

## LABORATORY REPORT

June 11, 2008

Robert Kennedy  
ENSR  
2 Technology Park Drive  
Westford, MA 01886

**RE: Soil Gas Sampling / 04020-023-4311**

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on May 21, 2008. For your reference, these analyses have been assigned our service request number P0801507.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 908 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

**Columbia Analytical Services, Inc.**

*Kelly M. Horiuchi*

Kelly Horiuchi  
Project Manager

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1 of 908

Client: ENSR  
Project: Soil Gas Sampling / 04020-023-4311

CAS Project No: P0801507

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### CASE NARRATIVE

The samples were received intact under chain of custody on May 21, 2008 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

#### Helium Analysis

The samples were analyzed for helium according to modified EPA Method 3C using a gas chromatograph equipped with a thermal conductivity detector (TCD).

#### Volatile Organic Compound Analysis

The samples were also analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Therefore, any result reported below the MRL may be biased high.

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*The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.*



Client: ENSR

Folder: P0801507

Project: Soil Gas Sampling 04020-023-4311

### Detailed Sample Information

<u>CAS Sample ID</u>	<u>Client Sample ID</u>	<u>Container Type</u>	<u>Pi1</u> (Hg)	<u>Pi1</u> (psig)	<u>Pf1</u> (Hg)	<u>Pf2</u> (psig)	<u>Cont ID</u>	<u>Order #</u>	<u>FC ID</u>	<u>Order #</u>
P0801507-001.01	SG77B-05	6.0 L-Summa Canister Source	-6.2	-3.0	3.5		SC00799	8862	OA00868	8862
P0801507-002.01	SG30B-05	6.0 L-Summa Canister Source	-6.2	-3.0	3.5		SC00705	8862	OA00664	8862
P0801507-003.01	SG29B-05	6.0 L-Summa Canister Source	-7.6	-3.7	3.5		SC00989	8862	OA00872	8862
P0801507-004.01	SG59B-05	6.0 L-Summa Canister Source	-8.6	-4.2	3.5		SC00987	8862	OA00035	8862
P0801507-005.01	SG31B-05	6.0 L-Summa Canister Source	-6.5	-3.2	3.5		SC00649	8862	OA00560	8862
P0801507-006.01	SG60B-05	6.0 L-Summa Canister Source	-7.6	-3.7	3.5		SC00811	8862	OA00040	8862
P0801507-007.01	SG58B-05	6.0 L-Summa Canister Source	-7.9	-3.9	3.7		SC00664	8862	OA00033	8862
P0801507-008.01	SG56B-05	6.0 L-Summa Canister Source	-7.8	-3.8	3.5		SC00943	8863	OA00816	8863
P0801507-009.01	SG56B-05D	6.0 L-Summa Canister Source	-7.7	-3.8	3.5		SC00978	8863	OA00816	8863
P0801507-010.01	SG55B-05	6.0 L-Summa Canister Source	-7.8	-3.8	3.8		SC00772	8863	OA00804	8863
P0801507-011.01	SG57B-05	6.0 L-Summa Canister Source	-6.8	-3.3	3.6		SC01021	8863	OA00561	8862
P0801507-012.01	SG13B-05	6.0 L-Summa Canister Source	-6.7	-3.3	3.6		SC00428	8863	OA00809	8863
P0801507-013.01	SG15B-05	6.0 L-Summa Canister Source	-7.2	-3.5	3.5		SC00817	8863	OA00806	8863
P0801507-014.01	SG14B-05	6.0 L-Summa Canister Source	-7.1	-3.5	3.6		SC00051	8863	OA00800	8863
P0801507-015.01	SG06B-05	6.0 L-Summa Canister Source	-5.9	-2.9	3.5		SC00189	8863	OA00807	8863

Client: ENSR

Folder: P0801507

Project: Soil Gas Sampling 04020-023-4311

### Detailed Sample Information

<u>CAS Sample ID</u>	<u>Client Sample ID</u>	<u>Container Type</u>	<u>P1 (Hg)</u>	<u>P1 (psig)</u>	<u>Pf1</u>	<u>P12 (Hg)</u>	<u>P12 (psig)</u>	<u>Pf2</u>	<u>Cont ID</u>	<u>Order #</u>	<u>FC ID</u>	<u>Order #</u>
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Miscellaneous Items - received

- SC00710
- AVG00758
- AVG00245
- AVG00461
- AVG00613
- AVG00121
- AVG00145
- AVG00787
- AVG00257
- OA00284
- AVG00649
- OA00021
- AVG00529
- OA00565
- AVG00679
- AVG00415
- AVG00319
- AVG00520
- AVG00743

# Air - Chain of Custody Record & Analytical Service Request



2655 Park Center Drive, Suite A  
Simi Valley, California 93065  
Phone (805) 526-7161  
Fax (805) 526-7270

**Requested Turnaround Time in Business Days (Surcharges) please circle**  
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10 Day - Standard

CAS Project No. **90801507**

Company Name & Address (Reporting Information) <b>ENSR</b> 1720 Avenida Acaso Camarillo, CA 93012		Project Name <b>Soil Gas Sampling</b>		Project Number <b>04020-013-4311</b>		Project Requirements (MRLs, QAPP) Helium	
Project Manager <b>MIKE FRACK</b>		P.O. # / Billing Information		CAS Contact <b>KELLY HORIMCHI</b>		Analysis Method and/or Analytes	
Phone <b>805.398.3775</b>		Fax <b>805.388.8577</b>		Sampler (Print & Sign) <b>CASSANDRA WALK</b>		Comments e.g. Actual Preservative or specific instructions	
Email Address for Result Reporting							
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tube/Solid)	Canister ID (Bar Code # - AC, SC, etc.)	Flow Controller (Bar Code - FC #)	Sample Volume
5977B-05	0-6.2	5/19/08	0801	Air	5000799	DA00008	6L
5930B-05	0-6.2	5/19/08	1035	Air	5000705	DA00004	6L
5929B-05	0-7.6	5/19/08	1143	Air	5000799	DA00072	6L
5959B-05	0-8.6	5/19/08	1320	Air	5000987	DA00035	6L
5931B-05	0-6.5	5/19/08	1443	Air	5000699	DA00500	6L
5910B-05	0-7.6	5/20/08	0924	Air	5000811	DA00040	6L
5958B-05	0-7.4	5/20/08	1100	Air	5000604	DA00033	6L
5956B-05	0-7.8	5/20/08	1248	Air	5000993	DA00010	6L
5956B-05D	0-7.7	5/20/08	1331	Air	5000978	DA00010	6L
5955B-05	0-7.8	5/20/08	1439	Air	5000772	DA00004	6L
5957B-05	0-6.8	5/20/08	1558	Air	5000602	DA00561	6L
5913B-05	0-6.7	5/20/08	1700	Air	5000428	DA00009	6L
5915B-05	0-7.2	5/20/08	1300	Air	5000817	DA00006	6L
5914B-05	0-7.1	5/20/08	1350	Air	5000051	DA00000	6L
5900B-05	0-5.9	5/20/08	1453	Air	5000189	DA00007	6L

**Report Tier Levels - please select**  
 Tier I - (Results/Default if not specified)  
 Tier II - (Results + QC)  
 Tier III - (Data Validation Package) 10% Surcharge  
 Tier V - (client specified)

Relinquished by: (Signature) **CAND** Date: **5/20/08** Time: **1040**  
 Relinquished by: (Signature) **BT** Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: (Signature) **WALK** Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Project Requirements (MRLs, QAPP)  
 Helium  
 #500116

Cooler / Blank  
 Temperature

**Columbia Analytical Services, Inc.**  
**Sample Acceptance Check Form**

Client: ENSR

Work order: P0801507

Project: Soil Gas Sampling / 04020-023-4311

Sample(s) received on: 5/21/2008

Date opened: 5/21/2008

by: MZAMORA

*Note:* This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- |  | Yes                                 | No                                  | N/A                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Container(s) <b>supplied by CAS</b> ?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Did <b>sample containers</b> arrive in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Were <b>chain-of-custody</b> papers used and filled out?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Did <b>sample container labels</b> and/or tags agree with custody papers?                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 6 Was <b>sample volume</b> received adequate for analysis?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Are samples within specified holding times?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8 Was proper <b>temperature</b> (thermal preservation) of cooler at receipt adhered to?                          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Cooler Temperature _____ °C    Blank Temperature _____ °C  |                                     |                                     |                                     |
| 9 Was a <b>trip blank</b> received?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Trip blank supplied by CAS: Serial # _____ -TB _____   |                                     |                                     |                                     |
| 10 Were <b>custody seals</b> on outside of cooler/Box?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were custody seals on outside of sample container?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Location of seal(s)? _____ Sealing Lid?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were signature and date included?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were seals intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 11 Do containers have appropriate <b>preservation</b> , according to method/SOP or Client specified information? | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are <b>pH</b> preserved?                                 | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Were <b>VOA vials</b> checked for presence/absence of air bubbles?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 12 <b>Tubes:</b> Are the tubes capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Do they contain moisture?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 13 <b>Badges:</b> Are the badges properly capped and intact?   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact?  | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P0801507-001.01	6.0 L Source Can					
P0801507-002.01	6.0 L Source Can					
P0801507-003.01	6.0 L Source Can					
P0801507-004.01	6.0 L Source Can					
P0801507-005.01	6.0 L Source Can					
P0801507-006.01	6.0 L Source Can					
P0801507-007.01	6.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): \_\_\_\_\_

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12);



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Helium**

**Test Code:** EPA 3C Modified  
**Instrument ID:** HP5890 II/GC8/TCD  
**Analyst:** Zheng Wang/Wade Henton/Chris Cornett  
**Sampling Media:** 6.0 L Summa Canister(s)  
**Test Notes:**

**Date(s) Collected:** 5/19 - 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/23/08

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SG77B-05	P0801507-001	1.00	1.56	ND	39	
SG30B-05	P0801507-002	1.00	1.56	ND	39	
<b>SG29B-05</b>	P0801507-003	1.00	1.65	<b>120</b>	41	
SG59B-05	P0801507-004	1.00	1.73	ND	43	
SG31B-05	P0801507-005	1.00	1.58	ND	40	
<b>SG60B-05</b>	P0801507-006	1.00	1.65	<b>1,100</b>	41	
SG58B-05	P0801507-007	1.00	1.70	ND	43	
SG56B-05	P0801507-008	1.00	1.67	ND	42	
SG56B-05D	P0801507-009	1.00	1.67	ND	42	
SG55B-05	P0801507-010	1.00	1.70	ND	43	
SG57B-05	P0801507-011	1.00	1.61	ND	40	
SG13B-05	P0801507-012	1.00	1.61	ND	40	
SG15B-05	P0801507-013	1.00	1.63	ND	41	
SG14B-05	P0801507-014	1.00	1.63	ND	41	
SG06B-05	P0801507-015	1.00	1.54	ND	39	
Method Blank	P080523-MB	1.00	1.00	ND	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG77B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00799

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** 0.010 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	78	7.8	ND	16	1.6	
74-87-3	Chloromethane	ND	16	7.8	ND	7.6	3.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	78	7.8	ND	11	1.1	
75-01-4	Vinyl Chloride	ND	16	7.8	ND	6.1	3.1	
74-83-9	Bromomethane	ND	16	7.8	ND	4.0	2.0	
75-00-3	Chloroethane	ND	16	7.8	ND	5.9	3.0	
64-17-5	<b>Ethanol</b>	<b>17</b>	780	7.8	<b>8.9</b>	410	4.1	<b>J, B</b>
67-64-1	<b>Acetone</b>	<b>330</b>	780	11	<b>140</b>	330	4.8	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	16	7.8	ND	2.8	1.4	
107-13-1	Acrylonitrile	ND	78	11	ND	36	5.0	
75-35-4	<b>1,1-Dichloroethene</b>	<b>14</b>	16	7.8	<b>3.6</b>	3.9	2.0	<b>J</b>
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	78	12	ND	26	3.8	
75-09-2	<b>Methylene Chloride</b>	<b>20</b>	78	7.8	<b>5.8</b>	22	2.2	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	16	7.8	ND	5.0	2.5	
76-13-1	Trichlorotrifluoroethane	ND	16	8.7	ND	2.0	1.1	
75-15-0	Carbon Disulfide	ND	78	19	ND	25	6.0	
156-60-5	trans-1,2-Dichloroethene	ND	16	7.8	ND	3.9	2.0	
75-34-3	1,1-Dichloroethane	ND	16	7.8	ND	3.9	1.9	
1634-04-4	Methyl tert-Butyl Ether	ND	16	7.8	ND	4.3	2.2	
108-05-4	Vinyl Acetate	ND	780	25	ND	220	7.1	
78-93-3	<b>2-Butanone (MEK)</b>	<b>51</b>	78	7.8	<b>17</b>	26	2.6	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	16	7.8	ND	3.9	2.0	
108-20-3	Diisopropyl Ether	ND	78	9.2	ND	19	2.2	
67-66-3	<b>Chloroform</b>	<b>45,000</b>	16	9.2	<b>9,300</b>	3.2	1.9	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG77B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00799

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	78	8.0	ND	19	1.9	
107-06-2	1,2-Dichloroethane	ND	16	7.8	ND	3.9	1.9	
71-55-6	1,1,1-Trichloroethane	ND	16	7.8	ND	2.9	1.4	
71-43-2	<b>Benzene</b>	<b>47</b>	16	7.8	<b>15</b>	4.9	2.4	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>22</b>	16	7.8	<b>3.6</b>	2.5	1.2	
994-05-8	tert-Amyl Methyl Ether	ND	78	7.8	ND	19	1.9	
78-87-5	1,2-Dichloropropane	ND	16	7.8	ND	3.4	1.7	
75-27-4	<b>Bromodichloromethane</b>	<b>47</b>	16	7.8	<b>7.0</b>	2.3	1.2	
79-01-6	<b>Trichloroethene</b>	<b>120</b>	16	7.8	<b>22</b>	2.9	1.5	
123-91-1	1,4-Dioxane	ND	78	9.5	ND	22	2.6	
80-62-6	Methyl Methacrylate	ND	78	12	ND	19	2.9	
142-82-5	<b>n-Heptane</b>	<b>39</b>	78	10	<b>9.5</b>	19	2.4	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	78	8.1	ND	17	1.8	
108-10-1	4-Methyl-2-pentanone	ND	78	8.7	ND	19	2.1	
10061-02-6	trans-1,3-Dichloropropene	ND	78	9.8	ND	17	2.2	
79-00-5	1,1,2-Trichloroethane	ND	16	7.8	ND	2.9	1.4	
108-88-3	<b>Toluene</b>	<b>430</b>	78	7.8	<b>110</b>	21	2.1	
591-78-6	2-Hexanone	ND	78	12	ND	19	2.9	
124-48-1	<b>Dibromochloromethane</b>	<b>32</b>	16	11	<b>3.8</b>	1.8	1.2	
106-93-4	1,2-Dibromoethane	ND	16	8.4	ND	2.0	1.1	
111-65-9	<b>n-Octane</b>	<b>1,000</b>	78	7.8	<b>210</b>	17	1.7	
127-18-4	<b>Tetrachloroethene</b>	<b>49</b>	16	7.8	<b>7.2</b>	2.3	1.2	
108-90-7	Chlorobenzene	ND	16	8.0	ND	3.4	1.7	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:     CA          Date:     6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG77B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00799

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	85	78	9.7	20	18	2.2	
179601-23-1	m,p-Xylenes	360	78	20	84	18	4.7	
75-25-2	Bromoform	41	78	12	3.9	7.5	1.1	J
100-42-5	Styrene	ND	78	12	ND	18	2.8	
95-47-6	o-Xylene	110	78	9.8	25	18	2.3	
79-34-5	1,1,2,2-Tetrachloroethane	ND	16	10	ND	2.3	1.5	
98-82-8	Cumene	ND	78	8.7	ND	16	1.8	
103-65-1	n-Propylbenzene	14	78	8.1	2.9	16	1.7	J
622-96-8	4-Ethyltoluene	21	78	8.9	4.2	16	1.8	J
108-67-8	1,3,5-Trimethylbenzene	22	78	9.4	4.5	16	1.9	J
98-83-9	alpha-Methylstyrene	ND	78	11	ND	16	2.4	
95-63-6	1,2,4-Trimethylbenzene	42	78	11	8.6	16	2.2	J
100-44-7	Benzyl Chloride	ND	16	13	ND	3.0	2.6	
541-73-1	1,3-Dichlorobenzene	ND	16	9.7	ND	2.6	1.6	
106-46-7	1,4-Dichlorobenzene	17	16	8.7	2.8	2.6	1.5	
135-98-8	sec-Butylbenzene	ND	78	9.0	ND	14	1.6	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	78	10	ND	14	1.8	
95-50-1	1,2-Dichlorobenzene	ND	16	10	ND	2.6	1.7	
96-12-8	1,2-Dibromo-3-chloropropane	ND	78	12	ND	8.1	1.2	
120-82-1	1,2,4-Trichlorobenzene	ND	16	12	ND	2.1	1.6	
91-20-3	Naphthalene	ND	31	12	ND	6.0	2.2	
87-68-3	Hexachlorobutadiene	ND	16	14	ND	1.5	1.3	
98-06-6	tert-Butylbenzene	ND	31	7.8	ND	5.7	1.4	
104-51-8	n-Butylbenzene	ND	31	7.8	ND	5.7	1.4	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG30B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00705

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.025 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	31	3.1	ND	6.3	0.63	
74-87-3	Chloromethane	ND	6.2	3.1	ND	3.0	1.5	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	31	3.1	ND	4.5	0.45	
75-01-4	Vinyl Chloride	ND	6.2	3.1	ND	2.4	1.2	
74-83-9	Bromomethane	ND	6.2	3.1	ND	1.6	0.80	
75-00-3	Chloroethane	ND	6.2	3.1	ND	2.4	1.2	
64-17-5	Ethanol	ND	310	3.1	ND	170	1.7	
67-64-1	<b>Acetone</b>	<b>49</b>	310	4.6	<b>21</b>	130	1.9	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	6.2	3.1	ND	1.1	0.56	
107-13-1	Acrylonitrile	ND	31	4.4	ND	14	2.0	
75-35-4	1,1-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	31	4.6	ND	10	1.5	
75-09-2	Methylene Chloride	ND	31	3.1	ND	9.0	0.90	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	6.2	3.1	ND	2.0	1.0	
76-13-1	Trichlorotrifluoroethane	ND	6.2	3.5	ND	0.81	0.46	
75-15-0	Carbon Disulfide	ND	31	7.5	ND	10	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
75-34-3	1,1-Dichloroethane	ND	6.2	3.1	ND	1.5	0.77	
1634-04-4	Methyl tert-Butyl Ether	ND	6.2	3.1	ND	1.7	0.87	
108-05-4	Vinyl Acetate	ND	310	10	ND	89	2.8	
78-93-3	<b>2-Butanone (MEK)</b>	<b>14</b>	31	3.1	<b>4.8</b>	11	1.1	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
108-20-3	Diisopropyl Ether	ND	31	3.7	ND	7.5	0.88	
67-66-3	<b>Chloroform</b>	<b>21,000</b>	6.2	3.7	<b>4,200</b>	1.3	0.75	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG30B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00705

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.025 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	10	31	3.9	2.4	7.2	0.89	J
179601-23-1	m,p-Xylenes	45	31	8.1	10	7.2	1.9	
75-25-2	Bromoform	ND	31	4.7	ND	3.0	0.46	
100-42-5	Styrene	ND	31	4.7	ND	7.3	1.1	
95-47-6	o-Xylene	14	31	3.9	3.3	7.2	0.91	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.2	4.0	ND	0.91	0.58	
98-82-8	Cumene	ND	31	3.5	ND	6.3	0.71	
103-65-1	n-Propylbenzene	ND	31	3.2	ND	6.3	0.66	
622-96-8	4-Ethyltoluene	ND	31	3.6	ND	6.3	0.72	
108-67-8	1,3,5-Trimethylbenzene	ND	31	3.7	ND	6.3	0.76	
98-83-9	alpha-Methylstyrene	ND	31	4.6	ND	6.5	0.94	
95-63-6	1,2,4-Trimethylbenzene	ND	31	4.3	ND	6.3	0.88	
100-44-7	Benzyl Chloride	ND	6.2	5.4	ND	1.2	1.0	
541-73-1	1,3-Dichlorobenzene	ND	6.2	3.9	ND	1.0	0.64	
106-46-7	1,4-Dichlorobenzene	28	6.2	3.5	4.6	1.0	0.58	
135-98-8	sec-Butylbenzene	ND	31	3.6	ND	5.7	0.66	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	31	4.1	ND	5.7	0.74	
95-50-1	1,2-Dichlorobenzene	ND	6.2	4.1	ND	1.0	0.69	
96-12-8	1,2-Dibromo-3-chloropropane	ND	31	4.7	ND	3.2	0.49	
120-82-1	1,2,4-Trichlorobenzene	ND	6.2	4.7	ND	0.84	0.64	
91-20-3	Naphthalene	ND	12	4.6	ND	2.4	0.88	
87-68-3	Hexachlorobutadiene	ND	6.2	5.6	ND	0.59	0.53	
98-06-6	tert-Butylbenzene	ND	12	3.1	ND	2.3	0.57	
104-51-8	n-Butylbenzene	ND	12	3.1	ND	2.3	0.57	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

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Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00989

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	83	8.3	ND	17	1.7	
74-87-3	Chloromethane	ND	17	8.3	ND	8.0	4.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	83	8.3	ND	12	1.2	
75-01-4	Vinyl Chloride	ND	17	8.3	ND	6.5	3.2	
74-83-9	Bromomethane	ND	17	8.3	ND	4.3	2.1	
75-00-3	Chloroethane	ND	17	8.3	ND	6.3	3.1	
64-17-5	Ethanol	ND	830	8.3	ND	440	4.4	
67-64-1	<b>Acetone</b>	<b>260</b>	830	12	<b>110</b>	350	5.1	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>660</b>	17	8.3	<b>120</b>	2.9	1.5	
107-13-1	Acrylonitrile	ND	83	12	ND	38	5.3	
75-35-4	1,1-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	83	12	ND	27	4.0	
75-09-2	<b>Methylene Chloride</b>	<b>13</b>	83	8.3	<b>3.7</b>	24	2.4	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	17	8.3	ND	5.3	2.6	
76-13-1	Trichlorotrifluoroethane	ND	17	9.2	ND	2.2	1.2	
75-15-0	Carbon Disulfide	ND	83	20	ND	27	6.4	
156-60-5	trans-1,2-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
75-34-3	1,1-Dichloroethane	ND	17	8.3	ND	4.1	2.0	
1634-04-4	Methyl tert-Butyl Ether	ND	17	8.3	ND	4.6	2.3	
108-05-4	Vinyl Acetate	ND	830	26	ND	230	7.5	
78-93-3	<b>2-Butanone (MEK)</b>	<b>22</b>	83	8.3	<b>7.4</b>	28	2.8	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
108-20-3	Diisopropyl Ether	ND	83	9.7	ND	20	2.3	
67-66-3	<b>Chloroform</b>	<b>63,000</b>	17	9.7	<b>13,000</b>	3.4	2.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:     CA          Date:     6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00989

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	83	8.4	ND	20	2.0	
107-06-2	1,2-Dichloroethane	ND	17	8.3	ND	4.1	2.0	
71-55-6	1,1,1-Trichloroethane	ND	17	8.3	ND	3.0	1.5	
71-43-2	<b>Benzene</b>	<b>12</b>	17	8.3	<b>3.9</b>	5.2	2.6	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>18,000</b>	17	8.3	<b>2,800</b>	2.6	1.3	
994-05-8	tert-Amyl Methyl Ether	ND	83	8.3	ND	20	2.0	
78-87-5	1,2-Dichloropropane	ND	17	8.3	ND	3.6	1.8	
75-27-4	Bromodichloromethane	ND	17	8.3	ND	2.5	1.2	
79-01-6	Trichloroethene	ND	17	8.3	ND	3.1	1.5	
123-91-1	1,4-Dioxane	ND	83	10	ND	23	2.8	
80-62-6	Methyl Methacrylate	ND	83	12	ND	20	3.0	
142-82-5	n-Heptane	ND	83	11	ND	20	2.6	
10061-01-5	cis-1,3-Dichloropropene	ND	83	8.6	ND	18	1.9	
108-10-1	4-Methyl-2-pentanone	ND	83	9.2	ND	20	2.3	
10061-02-6	trans-1,3-Dichloropropene	ND	83	10	ND	18	2.3	
79-00-5	1,1,2-Trichloroethane	ND	17	8.3	ND	3.0	1.5	
108-88-3	<b>Toluene</b>	<b>58</b>	83	8.3	<b>15</b>	22	2.2	<b>J</b>
591-78-6	2-Hexanone	ND	83	13	ND	20	3.1	
124-48-1	Dibromochloromethane	ND	17	11	ND	1.9	1.3	
106-93-4	1,2-Dibromoethane	ND	17	8.9	ND	2.1	1.2	
111-65-9	<b>n-Octane</b>	<b>140</b>	83	8.3	<b>30</b>	18	1.8	
127-18-4	<b>Tetrachloroethene</b>	<b>20</b>	17	8.3	<b>2.9</b>	2.4	1.2	
108-90-7	Chlorobenzene	ND	17	8.4	ND	3.6	1.8	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:         164              Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00989

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	16	83	10	3.6	19	2.4	J
179601-23-1	m,p-Xylenes	64	83	21	15	19	4.9	J
75-25-2	Bromoform	ND	83	13	ND	8.0	1.2	
100-42-5	Styrene	ND	83	13	ND	19	2.9	
95-47-6	o-Xylene	18	83	10	4.3	19	2.4	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	17	11	ND	2.4	1.5	
98-82-8	Cumene	ND	83	9.2	ND	17	1.9	
103-65-1	n-Propylbenzene	ND	83	8.6	ND	17	1.7	
622-96-8	4-Ethyltoluene	ND	83	9.4	ND	17	1.9	
108-67-8	1,3,5-Trimethylbenzene	ND	83	9.9	ND	17	2.0	
98-83-9	alpha-Methylstyrene	ND	83	12	ND	17	2.5	
95-63-6	1,2,4-Trimethylbenzene	ND	83	11	ND	17	2.3	
100-44-7	Benzyl Chloride	ND	17	14	ND	3.2	2.7	
541-73-1	1,3-Dichlorobenzene	ND	17	10	ND	2.7	1.7	
106-46-7	1,4-Dichlorobenzene	ND	17	9.2	ND	2.7	1.5	
135-98-8	sec-Butylbenzene	ND	83	9.6	ND	15	1.7	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	83	11	ND	15	2.0	
95-50-1	1,2-Dichlorobenzene	ND	17	11	ND	2.7	1.8	
96-12-8	1,2-Dibromo-3-chloropropane	ND	83	13	ND	8.5	1.3	
120-82-1	1,2,4-Trichlorobenzene	ND	17	13	ND	2.2	1.7	
91-20-3	Naphthalene	ND	33	12	ND	6.3	2.3	
87-68-3	Hexachlorobutadiene	ND	17	15	ND	1.5	1.4	
98-06-6	tert-Butylbenzene	ND	33	8.3	ND	6.0	1.5	
104-51-8	n-Butylbenzene	ND	33	8.3	ND	6.0	1.5	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:         C4              Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG59B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00987

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	43	4.3	ND	8.8	0.88	
74-87-3	Chloromethane	ND	8.7	4.3	ND	4.2	2.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	43	4.3	ND	6.2	0.62	
75-01-4	Vinyl Chloride	ND	8.7	4.3	ND	3.4	1.7	
74-83-9	Bromomethane	ND	8.7	4.3	ND	2.2	1.1	
75-00-3	Chloroethane	ND	8.7	4.3	ND	3.3	1.6	
64-17-5	Ethanol	ND	430	4.3	ND	230	2.3	
67-64-1	<b>Acetone</b>	<b>35</b>	430	6.3	<b>15</b>	180	2.7	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>230</b>	8.7	4.3	<b>42</b>	1.5	0.77	
107-13-1	Acrylonitrile	ND	43	6.1	ND	20	2.8	
75-35-4	1,1-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	43	6.4	ND	14	2.1	
75-09-2	<b>Methylene Chloride</b>	<b>4.3</b>	43	4.3	<b>1.2</b>	12	1.2	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	8.7	4.3	ND	2.8	1.4	
76-13-1	Trichlorotrifluoroethane	ND	8.7	4.8	ND	1.1	0.63	
75-15-0	Carbon Disulfide	ND	43	10	ND	14	3.3	
156-60-5	trans-1,2-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
75-34-3	1,1-Dichloroethane	ND	8.7	4.3	ND	2.1	1.1	
1634-04-4	Methyl tert-Butyl Ether	ND	8.7	4.3	ND	2.4	1.2	
108-05-4	Vinyl Acetate	ND	430	14	ND	120	3.9	
78-93-3	2-Butanone (MEK)	ND	43	4.3	ND	15	1.5	
156-59-2	cis-1,2-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
108-20-3	Diisopropyl Ether	ND	43	5.1	ND	10	1.2	
67-66-3	<b>Chloroform</b>	<b>17,000</b>	8.7	5.1	<b>3,500</b>	1.8	1.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         *CA*              Date:         6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG59B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00987

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	43	4.4	ND	10	1.1	
107-06-2	1,2-Dichloroethane	ND	8.7	4.3	ND	2.1	1.1	
71-55-6	1,1,1-Trichloroethane	ND	8.7	4.3	ND	1.6	0.79	
71-43-2	<b>Benzene</b>	<b>8.7</b>	8.7	4.3	<b>2.7</b>	2.7	1.4	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>160</b>	8.7	4.3	<b>26</b>	1.4	0.69	
994-05-8	tert-Amyl Methyl Ether	ND	43	4.3	ND	10	1.0	
78-87-5	1,2-Dichloropropane	ND	8.7	4.3	ND	1.9	0.94	
75-27-4	Bromodichloromethane	ND	8.7	4.3	ND	1.3	0.65	
79-01-6	Trichloroethene	ND	8.7	4.3	ND	1.6	0.81	
123-91-1	1,4-Dioxane	ND	43	5.3	ND	12	1.5	
80-62-6	Methyl Methacrylate	ND	43	6.5	ND	11	1.6	
142-82-5	n-Heptane	ND	43	5.5	ND	11	1.4	
10061-01-5	cis-1,3-Dichloropropene	ND	43	4.5	ND	9.5	0.99	
108-10-1	4-Methyl-2-pentanone	ND	43	4.8	ND	11	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	43	5.4	ND	9.5	1.2	
79-00-5	1,1,2-Trichloroethane	ND	8.7	4.3	ND	1.6	0.79	
108-88-3	<b>Toluene</b>	<b>67</b>	43	4.3	<b>18</b>	11	1.1	
591-78-6	2-Hexanone	ND	43	6.6	ND	11	1.6	
124-48-1	Dibromochloromethane	ND	8.7	5.9	ND	1.0	0.69	
106-93-4	1,2-Dibromoethane	ND	8.7	4.7	ND	1.1	0.61	
111-65-9	<b>n-Octane</b>	<b>85</b>	43	4.3	<b>18</b>	9.3	0.93	
127-18-4	<b>Tetrachloroethene</b>	<b>8.0</b>	8.7	4.3	<b>1.2</b>	1.3	0.64	<b>J</b>
108-90-7	Chlorobenzene	ND	8.7	4.4	ND	1.9	0.96	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG59B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-004

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00987

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	10	43	5.4	2.3	10	1.2	J
179601-23-1	m,p-Xylenes	48	43	11	11	10	2.6	
75-25-2	Bromoform	ND	43	6.6	ND	4.2	0.64	
100-42-5	Styrene	ND	43	6.6	ND	10	1.5	
95-47-6	o-Xylene	15	43	5.4	3.5	10	1.3	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.7	5.5	ND	1.3	0.81	
98-82-8	Cumene	ND	43	4.8	ND	8.8	0.99	
103-65-1	n-Propylbenzene	ND	43	4.5	ND	8.8	0.92	
622-96-8	4-Ethyltoluene	ND	43	4.9	ND	8.8	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	43	5.2	ND	8.8	1.1	
98-83-9	alpha-Methylstyrene	ND	43	6.3	ND	9.0	1.3	
95-63-6	1,2,4-Trimethylbenzene	ND	43	6.0	ND	8.8	1.2	
100-44-7	Benzyl Chloride	ND	8.7	7.4	ND	1.7	1.4	
541-73-1	1,3-Dichlorobenzene	ND	8.7	5.4	ND	1.4	0.89	
106-46-7	1,4-Dichlorobenzene	23	8.7	4.8	3.9	1.4	0.81	
135-98-8	sec-Butylbenzene	ND	43	5.0	ND	7.9	0.91	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	43	5.6	ND	7.9	1.0	
95-50-1	1,2-Dichlorobenzene	ND	8.7	5.7	ND	1.4	0.95	
96-12-8	1,2-Dibromo-3-chloropropane	ND	43	6.6	ND	4.5	0.68	
120-82-1	1,2,4-Trichlorobenzene	ND	8.7	6.6	ND	1.2	0.89	
91-20-3	Naphthalene	ND	17	6.4	ND	3.3	1.2	
87-68-3	Hexachlorobutadiene	ND	8.7	7.8	ND	0.81	0.73	
98-06-6	tert-Butylbenzene	ND	17	4.3	ND	3.2	0.79	
104-51-8	n-Butylbenzene	ND	17	4.3	ND	3.2	0.79	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:         CA              Date:         6/15/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG31B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00649

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.10 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	7.9	0.79	0.42	1.6	0.16	J
74-87-3	Chloromethane	ND	1.6	0.79	ND	0.77	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	7.9	0.79	ND	1.1	0.11	
75-01-4	Vinyl Chloride	ND	1.6	0.79	ND	0.62	0.31	
74-83-9	Bromomethane	ND	1.6	0.79	ND	0.41	0.20	
75-00-3	Chloroethane	ND	1.6	0.79	ND	0.60	0.30	
64-17-5	Ethanol	16	79	0.79	8.3	42	0.42	J
67-64-1	Acetone	25	79	1.2	11	33	0.49	J, B
75-69-4	Trichlorofluoromethane	36	1.6	0.79	6.4	0.28	0.14	
107-13-1	Acrylonitrile	ND	7.9	1.1	ND	3.6	0.51	
75-35-4	1,1-Dichloroethene	0.87	1.6	0.79	0.22	0.40	0.20	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	7.9	1.2	ND	2.6	0.39	
75-09-2	Methylene Chloride	2.8	7.9	0.79	0.81	2.3	0.23	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.6	0.79	ND	0.50	0.25	
76-13-1	Trichlorotrifluoroethane	ND	1.6	0.88	ND	0.21	0.12	
75-15-0	Carbon Disulfide	ND	7.9	1.9	ND	2.5	0.61	
156-60-5	trans-1,2-Dichloroethene	ND	1.6	0.79	ND	0.40	0.20	
75-34-3	1,1-Dichloroethane	7.8	1.6	0.79	1.9	0.39	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	1.6	0.79	ND	0.44	0.22	
108-05-4	Vinyl Acetate	ND	79	2.5	ND	22	0.72	
78-93-3	2-Butanone (MEK)	7.5	7.9	0.79	2.5	2.7	0.27	J
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.79	ND	0.40	0.20	
108-20-3	Diisopropyl Ether	ND	7.9	0.93	ND	1.9	0.22	
67-66-3	Chloroform	4,000	1.6	0.93	810	0.32	0.19	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG31B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-005

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00649

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.10 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	7.9	0.81	ND	1.9	0.19	
107-06-2	<b>1,2-Dichloroethane</b>	<b>2.9</b>	1.6	0.79	<b>0.71</b>	0.39	0.20	
71-55-6	1,1,1-Trichloroethane	ND	1.6	0.79	ND	0.29	0.14	
71-43-2	<b>Benzene</b>	<b>4.8</b>	1.6	0.79	<b>1.5</b>	0.49	0.25	
56-23-5	<b>Carbon Tetrachloride</b>	<b>38</b>	1.6	0.79	<b>6.1</b>	0.25	0.13	
994-05-8	tert-Amyl Methyl Ether	ND	7.9	0.79	ND	1.9	0.19	
78-87-5	1,2-Dichloropropane	ND	1.6	0.79	ND	0.34	0.17	
75-27-4	<b>Bromodichloromethane</b>	<b>3.5</b>	1.6	0.79	<b>0.52</b>	0.24	0.12	
79-01-6	<b>Trichloroethene</b>	<b>2.6</b>	1.6	0.79	<b>0.48</b>	0.29	0.15	
123-91-1	1,4-Dioxane	ND	7.9	0.96	ND	2.2	0.27	
80-62-6	Methyl Methacrylate	ND	7.9	1.2	ND	1.9	0.29	
142-82-5	<b>n-Heptane</b>	<b>1.6</b>	7.9	1.0	<b>0.39</b>	1.9	0.25	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	7.9	0.82	ND	1.7	0.18	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>2.4</b>	7.9	0.88	<b>0.59</b>	1.9	0.22	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	7.9	1.0	ND	1.7	0.22	
79-00-5	1,1,2-Trichloroethane	ND	1.6	0.79	ND	0.29	0.14	
108-88-3	<b>Toluene</b>	<b>20</b>	7.9	0.79	<b>5.4</b>	2.1	0.21	
591-78-6	<b>2-Hexanone</b>	<b>1.7</b>	7.9	1.2	<b>0.41</b>	1.9	0.29	<b>J</b>
124-48-1	Dibromochloromethane	ND	1.6	1.1	ND	0.19	0.13	
106-93-4	1,2-Dibromoethane	ND	1.6	0.85	ND	0.21	0.11	
111-65-9	<b>n-Octane</b>	<b>28</b>	7.9	0.79	<b>6.0</b>	1.7	0.17	
127-18-4	<b>Tetrachloroethene</b>	<b>76</b>	1.6	0.79	<b>11</b>	0.23	0.12	
108-90-7	Chlorobenzene	ND	1.6	0.81	ND	0.34	0.18	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG31B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00649

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.10 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	3.3	7.9	0.98	0.75	1.8	0.23	J
179601-23-1	m,p-Xylenes	16	7.9	2.1	3.7	1.8	0.47	
75-25-2	Bromoform	ND	7.9	1.2	ND	0.76	0.12	
100-42-5	Styrene	ND	7.9	1.2	ND	1.9	0.28	
95-47-6	o-Xylene	5.3	7.9	1.0	1.2	1.8	0.23	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.6	1.0	ND	0.23	0.15	
98-82-8	Cumene	ND	7.9	0.88	ND	1.6	0.18	
103-65-1	n-Propylbenzene	ND	7.9	0.82	ND	1.6	0.17	
622-96-8	4-Ethyltoluene	ND	7.9	0.90	ND	1.6	0.18	
108-67-8	1,3,5-Trimethylbenzene	0.95	7.9	0.95	0.19	1.6	0.19	J
98-83-9	alpha-Methylstyrene	ND	7.9	1.2	ND	1.6	0.24	
95-63-6	1,2,4-Trimethylbenzene	2.0	7.9	1.1	0.41	1.6	0.22	J
100-44-7	Benzyl Chloride	ND	1.6	1.4	ND	0.31	0.26	
541-73-1	1,3-Dichlorobenzene	8.5	1.6	0.98	1.4	0.26	0.16	
106-46-7	1,4-Dichlorobenzene	23	1.6	0.88	3.9	0.26	0.15	
135-98-8	sec-Butylbenzene	ND	7.9	0.92	ND	1.4	0.17	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	7.9	1.0	ND	1.4	0.19	
95-50-1	1,2-Dichlorobenzene	ND	1.6	1.0	ND	0.26	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.9	1.2	ND	0.82	0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	1.2	ND	0.21	0.16	
91-20-3	Naphthalene	1.3	3.2	1.2	0.26	0.60	0.22	J
87-68-3	Hexachlorobutadiene	2.3	1.6	1.4	0.21	0.15	0.13	
98-06-6	tert-Butylbenzene	ND	3.2	0.79	ND	0.58	0.14	
104-51-8	n-Butylbenzene	ND	3.2	0.79	ND	0.58	0.14	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG60B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00811

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	170	17	ND	33	3.3	
74-87-3	Chloromethane	ND	33	17	ND	16	8.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	170	17	ND	24	2.4	
75-01-4	Vinyl Chloride	ND	33	17	ND	13	6.5	
74-83-9	Bromomethane	ND	33	17	ND	8.5	4.3	
75-00-3	Chloroethane	ND	33	17	ND	13	6.3	
64-17-5	Ethanol	ND	1,700	17	ND	880	8.8	
67-64-1	<b>Acetone</b>	<b>70</b>	1,700	24	<b>30</b>	690	10	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>190</b>	33	17	<b>34</b>	5.9	2.9	
107-13-1	Acrylonitrile	ND	170	23	ND	76	11	
75-35-4	1,1-Dichloroethene	ND	33	17	ND	8.3	4.2	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	170	24	ND	54	8.1	
75-09-2	<b>Methylene Chloride</b>	<b>17</b>	170	17	<b>5.0</b>	48	4.8	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	33	17	ND	11	5.3	
76-13-1	Trichlorotrifluoroethane	ND	33	18	ND	4.3	2.4	
75-15-0	Carbon Disulfide	ND	170	40	ND	53	13	
156-60-5	trans-1,2-Dichloroethene	ND	33	17	ND	8.3	4.2	
75-34-3	1,1-Dichloroethane	ND	33	17	ND	8.2	4.1	
1634-04-4	Methyl tert-Butyl Ether	ND	33	17	ND	9.2	4.6	
108-05-4	Vinyl Acetate	ND	1,700	53	ND	470	15	
78-93-3	2-Butanone (MEK)	ND	170	17	ND	56	5.6	
156-59-2	cis-1,2-Dichloroethene	ND	33	17	ND	8.3	4.2	
108-20-3	Diisopropyl Ether	ND	170	19	ND	39	4.7	
67-66-3	<b>Chloroform</b>	<b>100,000</b>	33	19	<b>22,000</b>	6.8	4.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         *CA*              Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG60B-05

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

**Client Project ID:** Soil Gas Sampling / 04020-023-4311

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00811

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	170	17	ND	39	4.0	
107-06-2	1,2-Dichloroethane	ND	33	17	ND	8.2	4.1	
71-55-6	1,1,1-Trichloroethane	ND	33	17	ND	6.1	3.0	
71-43-2	Benzene	ND	33	17	ND	10	5.2	
56-23-5	<b>Carbon Tetrachloride</b>	<b>52</b>	33	17	<b>8.3</b>	5.2	2.6	
994-05-8	tert-Amyl Methyl Ether	ND	170	17	ND	39	3.9	
78-87-5	1,2-Dichloropropane	ND	33	17	ND	7.1	3.6	
75-27-4	Bromodichloromethane	ND	33	17	ND	4.9	2.5	
79-01-6	Trichloroethene	ND	33	17	ND	6.1	3.1	
123-91-1	1,4-Dioxane	ND	170	20	ND	46	5.6	
80-62-6	Methyl Methacrylate	ND	170	25	ND	40	6.0	
142-82-5	n-Heptane	ND	170	21	ND	40	5.2	
10061-01-5	cis-1,3-Dichloropropene	ND	170	17	ND	36	3.8	
108-10-1	4-Methyl-2-pentanone	ND	170	18	ND	40	4.5	
10061-02-6	trans-1,3-Dichloropropene	ND	170	21	ND	36	4.6	
79-00-5	1,1,2-Trichloroethane	ND	33	17	ND	6.1	3.0	
108-88-3	<b>Toluene</b>	<b>22</b>	170	17	<b>5.9</b>	44	4.4	<b>J</b>
591-78-6	2-Hexanone	ND	170	25	ND	40	6.1	
124-48-1	Dibromochloromethane	ND	33	22	ND	3.9	2.6	
106-93-4	1,2-Dibromoethane	ND	33	18	ND	4.3	2.3	
111-65-9	n-Octane	ND	170	17	ND	35	3.5	
127-18-4	<b>Tetrachloroethene</b>	<b>140</b>	33	17	<b>20</b>	4.9	2.4	
108-90-7	Chlorobenzene	ND	33	17	ND	7.2	3.7	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:               Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG60B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00811

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	170	20	ND	38	4.7	
179601-23-1	m,p-Xylenes	ND	170	43	ND	38	9.9	
75-25-2	Bromoform	ND	170	25	ND	16	2.4	
100-42-5	Styrene	ND	170	25	ND	39	5.9	
95-47-6	o-Xylene	ND	170	21	ND	38	4.8	
79-34-5	1,1,2,2-Tetrachloroethane	ND	33	21	ND	4.8	3.1	
98-82-8	Cumene	ND	170	18	ND	34	3.8	
103-65-1	n-Propylbenzene	ND	170	17	ND	34	3.5	
622-96-8	4-Ethyltoluene	ND	170	19	ND	34	3.8	
108-67-8	1,3,5-Trimethylbenzene	ND	170	20	ND	34	4.0	
98-83-9	alpha-Methylstyrene	ND	170	24	ND	34	5.0	
95-63-6	1,2,4-Trimethylbenzene	ND	170	23	ND	34	4.6	
100-44-7	Benzyl Chloride	ND	33	28	ND	6.4	5.5	
541-73-1	1,3-Dichlorobenzene	ND	33	20	ND	5.5	3.4	
106-46-7	1,4-Dichlorobenzene	ND	33	18	ND	5.5	3.1	
135-98-8	sec-Butylbenzene	ND	170	19	ND	30	3.5	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	170	21	ND	30	3.9	
95-50-1	1,2-Dichlorobenzene	ND	33	22	ND	5.5	3.6	
96-12-8	1,2-Dibromo-3-chloropropane	ND	170	25	ND	17	2.6	
120-82-1	1,2,4-Trichlorobenzene	ND	33	25	ND	4.4	3.4	
91-20-3	Naphthalene	ND	66	24	ND	13	4.7	
87-68-3	Hexachlorobutadiene	ND	33	30	ND	3.1	2.8	
98-06-6	tert-Butylbenzene	ND	66	17	ND	12	3.0	
104-51-8	n-Butylbenzene	ND	66	17	ND	12	3.0	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:         *CA*              Date:         6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG58B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00664

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 0.015 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.9      Final Pressure (psig): 3.7

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	57	5.7	ND	11	1.1	
74-87-3	Chloromethane	ND	11	5.7	ND	5.5	2.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	57	5.7	ND	8.1	0.81	
75-01-4	Vinyl Chloride	ND	11	5.7	ND	4.4	2.2	
74-83-9	Bromomethane	ND	11	5.7	ND	2.9	1.5	
75-00-3	Chloroethane	ND	11	5.7	ND	4.3	2.1	
64-17-5	Ethanol	ND	570	5.7	ND	300	3.0	
67-64-1	<b>Acetone</b>	<b>61</b>	570	8.3	<b>26</b>	240	3.5	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>55</b>	11	5.7	<b>9.8</b>	2.0	1.0	
107-13-1	Acrylonitrile	ND	57	7.9	ND	26	3.7	
75-35-4	1,1-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	57	8.4	ND	19	2.8	
75-09-2	<b>Methylene Chloride</b>	<b>5.8</b>	57	5.7	<b>1.7</b>	16	1.6	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	11	5.7	ND	3.6	1.8	
76-13-1	Trichlorotrifluoroethane	ND	11	6.3	ND	1.5	0.83	
75-15-0	Carbon Disulfide	ND	57	14	ND	18	4.4	
156-60-5	trans-1,2-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
75-34-3	<b>1,1-Dichloroethane</b>	<b>14</b>	11	5.7	<b>3.5</b>	2.8	1.4	
1634-04-4	Methyl tert-Butyl Ether	ND	11	5.7	ND	3.1	1.6	
108-05-4	Vinyl Acetate	ND	570	18	ND	160	5.2	
78-93-3	2-Butanone (MEK)	ND	57	5.7	ND	19	1.9	
156-59-2	cis-1,2-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
108-20-3	Diisopropyl Ether	ND	57	6.7	ND	14	1.6	
67-66-3	<b>Chloroform</b>	<b>51,000</b>	11	6.7	<b>10,000</b>	2.3	1.4	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG58B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00664

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 0.015 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.9      Final Pressure (psig): 3.7

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	57	5.8	ND	14	1.4	
107-06-2	<b>1,2-Dichloroethane</b>	<b>6.7</b>	11	5.7	<b>1.7</b>	2.8	1.4	<b>J</b>
71-55-6	1,1,1-Trichloroethane	ND	11	5.7	ND	2.1	1.0	
71-43-2	<b>Benzene</b>	<b>7.6</b>	11	5.7	<b>2.4</b>	3.5	1.8	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>75</b>	11	5.7	<b>12</b>	1.8	0.90	
994-05-8	tert-Amyl Methyl Ether	ND	57	5.7	ND	14	1.4	
78-87-5	1,2-Dichloropropane	ND	11	5.7	ND	2.5	1.2	
75-27-4	Bromodichloromethane	ND	11	5.7	ND	1.7	0.85	
79-01-6	<b>Trichloroethene</b>	<b>7.8</b>	11	5.7	<b>1.5</b>	2.1	1.1	<b>J</b>
123-91-1	1,4-Dioxane	ND	57	6.9	ND	16	1.9	
80-62-6	Methyl Methacrylate	ND	57	8.5	ND	14	2.1	
142-82-5	n-Heptane	ND	57	7.3	ND	14	1.8	
10061-01-5	cis-1,3-Dichloropropene	ND	57	5.9	ND	12	1.3	
108-10-1	4-Methyl-2-pentanone	ND	57	6.3	ND	14	1.5	
10061-02-6	trans-1,3-Dichloropropene	ND	57	7.1	ND	12	1.6	
79-00-5	1,1,2-Trichloroethane	ND	11	5.7	ND	2.1	1.0	
108-88-3	<b>Toluene</b>	<b>23</b>	57	5.7	<b>6.1</b>	15	1.5	<b>J</b>
591-78-6	2-Hexanone	ND	57	8.6	ND	14	2.1	
124-48-1	Dibromochloromethane	ND	11	7.7	ND	1.3	0.90	
106-93-4	1,2-Dibromoethane	ND	11	6.1	ND	1.5	0.80	
111-65-9	n-Octane	ND	57	5.7	ND	12	1.2	
127-18-4	<b>Tetrachloroethene</b>	<b>57</b>	11	5.7	<b>8.4</b>	1.7	0.84	
108-90-7	Chlorobenzene	ND	11	5.8	ND	2.5	1.3	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG58B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00664

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 0.015 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.9      Final Pressure (psig): 3.7

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	57	7.0	ND	13	1.6	
179601-23-1	<b>m,p-Xylenes</b>	<b>29</b>	57	15	<b>6.6</b>	13	3.4	<b>J</b>
75-25-2	Bromoform	ND	57	8.6	ND	5.5	0.83	
100-42-5	Styrene	ND	57	8.6	ND	13	2.0	
95-47-6	<b>o-Xylene</b>	<b>10</b>	57	7.1	<b>2.3</b>	13	1.6	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	11	7.3	ND	1.7	1.1	
98-82-8	Cumene	ND	57	6.3	ND	12	1.3	
103-65-1	n-Propylbenzene	ND	57	5.9	ND	12	1.2	
622-96-8	4-Ethyltoluene	ND	57	6.5	ND	12	1.3	
108-67-8	1,3,5-Trimethylbenzene	ND	57	6.8	ND	12	1.4	
98-83-9	alpha-Methylstyrene	ND	57	8.3	ND	12	1.7	
95-63-6	1,2,4-Trimethylbenzene	ND	57	7.8	ND	12	1.6	
100-44-7	Benzyl Chloride	ND	11	9.7	ND	2.2	1.9	
541-73-1	1,3-Dichlorobenzene	ND	11	7.0	ND	1.9	1.2	
106-46-7	1,4-Dichlorobenzene	ND	11	6.3	ND	1.9	1.1	
135-98-8	sec-Butylbenzene	ND	57	6.6	ND	10	1.2	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	57	7.4	ND	10	1.3	
95-50-1	1,2-Dichlorobenzene	ND	11	7.5	ND	1.9	1.2	
96-12-8	1,2-Dibromo-3-chloropropane	ND	57	8.6	ND	5.9	0.89	
120-82-1	1,2,4-Trichlorobenzene	ND	11	8.6	ND	1.5	1.2	
91-20-3	Naphthalene	ND	23	8.4	ND	4.3	1.6	
87-68-3	Hexachlorobutadiene	ND	11	10	ND	1.1	0.96	
98-06-6	tert-Butylbenzene	ND	23	5.7	ND	4.1	1.0	
104-51-8	n-Butylbenzene	ND	23	5.7	ND	4.1	1.0	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:                      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	17	1.7	ND	3.4	0.34	
74-87-3	Chloromethane	ND	3.3	1.7	ND	1.6	0.81	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	17	1.7	ND	2.4	0.24	
75-01-4	Vinyl Chloride	ND	3.3	1.7	ND	1.3	0.65	
74-83-9	Bromomethane	ND	3.3	1.7	ND	0.86	0.43	
75-00-3	Chloroethane	ND	3.3	1.7	ND	1.3	0.63	
64-17-5	Ethanol	ND	170	1.7	ND	89	0.89	
67-64-1	<b>Acetone</b>	<b>26</b>	170	2.4	<b>11</b>	70	1.0	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>56</b>	3.3	1.7	<b>9.9</b>	0.59	0.30	
107-13-1	Acrylonitrile	ND	17	2.3	ND	7.7	1.1	
75-35-4	1,1-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	17	2.5	ND	5.5	0.82	
75-09-2	<b>Methylene Chloride</b>	<b>3.4</b>	17	1.7	<b>0.99</b>	4.8	0.48	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.3	1.7	ND	1.1	0.53	
76-13-1	Trichlorotrifluoroethane	ND	3.3	1.9	ND	0.44	0.24	
75-15-0	Carbon Disulfide	ND	17	4.0	ND	5.4	1.3	
156-60-5	trans-1,2-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
75-34-3	<b>1,1-Dichloroethane</b>	<b>7.2</b>	3.3	1.7	<b>1.8</b>	0.83	0.41	
1634-04-4	Methyl tert-Butyl Ether	ND	3.3	1.7	ND	0.93	0.46	
108-05-4	Vinyl Acetate	ND	170	5.3	ND	47	1.5	
78-93-3	<b>2-Butanone (MEK)</b>	<b>7.4</b>	17	1.7	<b>2.5</b>	5.7	0.57	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
108-20-3	Diisopropyl Ether	ND	17	2.0	ND	4.0	0.47	
67-66-3	<b>Chloroform</b>	<b>7,500</b>	3.3	2.0	<b>1,500</b>	0.68	0.40	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	17	1.7	ND	4.0	0.41	
107-06-2	1,2-Dichloroethane	ND	3.3	1.7	ND	0.83	0.41	
71-55-6	1,1,1-Trichloroethane	ND	3.3	1.7	ND	0.61	0.31	
71-43-2	<b>Benzene</b>	<b>6.3</b>	3.3	1.7	<b>2.0</b>	1.0	0.52	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>210</b>	3.3	1.7	<b>33</b>	0.53	0.27	
994-05-8	tert-Amyl Methyl Ether	ND	17	1.7	ND	4.0	0.40	
78-87-5	1,2-Dichloropropane	ND	3.3	1.7	ND	0.72	0.36	
75-27-4	Bromodichloromethane	ND	3.3	1.7	ND	0.50	0.25	
79-01-6	Trichloroethene	ND	3.3	1.7	ND	0.62	0.31	
123-91-1	1,4-Dioxane	ND	17	2.0	ND	4.6	0.57	
80-62-6	Methyl Methacrylate	ND	17	2.5	ND	4.1	0.61	
142-82-5	n-Heptane	ND	17	2.1	ND	4.1	0.52	
10061-01-5	cis-1,3-Dichloropropene	ND	17	1.7	ND	3.7	0.38	
108-10-1	4-Methyl-2-pentanone	ND	17	1.9	ND	4.1	0.46	
10061-02-6	trans-1,3-Dichloropropene	ND	17	2.1	ND	3.7	0.46	
79-00-5	1,1,2-Trichloroethane	ND	3.3	1.7	ND	0.61	0.31	
108-88-3	<b>Toluene</b>	<b>32</b>	17	1.7	<b>8.6</b>	4.4	0.44	
591-78-6	2-Hexanone	ND	17	2.5	ND	4.1	0.62	
124-48-1	Dibromochloromethane	ND	3.3	2.3	ND	0.39	0.27	
106-93-4	1,2-Dibromoethane	ND	3.3	1.8	ND	0.43	0.23	
111-65-9	<b>n-Octane</b>	<b>26</b>	17	1.7	<b>5.5</b>	3.6	0.36	
127-18-4	<b>Tetrachloroethene</b>	<b>31</b>	3.3	1.7	<b>4.5</b>	0.49	0.25	
108-90-7	Chlorobenzene	ND	3.3	1.7	ND	0.73	0.37	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00943

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	8.9	17	2.1	2.0	3.8	0.48	J
179601-23-1	m,p-Xylenes	47	17	4.3	11	3.8	1.0	
75-25-2	Bromoform	ND	17	2.5	ND	1.6	0.25	
100-42-5	Styrene	ND	17	2.5	ND	3.9	0.60	
95-47-6	o-Xylene	17	17	2.1	3.8	3.8	0.48	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	2.1	ND	0.49	0.31	
98-82-8	Cumene	ND	17	1.9	ND	3.4	0.38	
103-65-1	n-Propylbenzene	ND	17	1.7	ND	3.4	0.35	
622-96-8	4-Ethyltoluene	ND	17	1.9	ND	3.4	0.39	
108-67-8	1,3,5-Trimethylbenzene	3.6	17	2.0	0.74	3.4	0.41	J
98-83-9	alpha-Methylstyrene	ND	17	2.4	ND	3.5	0.50	
95-63-6	1,2,4-Trimethylbenzene	5.2	17	2.3	1.1	3.4	0.47	J
100-44-7	Benzyl Chloride	ND	3.3	2.9	ND	0.65	0.56	
541-73-1	1,3-Dichlorobenzene	4.3	3.3	2.1	0.72	0.56	0.34	
106-46-7	1,4-Dichlorobenzene	ND	3.3	1.9	ND	0.56	0.31	
135-98-8	sec-Butylbenzene	ND	17	1.9	ND	3.0	0.35	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	17	2.2	ND	3.0	0.40	
95-50-1	1,2-Dichlorobenzene	ND	3.3	2.2	ND	0.56	0.37	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	2.5	ND	1.7	0.26	
120-82-1	1,2,4-Trichlorobenzene	ND	3.3	2.5	ND	0.45	0.34	
91-20-3	Naphthalene	ND	6.7	2.5	ND	1.3	0.47	
87-68-3	Hexachlorobutadiene	ND	3.3	3.0	ND	0.31	0.28	
98-06-6	tert-Butylbenzene	ND	6.7	1.7	ND	1.2	0.30	
104-51-8	n-Butylbenzene	ND	6.7	1.7	ND	1.2	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00978

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	5.6	0.56	0.44	1.1	0.11	J
74-87-3	Chloromethane	ND	1.1	0.56	ND	0.54	0.27	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.6	0.56	ND	0.80	0.080	
75-01-4	Vinyl Chloride	ND	1.1	0.56	ND	0.44	0.22	
74-83-9	Bromomethane	ND	1.1	0.56	ND	0.29	0.14	
75-00-3	Chloroethane	ND	1.1	0.56	ND	0.42	0.21	
64-17-5	Ethanol	1.4	56	0.56	0.72	30	0.30	J
67-64-1	Acetone	13	56	0.81	5.6	23	0.34	J, B
75-69-4	Trichlorofluoromethane	57	1.1	0.56	10	0.20	0.099	
107-13-1	Acrylonitrile	ND	5.6	0.78	ND	2.6	0.36	
75-35-4	1,1-Dichloroethene	0.87	1.1	0.56	0.22	0.28	0.14	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	5.6	0.82	ND	1.8	0.27	
75-09-2	Methylene Chloride	3.0	5.6	0.56	0.86	1.6	0.16	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.1	0.56	ND	0.36	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.1	0.62	ND	0.15	0.081	
75-15-0	Carbon Disulfide	3.5	5.6	1.3	1.1	1.8	0.43	J
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.56	ND	0.28	0.14	
75-34-3	1,1-Dichloroethane	7.5	1.1	0.56	1.9	0.28	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.56	ND	0.31	0.15	
108-05-4	Vinyl Acetate	ND	56	1.8	ND	16	0.51	
78-93-3	2-Butanone (MEK)	4.5	5.6	0.56	1.5	1.9	0.19	J
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.56	ND	0.28	0.14	
108-20-3	Diisopropyl Ether	ND	5.6	0.66	ND	1.3	0.16	
67-66-3	Chloroform	7,700	1.1	0.66	1,600	0.23	0.13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

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J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00978

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	5.6	0.57	ND	1.3	0.14	
107-06-2	<b>1,2-Dichloroethane</b>	<b>1.0</b>	1.1	0.56	<b>0.25</b>	0.28	0.14	<b>J</b>
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.56	ND	0.20	0.10	
71-43-2	<b>Benzene</b>	<b>4.8</b>	1.1	0.56	<b>1.5</b>	0.35	0.17	
56-23-5	<b>Carbon Tetrachloride</b>	<b>220</b>	1.1	0.56	<b>35</b>	0.18	0.089	
994-05-8	tert-Amyl Methyl Ether	ND	5.6	0.56	ND	1.3	0.13	
78-87-5	1,2-Dichloropropane	ND	1.1	0.56	ND	0.24	0.12	
75-27-4	<b>Bromodichloromethane</b>	<b>2.1</b>	1.1	0.56	<b>0.32</b>	0.17	0.083	
79-01-6	<b>Trichloroethene</b>	<b>0.98</b>	1.1	0.56	<b>0.18</b>	0.21	0.10	<b>J</b>
123-91-1	1,4-Dioxane	ND	5.6	0.68	ND	1.5	0.19	
80-62-6	Methyl Methacrylate	ND	5.6	0.84	ND	1.4	0.20	
142-82-5	<b>n-Heptane</b>	<b>1.1</b>	5.6	0.71	<b>0.27</b>	1.4	0.17	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	5.6	0.58	ND	1.2	0.13	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.9</b>	5.6	0.62	<b>0.46</b>	1.4	0.15	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	5.6	0.70	ND	1.2	0.15	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.56	ND	0.20	0.10	
108-88-3	<b>Toluene</b>	<b>35</b>	5.6	0.56	<b>9.2</b>	1.5	0.15	
591-78-6	<b>2-Hexanone</b>	<b>1.0</b>	5.6	0.85	<b>0.24</b>	1.4	0.21	<b>J</b>
124-48-1	Dibromochloromethane	ND	1.1	0.76	ND	0.13	0.089	
106-93-4	1,2-Dibromoethane	ND	1.1	0.60	ND	0.14	0.078	
111-65-9	<b>n-Octane</b>	<b>27</b>	5.6	0.56	<b>5.9</b>	1.2	0.12	
127-18-4	<b>Tetrachloroethene</b>	<b>30</b>	1.1	0.56	<b>4.4</b>	0.16	0.082	
108-90-7	<b>Chlorobenzene</b>	<b>0.81</b>	1.1	0.57	<b>0.18</b>	0.24	0.12	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00978

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	11	5.6	0.69	2.4	1.3	0.16	
179601-23-1	m,p-Xylenes	56	5.6	1.4	13	1.3	0.33	
75-25-2	Bromoform	ND	5.6	0.85	ND	0.54	0.082	
100-42-5	Styrene	ND	5.6	0.85	ND	1.3	0.20	
95-47-6	o-Xylene	20	5.6	0.70	4.6	1.3	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.71	ND	0.16	0.10	
98-82-8	Cumene	ND	5.6	0.62	ND	1.1	0.13	
103-65-1	n-Propylbenzene	1.2	5.6	0.58	0.25	1.1	0.12	J
622-96-8	4-Ethyltoluene	2.4	5.6	0.63	0.49	1.1	0.13	J
108-67-8	1,3,5-Trimethylbenzene	4.7	5.6	0.67	0.96	1.1	0.14	J
98-83-9	alpha-Methylstyrene	ND	5.6	0.81	ND	1.2	0.17	
95-63-6	1,2,4-Trimethylbenzene	8.0	5.6	0.77	1.6	1.1	0.16	
100-44-7	Benzyl Chloride	ND	1.1	0.96	ND	0.22	0.19	
541-73-1	1,3-Dichlorobenzene	4.3	1.1	0.69	0.72	0.19	0.11	
106-46-7	1,4-Dichlorobenzene	0.97	1.1	0.62	0.16	0.19	0.10	J
135-98-8	sec-Butylbenzene	ND	5.6	0.65	ND	1.0	0.12	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	5.6	0.72	ND	1.0	0.13	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.73	ND	0.19	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.6	0.85	ND	0.58	0.088	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	0.85	ND	0.15	0.11	
91-20-3	Naphthalene	1.2	2.2	0.82	0.22	0.42	0.16	J
87-68-3	Hexachlorobutadiene	ND	1.1	1.0	ND	0.10	0.094	
98-06-6	tert-Butylbenzene	ND	2.2	0.56	ND	0.41	0.10	
104-51-8	n-Butylbenzene	ND	2.2	0.56	ND	0.41	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/15/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG55B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00772

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.025 Liter(s)  
 0.0050 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	34	3.5	ND	8.1	0.83	
107-06-2	1,2-Dichloroethane	ND	6.8	3.4	ND	1.7	0.84	
71-55-6	1,1,1-Trichloroethane	ND	6.8	3.4	ND	1.2	0.62	
71-43-2	<b>Benzene</b>	<b>9.9</b>	6.8	3.4	<b>3.1</b>	2.1	1.1	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>530</b>	6.8	3.4	<b>85</b>	1.1	0.54	
994-05-8	tert-Amyl Methyl Ether	ND	34	3.4	ND	8.1	0.81	
78-87-5	1,2-Dichloropropane	ND	6.8	3.4	ND	1.5	0.74	
75-27-4	Bromodichloromethane	ND	6.8	3.4	ND	1.0	0.51	
79-01-6	Trichloroethene	ND	6.8	3.4	ND	1.3	0.63	
123-91-1	1,4-Dioxane	ND	34	4.1	ND	9.4	1.2	
80-62-6	Methyl Methacrylate	ND	34	5.1	ND	8.3	1.2	
142-82-5	n-Heptane	ND	34	4.4	ND	8.3	1.1	
10061-01-5	cis-1,3-Dichloropropene	ND	34	3.5	ND	7.5	0.78	
108-10-1	4-Methyl-2-pentanone	ND	34	3.8	ND	8.3	0.93	
10061-02-6	trans-1,3-Dichloropropene	ND	34	4.3	ND	7.5	0.94	
79-00-5	1,1,2-Trichloroethane	ND	6.8	3.4	ND	1.2	0.62	
108-88-3	<b>Toluene</b>	<b>41</b>	34	3.4	<b>11</b>	9.0	0.90	
591-78-6	2-Hexanone	ND	34	5.2	ND	8.3	1.3	
124-48-1	Dibromochloromethane	ND	6.8	4.6	ND	0.80	0.54	
106-93-4	1,2-Dibromoethane	ND	6.8	3.7	ND	0.89	0.48	
111-65-9	<b>n-Octane</b>	<b>23</b>	34	3.4	<b>4.8</b>	7.3	0.73	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>130</b>	6.8	3.4	<b>19</b>	1.0	0.50	
108-90-7	Chlorobenzene	ND	6.8	3.5	ND	1.5	0.75	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG55B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-010

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00772

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.025 Liter(s)  
 0.0050 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	8.0	34	4.2	1.8	7.8	0.97	J
179601-23-1	m,p-Xylenes	37	34	8.8	8.5	7.8	2.0	
75-25-2	Bromoform	ND	34	5.2	ND	3.3	0.50	
100-42-5	Styrene	ND	34	5.2	ND	8.0	1.2	
95-47-6	o-Xylene	11	34	4.3	2.6	7.8	0.99	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.8	4.4	ND	0.99	0.63	
98-82-8	Cumene	ND	34	3.8	ND	6.9	0.77	
103-65-1	n-Propylbenzene	ND	34	3.5	ND	6.9	0.72	
622-96-8	4-Ethyltoluene	ND	34	3.9	ND	6.9	0.79	
108-67-8	1,3,5-Trimethylbenzene	ND	34	4.1	ND	6.9	0.83	
98-83-9	alpha-Methylstyrene	ND	34	5.0	ND	7.0	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	34	4.7	ND	6.9	0.95	
100-44-7	Benzyl Chloride	ND	6.8	5.8	ND	1.3	1.1	
541-73-1	1,3-Dichlorobenzene	ND	6.8	4.2	ND	1.1	0.70	
106-46-7	1,4-Dichlorobenzene	ND	6.8	3.8	ND	1.1	0.63	
135-98-8	sec-Butylbenzene	ND	34	3.9	ND	6.2	0.72	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	34	4.4	ND	6.2	0.81	
95-50-1	1,2-Dichlorobenzene	ND	6.8	4.5	ND	1.1	0.75	
96-12-8	1,2-Dibromo-3-chloropropane	ND	34	5.2	ND	3.5	0.53	
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	5.2	ND	0.92	0.70	
91-20-3	Naphthalene	ND	14	5.0	ND	2.6	0.96	
87-68-3	Hexachlorobutadiene	ND	6.8	6.1	ND	0.64	0.57	
98-06-6	tert-Butylbenzene	ND	14	3.4	ND	2.5	0.62	
104-51-8	n-Butylbenzene	ND	14	3.4	ND	2.5	0.62	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG57B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-011

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC01021

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	40	4.0	ND	8.1	0.81	
74-87-3	Chloromethane	ND	8.1	4.0	ND	3.9	1.9	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	40	4.0	ND	5.8	0.58	
75-01-4	Vinyl Chloride	ND	8.1	4.0	ND	3.2	1.6	
74-83-9	Bromomethane	ND	8.1	4.0	ND	2.1	1.0	
75-00-3	<b>Chloroethane</b>	<b>54</b>	8.1	4.0	<b>21</b>	3.1	1.5	
64-17-5	Ethanol	ND	400	4.0	ND	210	2.1	
67-64-1	<b>Acetone</b>	<b>29</b>	400	5.9	<b>12</b>	170	2.5	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	8.1	4.0	ND	1.4	0.72	
107-13-1	Acrylonitrile	ND	40	5.6	ND	19	2.6	
75-35-4	1,1-Dichloroethene	ND	8.1	4.0	ND	2.0	1.0	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	40	6.0	ND	13	2.0	
75-09-2	<b>Methylene Chloride</b>	<b>36</b>	40	4.0	<b>10</b>	12	1.2	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	8.1	4.0	ND	2.6	1.3	
76-13-1	Trichlorotrifluoroethane	ND	8.1	4.5	ND	1.1	0.59	
75-15-0	Carbon Disulfide	ND	40	9.7	ND	13	3.1	
156-60-5	trans-1,2-Dichloroethene	ND	8.1	4.0	ND	2.0	1.0	
75-34-3	<b>1,1-Dichloroethane</b>	<b>110</b>	8.1	4.0	<b>26</b>	2.0	0.99	
1634-04-4	Methyl tert-Butyl Ether	ND	8.1	4.0	ND	2.2	1.1	
108-05-4	Vinyl Acetate	ND	400	13	ND	110	3.7	
78-93-3	2-Butanone (MEK)	ND	40	4.0	ND	14	1.4	
156-59-2	cis-1,2-Dichloroethene	ND	8.1	4.0	ND	2.0	1.0	
108-20-3	Diisopropyl Ether	ND	40	4.7	ND	9.6	1.1	
67-66-3	<b>Chloroform</b>	<b>29,000</b>	8.1	4.7	<b>5,900</b>	1.6	0.97	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG57B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-011

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC01021

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	40	4.1	ND	9.6	0.98	
107-06-2	<b>1,2-Dichloroethane</b>	<b>31</b>	8.1	4.0	<b>7.6</b>	2.0	0.99	
71-55-6	1,1,1-Trichloroethane	ND	8.1	4.0	ND	1.5	0.74	
71-43-2	<b>Benzene</b>	<b>9.4</b>	8.1	4.0	<b>2.9</b>	2.5	1.3	<b>B</b>
56-23-5	Carbon Tetrachloride	ND	8.1	4.0	ND	1.3	0.64	
994-05-8	tert-Amyl Methyl Ether	ND	40	4.0	ND	9.6	0.96	
78-87-5	1,2-Dichloropropane	ND	8.1	4.0	ND	1.7	0.87	
75-27-4	Bromodichloromethane	ND	8.1	4.0	ND	1.2	0.60	
79-01-6	Trichloroethene	ND	8.1	4.0	ND	1.5	0.75	
123-91-1	1,4-Dioxane	ND	40	4.9	ND	11	1.4	
80-62-6	Methyl Methacrylate	ND	40	6.0	ND	9.8	1.5	
142-82-5	n-Heptane	ND	40	5.2	ND	9.8	1.3	
10061-01-5	cis-1,3-Dichloropropene	ND	40	4.2	ND	8.9	0.92	
108-10-1	4-Methyl-2-pentanone	ND	40	4.5	ND	9.8	1.1	
10061-02-6	trans-1,3-Dichloropropene	ND	40	5.1	ND	8.9	1.1	
79-00-5	1,1,2-Trichloroethane	ND	8.1	4.0	ND	1.5	0.74	
108-88-3	<b>Toluene</b>	<b>45</b>	40	4.0	<b>12</b>	11	1.1	
591-78-6	2-Hexanone	ND	40	6.1	ND	9.8	1.5	
124-48-1	Dibromochloromethane	ND	8.1	5.5	ND	0.95	0.64	
106-93-4	1,2-Dibromoethane	ND	8.1	4.3	ND	1.0	0.57	
111-65-9	<b>n-Octane</b>	<b>28</b>	40	4.0	<b>5.9</b>	8.6	0.86	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>84</b>	8.1	4.0	<b>12</b>	1.2	0.59	
108-90-7	Chlorobenzene	ND	8.1	4.1	ND	1.7	0.89	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         CA              Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG57B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC01021

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	9.2	40	5.0	2.1	9.3	1.1	J
179601-23-1	m,p-Xylenes	46	40	10	11	9.3	2.4	
75-25-2	Bromoform	ND	40	6.1	ND	3.9	0.59	
100-42-5	Styrene	ND	40	6.1	ND	9.5	1.4	
95-47-6	o-Xylene	16	40	5.1	3.7	9.3	1.2	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.1	5.2	ND	1.2	0.75	
98-82-8	Cumene	ND	40	4.5	ND	8.2	0.92	
103-65-1	n-Propylbenzene	ND	40	4.2	ND	8.2	0.85	
622-96-8	4-Ethyltoluene	ND	40	4.6	ND	8.2	0.93	
108-67-8	1,3,5-Trimethylbenzene	ND	40	4.8	ND	8.2	0.98	
98-83-9	alpha-Methylstyrene	ND	40	5.9	ND	8.3	1.2	
95-63-6	1,2,4-Trimethylbenzene	ND	40	5.6	ND	8.2	1.1	
100-44-7	Benzyl Chloride	ND	8.1	6.9	ND	1.6	1.3	
541-73-1	1,3-Dichlorobenzene	ND	8.1	5.0	ND	1.3	0.83	
106-46-7	1,4-Dichlorobenzene	17	8.1	4.5	2.8	1.3	0.75	
135-98-8	sec-Butylbenzene	ND	40	4.7	ND	7.3	0.85	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	40	5.2	ND	7.3	0.95	
95-50-1	1,2-Dichlorobenzene	ND	8.1	5.3	ND	1.3	0.88	
96-12-8	1,2-Dibromo-3-chloropropane	ND	40	6.1	ND	4.2	0.63	
120-82-1	1,2,4-Trichlorobenzene	8.9	8.1	6.1	1.2	1.1	0.82	
91-20-3	Naphthalene	ND	16	6.0	ND	3.1	1.1	
87-68-3	Hexachlorobutadiene	ND	8.1	7.2	ND	0.75	0.68	
98-06-6	tert-Butylbenzene	ND	16	4.0	ND	2.9	0.73	
104-51-8	n-Butylbenzene	ND	16	4.0	ND	2.9	0.73	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08







**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG13B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-012

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00428

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.25 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	0.50	3.2	0.40	0.11	0.74	0.092	J
179601-23-1	m,p-Xylenes	2.4	3.2	0.84	0.56	0.74	0.19	J
75-25-2	Bromoform	0.99	3.2	0.49	0.095	0.31	0.047	J
100-42-5	Styrene	ND	3.2	0.49	ND	0.76	0.12	
95-47-6	o-Xylene	1.3	3.2	0.41	0.29	0.74	0.093	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.64	0.41	ND	0.094	0.060	
98-82-8	Cumene	ND	3.2	0.36	ND	0.66	0.073	
103-65-1	n-Propylbenzene	ND	3.2	0.33	ND	0.66	0.068	
622-96-8	4-Ethyltoluene	0.53	3.2	0.37	0.11	0.66	0.075	J
108-67-8	1,3,5-Trimethylbenzene	0.65	3.2	0.39	0.13	0.66	0.079	J
98-83-9	alpha-Methylstyrene	ND	3.2	0.47	ND	0.67	0.097	
95-63-6	1,2,4-Trimethylbenzene	2.5	3.2	0.44	0.51	0.66	0.090	J
100-44-7	Benzyl Chloride	ND	0.64	0.55	ND	0.12	0.11	
541-73-1	1,3-Dichlorobenzene	ND	0.64	0.40	ND	0.11	0.066	
106-46-7	1,4-Dichlorobenzene	19	0.64	0.36	3.2	0.11	0.060	
135-98-8	sec-Butylbenzene	ND	3.2	0.37	ND	0.59	0.068	
99-87-6	4-Isopropyltoluene (p-Cymene)	1.8	3.2	0.42	0.33	0.59	0.076	J
95-50-1	1,2-Dichlorobenzene	ND	0.64	0.43	ND	0.11	0.071	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.2	0.49	ND	0.33	0.051	
120-82-1	1,2,4-Trichlorobenzene	ND	0.64	0.49	ND	0.087	0.066	
91-20-3	Naphthalene	1.4	1.3	0.48	0.27	0.25	0.091	
87-68-3	Hexachlorobutadiene	2.3	0.64	0.58	0.22	0.060	0.054	
98-06-6	tert-Butylbenzene	ND	1.3	0.32	ND	0.23	0.059	
104-51-8	n-Butylbenzene	0.53	1.3	0.32	0.097	0.23	0.059	J

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MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00817

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.9	1.6	0.16	0.58	0.33	0.033	
74-87-3	Chloromethane	ND	0.33	0.16	ND	0.16	0.079	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.6	0.16	ND	0.23	0.023	
75-01-4	Vinyl Chloride	ND	0.33	0.16	ND	0.13	0.064	
74-83-9	Bromomethane	ND	0.33	0.16	ND	0.084	0.042	
75-00-3	Chloroethane	ND	0.33	0.16	ND	0.12	0.062	
64-17-5	Ethanol	11	16	0.16	5.8	8.7	0.087	J, B
67-64-1	Acetone	78	16	0.24	33	6.9	0.10	B
75-69-4	Trichlorofluoromethane	3.3	0.33	0.16	0.59	0.058	0.029	
107-13-1	Acrylonitrile	ND	1.6	0.23	ND	0.75	0.11	
75-35-4	1,1-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.4	1.6	0.24	0.46	0.54	0.080	J
75-09-2	Methylene Chloride	0.42	1.6	0.16	0.12	0.47	0.047	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.33	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.52	0.33	0.18	0.068	0.043	0.024	
75-15-0	Carbon Disulfide	7.6	1.6	0.39	2.4	0.52	0.13	
156-60-5	trans-1,2-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
75-34-3	1,1-Dichloroethane	ND	0.33	0.16	ND	0.081	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.33	0.16	ND	0.090	0.045	
108-05-4	Vinyl Acetate	6.9	16	0.52	2.0	4.6	0.15	J, B
78-93-3	2-Butanone (MEK)	22	1.6	0.16	7.6	0.55	0.055	B
156-59-2	cis-1,2-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
108-20-3	Diisopropyl Ether	ND	1.6	0.19	ND	0.39	0.046	
67-66-3	Chloroform	1,200	0.33	0.19	240	0.067	0.039	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00817

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	1.6	0.17	ND	0.39	0.040	
107-06-2	1,2-Dichloroethane	ND	0.33	0.16	ND	0.081	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.33	0.16	ND	0.060	0.030	
71-43-2	<b>Benzene</b>	<b>5.5</b>	0.33	0.16	<b>1.7</b>	0.10	0.051	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.2</b>	0.33	0.16	<b>1.2</b>	0.052	0.026	
994-05-8	tert-Amyl Methyl Ether	ND	1.6	0.16	ND	0.39	0.039	
78-87-5	1,2-Dichloropropane	ND	0.33	0.16	ND	0.071	0.035	
75-27-4	Bromodichloromethane	ND	0.33	0.16	ND	0.049	0.024	
79-01-6	<b>Trichloroethene</b>	<b>1.1</b>	0.33	0.16	<b>0.20</b>	0.061	0.030	
123-91-1	1,4-Dioxane	ND	1.6	0.20	ND	0.45	0.055	
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.060	
142-82-5	<b>n-Heptane</b>	<b>1.5</b>	1.6	0.21	<b>0.37</b>	0.40	0.051	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.17	ND	0.36	0.037	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>17</b>	1.6	0.18	<b>4.2</b>	0.40	0.045	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.21	ND	0.36	0.045	
79-00-5	1,1,2-Trichloroethane	ND	0.33	0.16	ND	0.060	0.030	
108-88-3	<b>Toluene</b>	<b>7.8</b>	1.6	0.16	<b>2.1</b>	0.43	0.043	
591-78-6	<b>2-Hexanone</b>	<b>3.9</b>	1.6	0.25	<b>0.96</b>	0.40	0.061	
124-48-1	Dibromochloromethane	ND	0.33	0.22	ND	0.038	0.026	
106-93-4	1,2-Dibromoethane	ND	0.33	0.18	ND	0.042	0.023	
111-65-9	<b>n-Octane</b>	<b>2.7</b>	1.6	0.16	<b>0.57</b>	0.35	0.035	
127-18-4	<b>Tetrachloroethene</b>	<b>7.2</b>	0.33	0.16	<b>1.1</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>1.8</b>	0.33	0.17	<b>0.39</b>	0.071	0.036	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.  
 MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.  
 J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.  
 B = Analyte was found in the method blank.

Verified By:         *Cat*              Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00817

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	0.62	1.6	0.20	0.14	0.38	0.047	J
179601-23-1	m,p-Xylenes	2.8	1.6	0.42	0.65	0.38	0.098	
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	0.49	1.6	0.25	0.11	0.38	0.058	J
95-47-6	o-Xylene	1.5	1.6	0.21	0.34	0.38	0.047	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.33	0.21	ND	0.047	0.030	
98-82-8	Cumene	ND	1.6	0.18	ND	0.33	0.037	
103-65-1	n-Propylbenzene	0.50	1.6	0.17	0.10	0.33	0.034	J
622-96-8	4-Ethyltoluene	0.78	1.6	0.19	0.16	0.33	0.038	J
108-67-8	1,3,5-Trimethylbenzene	0.93	1.6	0.20	0.19	0.33	0.040	J
98-83-9	alpha-Methylstyrene	0.39	1.6	0.24	0.082	0.34	0.049	J
95-63-6	1,2,4-Trimethylbenzene	3.5	1.6	0.22	0.72	0.33	0.046	
100-44-7	Benzyl Chloride	ND	0.33	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	0.77	0.33	0.20	0.13	0.054	0.034	
106-46-7	1,4-Dichlorobenzene	14	0.33	0.18	2.3	0.054	0.030	
135-98-8	sec-Butylbenzene	ND	1.6	0.19	ND	0.30	0.034	
99-87-6	4-Isopropyltoluene (p-Cymene)	12	1.6	0.21	2.2	0.30	0.039	
95-50-1	1,2-Dichlorobenzene	ND	0.33	0.22	ND	0.054	0.036	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.25	ND	0.17	0.026	
120-82-1	1,2,4-Trichlorobenzene	ND	0.33	0.25	ND	0.044	0.033	
91-20-3	Naphthalene	1.7	0.65	0.24	0.33	0.12	0.046	
87-68-3	Hexachlorobutadiene	11	0.33	0.29	1.0	0.031	0.028	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	1.1	0.65	0.16	0.21	0.12	0.030	M

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

M = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By:   CA        Date:   6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG14B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-014

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00051

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.10 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.82	0.082	0.46	0.16	0.016	
74-87-3	Chloromethane	0.24	0.16	0.082	0.11	0.079	0.039	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	0.082	ND	0.12	0.012	
75-01-4	Vinyl Chloride	ND	0.16	0.082	ND	0.064	0.032	
74-83-9	Bromomethane	ND	0.16	0.082	ND	0.042	0.021	
75-00-3	Chloroethane	0.31	0.16	0.082	0.12	0.062	0.031	
64-17-5	Ethanol	4.4	8.2	0.082	2.3	4.3	0.043	J, B
67-64-1	Acetone	48	8.2	0.12	20	3.4	0.050	B
75-69-4	Trichlorofluoromethane	2.9	0.16	0.082	0.51	0.029	0.015	
107-13-1	Acrylonitrile	0.26	0.82	0.11	0.12	0.38	0.053	J
75-35-4	1,1-Dichloroethene	0.10	0.16	0.082	0.026	0.041	0.021	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.54	0.82	0.12	0.18	0.27	0.040	J
75-09-2	Methylene Chloride	0.97	0.82	0.082	0.28	0.23	0.023	B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.082	ND	0.052	0.026	
76-13-1	Trichlorotrifluoroethane	0.52	0.16	0.091	0.069	0.021	0.012	
75-15-0	Carbon Disulfide	2.7	0.82	0.20	0.86	0.26	0.063	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.082	ND	0.041	0.021	
75-34-3	1,1-Dichloroethane	ND	0.16	0.082	ND	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.082	ND	0.045	0.023	
108-05-4	Vinyl Acetate	2.3	8.2	0.26	0.64	2.3	0.074	J, B
78-93-3	2-Butanone (MEK)	13	0.82	0.082	4.5	0.28	0.028	B
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.082	ND	0.041	0.021	
108-20-3	Diisopropyl Ether	ND	0.82	0.096	ND	0.20	0.023	
67-66-3	Chloroform	1,000	0.16	0.096	200	0.033	0.020	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CU      Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG14B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-014

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00051

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.10 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	6.3	0.82	0.10	1.5	0.19	0.023	
179601-23-1	m,p-Xylenes	28	0.82	0.21	6.4	0.19	0.049	
75-25-2	Bromoform	0.43	0.82	0.12	0.041	0.079	0.012	J
100-42-5	Styrene	0.47	0.82	0.12	0.11	0.19	0.029	J
95-47-6	o-Xylene	8.8	0.82	0.10	2.0	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.024	0.015	
98-82-8	Cumene	0.56	0.82	0.091	0.11	0.17	0.019	J
103-65-1	n-Propylbenzene	1.1	0.82	0.085	0.22	0.17	0.017	
622-96-8	4-Ethyltoluene	1.8	0.82	0.093	0.37	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	2.4	0.82	0.098	0.49	0.17	0.020	
98-83-9	alpha-Methylstyrene	0.52	0.82	0.12	0.11	0.17	0.025	J
95-63-6	1,2,4-Trimethylbenzene	5.7	0.82	0.11	1.2	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	13	0.16	0.091	2.2	0.027	0.015	
135-98-8	sec-Butylbenzene	0.15	0.82	0.095	0.026	0.15	0.017	J
99-87-6	4-Isopropyltoluene (p-Cymene)	2.9	0.82	0.11	0.53	0.15	0.019	
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	0.12	ND	0.084	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.017	
91-20-3	Naphthalene	1.3	0.33	0.12	0.25	0.062	0.023	
87-68-3	Hexachlorobutadiene	10	0.16	0.15	0.97	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.082	ND	0.059	0.015	
104-51-8	n-Butylbenzene	0.71	0.33	0.082	0.13	0.059	0.015	M

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

M = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: CA      Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG06B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00189

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	0.77	0.077	0.41	0.16	0.016	
74-87-3	Chloromethane	ND	0.15	0.077	ND	0.075	0.037	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	0.077	ND	0.11	0.011	
75-01-4	Vinyl Chloride	ND	0.15	0.077	ND	0.060	0.030	
74-83-9	Bromomethane	ND	0.15	0.077	ND	0.040	0.020	
75-00-3	Chloroethane	ND	0.15	0.077	ND	0.058	0.029	
64-17-5	Ethanol	2.3	7.7	0.077	1.2	4.1	0.041	J, B
67-64-1	Acetone	21	7.7	0.11	8.8	3.2	0.047	B
75-69-4	Trichlorofluoromethane	1.3	0.15	0.077	0.23	0.027	0.014	
107-13-1	Acrylonitrile	ND	0.77	0.11	ND	0.35	0.050	
75-35-4	1,1-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.45	0.77	0.11	0.15	0.25	0.038	J
75-09-2	Methylene Chloride	0.46	0.77	0.077	0.13	0.22	0.022	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.077	ND	0.049	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.15	0.086	0.071	0.020	0.011	
75-15-0	Carbon Disulfide	13	0.77	0.18	4.2	0.25	0.059	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
75-34-3	1,1-Dichloroethane	0.25	0.15	0.077	0.062	0.038	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	0.077	ND	0.043	0.021	
108-05-4	Vinyl Acetate	2.9	7.7	0.25	0.82	2.2	0.070	J, B
78-93-3	2-Butanone (MEK)	5.8	0.77	0.077	2.0	0.26	0.026	B
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
108-20-3	Diisopropyl Ether	ND	0.77	0.091	ND	0.18	0.022	
67-66-3	Chloroform	34	0.15	0.091	6.9	0.032	0.019	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG06B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00189

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.77	0.079	ND	0.18	0.019	
107-06-2	1,2-Dichloroethane	ND	0.15	0.077	ND	0.038	0.019	
71-55-6	1,1,1-Trichloroethane	ND	0.15	0.077	ND	0.028	0.014	
71-43-2	<b>Benzene</b>	<b>1.9</b>	0.15	0.077	<b>0.61</b>	0.048	0.024	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.60</b>	0.15	0.077	<b>0.095</b>	0.024	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.77	0.077	ND	0.18	0.018	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.088</b>	0.15	0.077	<b>0.019</b>	0.033	0.017	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>0.18</b>	0.15	0.077	<b>0.027</b>	0.023	0.011	
79-01-6	<b>Trichloroethene</b>	<b>1.3</b>	0.15	0.077	<b>0.24</b>	0.029	0.014	
123-91-1	1,4-Dioxane	ND	0.77	0.094	ND	0.21	0.026	
80-62-6	Methyl Methacrylate	ND	0.77	0.12	ND	0.19	0.028	
142-82-5	<b>n-Heptane</b>	<b>0.47</b>	0.77	0.099	<b>0.11</b>	0.19	0.024	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.77	0.080	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>9.2</b>	0.77	0.086	<b>2.2</b>	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	0.097	ND	0.17	0.021	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.077	ND	0.028	0.014	
108-88-3	<b>Toluene</b>	<b>6.7</b>	0.77	0.077	<b>1.8</b>	0.20	0.020	
591-78-6	<b>2-Hexanone</b>	<b>0.52</b>	0.77	0.12	<b>0.13</b>	0.19	0.029	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.12</b>	0.15	0.10	<b>0.014</b>	0.018	0.012	<b>J</b>
106-93-4	1,2-Dibromoethane	ND	0.15	0.083	ND	0.020	0.011	
111-65-9	<b>n-Octane</b>	<b>1.5</b>	0.77	0.077	<b>0.31</b>	0.16	0.016	
127-18-4	<b>Tetrachloroethene</b>	<b>1.1</b>	0.15	0.077	<b>0.17</b>	0.023	0.011	
108-90-7	Chlorobenzene	ND	0.15	0.079	ND	0.033	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	<b>Ethanol</b>	<b>0.082</b>	5.0	0.050	<b>0.044</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>1.0</b>	5.0	0.073	<b>0.42</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.076</b>	0.50	0.050	<b>0.022</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	<b>Vinyl Acetate</b>	<b>0.26</b>	5.0	0.16	<b>0.074</b>	1.4	0.045	<b>J</b>
78-93-3	<b>2-Butanone (MEK)</b>	<b>0.072</b>	0.50	0.050	<b>0.024</b>	0.17	0.017	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	Chloroform	ND	0.10	0.059	ND	0.020	0.012	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	<b>Benzene</b>	<b>0.059</b>	0.10	0.050	<b>0.018</b>	0.031	0.016	<b>J</b>
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result μg/m <sup>3</sup>	MRL μg/m <sup>3</sup>	MDL μg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	Ethanol	ND	5.0	0.050	ND	2.7	0.027	
67-64-1	<b>Acetone</b>	<b>0.35</b>	5.0	0.073	<b>0.15</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.064</b>	0.50	0.050	<b>0.018</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	<b>Chloroform</b>	<b>0.090</b>	0.10	0.059	<b>0.018</b>	0.020	0.012	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	Benzene	ND	0.10	0.050	ND	0.031	0.016	
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:         *Wida*         Date:         6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: LA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	<b>Ethanol</b>	<b>0.062</b>	5.0	0.050	<b>0.033</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>0.55</b>	5.0	0.073	<b>0.23</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.055</b>	0.50	0.050	<b>0.016</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	<b>Chloroform</b>	<b>0.087</b>	0.10	0.059	<b>0.018</b>	0.020	0.012	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 5/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	Benzene	ND	0.10	0.050	ND	0.031	0.016	
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

**SURROGATE SPIKE RECOVERY RESULTS**

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister(s)  
**Test Notes:**

**Date(s) Collected:** 5/19 - 5/20/08  
**Date(s) Received:** 5/21/08  
**Date(s) Analyzed:** 5/27 - 5/29/08

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P080527-MB	97	70-130	98	70-130	103	70-130	
Method Blank	P080528-MB	99	70-130	97	70-130	104	70-130	
Method Blank	P080529-MB	98	70-130	97	70-130	105	70-130	
Lab Control Sample	P080527-LCS	98	70-130	98	70-130	102	70-130	
Lab Control Sample	P080528-LCS	100	70-130	97	70-130	104	70-130	
Lab Control Sample	P080529-LCS	100	70-130	95	70-130	106	70-130	
SG77B-05	P0801507-001	96	70-130	98	70-130	103	70-130	
SG30B-05	P0801507-002	98	70-130	99	70-130	103	70-130	
SG29B-05	P0801507-003	99	70-130	96	70-130	102	70-130	
SG59B-05	P0801507-004	98	70-130	98	70-130	103	70-130	
SG31B-05	P0801507-005	98	70-130	96	70-130	103	70-130	
SG60B-05	P0801507-006	99	70-130	96	70-130	103	70-130	
SG58B-05	P0801507-007	99	70-130	96	70-130	105	70-130	
SG56B-05	P0801507-008	98	70-130	98	70-130	102	70-130	
SG56B-05	P0801507-008DUP	99	70-130	97	70-130	101	70-130	
SG56B-05D	P0801507-009	100	70-130	97	70-130	104	70-130	
SG55B-05	P0801507-010	100	70-130	98	70-130	102	70-130	
SG57B-05	P0801507-011	100	70-130	97	70-130	103	70-130	
SG13B-05	P0801507-012	100	70-130	96	70-130	102	70-130	
SG15B-05	P0801507-013	110	70-130	75	70-130	127	70-130	
SG14B-05	P0801507-014	100	70-130	97	70-130	103	70-130	
SG06B-05	P0801507-015	98	70-130	97	70-130	104	70-130	

Verified By:         *CA*         Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-LCS

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	23.7	93	69-117	
74-87-3	Chloromethane	24.5	24.1	98	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	25.8	99	58-133	
75-01-4	Vinyl Chloride	24.8	23.8	96	61-127	
74-83-9	Bromomethane	25.0	25.2	101	67-124	
75-00-3	Chloroethane	25.0	23.7	95	69-123	
64-17-5	Ethanol	23.8	24.8	104	56-137	
67-64-1	Acetone	26.8	25.5	95	63-116	
75-69-4	Trichlorofluoromethane	26.3	25.5	97	71-120	
107-13-1	Acrylonitrile	25.5	26.4	104	74-129	
75-35-4	1,1-Dichloroethene	27.8	27.9	100	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	26.5	103	35-141	
75-09-2	Methylene Chloride	27.8	26.9	97	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	28.6	107	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	27.4	99	63-129	
75-15-0	Carbon Disulfide	25.0	23.1	92	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	26.6	100	74-118	
75-34-3	1,1-Dichloroethane	26.8	27.2	101	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	27.0	101	72-119	
108-05-4	Vinyl Acetate	25.3	28.5	113	32-163	
78-93-3	2-Butanone (MEK)	27.0	27.4	101	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	27.1	100	74-117	
108-20-3	Diisopropyl Ether	26.3	26.8	102	70-131	
67-66-3	Chloroform	29.8	30.9	104	72-113	

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	26.6	102	74-123	
107-06-2	1,2-Dichloroethane	26.3	26.3	100	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	26.7	100	78-114	
71-43-2	Benzene	27.0	24.8	92	73-111	
56-23-5	Carbon Tetrachloride	26.0	26.5	102	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	26.9	103	81-118	
78-87-5	1,2-Dichloropropane	26.5	26.6	100	78-117	
75-27-4	Bromodichloromethane	27.8	28.6	103	77-120	
79-01-6	Trichloroethene	27.3	27.6	101	80-116	
123-91-1	1,4-Dioxane	27.5	29.1	106	79-122	
80-62-6	Methyl Methacrylate	25.8	28.2	109	79-128	
142-82-5	n-Heptane	26.8	27.2	101	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	26.5	106	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.2	95	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	29.4	105	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.0	103	80-117	
108-88-3	Toluene	26.5	25.2	95	76-116	
591-78-6	2-Hexanone	26.3	23.3	89	69-131	
124-48-1	Dibromochloromethane	27.0	27.2	101	80-128	
106-93-4	1,2-Dibromoethane	26.3	25.8	98	79-122	
111-65-9	n-Octane	26.0	25.6	98	78-122	
127-18-4	Tetrachloroethene	26.0	25.6	98	77-118	
108-90-7	Chlorobenzene	26.5	25.6	97	78-117	

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
100-41-4	Ethylbenzene	26.3	25.7	98	79-116	
179601-23-1	m,p-Xylenes	62.5	60.3	96	80-117	
75-25-2	Bromoform	31.3	34.4	110	77-128	
100-42-5	Styrene	26.3	26.9	102	80-124	
95-47-6	o-Xylene	29.8	28.7	96	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.1	98	79-120	
98-82-8	Cumene	27.0	26.6	99	81-119	
103-65-1	n-Propylbenzene	26.3	26.0	99	82-120	
622-96-8	4-Ethyltoluene	26.5	26.4	100	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.5	98	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.2	103	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.5	98	80-122	
100-44-7	Benzyl Chloride	25.8	27.5	107	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.1	98	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	25.8	98	81-119	
135-98-8	sec-Butylbenzene	26.8	26.4	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.1	101	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.3	98	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	27.4	106	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	28.0	108	75-138	
91-20-3	Naphthalene	26.3	27.1	103	76-143	
87-68-3	Hexachlorobutadiene	26.3	26.6	101	72-128	
98-06-6	tert-Butylbenzene	26.3	25.8	98	70-130	
104-51-8	n-Butylbenzene	26.8	26.3	98	70-130	

Verified By: CA Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	24.3	95	69-117	
74-87-3	Chloromethane	24.5	25.5	104	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	26.5	102	58-133	
75-01-4	Vinyl Chloride	24.8	24.8	100	61-127	
74-83-9	Bromomethane	25.0	25.6	102	67-124	
75-00-3	Chloroethane	25.0	24.3	97	69-123	
64-17-5	Ethanol	23.8	26.8	113	56-137	
67-64-1	Acetone	26.8	26.7	100	63-116	
75-69-4	Trichlorofluoromethane	26.3	26.6	101	71-120	
107-13-1	Acrylonitrile	25.5	27.6	108	74-129	
75-35-4	1,1-Dichloroethene	27.8	28.8	104	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	27.3	106	35-141	
75-09-2	Methylene Chloride	27.8	27.4	99	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	30.5	114	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	28.4	102	63-129	
75-15-0	Carbon Disulfide	25.0	24.4	98	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	27.6	104	74-118	
75-34-3	1,1-Dichloroethane	26.8	28.2	105	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	27.6	103	72-119	
108-05-4	Vinyl Acetate	25.3	30.7	121	32-163	
78-93-3	2-Butanone (MEK)	27.0	28.1	104	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	27.8	103	74-117	
108-20-3	Diisopropyl Ether	26.3	27.3	104	70-131	
67-66-3	Chloroform	29.8	32.3	108	72-113	

Verified By: CA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	27.5	106	74-123	
107-06-2	1,2-Dichloroethane	26.3	27.4	104	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	27.5	103	78-114	
71-43-2	Benzene	27.0	25.4	94	73-111	
56-23-5	Carbon Tetrachloride	26.0	27.6	106	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	27.5	106	81-118	
78-87-5	1,2-Dichloropropane	26.5	27.4	103	78-117	
75-27-4	Bromodichloromethane	27.8	29.8	107	77-120	
79-01-6	Trichloroethene	27.3	28.4	104	80-116	
123-91-1	1,4-Dioxane	27.5	29.4	107	79-122	
80-62-6	Methyl Methacrylate	25.8	28.4	110	79-128	
142-82-5	n-Heptane	26.8	27.8	104	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	27.2	109	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.9	98	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	30.2	108	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.9	106	80-117	
108-88-3	Toluene	26.5	25.6	97	76-116	
591-78-6	2-Hexanone	26.3	24.2	92	69-131	
124-48-1	Dibromochloromethane	27.0	27.8	103	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.4	100	79-122	
111-65-9	n-Octane	26.0	26.2	101	78-122	
127-18-4	Tetrachloroethene	26.0	25.8	99	77-118	
108-90-7	Chlorobenzene	26.5	25.9	98	78-117	

Verified By: LA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	25.9	98	79-116	
179601-23-1	m,p-Xylenes	62.5	61.1	98	80-117	
75-25-2	Bromoform	31.3	35.2	112	77-128	
100-42-5	Styrene	26.3	27.0	103	80-124	
95-47-6	o-Xylene	29.8	29.1	98	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.3	98	79-120	
98-82-8	Cumene	27.0	27.0	100	81-119	
103-65-1	n-Propylbenzene	26.3	26.4	100	82-120	
622-96-8	4-Ethyltoluene	26.5	26.5	100	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.9	100	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.7	105	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	26.0	100	80-122	
100-44-7	Benzyl Chloride	25.8	27.9	108	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.5	100	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	26.5	101	81-119	
135-98-8	sec-Butylbenzene	26.8	26.9	100	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.9	104	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.8	100	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	28.3	110	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	28.8	111	75-138	
91-20-3	Naphthalene	26.3	28.0	106	76-143	
87-68-3	Hexachlorobutadiene	26.3	27.6	105	72-128	
98-06-6	tert-Butylbenzene	26.3	26.1	99	70-130	
104-51-8	n-Butylbenzene	26.8	27.0	101	70-130	

Verified By: CA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS Acceptance Limits	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	24.1	95	69-117	
74-87-3	Chloromethane	24.5	25.5	104	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	26.4	102	58-133	
75-01-4	Vinyl Chloride	24.8	24.3	98	61-127	
74-83-9	Bromomethane	25.0	25.9	104	67-124	
75-00-3	Chloroethane	25.0	24.3	97	69-123	
64-17-5	Ethanol	23.8	26.8	113	56-137	
67-64-1	Acetone	26.8	26.3	98	63-116	
75-69-4	Trichlorofluoromethane	26.3	26.6	101	71-120	
107-13-1	Acrylonitrile	25.5	27.6	108	74-129	
75-35-4	1,1-Dichloroethene	27.8	28.8	104	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	27.1	105	35-141	
75-09-2	Methylene Chloride	27.8	27.4	99	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	30.7	115	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	27.9	100	63-129	
75-15-0	Carbon Disulfide	25.0	24.0	96	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	27.5	104	74-118	
75-34-3	1,1-Dichloroethane	26.8	28.1	105	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	27.5	103	72-119	
108-05-4	Vinyl Acetate	25.3	29.7	117	32-163	
78-93-3	2-Butanone (MEK)	27.0	28.2	104	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	27.8	103	74-117	
108-20-3	Diisopropyl Ether	26.3	27.2	103	70-131	
67-66-3	Chloroform	29.8	31.9	107	72-113	

Verified By: LA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	27.3	105	74-123	
107-06-2	1,2-Dichloroethane	26.3	27.6	105	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	27.6	103	78-114	
71-43-2	Benzene	27.0	25.2	93	73-111	
56-23-5	Carbon Tetrachloride	26.0	27.4	105	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	27.3	105	81-118	
78-87-5	1,2-Dichloropropane	26.5	27.3	103	78-117	
75-27-4	Bromodichloromethane	27.8	29.6	106	77-120	
79-01-6	Trichloroethene	27.3	28.1	103	80-116	
123-91-1	1,4-Dioxane	27.5	29.3	107	79-122	
80-62-6	Methyl Methacrylate	25.8	28.9	112	79-128	
142-82-5	n-Heptane	26.8	27.4	102	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	27.1	108	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.9	98	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	30.2	108	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.6	105	80-117	
108-88-3	Toluene	26.5	25.1	95	76-116	
591-78-6	2-Hexanone	26.3	23.9	91	69-131	
124-48-1	Dibromochloromethane	27.0	27.3	101	80-128	
106-93-4	1,2-Dibromoethane	26.3	25.8	98	79-122	
111-65-9	n-Octane	26.0	25.9	100	78-122	
127-18-4	Tetrachloroethene	26.0	25.4	98	77-118	
108-90-7	Chlorobenzene	26.5	25.4	96	78-117	

Verified By:         *CA*         Date:         6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	25.6	97	79-116	
179601-23-1	m,p-Xylenes	62.5	59.9	96	80-117	
75-25-2	Bromoform	31.3	34.2	109	77-128	
100-42-5	Styrene	26.3	26.6	101	80-124	
95-47-6	o-Xylene	29.8	28.5	96	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.0	97	79-120	
98-82-8	Cumene	27.0	26.5	98	81-119	
103-65-1	n-Propylbenzene	26.3	25.9	98	82-120	
622-96-8	4-Ethyltoluene	26.5	26.2	99	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.4	98	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.0	102	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.4	98	80-122	
100-44-7	Benzyl Chloride	25.8	27.4	106	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.1	98	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	26.0	99	81-119	
135-98-8	sec-Butylbenzene	26.8	26.4	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.2	101	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.2	98	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	27.8	108	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	27.9	107	75-138	
91-20-3	Naphthalene	26.3	27.4	104	76-143	
87-68-3	Hexachlorobutadiene	26.3	26.9	102	72-128	
98-06-6	tert-Butylbenzene	26.3	25.7	98	70-130	
104-51-8	n-Butylbenzene	26.8	26.5	99	70-130	

Verified By: CA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

**CAS Project ID:** P0801507  
**CAS Sample ID:** P0801507-008DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

**Initial Pressure (psig):** -3.8

**Final Pressure (psig):** 3.5

Canister Dilution Factor: 1.67

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
<b>Dichlorodifluoromethane (CFC 12)</b>	ND	ND	2.20	0.446	-	-	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
<b>Acetone</b>	25.9	10.9	25.6	10.8	25.75	<b>1</b>	25	<b>J, B</b>
<b>Trichlorofluoromethane</b>	55.8	9.94	55.5	9.88	55.65	<b>0.5</b>	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	ND	ND	ND	-	-	25	
<b>Methylene Chloride</b>	3.44	0.991	3.77	1.09	3.605	<b>9</b>	25	<b>J, B</b>
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
<b>1,1-Dichloroethane</b>	7.18	1.77	7.01	1.73	7.095	<b>2</b>	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
<b>2-Butanone (MEK)</b>	7.41	2.52	7.11	2.41	7.26	<b>4</b>	25	<b>J, B</b>
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Diisopropyl Ether	ND	ND	ND	ND	-	-	25	
<b>Chloroform</b>	7,490	1,530	7,410	1,520	7450	<b>1</b>	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08





**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Ethylbenzene	8.88	2.05	8.52	1.96	8.7	4	25	J
m,p-Xylenes	46.7	10.7	47.2	10.9	46.95	1	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	16.6	3.82	16.5	3.81	16.55	0.6	25	J
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	3.64	0.741	3.27	0.666	3.455	11	25	J
alpha-Methylstyrene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	5.18	1.05	5.08	1.03	5.13	2	25	J
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	4.34	0.722	4.18	0.695	4.26	4	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
sec-Butylbenzene	ND	ND	ND	ND	-	-	25	
4-Isopropyltoluene (p-Cymene)	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	
tert-Butylbenzene	ND	ND	ND	ND	-	-	25	
n-Butylbenzene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05270801.D  
 Date Analyzed: 5/27/08  
 Time Analyzed: 10:18

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	416189	9.22	1740493	11.36	689026	16.45
<b>Upper Limit</b>	582665	9.55	2436690	11.69	964636	16.78
<b>Lower Limit</b>	249713	8.89	1044296	11.03	413416	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	411633	9.19	1710469
02	Lab Control Sample	406006	9.23	1679145
03	SG77B-05	416586	9.20	1711385
04	SG77B-05 (Dilution)	414826	9.19	1697256
05	SG30B-05	407143	9.20	1685075
06	SG59B-05	406437	9.20	1677305
07	SG31B-05 (Dilution)	402647	9.19	1659207
08	SG56B-05	400661	9.20	1646575
09	SG56B-05 (Lab Duplicate)	392730	9.20	1634694
10	SG56B-05D (Dilution)	390553	9.19	1634882
11	SG55B-05	390977	9.20	1623936
12	SG57B-05	388924	9.20	1619160
13	SG13B-05	380792	9.20	1597367
14	SG15B-05	292426	9.17	1419564
15	SG14B-05	379532	9.22	1577066
16	SG06B-05	389303	9.20	1623961
17	SG56B-05 (Dilution)	402096	9.19	1667992
18	SG56B-05 (Lab Dup - Dilution)	399452	9.19	1672637
19	SG13B-05 (Dilution)	403942	9.19	1653911
20	SG15B-05 (Dilution)	394194	9.19	1641811
21	SG14B-05 (Dilution)	388783	9.19	1614645

IS1 (BCM) = Bromochloromethane  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area  
 AREA LOWER LIMIT = 60% of internal standard area  
 RT UPPER LIMIT = 0.33 minutes of internal standard RT  
 RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05280801.D  
 Date Analyzed: 5/28/08  
 Time Analyzed: 08:29

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	393838	9.20	1621199	11.36	662879	16.45
<b>Upper Limit</b>	551373	9.53	2269679	11.69	928031	16.78
<b>Lower Limit</b>	236303	8.87	972719	11.03	397727	16.12

Client Sample ID		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
01	Method Blank	385506	9.19	1591554	11.34	648424	16.44
02	SG30B-05 (Dilution)	381474	9.19	1555272	11.34	637855	16.45
03	SG59B-05 (Dilution)	373915	9.19	1544249	11.34	627480	16.45
04	SG31B-05	370470	9.20	1515272	11.35	626252	16.45
05	SG56B-05D	369769	9.21	1533976	11.36	624528	16.45
06	SG55B-05 (Dilution)	372167	9.19	1552178	11.34	637423	16.44
07	SG57B-05 (Dilution)	379052	9.19	1549547	11.34	630197	16.44
08	SG29B-05	374160	9.20	1530320	11.35	627102	16.45
09	SG60B-05	371218	9.20	1523833	11.35	623724	16.45
10	Lab Control Sample	377949	9.22	1568486	11.36	642257	16.45
11	SG60B-05 (Dilution)	384373	9.19	1575449	11.34	645600	16.45
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area  
 AREA LOWER LIMIT = 60% of internal standard area  
 RT UPPER LIMIT = 0.33 minutes of internal standard RT  
 RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05290801.D  
 Date Analyzed: 5/29/08  
 Time Analyzed: 08:31

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	383231	9.22	1598146	11.36	654560	16.45
<b>Upper Limit</b>	536523	9.55	2237404	11.69	916384	16.78
<b>Lower Limit</b>	229939	8.89	958888	11.03	392736	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
01	Method Blank	381746	9.19	1582084
02	SG29B-05 (Dilution)	381287	9.19	1569012
03	SG58B-05 (Dilution)	377706	9.19	1560046
04	SG58B-05	372594	9.20	1531812
05	Lab Control Sample	366705	9.23	1518501
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

IS1 (BCM) = Bromochloromethane  
 IS2 (DFB) = 1,4-Difluorobenzene  
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area  
 AREA LOWER LIMIT = 60% of internal standard area  
 RT UPPER LIMIT = 0.33 minutes of internal standard RT  
 RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.  
 \* Values outside of QC limits.

Verified By:     LGA     Date:     6/5/08

## RESULTS OF HELIUM ANALYSIS

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Helium**

**Test Code:** EPA 3C Modified  
**Instrument ID:** HP5890 II/GC8/TCD  
**Analyst:** Zheng Wang/Wade Henton/Chris Cornett  
**Sampling Media:** 6.0 L Summa Canister(s)  
**Test Notes:**

**Date(s) Collected:** 5/19 - 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/23/08

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SG77B-05	P0801507-001	1.00	1.56	ND	39	
SG30B-05	P0801507-002	1.00	1.56	ND	39	
<b>SG29B-05</b>	P0801507-003	1.00	1.65	<b>120</b>	41	
SG59B-05	P0801507-004	1.00	1.73	ND	43	
SG31B-05	P0801507-005	1.00	1.58	ND	40	
<b>SG60B-05</b>	P0801507-006	1.00	1.65	<b>1,100</b>	41	
SG58B-05	P0801507-007	1.00	1.70	ND	43	
SG56B-05	P0801507-008	1.00	1.67	ND	42	
SG56B-05D	P0801507-009	1.00	1.67	ND	42	
SG55B-05	P0801507-010	1.00	1.70	ND	43	
SG57B-05	P0801507-011	1.00	1.61	ND	40	
SG13B-05	P0801507-012	1.00	1.61	ND	40	
SG15B-05	P0801507-013	1.00	1.63	ND	41	
SG14B-05	P0801507-014	1.00	1.63	ND	41	
SG06B-05	P0801507-015	1.00	1.54	ND	39	
Method Blank	P080523-MB	1.00	1.00	ND	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RG Date: 6/5/08

## RESULTS OF VOLATILE ORGANIC ANALYSIS

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG77B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00799

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** 0.010 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	78	7.8	ND	16	1.6	
74-87-3	Chloromethane	ND	16	7.8	ND	7.6	3.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	78	7.8	ND	11	1.1	
75-01-4	Vinyl Chloride	ND	16	7.8	ND	6.1	3.1	
74-83-9	Bromomethane	ND	16	7.8	ND	4.0	2.0	
75-00-3	Chloroethane	ND	16	7.8	ND	5.9	3.0	
64-17-5	<b>Ethanol</b>	<b>17</b>	780	7.8	<b>8.9</b>	410	4.1	<b>J, B</b>
67-64-1	<b>Acetone</b>	<b>330</b>	780	11	<b>140</b>	330	4.8	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	16	7.8	ND	2.8	1.4	
107-13-1	Acrylonitrile	ND	78	11	ND	36	5.0	
75-35-4	<b>1,1-Dichloroethene</b>	<b>14</b>	16	7.8	<b>3.6</b>	3.9	2.0	<b>J</b>
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	78	12	ND	26	3.8	
75-09-2	<b>Methylene Chloride</b>	<b>20</b>	78	7.8	<b>5.8</b>	22	2.2	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	16	7.8	ND	5.0	2.5	
76-13-1	Trichlorotrifluoroethane	ND	16	8.7	ND	2.0	1.1	
75-15-0	Carbon Disulfide	ND	78	19	ND	25	6.0	
156-60-5	trans-1,2-Dichloroethene	ND	16	7.8	ND	3.9	2.0	
75-34-3	1,1-Dichloroethane	ND	16	7.8	ND	3.9	1.9	
1634-04-4	Methyl tert-Butyl Ether	ND	16	7.8	ND	4.3	2.2	
108-05-4	Vinyl Acetate	ND	780	25	ND	220	7.1	
78-93-3	<b>2-Butanone (MEK)</b>	<b>51</b>	78	7.8	<b>17</b>	26	2.6	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	16	7.8	ND	3.9	2.0	
108-20-3	Diisopropyl Ether	ND	78	9.2	ND	19	2.2	
67-66-3	<b>Chloroform</b>	<b>45,000</b>	16	9.2	<b>9,300</b>	3.2	1.9	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG77B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00799

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
637-92-3	Ethyl tert-Butyl Ether	ND	78	8.0	ND	19	1.9	
107-06-2	1,2-Dichloroethane	ND	16	7.8	ND	3.9	1.9	
71-55-6	1,1,1-Trichloroethane	ND	16	7.8	ND	2.9	1.4	
71-43-2	<b>Benzene</b>	<b>47</b>	16	7.8	<b>15</b>	4.9	2.4	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>22</b>	16	7.8	<b>3.6</b>	2.5	1.2	
994-05-8	tert-Amyl Methyl Ether	ND	78	7.8	ND	19	1.9	
78-87-5	1,2-Dichloropropane	ND	16	7.8	ND	3.4	1.7	
75-27-4	<b>Bromodichloromethane</b>	<b>47</b>	16	7.8	<b>7.0</b>	2.3	1.2	
79-01-6	<b>Trichloroethene</b>	<b>120</b>	16	7.8	<b>22</b>	2.9	1.5	
123-91-1	1,4-Dioxane	ND	78	9.5	ND	22	2.6	
80-62-6	Methyl Methacrylate	ND	78	12	ND	19	2.9	
142-82-5	<b>n-Heptane</b>	<b>39</b>	78	10	<b>9.5</b>	19	2.4	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	78	8.1	ND	17	1.8	
108-10-1	4-Methyl-2-pentanone	ND	78	8.7	ND	19	2.1	
10061-02-6	trans-1,3-Dichloropropene	ND	78	9.8	ND	17	2.2	
79-00-5	1,1,2-Trichloroethane	ND	16	7.8	ND	2.9	1.4	
108-88-3	<b>Toluene</b>	<b>430</b>	78	7.8	<b>110</b>	21	2.1	
591-78-6	2-Hexanone	ND	78	12	ND	19	2.9	
124-48-1	<b>Dibromochloromethane</b>	<b>32</b>	16	11	<b>3.8</b>	1.8	1.2	
106-93-4	1,2-Dibromoethane	ND	16	8.4	ND	2.0	1.1	
111-65-9	<b>n-Octane</b>	<b>1,000</b>	78	7.8	<b>210</b>	17	1.7	
127-18-4	<b>Tetrachloroethene</b>	<b>49</b>	16	7.8	<b>7.2</b>	2.3	1.2	
108-90-7	Chlorobenzene	ND	16	8.0	ND	3.4	1.7	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

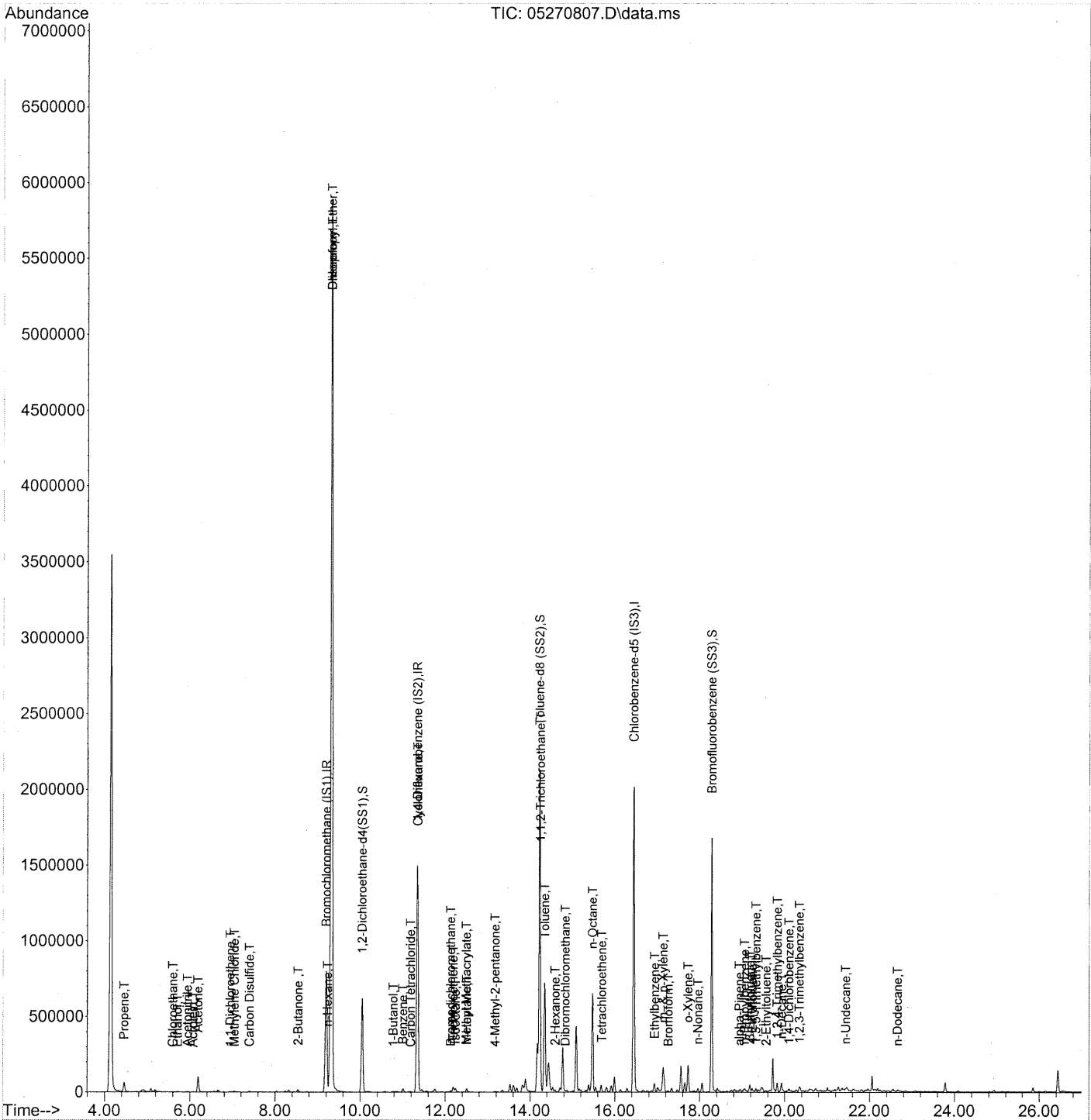
B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	416586	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1711385	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	684381	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
33) 1,2-Dichloroethane-d4(...)	10.05	65	569524	23.909	ng	-0.05
Spiked Amount				25.000		
				Recovery =		95.64%
57) Toluene-d8 (SS2)	14.22	98	1735852	24.602	ng	-0.02
Spiked Amount				25.000		
				Recovery =		98.40%
73) Bromofluorobenzene (SS3)	18.28	174	603399	25.722	ng	-0.01
Spiked Amount				25.000		
				Recovery =		102.88%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	11316	0.351	ng	89
3) Dichlorodifluoromethane	4.55	85	651	N.D.	-	
4) Chloromethane	4.75	50	1738	N.D.	-	
5) Freon 114	0.00	135	0	N.D.	-	
6) Vinyl Chloride	0.00	62	0	N.D.	-	
7) 1,3-Butadiene	5.14	54	94	N.D.	-	
8) Bromomethane	0.00	94	0	N.D.	-	
9) Chloroethane	5.60	64	1466	0.091	ng	UR # 54
10) Ethanol	5.71	45	2360	0.108	ng	82
11) Acetonitrile	5.94	41	5321	0.084	ng	# 56
12) Acrolein	6.07	56	1736	0.110	ng	80
13) Acetone	6.19	58	46741	2.147	ng	# 76
14) Trichlorofluoromethane	6.33	101	139	N.D.	-	
15) Isopropanol	6.48	45	100	N.D.	-	
16) Acrylonitrile	6.61	53	1407	N.D.	-	
17) 1,1-Dichloroethene	6.94	96	1564	0.092	ng	99
18) tert-Butanol	7.02	59	95	N.D.	-	
19) Methylene Chloride	7.04	84	2150	0.128	ng	# 31
20) Allyl Chloride	7.17	41	194	N.D.	-	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	-	
22) Carbon Disulfide	7.40	76	7789	0.115	ng	<MDL 87
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	-	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	-	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	-	
26) Vinyl Acetate	8.24	86	175	N.D.	-	
27) 2-Butanone	8.53	72	3735	0.328	ng	# 2
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	-	
29) Diisopropyl Ether	9.32	87	711802	47.483	ng	UR # 1
30) Ethyl Acetate	0.00	61	0	N.D.	-	
31) n-Hexane	9.23	57	3836	0.081	ng	# 65

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	6496370	264.263	ng	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	10.18	62	1186	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.77	56	4038	0.143	ng	88
41) Benzene	11.01	78	21751	0.301	ng	97
42) Carbon Tetrachloride	11.18	117	4255	0.144	ng	96
43) Cyclohexane	11.35	84	2769	0.098	ng	# 1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	11.94	63	815	N.D.		
46) Bromodichloromethane	12.13	83	6380	0.301	ng	97
47) Trichloroethene	12.19	130	16770	0.747	ng	99
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	25727	0.223	ng	99
50) Methyl Methacrylate	12.50	100	1427	0.184	ng	NR # 1
51) n-Heptane	12.50	71	4291	0.249	ng	# 55
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.17	58	1722	0.069	ng	NR # 44
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	148768	8.477	ng	NR # 6
58) Toluene	14.35	91	219634	2.744	ng	97
59) 2-Hexanone	14.59	43	10350	0.137	ng	NR # 47
60) Dibromochloromethane	14.83	129	4840	0.205	ng	95
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.31	43	1686	N.D.		
63) n-Octane	15.47	57	155061	6.407	ng	96
64) Tetrachloroethene	15.69	166	7444	0.314	ng	99
65) Chlorobenzene	16.50	112	675	N.D.		
66) Ethylbenzene	16.94	91	49706	0.546	ng	90
67) m- & p-Xylene	17.14	91	140210	2.326	ng	92
68) Bromoform	17.26	173	3566	0.260	ng	96
69) Styrene	17.59	104	1076	N.D.		
70) o-Xylene	17.73	91	44210	0.685	ng	91
71) n-Nonane	17.96	43	10983	0.173	ng	90
72) 1,1,2,2-Tetrachloroethane	17.65	83	208	N.D.		
74) Cumene	18.44	105	4605	N.D.		
75) alpha-Pinene	18.93	93	2537	0.058	ng	93
76) n-Propylbenzene	19.06	91	9773	0.090	ng	# 43
77) 3-Ethyltoluene	19.18	105	24250	0.235	ng	94
78) 4-Ethyltoluene	19.24	105	12328	0.133	ng	98
79) 1,3,5-Trimethylbenzene	19.33	105	11689	0.142	ng	89

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

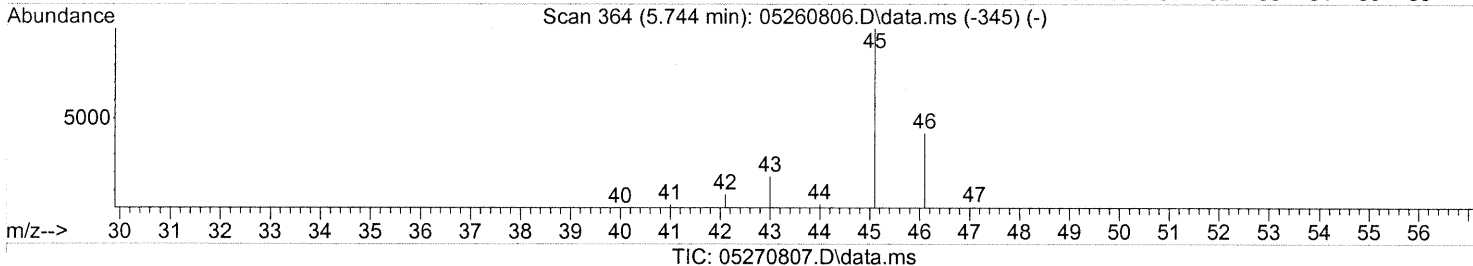
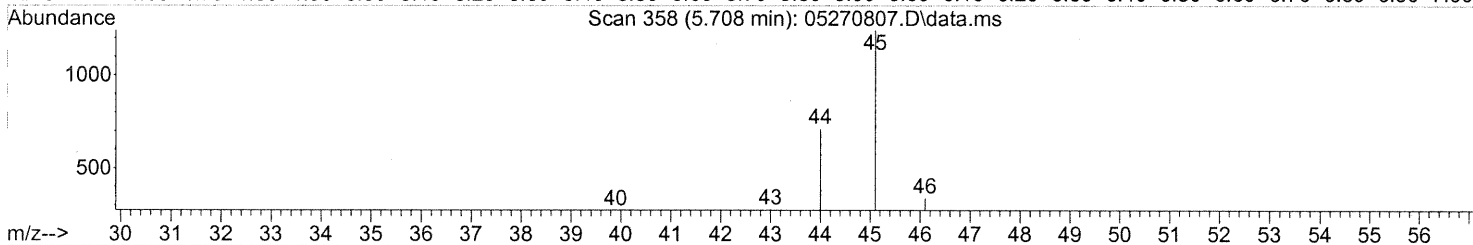
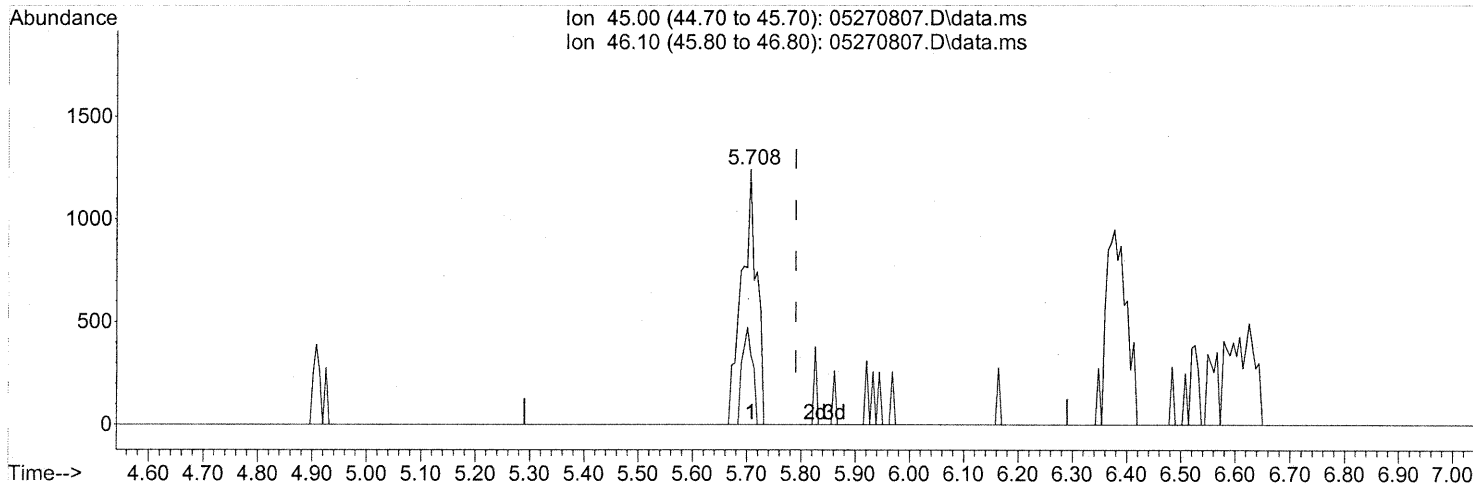
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	97	N.D.	-	
81) 2-Ethyltoluene	19.56	105	8600	0.086	ng	98
82) 1,2,4-Trimethylbenzene	19.83	105	22708	0.272	ng	99
83) n-Decane	19.93	57	26641	0.451	ng	83
84) Benzyl Chloride	19.99	91	954	N.D.	-	
85) 1,3-Dichlorobenzene	20.02	146	656	N.D.	-	
86) 1,4-Dichlorobenzene	20.10	146	5549	0.108	ng	94
87) sec-Butylbenzene	20.15	105	1299	N.D.	-	
88) p-Isopropyltoluene	20.34	119	2501	N.D.	-	
89) 1,2,3-Trimethylbenzene	20.34	105	6155	0.077	ng	95
90) 1,2-Dichlorobenzene	20.52	146	569	N.D.	-	
91) d-Limonene	20.52	68	1071	N.D.	-	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	-	
93) n-Undecane	21.43	57	7633	0.123	ng	89
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	-	
95) Naphthalene	22.70	128	5241	N.D.	-	
96) n-Dodecane	22.66	57	4627	0.077	ng	# 68
97) Hexachloro-1,3-butadiene	23.11	225	395	N.D.	-	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.708min (-0.083) 0.11ng

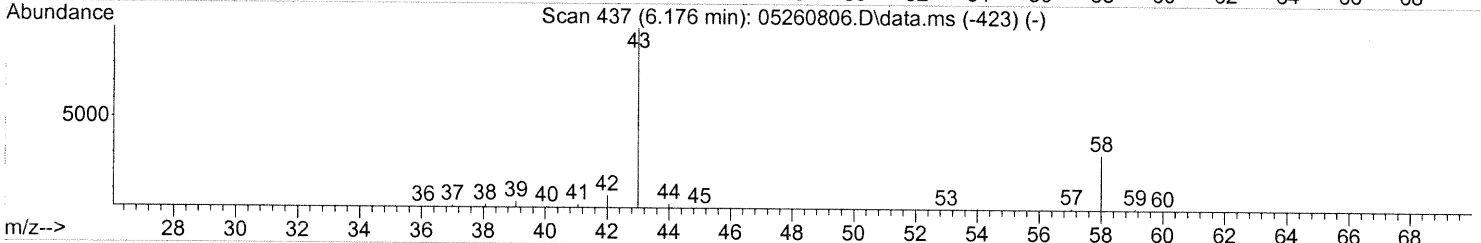
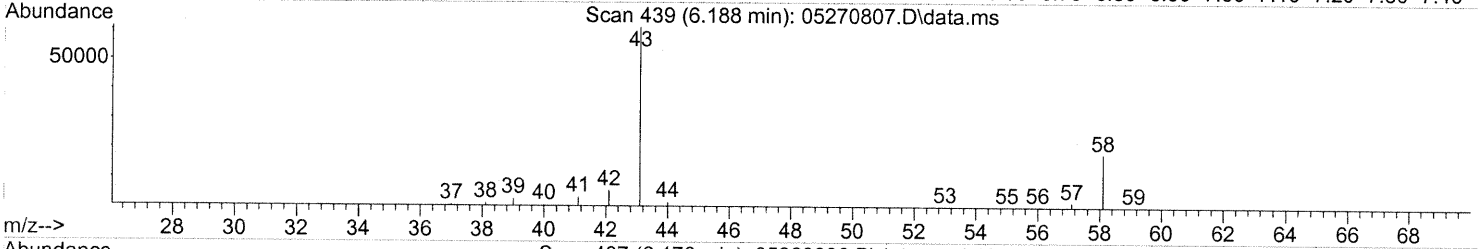
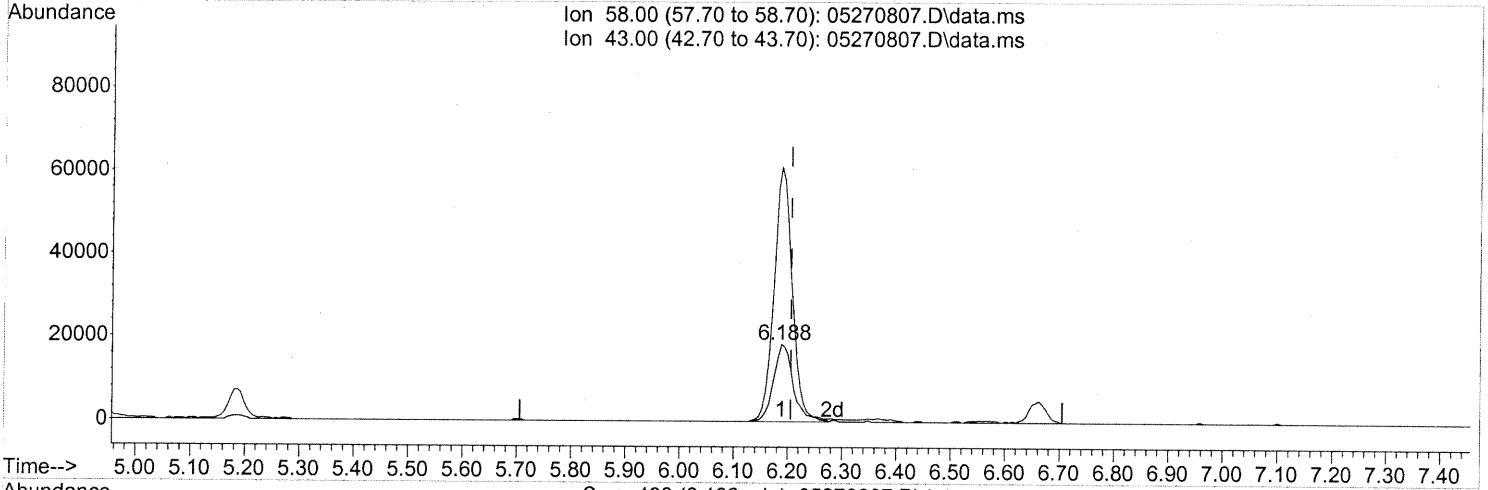
response 2360

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	26.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 2.15ng

response 46741

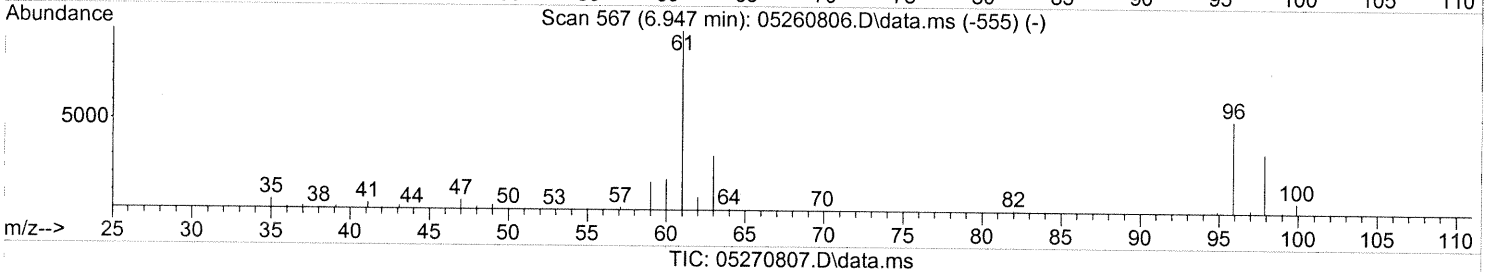
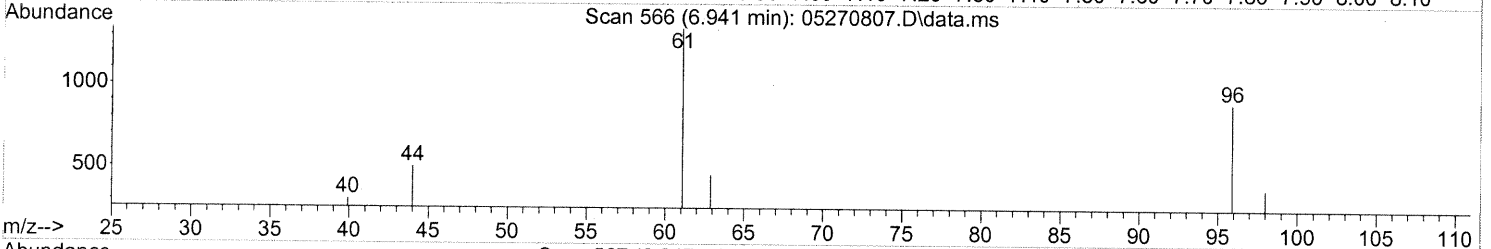
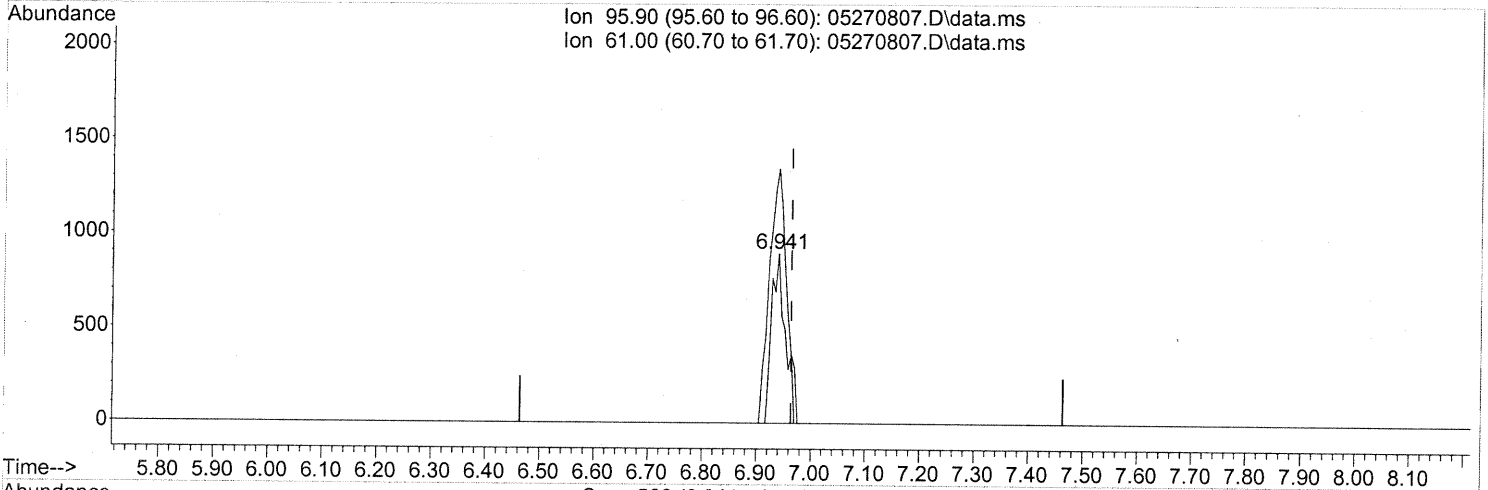
Ion	Exp%	Act%
58.00	100	100
43.00	368.40	313.61#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

6.941min (-0.024) 0.09ng

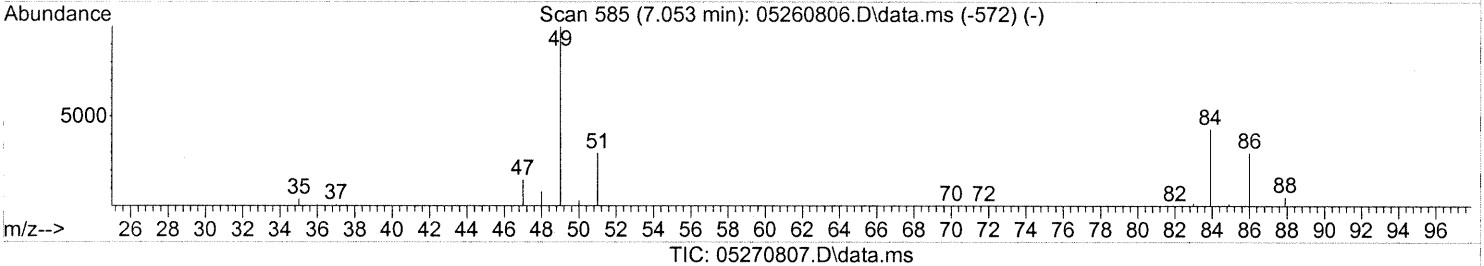
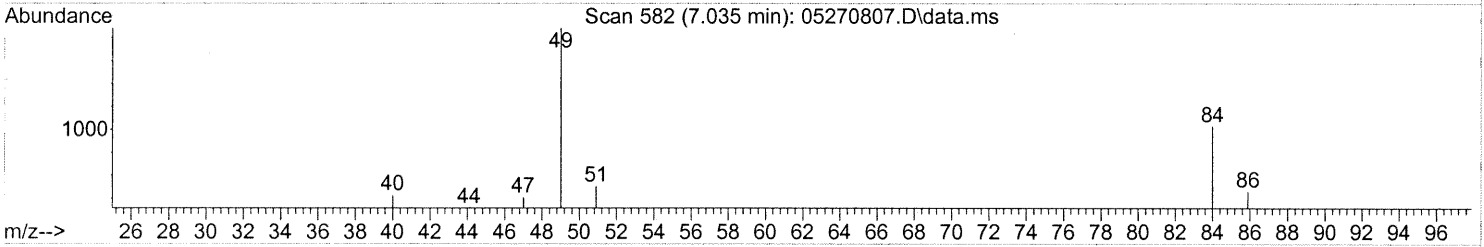
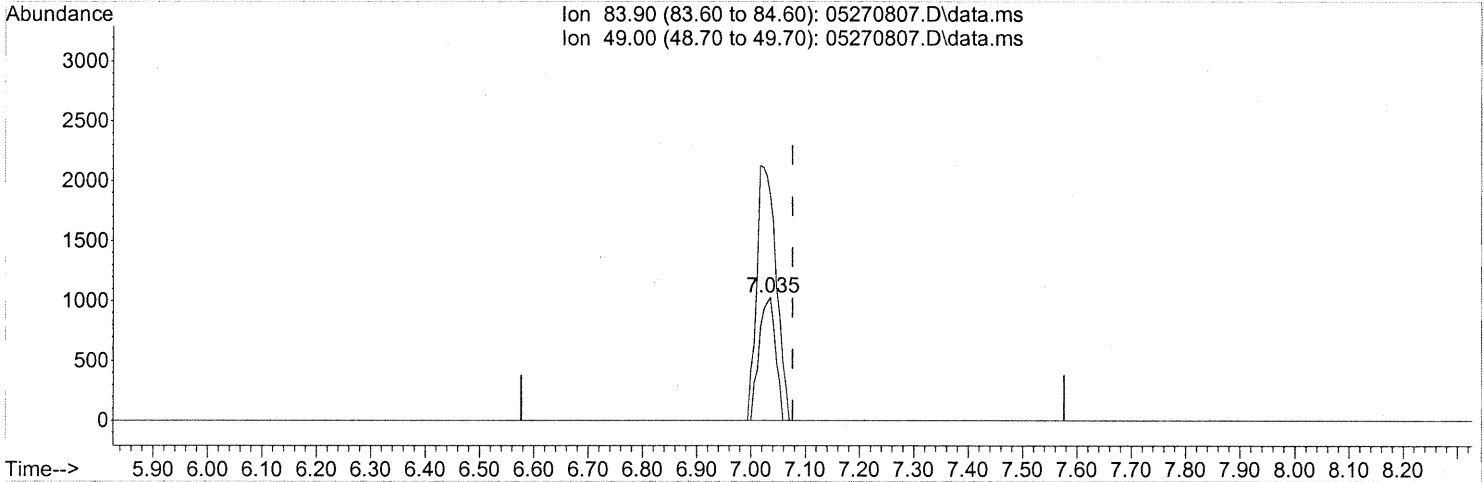
response 1564

Ion	Exp%	Act%
95.90	100	100
61.00	189.30	191.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.035min (-0.042) 0.13ng

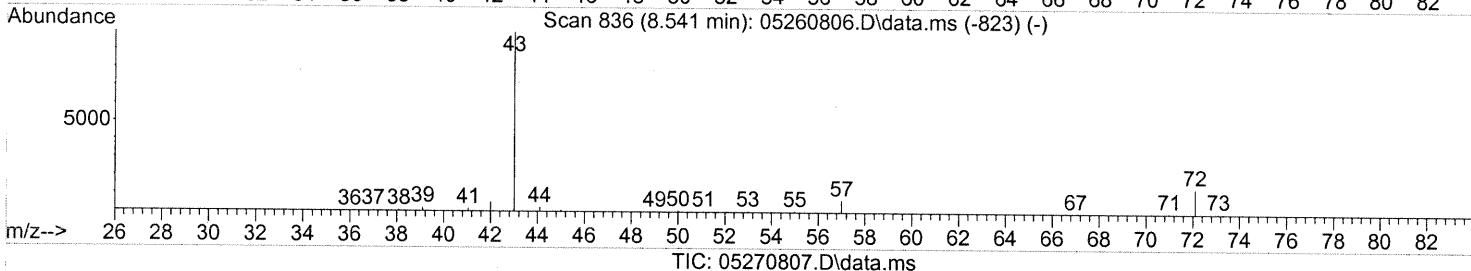
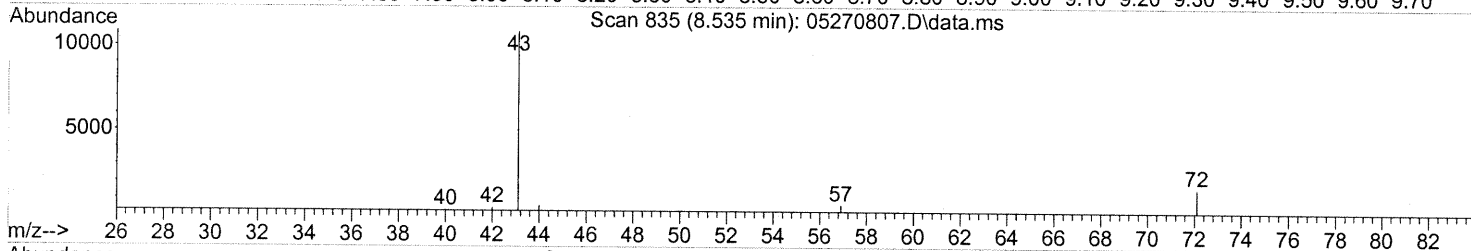
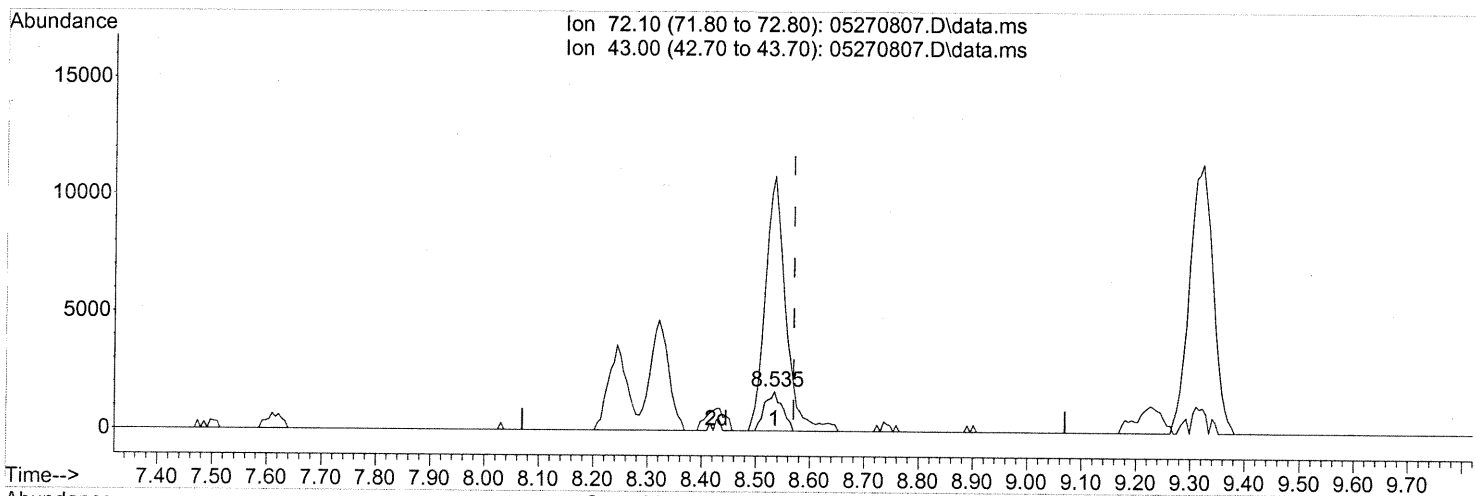
response 2150

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	245.30#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



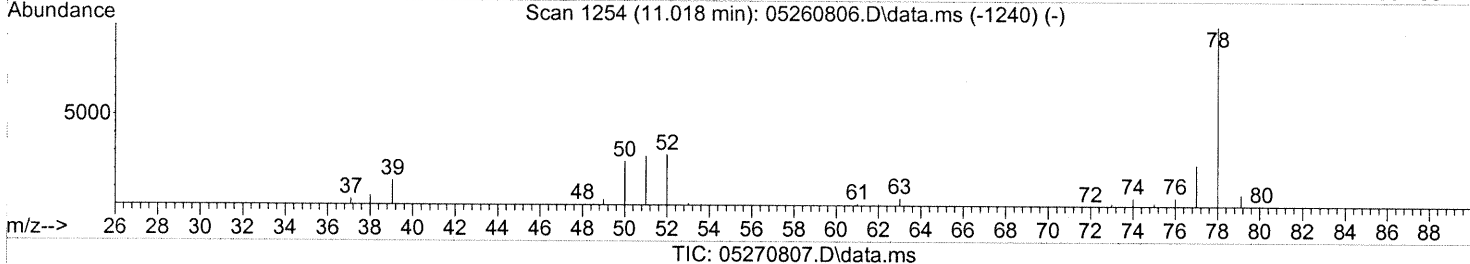
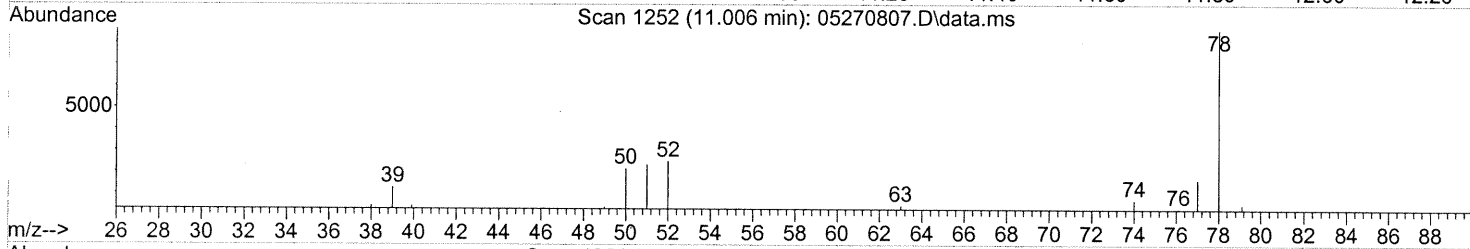
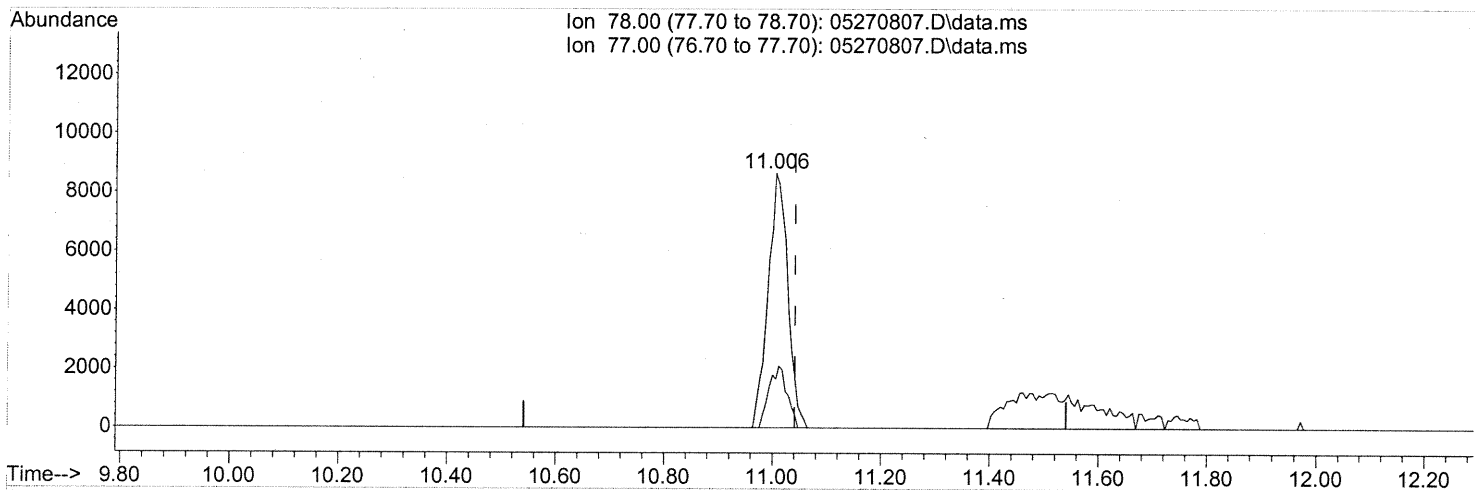
(27) 2-Butanone (T)  
 8.535min (-0.036) 0.33ng  
 response 3735

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	757.40#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



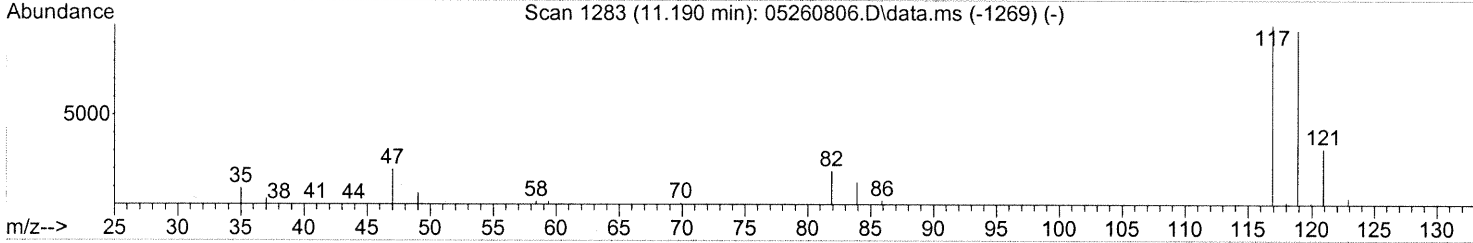
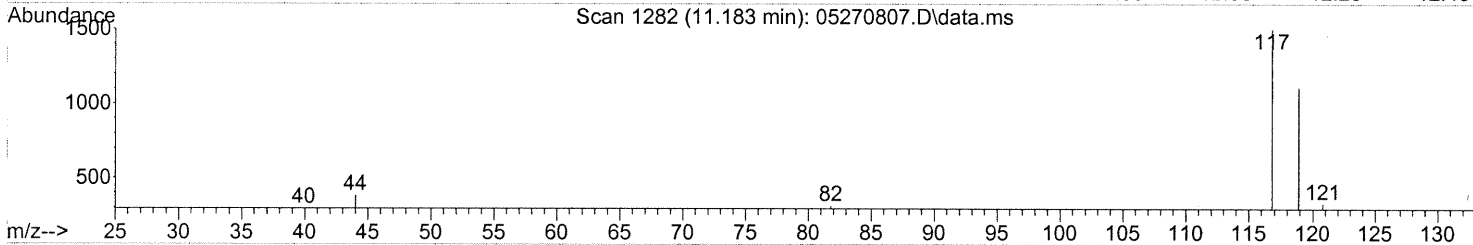
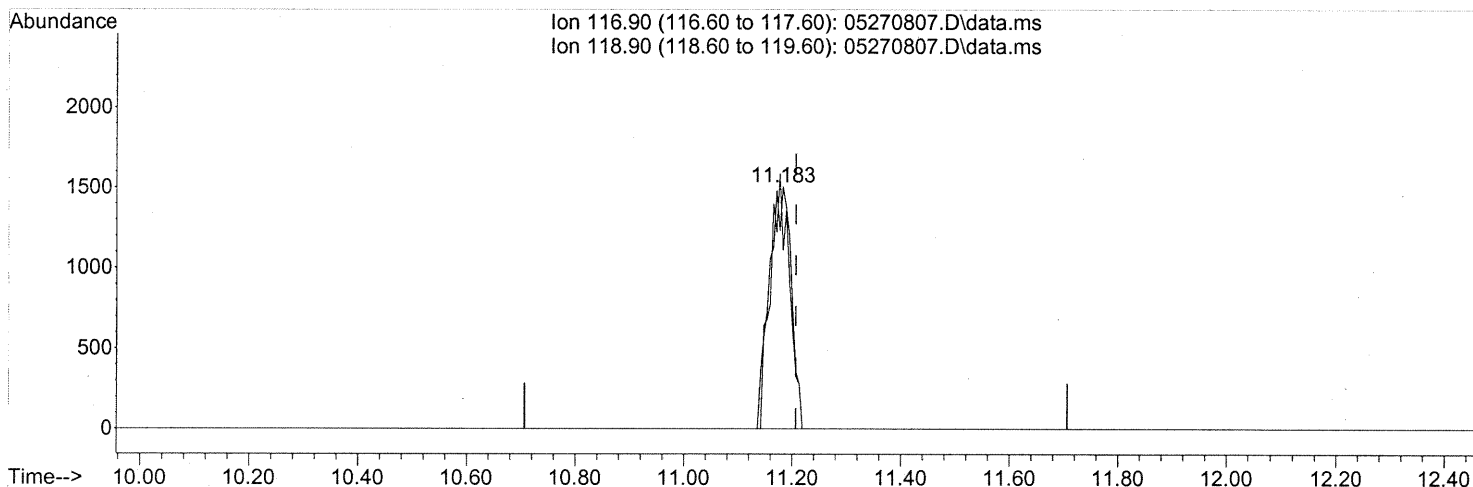
(41) Benzene (T)  
 11.006min (-0.036) 0.30ng  
 response 21751

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.183min (-0.024) 0.14ng

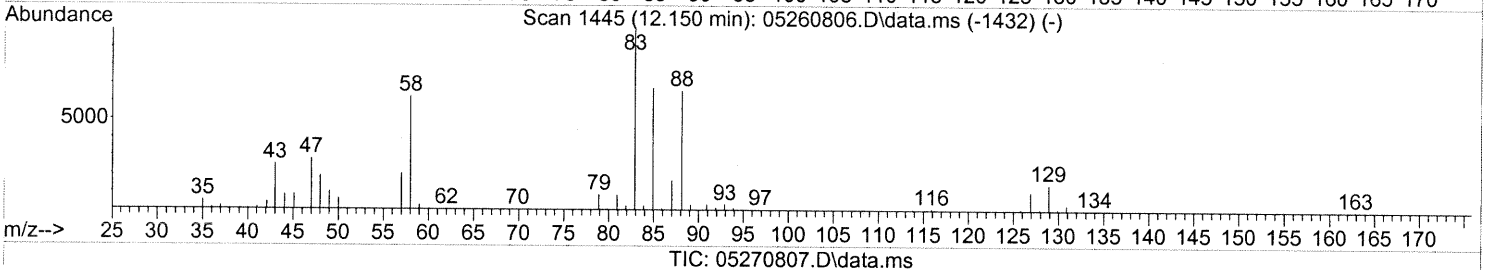
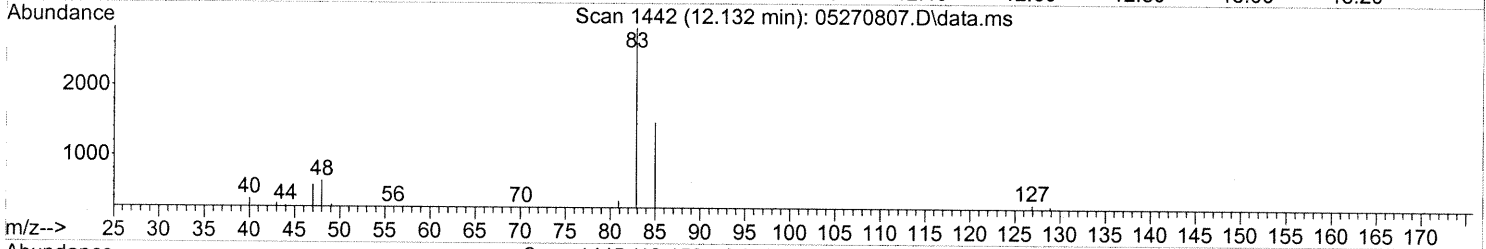
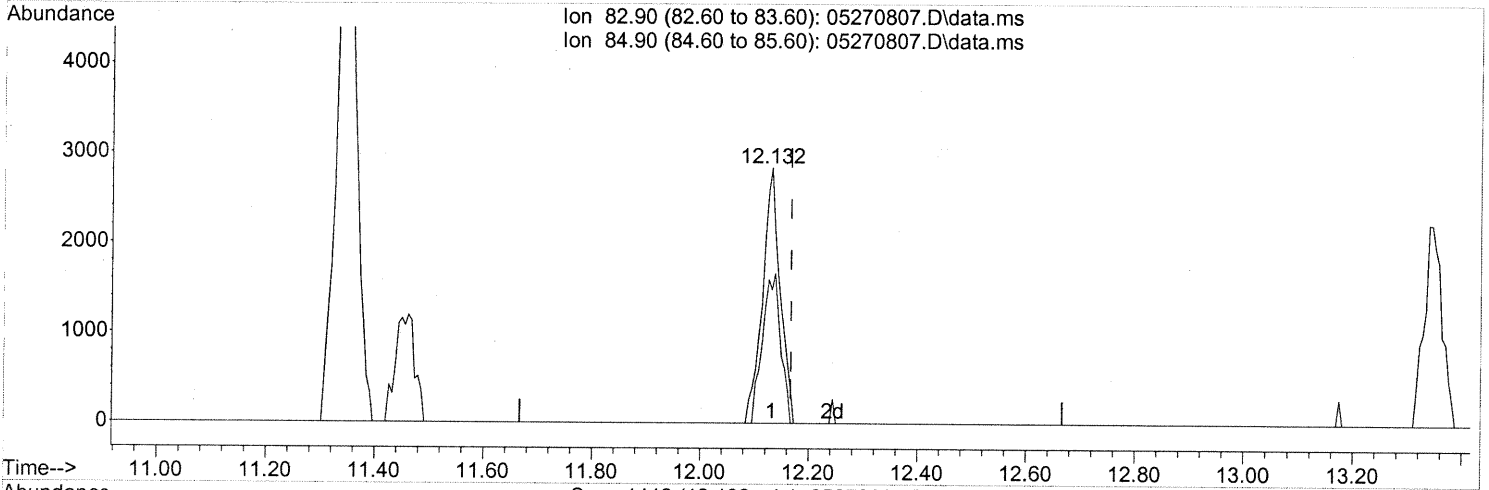
response 4255

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	91.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270807.D  
Acq On : 27 May 2008 16:33  
Operator : WA  
Sample : P0801507-001 (10ml)  
Misc : ENSR SG77B-05 (-3.0, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(46) Bromodichloromethane (T)

12.132min (-0.036) 0.30ng

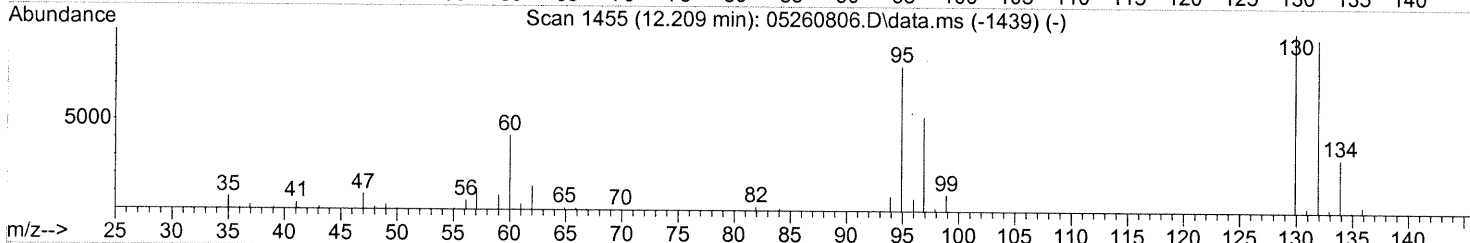
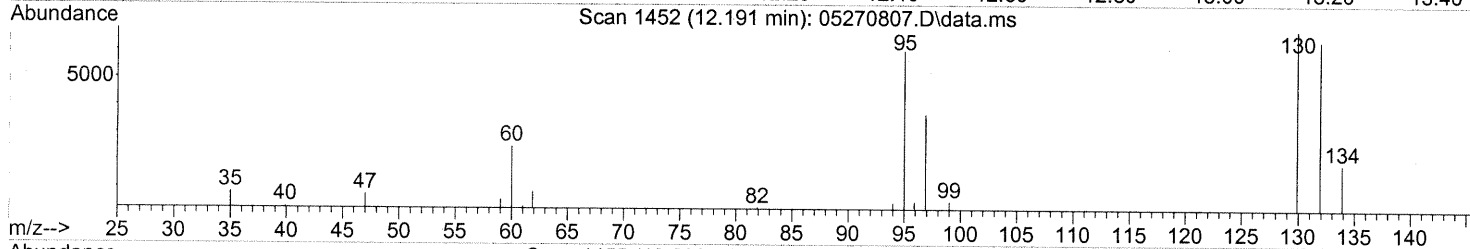
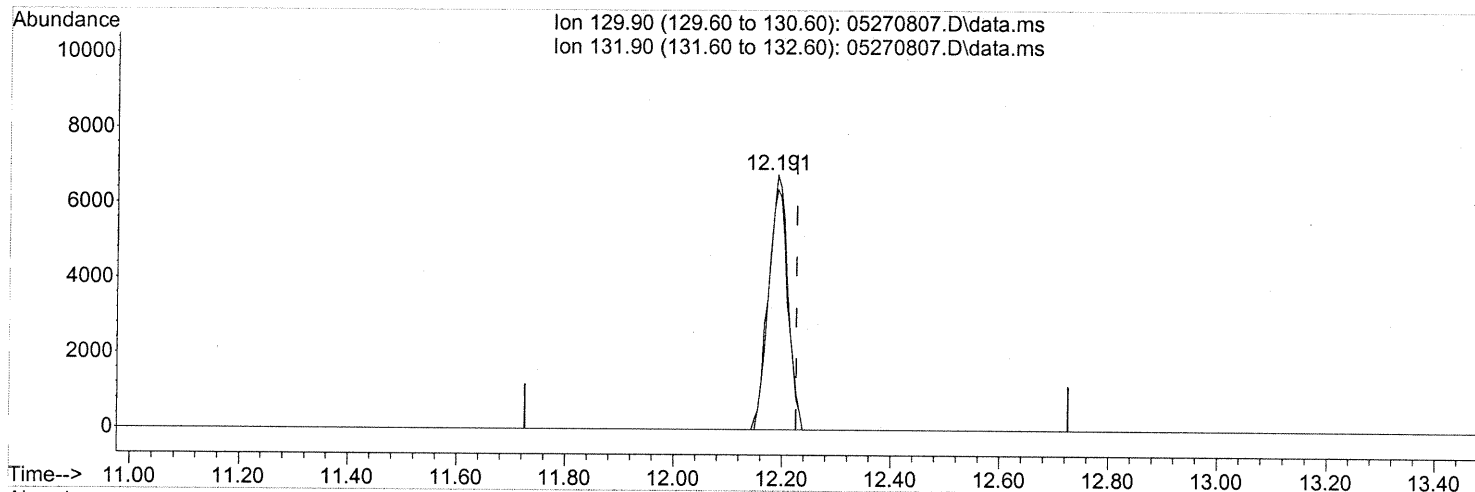
response 6380

Ion	Exp%	Act%
82.90	100	100
84.90	62.30	60.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

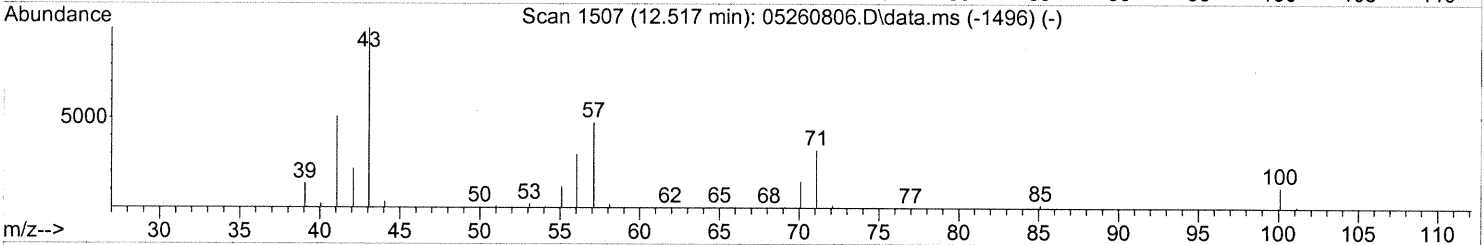
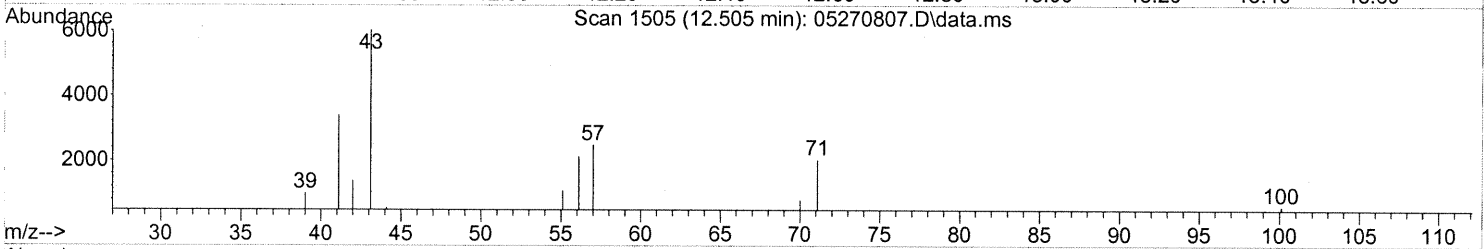
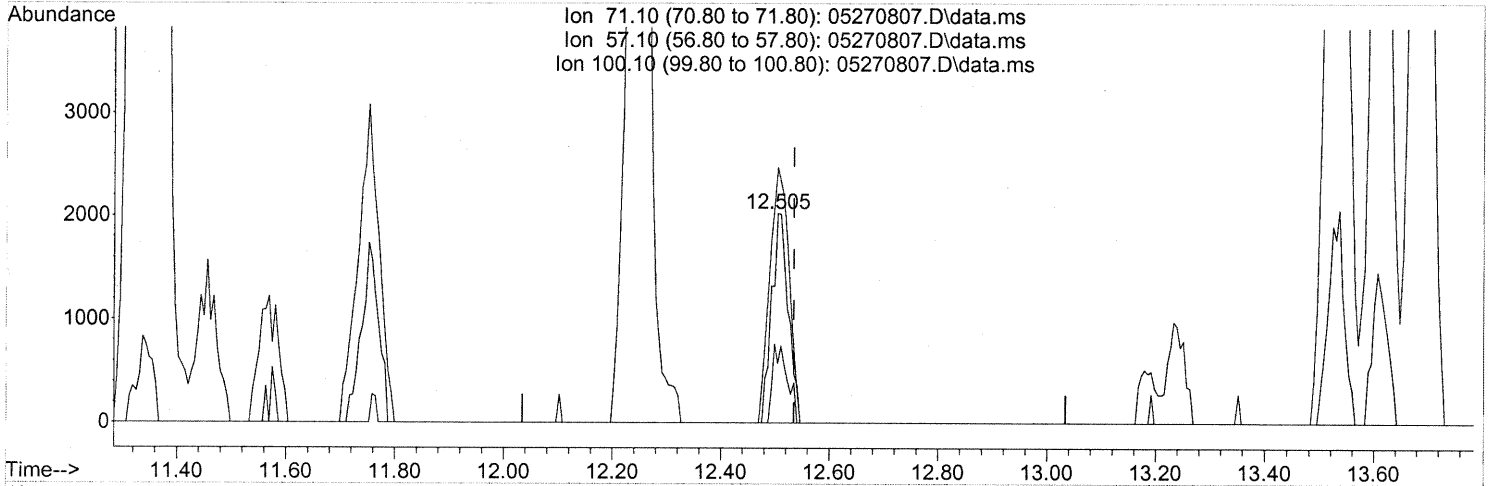
(47) Trichloroethene (T)  
 12.191min (-0.036) 0.75ng  
 response 16770

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	94.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

(51) n-Heptane (T)  
 12.505min (-0.030) 0.25ng  
 response 4291

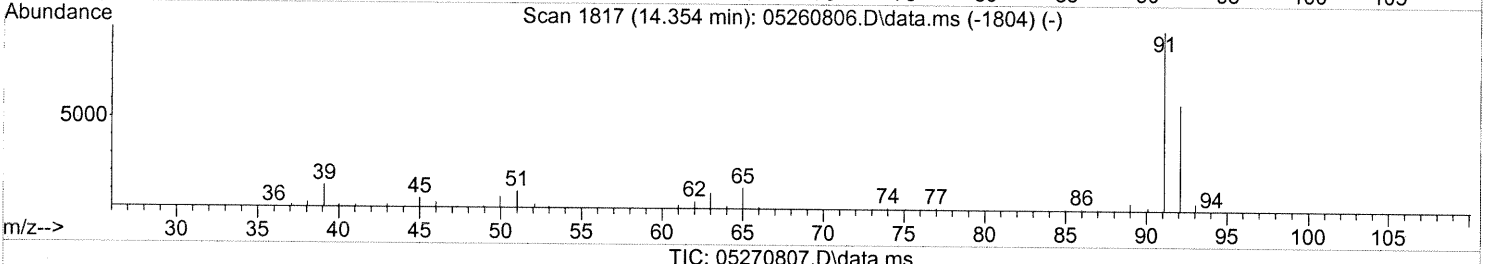
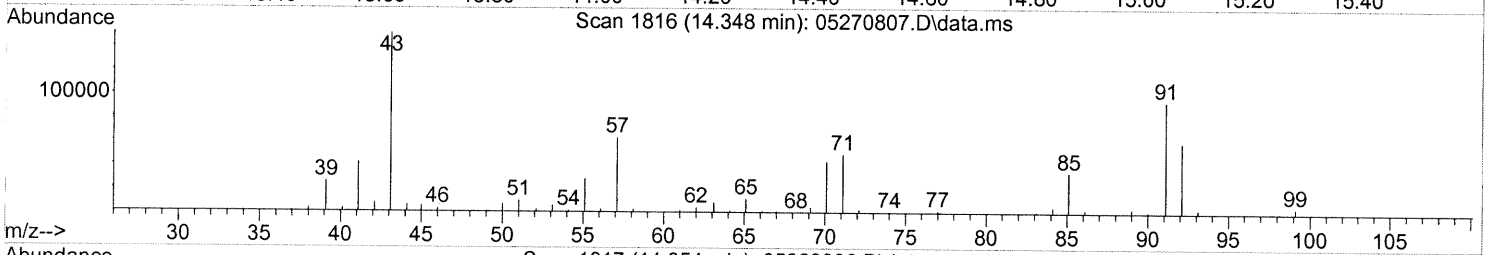
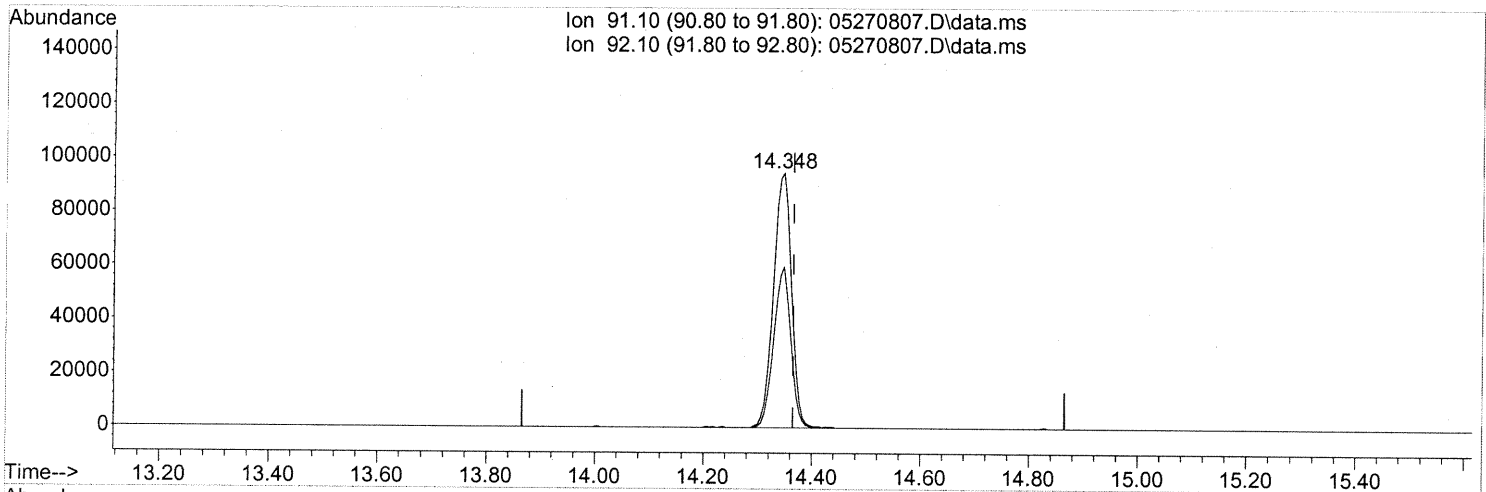
Ion	Exp%	Act%
71.10	100	100
57.10	88.70	141.34#
100.10	28.80	33.26
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



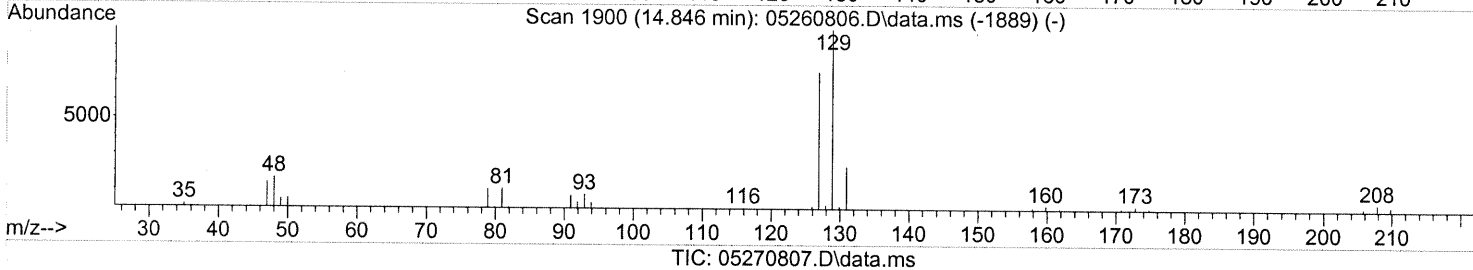
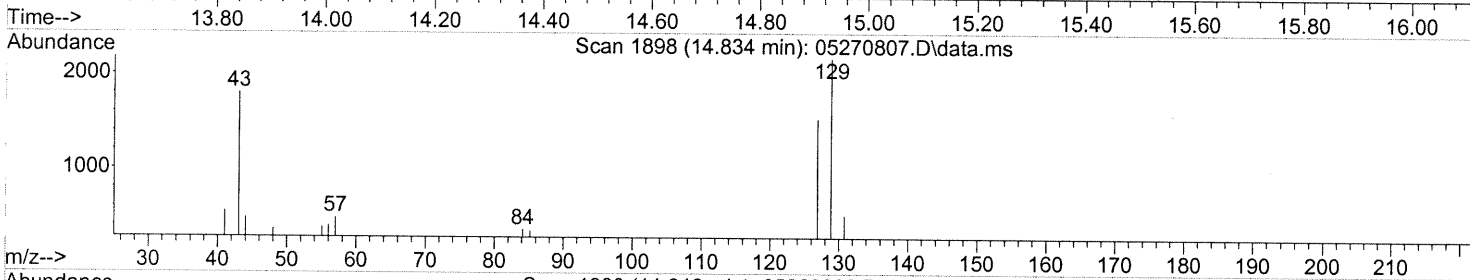
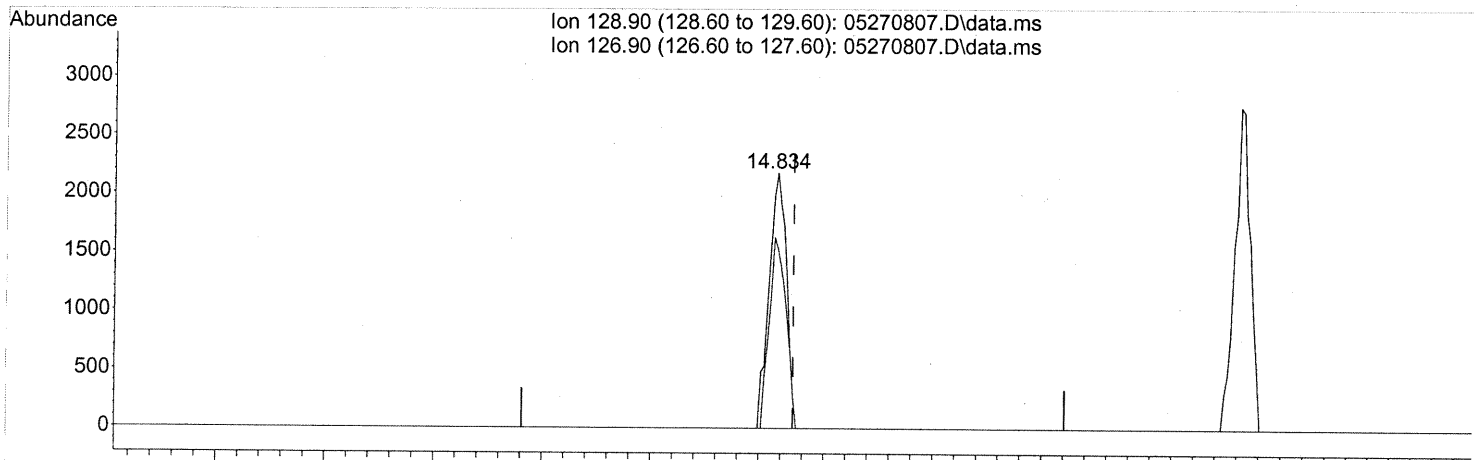
(58) Toluene (T)  
 14.348min (-0.018) 2.74ng  
 response 219634

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(60) Dibromochloromethane (T)

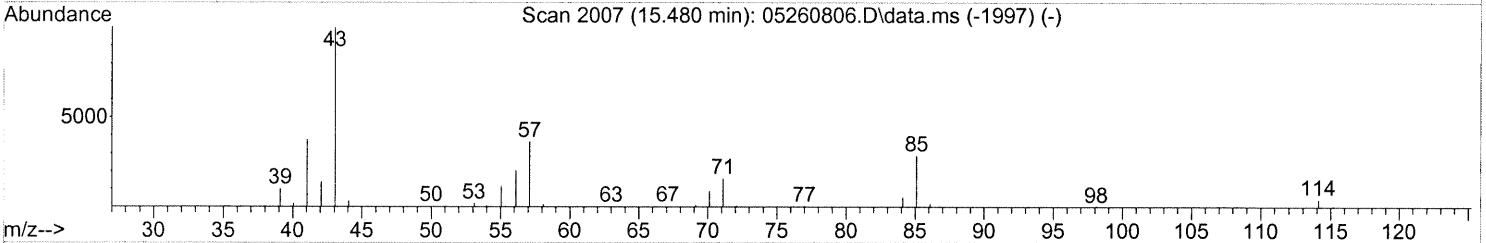
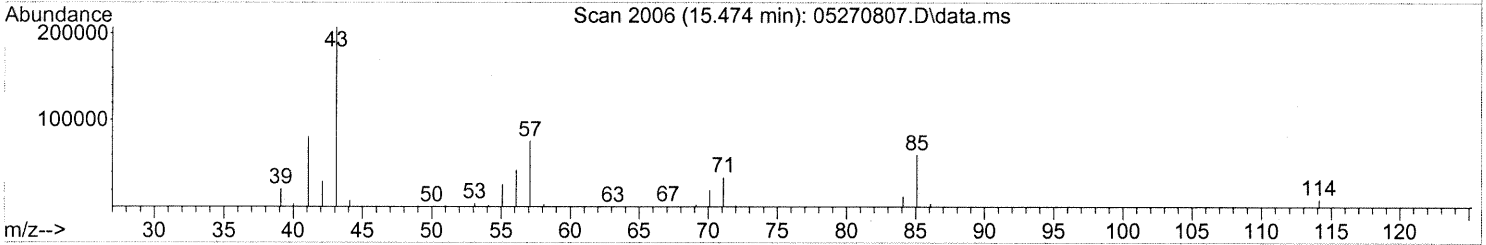
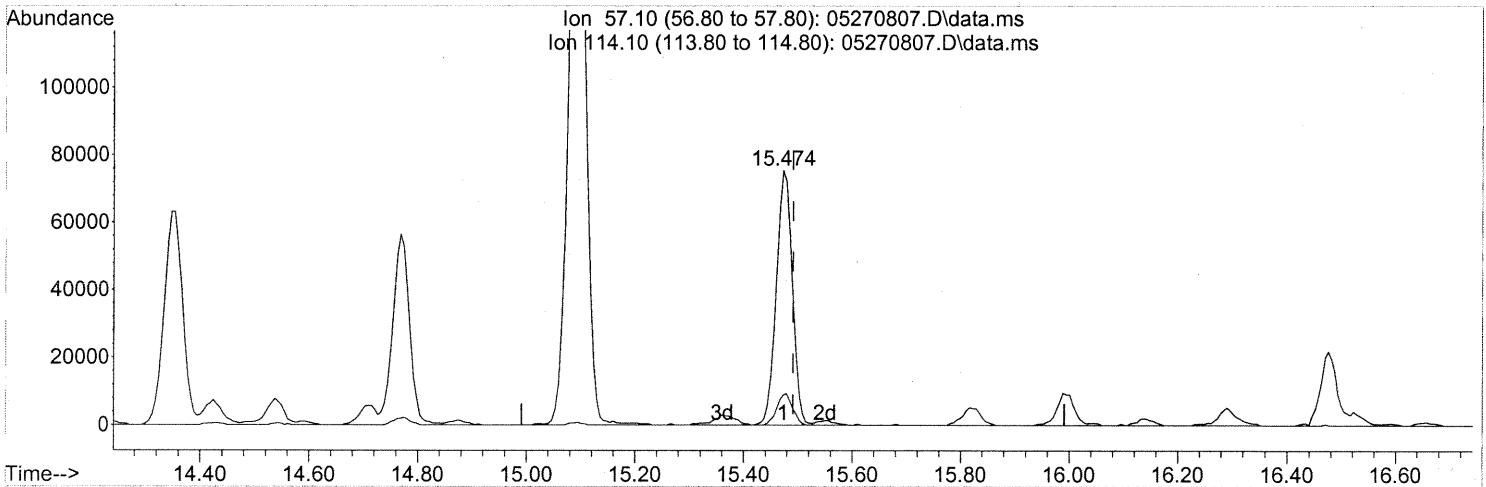
14.834min (-0.030) 0.20ng

response 4840

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	72.79
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

(63) n-Octane (T)

15.474min (-0.018) 6.41ng

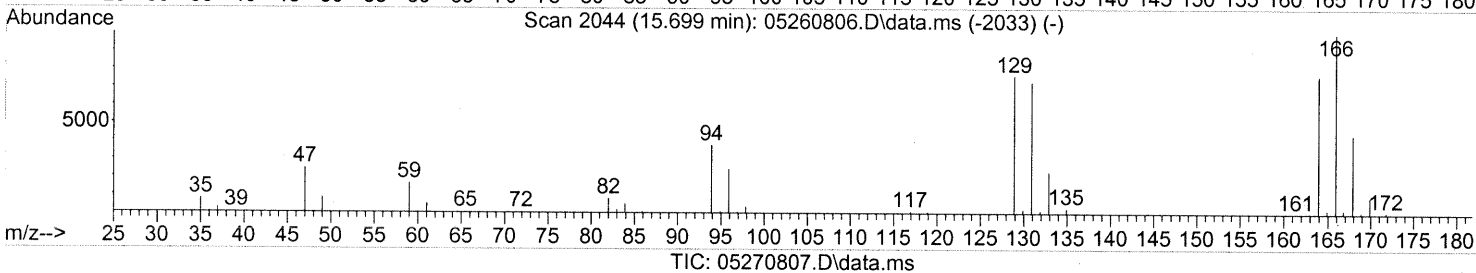
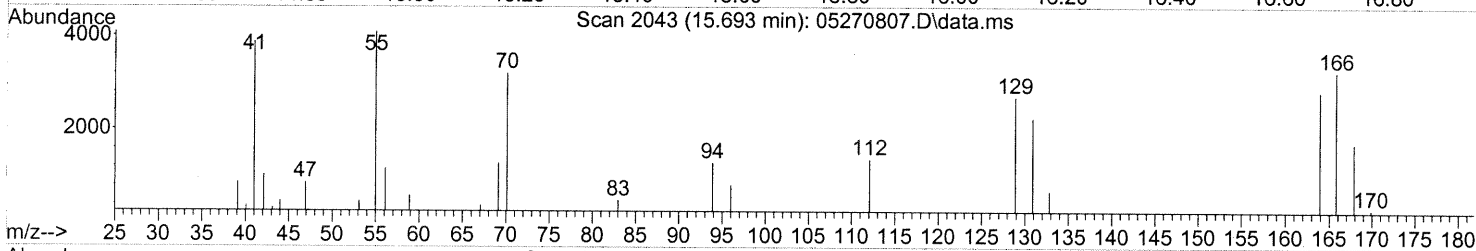
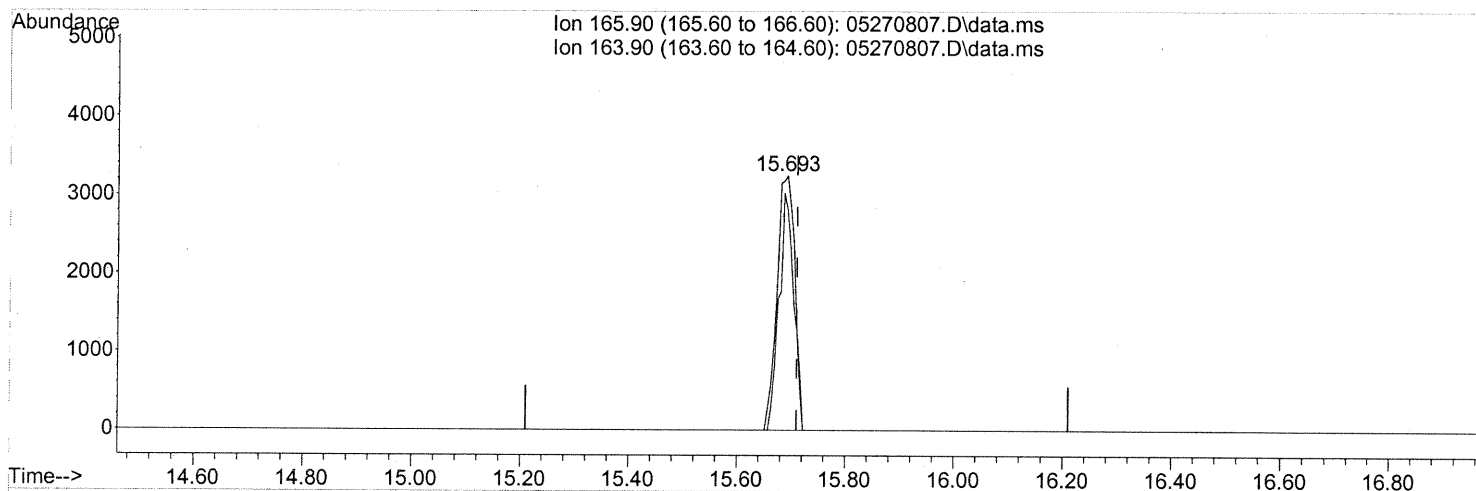
response 155061

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 0.31ng

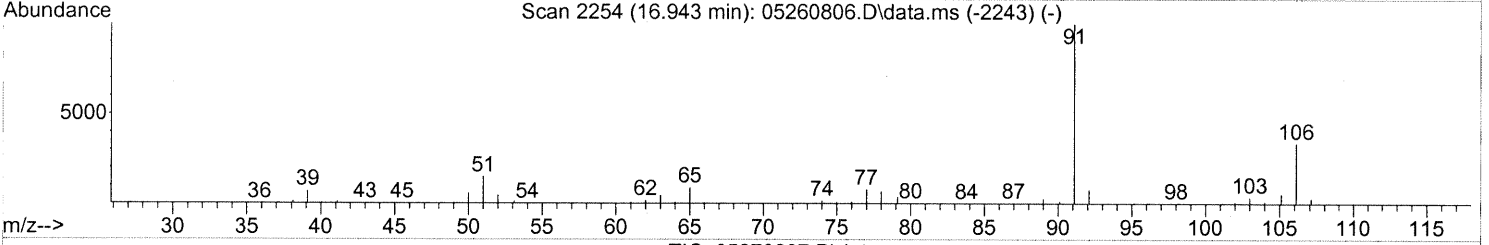
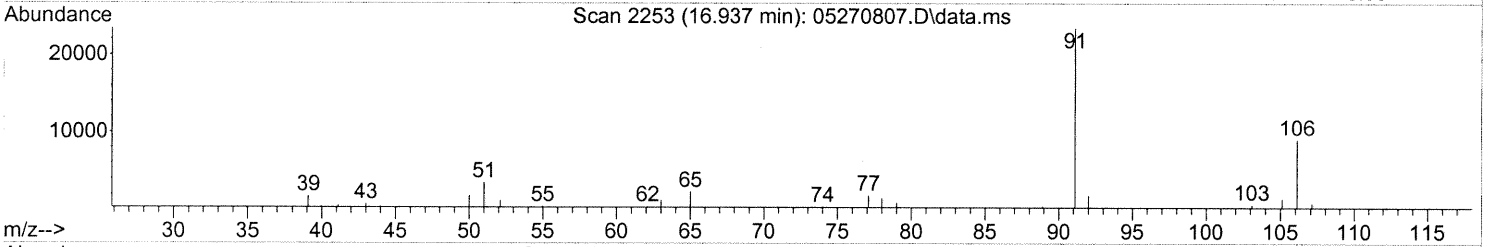
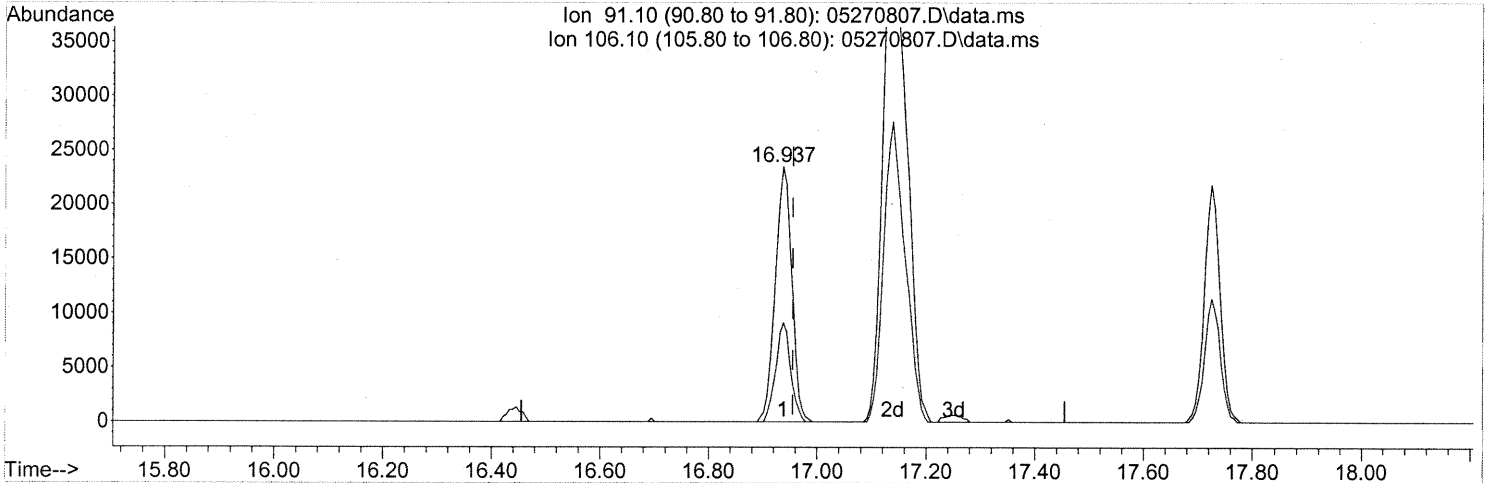
response 7444

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	76.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

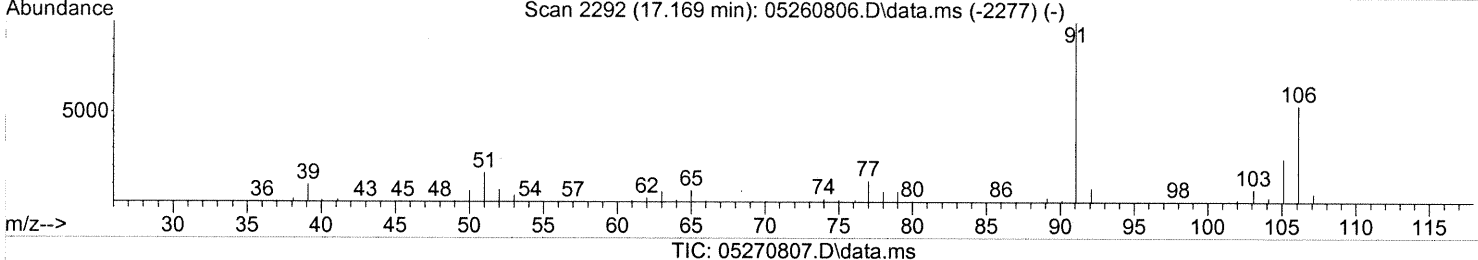
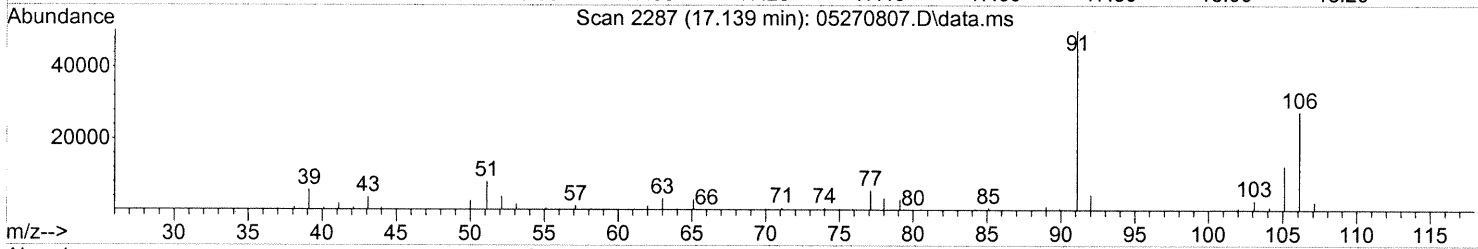
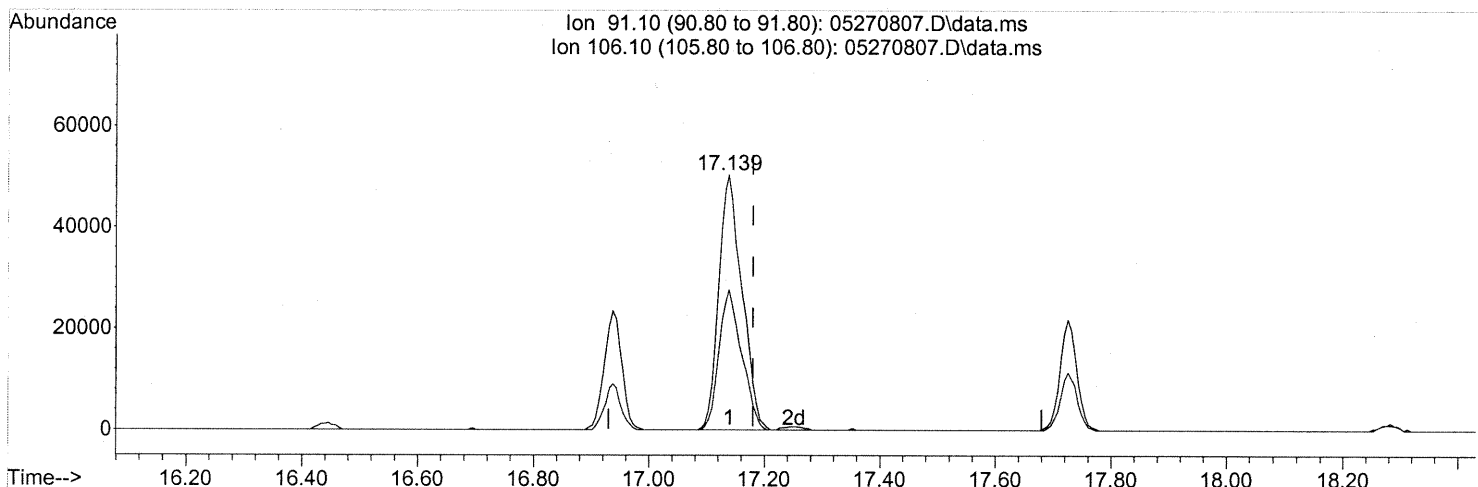
(66) Ethylbenzene (T)  
 16.937min (-0.018) 0.55ng  
 response 49706

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	35.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 2.33ng

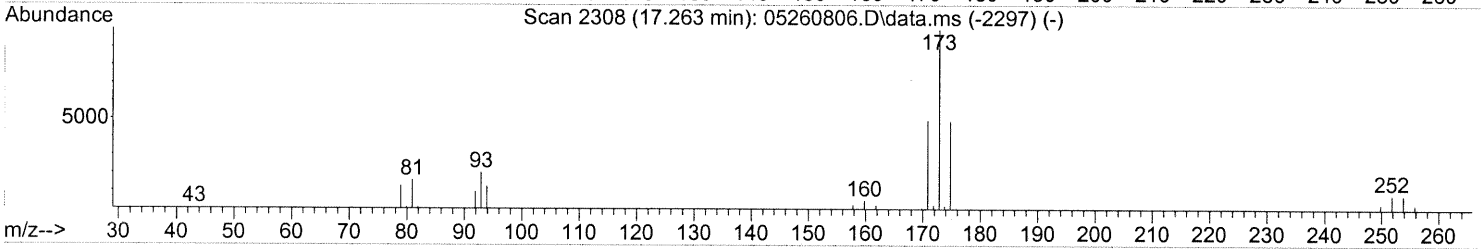
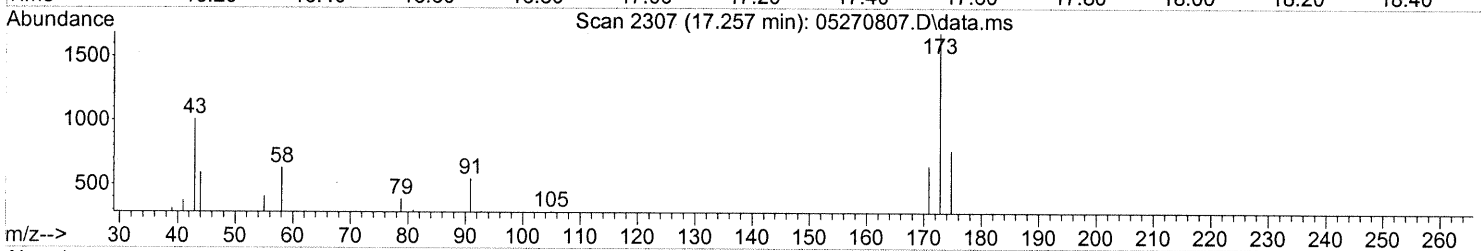
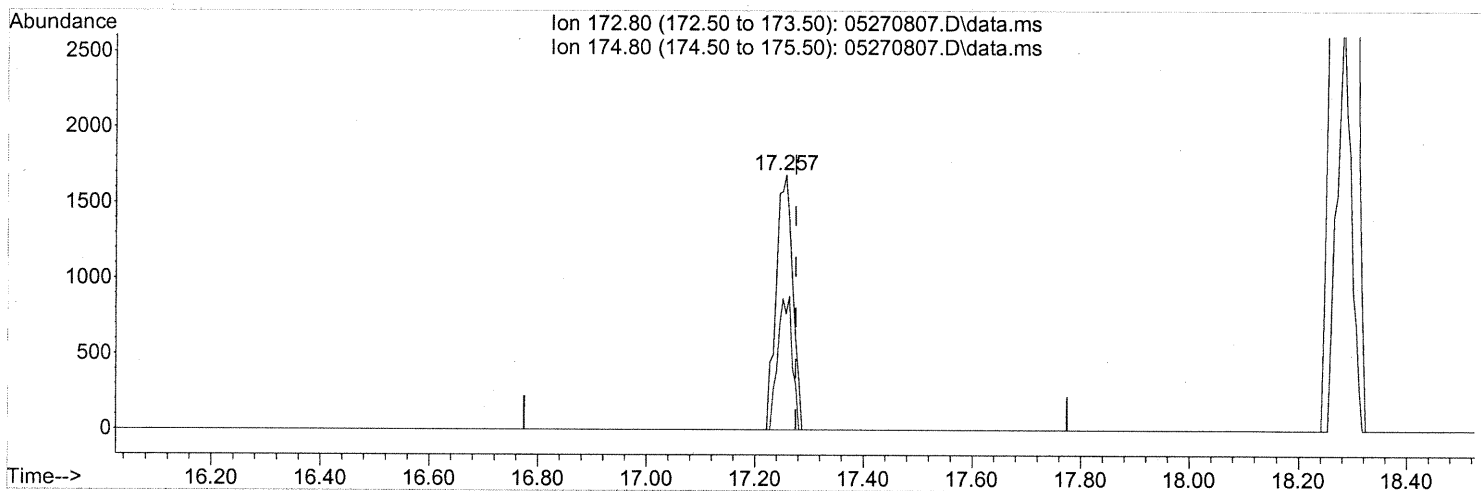
response 140210

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(68) Bromoform (T)

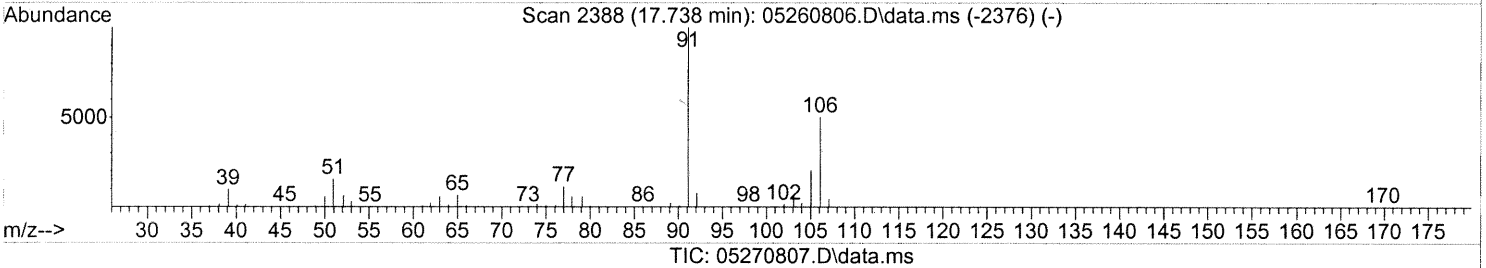
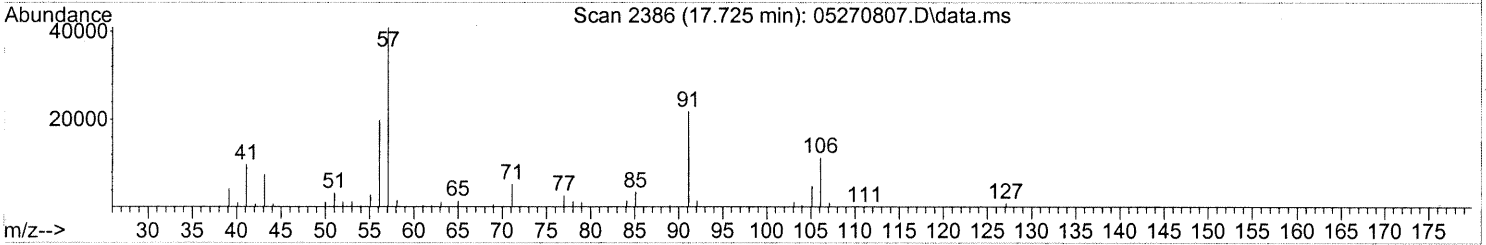
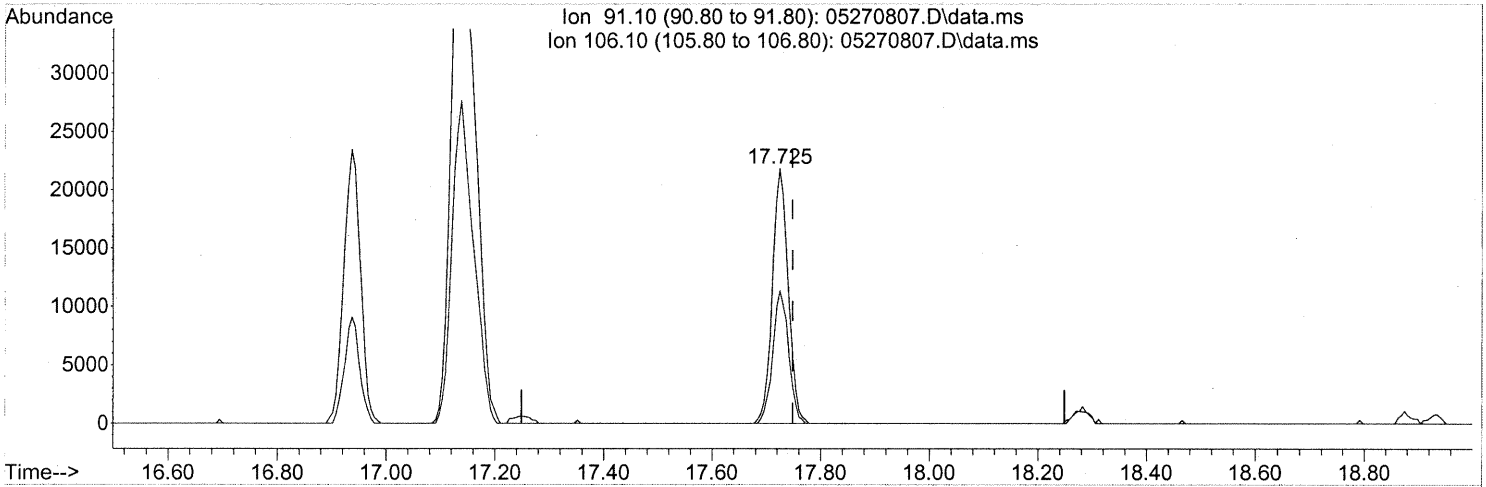
17.257min (-0.018) 0.26ng

response 3566

Ion	Exp%	Act%
172.80	100	100
174.80	48.50	45.49
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.725min (-0.024) 0.69ng

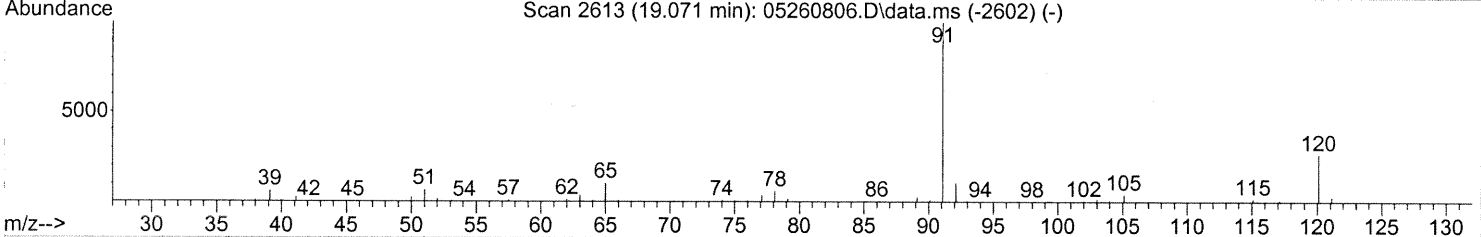
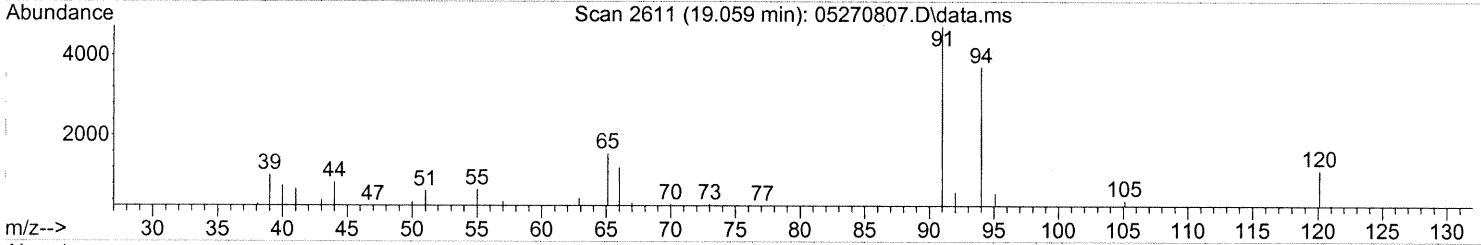
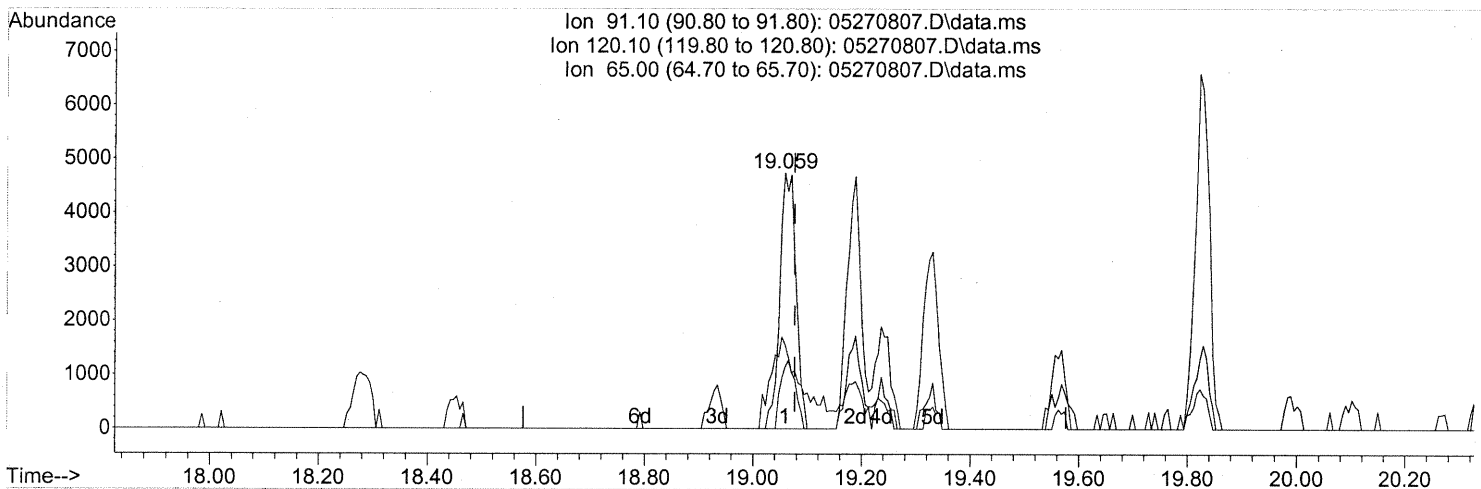
response 44210

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	52.07
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270807.D\data.ms

(76) n-Propylbenzene (T)

19.059min (-0.018) 0.09ng

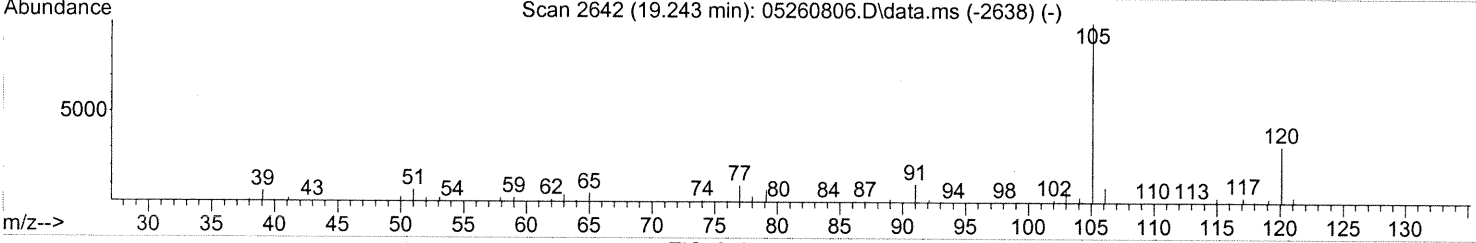
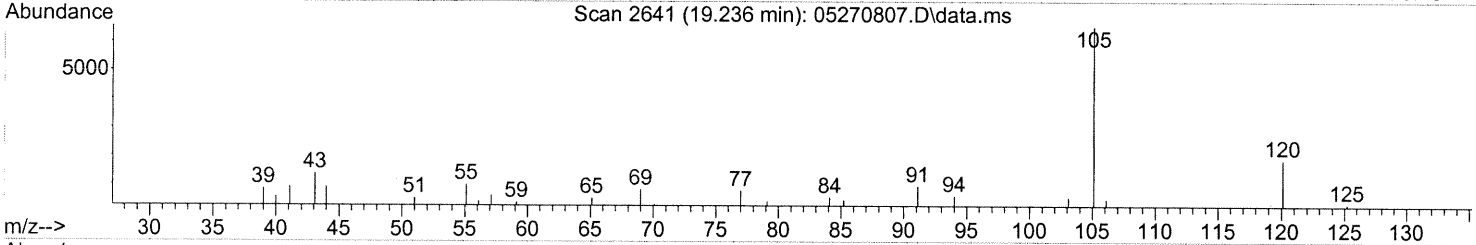
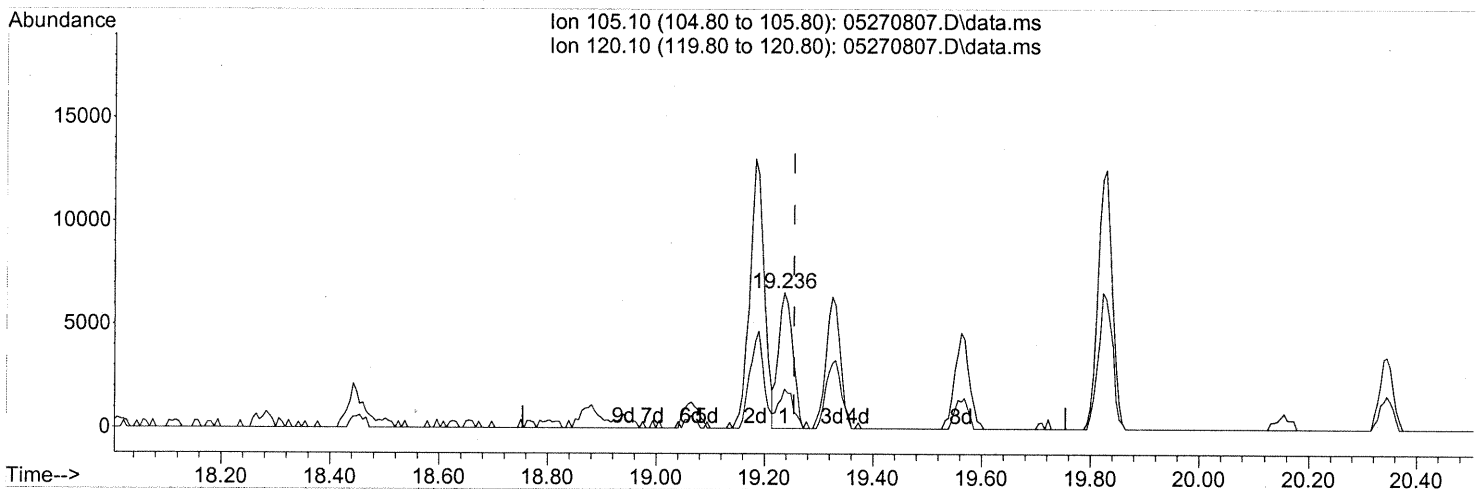
response 9773

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	24.43
65.00	10.40	69.19#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



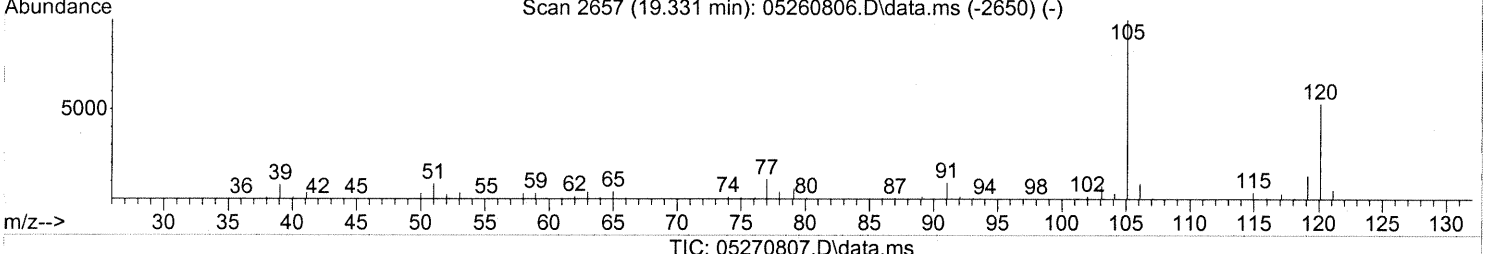
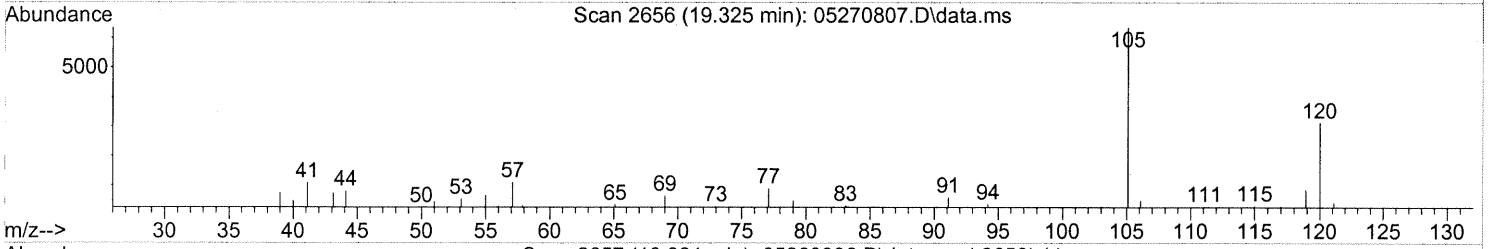
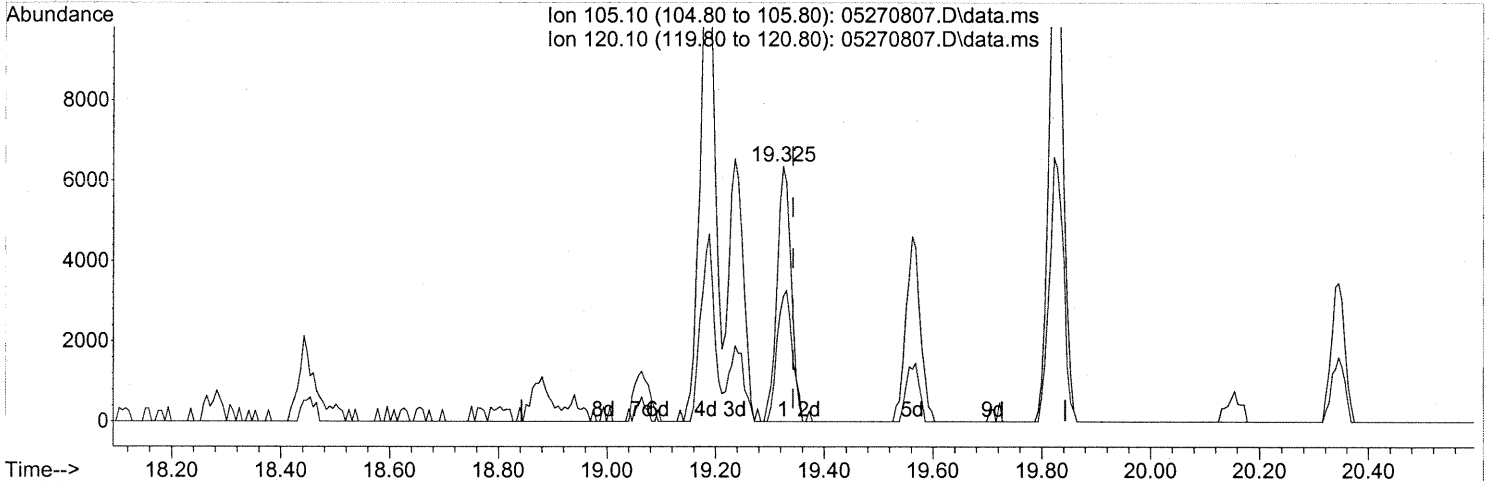
(78) 4-Ethyltoluene (T)  
 19.236min (-0.018) 0.13ng  
 response 12328

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	29.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

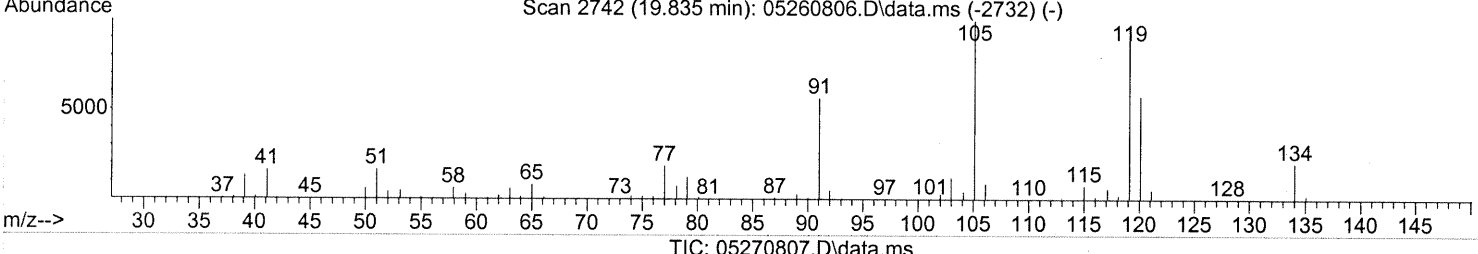
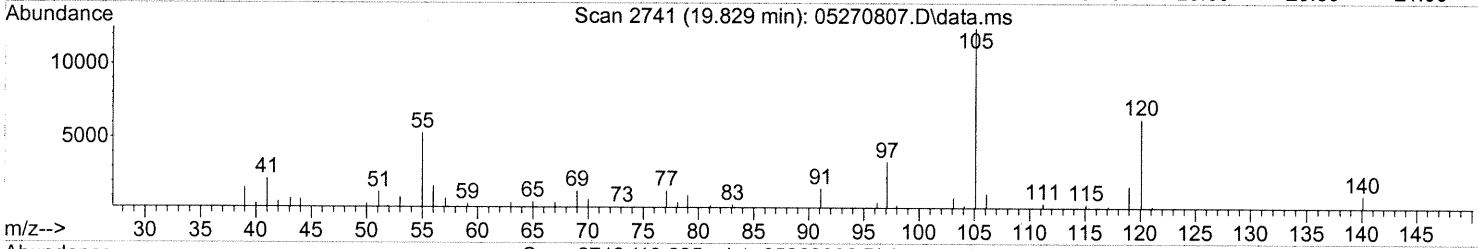
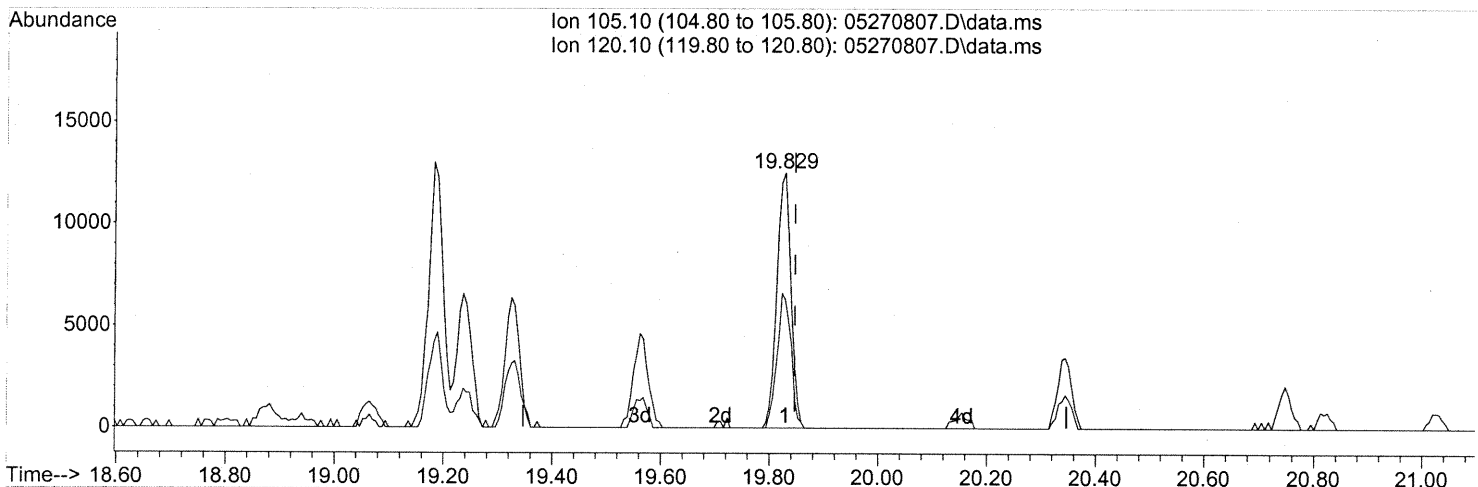
19.325min (-0.018) 0.14ng

response 11689

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	54.64
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 0.27ng

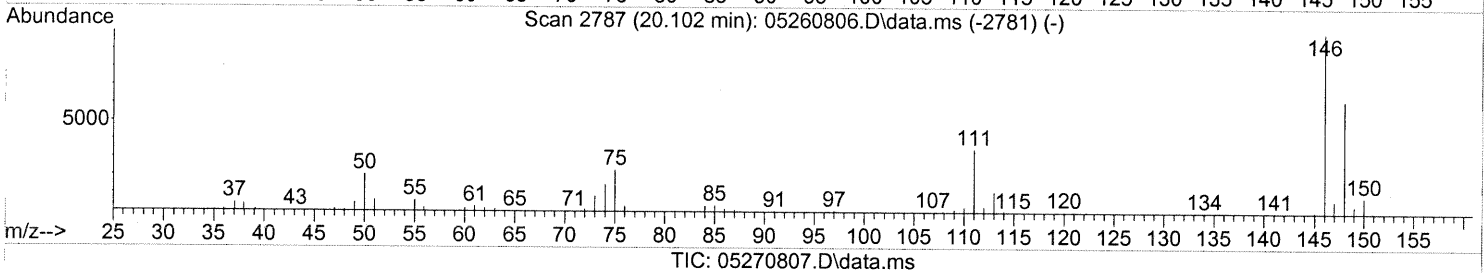
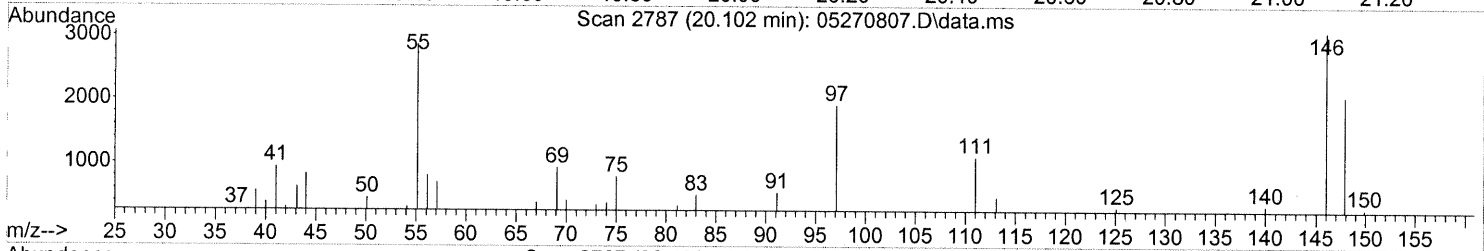
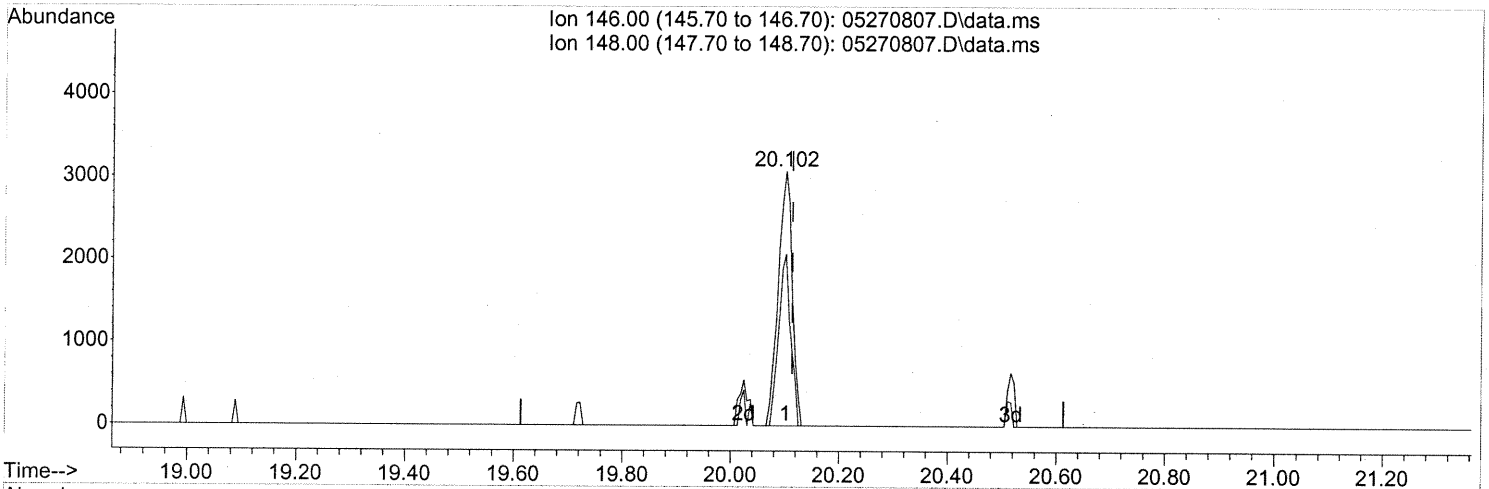
response 22708

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	52.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:46:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

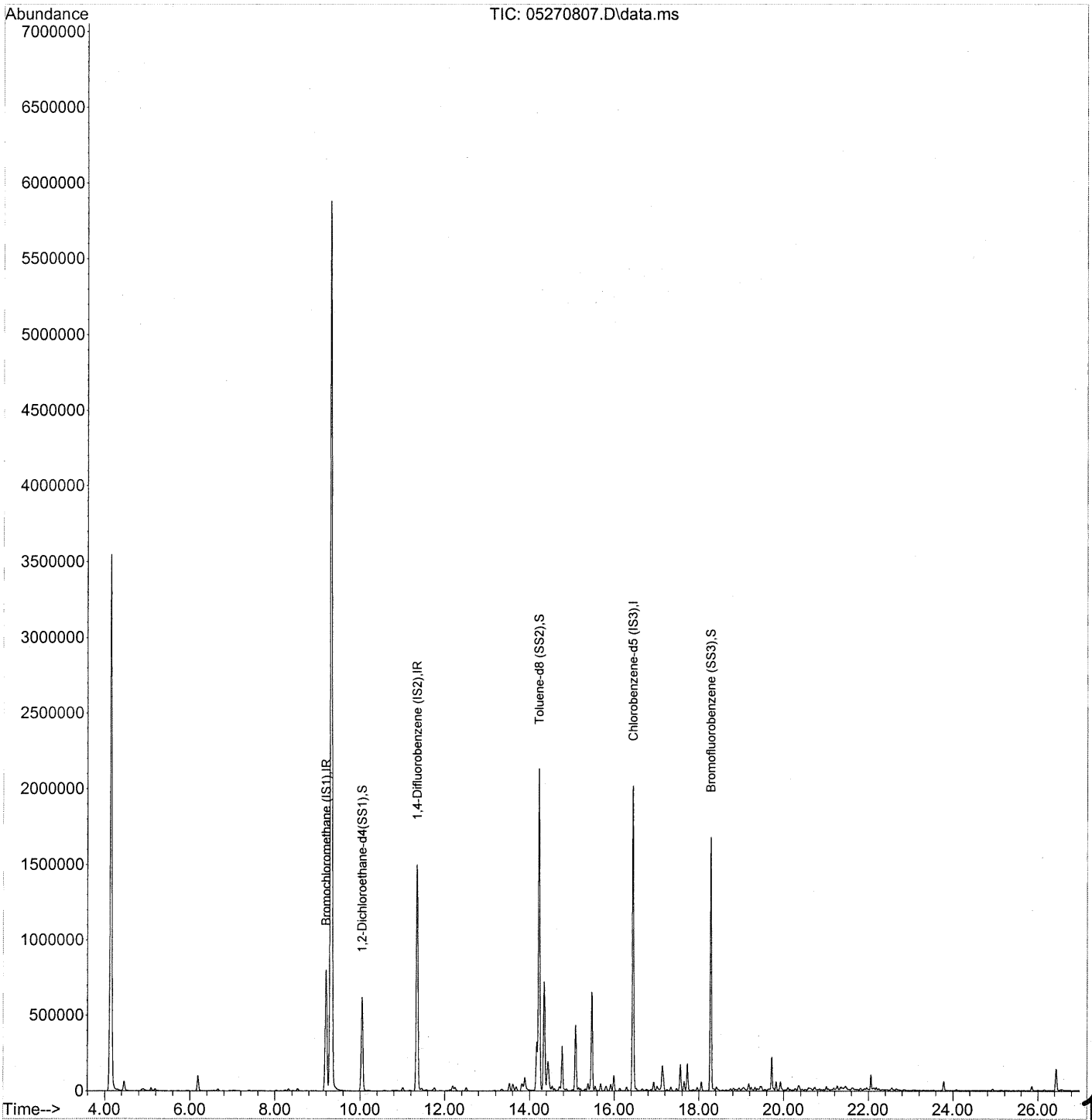
20.102min (-0.012) 0.11ng

response 5549

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	58.33
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270807.D  
Acq On : 27 May 2008 16:33  
Operator : WA  
Sample : P0801507-001 (10ml)  
Misc : ENSR SG77B-05 (-3.0, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 14:39:19 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270807.D  
 Acq On : 27 May 2008 16:33  
 Operator : WA  
 Sample : P0801507-001 (10ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

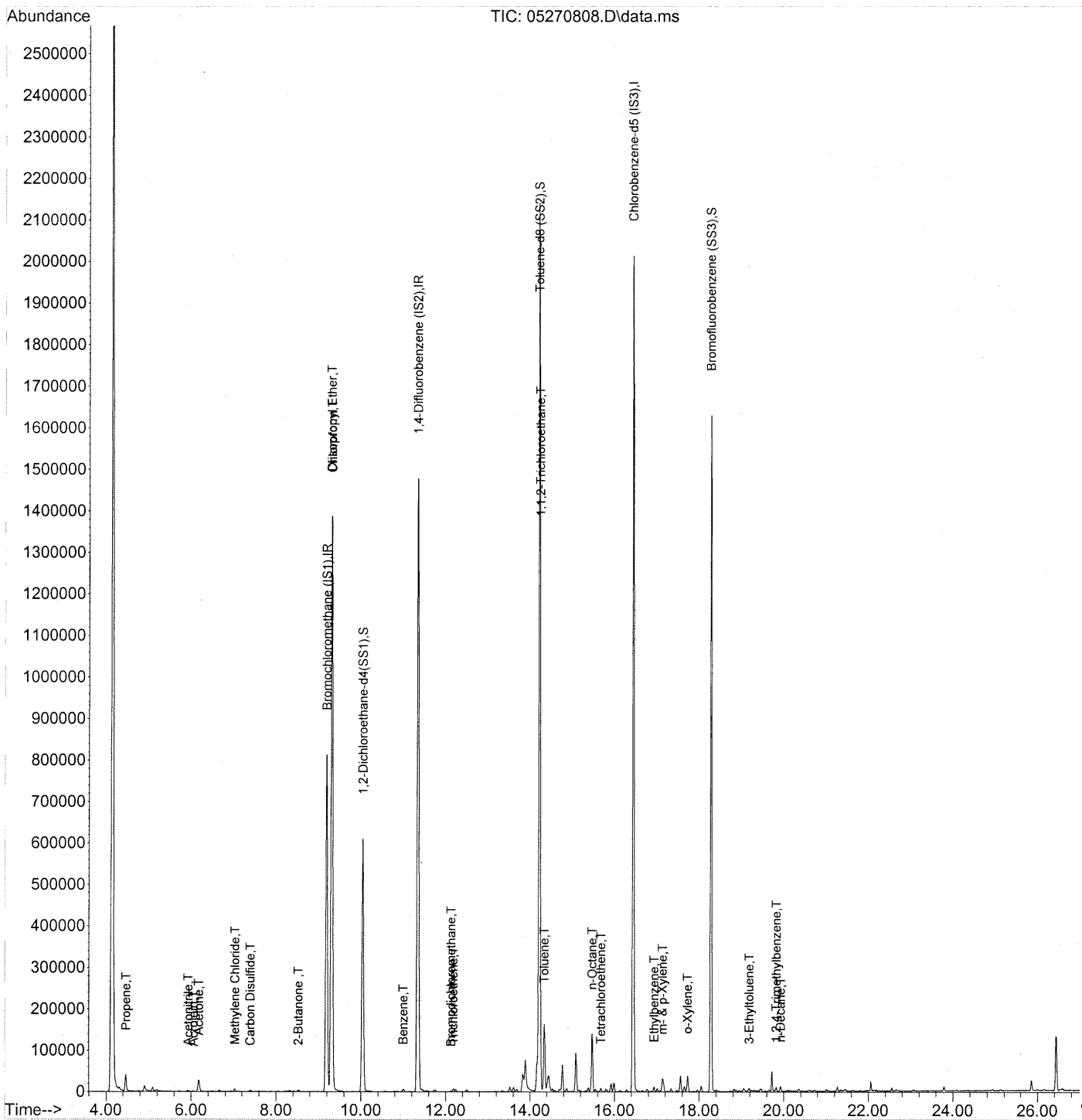
Quant Time: Jun 04 14:39:19 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	9.20	130	416586	25.000	ng	-0.05	
3) 1,4-Difluorobenzene (IS2)	11.34	114	1711385	25.000	ng	-0.04	
4) Chlorobenzene-d5 (IS3)	16.45	82	684381	25.000	ng	-0.01	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.05	65	569524	23.909	ng	-0.05	
Spiked Amount	25.000		Recovery	=	95.64%		
5) Toluene-d8 (SS2)	14.22	98	1735852	24.602	ng	-0.02	
Spiked Amount	25.000		Recovery	=	98.40%		
6) Bromofluorobenzene (SS3)	18.28	174	603399	25.722	ng	-0.01	
Spiked Amount	25.000		Recovery	=	102.88%		
Target Compounds							
7) tert-Butylbenzene	19.83	119	3370		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	1925		N.D.		

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

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270808.D  
Acq On : 27 May 2008 17:18  
Operator : WA  
Sample : P0801507-001 Dil (2ml)  
Misc : ENSR SG77B-05 (-3.0, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270808.D  
 Acq On : 27 May 2008 17:18  
 Operator : WA  
 Sample : P0801507-001 Dil (2ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	414826	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1697256	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	680501	25.000	ng	-0.02

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	572286	24.127	ng	-0.05	
Spiked Amount	25.000		Recovery	=	96.52%		✓
57) Toluene-d8 (SS2)	14.22	98	1725244	24.591	ng	-0.02	
Spiked Amount	25.000		Recovery	=	98.36%		✓
73) Bromofluorobenzene (SS3)	18.28	174	597896	25.633	ng	-0.01	
Spiked Amount	25.000		Recovery	=	102.52%		✓

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	3435	0.107	ng	# 86
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	4.76	50	324	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.72	45	691	N.D.		
11) Acetonitrile	5.93	41	3648	0.058	ng	# 34
12) Acrolein	6.06	56	1167	0.074	ng	76
13) Acetone	6.18	58	15743	0.726	ng	# 71
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.39	45	679	N.D.		
16) Acrylonitrile	6.60	53	223	N.D.		
17) 1,1-Dichloroethene	6.94	96	107	N.D.		
18) tert-Butanol	6.98	59	316	N.D.		
19) Methylene Chloride	7.03	84	2530	0.151	ng	# 44
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	4933	0.073	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.53	72	849	0.075	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	158091	10.591	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	1032	N.D.		

