ENVIRONMENTAL ANALYTICAL SERVICE, INC.
DATA DELIVERABLE PACKAGE

COVER PAGE

Lab Name:	Environmental Analytical Service	Contract:	
Lab Code:		SDG No.:	209253
Report Date:		Level:	4

This Data Deliverable Package was prepared by Environmental Analytical Service and covers the following samples:

Sample No.	Lab Sample ID
IA-FO-O1-001	210253-1
OA-FO-AI-001	210253-2
IA-LB-O1-001	210253-3
IA-LB-O2-001	210253-4
OA-LB-AI-001	210253-5
OA-U4-U5-001	210253-6
OA-UW-00-001	210253-7
IA-AB-O1-001	210253-8
OA-AB-AI-001	210253-9
OA-AB-AI-002	210253-10
IA-WH-SA-001	210253-11
OA-WH-AI-001	210253-12
IA-BP-CR-001	210253-13
IA-BP-SO-001	210253-14
IA-SP-CR-001	210253-15
IA-U3-O1-001	210253-16
IA-U3-O2-001	210253-17
IA-U3-O2-002	210253-18

Comments:

I certify that this data package is in compliance with the Terms and Conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:		Name:	Steve Hoyt
Date:	7/21/16	Title:	Lab Director

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
DATA DELIVERABLE PACKAGE

COVER PAGE

Lab Name:	Environmental Analytical Service	**Contract:**	
Lab Code:		**SDG No.:**	209253
Report Date:		**Level:**	4

This Data Deliverable Package was prepared by Environmental Analytical Service and covers the following samples:

Sample No.	Lab Sample ID
IA-U3-O3-001	210253-19
IA-U3-O4-001	210253-20
IA-U3-O5-001	210253-21
IA-U3-UF-001	210253-22
OA-U3-AI-001	210253-23

Comments:

I certify that this data package is in compliance with the Terms and Conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature:		**Name:**	Steve Hoyt
Date:	7/26/10	**Title:**	Lab Director

ANALYTICAL REPORT, QUALITY ASSURANCE REPORT, AND DELIVERABLES

Project Name: Tronox
Project Number: 2027.01
Sample Date: 6/21/10

Sample Delivery Group: 210253

Prepared for:

Northgate Environmental Management
Oakland, CA 94612

Prepared by:
Kristin Beckley
Steve Hoyt

ENVIRONMENTAL ANALYTICAL SERVICE, INC.
173 Cross St.
San Luis Obispo, CA 93401

(805) 781-3585, FAX (805) 541-4550

TABLE OF CONTENTS

SECTION 1
Project Summary

1.1 Analytical Batch and Log-in Batch Summary

The samples received by Environmental Analytical Service (EAS) for this project were logged in and assigned a Sample Delivery Group (SDG) Number. Each sample is also assigned an individual Laboratory ID number. The samples were then distributed to the analysts for the designated analysis. Each sample was analyzed in a daily analytical batch with associated QC. Each QC batch is assigned a QC analytical batch number. The Analytical Batch Reference Table is a summary of the SDG number, the client ID, the date collected, the EAS laboratory ID number, and the analytical batch number for each sample received. The QC Criteria for each analytical test is summarized in Section 1.4. For detailed information on Quality Control consult the EAS Quality Manual. Section 1.5 contains a Case Narrative for each QC analytical batch.

1.2 Sample Receipt Log-in Form and Chain-of-Custody Forms

The following page shows the Sample Receipt Log-In Form that was filled out by Sample Control when the samples were received by EAS. Following the Sample Receipt Log-In Form are the Chain-of-Custody form(s) received with the samples.

SAMPLE LOG-IN SHEET

Lab Name: Environmental Analytical Service
Received By (Print): Travis Robinson
Received By (Signature): T. R.
Contract Number:

Page 1 of 1
Log-In Date: 6/28/2010

Case Number:
Sample Delivery Group # 210253
SAS Number:

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): (Present)/Absent* (Intact)/Broken N/A
2. Custody Seal Nos.:
3. Traffic Reports/ Chain-of-Custody Records or Packing Lists: (Present)/Absent* N/A
4. Airbill: (Airbill)/Sticker (Present)/Absent* N/A
5. Airbill No(s): 7987-8269-2406
6. Sample Tags: (Present)/Absent* Sample Tag Numbers: (Listed)/Not Listed on Chain-of-Custody
7. Sample Condition: (Intact)/Broken*/Leaking
8. Cooler Temperature Indicator Bottle: Present/Absent*
9. Cooler Temperature: N/A
10. Does information on custody records, traffic reports and sample tag agree? (Yes)/No *
11. Date Received at Lab: 6/28/2010
12. Time Received: 3:45 PM

Sample Transfer
Area #:
By:
On:

Sample #	Corresponding Sample Tag #	Corresponding Canister #	Corresponding Assigned Lab #	REMARKS: Condition of Sample Shipment etc.
IA-FO-O1-001		687	210253-1	Intact
OA-FO-AI-001		662	210253-2	Intact
IA-LB-O1-001		698	210253-3	Intact
IA-LB-O2-001		759	210253-4	Intact
OA-LB-AI-001		214	210253-5	Intact
OA-U4-U5-001		732	210253-6	Intact
OA-UW-00-001		708	210253-7	Intact
IA-AB-O1-001		606	210253-8	Intact
OA-AB-AI-001		157	210253-9	Intact
OA-AB-AI-002		661	210253-10	Intact
IA-WH-SA-001		647	210253-11	Intact
OA-WH-AI-001		650	210253-12	Intact
IA-BP-CR-001		783	210253-13	Intact
IA-BP-SO-001		2965	210253-14	Intact
IA-SP-CR-001		685	210253-15	Intact
IA-U3-O1-001		213	210253-16	Intact
IA-U3-O2-001		184	210253-17	Intact
IA-U3-O2-002		990	210253-18	Intact
IA-U3-O3-001		784	210253-19	Intact
IA-U3-O4-001		515	210253-20	Intact
IA-U3-O5-001		519	210253-21	Intact
IA-U3-UF-001		407	210253-22	Intact
OA-U3-AI-001		769	210253-23	Intact

* If Circled, contact SMO and attach record of resolution

Reviewed By:
Date: 6/28/2010

Logbook No.: 5
Logbook Page 180-181

Form AADC - 1

ENVIRONMENTAL
Analytical Service, Inc.

173 Cross Street
San Luis Obispo, CA
93401 - 7597
805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number 7027.07-50 | Project Name: Tronex | Quote Number:

REPORT TO:

Company Northgate

Address 300 Frank H. Ogawa Plaza, Suite 510

City/State/Zip Oakland, CA 94612

Phone (510) 839-0688 (FAX) (510) 834-4350

ATTENTION Marie.Smith@gensem.com

MATRIX LEGEND
A - Ambient Air, Low Level
I - Indoor Air
S - Source Air, High Level
G - Gas/Product

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME hr:min	CANISTER NUMBER	COMP	GRAB	MATRIX A	MATRIX I	MATRIX S	MATRIX G	INITIAL PRESSURE	FINAL PRESSURE	EAS LABORATORY ID	ANALYTICAL TESTS: Chlorofm, TCA (carbon tetrachloride) w/ TO-15 (SIM)	Pi	Pf		REMARKS
IA-FO-01-001	6/21	7:45	687				X			27	10	210253-1	X	446	905	E	
OA-FO-A1-001	"	10:16	662			X				29	16	-2	X	350	799	E	
IA-LB-01-001	"	7:53	698				X			28	10	-3	X	401	910	E	
IA-LB-02-001	"	7:52	759				X			27	12½	-4	X	427	906	E	
OA-LB-A1-001	"	10:09	214			X				25	10	-5	X	353	797	E	
OA-U4-05-001	"	9:28	732			X				27	11	-6	X	401	904	E	
OA-UW-00-001	"	10:03	708			X				30+	16	-7	X	415	719	E	

COMMENTS

BILLING INFORMATION

Company Same as above

Address

City/State/Zip

ATTENTION

Purchase Order/Billing Reference

SAMPLED BY: ADR/RMK	Date 6/21/10 Time	Received by:	Date Time
Relinquished By:	Date 6/21 Time 7:10	Received by: SSN	Date 6/21/10 Time 1910
Relinquished By: SSN	Date 6/21/10 Time 19:10	Received by:	Date Time
Relinquished By:	Date Time	Received for lab by: Travis Polmisano	Date 6/23 Time 15:45

ENVIRONMENTAL
Analytical Service, Inc.

173 Cross Street
San Luis Obispo, CA
93401 - 7597
805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number: 202707-50 | Project Name: Tronox | Quote Number:

REPORT TO:

Company: Northgate
Address: 300 Frank H. Ogawa Plaza, Suite 510
City/State/Zip: Oakland, CA 94612
Phone: (510) 839-0688 (FAX) (510) 839-4350
ATTENTION: Maile.Smith@ngem.com

MATRIX LEGEND
A - Ambient Air, Low Level
I - Indoor Air
S - Source Air, High Level
G - Gas/Product

ANALYTICAL TESTS: Chloroform, TCE, carbon tetrachloride w/ TO-15 (SIM); N2; P1; P2

Remarks: SHELF: I

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME hr:min	CANISTER NUMBER	COMP	GRAB	MATRIX A	MATRIX I	MATRIX S	MATRIX G	INITIAL PRESSURE	FINAL PRESSURE	EAS LABORATORY ID	Chloroform, TCE, carbon tetrachloride w/ TO-15 (SIM)		P1	P2		REMARKS
IA-AB-01-001	6/21	7:45	606				X			30	11 1/2	210253-8	X		474	912		
OA-AB-AI-001	"	9:35	157			X				29	16	-9	X		349	859		Pot. Canister Issue
OA-AB-AI-002	"	7:11	661			X				29	17	-10	X		~~[illegible]~~	~~[illegible]~~ 313	727	Start: 11:37
IA-WH-SA-001	"	7:49	647				X			28	8	-11	X		484	911		
OA-WH-AI-001	"	9:47	650			X				27	1	-12	X		441	905		
IA-BP-CR-001	"	7:53	783				X			26	7	-13	X		485	903		
IA-BP-SO-001	"	7:53	2965				X			29	10	-14	X		488	906		
IA-SP-CR-001	"	7:53	685				X			30+	14	-15	X		475	905		

COMMENTS

BILLING INFORMATION

Company: Same as above
Address:
City/State/Zip:
ATTENTION:
Purchase Order/Billing Reference:

	Date	Time		Date	Time
SAMPLED BY: ADR/RMK	6/21/10		Received by:		
Relinquished By: [signature]	6/21	710	Received by: [signature] SW	6/21/10	1910
Relinquished By: [signature] SW	6/23/10	1110	Received by:		
Relinquished By:			Received for lab by: [signature]	6/23	15:45

ENVIRONMENTAL
Analytical Service, Inc.

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93401 - 7597
805.781.3585
Fax 805.541.4550

CHAIN OF CUSTODY RECORD

Project Number: 2027.07-50 | Project Name: Tronox | Quote Number:

REPORT TO:

Company: Northgate
Address: 300 Frank H. Ogawa Plaza, Suite 510
City/State/Zip: Oakland, CA 94612
Phone: (510) 839-0688 (FAX) (510) 839-4350
ATTENTION: Mile.Smith@ngem.com

MATRIX LEGEND
A - Ambient Air, Low Level
I - Indoor Air
S - Source Air, High Level
G - Gas/Product

ANALYTICAL TESTS: Chloroform, TCE, carbon tetrachloride w/ TO-15 (SIM); P1; P2; N2 (circled); Shelf

SAMPLE DESCRIPTION	SAMPLE DATE	SAMPLE TIME hr:min	CANISTER NUMBER	COMP	GRAB	MATRIX A	MATRIX I	MATRIX S	MATRIX G	INITIAL PRESSURE	FINAL PRESSURE	EAS LABORATORY ID	Chloroform, TCE, carbon tetrachloride w/ TO-15 (SIM)		P1	P2	N2	Shelf	REMARKS
IA-U3-01-001	6/21	7:35	213				X			28	12	210253-16	X		433	900		T	
IA-U3-02-001	"	7:48	184				X			24	~~11~~ 9	-17	X		463	867		T	
IA-U3-02-002	"	7:48	990				X			28	11	-18	X		449	898		T	
IA-U3-03-001	"	7:32	784				X			28	3	-19	X		580	904		T	
IA-U3-04-001	"	7:46	515				X			26 1/2	11	-20	X		459	888		S	
IA-U3-05-001	"	7:44	519				X			29	12	-21	X		453	910		S	
IA-U3-UF-001	"	7:51	~~184~~ 407				X			24	11	-22	X		419	914		S	
OA-U3-AI-001	"	9:56	769			X				26	13	-23	X		420	906		S	

COMMENTS

Rcvd' 746, 789, 728

BILLING INFORMATION

Company: Same as above
Address:
City/State/Zip:
ATTENTION:
Purchase Order/Billing Reference:

	Date	Time		Date	Time
SAMPLED BY: ADR/RMK	6/21/10		Received by:		
Relinquished By: [signature]	6/21	7:10	Received by: [signature]	6/21/10	1910
Relinquished By: [signature]	6/21/10	1910	Received by:		
Relinquished By:			Received for lab by: [signature]	6/23	15:45

1.3 Analytical Batch Reference Table(s)

EPA TO-15M SIM Volatile Organics

SDG Number	Lab ID Number	Date Collected	Client ID	Analysis Batch
210253	1	06/21/10	IA-FO-O1-001	063010-MS2
210253	2	06/21/10	OA-FO-AI-001	070210-MS2
210253	3	06/21/10	IA-LB-O1-001	070210-MS2
210253	4	06/21/10	IA-LB-O2-001	070210-MS2
210253	5	06/21/10	OA-LB-AI-001	070210-MS2
210253	6	06/21/10	OA-U4-U5-001	070210-MS2
210253	7	06/21/10	OA-UW-OO-001	070210-MS2
210253	8	06/21/10	IA-AB-O1-001	070210-MS2
210253	9	06/21/10	OA-AB-AI-001	070210-MS2
210253	10	06/21/10	OA-AB-AI-002	062910-MS2
210253	11	06/21/10	IA-WH-SA-001	062910-MS2
210253	12	06/21/10	OA-WH-AI-001	062910-MS2
210253	13	06/21/10	IA-BP-CR-001	062910-MS2
210253	14	06/21/10	IA-BP-SO-001	062910-MS2
210253	15	06/21/10	IA-SP-CR-001	062910-MS2
210253	16	06/21/10	IA-U3-O1-001	062910-MS2
210253	17	06/21/10	IA-U3-O2-001	063010-MS2
210253	18	06/21/10	IA-U3-O2-002	063010-MS2
210253	19	06/21/10	IA-U3-O3-001	063010-MS2
210253	20	06/21/10	IA-U3-O4-001	063010-MS2
210253	21	06/21/10	IA-U3-O5-001	063010-MS2
210253	22	06/21/10	IA-U3-UF-001	063010-MS2
210253	23	06/21/10	OA-U3-AI-001	063010-MS2

1.4 QC Criteria

The QC criteria are listed in the following tables by analytical test. The EAS QC Criteria described in the EAS Quality Manual was used as The QC criteria unless Project Specific QC Criteria was specified and supplied.

The daily analytical batch data was checked against the QC criteria and any criteria that did not pass are listed in the QC Comments section of the case narrative under the daily analytical batch number.

This package contains all the information needed for data validation for the requested samples. If level C package was requested the data for each daily analytical batch are provided in Section 4. If level D was requested on all or some samples the additional data (the ion spectra) for the samples and QC samples is given in Section 7.

EPA TO-15M SIM Volatile Organics

Parameter	EAS TO-15/TO-14A SIM Modified
BFB Tune	Daily (24 hour)
Tuning Criteria with BFB	TO-15 Tune Criteria
Initial Calibration	Five points minimum <30% RSD 90% compounds meet criteria
Calibration Check Sample (CCS)	After Initial Calibration
Continuing Calibration Verification (CCV)	Daily (24 hours) <30% 90% compounds meet criteria
Internal Standard (IS)	Chlorobenzene d5 Response 50% to 150%
Surrogate	Toluene-d8 70-130% recovery
Method Blank	Dry Nitrogen < RL or LOQ
Laboratory Control Spike	1 per Daily Batch 70-130% for LCS list <90% of compounds meet criteria
Duplicate Lab Control Dup Sample Dup	Duplicate with each 20 samples <30% for LCS spike list <90% of compounds meet criteria

1.5 Project Case Narrative

The samples were received in good condition with canister pressure in an acceptable range for a valid sample event. All analyses were performed in holding time as specified by the QC criteria listed in Section 1.4. The QC criteria for each of the analytical methods used in this project has been met except as noted in the QC comments for the daily analytical batch.

Daily Analytical Batch #: 062910-MS2
All analysis met the QC requirements for the method.

Daily Analytical Batch #: 063010-MS2
All analysis met the QC requirements for the method except trichloroethene marginally exceeds QC limits for %D on the continuing calibration analysis (31.2%).

The above does not affect data quality.

Daily Analytical Batch #: 070210-MS2
All analysis met the QC requirements for the method.

SECTION 2
Operational Information

2.1 SAMPLE ANALYSIS

EPA TO-15 Ambient Air by GC/MS - General Information

The GC/MS method (EPA Method TO-14/15) uses a cryotrapping system and a high resolution capillary column to analyze for volatile organic compounds for the TO-14 method a nafion dryer is used for water management, on TO-15 no dryer is used so oxygenated compounds can be analyzed.

Samples are analyzed on an HP 5890 gas chromatograph and HP 5970 MSD quadrapole mass spectrometer detector. A 100 to 1000 mL ambient air sample is introduced from the air sampling container on to the freezeout loop constructed of 1/8" nickel tubing packed with glass beads. A gas phase internal standard mixture, as specified in the EPA SOW for ambient air samples, is injected with each sample. The freezeout loop is immersed in liquid oxygen and concentrates the air sample. After the sample is trapped, it is thermally desorbed using an electric heater at 225° C and is cryofocussed onto the beginning of a 0.25 mm ID deactivated fused silica capillary column. The cryofocussed loop is then warmed and the compounds are injected onto a 60 meter, DB-5, 0.25 mm ID fused silica capillary column in the GC. The GC is temperature programmed from -10° C held for 3 minutes, then ramped to 70° C at 9°C/min, then ramped to 120° C at 5°C/min., then ramped to 220° C at 13° C/min and held for 2 minutes. As the column is heated, the compounds elute off the column and enter the mass spectrometer. The MS is scanned from 37 to 275 amu with a scan rate of 0.8 seconds for the Full Scan. The GC/MS is tuned and operated according to the specifications outlined in EPA SW 846 Test Methods. Compounds are calibrated by the internal standard procedure using NIST traceable air standards as described below. The relative percent difference (RPD) of a duplicate pair is about 30% at 10 ppbV and the average MDL is approximately 0.10 ppbV for most compounds at a 500 ml load volume.

TO-15/TO-14A GC/MS Selected Ion Monitoring (SIM)

This method is similar to the TO-15 method described above, except the mass spectrometer is operated in the selected ion-monitoring mode (SIM), which gives a lower detection limit for a select group of compounds. SIM is best used for a short list of compounds that need low MDL's, and is often run in combined mode with TO-15 Full Scan (TO-15 Full Scan-SIM combined). SIM works by selecting a limited group of ions to monitor, rather than scanning all ions.

The EAS modifications to the method include the target list and the QC criteria. A lower concentration internal standard is used for the SIM analysis.

2.2 Calibration Procedures

The standards used for the routine analytical tests are commercial NIST traceable gas standards. Special in-house standards are prepared when commercial standards are not available or when commercial standards need to be diluted. Details of the traceability and calibration program at EAS can be found in the EAS Quality Manual.

Working standards are prepared by using a gas dilution system on the gas chromatograph or by making static dilutions to atmospheric levels. The gas dilution system is constructed from an eight port gas sampling valve with various size sample loops. The loops are filled with the standard and flushed with "zero air". The gas dilution system is used for the daily instrument calibration.

The concentration of the individual target compounds is determined using the initial calibration response factors as shown below. The GC/MS methods us an internal standard in the calibration while the GC methods do not. If no is IS used the terms involving IS are removed from the sample calculations below.

2.3 Sample Calculations

$$RF = \frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{Conc. IS}}{\text{Std Conc of Cmpd (ppbV)}}$$

Std Conc Cmpd (ppbV) = (Std Conc cmpd (ppmV)*1000*(Std load Vol /1000 mls)

$$\text{Avg. RF} = (RF_1 + RF_2 + \ldots + Rf_n)/ n$$

The Concentration of Analyte in the sample is calculated:

$$\frac{\text{Area Cmpd.}}{\text{Area IS}} * \frac{\text{IS Conc.}}{\text{Avg. RF}} * \frac{1000\ \text{ml}}{\text{Smple. Vol.}} * \text{DF}$$

Where IS = Internal Standard
RF = Response Factor
n = Number of calibration levels
DF = Final pressure/ Initial pressure of the SUMMA canister.
IS Conc. = 20 ppbV (except BFB = 10 ppbV)

2.4 GC/MS Specific Data Processing :

Qualifiers : Qualifiers are ions used to aid in the identification of a peak. These ions are usually the secondary ion peaks for the compound in question. A ratio between the area counts of the primary ion (used for quantitation) and the area counts of the secondary ion is established by analyzing a daily standard containing the ions of interest at a known concentration (generally a mid-level standard). The standard ratios are used to update the running method on a daily basis. The method sets an acceptable criteria window for the qualifier ion by using the ion ratios and the user specific qualifier criteria.

Example For Toluene :

Primary ion 91 : 341877 area counts Secondary ion 92 : 205126 area counts
The target ion 91 is automatically set at 100%.
The ratio of 92 ion to 91 ion is used to set a target qualifier amount for the 91 ion

205126 / 341877 * 100 = 60%.

The user then sets a +/- window based upon the experience and the industry standard criteria. EAS uses a window of +/-20 percent relative except for the early eluting compounds which use a window of +/-35 percent relative.

Qualifier Exceptions : An analyst must use his best judgment when positively identifying a compound using qualifiers, as several factors can affect the qualifier ratios. These factors include, but are not limited to, the amounts of carbon dioxide and water present in the sample, the ambient room temperature, coeluting peaks, baseline carry-over from compounds eluting prior to the peak in question and the actual amount of the compound in the sample.

If a compound is in question, the analyst will first compare the total peak spectra of the sample with the total compound spectra of a standard. If the two spectra are a fair match, the analyst will report a positive result. If the identity is still in question, the analyst runs a library search for compound matches with the NBS54K library. For a positive identification using this library, the peak in question must have a Q value match of 50% or above. If a positive peak identification still is not made, the analyst looks at the area counts for the target ion. If the area is less than 5000 counts and/or the compound result is near the instrument detection limit, the analyst will look for the presence of the qualifier. If it is present, a positive result will be reported. In the case that the compound result is less than 5 times the reported MDL, the presence of the target ion is sufficient to report a positive result. If none of this criteria is met, the compound is reported non-detected (ND).

Retention Time: Each day a calibration standard is analyzed. This calibration standard is used to check the compound target retention times in the running

method prior to all other analyses. The normal retention time window is +/- 0.2 minutes of the target retention time, adjusted for any retention time shifts in the internal standard (IS), with all shifts being in the same direction.

Retention Time Exceptions: Air samples rarely fall within the retention time guidelines cited above. The retention times of the compounds are significantly affected by the amount of carbon dioxide and water present in the samples. As a general rule, compounds eluting prior to benzene will be shifted to the left (earlier Rts), while the later eluting compounds may be shifted to the right (later Rts). For retention times near benzene, the normal retention time criteria can be used with judgment. The earlier the peaks elute from benzene, the wider the acceptance window becomes with the earliest peaks having a possible shift of 2 to 3 minutes. The analyst should use the nearest positively identified peak's retention time window as a guide to what the window will be for compounds near that peak. Normally, the peak elution prior to benzene is in the same direction. However, if significant amounts of carbon dioxide or water are present, they can cause the earliest eluting peaks to shift to the right. Peaks eluting after benzene may shift slightly to the right with the window increasing slightly with increasing distance. This shift is normally no more than +/- 0.4 minute of the target RT adjusted for the IS shift and is in the same direction for all compounds. If the analyst has knowledge of certain peak patterns, he will also use this information in identifying peaks. Another important retention time criteria for air samples is that all compounds should elute in the same order as the daily calibration standard compounds.

2.5 QUALITY CONTROL PROGRAM

The quality assurance program at Environmental Analytical Service, Inc. is described in detail in the EAS Quality Manual.

2.6 Data Qualifiers and Definitions

Data Qualifiers

U Indicates compound was analyzed for but not detected.

B This compound was also detected in the blank.

DL The sample was analyzed at a lower volume.

E The amount reported is an estimated value. The result may exceed the calibration range or may be affected by possible carry-over from the previous sample.

N Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds, where the identification is based on a mass spectral library search. It is applied to all TIC results.

J The amount reported is an estimated value. This flag is used when a compound is reported below the Lower Quantitation Limit (LQL) often called the Reporting Limit (RL).

NFS The ions do not fit the target spectra.

Definitions

ppbV = $\frac{\text{\# nanomoles cmpd}}{\text{\# moles air}}$

The compound (cmpd) is reported as ppb of compound by Volume. This unit is temperature independent.

ug/m3 = ppbV * $\frac{\text{MW cmpd}}{23.68}$

The compound is reported as ug of a compound in a m3 of air.
23.68 is the molar volume of a gas at 60 F and 1 atm pressure.
MW = molecular weight.
This unit is temperature dependent.

ppbC = ppbV * # carbons in compound.

SECTION 3
Summary of Results

3.1 EPA TO-15M SIM Volatile Organics

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 01**

File:	1025301A.D	**Date Sampled:**	06/21/10	**Time:**	7:45
Description:	IA-FO-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	687	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	21:02
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.02		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.105	0.265	0.104	0.528	1.332	
56-23-5	Carbon tetrachloride	0.021	0.105	0.221	0.134	0.683	1.437	
79-01-6	Trichloroethene	0.021	0.105	0.039	0.115	0.581	0.214	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.241	121	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 02**

File:	1025302A.D	**Date Sampled:**	06/21/10	**Time:**	10:16
Description:	OA-FO-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	662	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	21:10
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.28		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.023	0.119	0.043	0.117	0.596	0.217	J
56-23-5	Carbon tetrachloride	0.023	0.119	0.110	0.151	0.771	0.717	J
79-01-6	Trichloroethene	0.023	0.119	ND	0.130	0.656	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.188	94	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 03**

File:	1025303A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-LB-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	698	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	21:52
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.94		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.101	0.475	0.099	0.507	2.388	
56-23-5	Carbon tetrachloride	0.020	0.101	0.217	0.129	0.656	1.413	
79-01-6	Trichloroethene	0.020	0.101	0.026	0.111	0.558	0.144	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.175	87	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 04**

File:	1025304A.D	**Date Sampled:**	06/21/10	**Time:**	7:52
Description:	IA-LB-02-001	**Date Received:**	06/23/10		
Can/Tube#:	759	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	22:35
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.12		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.110	0.353	0.109	0.554	1.773	
56-23-5	Carbon tetrachloride	0.022	0.110	0.208	0.141	0.717	1.350	
79-01-6	Trichloroethene	0.022	0.110	0.038	0.121	0.610	0.209	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.176	88	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 05**

File:	1025305A.D	**Date Sampled:**	06/21/10	**Time:**	10:04
Description:	OA-LB-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	214	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	17:41
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.26		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.023	0.118	0.068	0.116	0.591	0.341	J
56-23-5	Carbon tetrachloride	0.023	0.118	0.090	0.150	0.764	0.584	J
79-01-6	Trichloroethene	0.023	0.118	ND	0.129	0.650	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.182	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 06**

File:	1025306A.D	**Date Sampled:**	06/21/10	**Time:**	9:28
Description:	OA-U4-U5-001	**Date Received:**	06/23/10		
Can/Tube#:	732	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	18:23
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.94		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.101	0.029	0.099	0.507	0.147	J
56-23-5	Carbon tetrachloride	0.020	0.101	0.059	0.129	0.656	0.384	J
79-01-6	Trichloroethene	0.020	0.101	0.185	0.111	0.558	1.024	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.175	87	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 07**

File:	1025307A.D	**Date Sampled:**	06/21/10	**Time:**	10:03
Description:	OA-UW-00-001	**Date Received:**	06/23/10		
Can/Tube#:	708	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	19:05
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.08		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.108	0.086	0.107	0.544	0.430	J
56-23-5	Carbon tetrachloride	0.021	0.108	0.036	0.138	0.703	0.232	J
79-01-6	Trichloroethene	0.021	0.108	ND	0.119	0.598	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.166	83	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 08**

File:	1025308A.D	**Date Sampled:**	06/21/10	**Time:**	7:45
Description:	IA-AB-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	606	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	19:46
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.92		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.100	0.105	0.098	0.502	0.530	
56-23-5	Carbon tetrachloride	0.020	0.100	0.172	0.127	0.649	1.120	
79-01-6	Trichloroethene	0.020	0.100	0.511	0.109	0.552	2.827	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.180	90	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 09**

File:	1025309A.D	**Date Sampled:**	06/21/10	**Time:**	9:35
Description:	OA-AB-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	157	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	20:28
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.40		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.024	0.125	0.042	0.123	0.627	0.209	J
56-23-5	Carbon tetrachloride	0.024	0.125	0.105	0.159	0.812	0.683	J
79-01-6	Trichloroethene	0.025	0.125	0.038	0.137	0.690	0.209	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 10**

File:	1025310A.D	**Date Sampled:**	06/21/10	**Time:**	7:11
Description:	OA-AB-AI-002	**Date Received:**	06/23/10		
Can/Tube#:	661	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	14:45
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.32		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.024	0.121	0.123	0.119	0.606	0.618	
56-23-5	Carbon tetrachloride	0.024	0.121	0.119	0.154	0.785	0.774	J
79-01-6	Trichloroethene	0.024	0.121	0.096	0.132	0.667	0.531	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.198	99	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 11**

File:	1025311A.D	**Date Sampled:**	06/21/10	**Time:**	7:49
Description:	IA-WH-SA-001	**Date Received:**	06/23/10		
Can/Tube#:	647	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	15:28
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.88		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.098	0.680	0.096	0.491	3.417	
56-23-5	Carbon tetrachloride	0.019	0.098	0.122	0.125	0.636	0.793	
79-01-6	Trichloroethene	0.019	0.098	0.109	0.107	0.541	0.601	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.212	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 12**

File:	1025312A.D	**Date Sampled:**	06/21/10	**Time:**	9:47
Description:	OA-WH-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	650	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	16:10
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.05		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.107	0.080	0.105	0.536	0.402	J
56-23-5	Carbon tetrachloride	0.021	0.107	0.125	0.136	0.693	0.815	
79-01-6	Trichloroethene	0.021	0.107	0.077	0.117	0.590	0.428	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.210	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 13**

File:	1025313A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-BP-CR-001	**Date Received:**	06/23/10		
Can/Tube#:	783	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	16:56
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.86		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.168	0.095	0.486	0.843	
56-23-5	Carbon tetrachloride	0.019	0.097	0.121	0.123	0.629	0.790	
79-01-6	Trichloroethene	0.019	0.097	0.103	0.106	0.535	0.572	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.212	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 14**

File:	1025314A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-BP-SO-001	**Date Received:**	06/23/10		
Can/Tube#:	2965	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	17:40
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.86		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.151	0.095	0.486	0.759	
56-23-5	Carbon tetrachloride	0.019	0.097	0.156	0.123	0.629	1.018	
79-01-6	Trichloroethene	0.019	0.097	0.118	0.106	0.535	0.655	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.248	124	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 15**

File:	1025315A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-SP-CR-001	**Date Received:**	06/23/10		
Can/Tube#:	685	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	18:22
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.91		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.099	0.073	0.098	0.499	0.367	J
56-23-5	Carbon tetrachloride	0.019	0.099	0.132	0.127	0.646	0.857	
79-01-6	Trichloroethene	0.020	0.099	0.089	0.109	0.549	0.491	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.204	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 16**

File:	1025316A.D	**Date Sampled:**	06/21/10	**Time:**	7:35
Description:	IA-U3-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	213	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	19:26
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.08		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.108	0.328	0.107	0.544	1.650	
56-23-5	Carbon tetrachloride	0.021	0.108	0.132	0.138	0.703	0.857	
79-01-6	Trichloroethene	0.021	0.108	2.662	0.119	0.598	14.729	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.206	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 17**

File:	1025317A.D	**Date Sampled:**	06/21/10	**Time:**	7:48
Description:	IA-U3-O2-001	**Date Received:**	06/23/10		
Can/Tube#:	184	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	14:28
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.87		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.258	0.096	0.489	1.296	
56-23-5	Carbon tetrachloride	0.019	0.097	0.113	0.124	0.632	0.733	
79-01-6	Trichloroethene	0.019	0.097	1.155	0.107	0.538	6.389	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.205	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 18**

File:	1025318B.D	**Date Sampled:**	06/21/10	**Time:**	7:48
Description:	IA-U3-O2-002	**Date Received:**	06/23/10		
Can/Tube#:	990	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	16:44
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.104	0.397	0.103	0.523	1.997	
56-23-5	Carbon tetrachloride	0.020	0.104	0.129	0.133	0.676	0.838	
79-01-6	Trichloroethene	0.021	0.104	2.853	0.114	0.575	15.782	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.230	115	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 19**

File:	1025319A.D	**Date Sampled:**	06/21/10	**Time:**	7:32
Description:	IA-U3-O3-001	**Date Received:**	06/23/10		
Can/Tube#:	784	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	17:26
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.56		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.016	0.081	0.264	0.080	0.408	1.328	
56-23-5	Carbon tetrachloride	0.016	0.081	0.072	0.103	0.528	0.470	J
79-01-6	Trichloroethene	0.016	0.081	0.570	0.089	0.449	3.154	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.243	122	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 20**

File:	1025320A.D	**Date Sampled:**	06/21/10	**Time:**	7:46
Description:	IA-U3-O4-001	**Date Received:**	06/23/10		
Can/Tube#:	515	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	18:11
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.89		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.098	0.239	0.097	0.494	1.203	
56-23-5	Carbon tetrachloride	0.019	0.098	0.072	0.125	0.639	0.466	J
79-01-6	Trichloroethene	0.019	0.098	2.262	0.108	0.544	12.514	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.195	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 21**

File:	1025321A.D	**Date Sampled:**	06/21/10	**Time:**	7:44
Description:	IA-U3-O5-001	**Date Received:**	06/23/10		
Can/Tube#:	519	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	18:56
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.01		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.105	0.229	0.103	0.525	1.149	
56-23-5	Carbon tetrachloride	0.021	0.105	0.046	0.133	0.680	0.299	J
79-01-6	Trichloroethene	0.021	0.105	2.133	0.115	0.578	11.802	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.182	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 22**

File:	1025322A.D	**Date Sampled:**	06/21/10	**Time:**	7:51
Description:	IA-U3-UF-001	**Date Received:**	06/23/10		
Can/Tube#:	407	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	19:37
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.18		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.113	ND	0.112	0.570	ND	ND
56-23-5	Carbon tetrachloride	0.022	0.113	ND	0.145	0.737	ND	ND
79-01-6	Trichloroethene	0.022	0.113	0.035	0.124	0.627	0.195	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.190	95	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 23**

File:	1025323A.D	**Date Sampled:**	06/21/10	**Time:**	9:56
Description:	OA-U3-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	769	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	20:18
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.11		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.110	0.041	0.108	0.551	0.204	J
56-23-5	Carbon tetrachloride	0.022	0.110	0.085	0.140	0.714	0.550	J
79-01-6	Trichloroethene	0.022	0.110	0.071	0.120	0.607	0.393	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

SECTION 4
Analytical Data, Level C

This section contains the Daily Analytical Batch (DAB) data for each analytical test requested. There will be a separate DAB for each day samples were analyzed and for each analysis requested. The DAB's are organized first by analytical test then in order of date. To find a particular sample refer to the Analytical Batch Reference Table in Section 1.3, which gives the DAB number for each sample.

Each Batch contains the following:

1) Tune Data (GC/MS only)
2) Continuing Calibration Sample
3) Method Blank
4) QC Samples (LCS, LCD, MS, Sample Dup)
5) Samples

Each sample data package contains all of the information used to quantitate the results for that sample. The Initial Calibration data is included, along with the response factors, calculation sheet, sample calculation, and analytical report. Note: The continuing calibration is considered a separate QC check sample, since the continuing calibration data is not used to calculate the analytical results (results are calculated from the initial calibration curve data).

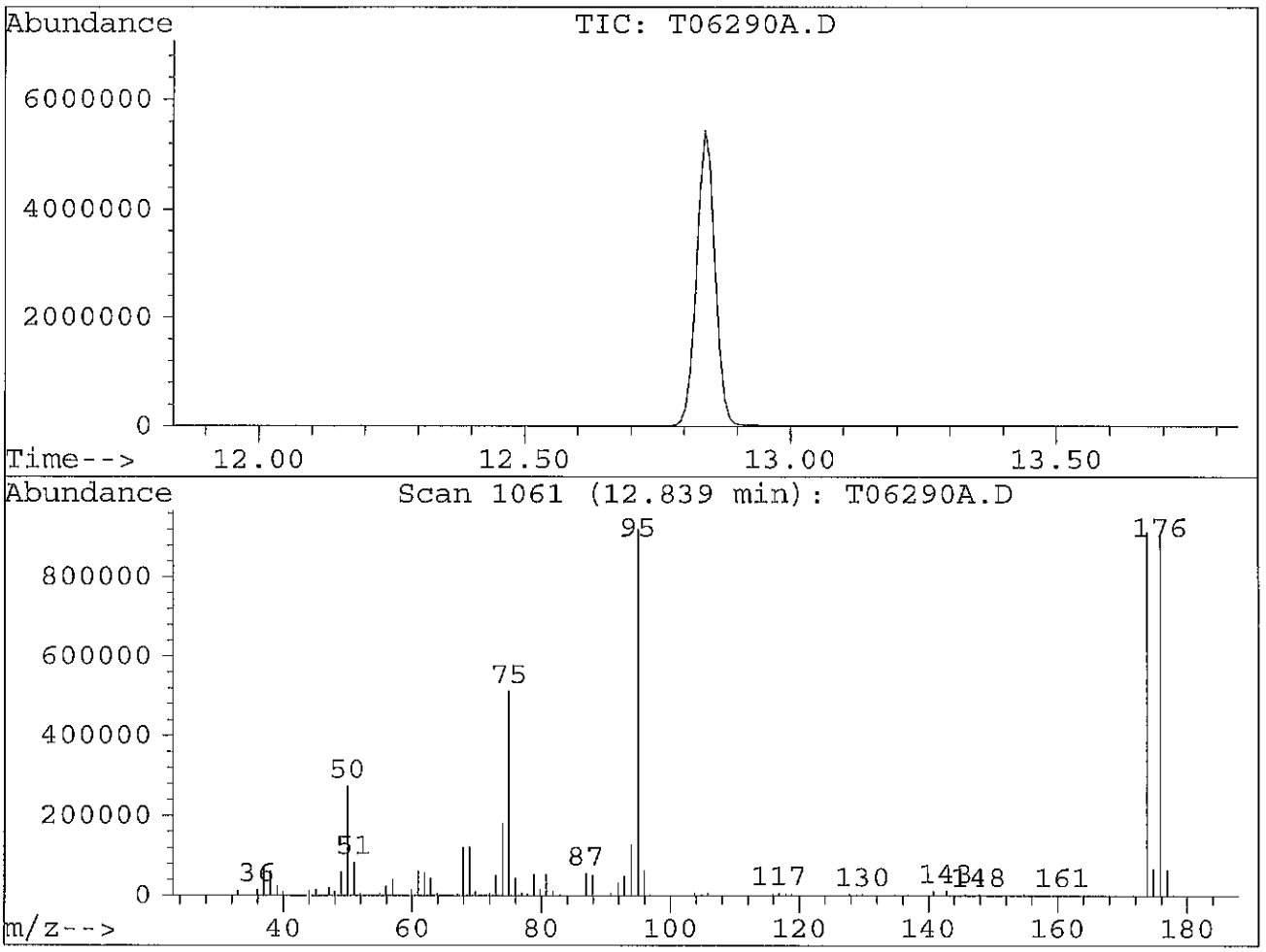
4.1 EPA TO-15 SIM Volatile Organics

Daily Analytical Batch #: 062910-MS2

BFB

Data File : C:\HPCHEM\1\DATA\06290MS2\T06290A.D
Acq Time : 29 Jun 110 8:52 am Operator: KB
Sample : BFB TUNE Inst : MS2
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2EXSIM_U.M
Title : EPA T0-15



Peak Apex is scan: 1061

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	29.6	272640	PASS
75	95	30	66	55.6	510912	PASS
95	95	100	100	100.0	919552	PASS
96	95	5	9	6.8	62512	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	99.2	912576	PASS
175	174	4	9	7.3	66752	PASS
176	174	93	101	100.1	913280	PASS
177	176	5	9	7.0	63568	PASS

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**
QC_Batch:	**062910-MS2**
Sample ID:	ST60421 + ST60550
Sample Analysis Date:	29 Jun 110 10:48 am
Run Method:	2EXSIM_U.M
Quant/Calibration Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms
Calibration Level	Level 6 1.0

Sample Calculation:

$$1)\ RFi = \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}\ i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Chloroform	15259	0.102	0.260	0.229	-13.5	30	IN
Carbon tetrachloride	7838	0.102	0.133	0.128	-4.6	30	IN
Trichloroethene	8146	0.103	0.137	0.125	-10.1	30	IN
Chlorobenzene-d5	115216	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	55680	0.200	0.483	0.469	-3.0	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** C06290B

File Name:	C06290B.D			1 **SS**
Sample ID:	ST60421 + ST60550			2 **KB**
Date:	29 Jun 110 10:48 am	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.116	10.58	10.66	83.00	15259	63	52	78			
56-23-5	Carbon tetrachloride	4	0.107	12.60	12.66	116.90	7838	96	73	110			
79-01-6	Trichloroethene	5	0.113	14.20	14.26	130.00	8146	96	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**115216**						
2037-26-5	Toluene-d8	2	0.206	17.00	17.05	98.00	**55680**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**062910-MS2**	
File Name:	C06290B.D		**Instrument Name:**	MS2	
Sample ID:	ST60421 + ST60550				
Sample Analysis Date:	29 Jun 110 10:48 am			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**062910-MS2**
Sample ID:	ST60421 + ST60550
Sample Analysis Date:	29 Jun 110 10:48 am
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\left[\frac{(\text{Astdni})}{(\text{Cstdni})}\cdot\frac{(\text{Cistdi})}{(\text{Aistdi})}\right]_i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06290

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.116	0.231	1.163	0.005	0.026	0.01	0.051	0.05	0.261		0.255
Carbon tetrachloride	154.0	0.107	0.213	1.388	0.005	0.026	0.01	0.066	0.05	0.338		0.255
Trichloroethene	131.0	0.113	0.227	1.255	0.005	0.026	0.01	0.058	0.05	0.288		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06290**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	15259	0.200	115216	0.116	0.231	1.161
4	Carbon tetrachloride	1	TRG	154.0	0.128	7838	0.200	115216	0.107	0.213	1.385
5	Trichloroethene	1	TRG	131.0	0.125	8146	0.200	115216	0.113	0.227	1.256
1	Chlorobenzene-d5	1	IS	0.0	1.000	115216	0.200	115216	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	55680	0.200	115216	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: TO-15 SIM **Laboratory Number: B06290**

File:	B06290C.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	06/29/10	**Time:**	13:57
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.010	0.052	0.021	0.051	0.261	0.108	J
56-23-5	Carbon tetrachloride	0.010	0.052	ND	0.066	0.338	ND	ND
79-01-6	Trichloroethene	0.010	0.052	0.020	0.057	0.288	0.111	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.205	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** B06290C

File Name:	B06290C.D			1 **SS**
Sample ID:	METHOD BLANK			2 **KB**
Date:	29 Jun 110 1:57 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.011	10.56	10.66	83.00	1380	62	52	78			
56-23-5	Carbon tetrachloride	4	0.003	12.58	12.66	116.90	247	83	73	110			
79-01-6	Trichloroethene	5	0.010	14.18	14.26	130.00	703	101	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**112564**						
2037-26-5	Toluene-d8	2	0.205	16.97	17.05	98.00	**54130**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**062910-MS2**	
File Name:	B06290C.D		**Instrument Name:**	MS2	
Sample ID:	METHOD BLANK				
Sample Analysis Date:	29 Jun 110 1:57 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**	**Sample Calculation:**				
QC_Batch:	**062910-MS2**	1) Avg RFn =	Sum	(Astdni)	(Cistdi)	
Sample ID:	METHOD BLANK			(Cstdni)	(Aistdi)	i
Sample Analysis Date:	29 Jun 110 1:57 pm					
Run Method:	2EXSIM_U.M					
Quant Method:	2NTHG_A.M					
Cal Update:	Sun Jul 04 13:43:39 2010					
Template:	northgte.ms					

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06290

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.011	0.021	0.108	0.005	0.026	0.01	0.051	0.05	0.261	J	0.255
Carbon tetrachloride	154.0	0.003	0.007	0.045	0.005	0.026	0.01	0.066	0.05	0.338	U	0.255
Trichloroethene	131.0	0.010	0.020	0.111	0.005	0.026	0.01	0.057	0.05	0.288	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06290**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	1380	0.200	112564	0.011	0.021	0.106
4	Carbon tetrachloride	1	TRG	154.0	0.128	247	0.200	112564	0.003	0.007	0.046
5	Trichloroethene	1	TRG	131.0	0.125	703	0.200	112564	0.010	0.020	0.111
1	Chlorobenzene-d5	1	IS	0.0	1.000	112564	0.200	112564	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	54130	0.200	112564	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM

File: QC06290A.D
Description: ST60022
Can/Tube#:
Sam_Type: LCS
QC_Batch: 062910-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/29/10 **Time:** 11:42
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.273	0.000	0.273	107	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.274	0.000	0.274	107	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.263	0.000	0.263	102	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.199	99	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** QC06290

File Name:	QC06290A.D			1 **SS**
Sample ID:	ST60022			2 **KB**
Date:	29 Jun 110 11:42 am	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	1000 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.273	10.64	10.66	83.00	39002	66	52	78			
56-23-5	Carbon tetrachloride	4	0.274	12.66	12.66	116.90	21787	100	73	110			
79-01-6	Trichloroethene	5	0.263	14.23	14.26	130.00	20479	95	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**124733**						
2037-26-5	Toluene-d8	2	0.199	17.03	17.05	98.00	**58131**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **062910-MS2**

File Name: QC06290A.D
Instrument Name: MS2
Sample ID: ST60022
Sample Analysis Date: 29 Jun 110 11:42 am
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	ST60022
Sample Analysis Date:	29 Jun 110 11:42 am
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC06290

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.273	0.273	1.373	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.274	0.274	1.782	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.263	0.263	1.457	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC06290**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	39002	0.200	124733	0.273	0.273	1.372
4	Carbon tetrachloride	1	TRG	154.0	0.128	21787	0.200	124733	0.274	0.274	1.782
5	Trichloroethene	1	TRG	131.0	0.125	20479	0.200	124733	0.263	0.263	1.455
1	Chlorobenzene-d5	1	IS	0.0	1.000	124733	0.200	124733	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	58131	0.200	124733	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: **TO-15 SIM**

Dup File: QC06290B.D
Description: ST60022
Can/Tube#:
QC_Batch: 062910-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
67-66-3	Chloroform	0.270	0.273	1	25	
56-23-5	Carbon tetrachloride	0.271	0.274	1	25	
79-01-6	Trichloroethene	0.278	0.263	6	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM

File: QC06290B.D
Description: ST60022
Can/Tube#:
Sam_Type: LCD
QC_Batch: 062910-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/29/10 **Time:** 12:32
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.270	0.000	0.270	106	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.271	0.000	0.271	106	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.278	0.000	0.278	108	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.202	101	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** QC06290

File Name:	QC06290B.D			1 **SS**
Sample ID:	ST60022			2 **KB**
Date:	29 Jun 110 12:32 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	1000 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.270	10.65	10.66	83.00	44722	66	52	78			
56-23-5	Carbon tetrachloride	4	0.271	12.66	12.66	116.90	24987	98	73	110			
79-01-6	Trichloroethene	5	0.278	14.23	14.26	130.00	25043	92	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**144732**						
2037-26-5	Toluene-d8	2	0.202	17.03	17.05	98.00	**68574**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	QC06290B.D		**Instrument Name:**	MS2	
Sample ID:	ST60022				
Sample Analysis Date:	29 Jun 110 12:32 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	ST60022
Sample Analysis Date:	29 Jun 110 12:32 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdn}i)\ (\text{Cistd}i)}{(\text{Cstdn}i)\ (\text{Aistd}i)}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC06290

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.270	0.270	1.357	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.271	0.271	1.761	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.278	0.278	1.535	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC06290**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	44722	0.200	144732	0.270	0.270	1.357
4	Carbon tetrachloride	1	TRG	154.0	0.128	24987	0.200	144732	0.271	0.271	1.762
5	Trichloroethene	1	TRG	131.0	0.125	25043	0.200	144732	0.278	0.278	1.538
1	Chlorobenzene-d5	1	IS	0.0	1.000	144732	0.200	144732	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	68574	0.200	144732	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 10**

File:	1025310A.D	**Date Sampled:**	06/21/10	**Time:**	7:11
Description:	OA-AB-AI-002	**Date Received:**	06/23/10		
Can/Tube#:	661	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	14:45
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.32		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.024	0.121	0.123	0.119	0.606	0.618	
56-23-5	Carbon tetrachloride	0.024	0.121	0.119	0.154	0.785	0.774	J
79-01-6	Trichloroethene	0.024	0.121	0.096	0.132	0.667	0.531	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.198	99	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025310

File Name:	1025310A.D			1 **SS**
Sample ID:	OA-AB-AI-002			2 **KB**
Date:	29 Jun 110 2:45 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	2.32			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.027	10.66	10.66	83.00	3493	65	52	78			
56-23-5	Carbon tetrachloride	4	0.026	12.66	12.66	116.90	1883	101	73	110			
79-01-6	Trichloroethene	5	0.021	14.25	14.26	130.00	1485	101	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**115079**						
2037-26-5	Toluene-d8	2	0.198	17.03	17.05	98.00	**53406**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **062910-MS2**

File Name: 1025310A.D
Instrument Name: MS2
Sample ID: OA-AB-AI-002
Sample Analysis Date: 29 Jun 110 2:45 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	OA-AB-AI-002
Sample Analysis Date:	29 Jun 110 2:45 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 10

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.32	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.027	0.123	0.618	0.005	0.026	0.02	0.119	0.12	0.606		0.255
Carbon tetrachloride	154.0	0.026	0.119	0.774	0.005	0.026	0.02	0.154	0.12	0.785	J	0.255
Trichloroethene	131.0	0.021	0.096	0.531	0.005	0.026	0.02	0.132	0.12	0.667	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**10**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.32
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	3493	0.200	115079	0.027	0.123	0.618
4	Carbon tetrachloride	1	TRG	154.0	0.128	1883	0.200	115079	0.026	0.119	0.774
5	Trichloroethene	1	TRG	131.0	0.125	1485	0.200	115079	0.021	0.096	0.531
1	Chlorobenzene-d5	1	IS	0.0	1.000	115079	0.200	115079	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	53406	0.200	115079	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 11**

File:	1025311A.D	**Date Sampled:**	06/21/10	**Time:**	7:49
Description:	IA-WH-SA-001	**Date Received:**	06/23/10		
Can/Tube#:	647	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	15:28
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.88		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.098	0.680	0.096	0.491	3.417	
56-23-5	Carbon tetrachloride	0.019	0.098	0.122	0.125	0.636	0.793	
79-01-6	Trichloroethene	0.019	0.098	0.109	0.107	0.541	0.601	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.212	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025311

File Name:	1025311A.D		1 **SS**
Sample ID:	IA-WH-SA-001		2 **KB**
Date:	29 Jun 110 3:28 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	1.88		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.181	10.33	10.66	83.00	28280	65	52	78			
56-23-5	Carbon tetrachloride	4	0.032	12.39	12.66	116.90	2825	102	73	110			
79-01-6	Trichloroethene	5	0.029	14.04	14.26	130.00	2460	98	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.42	20.51	117.00	**136657**						
2037-26-5	Toluene-d8	2	0.212	16.92	17.05	98.00	**67957**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	1025311A.D		**Instrument Name:**	MS2	
Sample ID:	IA-WH-SA-001				
Sample Analysis Date:	29 Jun 110 3:28 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **062910-MS2**
Sample ID: IA-WH-SA-001
Sample Analysis Date: 29 Jun 110 3:28 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 11

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.88	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.181	0.680	3.417	0.005	0.026	0.02	0.096	0.10	0.491		0.255
Carbon tetrachloride	154.0	0.032	0.122	0.793	0.005	0.026	0.02	0.125	0.10	0.636		0.255
Trichloroethene	131.0	0.029	0.109	0.601	0.005	0.026	0.02	0.107	0.10	0.541		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**11**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.88
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})}{(\text{SV})}\ (\text{STV})$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}}{\text{MW}}$
23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	28280	0.200	136657	0.181	0.680	3.417
4	Carbon tetrachloride	1	TRG	154.0	0.128	2825	0.200	136657	0.032	0.122	0.793
5	Trichloroethene	1	TRG	131.0	0.125	2460	0.200	136657	0.029	0.109	0.603
1	Chlorobenzene-d5	1	IS	0.0	1.000	136657	0.200	136657	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	67957	0.200	136657	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 12**

File:	1025312A.D	**Date Sampled:**	06/21/10	**Time:**	9:47
Description:	OA-WH-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	650	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	16:10
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.05		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.107	0.080	0.105	0.536	0.402	J
56-23-5	Carbon tetrachloride	0.021	0.107	0.125	0.136	0.693	0.815	
79-01-6	Trichloroethene	0.021	0.107	0.077	0.117	0.590	0.428	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.210	105	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025312

File Name:	1025312A.D		1 **SS**
Sample ID:	OA-WH-AI-001		2 **KB**
Date:	29 Jun 110 4:10 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.05		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.020	10.54	10.66	83.00	2872	63	52	78			
56-23-5	Carbon tetrachloride	4	0.031	12.55	12.66	116.90	2505	88	73	110			
79-01-6	Trichloroethene	5	0.019	14.18	14.26	130.00	1514	96	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**128570**						
2037-26-5	Toluene-d8	2	0.210	16.97	17.05	98.00	**63377**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	1025312A.D		**Instrument Name:**	MS2	
Sample ID:	OA-WH-AI-001				
Sample Analysis Date:	29 Jun 110 4:10 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	OA-WH-AI-001
Sample Analysis Date:	29 Jun 110 4:10 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 12

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.05	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.020	0.080	0.402	0.005	0.026	0.02	0.105	0.11	0.536	J	0.255
Carbon tetrachloride	154.0	0.031	0.125	0.815	0.005	0.026	0.02	0.136	0.11	0.693		0.255
Trichloroethene	131.0	0.019	0.077	0.428	0.005	0.026	0.02	0.117	0.11	0.590	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**12**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.05
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	2872	0.200	128570	0.020	0.080	0.402
4	Carbon tetrachloride	1	TRG	154.0	0.128	2505	0.200	128570	0.031	0.125	0.813
5	Trichloroethene	1	TRG	131.0	0.125	1514	0.200	128570	0.019	0.077	0.426
1	Chlorobenzene-d5	1	IS	0.0	1.000	128570	0.200	128570	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	63377	0.200	128570	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 13**

File:	1025313A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-BP-CR-001	**Date Received:**	06/23/10		
Can/Tube#:	783	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	16:56
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.86		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.168	0.095	0.486	0.843	
56-23-5	Carbon tetrachloride	0.019	0.097	0.121	0.123	0.629	0.790	
79-01-6	Trichloroethene	0.019	0.097	0.103	0.106	0.535	0.572	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.212	106	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025313

File Name:	1025313A.D			1 **SS**
Sample ID:	IA-BP-CR-001			2 **KB**
Date:	29 Jun 110 4:56 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.86			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.045	10.64	10.66	83.00	4385	65	52	78			
56-23-5	Carbon tetrachloride	4	0.033	12.66	12.66	116.90	1768	96	73	110			
79-01-6	Trichloroethene	5	0.028	14.23	14.26	130.00	1472	86	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**84922**						
2037-26-5	Toluene-d8	2	0.212	17.03	17.05	98.00	**42319**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	1025313A.D		**Instrument Name:**	MS2	
Sample ID:	IA-BP-CR-001				
Sample Analysis Date:	29 Jun 110 4:56 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	IA-BP-CR-001
Sample Analysis Date:	29 Jun 110 4:56 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 13

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.86	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.045	0.168	0.843	0.005	0.026	0.02	0.095	0.10	0.486		0.255
Carbon tetrachloride	154.0	0.033	0.121	0.790	0.005	0.026	0.02	0.123	0.10	0.629		0.255
Trichloroethene	131.0	0.028	0.103	0.572	0.005	0.026	0.02	0.106	0.10	0.535		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**13**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.86
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	4385	0.200	84922	0.045	0.168	0.844
4	Carbon tetrachloride	1	TRG	154.0	0.128	1768	0.200	84922	0.033	0.121	0.787
5	Trichloroethene	1	TRG	131.0	0.125	1472	0.200	84922	0.028	0.103	0.570
1	Chlorobenzene-d5	1	IS	0.0	1.000	84922	0.200	84922	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	42319	0.200	84922	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 14**

File:	1025314A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-BP-SO-001	**Date Received:**	06/23/10		
Can/Tube#:	2965	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	17:40
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.86		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.151	0.095	0.486	0.759	
56-23-5	Carbon tetrachloride	0.019	0.097	0.156	0.123	0.629	1.018	
79-01-6	Trichloroethene	0.019	0.097	0.118	0.106	0.535	0.655	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.248	124	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025314

File Name:	1025314A.D		1 **SS**
Sample ID:	IA-BP-SO-001		2 **KB**
Date:	29 Jun 110 5:40 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	1.86		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.041	10.38	10.66	83.00	3372	67	52	78			
56-23-5	Carbon tetrachloride	4	0.042	12.44	12.66	116.90	1947	98	73	110			
79-01-6	Trichloroethene	5	0.032	14.10	14.26	130.00	1440	93	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.44	20.51	117.00	**72596**						
2037-26-5	Toluene-d8	2	0.248	16.95	17.05	98.00	**42239**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **062910-MS2**

File Name: 1025314A.D
Instrument Name: MS2
Sample ID: IA-BP-SO-001
Sample Analysis Date: 29 Jun 110 5:40 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **062910-MS2**
Sample ID: IA-BP-SO-001
Sample Analysis Date: 29 Jun 110 5:40 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 14

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.86	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.041	0.151	0.759	0.005	0.026	0.02	0.095	0.10	0.486		0.255
Carbon tetrachloride	154.0	0.042	0.156	1.018	0.005	0.026	0.02	0.123	0.10	0.629		0.255
Trichloroethene	131.0	0.032	0.118	0.655	0.005	0.026	0.02	0.106	0.10	0.535		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**14**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.86
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	3372	0.200	72596	0.041	0.151	0.759
4	Carbon tetrachloride	1	TRG	154.0	0.128	1947	0.200	72596	0.042	0.156	1.015
5	Trichloroethene	1	TRG	131.0	0.125	1440	0.200	72596	0.032	0.118	0.653
1	Chlorobenzene-d5	1	IS	0.0	1.000	72596	0.200	72596	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	42239	0.200	72596	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 15**

File:	1025315A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-SP-CR-001	**Date Received:**	06/23/10		
Can/Tube#:	685	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	18:22
QC_Batch:	062910-MS2	**Can Dilution Factor:**	1.91		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.099	0.073	0.098	0.499	0.367	J
56-23-5	Carbon tetrachloride	0.019	0.099	0.132	0.127	0.646	0.857	
79-01-6	Trichloroethene	0.020	0.099	0.089	0.109	0.549	0.491	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.204	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025315

File Name:	1025315A.D			1 **SS**
Sample ID:	IA-SP-CR-001			2 **KB**
Date:	29 Jun 110 6:22 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.91			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.019	10.17	10.66	83.00	1864	71	52	78			
56-23-5	Carbon tetrachloride	4	0.034	12.26	12.66	116.90	1873	91	73	110			
79-01-6	Trichloroethene	5	0.023	13.96	14.26	130.00	1234	102	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.40	20.51	117.00	**85155**						
2037-26-5	Toluene-d8	2	0.204	16.84	17.05	98.00	**40726**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	1025315A.D		**Instrument Name:**	MS2	
Sample ID:	IA-SP-CR-001				
Sample Analysis Date:	29 Jun 110 6:22 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**062910-MS2**
Sample ID:	IA-SP-CR-001
Sample Analysis Date:	29 Jun 110 6:22 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 15

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.91	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.019	0.073	0.367	0.005	0.026	0.02	0.098	0.10	0.499	J	0.255
Carbon tetrachloride	154.0	0.034	0.132	0.857	0.005	0.026	0.02	0.127	0.10	0.646		0.255
Trichloroethene	131.0	0.023	0.089	0.491	0.005	0.026	0.02	0.109	0.10	0.549	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**15**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.91
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	1864	0.200	85155	0.019	0.073	0.367
4	Carbon tetrachloride	1	TRG	154.0	0.128	1873	0.200	85155	0.034	0.132	0.858
5	Trichloroethene	1	TRG	131.0	0.125	1234	0.200	85155	0.023	0.089	0.492
1	Chlorobenzene-d5	1	IS	0.0	1.000	85155	0.200	85155	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	40726	0.200	85155	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 16**

File:	1025316A.D	**Date Sampled:**	06/21/10	**Time:**	7:35
Description:	IA-U3-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	213	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/29/10	**Time:**	19:26
QC_Batch:	062910-MS2	**Can Dilution Factor:**	2.08		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.108	0.328	0.107	0.544	1.650	
56-23-5	Carbon tetrachloride	0.021	0.108	0.132	0.138	0.703	0.857	
79-01-6	Trichloroethene	0.021	0.108	2.662	0.119	0.598	14.729	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.206	103	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025316

File Name:	1025316A.D		1 **SS**
Sample ID:	IA-U3-O1-001		2 **KB**
Date:	29 Jun 110 7:26 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.08		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.079	10.67	10.66	83.00	12553	64	52	78			
56-23-5	Carbon tetrachloride	4	0.032	12.66	12.66	116.90	2809	91	73	110			
79-01-6	Trichloroethene	5	0.640	14.23	14.26	130.00	55467	94	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**139012**						
2037-26-5	Toluene-d8	2	0.206	17.03	17.05	98.00	**67114**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**062910-MS2**	
File Name:	1025316A.D		**Instrument Name:**	MS2	
Sample ID:	IA-U3-O1-001				
Sample Analysis Date:	29 Jun 110 7:26 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **062910-MS2**
Sample ID: IA-U3-O1-001
Sample Analysis Date: 29 Jun 110 7:26 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 16

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.08	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.079	0.328	1.650	0.005	0.026	0.02	0.107	0.11	0.544		0.255
Carbon tetrachloride	154.0	0.032	0.132	0.857	0.005	0.026	0.02	0.138	0.11	0.703		0.255
Trichloroethene	131.0	0.640	2.662	14.729	0.005	0.026	0.02	0.119	0.11	0.598		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**16**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.08
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	12553	0.200	139012	0.079	0.328	1.648
4	Carbon tetrachloride	1	TRG	154.0	0.128	2809	0.200	139012	0.032	0.132	0.858
5	Trichloroethene	1	TRG	131.0	0.125	55467	0.200	139012	0.640	2.662	14.726
1	Chlorobenzene-d5	1	IS	0.0	1.000	139012	0.200	139012	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	67114	0.200	139012	0.000	0.000	0.000

Calculation Definitions:

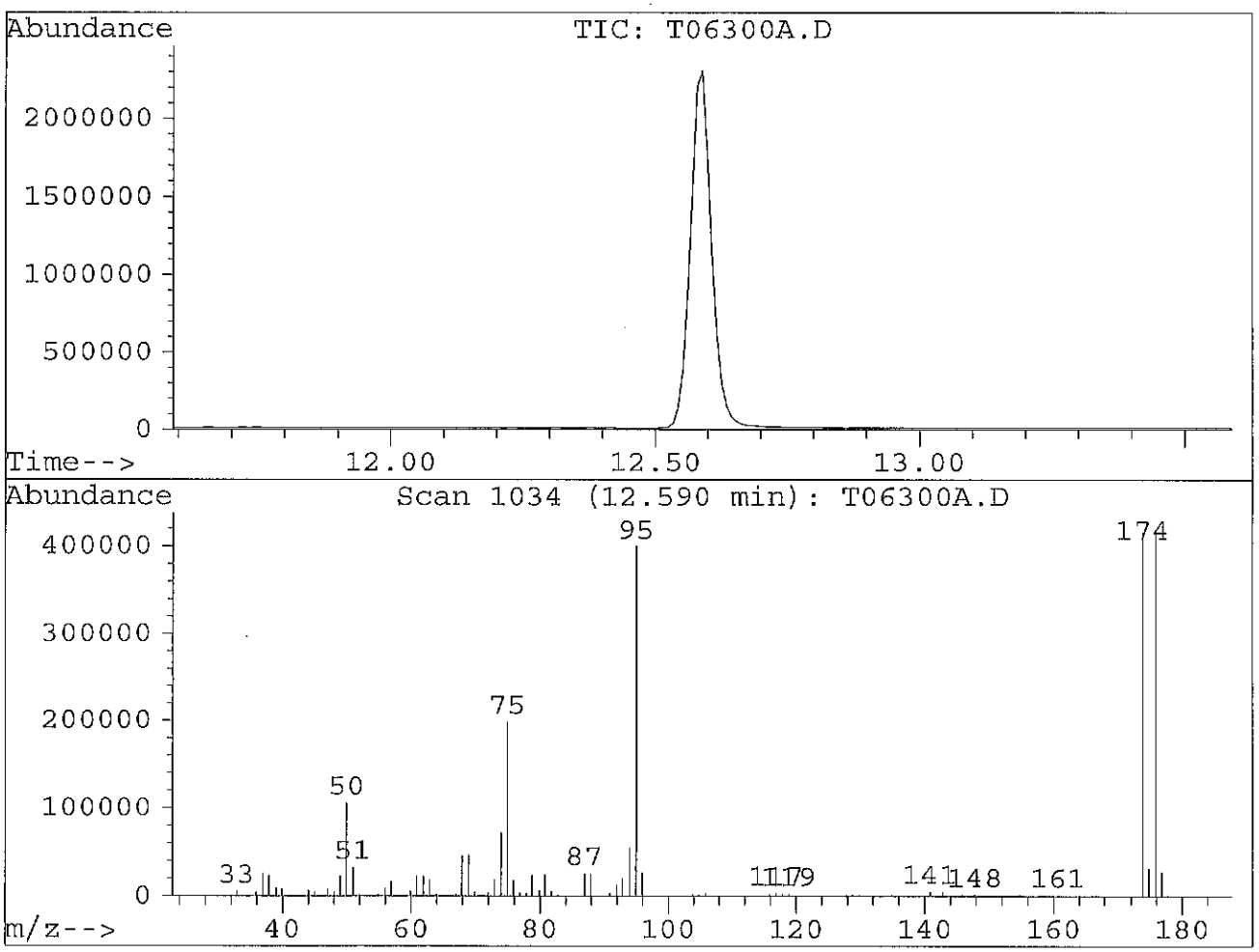
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Daily Analytical Batch #: 063010-MS2

BFB

Data File : C:\HPCHEM\1\DATA\06300MS2\T06300A.D
Acq Time : 30 Jun 110 8:20 am Operator: KB
Sample : BFB TUNE Inst : MS2
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2EXSIM_U.M
Title : EPA T0-15



Peak Apex is scan: 1034

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	26.3	105080	PASS
75	95	30	66	49.5	197696	PASS
95	95	100	100	100.0	399168	PASS
96	95	5	9	6.4	25744	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	104.2	415744	PASS
175	174	4	9	7.3	30488	PASS
176	174	93	101	99.7	414528	PASS
177	176	5	9	6.6	27232	PASS

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**
QC_Batch:	**063010-MS2**
Sample ID:	ST60421 + ST60550
Sample Analysis Date:	30 Jun 110 10:23 am
Run Method:	2EXSIM_U.M
Quant/Calibration Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms
Calibration Level	Level 6 1.0

Sample Calculation:

$$1)\ RFi = \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}\ i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Chloroform	11518	0.102	0.177	0.229	22.8	30	IN
Carbon tetrachloride	6917	0.102	0.106	0.128	16.8	30	IN
Trichloroethene	5646	0.103	0.086	0.125	31.2	30	OUT
Chlorobenzene-d5	127816	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	51785	0.200	0.405	0.469	13.7	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** C06300B

File Name:	C06300B.D			1 **SS**
Sample ID:	ST60421 + ST60550			2 **KB**
Date:	30 Jun 110 10:23 am	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.079	10.66	10.66	83.00	11518	65	52	78			
56-23-5	Carbon tetrachloride	4	0.085	12.66	12.66	116.90	6917	101	73	110			
79-01-6	Trichloroethene	5	0.071	14.26	14.26	130.00	5646	98	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**127816**						
2037-26-5	Toluene-d8	2	0.173	17.03	17.05	98.00	**51785**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**063010-MS2**	
File Name:	C06300B.D		**Instrument Name:**	MS2	
Sample ID:	ST60421 + ST60550				
Sample Analysis Date:	30 Jun 110 10:23 am			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**063010-MS2**
Sample ID:	ST60421 + ST60550
Sample Analysis Date:	30 Jun 110 10:23 am
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C06300

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.079	0.157	0.791	0.005	0.026	0.01	0.051	0.05	0.261		0.255
Carbon tetrachloride	154.0	0.085	0.170	1.104	0.005	0.026	0.01	0.066	0.05	0.338		0.255
Trichloroethene	131.0	0.071	0.142	0.784	0.005	0.026	0.01	0.057	0.05	0.288		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C06300**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	11518	0.200	127816	0.079	0.157	0.789
4	Carbon tetrachloride	1	TRG	154.0	0.128	6917	0.200	127816	0.085	0.170	1.106
5	Trichloroethene	1	TRG	131.0	0.125	5646	0.200	127816	0.071	0.142	0.786
1	Chlorobenzene-d5	1	IS	0.0	1.000	127816	0.200	127816	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	51785	0.200	127816	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: TO-15 SIM **Laboratory Number: B06300**

File:	B06300C.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	06/30/10	**Time:**	13:35
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.010	0.052	ND	0.051	0.261	ND	ND
56-23-5	Carbon tetrachloride	0.010	0.052	ND	0.066	0.338	ND	ND
79-01-6	Trichloroethene	0.010	0.052	ND	0.057	0.288	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.180	90	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** B06300C

File Name:	B06300C.D				1 **SS**
Sample ID:	METHOD BLANK				2 **KB**
Date:	30 Jun 110 1:35 pm		Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M		IS Areas		4 **BB**
Quant Method:	2NTHG_A.M		Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010				
Template:	northgte.ms				
Can Factor:	1.00				
Volume:	500	ml	Analyst:	SS	1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.004	10.66	10.66	83.00	155	63	52	78			
56-23-5	Carbon tetrachloride	4	0.002	12.63	12.66	116.90	39	39	73	110			
79-01-6	Trichloroethene	5	0.004	14.26	14.26	130.00	77	100	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**32819**						
2037-26-5	Toluene-d8	2	0.180	17.03	17.05	98.00	**13889**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**063010-MS2**	
File Name:	B06300C.D		**Instrument Name:**	MS2	
Sample ID:	METHOD BLANK				
Sample Analysis Date:	30 Jun 110 1:35 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**063010-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	30 Jun 110 1:35 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B06300

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.004	0.008	0.041	0.005	0.026	0.01	0.051	0.05	0.261	U	0.255
Carbon tetrachloride	154.0	0.002	0.004	0.024	0.005	0.026	0.01	0.066	0.05	0.338	U	0.255
Trichloroethene	131.0	0.004	0.008	0.042	0.005	0.026	0.01	0.057	0.05	0.288	U	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B06300**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	155	0.200	32819	0.004	0.008	0.040
4	Carbon tetrachloride	1	TRG	154.0	0.128	39	0.200	32819	0.002	0.004	0.026
5	Trichloroethene	1	TRG	131.0	0.125	77	0.200	32819	0.004	0.008	0.044
1	Chlorobenzene-d5	1	IS	0.0	1.000	32819	0.200	32819	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	13889	0.200	32819	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM

File: QC06300A.D
Description: ST60022
Can/Tube#:
Sam_Type: LCS
QC_Batch: 063010-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/30/10 **Time:** 11:24
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.213	0.000	0.213	84	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.226	0.000	0.226	89	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.217	0.000	0.217	84	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.180	90	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	**EAS Sample ID:** QC06300		
File Name:	QC06300A.D				1	**SS**
Sample ID:	ST60022				2	**KB**
Date:	30 Jun 110 11:24 am			Cal Amounts	3	**AT**
Run Method:	2EXSIM_U.M			IS Areas	4	**BB**
Quant Method:	2NTHG_A.M			Carryover	5	**SH**
Cal Update:	Sun Jul 04 13:43:39 2010					
Template:	northgte.ms					
Can Factor:	1.00					
Volume:	1000	ml		Analyst: SS	1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.213	10.65	10.66	83.00	53198	66	52	78			
56-23-5	Carbon tetrachloride	4	0.226	12.66	12.66	116.90	31425	98	73	110			
79-01-6	Trichloroethene	5	0.217	14.23	14.26	130.00	29539	97	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**218017**						
2037-26-5	Toluene-d8	2	0.180	17.03	17.05	98.00	**92100**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **063010-MS2**

File Name: QC06300A.D
Instrument Name: MS2
Sample ID: ST60022
Sample Analysis Date: 30 Jun 110 11:24 am
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**063010-MS2**
Sample ID:	ST60022
Sample Analysis Date:	30 Jun 110 11:24 am
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC06300

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.213	0.213	1.072	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.226	0.226	1.470	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.217	0.217	1.202	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC06300**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	53198	0.200	218017	0.213	0.213	1.070
4	Carbon tetrachloride	1	TRG	154.0	0.128	31425	0.200	218017	0.226	0.226	1.470
5	Trichloroethene	1	TRG	131.0	0.125	29539	0.200	218017	0.217	0.217	1.200
1	Chlorobenzene-d5	1	IS	0.0	1.000	218017	0.200	218017	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	92100	0.200	218017	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: **TO-15 SIM**

Dup File: QC06300B.D
Description: ST60022
Can/Tube#:
QC_Batch: 063010-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
67-66-3	Chloroform	0.234	0.213	8	25	
56-23-5	Carbon tetrachloride	0.235	0.226	4	25	
79-01-6	Trichloroethene	0.245	0.217	11	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: **TO-15 SIM**

File: QC06300B.D
Description: ST60022
Can/Tube#:
Sam_Type: LCD
QC_Batch: 063010-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 06/30/10 **Time:** 12:06
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.234	0.000	0.234	92	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.235	0.000	0.235	92	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.245	0.000	0.245	95	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.189	95	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** QC06300

File Name:	QC06300B.D			1 **SS**
Sample ID:	ST60022			2 **KB**
Date:	30 Jun 110 12:06 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	1000 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.234	10.60	10.66	83.00	38721	66	52	78			
56-23-5	Carbon tetrachloride	4	0.235	12.60	12.66	116.90	21633	96	73	110			
79-01-6	Trichloroethene	5	0.245	14.20	14.26	130.00	22069	100	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**144398**						
2037-26-5	Toluene-d8	2	0.189	17.00	17.05	98.00	**64174**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **063010-MS2**

File Name: QC06300B.D

Instrument Name: MS2

Sample ID: ST60022

Sample Analysis Date: 30 Jun 110 12:06 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **063010-MS2**
Sample ID: ST60022
Sample Analysis Date: 30 Jun 110 12:06 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC06300

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.234	0.234	1.178	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.235	0.235	1.528	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.245	0.245	1.356	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC06300**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) 1000 / (SV) (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	38721	0.200	144398	0.234	0.234	1.176
4	Carbon tetrachloride	1	TRG	154.0	0.128	21633	0.200	144398	0.235	0.235	1.528
5	Trichloroethene	1	TRG	131.0	0.125	22069	0.200	144398	0.245	0.245	1.355
1	Chlorobenzene-d5	1	IS	0.0	1.000	144398	0.200	144398	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	64174	0.200	144398	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 01**

File:	1025301A.D	**Date Sampled:**	06/21/10	**Time:**	7:45
Description:	IA-FO-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	687	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	21:02
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.02		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.105	0.265	0.104	0.528	1.332	
56-23-5	Carbon tetrachloride	0.021	0.105	0.221	0.134	0.683	1.437	
79-01-6	Trichloroethene	0.021	0.105	0.039	0.115	0.581	0.214	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.241	121	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025301

File Name:	1025301A.D		1 **SS**
Sample ID:	IA-FO-O1-001		2 **KB**
Date:	30 Jun 110 9:02 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.02		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.066	10.58	10.66	83.00	4452	65	52	78			
56-23-5	Carbon tetrachloride	4	0.055	12.60	12.66	116.90	2067	94	73	110			
79-01-6	Trichloroethene	5	0.010	14.20	14.26	130.00	354	106	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**59284**						
2037-26-5	Toluene-d8	2	0.241	17.00	17.05	98.00	**33582**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **063010-MS2**

File Name: 1025301A.D
Instrument Name: MS2
Sample ID: IA-FO-O1-001
Sample Analysis Date: 30 Jun 110 9:02 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**063010-MS2**
Sample ID:	IA-FO-O1-001
Sample Analysis Date:	30 Jun 110 9:02 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 01

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.02	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.066	0.265	1.332	0.005	0.026	0.02	0.104	0.11	0.528		0.255
Carbon tetrachloride	154.0	0.055	0.221	1.437	0.005	0.026	0.02	0.134	0.11	0.683		0.255
Trichloroethene	131.0	0.010	0.039	0.214	0.005	0.026	0.02	0.115	0.11	0.581	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**01**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.02
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	4452	0.200	59284	0.066	0.265	1.332
4	Carbon tetrachloride	1	TRG	154.0	0.128	2067	0.200	59284	0.055	0.221	1.437
5	Trichloroethene	1	TRG	131.0	0.125	354	0.200	59284	0.010	0.039	0.216
1	Chlorobenzene-d5	1	IS	0.0	1.000	59284	0.200	59284	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	33582	0.200	59284	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 17**

File:	1025317A.D	**Date Sampled:**	06/21/10	**Time:**	7:48
Description:	IA-U3-O2-001	**Date Received:**	06/23/10		
Can/Tube#:	184	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	14:28
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.87		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.097	0.258	0.096	0.489	1.296	
56-23-5	Carbon tetrachloride	0.019	0.097	0.113	0.124	0.632	0.733	
79-01-6	Trichloroethene	0.019	0.097	1.155	0.107	0.538	6.389	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.205	102	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025317

File Name:	1025317A.D		1 **SS**
Sample ID:	IA-U3-O2-001		2 **KB**
Date:	30 Jun 110 2:28 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	1.87		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.069	10.38	10.66	83.00	10089	63	52	78			
56-23-5	Carbon tetrachloride	4	0.030	11.67	12.66	116.90	2456	98	73	110			
79-01-6	Trichloroethene	5	0.309	14.09	14.26	130.00	24612	99	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.44	20.51	117.00	**127835**						
2037-26-5	Toluene-d8	2	0.205	16.95	17.05	98.00	**61379**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **063010-MS2**

File Name: 1025317A.D
Instrument Name: MS2
Sample ID: IA-U3-O2-001
Sample Analysis Date: 30 Jun 110 2:28 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **063010-MS2**
Sample ID: IA-U3-O2-001
Sample Analysis Date: 30 Jun 110 2:28 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 17

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.87	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.069	0.258	1.296	0.005	0.026	0.02	0.096	0.10	0.489		0.255
Carbon tetrachloride	154.0	0.030	0.113	0.733	0.005	0.026	0.02	0.124	0.10	0.632		0.255
Trichloroethene	131.0	0.309	1.155	6.389	0.005	0.026	0.02	0.107	0.10	0.538		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**17**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.87
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})}{(\text{SV})}\ (\text{STV})$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	10089	0.200	127835	0.069	0.258	1.297
4	Carbon tetrachloride	1	TRG	154.0	0.128	2456	0.200	127835	0.030	0.113	0.735
5	Trichloroethene	1	TRG	131.0	0.125	24612	0.200	127835	0.309	1.155	6.390
1	Chlorobenzene-d5	1	IS	0.0	1.000	127835	0.200	127835	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	61379	0.200	127835	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 18**

File:	1025318B.D	**Date Sampled:**	06/21/10	**Time:**	7:48
Description:	IA-U3-O2-002	**Date Received:**	06/23/10		
Can/Tube#:	990	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	16:44
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.104	0.397	0.103	0.523	1.997	
56-23-5	Carbon tetrachloride	0.020	0.104	0.129	0.133	0.676	0.838	
79-01-6	Trichloroethene	0.021	0.104	2.853	0.114	0.575	15.782	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.230	115	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025318

File Name:	1025318B.D			1 **SS**
Sample ID:	IA-U3-O2-002			2 **KB**
Date:	30 Jun 110 4:44 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	2.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.099	10.49	10.66	83.00	9449	67	52	78			
56-23-5	Carbon tetrachloride	4	0.032	12.52	12.66	116.90	1707	95	73	110			
79-01-6	Trichloroethene	5	0.713	14.15	14.26	130.00	36962	99	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**83126**						
2037-26-5	Toluene-d8	2	0.230	16.97	17.05	98.00	**44805**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **063010-MS2**

File Name: 1025318B.D
Instrument Name: MS2
Sample ID: IA-U3-O2-002
Sample Analysis Date: 30 Jun 110 4:44 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **063010-MS2**
Sample ID: IA-U3-O2-002
Sample Analysis Date: 30 Jun 110 4:44 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 18

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.099	0.397	1.997	0.005	0.026	0.02	0.103	0.10	0.523		0.255
Carbon tetrachloride	154.0	0.032	0.129	0.838	0.005	0.026	0.02	0.133	0.10	0.676		0.255
Trichloroethene	131.0	0.713	2.853	15.782	0.005	0.026	0.02	0.114	0.10	0.575		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**18**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	9449	0.200	83126	0.099	0.397	1.995
4	Carbon tetrachloride	1	TRG	154.0	0.128	1707	0.200	83126	0.032	0.129	0.839
5	Trichloroethene	1	TRG	131.0	0.125	36962	0.200	83126	0.713	2.853	15.783
1	Chlorobenzene-d5	1	IS	0.0	1.000	83126	0.200	83126	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	44805	0.200	83126	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 19**

File:	1025319A.D	**Date Sampled:**	06/21/10	**Time:**	7:32
Description:	IA-U3-O3-001	**Date Received:**	06/23/10		
Can/Tube#:	784	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	17:26
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.56		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.016	0.081	0.264	0.080	0.408	1.328	
56-23-5	Carbon tetrachloride	0.016	0.081	0.072	0.103	0.528	0.470	J
79-01-6	Trichloroethene	0.016	0.081	0.570	0.089	0.449	3.154	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.243	122	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025319

File Name:	1025319A.D		1 **SS**
Sample ID:	IA-U3-O3-001		2 **KB**
Date:	30 Jun 110 5:26 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	1.56		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.085	10.65	10.66	83.00	7055	64	52	78			
56-23-5	Carbon tetrachloride	4	0.023	12.66	12.66	116.90	1076	96	73	110			
79-01-6	Trichloroethene	5	0.183	14.23	14.26	130.00	8292	92	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**72790**						
2037-26-5	Toluene-d8	2	0.243	17.03	17.05	98.00	**41503**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **063010-MS2**

File Name: 1025319A.D

Instrument Name: MS2

Sample ID: IA-U3-O3-001

Sample Analysis Date: 30 Jun 110 5:26 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **063010-MS2**
Sample ID: IA-U3-O3-001
Sample Analysis Date: 30 Jun 110 5:26 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 19

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.56	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.085	0.264	1.328	0.005	0.026	0.02	0.080	0.08	0.408		0.255
Carbon tetrachloride	154.0	0.023	0.072	0.470	0.005	0.026	0.02	0.103	0.08	0.528	J	0.255
Trichloroethene	131.0	0.183	0.570	3.154	0.005	0.026	0.02	0.089	0.08	0.449		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**19**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.56
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	7055	0.200	72790	0.085	0.264	1.327
4	Carbon tetrachloride	1	TRG	154.0	0.128	1076	0.200	72790	0.023	0.072	0.468
5	Trichloroethene	1	TRG	131.0	0.125	8292	0.200	72790	0.183	0.570	3.153
1	Chlorobenzene-d5	1	IS	0.0	1.000	72790	0.200	72790	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	41503	0.200	72790	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 20**

File:	1025320A.D	**Date Sampled:**	06/21/10	**Time:**	7:46
Description:	IA-U3-O4-001	**Date Received:**	06/23/10		
Can/Tube#:	515	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	18:11
QC_Batch:	063010-MS2	**Can Dilution Factor:**	1.89		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.019	0.098	0.239	0.097	0.494	1.203	
56-23-5	Carbon tetrachloride	0.019	0.098	0.072	0.125	0.639	0.466	J
79-01-6	Trichloroethene	0.019	0.098	2.262	0.108	0.544	12.514	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.195	97	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025320

File Name:	1025320A.D			1 **SS**
Sample ID:	IA-U3-O4-001			2 **KB**
Date:	30 Jun 110 6:11 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.89			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.063	10.69	10.66	83.00	9886	68	52	78			
56-23-5	Carbon tetrachloride	4	0.019	12.68	12.66	116.90	1650	100	73	110			
79-01-6	Trichloroethene	5	0.598	14.25	14.26	130.00	50904	95	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**136435**						
2037-26-5	Toluene-d8	2	0.195	17.03	17.05	98.00	**62376**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **063010-MS2**

File Name: 1025320A.D
Instrument Name: MS2
Sample ID: IA-U3-O4-001
Sample Analysis Date: 30 Jun 110 6:11 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**063010-MS2**
Sample ID:	IA-U3-O4-001
Sample Analysis Date:	30 Jun 110 6:11 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 20

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.89	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.063	0.239	1.203	0.005	0.026	0.02	0.097	0.10	0.494		0.255
Carbon tetrachloride	154.0	0.019	0.072	0.466	0.005	0.026	0.02	0.125	0.10	0.639	J	0.255
Trichloroethene	131.0	0.598	2.262	12.514	0.005	0.026	0.02	0.108	0.10	0.544		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**20**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.89
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	9886	0.200	136435	0.063	0.239	1.201
4	Carbon tetrachloride	1	TRG	154.0	0.128	1650	0.200	136435	0.019	0.072	0.468
5	Trichloroethene	1	TRG	131.0	0.125	50904	0.200	136435	0.598	2.262	12.514
1	Chlorobenzene-d5	1	IS	0.0	1.000	136435	0.200	136435	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	62376	0.200	136435	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 21**

File:	1025321A.D	**Date Sampled:**	06/21/10	**Time:**	7:44
Description:	IA-U3-O5-001	**Date Received:**	06/23/10		
Can/Tube#:	519	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	18:56
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.01		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.105	0.229	0.103	0.525	1.149	
56-23-5	Carbon tetrachloride	0.021	0.105	0.046	0.133	0.680	0.299	J
79-01-6	Trichloroethene	0.021	0.105	2.133	0.115	0.578	11.802	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.182	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025321

File Name:	1025321A.D			1 **SS**
Sample ID:	IA-U3-O5-001			2 **KB**
Date:	30 Jun 110 6:56 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	2.01			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.057	9.92	10.66	83.00	14784	66	52	78			
56-23-5	Carbon tetrachloride	4	0.011	12.28	12.66	116.90	1657	100	73	110			
79-01-6	Trichloroethene	5	0.531	13.99	14.26	130.00	75180	100	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.40	20.51	117.00	**227234**						
2037-26-5	Toluene-d8	2	0.182	16.87	17.05	98.00	**97016**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **063010-MS2**

File Name: 1025321A.D

Instrument Name: MS2

Sample ID: IA-U3-O5-001

Sample Analysis Date: 30 Jun 110 6:56 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						Calibration Response, Area					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**063010-MS2**
Sample ID:	IA-U3-O5-001
Sample Analysis Date:	30 Jun 110 6:56 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 21

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.01	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.057	0.229	1.149	0.005	0.026	0.02	0.103	0.10	0.525		0.255
Carbon tetrachloride	154.0	0.011	0.046	0.299	0.005	0.026	0.02	0.133	0.10	0.680	J	0.255
Trichloroethene	131.0	0.531	2.133	11.802	0.005	0.026	0.02	0.115	0.10	0.578		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**21**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.01
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	14784	0.200	227234	0.057	0.229	1.151
4	Carbon tetrachloride	1	TRG	154.0	0.128	1657	0.200	227234	0.011	0.046	0.299
5	Trichloroethene	1	TRG	131.0	0.125	75180	0.200	227234	0.531	2.133	11.800
1	Chlorobenzene-d5	1	IS	0.0	1.000	227234	0.200	227234	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	97016	0.200	227234	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 22**

File:	1025322A.D	**Date Sampled:**	06/21/10	**Time:**	7:51
Description:	IA-U3-UF-001	**Date Received:**	06/23/10		
Can/Tube#:	407	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	19:37
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.18		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.113	ND	0.112	0.570	ND	ND
56-23-5	Carbon tetrachloride	0.022	0.113	ND	0.145	0.737	ND	ND
79-01-6	Trichloroethene	0.022	0.113	0.035	0.124	0.627	0.195	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.190	95	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025322

File Name:	1025322A.D		1 **SS**
Sample ID:	IA-U3-UF-001		2 **KB**
Date:	30 Jun 110 7:37 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.18		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.003	10.64	10.66	83.00	486	59	52	78			
56-23-5	Carbon tetrachloride	4	0.002	12.63	12.66	116.90	148	111	73	110			
79-01-6	Trichloroethene	5	0.008	14.23	14.26	130.00	727	96	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**143890**						
2037-26-5	Toluene-d8	2	0.190	17.03	17.05	98.00	**64145**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**063010-MS2**	
File Name:	1025322A.D		**Instrument Name:**	MS2	
Sample ID:	IA-U3-UF-001				
Sample Analysis Date:	30 Jun 110 7:37 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **063010-MS2**
Sample ID: IA-U3-UF-001
Sample Analysis Date: 30 Jun 110 7:37 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 22

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.18	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.003	0.013	0.065	0.005	0.026	0.02	0.112	0.11	0.570	U	0.255
Carbon tetrachloride	154.0	0.002	0.007	0.046	0.005	0.026	0.02	0.145	0.11	0.737	U	0.255
Trichloroethene	131.0	0.008	0.035	0.195	0.005	0.026	0.02	0.124	0.11	0.627	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**22**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.18
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	486	0.200	143890	0.003	0.013	0.065
4	Carbon tetrachloride	1	TRG	154.0	0.128	148	0.200	143890	0.002	0.007	0.046
5	Trichloroethene	1	TRG	131.0	0.125	727	0.200	143890	0.008	0.035	0.194
1	Chlorobenzene-d5	1	IS	0.0	1.000	143890	0.200	143890	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	64145	0.200	143890	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 23**

File:	1025323A.D	**Date Sampled:**	06/21/10	**Time:**	9:56
Description:	OA-U3-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	769	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	06/30/10	**Time:**	20:18
QC_Batch:	063010-MS2	**Can Dilution Factor:**	2.11		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.110	0.041	0.108	0.551	0.204	J
56-23-5	Carbon tetrachloride	0.022	0.110	0.085	0.140	0.714	0.550	J
79-01-6	Trichloroethene	0.022	0.110	0.071	0.120	0.607	0.393	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025323

File Name:	1025323A.D		1 **SS**
Sample ID:	OA-U3-AI-001		2 **KB**
Date:	30 Jun 110 8:18 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.11		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.010	10.65	10.66	83.00	818	60	52	78			
56-23-5	Carbon tetrachloride	4	0.020	12.66	12.66	116.90	951	97	73	110			
79-01-6	Trichloroethene	5	0.017	14.23	14.26	130.00	781	98	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**74445**						
2037-26-5	Toluene-d8	2	0.183	17.03	17.05	98.00	**31938**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**063010-MS2**	
File Name:	1025323A.D		**Instrument Name:**	MS2	
Sample ID:	OA-U3-AI-001				
Sample Analysis Date:	30 Jun 110 8:18 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**063010-MS2**
Sample ID:	OA-U3-AI-001
Sample Analysis Date:	30 Jun 110 8:18 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 23

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.11	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.010	0.041	0.204	0.005	0.026	0.02	0.108	0.11	0.551	J	0.255
Carbon tetrachloride	154.0	0.020	0.085	0.550	0.005	0.026	0.02	0.140	0.11	0.714	J	0.255
Trichloroethene	131.0	0.017	0.071	0.393	0.005	0.026	0.02	0.120	0.11	0.607	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**23**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.11
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	818	0.200	74445	0.010	0.041	0.206
4	Carbon tetrachloride	1	TRG	154.0	0.128	951	0.200	74445	0.020	0.085	0.553
5	Trichloroethene	1	TRG	131.0	0.125	781	0.200	74445	0.017	0.071	0.393
1	Chlorobenzene-d5	1	IS	0.0	1.000	74445	0.200	74445	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	31938	0.200	74445	0.000	0.000	0.000

Calculation Definitions:

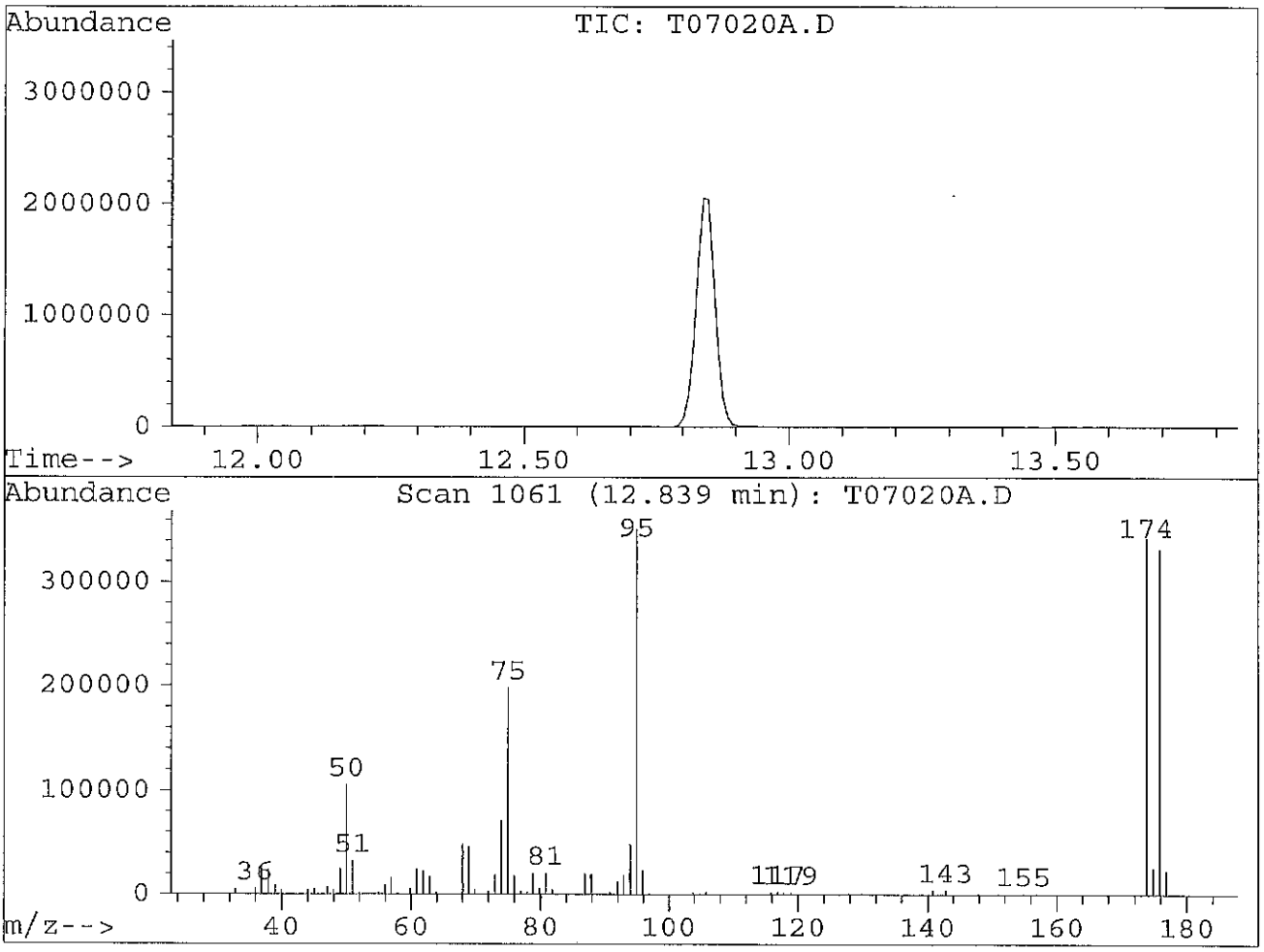
n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

Daily Analytical Batch #: 070210-MS2

BFB

Data File : C:\HPCHEM\1\DATA\07020MS2\T07020A.D
Acq Time : 2 Jul 110 7:59 am Operator: KB
Sample : BFB TUNE Inst : MS2
Misc : Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2EXSIM_U.M
Title : EPA T0-15



Peak Apex is scan: 1061

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	29.9	104872	PASS
75	95	30	66	56.3	197568	PASS
95	95	100	100	100.0	350784	PASS
96	95	5	9	6.6	22992	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	97.6	342208	PASS
175	174	4	9	7.4	25200	PASS
176	174	93	101	96.9	331648	PASS
177	176	5	9	6.8	22400	PASS

CONTINUING CALIBRATION REPORT

SDG:	**LABQC**	
QC_Batch:	**070210-MS2**	
Sample ID:	ST60421 + ST60550	
Sample Analysis Date:	2 Jul 110 9:26 am	
Run Method:	2EXSIM_U.M	
Quant/Calibration Method:	2NTHG_A.M	
Cal Update:	Sun Jul 04 13:43:39 2010	
Template:	northgte.ms	
Calibration Level	Level 6	1.0

Sample Calculation:

$$1)\ RFi = \frac{(Astdi)\ (Cistdi)}{(Cstdi)\ (Aistdi)}\ i$$

Compound	Area Astdi	Cal Level Cstdi ppbv	CCRRF	AvgRFn	%Dev	%Dev Limit	%Dev Flag
Chloroform	3503	0.102	0.196	0.229	14.5	30	IN
Carbon tetrachloride	2109	0.102	0.118	0.128	7.6	30	IN
Trichloroethene	1710	0.103	0.095	0.125	24.2	30	IN
Chlorobenzene-d5	35114	0.200	1.000	1.000	0.0	30	IN
Toluene-d8	14911	0.200	0.425	0.469	9.5	30	IN

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** C07020A

File Name:	C07020A.D			1 **SS**
Sample ID:	ST60421 + ST60550			2 **KB**
Date:	2 Jul 110 9:26 am	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.087	10.66	10.66	83.00	3503	64	52	78			
56-23-5	Carbon tetrachloride	4	0.094	12.66	12.66	116.90	2109	96	73	110			
79-01-6	Trichloroethene	5	0.078	14.26	14.26	130.00	1710	100	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**35114**						
2037-26-5	Toluene-d8	2	0.181	17.03	17.05	98.00	**14911**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**070210-MS2**	
File Name:	C07020A.D		**Instrument Name:**	MS2	
Sample ID:	ST60421 + ST60550				
Sample Analysis Date:	2 Jul 110 9:26 am			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070210-MS2**
Sample ID:	ST60421 + ST60550
Sample Analysis Date:	2 Jul 110 9:26 am
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: C07020

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.087	0.174	0.876	0.005	0.026	0.01	0.051	0.05	0.261		0.255
Carbon tetrachloride	154.0	0.094	0.188	1.225	0.005	0.026	0.01	0.066	0.05	0.338		0.255
Trichloroethene	131.0	0.078	0.156	0.864	0.005	0.026	0.01	0.057	0.05	0.288		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**C07020**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum [(Astdni) (Cistdi) / (Cstdni) (Aistdi)] i — Note: 1

2) Raw Amt = (Ansamp) / (Avg RFn) × (Cistdi) / (Aistdi) **= Cn**

3) Amount ppbv = (Raw Amt) × 1000 / (SV) × (CDF) × (STV)

4) Amount ug/m3 = (amt(ppbv) × MW / 23.68

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	3503	0.200	35114	0.087	0.174	0.874
4	Carbon tetrachloride	1	TRG	154.0	0.128	2109	0.200	35114	0.094	0.188	1.223
5	Trichloroethene	1	TRG	131.0	0.125	1710	0.200	35114	0.078	0.156	0.863
1	Chlorobenzene-d5	1	IS	0.0	1.000	35114	0.200	35114	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	14911	0.200	35114	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

METHOD BLANK REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: LABQC**
Analytical Method: TO-15 SIM **Laboratory Number: B07020**

File:	CC771A.D	**Date Sampled:**		**Time:**	
Description:	METHOD BLANK	**Date Received:**			
Can/Tube#:		**Date Extracted:**			
Sam_Type:	MB	**Date Analyzed:**	07/02/10	**Time:**	15:35
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.00		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.010	0.052	ND	0.051	0.261	ND	ND
56-23-5	Carbon tetrachloride	0.010	0.052	ND	0.066	0.338	ND	ND
79-01-6	Trichloroethene	0.010	0.052	ND	0.057	0.288	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.182	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** CC771A.

File Name:	CC771A.D			1 **SS**
Sample ID:	METHOD BLANK			2 **KB**
Date:	2 Jul 110 3:35 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.00			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.002	10.68	10.66	83.00	85	54	52	78			
56-23-5	Carbon tetrachloride	4	0.002	12.68	12.66	116.90	55	86	73	110			
79-01-6	Trichloroethene	5	0.002	14.25	14.26	130.00	47	96	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**38819**						
2037-26-5	Toluene-d8	2	0.182	17.05	17.05	98.00	**16594**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**LABQC**	
			QC_Batch:	**070210-MS2**	
File Name:	CC771A.D		**Instrument Name:**	MS2	
Sample ID:	METHOD BLANK				
Sample Analysis Date:	2 Jul 110 3:35 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**LABQC**
QC_Batch:	**070210-MS2**
Sample ID:	METHOD BLANK
Sample Analysis Date:	2 Jul 110 3:35 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: LABQC
Laboratory Number: B07020

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.002	0.004	0.019	0.005	0.026	0.01	0.051	0.05	0.261	U	0.255
Carbon tetrachloride	154.0	0.002	0.004	0.029	0.005	0.026	0.01	0.066	0.05	0.338	U	0.255
Trichloroethene	131.0	0.002	0.004	0.021	0.005	0.026	0.01	0.057	0.05	0.288	U	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**LABQC**
Laboratory Number:		**B07020**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	85	0.200	38819	0.002	0.004	0.020
4	Carbon tetrachloride	1	TRG	154.0	0.128	55	0.200	38819	0.002	0.004	0.026
5	Trichloroethene	1	TRG	131.0	0.125	47	0.200	38819	0.002	0.004	0.022
1	Chlorobenzene-d5	1	IS	0.0	1.000	38819	0.200	38819	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	16594	0.200	38819	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL SPIKE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM

File: QC07020A.D
Description: ST60022
Can/Tube#:
Sam_Type: LCS
QC_Batch: 070210-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/02/10 **Time:** 12:05
Can Dilution Factor: 1.00 3
QC Duplicate: No

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.250	0.000	0.250	98	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.252	0.000	0.252	99	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.263	0.000	0.263	102	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.191	96	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	**EAS Sample ID:** QC07020		
File Name:	QC07020A.D				1	**SS**
Sample ID:	ST60022				2	**KB**
Date:	2 Jul 110 12:05 pm			Cal Amounts	3	**AT**
Run Method:	2EXSIM_U.M			IS Areas	4	**BB**
Quant Method:	2NTHG_A.M			Carryover	5	**SH**
Cal Update:	Sun Jul 04 13:43:39 2010					
Template:	northgte.ms					
Can Factor:	1.00					
Volume:	1000	ml		Analyst: SS	1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.250	10.65	10.66	83.00	25699	67	52	78			
56-23-5	Carbon tetrachloride	4	0.252	12.66	12.66	116.90	14423	100	73	110			
79-01-6	Trichloroethene	5	0.263	14.23	14.26	130.00	14739	94	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**89749**						
2037-26-5	Toluene-d8	2	0.191	17.03	17.05	98.00	**40321**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	QC07020A.D		**Instrument Name:**	MS2	
Sample ID:	ST60022				
Sample Analysis Date:	2 Jul 110 12:05 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	ST60022
Sample Analysis Date:	2 Jul 110 12:05 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC07020

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.250	0.250	1.257	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.252	0.252	1.639	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.263	0.263	1.457	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC07020**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	25699	0.200	89749	0.250	0.250	1.256
4	Carbon tetrachloride	1	TRG	154.0	0.128	14423	0.200	89749	0.252	0.252	1.639
5	Trichloroethene	1	TRG	131.0	0.125	14739	0.200	89749	0.263	0.263	1.455
1	Chlorobenzene-d5	1	IS	0.0	1.000	89749	0.200	89749	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	40321	0.200	89749	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

QUALITY CONTROL DUPLICATE

ENVIRONMENTAL
Analytical Service, Inc.

Duplicate of QC Sample

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM

Dup File: QC07020B.D
Description: ST60022
Can/Tube#:
QC_Batch: 070210-MS2

CAS#	Compound	LCD ppbv	LCS ppbv	RPD %D	Limit %	Flag * = Out
67-66-3	Chloroform	0.220	0.250	12	25	
56-23-5	Carbon tetrachloride	0.222	0.252	12	25	
79-01-6	Trichloroethene	0.246	0.263	7	25	

QUALITY CONTROL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

LABORATORY CONTROL DUPLICATE

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: **TO-15 SIM**

File: QC07020B.D
Description: ST60022
Can/Tube#:
Sam_Type: LCD
QC_Batch: 070210-MS2
Air Volume: 1000 ml

Date Sampled: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 07/02/10 **Time:** 12:53
Can Dilution Factor: 1.00 3
QC Duplicate: Yes

CAS#	Compound	MDL ppbv	Spike Conc ppbv	Amount ppbv	Matrix Amt ppbv	Spk Amt ppbv	Percent Recovery	LCL %	UCL %	Flag
67-66-3	Chloroform	0.005	0.255	0.220	0.000	0.220	86	70	130	
56-23-5	Carbon tetrachloride	0.005	0.255	0.222	0.000	0.222	87	70	130	
79-01-6	Trichloroethene	0.005	0.258	0.246	0.000	0.246	95	70	130	

Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
Toluene-d8	0.200	0.183	92	70-130	

Notes: Reported results are to be interpreted to two significant figures.
*ug/m3 calculated assuming conditions at 60 F and 1 atm.

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			Review	EAS Sample ID: QC07020	
File Name:	QC07020B.D				1 **SS**
Sample ID:	ST60022				2 **KB**
Date:	2 Jul 110 12:53 pm			Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M			IS Areas	4 **BB**
Quant Method:	2NTHG_A.M			Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010				
Template:	northgte.ms				
Can Factor:	1.00				
Volume:	1000	ml		Analyst: SS	1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.220	10.66	10.66	83.00	11105	65	52	78			
56-23-5	Carbon tetrachloride	4	0.222	12.66	12.66	116.90	6247	98	73	110			
79-01-6	Trichloroethene	5	0.246	14.25	14.26	130.00	6770	101	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**44077**						
2037-26-5	Toluene-d8	2	0.183	17.03	17.05	98.00	**18933**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	QC07020B.D		**Instrument Name:**	MS2	
Sample ID:	ST60022				
Sample Analysis Date:	2 Jul 110 12:53 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **070210-MS2**
Sample ID: ST60022
Sample Analysis Date: 2 Jul 110 12:53 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: QC07020

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.00	
Air Volume:	1000	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.220	0.220	1.106	0.005	0.026	0.01	0.026	0.03	0.131		0.255
Carbon tetrachloride	154.0	0.222	0.222	1.446	0.005	0.026	0.01	0.033	0.03	0.169		0.255
Trichloroethene	131.0	0.246	0.246	1.363	0.005	0.026	0.01	0.028	0.03	0.144		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**QC07020**
Standard Volume	STV	1.0
Sample Volume	SV	1000
Can Dilution Factor	CDF	1.00
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)}{(Avg\ RFn)}\ \frac{(Cistdi)}{(Aistdi)}$ **= Cn**

3) Amount ppbv = (Raw Amt) $\frac{1000}{(SV)}$ (CDF) (STV)

4) Amount ug/m3 = (amt(ppbv) $\frac{MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	11105	0.200	44077	0.220	0.220	1.106
4	Carbon tetrachloride	1	TRG	154.0	0.128	6247	0.200	44077	0.222	0.222	1.444
5	Trichloroethene	1	TRG	131.0	0.125	6770	0.200	44077	0.246	0.246	1.361
1	Chlorobenzene-d5	1	IS	0.0	1.000	44077	0.200	44077	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	18933	0.200	44077	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 02**

File:	1025302A.D	**Date Sampled:**	06/21/10	**Time:**	10:16
Description:	OA-FO-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	662	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	21:10
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.28		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.023	0.119	0.043	0.117	0.596	0.217	J
56-23-5	Carbon tetrachloride	0.023	0.119	0.110	0.151	0.771	0.717	J
79-01-6	Trichloroethene	0.023	0.119	ND	0.130	0.656	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.188	94	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025302

File Name:	1025302A.D		1 **SS**
Sample ID:	OA-FO-AI-001		2 **KB**
Date:	2 Jul 110 9:10 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.28		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.009	10.41	10.66	83.00	531	63	52	78			
56-23-5	Carbon tetrachloride	4	0.024	12.44	12.66	116.90	754	96	73	110			
79-01-6	Trichloroethene	5	0.004	14.07	14.26	130.00	135	107	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.42	20.51	117.00	**48896**						
2037-26-5	Toluene-d8	2	0.188	16.92	17.05	98.00	**21604**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **070210-MS2**

File Name: 1025302A.D

Instrument Name: MS2

Sample ID: OA-FO-AI-001

Sample Analysis Date: 2 Jul 110 9:10 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	OA-FO-AI-001
Sample Analysis Date:	2 Jul 110 9:10 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 02

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.28	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.009	0.043	0.217	0.005	0.026	0.02	0.117	0.12	0.596	J	0.255
Carbon tetrachloride	154.0	0.024	0.110	0.717	0.005	0.026	0.02	0.151	0.12	0.771	J	0.255
Trichloroethene	131.0	0.004	0.020	0.112	0.005	0.026	0.02	0.130	0.12	0.656	U	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**02**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.28
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	531	0.200	48896	0.009	0.043	0.216
4	Carbon tetrachloride	1	TRG	154.0	0.128	754	0.200	48896	0.024	0.110	0.715
5	Trichloroethene	1	TRG	131.0	0.125	135	0.200	48896	0.004	0.020	0.111
1	Chlorobenzene-d5	1	IS	0.0	1.000	48896	0.200	48896	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	21604	0.200	48896	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 03**

File:	1025303A.D	**Date Sampled:**	06/21/10	**Time:**	7:53
Description:	IA-LB-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	698	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	21:52
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.94		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.101	0.475	0.099	0.507	2.388	
56-23-5	Carbon tetrachloride	0.020	0.101	0.217	0.129	0.656	1.413	
79-01-6	Trichloroethene	0.020	0.101	0.026	0.111	0.558	0.144	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.175	87	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025303

File Name:	1025303A.D		1 **SS**
Sample ID:	IA-LB-O1-001		2 **KB**
Date:	2 Jul 110 9:52 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	1.94		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.122	9.50	10.66	83.00	8355	68	52	78			
56-23-5	Carbon tetrachloride	4	0.056	11.75	12.66	116.90	2128	101	73	110			
79-01-6	Trichloroethene	5	0.007	13.56	14.26	130.00	249	101	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.26	20.51	117.00	**59618**						
2037-26-5	Toluene-d8	2	0.175	16.60	17.05	98.00	**24435**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	1025303A.D		**Instrument Name:**	MS2	
Sample ID:	IA-LB-O1-001				
Sample Analysis Date:	2 Jul 110 9:52 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	IA-LB-O1-001
Sample Analysis Date:	2 Jul 110 9:52 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 03

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.94	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.122	0.475	2.388	0.005	0.026	0.02	0.099	0.10	0.507		0.255
Carbon tetrachloride	154.0	0.056	0.217	1.413	0.005	0.026	0.02	0.129	0.10	0.656		0.255
Trichloroethene	131.0	0.007	0.026	0.144	0.005	0.026	0.02	0.111	0.10	0.558	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**03**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.94
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})}{(\text{SV})}\ (\text{STV})$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	8355	0.200	59618	0.122	0.475	2.387
4	Carbon tetrachloride	1	TRG	154.0	0.128	2128	0.200	59618	0.056	0.217	1.411
5	Trichloroethene	1	TRG	131.0	0.125	249	0.200	59618	0.007	0.026	0.144
1	Chlorobenzene-d5	1	IS	0.0	1.000	59618	0.200	59618	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	24435	0.200	59618	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 04**

File:	1025304A.D	**Date Sampled:**	06/21/10	**Time:**	7:52
Description:	IA-LB-O2-001	**Date Received:**	06/23/10		
Can/Tube#:	759	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	22:35
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.12		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.022	0.110	0.353	0.109	0.554	1.773	
56-23-5	Carbon tetrachloride	0.022	0.110	0.208	0.141	0.717	1.350	
79-01-6	Trichloroethene	0.022	0.110	0.038	0.121	0.610	0.209	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.176	88	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025304

File Name:	1025304A.D				1 **SS**
Sample ID:	IA-LB-O2-001				2 **KB**
Date:	2 Jul 110 10:35 pm		Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M		IS Areas		4 **BB**
Quant Method:	2NTHG_A.M		Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010				
Template:	northgte.ms				
Can Factor:	2.12				
Volume:	500	ml	Analyst:	SS	1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.083	10.40	10.66	83.00	3551	65	52	78			
56-23-5	Carbon tetrachloride	4	0.049	12.44	12.66	116.90	1164	100	73	110			
79-01-6	Trichloroethene	5	0.009	14.07	14.26	130.00	207	98	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.42	20.51	117.00	**37282**						
2037-26-5	Toluene-d8	2	0.176	16.92	17.05	98.00	**15372**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**
QC_Batch: **070210-MS2**

File Name: 1025304A.D
Instrument Name: MS2
Sample ID: IA-LB-O2-001
Sample Analysis Date: 2 Jul 110 10:35 pm
Number Compounds: 5
Run Method: 2EXSIM_U.M
IS1: ST60551 0.2
Quant and Calibration Method: 2NTHG_A.M
Calibration Title: EPA T0-15
IS2:
Cal Update: Sun Jul 04 13:43:39 2010
IS3:
Template: northgte.ms
IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	IA-LB-O2-001
Sample Analysis Date:	2 Jul 110 10:35 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 04

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.12	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.083	0.353	1.773	0.005	0.026	0.02	0.109	0.11	0.554		0.255
Carbon tetrachloride	154.0	0.049	0.208	1.350	0.005	0.026	0.02	0.141	0.11	0.717		0.255
Trichloroethene	131.0	0.009	0.038	0.209	0.005	0.026	0.02	0.121	0.11	0.610	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**04**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.12
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	3551	0.200	37282	0.083	0.353	1.774
4	Carbon tetrachloride	1	TRG	154.0	0.128	1164	0.200	37282	0.049	0.208	1.353
5	Trichloroethene	1	TRG	131.0	0.125	207	0.200	37282	0.009	0.038	0.210
1	Chlorobenzene-d5	1	IS	0.0	1.000	37282	0.200	37282	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	15372	0.200	37282	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 05**

File:	1025305A.D	**Date Sampled:**	06/21/10	**Time:**	10:04
Description:	OA-LB-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	214	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	17:41
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.26		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.023	0.118	0.068	0.116	0.591	0.341	J
56-23-5	Carbon tetrachloride	0.023	0.118	0.090	0.150	0.764	0.584	J
79-01-6	Trichloroethene	0.023	0.118	ND	0.129	0.650	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.182	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025305

File Name:	1025305A.D		1 **SS**
Sample ID:	OA-LB-AI-001		2 **KB**
Date:	2 Jul 110 5:41 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.26		
Volume:	500 ml	Analyst:	SS 1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.015	10.64	10.66	83.00	769	64	52	78			
56-23-5	Carbon tetrachloride	4	0.020	12.66	12.66	116.90	567	87	73	110			
79-01-6	Trichloroethene	5	0.002	14.23	14.26	130.00	55	86	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**44772**						
2037-26-5	Toluene-d8	2	0.182	17.03	17.05	98.00	**19160**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	1025305A.D		**Instrument Name:**	MS2	
Sample ID:	OA-LB-AI-001				
Sample Analysis Date:	2 Jul 110 5:41 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	OA-LB-AI-001
Sample Analysis Date:	2 Jul 110 5:41 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 05

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.26	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.015	0.068	0.341	0.005	0.026	0.02	0.116	0.12	0.591	J	0.255
Carbon tetrachloride	154.0	0.020	0.090	0.584	0.005	0.026	0.02	0.150	0.12	0.764	J	0.255
Trichloroethene	131.0	0.002	0.009	0.049	0.005	0.026	0.02	0.129	0.12	0.650	U	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**05**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.26
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	769	0.200	44772	0.015	0.068	0.342
4	Carbon tetrachloride	1	TRG	154.0	0.128	567	0.200	44772	0.020	0.090	0.585
5	Trichloroethene	1	TRG	131.0	0.125	55	0.200	44772	0.002	0.009	0.050
1	Chlorobenzene-d5	1	IS	0.0	1.000	44772	0.200	44772	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	19160	0.200	44772	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 06**

File:	1025306A.D	**Date Sampled:**	06/21/10	**Time:**	9:28
Description:	OA-U4-U5-001	**Date Received:**	06/23/10		
Can/Tube#:	732	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	18:23
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.94		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.101	0.029	0.099	0.507	0.147	J
56-23-5	Carbon tetrachloride	0.020	0.101	0.059	0.129	0.656	0.384	J
79-01-6	Trichloroethene	0.020	0.101	0.185	0.111	0.558	1.024	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.175	87	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025306

File Name:	1025306A.D			1 **SS**
Sample ID:	OA-U4-U5-001			2 **KB**
Date:	2 Jul 110 6:23 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	1.94			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.008	10.63	10.66	83.00	181	64	52	78			
56-23-5	Carbon tetrachloride	4	0.015	12.63	12.66	116.90	203	96	73	110			
79-01-6	Trichloroethene	5	0.048	14.23	14.26	130.00	622	103	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.49	20.51	117.00	**20922**						
2037-26-5	Toluene-d8	2	0.175	17.03	17.05	98.00	**8583**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	1025306A.D		**Instrument Name:**	MS2	
Sample ID:	OA-U4-U5-001				
Sample Analysis Date:	2 Jul 110 6:23 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	OA-U4-U5-001
Sample Analysis Date:	2 Jul 110 6:23 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 06

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.94	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.008	0.029	0.147	0.005	0.026	0.02	0.099	0.10	0.507	J	0.255
Carbon tetrachloride	154.0	0.015	0.059	0.384	0.005	0.026	0.02	0.129	0.10	0.656	J	0.255
Trichloroethene	131.0	0.048	0.185	1.024	0.005	0.026	0.02	0.111	0.10	0.558		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**06**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.94
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	181	0.200	20922	0.008	0.029	0.146
4	Carbon tetrachloride	1	TRG	154.0	0.128	203	0.200	20922	0.015	0.059	0.384
5	Trichloroethene	1	TRG	131.0	0.125	622	0.200	20922	0.048	0.185	1.023
1	Chlorobenzene-d5	1	IS	0.0	1.000	20922	0.200	20922	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	8583	0.200	20922	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 07**

File:	1025307A.D	**Date Sampled:**	06/21/10	**Time:**	10:03
Description:	OA-UW-00-001	**Date Received:**	06/23/10		
Can/Tube#:	708	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	19:05
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.08		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.021	0.108	0.086	0.107	0.544	0.430	J
56-23-5	Carbon tetrachloride	0.021	0.108	0.036	0.138	0.703	0.232	J
79-01-6	Trichloroethene	0.021	0.108	ND	0.119	0.598	ND	ND

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.166	83	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025307

File Name:	1025307A.D		1 **SS**
Sample ID:	OA-UW-00-001		2 **KB**
Date:	2 Jul 110 7:05 pm	Cal Amounts	3 **AT**
Run Method:	2EXSIM_U.M	IS Areas	4 **BB**
Quant Method:	2NTHG_A.M	Carryover	5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010		
Template:	northgte.ms		
Can Factor:	2.08		
Volume:	500 ml	Analyst: SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.021	10.54	10.66	83.00	795	67	52	78			
56-23-5	Carbon tetrachloride	4	0.009	12.58	12.66	116.90	185	90	73	110			
79-01-6	Trichloroethene	5	0.003	14.18	14.26	130.00	62	42	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.46	20.51	117.00	**33777**						
2037-26-5	Toluene-d8	2	0.166	17.00	17.05	98.00	**13174**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

			SDG:	**210253**	
			QC_Batch:	**070210-MS2**	
File Name:	1025307A.D		**Instrument Name:**	MS2	
Sample ID:	OA-UW-00-001				
Sample Analysis Date:	2 Jul 110 7:05 pm			Number Compounds:	5
Run Method:	2EXSIM_U.M			IS1: ST60551	0.2
Quant and Calibration Method:	2NTHG_A.M	Calibration Title: EPA T0-15		IS2:	
Cal Update:	Sun Jul 04 13:43:39 2010			IS3:	
Template:	northgte.ms			IS4:	

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	OA-UW-00-001
Sample Analysis Date:	2 Jul 110 7:05 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 07

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.08	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.021	0.086	0.430	0.005	0.026	0.02	0.107	0.11	0.544	J	0.255
Carbon tetrachloride	154.0	0.009	0.036	0.232	0.005	0.026	0.02	0.138	0.11	0.703	J	0.255
Trichloroethene	131.0	0.003	0.012	0.068	0.005	0.026	0.02	0.119	0.11	0.598	U	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**07**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.08
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	795	0.200	33777	0.021	0.086	0.432
4	Carbon tetrachloride	1	TRG	154.0	0.128	185	0.200	33777	0.009	0.036	0.234
5	Trichloroethene	1	TRG	131.0	0.125	62	0.200	33777	0.003	0.012	0.066
1	Chlorobenzene-d5	1	IS	0.0	1.000	33777	0.200	33777	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	13174	0.200	33777	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 08**

File:	1025308A.D	**Date Sampled:**	06/21/10	**Time:**	7:45
Description:	IA-AB-O1-001	**Date Received:**	06/23/10		
Can/Tube#:	606	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	19:46
QC_Batch:	070210-MS2	**Can Dilution Factor:**	1.92		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.020	0.100	0.105	0.098	0.502	0.530	
56-23-5	Carbon tetrachloride	0.020	0.100	0.172	0.127	0.649	1.120	
79-01-6	Trichloroethene	0.020	0.100	0.511	0.109	0.552	2.827	

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.180	90	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025308

File Name:	1025308A.D				1 **SS**
Sample ID:	IA-AB-O1-001				2 **KB**
Date:	2 Jul 110 7:46 pm		Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M		IS Areas		4 **BB**
Quant Method:	2NTHG_A.M		Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010				
Template:	northgte.ms				
Can Factor:	1.92				
Volume:	500	ml	Analyst:	SS	1

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.027	10.22	10.66	83.00	1155	75	52	78			
56-23-5	Carbon tetrachloride	4	0.045	12.31	12.66	116.90	1051	97	73	110			
79-01-6	Trichloroethene	5	0.133	13.99	14.26	130.00	3049	98	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.40	20.51	117.00	**36748**						
2037-26-5	Toluene-d8	2	0.180	16.87	17.05	98.00	**15540**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **070210-MS2**

File Name: 1025308A.D

Instrument Name: MS2

Sample ID: IA-AB-O1-001

Sample Analysis Date: 2 Jul 110 7:46 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG:	**210253**
QC_Batch:	**070210-MS2**
Sample ID:	IA-AB-O1-001
Sample Analysis Date:	2 Jul 110 7:46 pm
Run Method:	2EXSIM_U.M
Quant Method:	2NTHG_A.M
Cal Update:	Sun Jul 04 13:43:39 2010
Template:	northgte.ms

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ i

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 08

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	1.92	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.027	0.105	0.530	0.005	0.026	0.02	0.098	0.10	0.502		0.255
Carbon tetrachloride	154.0	0.045	0.172	1.120	0.005	0.026	0.02	0.127	0.10	0.649		0.255
Trichloroethene	131.0	0.133	0.511	2.827	0.005	0.026	0.02	0.109	0.10	0.552		0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**08**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	1.92
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = Sum $\frac{(Astdni)\ (Cistdi)}{(Cstdni)\ (Aistdi)}$ Note: 1 i

2) Raw Amt = $\frac{(Ansamp)\ (Cistdi)}{(Avg\ RFn)\ (Aistdi)}$ **= Cn**

3) Amount ppbv = $\frac{(Raw\ Amt)\ 1000\ (CDF)\ (STV)}{(SV)}$

4) Amount ug/m3 = $\frac{(amt(ppbv)\ MW}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	1155	0.200	36748	0.027	0.105	0.528
4	Carbon tetrachloride	1	TRG	154.0	0.128	1051	0.200	36748	0.045	0.172	1.119
5	Trichloroethene	1	TRG	131.0	0.125	3049	0.200	36748	0.133	0.511	2.827
1	Chlorobenzene-d5	1	IS	0.0	1.000	36748	0.200	36748	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	15540	0.200	36748	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

ANALYTICAL REPORT

ENVIRONMENTAL
Analytical Service, Inc.