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6/2/08

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270808.D  
 Acq On : 27 May 2008 17:18  
 Operator : WA  
 Sample : P0801507-001 Dil (2ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	1427223	58.304	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	344	N.D.		
41) Benzene	11.00	78	6905	0.096	ng	89
42) Carbon Tetrachloride	11.17	117	422	N.D.		
43) Cyclohexane	11.33	84	897	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.13	83	1413	0.067	ng	80
47) Trichloroethene	12.18	130	3634	0.163	ng	91
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	5666	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	12.50	71	686	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.19	58	90	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	144690	8.313	ng	# 6
58) Toluene	14.34	91	49188	0.618	ng	99
59) 2-Hexanone	14.60	43	2749	N.D.		
60) Dibromochloromethane	14.83	129	1044	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.33	43	217	N.D.		
63) n-Octane	15.47	57	34222	1.422	ng	93
64) Tetrachloroethene	15.69	166	1499	0.064	ng	94
65) Chlorobenzene	16.49	112	90	N.D.		
66) Ethylbenzene	16.94	91	10681	0.118	ng	97
67) m- & p-Xylene	17.14	91	30673	0.512	ng	95
68) Bromoform	17.26	173	575	N.D.		
69) Styrene	17.58	104	473	N.D.		
70) o-Xylene	17.73	91	9308	0.145	ng	91
71) n-Nonane	17.96	43	2337	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.45	105	812	N.D.		
75) alpha-Pinene	18.93	93	202	N.D.		
76) n-Propylbenzene	19.07	91	2364	N.D.		
77) 3-Ethyltoluene	19.18	105	5474	0.053	ng	98
78) 4-Ethyltoluene	19.24	105	2487	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	2919	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270808.D  
 Acq On : 27 May 2008 17:18  
 Operator : WA  
 Sample : P0801507-001 Dil (2ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

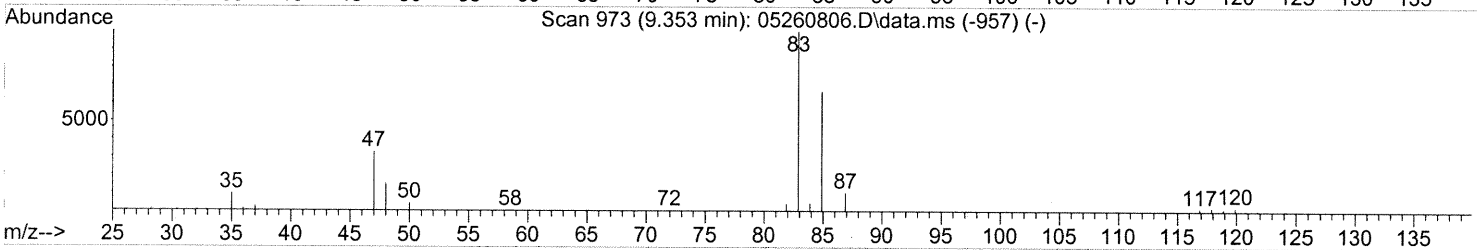
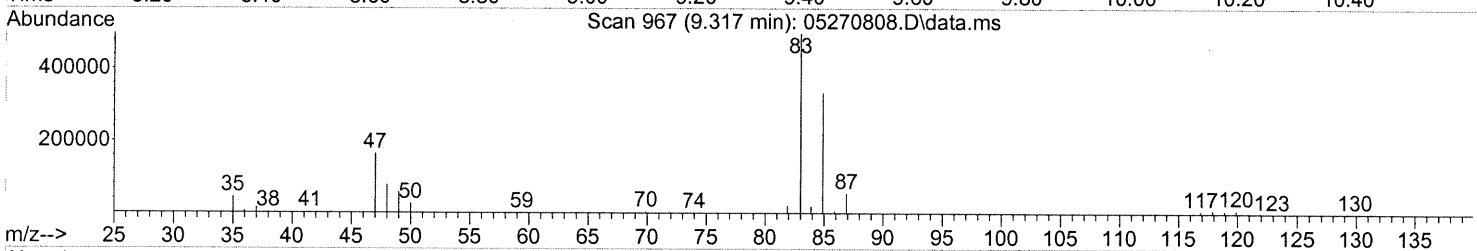
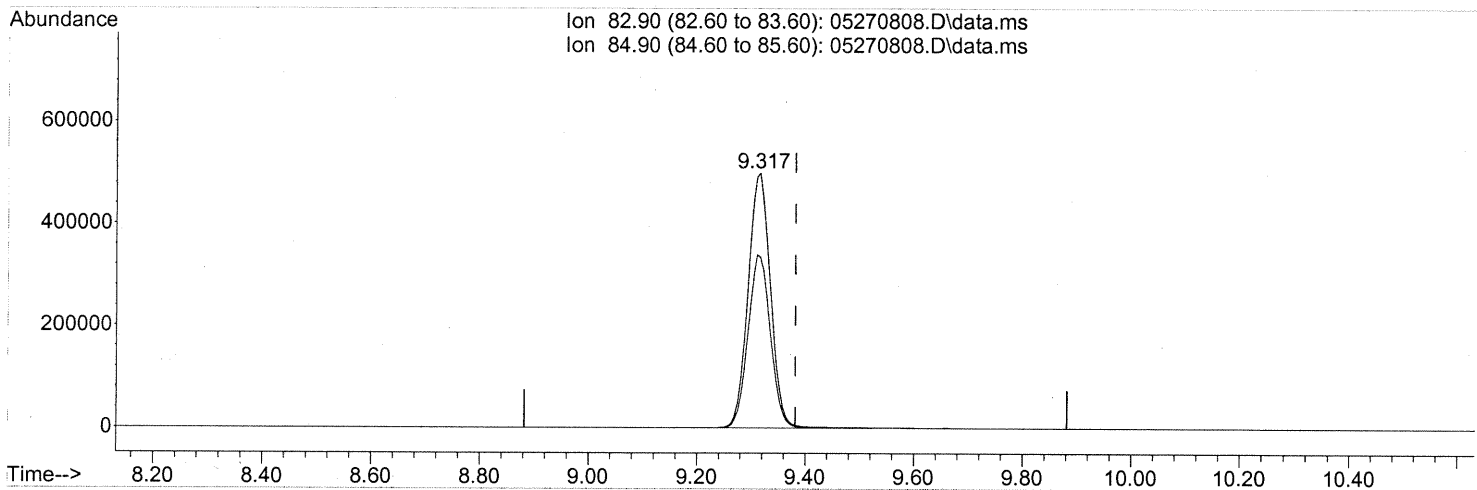
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	196	N.D.		
81) 2-Ethyltoluene	19.57	105	1740	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	5013	0.060	ng	95
83) n-Decane	19.92	57	5538	0.094	ng	# 67
84) Benzyl Chloride	19.99	91	218	N.D.		
85) 1,3-Dichlorobenzene	20.03	146	230	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	1308	N.D.		
87) sec-Butylbenzene	20.15	105	137	N.D.		
88) p-Isopropyltoluene	20.34	119	698	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	1449	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	128	N.D.		
91) d-Limonene	20.52	68	97	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	2821	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	3069	N.D.		
96) n-Dodecane	22.66	57	1131	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270808.D  
 Acq On : 27 May 2008 17:18  
 Operator : WA  
 Sample : P0801507-001 Dil (2ml)  
 Misc : ENSR SG77B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270808.D\data.ms

(32) Chloroform (T)

9.317min (-0.065) 58.30ng

response 1427223

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.19
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG30B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00705

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.025 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	31	3.1	ND	6.3	0.63	
74-87-3	Chloromethane	ND	6.2	3.1	ND	3.0	1.5	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	31	3.1	ND	4.5	0.45	
75-01-4	Vinyl Chloride	ND	6.2	3.1	ND	2.4	1.2	
74-83-9	Bromomethane	ND	6.2	3.1	ND	1.6	0.80	
75-00-3	Chloroethane	ND	6.2	3.1	ND	2.4	1.2	
64-17-5	Ethanol	ND	310	3.1	ND	170	1.7	
67-64-1	<b>Acetone</b>	<b>49</b>	310	4.6	<b>21</b>	130	1.9	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	6.2	3.1	ND	1.1	0.56	
107-13-1	Acrylonitrile	ND	31	4.4	ND	14	2.0	
75-35-4	1,1-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	31	4.6	ND	10	1.5	
75-09-2	Methylene Chloride	ND	31	3.1	ND	9.0	0.90	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	6.2	3.1	ND	2.0	1.0	
76-13-1	Trichlorotrifluoroethane	ND	6.2	3.5	ND	0.81	0.46	
75-15-0	Carbon Disulfide	ND	31	7.5	ND	10	2.4	
156-60-5	trans-1,2-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
75-34-3	1,1-Dichloroethane	ND	6.2	3.1	ND	1.5	0.77	
1634-04-4	Methyl tert-Butyl Ether	ND	6.2	3.1	ND	1.7	0.87	
108-05-4	Vinyl Acetate	ND	310	10	ND	89	2.8	
78-93-3	<b>2-Butanone (MEK)</b>	<b>14</b>	31	3.1	<b>4.8</b>	11	1.1	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	6.2	3.1	ND	1.6	0.79	
108-20-3	Diisopropyl Ether	ND	31	3.7	ND	7.5	0.88	
67-66-3	<b>Chloroform</b>	<b>21,000</b>	6.2	3.7	<b>4,200</b>	1.3	0.75	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         CA              Date:         6/5/08              **119**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG30B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00705

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.025 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
637-92-3	Ethyl tert-Butyl Ether	ND	31	3.2	ND	7.5	0.76	
107-06-2	1,2-Dichloroethane	ND	6.2	3.1	ND	1.5	0.77	
71-55-6	1,1,1-Trichloroethane	ND	6.2	3.1	ND	1.1	0.57	
71-43-2	<b>Benzene</b>	<b>15</b>	6.2	3.1	<b>4.6</b>	2.0	0.98	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>700</b>	6.2	3.1	<b>110</b>	0.99	0.50	
994-05-8	tert-Amyl Methyl Ether	ND	31	3.1	ND	7.5	0.75	
78-87-5	1,2-Dichloropropane	ND	6.2	3.1	ND	1.4	0.68	
75-27-4	<b>Bromodichloromethane</b>	<b>5.3</b>	6.2	3.1	<b>0.79</b>	0.93	0.47	<b>J</b>
79-01-6	<b>Trichloroethene</b>	<b>6.9</b>	6.2	3.1	<b>1.3</b>	1.2	0.58	
123-91-1	1,4-Dioxane	ND	31	3.8	ND	8.7	1.1	
80-62-6	Methyl Methacrylate	ND	31	4.7	ND	7.6	1.1	
142-82-5	<b>n-Heptane</b>	<b>10</b>	31	4.0	<b>2.5</b>	7.6	0.97	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	31	3.2	ND	6.9	0.72	
108-10-1	4-Methyl-2-pentanone	ND	31	3.5	ND	7.6	0.85	
10061-02-6	trans-1,3-Dichloropropene	ND	31	3.9	ND	6.9	0.87	
79-00-5	1,1,2-Trichloroethane	ND	6.2	3.1	ND	1.1	0.57	
108-88-3	<b>Toluene</b>	<b>60</b>	31	3.1	<b>16</b>	8.3	0.83	
591-78-6	2-Hexanone	ND	31	4.7	ND	7.6	1.2	
124-48-1	Dibromochloromethane	ND	6.2	4.2	ND	0.73	0.50	
106-93-4	1,2-Dibromoethane	ND	6.2	3.4	ND	0.81	0.44	
111-65-9	<b>n-Octane</b>	<b>170</b>	31	3.1	<b>35</b>	6.7	0.67	
127-18-4	<b>Tetrachloroethene</b>	<b>16</b>	6.2	3.1	<b>2.4</b>	0.92	0.46	
108-90-7	Chlorobenzene	ND	6.2	3.2	ND	1.4	0.69	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG30B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-002

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00705

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.025 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.0      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.56

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	10	31	3.9	2.4	7.2	0.89	J
179601-23-1	m,p-Xylenes	45	31	8.1	10	7.2	1.9	
75-25-2	Bromoform	ND	31	4.7	ND	3.0	0.46	
100-42-5	Styrene	ND	31	4.7	ND	7.3	1.1	
95-47-6	o-Xylene	14	31	3.9	3.3	7.2	0.91	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.2	4.0	ND	0.91	0.58	
98-82-8	Cumene	ND	31	3.5	ND	6.3	0.71	
103-65-1	n-Propylbenzene	ND	31	3.2	ND	6.3	0.66	
622-96-8	4-Ethyltoluene	ND	31	3.6	ND	6.3	0.72	
108-67-8	1,3,5-Trimethylbenzene	ND	31	3.7	ND	6.3	0.76	
98-83-9	alpha-Methylstyrene	ND	31	4.6	ND	6.5	0.94	
95-63-6	1,2,4-Trimethylbenzene	ND	31	4.3	ND	6.3	0.88	
100-44-7	Benzyl Chloride	ND	6.2	5.4	ND	1.2	1.0	
541-73-1	1,3-Dichlorobenzene	ND	6.2	3.9	ND	1.0	0.64	
106-46-7	1,4-Dichlorobenzene	28	6.2	3.5	4.6	1.0	0.58	
135-98-8	sec-Butylbenzene	ND	31	3.6	ND	5.7	0.66	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	31	4.1	ND	5.7	0.74	
95-50-1	1,2-Dichlorobenzene	ND	6.2	4.1	ND	1.0	0.69	
96-12-8	1,2-Dibromo-3-chloropropane	ND	31	4.7	ND	3.2	0.49	
120-82-1	1,2,4-Trichlorobenzene	ND	6.2	4.7	ND	0.84	0.64	
91-20-3	Naphthalene	ND	12	4.6	ND	2.4	0.88	
87-68-3	Hexachlorobutadiene	ND	6.2	5.6	ND	0.59	0.53	
98-06-6	tert-Butylbenzene	ND	12	3.1	ND	2.3	0.57	
104-51-8	n-Butylbenzene	ND	12	3.1	ND	2.3	0.57	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

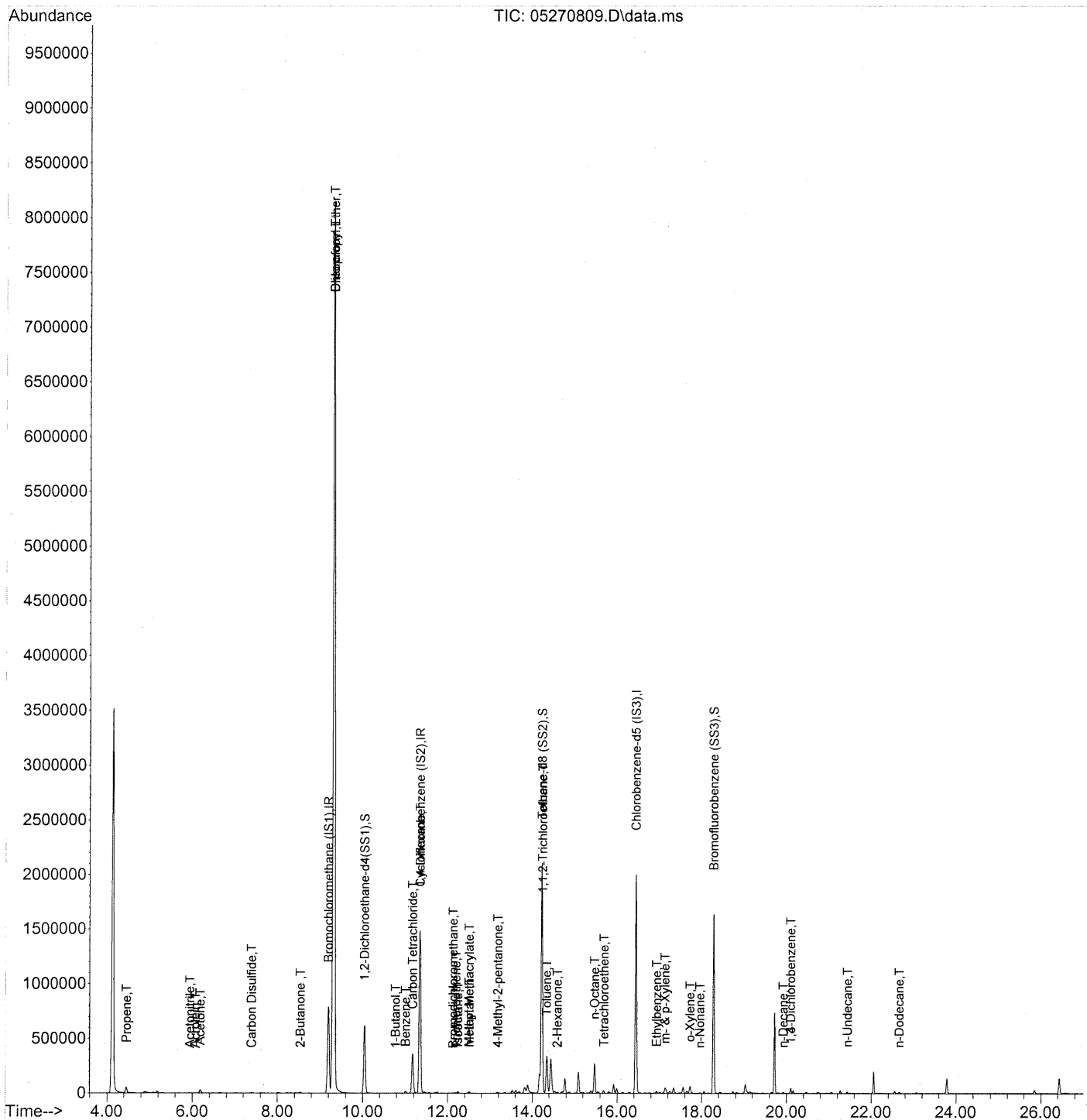
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:         Clt              Date:         6/5/08

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	407143	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1685075	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	671836	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	572018	24.571	ng	-0.05
Spiked Amount	25.000			Recovery =	98.28%	✓
57) Toluene-d8 (SS2)	14.23	98	1707712	24.655	ng	-0.02
Spiked Amount	25.000			Recovery =	98.64%	✓
73) Bromofluorobenzene (SS3)	18.28	174	594120	25.799	ng	-0.01
Spiked Amount	25.000			Recovery =	103.20%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	3000	0.095	ng	# 48
3) Dichlorodifluoromethane	4.55	85	1153	N.D.	-	
4) Chloromethane	4.75	50	89	N.D.	-	
5) Freon 114	0.00	135	0	N.D.	-	
6) Vinyl Chloride	0.00	62	0	N.D.	-	
7) 1,3-Butadiene	0.00	54	0	N.D.	-	
8) Bromomethane	0.00	94	0	N.D.	-	
9) Chloroethane	0.00	64	0	N.D.	-	
10) Ethanol	5.82	45	98	N.D.	-	
11) Acetonitrile	5.95	41	3503	0.057	ng	# 34
12) Acrolein	6.08	56	1247	0.081	ng	98
13) Acetone	6.19	58	16632	0.782	ng	# 60
14) Trichlorofluoromethane	6.33	101	1003	N.D.	-	
15) Isopropanol	6.44	45	277	N.D.	-	
16) Acrylonitrile	0.00	53	0	N.D.	-	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	-	
18) tert-Butanol	6.96	59	142	N.D.	-	
19) Methylene Chloride	7.03	84	629	N.D.	-	
20) Allyl Chloride	0.00	41	0	N.D.	-	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	-	
22) Carbon Disulfide	7.40	76	7318	0.111	ng	<HDL 85
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	-	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	-	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	-	
26) Vinyl Acetate	8.24	86	96	N.D.	-	
27) 2-Butanone	8.54	72	2507	0.225	ng	# 17
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	-	
29) Diisopropyl Ether	9.32	87	987680	67.415	ng	NR# 1
30) Ethyl Acetate	0.00	61	0	N.D.	-	
31) n-Hexane	9.22	57	2035	N.D.	-	

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.32	83	9132180	<del>380.100</del> ng	<i>su dil</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.-		
36) 1,2-Dichloroethane	10.05	62	180	N.D.-		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.-		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.78	56	2868	0.103 ng	#	72
41) Benzene	11.01	78	16813	0.237 ng		99
42) Carbon Tetrachloride	11.18	117	326326	11.198 ng		99
43) Cyclohexane	11.35	84	1712	0.062 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.-		
45) 1,2-Dichloropropane	0.00	63	0	N.D.-		
46) Bromodichloromethane	12.13	83	1768	0.085 ng		99
47) Trichloroethene	12.20	130	2439	0.110 ng		94
48) 1,4-Dioxane	0.00	88	0	N.D.-		
49) Isooctane	12.25	57	15579	0.137 ng		96
50) Methyl Methacrylate	12.51	100	1015	0.133 ng	NR#	1
51) n-Heptane	12.51	71	2794	0.165 ng	#	57
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.-		
53) 4-Methyl-2-pentanone	13.19	58	2946	0.119 ng	NR#	54
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.-		
55) 1,1,2-Trichloroethane	14.24	97	146325	8.468 ng	NR#	7
58) Toluene	14.34	91	75596	0.962 ng		99
59) 2-Hexanone	14.59	43	6628	0.089 ng	NR#	59
60) Dibromochloromethane	14.83	129	187	N.D.-		
61) 1,2-Dibromoethane	0.00	107	0	N.D.-		
62) Butyl Acetate	15.31	43	641	N.D.		
63) n-Octane	15.47	57	62834	2.645 ng		96
64) Tetrachloroethene	15.70	166	5955	0.256 ng		99
65) Chlorobenzene	0.00	112	0	N.D.-		
66) Ethylbenzene	16.94	91	14646	0.164 ng		92
67) m- & p-Xylene	17.14	91	42389	0.716 ng		93
68) Bromoform	0.00	173	0	N.D.-		
69) Styrene	17.59	104	659	N.D.-		
70) o-Xylene	17.73	91	14349	0.227 ng		94
71) n-Nonane	17.96	43	4798	0.077 ng		77
72) 1,1,2,2-Tetrachloroethane	17.58	83	98	N.D.-		
74) Cumene	18.45	105	2093	N.D.-		
75) alpha-Pinene	18.92	93	93	N.D.		
76) n-Propylbenzene	19.06	91	1252	N.D.-		
77) 3-Ethyltoluene	19.18	105	2679	N.D.		
78) 4-Ethyltoluene	19.24	105	1835	N.D.-		
79) 1,3,5-Trimethylbenzene	19.34	105	1070	N.D.-		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

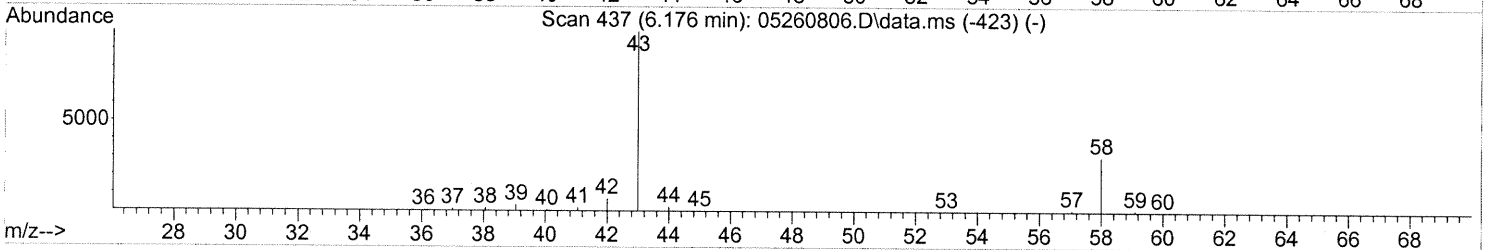
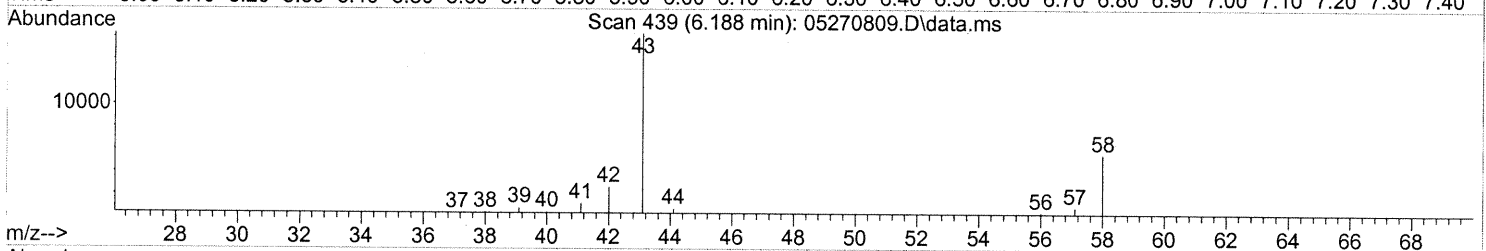
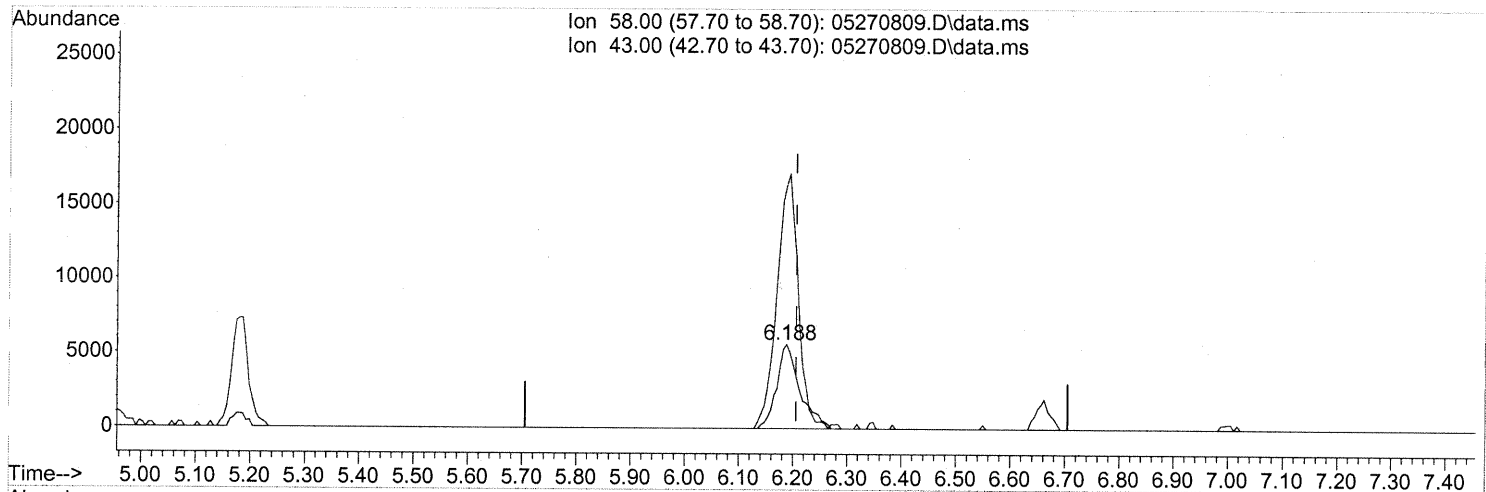
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	736	N.D.-		
81) 2-Ethyltoluene	19.57	105	1194	N.D.-		
82) 1,2,4-Trimethylbenzene	19.83	105	3194	N.D.-		
83) n-Decane	19.92	57	4504	0.078	ng	74
84) Benzyl Chloride	19.82	91	331	N.D.-		
85) 1,3-Dichlorobenzene	20.10	146	22545	0.434	ng	96
86) 1,4-Dichlorobenzene	20.10	146	22545	0.447	ng	97
87) sec-Butylbenzene	20.34	105	1215	N.D.-		
88) p-Isopropyltoluene	20.34	119	498	N.D.-		
89) 1,2,3-Trimethylbenzene	20.34	105	1215	N.D.-		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.-		
91) d-Limonene	0.00	68	0	N.D.-		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.-		
93) n-Undecane	21.44	57	6745	0.111	ng	# 72
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.-		
95) Naphthalene	22.70	128	3685	N.D.-		
96) n-Dodecane	22.66	57	4433	0.075	ng	# 71
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.-		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270809.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 0.78ng

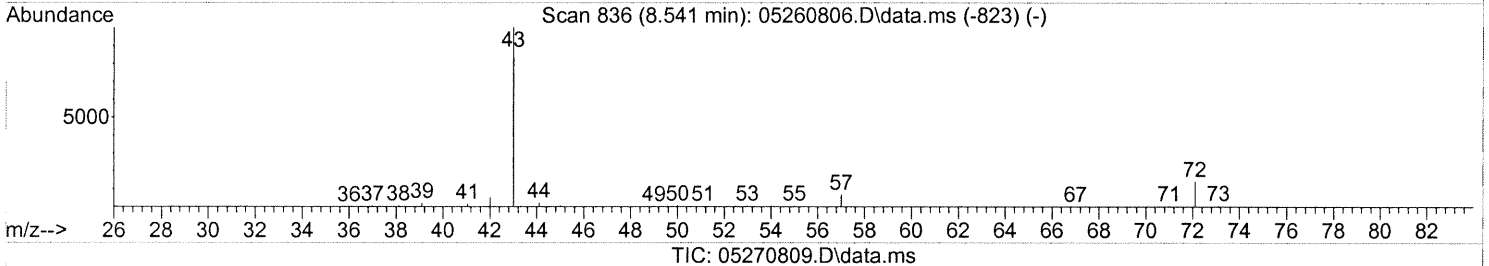
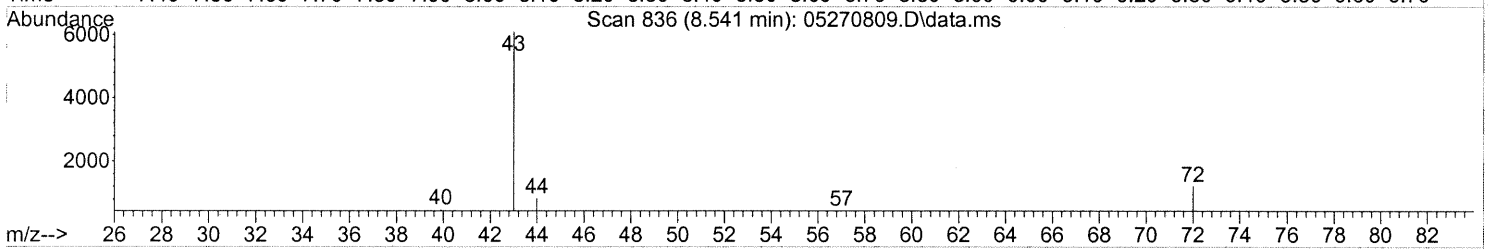
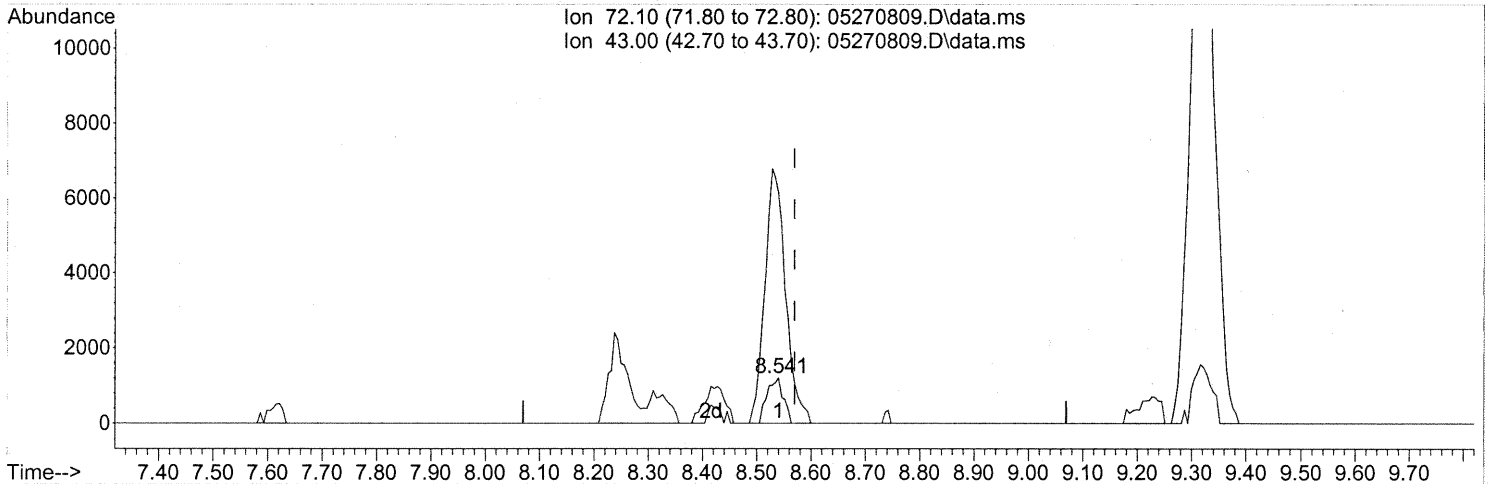
response 16632

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	277.90#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.541min (-0.030) 0.23ng

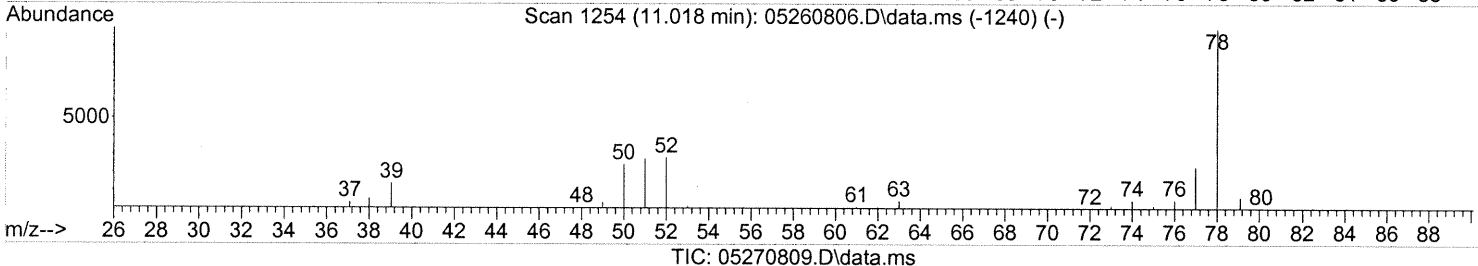
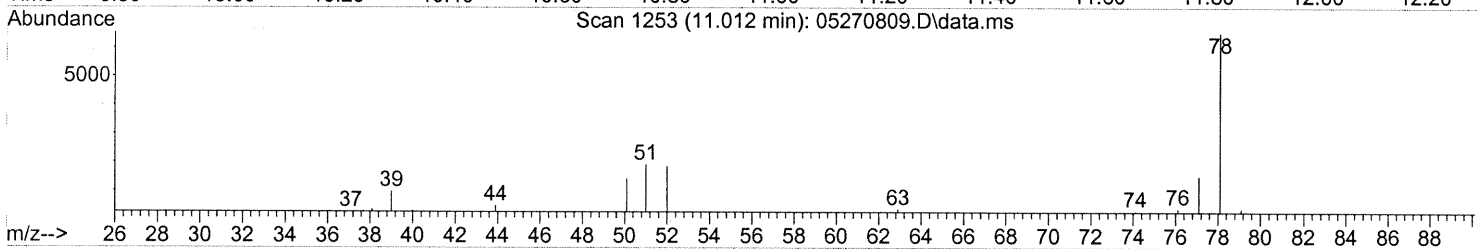
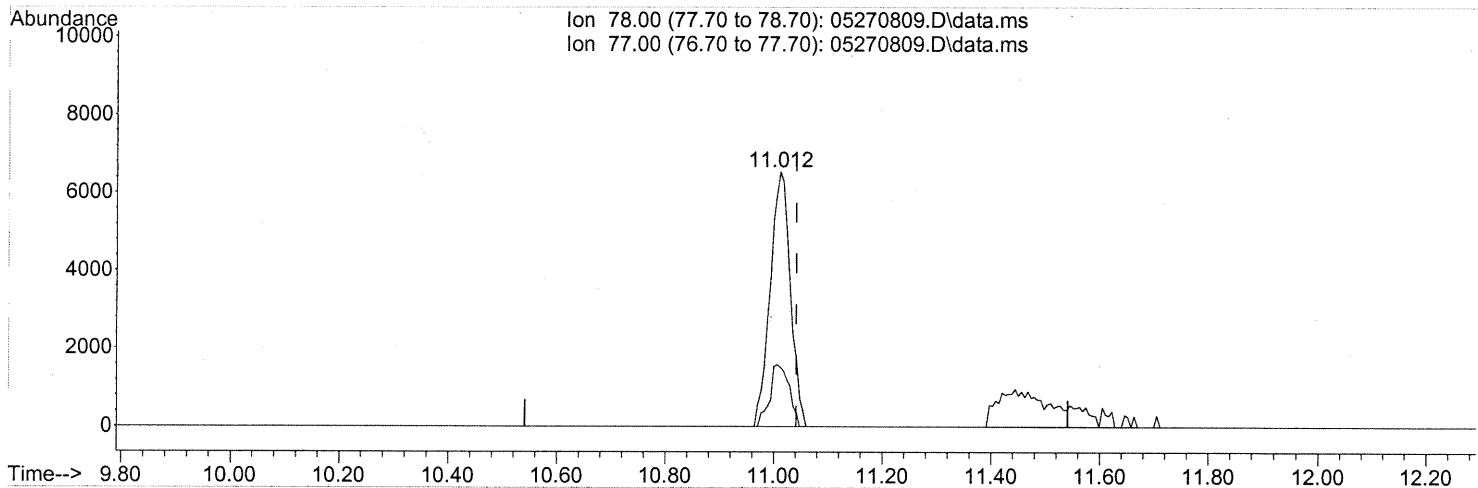
response 2507

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	718.99#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(41) Benzene (T)

11.012min (-0.030) 0.24ng

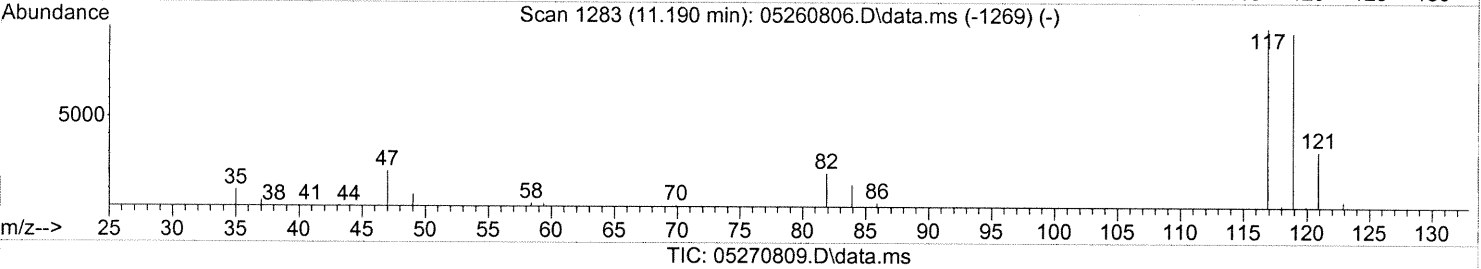
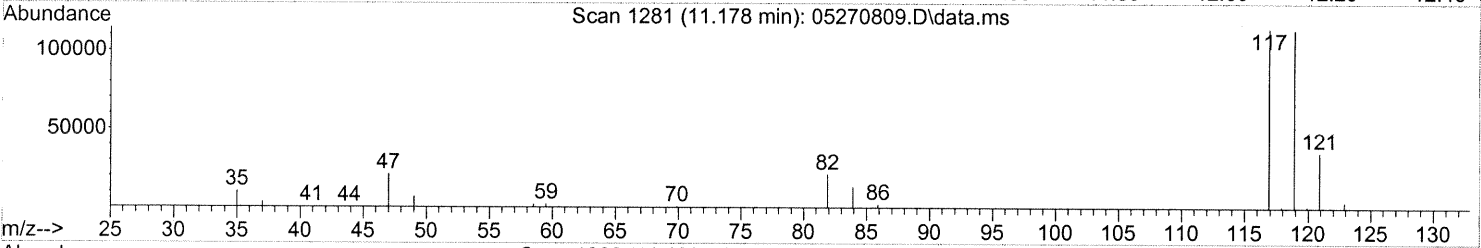
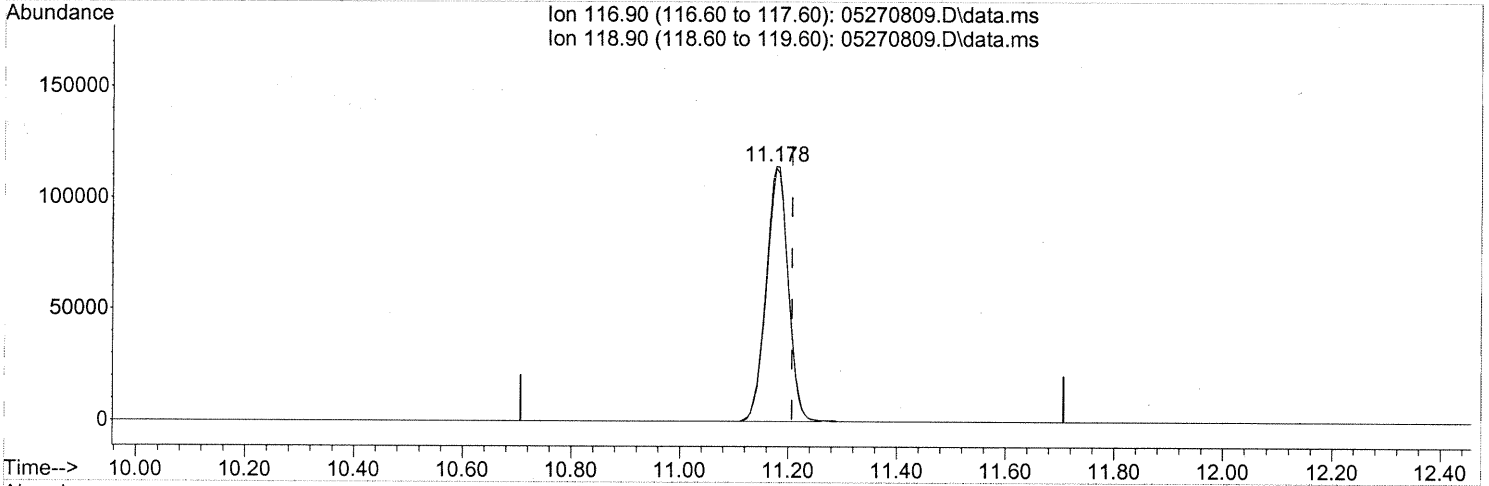
response 16813

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.178min (-0.030) 11.20ng

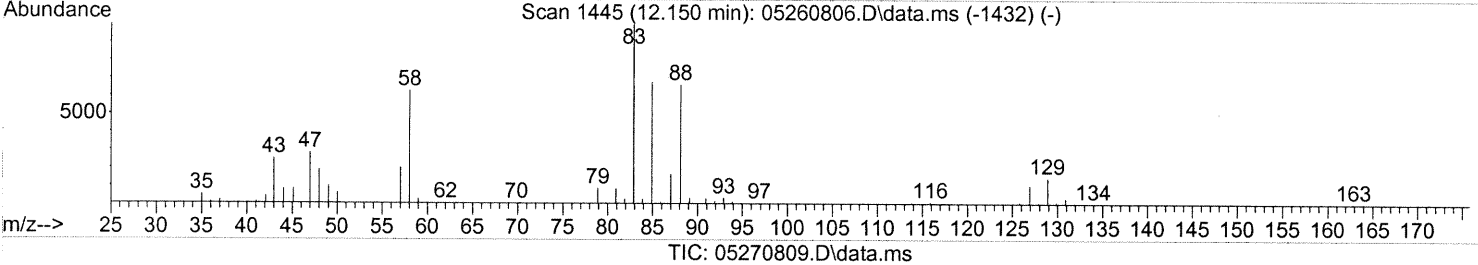
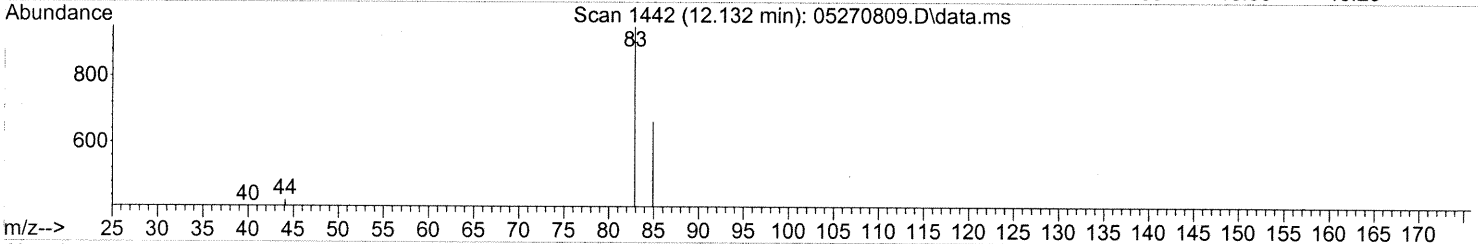
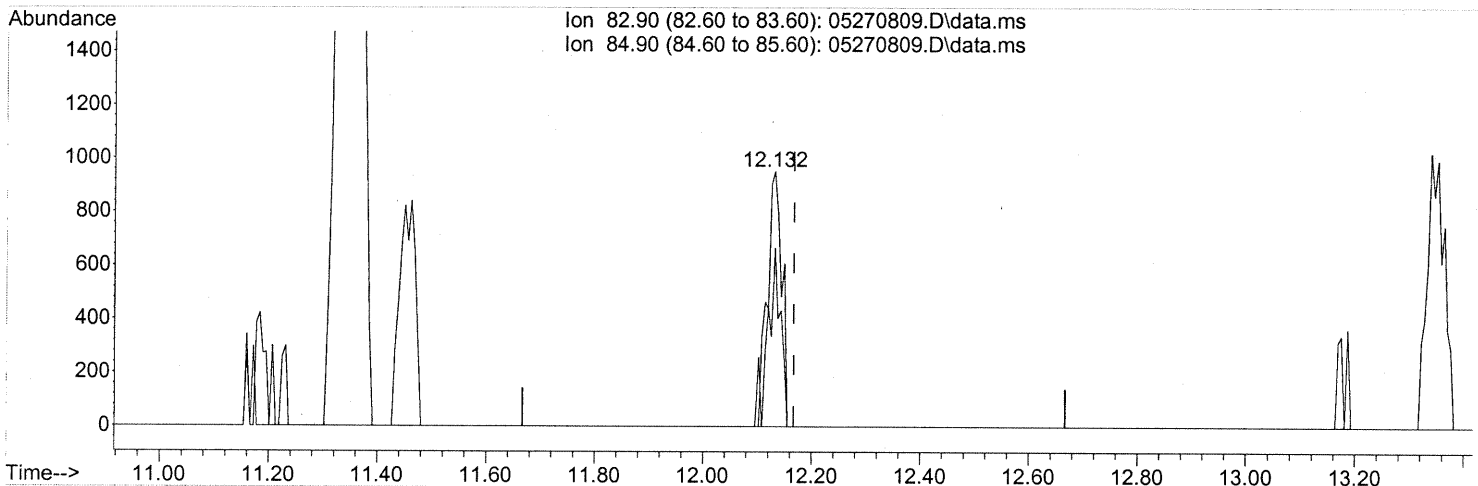
response 326326

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

12.132min (-0.036) 0.08ng

response 1768

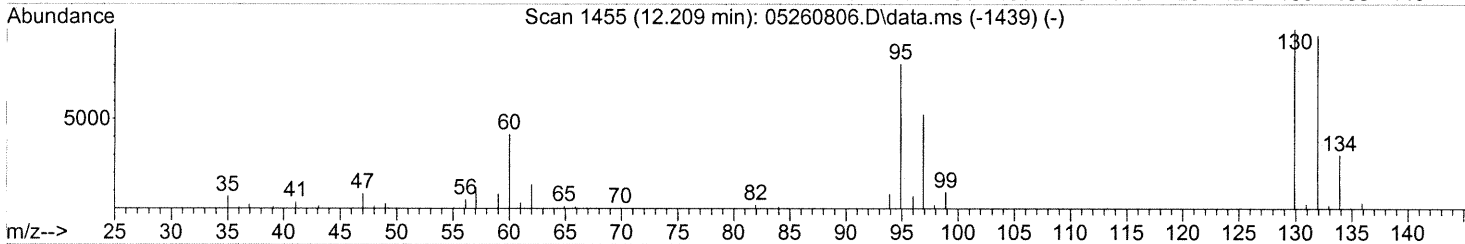
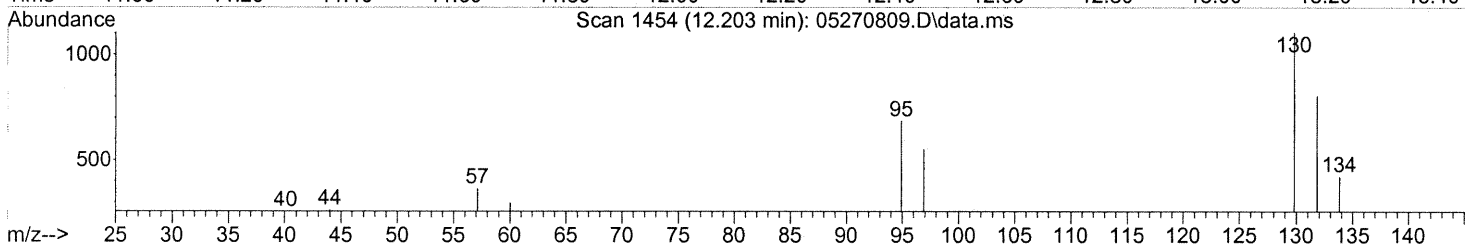
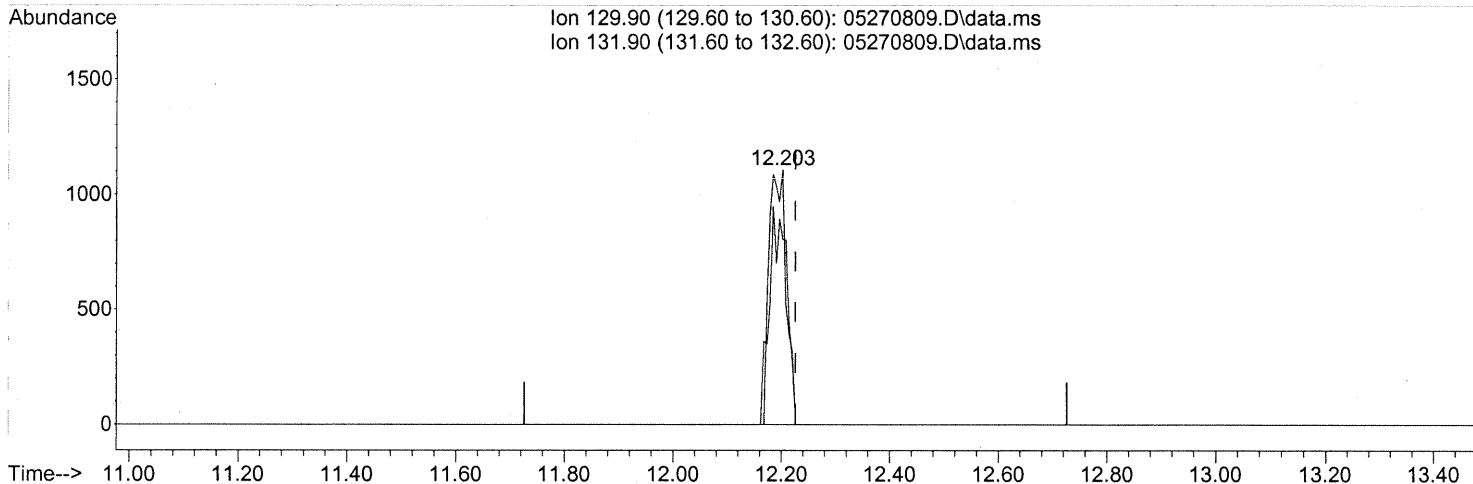
Ion	Exp%	Act%
82.90	100	100
84.90	62.30	61.31
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270809.D\data.ms

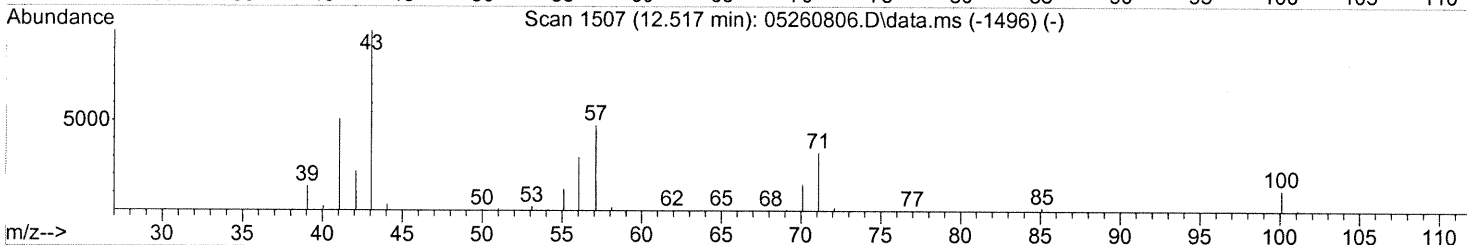
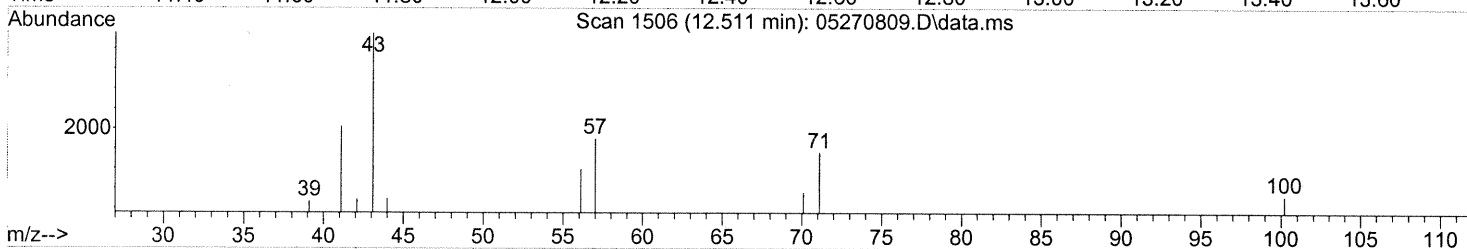
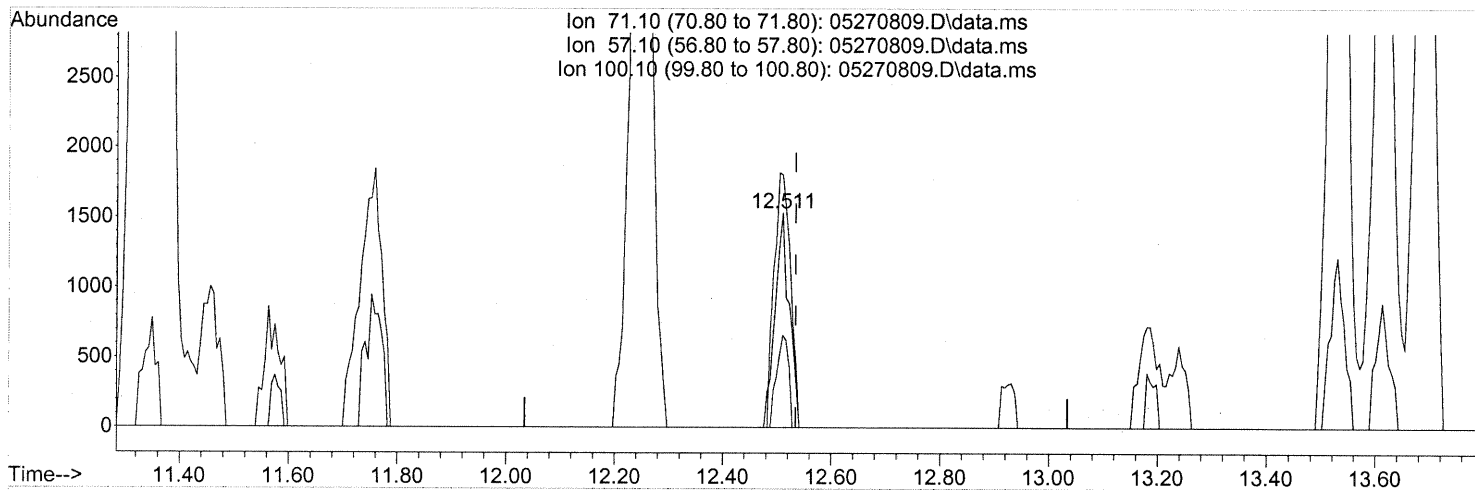
(47) Trichloroethene (T)  
 12.203min (-0.024) 0.11ng  
 response 2439

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	88.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270809.D\data.ms

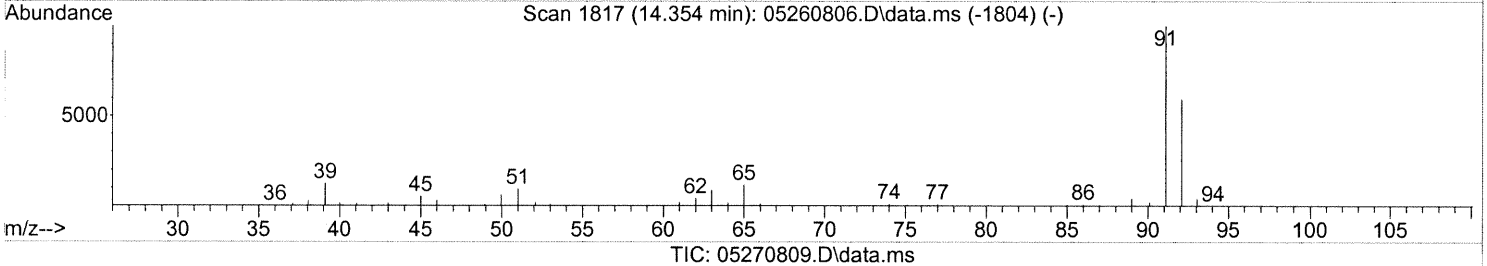
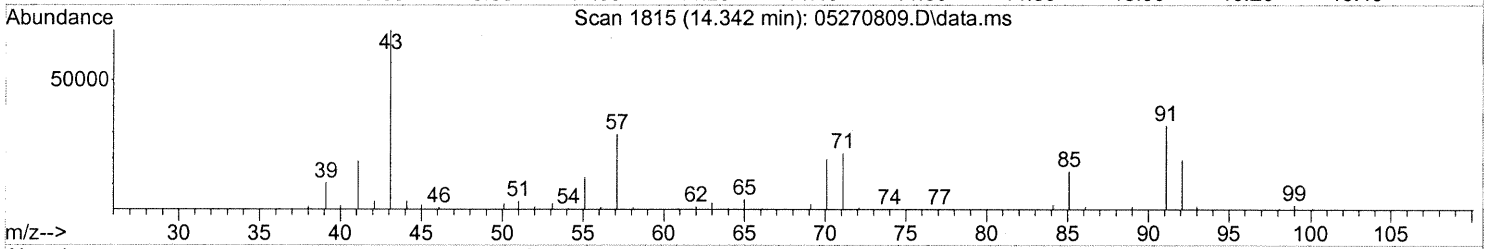
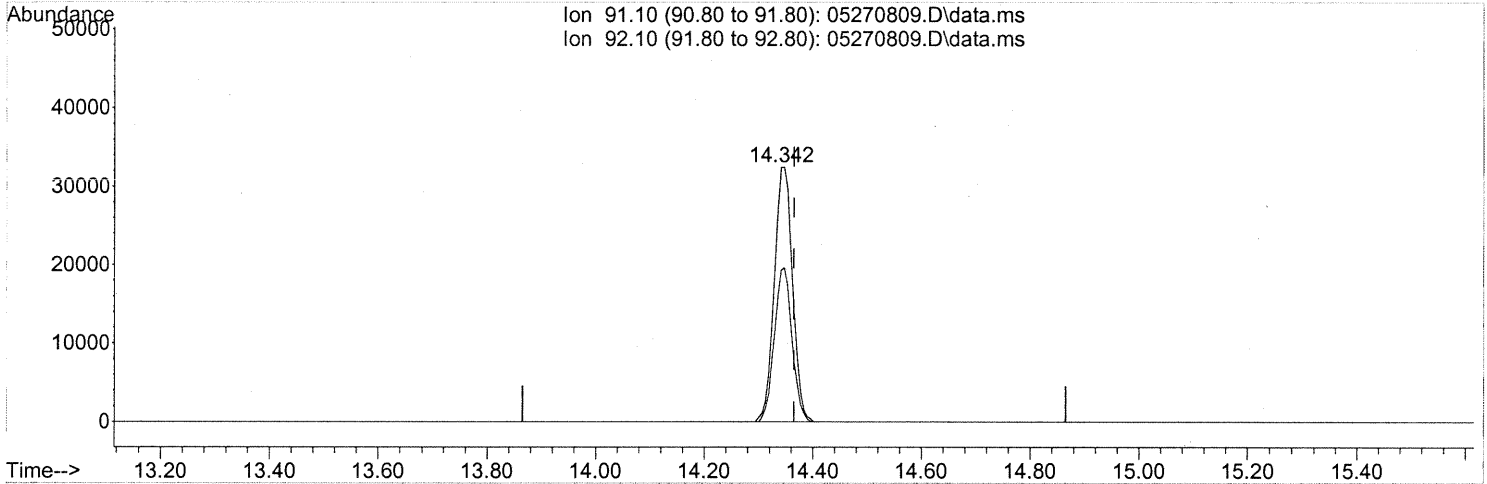
(51) n-Heptane (T)  
 12.511min (-0.024) 0.16ng  
 response 2794

Ion	Exp%	Act%
71.10	100	100
57.10	88.70	137.51#
100.10	28.80	36.33
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(58) Toluene (T)

14.342min (-0.024) 0.96ng

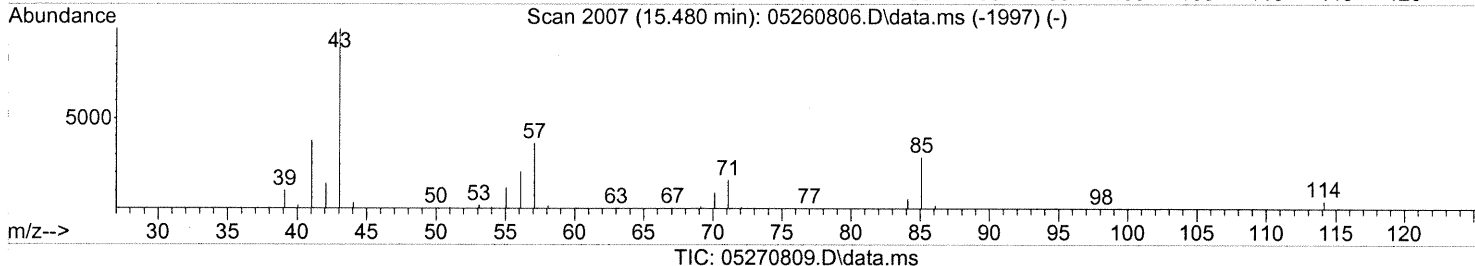
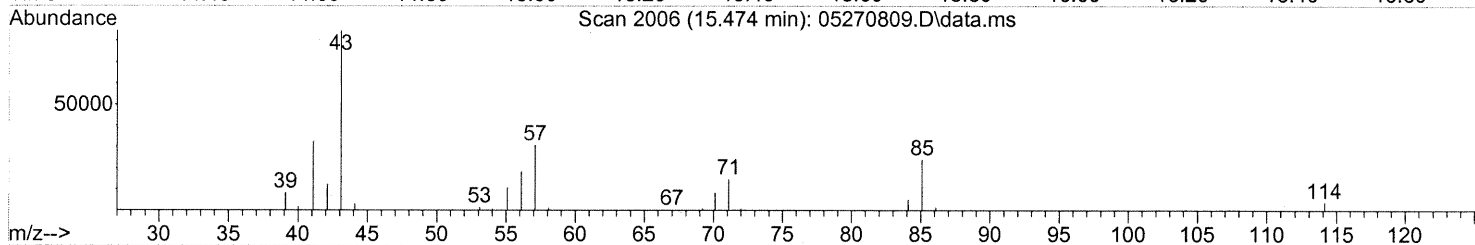
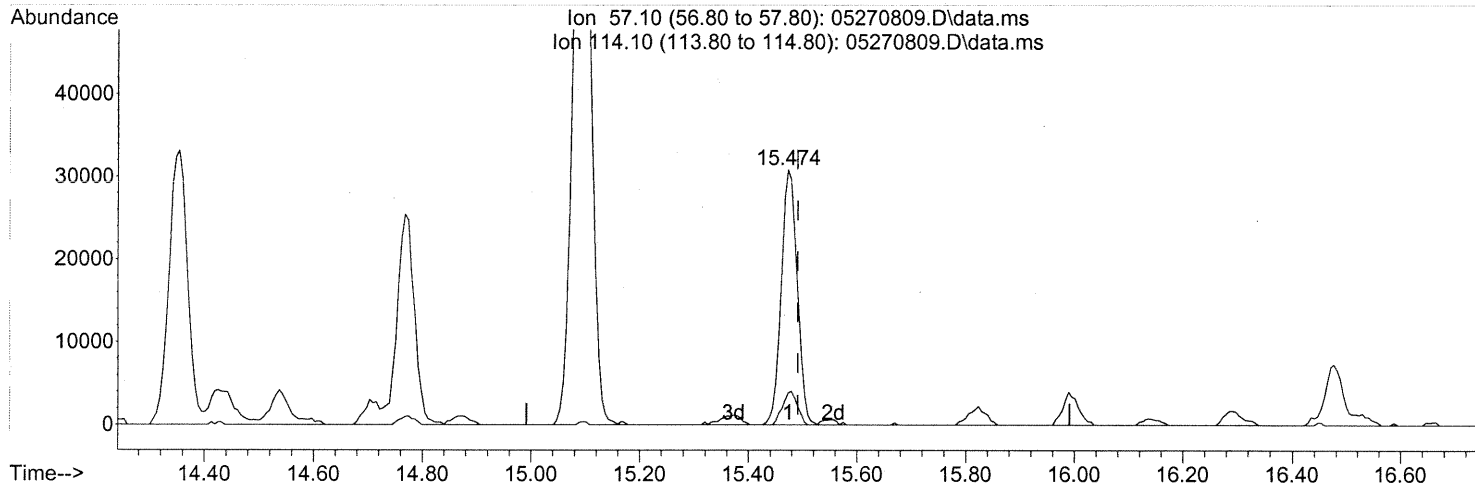
response 75596

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	58.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270809.D\data.ms

(63) n-Octane (T)

15.474min (-0.018) 2.64ng

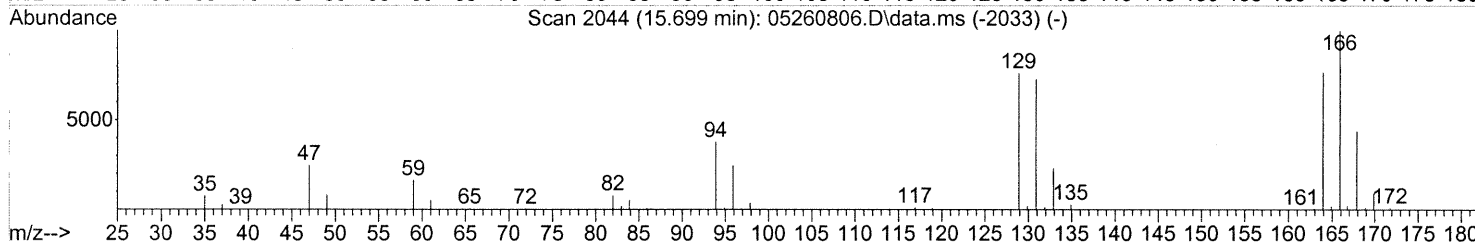
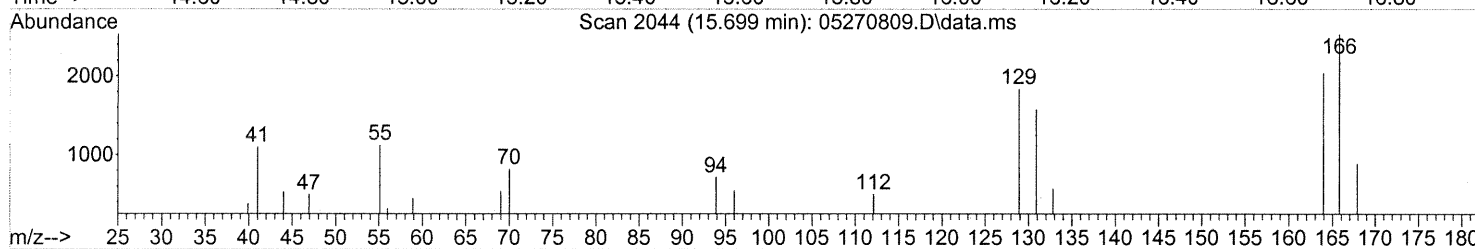
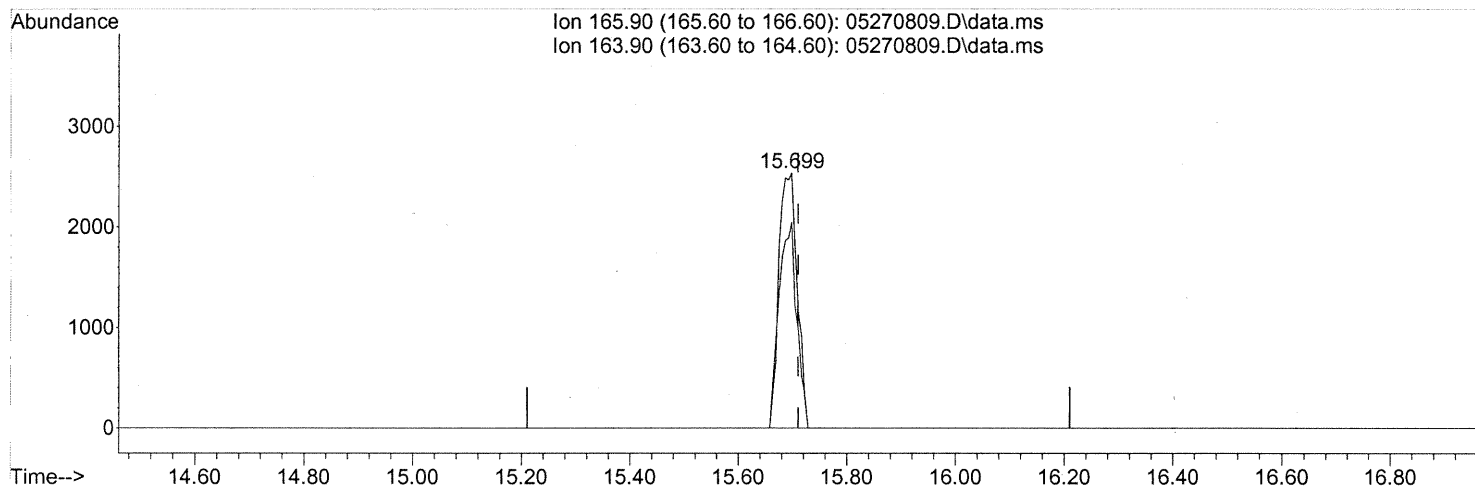
response 62834

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	12.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270809.D  
Acq On : 27 May 2008 17:56  
Operator : WA  
Sample : P0801507-002 (25ml)  
Misc : ENSR SG30B-05 (-3.0, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270809.D\data.ms

(64) Tetrachloroethene (T)

15.699min (-0.012) 0.26ng

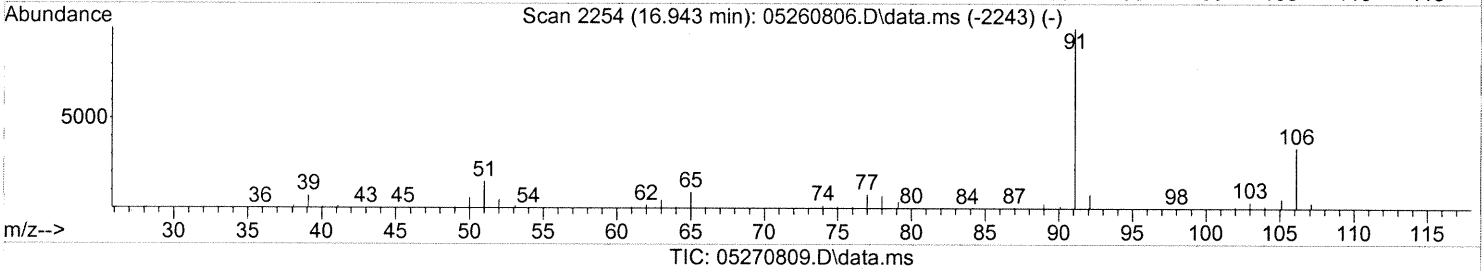
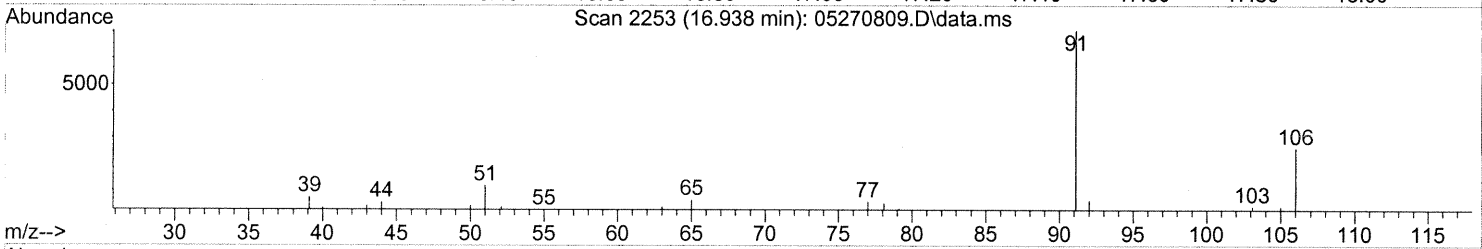
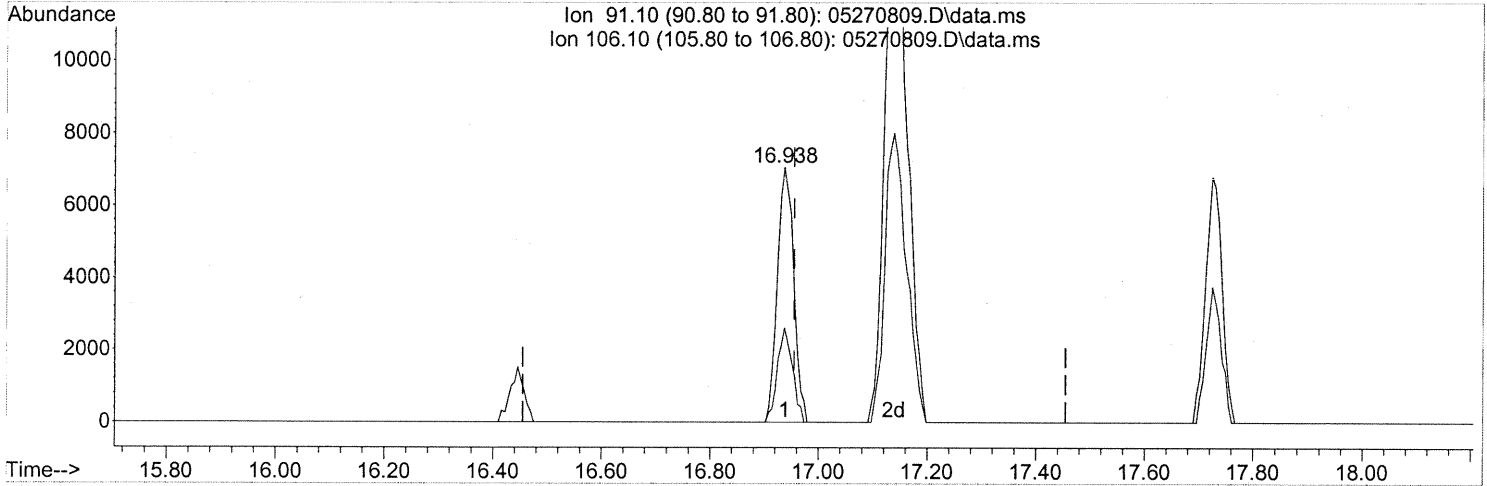
response 5955

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

16.938min (-0.018) 0.16ng

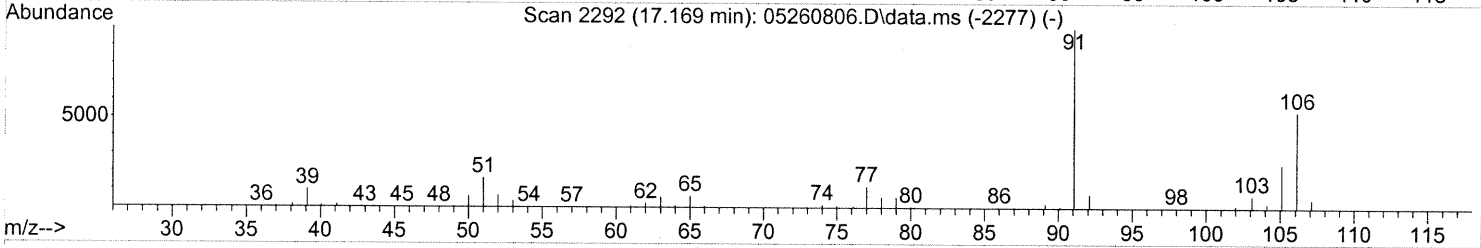
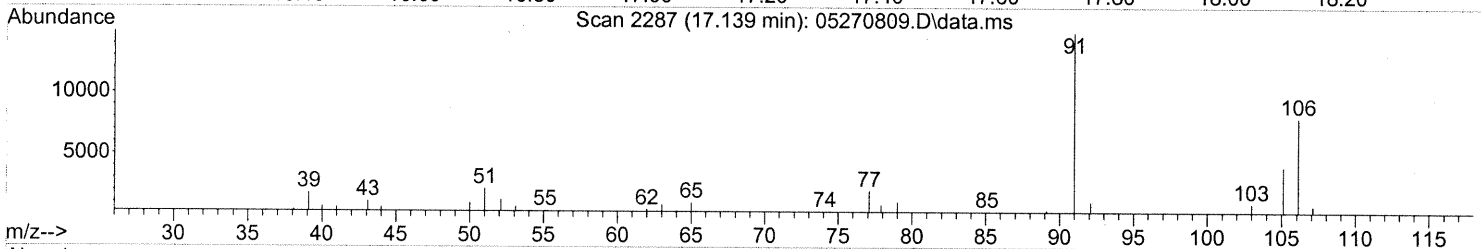
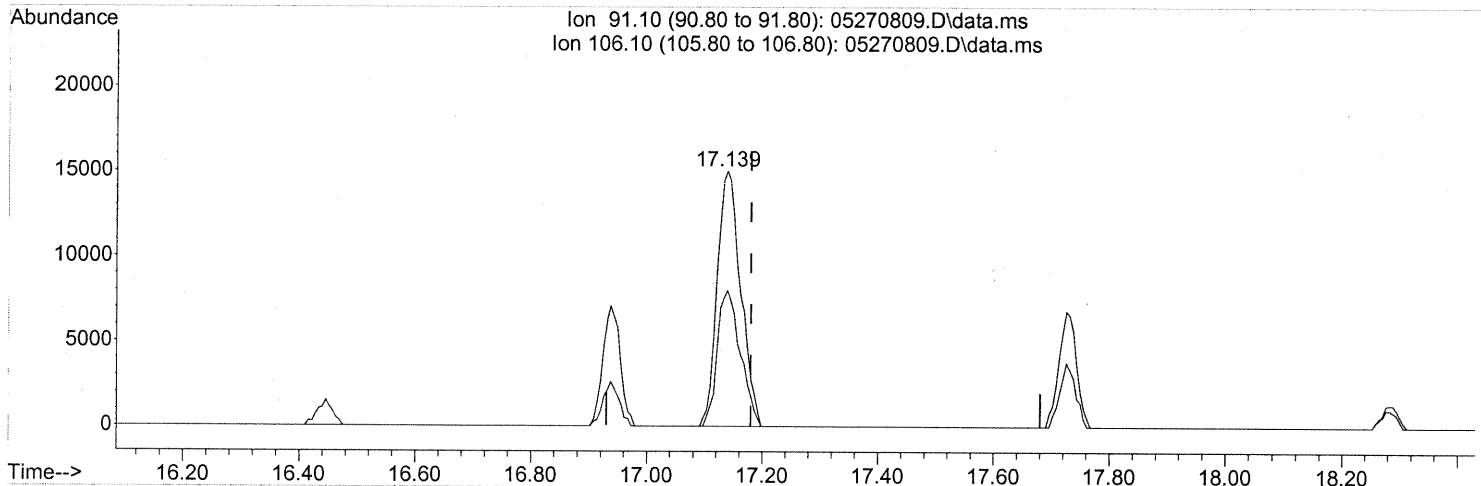
response 14646

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	34.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.041) 0.72ng

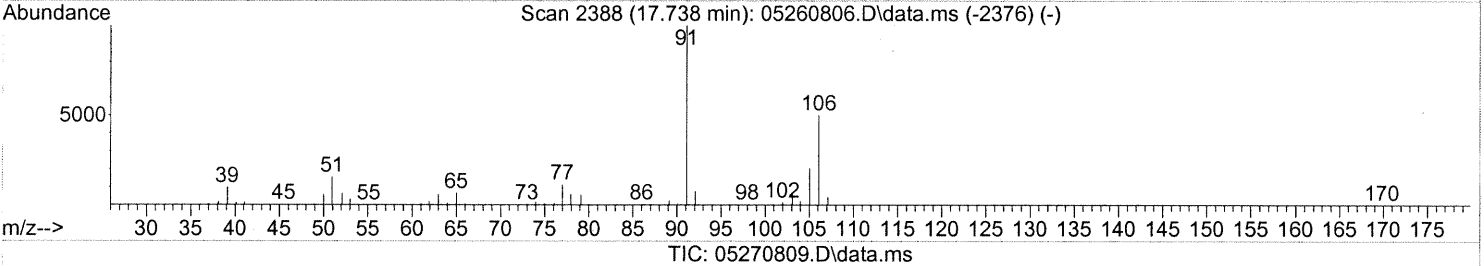
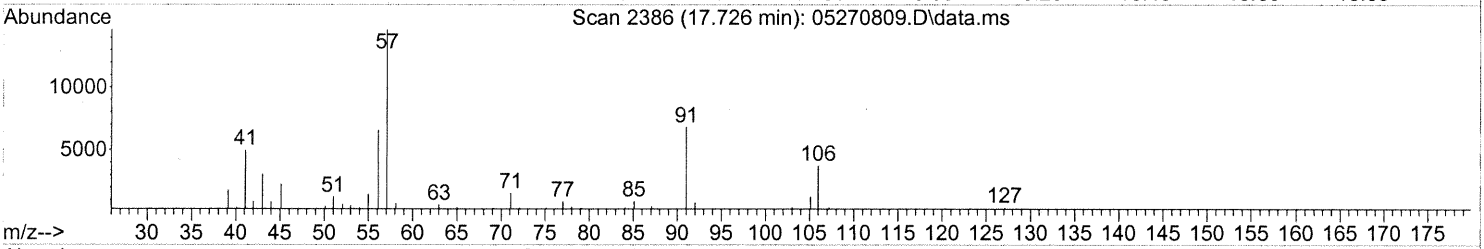
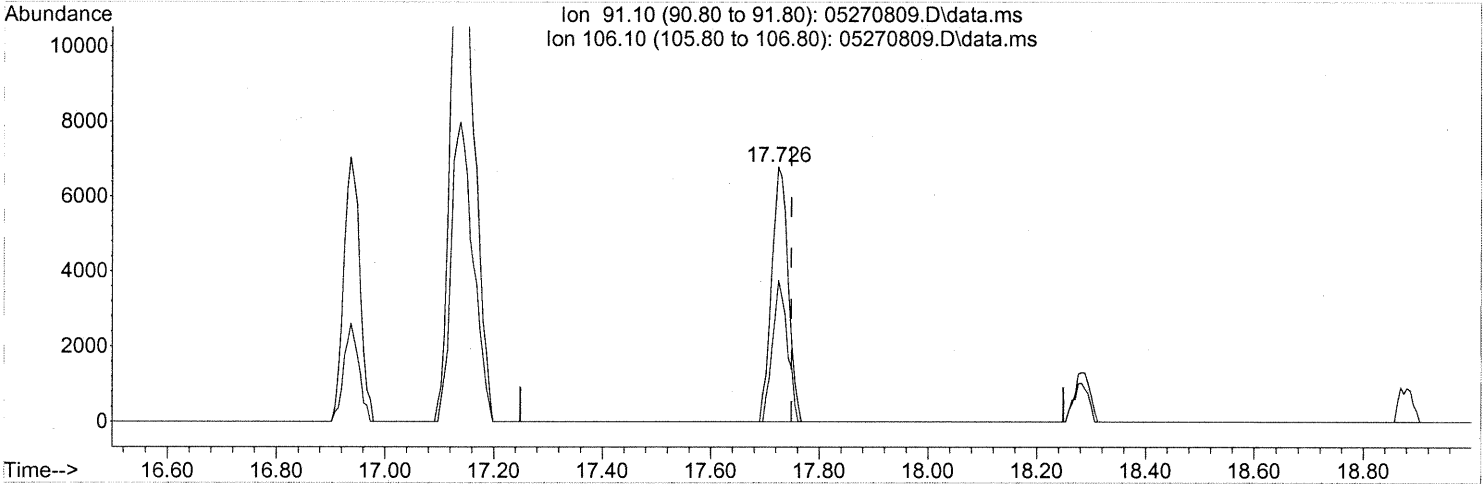
response 42389

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	52.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.726min (-0.024) 0.23ng

response 14349

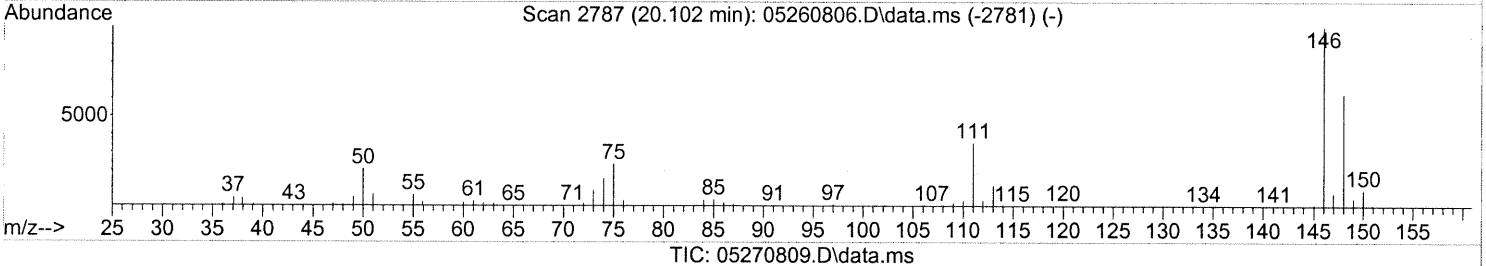
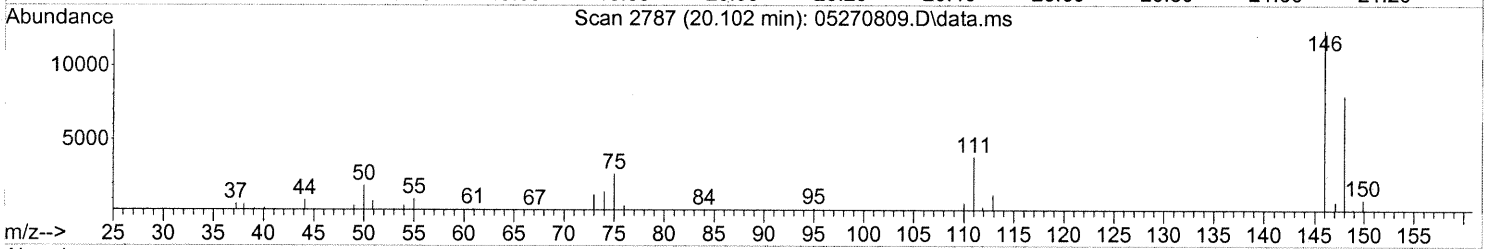
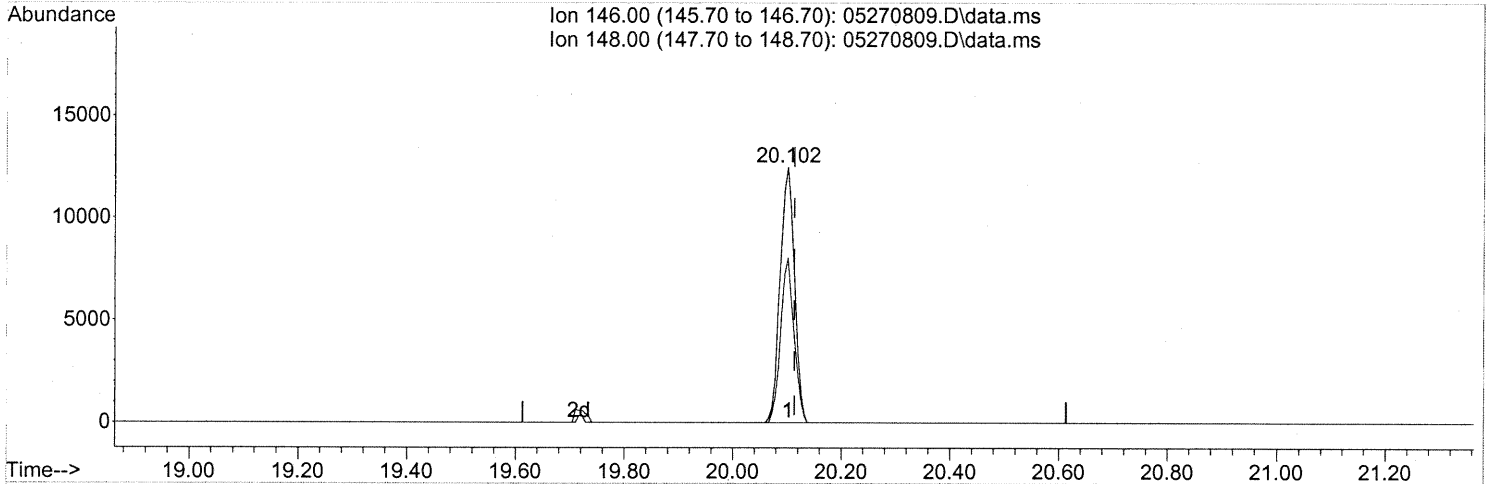
Ion	Exp%	Act%
91.10	100	100
106.10	45.90	49.84
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 28 04:46:39 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

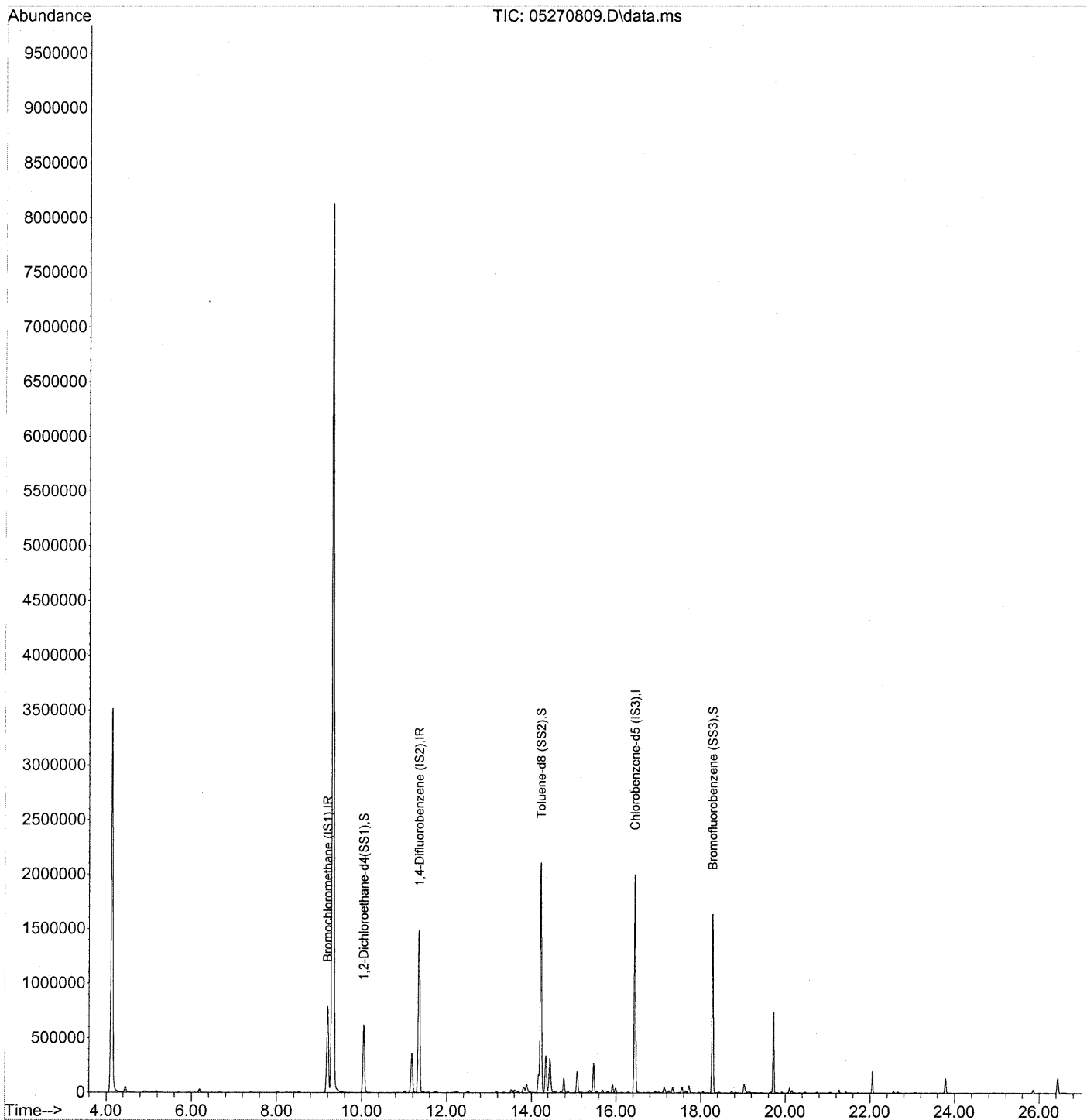
20.102min (-0.012) 0.45ng

response 22545

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	60.25
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270809.D  
Acq On : 27 May 2008 17:56  
Operator : WA  
Sample : P0801507-002 (25ml)  
Misc : ENSR SG30B-05 (-3.0, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jun 04 14:39:20 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270809.D  
 Acq On : 27 May 2008 17:56  
 Operator : WA  
 Sample : P0801507-002 (25ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

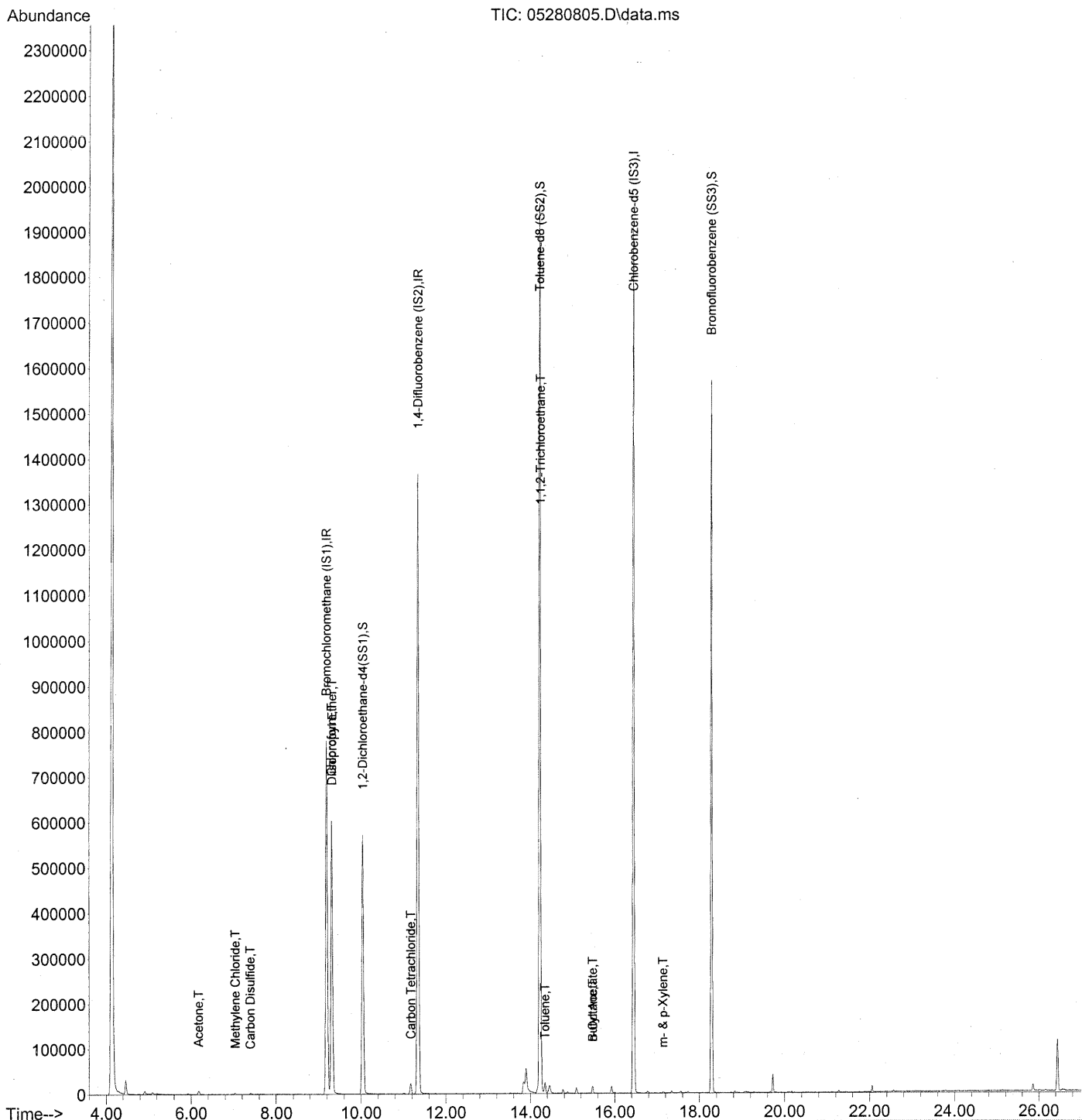
Quant Time: Jun 04 14:39:20 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	9.20	130	407143	25.000	ng	-0.05	
3) 1,4-Difluorobenzene (IS2)	11.35	114	1685075	25.000	ng	-0.03	
4) Chlorobenzene-d5 (IS3)	16.45	82	671836	25.000	ng	-0.01	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.05	65	572018	24.571	ng	-0.05	
Spiked Amount	25.000						Recovery = 98.28%
5) Toluene-d8 (SS2)	14.23	98	1707712	24.655	ng	-0.02	
Spiked Amount	25.000						Recovery = 98.64%
6) Bromofluorobenzene (SS3)	18.28	174	594120	25.799	ng	-0.01	
Spiked Amount	25.000						Recovery = 103.20%
Target Compounds							
7) tert-Butylbenzene	19.82	119	437		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	736		N.D.		

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

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280805.D  
Acq On : 28 May 2008 12:03 pm  
Operator : WA  
Sample : P0801507-002 Dil (2ml)  
Misc : ENSR SG30B-05 (-3.0, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:44:56 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280805.D  
 Acq On : 28 May 2008 12:03 pm  
 Operator : WA  
 Sample : P0801507-002 Dil (2ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:44:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	381474	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1555272	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	637855	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	537683	24.650	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.60%	✓
57) Toluene-d8 (SS2)	14.22	98	1582604	24.066	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.28%	✓
73) Bromofluorobenzene (SS3)	18.28	174	565155	25.849	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.40%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	835	N.D.		
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.93	41	2722	N.D.		
12) Acrolein	6.06	56	457	N.D.		
13) Acetone	6.18	58	4981	0.250	ng	# 54
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	0.00	45	0	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.04	84	1090	0.071	ng	# 5
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	3240	0.052	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	64647	4.709	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280805.D  
 Acq On : 28 May 2008 12:03 pm  
 Operator : WA  
 Sample : P0801507-002 Dil (2ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:44:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.31	83	594865	26.426	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.01	78	2827	N.D.		
42) Carbon Tetrachloride	11.17	117	19756	0.735	ng	99
43) Cyclohexane	11.35	84	608	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.23	57	845	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	134828	8.454	ng	# 7
58) Toluene	14.34	91	4964	0.067	ng	96
59) 2-Hexanone	14.58	43	748	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	10293	0.145	ng	# 73
63) n-Octane	15.47	57	3621	0.161	ng	73
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.95	91	834	N.D.		
67) m- & p-Xylene	17.14	91	3080	0.055	ng	97
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	906	N.D.		
71) n-Nonane	17.97	43	412	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	578	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	18.89	105	338	N.D.		
78) 4-Ethyltoluene	18.89	105	338	N.D.		
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.		

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280805.D  
 Acq On : 28 May 2008 12:03 pm  
 Operator : WA  
 Sample : P0801507-002 Dil (2ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:44:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

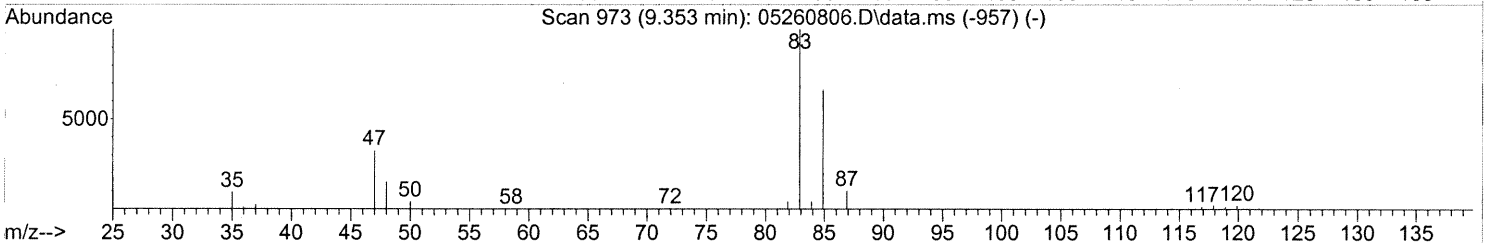
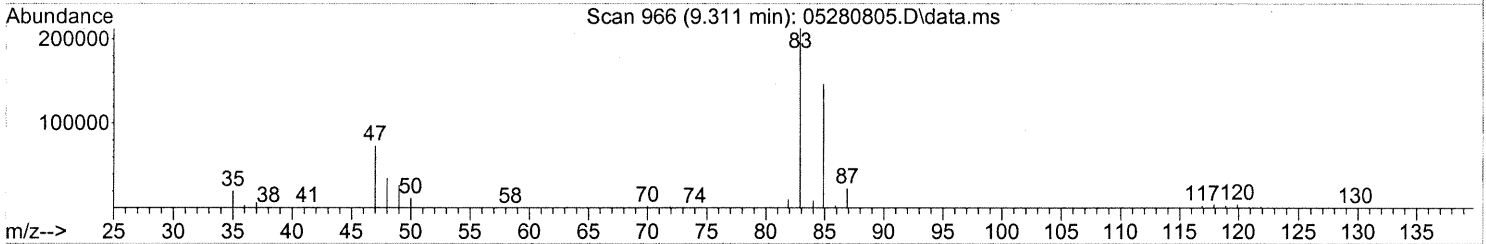
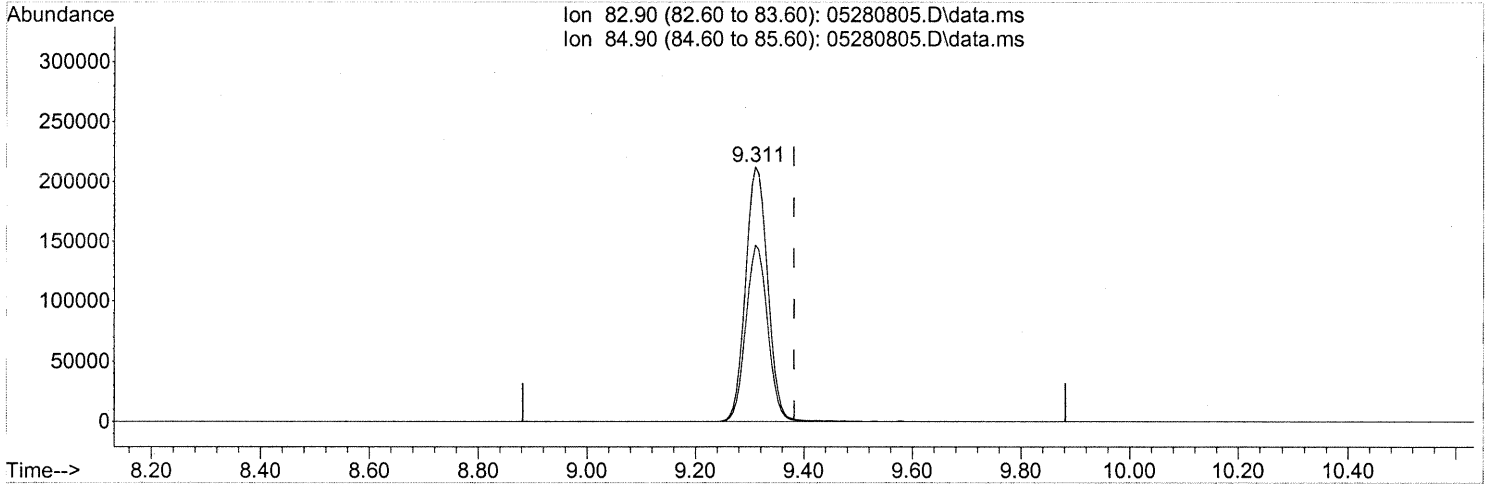
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	182	N.D.		
81) 2-Ethyltoluene	19.82	105	219	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	219	N.D.		
83) n-Decane	19.92	57	95	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	1262	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	1262	N.D.		
87) sec-Butylbenzene	19.82	105	219	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	20.76	105	340	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	137	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	758	N.D.		
96) n-Dodecane	22.67	57	109	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280805.D  
 Acq On : 28 May 2008 12:03  
 Operator : WA  
 Sample : P0801507-002 Dil (2ml)  
 Misc : ENSR SG30B-05 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:44:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280805.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 26.43ng

response 594865

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.16
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00989

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28 - 5/29/08  
**Volume(s) Analyzed:** 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	83	8.3	ND	17	1.7	
74-87-3	Chloromethane	ND	17	8.3	ND	8.0	4.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	83	8.3	ND	12	1.2	
75-01-4	Vinyl Chloride	ND	17	8.3	ND	6.5	3.2	
74-83-9	Bromomethane	ND	17	8.3	ND	4.3	2.1	
75-00-3	Chloroethane	ND	17	8.3	ND	6.3	3.1	
64-17-5	Ethanol	ND	830	8.3	ND	440	4.4	
67-64-1	<b>Acetone</b>	<b>260</b>	830	12	<b>110</b>	350	5.1	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>660</b>	17	8.3	<b>120</b>	2.9	1.5	
107-13-1	Acrylonitrile	ND	83	12	ND	38	5.3	
75-35-4	1,1-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	83	12	ND	27	4.0	
75-09-2	<b>Methylene Chloride</b>	<b>13</b>	83	8.3	<b>3.7</b>	24	2.4	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	17	8.3	ND	5.3	2.6	
76-13-1	Trichlorotrifluoroethane	ND	17	9.2	ND	2.2	1.2	
75-15-0	Carbon Disulfide	ND	83	20	ND	27	6.4	
156-60-5	trans-1,2-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
75-34-3	1,1-Dichloroethane	ND	17	8.3	ND	4.1	2.0	
1634-04-4	Methyl tert-Butyl Ether	ND	17	8.3	ND	4.6	2.3	
108-05-4	Vinyl Acetate	ND	830	26	ND	230	7.5	
78-93-3	<b>2-Butanone (MEK)</b>	<b>22</b>	83	8.3	<b>7.4</b>	28	2.8	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	17	8.3	ND	4.2	2.1	
108-20-3	Diisopropyl Ether	ND	83	9.7	ND	20	2.3	
67-66-3	<b>Chloroform</b>	<b>63,000</b>	17	9.7	<b>13,000</b>	3.4	2.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:     CA          Date:     6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00989

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
637-92-3	Ethyl tert-Butyl Ether	ND	83	8.4	ND	20	2.0	
107-06-2	1,2-Dichloroethane	ND	17	8.3	ND	4.1	2.0	
71-55-6	1,1,1-Trichloroethane	ND	17	8.3	ND	3.0	1.5	
71-43-2	<b>Benzene</b>	<b>12</b>	17	8.3	<b>3.9</b>	5.2	2.6	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>18,000</b>	17	8.3	<b>2,800</b>	2.6	1.3	
994-05-8	tert-Amyl Methyl Ether	ND	83	8.3	ND	20	2.0	
78-87-5	1,2-Dichloropropane	ND	17	8.3	ND	3.6	1.8	
75-27-4	Bromodichloromethane	ND	17	8.3	ND	2.5	1.2	
79-01-6	Trichloroethene	ND	17	8.3	ND	3.1	1.5	
123-91-1	1,4-Dioxane	ND	83	10	ND	23	2.8	
80-62-6	Methyl Methacrylate	ND	83	12	ND	20	3.0	
142-82-5	n-Heptane	ND	83	11	ND	20	2.6	
10061-01-5	cis-1,3-Dichloropropene	ND	83	8.6	ND	18	1.9	
108-10-1	4-Methyl-2-pentanone	ND	83	9.2	ND	20	2.3	
10061-02-6	trans-1,3-Dichloropropene	ND	83	10	ND	18	2.3	
79-00-5	1,1,2-Trichloroethane	ND	17	8.3	ND	3.0	1.5	
108-88-3	<b>Toluene</b>	<b>58</b>	83	8.3	<b>15</b>	22	2.2	<b>J</b>
591-78-6	2-Hexanone	ND	83	13	ND	20	3.1	
124-48-1	Dibromochloromethane	ND	17	11	ND	1.9	1.3	
106-93-4	1,2-Dibromoethane	ND	17	8.9	ND	2.1	1.2	
111-65-9	<b>n-Octane</b>	<b>140</b>	83	8.3	<b>30</b>	18	1.8	
127-18-4	<b>Tetrachloroethene</b>	<b>20</b>	17	8.3	<b>2.9</b>	2.4	1.2	
108-90-7	Chlorobenzene	ND	17	8.4	ND	3.6	1.8	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**148**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG29B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00989

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.010 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	16	83	10	3.6	19	2.4	J
179601-23-1	m,p-Xylenes	64	83	21	15	19	4.9	J
75-25-2	Bromoform	ND	83	13	ND	8.0	1.2	
100-42-5	Styrene	ND	83	13	ND	19	2.9	
95-47-6	o-Xylene	18	83	10	4.3	19	2.4	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	17	11	ND	2.4	1.5	
98-82-8	Cumene	ND	83	9.2	ND	17	1.9	
103-65-1	n-Propylbenzene	ND	83	8.6	ND	17	1.7	
622-96-8	4-Ethyltoluene	ND	83	9.4	ND	17	1.9	
108-67-8	1,3,5-Trimethylbenzene	ND	83	9.9	ND	17	2.0	
98-83-9	alpha-Methylstyrene	ND	83	12	ND	17	2.5	
95-63-6	1,2,4-Trimethylbenzene	ND	83	11	ND	17	2.3	
100-44-7	Benzyl Chloride	ND	17	14	ND	3.2	2.7	
541-73-1	1,3-Dichlorobenzene	ND	17	10	ND	2.7	1.7	
106-46-7	1,4-Dichlorobenzene	ND	17	9.2	ND	2.7	1.5	
135-98-8	sec-Butylbenzene	ND	83	9.6	ND	15	1.7	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	83	11	ND	15	2.0	
95-50-1	1,2-Dichlorobenzene	ND	17	11	ND	2.7	1.8	
96-12-8	1,2-Dibromo-3-chloropropane	ND	83	13	ND	8.5	1.3	
120-82-1	1,2,4-Trichlorobenzene	ND	17	13	ND	2.2	1.7	
91-20-3	Naphthalene	ND	33	12	ND	6.3	2.3	
87-68-3	Hexachlorobutadiene	ND	17	15	ND	1.5	1.4	
98-06-6	tert-Butylbenzene	ND	33	8.3	ND	6.0	1.5	
104-51-8	n-Butylbenzene	ND	33	8.3	ND	6.0	1.5	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:                     

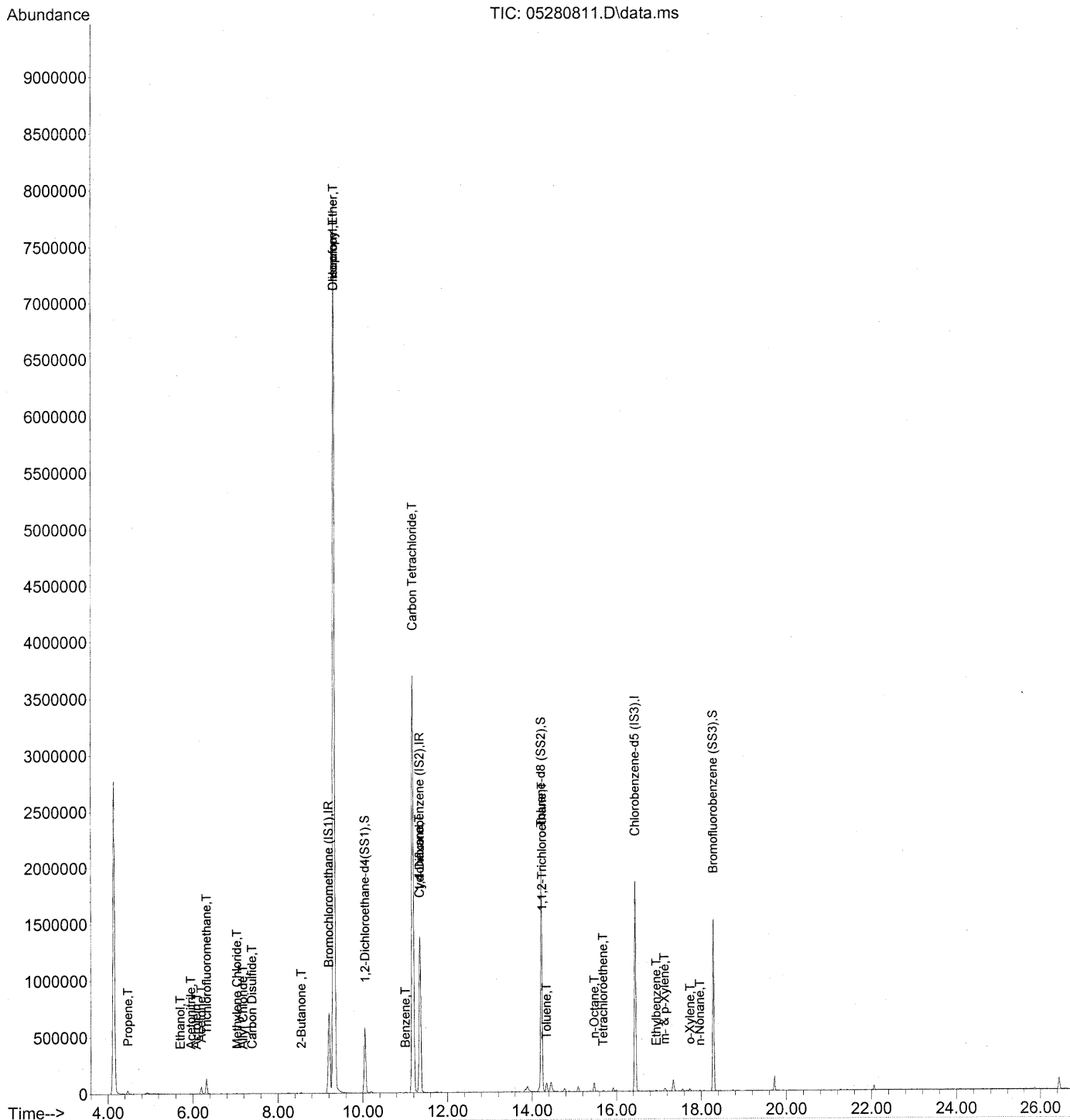
Date: 6/5/08

**149**

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 4:35 pm  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8)  
 ALS Vial : 1 Sample Multiplier: 1

SG-298-05 (-3.7, 3.5)  
 6/4/08

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 4:35 pm  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8) SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

DA 6/4/08

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	374160	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.35	114	1530320	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	627102	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	530224	24.783	ng	-0.04
Spiked Amount	25.000			Recovery =	99.12%	✓
57) Toluene-d8 (SS2)	14.22	98	1556601	24.077	ng	-0.02
Spiked Amount	25.000			Recovery =	96.32%	✓
73) Bromofluorobenzene (SS3)	18.28	174	548184	25.503	ng	-0.01
Spiked Amount	25.000			Recovery =	102.00%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	1755	0.061	ng	# 83
3) Dichlorodifluoromethane	4.55	85	90	N.D.	✓	
4) Chloromethane	0.00	50	0	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.70	45	1318	<del>0.067</del>	ng NR	# 38
11) Acetonitrile	5.95	41	2863	0.051	ng	# 11
12) Acrolein	6.08	56	1040	0.073	ng	# 89
13) Acetone	6.20	58	30471	1.559	ng	# 76
14) Trichlorofluoromethane	6.32	101	130726	3.986	ng	# 99
15) Isopropanol	6.40	45	185	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.97	59	186	N.D.	✓	
19) Methylene Chloride	7.04	84	1159	0.077	ng	# 15
20) Allyl Chloride	7.18	41	1843	<del>0.053</del>	ng NR	# 45
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.40	76	3976	<del>0.066</del>	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.19	63	1174	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.55	72	1363	0.133	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.32	87	954402	<del>70.886</del>	ng NR	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.23	57	288	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 4:35 pm  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8)  
 ALS Vial : 1 Sample Multiplier: 1

SG29B-05 (-3.7, 3.5)

at 6/4/08

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	8873311	<del>401.882</del> ng	see dil	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.✓		
36) 1,2-Dichloroethane	0.00	62	0	N.D.✓		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.01	78	4858	0.075 ng		90
42) Carbon Tetrachloride	11.18	117	3379049	<del>127.681</del> ng	see dil	99
43) Cyclohexane	11.34	84	10584	0.420 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D.✓		
46) Bromodichloromethane	12.13	83	328	N.D.✓		
47) Trichloroethene	12.18	130	253	N.D.✓		
48) 1,4-Dioxane	0.00	88	0	N.D.✓		
49) Isooctane	12.25	57	2408	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.✓		
51) n-Heptane	12.51	71	370	N.D.✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.✓		
53) 4-Methyl-2-pentanone	13.17	58	103	N.D.✓		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.✓		
55) 1,1,2-Trichloroethane	14.24	97	133008	8.476 ng	UR #	6
58) Toluene	14.34	91	25765	0.351 ng		97
59) 2-Hexanone	14.59	43	3155	N.D.✓		
60) Dibromochloromethane	0.00	129	0	N.D.✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D.✓		
62) Butyl Acetate	15.31	43	304	N.D.		
63) n-Octane	15.47	57	18607	0.839 ng		95
64) Tetrachloroethene	15.69	166	2602	0.120 ng		91
65) Chlorobenzene	0.00	112	0	N.D.✓		
66) Ethylbenzene	16.94	91	7866	0.094 ng		95
67) m- & p-Xylene	17.13	91	21339	0.386 ng		95
68) Bromoform	0.00	173	0	N.D.✓		
69) Styrene	17.59	104	92	N.D.✓		
70) o-Xylene	17.73	91	6601	0.112 ng		96
71) n-Nonane	17.96	43	3288	0.056 ng	#	83
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.✓		
74) Cumene	18.28	105	489	N.D.✓		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	19.06	91	111	N.D.✓		
77) 3-Ethyltoluene	19.19	105	727	N.D.		
78) 4-Ethyltoluene	19.24	105	378	N.D.✓		
79) 1,3,5-Trimethylbenzene	19.33	105	302	N.D.✓		

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 4:35 pm  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8)  
 ALS Vial : 1 Sample Multiplier: 1

SGT-98-05 (-3.7, 3.5)

DA 6/4/08

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

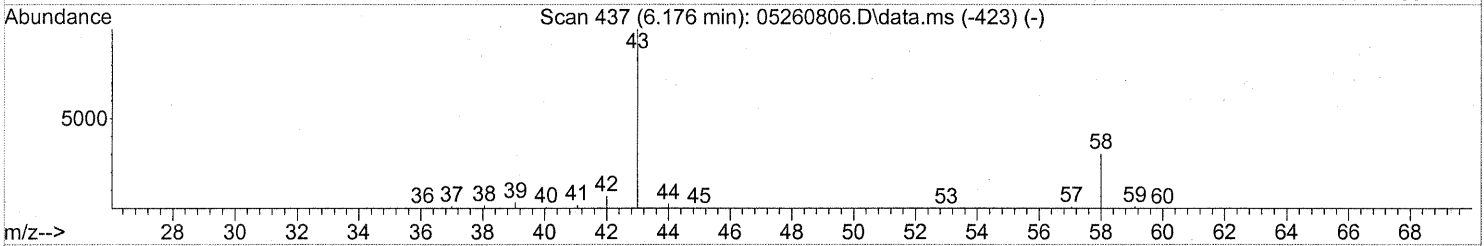
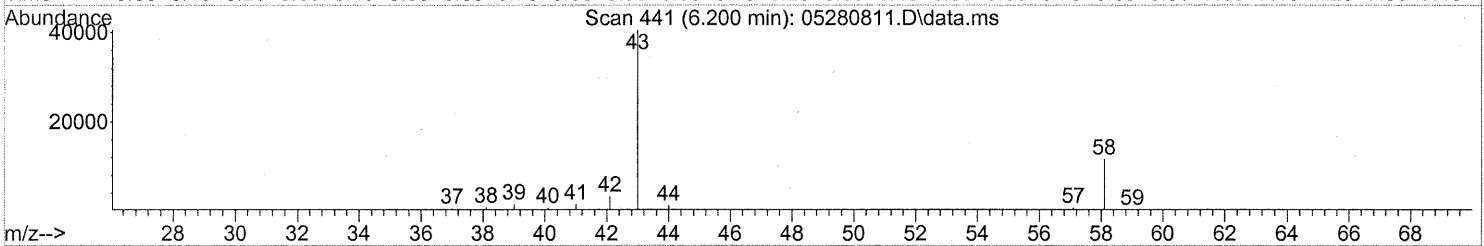
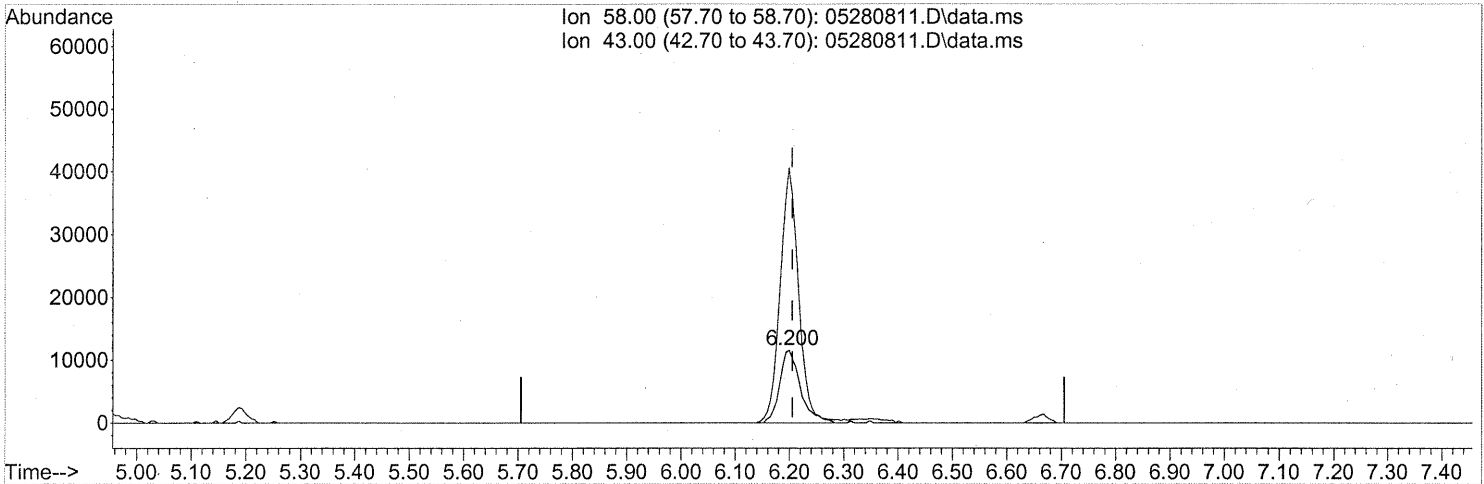
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.72	118	982	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	98	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	610	N.D.	✓	
83) n-Decane	19.92	57	1947	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.	✓	
85) 1,3-Dichlorobenzene	20.10	146	908	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	908	N.D.	✓	
87) sec-Butylbenzene	19.82	105	610	N.D.	✓	
88) p-Isopropyltoluene	0.00	119	0	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.75	105	266	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	✓	
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.43	57	1920	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.69	128	654	N.D.	✓	
96) n-Dodecane	22.66	57	1168	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

(13) Acetone (T)

6.200min (-0.006) 1.56ng

response 30471

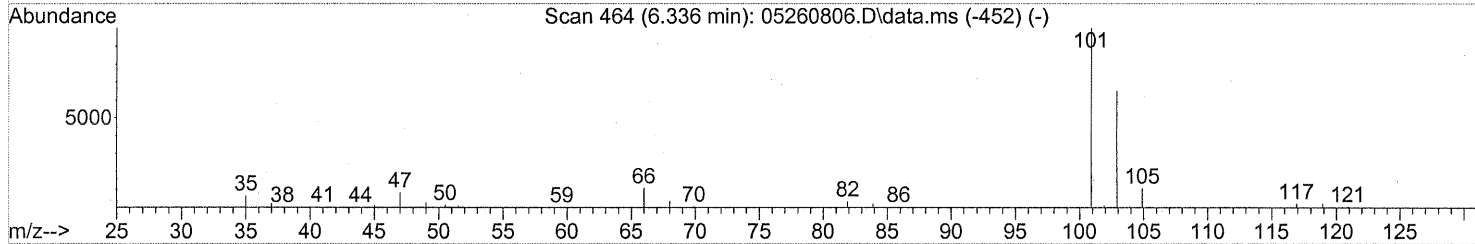
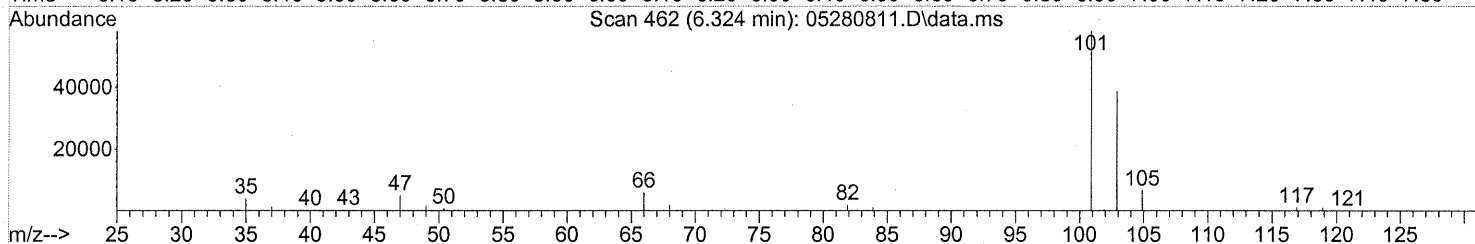
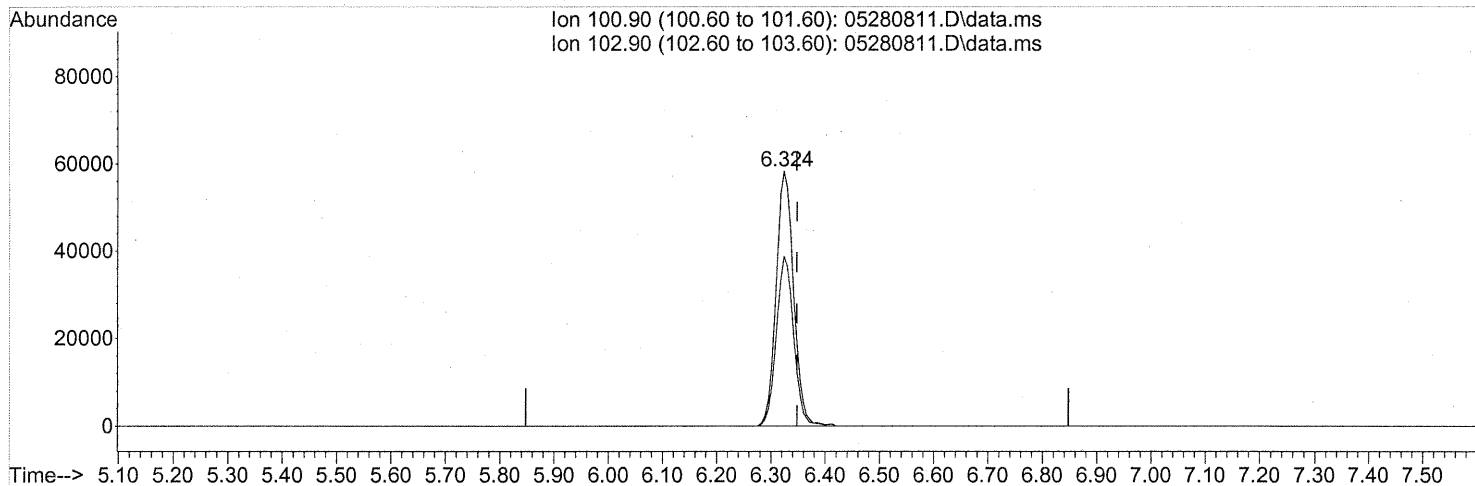
Ion	Exp%	Act%
58.00	100	100
43.00	368.40	315.19#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

6.324min (-0.024) 3.99ng

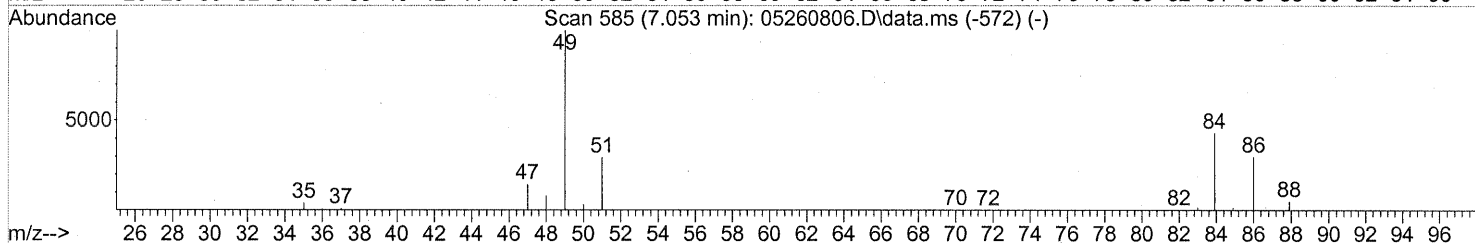
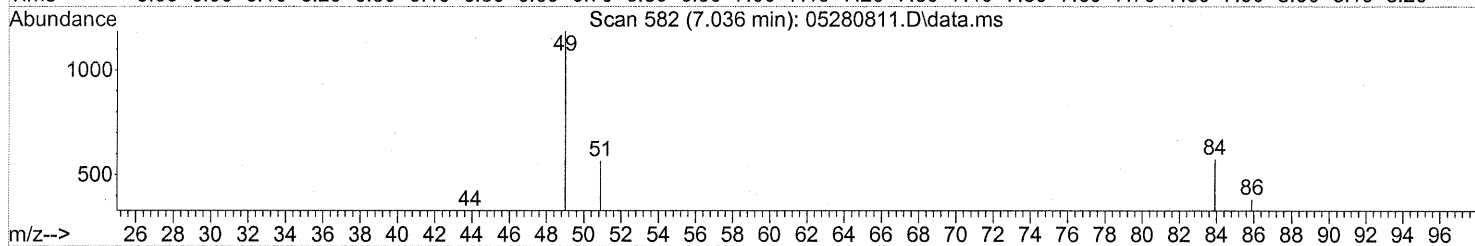
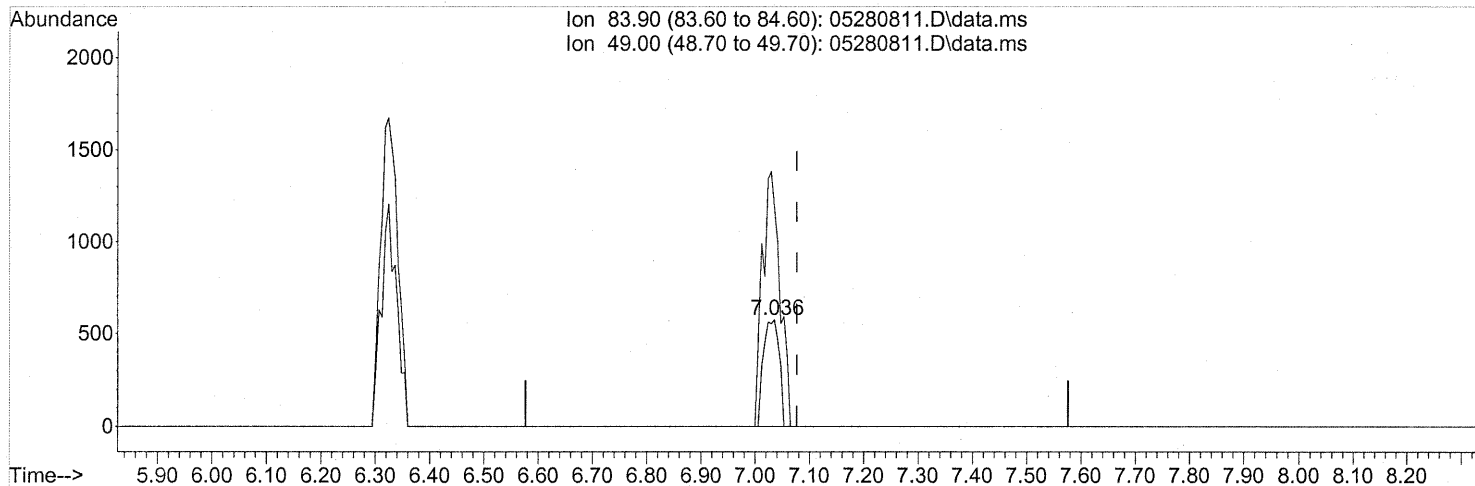
response 130726

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	65.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

(19) Methylene Chloride (T)

7.036min (-0.041) 0.08ng

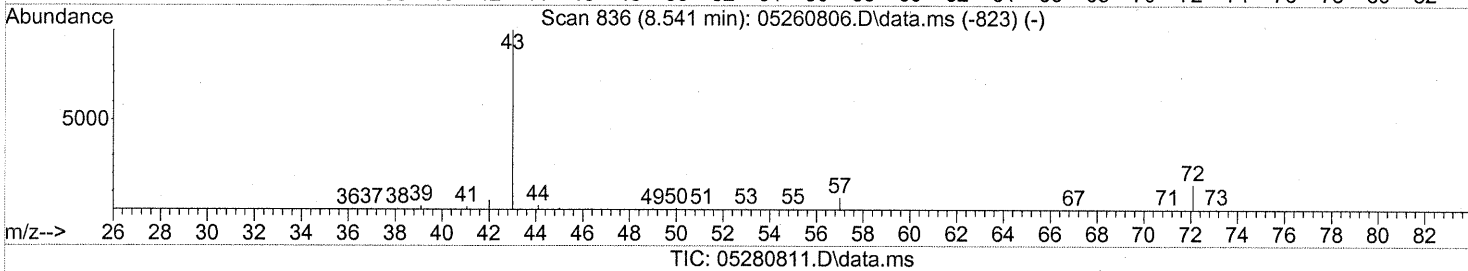
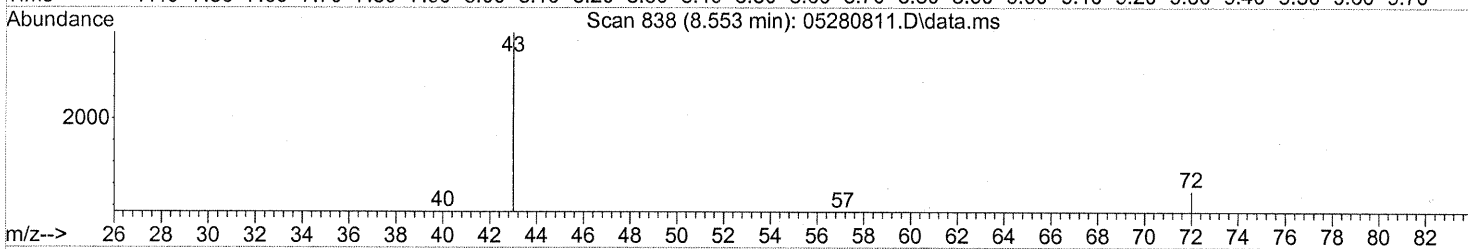
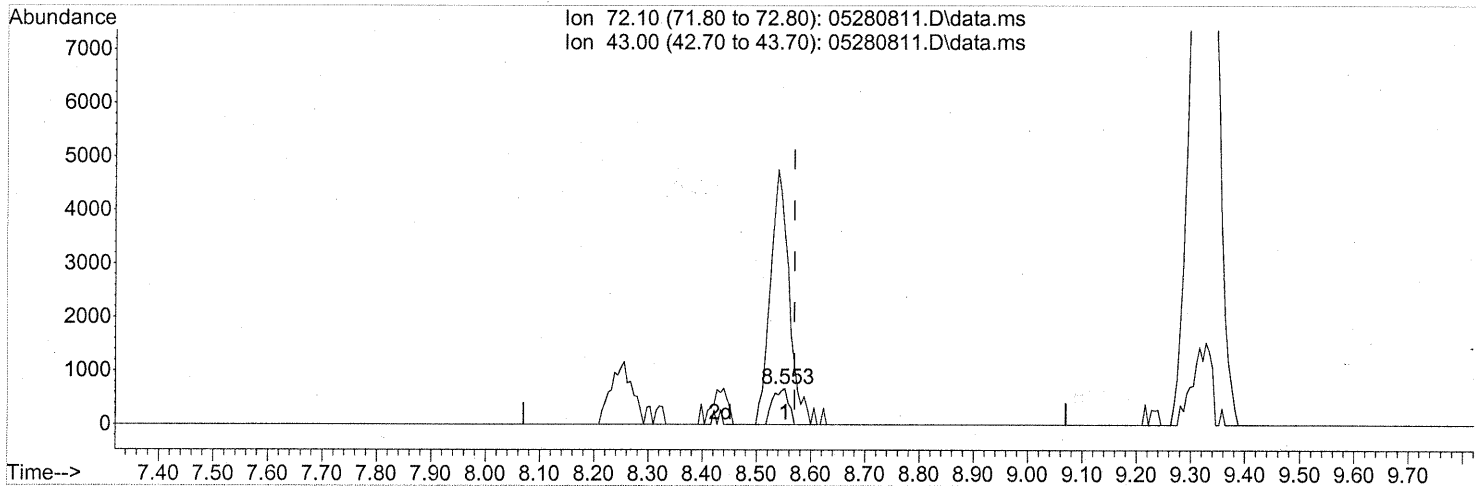
response 1159

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	266.01#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.553min (-0.018) 0.13ng

response 1363

Ion	Exp%	Act%
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72.10	100	100
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43.00	491.60	848.13#
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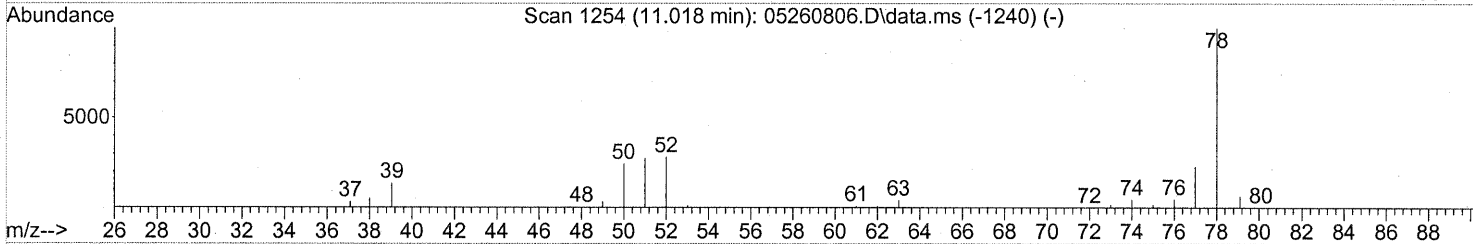
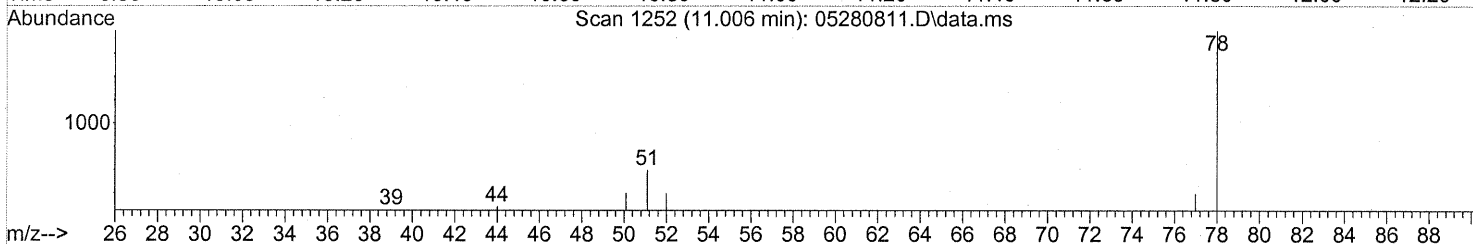
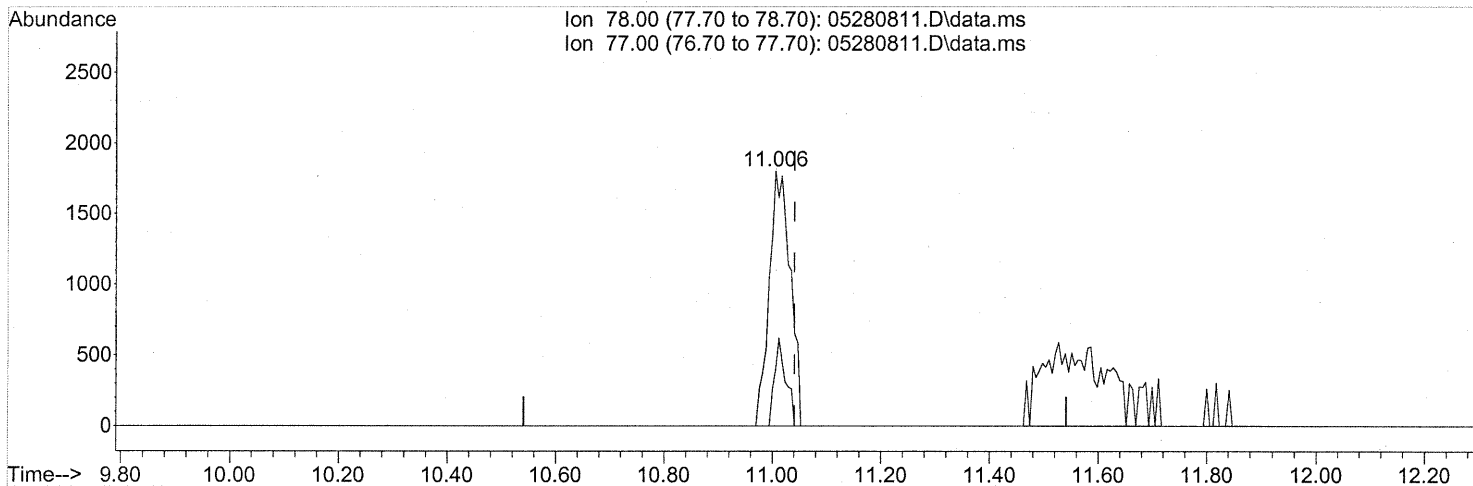
0.00	0.00	0.00
------	------	------

0.00	0.00	0.00
------	------	------

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(41) Benzene (T)

11.006min (-0.036) 0.08ng

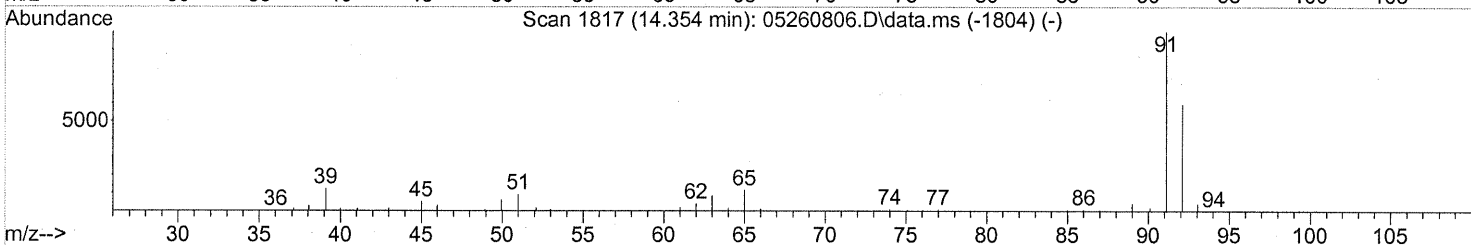
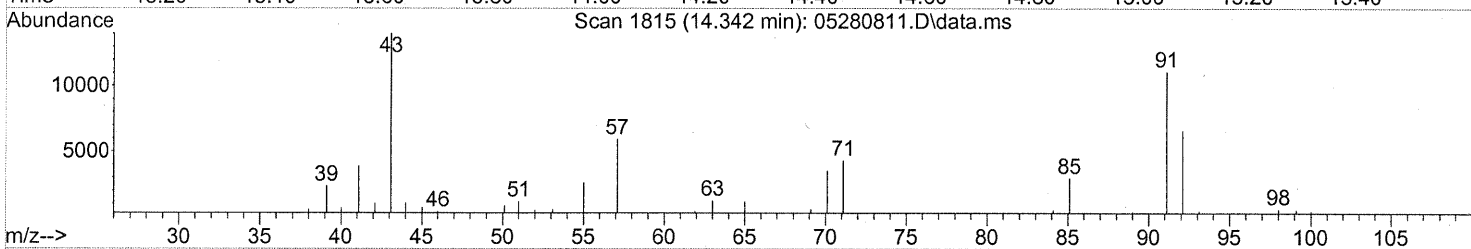
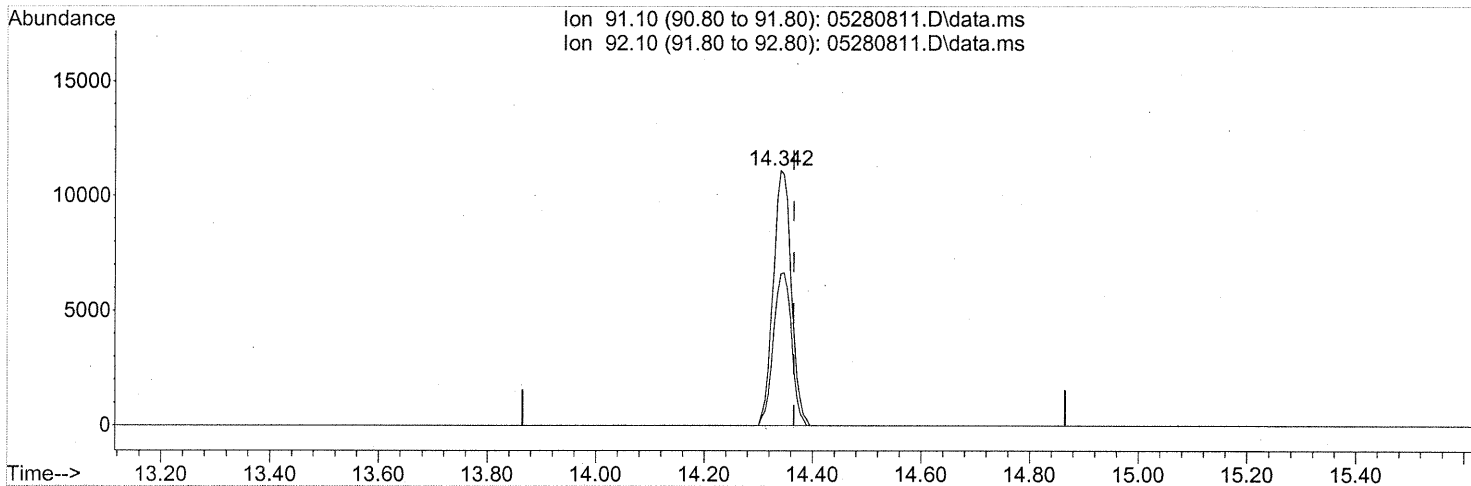
response 4858

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	18.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

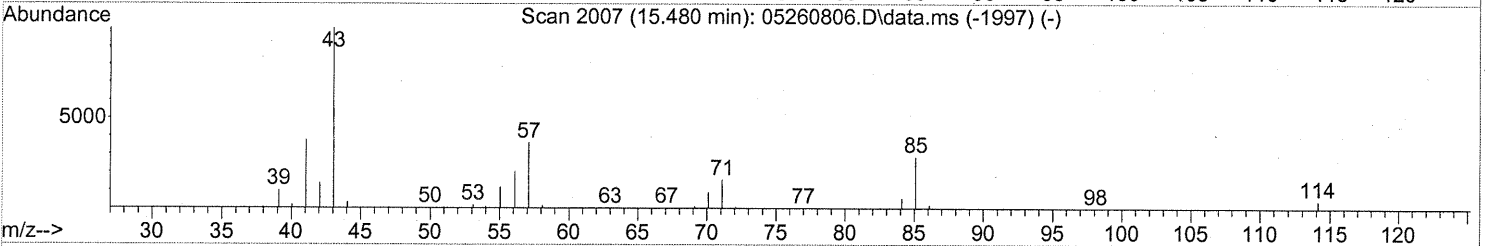
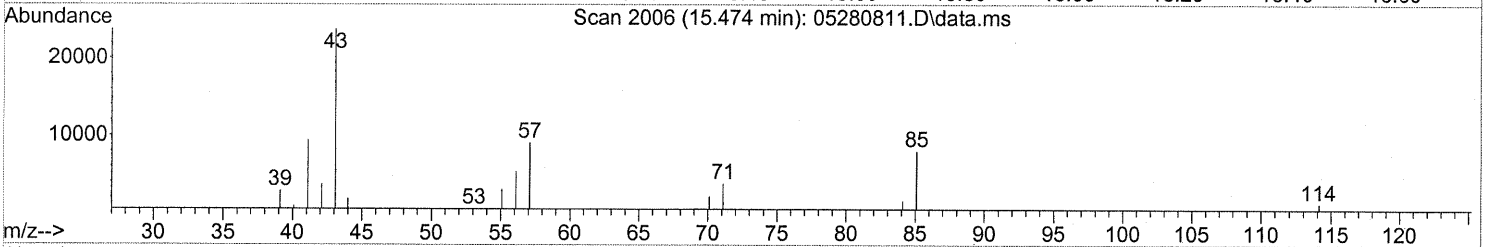
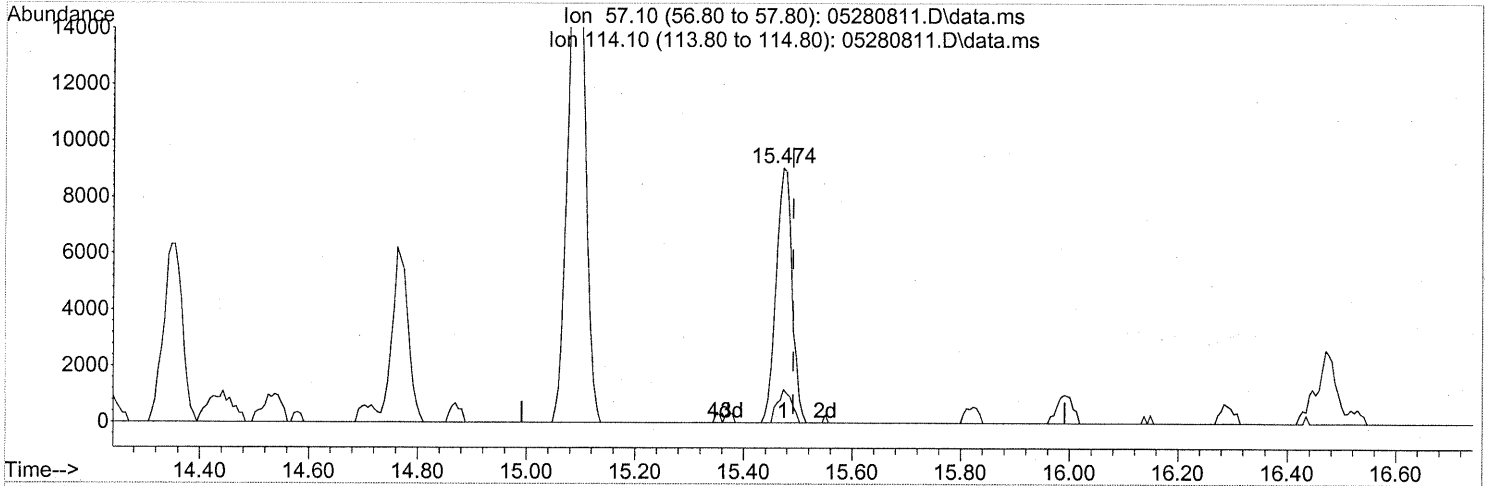
(58) Toluene (T)  
 14.342min (-0.024) 0.35ng  
 response 25765

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

(63) n-Octane (T)

15.474min (-0.018) 0.84ng

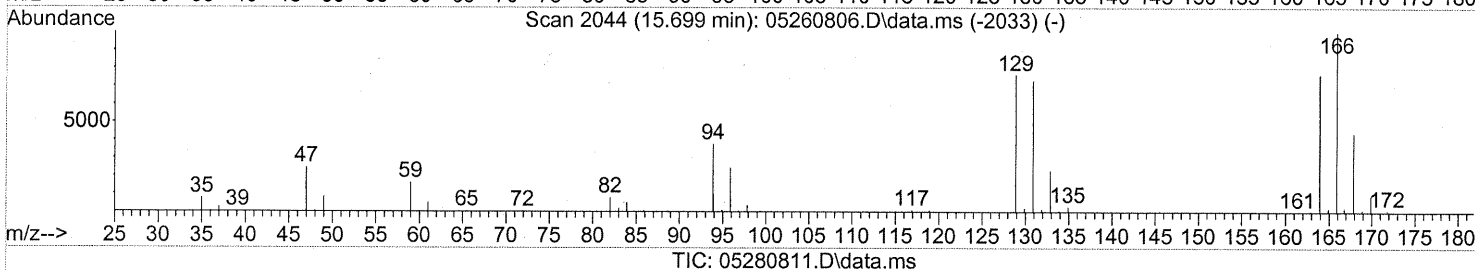
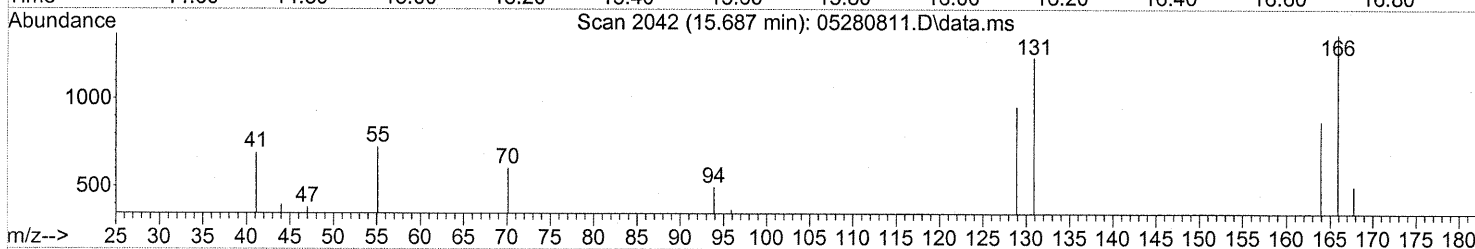
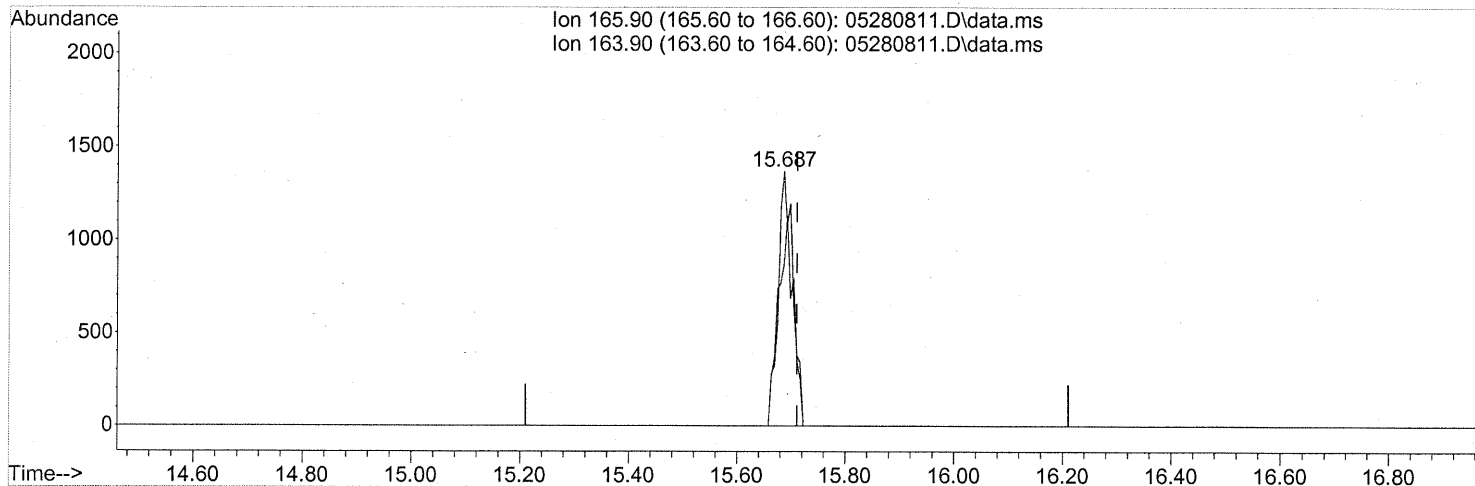
response 18607

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.687min (-0.024) 0.12ng

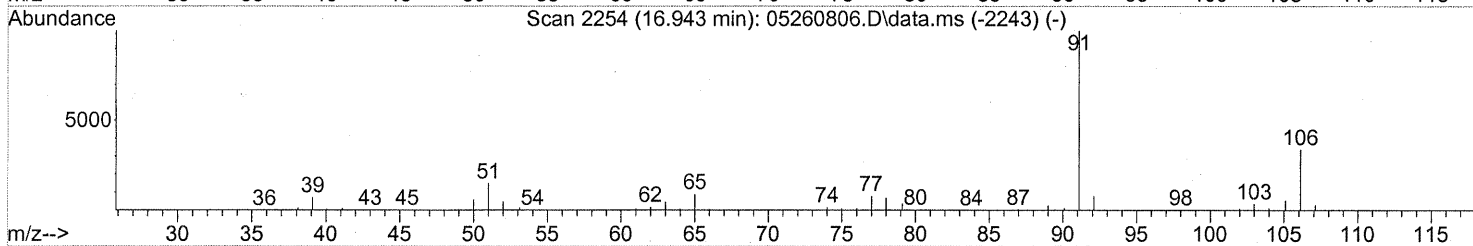
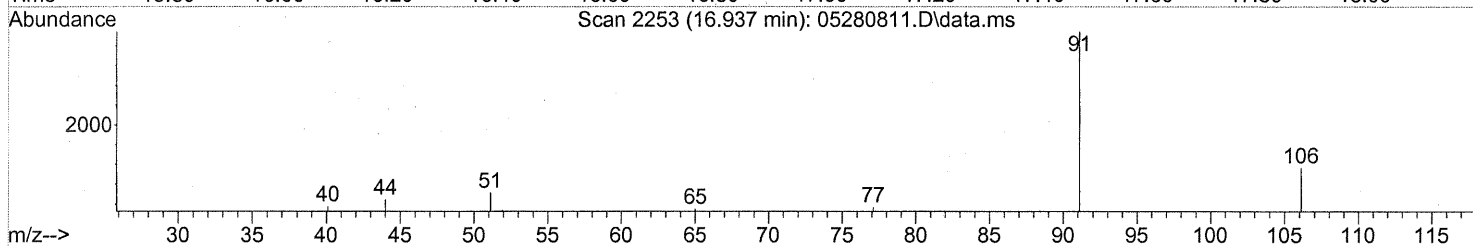
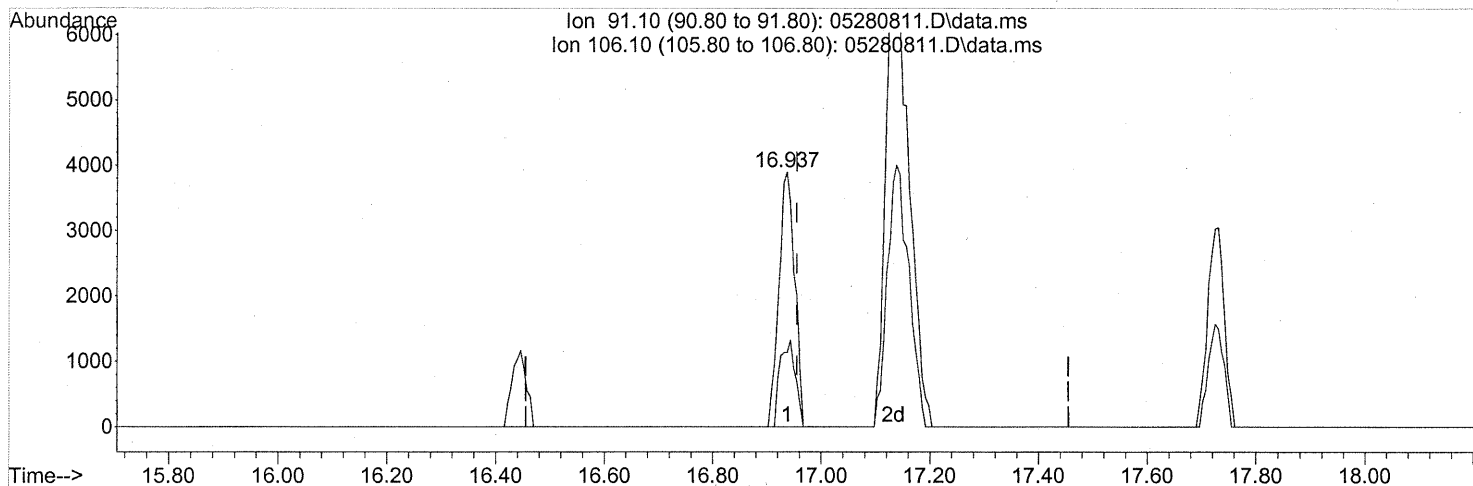
response 2602

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	84.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

(66) Ethylbenzene (T)  
 16.937min (-0.018) 0.09ng  
 response 7866

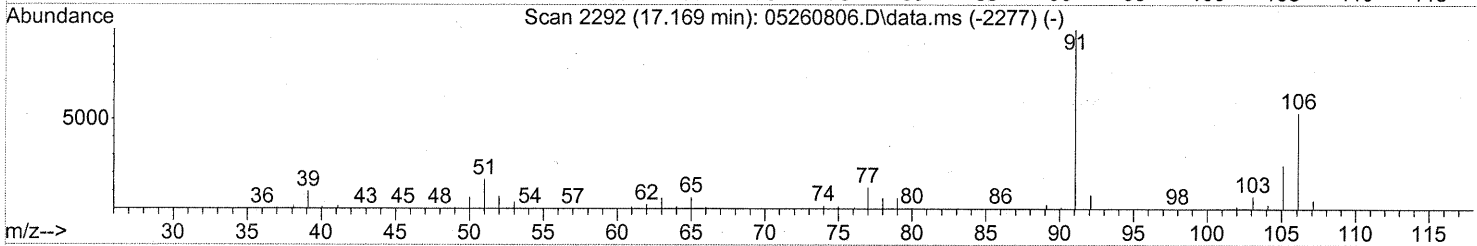
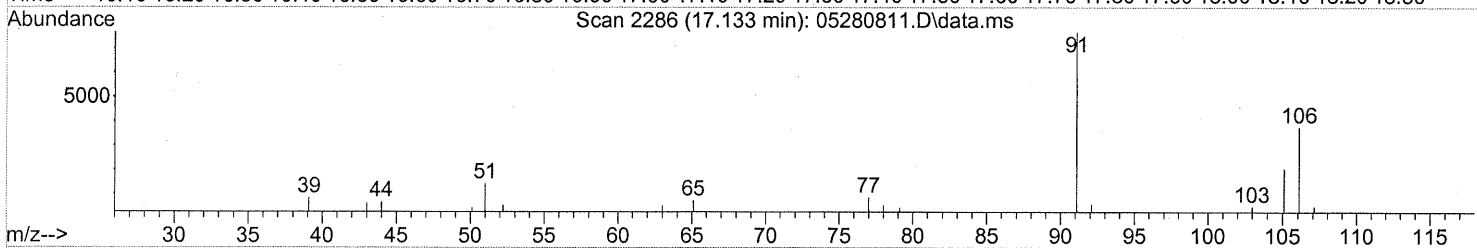
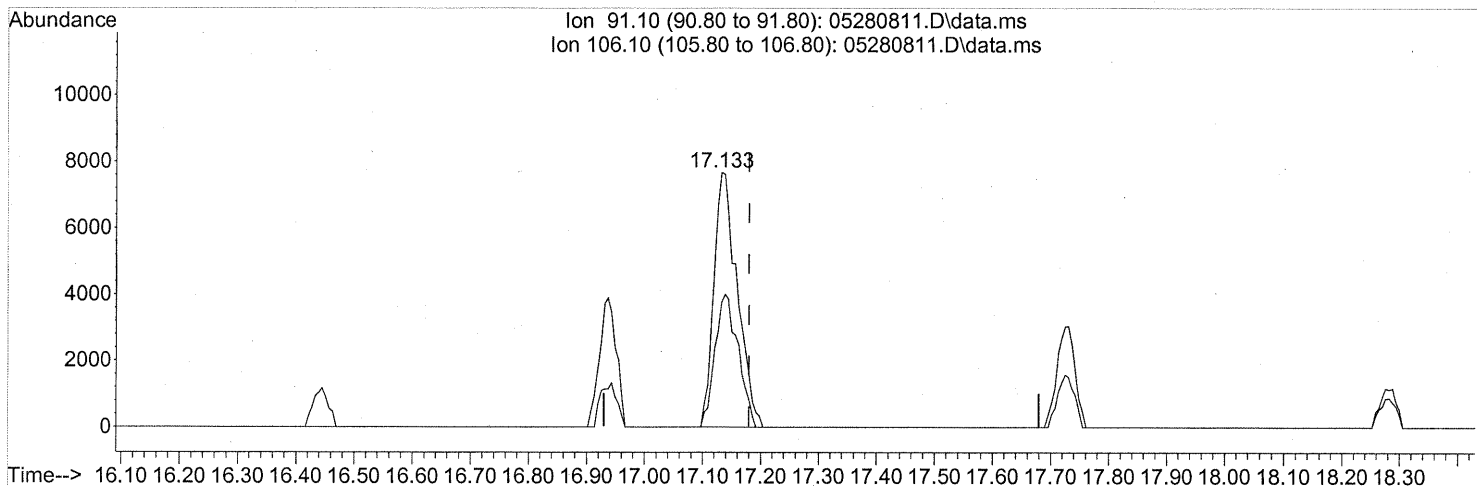
Ion	Exp%	Act%
91.10	100	100
106.10	29.90	32.82
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280811.D\data.ms

(67) m- & p-Xylene (T)

17.133min (-0.048) 0.39ng

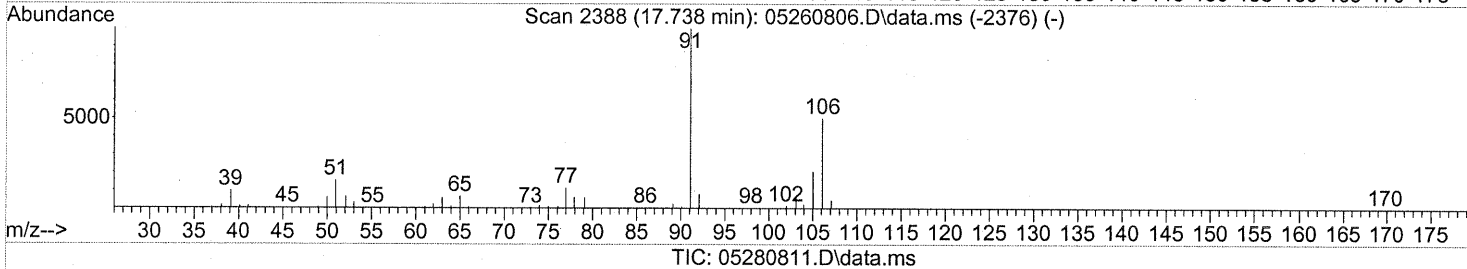
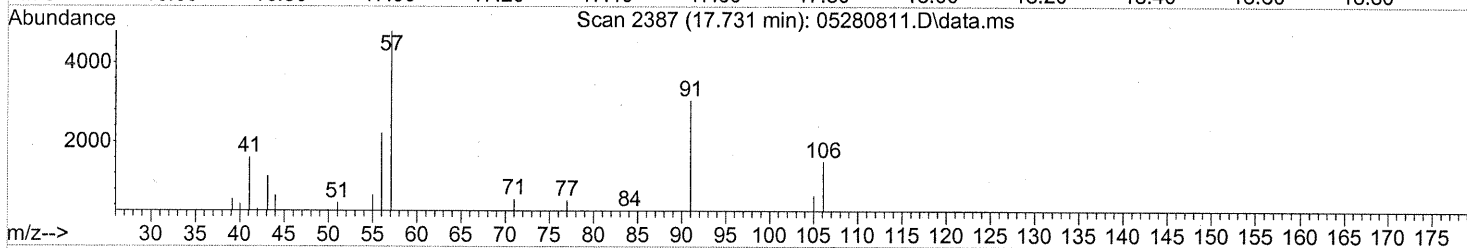
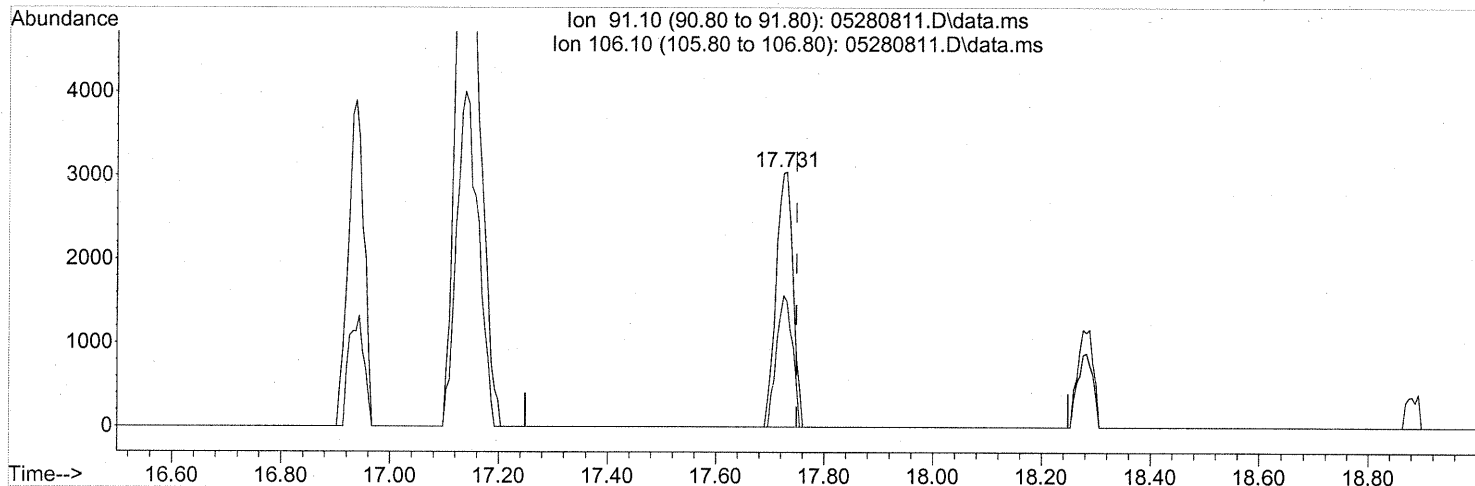
response 21339

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	51.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280811.D  
 Acq On : 28 May 2008 16:35  
 Operator : WA  
 Sample : P0801507-003 (10ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

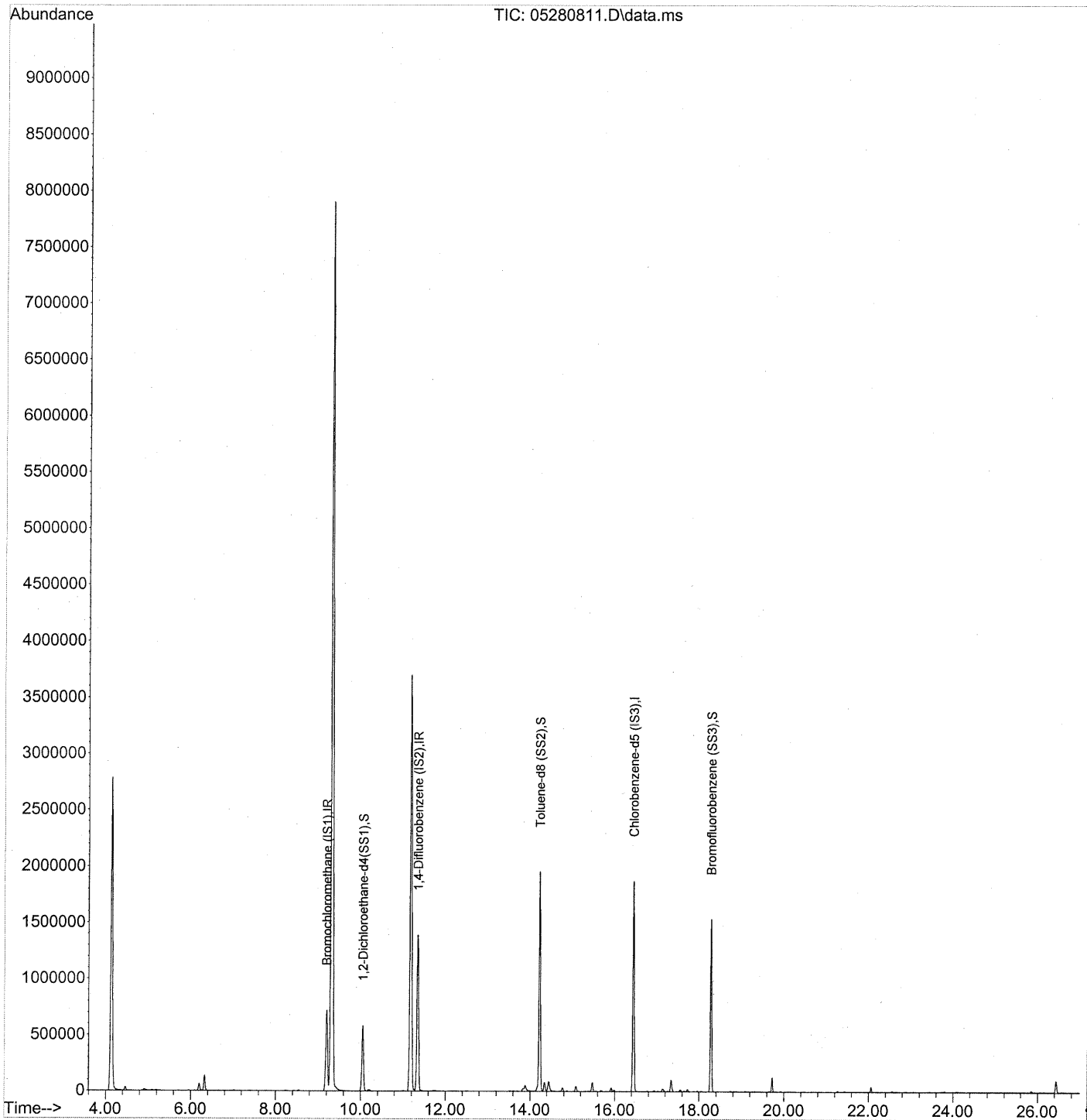


(70) o-Xylene (T)  
 17.731min (-0.018) 0.11ng  
 response 6601

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	48.28
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280811.D  
Acq On : 28 May 2008 16:35  
Operator : WA  
Sample : P0801507-003 (10ml)  
Misc : ENSR SG55B-05D (-3.8, 3.8) *SG29B-05 (-3.7, 3.5)*  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:47 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\

Data File : 05280811.D

Acq On : 28 May 2008 16:35

Operator : WA

Sample : P0801507-003 (10ml)

Misc : ENSR SG55B-05D (-3.8, 3.8)

ALS Vial : 1 Sample Multiplier: 1

SG29B-05 (-3.7, 3.5)

Quant Time: Jun 04 14:39:47 2008

Quant Method : J:\MS16\METHODS\S16052608.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Wed Jun 04 14:30:18 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	374160	25.000	ng	-0.04
3) 1,4-Difluorobenzene (IS2)	11.35	114	1530320	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	627102	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	530224	24.783	ng	-0.04
Spiked Amount	25.000					Recovery = 99.12%
5) Toluene-d8 (SS2)	14.22	98	1556601	24.077	ng	-0.02
Spiked Amount	25.000					Recovery = 96.32%
6) Bromofluorobenzene (SS3)	18.28	174	548184	25.503	ng	-0.01
Spiked Amount	25.000					Recovery = 102.00%
Target Compounds						
7) tert-Butylbenzene	19.72	119	1392		N.D.	Qvalue
8) n-Butylbenzene	0.00	91	0		N.D.	

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

Data Path : J:\MS16\DATA\2008\_05\29\

Data File : 05290805.D

Acq On : 29 May 2008 11:32 am

Operator : WA

Sample : P0801507-003 Dil (1.0ml)

Misc : ENSR SG29B-05 (-3.7, 3.5)

ALS Vial : 1 Sample Multiplier: 1

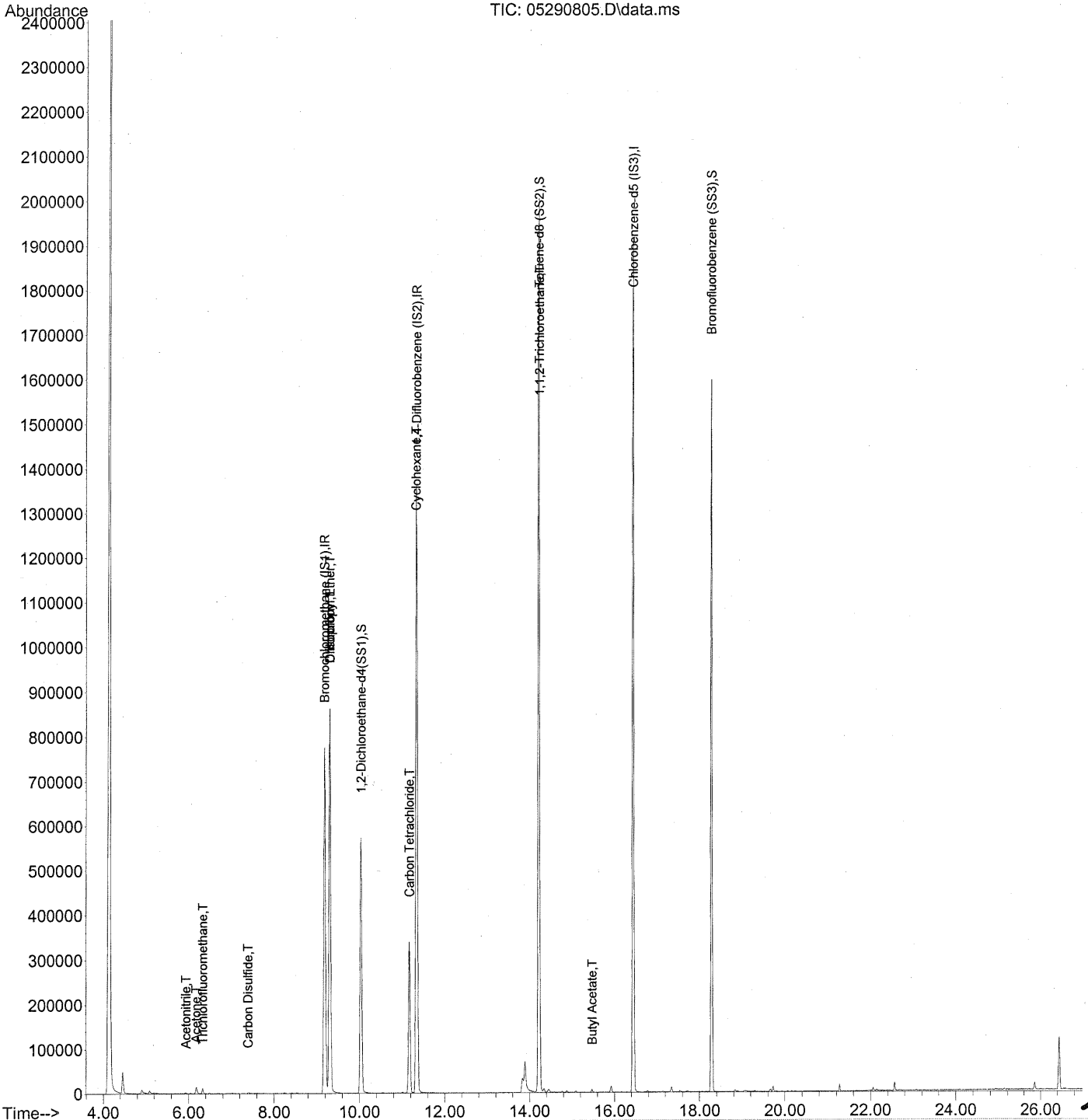
Quant Time: May 29 12:48:48 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290805.D  
 Acq On : 29 May 2008 11:32 am  
 Operator : WA  
 Sample : P0801507-003 Dil (1.0ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:48:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	381287	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1569012	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	645319	25.000	ng	-0.02

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	539213	24.732	ng	-0.05	
Spiked Amount				25.000			
				Recovery	=	98.92%	✓
57) Toluene-d8 (SS2)	14.22	98	1598300	24.024	ng	-0.02	
Spiked Amount				25.000			
				Recovery	=	96.08%	✓
73) Bromofluorobenzene (SS3)	18.28	174	574670	25.980	ng	-0.01	
Spiked Amount				25.000			
				Recovery	=	103.92%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1036		N.D.	
3) Dichlorodifluoromethane	0.00	85	0		N.D.	
4) Chloromethane	4.77	50	92		N.D.	
5) Freon 114	0.00	135	0		N.D.	
6) Vinyl Chloride	0.00	62	0		N.D.	
7) 1,3-Butadiene	0.00	54	0		N.D.	
8) Bromomethane	0.00	94	0		N.D.	
9) Chloroethane	0.00	64	0		N.D.	
10) Ethanol	0.00	45	0		N.D.	
11) Acetonitrile	5.94	41	3038	0.053	ng	# 1
12) Acrolein	6.05	56	653		N.D.	
13) Acetone	6.18	58	8473	0.425	ng	# 62
14) Trichlorofluoromethane	6.33	101	12164	0.364	ng	99
15) Isopropanol	6.40	45	345		N.D.	
16) Acrylonitrile	0.00	53	0		N.D.	
17) 1,1-Dichloroethene	0.00	96	0		N.D.	
18) tert-Butanol	0.00	59	0		N.D.	
19) Methylene Chloride	7.03	84	388		N.D.	
20) Allyl Chloride	7.15	41	90		N.D.	
21) Trichlorotrifluoroethane	0.00	151	0		N.D.	
22) Carbon Disulfide	7.40	76	4374	0.071	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0		N.D.	
24) 1,1-Dichloroethane	0.00	63	0		N.D.	
25) Methyl tert-Butyl Ether	0.00	73	0		N.D.	
26) Vinyl Acetate	0.00	86	0		N.D.	
27) 2-Butanone	0.00	72	0		N.D.	
28) cis-1,2-Dichloroethene	0.00	61	0		N.D.	
29) Diisopropyl Ether	9.31	87	93251	6.797	ng	# 1
30) Ethyl Acetate	0.00	61	0		N.D.	
31) n-Hexane	9.22	57	92		N.D.	

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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290805.D  
 Acq On : 29 May 2008 11:32 am  
 Operator : WA  
 Sample : P0801507-003 Dil (1.0ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:48:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	861929	38.308 ng		96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.01	78	2601	N.D.		
42) Carbon Tetrachloride	11.17	117	292024	10.762 ng		98
43) Cyclohexane	11.33	84	1750	0.068 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	99	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	137143	8.524 ng	#	7
58) Toluene	14.34	91	3395	N.D.		
59) 2-Hexanone	14.58	43	480	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	4313	0.060 ng	#	69
63) n-Octane	15.47	57	1104	N.D.		
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	965	N.D.		
67) m- & p-Xylene	17.13	91	2392	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	647	N.D.		
71) n-Nonane	17.96	43	368	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.45	105	90	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.18	105	261	N.D.		
78) 4-Ethyltoluene	19.33	105	106	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	106	N.D.		

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290805.D  
Acq On : 29 May 2008 11:32 am  
Operator : WA  
Sample : P0801507-003 Dil (1.0ml)  
Misc : ENSR SG29B-05 (-3.7, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:48:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0		N.D.	
81) 2-Ethyltoluene	19.82	105	263		N.D.	
82) 1,2,4-Trimethylbenzene	19.82	105	263		N.D.	
83) n-Decane	19.92	57	219		N.D.	
84) Benzyl Chloride	19.99	91	222		N.D.	
85) 1,3-Dichlorobenzene	20.10	146	207		N.D.	
86) 1,4-Dichlorobenzene	20.10	146	207		N.D.	
87) sec-Butylbenzene	20.34	105	110		N.D.	
88) p-Isopropyltoluene	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	20.34	105	110		N.D.	
90) 1,2-Dichlorobenzene	20.52	146	99		N.D.	
91) d-Limonene	0.00	68	0		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	21.43	57	99		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.69	128	2804		N.D.	
96) n-Dodecane	22.67	57	145		N.D.	
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

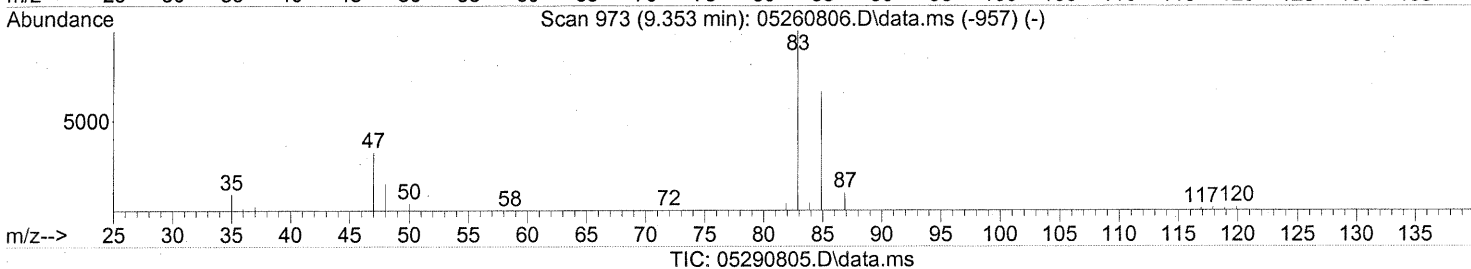
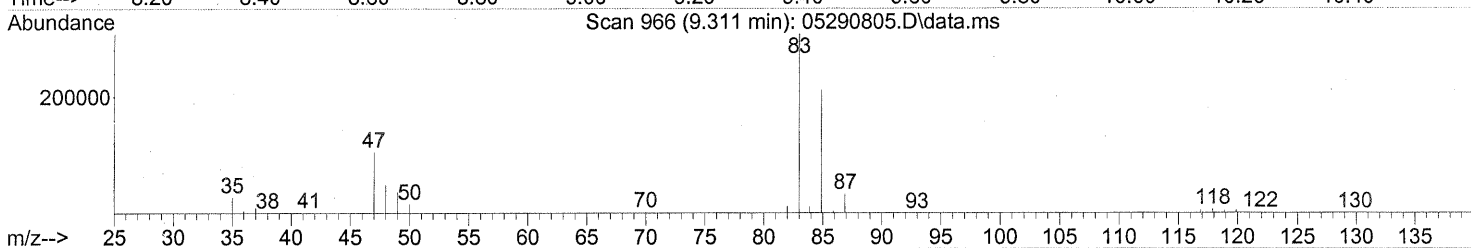
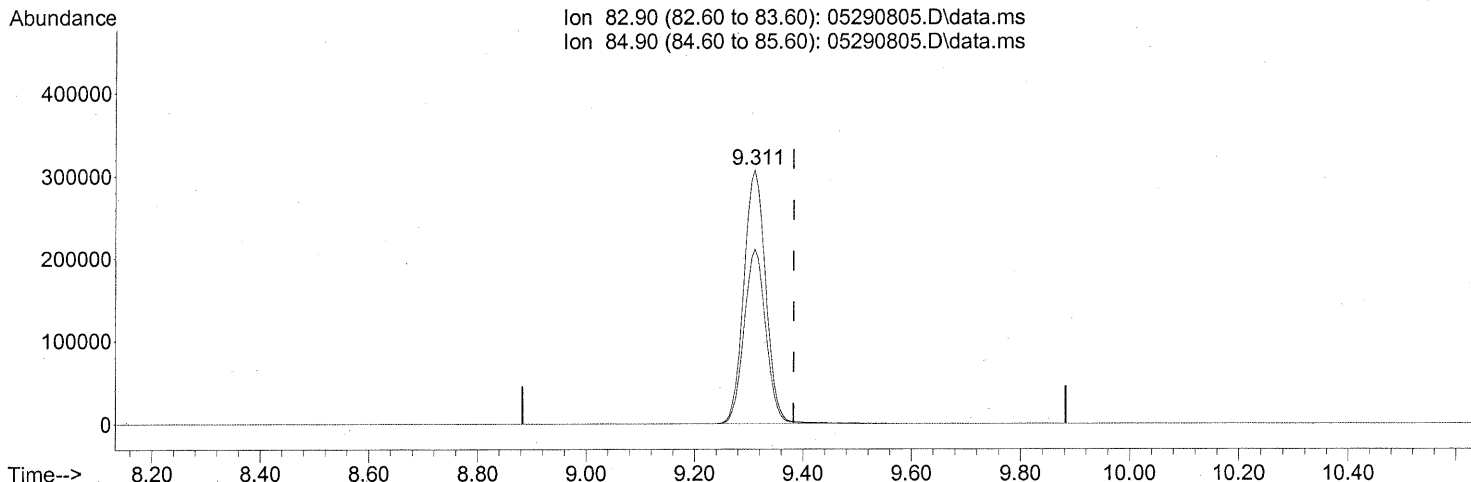
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290805.D  
Acq On : 29 May 2008 11:32 am  
Operator : WA  
Sample : P0801507-003 Dil (1.0ml)  
Misc : ENSR SG29B-05 (-3.7, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:48:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(32) Chloroform (T)

9.311min (-0.071) 38.31ng

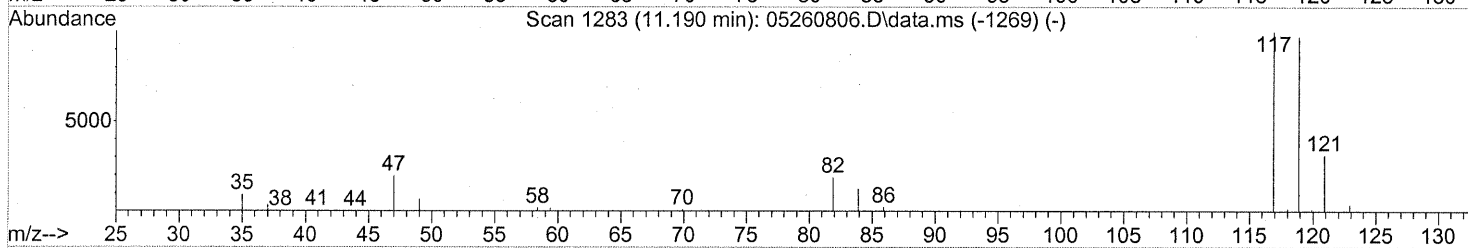
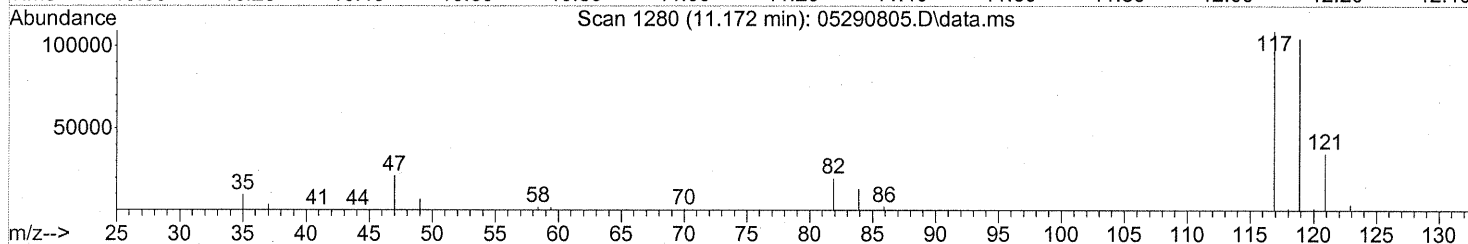
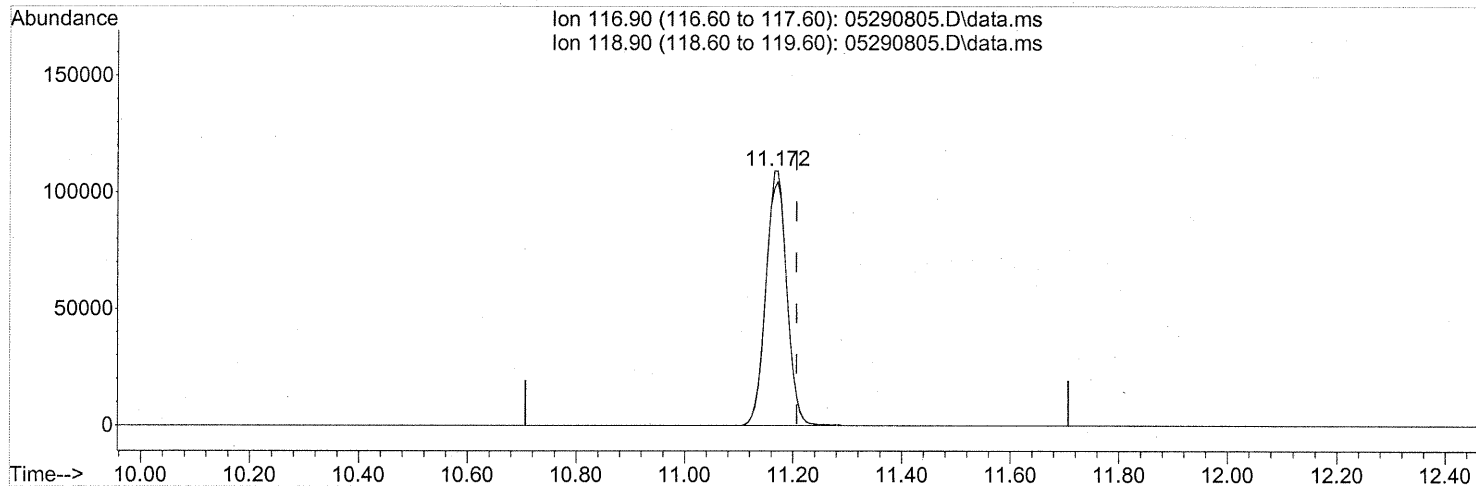
response 861929

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290805.D  
 Acq On : 29 May 2008 11:32  
 Operator : WA  
 Sample : P0801507-003 Dil (1.0ml)  
 Misc : ENSR SG29B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:48:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.172min (-0.036) 10.76ng

response 292024

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	97.36
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG59B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00987

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	43	4.3	ND	8.8	0.88	
74-87-3	Chloromethane	ND	8.7	4.3	ND	4.2	2.1	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	43	4.3	ND	6.2	0.62	
75-01-4	Vinyl Chloride	ND	8.7	4.3	ND	3.4	1.7	
74-83-9	Bromomethane	ND	8.7	4.3	ND	2.2	1.1	
75-00-3	Chloroethane	ND	8.7	4.3	ND	3.3	1.6	
64-17-5	Ethanol	ND	430	4.3	ND	230	2.3	
67-64-1	<b>Acetone</b>	<b>35</b>	430	6.3	<b>15</b>	180	2.7	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>230</b>	8.7	4.3	<b>42</b>	1.5	0.77	
107-13-1	Acrylonitrile	ND	43	6.1	ND	20	2.8	
75-35-4	1,1-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	43	6.4	ND	14	2.1	
75-09-2	<b>Methylene Chloride</b>	<b>4.3</b>	43	4.3	<b>1.2</b>	12	1.2	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	8.7	4.3	ND	2.8	1.4	
76-13-1	Trichlorotrifluoroethane	ND	8.7	4.8	ND	1.1	0.63	
75-15-0	Carbon Disulfide	ND	43	10	ND	14	3.3	
156-60-5	trans-1,2-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
75-34-3	1,1-Dichloroethane	ND	8.7	4.3	ND	2.1	1.1	
1634-04-4	Methyl tert-Butyl Ether	ND	8.7	4.3	ND	2.4	1.2	
108-05-4	Vinyl Acetate	ND	430	14	ND	120	3.9	
78-93-3	2-Butanone (MEK)	ND	43	4.3	ND	15	1.5	
156-59-2	cis-1,2-Dichloroethene	ND	8.7	4.3	ND	2.2	1.1	
108-20-3	Diisopropyl Ether	ND	43	5.1	ND	10	1.2	
67-66-3	<b>Chloroform</b>	<b>17,000</b>	8.7	5.1	<b>3,500</b>	1.8	1.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR

**Client Sample ID:** SG59B-05

**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

CAS Sample ID: P0801507-004

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Wida Ang

Sampling Media: 6.0 L Summa Canister

Test Notes:

Container ID: SC00987

Date Collected: 5/19/08

Date Received: 5/21/08

Date Analyzed: 5/27 - 5/28/08

Volume(s) Analyzed: 0.020 Liter(s)

0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	43	4.4	ND	10	1.1	
107-06-2	1,2-Dichloroethane	ND	8.7	4.3	ND	2.1	1.1	
71-55-6	1,1,1-Trichloroethane	ND	8.7	4.3	ND	1.6	0.79	
71-43-2	<b>Benzene</b>	<b>8.7</b>	8.7	4.3	<b>2.7</b>	2.7	1.4	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>160</b>	8.7	4.3	<b>26</b>	1.4	0.69	
994-05-8	tert-Amyl Methyl Ether	ND	43	4.3	ND	10	1.0	
78-87-5	1,2-Dichloropropane	ND	8.7	4.3	ND	1.9	0.94	
75-27-4	Bromodichloromethane	ND	8.7	4.3	ND	1.3	0.65	
79-01-6	Trichloroethene	ND	8.7	4.3	ND	1.6	0.81	
123-91-1	1,4-Dioxane	ND	43	5.3	ND	12	1.5	
80-62-6	Methyl Methacrylate	ND	43	6.5	ND	11	1.6	
142-82-5	n-Heptane	ND	43	5.5	ND	11	1.4	
10061-01-5	cis-1,3-Dichloropropene	ND	43	4.5	ND	9.5	0.99	
108-10-1	4-Methyl-2-pentanone	ND	43	4.8	ND	11	1.2	
10061-02-6	trans-1,3-Dichloropropene	ND	43	5.4	ND	9.5	1.2	
79-00-5	1,1,2-Trichloroethane	ND	8.7	4.3	ND	1.6	0.79	
108-88-3	<b>Toluene</b>	<b>67</b>	43	4.3	<b>18</b>	11	1.1	
591-78-6	2-Hexanone	ND	43	6.6	ND	11	1.6	
124-48-1	Dibromochloromethane	ND	8.7	5.9	ND	1.0	0.69	
106-93-4	1,2-Dibromoethane	ND	8.7	4.7	ND	1.1	0.61	
111-65-9	<b>n-Octane</b>	<b>85</b>	43	4.3	<b>18</b>	9.3	0.93	
127-18-4	<b>Tetrachloroethene</b>	<b>8.0</b>	8.7	4.3	<b>1.2</b>	1.3	0.64	<b>J</b>
108-90-7	Chlorobenzene	ND	8.7	4.4	ND	1.9	0.96	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG59B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-004

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00987

Date Collected: 5/19/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -4.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.73

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	10	43	5.4	2.3	10	1.2	J
179601-23-1	m,p-Xylenes	48	43	11	11	10	2.6	
75-25-2	Bromoform	ND	43	6.6	ND	4.2	0.64	
100-42-5	Styrene	ND	43	6.6	ND	10	1.5	
95-47-6	o-Xylene	15	43	5.4	3.5	10	1.3	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.7	5.5	ND	1.3	0.81	
98-82-8	Cumene	ND	43	4.8	ND	8.8	0.99	
103-65-1	n-Propylbenzene	ND	43	4.5	ND	8.8	0.92	
622-96-8	4-Ethyltoluene	ND	43	4.9	ND	8.8	1.0	
108-67-8	1,3,5-Trimethylbenzene	ND	43	5.2	ND	8.8	1.1	
98-83-9	alpha-Methylstyrene	ND	43	6.3	ND	9.0	1.3	
95-63-6	1,2,4-Trimethylbenzene	ND	43	6.0	ND	8.8	1.2	
100-44-7	Benzyl Chloride	ND	8.7	7.4	ND	1.7	1.4	
541-73-1	1,3-Dichlorobenzene	ND	8.7	5.4	ND	1.4	0.89	
106-46-7	1,4-Dichlorobenzene	23	8.7	4.8	3.9	1.4	0.81	
135-98-8	sec-Butylbenzene	ND	43	5.0	ND	7.9	0.91	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	43	5.6	ND	7.9	1.0	
95-50-1	1,2-Dichlorobenzene	ND	8.7	5.7	ND	1.4	0.95	
96-12-8	1,2-Dibromo-3-chloropropane	ND	43	6.6	ND	4.5	0.68	
120-82-1	1,2,4-Trichlorobenzene	ND	8.7	6.6	ND	1.2	0.89	
91-20-3	Naphthalene	ND	17	6.4	ND	3.3	1.2	
87-68-3	Hexachlorobutadiene	ND	8.7	7.8	ND	0.81	0.73	
98-06-6	tert-Butylbenzene	ND	17	4.3	ND	3.2	0.79	
104-51-8	n-Butylbenzene	ND	17	4.3	ND	3.2	0.79	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

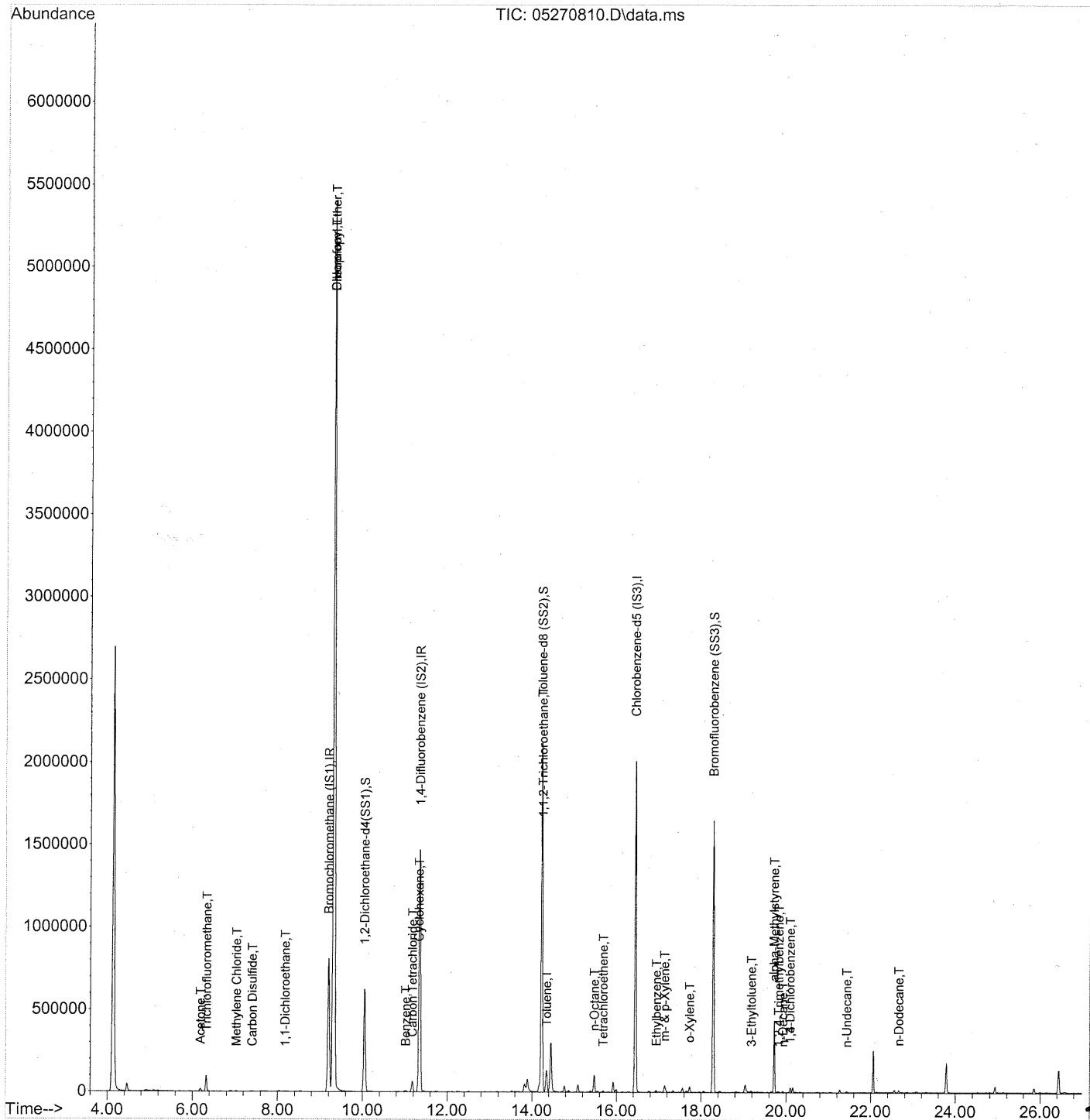
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	406437	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1677305	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	674760	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	570492	24.548	ng	-0.05
Spiked Amount	25.000			Recovery =	98.20%	✓
57) Toluene-d8 (SS2)	14.23	98	1700871	24.450	ng	-0.02
Spiked Amount	25.000			Recovery =	97.80%	✓
73) Bromofluorobenzene (SS3)	18.28	174	593854	25.676	ng	-0.01
Spiked Amount	25.000			Recovery =	102.72%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1427	N.D.		
3) Dichlorodifluoromethane	4.56	85	773	N.D.	✓	
4) Chloromethane	4.76	50	110	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.68	45	693	N.D.	✓	
11) Acetonitrile	5.95	41	2766	N.D.		
12) Acrolein	6.08	56	708	N.D.		
13) Acetone	6.19	58	8508	0.401	ng	# 62
14) Trichlorofluoromethane	6.33	101	96053	2.696	ng	99
15) Isopropanol	6.38	45	538	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	7.09	59	90	N.D.	✓	
19) Methylene Chloride	7.03	84	825	0.050	ng	✓ # 9
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.41	76	3690	0.056	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	2214	0.064	ng	✓ # 50
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.53	72	516	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.32	87	627442	42.901	ng	✓ # 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	93	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	5810600	<del>242.269</del> ng	<i>su dil</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.16	62	228	N.D. ✓		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.80	56	699	N.D.		
41) Benzene	11.02	78	7062	0.100 ng		99
42) Carbon Tetrachloride	11.18	117	54780	1.889 ng		99
43) Cyclohexane	11.33	84	2346	0.085 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.13	83	406	N.D. ✓		
47) Trichloroethene	0.00	130	0	N.D. ✓		
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.25	57	4361	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D. ✓		
51) n-Heptane	12.50	71	94	N.D. ✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.19	58	851	N.D. ✓		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	143346	8.334 ng	NR #	7
58) Toluene	14.35	91	61279	0.777 ng		98
59) 2-Hexanone	14.59	43	2483	N.D. ✓		
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.38	43	331	N.D.		
63) n-Octane	15.47	57	23438	0.982 ng		94
64) Tetrachloroethene	15.69	166	2166	0.093 ng		100
65) Chlorobenzene	16.50	112	90	N.D. ✓		
66) Ethylbenzene	16.94	91	10473	0.117 ng		91
67) m- & p-Xylene	17.14	91	32961	0.555 ng		91
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	17.58	104	102	N.D. ✓		
70) o-Xylene	17.73	91	11076	0.174 ng		98
71) n-Nonane	17.97	43	2407	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. ✓		
74) Cumene	18.45	105	123	N.D. ✓		
75) alpha-Pinene	18.92	93	207	N.D. ✓		
76) n-Propylbenzene	19.07	91	1555	N.D. ✓		
77) 3-Ethyltoluene	19.18	105	6136	0.060 ng		96
78) 4-Ethyltoluene	19.24	105	2205	N.D. ✓		
79) 1,3,5-Trimethylbenzene	19.33	105	2794	N.D. ✓		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

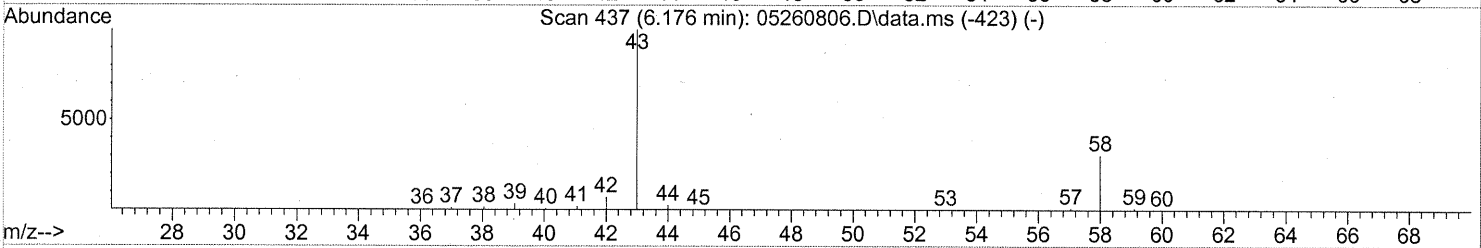
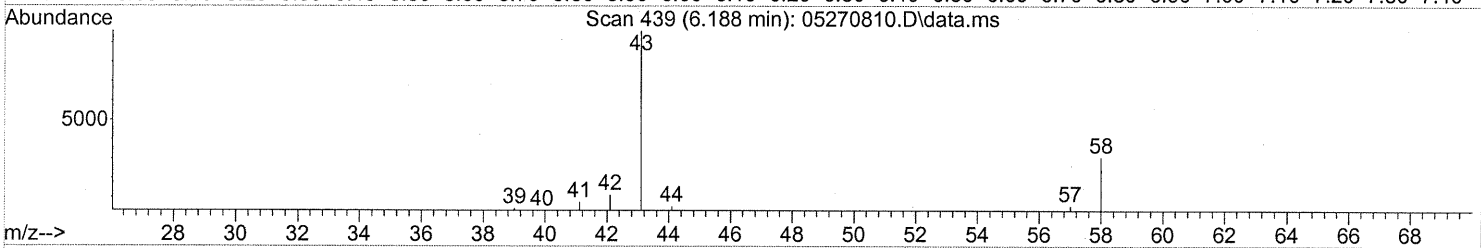
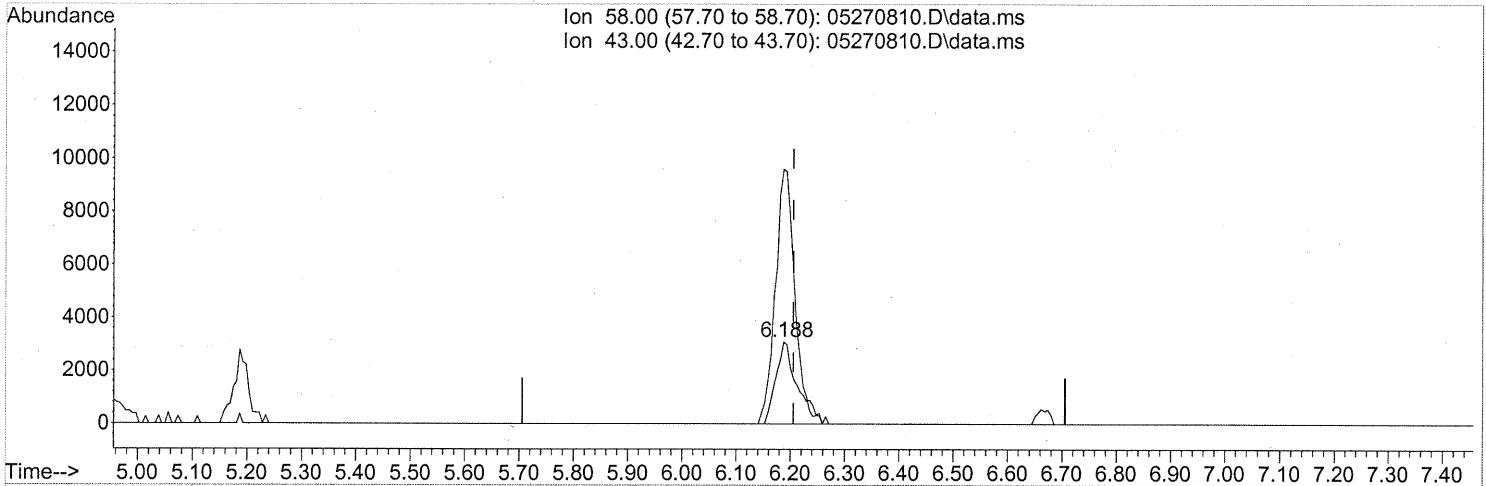
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	3960	<del>0.087</del>	ng	UR# 17
81) 2-Ethyltoluene	19.57	105	1969	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	4790	<del>0.058</del>	ng	100
83) n-Decane	19.92	57	3516	0.060	ng	71
84) Benzyl Chloride	19.99	91	89	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	13594	<del>0.261</del>	ng	UR 97
86) 1,4-Dichlorobenzene	<u>20.10</u>	146	13594	<u>0.269</u>	ng	97
87) sec-Butylbenzene	20.16	105	91	N.D.		
88) p-Isopropyltoluene	20.34	119	365	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	1470	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	3146	0.052	ng	# 70
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	3243	N.D.		
96) n-Dodecane	22.66	57	5859	0.098	ng	# 71
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270810.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 0.40ng

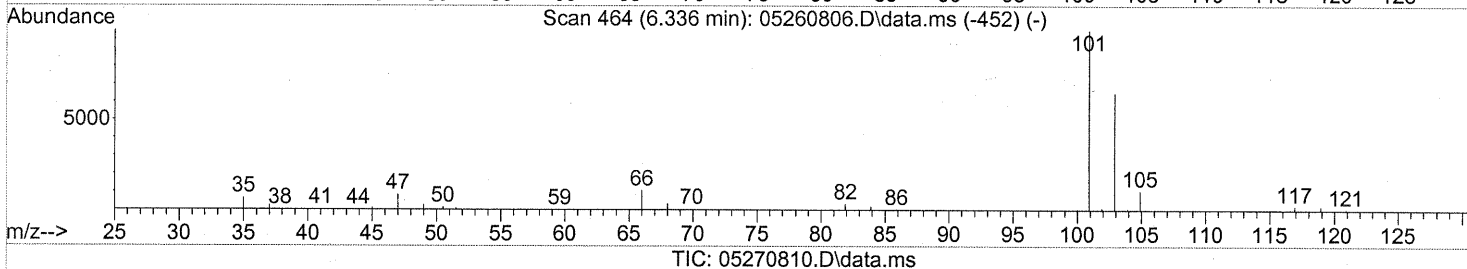
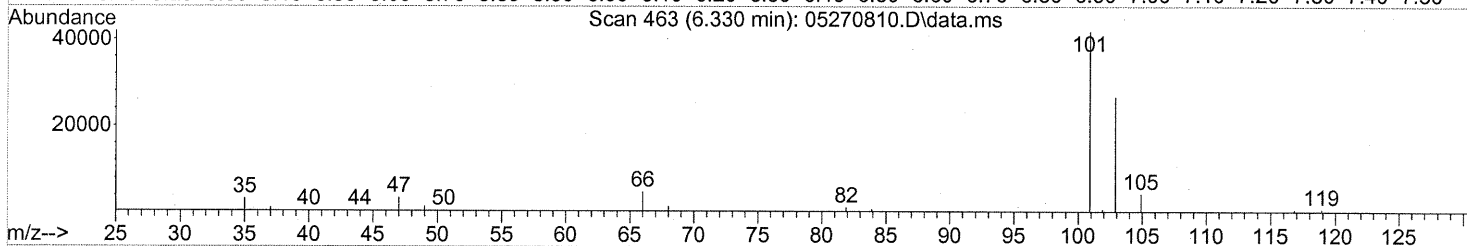
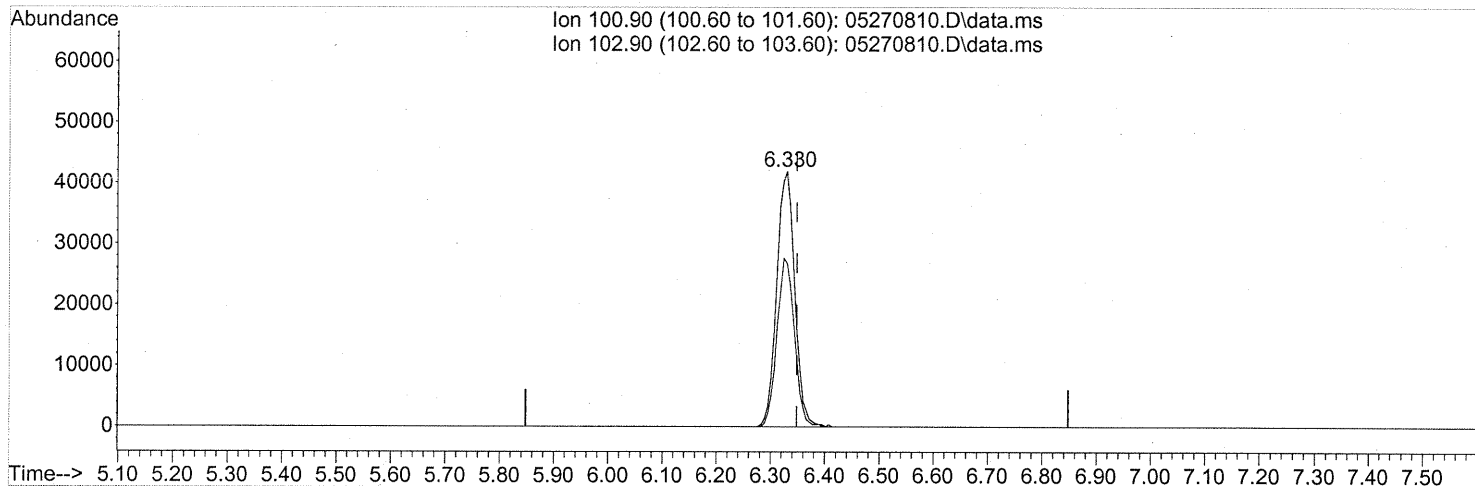
response 8508

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	283.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270810.D  
Acq On : 27 May 2008 18:34  
Operator : WA  
Sample : P0801507-004 (20ml)  
Misc : ENSR SG59B-05 (-4.2, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

6.330min (-0.018) 2.70ng

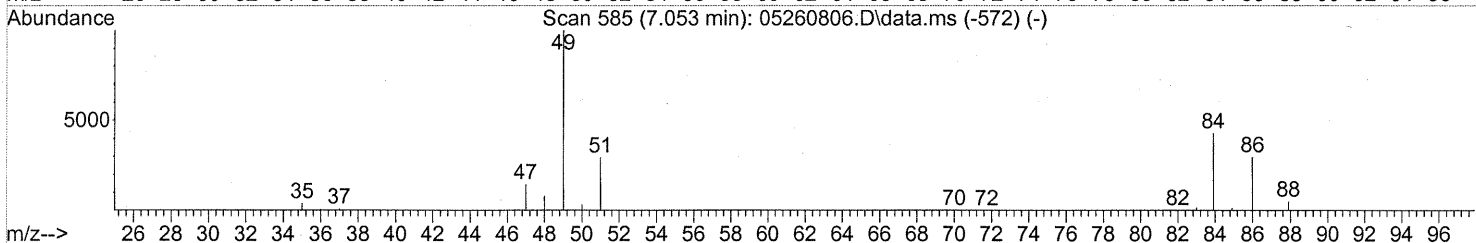
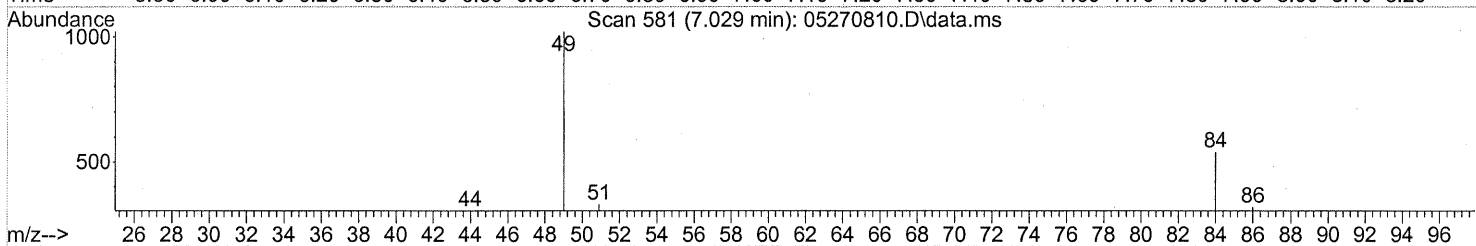
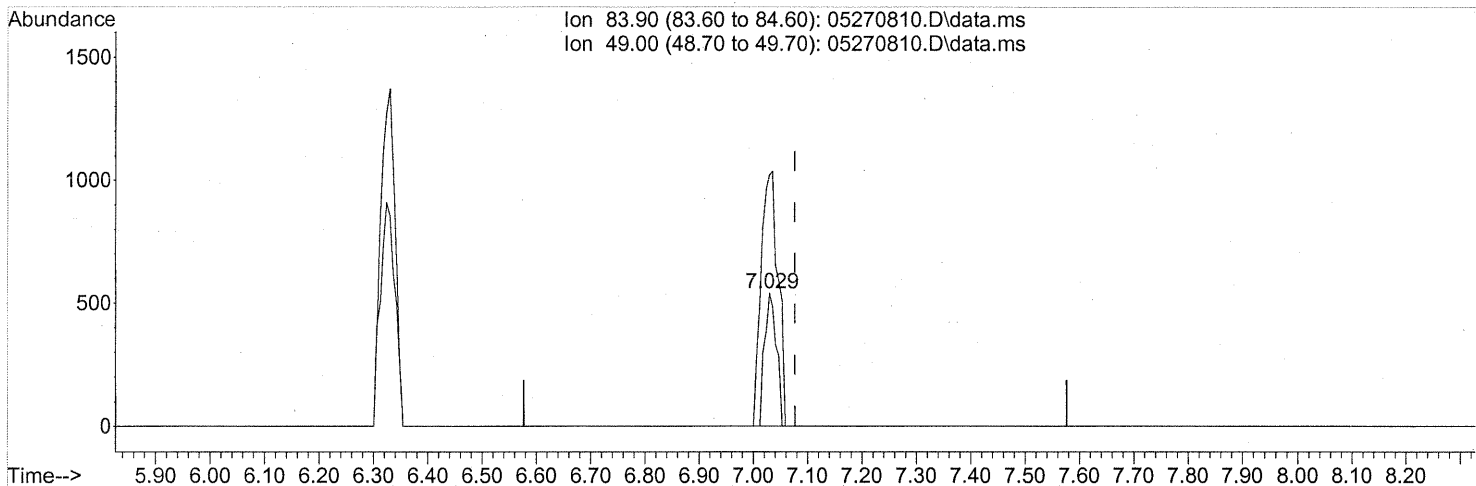
response 96053

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	63.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270810.D\data.ms

(19) Methylene Chloride (T)

7.029min (-0.048) 0.05ng

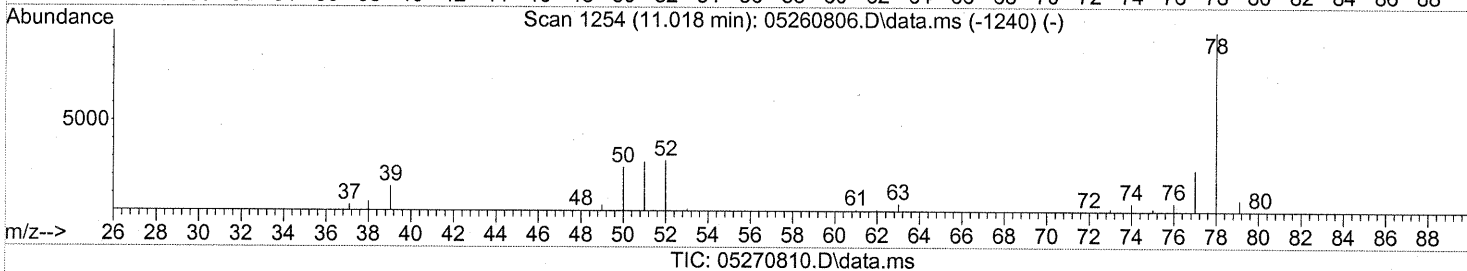
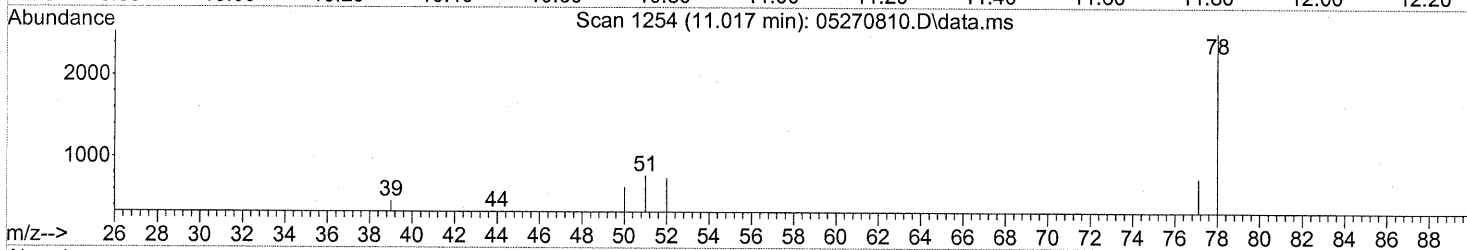
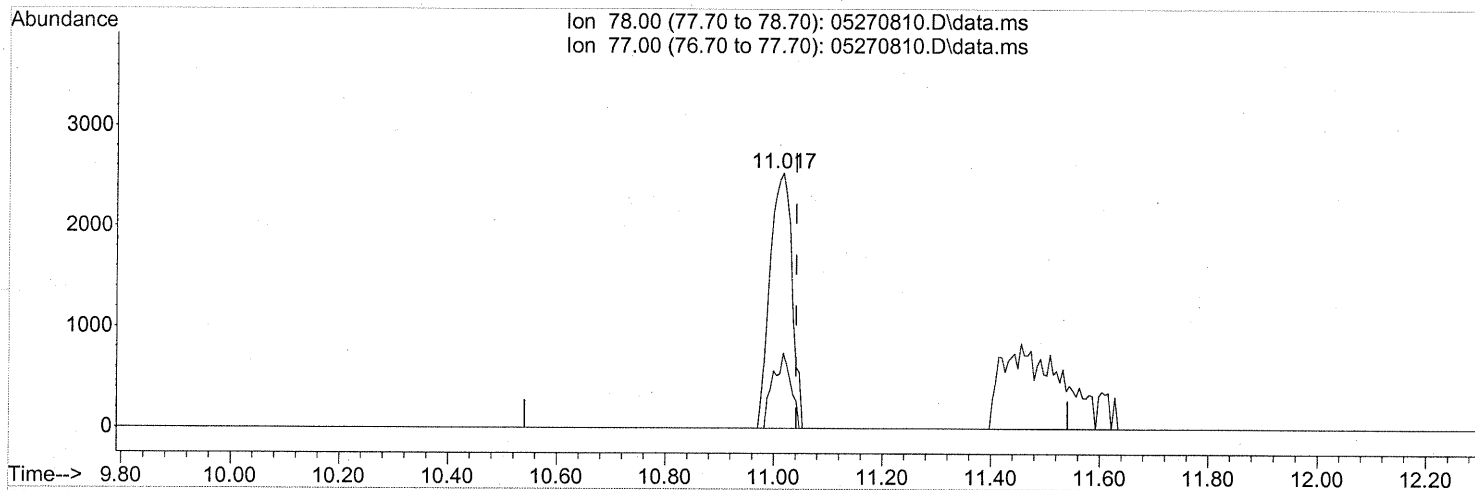
response 825

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	273.45#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270810.D  
Acq On : 27 May 2008 18:34  
Operator : WA  
Sample : P0801507-004 (20ml)  
Misc : ENSR SG59B-05 (-4.2, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration

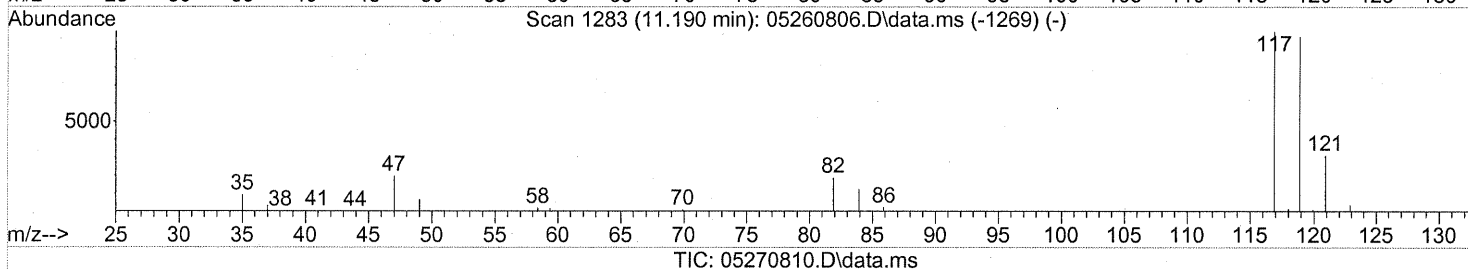
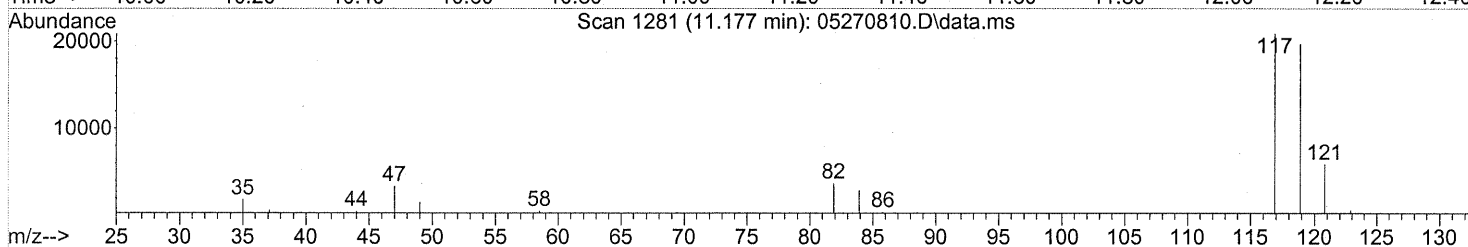
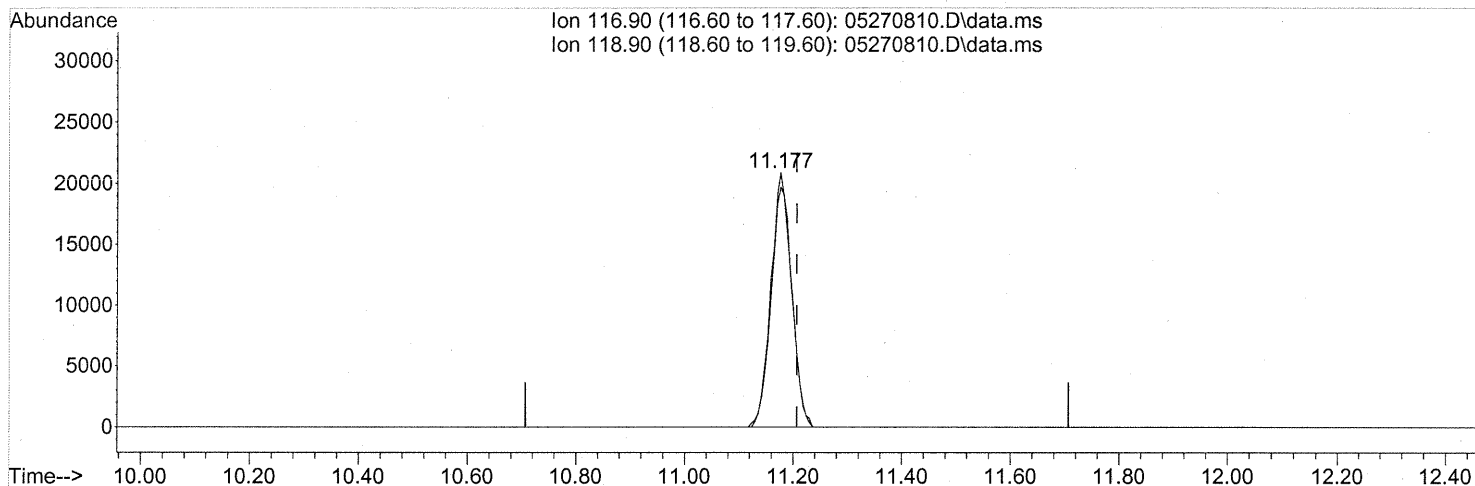


(41) Benzene (T)  
11.017min (-0.024) 0.10ng  
response 7062  
Ion Exp% Act%  
78.00 100 100  
77.00 23.50 23.99  
0.00 0.00 0.00  
0.00 0.00 0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.177min (-0.030) 1.89ng

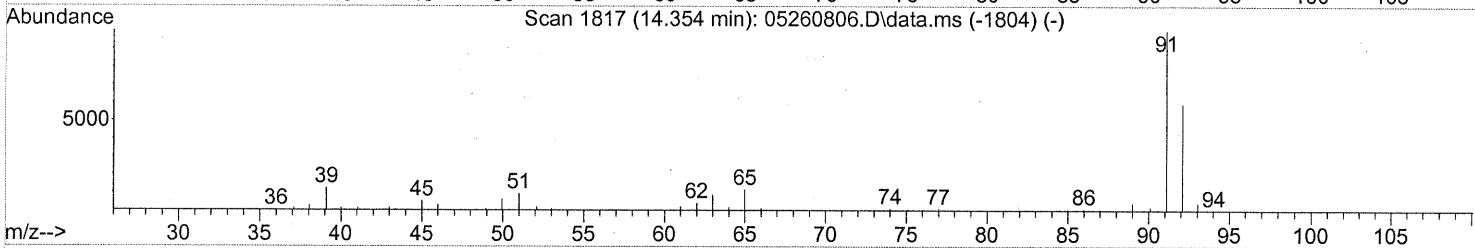
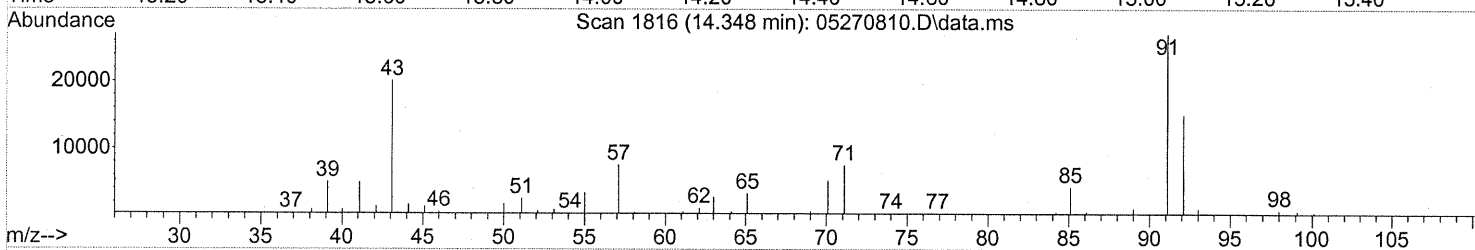
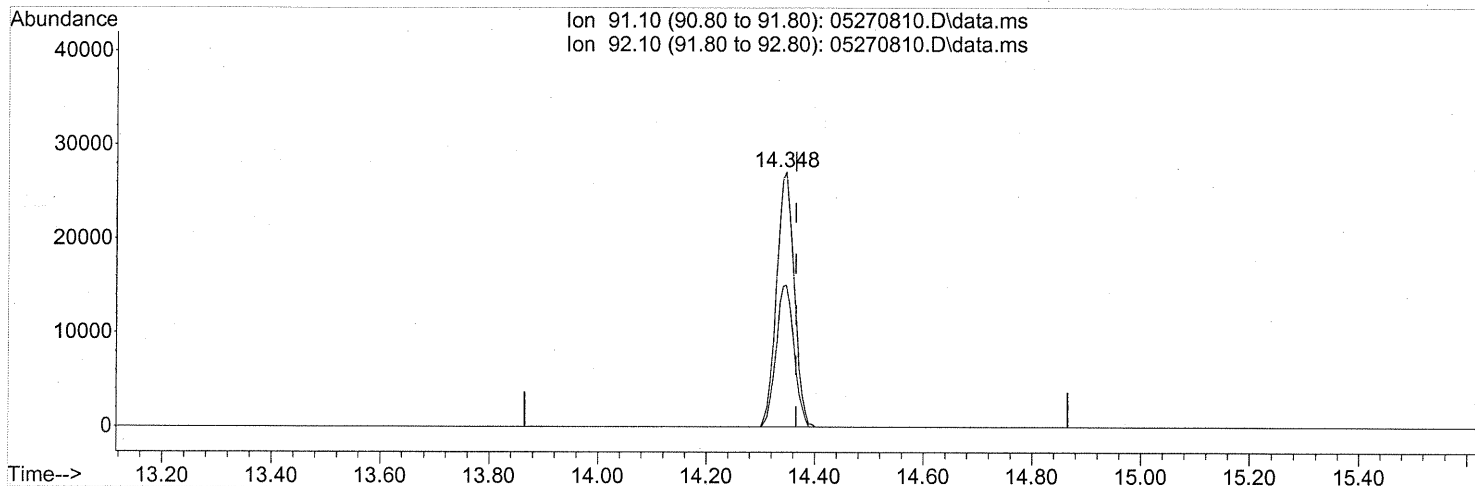
response 54780

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270810.D\data.ms

(58) Toluene (T)

14.348min (-0.018) 0.78ng

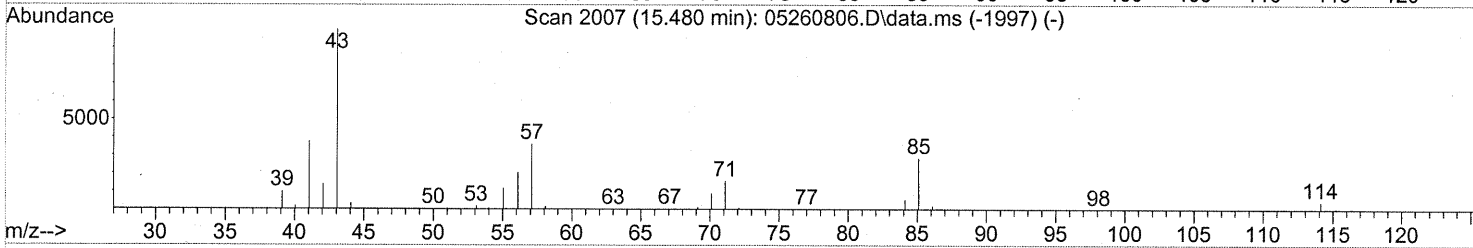
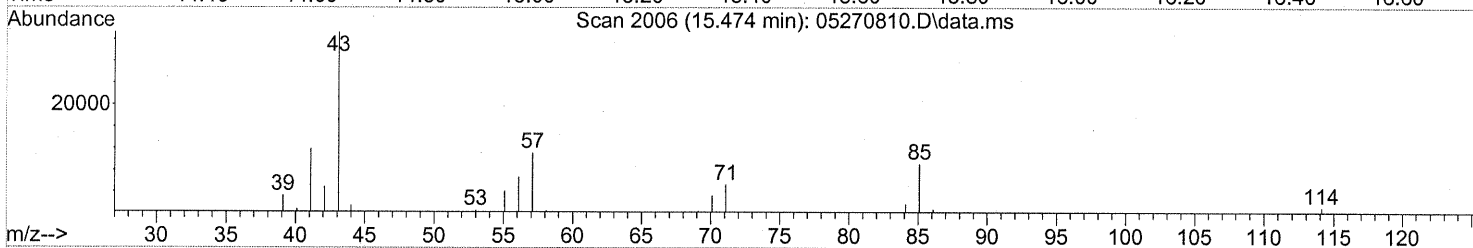
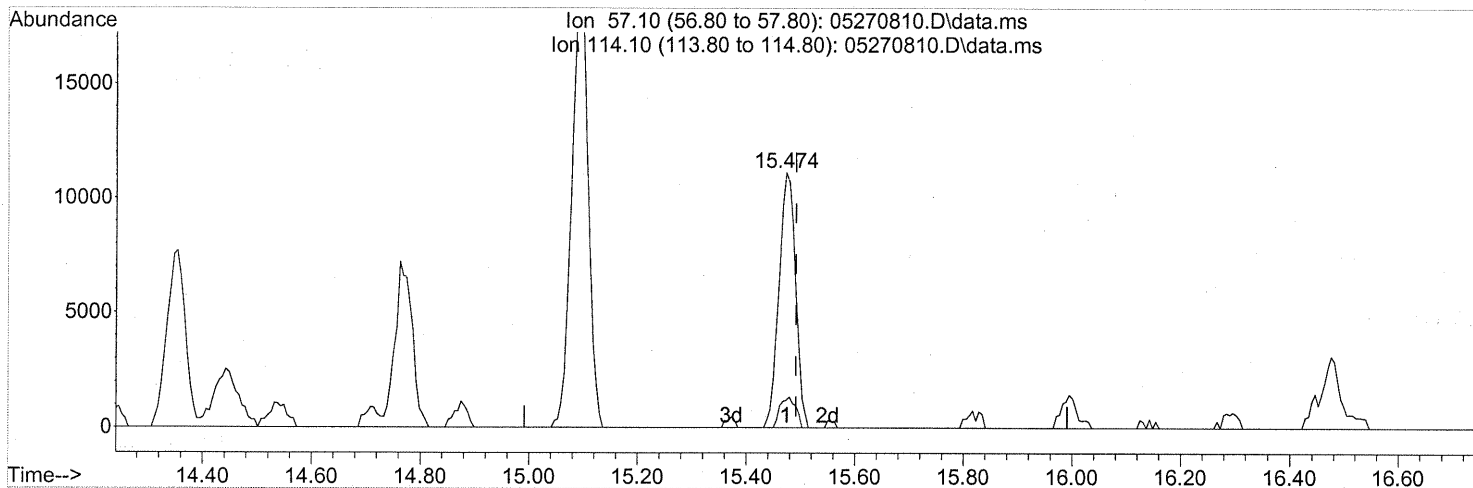
response 61279

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	56.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(63) n-Octane (T)

15.474min (-0.018) 0.98ng

response 23438

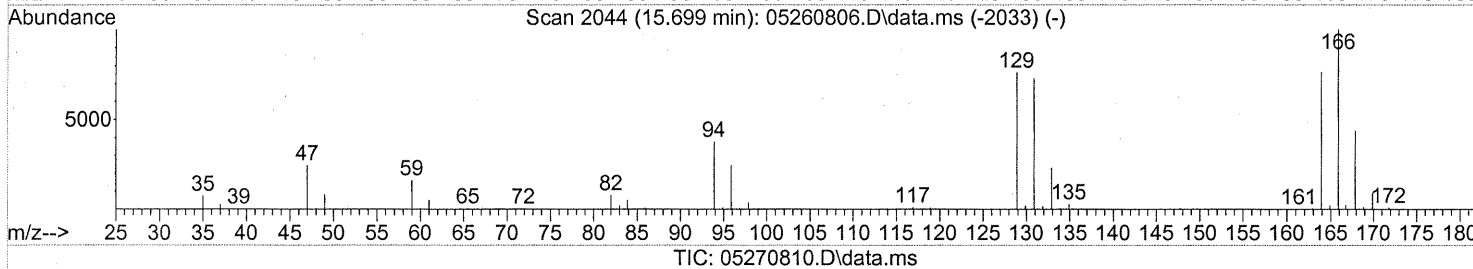
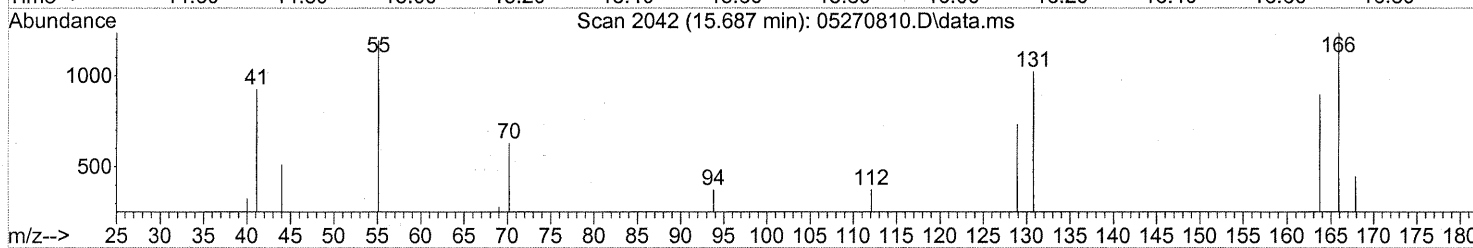
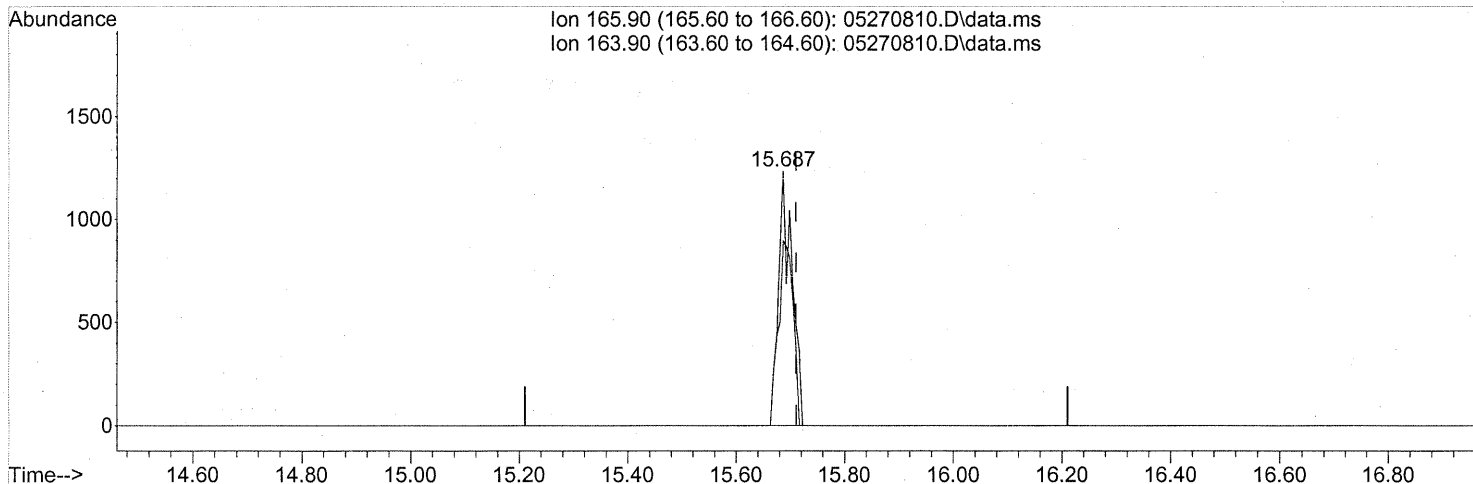
Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.36
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.687min (-0.024) 0.09ng

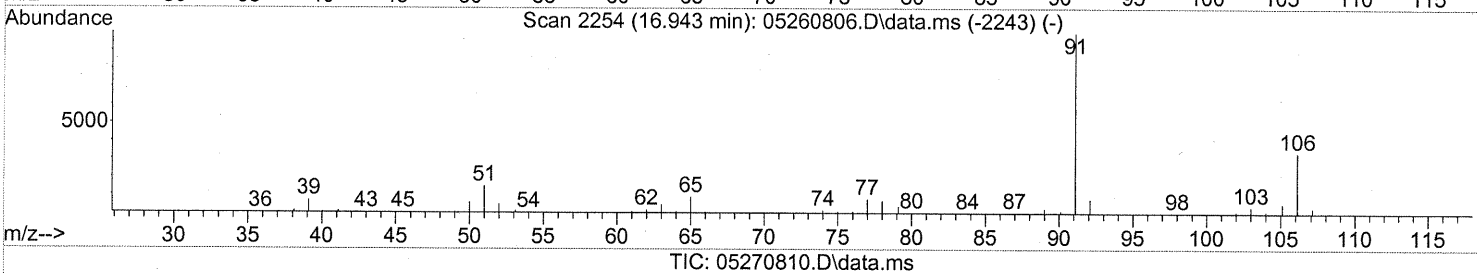
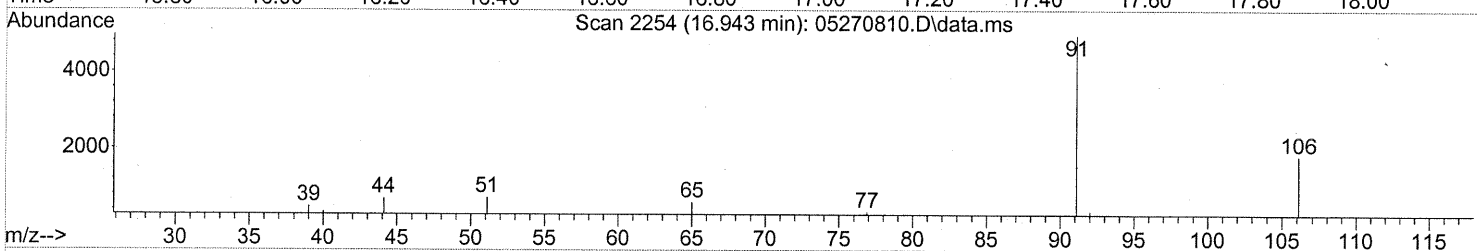
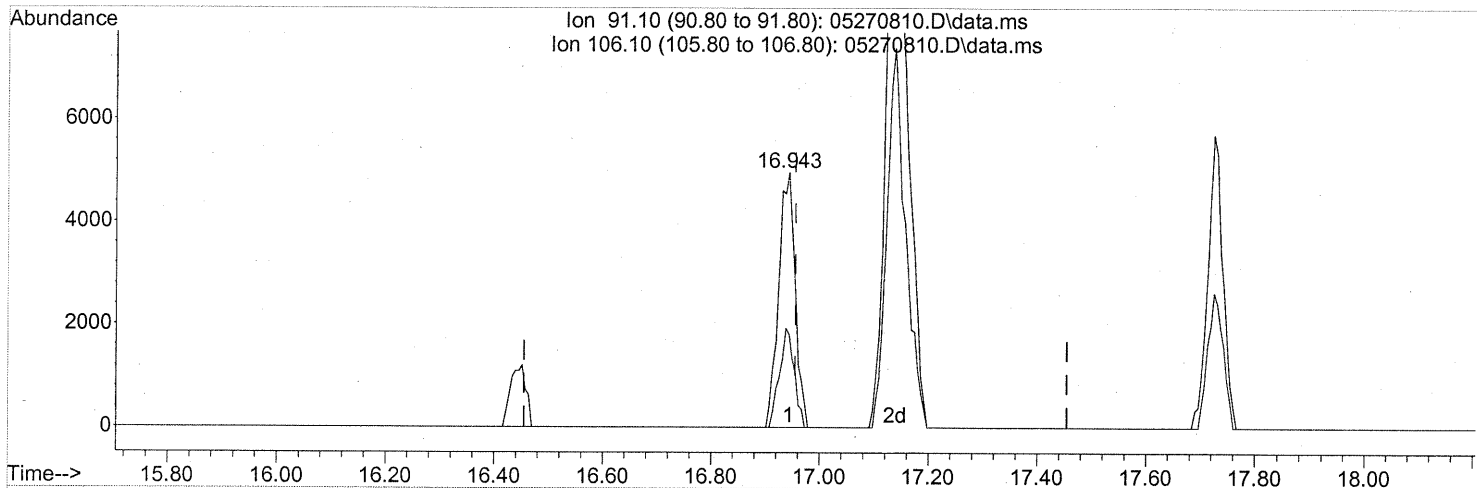
response 2166

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	77.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

16.943min (-0.012) 0.12ng

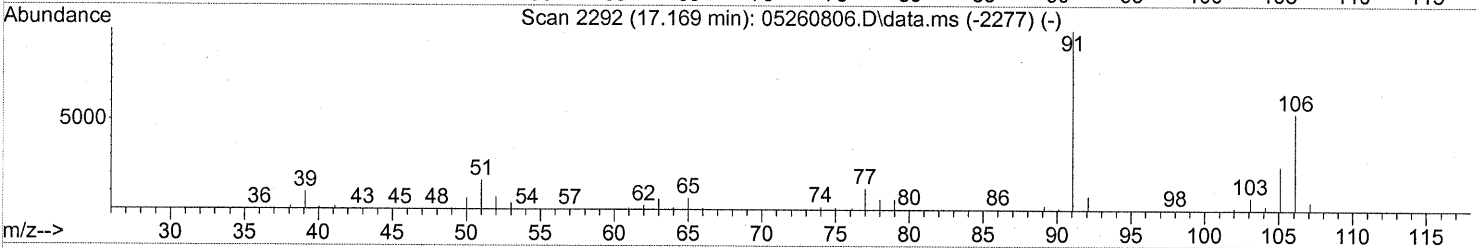
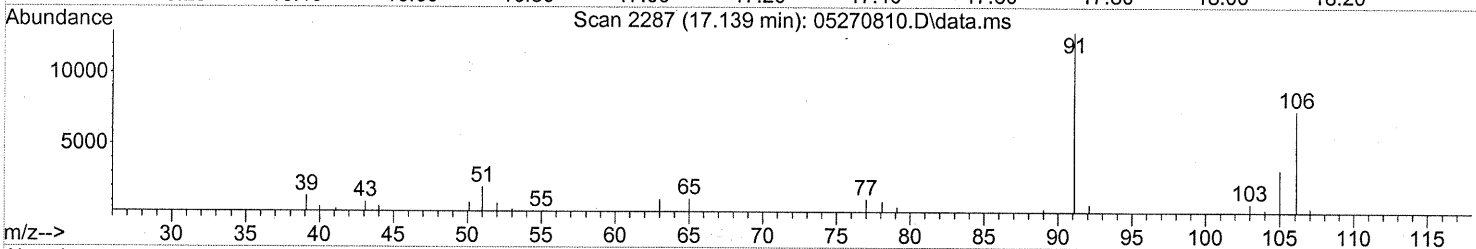
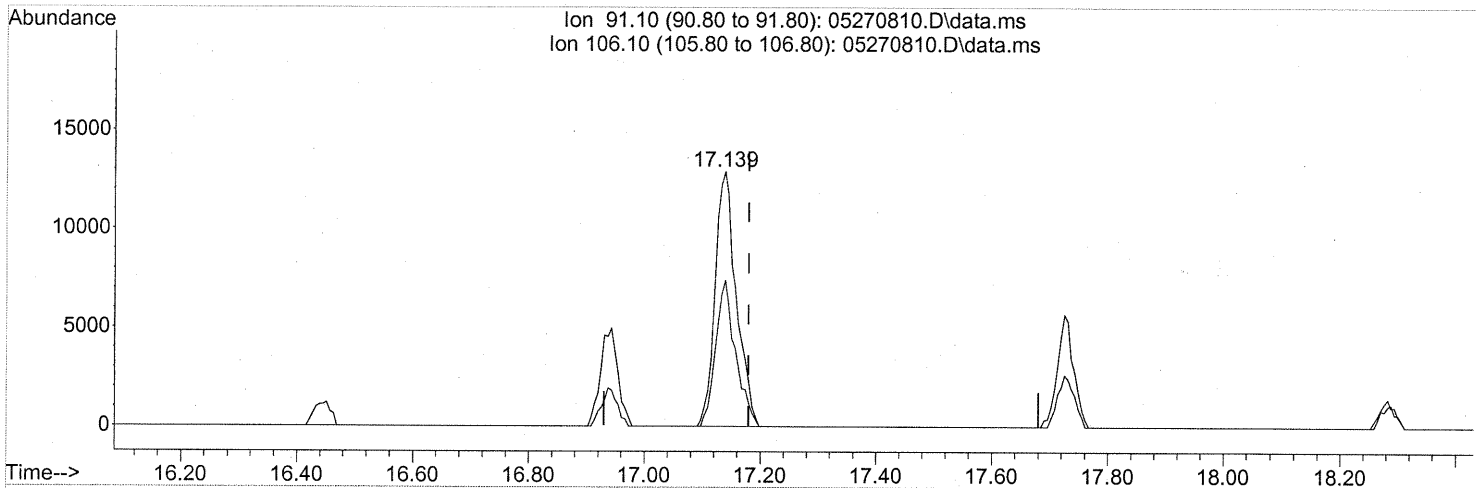
response 10473

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	34.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 0.55ng

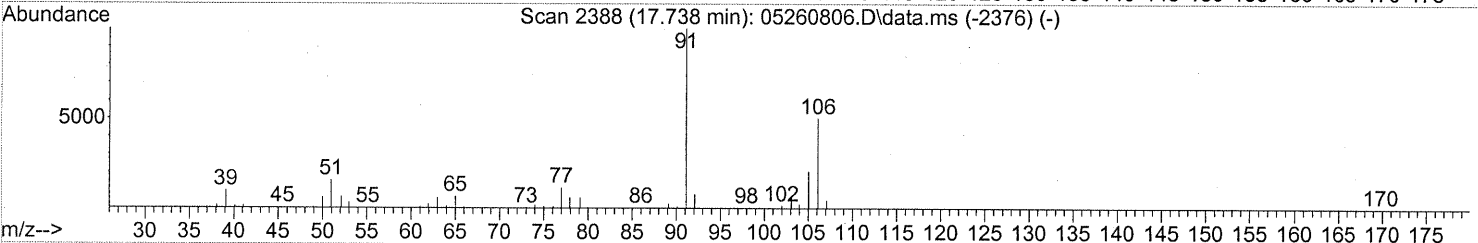
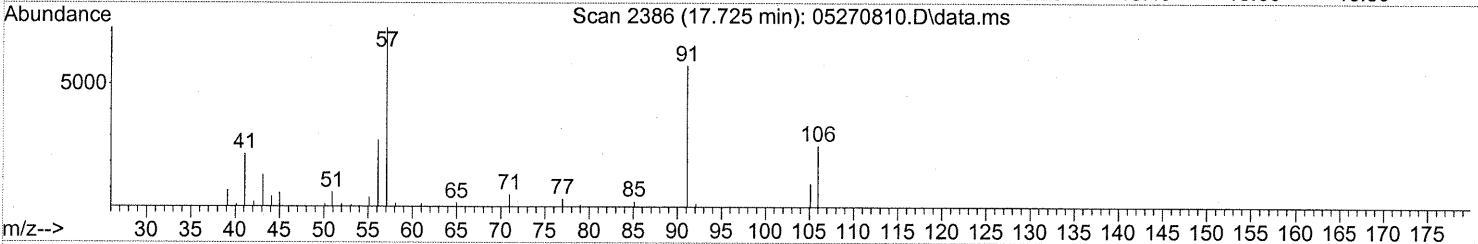
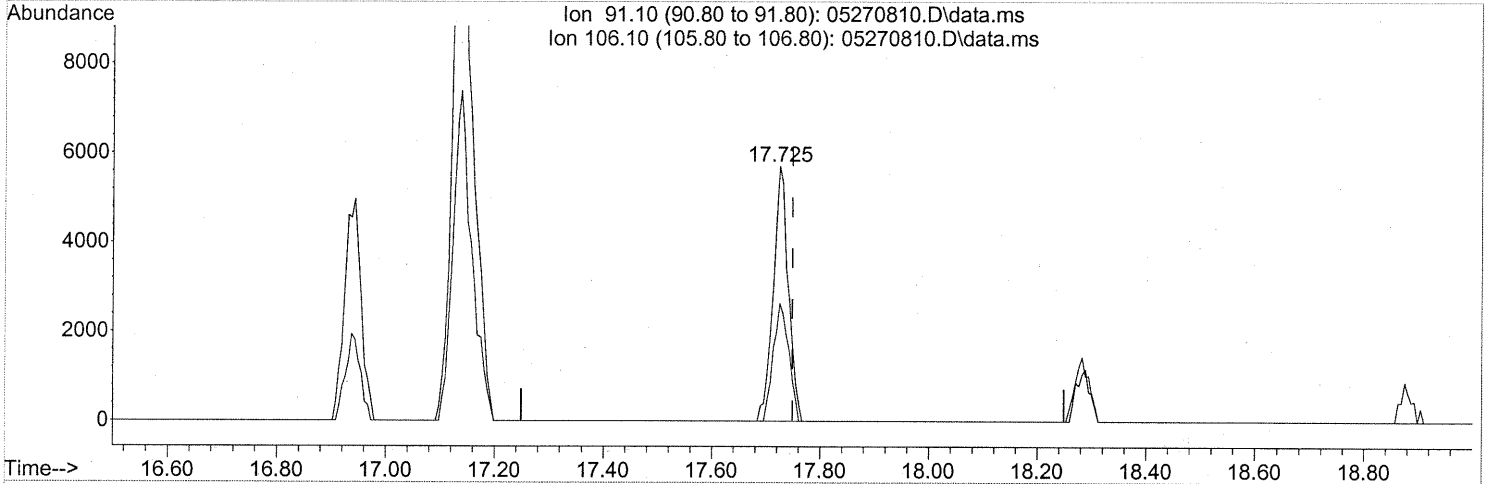
response 32961

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270810.D  
Acq On : 27 May 2008 18:34  
Operator : WA  
Sample : P0801507-004 (20ml)  
Misc : ENSR SG59B-05 (-4.2, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270810.D\data.ms

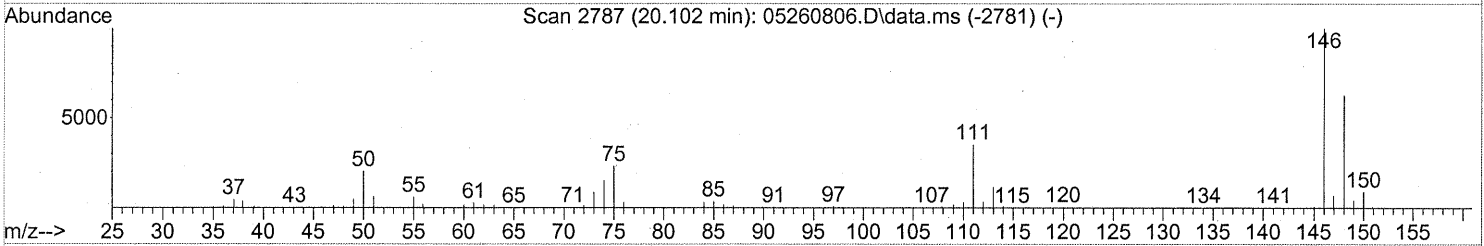
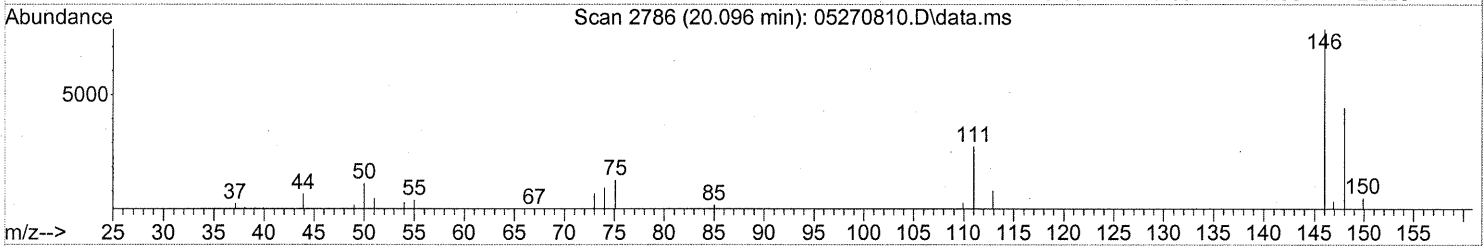
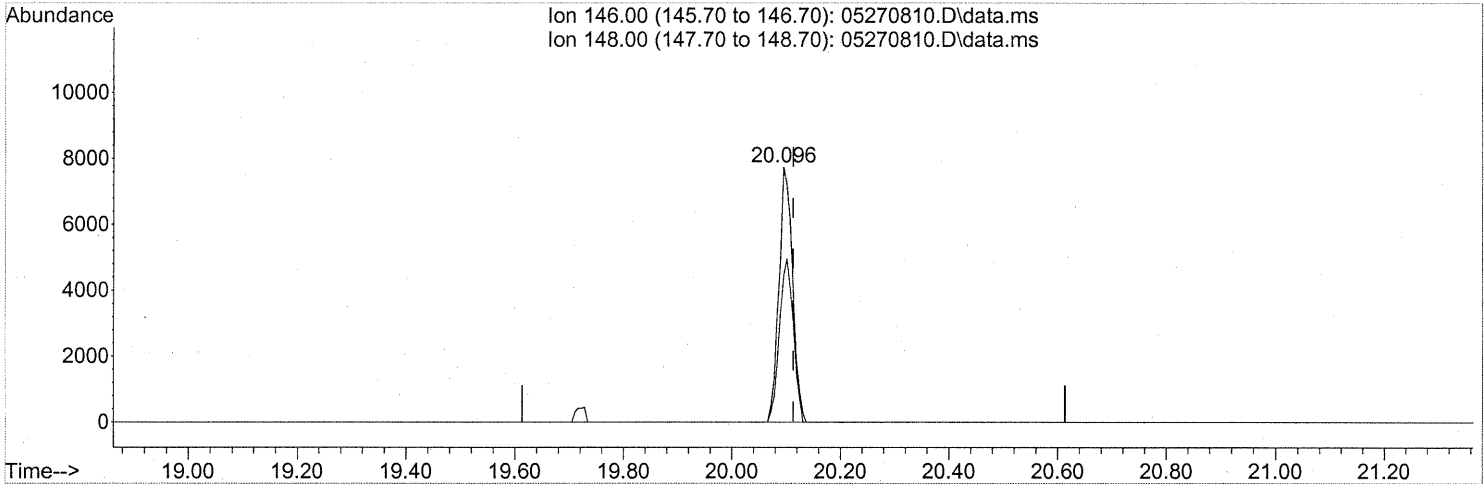
(70) o-Xylene (T)  
17.725min (-0.024) 0.17ng  
response 11076

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	47.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 28 04:46:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270810.D\data.ms

(86) 1,4-Dichlorobenzene (T)

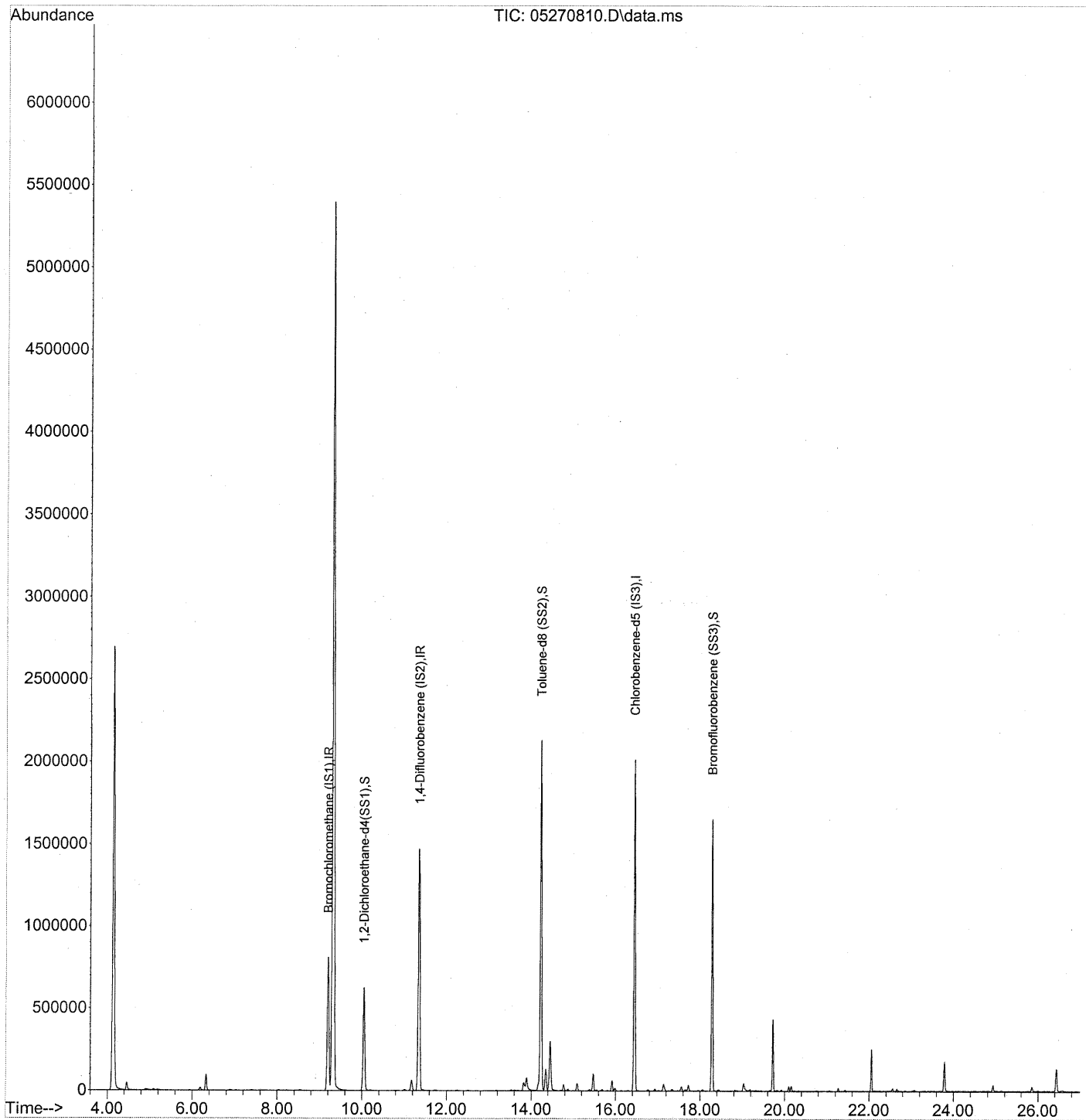
20.096min (-0.018) 0.27ng

response 13594

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	65.23
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270810.D  
Acq On : 27 May 2008 18:34  
Operator : WA  
Sample : P0801507-004 (20ml)  
Misc : ENSR SG59B-05 (-4.2, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jun 04 14:39:22 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270810.D  
 Acq On : 27 May 2008 18:34  
 Operator : WA  
 Sample : P0801507-004 (20ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

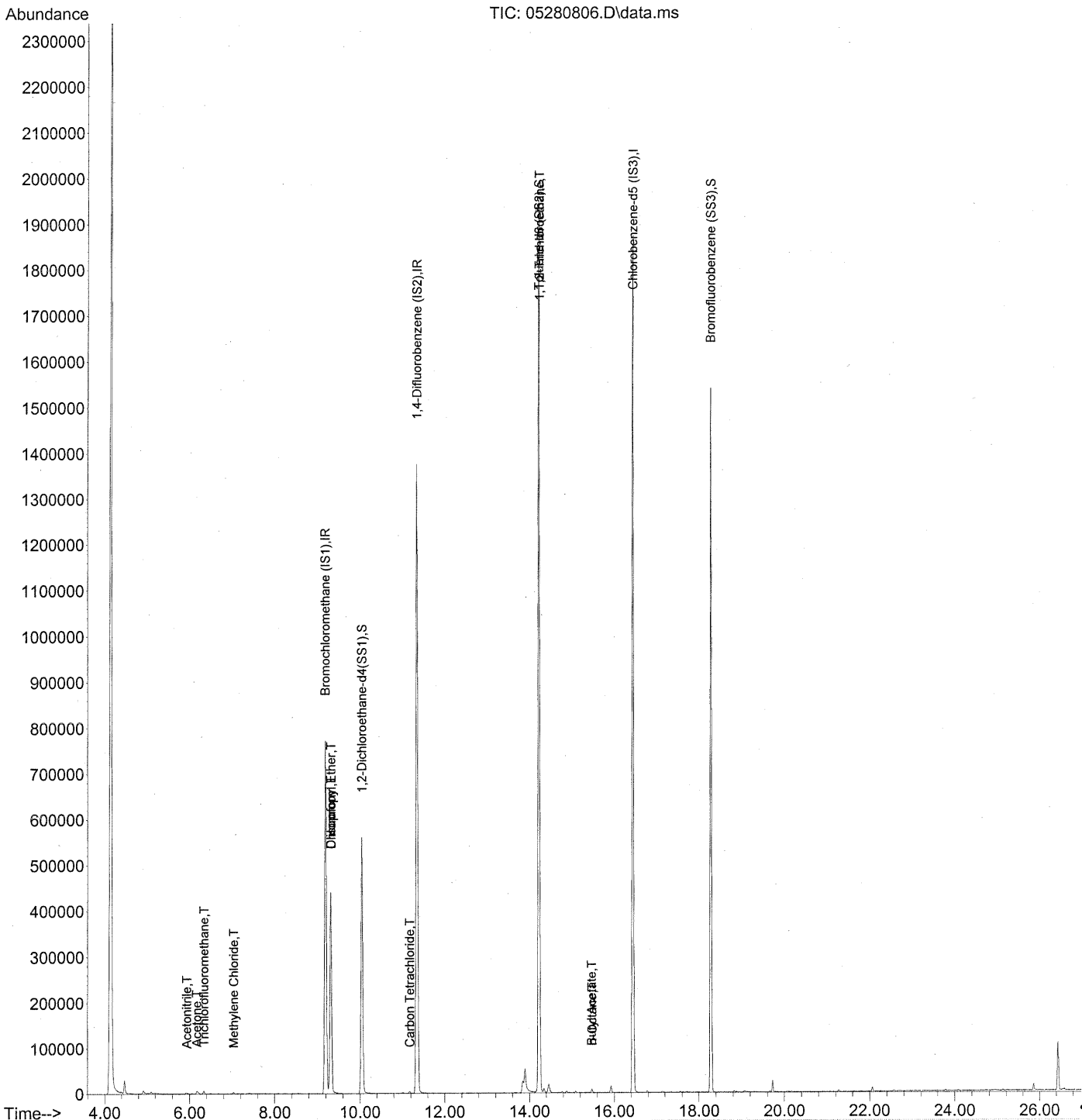
Quant Time: Jun 04 14:39:22 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	406437	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1677305	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	674760	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	570492	24.548	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.20%	
5) Toluene-d8 (SS2)	14.23	98	1700871	24.450	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.80%	
6) Bromofluorobenzene (SS3)	18.28	174	593854	25.676	ng	-0.01
Spiked Amount	25.000		Recovery	=	102.72%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	803	N.D.		Qvalue
8) n-Butylbenzene	20.85	91	437	N.D.		

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

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280806.D  
 Acq On : 28 May 2008 12:43 pm  
 Operator : WA  
 Sample : P0801507-004 Dil (2ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:45:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280806.D  
 Acq On : 28 May 2008 12:43 pm  
 Operator : WA  
 Sample : P0801507-004 Dil (2ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:45:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	373915	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1544249	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	627480	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	533070	24.932	ng	-0.05
Spiked Amount				25.000		
				Recovery	=	99.72%
57) Toluene-d8 (SS2)	14.22	98	1573278	24.320	ng	-0.02
Spiked Amount				25.000		
				Recovery	=	97.28%
73) Bromofluorobenzene (SS3)	18.28	174	557186	25.906	ng	-0.01
Spiked Amount				25.000		
				Recovery	=	103.64%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	832		N.D.	
3) Dichlorodifluoromethane	0.00	85	0		N.D.	
4) Chloromethane	0.00	50	0		N.D.	
5) Freon 114	0.00	135	0		N.D.	
6) Vinyl Chloride	0.00	62	0		N.D.	
7) 1,3-Butadiene	0.00	54	0		N.D.	
8) Bromomethane	0.00	94	0		N.D.	
9) Chloroethane	0.00	64	0		N.D.	
10) Ethanol	0.00	45	0		N.D.	
11) Acetonitrile	5.93	41	4072	0.072	ng	99
12) Acrolein	6.06	56	479		N.D.	
13) Acetone	6.17	58	4285	0.219	ng	# 51
14) Trichlorofluoromethane	6.34	101	7159	0.218	ng	94
15) Isopropanol	0.00	45	0		N.D.	
16) Acrylonitrile	0.00	53	0		N.D.	
17) 1,1-Dichloroethene	0.00	96	0		N.D.	
18) tert-Butanol	0.00	59	0		N.D.	
19) Methylene Chloride	7.04	84	1118	0.074	ng	# 1
20) Allyl Chloride	0.00	41	0		N.D.	
21) Trichlorotrifluoroethane	0.00	151	0		N.D.	
22) Carbon Disulfide	7.41	76	2792		N.D.	
23) trans-1,2-Dichloroethene	0.00	61	0		N.D.	
24) 1,1-Dichloroethane	0.00	63	0		N.D.	
25) Methyl tert-Butyl Ether	0.00	73	0		N.D.	
26) Vinyl Acetate	0.00	86	0		N.D.	
27) 2-Butanone	0.00	72	0		N.D.	
28) cis-1,2-Dichloroethene	0.00	61	0		N.D.	
29) Diisopropyl Ether	9.32	87	46992	3.493	ng	# 1
30) Ethyl Acetate	0.00	61	0		N.D.	
31) n-Hexane	0.00	57	0		N.D.	

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280806.D  
 Acq On : 28 May 2008 12:43 pm  
 Operator : WA  
 Sample : P0801507-004 Dil (2ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:45:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	434265	19.681	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	10.04	62	91	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.02	78	2311	N.D.		
42) Carbon Tetrachloride	11.18	117	3732	0.140	ng	97
43) Cyclohexane	11.33	84	972	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	132769	8.384	ng	# 7
58) Toluene	14.34	91	3441	N.D.		
59) 2-Hexanone	14.60	43	184	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	4659	0.067	ng	# 72
63) n-Octane	15.48	57	1625	0.073	ng	# 66
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	389	N.D.		
67) m- & p-Xylene	17.14	91	2620	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.72	91	671	N.D.		
71) n-Nonane	17.97	43	190	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	659	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.18	105	189	N.D.		
78) 4-Ethyltoluene	19.18	105	189	N.D.		
79) 1,3,5-Trimethylbenzene	19.18	105	189	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280806.D  
Acq On : 28 May 2008 12:43 pm  
Operator : WA  
Sample : P0801507-004 Dil (2ml)  
Misc : ENSR SG59B-05 (-4.2, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:45:20 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration

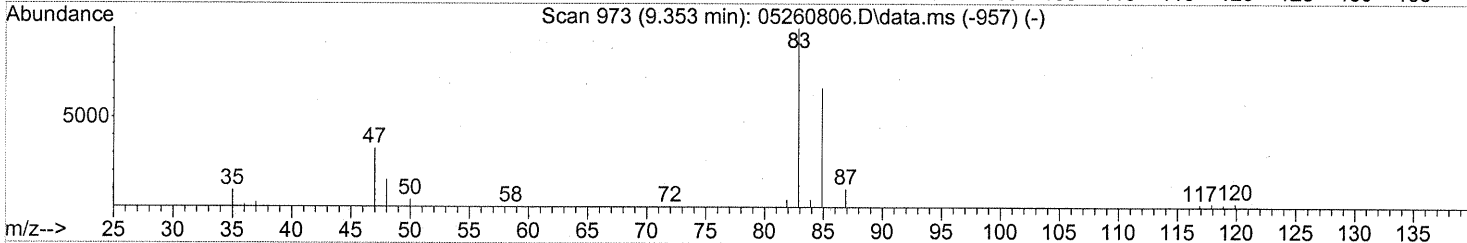
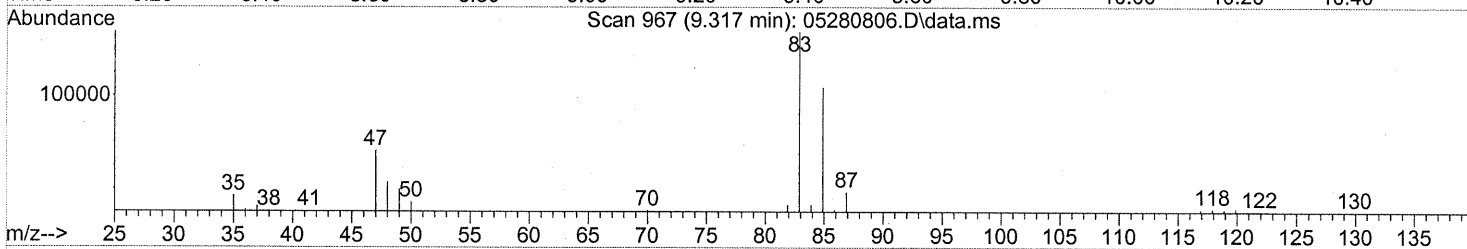
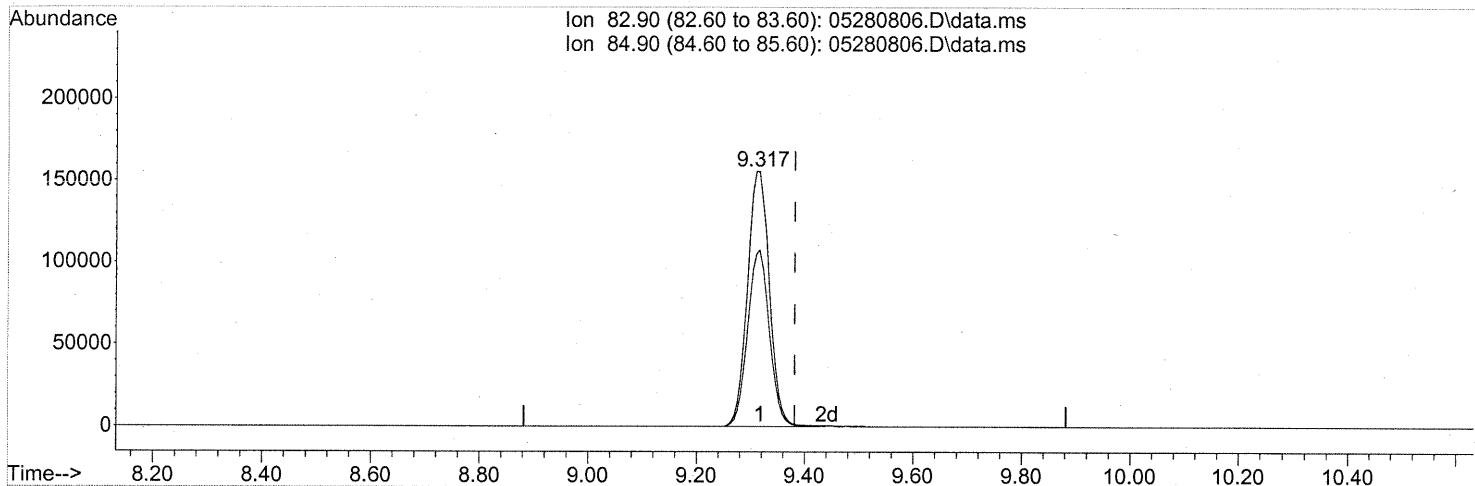
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	19.82	105	320	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	320	N.D.		
83) n-Decane	20.16	57	1279	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.11	146	792	N.D.		
86) 1,4-Dichlorobenzene	20.11	146	792	N.D.		
87) sec-Butylbenzene	19.82	105	320	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	20.77	105	184	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	115	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	600	N.D.		
96) n-Dodecane	22.66	57	203	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280806.D  
 Acq On : 28 May 2008 12:43  
 Operator : WA  
 Sample : P0801507-004 Dil (2ml)  
 Misc : ENSR SG59B-05 (-4.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 14:45:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280806.D\data.ms

(32) Chloroform (T)  
 9.317min (-0.065) 19.68ng  
 response 434265

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.29
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG31B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00649

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.10 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.58

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.1	7.9	0.79	0.42	1.6	0.16	J
74-87-3	Chloromethane	ND	1.6	0.79	ND	0.77	0.38	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	7.9	0.79	ND	1.1	0.11	
75-01-4	Vinyl Chloride	ND	1.6	0.79	ND	0.62	0.31	
74-83-9	Bromomethane	ND	1.6	0.79	ND	0.41	0.20	
75-00-3	Chloroethane	ND	1.6	0.79	ND	0.60	0.30	
64-17-5	Ethanol	16	79	0.79	8.3	42	0.42	J
67-64-1	Acetone	25	79	1.2	11	33	0.49	J, B
75-69-4	Trichlorofluoromethane	36	1.6	0.79	6.4	0.28	0.14	
107-13-1	Acrylonitrile	ND	7.9	1.1	ND	3.6	0.51	
75-35-4	1,1-Dichloroethene	0.87	1.6	0.79	0.22	0.40	0.20	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	7.9	1.2	ND	2.6	0.39	
75-09-2	Methylene Chloride	2.8	7.9	0.79	0.81	2.3	0.23	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.6	0.79	ND	0.50	0.25	
76-13-1	Trichlorotrifluoroethane	ND	1.6	0.88	ND	0.21	0.12	
75-15-0	Carbon Disulfide	ND	7.9	1.9	ND	2.5	0.61	
156-60-5	trans-1,2-Dichloroethene	ND	1.6	0.79	ND	0.40	0.20	
75-34-3	1,1-Dichloroethane	7.8	1.6	0.79	1.9	0.39	0.20	
1634-04-4	Methyl tert-Butyl Ether	ND	1.6	0.79	ND	0.44	0.22	
108-05-4	Vinyl Acetate	ND	79	2.5	ND	22	0.72	
78-93-3	2-Butanone (MEK)	7.5	7.9	0.79	2.5	2.7	0.27	J
156-59-2	cis-1,2-Dichloroethene	ND	1.6	0.79	ND	0.40	0.20	
108-20-3	Diisopropyl Ether	ND	7.9	0.93	ND	1.9	0.22	
67-66-3	Chloroform	4,000	1.6	0.93	810	0.32	0.19	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG31B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00649

**Date Collected:** 5/19/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.10 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.58

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	3.3	7.9	0.98	0.75	1.8	0.23	J
179601-23-1	m,p-Xylenes	16	7.9	2.1	3.7	1.8	0.47	
75-25-2	Bromoform	ND	7.9	1.2	ND	0.76	0.12	
100-42-5	Styrene	ND	7.9	1.2	ND	1.9	0.28	
95-47-6	o-Xylene	5.3	7.9	1.0	1.2	1.8	0.23	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.6	1.0	ND	0.23	0.15	
98-82-8	Cumene	ND	7.9	0.88	ND	1.6	0.18	
103-65-1	n-Propylbenzene	ND	7.9	0.82	ND	1.6	0.17	
622-96-8	4-Ethyltoluene	ND	7.9	0.90	ND	1.6	0.18	
108-67-8	1,3,5-Trimethylbenzene	0.95	7.9	0.95	0.19	1.6	0.19	J
98-83-9	alpha-Methylstyrene	ND	7.9	1.2	ND	1.6	0.24	
95-63-6	1,2,4-Trimethylbenzene	2.0	7.9	1.1	0.41	1.6	0.22	J
100-44-7	Benzyl Chloride	ND	1.6	1.4	ND	0.31	0.26	
541-73-1	1,3-Dichlorobenzene	8.5	1.6	0.98	1.4	0.26	0.16	
106-46-7	1,4-Dichlorobenzene	23	1.6	0.88	3.9	0.26	0.15	
135-98-8	sec-Butylbenzene	ND	7.9	0.92	ND	1.4	0.17	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	7.9	1.0	ND	1.4	0.19	
95-50-1	1,2-Dichlorobenzene	ND	1.6	1.0	ND	0.26	0.17	
96-12-8	1,2-Dibromo-3-chloropropane	ND	7.9	1.2	ND	0.82	0.12	
120-82-1	1,2,4-Trichlorobenzene	ND	1.6	1.2	ND	0.21	0.16	
91-20-3	Naphthalene	1.3	3.2	1.2	0.26	0.60	0.22	J
87-68-3	Hexachlorobutadiene	2.3	1.6	1.4	0.21	0.15	0.13	
98-06-6	tert-Butylbenzene	ND	3.2	0.79	ND	0.58	0.14	
104-51-8	n-Butylbenzene	ND	3.2	0.79	ND	0.58	0.14	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

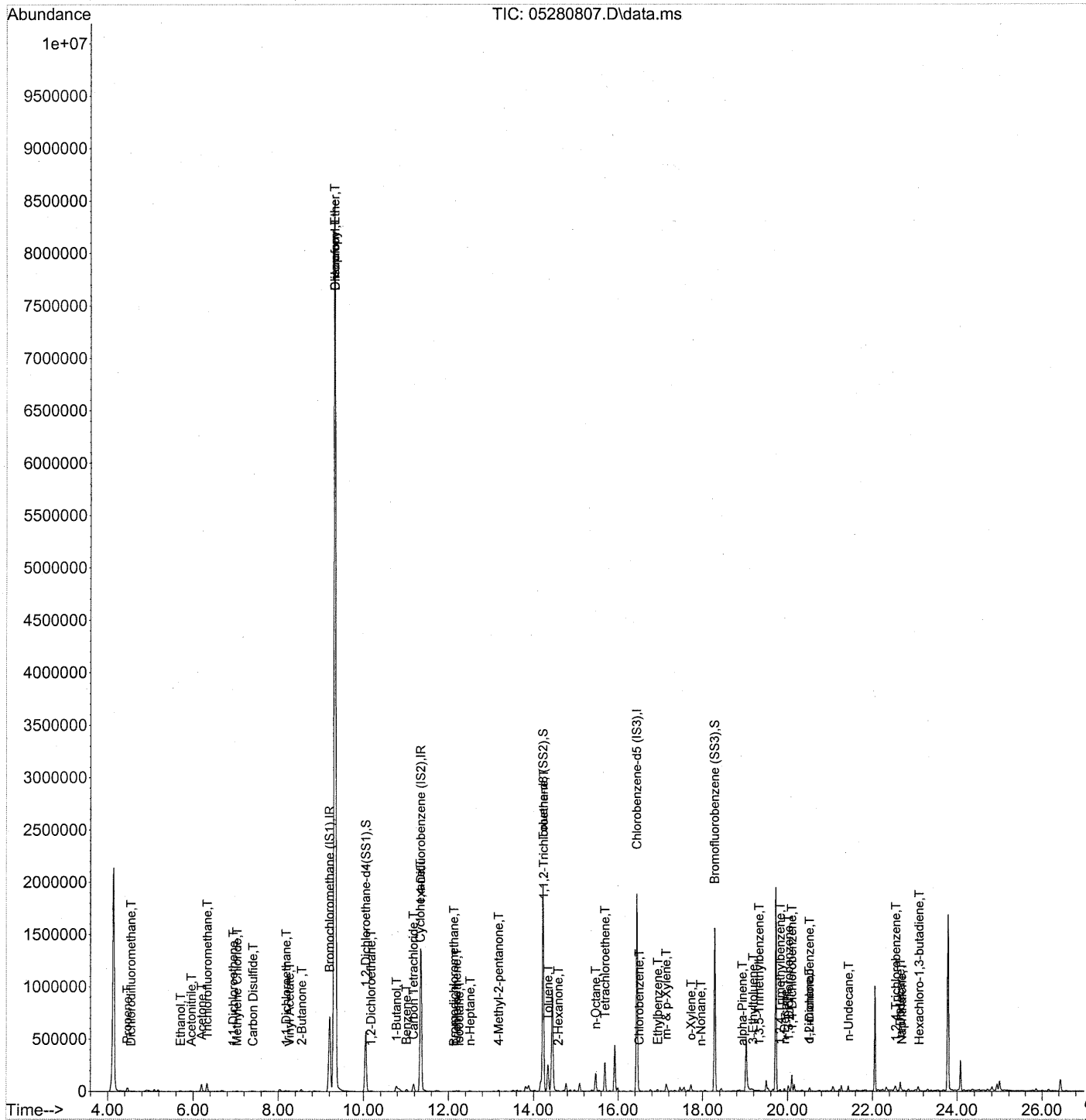
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08      **201**

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 09:37:03 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



202



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 09:37:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	370470	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.35	114	1515272	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	626252	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	520853	24.588	ng	-0.04	
Spiked Amount	25.000		Recovery	=	98.36%		✓
57) Toluene-d8 (SS2)	14.23	98	1555286	24.089	ng	-0.02	
Spiked Amount	25.000		Recovery	=	96.36%		✓
73) Bromofluorobenzene (SS3)	18.28	174	553601	25.790	ng	-0.01	
Spiked Amount	25.000		Recovery	=	103.16%		✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	7376	0.257	ng	90
3) Dichlorodifluoromethane	4.55	85	4549	0.131	ng	# 91
4) Chloromethane	4.75	50	329	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	5.13	54	695	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.71	45	19368m	0.995	ng	
11) Acetonitrile	5.96	41	9291	0.166	ng	# 62
12) Acrolein	6.06	56	545	N.D.		
13) Acetone	6.20	58	31071	1.605	ng	# 75
14) Trichlorofluoromethane	6.33	101	73985	2.278	ng	100
15) Isopropanol	6.49	45	1554	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	6.94	96	838	0.055	ng	# 32
18) tert-Butanol	7.05	59	715	N.D.	✓	
19) Methylene Chloride	7.03	84	2643	0.177	ng	# 16
20) Allyl Chloride	7.14	41	300	N.D.	✓	
21) Trichlorotrifluoroethane	7.30	151	101	N.D.	✓	
22) Carbon Disulfide	7.40	76	6133	0.102	ng	84
23) trans-1,2-Dichloroethene	8.05	61	824	N.D.	✓	
24) 1,1-Dichloroethane	8.19	63	15594	0.492	ng	93
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	8.26	86	347	0.109	ng	<MHL 1
27) 2-Butanone	8.55	72	4794	0.474	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.33	87	1035074	77.644	ng	NR# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	2044	N.D.		