EPA Method TO-15 Modified SIM GC/MS **SDG: 210253**
Analytical Method: TO-15 SIM **Laboratory Number: 09**

File:	1025309A.D	**Date Sampled:**	06/21/10	**Time:**	9:35
Description:	OA-AB-AI-001	**Date Received:**	06/23/10		
Can/Tube#:	157	**Date Extracted:**			
Sam_Type:	SA	**Date Analyzed:**	07/02/10	**Time:**	20:28
QC_Batch:	070210-MS2	**Can Dilution Factor:**	2.40		3
Air Volume:	500 ml	**Not Detected Flag:**	ND		

CAS#	Compound	MDL ppbv	RL ppbv	Amount ppbv	MDL ug/m3	RL ug/m3	Amount ug/m3	Flag
67-66-3	Chloroform	0.024	0.125	0.042	0.123	0.627	0.209	J
56-23-5	Carbon tetrachloride	0.024	0.125	0.105	0.159	0.812	0.683	J
79-01-6	Trichloroethene	0.025	0.125	0.038	0.137	0.690	0.209	J

	Surrogate Recovery	Spike Amt. ppbV	Amount ppbV	% Rec.	QC Limits	Flag * = Out
2037-26-5	Toluene-d8	0.200	0.183	91	70-130	

Notes: 1) Reported results are to be interpreted to two significant figures.
2) ug/m3 = ppbV*FW/23.68 calculated assuming conditions at 60 F and 1 atm.
3) MDL and RL are adjusted for sample volume and can dilution.
4) U and ND are Flags used for Not Detected
5) J is a flag for a result between the MDL and the RL (or lower quantitation limit, LQL)

QUANTITATION REPORT

EPA Method TO-15 Modified SIM GC/MS

Review **EAS Sample ID:** 1025309

File Name:	1025309A.D			1 **SS**
Sample ID:	OA-AB-AI-001			2 **KB**
Date:	2 Jul 110 8:28 pm	Cal Amounts		3 **AT**
Run Method:	2EXSIM_U.M	IS Areas		4 **BB**
Quant Method:	2NTHG_A.M	Carryover		5 **SH**
Cal Update:	Sun Jul 04 13:43:39 2010			
Template:	northgte.ms			
Can Factor:	2.40			
Volume:	500 ml	Analyst:	SS 1	

CAS#	Compound	n	Raw Amount	RT	Target RT	Ion	Sample Area	Qualifier	Lower Qual	Upper Qual	**Qual Flag**	**Cal Flag**	**Int Flag**
67-66-3	Chloroform	3	0.009	10.44	10.66	83.00	507	63	52	78			
56-23-5	Carbon tetrachloride	4	0.022	12.47	12.66	116.90	714	95	73	110			
79-01-6	Trichloroethene	5	0.008	14.10	14.26	130.00	251	99	76	114			
3114-55-4	Chlorobenzene-d5	1	0.200	20.44	20.51	117.00	**51205**						
2037-26-5	Toluene-d8	2	0.183	16.95	17.05	98.00	**21948**						

Integration Flags:

If no flag, the Integration was done by the instrument computer

M1 Manual Integration because the computer did not integrated the peak or integrated the wrong peak

M2 Manual Integration because computer integration of baseline was different than Initial Calibration

INITIAL CALIBRATION REPORT

EPA Method TO-15 Modified SIM GC/MS

SDG: **210253**

QC_Batch: **070210-MS2**

File Name: 1025309A.D

Instrument Name: MS2

Sample ID: OA-AB-AI-001

Sample Analysis Date: 2 Jul 110 8:28 pm

Number Compounds: 5

Run Method: 2EXSIM_U.M

IS1: ST60551 0.2

Quant and Calibration Method: 2NTHG_A.M

Calibration Title: EPA T0-15

IS2:

Cal Update: Sun Jul 04 13:43:39 2010

IS3:

Template: northgte.ms

IS4:

		Calibration Amount CA, ppmv						**Calibration Response, Area**					
		Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
		Amt	Amt	Amt	Amt	Amt	Amt	C06240G.D	C06240H.D	C06240D.D	C06250C.D	C06240C.D	C06250A.D
n	Compound	0.25	0.5	2.0	5.0	4.0	1.0	0.25	0.5	2.0	5.0	4.0	1.0
3	Chloroform	0.026	0.051	0.204	0.510	0.408	0.102	16260	26187	31302	184259	150796	44523
4	Carbon tetrachloride	0.026	0.051	0.204	0.510	0.408	0.102	7333	12851	19879	121264	100455	24384
5	Trichloroethene	0.026	0.052	0.206	0.515	0.412	0.103	9310	15082	16546	94596	80239	24451
1	Chlorobenzene-d5	0.200	0.200	0.200	0.200	0.200	0.200	385890	388495	151659	407017	396713	399358
2	Toluene-d8	0.200	0.200	0.200	0.200	0.200	0.200	179207	182116	72057	189836	188151	186243

INITIAL CALIBRATION REPORT: Response Factors

SDG: **210253**
QC_Batch: **070210-MS2**
Sample ID: OA-AB-AI-001
Sample Analysis Date: 2 Jul 110 8:28 pm
Run Method: 2EXSIM_U.M
Quant Method: 2NTHG_A.M
Cal Update: Sun Jul 04 13:43:39 2010
Template: northgte.ms

Sample Calculation:

$$1)\ \text{Avg RFn} = \text{Sum}\ \frac{(\text{Astdni})\ (\text{Cistdi})}{(\text{Cstdni})\ (\text{Aistdi})}\ i$$

Response Factors

Compound	RF1	RF2	RF3	RF4	RF5	RF6	AvgRFn	%RSD
Chloroform	0.324	0.264	0.202	0.178	0.186	0.219	0.229	24.39
Carbon tetrachloride	0.146	0.130	0.129	0.117	0.124	0.120	0.128	8.15
Trichloroethene	0.186	0.149	0.106	0.090	0.098	0.119	0.125	29.11
Chlorobenzene-d5	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.00
Toluene-d8	0.464	0.469	0.475	0.466	0.474	0.466	0.469	0.95

CALCULATIONS

EPA Method TO-15 Modified SIM GC/MS

SDG: 210253
Laboratory Number: 09

RL:	2NTHG_A.M	
Run Method:	2EXSIM_U.M	
Quant Method:	2NTHG_A.M	
Can Dilution Factor:	2.40	
Air Volume:	500	ml
Gas Constant:	23.68	
Decimal Places:	3	

Compound	M.W.	Raw Amount	Result ppbv	Result ug/m3	(1) MDL ppbv	(2) RL ppbv	Calc MDL ppbv	Calc MDL ug/m3	Calc RL ppbv	Calc RL ug/m3	Flag	Spike ppmv
Chloroform	119.0	0.009	0.042	0.209	0.005	0.026	0.02	0.123	0.12	0.627	J	0.255
Carbon tetrachloride	154.0	0.022	0.105	0.683	0.005	0.026	0.02	0.159	0.12	0.812	J	0.255
Trichloroethene	131.0	0.008	0.038	0.209	0.005	0.026	0.02	0.137	0.12	0.690	J	0.2575

SAMPLE CALCULATION

EPA Method TO-15 Modified SIM GC/MS

SDG:		**210253**
Laboratory Number:		**09**
Standard Volume	STV	1.0
Sample Volume	SV	500
Can Dilution Factor	CDF	2.40
Gas Constant		23.68
Decimal Places:		3

Sample Calculation:

1) Avg RFn = $\frac{\text{Sum}\ \frac{(\text{Astdni})}{(\text{Cstdni})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}}{i}$ Note: 1

2) Raw Amt = $\frac{(\text{Ansamp})}{(\text{Avg RFn})}\ \frac{(\text{Cistdi})}{(\text{Aistdi})}$ **= Cn**

3) Amount ppbv = $\frac{(\text{Raw Amt})\ 1000\ (\text{CDF})\ (\text{STV})}{(\text{SV})}$

4) Amount ug/m3 = $\frac{(\text{amt(ppbv)}\ \text{MW}}{23.68}$

n	Compound	IS n	Chem type	MW	AvgRFn	Area Ansamp	Cistdi ppmv	Aistdi Ais	**Cn** ppmV Raw Amt	Amount ppbv	Amount ug/m3
3	Chloroform	1	TRG	119.0	0.229	507	0.200	51205	0.009	0.042	0.211
4	Carbon tetrachloride	1	TRG	154.0	0.128	714	0.200	51205	0.022	0.105	0.683
5	Trichloroethene	1	TRG	131.0	0.125	251	0.200	51205	0.008	0.038	0.210
1	Chlorobenzene-d5	1	IS	0.0	1.000	51205	0.200	51205	0.000	0.000	0.000
2	Toluene-d8	1	SURR	0.0	0.469	21948	0.200	51205	0.000	0.000	0.000

Calculation Definitions:

n	compound n
i	i th calibration level
Astdni	Standard Area for compound n at ith calibration level
Cstdni	Standard Concentration for compound n at ith calibration level in ppmv
Cistdi	Internal Standard Conc used for compound n at ith calibration level in ppmv
Aistdi	Internal Standard Area used for compound n at ith calibration level
Ansamp	Sample Area for compound n
Avg RFn	Average response factor for all ith calibration levels for compound n
Raw Amount	Sample Concentration in ppmv before applying factors
Cistd	Concentration internal standard used for compound n in sample in ppmv
Aistd	Area of internal standard used for compound n in sample
Cn	Concentration of compound n in sample in ppmv
23.68	Gas constant at 60 F as per EPA source test protocol
MW	Molecular weight of compound
Note (1) : Avg RFn	The values for the Average Response Factor AvgRFn can be optained from the response Factor Report for the Initial Calibration, or from the Calibration Report

SECTION 5
Sample Delivery Group Information

5.1: Instrument Daily Analytical Batch Run Logs and Initial Calibration Run Logs

Daily Analytical Batch

Method: BFB_A **DAB:** 062910-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06290A		BFB TUNE		500	062910-MS2	KB	OK	BFB_A	
02	STD	LABQC		C06290A		ST60421	ST60534	1.0	062910-MS2	CM	NG	2EXSIM_U	
03	BLK	LABQC		B06290A		HUMID AIR BLANK		200	062910-MS2	CM	OK	2EXSIM_U	
04	STD	LABQC		C06290B		ST60421	ST60534	1.0	062910-MS2	CM	OK	2EXSIM_U	
05	SPK	LABQC		QC06290A		ST60022		0.25	062910-MS2	CM	OK	2EXSIM_U	
06	SPK	LABQC		QC06290B		ST60022		0.25	062910-MS2	CM	OK	2EXSIM_U	
07	BLK	LABQC		B06290B		HUMID AIR BLANK		200	062910-MS2	CM	OK	2EXSIM_U	
08	BLK	LABQC		B06290C		METHOD BLANK		200	062910-MS2	CM	OK	2EXSIM_U	
09	SA	210253	10	1025310A	661	OA-AB-AI-002	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
10	SA	210253	11	1025311A	647	IA-WH-SA-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
11	SA	210253	12	1025312A	650	OA-WH-AI-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
12	SA	210253	13	1025313A	783	IA-BP-CR-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
13	SA	210253	14	1025314A	2965	IA-BP-SO-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
14	SA	210253	15	1025315A	685	IA-SP-CR-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
15	SA	210253	16	1025316A	213	IA-U3-O1-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
16	SA	210253	17	1025317A	184	IA-U3-O2-001	NORTHGATE	500	062910-MS2	JF	OK	2EXSIM_U	
17	STD	LABQC		C06290C		ST60421	ST60550	1.0	062910-MS2	JF		2EXSIM_U	

Daily Analytical Batch

Method: BFB_A **DAB:** 063010-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T06300A		BFB TUNE		200	063010-MS2	KB	OK	BFB_A	
02	STD	LABQC		C06300A		ST60421	ST60550	1.0	063010-MS2	KB	NG	2EXSIM_U	
03	BLK	LABQC		B06300A		HUMID AIR BLANK		200	063010-MS2	CM	OK	2EXSIM_U	
04	STD	LABQC		C06300B		ST60421	ST60550	1.0	063010-MS2	CM	OK	2EXSIM_U	
05	SPK	LABQC		QC06300A		ST60022		0.25	063010-MS2	CM	OK	2EXSIM_U	
06	SPK	LABQC		QC06300B		ST60022		0.25	063010-MS2	CM	OK	2EXSIM_U	
07	BLK	LABQC		B06300B		HUMID AIR BLANK		200	063010-MS2	CM	OK	2EXSIM_U	
08	BLK	LABQC		B06300C		METHOD BLANK		500	063010-MS2	CM	OK	2EXSIM_U	
09	SA	210253	17	1025317A	184	IA-U3-O2-001	NORTHGATE	500	063010-MS2	CM	OK	2EXSIM_U	
10	SA	210253	18	1025318A	990	IA-U3-O2-002	NORTHGATE	500	063010-MS2	JF	NG	2EXSM_U	POWER OUT
11	SA	210253	18	1025318B	990	IA-U3-O2-002	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
12	SA	210253	19	1025319A	784	IA-U3-O3-001	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
13	SA	210253	20	1025320A	515	IA-U3-O4-001	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
14	SA	210253	21	1025321A	519	IA-U3-O5-001	NORTHGATE	500	063010-MS2	KB	OK	2EXSIM_U	
15	SA	210253	22	1025322A	407	IA-U3-UF-001	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
16	SA	210253	23	1025323A	769	OA-U3-AI-001	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
17	SA	210253	01	1025301A	687	IA-FO-O1-001	NORTHGATE	500	063010-MS2	JF	OK	2EXSIM_U	
18	STD	LABQC		C06300C		ST60421	ST60550	~~1.0~~ 2.0	063010-MS2	JF		2EXSIM_U	

KB 6/30/10

Daily Analytical Batch

Method: BFB_A **DAB:** 070210-MS2

RUN	TYPE	SDG or LABQC	ID	File ID	Can	Description	Client	Vol	DAB	Tech	Qual	Method	Comments
01	TUNE	LABQC		T07020A		BFB TUNE		500	070210-MS2	JF	OK	BFB_A	
02	BLK	LABQC		B07020A		HUMID AIR		200	070210-MS2	JF	OK	2EXSIM_U	
03	STD	LABQC		C07020A		ST60421	ST60550	1.0	070210-MS2	JF	~~NG~~	2EXSIM_U	OK
04	STD	LABQC		C07020B		ST60421	ST60550	1.0	070210-MS2	JF	NG	2EXSIM_U	MISLOAD
05	STD	LABQC		C07020C		ST60421	ST60550	1.0	070210-MS2	JF	OK	2EXSIM_U	
06	SPK	LABQC		QC07020A		ST60022		0.25	070210-MS2	JF	OK	2EXSIM_U	
07	SPK	LABQC		QC07020B		ST60022		0.25	070210-MS2	JF	OK	2EXSIM_U	
08	BLK	LABQC		B07020B		HUMID AIR BLANK		200	070210-MS2	JF	NG	2EXSIM_U	MS HALTED
09	CC	LABQC		CC3791A	3791	3791	070110B	500	070210-MS2	CM	OK	2EXSIM_U	
10	CC	LABQC		CC532A	532	532	070110C	500	070210-MS2	CM	OK	2EXSIM_U	
11	CC	LABQC		CC771A	771	771	070210A	500	070210-MS2	CM	OK	2EXSIM_U	
12	SA	210260	04	1026004A	652	3	CHWM	500	070210-MS2	JF	OK	2EXSIM_U	
13	SA	210260	05	1026005A	877	1B	CHWM	500	070210-MS2	JF	OK	2EXSIM_U	
14	SA	210253	05	1025305A	214	OA-LB-AI-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
15	SA	210253	06	1025306A	732	OA-U4-U5-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
16	SA	210253	07	1025307A	708	OA-UW-00-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
17	SA	210253	08	1025308A	606	IA-AB-O1-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
18	SA	210253	09	1025309A	157	OA-AB-AI-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
19	SA	210253	02	1025302A	662	OA-FO-AI-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
20	SA	210253	03	1025303A	698	IA-LB-O1-001	NORTHGATE	500	070210-MS2	CM	OK	2EXSIM_U	
21	SA	210253	04	1025304A	759	IA-LB-O1-001	NORTHGATE	500	070210-MS2	CM		2EXSIM_U	

5.2: Sample Preparation Logs

5.3: Shipping Receipts, Correspondence, Phone Logs

Environmental
ANALYTICAL SERVICE, INC.

PACKING SLIP

Project Manager:

Maile Smith
Northgate Environmental Management
300 Frank H. Ogawa, Suite 510
Oakland CA 94612
510-839-0688 ext 223

Ship To: **PS NO:** 8511

Jim Caroline c/o Suzan Crowley
Tronox LLC
560 West Lake Mead Pkwy
Henderson NV 89105
510-504-6927

Quote: 16102 **Order Date:** 6/11/2010 **Due Date:** 6/18/2010 **Ship Date:** 6/16/2010

Carrier: UPS Ground **Bill Client:** **Account:**

Airbill Number: **Order Status** Completed

Item	Quan	Description	ID	Equipment Clean Batch	Return	SDG	Date Returned
1	1	SUMMA Canister, 6L	662	061110D	Yes	210253	6/23/2010
2	1	SUMMA Canister, 6L	519	061110D	Yes	210253	6/23/2010
3	1	SUMMA Canister, 6L	732	061110D	Yes	210253	6/23/2010
4	1	SUMMA Canister, 6L	214	061110B	Yes	210253	6/23/2010
5	1	SUMMA Canister, 6L	650	061110D	Yes	210253	6/23/2010
6	1	SUMMA Canister, 6L	184	061110D	Yes	210253	6/23/2010
7	1	SUMMA Canister, 6L	789	061110D	Yes	210253	6/23/2010
8	1	SUMMA Canister, 6L	407	061110D	Yes	210253	6/23/2010
9	1	SUMMA Canister, 6L	606	060410A	Yes	210253	6/23/2010
10	1	SUMMA Canister, 6L	661	060410A	Yes	210253	6/23/2010
11	1	SUMMA Canister, 6L	213	060410A	Yes	210253	6/23/2010
12	1	SUMMA Canister, 6L	746	060410A	Yes	210253	6/23/2010
13	1	SUMMA Canister, 6L	990	060410B	Yes	210253	6/23/2010
14	1	SUMMA Canister, 6L	157	060410A	Yes	210253	6/23/2010
15	1	SUMMA Canister, 6L	728	060410A	Yes	210253	6/23/2010
16	1	SUMMA Canister, 6L	783	060410B	Yes	210253	6/23/2010
17	1	SUMMA Canister, 6L	759	060410B	Yes	210253	6/23/2010
18	1	SUMMA Canister, 6L	769	060410B	Yes	210253	6/23/2010
19	1	SUMMA Canister, 6L	687	060410B	Yes	210253	6/23/2010
20	1	SUMMA Canister, 6L	2965	060410B	Yes	210253	6/23/2010
21	1	SUMMA Canister, 6L	698	060410B	Yes	210253	6/23/2010
22	1	SUMMA Canister, 6L	784	061110B	Yes	210253	6/23/2010
23	1	SUMMA Canister, 6L	685	060410B	Yes	210253	6/23/2010
24	1	SUMMA Canister, 6L	515	060410B	Yes	210253	6/23/2010
25	1	SUMMA Canister, 6L	647	061110B	Yes	210253	6/23/2010

26	1	SUMMA Canister, 6L	708	061110B	Yes	210253	6/23/2010
27	1	8 Hour Flow Regulator	2608	061510B	Yes	210253	6/23/2010
28	1	8 Hour Flow Regulator	2599	061510B	Yes	210253	6/23/2010
29	1	8 Hour Flow Regulator	2617	061510B	Yes	210253	6/23/2010
30	1	8 Hour Flow Regulator	2538	061510B	Yes	210253	6/23/2010
31	1	8 Hour Flow Regulator	2622	061510B	Yes	210253	6/23/2010
32	1	8 Hour Flow Regulator	2618	061510B	Yes	210253	6/23/2010
33	1	8 Hour Flow Regulator	2623	061510B	Yes	210253	6/23/2010
34	1	8 Hour Flow Regulator	2542	061110A	Yes	210253	6/23/2010
35	1	8 Hour Flow Regulator	2567	061110A	Yes	210253	6/23/2010
36	1	8 Hour Flow Regulator	2546	061510A	Yes	210253	6/23/2010
37	1	8 Hour Flow Regulator	2590	061510A	Yes	210253	6/23/2010
38	1	8 Hour Flow Regulator	2614	061510A	Yes	210253	6/23/2010
39	1	8 Hour Flow Regulator	2611	061510A	Yes	210253	6/23/2010
40	1	8 Hour Flow Regulator	2595	061510A	Yes	210253	6/23/2010
41	1	8 Hour Flow Regulator	2559	061510A	Yes	210253	6/23/2010
42	1	8 Hour Flow Regulator	2580	061510A	Yes	210253	6/23/2010
43	1	Snorkel	2214		Yes	210253	6/23/2010
44	1	Snorkel	2215		Yes	210253	6/23/2010
45	1	9/16" Wrench			Yes		6/23/2010
46	1	9/16" Wrench			Yes		6/23/2010
47	1	5/8" Wrench			Yes		6/23/2010
48	1	1/18" Allen Wrench for FC Adj			Yes		6/23/2010
49	1	Approx 3 ft. Tygon Tubing			Yes		6/23/2010
50	1	Digital Flow Meter			Yes		6/23/2010
51	1	10 Hour Flow Regulator	46	061110A	Yes	210253	6/23/2010
52	1	10 Hour Flow Regulator	31	060710A	Yes	210253	6/23/2010
53	1	10 Hour Flow Regulator	42	060710A	Yes	210253	6/23/2010
54	1	10 Hour Flow Regulator	45	060710A	Yes	210253	6/23/2010
55	1	10 Hour Flow Regulator	1	060710A	Yes	210253	6/23/2010
56	1	10 Hour Flow Regulator	32	060710A	Yes	210253	6/23/2010
57	1	10 Hour Flow Regulator	35	060710A	Yes	210253	6/23/2010
58	1	10 Hour Flow Regulator	25	060710A	Yes	210253	6/23/2010

Note: If the Return Column is Marked "Yes" for an Items it Needs to be Returned to EAS

From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

J102810052502225

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

1 of 13

TRK# 0201 7987 8269 2406

MASTER

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
ONT

XH SBPA

508C1/23F2/9A24

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J10201005250225

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

2 of 13

MPS# 0263 7987 8269 2483

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
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XH SBPA

608G1/22F2/9A24

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

J1D2D1005250225

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 **BILL SENDER**

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

3 of 13

MPS# 0263 7987 8269 2575

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
ONT

XH SBPA

508G1/22F2/9A24

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J10201095250225

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

Ref # 10203.01.02
Invoice #
PO #
Dept #

4 of 13

MPS# 0263 7987 8269 2656

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
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XH SBPA

508G1/22F2/9A24

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J102918052502225

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 **BILL SENDER**

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

5 of 13

MPS# 0263 7987 8269 2704

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
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XH SBPA

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

J10201005260226

Ship Date: 22JUN10
ActWgt: 28.0 LB
CAD: 100845654/INET3060

Dims: 20 X 20 X 15 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

6 of 13

MPS# 0263 7987 8269 2760

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
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698G1/22F2/9A24

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J10201005250226

Ship Date: 22JUN10
ActWgt: 14.0 LB
CAD: 100845654/INET3060

Dims: 13 X 10 X 10 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

7 of 13

MPS# 0263 7987 8269 2862

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

E

J102010052502225

Ship Date: 22JUN10
ActWgt: 14.0 LB
CAD: 100845654/INET3060

Dims: 13 X 10 X 10 IN

Delivery Address Bar Code

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

Ref # 10203.01.02
Invoice #
PO #
Dept #

8 of 13

MPS# 0263 7987 8269 2965

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J10201005260225

Ship Date: 22JUN10
ActWgt: 14.0 LB
CAD: 100845654/INET3060

Dims: 13 X 10 X 10 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 **BILL SENDER**

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

9 of 13

MPS# 0263 7987 8269 3023

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

J102010005260226

Ship Date: 22JUN10
ActWgt: 14.0 LB
CAD: 100845654/INET3060

Dims: 13 X 10 X 10 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 **BILL SENDER**

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

10 of 13

MPS# 0263 7987 8269 3104

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

J102010905250225

Ship Date: 22JUN10
ActWgt: 3.0 LB
CAD: 100845654/INET3060

Dims: 9 X 9 X 9 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

11 of 13

MPS# 0263 7987 8269 3181

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

J102010052602225

Ship Date: 22JUN10
Act/Wgt: 5.0 LB
CAD: 100845654/INET3060

Dims: 40 X 4 X 4 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 **BILL SENDER**

Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

12 of 13

MPS# 0263 7987 8269 3300

Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
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From: Origin ID: LASA (949) 514-9982
Sonny Nguyen(NGEM)c/o Susan Crowley
Tronox
560 W. Lake Mead Parkway

Henderson, NV 89015

FedEx Express

E

J10201005260225

Ship Date: 22JUN10
ActWgt: 14.0 LB
CAD: 100845654/INET3060

Dims: 18 X 10 X 14 IN

Delivery Address Bar Code

Ref # 10203.01.02
Invoice #
PO #
Dept #

SHIP TO: (805) 781-3585 BILL SENDER
Attn: Sample Receiving
Environmental Analytical Service
173 CROSS ST

SAN LUIS OBISPO, CA 93401

13 of 13
MPS# 0263 7987 8269 3468
Mstr# 7987 8269 2406 0201

WED - 23 JUN A5
PRIORITY OVERNIGHT

93401
CA-US
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ENVIRONMENTAL
ANALYTICAL SERVICE
173 Cross Street, San Luis Obispo, CA 93401

Sample Receipt Notification

Project Manager:	Maile Smith	**EAS SDG Number:**	210253
Company:	Northgate Environmental Manageme	**Date Received:**	6/23/2010
Proj. Number:	2027.07-50	**EAS Project/Quote Number:**	16102
		EAS Project Manager:	Project Manager

Thank you for submitting samples to Environmental Analytical Service. Attached to this sample receipt notification are copies or your Chain of Custody forms signed by Sample Control. If there were any problems with the sample shipment they will be recorded in the Sample Control Case Narrative. Each batch of samples received is assigned a Sample Delivery Group (SDG) number and a project manager. When contacting EAS please reference your SDG number.

In a couple of days your Project Manager will e-mail you an EAS Work Order that has the LIMS login information on your samples, including your field ID, the EAS sample ID, canister pressures, and the analytical tests requested for each sample. Please review this information to make sure it is correct.

Normal Turn Around Time for e-mailed reports is 10 working days from date of receipt unless an expedited TAT was requested. Depending on the sample load, your project manager may be able to e-mail preliminary results in about 5 to 7 working days, if requested. If you have any special scheduling needs please contact us and we will try to accomodate them if possible.

EAS uses the method specified holding times. EPA TO-15 specifies a holding time for SUMMA canisters of 30 days for most normal sampling situations. EAS pressurizes the canisters as soon as they are received so they will qualify for the 30 day holding time. If your project has soil gas samples and uses a 14 day holding time or the Project Plan specifies a holding time that is shorter than the method holding time, please notify your project manager as soon as possible. If you have questions on canister pressurization, dilution factors, holding times, or any other technical questions, please contact Dr. Steve Hoyt for assistance.

Sample Control Case Narrative

For Technical Questions
Dr. Steve Hoyt
stevehoyt@easlab.com or (805 781-3585 x 2

For Questions on SDG
Client Services
kbeckley@easlab.com or (805) 781-3585 x 3

ENVIRONMENTAL
ANALYTICAL SERVICE

LABORATORY WORK ORDER

INFORMATION

SDG Number: 210253

Project Manager: Maile Smith

Client: Northgate Environmental Management

EDD: Equis **Report:** PDF e-mail

Quote Number: 16102

Date Received: 6/23/2010

TAT: 7

Due Date: 7/2/2010

SAMPLE DESCRIPTION AND ANALYSIS REQUESTED — Date Sampled: Initial / Final / Factor

Client Sample No.	EAS Lab No.	Analysis Requested	Date Sampled	Pressure (torr) Rec	Final	Factor
IA-FO-O1-001	210253 1	EPA TO-15 SIM Short Target List	6/21/2010	448	905	2.02
OA-FO-AI-001	210253 2	EPA TO-15 SIM Short Target List	6/21/2010	350	799	2.28
IA-LB-O1-001	210253 3	EPA TO-15 SIM Short Target List	6/21/2010	469	910	1.94
IA-LB-O2-001	210253 4	EPA TO-15 SIM Short Target List	6/21/2010	427	906	2.12
OA-LB-AI-001	210253 5	EPA TO-15 SIM Short Target List	6/21/2010	353	797	2.26
OA-U4-U5-001	210253 6	EPA TO-15 SIM Short Target List	6/21/2010	467	904	1.94
OA-UW-00-001	210253 7	EPA TO-15 SIM Short Target List	6/21/2010	345	719	2.08
IA-AB-O1-001	210253 8	EPA TO-15 SIM Short Target List	6/21/2010	474	912	1.92
OA-AB-AI-001	210253 9	EPA TO-15 SIM Short Target List	6/21/2010	349	839	2.40
OA-AB-AI-002	210253 10	EPA TO-15 SIM Short Target List	6/21/2010	313	727	2.32
IA-WH-SA-001	210253 11	EPA TO-15 SIM Short Target List	6/21/2010	484	911	1.88
OA-WH-AI-001	210253 12	EPA TO-15 SIM Short Target List	6/21/2010	441	905	2.05
IA-BP-CR-001	210253 13	EPA TO-15 SIM Short Target List	6/21/2010	485	903	1.86
IA-BP-SO-001	210253 14	EPA TO-15 SIM Short Target List	6/21/2010	488	906	1.86
IA-SP-CR-001	210253 15	EPA TO-15 SIM Short Target List	6/21/2010	475	905	1.91
IA-U3-O1-001	210253 16	EPA TO-15 SIM Short Target List	6/21/2010	433	900	2.08
IA-U3-O2-001	210253 17	EPA TO-15 SIM Short Target List	6/21/2010	463	867	1.87
IA-U3-O2-002	210253 18	EPA TO-15 SIM Short Target List	6/21/2010	449	898	2.00
IA-U3-O3-001	210253 19	EPA TO-15 SIM Short Target List	6/21/2010	580	904	1.56
IA-U3-O4-001	210253 20	EPA TO-15 SIM Short Target List	6/21/2010	459	868	1.89
IA-U3-O5-001	210253 21	EPA TO-15 SIM Short Target List	6/21/2010	453	910	2.01
IA-U3-UF-001	210253 22	EPA TO-15 SIM Short Target List	6/21/2010	419	914	2.18
OA-U3-AI-001	210253 23	EPA TO-15 SIM Short Target List	6/21/2010	430	906	2.11

5.4: Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60421

Date Originally Purchased/Prepared:	**06/23/10**	**Cylinder:**	**AL032401**
Date Recertified:		**Cylinder Pres:**	**1000 psi**
Prep Standard:	**ST60022**		
Expires:	**06/23/11**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	0.105
74-87-3	Chloromethane	0.102
76-14-2	Freon 114	0.104
75-01-4	Vinyl chloride	0.104
74-83-9	Bromomethane	0.104
75-00-3	Chloroethane	0.104
75-69-4	Trichlorofluoromethane	0.104
75-35-4	1,1-Dichloroethene	0.104
75-09-2	Dichloromethane	0.104
76-13-1	Freon 113	0.102
75-34-3	1,1-Dichloroethane	0.101
156-59-2	c-1,2-Dichloroethene	0.103
67-66-3	Chloroform	0.102
107-06-2	1,2-Dichloroethane	0.103
71-55-6	1,1,1-Trichloroethane	0.102
71-43-2	Benzene	0.103
56-23-5	Carbon Tetrachloride	0.102
78-87-5	1,2-Dichloropropane	0.103
79-01-6	Trichloroethene	0.103
10061-01-5	c-1,3-Dichloropropene	0.106
10061-02-6	t-1,3-Dichloropropene	0.104
79-00-5	1,1,2-Trichloroethane	0.102
108-88-3	Toluene	0.103
106-93-4	1,2-Dibromoethane	0.104
127-18-4	Tetrachloroethene	0.102
108-90-7	Chlorobenzene	0.102
100-41-4	Ethylbenzene	0.104
106-42-3	p-Xylenes	0.103
108-38-3	m-Xylenes	0.103
100-42-5	Styrene	0.103
95-47-6	o-Xylene	0.102
79-34-5	1,1,2,2-Tetrachloroethane	0.102
108-67-8	1,3,5-Trimethylbenzene	0.106
95-63-6	1,2,4-Trimethylbenzene	0.102
541-73-1	1,3-Dichlorobenzene	0.102
106-46-7	1,4-Dichlorobenzene	0.102
95-50-1	1,2-Dichlorobenzene	0.100
120-82-1	1,2,4-Trichlorobenzene	0.103
87-68-3	Hexachlorobutadiene	0.103
106-99-0	1,3-Butadiene	0.107
107-13-1	Acrylonitrile	0.108

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

5.5: Laboratory Control Spike Certificates & Internal Standard Certificates

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60022

Date Originally Purchased/Prepared:	**07/25/06**	**Cylinder:**	**CC-230154**
Date Recertified:	**01/05/10**	**Cylinder Pres:**	**1100 psi**
Recertification Standard:	**ST60025**		
Expires:	**01/05/11**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
75-71-8	Freon 12	1.05
74-87-3	Chloromethane	1.02
76-14-2	Freon 114	1.04
75-01-4	Vinyl chloride	1.04
74-83-9	Bromomethane	1.04
75-00-3	Chloroethane	1.04
75-69-4	Trichlorofluoromethane	1.04
75-35-4	1,1-Dichloroethene	1.04
75-09-2	Dichloromethane	1.04
76-13-1	Freon 113	1.02
75-34-3	1,1-Dichloroethane	1.01
156-59-2	c-1,2-Dichloroethene	1.03
67-66-3	Chloroform	1.02
107-06-2	1,2-Dichloroethane	1.03
71-55-6	1,1,1-Trichloroethane	1.02
71-43-2	Benzene	1.03
56-23-5	Carbon Tetrachloride	1.02
78-87-5	1,2-Dichloropropane	1.03
79-01-6	Trichloroethene	1.03
10061-01-5	c-1,3-Dichloropropene	1.06
10061-02-6	t-1,3-Dichloropropene	1.04
79-00-5	1,1,2-Trichloroethane	1.02
108-88-3	Toluene	1.03
106-93-4	1,2-Dibromoethane	1.04
127-18-4	Tetrachloroethene	1.02
108-90-7	Chlorobenzene	1.02
100-41-4	Ethylbenzene	1.04
106-42-3	p-Xylenes	1.03
108-38-3	m-Xylenes	1.03
100-42-5	Styrene	1.03
95-47-6	o-Xylene	1.02
79-34-5	1,1,2,2-Tetrachloroethane	1.02
108-67-8	1,3,5-Trimethylbenzene	1.06
95-63-6	1,2,4-Trimethylbenzene	1.02
541-73-1	1,3-Dichlorobenzene	1.02
106-46-7	1,4-Dichlorobenzene	1.02
95-50-1	1,2-Dichlorobenzene	1.00
120-82-1	1,2,4-Trichlorobenzene	1.03
87-68-3	Hexachlorobutadiene	1.03
106-99-0	1,3-Butadiene	1.07
107-13-1	Acrylonitrile	1.08

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: Approved:

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

STANDARD CERTIFICATE
CALIBRATION GAS STANDARD

ENVIRONMENTAL
Analytical Service, Inc.

Standard Identification Number: ST60551

Date Originally Purchased/Prepared:	**02/24/10**	**Cylinder:**	**AL150**
Date Recertified:		**Cylinder Pres:**	**995 psig**
Recertification Standard:			
Expires:	**02/24/11**	**Analytical Accuracy: +/- 10%**	

CAS	Compound	Concentration (ppmV)
3114-55-4	Chlorobenzene-d5	0.437
386-72-4	Pentafluorobenzene	0.442
540-36-3	1,4-Difluorobenzene	0.455
460-00-4	1,4-Bromofluorobenzene	0.227
2037-26-5	Toluene-d8	0.248
	Vinyl Chloride-d3	0.457

•This Analysis is NIST Traceable by either measurement or weight•

Analyst: _____ Approved: _____

The stability of gas standards cannot be guaranteed and EAS will only be liable for replacement or reanalysis if the standard changes in six months from analysis date.

SECTION 6
Canister Certification Data

6.1 Canister Certification Information

Canister Certification for this project was done by batch certification method.

SECTION 7

Ion Spectra for GC/MS, Level D

This Section contains the Ion Spectra for samples analyzed for GC/MS for Level D Data Deliverable Packages. The Ion Spectra is grouped by Daily Analytical Batch and is included for the DAB and the Initial Calibration. Initial Calibration Tune Data is also included.

7.1: Ion Spectra for Daily Analytical Batch

Daily Analytical Batch #: 062910-MS2

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\C06290B.D
Acq Time : 29 Jun 110 10:48 am Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

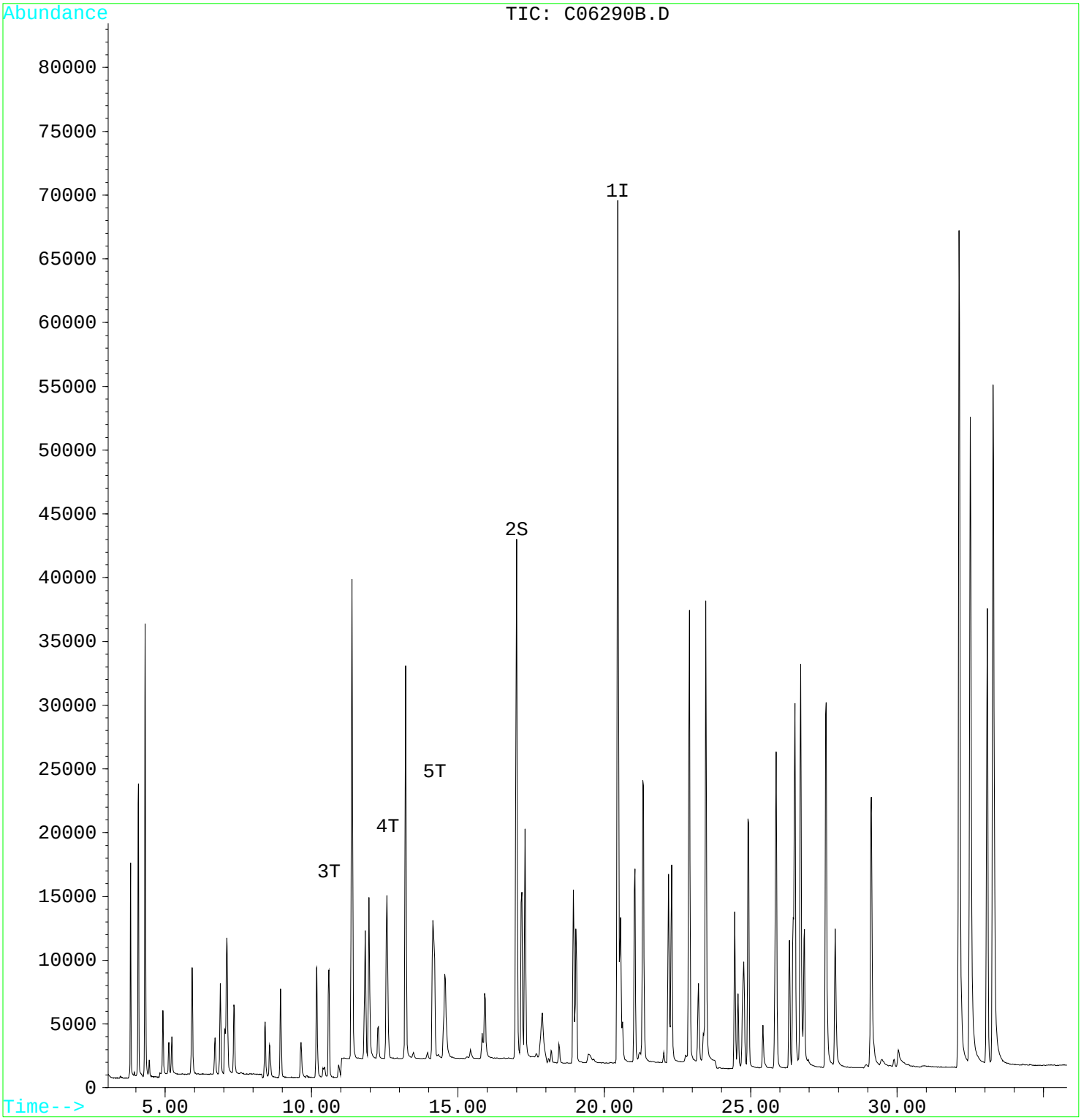
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	115216	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	55680	0.21	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.58	83	15259	0.12	ppbV	98
4) Carbon tetrachloride	12.60	117	7838	0.11	ppbV	96
5) Trichloroethene	14.20	130	8146	0.11	ppbV	98

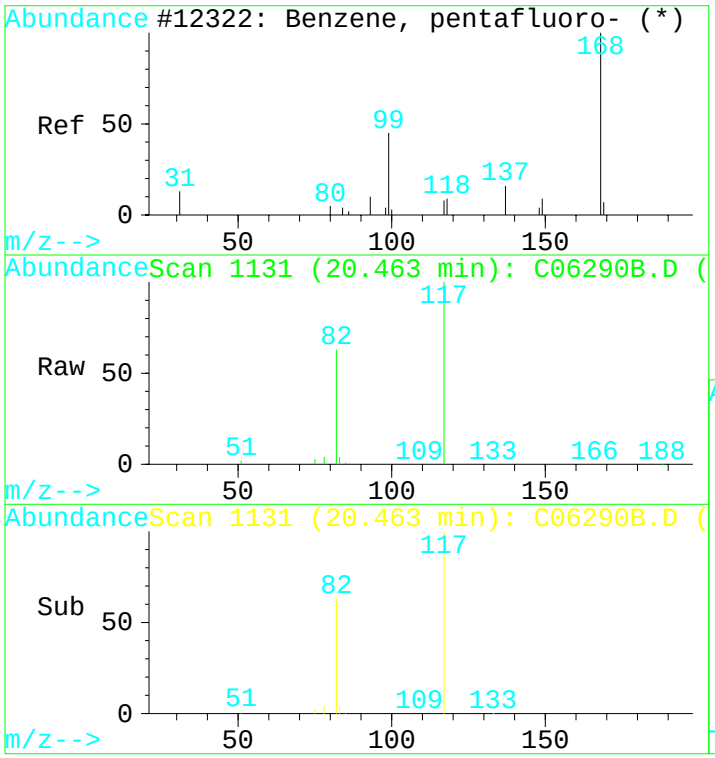
(#) = qualifier out of range (m) = manual integration
C06290B.D 2NTHG_A.M Sun Jul 04 13:58:14 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\C06290B.D
Acq Time : 29 Jun 110 10:48 am Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

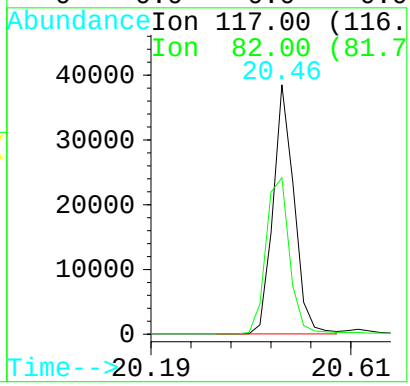


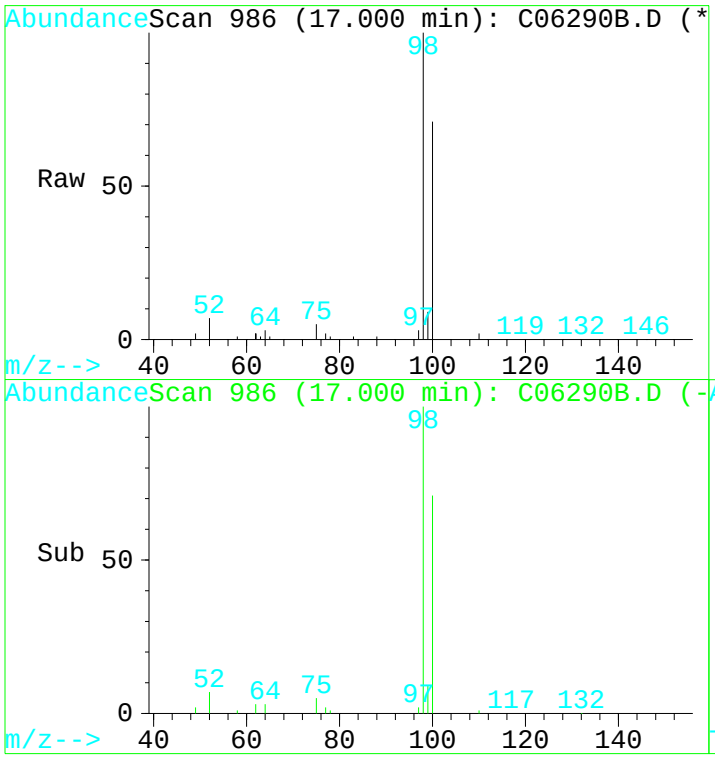


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06290B.D
Acq: 29 Jun 110 10:48 am

Tgt Ion:117 Resp: 115216

Ion	Ratio	Lower	Upper
117	100		
82	62.6	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

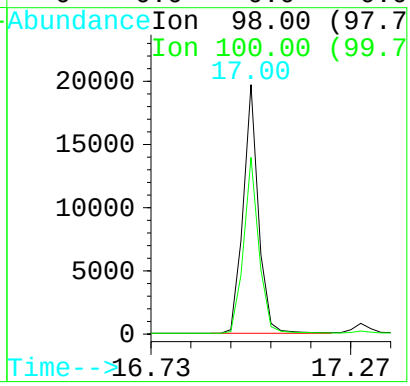


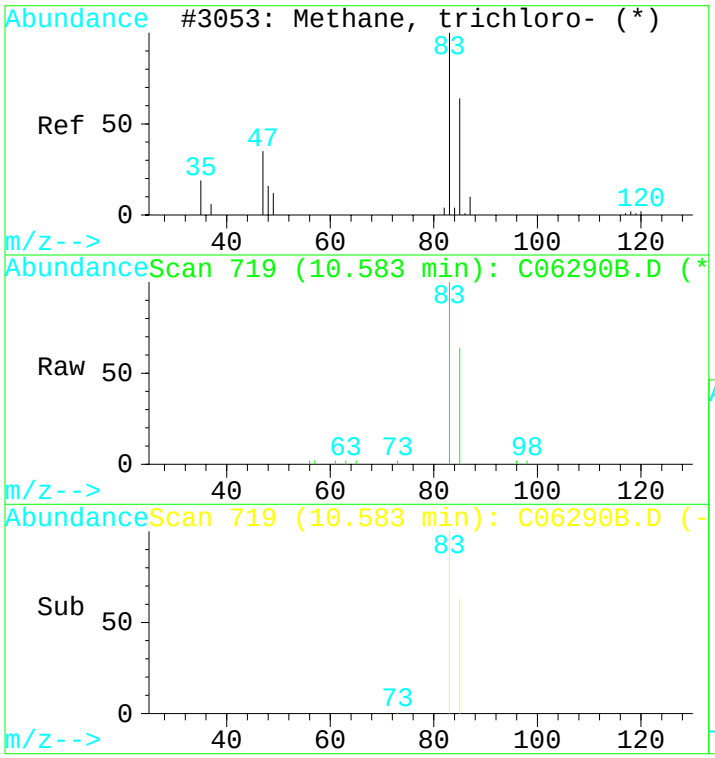


#2
Toluene-d8
Concen: 0.21 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: C06290B.D
Acq: 29 Jun 110 10:48 am

Tgt Ion:98 Resp: 55680

Ion	Ratio	Lower	Upper
98	100		
100	70.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

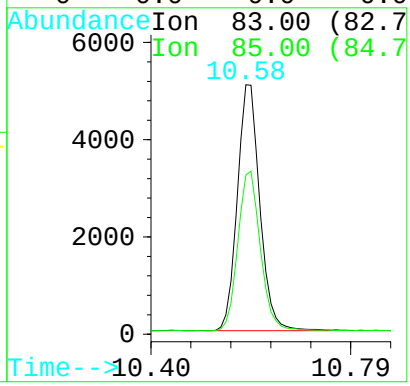


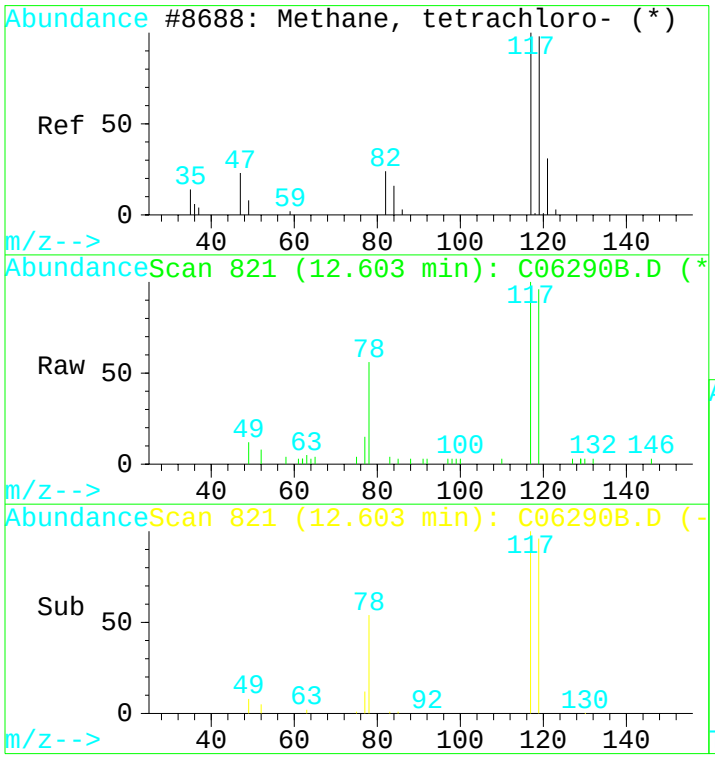


#3
Chloroform
Concen: 0.12 ppbV
RT: 10.58 min Scan# 719
Delta R.T. -0.08 min
Lab File: C06290B.D
Acq: 29 Jun 110 10:48 am

Tgt Ion:83 Resp: 15259

Ion	Ratio	Lower	Upper
83	100		
85	63.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

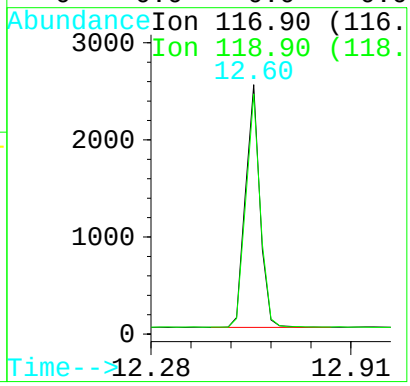


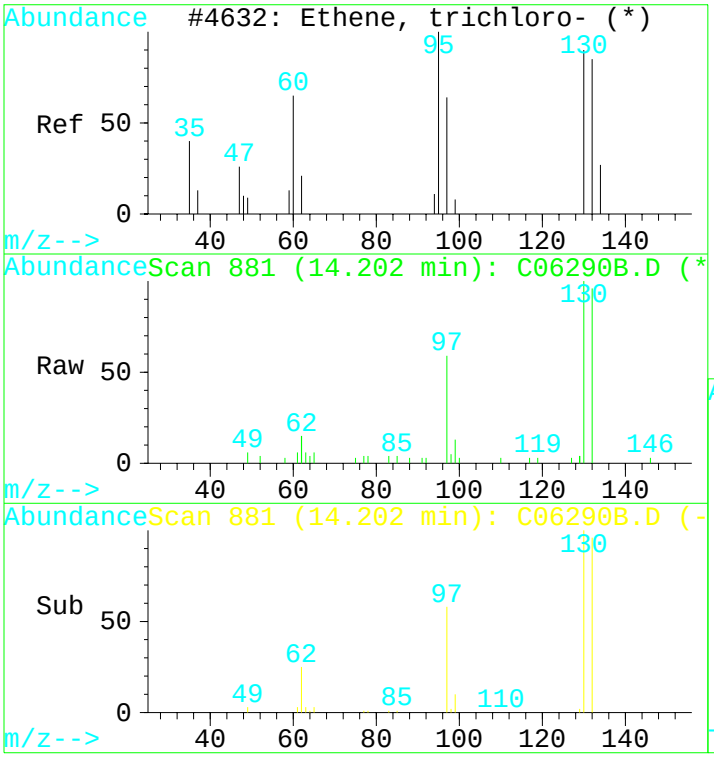


#4
Carbon tetrachloride
Concen: 0.11 ppbV
RT: 12.60 min Scan# 821
Delta R.T. -0.06 min
Lab File: C06290B.D
Acq: 29 Jun 110 10:48 am

Tgt Ion:116.9 Resp: 7838

Ion	Ratio	Lower	Upper
117	100		
119	96.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

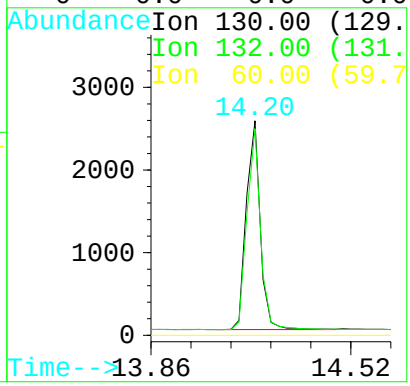




#5
Trichloroethene
Concen: 0.11 ppbV
RT: 14.20 min Scan# 881
Delta R.T. -0.06 min
Lab File: C06290B.D
Acq: 29 Jun 110 10:48 am

Tgt Ion:130 Resp: 8146

Ion	Ratio	Lower	Upper
130	100		
132	96.2	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\B06290C.D
Acq Time : 29 Jun 110 1:57 pm Operator: CM
Sample : METHOD BLANK Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

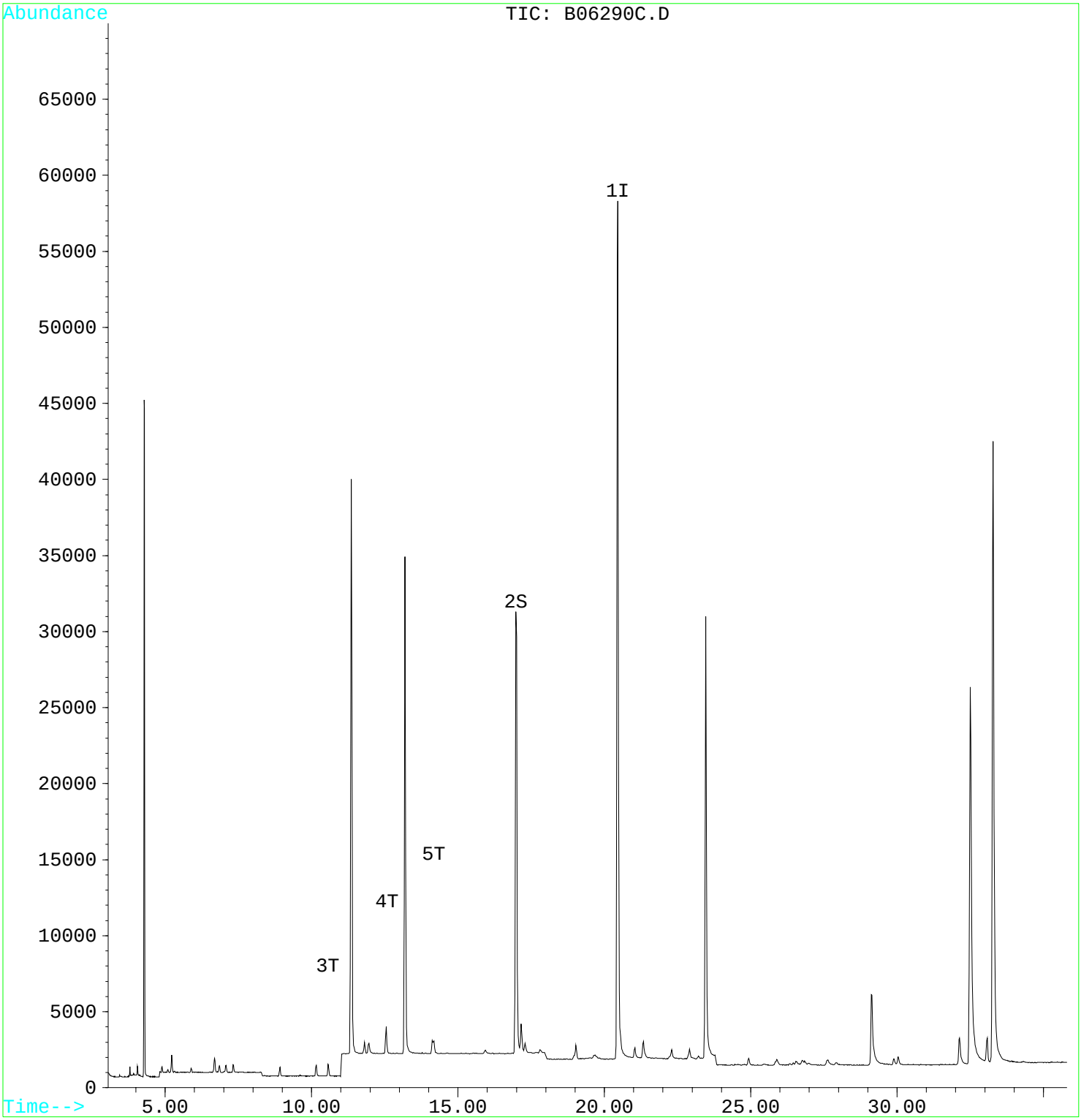
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	112564	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.97	98	54130	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.56	83	1380	0.01	ppbV	96
4) Carbon tetrachloride	12.58	117	247	0.00	ppbV	91
5) Trichloroethene	14.18	130	703	0.01	ppbV	93

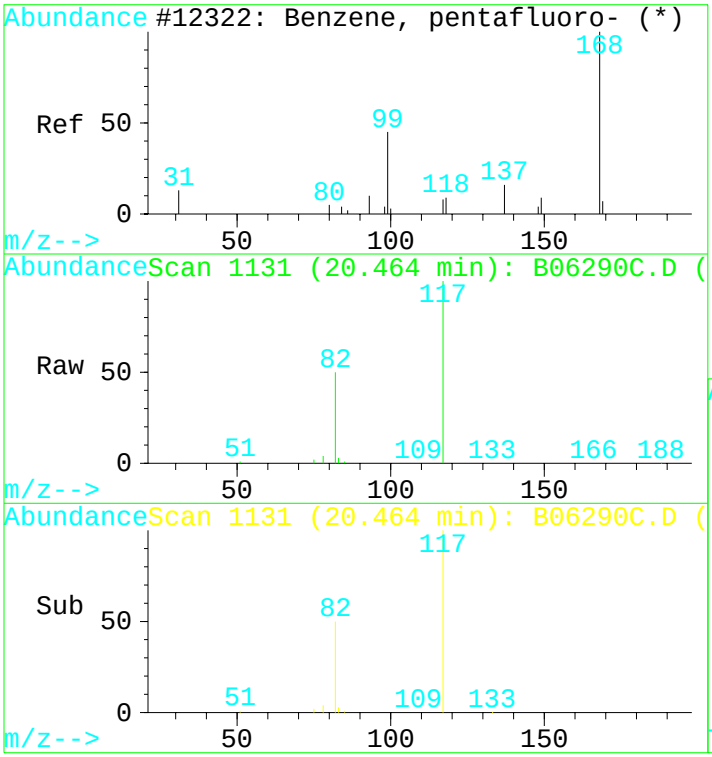
(#) = qualifier out of range (m) = manual integration
B06290C.D 2NTHG_A.M Sun Jul 04 13:57:51 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\B06290C.D
Acq Time : 29 Jun 110 1:57 pm Operator: CM
Sample : METHOD BLANK Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

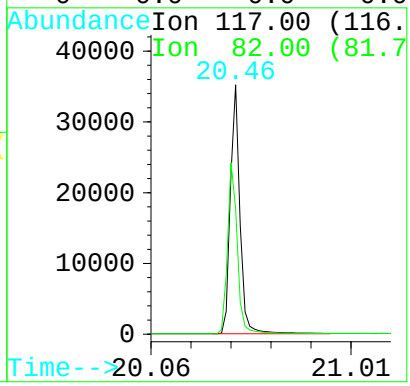


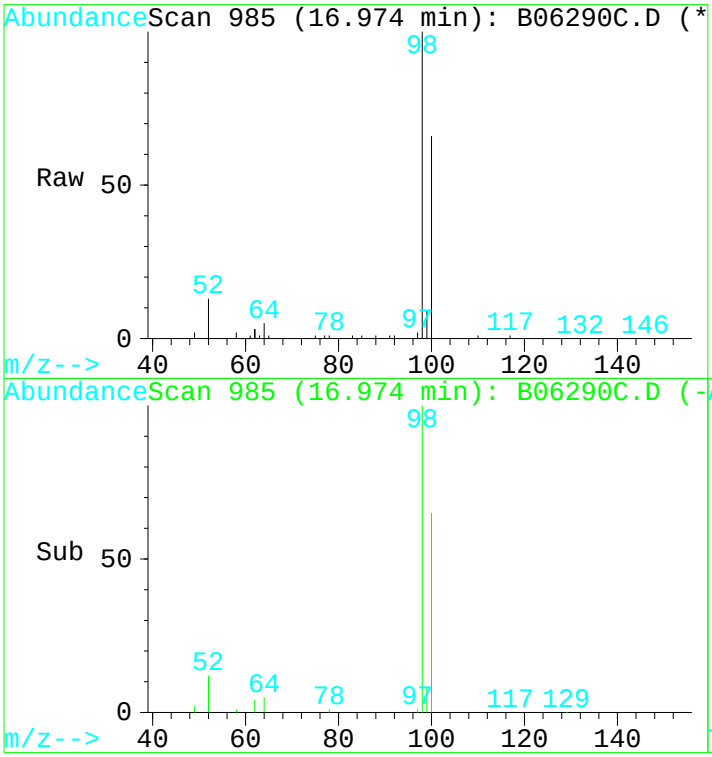


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: B06290C.D
Acq: 29 Jun 110 1:57 pm

Tgt Ion:117 Resp: 112564

Ion	Ratio	Lower	Upper
117	100		
82	50.0	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

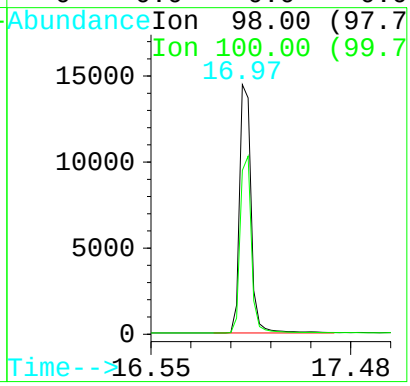


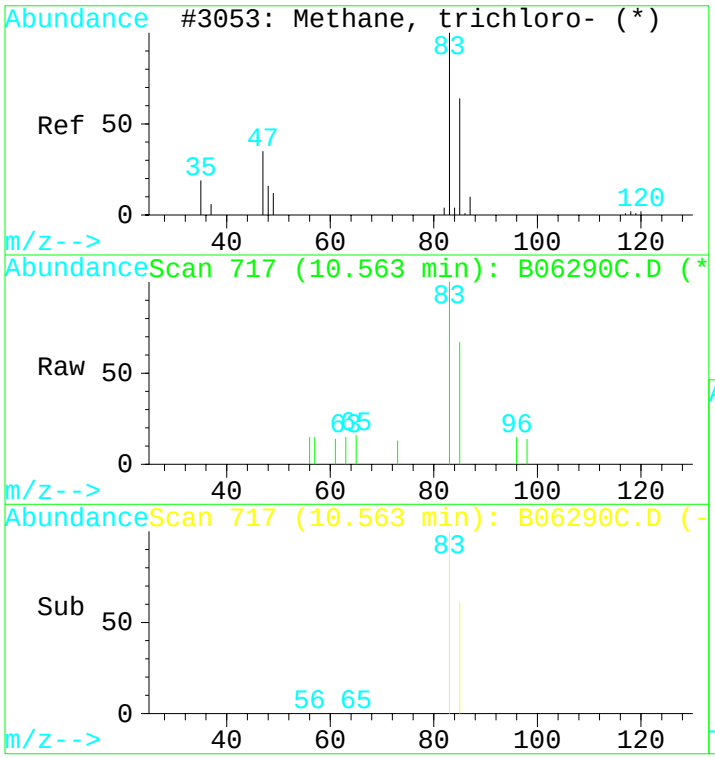


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 16.97 min Scan# 985
Delta R.T. -0.08 min
Lab File: B06290C.D
Acq: 29 Jun 110 1:57 pm

Tgt Ion:98 Resp: 54130

Ion	Ratio	Lower	Upper
98	100		
100	69.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

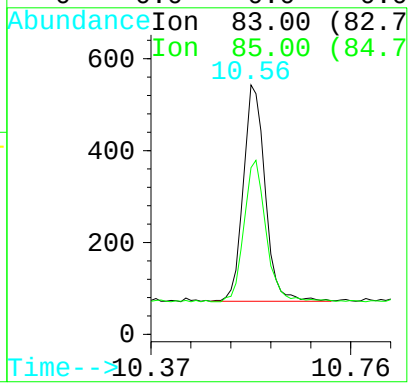


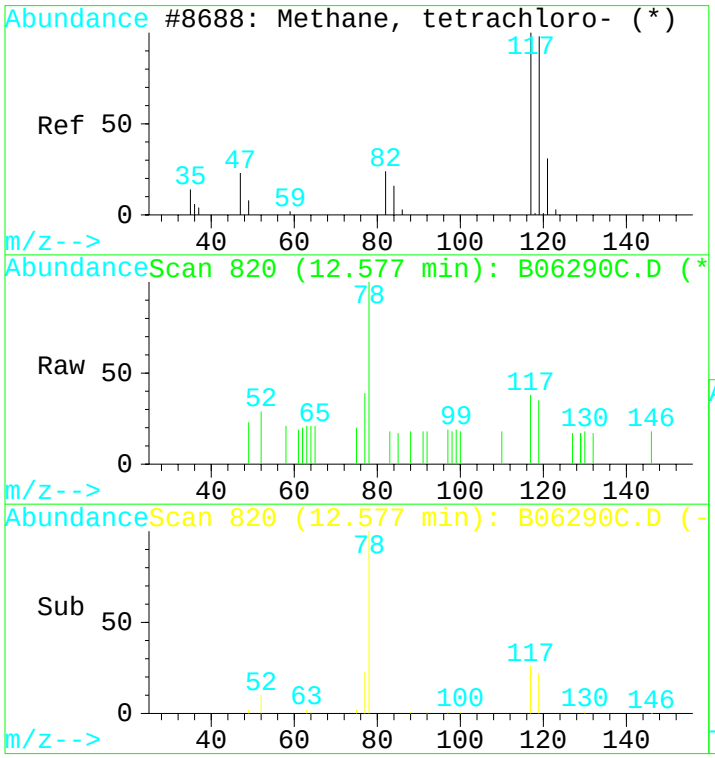


#3
Chloroform
Concen: 0.01 ppbV
RT: 10.56 min Scan# 717
Delta R.T. -0.10 min
Lab File: B06290C.D
Acq: 29 Jun 110 1:57 pm

Tgt Ion:83 Resp: 1380

Ion	Ratio	Lower	Upper
83	100		
85	61.7	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

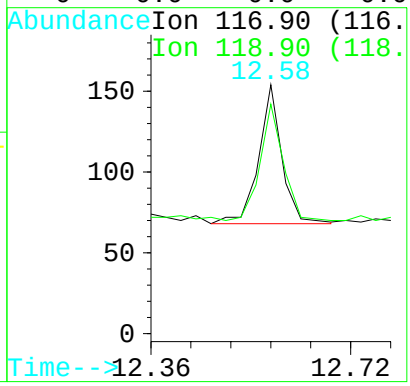


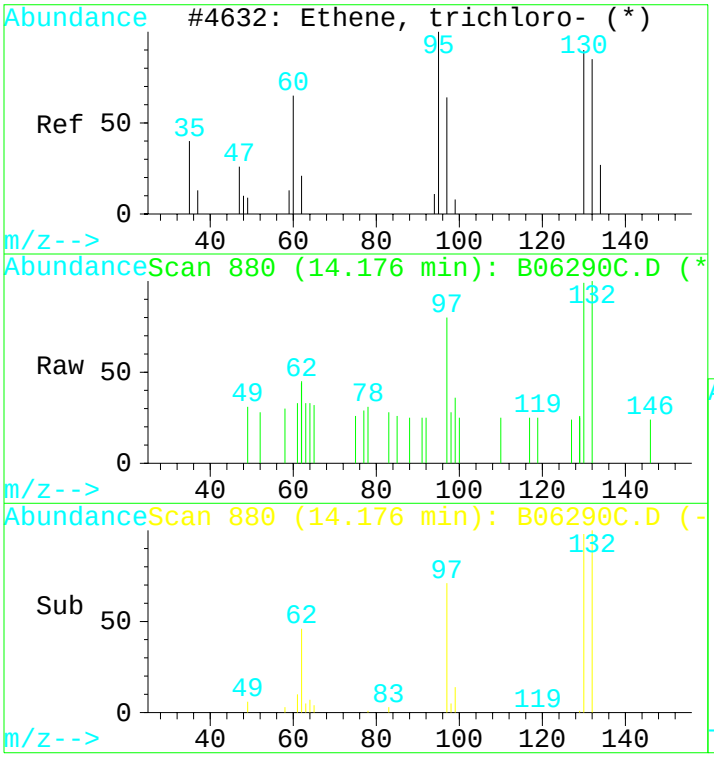


#4
Carbon tetrachloride
Concen: 0.00 ppbV
RT: 12.58 min Scan# 820
Delta R.T. -0.08 min
Lab File: B06290C.D
Acq: 29 Jun 110 1:57 pm

Tgt Ion:116.9 Resp: 247

Ion	Ratio	Lower	Upper
117	100		
119	83.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

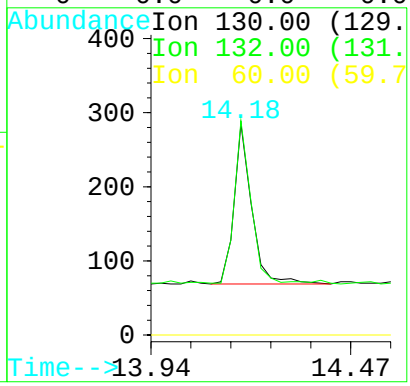




#5
Trichloroethene
Concen: 0.01 ppbV
RT: 14.18 min Scan# 880
Delta R.T. -0.08 min
Lab File: B06290C.D
Acq: 29 Jun 110 1:57 pm

Tgt Ion:130 Resp: 703

Ion	Ratio	Lower	Upper
130	100		
132	101.4	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\QC06290A.D
Acq Time : 29 Jun 110 11:42 am Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

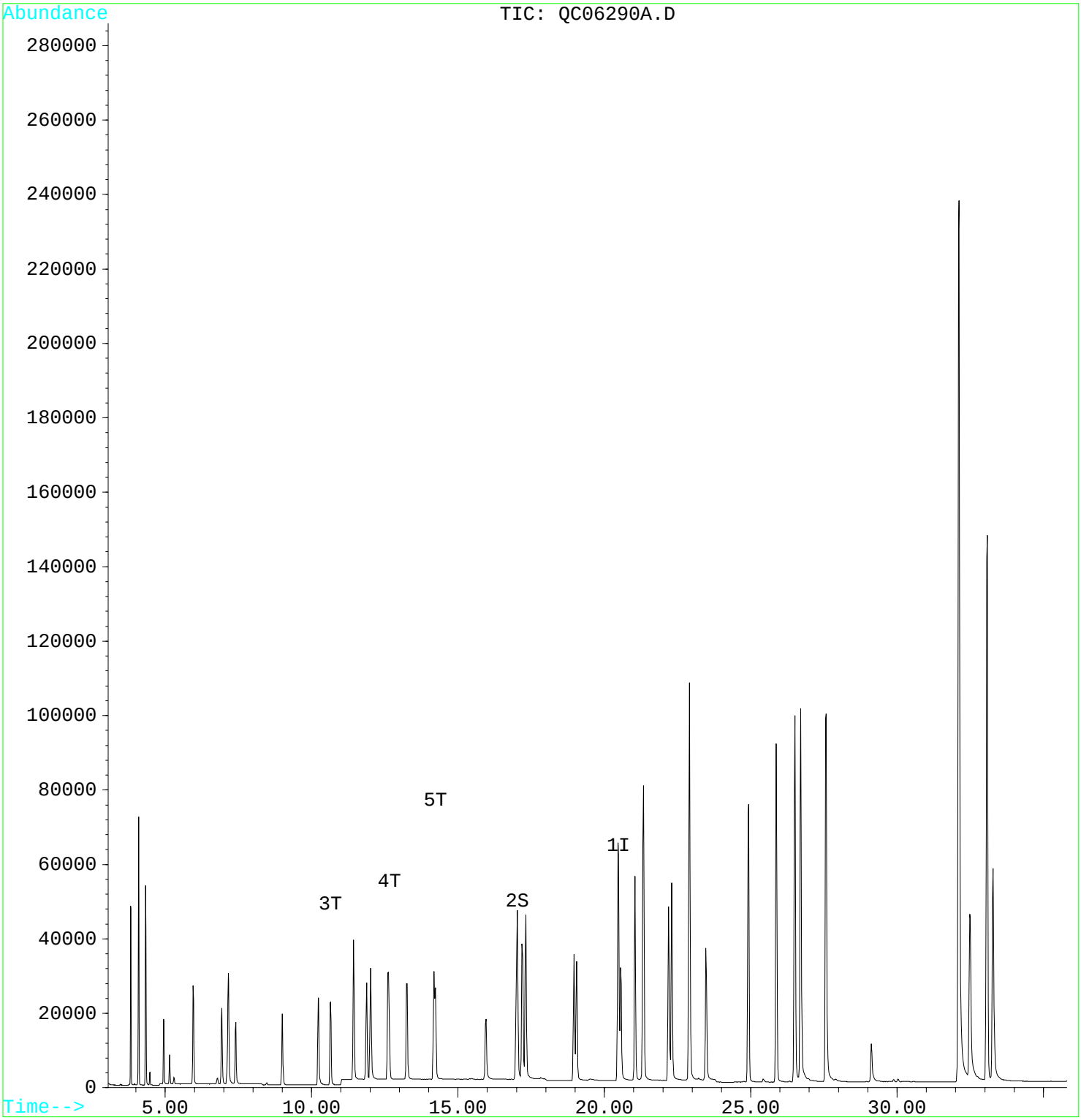
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	124733	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	58131	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	39002	0.27	ppbV	99
4) Carbon tetrachloride	12.66	117	21787	0.27	ppbV	91
5) Trichloroethene	14.23	130	20479	0.26	ppbV	99

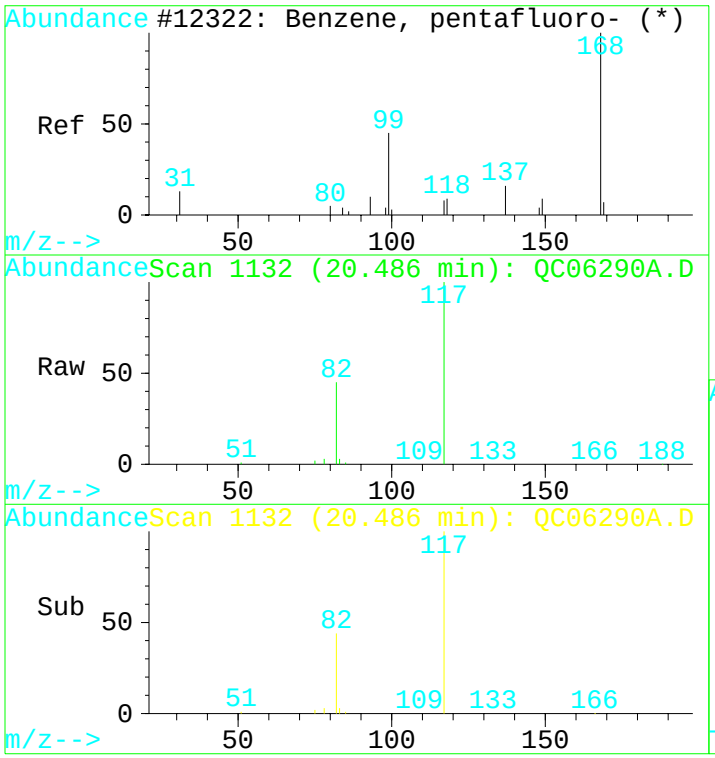
(#) = qualifier out of range (m) = manual integration
QC06290A.D 2NTHG_A.M Sun Jul 04 13:58:38 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\QC06290A.D
Acq Time : 29 Jun 110 11:42 am Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

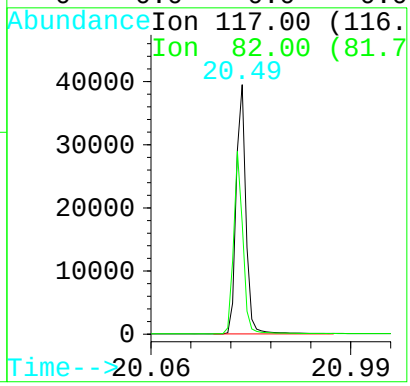


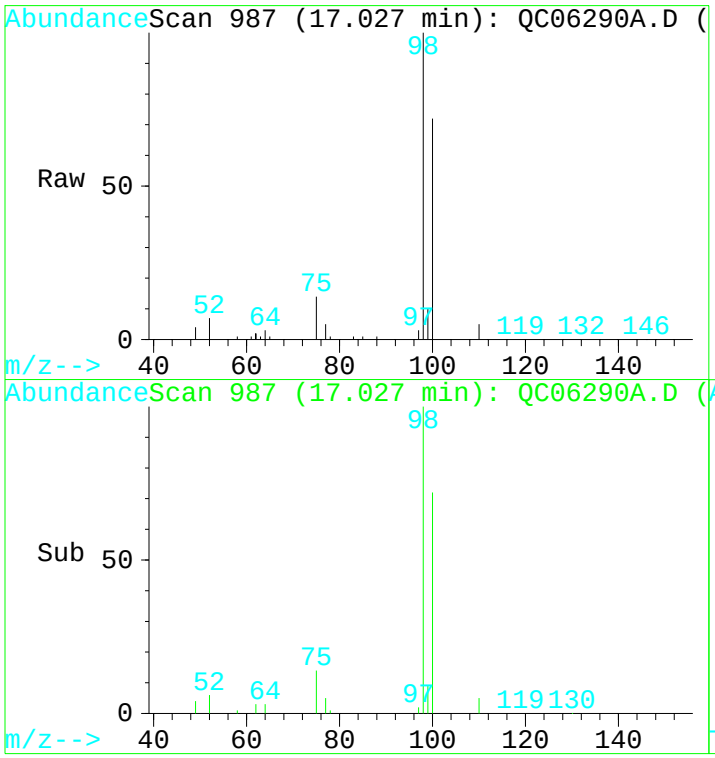


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: QC06290A.D
Acq: 29 Jun 110 11:42 am

Tgt Ion:117 Resp: 124733

Ion	Ratio	Lower	Upper
117	100		
82	44.4	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

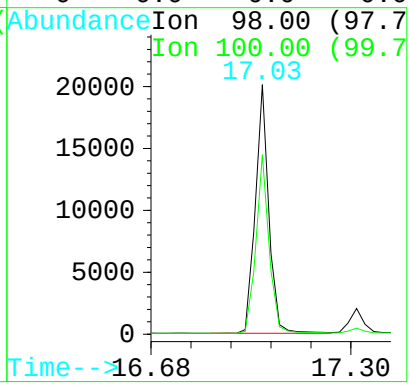


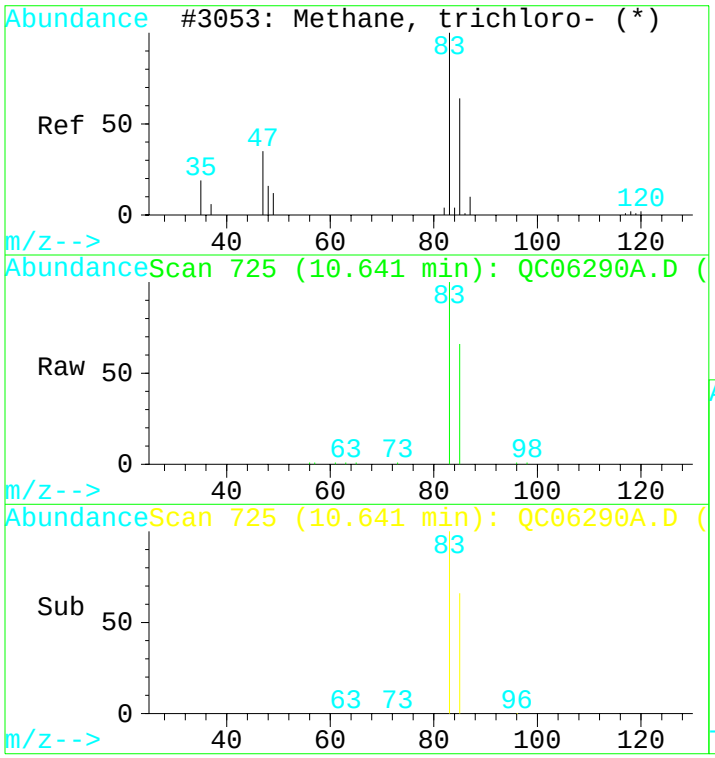


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: QC06290A.D
Acq: 29 Jun 110 11:42 am

Tgt Ion:98 Resp: 58131

Ion	Ratio	Lower	Upper
98	100		
100	70.4	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

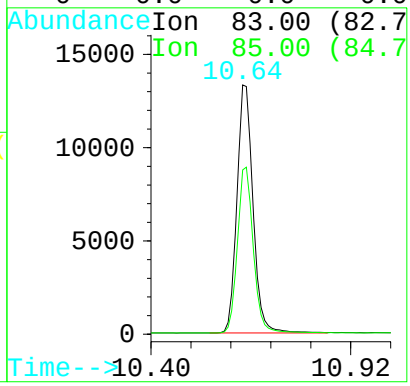


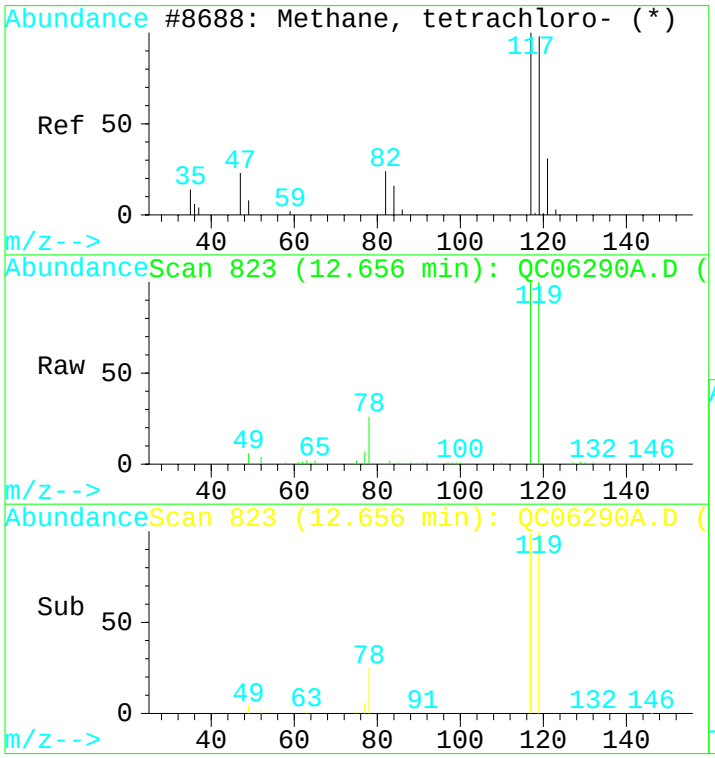


#3
Chloroform
Concen: 0.27 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: QC06290A.D
Acq: 29 Jun 110 11:42 am

Tgt Ion:83 Resp: 39002

Ion	Ratio	Lower	Upper
83	100		
85	65.7	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

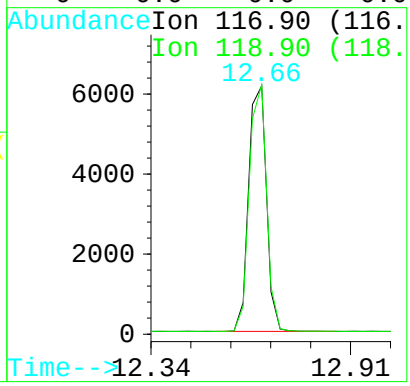


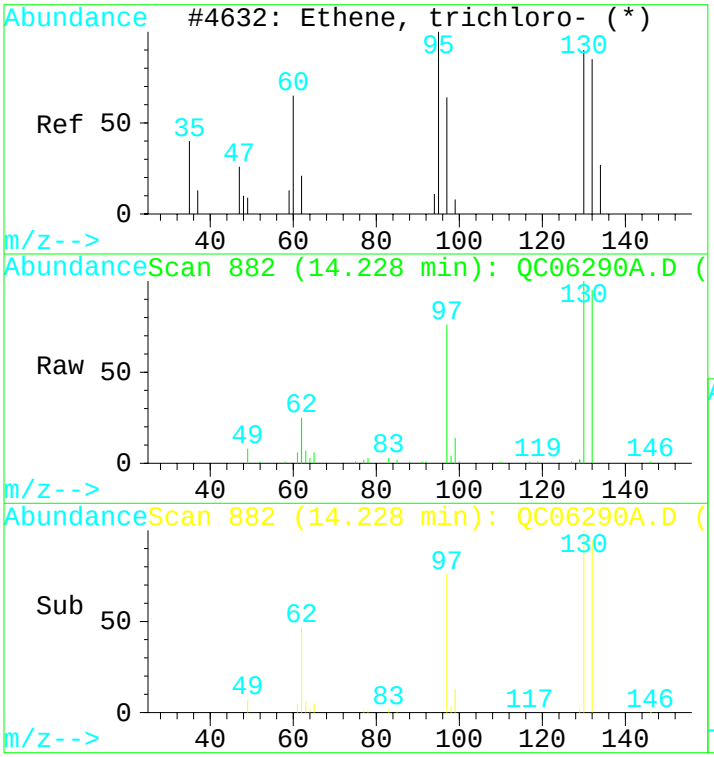


#4
Carbon tetrachloride
Concen: 0.27 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: QC06290A.D
Acq: 29 Jun 110 11:42 am

Tgt Ion:116.9 Resp: 21787

Ion	Ratio	Lower	Upper
117	100		
119	100.4	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

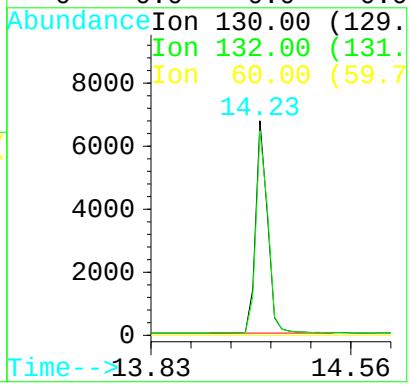




#5
Trichloroethene
Concen: 0.26 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: QC06290A.D
Acq: 29 Jun 110 11:42 am

Tgt Ion:130 Resp: 20479

Ion	Ratio	Lower	Upper
130	100		
132	95.2	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\QC06290B.D
Acq Time : 29 Jun 110 12:32 pm Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

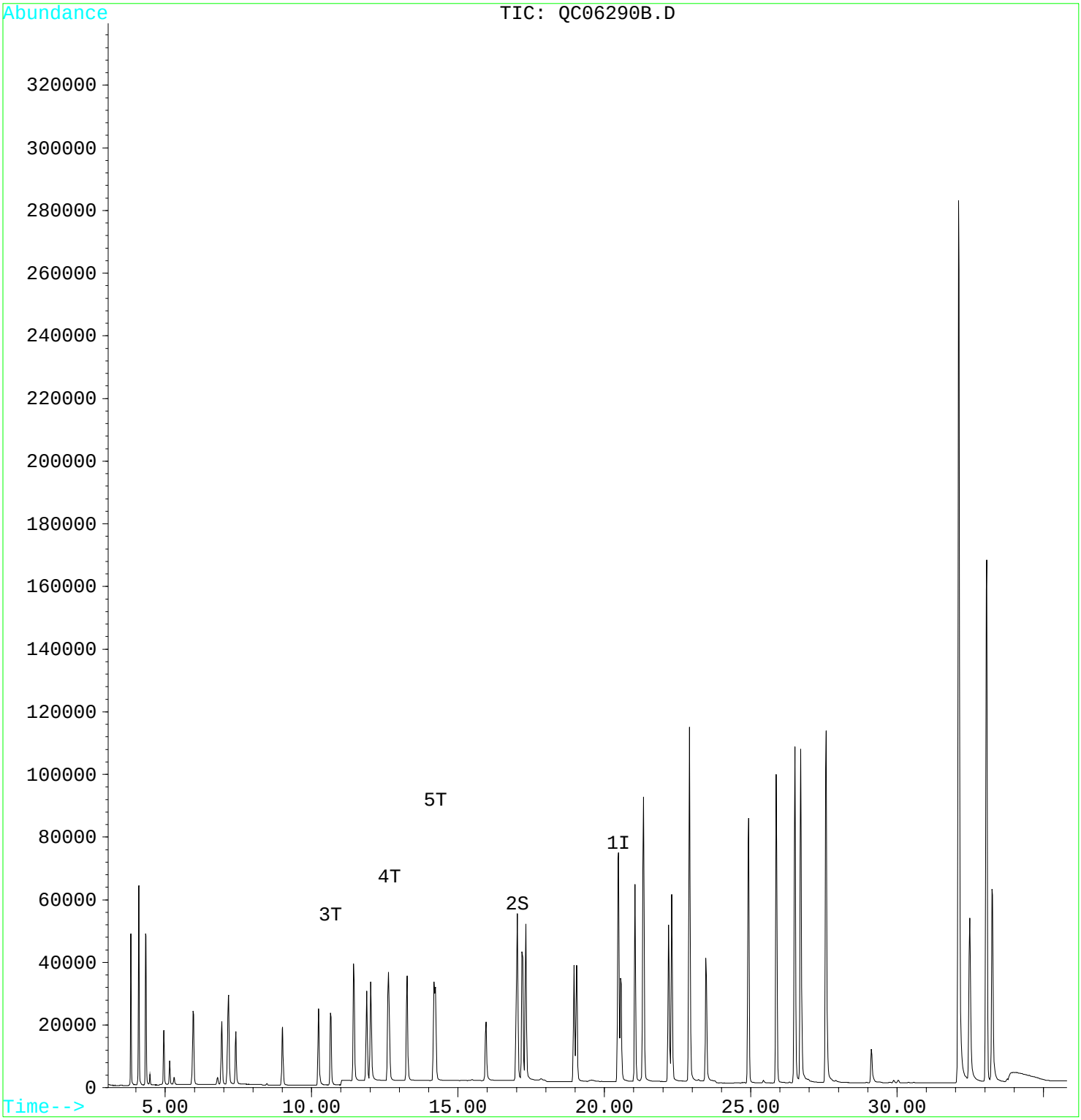
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	144732	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	68574	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.65	83	44722	0.27	ppbV	98
4) Carbon tetrachloride	12.66	117	24987	0.27	ppbV	93
5) Trichloroethene	14.23	130	25043	0.28	ppbV	97

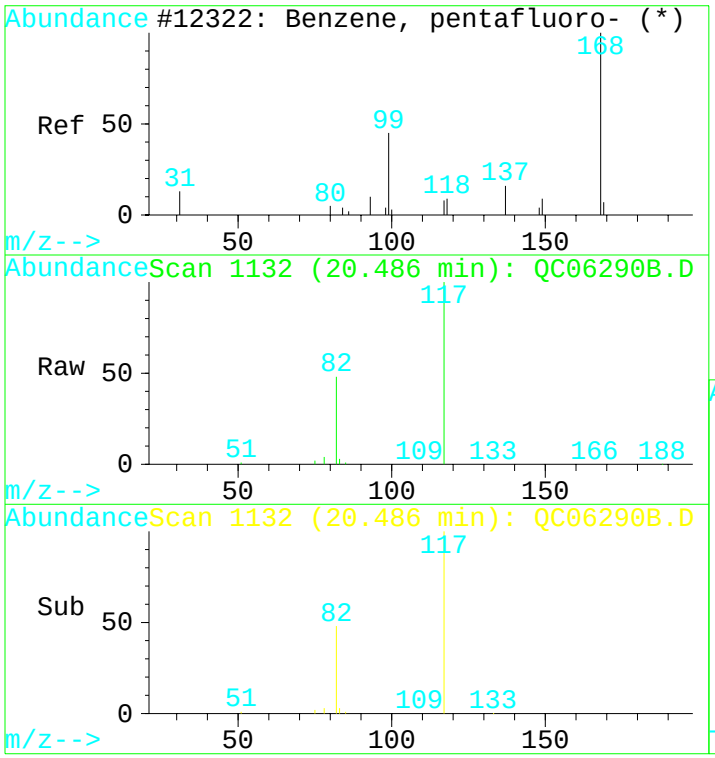
(#) = qualifier out of range (m) = manual integration
QC06290B.D 2NTHG_A.M Sun Jul 04 13:58:54 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\QC06290B.D
Acq Time : 29 Jun 110 12:32 pm Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:51 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

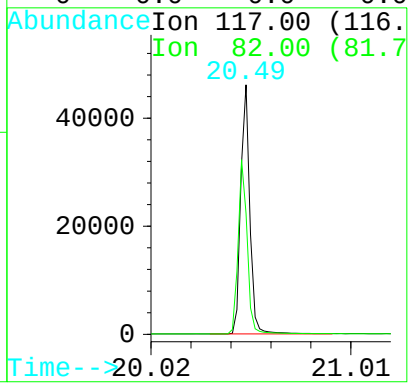


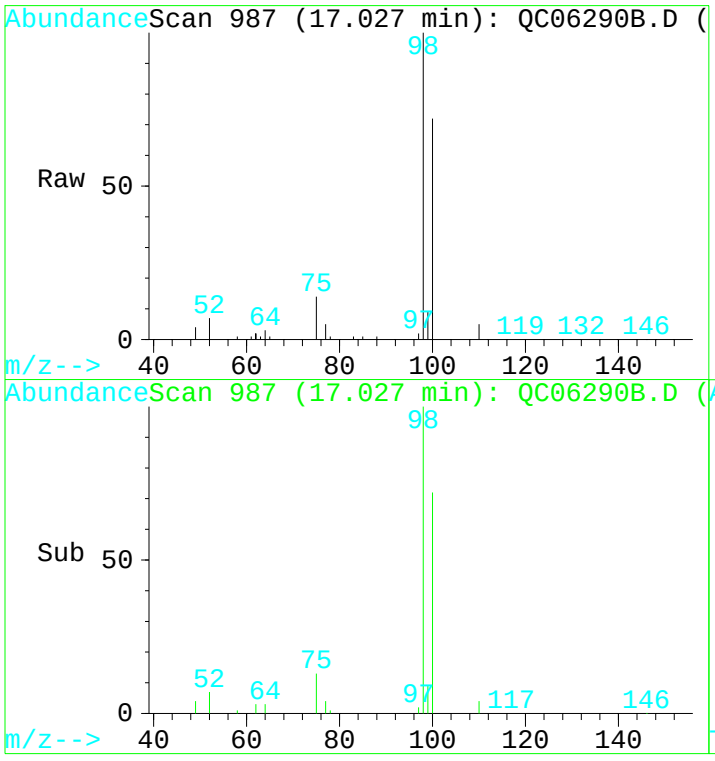


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: QC06290B.D
Acq: 29 Jun 110 12:32 pm

Tgt Ion:117 Resp: 144732

Ion	Ratio	Lower	Upper
117	100		
82	48.3	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

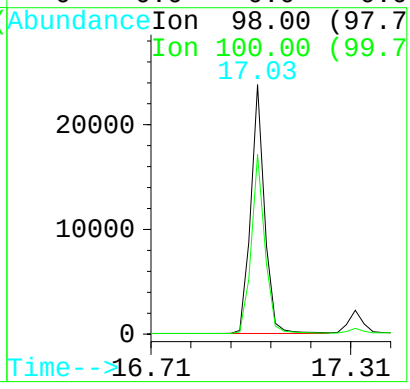


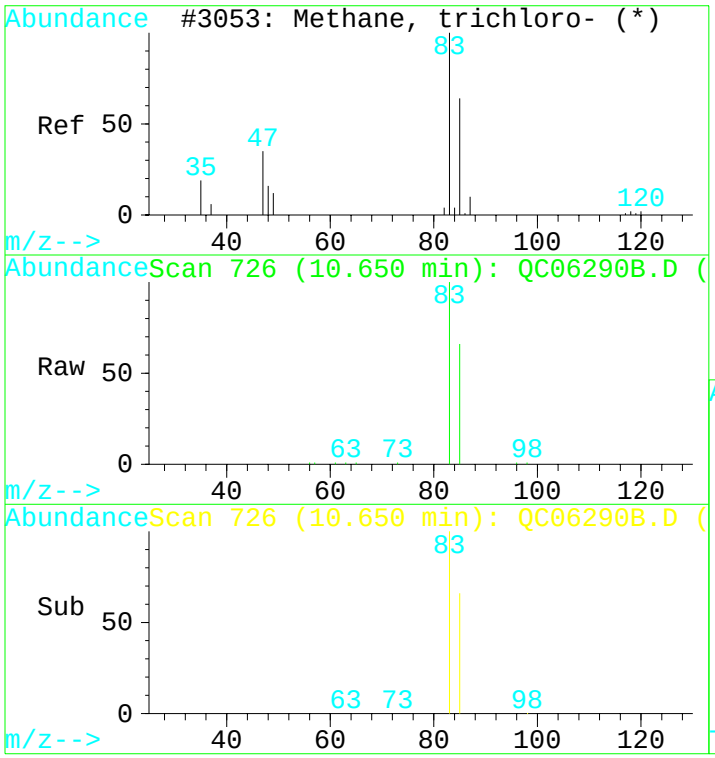


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: QC06290B.D
Acq: 29 Jun 110 12:32 pm

Tgt Ion:98 Resp: 68574

Ion	Ratio	Lower	Upper
98	100		
100	70.7	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

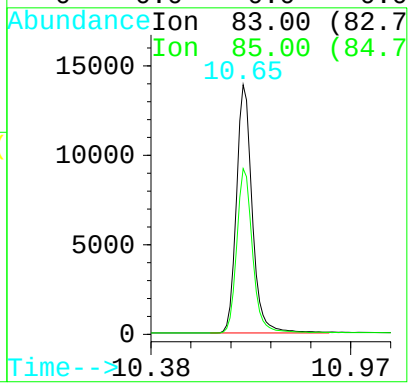


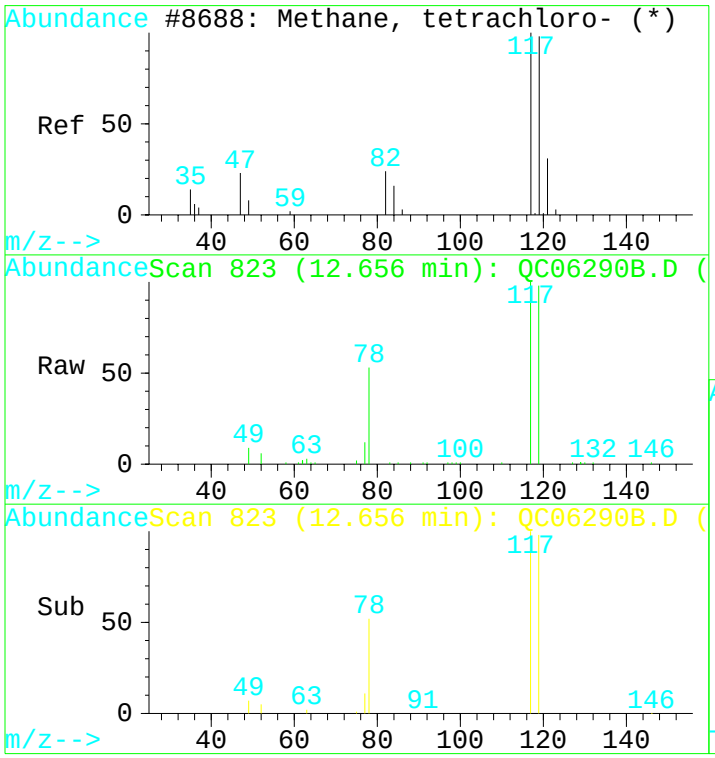


#3
Chloroform
Concen: 0.27 ppbV
RT: 10.65 min Scan# 726
Delta R.T. -0.01 min
Lab File: QC06290B.D
Acq: 29 Jun 110 12:32 pm

Tgt Ion:83 Resp: 44722

Ion	Ratio	Lower	Upper
83	100		
85	66.1	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

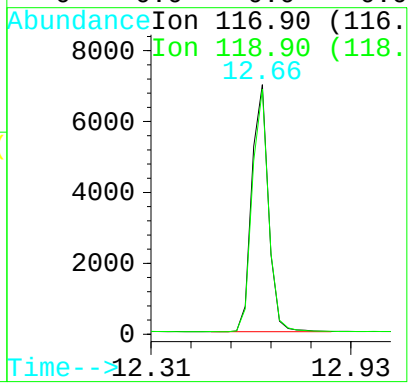


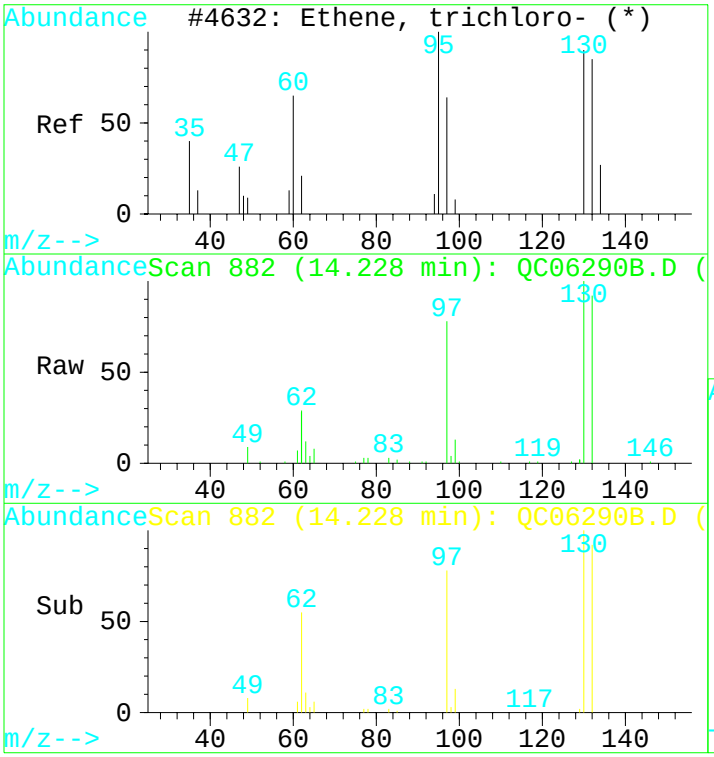


#4
Carbon tetrachloride
Concen: 0.27 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: QC06290B.D
Acq: 29 Jun 110 12:32 pm

Tgt Ion:116.9 Resp: 24987

Ion	Ratio	Lower	Upper
117	100		
119	98.2	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

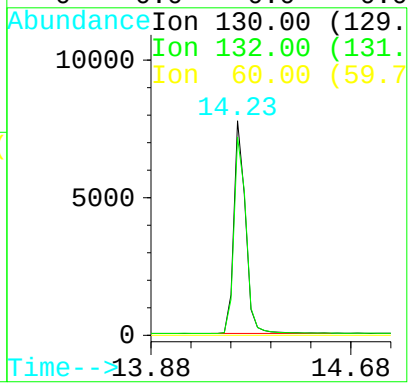




#5
Trichloroethene
Concen: 0.28 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: QC06290B.D
Acq: 29 Jun 110 12:32 pm

Tgt Ion:130 Resp: 25043

Ion	Ratio	Lower	Upper
130	100		
132	92.2	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025310A.D
Acq Time : 29 Jun 110 2:45 pm Operator: JF
Sample : OA-AB-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

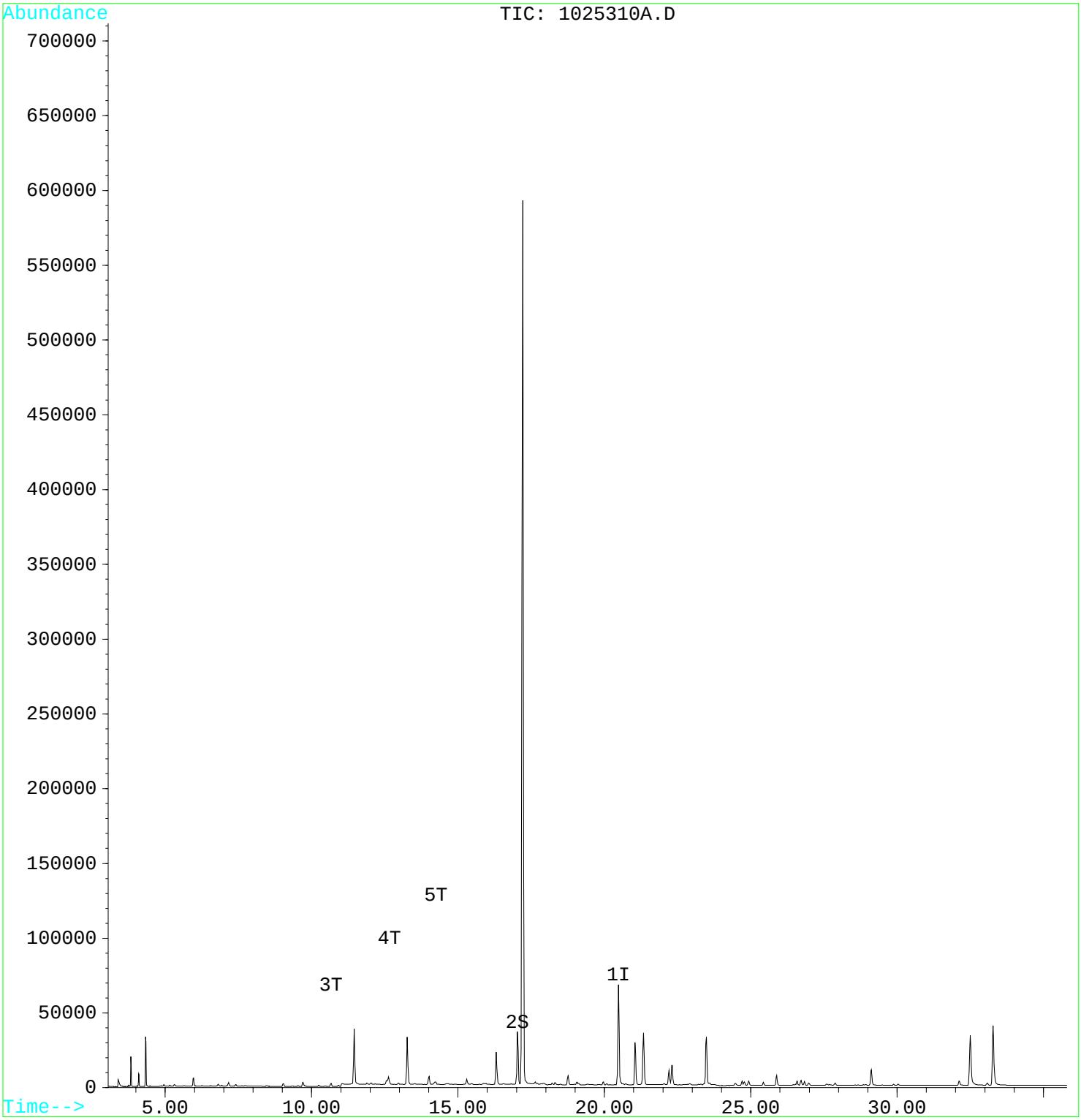
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	115079	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	53406	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.66	83	3493	0.03	ppbV	99
4) Carbon tetrachloride	12.66	117	1883	0.03	ppbV	90
5) Trichloroethene	14.25	130	1485	0.02	ppbV	93