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DA 6/4/08

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 09:37:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.33	83	9558811	<del>437.241</del> ng	see dil	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.18	62	4558	0.182 ng		90
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.78	56	72946	2.925 ng	#	65
41) Benzene	11.01	78	19558	0.306 ng		98
42) Carbon Tetrachloride	11.18	117	63141	2.410 ng		100
43) Cyclohexane	11.34	84	2312	0.093 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.13	83	4167	0.222 ng		89
47) Trichloroethene	12.20	130	3218	0.162 ng		94
48) 1,4-Dioxane	12.15	88	266	N.D. ✓		
49) Isooctane	12.26	57	10184	0.100 ng		98
50) Methyl Methacrylate	12.51	100	267	N.D. ✓		
51) n-Heptane	12.51	71	1534	0.101 ng	#	50
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.18	58	3409	0.153 ng	#	68
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	132472	8.525 ng	NR#	7
58) Toluene	14.35	91	94466	1.290 ng		99
59) 2-Hexanone	14.58	43	7402	0.107 ng	#	69
60) Dibromochloromethane	14.83	129	105	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.30	43	3310	N.D.		
63) n-Octane	15.47	57	38984	1.760 ng		94
64) Tetrachloroethene	15.69	166	104322	4.816 ng		100
65) Chlorobenzene	16.50	112	2752	0.053 ng	NR	82
66) Ethylbenzene	16.94	91	17238	0.207 ng		97
67) m- & p-Xylene	17.14	91	56747	1.029 ng		91
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	17.60	104	1029	N.D. ✓		
70) o-Xylene	17.73	91	19694	0.334 ng		90
71) n-Nonane	17.96	43	4751	0.082 ng		81
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. ✓		
74) Cumene	18.45	105	634	N.D. ✓		
75) alpha-Pinene	18.93	93	3805	0.094 ng		94
76) n-Propylbenzene	19.06	91	2373	N.D. ✓		
77) 3-Ethyltoluene	19.18	105	8382	0.089 ng		89
78) 4-Ethyltoluene	19.24	105	3539	N.D. ✓		
79) 1,3,5-Trimethylbenzene	19.33	105	4562	0.060 ng		92

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 09:37:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

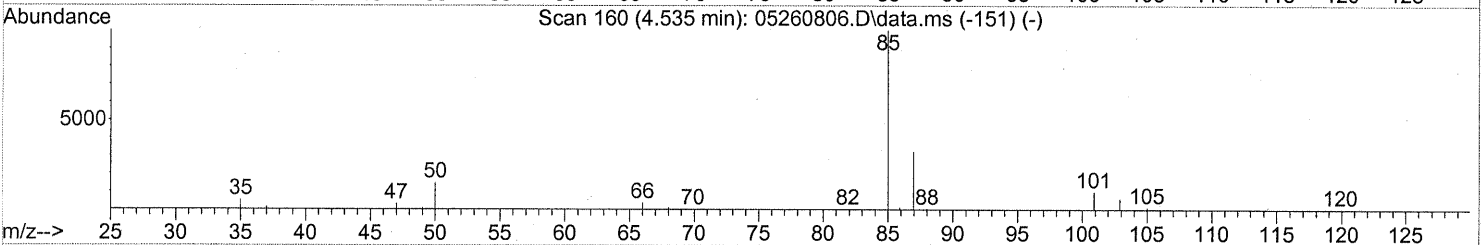
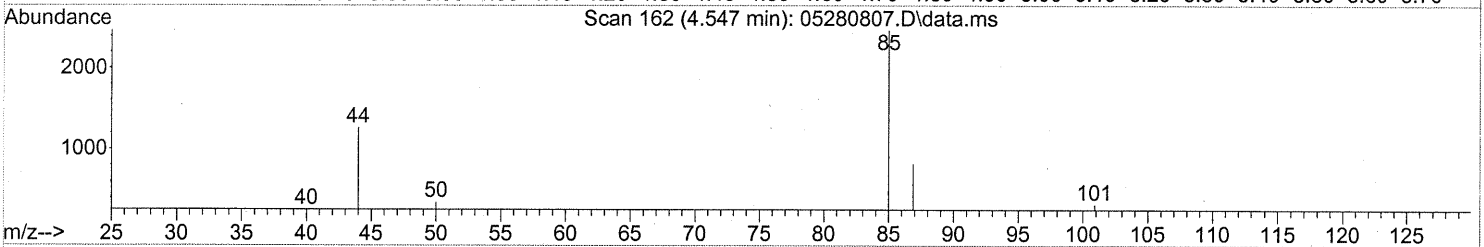
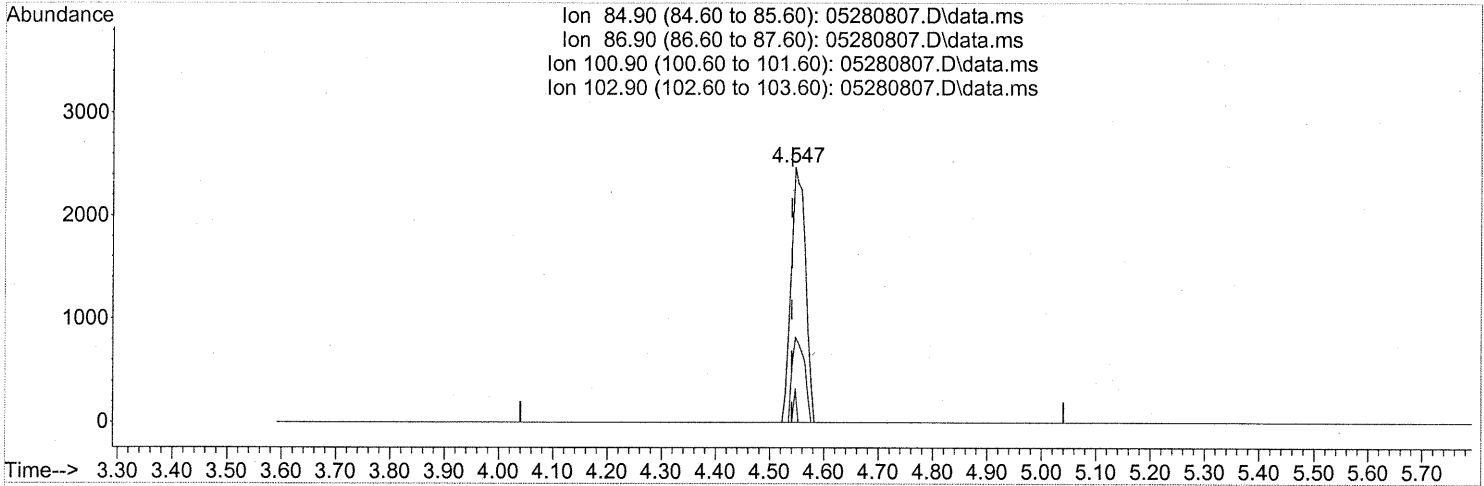
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	95	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	3424	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	9622	0.126	ng	99
83) n-Decane	19.93	57	11371	0.210	ng	76
84) Benzyl Chloride	20.16	91	121	N.D.	✓	
85) 1,3-Dichlorobenzene	20.02	146	25943	0.536	ng	96
86) 1,4-Dichlorobenzene	20.10	146	69617	1.482	ng	99
87) sec-Butylbenzene	20.34	105	3287	N.D.	✓	
88) p-Isopropyltoluene	20.33	119	2505	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	3287	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	2836	0.064	ng	93
91) d-Limonene	20.51	68	4532	0.193	ng	94
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.44	57	19696	0.347	ng	86
94) 1,2,4-Trichlorobenzene	22.56	184	572	0.071	ng	# 39
95) Naphthalene	22.70	128	9382	0.085	ng	97
96) n-Dodecane	22.66	57	29721	0.538	ng	82
97) Hexachloro-1,3-butadiene	23.11	225	1936	0.145	ng	94

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(3) Dichlorodifluoromethane (T)

4.547min (+0.006) 0.13ng

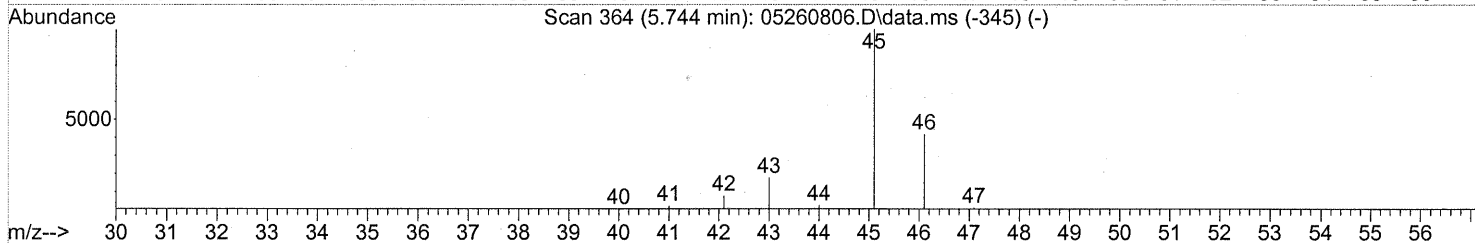
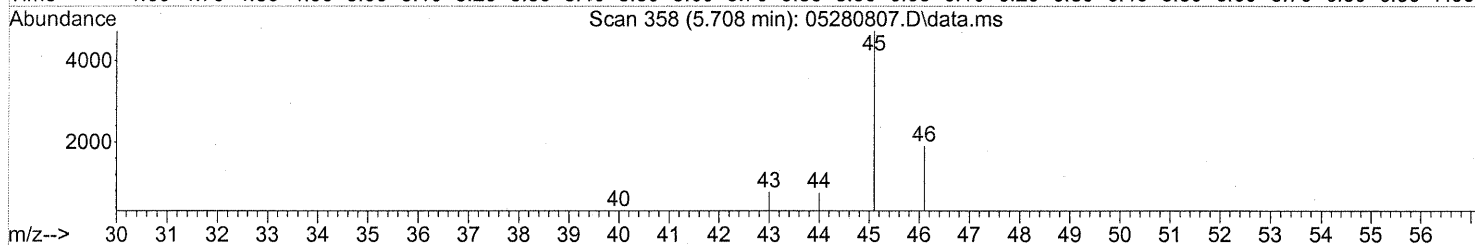
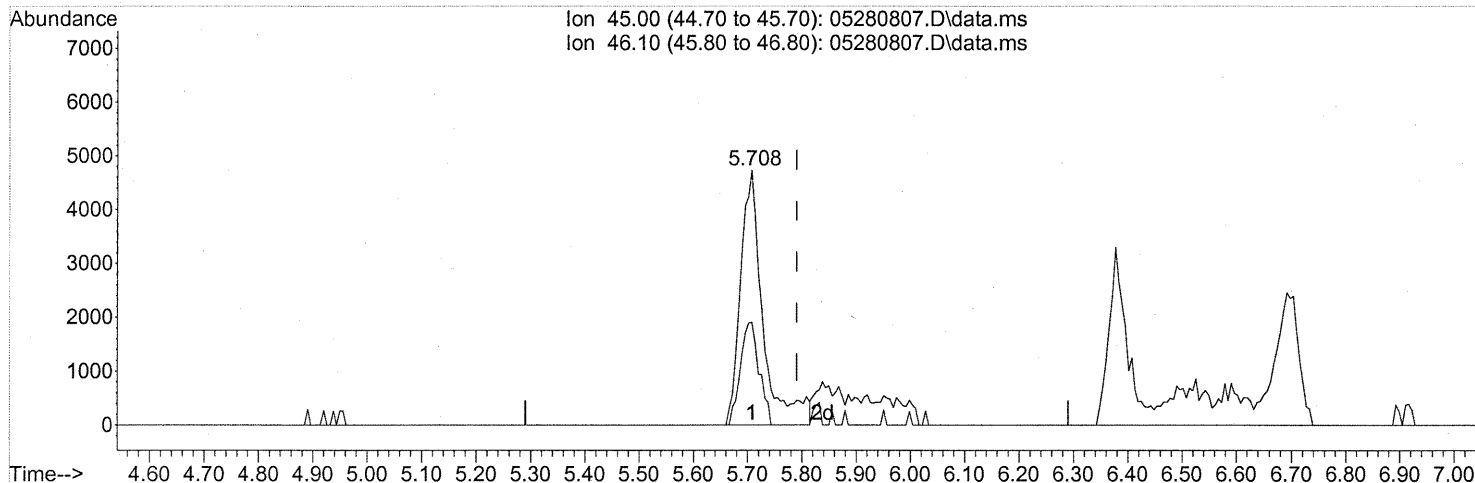
response 4549

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	28.45
100.90	8.40	2.51
102.90	5.50	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(10) Ethanol (T)

5.708min (-0.083) 0.69ng

response 13423

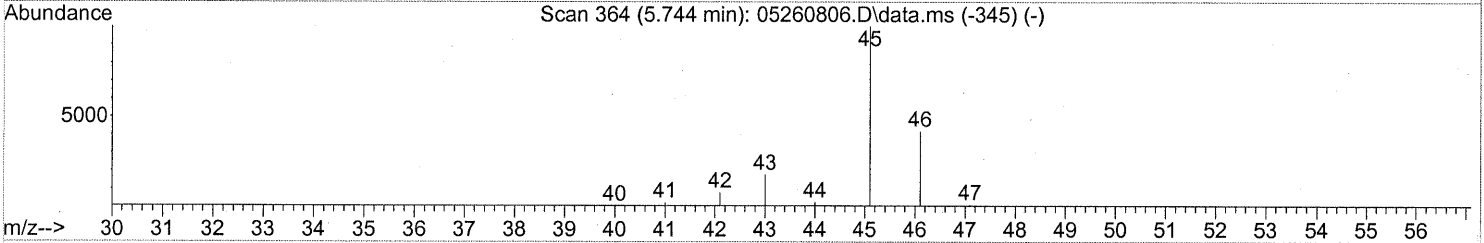
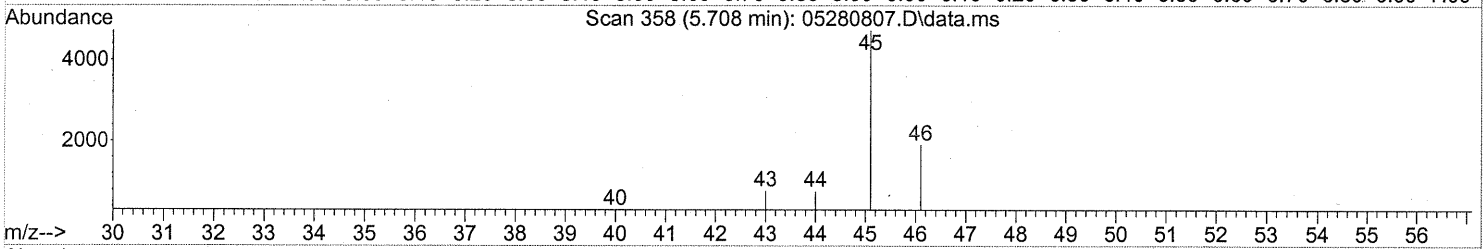
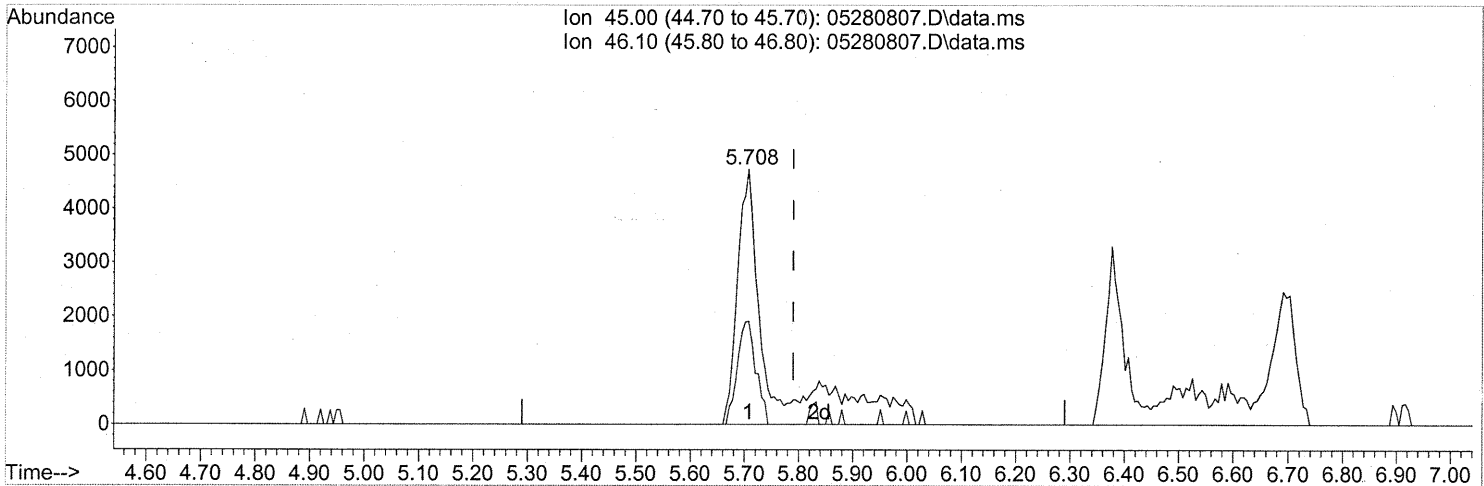
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	33.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.708min (-0.083) 1.00ng m

response 19368

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	23.28
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

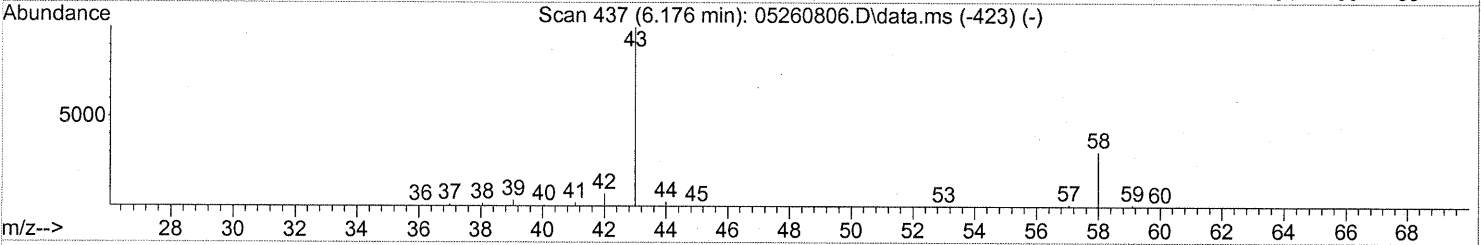
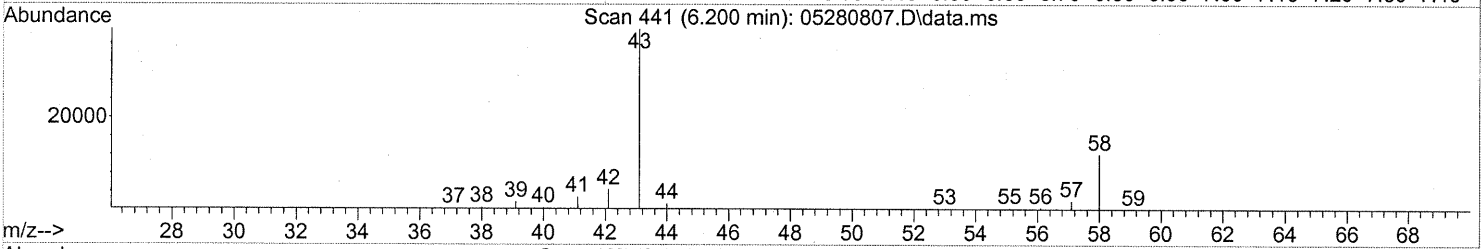
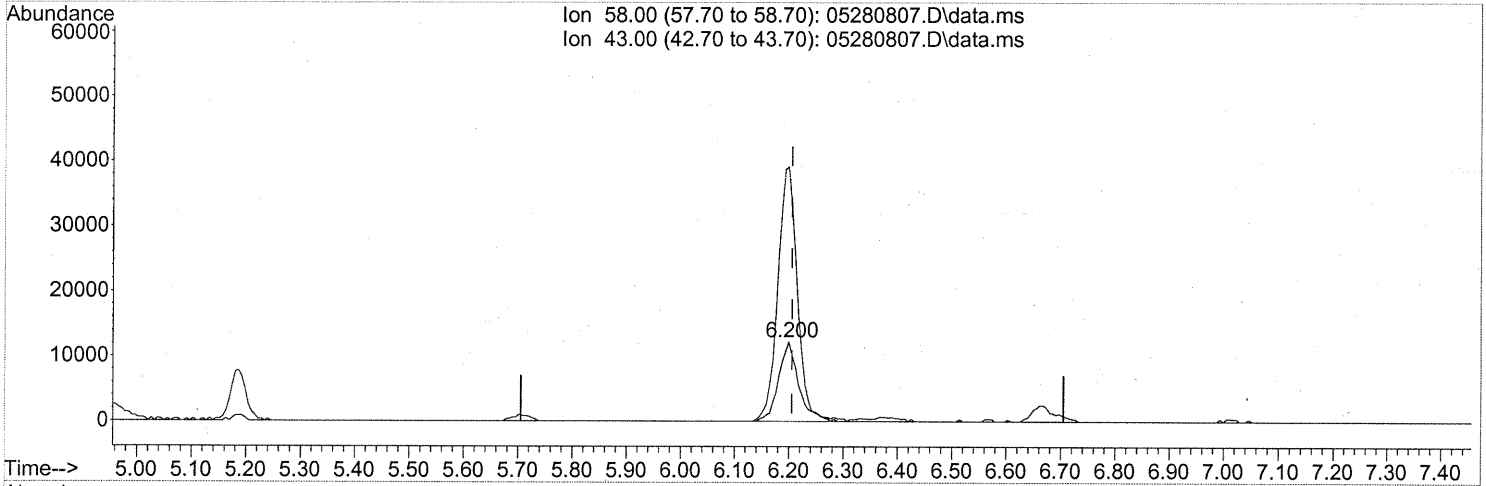
*WA 6/4/08*

*S. 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(13) Acetone (T)

6.200min (-0.006) 1.61ng

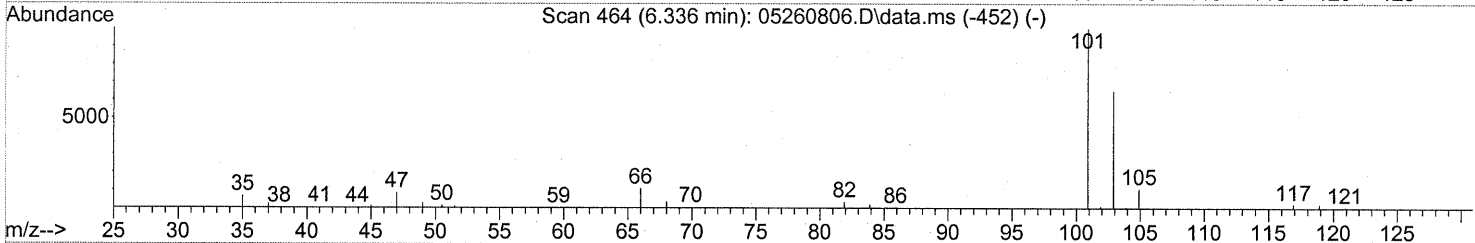
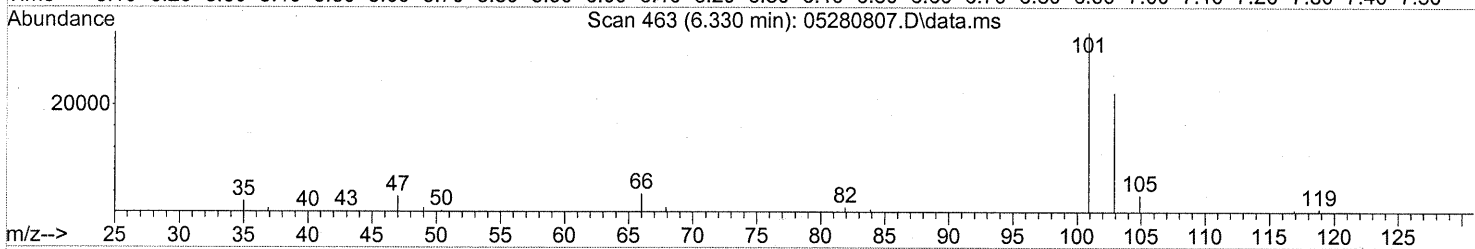
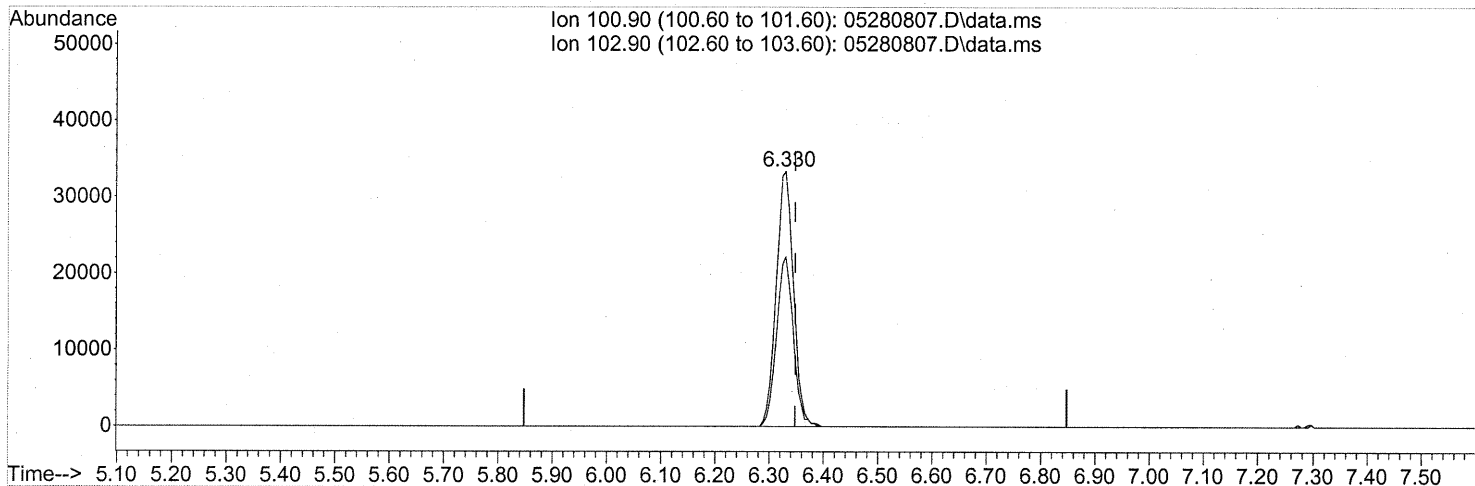
response 31071

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	313.20#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(14) Trichlorofluoromethane (T)

6.330min (-0.018) 2.28ng

response 73985

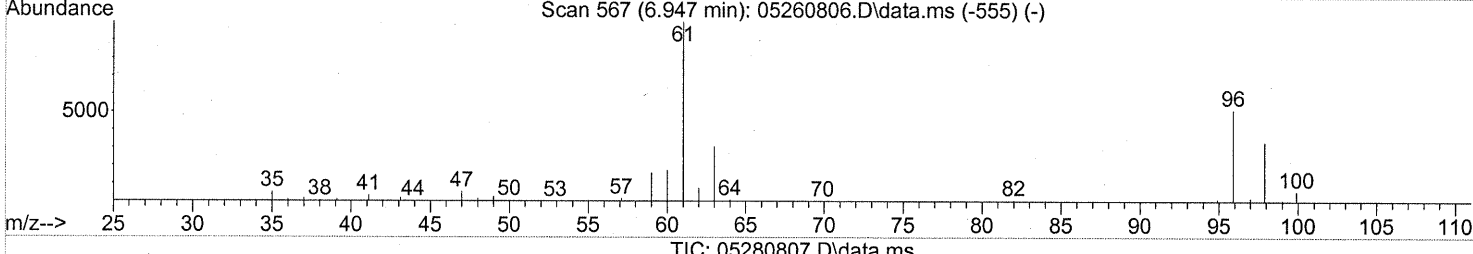
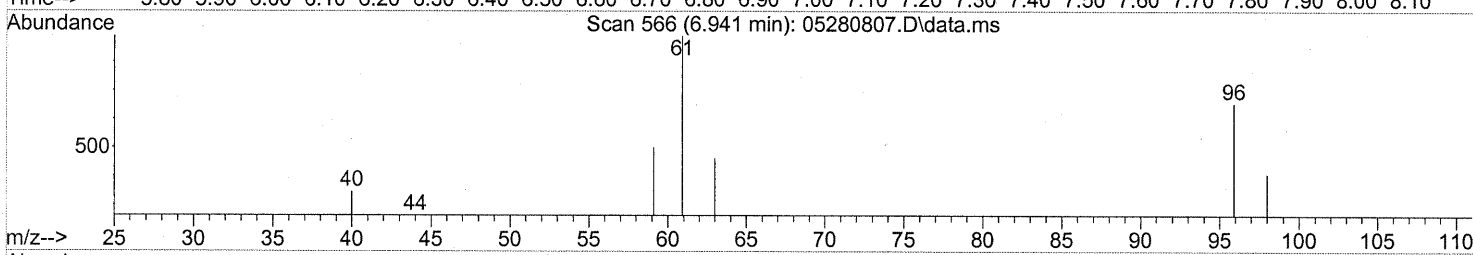
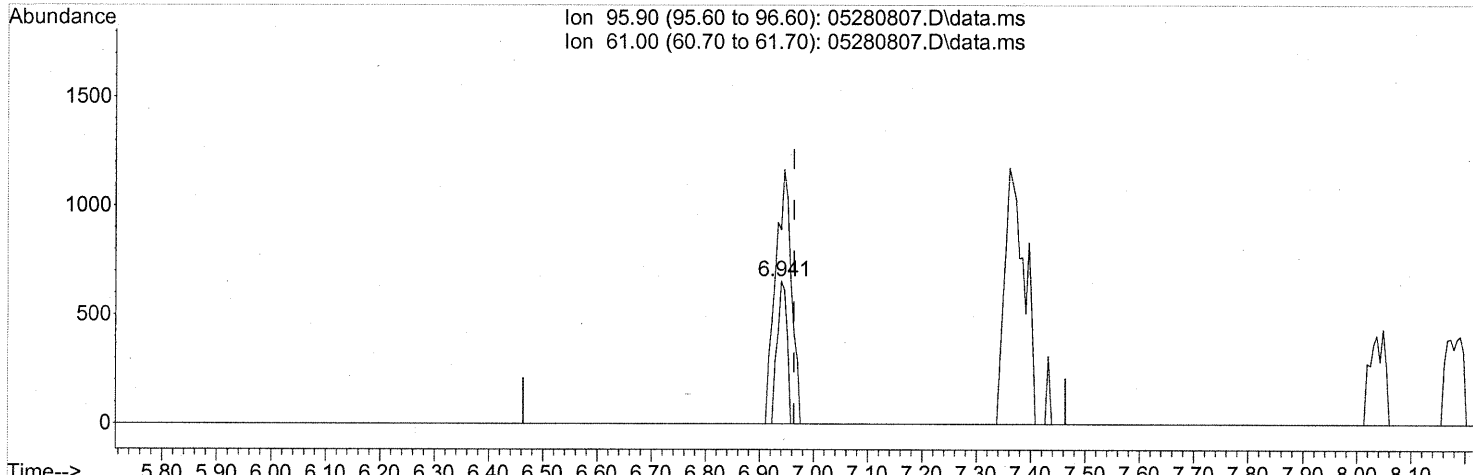
Ion	Exp%	Act%
100.90	100	100
102.90	64.90	64.88
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

6.941min (-0.024) 0.06ng

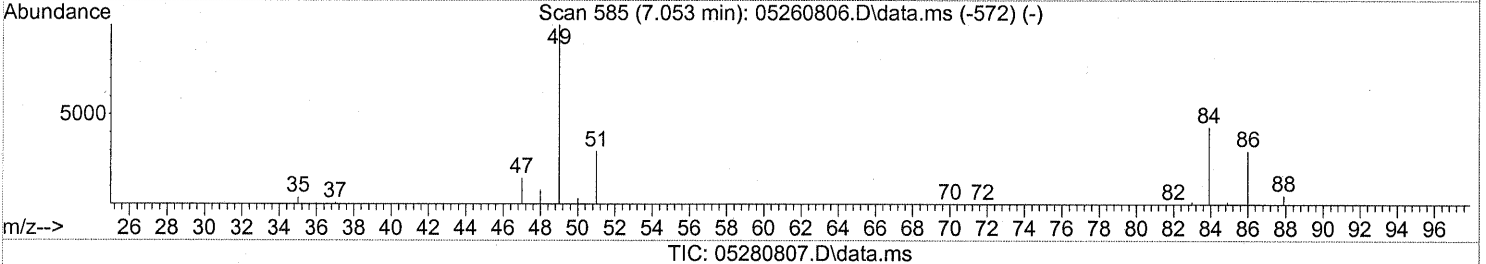
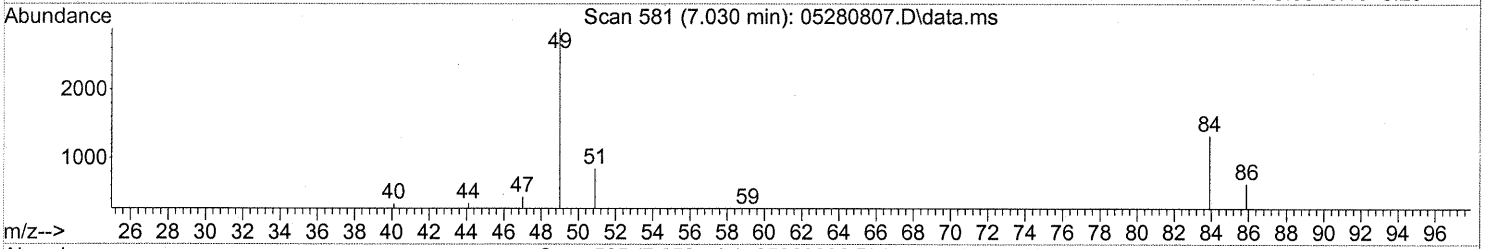
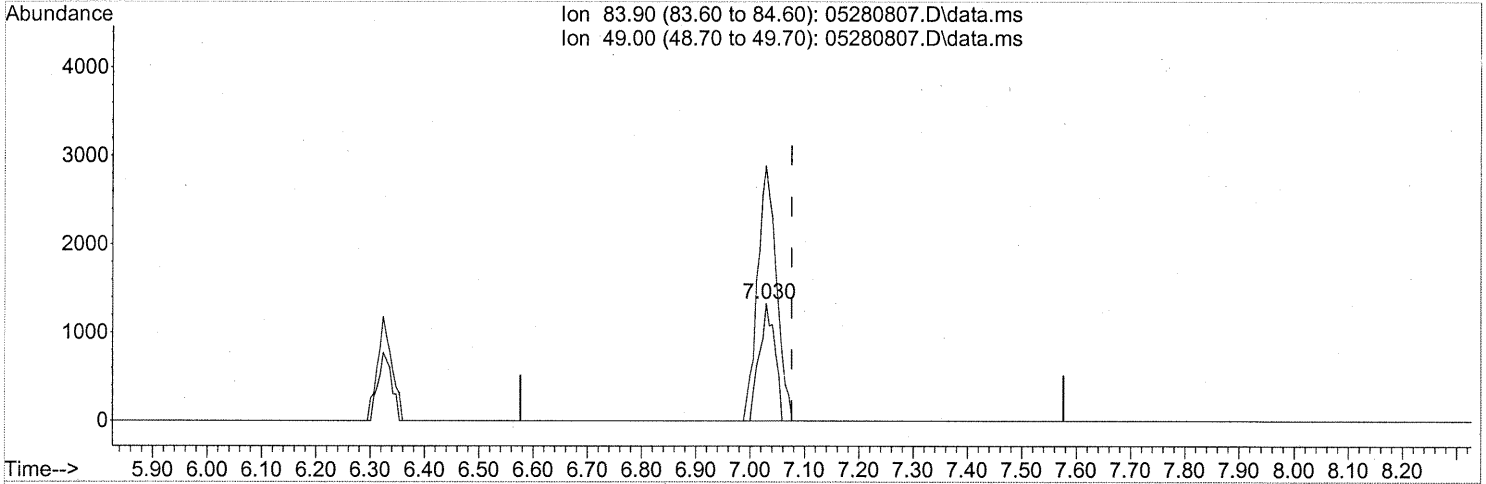
response 838

Ion	Exp%	Act%
95.90	100	100
61.00	189.30	289.26#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.030min (-0.047) 0.18ng

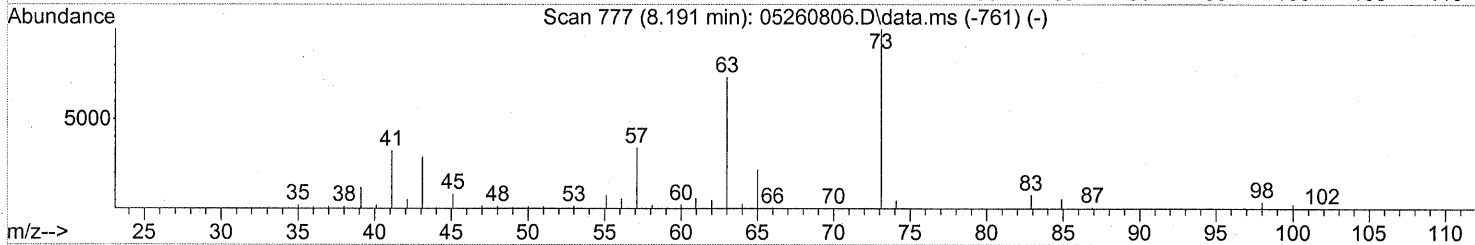
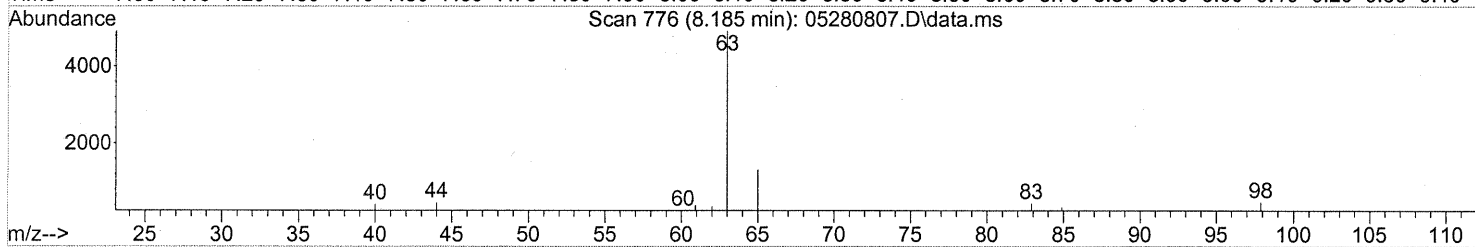
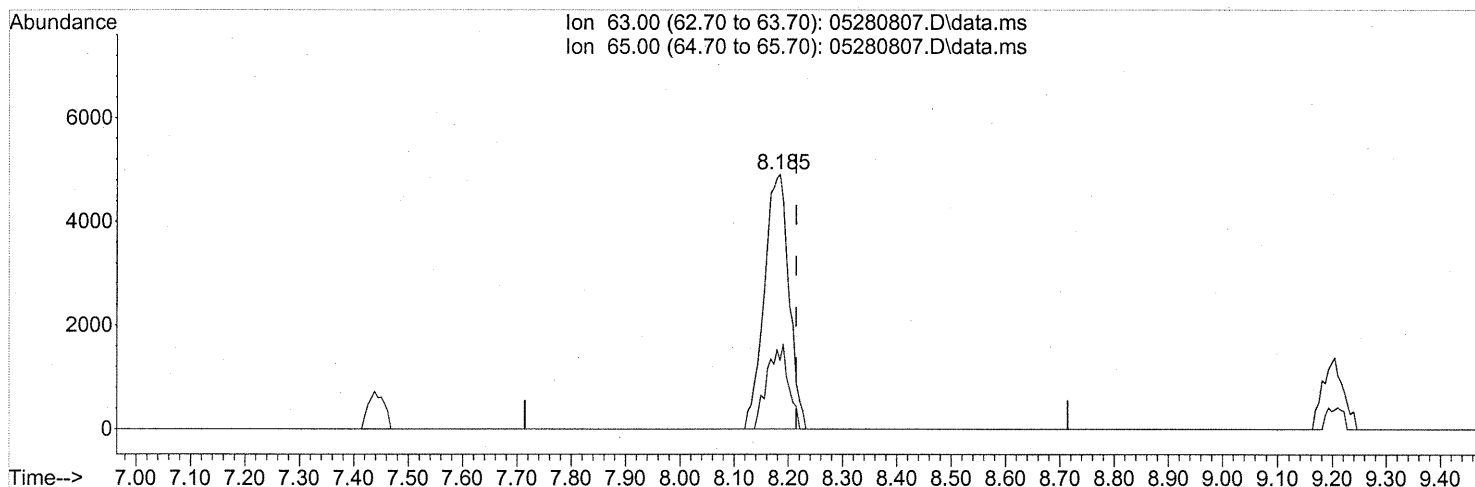
response 2643

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	264.51#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(24) 1,1-Dichloroethane (T)

8.185min (-0.030) 0.49ng

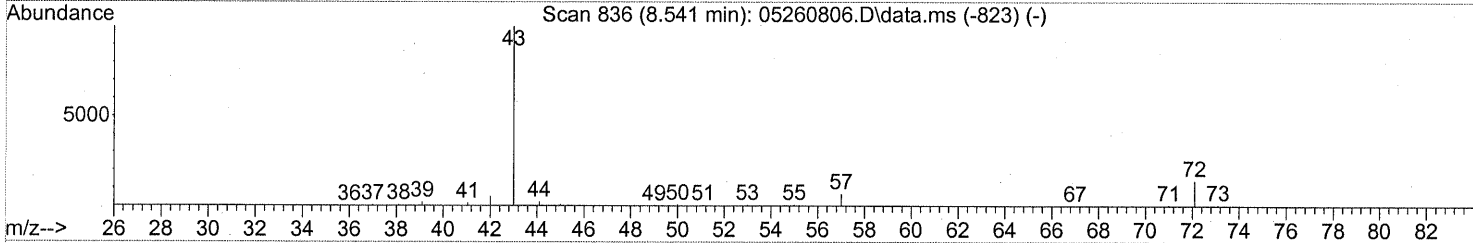
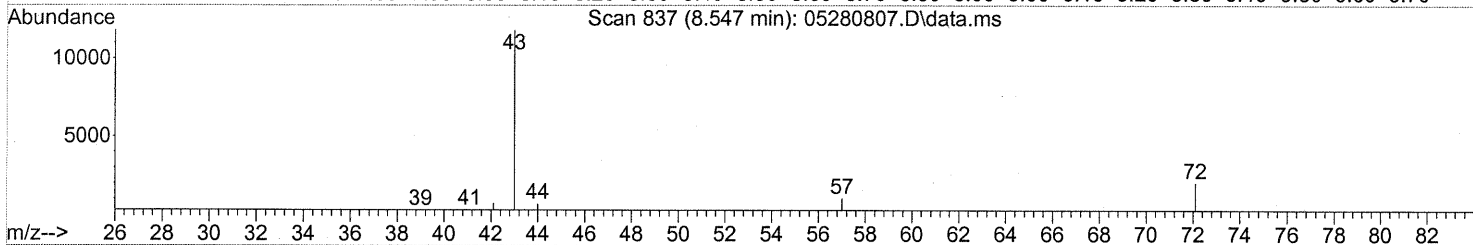
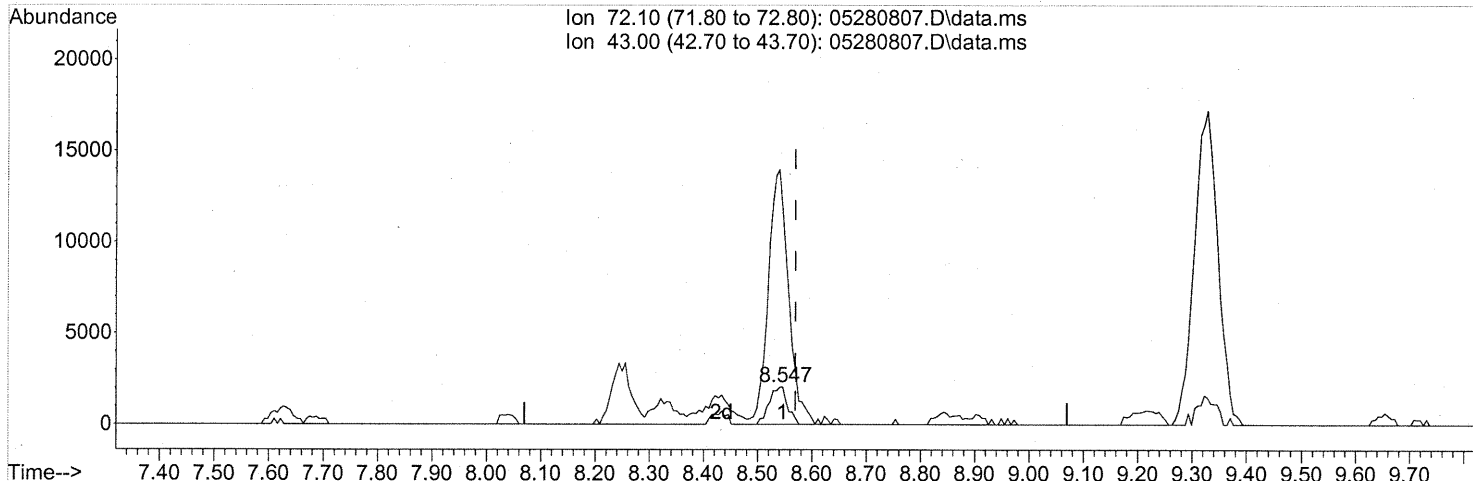
response 15594

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	28.32
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(27) 2-Butanone (T)

8.547min (-0.024) 0.47ng

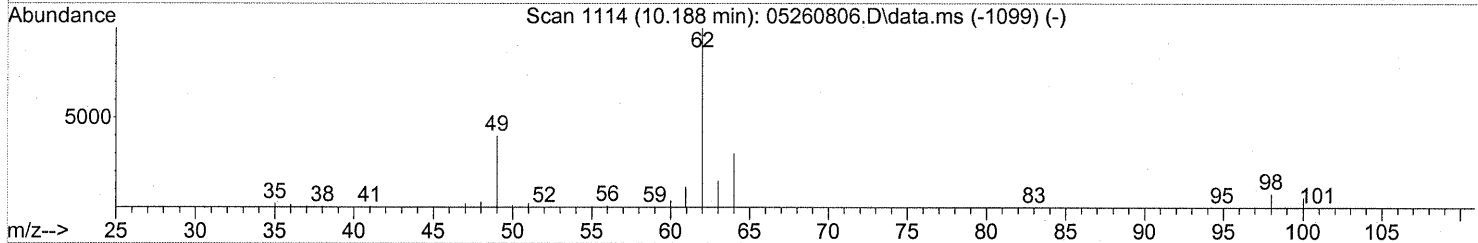
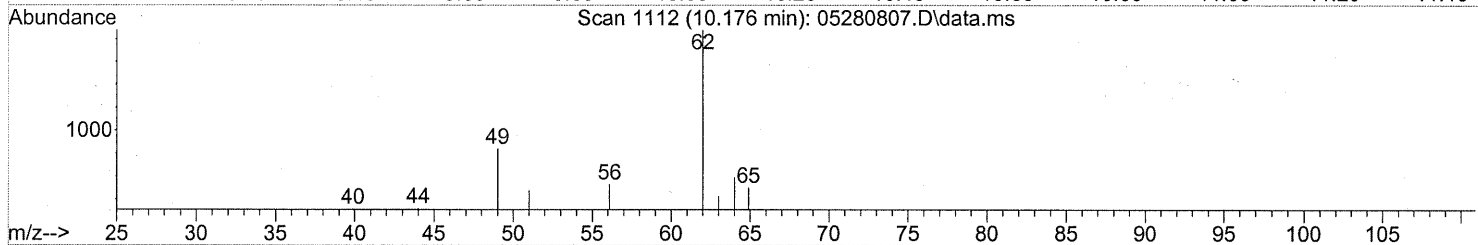
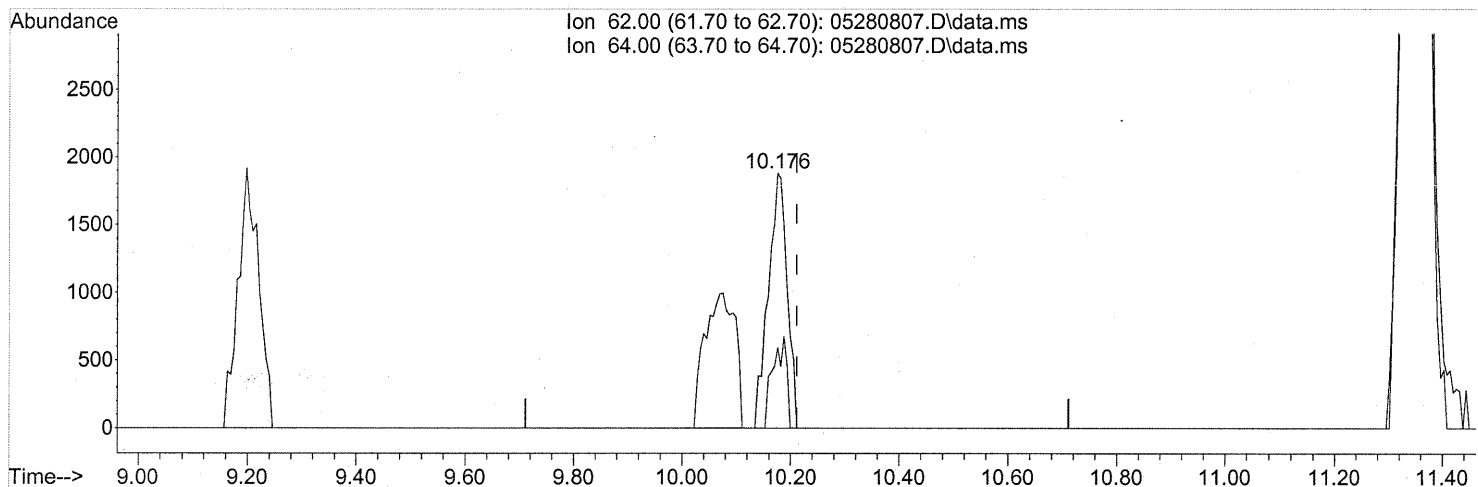
response 4794

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	760.10#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(36) 1,2-Dichloroethane (T)

10.176min (-0.036) 0.18ng

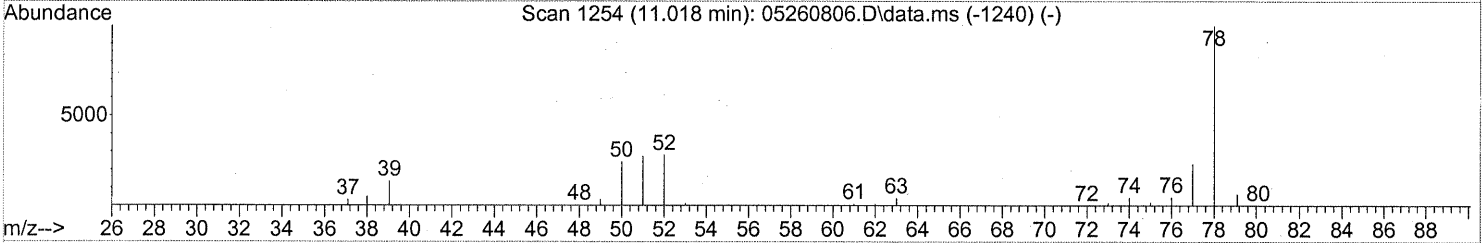
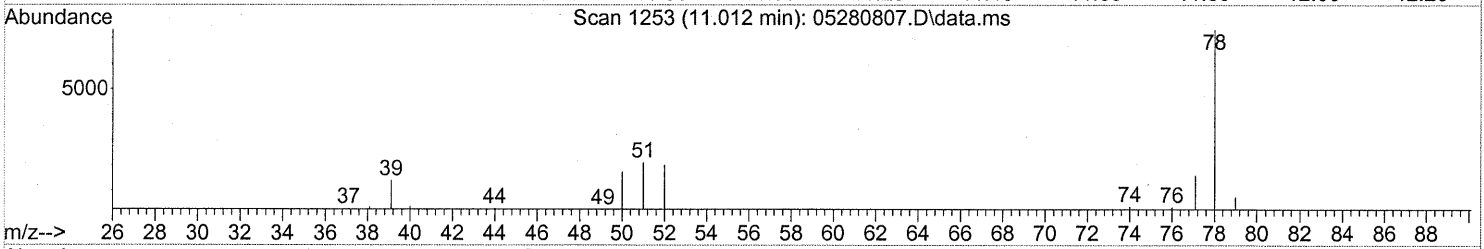
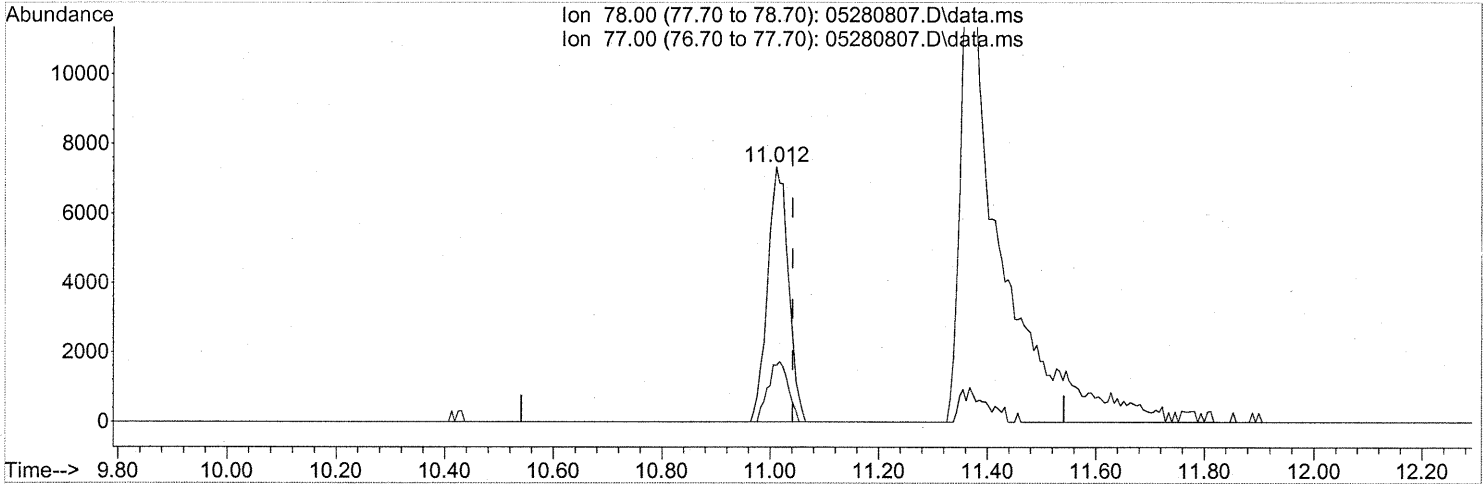
response 4558

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	26.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(41) Benzene (T)

11.012min (-0.030) 0.31ng

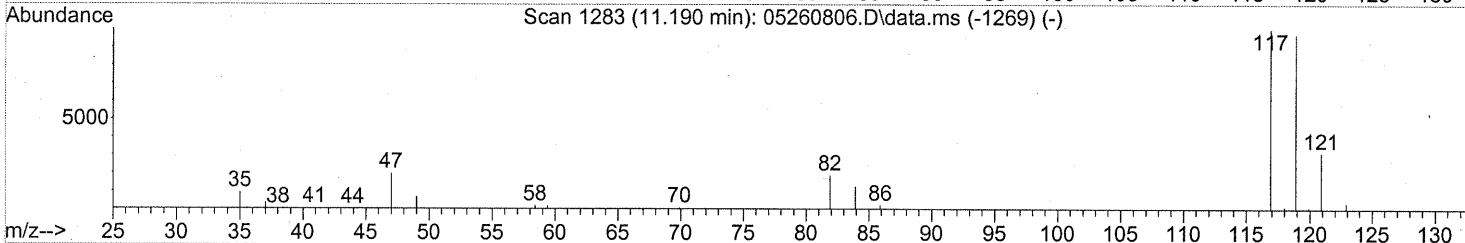
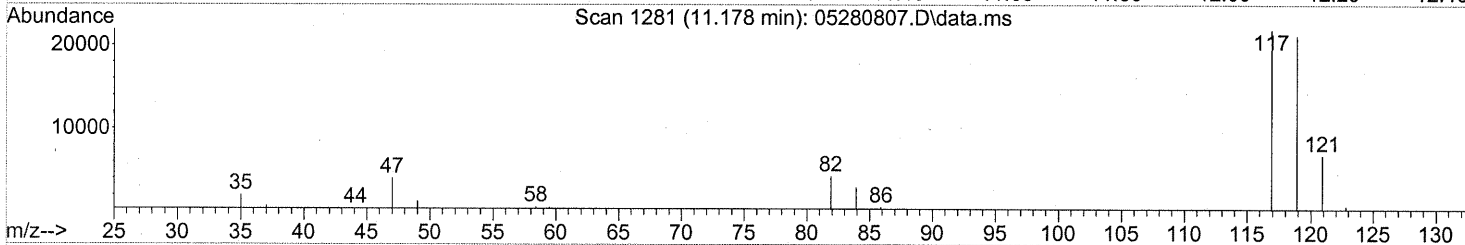
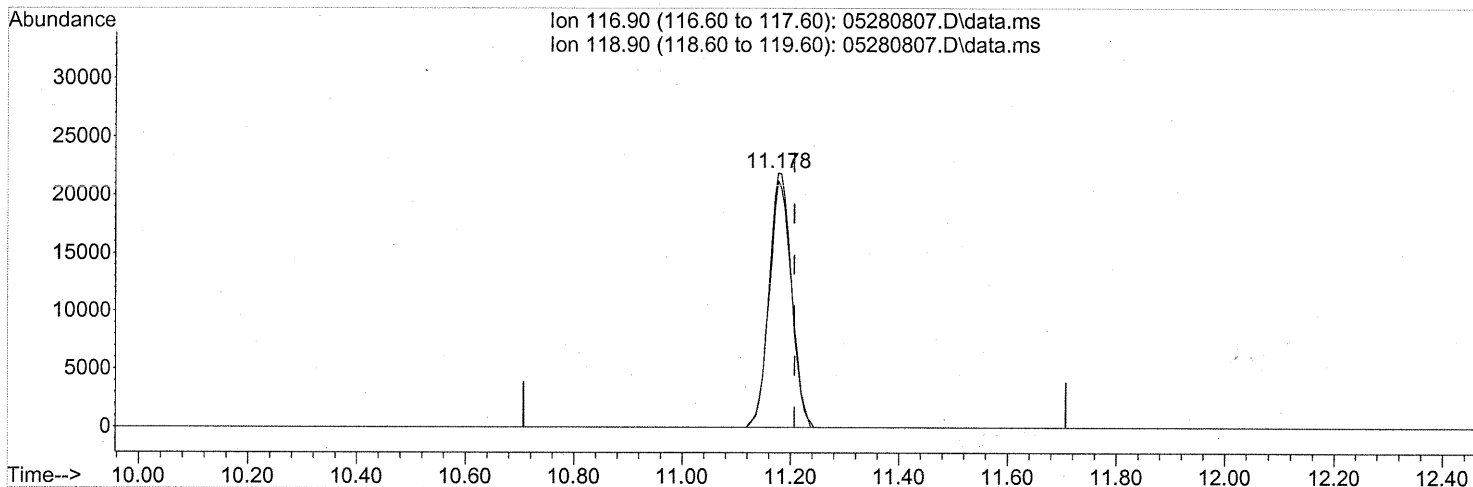
response 19558

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280807.D\data.ms

(42) Carbon Tetrachloride (T)

11.178min (-0.030) 2.41ng

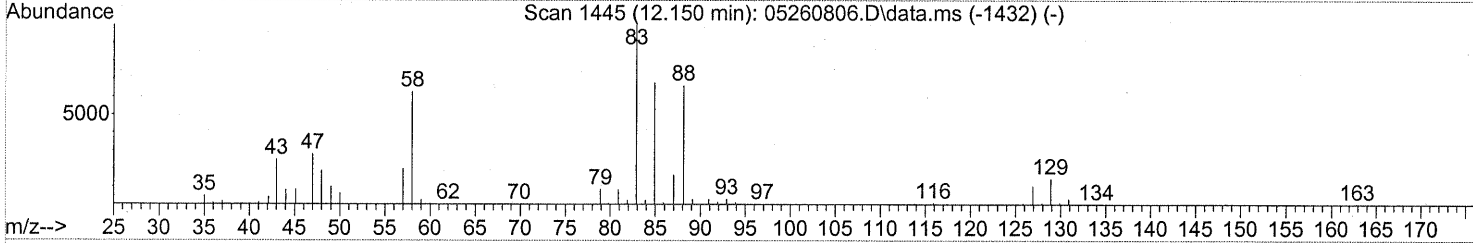
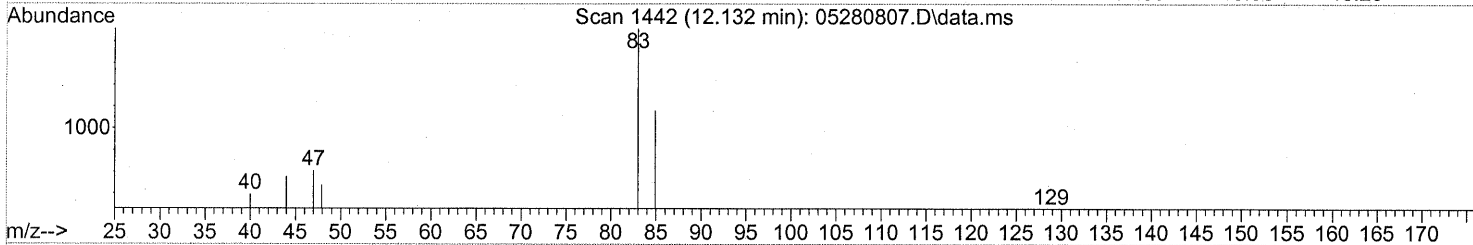
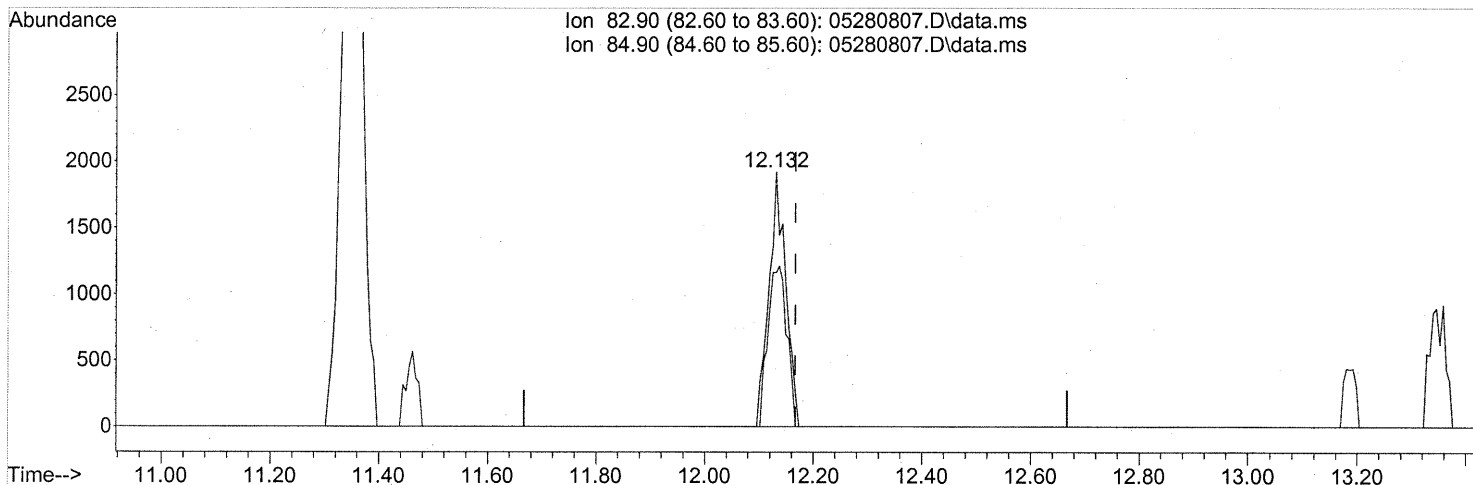
response 63141

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	95.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

(46) Bromodichloromethane (T)

12.132min (-0.036) 0.22ng

response 4167

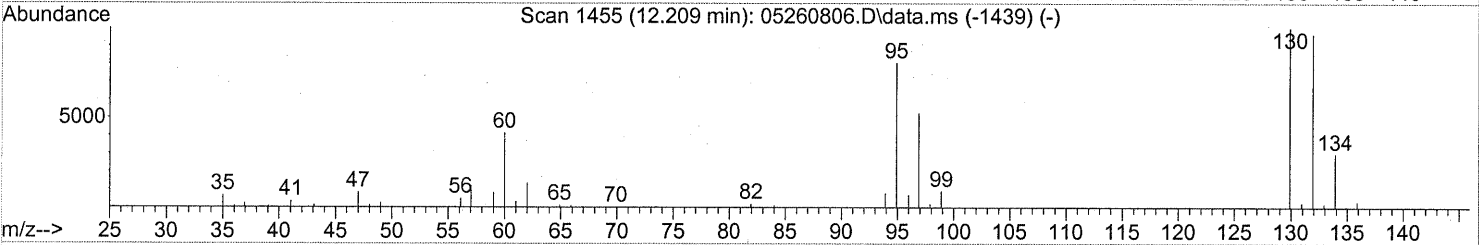
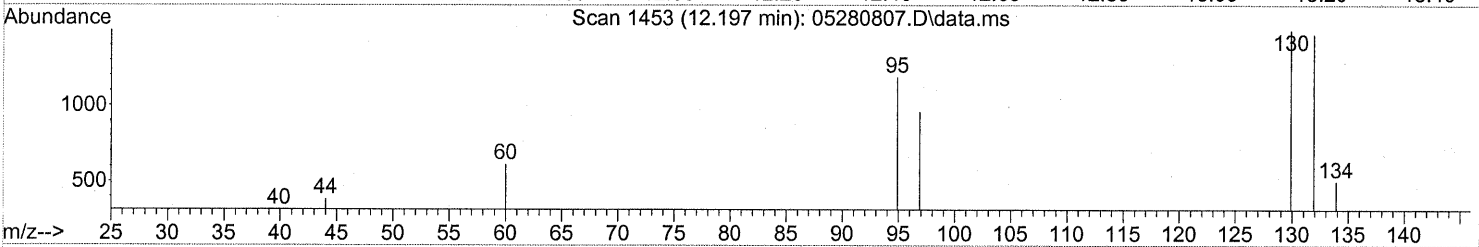
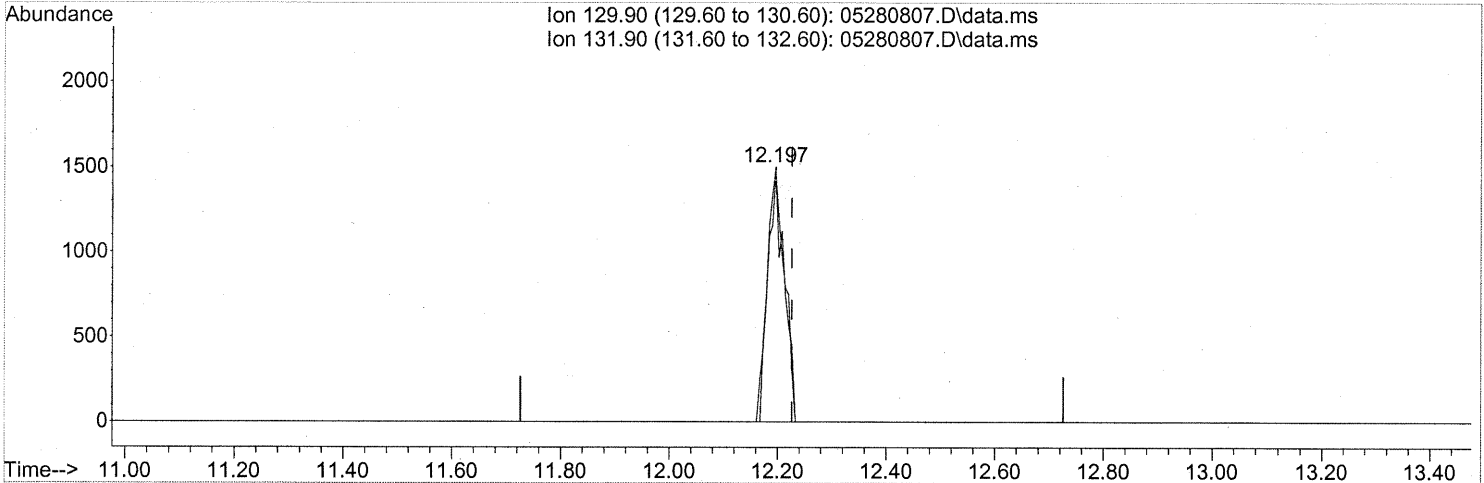
Ion	Exp%	Act%
82.90	100	100
84.90	62.30	70.82
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(47) Trichloroethene (T)

12.197min (-0.030) 0.16ng

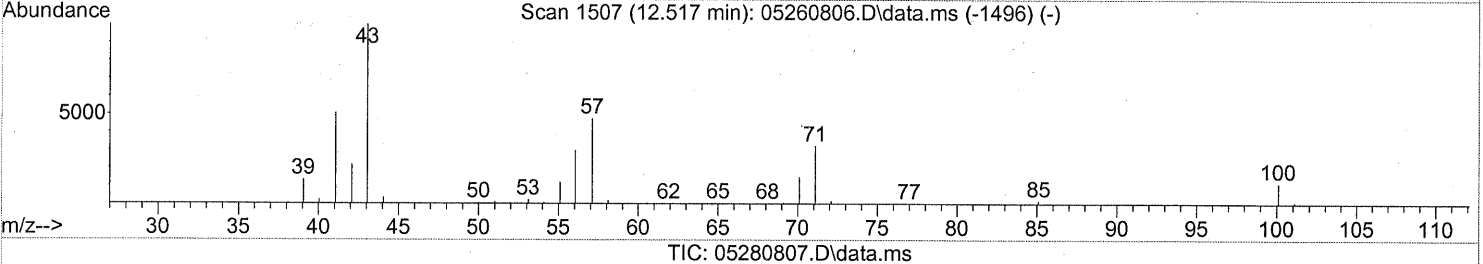
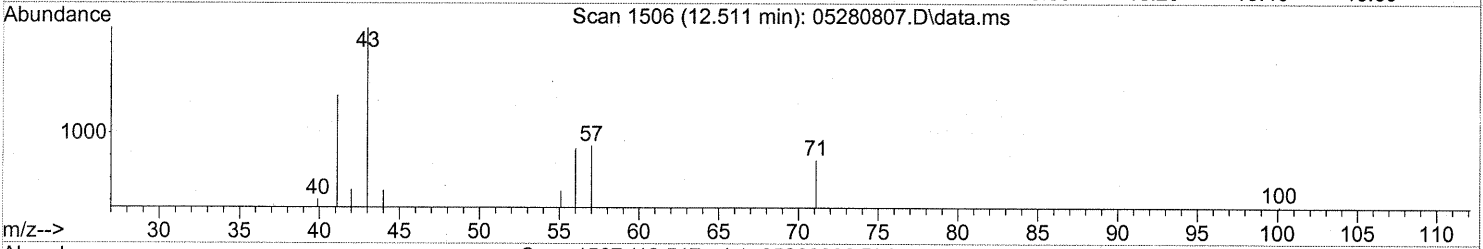
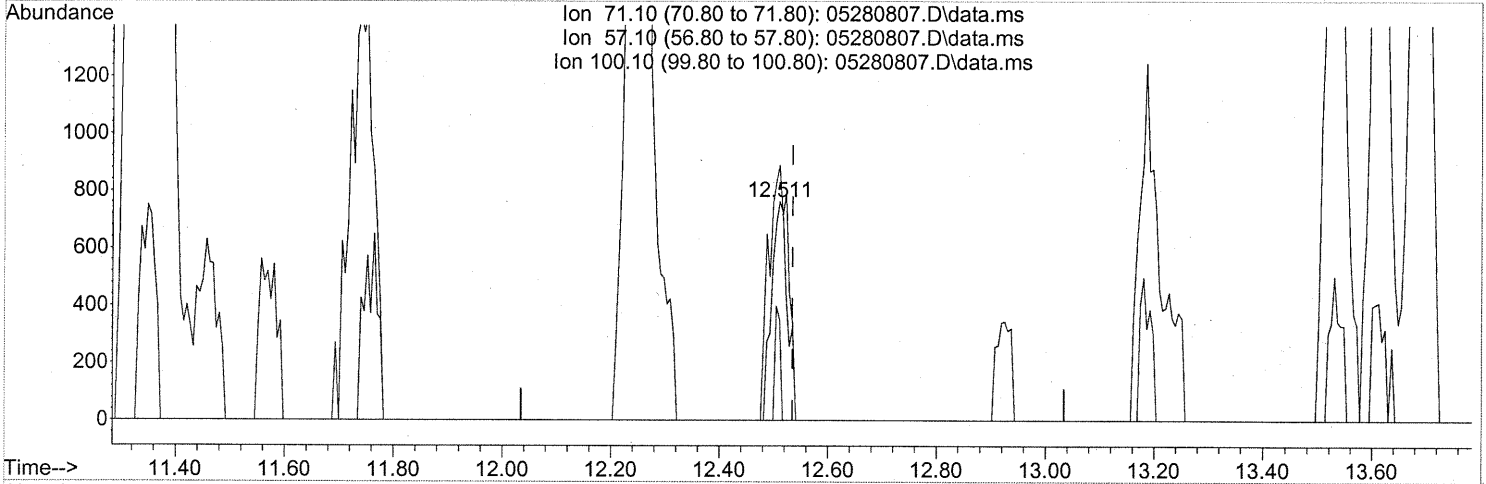
response 3218

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	101.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



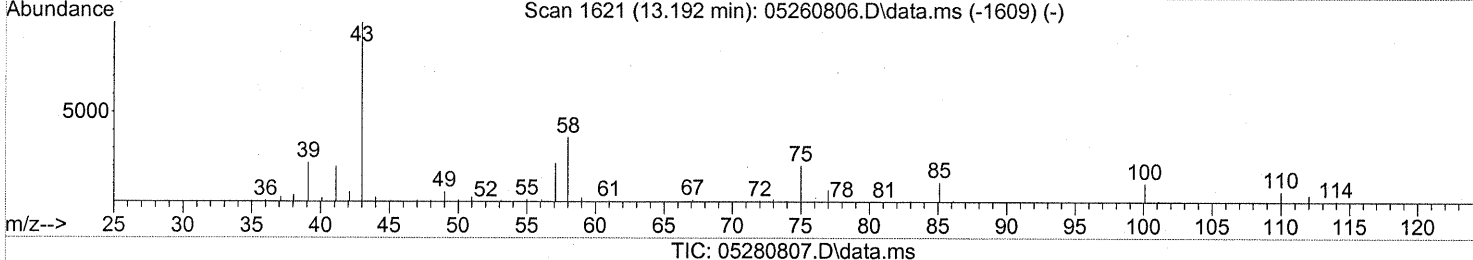
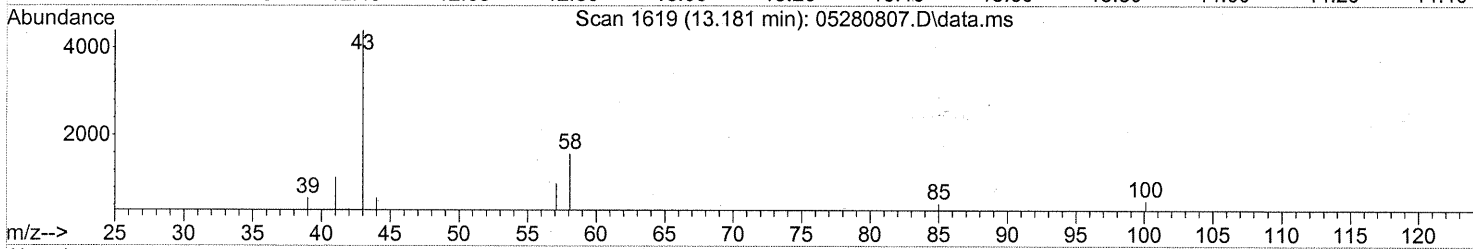
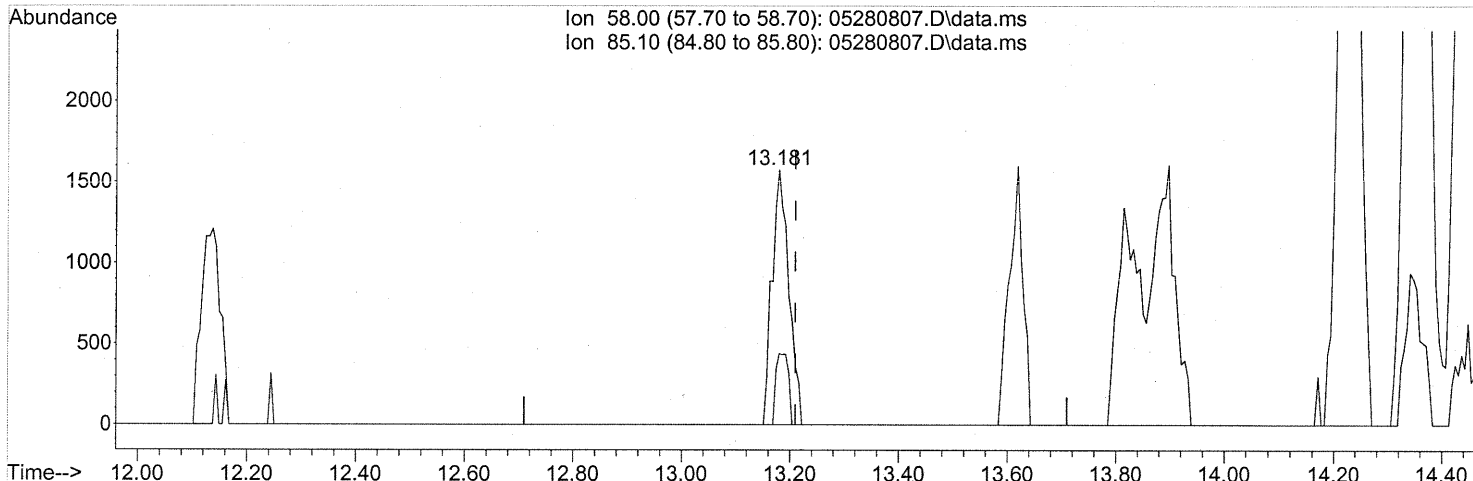
(51) n-Heptane (T)  
 12.511min (-0.024) 0.10ng  
 response 1534

Ion	Exp%	Act%
71.10	100	100
57.10	88.70	143.74#
100.10	28.80	17.41
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

13.181min (-0.030) 0.15ng

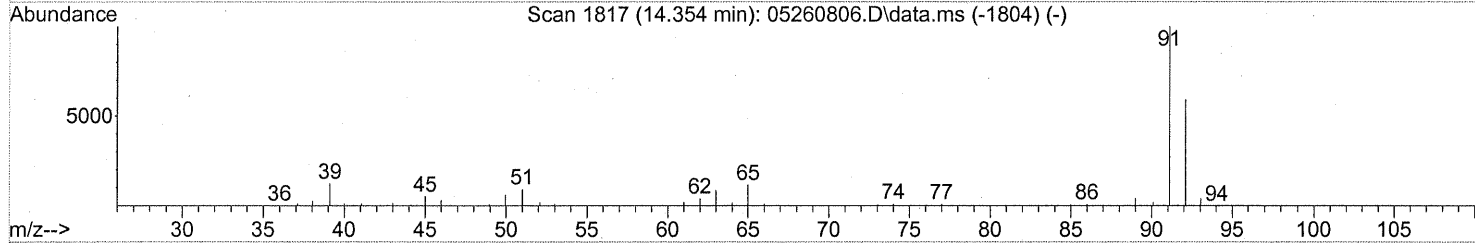
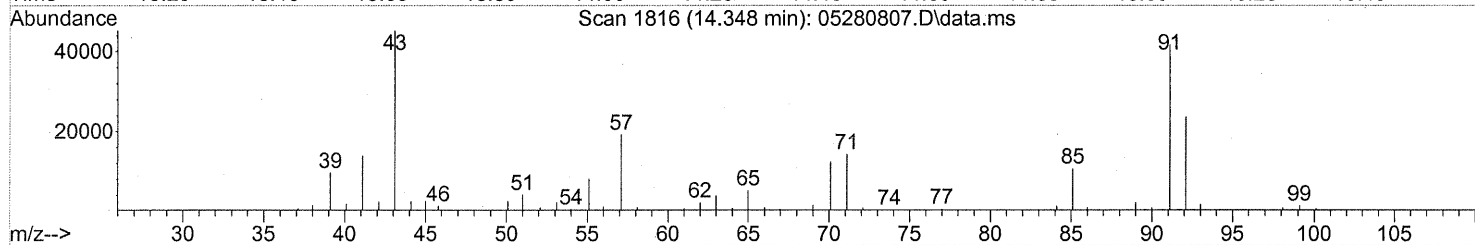
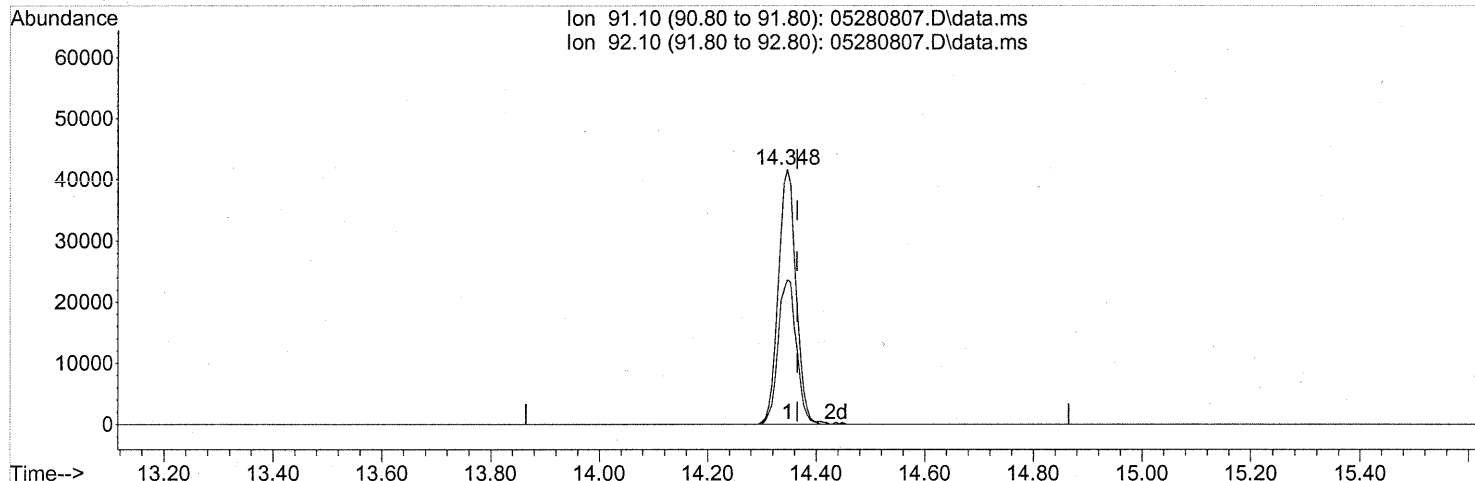
response 3409

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	20.50#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280807.D\data.ms

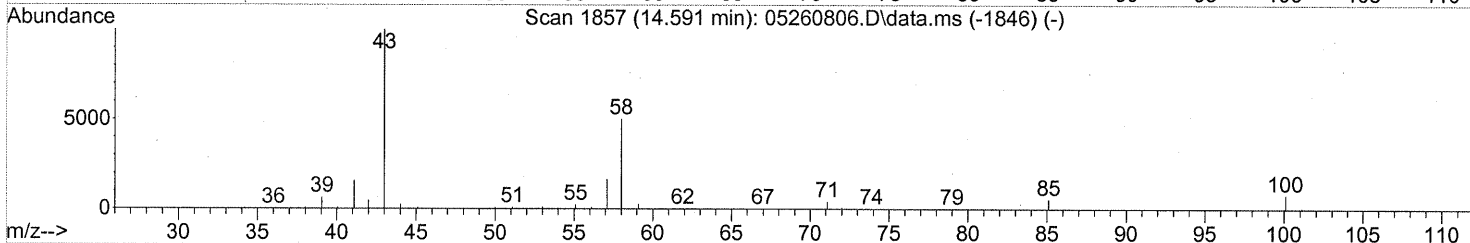
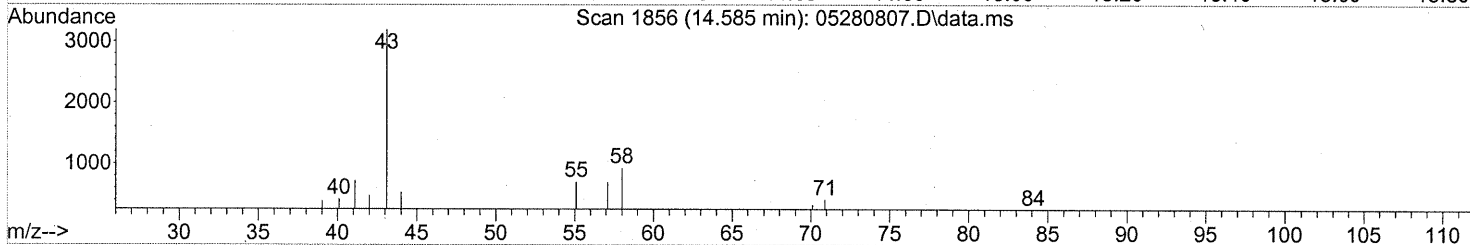
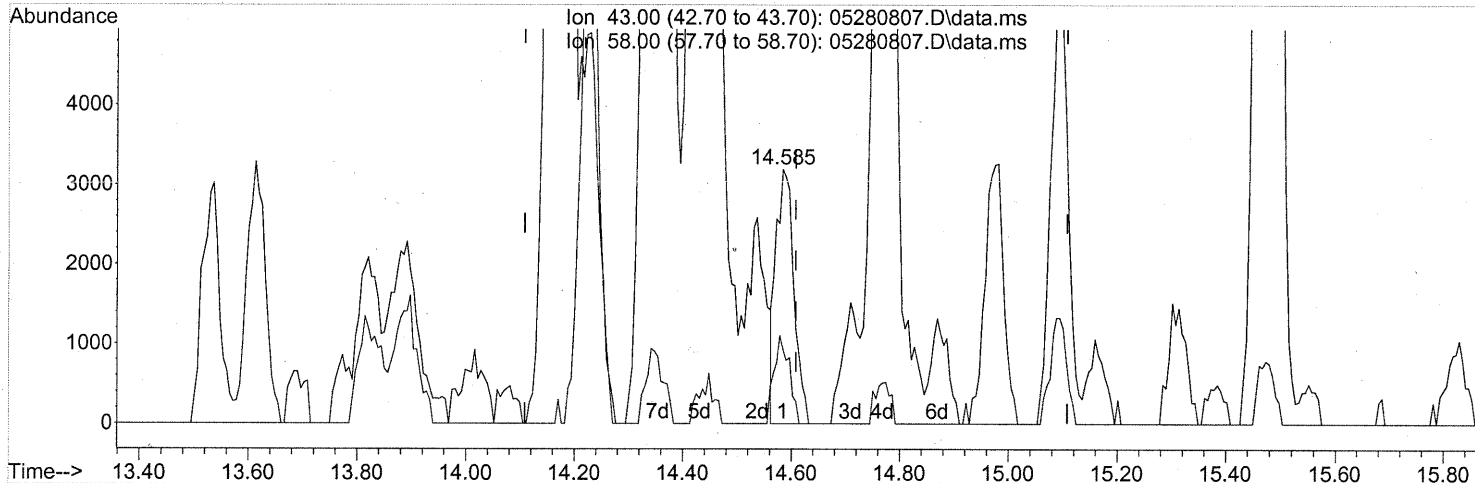
(58) Toluene (T)  
 14.348min (-0.018) 1.29ng  
 response 94466

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	58.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(59) 2-Hexanone (T)

14.585min (-0.024) 0.11ng

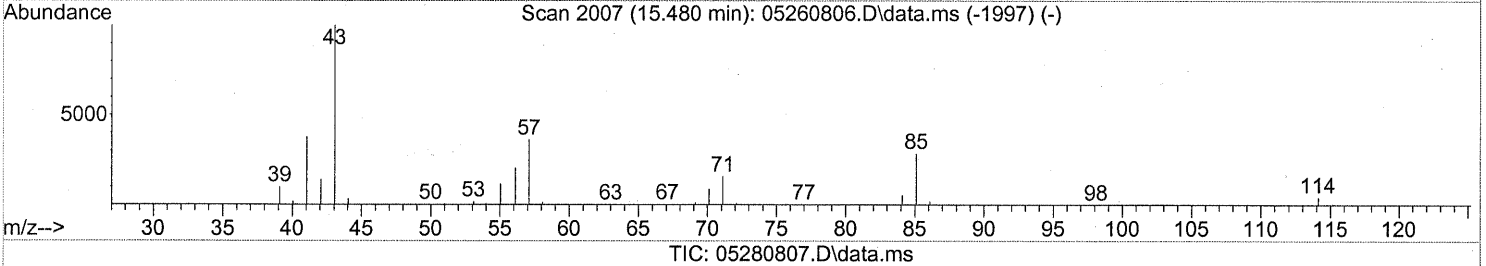
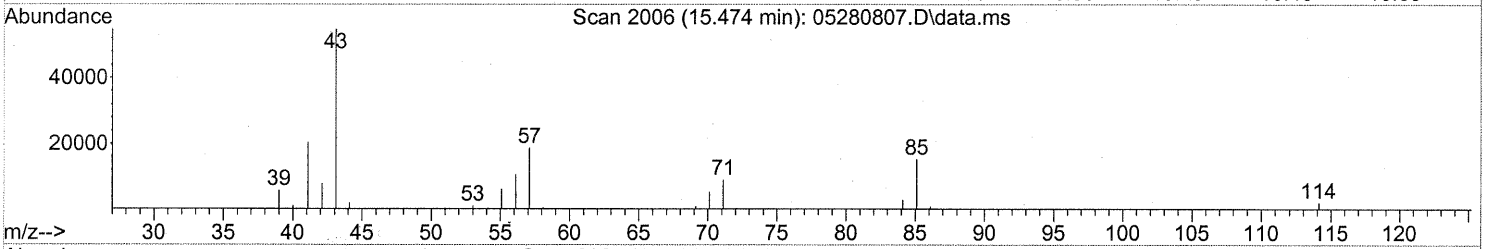
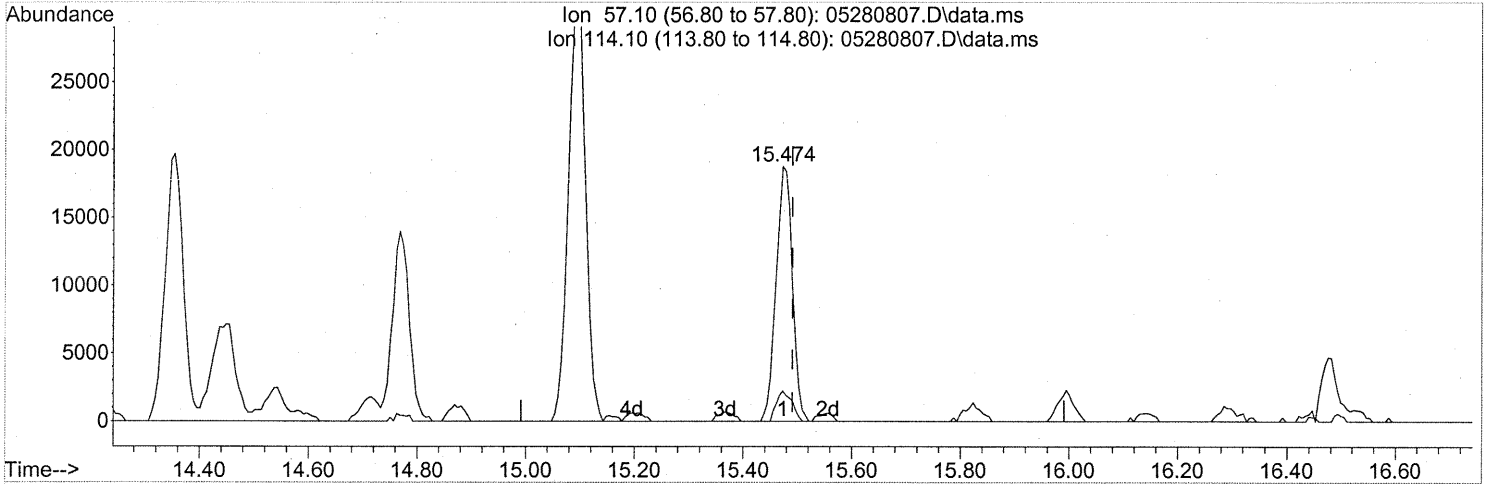
response 7402

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	29.37#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(63) n-Octane (T)

15.474min (-0.018) 1.76ng

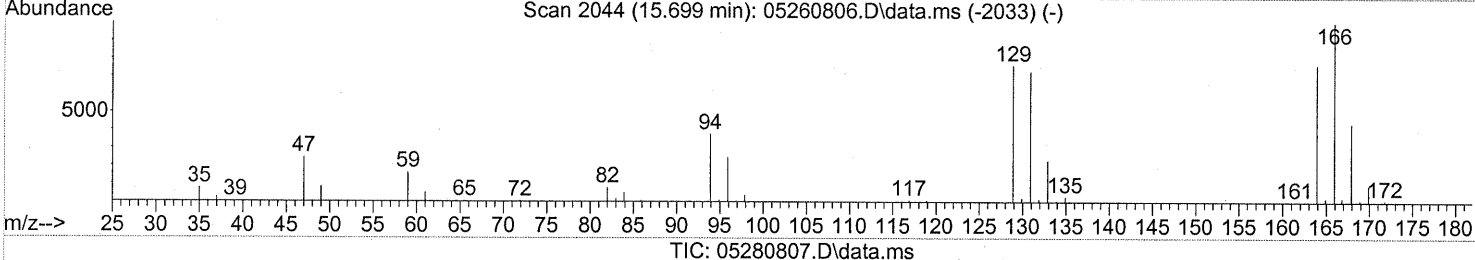
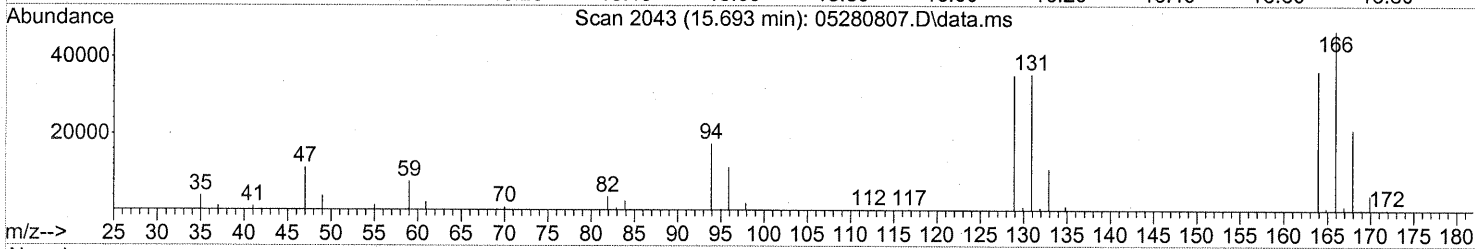
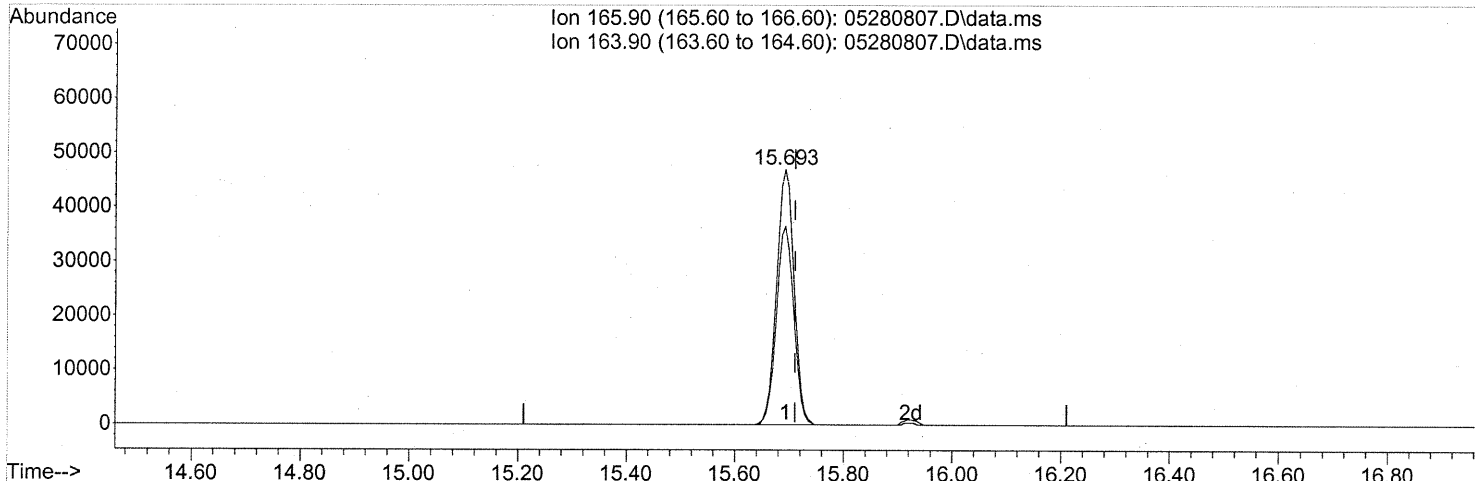
response 38984

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 4.82ng

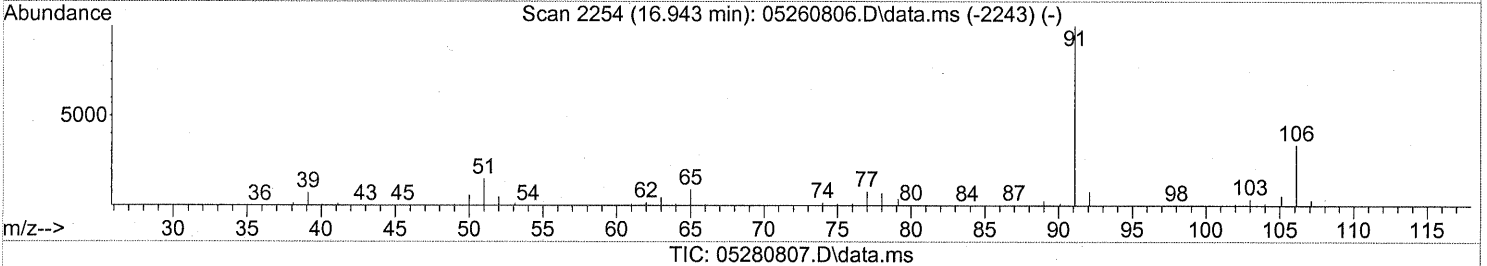
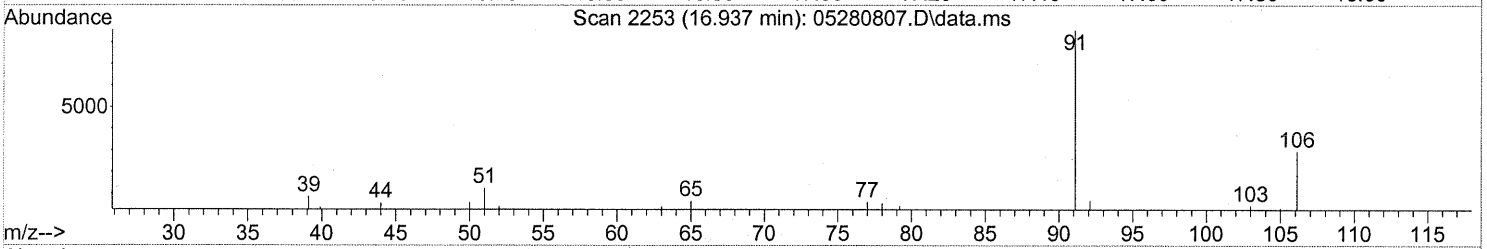
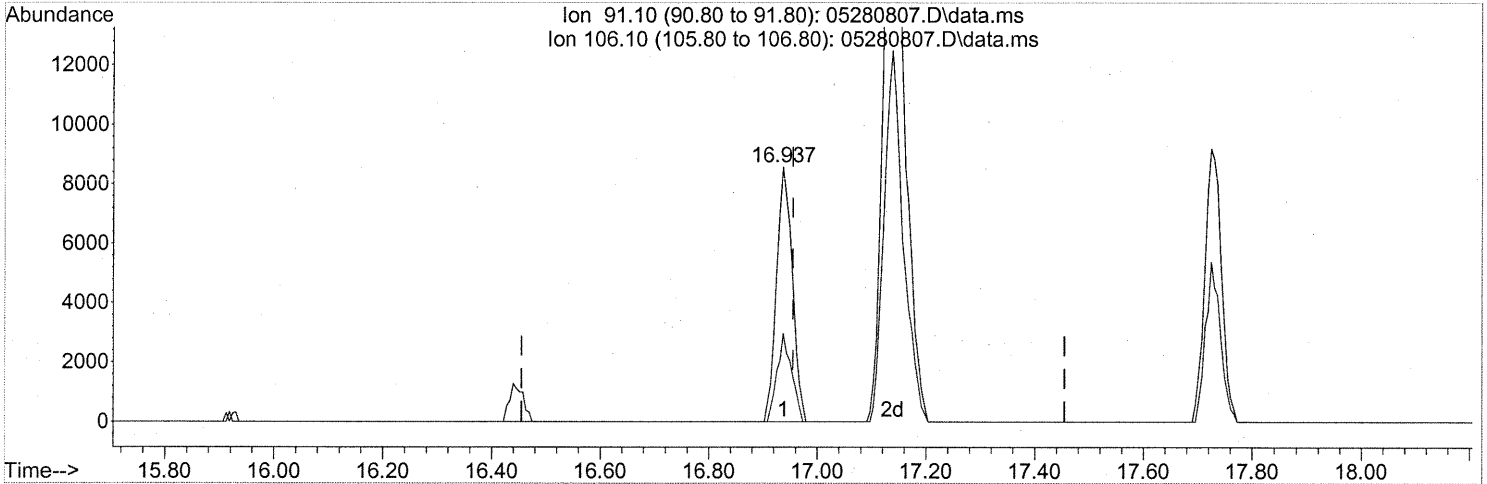
response 104322

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	77.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)  
 16.937min (-0.018) 0.21ng  
 response 17238

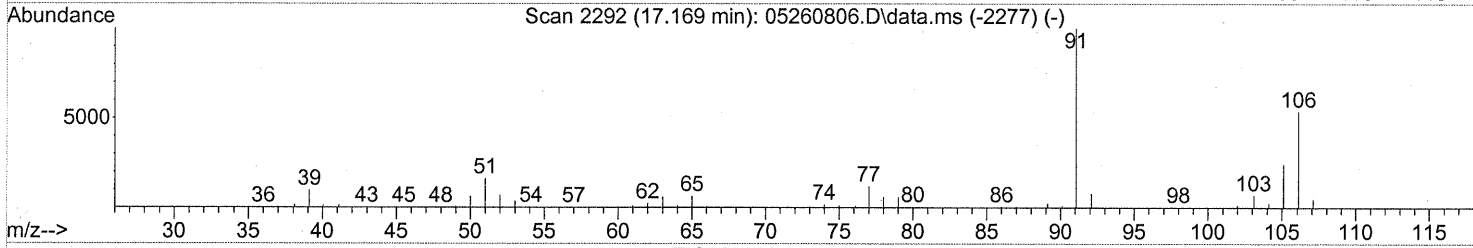
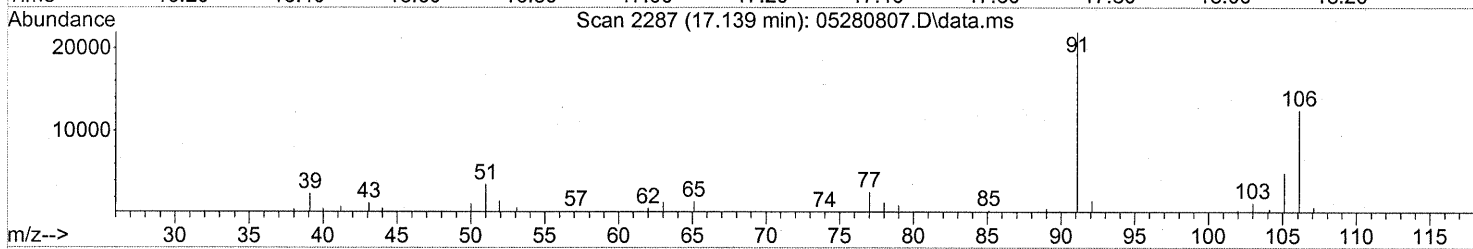
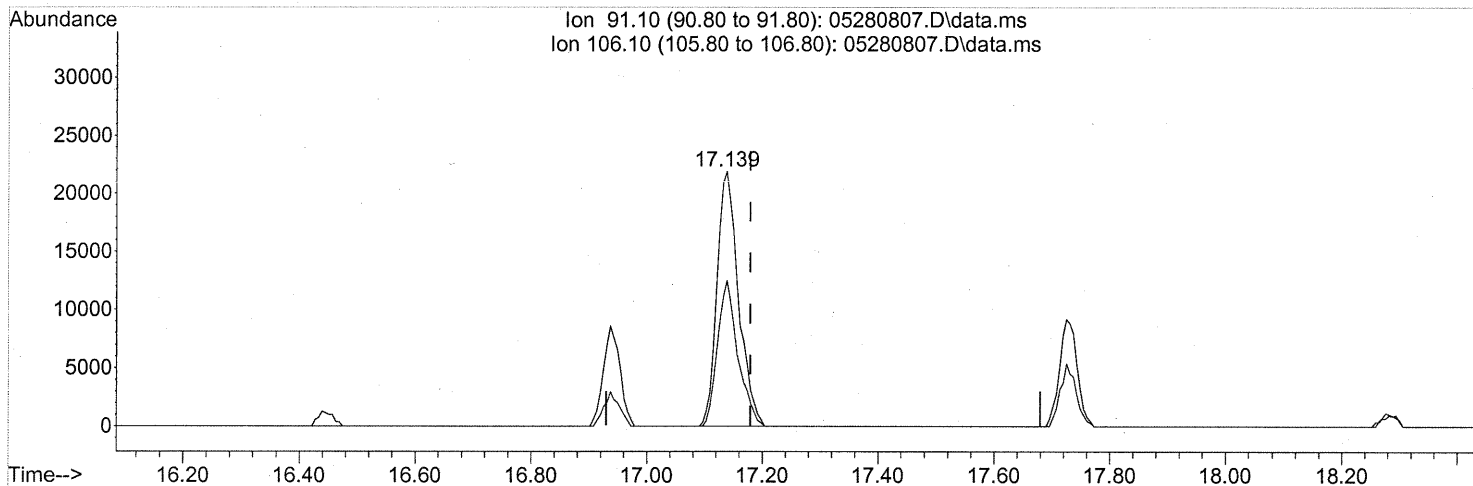
Ion	Exp%	Act%
91.10	100	100
106.10	29.90	31.69
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 1.03ng

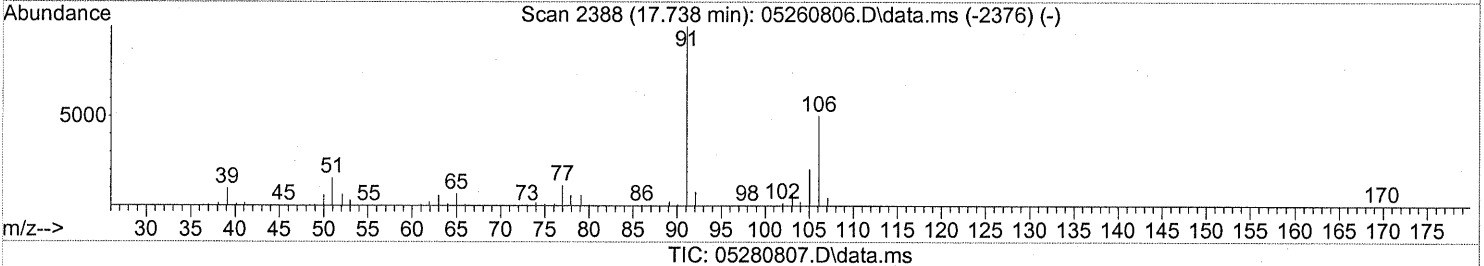
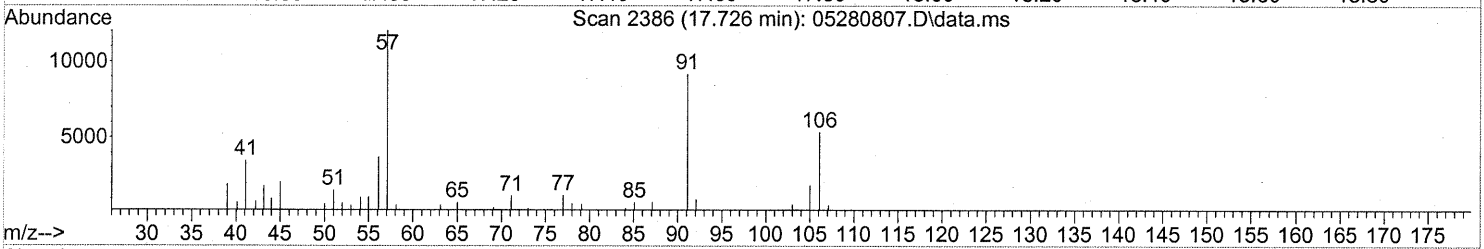
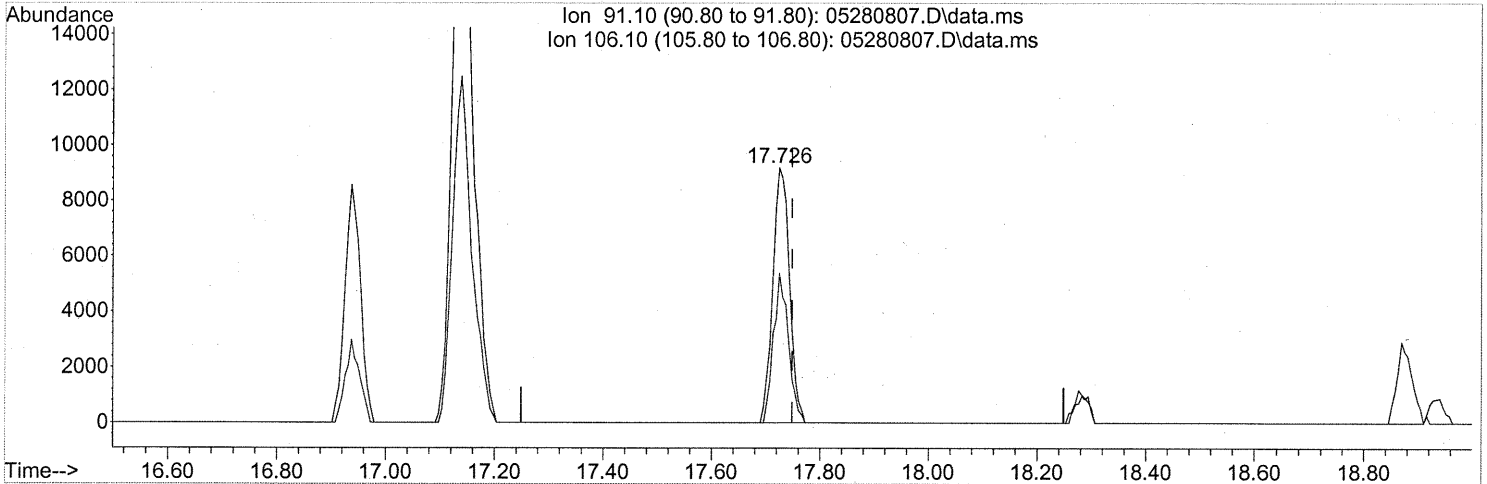
response 56747

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	54.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.726min (-0.024) 0.33ng

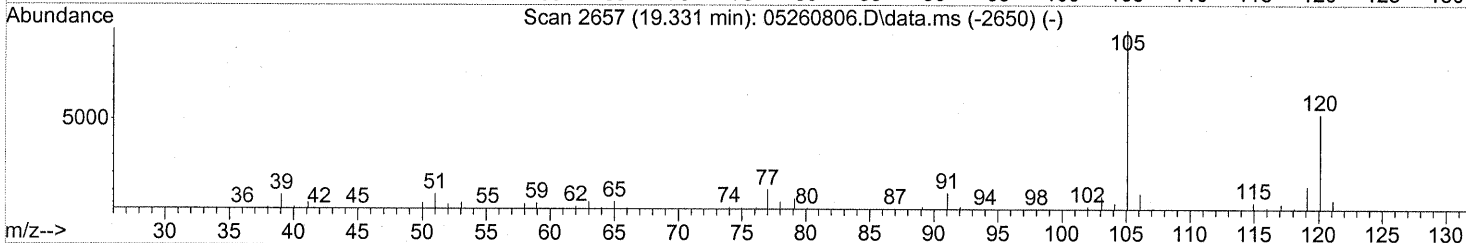
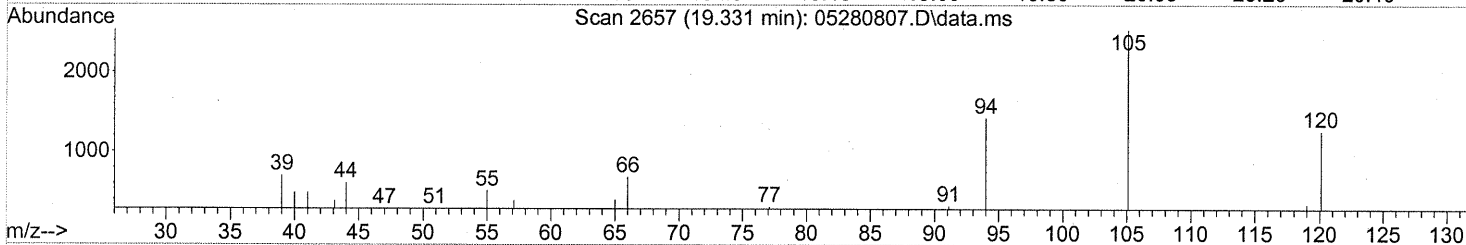
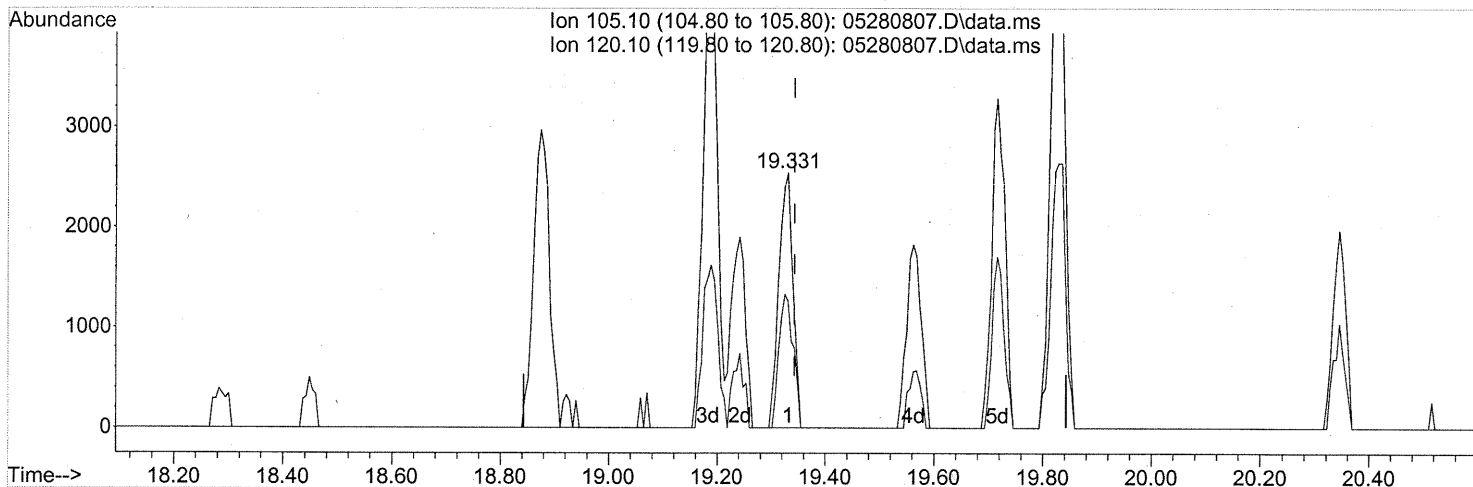
response 19694

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	52.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

19.331min (-0.012) 0.06ng

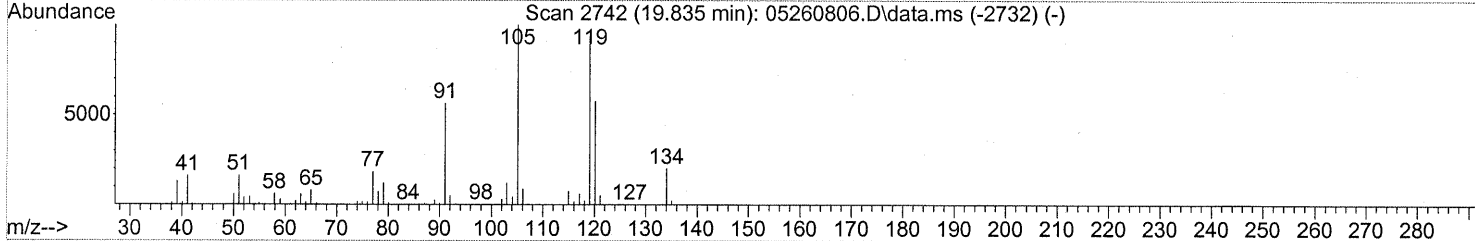
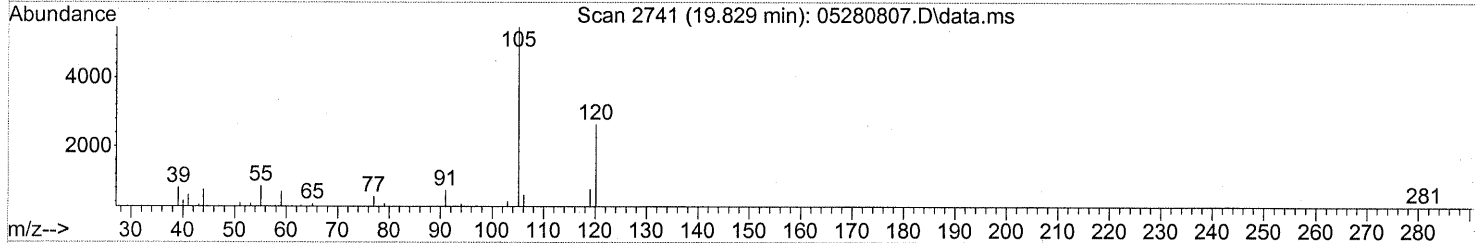
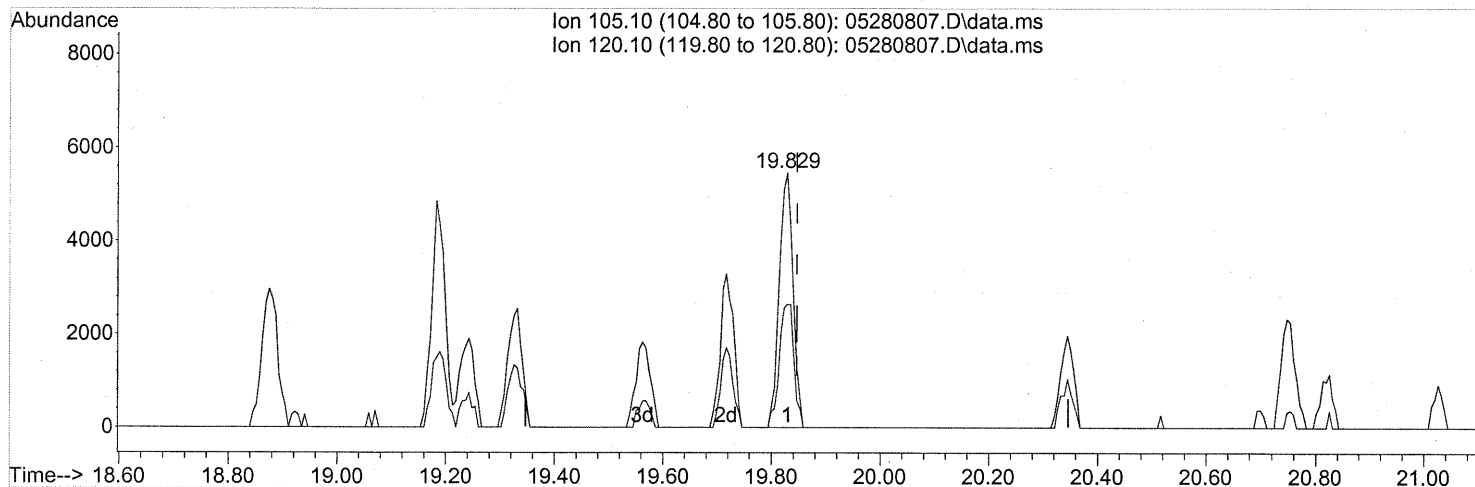
response 4562

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	52.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280807.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

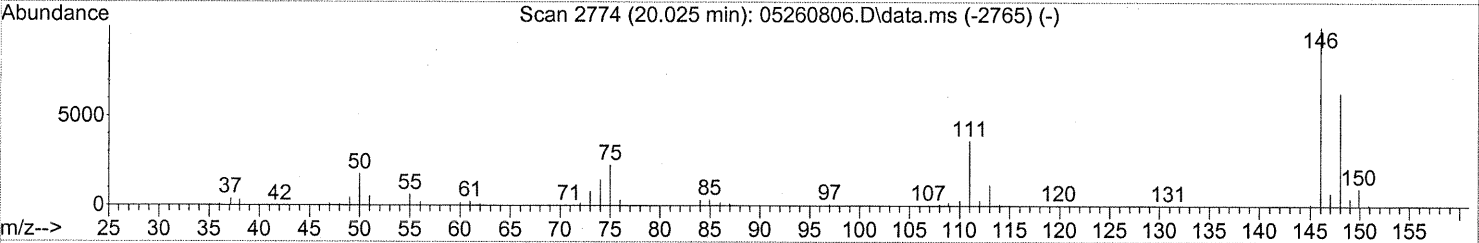
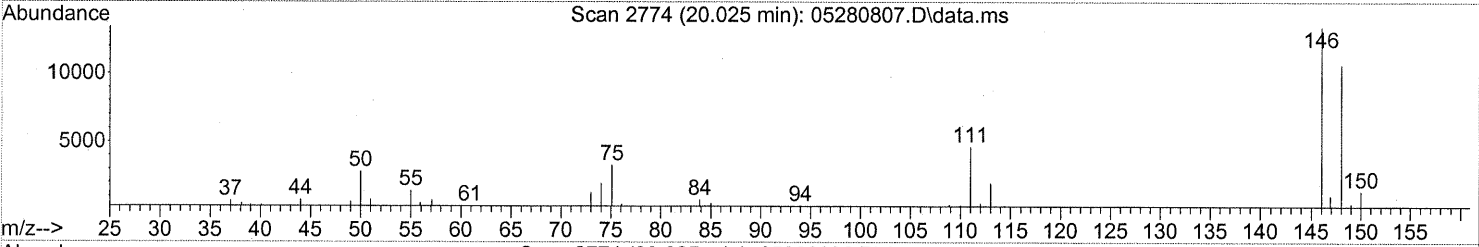
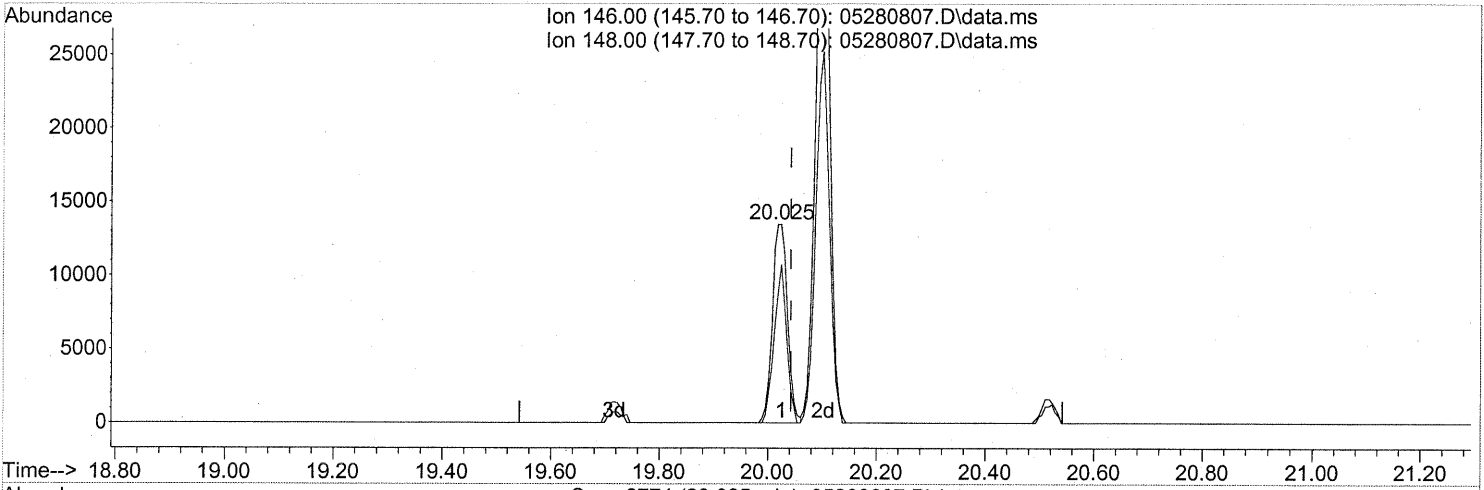
19.829min (-0.018) 0.13ng

response 9622

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	51.30
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

20.025min (-0.018) 0.54ng

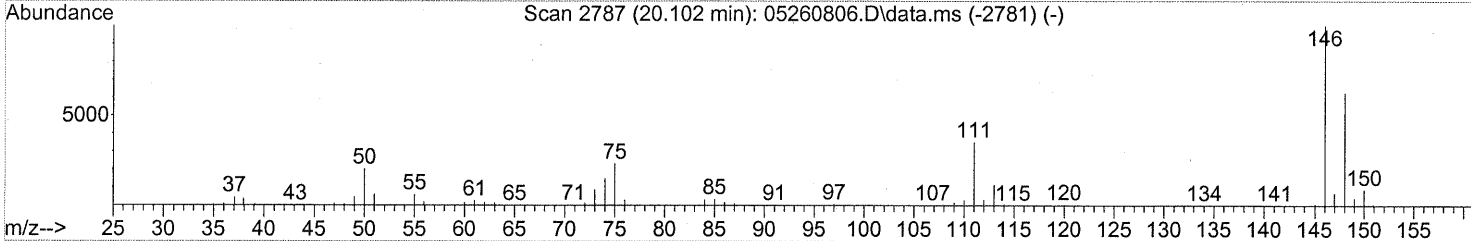
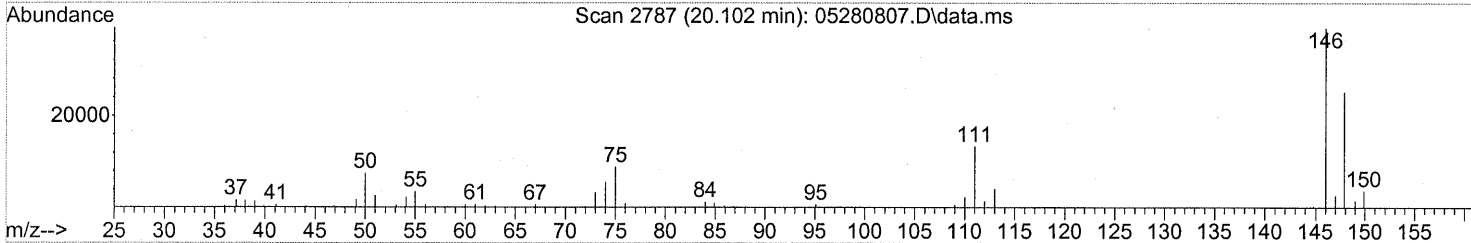
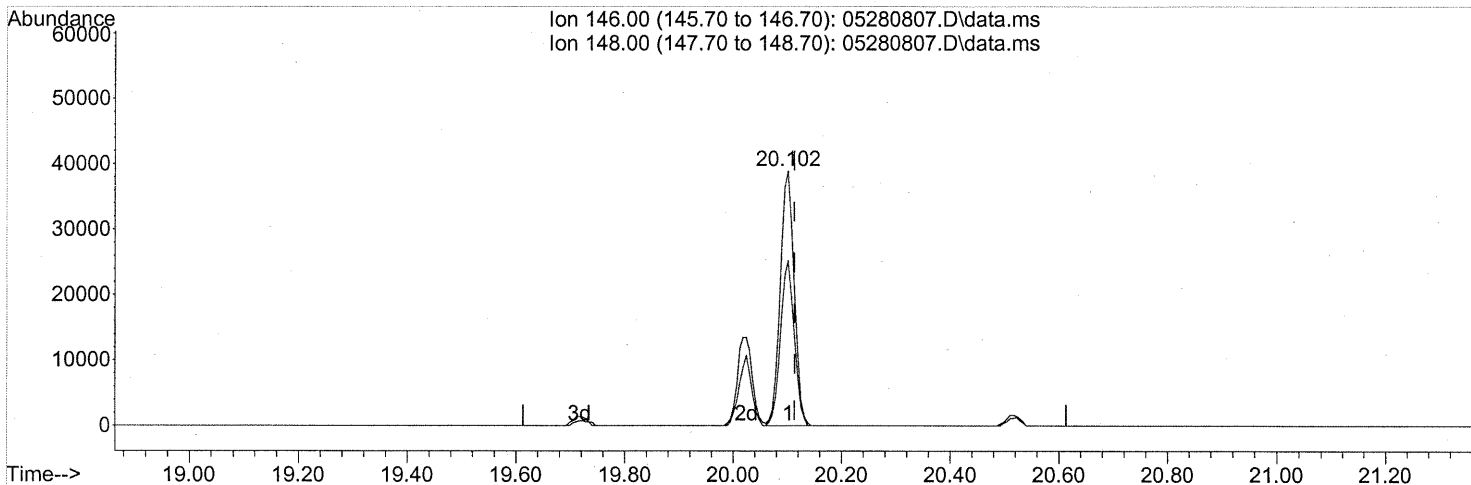
response 25943

Ion	Exp%	Act%
146.00	100	100
148.00	63.10	65.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280807.D\data.ms

(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 1.48ng

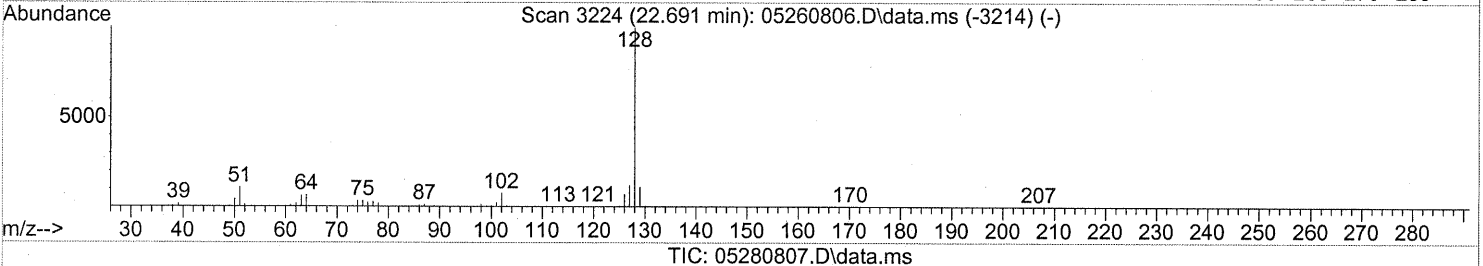
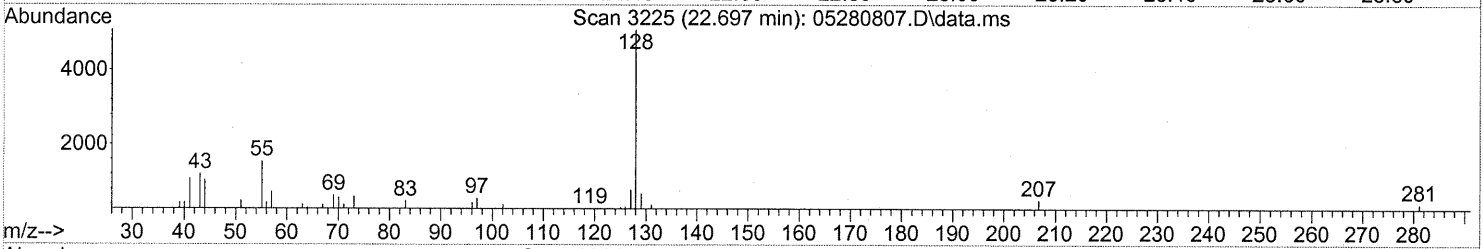
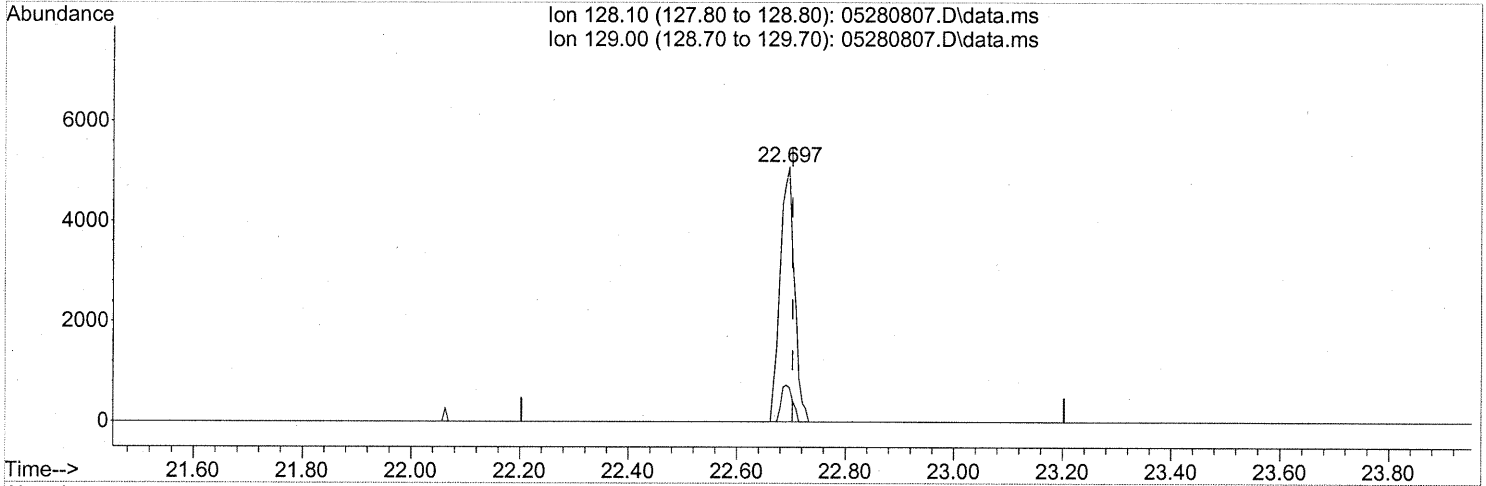
response 69617

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280807.D\data.ms

(95) Naphthalene (T)

22.697min (-0.006) 0.08ng

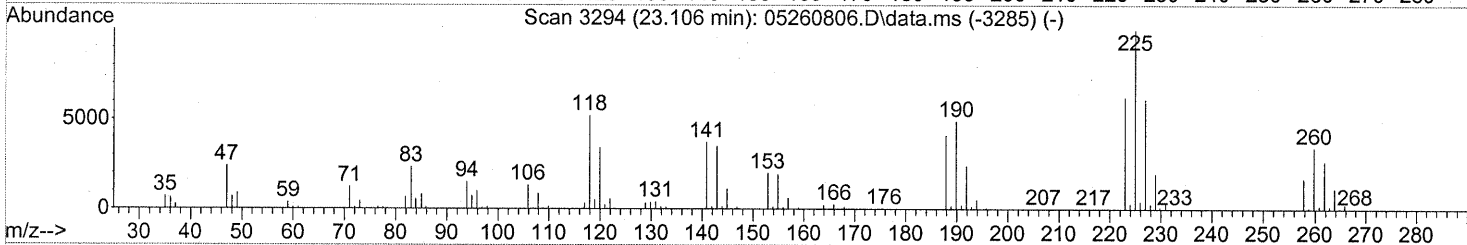
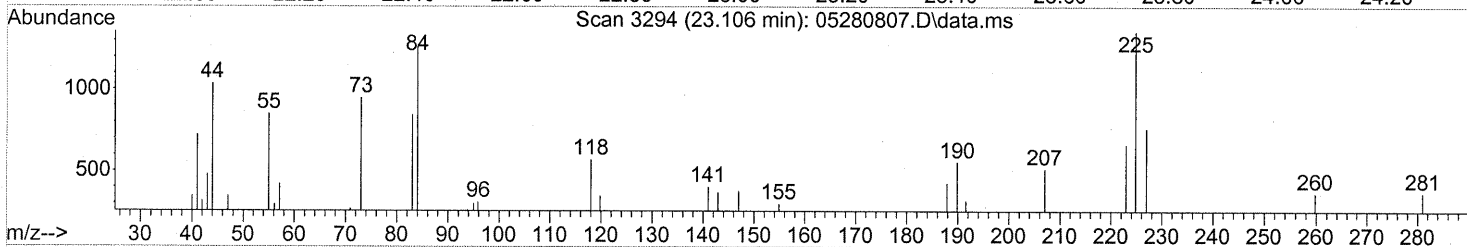
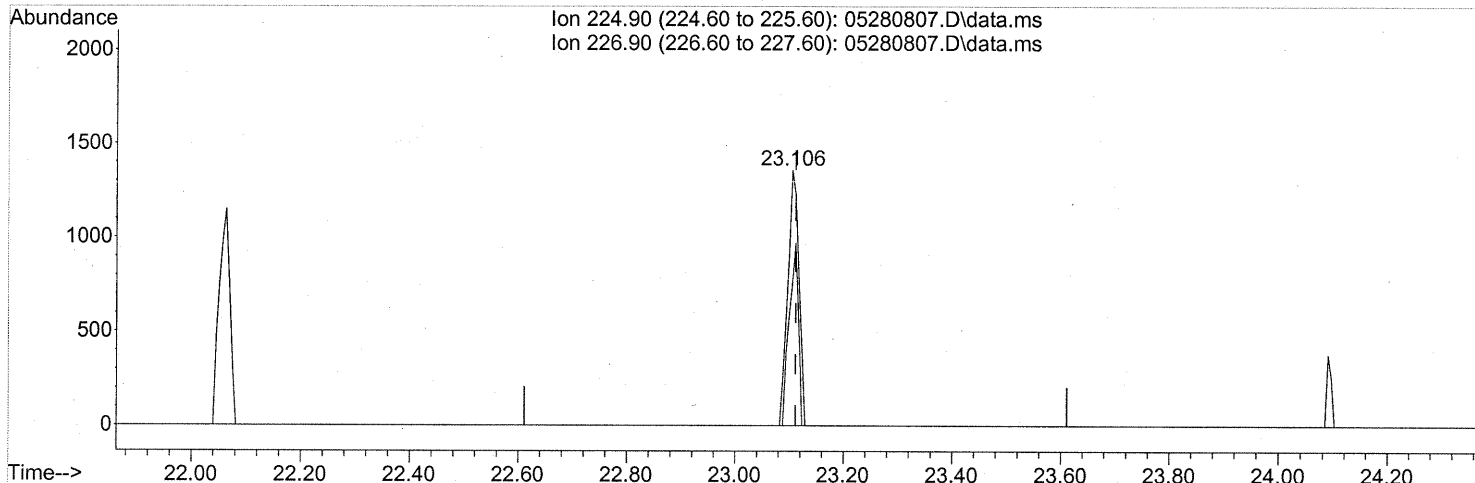
response 9382

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	11.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 14:45:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

23.106min (-0.006) 0.15ng

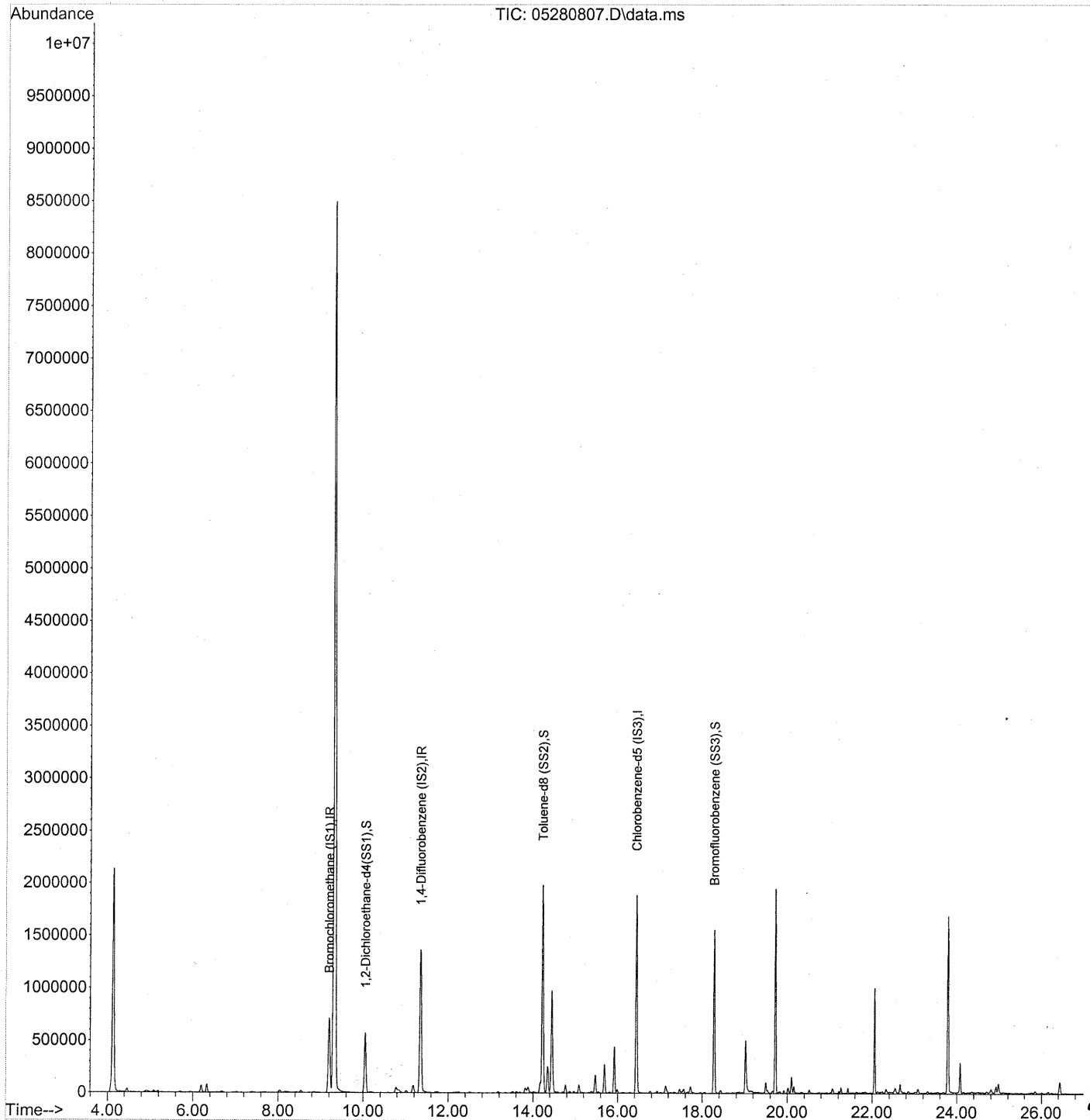
response 1936

Ion	Exp%	Act%
224.90	100	100
226.90	63.00	58.11
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280807.D  
Acq On : 28 May 2008 13:21  
Operator : WA  
Sample : P0801507-005 (100ml)  
Misc : ENSR SG31B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jun 04 14:39:43 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280807.D  
 Acq On : 28 May 2008 13:21  
 Operator : WA  
 Sample : P0801507-005 (100ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

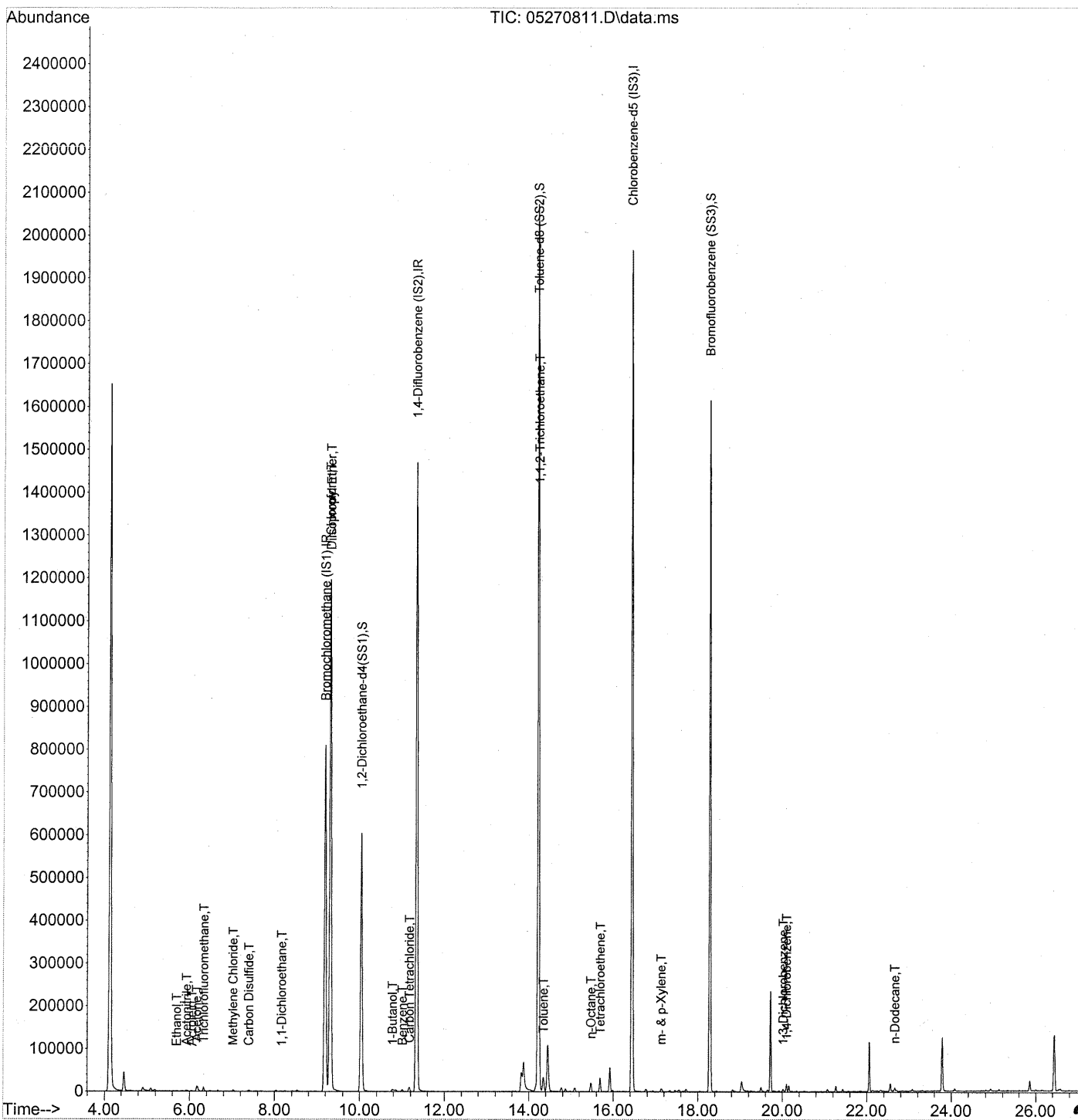
Quant Time: Jun 04 14:39:43 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	370470	25.000	ng	-0.04
3) 1,4-Difluorobenzene (IS2)	11.35	114	1515272	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	626252	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	520853	24.588	ng	-0.04
Spiked Amount	25.000		Recovery	=	98.36%	
5) Toluene-d8 (SS2)	14.23	98	1555286	24.089	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.36%	
6) Bromofluorobenzene (SS3)	18.28	174	553601	25.790	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.16%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	1284		N.D.	Qvalue
8) n-Butylbenzene	20.84	91	1538		N.D.	

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

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270811.D  
 Acq On : 27 May 2008 19:12  
 Operator : WA  
 Sample : P0801507-005 Dil (20ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 04:46:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270811.D  
 Acq On : 27 May 2008 19:12  
 Operator : WA  
 Sample : P0801507-005 Dil (20ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 04:46:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	402647	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1659207	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	667638	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	563723	24.485	ng	-0.05
Spiked Amount	25.000		Recovery	=	97.92%	✓
57) Toluene-d8 (SS2)	14.22	98	1673568	24.314	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.24%	✓
73) Bromofluorobenzene (SS3)	18.28	174	580241	25.355	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.40%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	991	N.D.		
3) Dichlorodifluoromethane	4.56	85	432	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	1307	0.062	ng	# 53
11) Acetonitrile	5.93	41	3194	0.052	ng	# 1
12) Acrolein	6.06	56	890	0.058	ng	89
13) Acetone	6.17	58	7077	0.336	ng	# 60
14) Trichlorofluoromethane	6.33	101	9150	0.259	ng	95
15) Isopropanol	6.37	45	1049	N.D.		
16) Acrylonitrile	6.61	53	148	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.98	59	103	N.D.		
19) Methylene Chloride	7.02	84	958	0.059	ng	# 25
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	3608	0.055	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.16	63	1741	0.051	ng	# 55
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.53	72	327	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	131034	9.044	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270811.D  
 Acq On : 27 May 2008 19:12  
 Operator : WA  
 Sample : P0801507-005 Dil (20ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 04:46:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.31	83	1192769	50.200	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	10.16	62	97	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.77	56	8085	0.296	ng #	66
41) Benzene	11.01	78	4388	0.063	ng	94
42) Carbon Tetrachloride	11.18	117	8138	0.284	ng	96
43) Cyclohexane	11.33	84	802	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.13	83	115	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.25	57	1259	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	142025	8.347	ng #	7
58) Toluene	14.35	91	12893	0.165	ng	96
59) 2-Hexanone	14.58	43	1064	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.32	43	99	N.D.		
63) n-Octane	15.47	57	4461	0.189	ng	85
64) Tetrachloroethene	15.69	166	12345	0.535	ng	94
65) Chlorobenzene	16.50	112	389	N.D.		
66) Ethylbenzene	16.93	91	2534	N.D.		
67) m- & p-Xylene	17.13	91	7614	0.129	ng	95
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	491	N.D.		
70) o-Xylene	17.74	91	2494	N.D.		
71) n-Nonane	17.97	43	387	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	590	N.D.		
75) alpha-Pinene	18.93	93	297	N.D.		
76) n-Propylbenzene	19.06	91	254	N.D.		
77) 3-Ethyltoluene	19.18	105	1142	N.D.		
78) 4-Ethyltoluene	19.24	105	542	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	645	N.D.		

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270811.D  
 Acq On : 27 May 2008 19:12  
 Operator : WA  
 Sample : P0801507-005 Dil (20ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 04:46:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

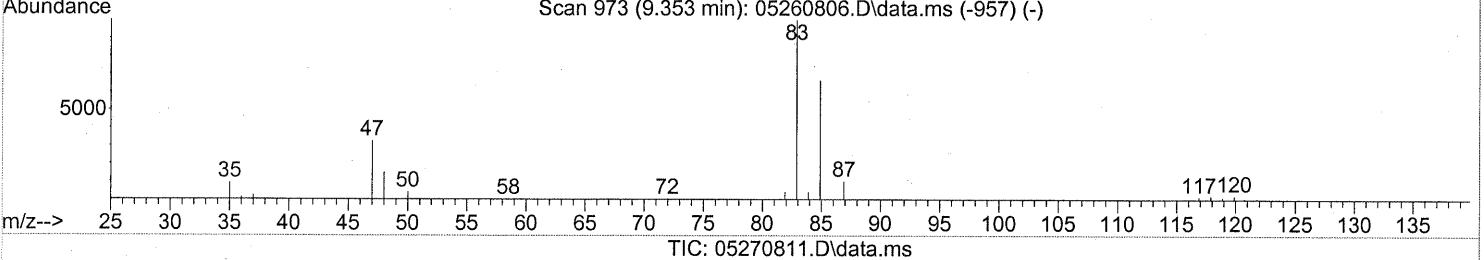
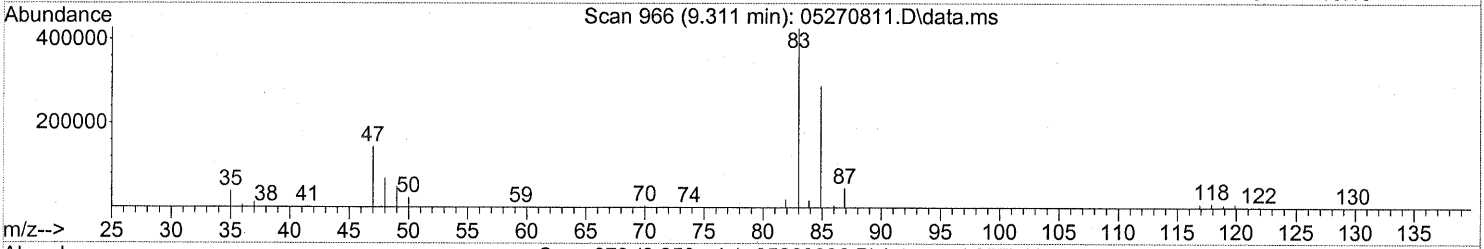
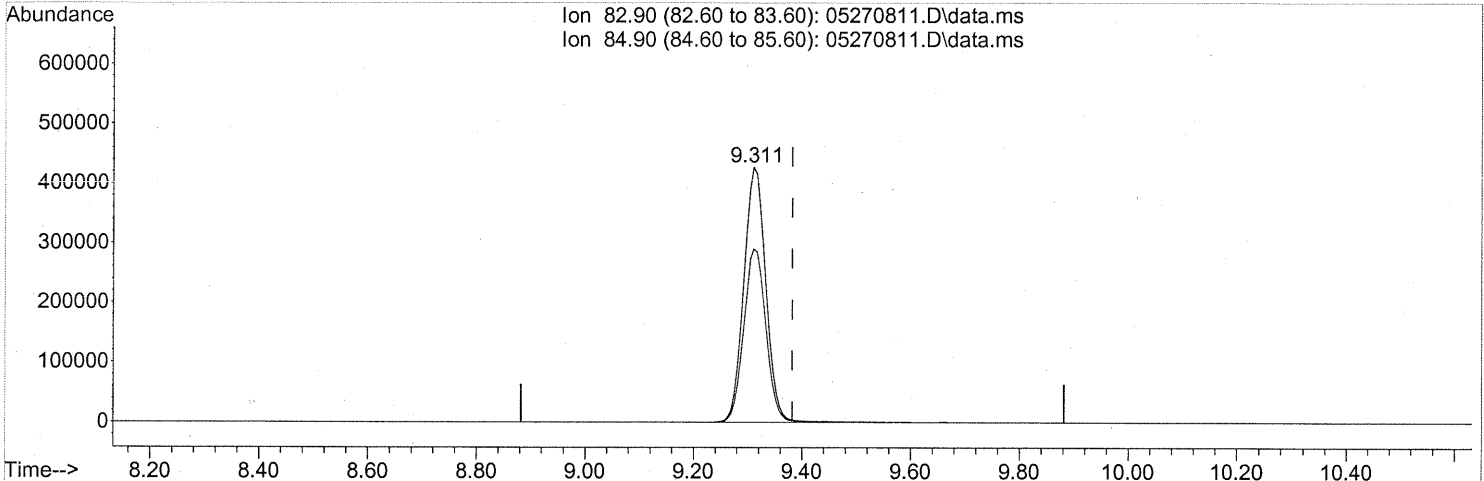
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.72	118	1856		N.D.	
81) 2-Ethyltoluene	19.56	105	578		N.D.	
82) 1,2,4-Trimethylbenzene	19.82	105	1368		N.D.	
83) n-Decane	19.93	57	1445		N.D.	
84) Benzyl Chloride	19.99	91	223		N.D.	
85) 1,3-Dichlorobenzene	20.02	146	3348	0.065	ng	98
86) 1,4-Dichlorobenzene	20.10	146	8813	0.176	ng	97
87) sec-Butylbenzene	20.34	105	654		N.D.	
88) p-Isopropyltoluene	20.34	119	462		N.D.	
89) 1,2,3-Trimethylbenzene	20.34	105	654		N.D.	
90) 1,2-Dichlorobenzene	20.52	146	275		N.D.	
91) d-Limonene	20.52	68	466		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	21.44	57	2554		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.70	128	3310		N.D.	
96) n-Dodecane	22.66	57	3148	0.053	ng	# 73
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270811.D  
 Acq On : 27 May 2008 19:12  
 Operator : WA  
 Sample : P0801507-005 Dil (20ml)  
 Misc : ENSR SG31B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 28 04:46:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

9.311min (-0.071) 50.20ng

response 1192769

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.27
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG60B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00811

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	170	17	ND	33	3.3	
74-87-3	Chloromethane	ND	33	17	ND	16	8.0	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	170	17	ND	24	2.4	
75-01-4	Vinyl Chloride	ND	33	17	ND	13	6.5	
74-83-9	Bromomethane	ND	33	17	ND	8.5	4.3	
75-00-3	Chloroethane	ND	33	17	ND	13	6.3	
64-17-5	Ethanol	ND	1,700	17	ND	880	8.8	
67-64-1	<b>Acetone</b>	<b>70</b>	1,700	24	<b>30</b>	690	10	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>190</b>	33	17	<b>34</b>	5.9	2.9	
107-13-1	Acrylonitrile	ND	170	23	ND	76	11	
75-35-4	1,1-Dichloroethene	ND	33	17	ND	8.3	4.2	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	170	24	ND	54	8.1	
75-09-2	<b>Methylene Chloride</b>	<b>17</b>	170	17	<b>5.0</b>	48	4.8	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	33	17	ND	11	5.3	
76-13-1	Trichlorotrifluoroethane	ND	33	18	ND	4.3	2.4	
75-15-0	Carbon Disulfide	ND	170	40	ND	53	13	
156-60-5	trans-1,2-Dichloroethene	ND	33	17	ND	8.3	4.2	
75-34-3	1,1-Dichloroethane	ND	33	17	ND	8.2	4.1	
1634-04-4	Methyl tert-Butyl Ether	ND	33	17	ND	9.2	4.6	
108-05-4	Vinyl Acetate	ND	1,700	53	ND	470	15	
78-93-3	2-Butanone (MEK)	ND	170	17	ND	56	5.6	
156-59-2	cis-1,2-Dichloroethene	ND	33	17	ND	8.3	4.2	
108-20-3	Diisopropyl Ether	ND	170	19	ND	39	4.7	
67-66-3	<b>Chloroform</b>	<b>100,000</b>	33	19	<b>22,000</b>	6.8	4.0	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG60B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00811

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	170	17	ND	39	4.0	
107-06-2	1,2-Dichloroethane	ND	33	17	ND	8.2	4.1	
71-55-6	1,1,1-Trichloroethane	ND	33	17	ND	6.1	3.0	
71-43-2	Benzene	ND	33	17	ND	10	5.2	
56-23-5	<b>Carbon Tetrachloride</b>	<b>52</b>	33	17	<b>8.3</b>	5.2	2.6	
994-05-8	tert-Amyl Methyl Ether	ND	170	17	ND	39	3.9	
78-87-5	1,2-Dichloropropane	ND	33	17	ND	7.1	3.6	
75-27-4	Bromodichloromethane	ND	33	17	ND	4.9	2.5	
79-01-6	Trichloroethene	ND	33	17	ND	6.1	3.1	
123-91-1	1,4-Dioxane	ND	170	20	ND	46	5.6	
80-62-6	Methyl Methacrylate	ND	170	25	ND	40	6.0	
142-82-5	n-Heptane	ND	170	21	ND	40	5.2	
10061-01-5	cis-1,3-Dichloropropene	ND	170	17	ND	36	3.8	
108-10-1	4-Methyl-2-pentanone	ND	170	18	ND	40	4.5	
10061-02-6	trans-1,3-Dichloropropene	ND	170	21	ND	36	4.6	
79-00-5	1,1,2-Trichloroethane	ND	33	17	ND	6.1	3.0	
108-88-3	<b>Toluene</b>	<b>22</b>	170	17	<b>5.9</b>	44	4.4	<b>J</b>
591-78-6	2-Hexanone	ND	170	25	ND	40	6.1	
124-48-1	Dibromochloromethane	ND	33	22	ND	3.9	2.6	
106-93-4	1,2-Dibromoethane	ND	33	18	ND	4.3	2.3	
111-65-9	n-Octane	ND	170	17	ND	35	3.5	
127-18-4	<b>Tetrachloroethene</b>	<b>140</b>	33	17	<b>20</b>	4.9	2.4	
108-90-7	Chlorobenzene	ND	33	17	ND	7.2	3.7	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08

**243**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG60B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00811

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28 - 5/29/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.7      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.65

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	170	20	ND	38	4.7	
179601-23-1	m,p-Xylenes	ND	170	43	ND	38	9.9	
75-25-2	Bromoform	ND	170	25	ND	16	2.4	
100-42-5	Styrene	ND	170	25	ND	39	5.9	
95-47-6	o-Xylene	ND	170	21	ND	38	4.8	
79-34-5	1,1,2,2-Tetrachloroethane	ND	33	21	ND	4.8	3.1	
98-82-8	Cumene	ND	170	18	ND	34	3.8	
103-65-1	n-Propylbenzene	ND	170	17	ND	34	3.5	
622-96-8	4-Ethyltoluene	ND	170	19	ND	34	3.8	
108-67-8	1,3,5-Trimethylbenzene	ND	170	20	ND	34	4.0	
98-83-9	alpha-Methylstyrene	ND	170	24	ND	34	5.0	
95-63-6	1,2,4-Trimethylbenzene	ND	170	23	ND	34	4.6	
100-44-7	Benzyl Chloride	ND	33	28	ND	6.4	5.5	
541-73-1	1,3-Dichlorobenzene	ND	33	20	ND	5.5	3.4	
106-46-7	1,4-Dichlorobenzene	ND	33	18	ND	5.5	3.1	
135-98-8	sec-Butylbenzene	ND	170	19	ND	30	3.5	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	170	21	ND	30	3.9	
95-50-1	1,2-Dichlorobenzene	ND	33	22	ND	5.5	3.6	
96-12-8	1,2-Dibromo-3-chloropropane	ND	170	25	ND	17	2.6	
120-82-1	1,2,4-Trichlorobenzene	ND	33	25	ND	4.4	3.4	
91-20-3	Naphthalene	ND	66	24	ND	13	4.7	
87-68-3	Hexachlorobutadiene	ND	33	30	ND	3.1	2.8	
98-06-6	tert-Butylbenzene	ND	66	17	ND	12	3.0	
104-51-8	n-Butylbenzene	ND	66	17	ND	12	3.0	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

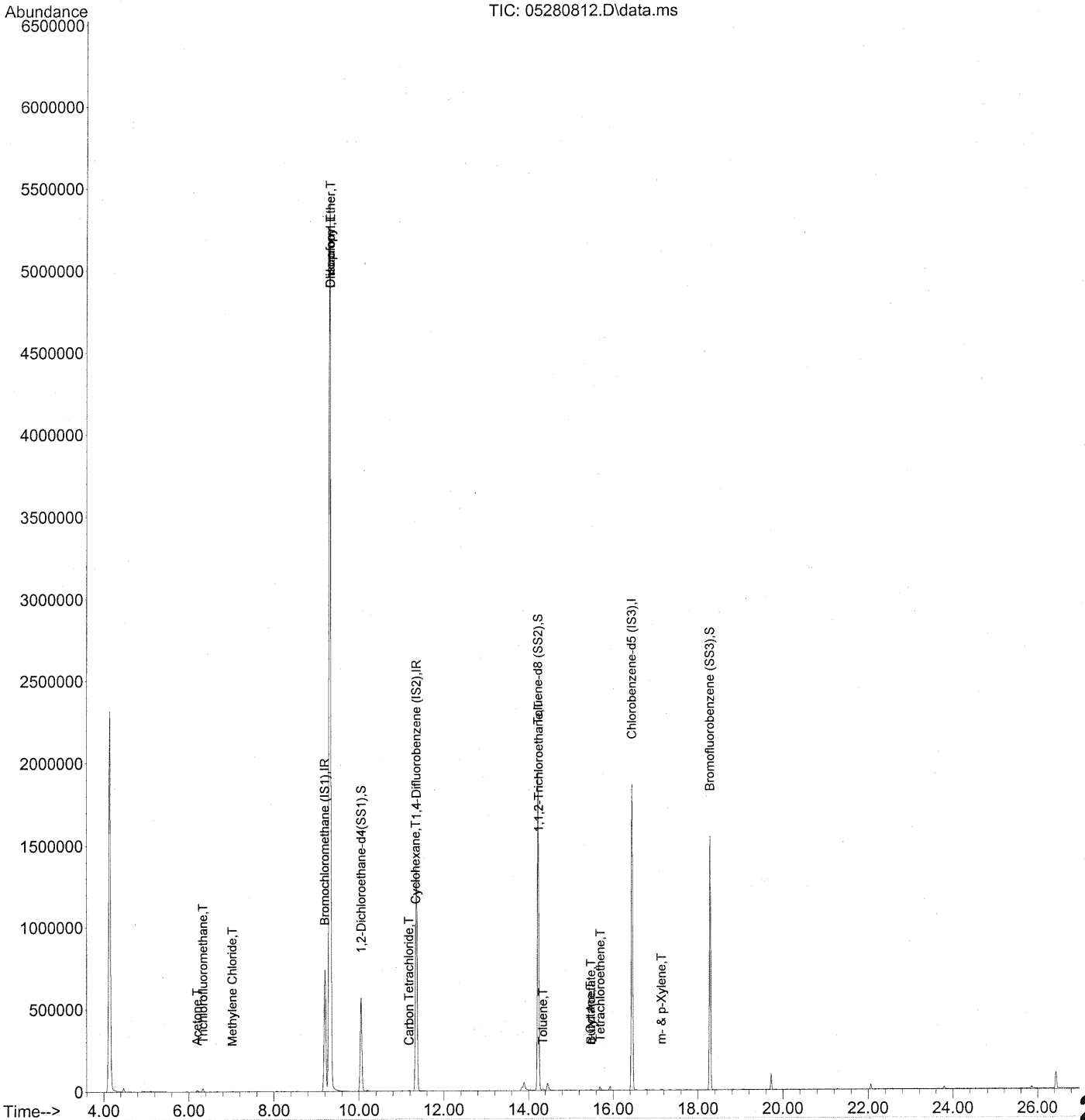
Verified By:         

Date: 6/5/08

**244**

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280812.D  
Acq On : 28 May 2008 5:12 pm  
Operator : WA  
Sample : P0801507-006 (5ml) *at 6/4/08*  
Misc : ENSR SG60B-05D (-3.7, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



245

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 5:12 pm  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *RA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	371218	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1523833	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	623724	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	526566	24.807	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.24%	✓
57) Toluene-d8 (SS2)	14.23	98	1548853	24.087	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.36%	✓
73) Bromofluorobenzene (SS3)	18.28	174	552392	25.838	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.36%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	882	N.D.		
3) Dichlorodifluoromethane	0.00	85	0	N.D.	✓	
4) Chloromethane	0.00	50	0	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	0.00	45	0	N.D.	✓	
11) Acetonitrile	5.96	41	1248	N.D.		
12) Acrolein	6.08	56	261	N.D.		
13) Acetone	<u>6.19</u>	58	4140	<u>0.213 ng</u>	#	63
14) Trichlorofluoromethane	<u>6.33</u>	101	18729	<u>0.576 ng</u>		93
15) Isopropanol	0.00	45	0	N.D.	✓	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	0.00	59	0	N.D.	✓	
19) Methylene Chloride	<u>7.02</u>	84	791	<u>0.053 ng</u>	#	6
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.41	76	2470	N.D.	✓	
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	427	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	0.00	72	0	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.32	87	629232	<u>47.105 ng</u>	NR #	1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 5:12 pm  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.32	83	5797530	<del>264.657</del>	ng <i>su dil</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	0.00	62	0	N.D.	✓	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	✓	
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.02	78	2827	N.D.	✓	
42) Carbon Tetrachloride	<u>11.18</u>	117	4164	<u>0.158</u>	ng	89
43) Cyclohexane	11.33	84	4998	0.199	ng #	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	✓	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	✓	
46) Bromodichloromethane	0.00	83	0	N.D.	✓	
47) Trichloroethene	0.00	130	0	N.D.	✓	
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.	✓	
51) n-Heptane	0.00	71	0	N.D.	✓	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	✓	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
55) 1,1,2-Trichloroethane	14.24	97	131305	<del>8.403</del>	ng <i>UR #</i>	7
58) Toluene	<u>14.34</u>	91	4855	<u>0.067</u>	ng	95
59) 2-Hexanone	14.58	43	288	N.D.	✓	
60) Dibromochloromethane	0.00	129	0	N.D.	✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	4319	0.062	ng #	69
63) n-Octane	15.46	57	1443	<del>0.065</del>	ng <i>UR #</i>	66
64) Tetrachloroethene	<u>15.69</u>	166	8940	<u>0.414</u>	ng	98
65) Chlorobenzene	0.00	112	0	N.D.	✓	
66) Ethylbenzene	16.94	91	1491	N.D.		
67) m- & p-Xylene	17.14	91	5563	<del>0.101</del>	ng	95
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	0.00	104	0	N.D.	✓	
70) o-Xylene	17.73	91	1964	N.D.	✓	
71) n-Nonane	17.97	43	206	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	✓	
74) Cumene	18.28	105	726	N.D.	✓	
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.	✓	
77) 3-Ethyltoluene	19.19	105	1020	N.D.		
78) 4-Ethyltoluene	19.24	105	231	N.D.	✓	
79) 1,3,5-Trimethylbenzene	19.33	105	111	N.D.	✓	

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 5:12 pm  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *WA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

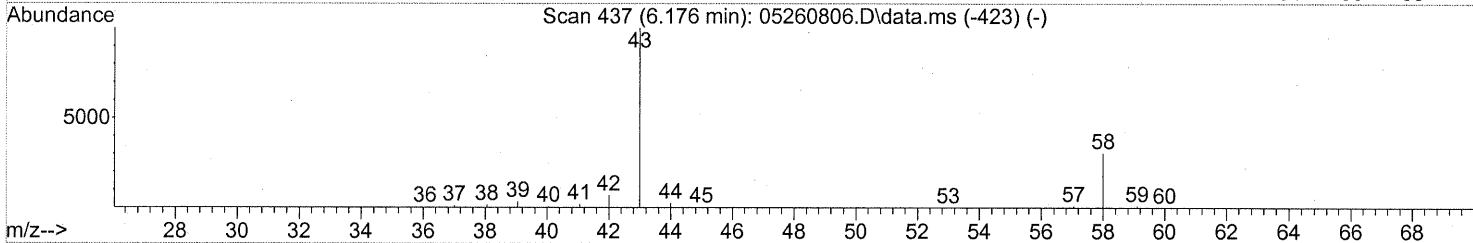
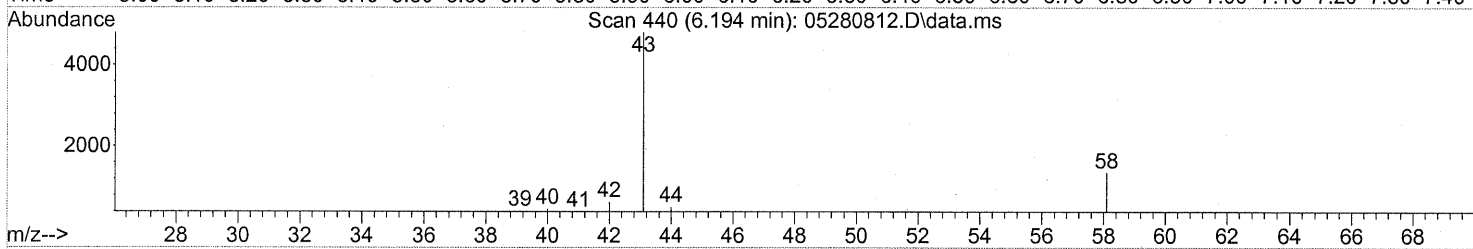
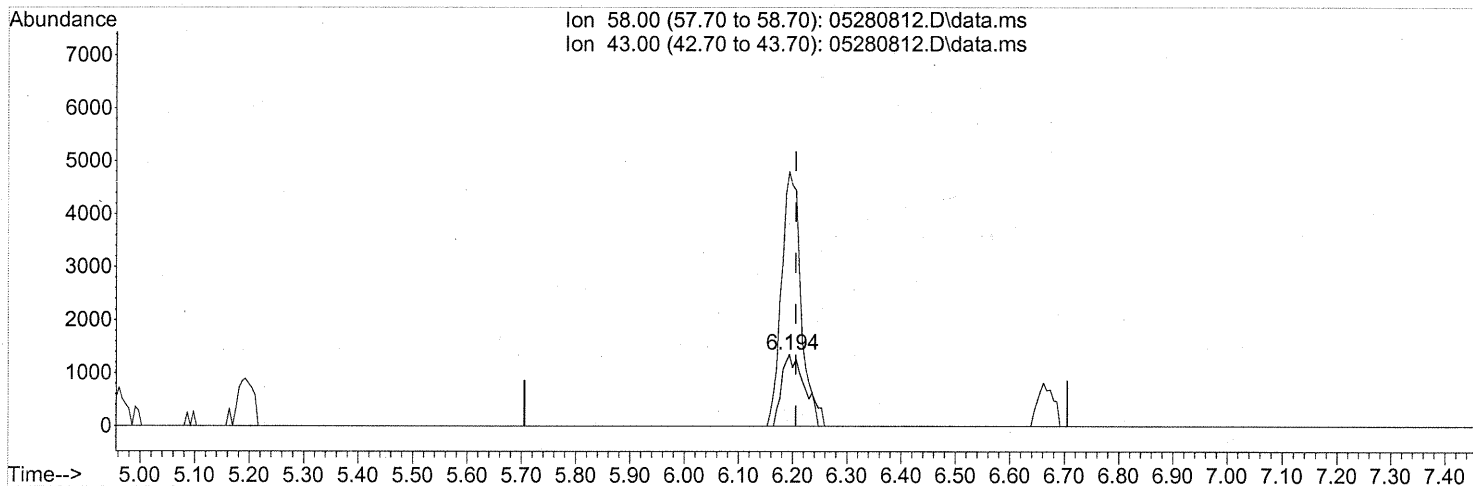
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	505	N.D.	✓	
81) 2-Ethyltoluene	19.72	105	97	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	645	N.D.	✓	
83) n-Decane	19.92	57	391	N.D.	..	
84) Benzyl Chloride	0.00	91	0	N.D.	✓	
85) 1,3-Dichlorobenzene	20.10	146	2225	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	2225	N.D.	✓	
87) sec-Butylbenzene	20.34	105	90	N.D.	✓	
88) p-Isopropyltoluene	0.00	119	0	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	90	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	✓	
91) d-Limonene	0.00	68	0	N.D.	✓	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.44	57	1072	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.70	128	944	N.D.	✓	
96) n-Dodecane	22.66	57	718	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280812.D\data.ms

(13) Acetone (T)

6.194min (-0.012) 0.21ng

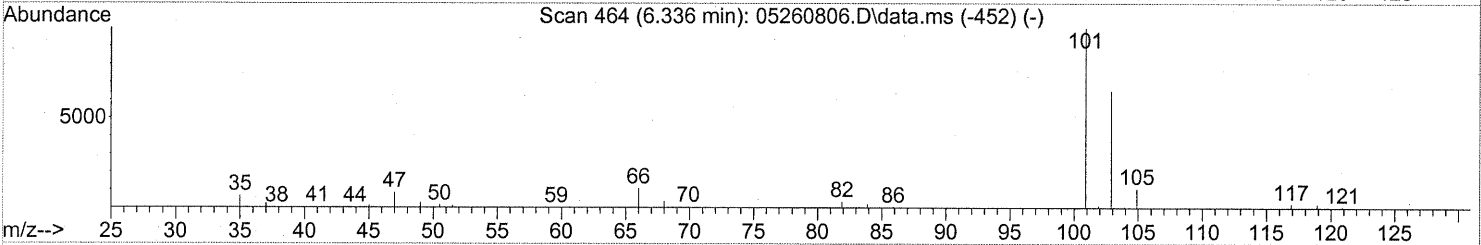
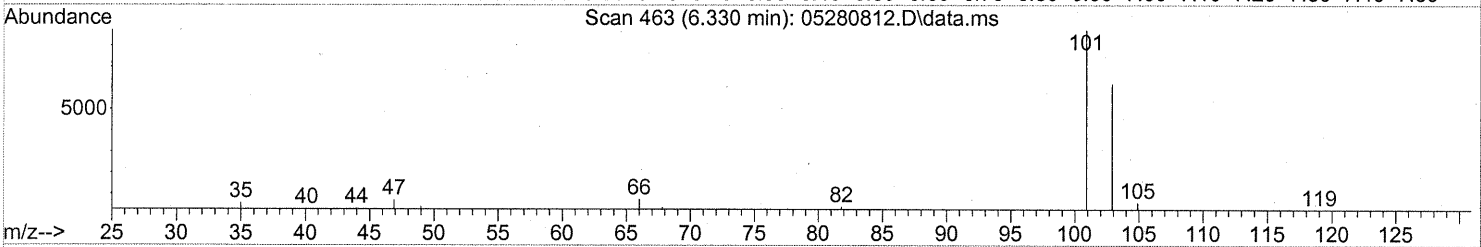
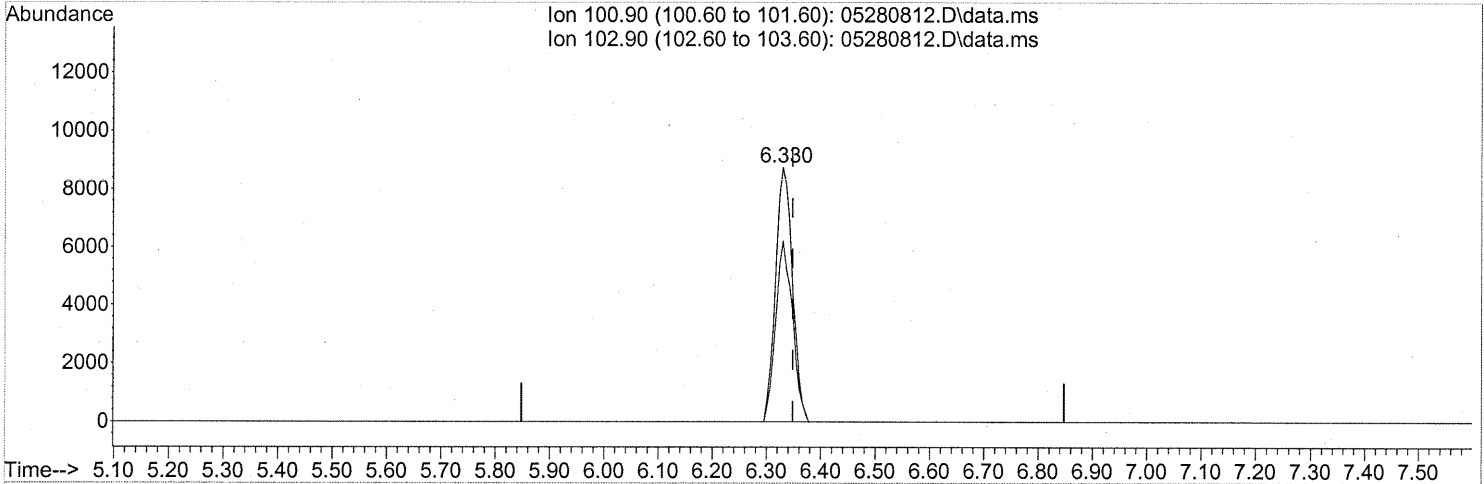
response 4140

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	284.28#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280812.D\data.ms

(14) Trichlorofluoromethane (T)

6.330min (-0.018) 0.58ng

response 18729

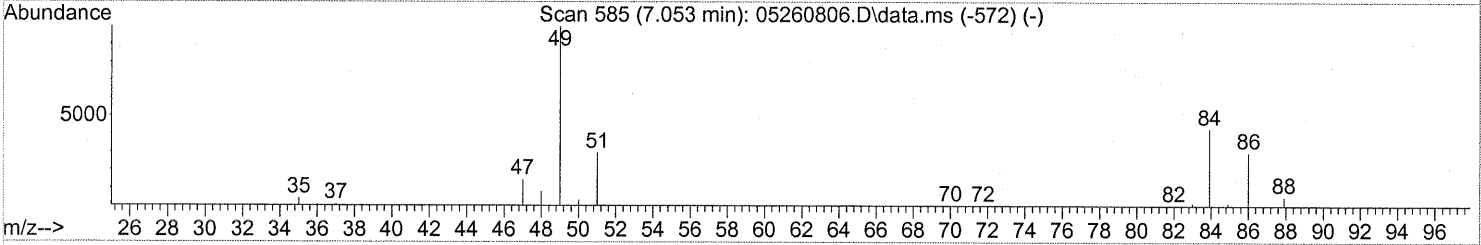
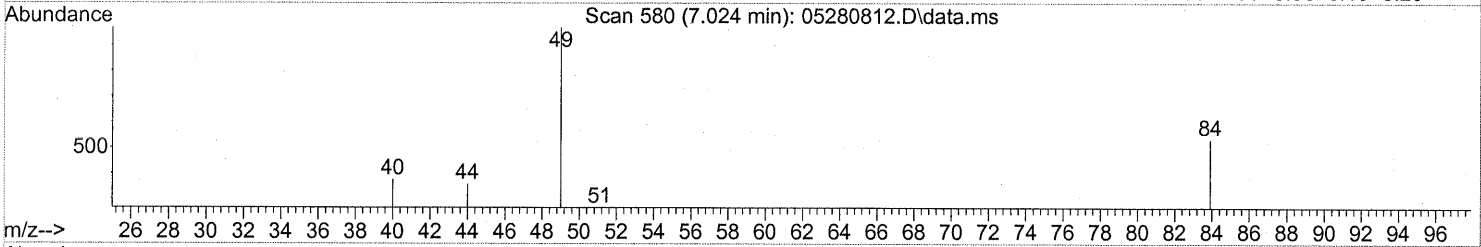
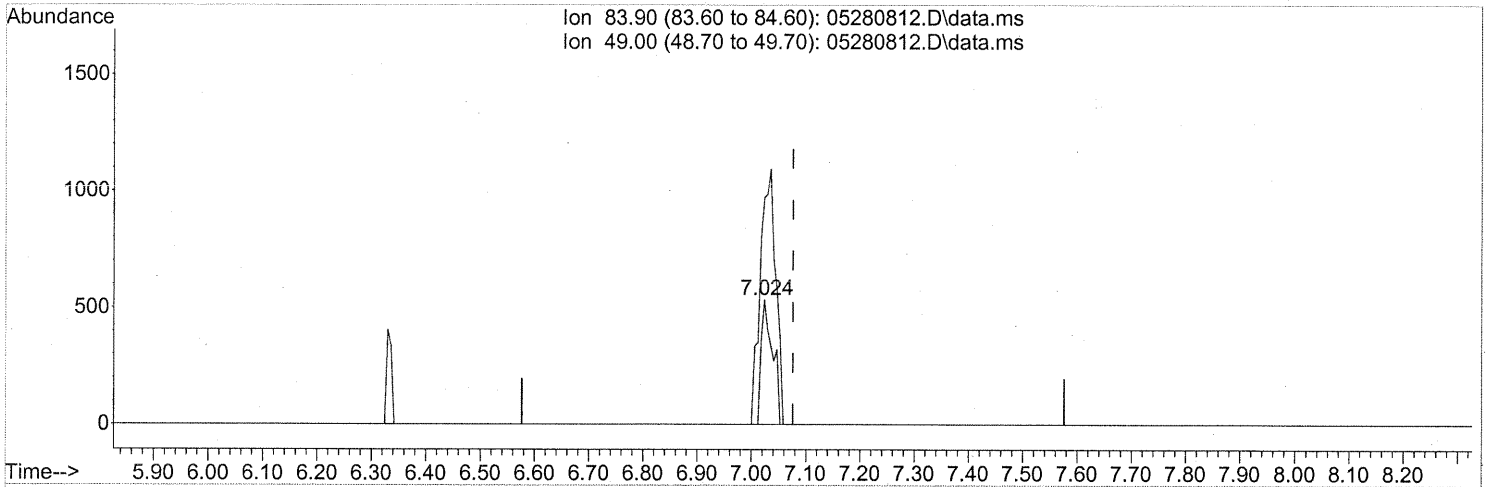
Ion	Exp%	Act%
100.90	100	100
102.90	64.90	70.41
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280812.D\data.ms

(19) Methylene Chloride (T)

7.024min (-0.053) 0.05ng

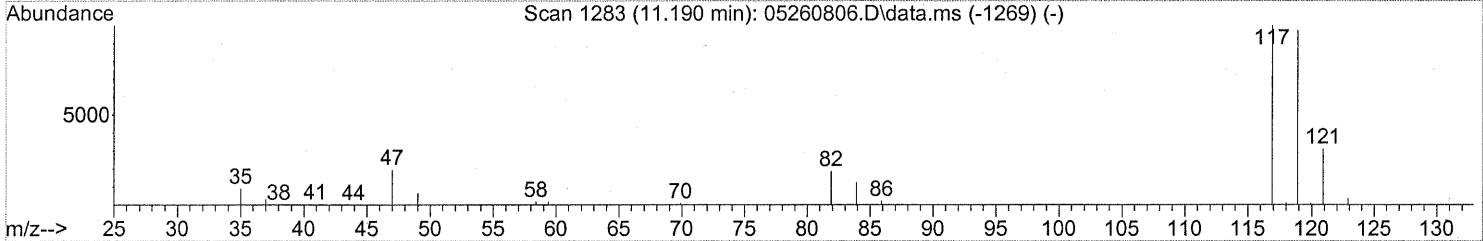
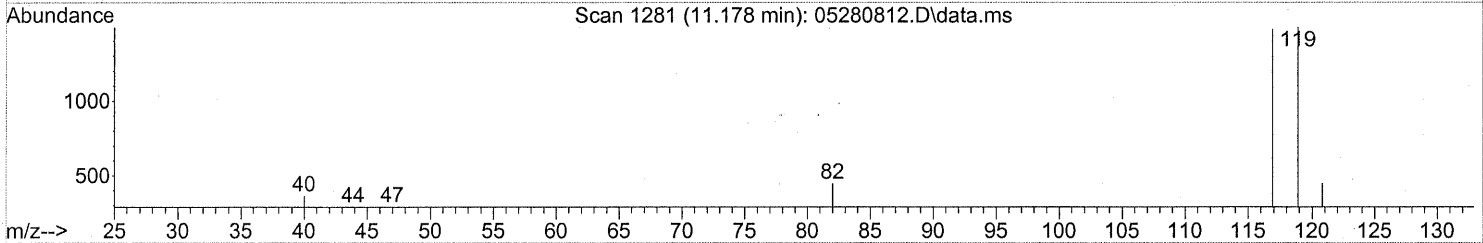
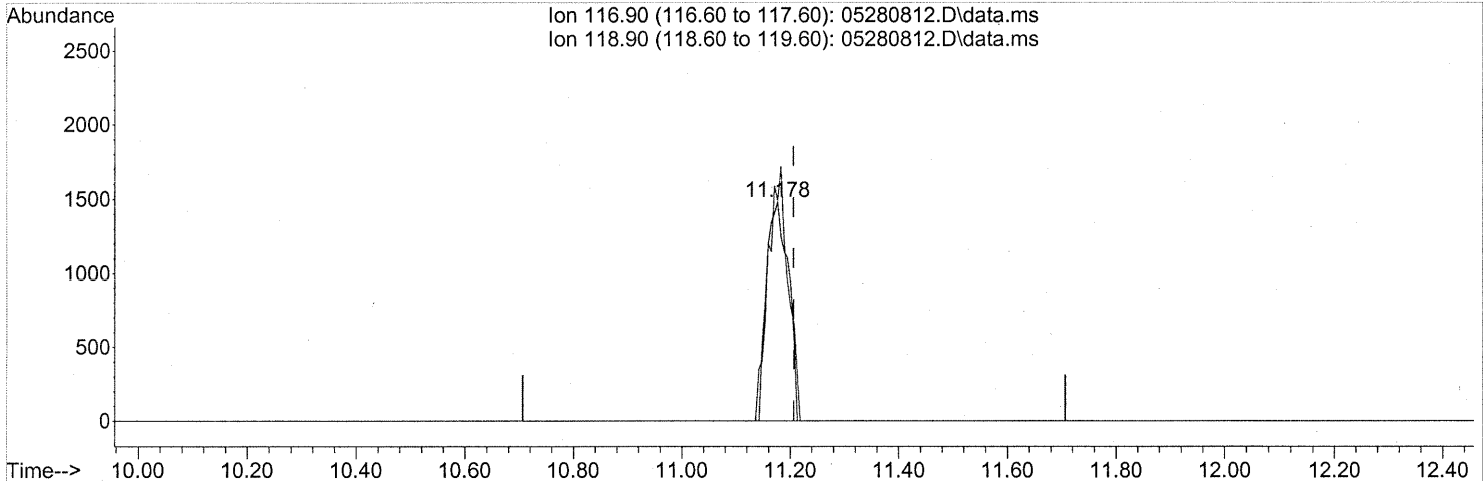
response 791

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	277.62#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280812.D\data.ms

(42) Carbon Tetrachloride (T)

11.178min (-0.030) 0.16ng

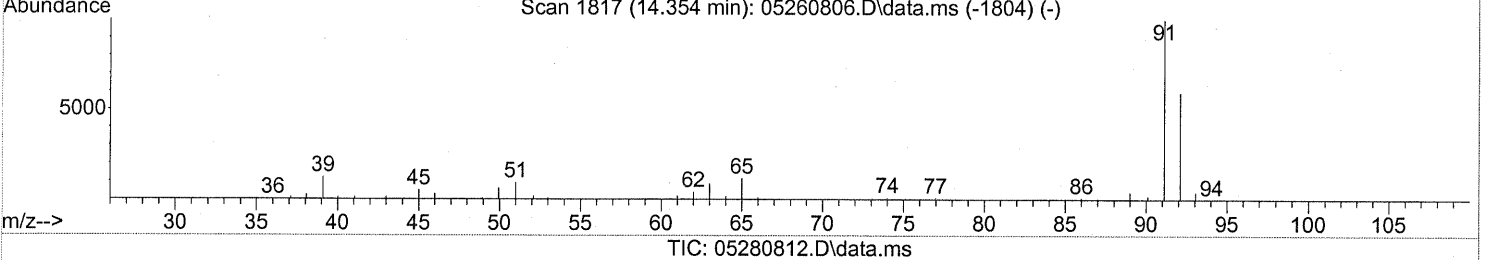
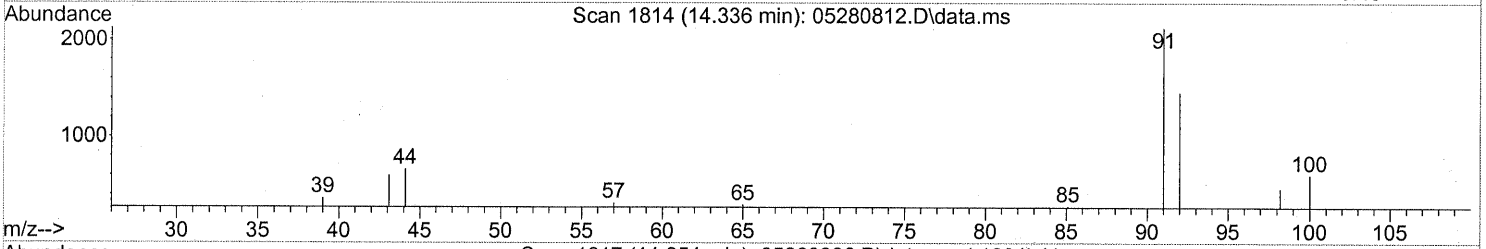
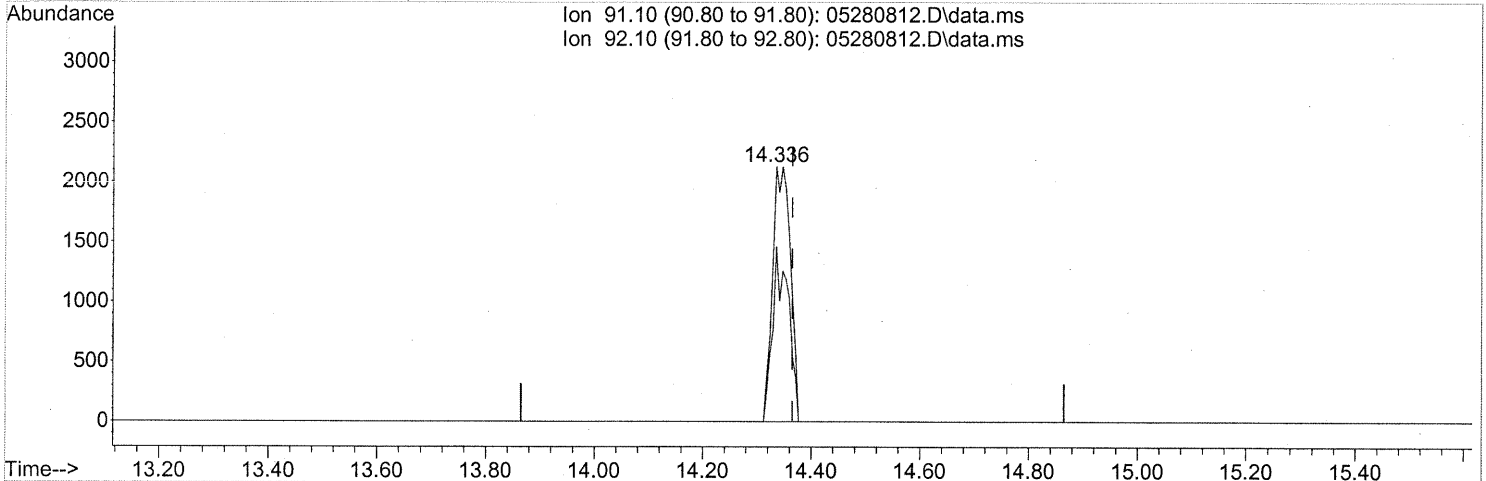
response 4164

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	106.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280812.D\data.ms

(58) Toluene (T)

14.336min (-0.030) 0.07ng

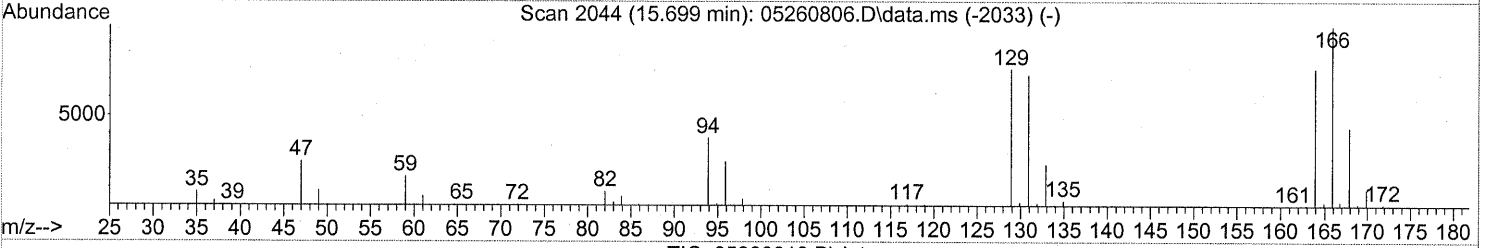
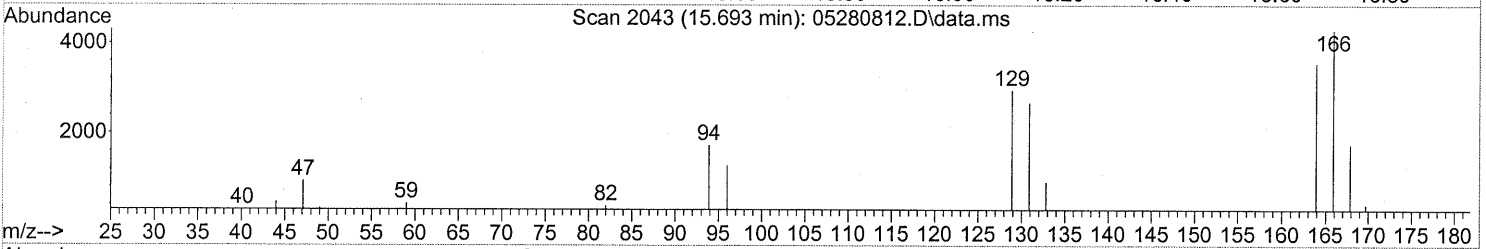
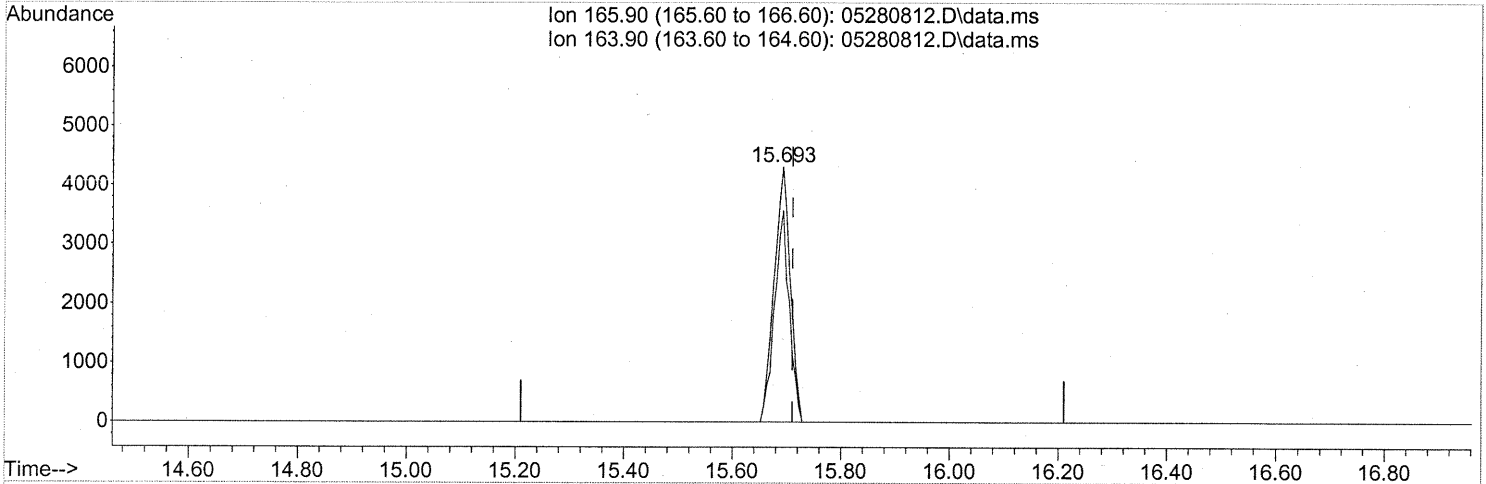
response 4855

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	61.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:37 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

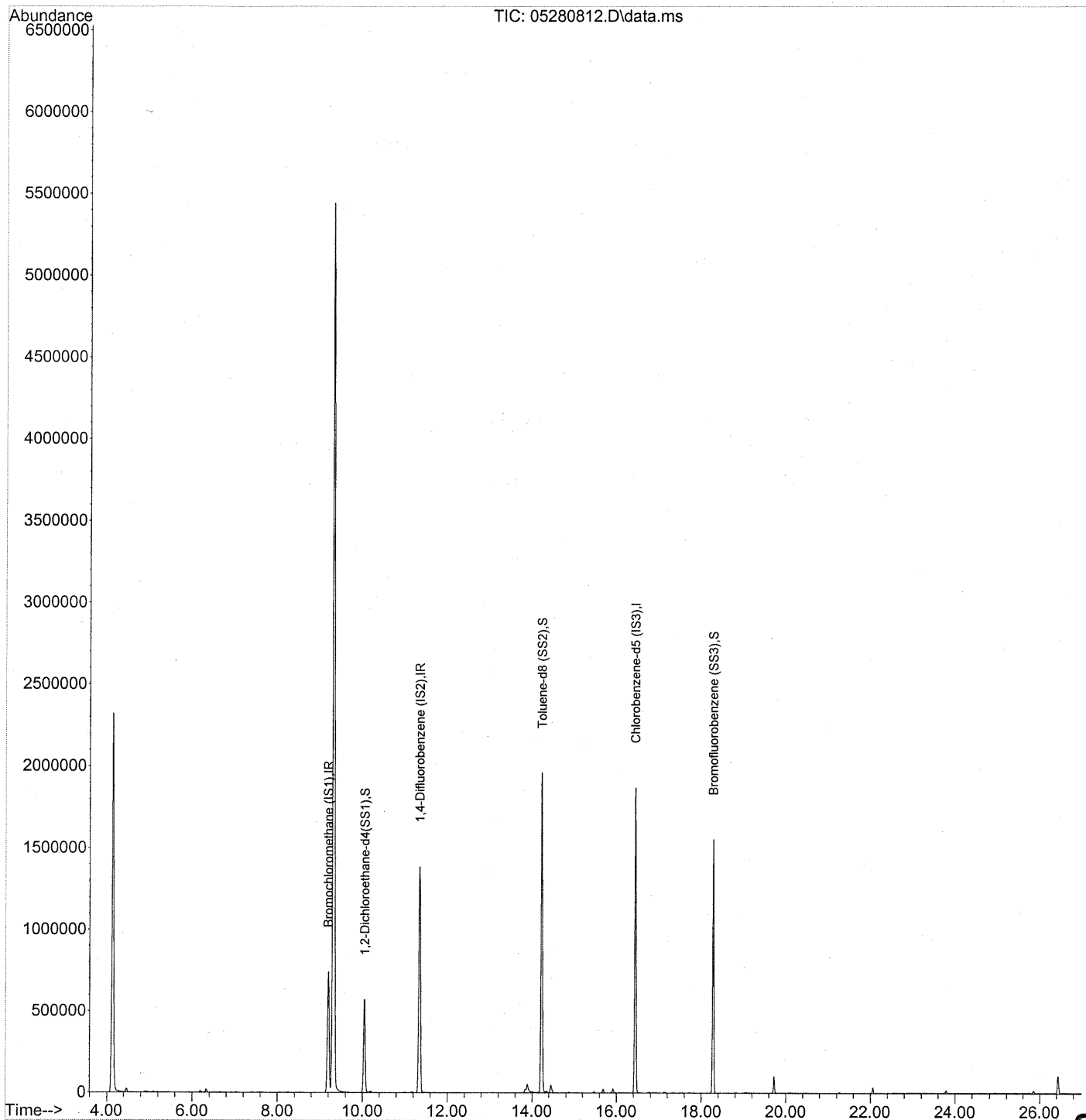
15.693min (-0.018) 0.41ng

response 8940

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	76.04
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml)  
 Misc : ENSR SG60B-050 (-3.7, 3.5) *BA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:48 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280812.D  
 Acq On : 28 May 2008 17:12  
 Operator : WA  
 Sample : P0801507-006 (5ml) *DA 6/4/08*  
 Misc : ENSR SG60B-05D (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

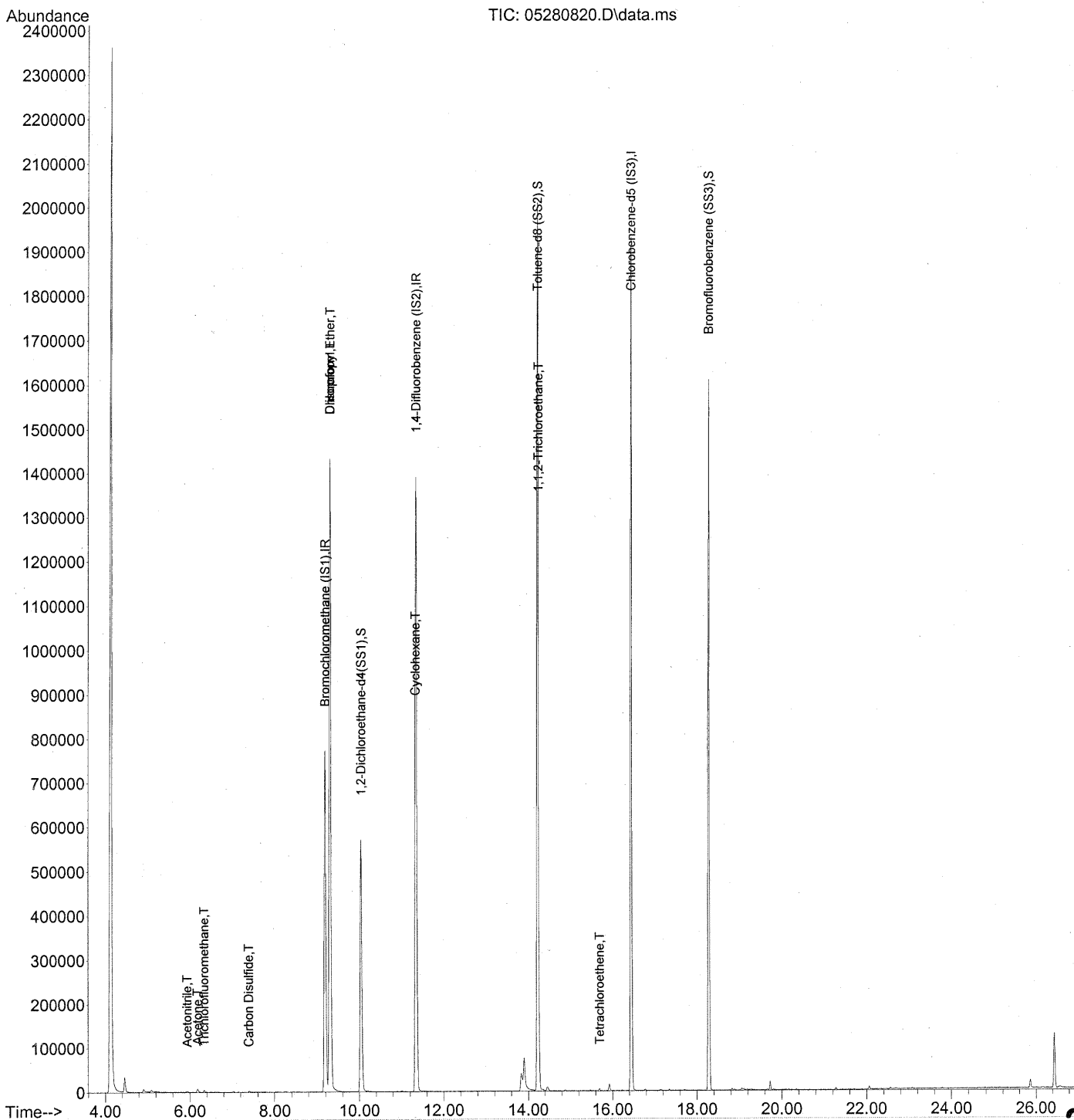
Quant Time: Jun 04 14:39:48 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	371218	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1523833	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	623724	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	526566	24.807	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.24%	
5) Toluene-d8 (SS2)	14.23	98	1548853	24.087	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.36%	
6) Bromofluorobenzene (SS3)	18.28	174	552392	25.838	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.36%	
Target Compounds						
7) tert-Butylbenzene	19.72	119	1065		N.D.	Qvalue
8) n-Butylbenzene	0.00	91	0		N.D.	

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

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280820.D  
 Acq On : 29 May 2008 7:44 am  
 Operator : WA  
 Sample : P0801507-006 Dil (1.0ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *BA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 08:39:57 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280820.D  
 Acq On : 29 May 2008 7:44 am  
 Operator : WA  
 Sample : P0801507-006 Dil (1.0ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *WA 6/1/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 08:39:57 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)	
1) Bromochloromethane (IS1)	9.19	130	384373	25.000	ng	-0.05	
37) 1,4-Difluorobenzene (IS2)	11.34	114	1575449	25.000	ng	-0.04	
56) Chlorobenzene-d5 (IS3)	16.45	82	645600	25.000	ng	-0.01	
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(...)	10.05	65	539908	24.565	ng	-0.05	
Spiked Amount	25.000		Recovery	=	98.28%		✓
57) Toluene-d8 (SS2)	14.22	98	1614991	24.264	ng	-0.02	
Spiked Amount	25.000		Recovery	=	97.04%		✓
73) Bromofluorobenzene (SS3)	18.28	174	579696	26.196	ng	-0.01	
Spiked Amount	25.000		Recovery	=	104.80%		✓
Target Compounds							
							Qvalue
2) Propene	4.46	42	1003	N.D.			
3) Dichlorodifluoromethane	0.00	85	0	N.D.			
4) Chloromethane	0.00	50	0	N.D.			
5) Freon 114	0.00	135	0	N.D.			
6) Vinyl Chloride	0.00	62	0	N.D.			
7) 1,3-Butadiene	0.00	54	0	N.D.			
8) Bromomethane	0.00	94	0	N.D.			
9) Chloroethane	0.00	64	0	N.D.			
10) Ethanol	0.00	45	0	N.D.			
11) Acetonitrile	5.94	41	3009	0.052	ng	#	1
12) Acrolein	6.06	56	564	N.D.			
13) Acetone	6.19	58	4892	0.244	ng	#	55
14) Trichlorofluoromethane	6.34	101	4925	0.146	ng		98
15) Isopropanol	6.40	45	417	N.D.			
16) Acrylonitrile	6.60	53	190	N.D.			
17) 1,1-Dichloroethene	0.00	96	0	N.D.			
18) tert-Butanol	6.97	59	103	N.D.			
19) Methylene Chloride	7.03	84	538	N.D.			
20) Allyl Chloride	0.00	41	0	N.D.			
21) Trichlorotrifluoroethane	0.00	151	0	N.D.			
22) Carbon Disulfide	7.40	76	3849	0.062	ng	#	75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.			
24) 1,1-Dichloroethane	0.00	63	0	N.D.			
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.			
26) Vinyl Acetate	0.00	86	0	N.D.			
27) 2-Butanone	0.00	72	0	N.D.			
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.			
29) Diisopropyl Ether	9.31	87	157034	11.353	ng	#	1
30) Ethyl Acetate	0.00	61	0	N.D.			
31) n-Hexane	0.00	57	0	N.D.			



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280820.D  
 Acq On : 29 May 2008 7:44 am  
 Operator : WA  
 Sample : P0801507-006 Dil (1.0ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 08:39:57 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.31	83	1443078	63.622	ng	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.01	78	2471	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	2126	0.082	ng #	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	411	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	135873	8.410	ng #	6
58) Toluene	14.34	91	2070	N.D.		
59) 2-Hexanone	14.59	43	459	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	1119	N.D.		
63) n-Octane	15.47	57	313	N.D.		
64) Tetrachloroethene	15.69	166	1967	0.088	ng	99
65) Chlorobenzene	16.50	112	238	N.D.		
66) Ethylbenzene	16.93	91	800	N.D.		
67) m- & p-Xylene	17.14	91	2511	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	514	N.D.		
70) o-Xylene	17.73	91	905	N.D.		
71) n-Nonane	17.96	43	195	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.45	105	509	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	19.08	91	762	N.D.		
77) 3-Ethyltoluene	19.20	105	1177	N.D.		
78) 4-Ethyltoluene	19.24	105	889	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	639	N.D.		

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280820.D  
 Acq On : 29 May 2008 7:44 am  
 Operator : WA  
 Sample : P0801507-006 Dil (1.0ml)  
 Misc : ENSR SG60B-05D (-3.7, 3.5) *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 08:39:57 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

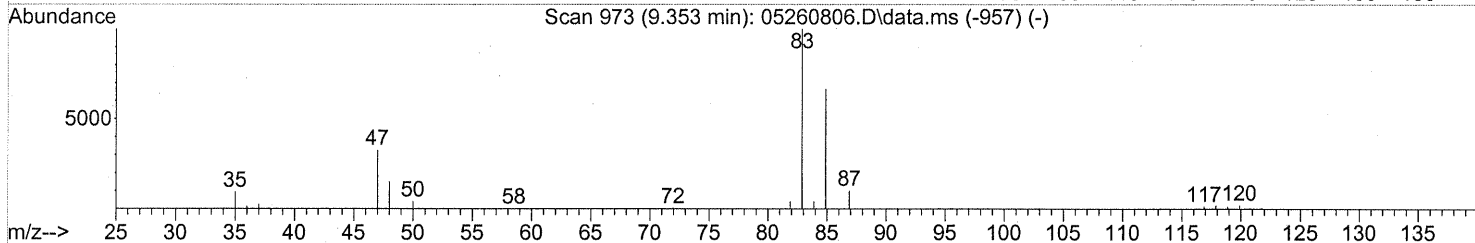
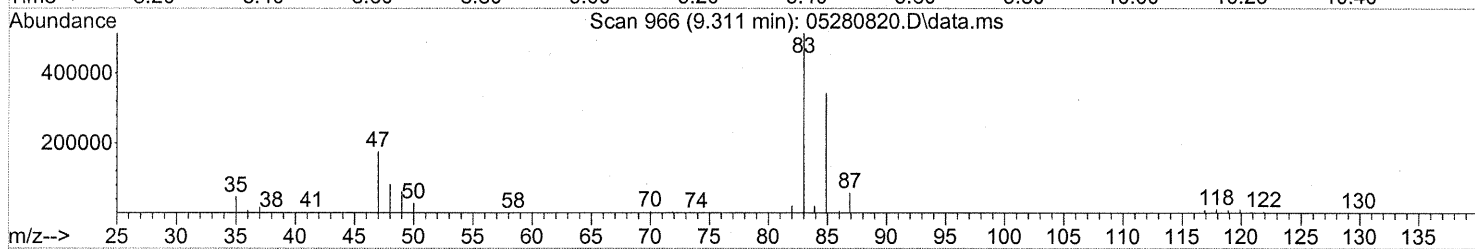
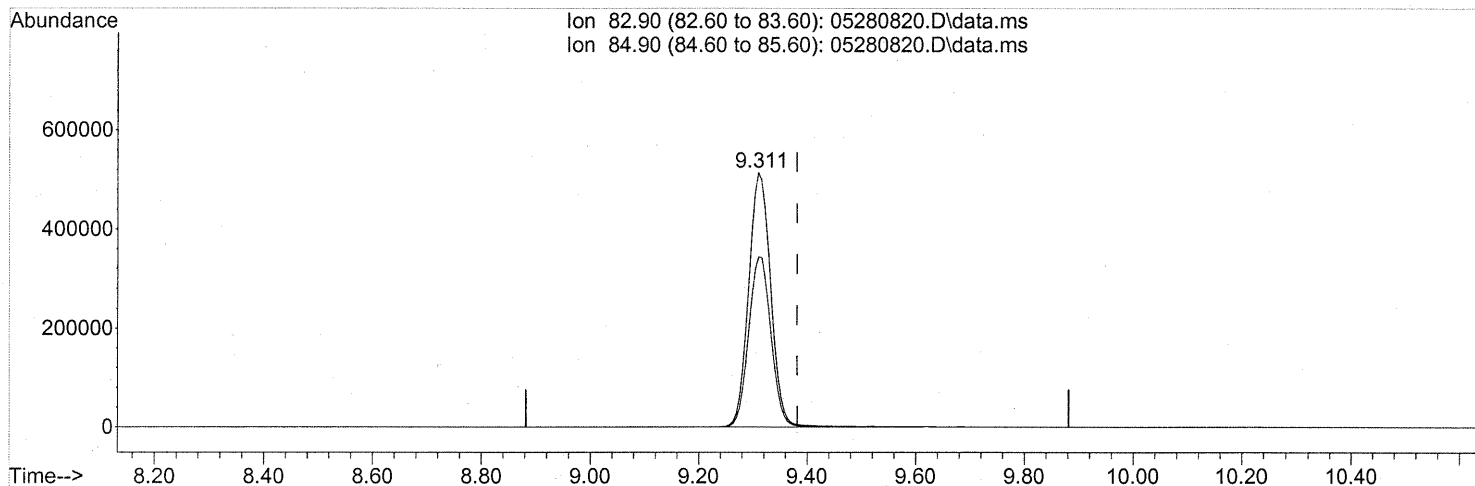
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	0.00	118	0		N.D.	
81) 2-Ethyltoluene	19.56	105	665		N.D.	
82) 1,2,4-Trimethylbenzene	19.82	105	888		N.D.	
83) n-Decane	19.92	57	206		N.D.	
84) Benzyl Chloride	20.00	91	664		N.D.	
85) 1,3-Dichlorobenzene	20.02	146	608		N.D.	
86) 1,4-Dichlorobenzene	20.11	146	1055		N.D.	
87) sec-Butylbenzene	20.16	105	523		N.D.	
88) p-Isopropyltoluene	20.33	119	405		N.D.	
89) 1,2,3-Trimethylbenzene	20.34	105	439		N.D.	
90) 1,2-Dichlorobenzene	20.51	146	223		N.D.	
91) d-Limonene	0.00	68	0		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	21.44	57	372		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.70	128	3101		N.D.	
96) n-Dodecane	22.66	57	463		N.D.	
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280820.D  
 Acq On : 29 May 2008 7:44  
 Operator : WA  
 Sample : P0801507-006 Dil (1.0ml)  
 Misc : ENSR SG60B-05 (-3.7, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 08:39:57 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280820.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 63.62ng

response 1443078

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.78
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG58B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-007

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00664

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/29/08  
 Volume(s) Analyzed: 0.015 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.9      Final Pressure (psig): 3.7

Canister Dilution Factor: 1.70

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	57	5.7	ND	11	1.1	
74-87-3	Chloromethane	ND	11	5.7	ND	5.5	2.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	57	5.7	ND	8.1	0.81	
75-01-4	Vinyl Chloride	ND	11	5.7	ND	4.4	2.2	
74-83-9	Bromomethane	ND	11	5.7	ND	2.9	1.5	
75-00-3	Chloroethane	ND	11	5.7	ND	4.3	2.1	
64-17-5	Ethanol	ND	570	5.7	ND	300	3.0	
67-64-1	<b>Acetone</b>	<b>61</b>	570	8.3	<b>26</b>	240	3.5	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>55</b>	11	5.7	<b>9.8</b>	2.0	1.0	
107-13-1	Acrylonitrile	ND	57	7.9	ND	26	3.7	
75-35-4	1,1-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	57	8.4	ND	19	2.8	
75-09-2	<b>Methylene Chloride</b>	<b>5.8</b>	57	5.7	<b>1.7</b>	16	1.6	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	11	5.7	ND	3.6	1.8	
76-13-1	Trichlorotrifluoroethane	ND	11	6.3	ND	1.5	0.83	
75-15-0	Carbon Disulfide	ND	57	14	ND	18	4.4	
156-60-5	trans-1,2-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
75-34-3	<b>1,1-Dichloroethane</b>	<b>14</b>	11	5.7	<b>3.5</b>	2.8	1.4	
1634-04-4	Methyl tert-Butyl Ether	ND	11	5.7	ND	3.1	1.6	
108-05-4	Vinyl Acetate	ND	570	18	ND	160	5.2	
78-93-3	2-Butanone (MEK)	ND	57	5.7	ND	19	1.9	
156-59-2	cis-1,2-Dichloroethene	ND	11	5.7	ND	2.9	1.4	
108-20-3	Diisopropyl Ether	ND	57	6.7	ND	14	1.6	
67-66-3	<b>Chloroform</b>	<b>51,000</b>	11	6.7	<b>10,000</b>	2.3	1.4	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         CH        

Date:         6/5/08        

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG58B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00664

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 0.015 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.9      Final Pressure (psig): 3.7

Canister Dilution Factor: 1.70

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	57	5.8	ND	14	1.4	
107-06-2	<b>1,2-Dichloroethane</b>	<b>6.7</b>	11	5.7	<b>1.7</b>	2.8	1.4	<b>J</b>
71-55-6	1,1,1-Trichloroethane	ND	11	5.7	ND	2.1	1.0	
71-43-2	<b>Benzene</b>	<b>7.6</b>	11	5.7	<b>2.4</b>	3.5	1.8	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>75</b>	11	5.7	<b>12</b>	1.8	0.90	
994-05-8	tert-Amyl Methyl Ether	ND	57	5.7	ND	14	1.4	
78-87-5	1,2-Dichloropropane	ND	11	5.7	ND	2.5	1.2	
75-27-4	Bromodichloromethane	ND	11	5.7	ND	1.7	0.85	
79-01-6	<b>Trichloroethene</b>	<b>7.8</b>	11	5.7	<b>1.5</b>	2.1	1.1	<b>J</b>
123-91-1	1,4-Dioxane	ND	57	6.9	ND	16	1.9	
80-62-6	Methyl Methacrylate	ND	57	8.5	ND	14	2.1	
142-82-5	n-Heptane	ND	57	7.3	ND	14	1.8	
10061-01-5	cis-1,3-Dichloropropene	ND	57	5.9	ND	12	1.3	
108-10-1	4-Methyl-2-pentanone	ND	57	6.3	ND	14	1.5	
10061-02-6	trans-1,3-Dichloropropene	ND	57	7.1	ND	12	1.6	
79-00-5	1,1,2-Trichloroethane	ND	11	5.7	ND	2.1	1.0	
108-88-3	<b>Toluene</b>	<b>23</b>	57	5.7	<b>6.1</b>	15	1.5	<b>J</b>
591-78-6	2-Hexanone	ND	57	8.6	ND	14	2.1	
124-48-1	Dibromochloromethane	ND	11	7.7	ND	1.3	0.90	
106-93-4	1,2-Dibromoethane	ND	11	6.1	ND	1.5	0.80	
111-65-9	n-Octane	ND	57	5.7	ND	12	1.2	
127-18-4	<b>Tetrachloroethene</b>	<b>57</b>	11	5.7	<b>8.4</b>	1.7	0.84	
108-90-7	Chlorobenzene	ND	11	5.8	ND	2.5	1.3	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

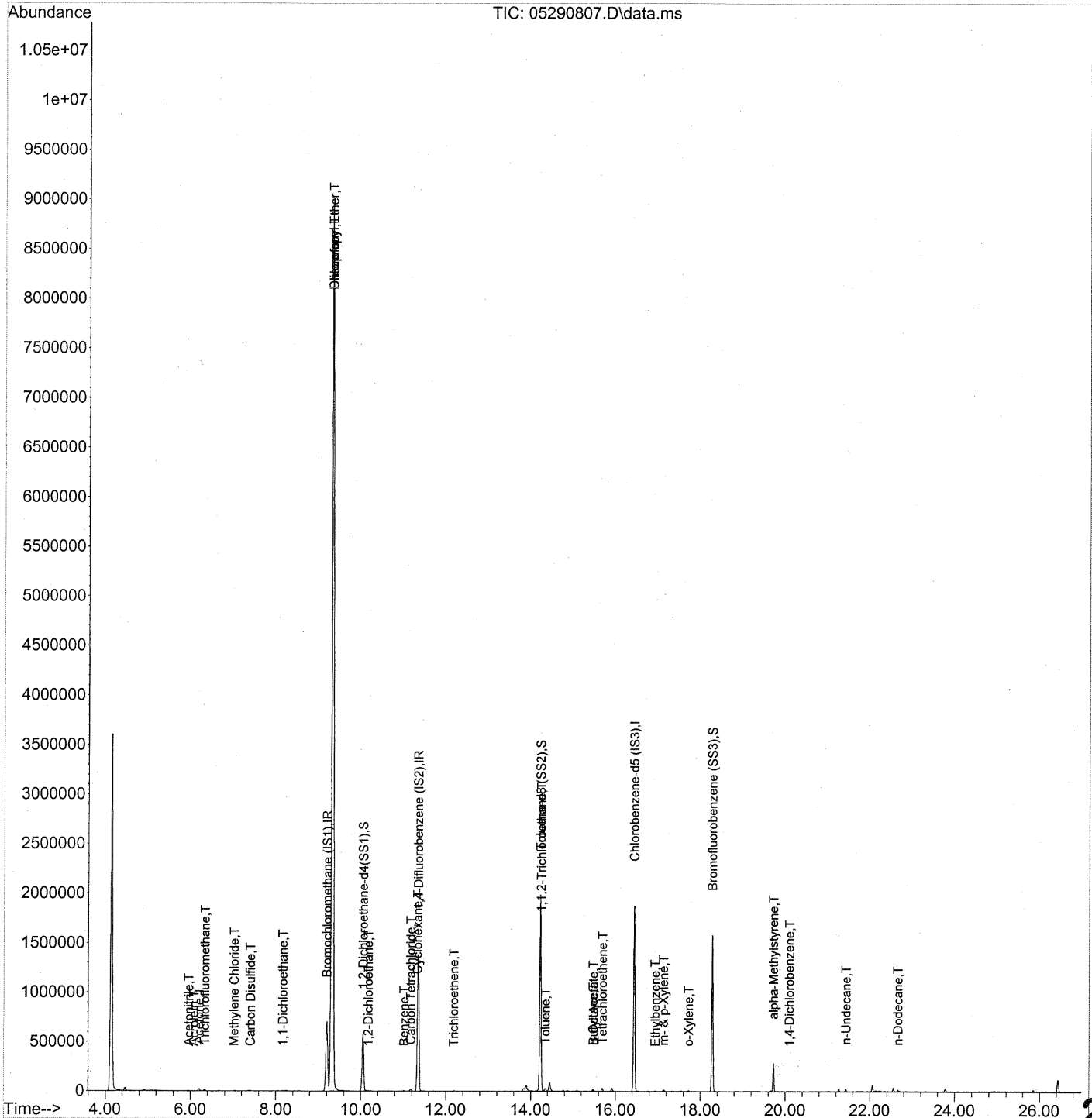
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
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Quant Time: Jun 04 10:38:49 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	372594	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.35	114	1531812	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	629311	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	10.05	65	527664	24.767	ng	-0.04	99.08%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.23	98	1555150	23.970	ng	-0.02	95.88%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.28	174	565867	26.233	ng	-0.01	104.92%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1262	N.D.		
3) Dichlorodifluoromethane	4.56	85	629	N.D.	✓	
4) Chloromethane	4.75	50	103	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.71	45	114	N.D.	✓	
11) Acetonitrile	5.96	41	3460	0.061	ng #	24
12) Acrolein	6.08	56	929	0.066	ng #	58
13) Acetone	6.20	58	10556	0.542	ng #	69
14) Trichlorofluoromethane	6.34	101	15829	0.485	ng	98
15) Isopropanol	6.40	45	641	N.D.	✓	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.99	59	94	N.D.	✓	
19) Methylene Chloride	7.02	84	772	0.051	ng #	1
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.40	76	3375	0.056	ng #	75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	3992	0.125	ng	85
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.54	72	99	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.33	87	1084879	80.916	ng N/A #	1
30) Ethyl Acetate	0.00	61	0	N.D.	✓	
31) n-Hexane	9.25	57	467	N.D.	✓	

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6/4/08



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.33	83	10117291	<del>460.149</del> ng	<i>see del</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.18	62	1489	0.059 ng	#	55
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.81	56	94	N.D.		
41) Benzene	11.02	78	4335	0.067 ng		83
42) Carbon Tetrachloride	11.18	117	17576	0.663 ng		97
43) Cyclohexane	11.33	84	1998	0.079 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.13	83	578	N.D. ✓		
47) Trichloroethene	12.19	130	1383	0.069 ng		99
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.24	57	903	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D. ✓		
51) n-Heptane	0.00	71	0	N.D. ✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D. ✓		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	132930	8.462 ng	OR #	7
58) Toluene	14.35	91	14905	0.203 ng		97
59) 2-Hexanone	14.58	43	753	N.D. ✓		
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.48	43	10952	0.157 ng	#	71
63) n-Octane	15.47	57	3850	0.173 ng	OR #	66
64) Tetrachloroethene	15.69	166	10954	0.503 ng		90
65) Chlorobenzene	16.50	112	96	N.D. ✓		
66) Ethylbenzene	16.94	91	4375	0.052 ng		91
67) m- & p-Xylene	17.14	91	13951	0.252 ng		99
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	0.00	104	0	N.D. ✓		
70) o-Xylene	17.73	91	5322	0.090 ng		96
71) n-Nonane	17.96	43	567	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. ✓		
74) Cumene	18.28	105	756	N.D. ✓		
75) alpha-Pinene	0.00	93	0	N.D. ✓ NOT		
76) n-Propylbenzene	19.06	91	461	N.D. ✓		
77) 3-Ethyltoluene	19.18	105	2331	N.D.		
78) 4-Ethyltoluene	19.24	105	1184	N.D. ✓		
79) 1,3,5-Trimethylbenzene	19.34	105	1184	N.D. ✓		

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

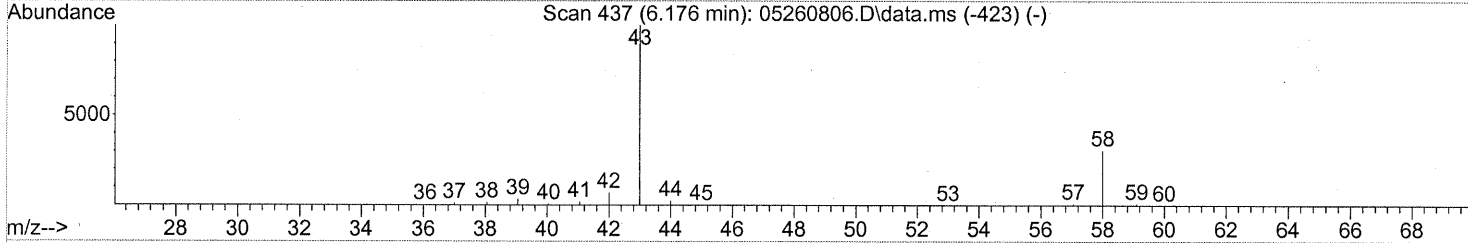
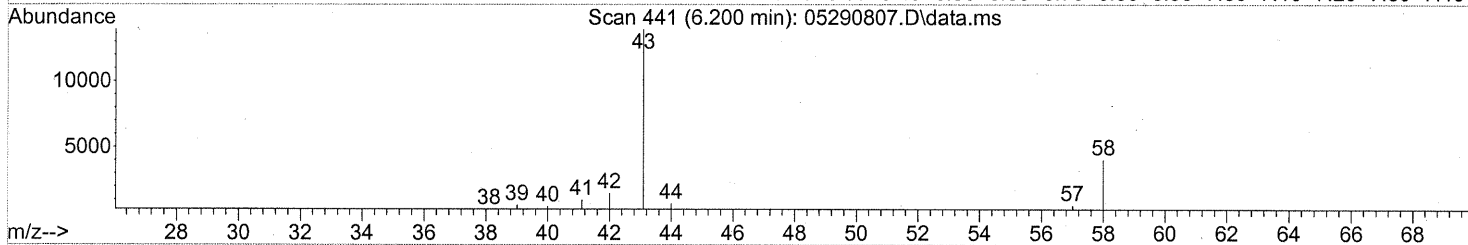
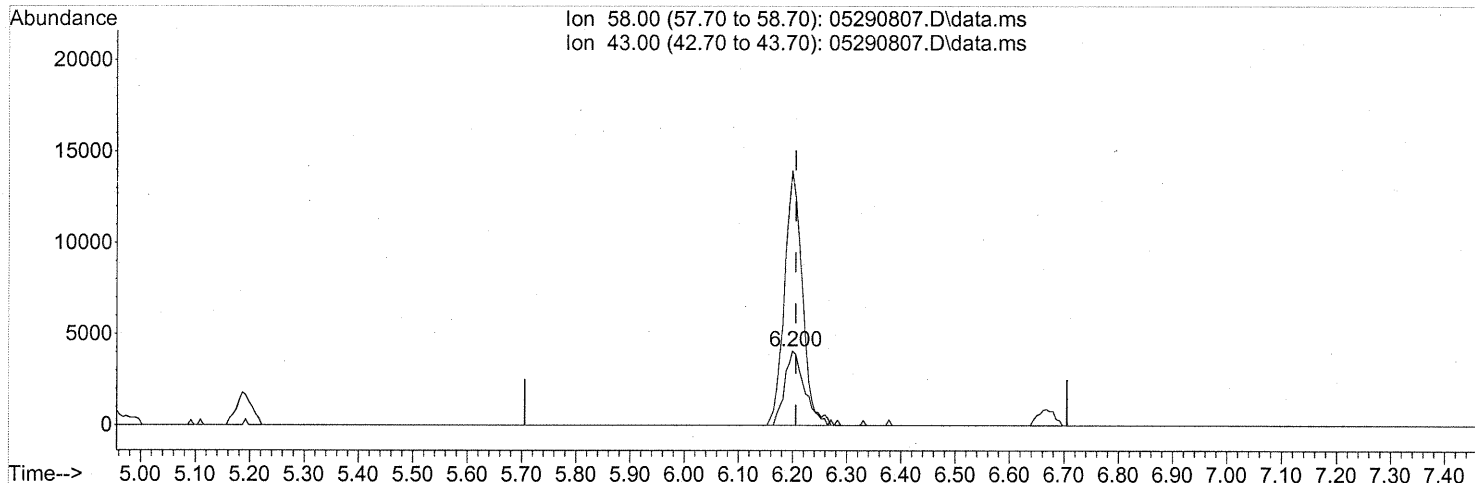
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	2353	<del>0.055</del>	ng	# 16
81) 2-Ethyltoluene	19.56	105	817	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	2354	N.D.	✓	
83) n-Decane	19.92	57	1602	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.	✓	
85) 1,3-Dichlorobenzene	20.10	146	2408	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	2408	<del>0.051</del>	ng	95
87) sec-Butylbenzene	20.35	105	876	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	337	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.35	105	876	N.D.	✓	
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	✓	
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.44	57	11516	<del>0.202</del>	ng	75
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.70	128	5268	N.D.	✓	
96) n-Dodecane	22.66	57	7780	0.140	ng	# 75
97) Hexachloro-1,3-butadiene	23.10	225	458	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

(13) Acetone (T)

6.200min (-0.006) 0.54ng

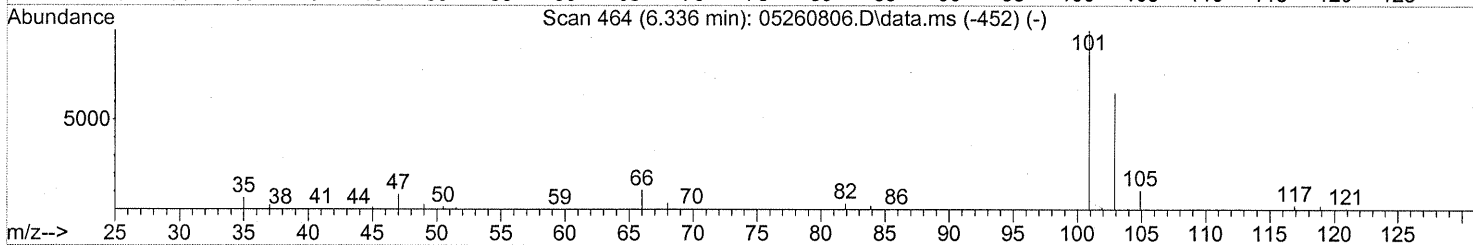
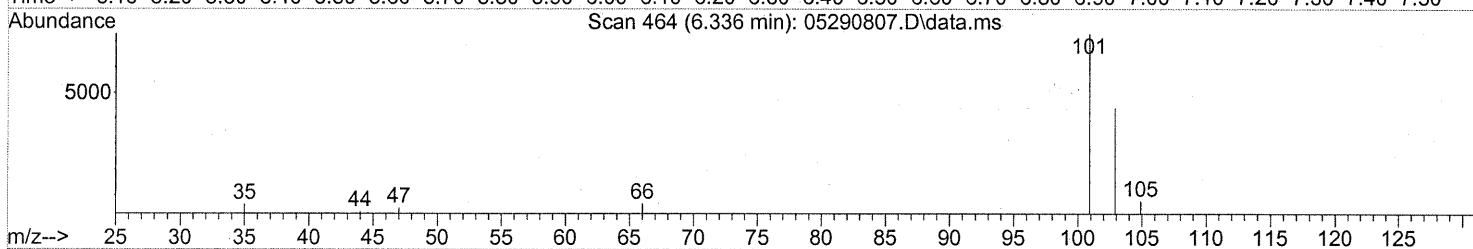
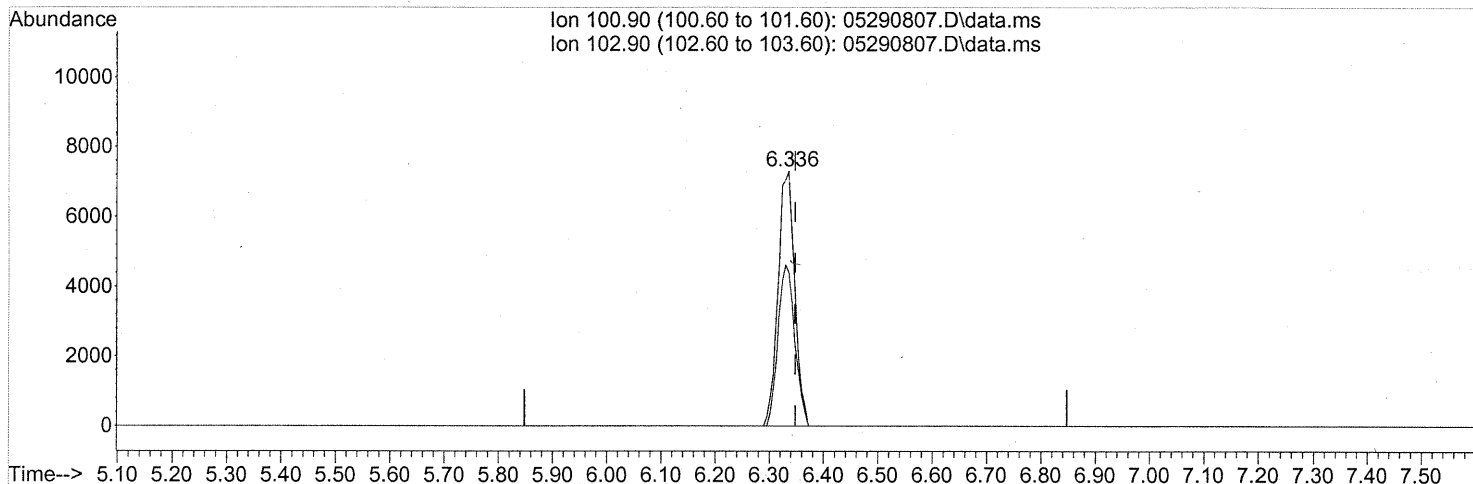
response 10556

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	298.08#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
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 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
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 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

(14) Trichlorofluoromethane (T)

6.336min (-0.012) 0.48ng

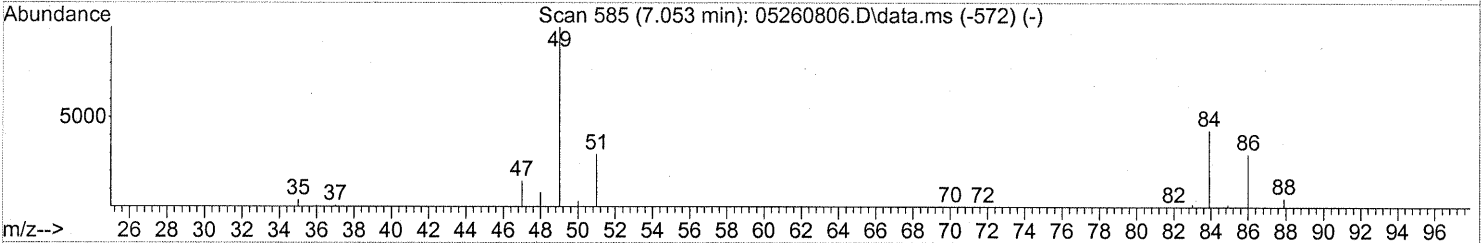
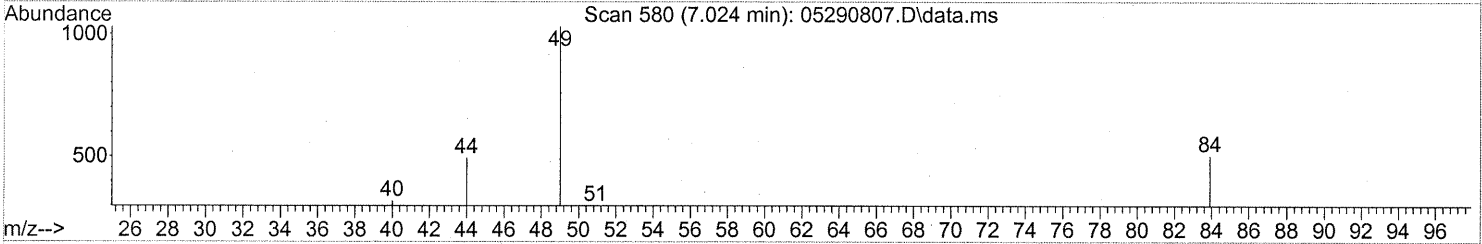
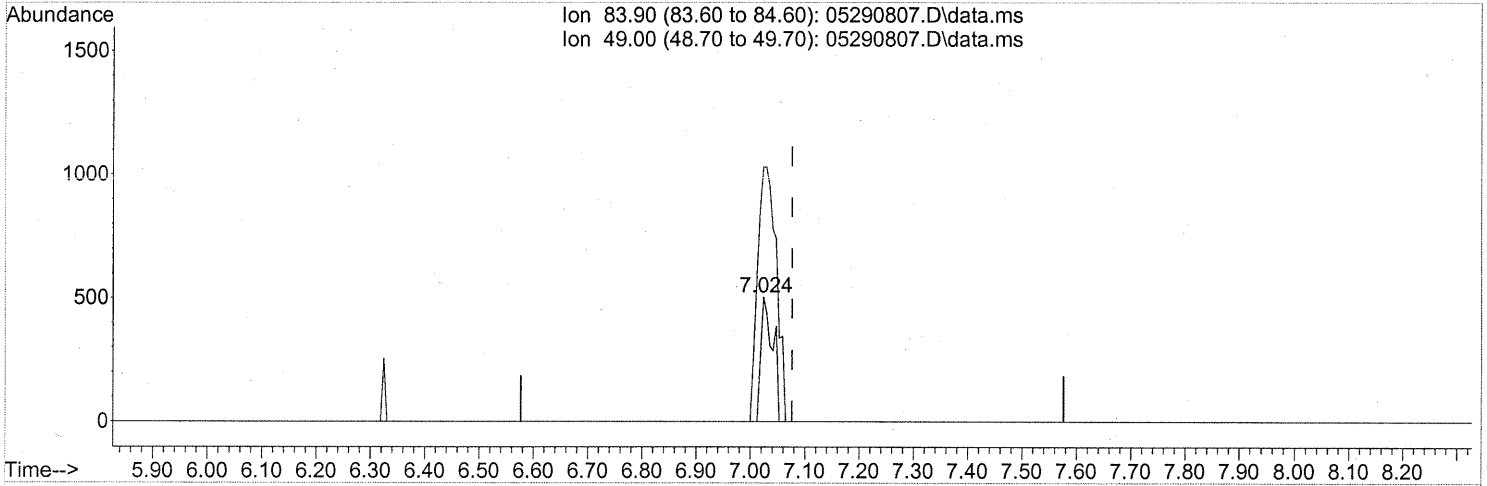
response 15829

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	63.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
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TIC: 05290807.D\data.ms

(19) Methylene Chloride (T)

7.024min (-0.053) 0.05ng

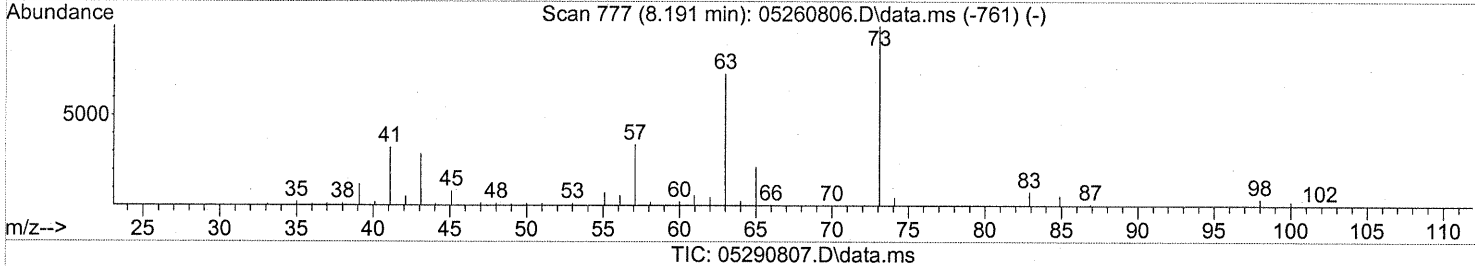
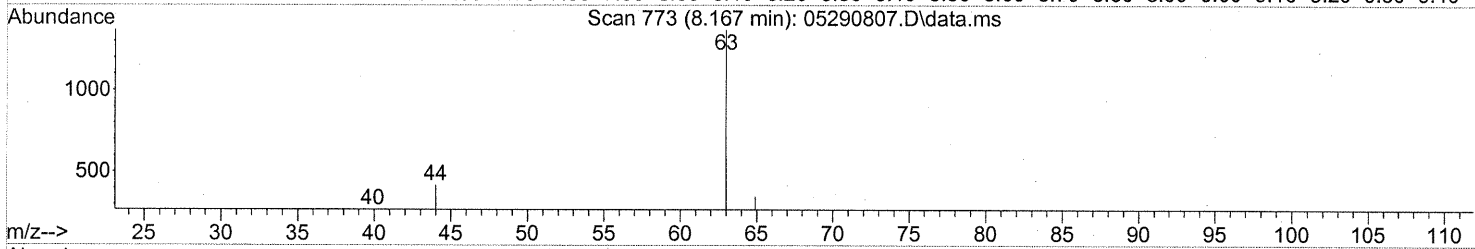
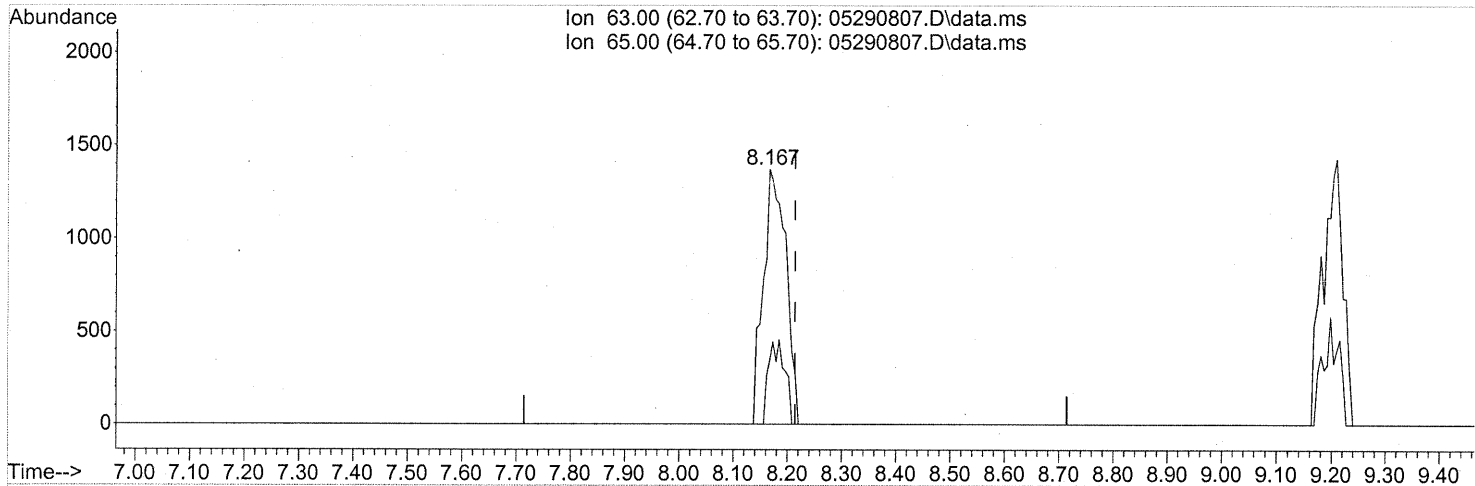
response 772

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	321.11#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

8.167min (-0.047) 0.13ng

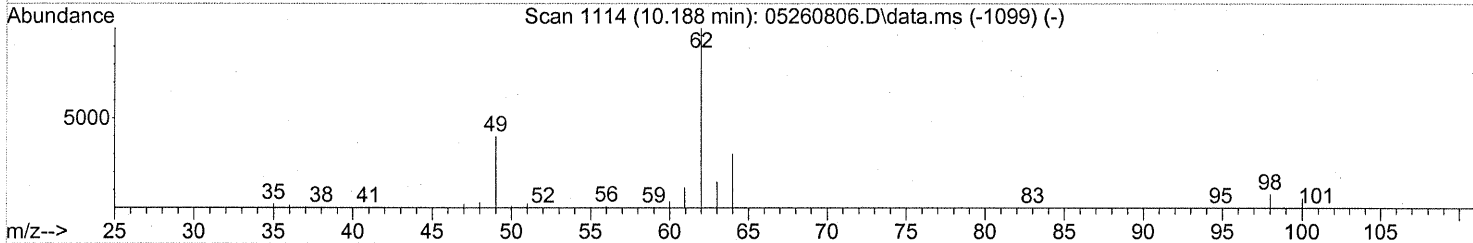
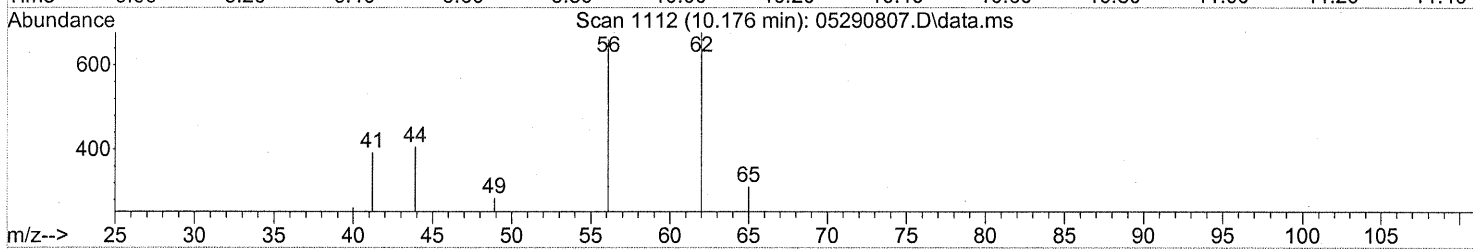
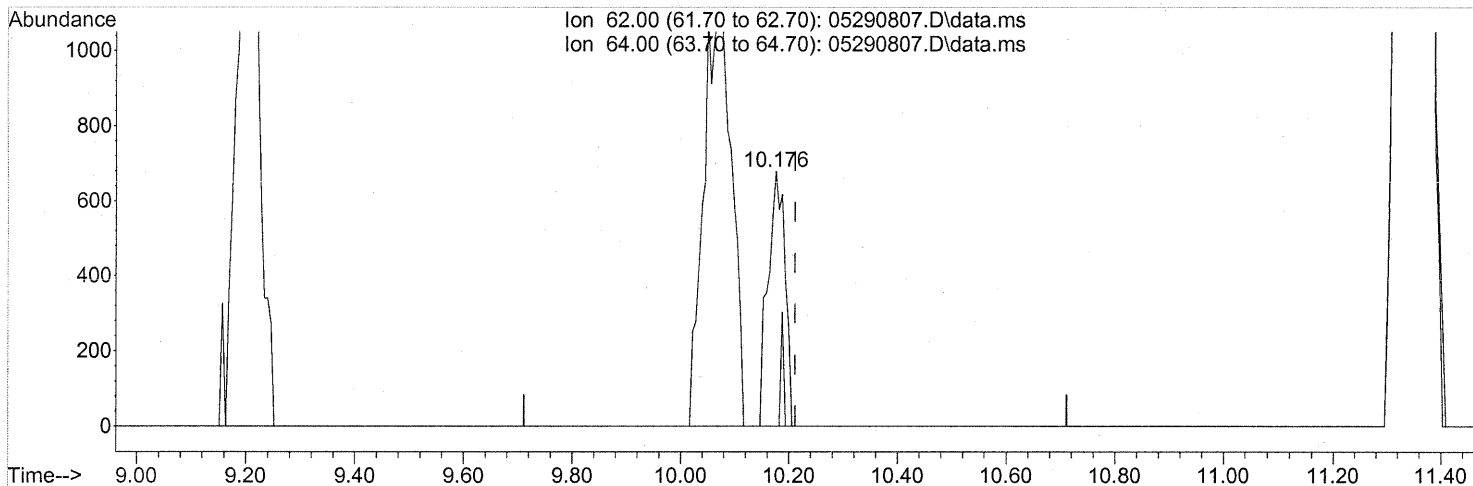
response 3992

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	23.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

(36) 1,2-Dichloroethane (T)

10.176min (-0.036) 0.06ng

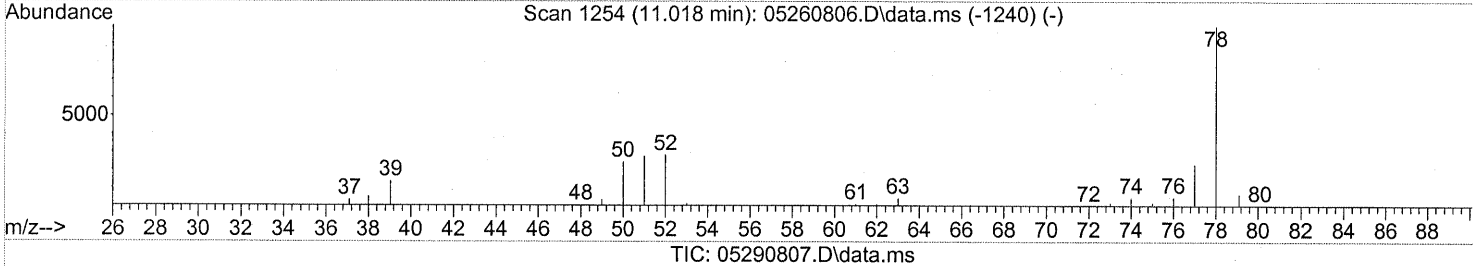
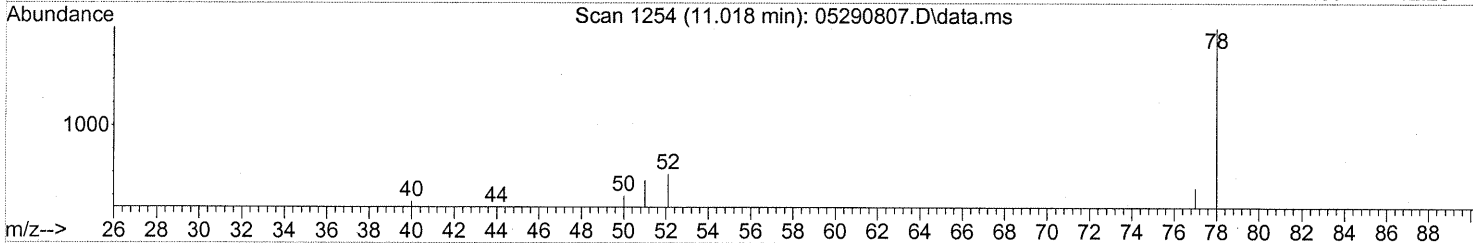
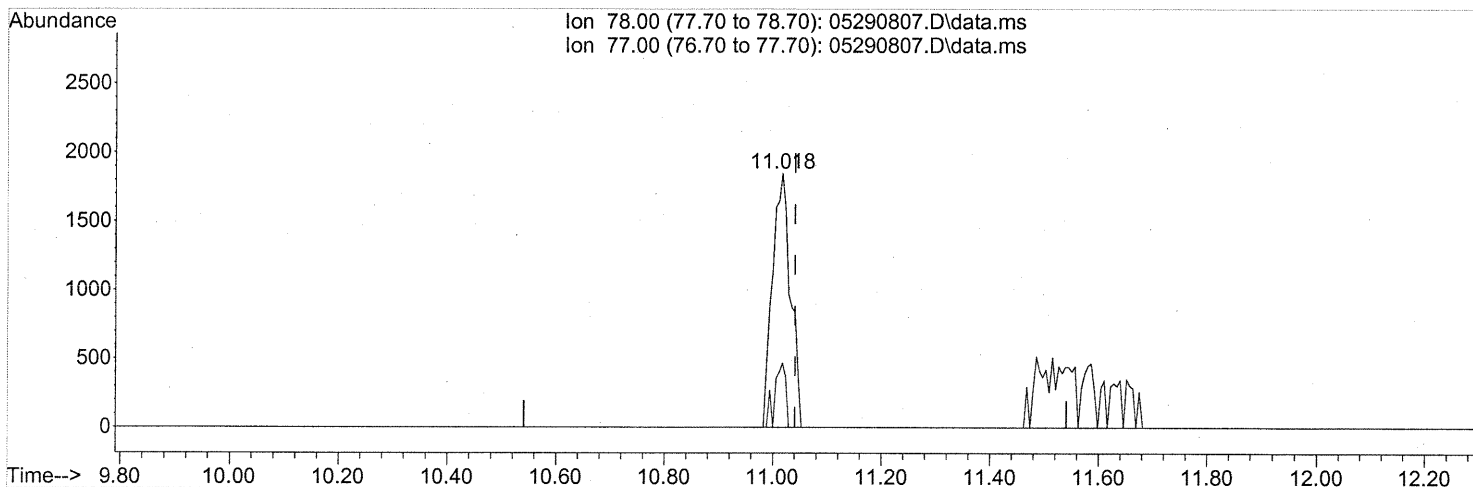
response 1489

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	7.19#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290807.D  
Acq On : 29 May 2008 12:56  
Operator : WA  
Sample : P0801507-007 (15ml)  
Misc : ENSR SG58B-05 (-3.9, 3.7)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(41) Benzene (T)  
11.018min (-0.024) 0.07ng  
response 4335

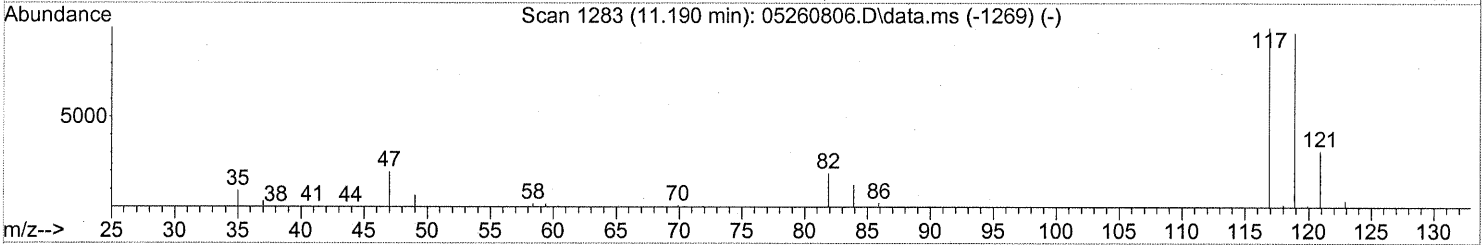
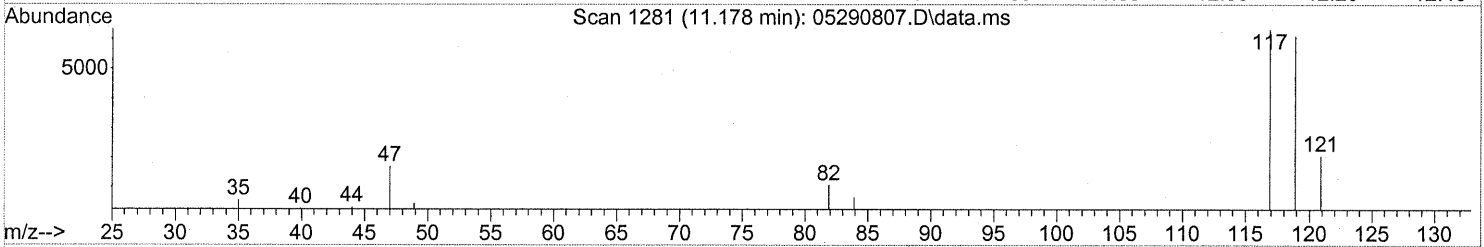
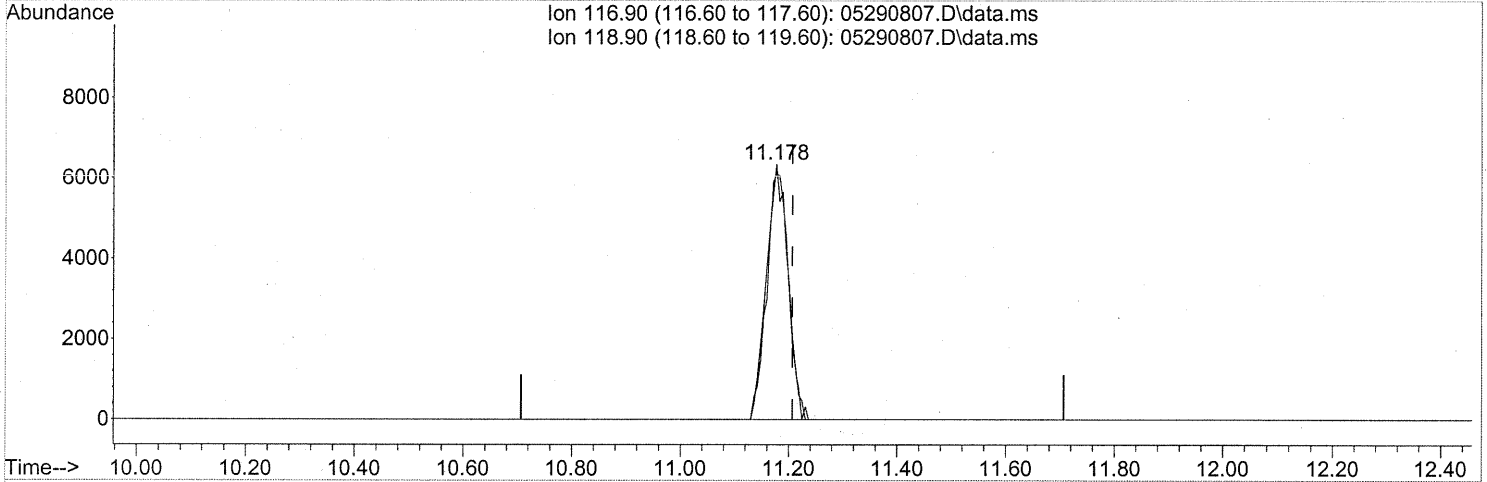
Ion	Exp%	Act%
78.00	100	100
77.00	23.50	15.27
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

(42) Carbon Tetrachloride (T)

11.178min (-0.030) 0.66ng

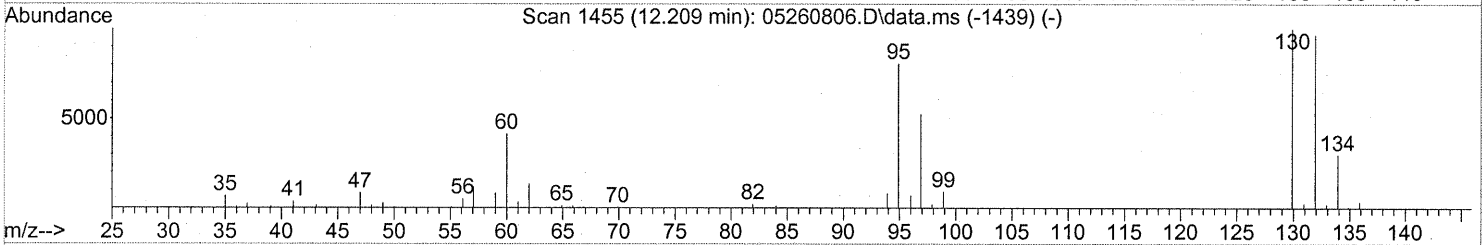
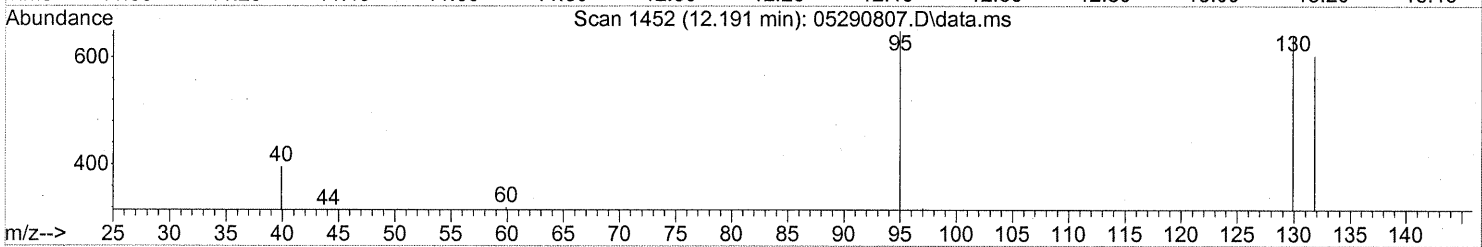
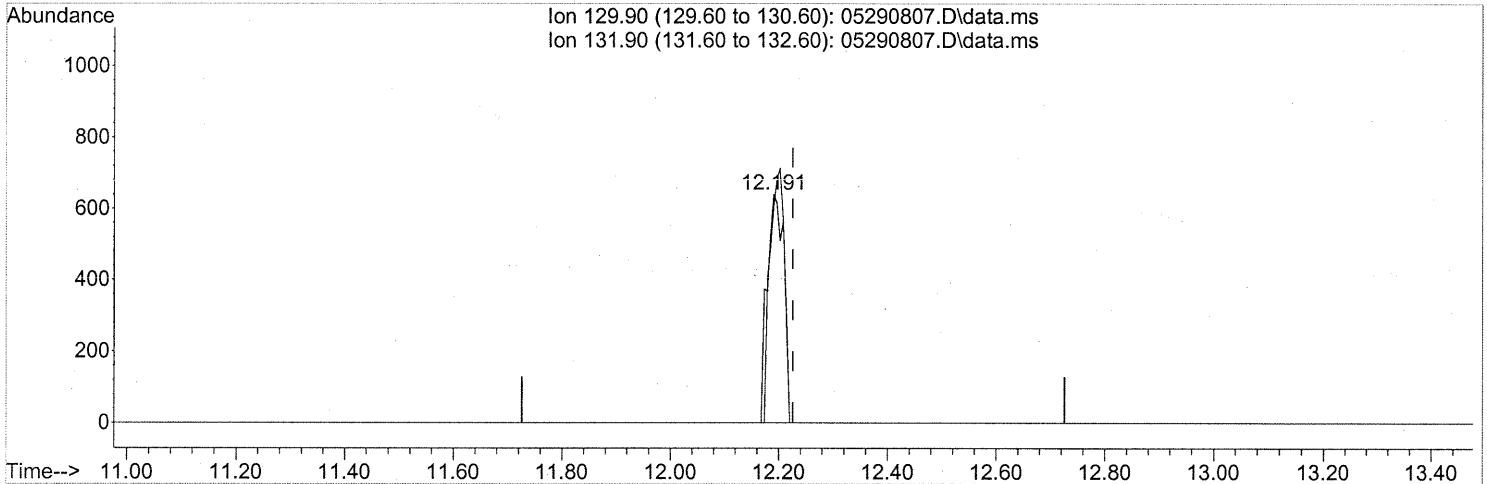
response 17576

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	97.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

(47) Trichloroethene (T)

12.191min (-0.036) 0.07ng

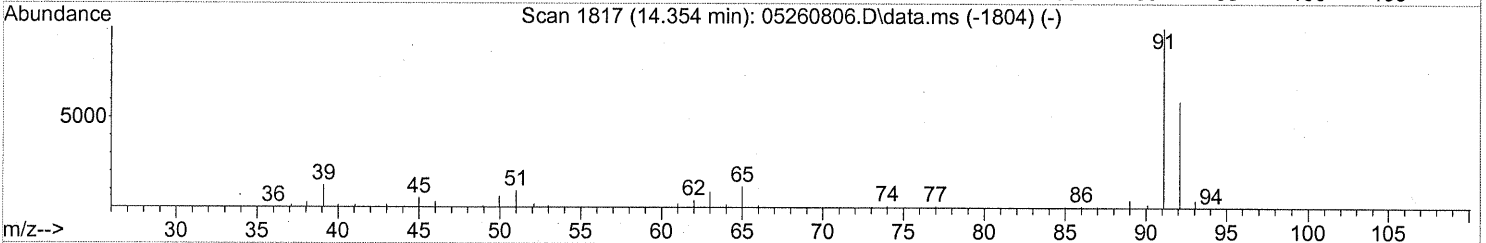
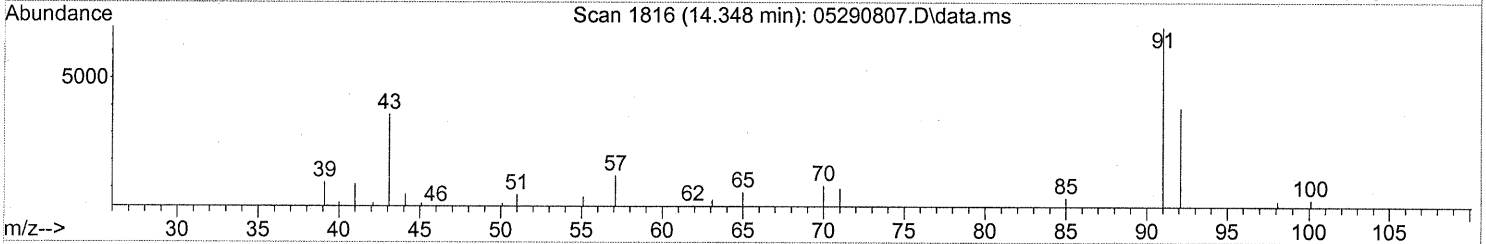
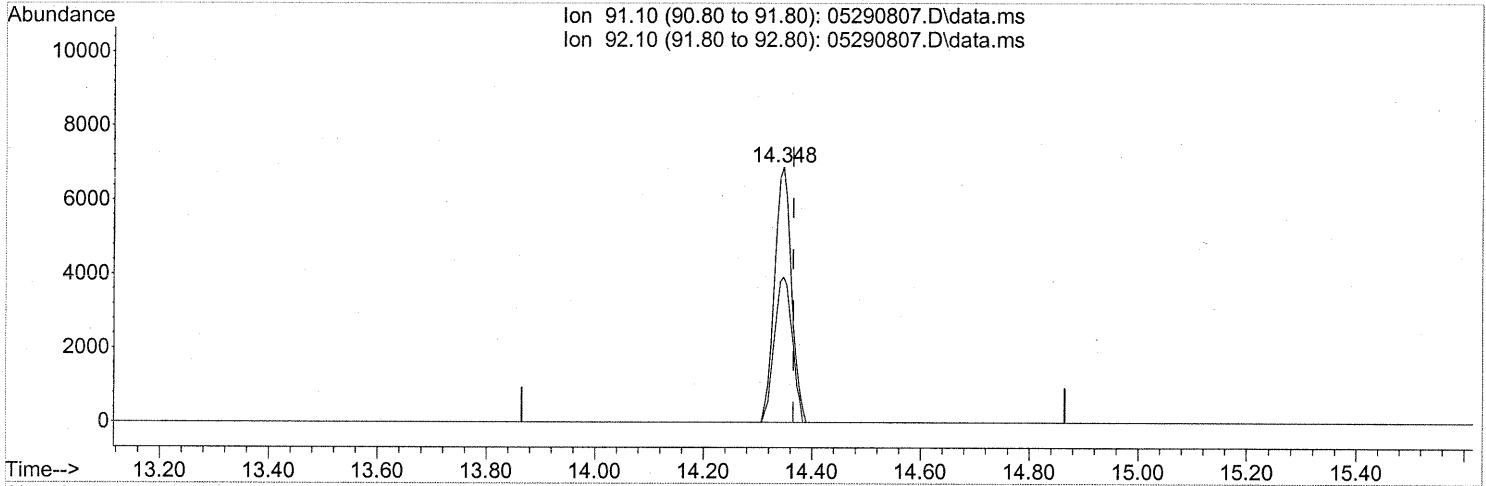
response 1383

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	95.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290807.D\data.ms

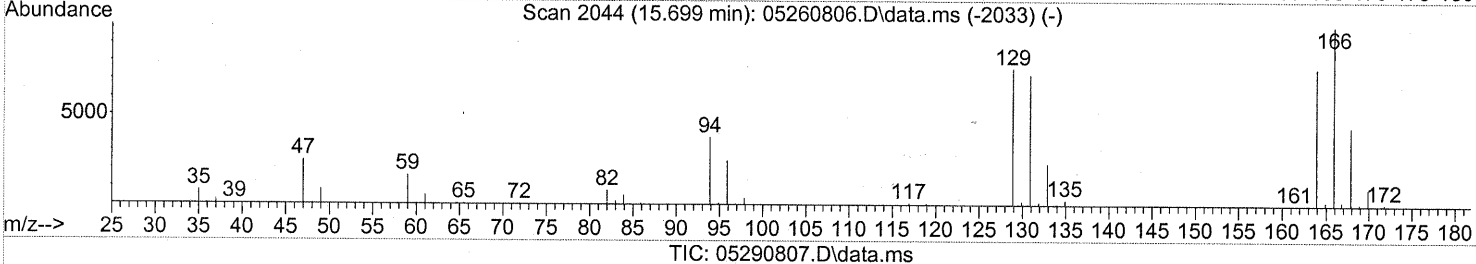
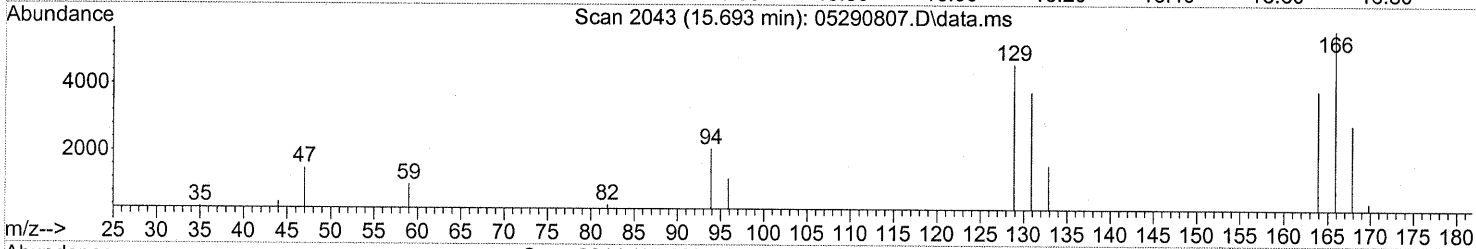
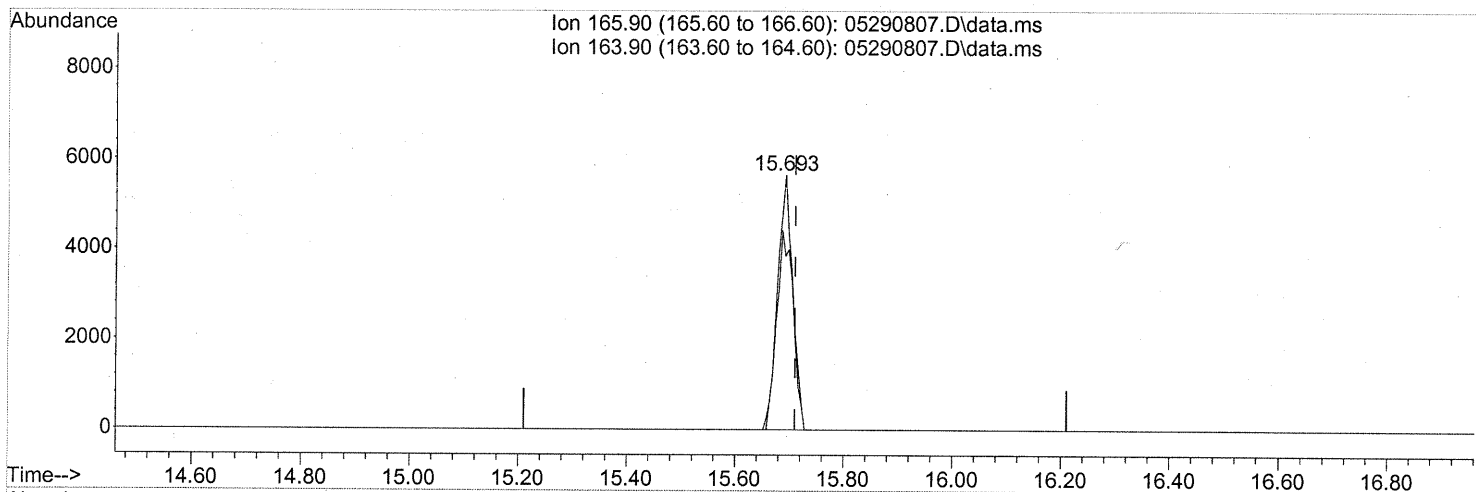
(58) Toluene (T)  
 14.348min (-0.018) 0.20ng  
 response 14905

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	60.32
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290807.D  
Acq On : 29 May 2008 12:56  
Operator : WA  
Sample : P0801507-007 (15ml)  
Misc : ENSR SG58B-05 (-3.9, 3.7)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 0.50ng

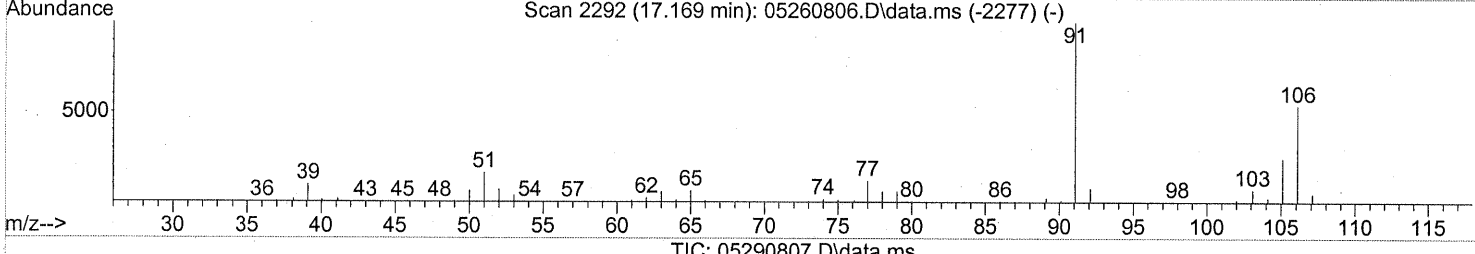
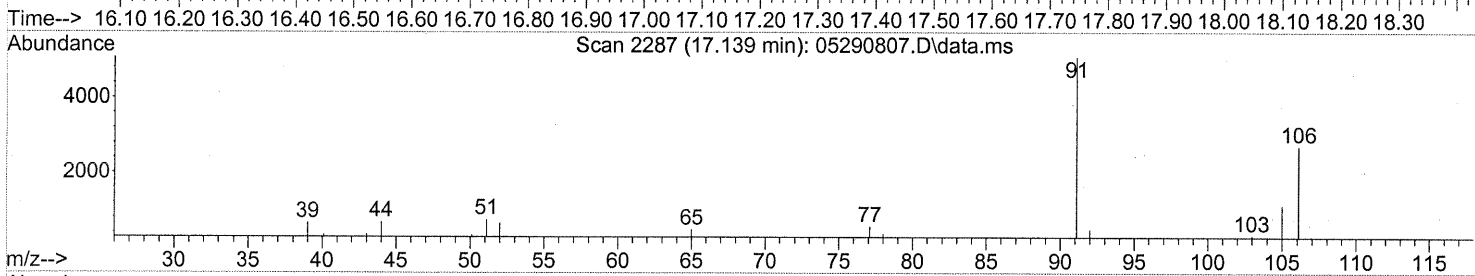
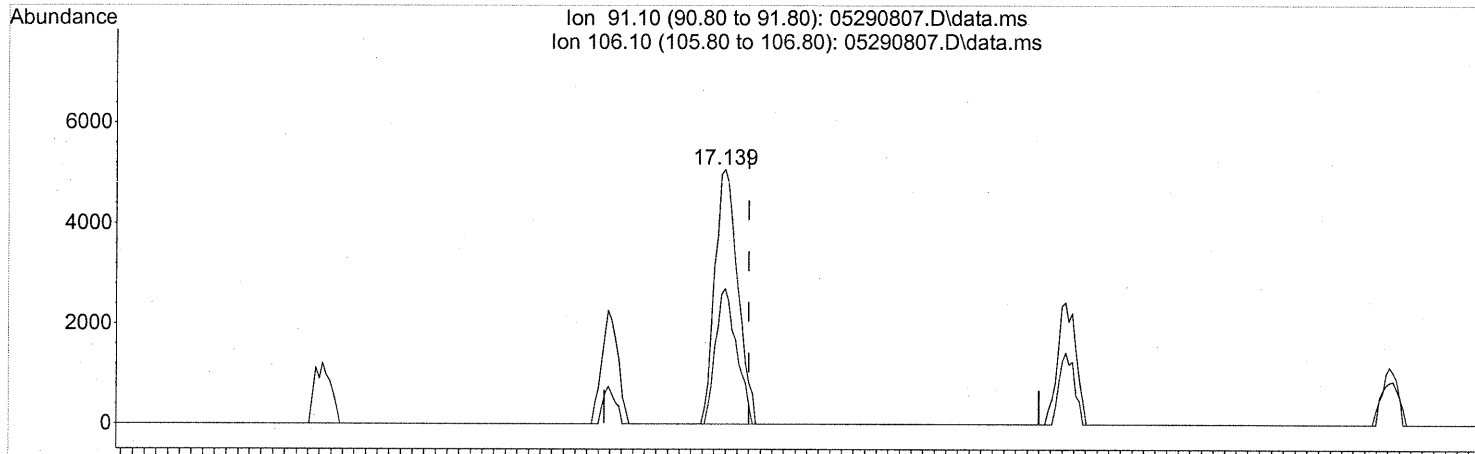
response 10954

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	86.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



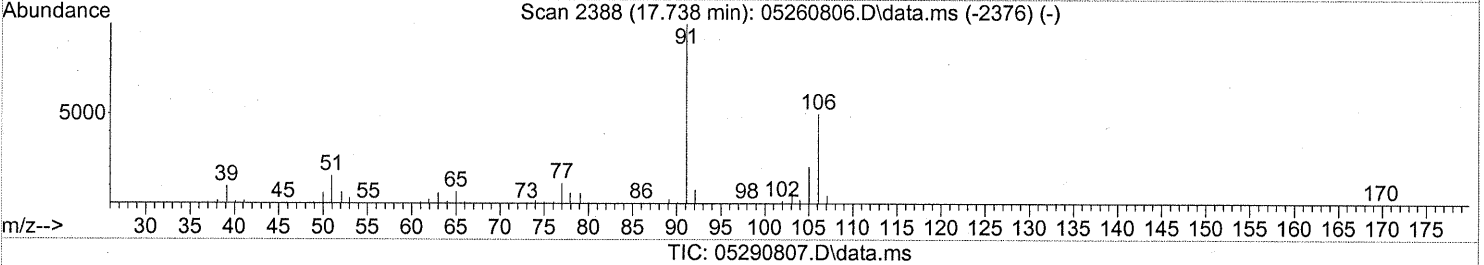
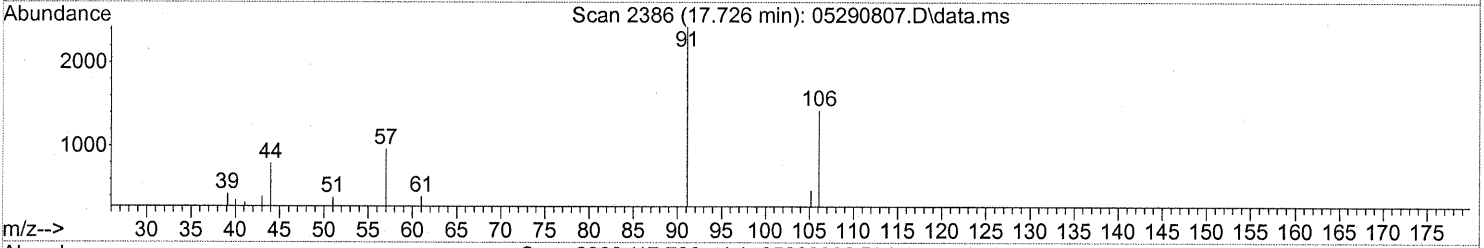
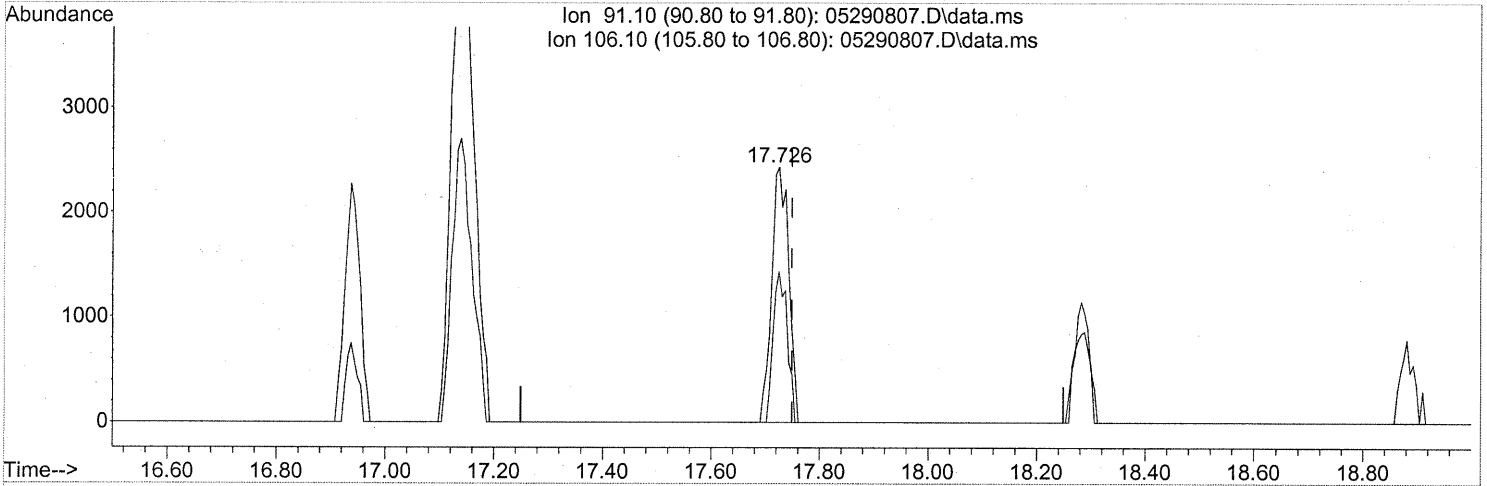
(67) m- & p-Xylene (T)  
 17.139min (-0.042) 0.25ng  
 response 13951

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	49.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 10:38:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

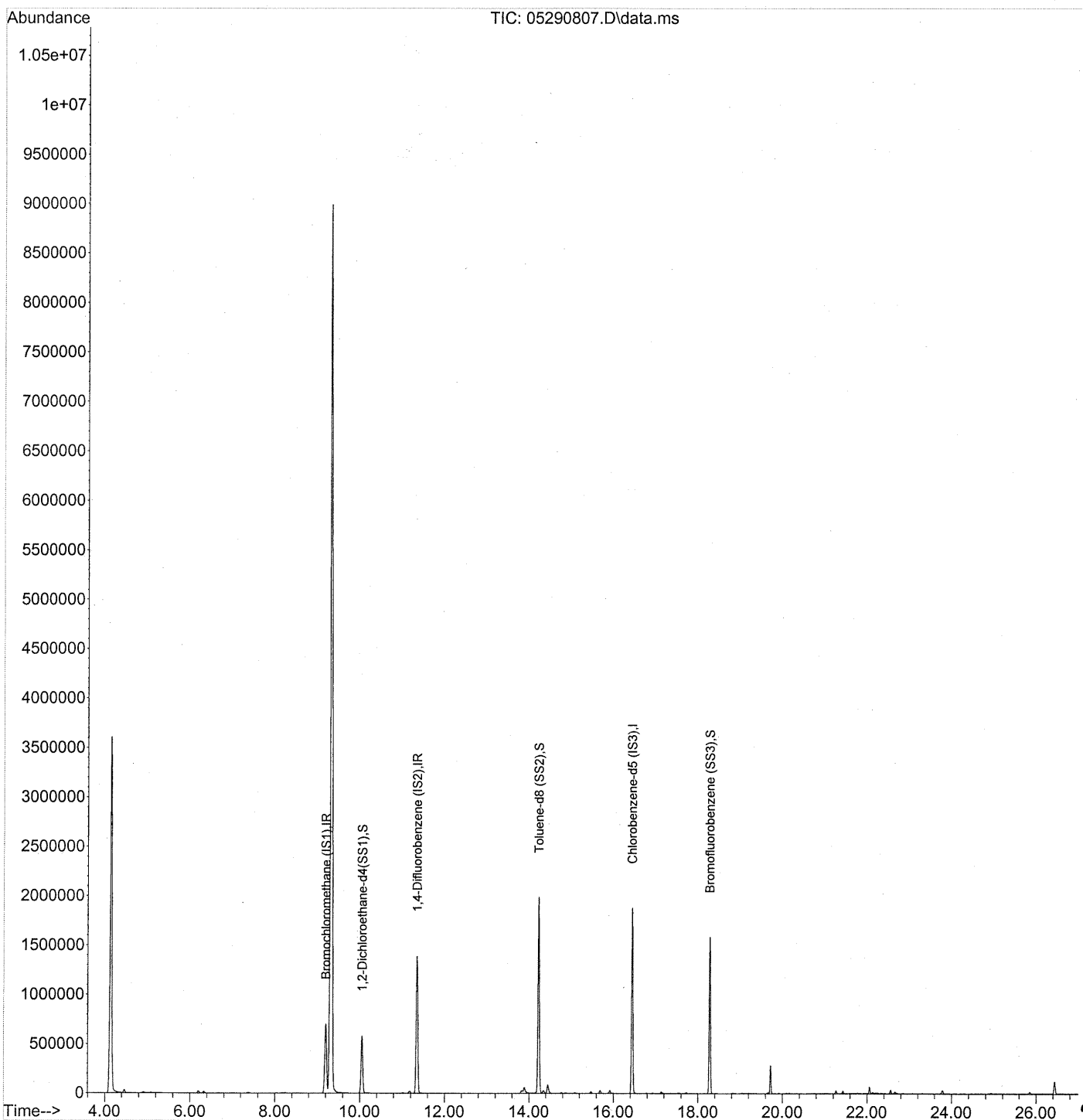


(70) o-Xylene (T)  
 17.726min (-0.024) 0.09ng  
 response 5322

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	48.46
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:56 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290807.D  
 Acq On : 29 May 2008 12:56  
 Operator : WA  
 Sample : P0801507-007 (15ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:56 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

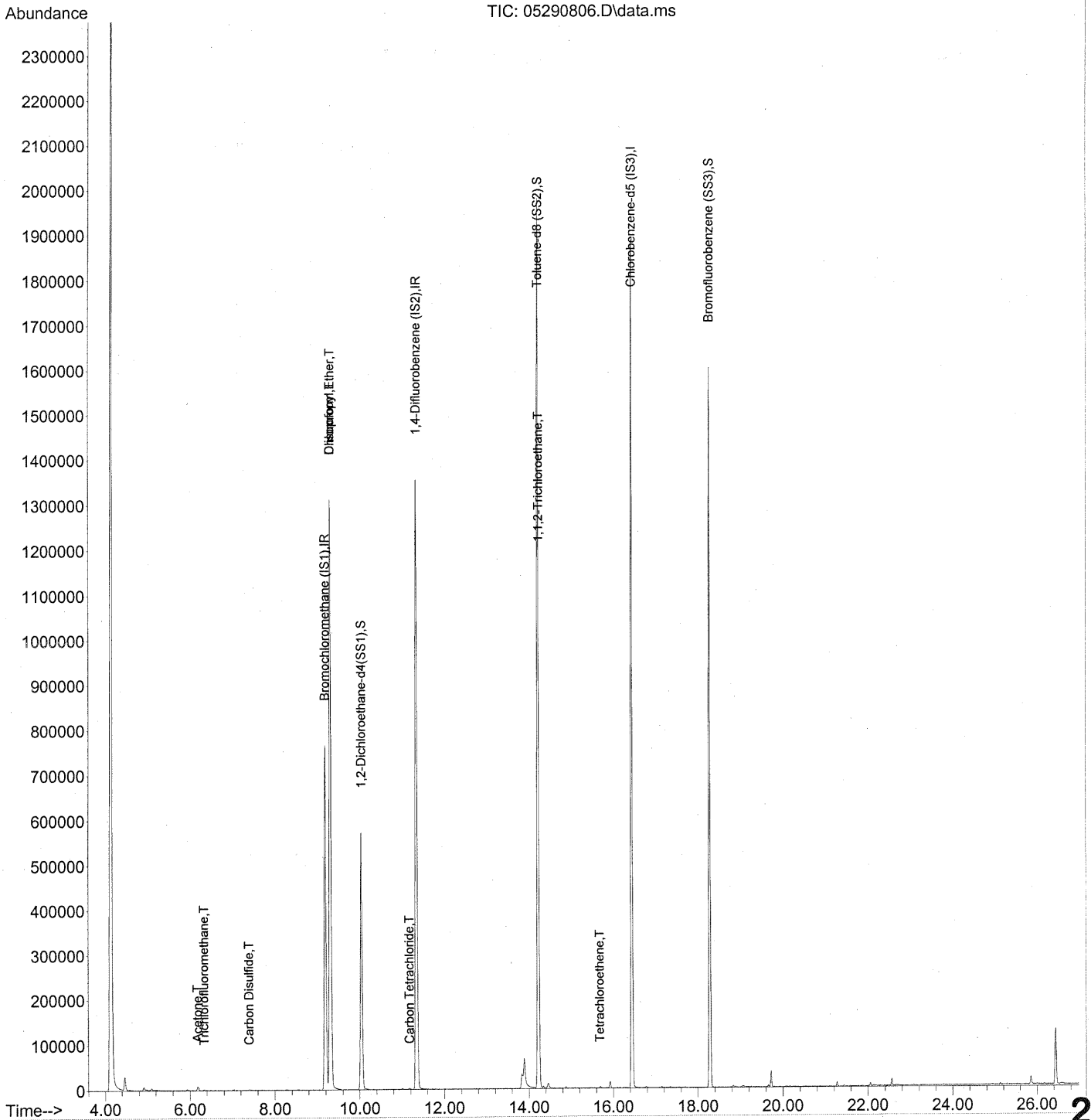
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	9.20	130	372594	25.000	ng	-0.04	
3) 1,4-Difluorobenzene (IS2)	11.35	114	1531812	25.000	ng	-0.03	
4) Chlorobenzene-d5 (IS3)	16.45	82	629311	25.000	ng	-0.01	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.05	65	527664	24.767	ng	-0.04	
Spiked Amount	25.000						Recovery = 99.08%
5) Toluene-d8 (SS2)	14.23	98	1555150	23.970	ng	-0.02	
Spiked Amount	25.000						Recovery = 95.88%
6) Bromofluorobenzene (SS3)	18.28	174	565867	26.233	ng	-0.01	
Spiked Amount	25.000						Recovery = 104.92%
Target Compounds							
7) tert-Butylbenzene	19.83	119	133		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	960		N.D.		

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



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290806.D  
 Acq On : 29 May 2008 12:19 pm  
 Operator : WA  
 Sample : P0801507-007 Dil (2.0ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:49:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290806.D  
 Acq On : 29 May 2008 12:19 pm  
 Operator : WA  
 Sample : P0801507-007 Dil (2.0ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:49:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	377706	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1560046	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	639445	25.000	ng	-0.02

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	534902	24.767	ng	-0.05
Spiked Amount	25.000		Recovery	=	99.08%	✓
57) Toluene-d8 (SS2)	14.22	98	1588432	24.095	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.36%	✓
73) Bromofluorobenzene (SS3)	18.28	174	574485	26.210	ng	-0.01
Spiked Amount	25.000		Recovery	=	104.84%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	993	N.D.		
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.93	41	2801	N.D.		
12) Acrolein	6.07	56	644	N.D.		
13) Acetone	6.18	58	5226	0.265	ng	# 57
14) Trichlorofluoromethane	6.33	101	2036	0.061	ng	93
15) Isopropanol	6.41	45	468	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.04	84	601	N.D.		
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	3268	0.053	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.16	63	228	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	144121	10.604	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290806.D  
 Acq On : 29 May 2008 12:19 pm  
 Operator : WA  
 Sample : P0801507-007 Dil (2.0ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:49:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.31	83	1343328	60.270	ng	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	11.01	78	2277	N.D.		
42) Carbon Tetrachloride	11.18	117	2345	0.087	ng	100
43) Cyclohexane	11.34	84	926	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	136547	8.535	ng	# 7
58) Toluene	14.34	91	2498	N.D.		
59) 2-Hexanone	14.59	43	300	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	1570	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.68	166	1366	0.062	ng	91
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.93	91	557	N.D.		
67) m- & p-Xylene	17.14	91	2481	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	591	N.D.		
71) n-Nonane	0.00	43	0	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	727	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.19	105	570	N.D.		
78) 4-Ethyltoluene	19.24	105	89	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	97	N.D.		

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290806.D  
 Acq On : 29 May 2008 12:19 pm  
 Operator : WA  
 Sample : P0801507-007 Dil (2.0ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:49:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

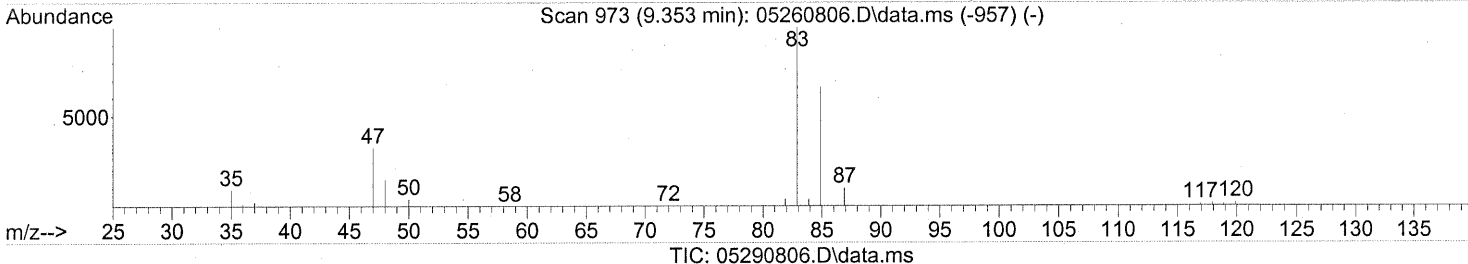
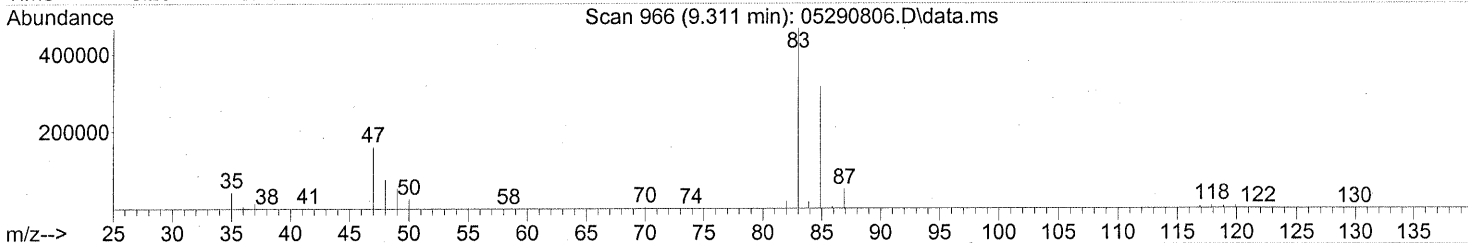
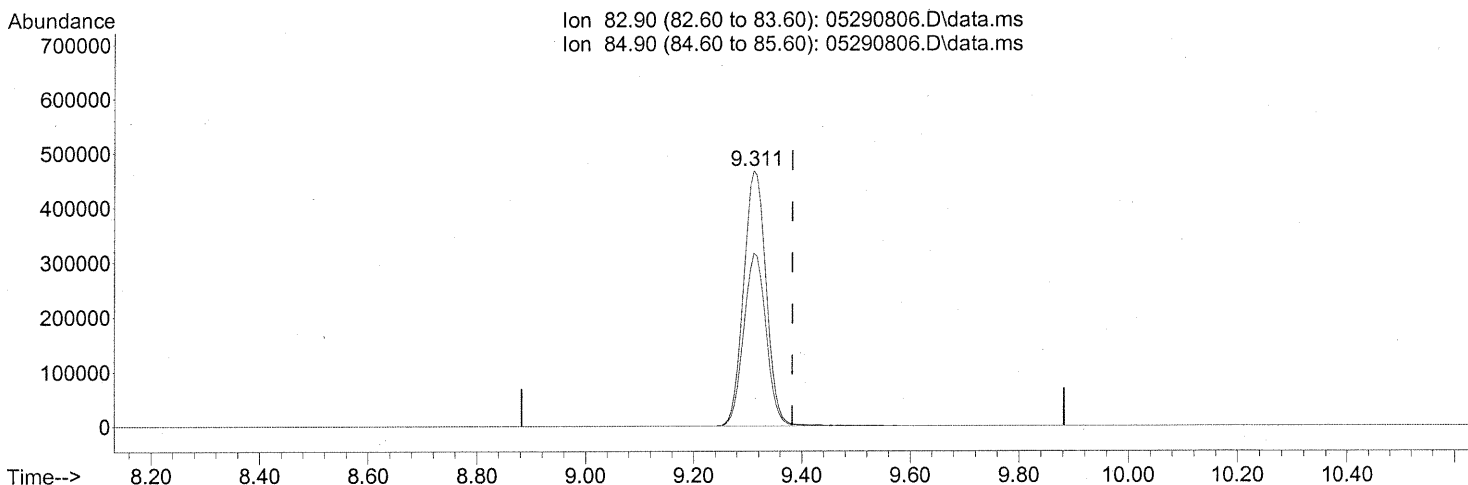
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	96	N.D.		
81) 2-Ethyltoluene	19.56	105	118	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	527	N.D.		
83) n-Decane	19.92	57	234	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.03	146	92	N.D.		
86) 1,4-Dichlorobenzene	20.11	146	570	N.D.		
87) sec-Butylbenzene	19.82	105	527	N.D.		
88) p-Isopropyltoluene	20.34	119	110	N.D.		
89) 1,2,3-Trimethylbenzene	20.75	105	214	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	1360	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	2186	N.D.		
96) n-Dodecane	22.66	57	958	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290806.D  
 Acq On : 29 May 2008 12:19 pm  
 Operator : WA  
 Sample : P0801507-007 Dil (2.0ml)  
 Misc : ENSR SG58B-05 (-3.9, 3.7)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 12:49:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

9.311min (-0.071) 60.27ng

response 1343328

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.36
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	17	1.7	ND	3.4	0.34	
74-87-3	Chloromethane	ND	3.3	1.7	ND	1.6	0.81	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	17	1.7	ND	2.4	0.24	
75-01-4	Vinyl Chloride	ND	3.3	1.7	ND	1.3	0.65	
74-83-9	Bromomethane	ND	3.3	1.7	ND	0.86	0.43	
75-00-3	Chloroethane	ND	3.3	1.7	ND	1.3	0.63	
64-17-5	Ethanol	ND	170	1.7	ND	89	0.89	
67-64-1	<b>Acetone</b>	<b>26</b>	170	2.4	<b>11</b>	70	1.0	<b>J, B</b>
75-69-4	<b>Trichlorofluoromethane</b>	<b>56</b>	3.3	1.7	<b>9.9</b>	0.59	0.30	
107-13-1	Acrylonitrile	ND	17	2.3	ND	7.7	1.1	
75-35-4	1,1-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	17	2.5	ND	5.5	0.82	
75-09-2	<b>Methylene Chloride</b>	<b>3.4</b>	17	1.7	<b>0.99</b>	4.8	0.48	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.3	1.7	ND	1.1	0.53	
76-13-1	Trichlorotrifluoroethane	ND	3.3	1.9	ND	0.44	0.24	
75-15-0	Carbon Disulfide	ND	17	4.0	ND	5.4	1.3	
156-60-5	trans-1,2-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
75-34-3	<b>1,1-Dichloroethane</b>	<b>7.2</b>	3.3	1.7	<b>1.8</b>	0.83	0.41	
1634-04-4	Methyl tert-Butyl Ether	ND	3.3	1.7	ND	0.93	0.46	
108-05-4	Vinyl Acetate	ND	170	5.3	ND	47	1.5	
78-93-3	<b>2-Butanone (MEK)</b>	<b>7.4</b>	17	1.7	<b>2.5</b>	5.7	0.57	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	3.3	1.7	ND	0.84	0.42	
108-20-3	Diisopropyl Ether	ND	17	2.0	ND	4.0	0.47	
67-66-3	<b>Chloroform</b>	<b>7,500</b>	3.3	2.0	<b>1,500</b>	0.68	0.40	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00943

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	8.9	17	2.1	2.0	3.8	0.48	J
179601-23-1	m,p-Xylenes	47	17	4.3	11	3.8	1.0	
75-25-2	Bromoform	ND	17	2.5	ND	1.6	0.25	
100-42-5	Styrene	ND	17	2.5	ND	3.9	0.60	
95-47-6	o-Xylene	17	17	2.1	3.8	3.8	0.48	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.3	2.1	ND	0.49	0.31	
98-82-8	Cumene	ND	17	1.9	ND	3.4	0.38	
103-65-1	n-Propylbenzene	ND	17	1.7	ND	3.4	0.35	
622-96-8	4-Ethyltoluene	ND	17	1.9	ND	3.4	0.39	
108-67-8	1,3,5-Trimethylbenzene	3.6	17	2.0	0.74	3.4	0.41	J
98-83-9	alpha-Methylstyrene	ND	17	2.4	ND	3.5	0.50	
95-63-6	1,2,4-Trimethylbenzene	5.2	17	2.3	1.1	3.4	0.47	J
100-44-7	Benzyl Chloride	ND	3.3	2.9	ND	0.65	0.56	
541-73-1	1,3-Dichlorobenzene	4.3	3.3	2.1	0.72	0.56	0.34	
106-46-7	1,4-Dichlorobenzene	ND	3.3	1.9	ND	0.56	0.31	
135-98-8	sec-Butylbenzene	ND	17	1.9	ND	3.0	0.35	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	17	2.2	ND	3.0	0.40	
95-50-1	1,2-Dichlorobenzene	ND	3.3	2.2	ND	0.56	0.37	
96-12-8	1,2-Dibromo-3-chloropropane	ND	17	2.5	ND	1.7	0.26	
120-82-1	1,2,4-Trichlorobenzene	ND	3.3	2.5	ND	0.45	0.34	
91-20-3	Naphthalene	ND	6.7	2.5	ND	1.3	0.47	
87-68-3	Hexachlorobutadiene	ND	3.3	3.0	ND	0.31	0.28	
98-06-6	tert-Butylbenzene	ND	6.7	1.7	ND	1.2	0.30	
104-51-8	n-Butylbenzene	ND	6.7	1.7	ND	1.2	0.30	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

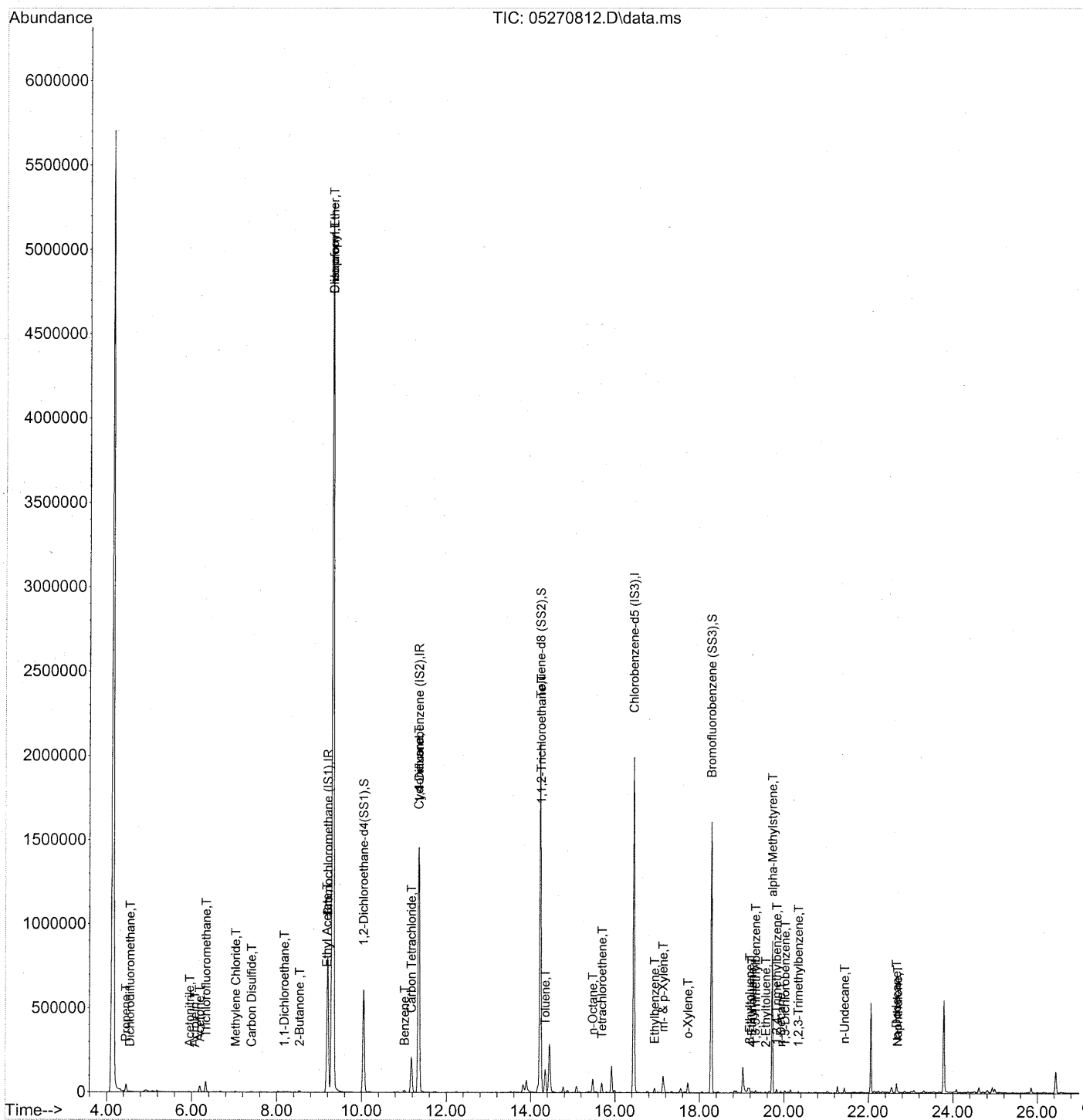
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	400661	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.35	114	1646575	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	663053	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	558707	24.387	ng	-0.05
Spiked Amount	25.000		Recovery	=	97.56%	
57) Toluene-d8 (SS2)	14.23	98	1667581	24.395	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.56%	
73) Bromofluorobenzene (SS3)	18.28	174	576728	25.376	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.52%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	1662	0.054	ng #	82
3) Dichlorodifluoromethane	4.55	85	2497	0.067	ng UR #	83
4) Chloromethane	4.76	50	362	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.70	45	963	N.D.	✓	
11) Acetonitrile	5.95	41	4128	0.068	ng #	7
12) Acrolein	6.08	56	1628	0.107	ng	91
13) Acetone	6.19	58	16221	0.775	ng #	74
14) Trichlorofluoromethane	6.33	101	58693	1.671	ng	99
15) Isopropanol	6.38	45	2605	N.D.	✓	
16) Acrylonitrile	6.63	53	110	N.D.	✓	
17) 1,1-Dichloroethene	6.94	96	246	N.D.	✓	
18) tert-Butanol	6.97	59	464	N.D.	✓	
19) Methylene Chloride	7.03	84	1664	0.103	ng #	23
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.40	76	6332	0.097	ng	85
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	7356	0.215	ng	83
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.54	72	2425	0.222	ng #	1
28) cis-1,2-Dichloroethene	9.18	61	535	N.D.	✓	
29) Diisopropyl Ether	9.32	87	619134	42.943	ng UR #	1
30) Ethyl Acetate	9.18	61	535	0.070	ng #	38
31) n-Hexane	9.23	57	995	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.32	83	5697459	<del>240.976</del> ng	<i>see dil</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.✓		
36) 1,2-Dichloroethane	10.16	62	645	N.D.✓		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.82	56	275	N.D.		
41) Benzene	11.02	78	13085	0.188 ng		97
42) Carbon Tetrachloride	11.18	117	178413	6.266 ng		97
43) Cyclohexane	11.34	84	2427	0.089 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D.✓		
46) Bromodichloromethane	12.13	83	989	N.D.✓		
47) Trichloroethene	12.18	130	313	N.D.✓		
48) 1,4-Dioxane	0.00	88	0	N.D.✓		
49) Isooctane	12.25	57	3828	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.✓		
51) n-Heptane	12.50	71	104	N.D.✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.✓		
53) 4-Methyl-2-pentanone	13.18	58	733	N.D.✓		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.✓		
55) 1,1,2-Trichloroethane	14.24	97	141459	8.378 ng	NR #	7
58) Toluene	14.35	91	74907	0.966 ng		97
59) 2-Hexanone	14.60	43	2237	N.D.✓		
60) Dibromochloromethane	0.00	129	0	N.D.✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D.✓		
62) Butyl Acetate	15.38	43	297	N.D.		
63) n-Octane	15.47	57	18047	0.770 ng		96
64) Tetrachloroethene	15.69	166	21152	0.922 ng		97
65) Chlorobenzene	16.49	112	1202	N.D.✓		
66) Ethylbenzene	16.94	91	23480	0.266 ng		96
67) m- & p-Xylene	17.14	91	81558	1.397 ng		91
68) Bromoform	0.00	173	0	N.D.✓		
69) Styrene	17.59	104	771	N.D.✓		
70) o-Xylene	17.73	91	31041	0.497 ng		92
71) n-Nonane	17.97	43	1458	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.✓		
74) Cumene	18.45	105	730	N.D.		
75) alpha-Pinene	18.92	93	476	N.D.		
76) n-Propylbenzene	19.06	91	3291	N.D.✓		
77) 3-Ethyltoluene	19.19	105	14936	0.150 ng		96
78) 4-Ethyltoluene	19.24	105	4619	0.051 ng		97
79) 1,3,5-Trimethylbenzene	19.33	105	8738	0.109 ng		93

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

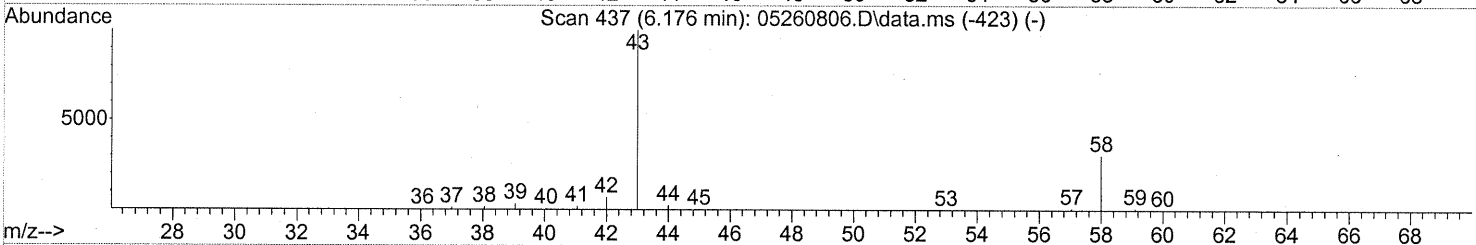
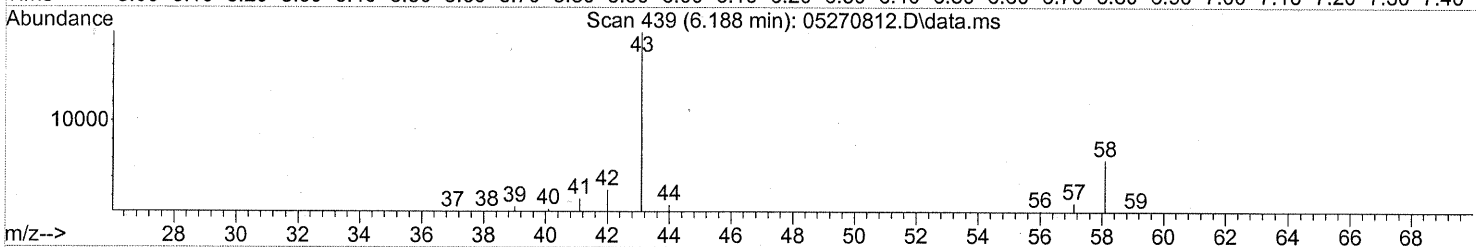
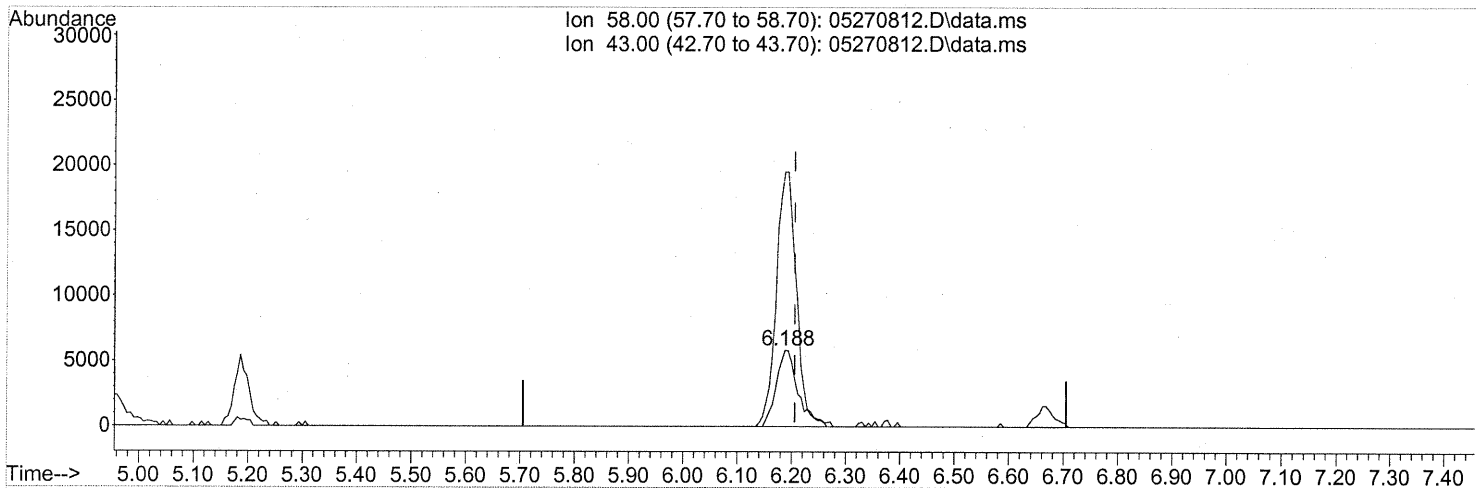
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	7134	<del>0.159 ng</del> UR#	18
81) 2-Ethyltoluene	19.57	105	5558	0.057 ng	94
82) 1,2,4-Trimethylbenzene	19.83	105	12551	0.155 ng	97
83) n-Decane	19.92	57	3824	0.067 ng	79
84) Benzyl Chloride	19.83	91	1143	N.D. ✓	
85) 1,3-Dichlorobenzene	20.02	146	6649	0.130 ng	97
86) 1,4-Dichlorobenzene	20.10	146	1926	N.D. ✓	
87) sec-Butylbenzene	20.16	105	109	N.D. ✓	
88) p-Isopropyltoluene	20.34	119	1063	N.D. ✓	
89) 1,2,3-Trimethylbenzene	20.34	105	4196	0.054 ng	88
90) 1,2-Dichlorobenzene	20.52	146	715	N.D. ✓	
91) d-Limonene	20.51	68	455	N.D. ✓	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D. ✓	
93) n-Undecane	21.43	57	10657	0.178 ng	88
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D. ✓	
95) Naphthalene	22.69	128	6211	<del>0.053 ng</del>	96
96) n-Dodecane	22.66	57	21844	0.374 ng	76
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D. ✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 0.77ng

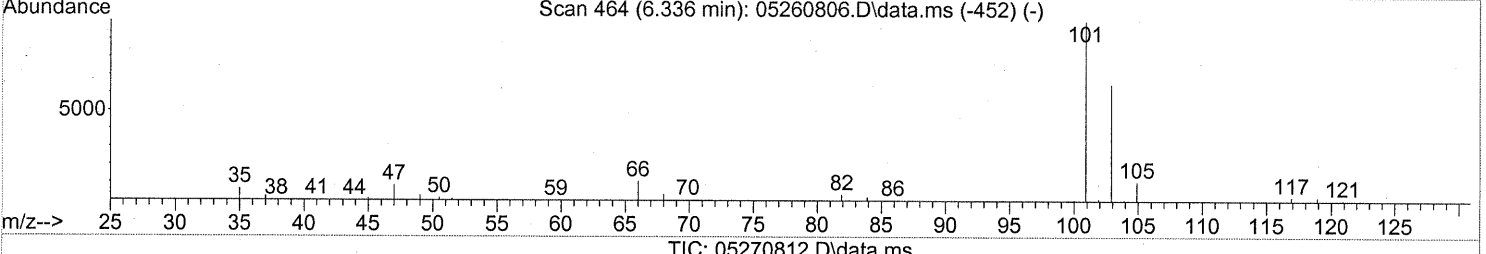
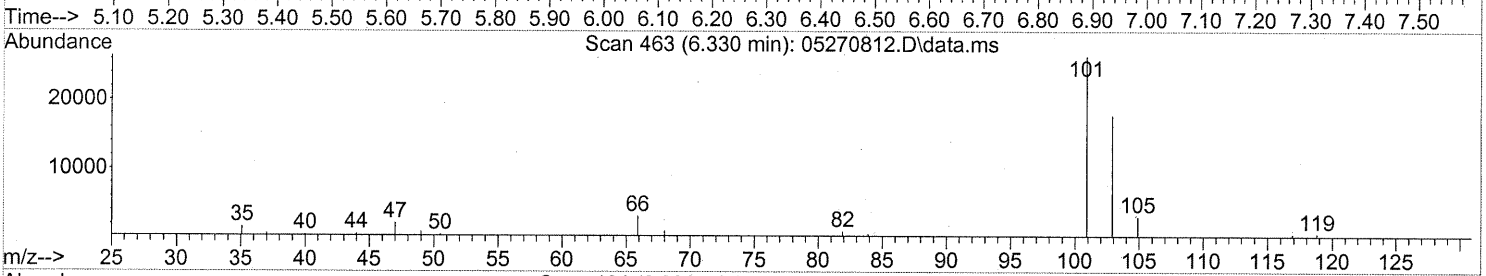
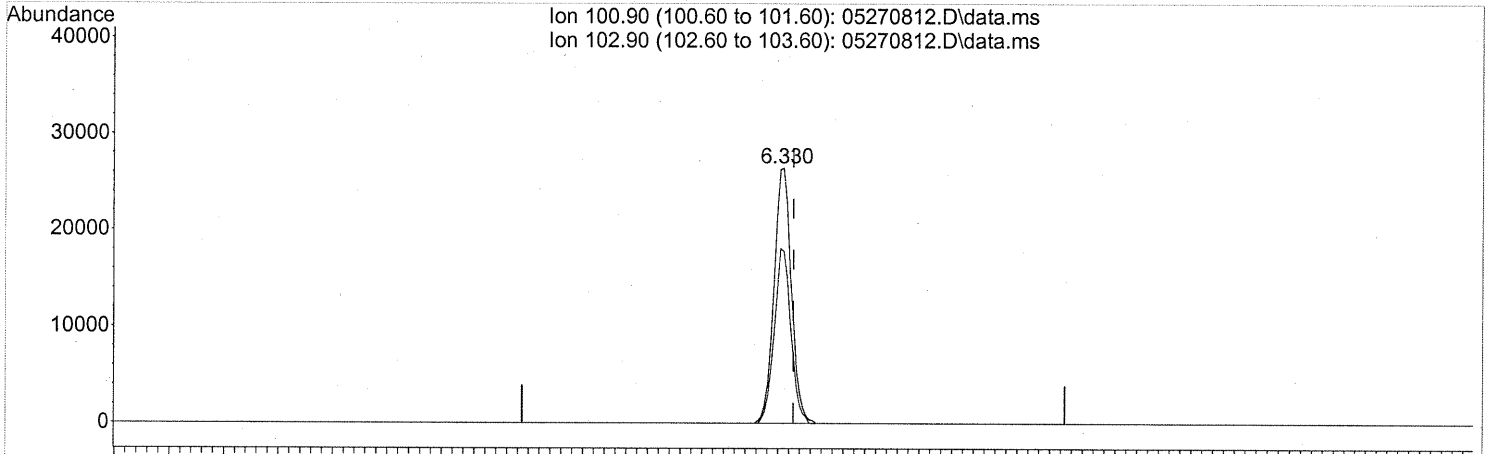
response 16221

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	309.09#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

6.330min (-0.018) 1.67ng

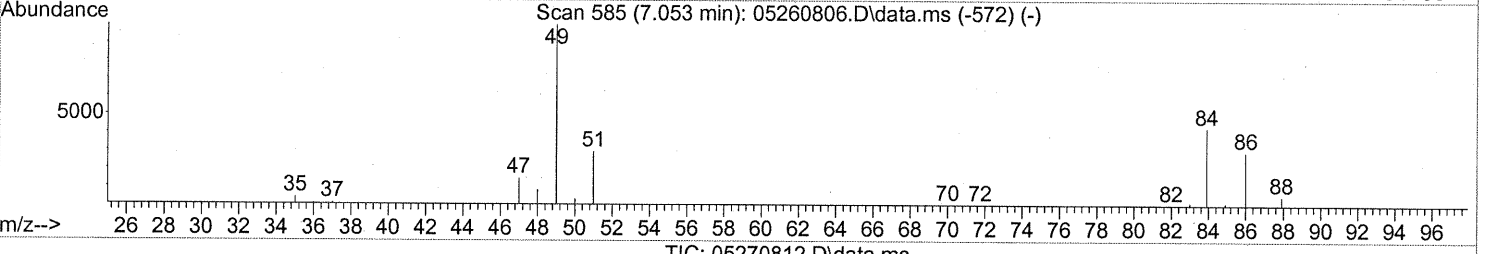
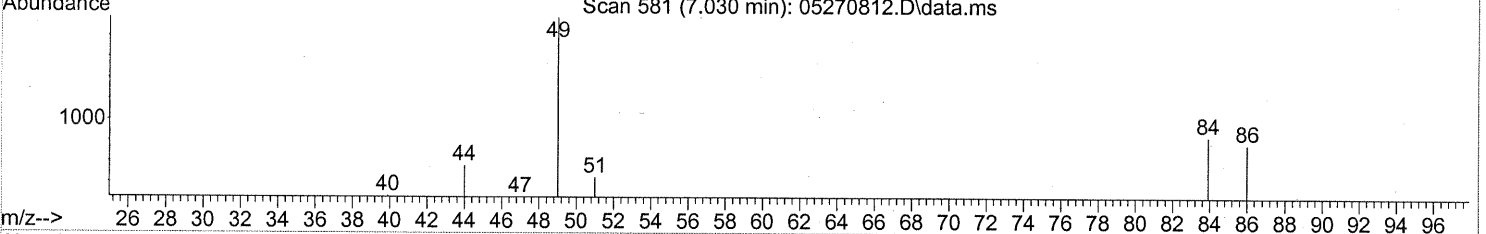
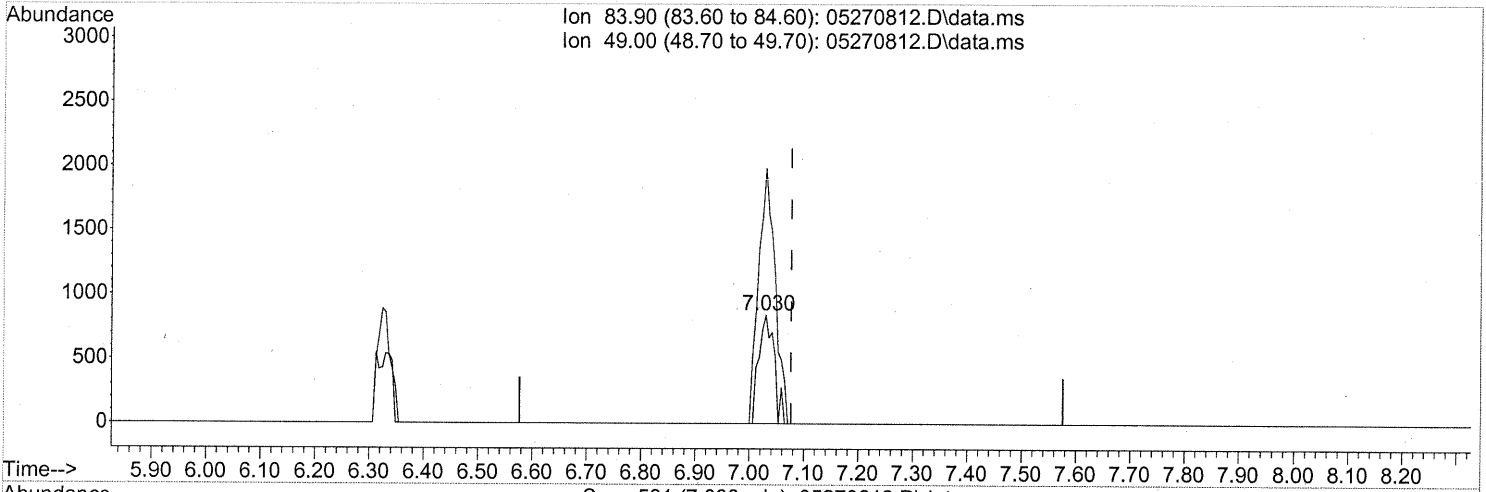
response 58693

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	65.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(19) Methylene Chloride (T)

7.030min (-0.047) 0.10ng

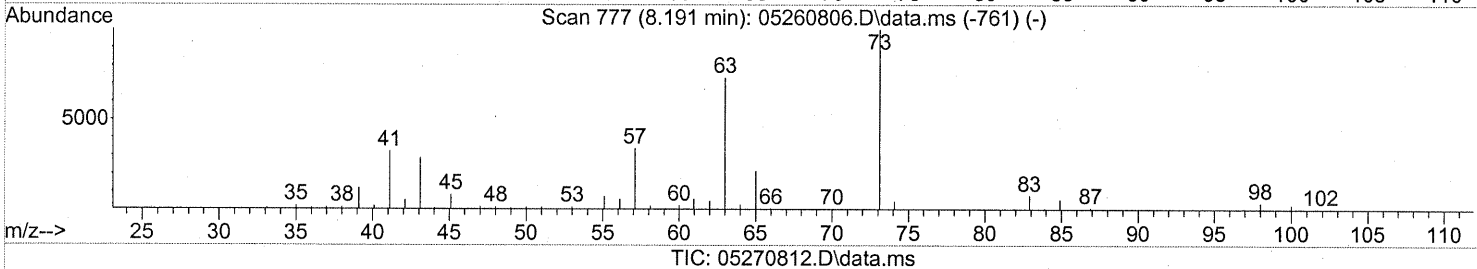
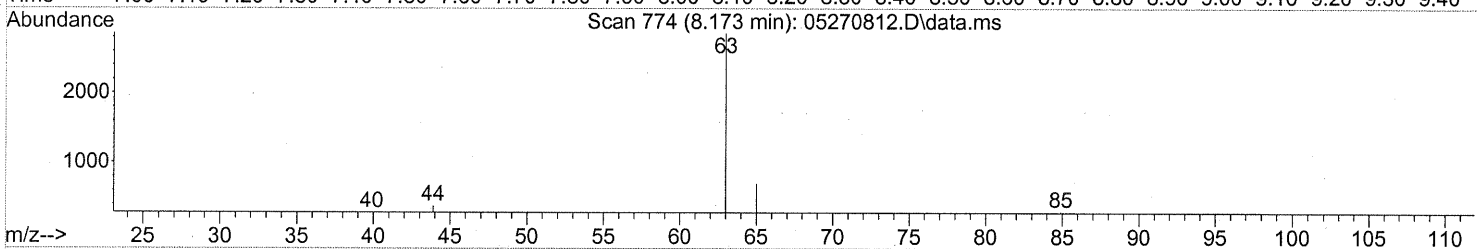
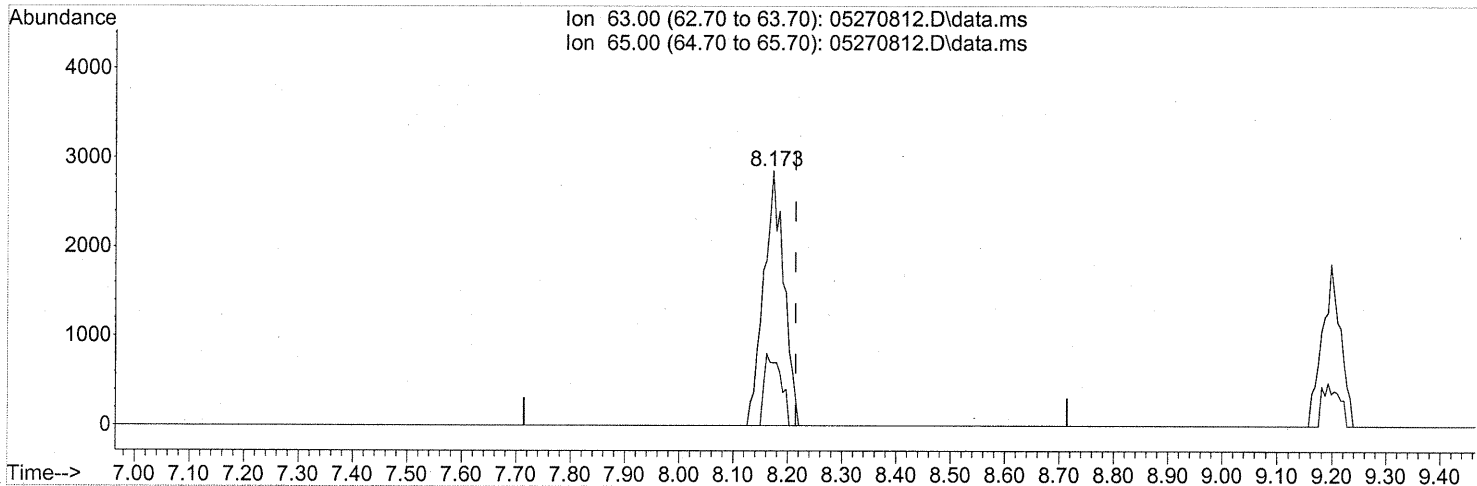
response 1664

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	254.75#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

8.173min (-0.042) 0.21ng

response 7356

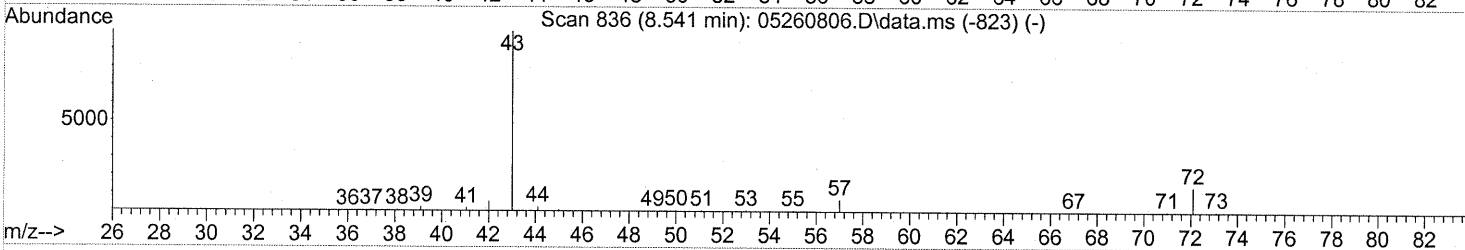
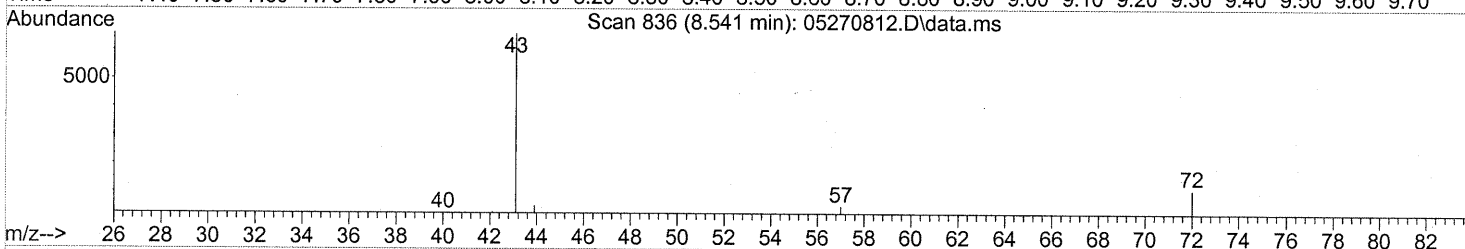
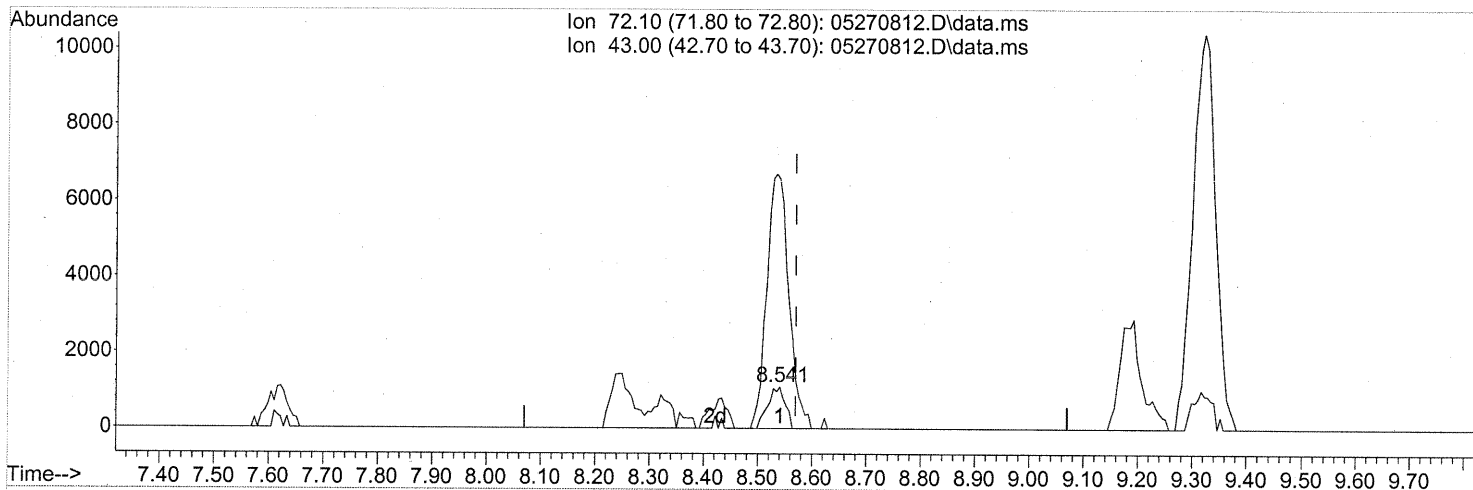
Ion	Exp%	Act%
63.00	100	100
65.00	32.20	22.70
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.541min (-0.030) 0.22ng

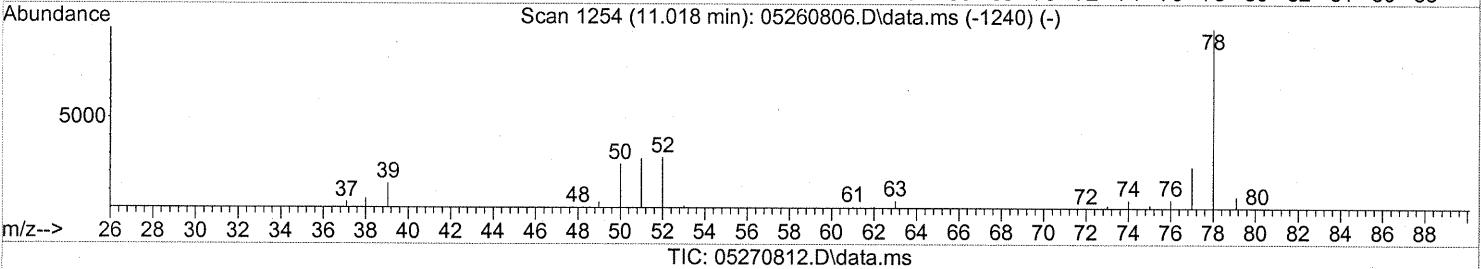
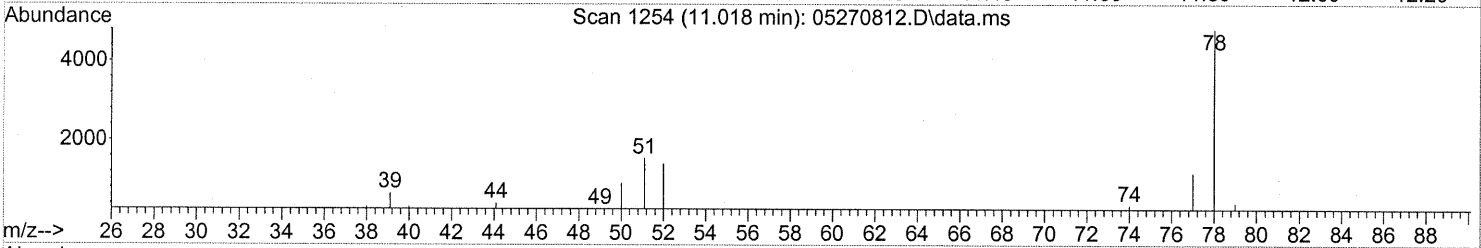
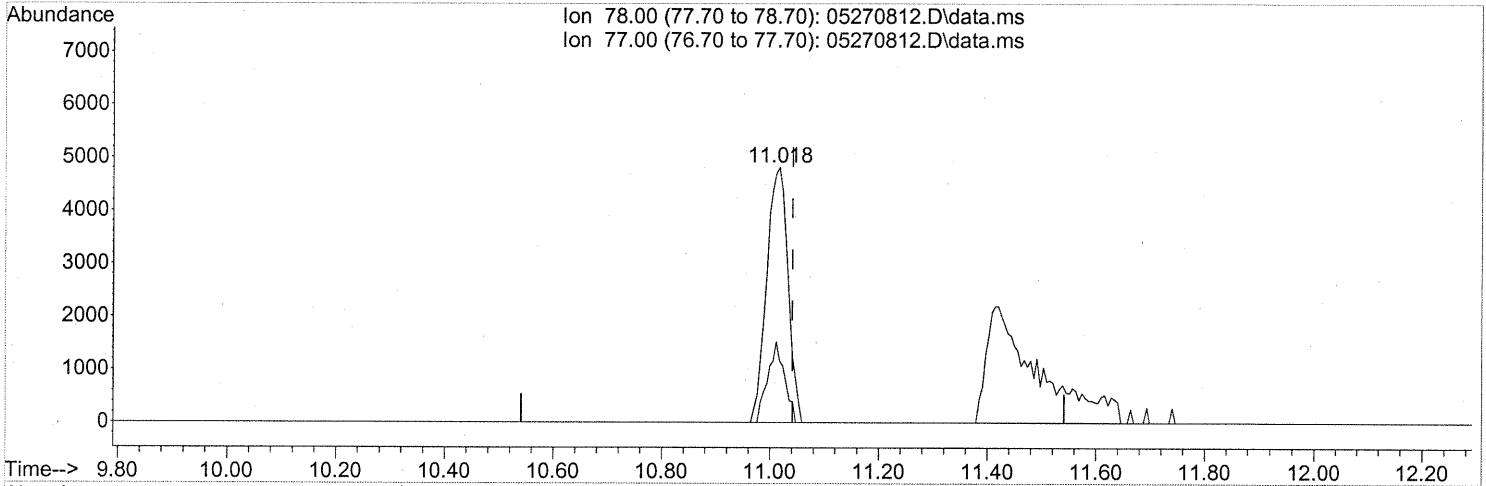
response 2425

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	781.77#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



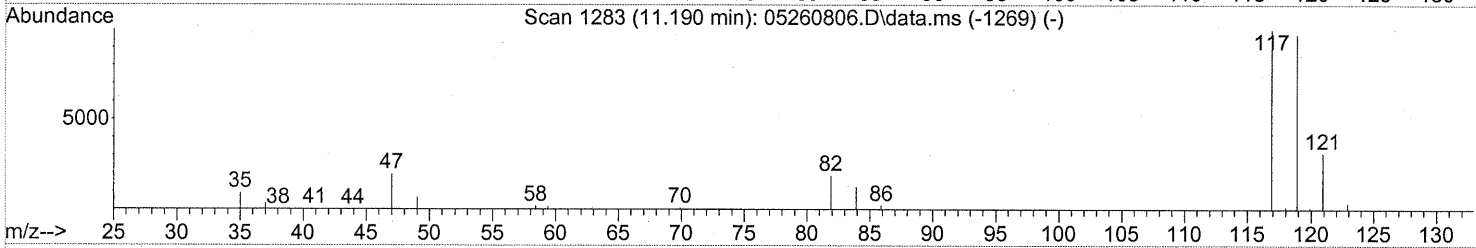
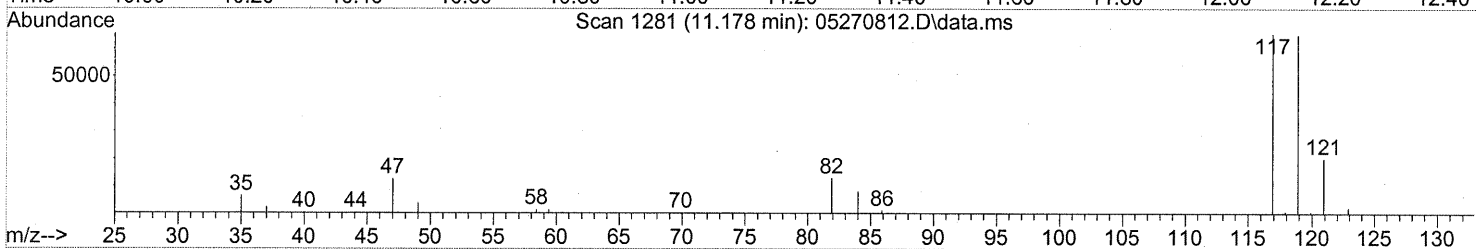
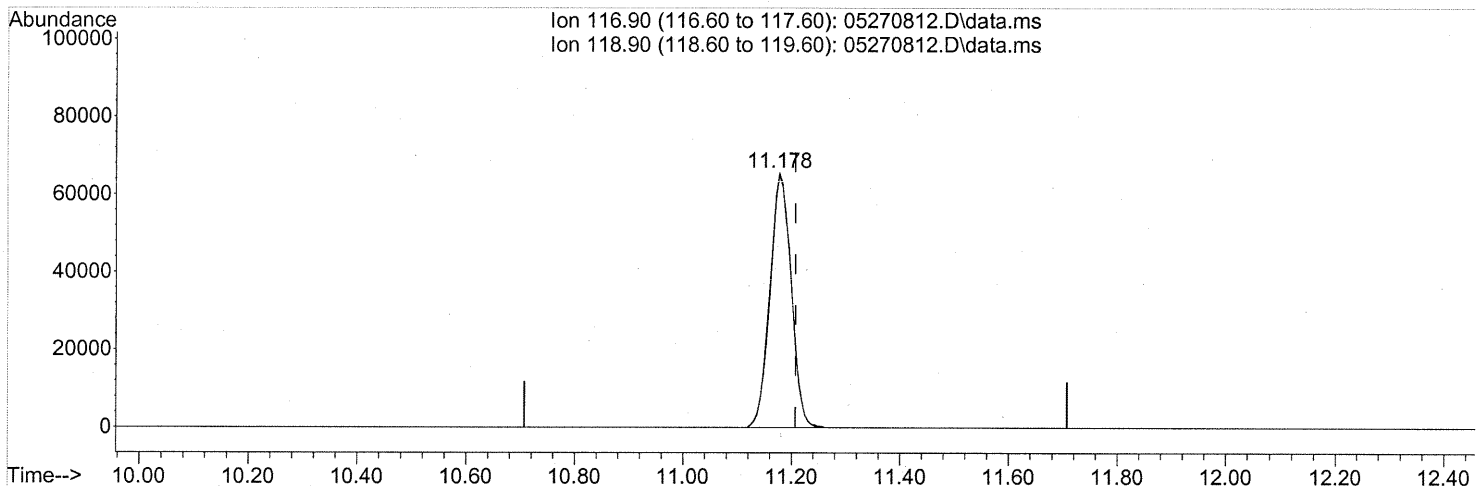
(41) Benzene (T)  
 11.018min (-0.024) 0.19ng  
 response 13085

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	25.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.178min (-0.030) 6.27ng

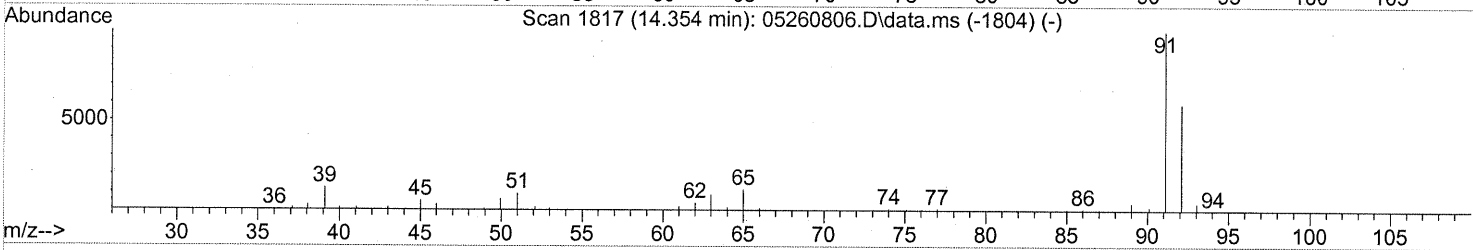
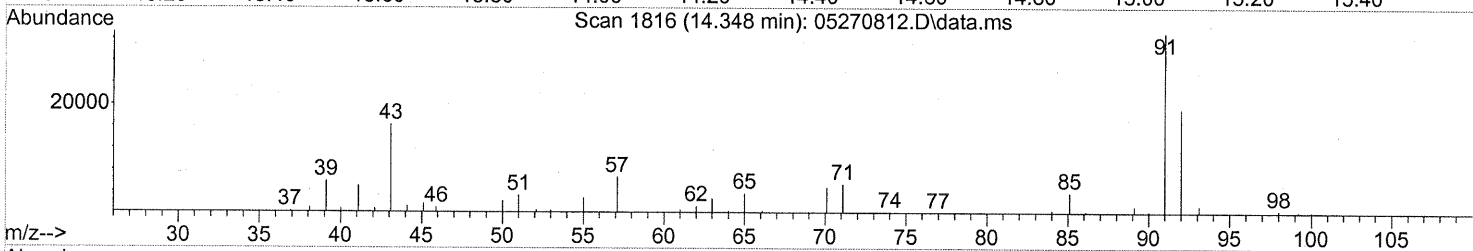
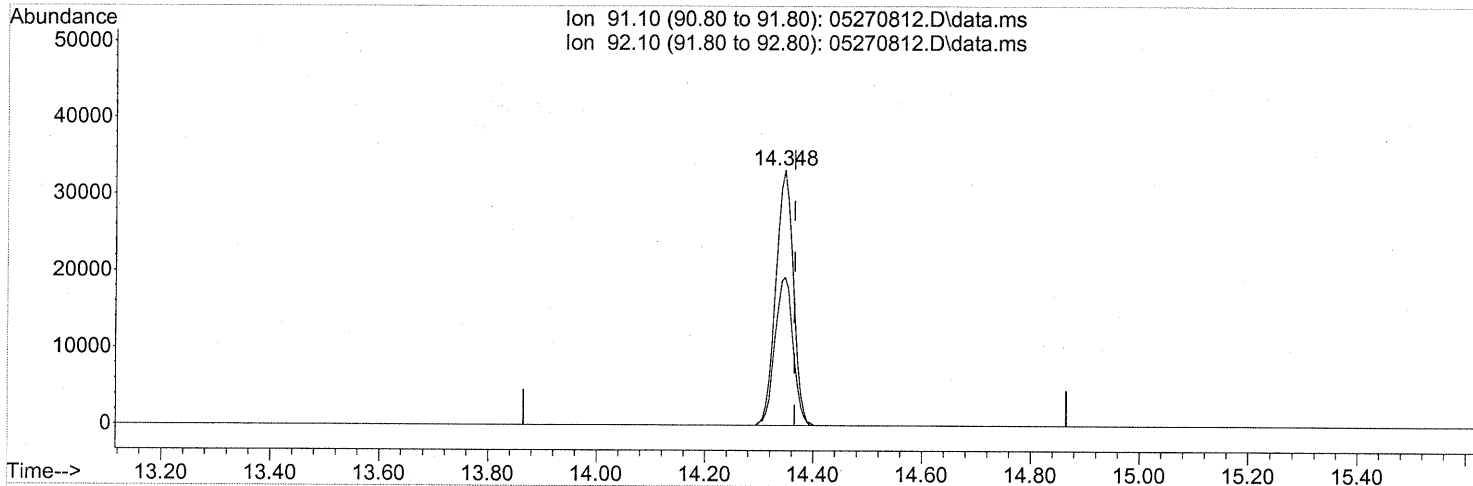
response 178413

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	97.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270812.D  
Acq On : 27 May 2008 19:49  
Operator : WA  
Sample : P0801507-008 (50ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270812.D\data.ms

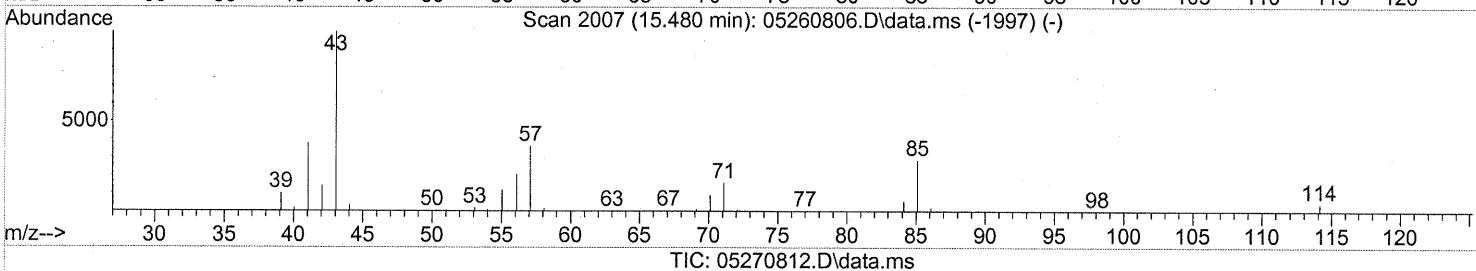
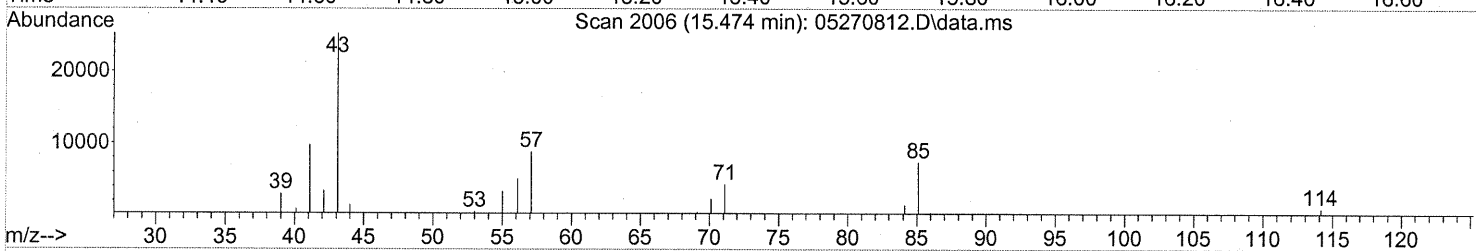
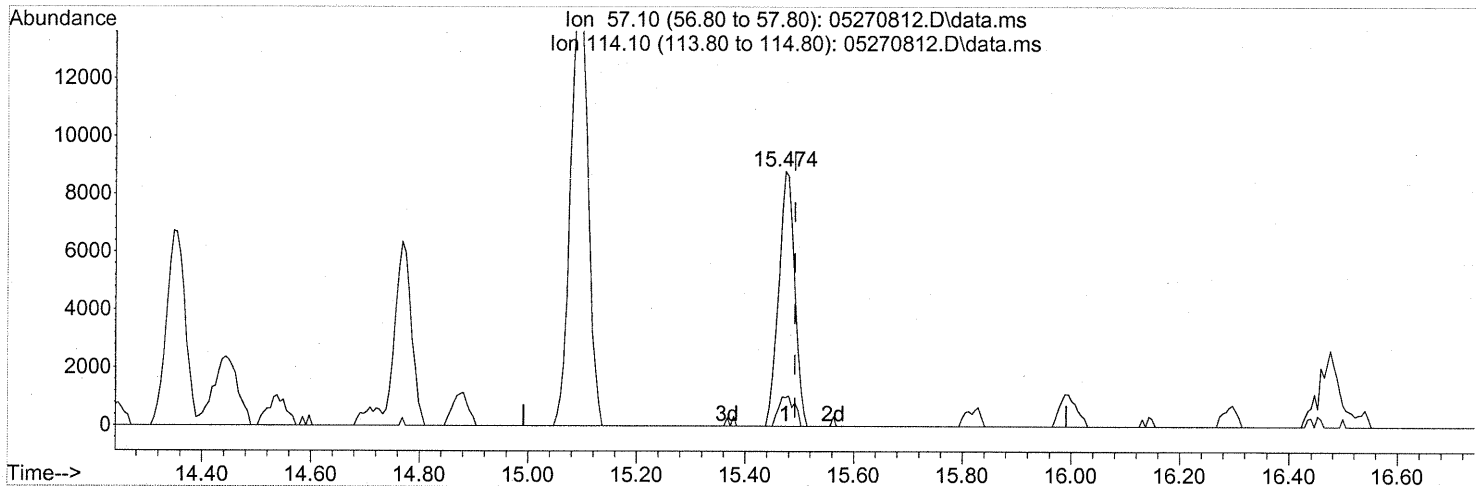
(58) Toluene (T)  
14.348min (-0.018) 0.97ng  
response 74907

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(63) n-Octane (T)

15.474min (-0.018) 0.77ng

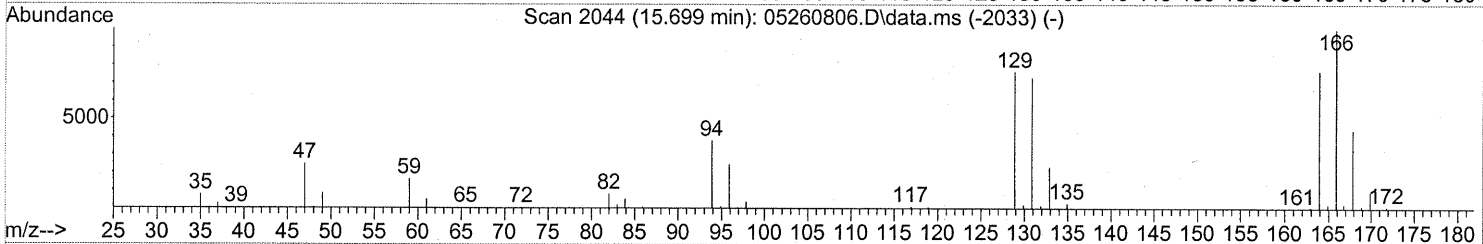
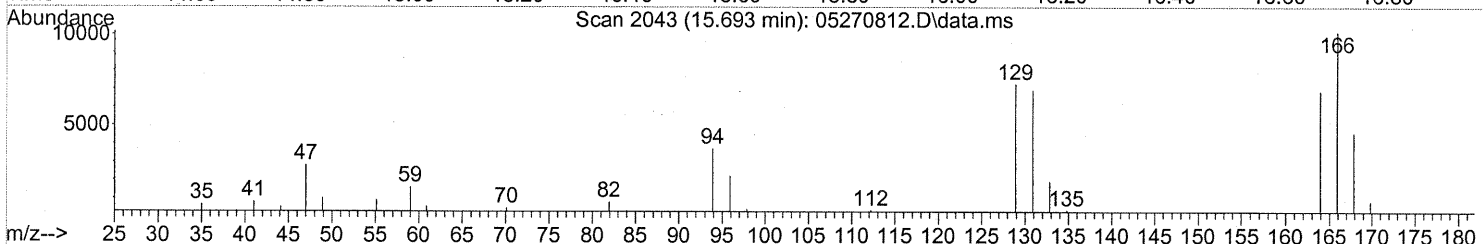
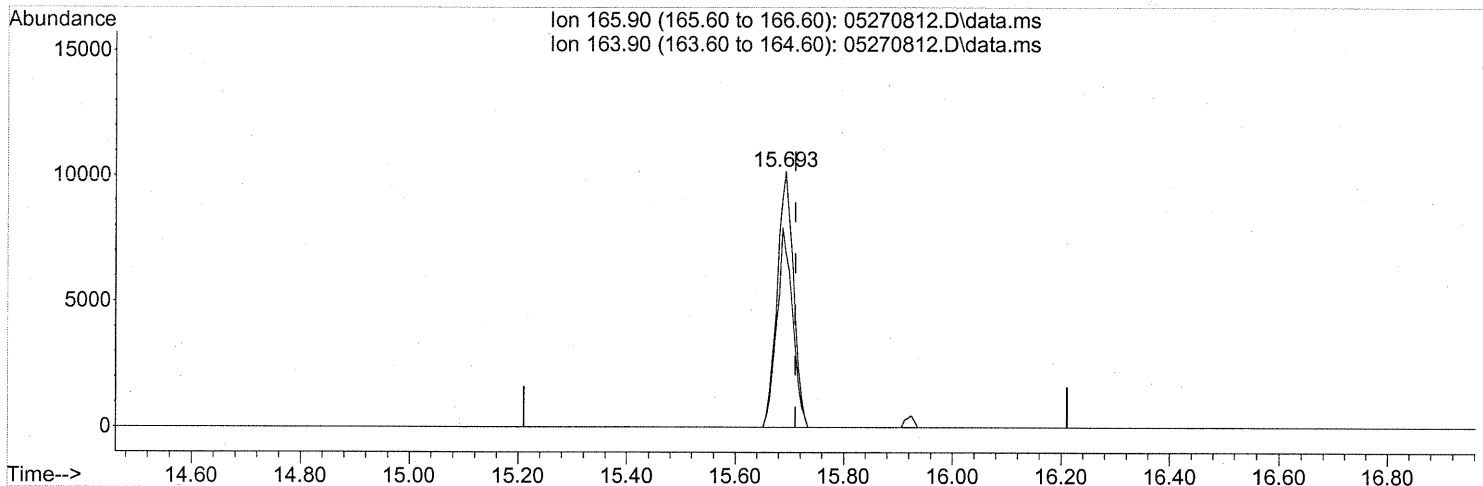
response 18047

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(64) Tetrachloroethene (T)

15.693min (-0.018) 0.92ng

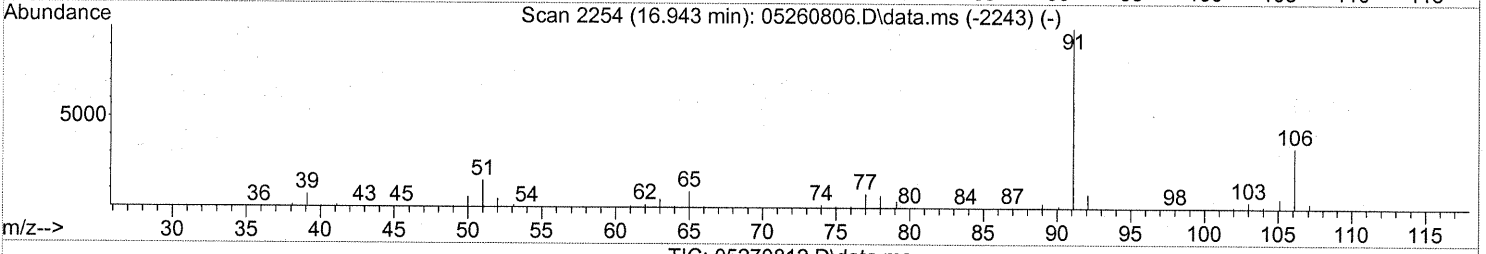
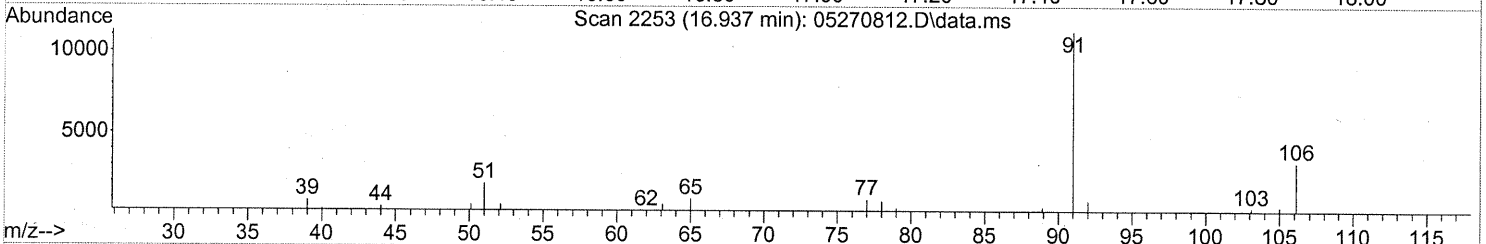
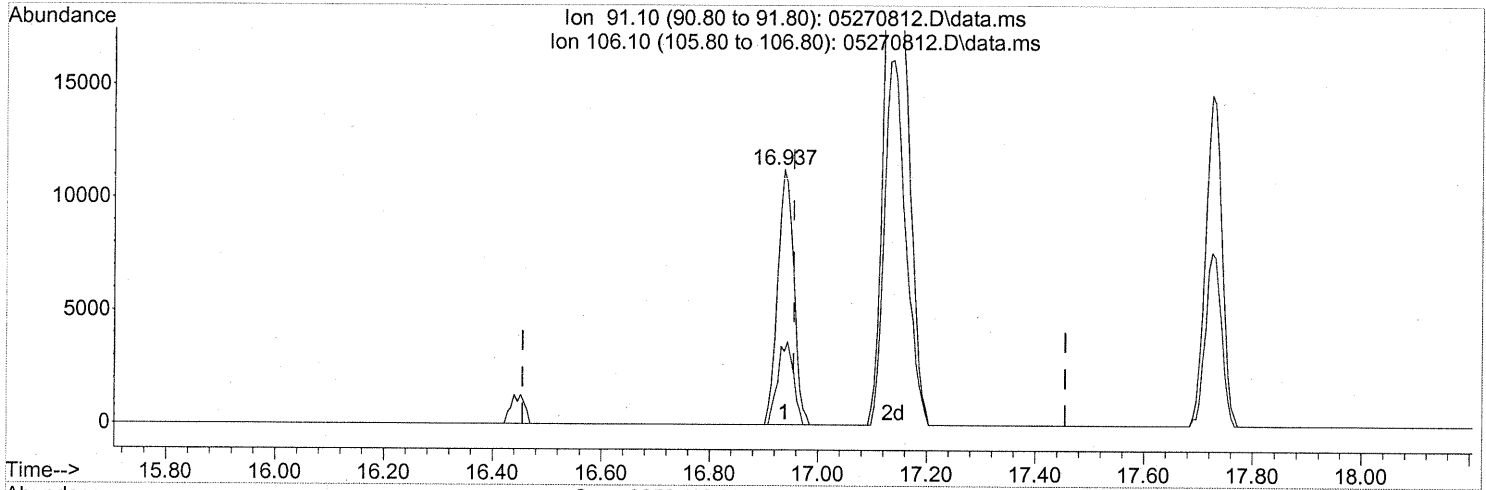
response 21152

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	75.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

16.937min (-0.018) 0.27ng

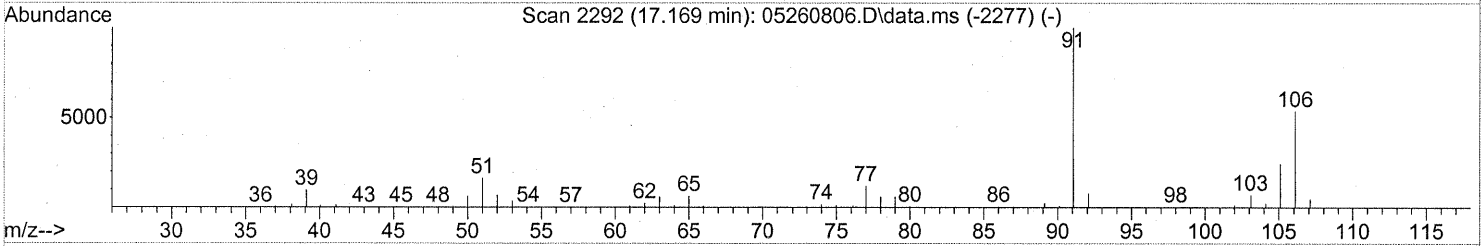
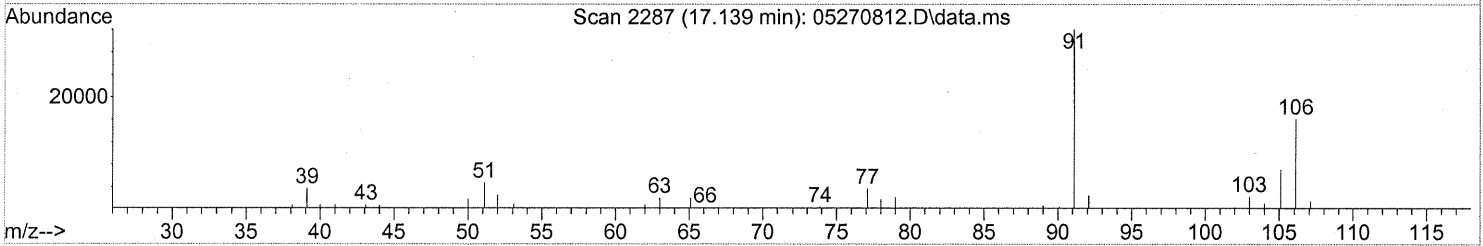
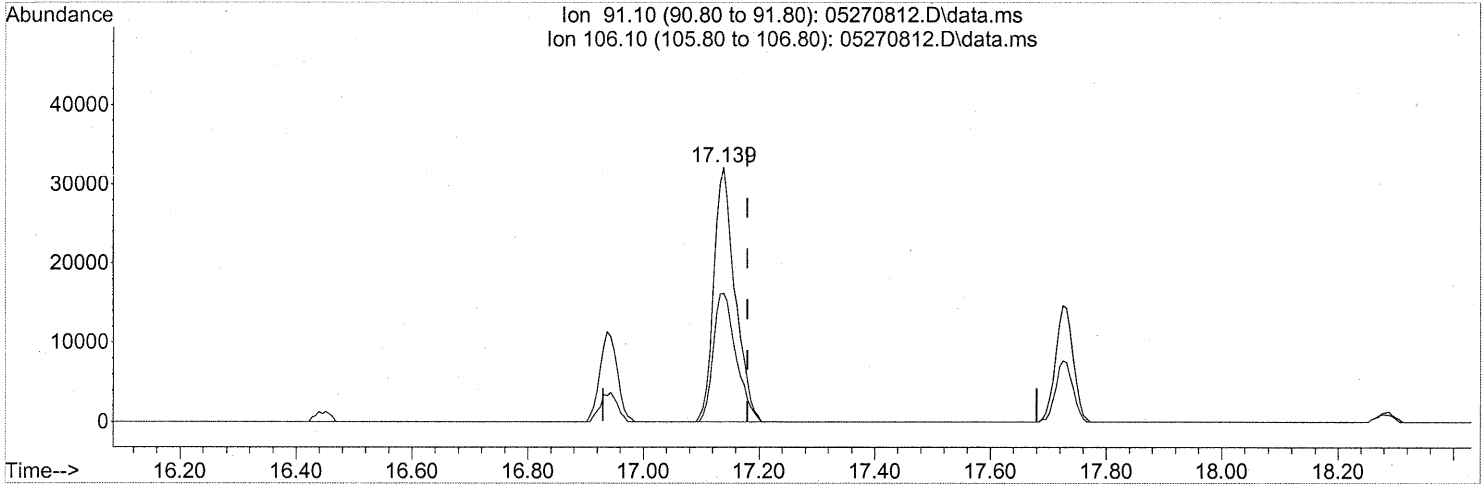
response 23480

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	31.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 1.40ng

response 81558

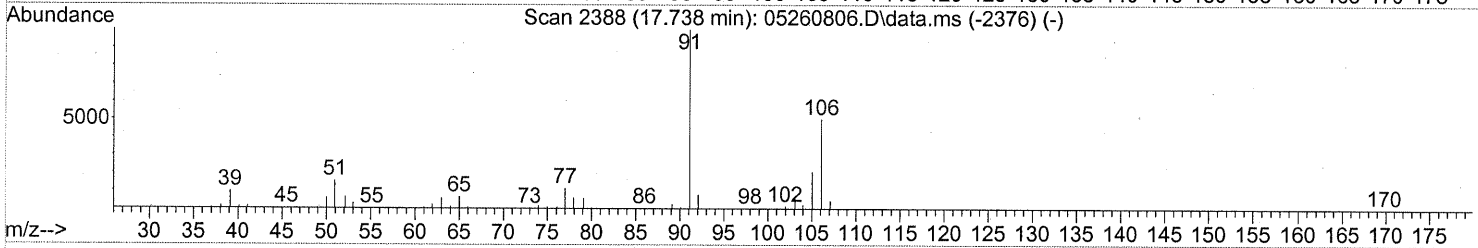
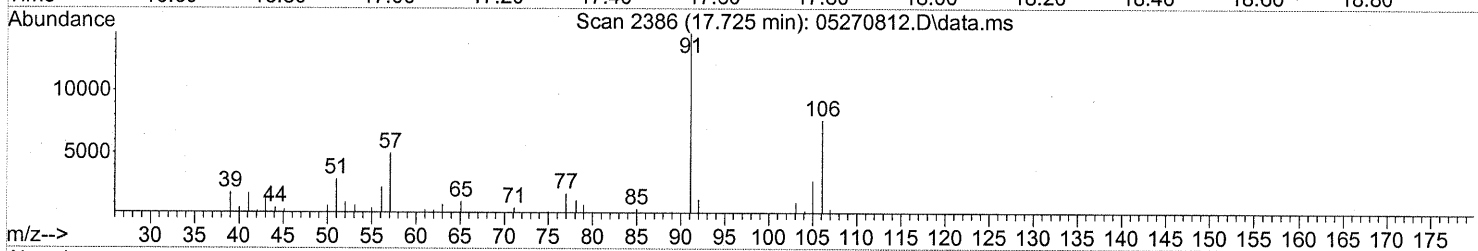
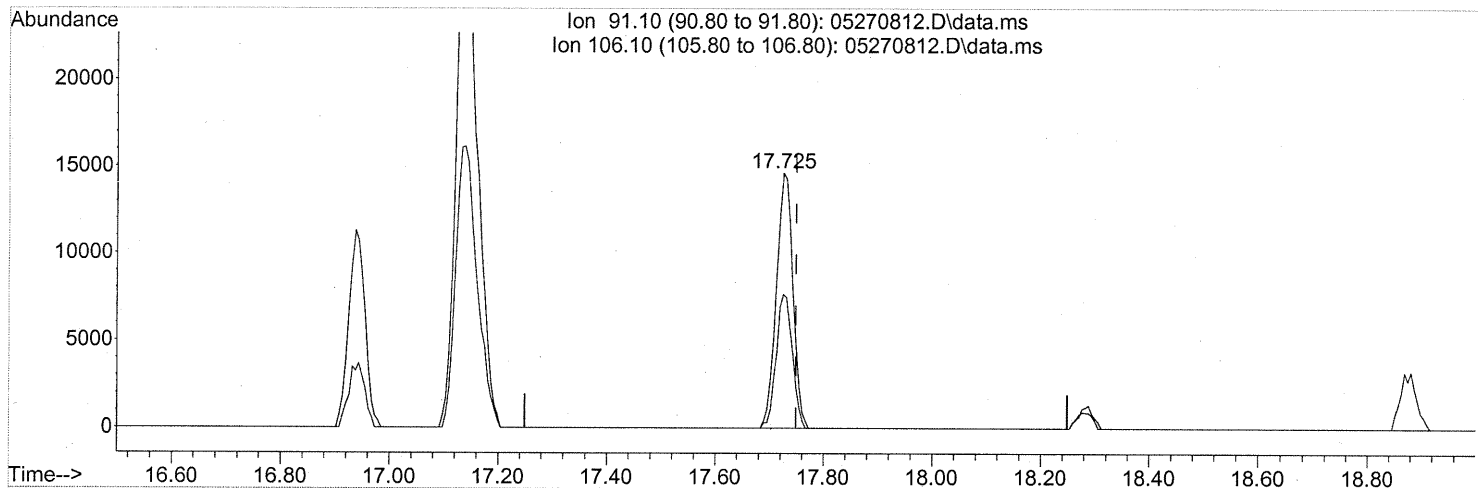
Ion	Exp%	Act%
91.10	100	100
106.10	48.00	54.06
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(70) o-Xylene (T)

17.725min (-0.024) 0.50ng

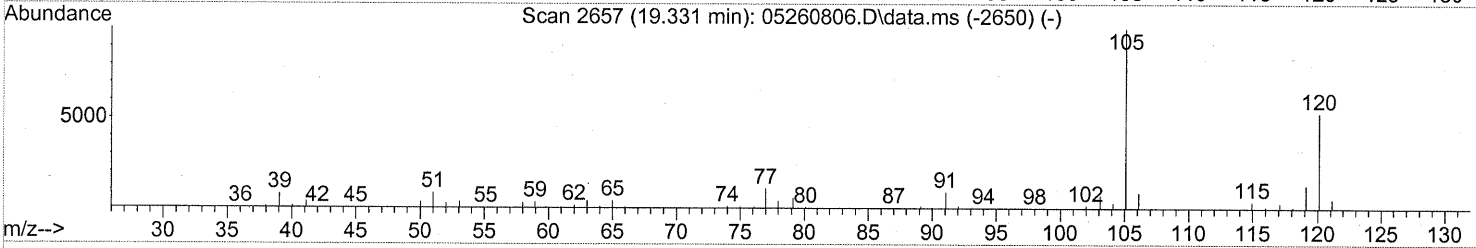
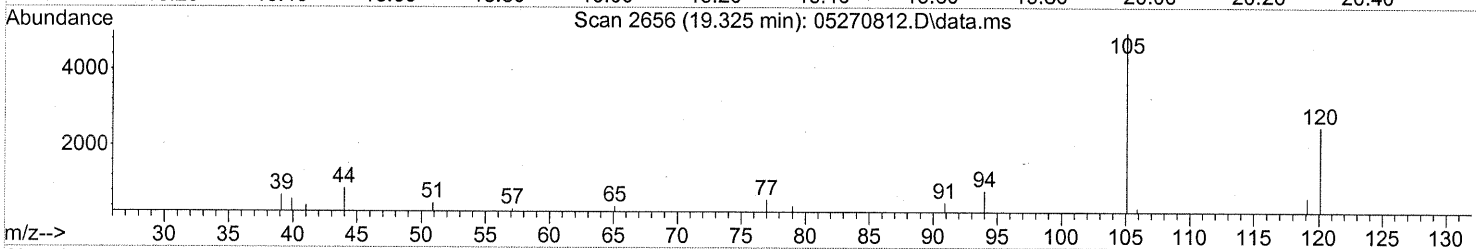
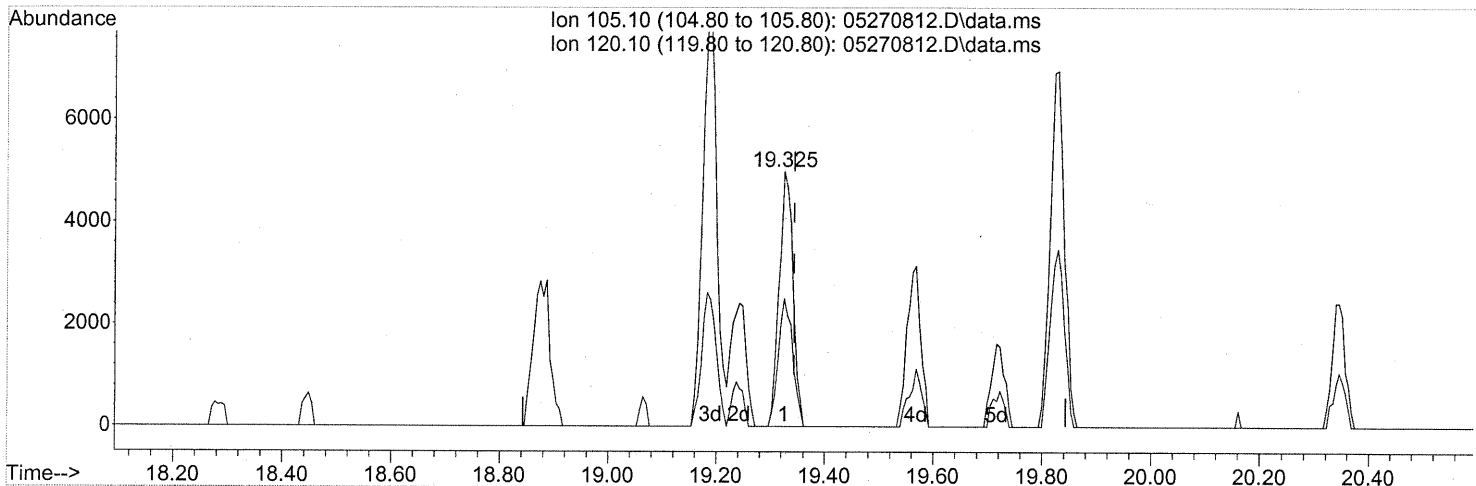
response 31041

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	51.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

19.325min (-0.018) 0.11ng

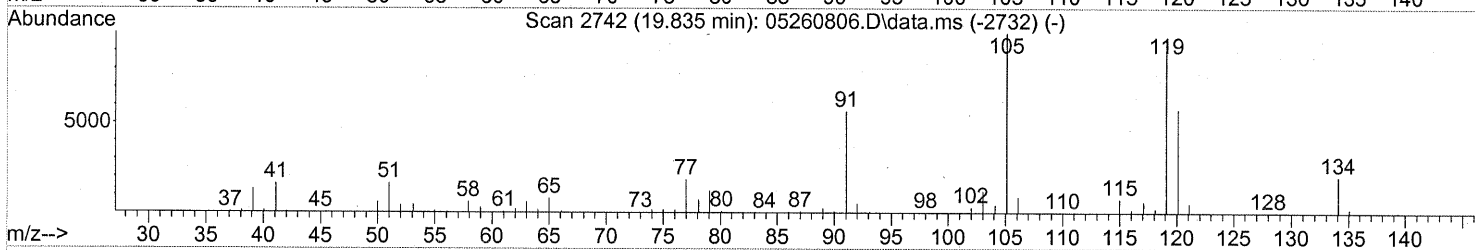
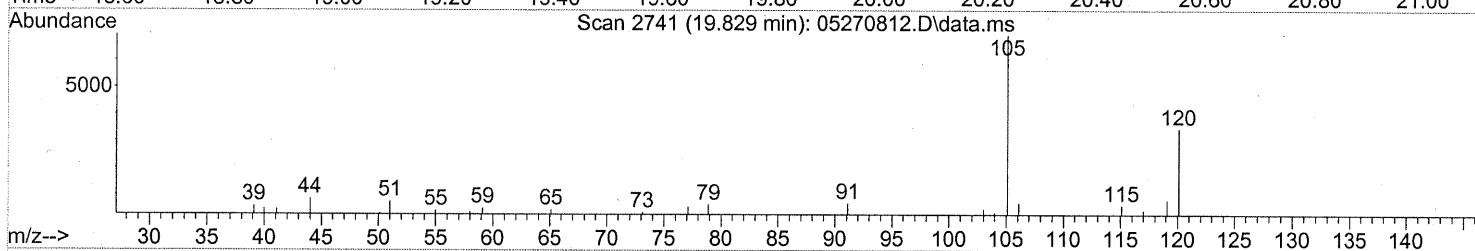
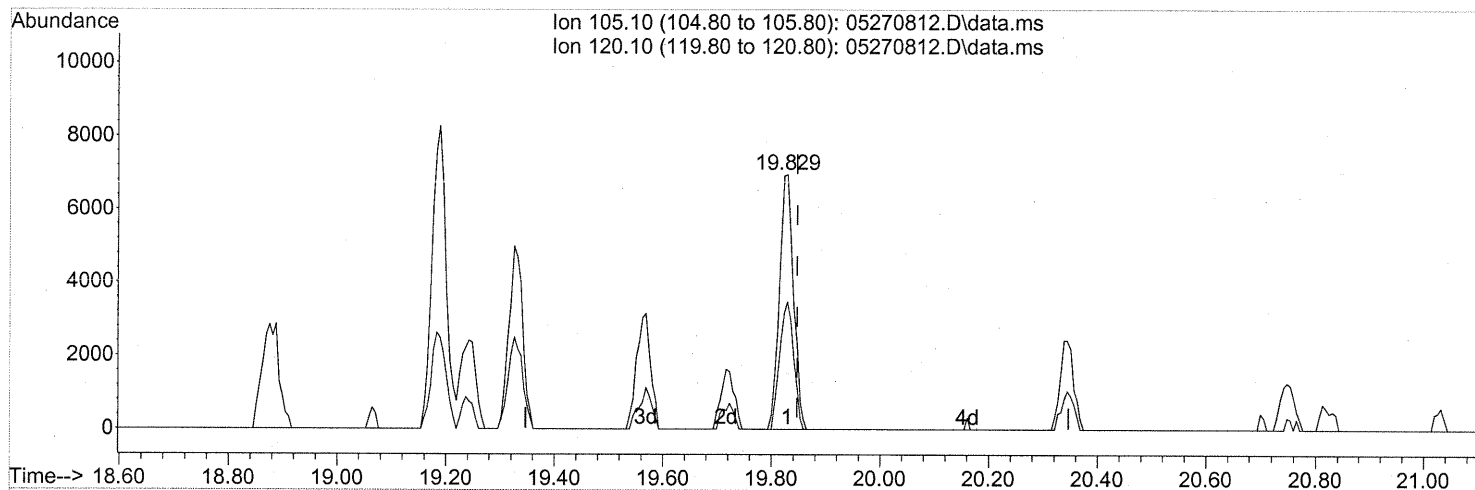
response 8738

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	52.28
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 0.16ng

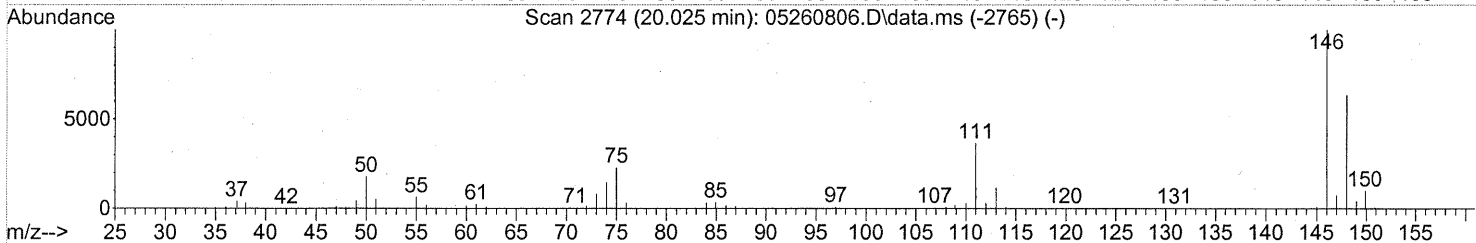
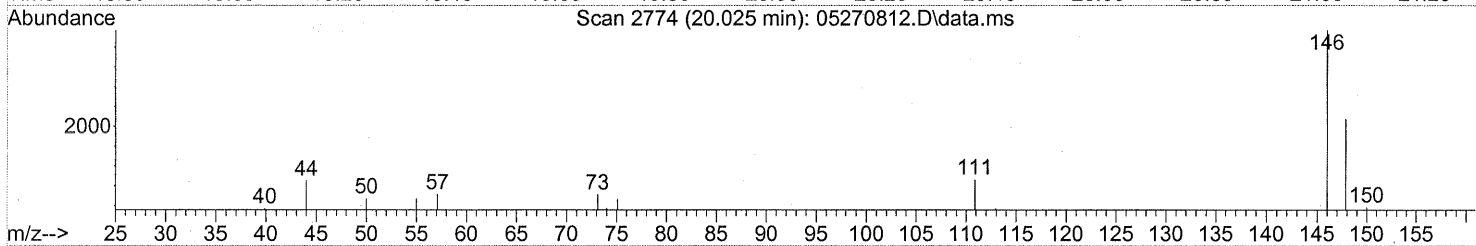
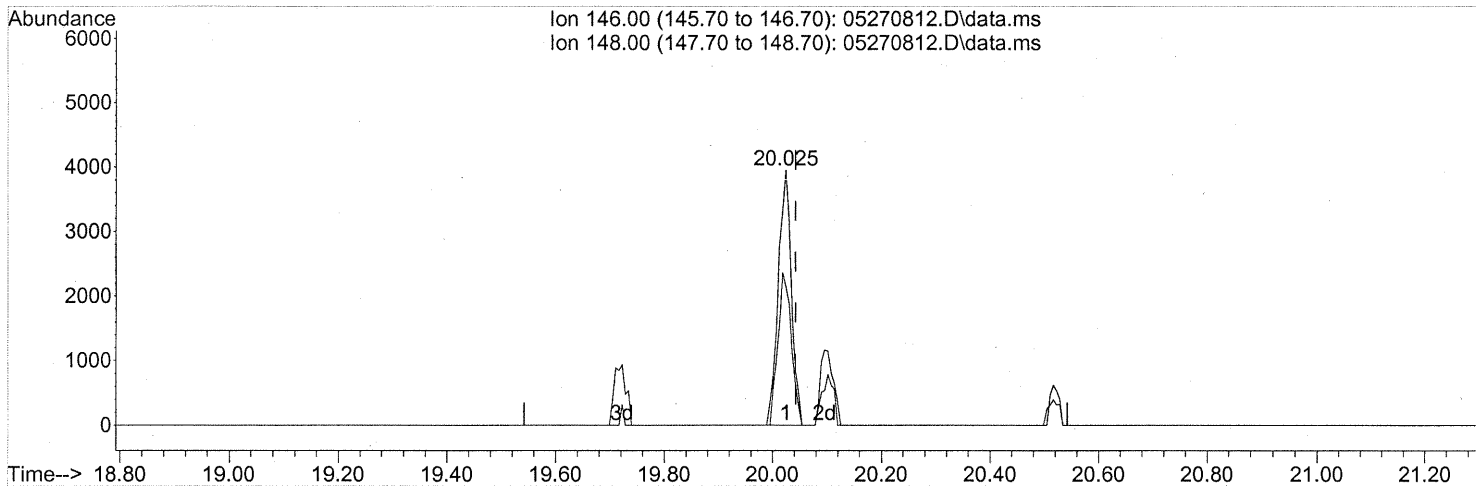
response 12551

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	49.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270812.D\data.ms

(85) 1,3-Dichlorobenzene (T)

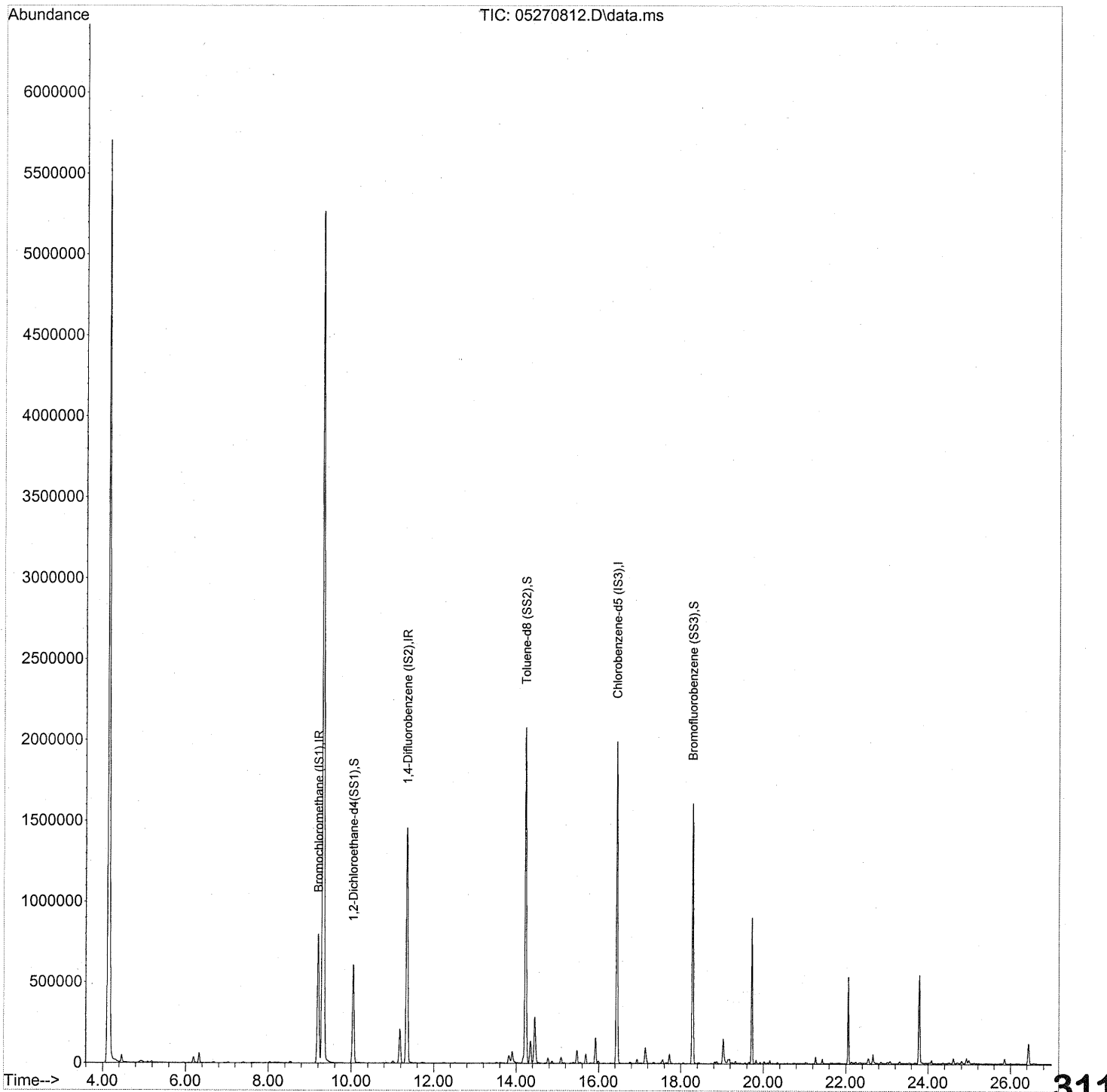
20.025min (-0.018) 0.13ng

response 6649

Ion	Exp%	Act%
146.00	100	100
148.00	63.10	61.09
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270812.D  
Acq On : 27 May 2008 19:49  
Operator : WA  
Sample : P0801507-008 (50ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 14:39:25 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270812.D  
 Acq On : 27 May 2008 19:49  
 Operator : WA  
 Sample : P0801507-008 (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

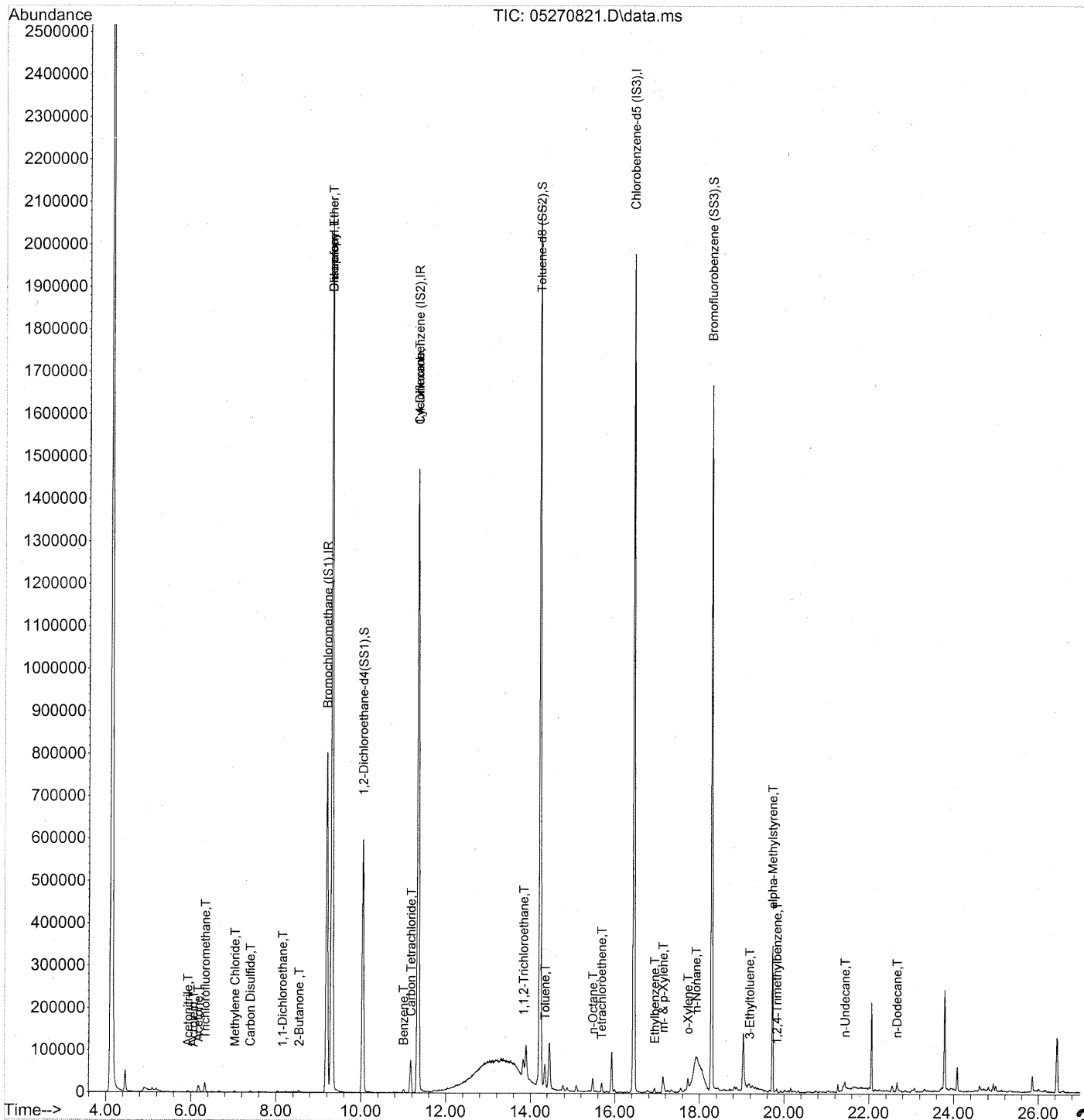
Quant Time: Jun 04 14:39:25 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	9.20	130	400661	25.000	ng	-0.04	
3) 1,4-Difluorobenzene (IS2)	11.35	114	1646575	25.000	ng	-0.03	
4) Chlorobenzene-d5 (IS3)	16.45	82	663053	25.000	ng	-0.01	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.05	65	558707	24.387	ng	-0.05	
Spiked Amount	25.000			Recovery	=	97.56%	
5) Toluene-d8 (SS2)	14.23	98	1667581	24.395	ng	-0.02	
Spiked Amount	25.000			Recovery	=	97.56%	
6) Bromofluorobenzene (SS3)	18.28	174	576728	25.376	ng	-0.01	
Spiked Amount	25.000			Recovery	=	101.52%	
Target Compounds							
7) tert-Butylbenzene	19.82	119	1481	N.D.			Qvalue
8) n-Butylbenzene	20.82	91	899	N.D.			

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

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270821.D  
 Acq On : 28 May 2008 1:39  
 Operator : WA  
 Sample : P0801507-008 Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270821.D  
 Acq On : 28 May 2008 1:39  
 Operator : WA  
 Sample : P0801507-008 Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	402096	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1667992	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	682079	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	557616	24.253	ng	-0.05
Spiked Amount	25.000			Recovery	=	97.00%
57) Toluene-d8 (SS2)	14.22	98	1701849	24.202	ng	-0.02
Spiked Amount	25.000			Recovery	=	96.80%
73) Bromofluorobenzene (SS3)	18.28	174	604876	25.872	ng	-0.01
Spiked Amount	25.000			Recovery	=	103.48%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	1016	N.D.		
3) Dichlorodifluoromethane	4.56	85	736	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	198	N.D.		
11) Acetonitrile	5.93	41	3651	0.060	ng	# 9
12) Acrolein	6.06	56	1075	0.071	ng	81
13) Acetone	6.17	58	8831	0.420	ng	# 67
14) Trichlorofluoromethane	6.33	101	21973	0.623	ng	96
15) Isopropanol	6.39	45	1024	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.03	84	1122	0.069	ng	# 33
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	4242	0.065	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.16	63	2571	0.075	ng	# 52
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.54	72	944	0.086	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	233206	16.118	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.24	57	188	N.D.		

314



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270821.D  
 Acq On : 28 May 2008 1:39  
 Operator : WA  
 Sample : P0801507-008 Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	2127594	89.666 ng		96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.81	56	1209	N.D.		
41) Benzene	11.00	78	8237	0.117 ng		93
42) Carbon Tetrachloride	11.18	117	65945	2.286 ng		99
43) Cyclohexane	11.34	84	1505	0.055 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.13	83	820	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	2021	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.19	58	305	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	13.83	97	1134	0.066 ng	#	49
58) Toluene	14.35	91	29682	0.372 ng		99
59) 2-Hexanone	14.63	43	414	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.32	43	588	N.D.		
63) n-Octane	15.47	57	7011	0.291 ng		89
64) Tetrachloroethene	15.69	166	8244	0.349 ng		98
65) Chlorobenzene	16.50	112	463	N.D.		
66) Ethylbenzene	16.94	91	9315	0.103 ng		91
67) m- & p-Xylene	17.14	91	32500	0.541 ng		91
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	453	N.D.		
70) o-Xylene	17.73	91	12691	0.197 ng		91
71) n-Nonane	17.92	43	290450	4.578 ng	#	18
72) 1,1,2,2-Tetrachloroethane	17.72	83	221	N.D.		
74) Cumene	18.46	105	479	N.D.		
75) alpha-Pinene	18.94	93	108	N.D.		
76) n-Propylbenzene	19.07	91	2125	N.D.		
77) 3-Ethyltoluene	19.18	105	6166	0.060 ng		94
78) 4-Ethyltoluene	19.24	105	2076	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	3360	N.D.		

315

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270821.D  
 Acq On : 28 May 2008 1:39  
 Operator : WA  
 Sample : P0801507-008 Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

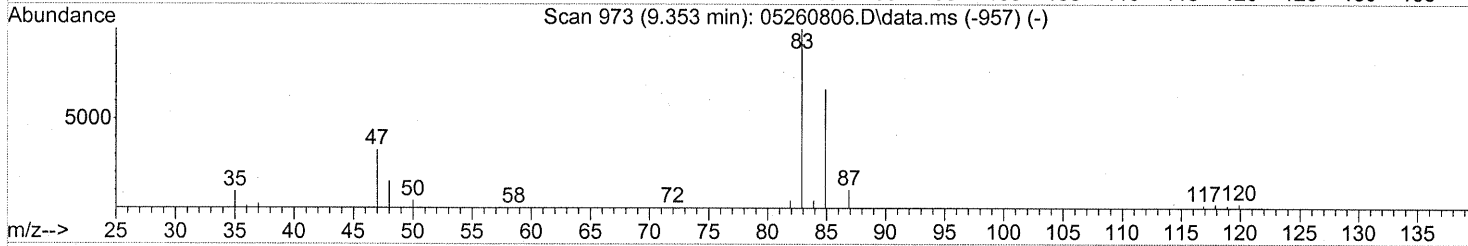
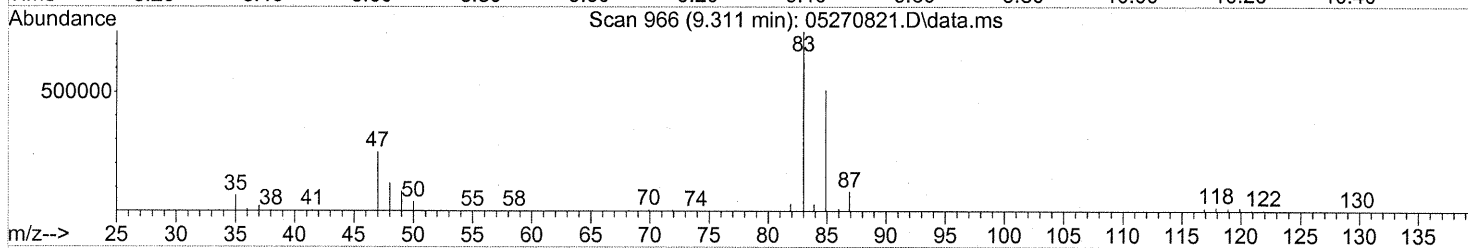
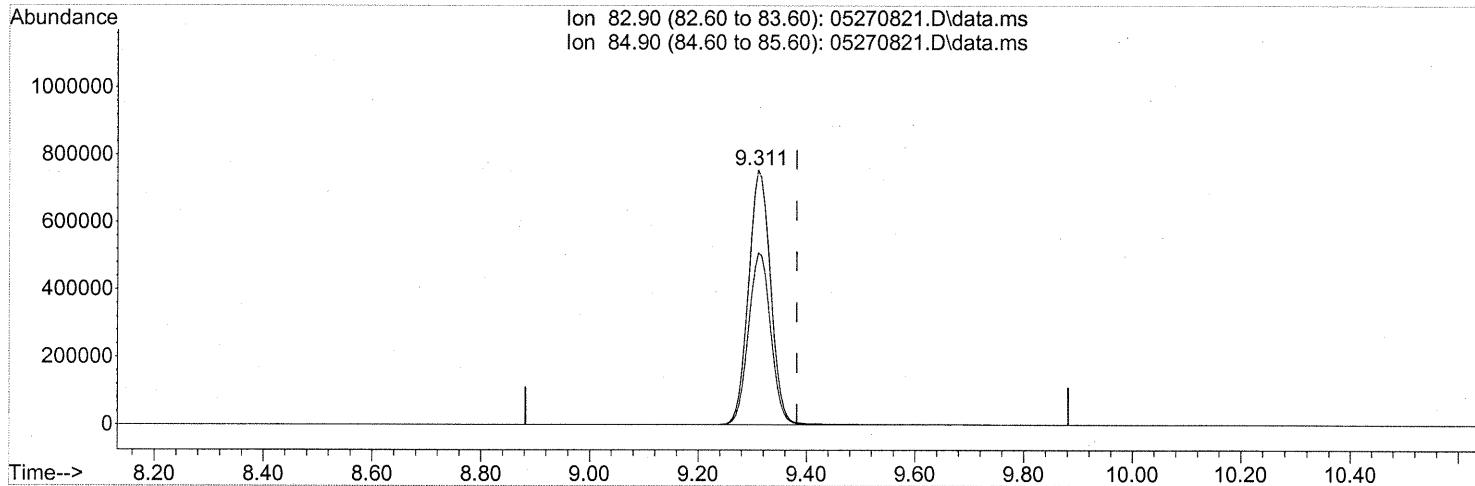
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	3192	0.069	ng	# 32
81) 2-Ethyltoluene	19.56	105	2581	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	5702	0.069	ng	86
83) n-Decane	19.93	57	2844	N.D.		
84) Benzyl Chloride	20.02	91	95	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	2086	N.D.		
86) 1,4-Dichlorobenzene	20.09	146	800	N.D.		
87) sec-Butylbenzene	20.15	105	361	N.D.		
88) p-Isopropyltoluene	20.33	119	525	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	2032	N.D.		
90) 1,2-Dichlorobenzene	20.51	146	91	N.D.		
91) d-Limonene	20.52	68	114	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	4704	0.076	ng	89
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	2920	N.D.		
96) n-Dodecane	22.66	57	13439	0.223	ng	78
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270821.D  
 Acq On : 28 May 2008 1:39  
 Operator : WA  
 Sample : P0801507-008 Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270821.D\data.ms

(32) Chloroform (T)  
 9.311min (-0.071) 89.67ng  
 response 2127594

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.94
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00978

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	5.6	0.56	0.44	1.1	0.11	J
74-87-3	Chloromethane	ND	1.1	0.56	ND	0.54	0.27	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	5.6	0.56	ND	0.80	0.080	
75-01-4	Vinyl Chloride	ND	1.1	0.56	ND	0.44	0.22	
74-83-9	Bromomethane	ND	1.1	0.56	ND	0.29	0.14	
75-00-3	Chloroethane	ND	1.1	0.56	ND	0.42	0.21	
64-17-5	Ethanol	1.4	56	0.56	0.72	30	0.30	J
67-64-1	Acetone	13	56	0.81	5.6	23	0.34	J, B
75-69-4	Trichlorofluoromethane	57	1.1	0.56	10	0.20	0.099	
107-13-1	Acrylonitrile	ND	5.6	0.78	ND	2.6	0.36	
75-35-4	1,1-Dichloroethene	0.87	1.1	0.56	0.22	0.28	0.14	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	5.6	0.82	ND	1.8	0.27	
75-09-2	Methylene Chloride	3.0	5.6	0.56	0.86	1.6	0.16	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	1.1	0.56	ND	0.36	0.18	
76-13-1	Trichlorotrifluoroethane	ND	1.1	0.62	ND	0.15	0.081	
75-15-0	Carbon Disulfide	3.5	5.6	1.3	1.1	1.8	0.43	J
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.56	ND	0.28	0.14	
75-34-3	1,1-Dichloroethane	7.5	1.1	0.56	1.9	0.28	0.14	
1634-04-4	Methyl tert-Butyl Ether	ND	1.1	0.56	ND	0.31	0.15	
108-05-4	Vinyl Acetate	ND	56	1.8	ND	16	0.51	
78-93-3	2-Butanone (MEK)	4.5	5.6	0.56	1.5	1.9	0.19	J
156-59-2	cis-1,2-Dichloroethene	ND	1.1	0.56	ND	0.28	0.14	
108-20-3	Diisopropyl Ether	ND	5.6	0.66	ND	1.3	0.16	
67-66-3	Chloroform	7,700	1.1	0.66	1,600	0.23	0.13	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:     Cet          Date:     6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00978

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	5.6	0.57	ND	1.3	0.14	
107-06-2	<b>1,2-Dichloroethane</b>	<b>1.0</b>	1.1	0.56	<b>0.25</b>	0.28	0.14	<b>J</b>
71-55-6	1,1,1-Trichloroethane	ND	1.1	0.56	ND	0.20	0.10	
71-43-2	<b>Benzene</b>	<b>4.8</b>	1.1	0.56	<b>1.5</b>	0.35	0.17	
56-23-5	<b>Carbon Tetrachloride</b>	<b>220</b>	1.1	0.56	<b>35</b>	0.18	0.089	
994-05-8	tert-Amyl Methyl Ether	ND	5.6	0.56	ND	1.3	0.13	
78-87-5	1,2-Dichloropropane	ND	1.1	0.56	ND	0.24	0.12	
75-27-4	<b>Bromodichloromethane</b>	<b>2.1</b>	1.1	0.56	<b>0.32</b>	0.17	0.083	
79-01-6	<b>Trichloroethene</b>	<b>0.98</b>	1.1	0.56	<b>0.18</b>	0.21	0.10	<b>J</b>
123-91-1	1,4-Dioxane	ND	5.6	0.68	ND	1.5	0.19	
80-62-6	Methyl Methacrylate	ND	5.6	0.84	ND	1.4	0.20	
142-82-5	<b>n-Heptane</b>	<b>1.1</b>	5.6	0.71	<b>0.27</b>	1.4	0.17	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	5.6	0.58	ND	1.2	0.13	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.9</b>	5.6	0.62	<b>0.46</b>	1.4	0.15	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	5.6	0.70	ND	1.2	0.15	
79-00-5	1,1,2-Trichloroethane	ND	1.1	0.56	ND	0.20	0.10	
108-88-3	<b>Toluene</b>	<b>35</b>	5.6	0.56	<b>9.2</b>	1.5	0.15	
591-78-6	<b>2-Hexanone</b>	<b>1.0</b>	5.6	0.85	<b>0.24</b>	1.4	0.21	<b>J</b>
124-48-1	Dibromochloromethane	ND	1.1	0.76	ND	0.13	0.089	
106-93-4	1,2-Dibromoethane	ND	1.1	0.60	ND	0.14	0.078	
111-65-9	<b>n-Octane</b>	<b>27</b>	5.6	0.56	<b>5.9</b>	1.2	0.12	
127-18-4	<b>Tetrachloroethene</b>	<b>30</b>	1.1	0.56	<b>4.4</b>	0.16	0.082	
108-90-7	<b>Chlorobenzene</b>	<b>0.81</b>	1.1	0.57	<b>0.18</b>	0.24	0.12	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-009

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00978

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.15 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	11	5.6	0.69	2.4	1.3	0.16	
179601-23-1	m,p-Xylenes	56	5.6	1.4	13	1.3	0.33	
75-25-2	Bromoform	ND	5.6	0.85	ND	0.54	0.082	
100-42-5	Styrene	ND	5.6	0.85	ND	1.3	0.20	
95-47-6	o-Xylene	20	5.6	0.70	4.6	1.3	0.16	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.1	0.71	ND	0.16	0.10	
98-82-8	Cumene	ND	5.6	0.62	ND	1.1	0.13	
103-65-1	n-Propylbenzene	1.2	5.6	0.58	0.25	1.1	0.12	J
622-96-8	4-Ethyltoluene	2.4	5.6	0.63	0.49	1.1	0.13	J
108-67-8	1,3,5-Trimethylbenzene	4.7	5.6	0.67	0.96	1.1	0.14	J
98-83-9	alpha-Methylstyrene	ND	5.6	0.81	ND	1.2	0.17	
95-63-6	1,2,4-Trimethylbenzene	8.0	5.6	0.77	1.6	1.1	0.16	
100-44-7	Benzyl Chloride	ND	1.1	0.96	ND	0.22	0.19	
541-73-1	1,3-Dichlorobenzene	4.3	1.1	0.69	0.72	0.19	0.11	
106-46-7	1,4-Dichlorobenzene	0.97	1.1	0.62	0.16	0.19	0.10	J
135-98-8	sec-Butylbenzene	ND	5.6	0.65	ND	1.0	0.12	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	5.6	0.72	ND	1.0	0.13	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.73	ND	0.19	0.12	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.6	0.85	ND	0.58	0.088	
120-82-1	1,2,4-Trichlorobenzene	ND	1.1	0.85	ND	0.15	0.11	
91-20-3	Naphthalene	1.2	2.2	0.82	0.22	0.42	0.16	J
87-68-3	Hexachlorobutadiene	ND	1.1	1.0	ND	0.10	0.094	
98-06-6	tert-Butylbenzene	ND	2.2	0.56	ND	0.41	0.10	
104-51-8	n-Butylbenzene	ND	2.2	0.56	ND	0.41	0.10	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

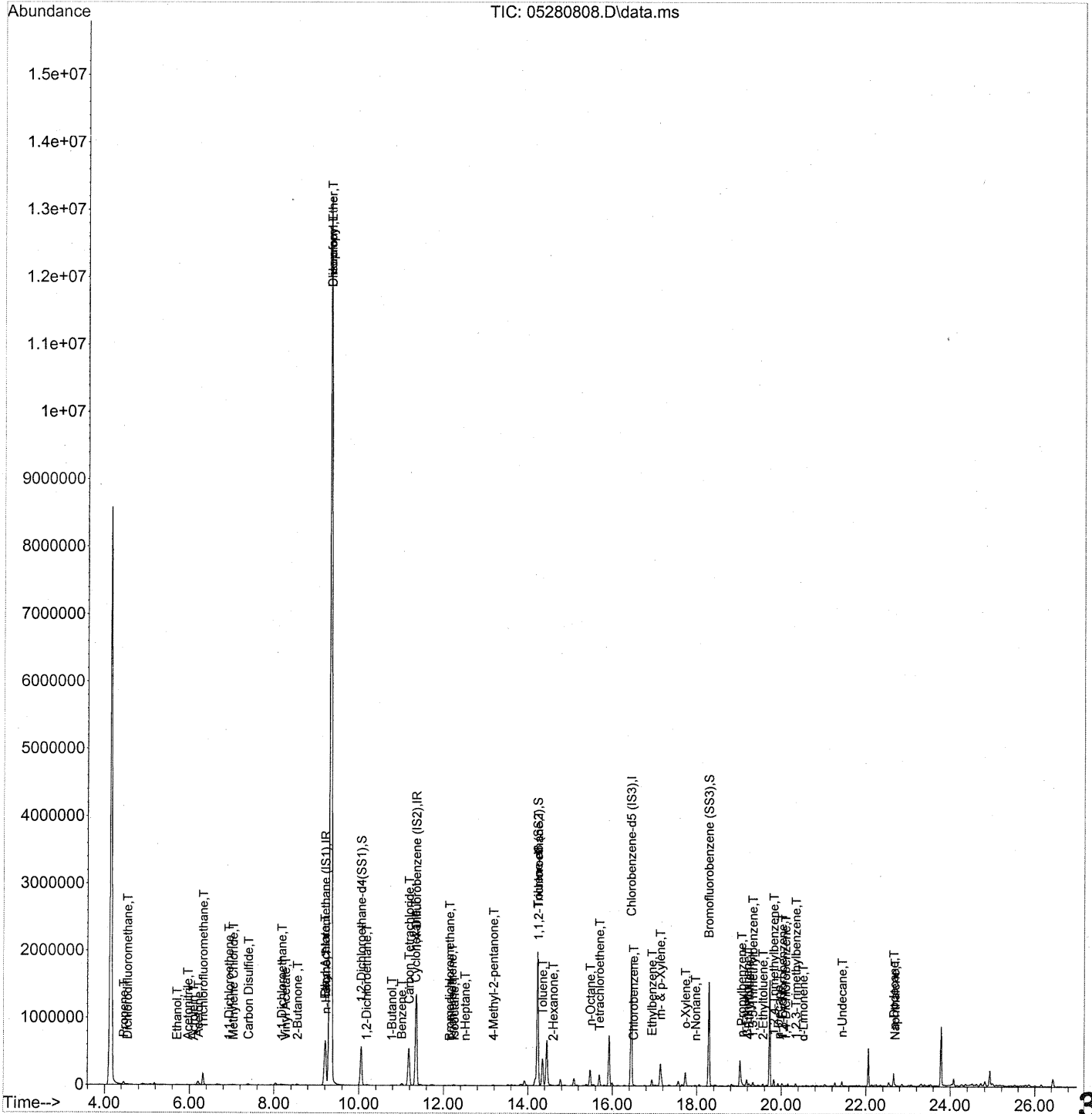
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/15/08

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280808.D  
Acq On : 28 May 2008 13:58  
Operator : WA  
Sample : P0801507-009 (150ml)  
Misc : ENSR SG56B-05D (-3.8, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
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Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.21	130	369769	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.36	114	1533976	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	624528	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	10.06	65	527427	24.945	ng	-0.04	99.80%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.23	98	1559731	24.225	ng	-0.02	96.88%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.28	174	556292	25.986	ng	-0.01	103.96%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	3710	0.130	ng	# 78
3) Dichlorodifluoromethane	4.54	85	6811	0.197	ng	# 95
4) Chloromethane	4.75	50	218	N.D.		✓
5) Freon 114	0.00	135	0	N.D.		✓
6) Vinyl Chloride	0.00	62	0	N.D.		✓
7) 1,3-Butadiene	0.00	54	0	N.D.		✓
8) Bromomethane	0.00	94	0	N.D.		✓
9) Chloroethane	0.00	64	0	N.D.		✓
10) Ethanol	5.71	45	2360	0.122	ng	77
11) Acetonitrile	5.96	41	4828	0.086	ng	# 32
12) Acrolein	6.09	56	1471	0.105	ng	79
13) Acetone	6.21	58	23063	1.194	ng	# 85
14) Trichlorofluoromethane	6.32	101	166712	5.144	ng	99
15) Isopropanol	6.45	45	292	N.D.		
16) Acrylonitrile	6.64	53	208	N.D.		✓
17) 1,1-Dichloroethene	6.93	96	1176	0.078	ng	# 81
18) tert-Butanol	7.02	59	97	N.D.		✓
19) Methylene Chloride	7.03	84	3975	0.267	ng	# 43
20) Allyl Chloride	7.10	41	91	N.D.		✓
21) Trichlorotrifluoroethane	7.28	151	636	N.D.		✓
22) Carbon Disulfide	7.40	76	18681	0.312	ng	99
23) trans-1,2-Dichloroethene	8.04	61	1076	N.D.		✓
24) 1,1-Dichloroethane	8.18	63	21450	0.678	ng	95
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		✓
26) Vinyl Acetate	8.27	86	222	0.070	ng	NR# 1
27) 2-Butanone	8.55	72	4040	0.400	ng	# 1
28) cis-1,2-Dichloroethene	9.20	61	1025	N.D.		✓
29) Diisopropyl Ether	9.33	87	1684284	126.582	ng	NR# 1
30) Ethyl Acetate	9.20	61	1025	0.145	ng	93
31) n-Hexane	9.23	57	2729	0.065	ng	# 65

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Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.33	83	15796386	<del>723.931</del> ng	<i>see dil</i>	96
34) Tetrahydrofuran	9.80	72	205	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.18	62	2268	0.091 ng	#	42
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.78	56	3908	0.155 ng	#	57
41) Benzene	11.01	78	27839	0.430 ng		98
42) Carbon Tetrachloride	11.18	117	519167	19.571 ng		99
43) Cyclohexane	11.34	84	5210	0.206 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.14	83	3638	0.191 ng		100
47) Trichloroethene	12.20	130	1774	0.088 ng		94
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.26	57	10229	0.099 ng		78
50) Methyl Methacrylate	0.00	100	0	N.D. ✓		
51) n-Heptane	12.51	71	1509	0.098 ng	#	40
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.18	58	3808	0.169 ng		81
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	132348	8.413 ng	<i>MR#</i>	7
58) Toluene	14.35	91	228357	3.127 ng		98
59) 2-Hexanone	14.60	43	6241	0.090 ng	#	69
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.31	43	1018	N.D.		
63) n-Octane	15.48	57	54219	2.455 ng		95
64) Tetrachloroethene	15.69	166	57989	2.684 ng		97
65) Chlorobenzene	16.50	112	3807	0.073 ng		84
66) Ethylbenzene	16.94	91	78384	0.944 ng		94
67) m- & p-Xylene	17.14	91	275410	5.007 ng		91
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	17.59	104	1415	N.D. ✓		
70) o-Xylene	17.73	91	105393	1.790 ng		92
71) n-Nonane	17.97	43	7858	0.135 ng		78
72) 1,1,2,2-Tetrachloroethane	17.64	83	97	N.D. ✓		
74) Cumene	18.45	105	3088	N.D. ✓		
75) alpha-Pinene	18.93	93	1671	N.D.		
76) n-Propylbenzene	19.06	91	10819	0.109 ng	#	79
77) 3-Ethyltoluene	19.19	105	59179	0.629 ng		95
78) 4-Ethyltoluene	19.24	105	18518	0.218 ng		91
79) 1,3,5-Trimethylbenzene	19.33	105	31772	0.422 ng		90

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 Operator : WA  
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 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

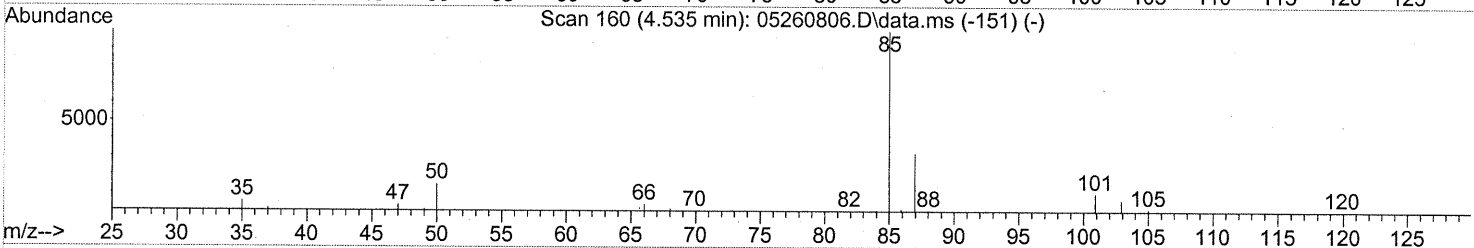
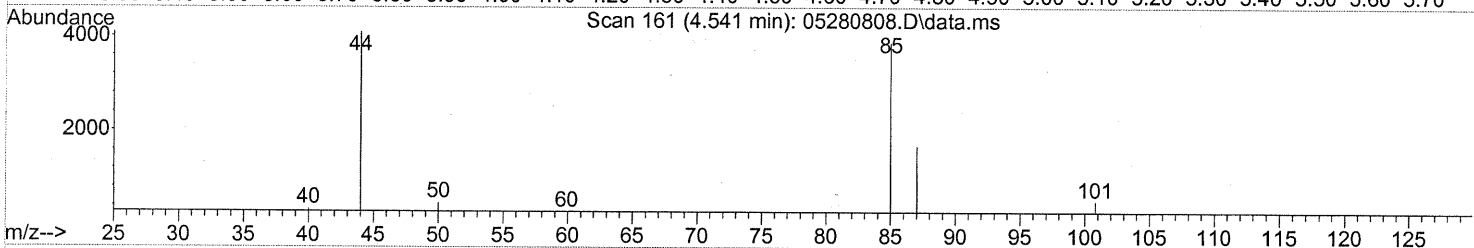
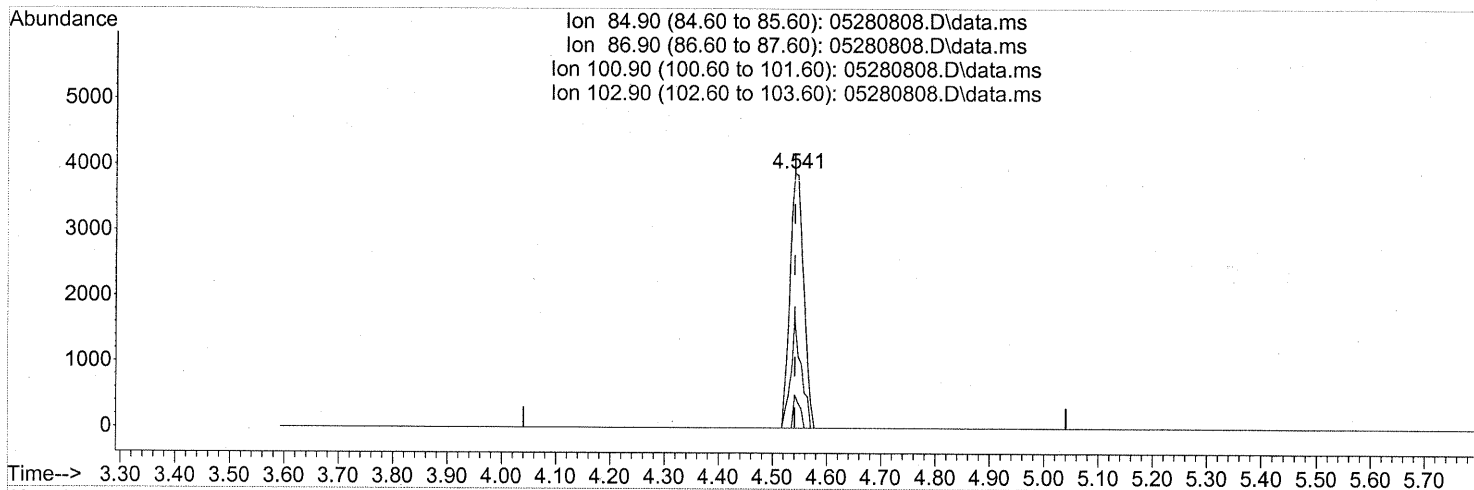
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	98	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	22344	0.245 ng		90
82) 1,2,4-Trimethylbenzene	19.82	105	54534	0.716 ng		98
83) n-Decane	19.93	57	16505	0.306 ng		87
84) Benzyl Chloride	20.10	91	95	N.D.	✓	
85) 1,3-Dichlorobenzene	20.02	146	18737	0.388 ng		98
86) 1,4-Dichlorobenzene	20.10	146	4076	0.087 ng		99
87) sec-Butylbenzene	20.15	105	619	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	3552	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	16592	0.227 ng		95
90) 1,2-Dichlorobenzene	20.51	146	2076	N.D.	✓	
91) d-Limonene	20.52	68	1385	0.059 ng		87
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.43	57	31521	0.558 ng		80
94) 1,2,4-Trichlorobenzene	22.55	184	192	N.D.	✓	
95) Naphthalene	22.69	128	11625	0.105 ng		94
96) n-Dodecane	22.66	57	67233	1.221 ng		80
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
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Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(3) Dichlorodifluoromethane (T)

4.541min (-0.000) 0.20ng

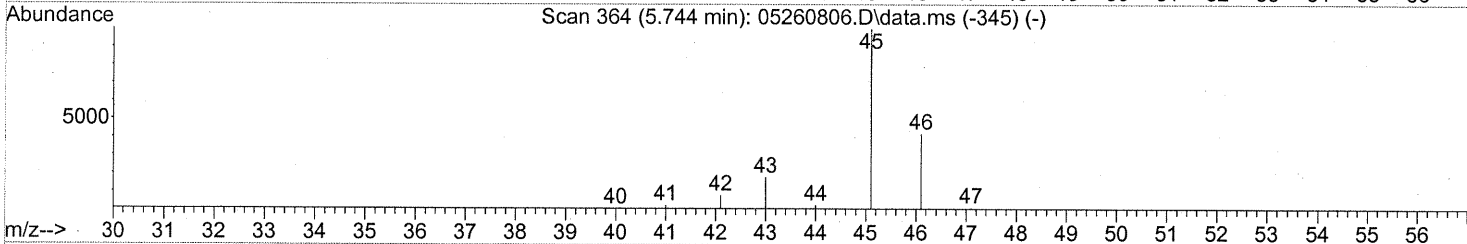
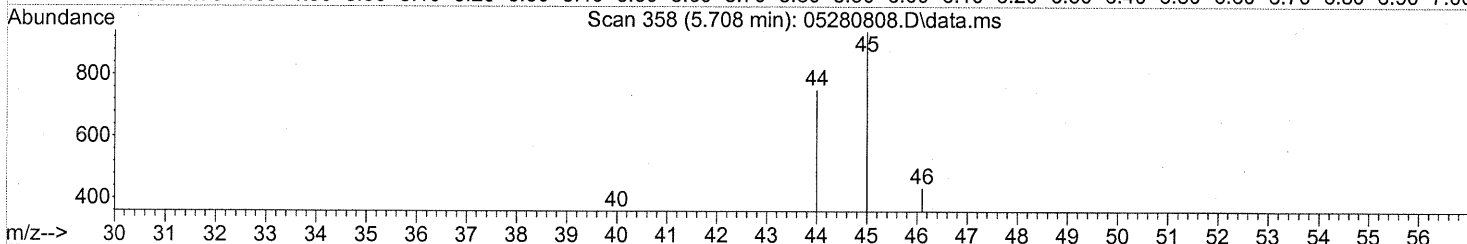
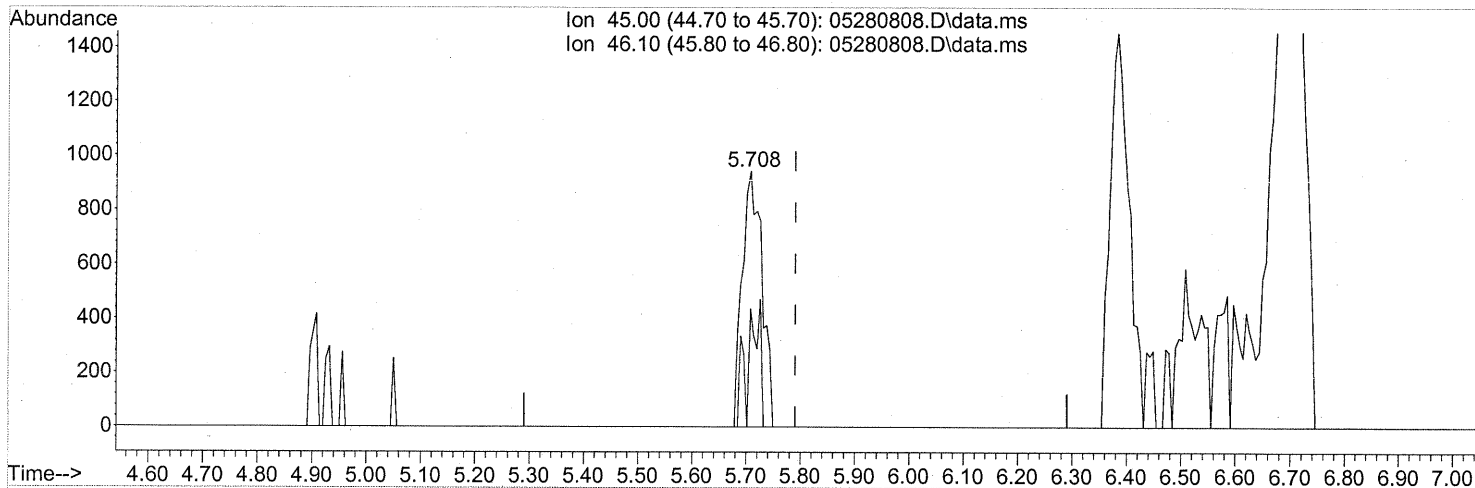
response 6811

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	33.17
100.90	8.40	6.09
102.90	5.50	0.00

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TIC: 05280808.D\data.ms

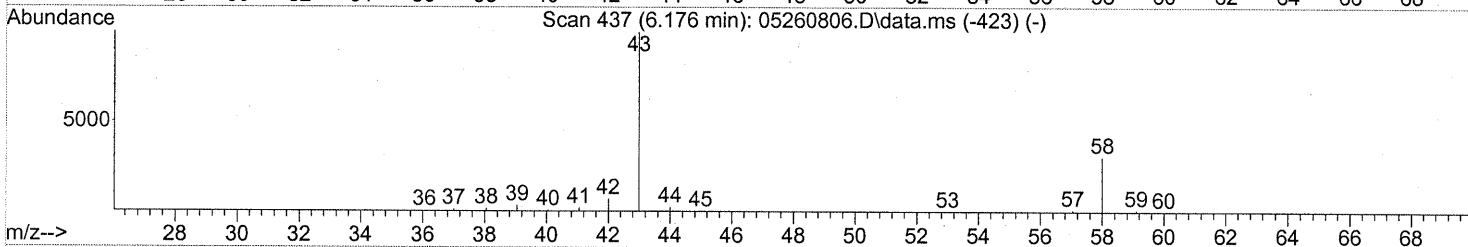
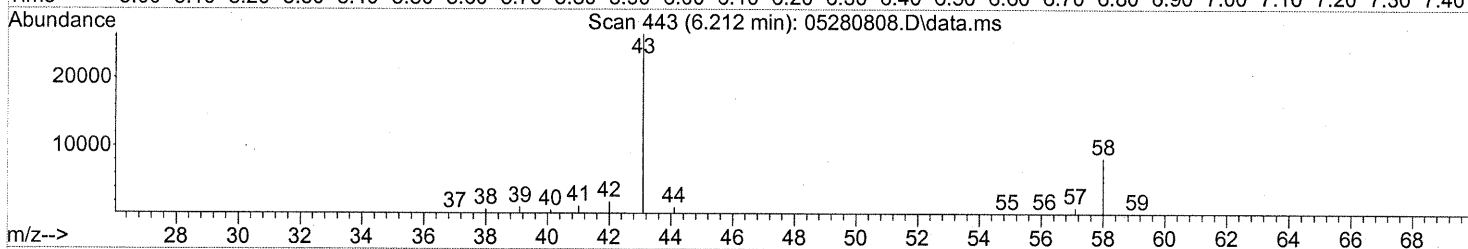
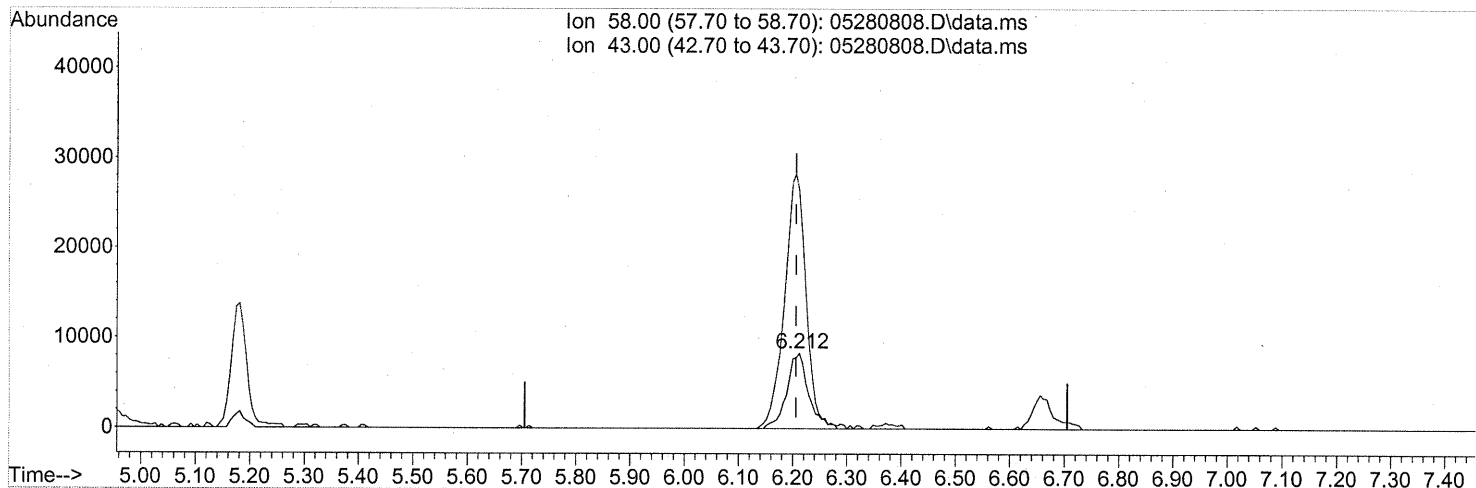
(10) Ethanol (T)  
 5.708min (-0.083) 0.12ng  
 response 2360

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	23.05
0.00	0.00	0.00
0.00	0.00	0.00

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TIC: 05280808.D\data.ms

(13) Acetone (T)

6.212min (+0.006) 1.19ng

response 23063

Ion	Exp%	Act%
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58.00	100	100
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43.00	368.40	335.40#
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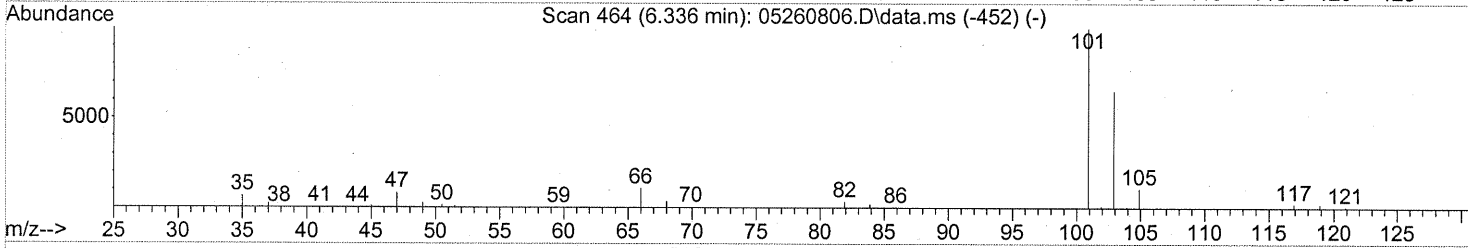
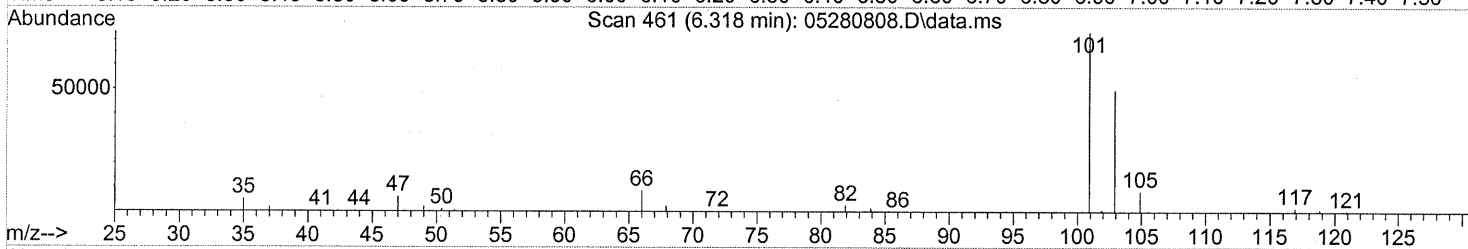
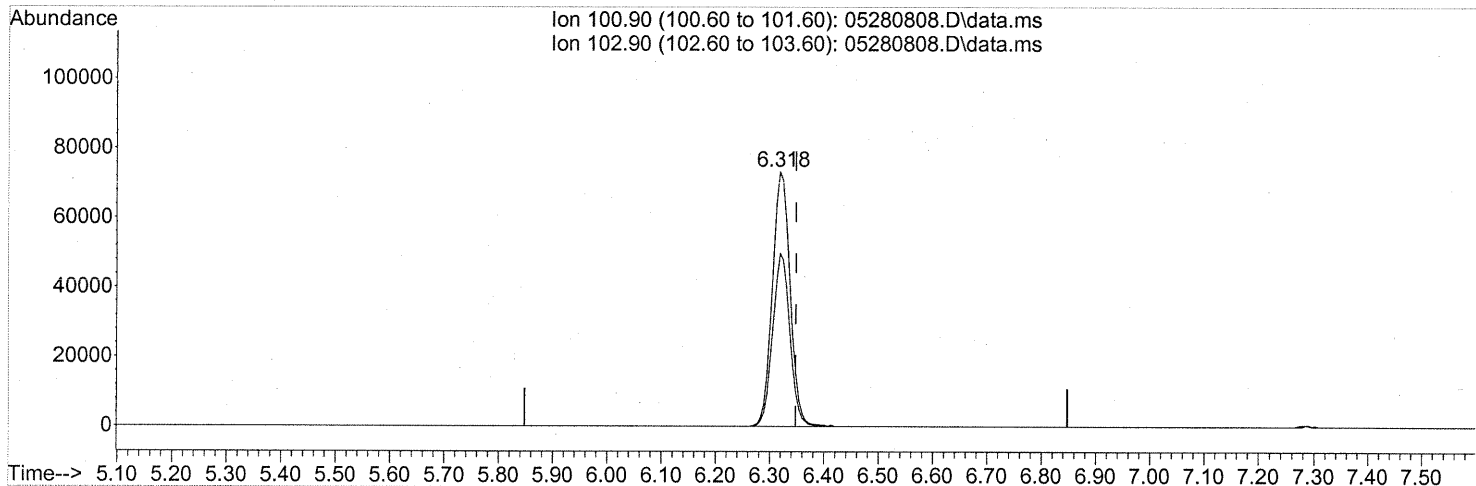
0.00	0.00	0.00
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0.00	0.00	0.00
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Quantitation Report (Qedit)

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(14) Trichlorofluoromethane (T)

6.318min (-0.030) 5.14ng

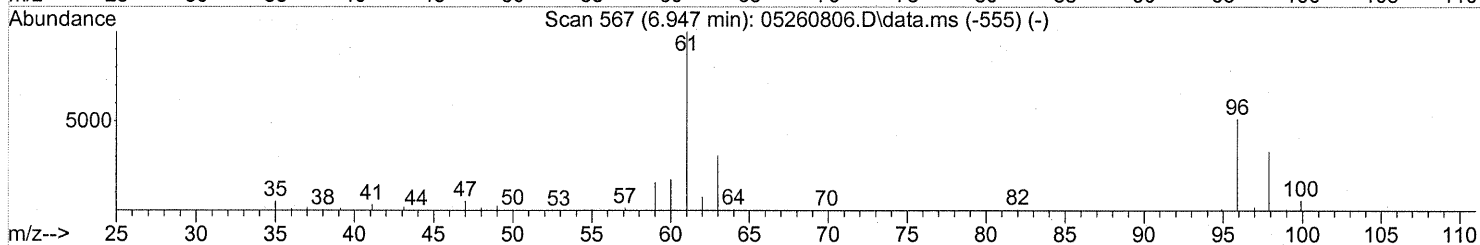
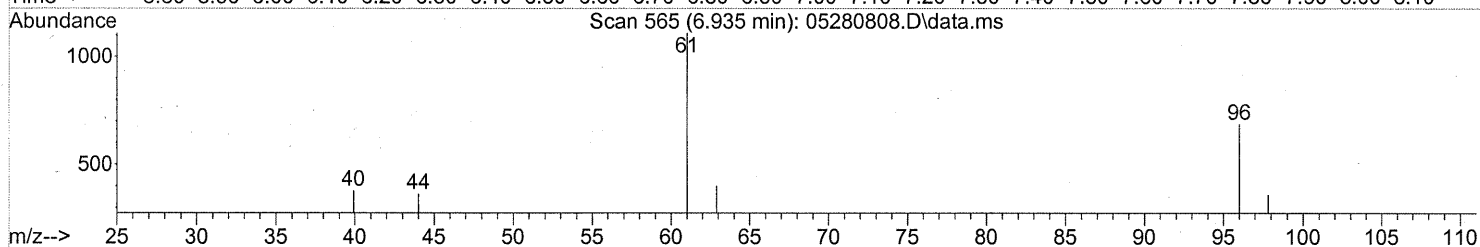
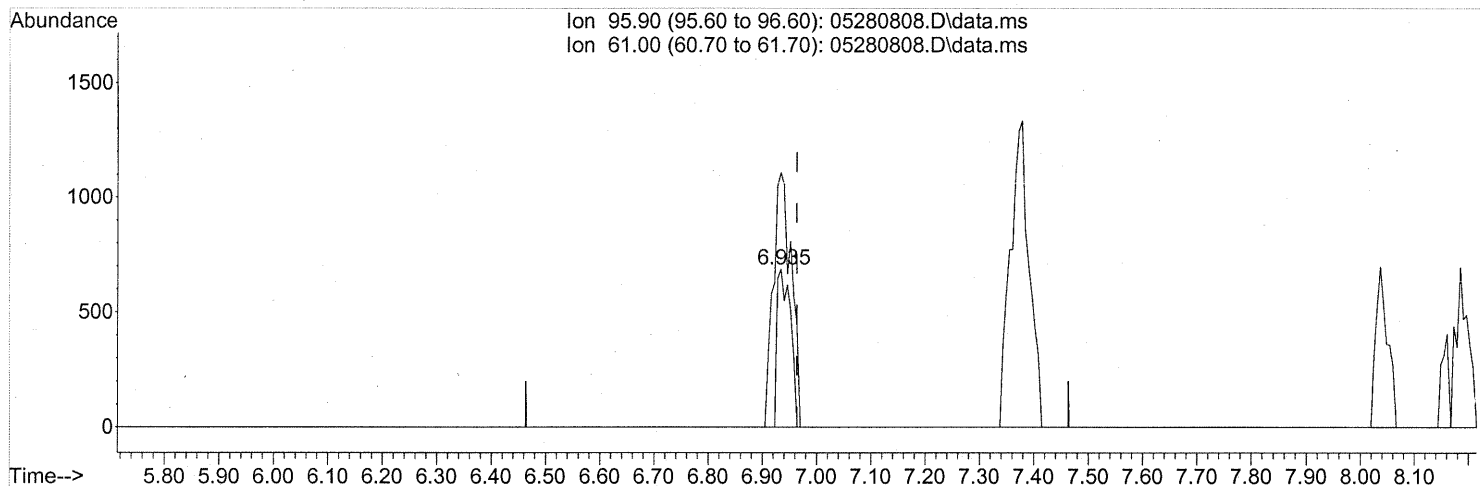
response 166712

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	65.97
0.00	0.00	0.00
0.00	0.00	0.00

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 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(17) 1,1-Dichloroethene (T)

6.935min (-0.030) 0.08ng

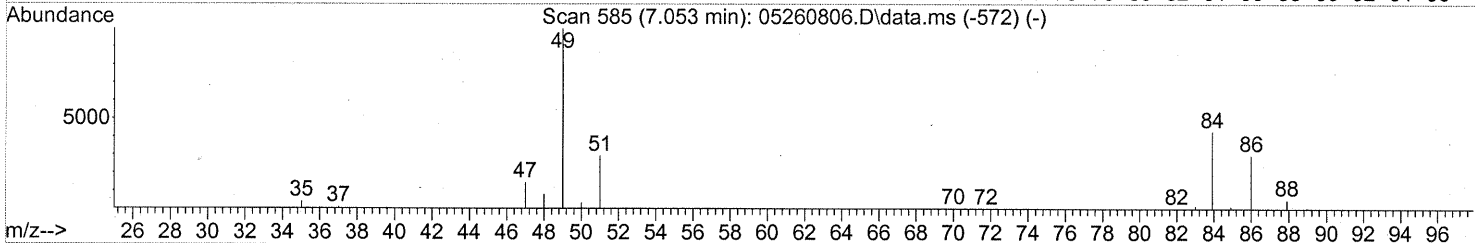
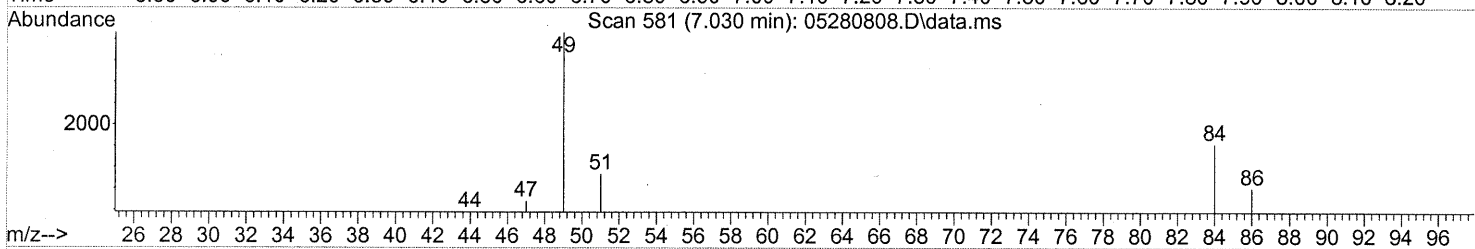
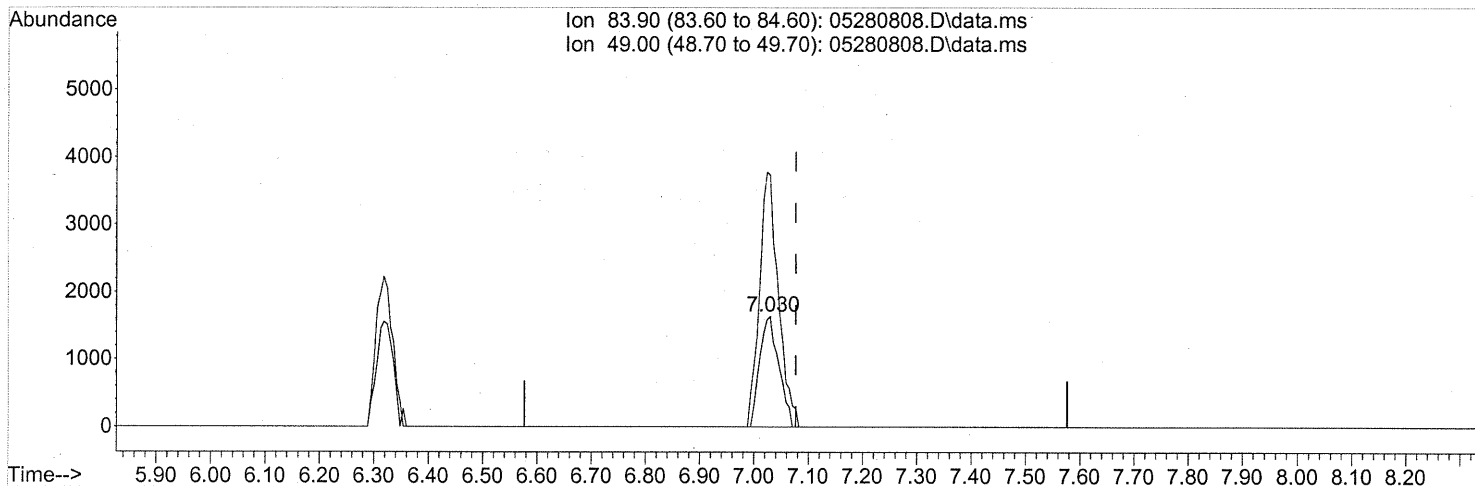
response 1176

Ion	Exp%	Act%
95.90	100	100
61.00	189.30	217.43#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(19) Methylene Chloride (T)

7.030min (-0.047) 0.27ng

response 3975

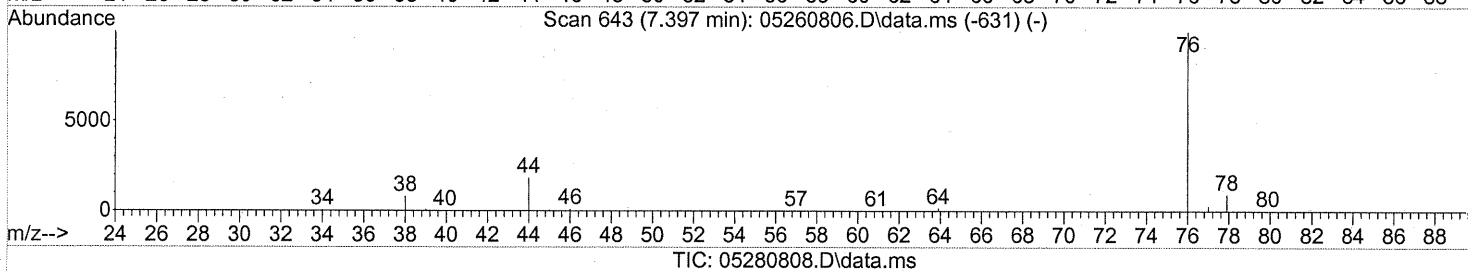
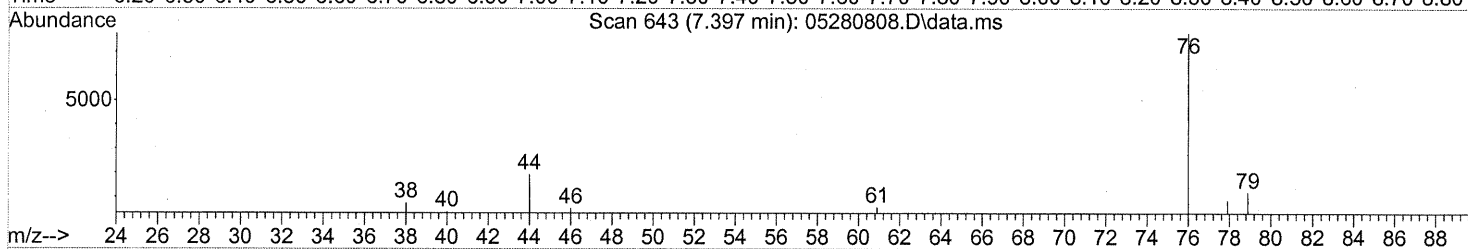
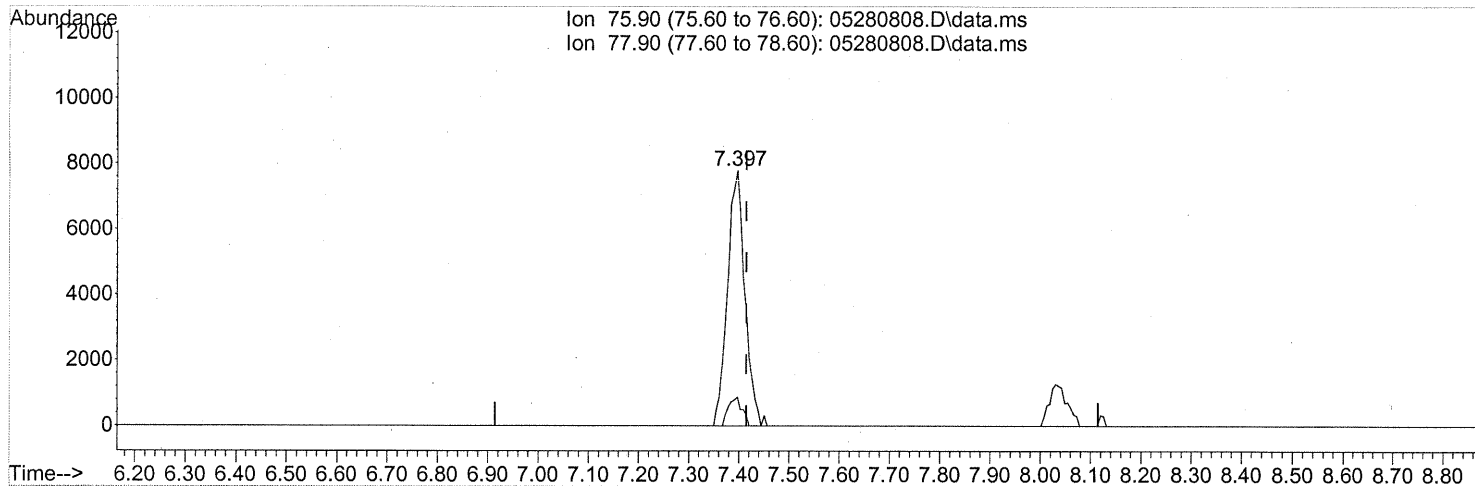
Ion	Exp%	Act%
83.90	100	100
49.00	155.50	229.31#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(22) Carbon Disulfide (T)

7.397min (-0.018) 0.31ng

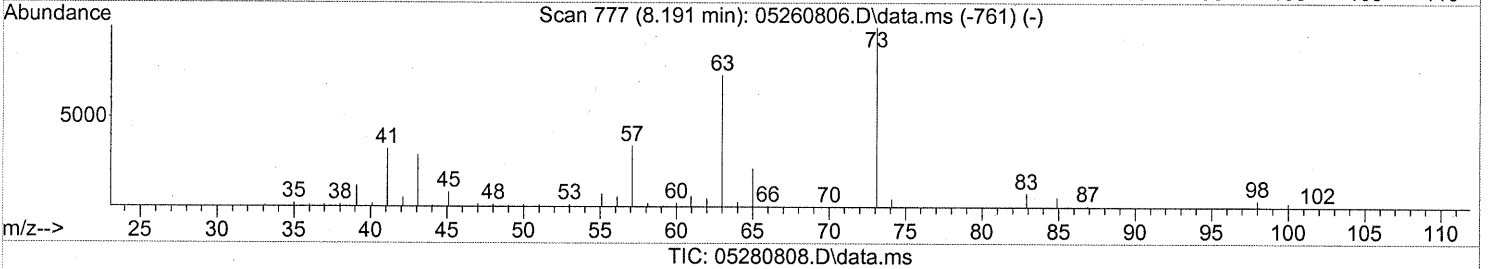
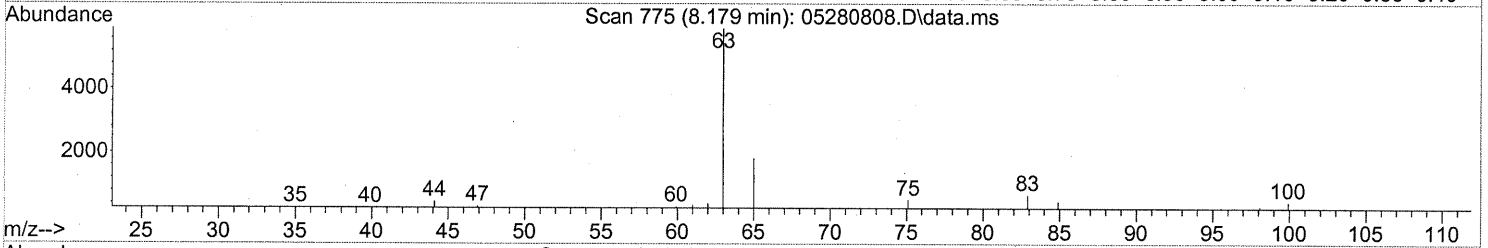
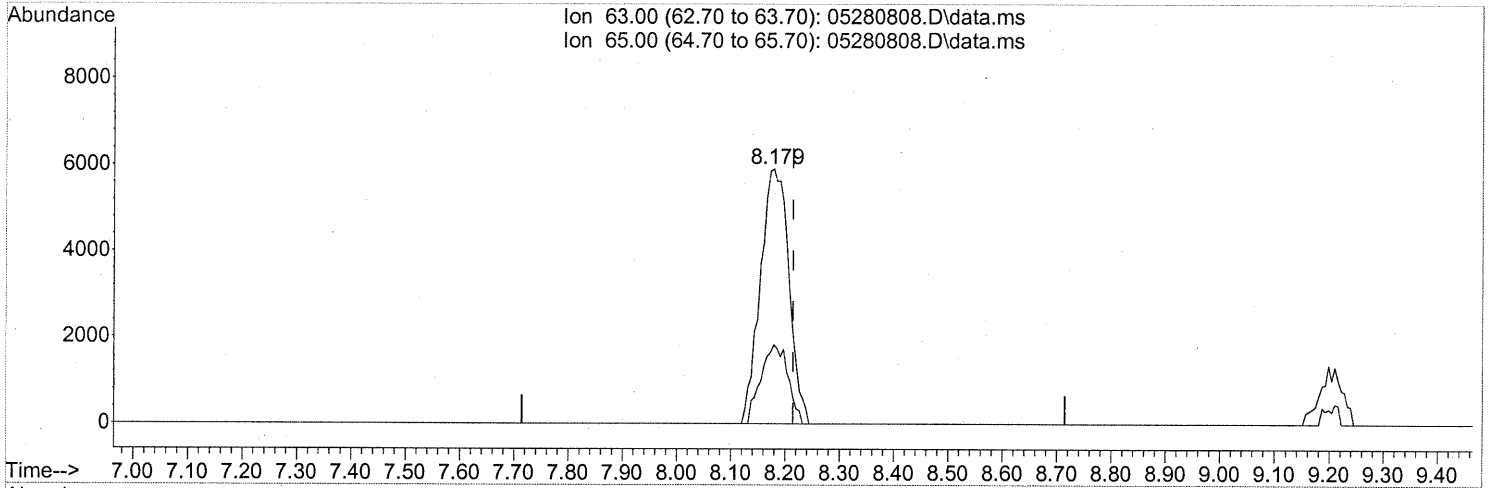
response 18681

Ion	Exp%	Act%
75.90	100	100
77.90	9.10	8.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

8.179min (-0.036) 0.68ng

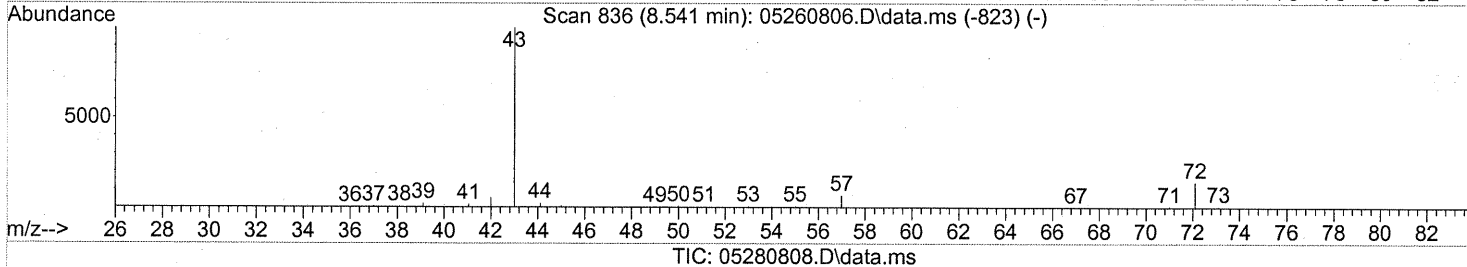
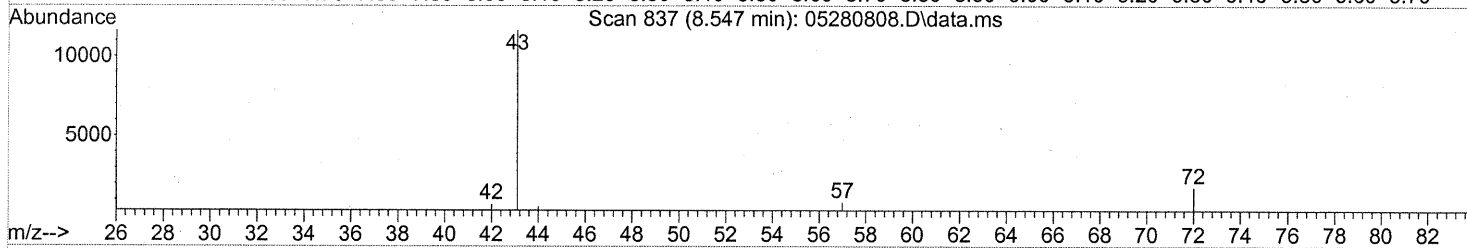
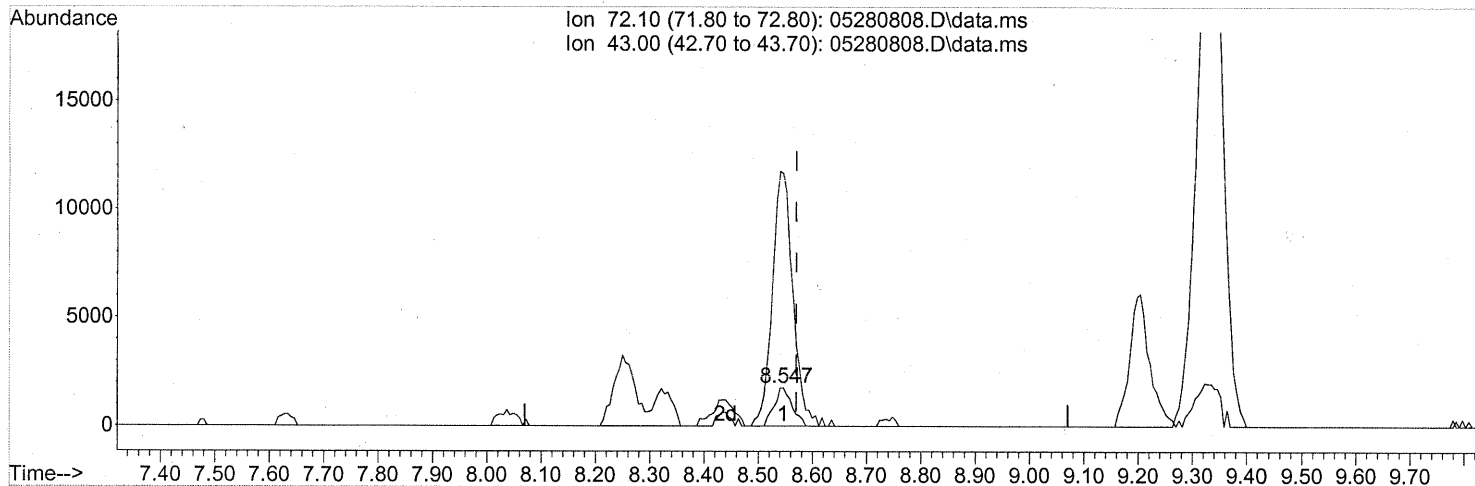
response 21450

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	29.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.547min (-0.024) 0.40ng

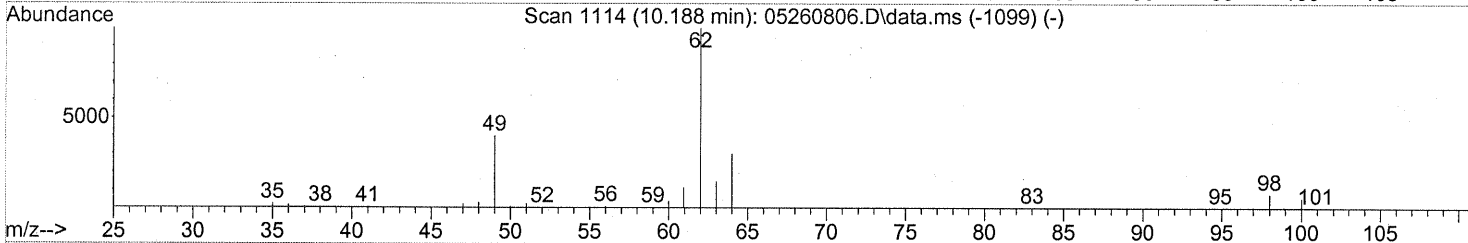
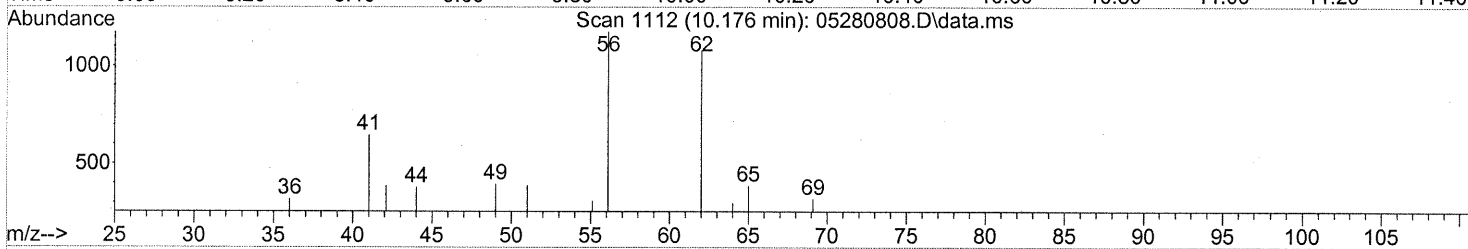
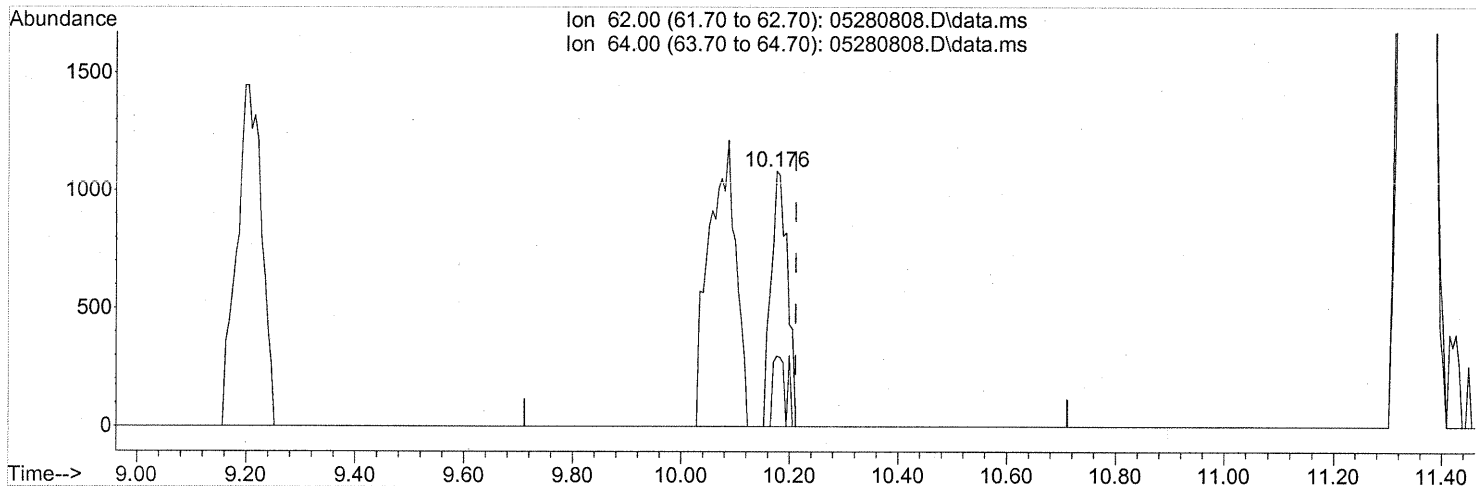
response 4040

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	770.50#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(36) 1,2-Dichloroethane (T)

10.176min (-0.036) 0.09ng

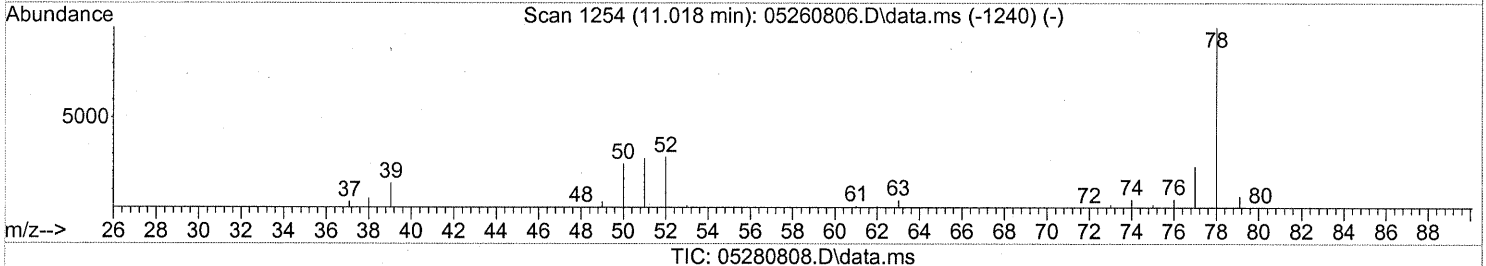
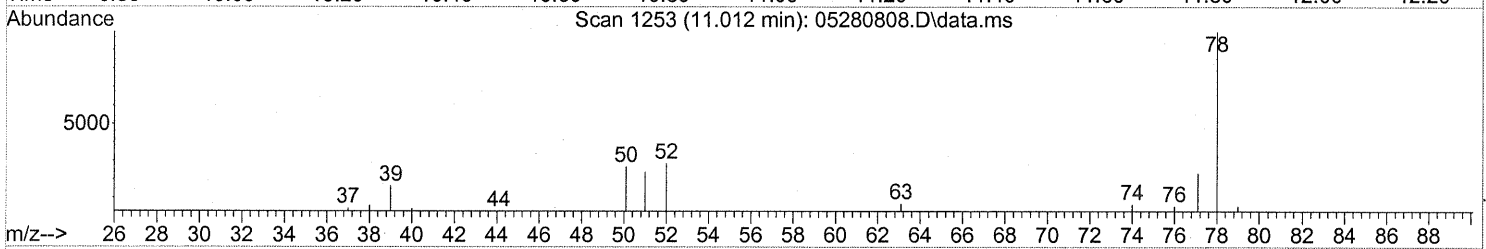
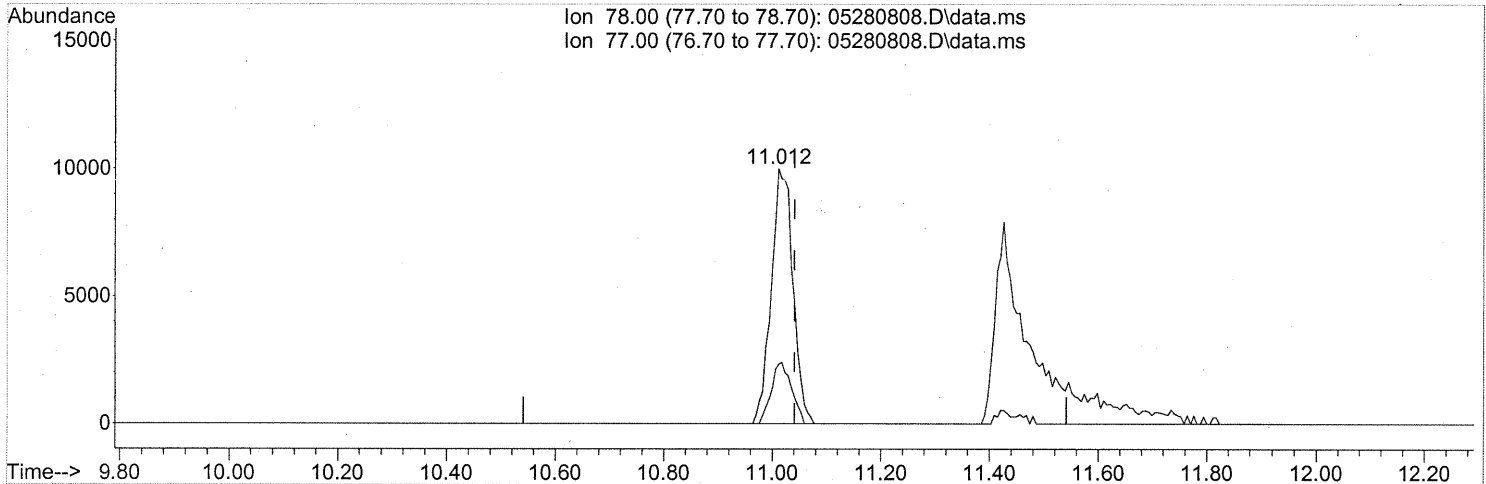
response 2268

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



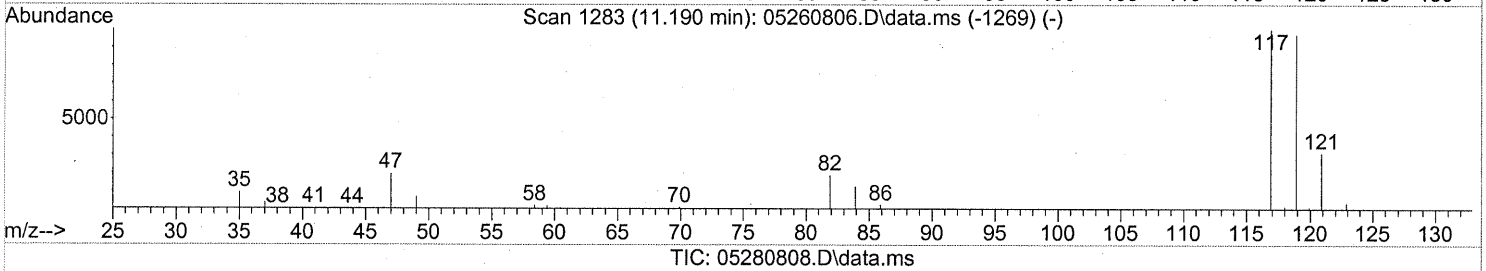
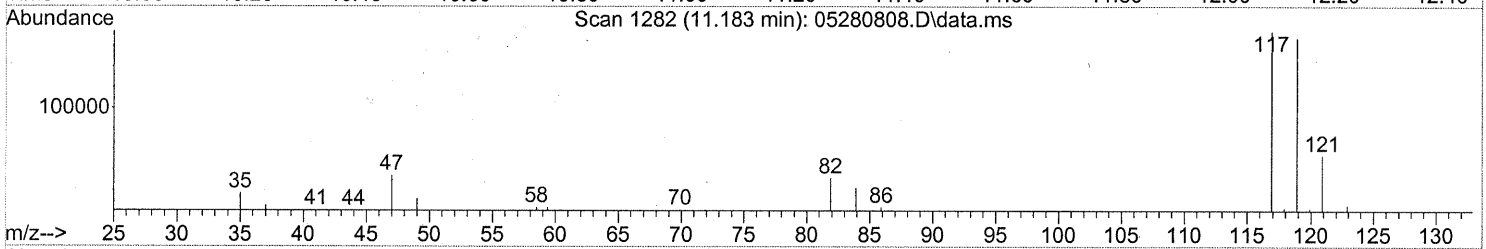
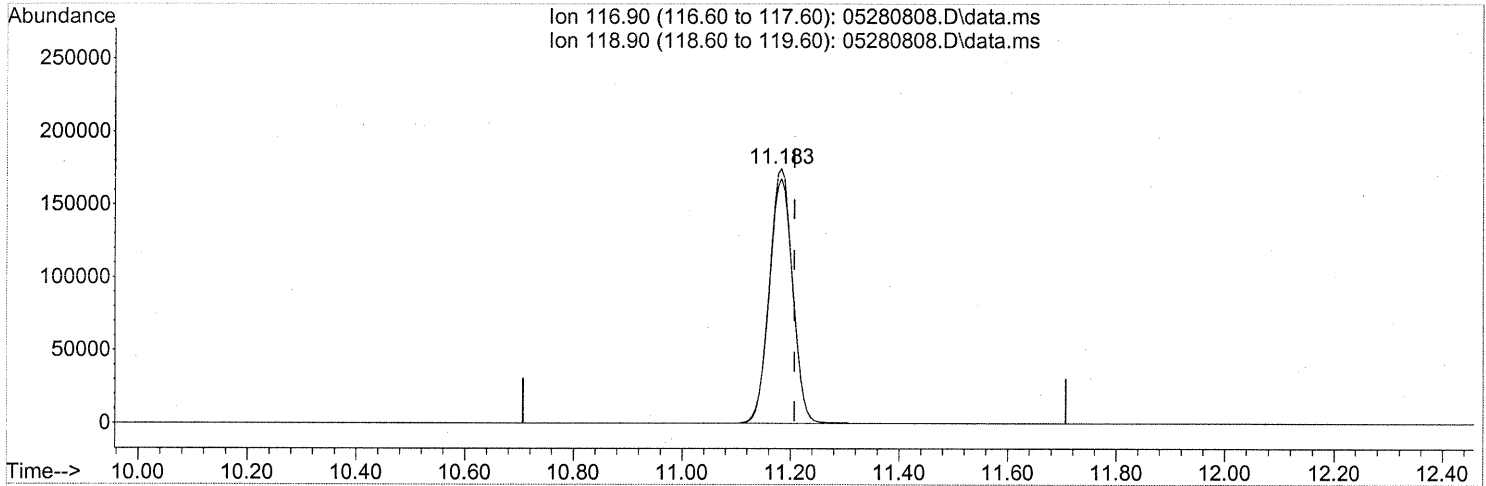
(41) Benzene (T)  
 11.012min (-0.030) 0.43ng  
 response 27839

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.183min (-0.024) 19.57ng

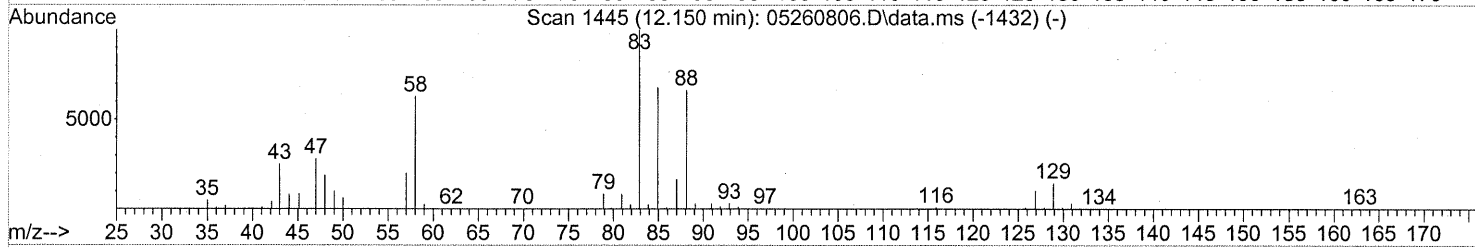
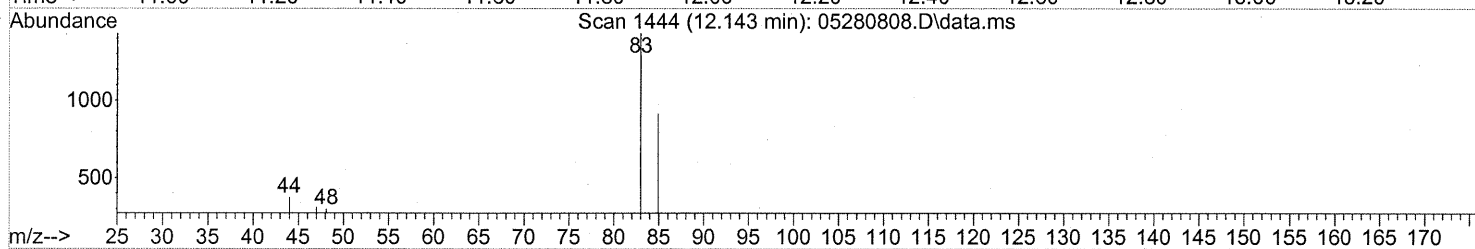
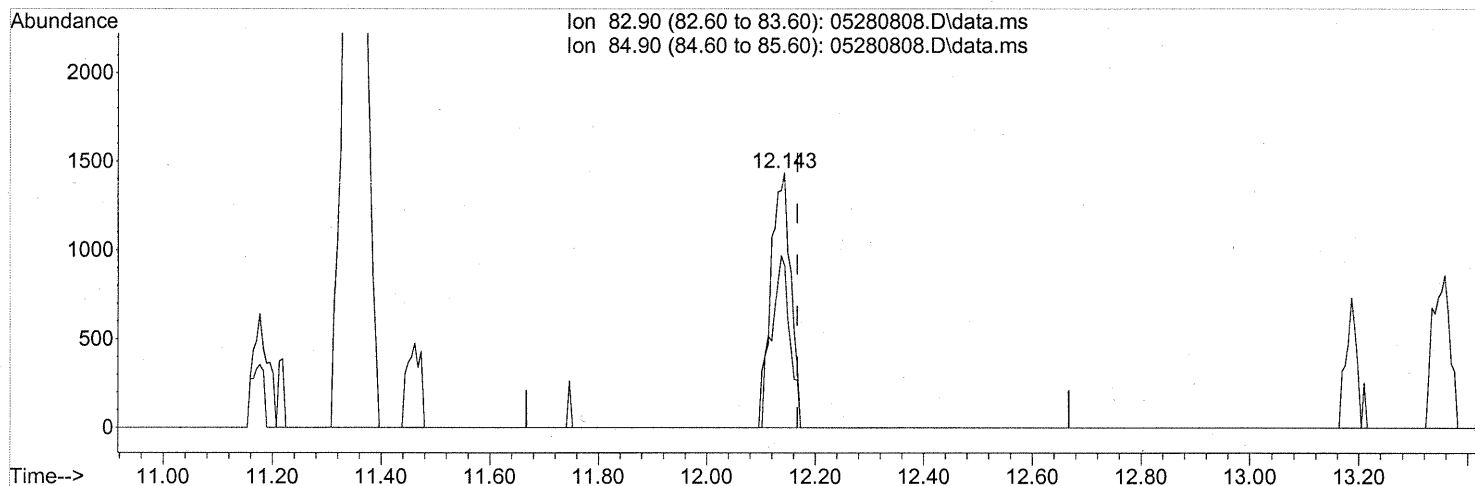
response 519167

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

12.143min (-0.024) 0.19ng

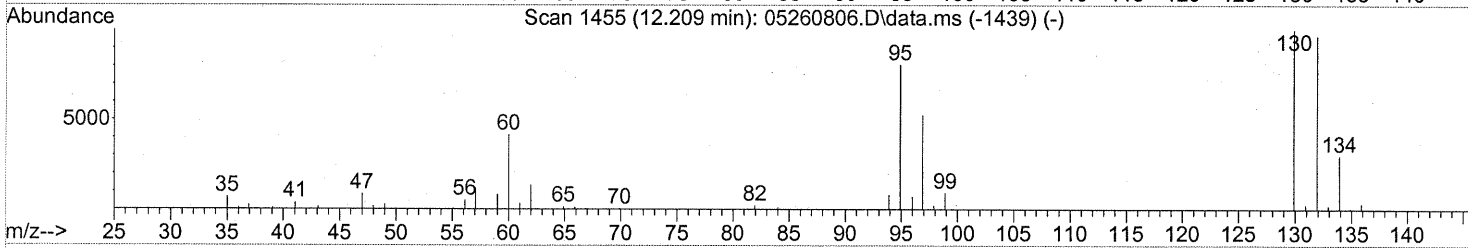
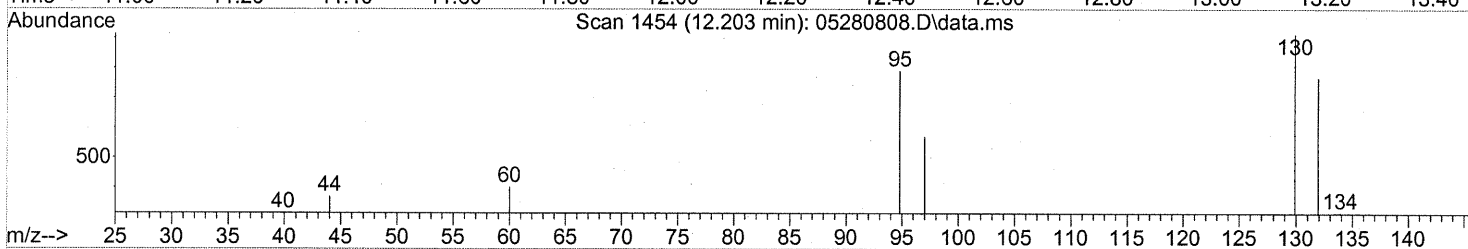
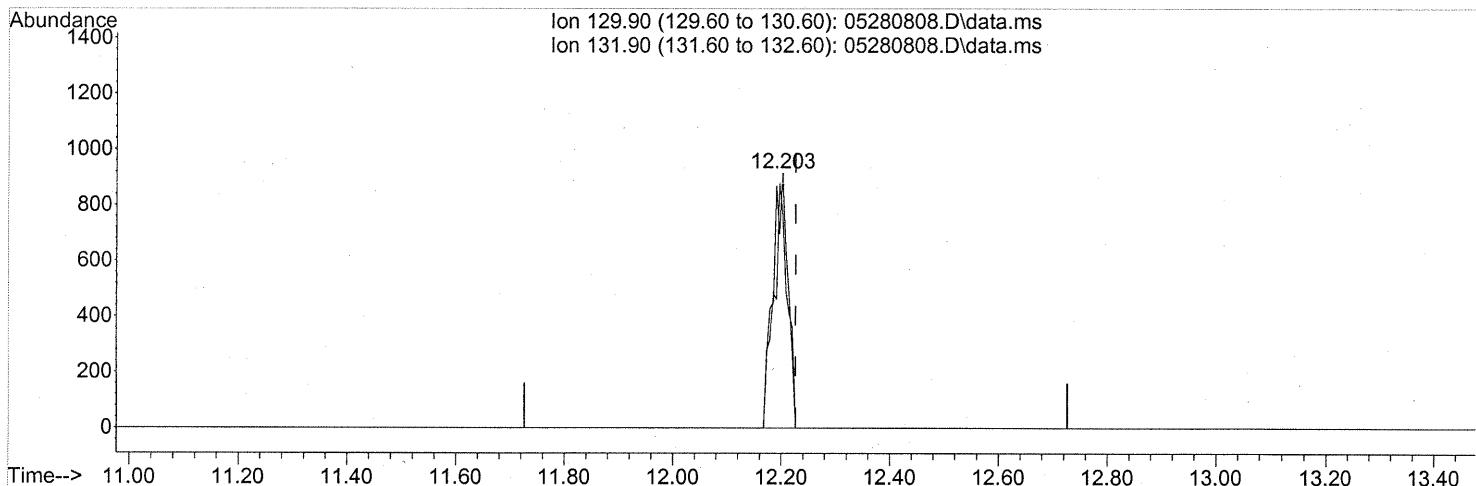
response 3638

Ion	Exp%	Act%
82.90	100	100
84.90	62.30	62.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(47) Trichloroethene (T)  
 12.203min (-0.024) 0.09ng  
 response 1774

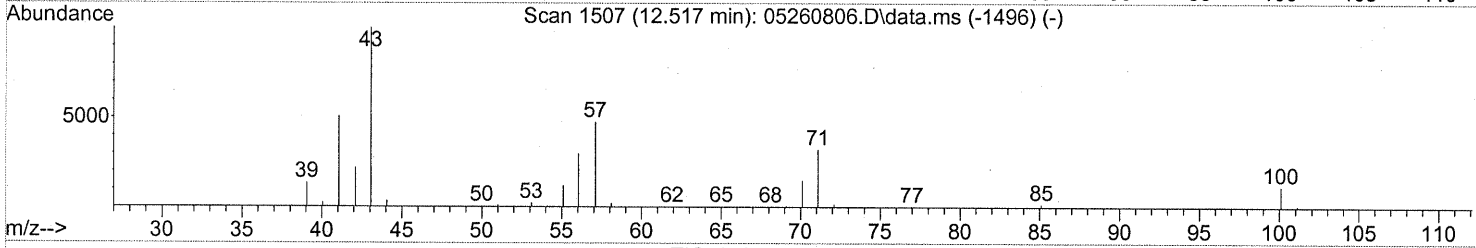
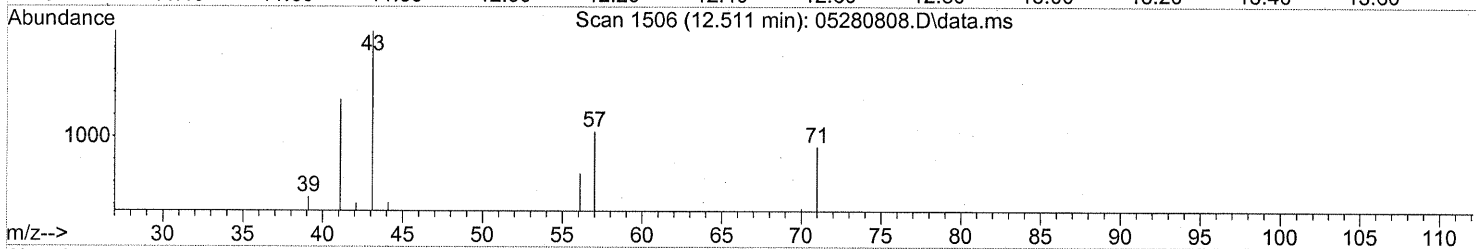
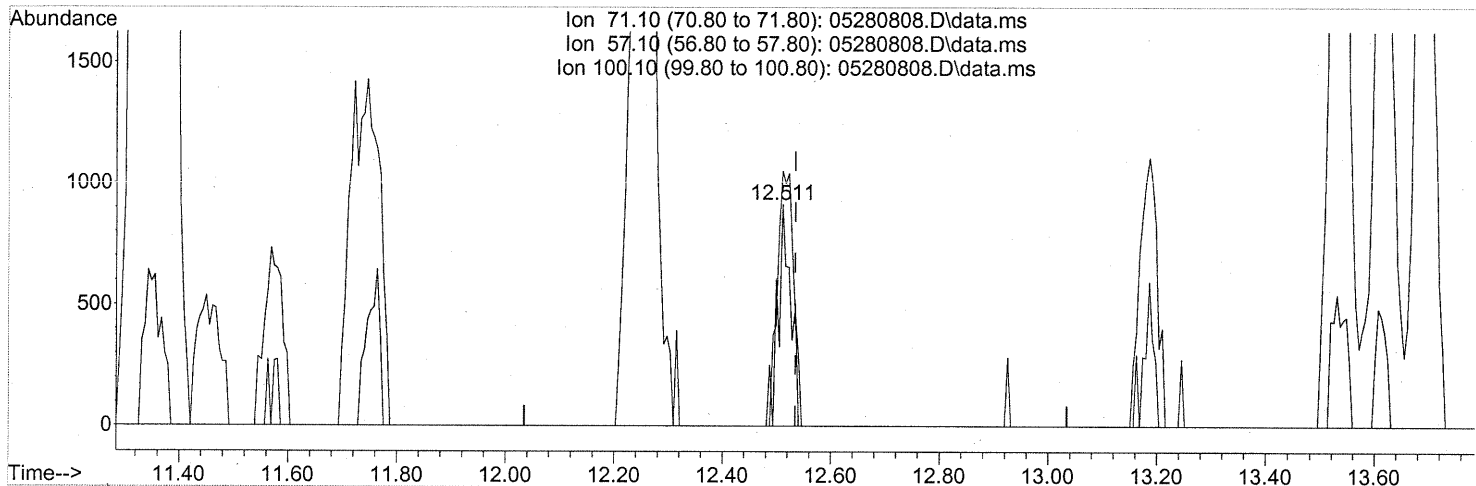
Ion	Exp%	Act%
129.90	100	100
131.90	95.10	89.01
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



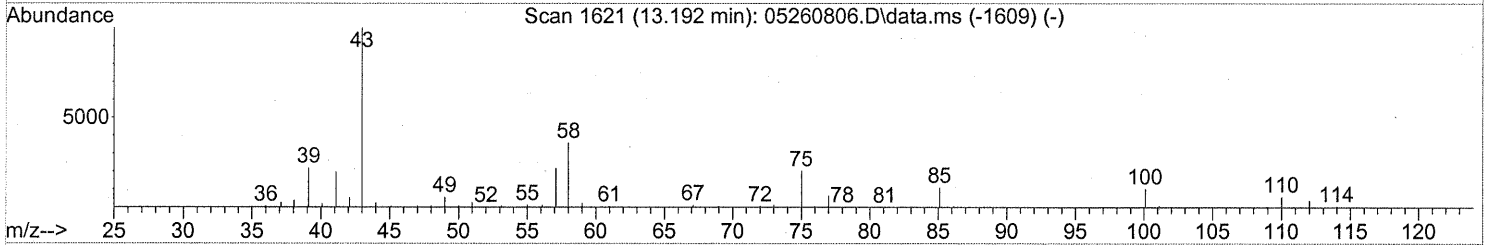
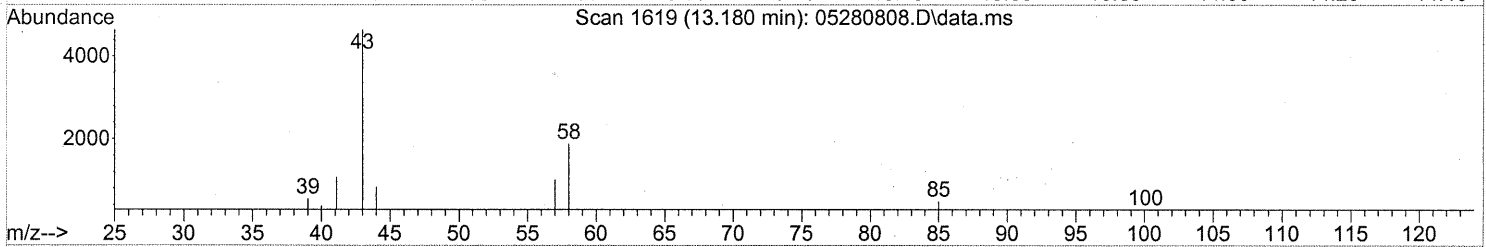
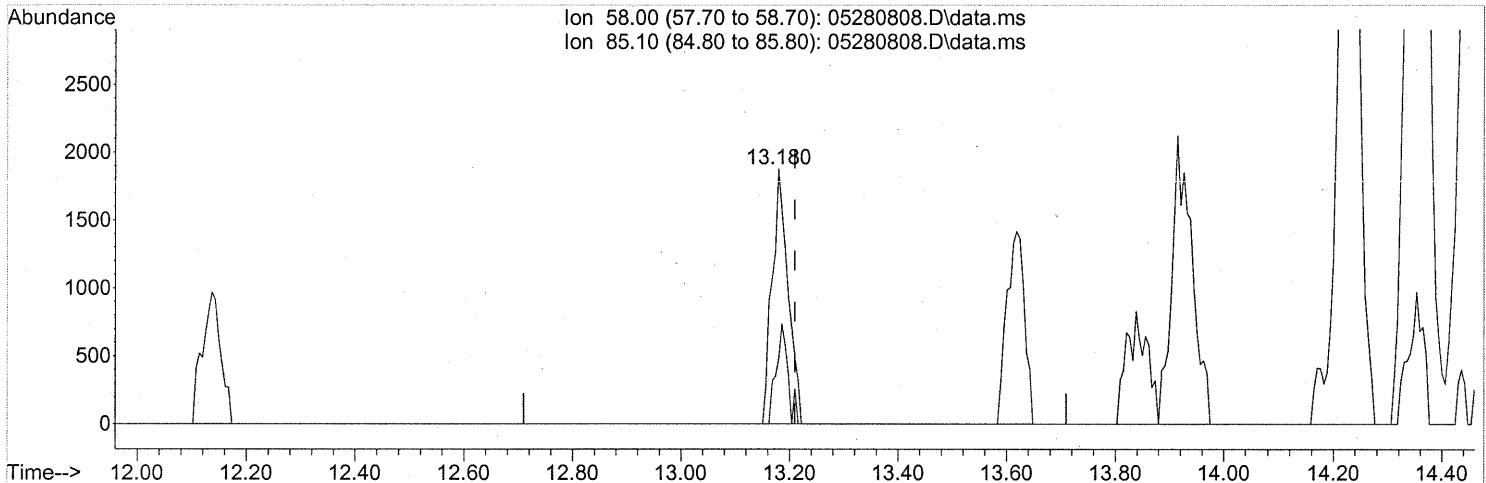
(51) n-Heptane (T)  
 12.511min (-0.024) 0.10ng  
 response 1509

Ion	Exp%	Act%
71.10	100	100
57.10	88.70	145.99#
100.10	28.80	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

13.180min (-0.030) 0.17ng

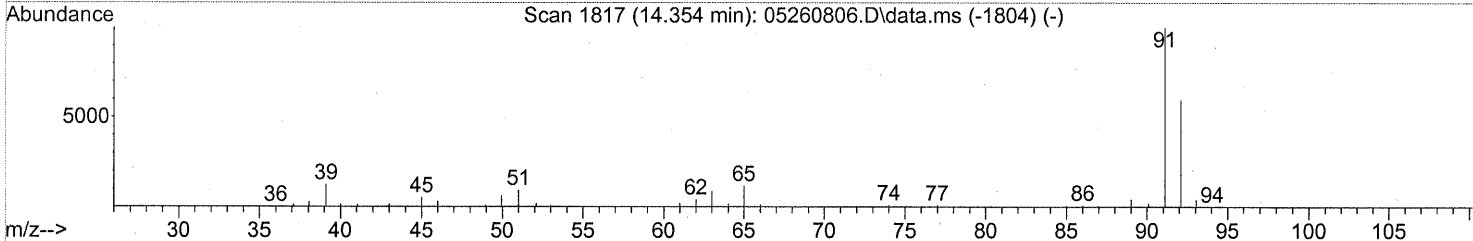
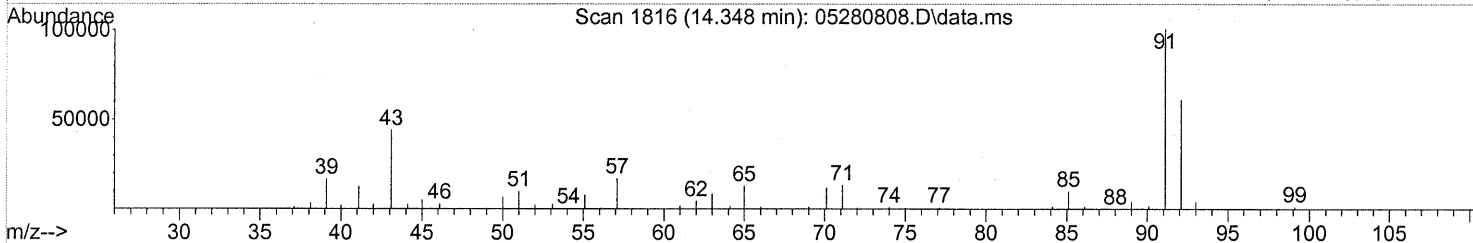
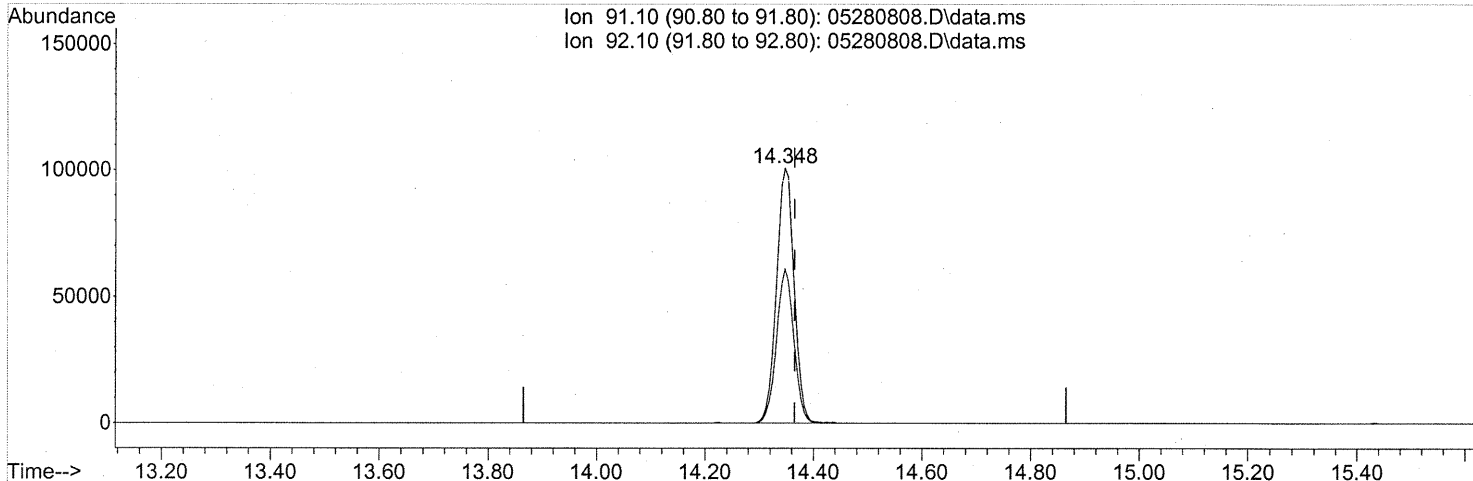
response 3808

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	28.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(58) Toluene (T)

14.348min (-0.018) 3.13ng

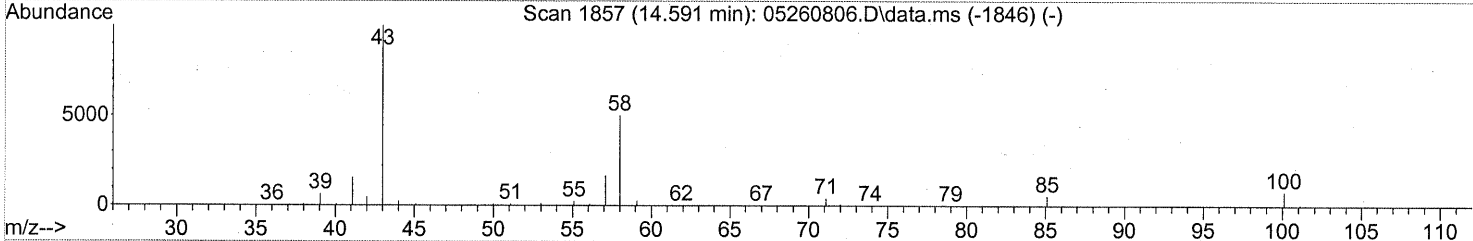
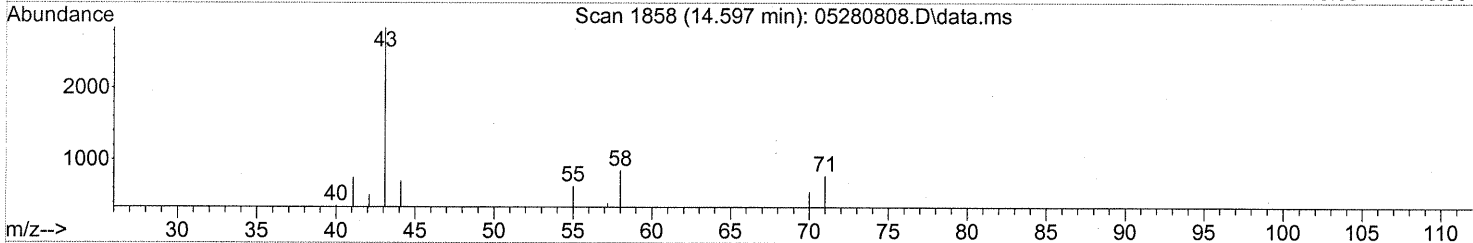
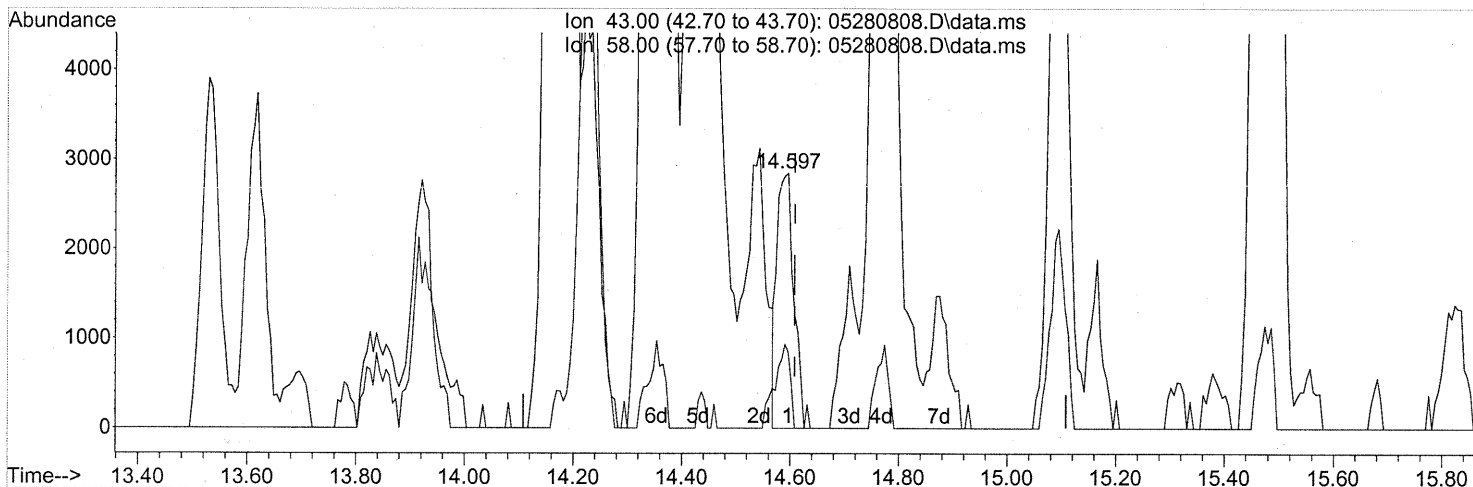
response 228357

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280808.D  
Acq On : 28 May 2008 13:58  
Operator : WA  
Sample : P0801507-009 (150ml)  
Misc : ENSR SG56B-05D (-3.8, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



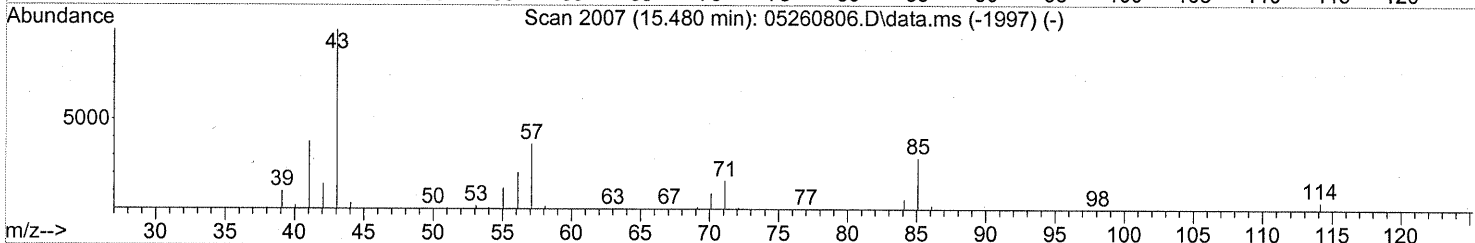
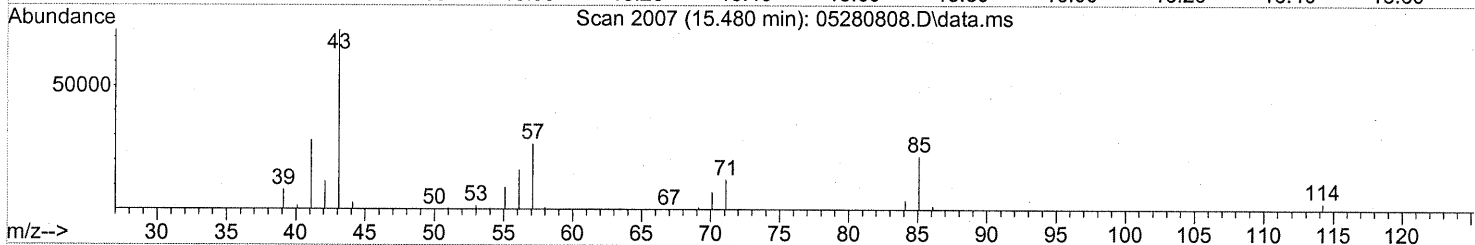
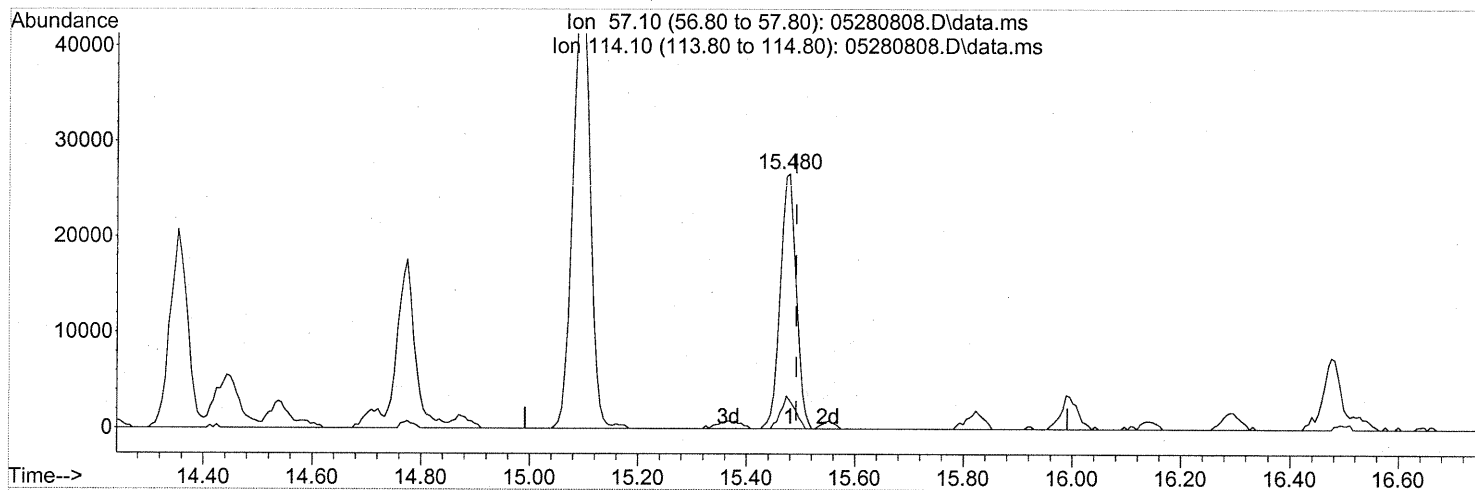
(59) 2-Hexanone (T)  
14.597min (-0.012) 0.09ng  
response 6241

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	29.48#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

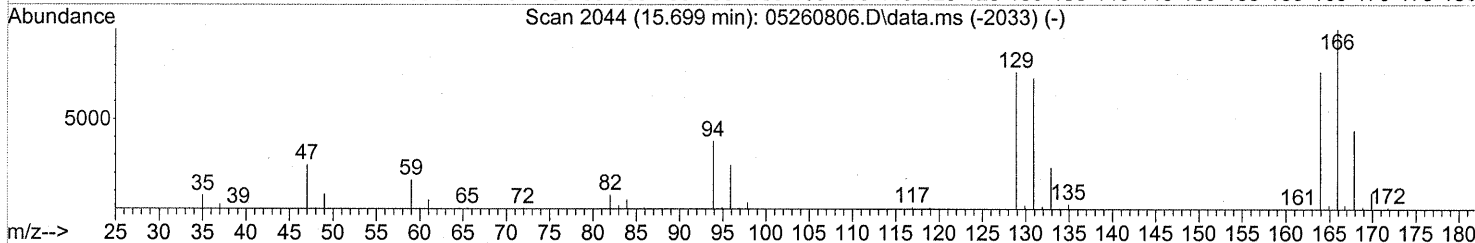
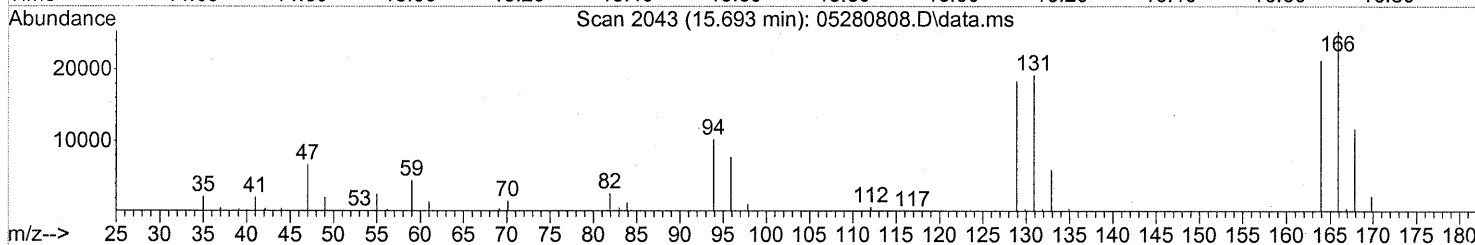
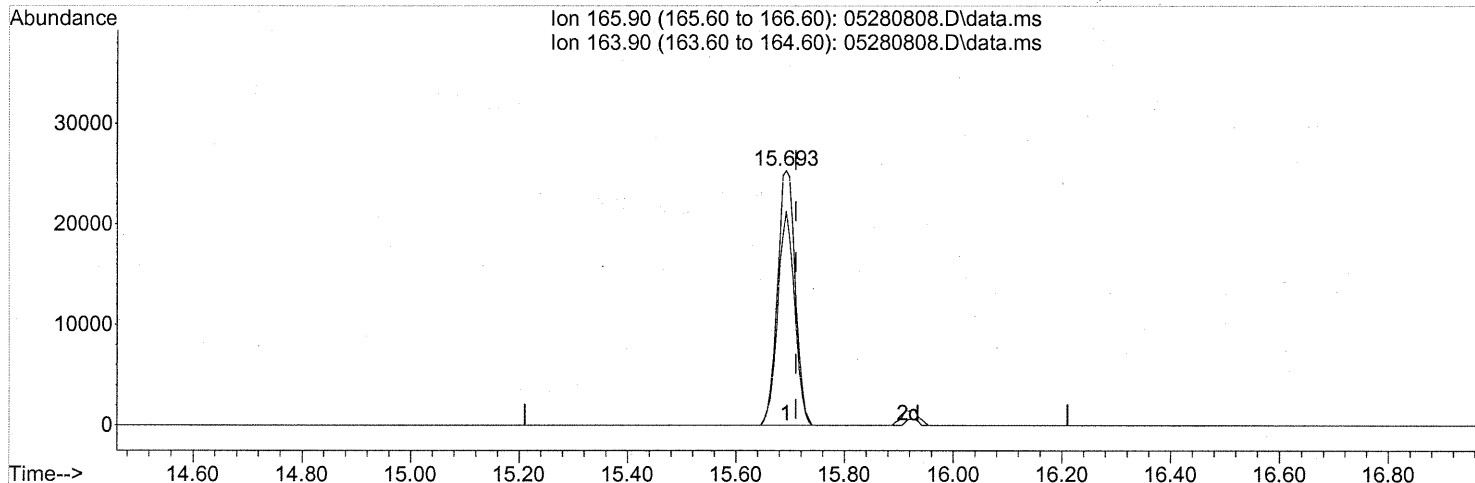
(63) n-Octane (T)  
 15.480min (-0.012) 2.46ng  
 response 54219

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 2.68ng

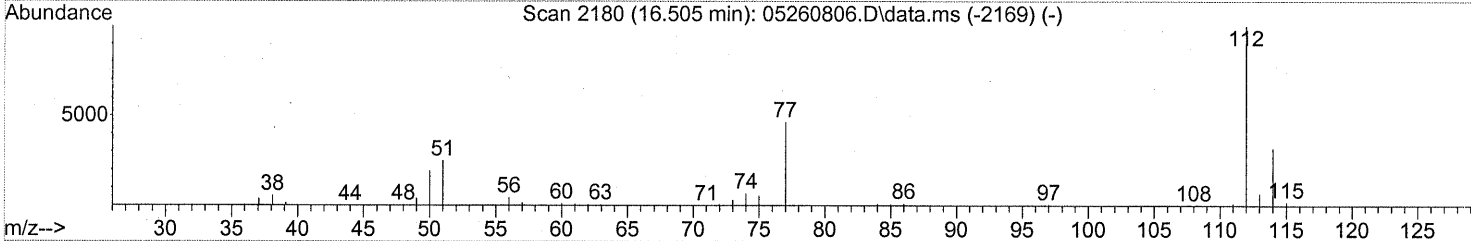
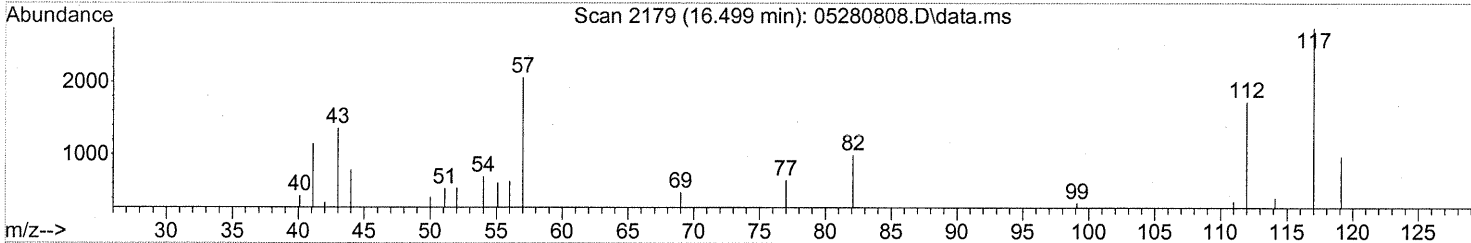
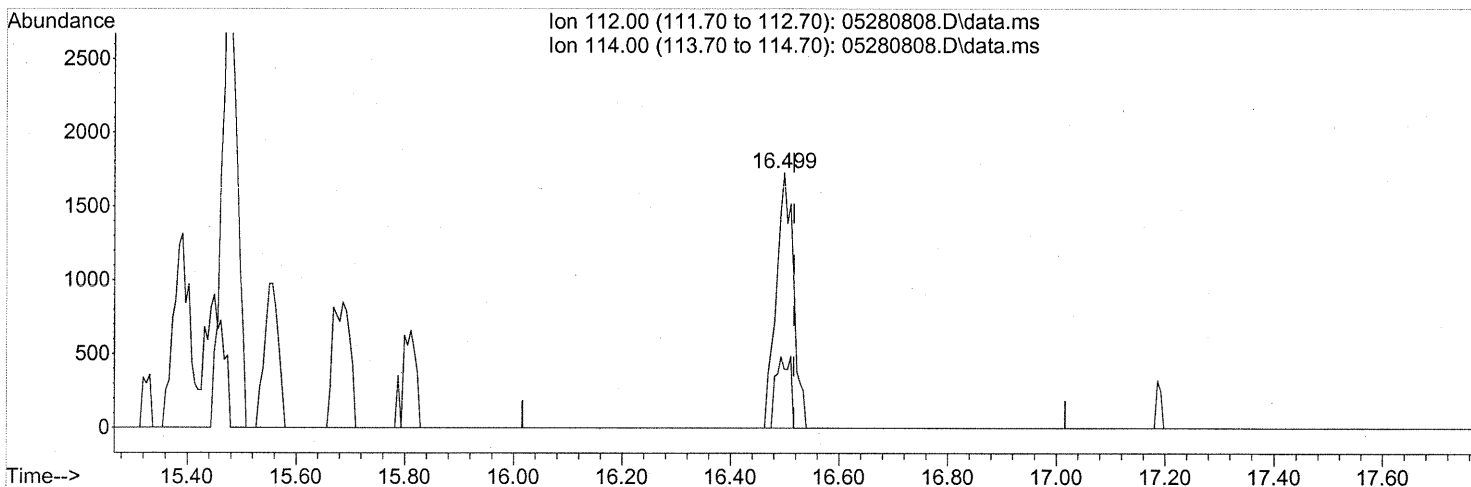
response 57989

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	79.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

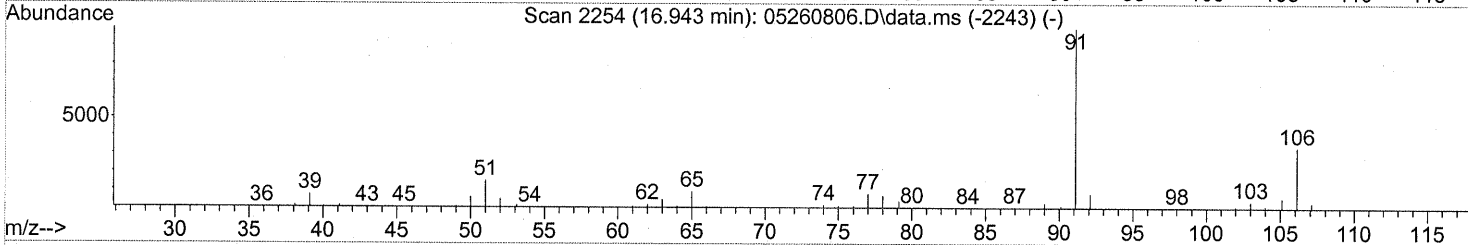
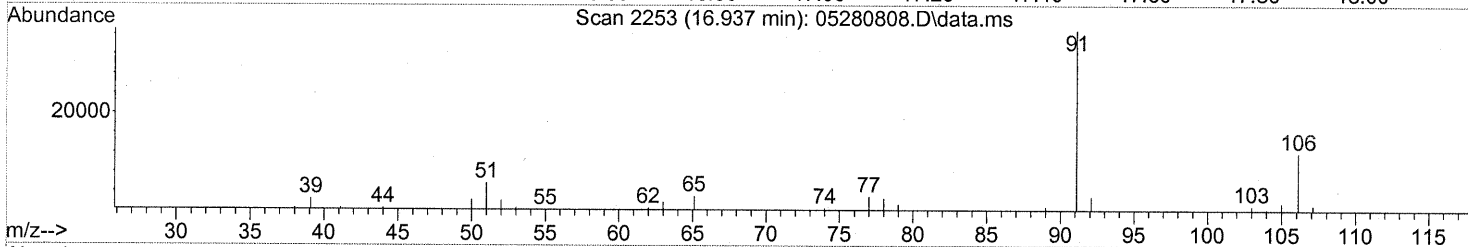
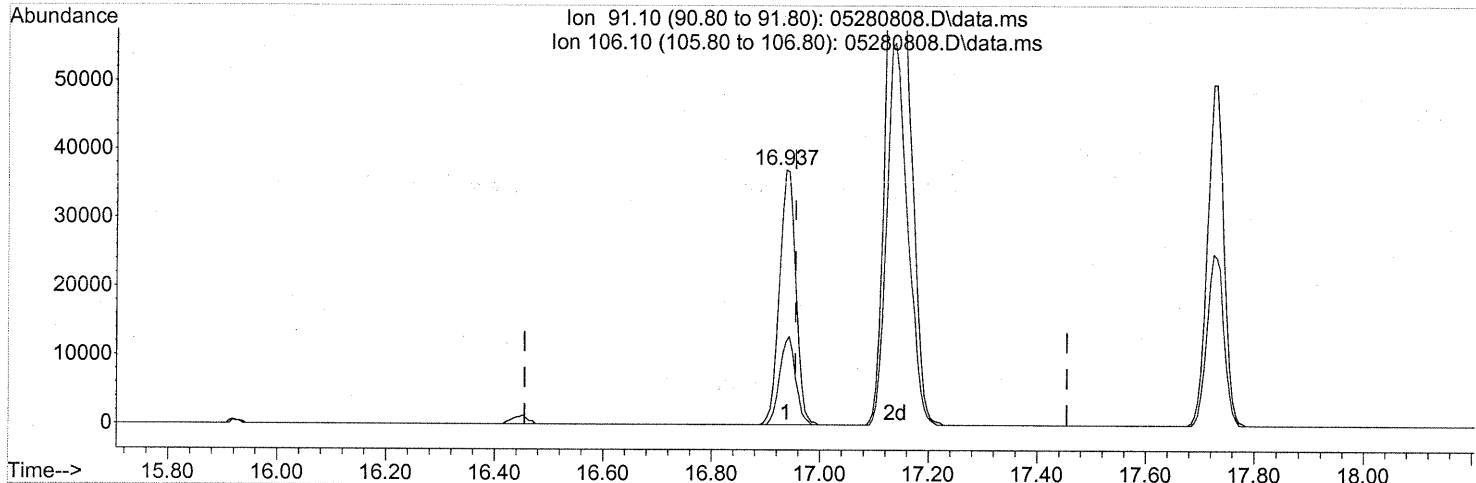
(65) Chlorobenzene (T)  
 16.499min (-0.018) 0.07ng  
 response 3807

Ion	Exp%	Act%
112.00	100	100
114.00	32.10	23.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(66) Ethylbenzene (T)

16.937min (-0.018) 0.94ng

response 78384

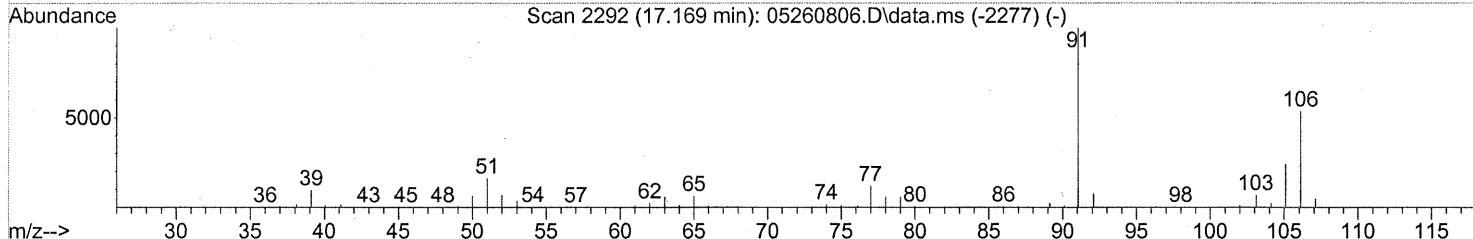
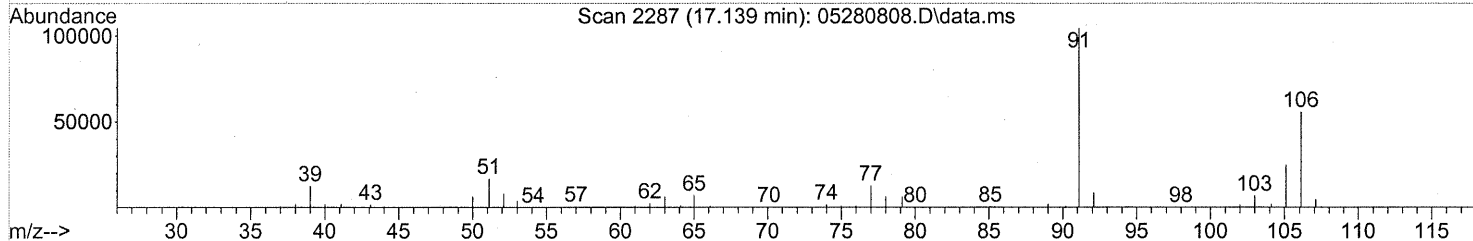
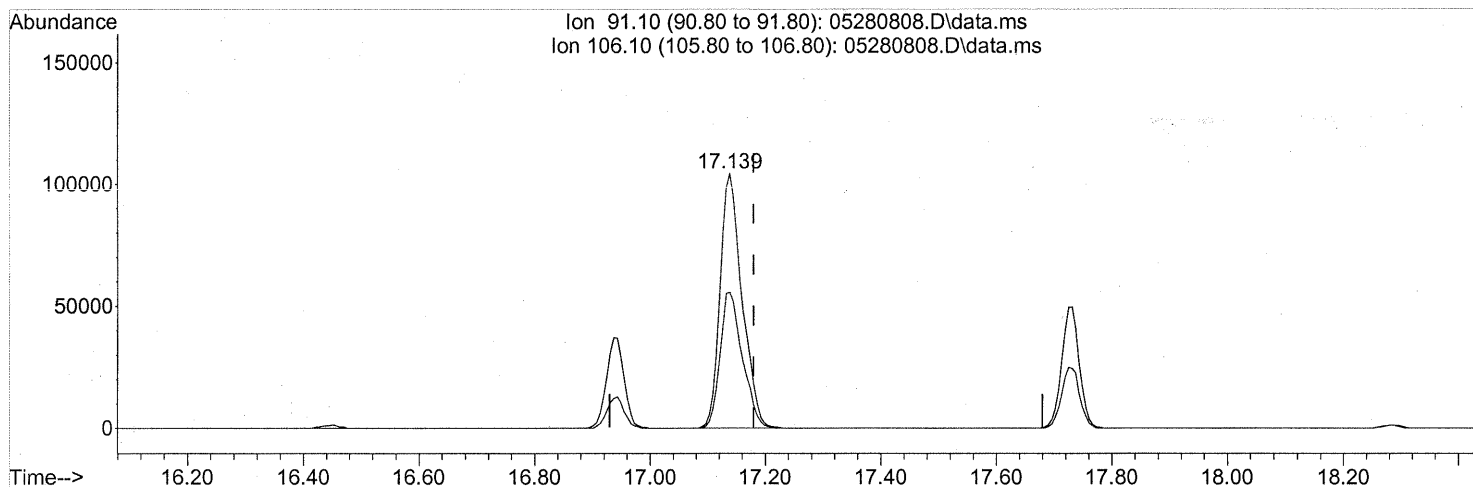
Ion	Exp%	Act%
91.10	100	100
106.10	29.90	33.36
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 5.01ng