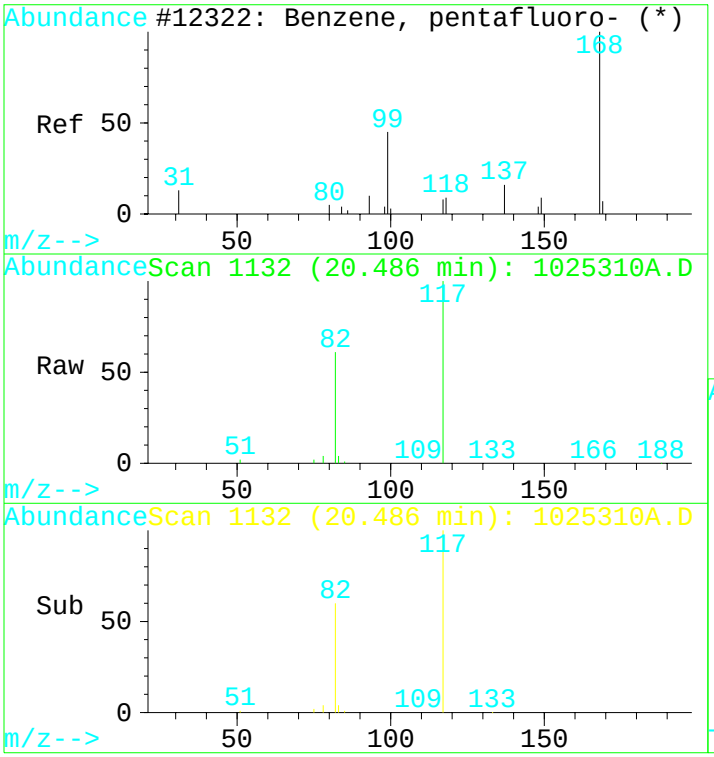
(#) = qualifier out of range (m) = manual integration
1025310A.D 2NTHG_A.M Sun Jul 04 13:52:00 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025310A.D
Acq Time : 29 Jun 110 2:45 pm Operator: JF
Sample : OA-AB-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

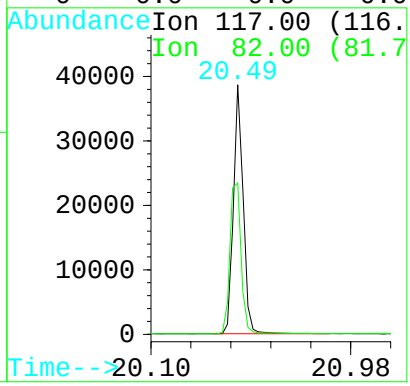


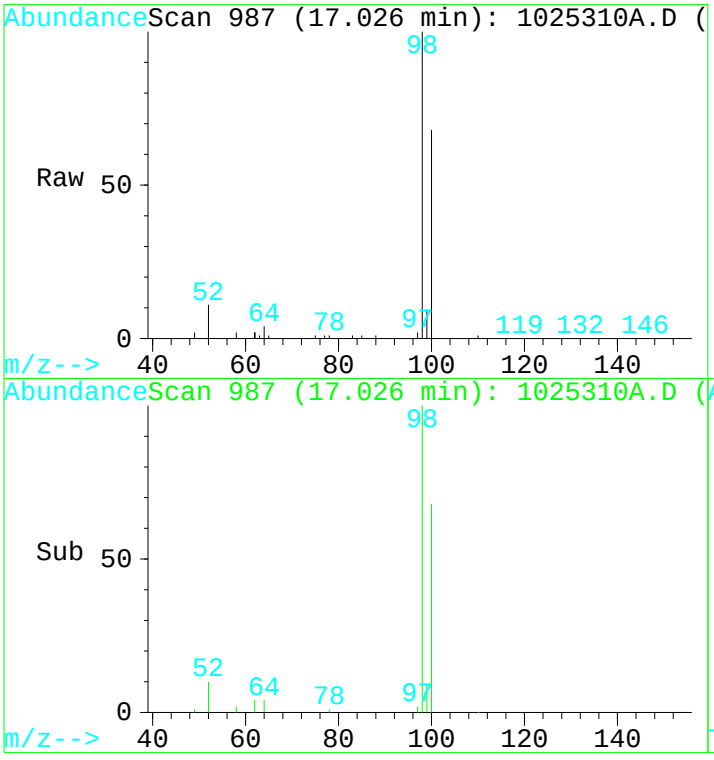


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025310A.D
Acq: 29 Jun 110 2:45 pm

Tgt Ion:117 Resp: 115079

Ion	Ratio	Lower	Upper
117	100		
82	60.5	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

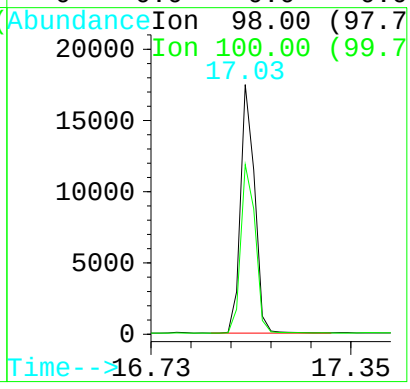


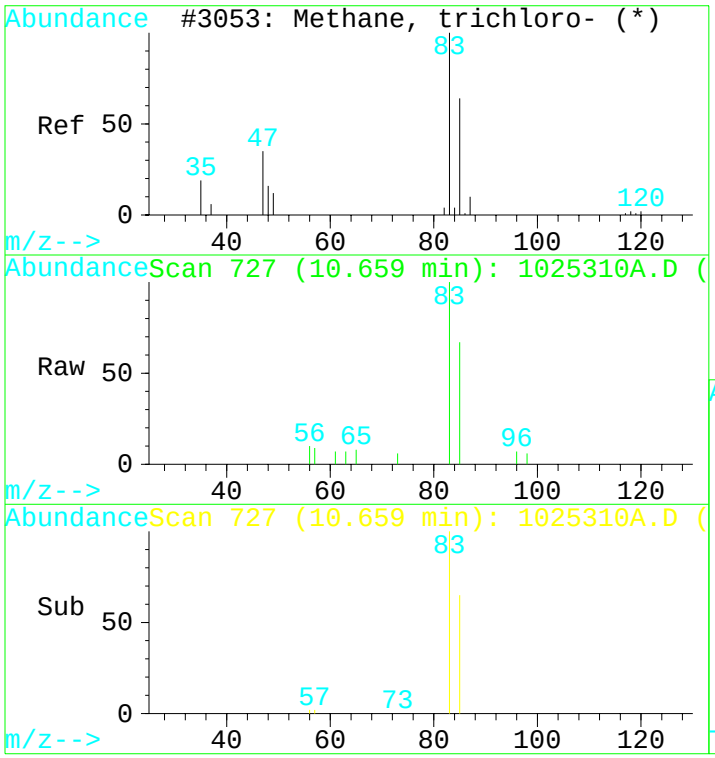


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025310A.D
Acq: 29 Jun 110 2:45 pm

Tgt Ion:98 Resp: 53406

Ion	Ratio	Lower	Upper
98	100		
100	70.1	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

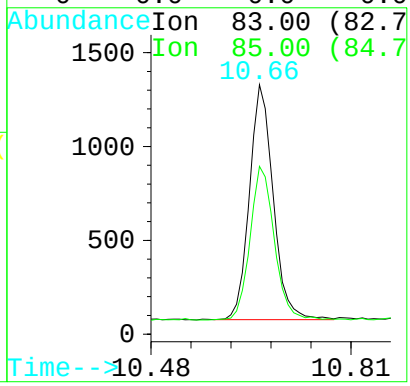


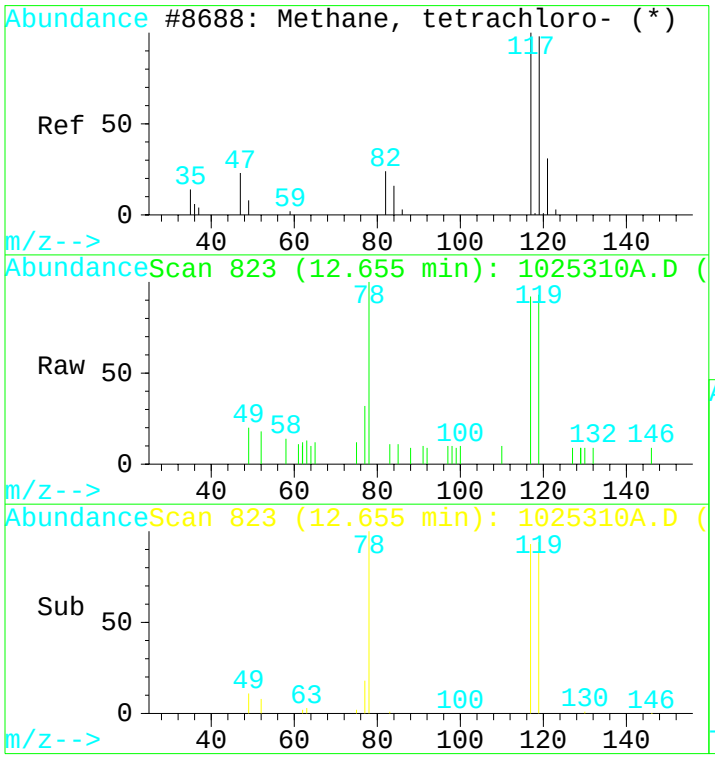


#3
Chloroform
Concen: 0.03 ppbV
RT: 10.66 min Scan# 727
Delta R.T. -0.00 min
Lab File: 1025310A.D
Acq: 29 Jun 110 2:45 pm

Tgt Ion:83 Resp: 3493

Ion	Ratio	Lower	Upper
83	100		
85	65.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

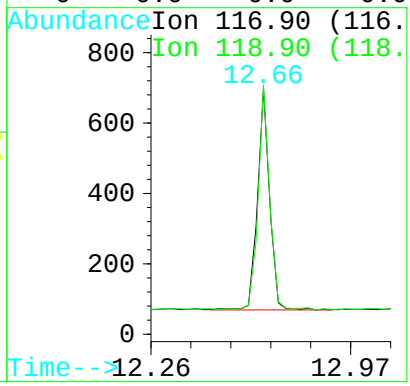


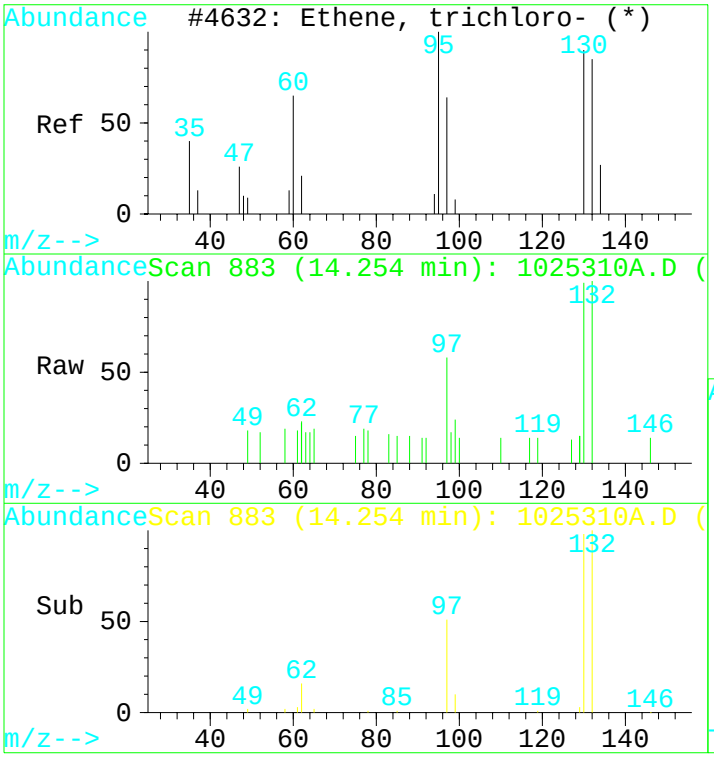


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025310A.D
Acq: 29 Jun 110 2:45 pm

Tgt Ion:116.9 Resp: 1883

Ion	Ratio	Lower	Upper
117	100		
119	101.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

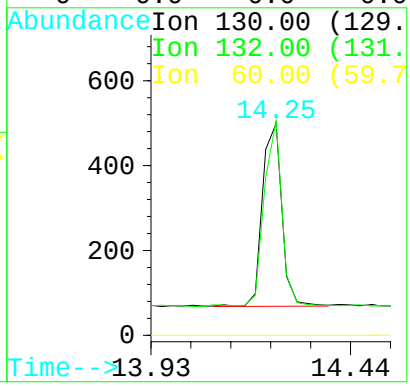




#5
Trichloroethene
Concen: 0.02 ppbV
RT: 14.25 min Scan# 883
Delta R.T. -0.01 min
Lab File: 1025310A.D
Acq: 29 Jun 110 2:45 pm

Tgt Ion:130 Resp: 1485

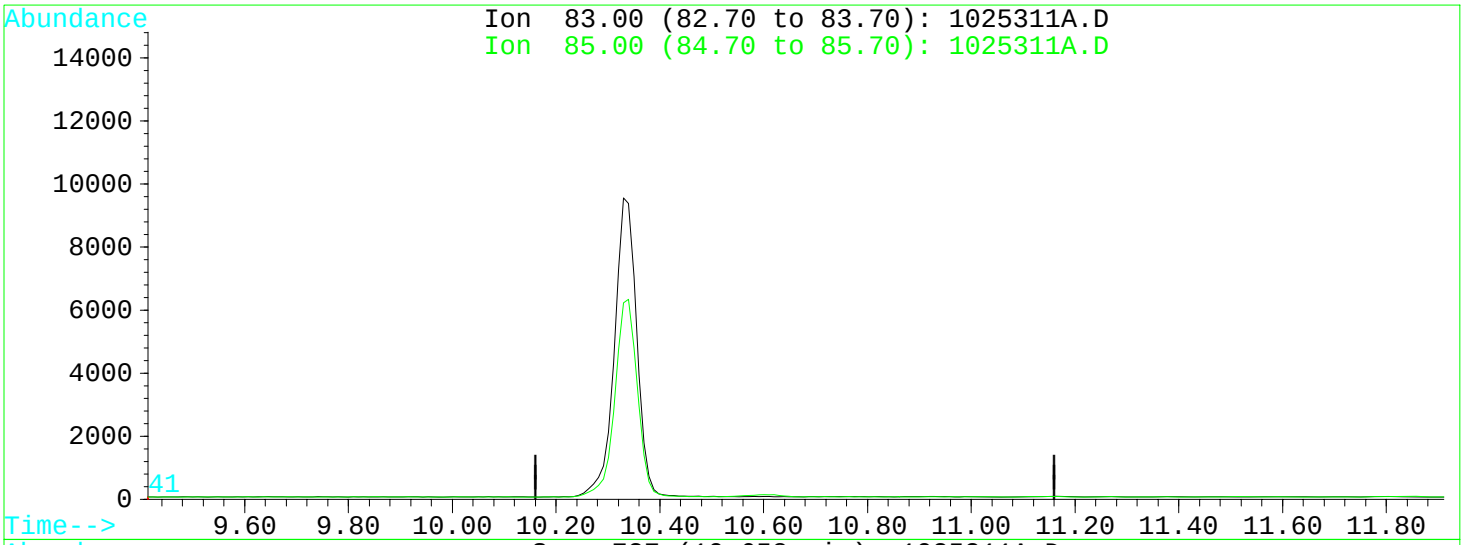
Ion	Ratio	Lower	Upper
130	100		
132	101.3	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0

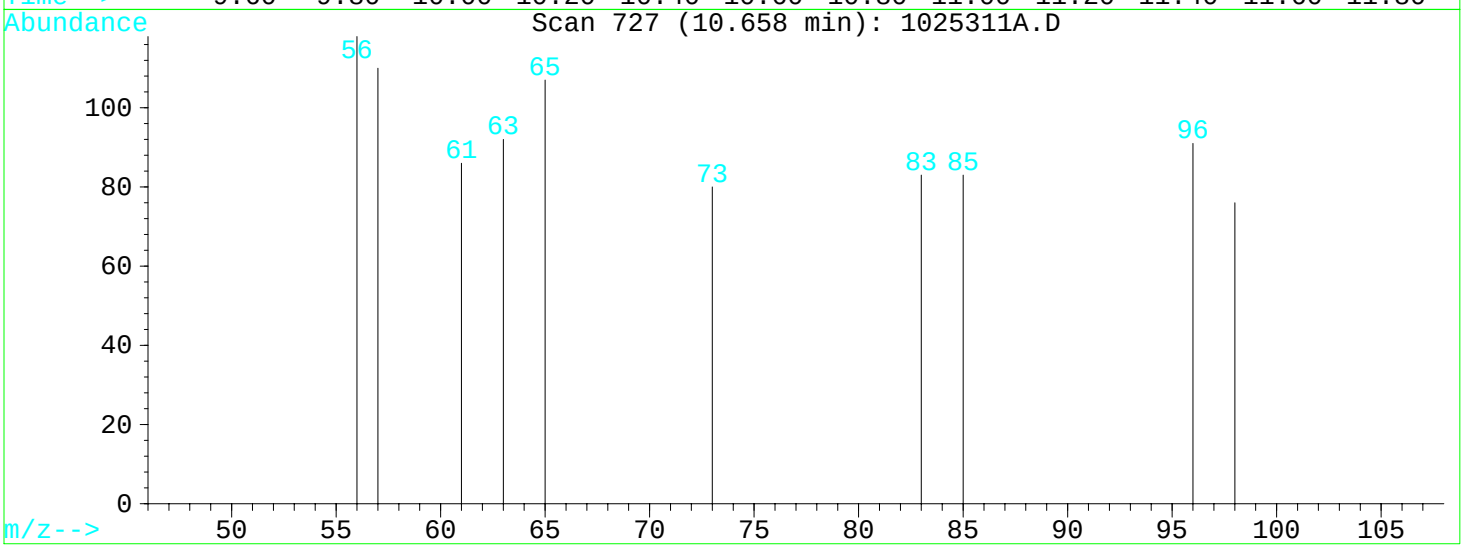


Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025311A.D
Acq Time : 29 Jun 110 3:28 pm Operator: JF
Sample : IA-WH-SA-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025311A.D

(3) Chloroform (T) Missed Peak - KB 7/4/10

10.66min 0.00ppbV

response 0

Ion	Exp%	Act%
83.00	100	0.00
85.00	64.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025311A.D
Acq Time : 29 Jun 110 3:28 pm Operator: JF
Sample : IA-WH-SA-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:53 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

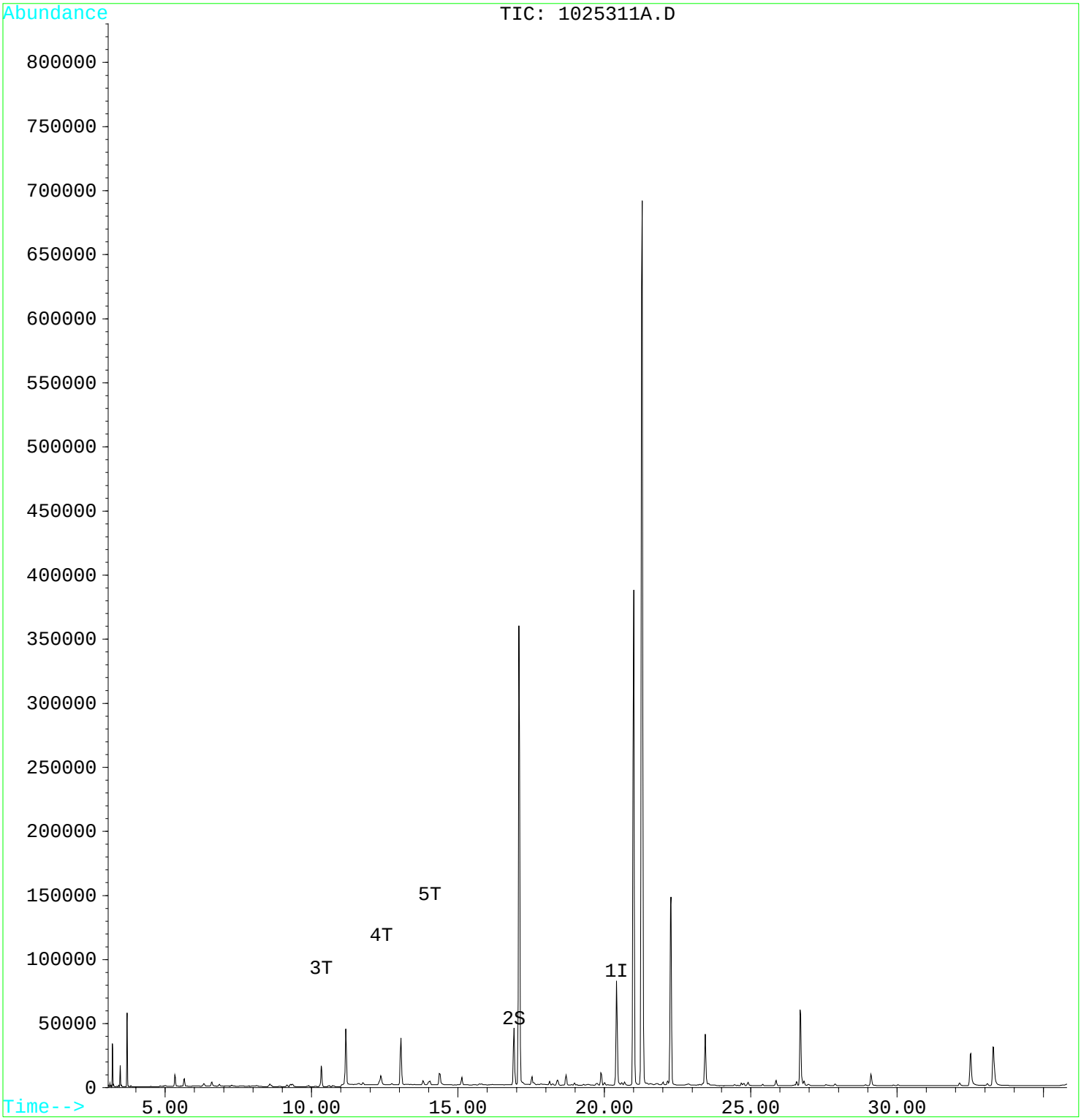
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.42	117	136657	0.20	ppbV		-0.09
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.92	98	67957	0.21	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.33	83	28280	0.18	ppbV	m	0
4) Carbon tetrachloride	12.39	117	2825	0.03	ppbV		90
5) Trichloroethene	14.04	130	2460	0.03	ppbV		96

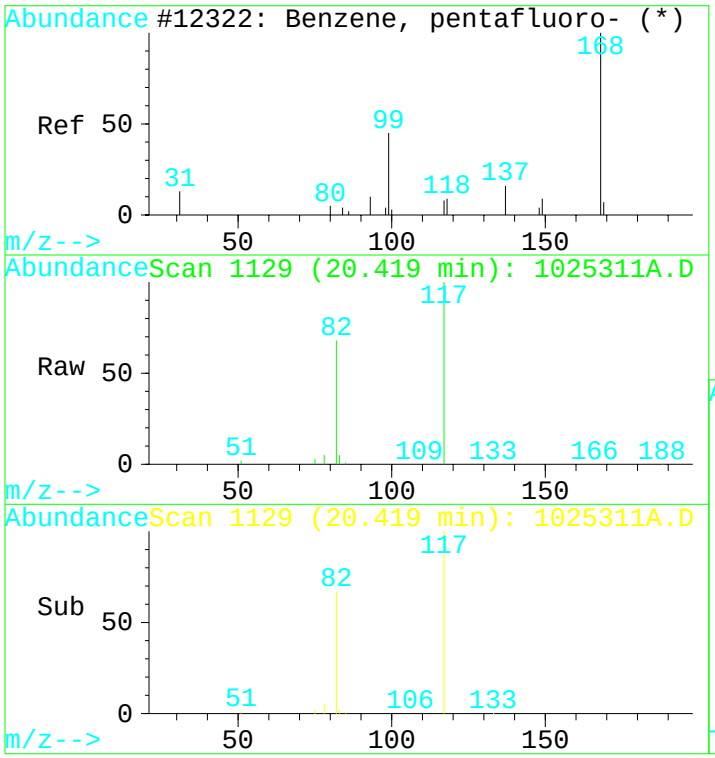
(#) = qualifier out of range (m) = manual integration
1025311A.D 2NTHG_A.M Sun Jul 04 13:53:44 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025311A.D
Acq Time : 29 Jun 110 3:28 pm Operator: JF
Sample : IA-WH-SA-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:53 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

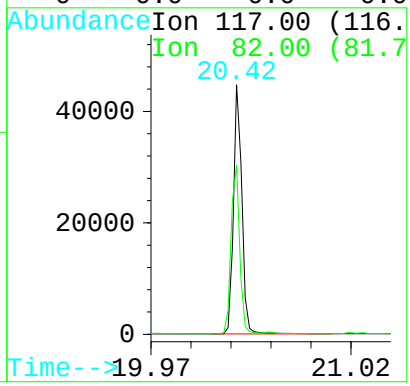


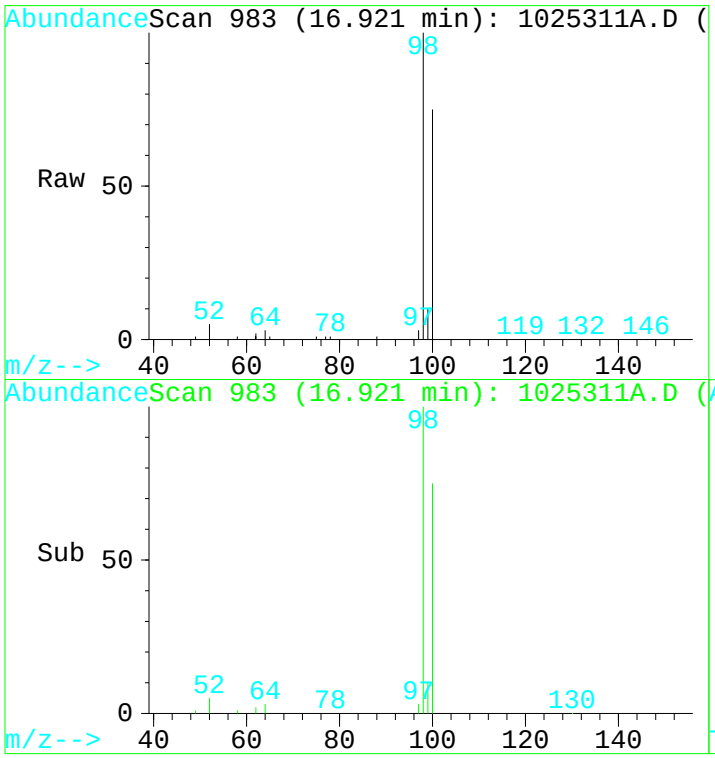


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.42 min Scan# 1129
Delta R.T. -0.09 min
Lab File: 1025311A.D
Acq: 29 Jun 110 3:28 pm

Tgt Ion:117 Resp: 136657

Ion	Ratio	Lower	Upper
117	100		
82	67.7	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

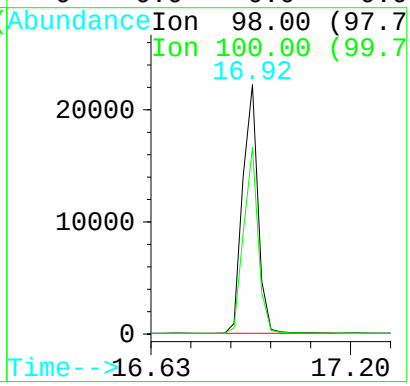


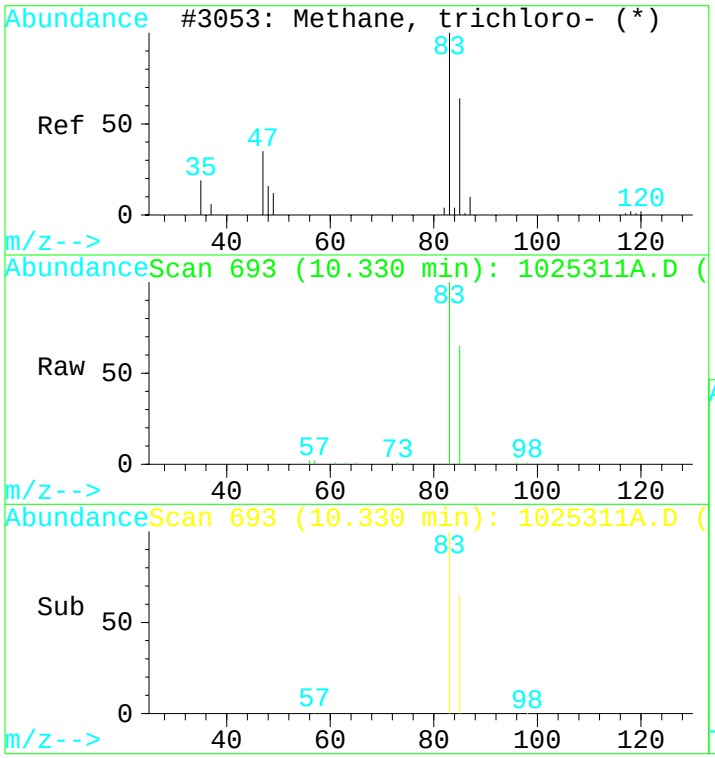


#2
Toluene-d8
Concen: 0.21 ppbV
RT: 16.92 min Scan# 983
Delta R.T. -0.13 min
Lab File: 1025311A.D
Acq: 29 Jun 110 3:28 pm

Tgt Ion:98 Resp: 67957

Ion	Ratio	Lower	Upper
98	100		
100	71.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

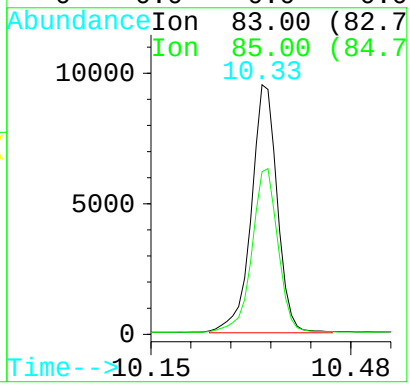


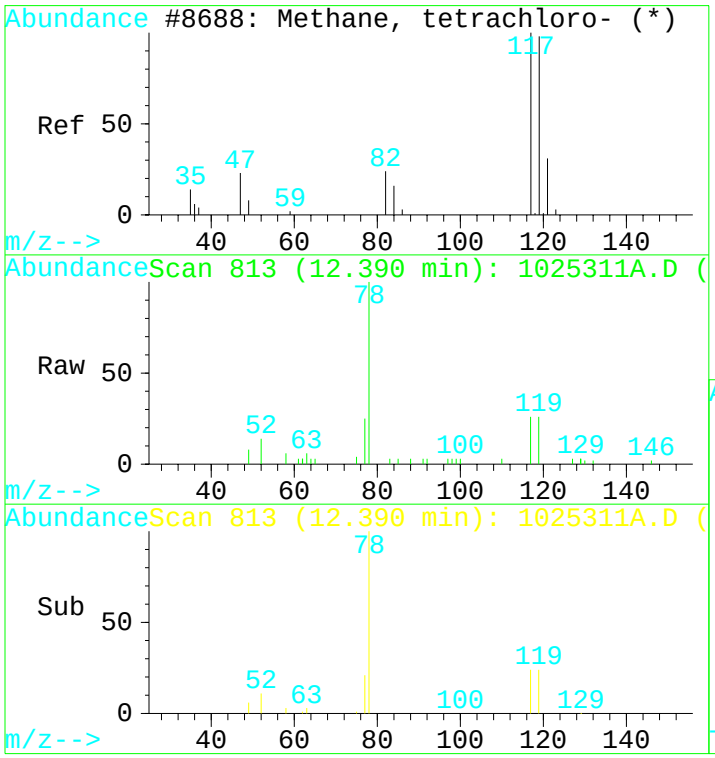


#3
Chloroform
Concen: 0.18 ppbV m
RT: 10.33 min Scan# 693
Delta R.T. -0.33 min
Lab File: 1025311A.D
Acq: 29 Jun 110 3:28 pm

Tgt Ion:83 Resp: 28280

Ion	Ratio	Lower	Upper
83	100		
85	65.2	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

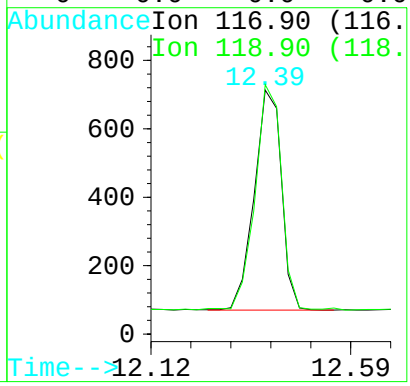


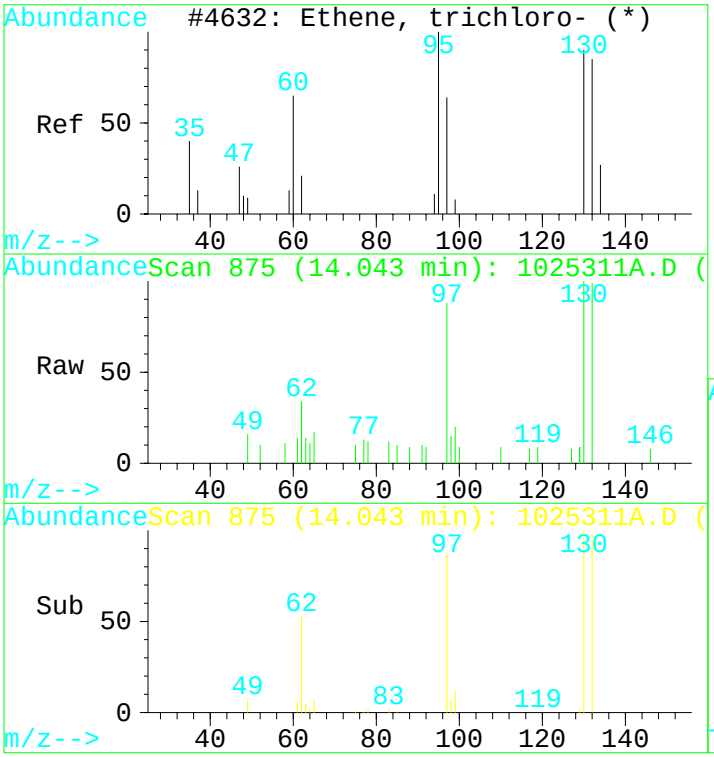


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.39 min Scan# 813
Delta R.T. -0.27 min
Lab File: 1025311A.D
Acq: 29 Jun 110 3:28 pm

Tgt Ion:116.9 Resp: 2825

Ion	Ratio	Lower	Upper
117	100		
119	101.7	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

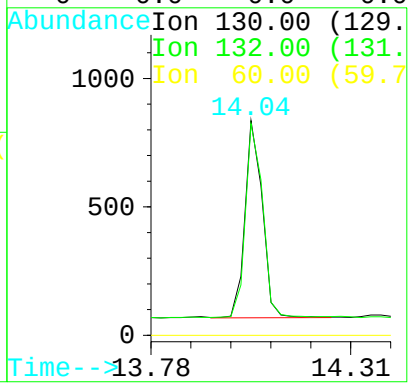




#5
Trichloroethene
Concen: 0.03 ppbV
RT: 14.04 min Scan# 875
Delta R.T. -0.22 min
Lab File: 1025311A.D
Acq: 29 Jun 110 3:28 pm

Tgt Ion:130 Resp: 2460

Ion	Ratio	Lower	Upper
130	100		
132	98.2	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025312A.D
Acq Time : 29 Jun 110 4:10 pm Operator: JF
Sample : OA-WH-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

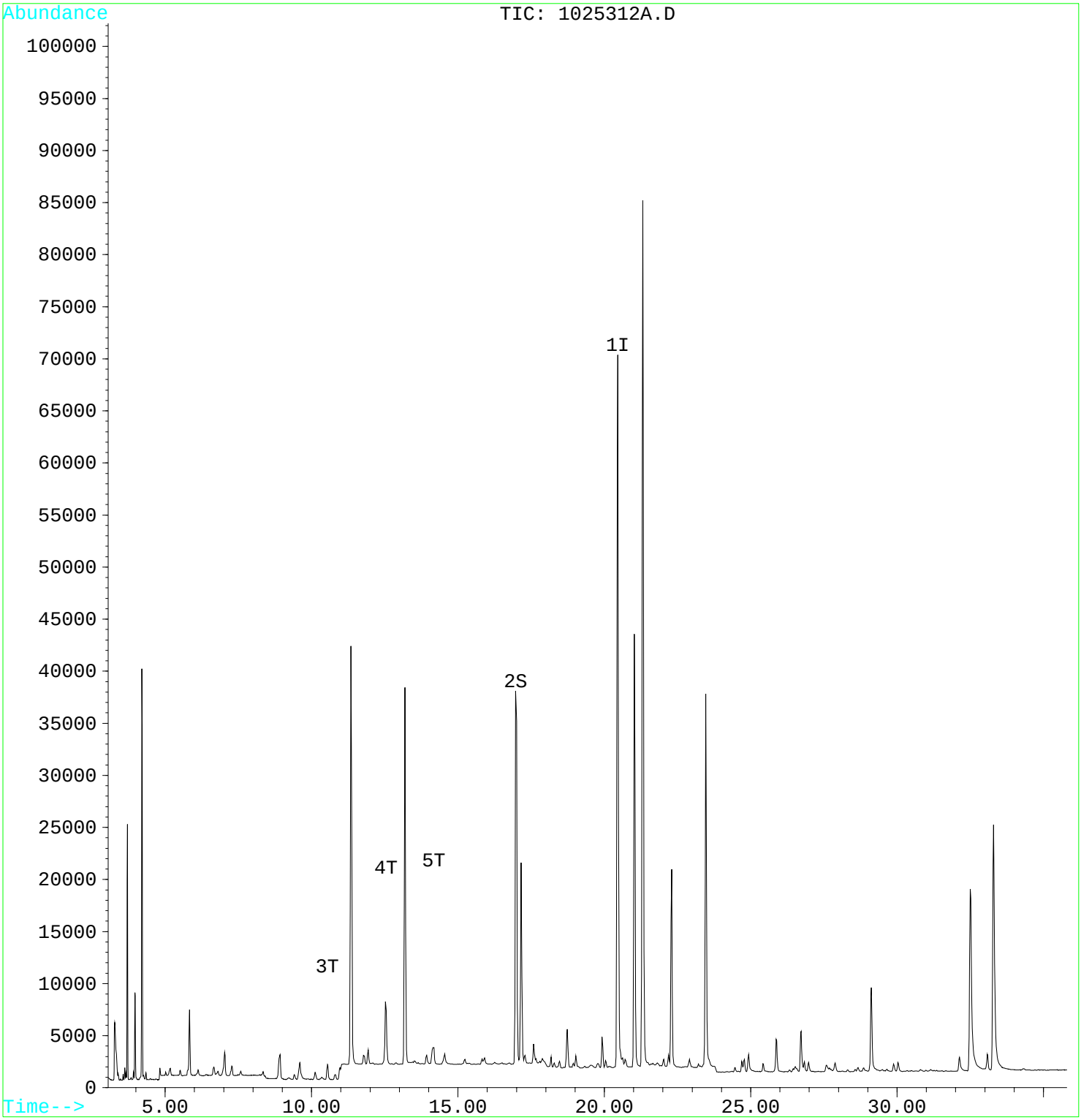
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	128570	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.97	98	63377	0.21	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.54	83	2872	0.02	ppbV	97
4) Carbon tetrachloride	12.55	117	2505	0.03	ppbV	97
5) Trichloroethene	14.18	130	1514	0.02	ppbV	98

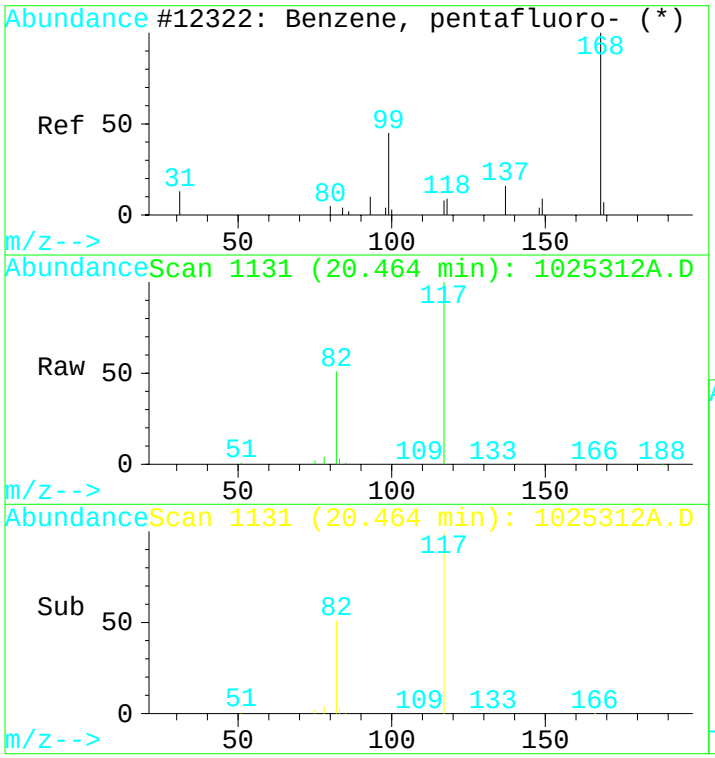
(#) = qualifier out of range (m) = manual integration
1025312A.D 2NTHG_A.M Sun Jul 04 13:54:08 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025312A.D
Acq Time : 29 Jun 110 4:10 pm Operator: JF
Sample : OA-WH-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

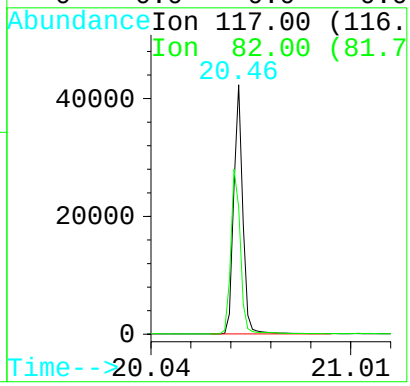


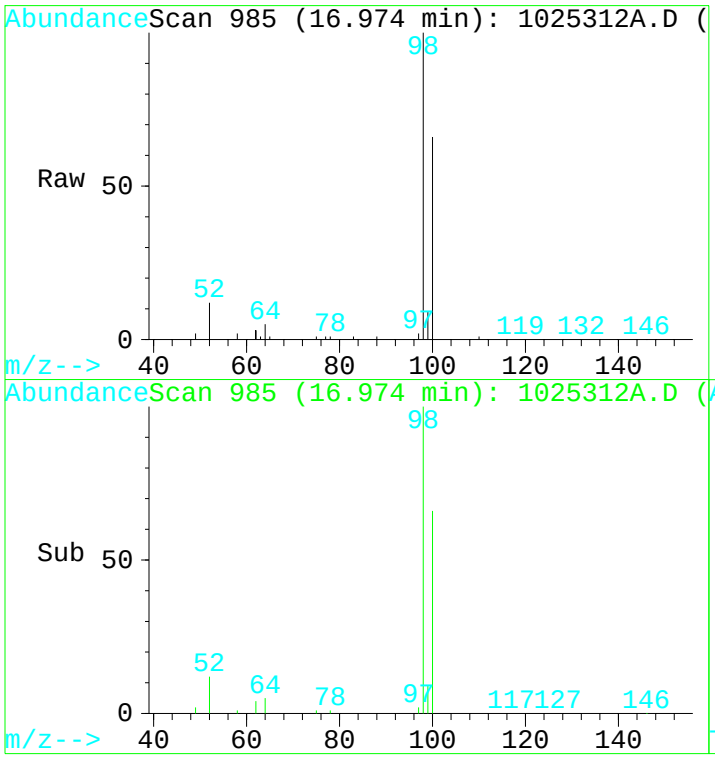


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: 1025312A.D
Acq: 29 Jun 110 4:10 pm

Tgt Ion:117 Resp: 128570

Ion	Ratio	Lower	Upper
117	100		
82	50.8	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

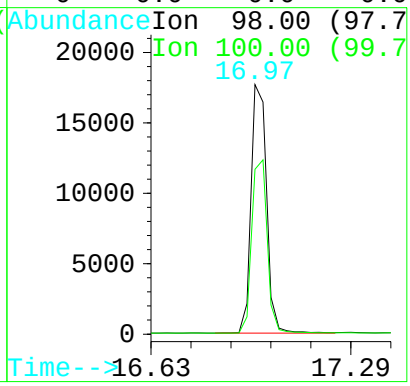


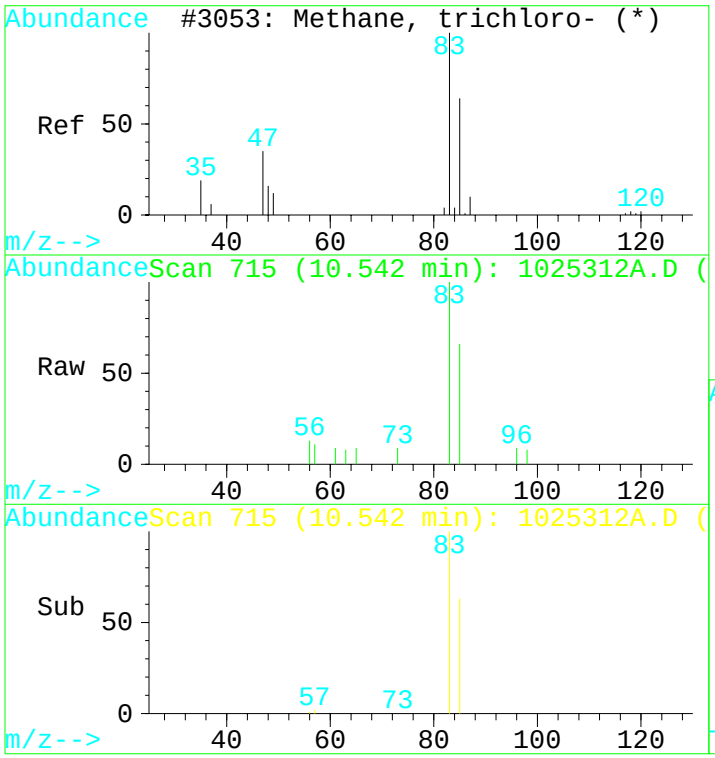


#2
Toluene-d8
Concen: 0.21 ppbV
RT: 16.97 min Scan# 985
Delta R.T. -0.08 min
Lab File: 1025312A.D
Acq: 29 Jun 110 4:10 pm

Tgt Ion:98 Resp: 63377

Ion	Ratio	Lower	Upper
98	100		
100	70.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

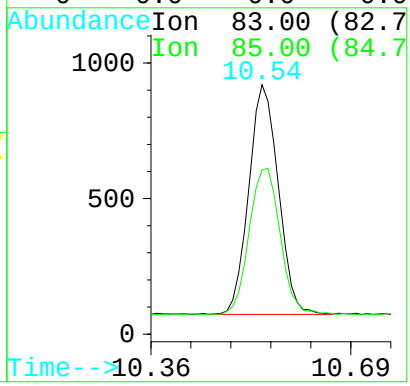


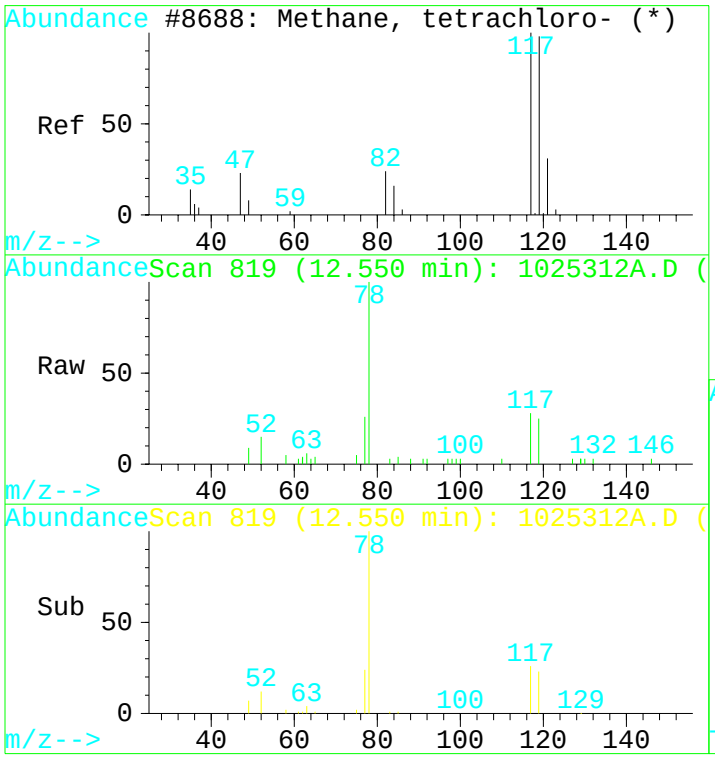


#3
Chloroform
Concen: 0.02 ppbV
RT: 10.54 min Scan# 715
Delta R.T. -0.12 min
Lab File: 1025312A.D
Acq: 29 Jun 110 4:10 pm

Tgt Ion:83 Resp: 2872

Ion	Ratio	Lower	Upper
83	100		
85	62.7	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

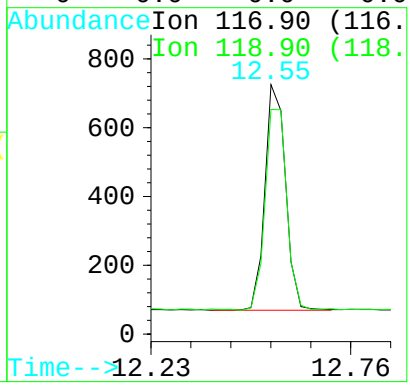


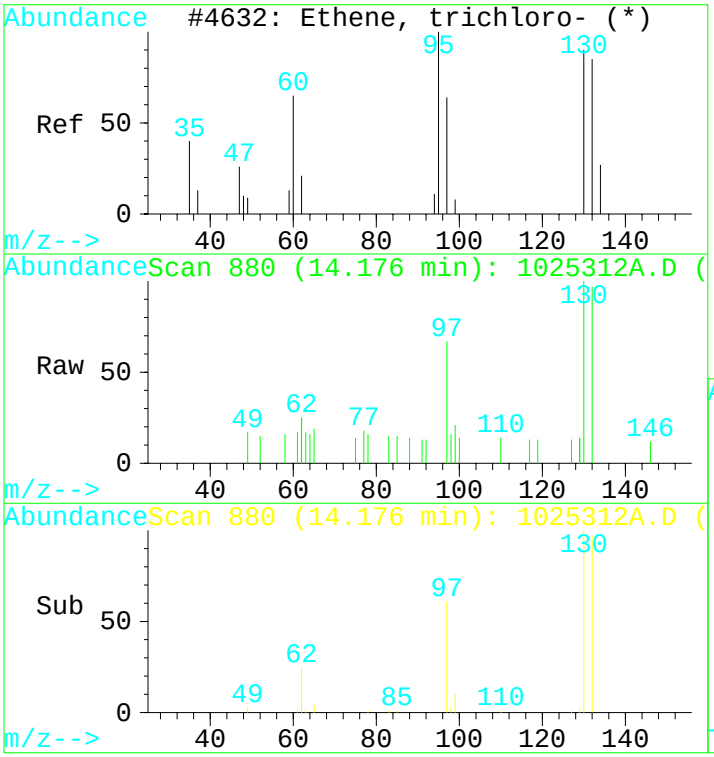


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.55 min Scan# 819
Delta R.T. -0.11 min
Lab File: 1025312A.D
Acq: 29 Jun 110 4:10 pm

Tgt Ion:116.9 Resp: 2505

Ion	Ratio	Lower	Upper
117	100		
119	88.5	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

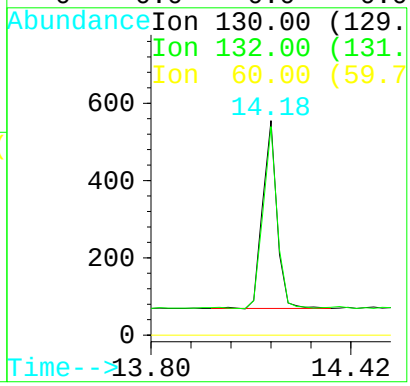




#5
Trichloroethene
Concen: 0.02 ppbV
RT: 14.18 min Scan# 880
Delta R.T. -0.08 min
Lab File: 1025312A.D
Acq: 29 Jun 110 4:10 pm

Tgt Ion:130 Resp: 1514

Ion	Ratio	Lower	Upper
130	100		
132	96.4	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025313A.D
Acq Time : 29 Jun 110 4:56 pm Operator: JF
Sample : IA-BP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

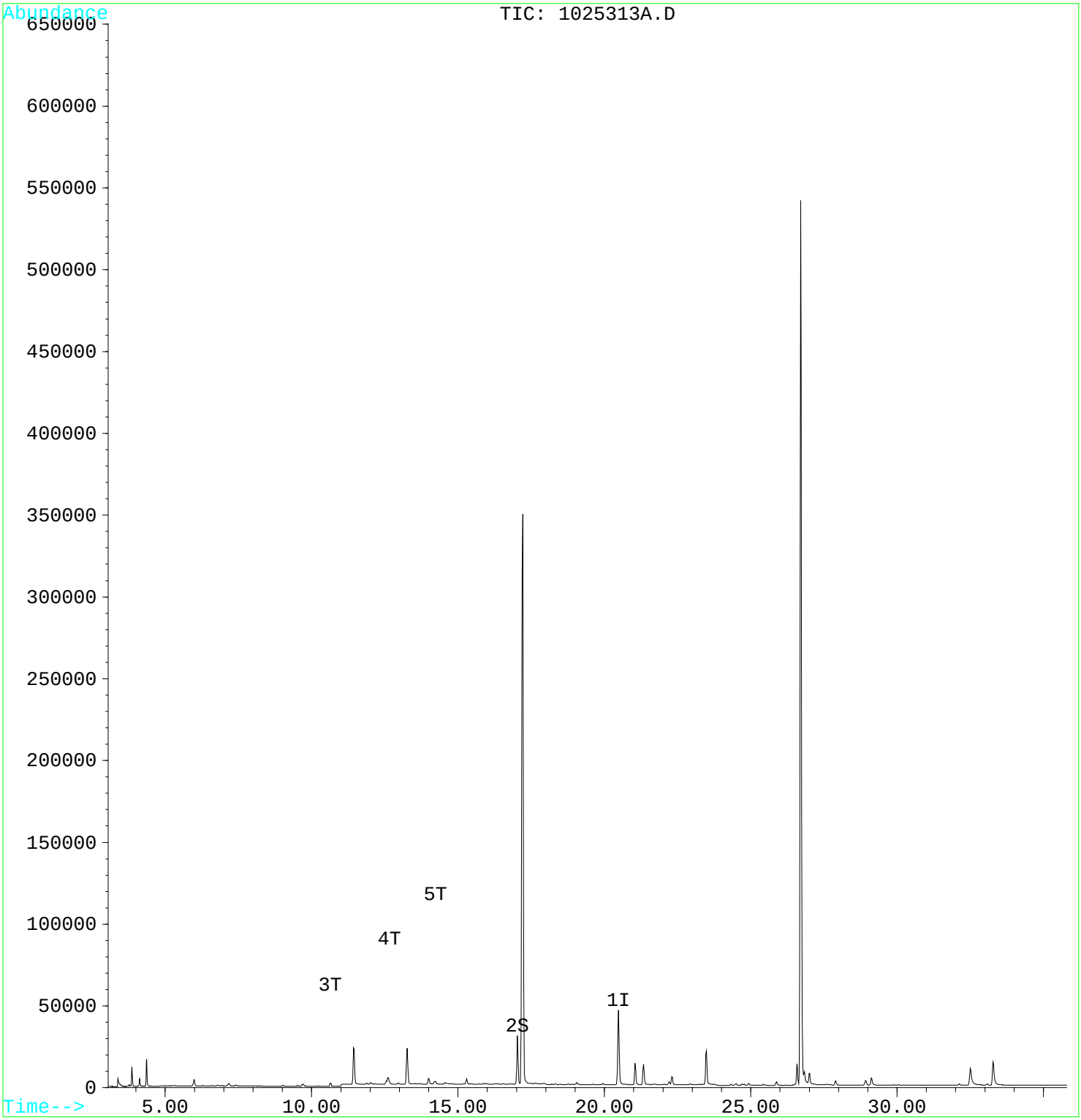
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	84922	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	42319	0.21	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	4385	0.05	ppbV	100
4) Carbon tetrachloride	12.66	117	1768	0.03	ppbV	96
5) Trichloroethene	14.23	130	1472	0.03	ppbV	91

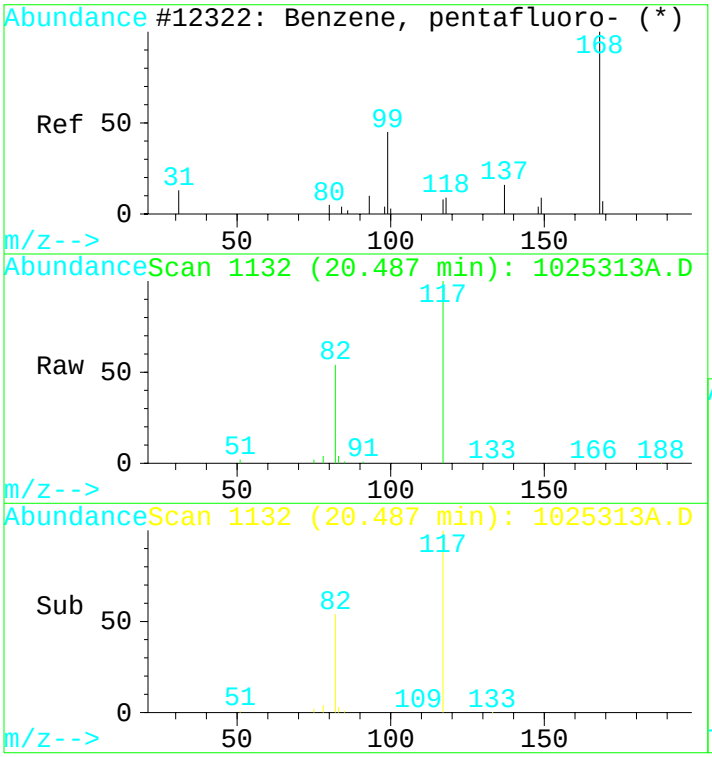
(#) = qualifier out of range (m) = manual integration
1025313A.D 2NTHG_A.M Sun Jul 04 13:54:31 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025313A.D
Acq Time : 29 Jun 110 4:56 pm Operator: JF
Sample : IA-BP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

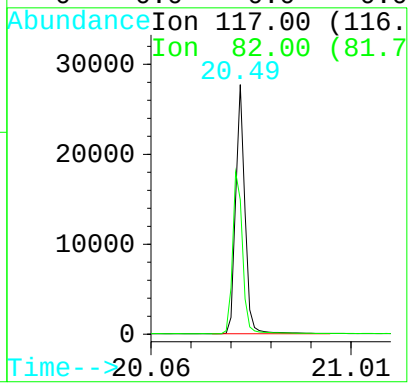


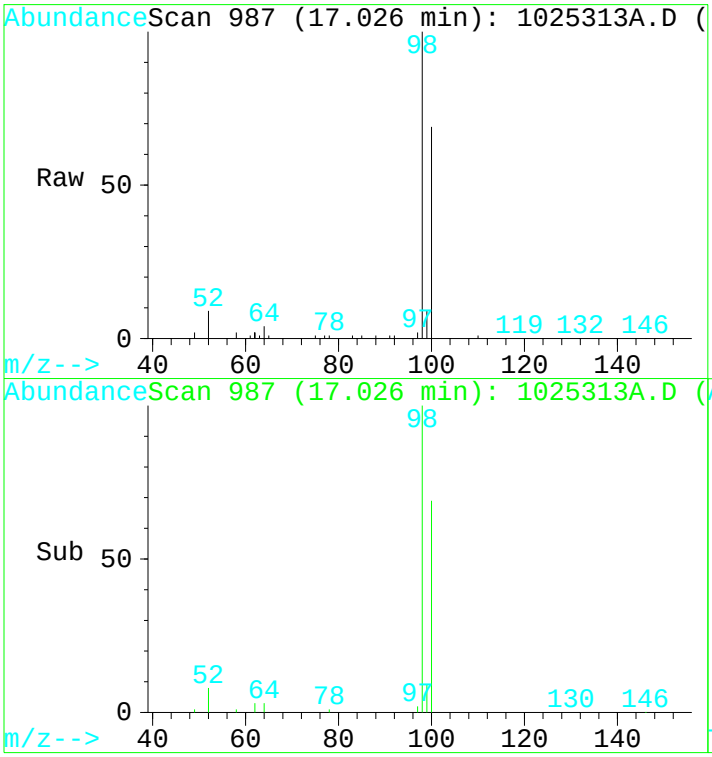


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025313A.D
Acq: 29 Jun 110 4:56 pm

Tgt Ion:117 Resp: 84922

Ion	Ratio	Lower	Upper
117	100		
82	53.7	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

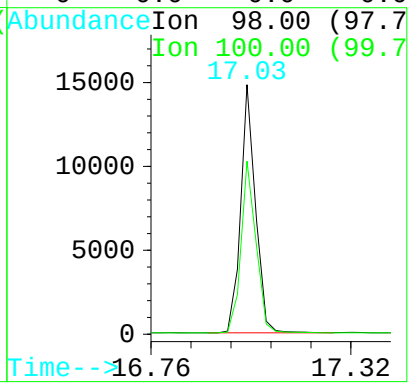


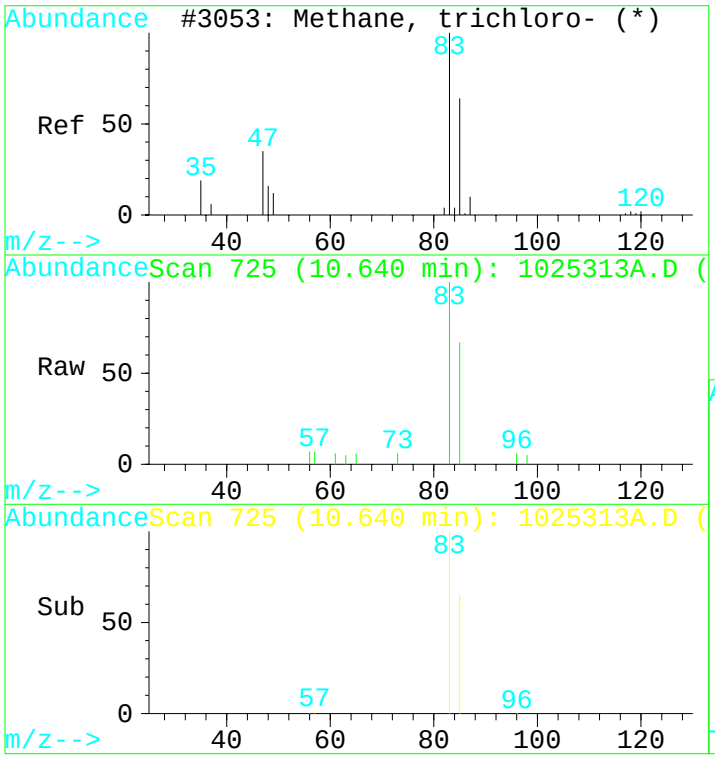


#2
Toluene-d8
Concen: 0.21 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025313A.D
Acq: 29 Jun 110 4:56 pm

Tgt Ion:98 Resp: 42319

Ion	Ratio	Lower	Upper
98	100		
100	70.3	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

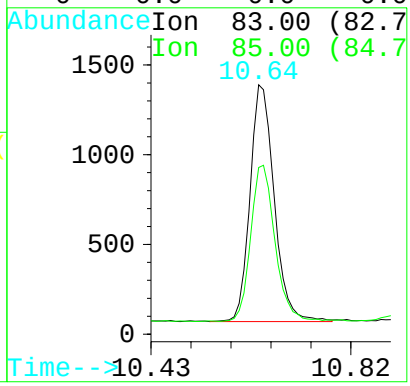


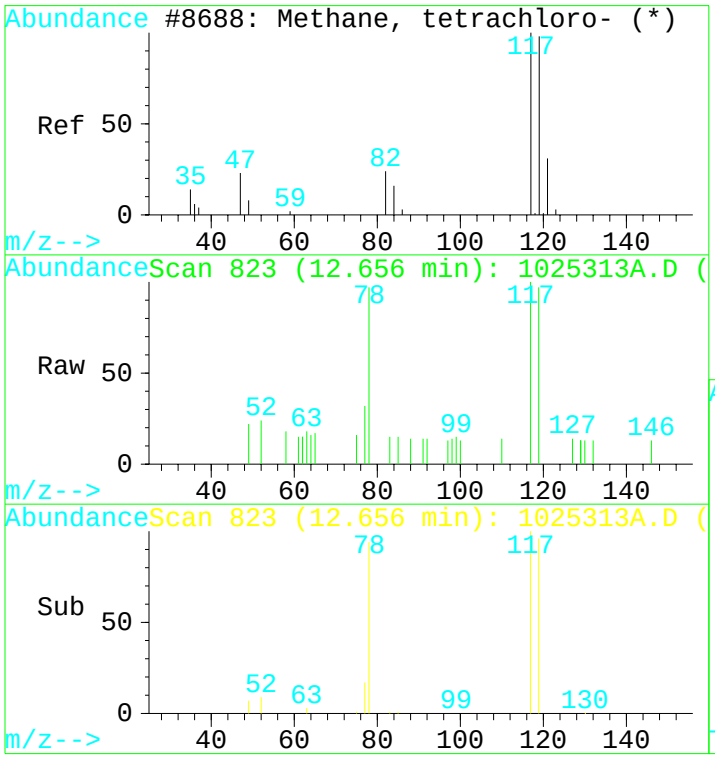


#3
Chloroform
Concen: 0.05 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: 1025313A.D
Acq: 29 Jun 110 4:56 pm

Tgt Ion:83 Resp: 4385

Ion	Ratio	Lower	Upper
83	100		
85	64.8	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

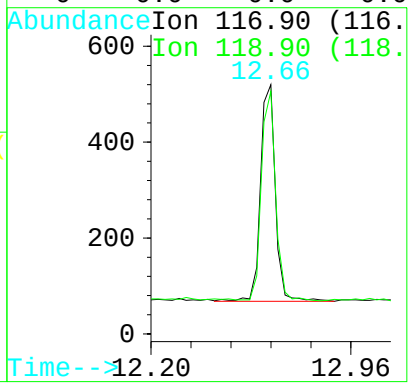


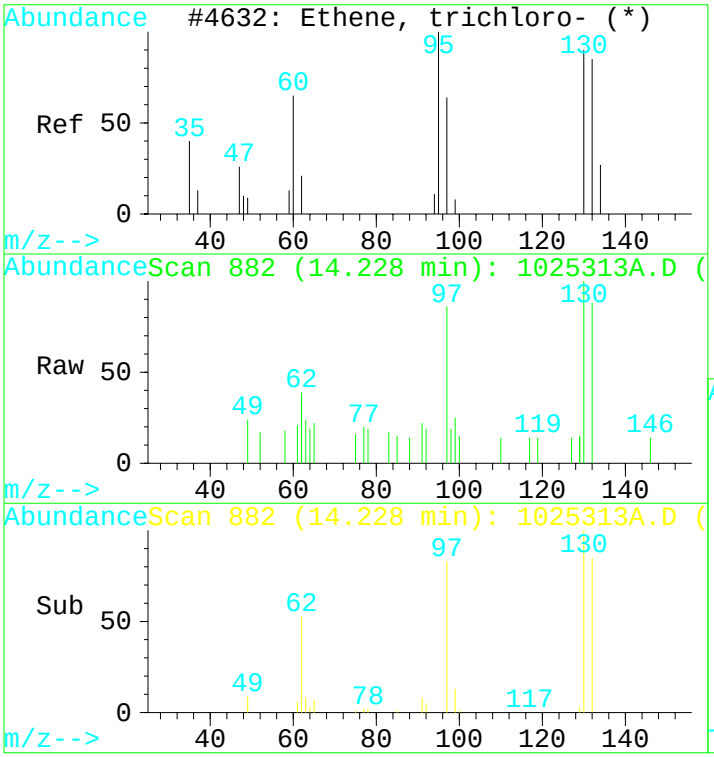


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025313A.D
Acq: 29 Jun 110 4:56 pm

Tgt Ion:116.9 Resp: 1768

Ion	Ratio	Lower	Upper
117	100		
119	96.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

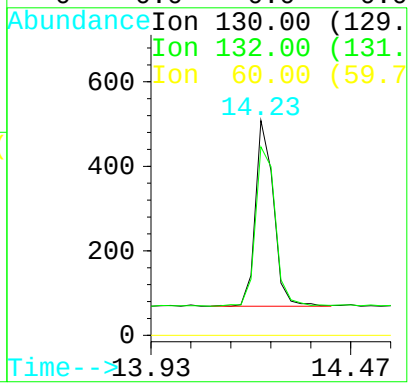




#5
Trichloroethene
Concen: 0.03 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025313A.D
Acq: 29 Jun 110 4:56 pm

Tgt Ion:130 Resp: 1472

Ion	Ratio	Lower	Upper
130	100		
132	85.8	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025314A.D
Acq Time : 29 Jun 110 5:40 pm Operator: JF
Sample : IA-BP-SO-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

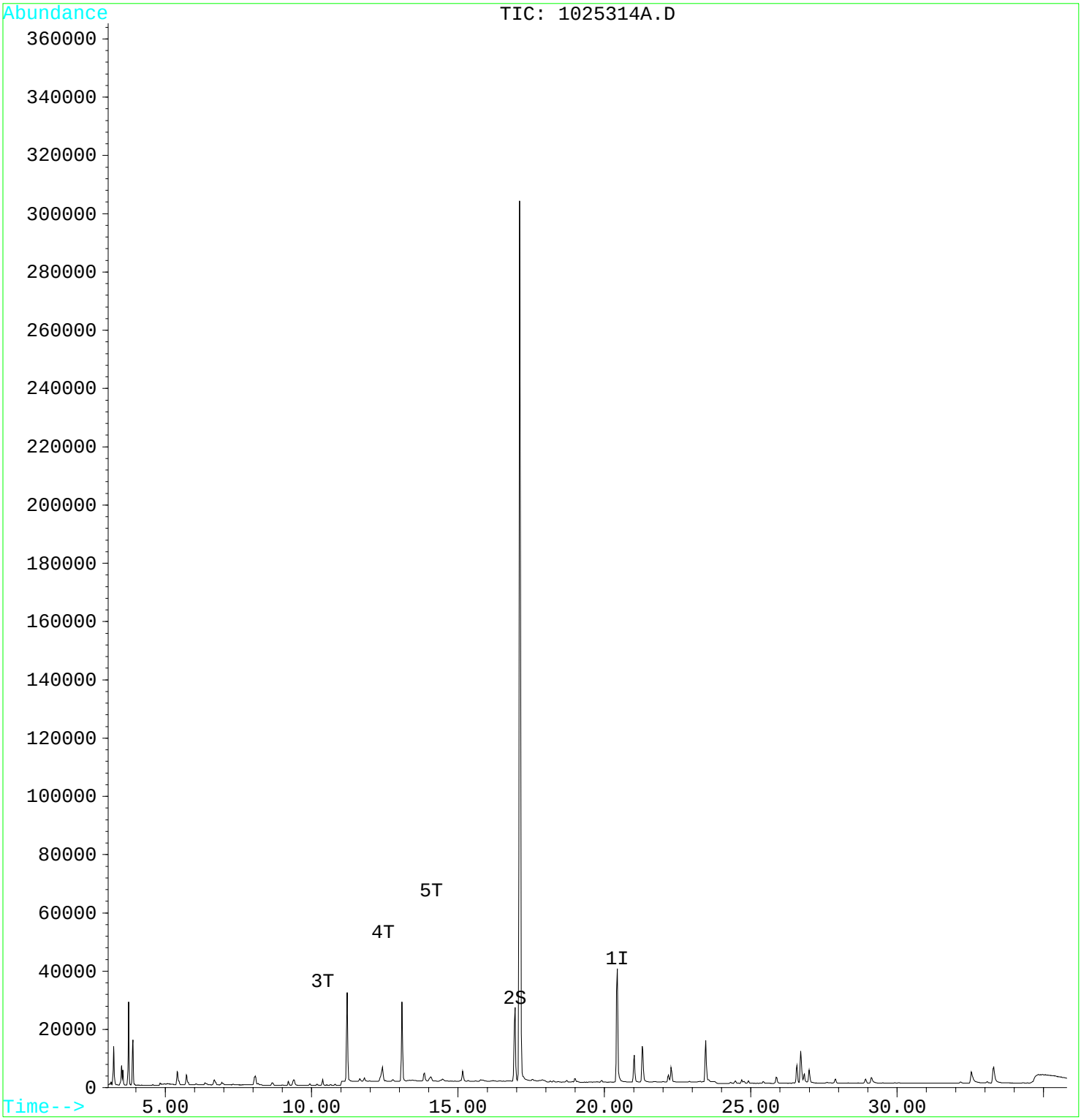
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.44	117	72596	0.20	ppbV	-0.07
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.95	98	42239	0.25	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.38	83	3372	0.04	ppbV	97
4) Carbon tetrachloride	12.44	117	1947	0.04	ppbV	93
5) Trichloroethene	14.10	130	1440	0.03	ppbV	99

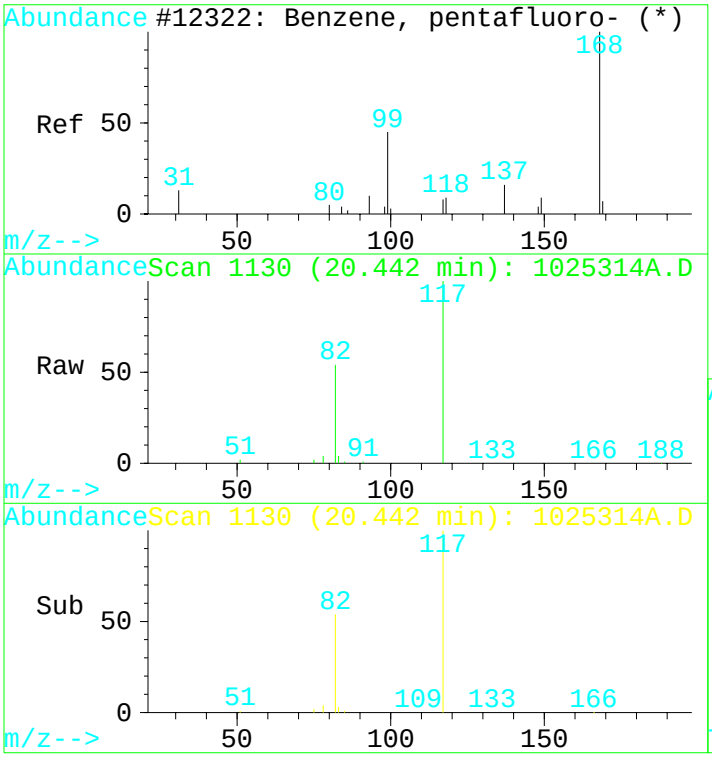
(#) = qualifier out of range (m) = manual integration
1025314A.D 2NTHG_A.M Sun Jul 04 13:54:55 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025314A.D
Acq Time : 29 Jun 110 5:40 pm Operator: JF
Sample : IA-BP-SO-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

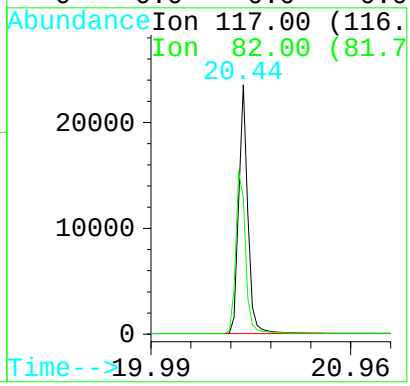


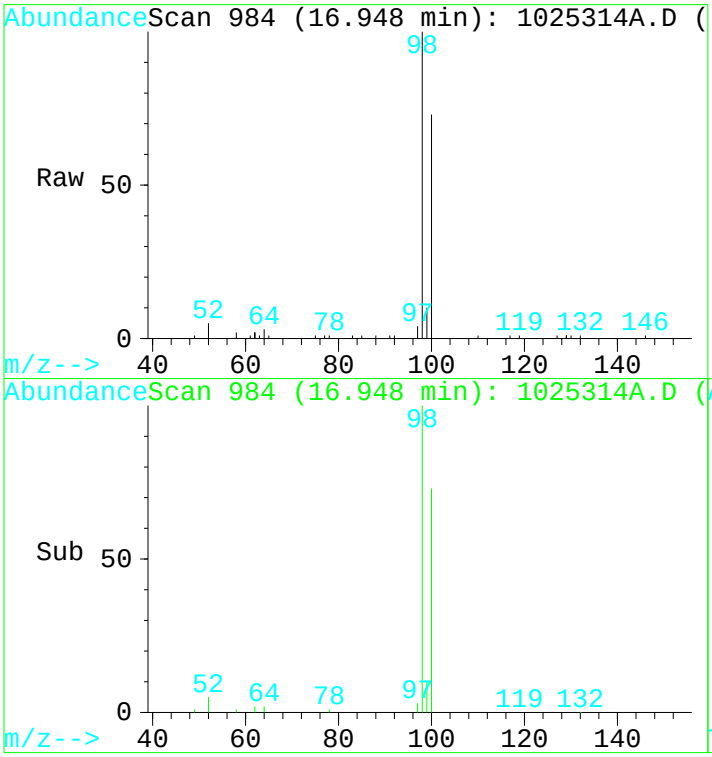


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.44 min Scan# 1130
Delta R.T. -0.07 min
Lab File: 1025314A.D
Acq: 29 Jun 110 5:40 pm

Tgt Ion:117 Resp: 72596

Ion	Ratio	Lower	Upper
117	100		
82	54.2	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

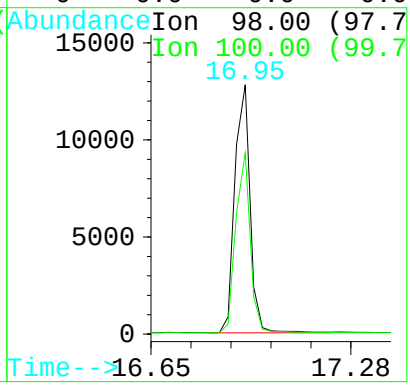


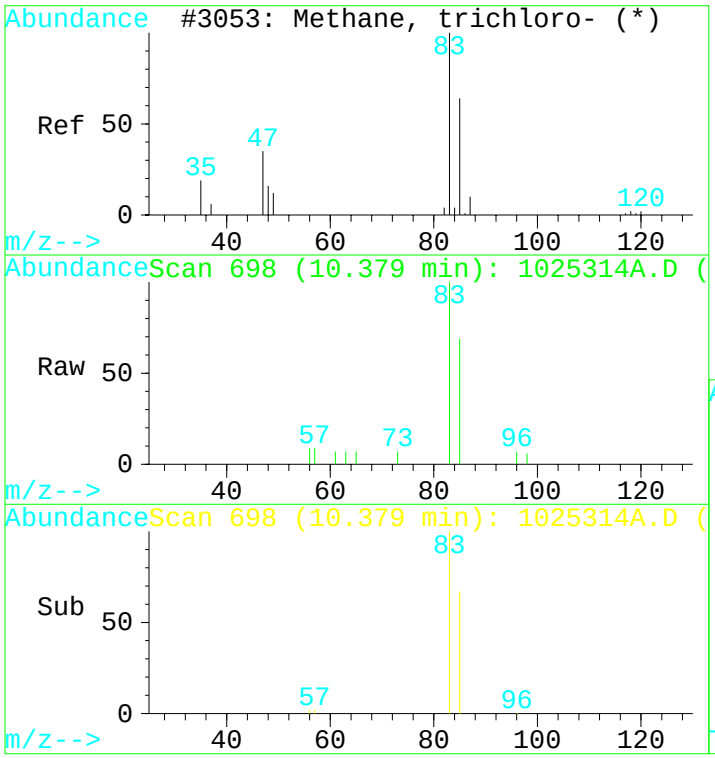


#2
Toluene-d8
Concen: 0.25 ppbV
RT: 16.95 min Scan# 984
Delta R.T. -0.10 min
Lab File: 1025314A.D
Acq: 29 Jun 110 5:40 pm

Tgt Ion:98 Resp: 42239

Ion	Ratio	Lower	Upper
98	100		
100	69.3	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

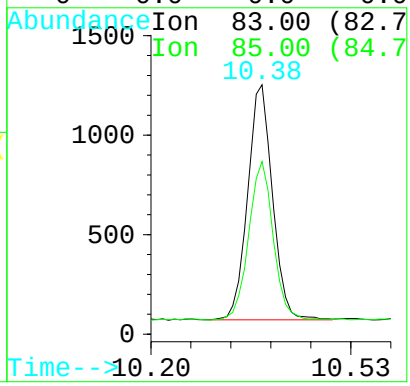


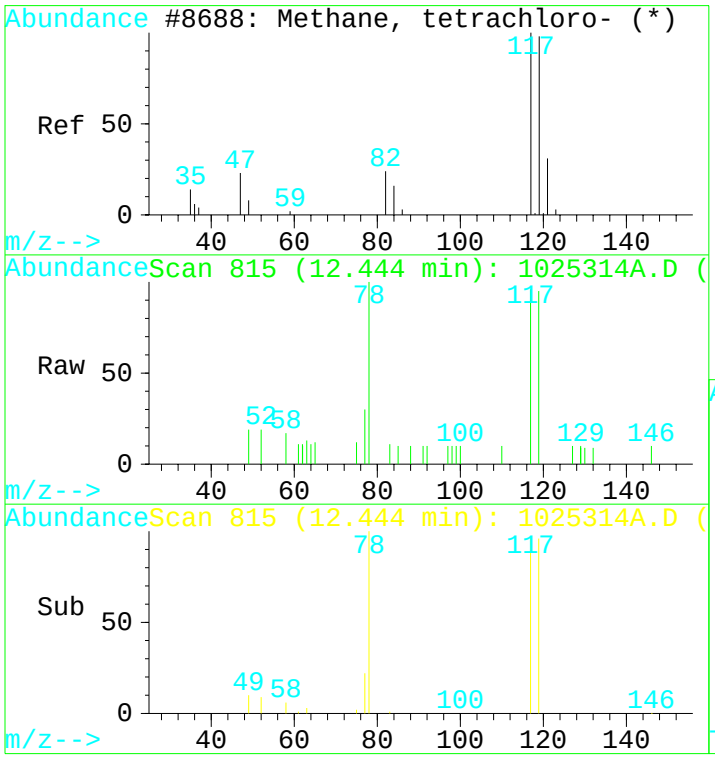


#3
Chloroform
Concen: 0.04 ppbV
RT: 10.38 min Scan# 698
Delta R.T. -0.28 min
Lab File: 1025314A.D
Acq: 29 Jun 110 5:40 pm

Tgt Ion:83 Resp: 3372

Ion	Ratio	Lower	Upper
83	100		
85	67.4	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

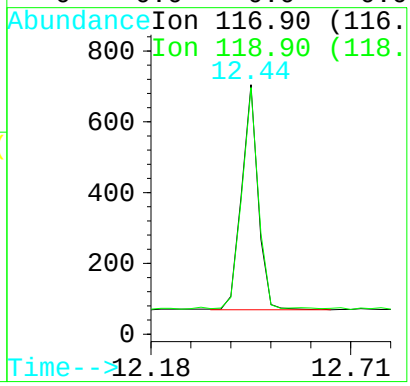


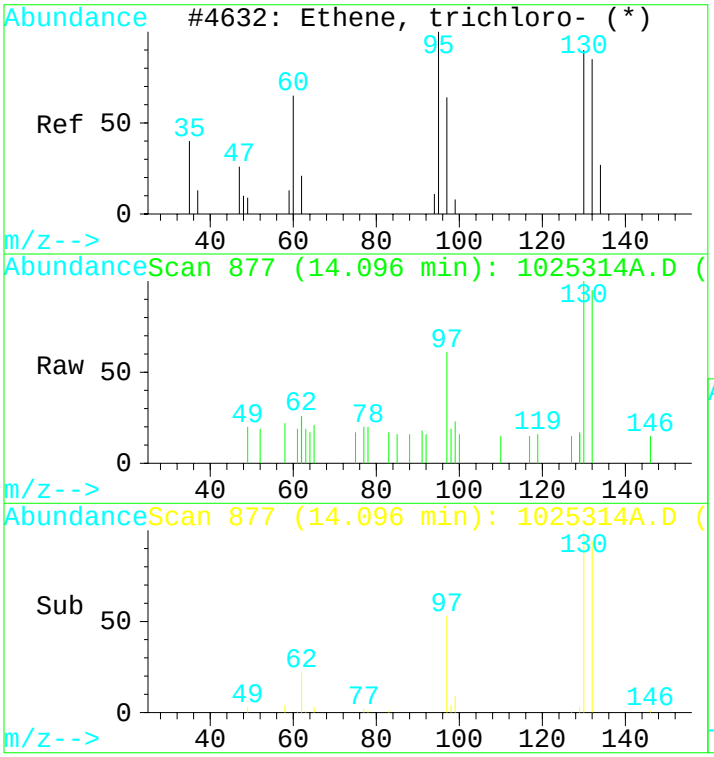


#4
Carbon tetrachloride
Concen: 0.04 ppbV
RT: 12.44 min Scan# 815
Delta R.T. -0.22 min
Lab File: 1025314A.D
Acq: 29 Jun 110 5:40 pm

Tgt Ion:116.9 Resp: 1947

Ion	Ratio	Lower	Upper
117	100		
119	98.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

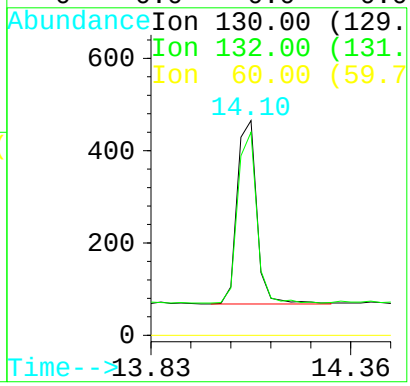




#5
Trichloroethene
Concen: 0.03 ppbV
RT: 14.10 min Scan# 877
Delta R.T. -0.16 min
Lab File: 1025314A.D
Acq: 29 Jun 110 5:40 pm

Tgt Ion:130 Resp: 1440

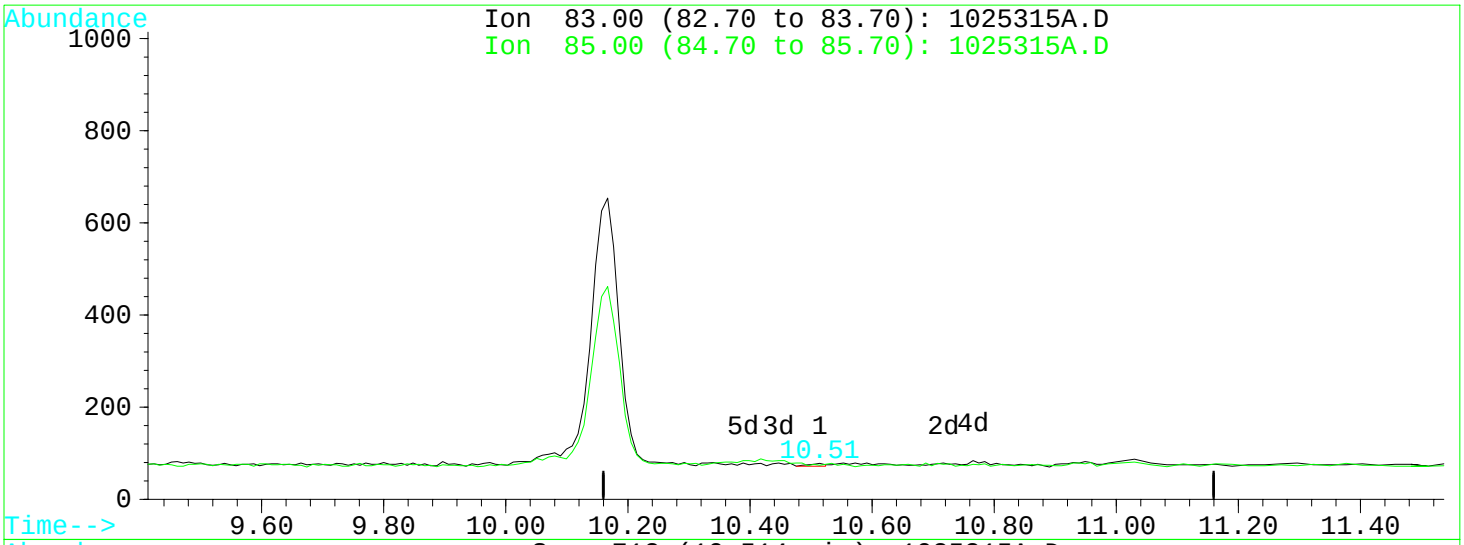
Ion	Ratio	Lower	Upper
130	100		
132	93.3	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0

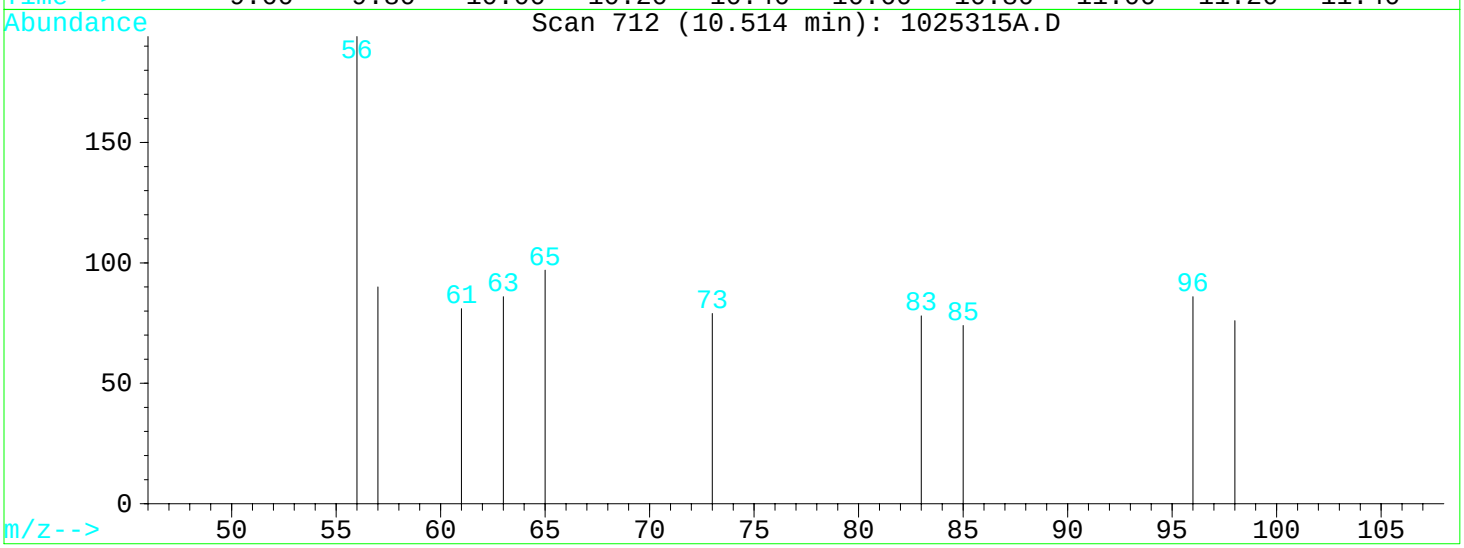


Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025315A.D
Acq Time : 29 Jun 110 6:22 pm Operator: JF
Sample : IA-SP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025315A.D

Missed Peak - KB 7/4/10

(3) Chloroform (T)

10.51min 0.00ppbV

response 10

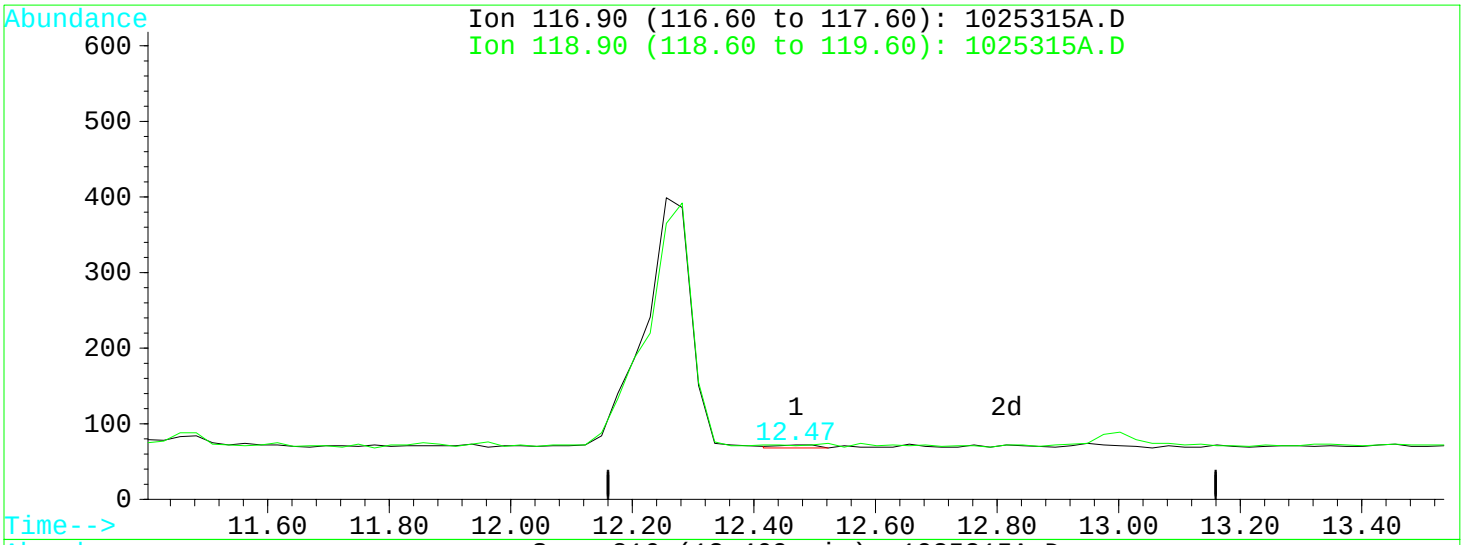
Ion	Exp%	Act%
83.00	100	100
85.00	64.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

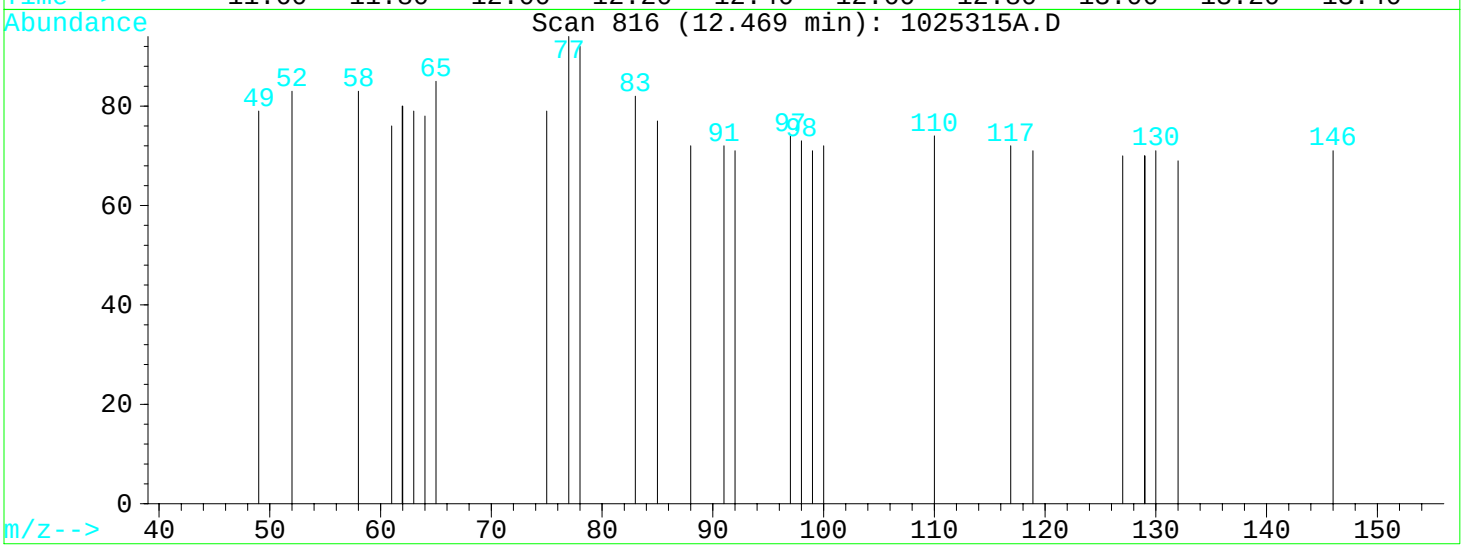
1025315A.D 2NTHG_A.M Sun Jul 04 13:55:52 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025315A.D
Acq Time : 29 Jun 110 6:22 pm Operator: JF
Sample : IA-SP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025315A.D

(4) Carbon tetrachloride (T) Missed Peak - KB 7/4/10

12.47min 0.00ppbV

response 17

Ion	Exp%	Act%
116.90	100	100
118.90	91.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

1025315A.D 2NTHG_A.M Sun Jul 04 13:56:37 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025315A.D
Acq Time : 29 Jun 110 6:22 pm Operator: JF
Sample : IA-SP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 14:04 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

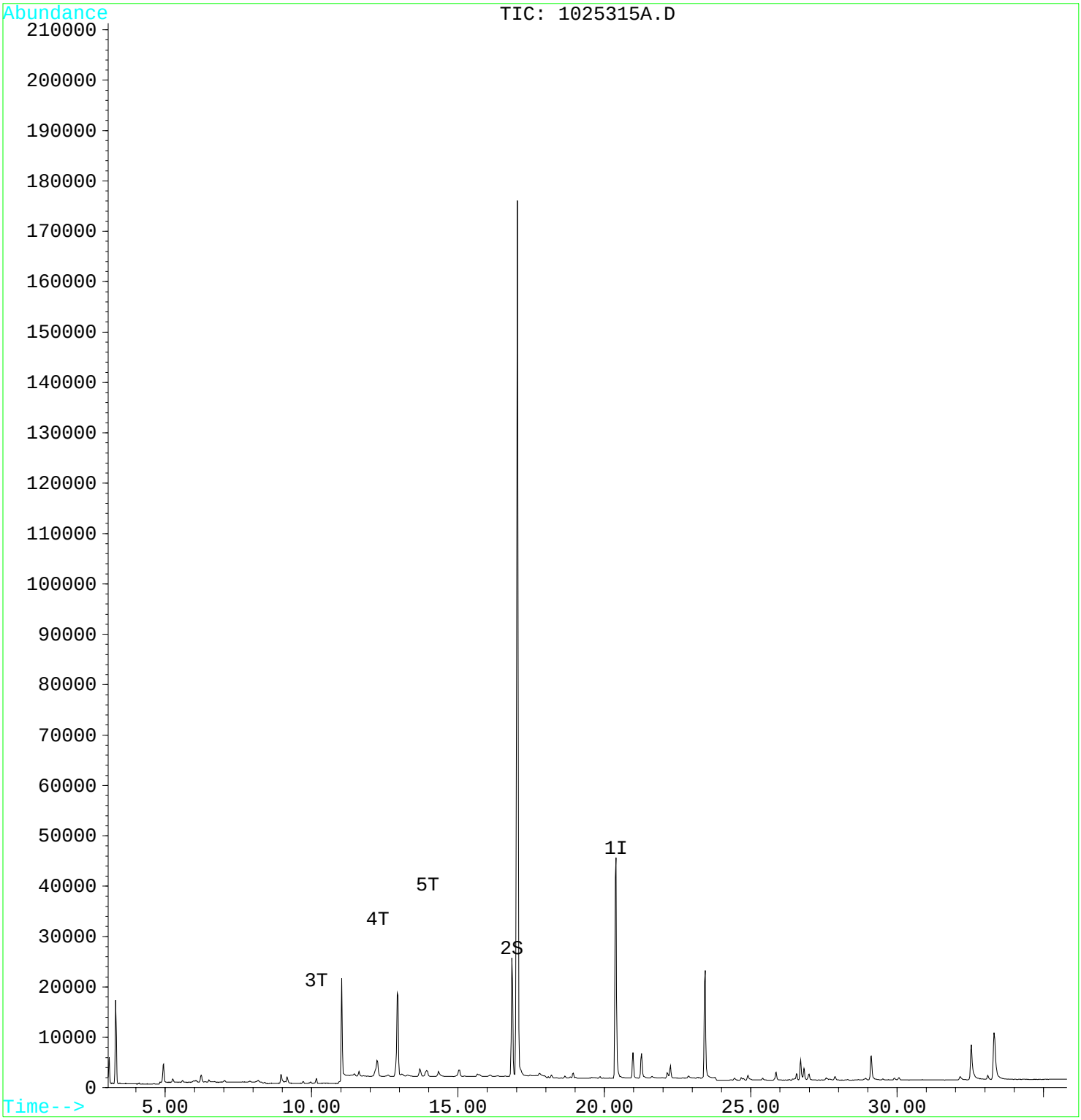
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.40	117	85155	0.20	ppbV		-0.11
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.84	98	40726	0.20	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.17	83	1864	0.02	ppbV	m	18
4) Carbon tetrachloride	12.26	117	1873	0.03	ppbV	m	4
5) Trichloroethene	13.96	130	1234	0.02	ppbV		93

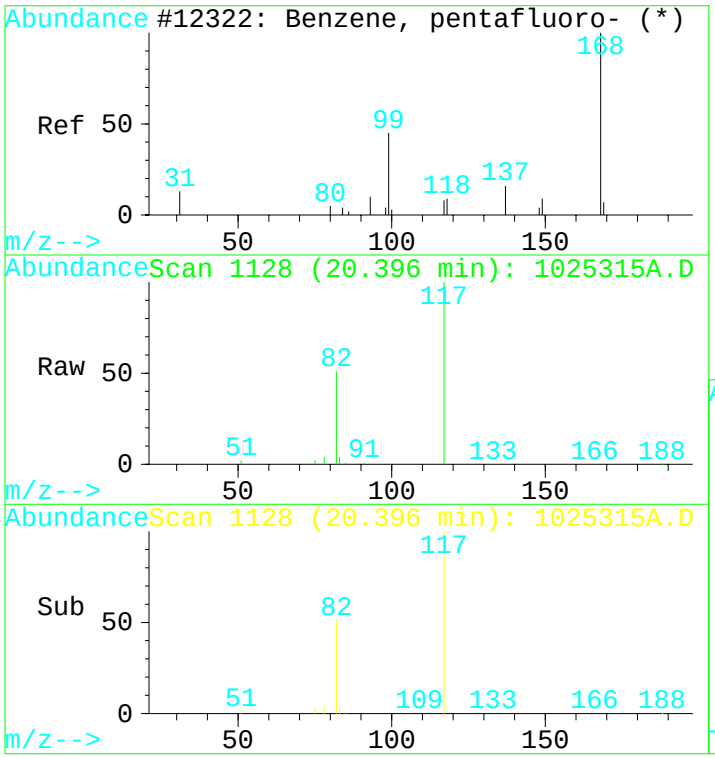
(#) = qualifier out of range (m) = manual integration
1025315A.D 2NTHG_A.M Sun Jul 04 14:04:15 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025315A.D
Acq Time : 29 Jun 110 6:22 pm Operator: JF
Sample : IA-SP-CR-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 14:04 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

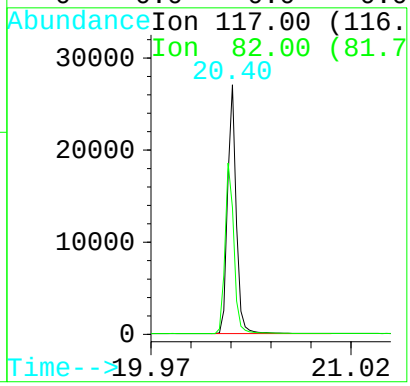


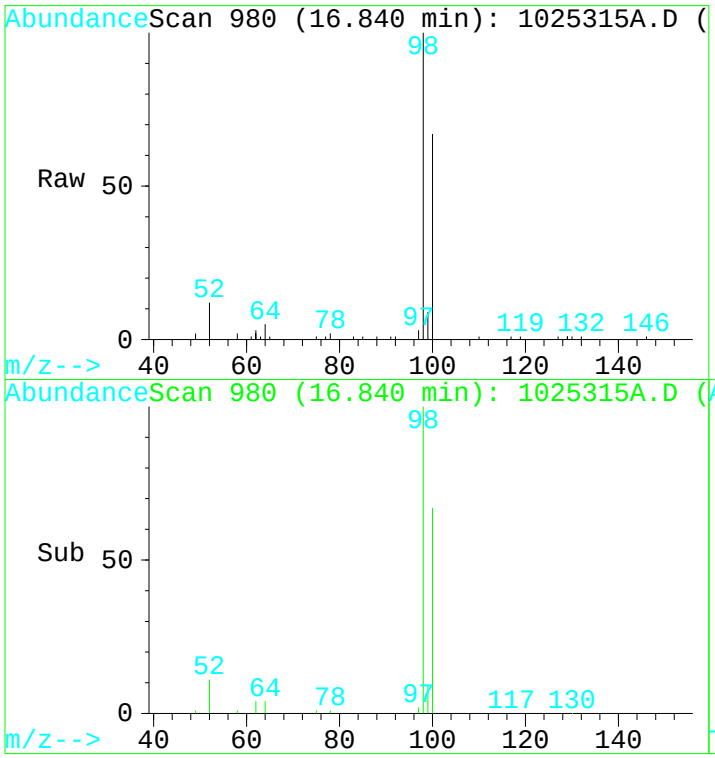


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.40 min Scan# 1128
Delta R.T. -0.11 min
Lab File: 1025315A.D
Acq: 29 Jun 110 6:22 pm

Tgt Ion:117 Resp: 85155

Ion	Ratio	Lower	Upper
117	100		
82	50.6	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

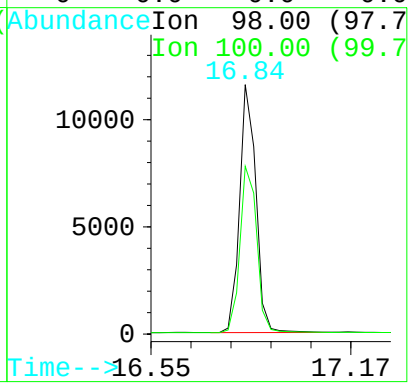


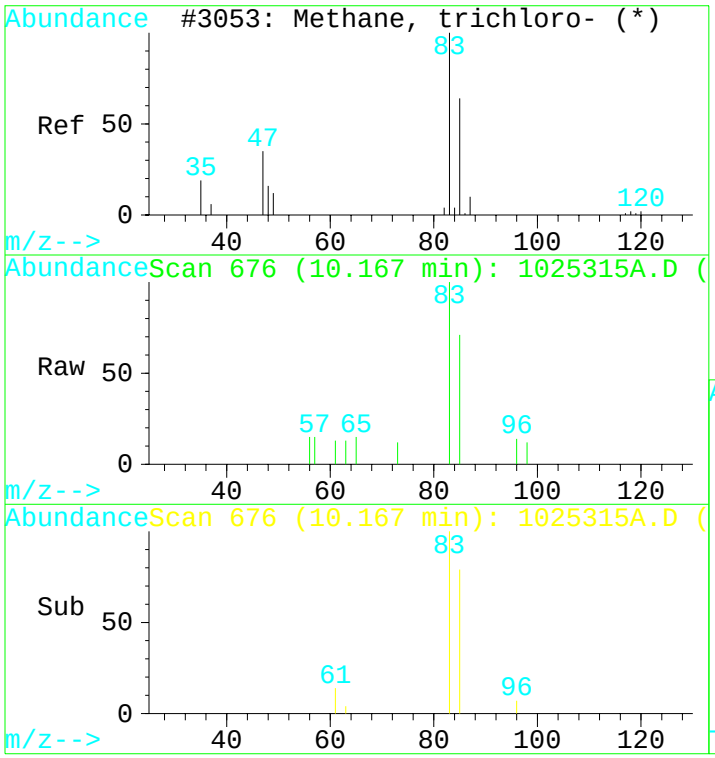


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 16.84 min Scan# 980
Delta R.T. -0.21 min
Lab File: 1025315A.D
Acq: 29 Jun 110 6:22 pm

Tgt Ion:98 Resp: 40726

Ion	Ratio	Lower	Upper
98	100		
100	69.4	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

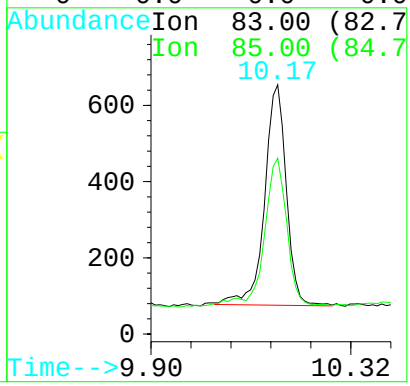


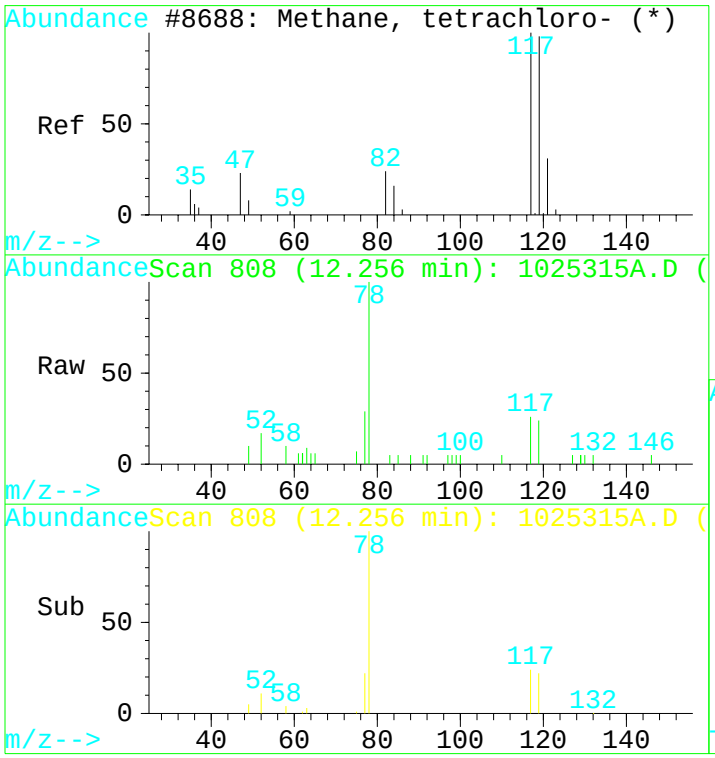


#3
Chloroform
Concen: 0.02 ppbV m
RT: 10.17 min Scan# 676
Delta R.T. -0.49 min
Lab File: 1025315A.D
Acq: 29 Jun 110 6:22 pm

Tgt Ion:83 Resp: 1864

Ion	Ratio	Lower	Upper
83	100		
85	70.6	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

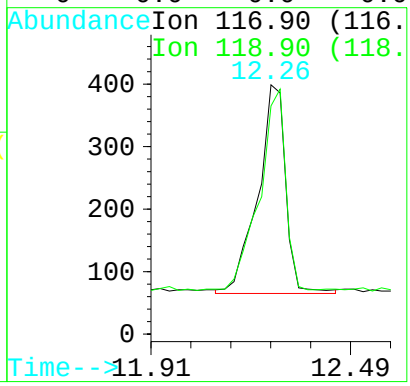


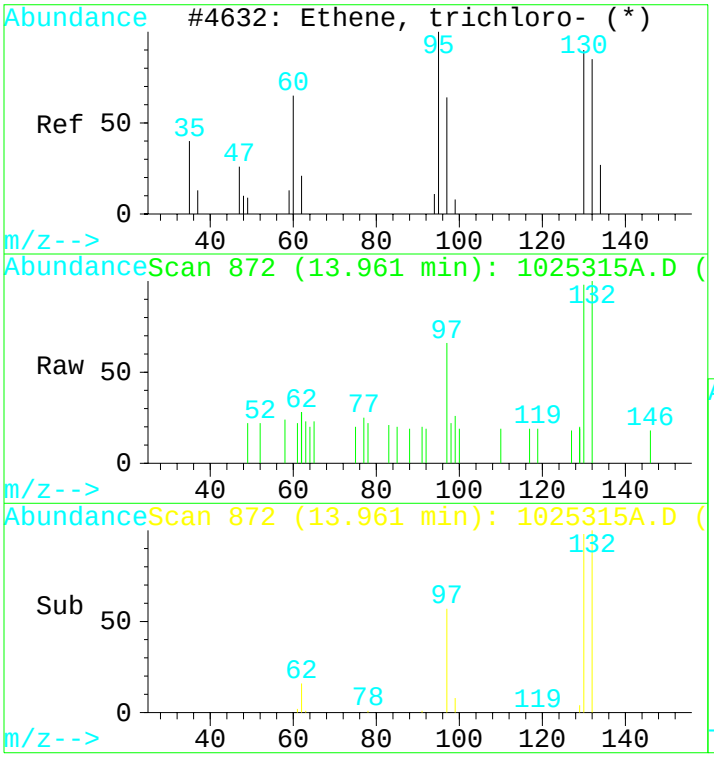


#4
Carbon tetrachloride
Concen: 0.03 ppbV m
RT: 12.26 min Scan# 808
Delta R.T. -0.40 min
Lab File: 1025315A.D
Acq: 29 Jun 110 6:22 pm

Tgt Ion:116.9 Resp: 1873

Ion	Ratio	Lower	Upper
117	100		
119	91.5	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

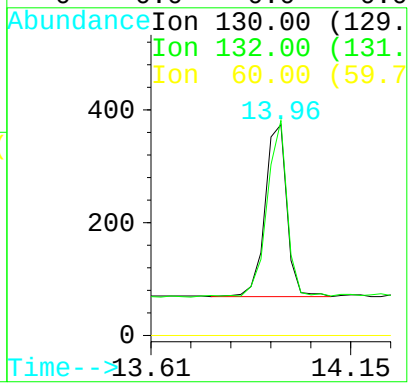




#5
Trichloroethene
Concen: 0.02 ppbV
RT: 13.96 min Scan# 872
Delta R.T. -0.30 min
Lab File: 1025315A.D
Acq: 29 Jun 110 6:22 pm

Tgt Ion:130 Resp: 1234

Ion	Ratio	Lower	Upper
130	100		
132	101.8	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025316A.D
Acq Time : 29 Jun 110 7:26 pm Operator: JF
Sample : IA-U3-O1-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

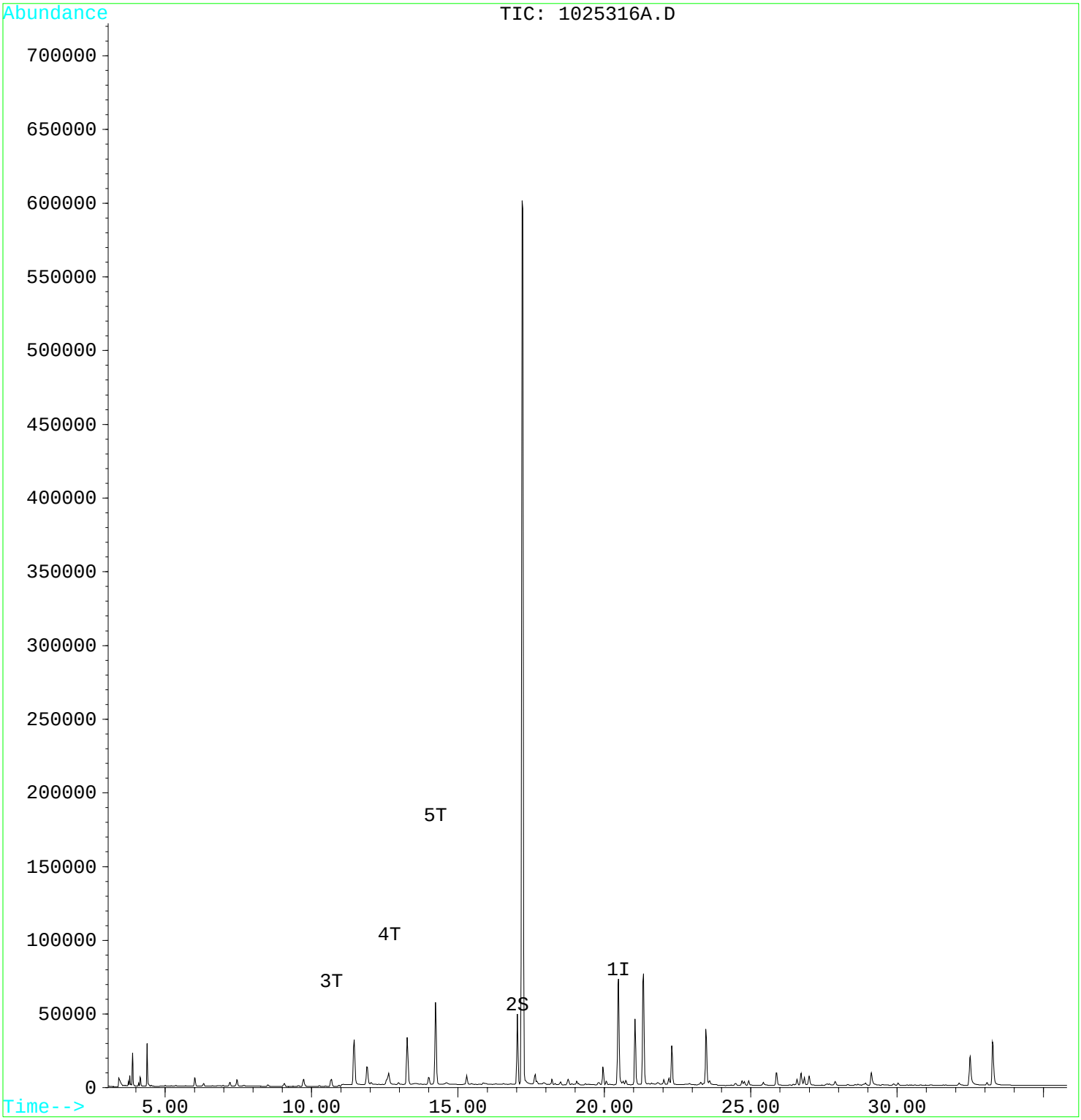
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	139012	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	67114	0.21	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.67	83	12553	0.08	ppbV	99
4) Carbon tetrachloride	12.66	117	2809	0.03	ppbV	99
5) Trichloroethene	14.23	130	55467	0.64	ppbV	99

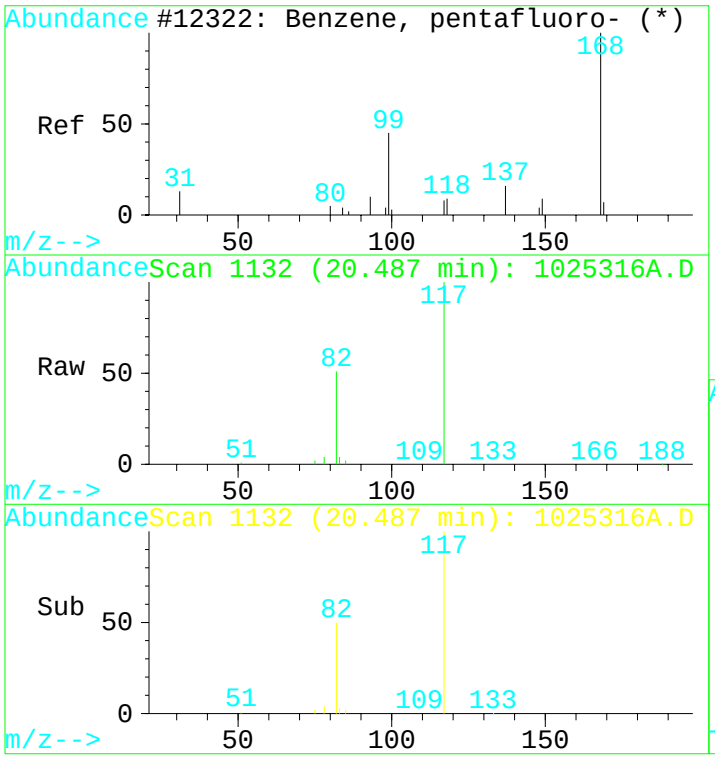
(#) = qualifier out of range (m) = manual integration
1025316A.D 2NTHG_A.M Sun Jul 04 13:57:25 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06290MS2\1025316A.D
Acq Time : 29 Jun 110 7:26 pm Operator: JF
Sample : IA-U3-O1-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 4 13:50 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

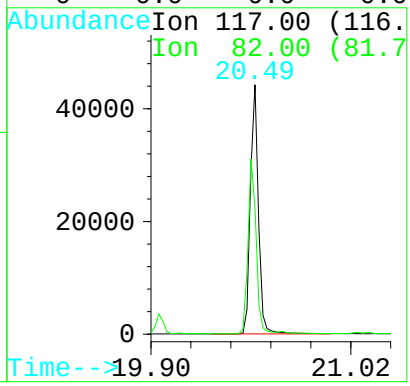


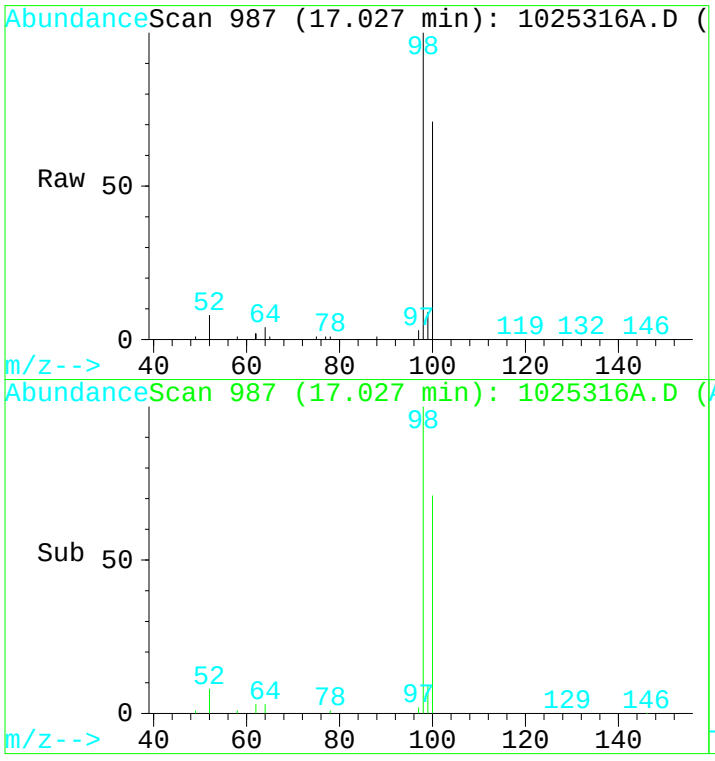


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025316A.D
Acq: 29 Jun 110 7:26 pm

Tgt Ion:117 Resp: 139012

Ion	Ratio	Lower	Upper
117	100		
82	50.4	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

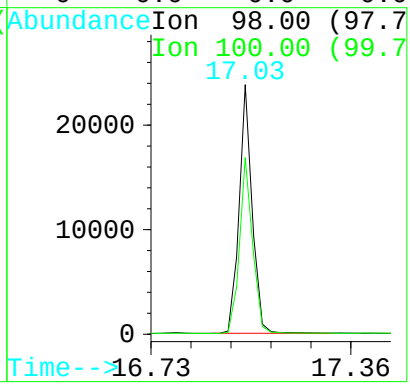


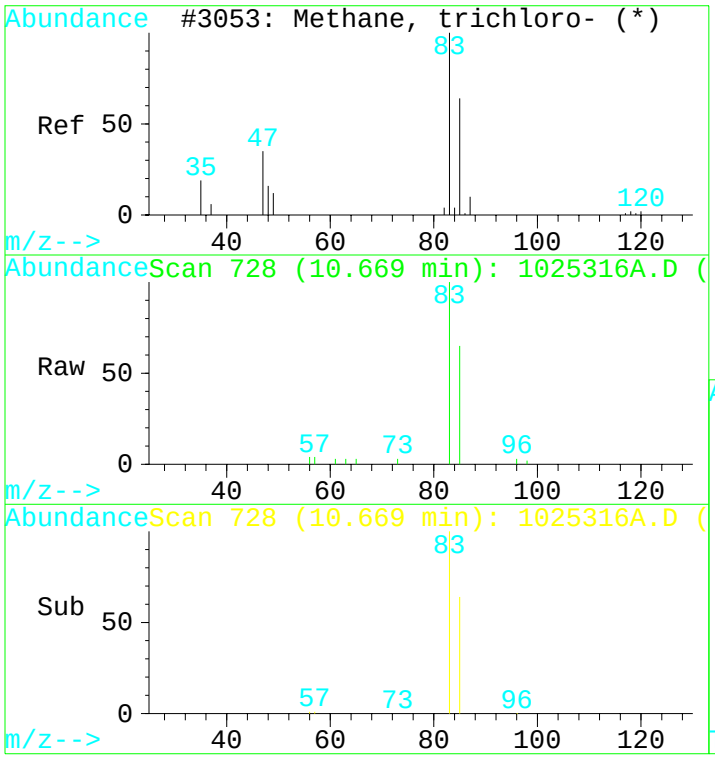


#2
Toluene-d8
Concen: 0.21 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025316A.D
Acq: 29 Jun 110 7:26 pm

Tgt Ion:98 Resp: 67114

Ion	Ratio	Lower	Upper
98	100		
100	71.1	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

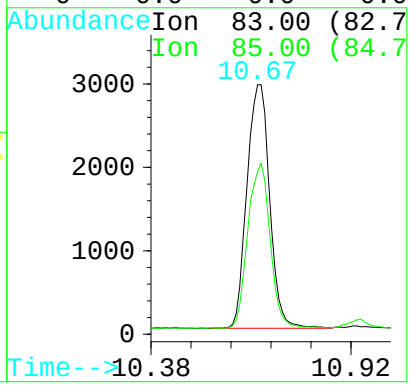


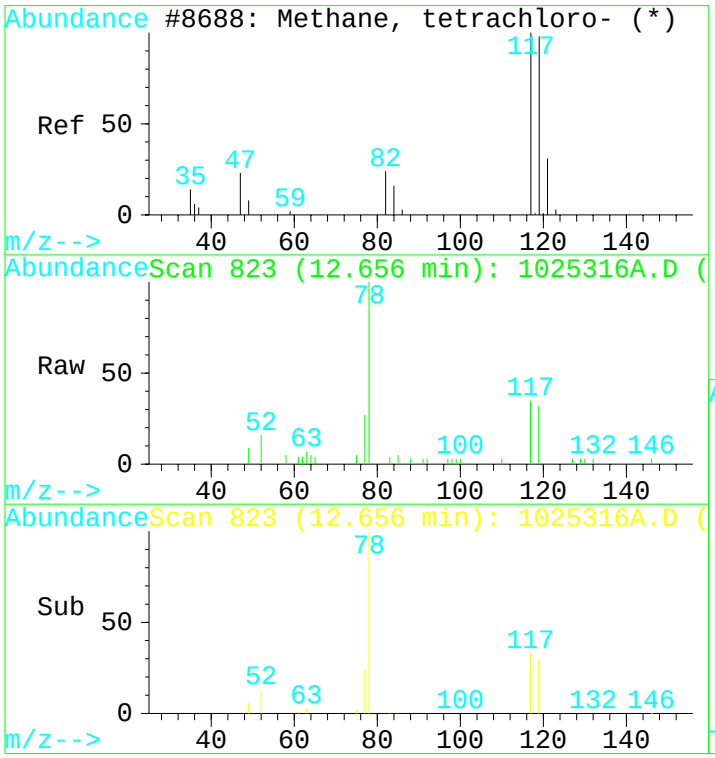


#3
Chloroform
Concen: 0.08 ppbV
RT: 10.67 min Scan# 728
Delta R.T. 0.01 min
Lab File: 1025316A.D
Acq: 29 Jun 110 7:26 pm

Tgt Ion:83 Resp: 12553

Ion	Ratio	Lower	Upper
83	100		
85	64.0	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

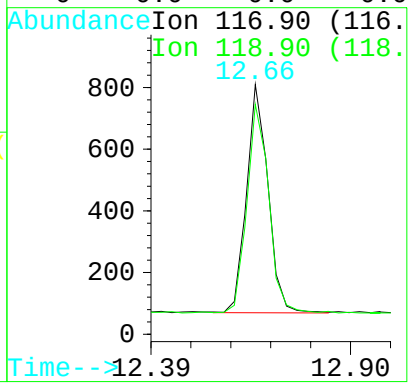


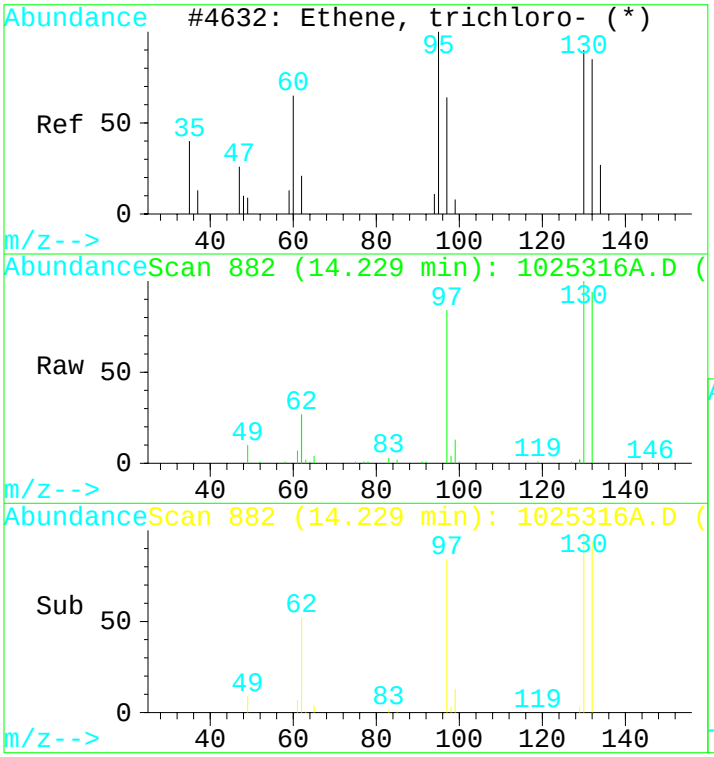


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025316A.D
Acq: 29 Jun 110 7:26 pm

Tgt Ion:116.9 Resp: 2809

Ion	Ratio	Lower	Upper
117	100		
119	91.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

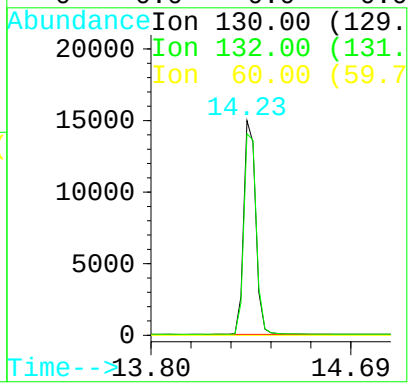




#5
Trichloroethene
Concen: 0.64 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025316A.D
Acq: 29 Jun 110 7:26 pm

Tgt Ion:130 Resp: 55467

Ion	Ratio	Lower	Upper
130	100		
132	93.9	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Daily Analytical Batch #: 063010-MS2

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\C06300B.D
Acq Time : 30 Jun 110 10:23 am Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

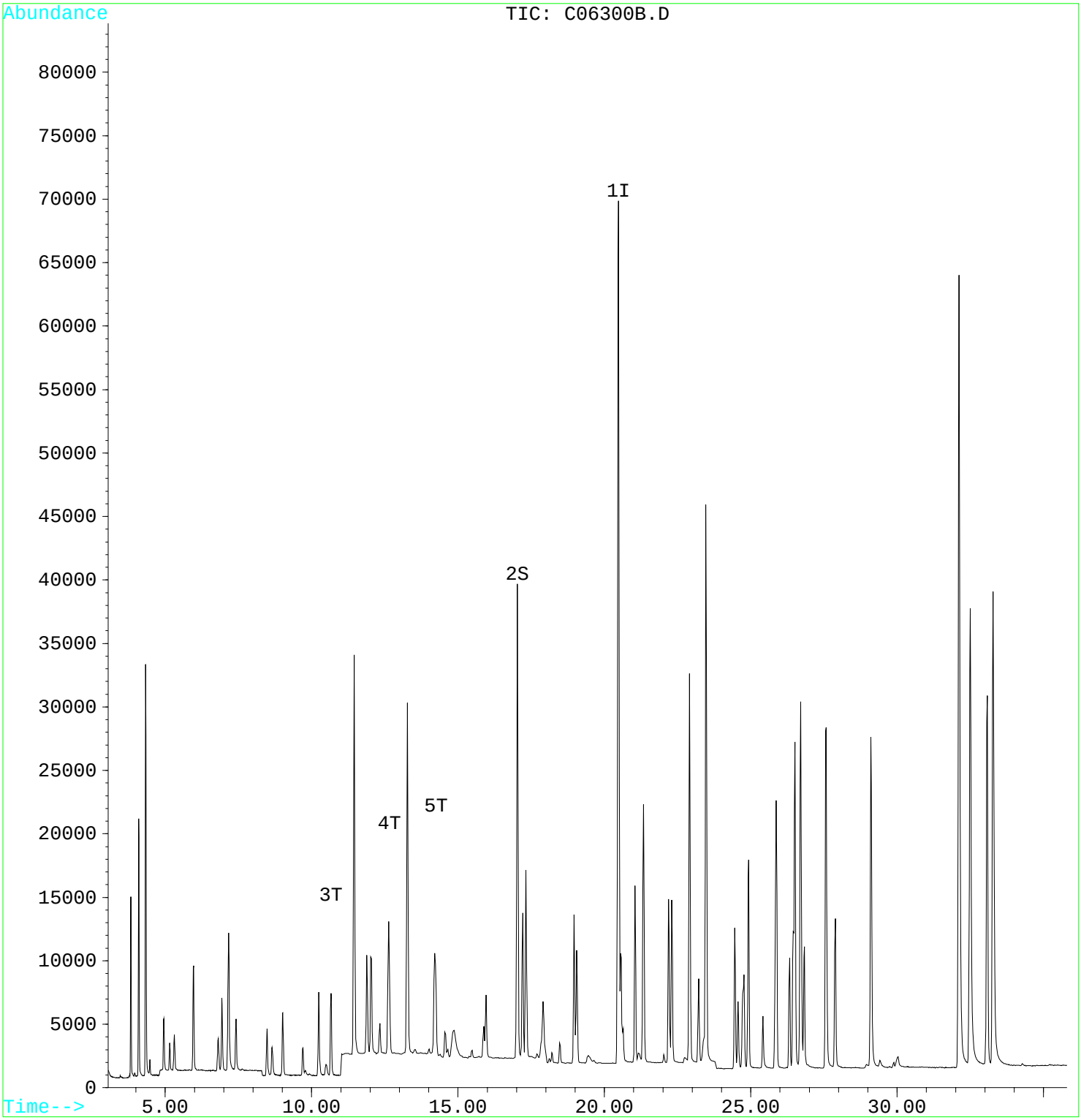
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	127816	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	51785	0.17	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.66	83	11518	0.08	ppbV	100
4) Carbon tetrachloride	12.66	117	6917	0.08	ppbV	91
5) Trichloroethene	14.26	130	5646	0.07	ppbV	96

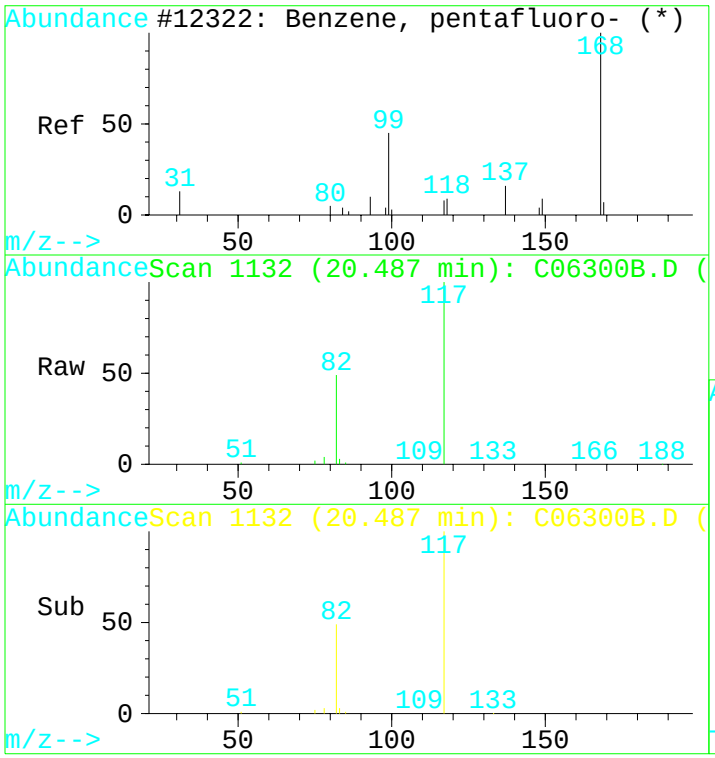
(#) = qualifier out of range (m) = manual integration
C06300B.D 2NTHG_A.M Tue Jul 06 13:01:18 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\C06300B.D
Acq Time : 30 Jun 110 10:23 am Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

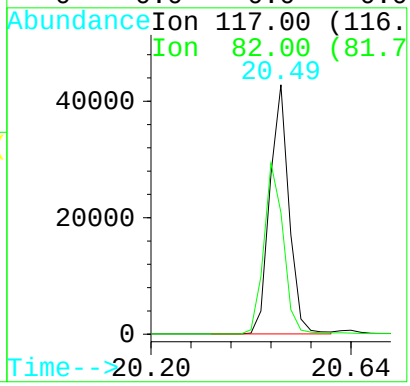


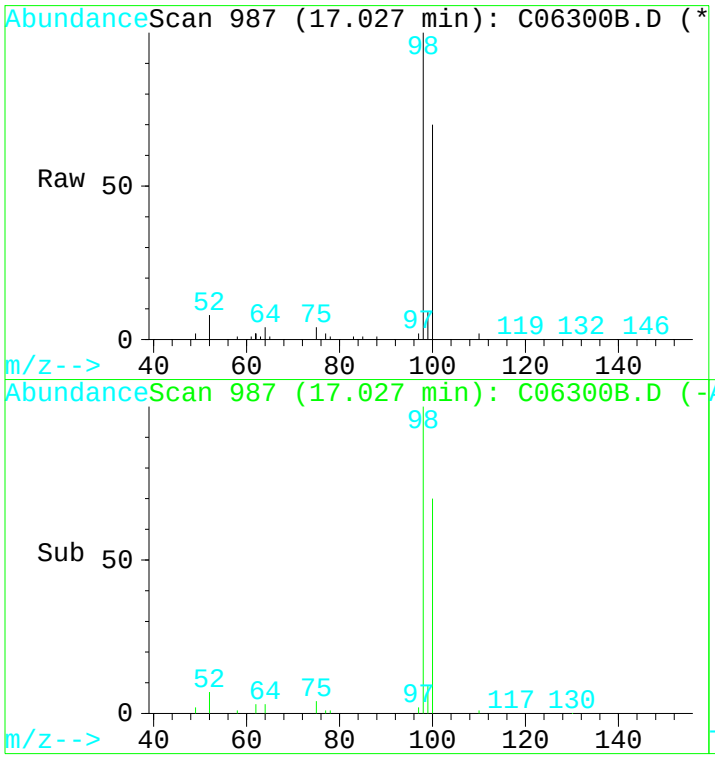


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: C06300B.D
Acq: 30 Jun 110 10:23 am

Tgt Ion:117 Resp: 127816

Ion	Ratio	Lower	Upper
117	100		
82	48.7	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

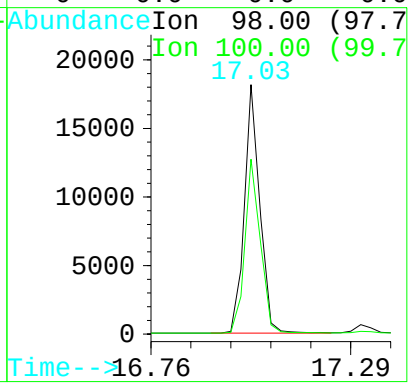


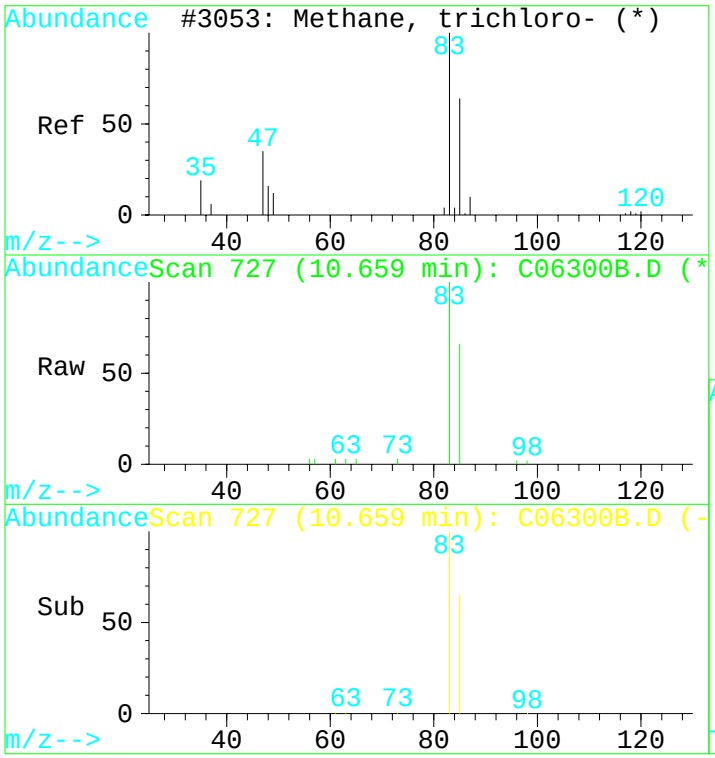


#2
Toluene-d8
Concen: 0.17 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: C06300B.D
Acq: 30 Jun 110 10:23 am

Tgt Ion:98 Resp: 51785

Ion	Ratio	Lower	Upper
98	100		
100	70.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

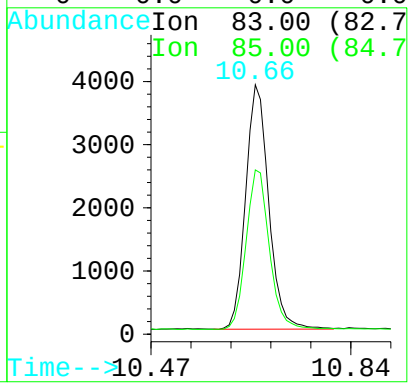


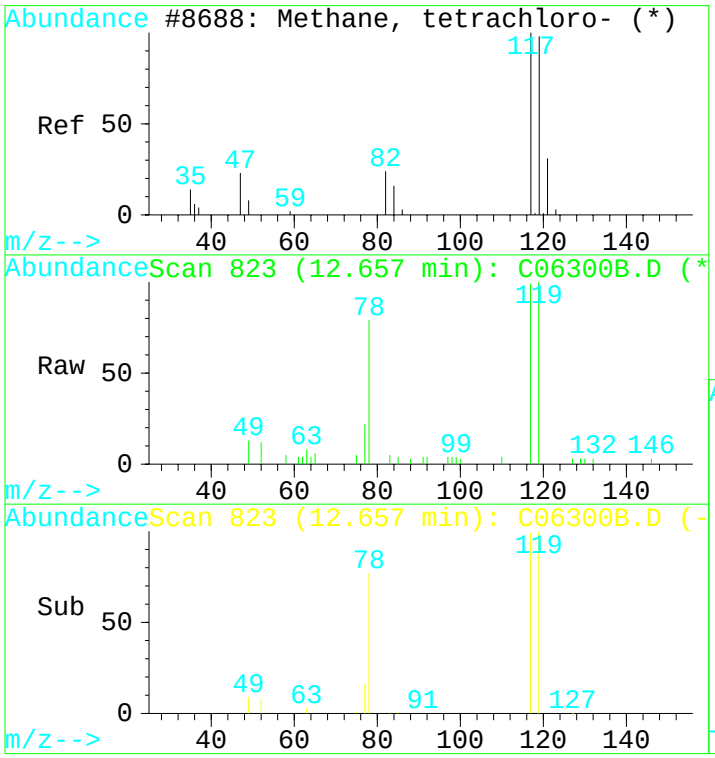


#3
Chloroform
Concen: 0.08 ppbV
RT: 10.66 min Scan# 727
Delta R.T. -0.00 min
Lab File: C06300B.D
Acq: 30 Jun 110 10:23 am

Tgt Ion:83 Resp: 11518

Ion	Ratio	Lower	Upper
83	100		
85	65.2	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

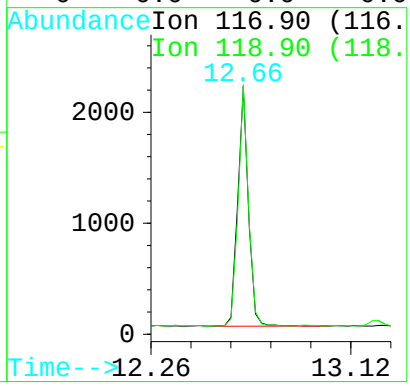


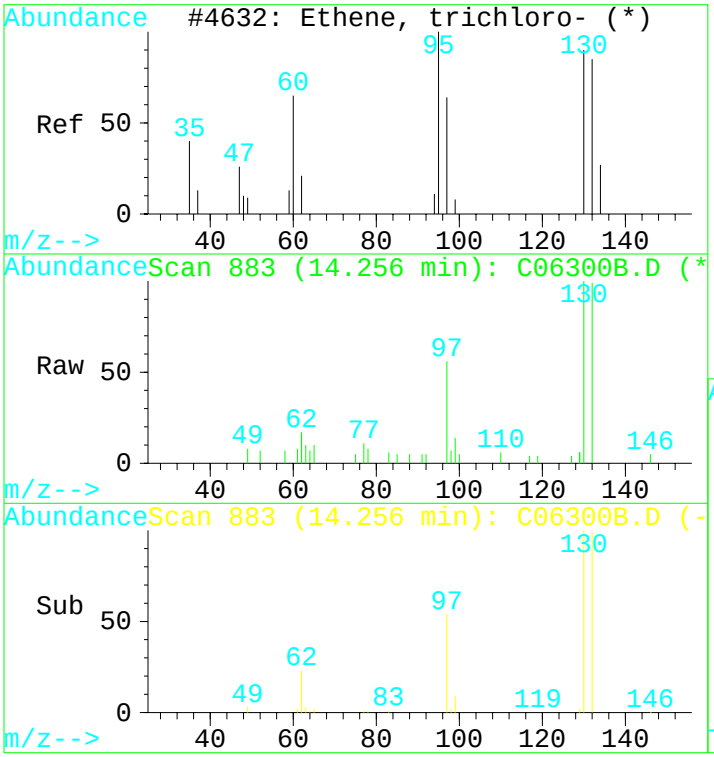


#4
Carbon tetrachloride
Concen: 0.08 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: C06300B.D
Acq: 30 Jun 110 10:23 am

Tgt Ion:116.9 Resp: 6917

Ion	Ratio	Lower	Upper
117	100		
119	100.7	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

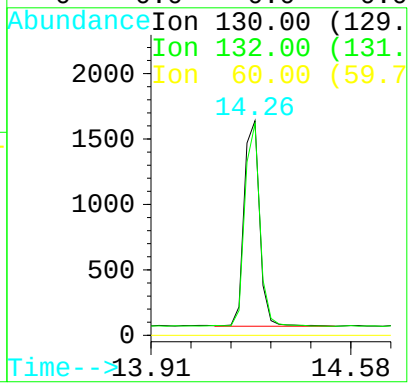




#5
Trichloroethene
Concen: 0.07 ppbV
RT: 14.26 min Scan# 883
Delta R.T. -0.00 min
Lab File: C06300B.D
Acq: 30 Jun 110 10:23 am

Tgt Ion:130 Resp: 5646

Ion	Ratio	Lower	Upper
130	100		
132	98.4	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\B06300C.D
Acq Time : 30 Jun 110 1:35 pm Operator: CM
Sample : METHOD BLANK Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 13:00 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

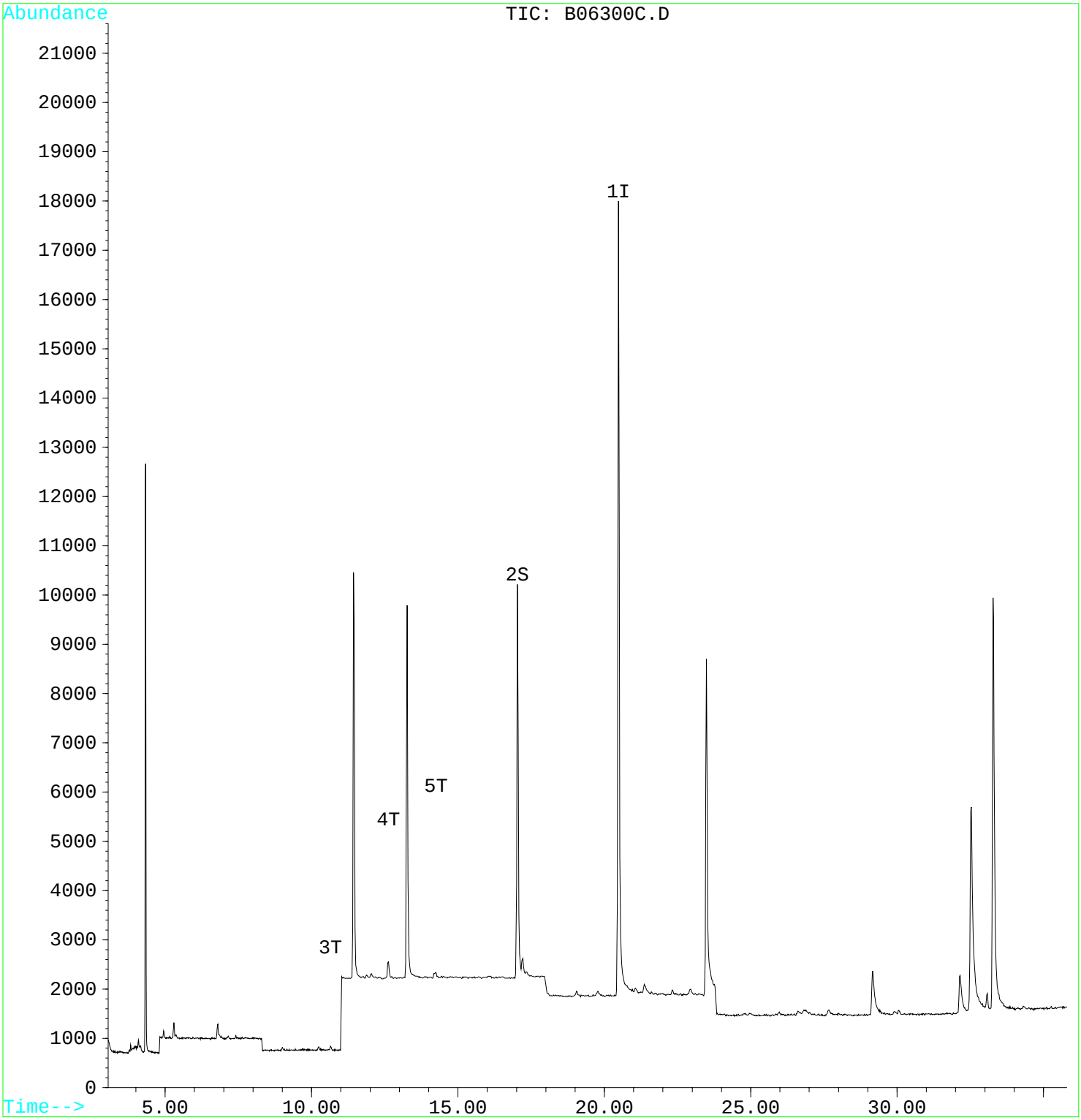
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.49	117	32819	0.20	ppbV		-0.02
System Monitoring Compounds							%Recovery
2) Toluene-d8	17.03	98	13889	0.18	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.66	83	155	0.00	ppbV		97
4) Carbon tetrachloride	12.63	117	39	0.00	ppbV	#	45
5) Trichloroethene	14.26	130	77	0.00	ppbV	m	92

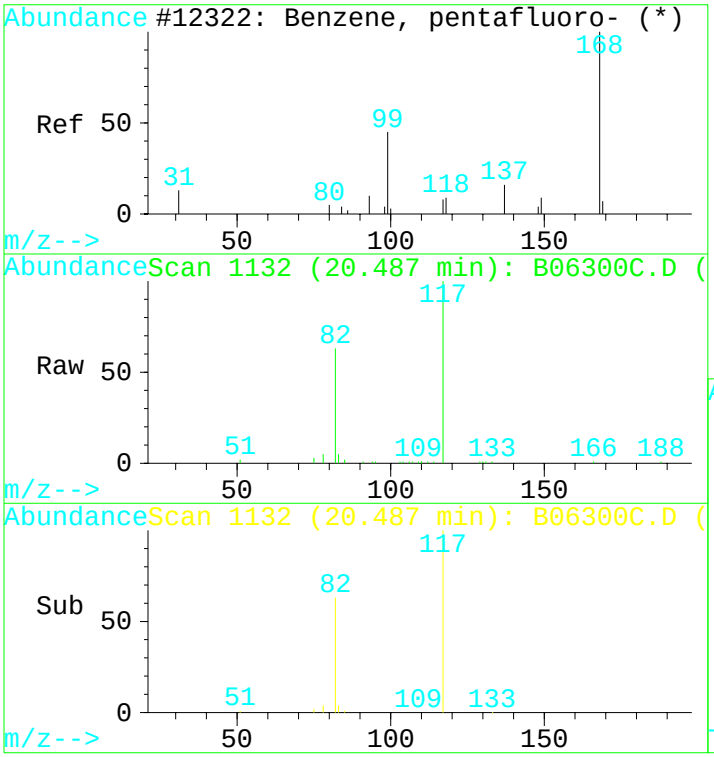
(#) = qualifier out of range (m) = manual integration
B06300C.D 2NTHG_A.M Tue Jul 06 13:00:18 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\B06300C.D
Acq Time : 30 Jun 110 1:35 pm Operator: CM
Sample : METHOD BLANK Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 13:00 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

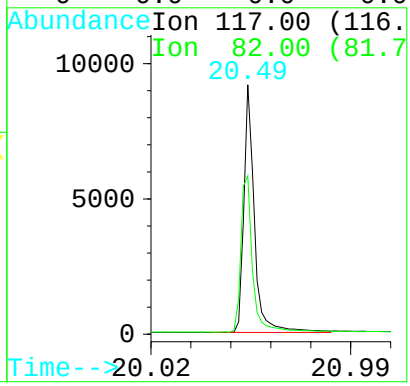


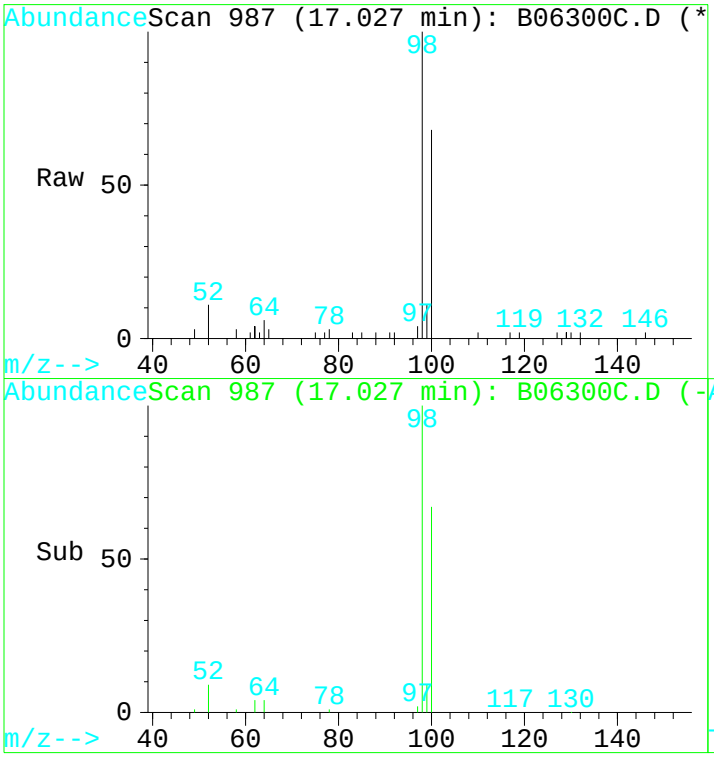


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: B06300C.D
Acq: 30 Jun 110 1:35 pm

Tgt Ion:117 Resp: 32819

Ion	Ratio	Lower	Upper
117	100		
82	63.1	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

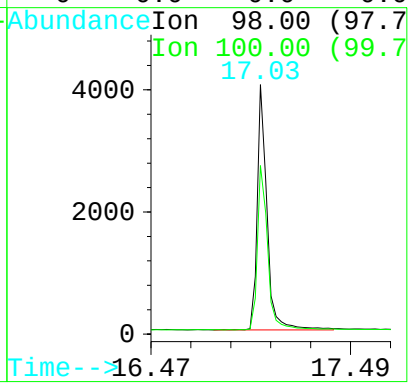


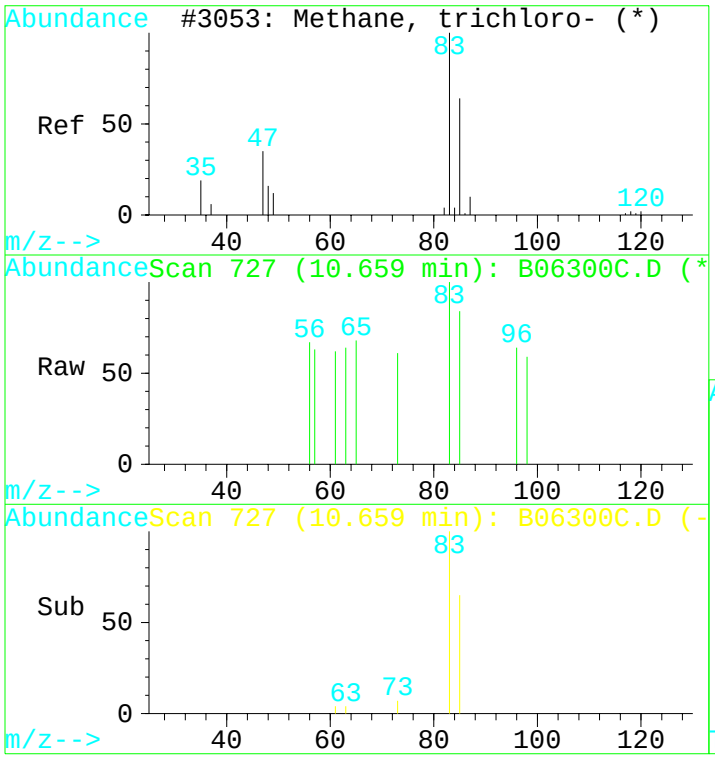


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: B06300C.D
Acq: 30 Jun 110 1:35 pm

Tgt Ion:98 Resp: 13889

Ion	Ratio	Lower	Upper
98	100		
100	70.4	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

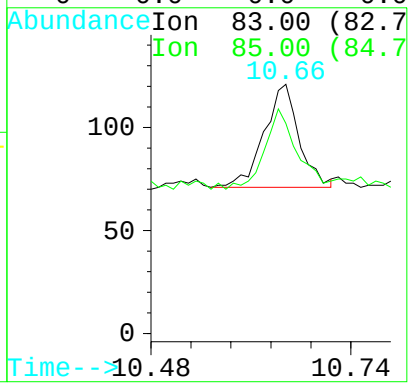


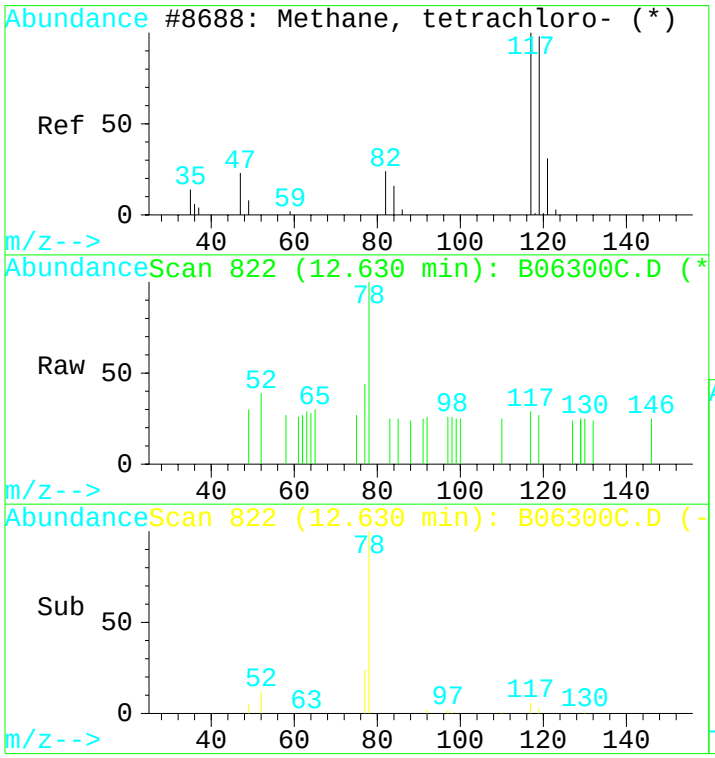


#3
Chloroform
Concen: 0.00 ppbV
RT: 10.66 min Scan# 727
Delta R.T. -0.00 min
Lab File: B06300C.D
Acq: 30 Jun 110 1:35 pm

Tgt Ion:83 Resp: 155

Ion	Ratio	Lower	Upper
83	100		
85	62.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

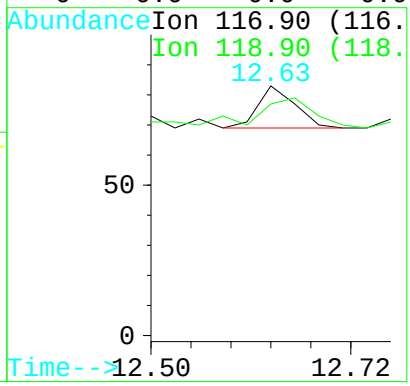


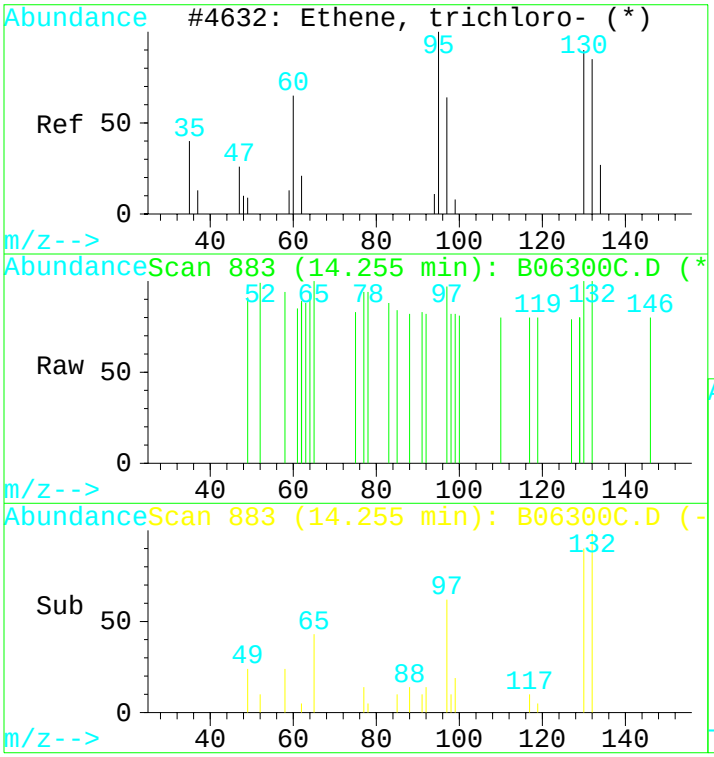


#4
Carbon tetrachloride
Concen: 0.00 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: B06300C.D
Acq: 30 Jun 110 1:35 pm

Tgt Ion:116.9 Resp: 39

Ion	Ratio	Lower	Upper
117	100		
119	39.3	73.4	110.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

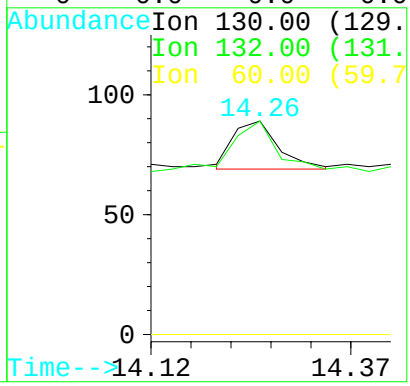




#5
Trichloroethene
Concen: 0.00 ppbV m
RT: 14.26 min Scan# 883
Delta R.T. -0.00 min
Lab File: B06300C.D
Acq: 30 Jun 110 1:35 pm

Tgt Ion:130 Resp: 77

Ion	Ratio	Lower	Upper
130	100		
132	100.0	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\QC06300A.D
Acq Time : 30 Jun 110 11:24 am Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

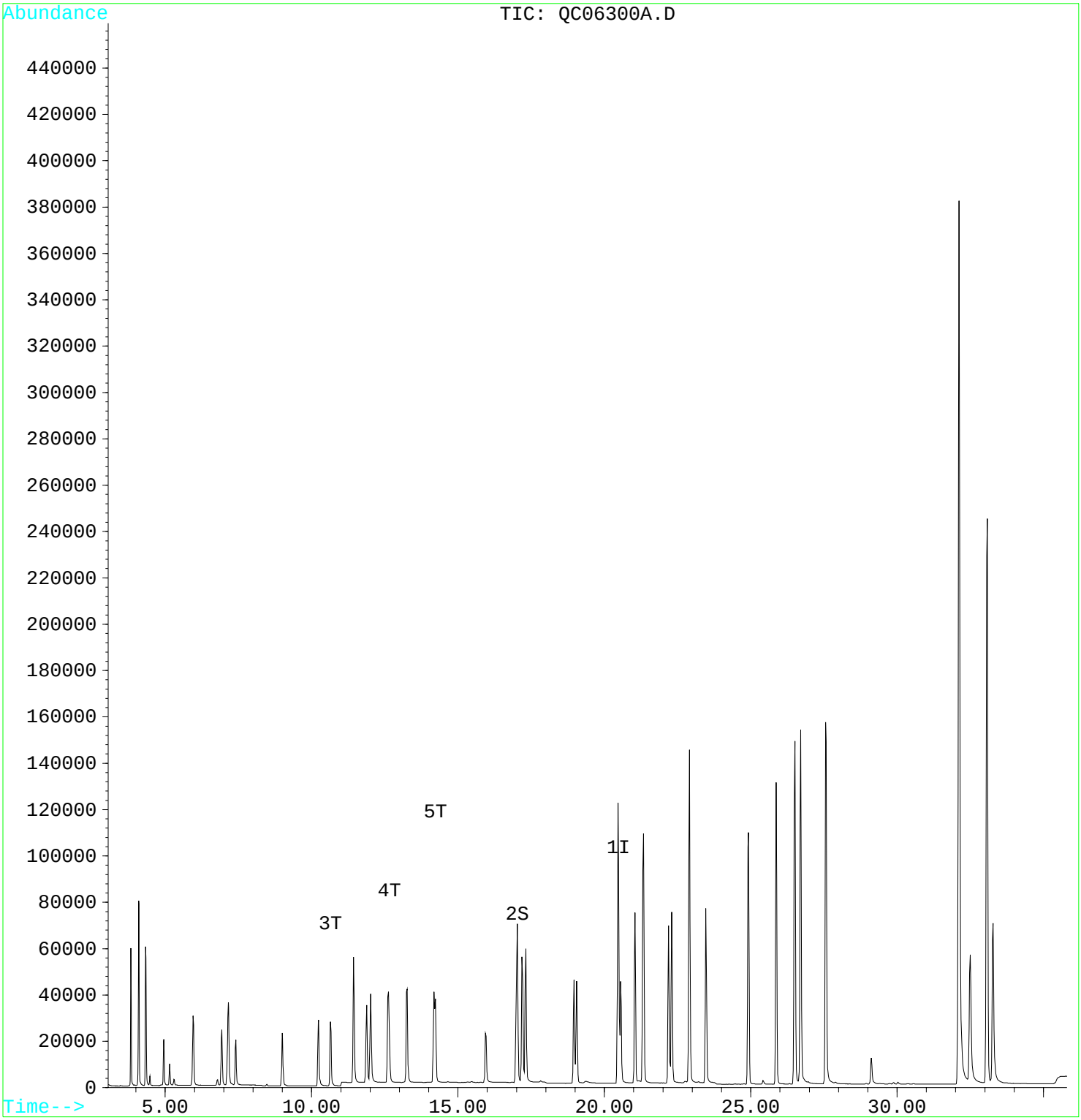
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	218017	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	92100	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.65	83	53198	0.21	ppbV	98
4) Carbon tetrachloride	12.66	117	31425	0.23	ppbV	93
5) Trichloroethene	14.23	130	29539	0.22	ppbV	98

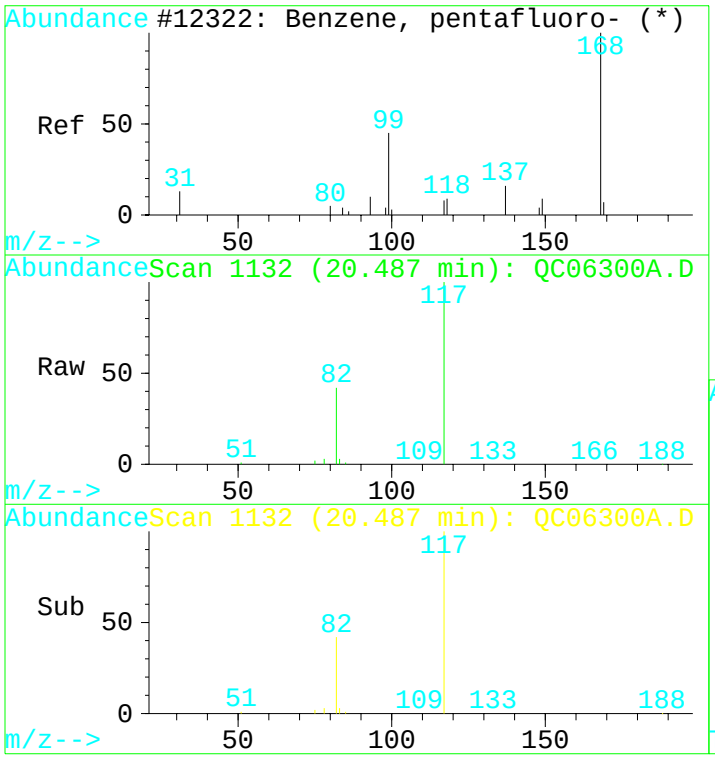
(#) = qualifier out of range (m) = manual integration
QC06300A.D 2NTHG_A.M Tue Jul 06 13:01:41 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\QC06300A.D
Acq Time : 30 Jun 110 11:24 am Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

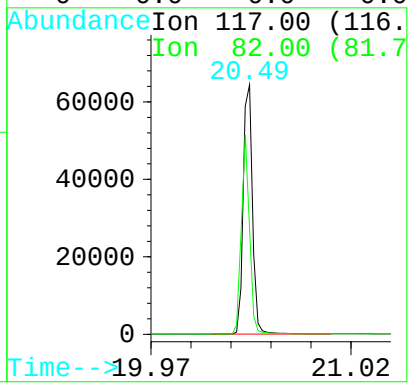


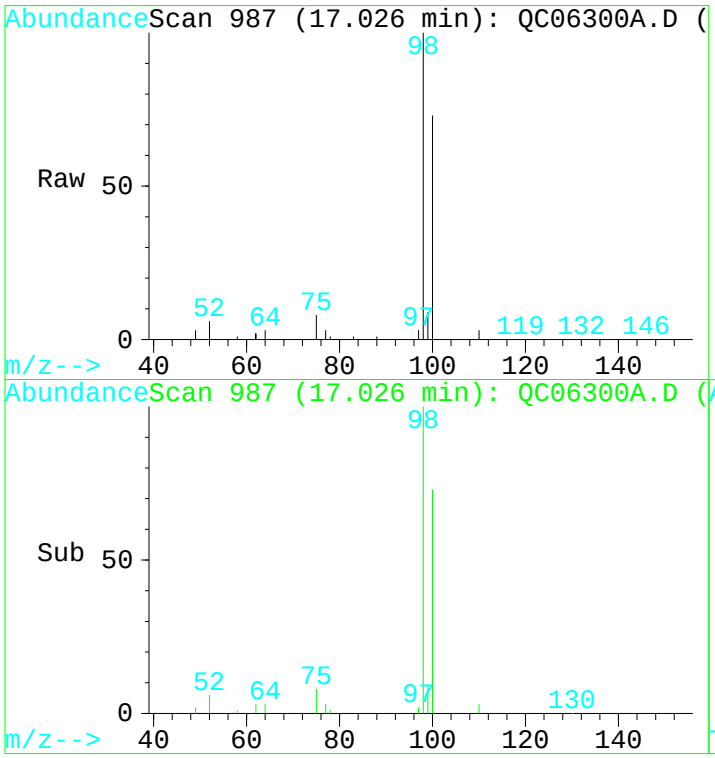


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: QC06300A.D
Acq: 30 Jun 110 11:24 am

Tgt Ion:117 Resp: 218017

Ion	Ratio	Lower	Upper
117	100		
82	42.3	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

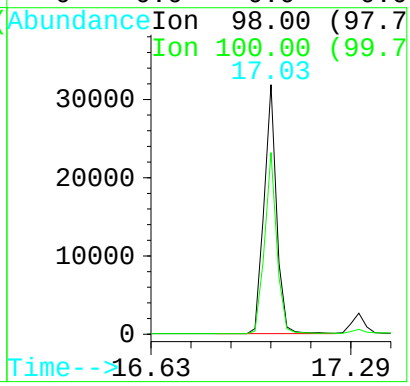


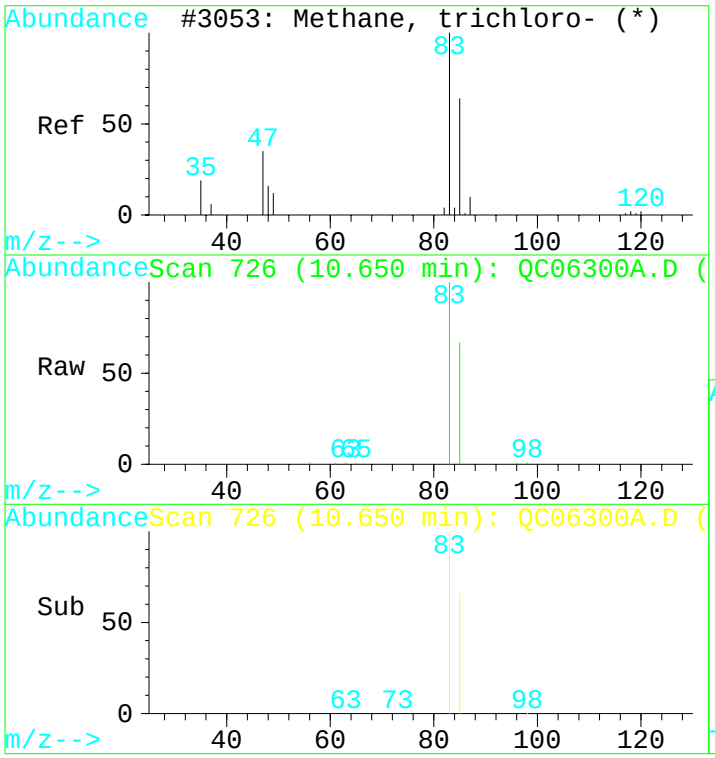


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: QC06300A.D
Acq: 30 Jun 110 11:24 am

Tgt Ion:98 Resp: 92100

Ion	Ratio	Lower	Upper
98	100		
100	71.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

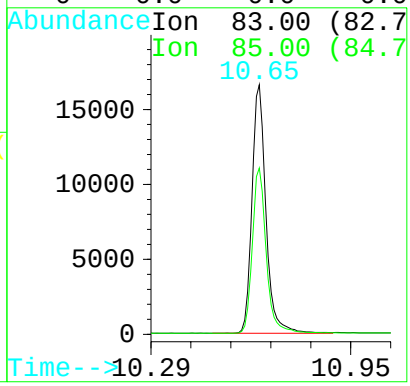


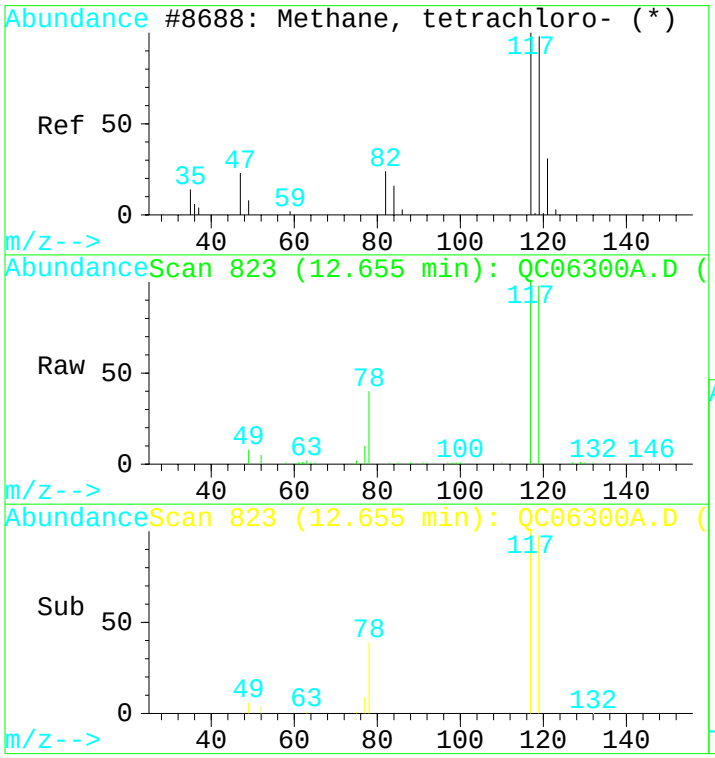


#3
Chloroform
Concen: 0.21 ppbV
RT: 10.65 min Scan# 726
Delta R.T. -0.01 min
Lab File: QC06300A.D
Acq: 30 Jun 110 11:24 am

Tgt Ion:83 Resp: 53198

Ion	Ratio	Lower	Upper
83	100		
85	66.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

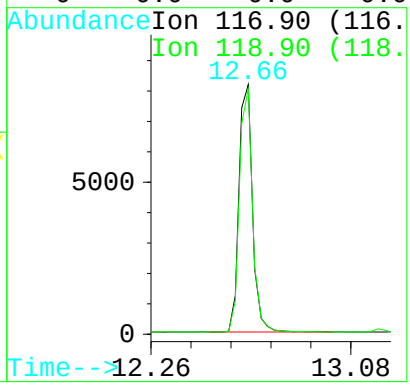


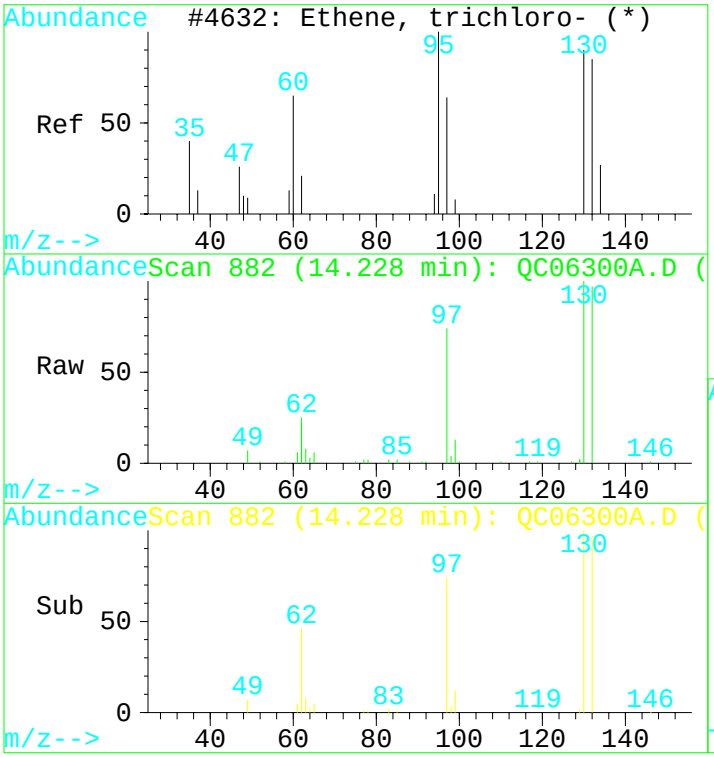


#4
Carbon tetrachloride
Concen: 0.23 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: QC06300A.D
Acq: 30 Jun 110 11:24 am

Tgt Ion:116.9 Resp: 31425

Ion	Ratio	Lower	Upper
117	100		
119	98.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

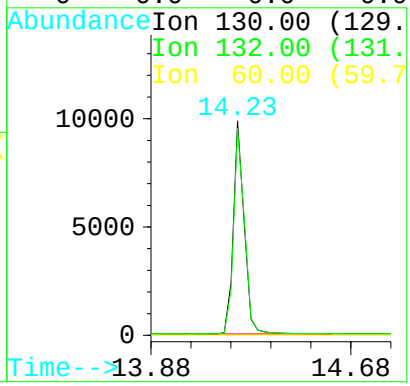




#5
Trichloroethene
Concen: 0.22 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: QC06300A.D
Acq: 30 Jun 110 11:24 am

Tgt Ion:130 Resp: 29539

Ion	Ratio	Lower	Upper
130	100		
132	96.5	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\QC06300B.D
Acq Time : 30 Jun 110 12:06 pm Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

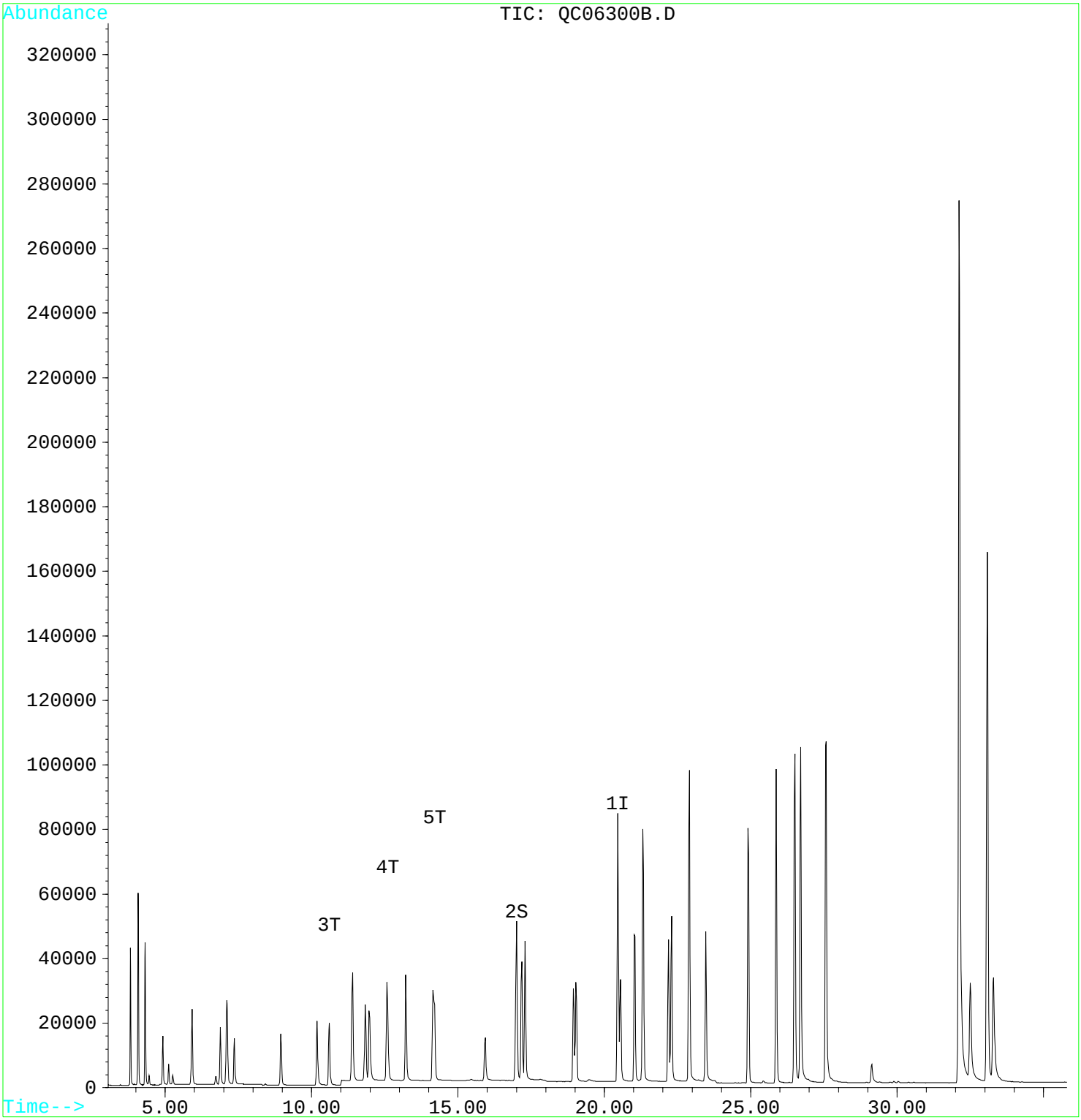
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	144398	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	64174	0.19	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.60	83	38721	0.23	ppbV	98
4) Carbon tetrachloride	12.60	117	21633	0.23	ppbV	95
5) Trichloroethene	14.20	130	22069	0.25	ppbV	94

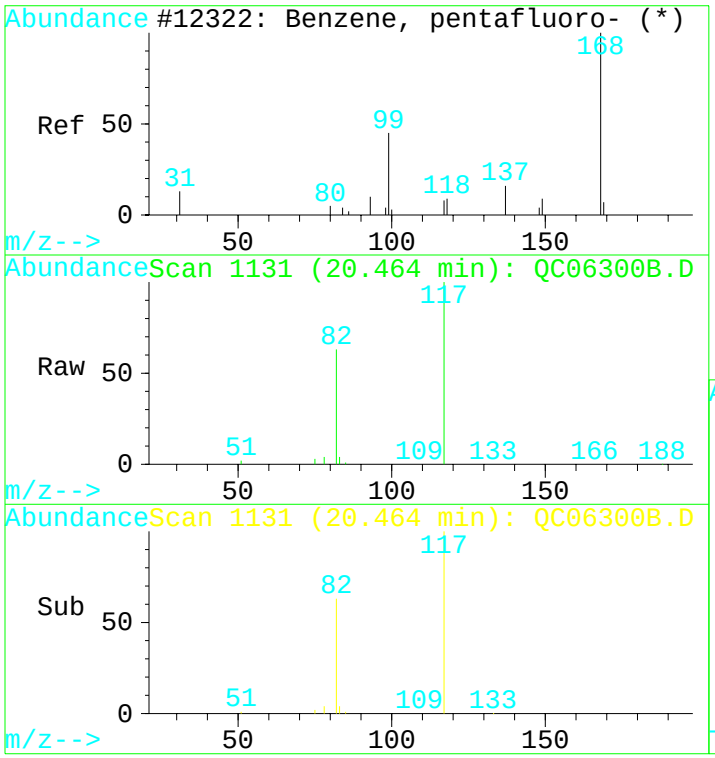
(#) = qualifier out of range (m) = manual integration
QC06300B.D 2NTHG_A.M Tue Jul 06 13:02:06 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\QC06300B.D
Acq Time : 30 Jun 110 12:06 pm Operator: CM
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 12:37 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

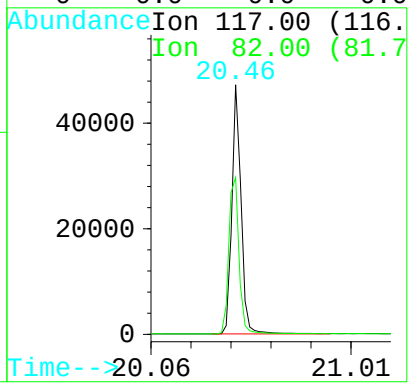


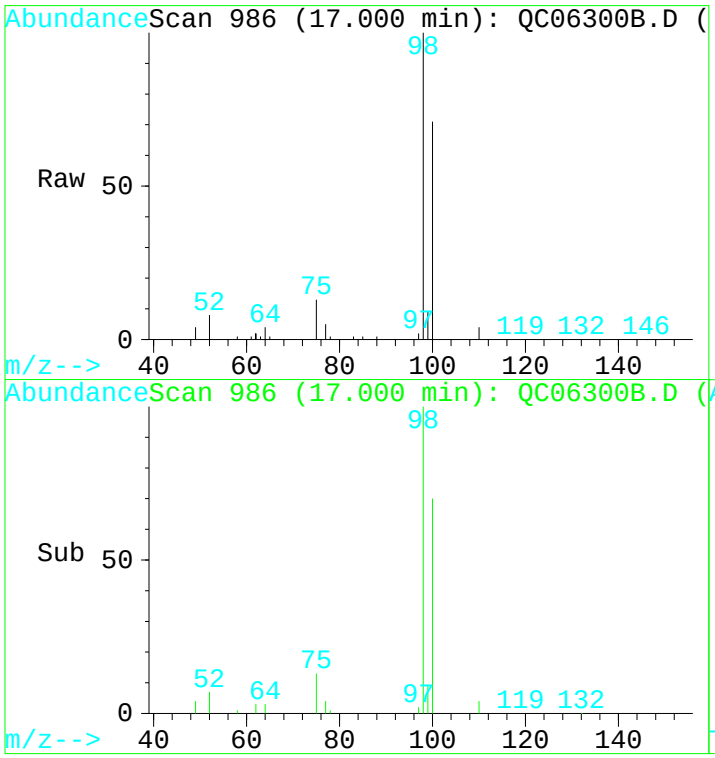


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: QC06300B.D
Acq: 30 Jun 110 12:06 pm

Tgt Ion:117 Resp: 144398

Ion	Ratio	Lower	Upper
117	100		
82	62.8	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

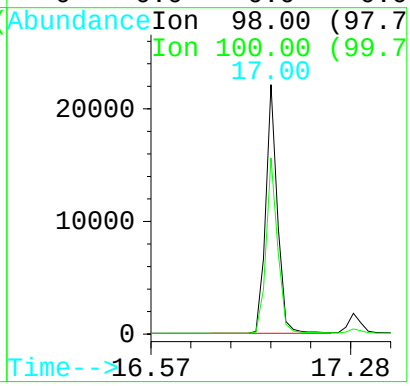


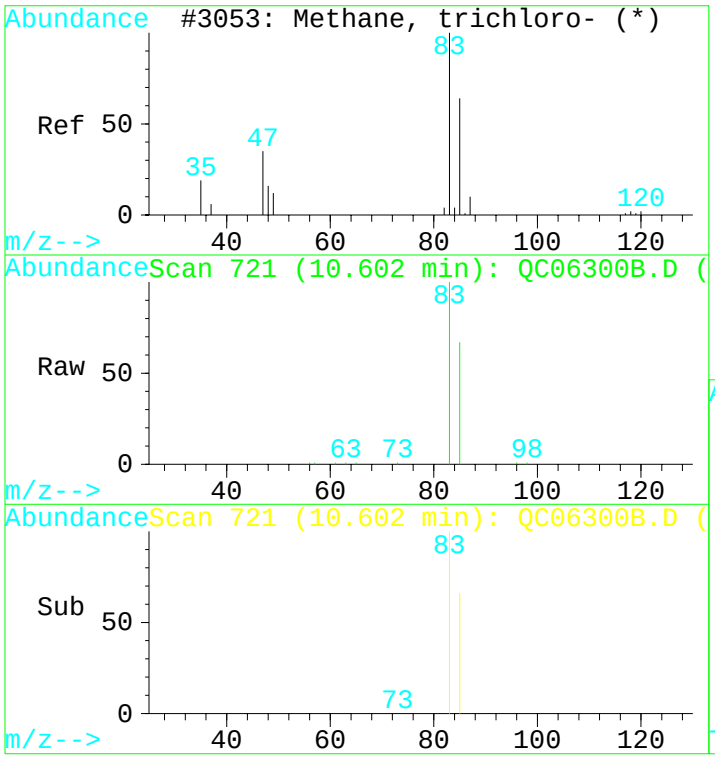


#2
Toluene-d8
Concen: 0.19 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: QC06300B.D
Acq: 30 Jun 110 12:06 pm

Tgt Ion:98 Resp: 64174

Ion	Ratio	Lower	Upper
98	100		
100	69.9	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

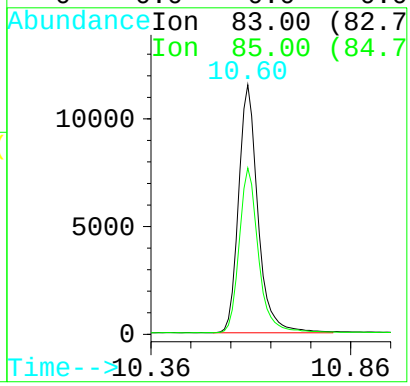


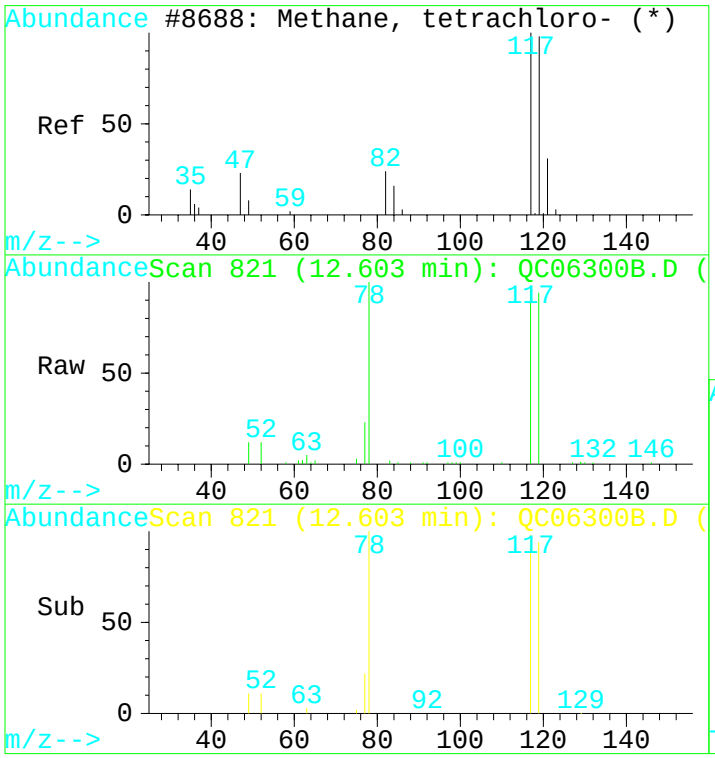


#3
Chloroform
Concen: 0.23 ppbV
RT: 10.60 min Scan# 721
Delta R.T. -0.06 min
Lab File: QC06300B.D
Acq: 30 Jun 110 12:06 pm

Tgt Ion:83 Resp: 38721

Ion	Ratio	Lower	Upper
83	100		
85	66.4	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

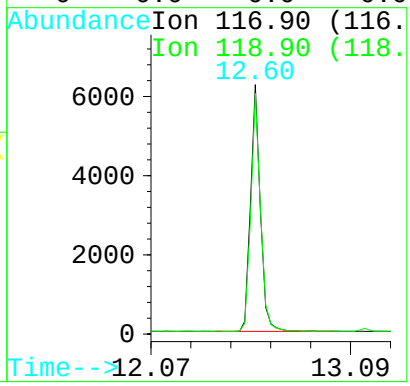


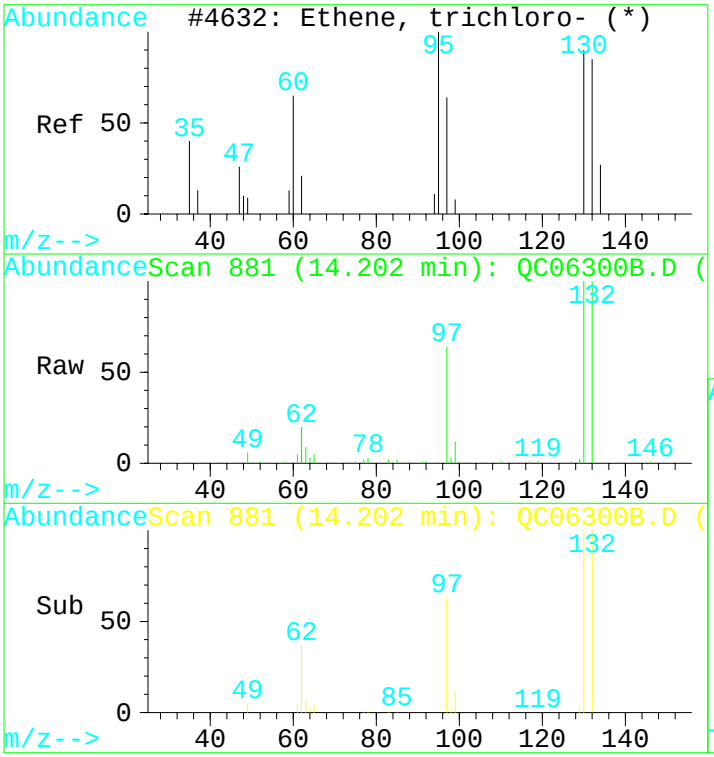


#4
Carbon tetrachloride
Concen: 0.23 ppbV
RT: 12.60 min Scan# 821
Delta R.T. -0.06 min
Lab File: QC06300B.D
Acq: 30 Jun 110 12:06 pm

Tgt Ion:116.9 Resp: 21633

Ion	Ratio	Lower	Upper
117	100		
119	96.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

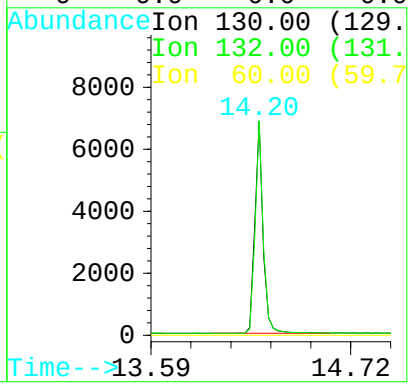




#5
Trichloroethene
Concen: 0.25 ppbV
RT: 14.20 min Scan# 881
Delta R.T. -0.06 min
Lab File: QC06300B.D
Acq: 30 Jun 110 12:06 pm

Tgt Ion:130 Resp: 22069

Ion	Ratio	Lower	Upper
130	100		
132	100.0	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025301A.D
Acq Time : 30 Jun 110 9:02 pm Operator: JF
Sample : IA-FO-O1-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

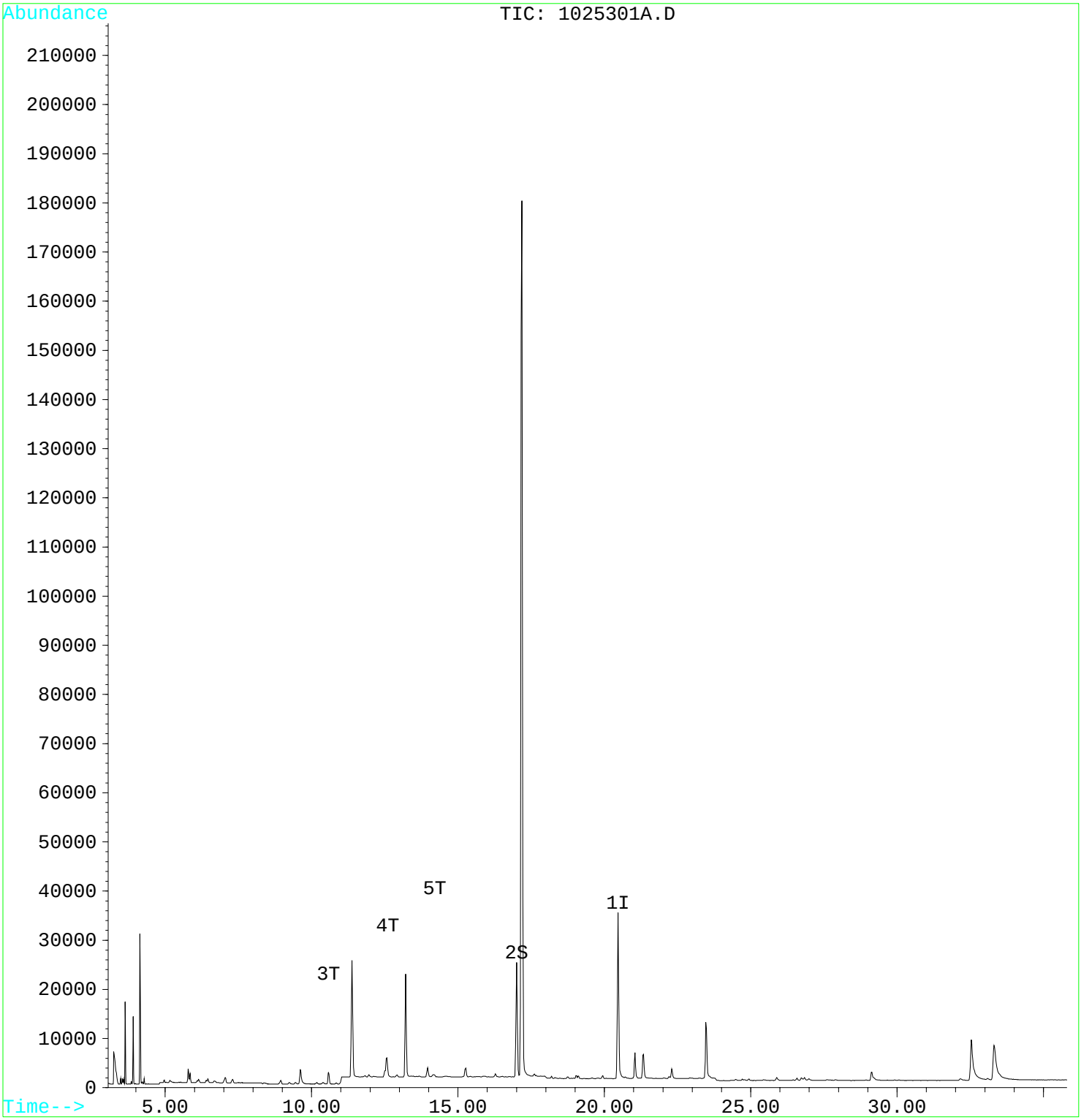
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	59284	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	33582	0.24	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.58	83	4452	0.07	ppbV	99
4) Carbon tetrachloride	12.60	117	2067	0.05	ppbV	98
5) Trichloroethene	14.20	130	354	0.01	ppbV	88

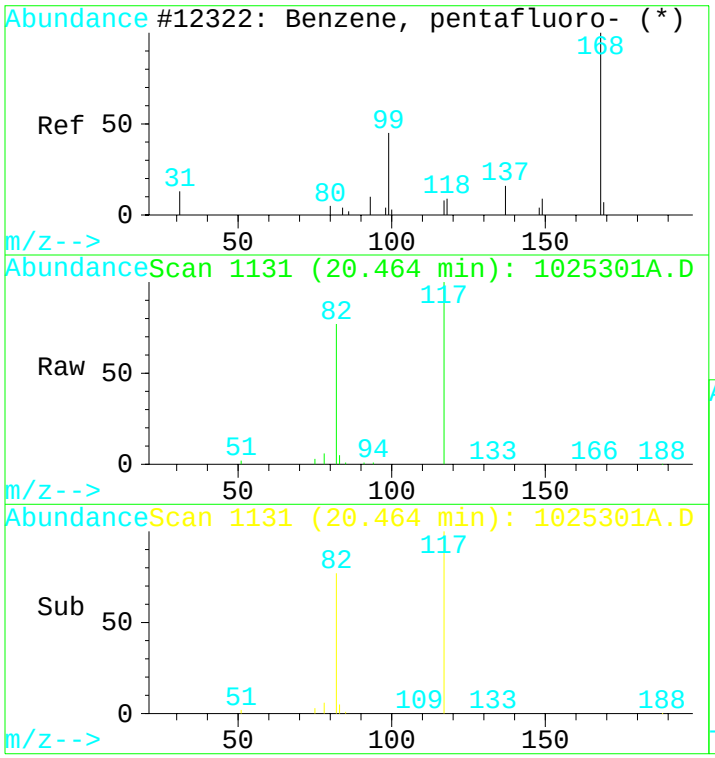
(#) = qualifier out of range (m) = manual integration
1025301A.D 2NTHG_A.M Tue Jul 06 12:37:38 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025301A.D
Acq Time : 30 Jun 110 9:02 pm Operator: JF
Sample : IA-FO-O1-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

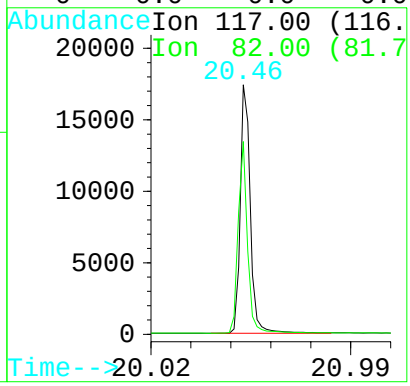


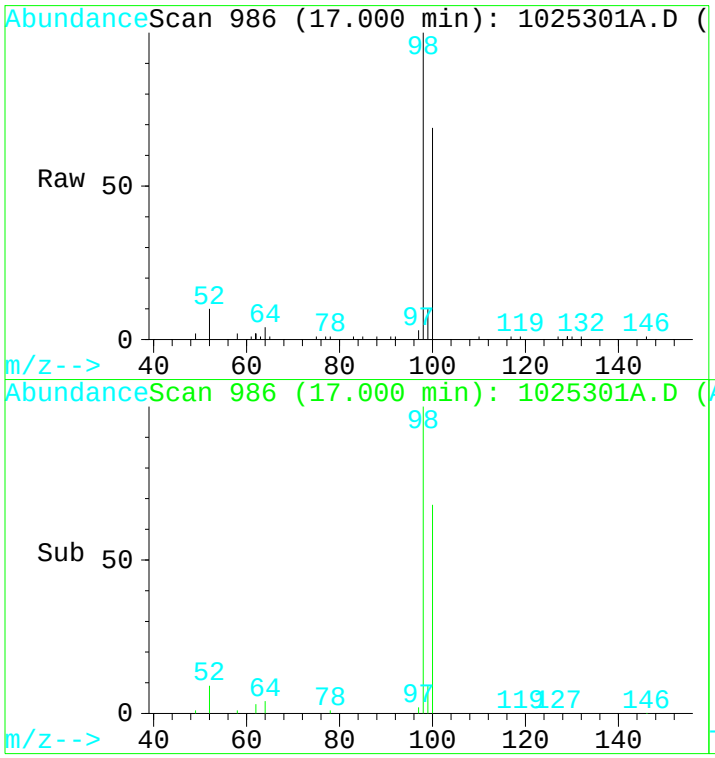


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: 1025301A.D
Acq: 30 Jun 110 9:02 pm

Tgt Ion:117 Resp: 59284

Ion	Ratio	Lower	Upper
117	100		
82	77.1	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

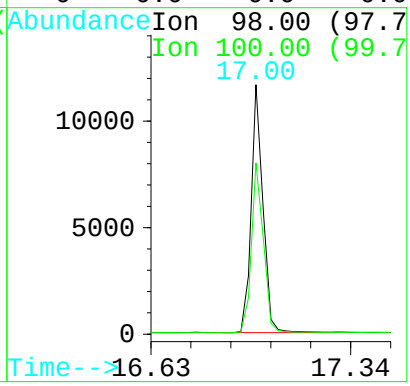


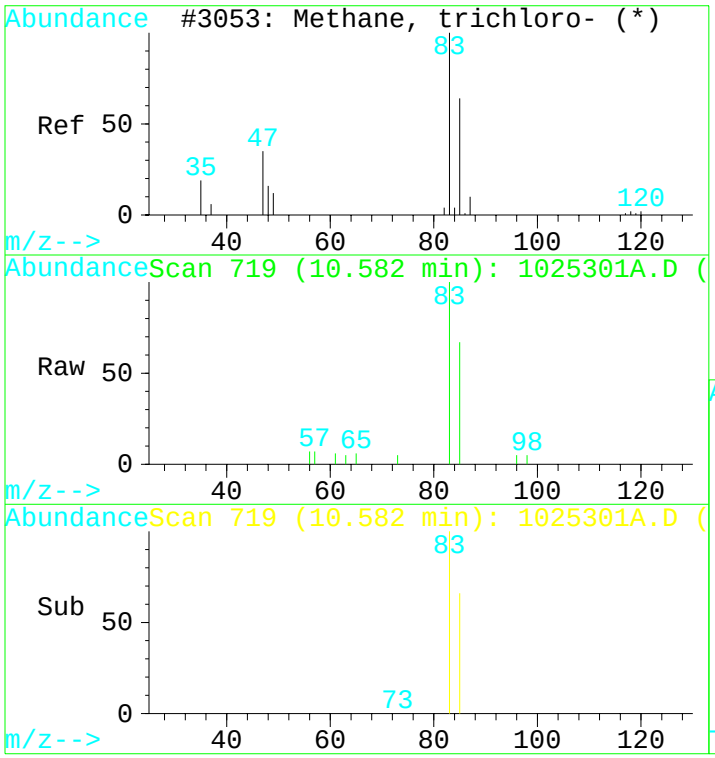


#2
Toluene-d8
Concen: 0.24 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: 1025301A.D
Acq: 30 Jun 110 9:02 pm

Tgt Ion:98 Resp: 33582

Ion	Ratio	Lower	Upper
98	100		
100	70.1	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

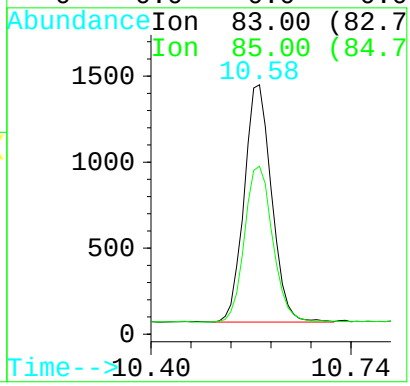


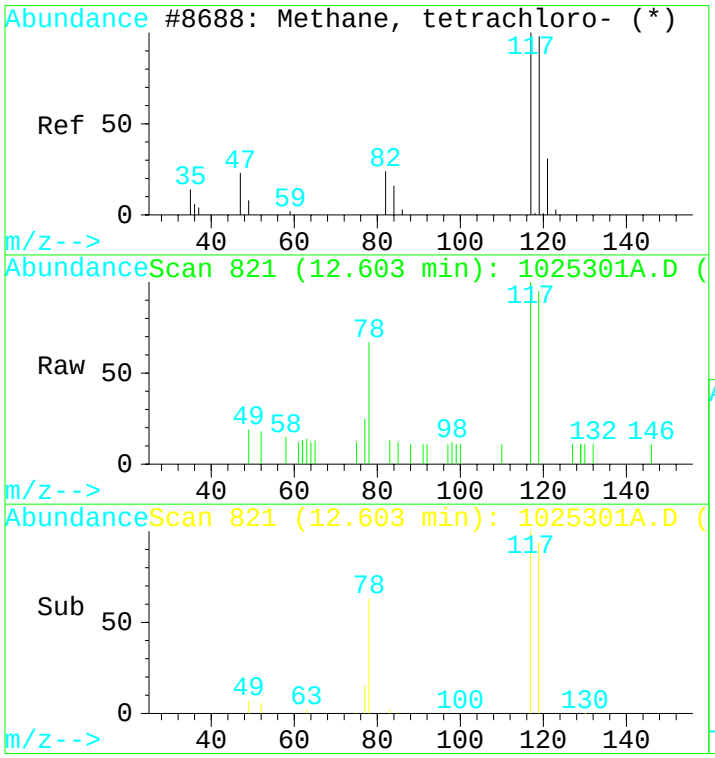


#3
Chloroform
Concen: 0.07 ppbV
RT: 10.58 min Scan# 719
Delta R.T. -0.08 min
Lab File: 1025301A.D
Acq: 30 Jun 110 9:02 pm

Tgt Ion:83 Resp: 4452

Ion	Ratio	Lower	Upper
83	100		
85	65.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

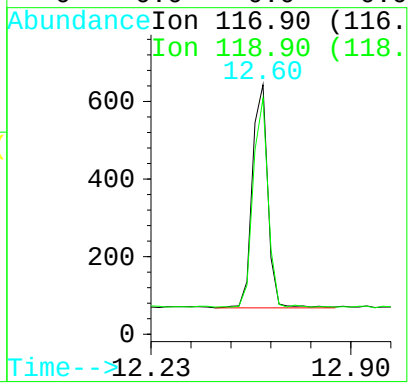


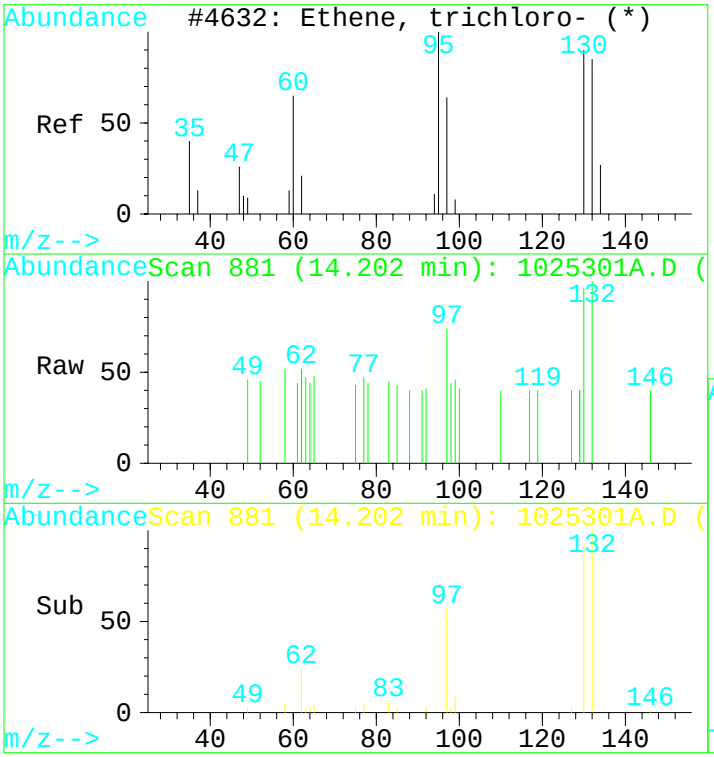


#4
Carbon tetrachloride
Concen: 0.05 ppbV
RT: 12.60 min Scan# 821
Delta R.T. -0.06 min
Lab File: 1025301A.D
Acq: 30 Jun 110 9:02 pm

Tgt Ion:116.9 Resp: 2067

Ion	Ratio	Lower	Upper
117	100		
119	93.7	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

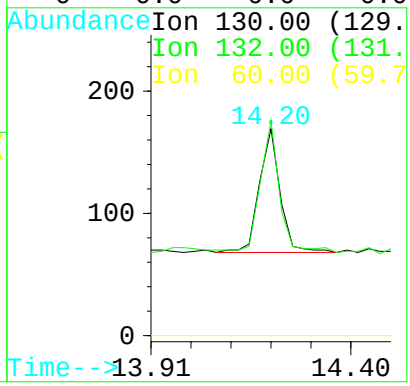




#5
Trichloroethene
Concen: 0.01 ppbV
RT: 14.20 min Scan# 881
Delta R.T. -0.06 min
Lab File: 1025301A.D
Acq: 30 Jun 110 9:02 pm

Tgt Ion:130 Resp: 354

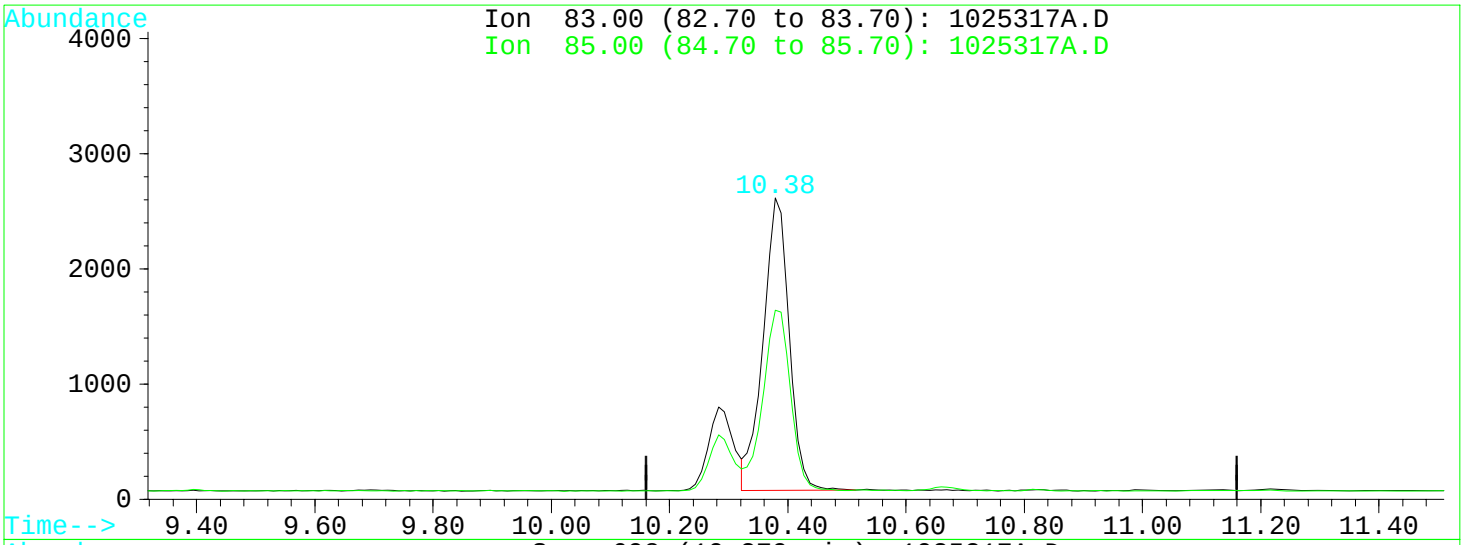
Ion	Ratio	Lower	Upper
130	100		
132	105.9	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0

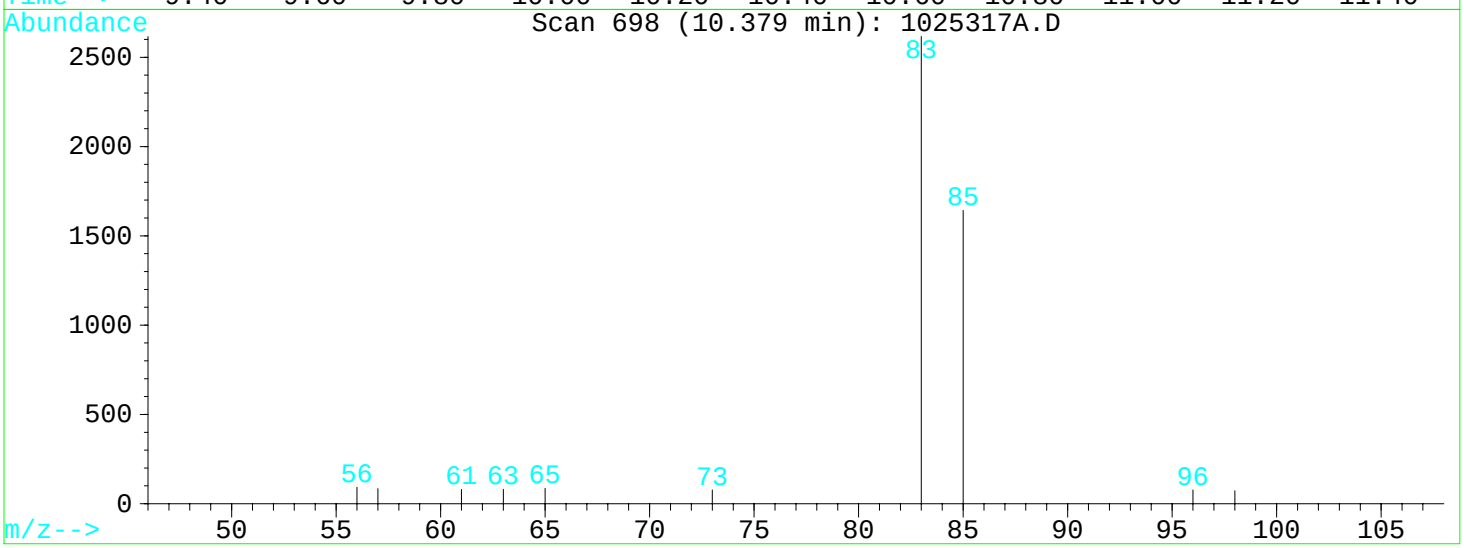


Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025317A.D
Acq Time : 30 Jun 110 2:28 pm Operator: CM
Sample : IA-U3-O2-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025317A.D

Split Peak - KB 7/6/10

(3) Chloroform (T)

10.38min 0.05ppbV

response 7813

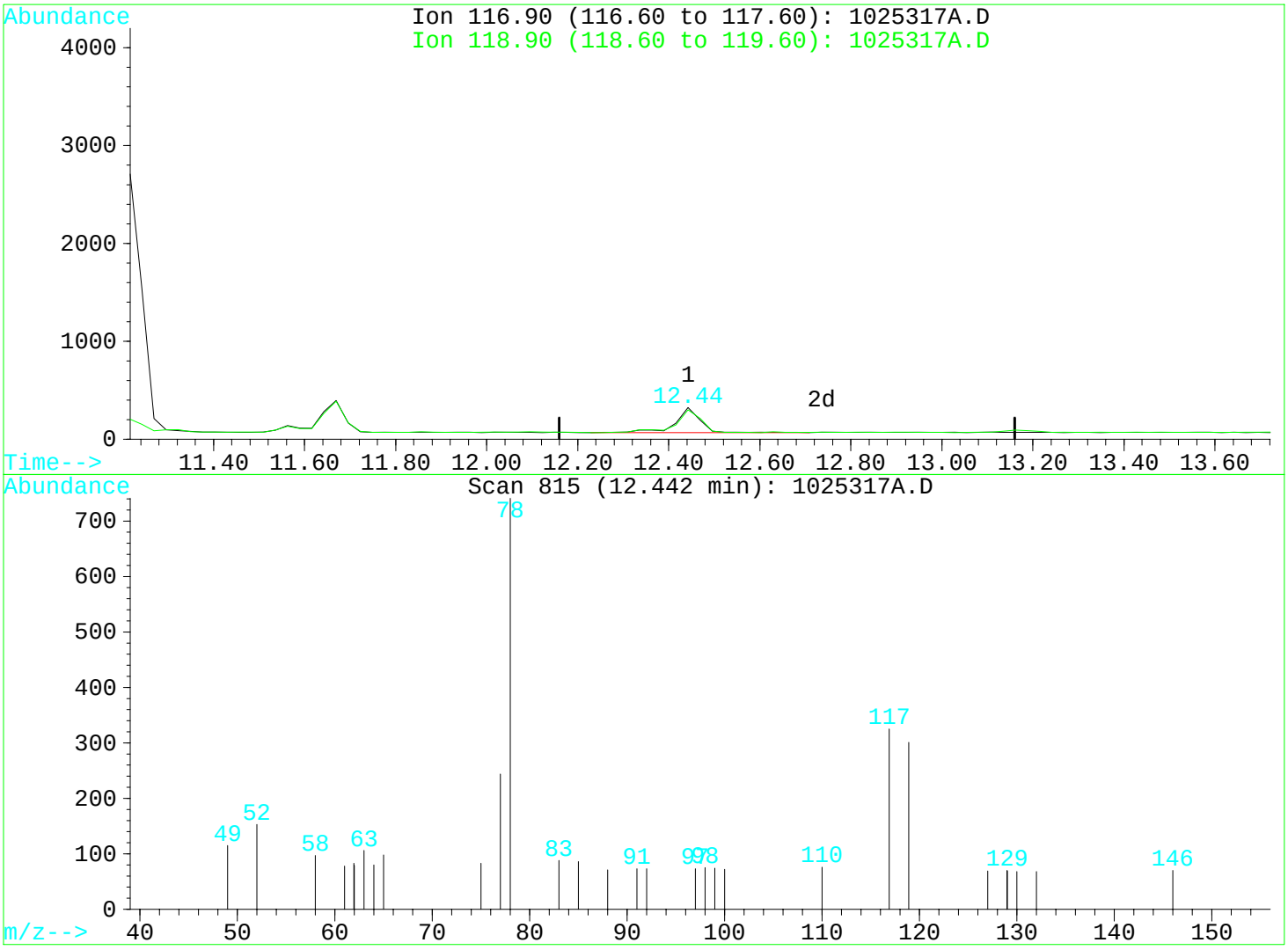
Ion	Exp%	Act%
83.00	100	100
85.00	64.80	61.21
0.00	0.00	0.00
0.00	0.00	0.00

1025317A.D 2NTHG_A.M Tue Jul 06 12:53:25 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025317A.D
Acq Time : 30 Jun 110 2:28 pm Operator: CM
Sample : IA-U3-O2-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 12:53 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration



TIC: 1025317A.D

(4) Carbon tetrachloride (T)

Split Peak - KB 7/6/10

12.44min 0.01ppbV

response 938

Ion	Exp%	Act%
116.90	100	100
118.90	91.80	90.63
0.00	0.00	0.00
0.00	0.00	0.00

1025317A.D 2NTHG_A.M Tue Jul 06 13:12:13 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025317A.D
Acq Time : 30 Jun 110 2:28 pm Operator: CM
Sample : IA-U3-O2-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 13:12 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

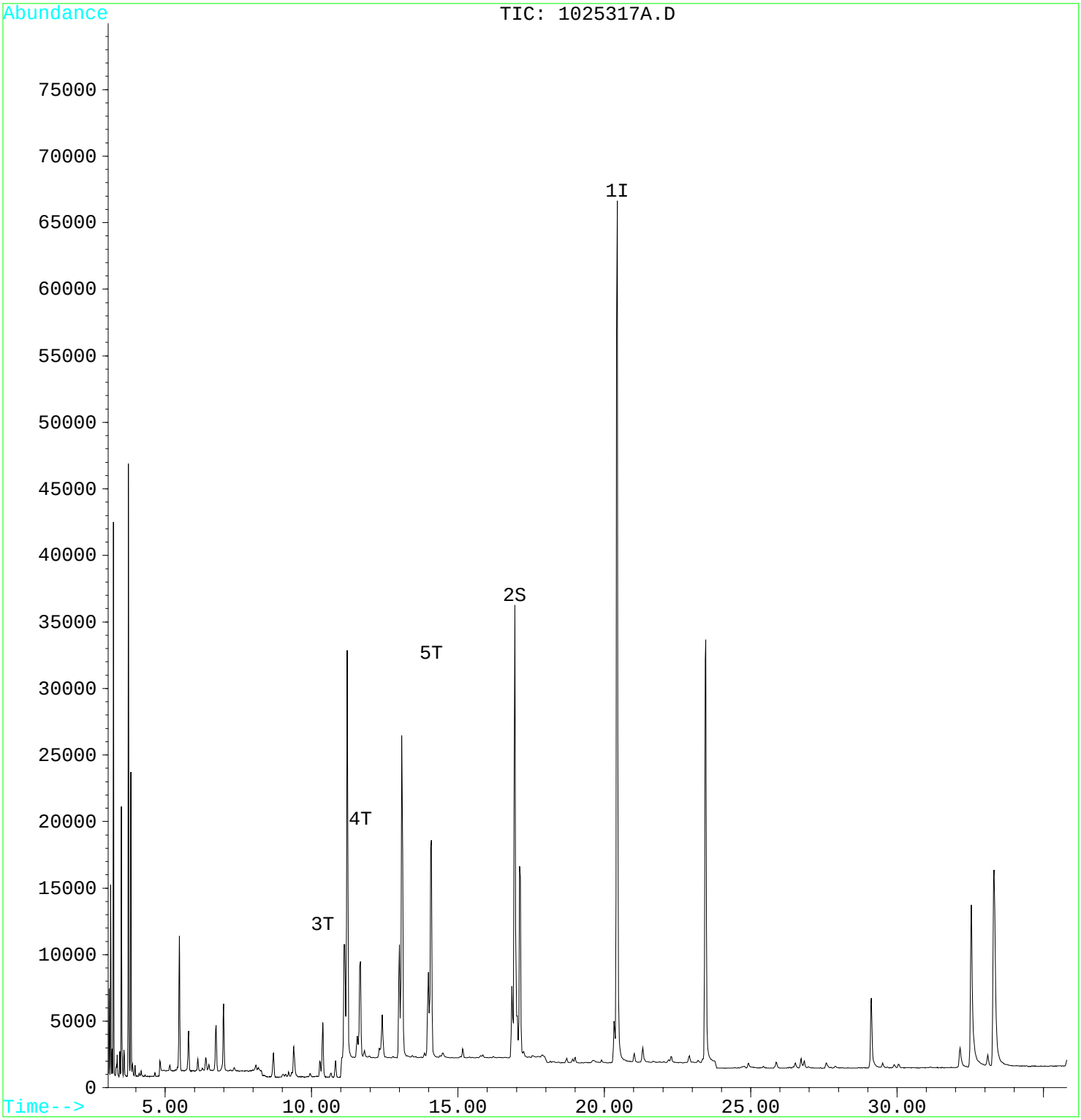
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.44	117	127835	0.20	ppbV		-0.07
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.95	98	61379	0.20	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.38	83	10089	0.07	ppbV	m	95
4) Carbon tetrachloride	11.67	117	2456	0.03	ppbV	m	99
5) Trichloroethene	14.09	130	24612	0.31	ppbV		96

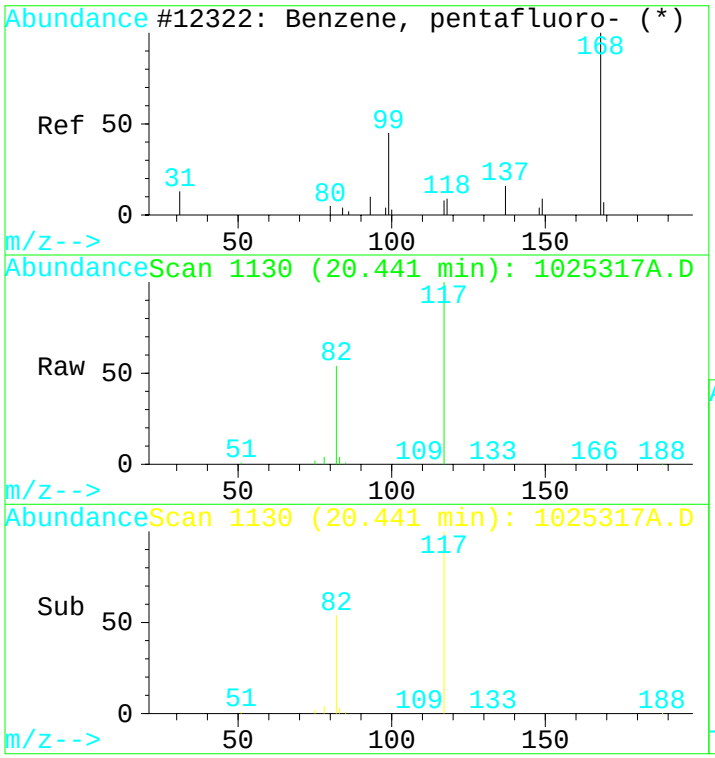
(#) = qualifier out of range (m) = manual integration
1025317A.D 2NTHG_A.M Tue Jul 06 13:12:55 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025317A.D
Acq Time : 30 Jun 110 2:28 pm Operator: CM
Sample : IA-U3-O2-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 13:12 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