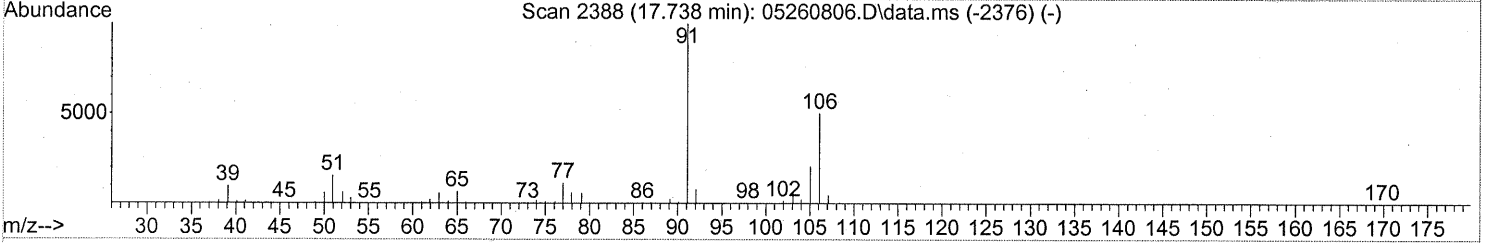
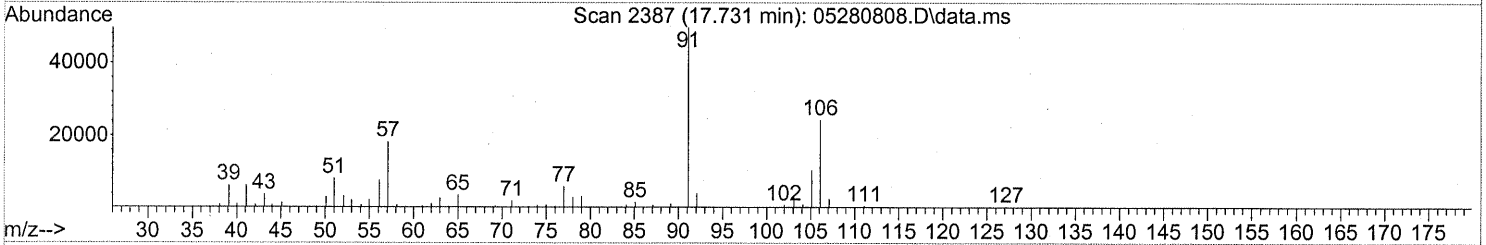
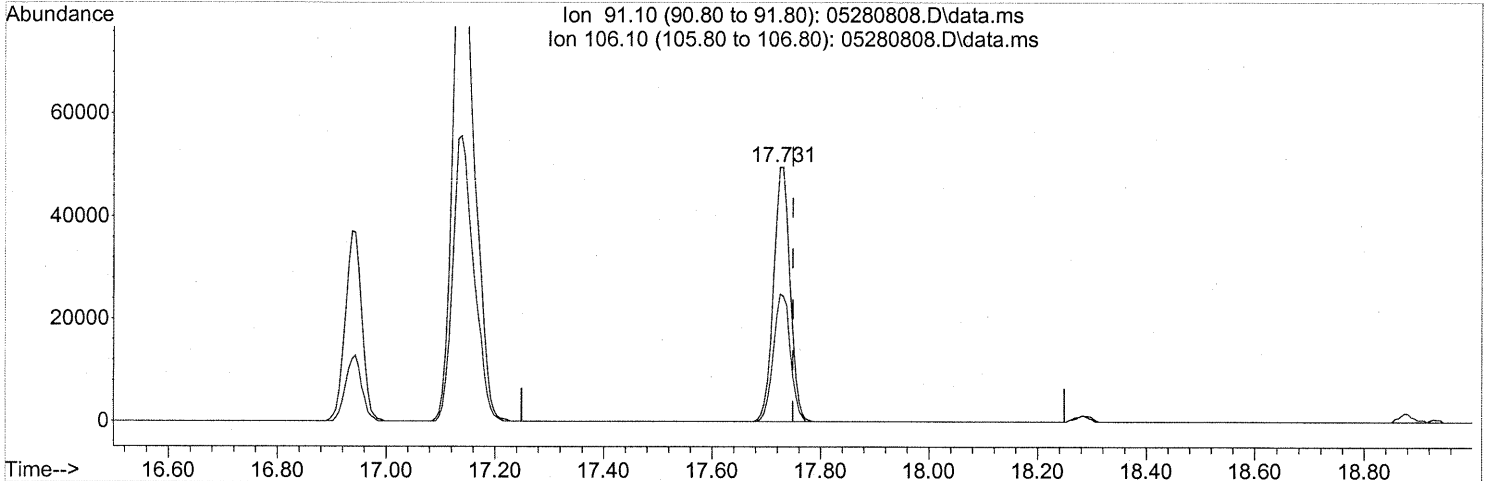
response 275410

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	54.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.731min (-0.018) 1.79ng

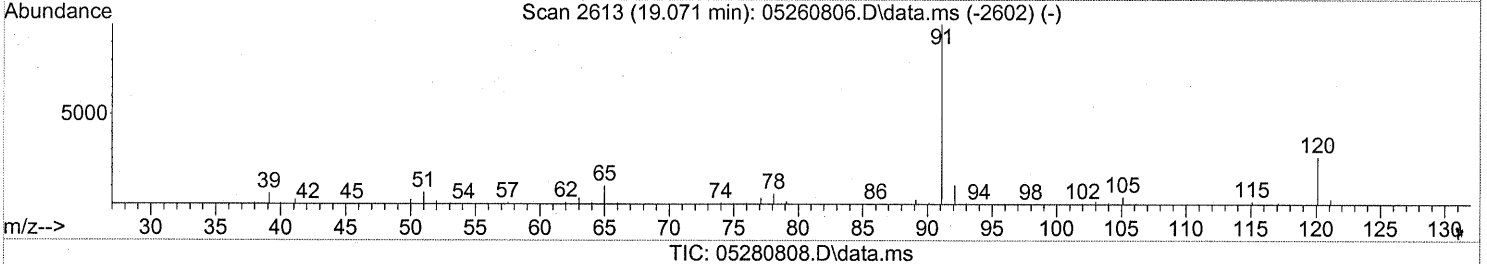
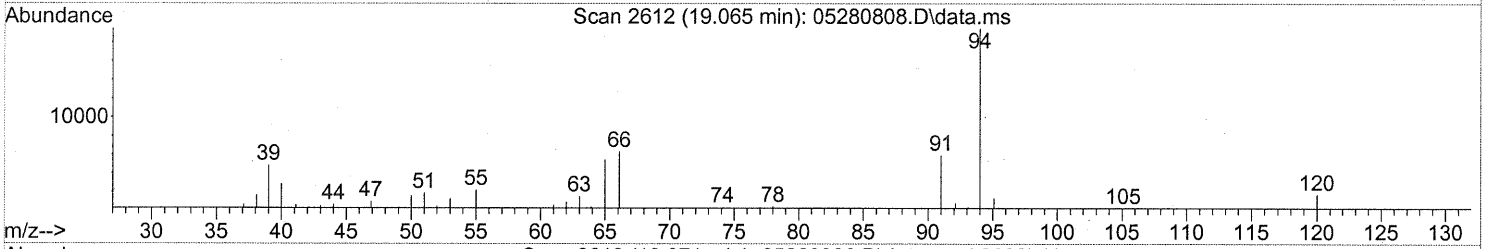
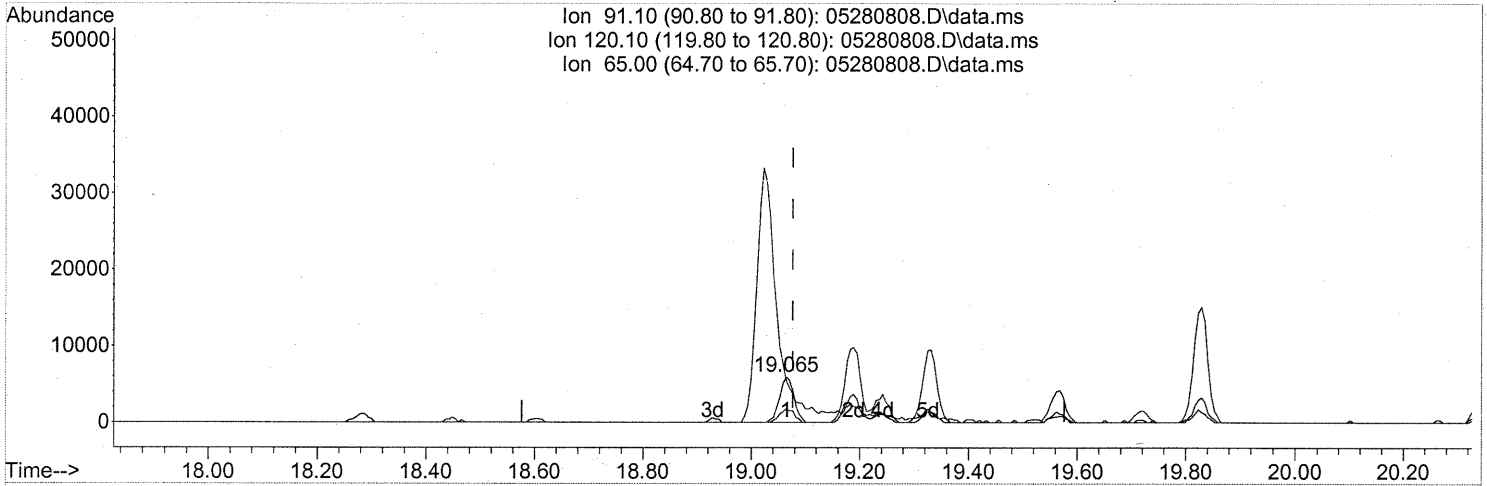
response 105393

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	51.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

19.065min (-0.012) 0.11ng

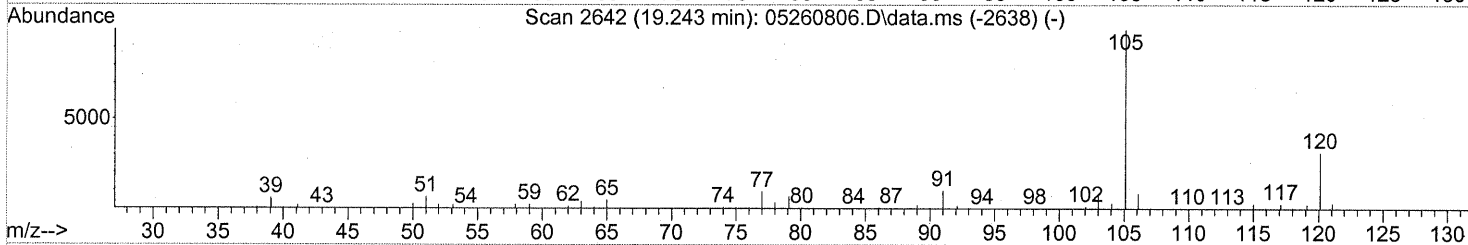
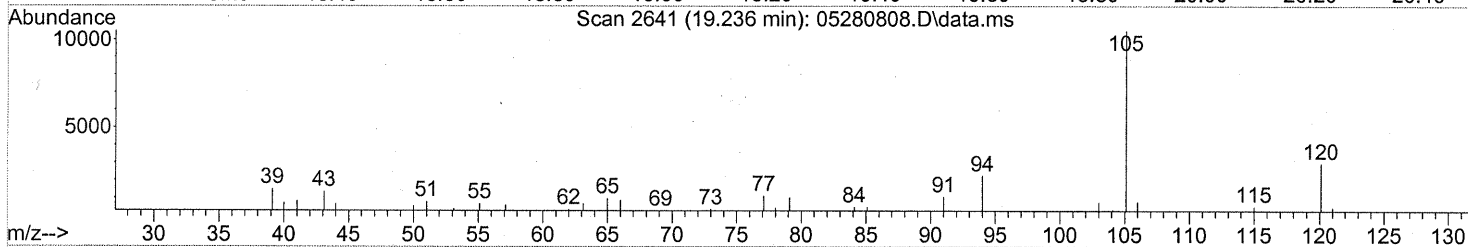
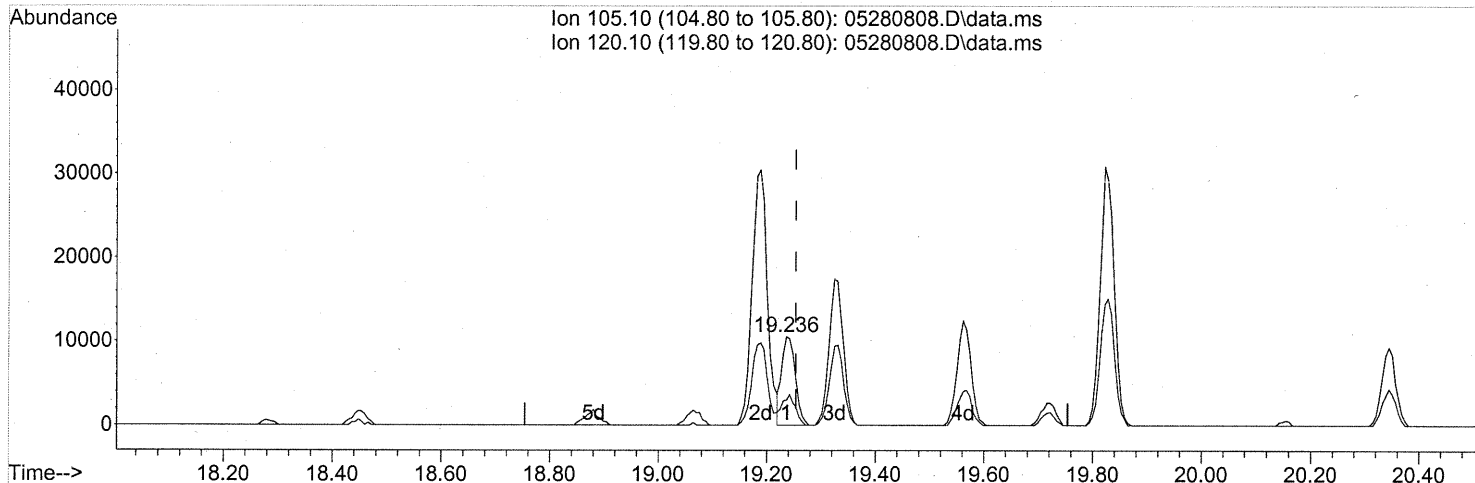
response 10819

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	29.22
65.00	10.40	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(78) 4-Ethyltoluene (T)

19.236min (-0.018) 0.22ng

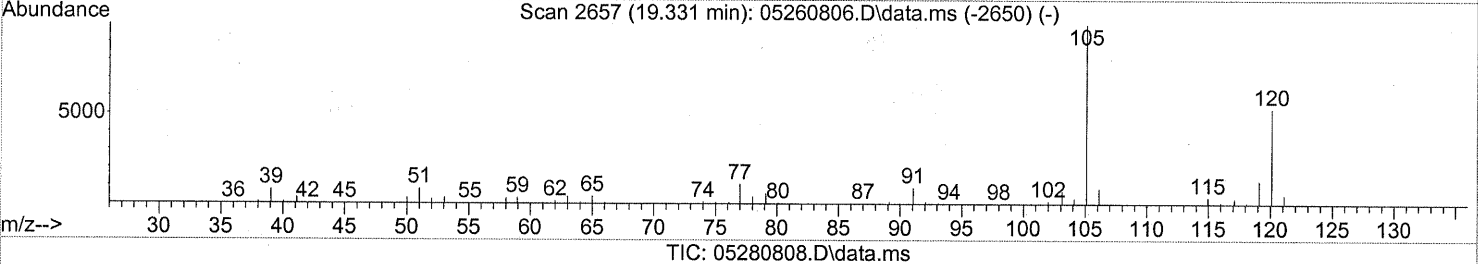
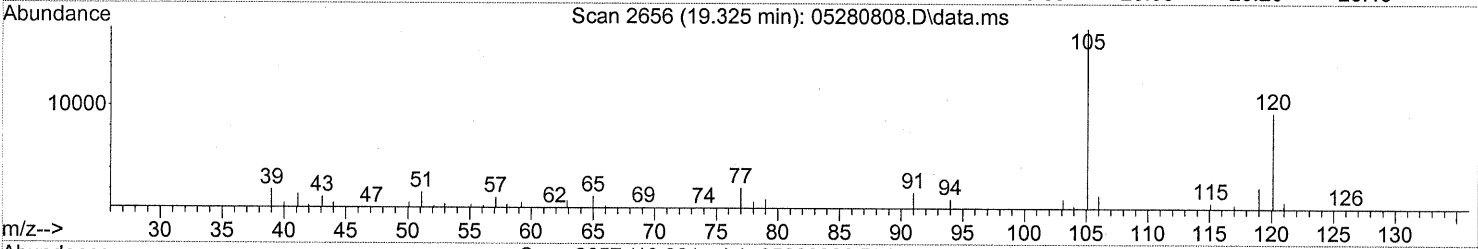
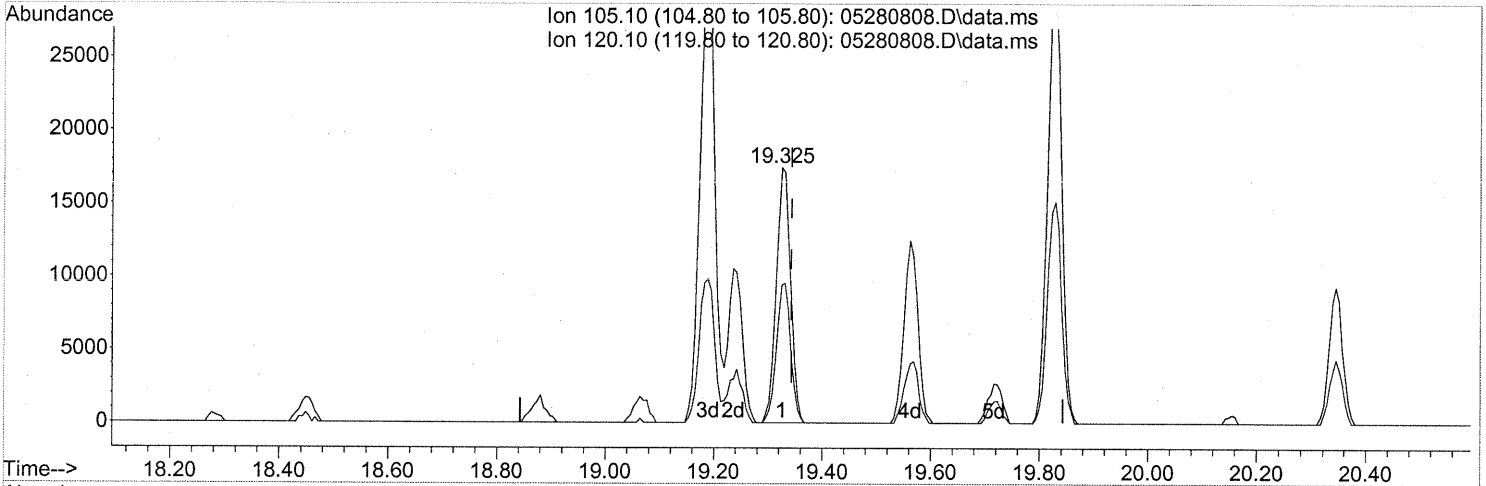
response 18518

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	33.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280808.D  
Acq On : 28 May 2008 13:58  
Operator : WA  
Sample : P0801507-009 (150ml)  
Misc : ENSR SG56B-05D (-3.8, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

19.325min (-0.018) 0.42ng

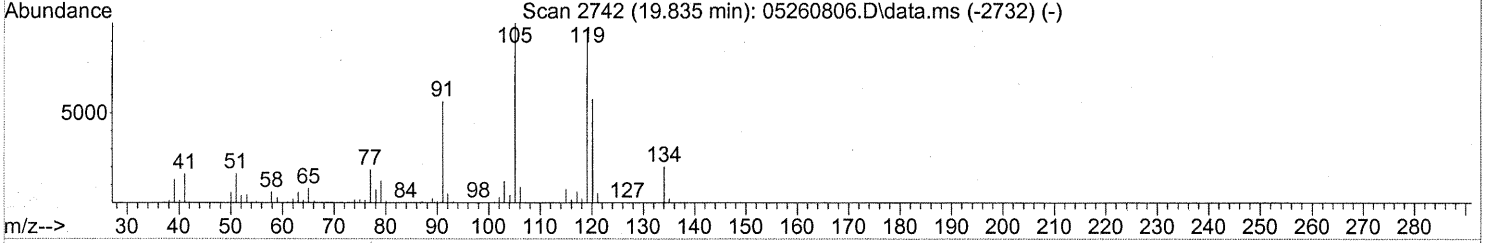
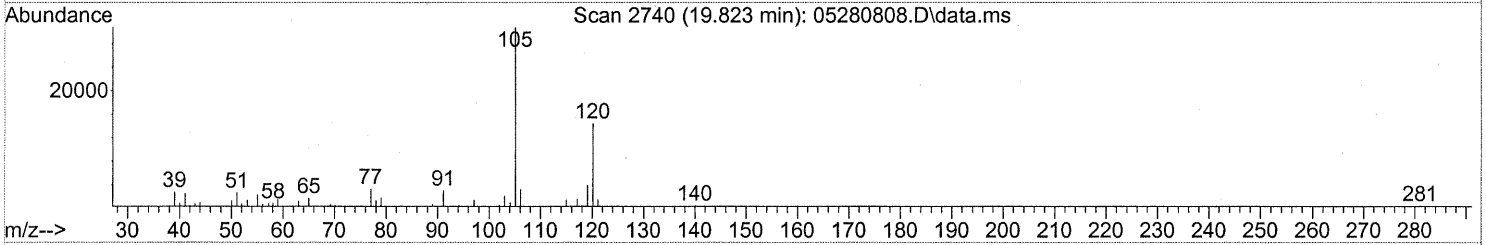
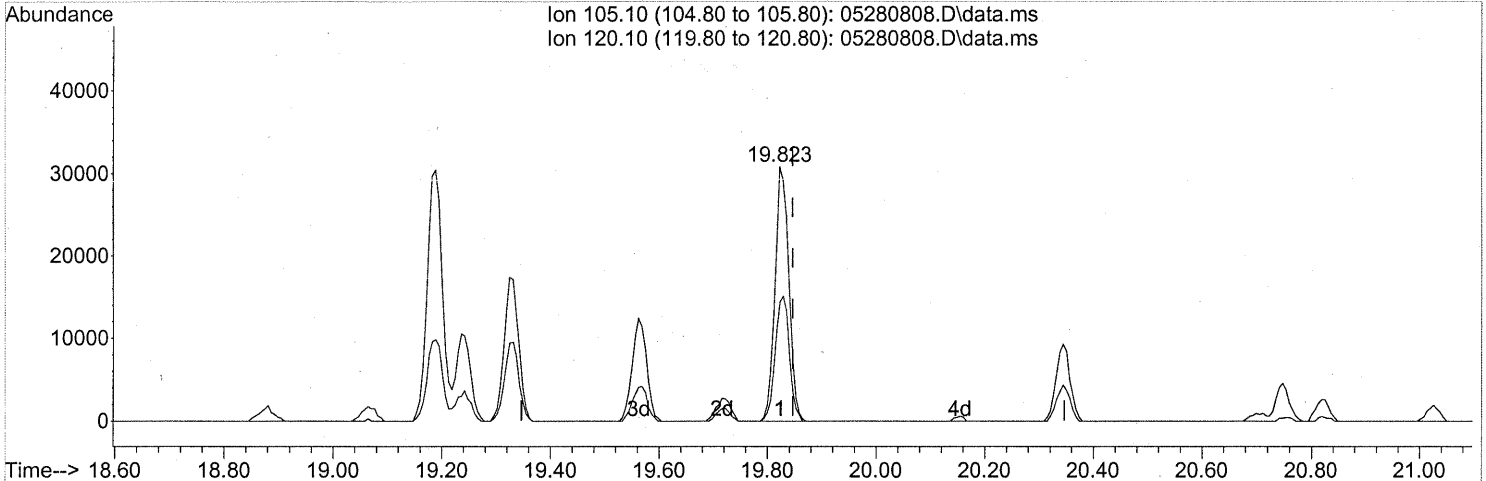
response 31772

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	54.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

19.823min (-0.024) 0.72ng

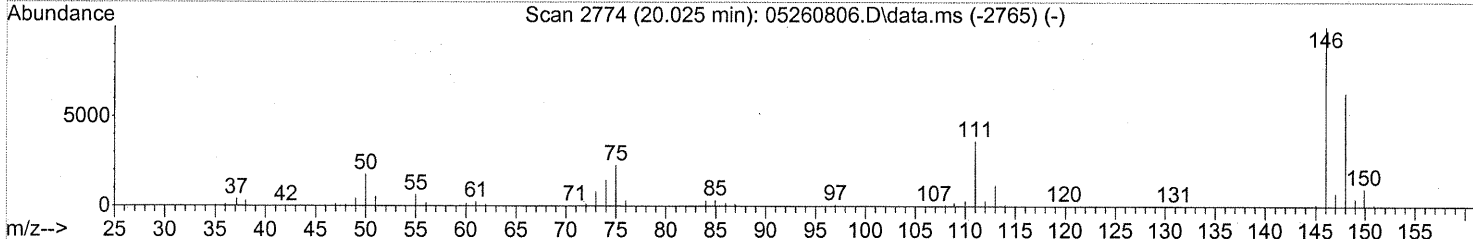
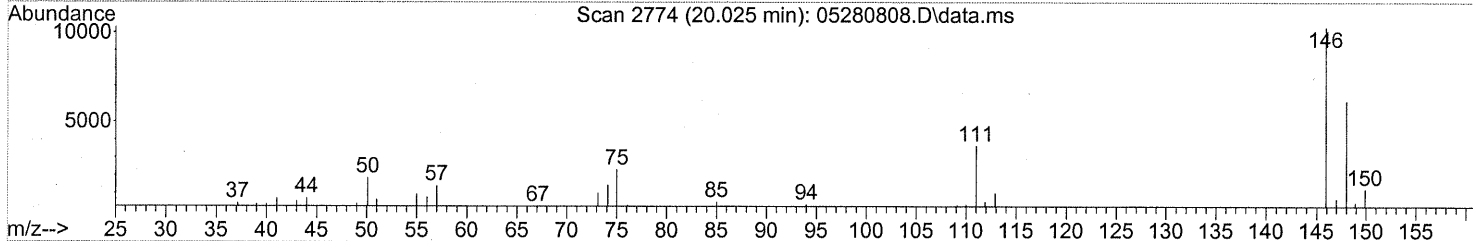
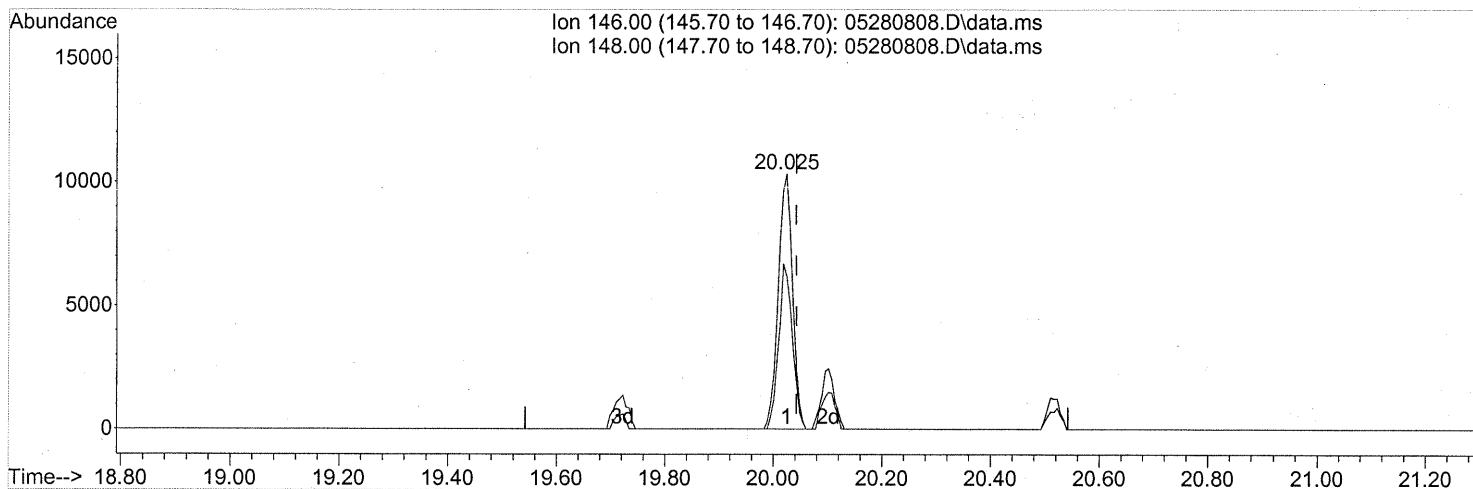
response 54534

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	50.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05280808.D\data.ms

(85) 1,3-Dichlorobenzene (T)

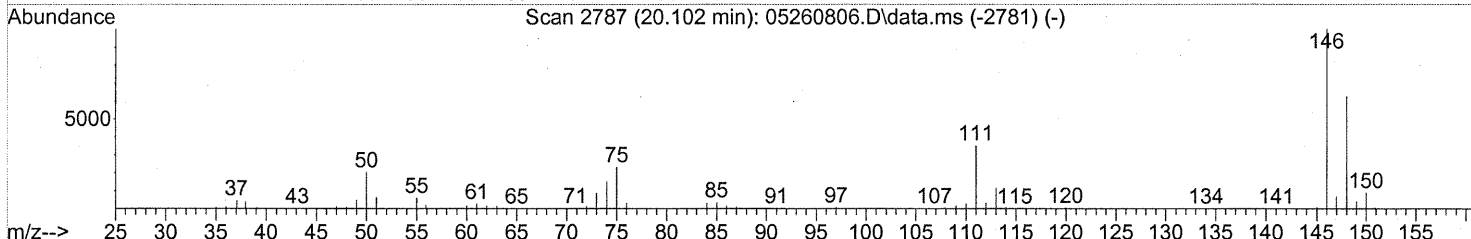
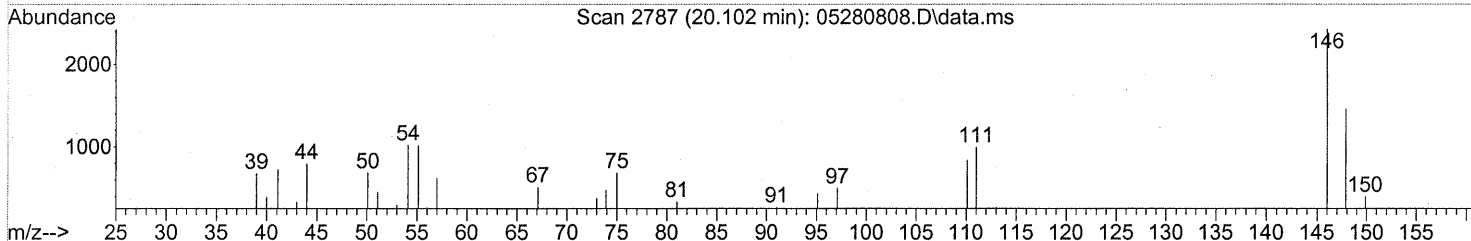
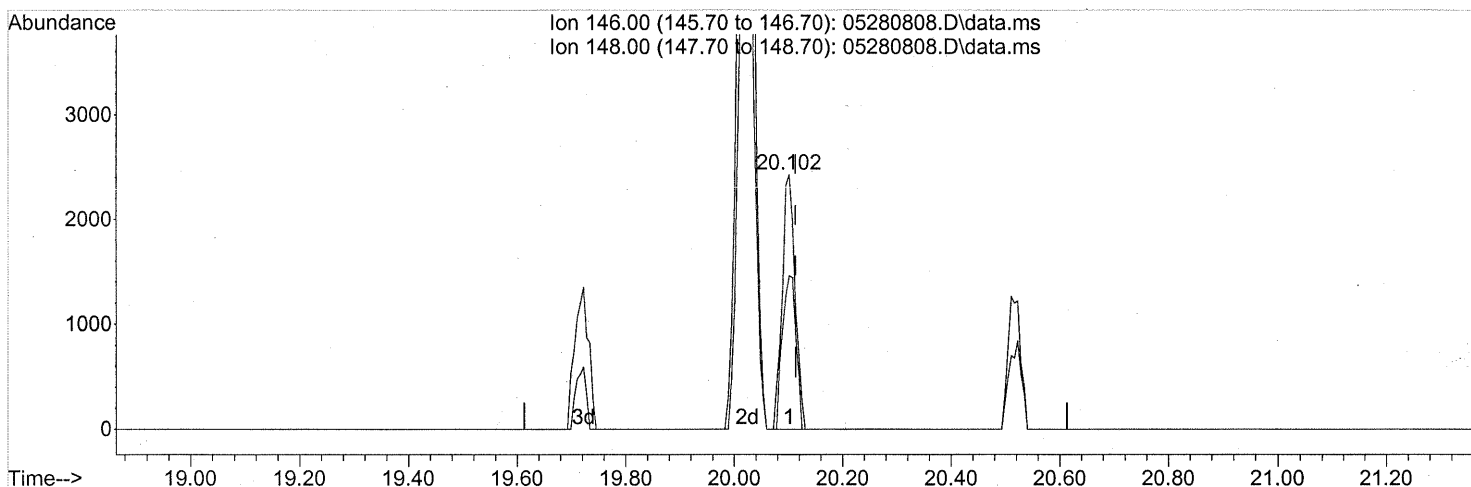
20.025min (-0.018) 0.39ng

response 18737

Ion	Exp%	Act%
146.00	100	100
148.00	63.10	61.83
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 0.09ng

response 4076

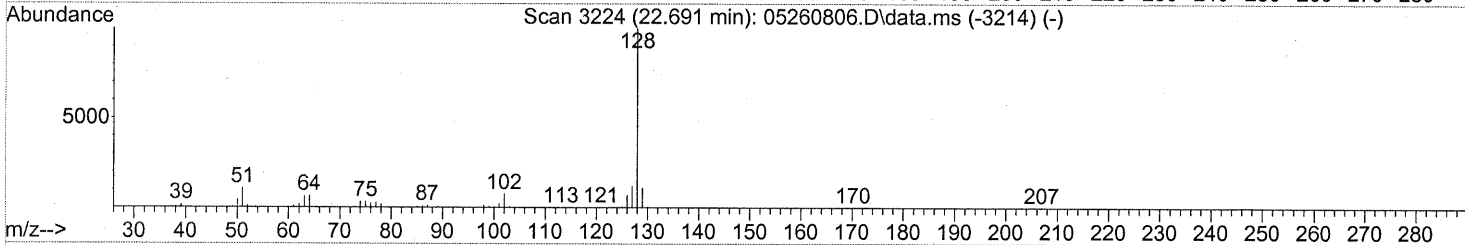
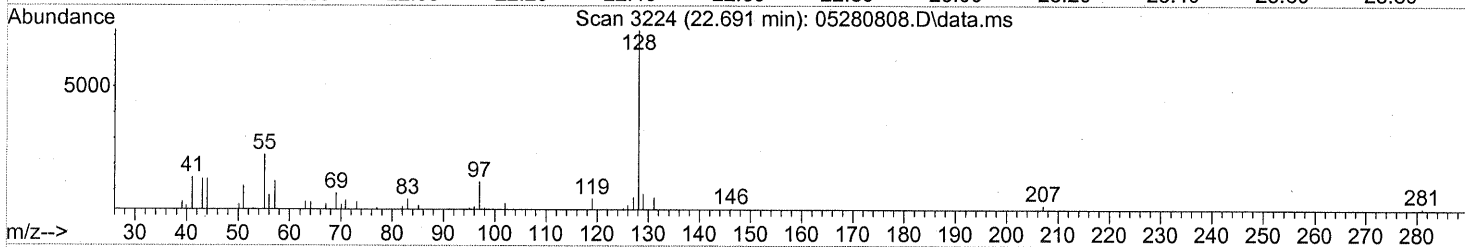
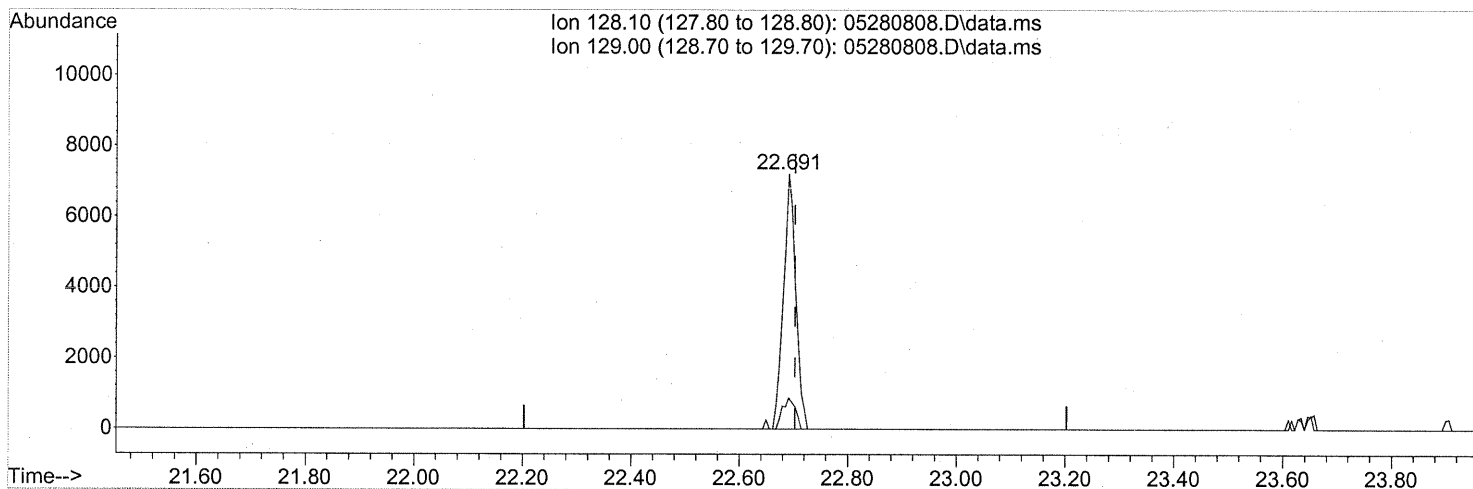
Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.17
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 14:45:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



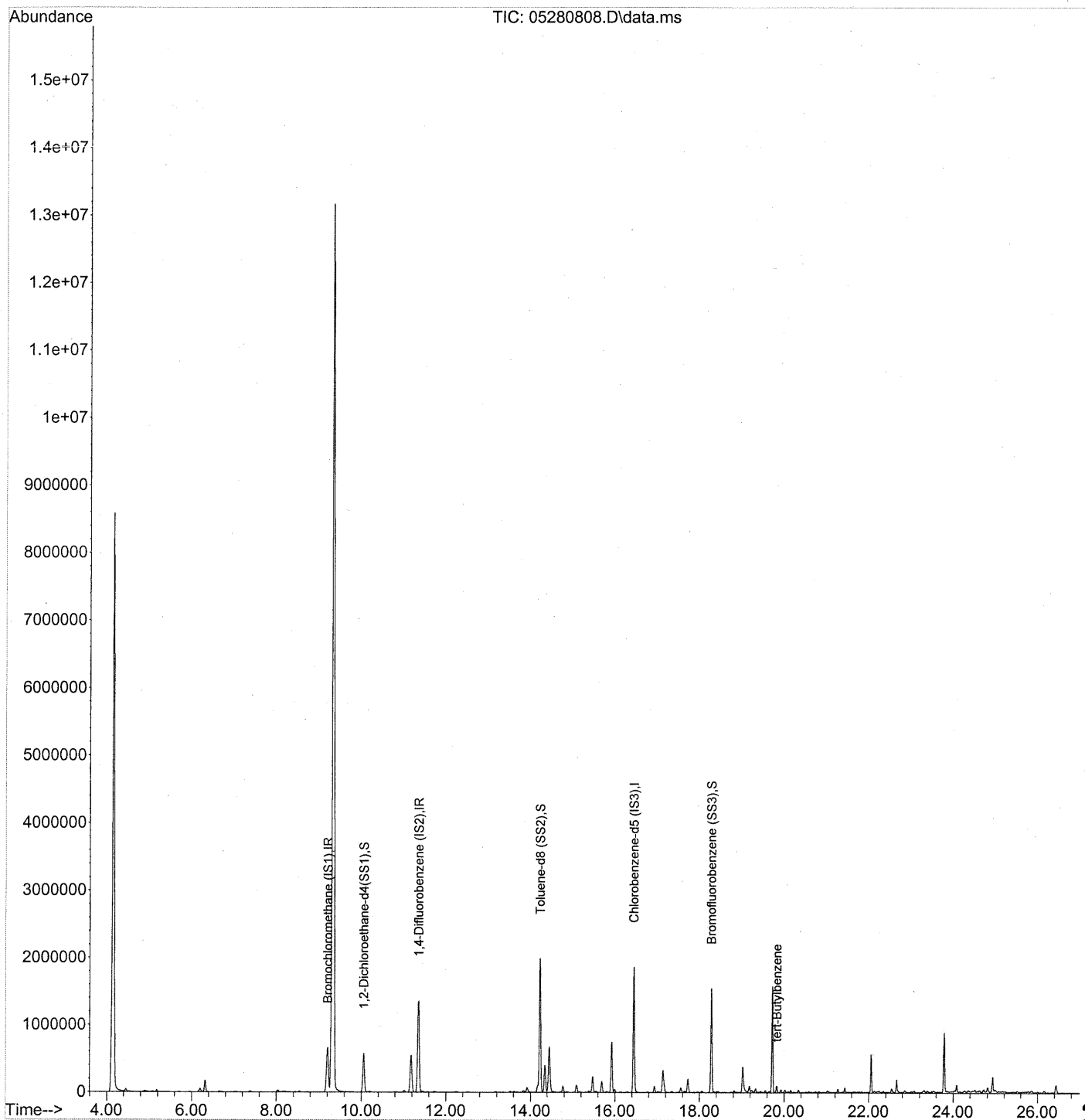
TIC: 05280808.D\data.ms

(95) Naphthalene (T)  
 22.691min (-0.012) 0.11ng  
 response 11625

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	12.54
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jun 04 14:39:45 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280808.D  
 Acq On : 28 May 2008 13:58  
 Operator : WA  
 Sample : P0801507-009 (150ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

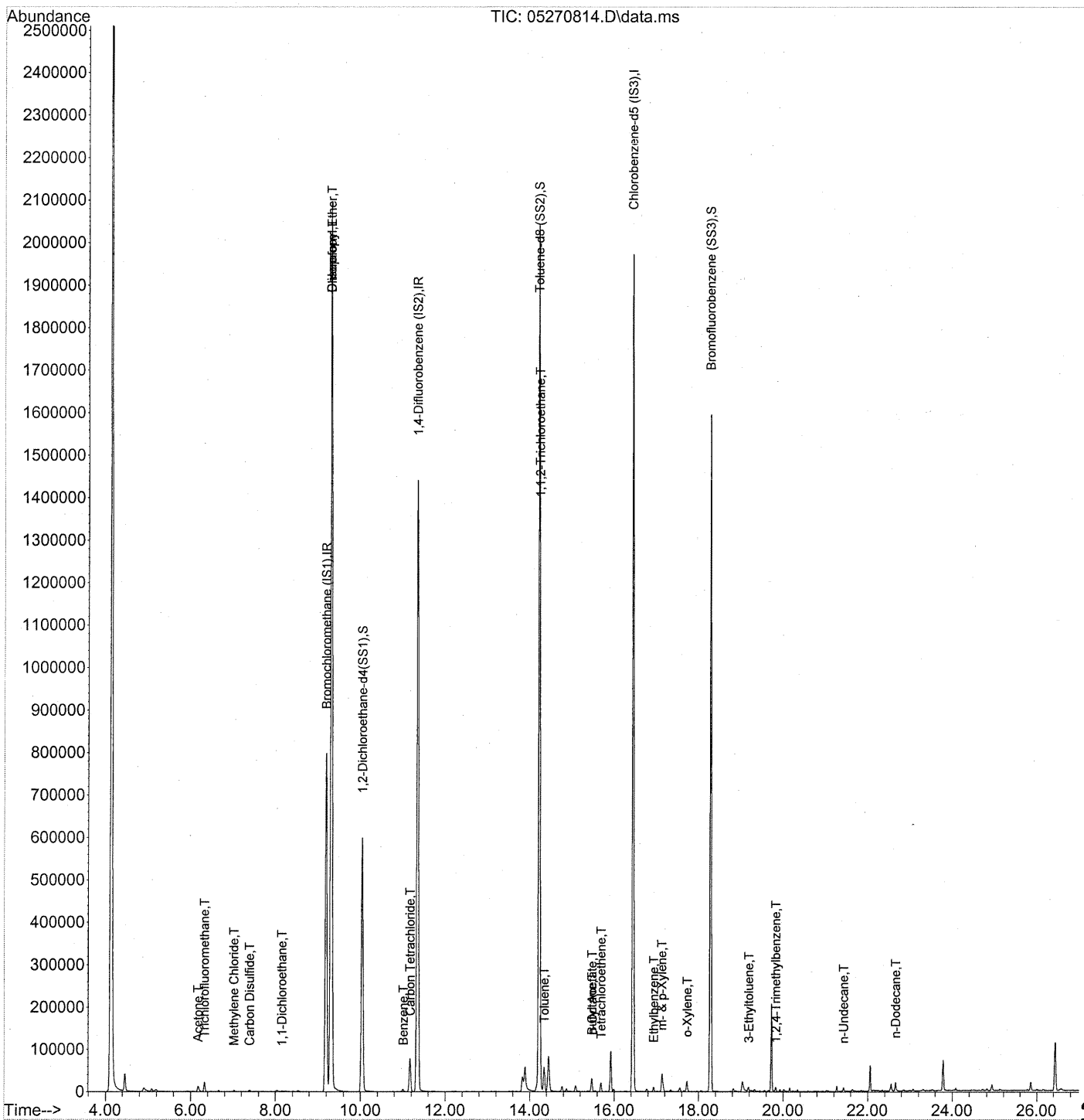
Quant Time: Jun 04 14:39:45 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.21	130	369769	25.000	ng	-0.04
3) 1,4-Difluorobenzene (IS2)	11.36	114	1533976	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	624528	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.06	65	527427	24.945	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.80%	
5) Toluene-d8 (SS2)	14.23	98	1559731	24.225	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.88%	
6) Bromofluorobenzene (SS3)	18.28	174	556292	25.986	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.96%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	7182	<del>0.092</del> ng	NR#	56
8) n-Butylbenzene	20.83	91	3342	N.D.		

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

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270814.D  
 Acq On : 27 May 2008 21:04  
 Operator : WA  
 Sample : P0801507-009 Dil (20ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 04:47:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270814.D  
 Acq On : 27 May 2008 21:04  
 Operator : WA  
 Sample : P0801507-009 Dil (20ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 04:47:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	390553	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1634882	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	658250	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	557740	24.975	ng	-0.05
Spiked Amount	25.000		Recovery	=	99.92%	✓
57) Toluene-d8 (SS2)	14.22	98	1659273	24.450	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.80%	✓
73) Bromofluorobenzene (SS3)	18.28	174	572807	25.387	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.56%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	652	N.D.		
3) Dichlorodifluoromethane	4.55	85	804	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.93	41	1974	N.D.		
12) Acrolein	6.06	56	736	N.D.		
13) Acetone	6.18	58	6759	0.331	ng	# 58
14) Trichlorofluoromethane	6.32	101	22224	0.649	ng	95
15) Isopropanol	6.38	45	201	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.02	84	1081	0.069	ng	# 38
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	4751	0.075	ng	81
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.15	63	2715	0.081	ng	# 50
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.53	72	95	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	231783	16.493	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	94	N.D.		

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DA 6/4/08

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270814.D  
 Acq On : 27 May 2008 21:04  
 Operator : WA  
 Sample : P0801507-009 Dil (20ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 04:47:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	2118621	91.927	ng	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.78	56	97	N.D.		
41) Benzene	11.02	78	5481	0.080	ng	96
42) Carbon Tetrachloride	11.18	117	66083	2.337	ng	98
43) Cyclohexane	11.34	84	1228	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	12.19	130	94	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	1017	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	139904	8.345	ng	# 7
58) Toluene	14.35	91	32204	0.418	ng	97
59) 2-Hexanone	14.59	43	1003	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.48	43	18731	0.256	ng	# 74
63) n-Octane	15.48	57	7114	0.306	ng	89
64) Tetrachloroethene	15.69	166	7462	0.328	ng	97
65) Chlorobenzene	16.49	112	430	N.D.		
66) Ethylbenzene	16.94	91	9926	0.113	ng	97
67) m- & p-Xylene	17.13	91	36236	0.625	ng	92
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	116	N.D.		
70) o-Xylene	17.73	91	13980	0.225	ng	95
71) n-Nonane	17.97	43	731	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.45	105	451	N.D.		
75) alpha-Pinene	19.16	93	213	N.D.		
76) n-Propylbenzene	19.07	91	1344	N.D.		
77) 3-Ethyltoluene	19.19	105	7277	0.073	ng	96
78) 4-Ethyltoluene	19.24	105	2589	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	3792	N.D.		

360

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270814.D  
 Acq On : 27 May 2008 21:04  
 Operator : WA  
 Sample : P0801507-009 Dil (20ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 04:47:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.72	118	1896	N.D.		
81) 2-Ethyltoluene	19.57	105	2906	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	6799	0.085	ng	98
83) n-Decane	19.93	57	2096	N.D.		
84) Benzyl Chloride	19.83	91	667	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	2500	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	536	N.D.		
87) sec-Butylbenzene	20.16	105	98	N.D.		
88) p-Isopropyltoluene	20.34	119	290	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	2220	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	112	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	3801	0.064	ng	75
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	2497	N.D.		
96) n-Dodecane	22.66	57	7937	0.137	ng	# 75
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

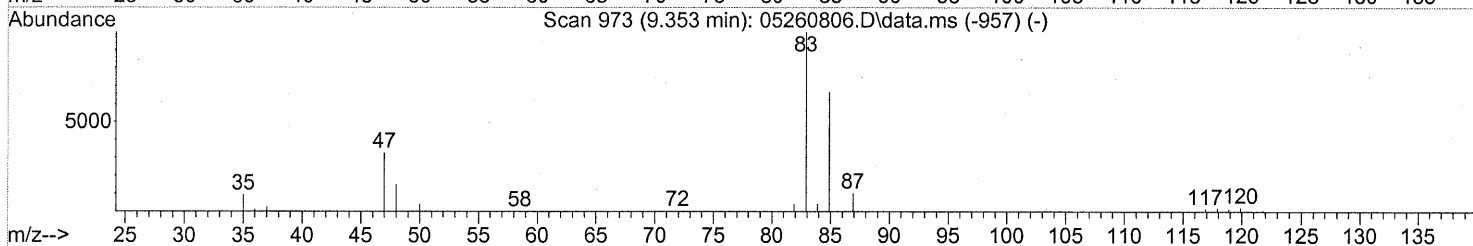
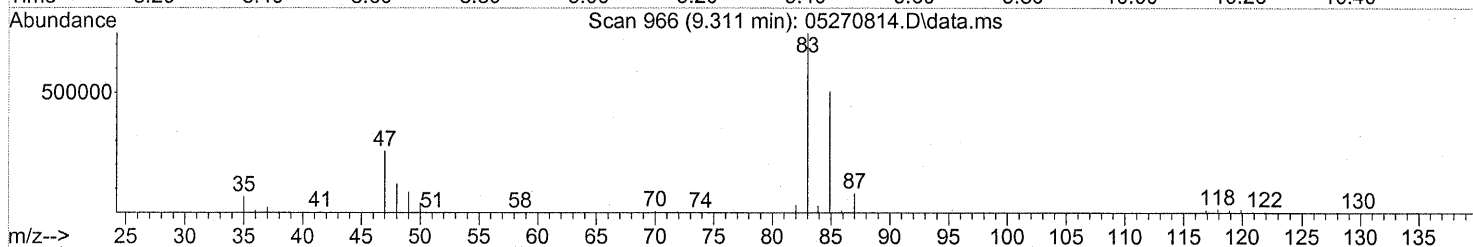
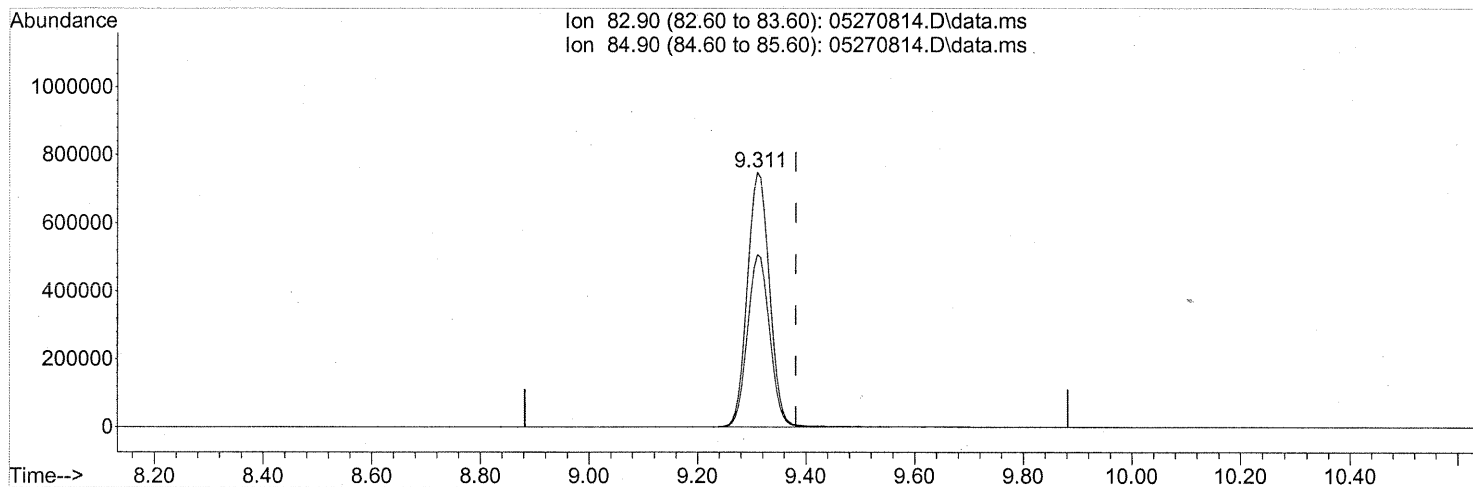
(#) = qualifier out of range (m) = manual integration (+) = signals summed

*WA* ~~6/4/08~~ 6/4/08

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270814.D  
 Acq On : 27 May 2008 21:04  
 Operator : WA  
 Sample : P0801507-009 Dil (20ml)  
 Misc : ENSR SG56B-05D (-3.8, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 28 04:47:22 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270814.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 91.93ng

response 2118621

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.66
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG55B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00772

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.025 Liter(s)  
 0.0050 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.70

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	34	3.4	ND	6.9	0.69	
74-87-3	Chloromethane	ND	6.8	3.4	ND	3.3	1.6	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	34	3.4	ND	4.9	0.49	
75-01-4	Vinyl Chloride	ND	6.8	3.4	ND	2.7	1.3	
74-83-9	Bromomethane	ND	6.8	3.4	ND	1.8	0.88	
75-00-3	Chloroethane	ND	6.8	3.4	ND	2.6	1.3	
64-17-5	Ethanol	ND	340	3.4	ND	180	1.8	
67-64-1	<b>Acetone</b>	<b>53</b>	340	5.0	<b>22</b>	140	2.1	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	6.8	3.4	ND	1.2	0.61	
107-13-1	Acrylonitrile	ND	34	4.8	ND	16	2.2	
75-35-4	1,1-Dichloroethene	ND	6.8	3.4	ND	1.7	0.86	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	34	5.0	ND	11	1.7	
75-09-2	<b>Methylene Chloride</b>	<b>4.6</b>	34	3.4	<b>1.3</b>	9.8	0.98	<b>J, B</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	6.8	3.4	ND	2.2	1.1	
76-13-1	Trichlorotrifluoroethane	ND	6.8	3.8	ND	0.89	0.50	
75-15-0	Carbon Disulfide	ND	34	8.2	ND	11	2.6	
156-60-5	trans-1,2-Dichloroethene	ND	6.8	3.4	ND	1.7	0.86	
75-34-3	1,1-Dichloroethane	ND	6.8	3.4	ND	1.7	0.84	
1634-04-4	Methyl tert-Butyl Ether	ND	6.8	3.4	ND	1.9	0.94	
108-05-4	Vinyl Acetate	ND	340	11	ND	97	3.1	
78-93-3	<b>2-Butanone (MEK)</b>	<b>8.8</b>	34	3.4	<b>3.0</b>	12	1.2	<b>J, B</b>
156-59-2	cis-1,2-Dichloroethene	ND	6.8	3.4	ND	1.7	0.86	
108-20-3	Diisopropyl Ether	ND	34	4.0	ND	8.1	0.96	
67-66-3	<b>Chloroform</b>	<b>14,000</b>	6.8	4.0	<b>2,900</b>	1.4	0.82	<b>B</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG55B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00772

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.025 Liter(s)  
 0.0050 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.70

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	34	3.5	ND	8.1	0.83	
107-06-2	1,2-Dichloroethane	ND	6.8	3.4	ND	1.7	0.84	
71-55-6	1,1,1-Trichloroethane	ND	6.8	3.4	ND	1.2	0.62	
71-43-2	<b>Benzene</b>	<b>9.9</b>	6.8	3.4	<b>3.1</b>	2.1	1.1	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>530</b>	6.8	3.4	<b>85</b>	1.1	0.54	
994-05-8	tert-Amyl Methyl Ether	ND	34	3.4	ND	8.1	0.81	
78-87-5	1,2-Dichloropropane	ND	6.8	3.4	ND	1.5	0.74	
75-27-4	Bromodichloromethane	ND	6.8	3.4	ND	1.0	0.51	
79-01-6	Trichloroethene	ND	6.8	3.4	ND	1.3	0.63	
123-91-1	1,4-Dioxane	ND	34	4.1	ND	9.4	1.2	
80-62-6	Methyl Methacrylate	ND	34	5.1	ND	8.3	1.2	
142-82-5	n-Heptane	ND	34	4.4	ND	8.3	1.1	
10061-01-5	cis-1,3-Dichloropropene	ND	34	3.5	ND	7.5	0.78	
108-10-1	4-Methyl-2-pentanone	ND	34	3.8	ND	8.3	0.93	
10061-02-6	trans-1,3-Dichloropropene	ND	34	4.3	ND	7.5	0.94	
79-00-5	1,1,2-Trichloroethane	ND	6.8	3.4	ND	1.2	0.62	
108-88-3	<b>Toluene</b>	<b>41</b>	34	3.4	<b>11</b>	9.0	0.90	
591-78-6	2-Hexanone	ND	34	5.2	ND	8.3	1.3	
124-48-1	Dibromochloromethane	ND	6.8	4.6	ND	0.80	0.54	
106-93-4	1,2-Dibromoethane	ND	6.8	3.7	ND	0.89	0.48	
111-65-9	<b>n-Octane</b>	<b>23</b>	34	3.4	<b>4.8</b>	7.3	0.73	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>130</b>	6.8	3.4	<b>19</b>	1.0	0.50	
108-90-7	Chlorobenzene	ND	6.8	3.5	ND	1.5	0.75	

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B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08      **364**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG55B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00772

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.025 Liter(s)  
 0.0050 Liter(s)

Initial Pressure (psig): -3.8      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.70

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	8.0	34	4.2	1.8	7.8	0.97	J
179601-23-1	m,p-Xylenes	37	34	8.8	8.5	7.8	2.0	
75-25-2	Bromoform	ND	34	5.2	ND	3.3	0.50	
100-42-5	Styrene	ND	34	5.2	ND	8.0	1.2	
95-47-6	o-Xylene	11	34	4.3	2.6	7.8	0.99	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	6.8	4.4	ND	0.99	0.63	
98-82-8	Cumene	ND	34	3.8	ND	6.9	0.77	
103-65-1	n-Propylbenzene	ND	34	3.5	ND	6.9	0.72	
622-96-8	4-Ethyltoluene	ND	34	3.9	ND	6.9	0.79	
108-67-8	1,3,5-Trimethylbenzene	ND	34	4.1	ND	6.9	0.83	
98-83-9	alpha-Methylstyrene	ND	34	5.0	ND	7.0	1.0	
95-63-6	1,2,4-Trimethylbenzene	ND	34	4.7	ND	6.9	0.95	
100-44-7	Benzyl Chloride	ND	6.8	5.8	ND	1.3	1.1	
541-73-1	1,3-Dichlorobenzene	ND	6.8	4.2	ND	1.1	0.70	
106-46-7	1,4-Dichlorobenzene	ND	6.8	3.8	ND	1.1	0.63	
135-98-8	sec-Butylbenzene	ND	34	3.9	ND	6.2	0.72	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	34	4.4	ND	6.2	0.81	
95-50-1	1,2-Dichlorobenzene	ND	6.8	4.5	ND	1.1	0.75	
96-12-8	1,2-Dibromo-3-chloropropane	ND	34	5.2	ND	3.5	0.53	
120-82-1	1,2,4-Trichlorobenzene	ND	6.8	5.2	ND	0.92	0.70	
91-20-3	Naphthalene	ND	14	5.0	ND	2.6	0.96	
87-68-3	Hexachlorobutadiene	ND	6.8	6.1	ND	0.64	0.57	
98-06-6	tert-Butylbenzene	ND	14	3.4	ND	2.5	0.62	
104-51-8	n-Butylbenzene	ND	14	3.4	ND	2.5	0.62	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

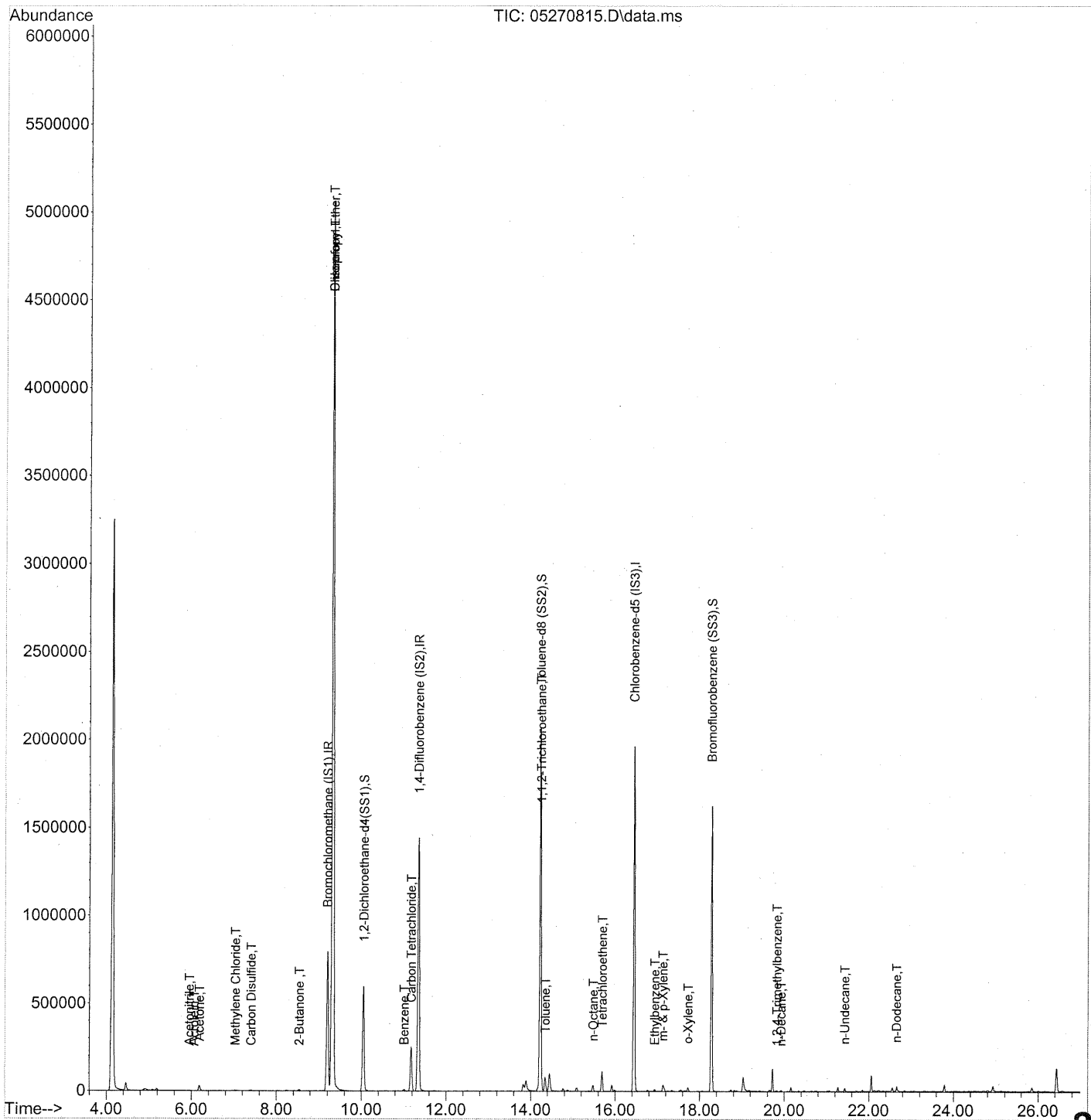
Verified By: CA

Date: 6/5/08

**365**

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270815.D  
Acq On : 27 May 2008 21:42  
Operator : WA  
Sample : P0801507-010 (25ml)  
Misc : ENSR SG55B-05 (-3.8, 3.8)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	390977	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1623936	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	656497	25.000	ng	-0.01

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	558634	24.988	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.96%	✓
57) Toluene-d8 (SS2)	14.23	98	1651846	24.406	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.64%	✓
73) Bromofluorobenzene (SS3)	18.28	174	576224	25.607	ng	-0.01
Spiked Amount	25.000		Recovery	=	102.44%	✓

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1431	N.D.		
3) Dichlorodifluoromethane	4.56	85	1021	N.D.	✓	
4) Chloromethane	0.00	50	0	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	5.60	64	90	N.D.	✓	
10) Ethanol	5.71	45	316	N.D.	✓	
11) Acetonitrile	5.95	41	3210	0.054	ng	# 23
12) Acrolein	6.06	56	843	0.057	ng	91
13) Acetone	6.19	58	15936	0.780	ng	# 67
14) Trichlorofluoromethane	6.34	101	1617	N.D.	✓	
15) Isopropanol	6.39	45	869	N.D.	✓	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.96	59	213	N.D.	✓	
19) Methylene Chloride	7.03	84	1060	0.067	ng	# 6
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.40	76	5138	0.081	ng	80
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.54	72	1385	0.130	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.32	87	582479	41.402	ng	UR# 1
30) Ethyl Acetate	0.00	61	0	N.D.	✓	
31) n-Hexane	9.22	57	238	N.D.	✓	

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	9.32	83	5393343	<del>233.764 ng</del> see dif	96
34) Tetrahydrofuran	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓	
36) 1,2-Dichloroethane	0.00	62	0	N.D. ✓	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	10.80	56	230	N.D.	
41) Benzene	11.01	78	9913	0.145 ng	96
42) Carbon Tetrachloride	11.18	117	220090	7.837 ng	99
43) Cyclohexane	11.33	84	1226	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓	
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓	
46) Bromodichloromethane	0.00	83	0	N.D. ✓	
47) Trichloroethene	12.20	130	609	N.D. ✓	
48) 1,4-Dioxane	0.00	88	0	N.D. ✓	
49) Isooctane	12.26	57	1300	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D. ✓	
51) n-Heptane	12.51	71	208	N.D. ✓	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓	
53) 4-Methyl-2-pentanone	13.17	58	90	N.D. ✓	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓	
55) 1,1,2-Trichloroethane	14.24	97	140659	8.446 ng NR#	7
58) Toluene	14.35	91	45948	0.598 ng	99
59) 2-Hexanone	14.59	43	2465	N.D. ✓	
60) Dibromochloromethane	0.00	129	0	N.D. ✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓	
62) Butyl Acetate	15.31	43	103	N.D.	
63) n-Octane	15.48	57	7682	0.331 ng	85
64) Tetrachloroethene	15.69	166	43490	1.915 ng	99
65) Chlorobenzene	16.49	112	1142	N.D. ✓	
66) Ethylbenzene	16.94	91	10306	0.118 ng	93
67) m- & p-Xylene	17.13	91	31424	0.544 ng	92
68) Bromoform	0.00	173	0	N.D. ✓	
69) Styrene	17.59	104	445	N.D. ✓	
70) o-Xylene	17.73	91	10254	0.166 ng	98
71) n-Nonane	17.96	43	1682	N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. ✓	
74) Cumene	18.45	105	539	N.D. ✓	
75) alpha-Pinene	19.04	93	1443	N.D.	
76) n-Propylbenzene	19.06	91	1043	N.D. ✓	
77) 3-Ethyltoluene	19.18	105	4199	N.D.	
78) 4-Ethyltoluene	19.24	105	1565	N.D. ✓	
79) 1,3,5-Trimethylbenzene	19.33	105	1893	N.D. ✓	

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

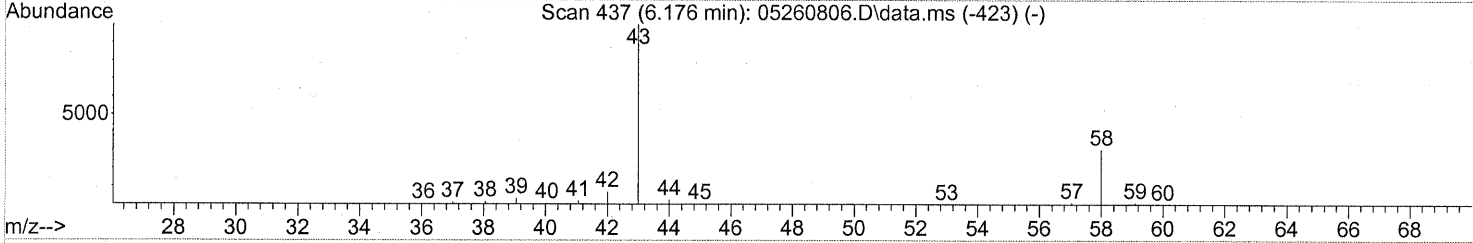
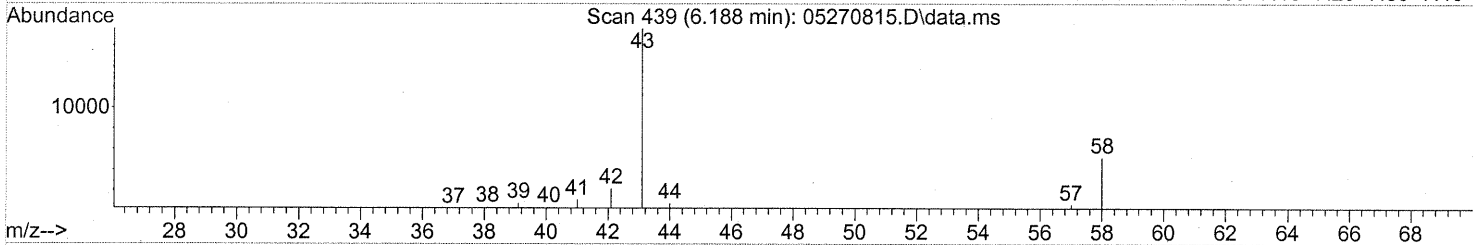
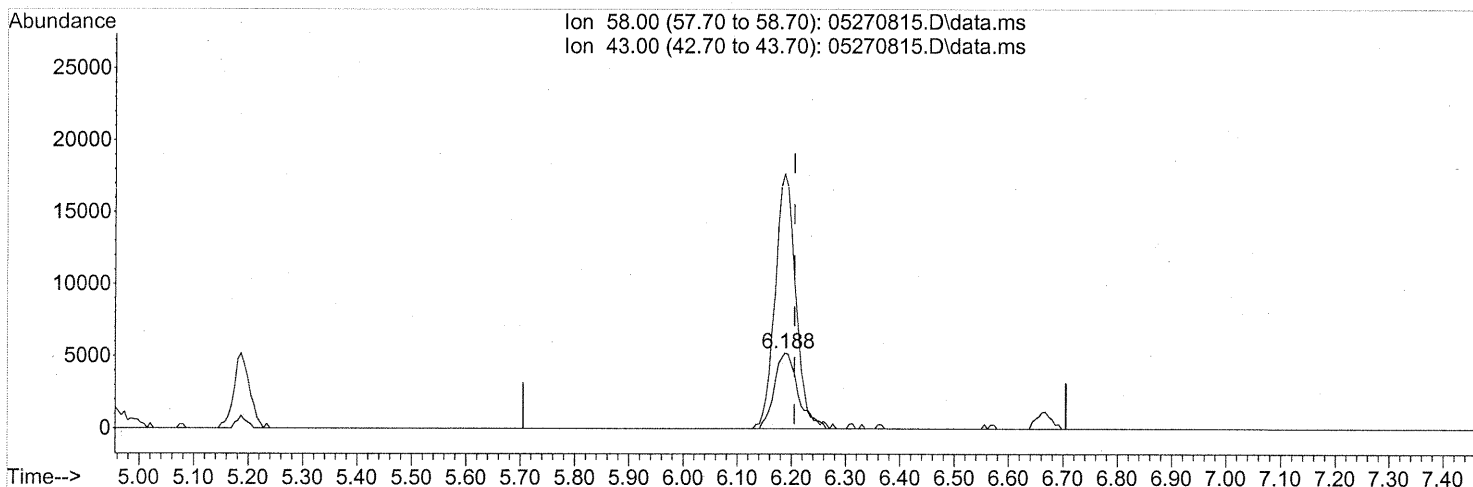
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	1279	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	1531	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	4022	<del>0.050 ng</del>		93
83) n-Decane	19.92	57	2869	0.051 ng	#	67
84) Benzyl Chloride	19.82	91	294	N.D.	✓	
85) 1,3-Dichlorobenzene	20.10	146	398	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	398	N.D.	✓	
87) sec-Butylbenzene	20.16	105	201	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	487	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	1430	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	✓	
91) d-Limonene	20.52	68	330	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.43	57	8049	0.135 ng		76
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.69	128	4597	N.D.	✓	
96) n-Dodecane	22.66	57	11273	0.195 ng	#	74
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270815.D  
Acq On : 27 May 2008 21:42  
Operator : WA  
Sample : P0801507-010 (25ml)  
Misc : ENSR SG55B-05 (-3.8, 3.8)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270815.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 0.78ng

response 15936

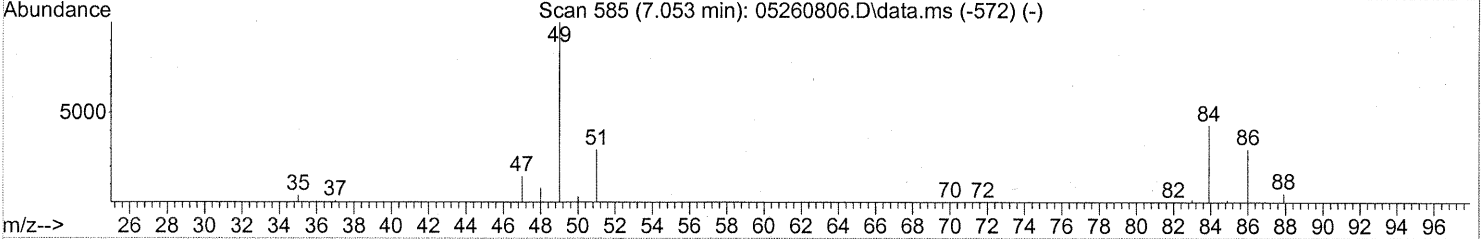
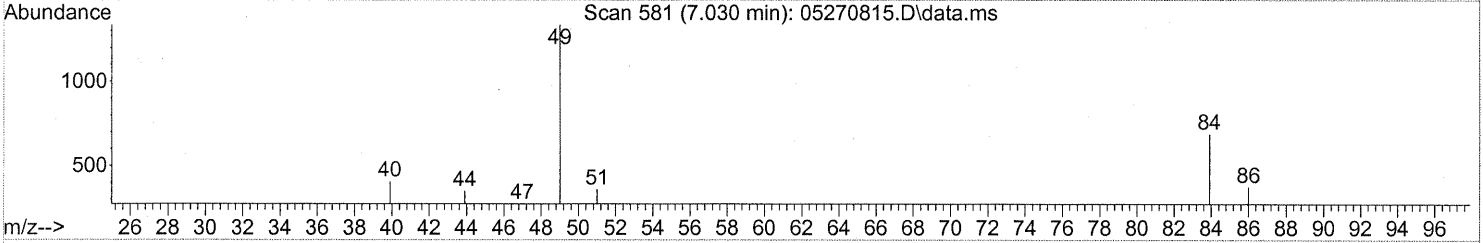
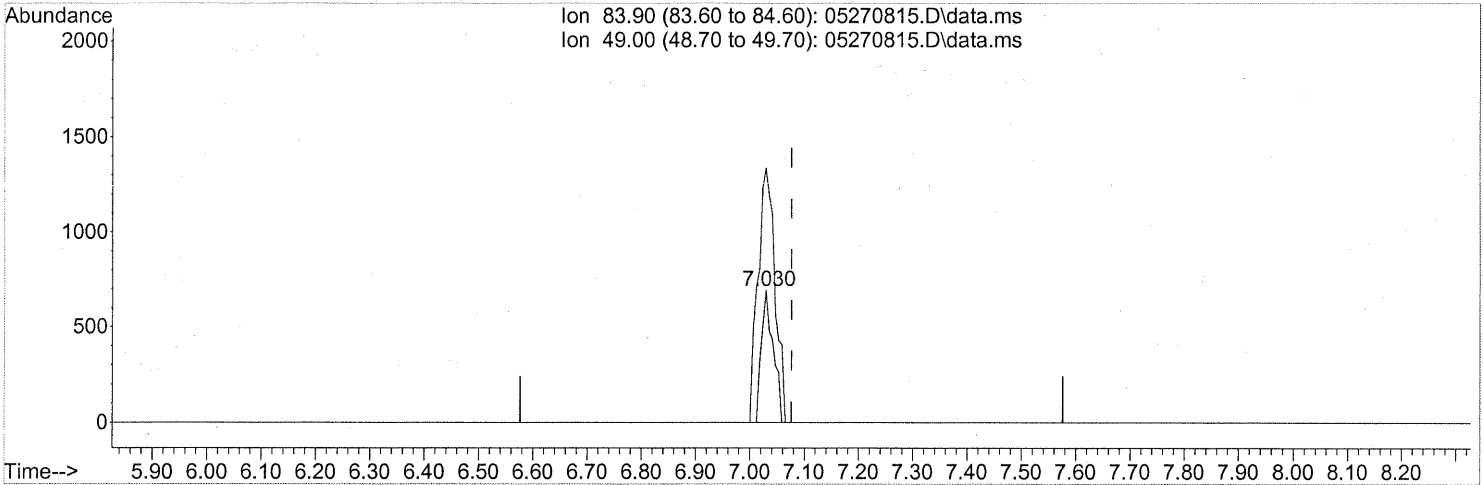
Ion	Exp%	Act%
58.00	100	100
43.00	368.40	293.65#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.030min (-0.047) 0.07ng

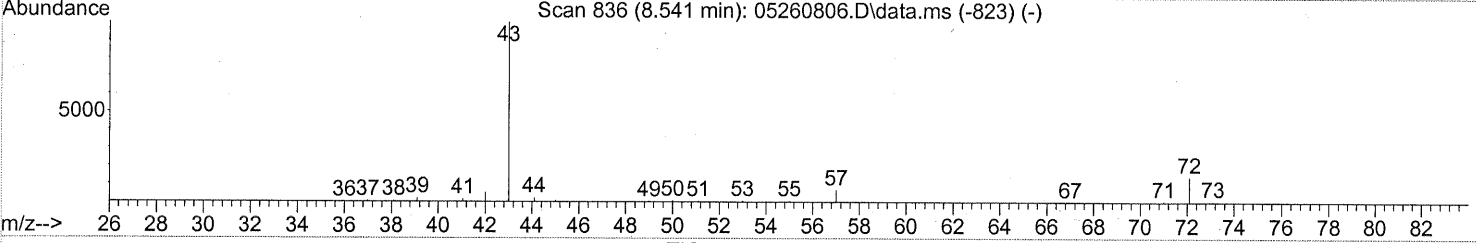
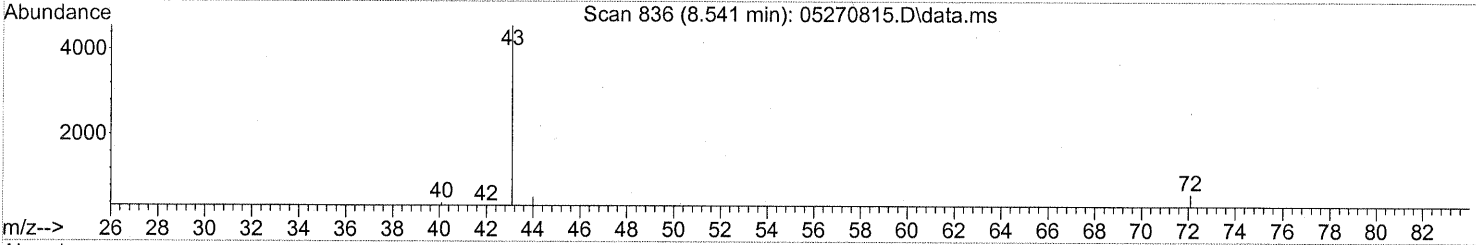
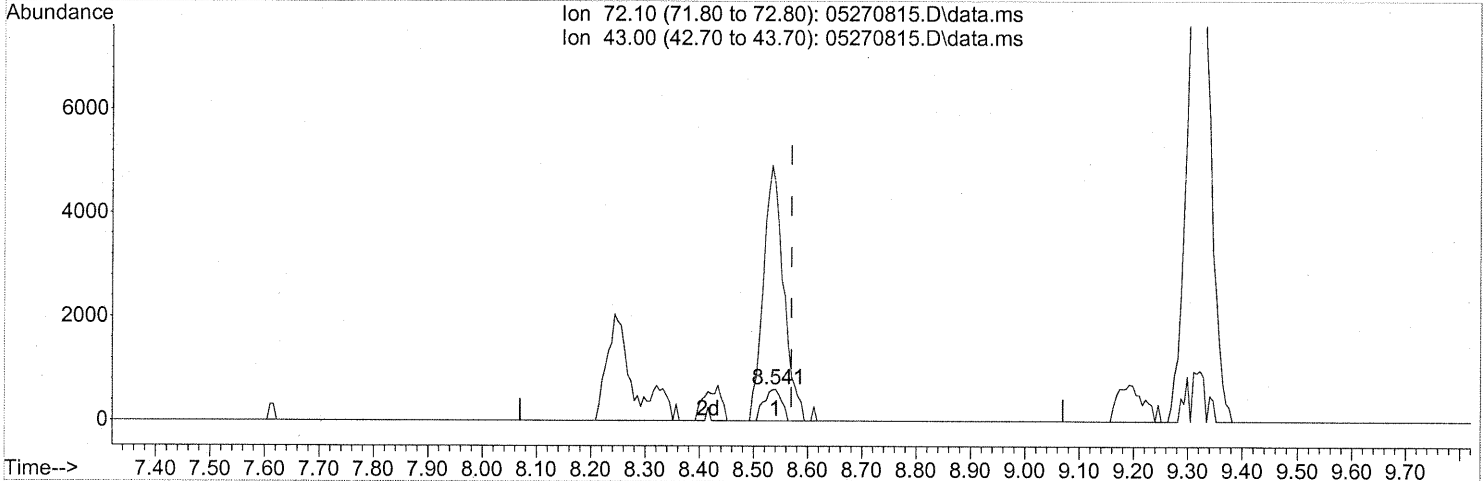
response 1060

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	277.17#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.541min (-0.030) 0.13ng

response 1385

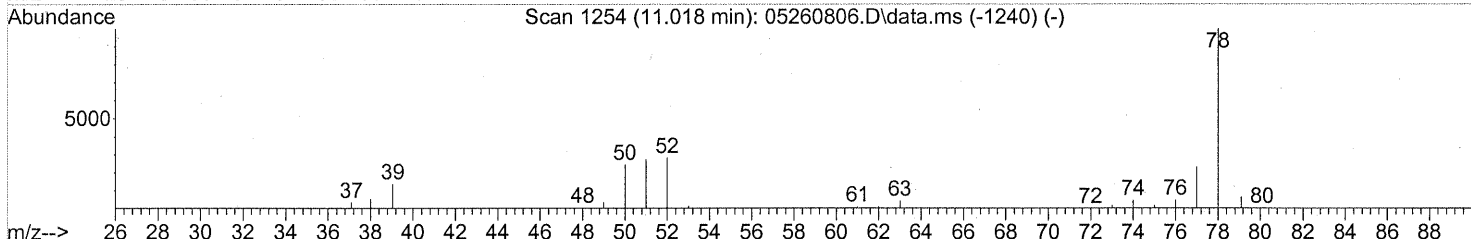
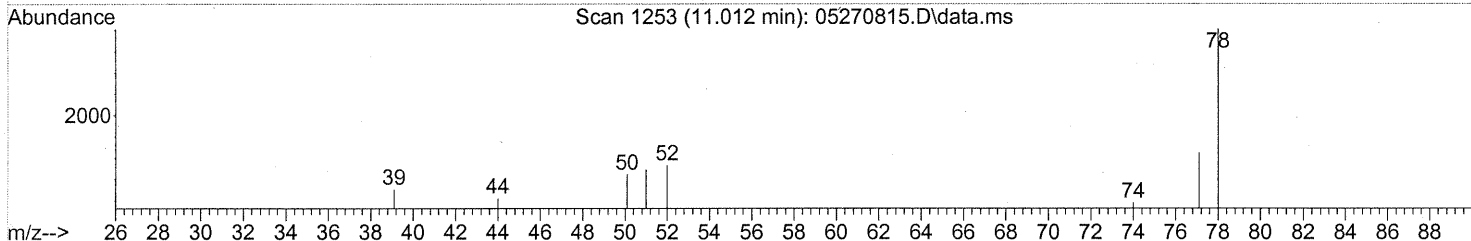
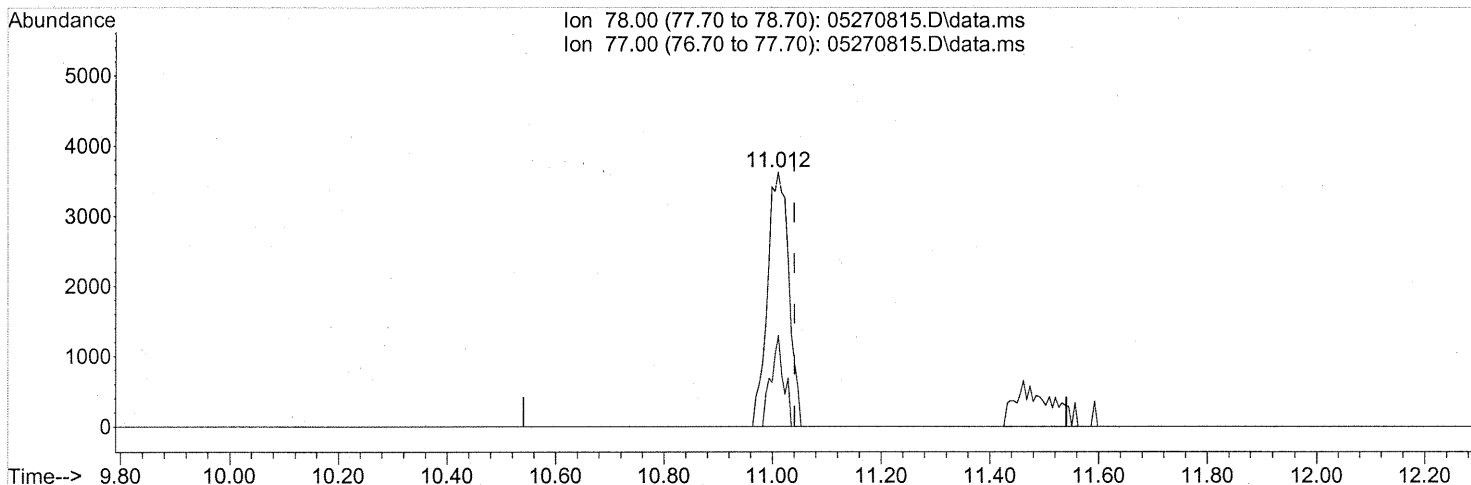
Ion	Exp%	Act%
72.10	100	100
43.00	491.60	925.63#
0.00	0.00	0.00
0.00	0.00	0.00

372

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270815.D  
Acq On : 27 May 2008 21:42  
Operator : WA  
Sample : P0801507-010 (25ml)  
Misc : ENSR SG55B-05 (-3.8, 3.8)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270815.D\data.ms

(41) Benzene (T)

11.012min (-0.030) 0.14ng

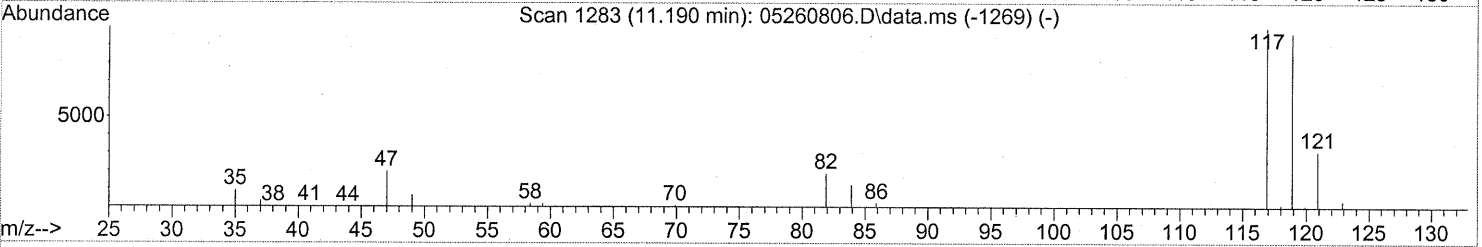
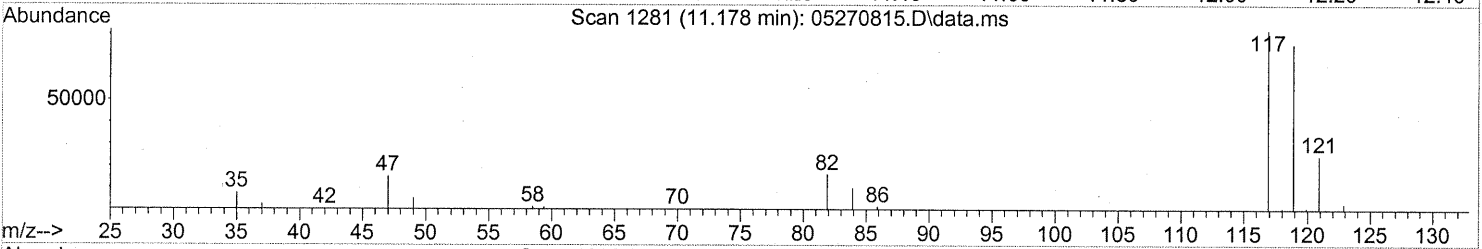
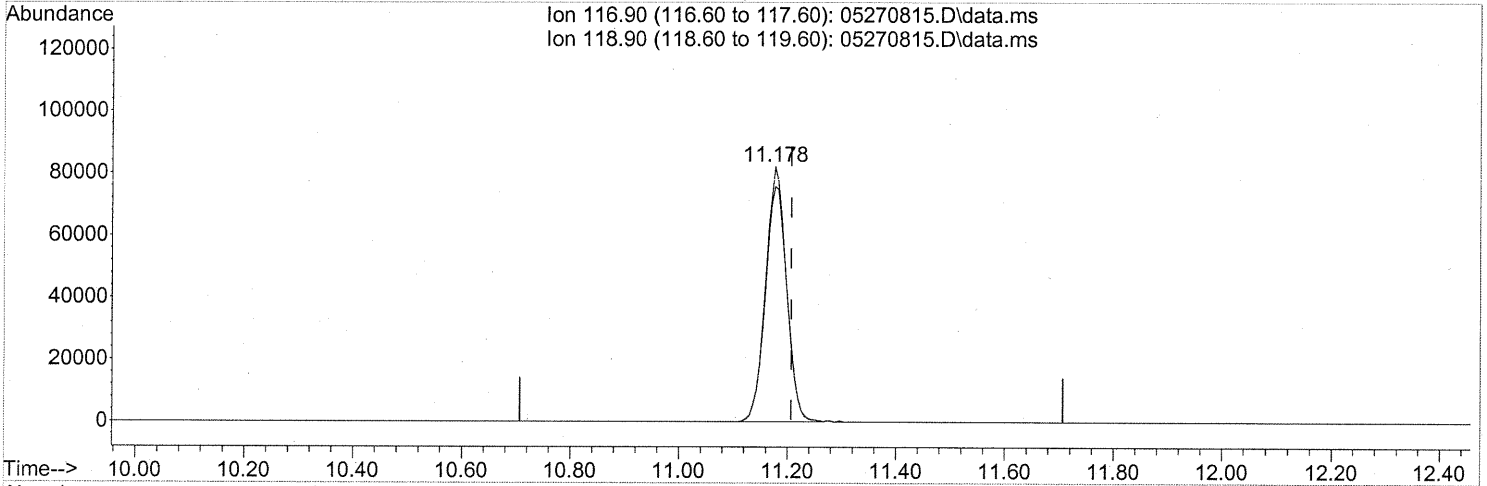
response 9913

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	21.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270815.D\data.ms

(42) Carbon Tetrachloride (T)

11.178min (-0.030) 7.84ng

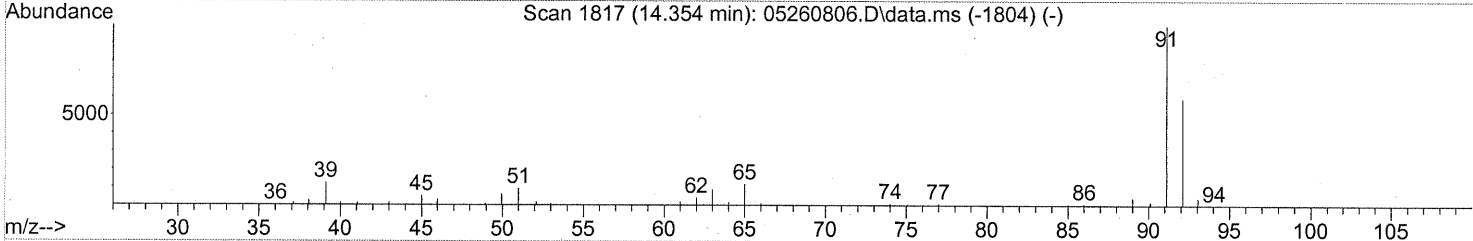
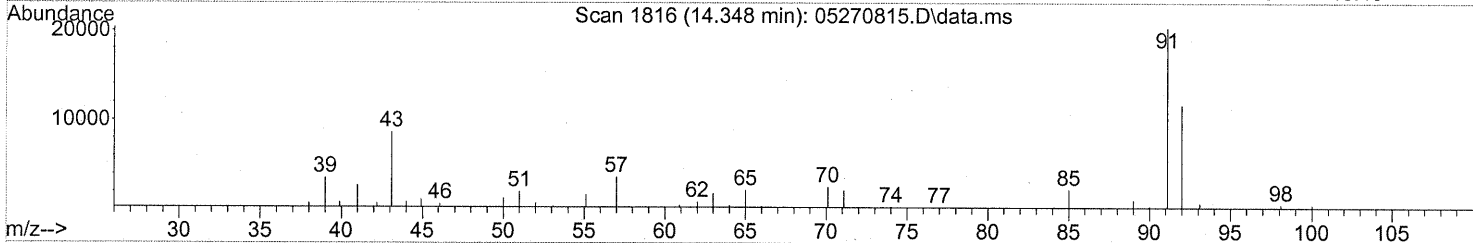
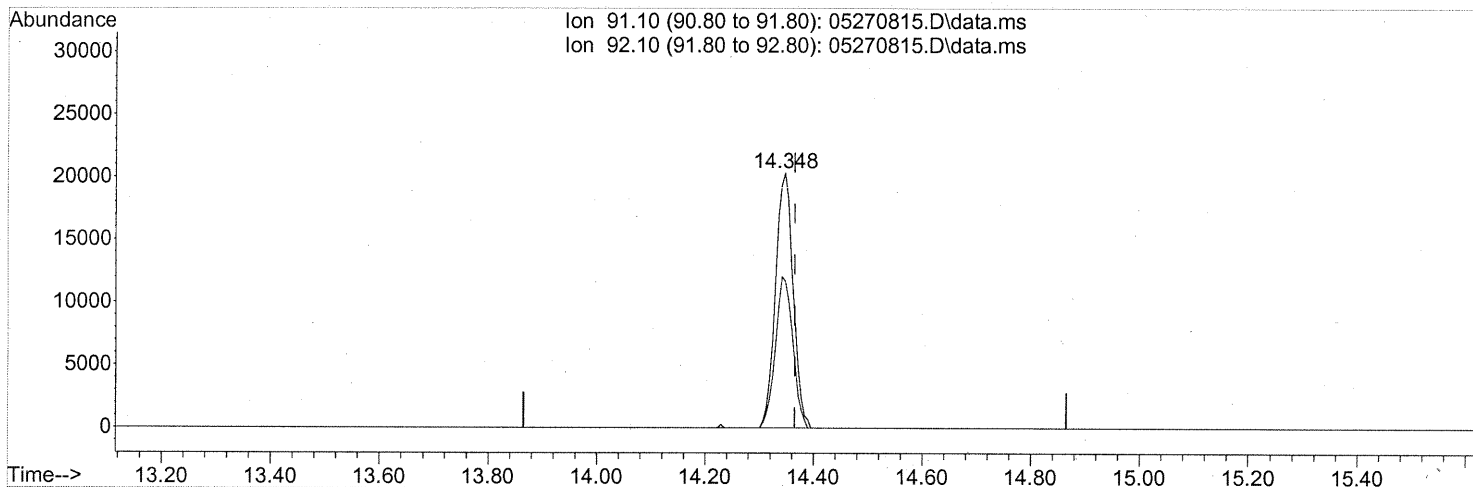
response 220090

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270815.D  
Acq On : 27 May 2008 21:42  
Operator : WA  
Sample : P0801507-010 (25ml)  
Misc : ENSR SG55B-05 (-3.8, 3.8)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



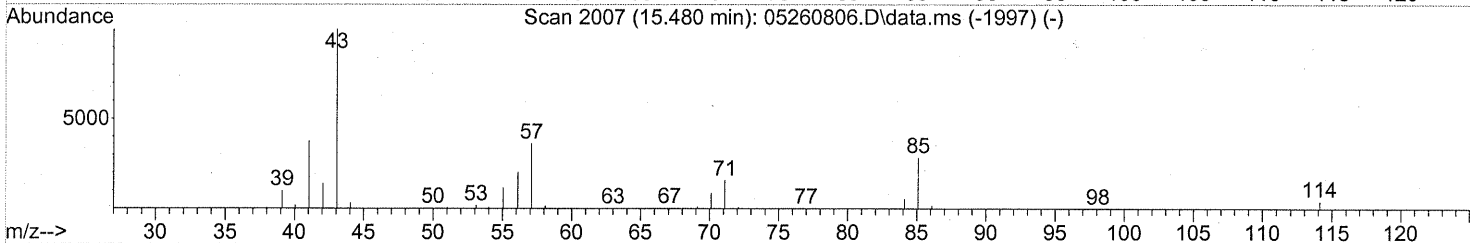
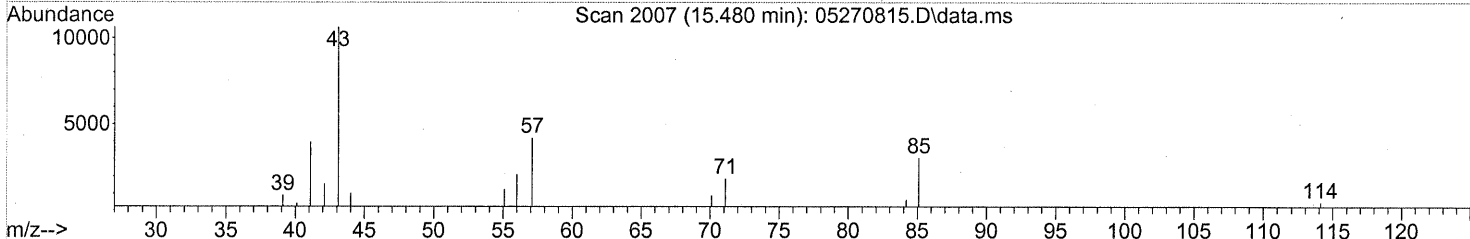
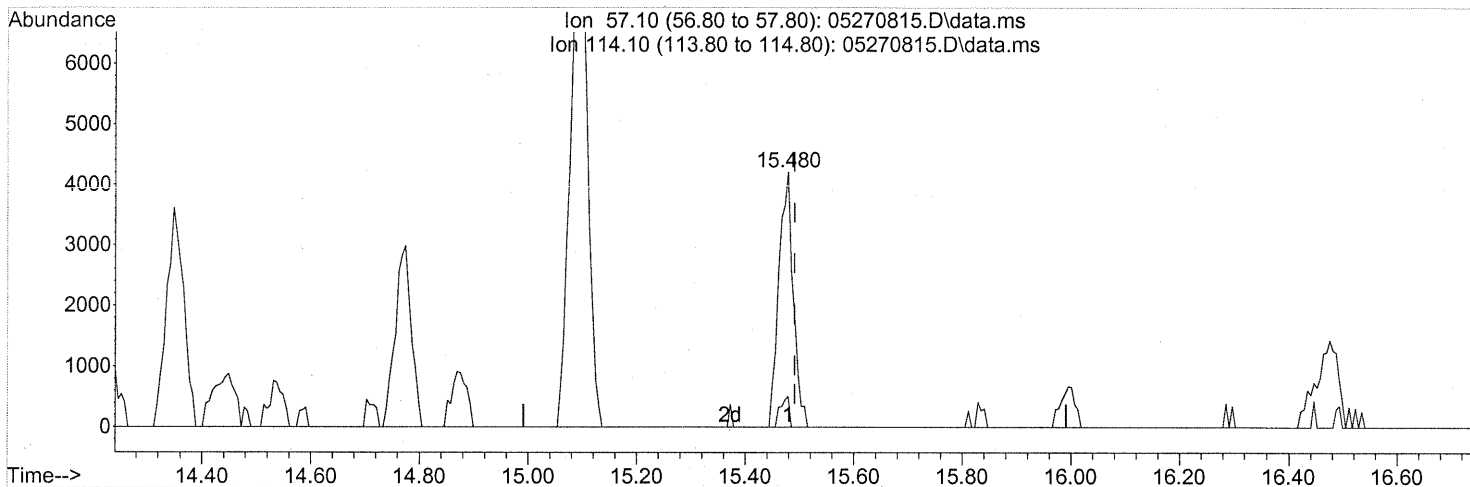
TIC: 05270815.D\data.ms

(58) Toluene (T)  
14.348min (-0.018) 0.60ng  
response 45948

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	58.60
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



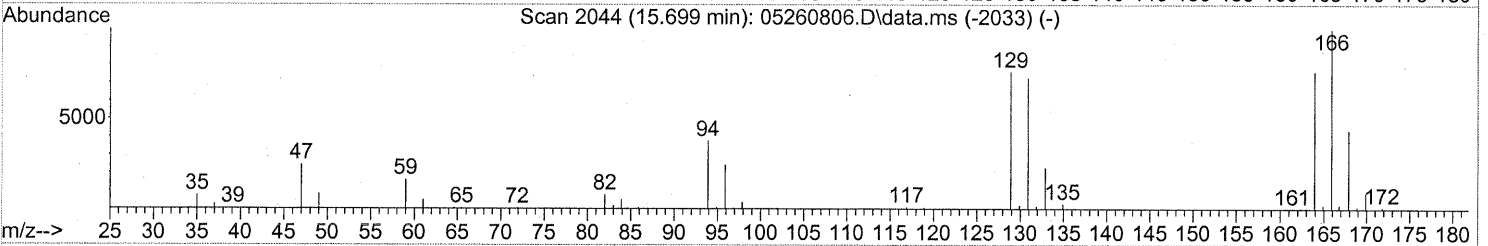
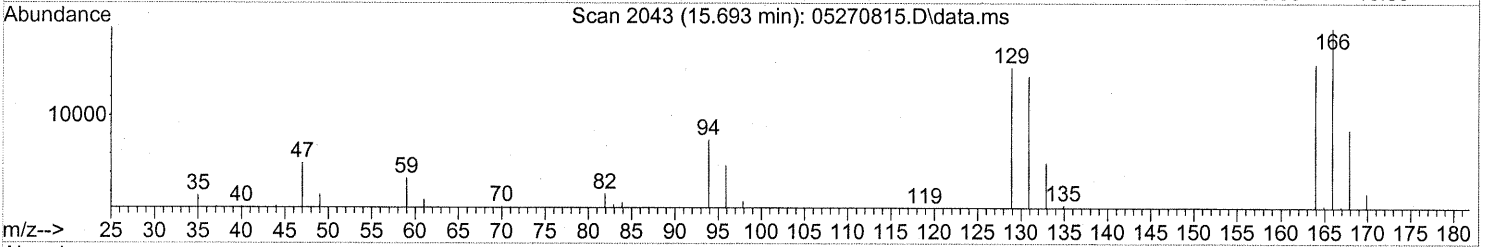
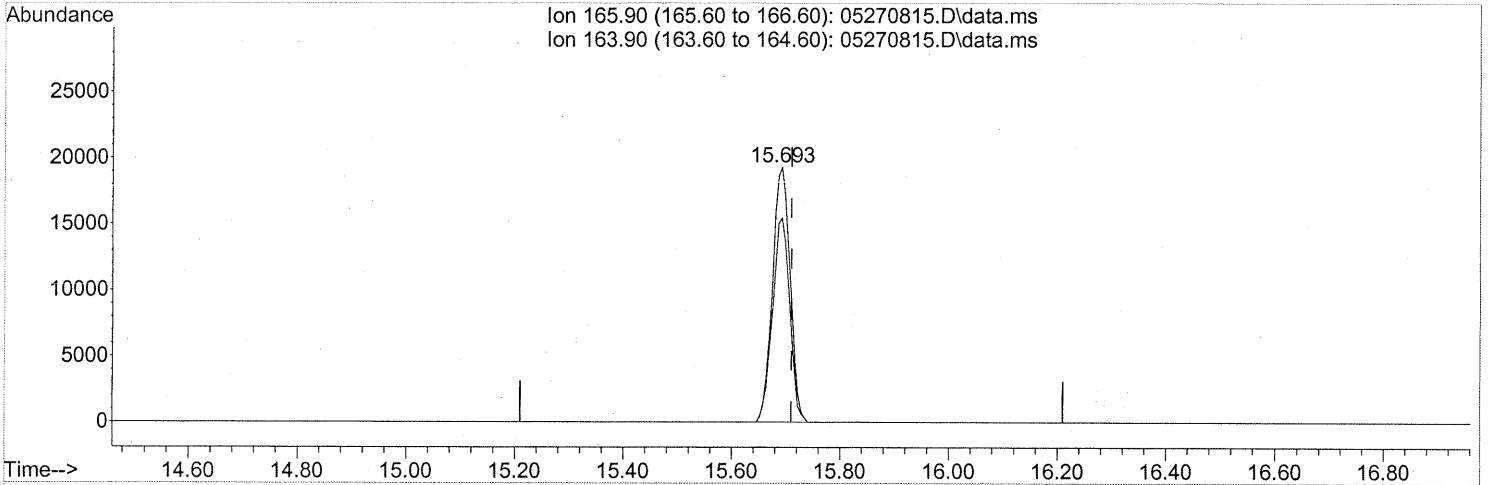
TIC: 05270815.D\data.ms

(63) n-Octane (T)  
 15.480min (-0.012) 0.33ng  
 response 7682

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	7.42
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270815.D\data.ms

(64) Tetrachloroethene (T)

15.693min (-0.018) 1.92ng

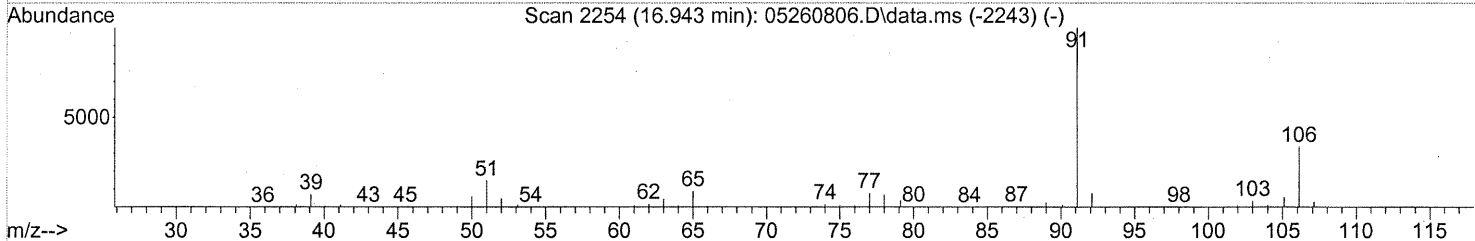
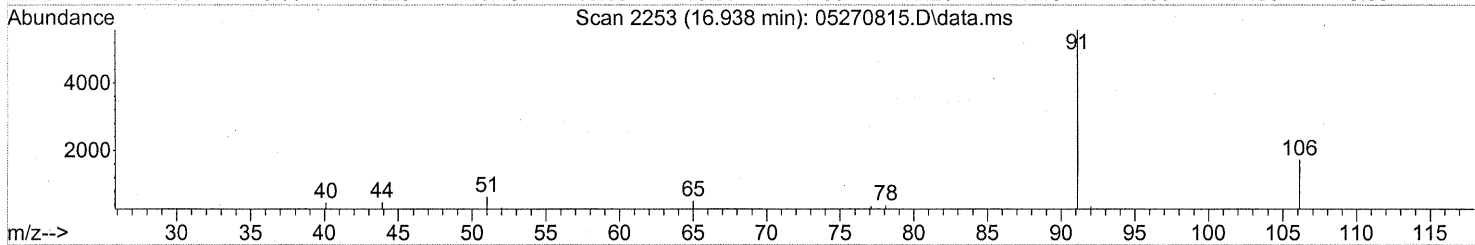
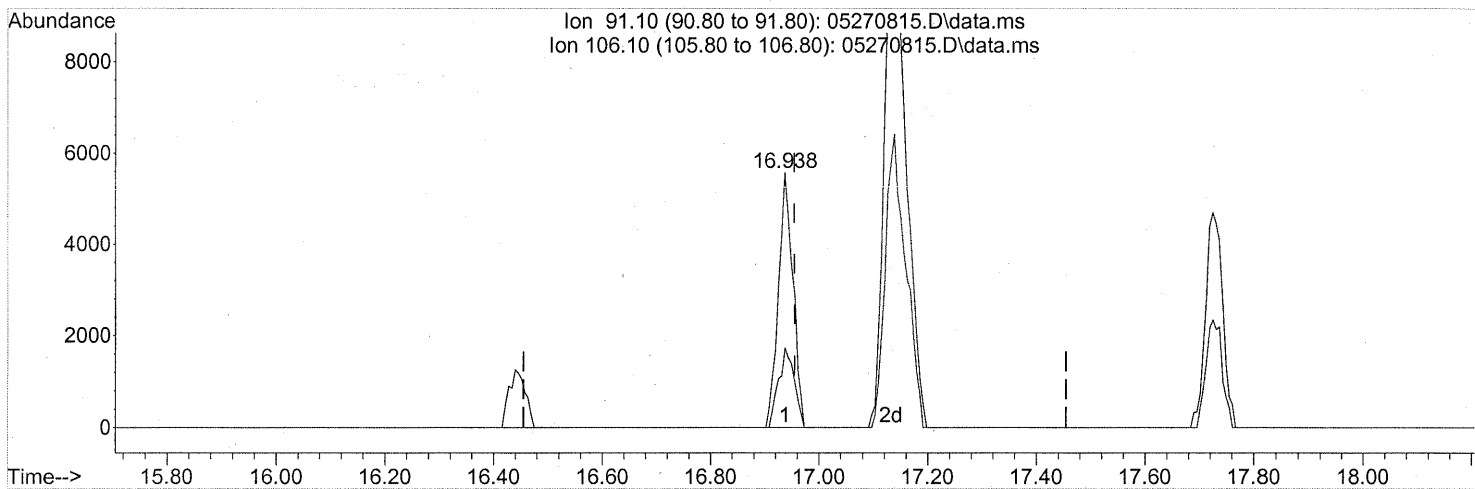
response 43490

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270815.D\data.ms

(66) Ethylbenzene (T)  
 16.938min (-0.018) 0.12ng  
 response 10306

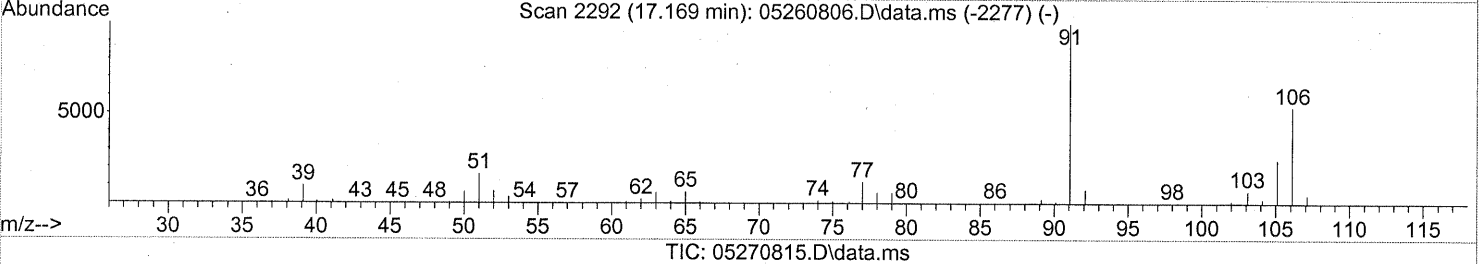
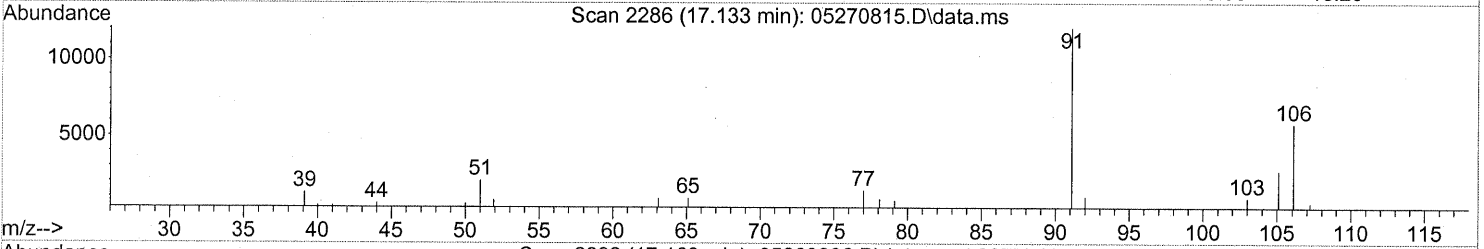
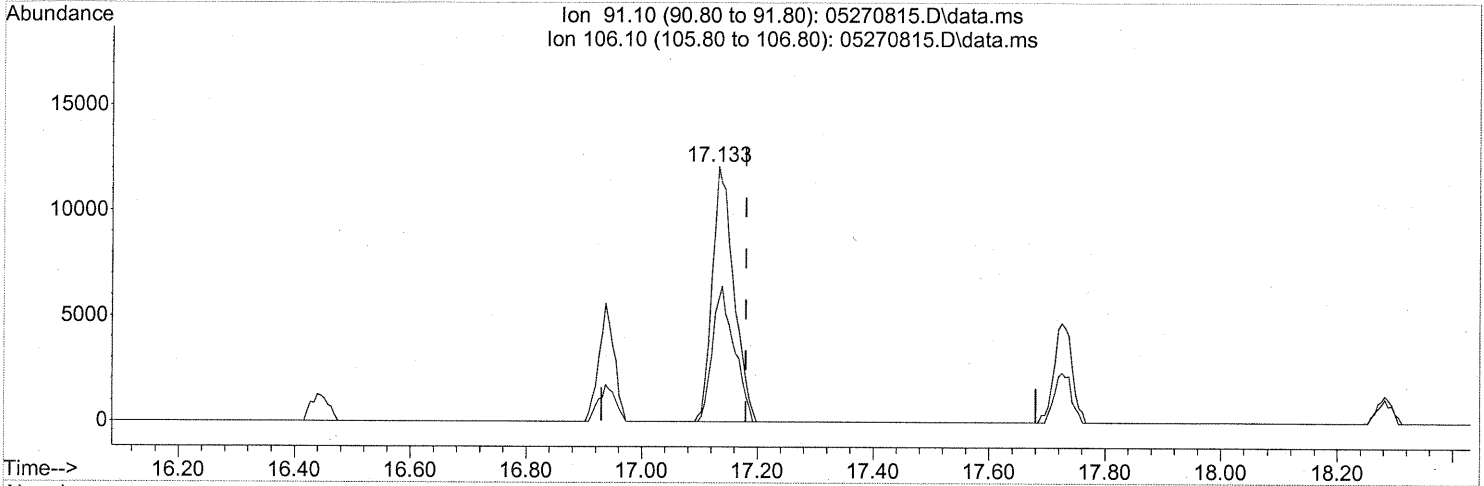
Ion	Exp%	Act%
91.10	100	100
106.10	29.90	33.63
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



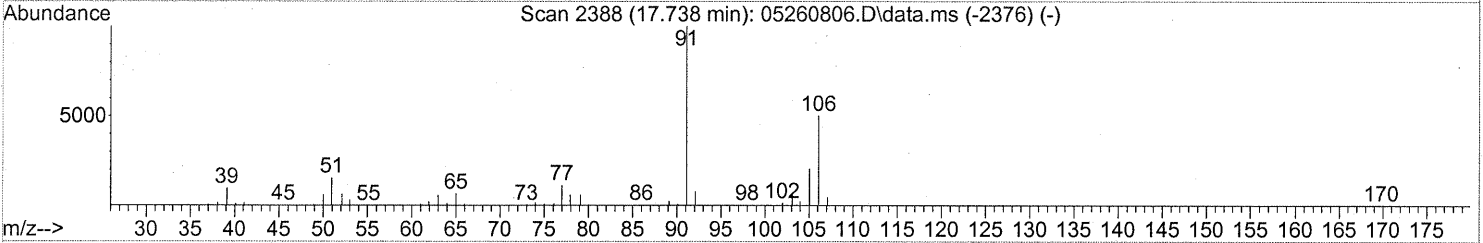
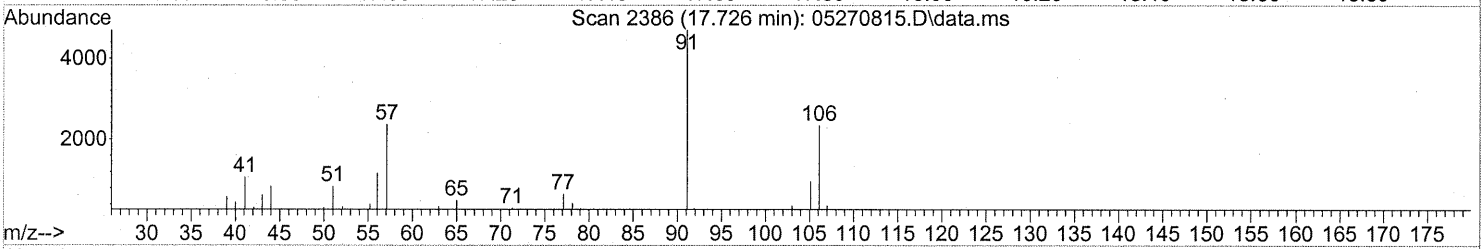
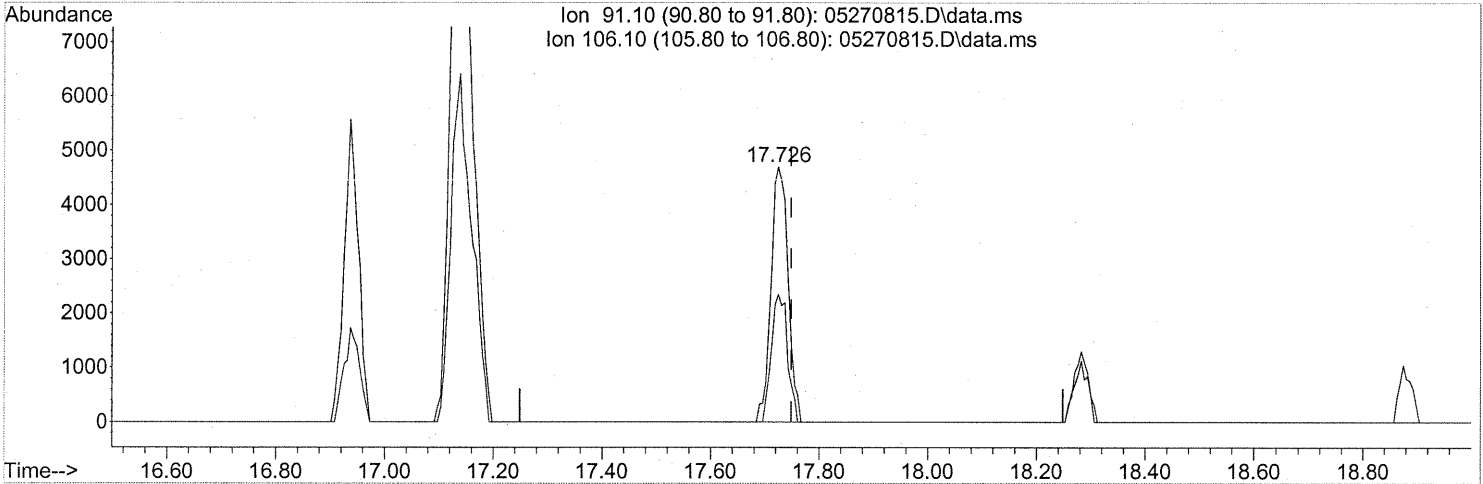
(67) m- & p-Xylene (T)  
 17.133min (-0.047) 0.54ng  
 response 31424

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 28 04:47:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270815.D\data.ms

(70) o-Xylene (T)

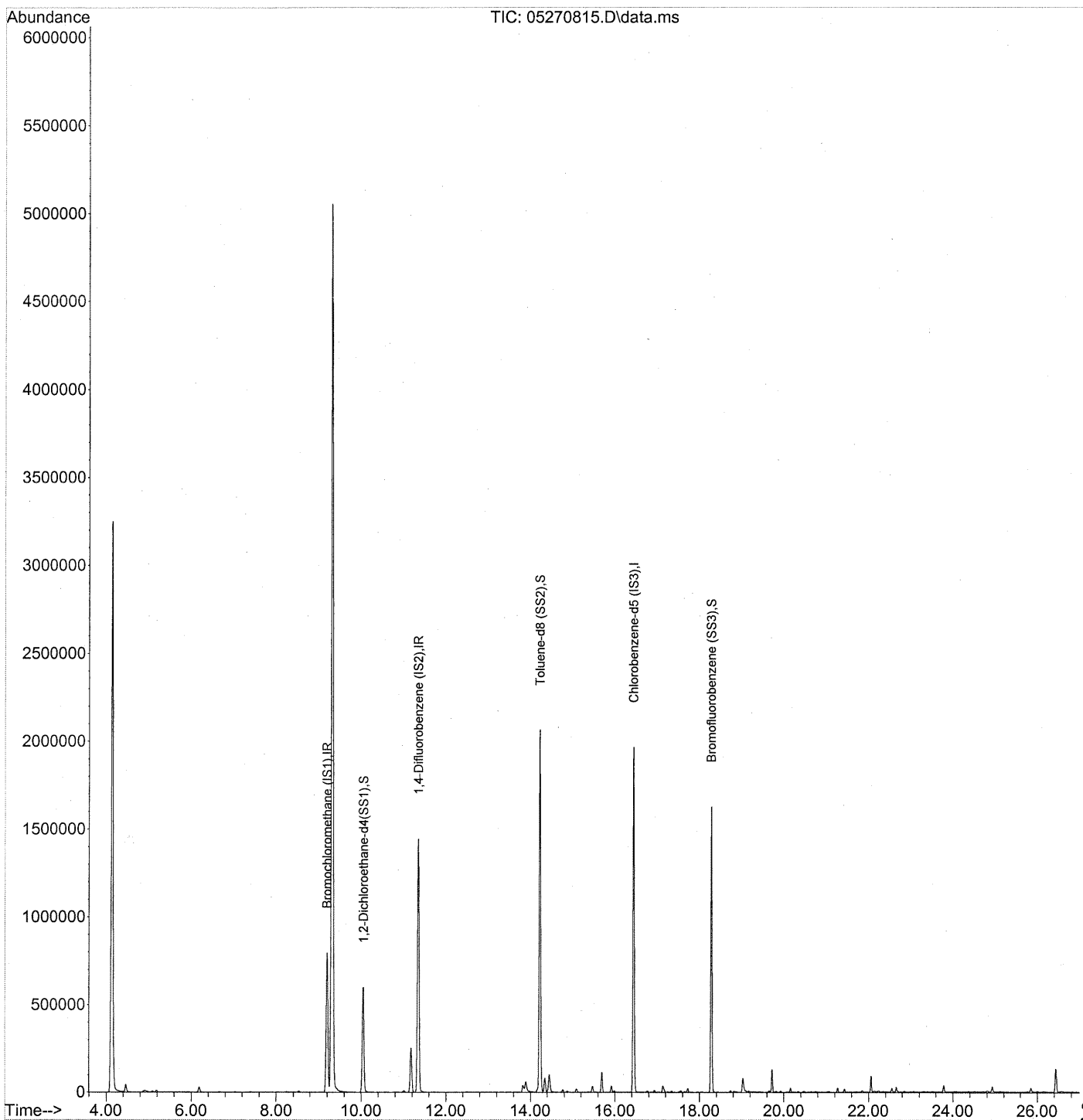
17.726min (-0.024) 0.17ng

response 10254

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	47.24
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270815.D  
Acq On : 27 May 2008 21:42  
Operator : WA  
Sample : P0801507-010 (25ml)  
Misc : ENSR SG55B-05 (-3.8, 3.8)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jun 04 14:39:26 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270815.D  
 Acq On : 27 May 2008 21:42  
 Operator : WA  
 Sample : P0801507-010 (25ml)  
 Misc : ENSR SG55B-05 (-3.8, 3.8)  
 ALS Vial : 6 Sample Multiplier: 1

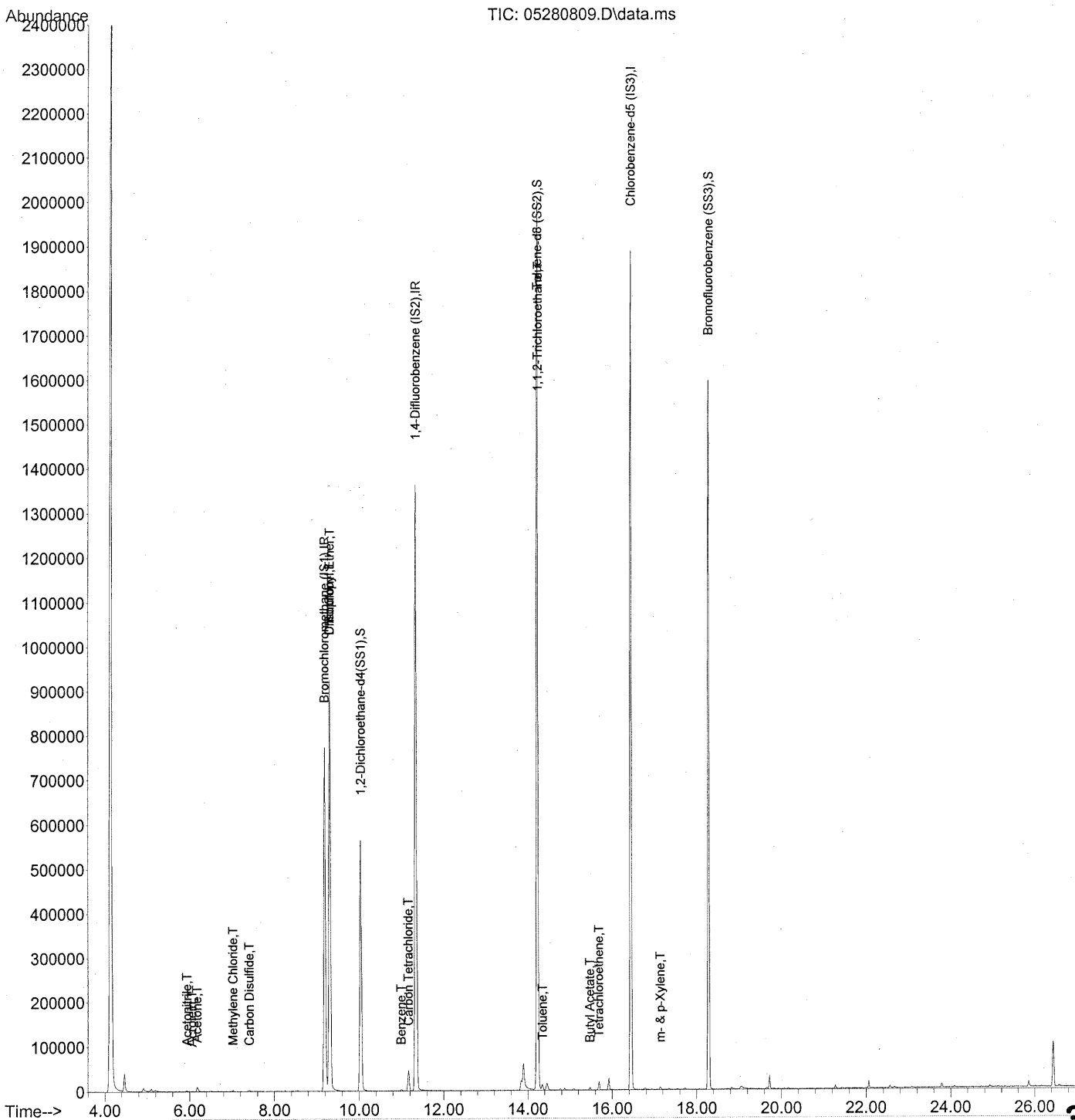
Quant Time: Jun 04 14:39:26 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	390977	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1623936	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	656497	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	558634	24.988	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.96%	
5) Toluene-d8 (SS2)	14.23	98	1651846	24.406	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.64%	
6) Bromofluorobenzene (SS3)	18.28	174	576224	25.607	ng	-0.01
Spiked Amount	25.000		Recovery	=	102.44%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	415		N.D.	Qvalue
8) n-Butylbenzene	20.85	91	598		N.D.	

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

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280809.D  
 Acq On : 28 May 2008 2:59 pm  
 Operator : WA  
 Sample : P0801507-010 Dil (5.0ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8) / *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280809.D  
 Acq On : 28 May 2008 2:59 pm  
 Operator : WA  
 Sample : P0801507-010 Dil (5.0ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8) *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:20 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	372167	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1552178	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	637423	25.000	ng	-0.02

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	531839	24.992	ng	-0.05	
Spiked Amount				25.000			
				Recovery	=	99.96%	✓
57) Toluene-d8 (SS2)	14.22	98	1596148	24.289	ng	-0.02	
Spiked Amount				25.000			
				Recovery	=	97.16%	✓
73) Bromofluorobenzene (SS3)	18.28	174	567862	25.990	ng	-0.01	✓
Spiked Amount				25.000			
				Recovery	=	103.96%	

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	919	N.D.		
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.93	41	2842	0.050	ng	# 20
12) Acrolein	6.05	56	706	0.050	ng	# 73
13) Acetone	6.17	58	5847	0.301	ng	# 65
14) Trichlorofluoromethane	6.34	101	99	N.D.		
15) Isopropanol	6.40	45	99	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	7.00	59	118	N.D.		
19) Methylene Chloride	7.02	84	935	0.062	ng	# 9
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	3821	0.063	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	100897	7.534	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

Data Path : J:\MS16\DATA\2008\_05\28\

Data File : 05280809.D

Acq On : 28 May 2008 2:59 pm

Operator : WA

Sample : P0801507-010 Dil (5.0ml)

Misc : ENSR SG55B-05D (-3.8, 3.8) *RA 6/4/08*

ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:20 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	922855	42.021 ng		95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	10.99	78	3344	0.051 ng		85
42) Carbon Tetrachloride	11.17	117	37085	1.382 ng		98
43) Cyclohexane	11.31	84	303	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	204	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	136248	8.560 ng	#	7
58) Toluene	14.34	91	6869	0.092 ng		99
59) 2-Hexanone	14.60	43	789	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	3709	0.052 ng	#	77
63) n-Octane	15.47	57	1055	N.D.		
64) Tetrachloroethene	15.69	166	7140	0.324 ng		96
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	1655	N.D.		
67) m- & p-Xylene	17.14	91	5862	0.104 ng		98
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	1794	N.D.		
71) n-Nonane	17.99	43	196	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	695	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.19	105	646	N.D.		
78) 4-Ethyltoluene	19.19	105	646	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	310	N.D.		

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280809.D  
 Acq On : 28 May 2008 2:59 pm  
 Operator : WA  
 Sample : P0801507-010 Dil (5.0ml)  
 Misc : ENSR SG55B-05D (-3.8, 3.8) *DA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:20 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0		N.D.	
81) 2-Ethyltoluene	19.56	105	125		N.D.	
82) 1,2,4-Trimethylbenzene	19.82	105	625		N.D.	
83) n-Decane	19.92	57	577		N.D.	
84) Benzyl Chloride	0.00	91	0		N.D.	
85) 1,3-Dichlorobenzene	0.00	146	0		N.D.	
86) 1,4-Dichlorobenzene	0.00	146	0		N.D.	
87) sec-Butylbenzene	20.34	105	181		N.D.	
88) p-Isopropyltoluene	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	20.34	105	181		N.D.	
90) 1,2-Dichlorobenzene	0.00	146	0		N.D.	
91) d-Limonene	0.00	68	0		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	21.42	57	1028		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.69	128	1129		N.D.	
96) n-Dodecane	22.66	57	1355		N.D.	
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

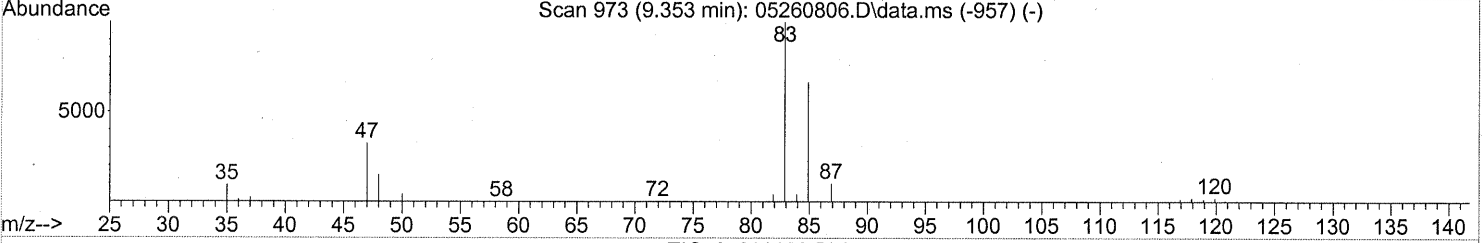
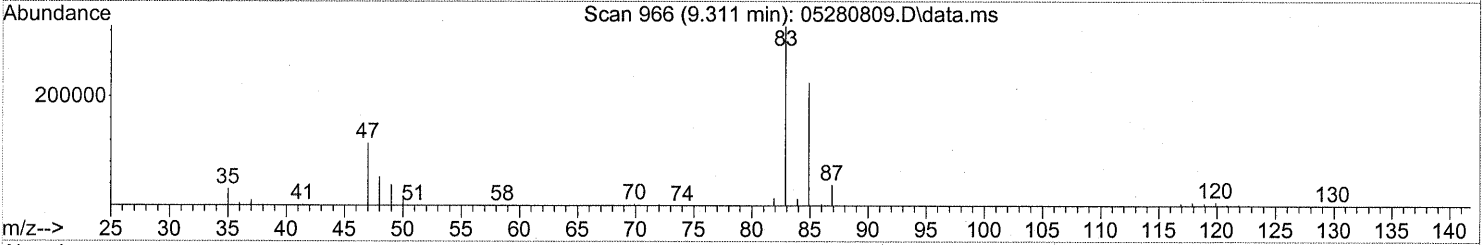
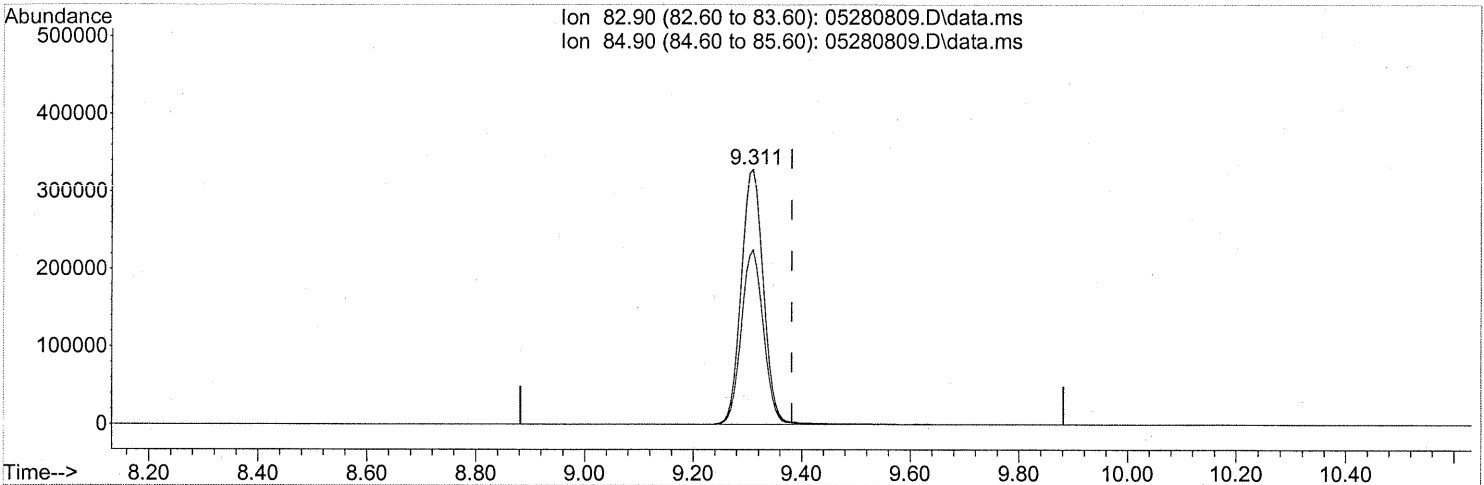
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280809.D  
Acq On : 28 May 2008 14:59  
Operator : WA  
Sample : P0801507-010 Dil (5.0ml)  
Misc : ENSR SG55B-05D (-3.8, 3.8) *MS 6/4/08*  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:20 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280809.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 42.02ng

response 922855

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.22
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG57B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC01021

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	40	4.1	ND	9.6	0.98	
107-06-2	<b>1,2-Dichloroethane</b>	<b>31</b>	8.1	4.0	<b>7.6</b>	2.0	0.99	
71-55-6	1,1,1-Trichloroethane	ND	8.1	4.0	ND	1.5	0.74	
71-43-2	<b>Benzene</b>	<b>9.4</b>	8.1	4.0	<b>2.9</b>	2.5	1.3	<b>B</b>
56-23-5	Carbon Tetrachloride	ND	8.1	4.0	ND	1.3	0.64	
994-05-8	tert-Amyl Methyl Ether	ND	40	4.0	ND	9.6	0.96	
78-87-5	1,2-Dichloropropane	ND	8.1	4.0	ND	1.7	0.87	
75-27-4	Bromodichloromethane	ND	8.1	4.0	ND	1.2	0.60	
79-01-6	Trichloroethene	ND	8.1	4.0	ND	1.5	0.75	
123-91-1	1,4-Dioxane	ND	40	4.9	ND	11	1.4	
80-62-6	Methyl Methacrylate	ND	40	6.0	ND	9.8	1.5	
142-82-5	n-Heptane	ND	40	5.2	ND	9.8	1.3	
10061-01-5	cis-1,3-Dichloropropene	ND	40	4.2	ND	8.9	0.92	
108-10-1	4-Methyl-2-pentanone	ND	40	4.5	ND	9.8	1.1	
10061-02-6	trans-1,3-Dichloropropene	ND	40	5.1	ND	8.9	1.1	
79-00-5	1,1,2-Trichloroethane	ND	8.1	4.0	ND	1.5	0.74	
108-88-3	<b>Toluene</b>	<b>45</b>	40	4.0	<b>12</b>	11	1.1	
591-78-6	2-Hexanone	ND	40	6.1	ND	9.8	1.5	
124-48-1	Dibromochloromethane	ND	8.1	5.5	ND	0.95	0.64	
106-93-4	1,2-Dibromoethane	ND	8.1	4.3	ND	1.0	0.57	
111-65-9	<b>n-Octane</b>	<b>28</b>	40	4.0	<b>5.9</b>	8.6	0.86	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>84</b>	8.1	4.0	<b>12</b>	1.2	0.59	
108-90-7	Chlorobenzene	ND	8.1	4.1	ND	1.7	0.89	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG57B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC01021

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.020 Liter(s)  
 0.0020 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	9.2	40	5.0	2.1	9.3	1.1	J
179601-23-1	m,p-Xylenes	46	40	10	11	9.3	2.4	
75-25-2	Bromoform	ND	40	6.1	ND	3.9	0.59	
100-42-5	Styrene	ND	40	6.1	ND	9.5	1.4	
95-47-6	o-Xylene	16	40	5.1	3.7	9.3	1.2	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	8.1	5.2	ND	1.2	0.75	
98-82-8	Cumene	ND	40	4.5	ND	8.2	0.92	
103-65-1	n-Propylbenzene	ND	40	4.2	ND	8.2	0.85	
622-96-8	4-Ethyltoluene	ND	40	4.6	ND	8.2	0.93	
108-67-8	1,3,5-Trimethylbenzene	ND	40	4.8	ND	8.2	0.98	
98-83-9	alpha-Methylstyrene	ND	40	5.9	ND	8.3	1.2	
95-63-6	1,2,4-Trimethylbenzene	ND	40	5.6	ND	8.2	1.1	
100-44-7	Benzyl Chloride	ND	8.1	6.9	ND	1.6	1.3	
541-73-1	1,3-Dichlorobenzene	ND	8.1	5.0	ND	1.3	0.83	
106-46-7	1,4-Dichlorobenzene	17	8.1	4.5	2.8	1.3	0.75	
135-98-8	sec-Butylbenzene	ND	40	4.7	ND	7.3	0.85	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	40	5.2	ND	7.3	0.95	
95-50-1	1,2-Dichlorobenzene	ND	8.1	5.3	ND	1.3	0.88	
96-12-8	1,2-Dibromo-3-chloropropane	ND	40	6.1	ND	4.2	0.63	
120-82-1	1,2,4-Trichlorobenzene	8.9	8.1	6.1	1.2	1.1	0.82	
91-20-3	Naphthalene	ND	16	6.0	ND	3.1	1.1	
87-68-3	Hexachlorobutadiene	ND	8.1	7.2	ND	0.75	0.68	
98-06-6	tert-Butylbenzene	ND	16	4.0	ND	2.9	0.73	
104-51-8	n-Butylbenzene	ND	16	4.0	ND	2.9	0.73	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

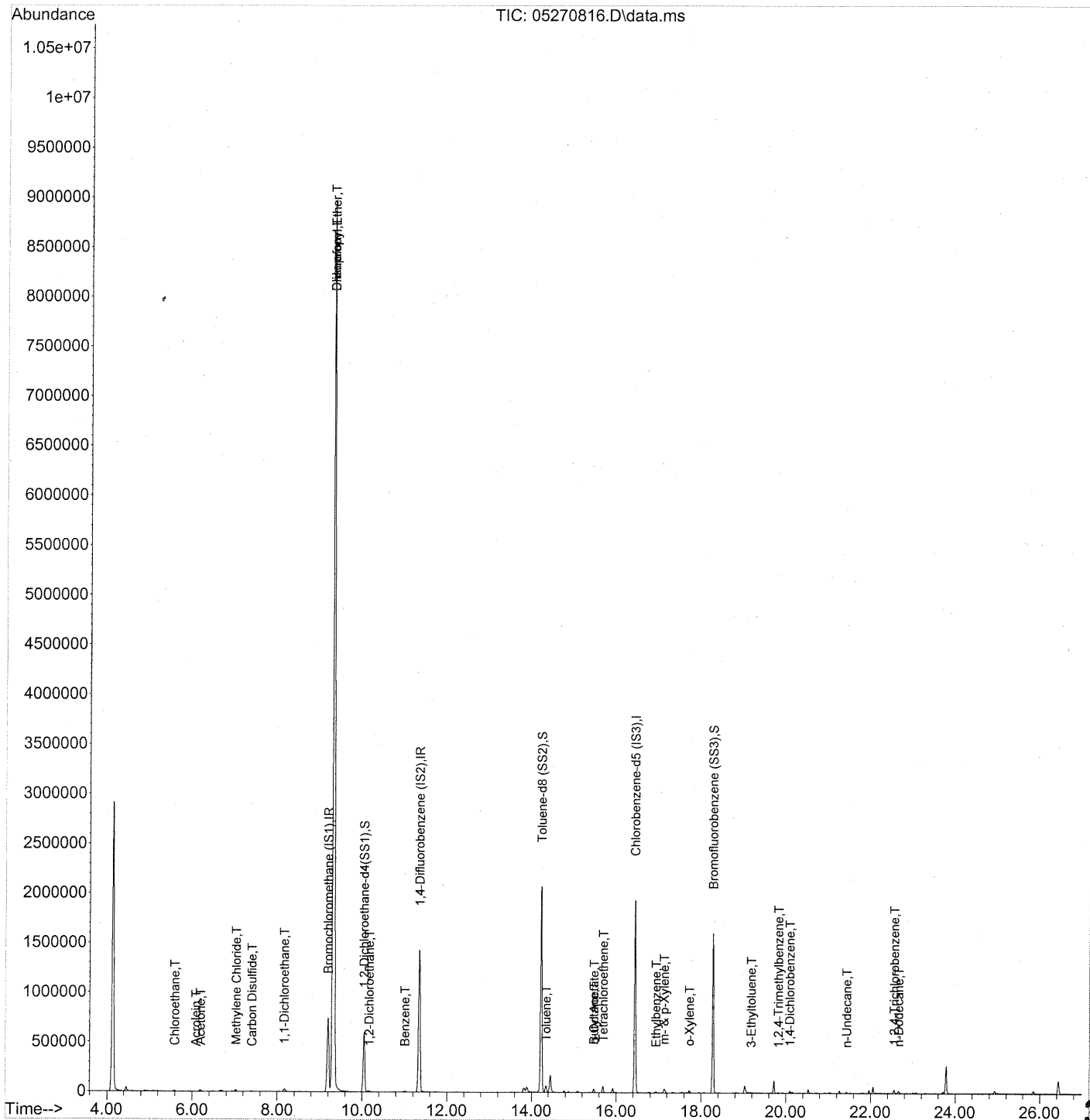
Verified By:         

Date: 6/5/08

**390**

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	388924	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1619160	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	656839	25.000	ng	-0.01

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...)	10.05	65	556899	25.042	ng	-0.05
Spiked Amount	25.000			Recovery =	100.16%	✓
57) Toluene-d8 (SS2)	14.23	98	1646381	24.313	ng	-0.02
Spiked Amount	25.000			Recovery =	97.24%	✓
73) Bromofluorobenzene (SS3)	18.28	174	578697	25.703	ng	-0.01
Spiked Amount	25.000			Recovery =	102.80%	✓

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	731	N.D.		
3) Dichlorodifluoromethane	4.56	85	588	N.D.	✓	
4) Chloromethane	4.75	50	105	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	4.99	62	366	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	5.59	64	10164	0.675	ng	95
10) Ethanol	5.70	45	245	N.D.	✓	
11) Acetonitrile	5.95	41	2836	N.D.		
12) Acrolein	6.09	56	848	0.058	ng	# 41
13) Acetone	6.19	58	7406	0.364	ng	# 64
14) Trichlorofluoromethane	6.32	101	103	N.D.	✓	
15) Isopropanol	6.37	45	430	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	6.93	96	654	N.D.	✓	
18) tert-Butanol	0.00	59	0	N.D.	✓	
19) Methylene Chloride	7.03	84	6931	0.442	ng	# 33
20) Allyl Chloride	7.02	41	414	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.41	76	3433	0.054	ng	82
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	44134	1.326	ng	93
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.54	72	343	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.32	87	1070825	76.514	ng	NR# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.21	57	115	N.D.		

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	9896310	<del>431.200</del>	ng <i>see dil</i>	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.17	62	10043	0.382	ng	95
38) 1,1,1-Trichloroethane	0.00	97	0	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	705	N.D.		
41) Benzene	11.01	78	7964	0.117	ng	97
42) Carbon Tetrachloride	0.00	117	0	N.D. ✓		
43) Cyclohexane	11.34	84	1138	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.13	83	440	N.D. ✓		
47) Trichloroethene	12.18	130	91	N.D. ✓		
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.25	57	1237	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D. ✓		
51) n-Heptane	0.00	71	0	N.D. ✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.18	58	100	N.D. ✓		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	13.98	97	582	N.D. ✓		
58) Toluene	14.35	91	42537	0.554	ng	100
59) 2-Hexanone	14.58	43	1297	N.D. ✓		
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.47	43	22054	0.302	ng	# 74
63) n-Octane	15.47	57	7951	0.342	ng	93
64) Tetrachloroethene	15.69	166	23573	1.038	ng	96
65) Chlorobenzene	16.50	112	2443	N.D. ✓		
66) Ethylbenzene	16.94	91	9959	0.114	ng	96
67) m- & p-Xylene	17.13	91	33305	0.576	ng	89
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	17.59	104	315	N.D. ✓		
70) o-Xylene	17.73	91	12346	0.199	ng	91
71) n-Nonane	17.97	43	1102	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D. ✓		
74) Cumene	18.45	105	224	N.D. ✓		
75) alpha-Pinene	19.04	93	1046	N.D. ✓		
76) n-Propylbenzene	19.07	91	1470	N.D.		
77) 3-Ethyltoluene	19.18	105	5375	<del>0.054</del>	ng <i>NOT</i>	93
78) 4-Ethyltoluene	19.24	105	2311	N.D. ✓		
79) 1,3,5-Trimethylbenzene	19.33	105	2523	N.D. ✓		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	693	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	1949	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	5360	<del>0.067 ng</del>		90
83) n-Decane	19.93	57	2246	N.D.		
84) Benzyl Chloride	19.83	91	365	N.D.	✓	
85) 1,3-Dichlorobenzene	20.02	146	1275	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	10436	0.212 ng		100
87) sec-Butylbenzene	20.16	105	181	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	579	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	1573	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	226	N.D.	✓	
91) d-Limonene	20.52	68	108	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.43	57	6295	0.106 ng	#	66
94) 1,2,4-Trichlorobenzene	22.55	184	928	0.110 ng	#	90
95) Naphthalene	22.69	128	3856	N.D.	✓	
96) n-Dodecane	22.66	57	8932	0.154 ng	#	74
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

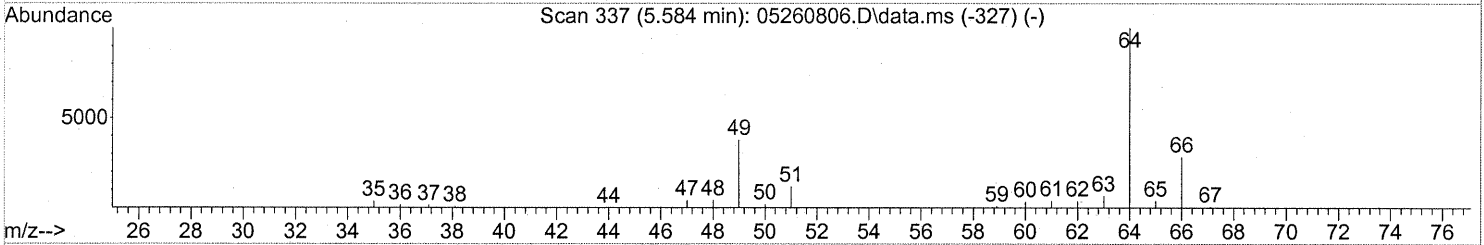
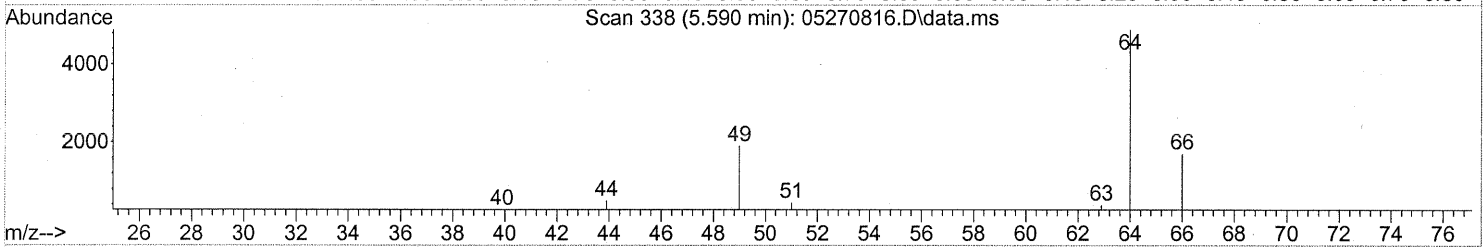
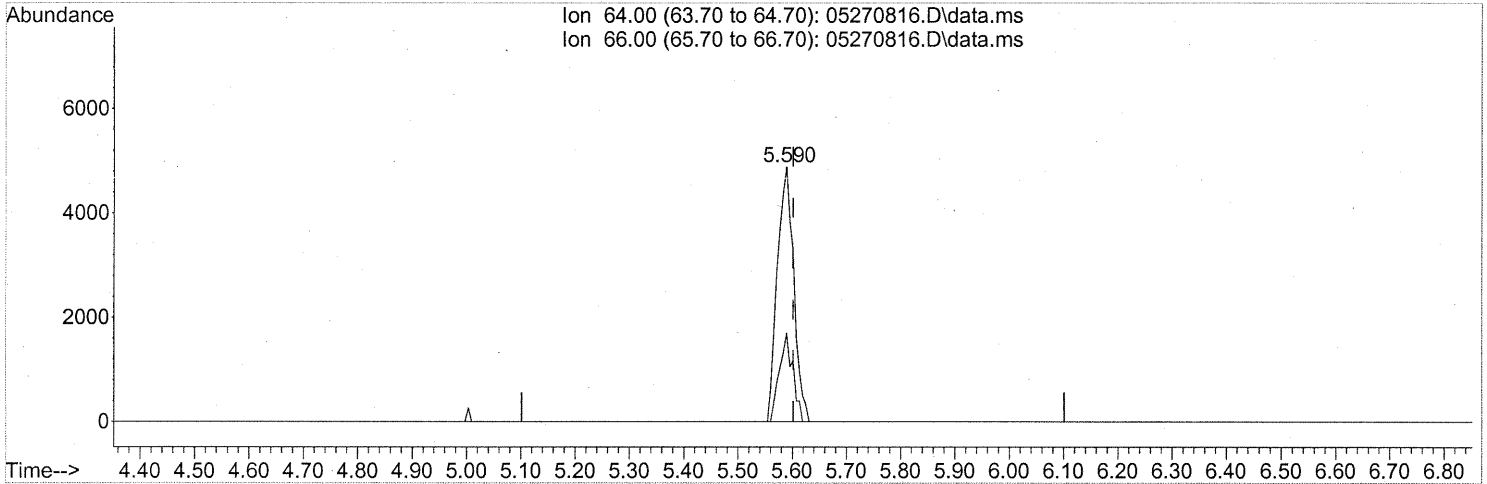
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

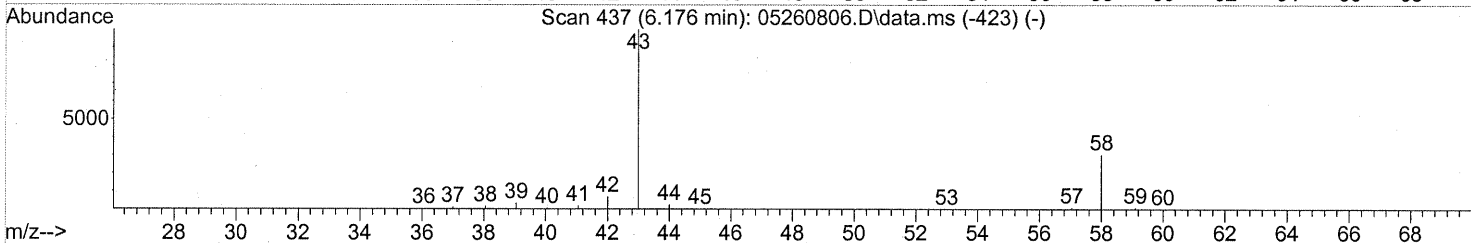
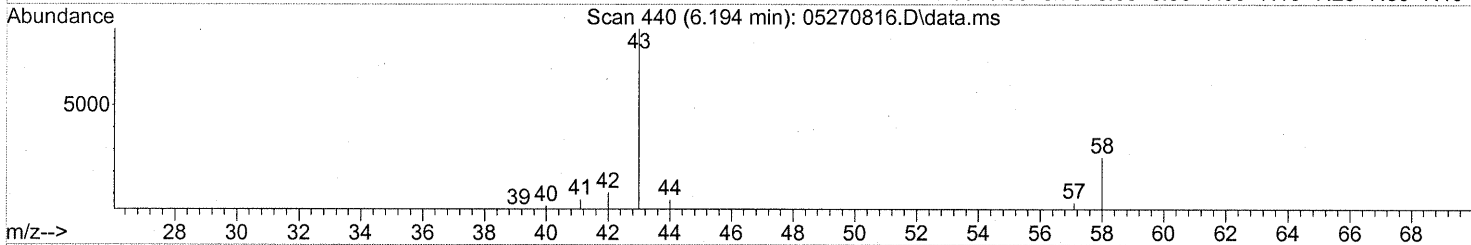
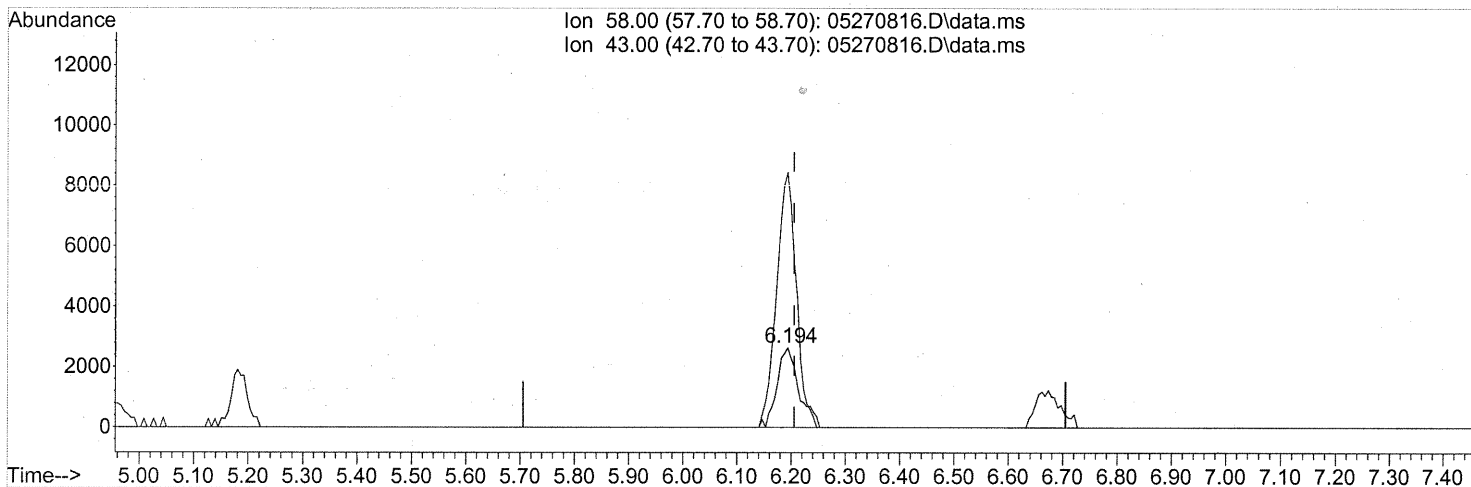
(9) Chloroethane (T)  
 5.590min (-0.012) 0.68ng  
 response 10164

Ion	Exp%	Act%
64.00	100	100
66.00	31.40	28.42
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
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 Acq On : 27 May 2008 22:19  
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 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(13) Acetone (T)

6.194min (-0.012) 0.36ng

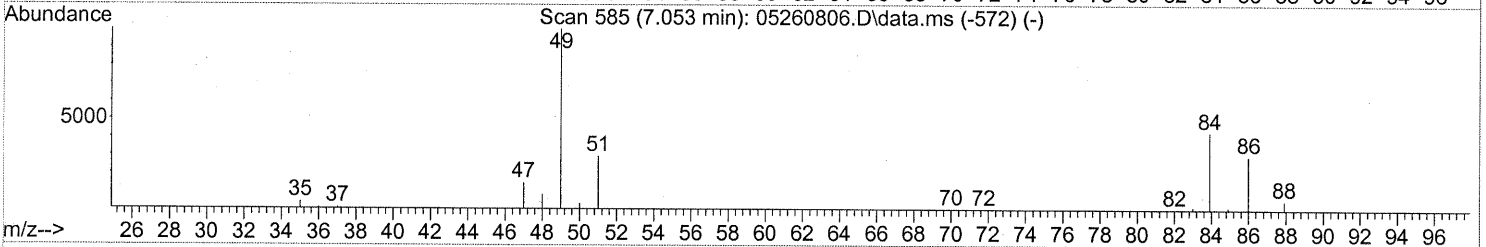
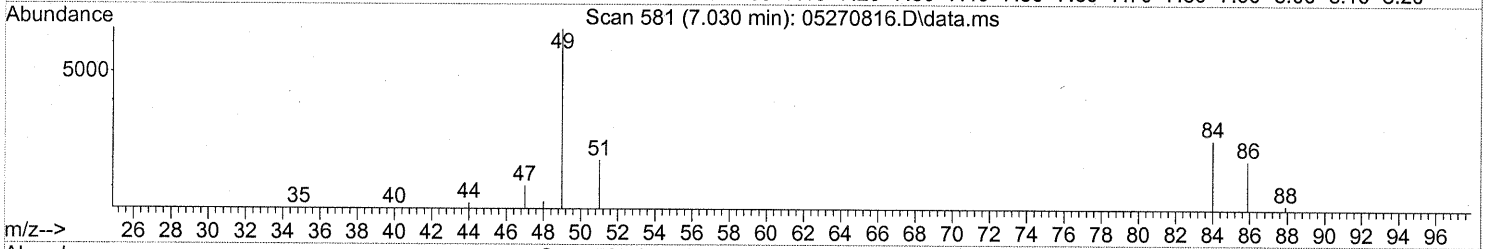
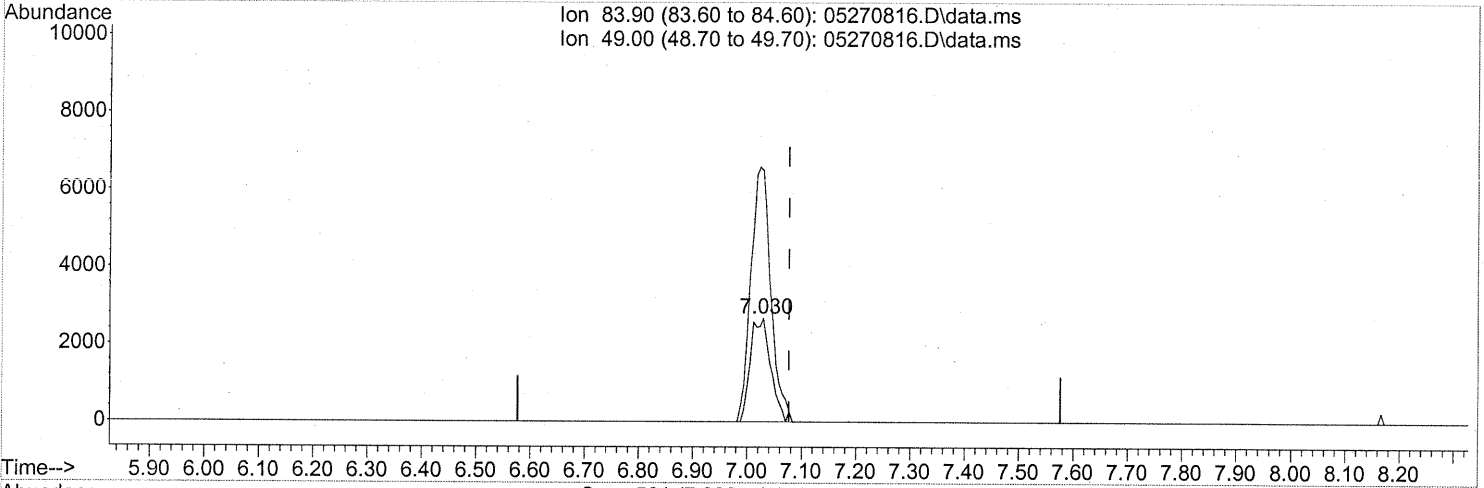
response 7406

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	288.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270816.D  
Acq On : 27 May 2008 22:19  
Operator : WA  
Sample : P0801507-011 (20ml)  
Misc : ENSR SG57B-05 (-3.3, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270816.D\data.ms

(19) Methylene Chloride (T)

7.030min (-0.047) 0.44ng

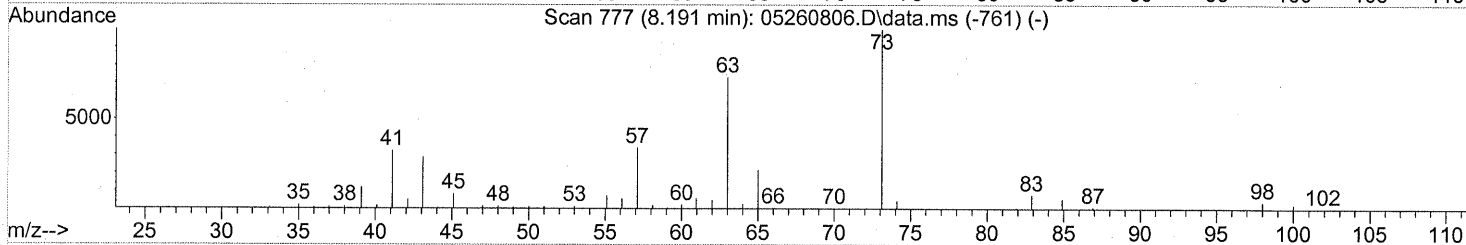
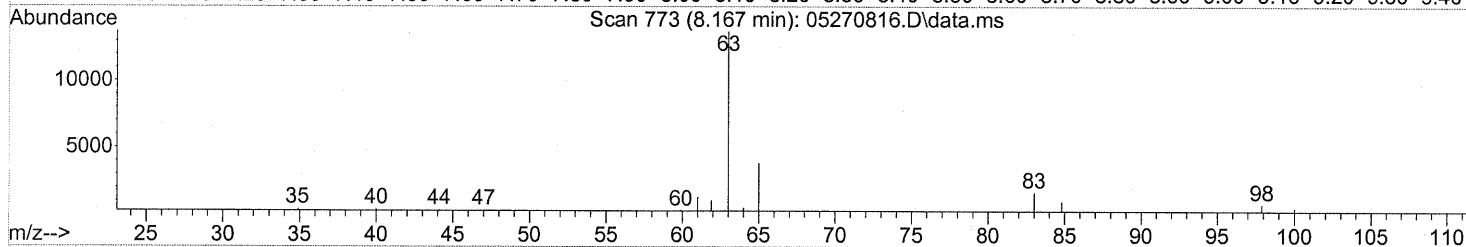
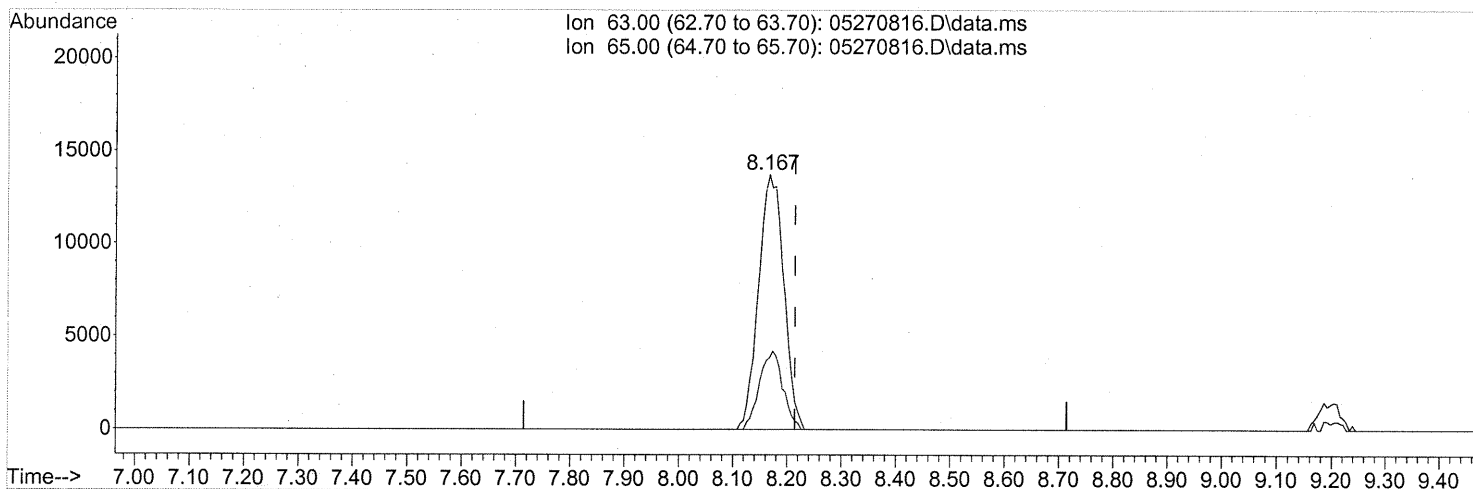
response 6931

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	242.32#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(24) 1,1-Dichloroethane (T)

8.167min (-0.048) 1.33ng

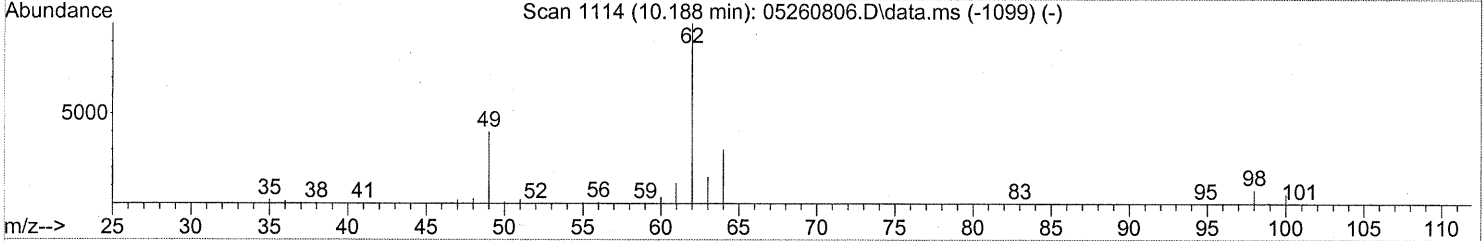
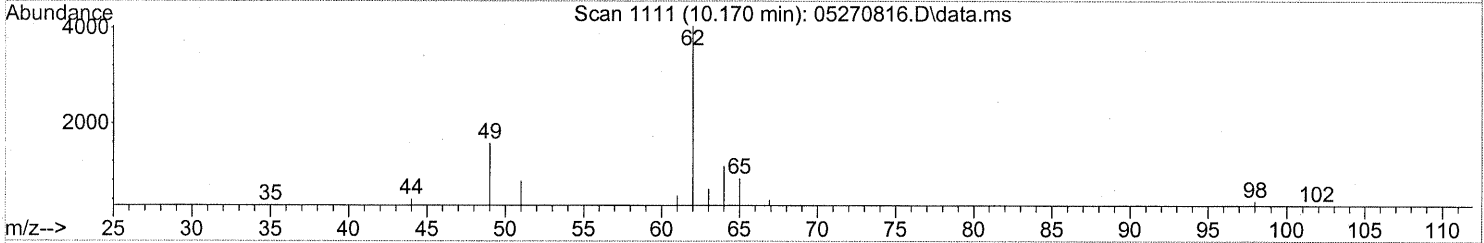
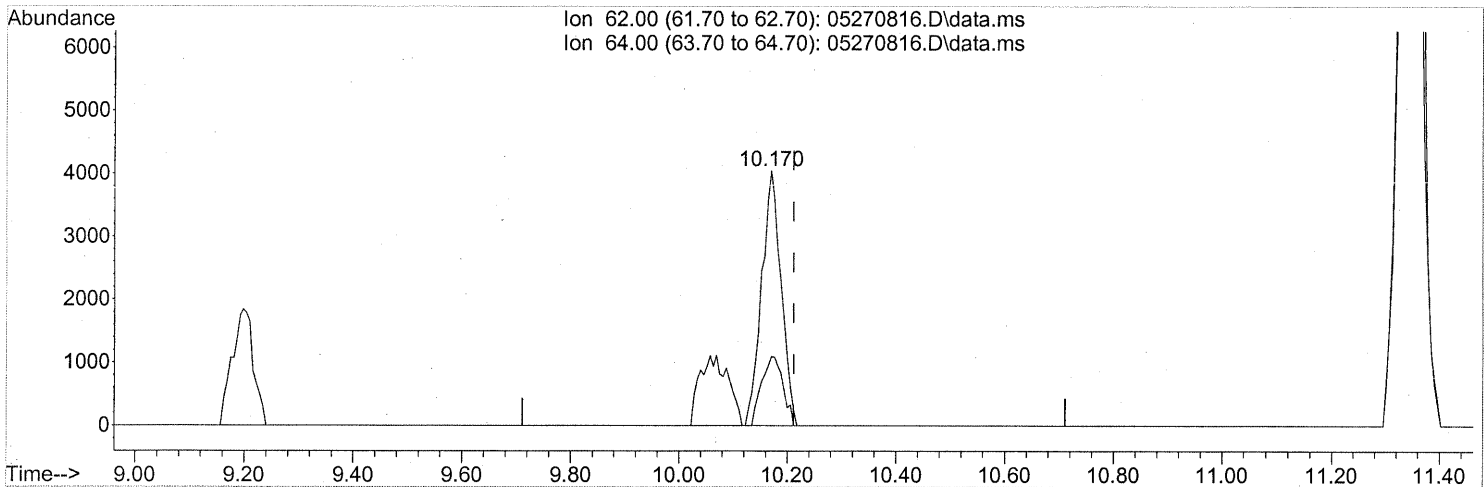
response 44134

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	28.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
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 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(36) 1,2-Dichloroethane (T)

10.170min (-0.042) 0.38ng

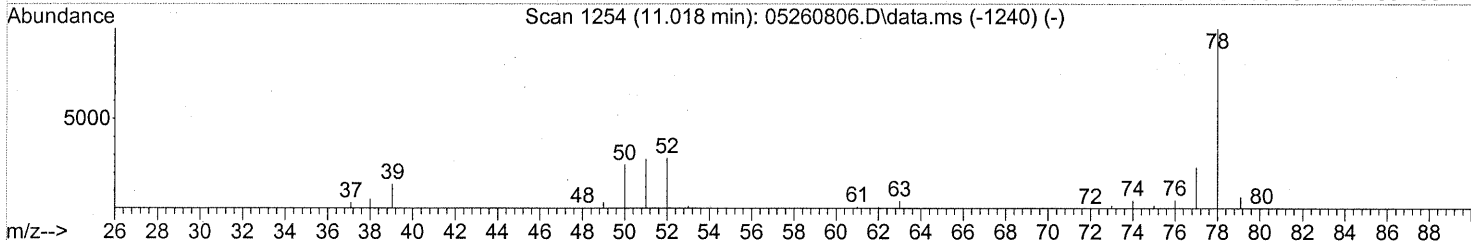
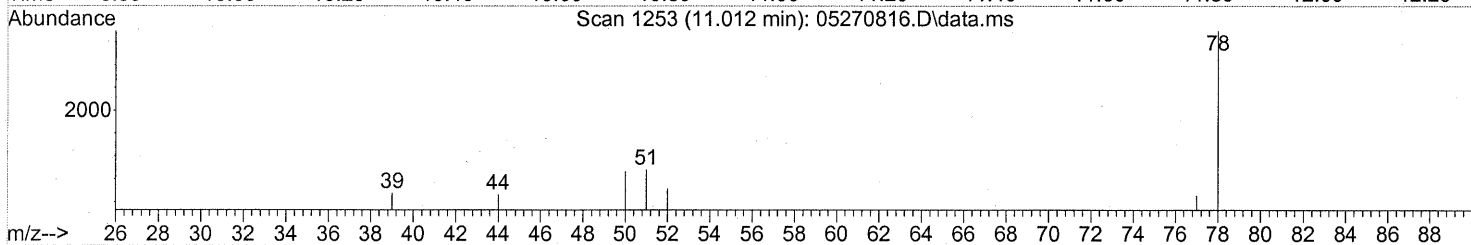
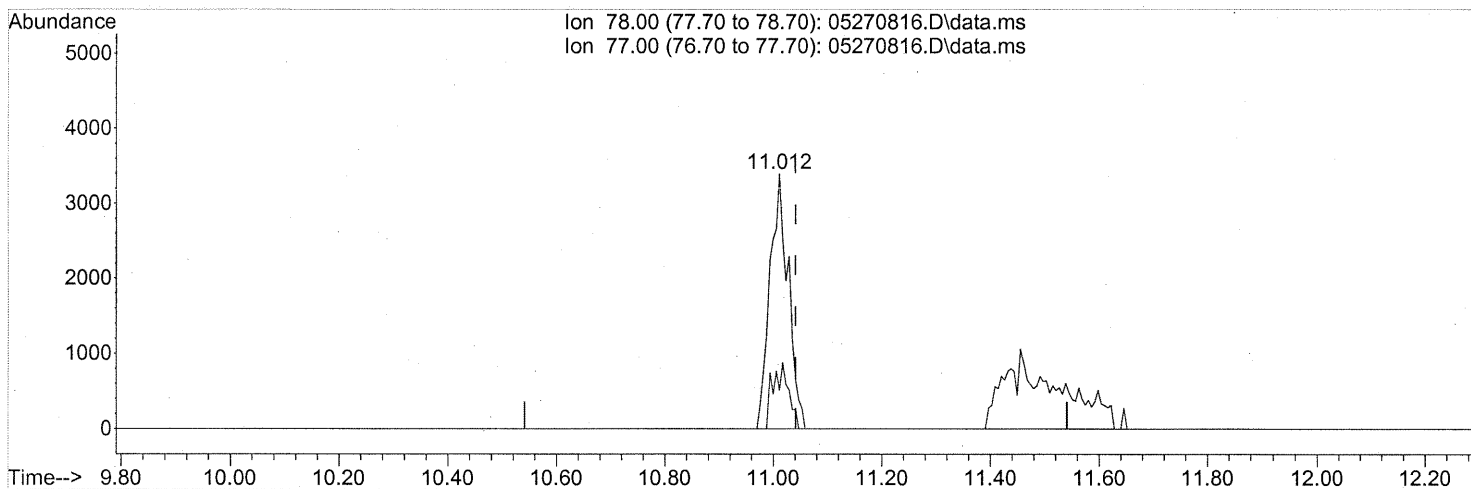
response 10043

Ion	Exp%	Act%
62.00	100	100
64.00	32.50	29.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(41) Benzene (T)

11.012min (-0.030) 0.12ng

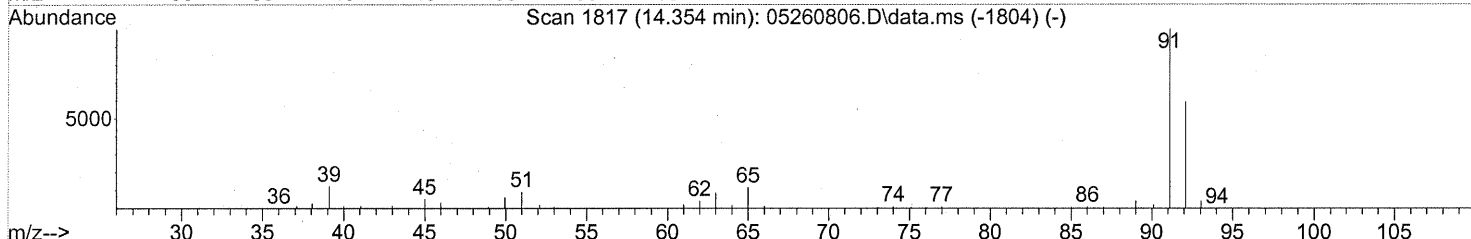
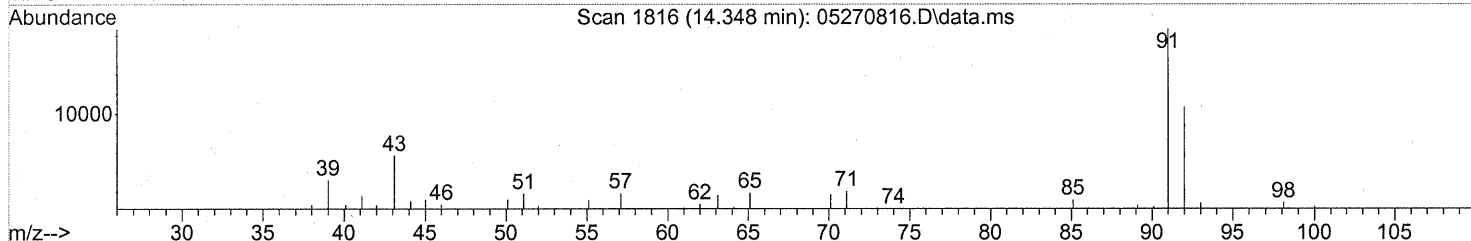
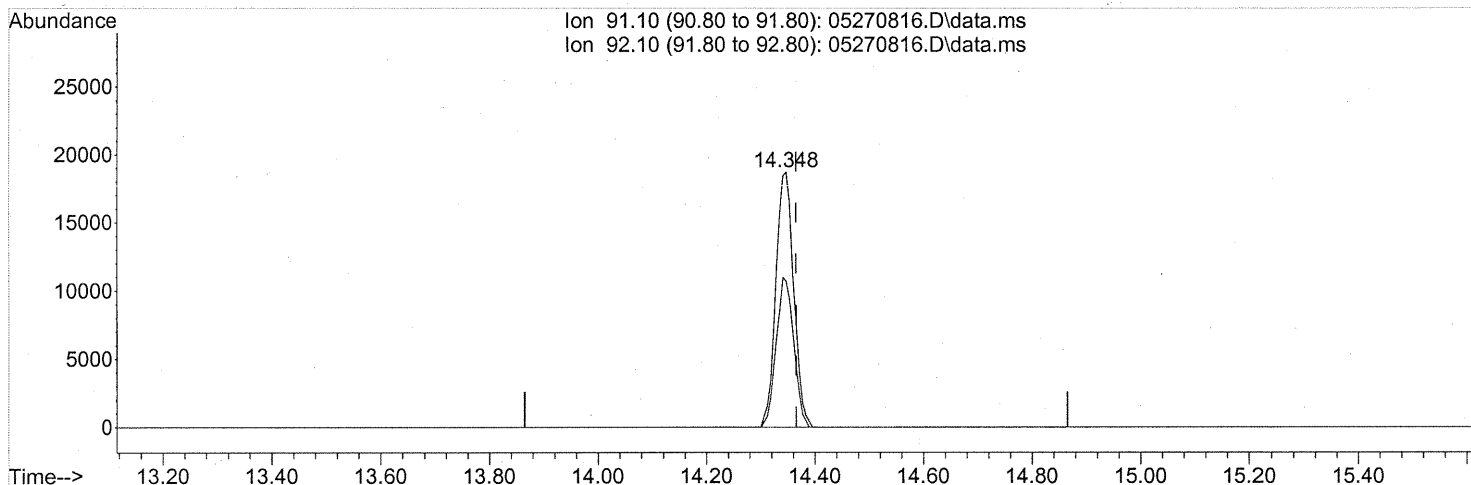
response 7964

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

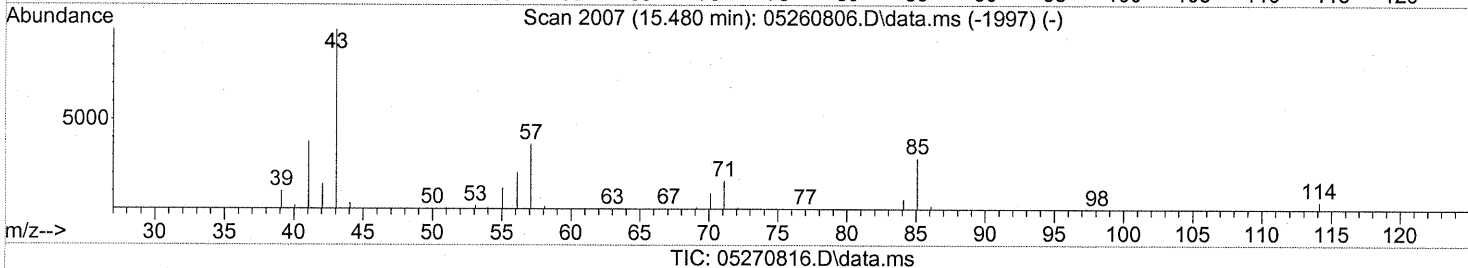
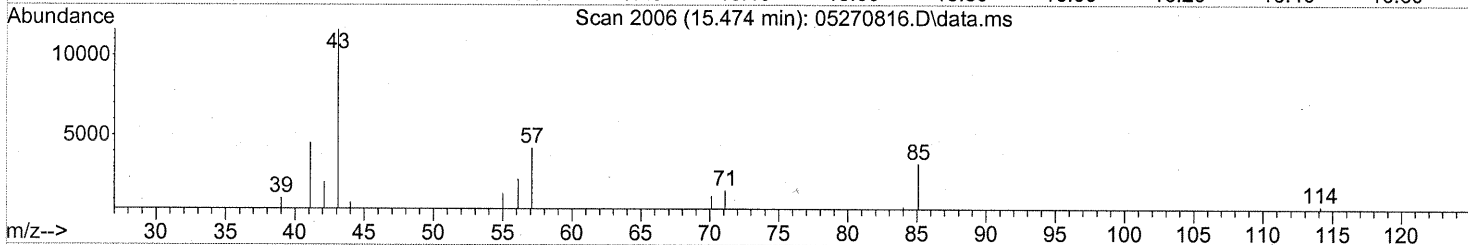
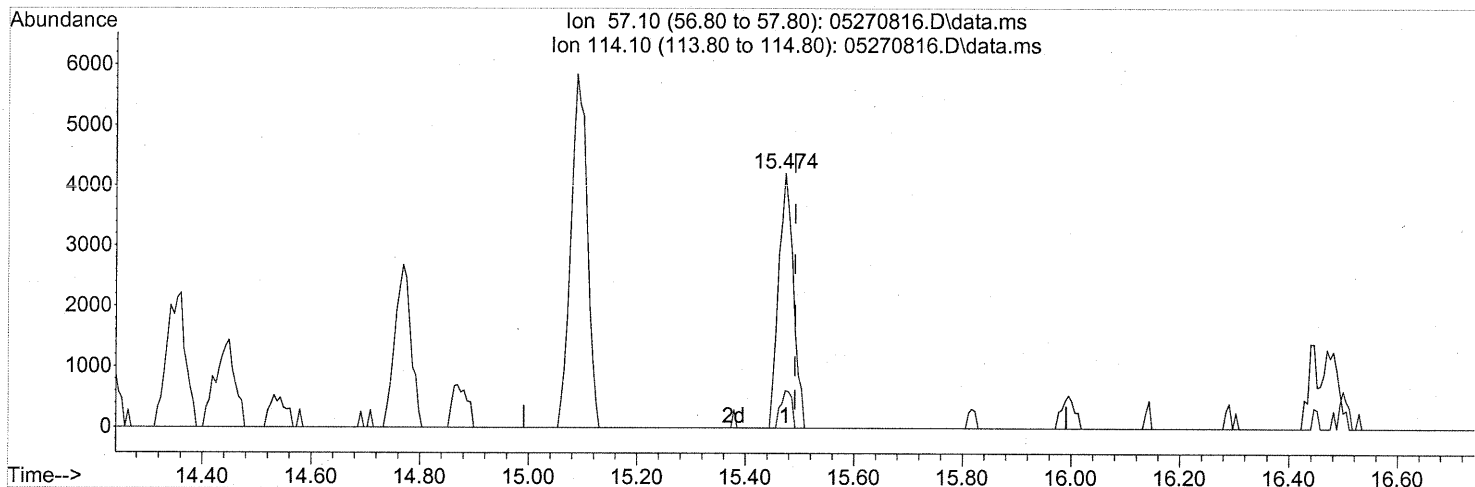
(58) Toluene (T)  
 14.348min (-0.018) 0.55ng  
 response 42537

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	57.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(63) n-Octane (T)

15.474min (-0.018) 0.34ng

response 7951

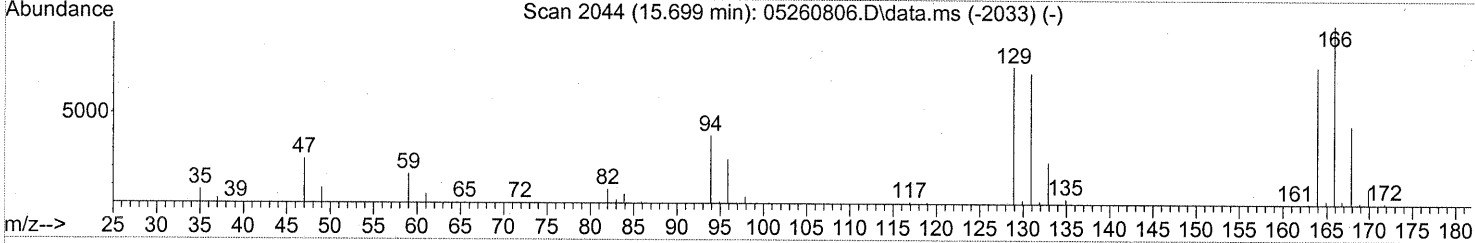
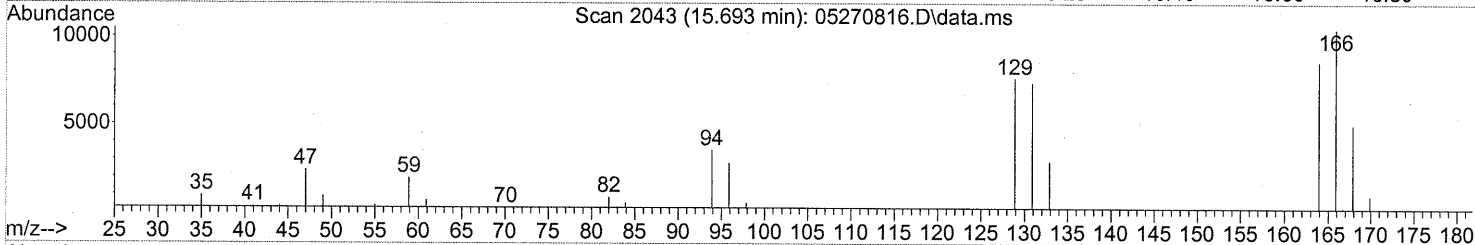
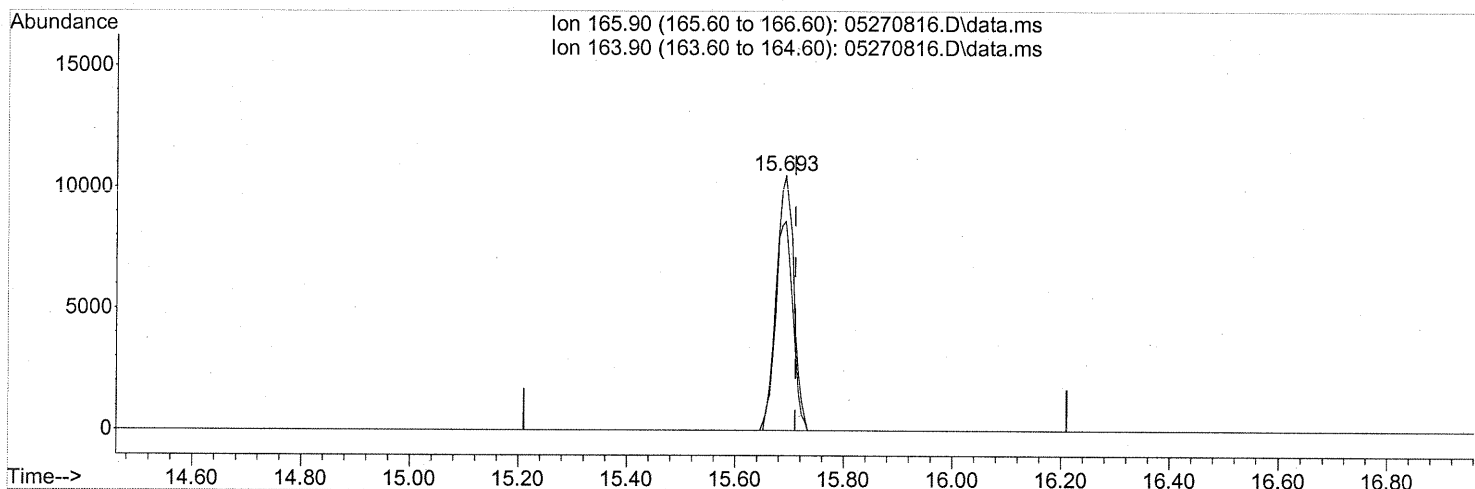
Ion	Exp%	Act%
57.10	100	100
114.10	13.60	10.94
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 1.04ng

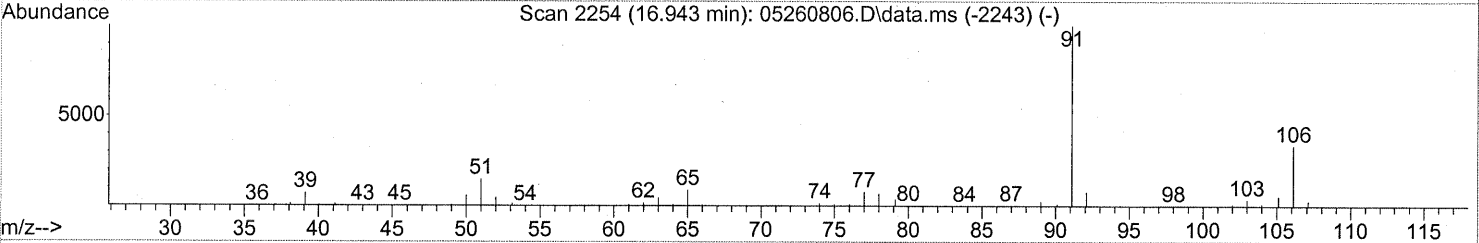
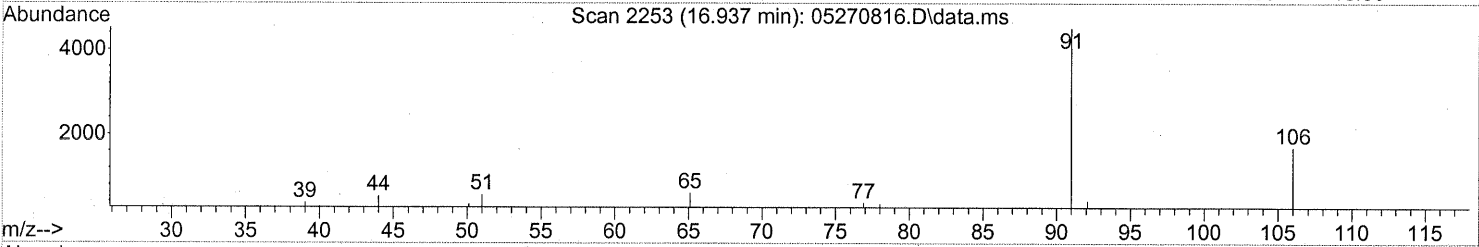
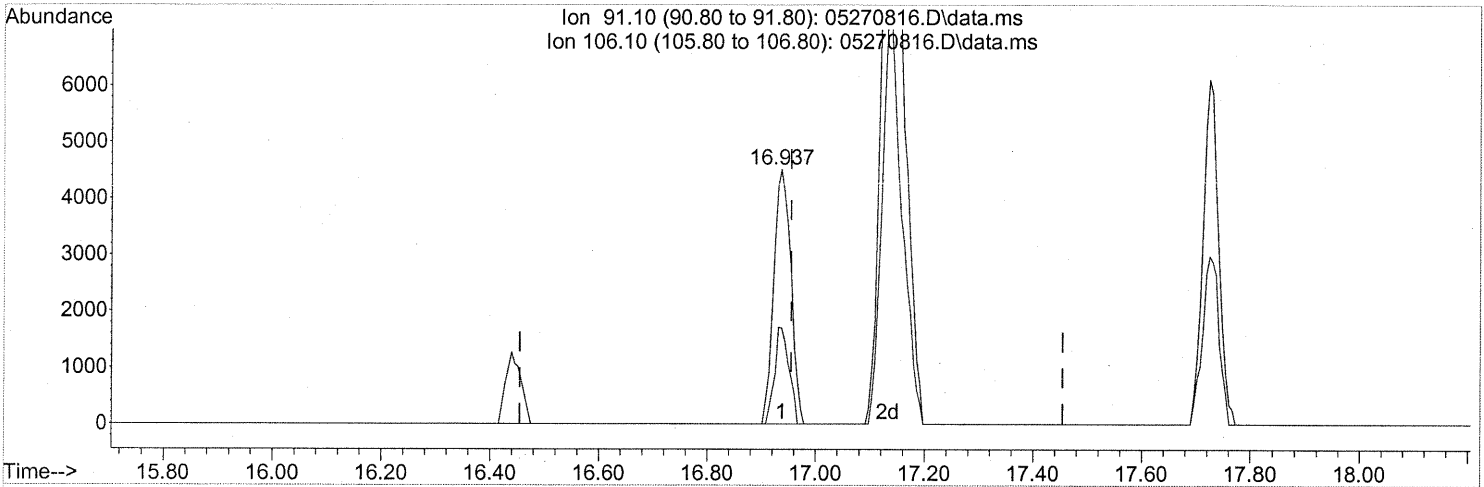
response 23573

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	80.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

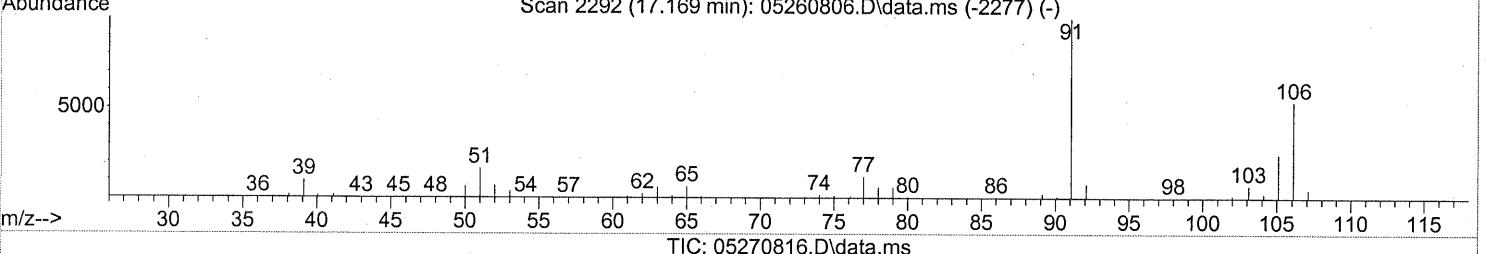
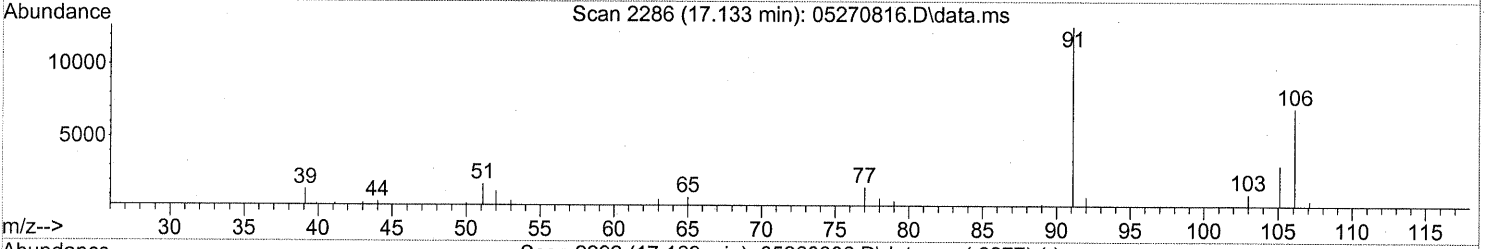
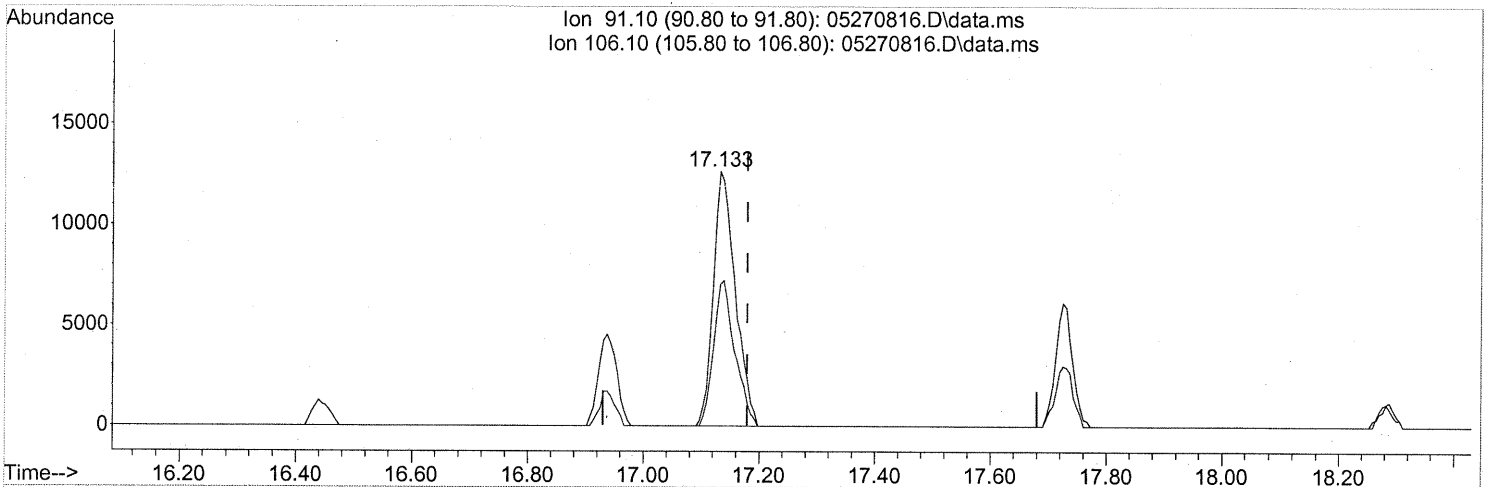
(66) Ethylbenzene (T)  
 16.937min (-0.018) 0.11ng  
 response 9959

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	32.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(67) m- & p-Xylene (T)

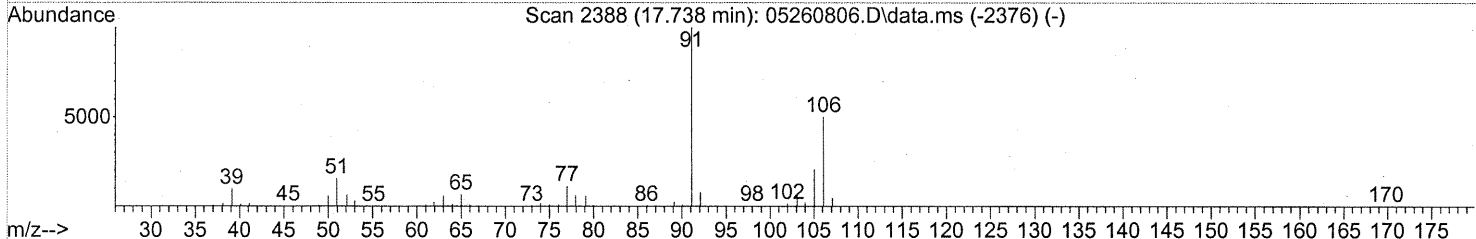
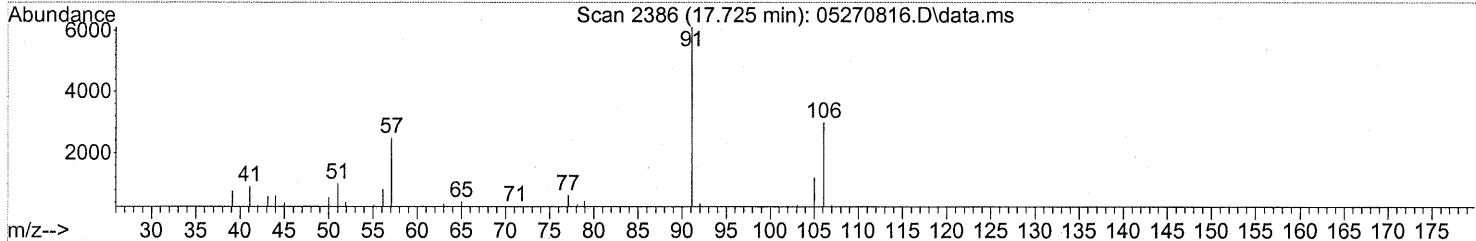
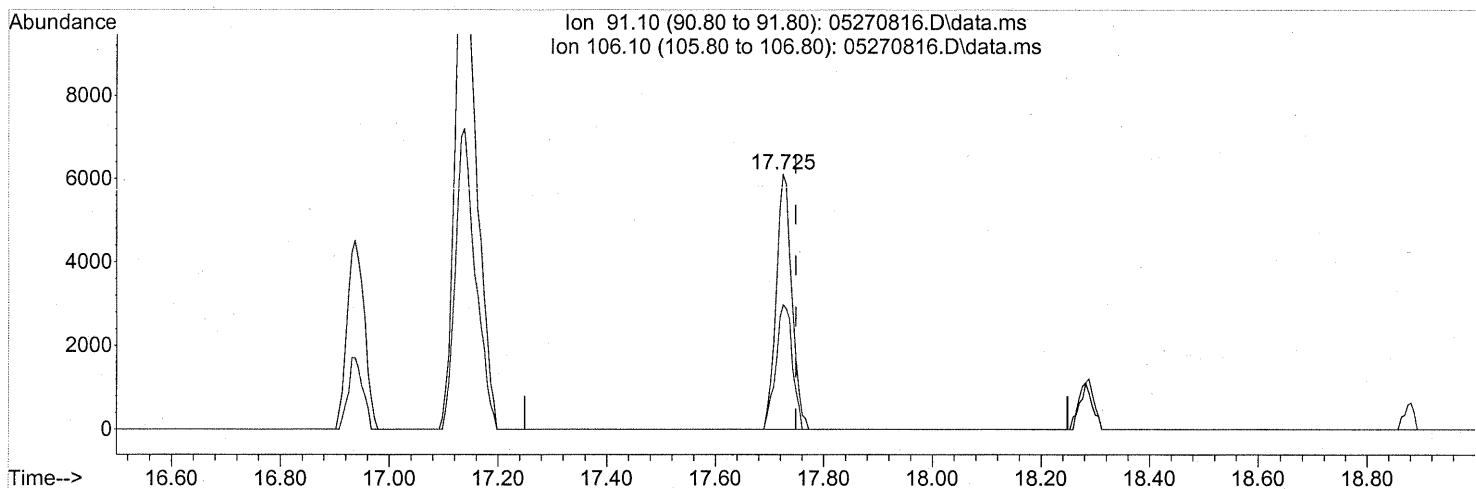
17.133min (-0.048) 0.58ng

response 33305

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	55.24
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(70) o-Xylene (T)

17.725min (-0.024) 0.20ng

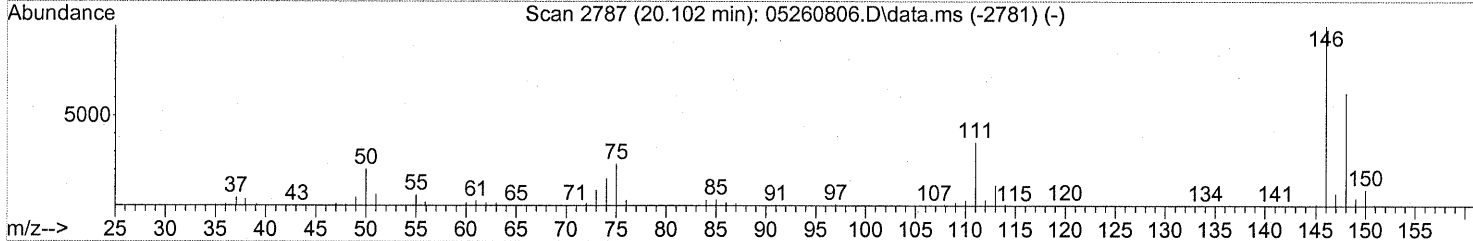
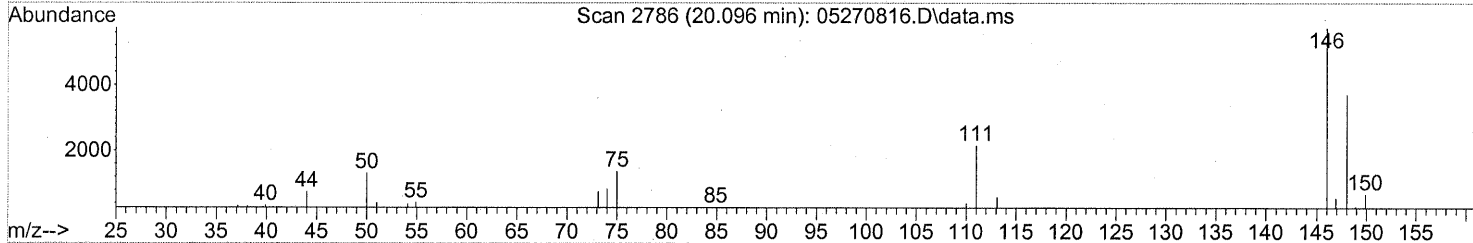
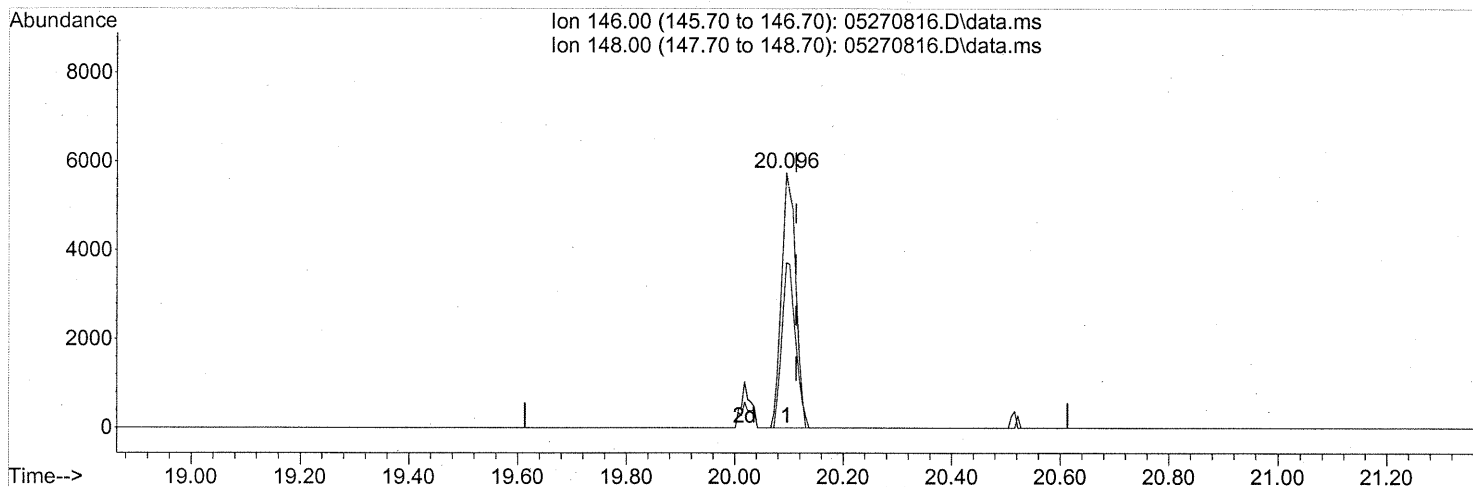
response 12346

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	51.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270816.D\data.ms

(86) 1,4-Dichlorobenzene (T)

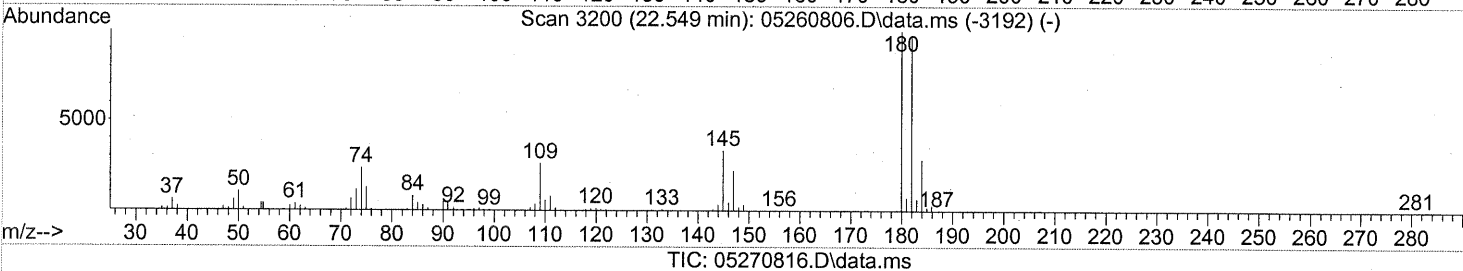
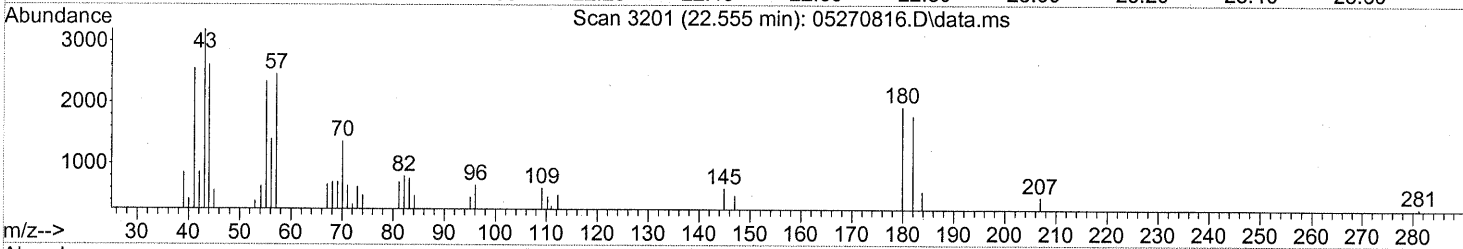
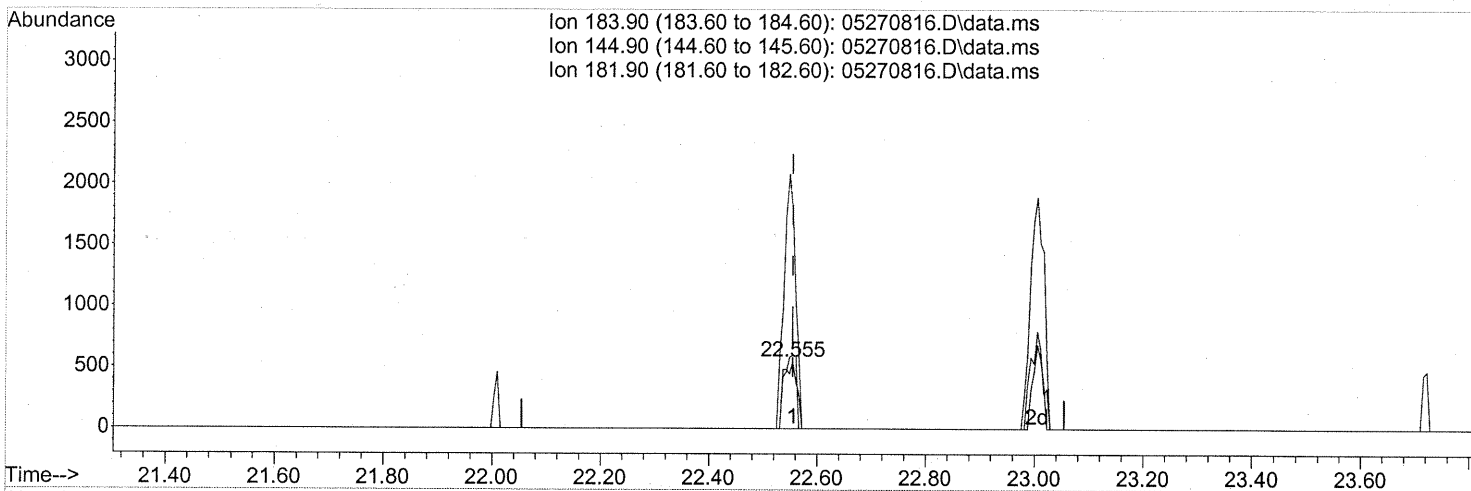
20.096min (-0.018) 0.21ng

response 10436

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	62.97
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 28 04:47:42 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(94) 1,2,4-Trichlorobenzene (T)

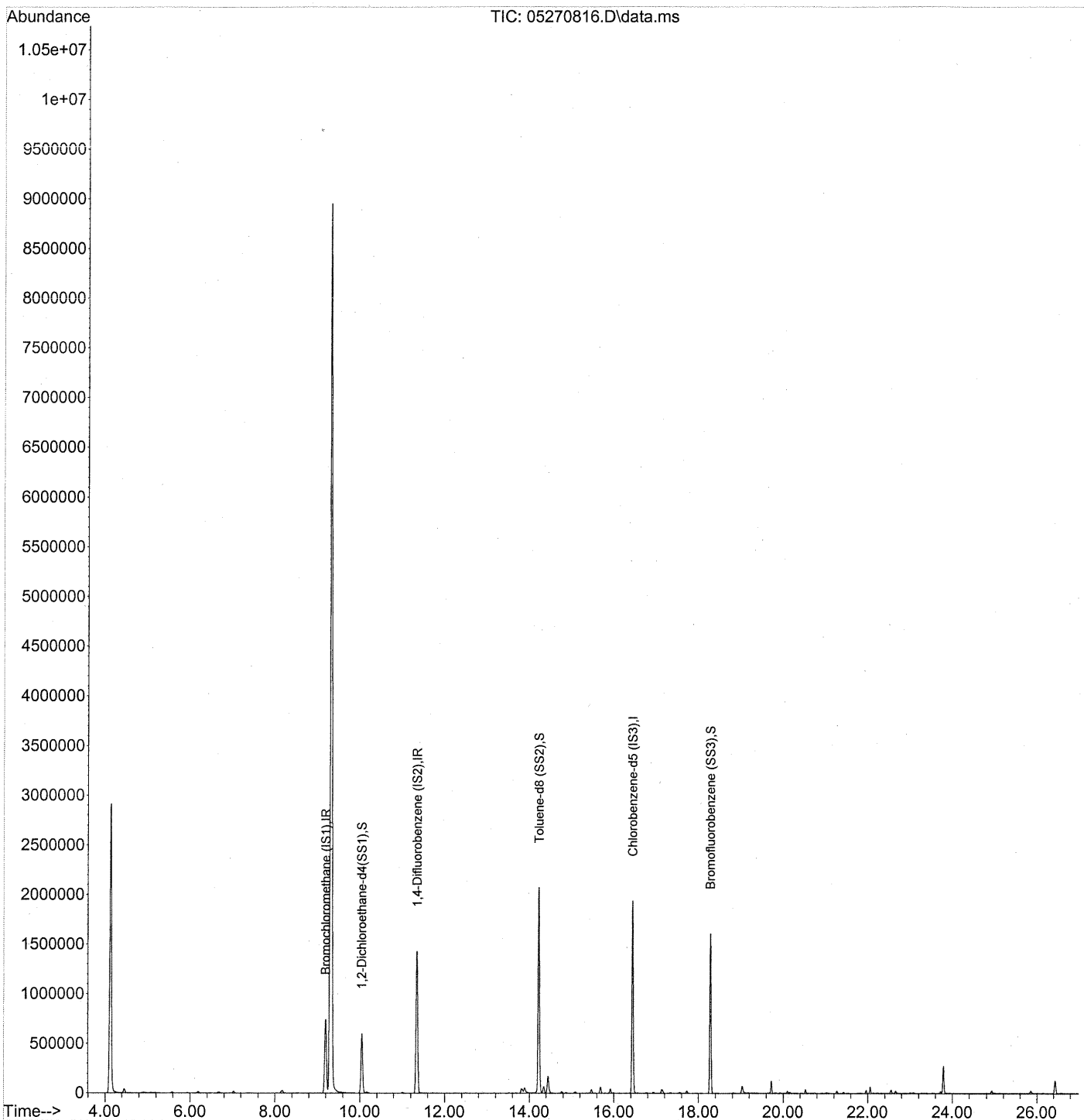
22.555min (-0.000) 0.11ng

response 928

Ion	Exp%	Act%
183.90	100	100
144.90	98.10	101.29
181.90	314.30	337.50#
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 04 14:39:28 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270816.D  
 Acq On : 27 May 2008 22:19  
 Operator : WA  
 Sample : P0801507-011 (20ml)  
 Misc : ENSR SG57B-05 (-3.3, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jun 04 14:39:28 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

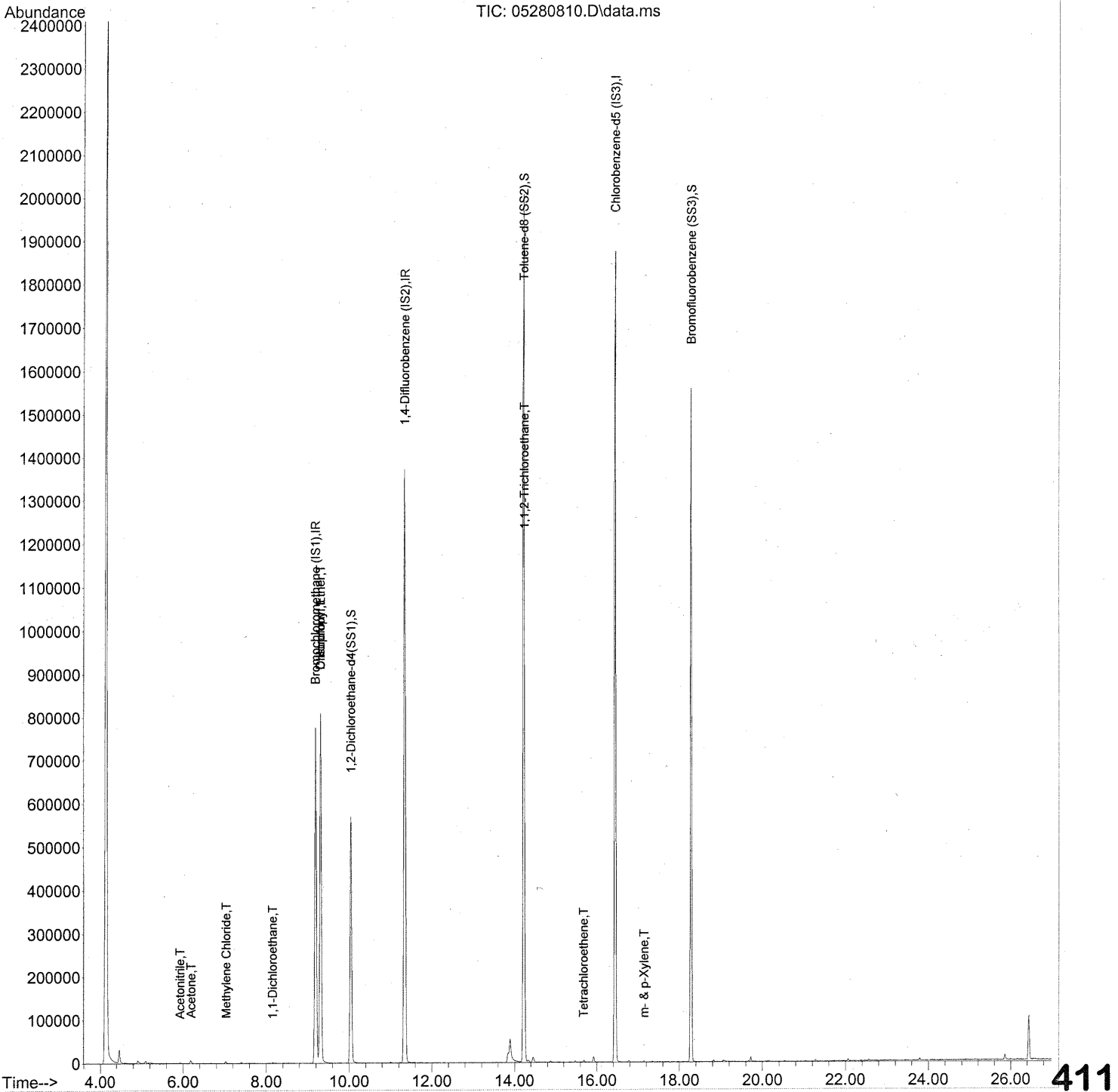
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	388924	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1619160	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	656839	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	556899	25.042	ng	-0.05
Spiked Amount	25.000					Recovery = 100.16%
5) Toluene-d8 (SS2)	14.23	98	1646381	24.313	ng	-0.02
Spiked Amount	25.000					Recovery = 97.24%
6) Bromofluorobenzene (SS3)	18.28	174	578697	25.703	ng	-0.01
Spiked Amount	25.000					Recovery = 102.80%
Target Compounds						
7) tert-Butylbenzene	19.83	119	663		N.D.	Qvalue
8) n-Butylbenzene	20.84	91	106		N.D.	

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



Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280810.D  
Acq On : 28 May 2008 3:45 pm  
Operator : WA  
Sample : P0801507-011 Dil (2.0ml)  
Misc : ENSR SG57B-050 (-3.3, 3.6) ~~WA~~ 6/4/08  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:25 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280810.D  
 Acq On : 28 May 2008 3:45 pm  
 Operator : WA  
 Sample : P0801507-011 Dil (2.0ml)  
 Misc : ENSR SG57B-05D (-3.3, 3.6) *6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:25 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	379052	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1549547	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	630197	25.000	ng	-0.02

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	532099	24.550	ng	-0.05	
Spiked Amount	25.000		Recovery	=	98.20%		✓
57) Toluene-d8 (SS2)	14.22	98	1582383	24.355	ng	-0.02	
Spiked Amount	25.000		Recovery	=	97.44%		✓
73) Bromofluorobenzene (SS3)	18.28	174	560054	25.927	ng	-0.01	
Spiked Amount	25.000		Recovery	=	103.72%		✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.48	42	483	N.D.		
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	5.60	64	578	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.93	41	3386	0.059	ng	# 7
12) Acrolein	6.06	56	198	N.D.		
13) Acetone	6.19	58	4178	0.211	ng	# 59
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	0.00	45	0	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.04	84	1821	0.119	ng	# 31
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	2808	N.D.		
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.16	63	3204	0.099	ng	79
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	87339	6.403	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

412

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280810.D  
 Acq On : 28 May 2008 3:45 pm  
 Operator : WA  
 Sample : P0801507-011 Dil (2.0ml)  
 Misc : ENSR SG57B-05D (-3.3, 3.6) *PA 6/4/08*  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:25 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	795180	35.550	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	10.17	62	294	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	0.00	56	0	N.D.		
41) Benzene	10.99	78	1959	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	448	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	0.00	57	0	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	133178	8.381	ng	# 6
58) Toluene	14.34	91	3102	N.D.		
59) 2-Hexanone	14.46	43	208	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	1864	N.D.		
63) n-Octane	15.47	57	626	N.D.		
64) Tetrachloroethene	15.68	166	1732	0.079	ng	98
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	670	N.D.		
67) m- & p-Xylene	17.14	91	2988	0.054	ng	81
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	887	N.D.		
71) n-Nonane	17.73	43	102	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.29	105	715	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.18	105	193	N.D.		
78) 4-Ethyltoluene	19.18	105	193	N.D.		
79) 1,3,5-Trimethylbenzene	19.18	105	193	N.D.		

413

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280810.D  
Acq On : 28 May 2008 3:45 pm  
Operator : WA  
Sample : P0801507-011 Dil (2.0ml) *WA 6/4/08*  
Misc : ENSR SG57B-05D (-3.3, 3.6)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:25 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration

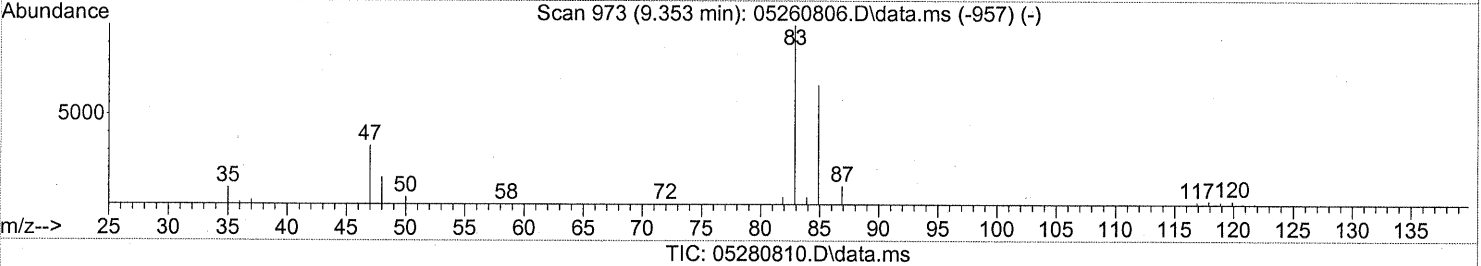
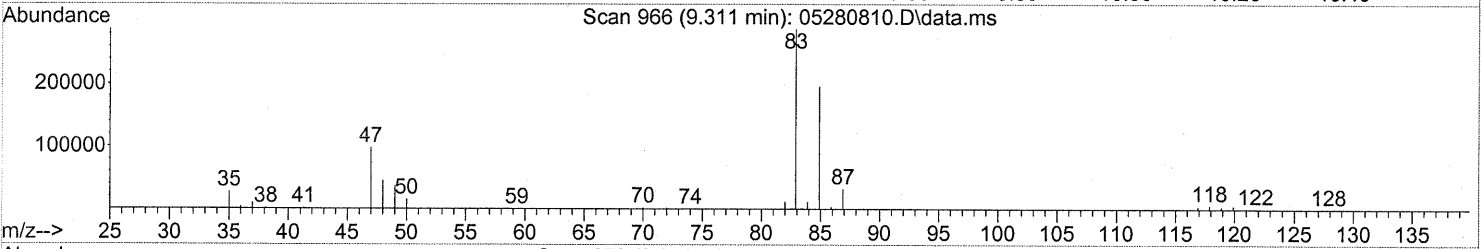
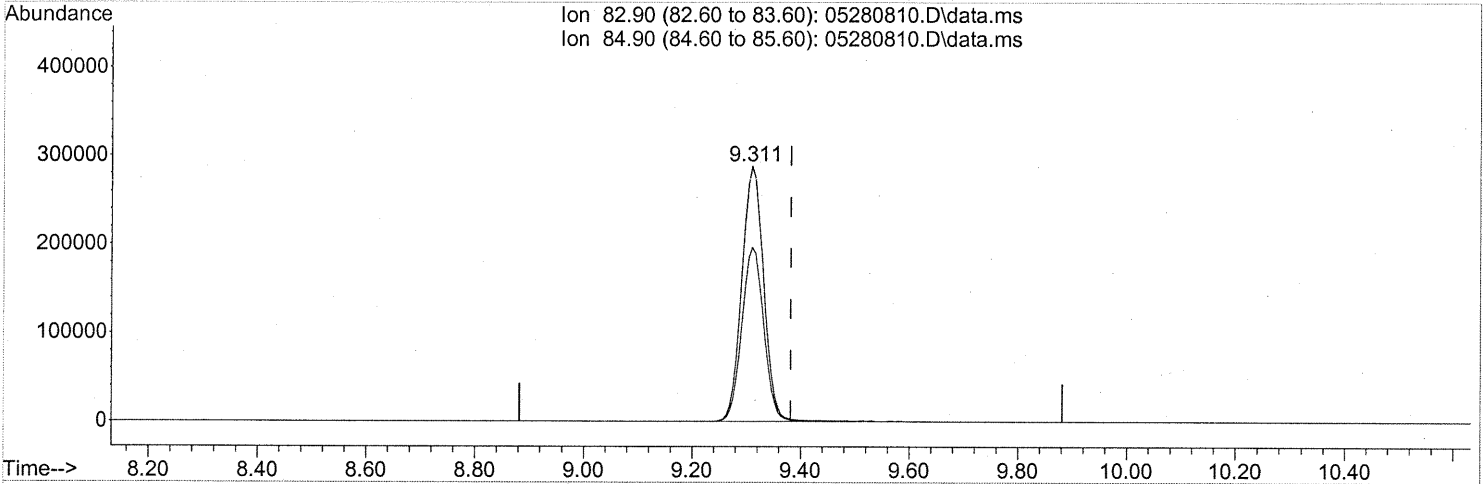
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	19.56	105	109	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	612	N.D.		
83) n-Decane	19.92	57	93	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.11	146	546	N.D.		
86) 1,4-Dichlorobenzene	20.11	146	546	N.D.		
87) sec-Butylbenzene	19.83	105	612	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	20.76	105	110	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	320	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	642	N.D.		
96) n-Dodecane	22.66	57	308	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280810.D  
Acq On : 28 May 2008 15:45  
Operator : WA  
Sample : P0801507-011 Dil (2.0ml)  
Misc : ENSR SG57B-05D (-3.3, 3.6) *DA 6/4/08*  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 06:13:25 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(32) Chloroform (T)

9.311min (-0.071) 35.55ng

response 795180

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.70
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG13B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00428

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.25 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.61

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.4	3.2	0.32	0.49	0.65	0.065	J
74-87-3	Chloromethane	0.34	0.64	0.32	0.17	0.31	0.16	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.2	0.32	ND	0.46	0.046	
75-01-4	Vinyl Chloride	ND	0.64	0.32	ND	0.25	0.13	
74-83-9	Bromomethane	ND	0.64	0.32	ND	0.17	0.083	
75-00-3	Chloroethane	ND	0.64	0.32	ND	0.24	0.12	
64-17-5	Ethanol	3.7	32	0.32	1.9	17	0.17	J, B
67-64-1	Acetone	47	32	0.47	20	14	0.20	B
75-69-4	Trichlorofluoromethane	7.0	0.64	0.32	1.2	0.11	0.057	
107-13-1	Acrylonitrile	ND	3.2	0.45	ND	1.5	0.21	
75-35-4	1,1-Dichloroethene	ND	0.64	0.32	ND	0.16	0.081	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	3.2	3.2	0.48	1.1	1.1	0.16	J
75-09-2	Methylene Chloride	0.57	3.2	0.32	0.16	0.93	0.093	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.64	0.32	ND	0.21	0.10	
76-13-1	Trichlorotrifluoroethane	0.52	0.64	0.36	0.068	0.084	0.047	J
75-15-0	Carbon Disulfide	3.0	3.2	0.77	0.98	1.0	0.25	J
156-60-5	trans-1,2-Dichloroethene	ND	0.64	0.32	ND	0.16	0.081	
75-34-3	1,1-Dichloroethane	ND	0.64	0.32	ND	0.16	0.080	
1634-04-4	Methyl tert-Butyl Ether	ND	0.64	0.32	ND	0.18	0.089	
108-05-4	Vinyl Acetate	4.5	32	1.0	1.3	9.1	0.29	J, B
78-93-3	2-Butanone (MEK)	19	3.2	0.32	6.5	1.1	0.11	B
156-59-2	cis-1,2-Dichloroethene	ND	0.64	0.32	ND	0.16	0.081	
108-20-3	Diisopropyl Ether	ND	3.2	0.38	ND	0.77	0.091	
67-66-3	Chloroform	1,700	0.64	0.38	350	0.13	0.078	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**416**

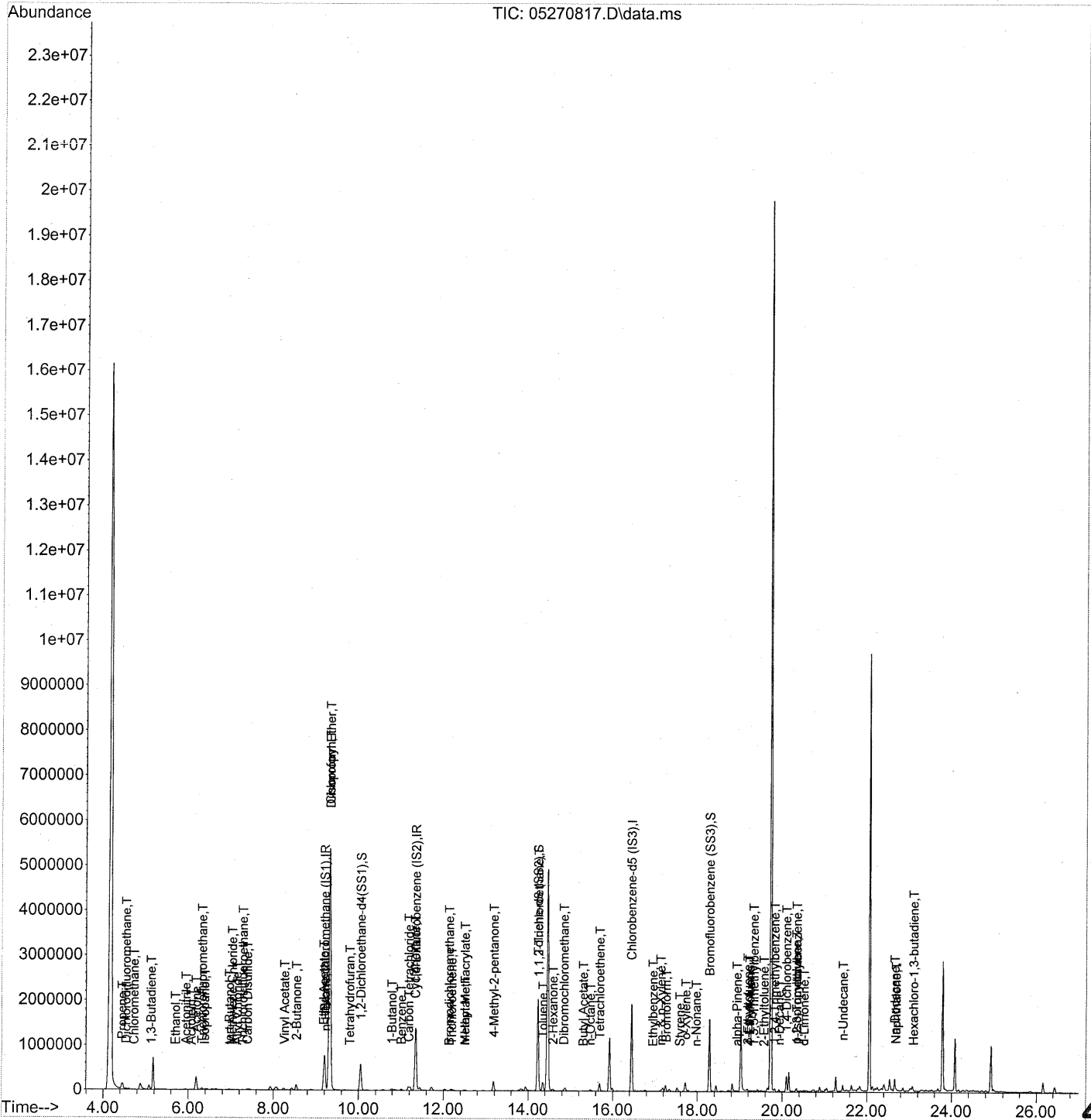






Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 07:59:33 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 07:59:33 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	380792	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.35	114	1597367	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	659426	25.000	ng	-0.01

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	542471	24.914	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.64%	✓
57) Toluene-d8 (SS2)	14.23	98	1625685	23.913	ng	-0.02
Spiked Amount	25.000		Recovery	=	95.64%	✓
73) Bromofluorobenzene (SS3)	18.29	174	577227	25.537	ng	0.00
Spiked Amount	25.000		Recovery	=	102.16%	✓

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	46853	1.589	ng	# 82
3) Dichlorodifluoromethane	4.54	85	13436	0.377	ng	99
4) Chloromethane	4.73	50	2389	0.053	ng	75
5) Freon 114	4.84	135	96	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	5.13	54	5970	0.230	ng	# 25
8) Bromomethane	5.42	94	98	N.D.	✓	
9) Chloroethane	5.59	64	204	N.D.	✓	
10) Ethanol	5.70	45	11369m	0.568	ng	
11) Acetonitrile	5.95	41	14931	0.259	ng	# 67
12) Acrolein	6.08	56	5209	0.361	ng	97
13) Acetone	6.19	58	144088	7.242	ng	# 75
14) Trichlorofluoromethane	6.32	101	36073	1.081	ng	97
15) Isopropanol	6.38	45	29486	0.492	ng	94
16) Acrylonitrile	6.61	53	630	N.D.	✓	
17) 1,1-Dichloroethene	6.93	96	191	N.D.	✓	
18) tert-Butanol	6.96	59	27838m	0.498	ng	
19) Methylene Chloride	7.03	84	1354	0.088	ng	# 11
20) Allyl Chloride	7.14	41	2586	0.073	ng	UR# 45
21) Trichlorotrifluoroethane	7.28	151	1306	0.081	ng	98
22) Carbon Disulfide	7.39	76	29117	0.472	ng	100
23) trans-1,2-Dichloroethene	7.93	61	808	N.D.	✓	
24) 1,1-Dichloroethane	0.00	63	0	N.D.	✓	
25) Methyl tert-Butyl Ether	8.22	73	315	N.D.	✓	
26) Vinyl Acetate	8.26	86	2275	0.698	ng	# 80
27) 2-Butanone	8.53	72	31124	2.992	ng	# 23
28) cis-1,2-Dichloroethene	9.01	61	95	N.D.	✓	
29) Diisopropyl Ether	9.33	87	659078	48.099	ng	UR# 1
30) Ethyl Acetate	9.18	61	5117	0.705	ng	87
31) n-Hexane	9.23	57	8031	0.185	ng	83

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 07:59:33 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	6058378	<del>269.612 ng</del>	<del>sa del</del>	96
34) Tetrahydrofuran	9.79	72	1418	0.145 ng	#	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	0.00	62	0	N.D. ✓		
38) 1,1,1-Trichloroethane	10.47	97	89	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	48729	1.853 ng	#	47
41) Benzene	11.01	78	28214	0.419 ng		98
42) Carbon Tetrachloride	11.18	117	67993	2.461 ng		99
43) Cyclohexane	11.34	84	5685	0.216 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	0.00	63	0	N.D. ✓		
46) Bromodichloromethane	12.14	83	3853	0.195 ng		92
47) Trichloroethene	12.20	130	14717	0.702 ng		99
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.24	57	4114	N.D.		
50) Methyl Methacrylate	12.51	100	658	0.091 ng	NR #	1
51) n-Heptane	12.51	71	2614	0.163 ng	#	48
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.19	58	74420	3.178 ng		82
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	137694	8.406 ng	NR #	7
58) Toluene	14.35	91	157744	2.046 ng		98
59) 2-Hexanone	14.59	43	34072	0.468 ng		92
60) Dibromochloromethane	14.85	129	2314	0.102 ng		87
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.31	43	7007	0.096 ng		93
63) n-Octane	15.47	57	6931	0.297 ng		85
64) Tetrachloroethene	15.69	166	63066	2.765 ng		99
65) Chlorobenzene	16.50	112	1098	N.D. ✓		
66) Ethylbenzene	16.95	91	6758	0.077 ng		87
67) m- & p-Xylene	17.14	91	21895	0.377 ng		90
68) Bromoform	17.26	173	2027	0.153 ng		95
69) Styrene	17.59	104	3204	0.057 ng		92
70) o-Xylene	17.73	91	12231	0.197 ng		81
71) n-Nonane	17.97	43	9876	0.161 ng		76
72) 1,1,2,2-Tetrachloroethane	17.70	83	97	N.D. ✓		
74) Cumene	18.45	105	1503	N.D. ✓		
75) alpha-Pinene	18.93	93	7904	0.186 ng		97
76) n-Propylbenzene	19.06	91	5173	N.D. ✓		
77) 3-Ethyltoluene	19.19	105	13096	0.132 ng		94
78) 4-Ethyltoluene	19.24	105	7301	0.082 ng		97
79) 1,3,5-Trimethylbenzene	19.33	105	8012	0.101 ng		95

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 07:59:33 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

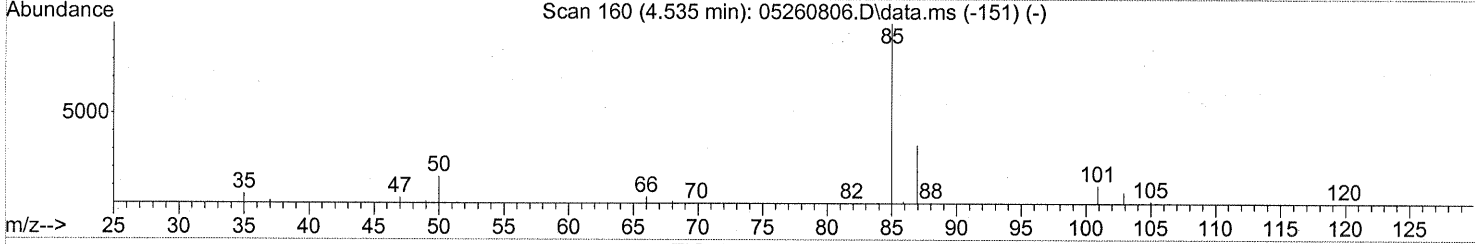
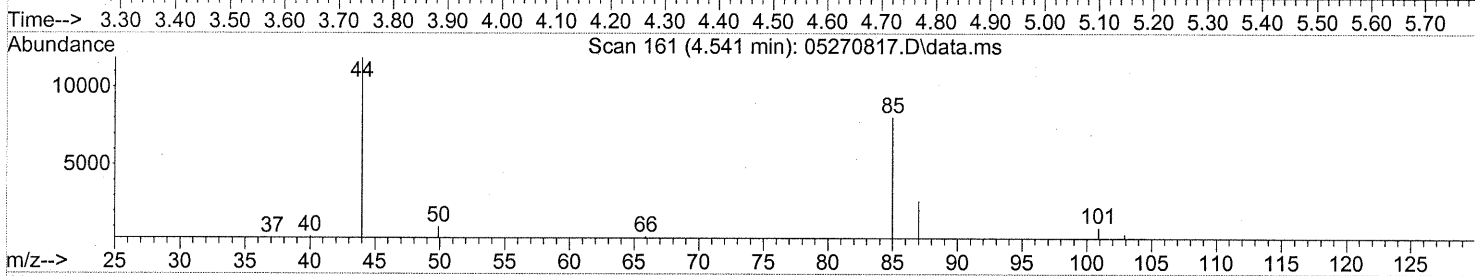
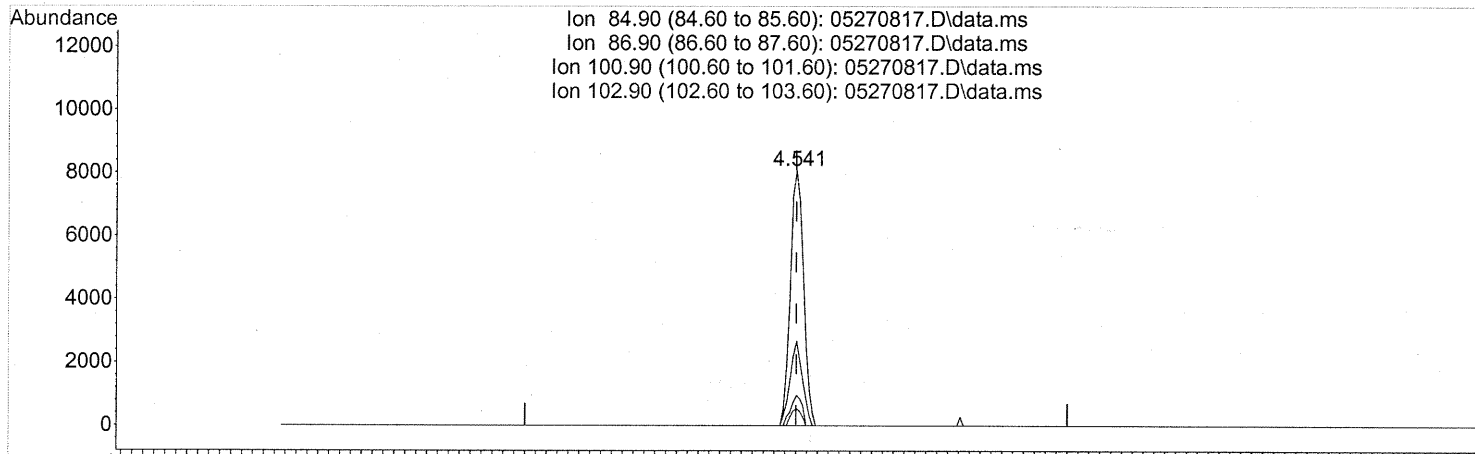
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	2140	N.D.	✓	
81) 2-Ethyltoluene	19.57	105	6430	0.067	ng	96
82) 1,2,4-Trimethylbenzene	19.82	105	31081	0.387	ng	94
83) n-Decane	19.93	57	18621	0.327	ng	88
84) Benzyl Chloride	19.99	91	113	N.D.	✓	
85) 1,3-Dichlorobenzene	20.01	146	304	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	148262	2.998	ng	98
87) sec-Butylbenzene	20.16	105	1352	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	25323	0.278	ng	94
89) 1,2,3-Trimethylbenzene	20.34	105	14029	0.182	ng	86
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	✓	
91) d-Limonene	20.52	68	7204	0.291	ng	86
92) 1,2-Dibromo-3-Chloropr...	21.43	157	208	N.D.	✓	
93) n-Undecane	21.44	57	58908	0.987	ng	95
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.69	128	25227	0.216	ng	90
96) n-Dodecane	22.66	57	102225	1.758	ng	76
97) Hexachloro-1,3-butadiene	23.11	225	4997	0.356	ng	96

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(3) Dichlorodifluoromethane (T)

4.541min (+0.000) 0.38ng

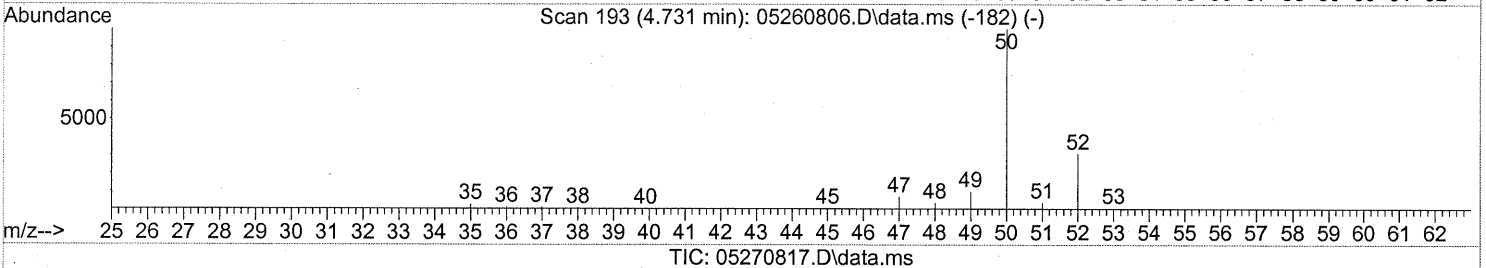
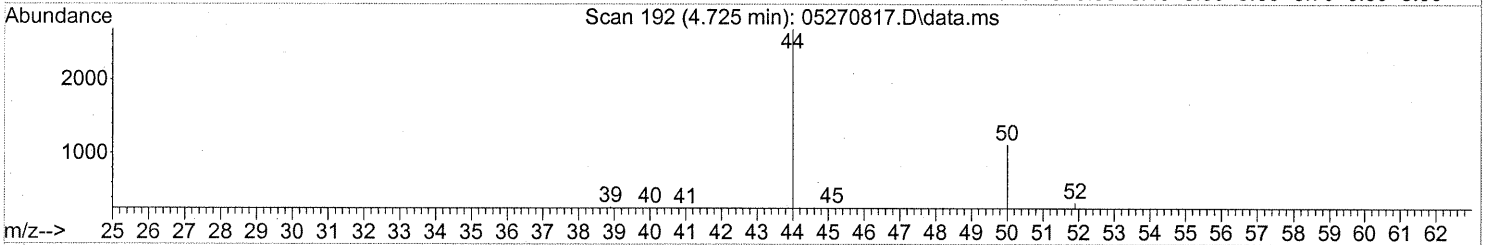
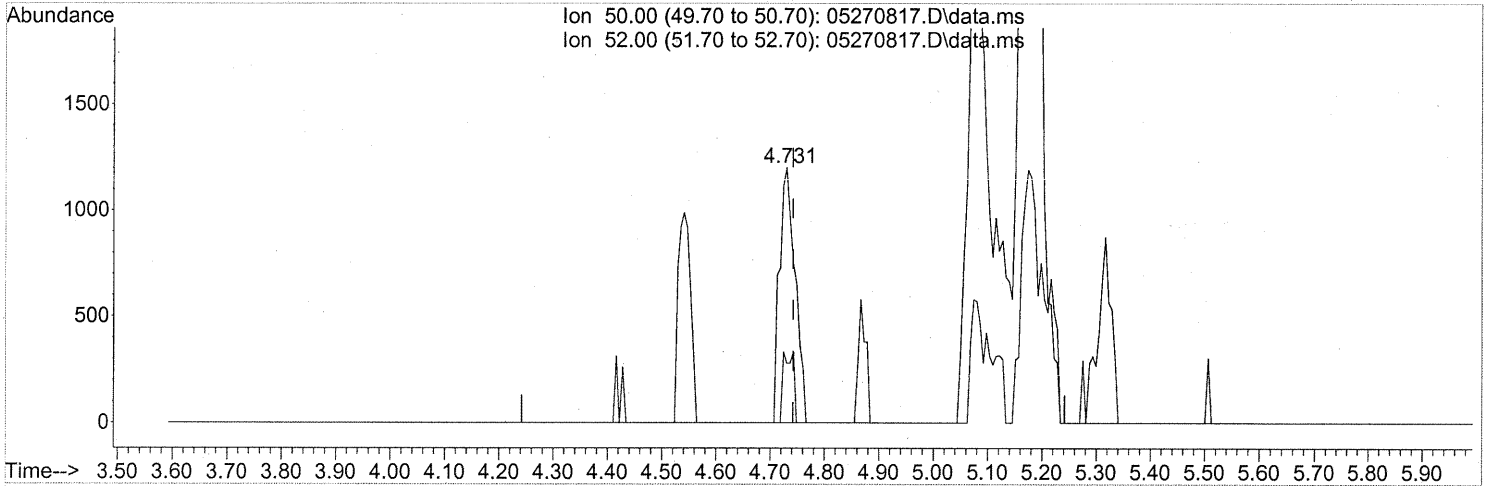
response 13436

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	31.16
100.90	8.40	10.08
102.90	5.50	5.13

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
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Quant Time: May 28 04:47:52 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(4) Chloromethane (T)

4.731min (-0.012) 0.05ng

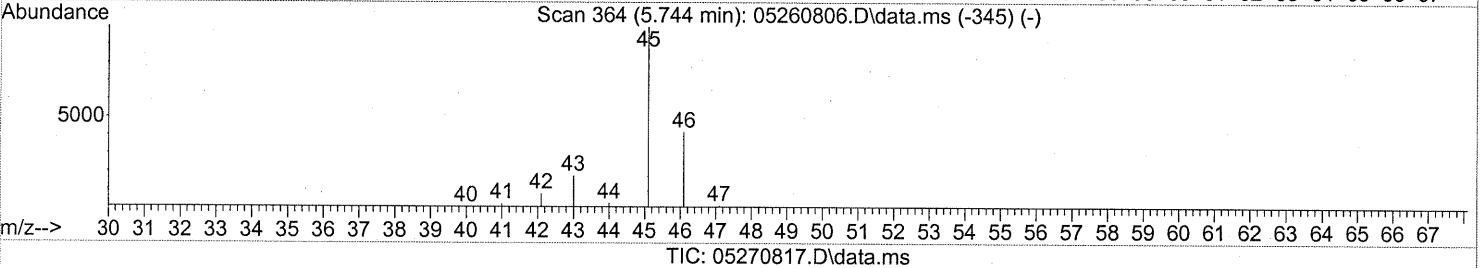
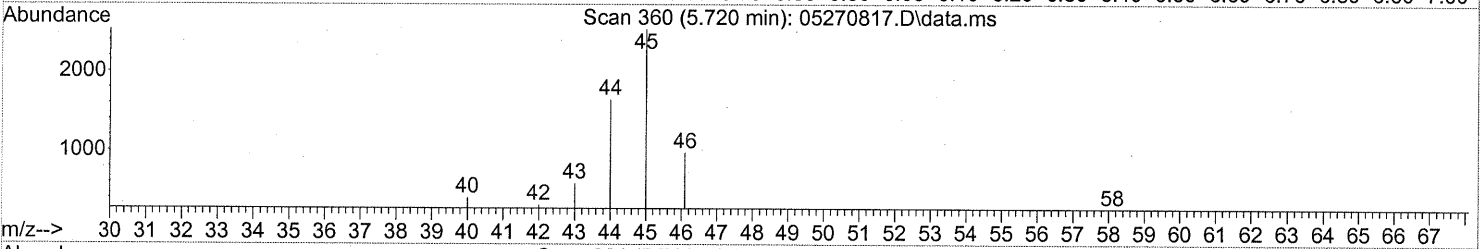
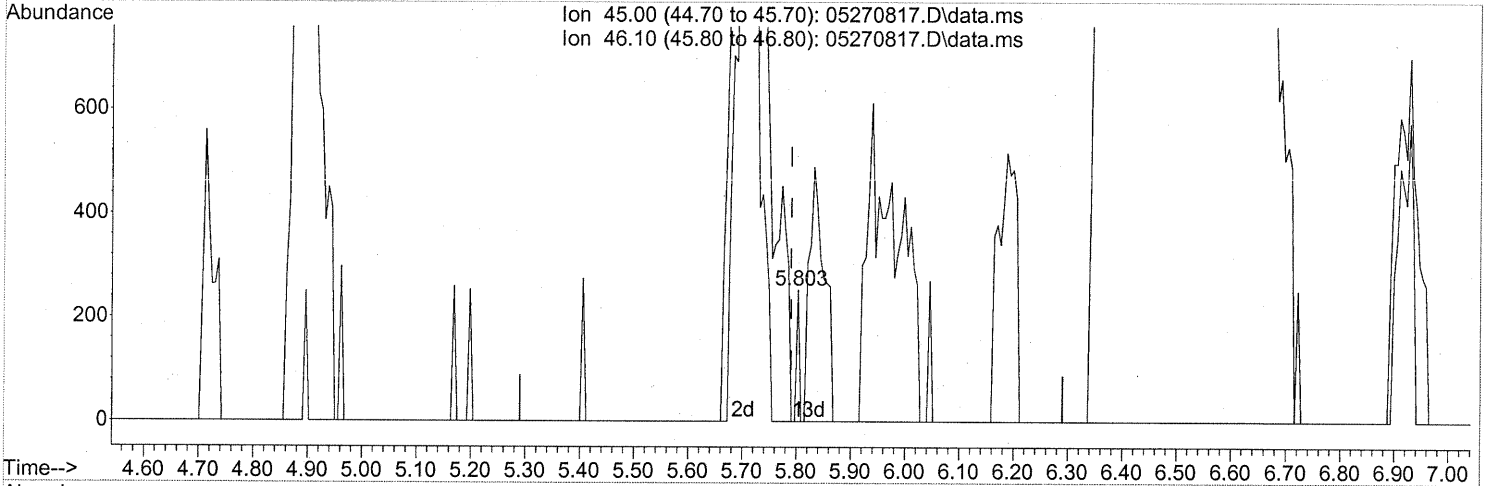
response 2389

Ion	Exp%	Act%
50.00	100	100
52.00	31.80	18.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.803min (+0.012) 0.00ng

response 90

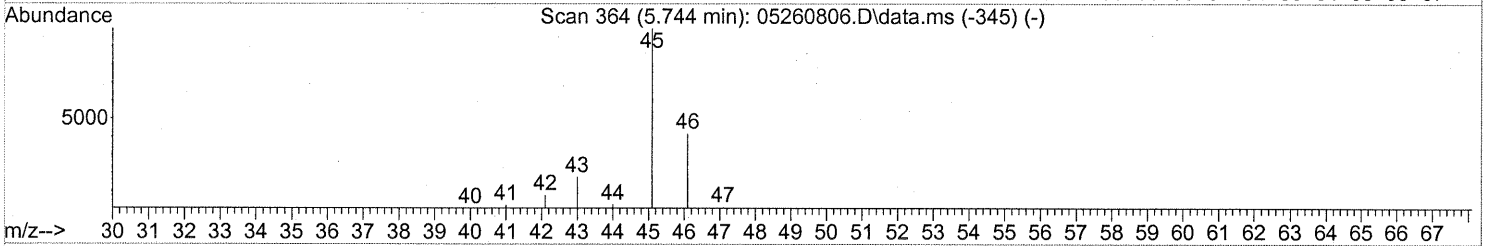
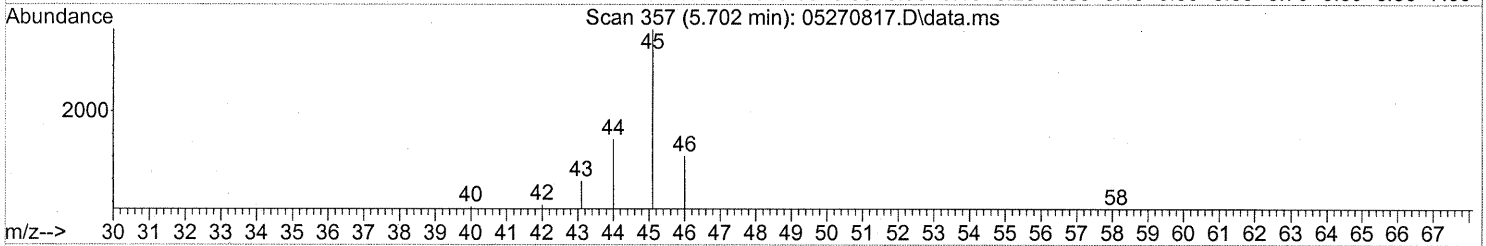
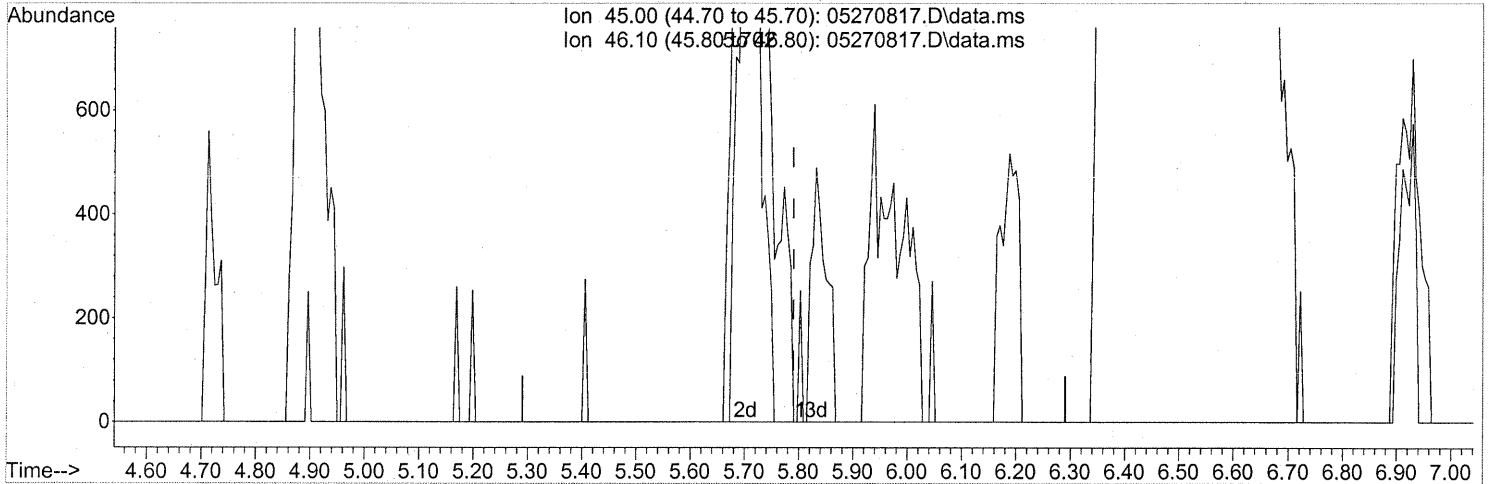
*mis-identify*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
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Quant Time: May 28 04:47:52 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.702min (-0.089) 0.57ng m

response 11369

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*int. corr. peak*

*DA 6/4/08*

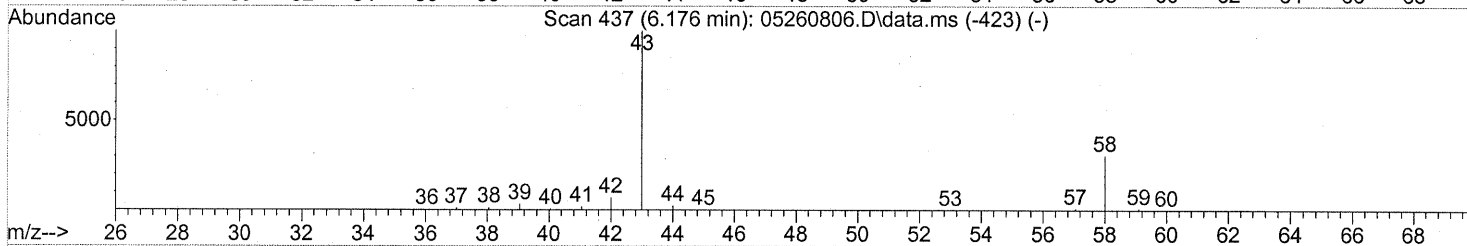
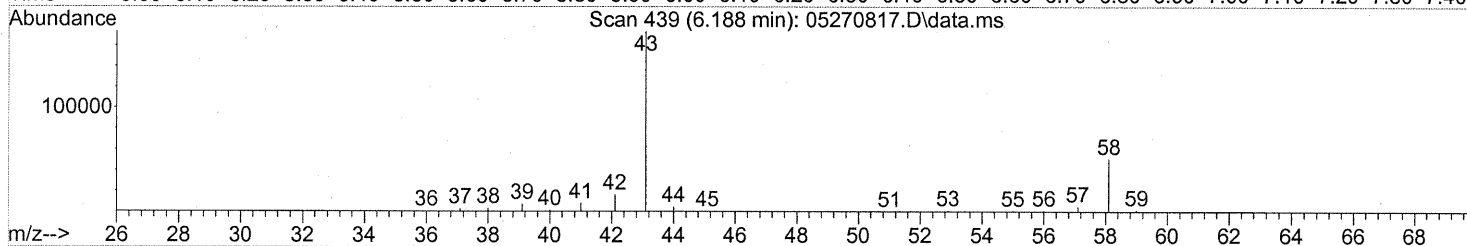
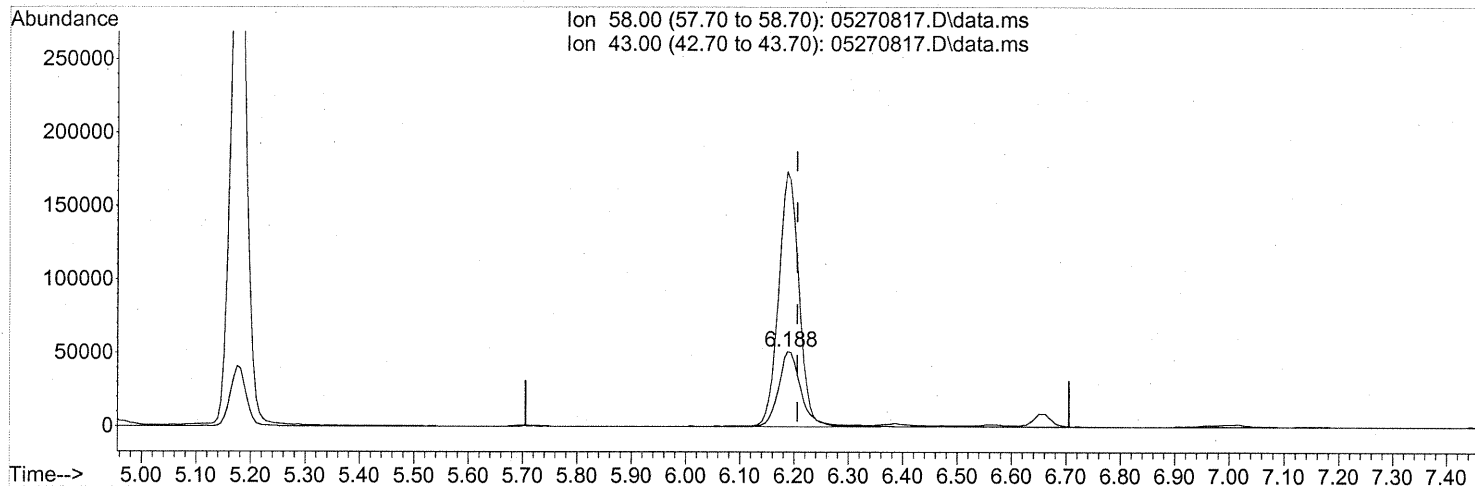
*6/4/08*