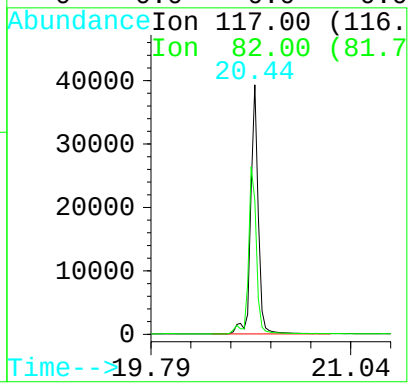


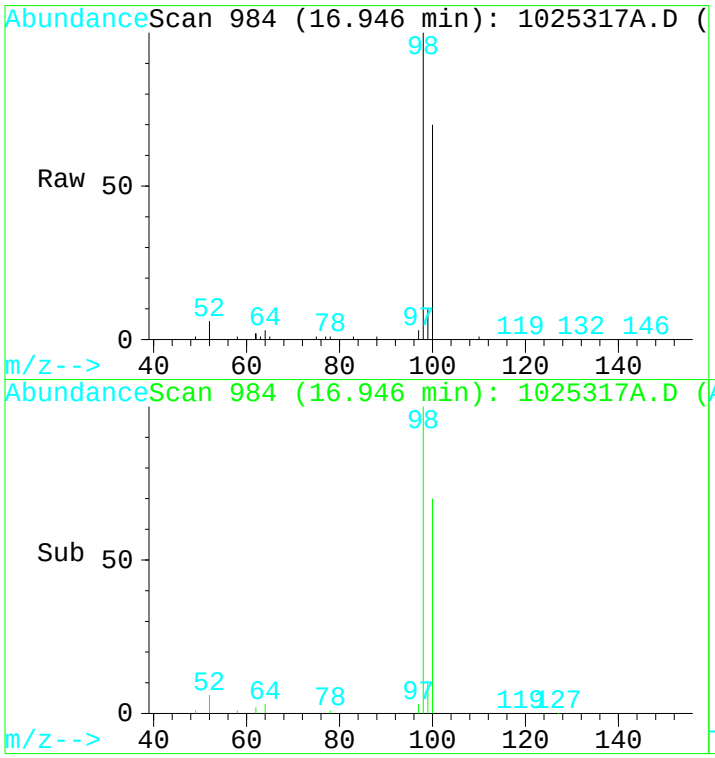


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.44 min Scan# 1130
Delta R.T. -0.07 min
Lab File: 1025317A.D
Acq: 30 Jun 110 2:28 pm

Tgt Ion:117 Resp: 127835

Ion	Ratio	Lower	Upper
117	100		
82	53.5	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

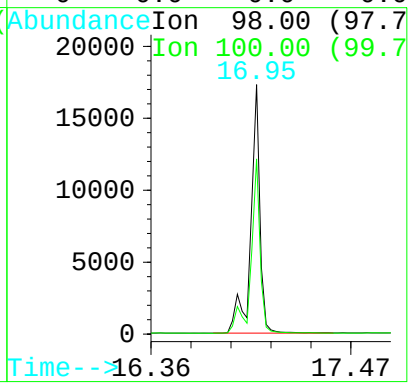


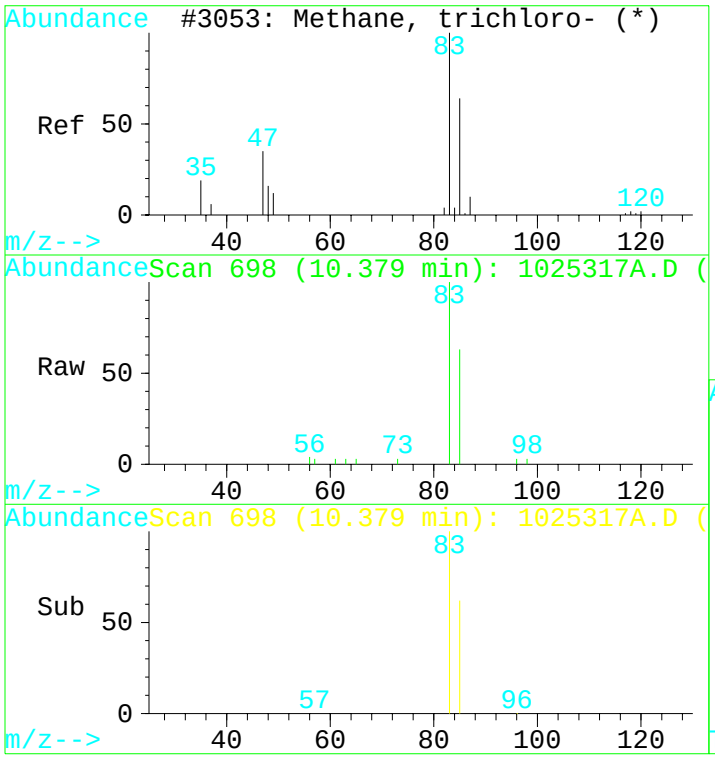


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 16.95 min Scan# 984
Delta R.T. -0.10 min
Lab File: 1025317A.D
Acq: 30 Jun 110 2:28 pm

Tgt Ion:98 Resp: 61379

Ion	Ratio	Lower	Upper
98	100		
100	69.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

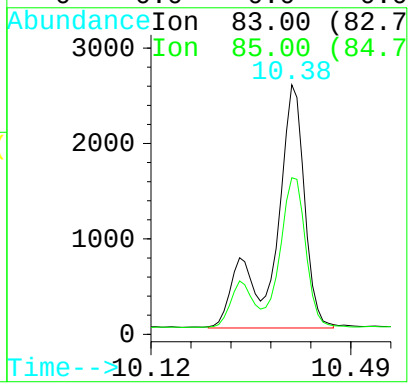


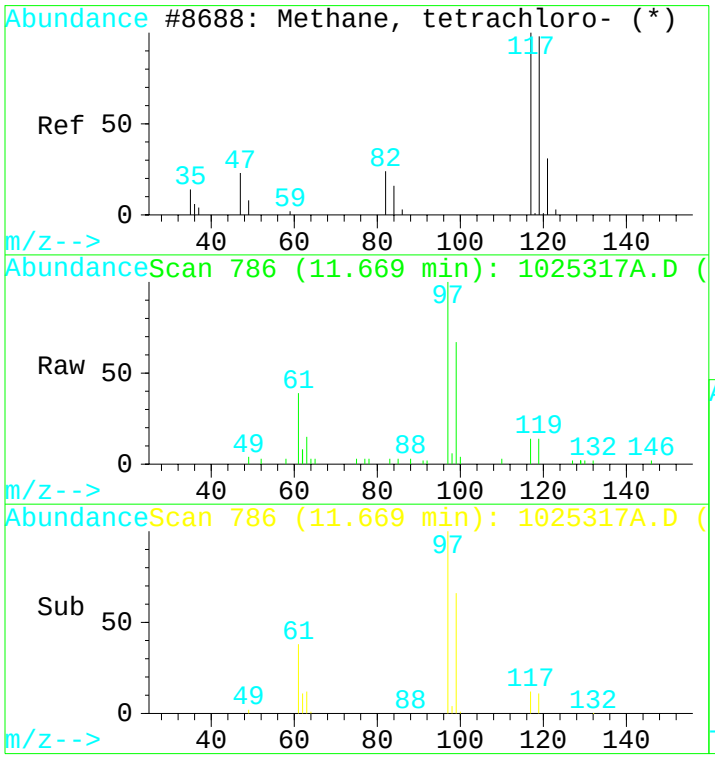


#3
Chloroform
Concen: 0.07 ppbV m
RT: 10.38 min Scan# 698
Delta R.T. -0.28 min
Lab File: 1025317A.D
Acq: 30 Jun 110 2:28 pm

Tgt Ion:83 Resp: 10089

Ion	Ratio	Lower	Upper
83	100		
85	62.8	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

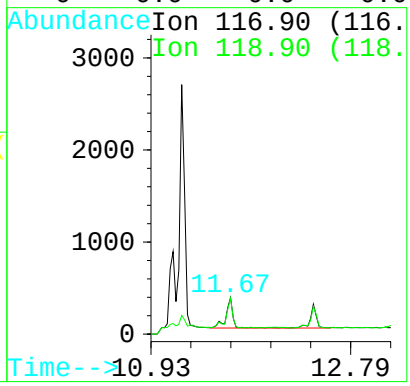


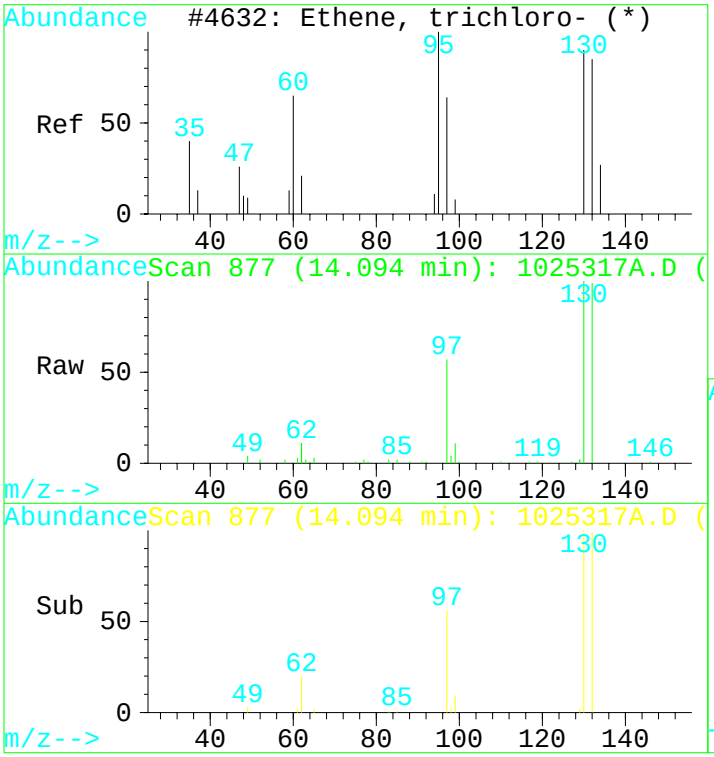


#4
Carbon tetrachloride
Concen: 0.03 ppbV m
RT: 11.67 min Scan# 786
Delta R.T. -0.99 min
Lab File: 1025317A.D
Acq: 30 Jun 110 2:28 pm

Tgt Ion:116.9 Resp: 2456

Ion	Ratio	Lower	Upper
117	100		
119	98.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

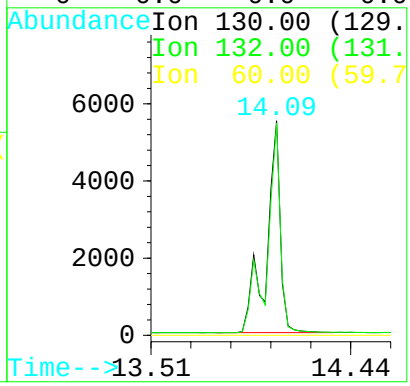




#5
Trichloroethene
Concen: 0.31 ppbV
RT: 14.09 min Scan# 877
Delta R.T. -0.17 min
Lab File: 1025317A.D
Acq: 30 Jun 110 2:28 pm

Tgt Ion:130 Resp: 24612

Ion	Ratio	Lower	Upper
130	100		
132	98.7	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025318B.D
Acq Time : 30 Jun 110 4:44 pm Operator: JF
Sample : IA-U3-O2-002 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

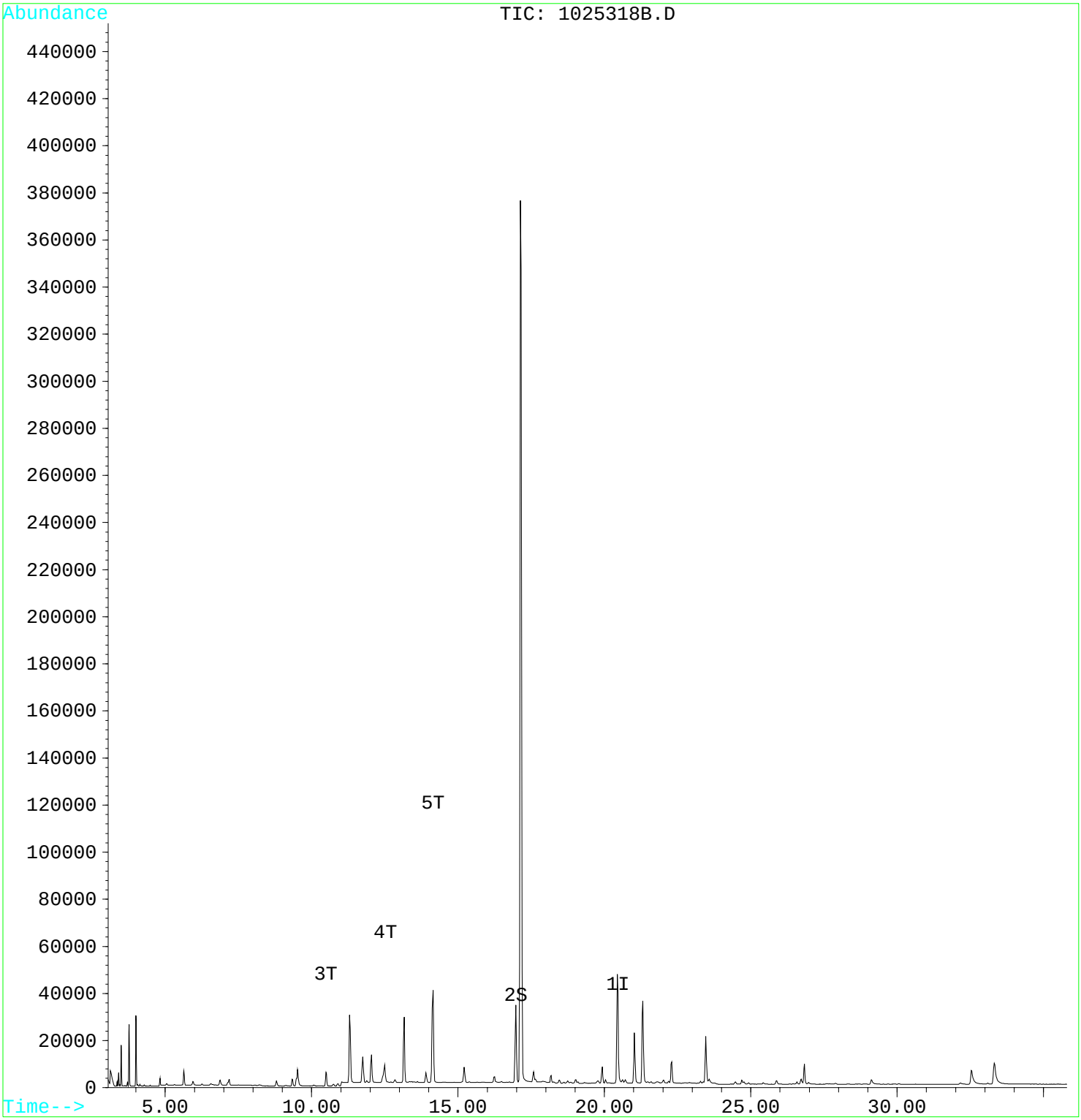
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	83126	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.97	98	44805	0.23	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.49	83	9449	0.10	ppbV	97
4) Carbon tetrachloride	12.52	117	1707	0.03	ppbV	97
5) Trichloroethene	14.15	130	36962	0.71	ppbV	96

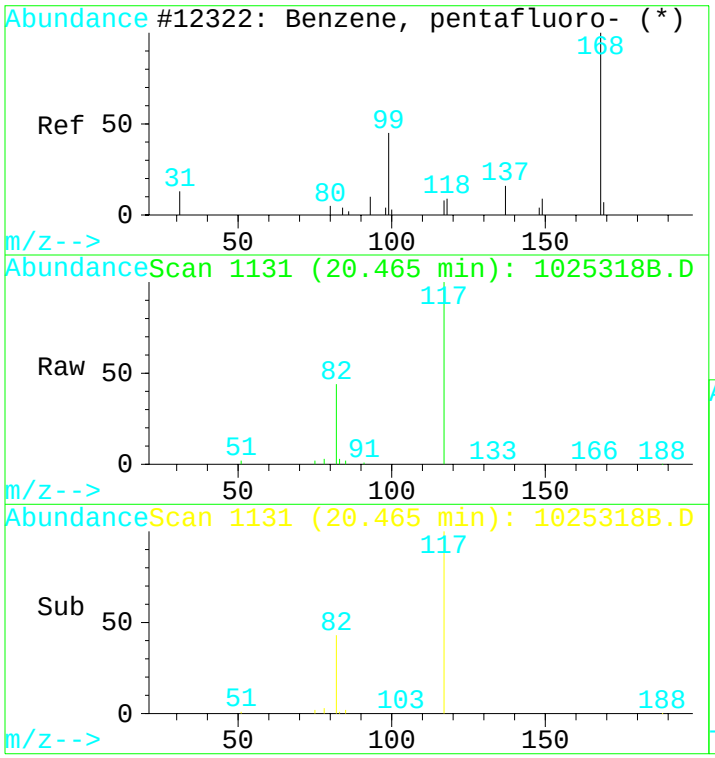
(#) = qualifier out of range (m) = manual integration
1025318B.D 2NTHG_A.M Tue Jul 06 12:54:24 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025318B.D
Acq Time : 30 Jun 110 4:44 pm Operator: JF
Sample : IA-U3-O2-002 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

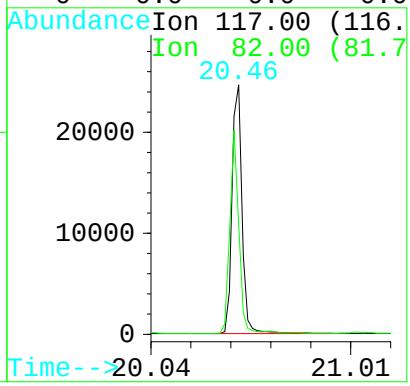


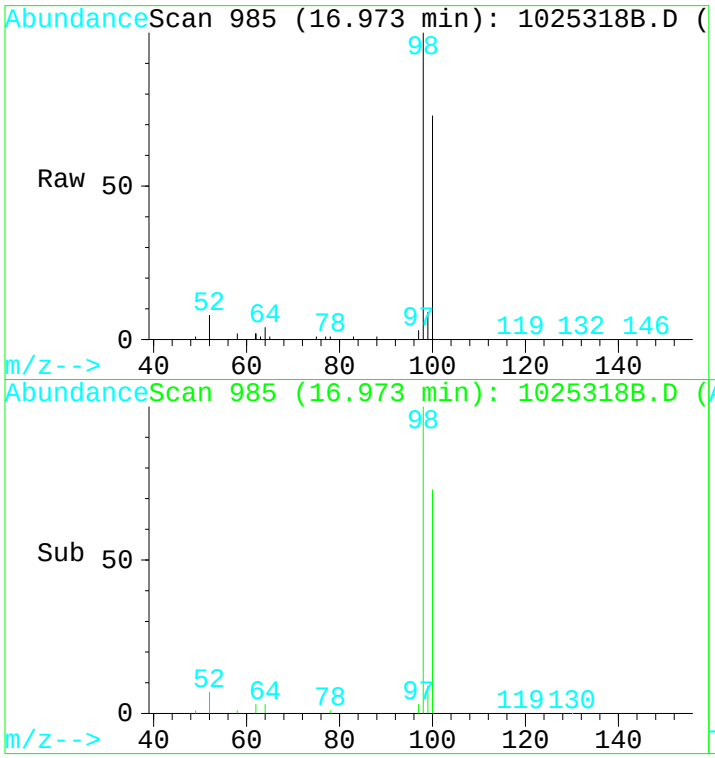


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: 1025318B.D
Acq: 30 Jun 110 4:44 pm

Tgt Ion:117 Resp: 83126

Ion	Ratio	Lower	Upper
117	100		
82	43.6	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

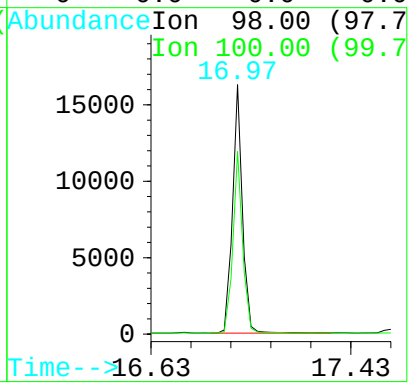


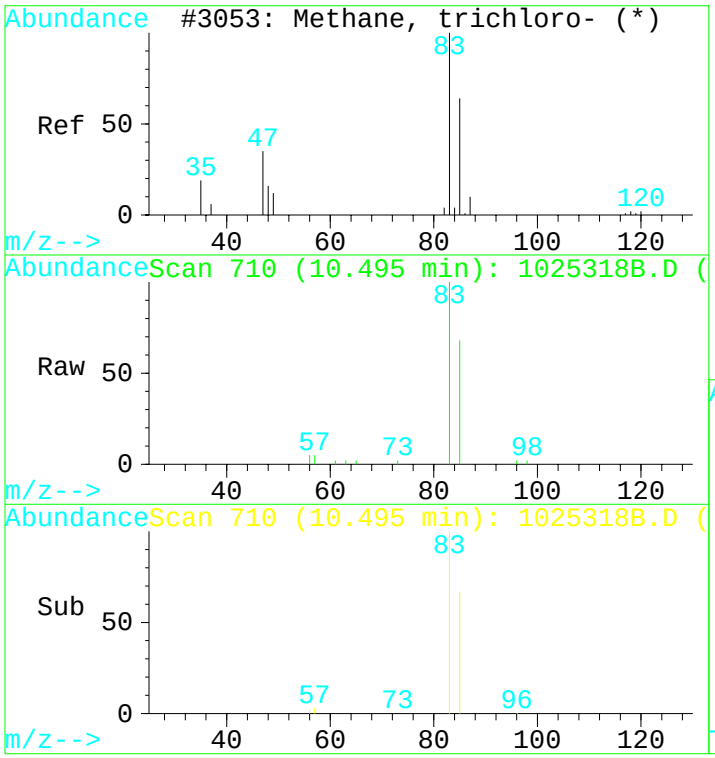


#2
Toluene-d8
Concen: 0.23 ppbV
RT: 16.97 min Scan# 985
Delta R.T. -0.08 min
Lab File: 1025318B.D
Acq: 30 Jun 110 4:44 pm

Tgt Ion:98 Resp: 44805

Ion	Ratio	Lower	Upper
98	100		
100	71.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

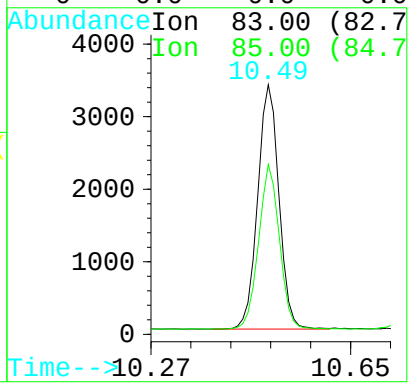


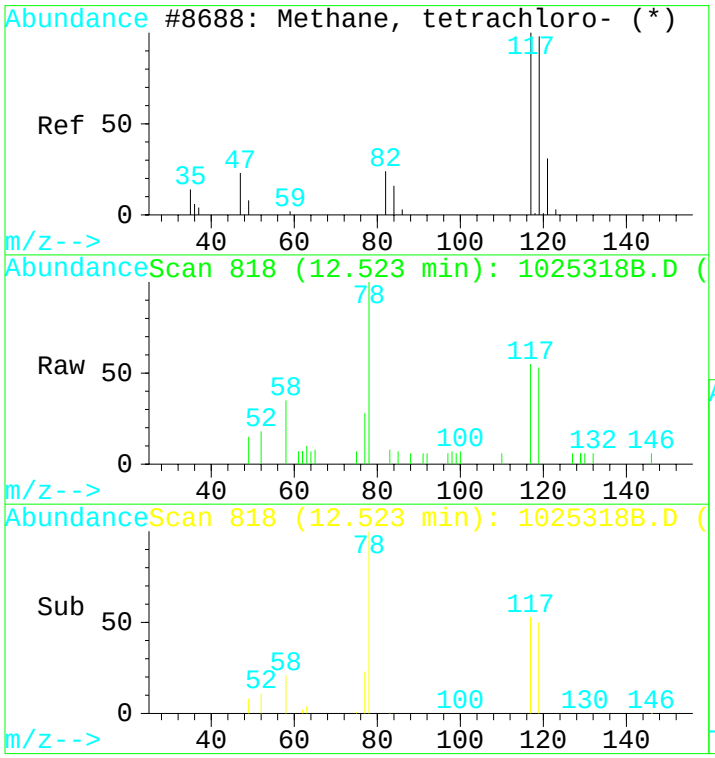


#3
Chloroform
Concen: 0.10 ppbV
RT: 10.49 min Scan# 710
Delta R.T. -0.17 min
Lab File: 1025318B.D
Acq: 30 Jun 110 4:44 pm

Tgt Ion:83 Resp: 9449

Ion	Ratio	Lower	Upper
83	100		
85	67.4	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

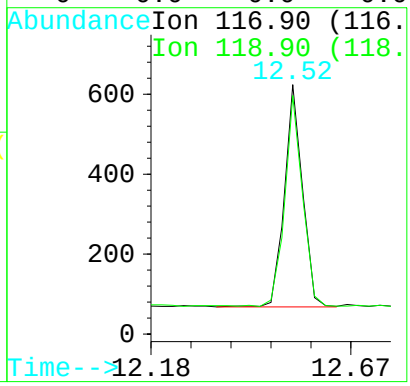


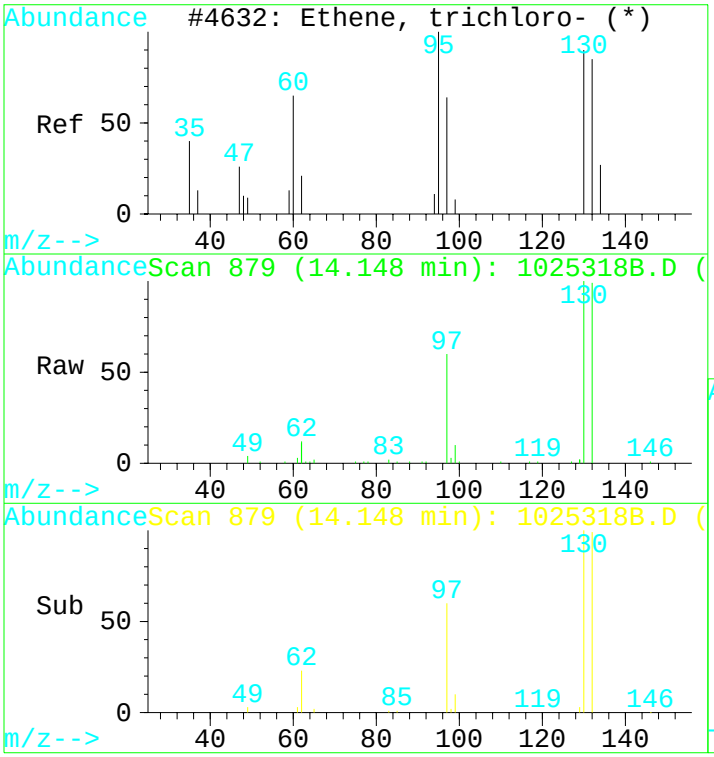


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.52 min Scan# 818
Delta R.T. -0.14 min
Lab File: 1025318B.D
Acq: 30 Jun 110 4:44 pm

Tgt Ion:116.9 Resp: 1707

Ion	Ratio	Lower	Upper
117	100		
119	94.8	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

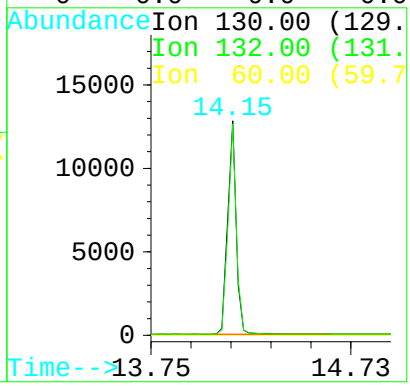




#5
Trichloroethene
Concen: 0.71 ppbV
RT: 14.15 min Scan# 879
Delta R.T. -0.11 min
Lab File: 1025318B.D
Acq: 30 Jun 110 4:44 pm

Tgt Ion:130 Resp: 36962

Ion	Ratio	Lower	Upper
130	100		
132	98.5	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025319A.D
Acq Time : 30 Jun 110 5:26 pm Operator: JF
Sample : IA-U3-O3-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

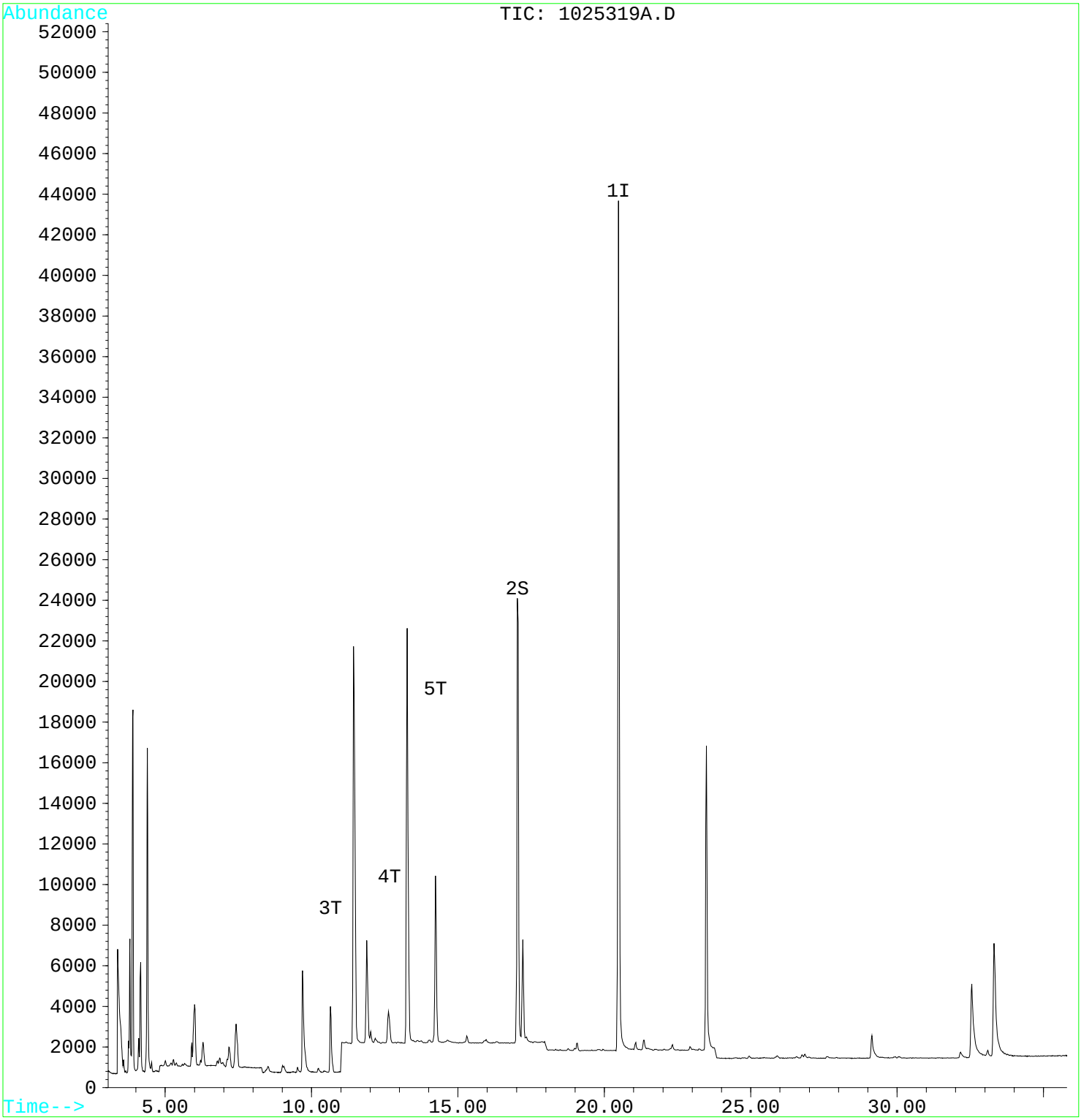
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	72790	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	41503	0.24	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.65	83	7055	0.08	ppbV	99
4) Carbon tetrachloride	12.66	117	1076	0.02	ppbV	96
5) Trichloroethene	14.23	130	8292	0.18	ppbV	97

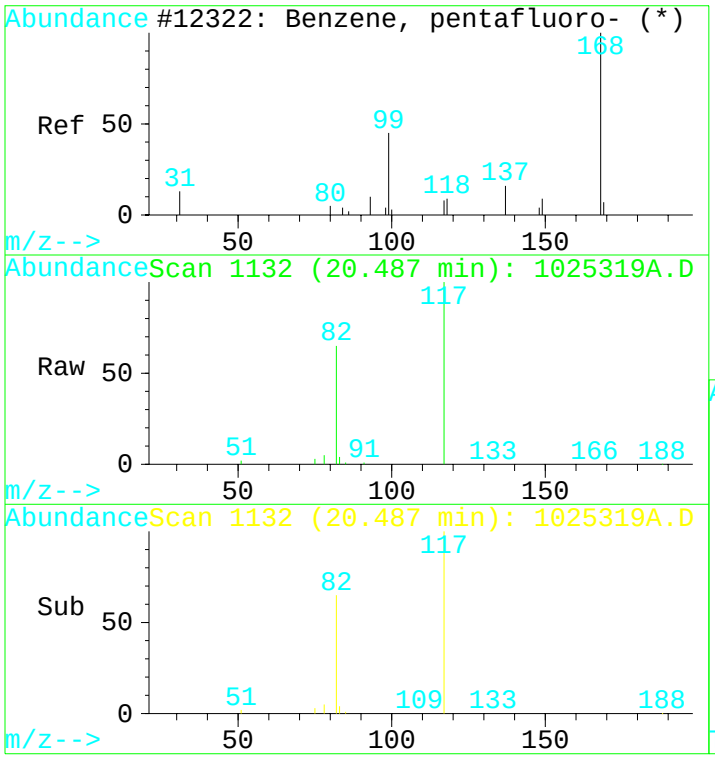
(#) = qualifier out of range (m) = manual integration
1025319A.D 2NTHG_A.M Tue Jul 06 12:54:46 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025319A.D
Acq Time : 30 Jun 110 5:26 pm Operator: JF
Sample : IA-U3-O3-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

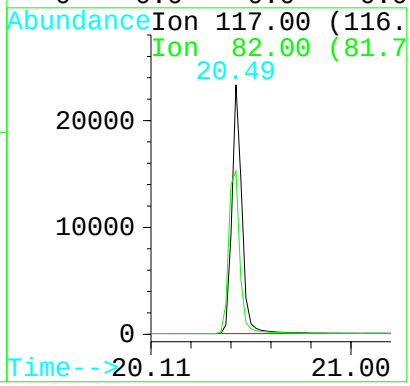


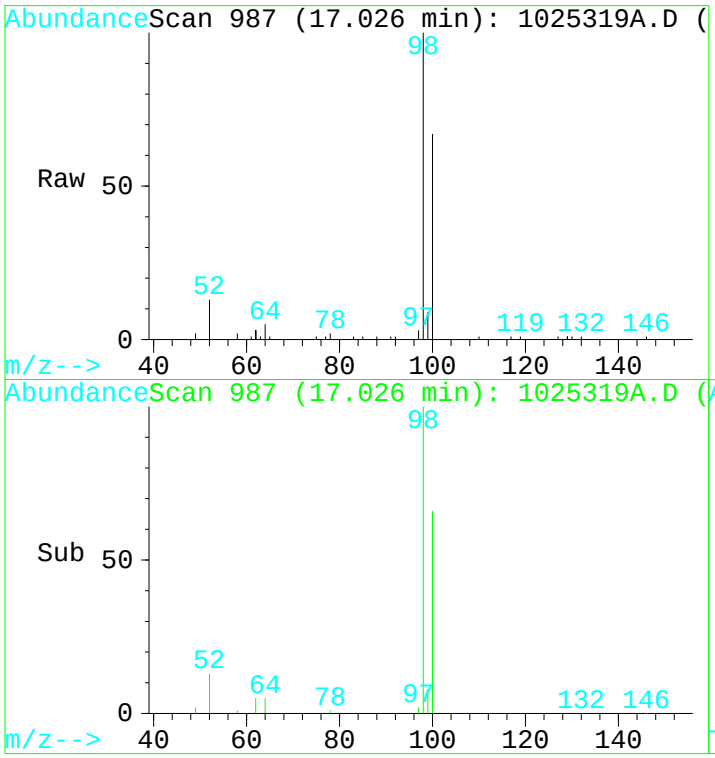


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025319A.D
Acq: 30 Jun 110 5:26 pm

Tgt Ion:117 Resp: 72790

Ion	Ratio	Lower	Upper
117	100		
82	65.3	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

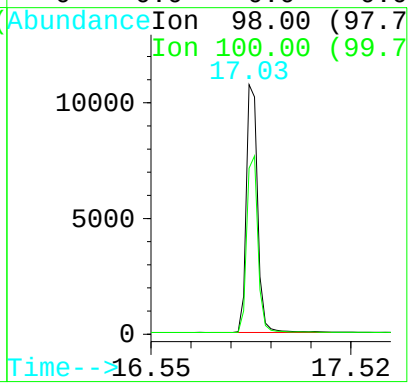


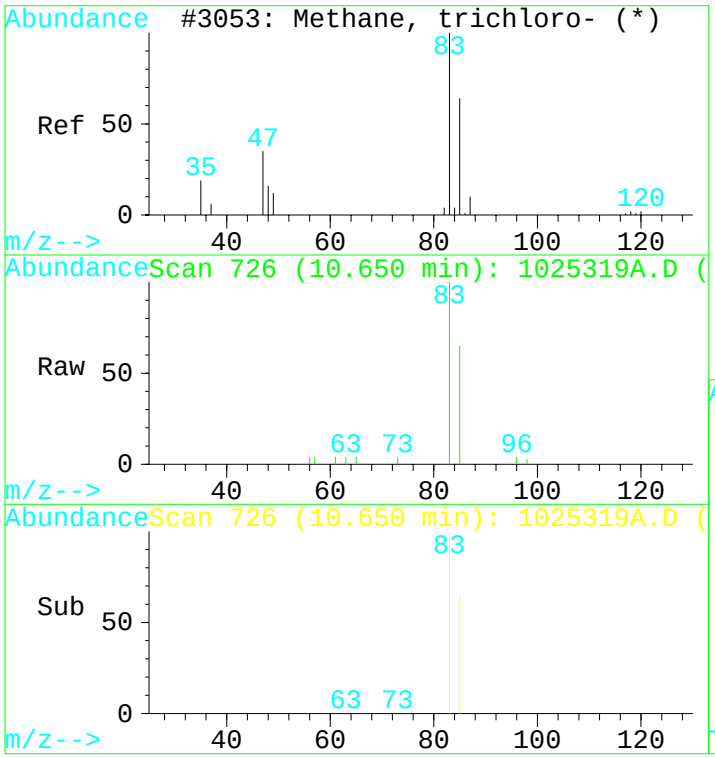


#2
Toluene-d8
Concen: 0.24 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025319A.D
Acq: 30 Jun 110 5:26 pm

Tgt Ion:98 Resp: 41503

Ion	Ratio	Lower	Upper
98	100		
100	70.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

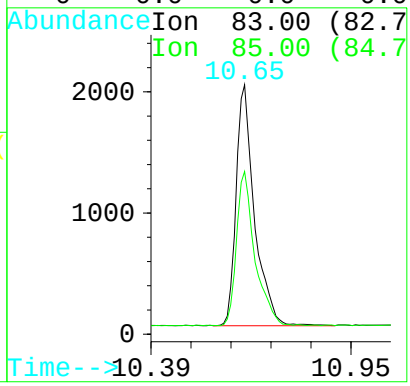


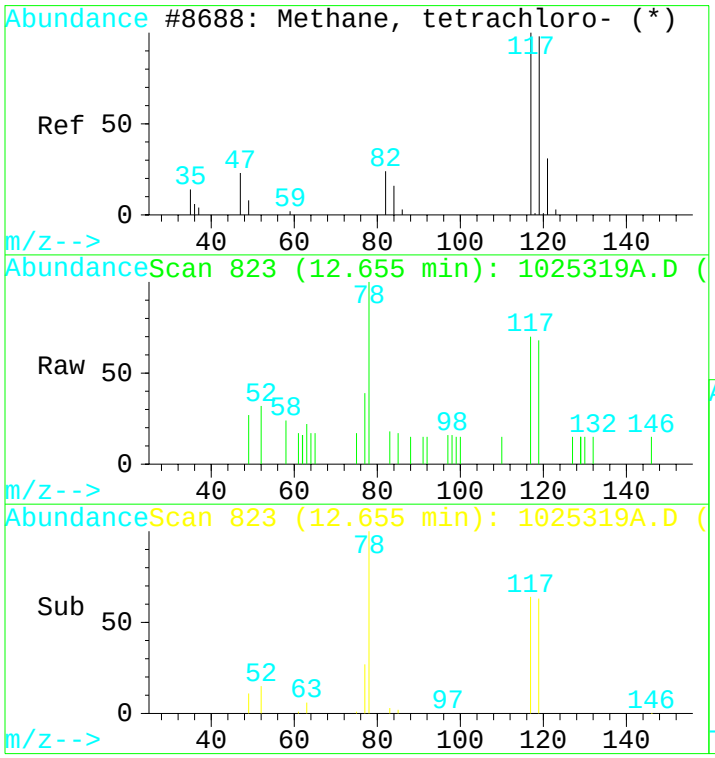


#3
Chloroform
Concen: 0.08 ppbV
RT: 10.65 min Scan# 726
Delta R.T. -0.01 min
Lab File: 1025319A.D
Acq: 30 Jun 110 5:26 pm

Tgt Ion:83 Resp: 7055

Ion	Ratio	Lower	Upper
83	100		
85	63.9	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

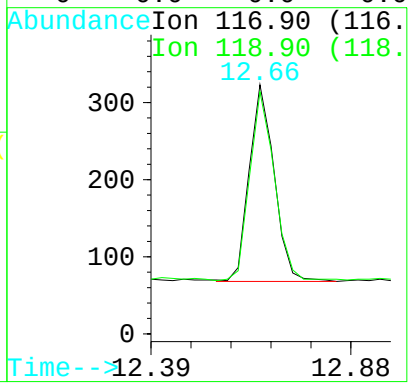


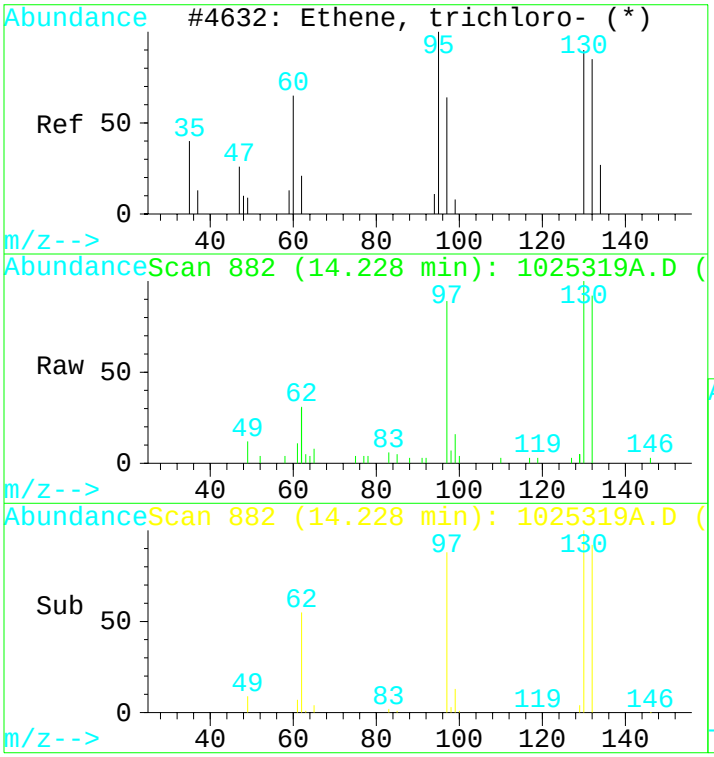


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025319A.D
Acq: 30 Jun 110 5:26 pm

Tgt Ion:116.9 Resp: 1076

Ion	Ratio	Lower	Upper
117	100		
119	96.1	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

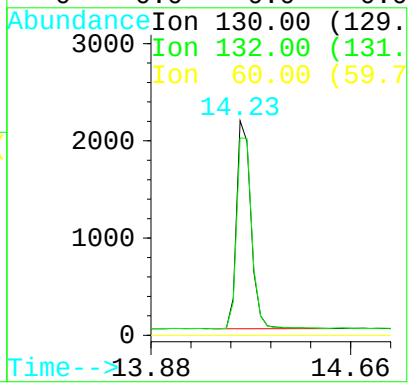




#5
Trichloroethene
Concen: 0.18 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025319A.D
Acq: 30 Jun 110 5:26 pm

Tgt Ion:130 Resp: 8292

Ion	Ratio	Lower	Upper
130	100		
132	91.7	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025320A.D
Acq Time : 30 Jun 110 6:11 pm Operator: JF
Sample : IA-U3-O4-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

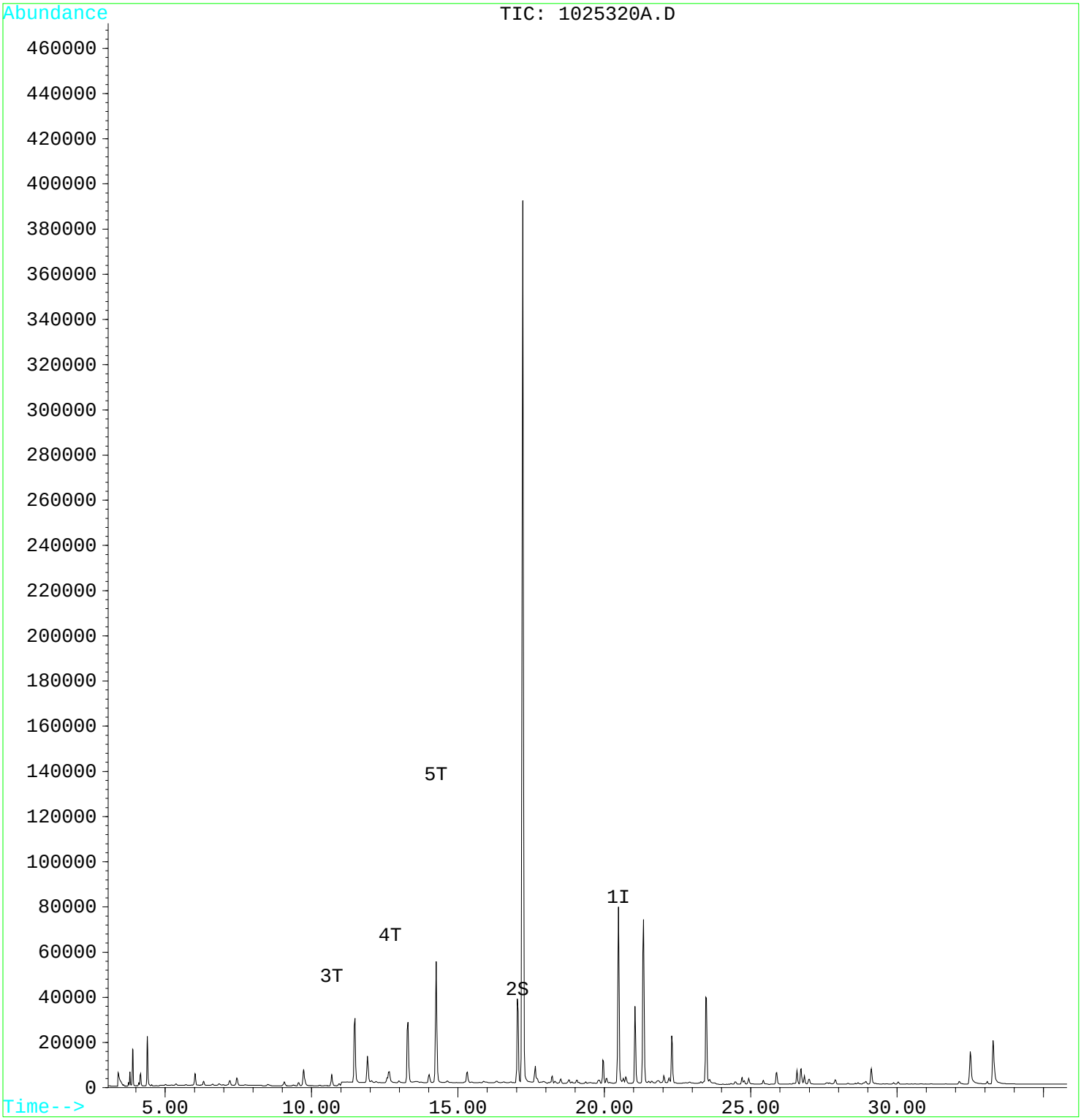
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	136435	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	62376	0.19	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.69	83	9886	0.06	ppbV	96
4) Carbon tetrachloride	12.68	117	1650	0.02	ppbV	91
5) Trichloroethene	14.25	130	50904	0.60	ppbV	99

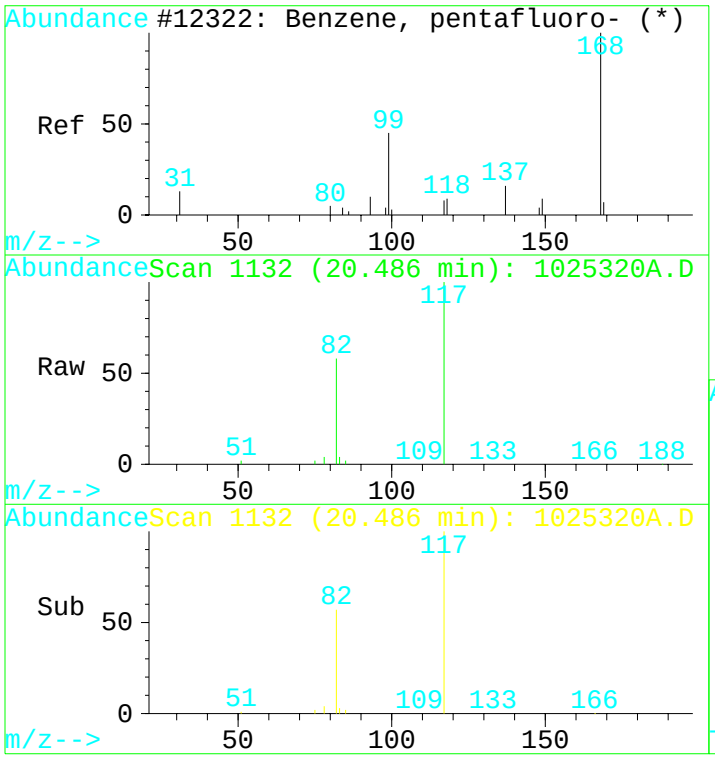
(#) = qualifier out of range (m) = manual integration
1025320A.D 2NTHG_A.M Tue Jul 06 12:55:28 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025320A.D
Acq Time : 30 Jun 110 6:11 pm Operator: JF
Sample : IA-U3-O4-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

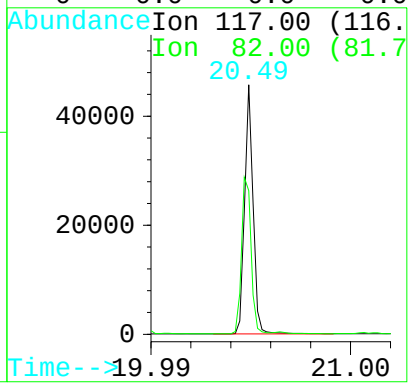


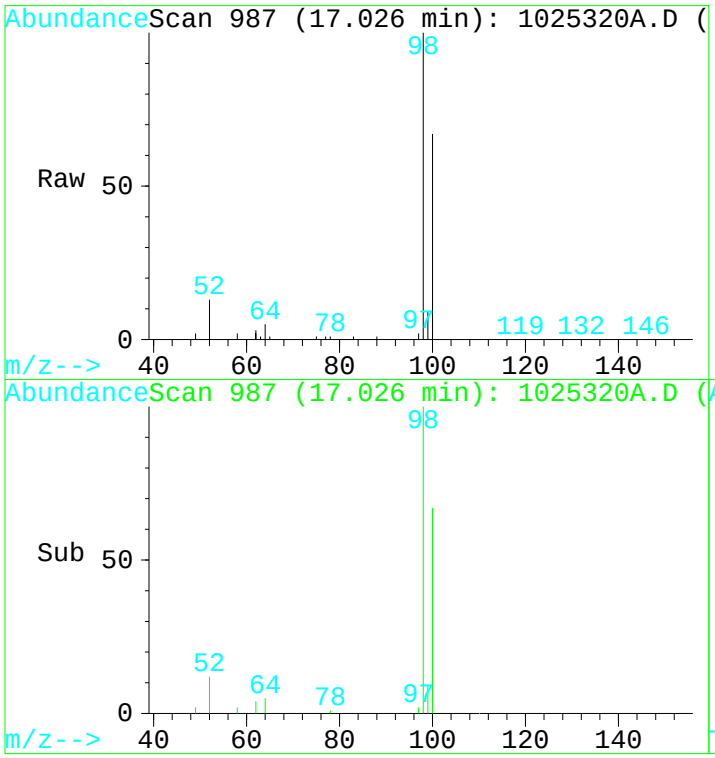


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025320A.D
Acq: 30 Jun 110 6:11 pm

Tgt Ion:117 Resp: 136435

Ion	Ratio	Lower	Upper
117	100		
82	57.4	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

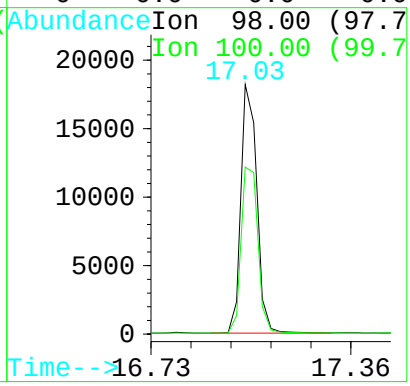


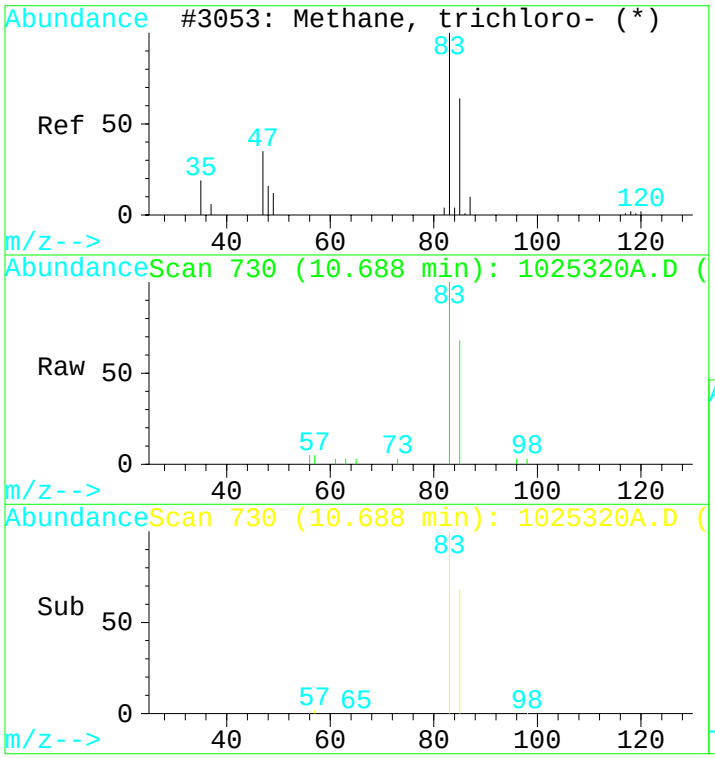


#2
Toluene-d8
Concen: 0.19 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025320A.D
Acq: 30 Jun 110 6:11 pm

Tgt Ion:98 Resp: 62376

Ion	Ratio	Lower	Upper
98	100		
100	70.9	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

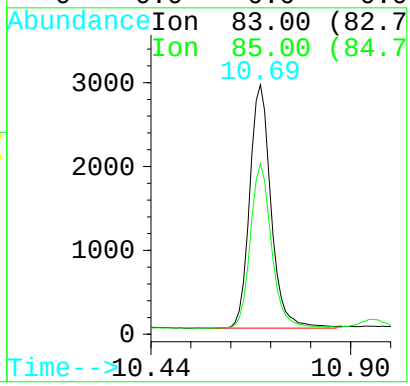


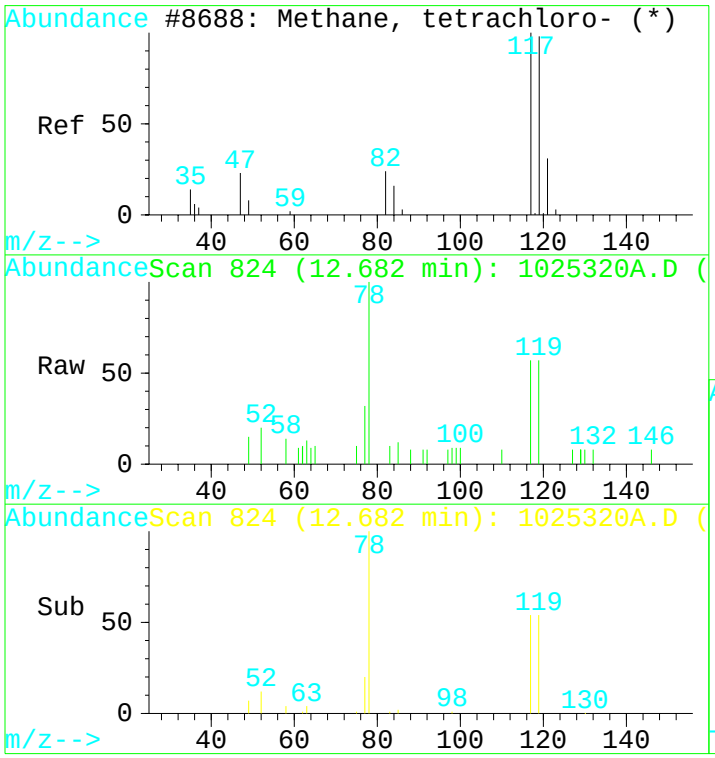


#3
Chloroform
Concen: 0.06 ppbV
RT: 10.69 min Scan# 730
Delta R.T. 0.03 min
Lab File: 1025320A.D
Acq: 30 Jun 110 6:11 pm

Tgt Ion:83 Resp: 9886

Ion	Ratio	Lower	Upper
83	100		
85	67.6	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

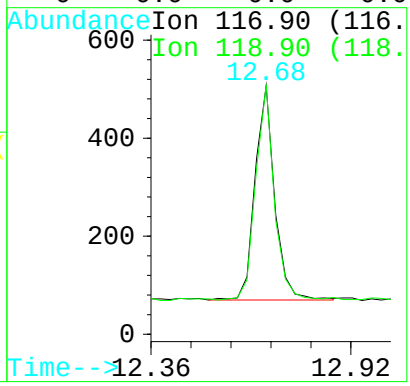


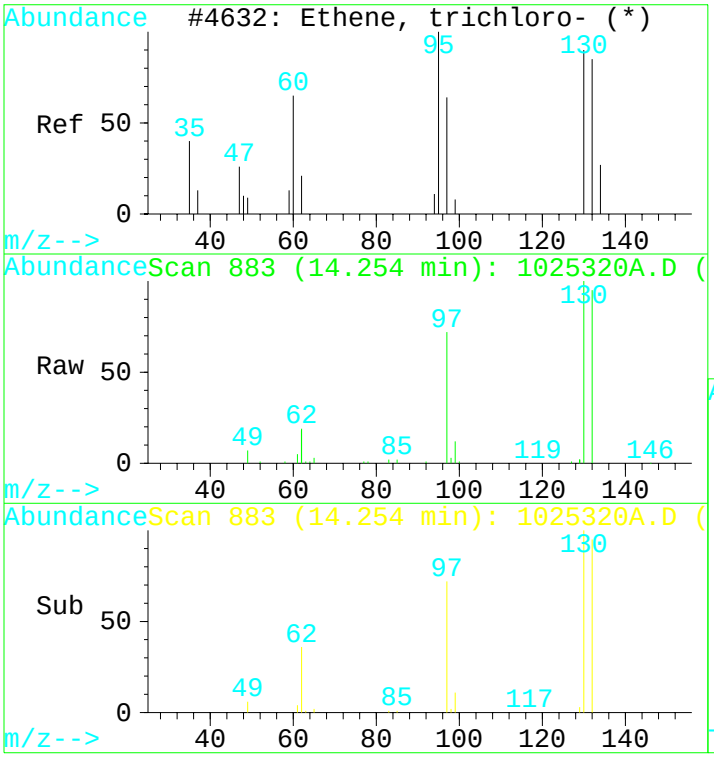


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.68 min Scan# 824
Delta R.T. 0.02 min
Lab File: 1025320A.D
Acq: 30 Jun 110 6:11 pm

Tgt Ion:116.9 Resp: 1650

Ion	Ratio	Lower	Upper
117	100		
119	100.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

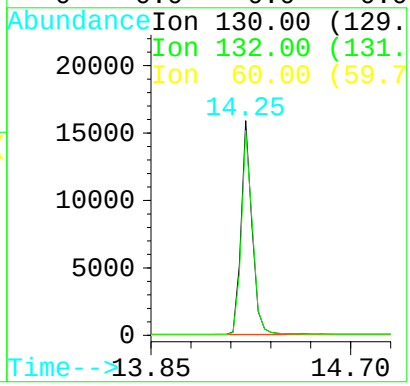




#5
Trichloroethene
Concen: 0.60 ppbV
RT: 14.25 min Scan# 883
Delta R.T. -0.01 min
Lab File: 1025320A.D
Acq: 30 Jun 110 6:11 pm

Tgt Ion:130 Resp: 50904

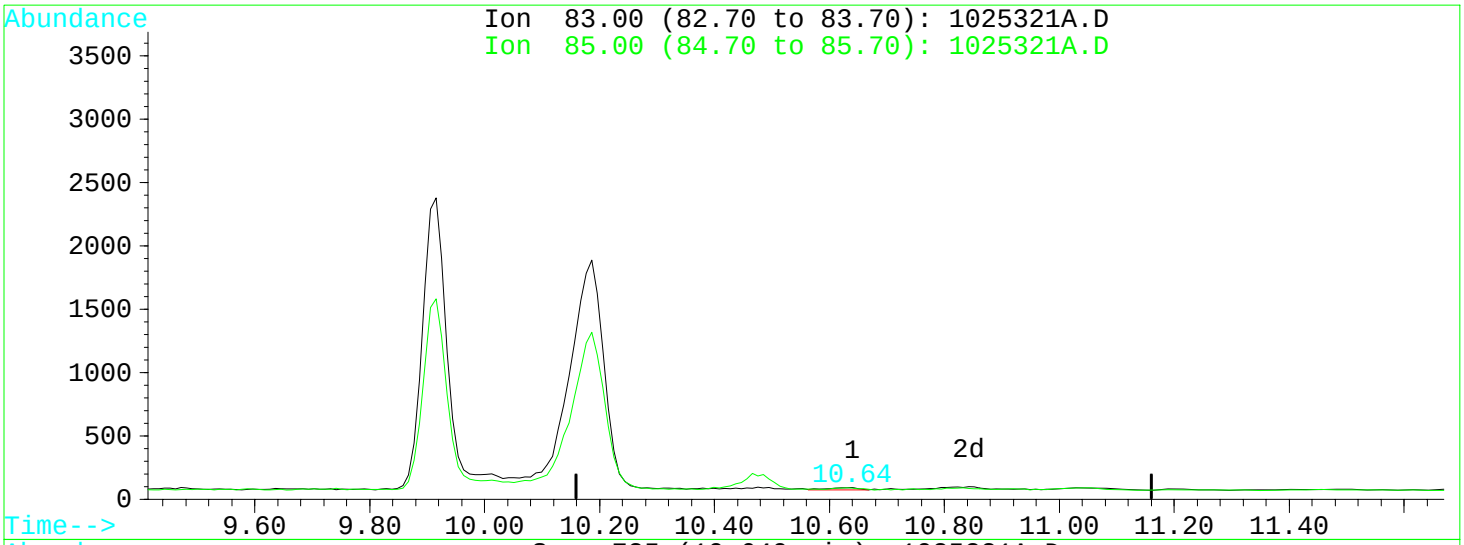
Ion	Ratio	Lower	Upper
130	100		
132	95.4	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0

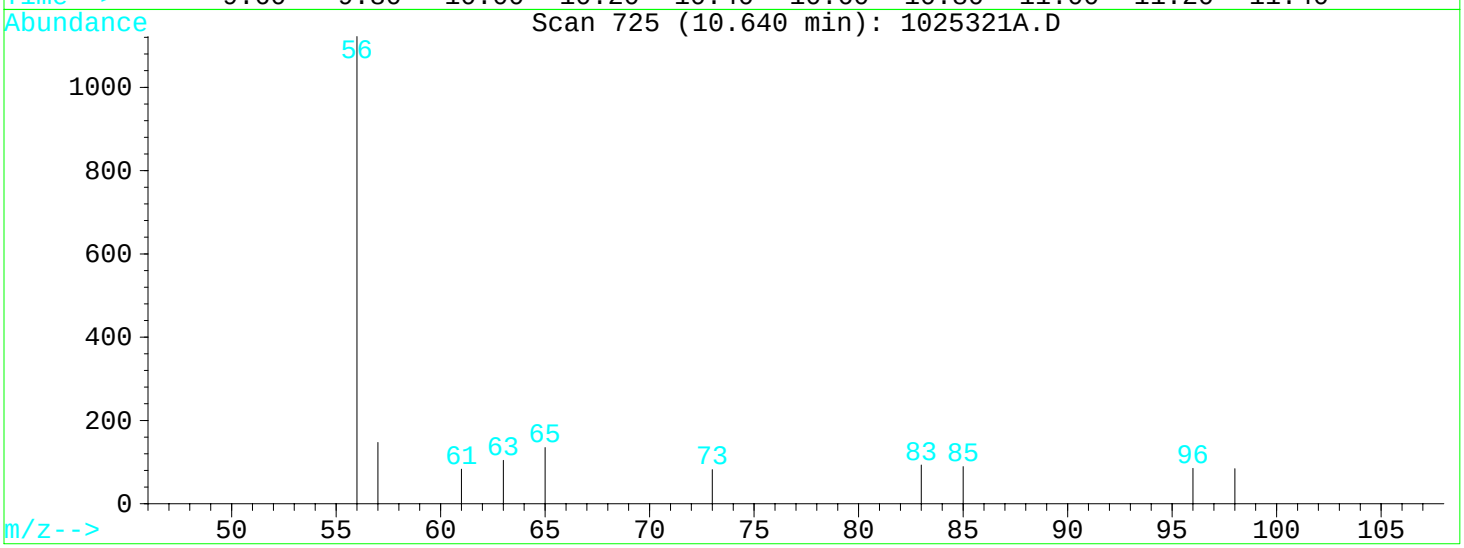


Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025321A.D
Acq Time : 30 Jun 110 6:56 pm Operator: KB
Sample : IA-U3-O5-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025321A.D

(3) Chloroform (T) RT Shift - KB 7/6/10

10.64min 0.00ppbV

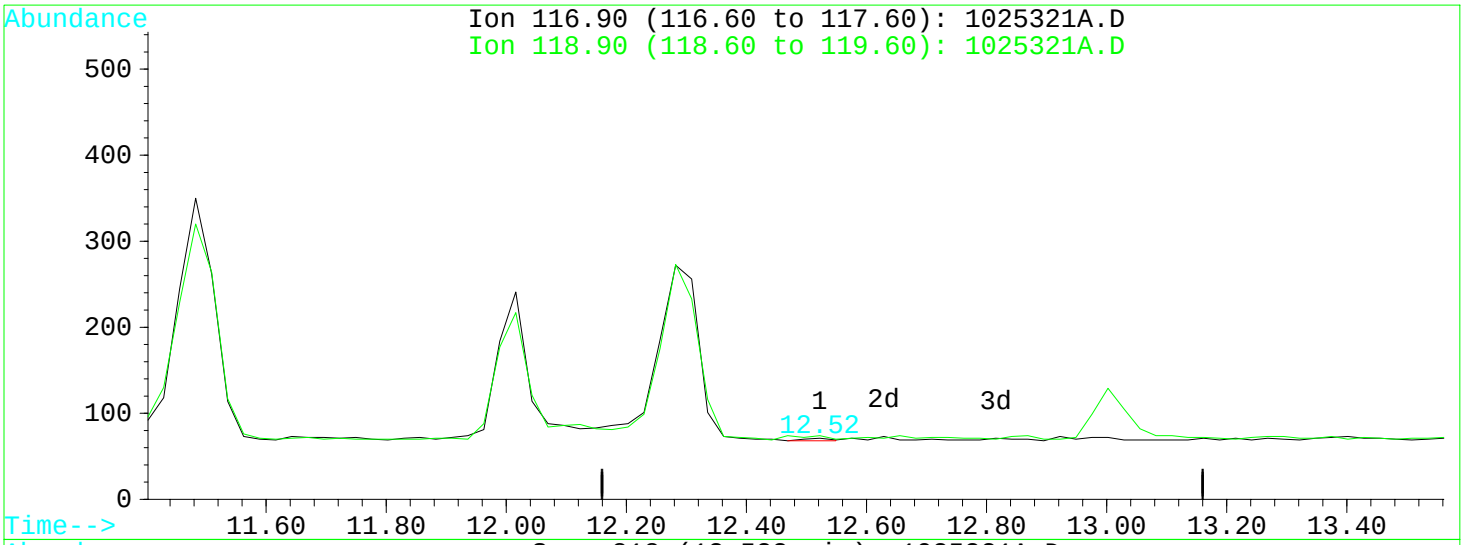
response 63

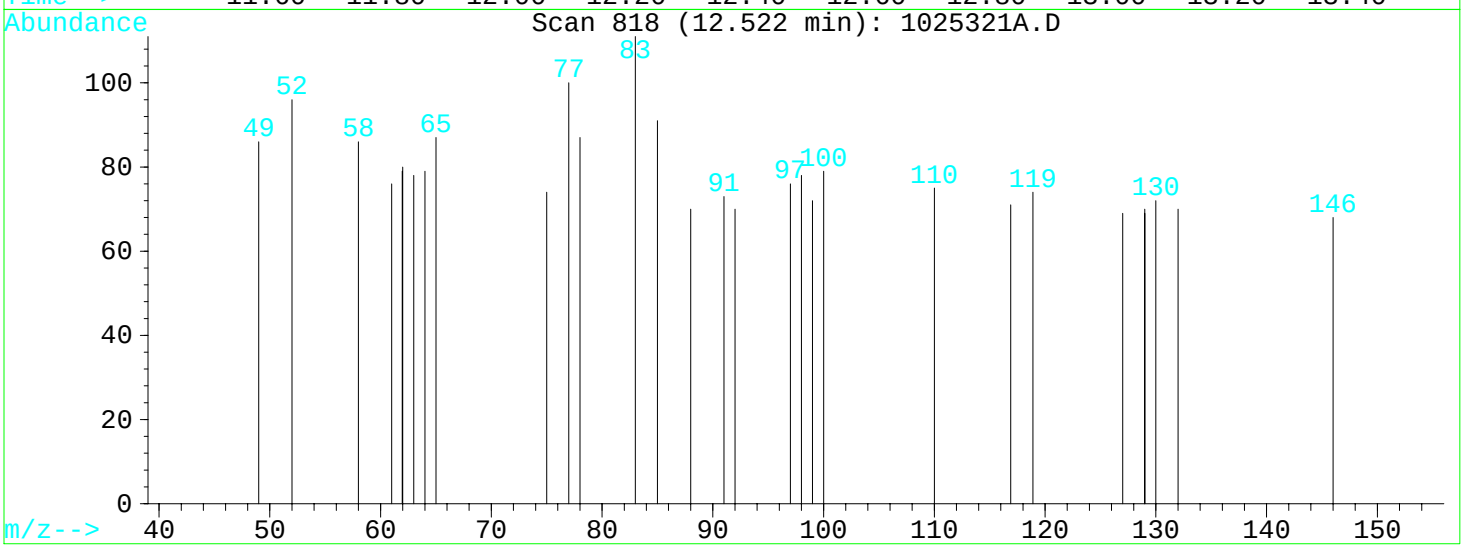
Ion	Exp%	Act%
83.00	100	100
85.00	64.80	52.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025321A.D
Acq Time : 30 Jun 110 6:56 pm Operator: KB
Sample : IA-U3-O5-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:56 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025321A.D

(4) Carbon tetrachloride (T) RT Shift - KB 7/6/10

12.52min 0.00ppbV

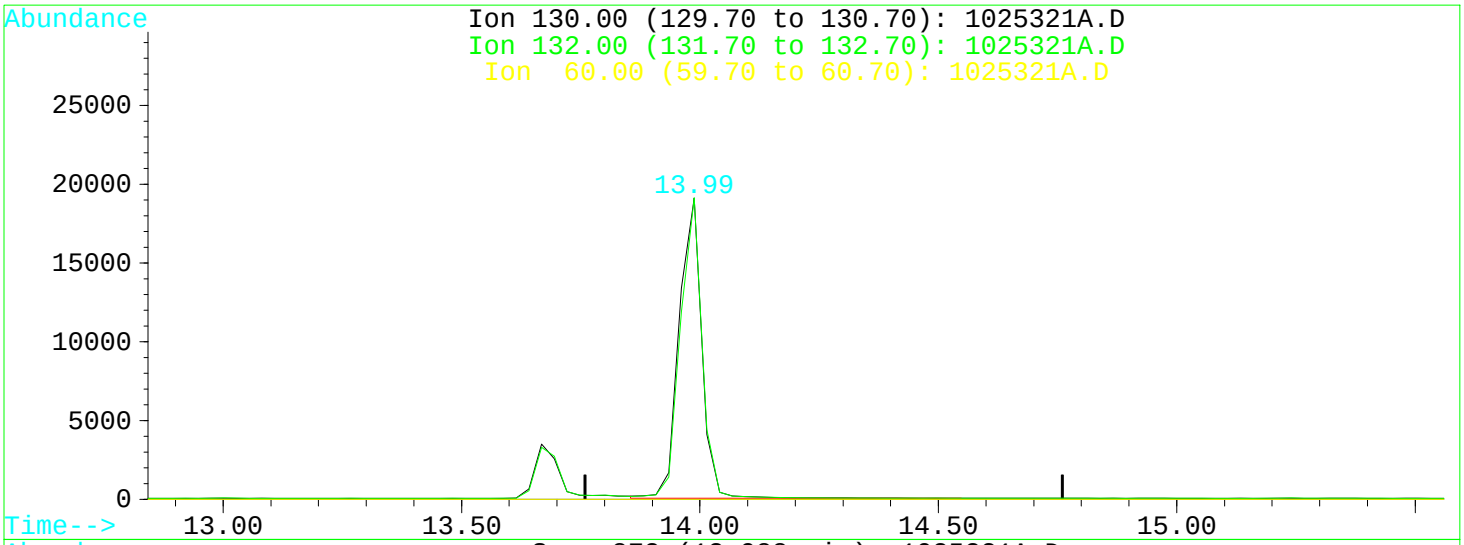
response 9

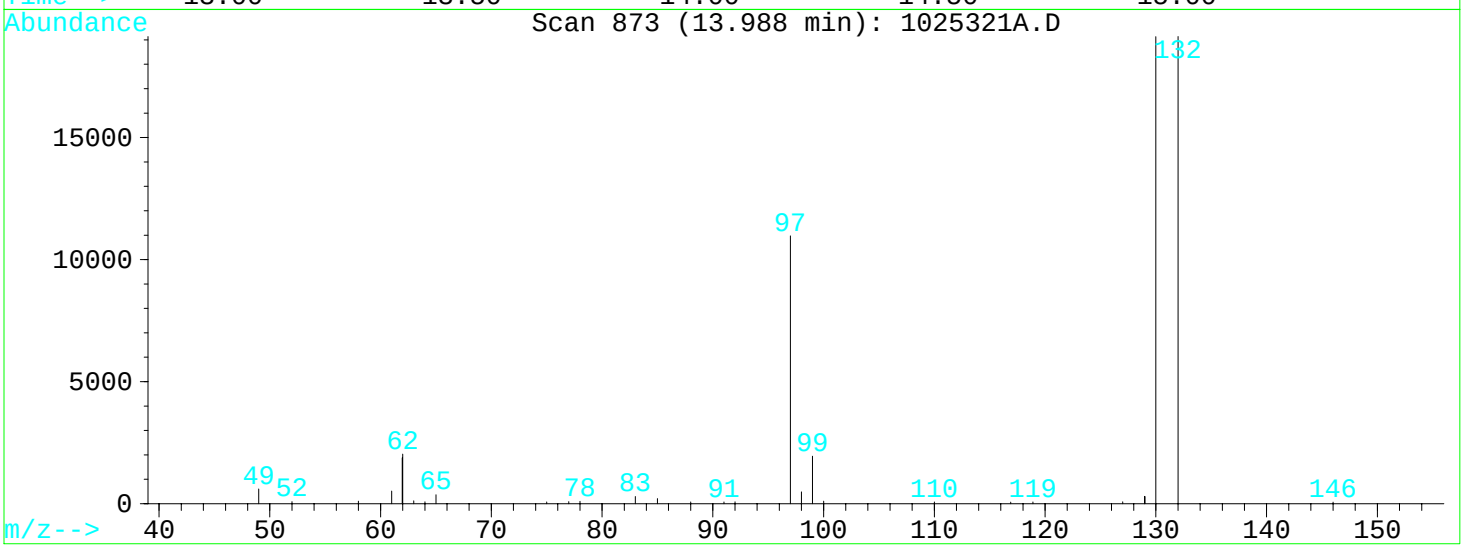
Ion	Exp%	Act%
116.90	100	100
118.90	91.80	80.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025321A.D
Acq Time : 30 Jun 110 6:56 pm Operator: KB
Sample : IA-U3-O5-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:56 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025321A.D

RT Shift - KB 7/6/10

(5) Trichloroethene (T)

13.99min 0.44ppbV

response 63024

Ion	Exp%	Act%
130.00	100	100
132.00	94.70	100.07
60.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025321A.D
Acq Time : 30 Jun 110 6:56 pm Operator: KB
Sample : IA-U3-O5-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:57 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

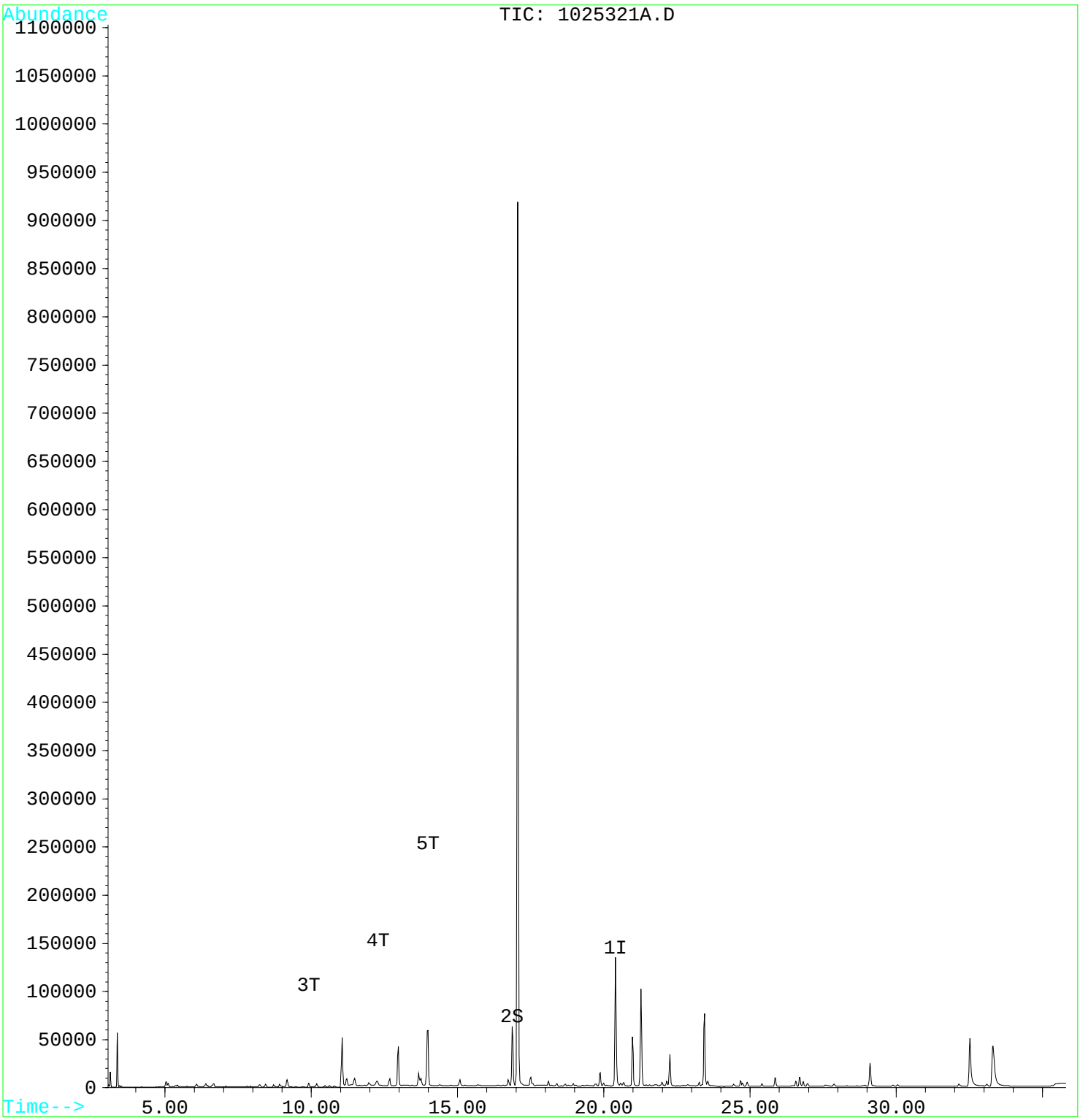
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.40	117	227234	0.20	ppbV		-0.11
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.87	98	97016	0.18	ppbV		
Target Compounds							Qvalue
3) Chloroform	9.92	83	14784	0.06	ppbV	m	85
4) Carbon tetrachloride	12.28	117	1657	0.01	ppbV	m	88
5) Trichloroethene	13.99	130	75180	0.53	ppbV	m	94

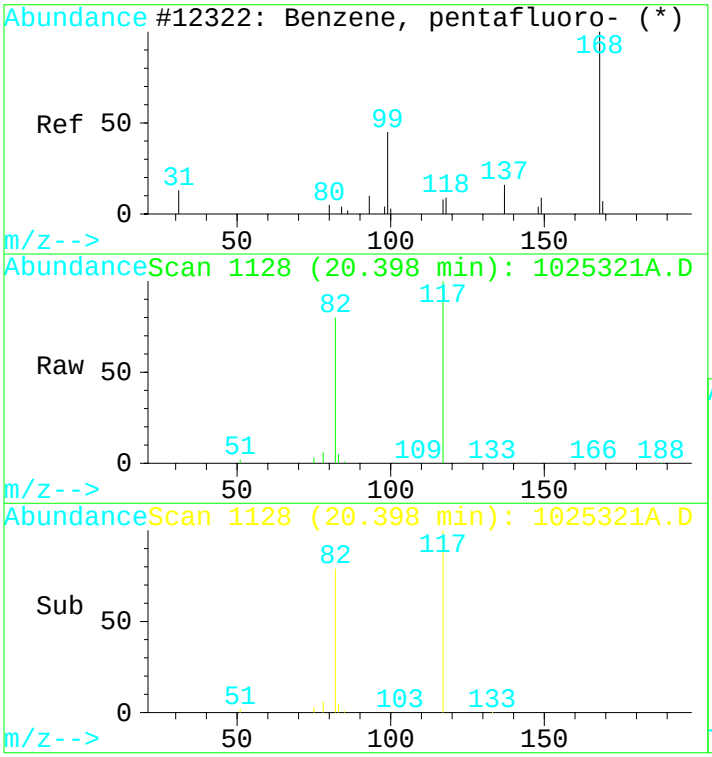
(#) = qualifier out of range (m) = manual integration
1025321A.D 2NTHG_A.M Tue Jul 06 12:57:39 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025321A.D
Acq Time : 30 Jun 110 6:56 pm Operator: KB
Sample : IA-U3-O5-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:57 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

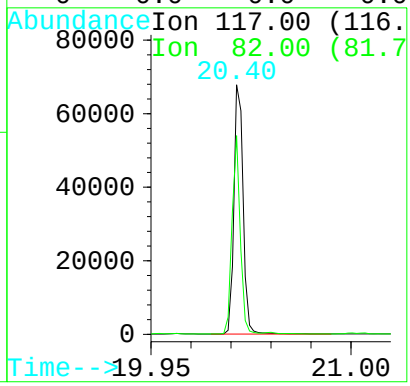


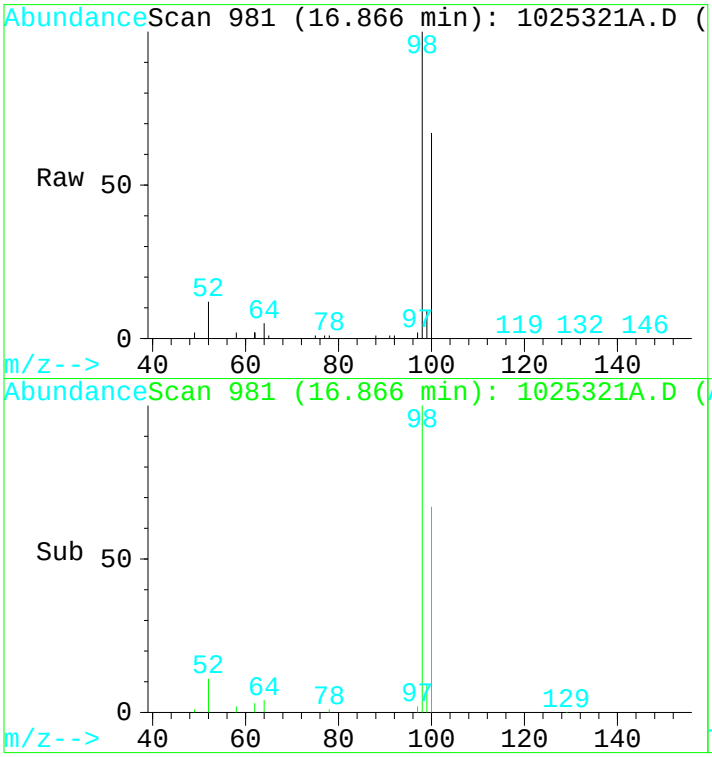


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.40 min Scan# 1128
Delta R.T. -0.11 min
Lab File: 1025321A.D
Acq: 30 Jun 110 6:56 pm

Tgt Ion:117 Resp: 227234

Ion	Ratio	Lower	Upper
117	100		
82	79.6	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

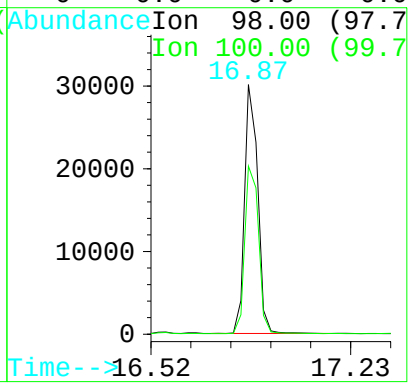


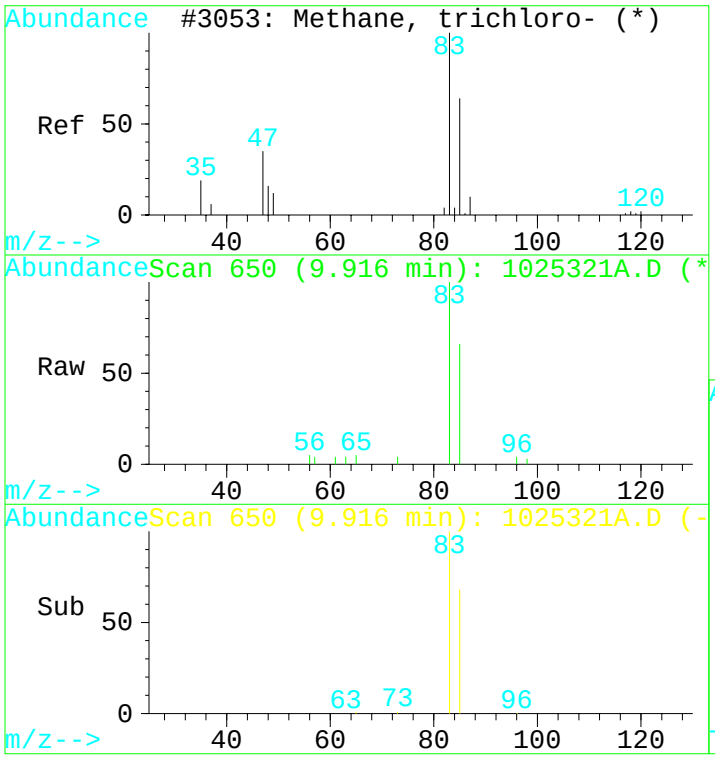


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 16.87 min Scan# 981
Delta R.T. -0.18 min
Lab File: 1025321A.D
Acq: 30 Jun 110 6:56 pm

Tgt Ion:98 Resp: 97016

Ion	Ratio	Lower	Upper
98	100		
100	70.7	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

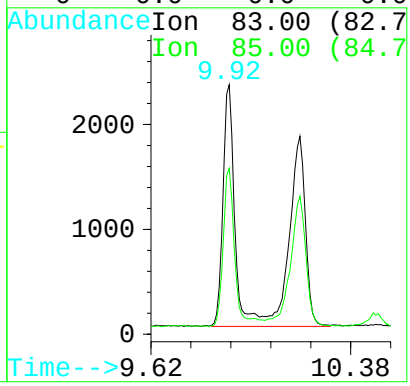


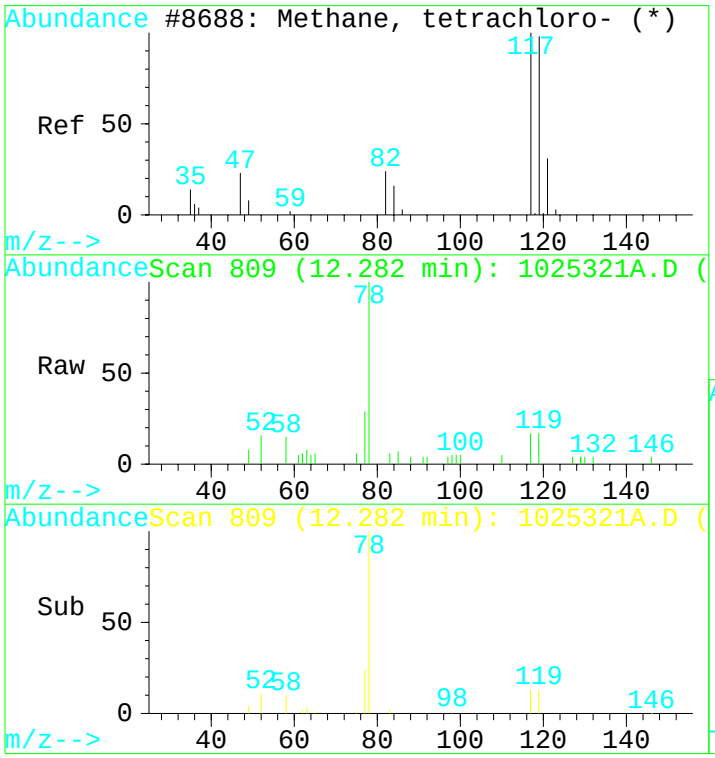


#3
Chloroform
Concen: 0.06 ppbV m
RT: 9.92 min Scan# 650
Delta R.T. -0.74 min
Lab File: 1025321A.D
Acq: 30 Jun 110 6:56 pm

Tgt Ion:83 Resp: 14784

Ion	Ratio	Lower	Upper
83	100		
85	66.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

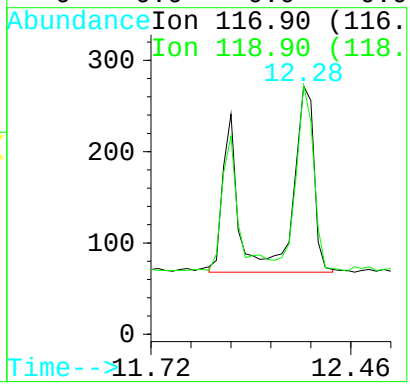


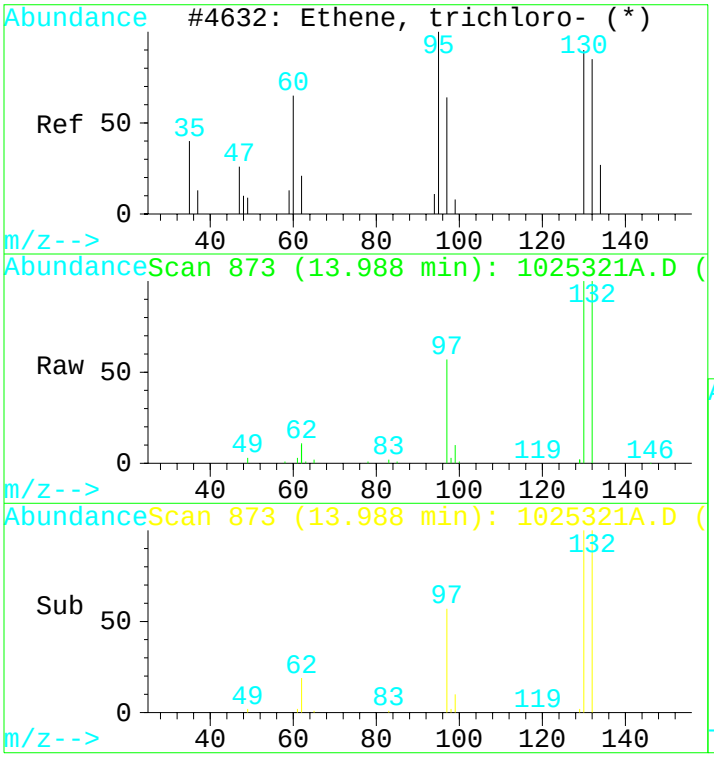


#4
Carbon tetrachloride
Concen: 0.01 ppbV m
RT: 12.28 min Scan# 809
Delta R.T. -0.38 min
Lab File: 1025321A.D
Acq: 30 Jun 110 6:56 pm

Tgt Ion:116.9 Resp: 1657

Ion	Ratio	Lower	Upper
117	100		
119	100.4	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

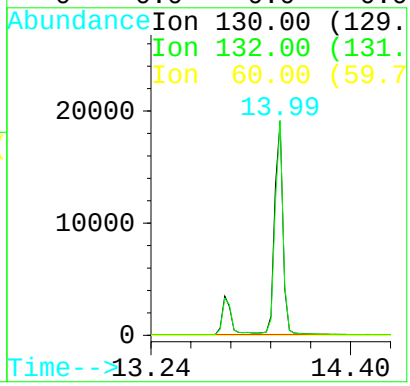




#5
Trichloroethene
Concen: 0.53 ppbV m
RT: 13.99 min Scan# 873
Delta R.T. -0.27 min
Lab File: 1025321A.D
Acq: 30 Jun 110 6:56 pm

Tgt Ion:130 Resp: 75180

Ion	Ratio	Lower	Upper
130	100		
132	100.0	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025322A.D
Acq Time : 30 Jun 110 7:37 pm Operator: JF
Sample : IA-U3-UF-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

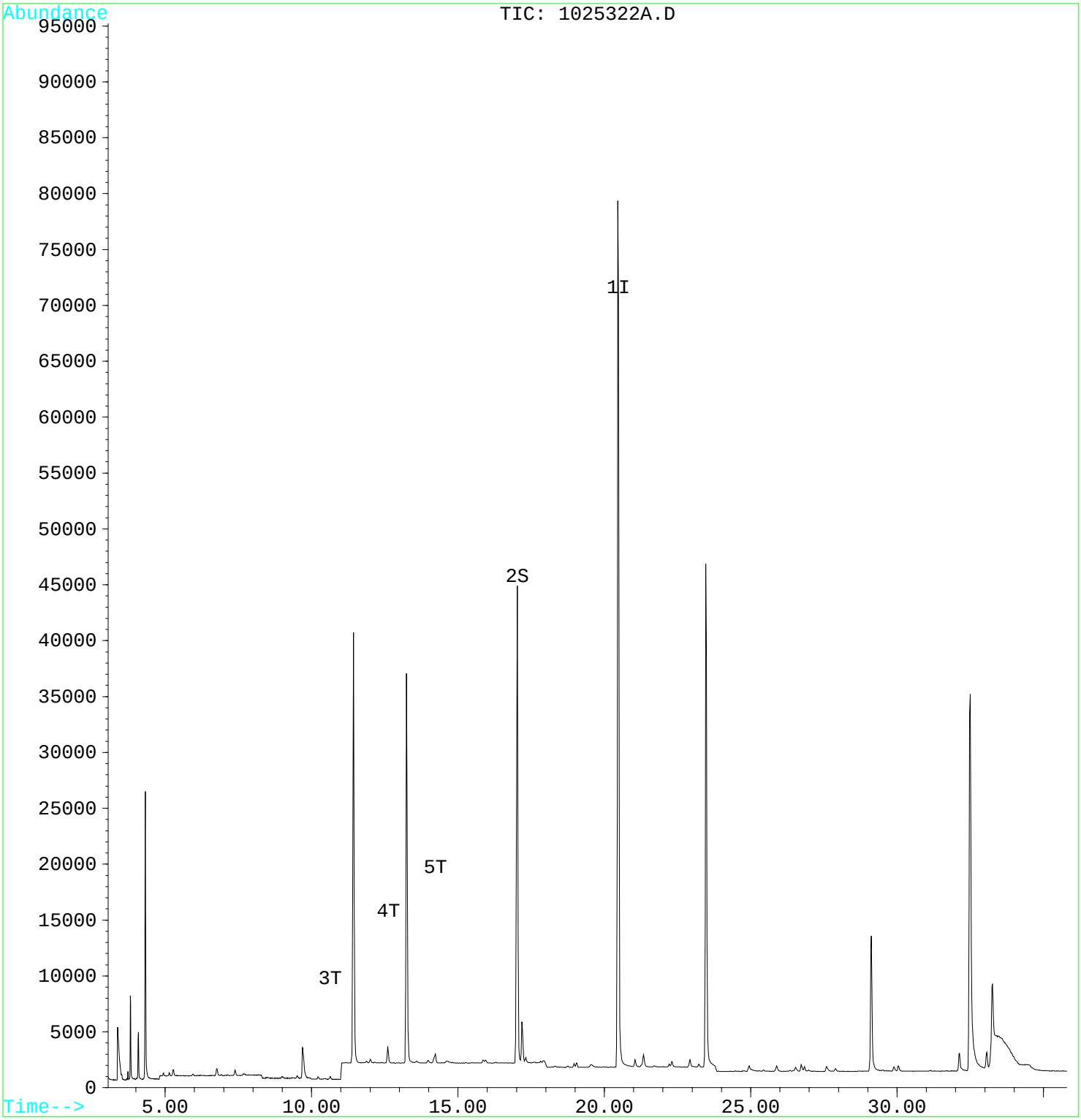
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.49	117	143890	0.20	ppbV		-0.02
System Monitoring Compounds							%Recovery
2) Toluene-d8	17.03	98	64145	0.19	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.64	83	486	0.00	ppbV		93
4) Carbon tetrachloride	12.63	117	148	0.00	ppbV	#	80
5) Trichloroethene	14.23	130	727	0.01	ppbV		99

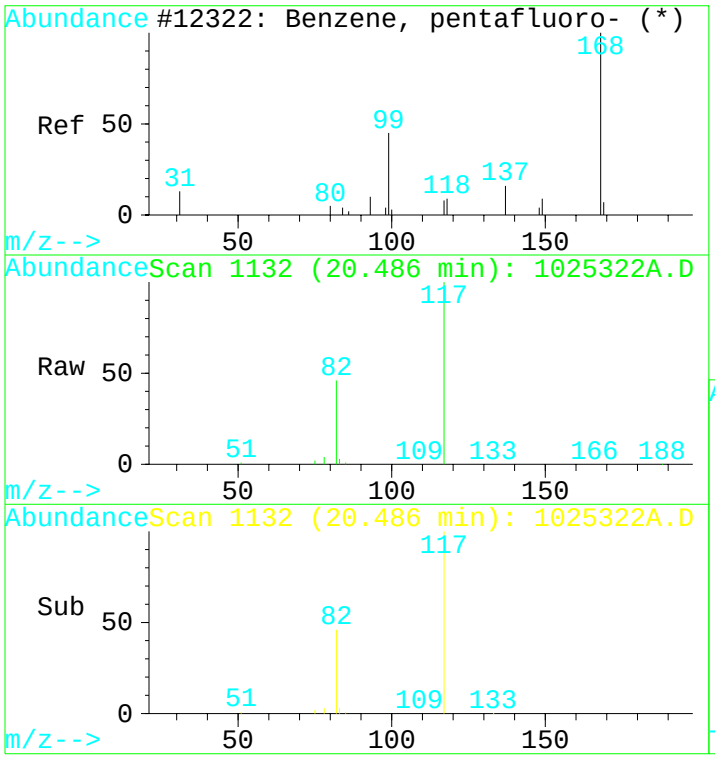
(#) = qualifier out of range (m) = manual integration
1025322A.D 2NTHG_A.M Tue Jul 06 12:58:58 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025322A.D
Acq Time : 30 Jun 110 7:37 pm Operator: JF
Sample : IA-U3-UF-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

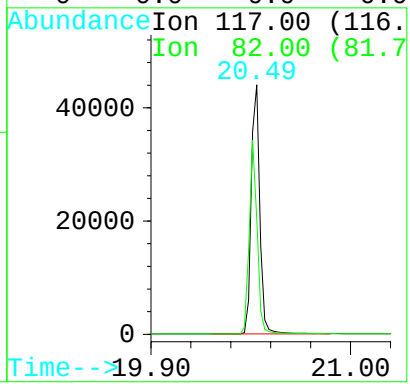


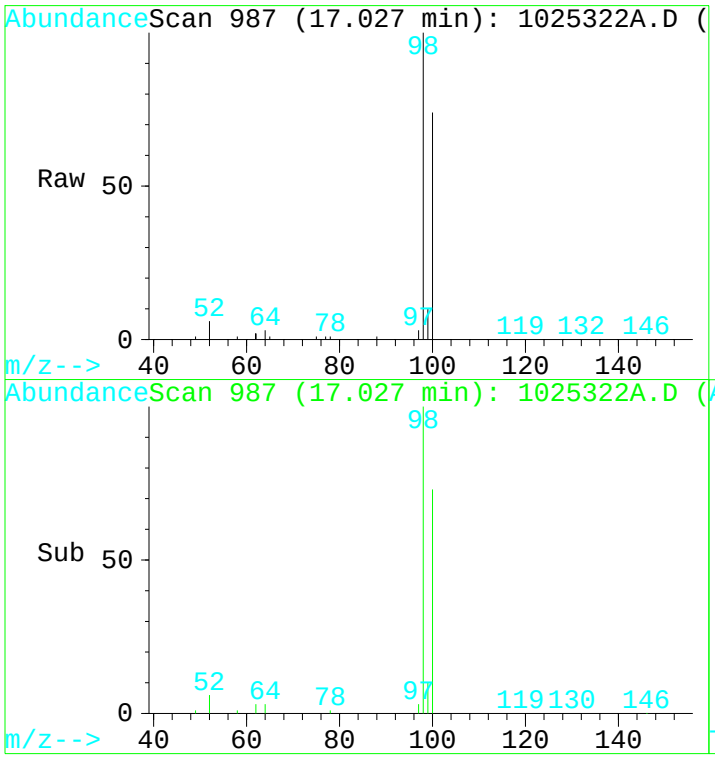


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025322A.D
Acq: 30 Jun 110 7:37 pm

Tgt Ion:117 Resp: 143890

Ion	Ratio	Lower	Upper
117	100		
82	46.2	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

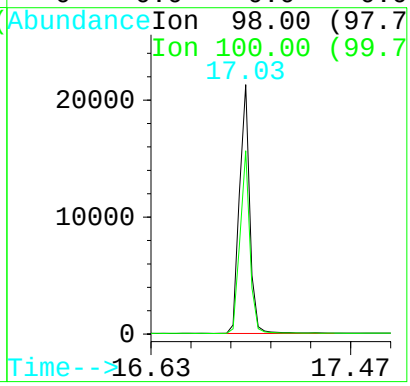


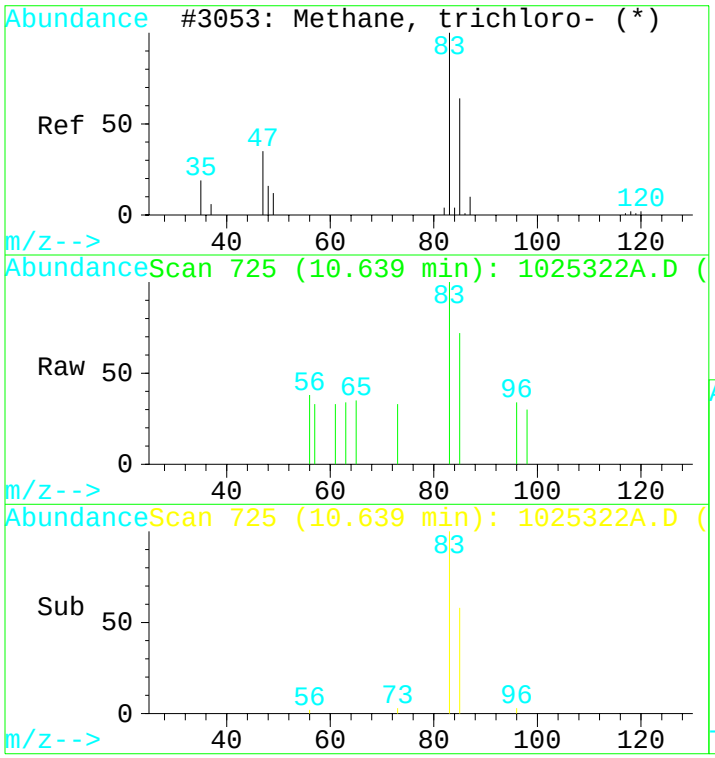


#2
Toluene-d8
Concen: 0.19 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025322A.D
Acq: 30 Jun 110 7:37 pm

Tgt Ion:98 Resp: 64145

Ion	Ratio	Lower	Upper
98	100		
100	70.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

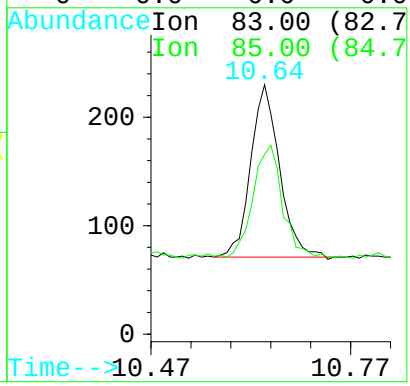


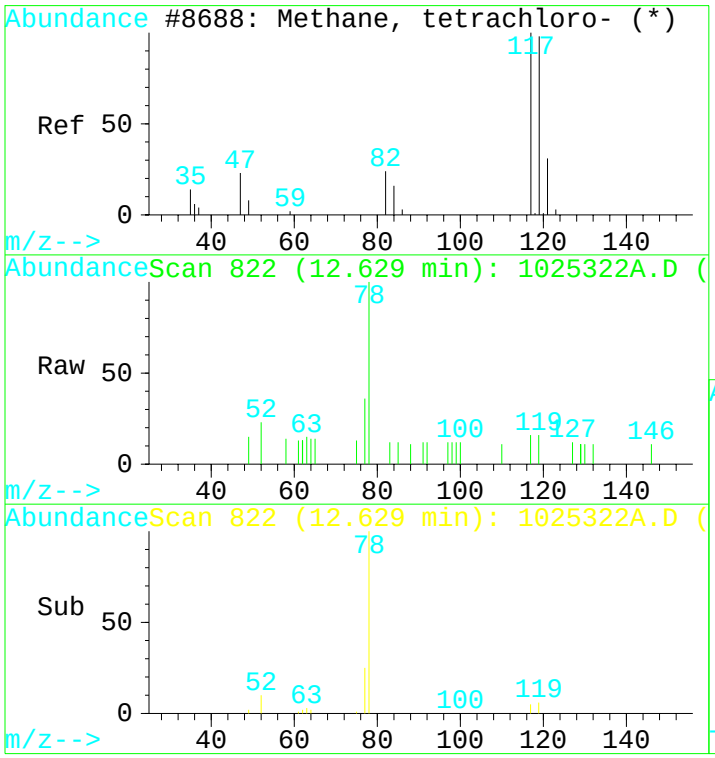


#3
Chloroform
Concen: 0.00 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: 1025322A.D
Acq: 30 Jun 110 7:37 pm

Tgt Ion:83 Resp: 486

Ion	Ratio	Lower	Upper
83	100		
85	59.4	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

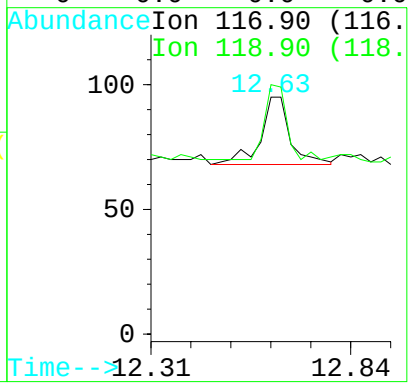


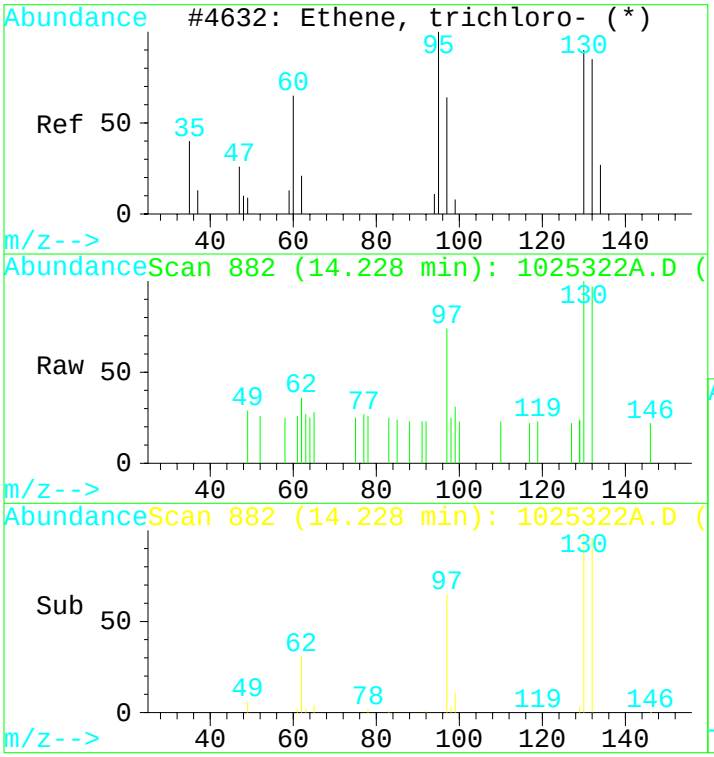


#4
Carbon tetrachloride
Concen: 0.00 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: 1025322A.D
Acq: 30 Jun 110 7:37 pm

Tgt Ion:116.9 Resp: 148

Ion	Ratio	Lower	Upper
117	100		
119	111.3	73.4	110.2#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

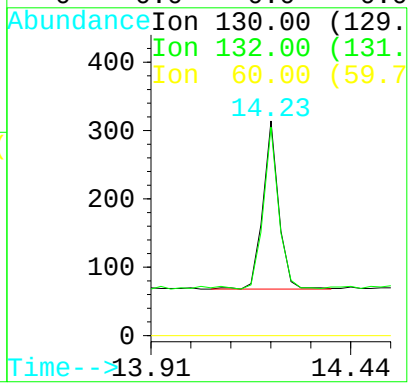




#5
Trichloroethene
Concen: 0.01 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025322A.D
Acq: 30 Jun 110 7:37 pm

Tgt Ion:130 Resp: 727

Ion	Ratio	Lower	Upper
130	100		
132	95.5	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025323A.D
Acq Time : 30 Jun 110 8:18 pm Operator: JF
Sample : OA-U3-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

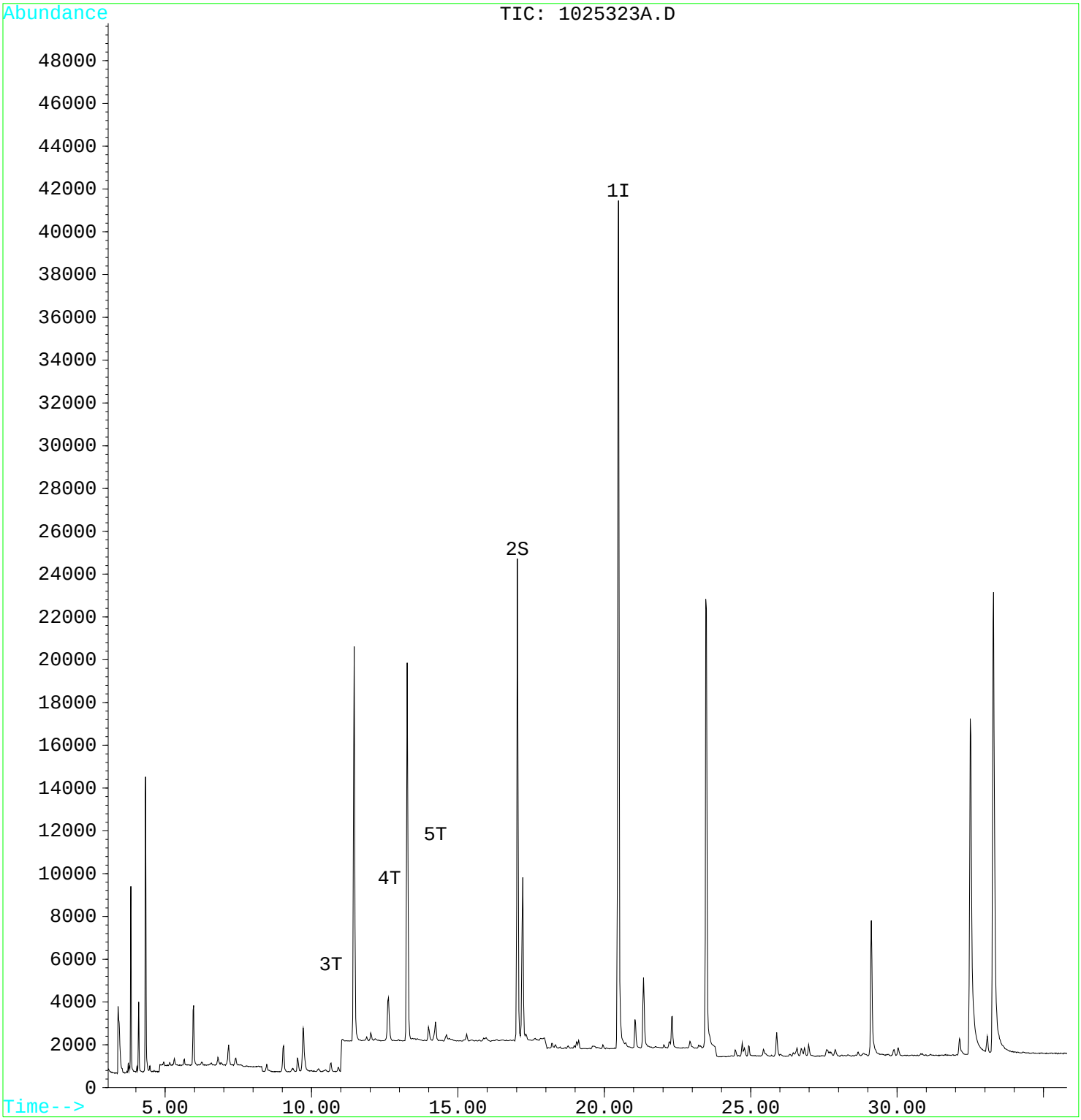
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	74445	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	31938	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.65	83	818	0.01	ppbV	94
4) Carbon tetrachloride	12.66	117	951	0.02	ppbV	94
5) Trichloroethene	14.23	130	781	0.02	ppbV	97

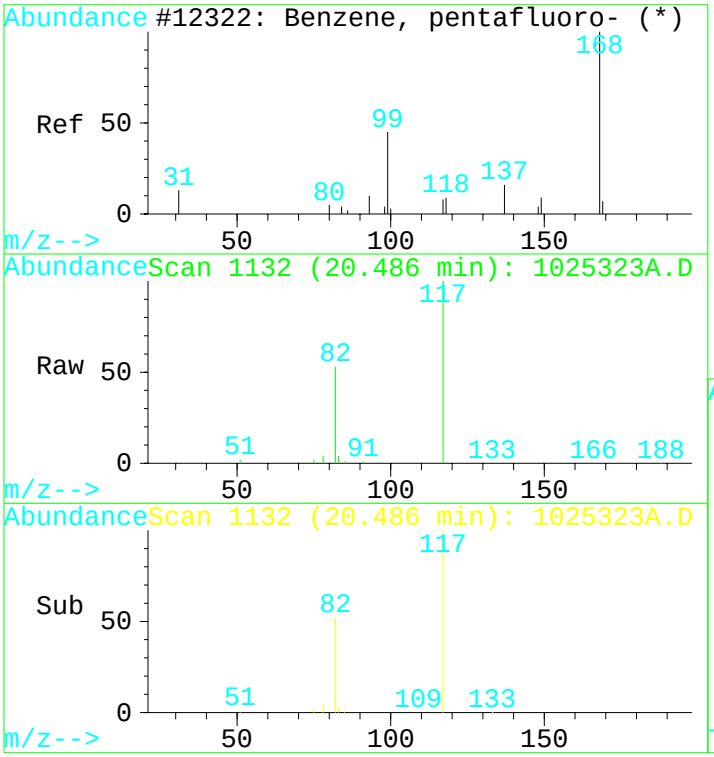
(#) = qualifier out of range (m) = manual integration
1025323A.D 2NTHG_A.M Tue Jul 06 12:59:20 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06300MS2\1025323A.D
Acq Time : 30 Jun 110 8:18 pm Operator: JF
Sample : OA-U3-AI-001 Inst : MS2
Misc : NORTHGATE ENVIRONMENTAL MANAGEMENT Multiplr: 1.00
Quant Time: Jul 6 12:36 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

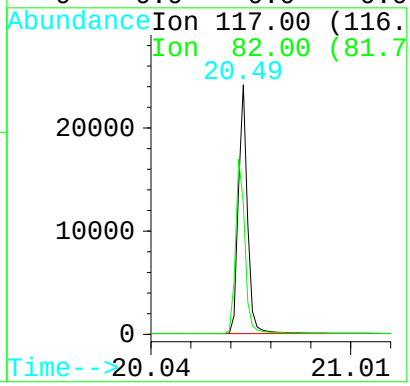


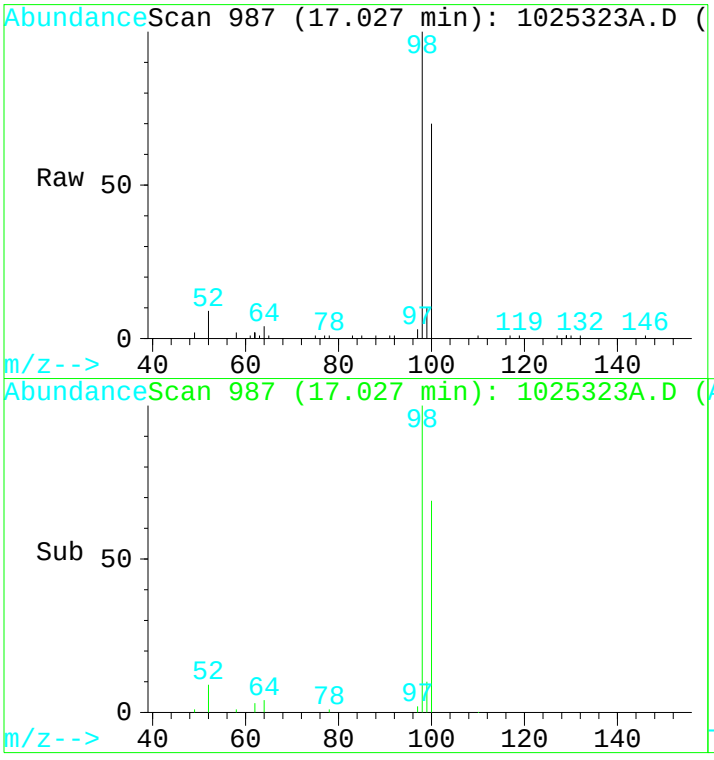


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025323A.D
Acq: 30 Jun 110 8:18 pm

Tgt Ion:117 Resp: 74445

Ion	Ratio	Lower	Upper
117	100		
82	52.4	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

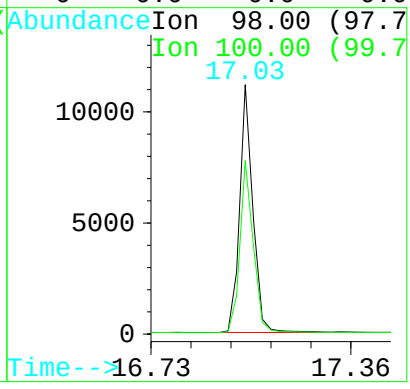


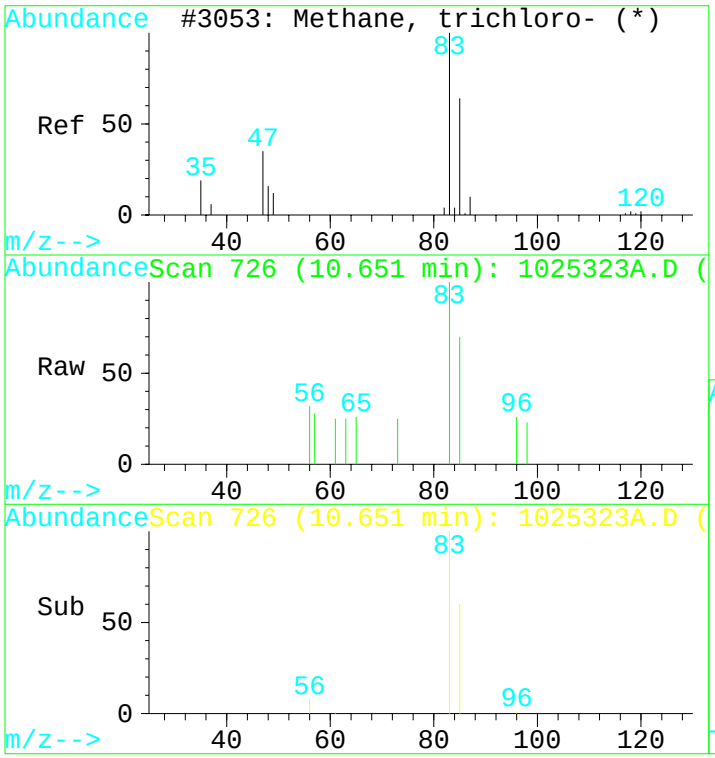


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025323A.D
Acq: 30 Jun 110 8:18 pm

Tgt Ion:98 Resp: 31938

Ion	Ratio	Lower	Upper
98	100		
100	70.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

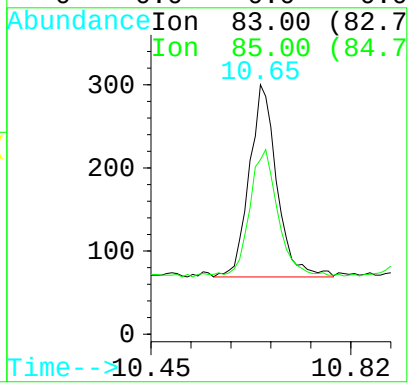


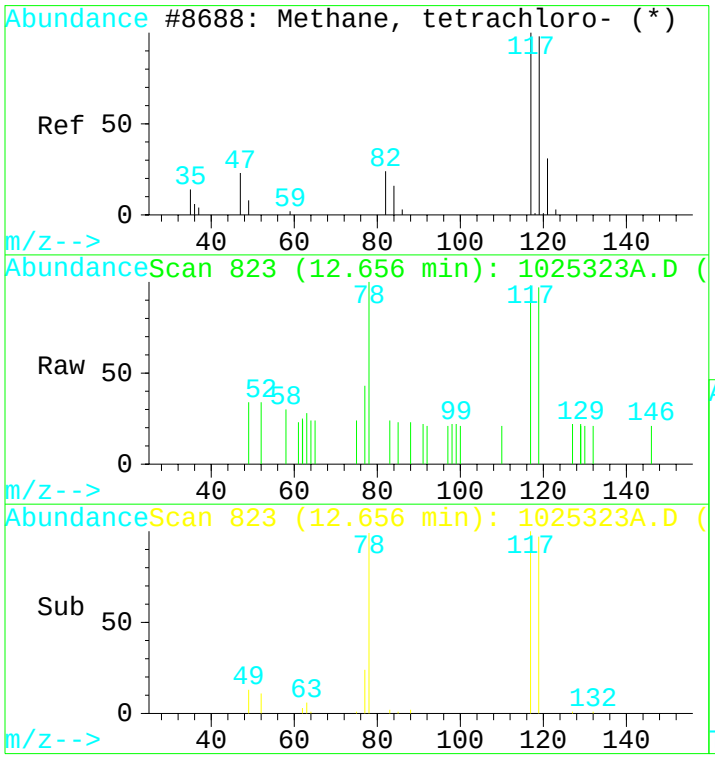


#3
Chloroform
Concen: 0.01 ppbV
RT: 10.65 min Scan# 726
Delta R.T. -0.01 min
Lab File: 1025323A.D
Acq: 30 Jun 110 8:18 pm

Tgt Ion:83 Resp: 818

Ion	Ratio	Lower	Upper
83	100		
85	60.1	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

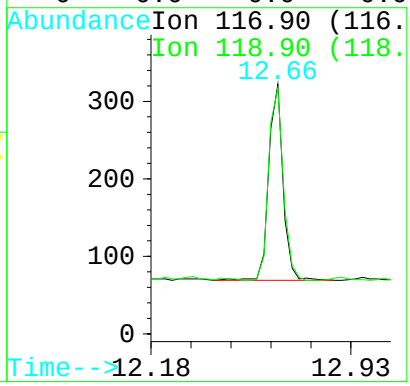


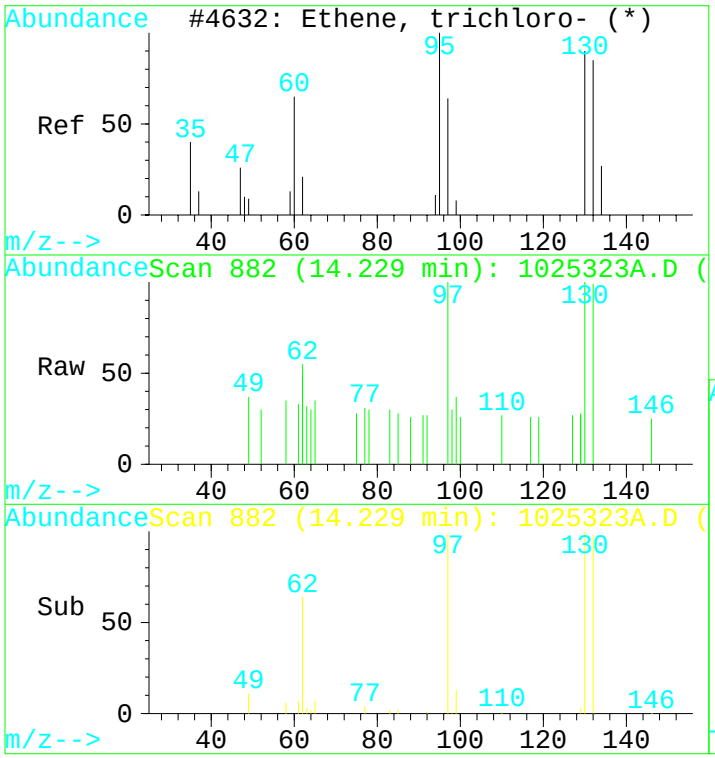


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025323A.D
Acq: 30 Jun 110 8:18 pm

Tgt Ion:116.9 Resp: 951

Ion	Ratio	Lower	Upper
117	100		
119	97.2	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

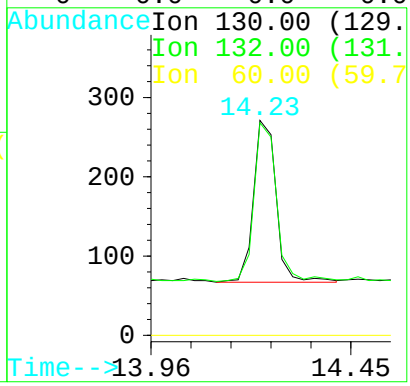




#5
Trichloroethene
Concen: 0.02 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025323A.D
Acq: 30 Jun 110 8:18 pm

Tgt Ion:130 Resp: 781

Ion	Ratio	Lower	Upper
130	100		
132	98.0	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Daily Analytical Batch #: 070210-MS2

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\C07020A.D
Acq Time : 2 Jul 110 9:26 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

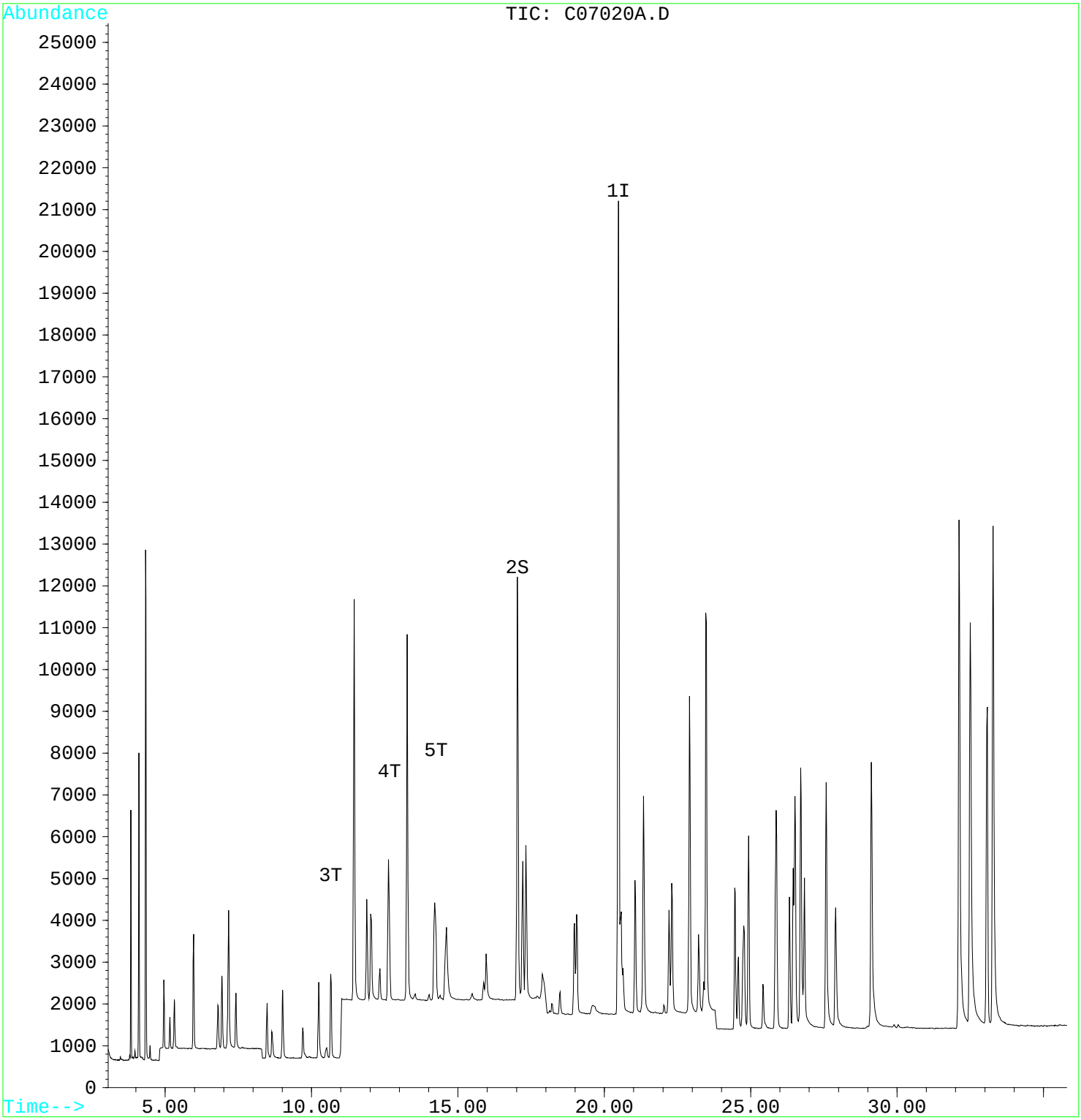
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	35114	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	14911	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.66	83	3503	0.09	ppbV	100
4) Carbon tetrachloride	12.66	117	2109	0.09	ppbV	95
5) Trichloroethene	14.26	130	1710	0.08	ppbV	95

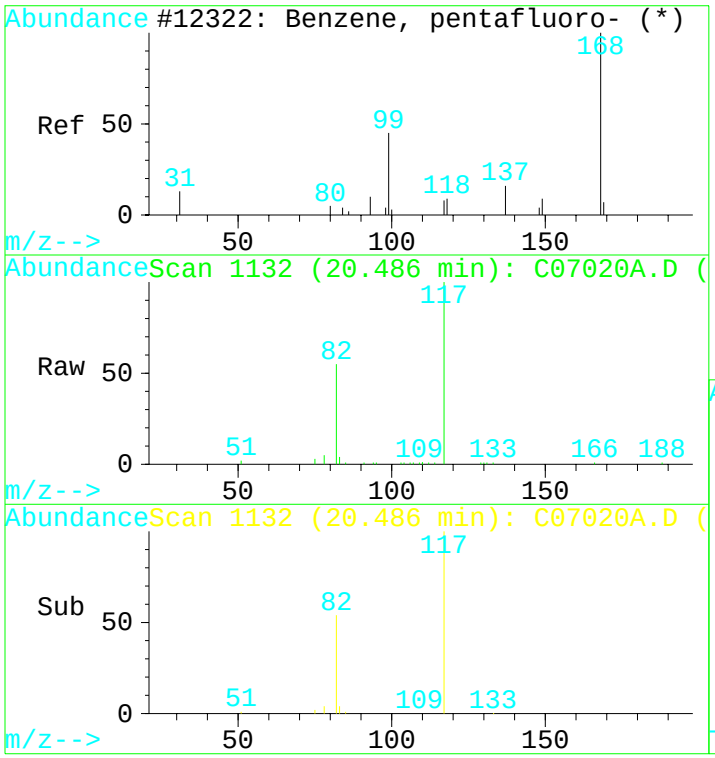
(#) = qualifier out of range (m) = manual integration
C07020A.D 2NTHG_A.M Tue Jul 06 15:31:24 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\C07020A.D
Acq Time : 2 Jul 110 9:26 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

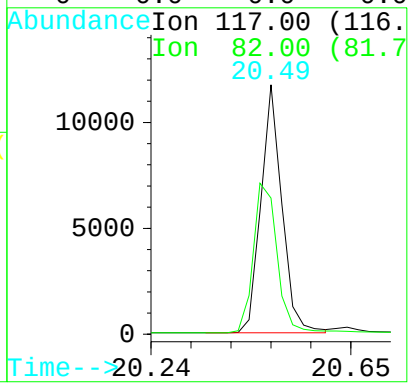


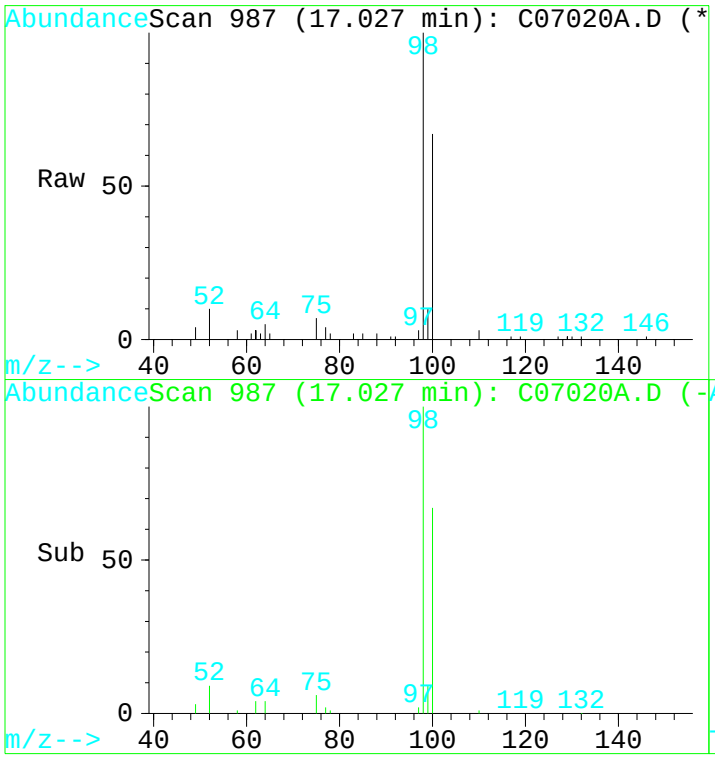


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: C07020A.D
Acq: 2 Jul 110 9:26 am

Tgt Ion:117 Resp: 35114

Ion	Ratio	Lower	Upper
117	100		
82	54.3	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

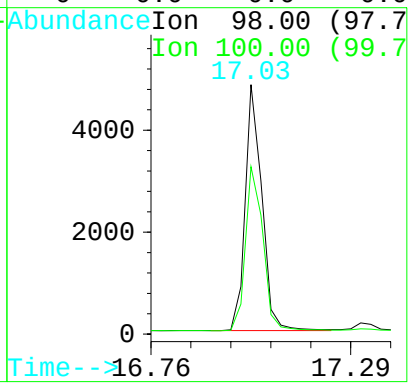


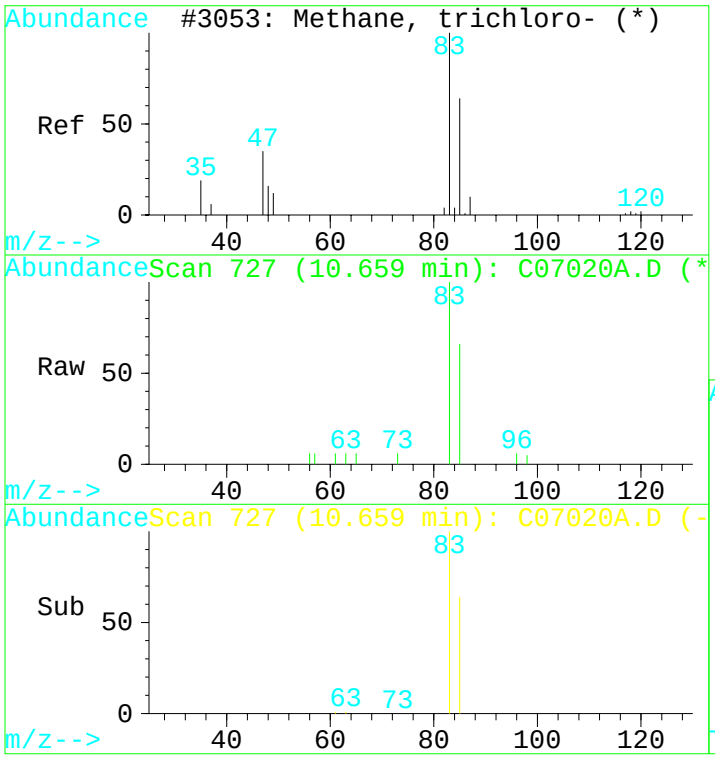


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: C07020A.D
Acq: 2 Jul 110 9:26 am

Tgt Ion:98 Resp: 14911

Ion	Ratio	Lower	Upper
98	100		
100	70.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

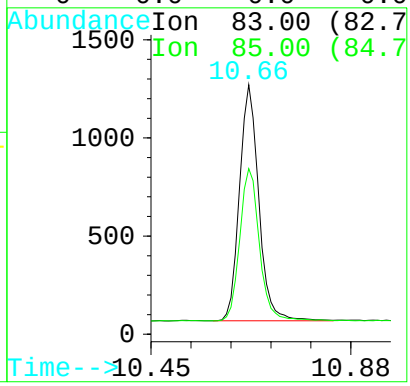


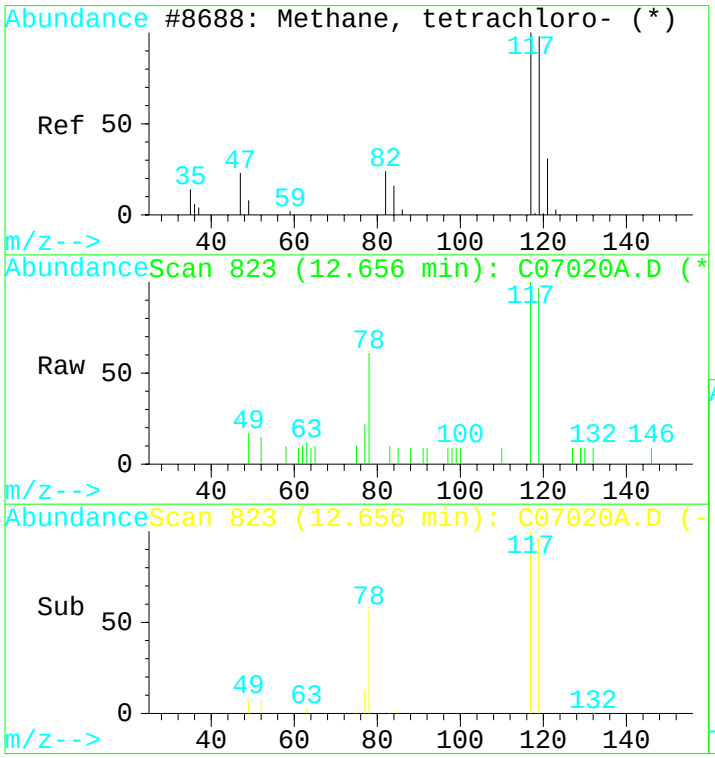


#3
Chloroform
Concen: 0.09 ppbV
RT: 10.66 min Scan# 727
Delta R.T. -0.00 min
Lab File: C07020A.D
Acq: 2 Jul 110 9:26 am

Tgt Ion:83 Resp: 3503

Ion	Ratio	Lower	Upper
83	100		
85	64.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

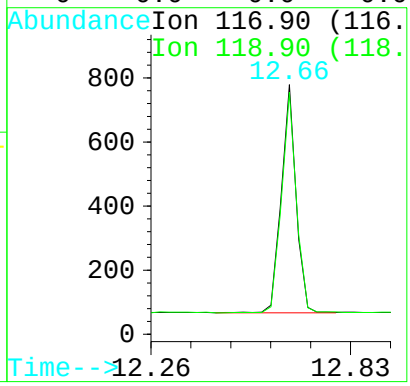


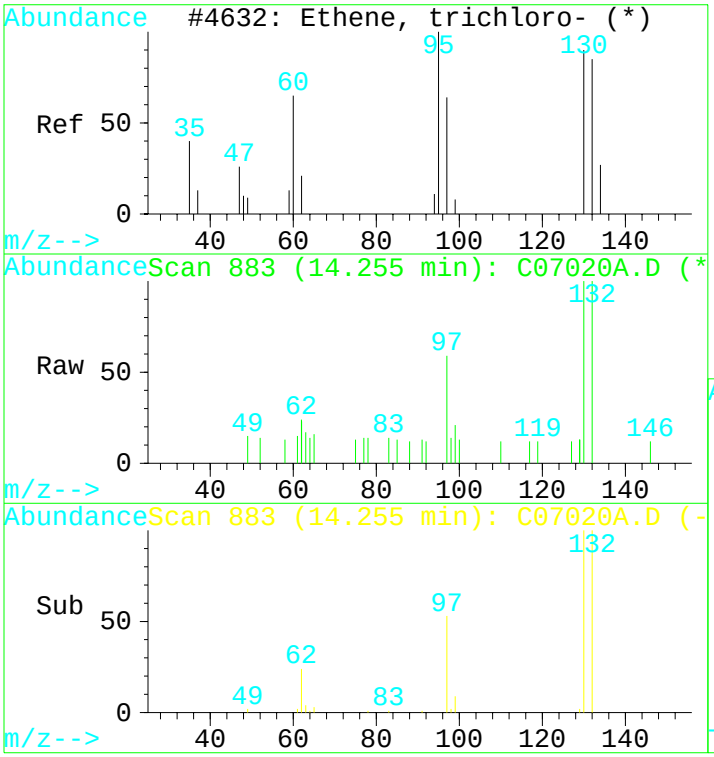


#4
Carbon tetrachloride
Concen: 0.09 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: C07020A.D
Acq: 2 Jul 110 9:26 am

Tgt Ion:116.9 Resp: 2109

Ion	Ratio	Lower	Upper
117	100		
119	96.5	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

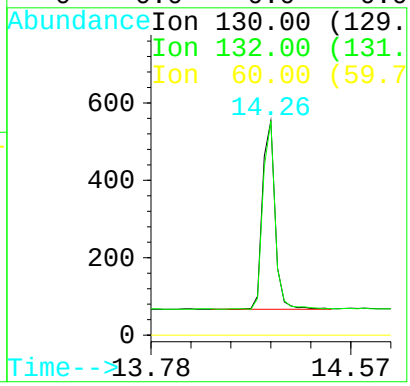




#5
Trichloroethene
Concen: 0.08 ppbV
RT: 14.26 min Scan# 883
Delta R.T. -0.00 min
Lab File: C07020A.D
Acq: 2 Jul 110 9:26 am

Tgt Ion:130 Resp: 1710

Ion	Ratio	Lower	Upper
130	100		
132	99.6	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\CC771A.D
Acq Time : 2 Jul 110 3:35 pm Operator: CM
Sample : 771 Inst : MS2
Misc : 070210A Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

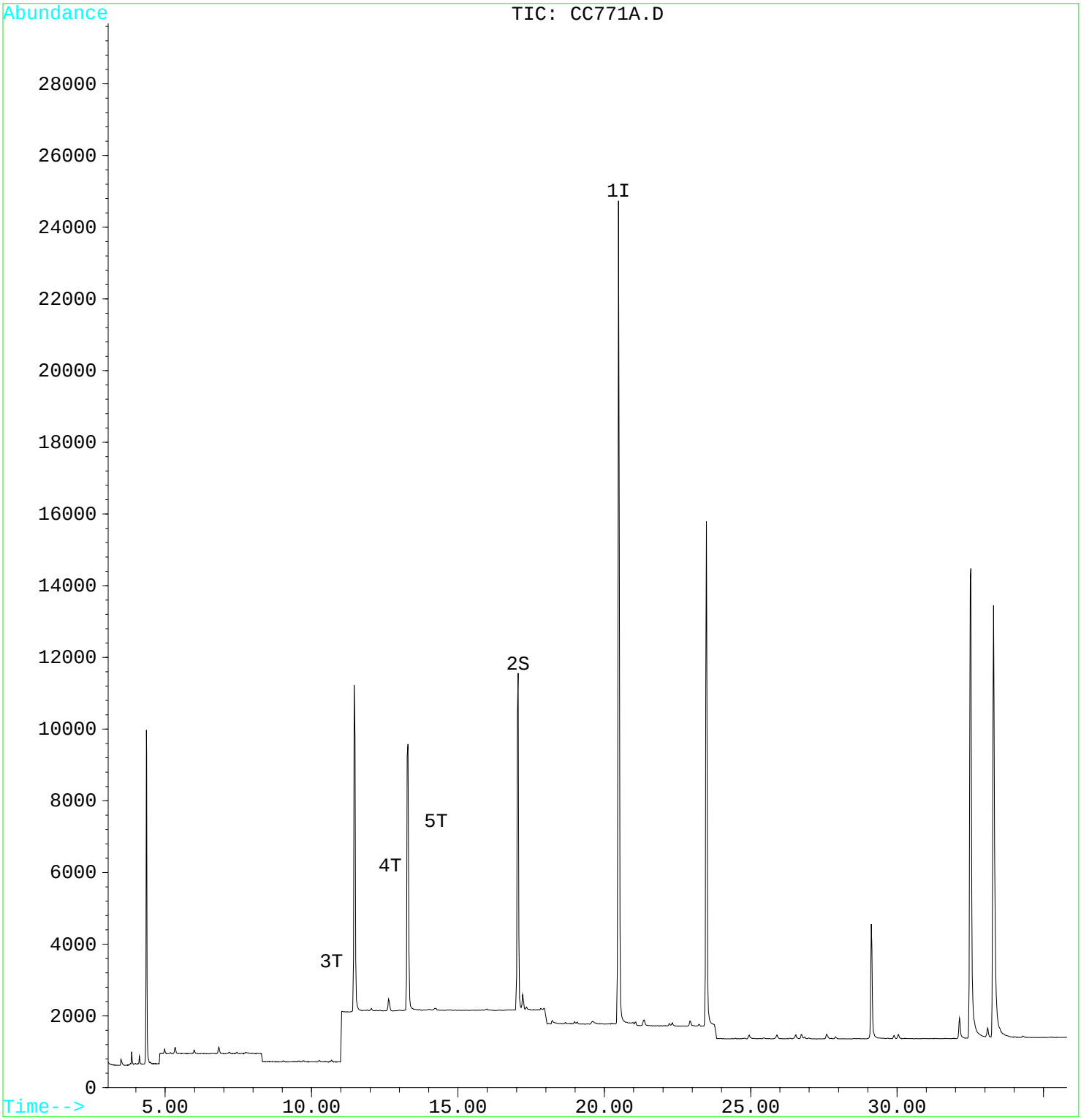
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	38819	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.05	98	16594	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.68	83	85	0.00	ppbV	86
4) Carbon tetrachloride	12.68	117	55	0.00	ppbV	94
5) Trichloroethene	14.25	130	47	0.00	ppbV	99

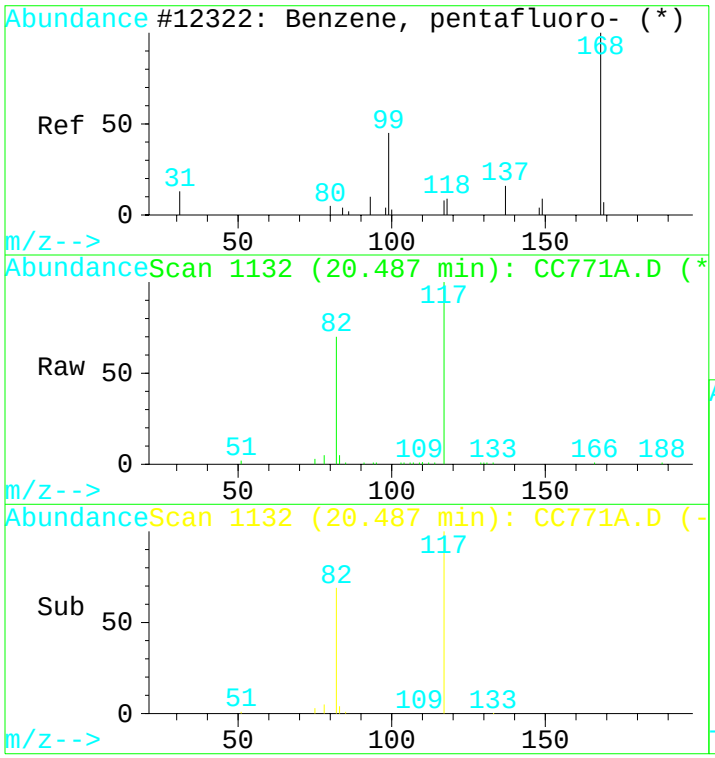
(#) = qualifier out of range (m) = manual integration
CC771A.D 2NTHG_A.M Tue Jul 06 15:31:50 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\CC771A.D
Acq Time : 2 Jul 110 3:35 pm Operator: CM
Sample : 771 Inst : MS2
Misc : 070210A Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

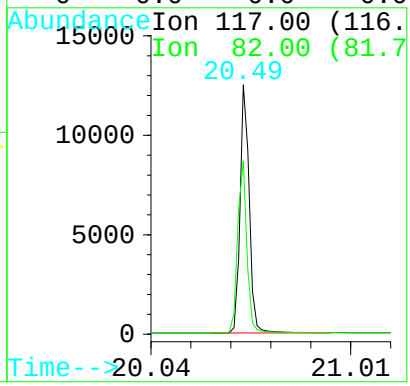


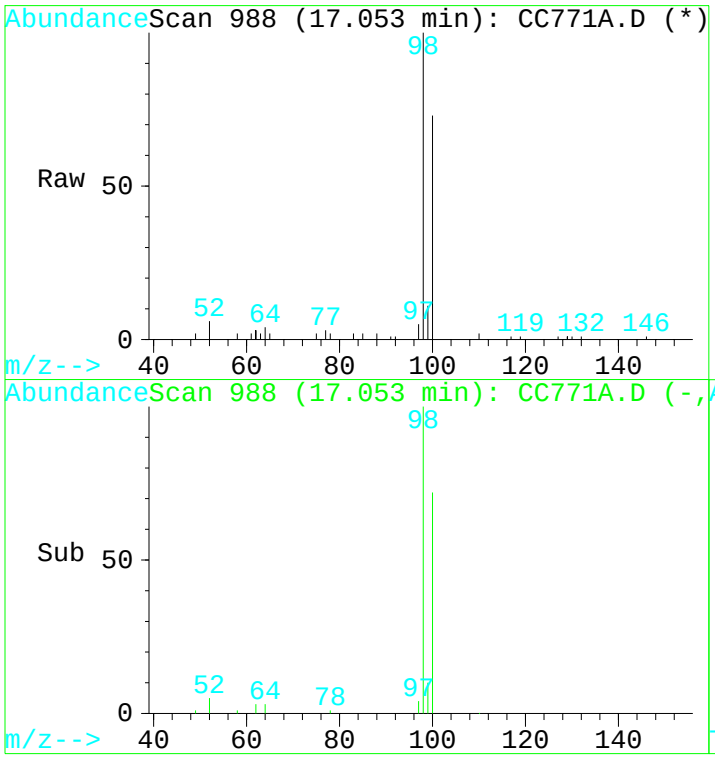


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: CC771A.D
Acq: 2 Jul 110 3:35 pm

Tgt Ion:117 Resp: 38819

Ion	Ratio	Lower	Upper
117	100		
82	69.3	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

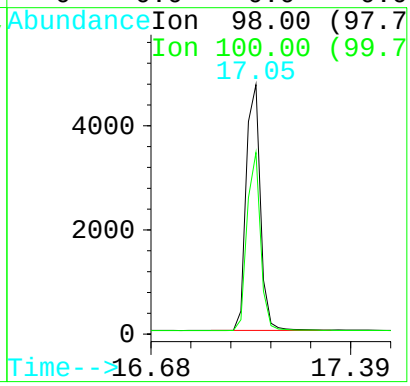


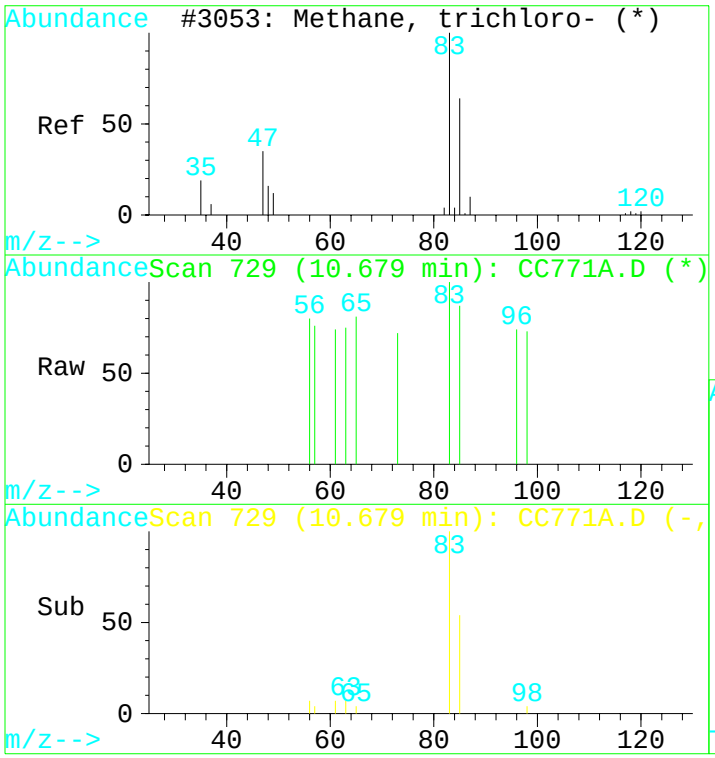


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.05 min Scan# 988
Delta R.T. 0.00 min
Lab File: CC771A.D
Acq: 2 Jul 110 3:35 pm

Tgt Ion:98 Resp: 16594

Ion	Ratio	Lower	Upper
98	100		
100	69.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

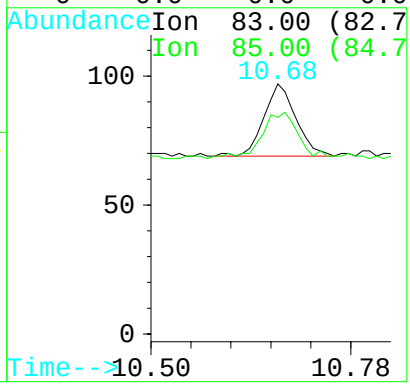


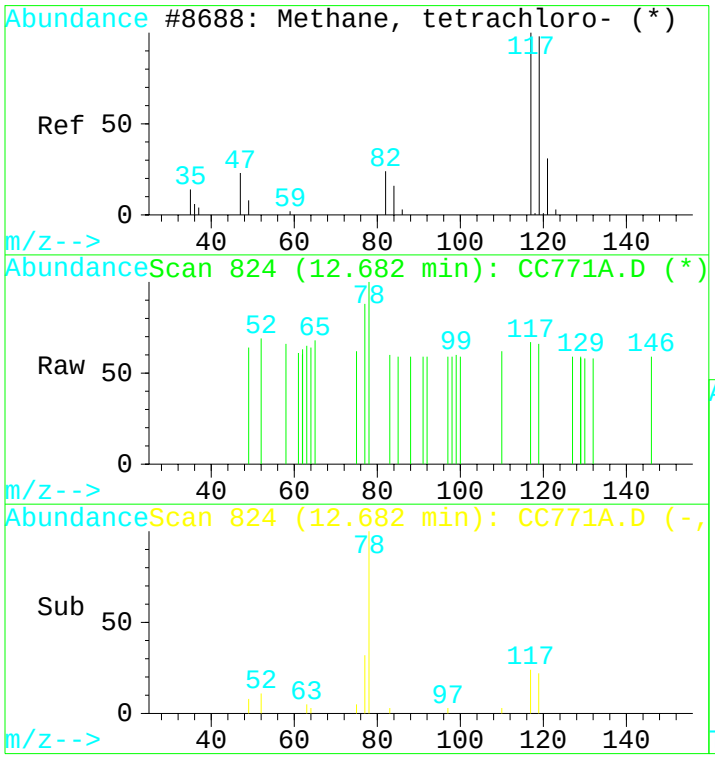


#3
Chloroform
Concen: 0.00 ppbV
RT: 10.68 min Scan# 729
Delta R.T. 0.02 min
Lab File: CC771A.D
Acq: 2 Jul 110 3:35 pm

Tgt Ion:83 Resp: 85

Ion	Ratio	Lower	Upper
83	100		
85	53.6	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

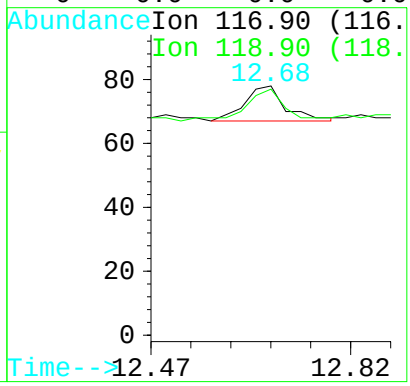


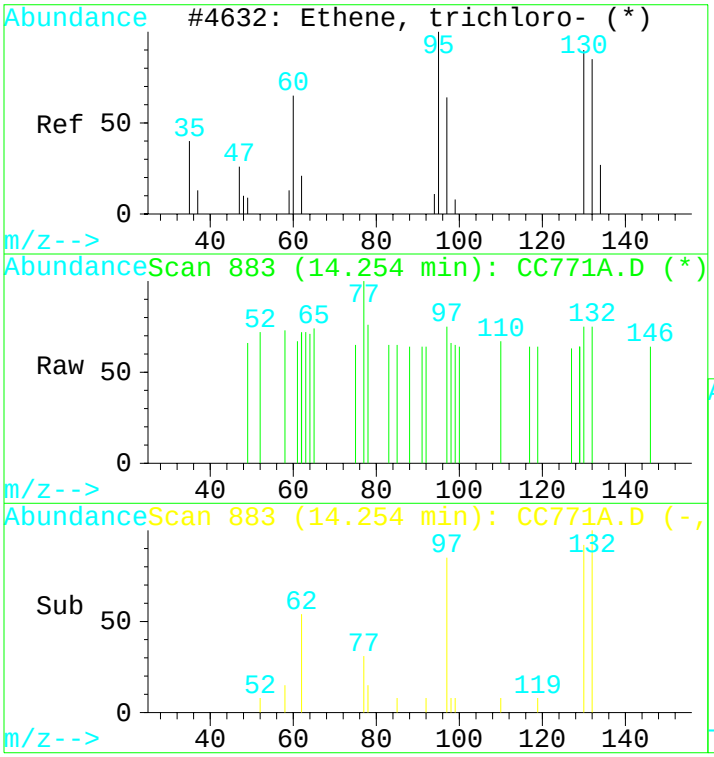


#4
Carbon tetrachloride
Concen: 0.00 ppbV
RT: 12.68 min Scan# 824
Delta R.T. 0.02 min
Lab File: CC771A.D
Acq: 2 Jul 110 3:35 pm

Tgt Ion:116.9 Resp: 55

Ion	Ratio	Lower	Upper
117	100		
119	85.7	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

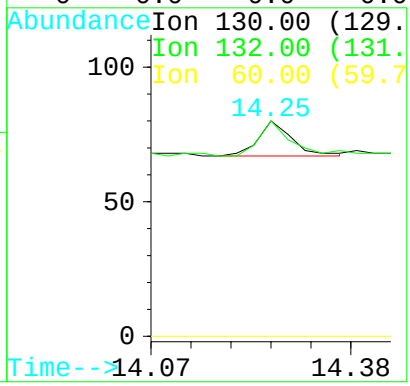




#5
Trichloroethene
Concen: 0.00 ppbV
RT: 14.25 min Scan# 883
Delta R.T. -0.01 min
Lab File: CC771A.D
Acq: 2 Jul 110 3:35 pm

Tgt Ion:130 Resp: 47

Ion	Ratio	Lower	Upper
130	100		
132	96.0	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\QC07020A.D
Acq Time : 2 Jul 110 12:05 pm Operator: JF
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

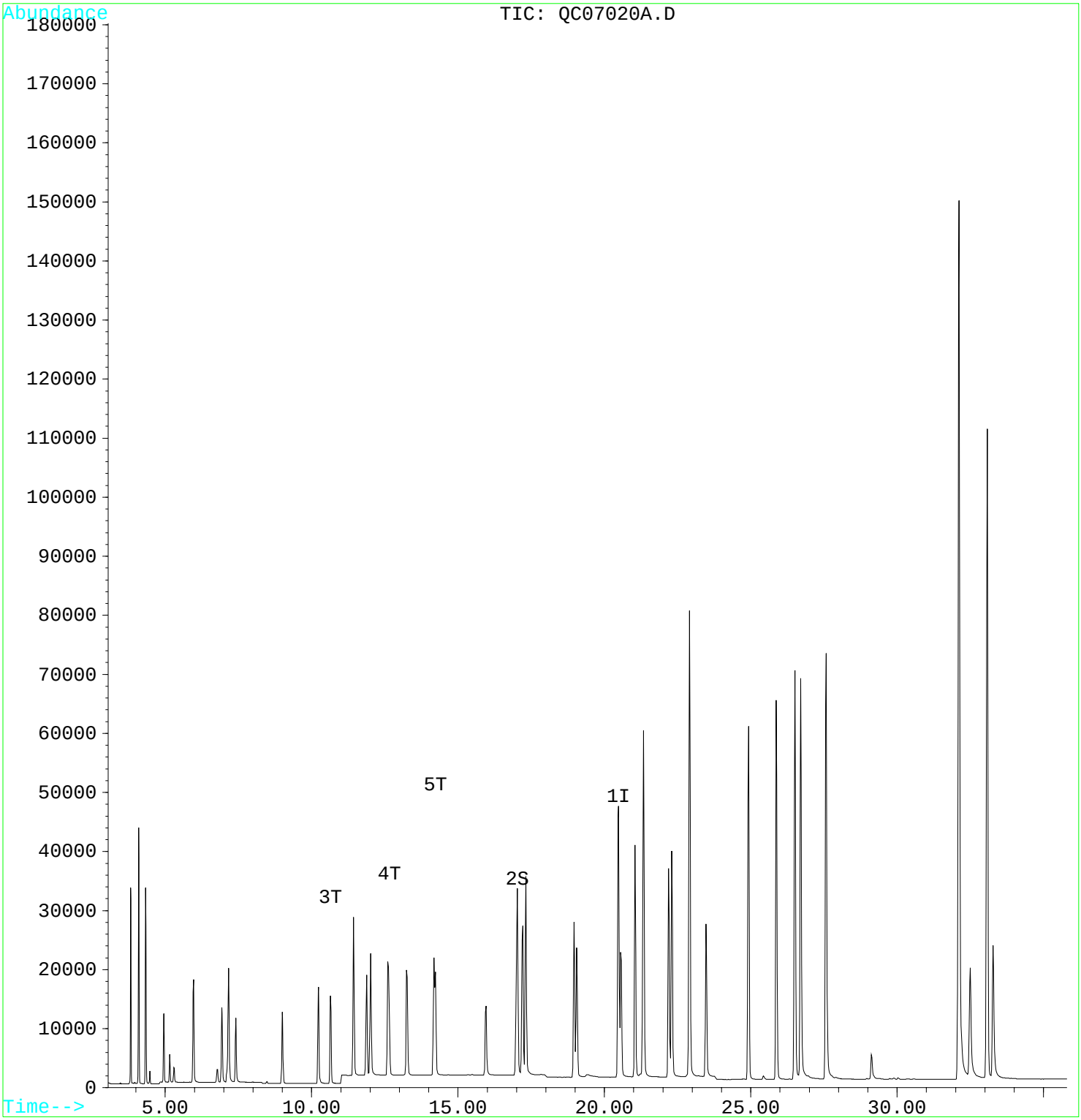
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	89749	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	40321	0.19	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.65	83	25699	0.25	ppbV	97
4) Carbon tetrachloride	12.66	117	14423	0.25	ppbV	91
5) Trichloroethene	14.23	130	14739	0.26	ppbV	99

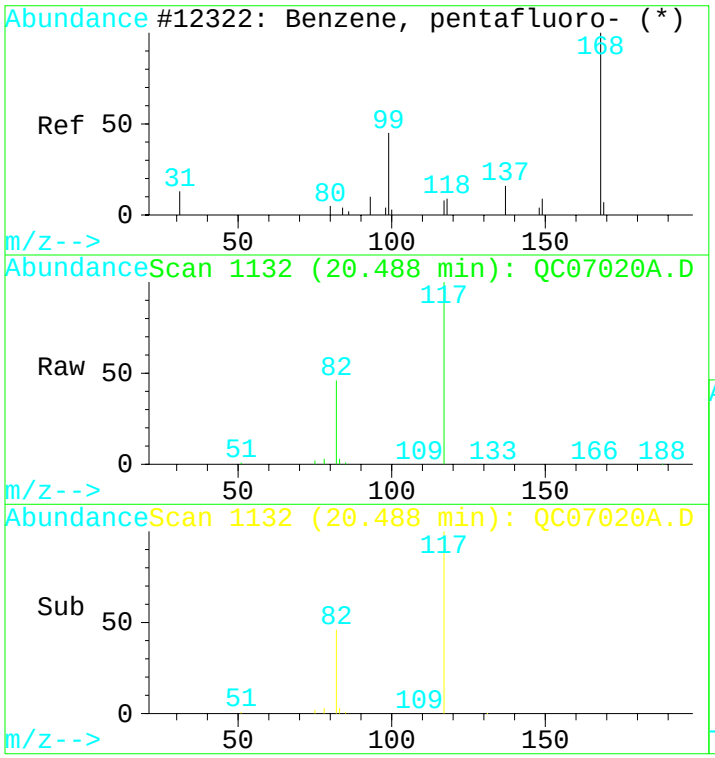
(#) = qualifier out of range (m) = manual integration
QC07020A.D 2NTHG_A.M Tue Jul 06 15:32:16 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\QC07020A.D
Acq Time : 2 Jul 110 12:05 pm Operator: JF
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

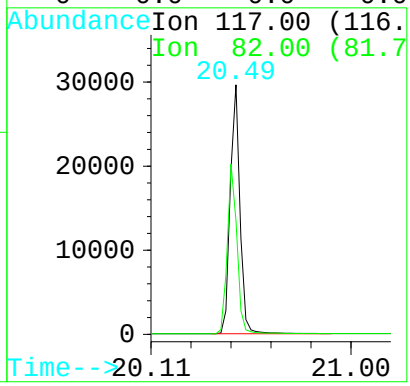


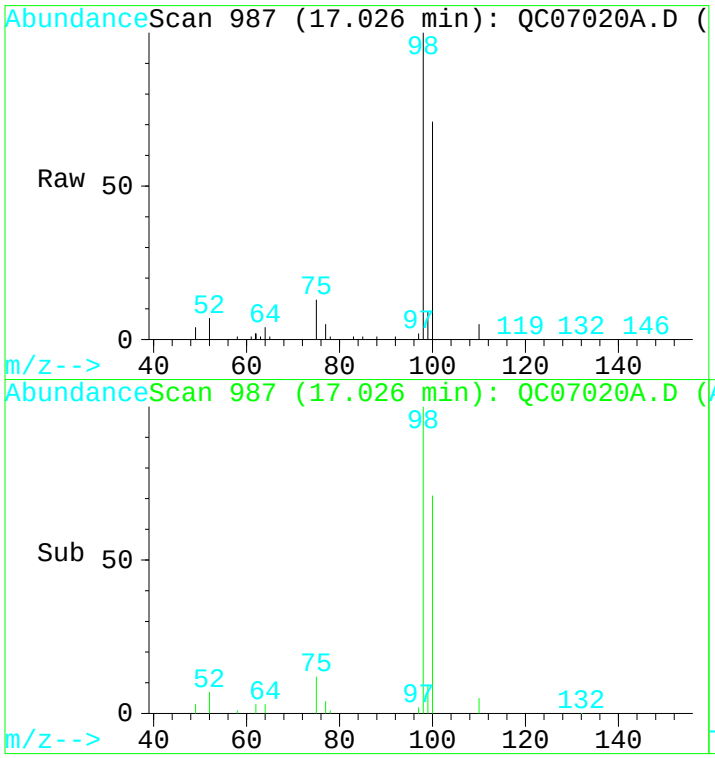


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: QC07020A.D
Acq: 2 Jul 110 12:05 pm

Tgt Ion:117 Resp: 89749

Ion	Ratio	Lower	Upper
117	100		
82	45.5	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

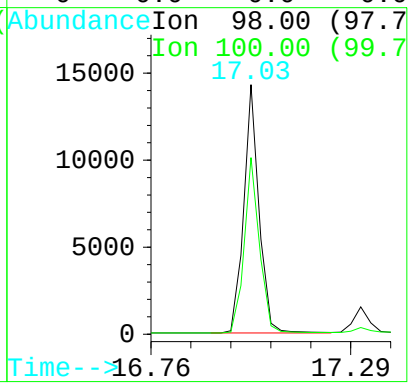


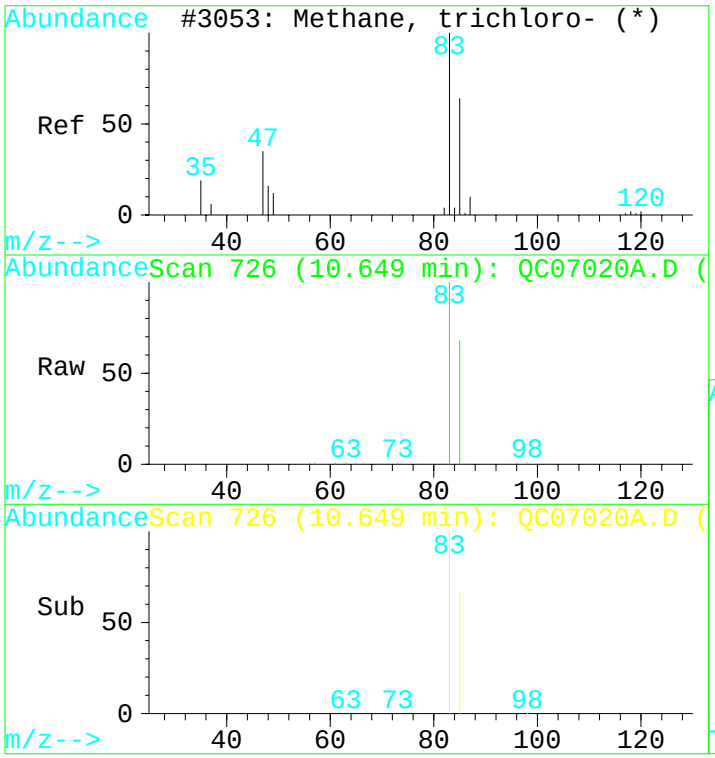


#2
Toluene-d8
Concen: 0.19 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: QC07020A.D
Acq: 2 Jul 110 12:05 pm

Tgt Ion:98 Resp: 40321

Ion	Ratio	Lower	Upper
98	100		
100	70.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

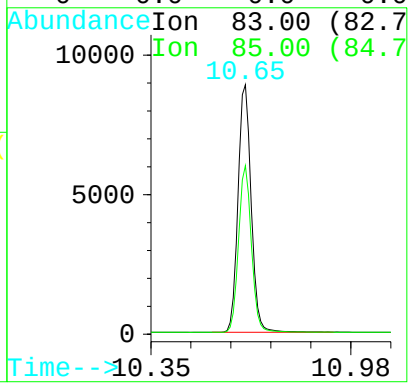


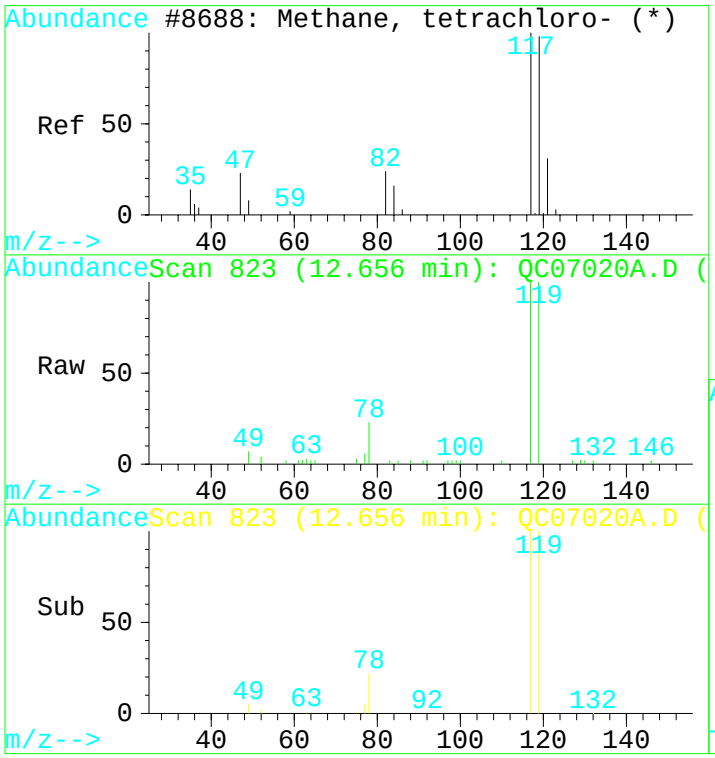


#3
Chloroform
Concen: 0.25 ppbV
RT: 10.65 min Scan# 726
Delta R.T. -0.01 min
Lab File: QC07020A.D
Acq: 2 Jul 110 12:05 pm

Tgt Ion:83 Resp: 25699

Ion	Ratio	Lower	Upper
83	100		
85	67.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

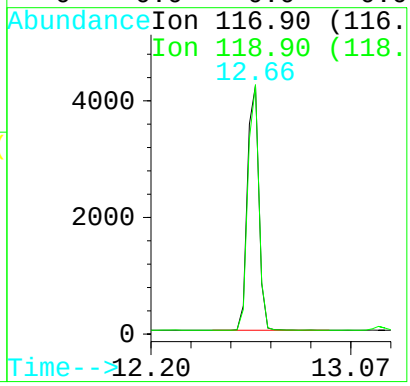


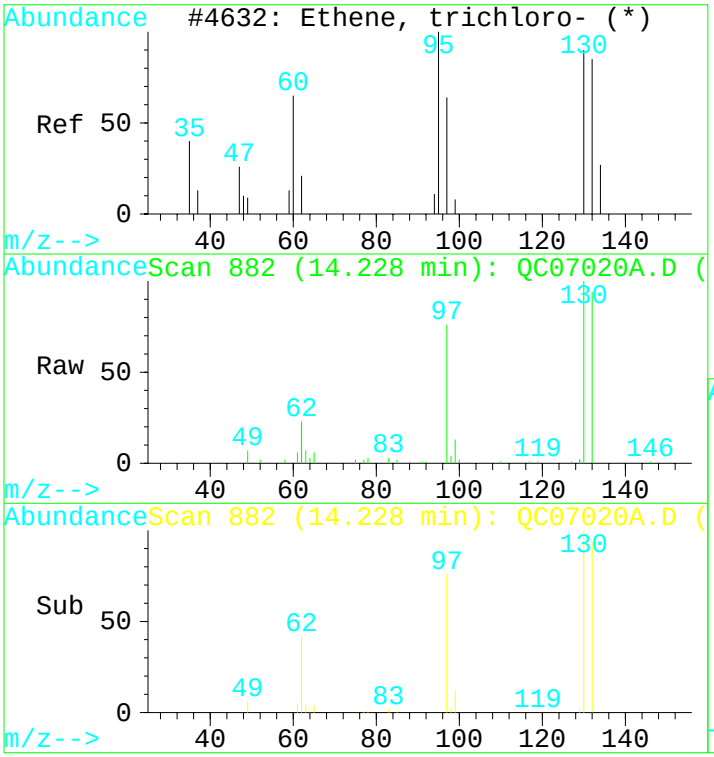


#4
Carbon tetrachloride
Concen: 0.25 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: QC07020A.D
Acq: 2 Jul 110 12:05 pm

Tgt Ion:116.9 Resp: 14423

Ion	Ratio	Lower	Upper
117	100		
119	100.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

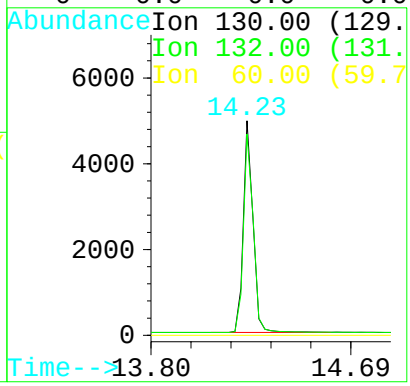




#5
Trichloroethene
Concen: 0.26 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: QC07020A.D
Acq: 2 Jul 110 12:05 pm

Tgt Ion:130 Resp: 14739

Ion	Ratio	Lower	Upper
130	100		
132	93.7	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\QC07020B.D
Acq Time : 2 Jul 110 12:53 pm Operator: JF
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:20 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

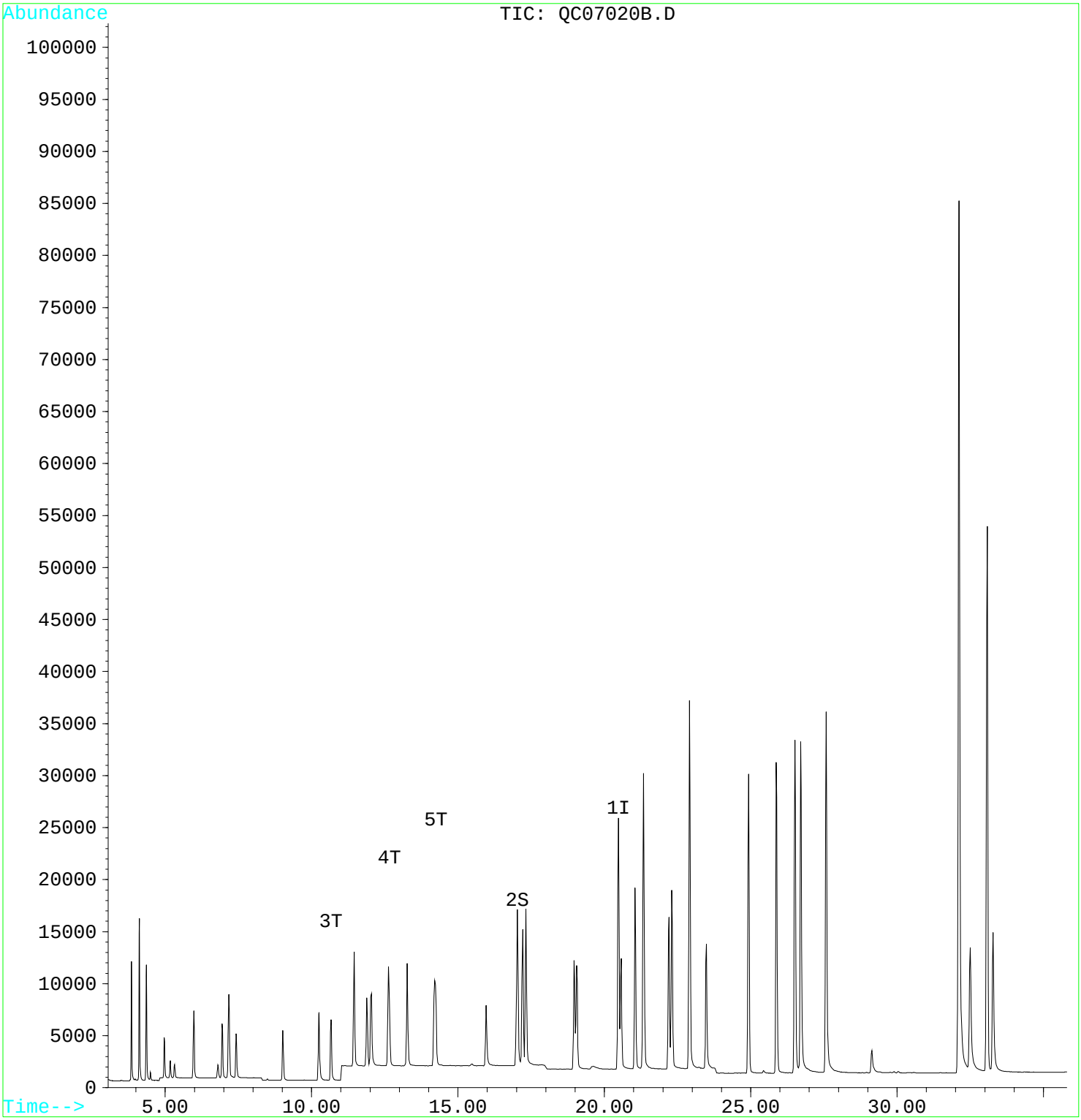
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	44077	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	18933	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.66	83	11105	0.22	ppbV	100
4) Carbon tetrachloride	12.66	117	6247	0.22	ppbV	94
5) Trichloroethene	14.25	130	6770	0.25	ppbV	94

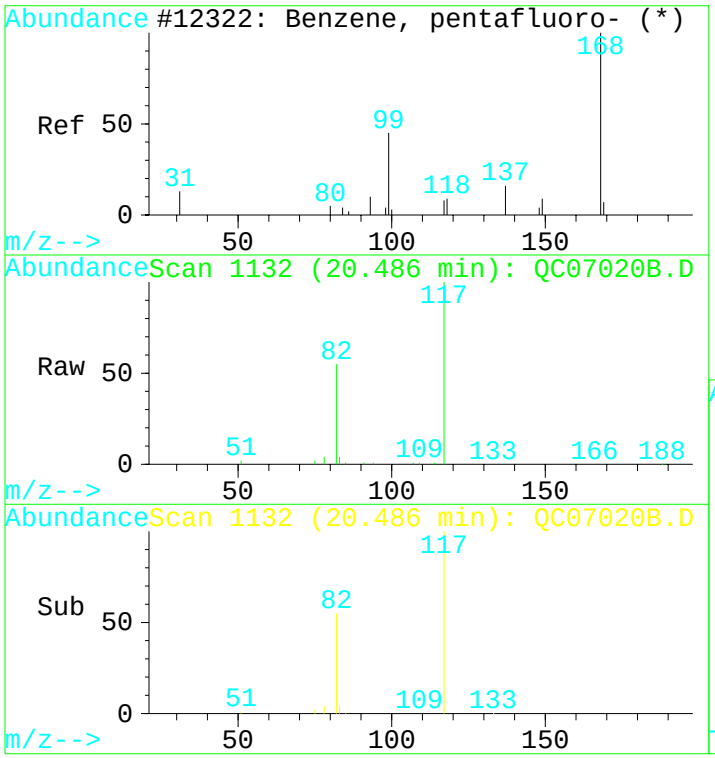
(#) = qualifier out of range (m) = manual integration
QC07020B.D 2NTHG_A.M Tue Jul 06 15:32:41 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\QC07020B.D
Acq Time : 2 Jul 110 12:53 pm Operator: JF
Sample : ST60022 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 6 15:20 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

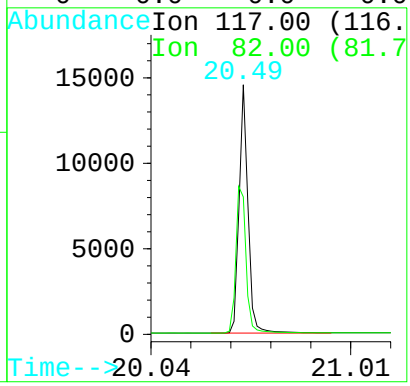


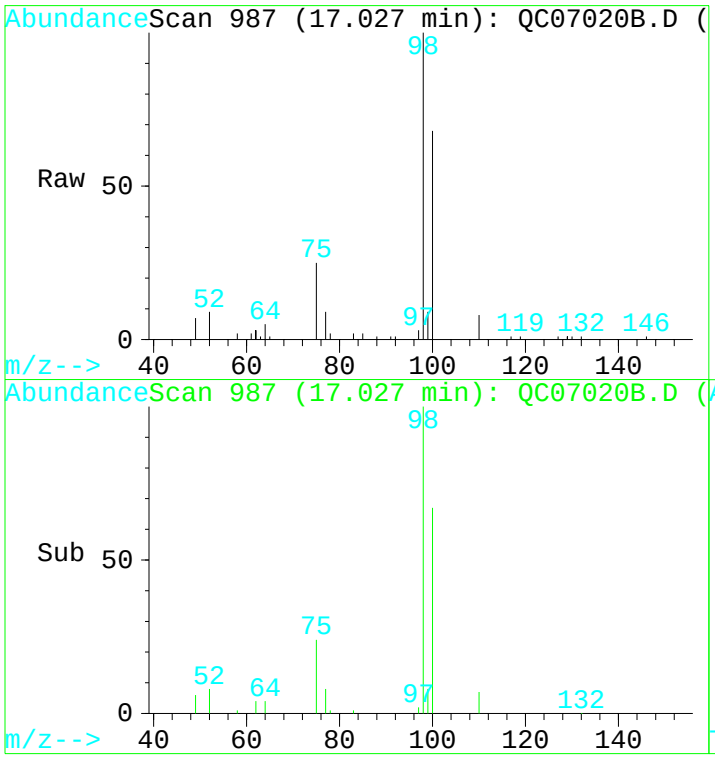


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: QC07020B.D
Acq: 2 Jul 110 12:53 pm

Tgt Ion:117 Resp: 44077

Ion	Ratio	Lower	Upper
117	100		
82	54.8	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

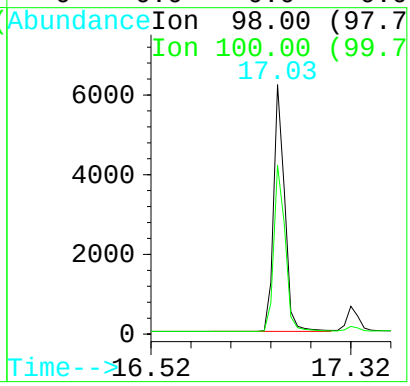


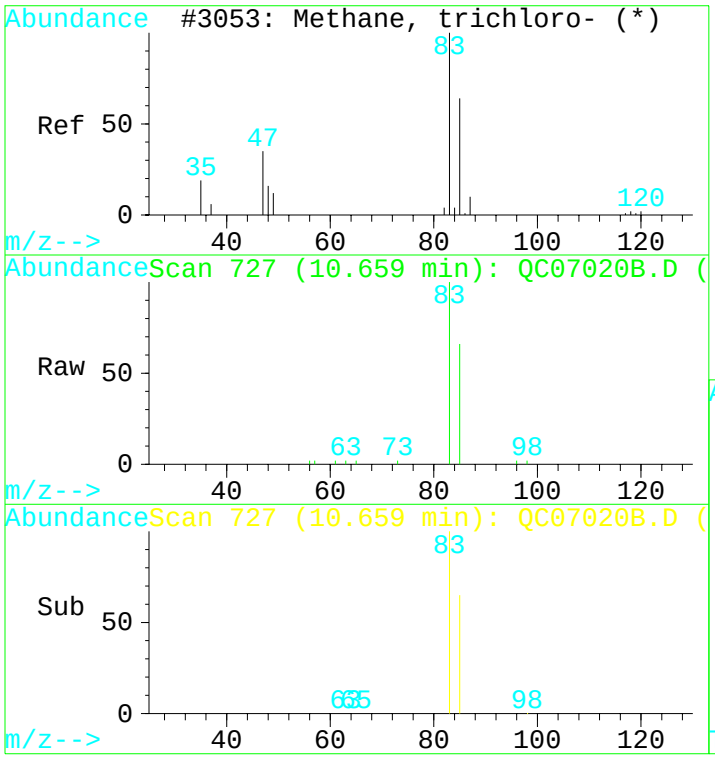


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: QC07020B.D
Acq: 2 Jul 110 12:53 pm

Tgt Ion:98 Resp: 18933

Ion	Ratio	Lower	Upper
98	100		
100	69.3	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

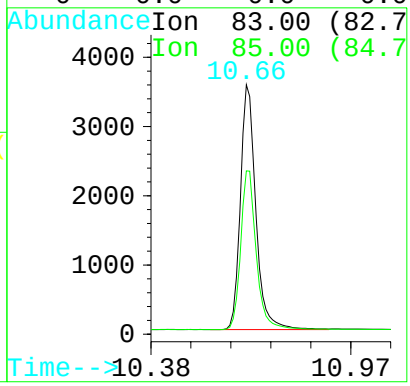


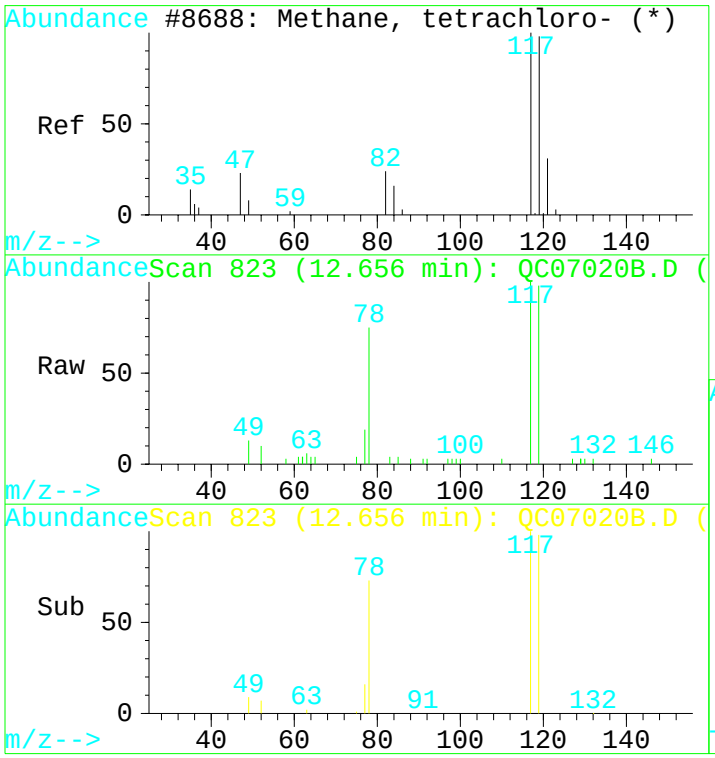


#3
Chloroform
Concen: 0.22 ppbV
RT: 10.66 min Scan# 727
Delta R.T. -0.00 min
Lab File: QC07020B.D
Acq: 2 Jul 110 12:53 pm

Tgt Ion:83 Resp: 11105

Ion	Ratio	Lower	Upper
83	100		
85	64.8	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

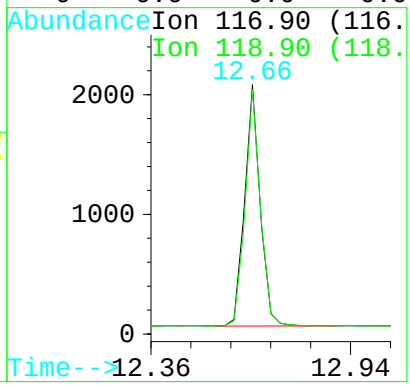


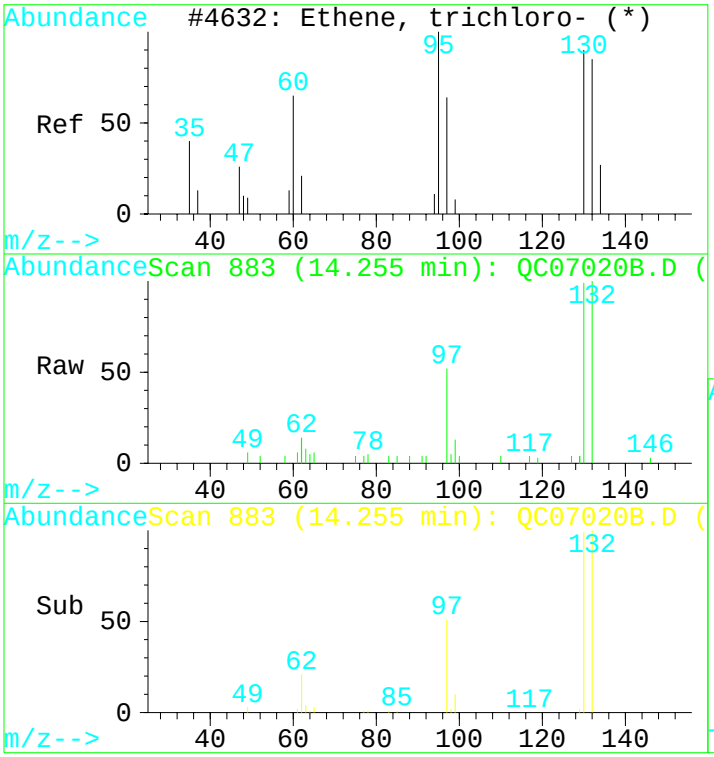


#4
Carbon tetrachloride
Concen: 0.22 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: QC07020B.D
Acq: 2 Jul 110 12:53 pm

Tgt Ion:116.9 Resp: 6247

Ion	Ratio	Lower	Upper
117	100		
119	97.9	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

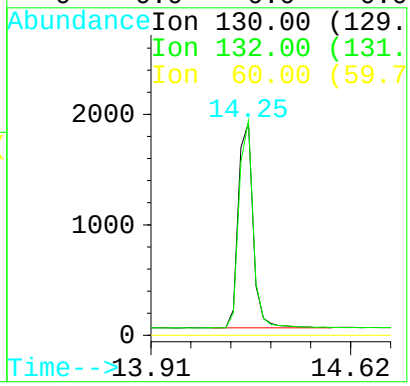




#5
Trichloroethene
Concen: 0.25 ppbV
RT: 14.25 min Scan# 883
Delta R.T. -0.01 min
Lab File: QC07020B.D
Acq: 2 Jul 110 12:53 pm

Tgt Ion:130 Resp: 6770

Ion	Ratio	Lower	Upper
130	100		
132	100.9	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025302A.D
Acq Time : 2 Jul 110 9:10 pm Operator: CM
Sample : OA-FO-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

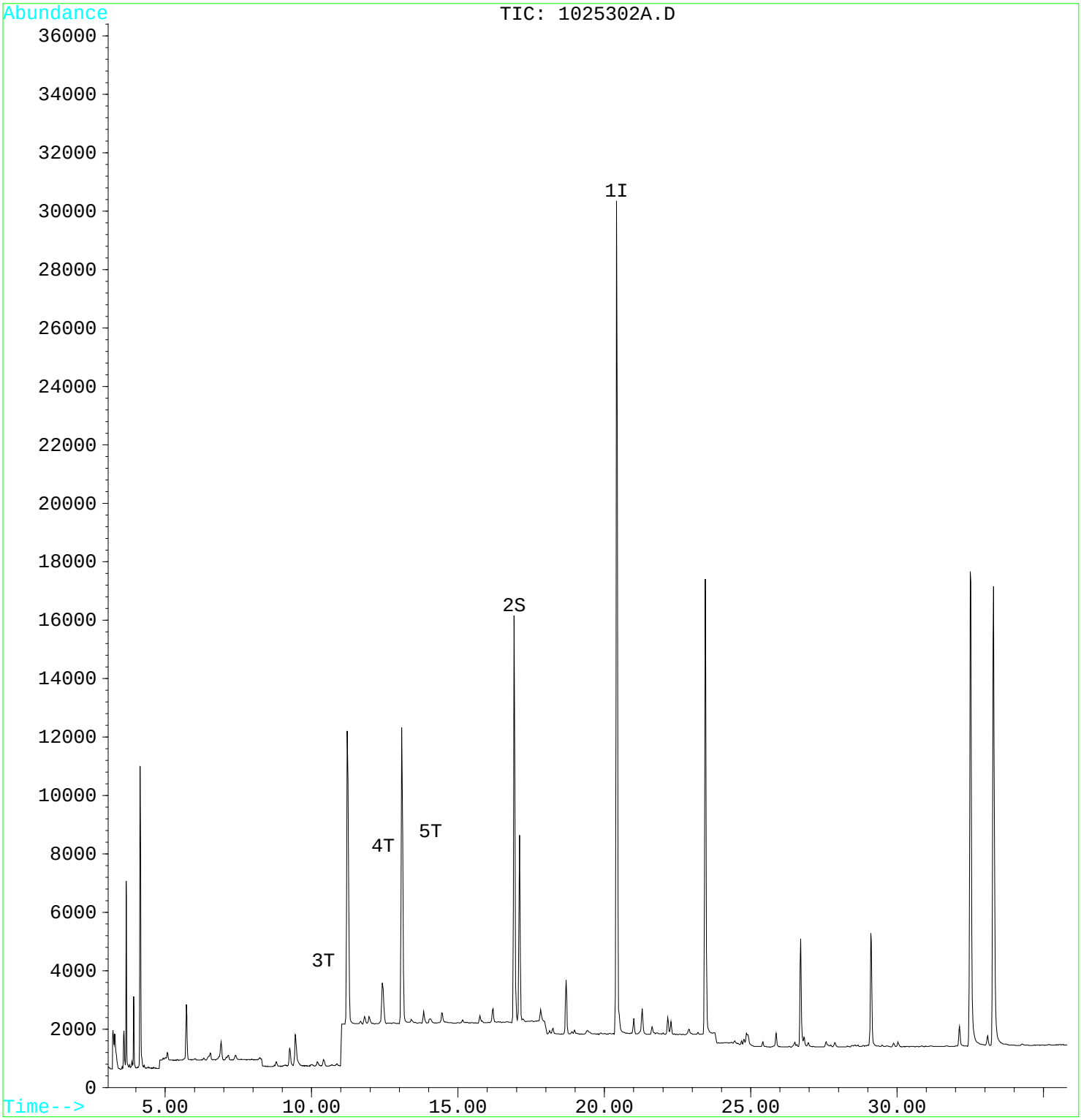
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.42	117	48896	0.20	ppbV	-0.09
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.92	98	21604	0.19	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.41	83	531	0.01	ppbV	98
4) Carbon tetrachloride	12.44	117	754	0.02	ppbV	96
5) Trichloroethene	14.07	130	135	0.00	ppbV	87

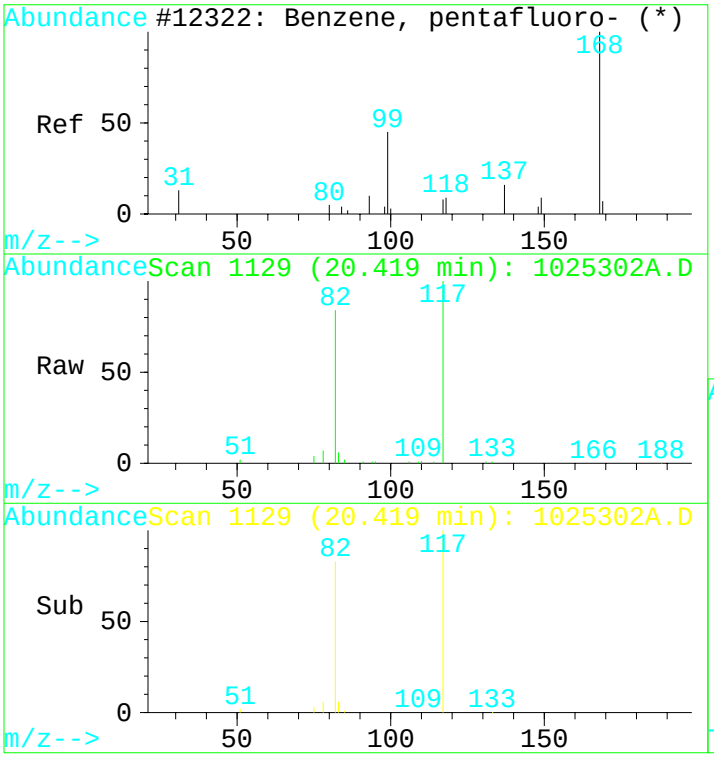
(#) = qualifier out of range (m) = manual integration
1025302A.D 2NTHG_A.M Tue Jul 06 15:20:28 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025302A.D
Acq Time : 2 Jul 110 9:10 pm Operator: CM
Sample : OA-FO-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

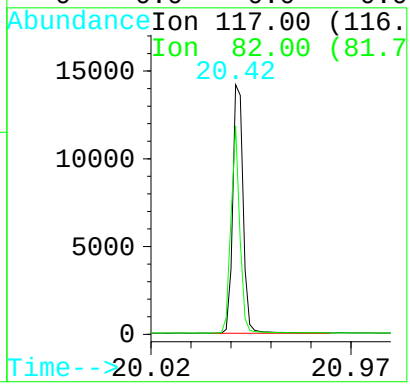


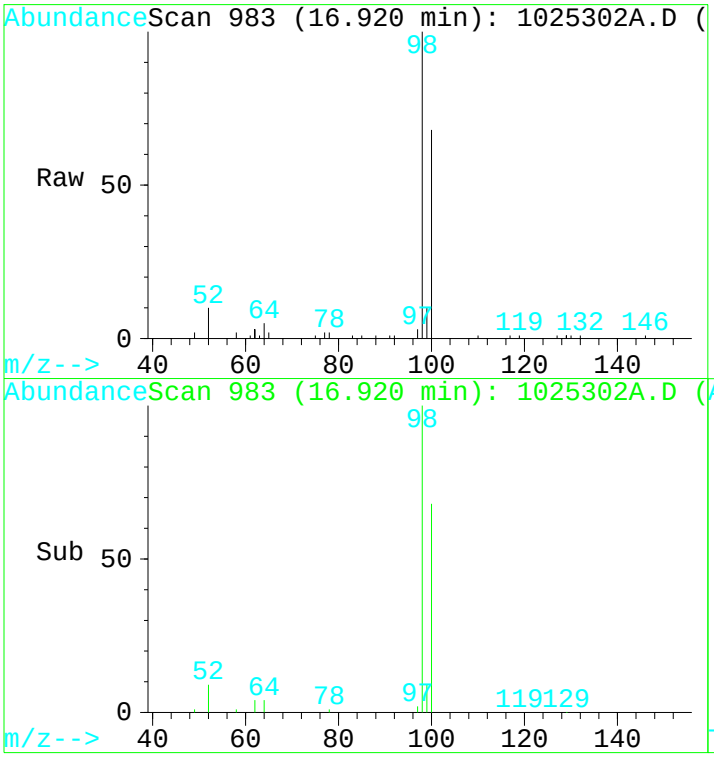


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.42 min Scan# 1129
Delta R.T. -0.09 min
Lab File: 1025302A.D
Acq: 2 Jul 110 9:10 pm

Tgt Ion:117 Resp: 48896

Ion	Ratio	Lower	Upper
117	100		
82	83.4	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

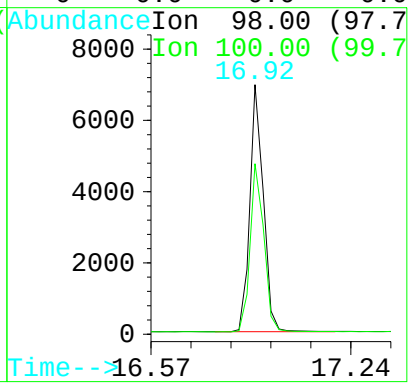


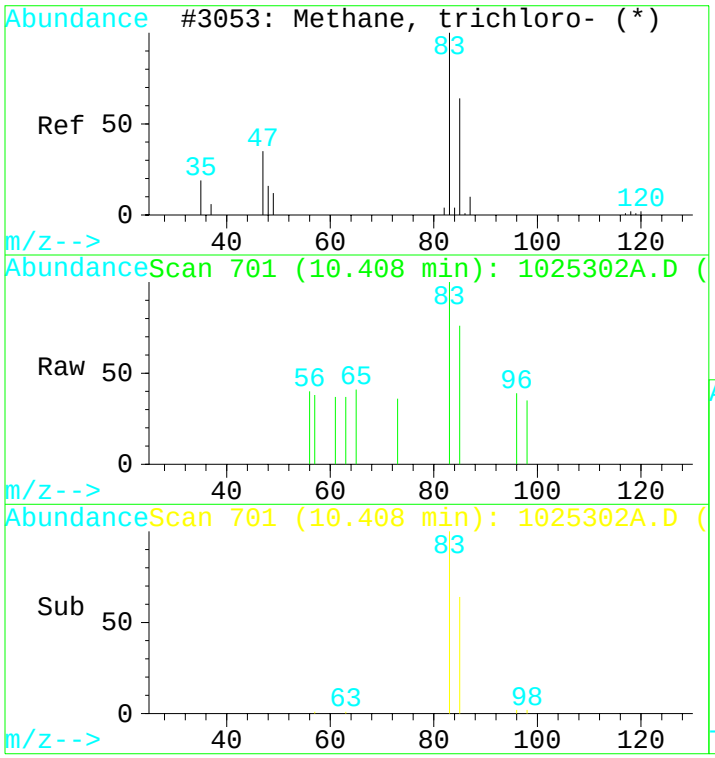


#2
Toluene-d8
Concen: 0.19 ppbV
RT: 16.92 min Scan# 983
Delta R.T. -0.13 min
Lab File: 1025302A.D
Acq: 2 Jul 110 9:10 pm

Tgt Ion:98 Resp: 21604

Ion	Ratio	Lower	Upper
98	100		
100	69.3	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

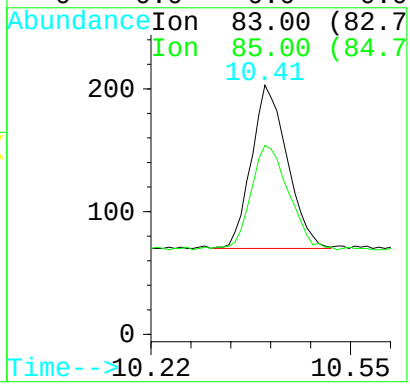


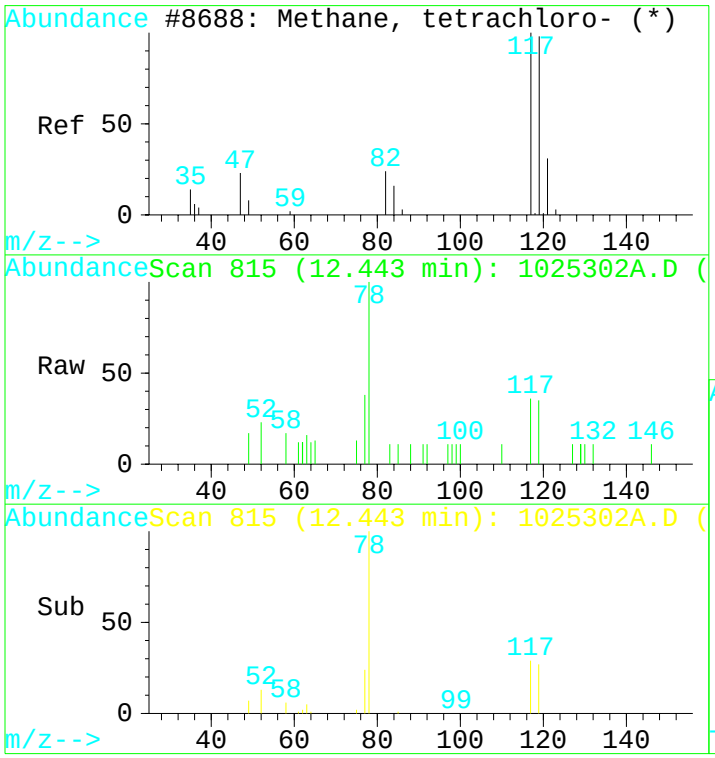


#3
Chloroform
Concen: 0.01 ppbV
RT: 10.41 min Scan# 701
Delta R.T. -0.25 min
Lab File: 1025302A.D
Acq: 2 Jul 110 9:10 pm

Tgt Ion:83 Resp: 531

Ion	Ratio	Lower	Upper
83	100		
85	63.0	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

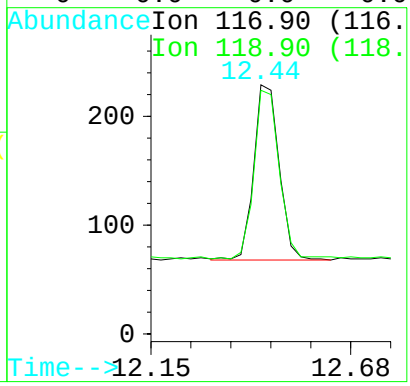


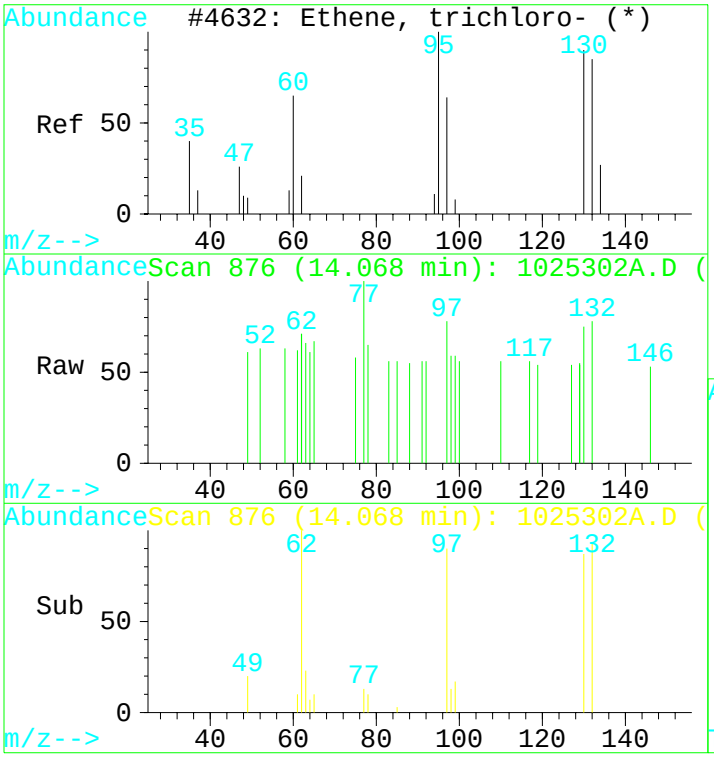


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.44 min Scan# 815
Delta R.T. -0.22 min
Lab File: 1025302A.D
Acq: 2 Jul 110 9:10 pm

Tgt Ion:116.9 Resp: 754

Ion	Ratio	Lower	Upper
117	100		
119	96.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

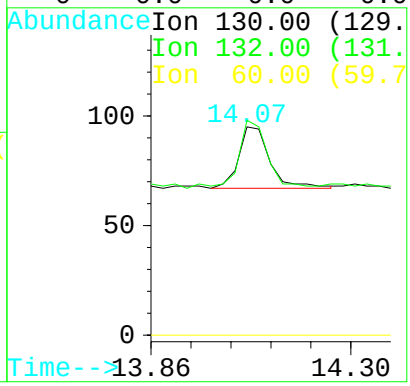




#5
Trichloroethene
Concen: 0.00 ppbV
RT: 14.07 min Scan# 876
Delta R.T. -0.19 min
Lab File: 1025302A.D
Acq: 2 Jul 110 9:10 pm

Tgt Ion:130 Resp: 135

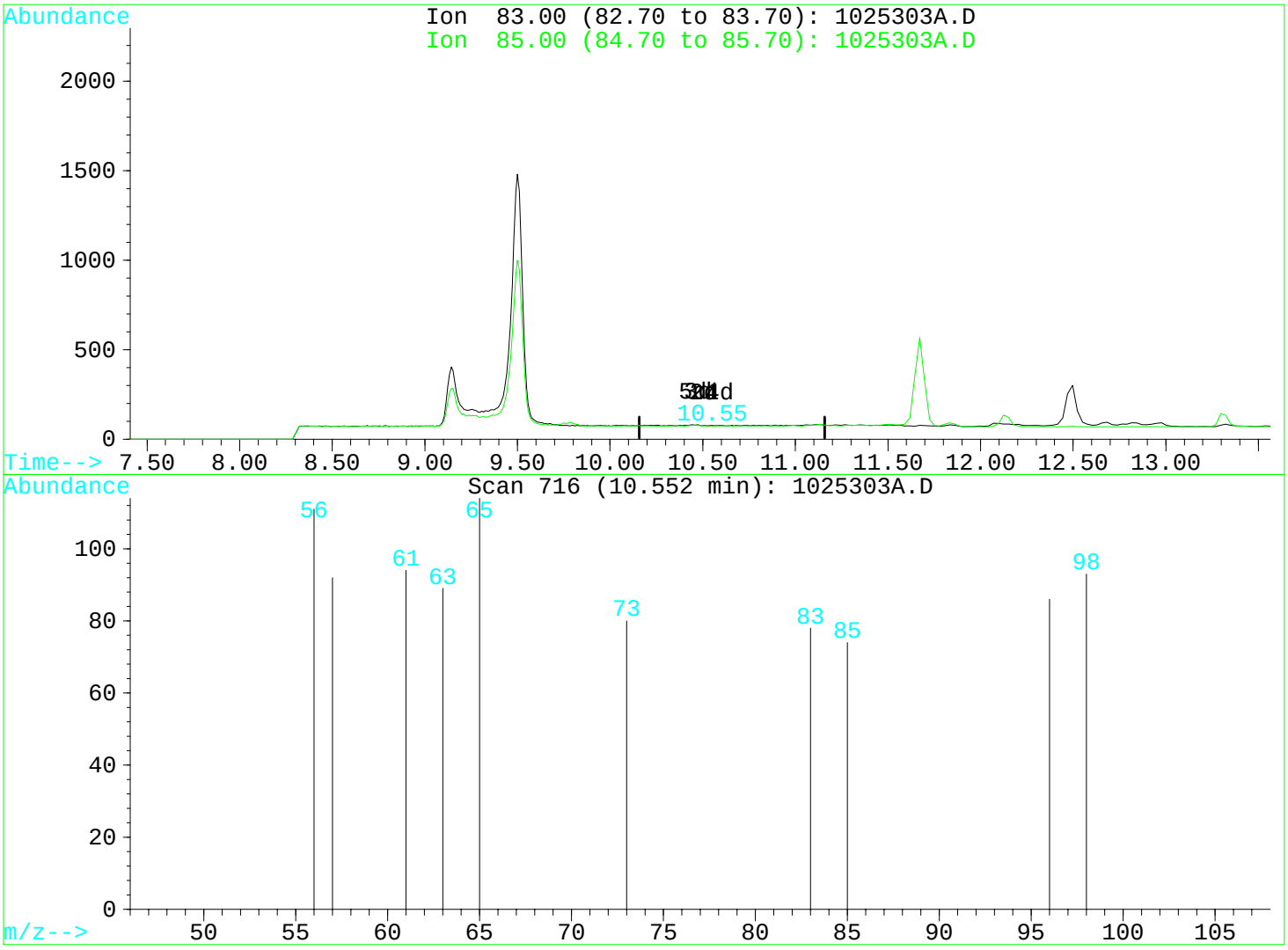
Ion	Ratio	Lower	Upper
130	100		
132	107.3	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025303A.D
Acq Time : 2 Jul 110 9:52 pm Operator: CM
Sample : IA-LB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration



TIC: 1025303A.D

(3) Chloroform (T) RT Shift - KB 7/6/10

10.55min 0.00ppbV

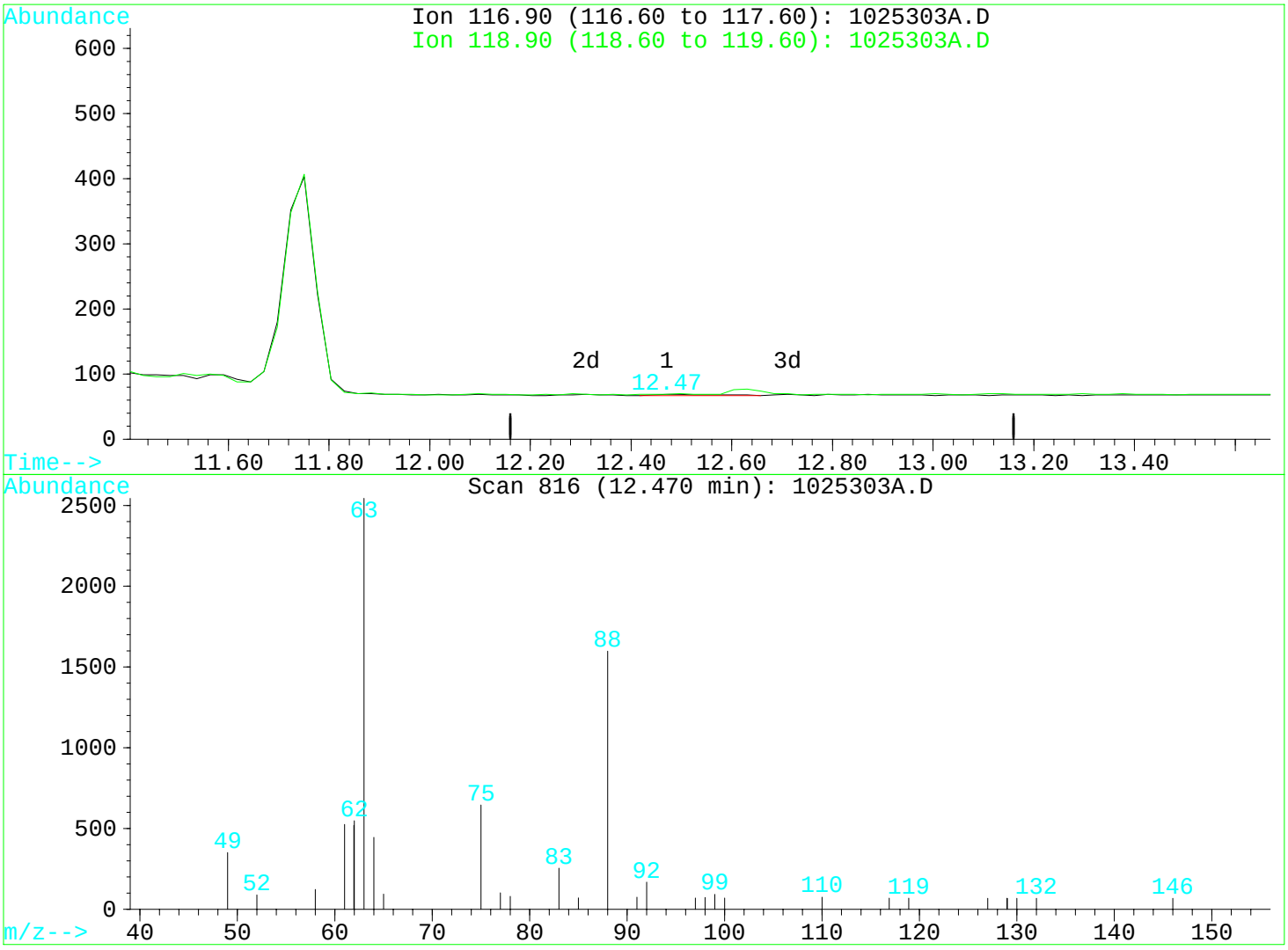
response 3

Ion	Exp%	Act%
83.00	100	100
85.00	64.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025303A.D
Acq Time : 2 Jul 110 9:52 pm Operator: CM
Sample : IA-LB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:24 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration



TIC: 1025303A.D

(4) Carbon tetrachloride (T) RT Shift - KB 7/6/10

12.47min 0.00ppbV

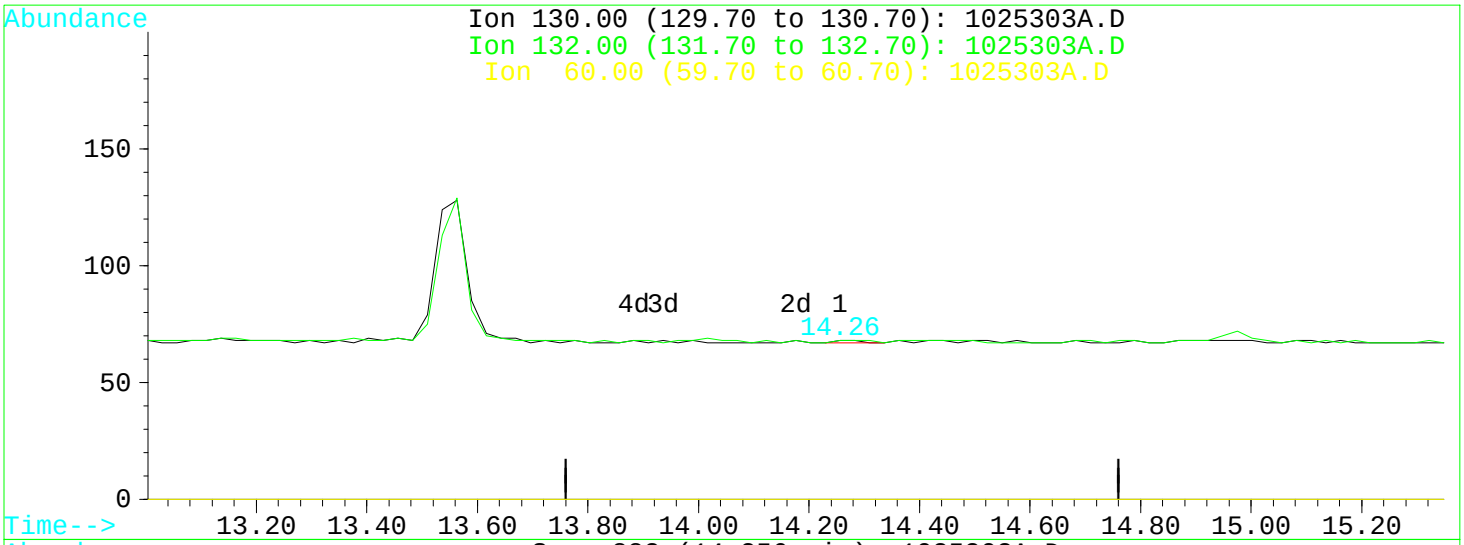
response 15

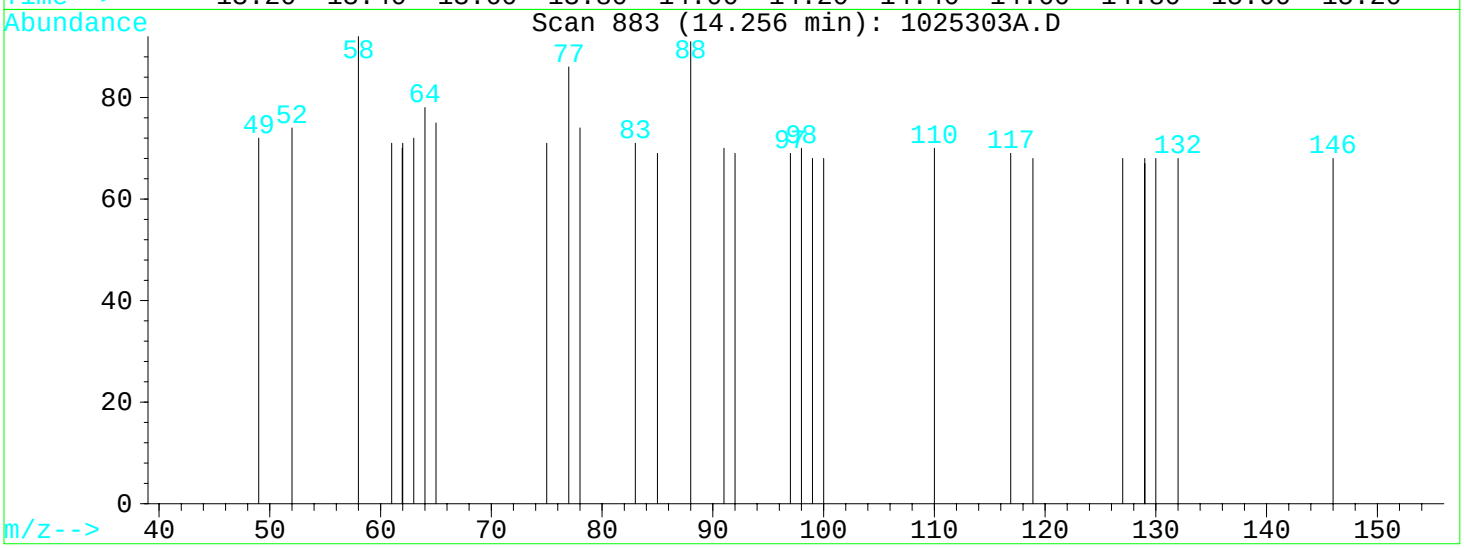
Ion	Exp%	Act%
116.90	100	100
118.90	91.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025303A.D
Acq Time : 2 Jul 110 9:52 pm Operator: CM
Sample : IA-LB-01-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:25 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025303A.D

(5) Trichloroethene (T) RT Shift - KB 7/6/10

14.26min 0.00ppbV

response 3

Ion	Exp%	Act%
130.00	100	100
132.00	94.70	100.00
60.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025303A.D
Acq Time : 2 Jul 110 9:52 pm Operator: CM
Sample : IA-LB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:25 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

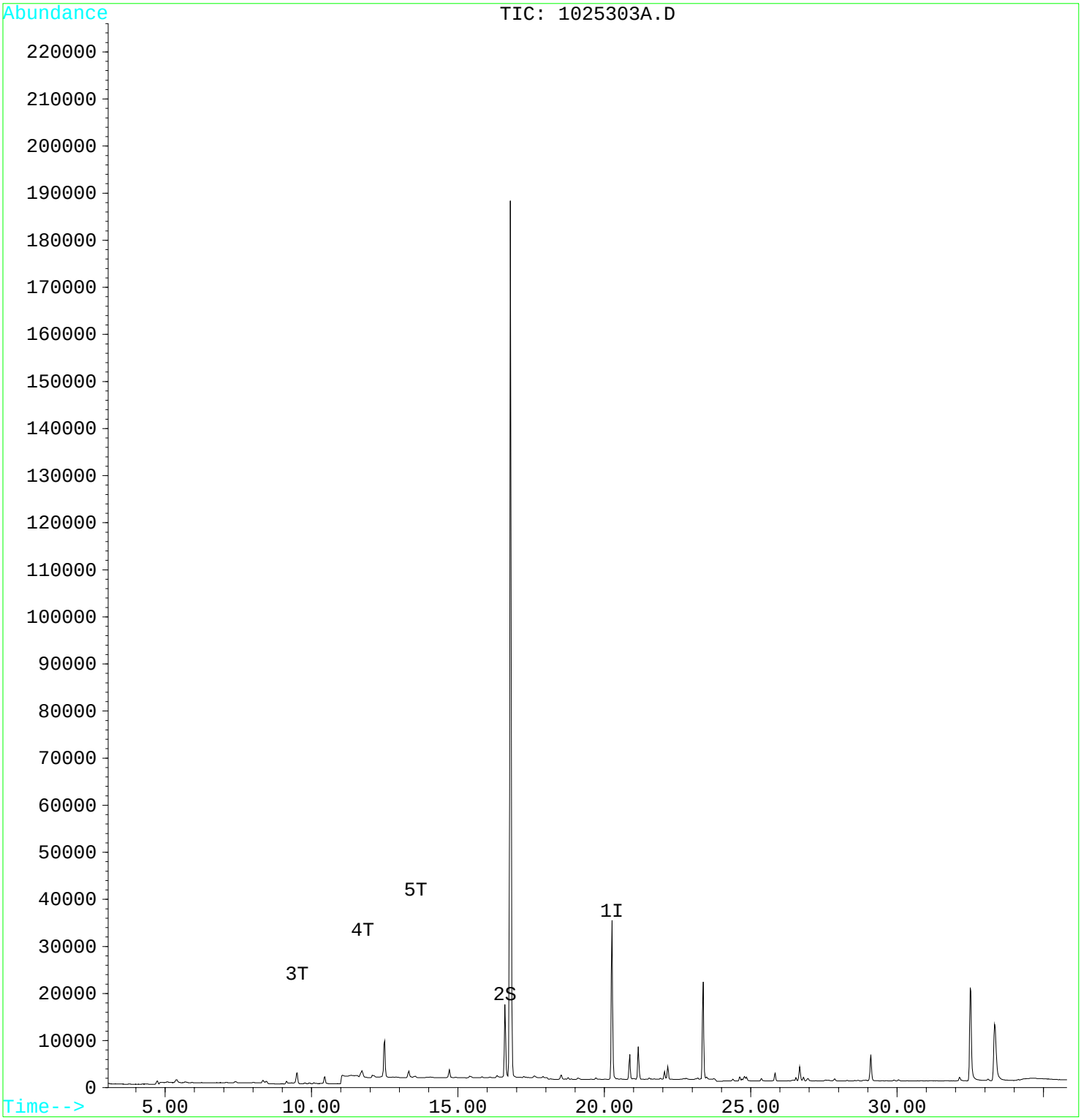
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.26	117	59618	0.20	ppbV		-0.25
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.60	98	24435	0.17	ppbV		
Target Compounds							Qvalue
3) Chloroform	9.50	83	8355	0.12	ppbV	m	18
4) Carbon tetrachloride	11.75	117	2128	0.06	ppbV	m	4
5) Trichloroethene	13.56	130	249	0.01	ppbV	m	95