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 7.24ng

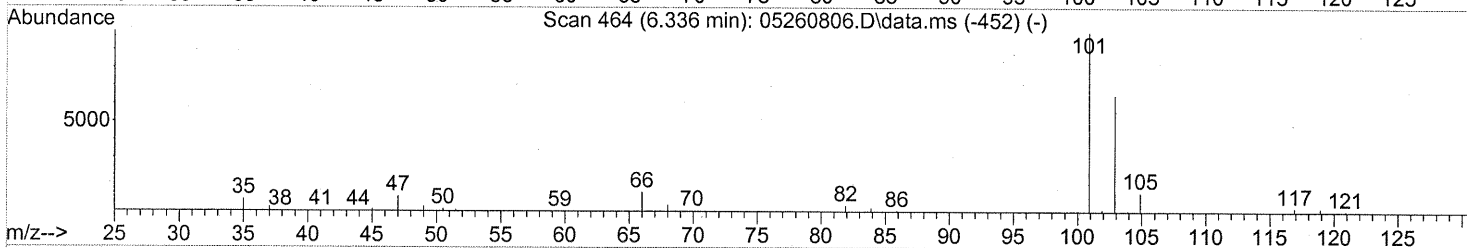
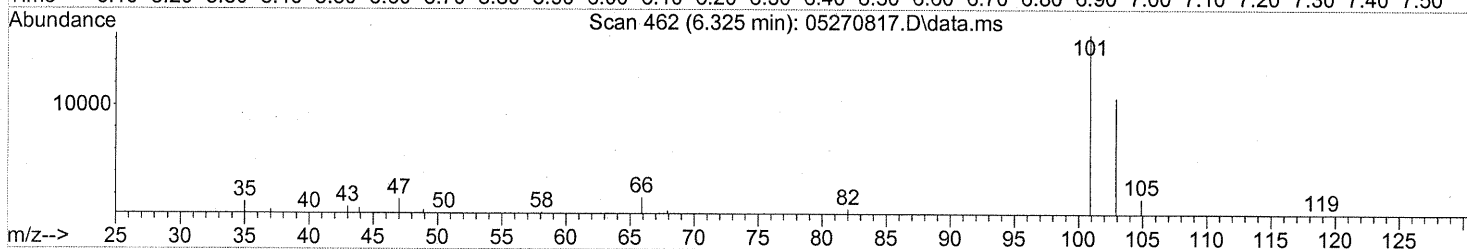
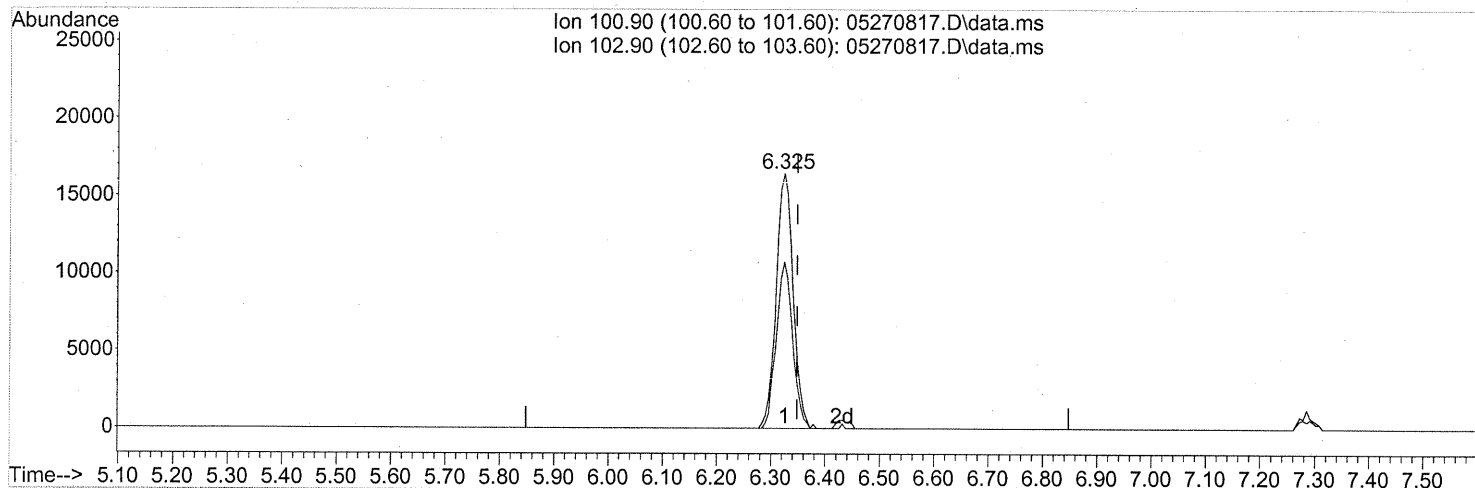
response 144088

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	312.17#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
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Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(14) Trichlorofluoromethane (T)

6.325min (-0.024) 1.08ng

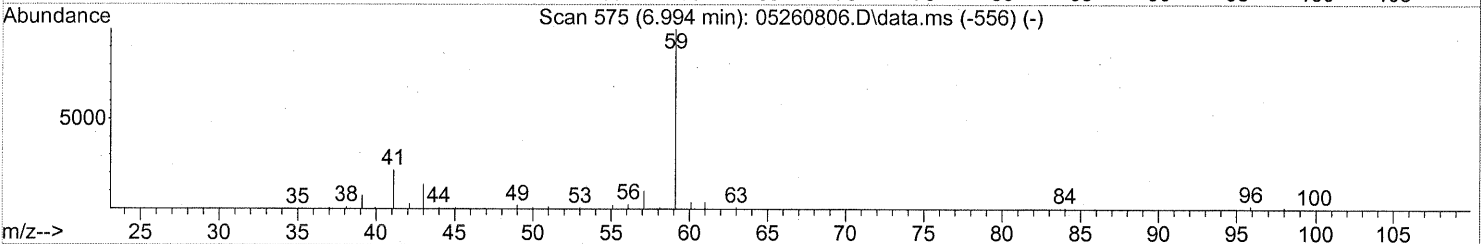
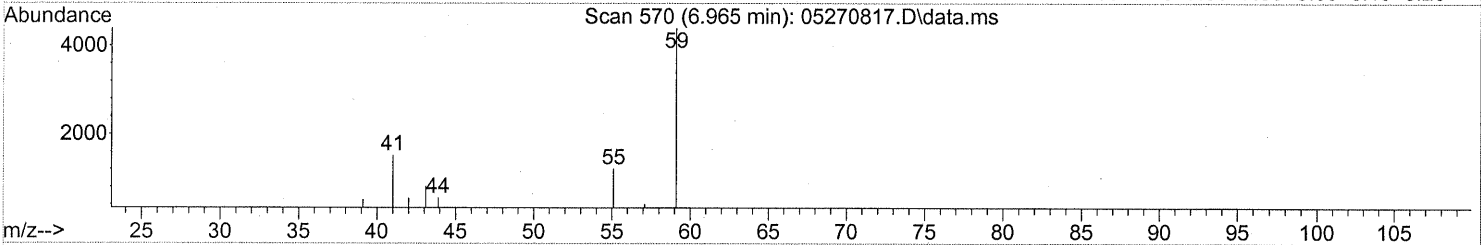
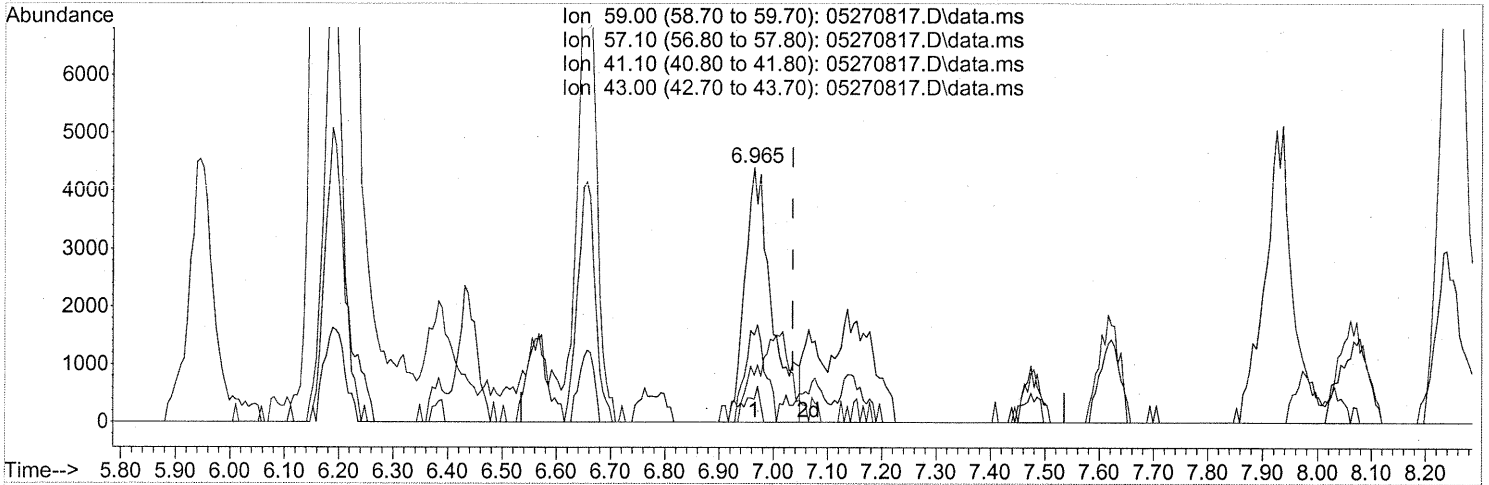
response 36073

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	62.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qeait)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.965min (-0.071) 0.27ng

response 15238

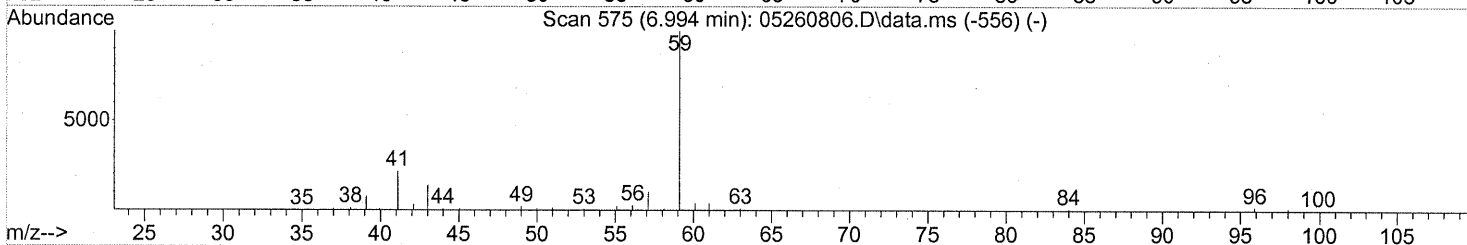
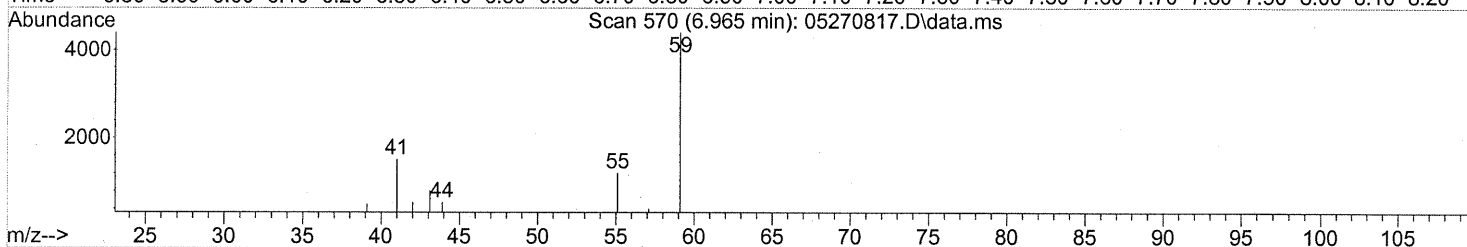
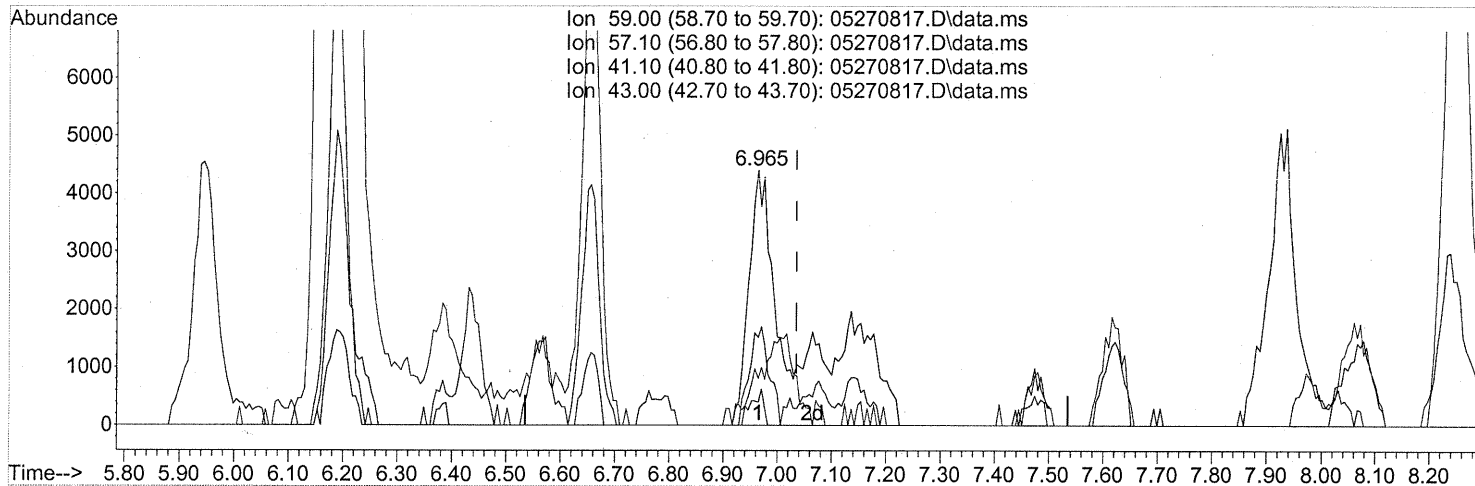
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	6.39
41.10	21.90	28.07
43.00	17.20	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 6.965min (-0.071) 0.50ng m  
 response 27838

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	3.50
41.10	21.90	15.36
43.00	17.20	0.00

*int. whole peaks*

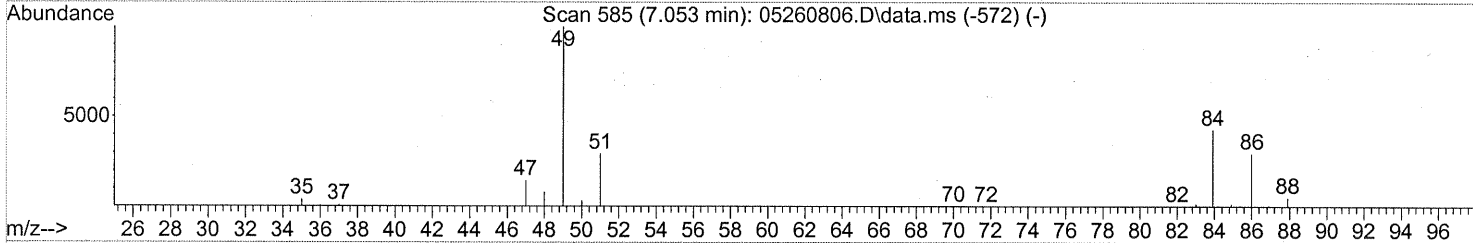
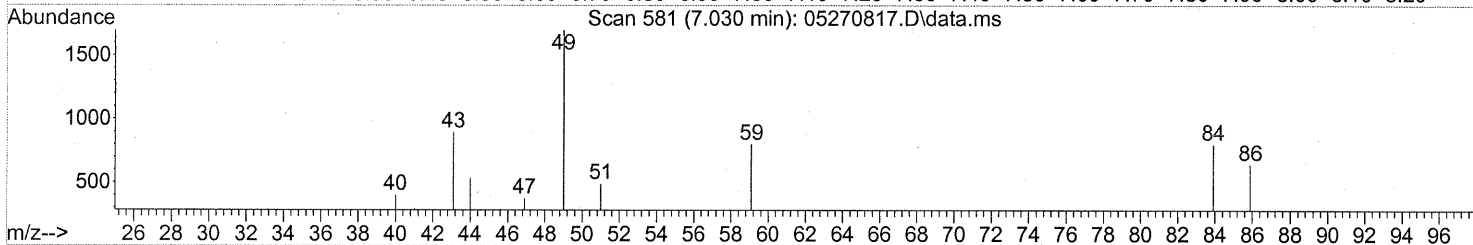
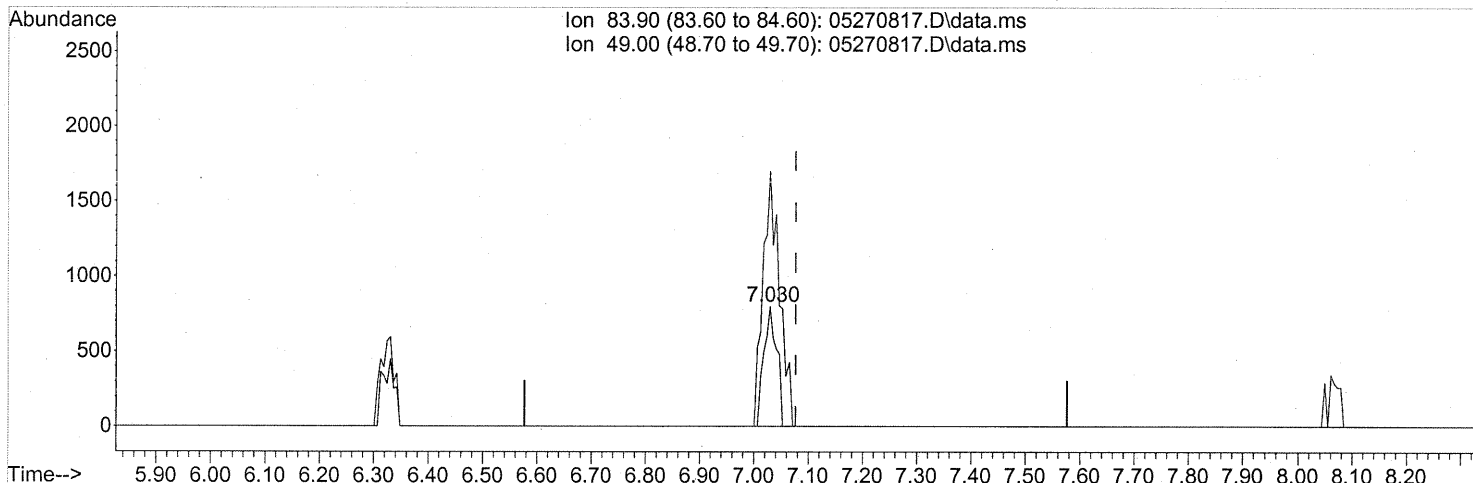
*DA 6/4/08*

*WA 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270817.D  
Acq On : 27 May 2008 22:57  
Operator : WA  
Sample : P0801507-012 (250ml)  
Misc : ENSR SG13B-05 (-3.3, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270817.D\data.ms

(19) Methylene Chloride (T)

7.030min (-0.047) 0.09ng

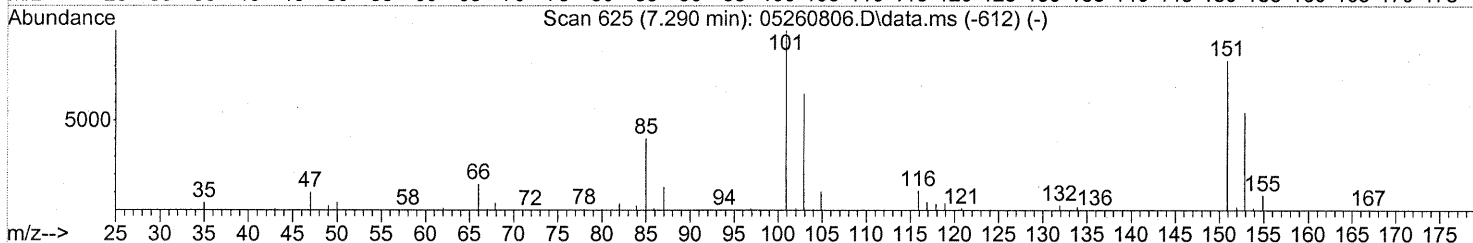
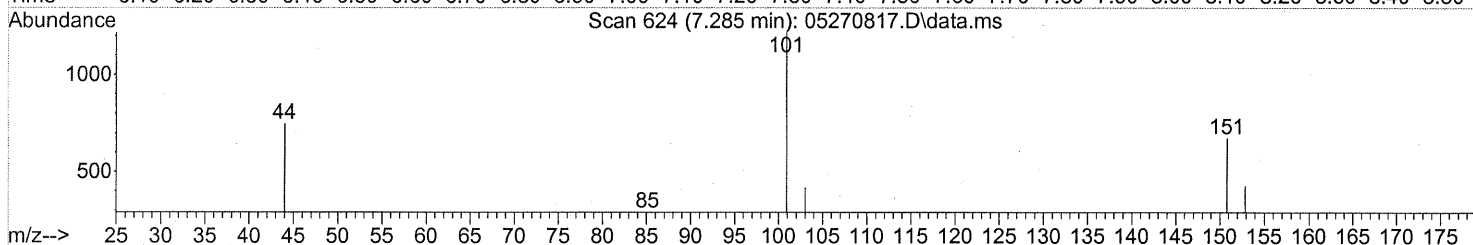
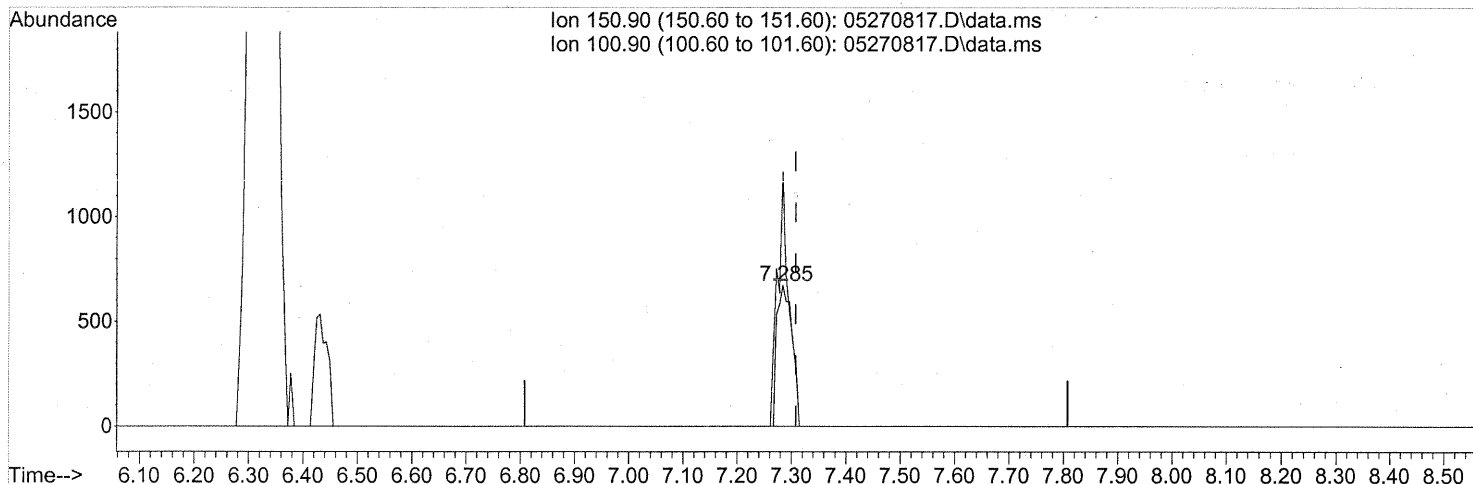
response 1354

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	270.46#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(21) Trichlorotrifluoroethane (T)

7.285min (-0.024) 0.08ng

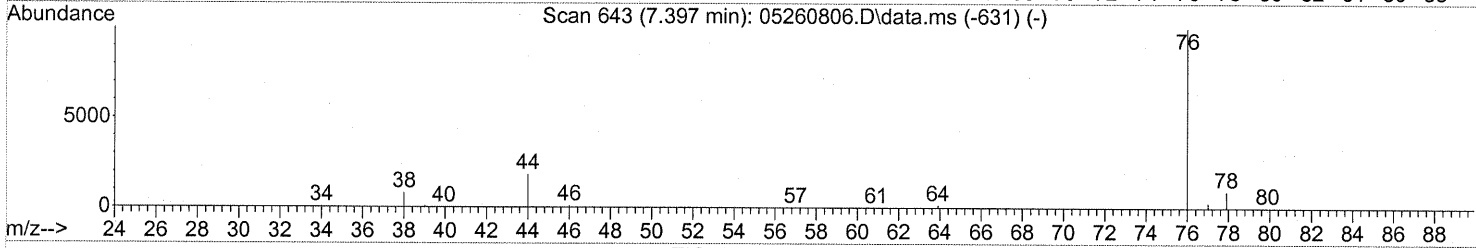
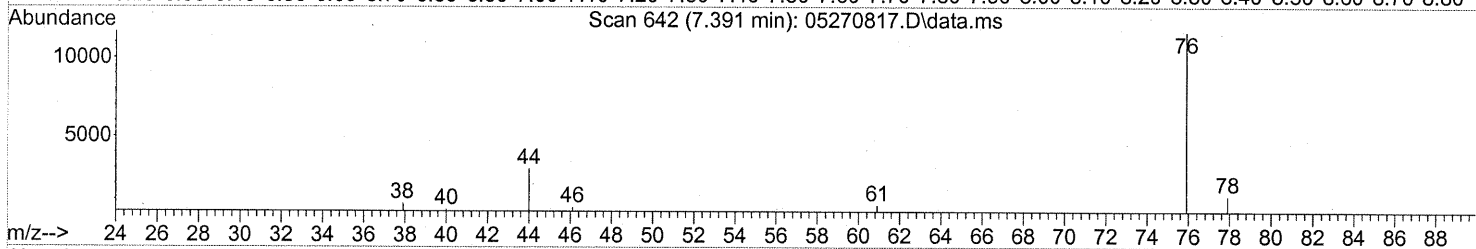
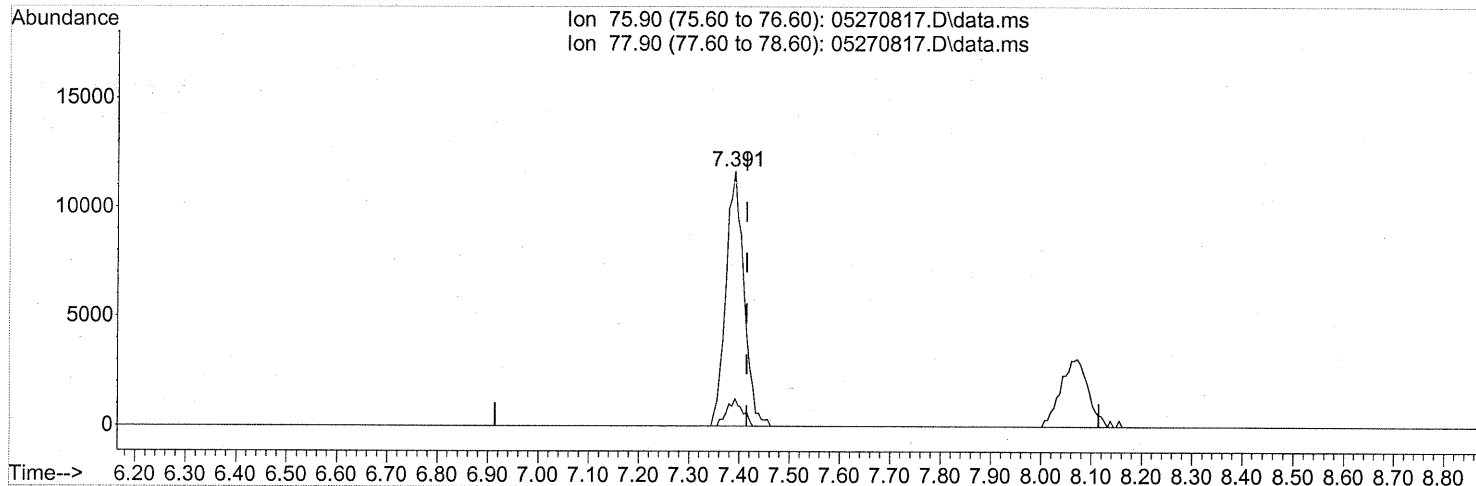
response 1306

Ion	Exp%	Act%
150.90	100	100
100.90	136.10	134.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(22) Carbon Disulfide (T)

7.391min (-0.024) 0.47ng

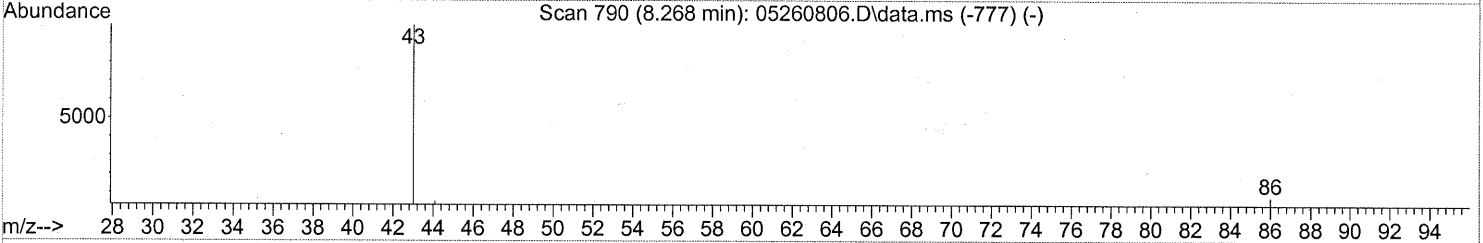
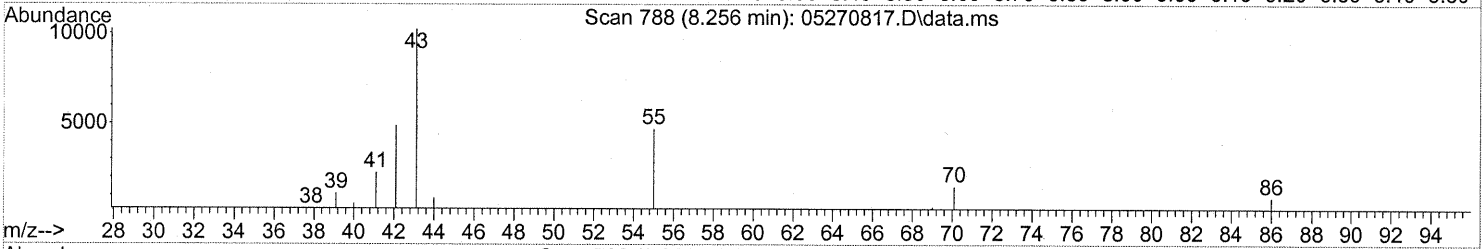
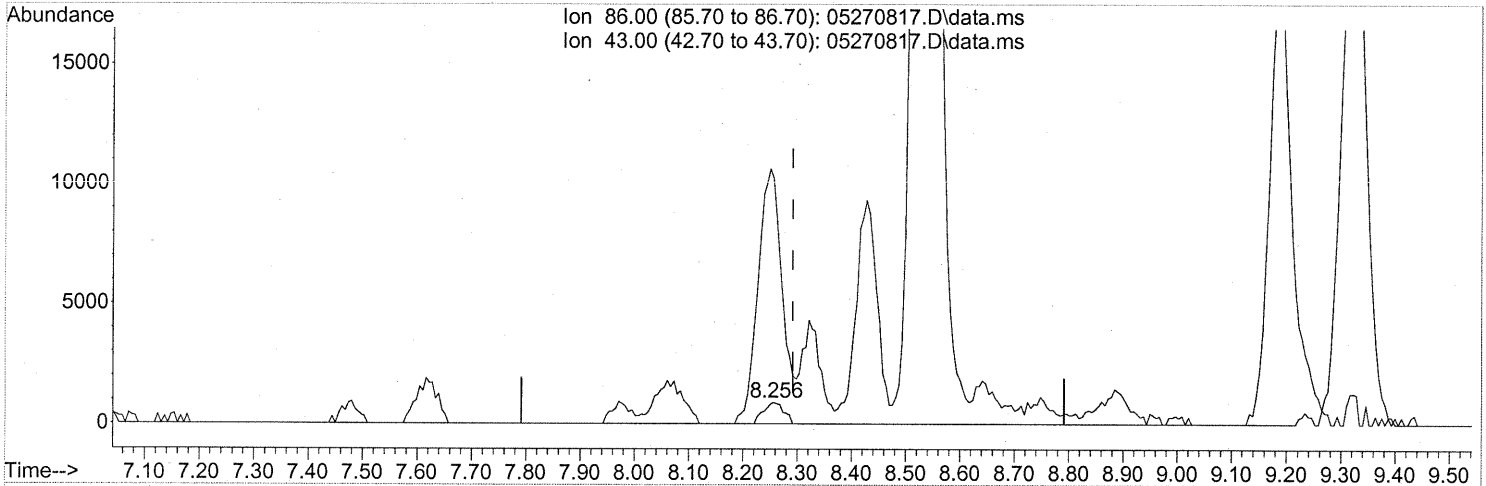
response 29117

Ion	Exp%	Act%
75.90	100	100
77.90	9.10	9.16
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

8.256min (-0.036) 0.70ng

response 2275

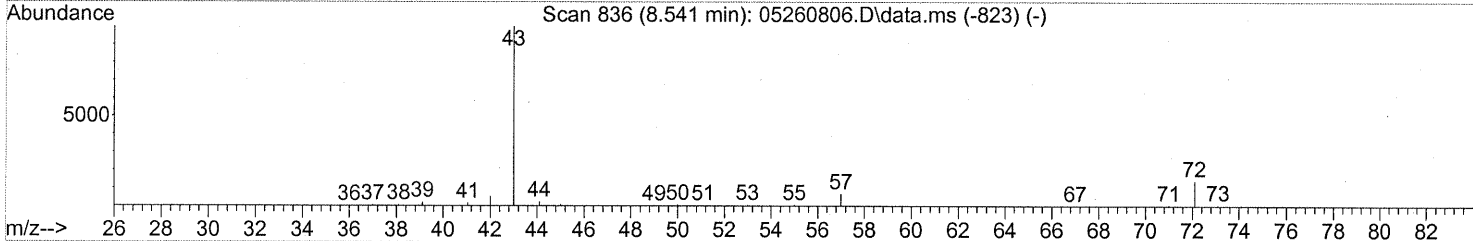
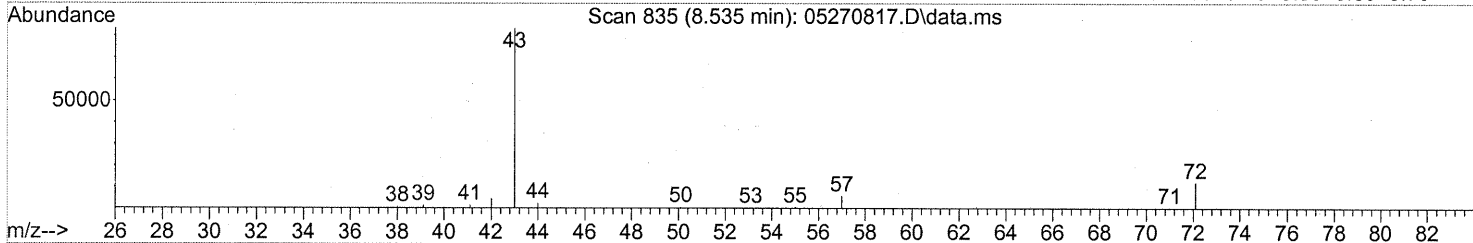
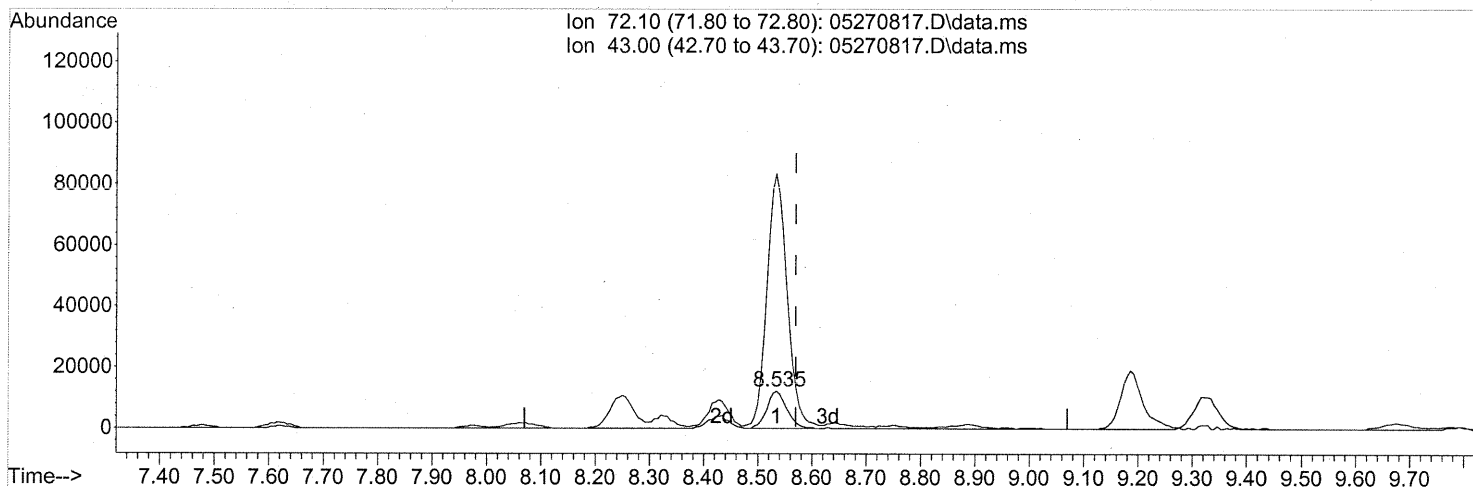
Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	1457.05#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270817.D  
Acq On : 27 May 2008 22:57  
Operator : WA  
Sample : P0801507-012 (250ml)  
Misc : ENSR SG13B-05 (-3.3, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270817.D\data.ms

(27) 2-Butanone (T)

8.535min (-0.036) 2.99ng

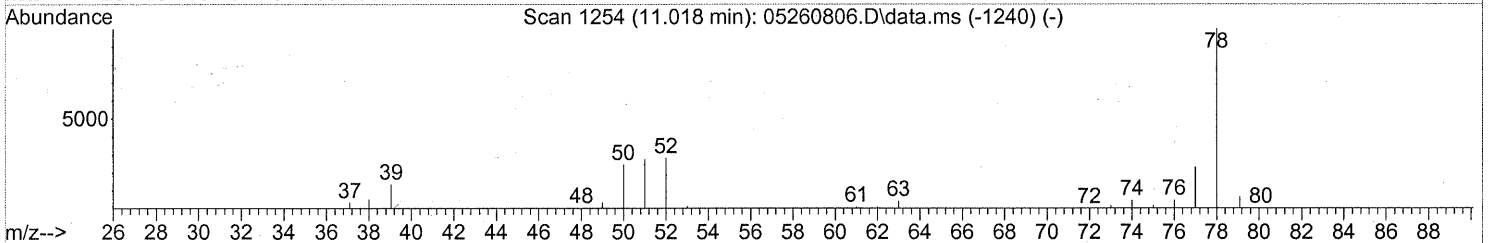
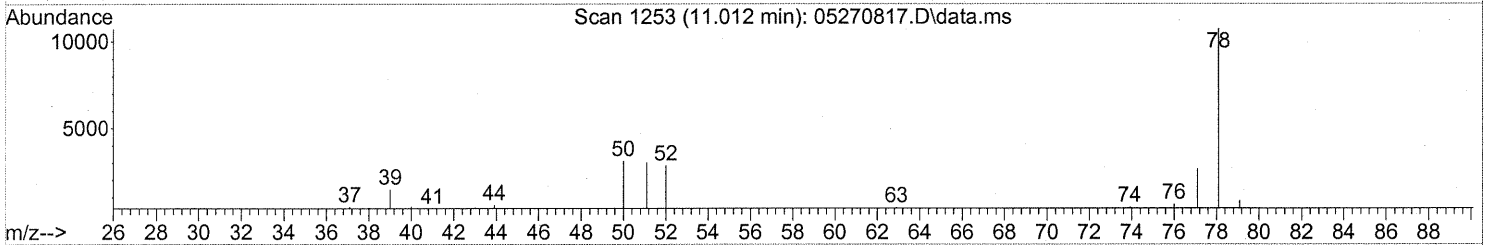
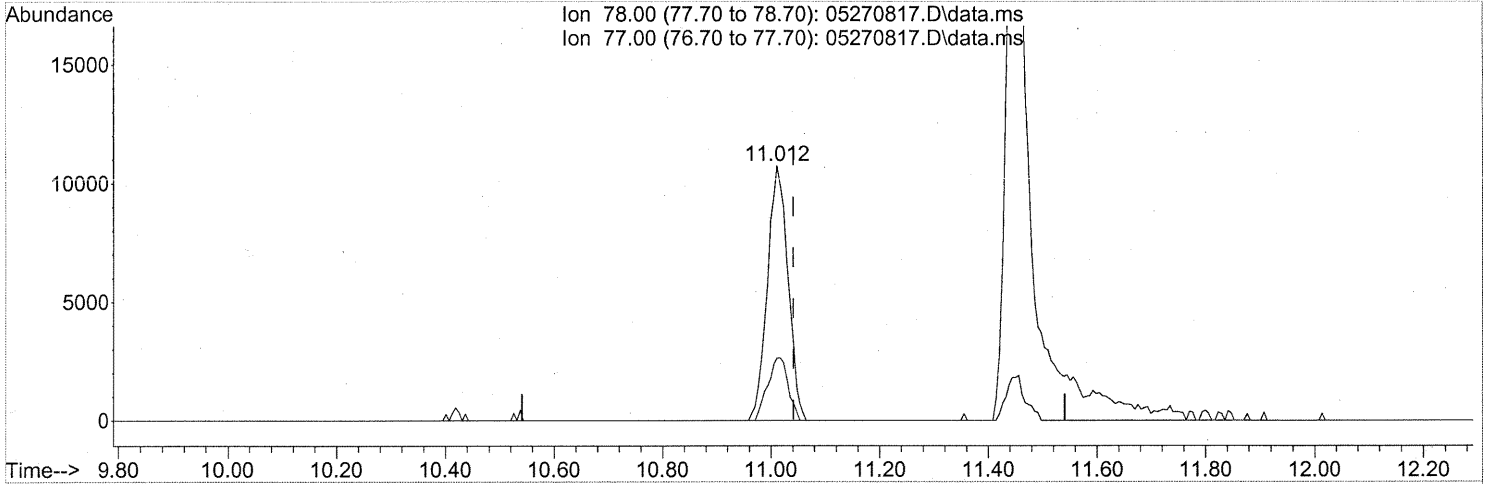
response 31124

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	700.13#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(41) Benzene (T)

11.012min (-0.030) 0.42ng

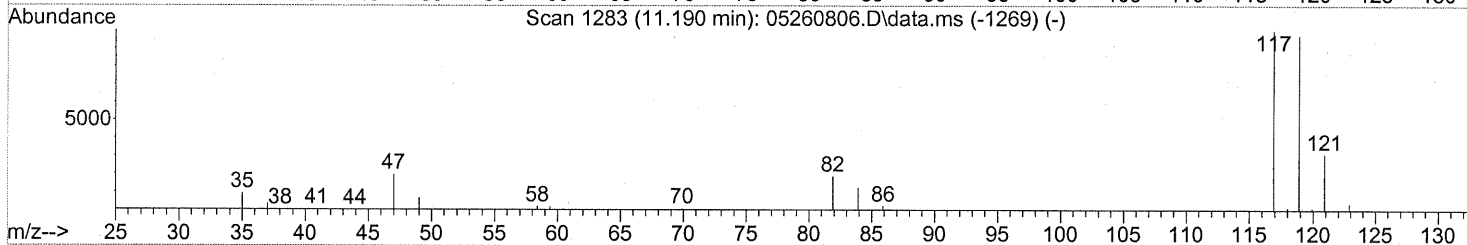
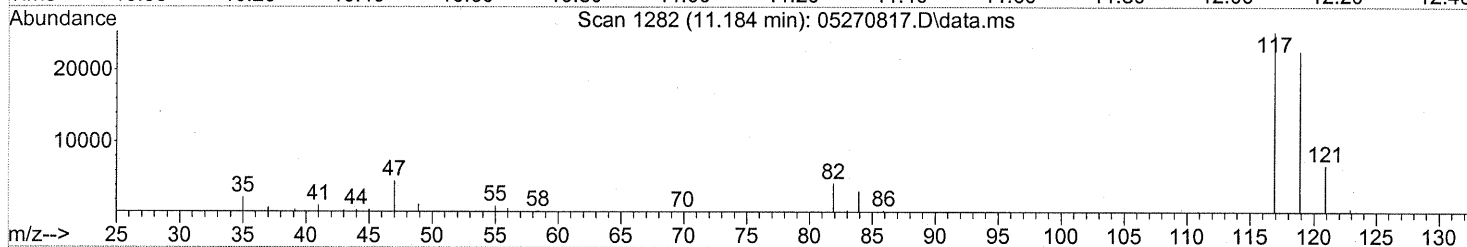
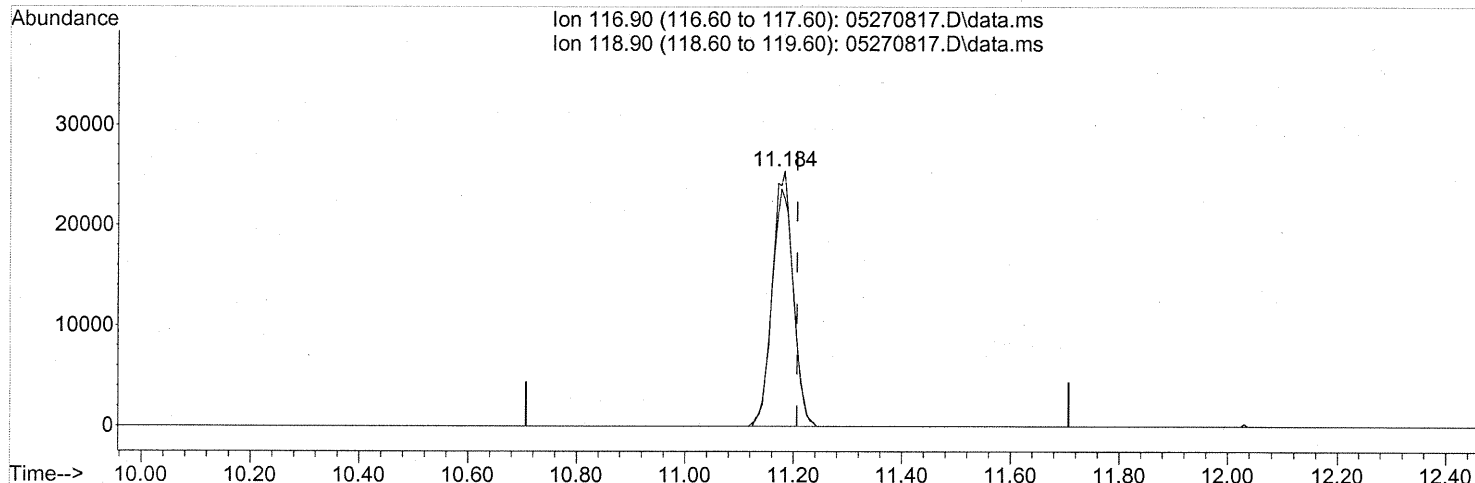
response 28214

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	24.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270817.D  
Acq On : 27 May 2008 22:57  
Operator : WA  
Sample : P0801507-012 (250ml)  
Misc : ENSR SG13B-05 (-3.3, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270817.D\data.ms

(42) Carbon Tetrachloride (T)

11.184min (-0.024) 2.46ng

response 67993

Ion Exp% Act%

116.90 100 100

118.90 95.30 95.87

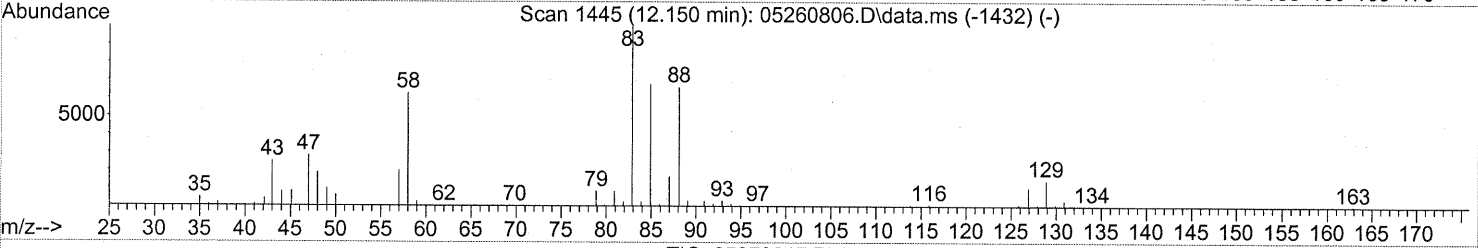
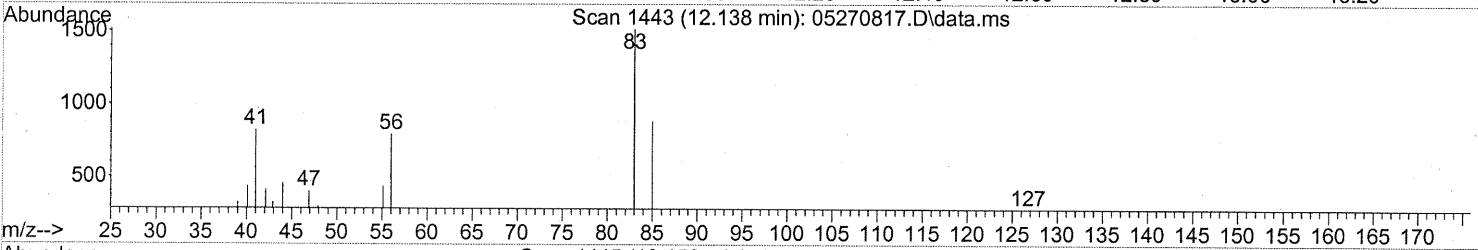
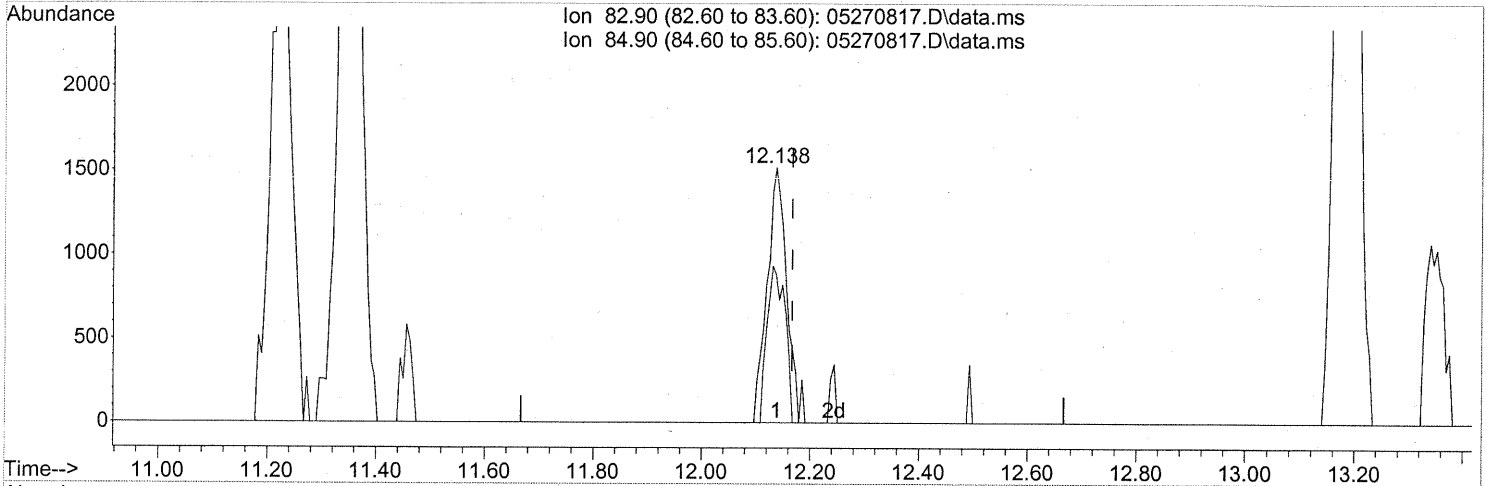
0.00 0.00 0.00

0.00 0.00 0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(46) Bromodichloromethane (T)

12.138min (-0.030) 0.19ng

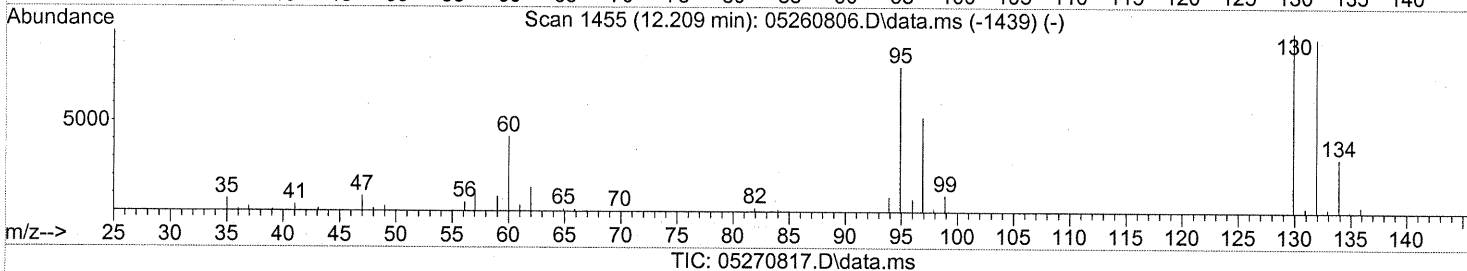
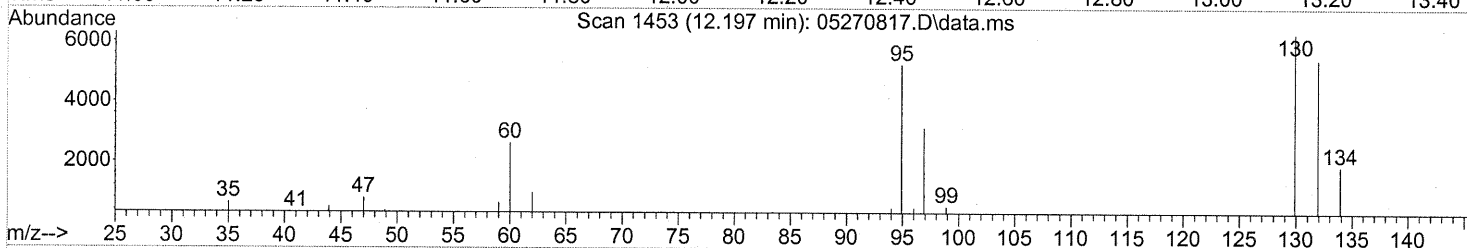
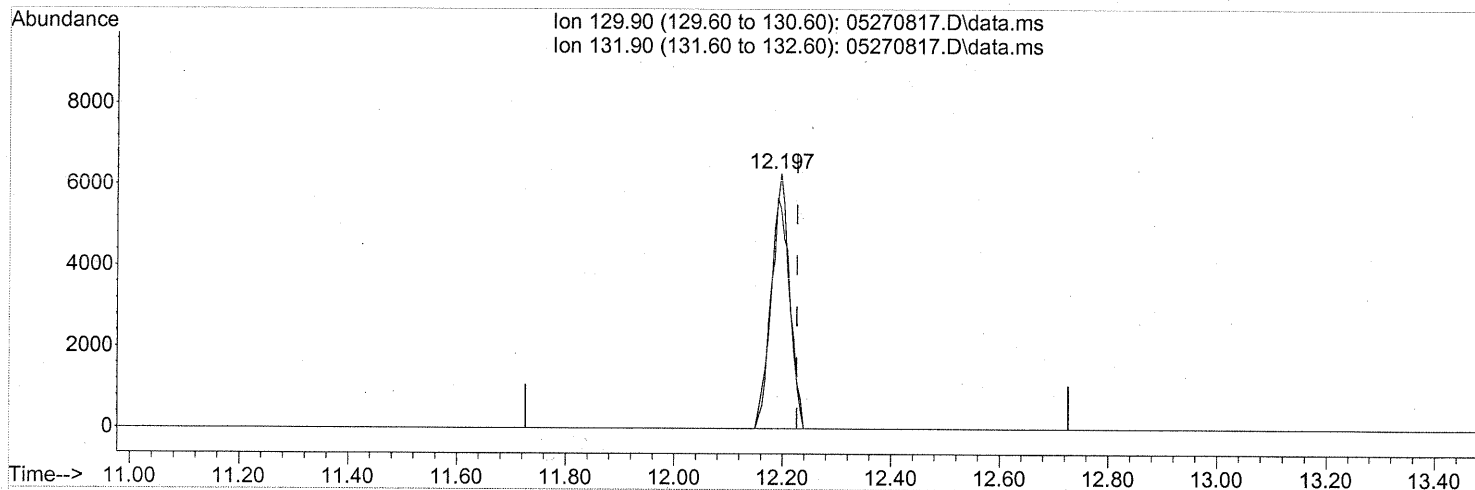
response 3853

Ion	Exp%	Act%
82.90	100	100
84.90	62.30	56.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



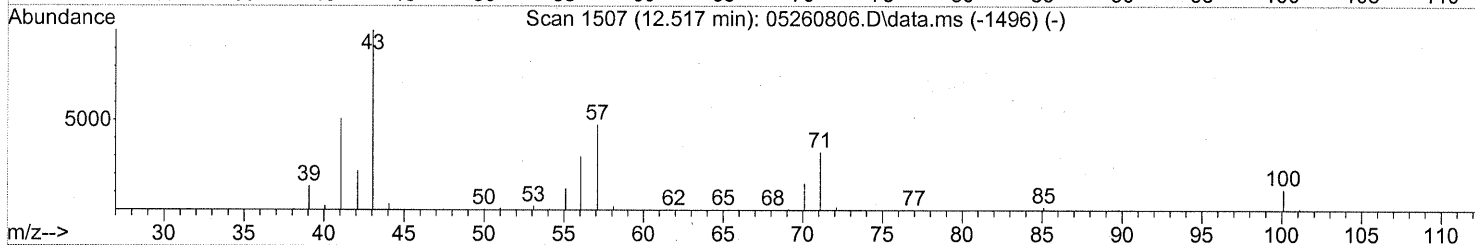
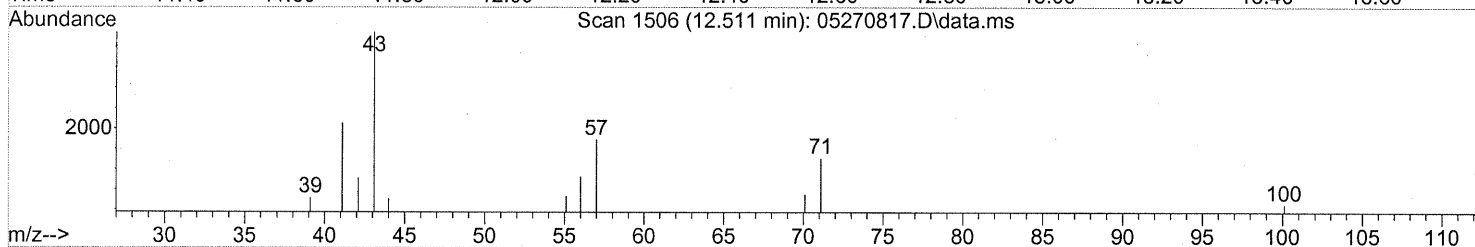
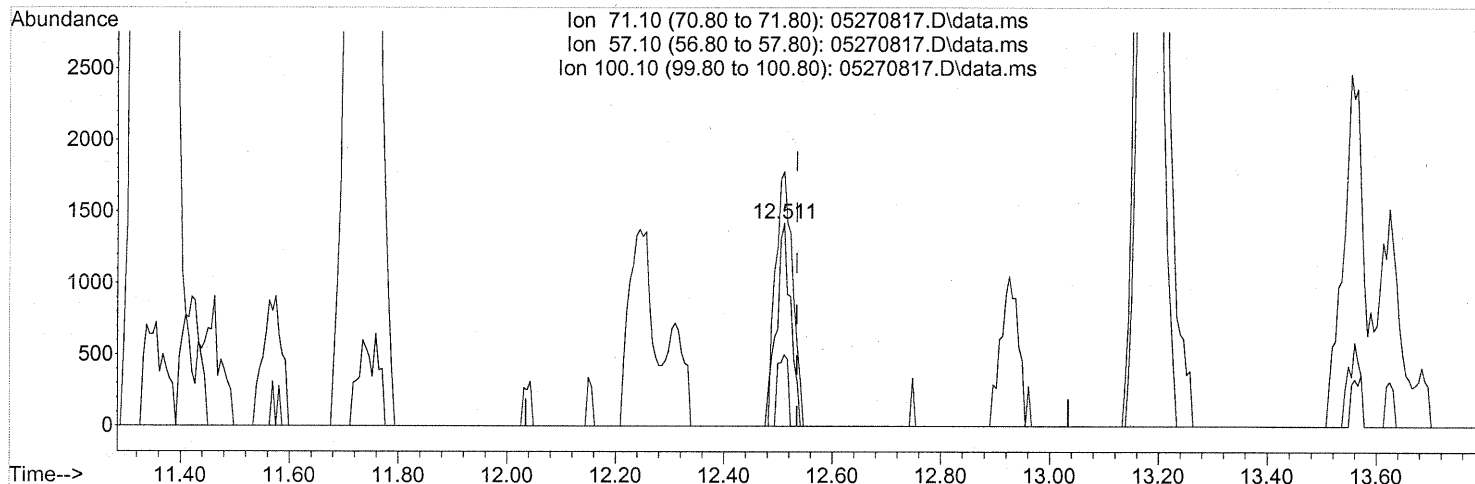
(47) Trichloroethene (T)  
 12.197min (-0.030) 0.70ng  
 response 14717

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	94.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

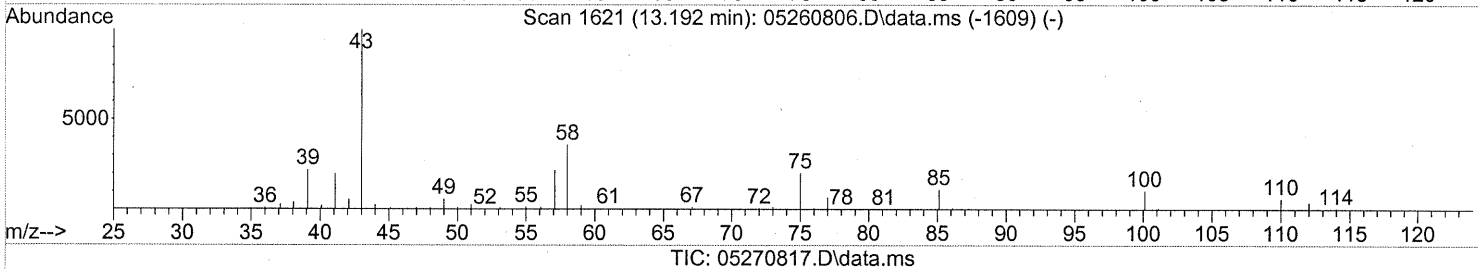
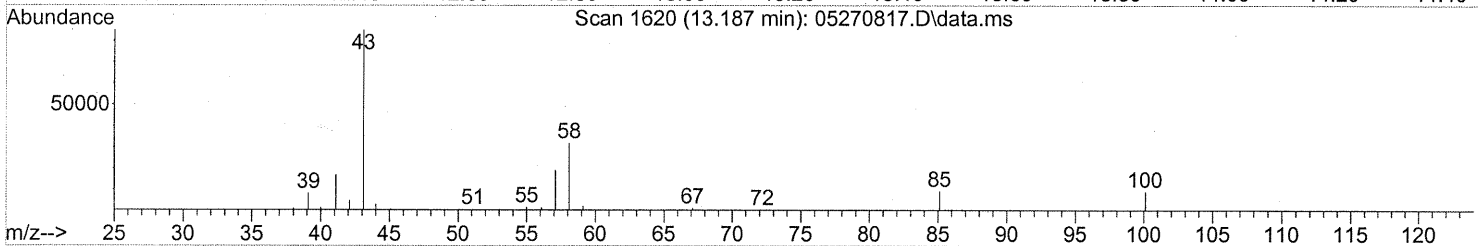
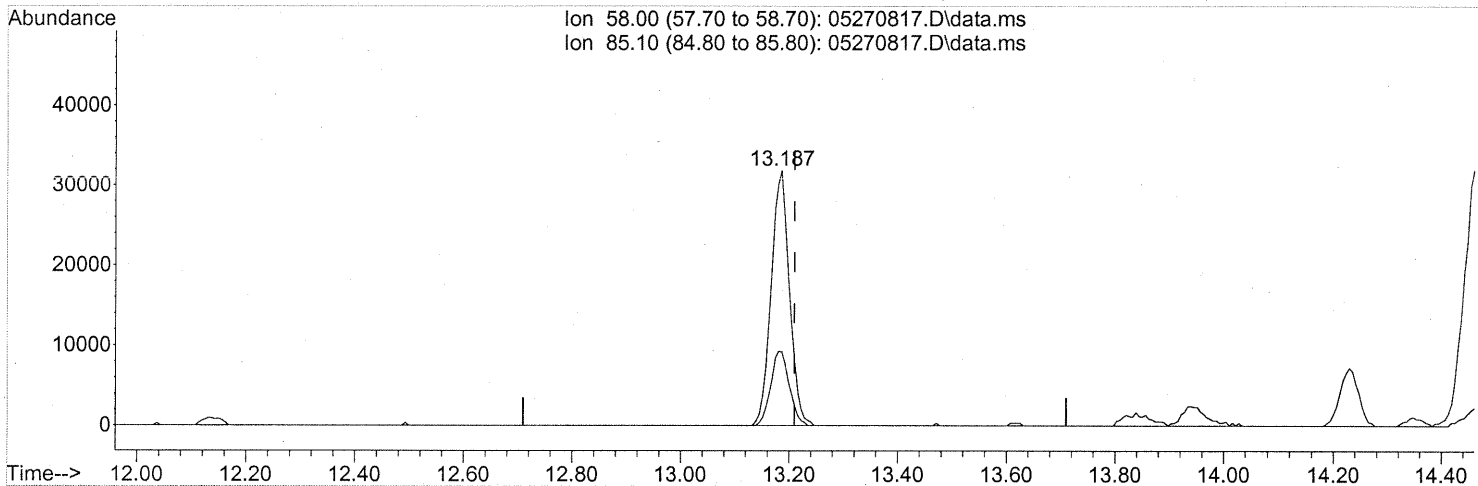
(51) n-Heptane (T)  
 12.511min (-0.024) 0.16ng  
 response 2614

Ion	Exp%	Act%
71.10	100	100
57.10	88.70	150.54#
100.10	28.80	25.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

13.187min (-0.024) 3.18ng

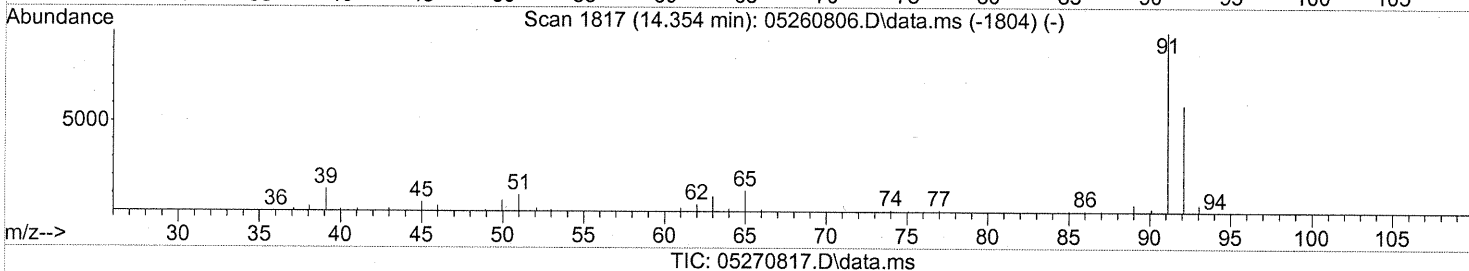
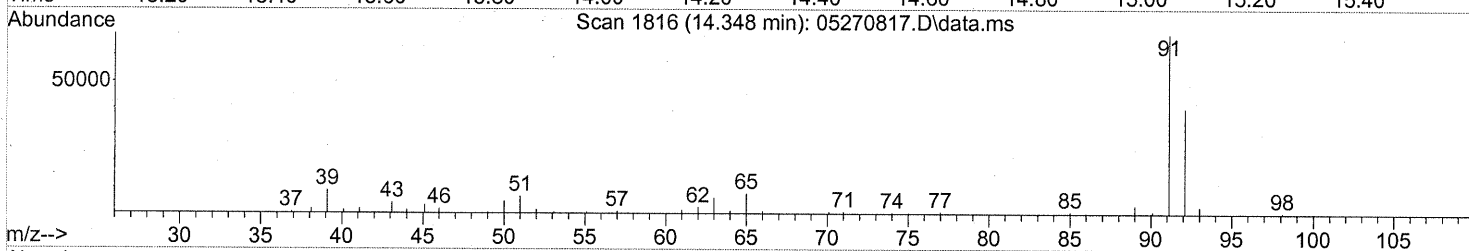
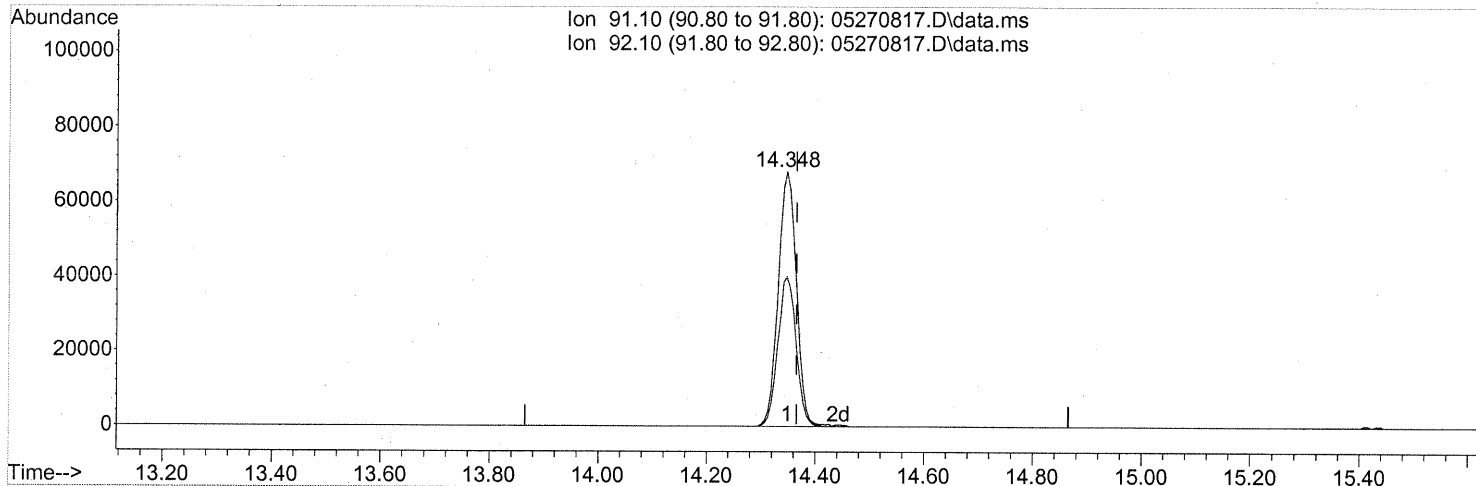
response 74420

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	29.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(58) Toluene (T)  
 14.348min (-0.018) 2.05ng  
 response 157744

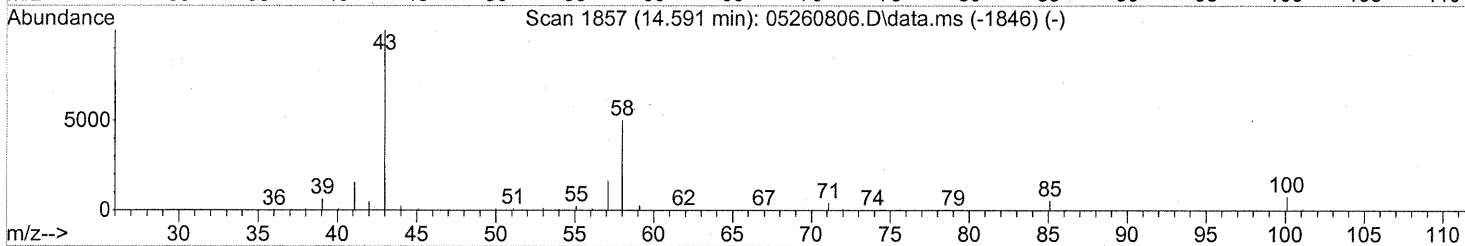
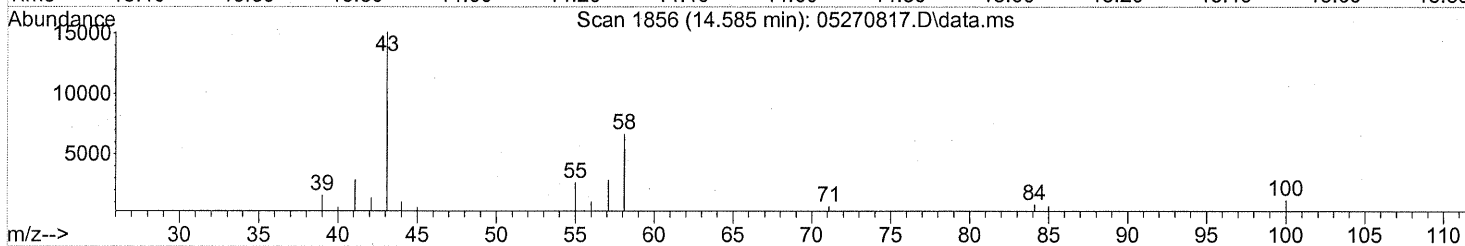
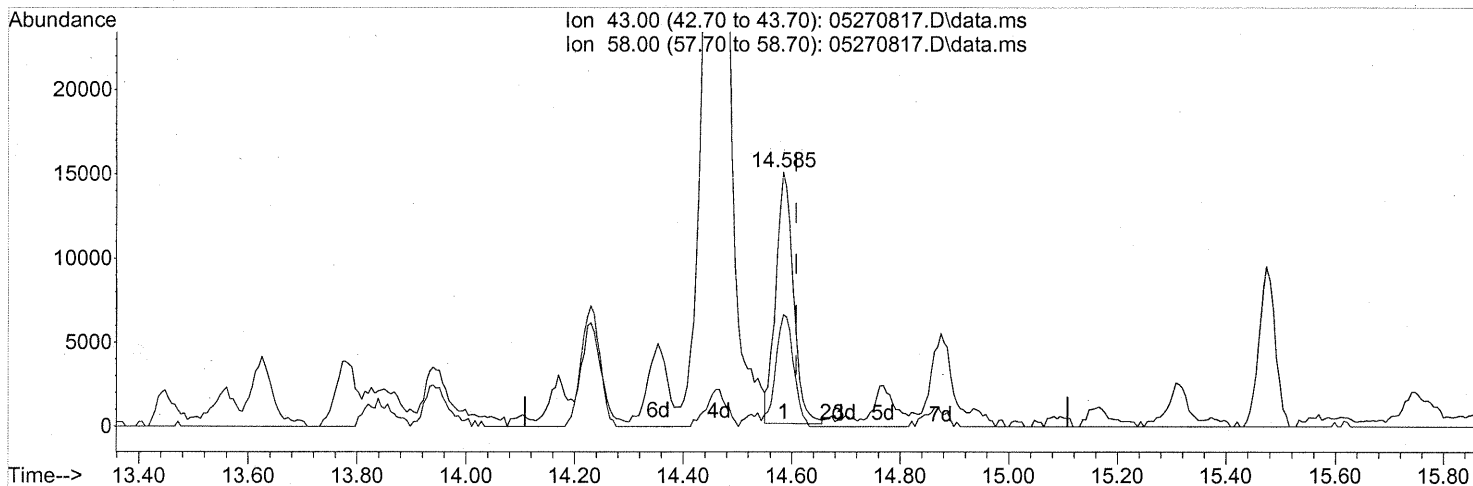
Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.05
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

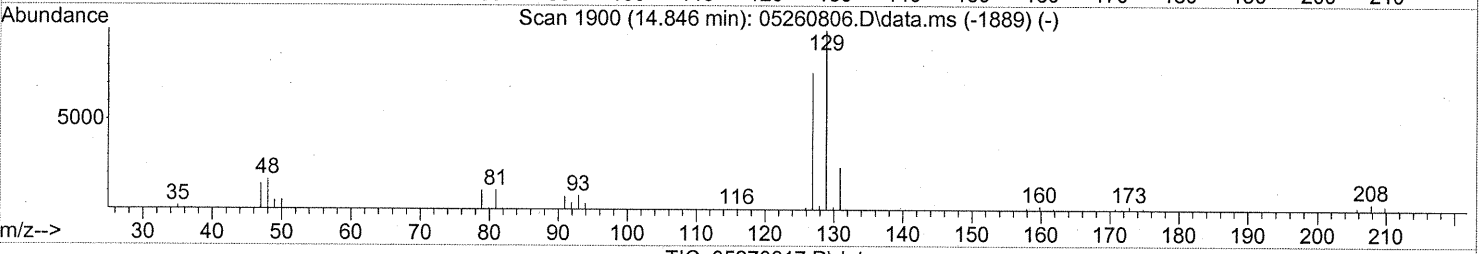
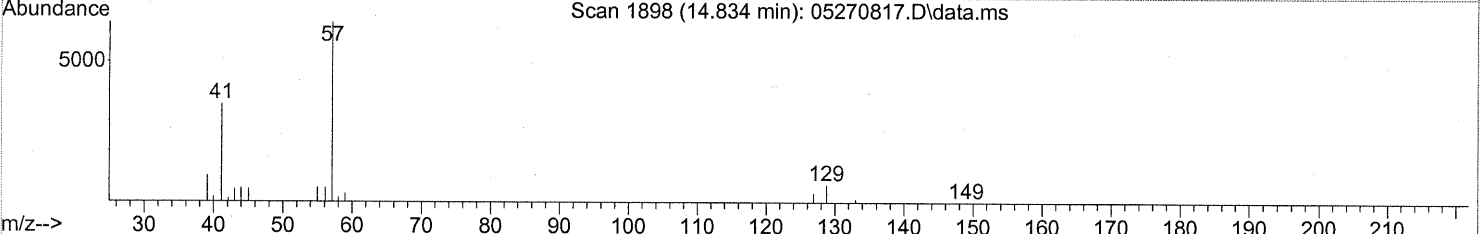
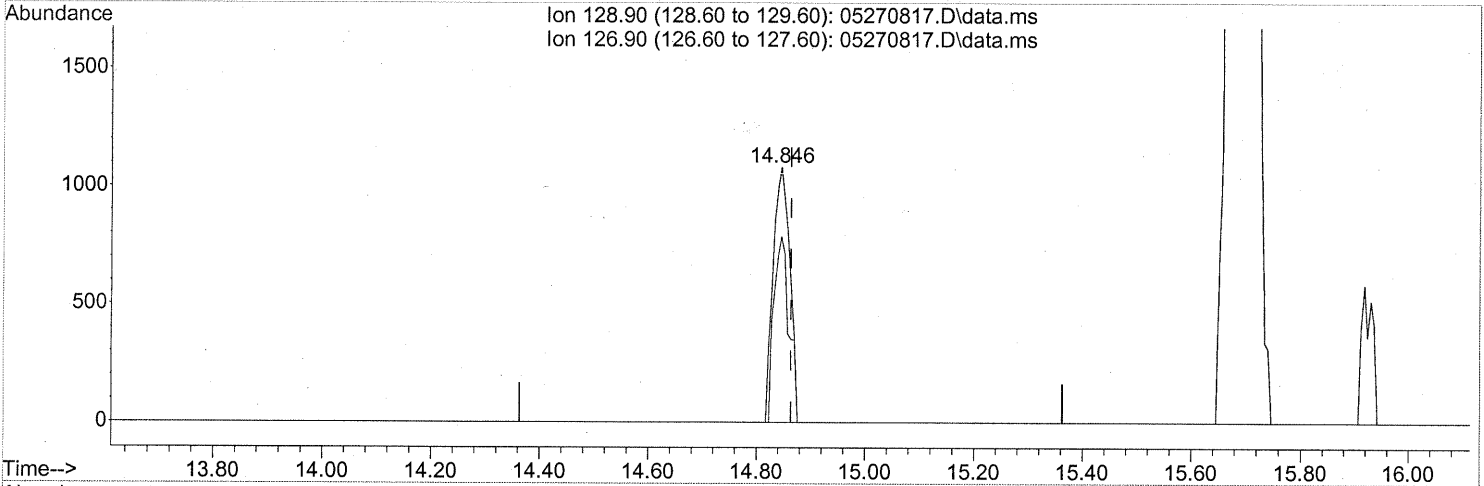
(59) 2-Hexanone (T)  
 14.585min (-0.024) 0.47ng  
 response 34072

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	45.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(60) Dibromochloromethane (T)

14.846min (-0.018) 0.10ng

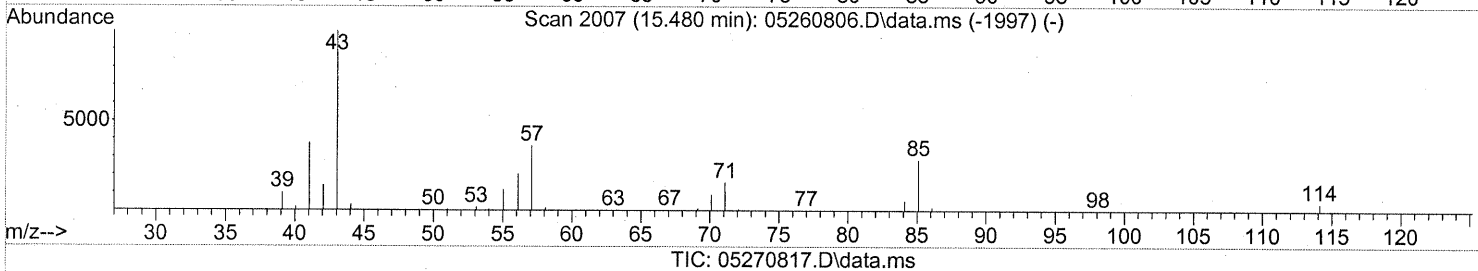
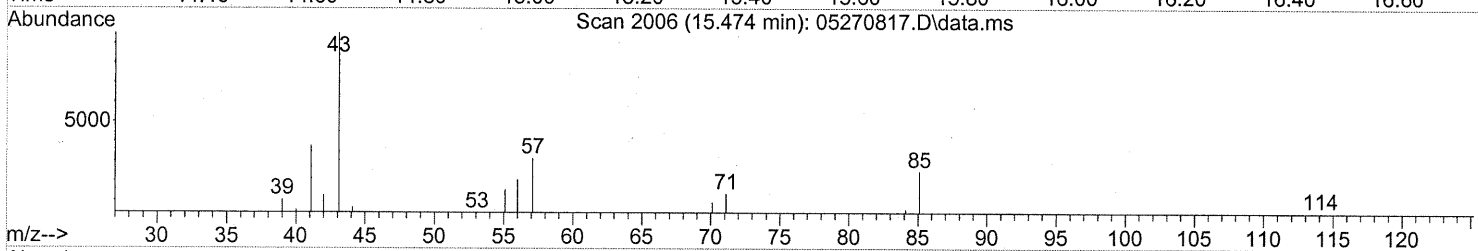
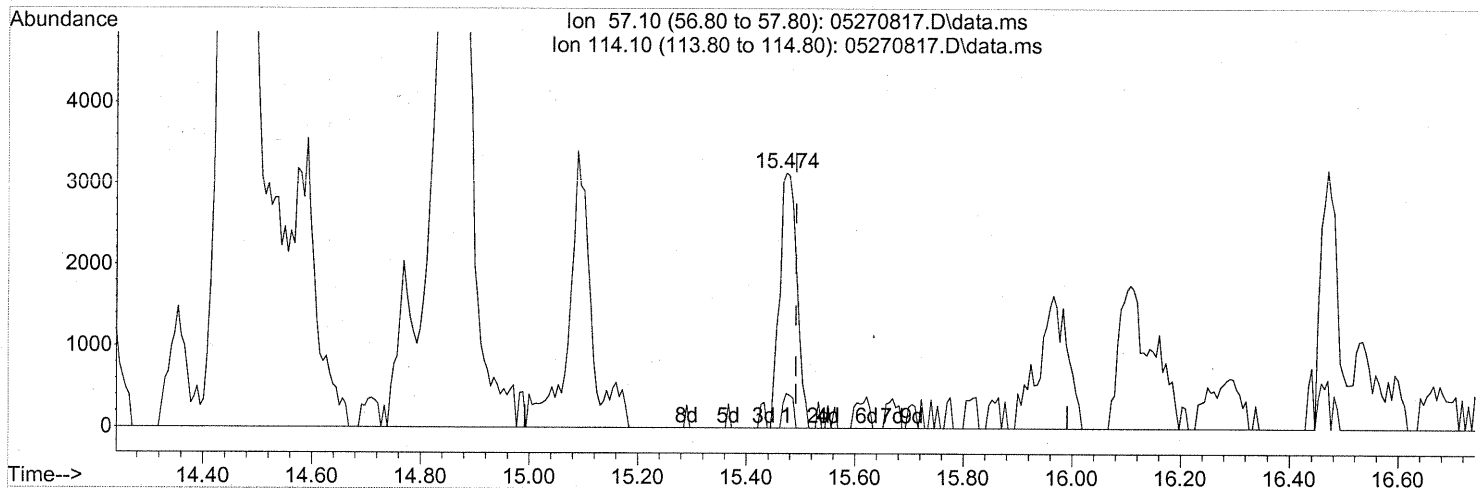
response 2314

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	65.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(63) n-Octane (T)

15.474min (-0.018) 0.30ng

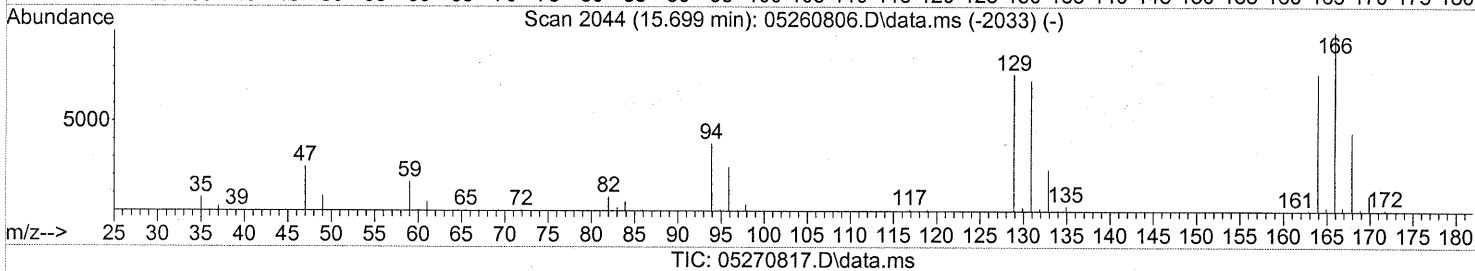
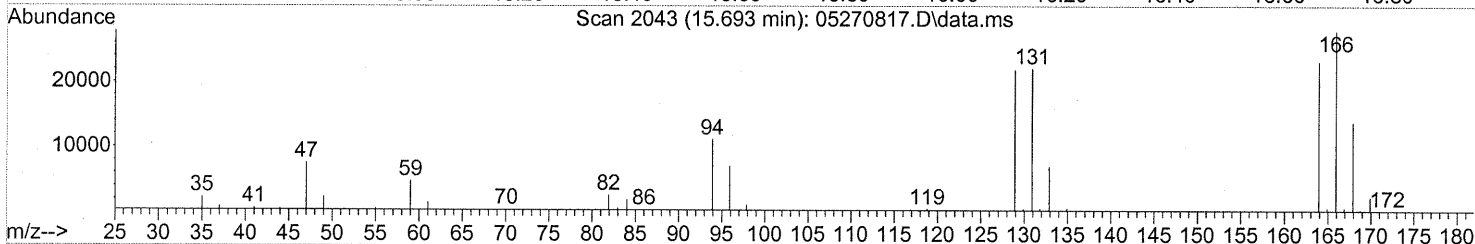
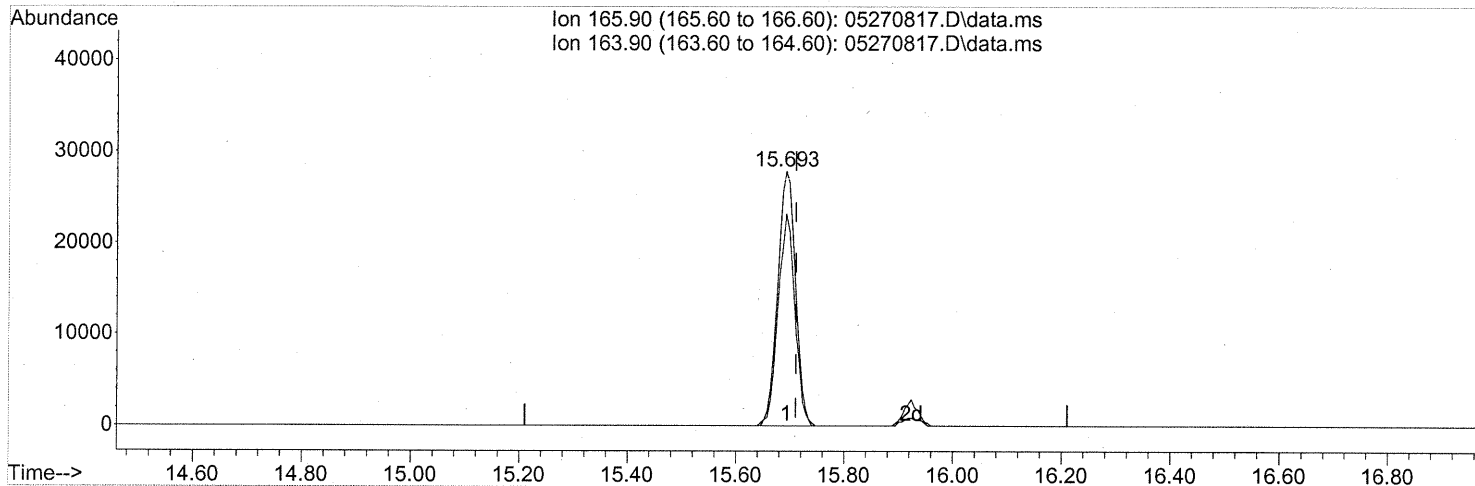
response 6931

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	7.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270817.D  
Acq On : 27 May 2008 22:57  
Operator : WA  
Sample : P0801507-012 (250ml)  
Misc : ENSR SG13B-05 (-3.3, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 2.76ng

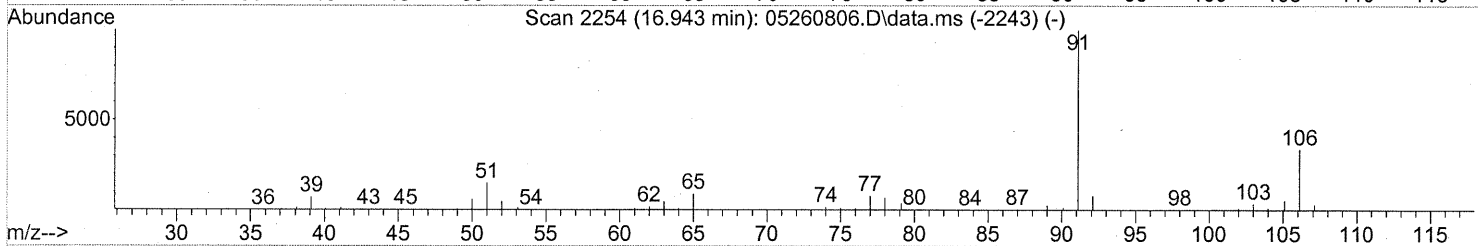
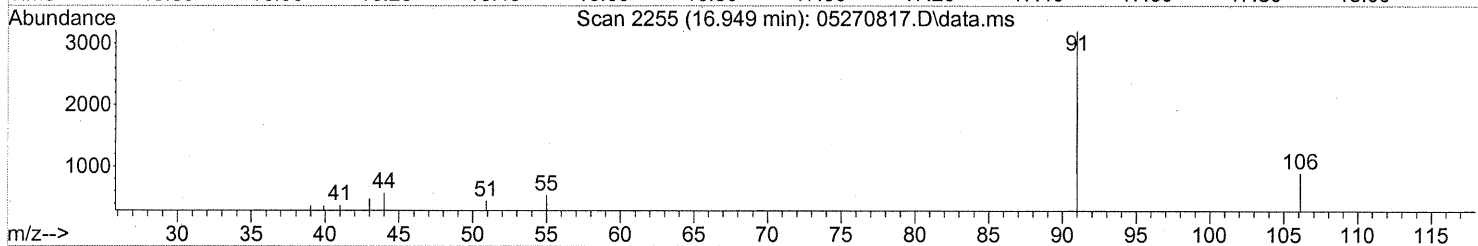
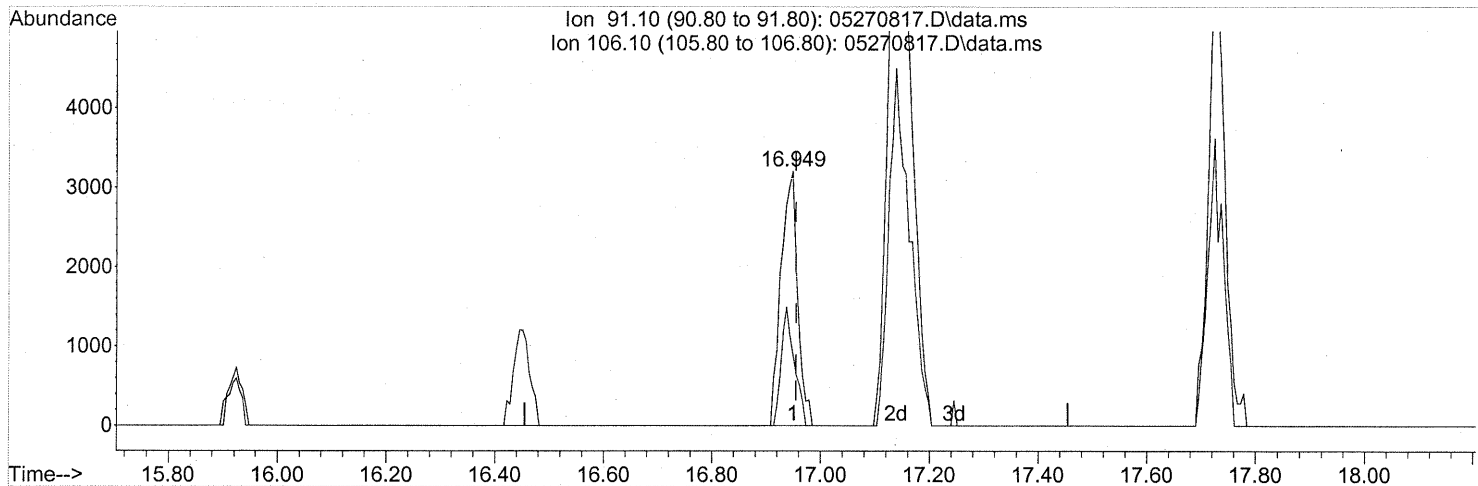
response 63066

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.54
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

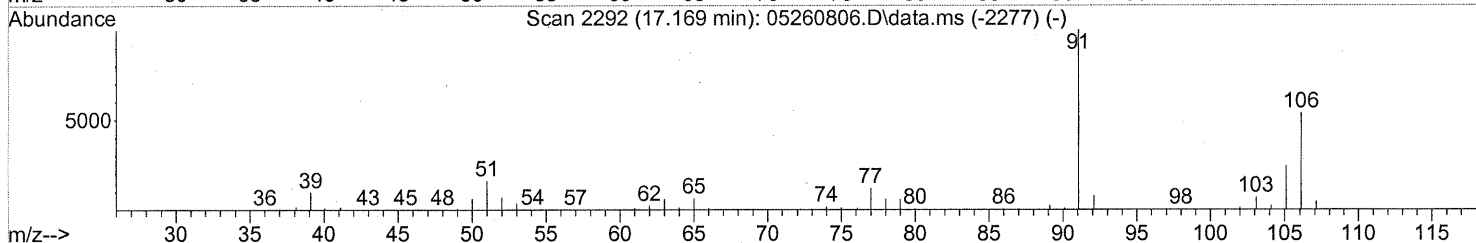
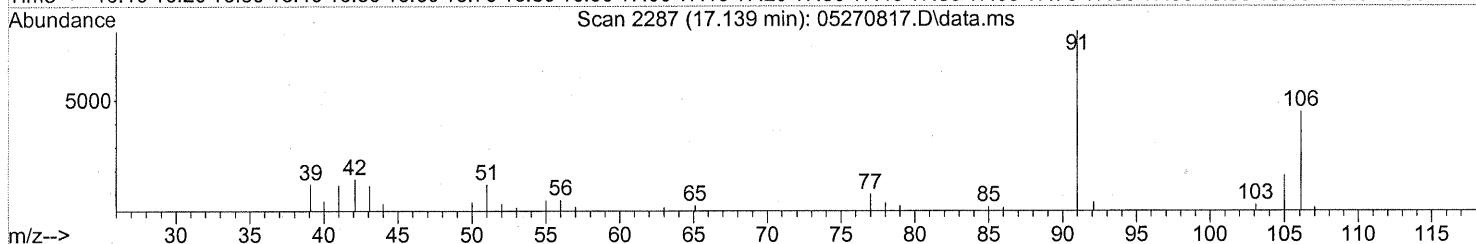
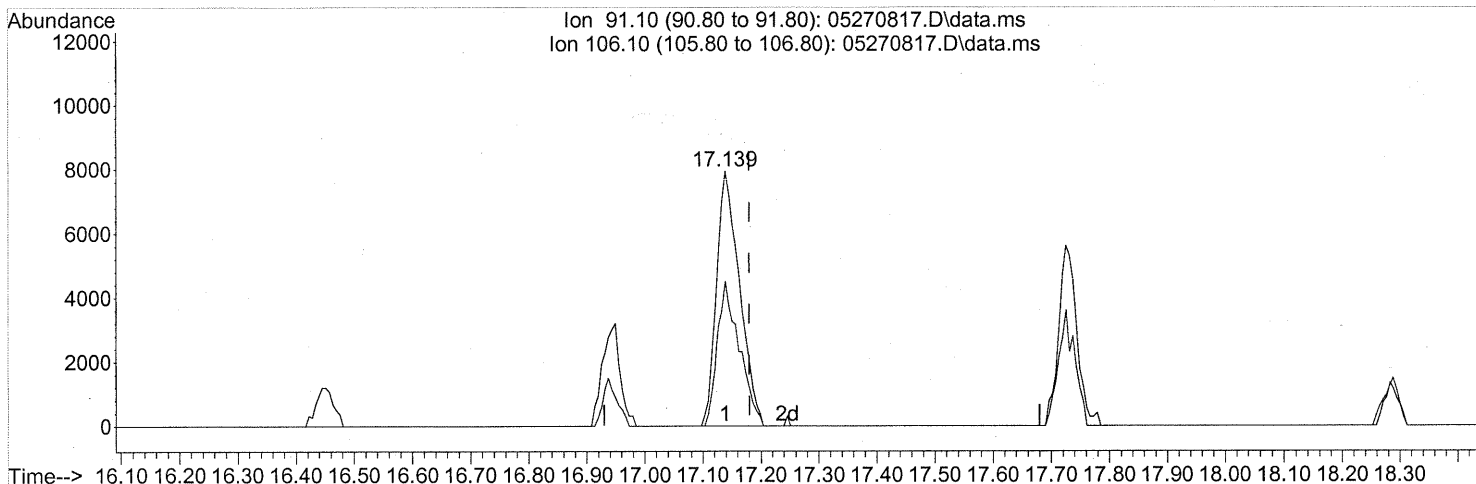
(66) Ethylbenzene (T)  
 16.949min (-0.006) 0.08ng  
 response 6758

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	36.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(67) m- & p-Xylene (T)

17.139min (-0.041) 0.38ng

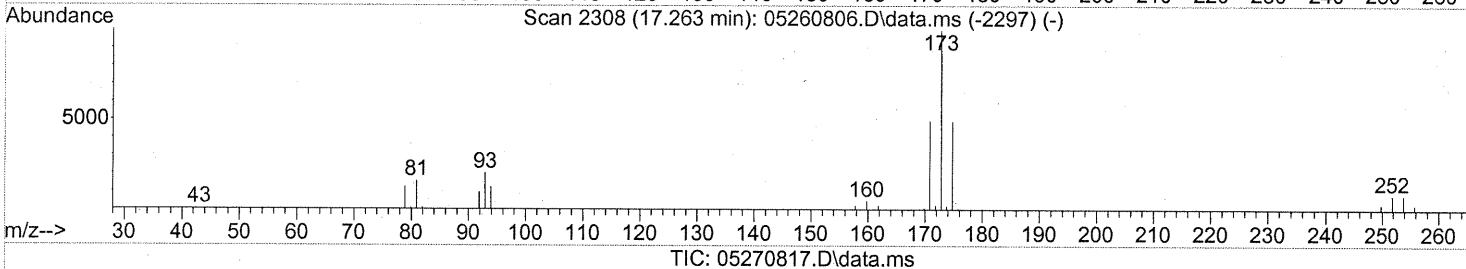
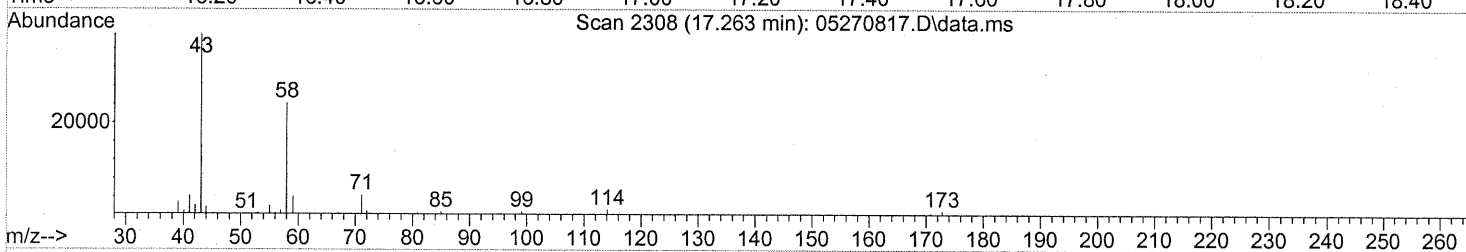
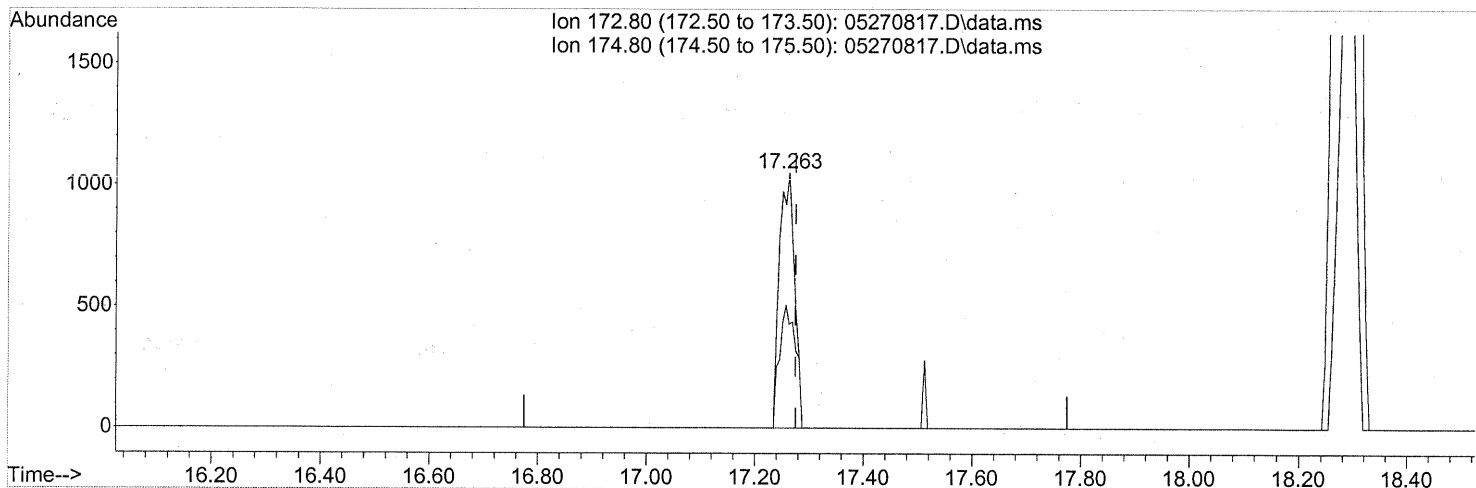
response 21895

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	54.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 07:59:33 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



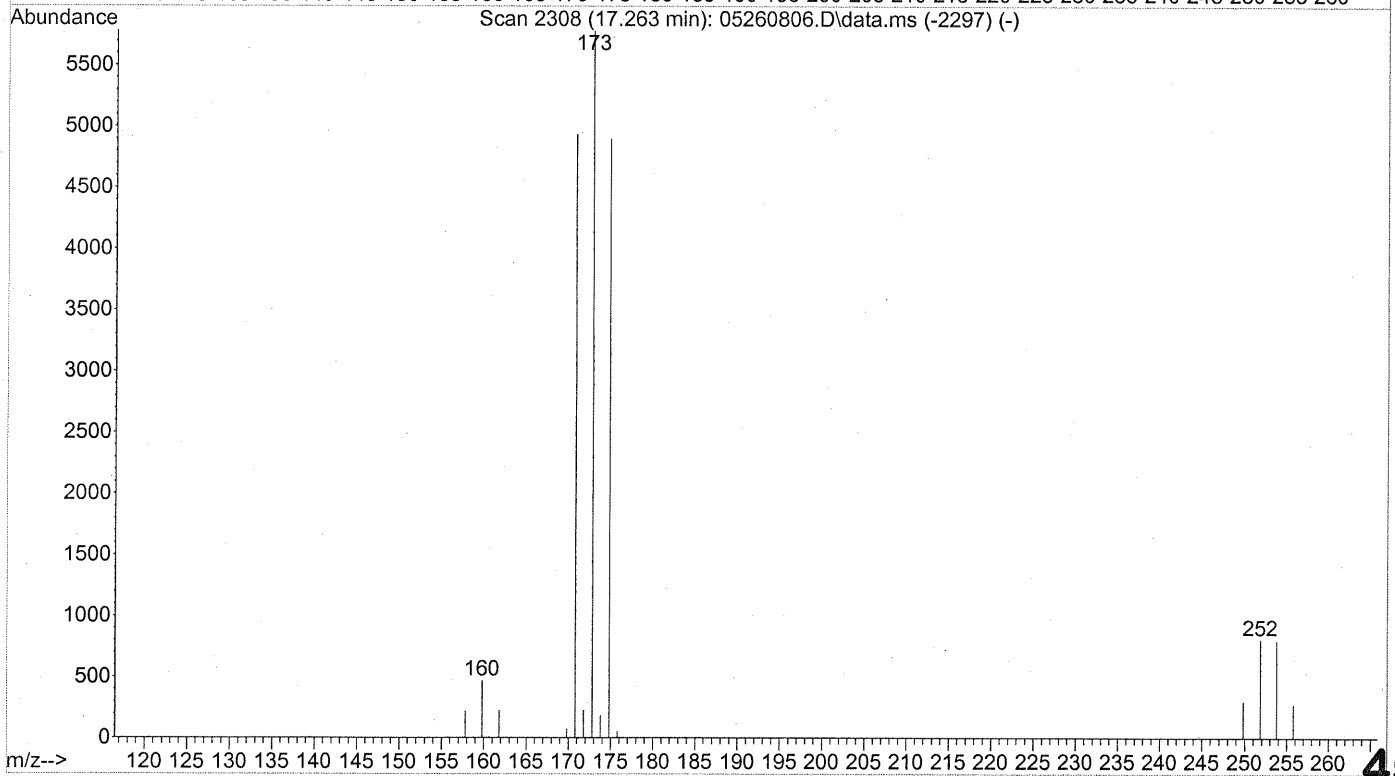
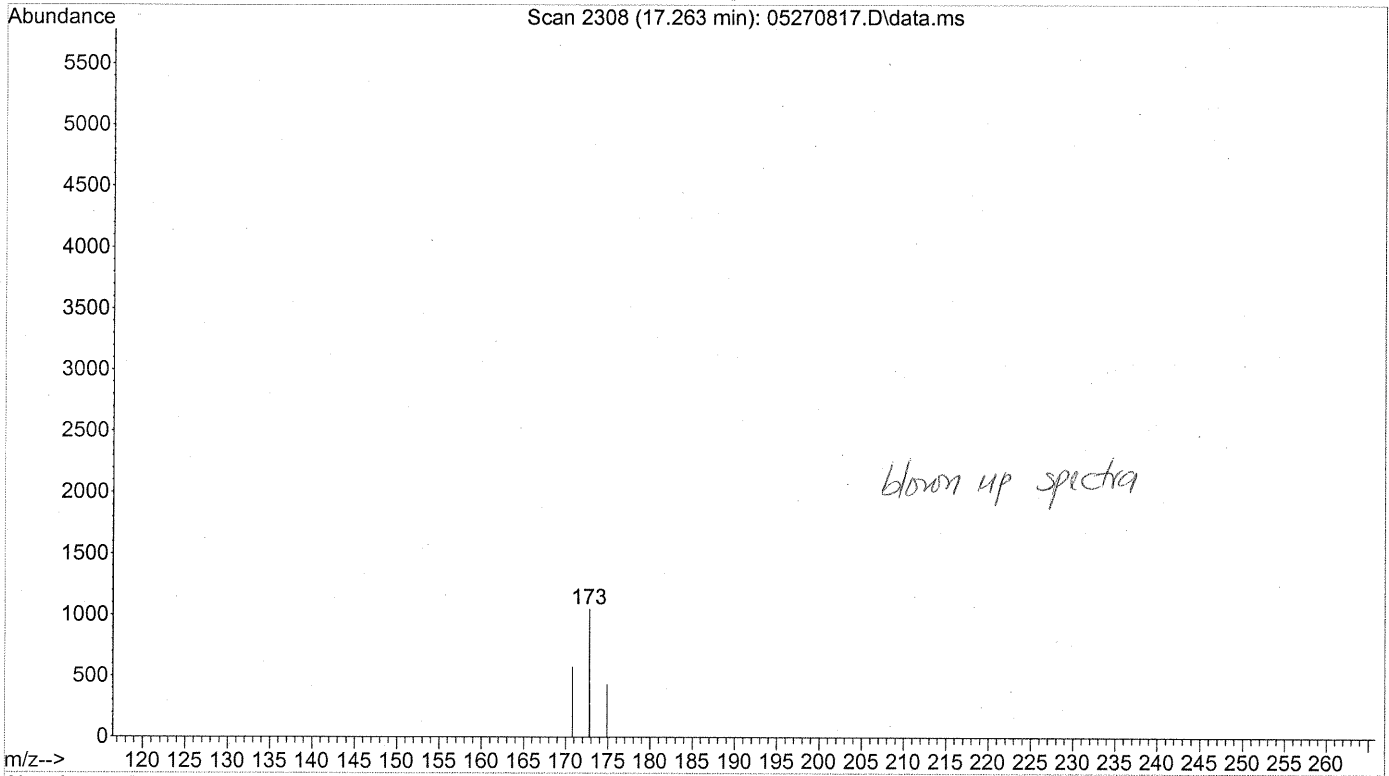
(68) Bromoform (T)

17.263min (-0.012) 0.15ng

response 2027

Ion	Exp%	Act%
172.80	100	100
174.80	48.50	51.60
0.00	0.00	0.00
0.00	0.00	0.00

File : J:\MS16\DATA\2008\_05\27\05270817.D  
Operator : WA  
Acquired : 27 May 2008 22:57 using AcqMethod TO15.M  
Instrument : GCMS-16  
Sample Name: P0801507-012 (250ml)  
Misc Info : ENSR SG13B-05 (-3.3, 3.6)  
Vial Number: 9

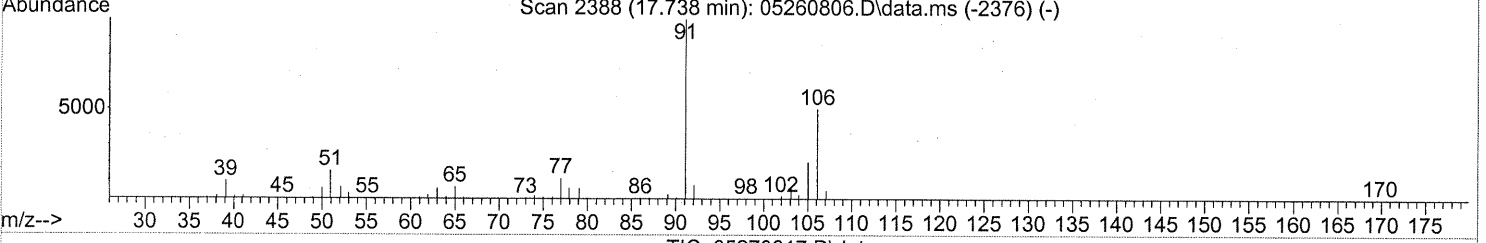
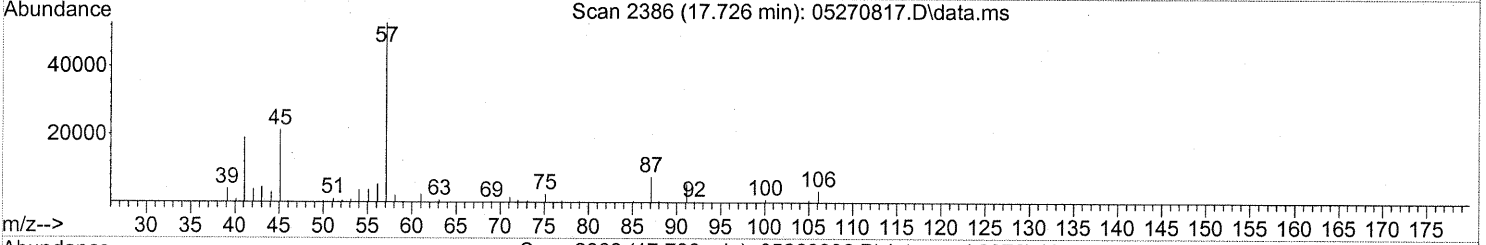
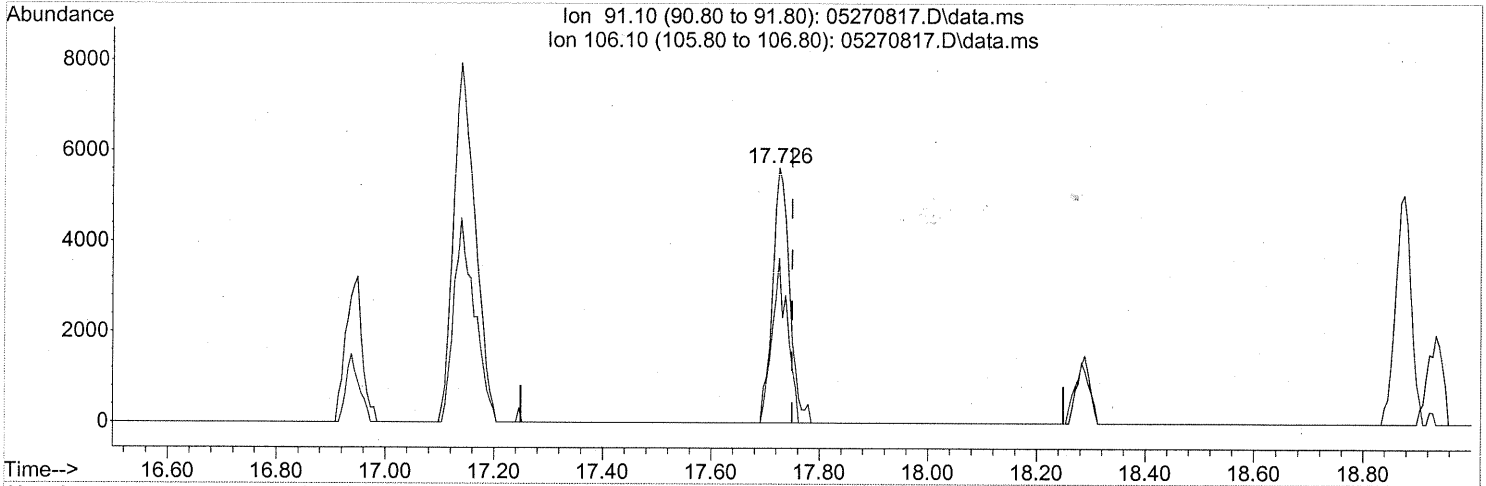




Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



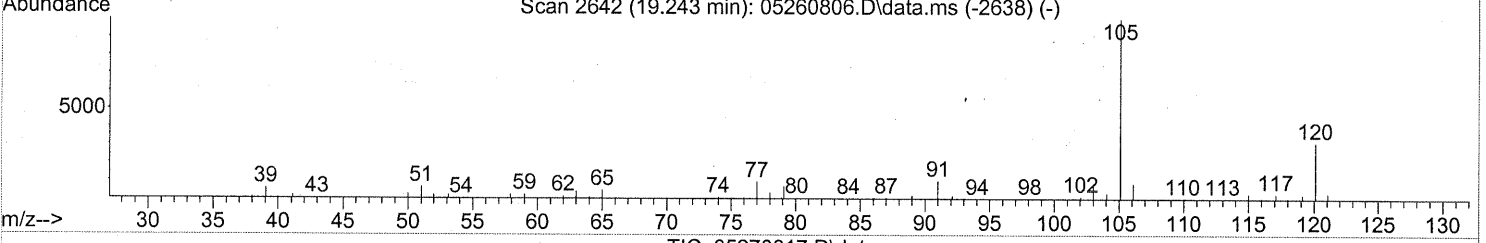
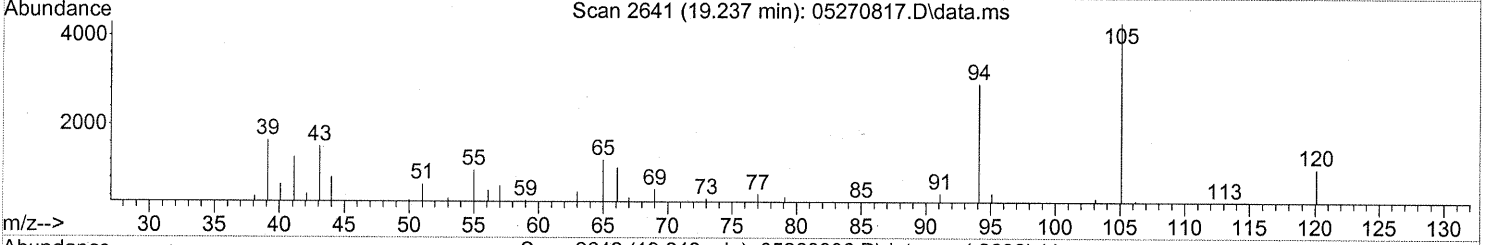
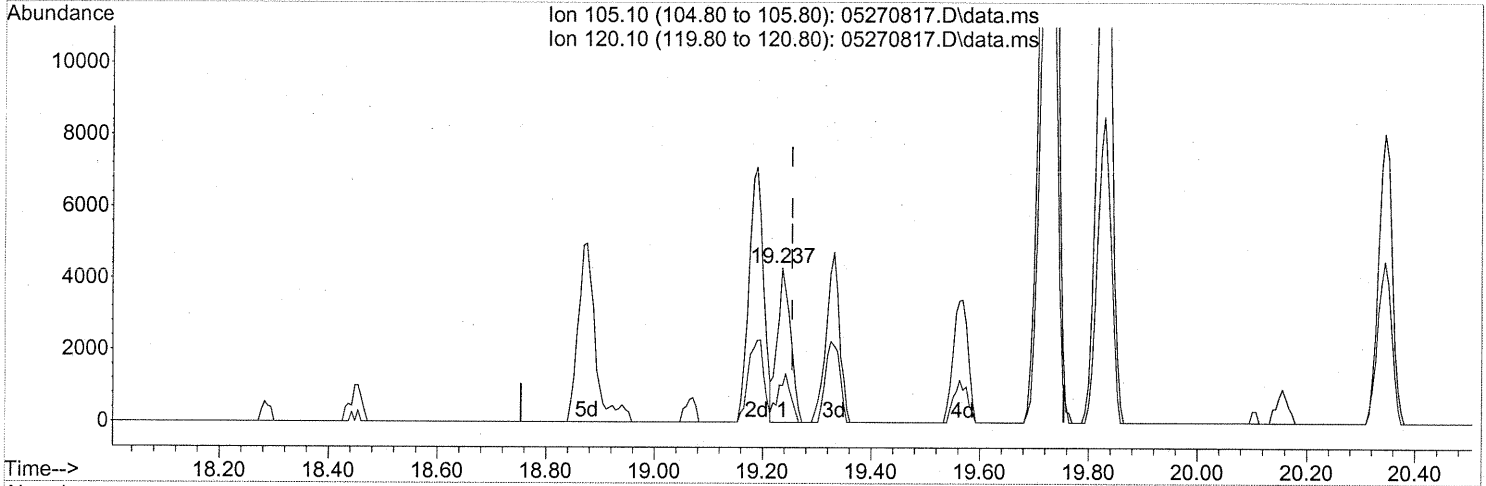
(70) o-Xylene (T)  
 17.726min (-0.024) 0.20ng  
 response 12231

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	58.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



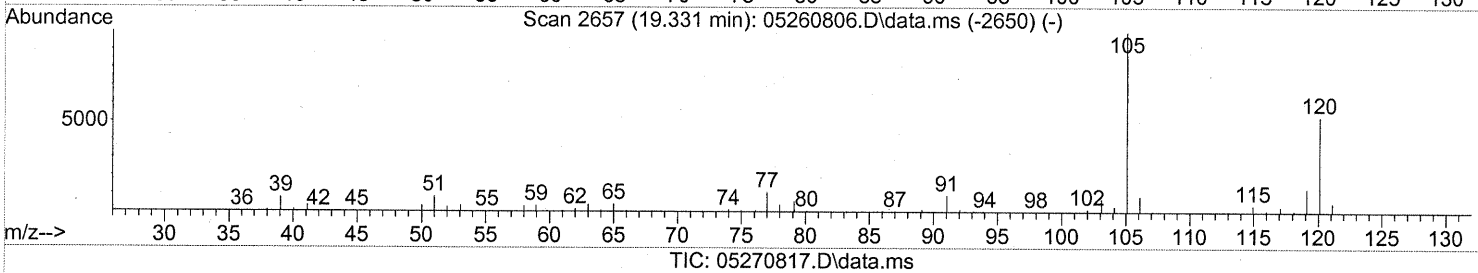
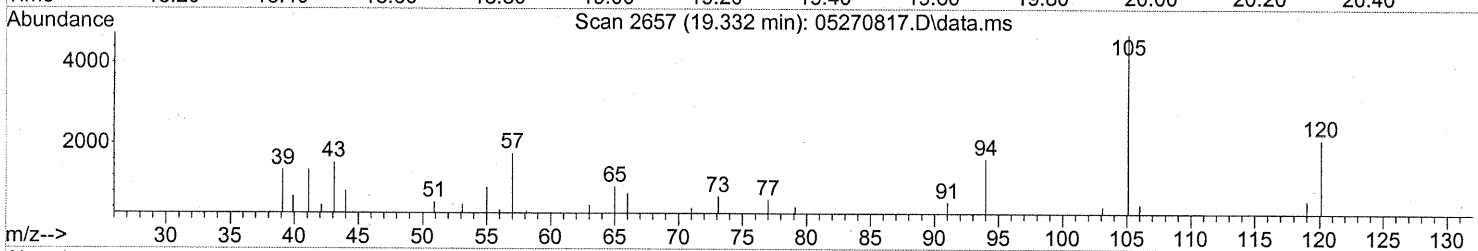
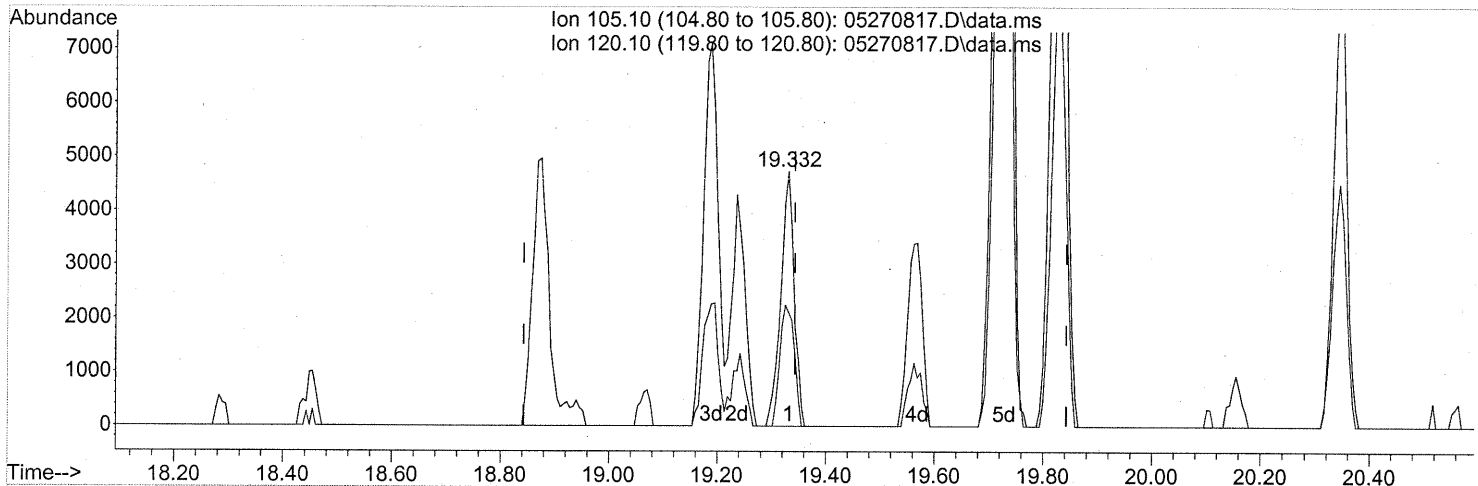
(78) 4-Ethyltoluene (T)  
 19.237min (-0.018) 0.08ng  
 response 7301

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	30.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

19.332min (-0.012) 0.10ng

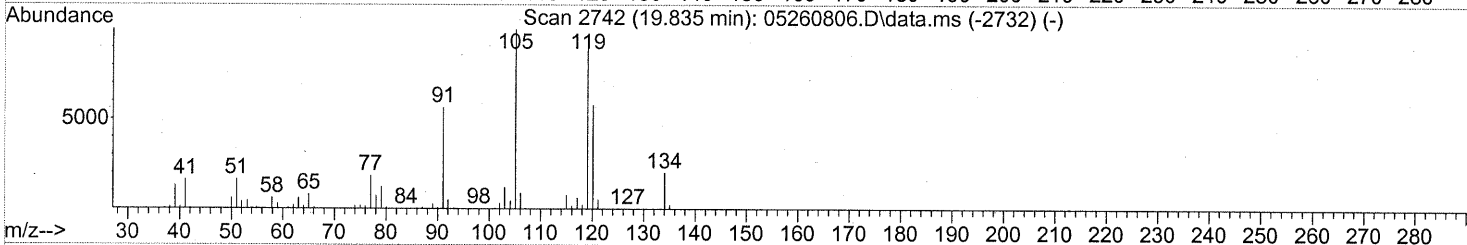
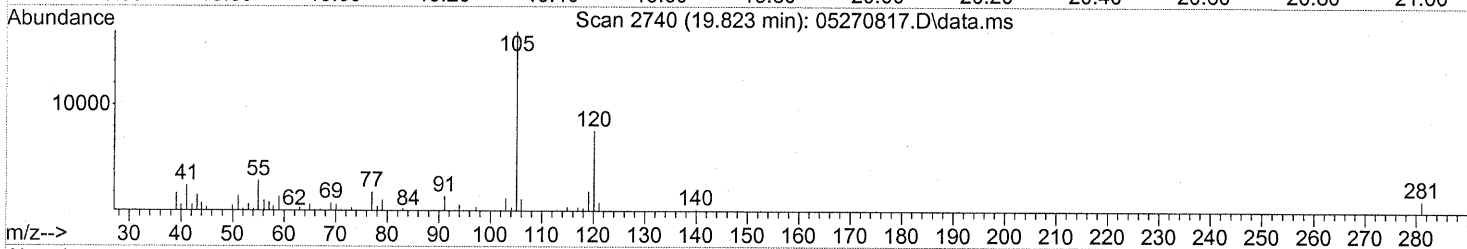
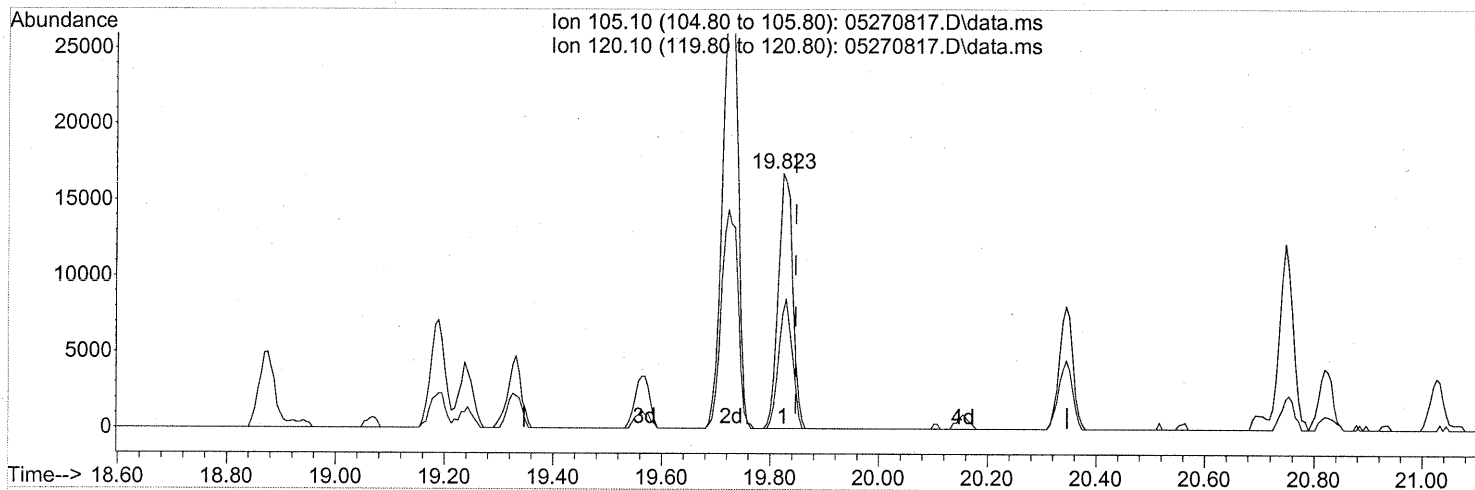
response 8012

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	50.47
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

19.823min (-0.024) 0.39ng

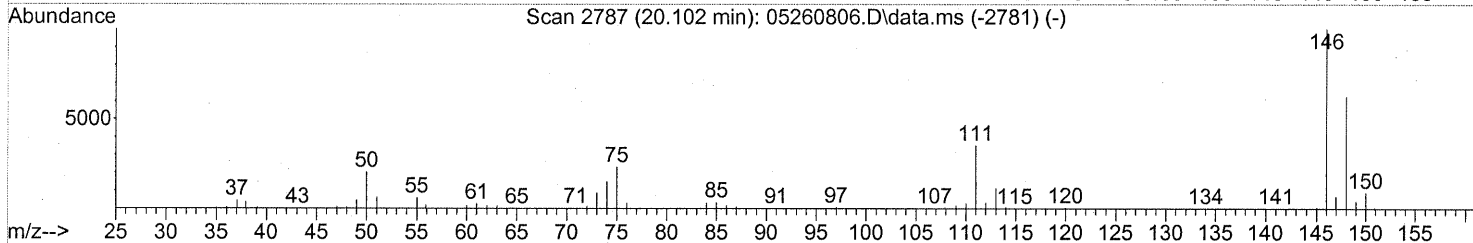
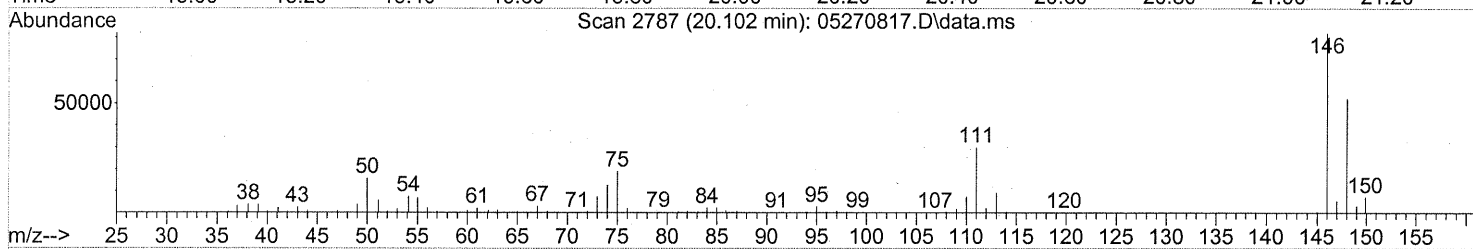
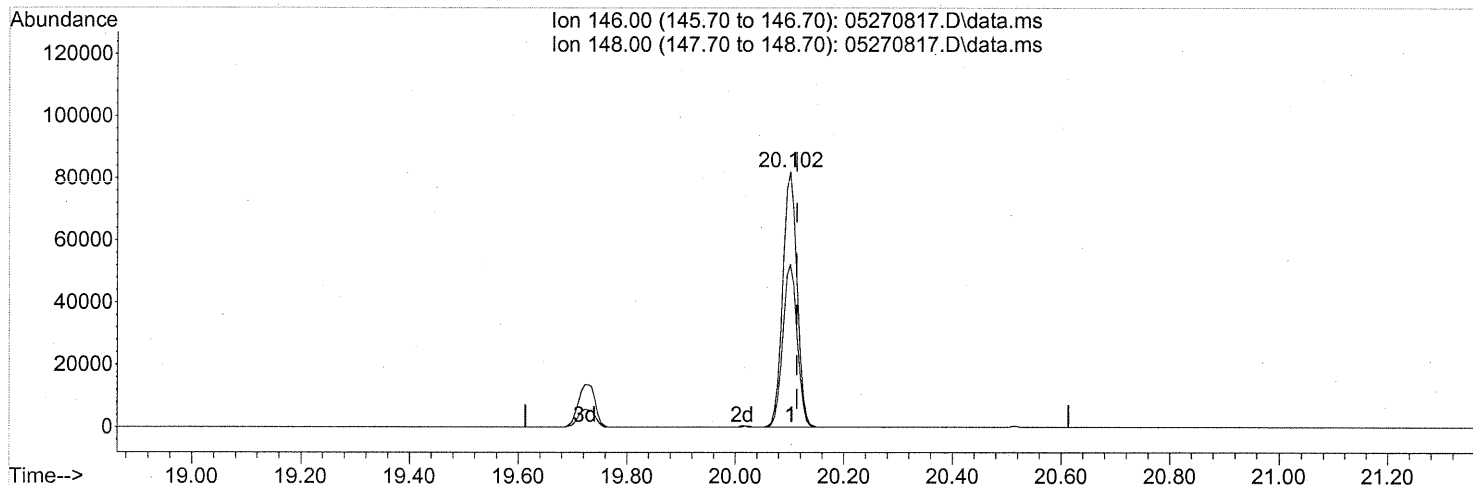
response 31081

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	47.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 3.00ng

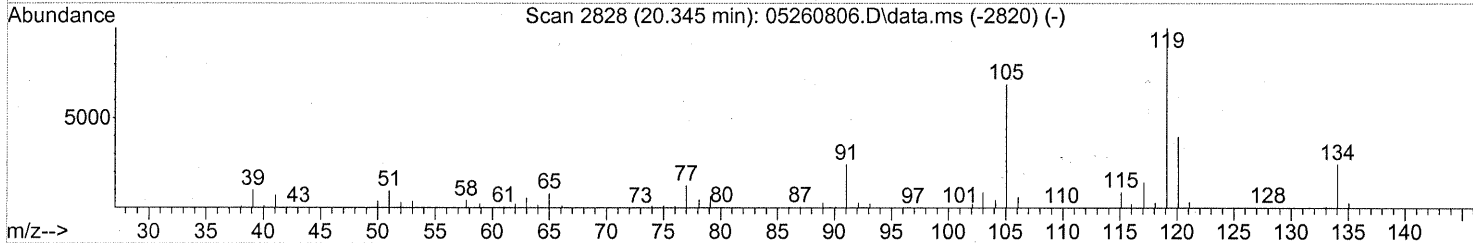
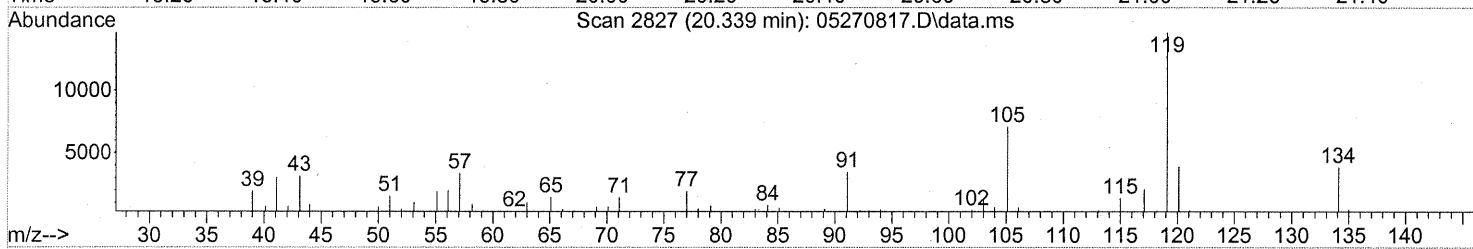
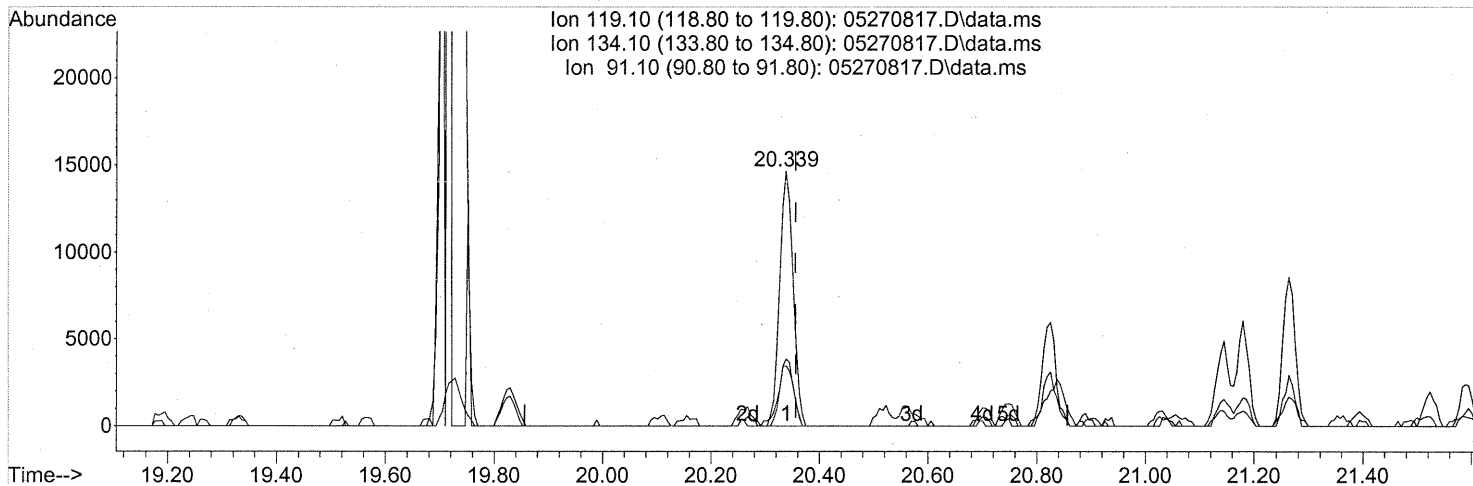
response 148262

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

(88) p-Isopropyltoluene (T)

20.339min (-0.018) 0.28ng

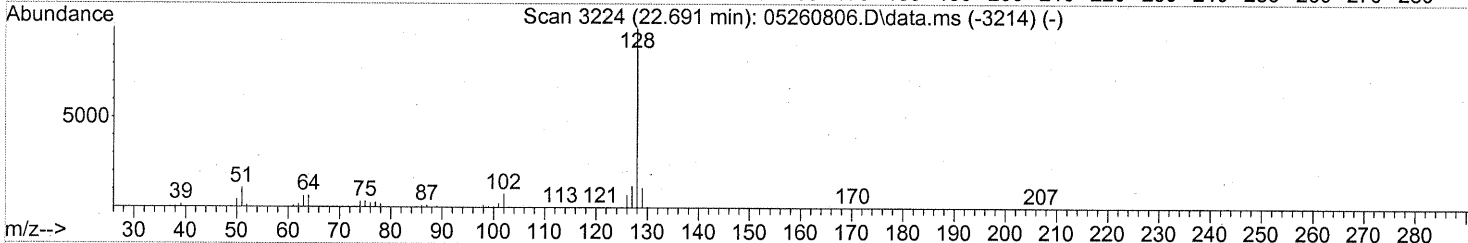
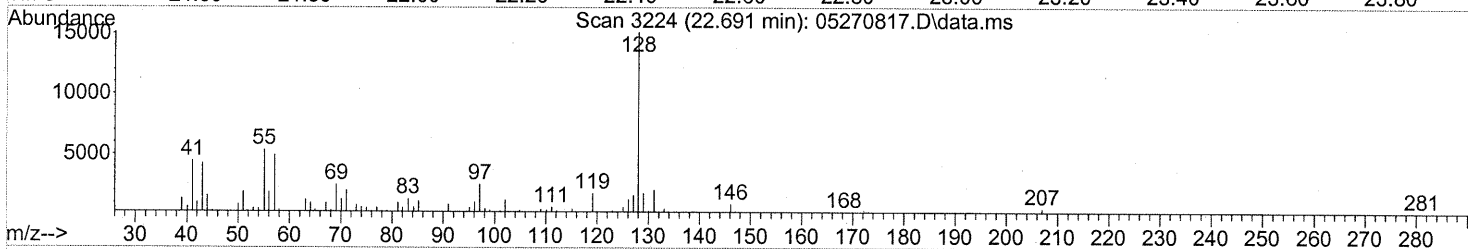
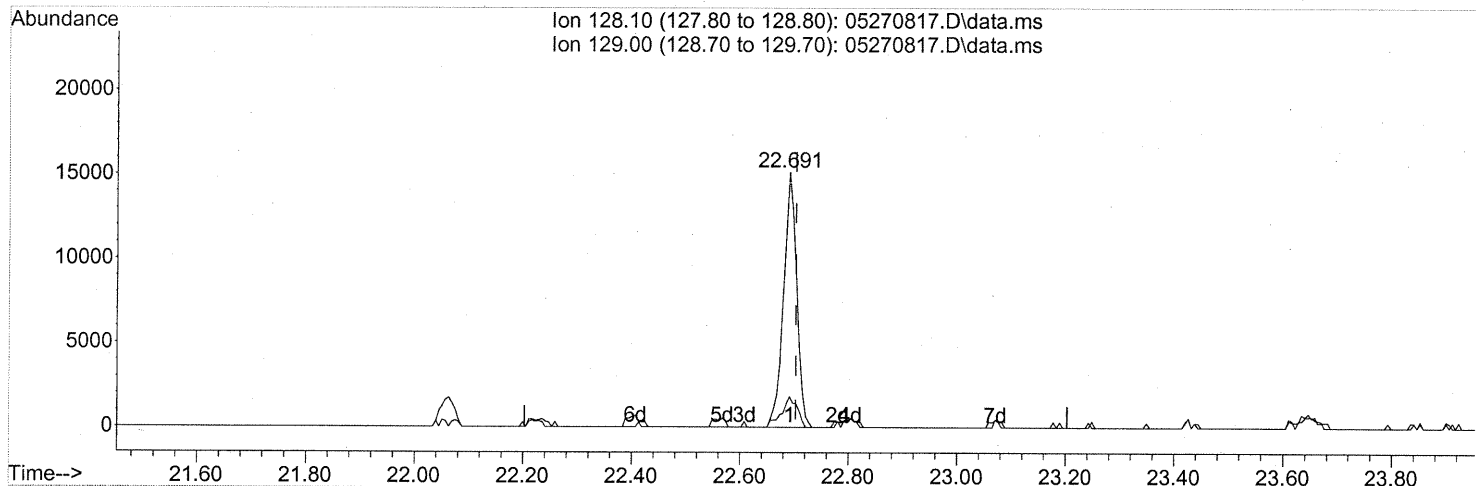
response 25323

Ion	Exp%	Act%
119.10	100	100
134.10	23.00	26.04
91.10	30.60	27.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270817.D\data.ms

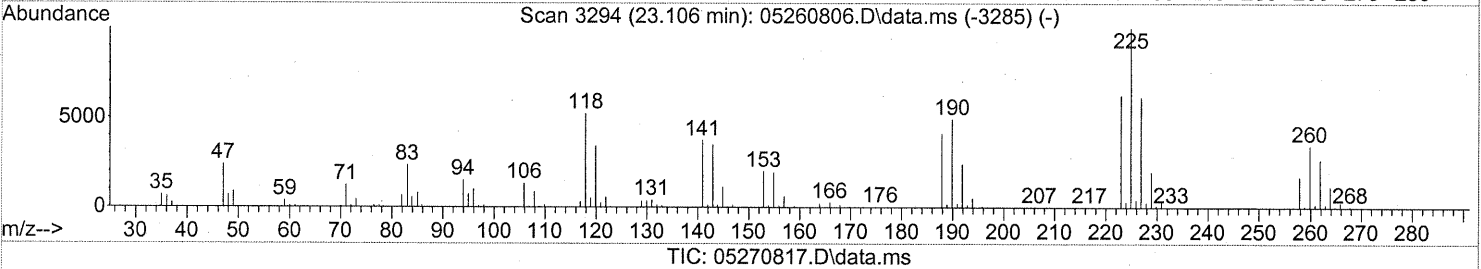
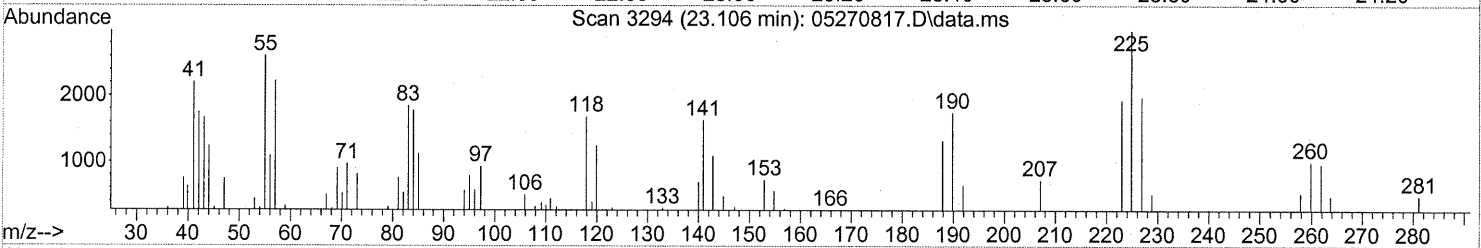
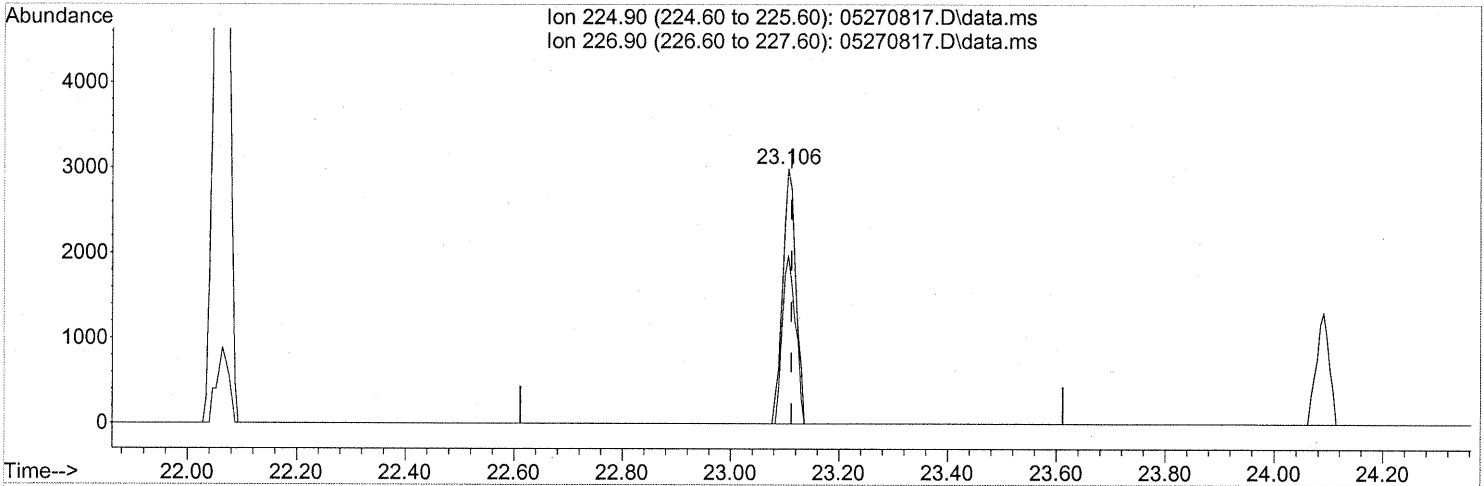
(95) Naphthalene (T)  
 22.691min (-0.012) 0.22ng  
 response 25227

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	14.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 04:47:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

23.106min (-0.006) 0.36ng

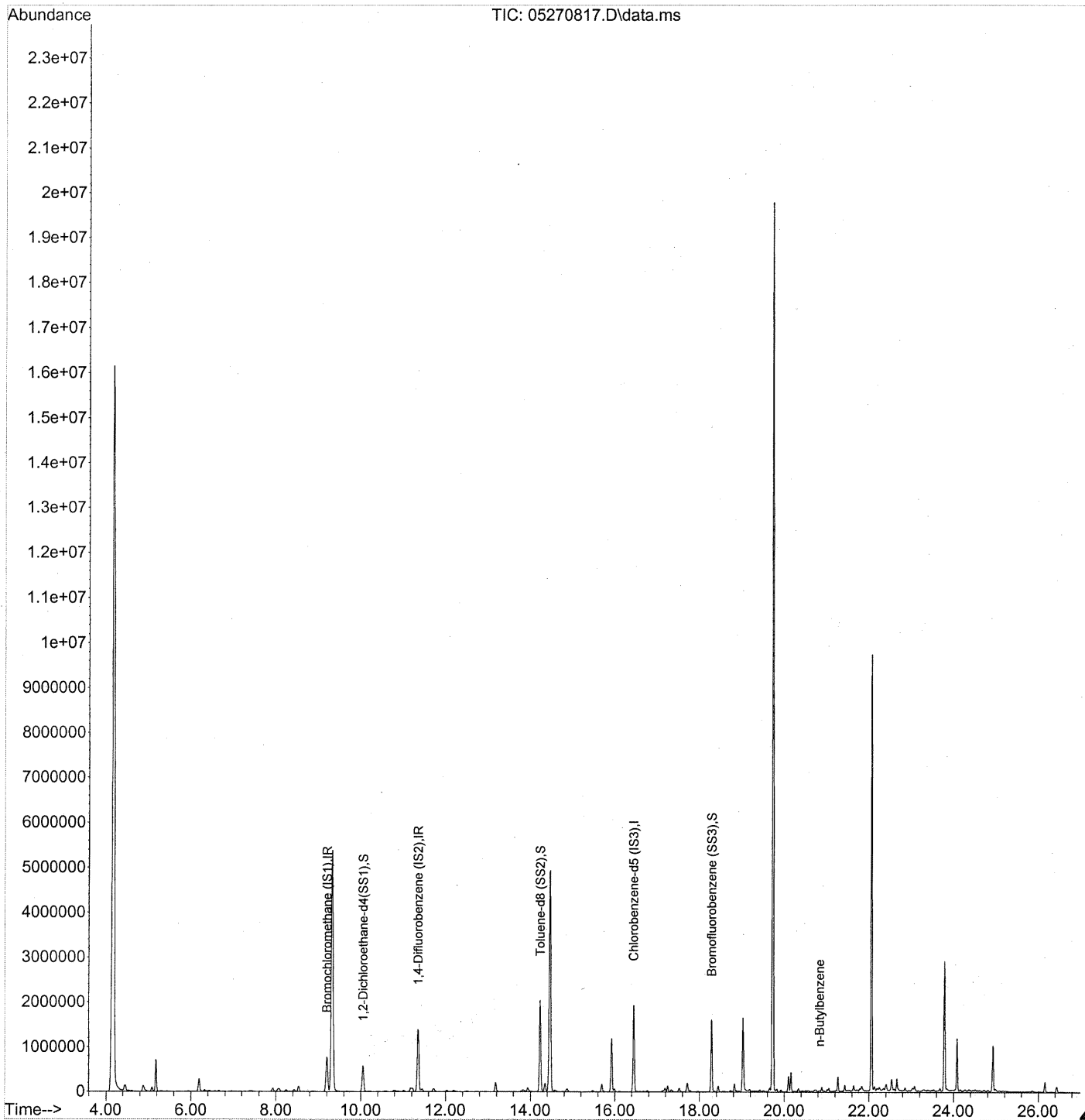
response 4997

Ion	Exp%	Act%
224.90	100	100
226.90	63.00	66.20
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 14:39:31 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 14:39:31 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

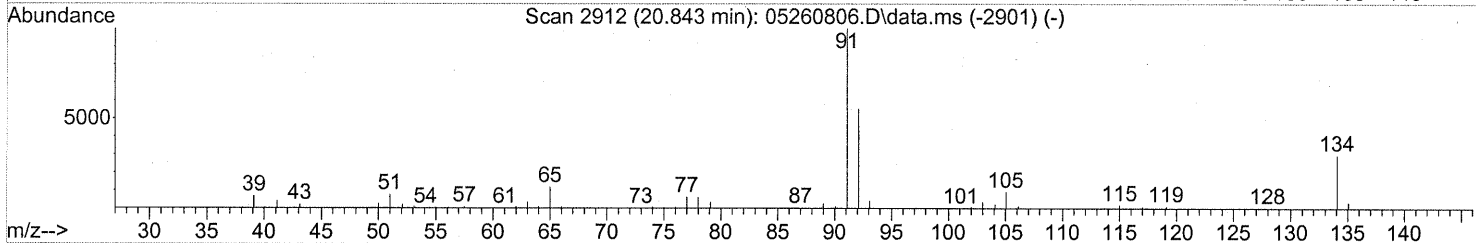
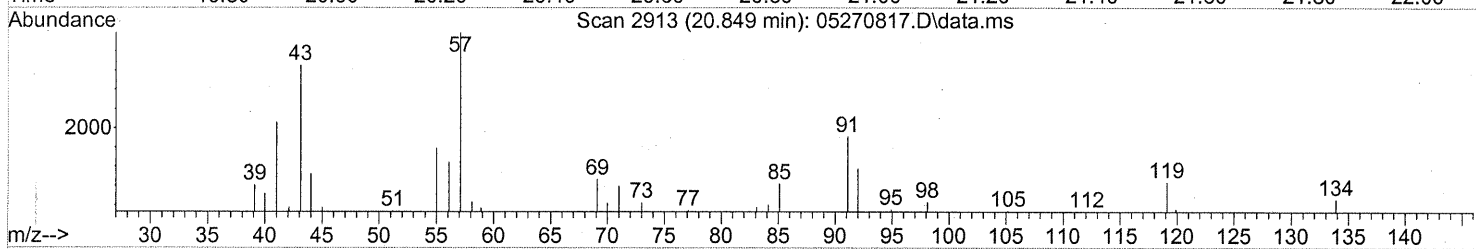
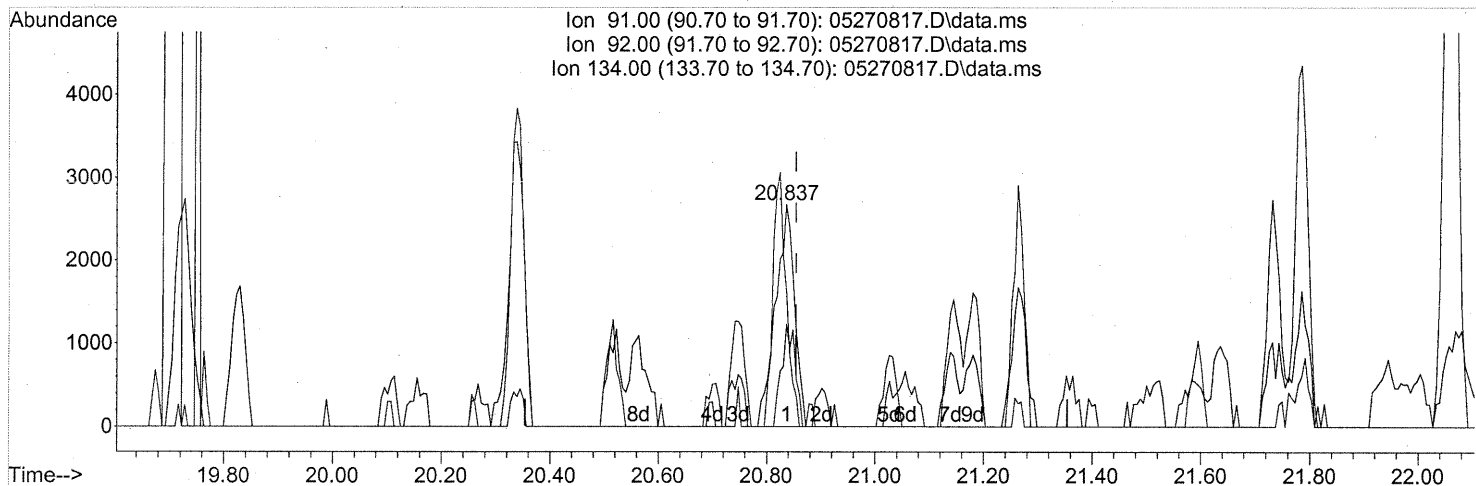
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	380792	25.000	ng	-0.04
3) 1,4-Difluorobenzene (IS2)	11.35	114	1597367	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	659426	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	542471	24.914	ng	-0.04
Spiked Amount	25.000		Recovery	=	99.64%	
5) Toluene-d8 (SS2)	14.23	98	1625685	23.913	ng	-0.02
Spiked Amount	25.000		Recovery	=	95.64%	
6) Bromofluorobenzene (SS3)	18.29	174	577227	25.537	ng	0.00
Spiked Amount	25.000		Recovery	=	102.16%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	4011	N.D.		Qvalue
8) n-Butylbenzene	20.84	91	6519	0.083 ng	#	44

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270817.D  
 Acq On : 27 May 2008 22:57  
 Operator : WA  
 Sample : P0801507-012 (250ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jun 04 14:39:31 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

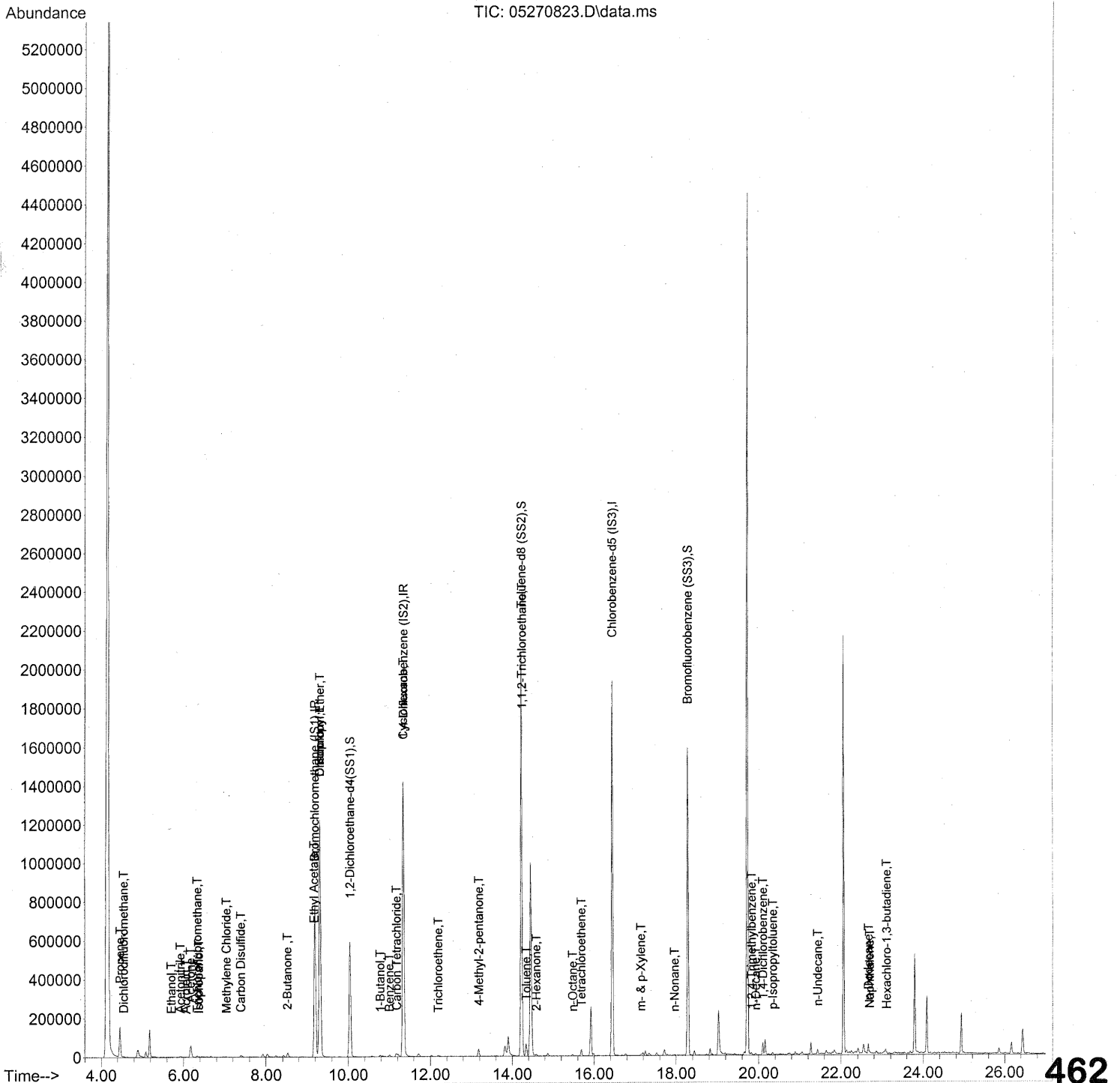


(8) n-Butylbenzene  
 20.837min (-0.018) 0.08ng  
 response 6519

Ion	Exp%	Act%
91.00	100	100
92.00	53.60	32.86#
134.00	23.40	81.42#
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270823.D  
 Acq On : 28 May 2008 5:10 am  
 Operator : WA  
 Sample : P0801507-012 Dil (50ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 06:51:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270823.D  
 Acq On : 28 May 2008 5:10 am  
 Operator : WA  
 Sample : P0801507-012 Dil (50ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 06:51:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	403942	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1653911	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	667568	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	557760	24.148	ng	-0.05
Spiked Amount				25.000		
				Recovery	=	96.60%
57) Toluene-d8 (SS2)	14.22	98	1684592	24.477	ng	-0.02
Spiked Amount				25.000		
				Recovery	=	97.92%
73) Bromofluorobenzene (SS3)	18.28	174	585981	25.608	ng	-0.01
Spiked Amount				25.000		
				Recovery	=	102.44%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	10128	0.324	ng	# 87
3) Dichlorodifluoromethane	4.55	85	2648	0.070	ng	# 91
4) Chloromethane	4.75	50	733	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.13	54	1243	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	2192	0.103	ng	81
11) Acetonitrile	5.92	41	7820	0.128	ng	# 47
12) Acrolein	6.06	56	2004	0.131	ng	99
13) Acetone	6.17	58	35334	1.674	ng	# 68
14) Trichlorofluoromethane	6.33	101	7313	0.207	ng	97
15) Isopropanol	6.37	45	7319	0.115	ng	87
16) Acrylonitrile	6.61	53	282	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.99	59	118	N.D.		
19) Methylene Chloride	7.04	84	963	0.059	ng	# 14
20) Allyl Chloride	7.14	41	118	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.39	76	12870	0.197	ng	95
23) trans-1,2-Dichloroethene	8.01	61	96	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.52	72	5845	0.530	ng	# 1
28) cis-1,2-Dichloroethene	9.17	61	913	N.D.		
29) Diisopropyl Ether	9.31	87	134821	9.275	ng	# 1
30) Ethyl Acetate	9.17	61	913	0.119	ng	# 58
31) n-Hexane	9.23	57	1633	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270823.D  
 Acq On : 28 May 2008 5:10 am  
 Operator : WA  
 Sample : P0801507-012 Dil (50ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 06:51:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	1251340	52.496	ng	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.77	56	9756	0.358	ng #	46
41) Benzene	11.00	78	9249	0.133	ng	93
42) Carbon Tetrachloride	11.17	117	13860	0.485	ng	98
43) Cyclohexane	11.34	84	1632	0.060	ng #	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.13	83	212	N.D.		
47) Trichloroethene	12.19	130	2924	0.135	ng	96
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	1025	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	12.50	71	266	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.18	58	13989	0.577	ng	83
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	142528	8.404	ng #	7
58) Toluene	14.34	91	54255	0.695	ng	95
59) 2-Hexanone	14.58	43	7474	0.101	ng	85
60) Dibromochloromethane	14.83	129	246	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.31	43	1110	N.D.		
63) n-Octane	15.47	57	1292	0.055	ng	84
64) Tetrachloroethene	15.69	166	12987	0.562	ng	99
65) Chlorobenzene	16.49	112	123	N.D.		
66) Ethylbenzene	16.94	91	1778	N.D.		
67) m- & p-Xylene	17.14	91	5557	0.095	ng	93
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	1105	N.D.		
70) o-Xylene	17.73	91	2783	N.D.		
71) n-Nonane	17.96	43	3174	0.051	ng #	63
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.44	105	470	N.D.		
75) alpha-Pinene	18.93	93	1507	N.D.		
76) n-Propylbenzene	19.06	91	1123	N.D.		
77) 3-Ethyltoluene	19.18	105	2746	N.D.		
78) 4-Ethyltoluene	19.23	105	1860	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	1755	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270823.D  
 Acq On : 28 May 2008 5:10 am  
 Operator : WA  
 Sample : P0801507-012 Dil (50ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 06:51:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

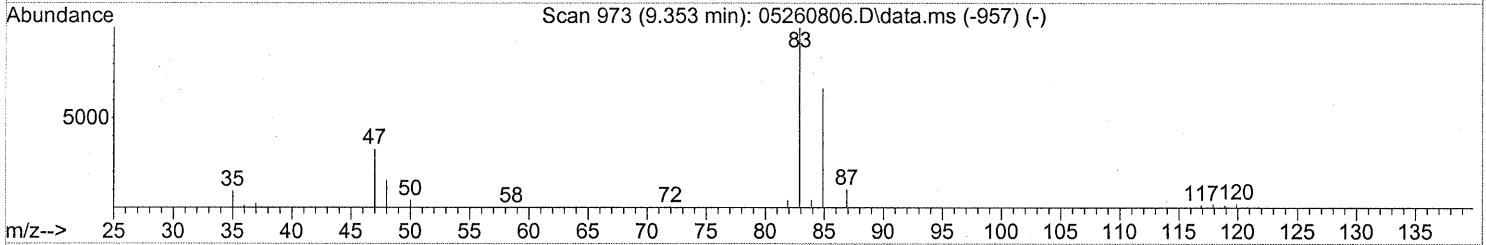
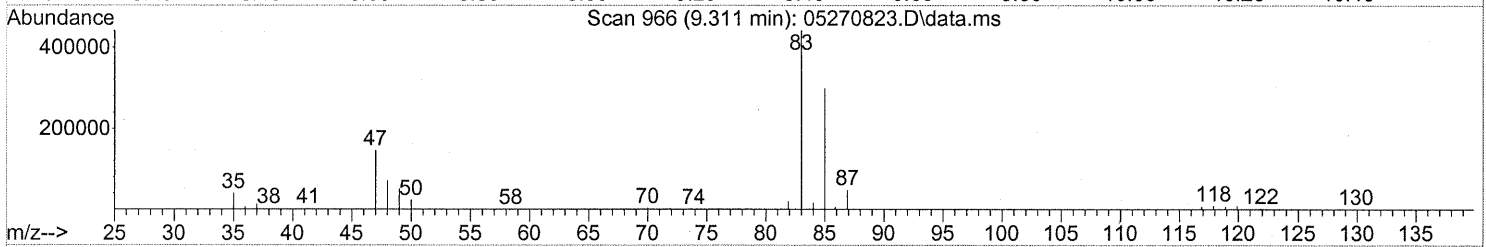
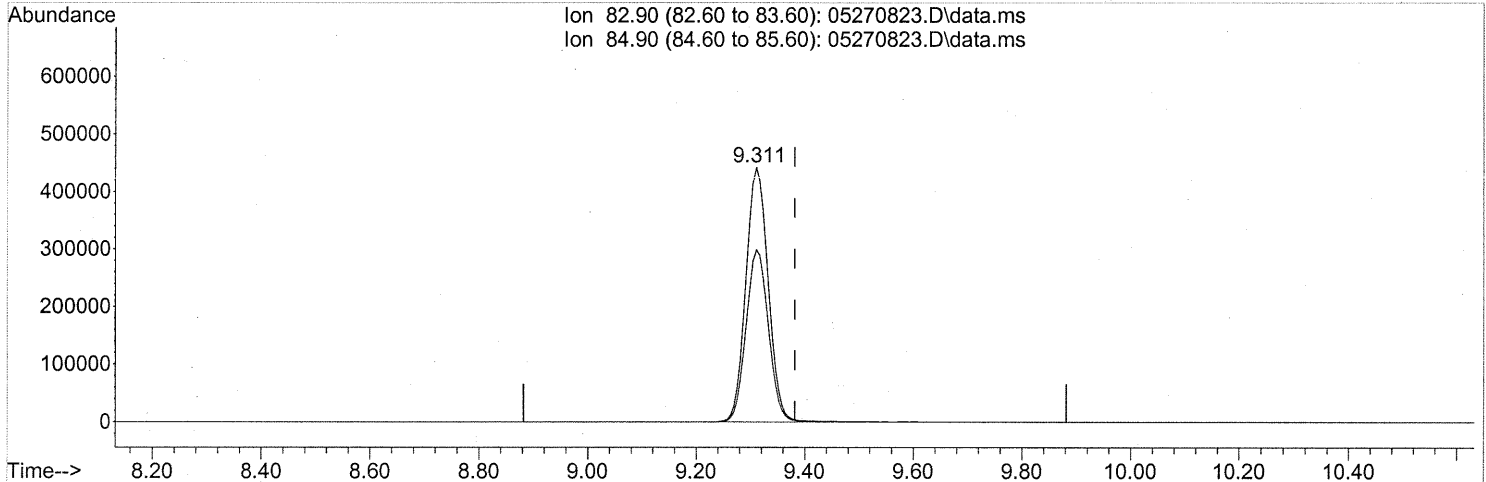
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	374	N.D.		
81) 2-Ethyltoluene	19.56	105	1721	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	6361	0.078	ng	100
83) n-Decane	19.92	57	4080	0.071	ng	# 67
84) Benzyl Chloride	19.83	91	603	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	211	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	30045	0.600	ng	98
87) sec-Butylbenzene	20.16	105	221	N.D.		
88) p-Isopropyltoluene	20.34	119	5079	0.055	ng	96
89) 1,2,3-Trimethylbenzene	20.35	105	3222	N.D.		
90) 1,2-Dichlorobenzene	20.51	146	96	N.D.		
91) d-Limonene	20.51	68	1201	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	10046	0.166	ng	97
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	6605	0.056	ng	98
96) n-Dodecane	22.66	57	19496	0.331	ng	83
97) Hexachloro-1,3-butadiene	23.10	225	1002	0.070	ng	81

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270823.D  
 Acq On : 28 May 2008 5:10  
 Operator : WA  
 Sample : P0801507-012 Dil (50ml)  
 Misc : ENSR SG13B-05 (-3.3, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 28 06:51:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270823.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 52.50ng

response 1251340

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.78
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00817

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.9	1.6	0.16	0.58	0.33	0.033	
74-87-3	Chloromethane	ND	0.33	0.16	ND	0.16	0.079	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.6	0.16	ND	0.23	0.023	
75-01-4	Vinyl Chloride	ND	0.33	0.16	ND	0.13	0.064	
74-83-9	Bromomethane	ND	0.33	0.16	ND	0.084	0.042	
75-00-3	Chloroethane	ND	0.33	0.16	ND	0.12	0.062	
64-17-5	Ethanol	11	16	0.16	5.8	8.7	0.087	J, B
67-64-1	Acetone	78	16	0.24	33	6.9	0.10	B
75-69-4	Trichlorofluoromethane	3.3	0.33	0.16	0.59	0.058	0.029	
107-13-1	Acrylonitrile	ND	1.6	0.23	ND	0.75	0.11	
75-35-4	1,1-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.4	1.6	0.24	0.46	0.54	0.080	J
75-09-2	Methylene Chloride	0.42	1.6	0.16	0.12	0.47	0.047	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.33	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.52	0.33	0.18	0.068	0.043	0.024	
75-15-0	Carbon Disulfide	7.6	1.6	0.39	2.4	0.52	0.13	
156-60-5	trans-1,2-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
75-34-3	1,1-Dichloroethane	ND	0.33	0.16	ND	0.081	0.040	
1634-04-4	Methyl tert-Butyl Ether	ND	0.33	0.16	ND	0.090	0.045	
108-05-4	Vinyl Acetate	6.9	16	0.52	2.0	4.6	0.15	J, B
78-93-3	2-Butanone (MEK)	22	1.6	0.16	7.6	0.55	0.055	B
156-59-2	cis-1,2-Dichloroethene	ND	0.33	0.16	ND	0.082	0.041	
108-20-3	Diisopropyl Ether	ND	1.6	0.19	ND	0.39	0.046	
67-66-3	Chloroform	1,200	0.33	0.19	240	0.067	0.039	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08 **467**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00817

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/27 - 5/28/08  
**Volume(s) Analyzed:** 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	1.6	0.17	ND	0.39	0.040	
107-06-2	1,2-Dichloroethane	ND	0.33	0.16	ND	0.081	0.040	
71-55-6	1,1,1-Trichloroethane	ND	0.33	0.16	ND	0.060	0.030	
71-43-2	<b>Benzene</b>	<b>5.5</b>	0.33	0.16	<b>1.7</b>	0.10	0.051	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.2</b>	0.33	0.16	<b>1.2</b>	0.052	0.026	
994-05-8	tert-Amyl Methyl Ether	ND	1.6	0.16	ND	0.39	0.039	
78-87-5	1,2-Dichloropropane	ND	0.33	0.16	ND	0.071	0.035	
75-27-4	Bromodichloromethane	ND	0.33	0.16	ND	0.049	0.024	
79-01-6	<b>Trichloroethene</b>	<b>1.1</b>	0.33	0.16	<b>0.20</b>	0.061	0.030	
123-91-1	1,4-Dioxane	ND	1.6	0.20	ND	0.45	0.055	
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.060	
142-82-5	<b>n-Heptane</b>	<b>1.5</b>	1.6	0.21	<b>0.37</b>	0.40	0.051	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.17	ND	0.36	0.037	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>17</b>	1.6	0.18	<b>4.2</b>	0.40	0.045	
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.21	ND	0.36	0.045	
79-00-5	1,1,2-Trichloroethane	ND	0.33	0.16	ND	0.060	0.030	
108-88-3	<b>Toluene</b>	<b>7.8</b>	1.6	0.16	<b>2.1</b>	0.43	0.043	
591-78-6	<b>2-Hexanone</b>	<b>3.9</b>	1.6	0.25	<b>0.96</b>	0.40	0.061	
124-48-1	Dibromochloromethane	ND	0.33	0.22	ND	0.038	0.026	
106-93-4	1,2-Dibromoethane	ND	0.33	0.18	ND	0.042	0.023	
111-65-9	<b>n-Octane</b>	<b>2.7</b>	1.6	0.16	<b>0.57</b>	0.35	0.035	
127-18-4	<b>Tetrachloroethene</b>	<b>7.2</b>	0.33	0.16	<b>1.1</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>1.8</b>	0.33	0.17	<b>0.39</b>	0.071	0.036	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG15B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-013

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00817

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.50 Liter(s)  
 0.050 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	0.62	1.6	0.20	0.14	0.38	0.047	J
179601-23-1	m,p-Xylenes	2.8	1.6	0.42	0.65	0.38	0.098	
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	0.49	1.6	0.25	0.11	0.38	0.058	J
95-47-6	o-Xylene	1.5	1.6	0.21	0.34	0.38	0.047	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.33	0.21	ND	0.047	0.030	
98-82-8	Cumene	ND	1.6	0.18	ND	0.33	0.037	
103-65-1	n-Propylbenzene	0.50	1.6	0.17	0.10	0.33	0.034	J
622-96-8	4-Ethyltoluene	0.78	1.6	0.19	0.16	0.33	0.038	J
108-67-8	1,3,5-Trimethylbenzene	0.93	1.6	0.20	0.19	0.33	0.040	J
98-83-9	alpha-Methylstyrene	0.39	1.6	0.24	0.082	0.34	0.049	J
95-63-6	1,2,4-Trimethylbenzene	3.5	1.6	0.22	0.72	0.33	0.046	
100-44-7	Benzyl Chloride	ND	0.33	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	0.77	0.33	0.20	0.13	0.054	0.034	
106-46-7	1,4-Dichlorobenzene	14	0.33	0.18	2.3	0.054	0.030	
135-98-8	sec-Butylbenzene	ND	1.6	0.19	ND	0.30	0.034	
99-87-6	4-Isopropyltoluene (p-Cymene)	12	1.6	0.21	2.2	0.30	0.039	
95-50-1	1,2-Dichlorobenzene	ND	0.33	0.22	ND	0.054	0.036	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.25	ND	0.17	0.026	
120-82-1	1,2,4-Trichlorobenzene	ND	0.33	0.25	ND	0.044	0.033	
91-20-3	Naphthalene	1.7	0.65	0.24	0.33	0.12	0.046	
87-68-3	Hexachlorobutadiene	11	0.33	0.29	1.0	0.031	0.028	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	1.1	0.65	0.16	0.21	0.12	0.030	M

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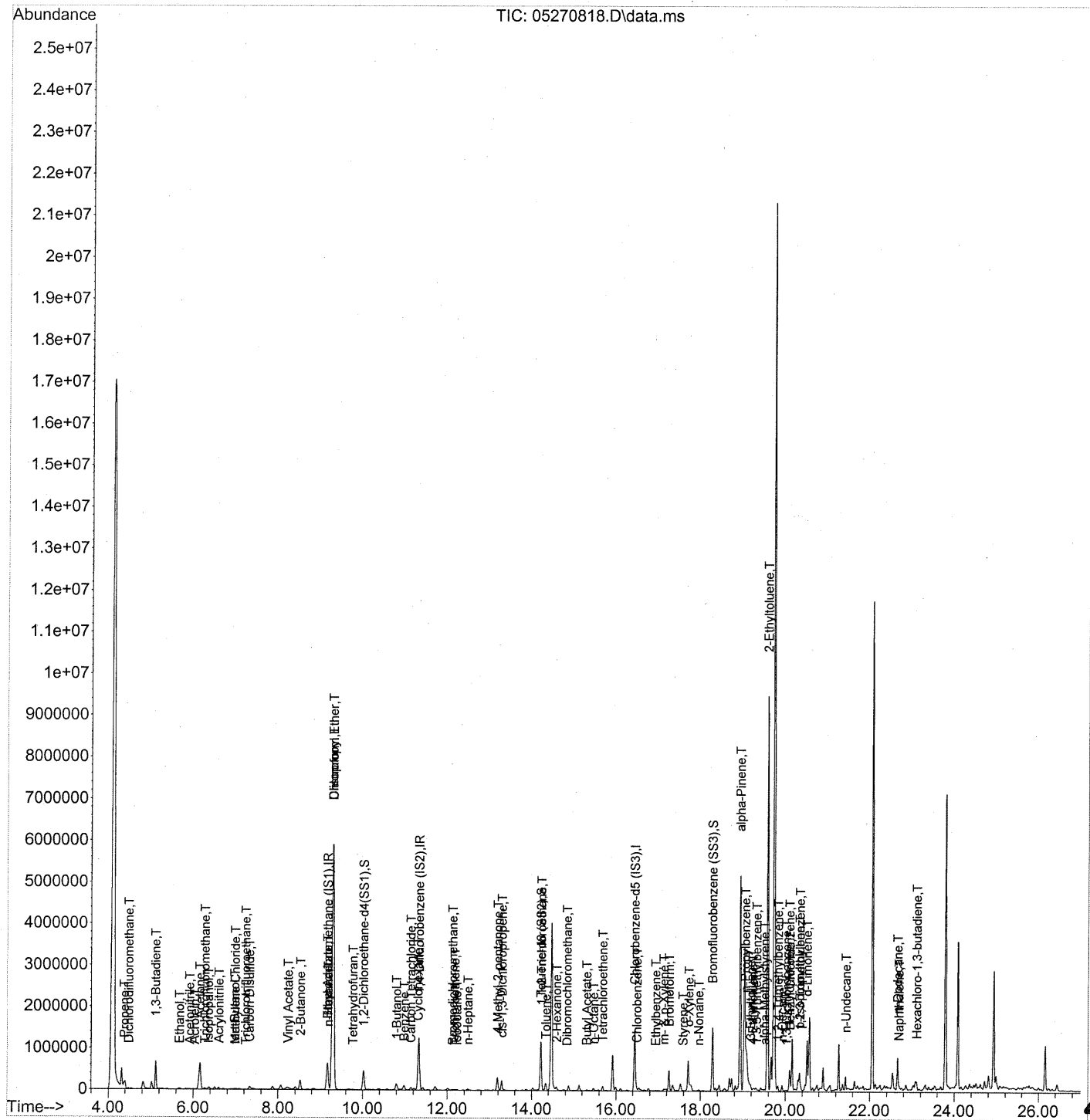
M = Matrix interference due to coelution with a non-target compound; results may be biased high.

Verified By: CA      Date: 6/5/08

**469**

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 08:19:16 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



470

Data Path : J:\MS16\DATA\2008\_05\27\  
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 Operator : WA  
 Sample : P0801507-013 (500ml)  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.17	130	292426	25.000	ng	-0.08
37) 1,4-Difluorobenzene (IS2)	11.33	114	1419564	25.000	ng	-0.05
56) Chlorobenzene-d5 (IS3)	16.45	82	494463	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	10.02	65	461246	27.585	ng	-0.07	110.32%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.22	98	953570	18.706	ng	-0.03	74.84%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.28	174	539171	31.812	ng	-0.01	127.24%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.37	42	74213	3.278	ng	# 78
3) Dichlorodifluoromethane	4.48	85	23953	0.875	ng	96
4) Chloromethane	4.68	50	1388	N.D.	✓	
5) Freon 114	4.79	135	545	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	5.12	54	1200	0.060	ng	# 1
8) Bromomethane	5.36	94	209	N.D.	✓	
9) Chloroethane	5.54	64	128	N.D.	✓	
10) Ethanol	5.68	45	51104m	3.327	ng	
11) Acetonitrile	5.92	41	20263	0.458	ng	97
12) Acrolein	6.03	56	12480	1.127	ng	89
13) Acetone	6.16	58	367772	24.069	ng	# 83
14) Trichlorofluoromethane	6.27	101	26193	1.022	ng	99
15) Isopropanol	6.36	45	63022	1.369	ng	93
16) Acrylonitrile	6.61	53	2215	0.080	ng	NR 87
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.98	59	18505m	0.431	ng	
19) Methylene Chloride	6.99	84	1517	0.129	ng	# 18
20) Allyl Chloride	7.15	41	228	N.D.	✓	
21) Trichlorotrifluoroethane	7.24	151	1984	0.159	ng	97
22) Carbon Disulfide	7.33	76	109842	2.317	ng	100
23) trans-1,2-Dichloroethene	7.88	61	661	N.D.	✓	
24) 1,1-Dichloroethane	8.14	63	565	N.D.	✓	
25) Methyl tert-Butyl Ether	8.19	73	1076	N.D.	✓	
26) Vinyl Acetate	8.23	86	5274m	2.107	ng	
27) 2-Butanone	8.52	72	54748	6.853	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	9.30	87	771805	73.347	ng	NR # 1
30) Ethyl Acetate	9.17	61	9029	1.620	ng	88
31) n-Hexane	9.19	57	15039	0.451	ng	92

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BA 6/4/08

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 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 08:19:16 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.29	83	7184472	<del>416.341</del>	ng	97
34) Tetrahydrofuran	9.77	72	2025	0.270	ng #	1
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.15	62	330	N.D. ✓		
38) 1,1,1-Trichloroethane	10.45	97	106	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.80	56	136915	5.860	ng #	77
41) Benzene	10.98	78	101306	1.693	ng	99
42) Carbon Tetrachloride	11.14	117	54530	2.221	ng	99
43) Cyclohexane	11.31	84	8785	0.375	ng #	3
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	11.92	63	218	N.D. ✓		
46) Bromodichloromethane	12.13	83	1813	<del>0.103</del>	ng NR#	39
47) Trichloroethene	12.18	130	6178	0.332	ng	91
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	12.23	57	7557	0.079	ng #	1
50) Methyl Methacrylate	12.33	100	108	N.D. ✓		
51) n-Heptane	12.49	71	6607	0.462	ng #	57
52) cis-1,3-Dichloropropene	13.29	75	4274	<del>0.192</del>	ng NR#	1
53) 4-Methyl-2-pentanone	13.19	58	108714	5.224	ng	82
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	14.23	97	80872	<del>5.555</del>	ng NR#	9
58) Toluene	14.34	91	138035	2.387	ng	100
59) 2-Hexanone	14.59	43	66050	1.209	ng	95
60) Dibromochloromethane	14.84	129	867	<del>0.051</del>	ng #	64
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.31	43	20532	0.374	ng	85
63) n-Octane	15.47	57	14379	0.822	ng	88
64) Tetrachloroethene	15.69	166	37982	2.221	ng	99
65) Chlorobenzene	16.49	112	22939	0.557	ng	79
66) Ethylbenzene	16.94	91	12574	0.191	ng	94
67) m- & p-Xylene	17.13	91	37800	0.868	ng	91
68) Bromoform	17.26	173	625	<del>0.063</del>	ng #	29
69) Styrene	17.59	104	6260	0.149	ng	93
70) o-Xylene	17.73	91	21349	0.458	ng	85
71) n-Nonane	17.96	43	23868	0.519	ng	82
72) 1,1,2,2-Tetrachloroethane	17.71	83	634	N.D. ✓		
74) Cumene	18.45	105	2589	N.D. ✓		
75) alpha-Pinene	18.93	93	2405811	75.566	ng	93
76) n-Propylbenzene	19.06	91	12123	0.154	ng #	90
77) 3-Ethyltoluene	19.18	105	26645	0.358	ng	94
78) 4-Ethyltoluene	19.24	105	16104	0.240	ng	95
79) 1,3,5-Trimethylbenzene	19.33	105	16963	0.285	ng	95

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6/4/08

Data Path : J:\MS16\DATA\2008\_05\27\  
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 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 08:19:16 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

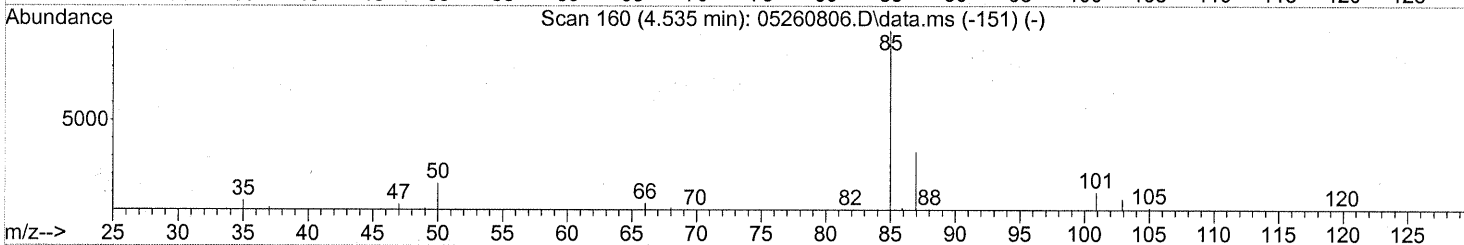
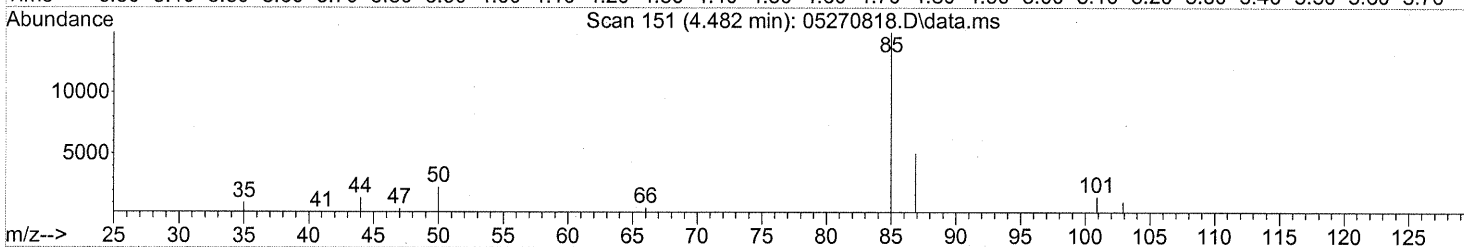
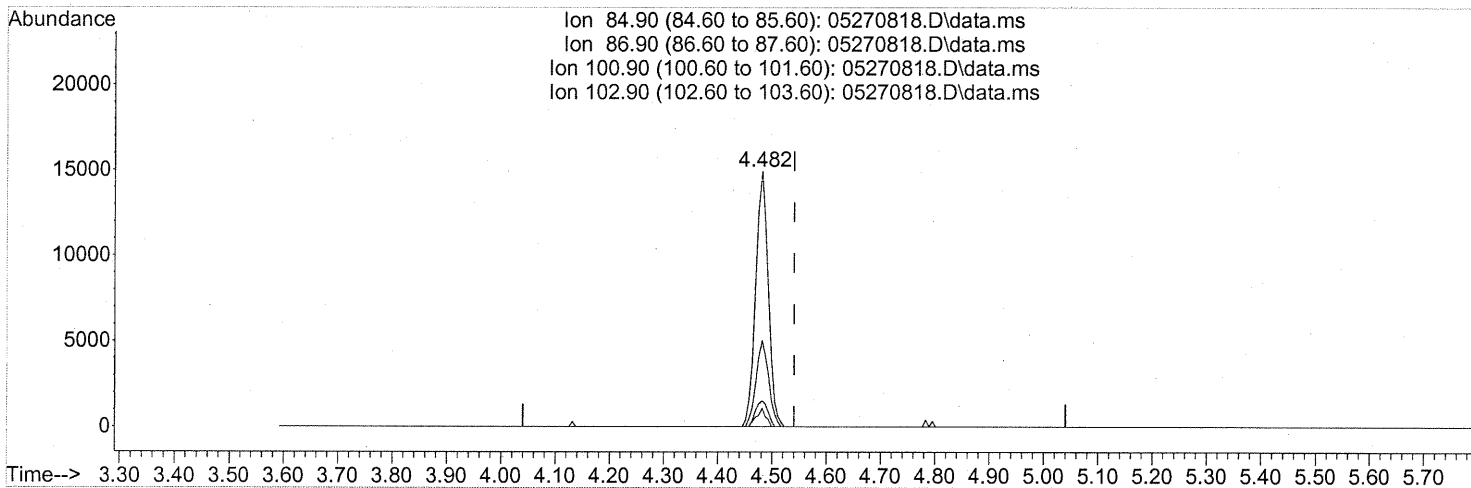
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	4053	0.121	ng	91
81) 2-Ethyltoluene	19.58	105	148883	2.063	ng	64
82) 1,2,4-Trimethylbenzene	19.83	105	65043	1.079	ng	97
83) n-Decane	19.92	57	46690	1.094	ng	87
84) Benzyl Chloride	<del>20.11</del>	91	49112	<del>1.054</del>	ng	MR# 57
85) 1,3-Dichlorobenzene	20.02	146	9059	0.237	ng	94
86) 1,4-Dichlorobenzene	20.10	146	160229	4.321	ng	99
87) sec-Butylbenzene	20.15	105	2449	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	253093	3.704	ng	91
89) 1,2,3-Trimethylbenzene	20.34	105	41387	0.715	ng	# 36
90) 1,2-Dichlorobenzene	20.52	146	770	N.D.	✓	
91) d-Limonene	20.52	68	274429	14.772	ng	86
92) 1,2-Dibromo-3-Chloropr...	21.43	157	203	N.D.	✓	
93) n-Undecane	21.44	57	125829	2.811	ng	87
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.69	128	46657	0.533	ng	89
96) n-Dodecane	22.66	57	285525	6.547	ng	75
97) Hexachloro-1,3-butadiene	23.11	225	34562	3.280	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
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 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(3) Dichlorodifluoromethane (T)

4.482min (-0.059) 0.87ng

response 23953

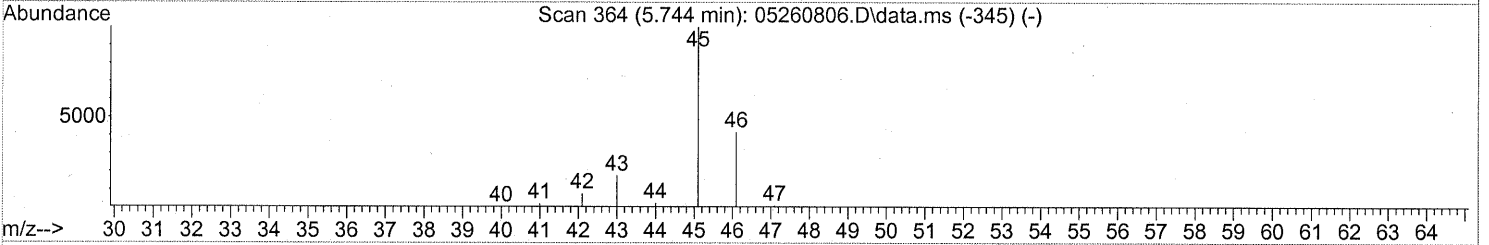
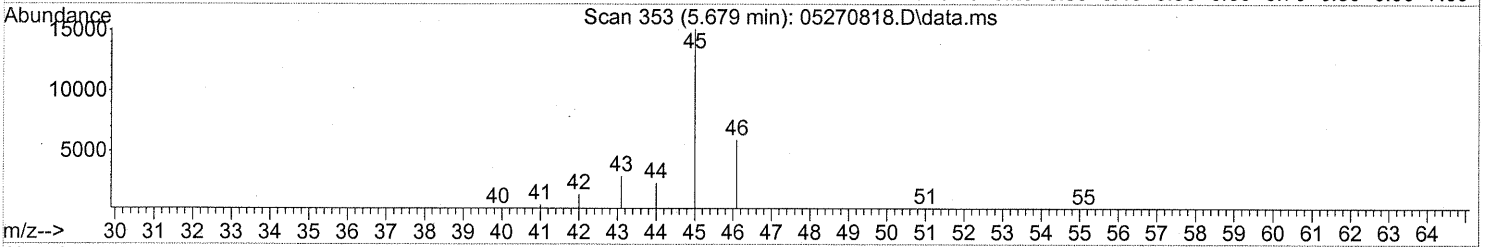
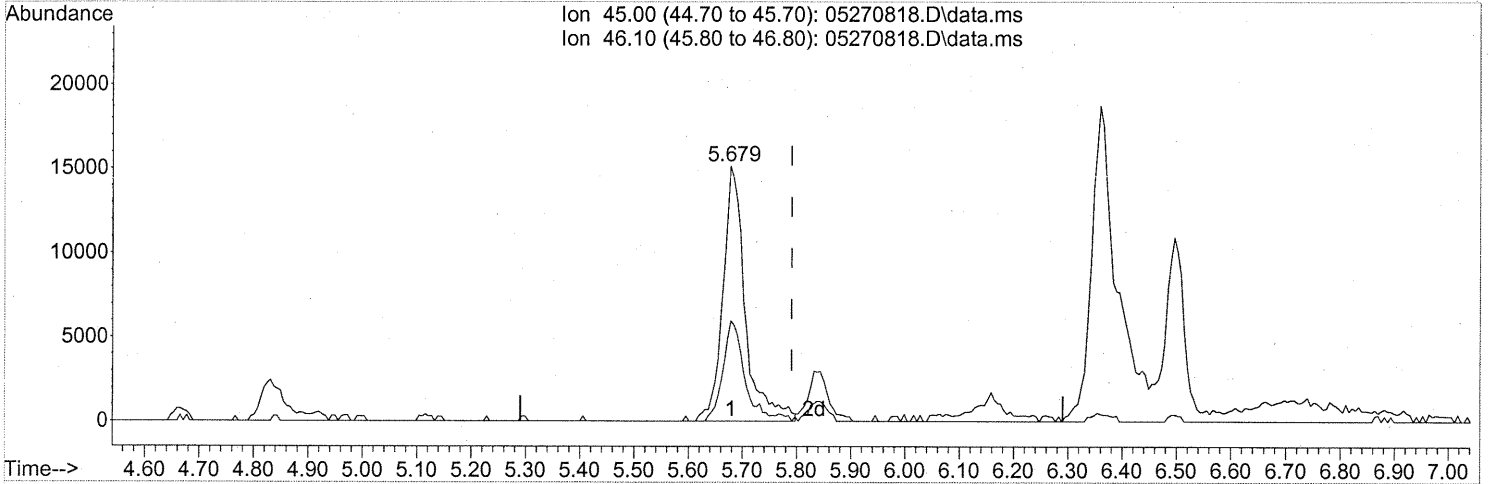
Ion	Exp%	Act%
84.90	100	100
86.90	31.50	33.70
100.90	8.40	9.76
102.90	5.50	5.22



Quantitation Report (Qedit)

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TIC: 05270818.D\data.ms

(10) Ethanol (T)

5.679min (-0.112) 2.83ng

response 43460

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.56
0.00	0.00	0.00
0.00	0.00	0.00

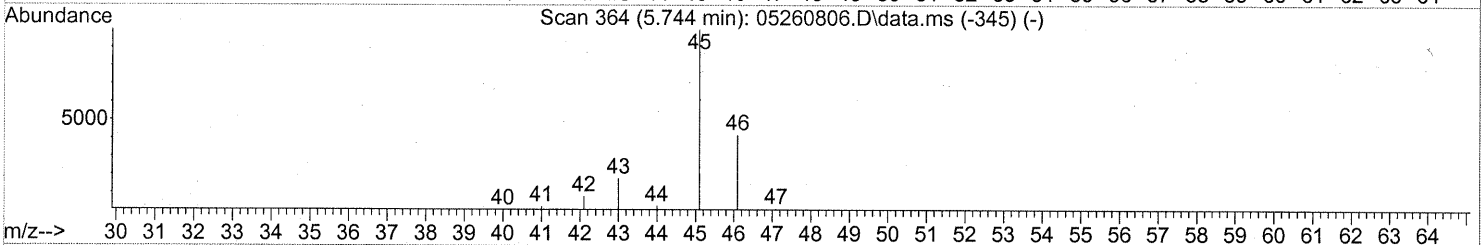
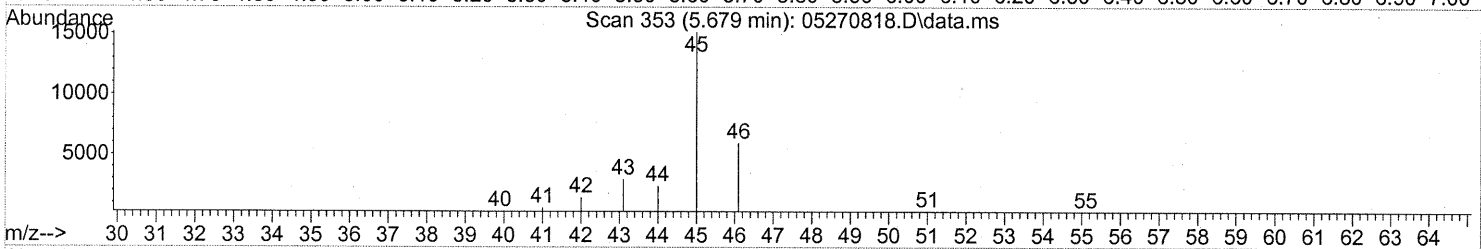
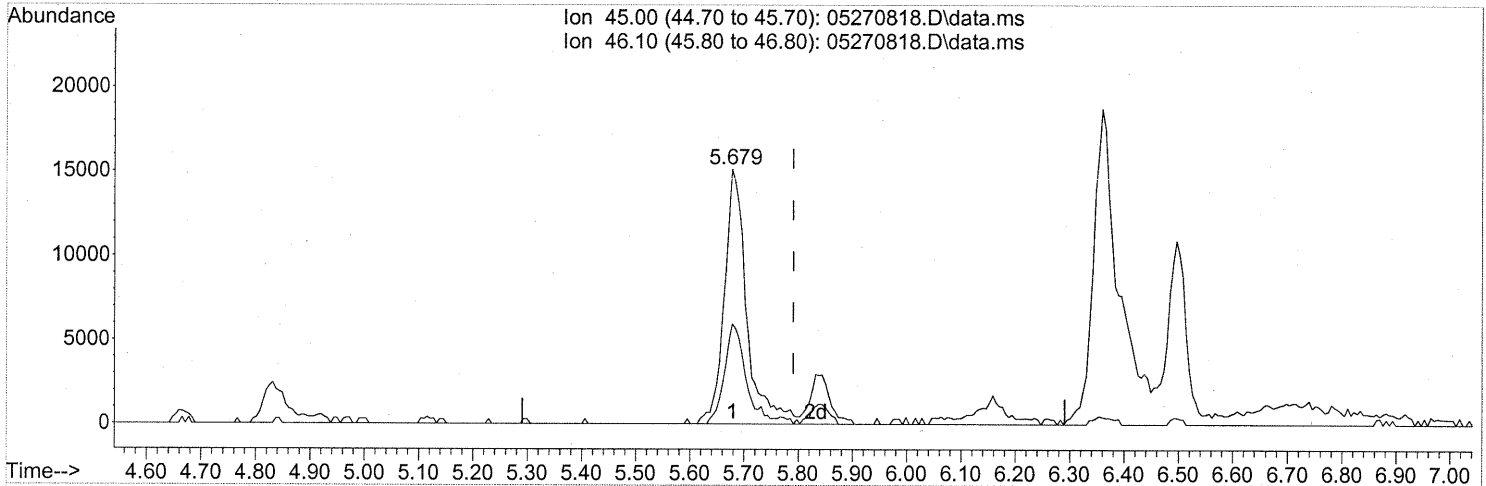
*tailing*

475

Quantitation Report (Qedit)

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TIC: 05270818.D\data.ms

(10) Ethanol (T)

5.679min (-0.112) 3.33ng m

response 51104

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	32.80
0.00	0.00	0.00
0.00	0.00	0.00

*incl. tailing*

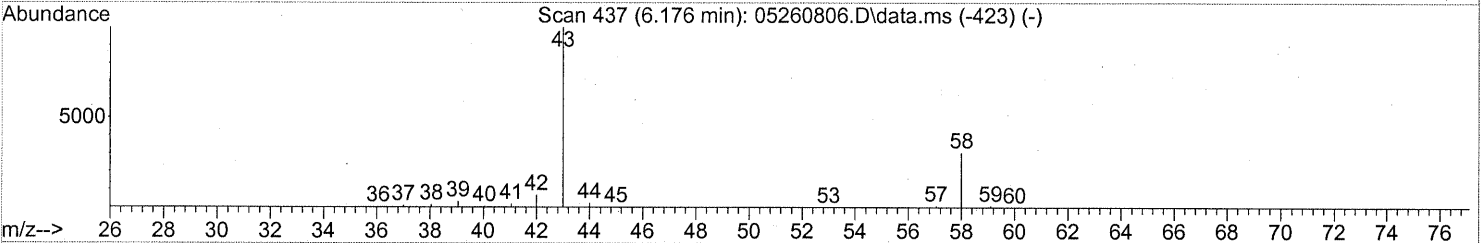
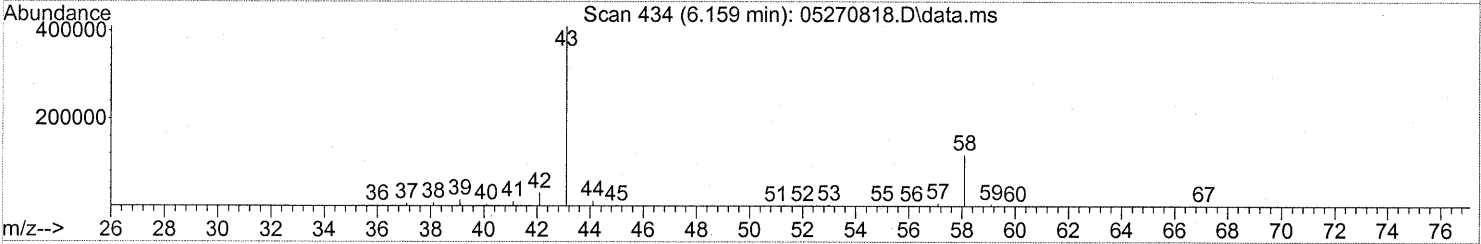
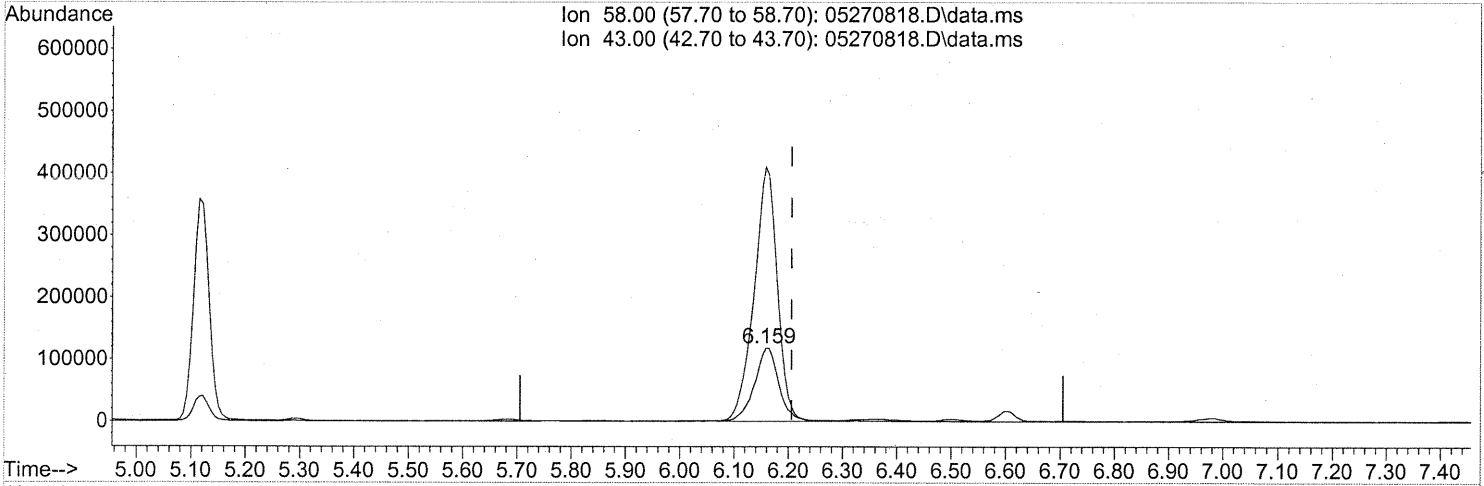
*DA 6/4/08*

*6/4/08*

Quantitation Report (Qedit)

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 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(13) Acetone (T)

6.159min (-0.047) 24.07ng

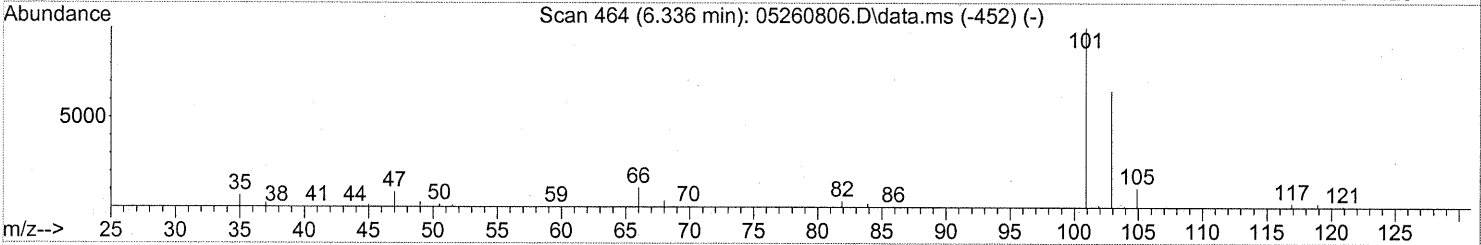
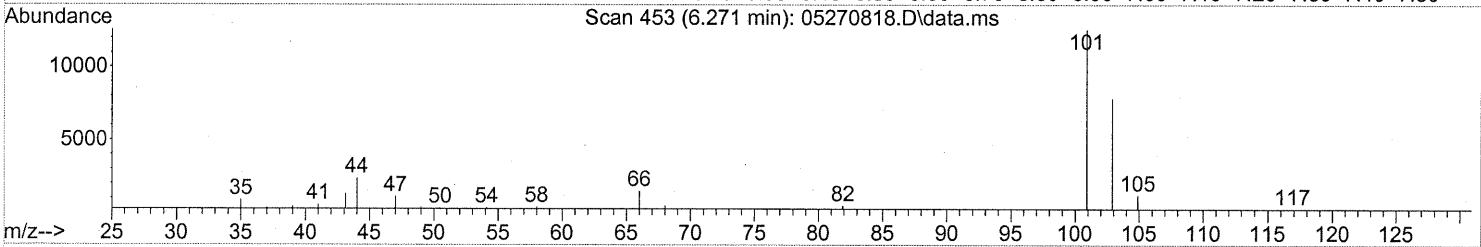
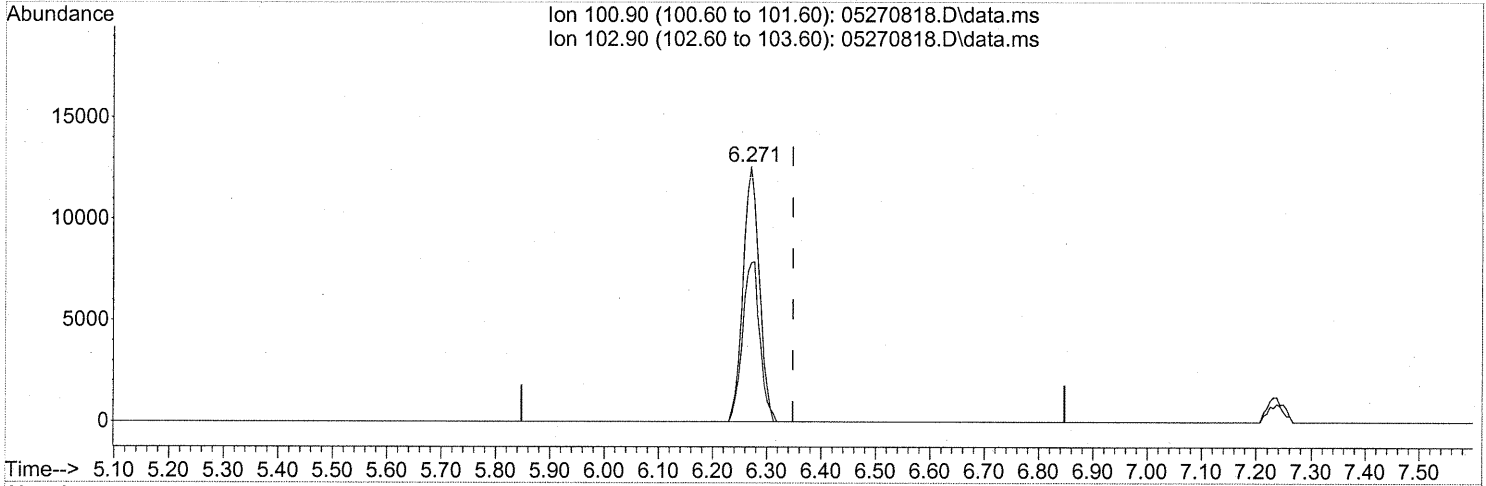
response 367772

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	331.24#
0.00	0.00	0.00
0.00	0.00	0.00

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 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(14) Trichlorofluoromethane (T)

6.271min (-0.077) 1.02ng

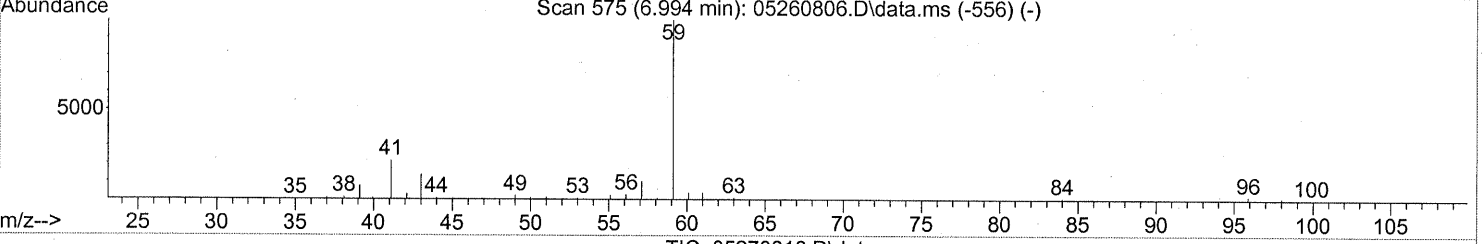
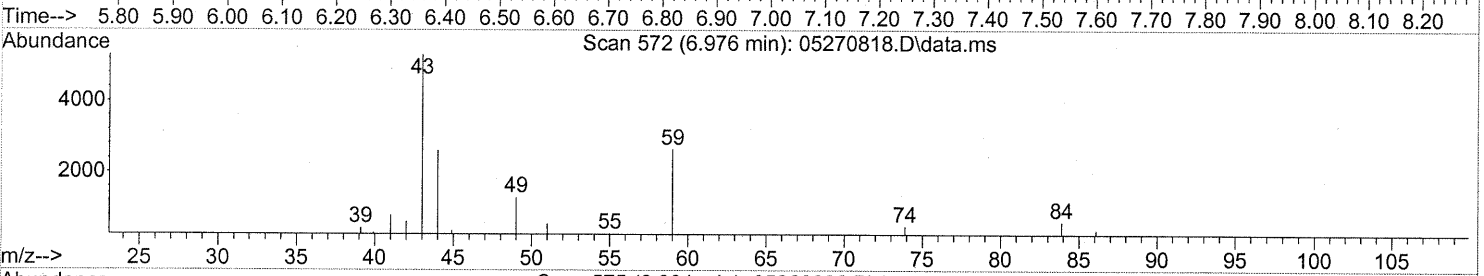
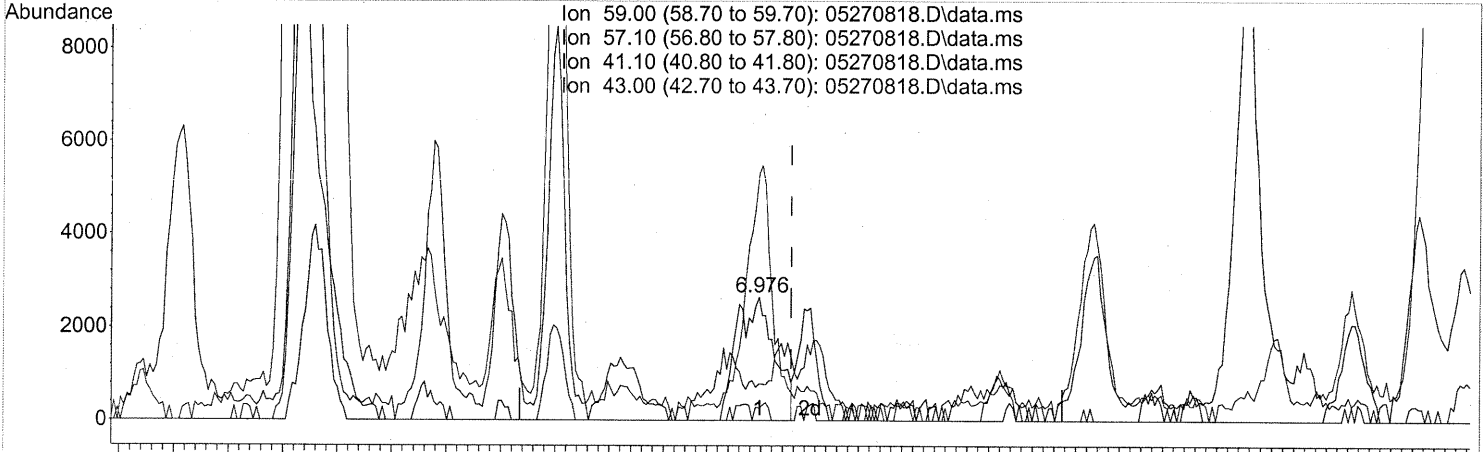
response 26193

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	65.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.976min (-0.059) 0.30ng

response 12869

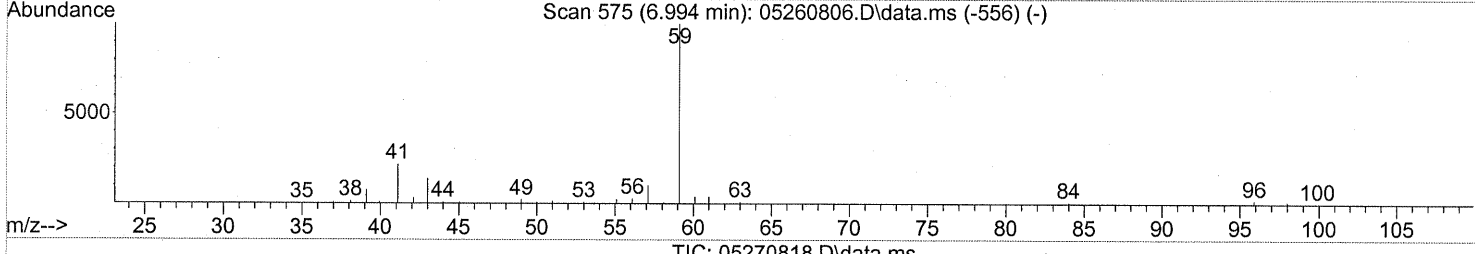
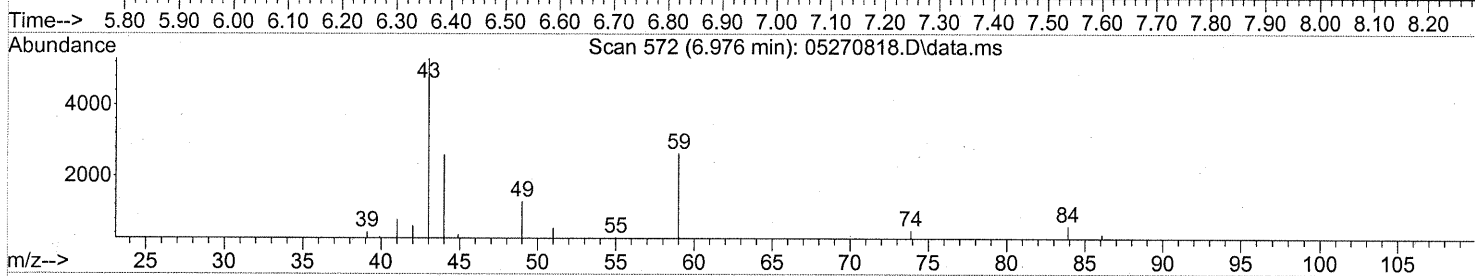
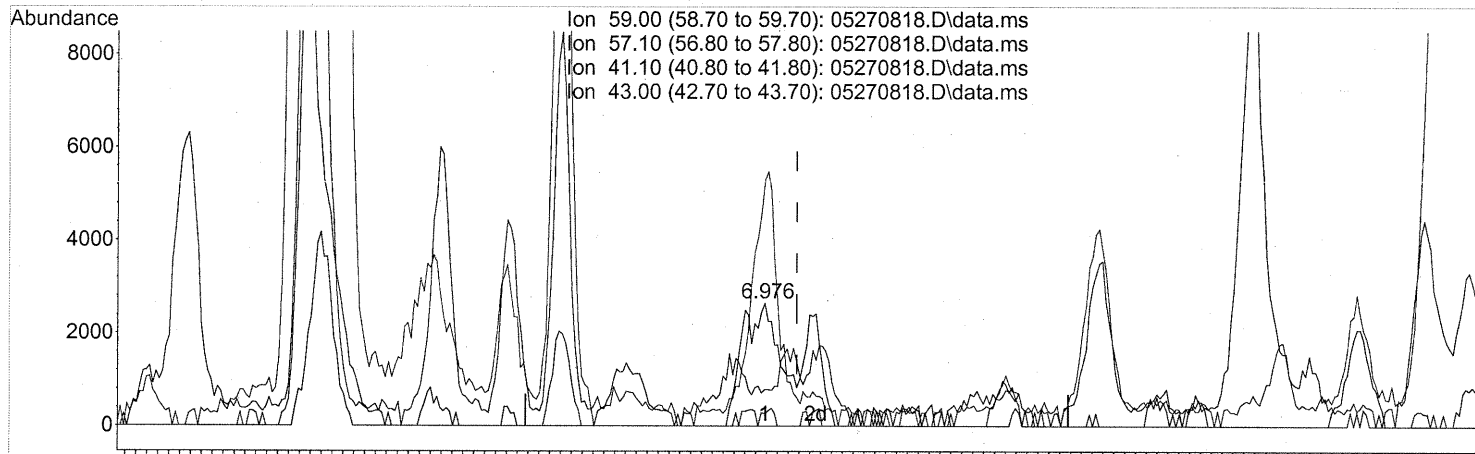
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	4.18
41.10	21.90	0.00#
43.00	17.20	127.75#

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.976min (-0.059) 0.43ng m

response 18505

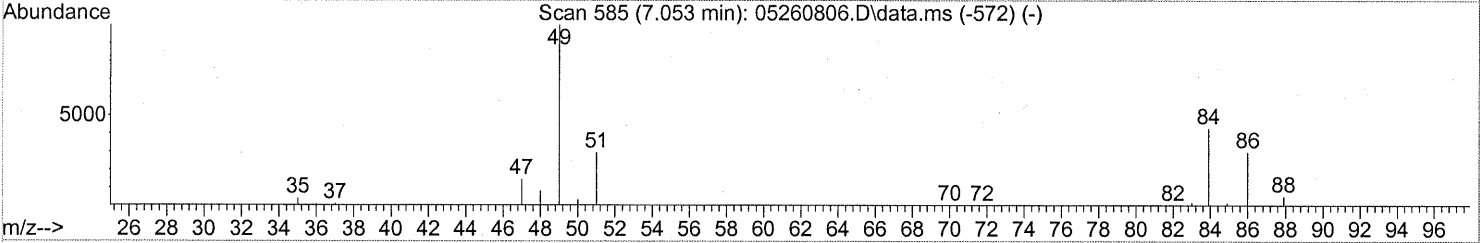
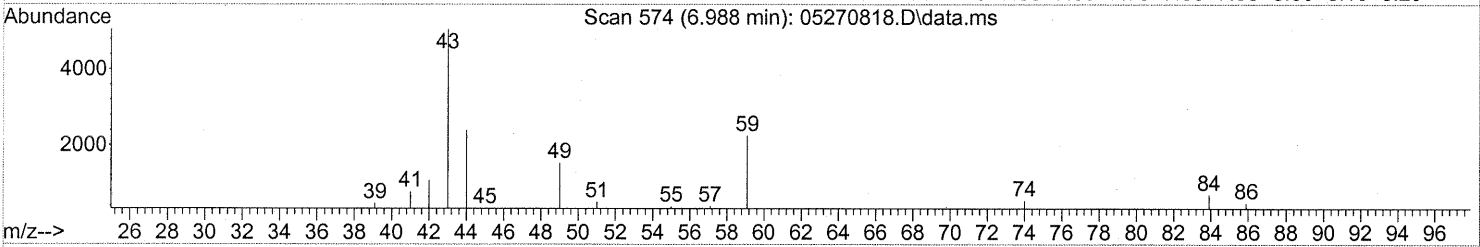
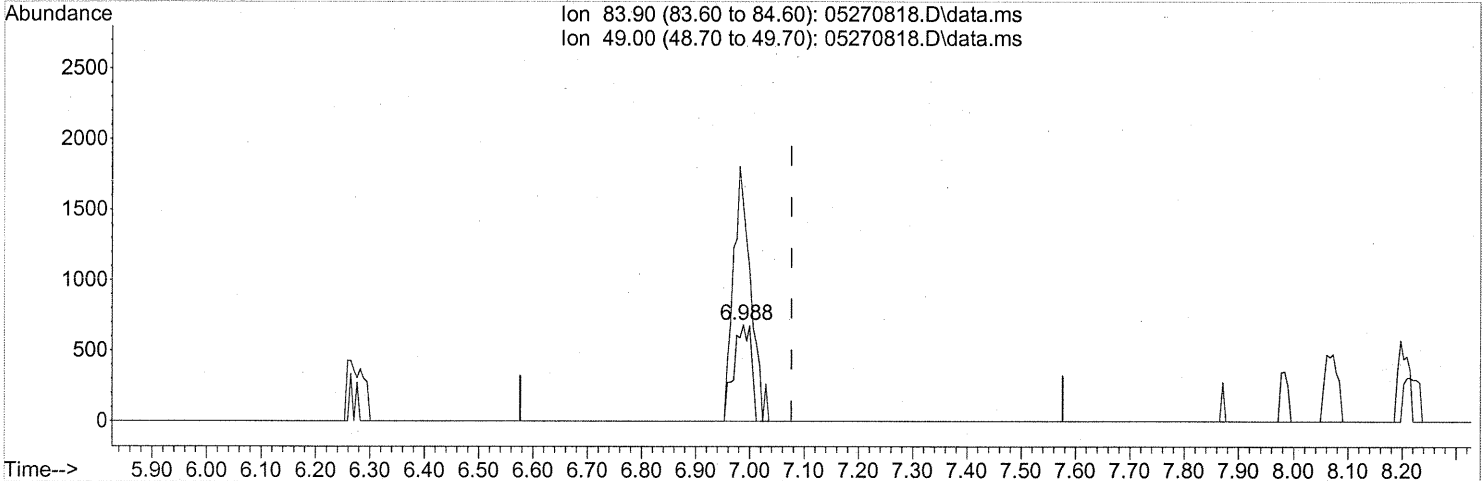
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	2.91
41.10	21.90	0.00#
43.00	17.20	88.84#

*int. whole peaks*  
*DA 6/4/08*  
*6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(19) Methylene Chloride (T)

6.988min (-0.089) 0.13ng

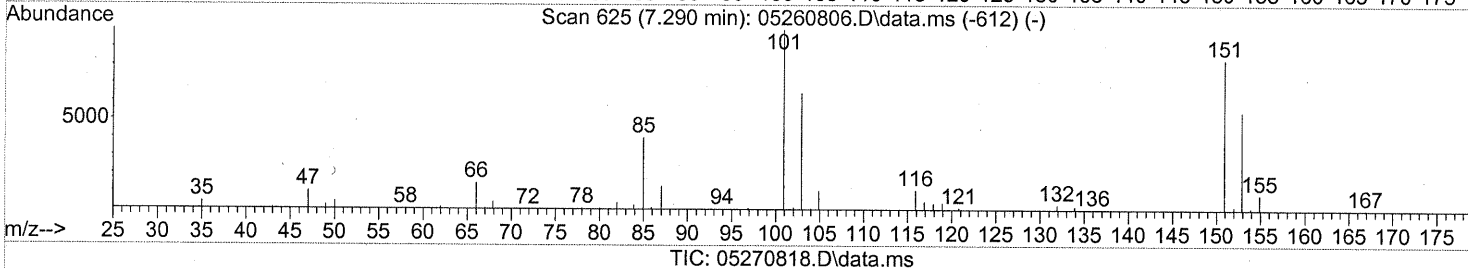
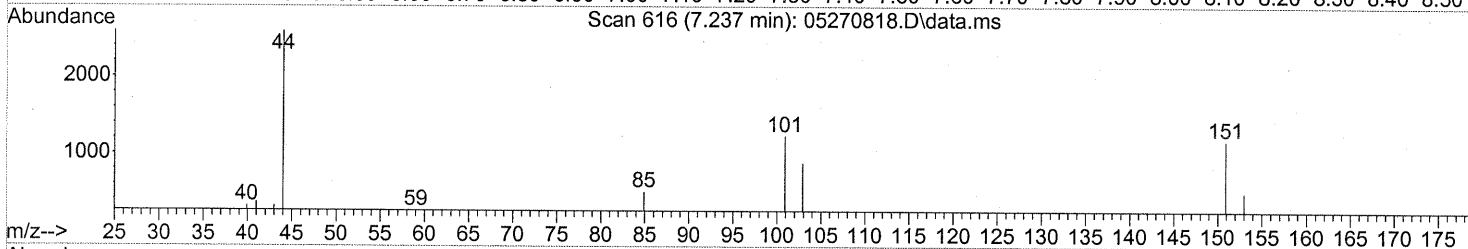
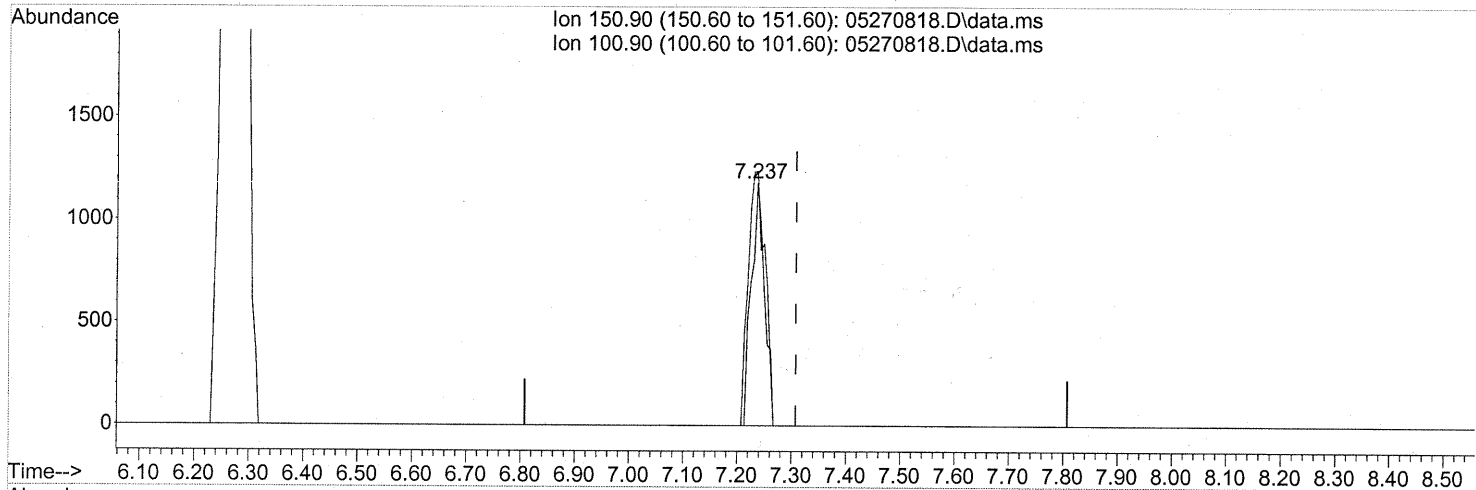
response 1517

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	262.23#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

7.237min (-0.071) 0.16ng

response 1984

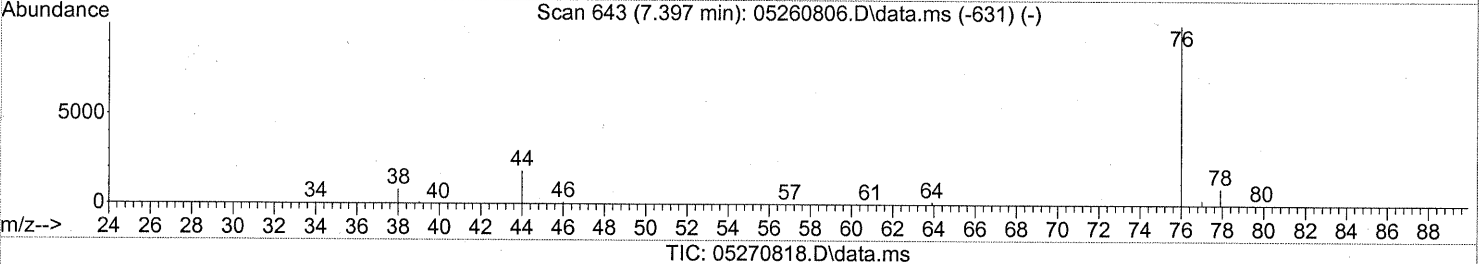
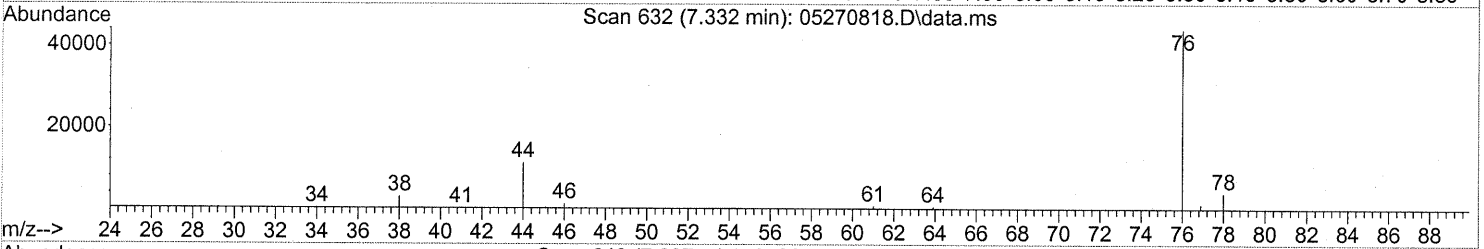
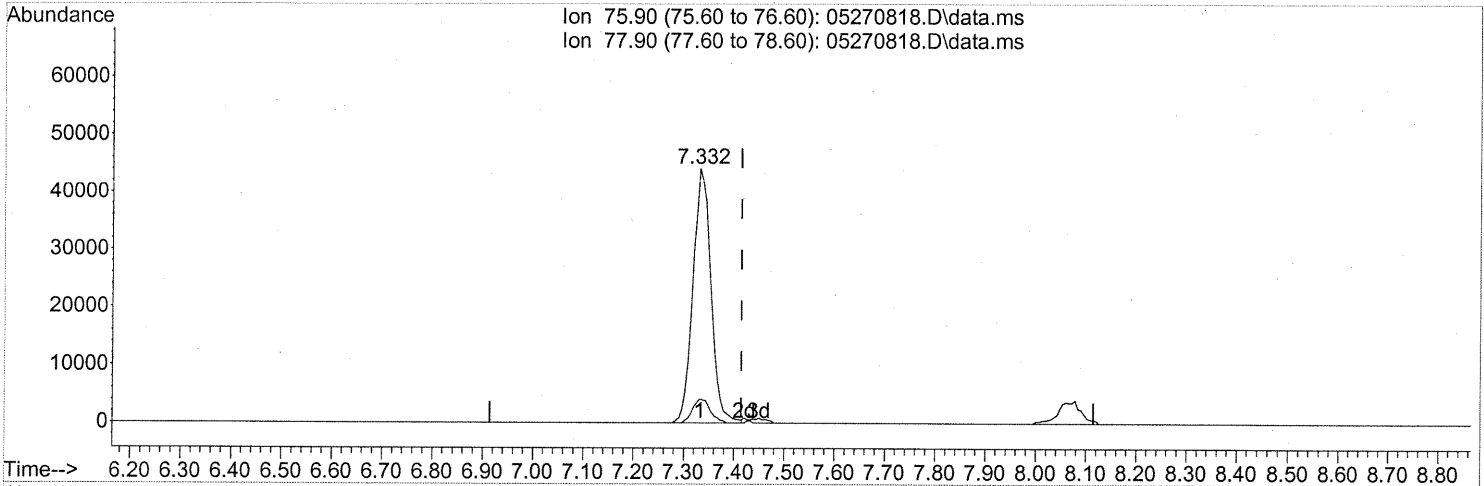
Ion	Exp%	Act%
150.90	100	100
100.90	136.10	132.11
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270818.D  
Acq On : 27 May 2008 23:35  
Operator : WA  
Sample : P0801507-013 (500ml)  
Misc : ENSR SG15B-05 (-3.5, 3.5)  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(22) Carbon Disulfide (T)

7.332min (-0.083) 2.32ng

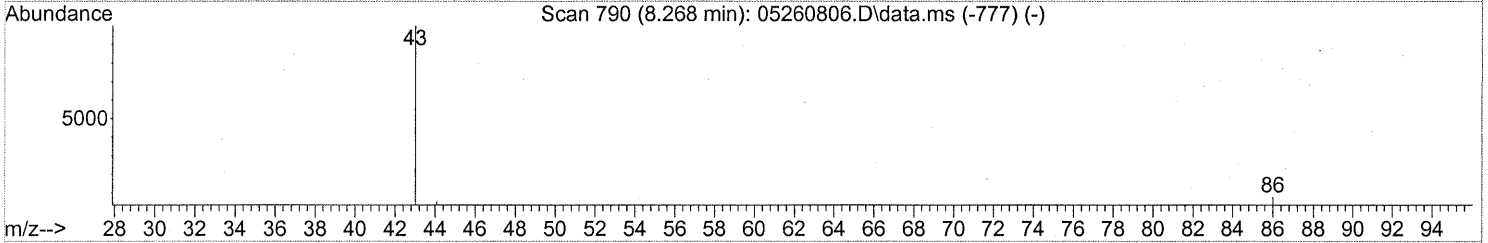
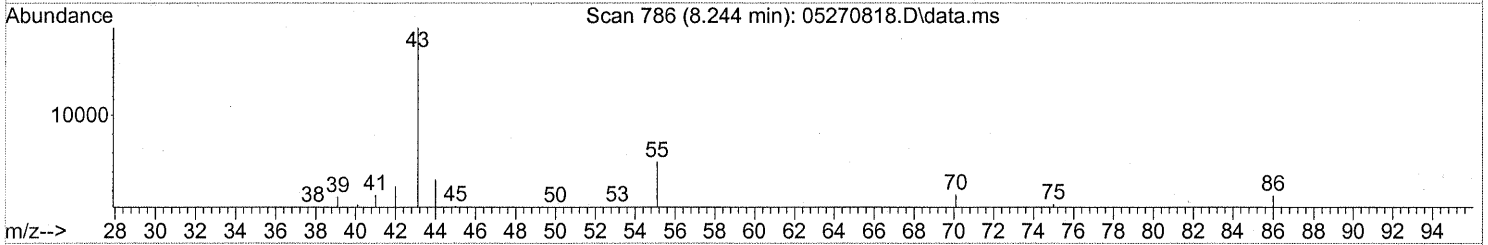
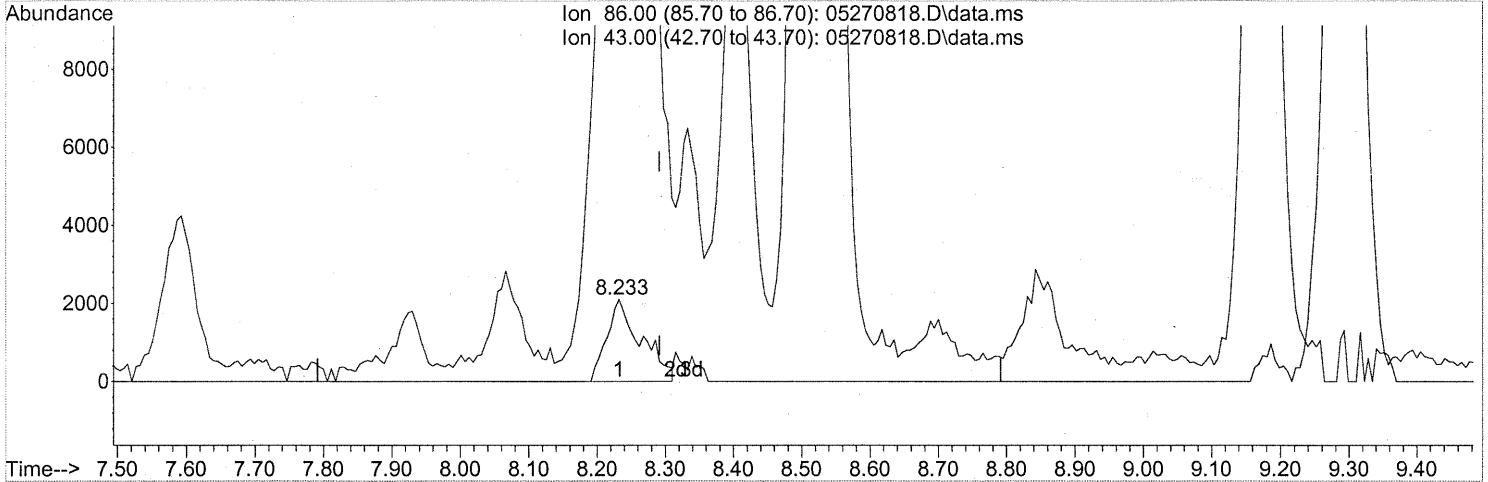
response 109842

Ion	Exp%	Act%
75.90	100	100
77.90	9.10	9.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)  
 8.233min (-0.059) 2.91ng  
 response 7284

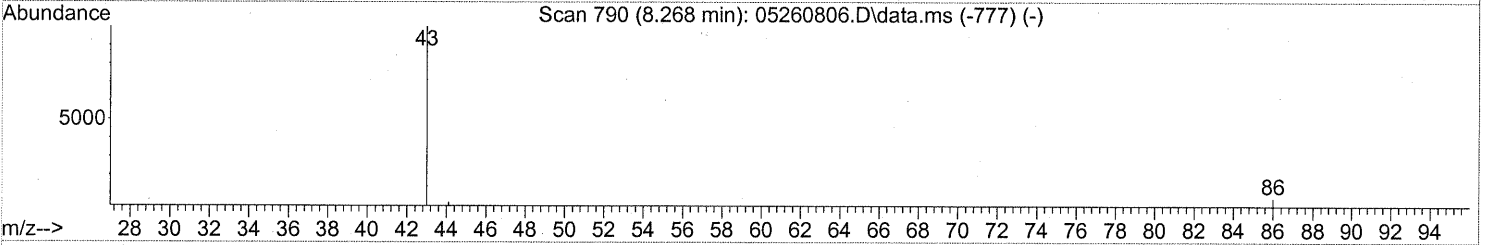
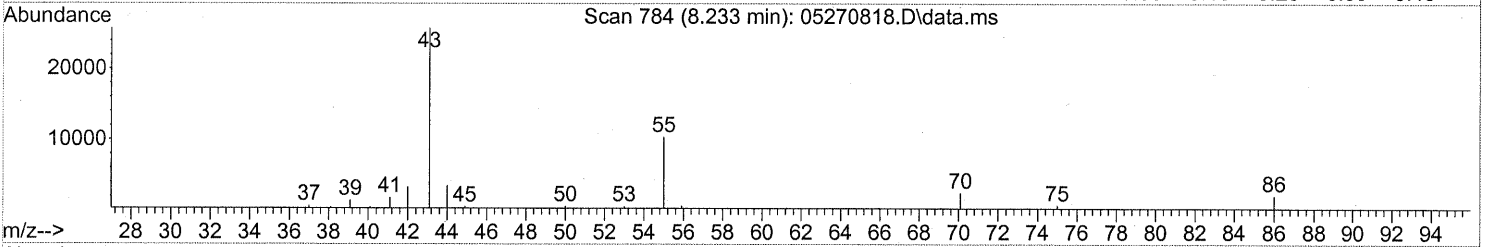
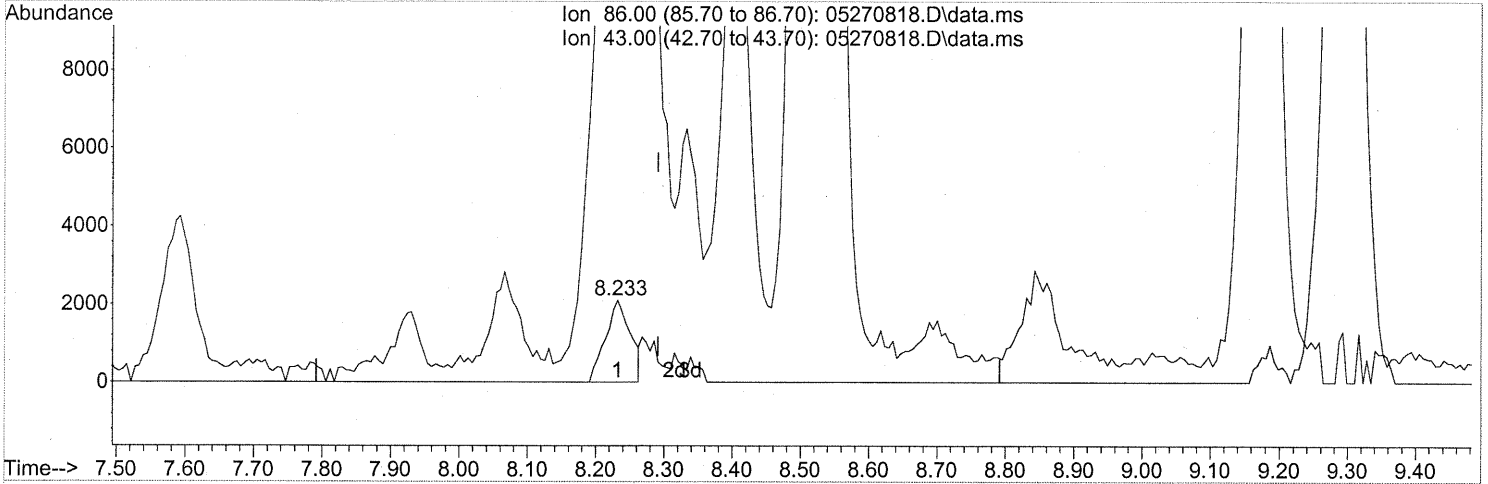
Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	1561.42#
0.00	0.00	0.00
0.00	0.00	0.00

*fading*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270818.D  
Acq On : 27 May 2008 23:35  
Operator : WA  
Sample : P0801507-013 (500ml)  
Misc : ENSR SG15B-05 (-3.5, 3.5)  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(26) Vinyl Acetate (T)  
8.233min (-0.059) 2.11ng m

response 5274

Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	2156.50#
0.00	0.00	0.00
0.00	0.00	0.00

*No. tailing*

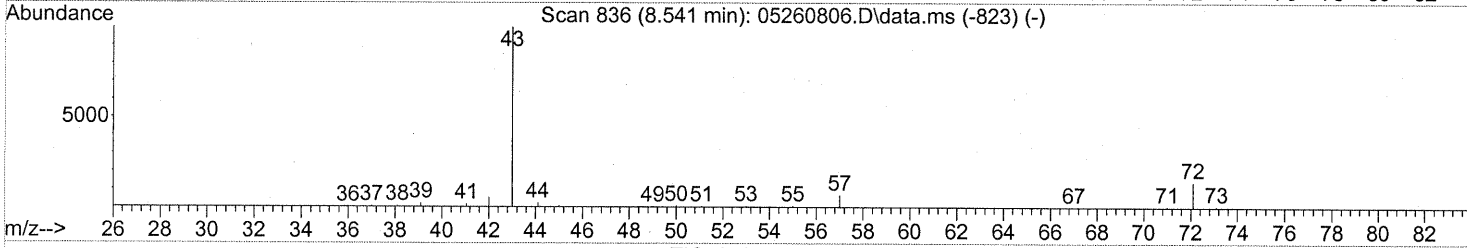
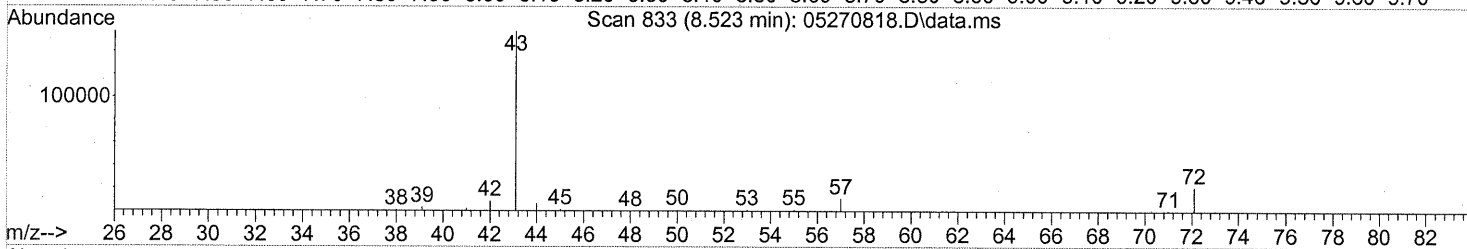
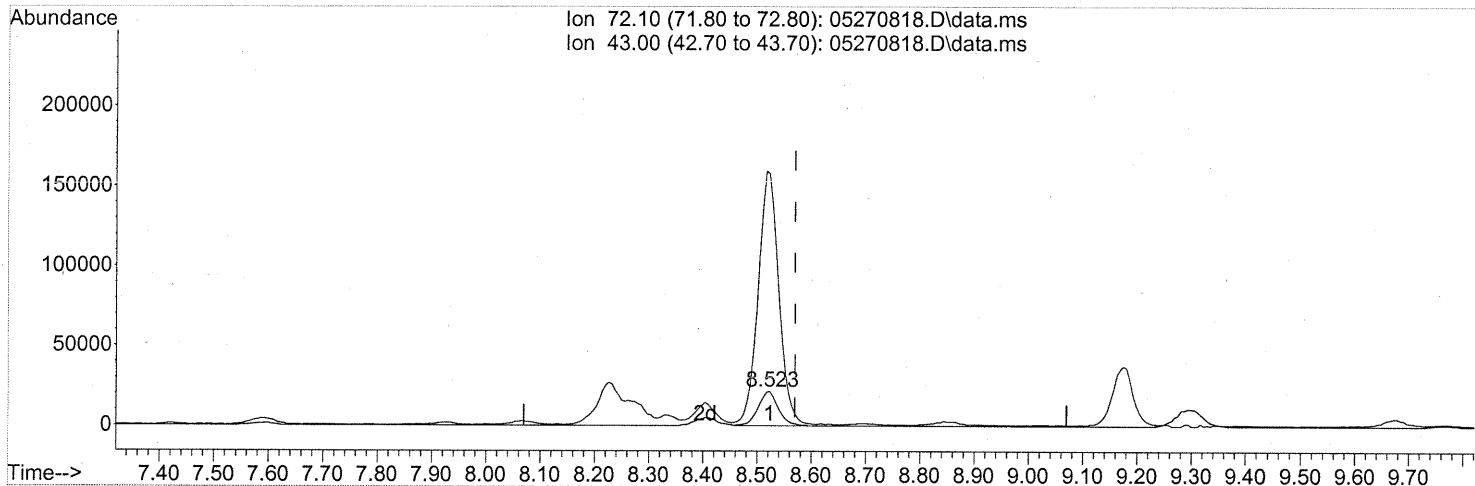
*WA 6/4/08*

*C-6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.523min (-0.047) 6.85ng

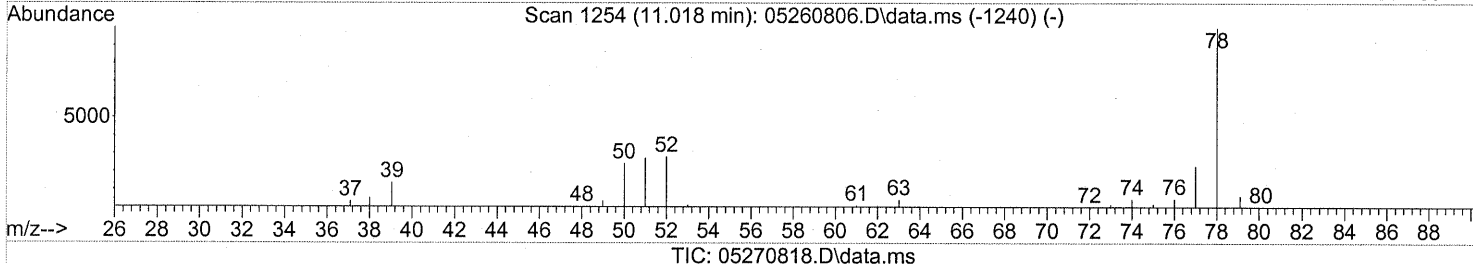
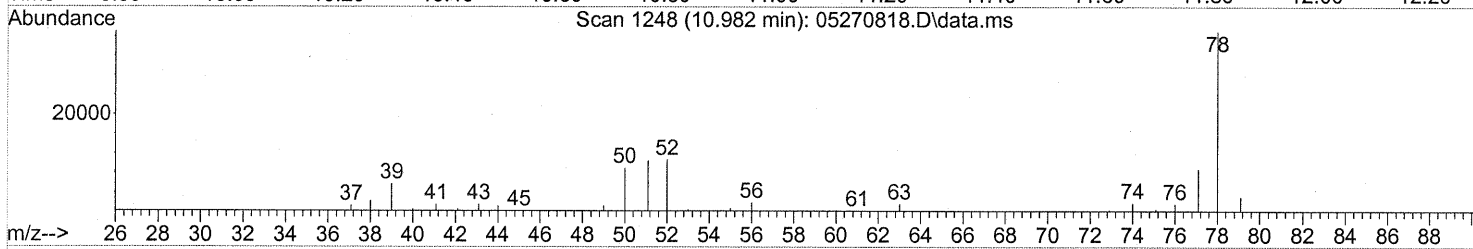
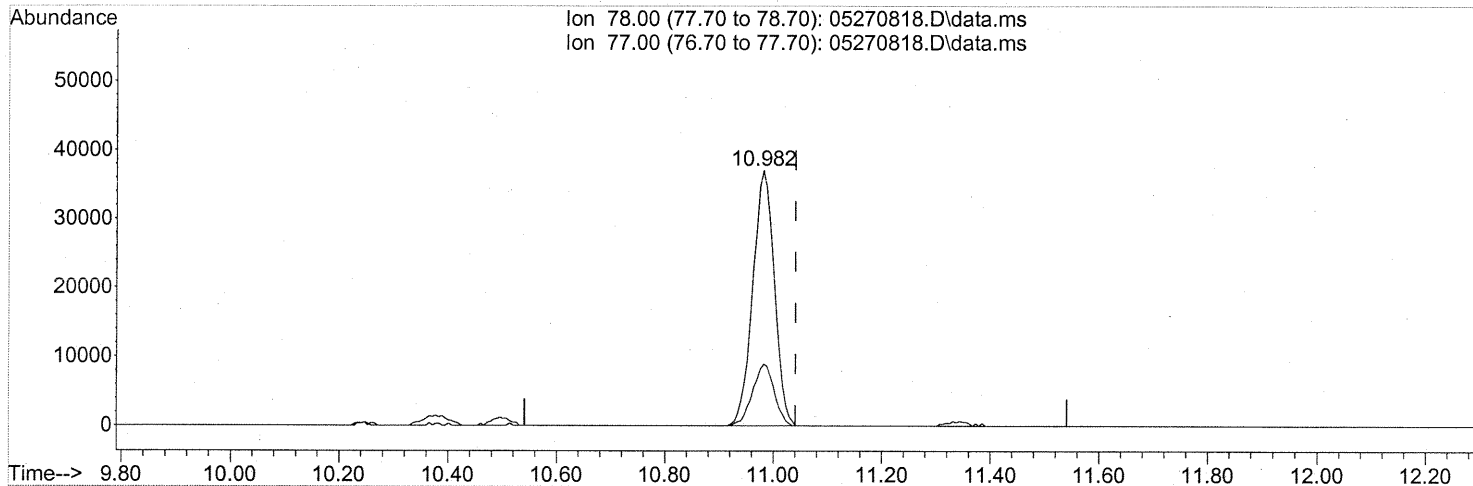
response 54748

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	767.47#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(41) Benzene (T)

10.982min (-0.059) 1.69ng

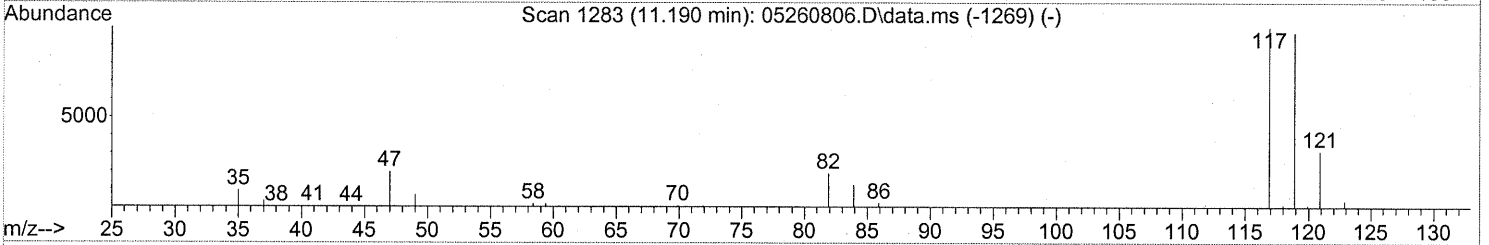
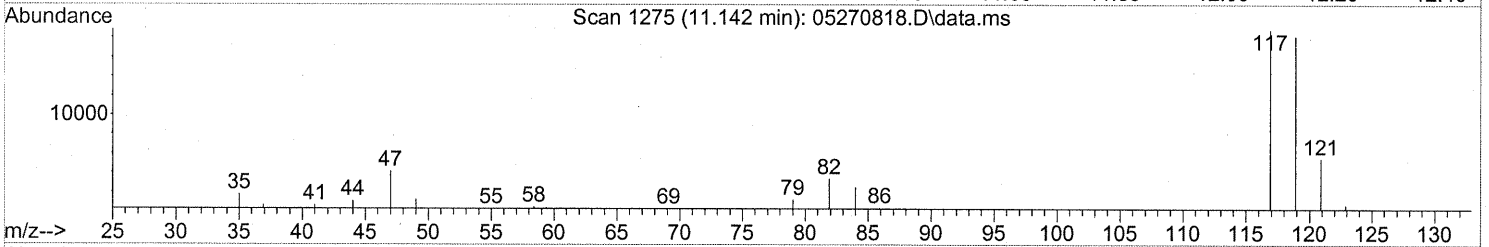
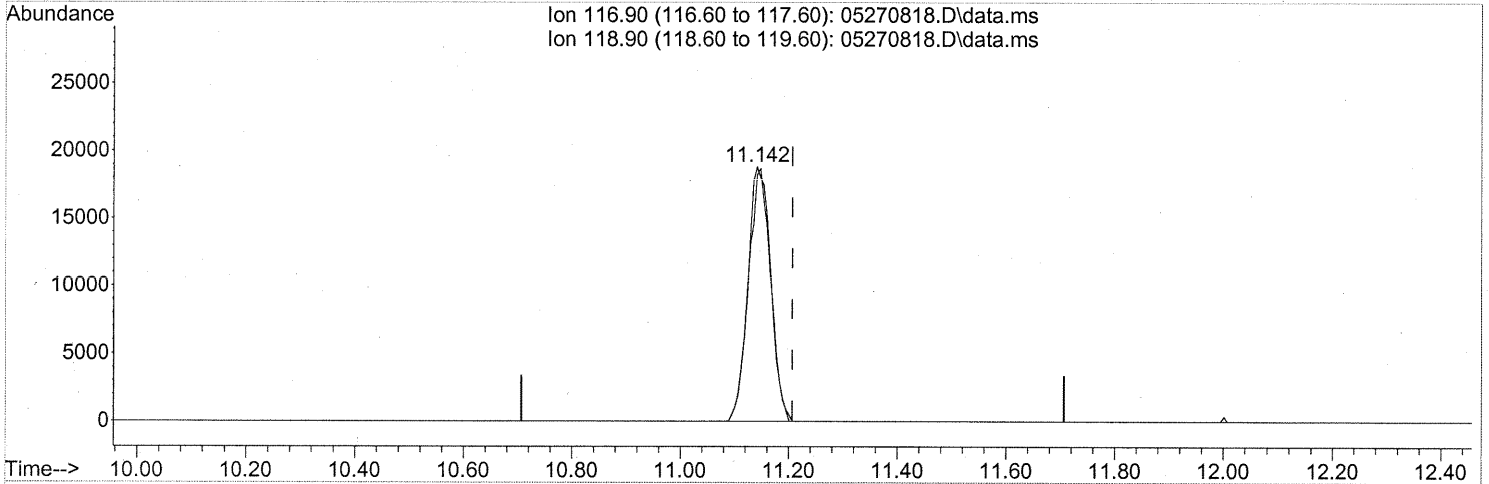
response 101306

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	24.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(42) Carbon Tetrachloride (T)

11.142min (-0.065) 2.22ng

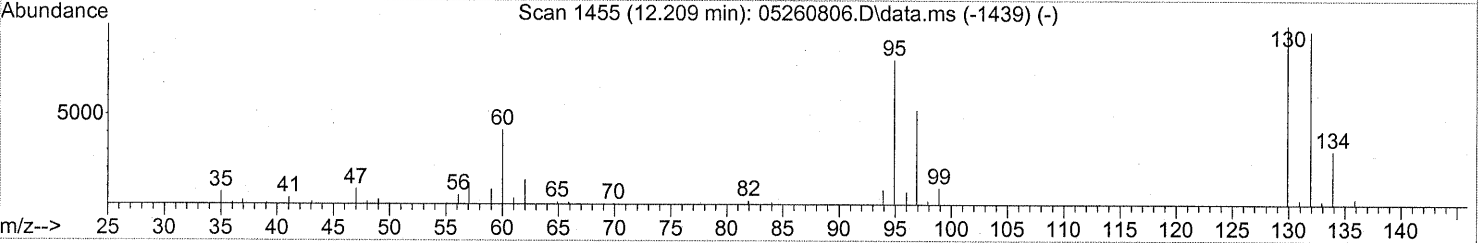
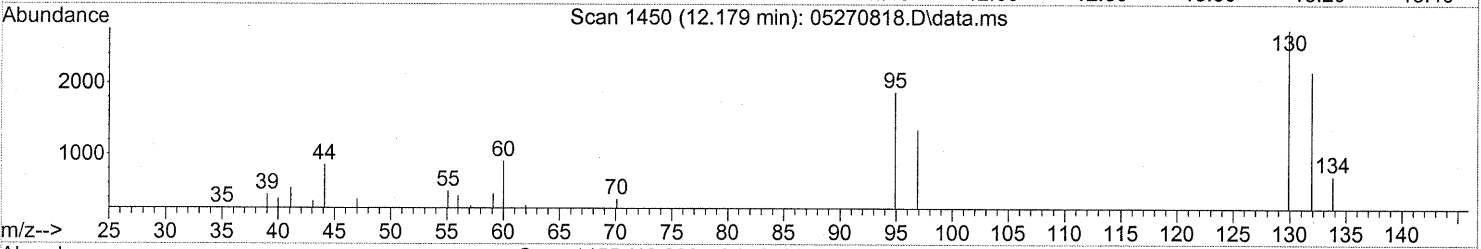
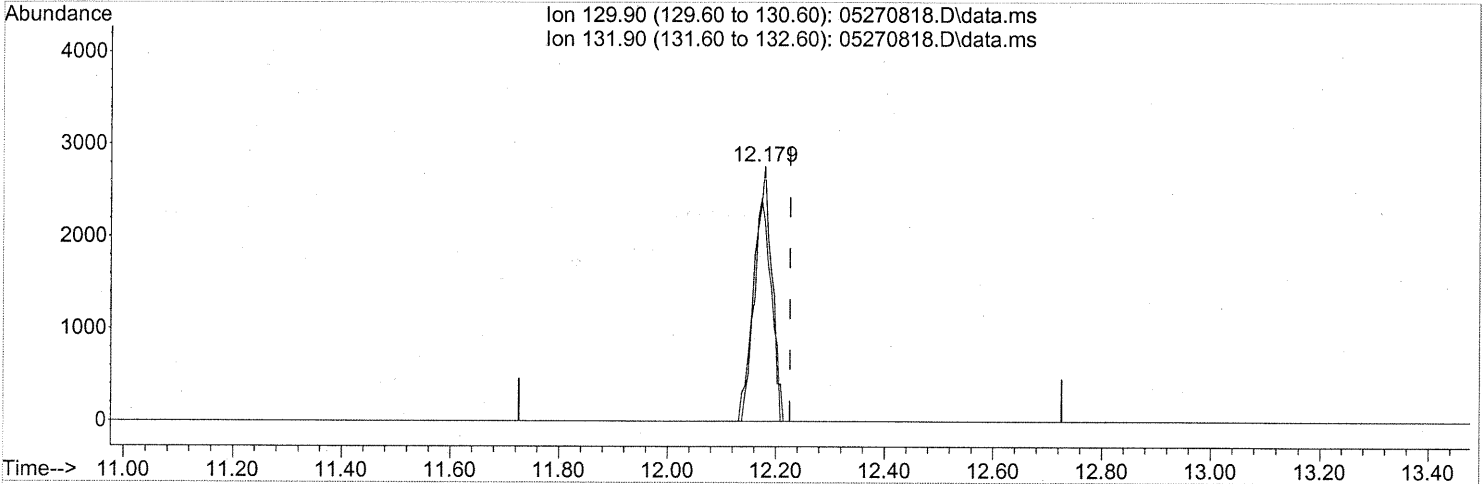
response 54530

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

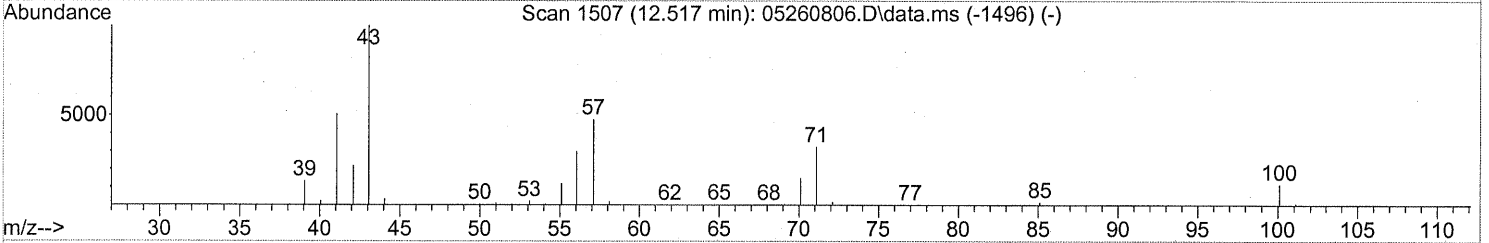
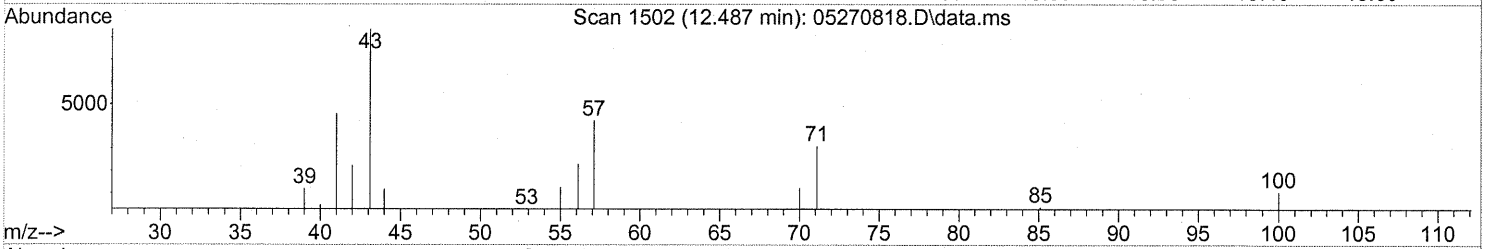
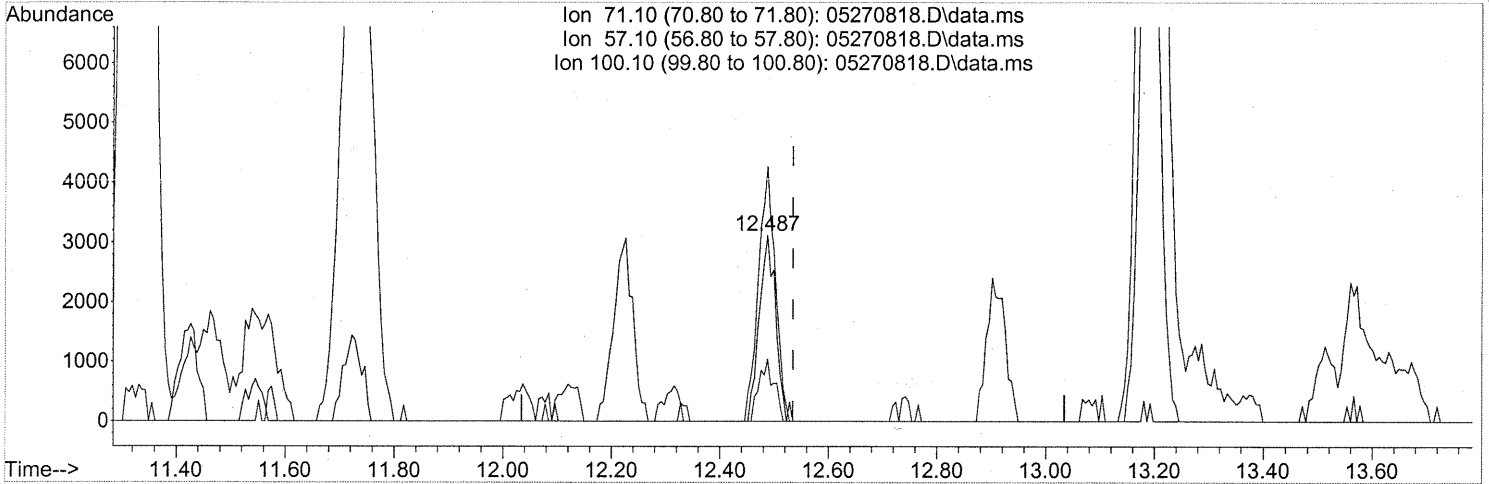
(47) Trichloroethene (T)  
 12.179min (-0.047) 0.33ng  
 response 6178

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	86.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(51) n-Heptane (T)  
 12.487min (-0.047) 0.46ng  
 response 6607

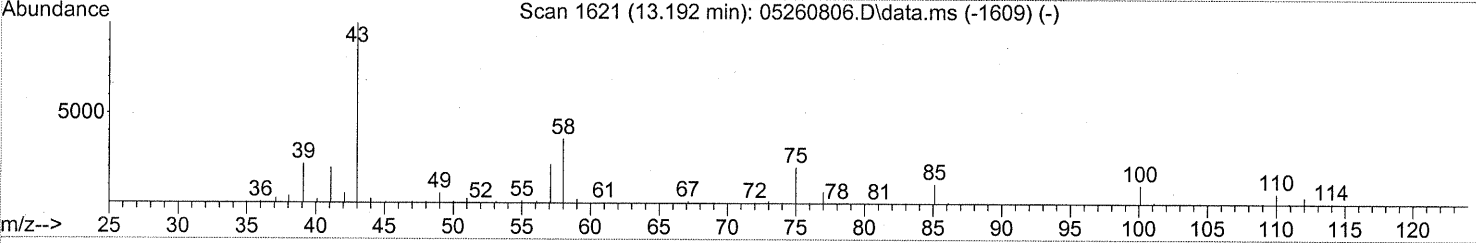
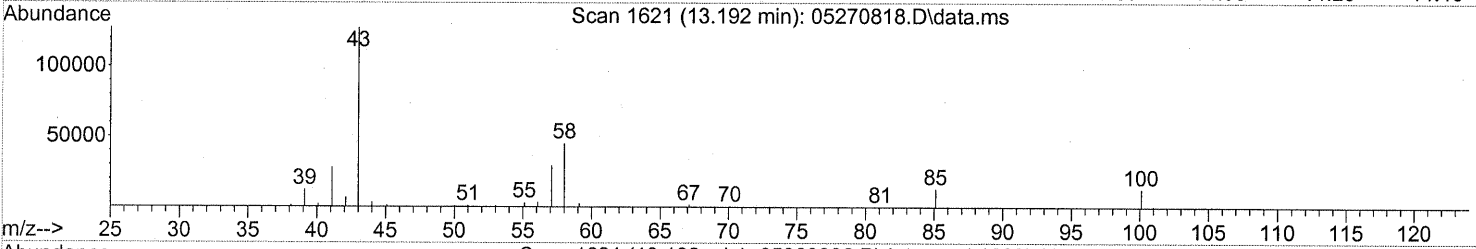
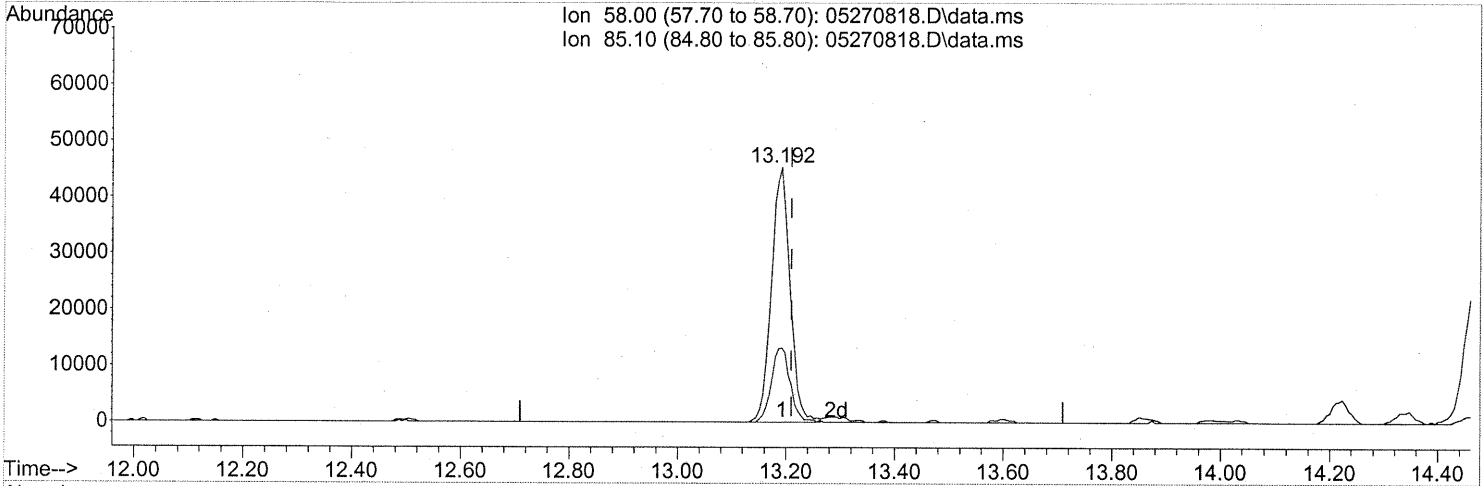
Ion	Exp%	Act%
71.10	100	100
57.10	88.70	140.64#
100.10	28.80	30.72
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(53) 4-Methyl-2-pentanone (T)

13.192min (-0.018) 5.22ng

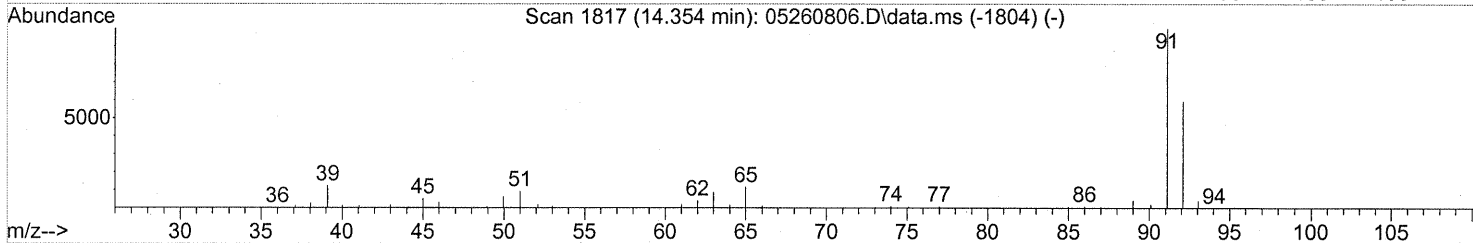
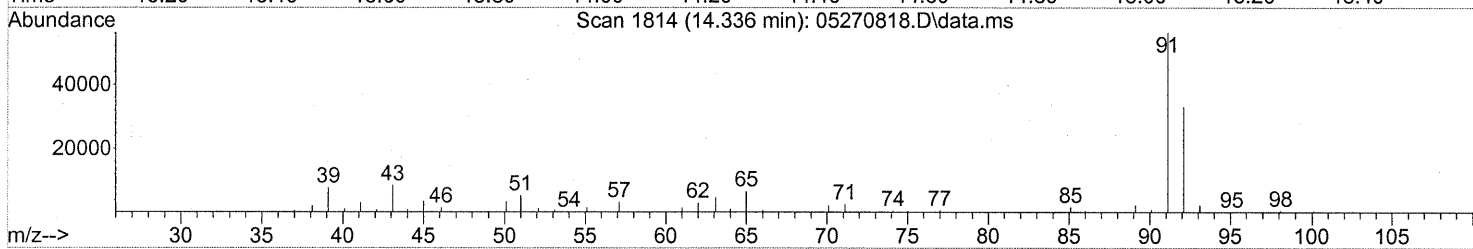
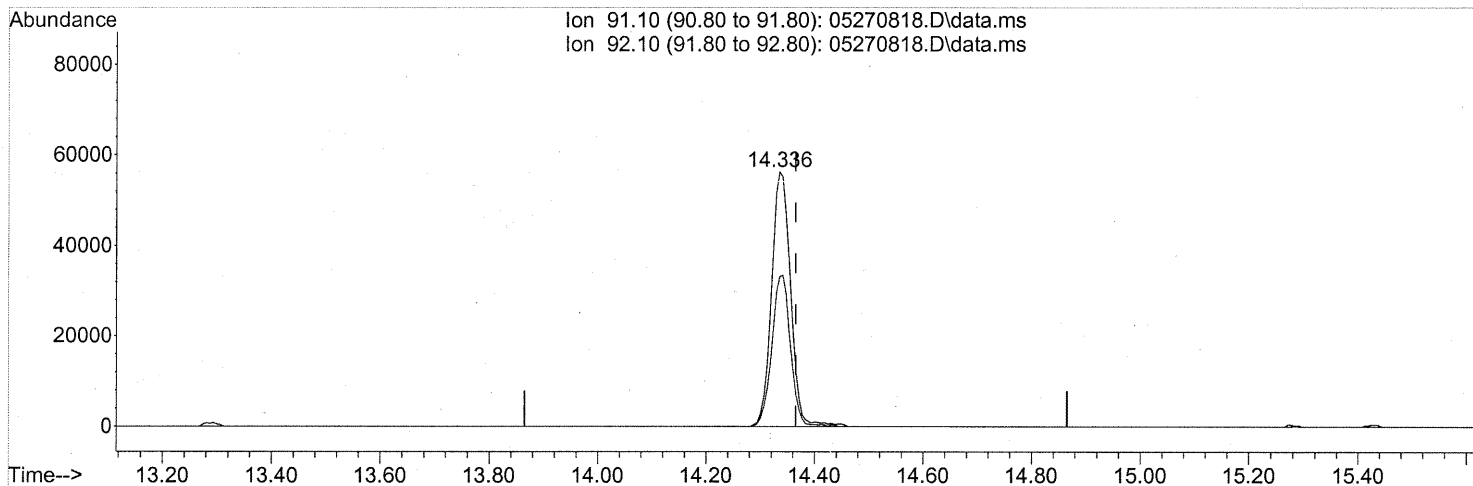
response 108714

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	29.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(58) Toluene (T)

14.336min (-0.030) 2.39ng

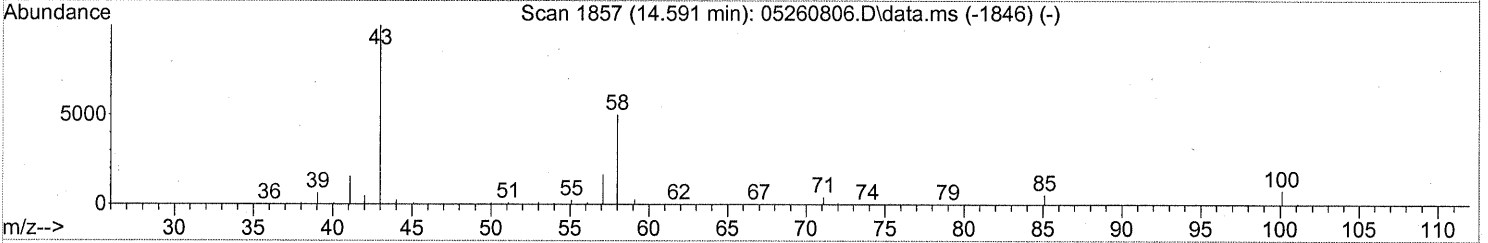
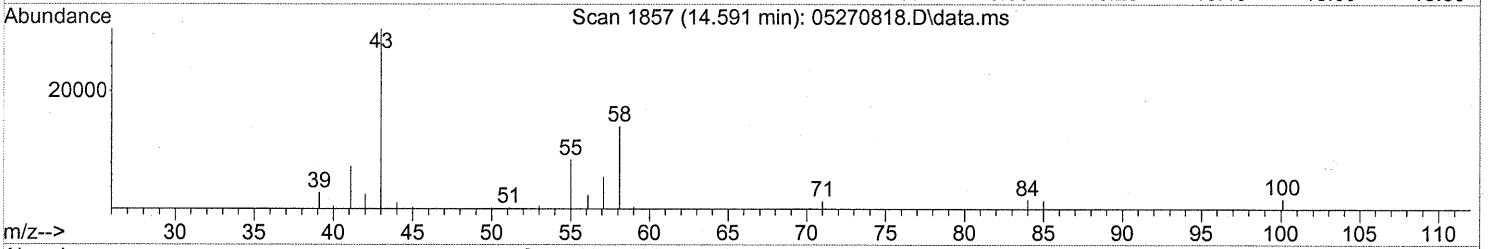
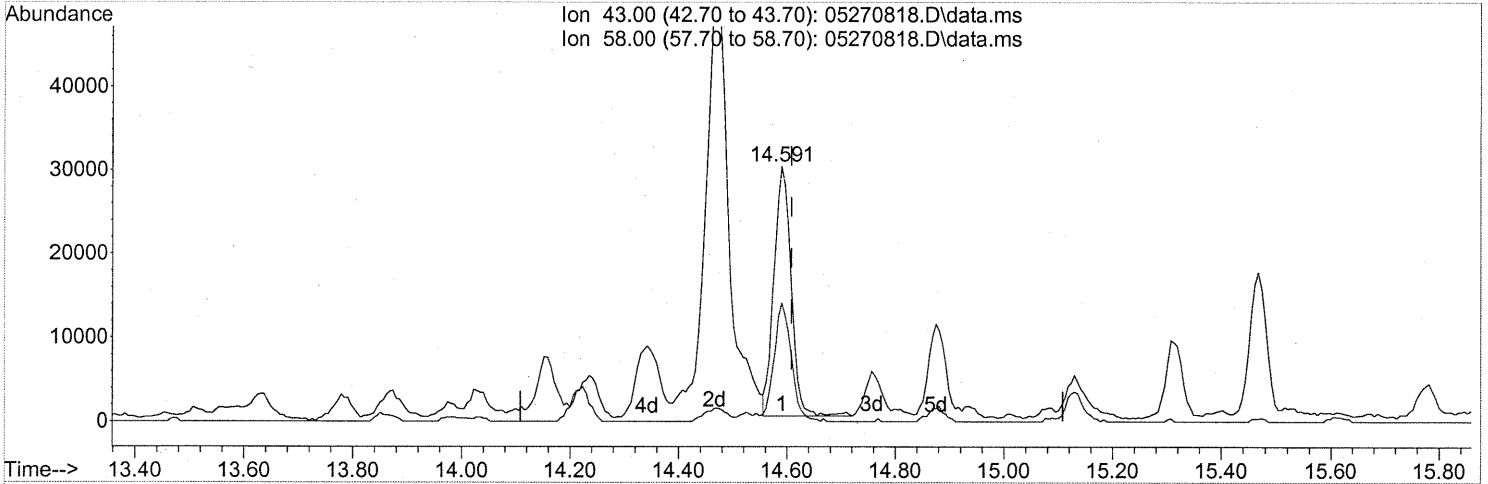
response 138035

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	57.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

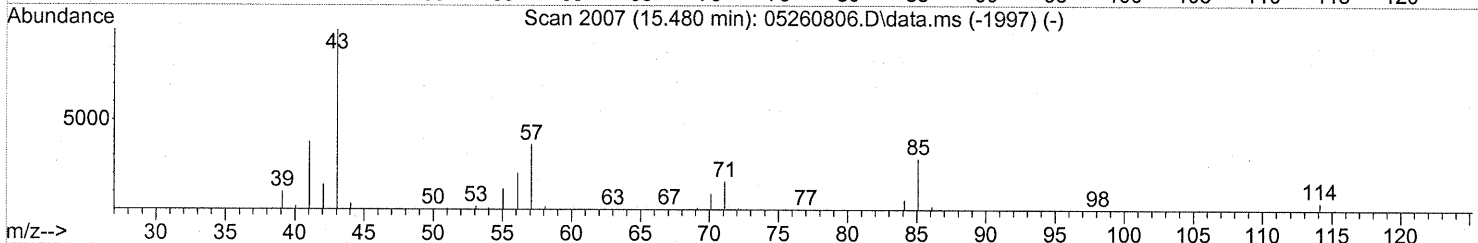
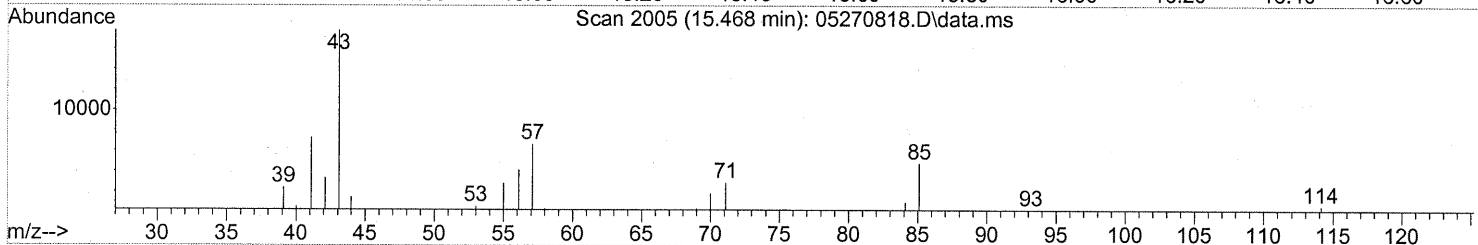
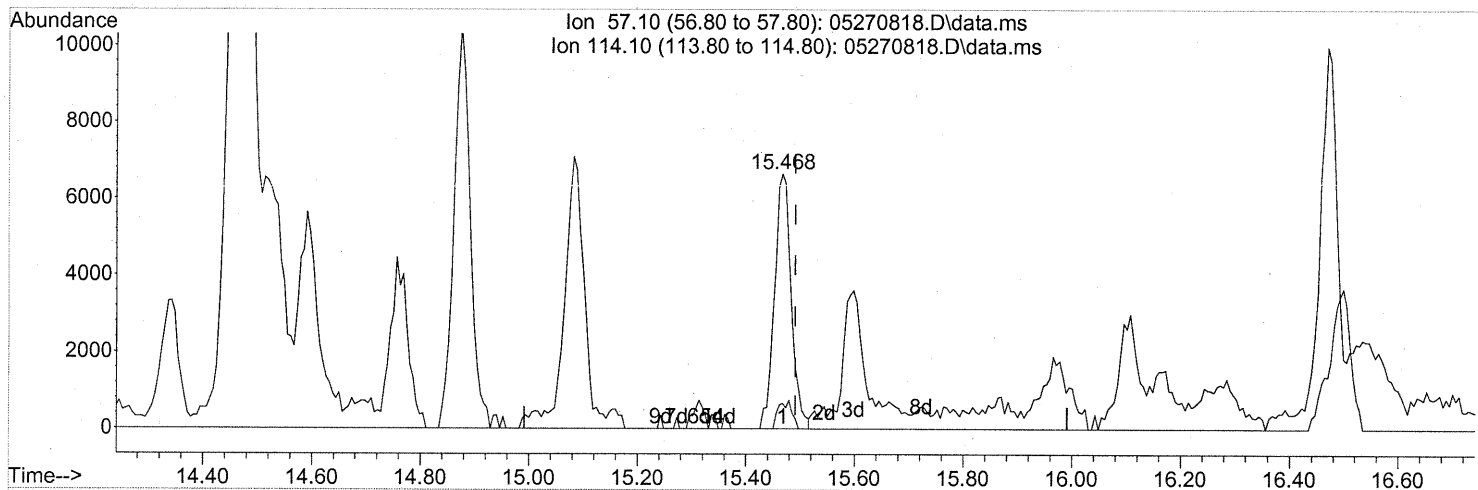
(59) 2-Hexanone (T)  
 14.591min (-0.018) 1.21ng  
 response 66050

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	47.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

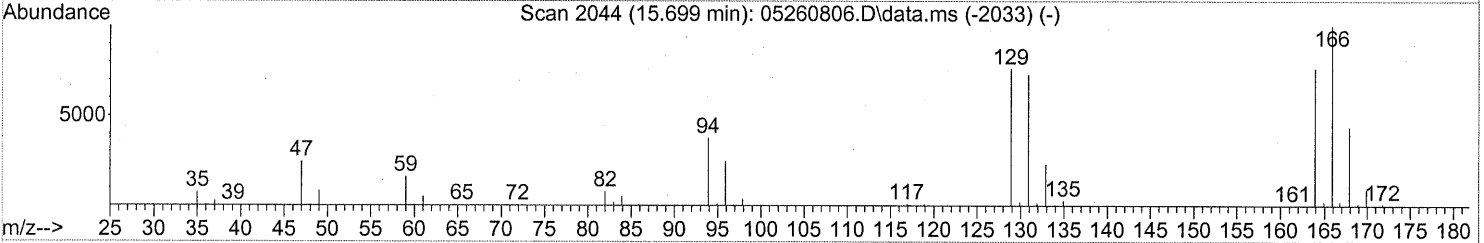
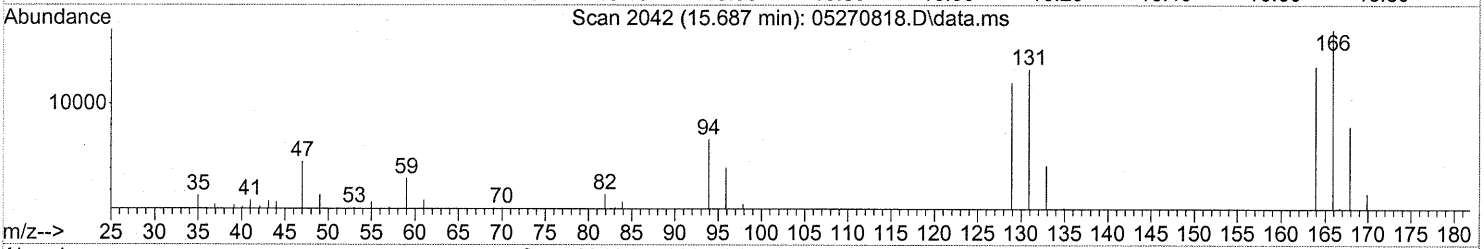
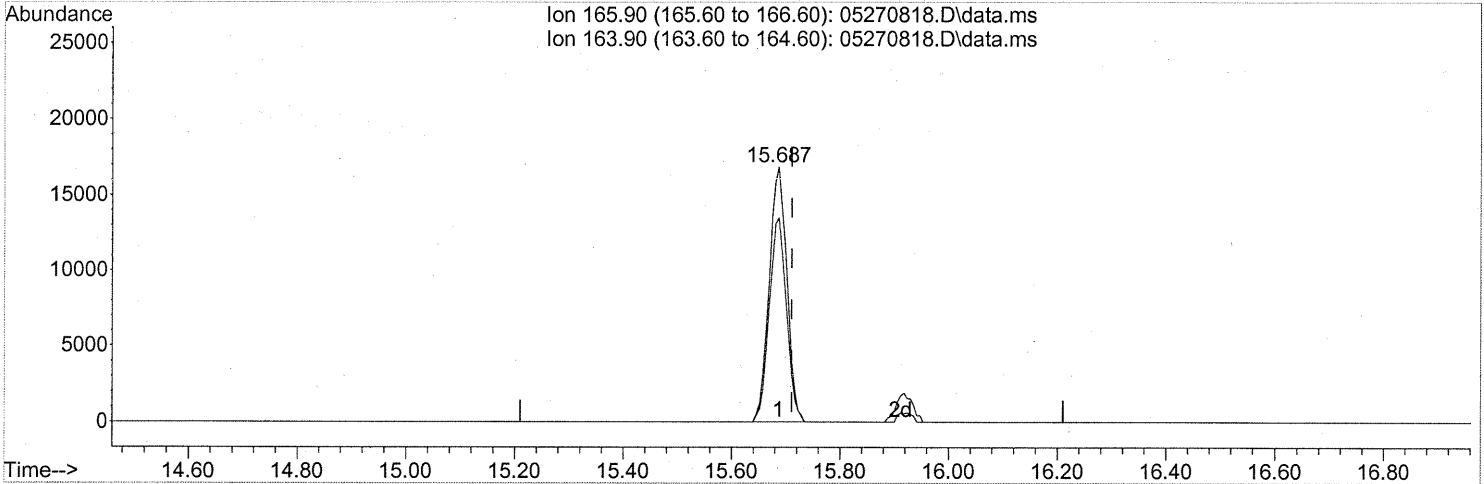
(63) n-Octane (T)  
 15.468min (-0.024) 0.82ng  
 response 14379

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	8.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(64) Tetrachloroethene (T)

15.687min (-0.024) 2.22ng

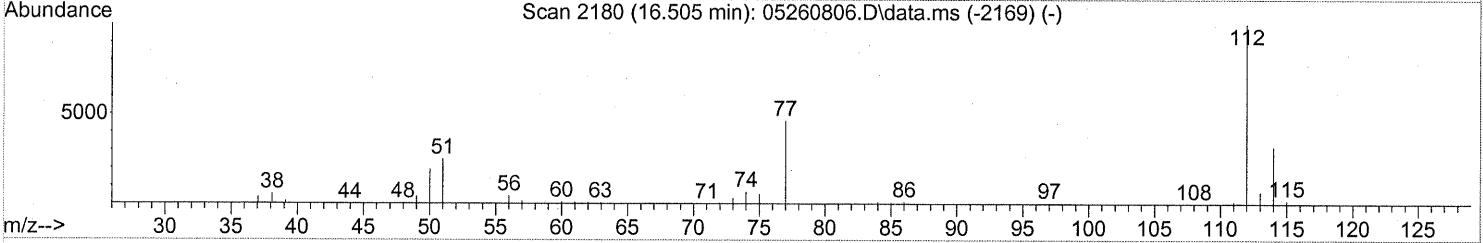
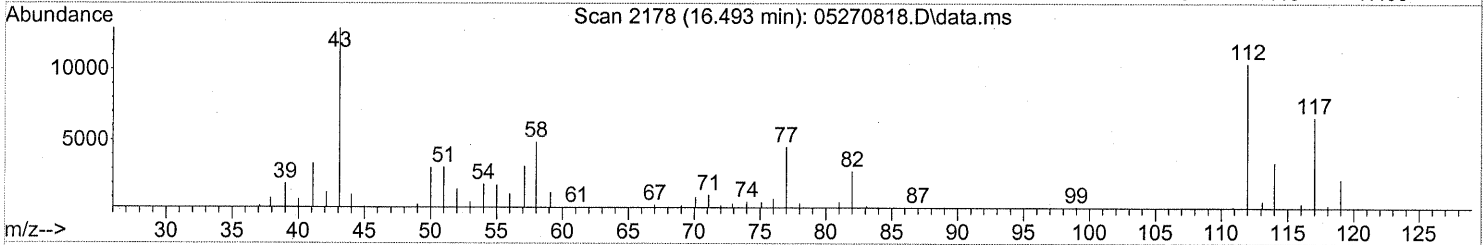
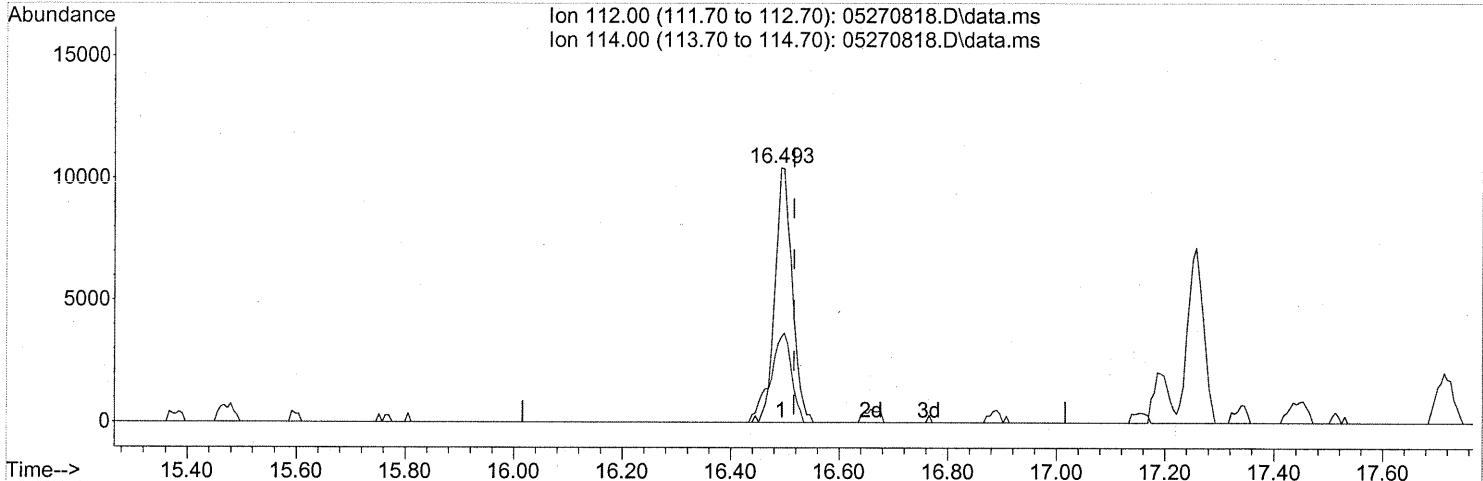
response 37982

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

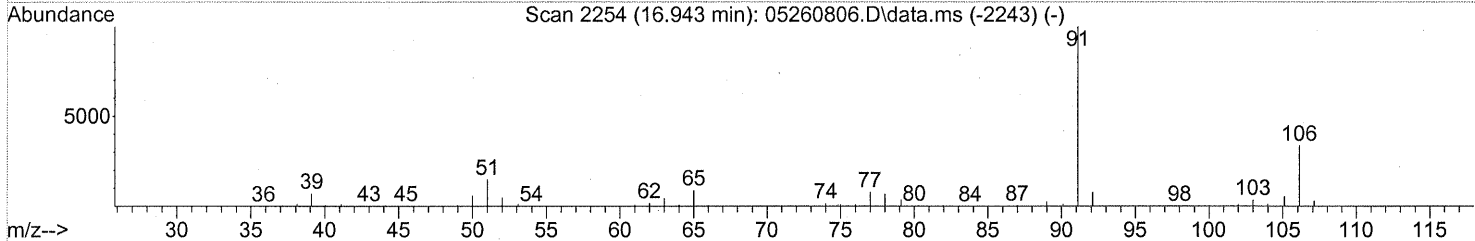
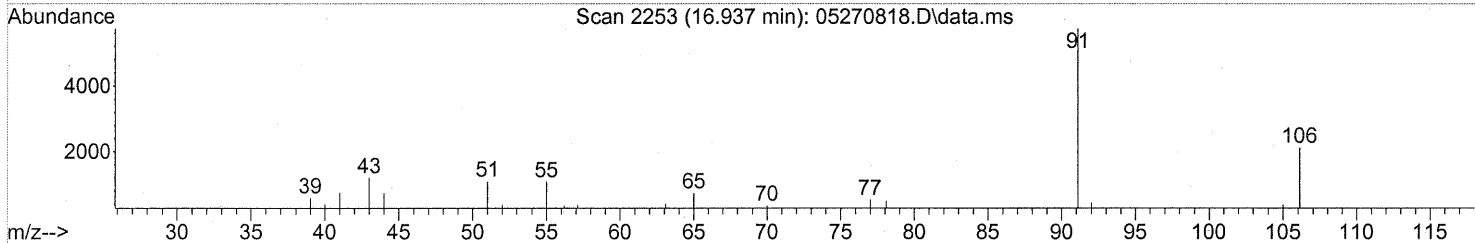
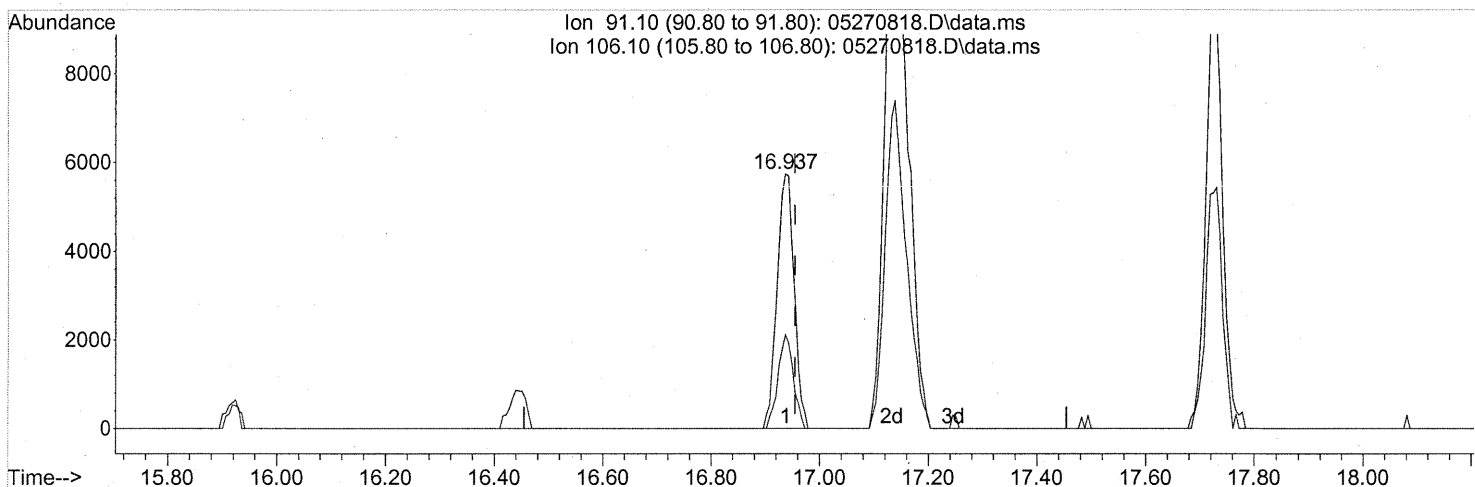
(65) Chlorobenzene (T)  
 16.493min (-0.024) 0.56ng  
 response 22939

Ion	Exp%	Act%
112.00	100	100
114.00	32.10	43.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(66) Ethylbenzene (T)

16.937min (-0.018) 0.19ng

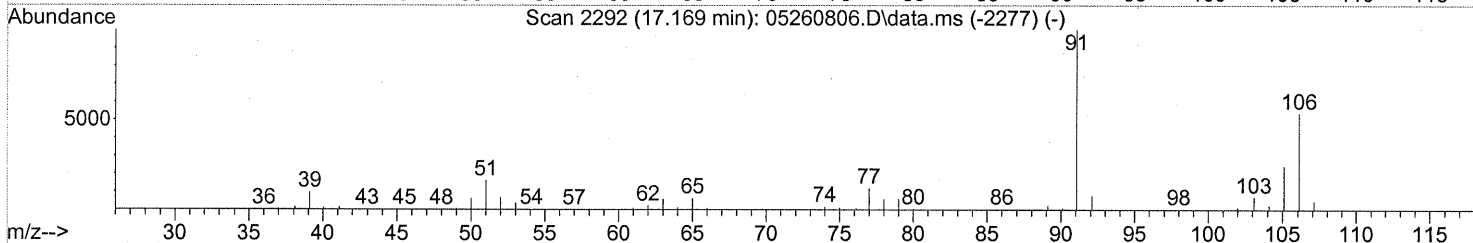
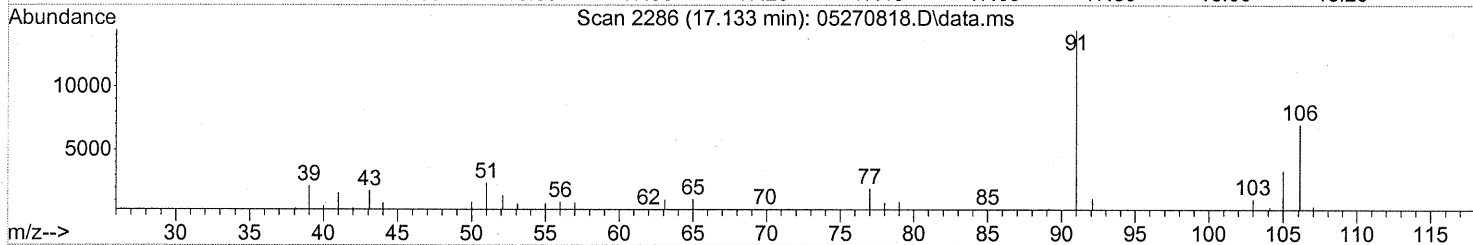
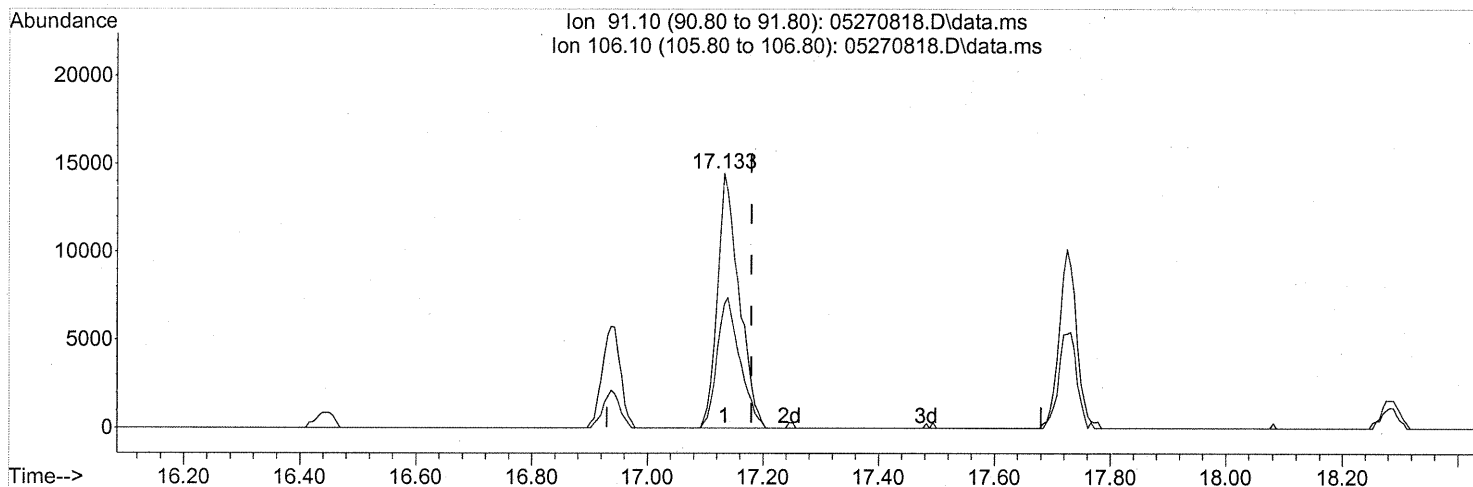
response 12574

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	33.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(67) m- & p-Xylene (T)

17.133min (-0.047) 0.87ng

response 37800

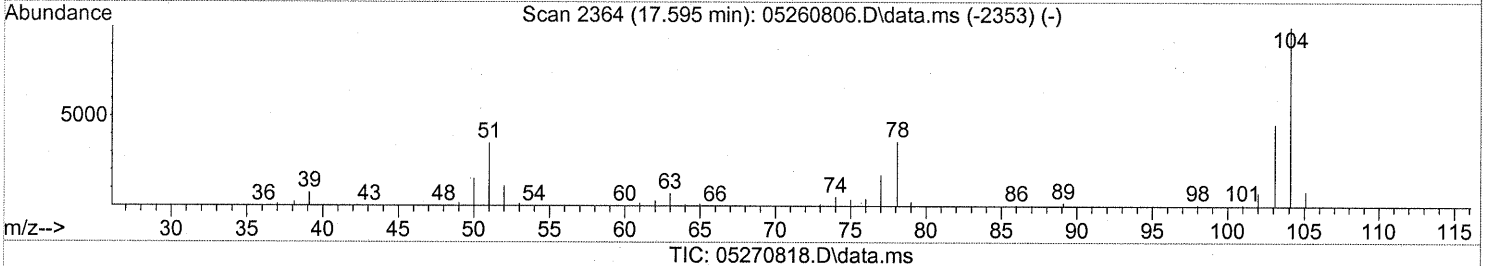
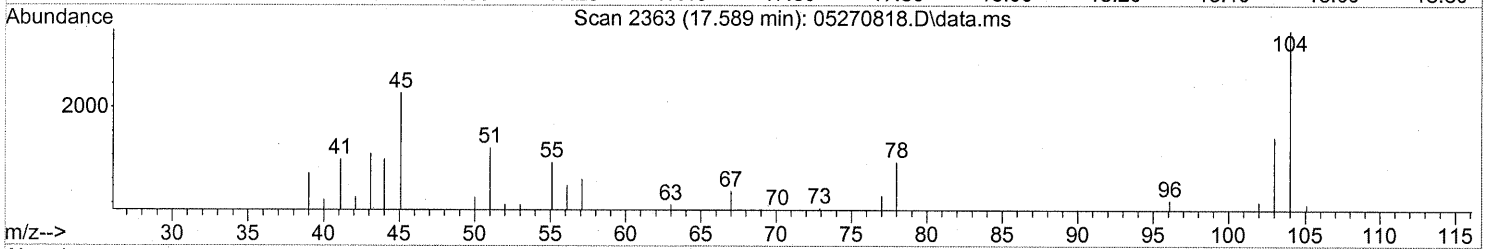
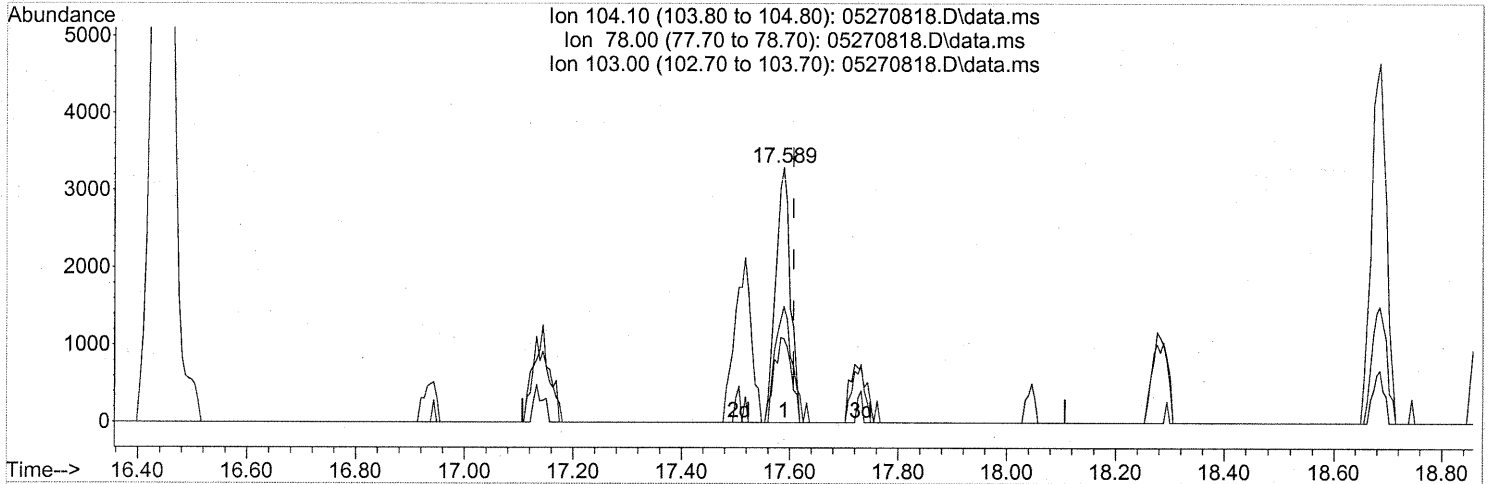
Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.80
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(69) Styrene (T)

17.589min (-0.018) 0.15ng

response 6260

Ion	Exp%	Act%
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104.10	100	100
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78.00	43.30	39.22
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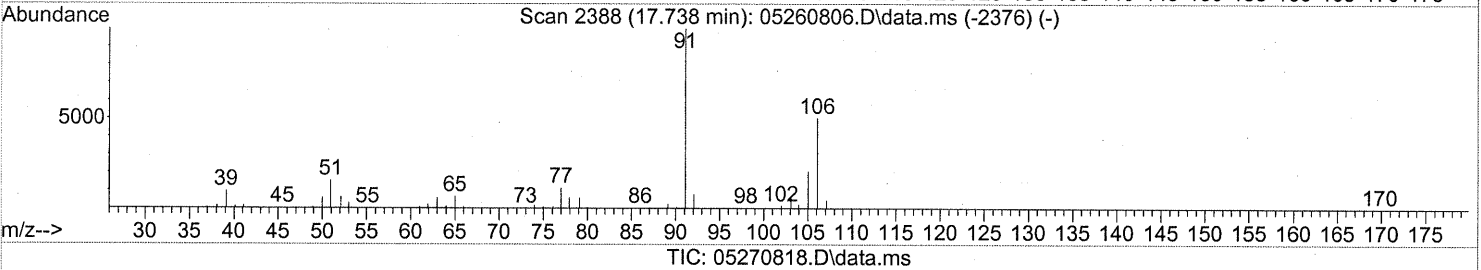
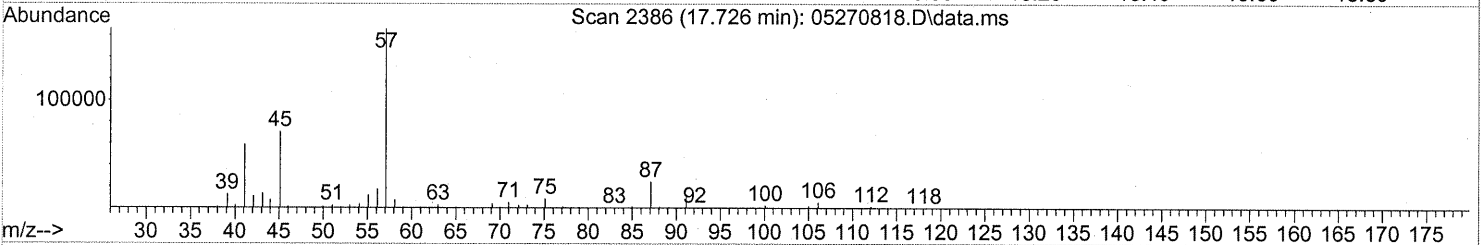
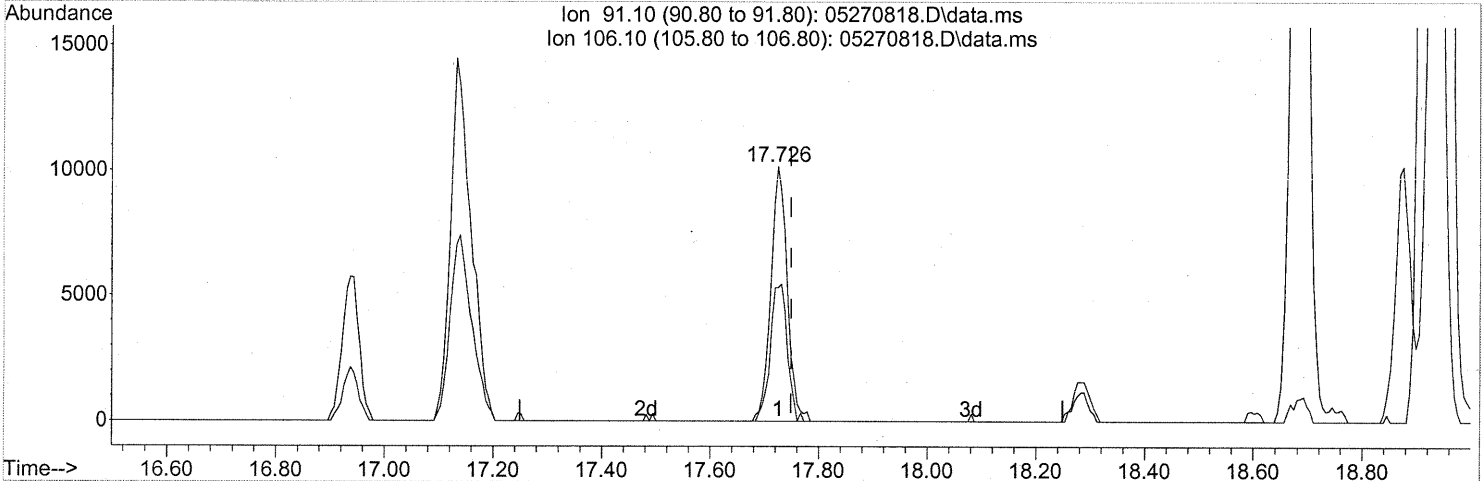
103.00	47.60	53.26
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0.00	0.00	0.00
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Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.726min (-0.024) 0.46ng

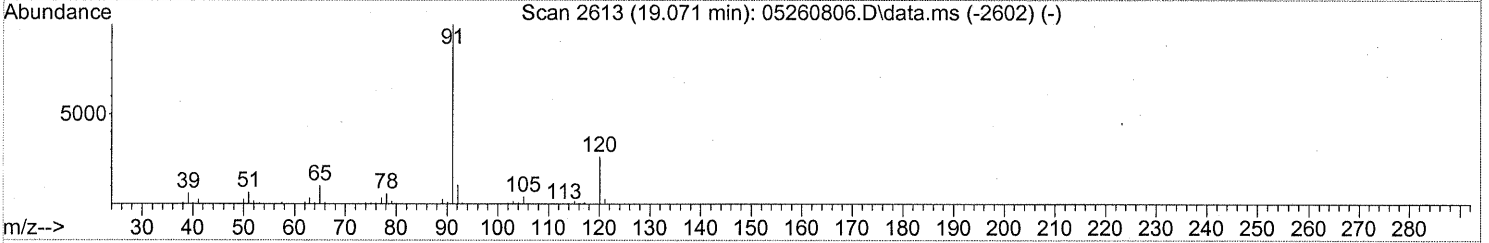
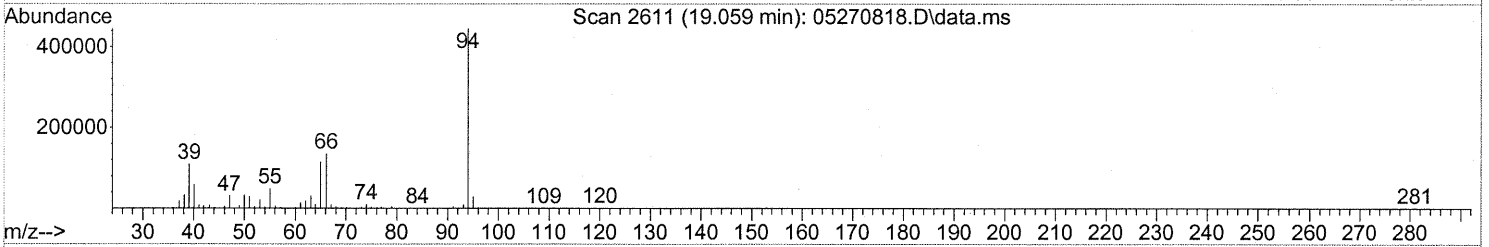
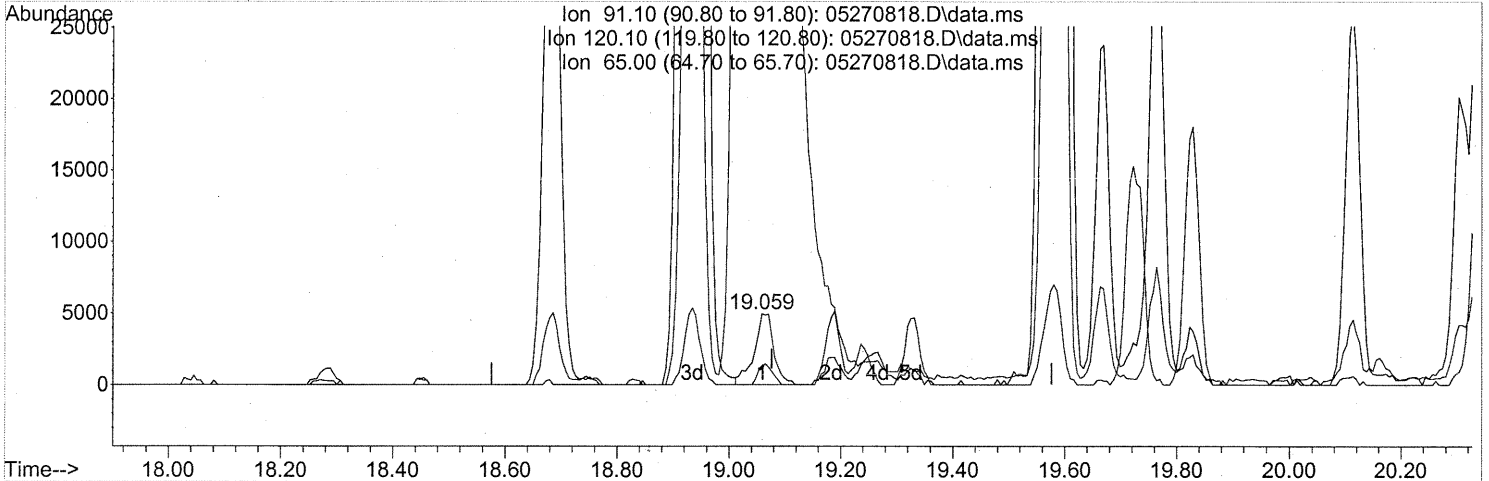
response 21349

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	55.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

19.059min (-0.018) 0.15ng

response 12123

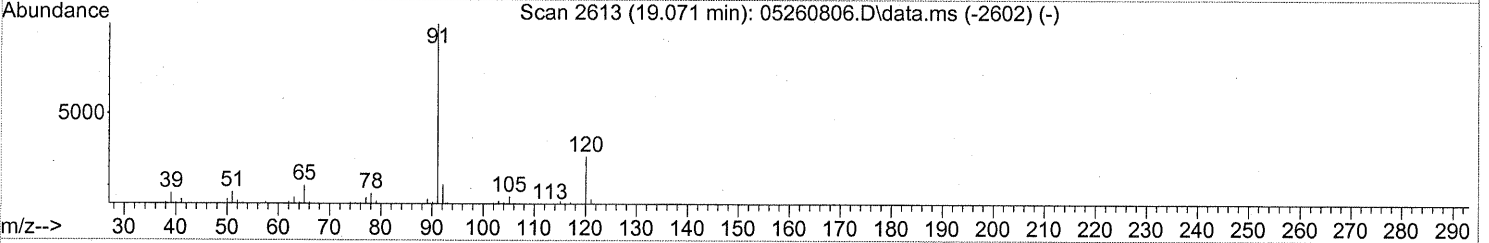
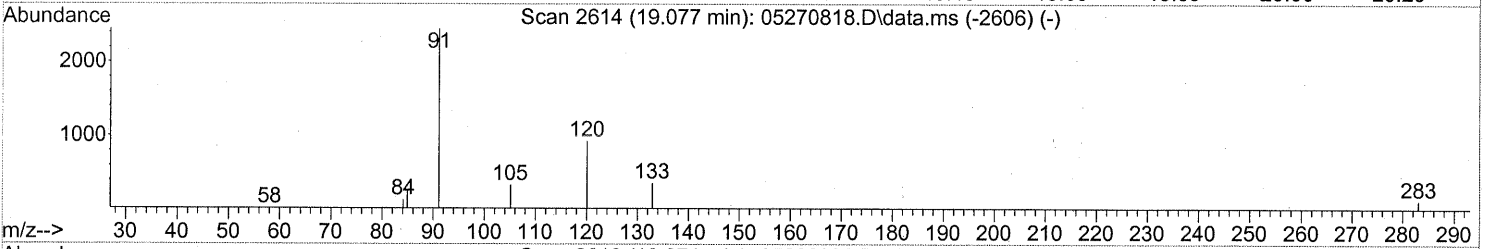
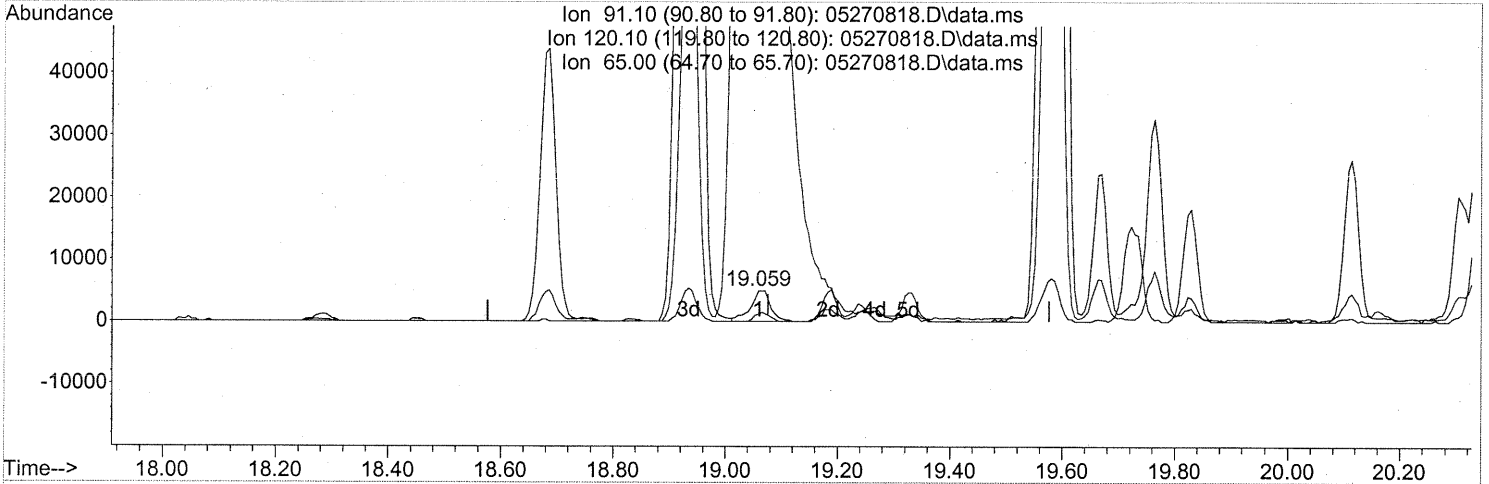
Ion	Exp%	Act%
91.10	100	100
120.10	21.00	20.54
65.00	10.40	0.00
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(76) n-Propylbenzene (T)

19.059min (-0.018) 0.15ng

response 12123

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	20.54
65.00	10.40	0.00
0.00	0.00	0.00

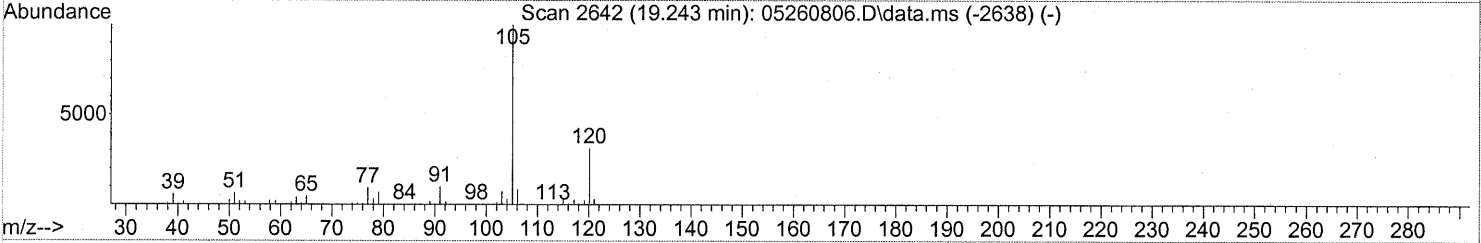
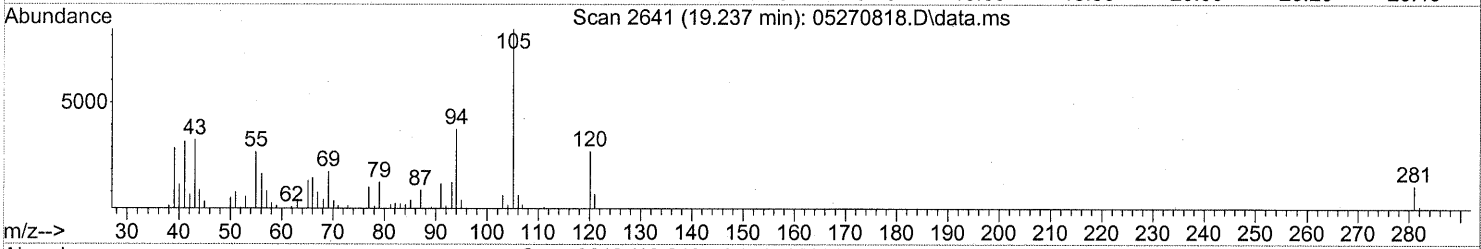
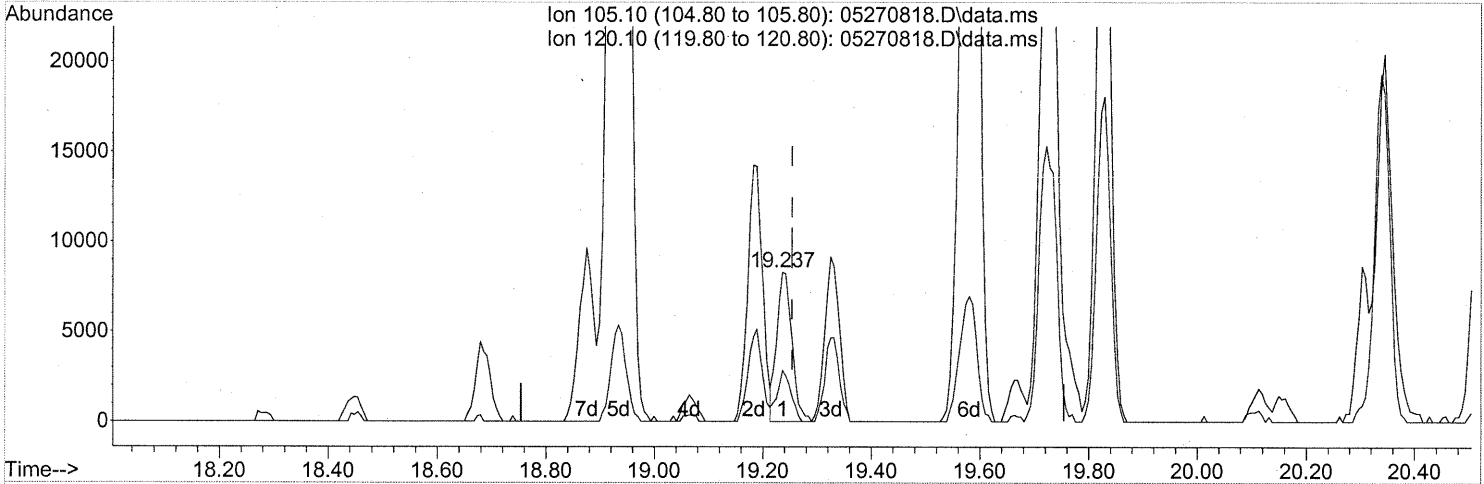
*after subtraction*

*WA 6/5/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



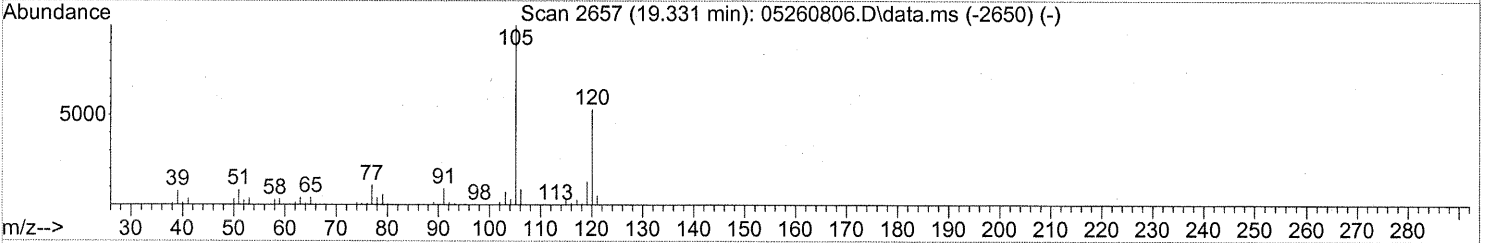
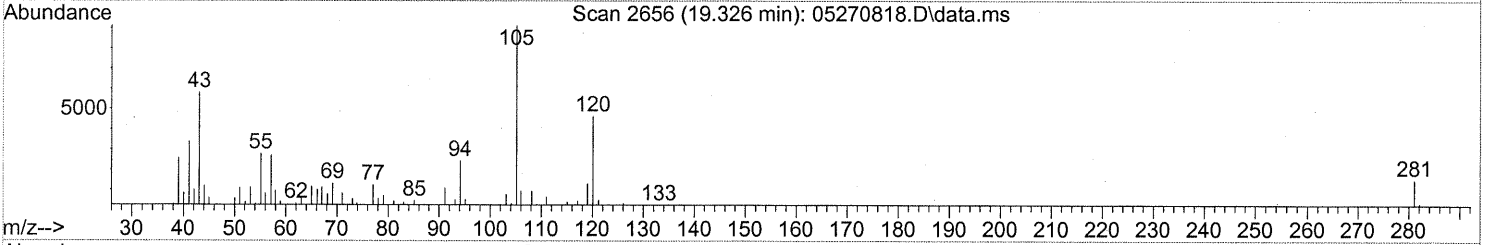
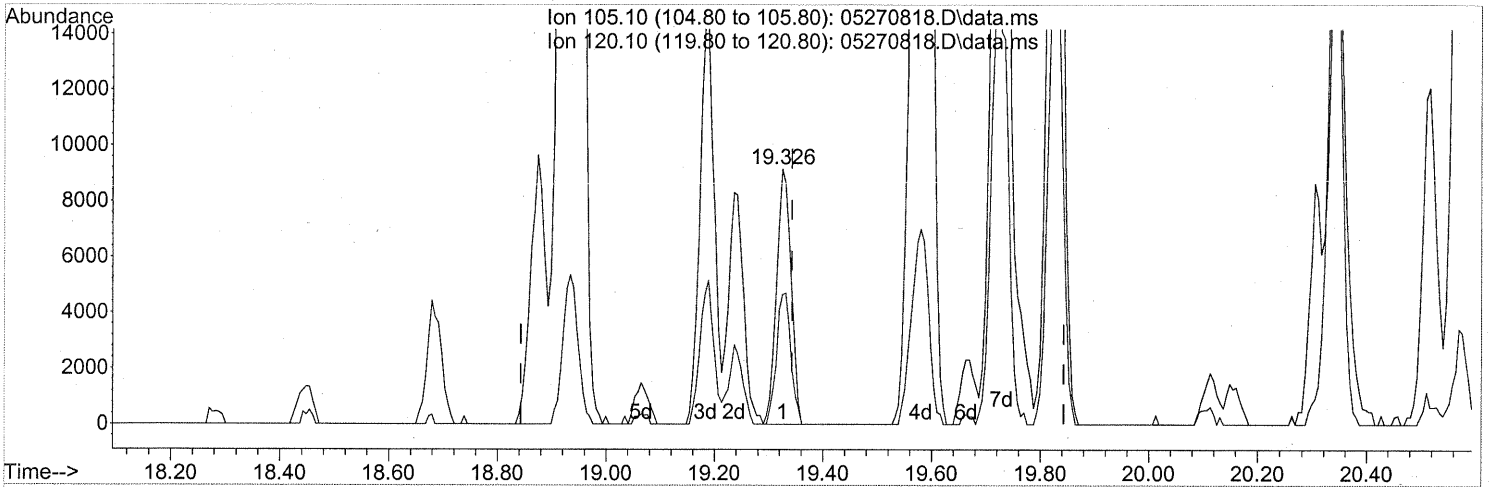
TIC: 05270818.D\data.ms

(78) 4-Ethyltoluene (T)  
 19.237min (-0.018) 0.24ng  
 response 16104

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	31.11
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

19.326min (-0.018) 0.28ng

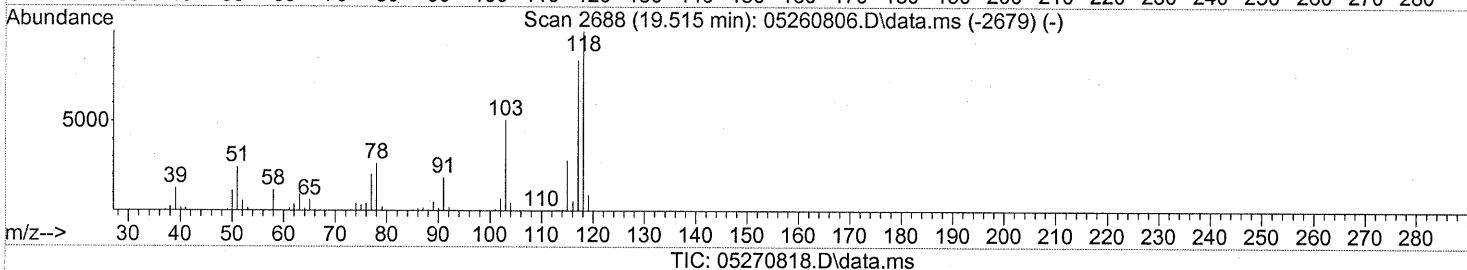
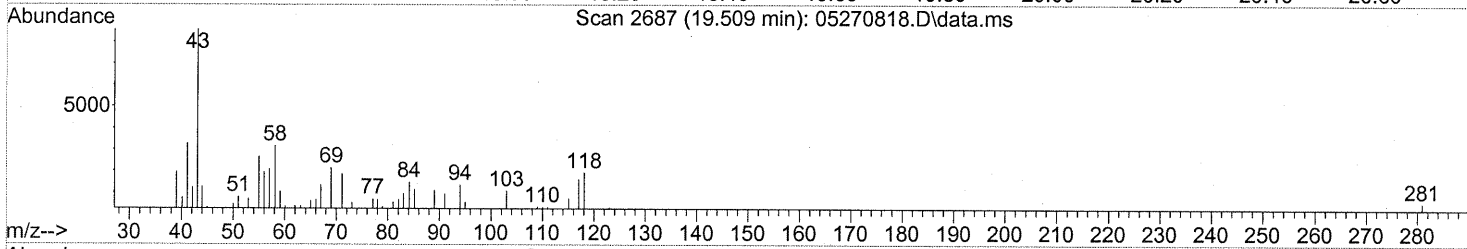
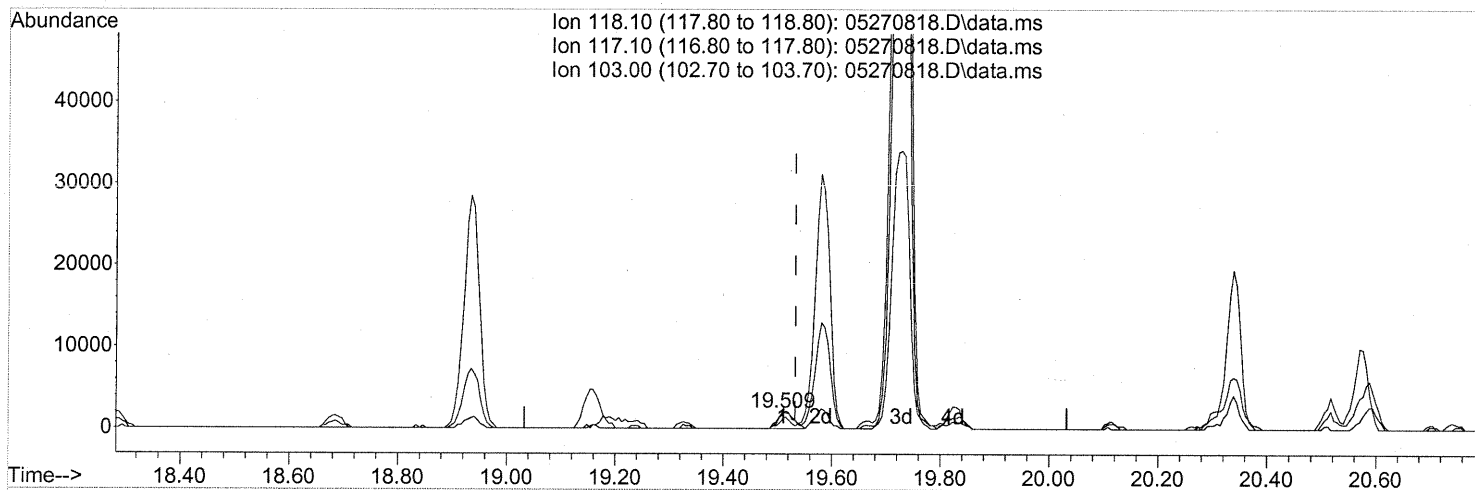
response 16963

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	50.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(80) alpha-Methylstyrene (T)

19.509min (-0.024) 0.12ng

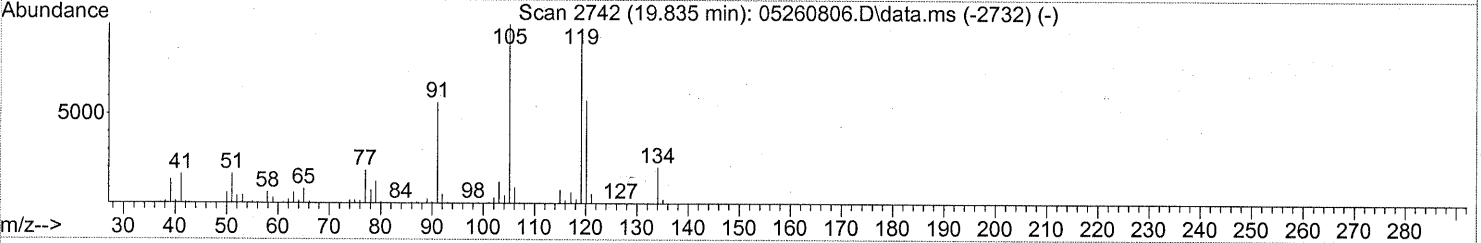
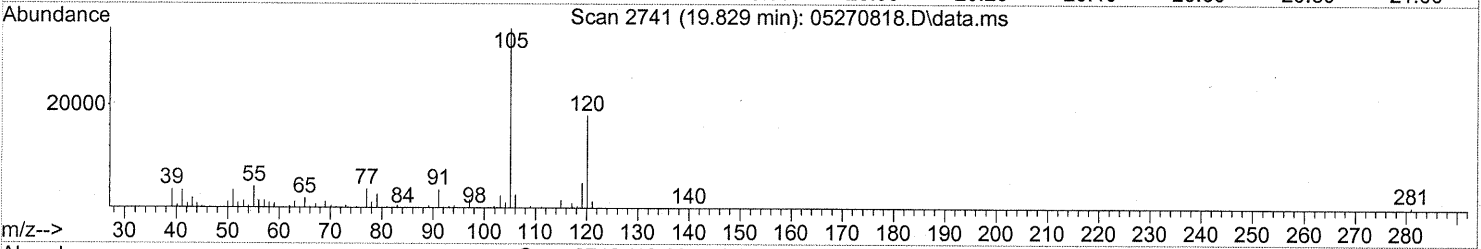
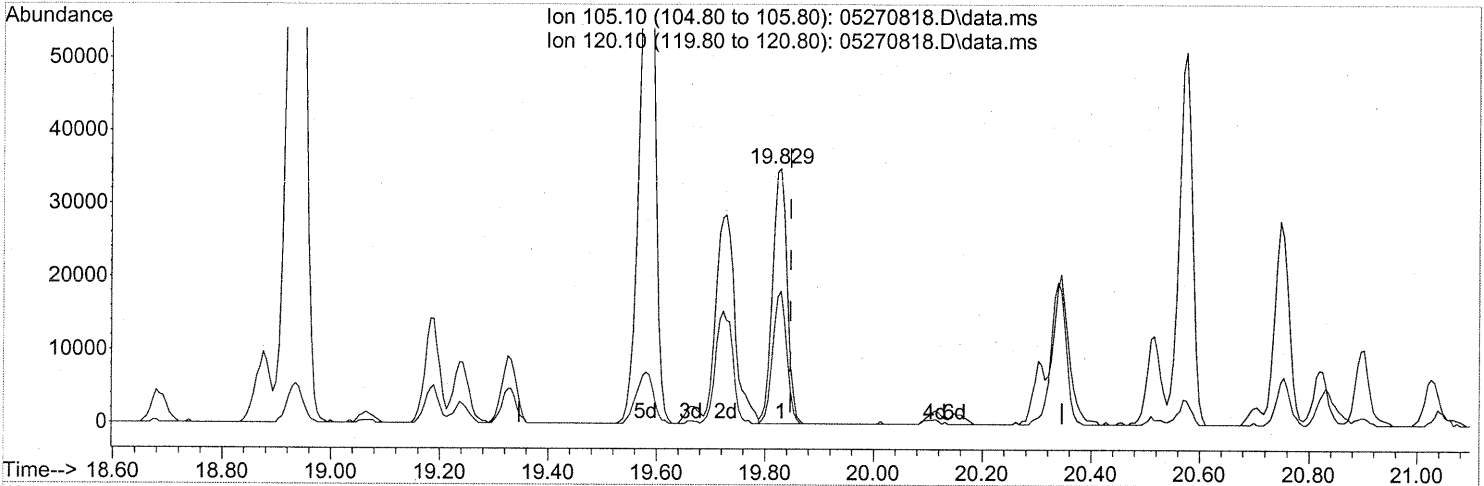
response 4053

Ion	Exp%	Act%
118.10	100	100
117.10	85.30	94.33
103.00	55.10	48.78
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 1.08ng

response 65043

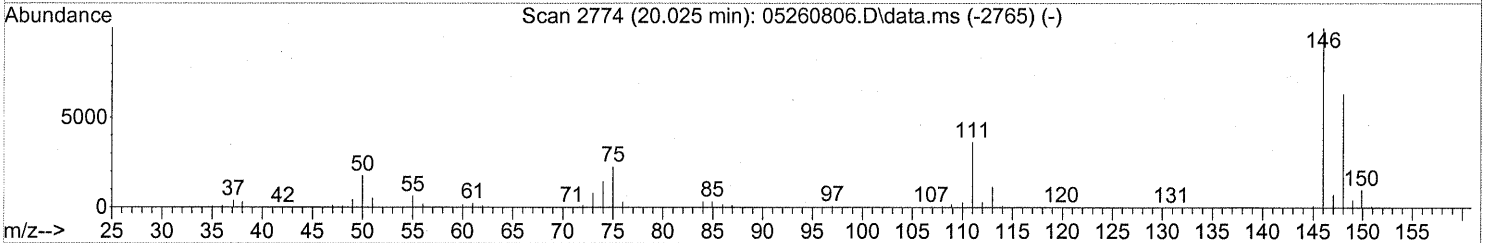
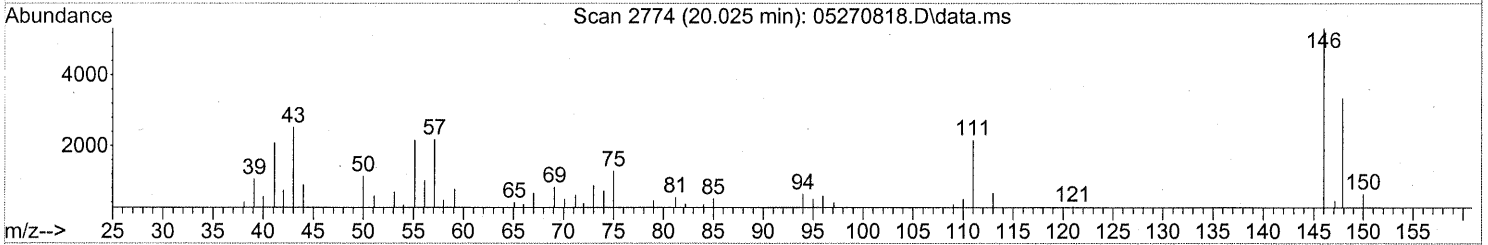
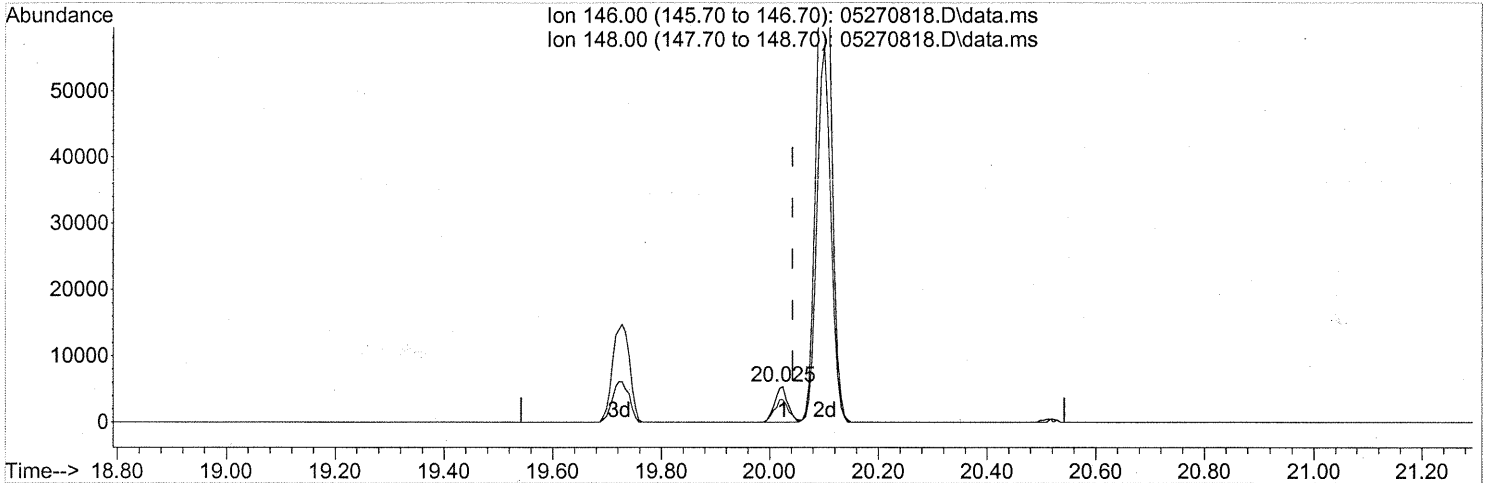
Ion	Exp%	Act%
105.10	100	100
120.10	51.70	49.70
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(85) 1,3-Dichlorobenzene (T)

20.025min (-0.018) 0.24ng

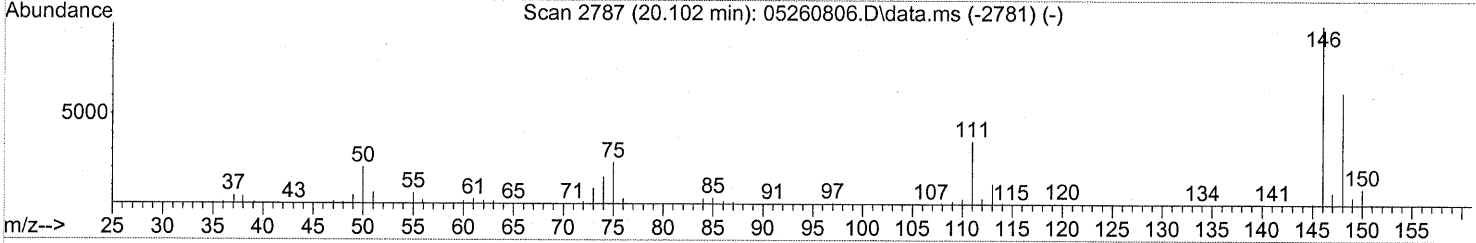
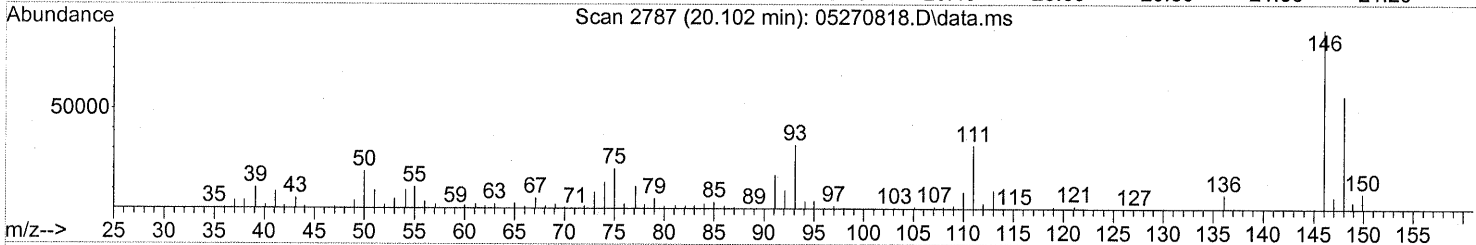
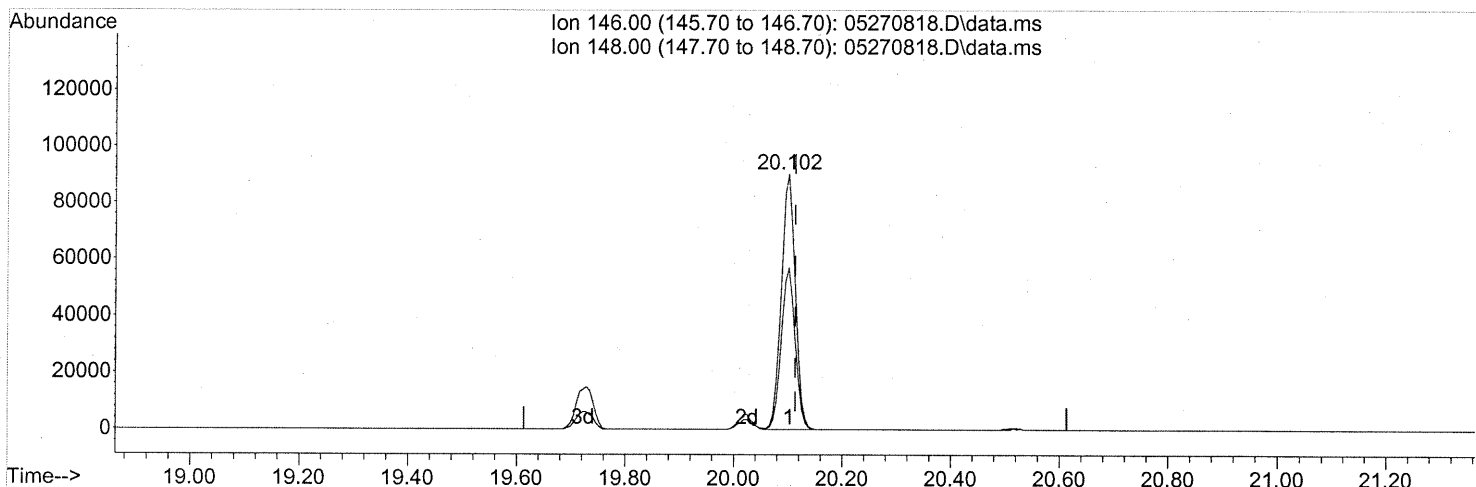
response 9059

Ion	Exp%	Act%
146.00	100	100
148.00	63.10	68.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 4.32ng

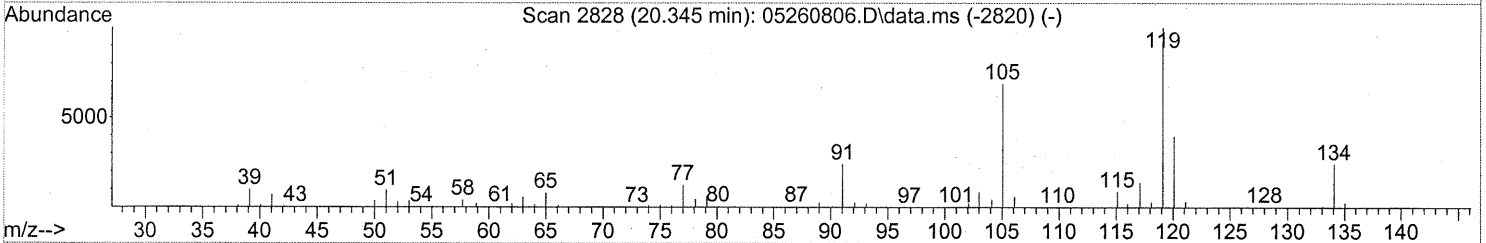
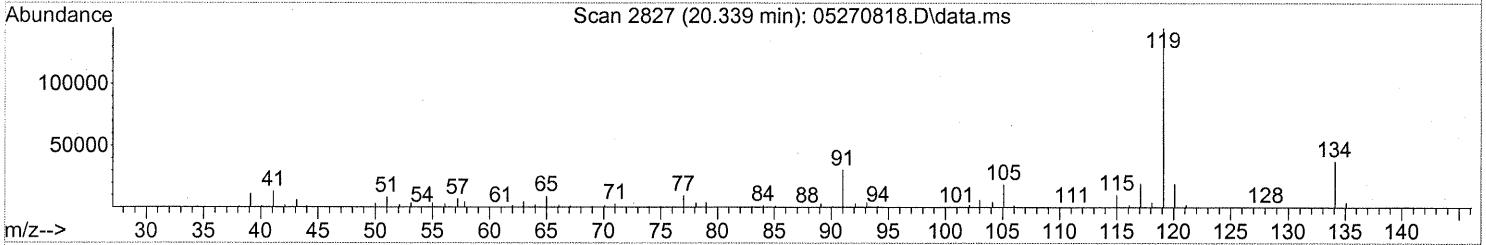
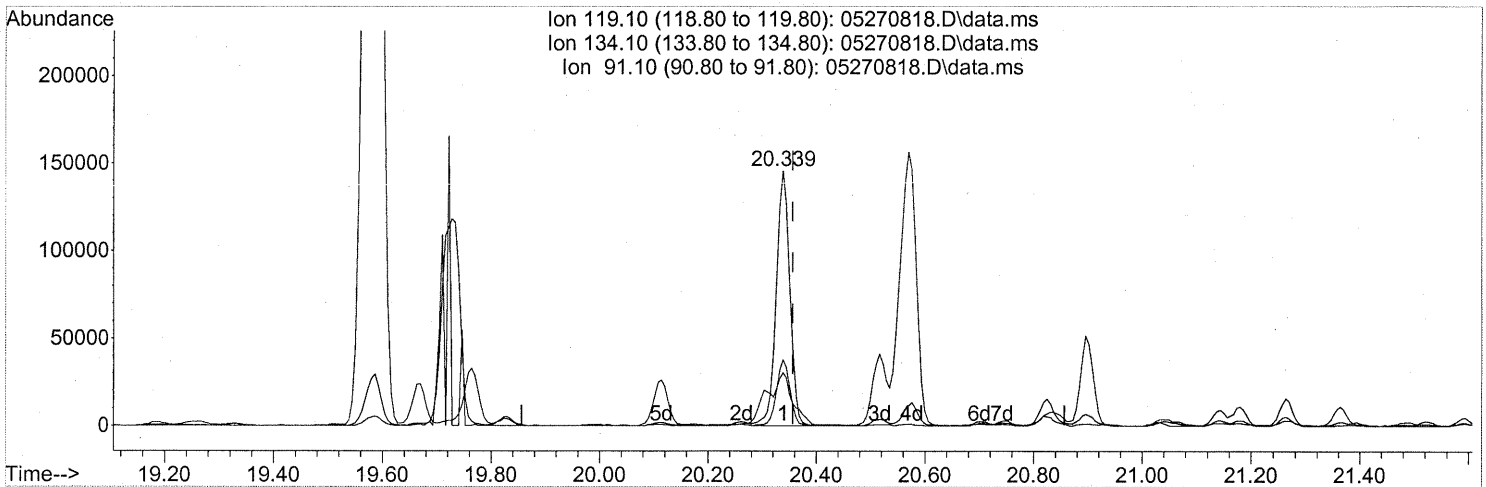
response 160229

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

20.339min (-0.018) 3.70ng

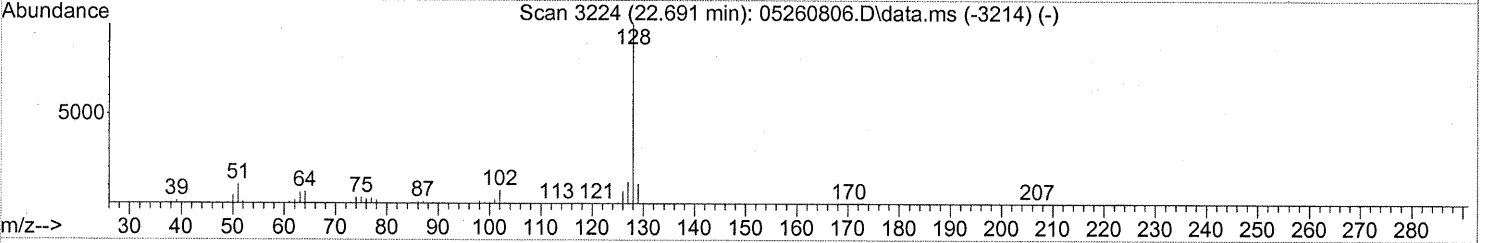
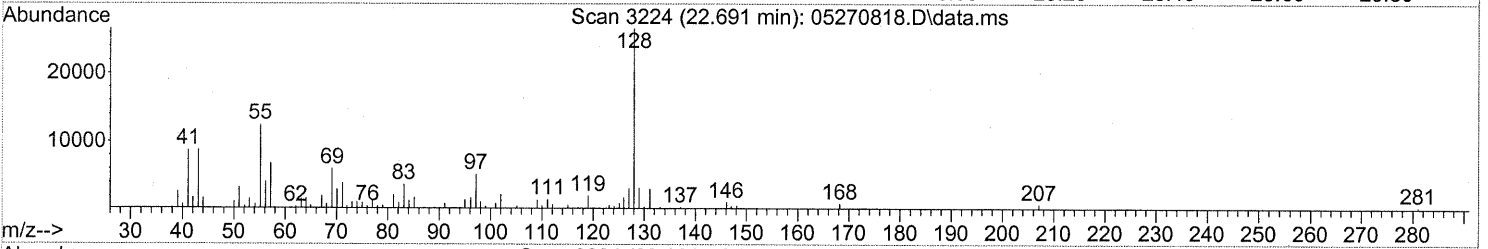
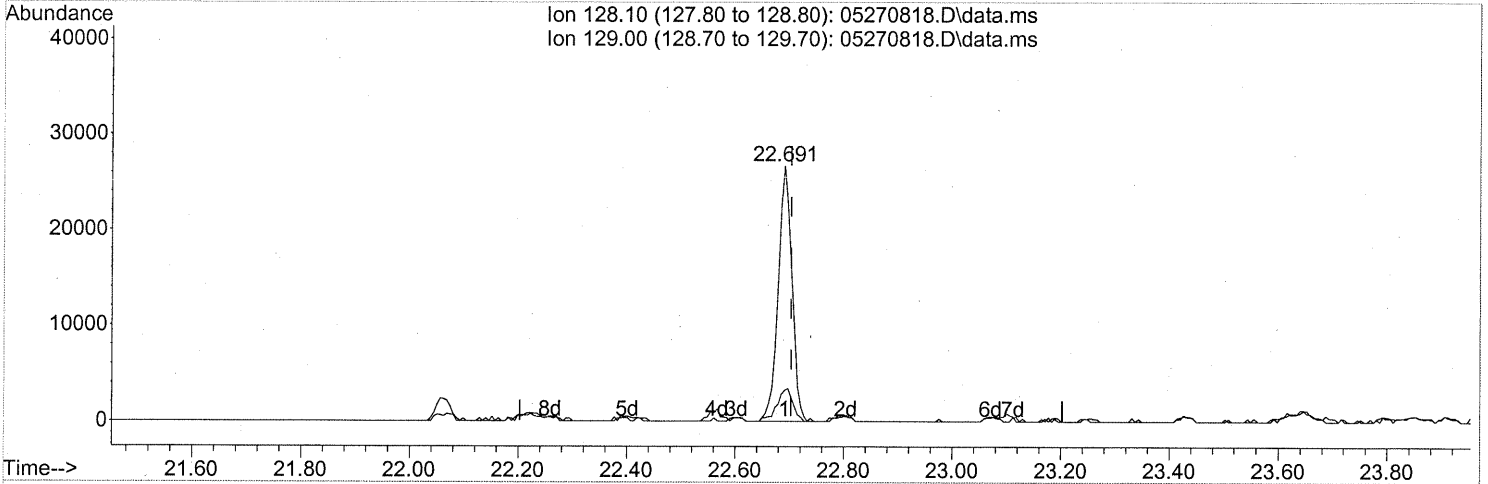
response 253093

Ion	Exp%	Act%
119.10	100	100
134.10	23.00	25.40
91.10	30.60	23.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

(95) Naphthalene (T)

22.691min (-0.012) 0.53ng

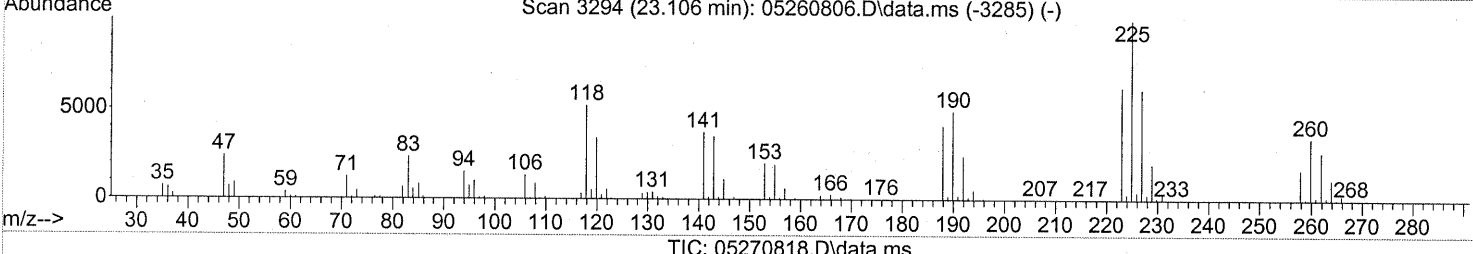
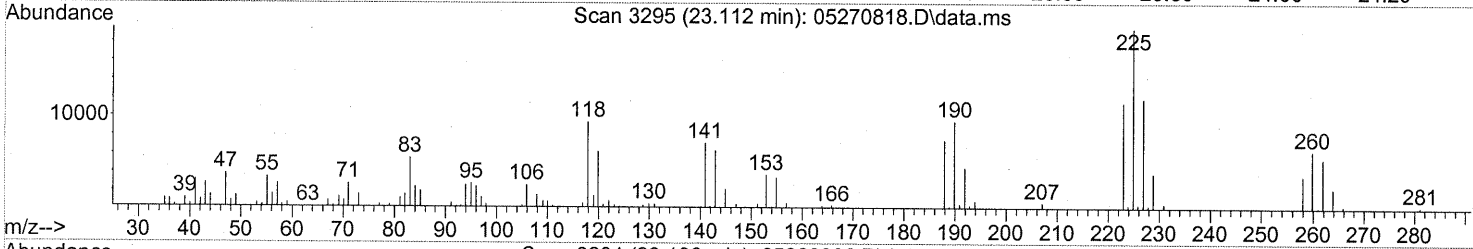
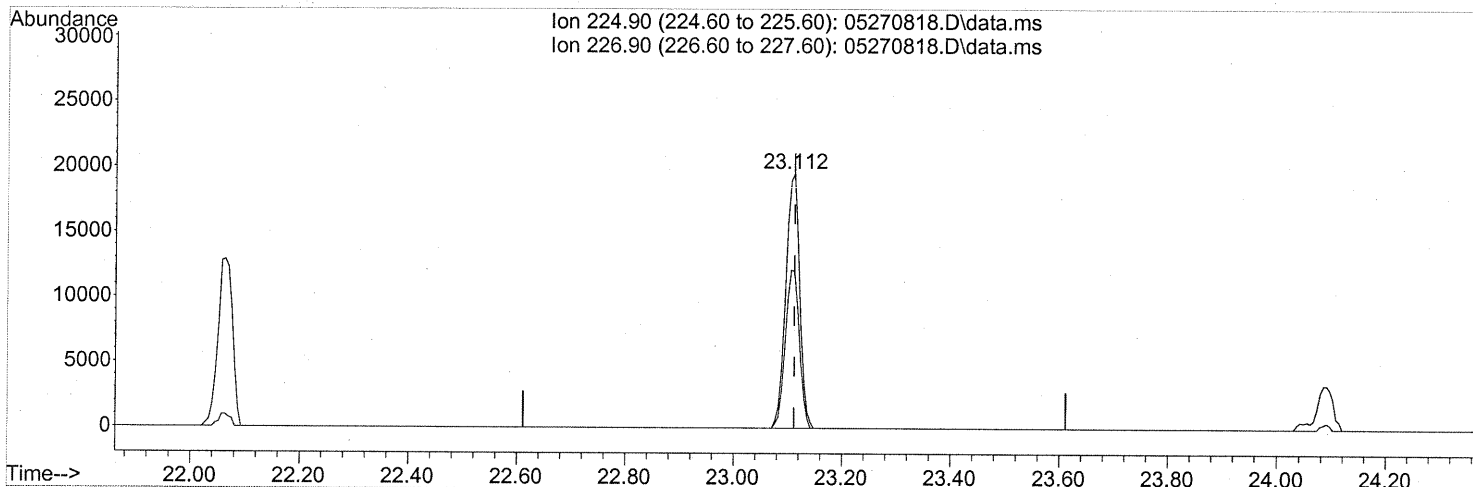
response 46657

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	14.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 04:48:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

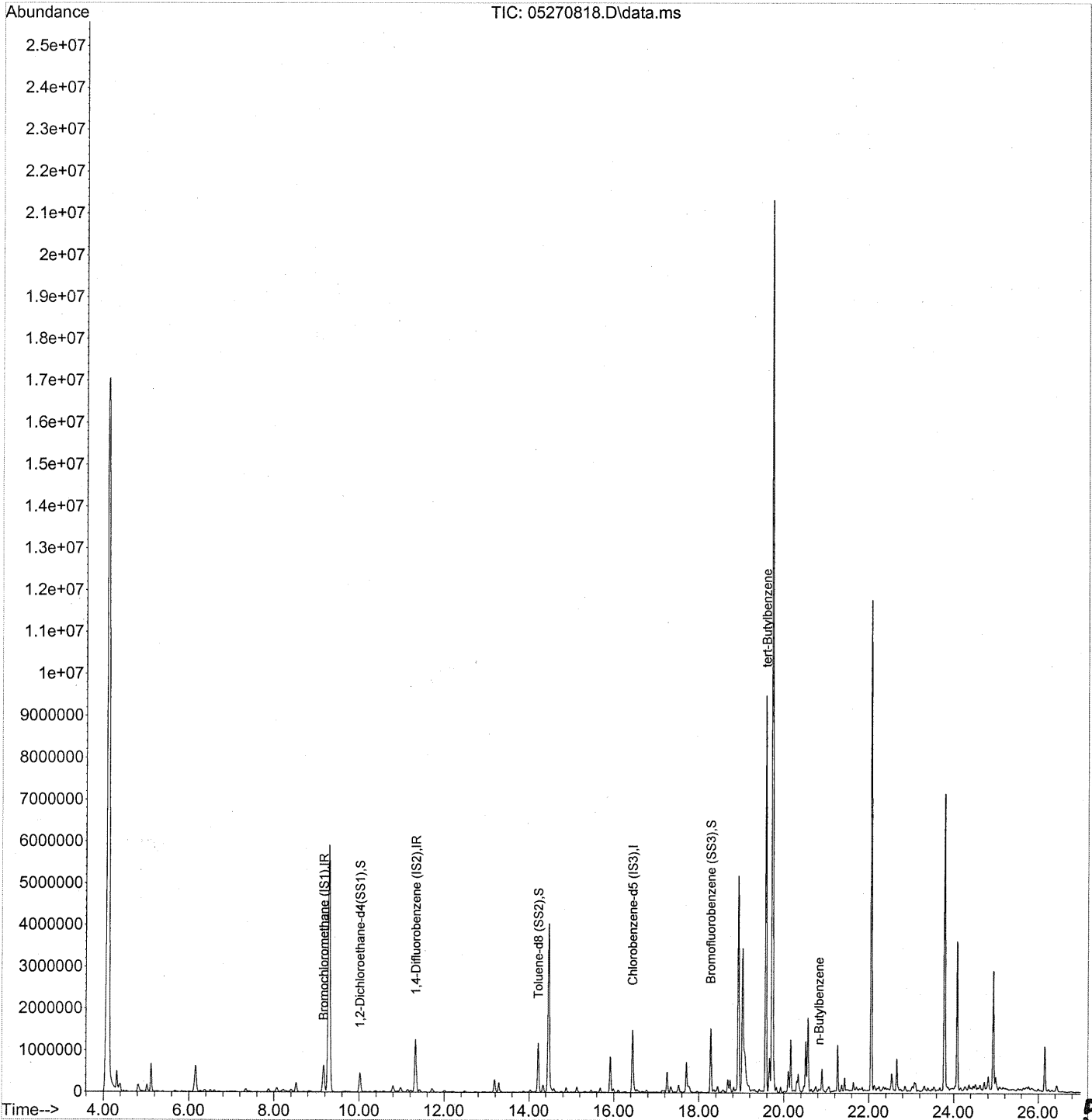
23.112min (-0.000) 3.28ng

response 34562

Ion	Exp%	Act%
224.90	100	100
226.90	63.00	62.54
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270818.D  
Acq On : 27 May 2008 23:35  
Operator : WA  
Sample : P0801507-013 (500ml)  
Misc : ENSR SG15B-05 (-3.5, 3.5)  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 14:39:33 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



512

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 14:39:33 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

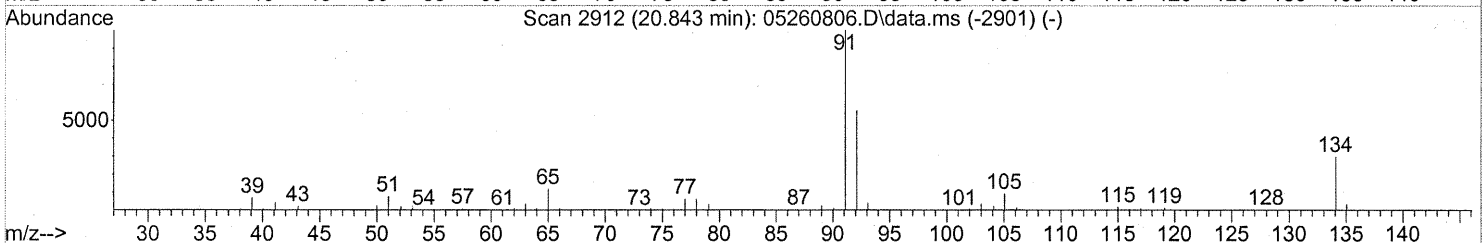
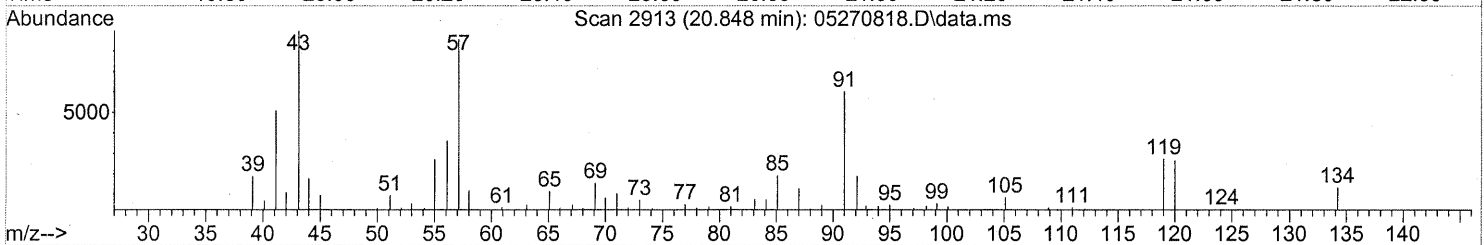
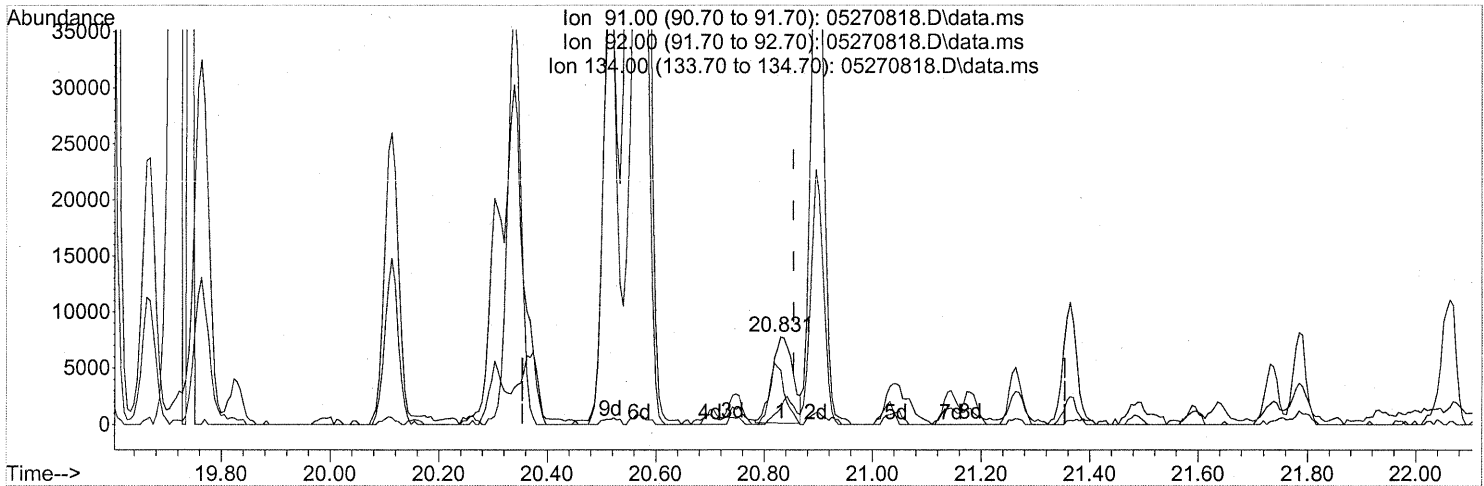
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.17	130	292426	25.000	ng	-0.08
3) 1,4-Difluorobenzene (IS2)	11.33	114	1419564	25.000	ng	-0.05
4) Chlorobenzene-d5 (IS3)	16.45	82	494463	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.02	65	461246	27.585	ng	-0.07
Spiked Amount	25.000					Recovery = 110.32%
5) Toluene-d8 (SS2)	14.22	98	953570	18.706	ng	-0.03
Spiked Amount	25.000					Recovery = 74.84%
6) Bromofluorobenzene (SS3)	18.28	174	539171	31.812	ng	-0.01
Spiked Amount	25.000					Recovery = 127.24%
Target Compounds						
7) tert-Butylbenzene	19.59	119	54966	<del>0.893</del> ng		MR Qvalue 97
8) n-Butylbenzene	<u>20.83</u>	91	20481	<u>0.349</u> ng		M# 57

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270818.D  
 Acq On : 27 May 2008 23:35  
 Operator : WA  
 Sample : P0801507-013 (500ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jun 04 14:39:33 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



TIC: 05270818.D\data.ms

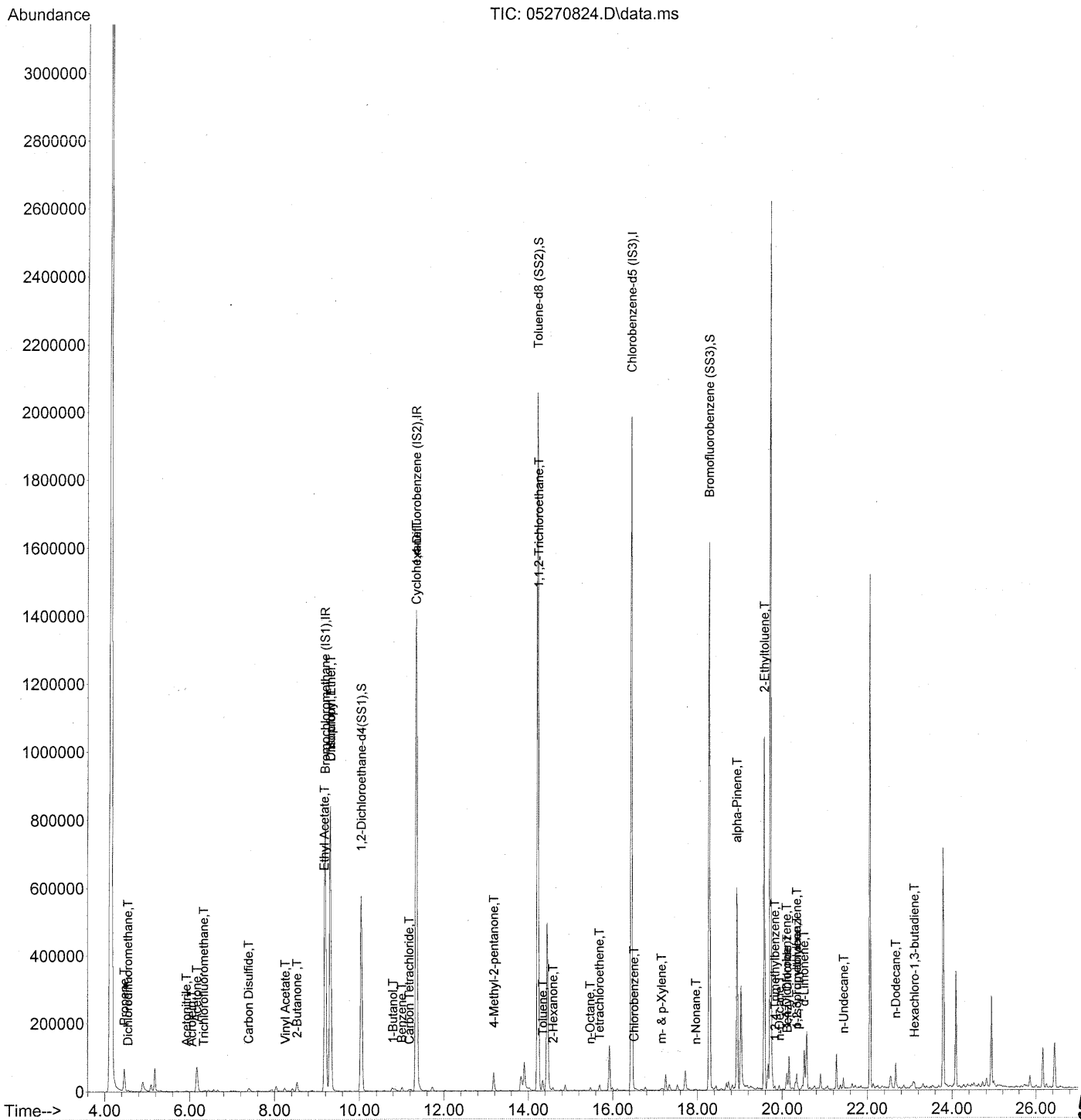
(8) n-Butylbenzene  
 20.831min (-0.024) 0.35ng  
 response 20481

Ion	Exp%	Act%
91.00	100	100
92.00	53.60	24.87#
134.00	23.40	0.00#
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270824.D  
 Acq On : 28 May 2008 5:48 am  
 Operator : WA  
 Sample : P0801507-013 Dil (50ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 06:52:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



515

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270824.D  
 Acq On : 28 May 2008 5:48 am  
 Operator : WA  
 Sample : P0801507-013 Dil (50ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 06:52:03 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	394194	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1641811	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	663545	25.000	ng	-0.01

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	556677	24.697	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.80%	✓
57) Toluene-d8 (SS2)	14.22	98	1672173	24.444	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.76%	✓
73) Bromofluorobenzene (SS3)	18.28	174	588742	25.885	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.56%	✓

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	7880	0.258	ng	# 73
3) Dichlorodifluoromethane	4.55	85	2456	0.067	ng	# 93
4) Chloromethane	4.76	50	107	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.08	54	108	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.81	45	90	N.D.		
11) Acetonitrile	5.92	41	3806	0.064	ng	# 13
12) Acrolein	6.05	56	1762	0.118	ng	99
13) Acetone	6.17	58	45766	2.222	ng	# 67
14) Trichlorofluoromethane	6.33	101	2788	0.081	ng	96
15) Isopropanol	6.48	45	963	N.D.		
16) Acrylonitrile	6.61	53	189	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.97	59	2025	N.D.		
19) Methylene Chloride	7.04	84	788	N.D.		
20) Allyl Chloride	7.14	41	100	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.39	76	16184	0.253	ng	99
23) trans-1,2-Dichloroethene	8.04	61	315	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	8.25	86	853	0.253	ng	# 1
27) 2-Butanone	8.52	72	7290	0.677	ng	# 9
28) cis-1,2-Dichloroethene	9.17	61	771	N.D.		
29) Diisopropyl Ether	9.32	87	92754	6.539	ng	# 1
30) Ethyl Acetate	9.17	61	771	0.103	ng	# 36
31) n-Hexane	9.24	57	1651	N.D.		

516

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270824.D  
 Acq On : 28 May 2008 5:48 am  
 Operator : WA  
 Sample : P0801507-013 Dil (50ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 06:52:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.32	83	850159	36.548	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	16320	0.604	ng	# 71
41) Benzene	11.00	78	12607	0.182	ng	100
42) Carbon Tetrachloride	11.17	117	5332	0.188	ng	99
43) Cyclohexane	11.34	84	1857	0.069	ng	# 1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	12.20	130	298	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	500	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	12.51	71	219	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.18	58	19202	0.798	ng	82
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	141349	8.395	ng	# 6
58) Toluene	14.34	91	24949	0.322	ng	97.
59) 2-Hexanone	14.58	43	8643	0.118	ng	89
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.31	43	2606	N.D.		
63) n-Octane	15.46	57	2204	0.094	ng	# 66
64) Tetrachloroethene	15.69	166	6839	0.298	ng	99
65) Chlorobenzene	16.50	112	2971	0.054	ng	96
66) Ethylbenzene	16.94	91	1584	N.D.		
67) m- & p-Xylene	17.15	91	5586	0.096	ng	96
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	692	N.D.		
70) o-Xylene	17.72	91	2470	N.D.		
71) n-Nonane	17.96	43	3977	0.064	ng	# 74
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.29	105	790	N.D.		
75) alpha-Pinene	18.93	93	277756	6.501	ng	92
76) n-Propylbenzene	19.06	91	1245	N.D.		
77) 3-Ethyltoluene	19.19	105	3111	N.D.		
78) 4-Ethyltoluene	19.25	105	1834	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	1640	N.D.		

517

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270824.D  
 Acq On : 28 May 2008 5:48 am  
 Operator : WA  
 Sample : P0801507-013 Dil (50ml)  
 Misc : ENSR SG15B-05 (-3.5, 3.5)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 06:52:03 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

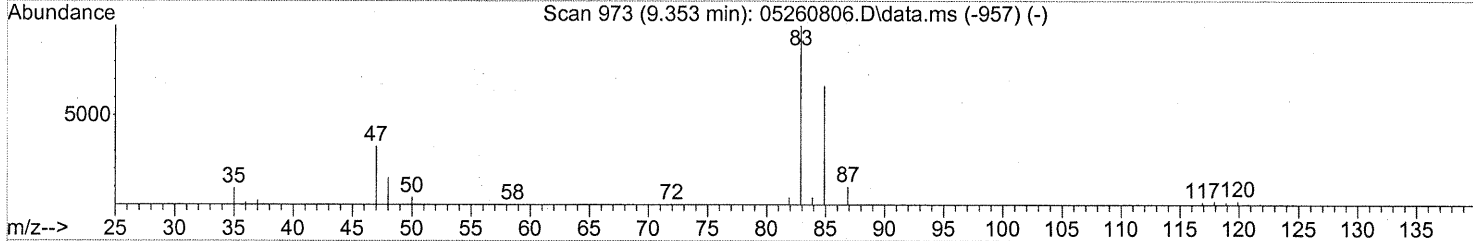
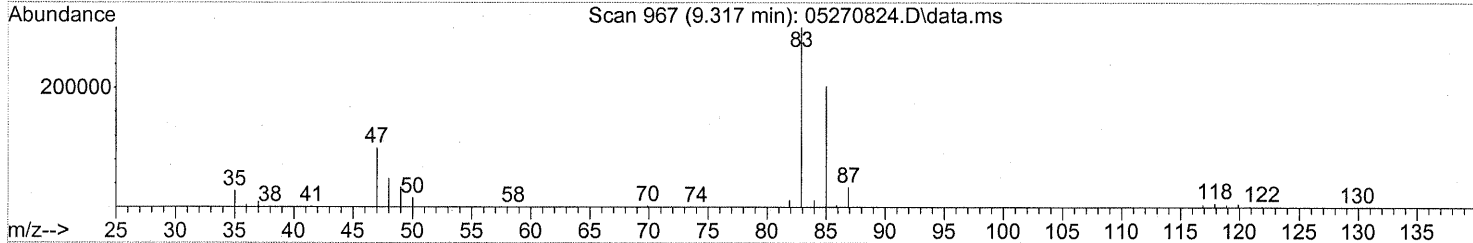
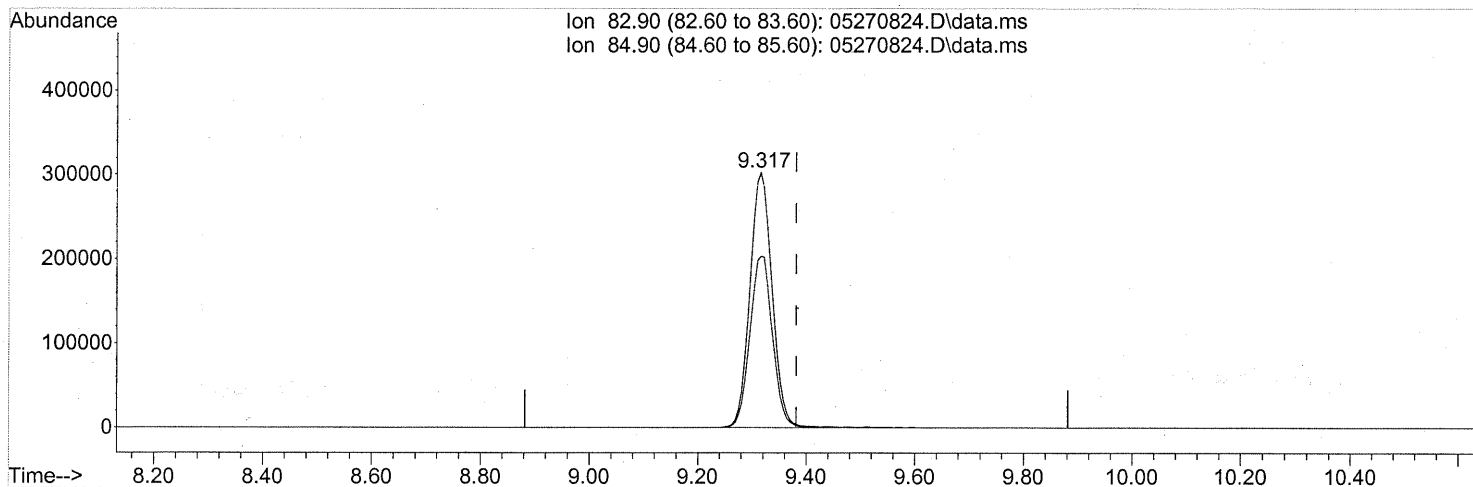
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	503	N.D.		
81) 2-Ethyltoluene	19.58	105	16000	0.165	ng #	61
82) 1,2,4-Trimethylbenzene	19.83	105	6497	0.080	ng	97
83) n-Decane	19.93	57	5188	0.091	ng	79
84) Benzyl Chloride	20.11	91	4528	0.072	ng #	57
85) 1,3-Dichlorobenzene	20.02	146	983	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	17176	0.345	ng	100
87) sec-Butylbenzene	20.16	105	259	N.D.		
88) p-Isopropyltoluene	20.34	119	26669	0.291	ng	95
89) 1,2,3-Trimethylbenzene	20.34	105	4345	0.056	ng #	26
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	20.51	68	27286	1.094	ng	85
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	13548	0.226	ng	82
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	5497	N.D.		
96) n-Dodecane	22.66	57	26784	0.458	ng	81
97) Hexachloro-1,3-butadiene	23.11	225	3545	0.251	ng	98

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270824.D  
Acq On : 28 May 2008 5:48  
Operator : WA  
Sample : P0801507-013 Dil (50ml)  
Misc : ENSR SG15B-05 (-3.5, 3.5)  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 28 06:52:03 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270824.D\data.ms

(32) Chloroform (T)  
9.317min (-0.065) 36.55ng  
response 850159

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.46
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG14B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00051

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)  
 0.10 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.82	0.082	0.46	0.16	0.016	
74-87-3	Chloromethane	0.24	0.16	0.082	0.11	0.079	0.039	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.82	0.082	ND	0.12	0.012	
75-01-4	Vinyl Chloride	ND	0.16	0.082	ND	0.064	0.032	
74-83-9	Bromomethane	ND	0.16	0.082	ND	0.042	0.021	
75-00-3	Chloroethane	0.31	0.16	0.082	0.12	0.062	0.031	
64-17-5	Ethanol	4.4	8.2	0.082	2.3	4.3	0.043	J, B
67-64-1	Acetone	48	8.2	0.12	20	3.4	0.050	B
75-69-4	Trichlorofluoromethane	2.9	0.16	0.082	0.51	0.029	0.015	
107-13-1	Acrylonitrile	0.26	0.82	0.11	0.12	0.38	0.053	J
75-35-4	1,1-Dichloroethene	0.10	0.16	0.082	0.026	0.041	0.021	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.54	0.82	0.12	0.18	0.27	0.040	J
75-09-2	Methylene Chloride	0.97	0.82	0.082	0.28	0.23	0.023	B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.082	ND	0.052	0.026	
76-13-1	Trichlorotrifluoroethane	0.52	0.16	0.091	0.069	0.021	0.012	
75-15-0	Carbon Disulfide	2.7	0.82	0.20	0.86	0.26	0.063	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.082	ND	0.041	0.021	
75-34-3	1,1-Dichloroethane	ND	0.16	0.082	ND	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.082	ND	0.045	0.023	
108-05-4	Vinyl Acetate	2.3	8.2	0.26	0.64	2.3	0.074	J, B
78-93-3	2-Butanone (MEK)	13	0.82	0.082	4.5	0.28	0.028	B
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.082	ND	0.041	0.021	
108-20-3	Diisopropyl Ether	ND	0.82	0.096	ND	0.20	0.023	
67-66-3	Chloroform	1,000	0.16	0.096	200	0.033	0.020	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08      **520**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG14B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00051

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)  
 0.10 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.63

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
637-92-3	Ethyl tert-Butyl Ether	ND	0.82	0.083	ND	0.20	0.020	
107-06-2	1,2-Dichloroethane	ND	0.16	0.082	ND	0.040	0.020	
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.082	ND	0.030	0.015	
71-43-2	<b>Benzene</b>	<b>4.4</b>	0.16	0.082	<b>1.4</b>	0.051	0.026	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>15</b>	0.16	0.082	<b>2.3</b>	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.82	0.082	ND	0.20	0.020	
78-87-5	1,2-Dichloropropane	ND	0.16	0.082	ND	0.035	0.018	
75-27-4	<b>Bromodichloromethane</b>	<b>5.8</b>	0.16	0.082	<b>0.86</b>	0.024	0.012	
79-01-6	<b>Trichloroethene</b>	<b>1.0</b>	0.16	0.082	<b>0.19</b>	0.030	0.015	
123-91-1	1,4-Dioxane	ND	0.82	0.099	ND	0.23	0.028	
80-62-6	Methyl Methacrylate	ND	0.82	0.12	ND	0.20	0.030	
142-82-5	<b>n-Heptane</b>	<b>2.6</b>	0.82	0.10	<b>0.64</b>	0.20	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.82	0.085	ND	0.18	0.019	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>18</b>	0.82	0.091	<b>4.4</b>	0.20	0.022	
10061-02-6	trans-1,3-Dichloropropene	ND	0.82	0.10	ND	0.18	0.023	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.082	ND	0.030	0.015	
108-88-3	<b>Toluene</b>	<b>31</b>	0.82	0.082	<b>8.3</b>	0.22	0.022	
591-78-6	<b>2-Hexanone</b>	<b>2.3</b>	0.82	0.12	<b>0.57</b>	0.20	0.030	
124-48-1	<b>Dibromochloromethane</b>	<b>0.34</b>	0.16	0.11	<b>0.039</b>	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.088	ND	0.021	0.011	
111-65-9	<b>n-Octane</b>	<b>93</b>	0.82	0.082	<b>20</b>	0.17	0.017	
127-18-4	<b>Tetrachloroethene</b>	<b>16</b>	0.16	0.082	<b>2.4</b>	0.024	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>0.66</b>	0.16	0.083	<b>0.14</b>	0.035	0.018	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

B = Analyte was found in the method blank.

Verified By: CA      Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG14B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00051

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)  
 0.10 Liter(s)

Initial Pressure (psig): -3.5      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.63

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	6.3	0.82	0.10	1.5	0.19	0.023	
179601-23-1	m,p-Xylenes	28	0.82	0.21	6.4	0.19	0.049	
75-25-2	Bromoform	0.43	0.82	0.12	0.041	0.079	0.012	J
100-42-5	Styrene	0.47	0.82	0.12	0.11	0.19	0.029	J
95-47-6	o-Xylene	8.8	0.82	0.10	2.0	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.024	0.015	
98-82-8	Cumene	0.56	0.82	0.091	0.11	0.17	0.019	J
103-65-1	n-Propylbenzene	1.1	0.82	0.085	0.22	0.17	0.017	
622-96-8	4-Ethyltoluene	1.8	0.82	0.093	0.37	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	2.4	0.82	0.098	0.49	0.17	0.020	
98-83-9	alpha-Methylstyrene	0.52	0.82	0.12	0.11	0.17	0.025	J
95-63-6	1,2,4-Trimethylbenzene	5.7	0.82	0.11	1.2	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	13	0.16	0.091	2.2	0.027	0.015	
135-98-8	sec-Butylbenzene	0.15	0.82	0.095	0.026	0.15	0.017	J
99-87-6	4-Isopropyltoluene (p-Cymene)	2.9	0.82	0.11	0.53	0.15	0.019	
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.82	0.12	ND	0.084	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.017	
91-20-3	Naphthalene	1.3	0.33	0.12	0.25	0.062	0.023	
87-68-3	Hexachlorobutadiene	10	0.16	0.15	0.97	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.082	ND	0.059	0.015	
104-51-8	n-Butylbenzene	0.71	0.33	0.082	0.13	0.059	0.015	M

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

M = Matrix interference due to coelution with a non-target compound; results may be biased high.

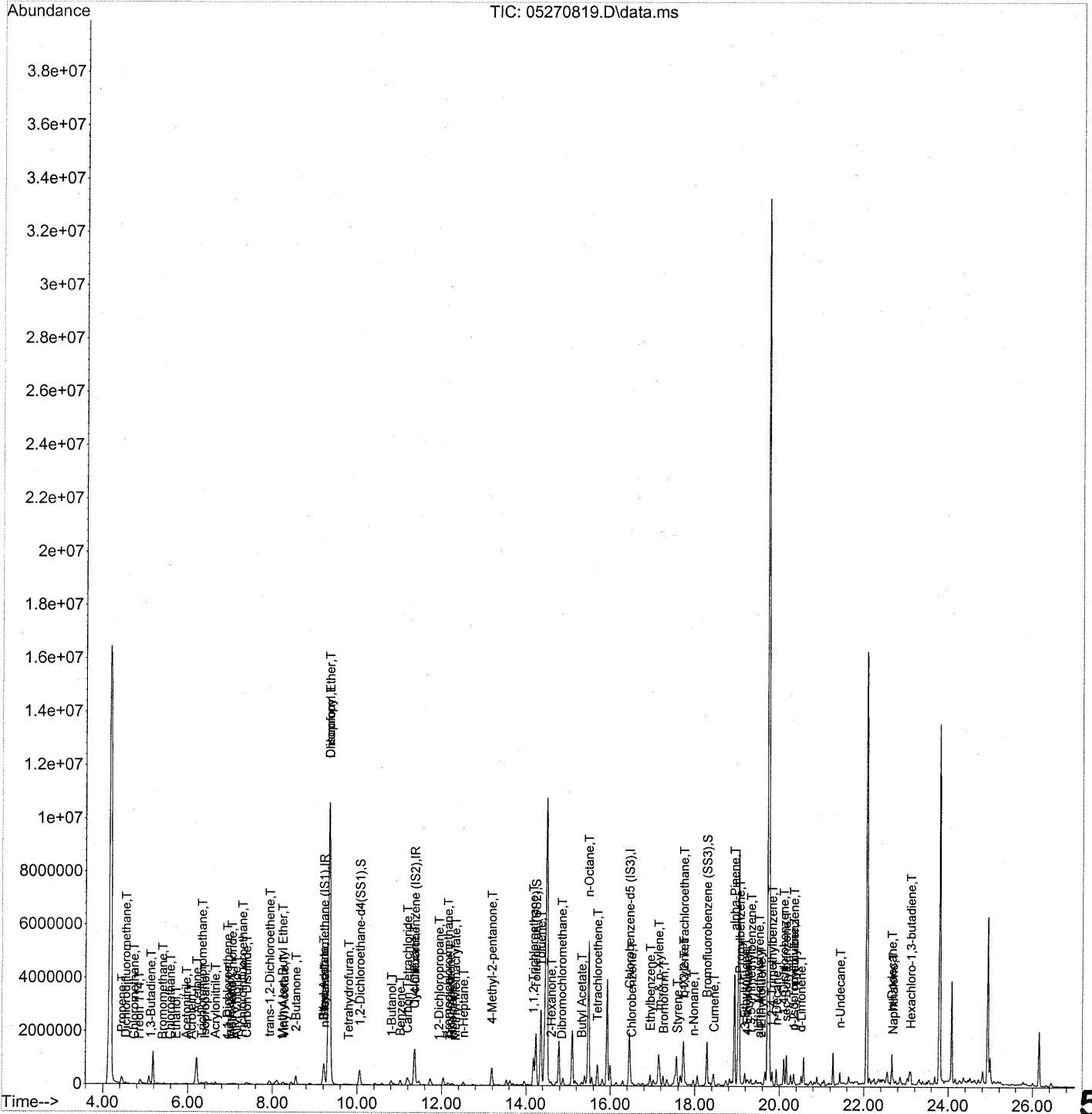
Verified By: CA      Date: 6/5/08

**522**



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 08:31:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



523

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 08:31:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.22	130	379532	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	11.36	114	1577066	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	651799	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.06	65	542292	24.988	ng	-0.03
Spiked Amount	25.000		Recovery =	99.96%		✓
57) Toluene-d8 (SS2)	14.24	98	1621346	24.128	ng	-0.01
Spiked Amount	25.000		Recovery =	96.52%		✓
73) Bromofluorobenzene (SS3)	18.29	174	573066	25.650	ng	0.00
Spiked Amount	25.000		Recovery =	102.60%		✓

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	122172	4.158	ng	91
3) Dichlorodifluoromethane	4.54	85	49350	0.389	ng	100
4) Chloromethane	4.74	50	6470	0.145	ng	96
5) Freon 114	4.85	135	1041	0.052	ng	41
6) Vinyl Chloride	4.97	62	90	N.D.		✓
7) 1,3-Butadiene	5.12	54	18988	0.733	ng	# 27
8) Bromomethane	5.41	94	1097	0.075	ng	UR# 3
9) Chloroethane	5.58	64	2795	0.190	ng	90
10) Ethanol	5.72	45	53258m	2.672	ng	
11) Acetonitrile	5.96	41	53428	0.930	ng	93
12) Acrolein	6.09	56	27440	1.909	ng	# 63
13) Acetone	6.21	58	578805	29.187	ng	# 77
14) Trichlorofluoromethane	6.33	101	58519	1.759	ng	97
15) Isopropanol	6.40	45	124280	2.080	ng	93
16) Acrylonitrile	6.64	53	5745	0.159	ng	97
17) 1,1-Dichloroethene	6.93	96	974	0.063	ng	# 1
18) tert-Butanol	6.99	59	18387m	0.330	ng	
19) Methylene Chloride	7.04	84	9084	0.594	ng	# 73
20) Allyl Chloride	7.14	41	5092	0.144	ng	UR# 45
21) Trichlorotrifluoroethane	7.29	151	5203	0.322	ng	87
22) Carbon Disulfide	7.39	76	100960	1.641	ng	99
23) trans-1,2-Dichloroethene	7.93	61	2095	0.069	ng	UR# 19
24) 1,1-Dichloroethane	8.18	63	1264	N.D.		✓
25) Methyl tert-Butyl Ether	8.23	73	4821	0.102	ng	UR# 53
26) Vinyl Acetate	8.27	86	4503	1.386	ng	# 37
27) 2-Butanone	8.55	72	85110	8.209	ng	# 22
28) cis-1,2-Dichloroethene	9.03	61	183	N.D.		✓
29) Diisopropyl Ether	9.34	87	1505454	140.232	ng	UR# 1
30) Ethyl Acetate	9.20	61	19664	2.718	ng	89
31) n-Hexane	9.23	57	28659	0.663	ng	92

524

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 08:31:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.34	83	14048656	<del>627.273</del>	ng	<i>see del</i> 96
34) Tetrahydrofuran	9.80	72	5422	0.556	ng	# 47
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	10.19	62	1230	N.D.	✓	
38) 1,1,1-Trichloroethane	10.49	97	1001	N.D.	✓	
39) Isopropyl Acetate	10.78	61	219	N.D.		
40) 1-Butanol	10.82	56	177969	6.856	ng	# 68
41) Benzene	11.02	78	178816	2.689	ng	99
42) Carbon Tetrachloride	11.19	117	244659	8.971	ng	99
43) Cyclohexane	11.35	84	12869	0.495	ng	# 1
44) tert-Amyl Methyl Ether	11.60	73	106	N.D.	✓	
45) 1,2-Dichloropropane	11.94	63	1154	<del>0.059</del>	ng	<i>NR</i> 98
46) Bromodichloromethane	12.15	83	69037	3.532	ng	96
47) Trichloroethene	12.20	130	13041	0.630	ng	99
48) 1,4-Dioxane	12.15	88	351	N.D.	✓	
49) Isooctane	12.26	57	62869	0.591	ng	71
50) Methyl Methacrylate	12.33	100	907	<del>0.127</del>	ng	<i>NR</i> # 1
51) n-Heptane	12.52	71	25510	1.607	ng	# 58
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
53) 4-Methyl-2-pentanone	13.19	58	252898	10.939	ng	83
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
55) 1,1,2-Trichloroethane	14.18	97	1243	<del>0.077</del>	ng	<i>NR</i> # 1
58) Toluene	14.35	91	1461913	19.179	ng	99
59) 2-Hexanone	14.60	43	102971	1.430	ng	77
60) Dibromochloromethane	14.85	129	4639	0.206	ng	99
61) 1,2-Dibromoethane	0.00	107	0	N.D.	✓	
62) Butyl Acetate	15.32	43	44347	0.613	ng	# 29
63) n-Octane	15.49	57	1320046	57.272	ng	95
64) Tetrachloroethene	15.70	166	227946	10.110	ng	98
65) Chlorobenzene	16.50	112	21858	0.402	ng	78
66) Ethylbenzene	16.94	91	335103	3.868	ng	93
67) m- & p-Xylene	17.14	91	982619	17.118	ng	92
68) Bromoform	17.26	173	3418	0.262	ng	98
69) Styrene	17.59	104	16061	0.290	ng	99
70) o-Xylene	17.73	91	333449	5.427	ng	92
71) n-Nonane	17.97	43	114072	1.881	ng	91
72) 1,1,2,2-Tetrachloroethane	17.74	83	2312	<del>0.091</del>	ng	<i>NR</i> # 1
74) Cumene	18.45	105	30977	0.346	ng	97
75) alpha-Pinene	18.94	93	1967878	46.891	ng	92
76) n-Propylbenzene	19.06	91	68515	0.659	ng	# 84
77) 3-Ethyltoluene	19.19	105	222654	2.269	ng	93
78) 4-Ethyltoluene	19.24	105	99070	1.119	ng	93
79) 1,3,5-Trimethylbenzene	19.33	105	117091	1.492	ng	88

525

*WA 6/4/08*

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 08:31:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

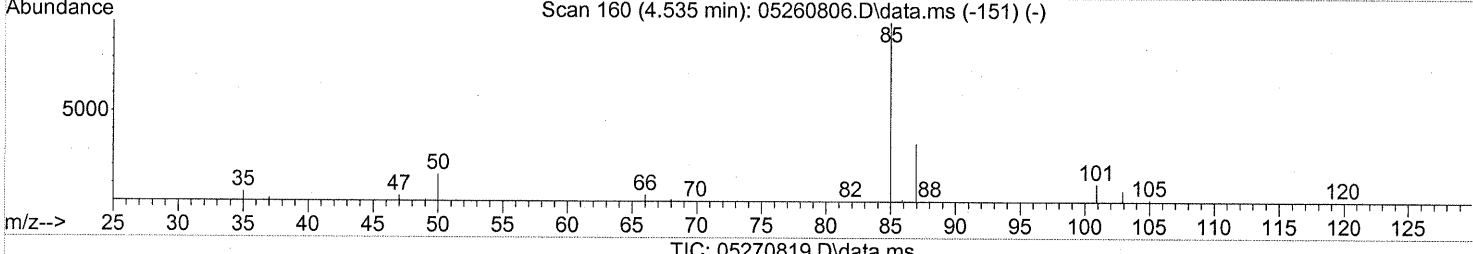
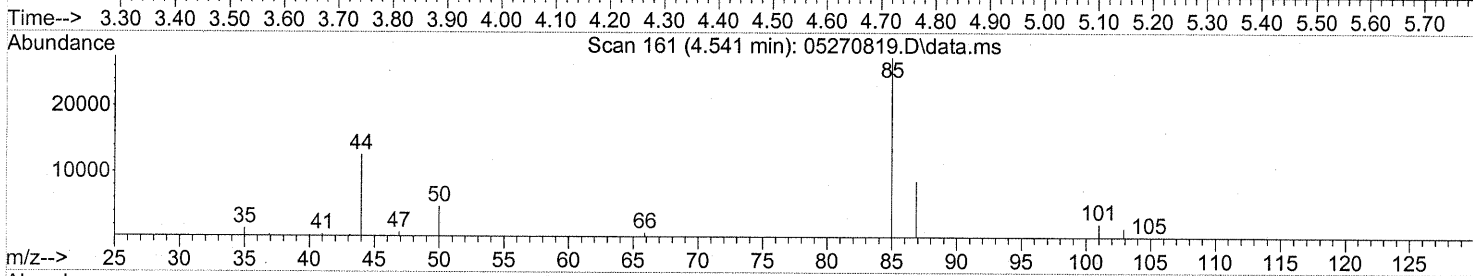
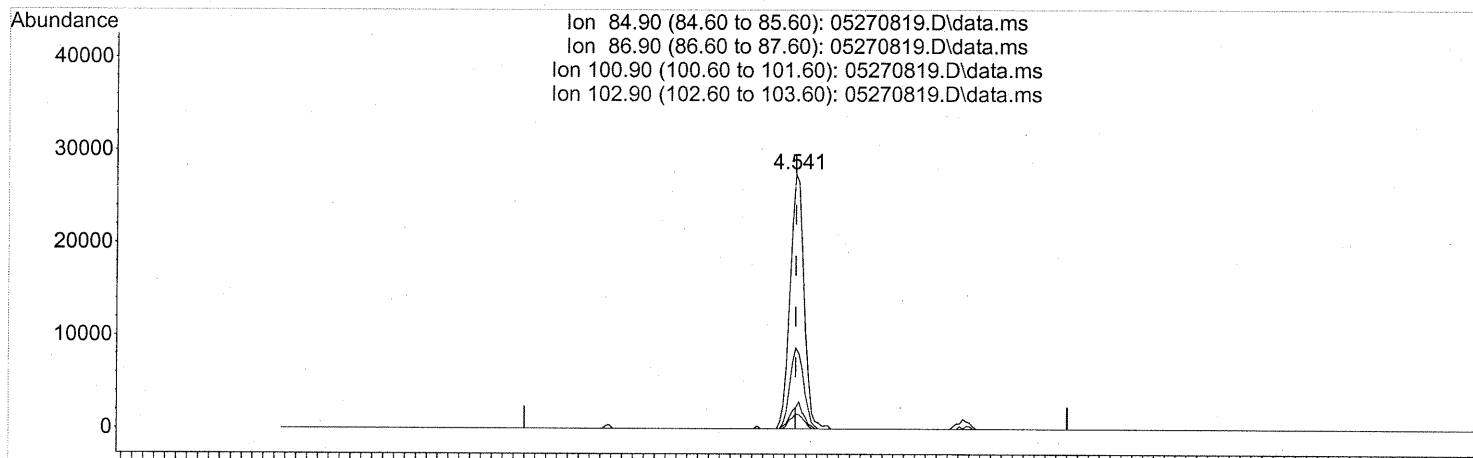
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	14223	0.322	ng	# 65
81) 2-Ethyltoluene	19.57	105	80290	0.844	ng	88
82) 1,2,4-Trimethylbenzene	19.83	105	276191	3.475	ng	97
83) n-Decane	19.93	57	246747	4.386	ng	82
84) Benzyl Chloride	19.99	91	3060	N.D.	✓	
85) 1,3-Dichlorobenzene	20.03	146	1796	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	397262	8.127	ng	99
87) sec-Butylbenzene	20.15	105	9174	0.089	ng	79
88) p-Isopropyltoluene	20.34	119	161629	1.794	ng	97
89) 1,2,3-Trimethylbenzene	20.34	105	100510	1.317	ng	85
90) 1,2-Dichlorobenzene	20.52	146	1087	N.D.	✓	
91) d-Limonene	20.52	68	76219	3.112	ng	86
92) 1,2-Dibromo-3-Chloropr...	21.17	157	92	N.D.	✓	
93) n-Undecane	21.43	57	197851	3.353	ng	84
94) 1,2,4-Trichlorobenzene	22.85	184	321	N.D.	✓	
95) Naphthalene	22.69	128	93810	0.812	ng	88
96) n-Dodecane	22.66	57	420220	7.310	ng	76
97) Hexachloro-1,3-butadiene	23.11	225	88219	6.351	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.541min (-0.000) 1.39ng

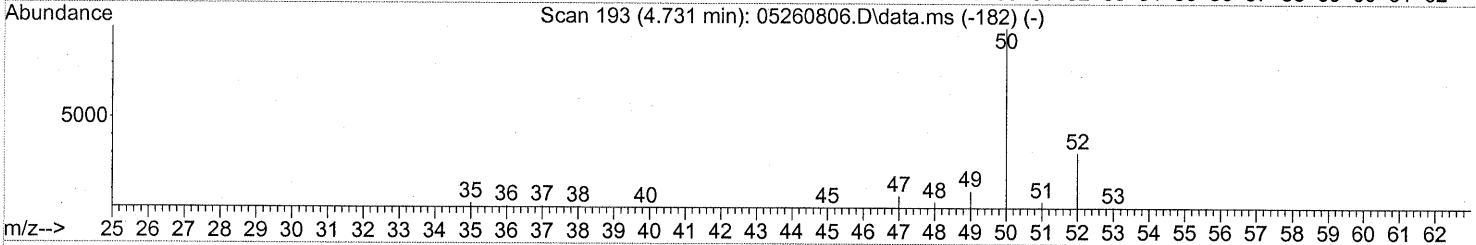
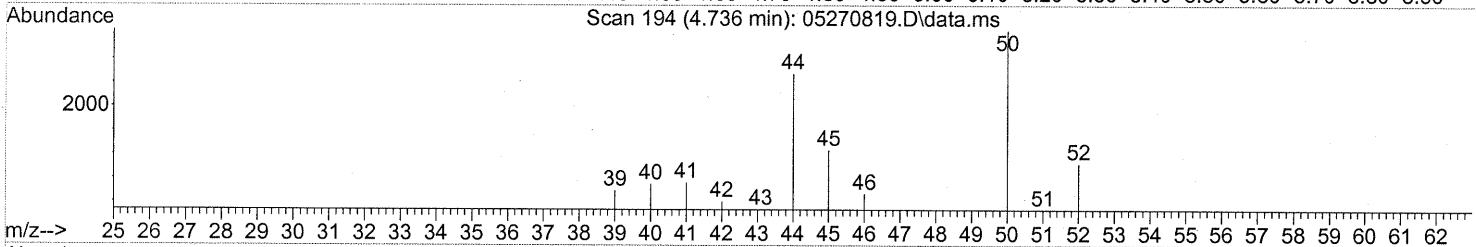
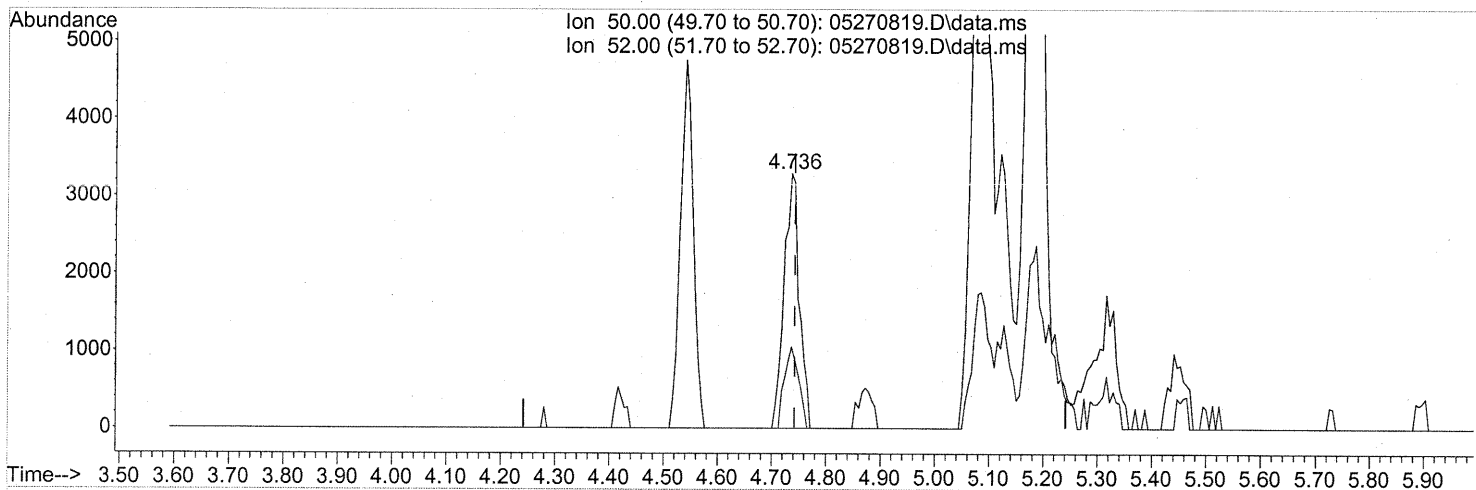
response 49350

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	31.50
100.90	8.40	9.26
102.90	5.50	5.48

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(4) Chloromethane (T)

4.736min (-0.006) 0.14ng

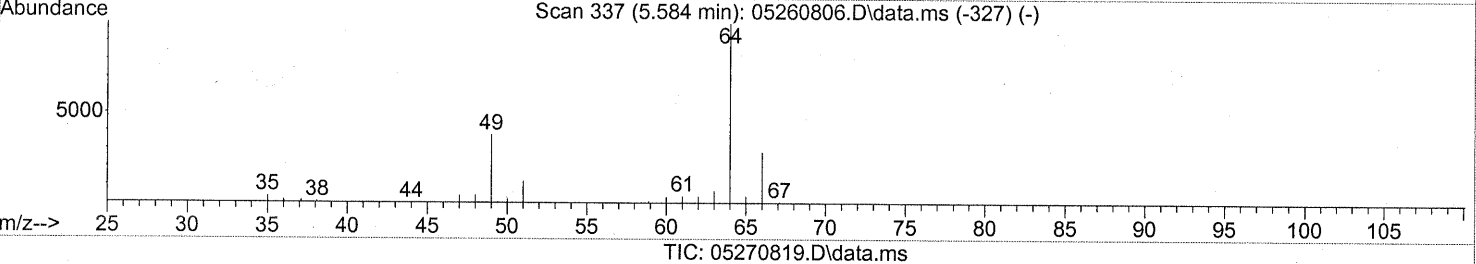
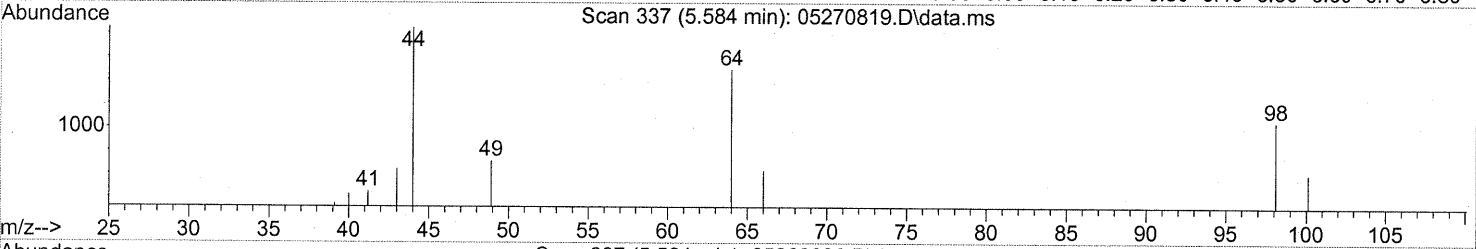
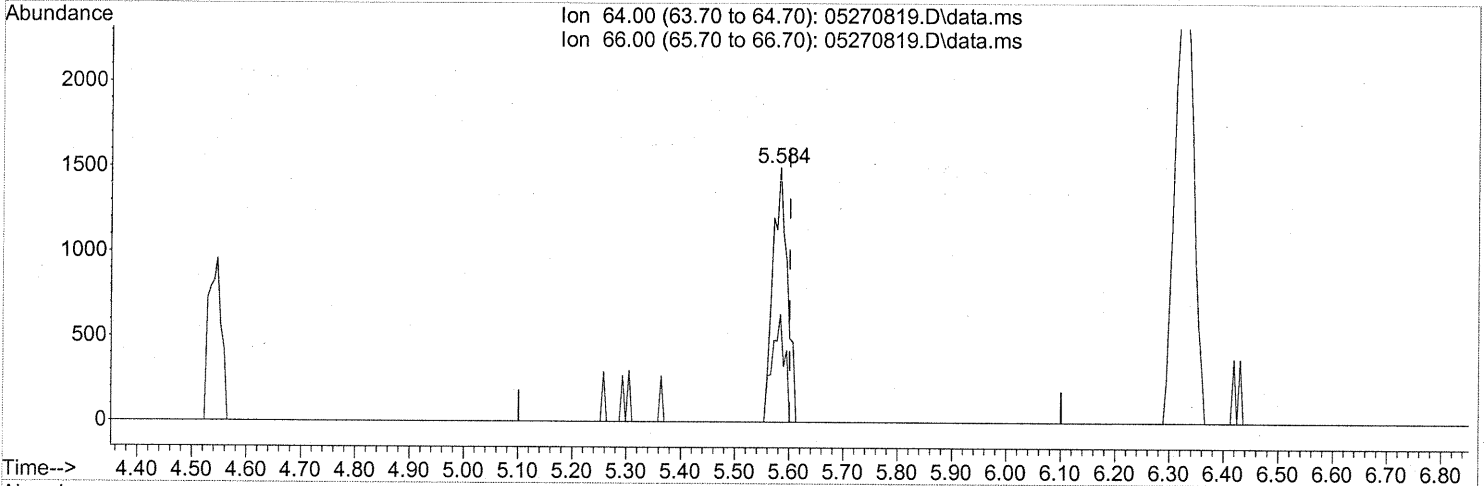
response 6470

Ion	Exp%	Act%
50.00	100	100
52.00	31.80	29.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



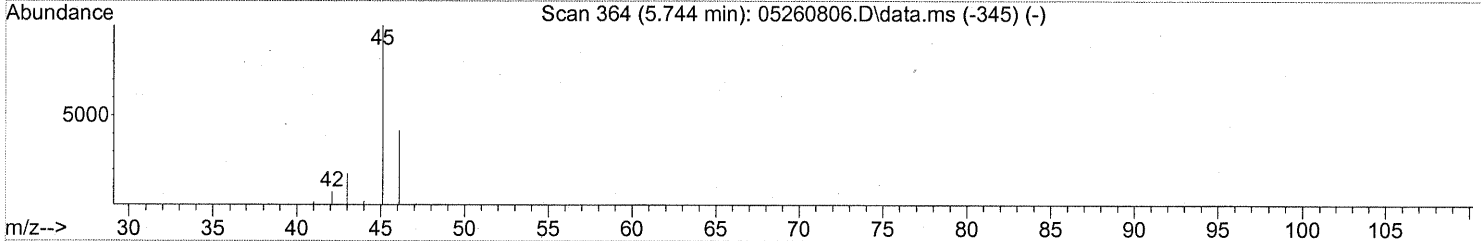
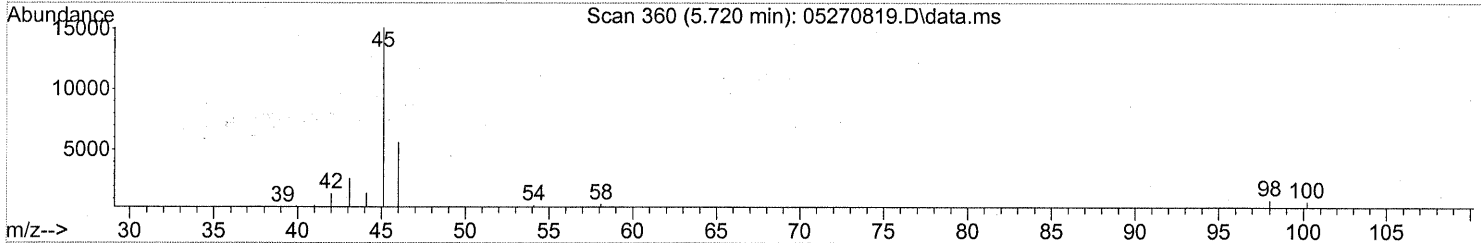
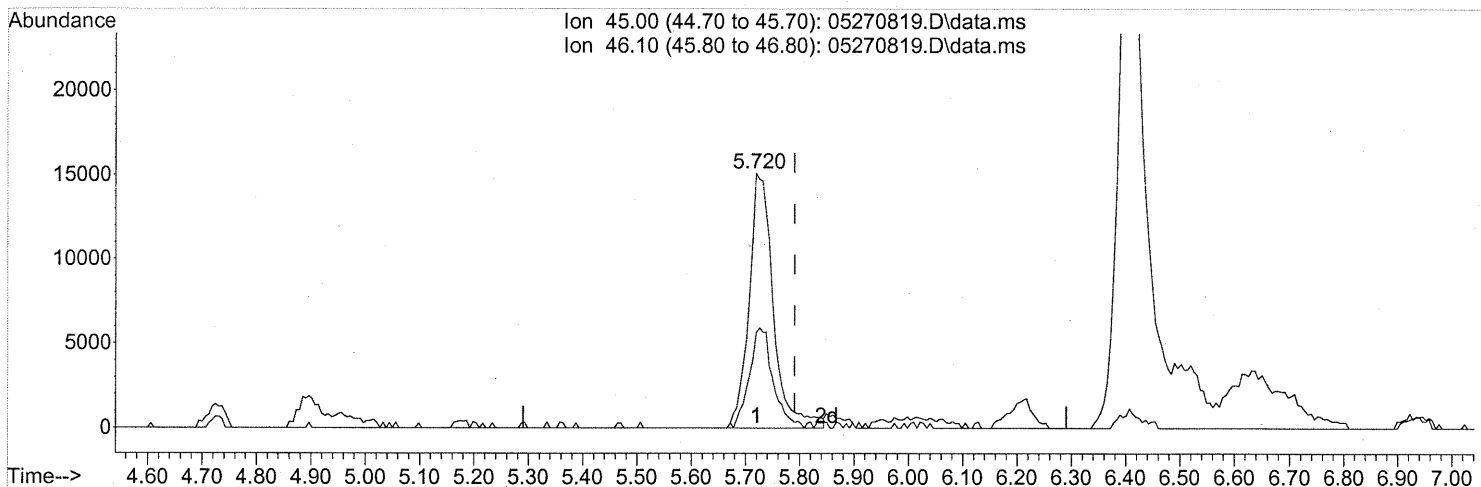
(9) Chloroethane (T)  
 5.584min (-0.018) 0.19ng  
 response 2795

Ion	Exp%	Act%
64.00	100	100
66.00	31.40	36.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(10) Ethanol (T)

5.720min (-0.071) 2.34ng

response 46569

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.35
0.00	0.00	0.00
0.00	0.00	0.00

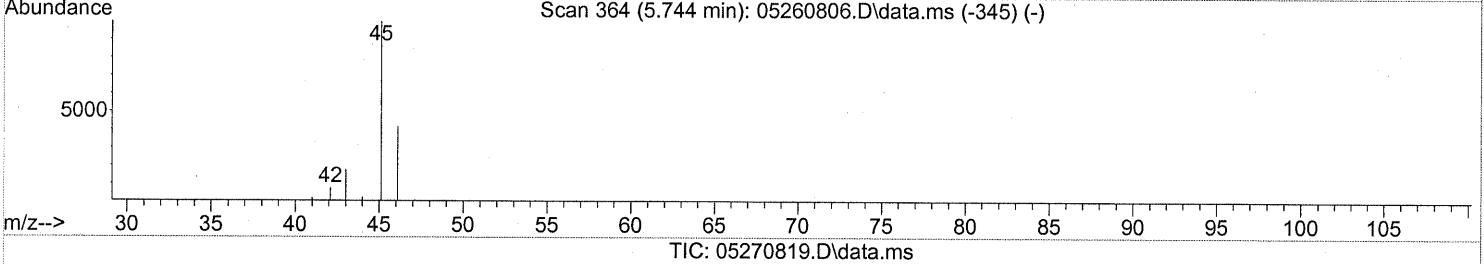
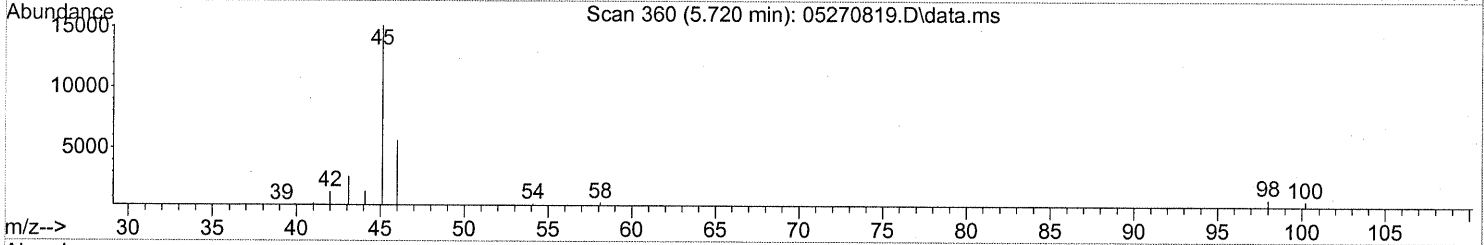
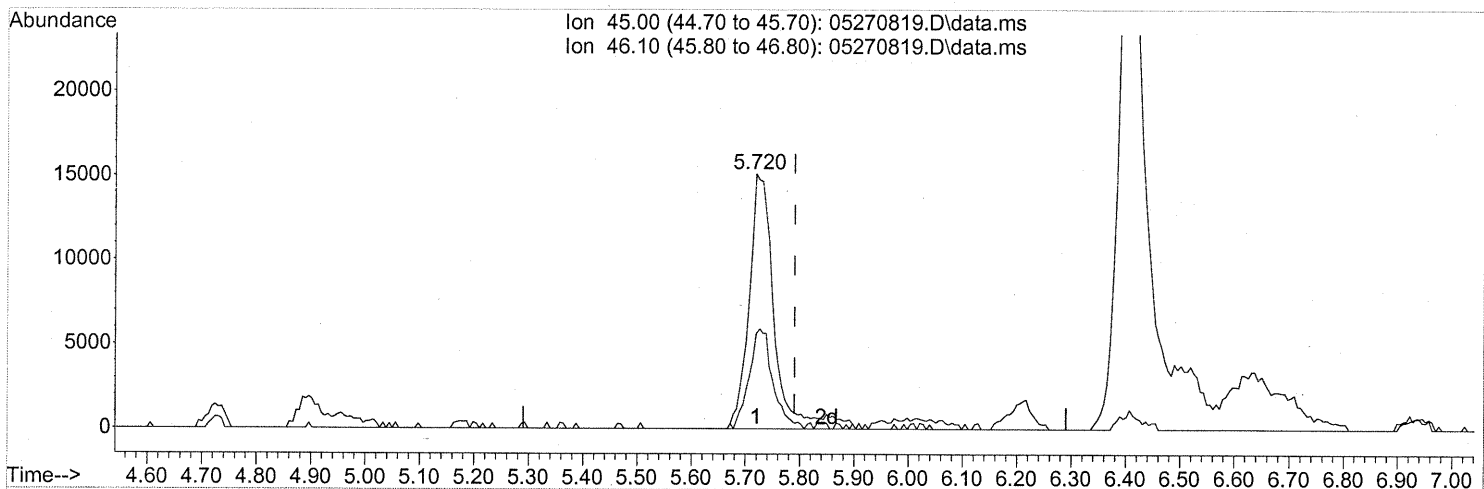
*tailing*



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.720min (-0.071) 2.67ng m

response 53258

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	33.53
0.00	0.00	0.00
0.00	0.00	0.00

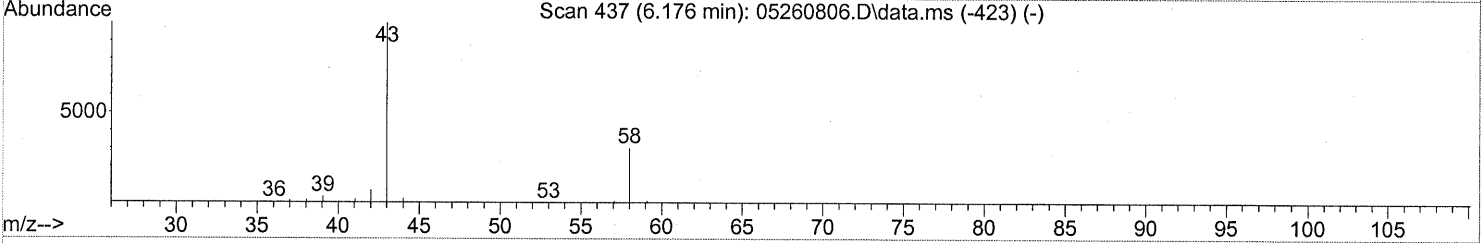
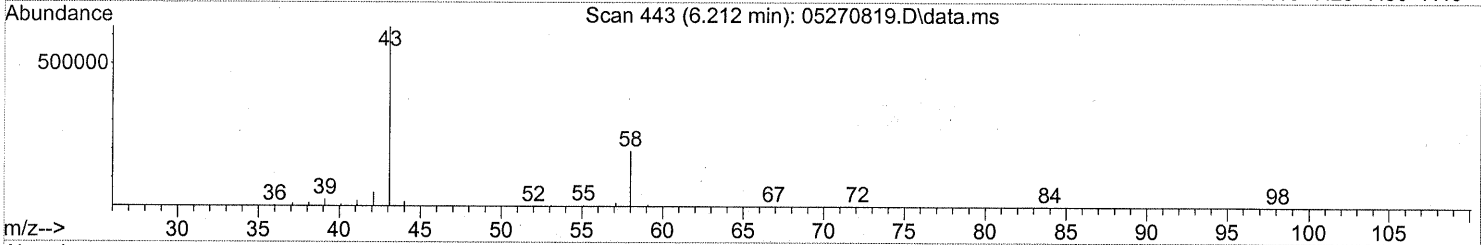
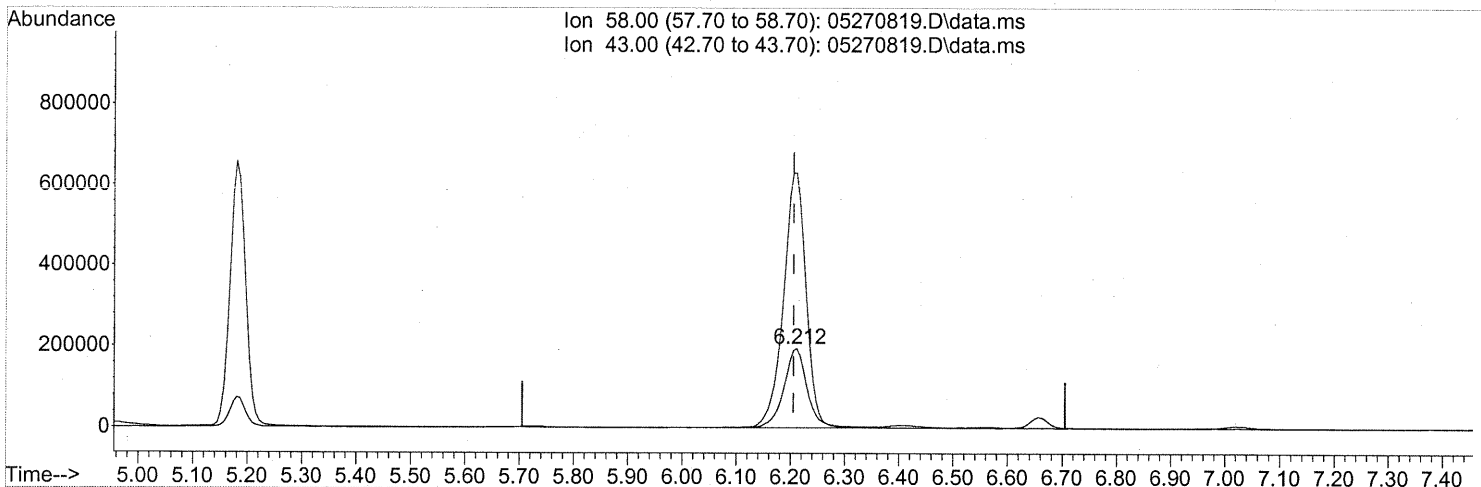
*incl. tailing*

*PA 6/4/08*

*C. 6/4/08*

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

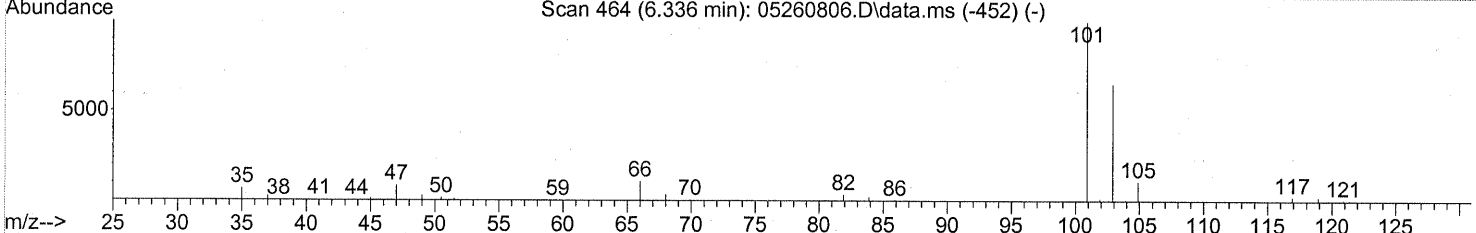
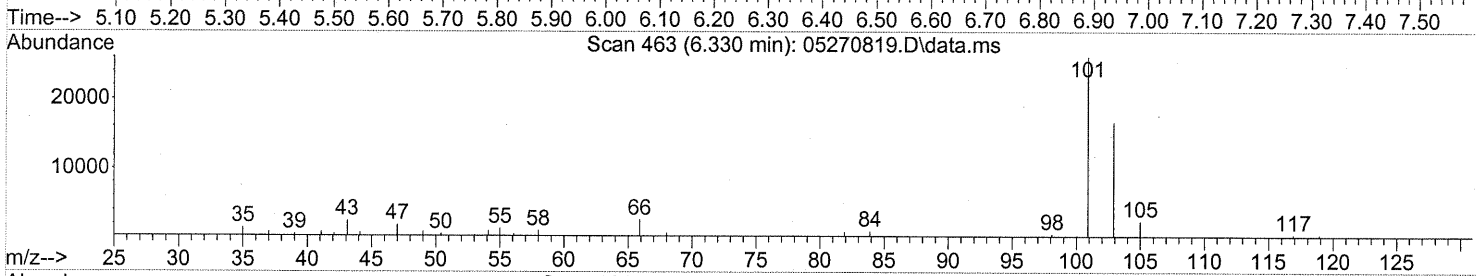
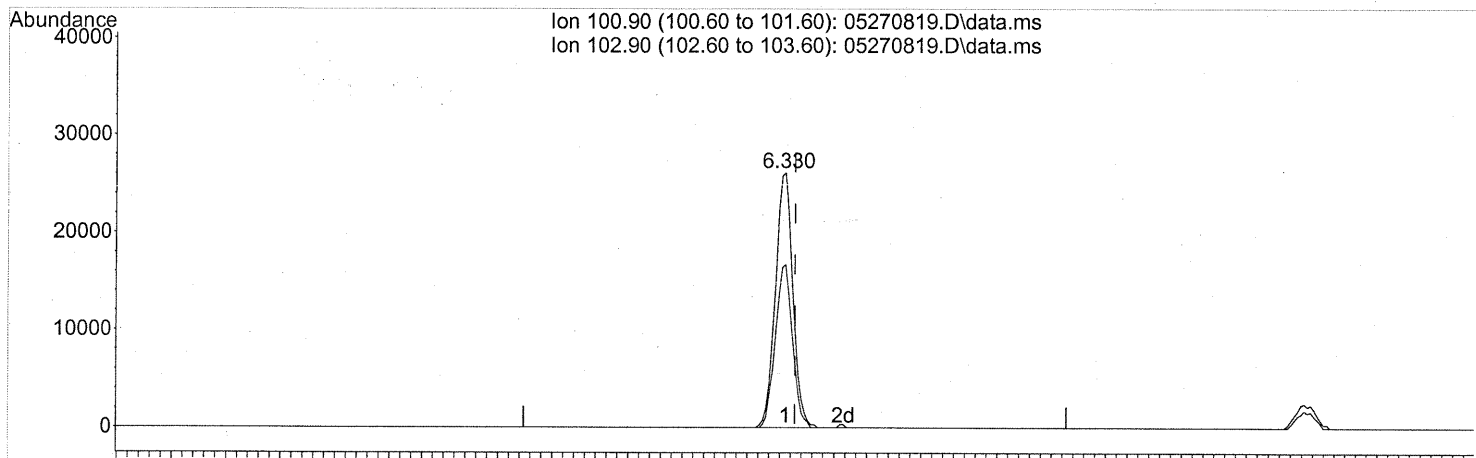
(13) Acetone (T)  
 6.212min (+0.006) 29.19ng  
 response 578805

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	317.36#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(14) Trichlorofluoromethane (T)

6.330min (-0.018) 1.76ng

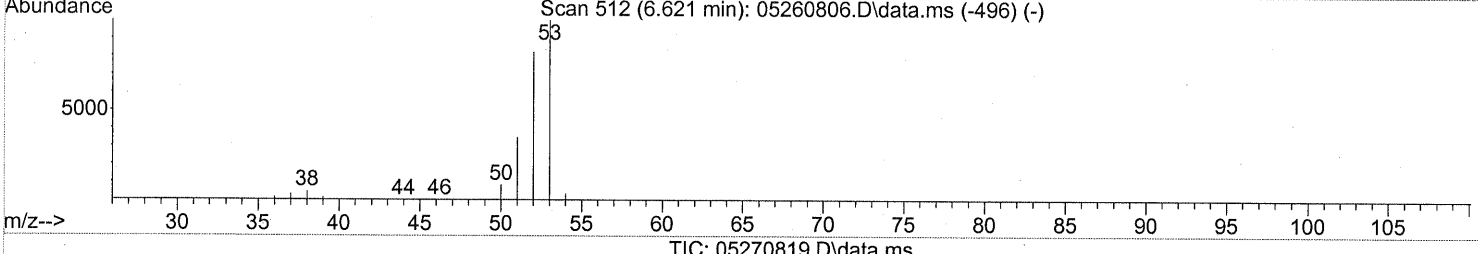
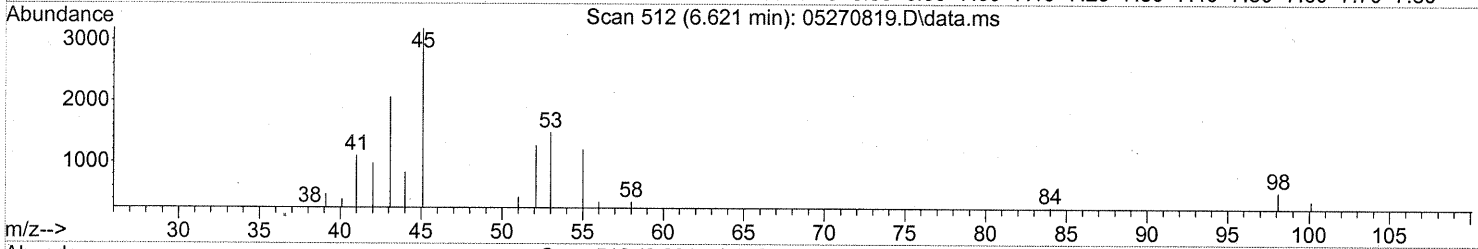
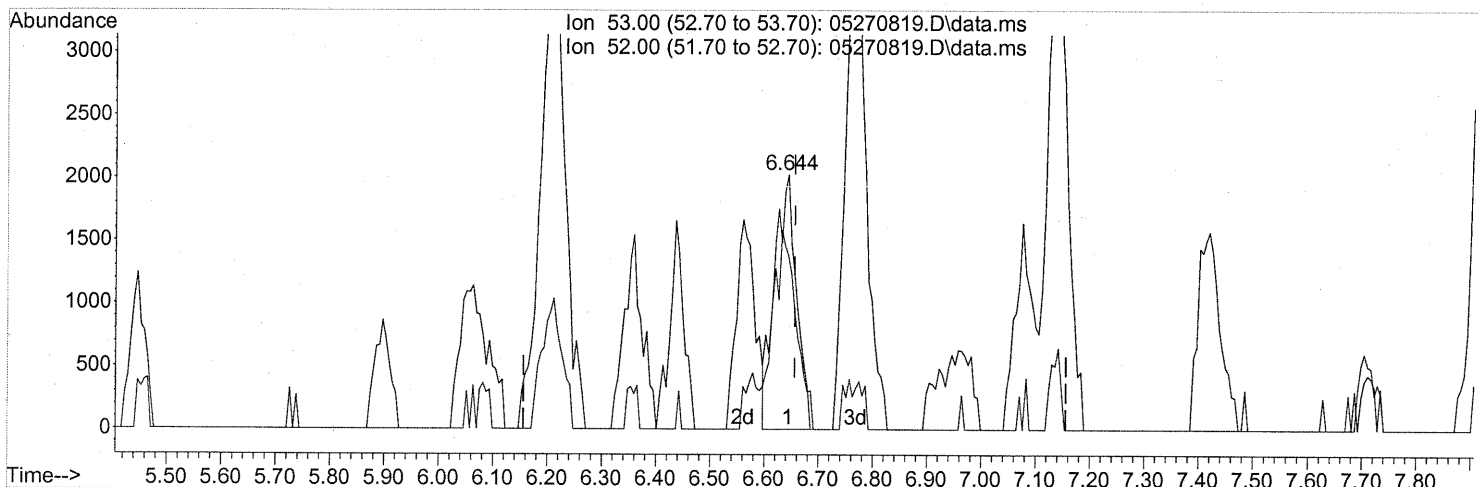
response 58519

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	62.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



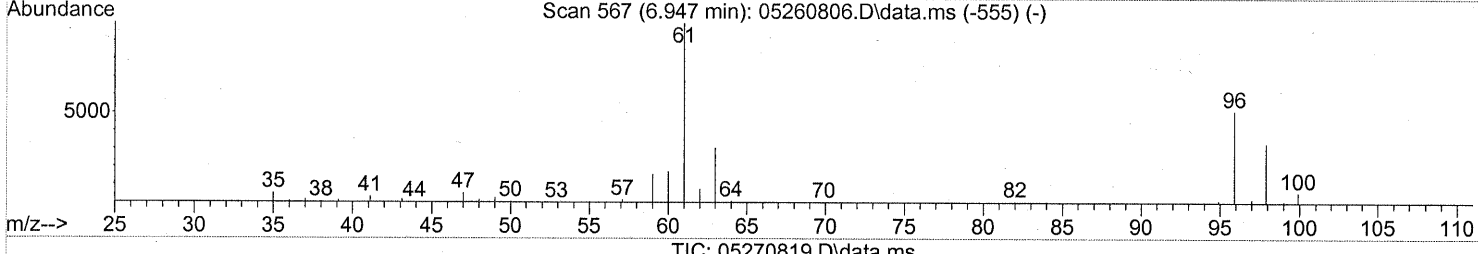
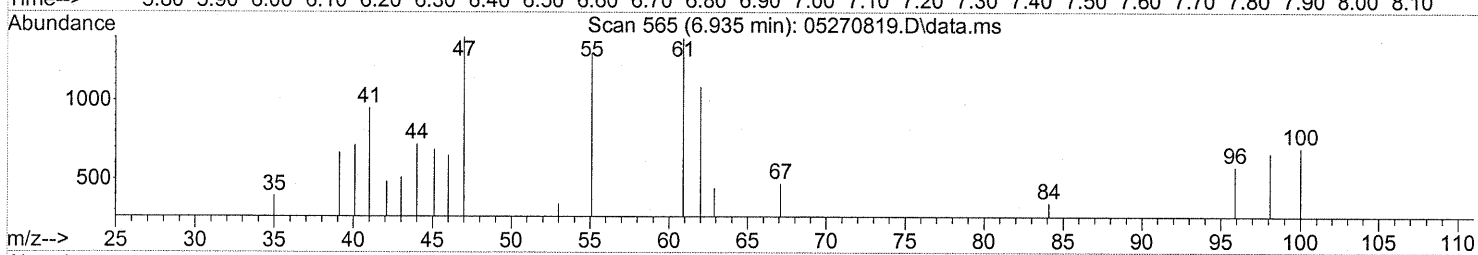
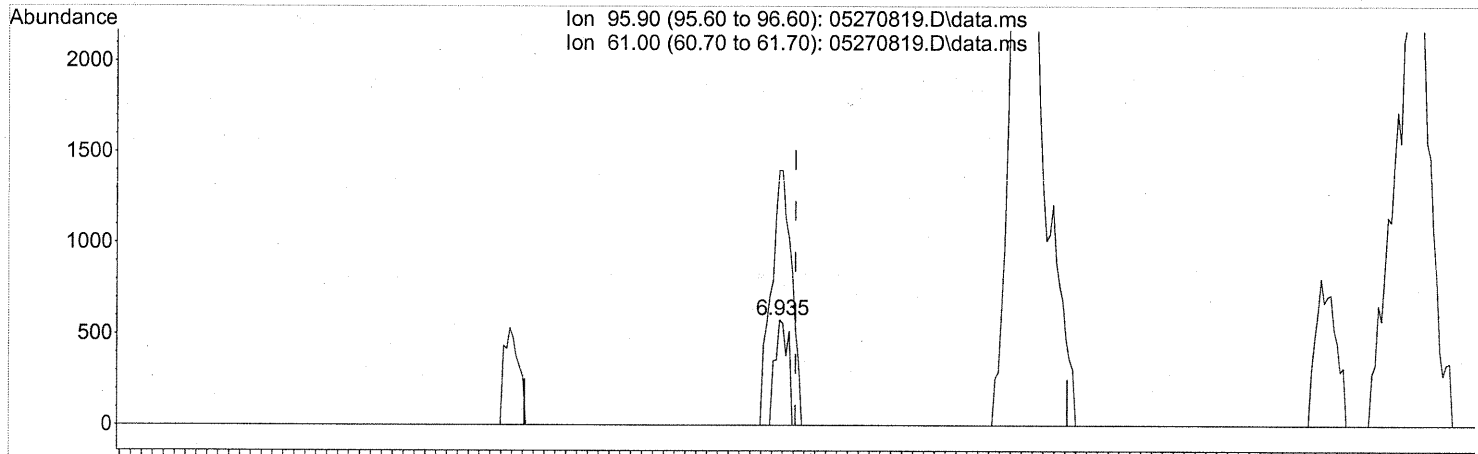
(16) Acrylonitrile (T)  
 6.644min (-0.012) 0.16ng  
 response 5745

Ion	Exp%	Act%
53.00	100	100
52.00	86.70	83.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

6.935min (-0.030) 0.06ng

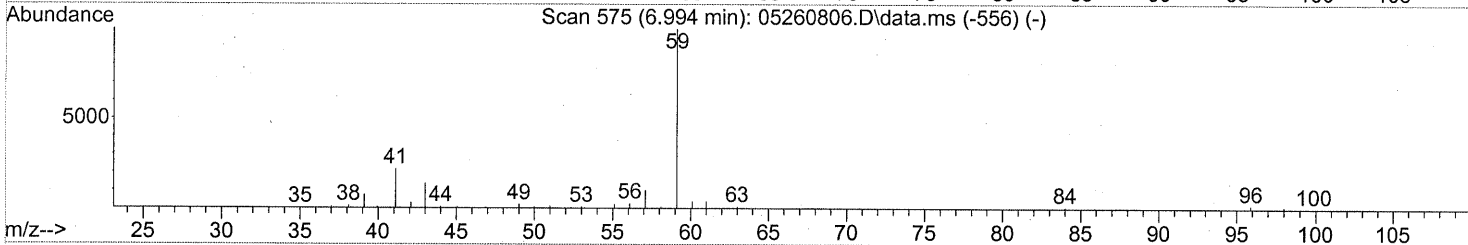
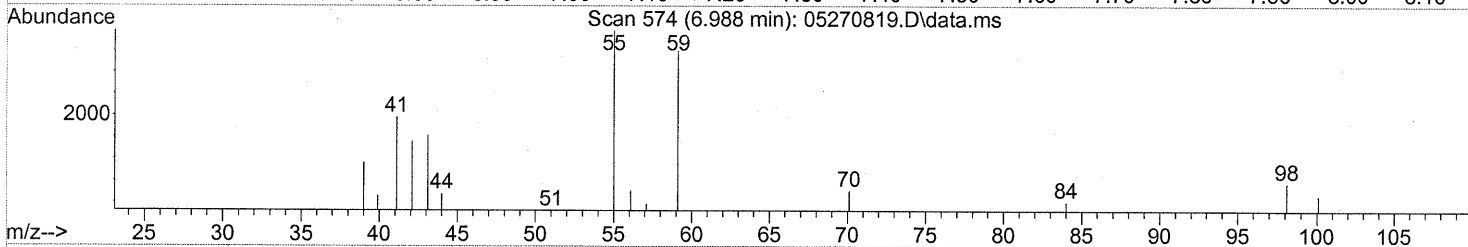
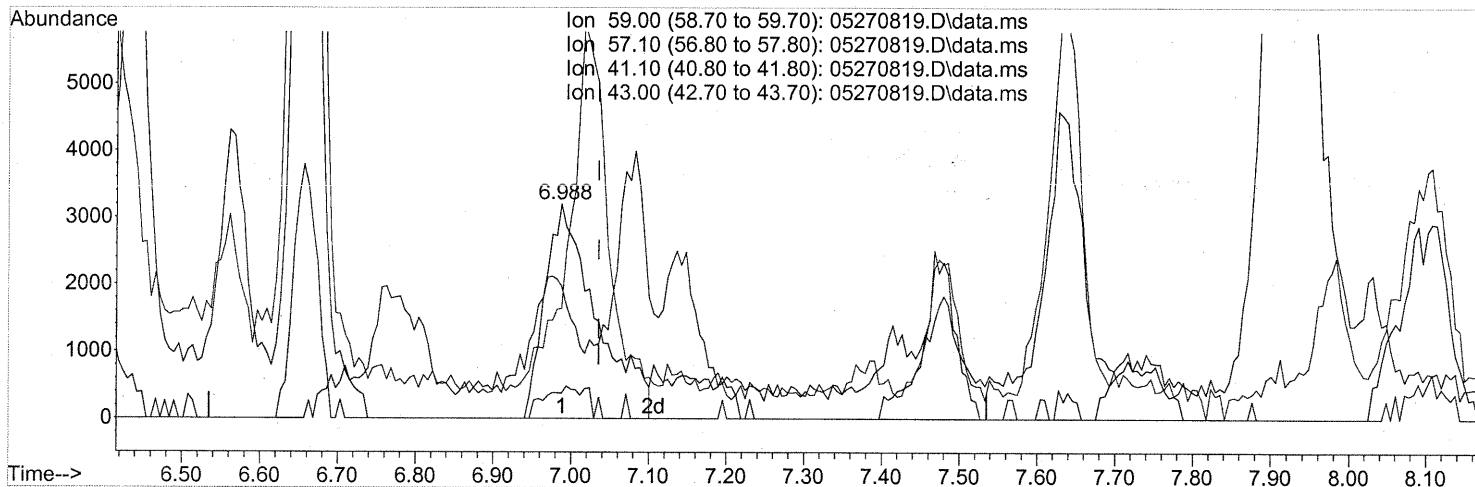
response 974

Ion	Exp%	Act%
95.90	100	100
61.00	189.30	375.98#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(18) tert-Butanol (T)

6.988min (-0.048) 0.26ng

response 14628

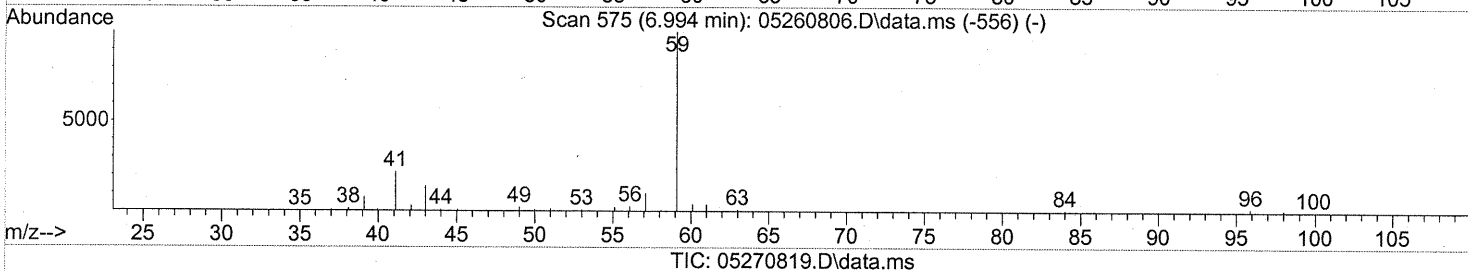
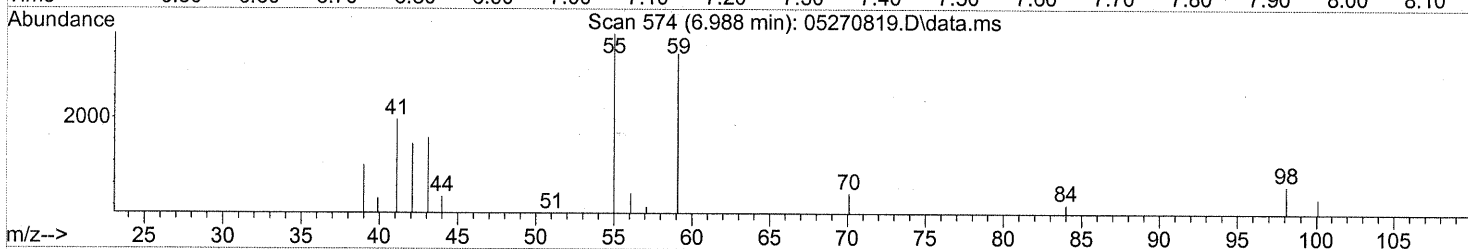
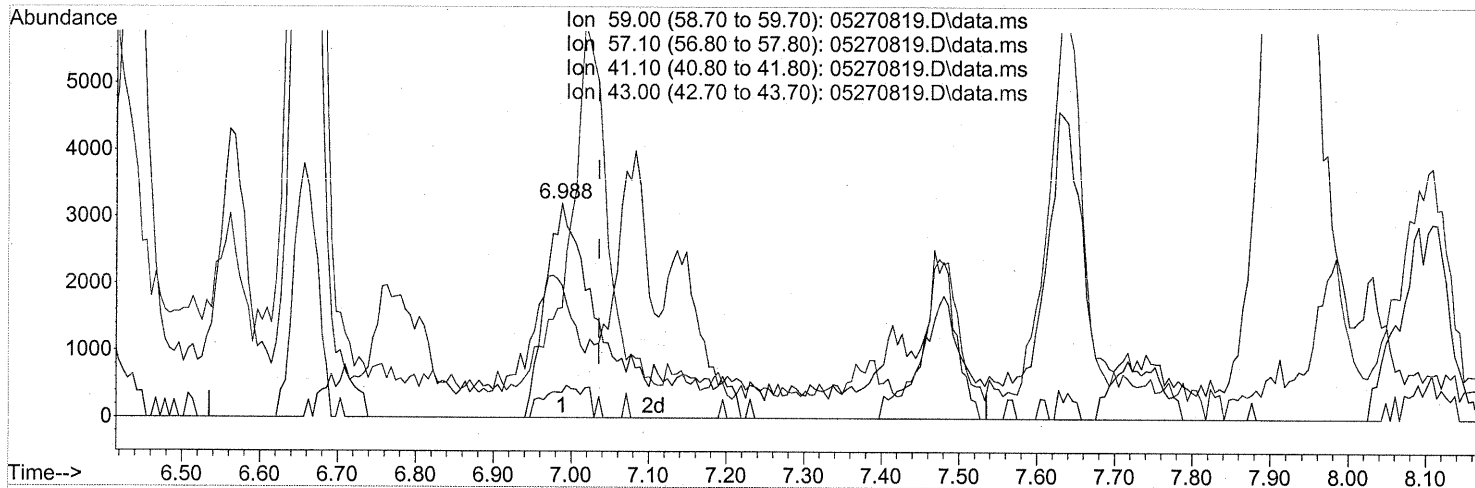
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	12.55
41.10	21.90	47.57#
43.00	17.20	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.988min (-0.048) 0.33ng m

response 18387

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.99
41.10	21.90	37.84
43.00	17.20	0.00

*int. whole peaks*

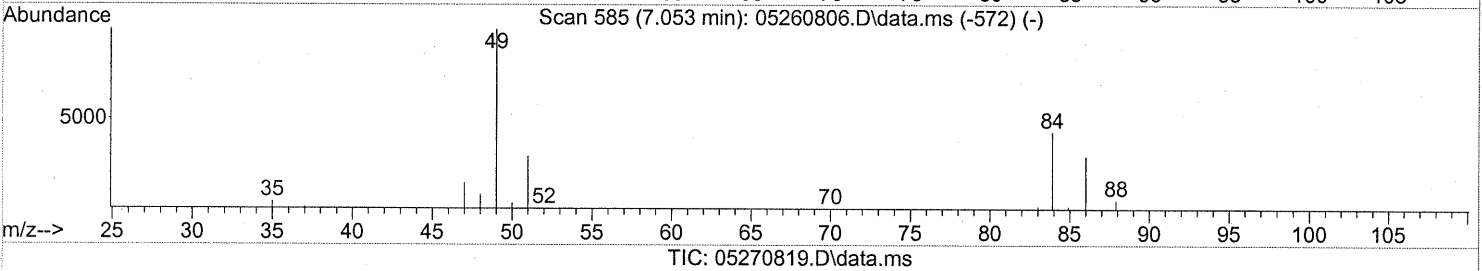
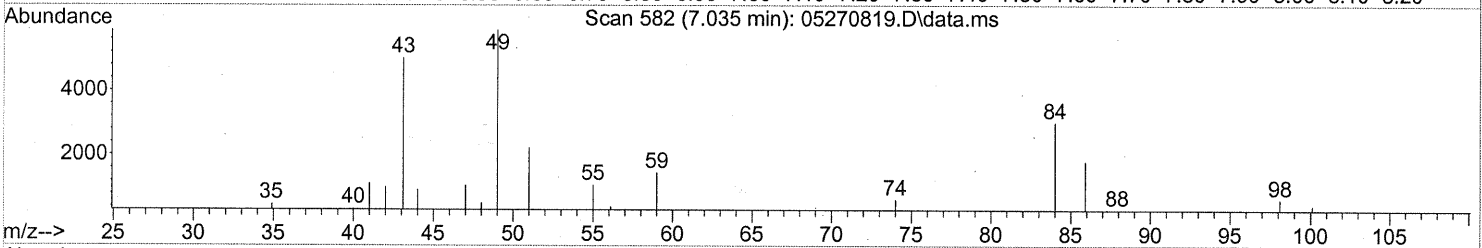
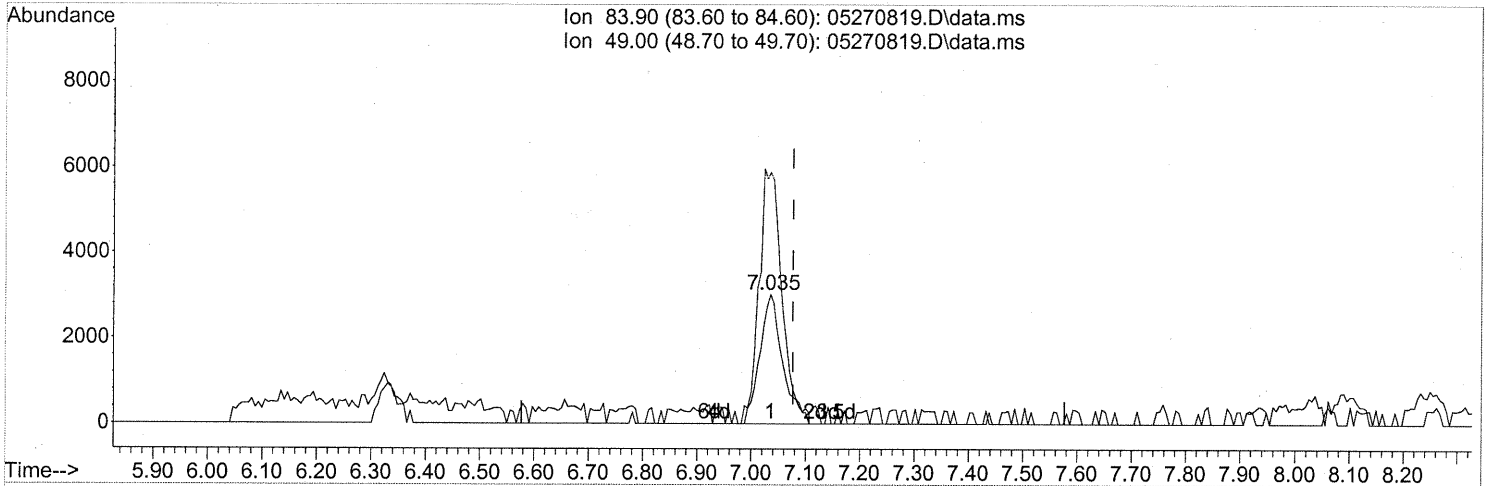
*DA 6/4/08*

*6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.035min (-0.042) 0.59ng

response 9084

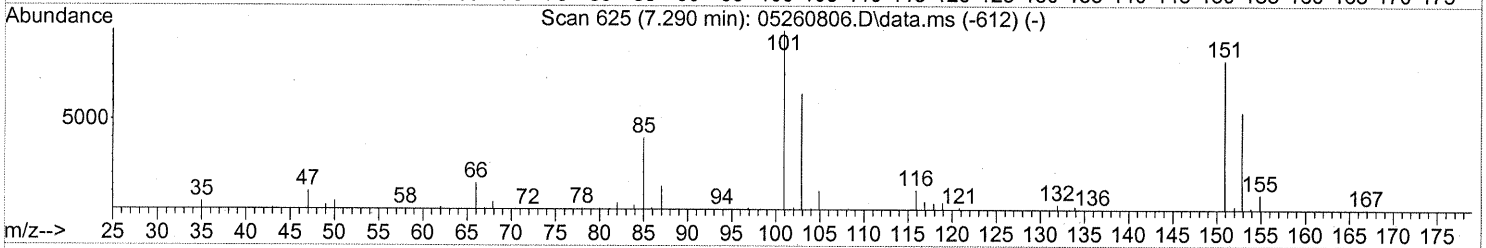
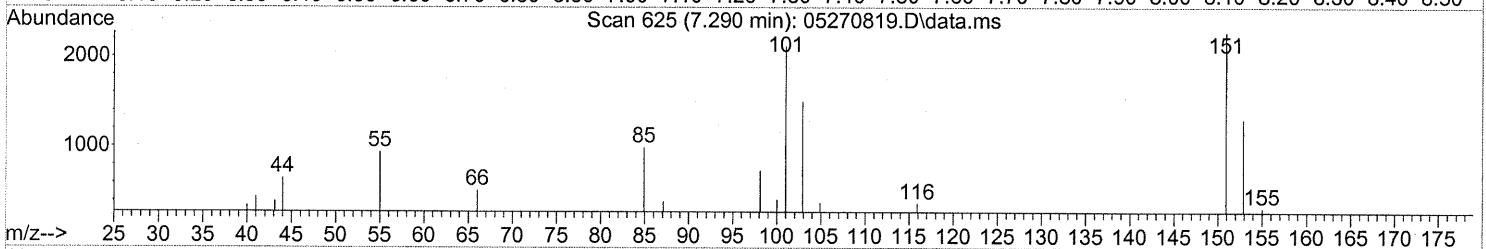
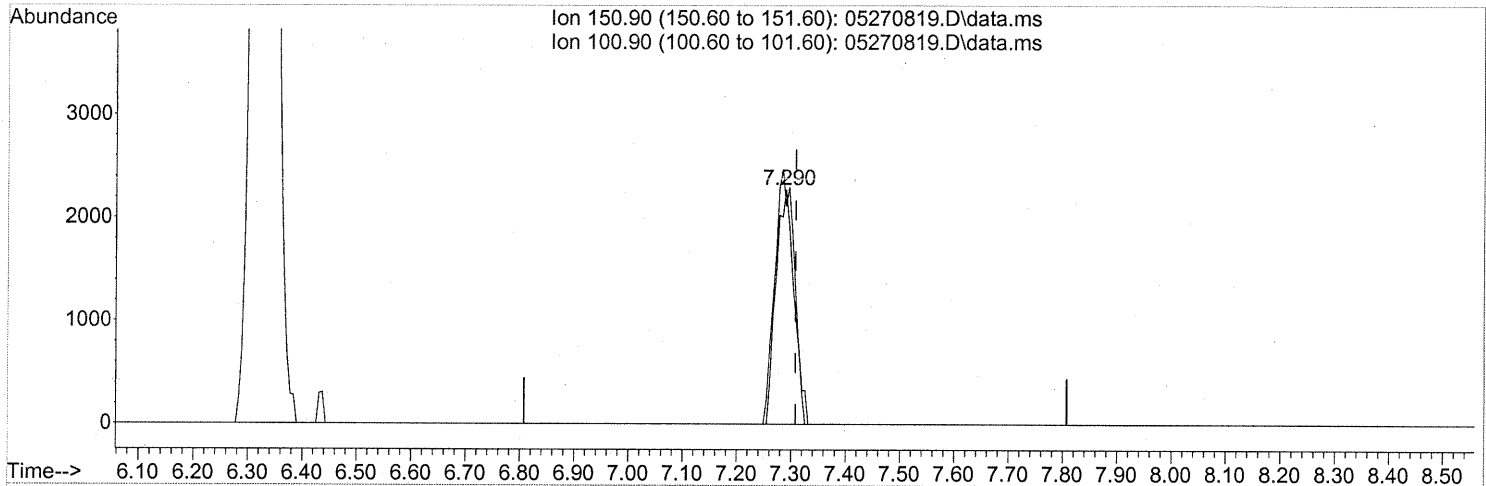
Ion	Exp%	Act%
83.90	100	100
49.00	155.50	190.94#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

7.290min (-0.018) 0.32ng

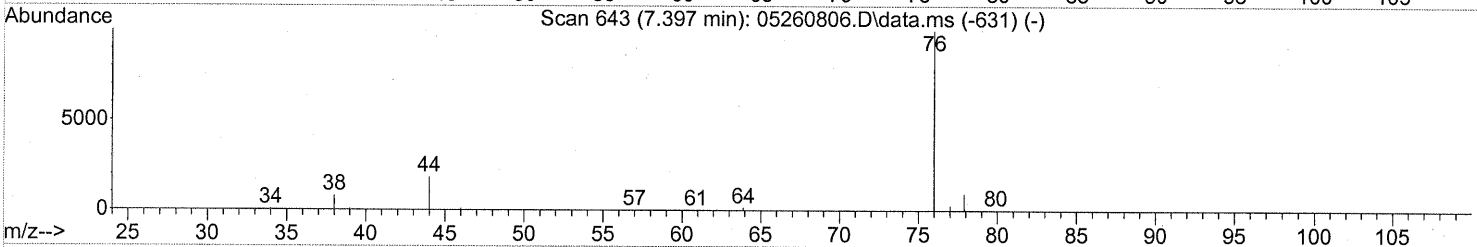
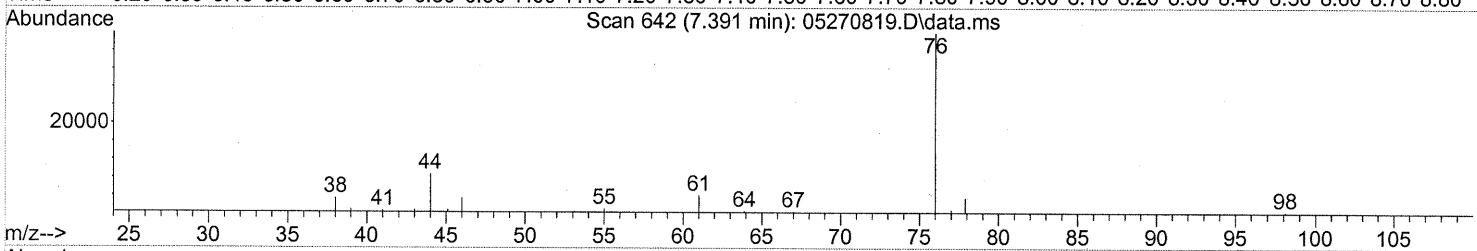
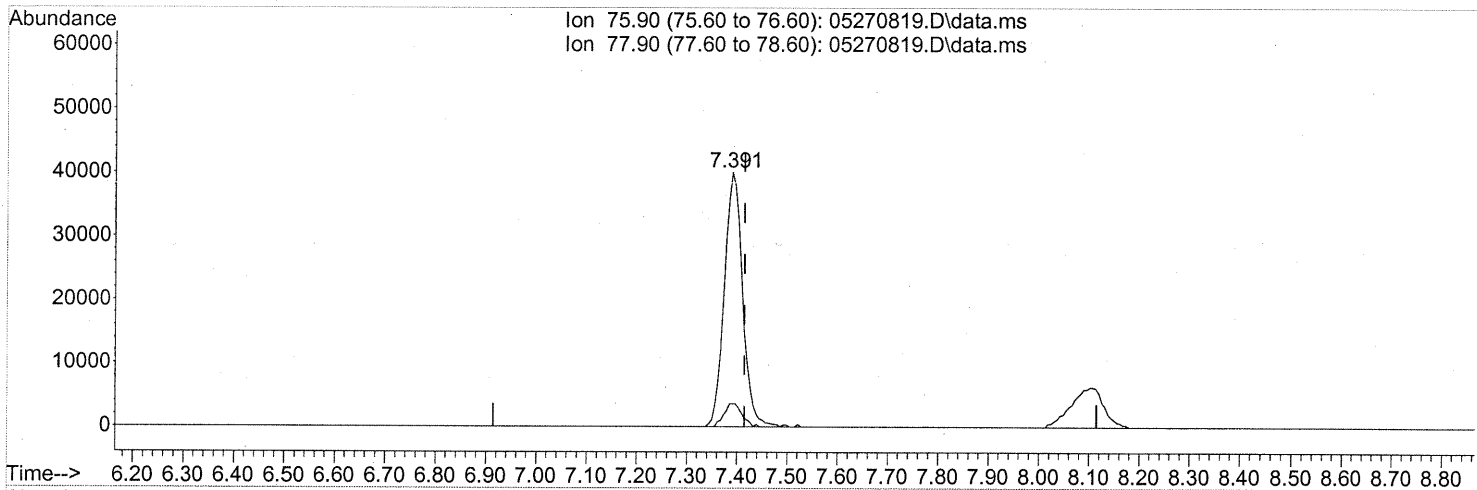
response 5203

Ion	Exp%	Act%
150.90	100	100
100.90	136.10	120.14
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(22) Carbon Disulfide (T)

7.391min (-0.024) 1.64ng

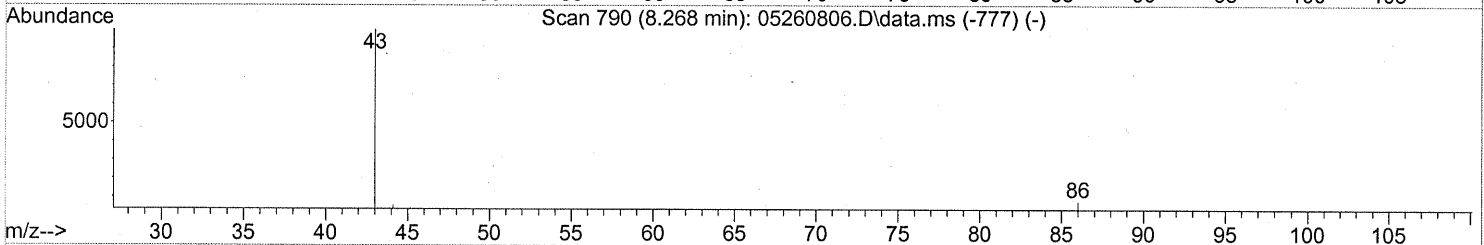
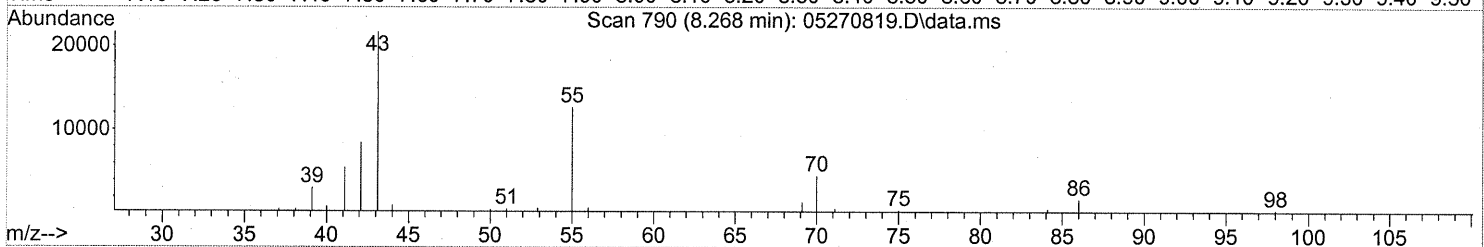
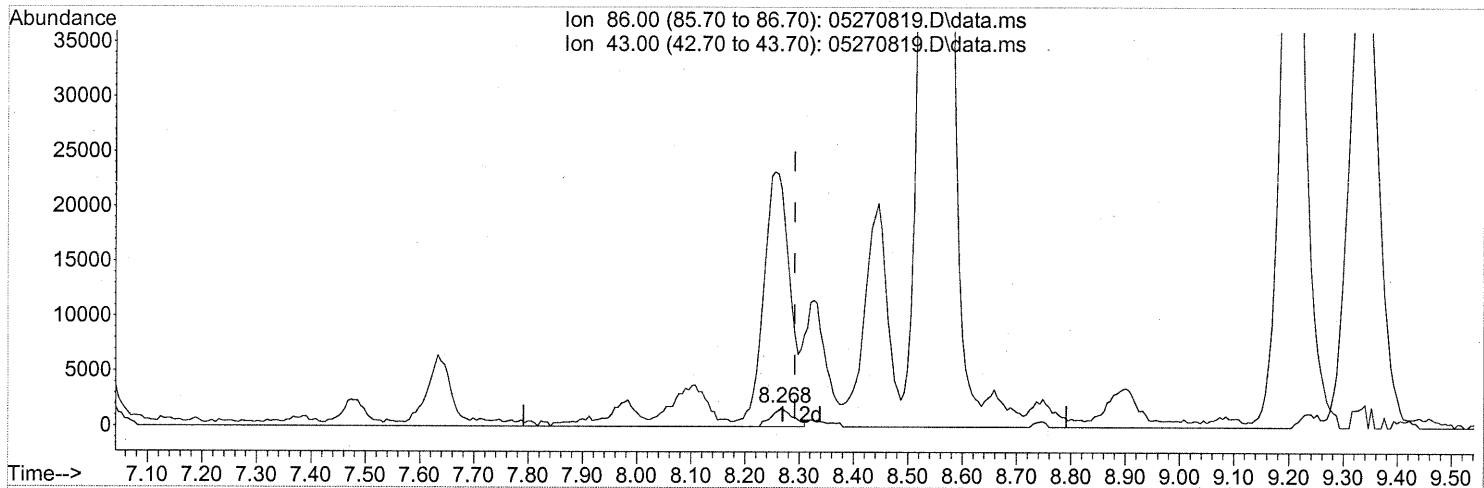
response 100960

Ion	Exp%	Act%
75.90	100	100
77.90	9.10	8.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(26) Vinyl Acetate (T)

8.268min (-0.024) 1.39ng

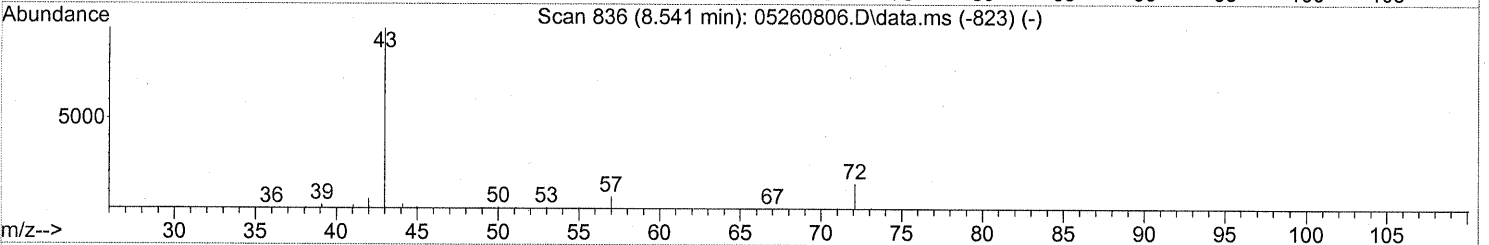
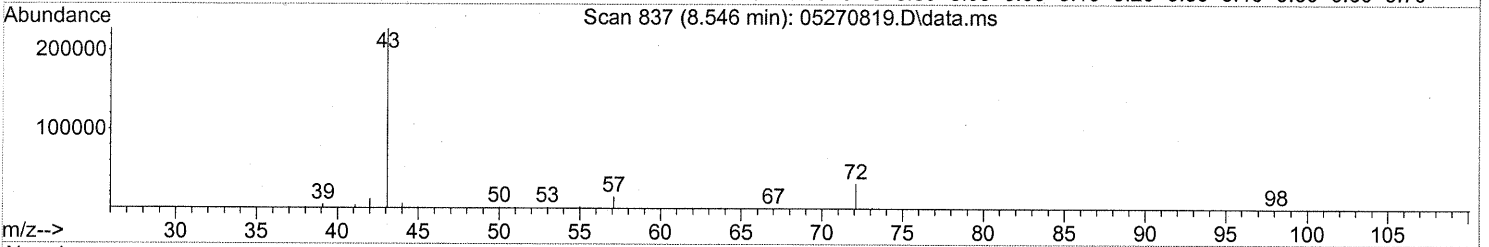
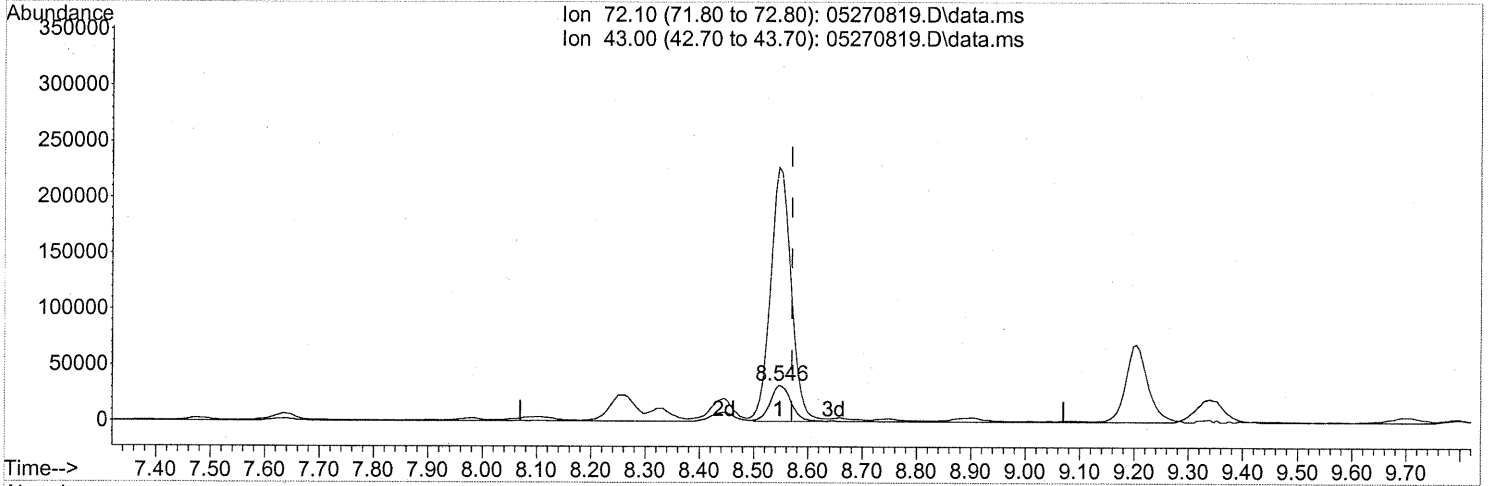
response 4503

Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	1691.94#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(27) 2-Butanone (T)

8.546min (-0.024) 8.21ng

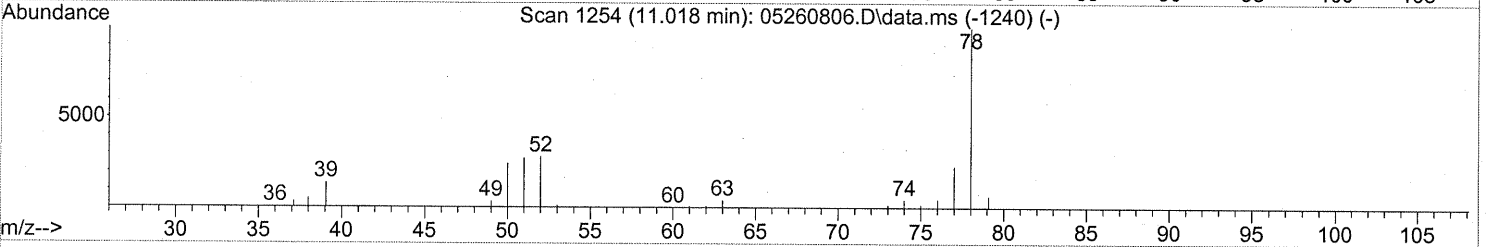
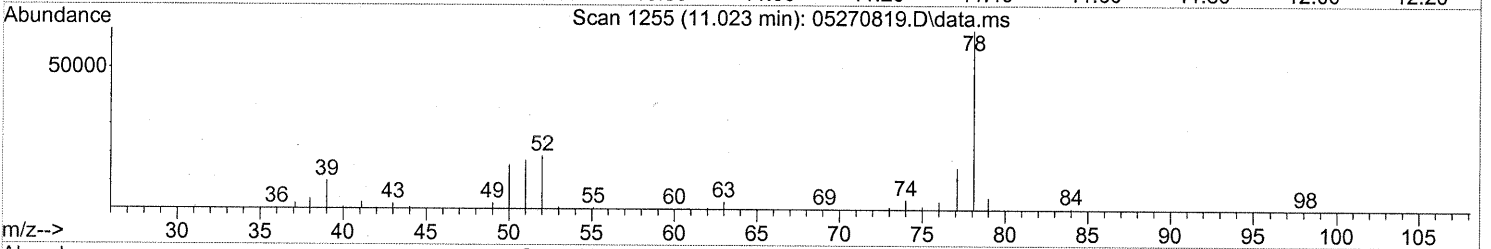
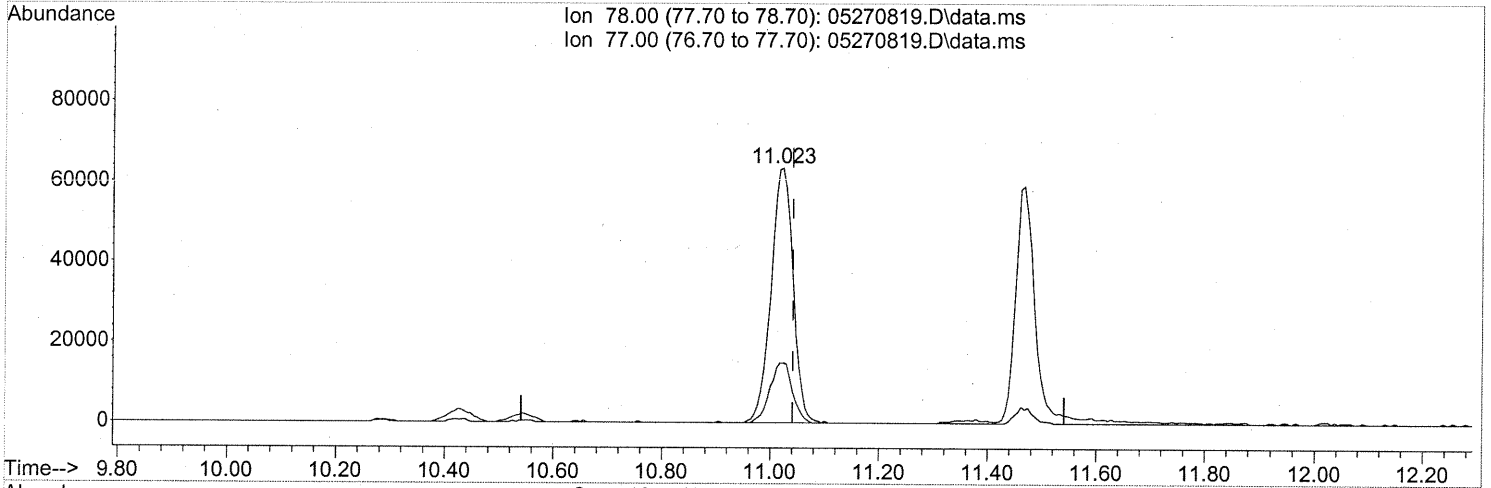
response 85110

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	704.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(41) Benzene (T)

11.023min (-0.018) 2.69ng

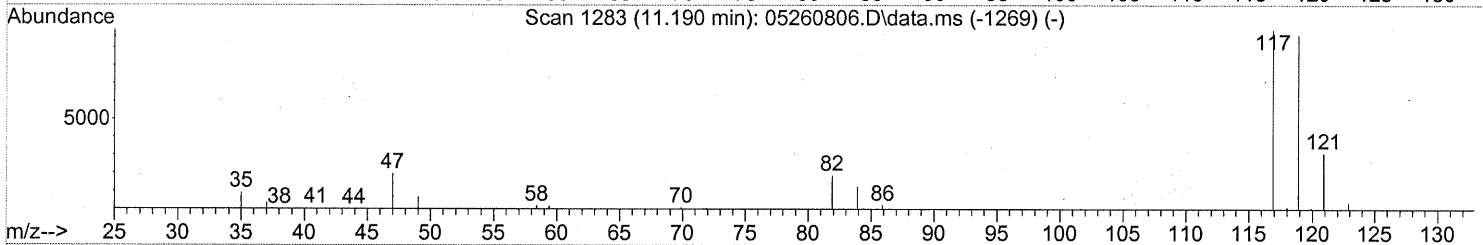
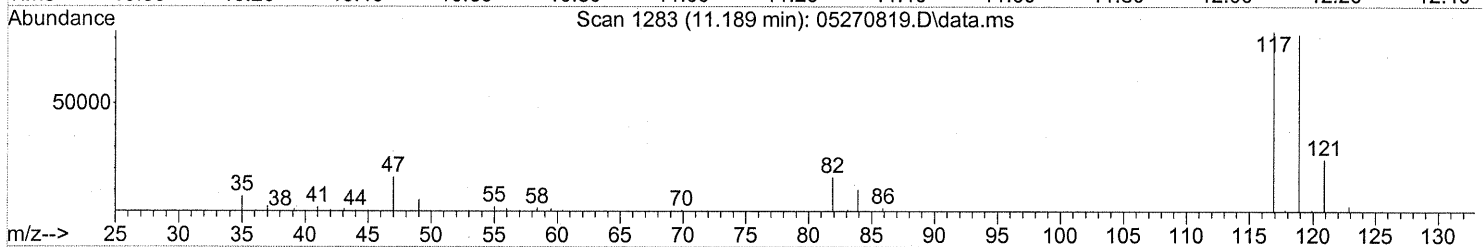
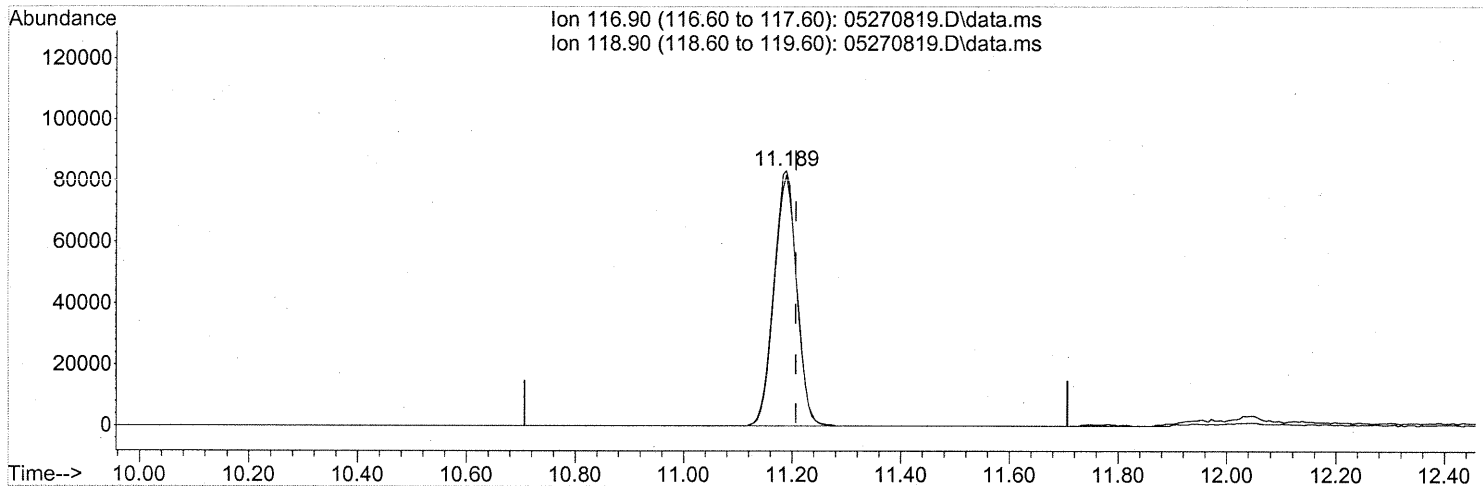
response 178816

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(42) Carbon Tetrachloride (T)

11.189min (-0.018) 8.97ng

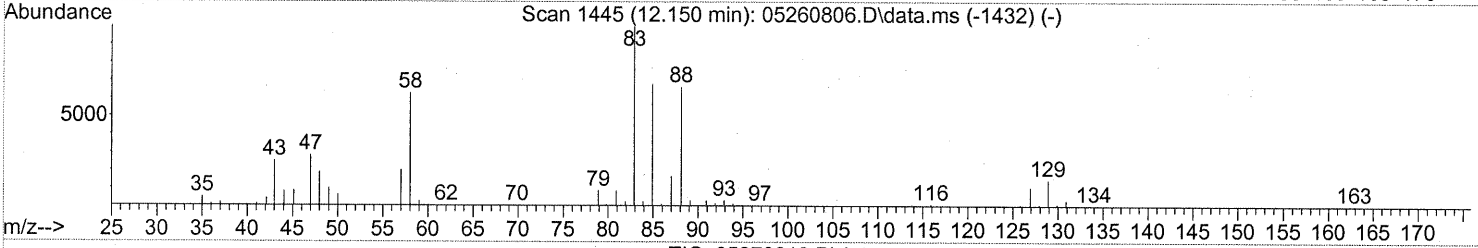
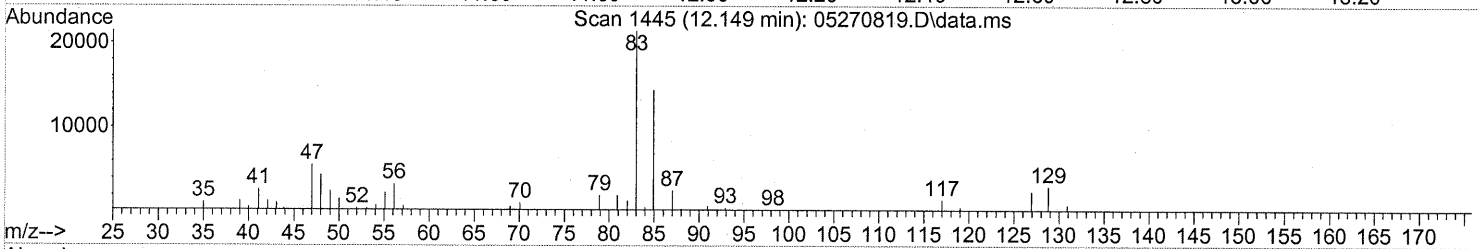
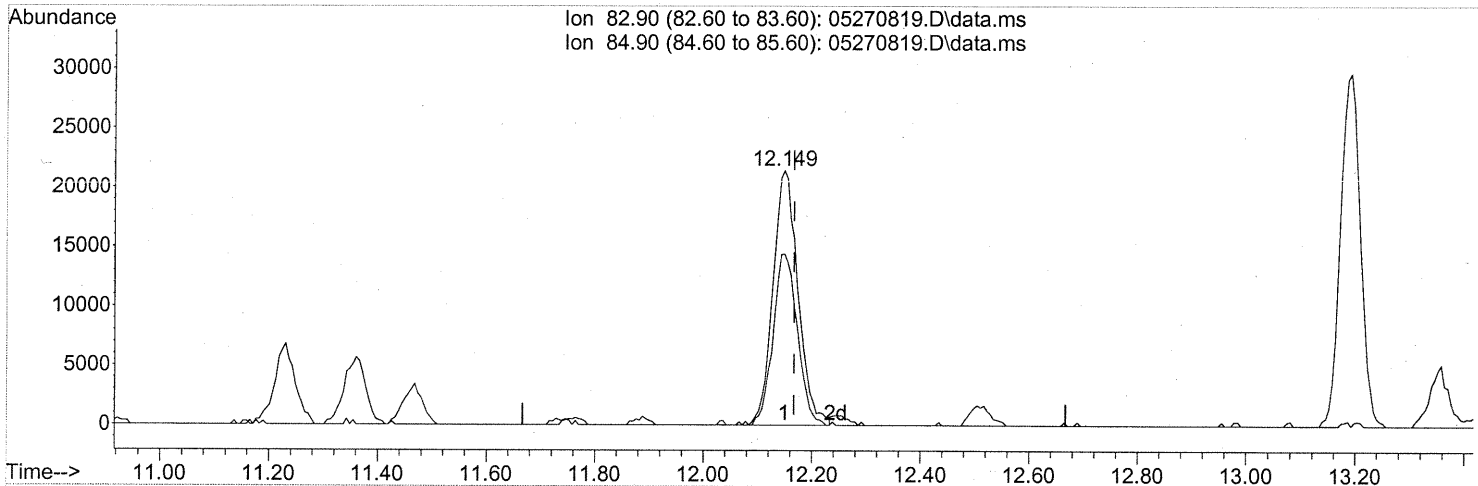
response 244659

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.05
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

12.149min (-0.018) 3.53ng

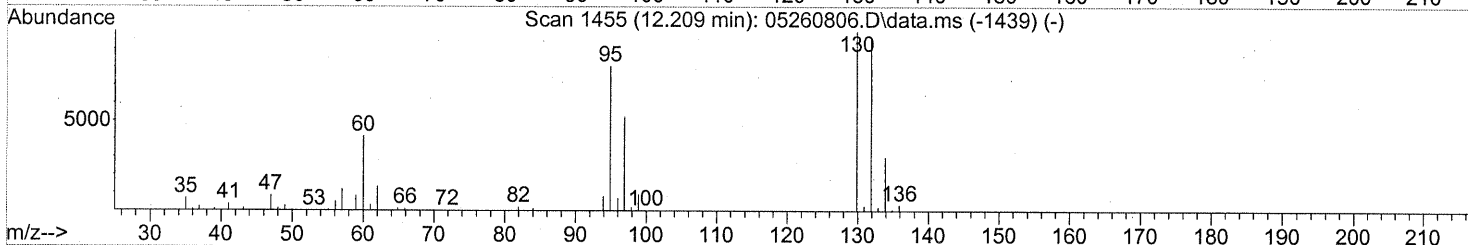
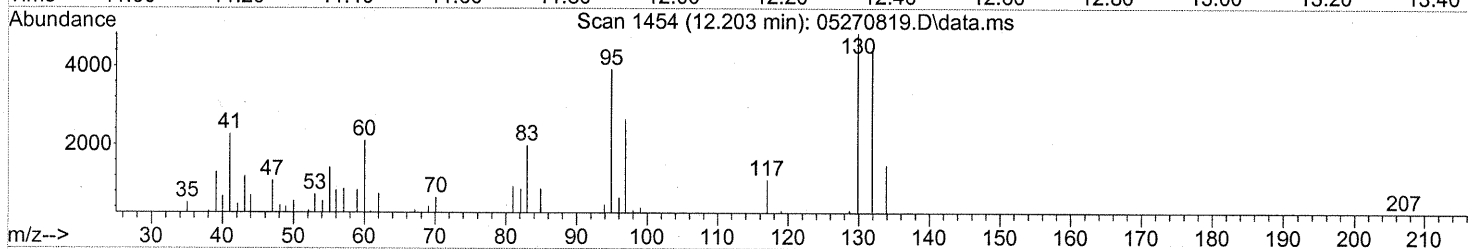
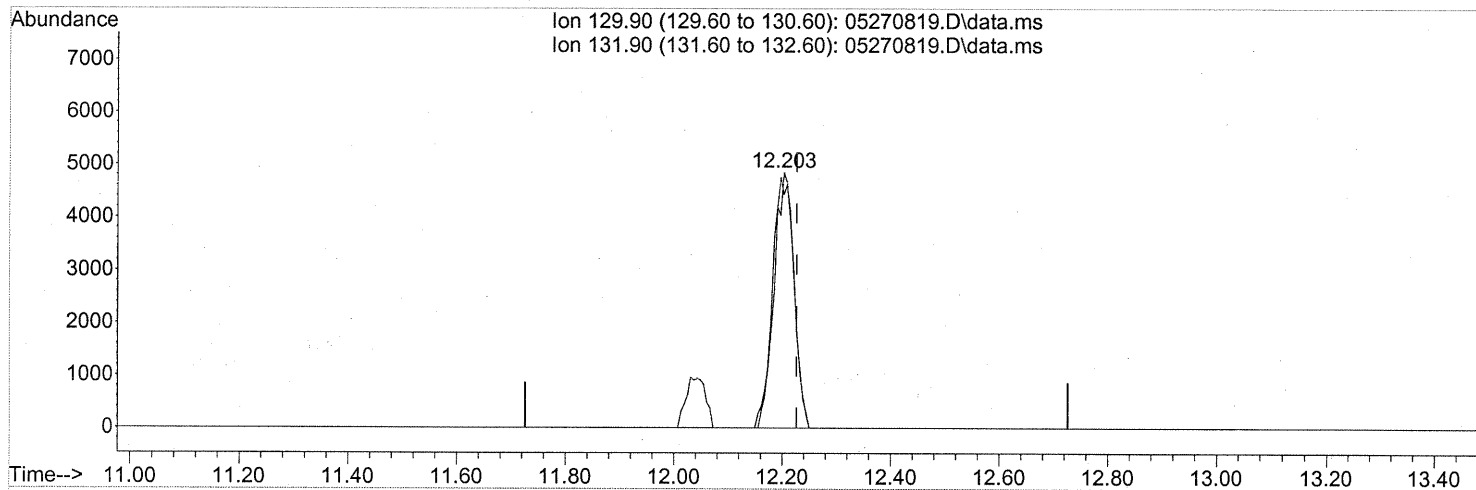
response 69037

Ion	Exp%	Act%
82.90	100	100
84.90	62.30	65.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(47) Trichloroethene (T)  
 12.203min (-0.024) 0.63ng  
 response 13041

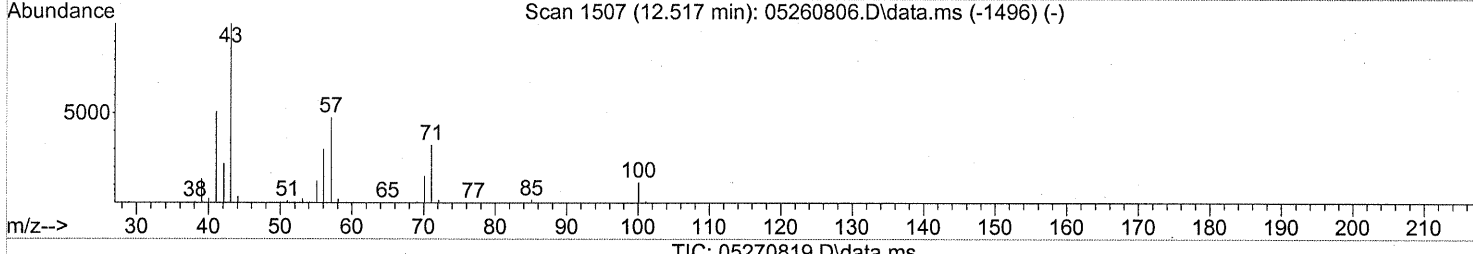
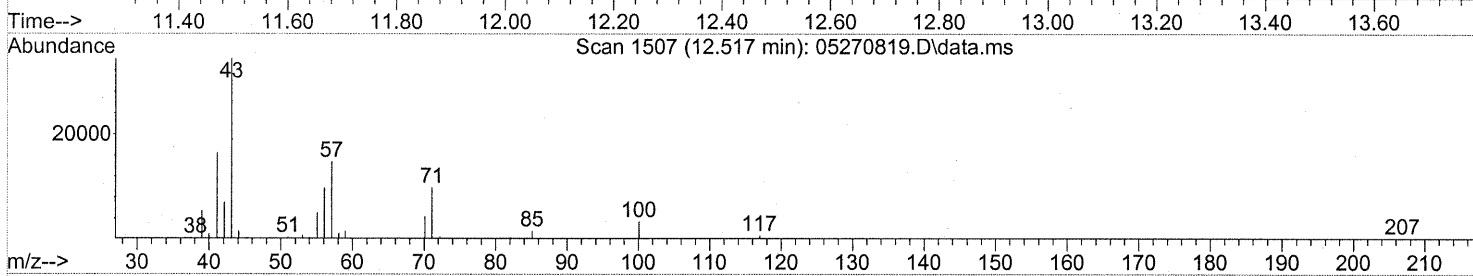
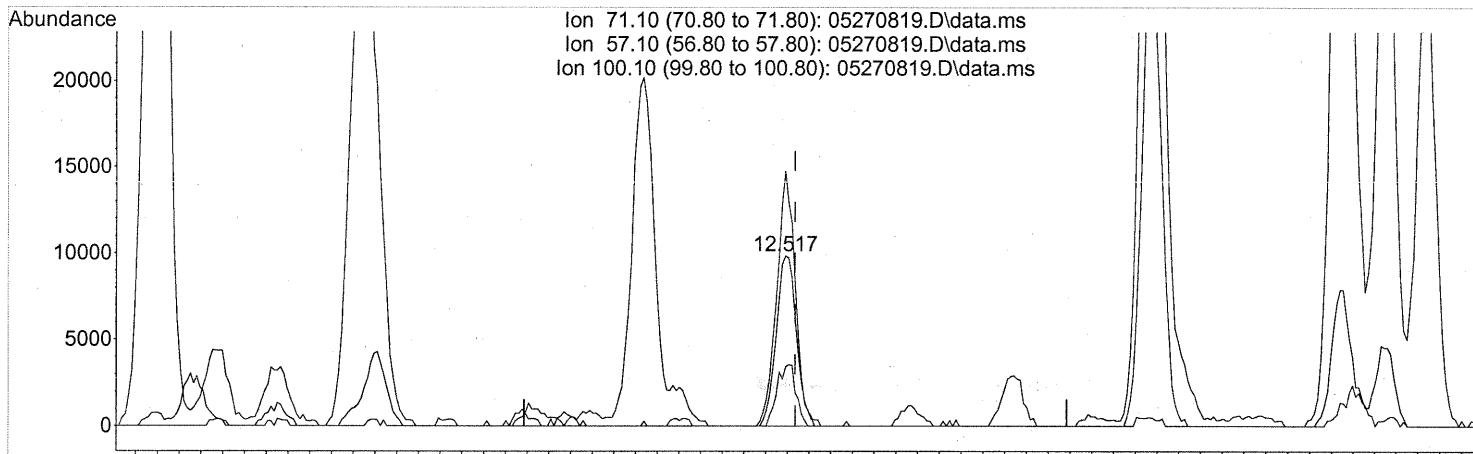
Ion	Exp%	Act%
129.90	100	100
131.90	95.10	95.91
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



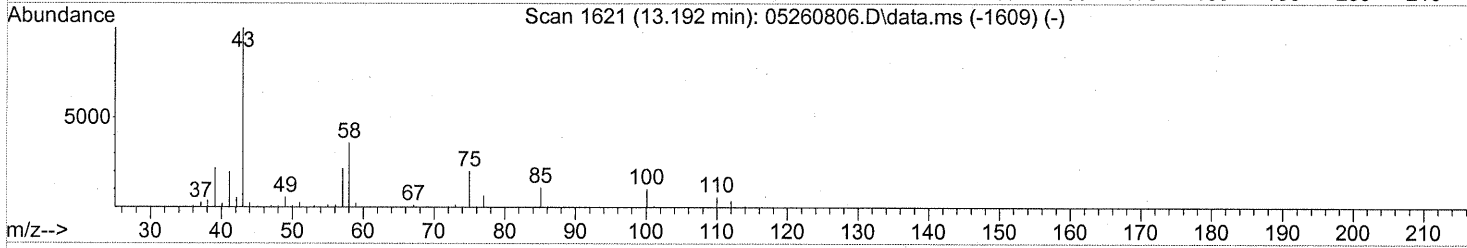
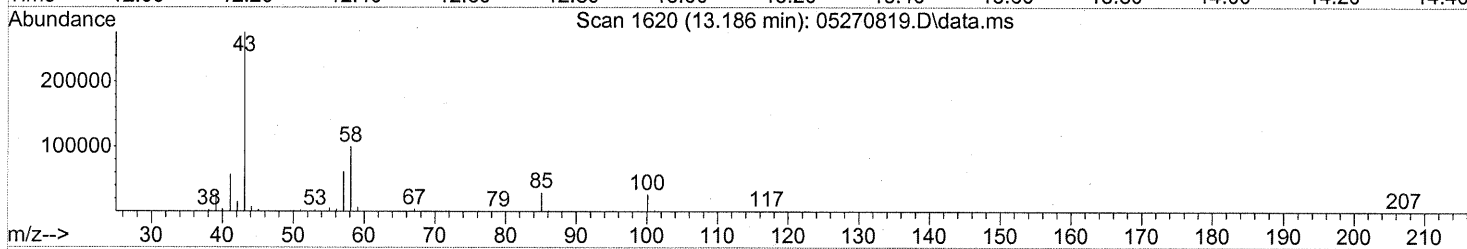
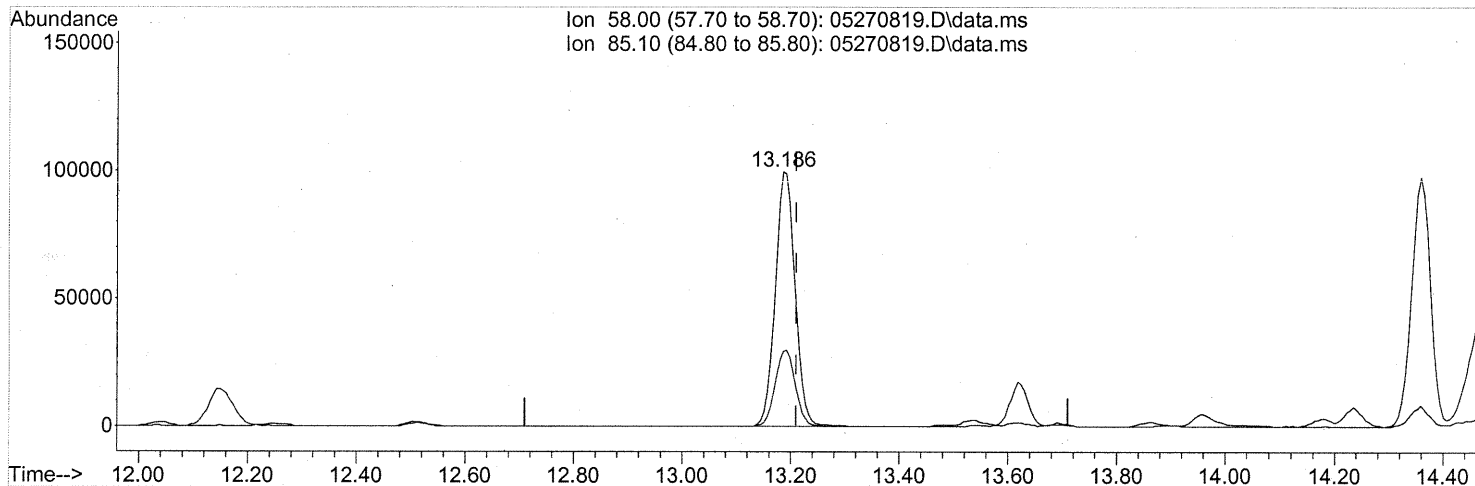
(51) n-Heptane (T)  
 12.517min (-0.018) 1.61ng  
 response 25510

Ion	Exp%	Act%
71.10	100	100
57.10	88.70	137.72#
100.10	28.80	33.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

13.186min (-0.024) 10.94ng

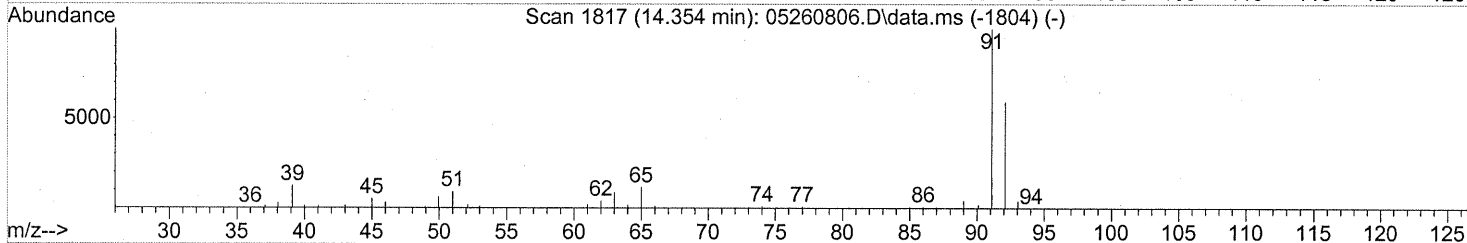
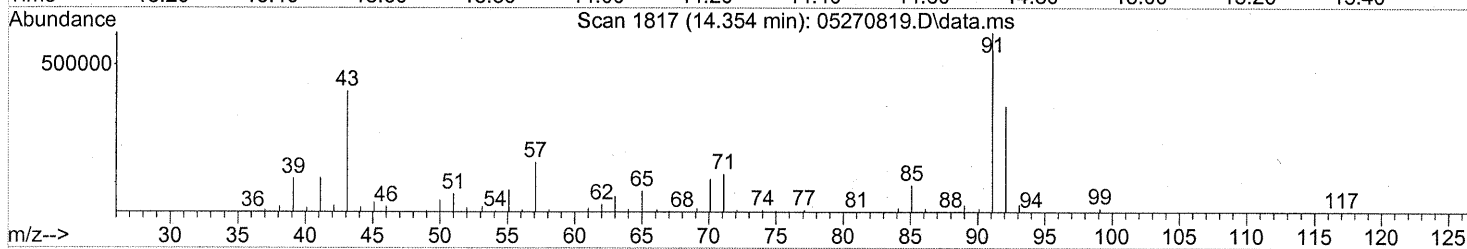
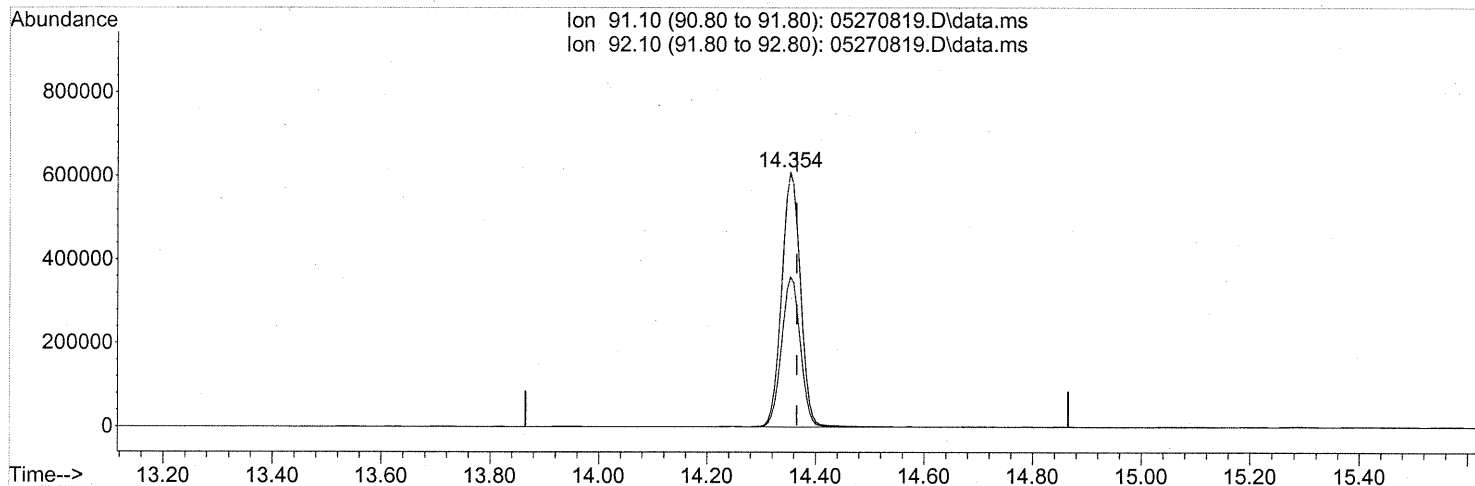
response 252898

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	30.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(58) Toluene (T)

14.354min (-0.012) 19.18ng

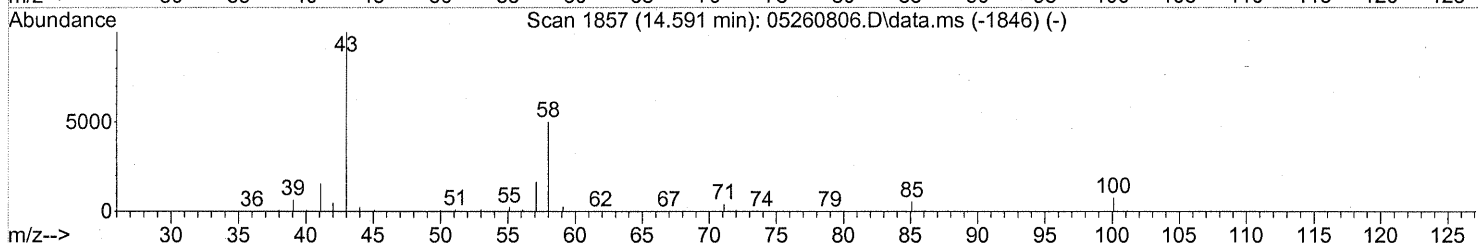
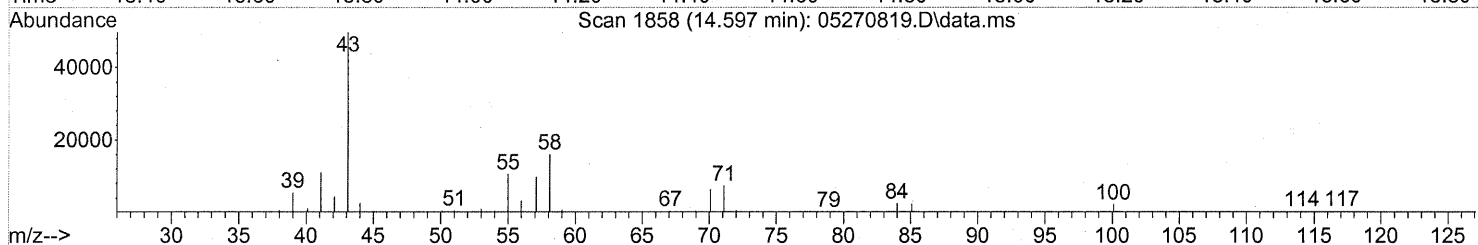
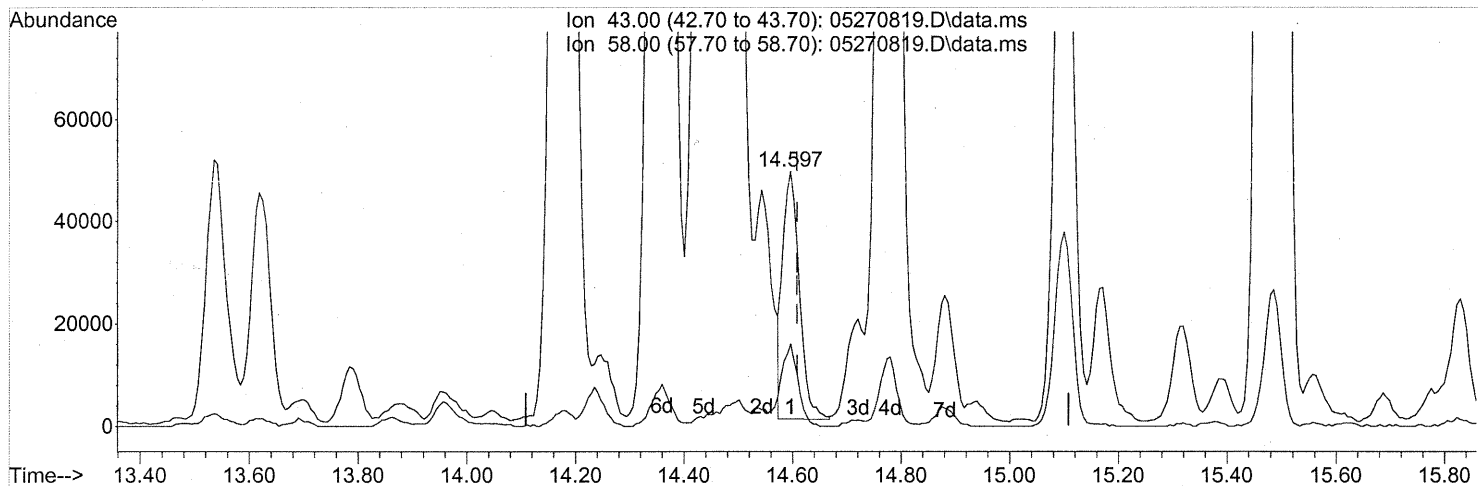
response 1461913

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	58.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

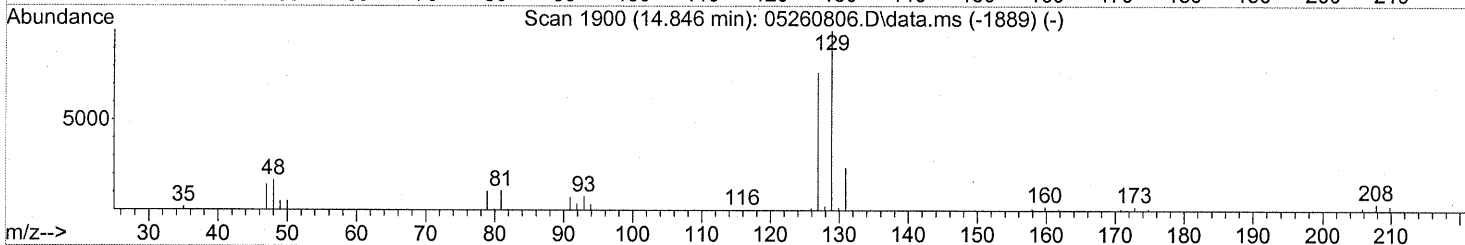
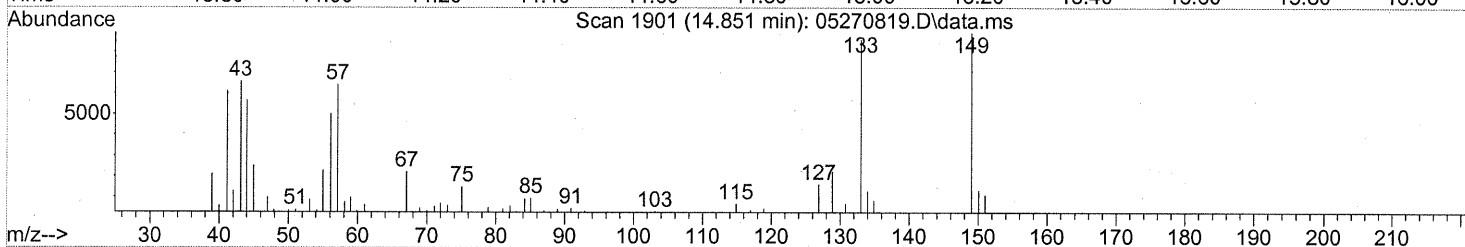
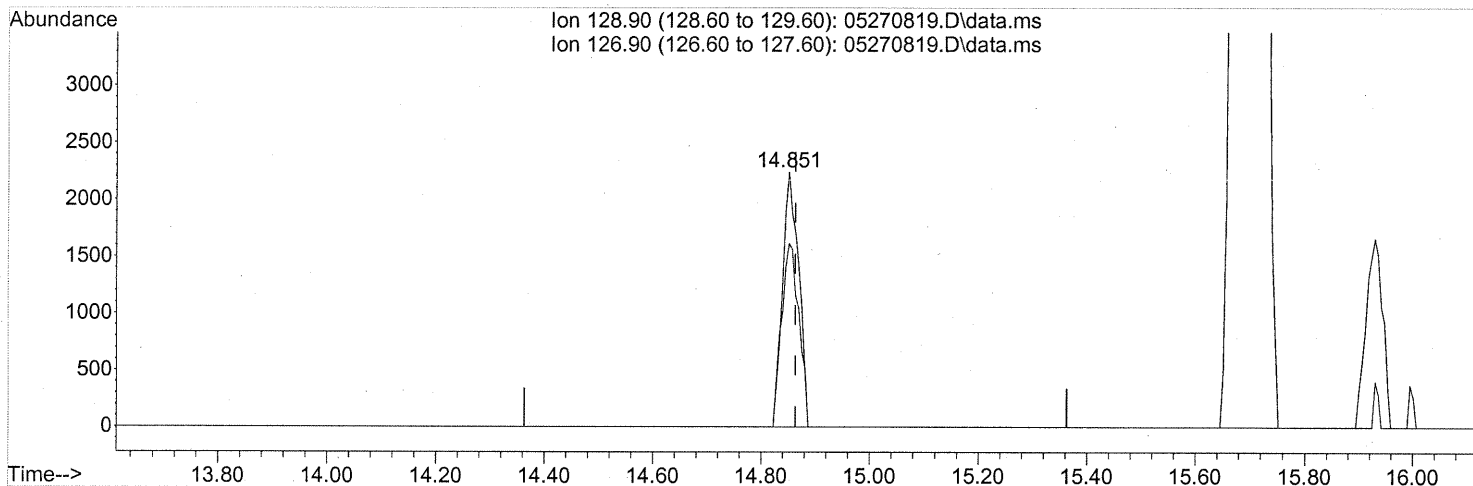
(59) 2-Hexanone (T)  
 14.597min (-0.012) 1.43ng  
 response 102971

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	34.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(60) Dibromochloromethane (T)

14.851min (-0.012) 0.21ng

response 4639

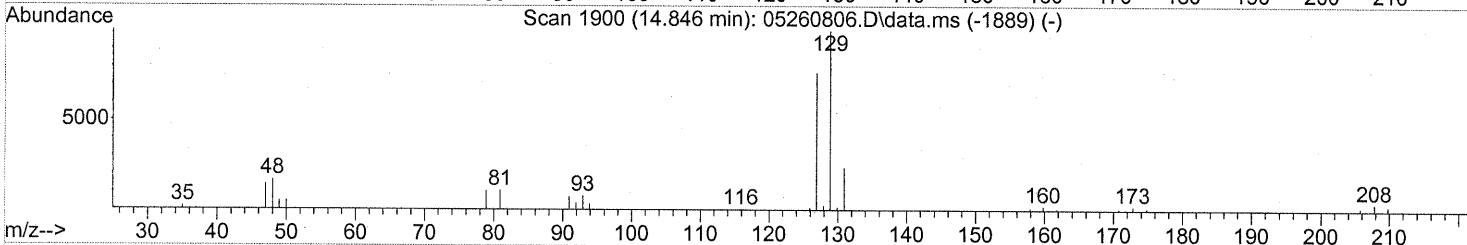
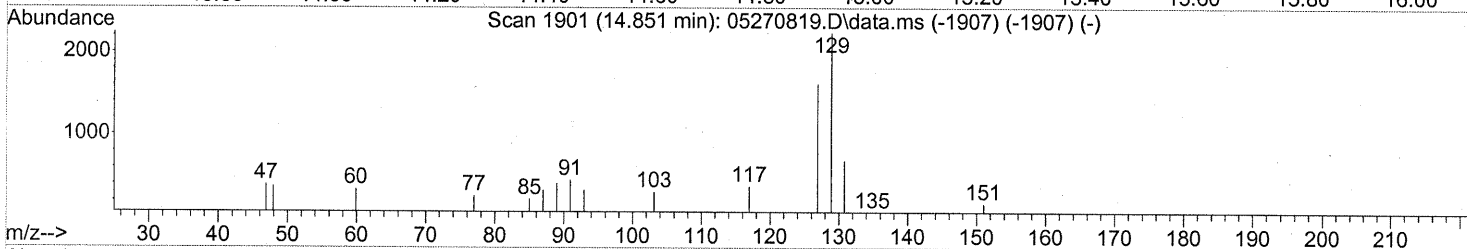
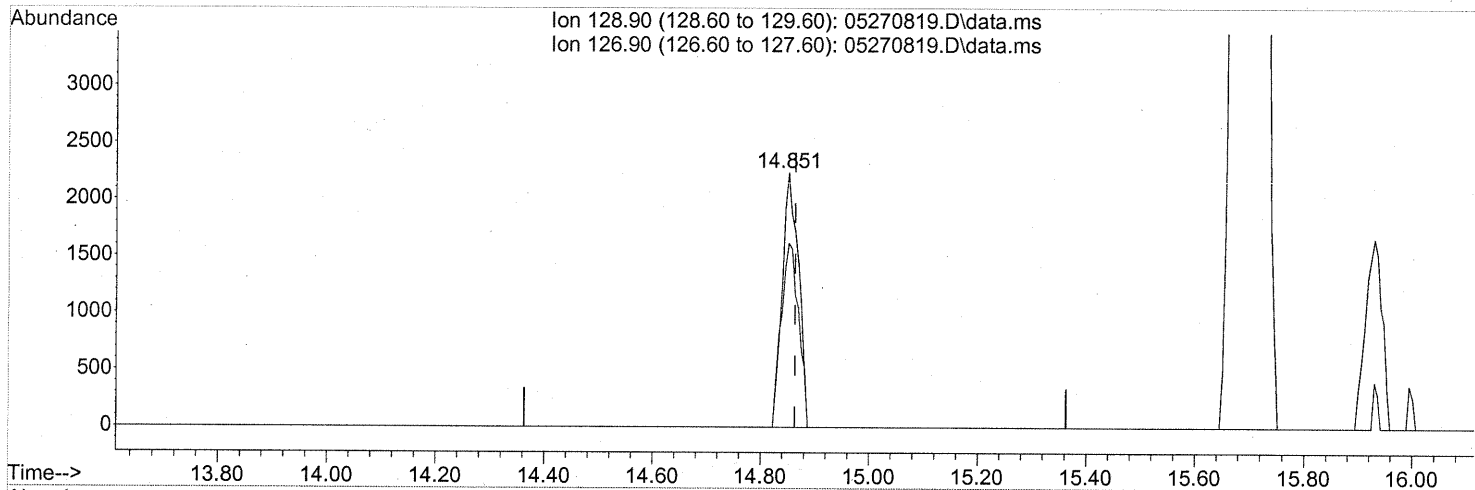
*before*

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	78.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(60) Dibromochloromethane (T)

14.851min (-0.012) 0.21ng

response 4639

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	78.01
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

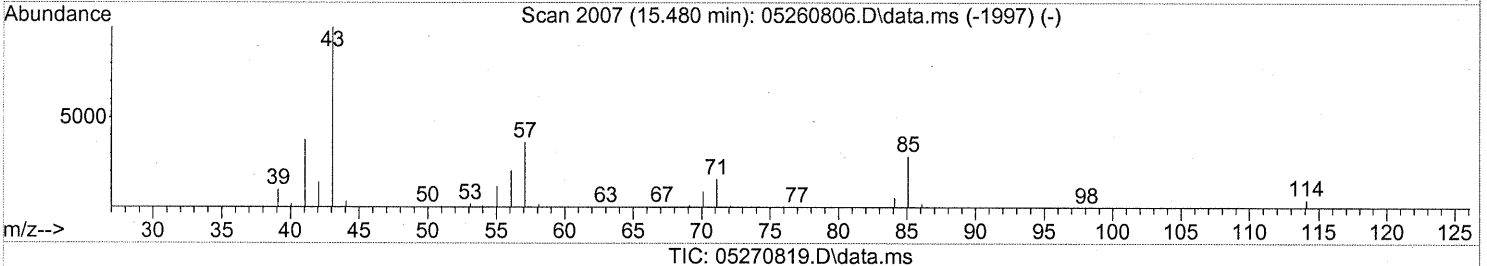
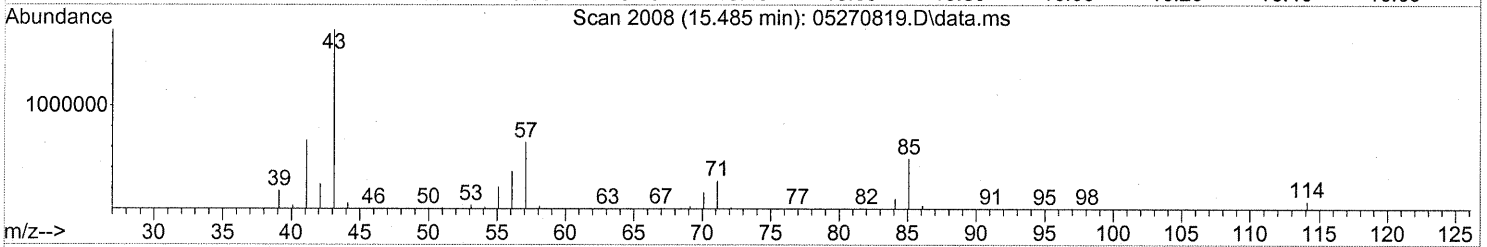
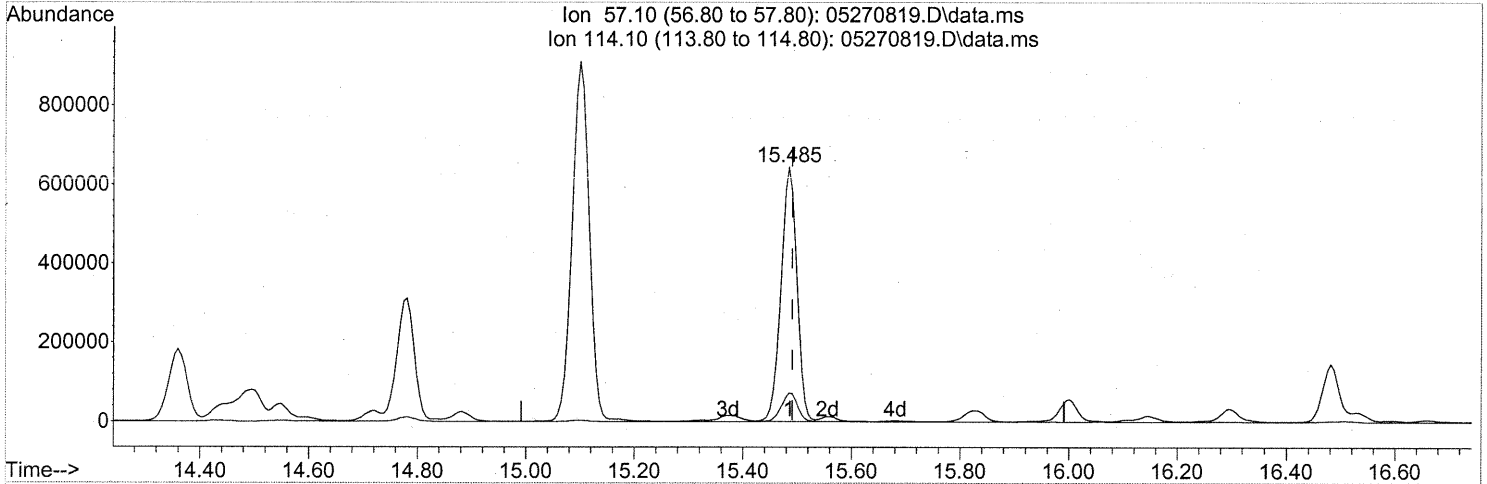
*WA 6/4/08*