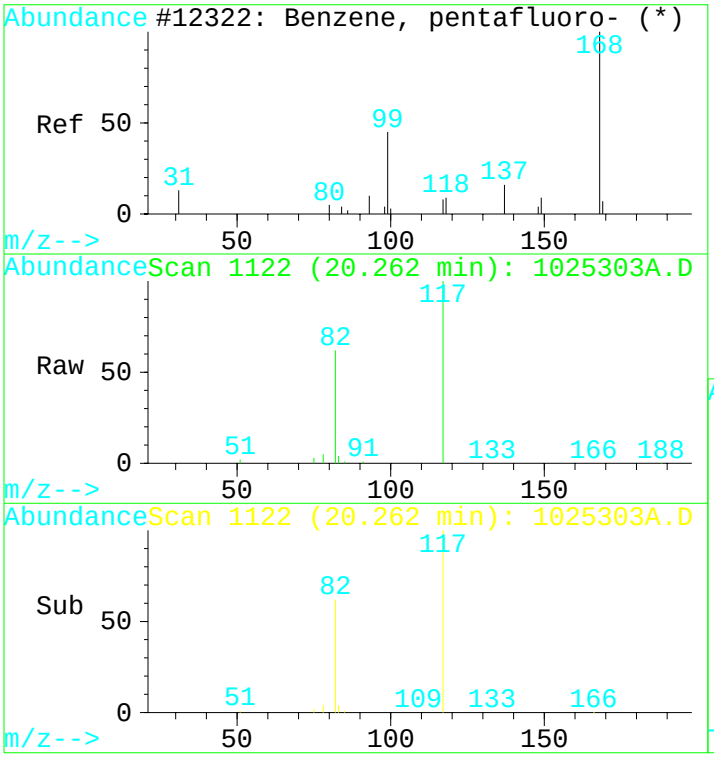
(#) = qualifier out of range (m) = manual integration
1025303A.D 2NTHG_A.M Tue Jul 06 15:25:51 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025303A.D
Acq Time : 2 Jul 110 9:52 pm Operator: CM
Sample : IA-LB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:25 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

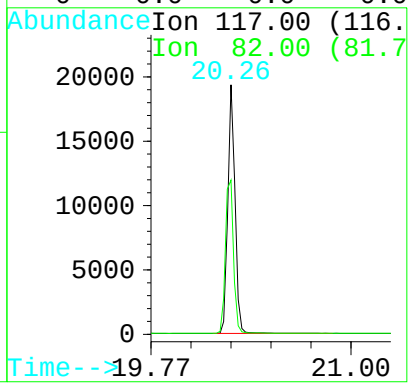


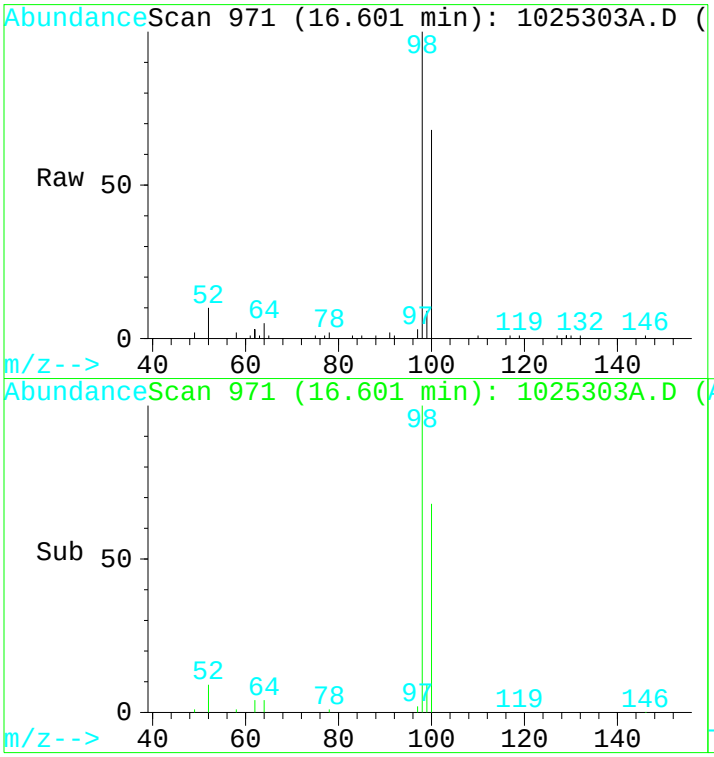


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.26 min Scan# 1122
Delta R.T. -0.25 min
Lab File: 1025303A.D
Acq: 2 Jul 110 9:52 pm

Tgt Ion:117 Resp: 59618

Ion	Ratio	Lower	Upper
117	100		
82	61.6	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

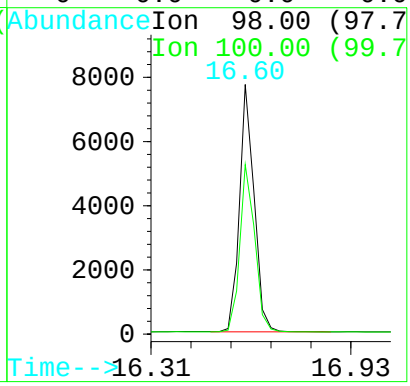


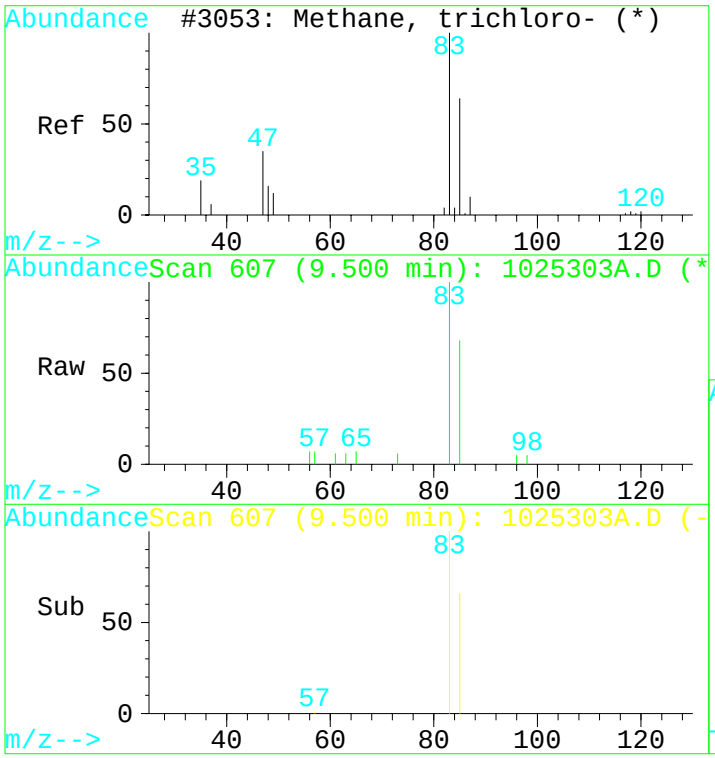


#2
Toluene-d8
Concen: 0.17 ppbV
RT: 16.60 min Scan# 971
Delta R.T. -0.45 min
Lab File: 1025303A.D
Acq: 2 Jul 110 9:52 pm

Tgt Ion:98 Resp: 24435

Ion	Ratio	Lower	Upper
98	100		
100	69.1	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

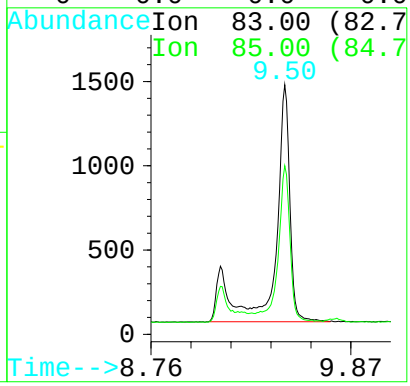


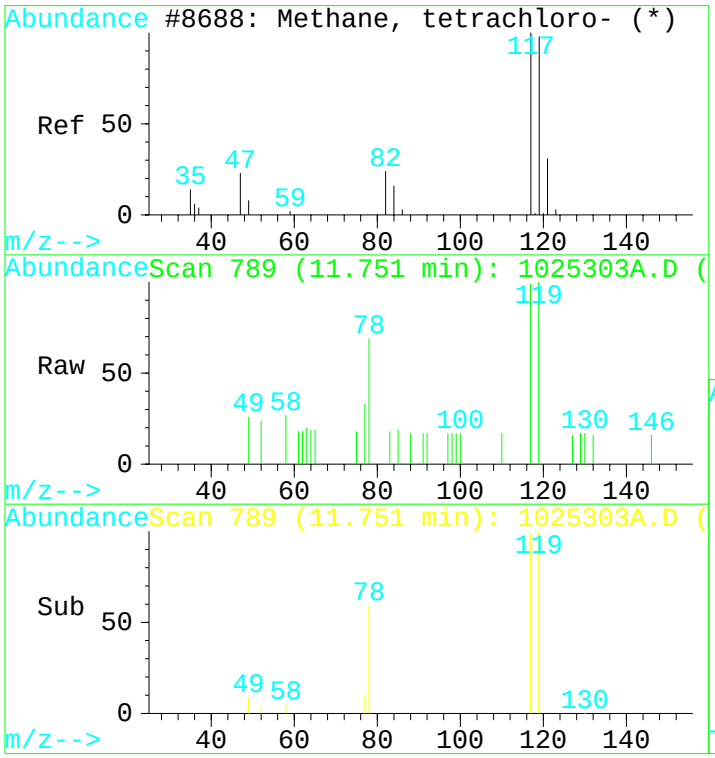


#3
Chloroform
Concen: 0.12 ppbV m
RT: 9.50 min Scan# 607
Delta R.T. -1.16 min
Lab File: 1025303A.D
Acq: 2 Jul 110 9:52 pm

Tgt Ion:83 Resp: 8355

Ion	Ratio	Lower	Upper
83	100		
85	67.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

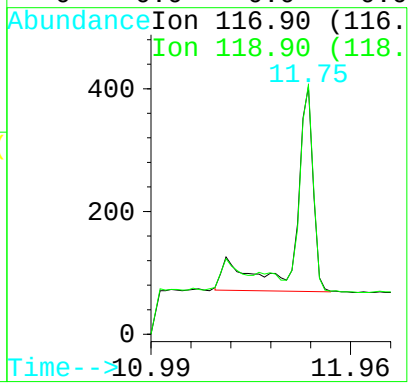


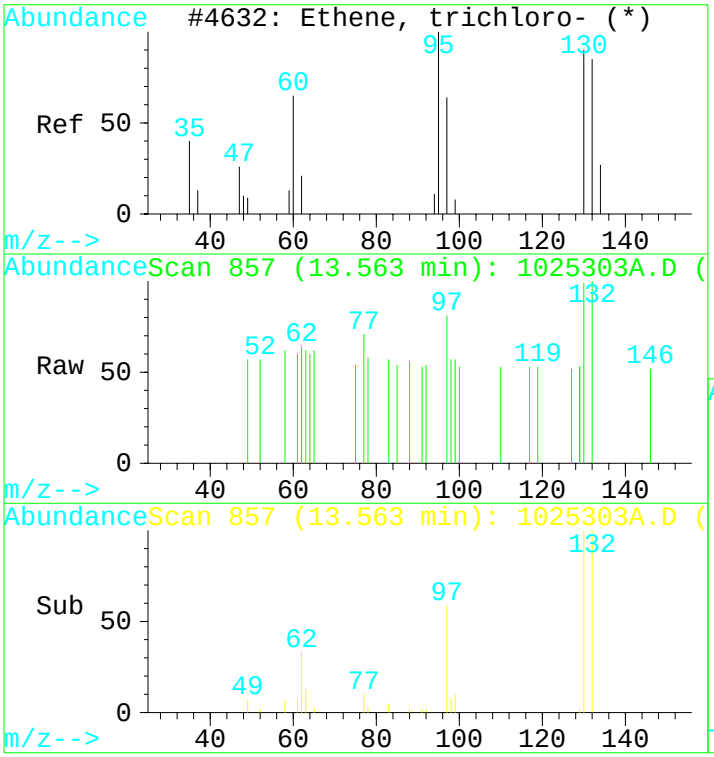


#4
Carbon tetrachloride
Concen: 0.06 ppbV m
RT: 11.75 min Scan# 789
Delta R.T. -0.91 min
Lab File: 1025303A.D
Acq: 2 Jul 110 9:52 pm

Tgt Ion:116.9 Resp: 2128

Ion	Ratio	Lower	Upper
117	100		
119	101.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

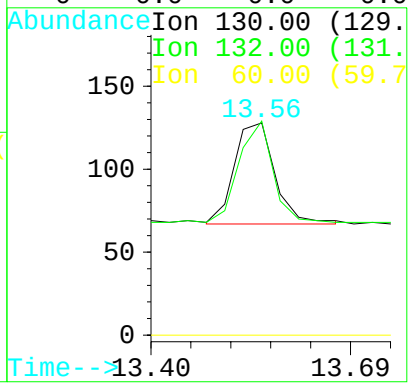




#5
Trichloroethene
Concen: 0.01 ppbV m
RT: 13.56 min Scan# 857
Delta R.T. -0.70 min
Lab File: 1025303A.D
Acq: 2 Jul 110 9:52 pm

Tgt Ion:130 Resp: 249

Ion	Ratio	Lower	Upper
130	100		
132	100.8	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025304A.D
Acq Time : 2 Jul 110 10:35 pm Operator: CM
Sample : IA-LB-02-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

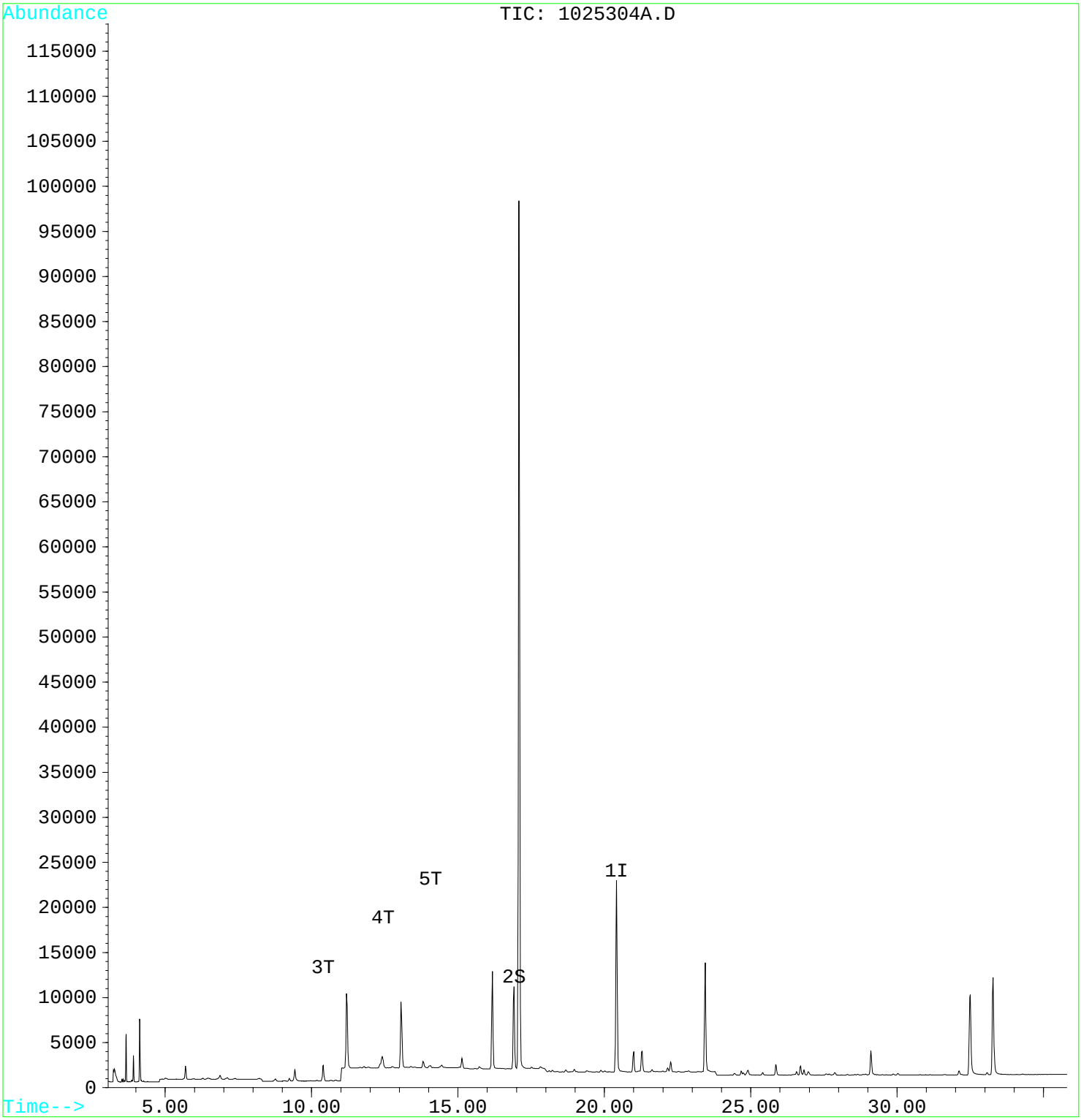
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.42	117	37282	0.20	ppbV	-0.09
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.92	98	15372	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.40	83	3551	0.08	ppbV	100
4) Carbon tetrachloride	12.44	117	1164	0.05	ppbV	91
5) Trichloroethene	14.07	130	207	0.01	ppbV	97

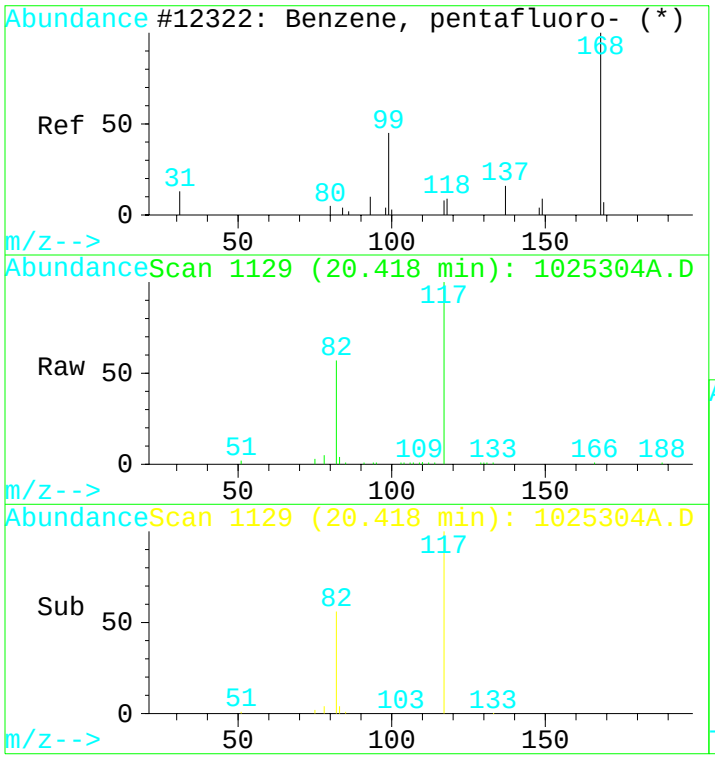
(#) = qualifier out of range (m) = manual integration
1025304A.D 2NTHG_A.M Tue Jul 06 15:26:22 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025304A.D
Acq Time : 2 Jul 110 10:35 pm Operator: CM
Sample : IA-LB-02-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

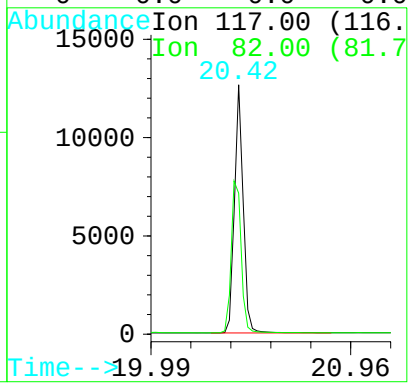


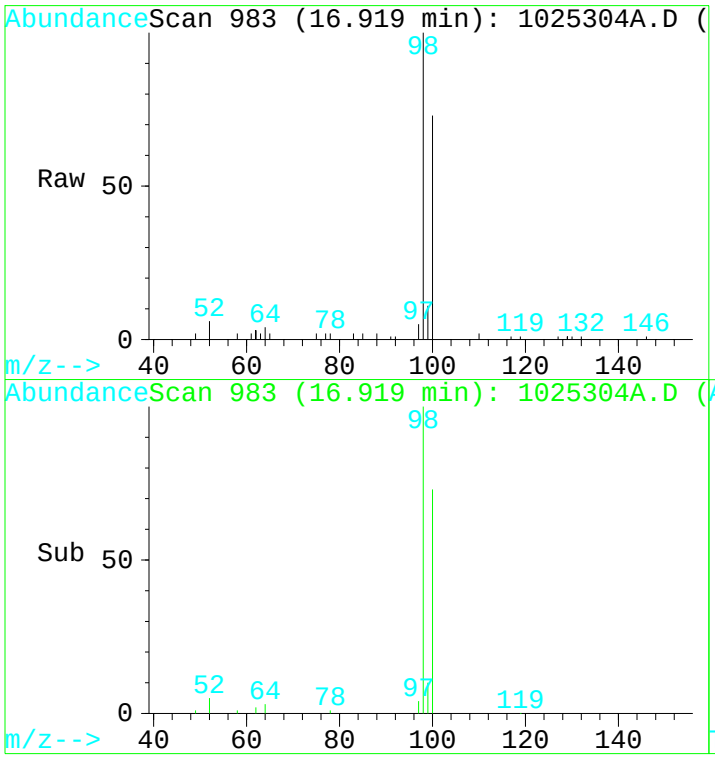


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.42 min Scan# 1129
Delta R.T. -0.09 min
Lab File: 1025304A.D
Acq: 2 Jul 110 10:35 pm

Tgt Ion:117 Resp: 37282

Ion	Ratio	Lower	Upper
117	100		
82	56.3	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

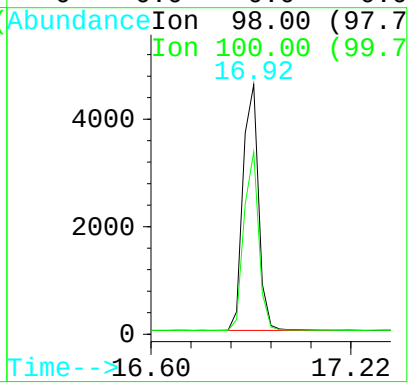


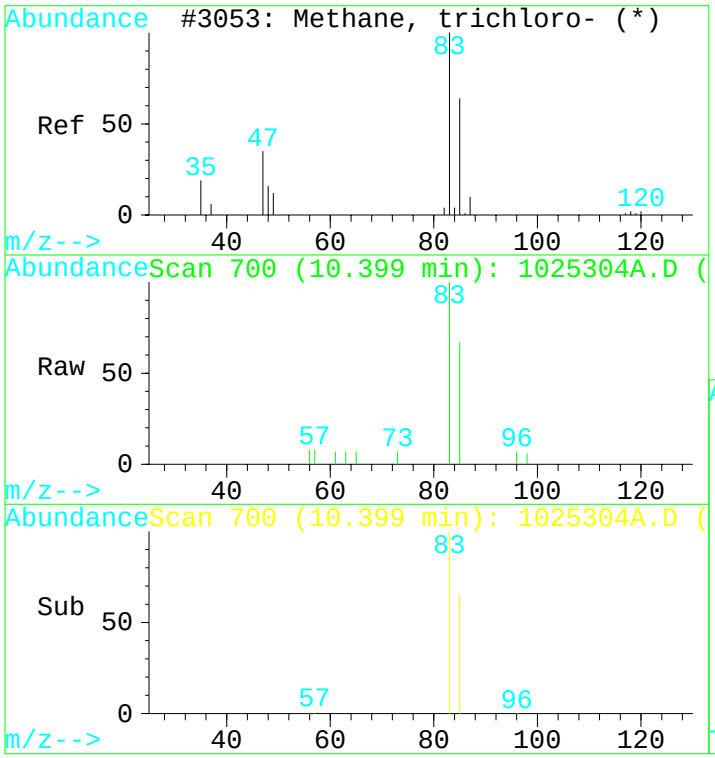


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 16.92 min Scan# 983
Delta R.T. -0.13 min
Lab File: 1025304A.D
Acq: 2 Jul 110 10:35 pm

Tgt Ion:98 Resp: 15372

Ion	Ratio	Lower	Upper
98	100		
100	69.9	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

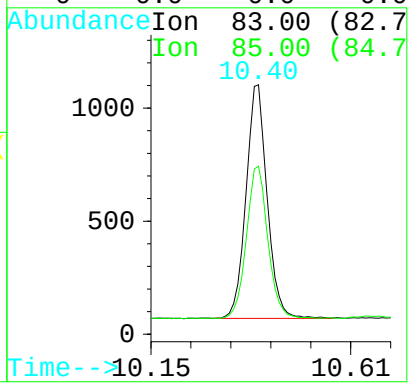


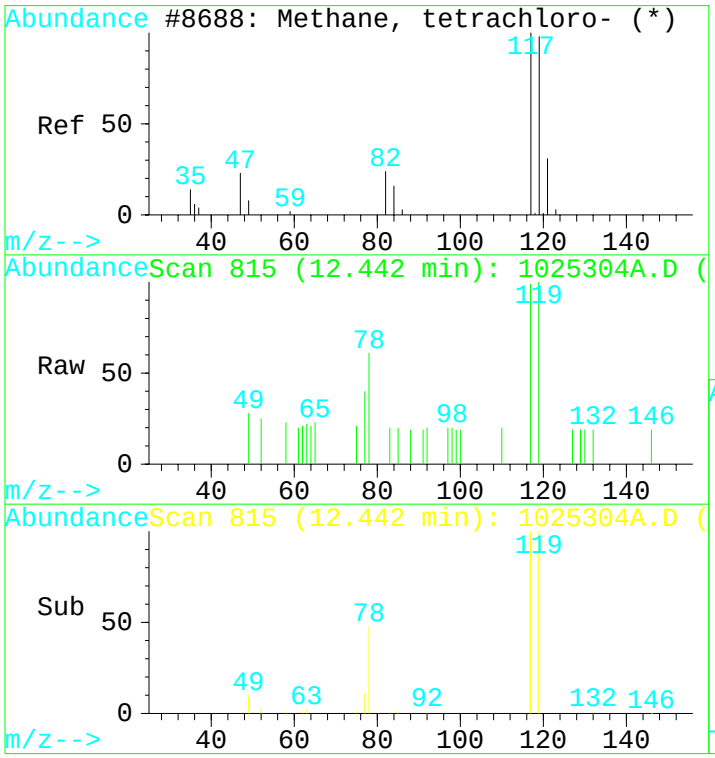


#3
Chloroform
Concen: 0.08 ppbV
RT: 10.40 min Scan# 700
Delta R.T. -0.26 min
Lab File: 1025304A.D
Acq: 2 Jul 110 10:35 pm

Tgt Ion:83 Resp: 3551

Ion	Ratio	Lower	Upper
83	100		
85	65.1	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

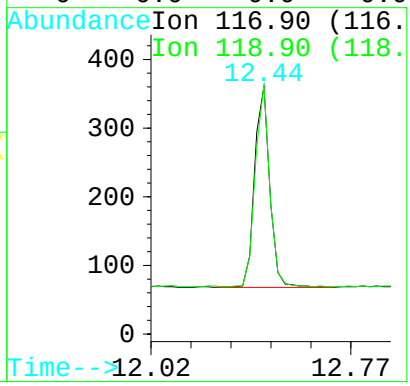


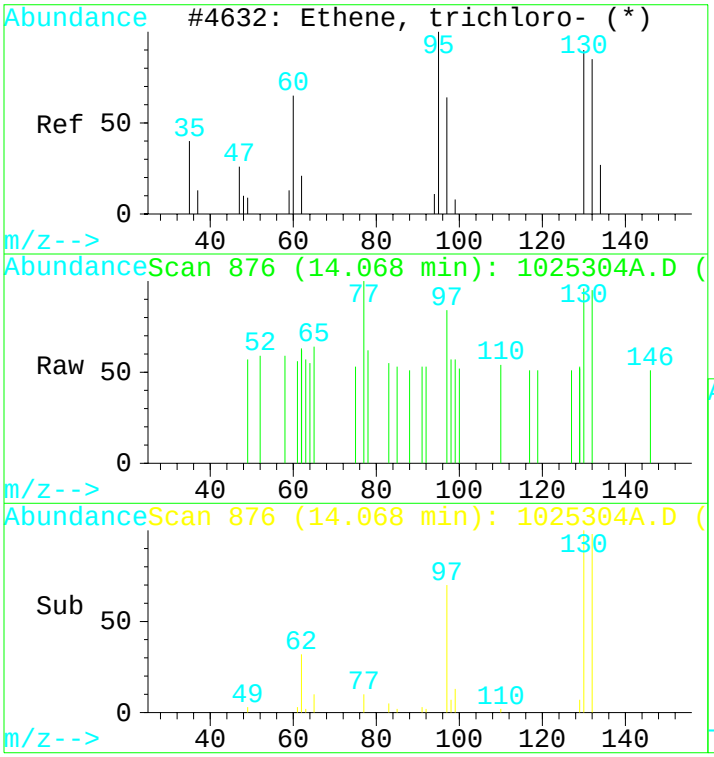


#4
Carbon tetrachloride
Concen: 0.05 ppbV
RT: 12.44 min Scan# 815
Delta R.T. -0.22 min
Lab File: 1025304A.D
Acq: 2 Jul 110 10:35 pm

Tgt Ion:116.9 Resp: 1164

Ion	Ratio	Lower	Upper
117	100		
119	100.2	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

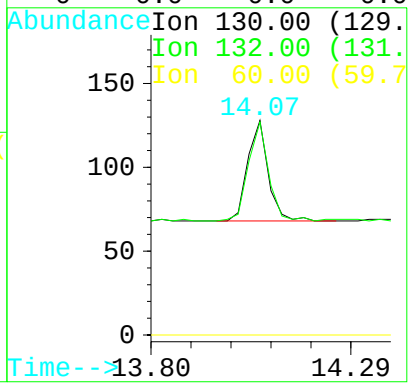




#5
Trichloroethene
Concen: 0.01 ppbV
RT: 14.07 min Scan# 876
Delta R.T. -0.19 min
Lab File: 1025304A.D
Acq: 2 Jul 110 10:35 pm

Tgt Ion:130 Resp: 207

Ion	Ratio	Lower	Upper
130	100		
132	97.5	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025305A.D
Acq Time : 2 Jul 110 5:41 pm Operator: CM
Sample : OA-LB-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

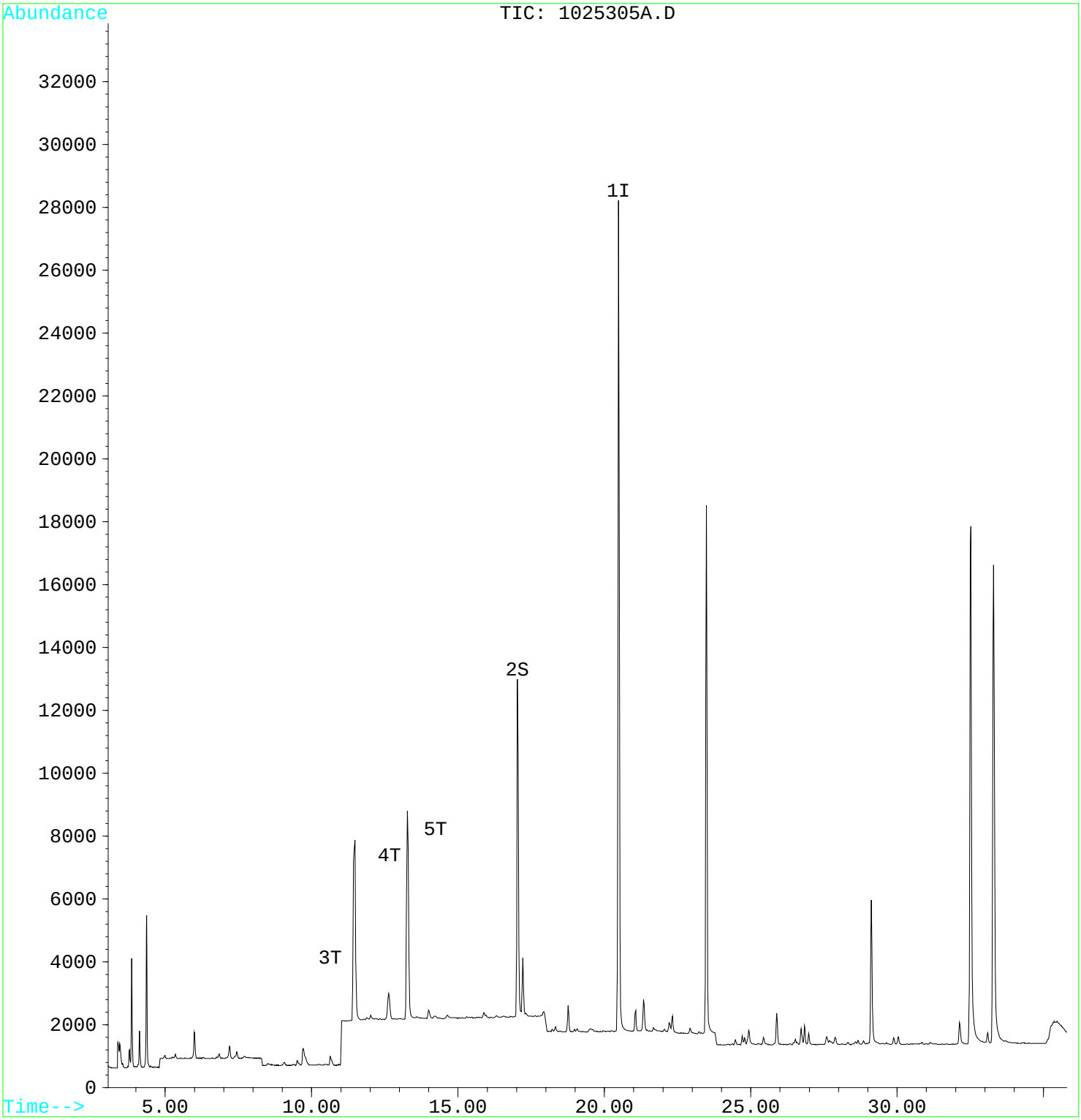
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	44772	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	19160	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	769	0.02	ppbV	98
4) Carbon tetrachloride	12.66	117	567	0.02	ppbV	95
5) Trichloroethene	14.23	130	55	0.00	ppbV	91

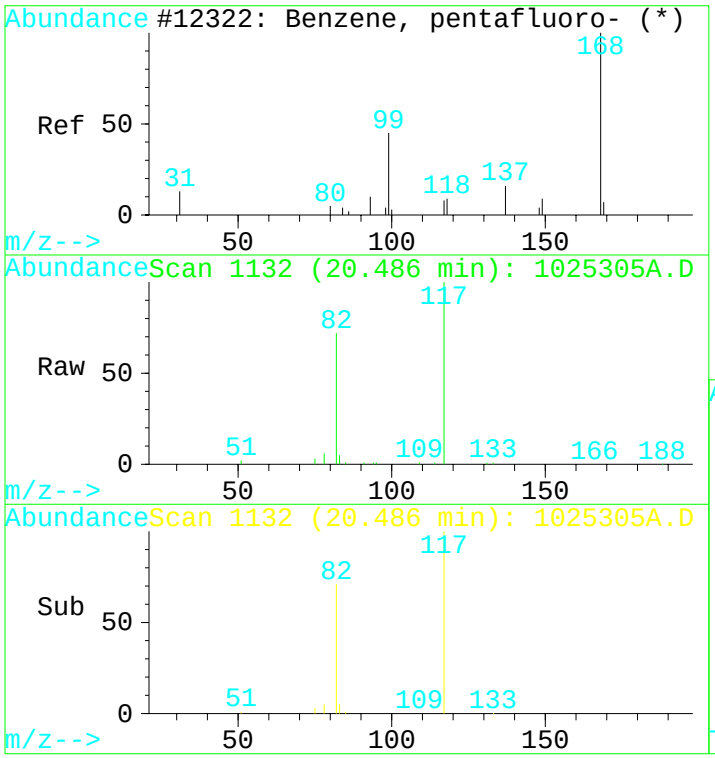
(#) = qualifier out of range (m) = manual integration
1025305A.D 2NTHG_A.M Tue Jul 06 15:27:11 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025305A.D
Acq Time : 2 Jul 110 5:41 pm Operator: CM
Sample : OA-LB-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

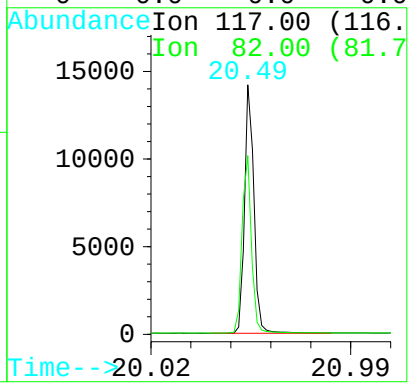


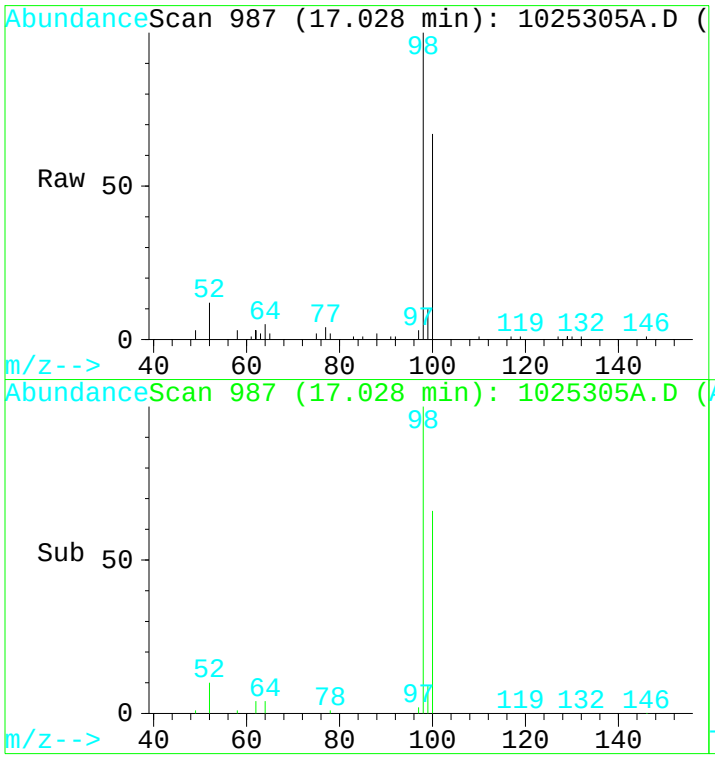


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025305A.D
Acq: 2 Jul 110 5:41 pm

Tgt Ion:117 Resp: 44772

Ion	Ratio	Lower	Upper
117	100		
82	71.4	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

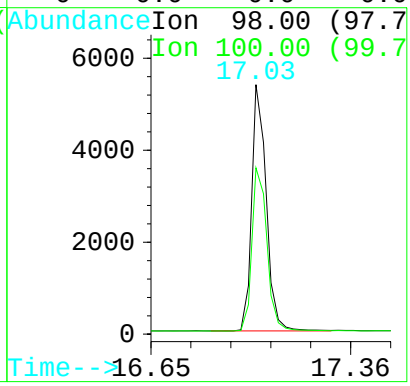


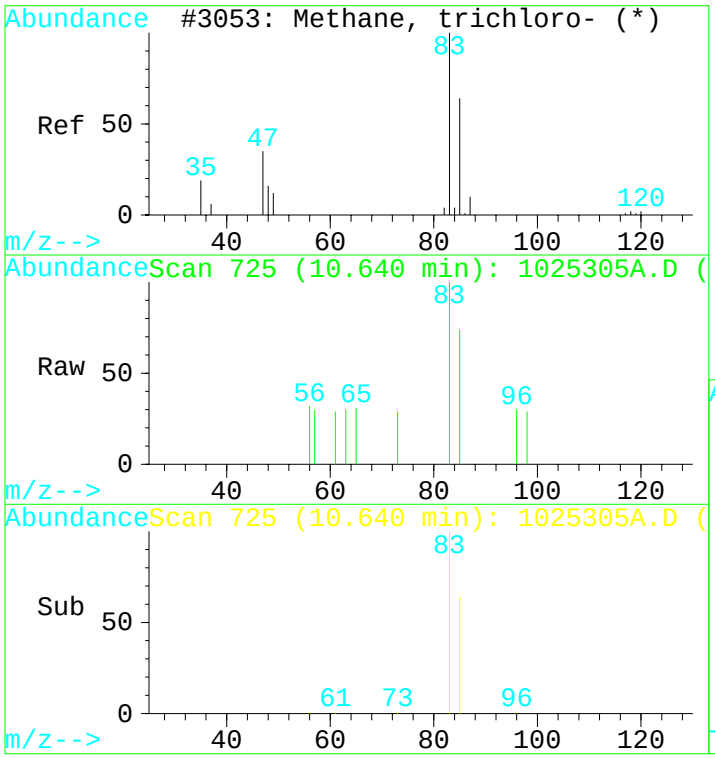


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025305A.D
Acq: 2 Jul 110 5:41 pm

Tgt Ion:98 Resp: 19160

Ion	Ratio	Lower	Upper
98	100		
100	68.9	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

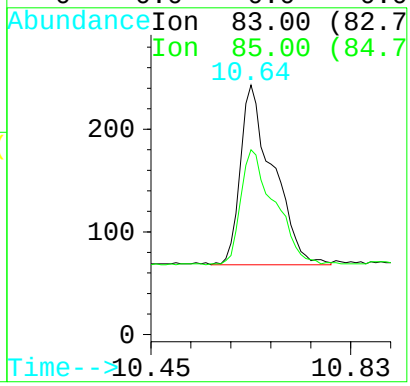


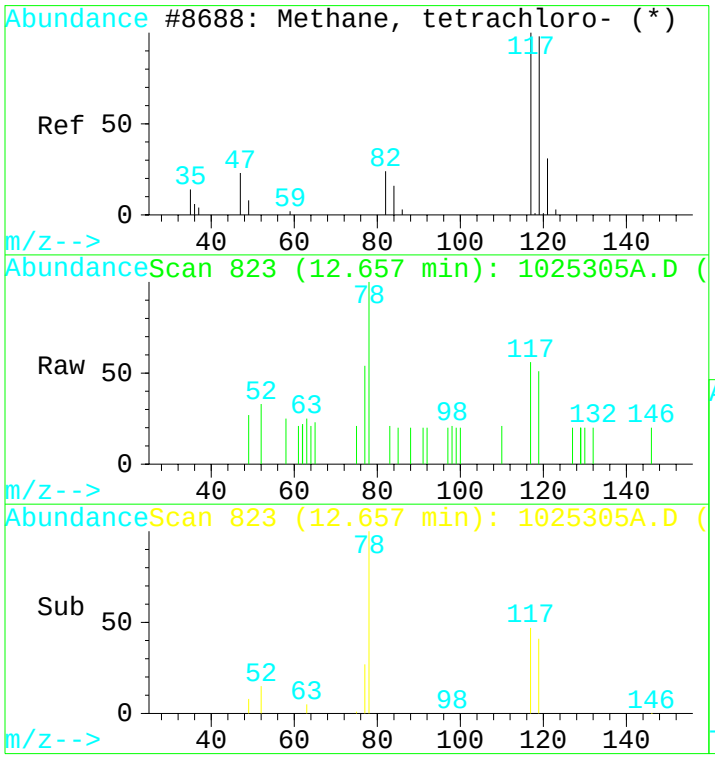


#3
Chloroform
Concen: 0.02 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: 1025305A.D
Acq: 2 Jul 110 5:41 pm

Tgt Ion:83 Resp: 769

Ion	Ratio	Lower	Upper
83	100		
85	63.5	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

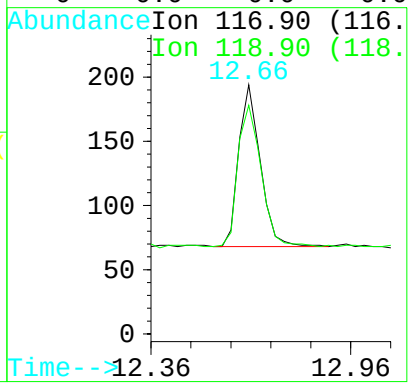


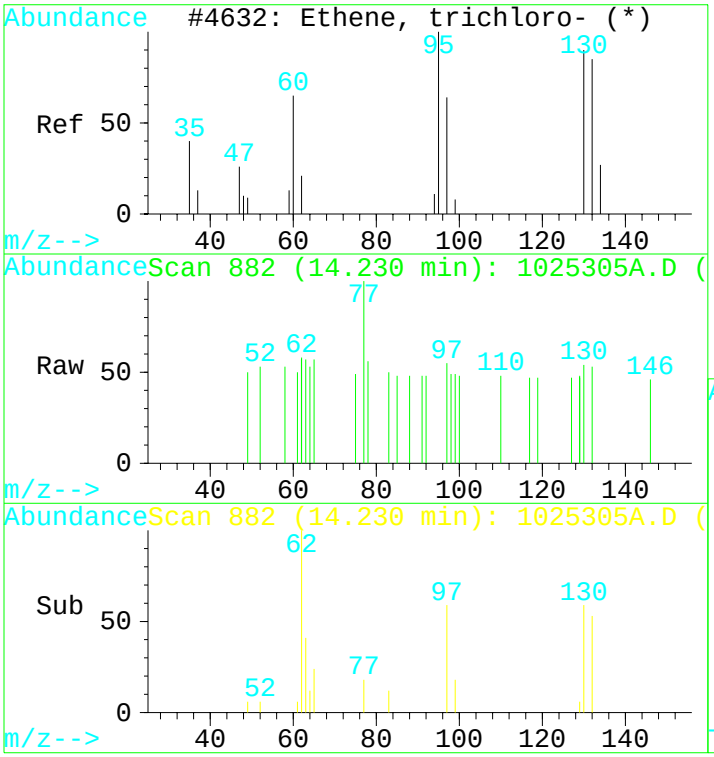


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.66 min Scan# 823
Delta R.T. -0.00 min
Lab File: 1025305A.D
Acq: 2 Jul 110 5:41 pm

Tgt Ion:116.9 Resp: 567

Ion	Ratio	Lower	Upper
117	100		
119	86.9	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

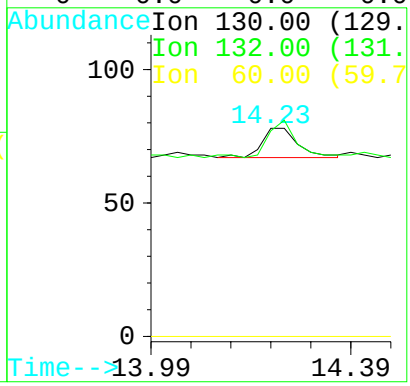




#5
Trichloroethene
Concen: 0.00 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025305A.D
Acq: 2 Jul 110 5:41 pm

Tgt Ion:130 Resp: 55

Ion	Ratio	Lower	Upper
130	100		
132	85.7	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025306A.D
Acq Time : 2 Jul 110 6:23 pm Operator: CM
Sample : OA-U4-U5-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

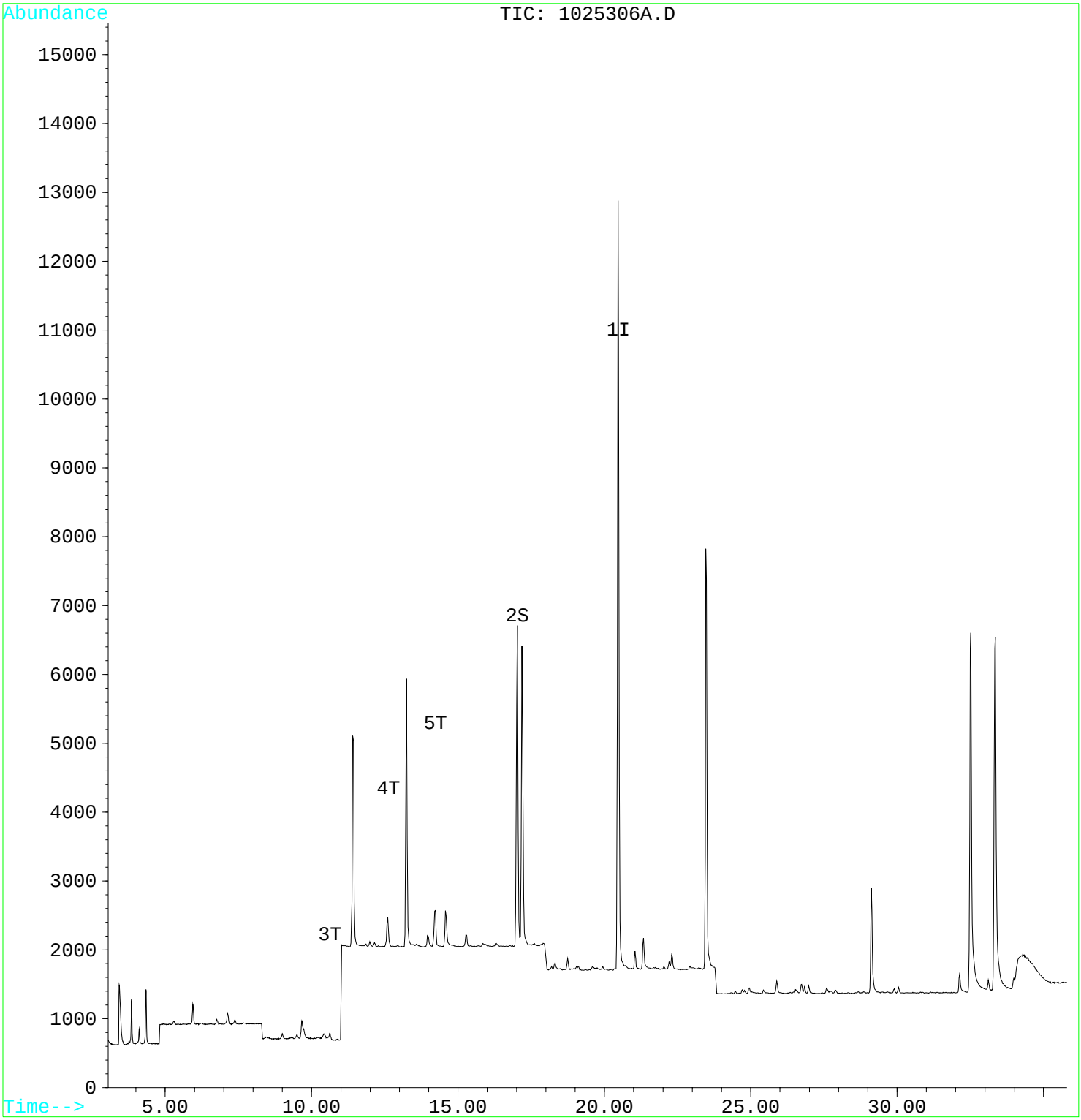
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.49	117	20922	0.20	ppbV	-0.02
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	8583	0.17	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.63	83	181	0.01	ppbV	99
4) Carbon tetrachloride	12.63	117	203	0.02	ppbV	95
5) Trichloroethene	14.23	130	622	0.05	ppbV	92

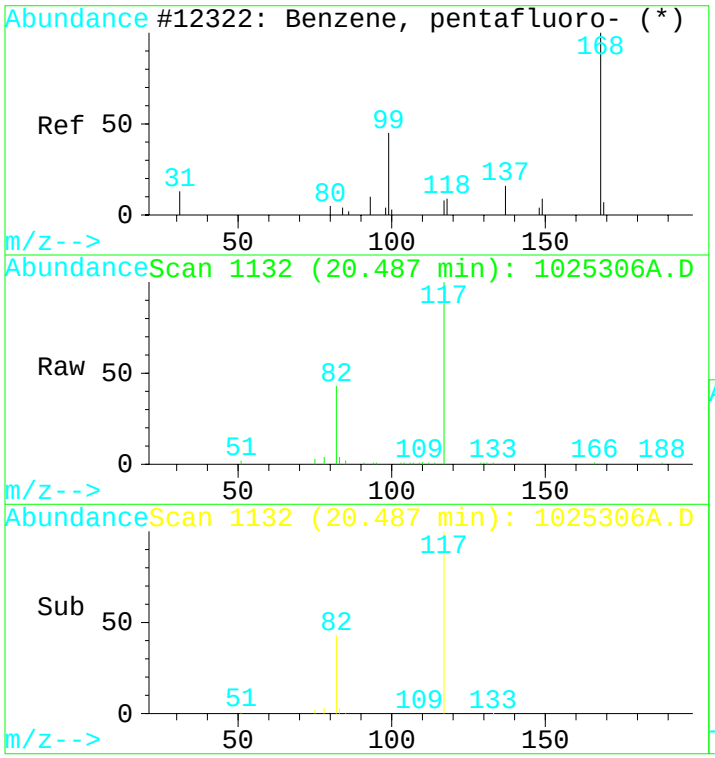
(#) = qualifier out of range (m) = manual integration
1025306A.D 2NTHG_A.M Tue Jul 06 15:27:40 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025306A.D
Acq Time : 2 Jul 110 6:23 pm Operator: CM
Sample : OA-U4-U5-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

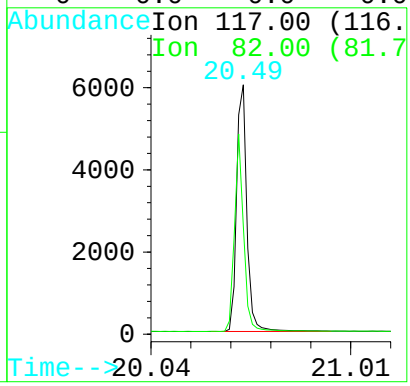


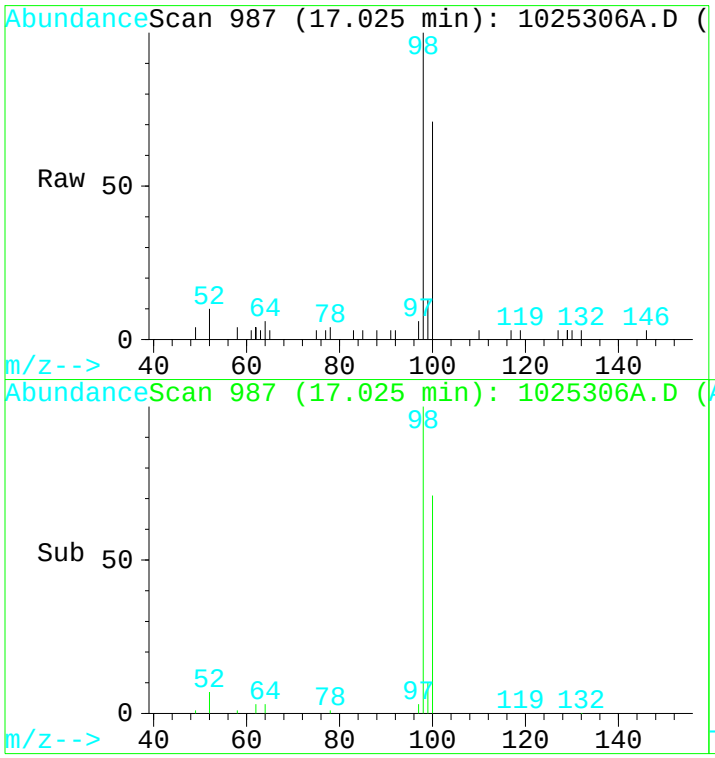


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.49 min Scan# 1132
Delta R.T. -0.02 min
Lab File: 1025306A.D
Acq: 2 Jul 110 6:23 pm

Tgt Ion:117 Resp: 20922

Ion	Ratio	Lower	Upper
117	100		
82	42.7	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

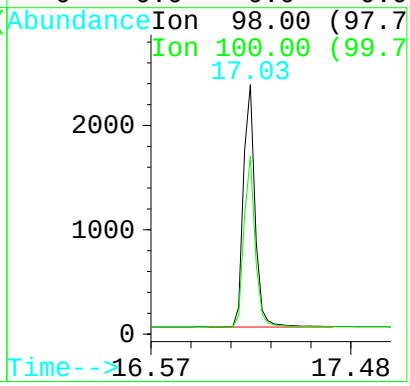


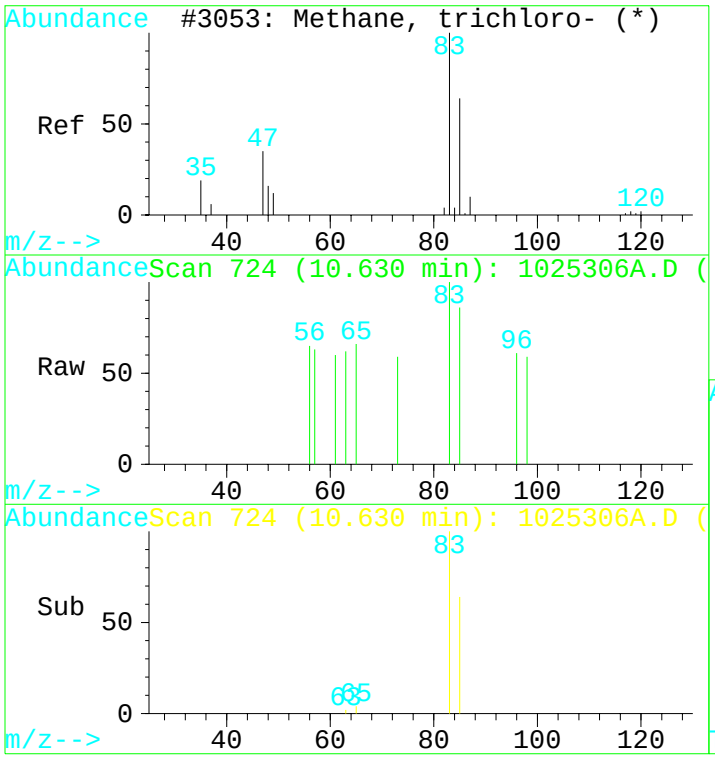


#2
Toluene-d8
Concen: 0.17 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: 1025306A.D
Acq: 2 Jul 110 6:23 pm

Tgt Ion:98 Resp: 8583

Ion	Ratio	Lower	Upper
98	100		
100	68.4	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

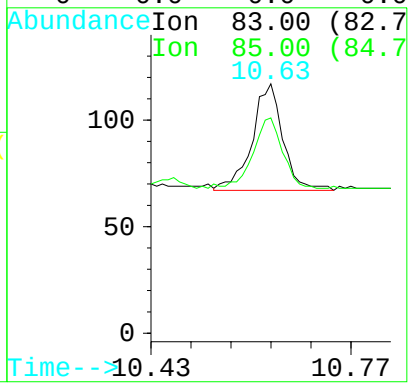


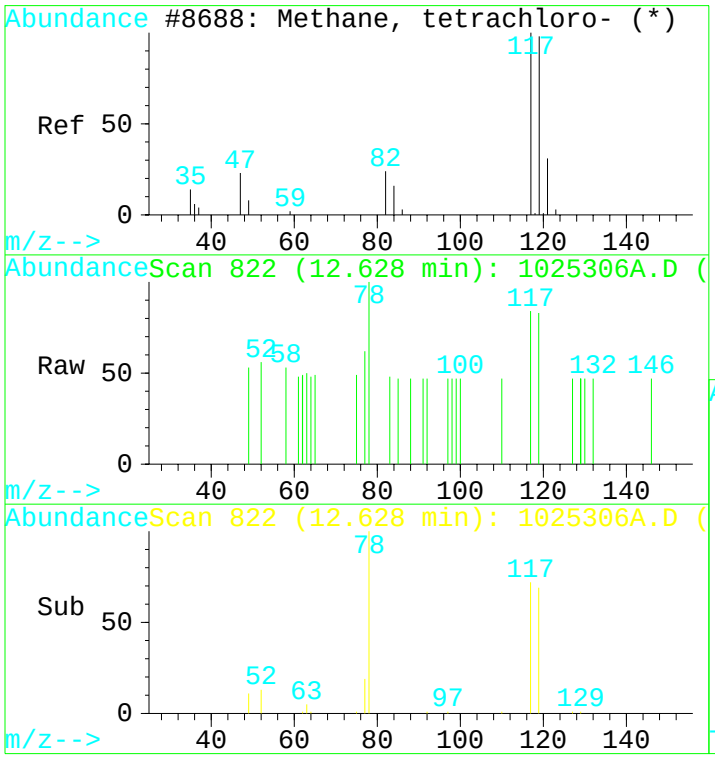


#3
Chloroform
Concen: 0.01 ppbV
RT: 10.63 min Scan# 724
Delta R.T. -0.03 min
Lab File: 1025306A.D
Acq: 2 Jul 110 6:23 pm

Tgt Ion:83 Resp: 181

Ion	Ratio	Lower	Upper
83	100		
85	63.6	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

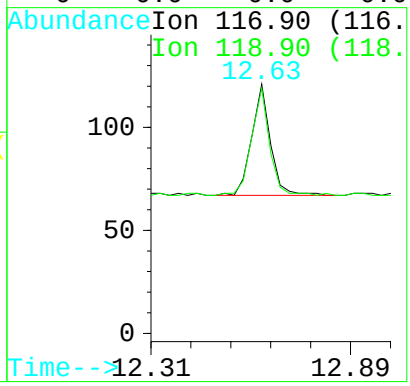


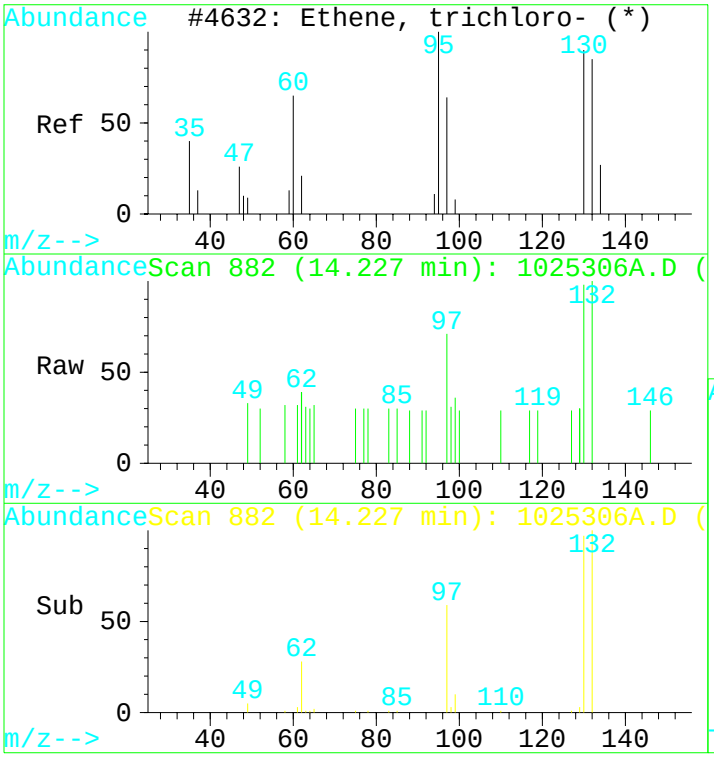


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: 1025306A.D
Acq: 2 Jul 110 6:23 pm

Tgt Ion:116.9 Resp: 203

Ion	Ratio	Lower	Upper
117	100		
119	96.3	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

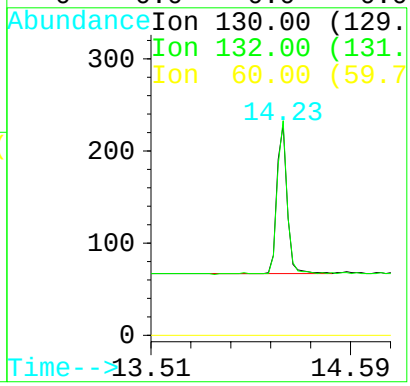




#5
Trichloroethene
Concen: 0.05 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: 1025306A.D
Acq: 2 Jul 110 6:23 pm

Tgt Ion:130 Resp: 622

Ion	Ratio	Lower	Upper
130	100		
132	102.8	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025307A.D
Acq Time : 2 Jul 110 7:05 pm Operator: CM
Sample : OA-UW-00-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

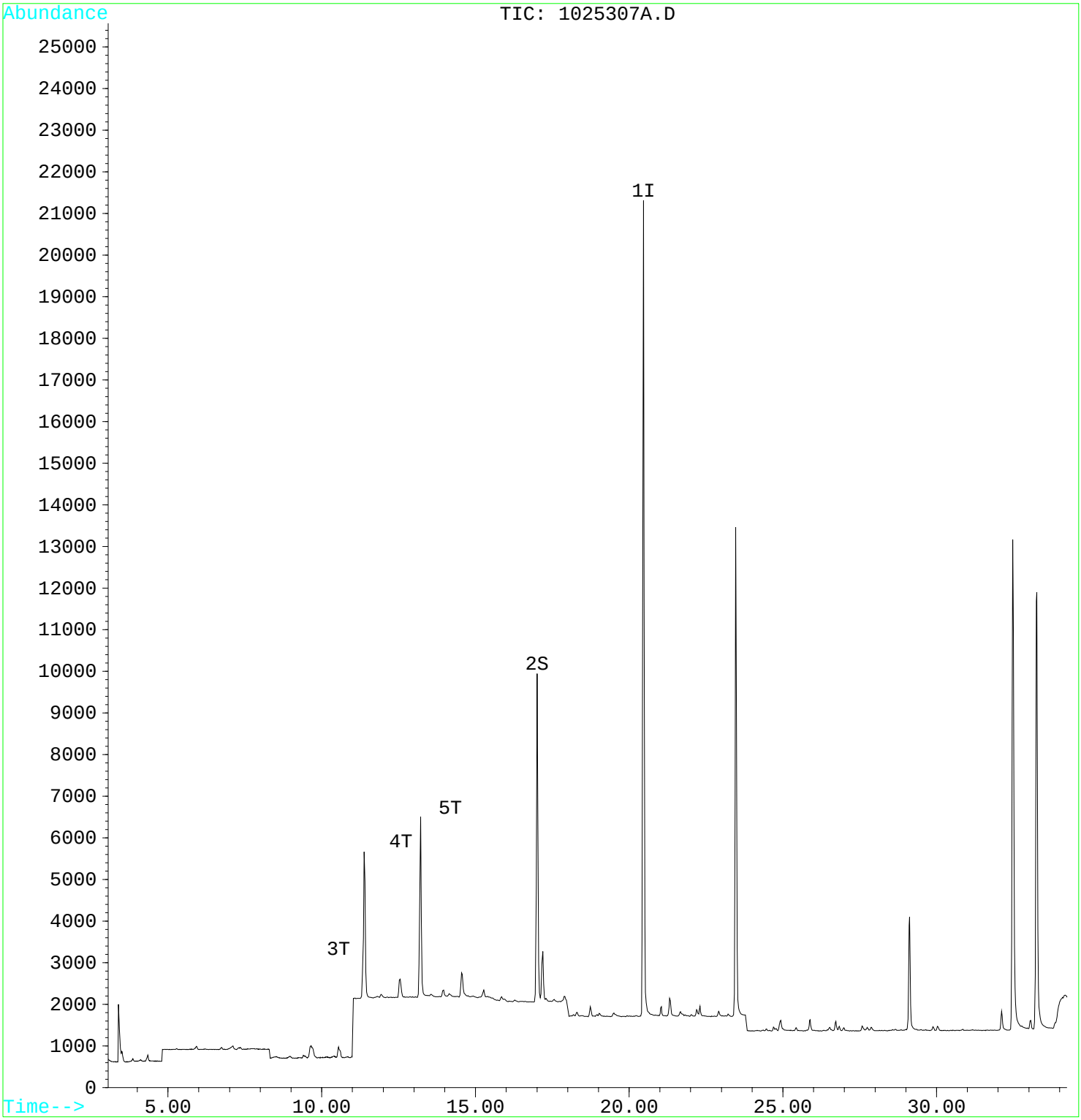
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.46	117	33777	0.20	ppbV		-0.05
System Monitoring Compounds							%Recovery
2) Toluene-d8	17.00	98	13174	0.17	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.54	83	795	0.02	ppbV		97
4) Carbon tetrachloride	12.58	117	185	0.01	ppbV		98
5) Trichloroethene	14.18	130	62	0.00	ppbV	#	46

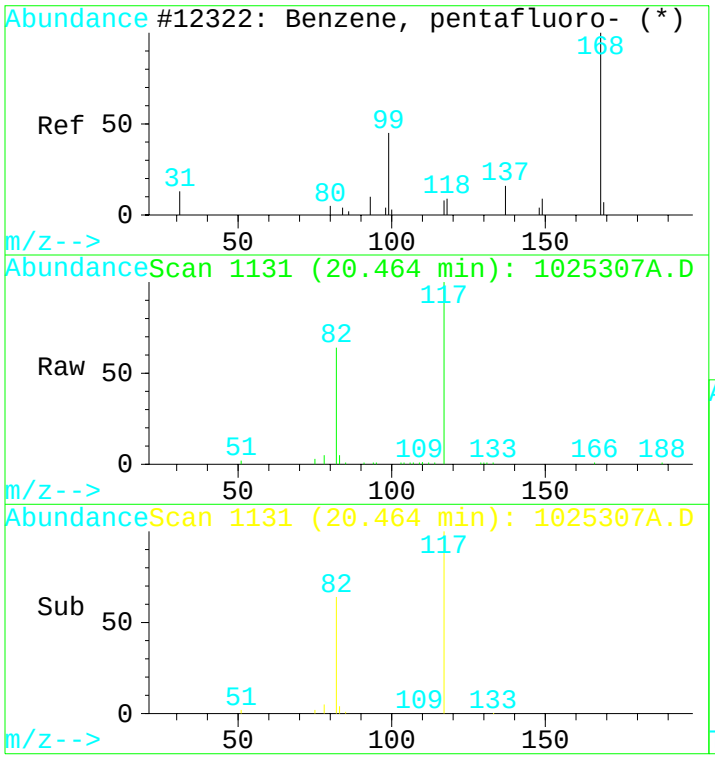
(#) = qualifier out of range (m) = manual integration
1025307A.D 2NTHG_A.M Tue Jul 06 15:28:03 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025307A.D
Acq Time : 2 Jul 110 7:05 pm Operator: CM
Sample : OA-UW-00-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

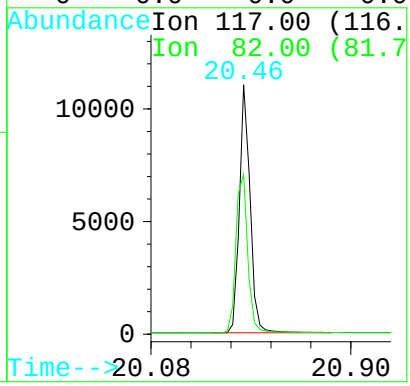


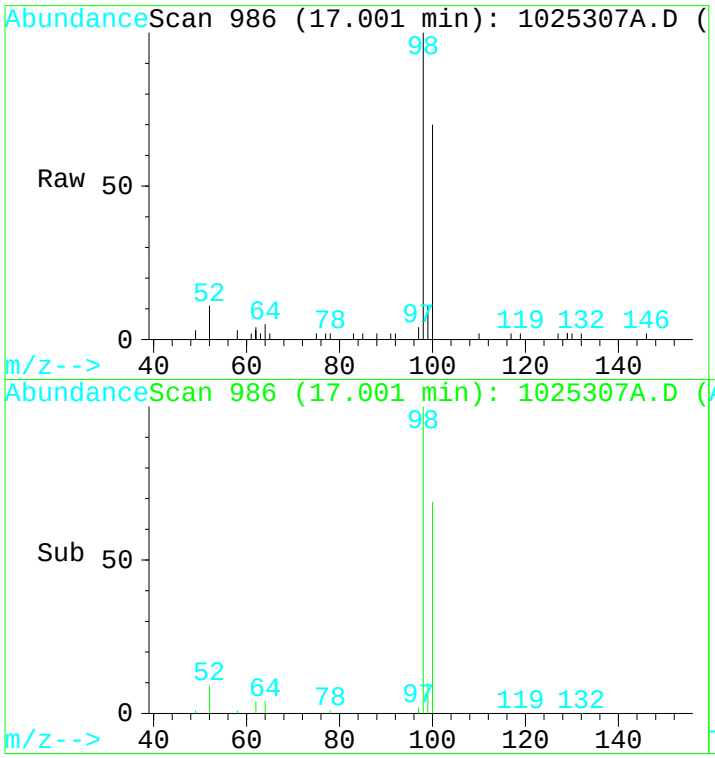


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: 1025307A.D
Acq: 2 Jul 110 7:05 pm

Tgt Ion:117 Resp: 33777

Ion	Ratio	Lower	Upper
117	100		
82	64.0	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

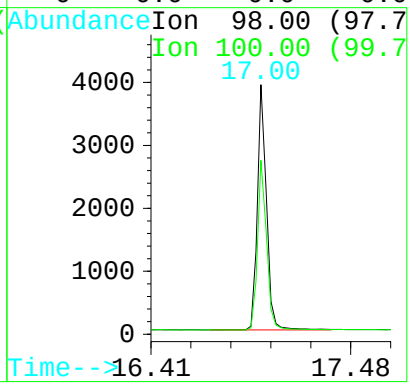


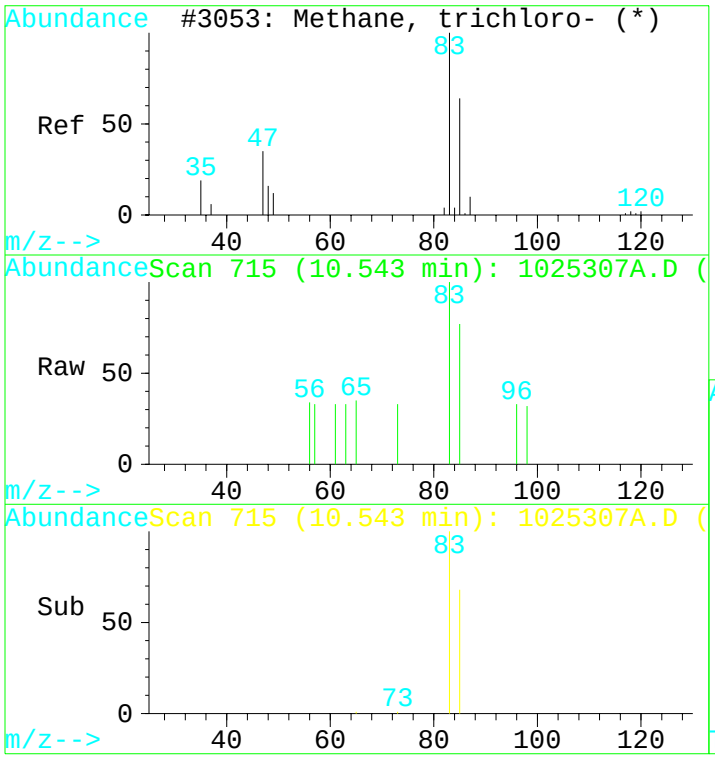


#2
Toluene-d8
Concen: 0.17 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: 1025307A.D
Acq: 2 Jul 110 7:05 pm

Tgt Ion:98 Resp: 13174

Ion	Ratio	Lower	Upper
98	100		
100	68.8	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

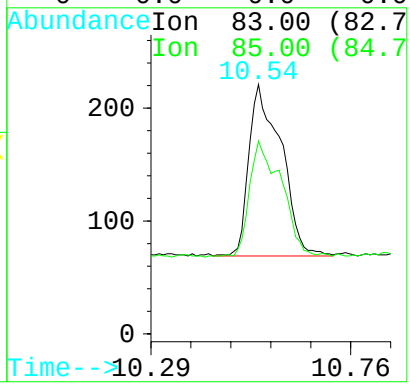


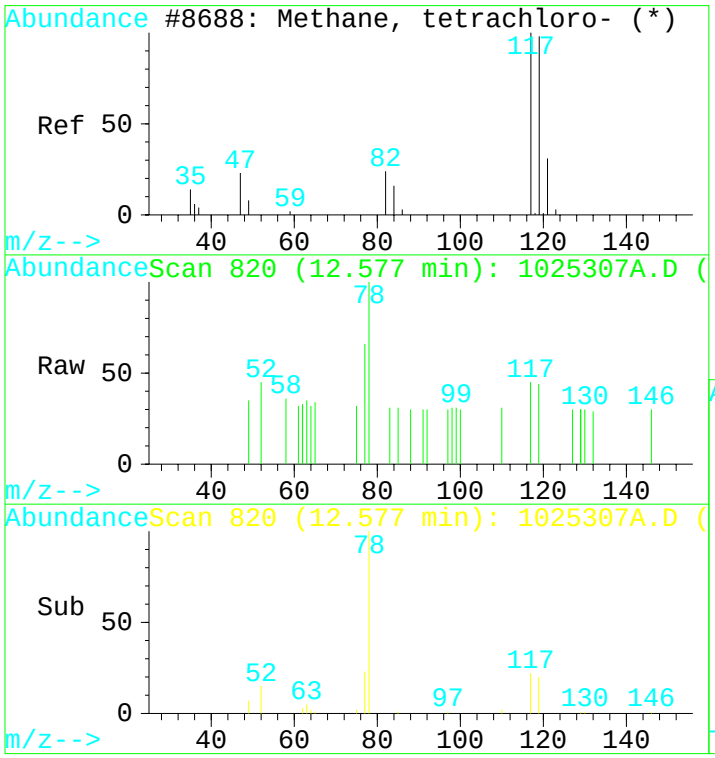


#3
Chloroform
Concen: 0.02 ppbV
RT: 10.54 min Scan# 715
Delta R.T. -0.12 min
Lab File: 1025307A.D
Acq: 2 Jul 110 7:05 pm

Tgt Ion:83 Resp: 795

Ion	Ratio	Lower	Upper
83	100		
85	67.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

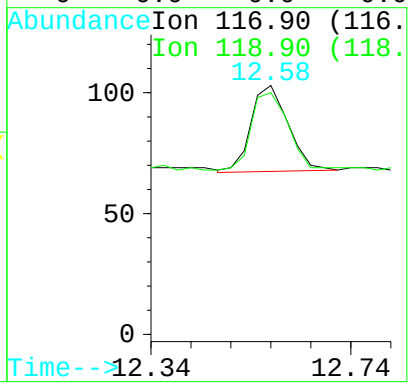


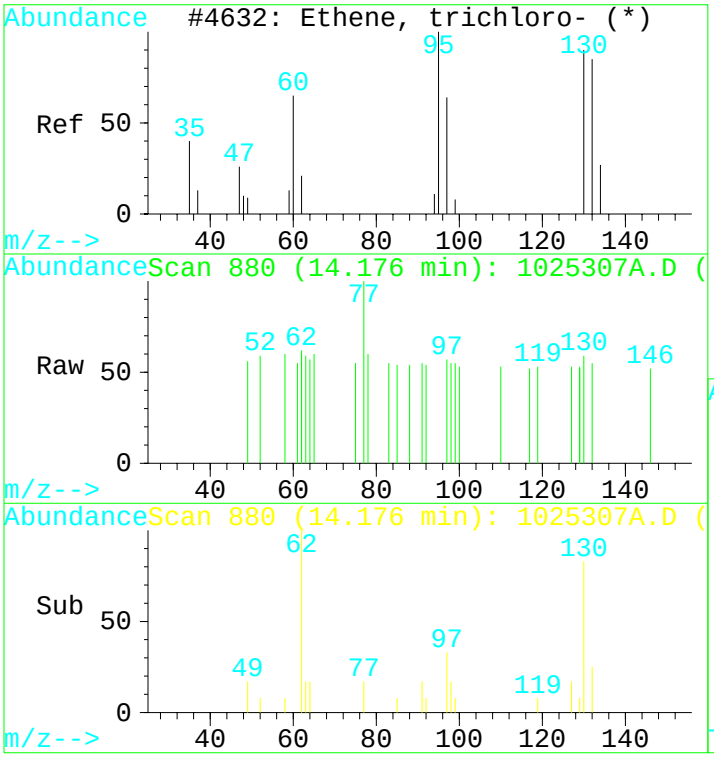


#4
Carbon tetrachloride
Concen: 0.01 ppbV
RT: 12.58 min Scan# 820
Delta R.T. -0.08 min
Lab File: 1025307A.D
Acq: 2 Jul 110 7:05 pm

Tgt Ion:116.9 Resp: 185

Ion	Ratio	Lower	Upper
117	100		
119	90.0	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

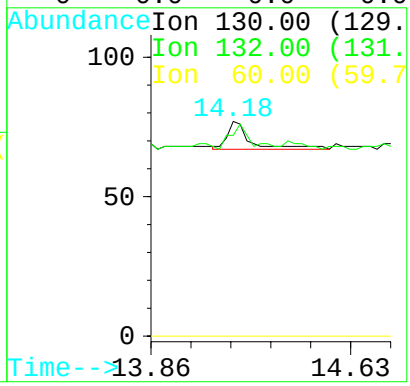




#5
Trichloroethene
Concen: 0.00 ppbV
RT: 14.18 min Scan# 880
Delta R.T. -0.08 min
Lab File: 1025307A.D
Acq: 2 Jul 110 7:05 pm

Tgt Ion:130 Resp: 62

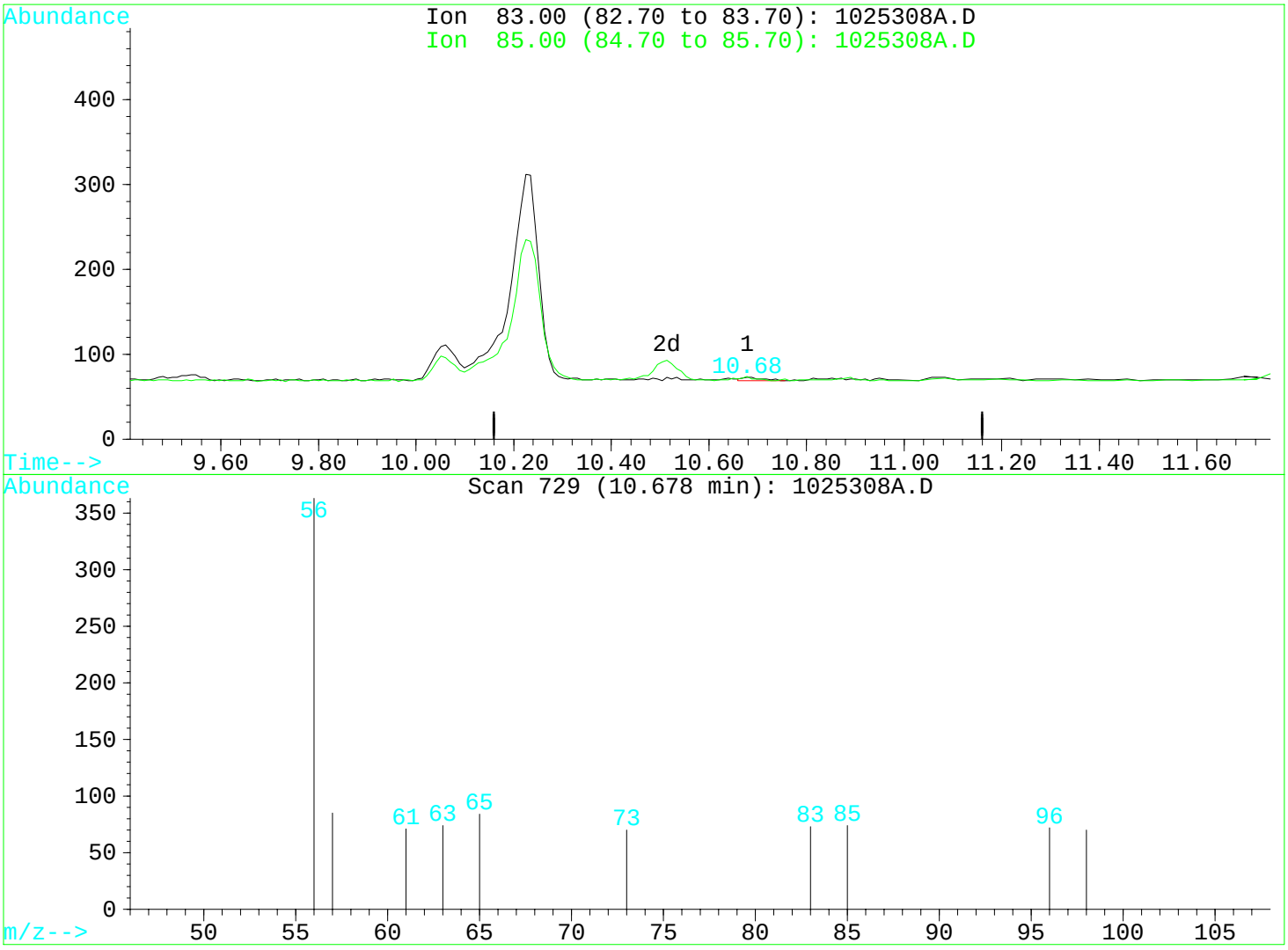
Ion	Ratio	Lower	Upper
130	100		
132	42.1	75.8	113.6#
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025308A.D
Acq Time : 2 Jul 110 7:46 pm Operator: CM
Sample : IA-AB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration



TIC: 1025308A.D

RT Shift - KB 7/6/10

(3) Chloroform (T)

10.68min 0.00ppbV

response 11

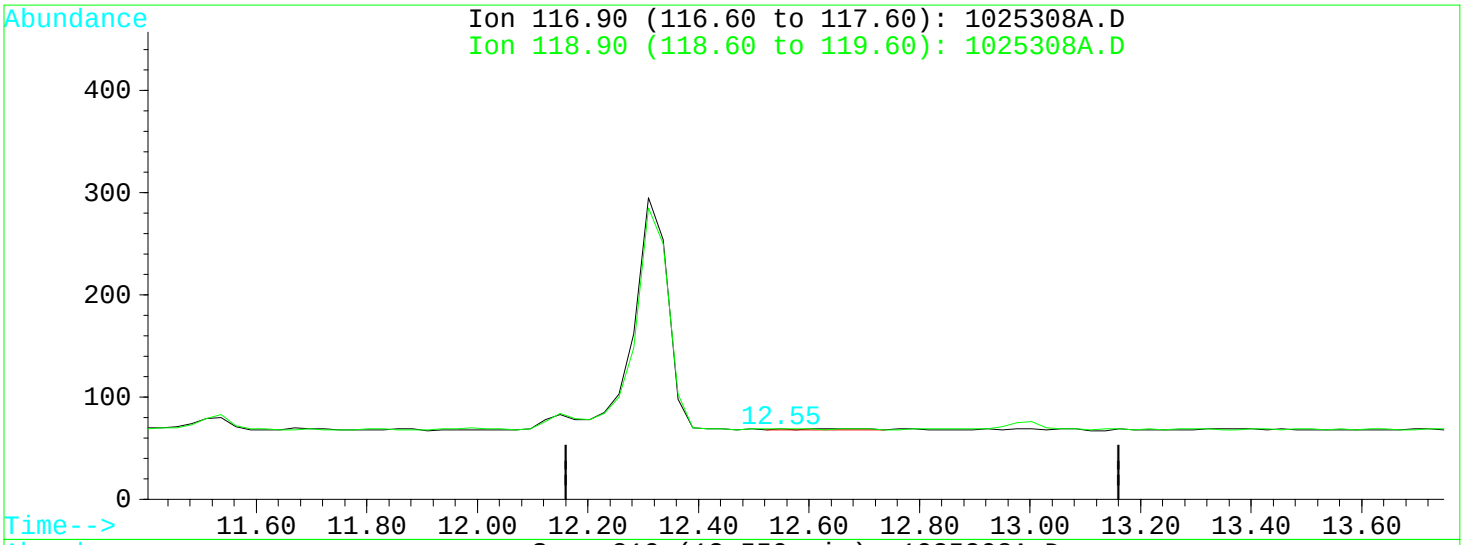
Ion	Exp%	Act%
83.00	100	100
85.00	64.80	100.00#
0.00	0.00	0.00
0.00	0.00	0.00

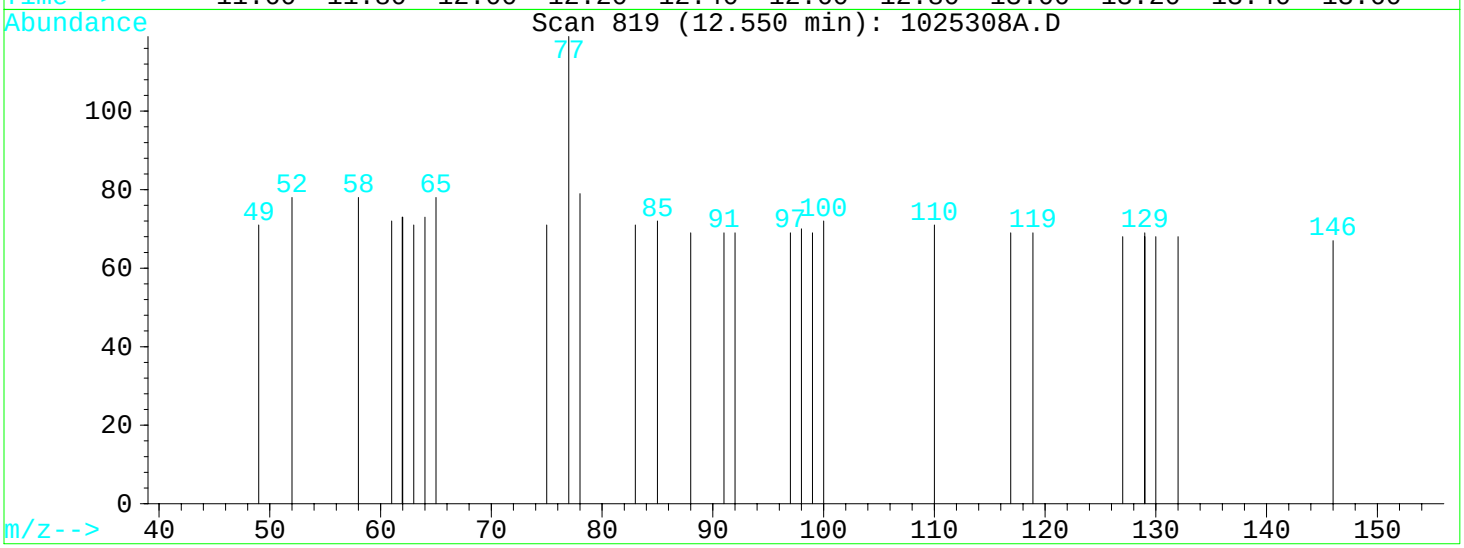
1025308A.D 2NTHG_A.M Tue Jul 06 15:28:29 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025308A.D
Acq Time : 2 Jul 110 7:46 pm Operator: CM
Sample : IA-AB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:28 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025308A.D

(4) Carbon tetrachloride (T) RT Shift- KB 7/6/10

12.55min 0.00ppbV

response 9

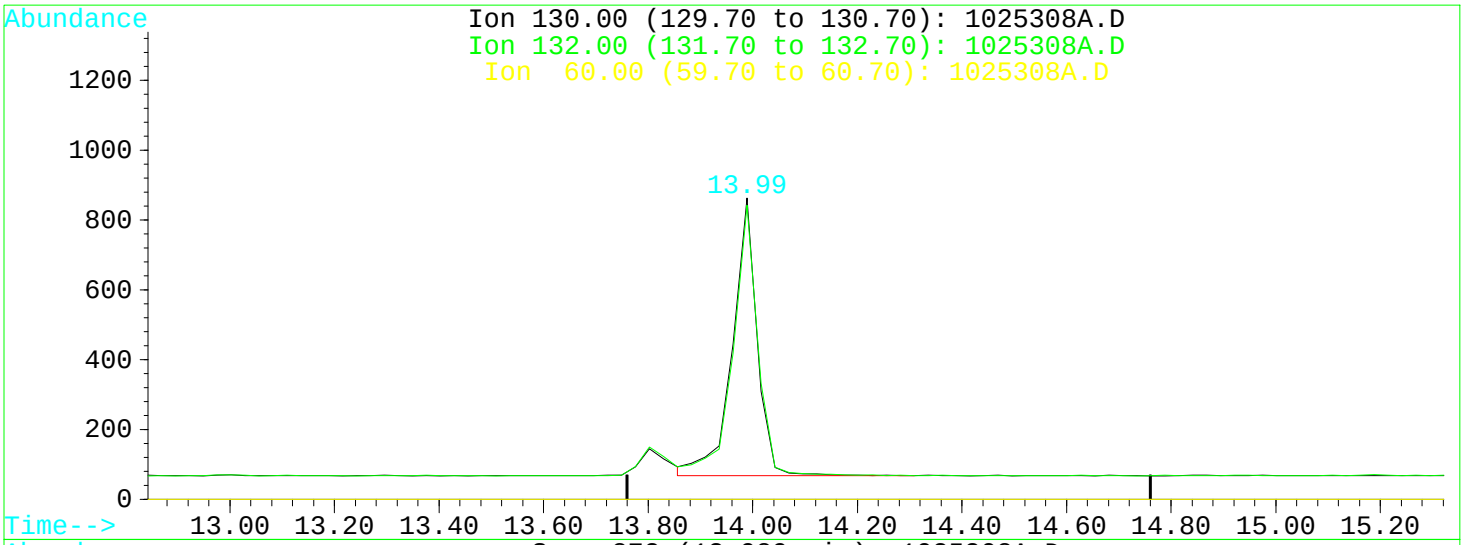
Ion	Exp%	Act%
116.90	100	100
118.90	91.80	50.00#
0.00	0.00	0.00
0.00	0.00	0.00

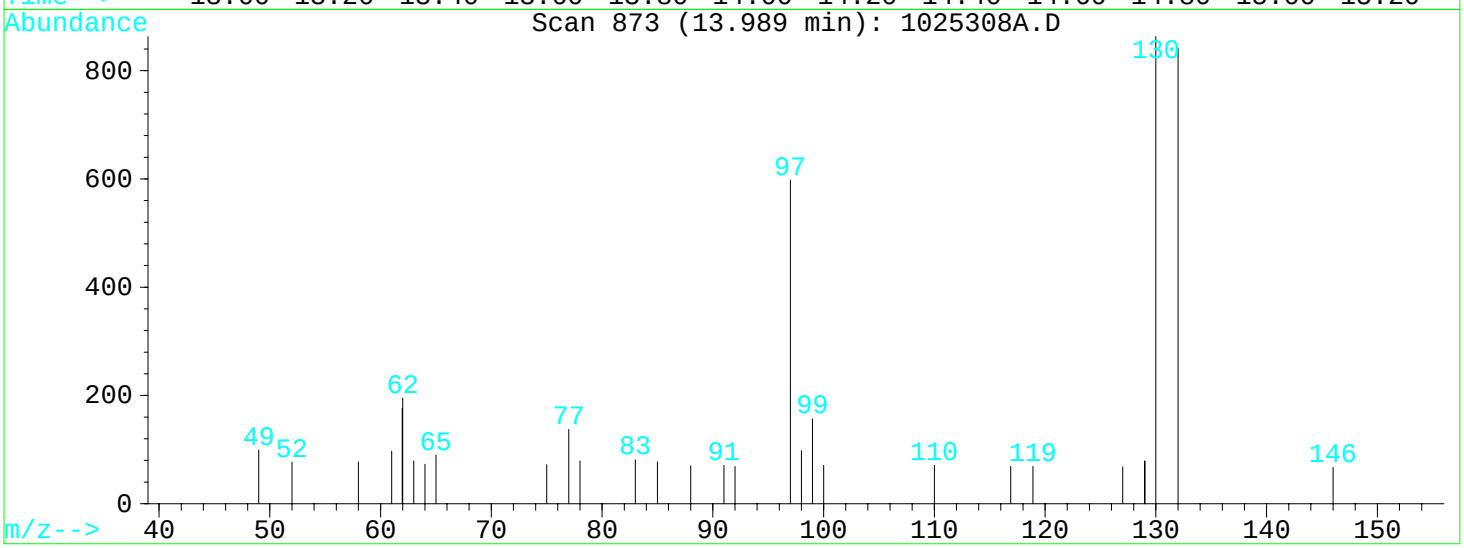
1025308A.D 2NTHG_A.M Tue Jul 06 15:29:03 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025308A.D
Acq Time : 2 Jul 110 7:46 pm Operator: CM
Sample : IA-AB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:29 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration





TIC: 1025308A.D

(5) Trichloroethene (T) Split Peak - KB 7/6/10

13.99min 0.11ppbV

response 2607

Ion	Exp%	Act%
130.00	100	100
132.00	94.70	97.32
60.00	0.00	0.00
0.00	0.00	0.00

1025308A.D 2NTHG_A.M Tue Jul 06 15:29:36 2010

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025308A.D
Acq Time : 2 Jul 110 7:46 pm Operator: CM
Sample : IA-AB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:30 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

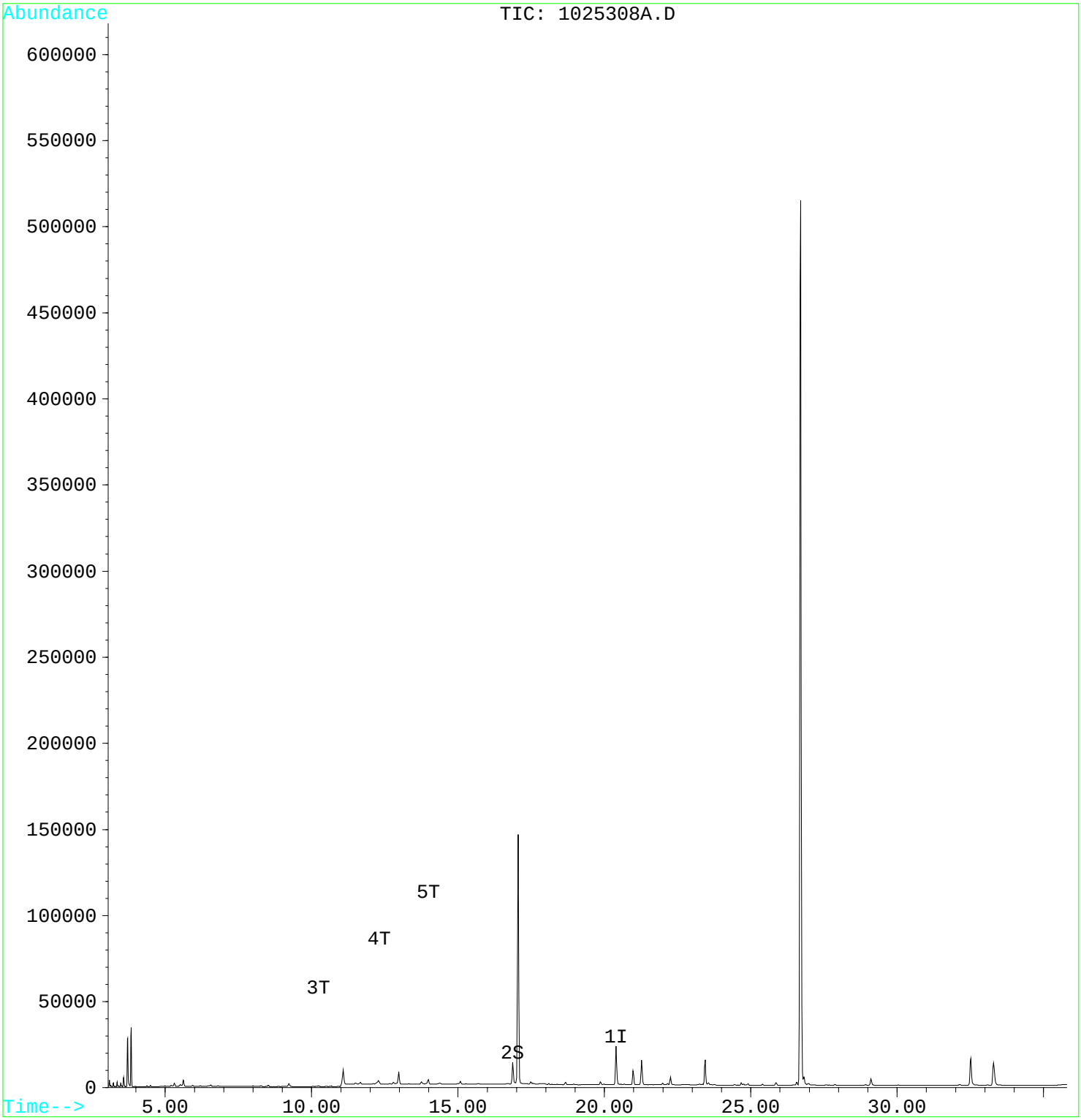
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
1) Chlorobenzene-d5	20.40	117	36748	0.20	ppbV		-0.11
System Monitoring Compounds							%Recovery
2) Toluene-d8	16.87	98	15540	0.18	ppbV		
Target Compounds							Qvalue
3) Chloroform	10.22	83	1155	0.03	ppbV	m	55
4) Carbon tetrachloride	12.31	117	1051	0.04	ppbV	m	56
5) Trichloroethene	13.99	130	3049	0.13	ppbV	m	97

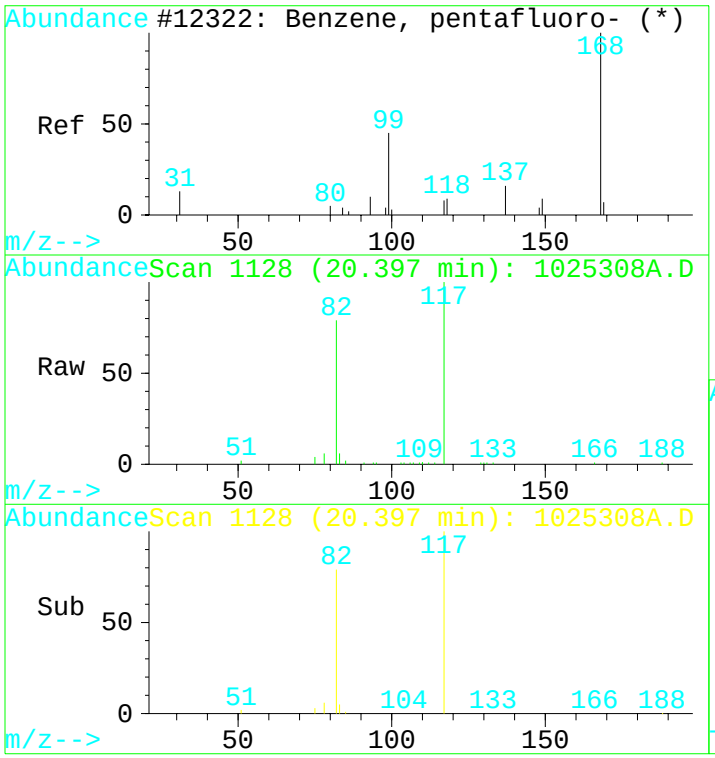
(#) = qualifier out of range (m) = manual integration
1025308A.D 2NTHG_A.M Tue Jul 06 15:30:25 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025308A.D
Acq Time : 2 Jul 110 7:46 pm Operator: CM
Sample : IA-AB-O1-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:30 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

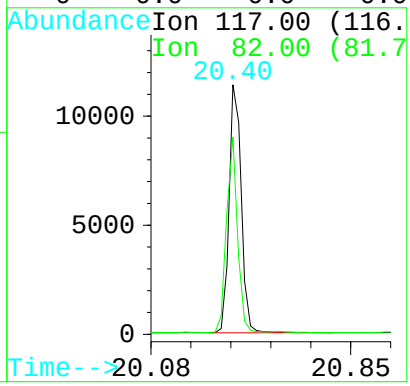


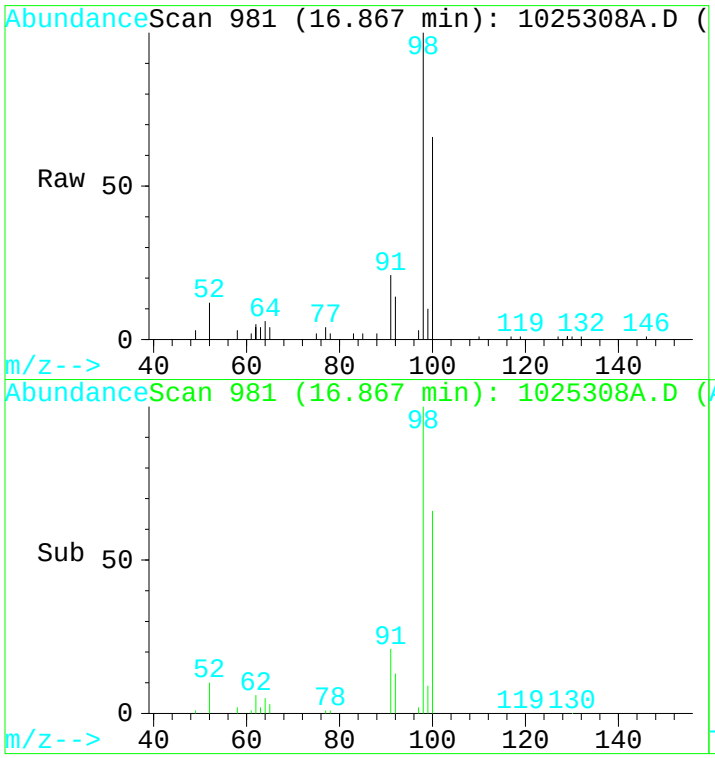


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.40 min Scan# 1128
Delta R.T. -0.11 min
Lab File: 1025308A.D
Acq: 2 Jul 110 7:46 pm

Tgt Ion:117 Resp: 36748

Ion	Ratio	Lower	Upper
117	100		
82	78.8	52.6	78.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

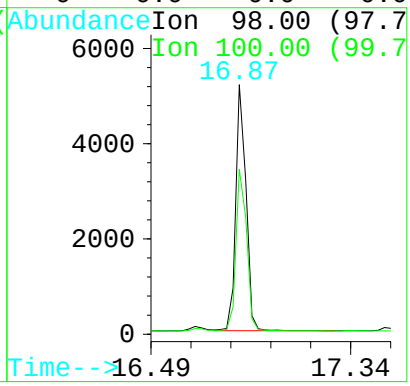


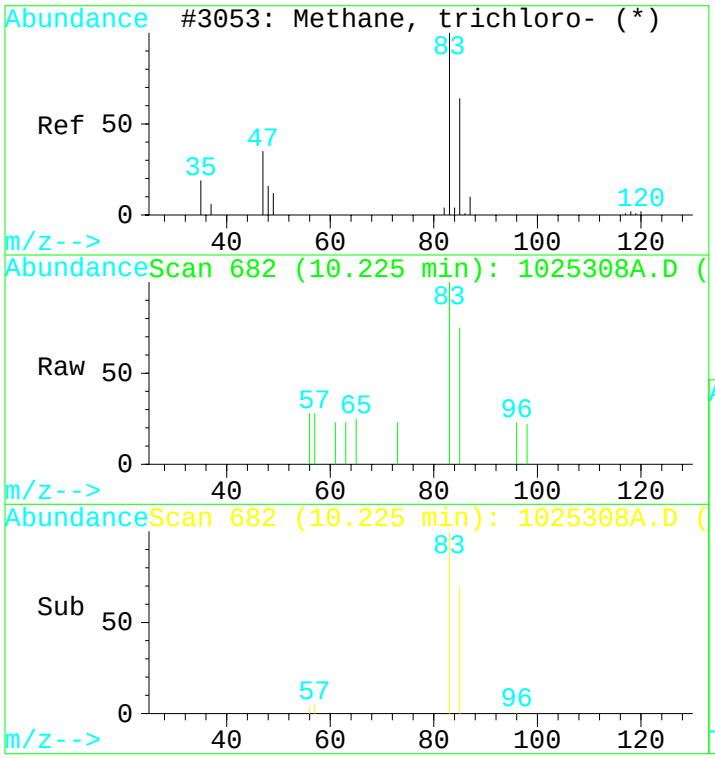


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 16.87 min Scan# 981
Delta R.T. -0.18 min
Lab File: 1025308A.D
Acq: 2 Jul 110 7:46 pm

Tgt Ion:98 Resp: 15540

Ion	Ratio	Lower	Upper
98	100		
100	68.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

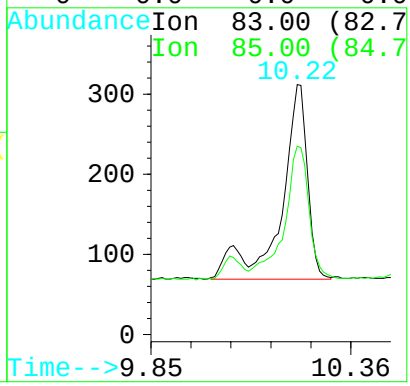


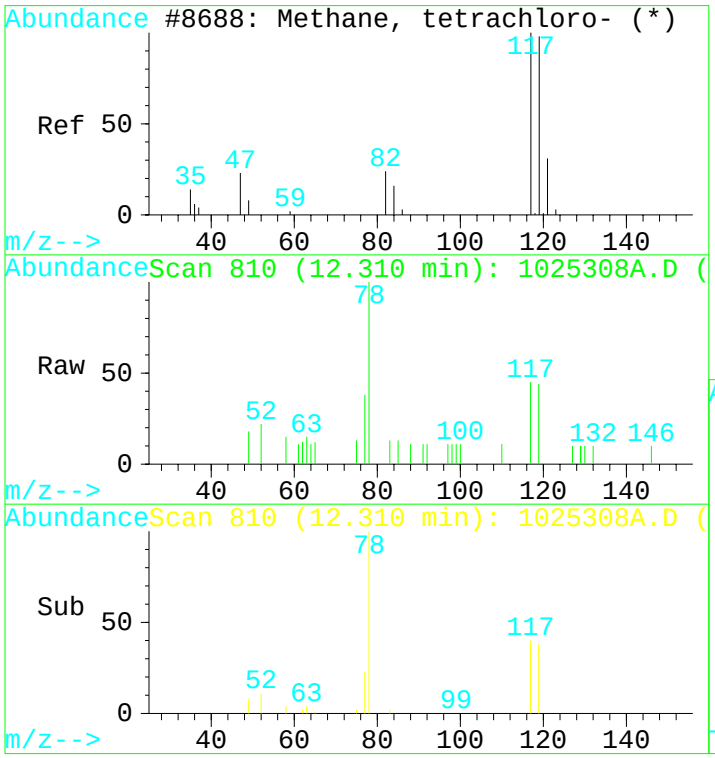


#3
Chloroform
Concen: 0.03 ppbV m
RT: 10.22 min Scan# 682
Delta R.T. -0.44 min
Lab File: 1025308A.D
Acq: 2 Jul 110 7:46 pm

Tgt Ion:83 Resp: 1155

Ion	Ratio	Lower	Upper
83	100		
85	75.3	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

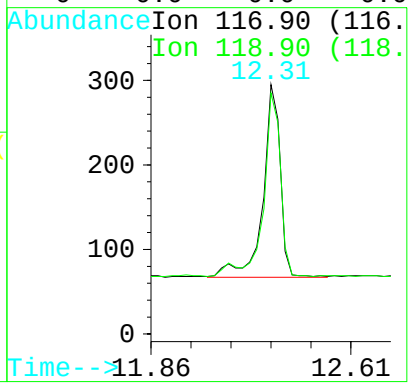


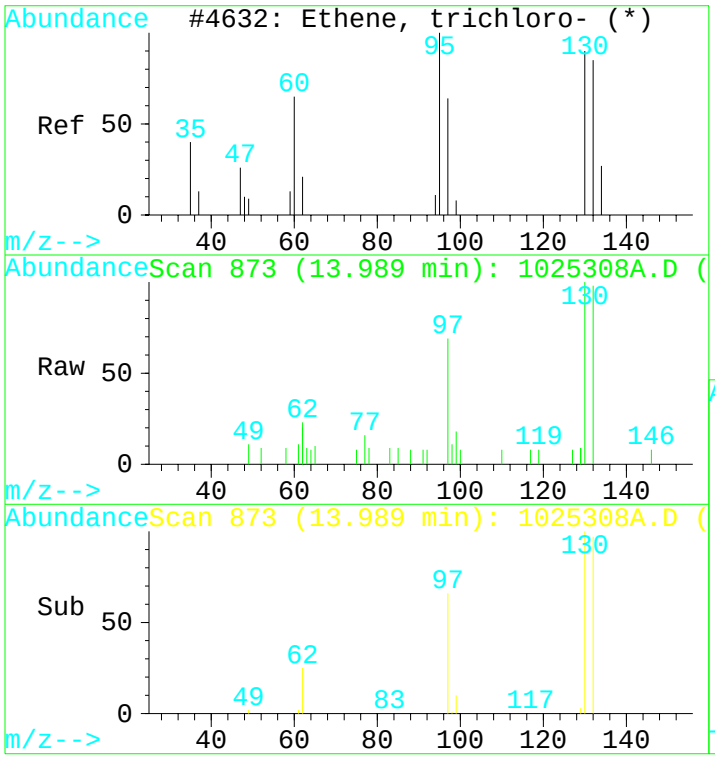


#4
Carbon tetrachloride
Concen: 0.04 ppbV m
RT: 12.31 min Scan# 810
Delta R.T. -0.35 min
Lab File: 1025308A.D
Acq: 2 Jul 110 7:46 pm

Tgt Ion:116.9 Resp: 1051

Ion	Ratio	Lower	Upper
117	100		
119	96.6	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

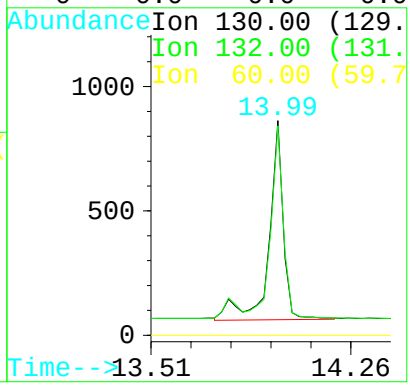




#5
Trichloroethene
Concen: 0.13 ppbV m
RT: 13.99 min Scan# 873
Delta R.T. -0.27 min
Lab File: 1025308A.D
Acq: 2 Jul 110 7:46 pm

Tgt Ion:130 Resp: 3049

Ion	Ratio	Lower	Upper
130	100		
132	97.6	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025309A.D
Acq Time : 2 Jul 110 8:28 pm Operator: CM
Sample : OA-AB-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

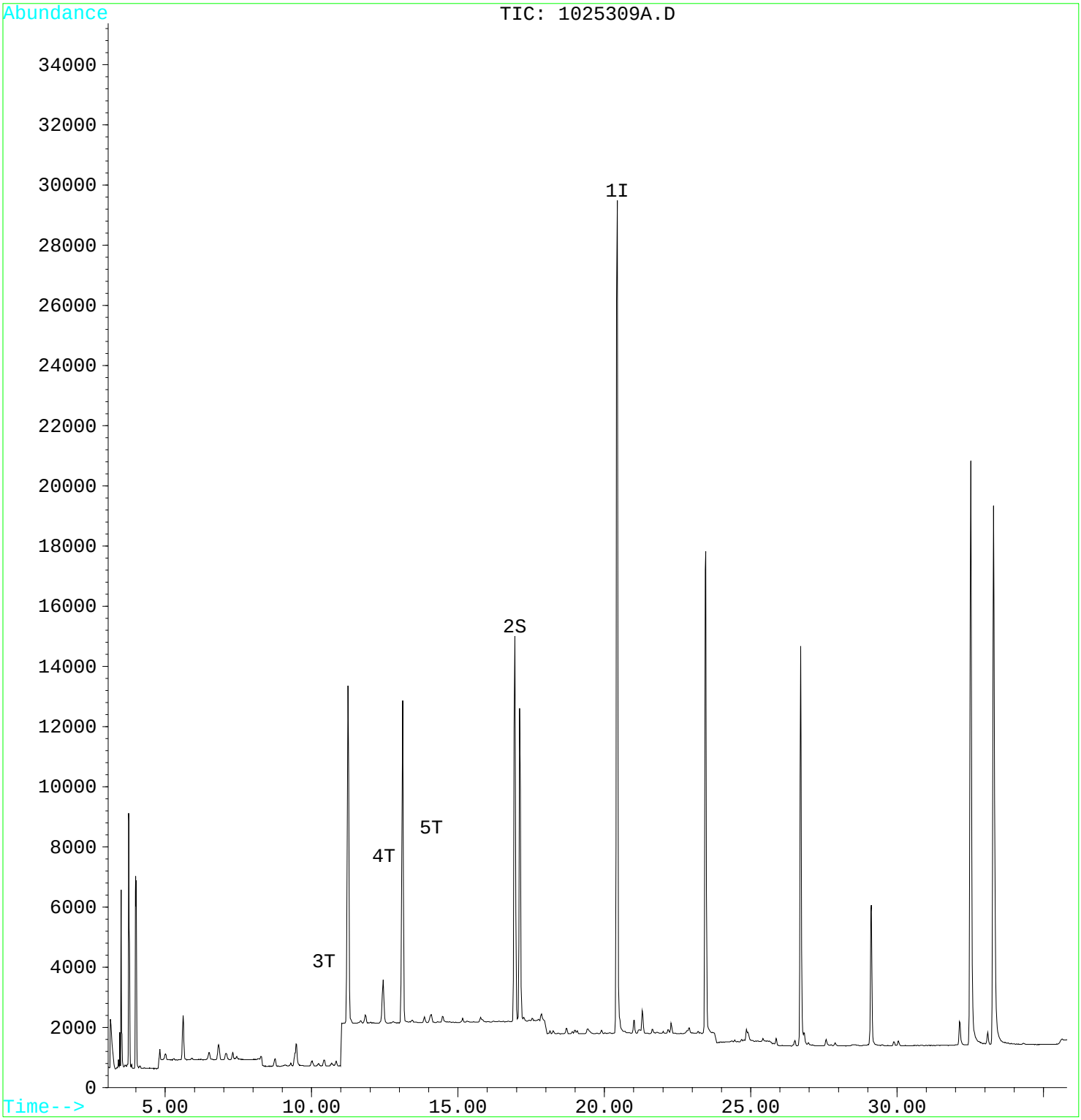
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.44	117	51205	0.20	ppbV	-0.07
System Monitoring Compounds						%Recovery
2) Toluene-d8	16.95	98	21948	0.18	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.44	83	507	0.01	ppbV	98
4) Carbon tetrachloride	12.47	117	714	0.02	ppbV	97
5) Trichloroethene	14.10	130	251	0.01	ppbV	96

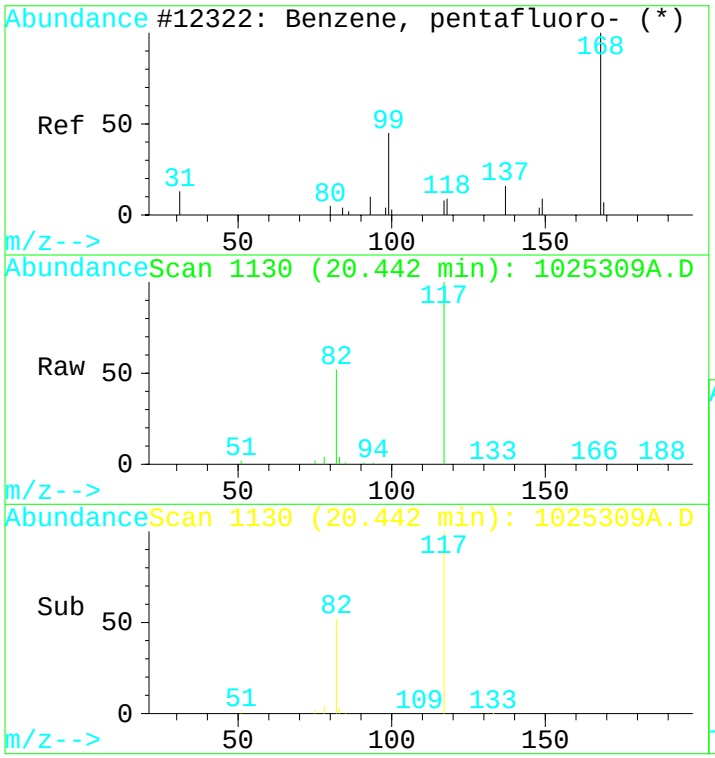
(#) = qualifier out of range (m) = manual integration
1025309A.D 2NTHG_A.M Tue Jul 06 15:30:49 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\07020M~1\1025309A.D
Acq Time : 2 Jul 110 8:28 pm Operator: CM
Sample : OA-AB-AI-001 Inst : MS2
Misc : NORTHGATE Multiplr: 1.00
Quant Time: Jul 6 15:19 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

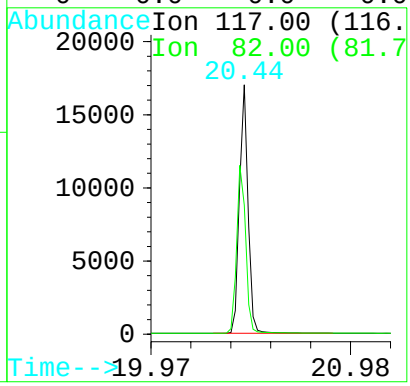


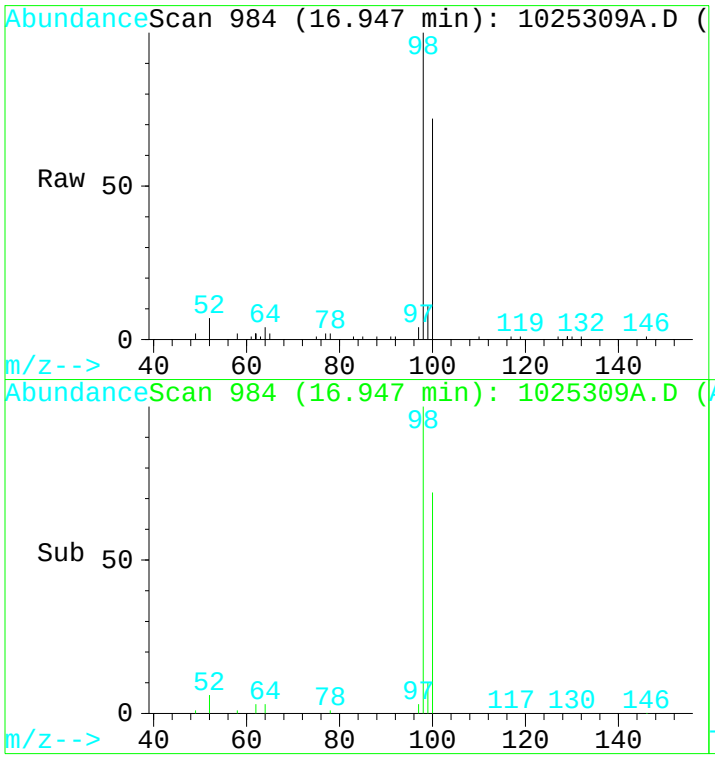


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.44 min Scan# 1130
Delta R.T. -0.07 min
Lab File: 1025309A.D
Acq: 2 Jul 110 8:28 pm

Tgt Ion:117 Resp: 51205

Ion	Ratio	Lower	Upper
117	100		
82	51.6	52.6	78.8#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

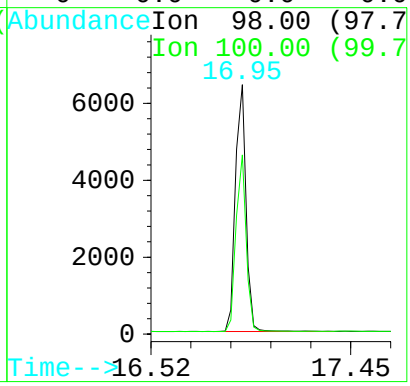


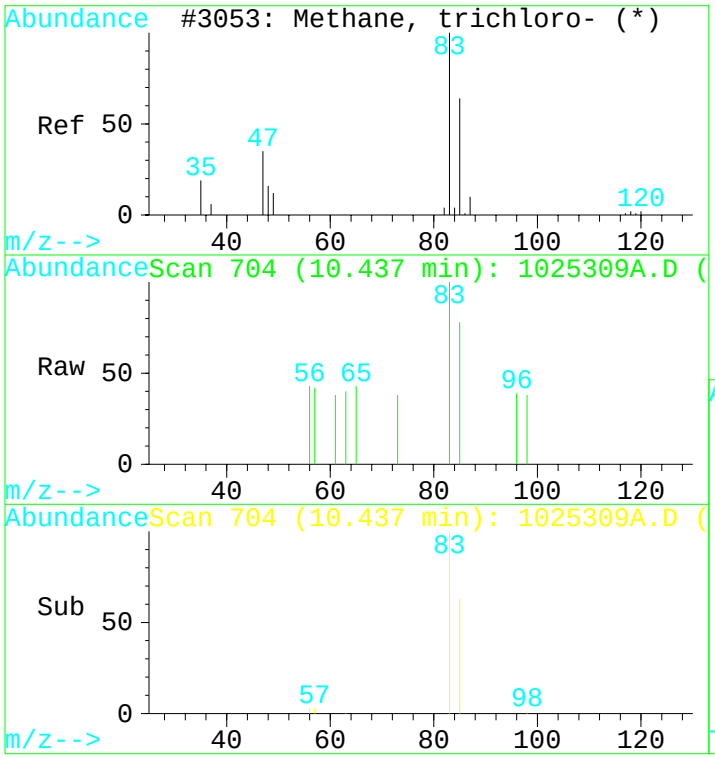


#2
Toluene-d8
Concen: 0.18 ppbV
RT: 16.95 min Scan# 984
Delta R.T. -0.10 min
Lab File: 1025309A.D
Acq: 2 Jul 110 8:28 pm

Tgt Ion:98 Resp: 21948

Ion	Ratio	Lower	Upper
98	100		
100	69.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

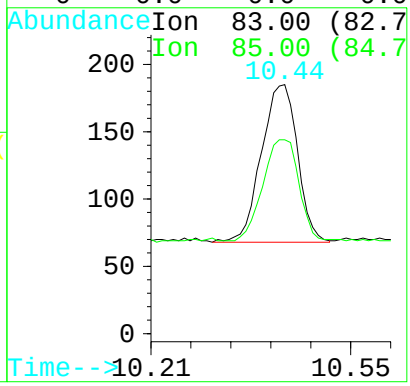


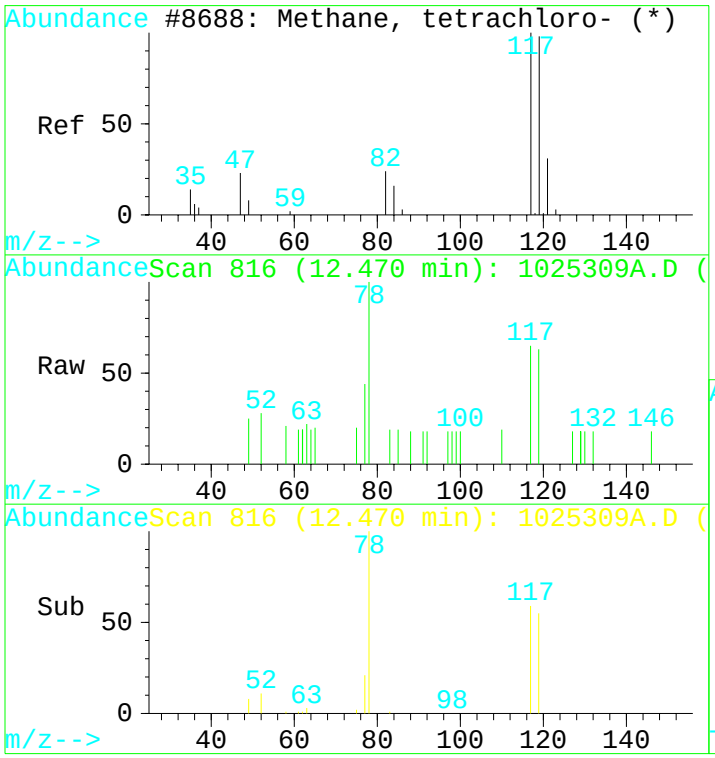


#3
Chloroform
Concen: 0.01 ppbV
RT: 10.44 min Scan# 704
Delta R.T. -0.22 min
Lab File: 1025309A.D
Acq: 2 Jul 110 8:28 pm

Tgt Ion:83 Resp: 507

Ion	Ratio	Lower	Upper
83	100		
85	63.1	51.8	77.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

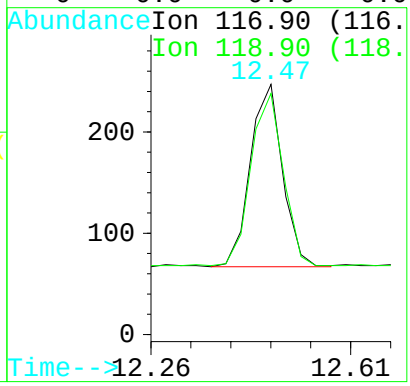


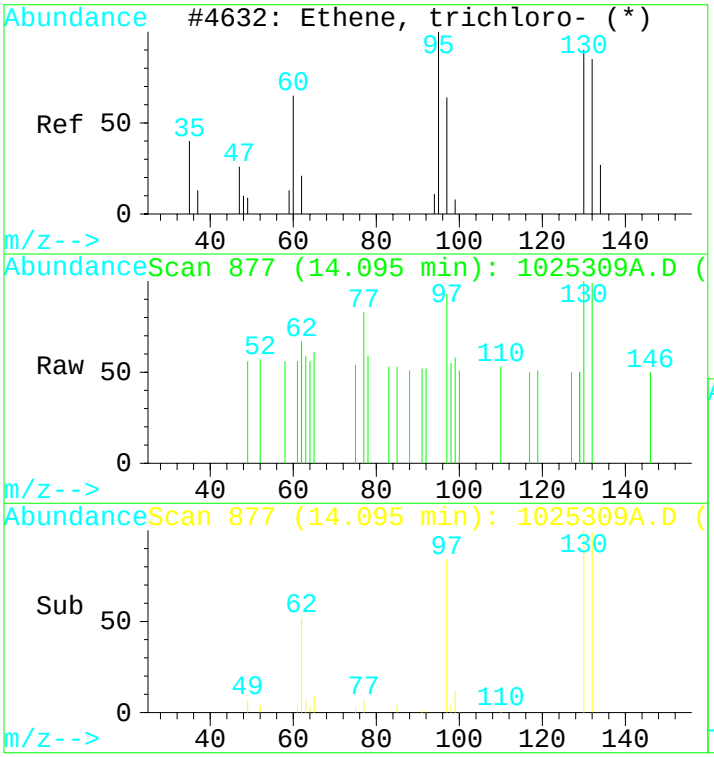


#4
Carbon tetrachloride
Concen: 0.02 ppbV
RT: 12.47 min Scan# 816
Delta R.T. -0.19 min
Lab File: 1025309A.D
Acq: 2 Jul 110 8:28 pm

Tgt Ion:116.9 Resp: 714

Ion	Ratio	Lower	Upper
117	100		
119	94.7	73.4	110.2
0	0.0	0.0	0.0
0	0.0	0.0	0.0

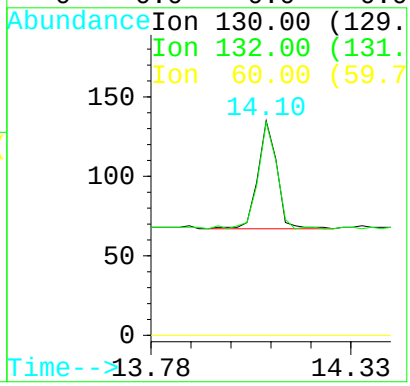




#5
Trichloroethene
Concen: 0.01 ppbV
RT: 14.10 min Scan# 877
Delta R.T. -0.16 min
Lab File: 1025309A.D
Acq: 2 Jul 110 8:28 pm

Tgt Ion:130 Resp: 251

Ion	Ratio	Lower	Upper
130	100		
132	98.5	75.8	113.6
60	0.0	0.0	0.0
0	0.0	0.0	0.0



7.2: Ion Spectra for Initial Calibration
METHOD: 2NTHG_A.M

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240C.D
Acq Time : 24 Jun 110 12:24 pm Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : 4.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

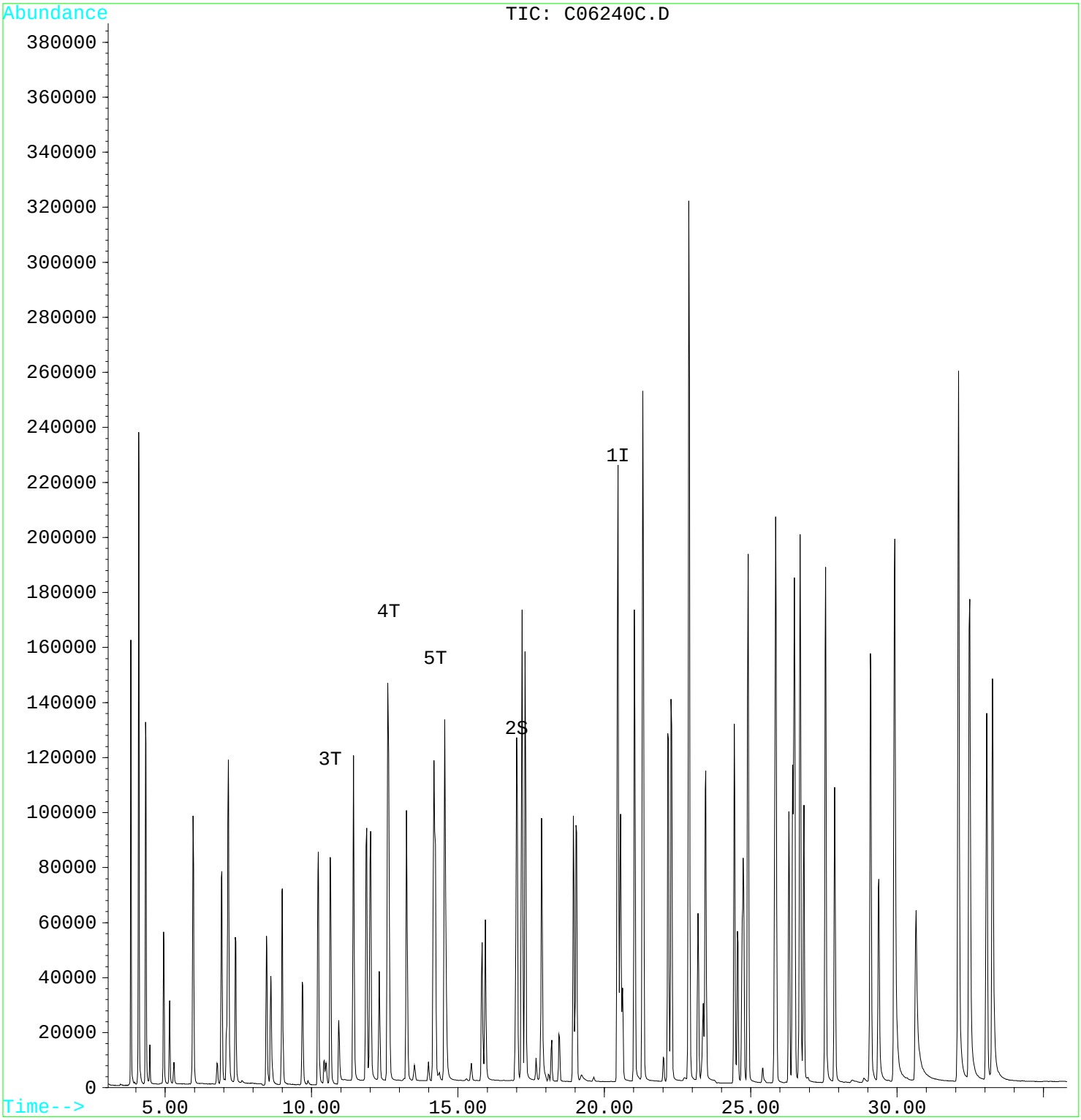
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	396713	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	188151	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	150796	0.36	ppbV	97
4) Carbon tetrachloride	12.63	117	100455	0.40	ppbV	97
5) Trichloroethene	14.23	130	80239	0.36	ppbV	99

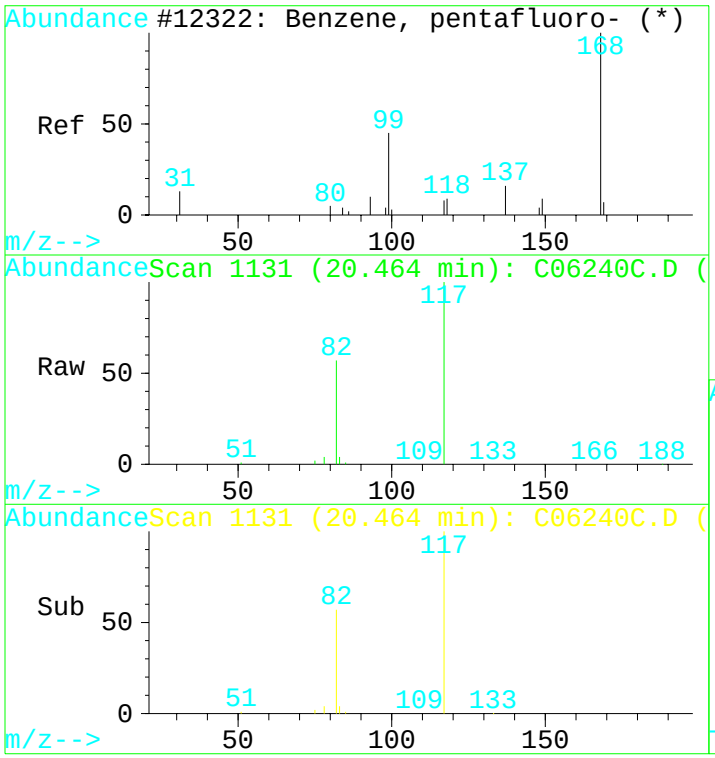
(#) = qualifier out of range (m) = manual integration
C06240C.D 2NTHG_A.M Sun Jul 04 13:44:35 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240C.D
Acq Time : 24 Jun 110 12:24 pm Operator: CM
Sample : ST60421 + ST60550 Inst : MS2
Misc : 4.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

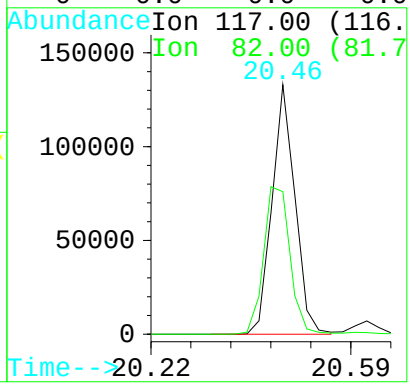


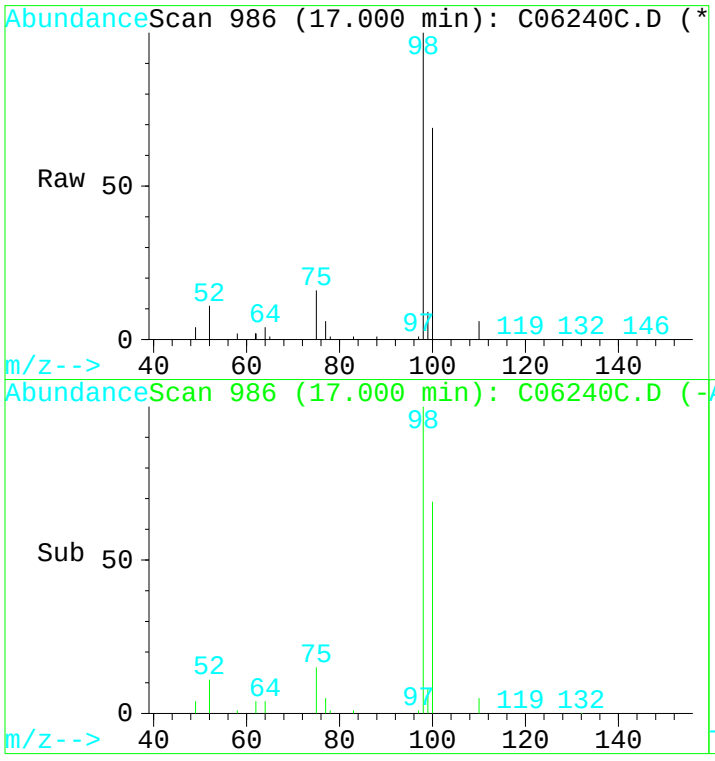


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06240C.D
Acq: 24 Jun 110 12:24 pm

Tgt Ion:117 Resp: 396713

Ion	Ratio	Lower	Upper
117	100		
82	57.2	33.5	50.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

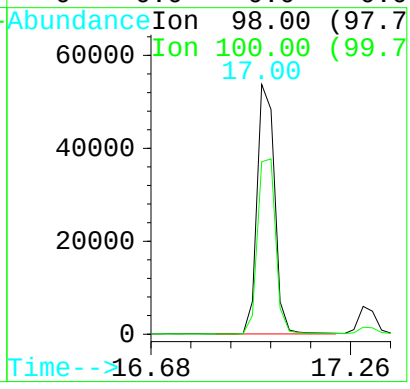


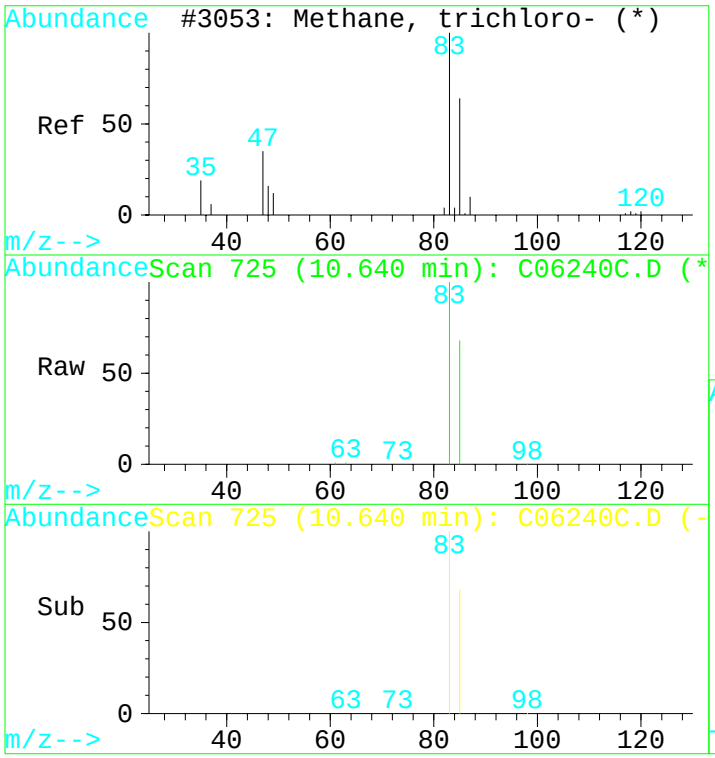


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: C06240C.D
Acq: 24 Jun 110 12:24 pm

Tgt Ion:98 Resp: 188151

Ion	Ratio	Lower	Upper
98	100		
100	72.6	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

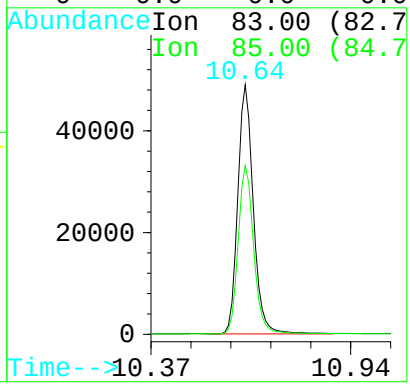


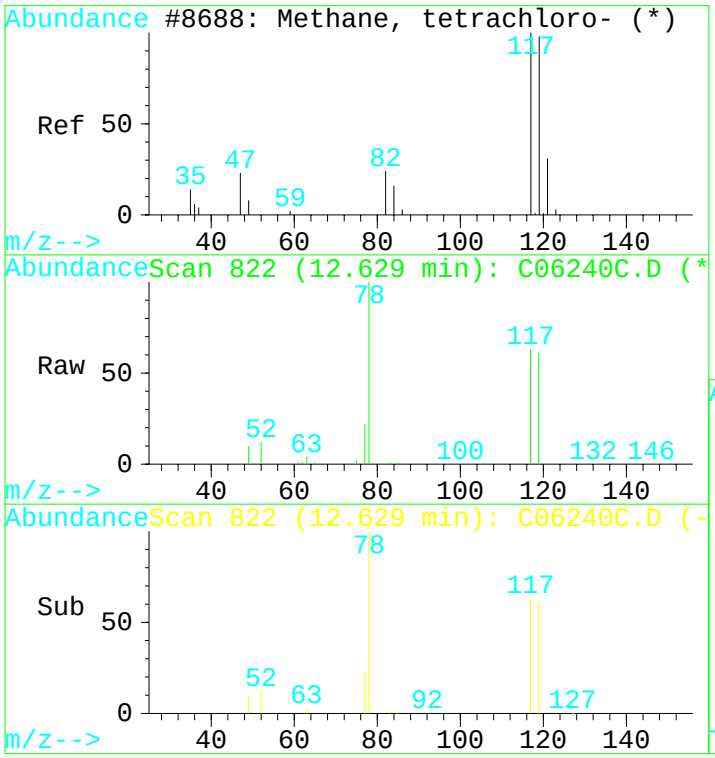


#3
Chloroform
Concen: 0.36 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: C06240C.D
Acq: 24 Jun 110 12:24 pm

Tgt Ion:83 Resp: 150796

Ion	Ratio	Lower	Upper
83	100		
85	67.5	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

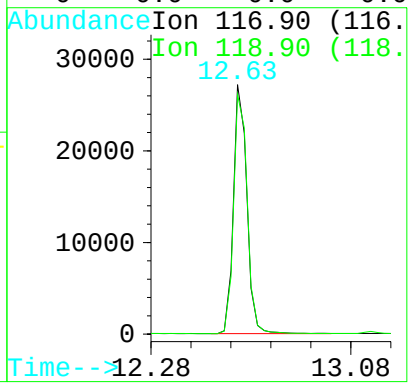


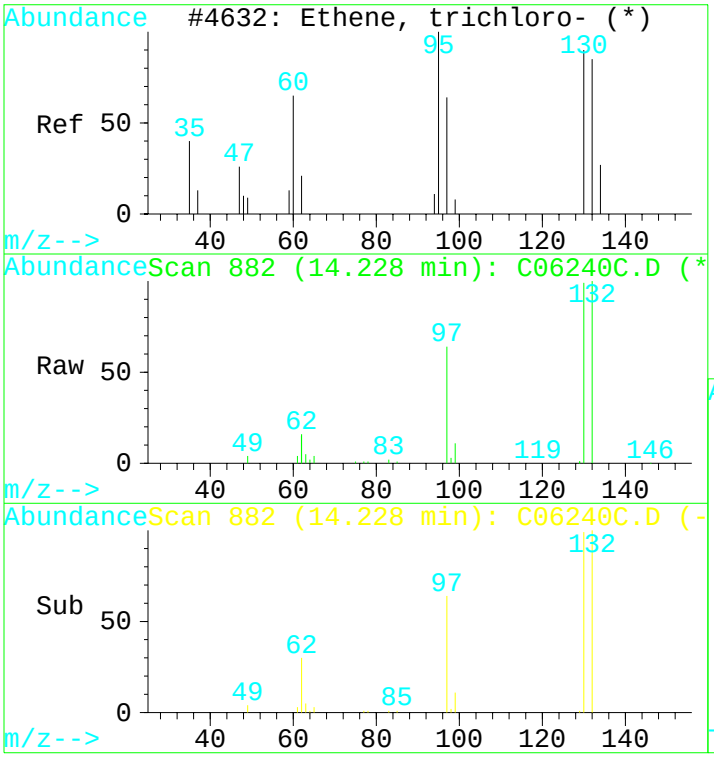


#4
Carbon tetrachloride
Concen: 0.40 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06240C.D
Acq: 24 Jun 110 12:24 pm

Tgt Ion:116.9 Resp: 100455

Ion	Ratio	Lower	Upper
117	100		
119	96.1	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

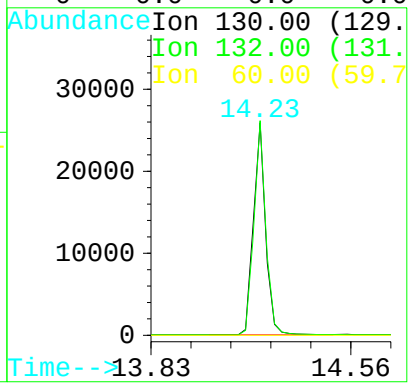




#5
Trichloroethene
Concen: 0.36 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: C06240C.D
Acq: 24 Jun 110 12:24 pm

Tgt Ion:130 Resp: 80239

Ion	Ratio	Lower	Upper
130	100		
132	100.9	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240D.D
Acq Time : 24 Jun 110 2:06 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 2.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

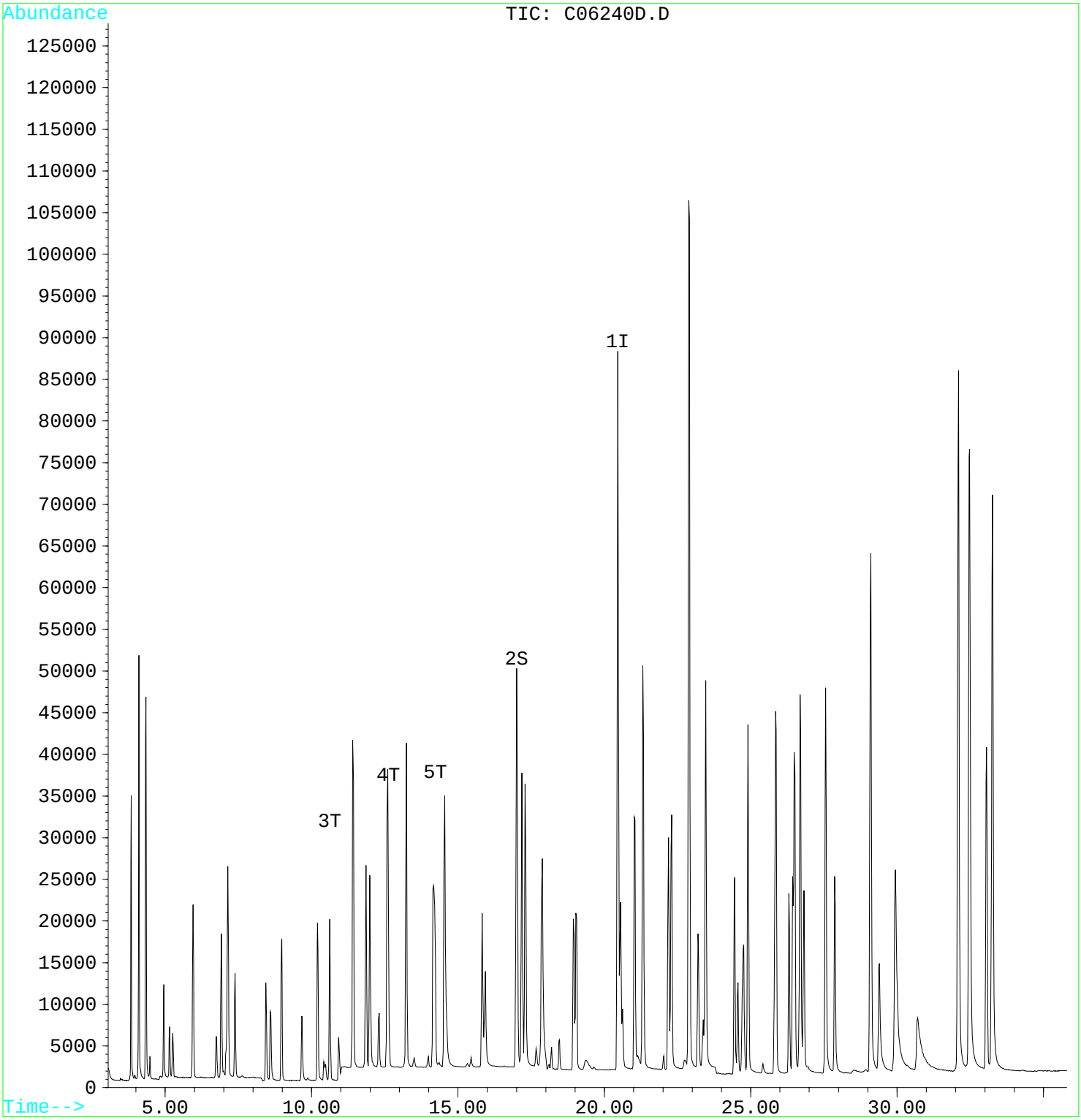
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	151659	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	72057	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.62	83	31302	0.20	ppbV	98
4) Carbon tetrachloride	12.63	117	19879	0.21	ppbV	98
5) Trichloroethene	14.23	130	16546	0.19	ppbV	98

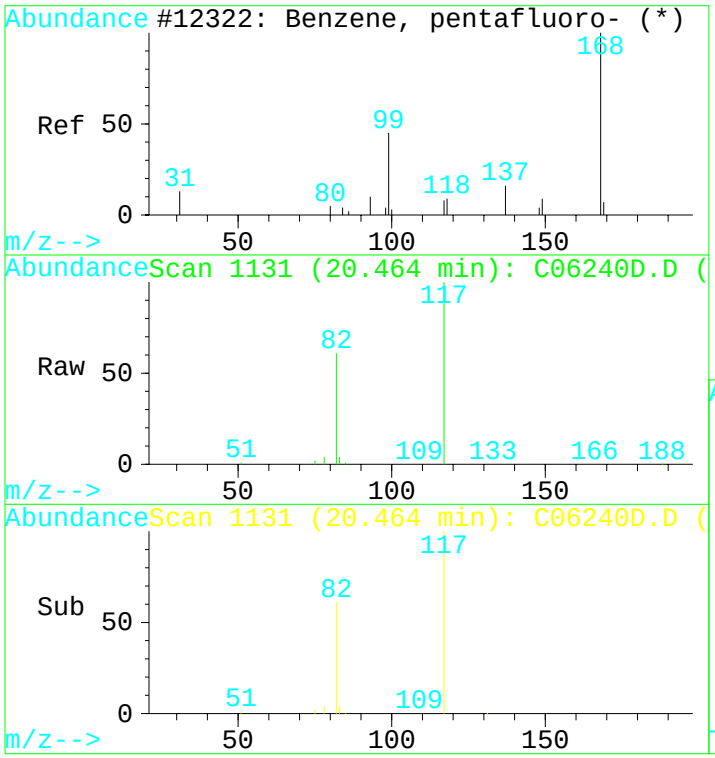
(#) = qualifier out of range (m) = manual integration
C06240D.D 2NTHG_A.M Sun Jul 04 13:45:10 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240D.D
Acq Time : 24 Jun 110 2:06 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 2.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

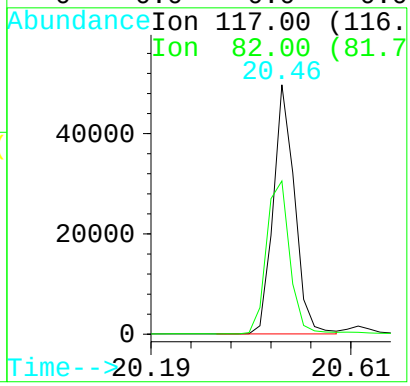


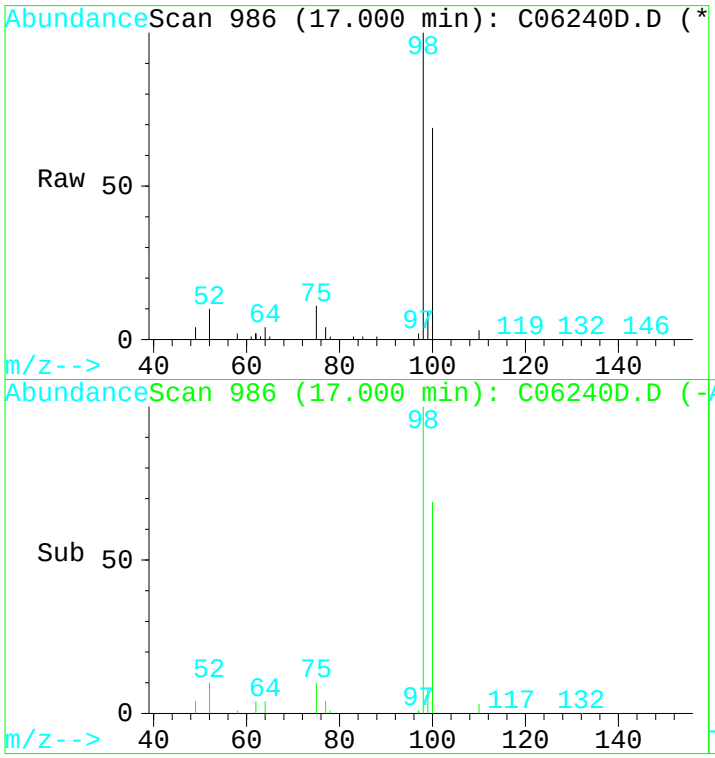


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06240D.D
Acq: 24 Jun 110 2:06 pm

Tgt Ion:117 Resp: 151659

Ion	Ratio	Lower	Upper
117	100		
82	61.4	33.5	50.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

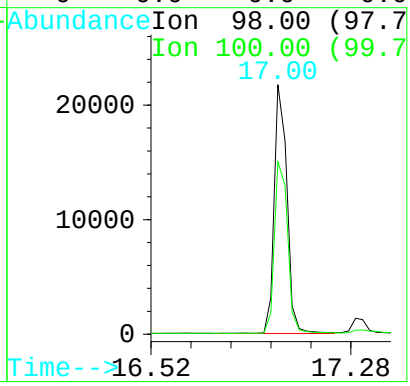


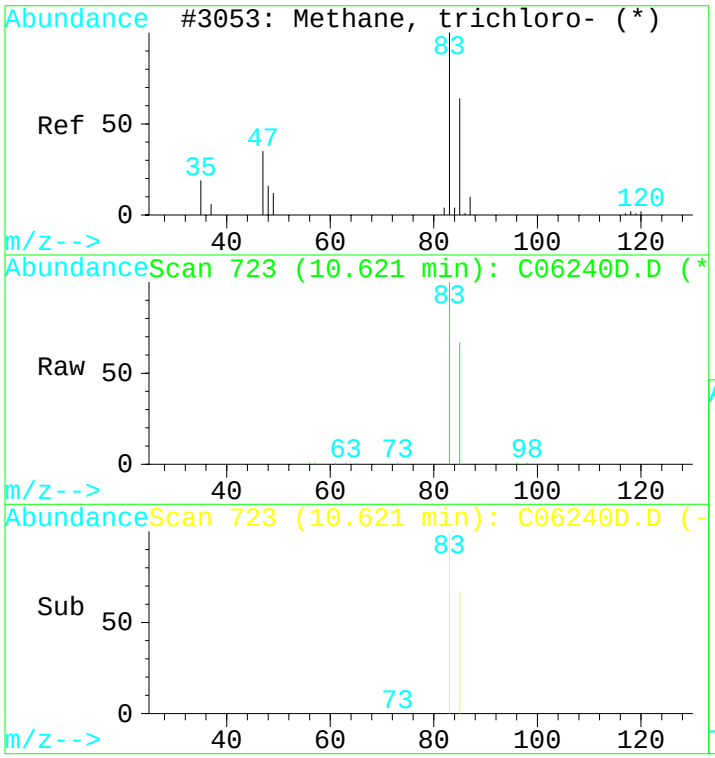


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: C06240D.D
Acq: 24 Jun 110 2:06 pm

Tgt Ion:98 Resp: 72057

Ion	Ratio	Lower	Upper
98	100		
100	71.7	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

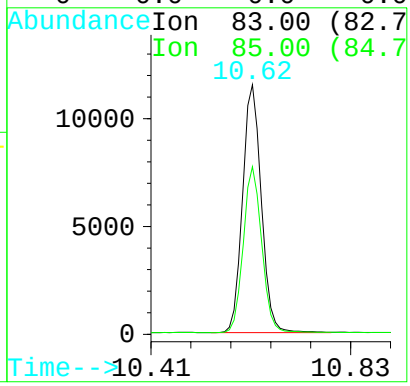


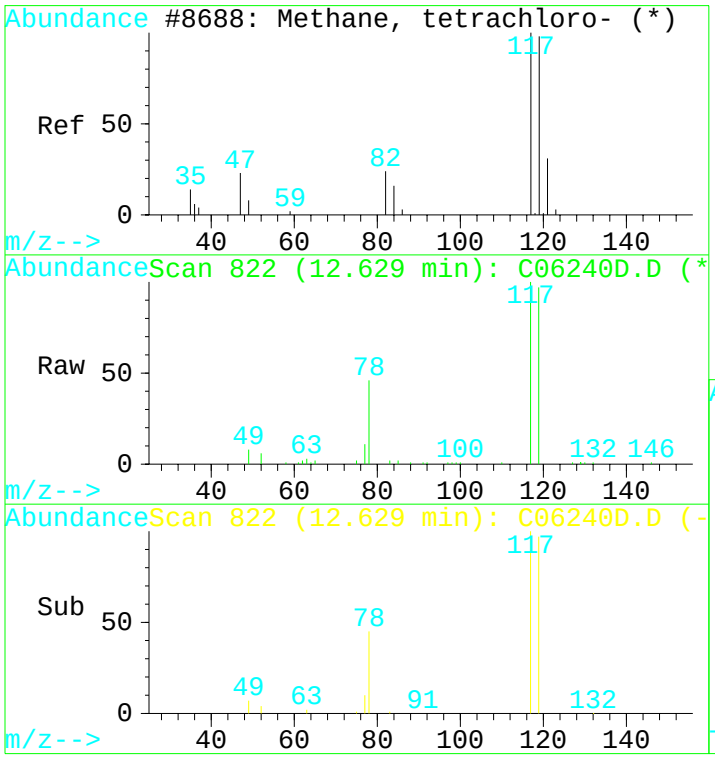


#3
Chloroform
Concen: 0.20 ppbV
RT: 10.62 min Scan# 723
Delta R.T. -0.04 min
Lab File: C06240D.D
Acq: 24 Jun 110 2:06 pm

Tgt Ion:83 Resp: 31302

Ion	Ratio	Lower	Upper
83	100		
85	67.0	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

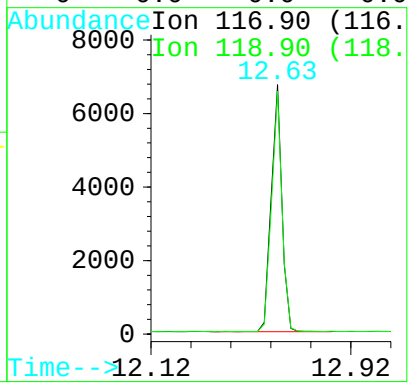


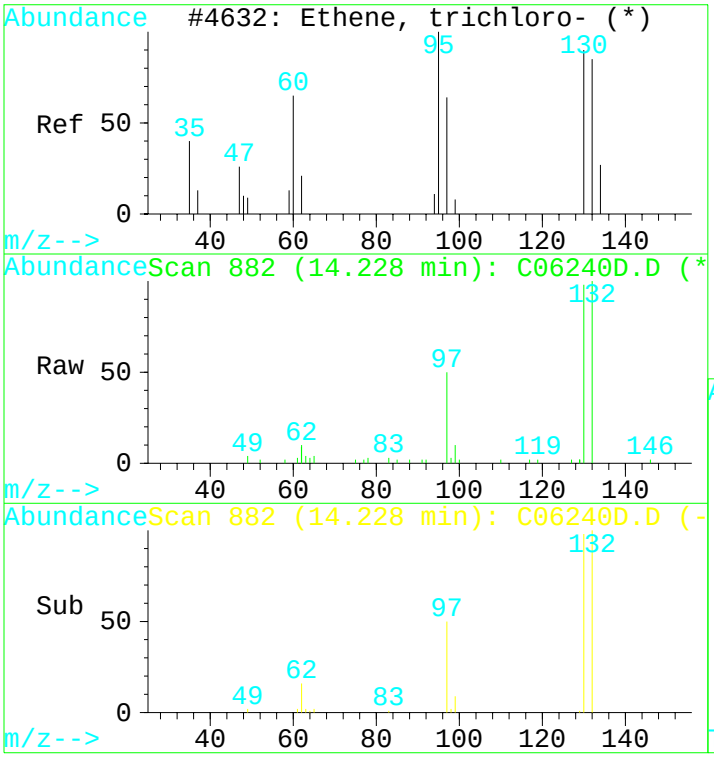


#4
Carbon tetrachloride
Concen: 0.21 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06240D.D
Acq: 24 Jun 110 2:06 pm

Tgt Ion:116.9 Resp: 19879

Ion	Ratio	Lower	Upper
117	100		
119	97.3	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

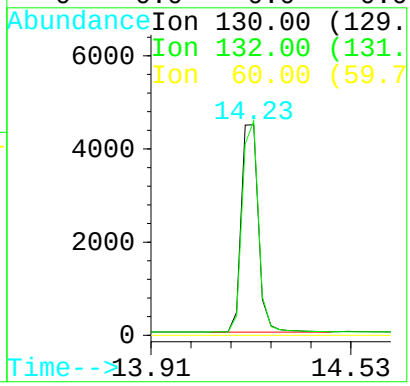




#5
Trichloroethene
Concen: 0.19 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: C06240D.D
Acq: 24 Jun 110 2:06 pm

Tgt Ion:130 Resp: 16546

Ion	Ratio	Lower	Upper
130	100		
132	101.9	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240G.D
Acq Time : 24 Jun 110 5:21 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 0.25 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

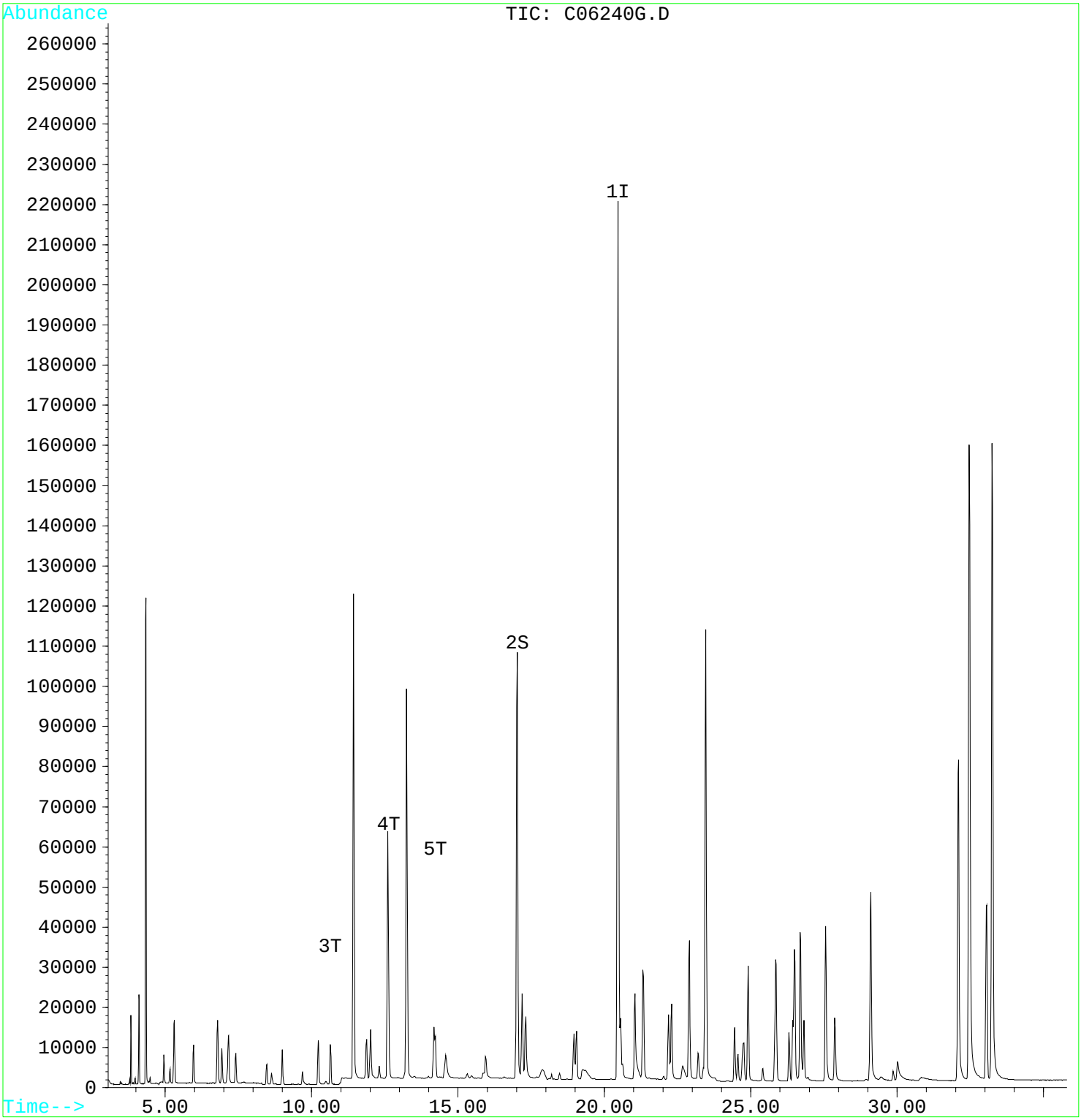
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	385890	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	179207	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	16260	0.04	ppbV	99
4) Carbon tetrachloride	12.63	117	7333	0.03	ppbV	93
5) Trichloroethene	14.23	130	9310	0.04	ppbV	94

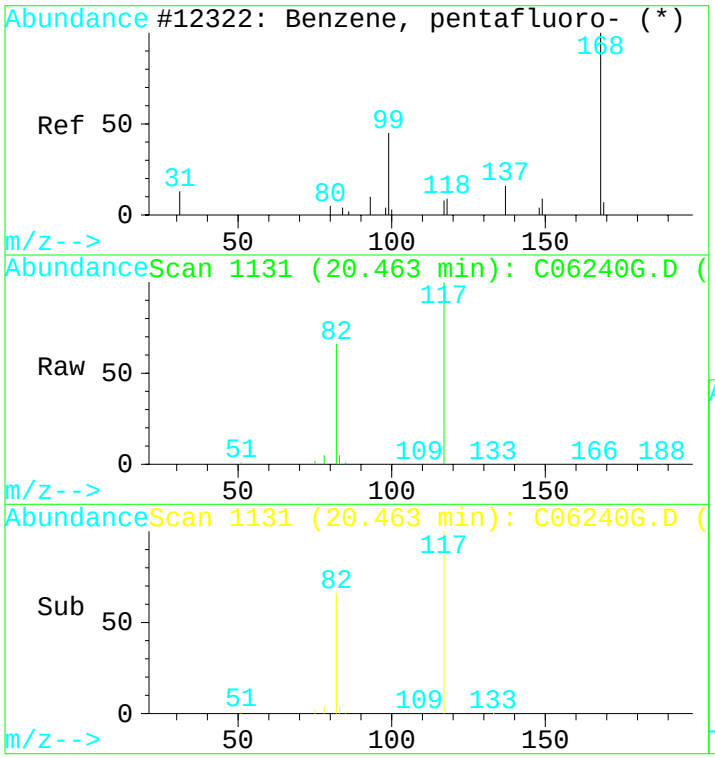
(#) = qualifier out of range (m) = manual integration
C06240G.D 2NTHG_A.M Sun Jul 04 13:45:24 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240G.D
Acq Time : 24 Jun 110 5:21 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 0.25 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

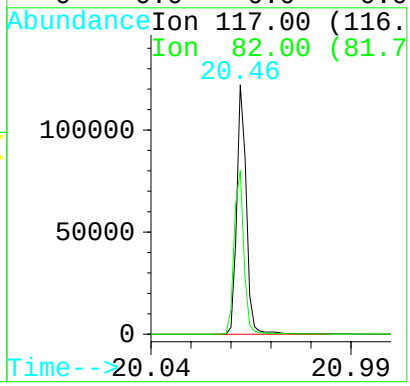


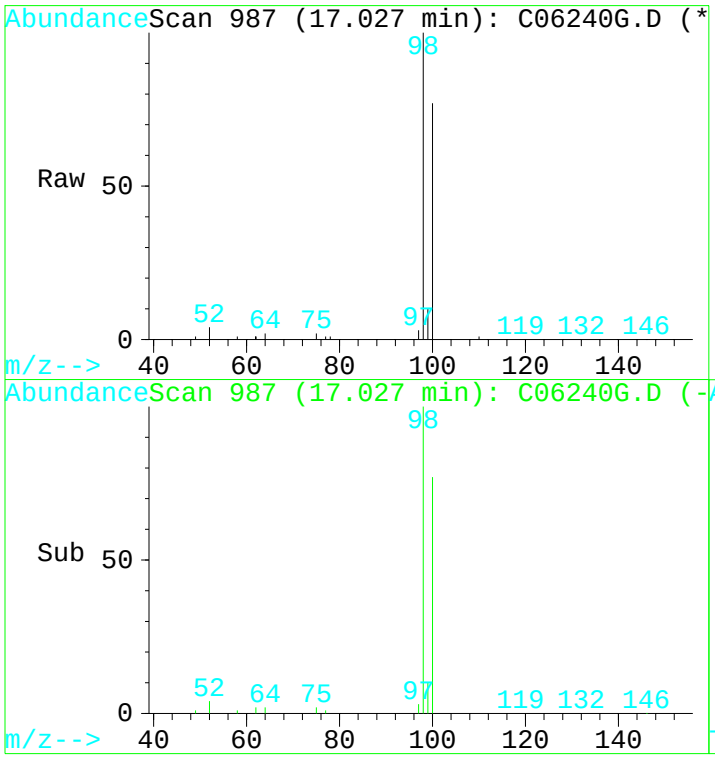


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06240G.D
Acq: 24 Jun 110 5:21 pm

Tgt Ion:117 Resp: 385890

Ion	Ratio	Lower	Upper
117	100		
82	65.7	33.5	50.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

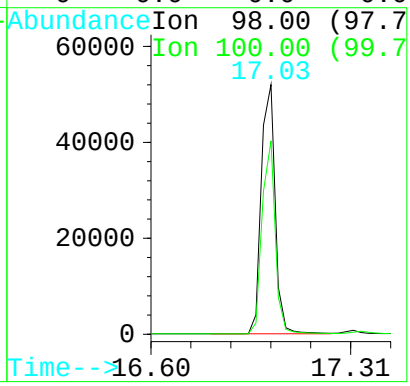


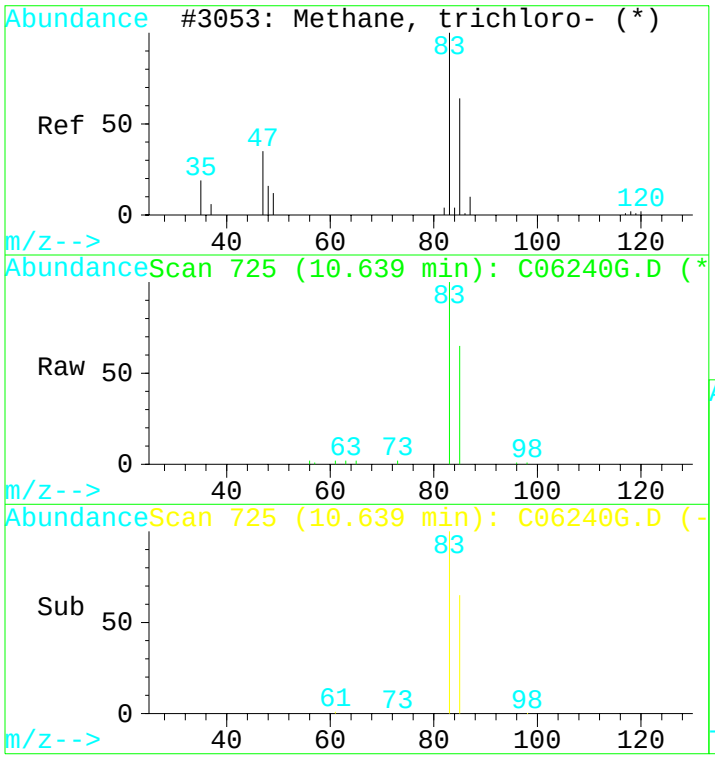


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: C06240G.D
Acq: 24 Jun 110 5:21 pm

Tgt Ion:98 Resp: 179207

Ion	Ratio	Lower	Upper
98	100		
100	73.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

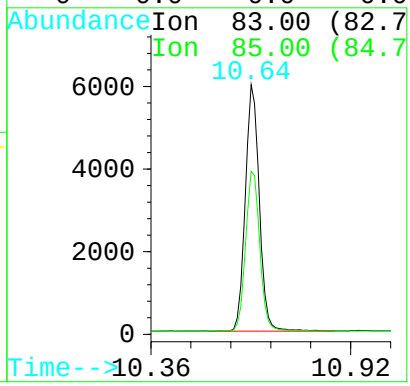


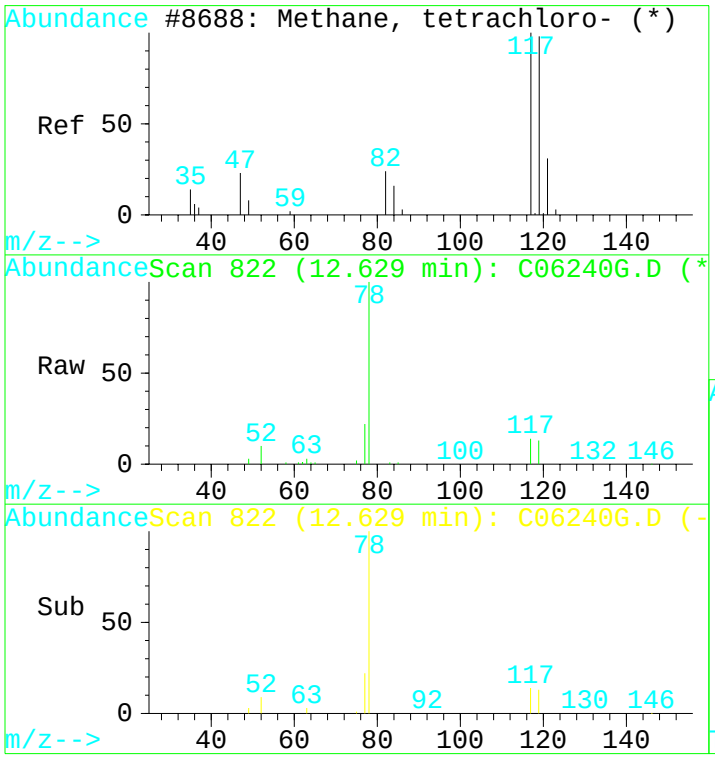


#3
Chloroform
Concen: 0.04 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: C06240G.D
Acq: 24 Jun 110 5:21 pm

Tgt Ion:83 Resp: 16260

Ion	Ratio	Lower	Upper
83	100		
85	64.8	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

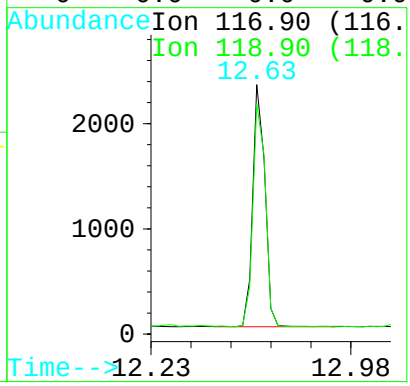


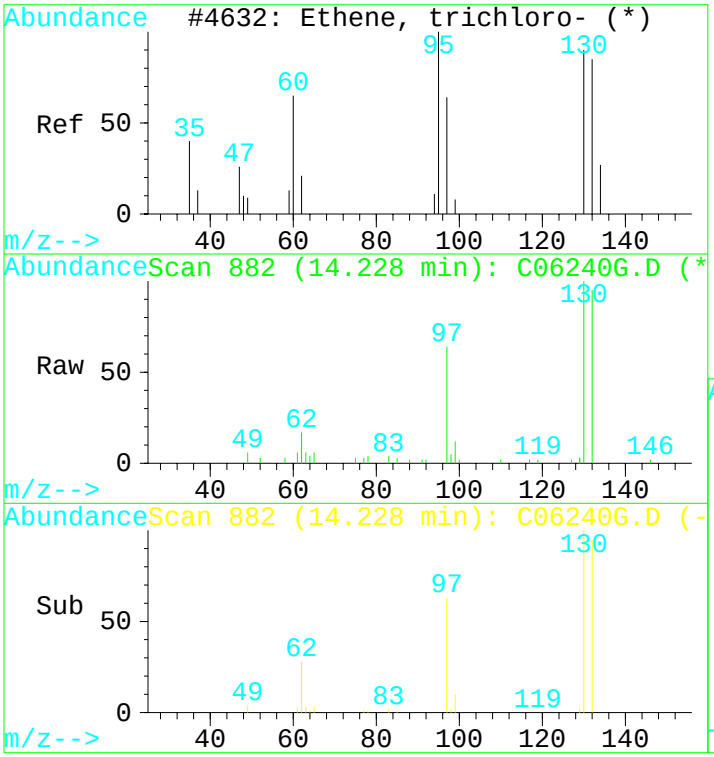


#4
Carbon tetrachloride
Concen: 0.03 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06240G.D
Acq: 24 Jun 110 5:21 pm

Tgt Ion:116.9 Resp: 7333

Ion	Ratio	Lower	Upper
117	100		
119	91.8	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

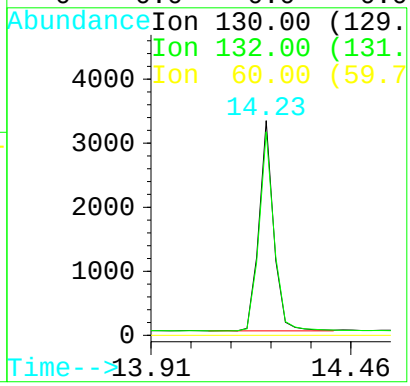




#5
Trichloroethene
Concen: 0.04 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: C06240G.D
Acq: 24 Jun 110 5:21 pm

Tgt Ion:130 Resp: 9310

Ion	Ratio	Lower	Upper
130	100		
132	94.7	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240H.D
Acq Time : 24 Jun 110 6:10 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 0.5 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

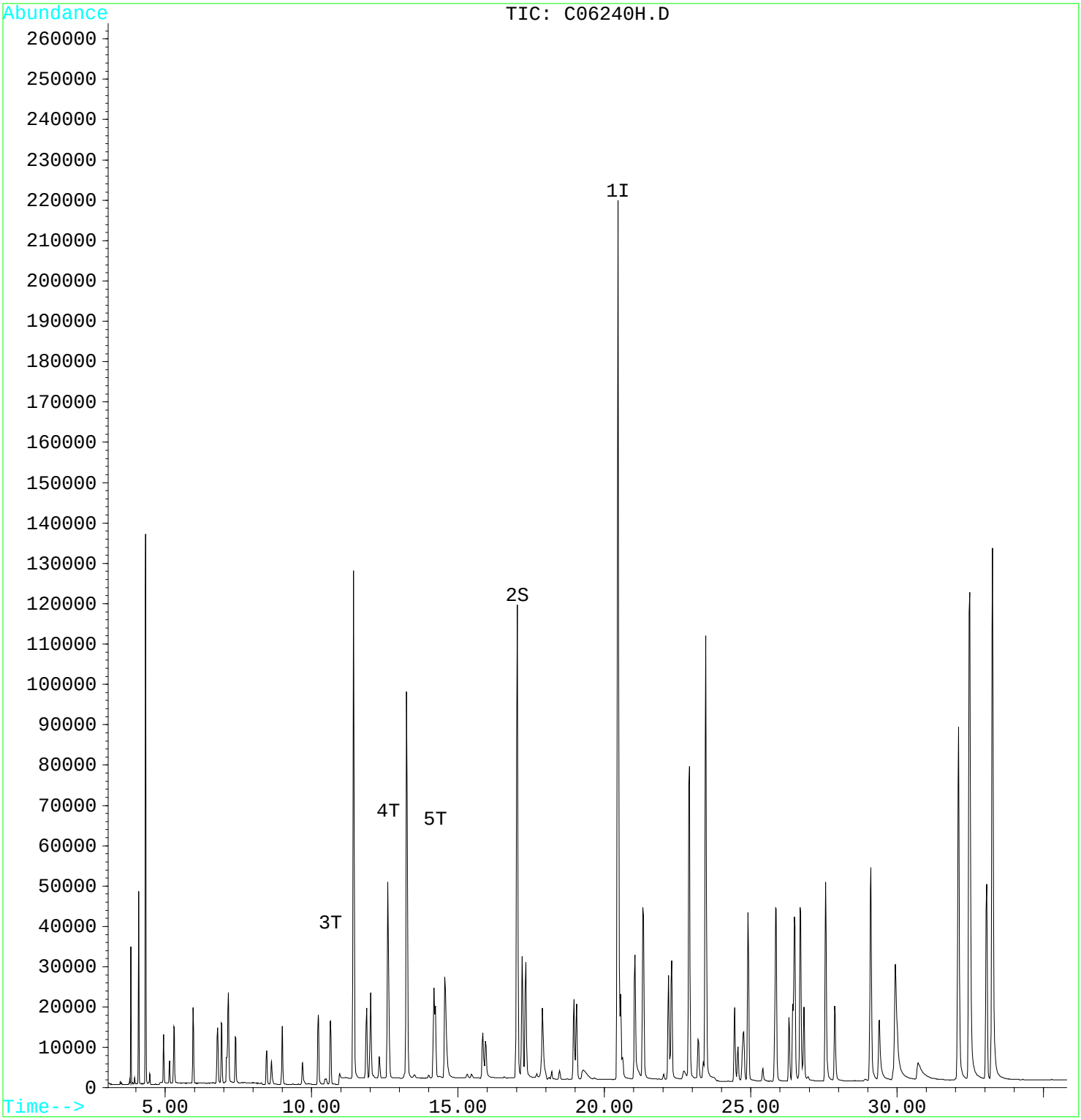
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	388495	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.03	98	182116	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	26187	0.06	ppbV	99
4) Carbon tetrachloride	12.63	117	12851	0.05	ppbV	98
5) Trichloroethene	14.23	130	15082	0.07	ppbV	96

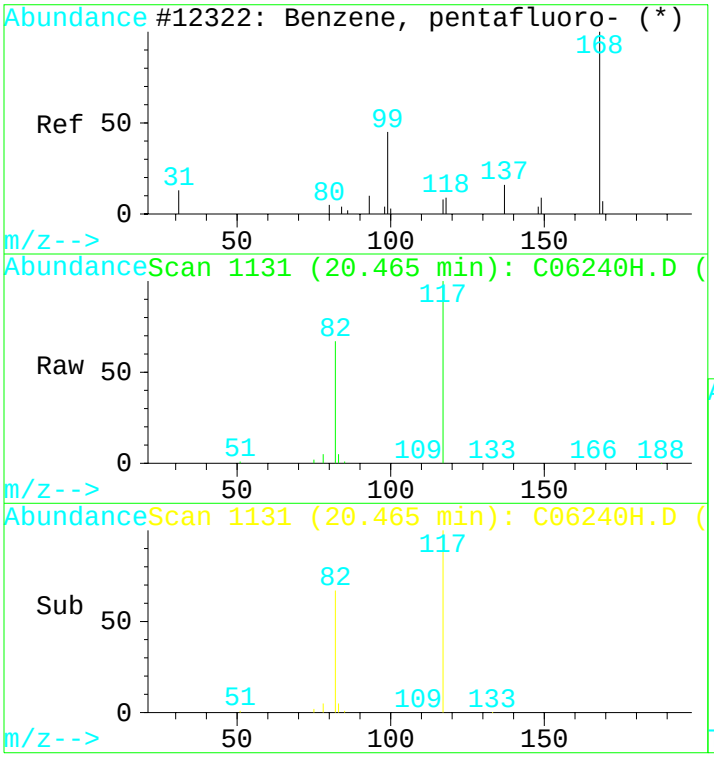
(#) = qualifier out of range (m) = manual integration
C06240H.D 2NTHG_A.M Sun Jul 04 13:45:39 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06240H.D
Acq Time : 24 Jun 110 6:10 pm Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 0.5 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

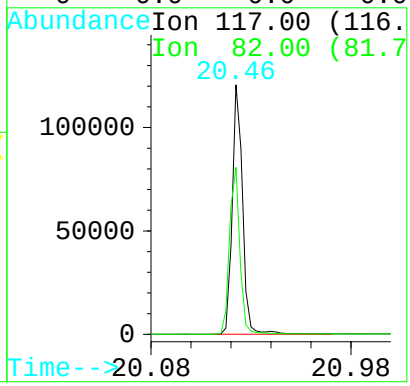


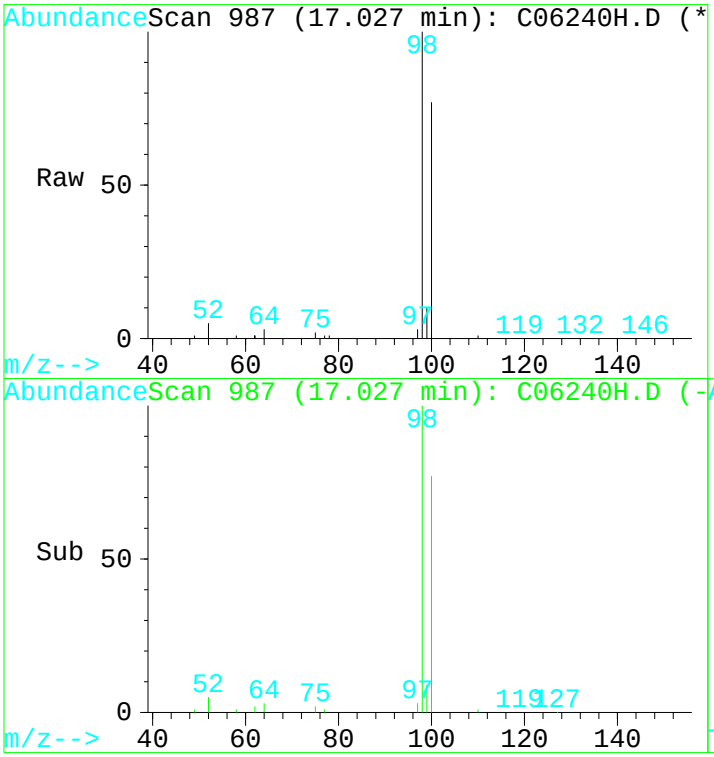


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06240H.D
Acq: 24 Jun 110 6:10 pm

Tgt Ion:117 Resp: 388495

Ion	Ratio	Lower	Upper
117	100		
82	66.9	33.5	50.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

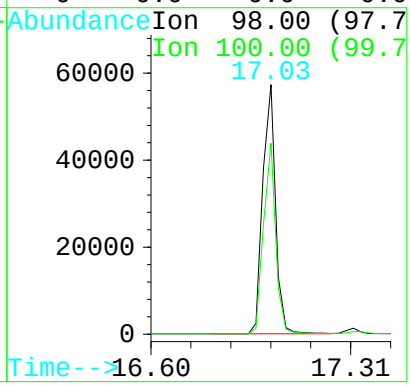


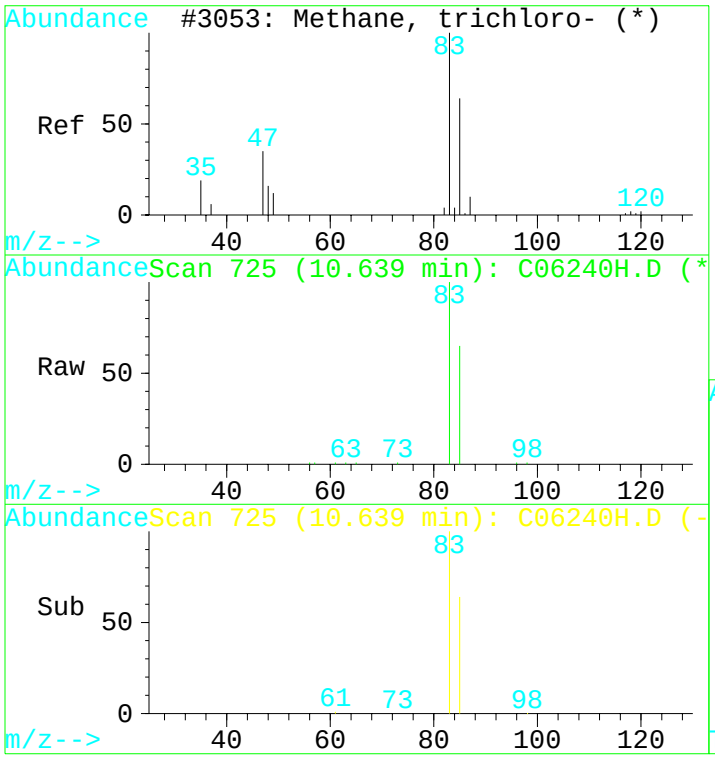


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.03 min Scan# 987
Delta R.T. -0.02 min
Lab File: C06240H.D
Acq: 24 Jun 110 6:10 pm

Tgt Ion:98 Resp: 182116

Ion	Ratio	Lower	Upper
98	100		
100	73.0	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

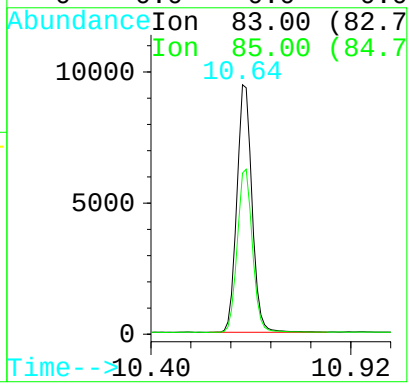


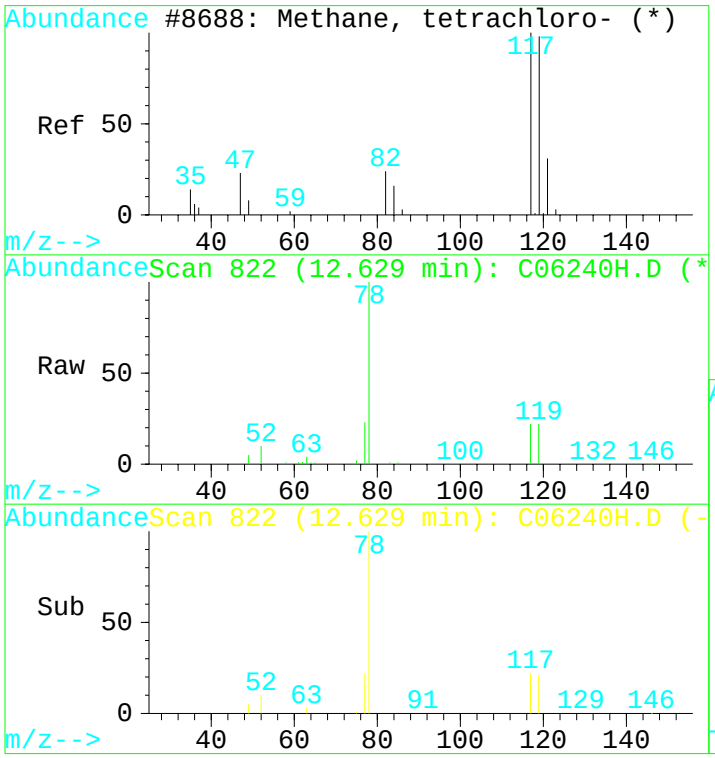


#3
Chloroform
Concen: 0.06 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: C06240H.D
Acq: 24 Jun 110 6:10 pm

Tgt Ion:83 Resp: 26187

Ion	Ratio	Lower	Upper
83	100		
85	64.3	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

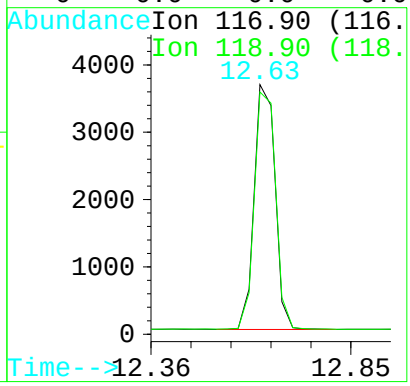


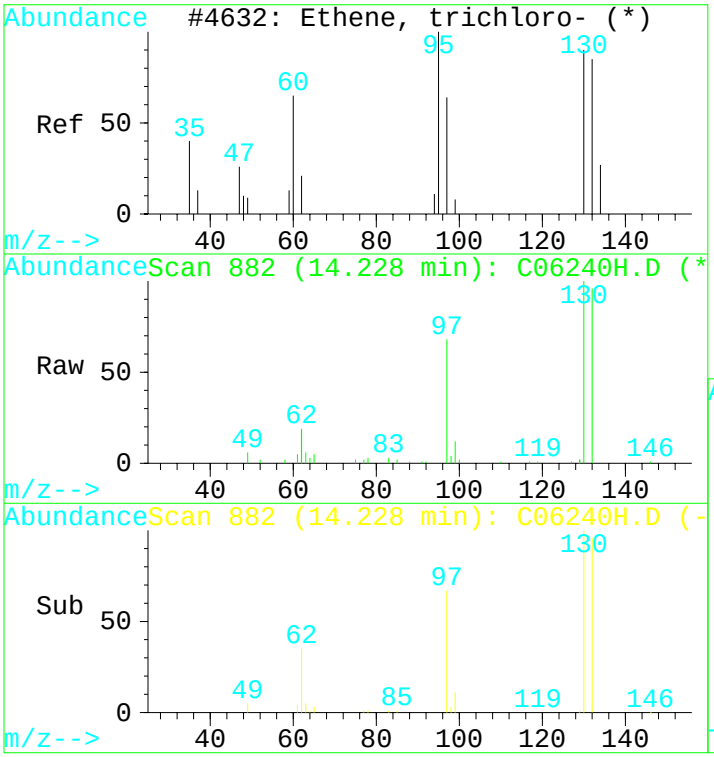


#4
Carbon tetrachloride
Concen: 0.05 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06240H.D
Acq: 24 Jun 110 6:10 pm

Tgt Ion:116.9 Resp: 12851

Ion	Ratio	Lower	Upper
117	100		
119	96.9	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

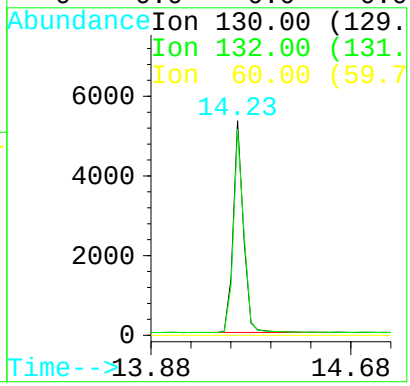




#5
Trichloroethene
Concen: 0.07 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: C06240H.D
Acq: 24 Jun 110 6:10 pm

Tgt Ion:130 Resp: 15082

Ion	Ratio	Lower	Upper
130	100		
132	95.9	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06250A.D
Acq Time : 25 Jun 110 9:19 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

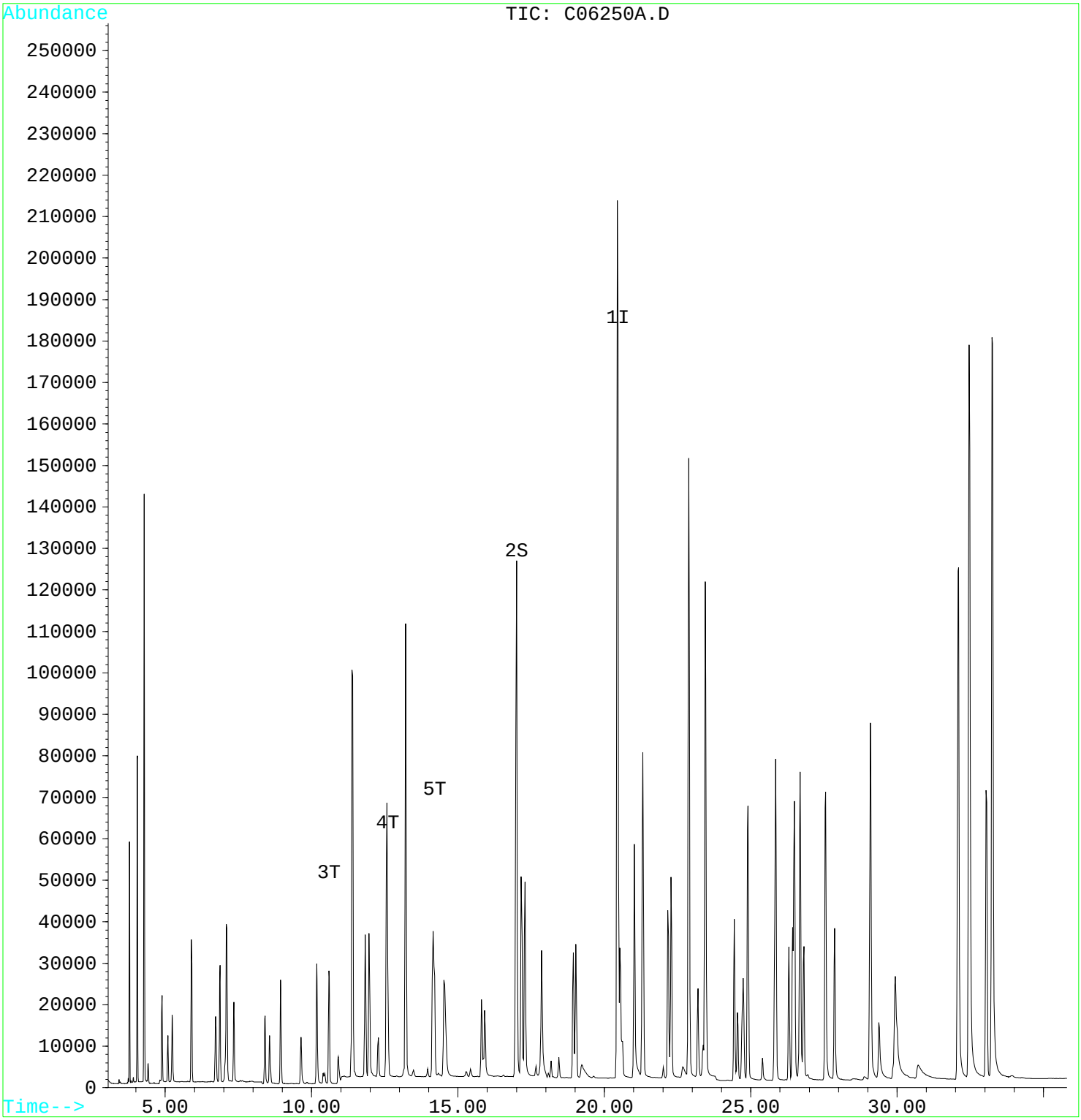
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	399358	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	186243	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.59	83	44523	0.11	ppbV	100
4) Carbon tetrachloride	12.60	117	24384	0.10	ppbV	100
5) Trichloroethene	14.20	130	24451	0.11	ppbV	100

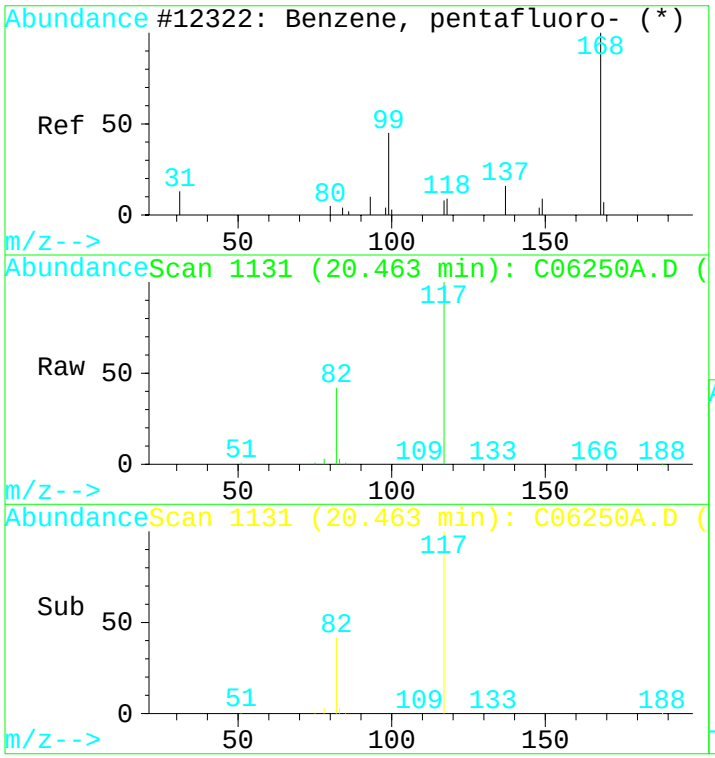
(#) = qualifier out of range (m) = manual integration
C06250A.D 2NTHG_A.M Sun Jul 04 13:45:55 2010 Page 1

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06250A.D
Acq Time : 25 Jun 110 9:19 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

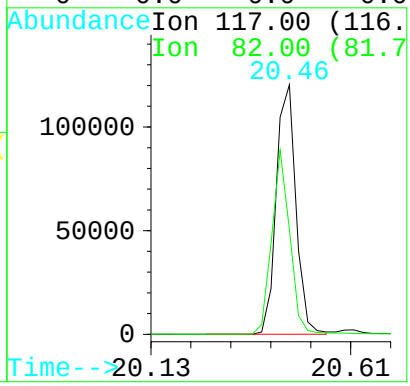


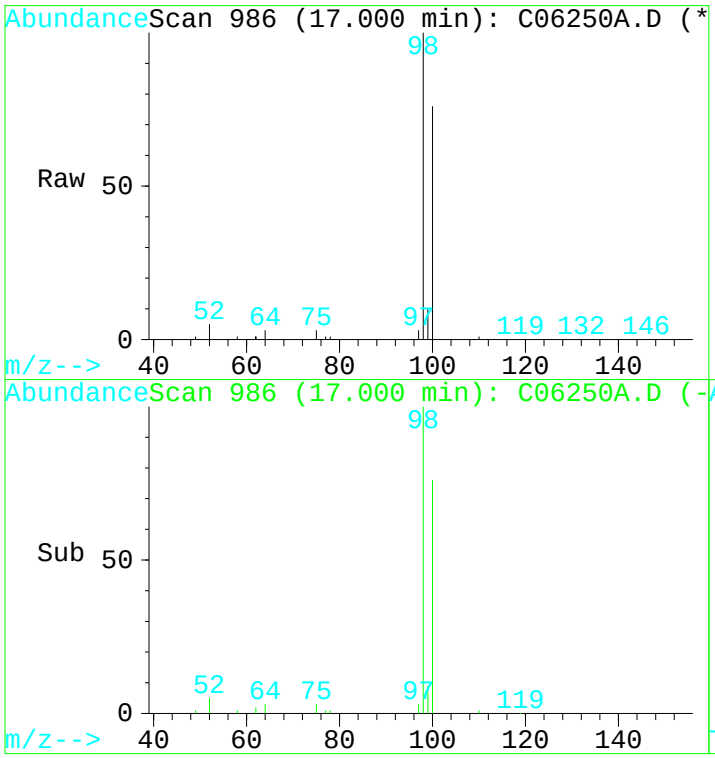


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06250A.D
Acq: 25 Jun 110 9:19 am

Tgt Ion:117 Resp: 399358

Ion	Ratio	Lower	Upper
117	100		
82	41.9	33.5	50.3
0	0.0	0.0	0.0
0	0.0	0.0	0.0

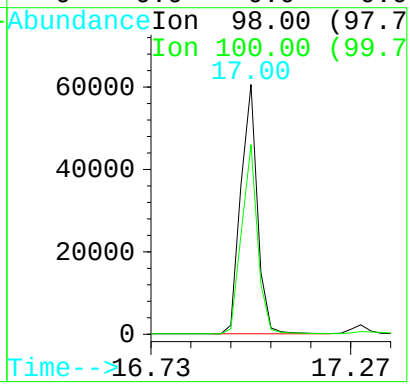


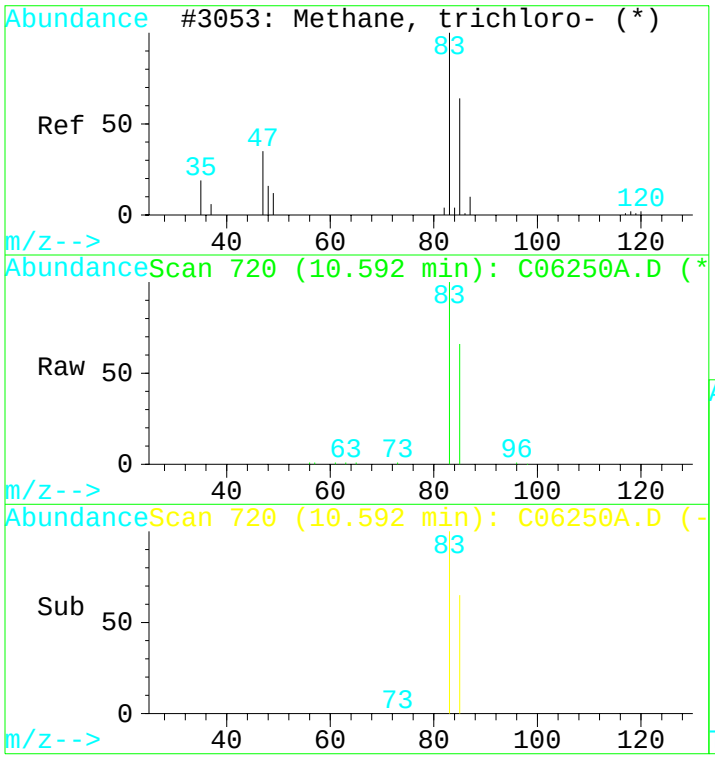


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: C06250A.D
Acq: 25 Jun 110 9:19 am

Tgt Ion:98 Resp: 186243

Ion	Ratio	Lower	Upper
98	100		
100	73.2	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

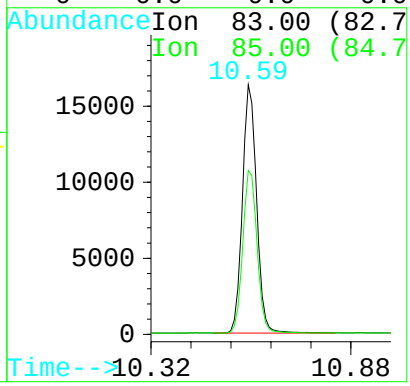


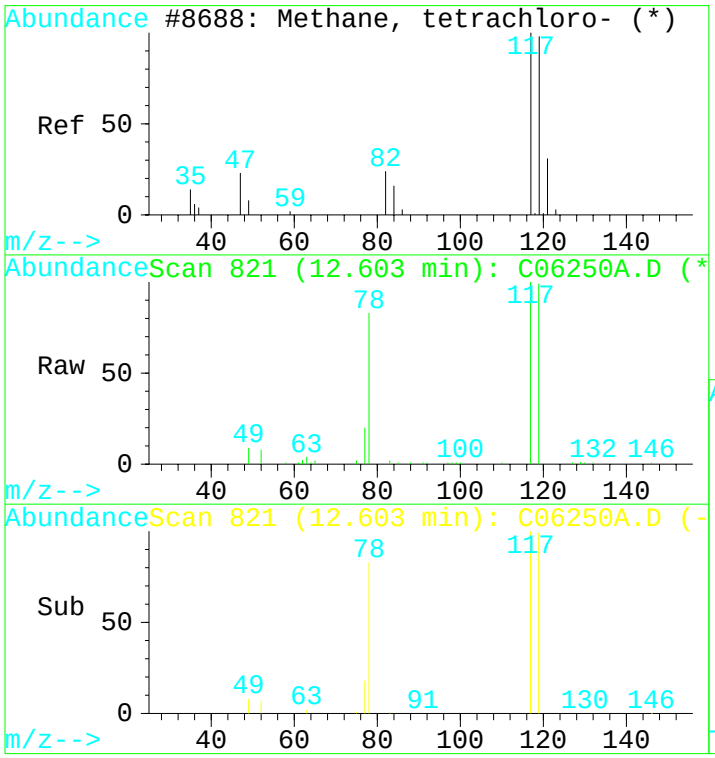


#3
Chloroform
Concen: 0.11 ppbV
RT: 10.59 min Scan# 720
Delta R.T. -0.07 min
Lab File: C06250A.D
Acq: 25 Jun 110 9:19 am

Tgt Ion:83 Resp: 44523

Ion	Ratio	Lower	Upper
83	100		
85	65.4	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

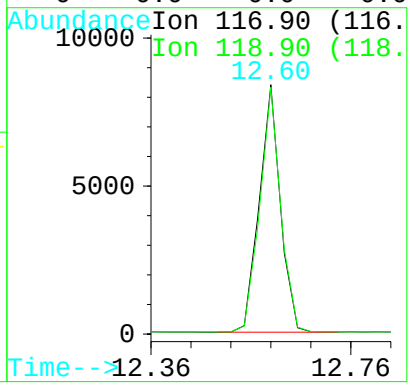


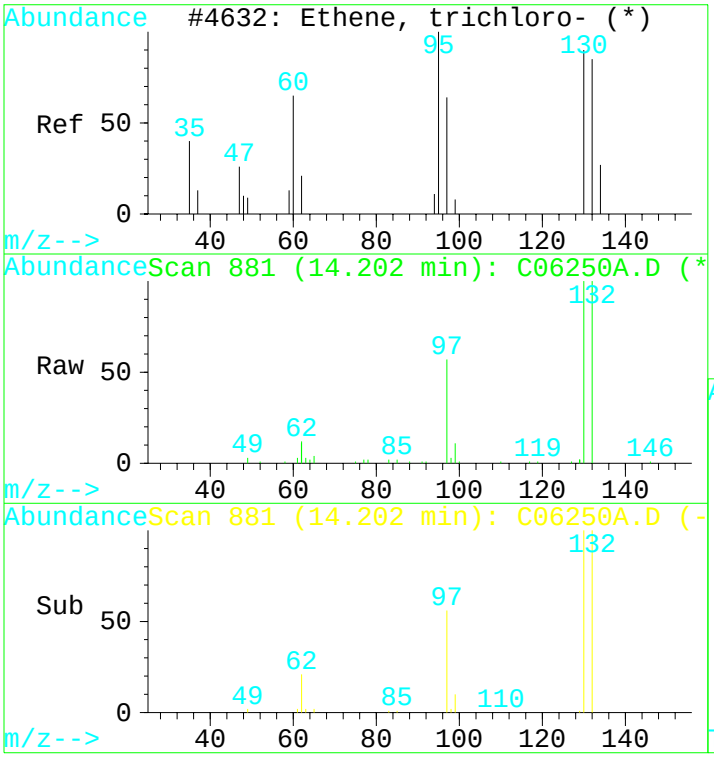


#4
Carbon tetrachloride
Concen: 0.10 ppbV
RT: 12.60 min Scan# 821
Delta R.T. -0.06 min
Lab File: C06250A.D
Acq: 25 Jun 110 9:19 am

Tgt Ion:116.9 Resp: 24384

Ion	Ratio	Lower	Upper
117	100		
119	98.8	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0

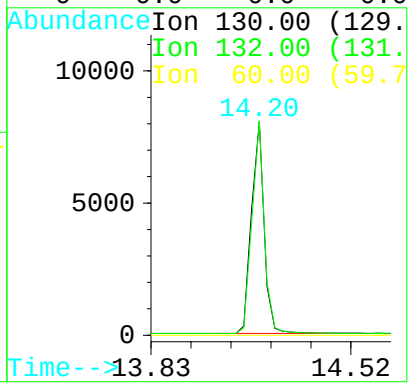




#5
Trichloroethene
Concen: 0.11 ppbV
RT: 14.20 min Scan# 881
Delta R.T. -0.06 min
Lab File: C06250A.D
Acq: 25 Jun 110 9:19 am

Tgt Ion:130 Resp: 24451

Ion	Ratio	Lower	Upper
130	100		
132	100.3	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0



Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06250C.D
Acq Time : 25 Jun 110 10:30 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 5.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

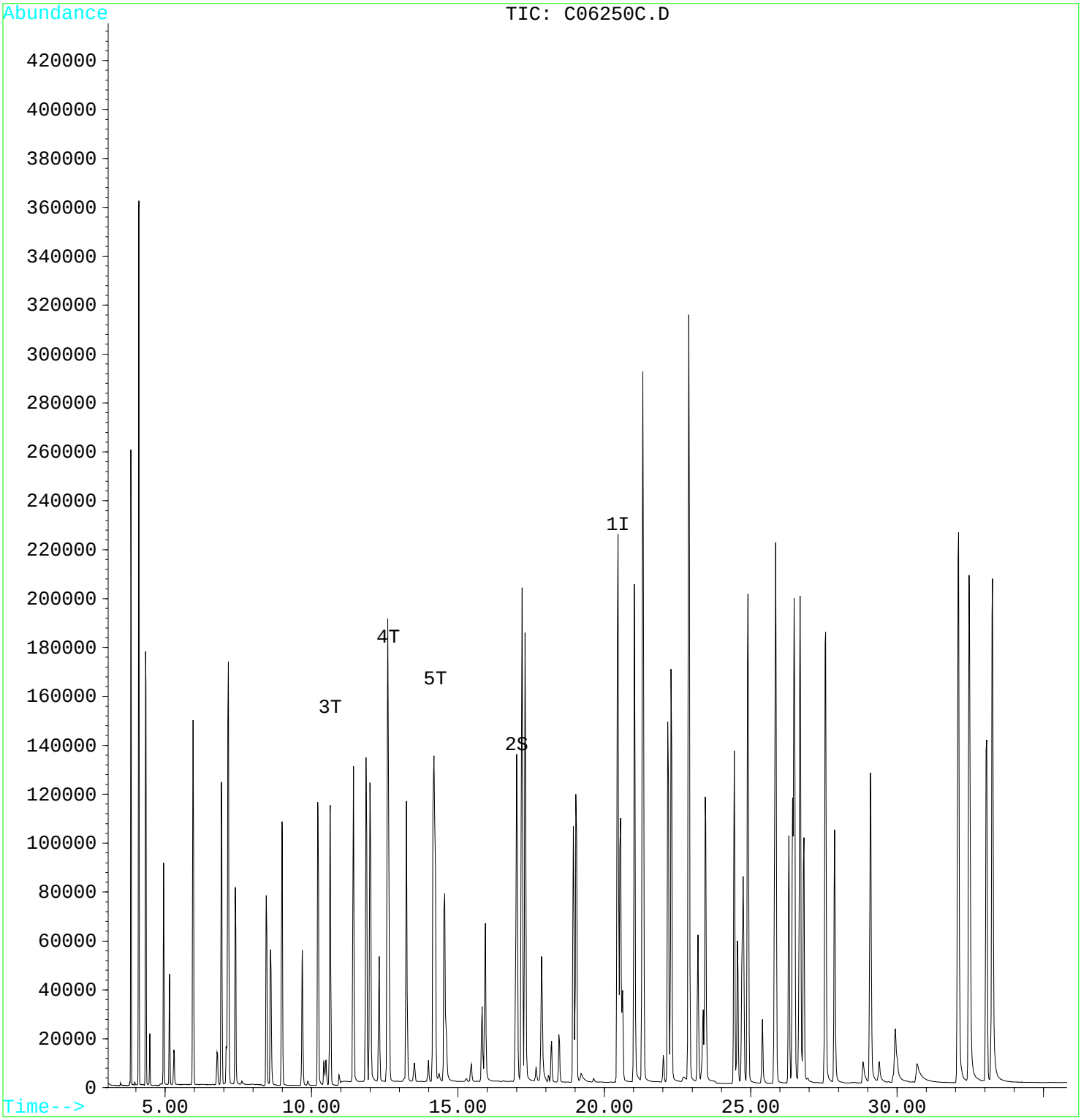
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Chlorobenzene-d5	20.46	117	407017	0.20	ppbV	-0.05
System Monitoring Compounds						%Recovery
2) Toluene-d8	17.00	98	189836	0.20	ppbV	
Target Compounds						Qvalue
3) Chloroform	10.64	83	184259	0.43	ppbV	96
4) Carbon tetrachloride	12.63	117	121264	0.47	ppbV	99
5) Trichloroethene	14.23	130	94596	0.41	ppbV	97

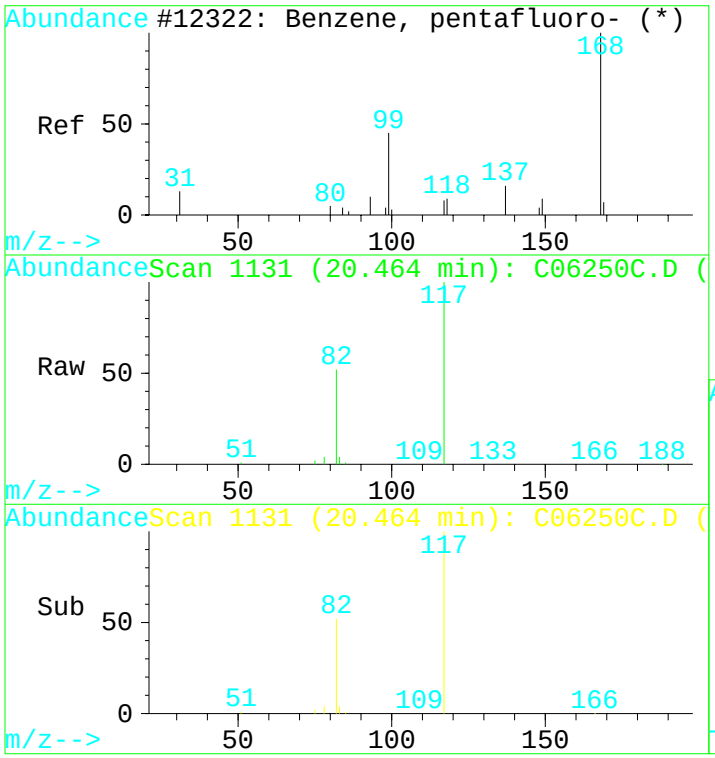
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\MSCHEM\2\DATA\06240M~1\C06250C.D
Acq Time : 25 Jun 110 10:30 am Operator: JF
Sample : ST60421 + ST60550 Inst : MS2
Misc : 5.0 ML Multiplr: 1.00
Quant Time: Jul 4 13:38 19110

Method : C:\MSCHEM\2\METHODS\2NTHG_A.M
Title : EPA T0-15
Last Update : Sun Jul 04 13:43:39 2010
Response via : Multiple Level Calibration

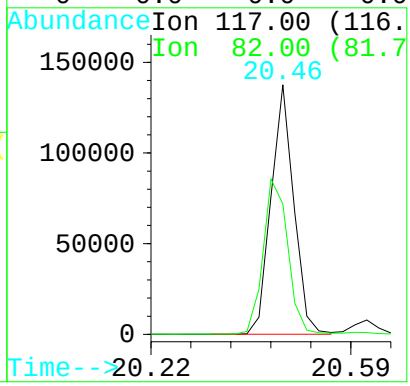


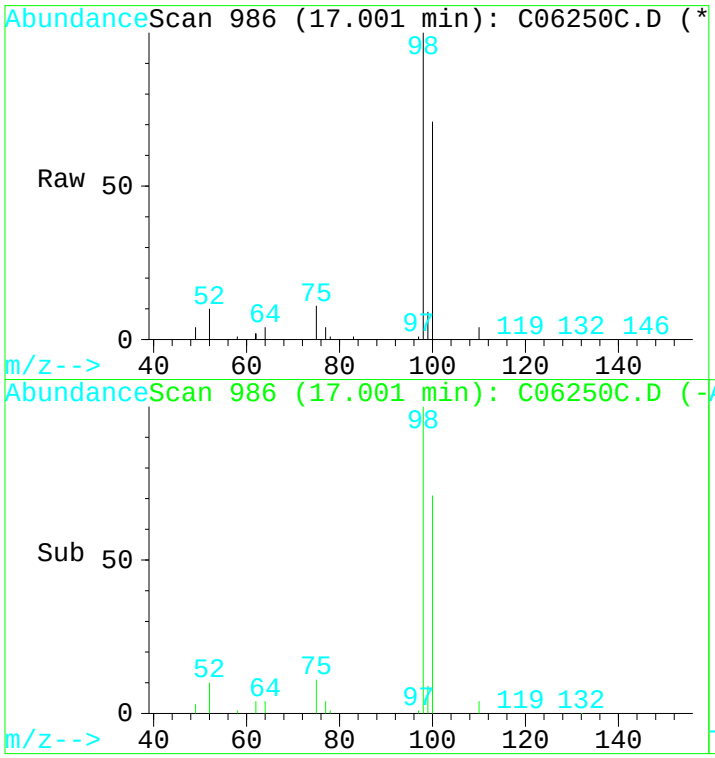


#1
Chlorobenzene-d5
Concen: 0.20 ppbV
RT: 20.46 min Scan# 1131
Delta R.T. -0.05 min
Lab File: C06250C.D
Acq: 25 Jun 110 10:30 am

Tgt Ion:117 Resp: 407017

Ion	Ratio	Lower	Upper
117	100		
82	52.2	33.5	50.3#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

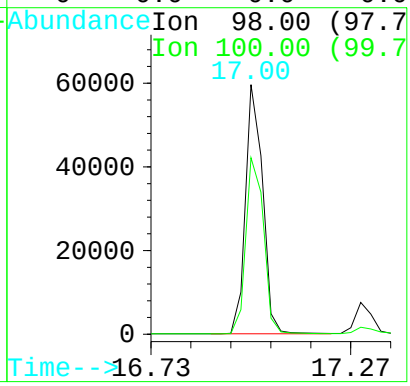


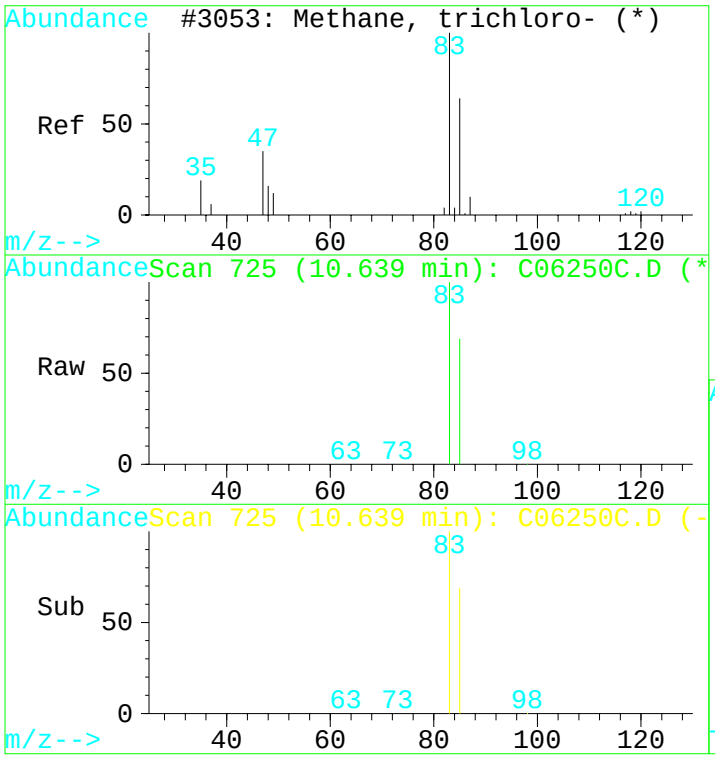


#2
Toluene-d8
Concen: 0.20 ppbV
RT: 17.00 min Scan# 986
Delta R.T. -0.05 min
Lab File: C06250C.D
Acq: 25 Jun 110 10:30 am

Tgt Ion:98 Resp: 189836

Ion	Ratio	Lower	Upper
98	100		
100	73.1	58.6	87.8
0	0.0	0.0	0.0
0	0.0	0.0	0.0

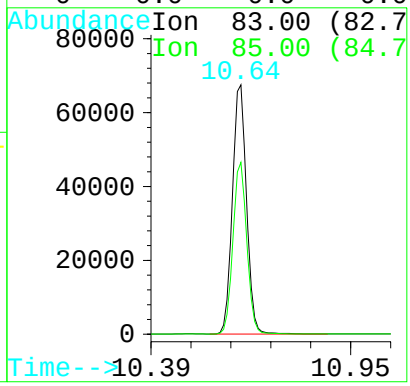


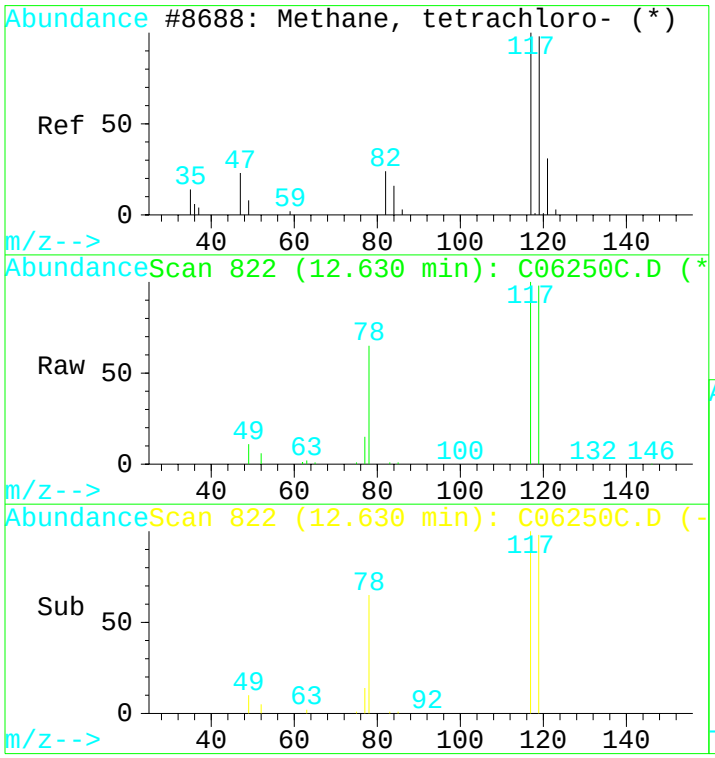


#3
Chloroform
Concen: 0.43 ppbV
RT: 10.64 min Scan# 725
Delta R.T. -0.02 min
Lab File: C06250C.D
Acq: 25 Jun 110 10:30 am

Tgt Ion:83 Resp: 184259

Ion	Ratio	Lower	Upper
83	100		
85	68.9	52.3	78.5
0	0.0	0.0	0.0
0	0.0	0.0	0.0

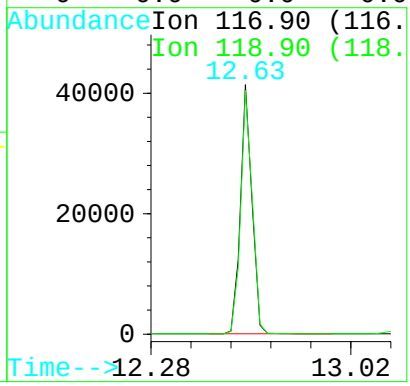


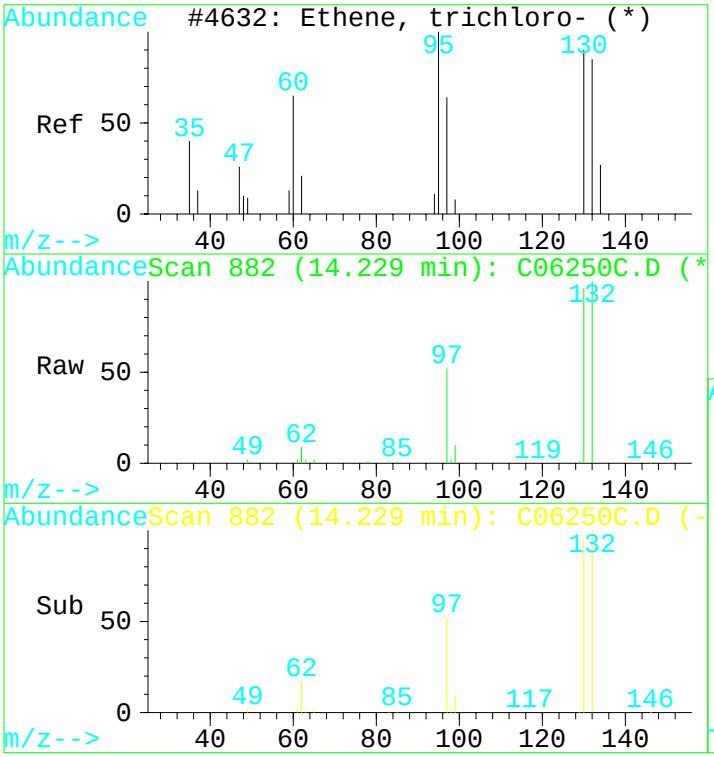


#4
Carbon tetrachloride
Concen: 0.47 ppbV
RT: 12.63 min Scan# 822
Delta R.T. -0.03 min
Lab File: C06250C.D
Acq: 25 Jun 110 10:30 am

Tgt Ion:116.9 Resp: 121264

Ion	Ratio	Lower	Upper
117	100		
119	97.6	79.0	118.6
0	0.0	0.0	0.0
0	0.0	0.0	0.0





#5
Trichloroethene
Concen: 0.41 ppbV
RT: 14.23 min Scan# 882
Delta R.T. -0.03 min
Lab File: C06250C.D
Acq: 25 Jun 110 10:30 am

Tgt Ion:130 Resp: 94596

Ion	Ratio	Lower	Upper
130	100		
132	103.7	80.2	120.4
60	0.0	0.0	0.0
0	0.0	0.0	0.0