*E. 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



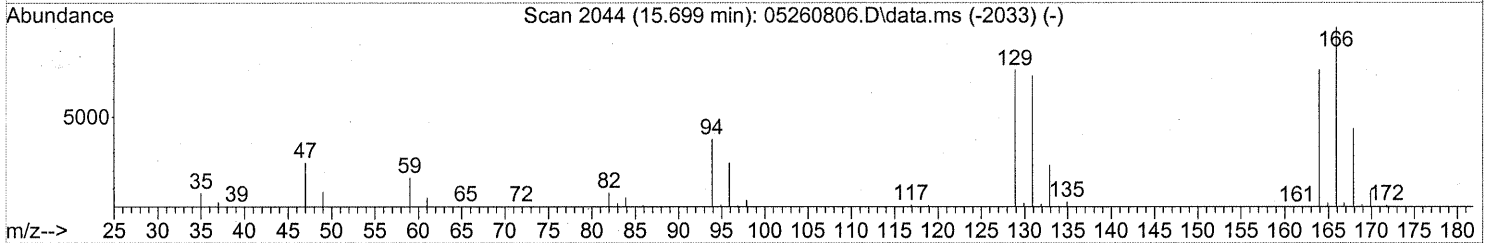
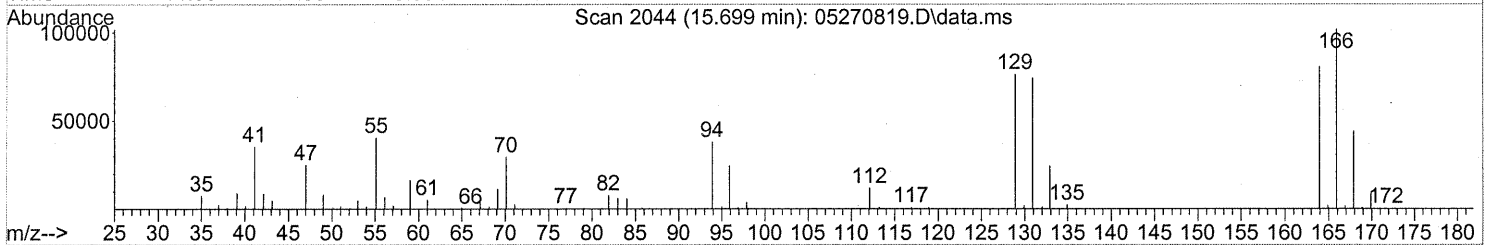
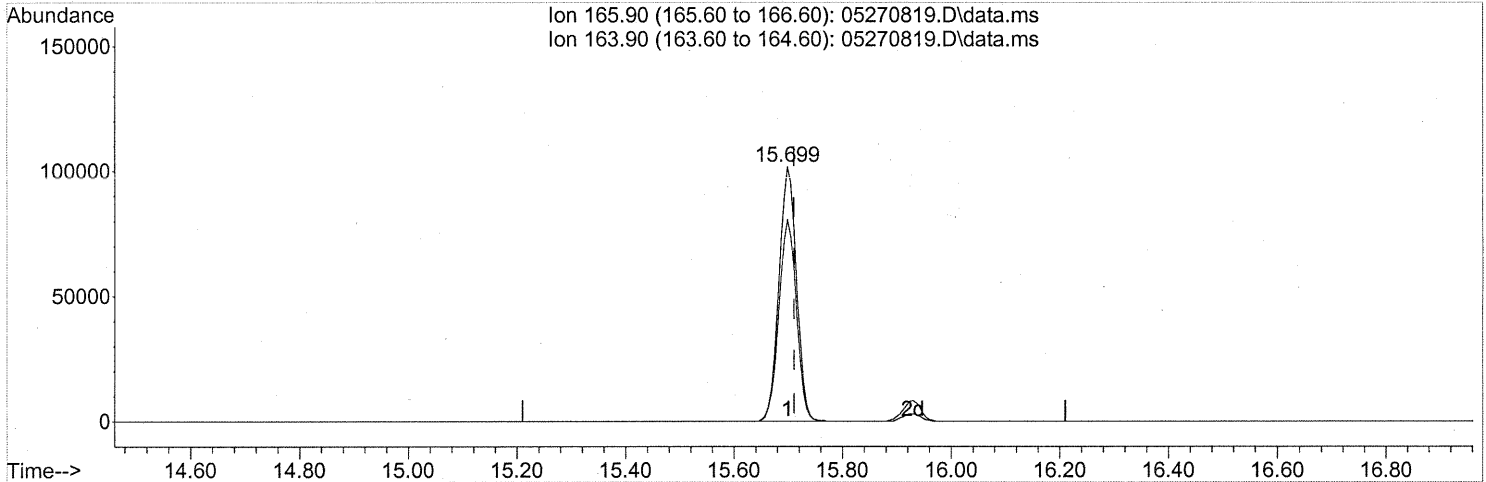
(63) n-Octane (T)  
 15.485min (-0.006) 57.27ng  
 response 1320046

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(64) Tetrachloroethene (T)

15.699min (-0.012) 10.11ng

response 227946

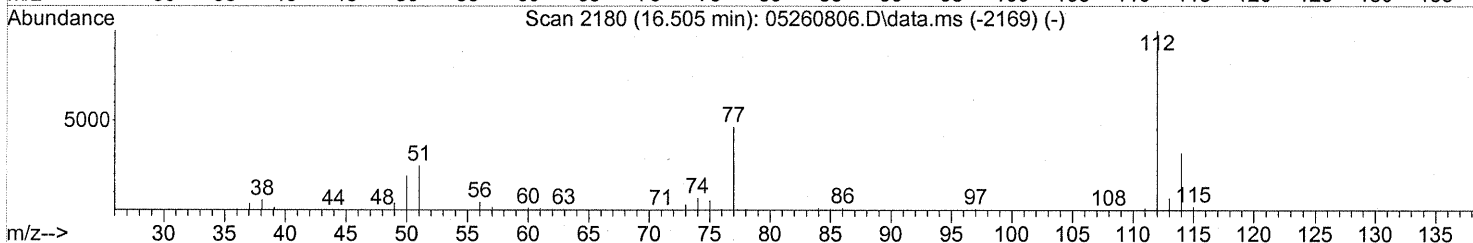
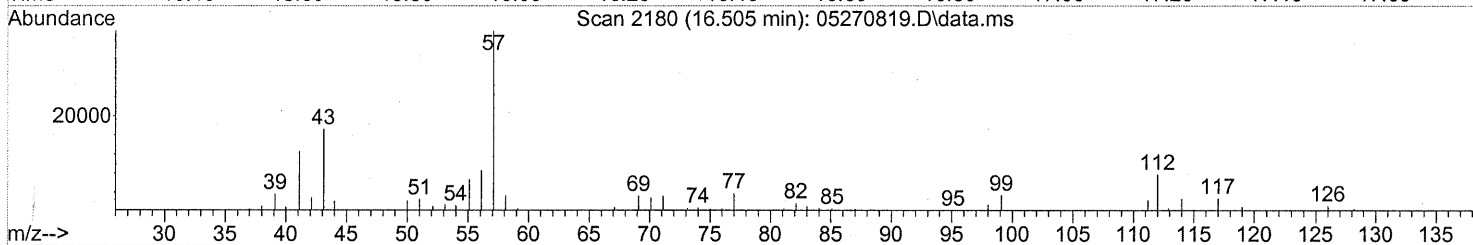
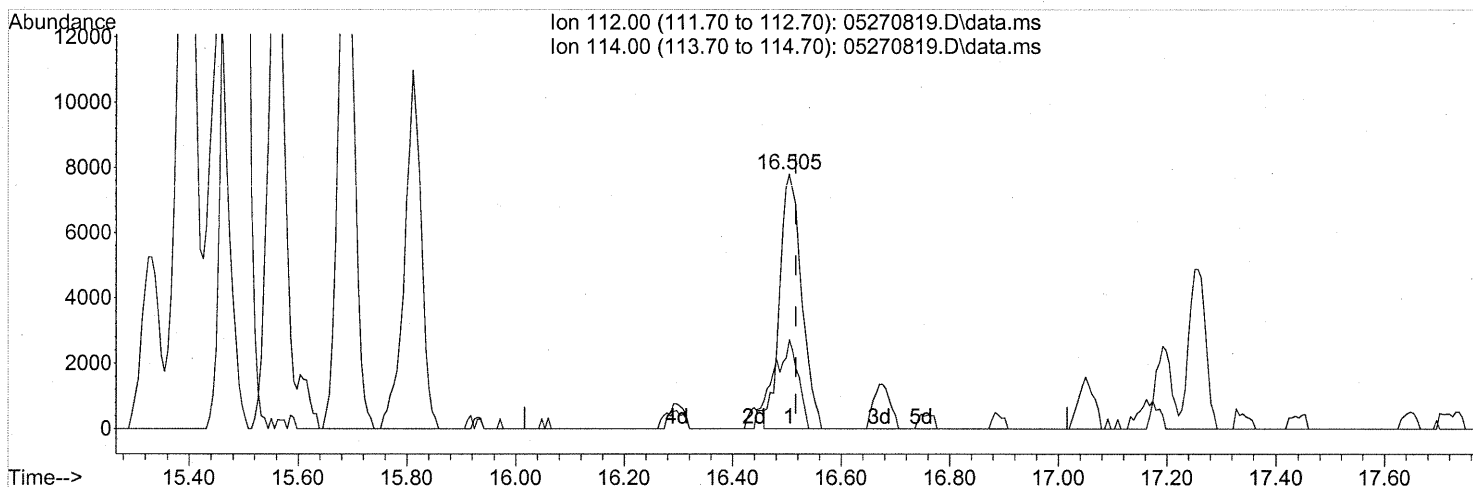
Ion	Exp%	Act%
165.90	100	100
163.90	77.50	79.23
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(65) Chlorobenzene (T)

16.505min (-0.012) 0.40ng

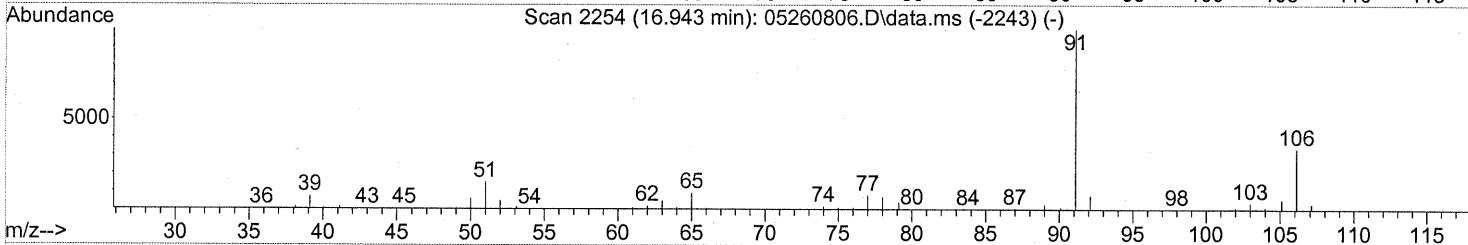
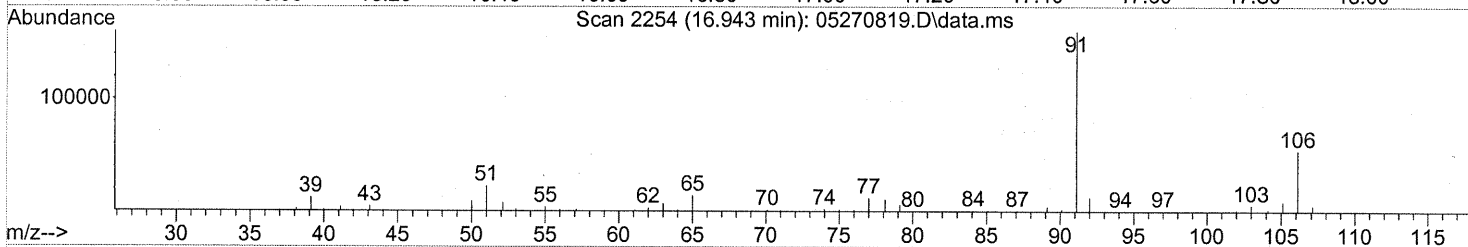
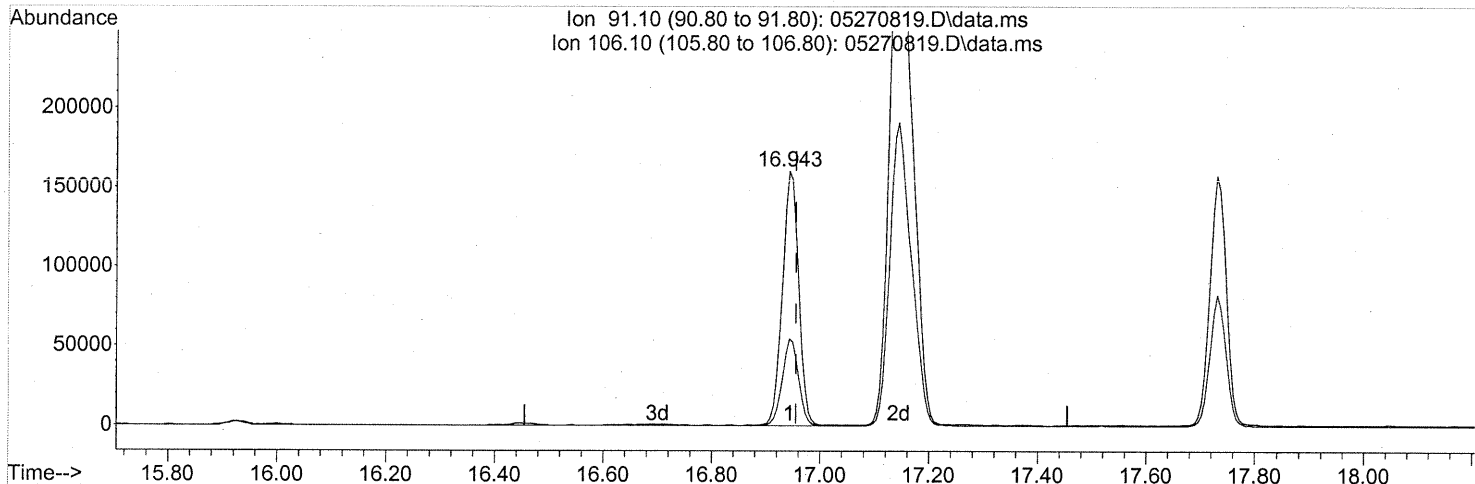
response 21858

Ion	Exp%	Act%
112.00	100	100
114.00	32.10	19.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(66) Ethylbenzene (T)

16.943min (-0.012) 3.87ng

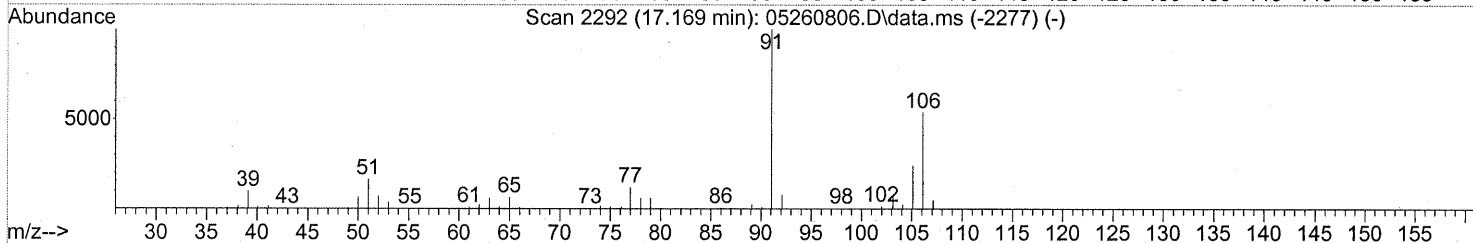
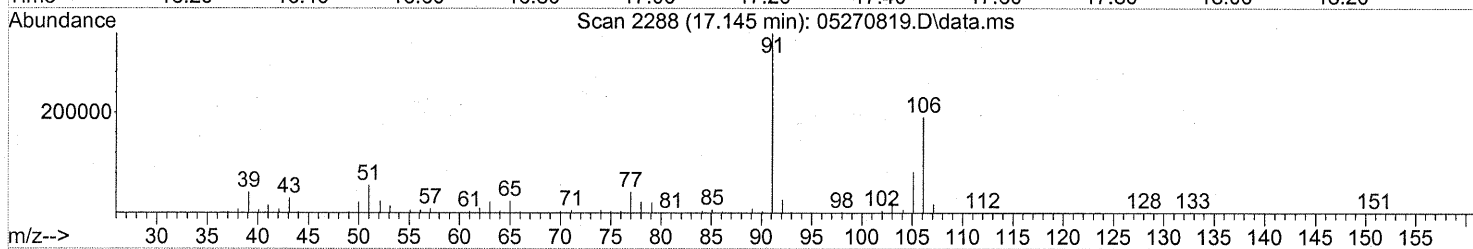
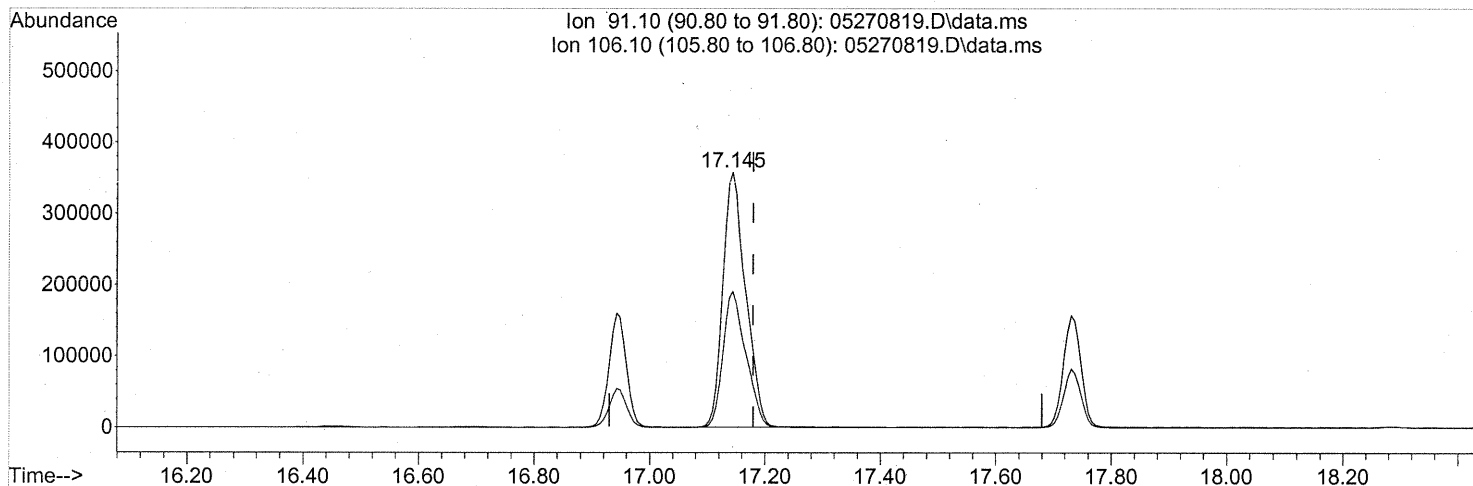
response 335103

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	33.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

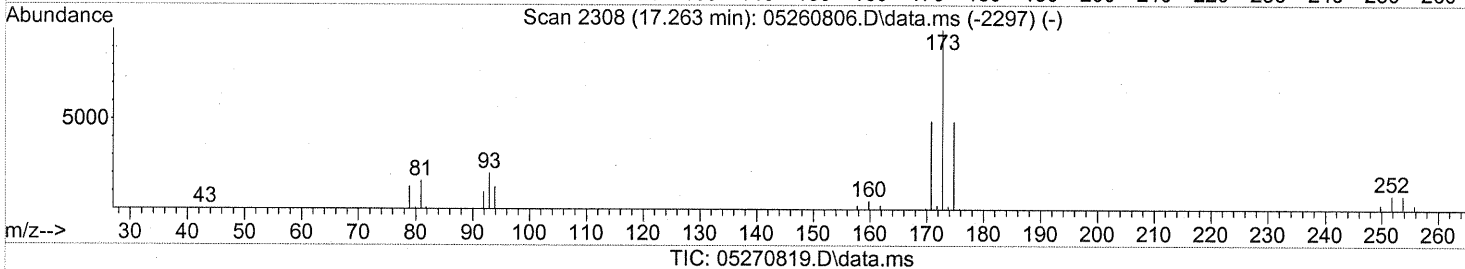
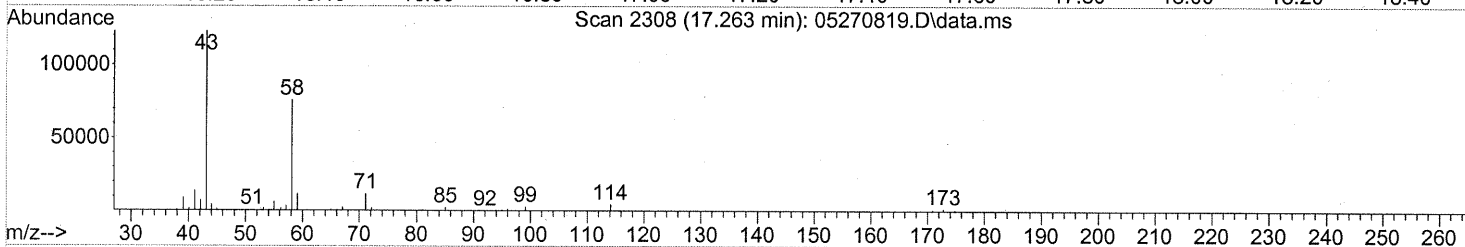
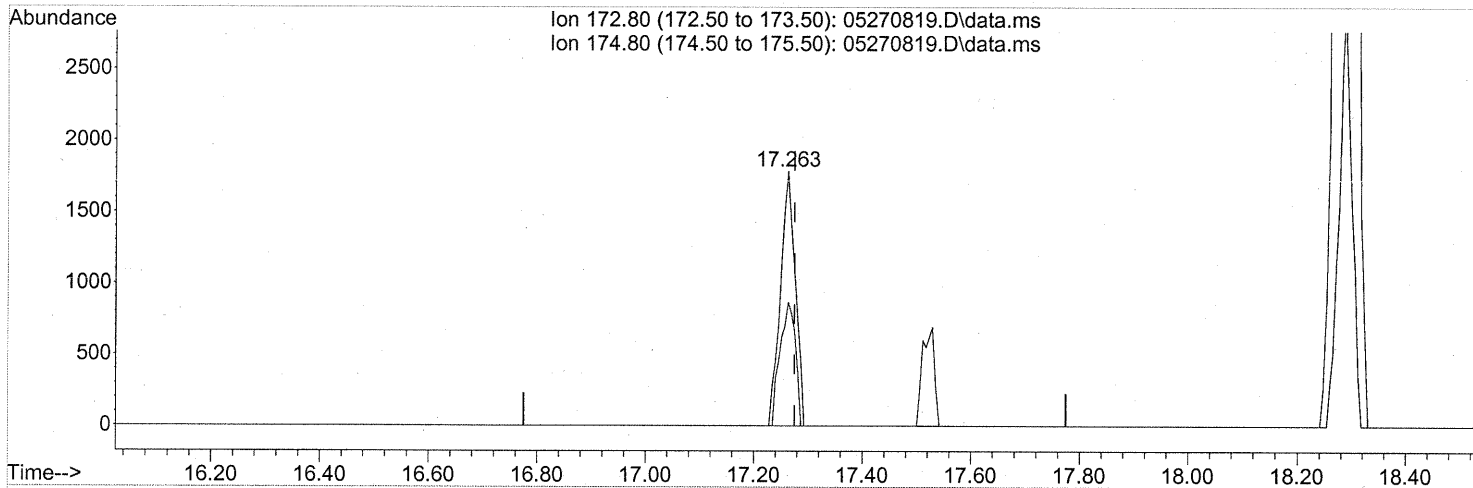
(67) m- & p-Xylene (T)  
 17.145min (-0.036) 17.12ng  
 response 982619

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

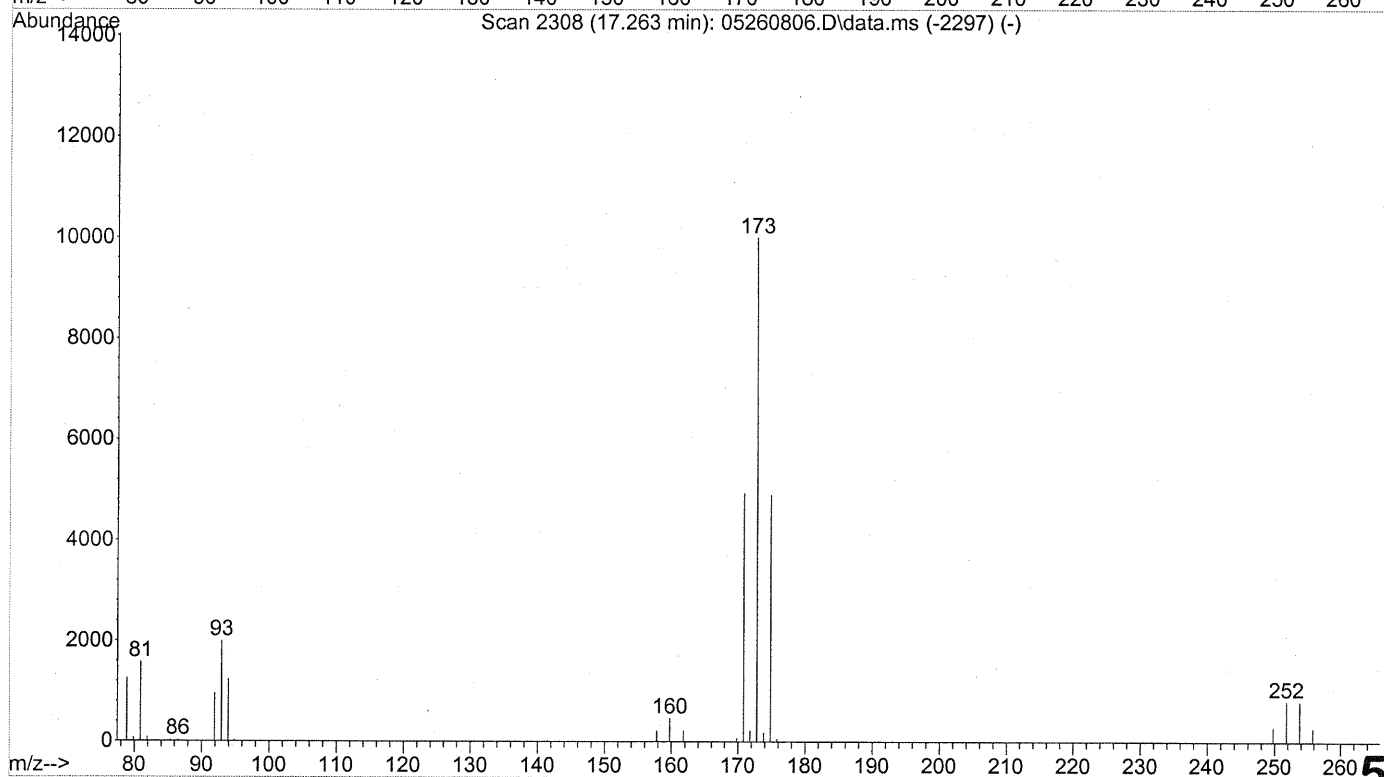
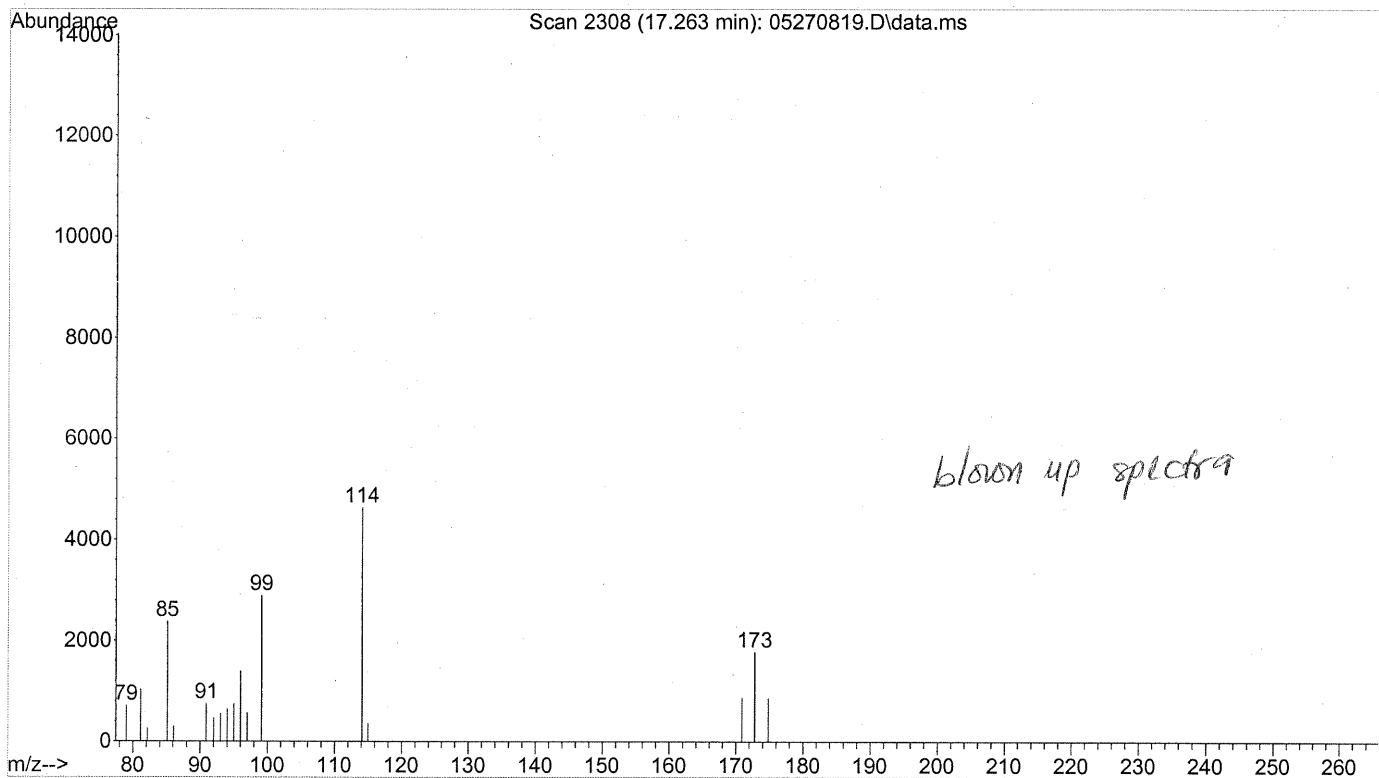


(68) Bromoform (T)  
 17.263min (-0.012) 0.26ng  
 response 3418

Ion	Exp%	Act%
172.80	100	100
174.80	48.50	50.03
0.00	0.00	0.00
0.00	0.00	0.00

*before blown up*

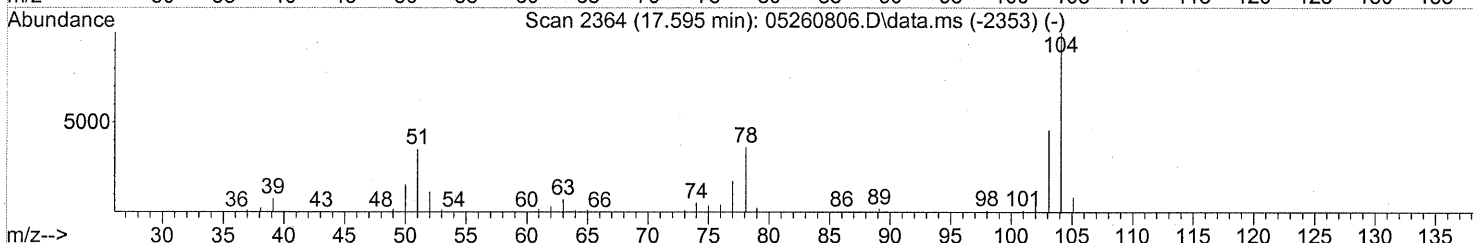
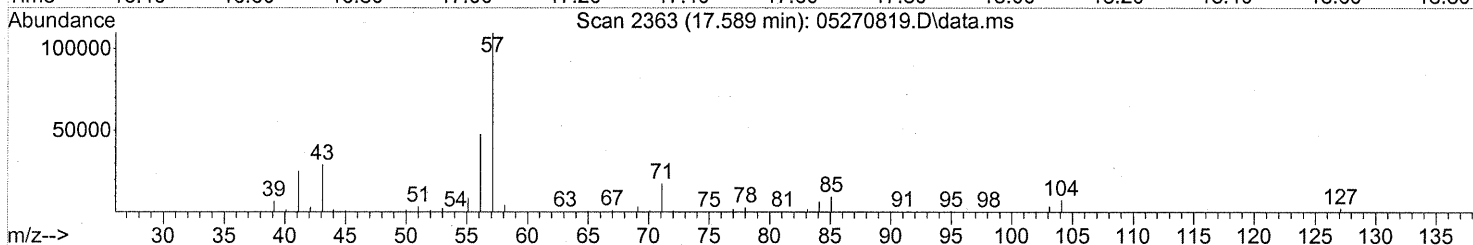
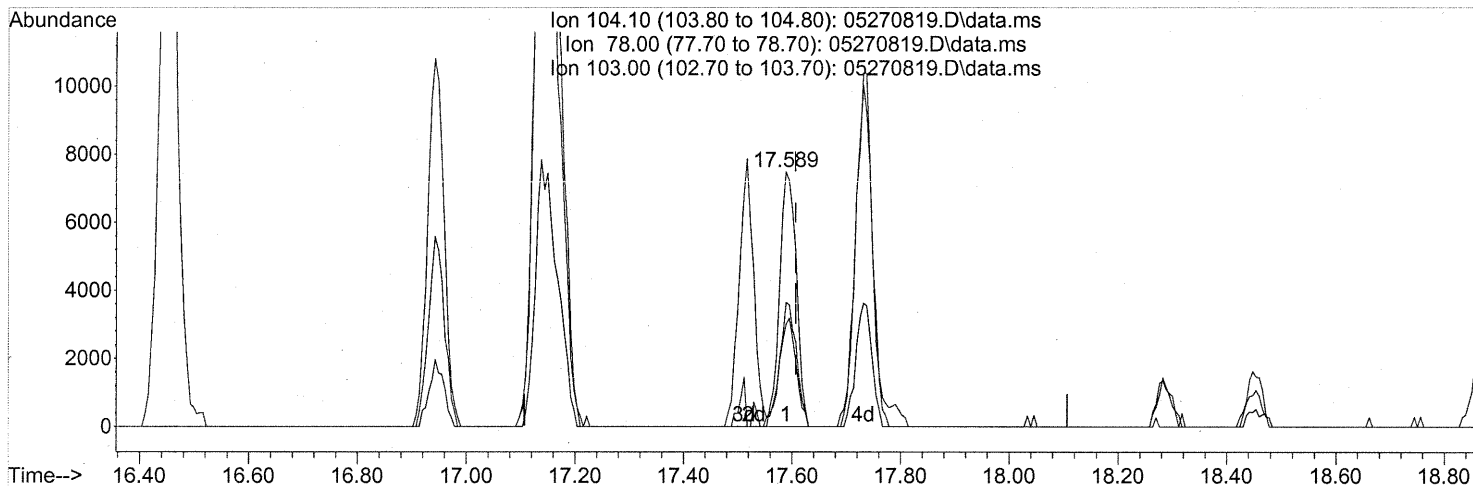
File : J:\MS16\DATA\2008\_05\27\05270819.D  
Operator : WA  
Acquired : 28 May 2008 00:18 using AcqMethod TO15.M  
Instrument : GCMS-16  
Sample Name: P0801507-014 (1000ml)  
Misc Info : ENSR SG14B-05 (-3.5, 3.6)  
Vial Number: 11



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

(69) Styrene (T)  
 17.589min (-0.018) 0.29ng  
 response 16061

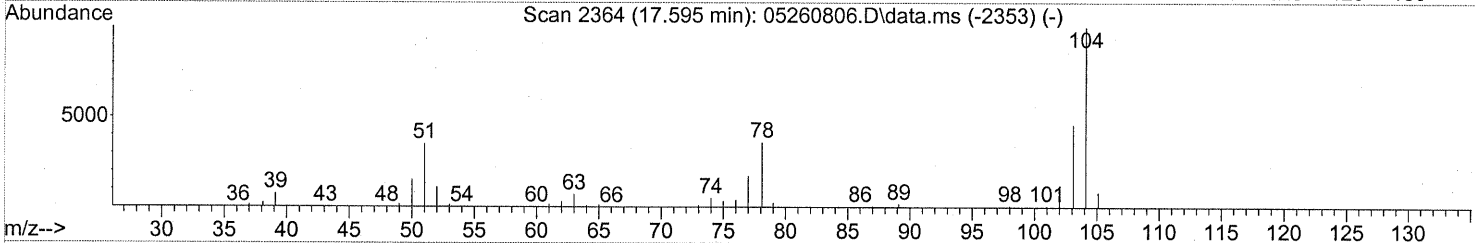
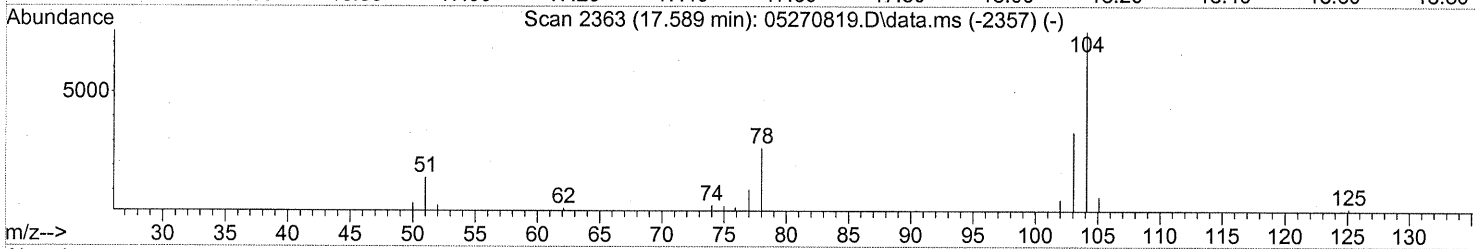
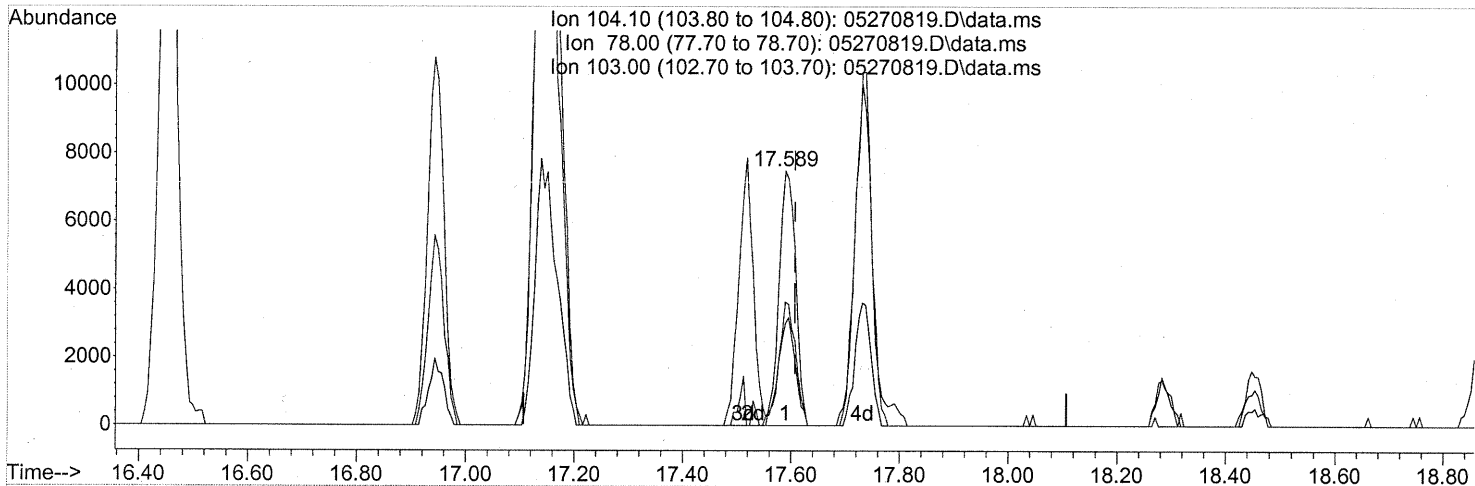
Ion	Exp%	Act%
104.10	100	100
78.00	43.30	43.00
103.00	47.60	48.55
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270819.D  
Acq On : 28 May 2008 00:18  
Operator : WA  
Sample : P0801507-014 (1000ml)  
Misc : ENSR SG14B-05 (-3.5, 3.6)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270819.D\data.ms

(69) Styrene (T)  
17.589min (-0.018) 0.29ng  
response 16061

Ion	Exp%	Act%
104.10	100	100
78.00	43.30	43.00
103.00	47.60	48.55
0.00	0.00	0.00

*after substr.*

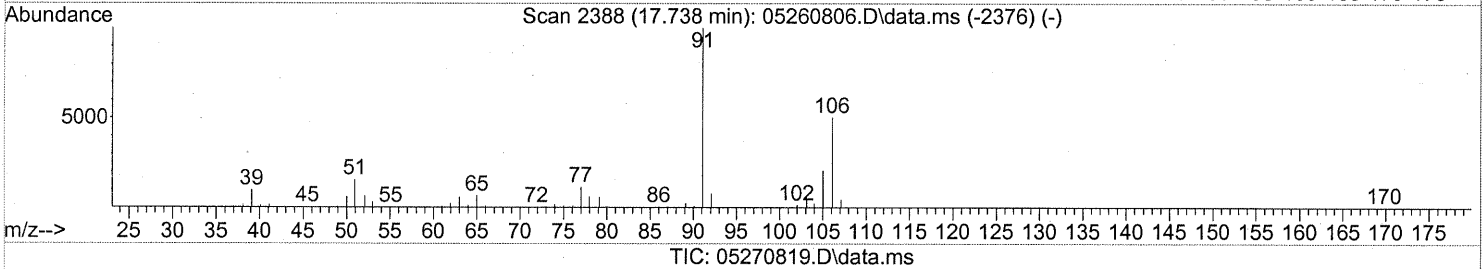
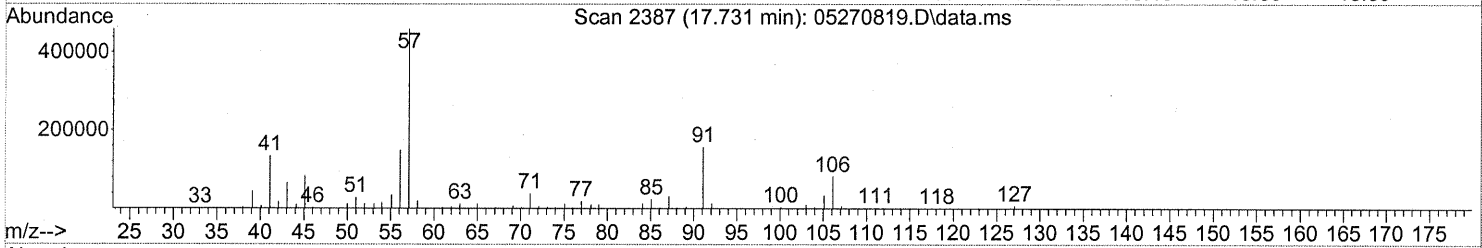
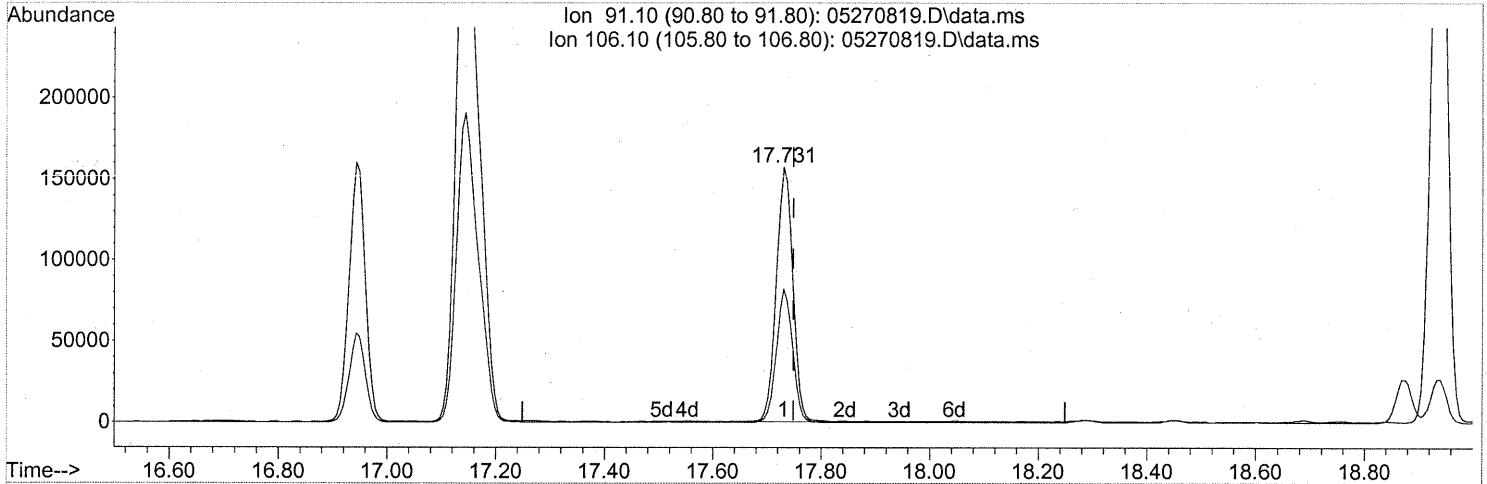
*DA 6/4/08*

*C. 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)  
 17.731min (-0.018) 5.43ng  
 response 333449

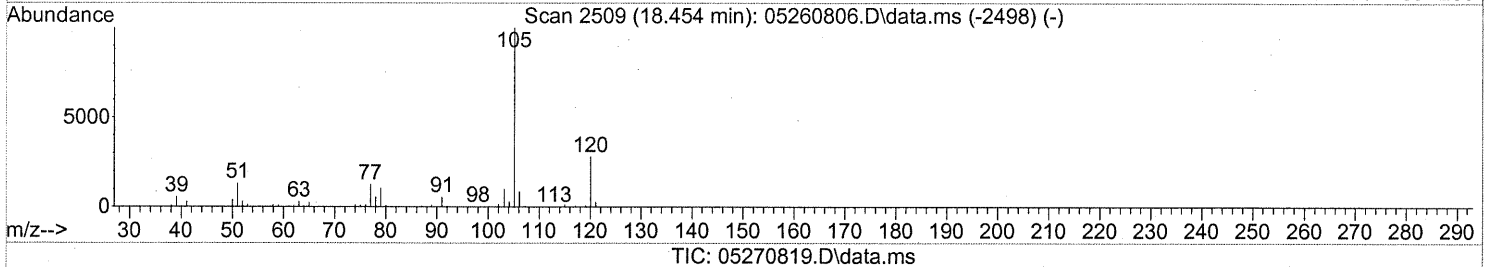
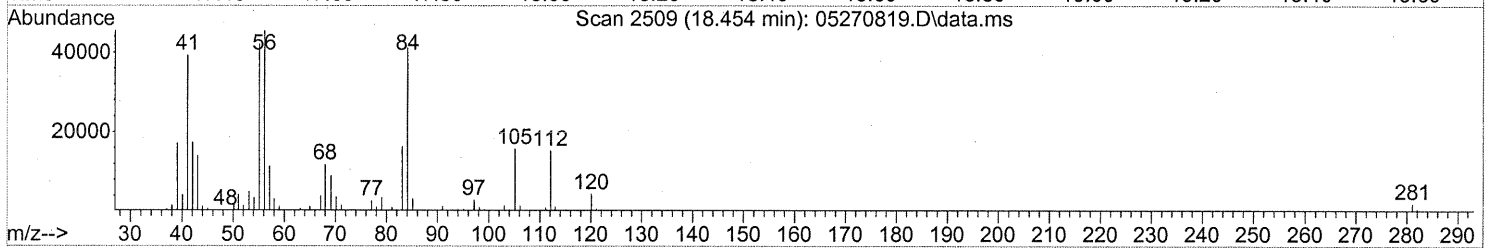
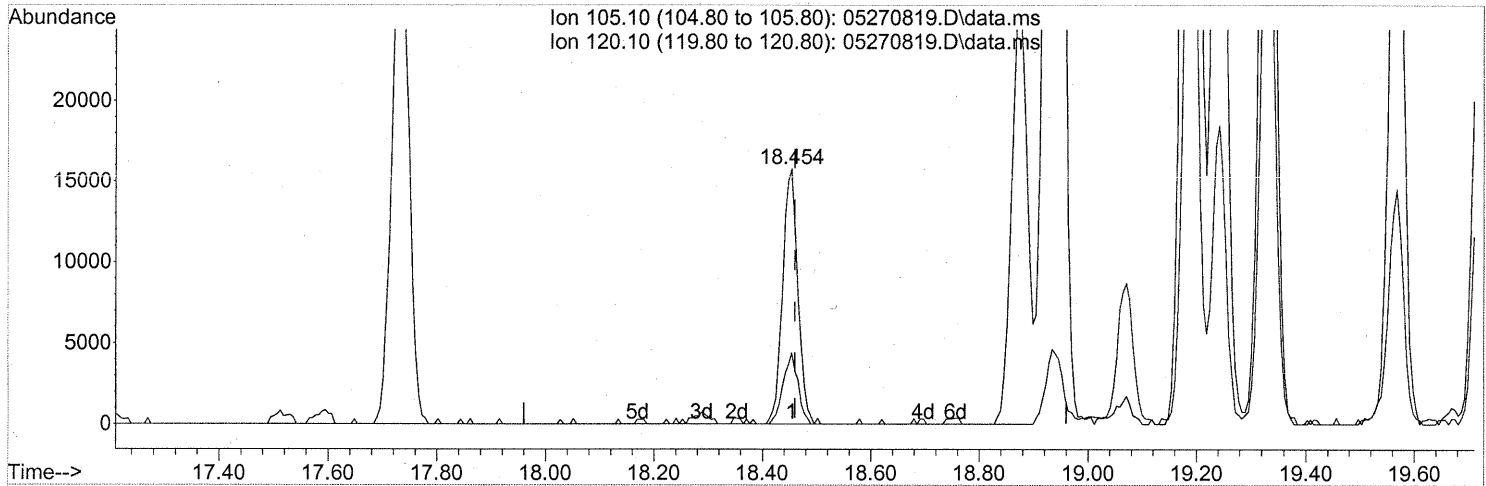
Ion	Exp%	Act%
91.10	100	100
106.10	45.90	50.93
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



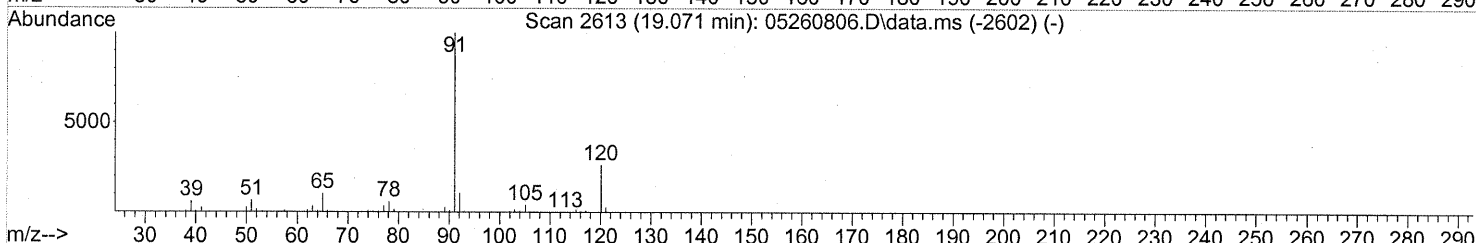
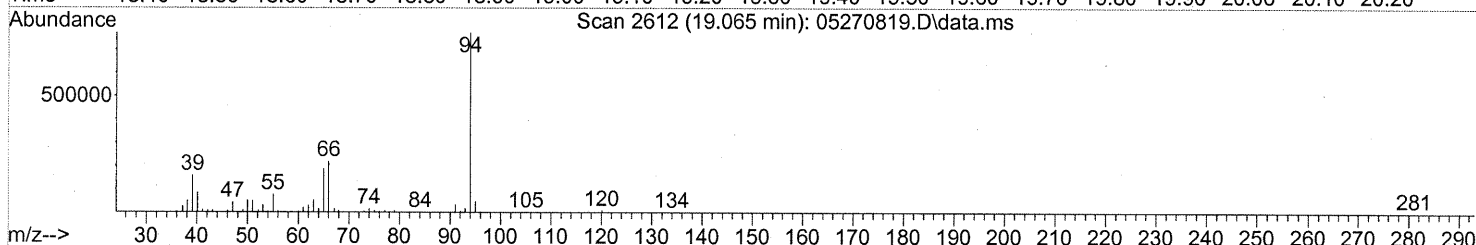
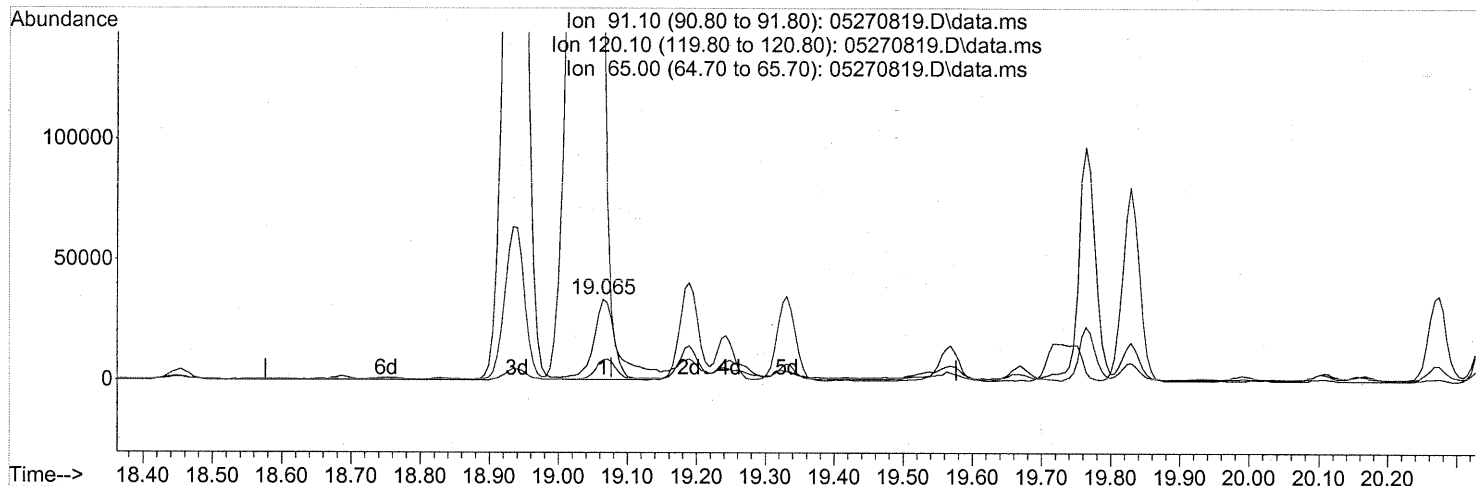
(74) Cumene (T)  
 18.454min (-0.006) 0.35ng  
 response 30977

Ion	Exp%	Act%
105.10	100	100
120.10	25.60	27.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

19.065min (-0.012) 0.66ng

response 68515

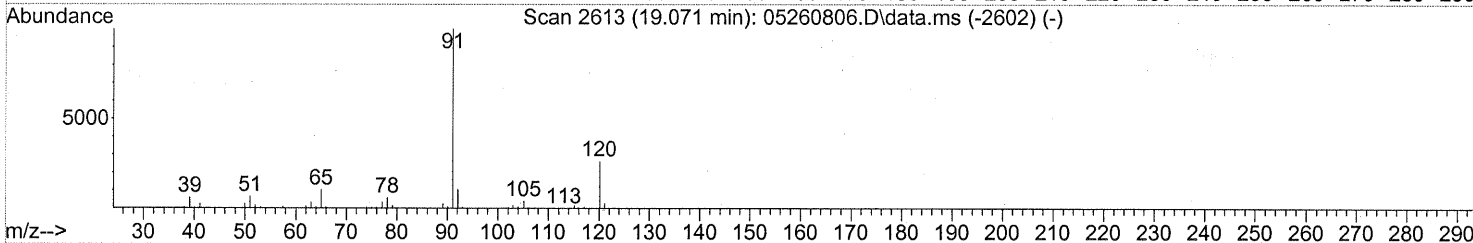
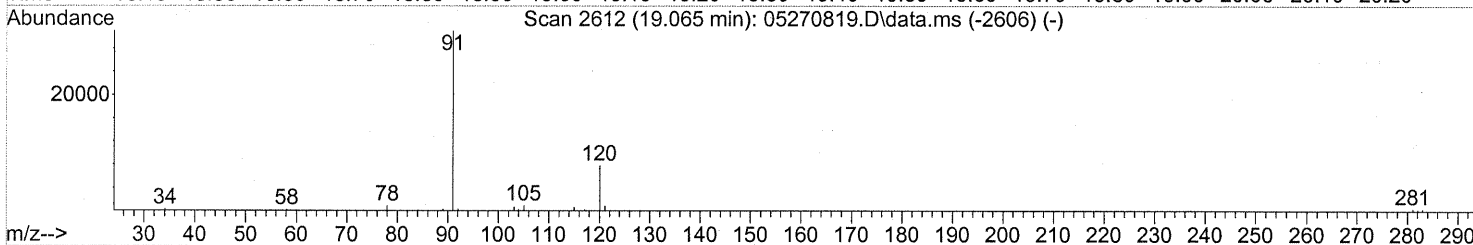
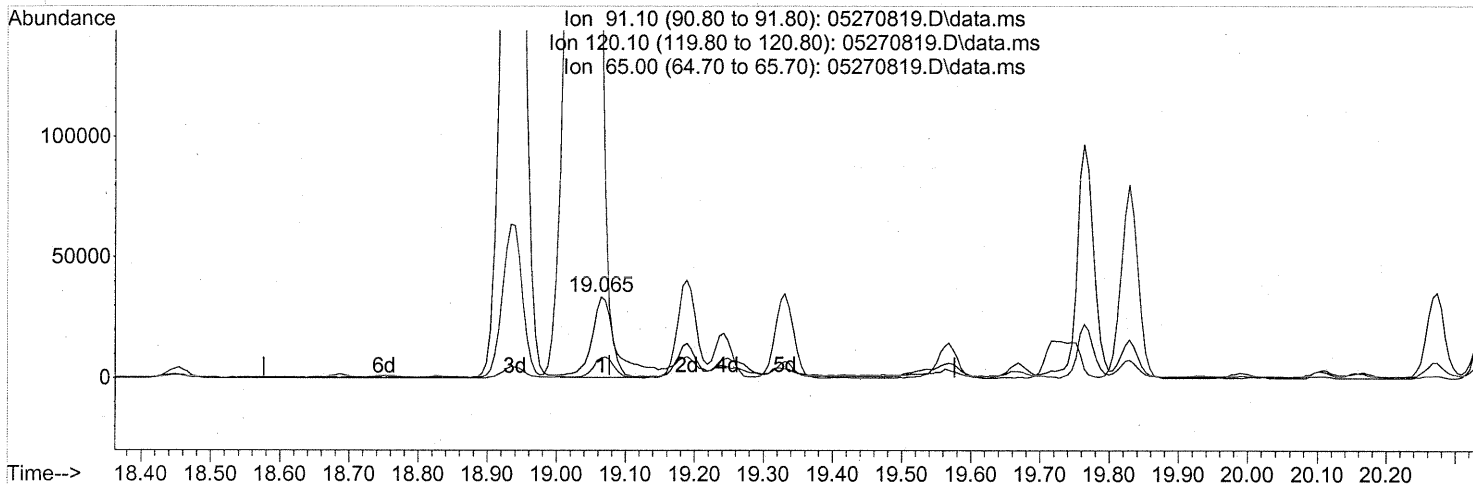
*before*

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	26.08
65.00	10.40	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)  
 19.065min (-0.012) 0.66ng  
 response 68515

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	26.08
65.00	10.40	0.00
0.00	0.00	0.00

*after substr.*

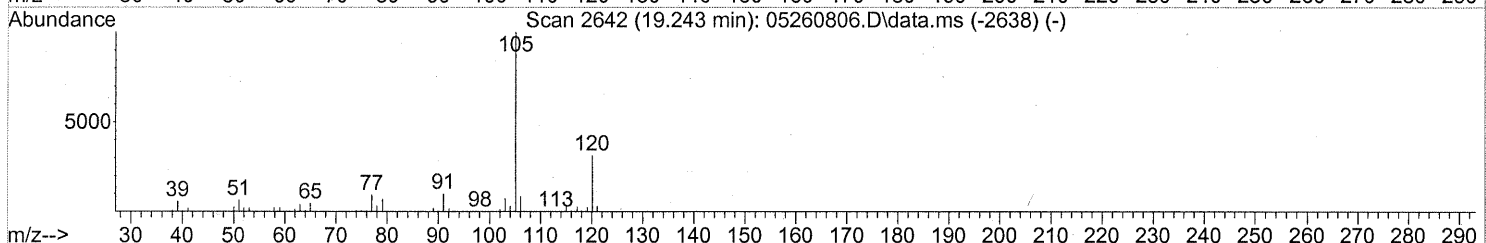
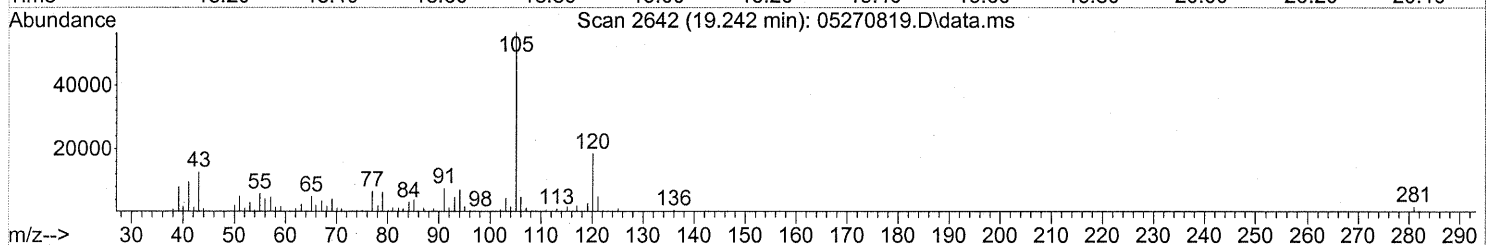
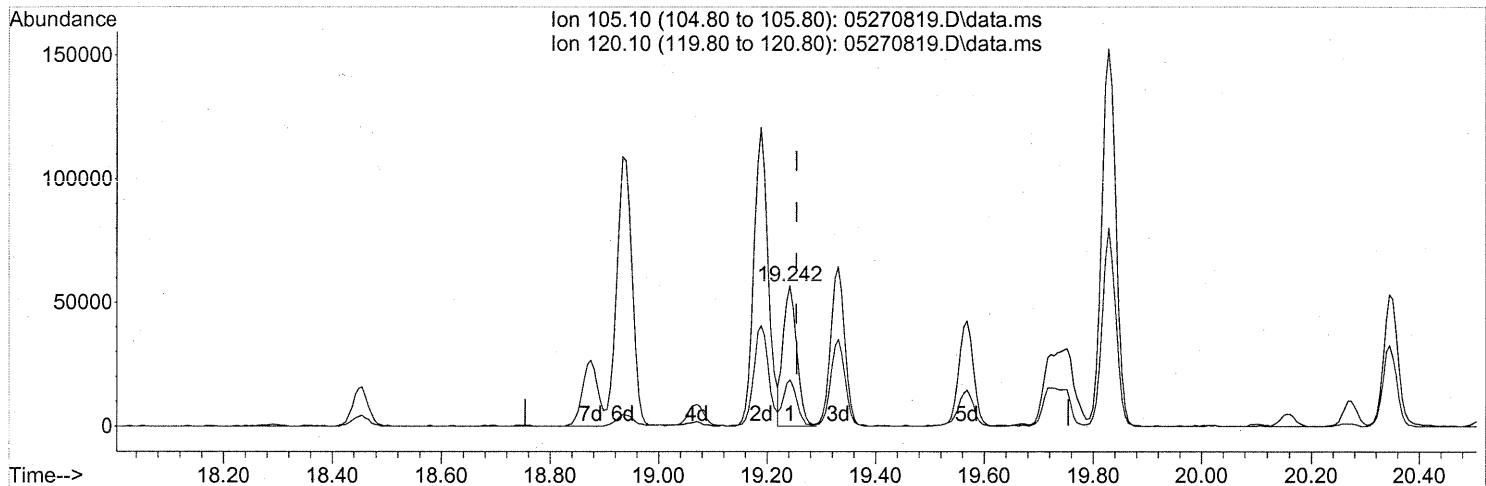
*WA 6/4/08*

*WA 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

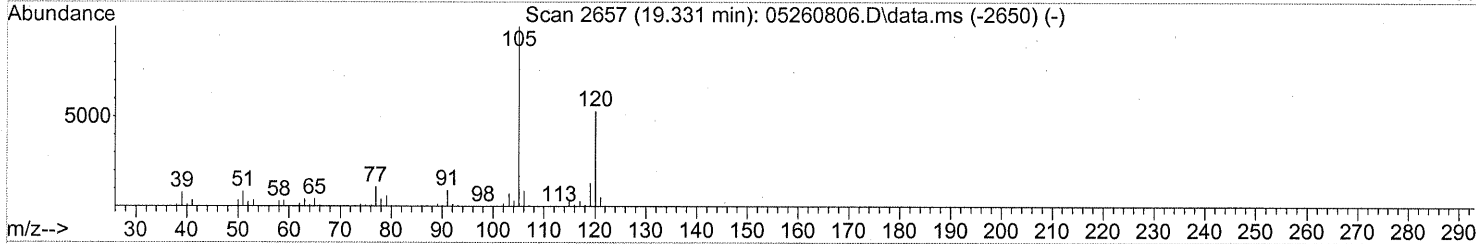
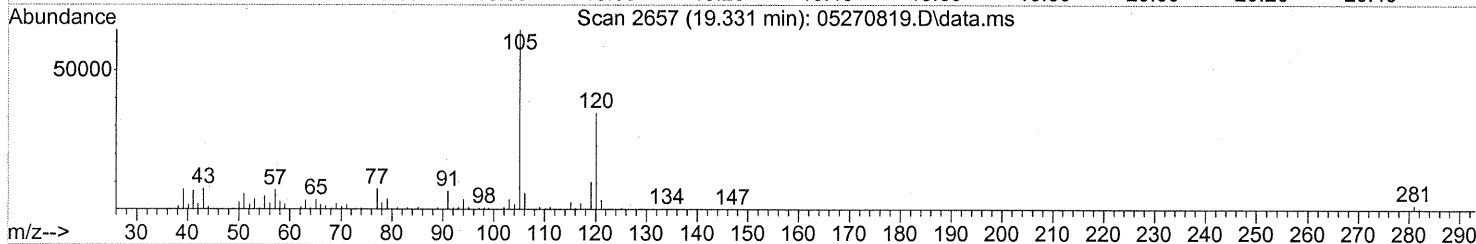
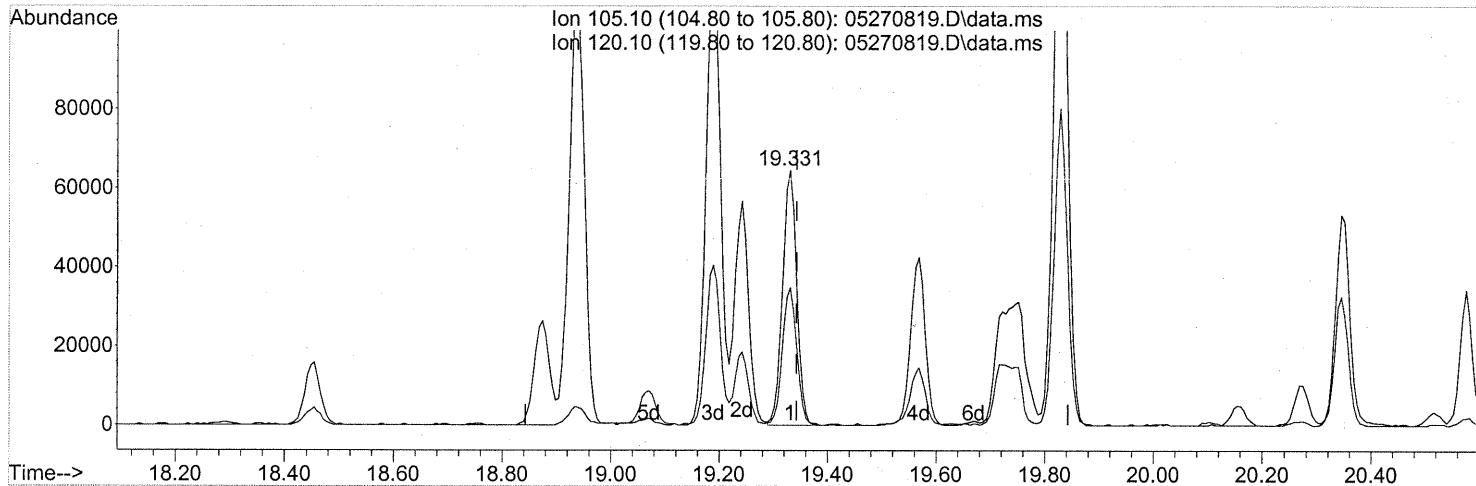
(78) 4-Ethyltoluene (T)  
 19.242min (-0.012) 1.12ng  
 response 99070

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	32.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

19.331min (-0.012) 1.49ng

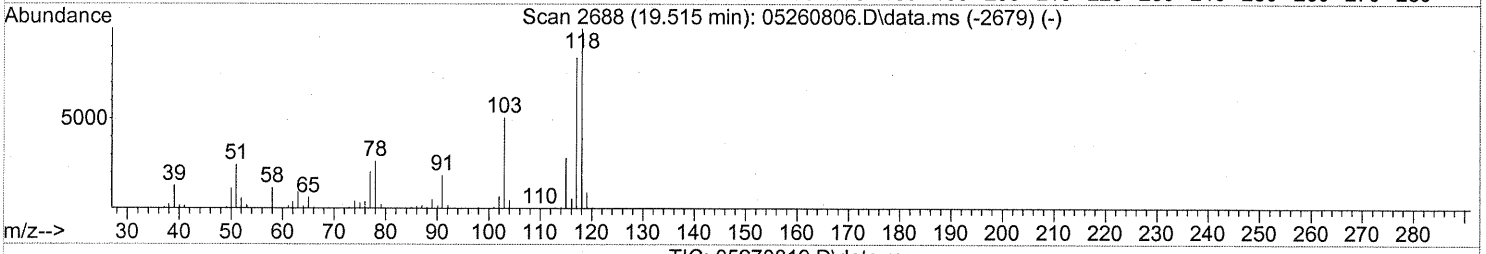
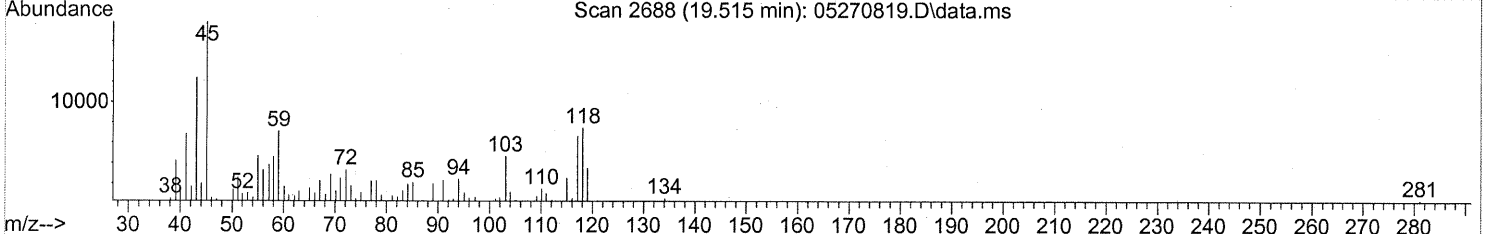
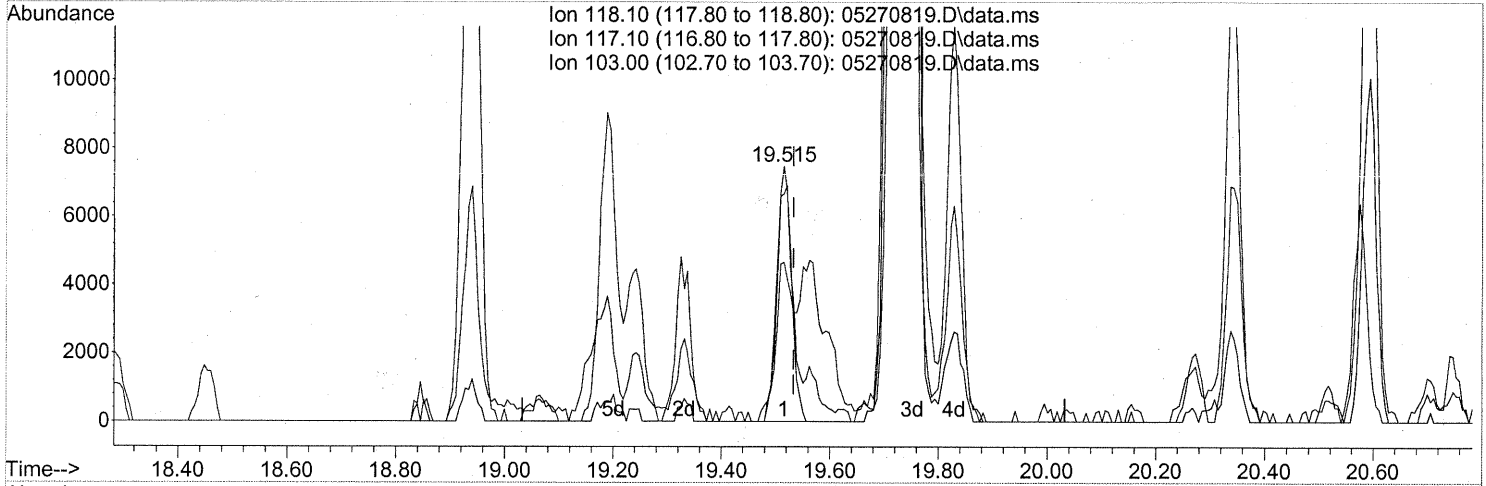
response 117091

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	55.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(80) alpha-Methylstyrene (T)

19.515min (-0.018) 0.32ng

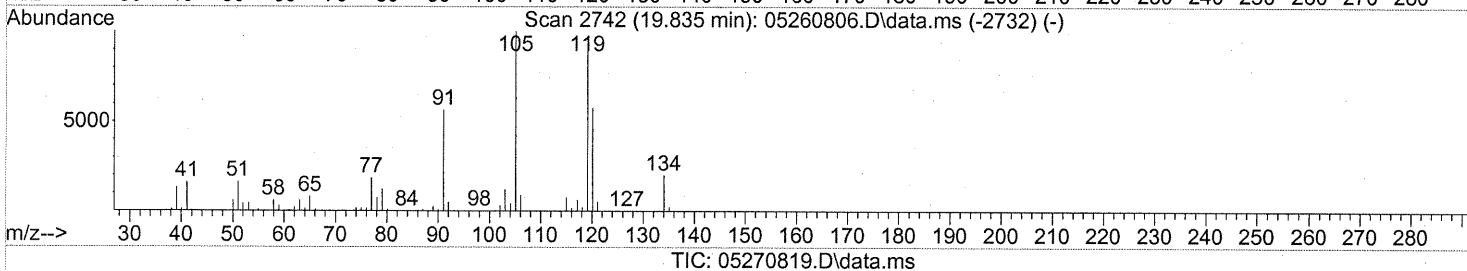
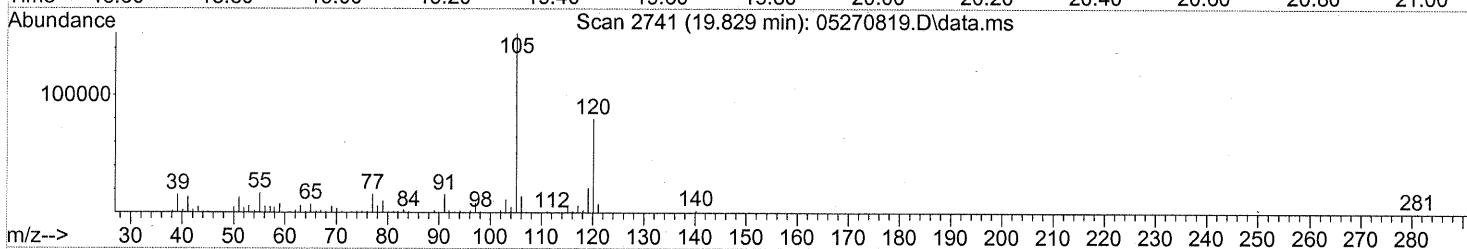
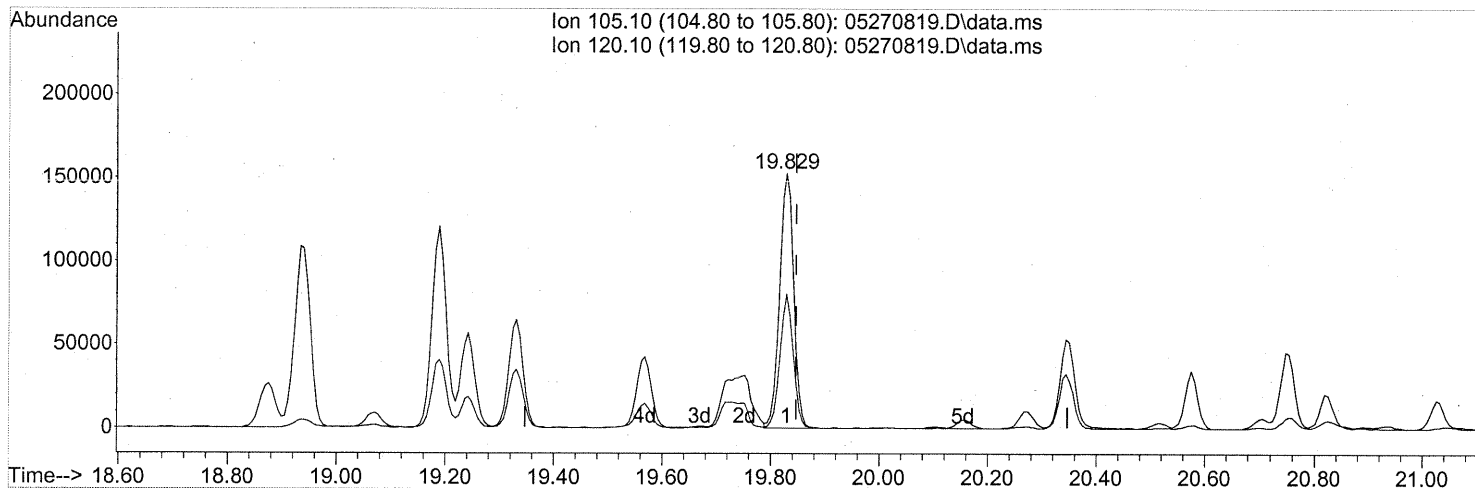
response 14223

Ion	Exp%	Act%
118.10	100	100
117.10	85.30	122.57#
103.00	55.10	73.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 3.48ng

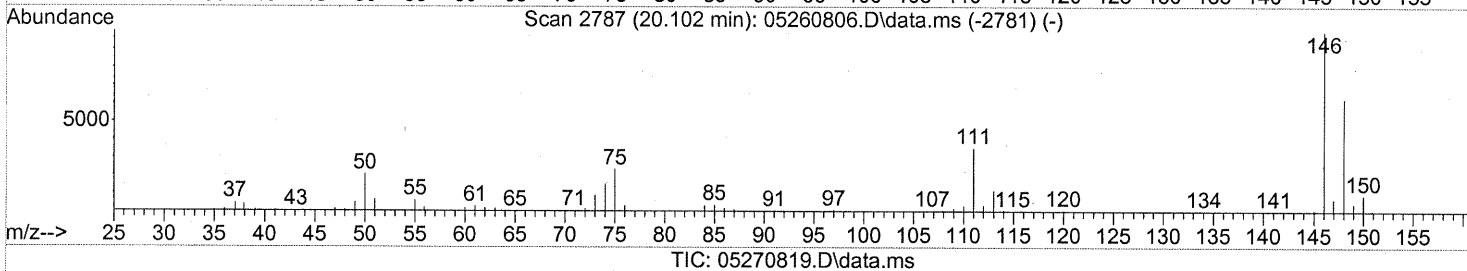
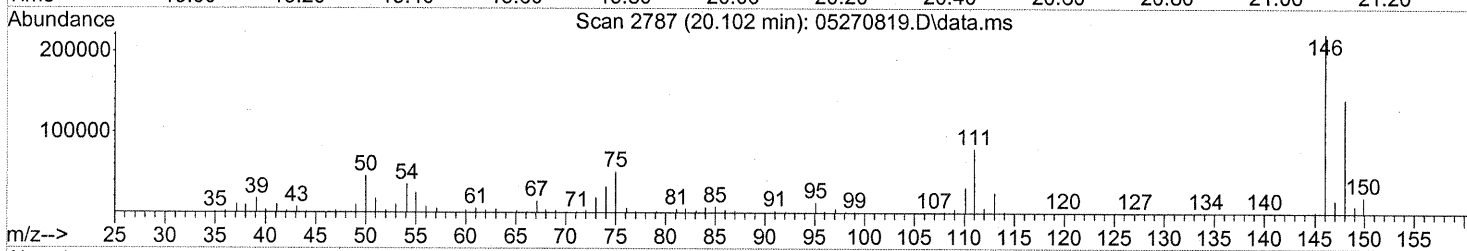
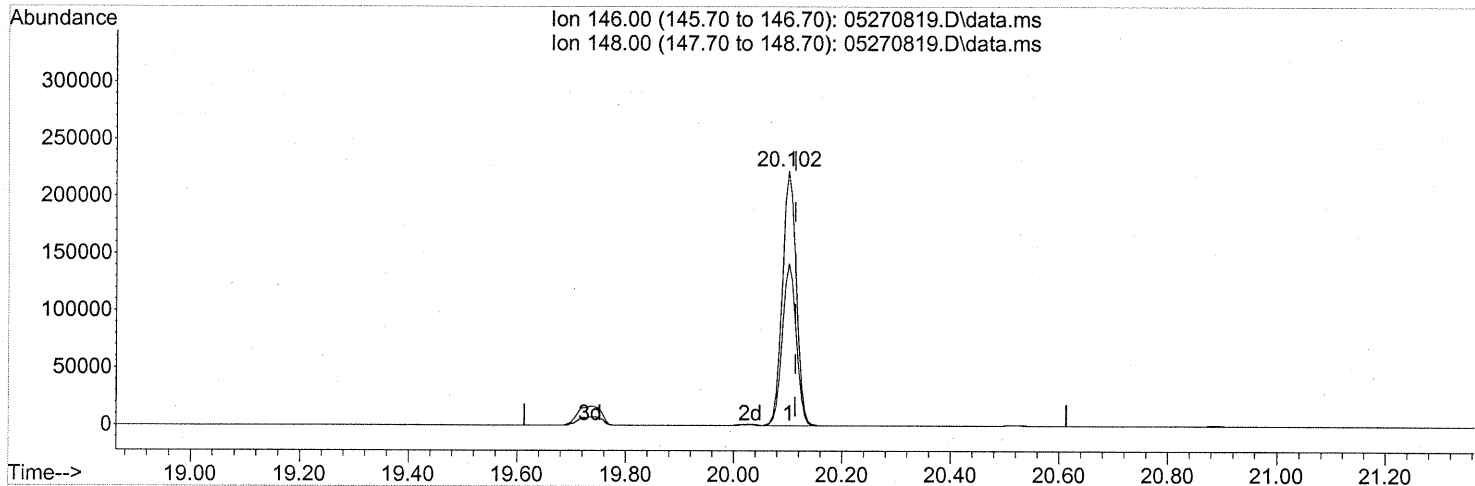
response 276191

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	49.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270819.D  
Acq On : 28 May 2008 00:18  
Operator : WA  
Sample : P0801507-014 (1000ml)  
Misc : ENSR SG14B-05 (-3.5, 3.6)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 8.13ng

response 397262

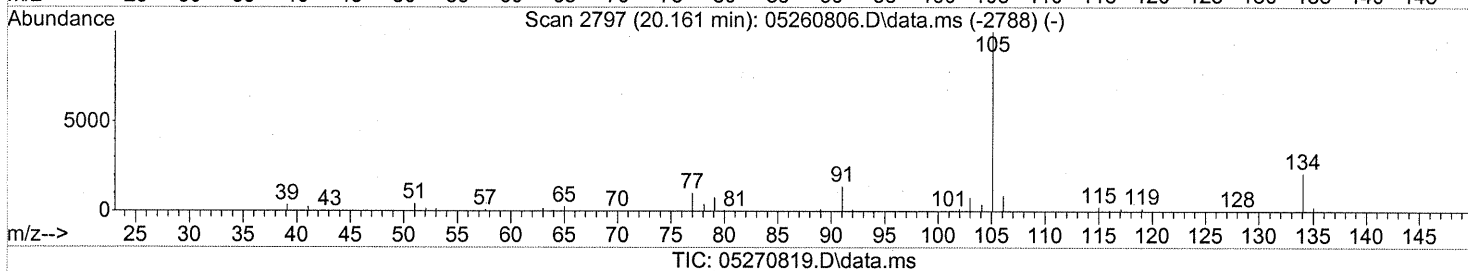
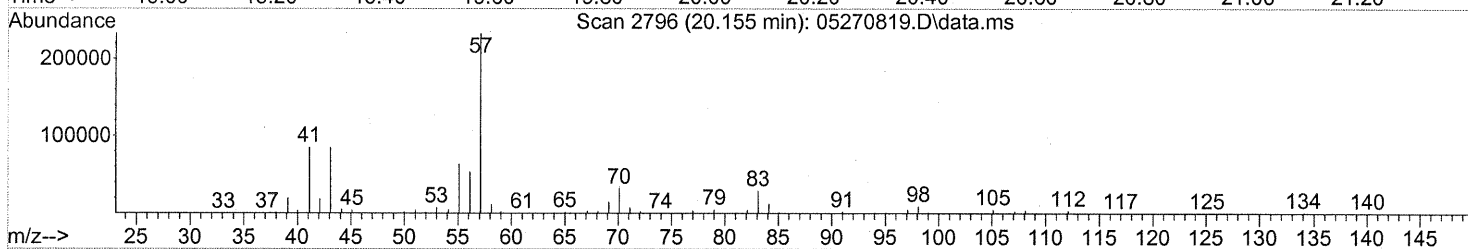
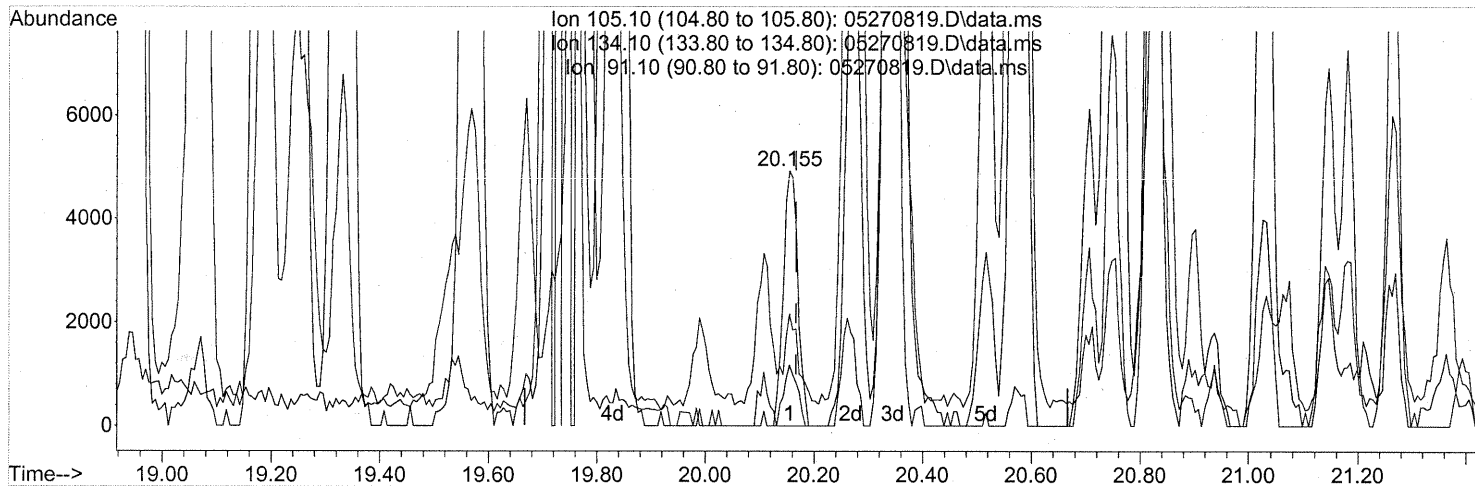
Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.67
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(87) sec-Butylbenzene (T)

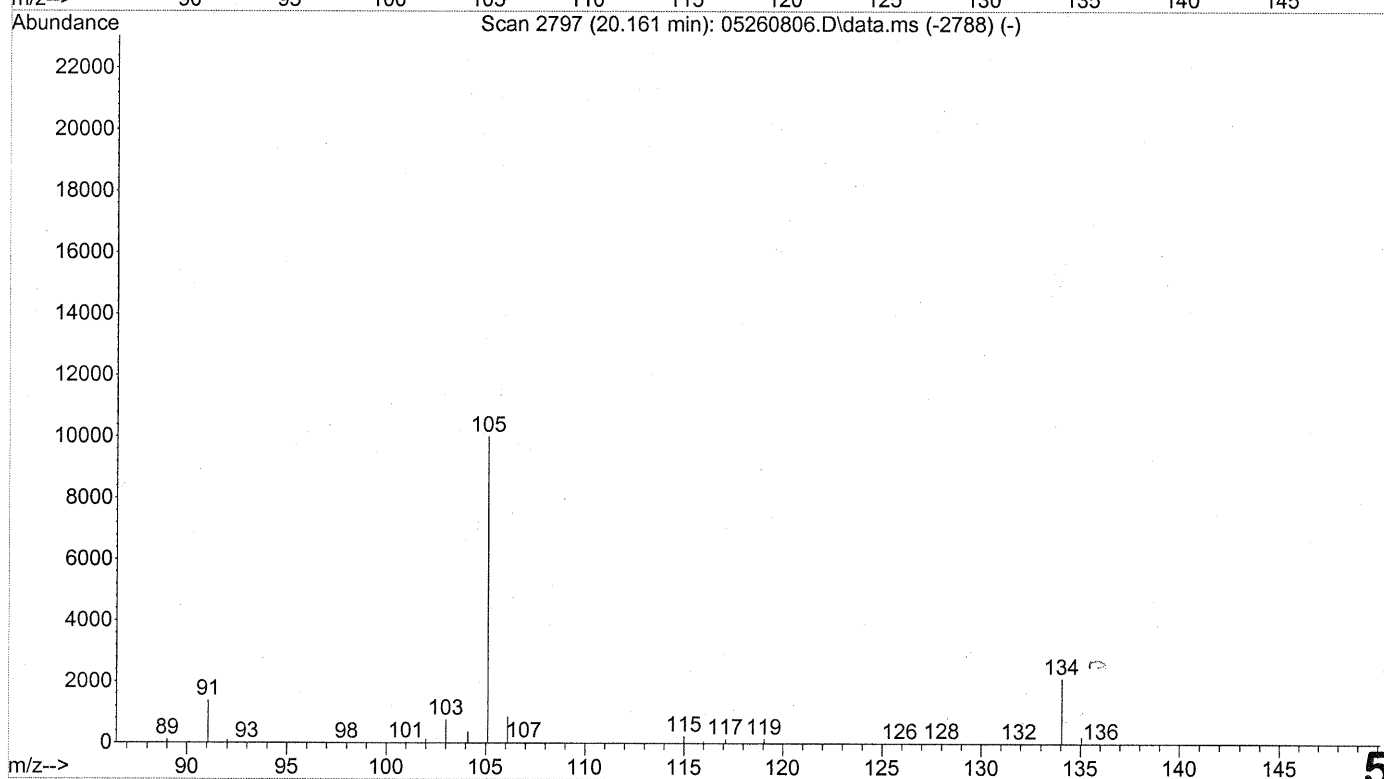
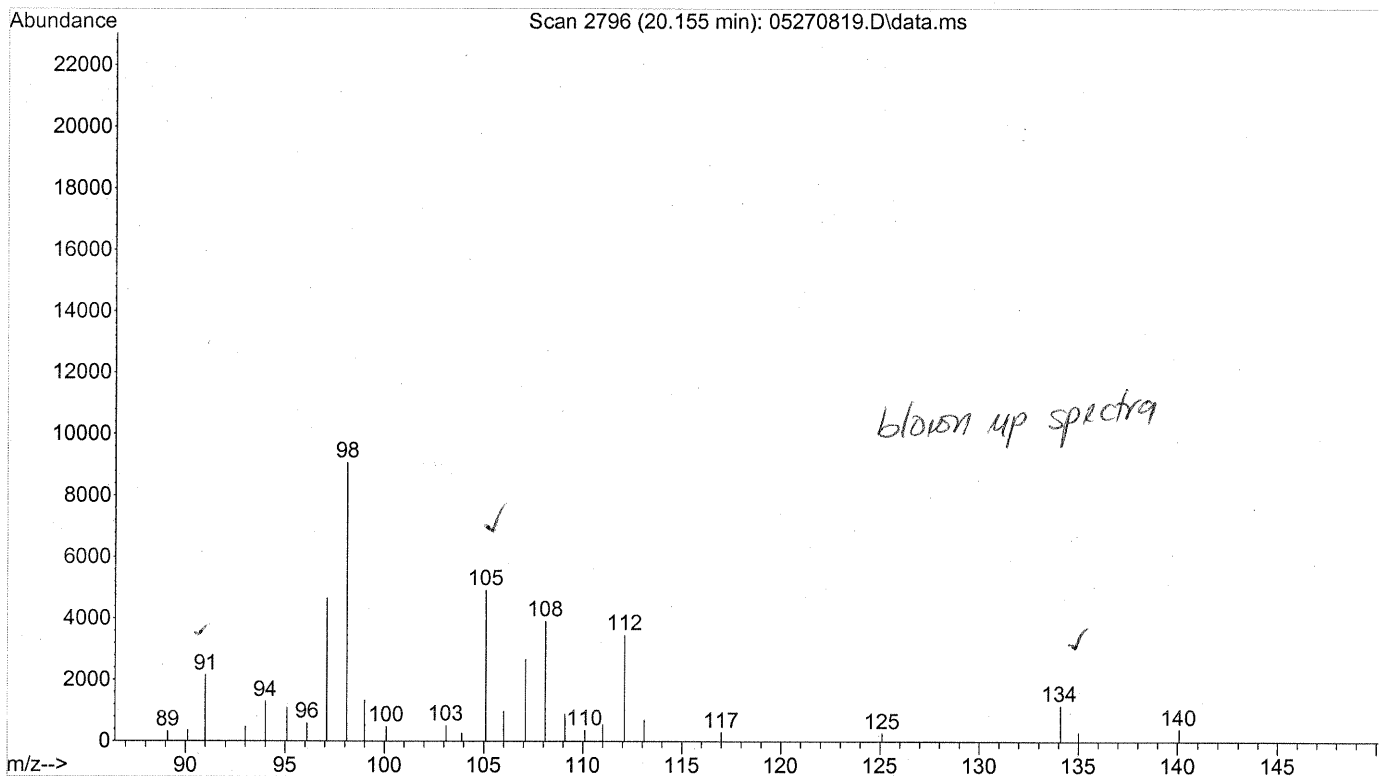
20.155min (-0.012) 0.09ng

response 9174

*see blown up spectra*

Ion	Exp%	Act%
105.10	100	100
134.10	18.30	22.43
91.10	15.40	30.01
0.00	0.00	0.00

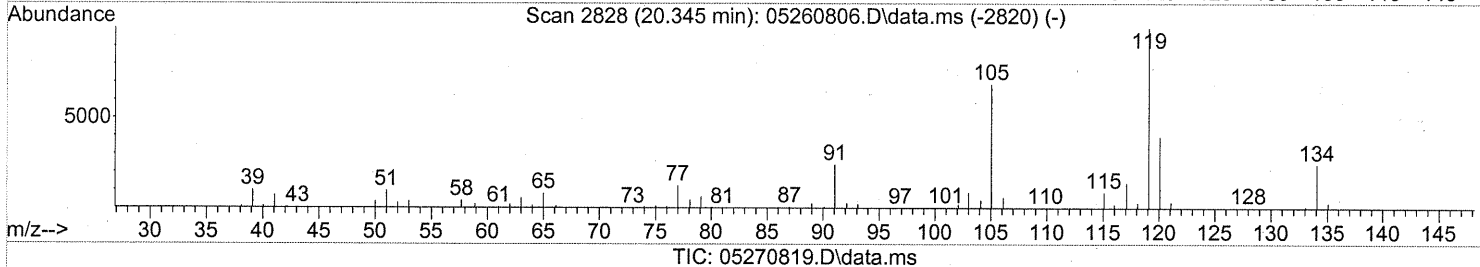
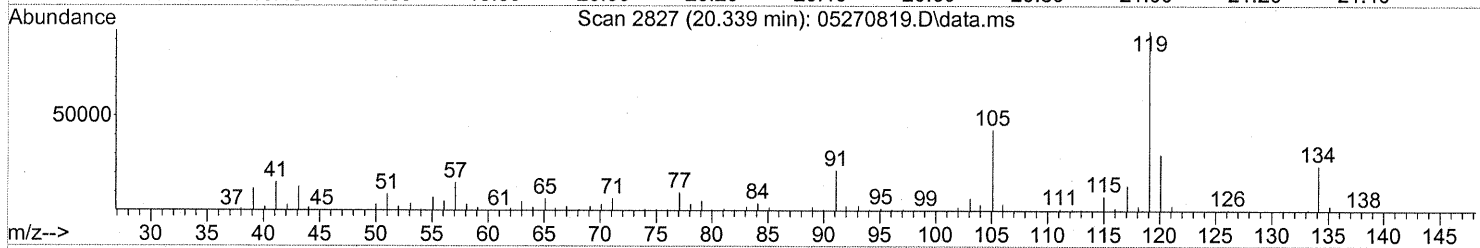
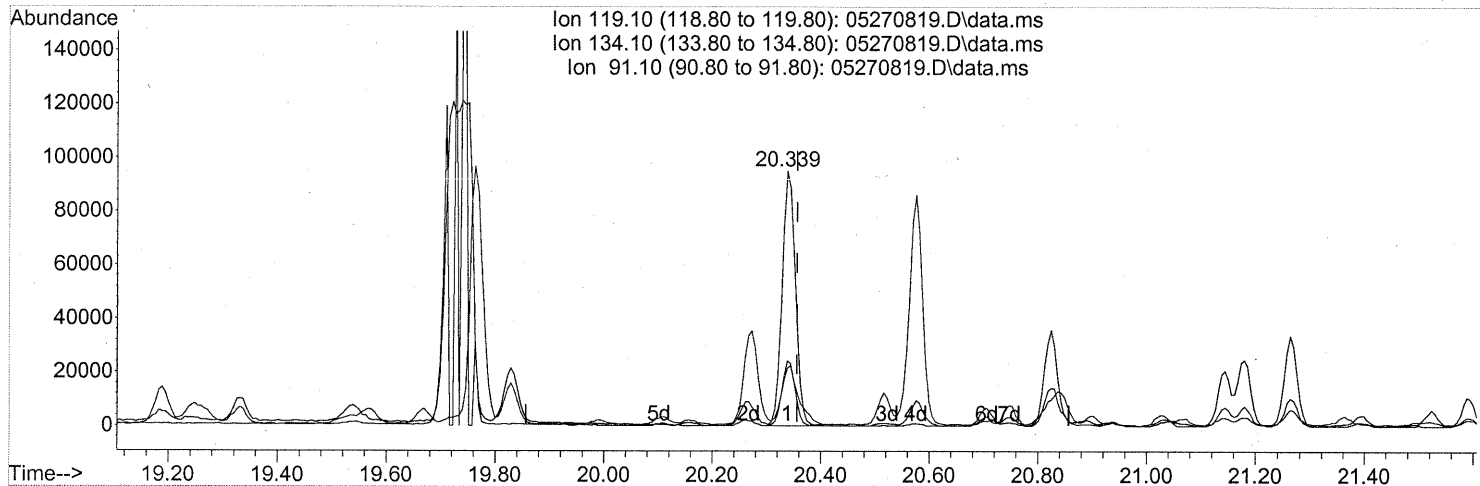
File :J:\MS16\DATA\2008\_05\27\05270819.D  
Operator : WA  
Acquired : 28 May 2008 00:18 using AcqMethod TO15.M  
Instrument : GCMS-16  
Sample Name: P0801507-014 (1000ml)  
Misc Info : ENSR SG14B-05 (-3.5, 3.6)  
Vial Number: 11



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

20.339min (-0.018) 1.79ng

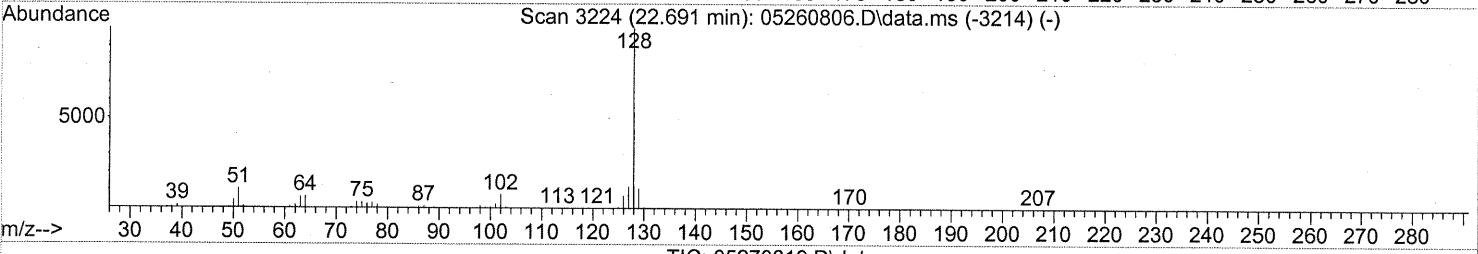
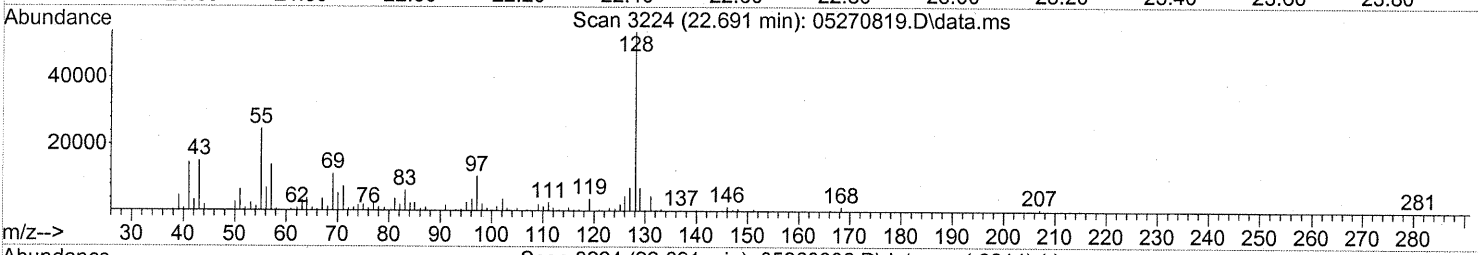
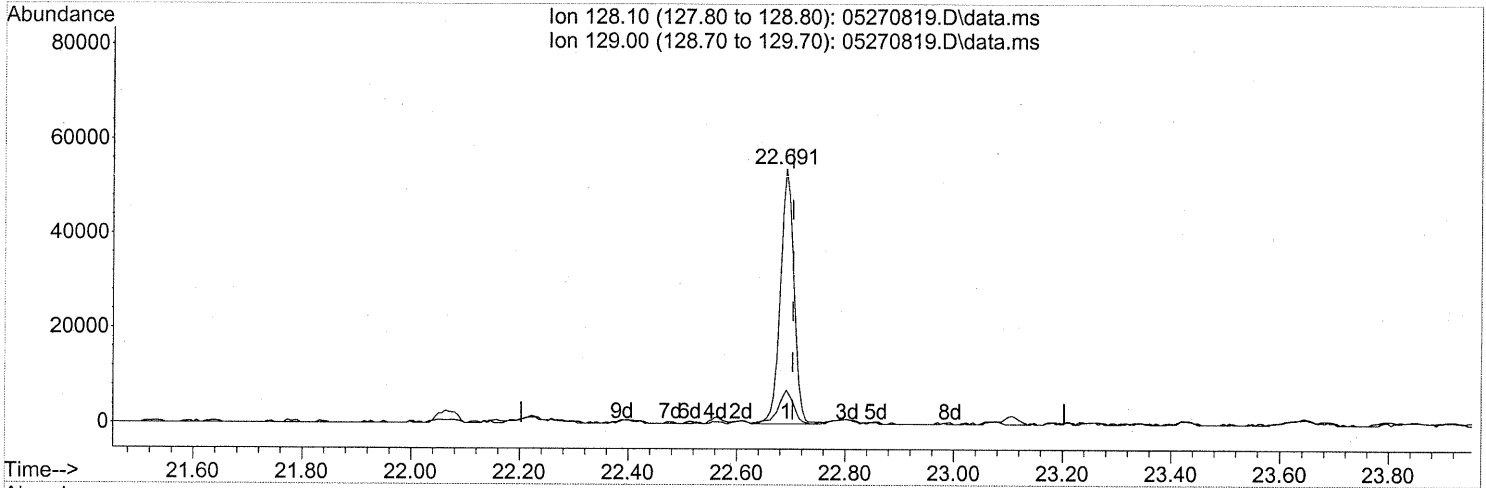
response 161629

Ion	Exp%	Act%
119.10	100	100
134.10	23.00	25.14
91.10	30.60	29.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270819.D\data.ms

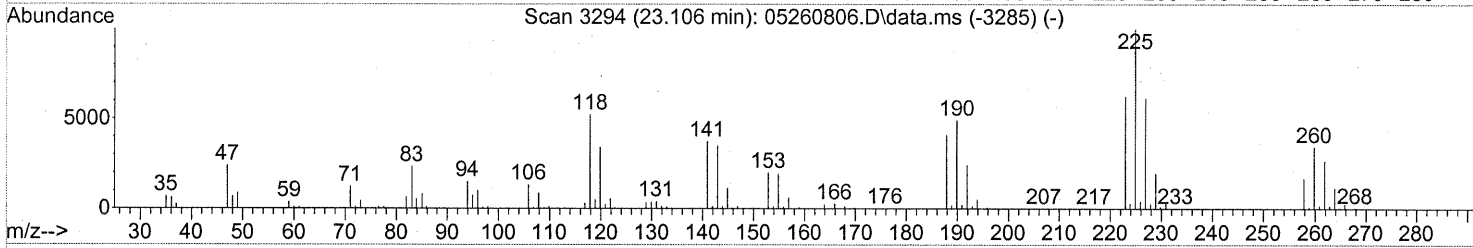
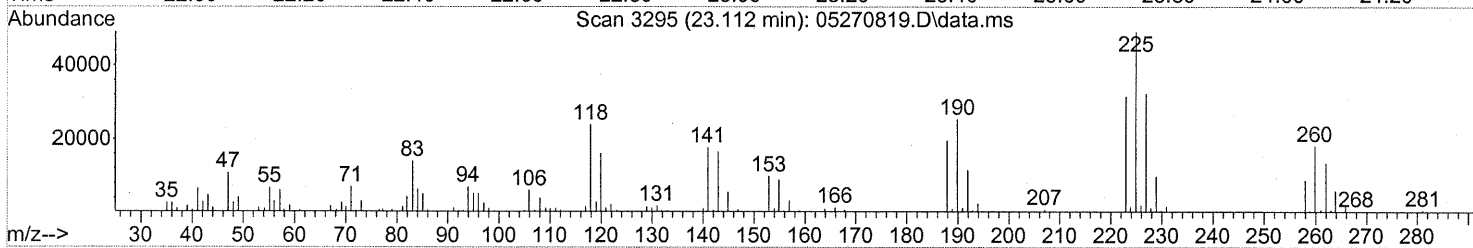
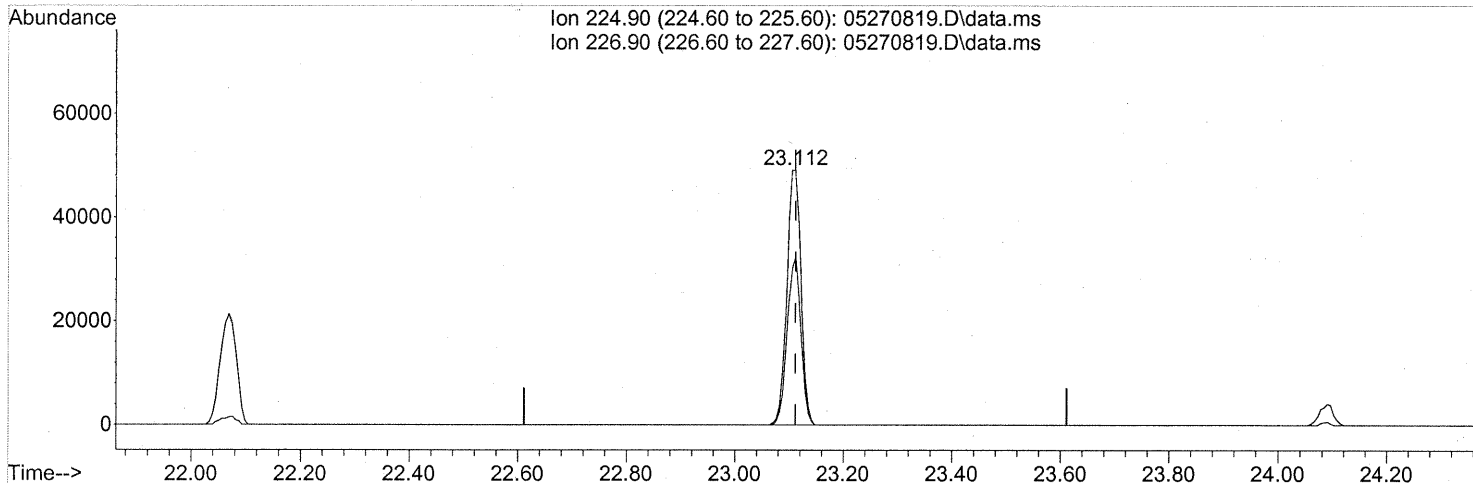
(95) Naphthalene (T)  
 22.691min (-0.012) 0.81ng  
 response 93810

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	14.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 04:48:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

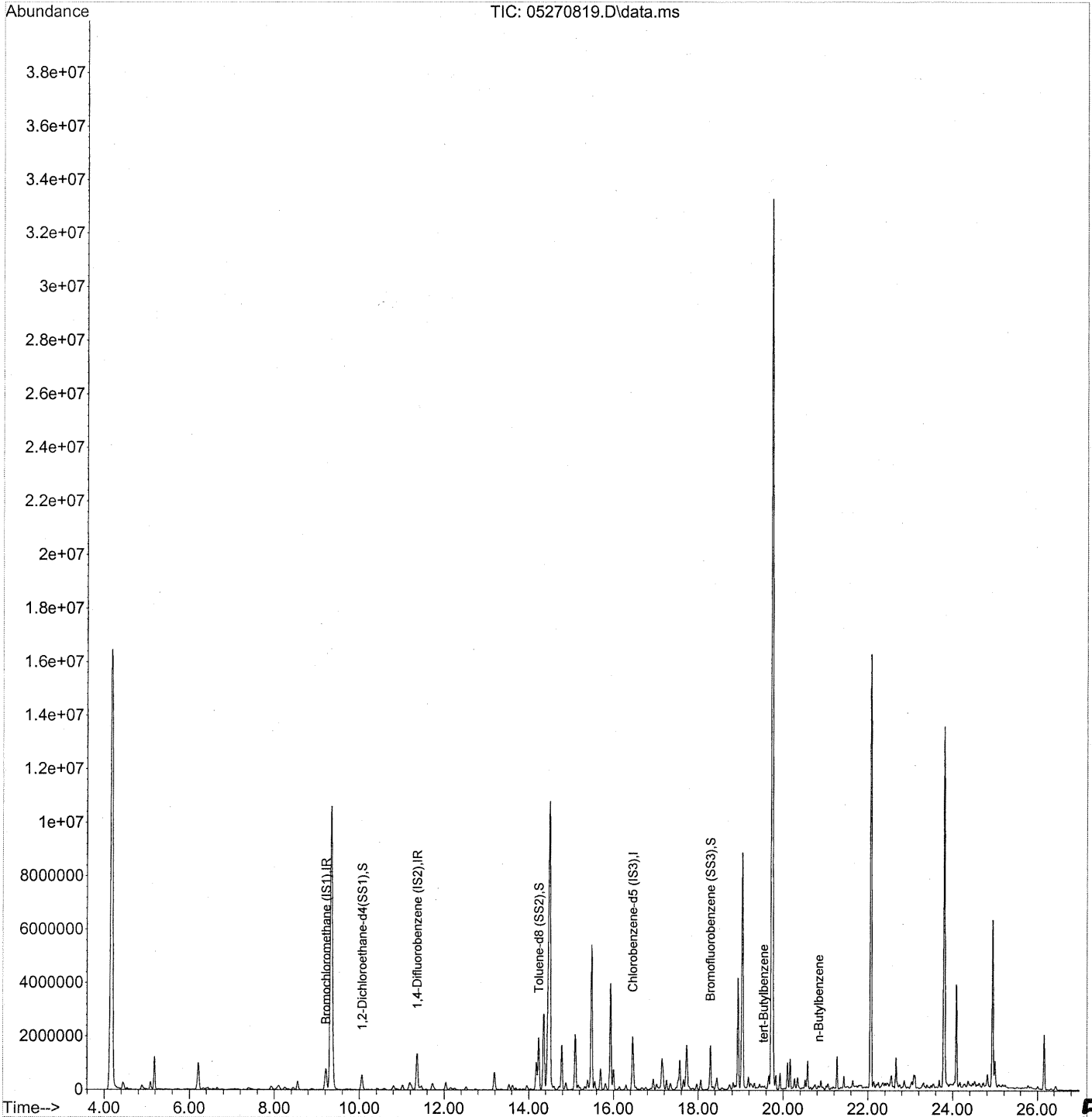
23.112min (-0.000) 6.35ng

response 88219

Ion	Exp%	Act%
224.90	100	100
226.90	63.00	64.12
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270819.D  
Acq On : 28 May 2008 00:18  
Operator : WA  
Sample : P0801507-014 (1000ml)  
Misc : ENSR SG14B-05 (-3.5, 3.6)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 14:39:35 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



576

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 14:39:35 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

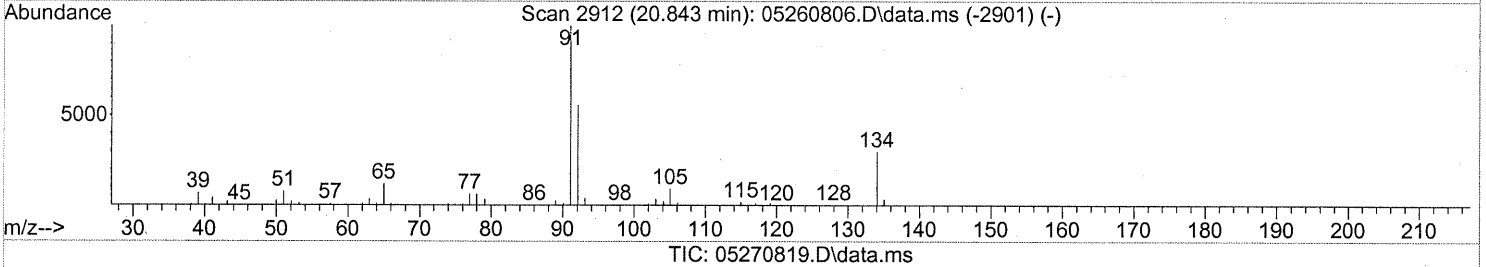
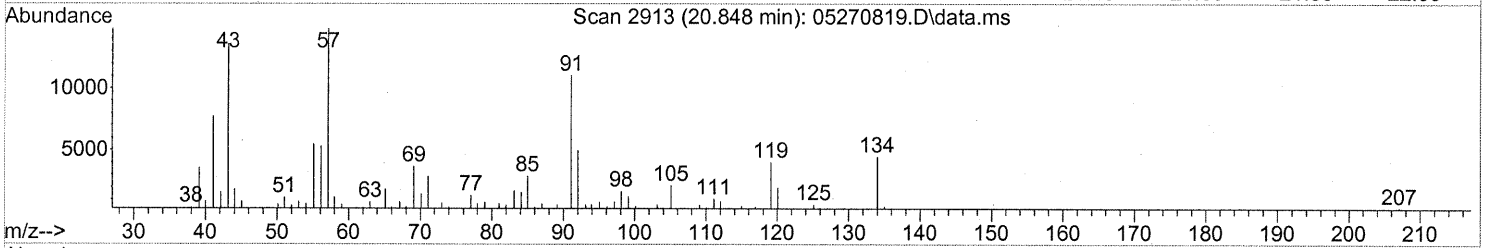
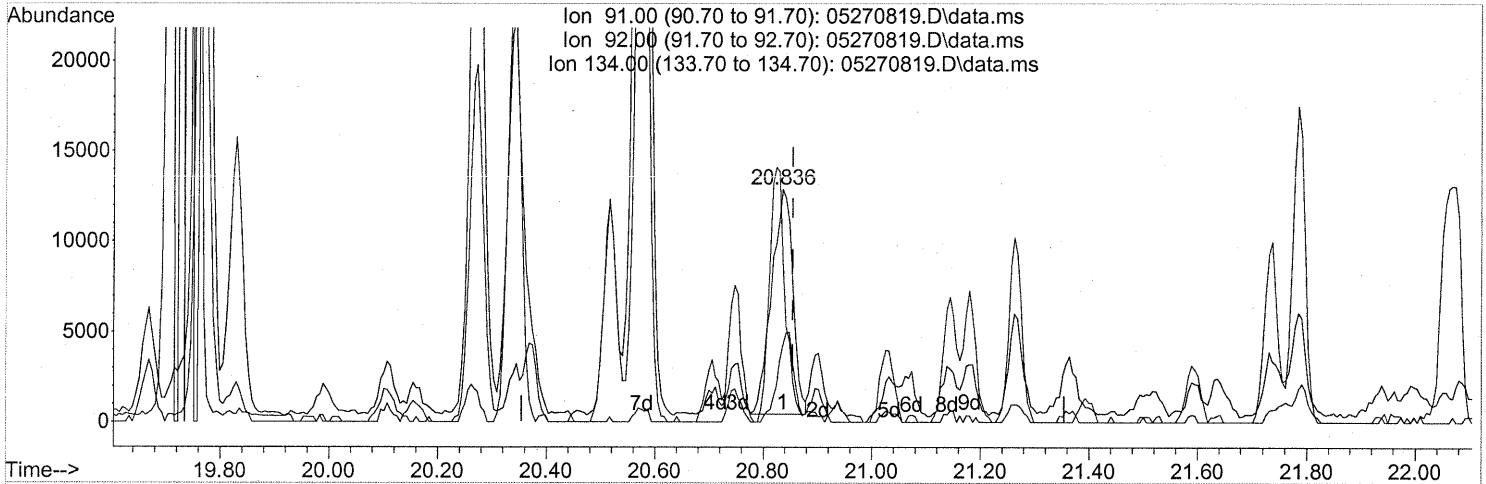
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.22	130	379532	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	11.36	114	1577066	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	651799	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.06	65	542292	24.988	ng	-0.03
Spiked Amount	25.000			Recovery	=	99.96%
5) Toluene-d8 (SS2)	14.24	98	1621346	24.128	ng	-0.01
Spiked Amount	25.000			Recovery	=	96.52%
6) Bromofluorobenzene (SS3)	18.29	174	573066	25.650	ng	0.00
Spiked Amount	25.000			Recovery	=	102.60%
Target Compounds						
7) tert-Butylbenzene	19.54	119	16485	<del>0.203</del> ng	AR	92
8) n-Butylbenzene	<u>20.84</u>	91	33595	<u>0.435</u> ng	H #	64

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270819.D  
 Acq On : 28 May 2008 00:18  
 Operator : WA  
 Sample : P0801507-014 (1000ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jun 04 14:39:35 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene  
 20.836min (-0.018) 0.43ng  
 response 33595

Ion	Exp%	Act%
91.00	100	100
92.00	53.60	31.11#
134.00	23.40	0.00#
0.00	0.00	0.00





Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270825.D  
 Acq On : 28 May 2008 6:26 am  
 Operator : WA  
 Sample : P0801507-014 Dil (100ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 06:58:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	388783	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1614645	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	658561	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	548632	24.679	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.72%	✓
57) Toluene-d8 (SS2)	14.23	98	1656423	24.397	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.60%	✓
73) Bromofluorobenzene (SS3)	18.28	174	592517	26.248	ng	-0.01
Spiked Amount	25.000		Recovery	=	105.00%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	13999	0.465	ng	91
3) Dichlorodifluoromethane	4.55	85	5246	0.144	ng	# 95
4) Chloromethane	4.75	50	2514	0.055	ng	77
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.09	54	439	N.D.		
8) Bromomethane	5.43	94	100	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.75	45	188	N.D.		
11) Acetonitrile	5.93	41	7036	0.120	ng	# 45
12) Acrolein	6.05	56	3140	0.213	ng	95
13) Acetone	6.17	58	63175	3.110	ng	# 71
14) Trichlorofluoromethane	6.33	101	5618	0.165	ng	96
15) Isopropanol	6.45	45	385	N.D.		
16) Acrylonitrile	6.61	53	118	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.95	59	3300	0.058	ng	# 75
19) Methylene Chloride	7.03	84	1020	0.065	ng	# 1
20) Allyl Chloride	7.14	41	301	N.D.		
21) Trichlorotrifluoroethane	7.30	151	96	N.D.		
22) Carbon Disulfide	7.39	76	12595	0.200	ng	97
23) trans-1,2-Dichloroethene	8.03	61	445	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	8.25	86	274	0.082	ng	# 1
27) 2-Butanone	8.52	72	10567	0.995	ng	# 14
28) cis-1,2-Dichloroethene	9.17	61	2112	0.073	ng	# 39
29) Diisopropyl Ether	9.32	87	152688	10.914	ng	# 1
30) Ethyl Acetate	9.17	61	2112	0.285	ng	77
31) n-Hexane	9.23	57	2485	0.056	ng	# 65

580

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270825.D  
 Acq On : 28 May 2008 6:26 am  
 Operator : WA  
 Sample : P0801507-014 Dil (100ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 06:58:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	1405417	61.259	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	17401	0.655	ng #	69
41) Benzene	11.01	78	20014	0.294	ng	98
42) Carbon Tetrachloride	11.18	117	24980	0.895	ng	94
43) Cyclohexane	11.35	84	1986	0.075	ng #	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.14	83	6782	0.339	ng	92
47) Trichloroethene	12.20	130	1241	0.059	ng	81
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	5770	0.053	ng	80
50) Methyl Methacrylate	12.51	100	772	0.106	ng #	1
51) n-Heptane	12.52	71	2339	0.144	ng #	62
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.19	58	24141	1.020	ng	83
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	140990	8.515	ng #	7
58) Toluene	14.35	91	149412	1.940	ng	99
59) 2-Hexanone	14.58	43	10473	0.144	ng	73
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.30	43	4698	0.064	ng #	40
63) n-Octane	15.47	57	129848	5.576	ng	96
64) Tetrachloroethene	15.69	166	22685	0.996	ng	99
65) Chlorobenzene	16.50	112	1987	N.D.		
66) Ethylbenzene	16.94	91	31596	0.361	ng	90
67) m- & p-Xylene	17.14	91	97049	1.673	ng	91
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	1583	N.D.		
70) o-Xylene	17.73	91	33174	0.534	ng	93
71) n-Nonane	17.97	43	12243	0.200	ng	88
72) 1,1,2,2-Tetrachloroethane	17.78	83	426	N.D.		
74) Cumene	18.45	105	3028	N.D.		
75) alpha-Pinene	18.93	93	192963	4.551	ng	93
76) n-Propylbenzene	19.06	91	6648	0.063	ng #	85
77) 3-Ethyltoluene	19.19	105	22353	0.225	ng	95
78) 4-Ethyltoluene	19.24	105	8951	0.100	ng	90
79) 1,3,5-Trimethylbenzene	19.33	105	11272	0.142	ng	9581

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270825.D  
 Acq On : 28 May 2008 6:26 am  
 Operator : WA  
 Sample : P0801507-014 Dil (100ml)  
 Misc : ENSR SG14B-05 (-3.5, 3.6)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 06:58:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

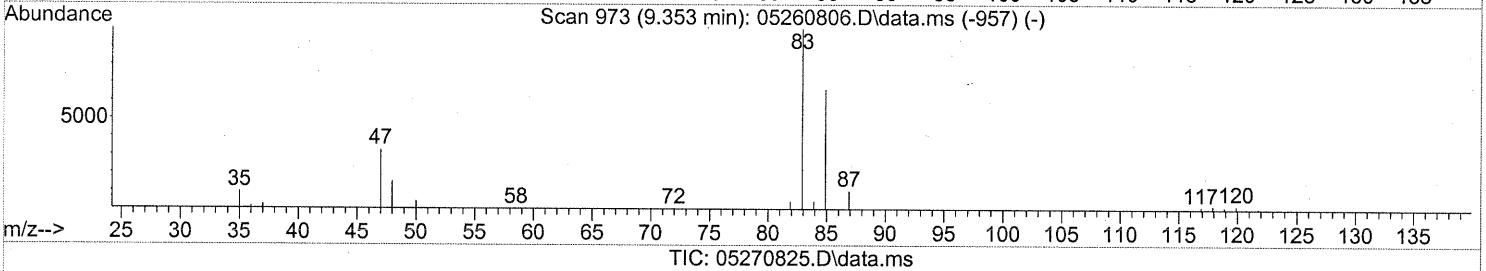
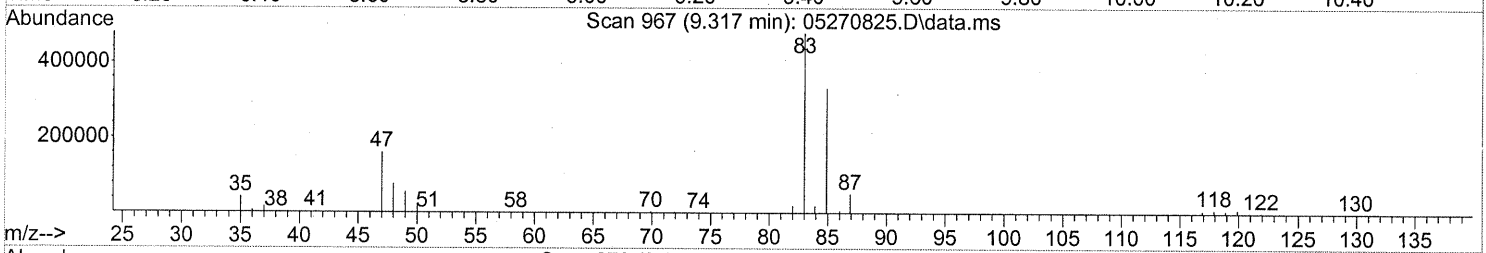
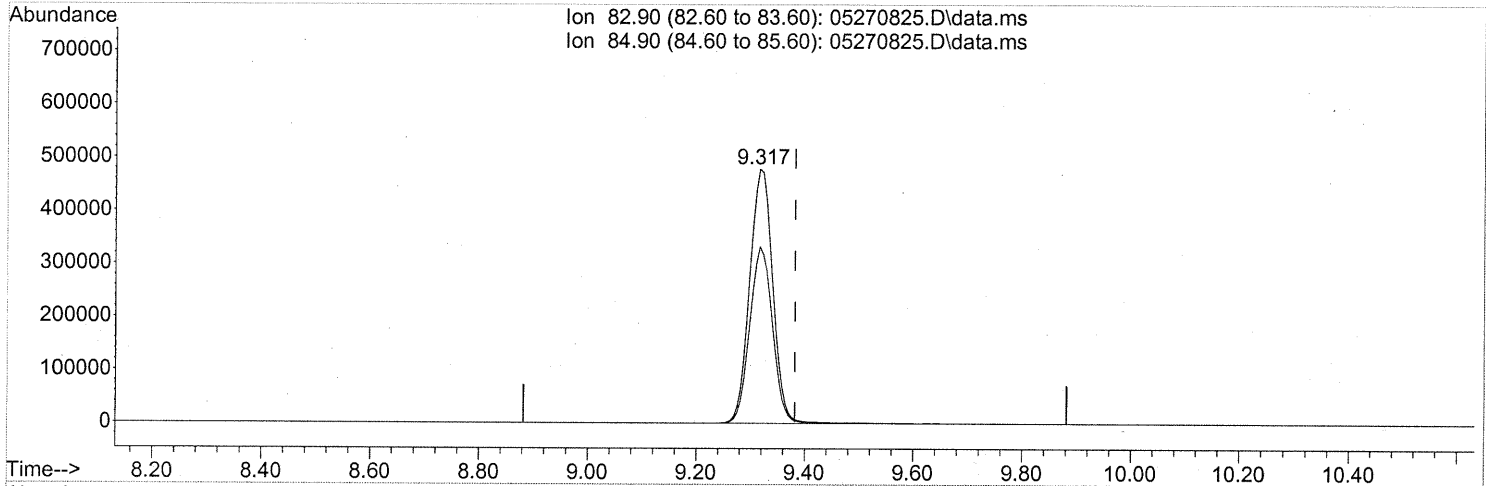
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	1122	N.D.		
81) 2-Ethyltoluene	19.57	105	7926	0.082	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	26243	0.327	ng	95
83) n-Decane	19.93	57	24903	0.438	ng	79
84) Benzyl Chloride	20.00	91	107	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	39325	0.773	ng	100
86) 1,4-Dichlorobenzene	20.10	146	39325	0.796	ng	100
87) sec-Butylbenzene	20.15	105	874	N.D.		
88) p-Isopropyltoluene	20.34	119	15506	0.170	ng	98
89) 1,2,3-Trimethylbenzene	20.34	105	9559	0.124	ng	84
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	20.52	68	7121	0.288	ng	81
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	19245	0.323	ng	91
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	9693	0.083	ng	92
96) n-Dodecane	22.66	57	39202	0.675	ng	82
97) Hexachloro-1,3-butadiene	23.11	225	8535	0.608	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270825.D  
Acq On : 28 May 2008 6:26  
Operator : WA  
Sample : P0801507-014 Dil (100ml)  
Misc : ENSR SG14B-05 (-3.5, 3.6)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 28 06:58:00 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(32) Chloroform (T)  
9.317min (-0.065) 61.26ng  
response 1405417

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.50
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG06B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00189

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.54

CAS #	Compound	Result	MRL	MDL	Result	MRL	MDL	Data Qualifier
		µg/m <sup>3</sup>	µg/m <sup>3</sup>	µg/m <sup>3</sup>	ppbV	ppbV	ppbV	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	0.77	0.077	0.41	0.16	0.016	
74-87-3	Chloromethane	ND	0.15	0.077	ND	0.075	0.037	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.77	0.077	ND	0.11	0.011	
75-01-4	Vinyl Chloride	ND	0.15	0.077	ND	0.060	0.030	
74-83-9	Bromomethane	ND	0.15	0.077	ND	0.040	0.020	
75-00-3	Chloroethane	ND	0.15	0.077	ND	0.058	0.029	
64-17-5	Ethanol	2.3	7.7	0.077	1.2	4.1	0.041	J, B
67-64-1	Acetone	21	7.7	0.11	8.8	3.2	0.047	B
75-69-4	Trichlorofluoromethane	1.3	0.15	0.077	0.23	0.027	0.014	
107-13-1	Acrylonitrile	ND	0.77	0.11	ND	0.35	0.050	
75-35-4	1,1-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.45	0.77	0.11	0.15	0.25	0.038	J
75-09-2	Methylene Chloride	0.46	0.77	0.077	0.13	0.22	0.022	J, B
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.077	ND	0.049	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.15	0.086	0.071	0.020	0.011	
75-15-0	Carbon Disulfide	13	0.77	0.18	4.2	0.25	0.059	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
75-34-3	1,1-Dichloroethane	0.25	0.15	0.077	0.062	0.038	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	0.077	ND	0.043	0.021	
108-05-4	Vinyl Acetate	2.9	7.7	0.25	0.82	2.2	0.070	J, B
78-93-3	2-Butanone (MEK)	5.8	0.77	0.077	2.0	0.26	0.026	B
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.077	ND	0.039	0.019	
108-20-3	Diisopropyl Ether	ND	0.77	0.091	ND	0.18	0.022	
67-66-3	Chloroform	34	0.15	0.091	6.9	0.032	0.019	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG06B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00189

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.77	0.079	ND	0.18	0.019	
107-06-2	1,2-Dichloroethane	ND	0.15	0.077	ND	0.038	0.019	
71-55-6	1,1,1-Trichloroethane	ND	0.15	0.077	ND	0.028	0.014	
71-43-2	<b>Benzene</b>	<b>1.9</b>	0.15	0.077	<b>0.61</b>	0.048	0.024	<b>B</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.60</b>	0.15	0.077	<b>0.095</b>	0.024	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.77	0.077	ND	0.18	0.018	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.088</b>	0.15	0.077	<b>0.019</b>	0.033	0.017	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>0.18</b>	0.15	0.077	<b>0.027</b>	0.023	0.011	
79-01-6	<b>Trichloroethene</b>	<b>1.3</b>	0.15	0.077	<b>0.24</b>	0.029	0.014	
123-91-1	1,4-Dioxane	ND	0.77	0.094	ND	0.21	0.026	
80-62-6	Methyl Methacrylate	ND	0.77	0.12	ND	0.19	0.028	
142-82-5	<b>n-Heptane</b>	<b>0.47</b>	0.77	0.099	<b>0.11</b>	0.19	0.024	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.77	0.080	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>9.2</b>	0.77	0.086	<b>2.2</b>	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.77	0.097	ND	0.17	0.021	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.077	ND	0.028	0.014	
108-88-3	<b>Toluene</b>	<b>6.7</b>	0.77	0.077	<b>1.8</b>	0.20	0.020	
591-78-6	<b>2-Hexanone</b>	<b>0.52</b>	0.77	0.12	<b>0.13</b>	0.19	0.029	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.12</b>	0.15	0.10	<b>0.014</b>	0.018	0.012	<b>J</b>
106-93-4	1,2-Dibromoethane	ND	0.15	0.083	ND	0.020	0.011	
111-65-9	<b>n-Octane</b>	<b>1.5</b>	0.77	0.077	<b>0.31</b>	0.16	0.016	
127-18-4	<b>Tetrachloroethene</b>	<b>1.1</b>	0.15	0.077	<b>0.17</b>	0.023	0.011	
108-90-7	Chlorobenzene	ND	0.15	0.079	ND	0.033	0.017	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:     CA    

Date:     6/5/08    

**585**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG06B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00189

**Date Collected:** 5/20/08  
**Date Received:** 5/21/08  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.54

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	0.41	0.77	0.095	0.095	0.18	0.022	J
179601-23-1	m,p-Xylenes	1.9	0.77	0.20	0.45	0.18	0.046	
75-25-2	Bromoform	0.27	0.77	0.12	0.026	0.075	0.011	J
100-42-5	Styrene	0.31	0.77	0.12	0.073	0.18	0.028	J
95-47-6	o-Xylene	0.89	0.77	0.097	0.21	0.18	0.022	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	0.099	ND	0.022	0.014	
98-82-8	Cumene	0.088	0.77	0.086	0.018	0.16	0.018	J
103-65-1	n-Propylbenzene	0.28	0.77	0.080	0.058	0.16	0.016	J
622-96-8	4-Ethyltoluene	0.46	0.77	0.088	0.093	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.51	0.77	0.092	0.10	0.16	0.019	J
98-83-9	alpha-Methylstyrene	0.39	0.77	0.11	0.080	0.16	0.023	J
95-63-6	1,2,4-Trimethylbenzene	2.2	0.77	0.11	0.44	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.15	0.13	ND	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	ND	0.15	0.095	ND	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	8.7	0.15	0.086	1.4	0.026	0.014	
135-98-8	sec-Butylbenzene	ND	0.77	0.089	ND	0.14	0.016	
99-87-6	4-Isopropyltoluene (p-Cymene)	4.4	0.77	0.10	0.80	0.14	0.018	
95-50-1	1,2-Dichlorobenzene	ND	0.15	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.77	0.12	ND	0.080	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.15	0.12	ND	0.021	0.016	
91-20-3	Naphthalene	4.2	0.31	0.11	0.79	0.059	0.022	
87-68-3	Hexachlorobutadiene	ND	0.15	0.14	ND	0.014	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.077	ND	0.056	0.014	
104-51-8	n-Butylbenzene	0.68	0.31	0.077	0.12	0.056	0.014	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

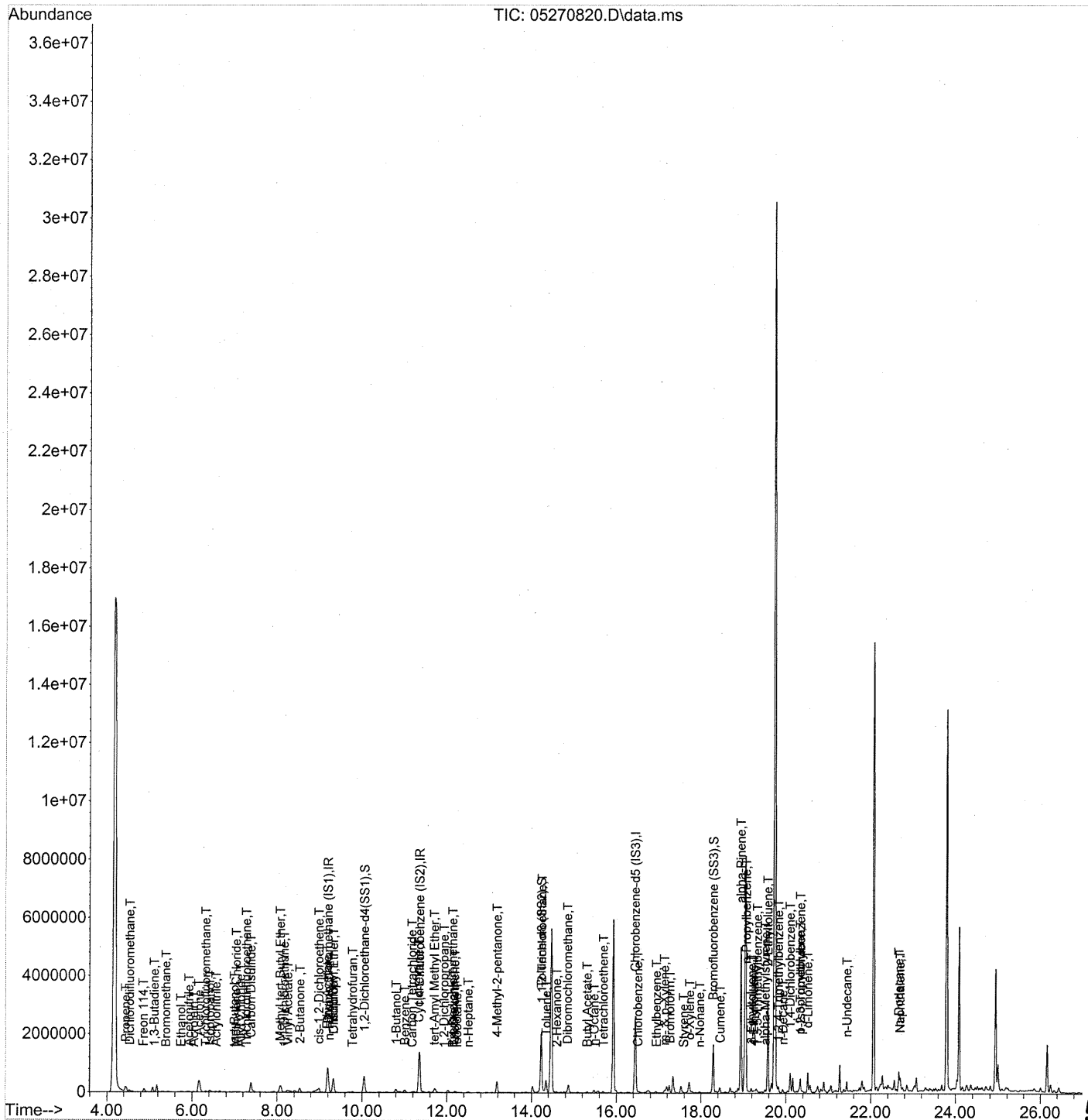
Verified By: CA

Date: 6/5/08



Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270820.D  
Acq On : 28 May 2008 1:01  
Operator : WA  
Sample : P0801507-015 (1000ml)  
Misc : ENSR SG06B-05 (-2.9, 3.5)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:11:24 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:11:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	389303	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1623961	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	666312	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	546780	24.563	ng	-0.04
Spiked Amount	25.000		Recovery	=	98.24%	✓
57) Toluene-d8 (SS2)	14.23	98	1659883	24.163	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.64%	✓
73) Bromofluorobenzene (SS3)	18.29	174	593715	25.995	ng	0.00
Spiked Amount	25.000		Recovery	=	104.00%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	63630	2.111	ng	90
3) Dichlorodifluoromethane	4.54	85	48171	1.322	ng	97
4) Chloromethane	4.72	50	2071	N.D.	✓	
5) Freon 114	4.85	135	1167	0.057	ng NR#	41
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	5.12	54	9690	0.364	ng #	25
8) Bromomethane	5.39	94	2171	0.144	ng NR#	15
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.74	45	29946m	1.465	ng	
11) Acetonitrile	5.93	41	42617	0.723	ng	80
12) Acrolein	6.04	56	16293	1.105	ng	76
13) Acetone	6.16	58	275163	13.527	ng #	77
14) Trichlorofluoromethane	6.32	101	28199	0.826	ng	98
15) Isopropanol	6.42	45	103855	1.695	ng	93
16) Acrylonitrile	6.57	53	5049	0.137	ng NR#	6
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.99	59	16743m	0.293	ng	
19) Methylene Chloride	7.04	84	4710	0.300	ng #	56
20) Allyl Chloride	7.14	41	4274	0.118	ng NR#	45
21) Trichlorotrifluoroethane	7.28	151	5867	0.354	ng	85
22) Carbon Disulfide	7.39	76	537135	8.512	ng	100
23) trans-1,2-Dichloroethene	7.93	61	200	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	5396	0.162	ng	81
25) Methyl tert-Butyl Ether	8.07	73	3906	0.080	ng NR#	51
26) Vinyl Acetate	8.25	86	6277	1.884	ng #	67
27) 2-Butanone	8.53	72	39924	3.754	ng #	23
28) cis-1,2-Dichloroethene	8.99	61	1665	0.058	ng NR#	16
29) Diisopropyl Ether	9.33	87	54902	3.919	ng NR#	1
30) Ethyl Acetate	9.18	61	22710	3.060	ng	80
31) n-Hexane	9.23	57	15354	0.346	ng	90

588

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:11:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.33	83	502819	21.887 ng		95
34) Tetrahydrofuran	9.77	72	4947	0.495 ng	#	17
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	10.16	62	103	N.D. ✓		
38) 1,1,1-Trichloroethane	10.48	97	455	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.80	56	134066	5.016 ng	#	63
41) Benzene	11.01	78	85981	1.256 ng		100
42) Carbon Tetrachloride	11.17	117	10901	0.388 ng		95
43) Cyclohexane	11.33	84	4568	0.171 ng	#	1
44) tert-Amyl Methyl Ether	11.70	73	18171	0.399 ng	NR#	29
45) 1,2-Dichloropropane	11.94	63	1150	0.057 ng		86
46) Bromodichloromethane	12.14	83	2372	0.118 ng	#	68
47) Trichloroethene	12.18	130	18006	0.845 ng		100
48) 1,4-Dioxane	12.16	88	774	0.061 ng	NR	76
49) Isooctane	12.24	57	11669	0.107 ng		80
50) Methyl Methacrylate	12.34	100	107	N.D. ✓		
51) n-Heptane	12.50	71	4943	0.302 ng	#	54
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	13.18	58	142119	5.970 ng		83
54) trans-1,3-Dichloropropene	14.02	75	102	N.D. ✓		
55) 1,1,2-Trichloroethane	14.24	97	139999	8.407 ng	NR#	8
58) Toluene	14.35	91	340441	4.369 ng		99
59) 2-Hexanone	14.59	43	25031	0.340 ng		96
60) Dibromochloromethane	14.85	129	1731	0.075 ng		100
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	15.31	43	33554	0.453 ng		89
63) n-Octane	15.47	57	22197	0.942 ng		94
64) Tetrachloroethene	15.69	166	16929	0.735 ng		100
65) Chlorobenzene	16.50	112	3091	0.056 ng	NR#	43
66) Ethylbenzene	16.94	91	23852	0.269 ng		94
67) m- & p-Xylene	17.14	91	74048	1.262 ng		91
68) Bromoform	17.26	173	2307	0.173 ng		95
69) Styrene	17.59	104	11401	0.201 ng		96
70) o-Xylene	17.73	91	36403	0.580 ng		92
71) n-Nonane	17.97	43	20021	0.323 ng		84
72) 1,1,2,2-Tetrachloroethane	17.73	83	970	N.D. ✓		
74) Cumene	18.45	105	5232	0.057 ng		98
75) alpha-Pinene	18.93	93	2345121	54.662 ng		92
76) n-Propylbenzene	19.06	91	19538	0.184 ng	#	86
77) 3-Ethyltoluene	19.19	105	50133	0.500 ng		92
78) 4-Ethyltoluene	19.24	105	26922	0.297 ng		95
79) 1,3,5-Trimethylbenzene	19.33	105	26318	0.328 ng		93

589

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:11:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

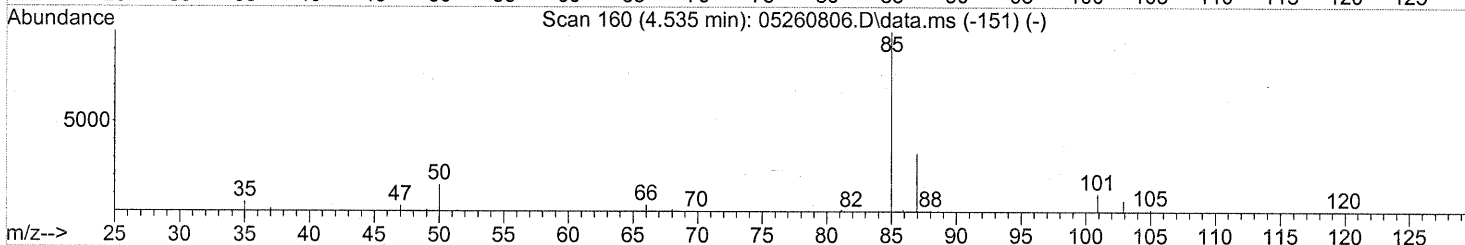
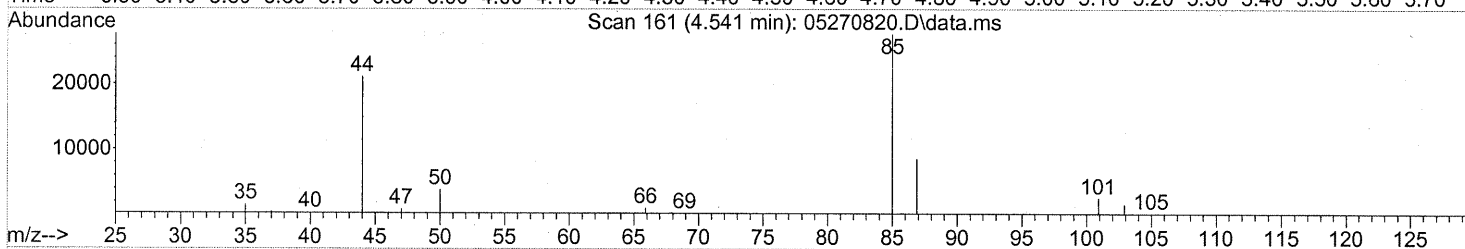
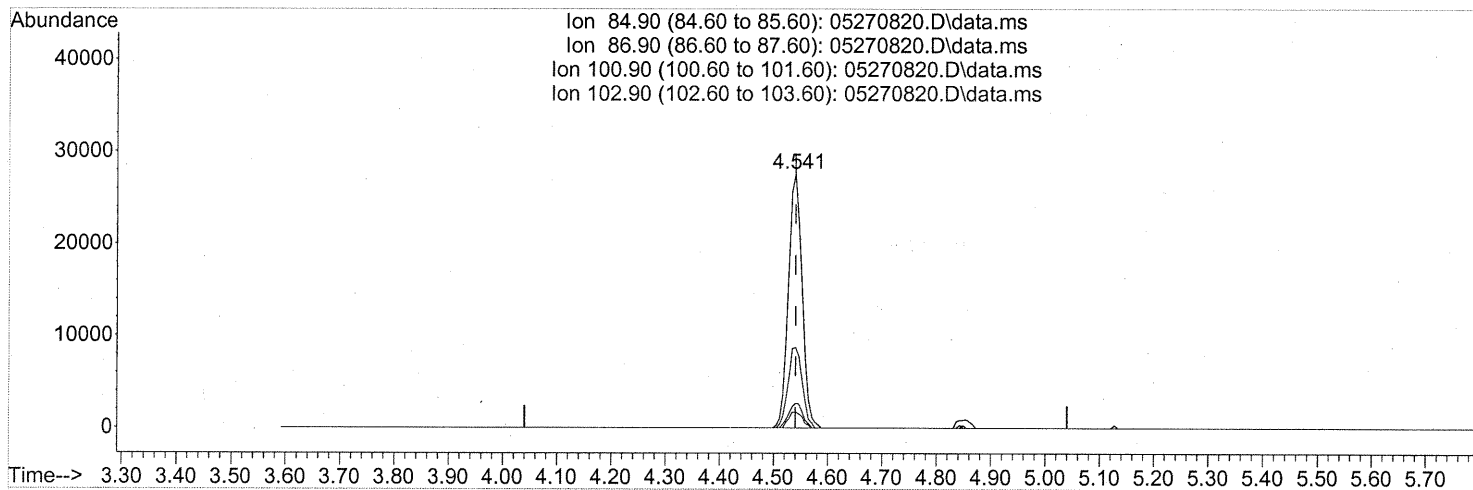
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	11391	0.252	ng	97
81) 2-Ethyltoluene	19.57	105	65913	0.678	ng	77
82) 1,2,4-Trimethylbenzene	19.83	105	114126	1.405	ng	96
83) n-Decane	19.93	57	49608	0.863	ng	84
84) Benzyl Chloride	20.00	91	2860	N.D.	✓	
85) 1,3-Dichlorobenzene	20.02	146	1727	N.D.	✓	
86) 1,4-Dichlorobenzene	20.10	146	281902	5.641	ng	99
87) sec-Butylbenzene	20.16	105	4499	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	262790	2.854	ng	96
89) 1,2,3-Trimethylbenzene	20.34	105	64319	0.825	ng	# 61
90) 1,2-Dichlorobenzene	20.52	146	905	N.D.	✓	
91) d-Limonene	20.52	68	151994	6.071	ng	87
92) 1,2-Dibromo-3-Chloropr...	21.43	157	421	N.D.	✓	
93) n-Undecane	21.43	57	129396	2.145	ng	88
94) 1,2,4-Trichlorobenzene	22.86	184	111	N.D.	✓	
95) Naphthalene	22.69	128	319255	2.705	ng	94
96) n-Dodecane	22.66	57	247509	4.212	ng	79
97) Hexachloro-1,3-butadiene	23.11	225	93	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(3) Dichlorodifluoromethane (T)

4.541min (-0.000) 1.32ng

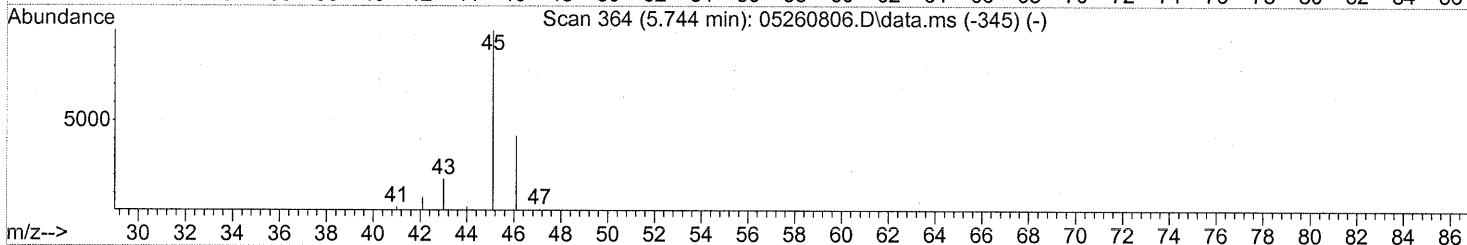
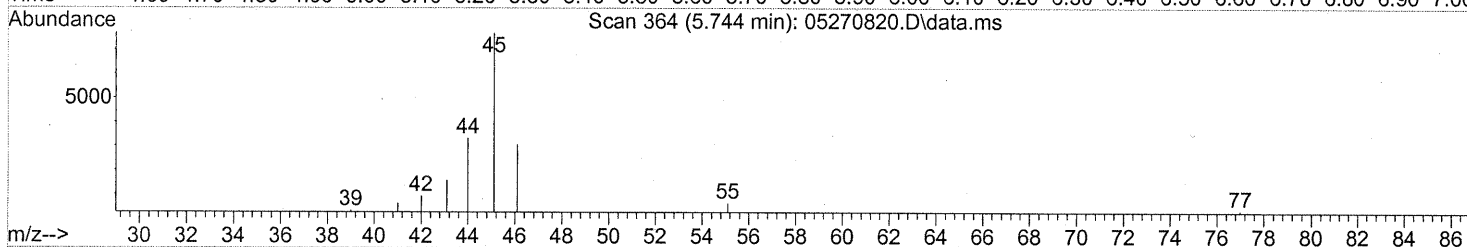
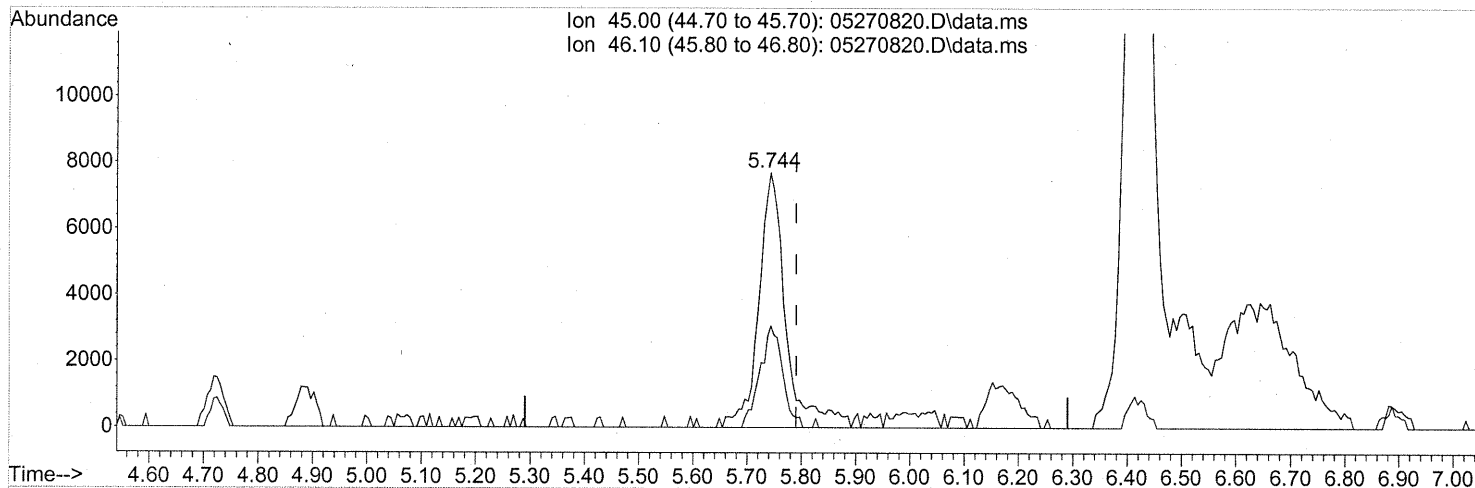
response 48171

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	32.87
100.90	8.40	9.78
102.90	5.50	6.20

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(10) Ethanol (T)

5.744min (-0.047) 1.30ng

response 26674

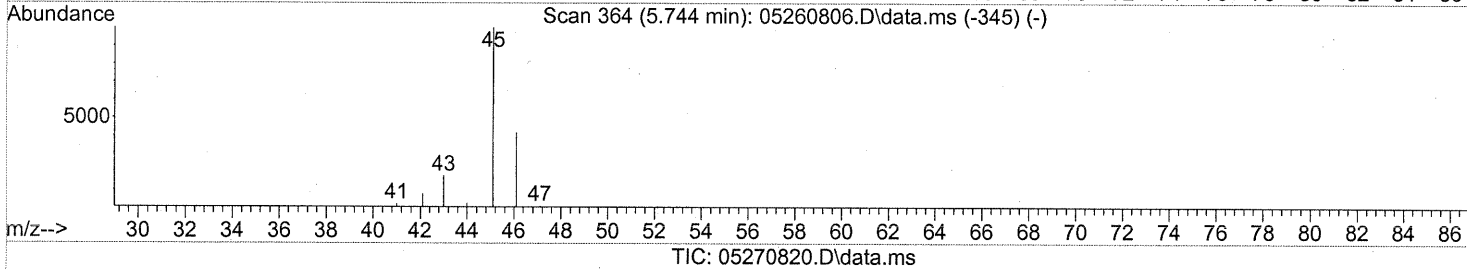
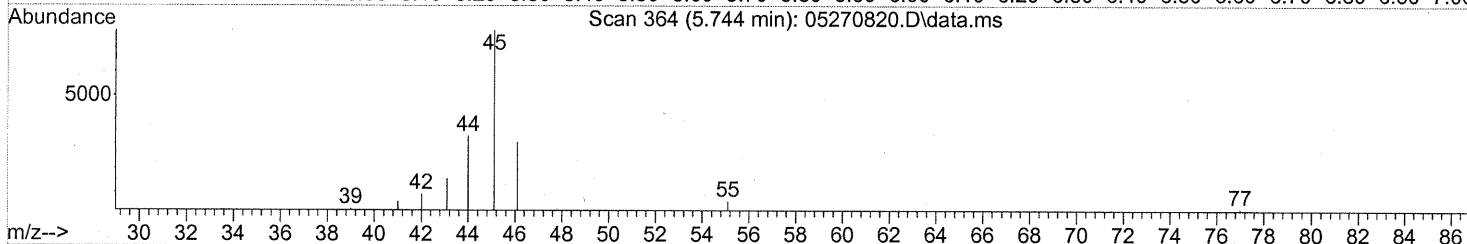
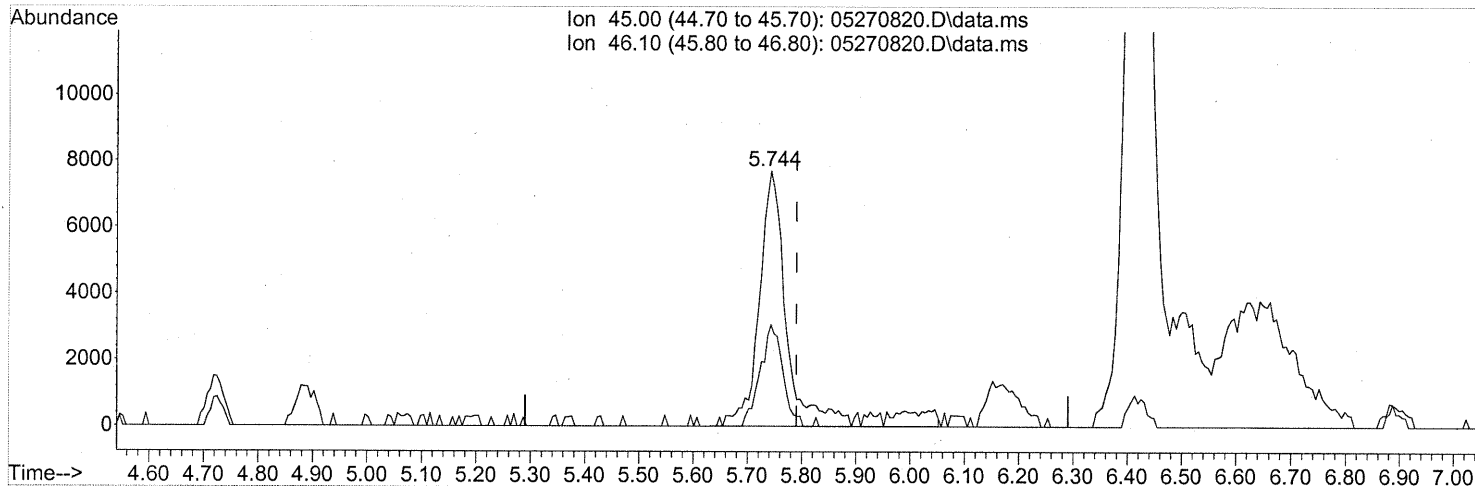
*split peak*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	33.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
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 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.744min (-0.047) 1.46ng m

response 29946

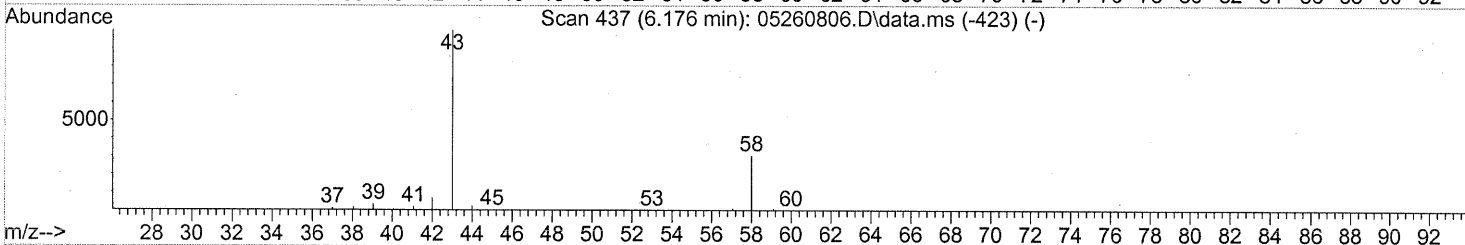
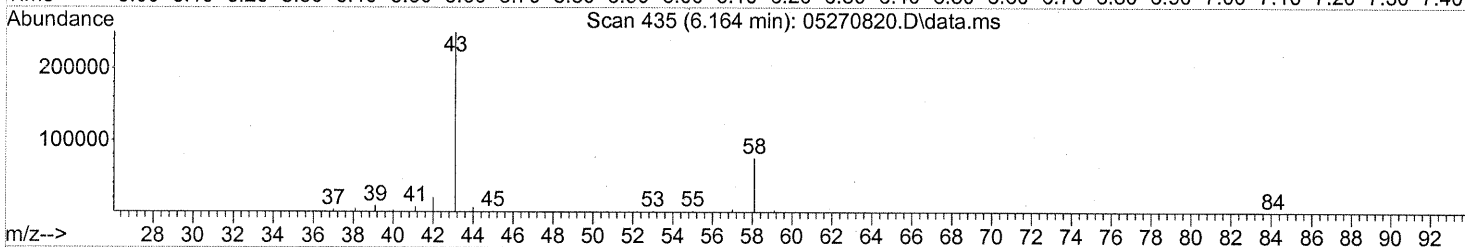
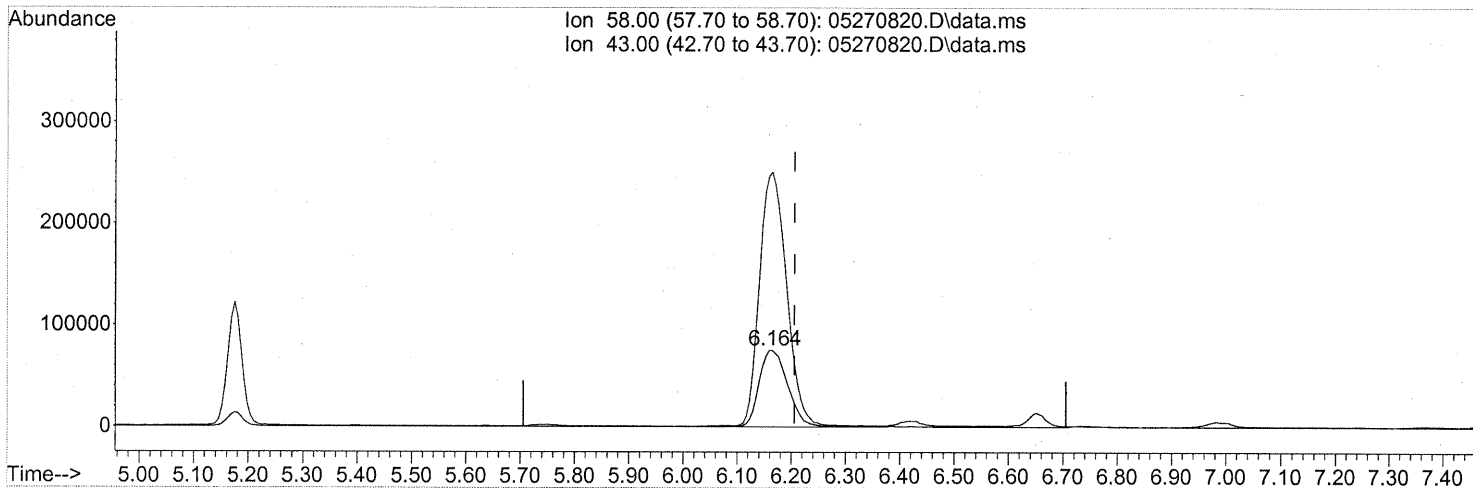
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	29.79
0.00	0.00	0.00
0.00	0.00	0.00

*int. alcohol peak*  
*WA 6/5/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(13) Acetone (T)

6.164min (-0.042) 13.53ng

response 275163

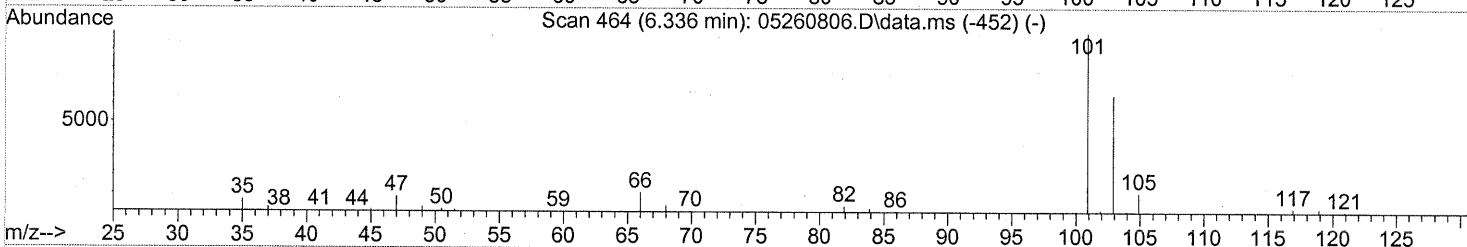
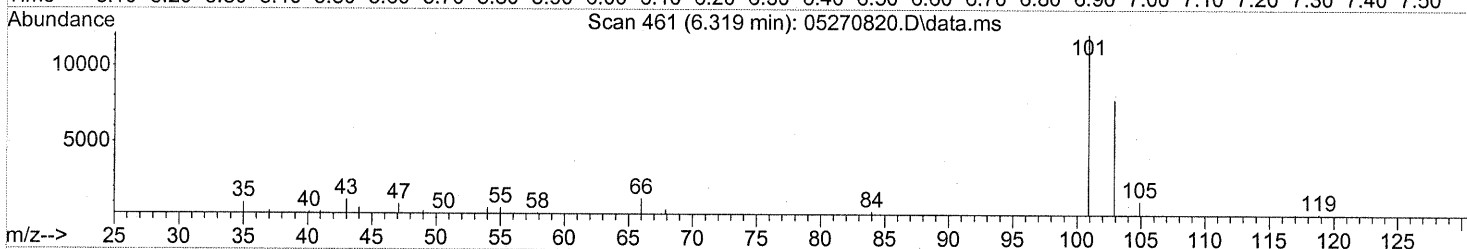
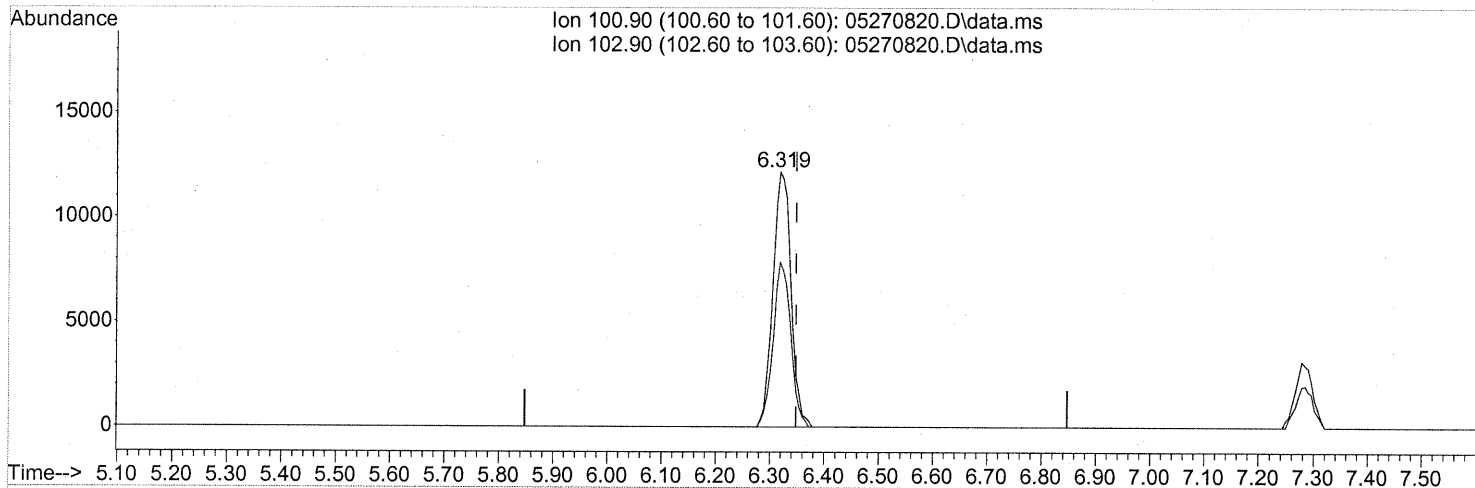
Ion	Exp%	Act%
58.00	100	100
43.00	368.40	316.58#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(14) Trichlorofluoromethane (T)

6.319min (-0.030) 0.83ng

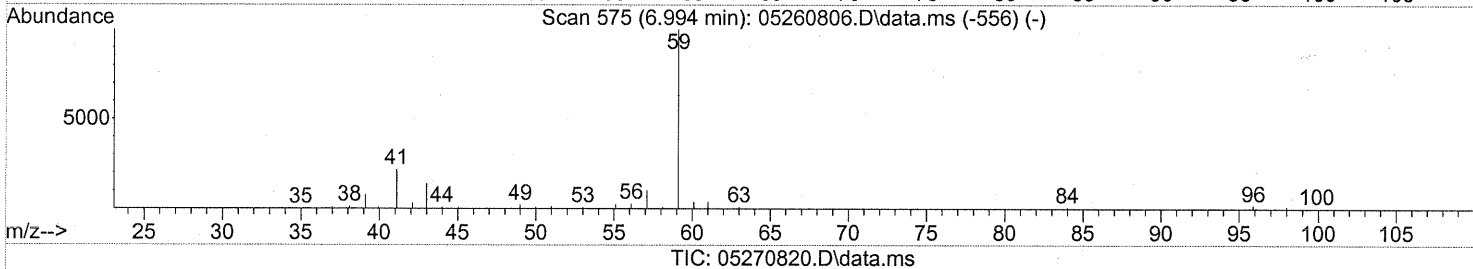
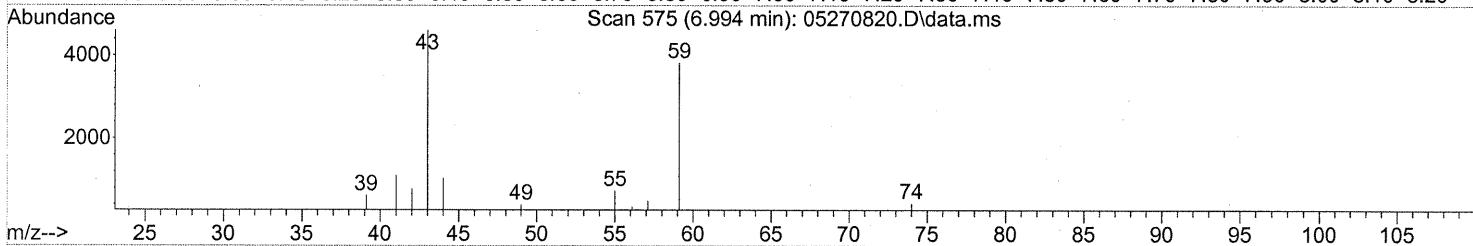
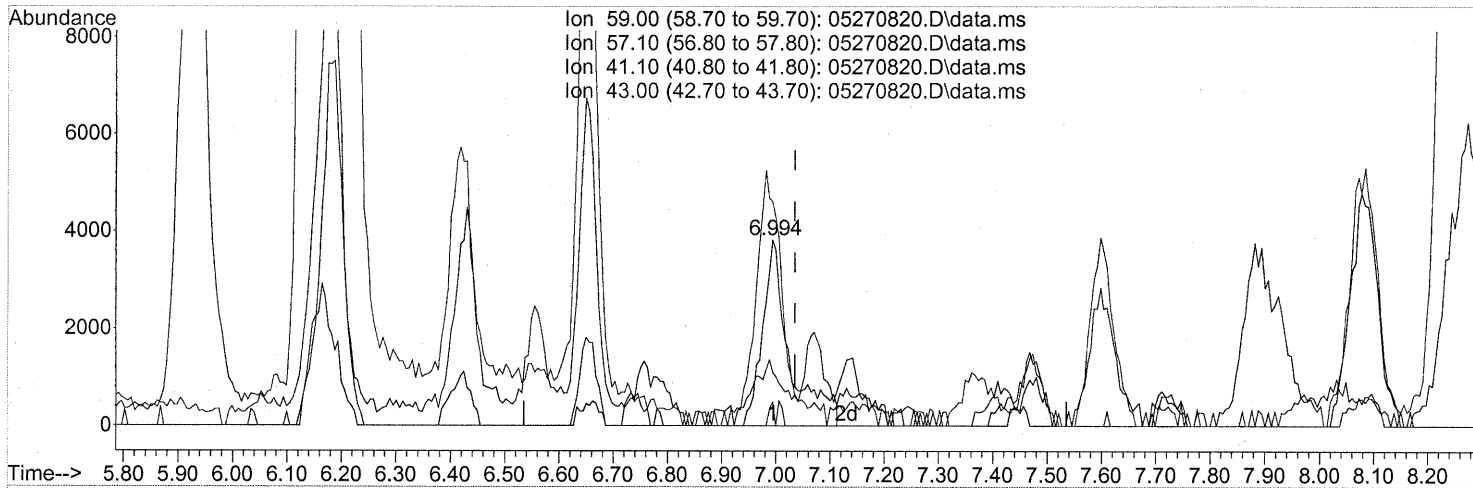
response 28199

Ion	Exp%	Act%
100.90	100	100
102.90	64.90	62.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.994min (-0.042) 0.23ng

response 13351

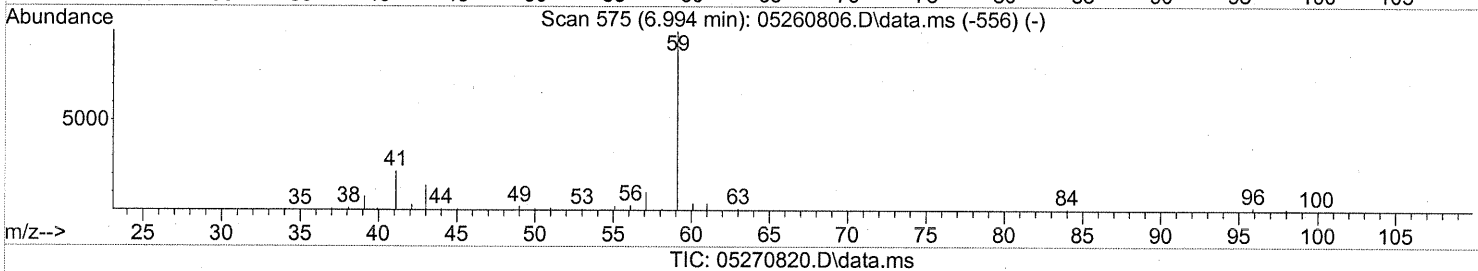
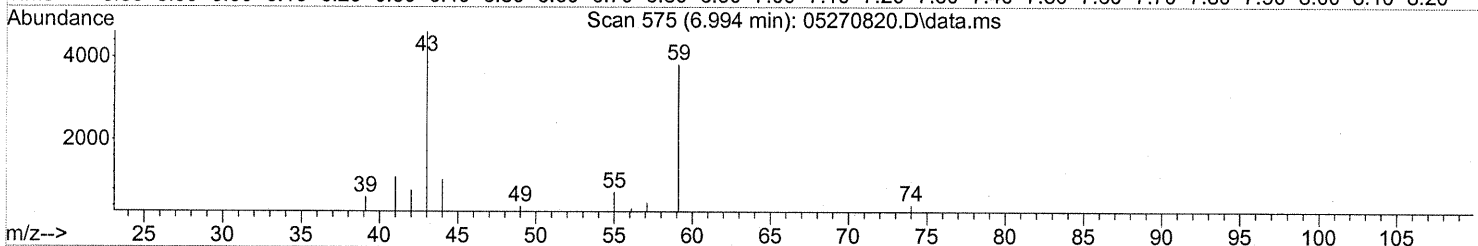
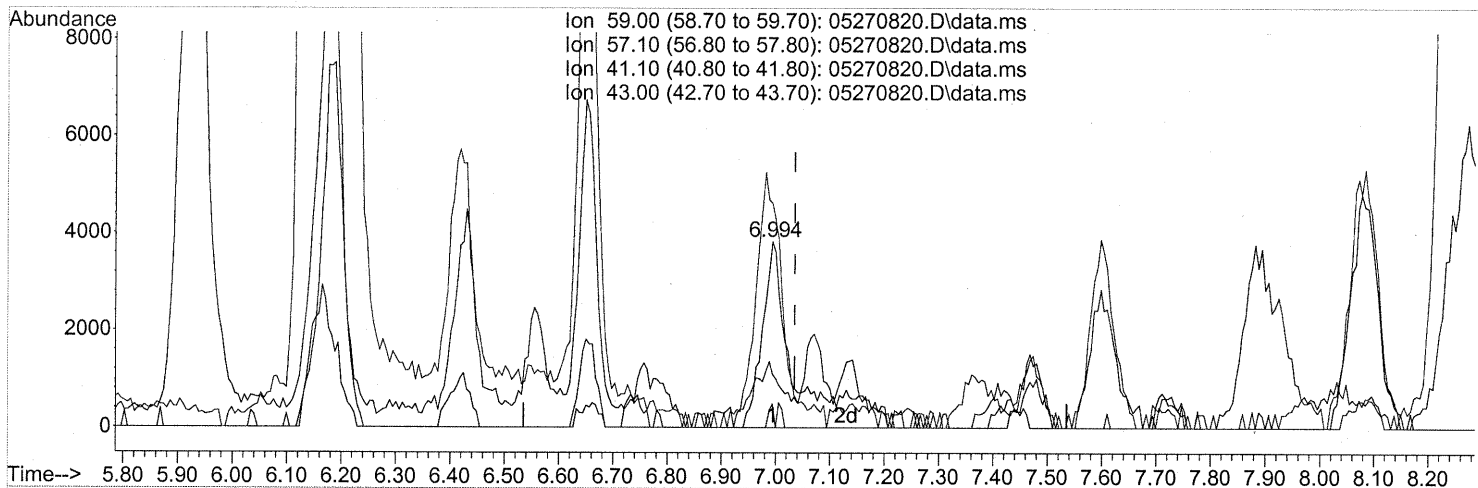
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	2.21
41.10	21.90	40.89
43.00	17.20	137.26#

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 6.994min (-0.042) 0.29ng m  
 response 16743

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	1.76
41.10	21.90	32.60
43.00	17.20	109.45#

*int whole peaks*

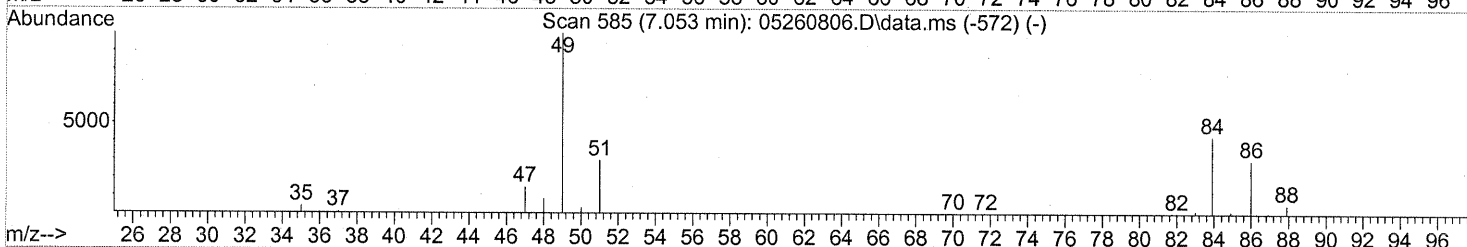
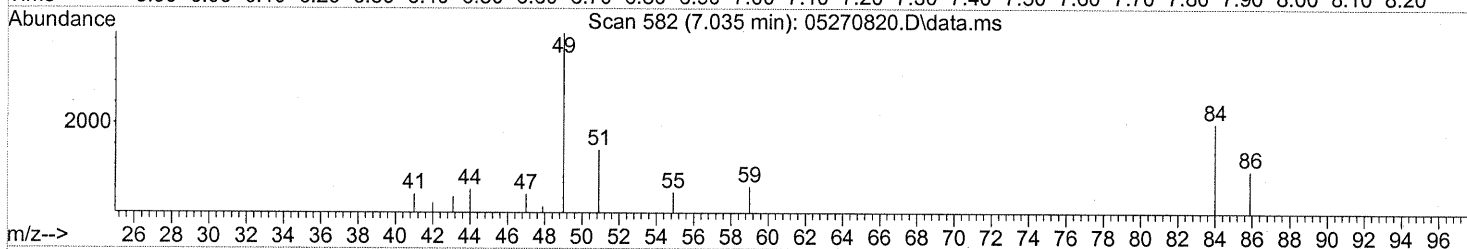
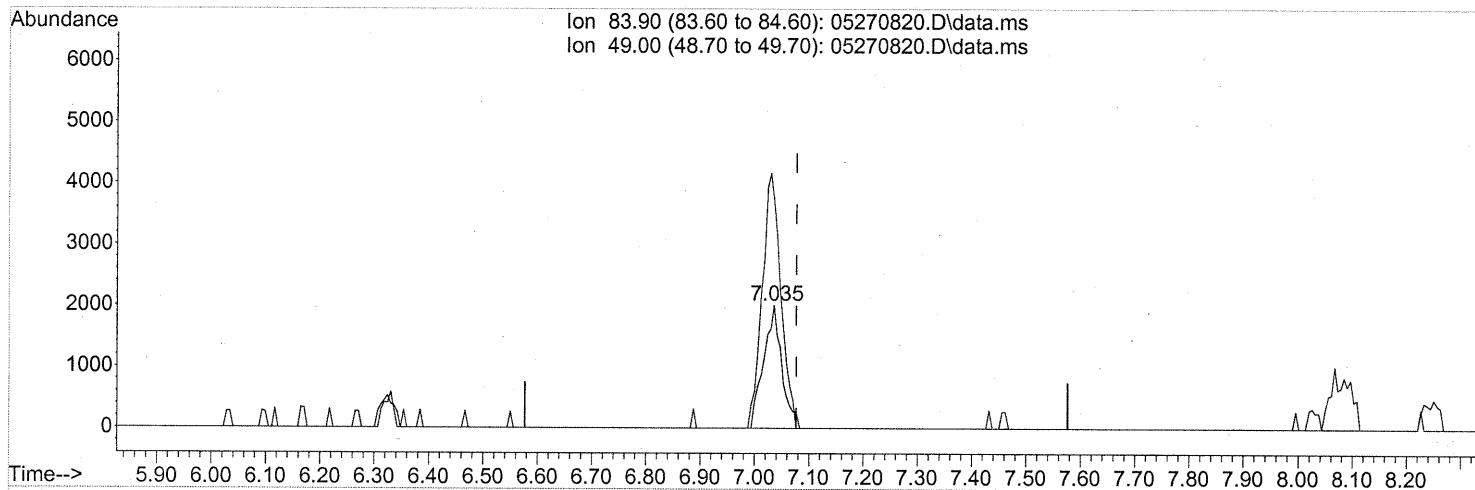
*DA 6/4/08*

*C-6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(19) Methylene Chloride (T)

7.035min (-0.042) 0.30ng

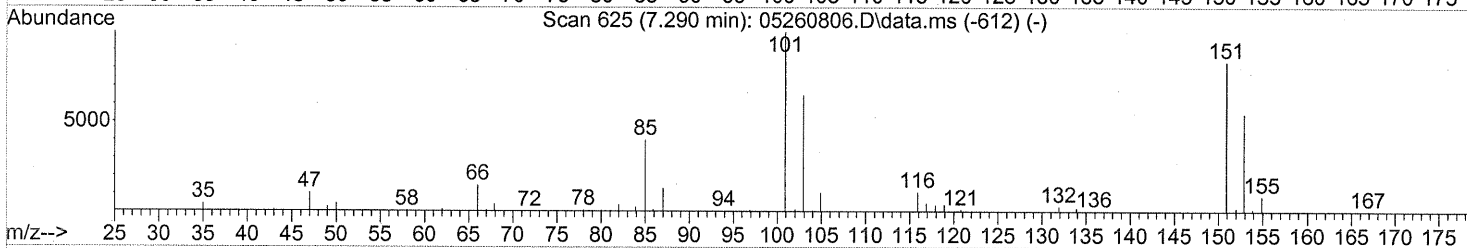
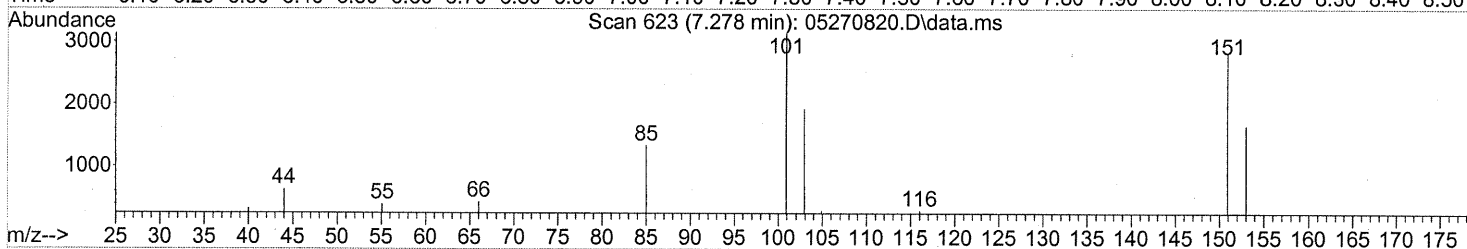
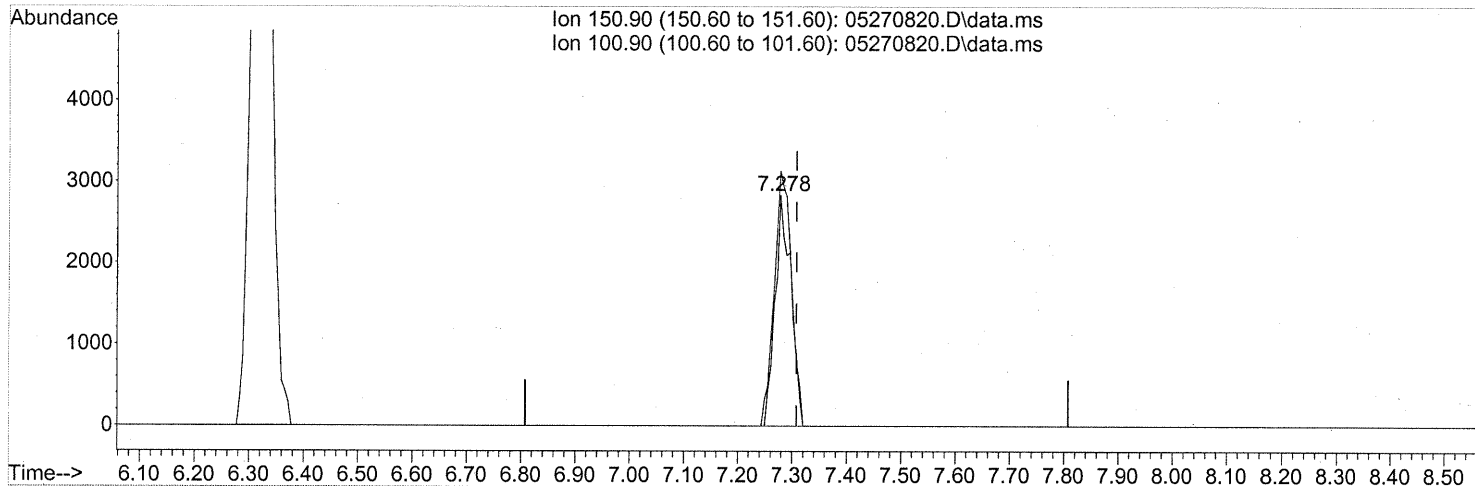
response 4710

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	212.68#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

7.278min (-0.030) 0.35ng

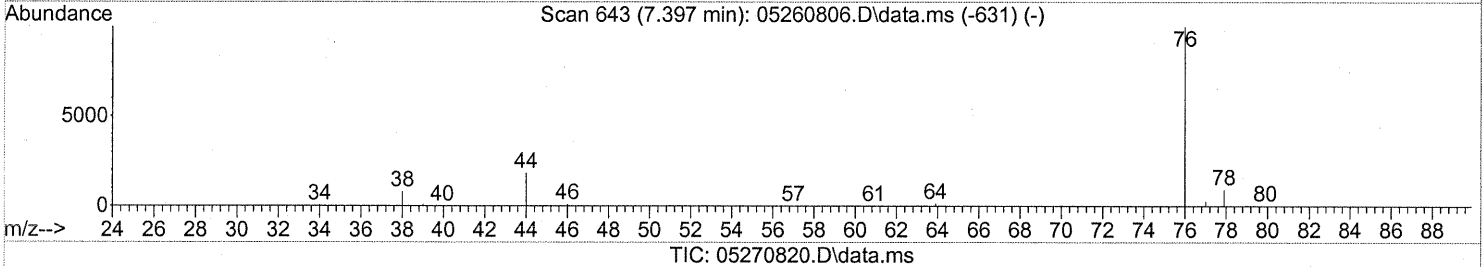
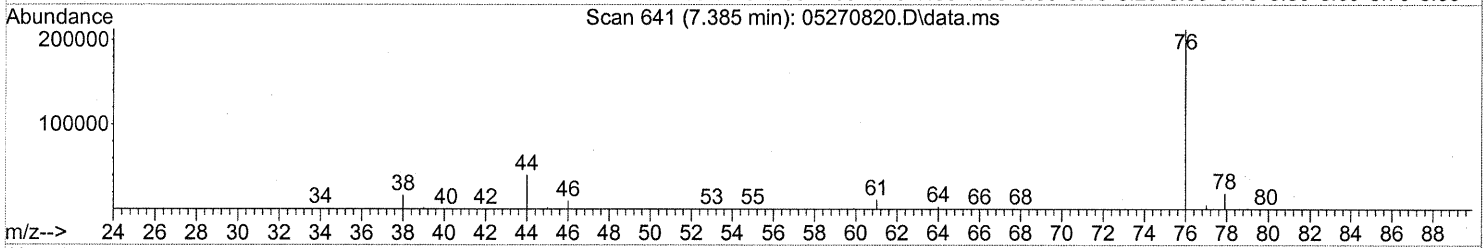
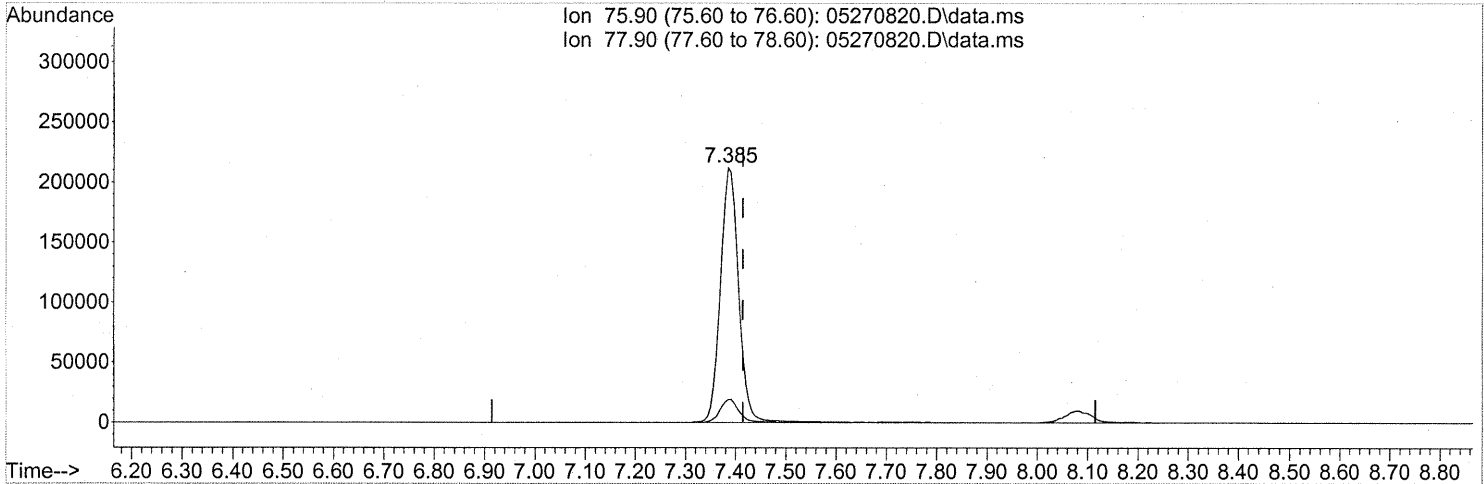
response 5867

Ion	Exp%	Act%
150.90	100	100
100.90	136.10	118.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(22) Carbon Disulfide (T)

7.385min (-0.030) 8.51ng

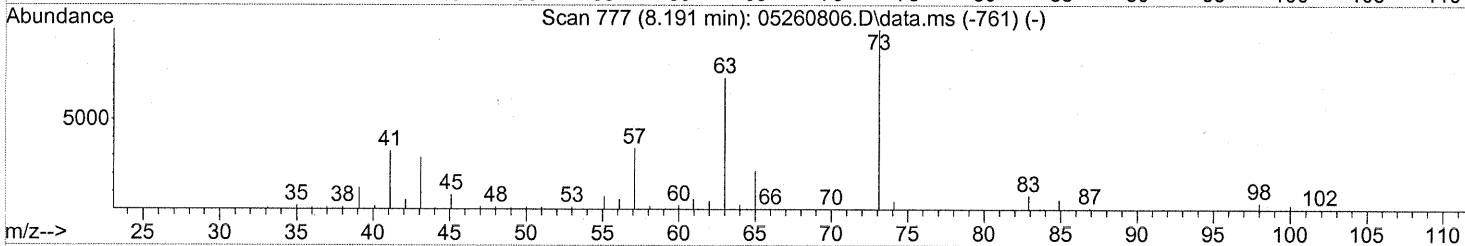
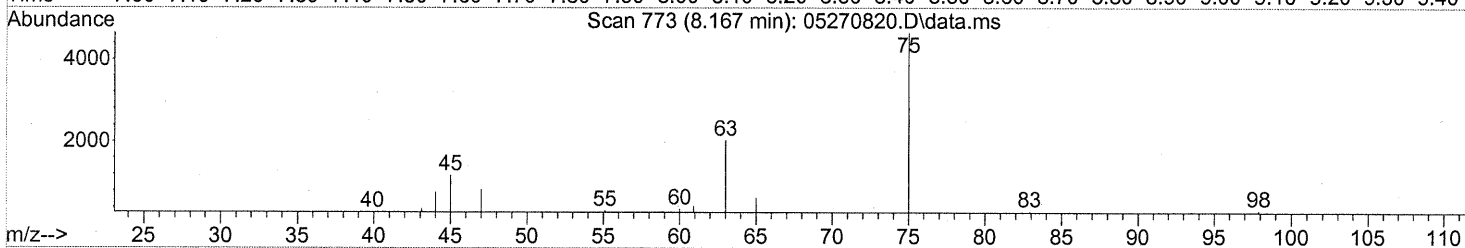
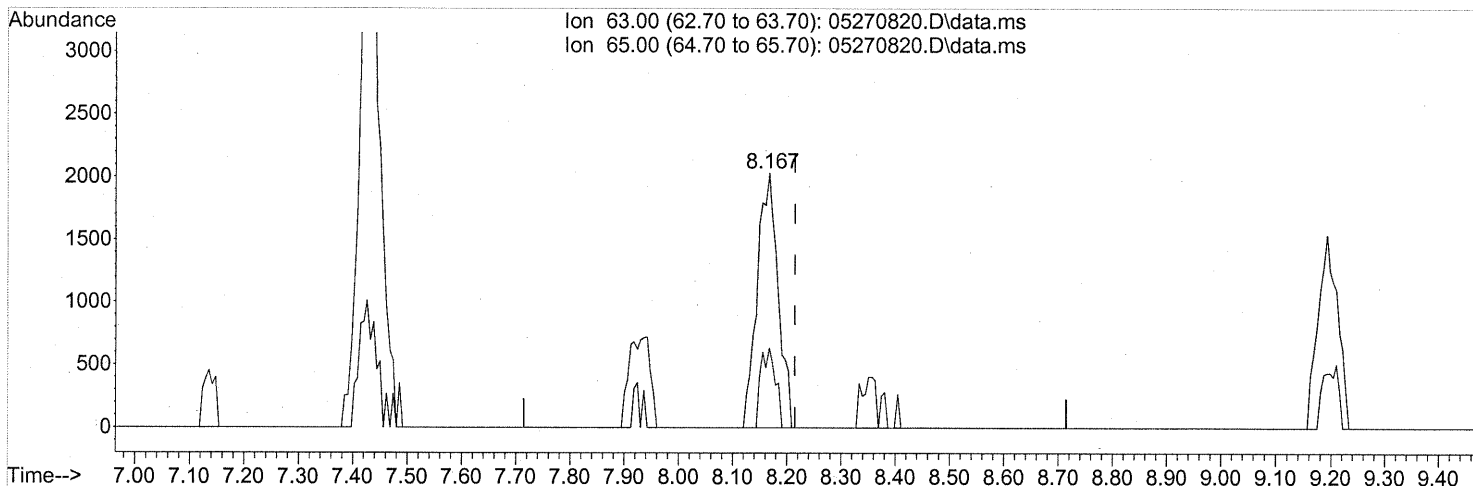
response 537135

Ion	Exp%	Act%
75.90	100	100
77.90	9.10	9.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(24) 1,1-Dichloroethane (T)

8.167min (-0.048) 0.16ng

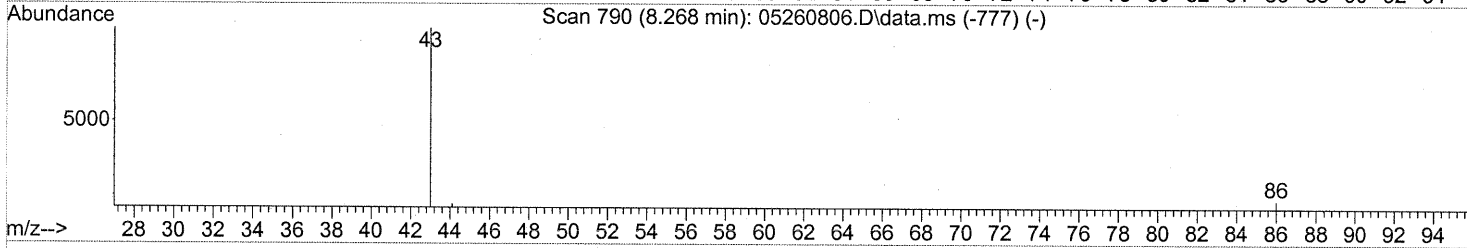
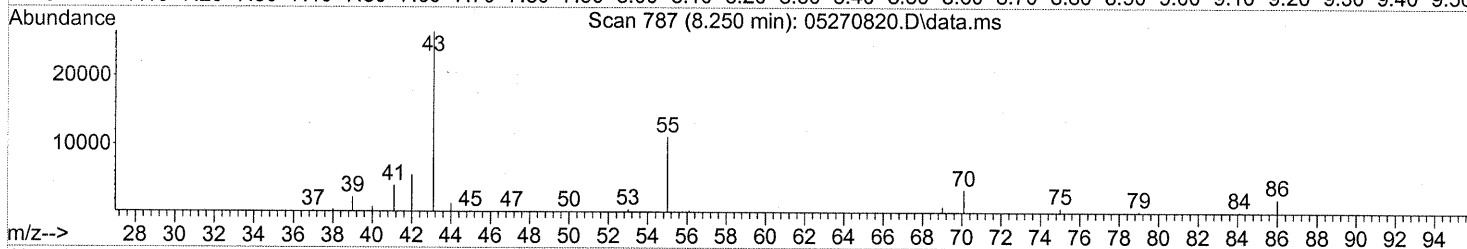
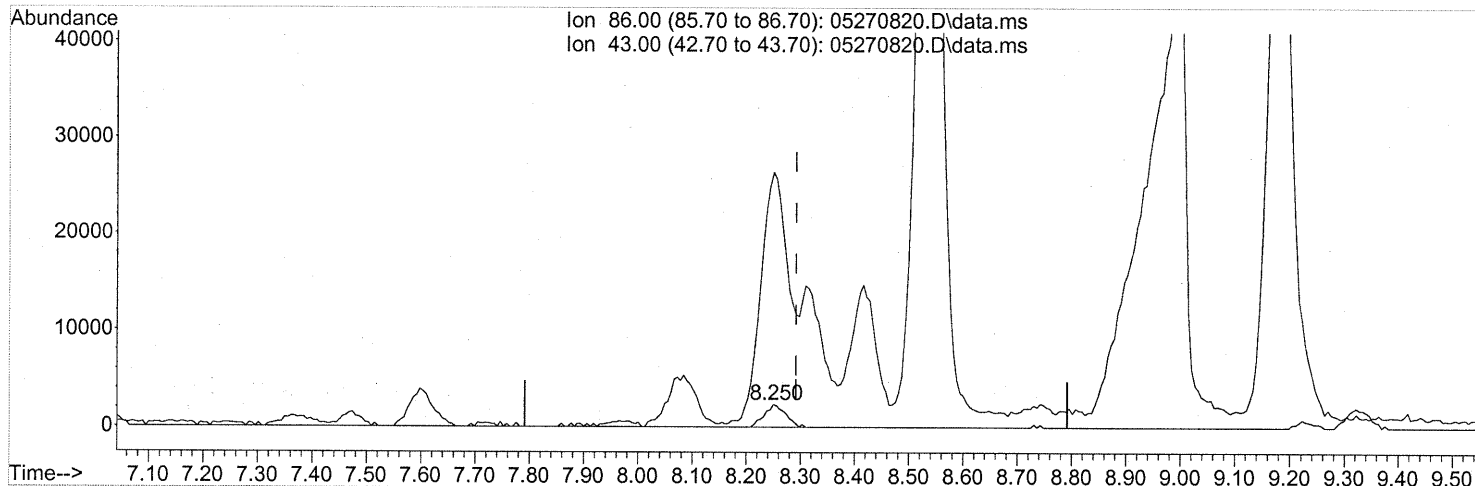
response 5396

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	21.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

8.250min (-0.042) 1.88ng

response 6277

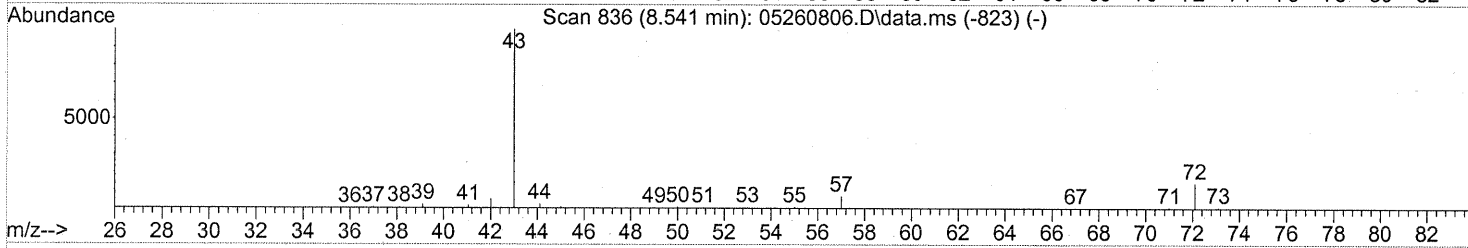
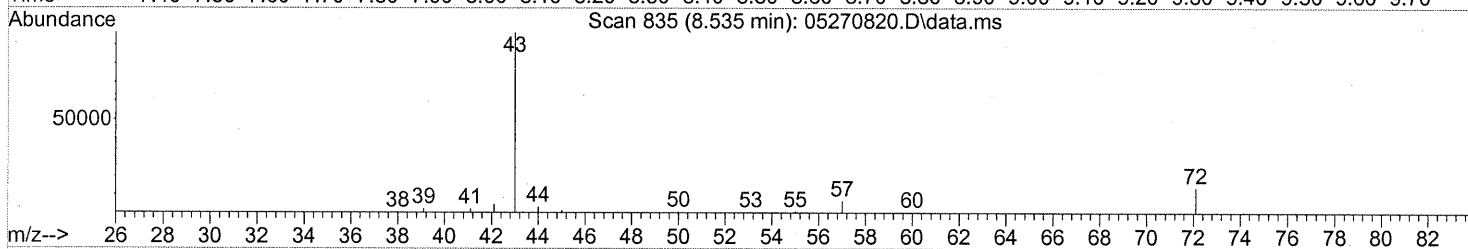
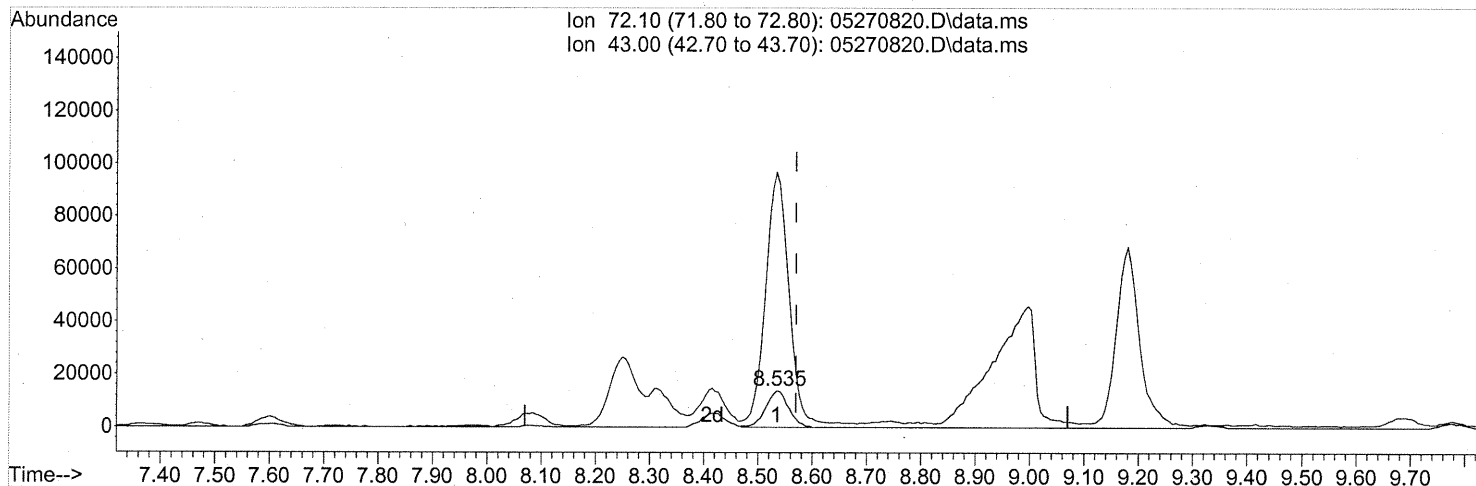
Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	1524.47#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

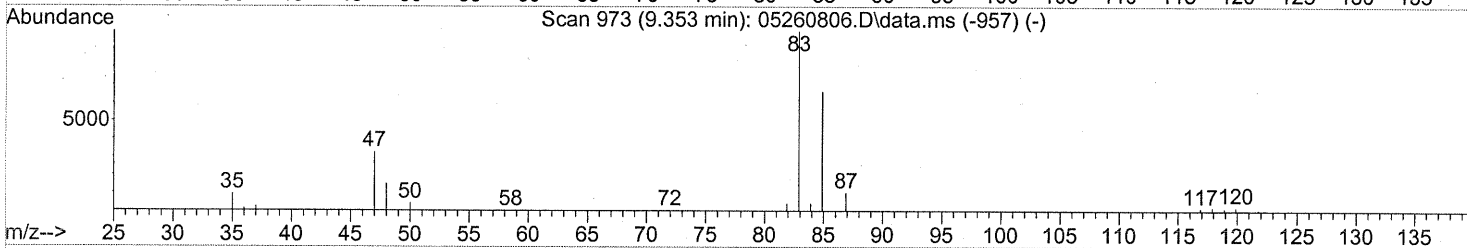
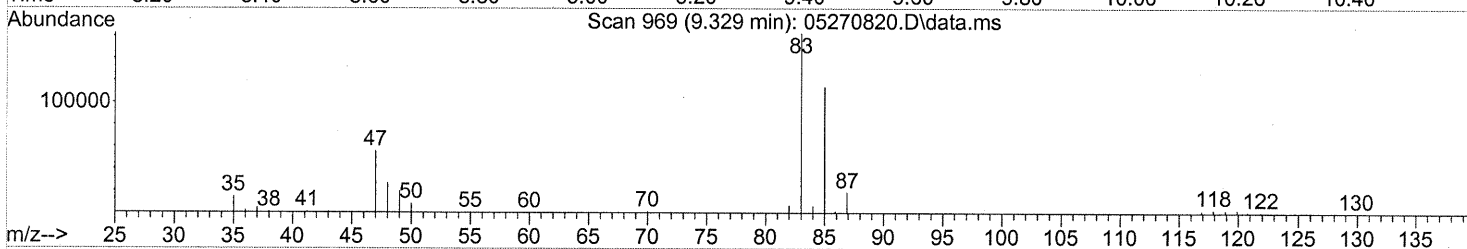
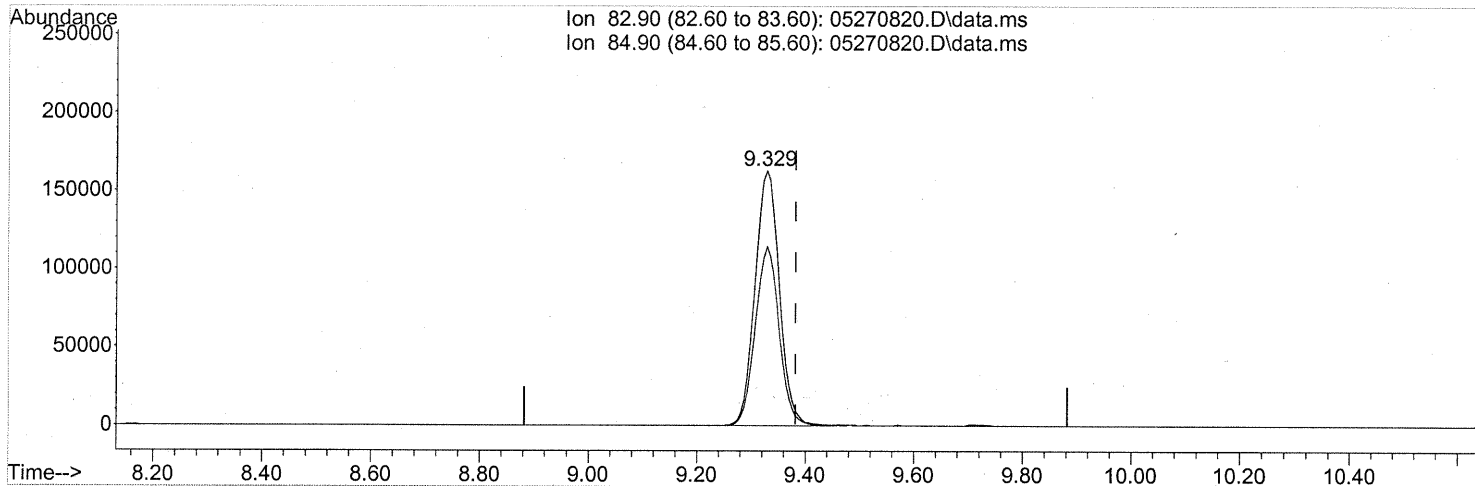
8.535min (-0.036) 3.75ng  
 response 39924

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	701.37#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



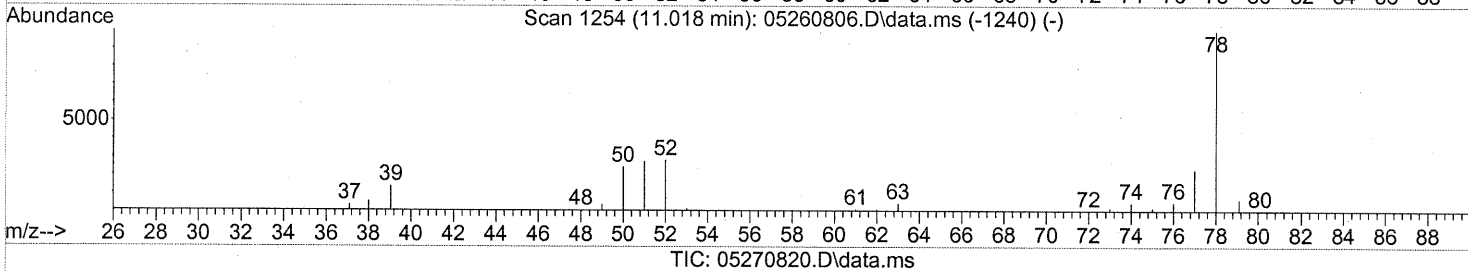
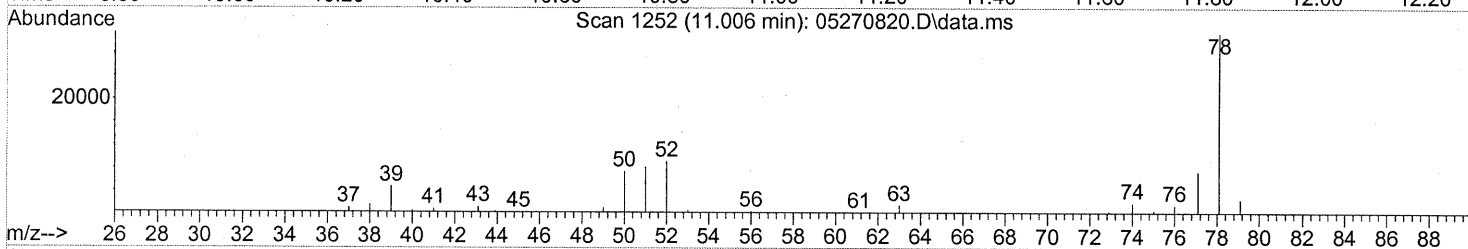
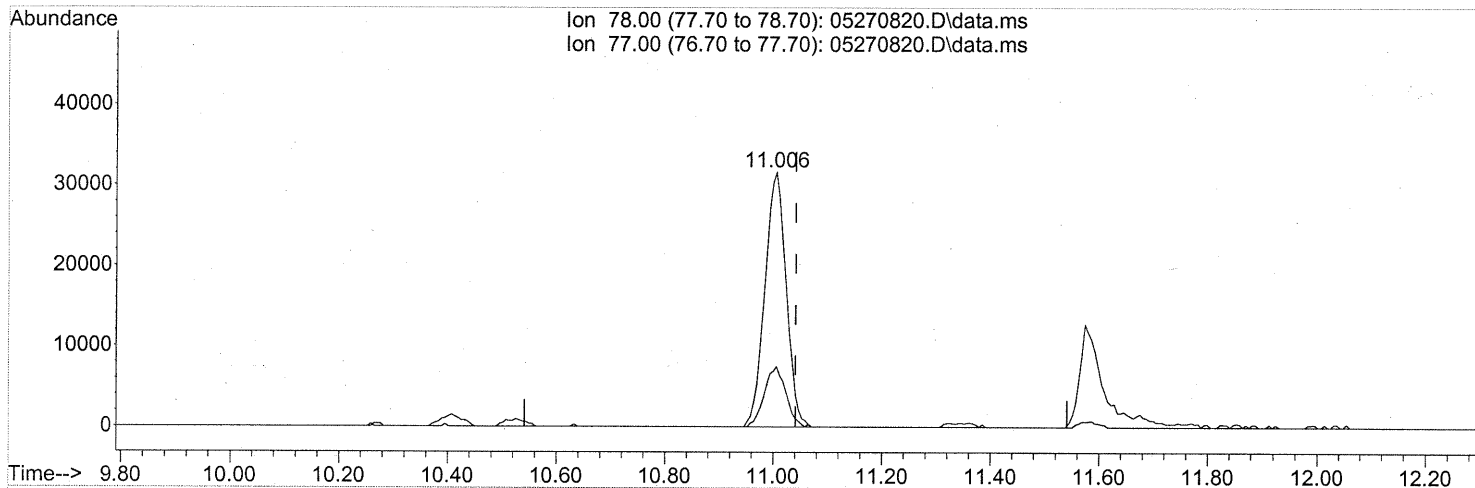
(32) Chloroform (T)  
 9.329min (-0.053) 21.89ng  
 response 502819

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270820.D  
Acq On : 28 May 2008 1:01  
Operator : WA  
Sample : P0801507-015 (1000ml)  
Misc : ENSR SG06B-05 (-2.9, 3.5)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



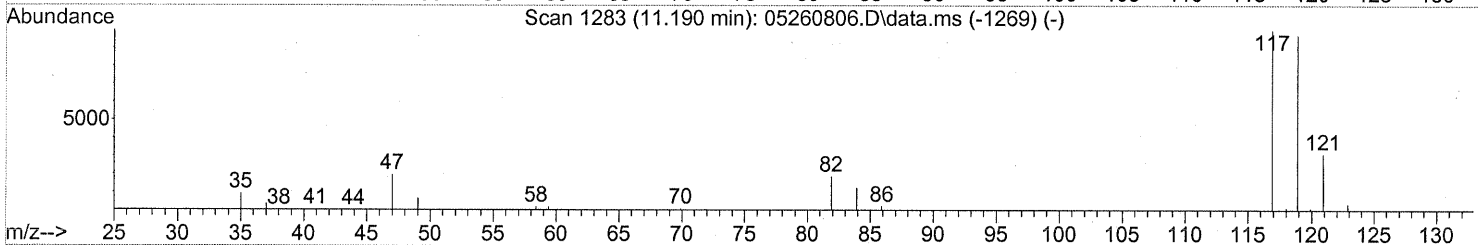
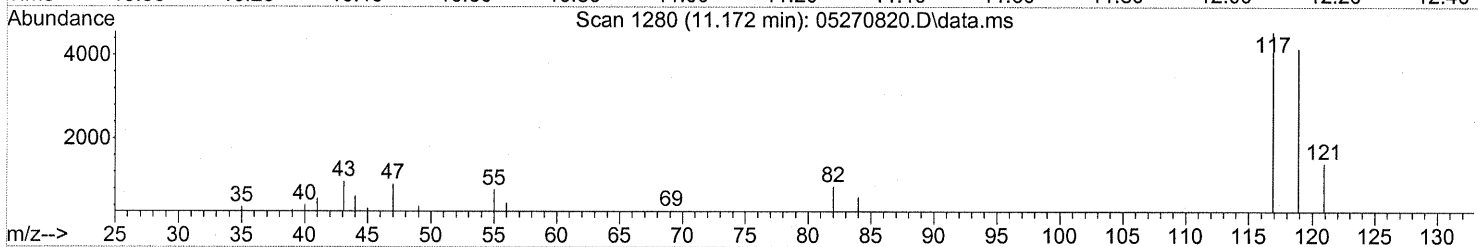
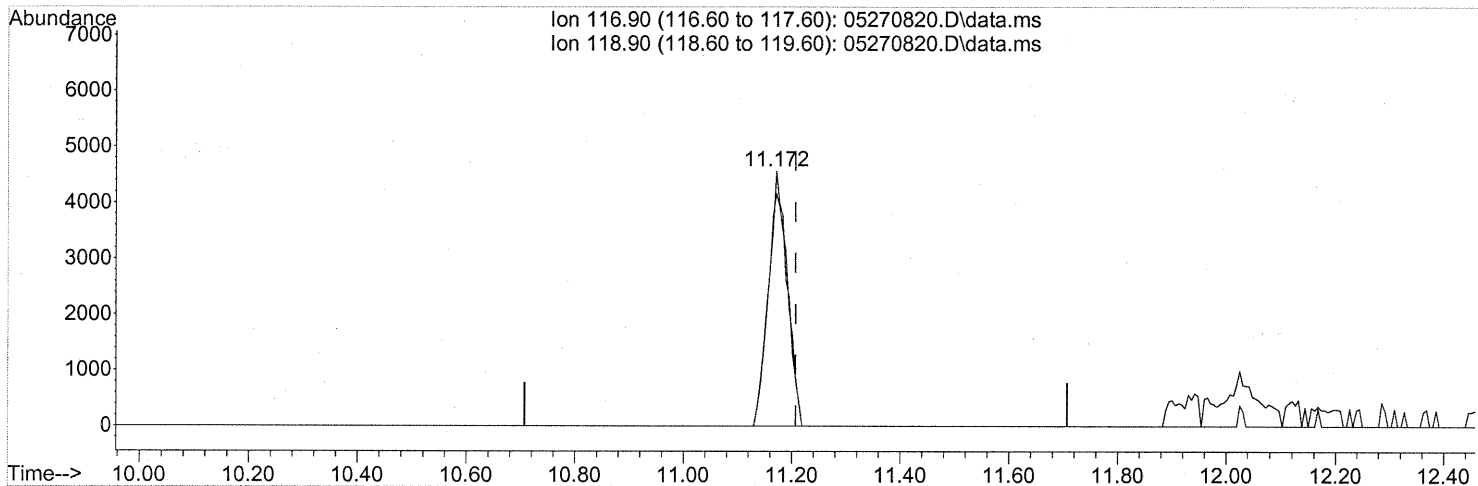
(41) Benzene (T)  
11.006min (-0.036) 1.26ng  
response 85981

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(42) Carbon Tetrachloride (T)

11.172min (-0.036) 0.39ng

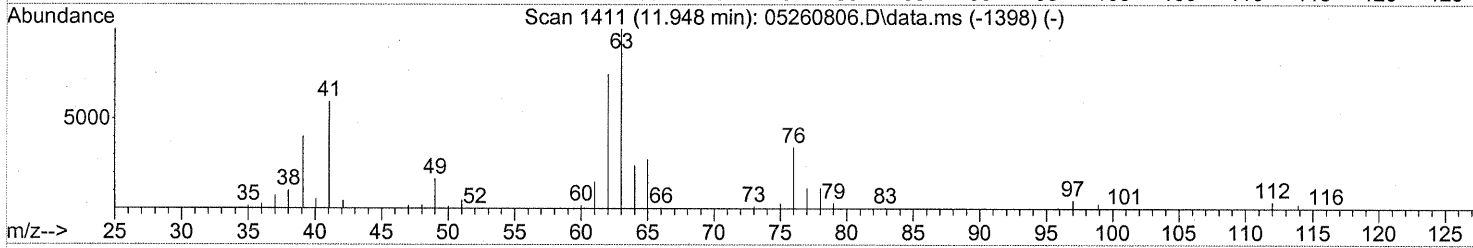
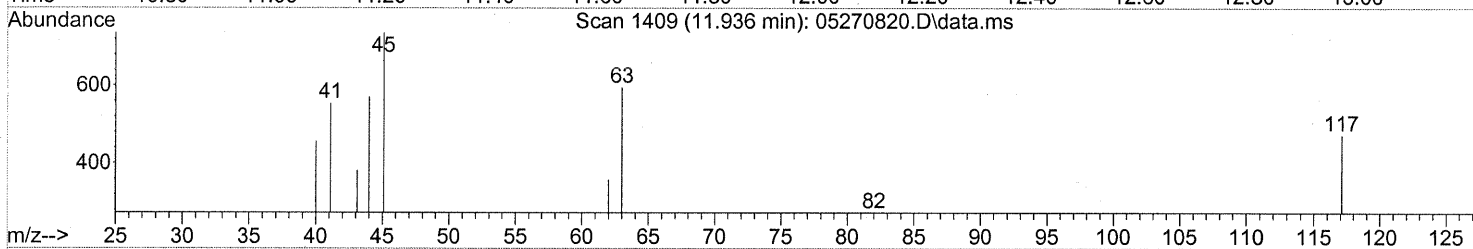
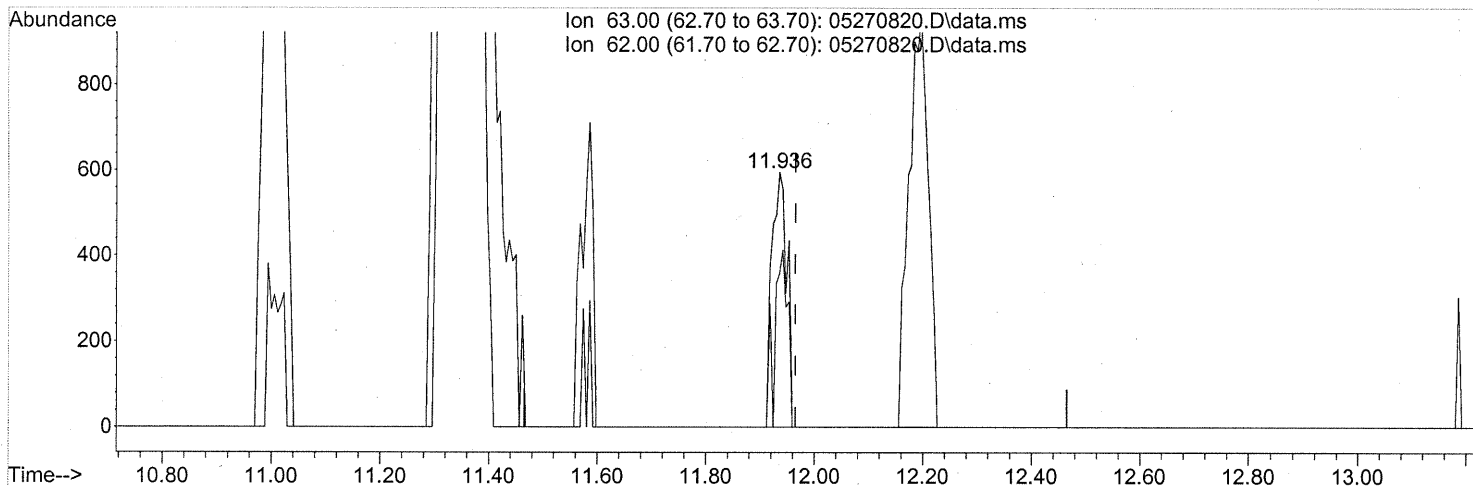
response 10901

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	99.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

11.936min (-0.030) 0.06ng

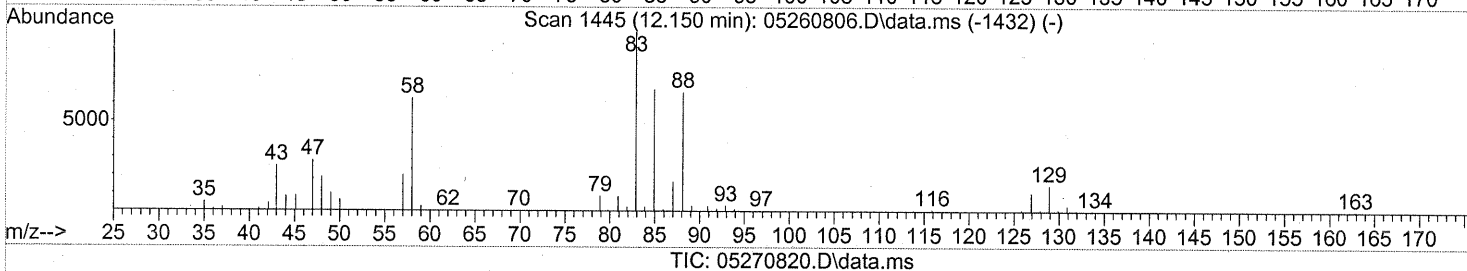
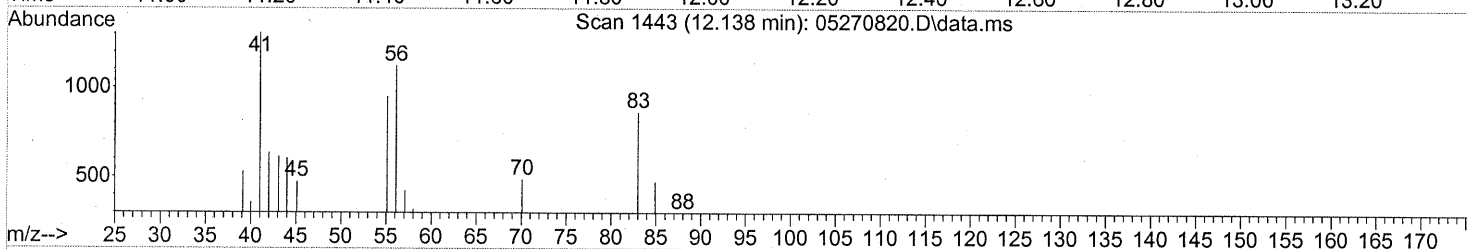
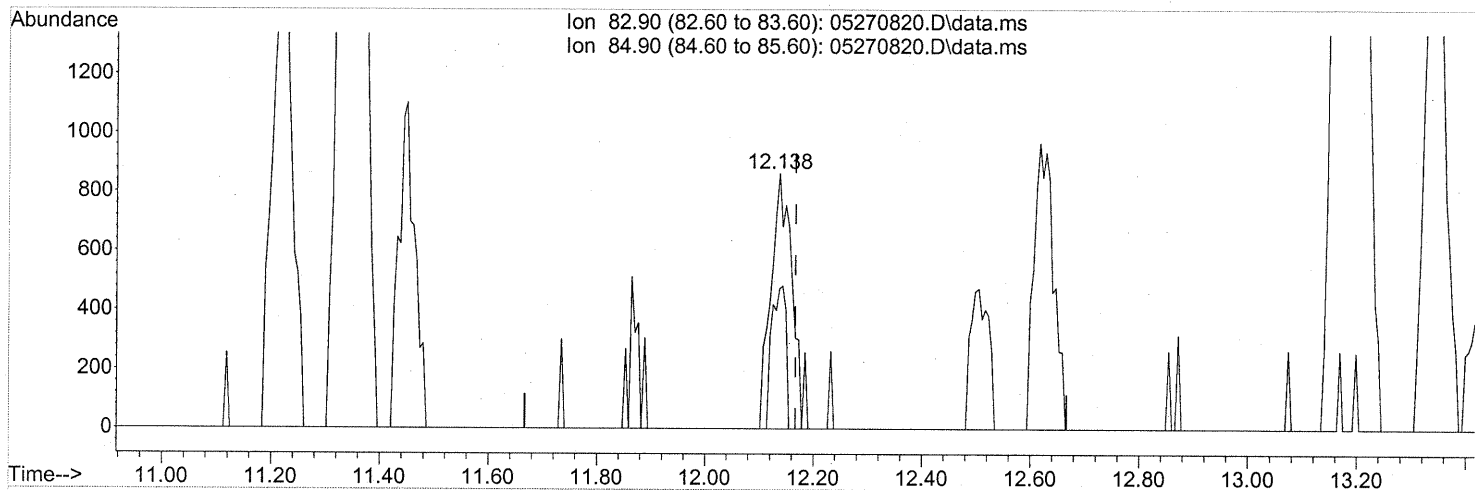
response 1150

Ion	Exp%	Act%
63.00	100	100
62.00	72.20	60.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

12.138min (-0.030) 0.12ng

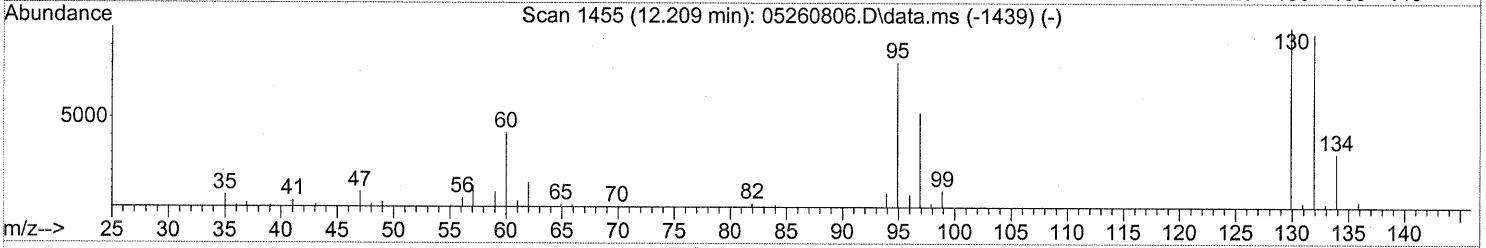
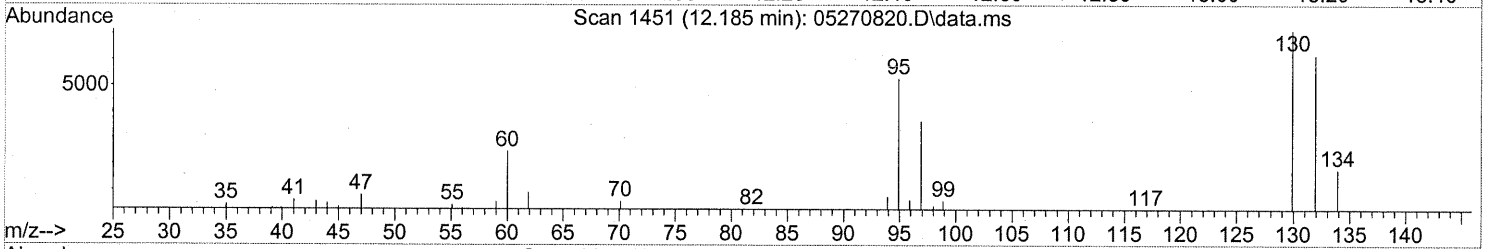
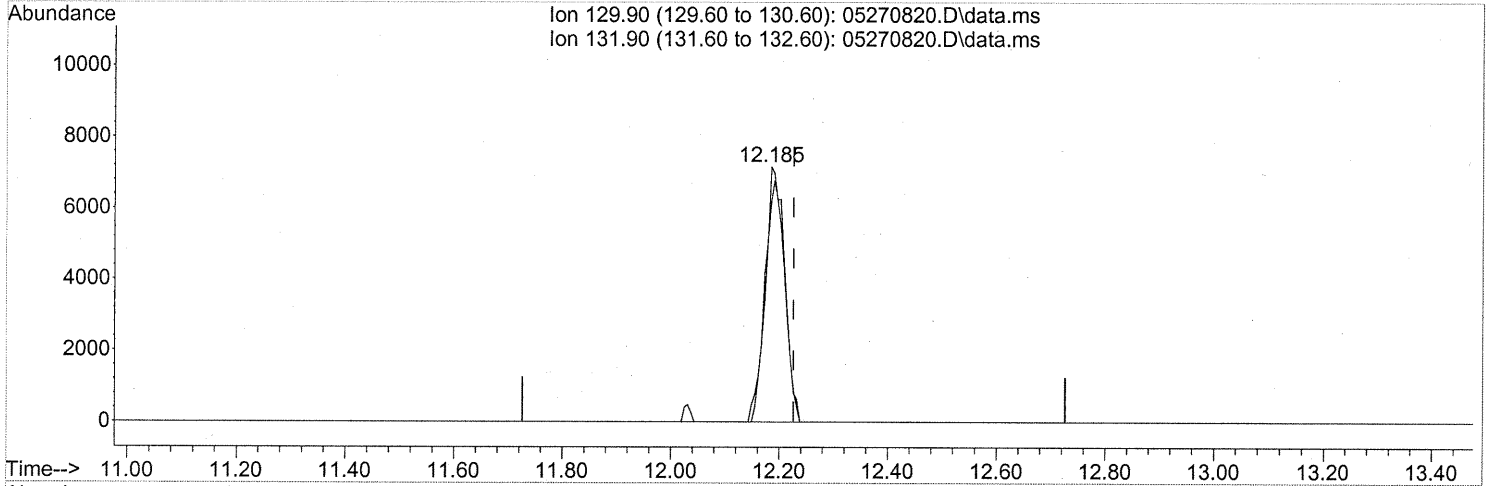
response 2372

Ion	Exp%	Act%
82.90	100	100
84.90	62.30	37.31#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(47) Trichloroethene (T)

12.185min (-0.042) 0.84ng

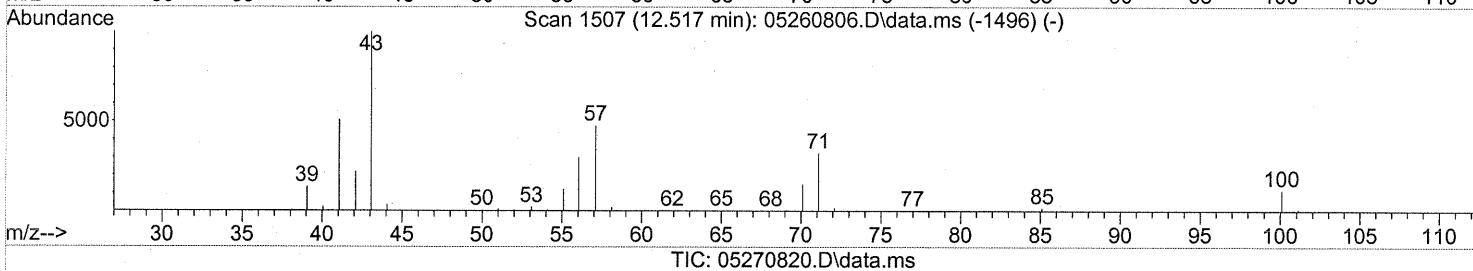
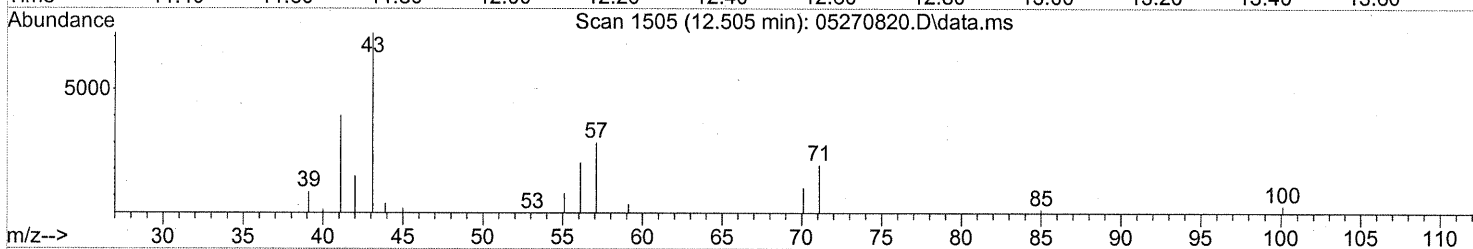
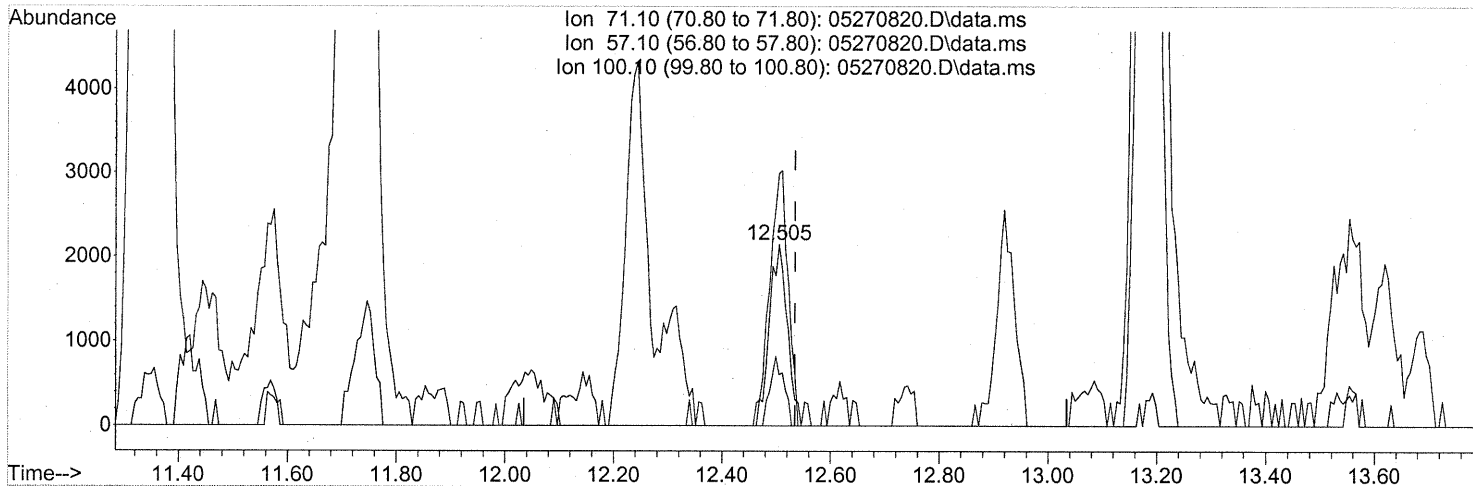
response 18006

Ion	Exp%	Act%
129.90	100	100
131.90	95.10	95.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(51) n-Heptane (T)  
 12.505min (-0.030) 0.30ng  
 response 4943

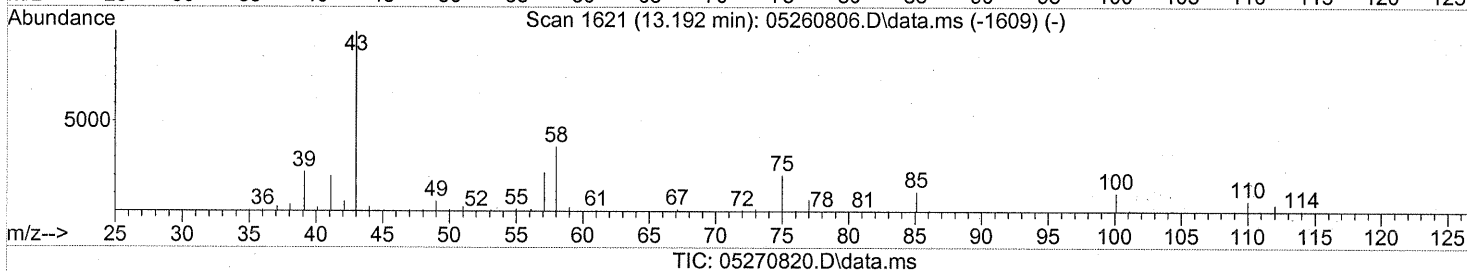
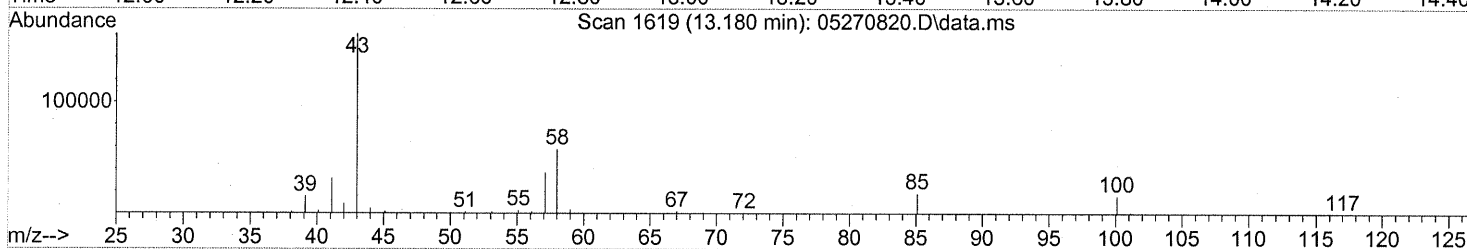
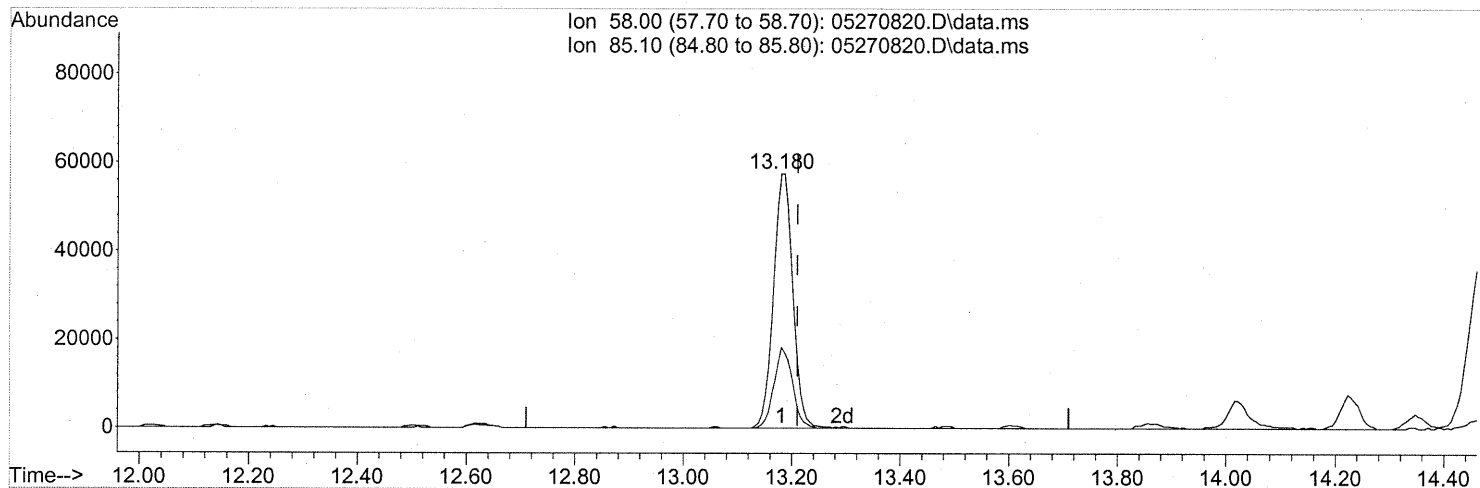
Ion	Exp%	Act%
71.10	100	100
57.10	88.70	145.52#
100.10	28.80	29.29
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

13.180min (-0.030) 5.97ng

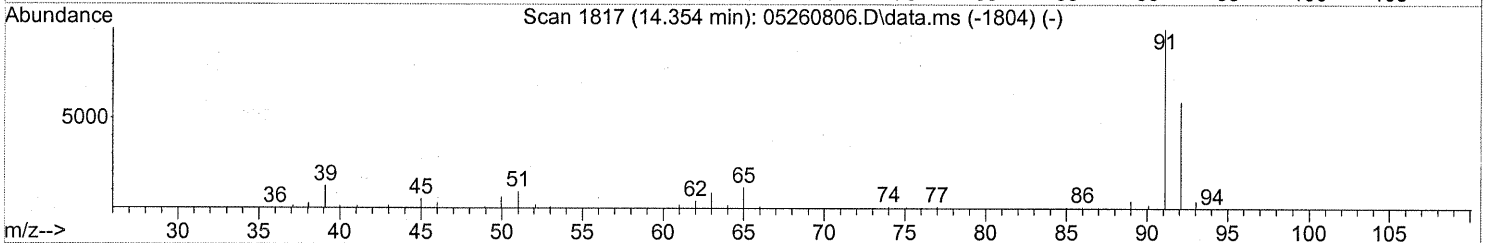
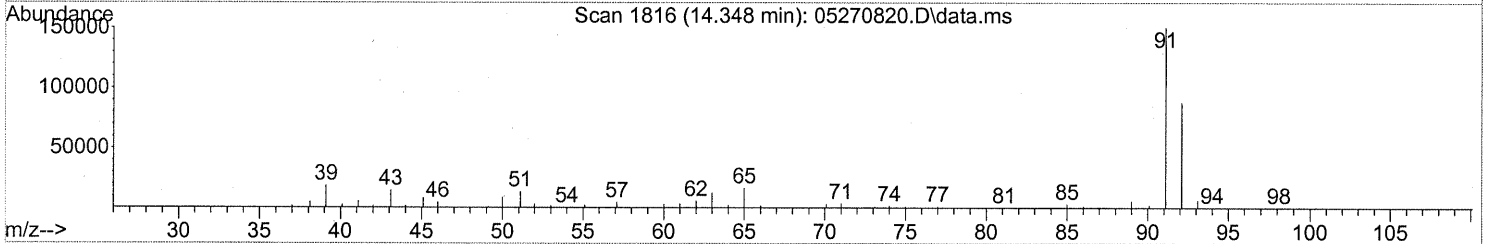
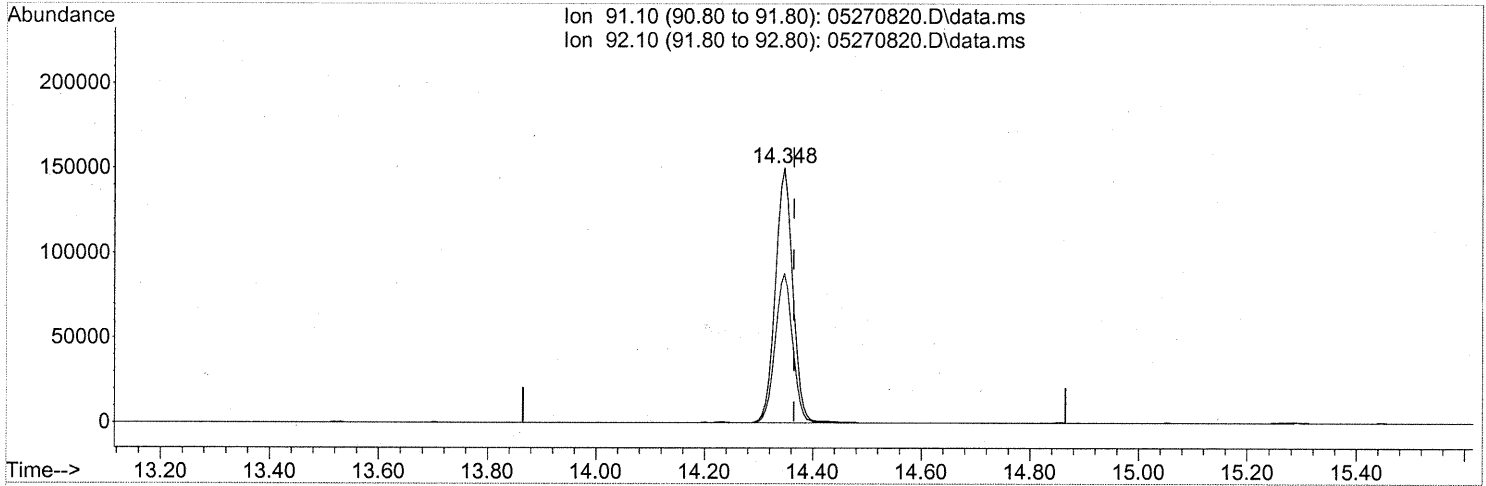
response 142119

Ion	Exp%	Act%
58.00	100	100
85.10	40.70	30.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(58) Toluene (T)

14.348min (-0.018) 4.37ng

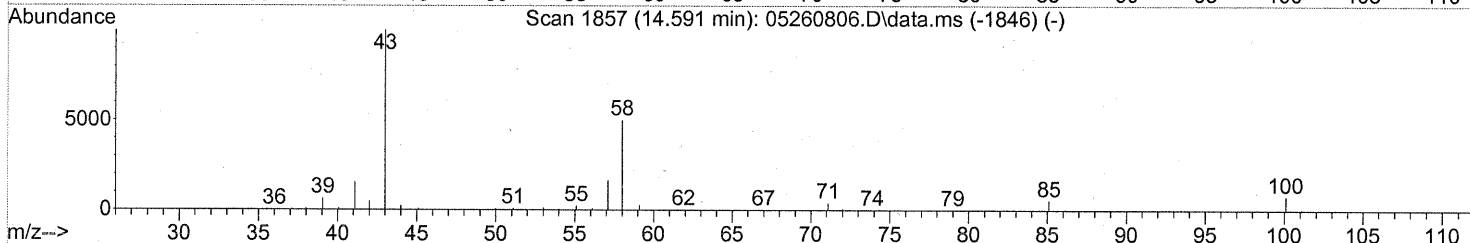
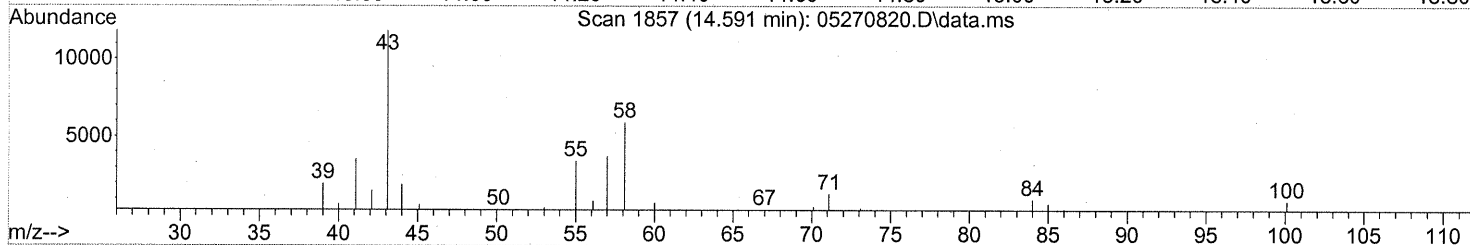
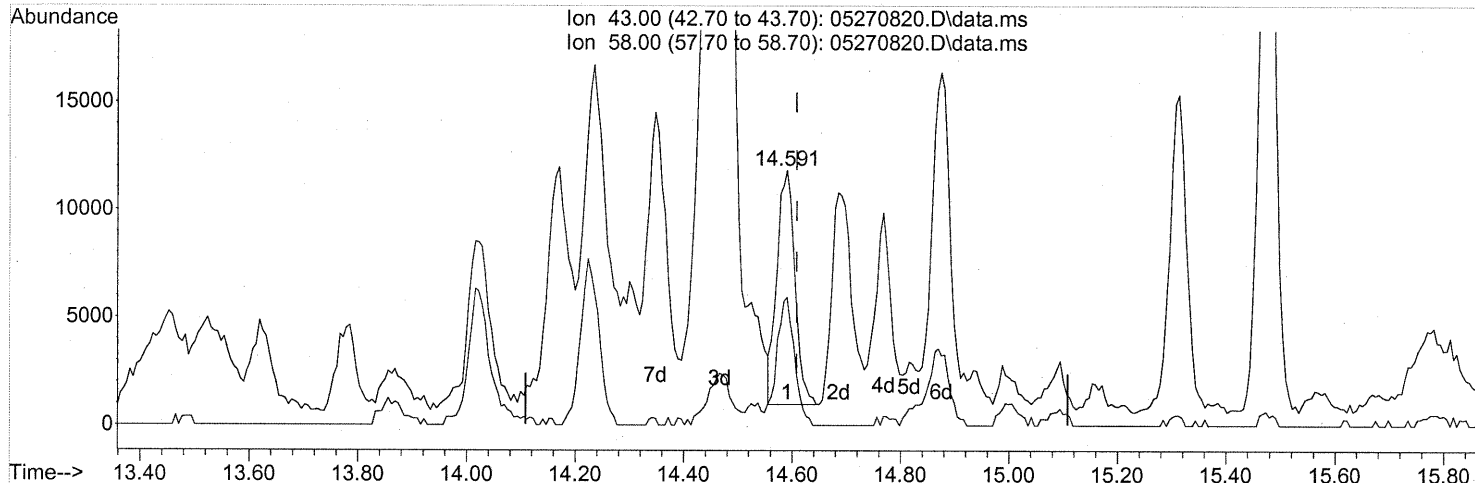
response 340441

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	58.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



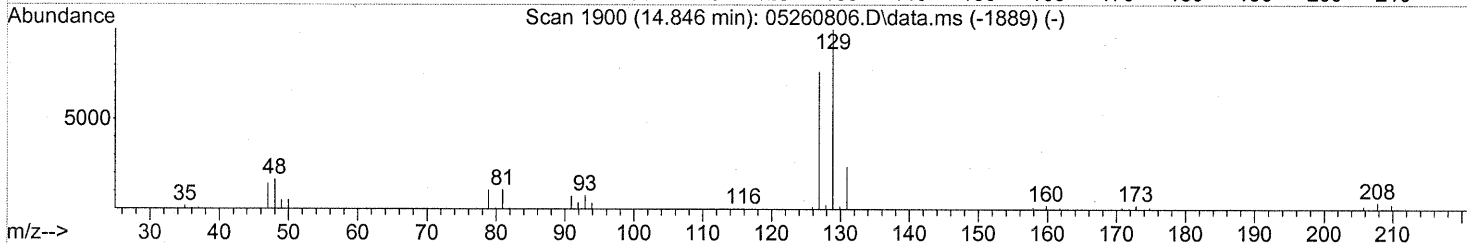
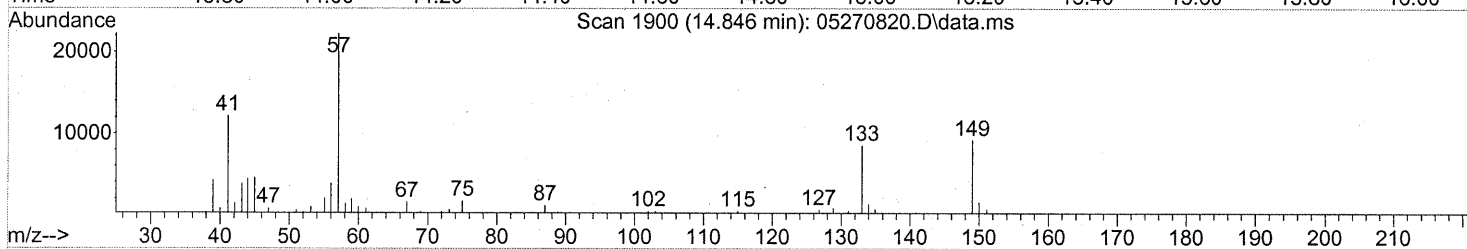
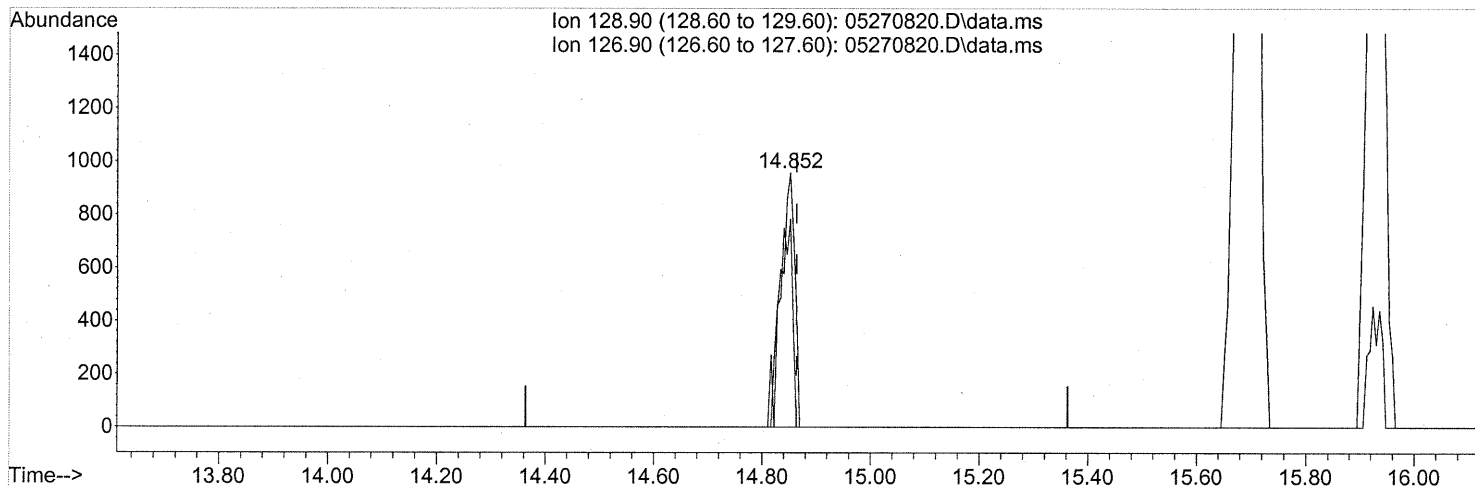
(59) 2-Hexanone (T)  
 14.591min (-0.018) 0.34ng  
 response 25031

Ion	Exp%	Act%
43.00	100	100
58.00	50.90	54.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(60) Dibromochloromethane (T)

14.852min (-0.012) 0.08ng

response 1731

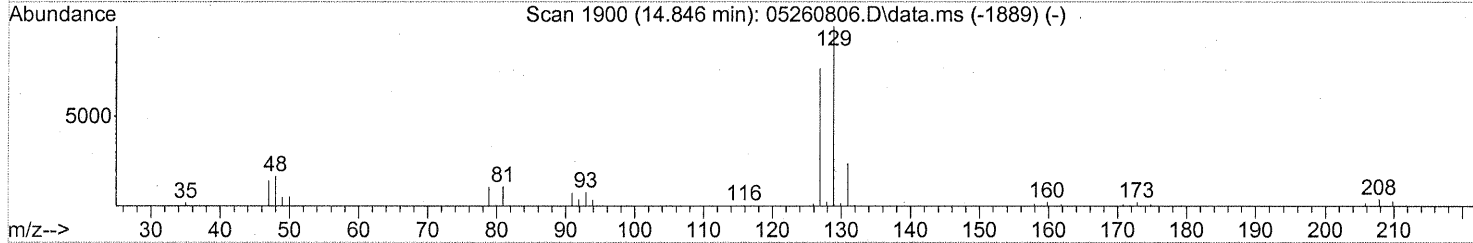
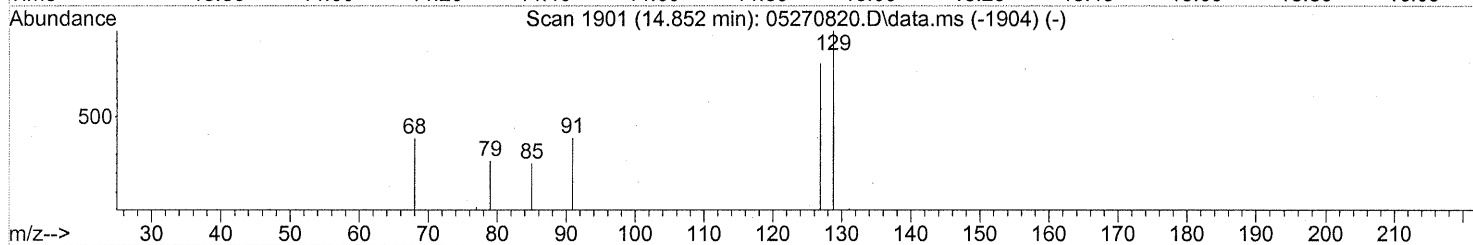
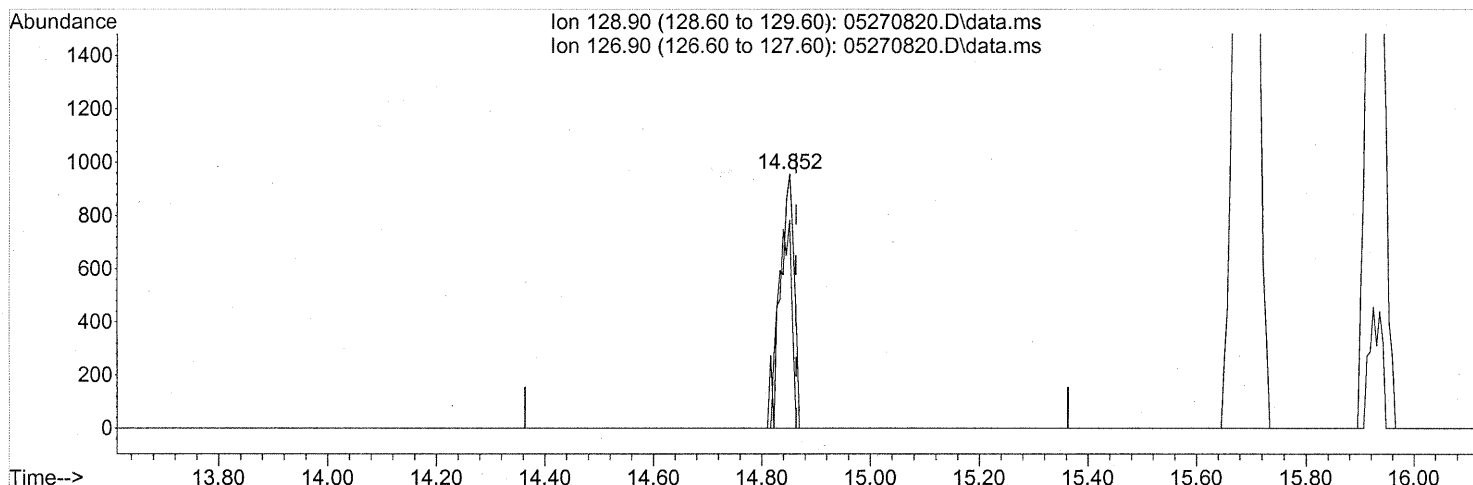
*before*

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	76.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 09:11:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(60) Dibromochloromethane (T)

14.852min (-0.012) 0.08ng

response 1731

Ion	Exp%	Act%
128.90	100	100
126.90	77.20	76.89
0.00	0.00	0.00
0.00	0.00	0.00

*after substr*

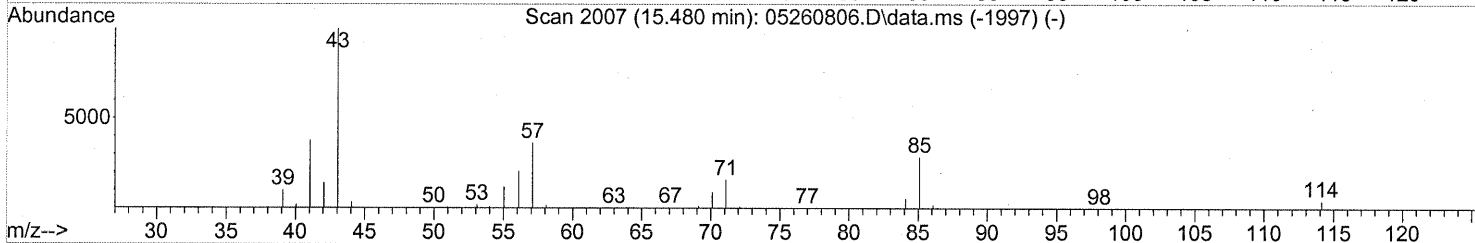
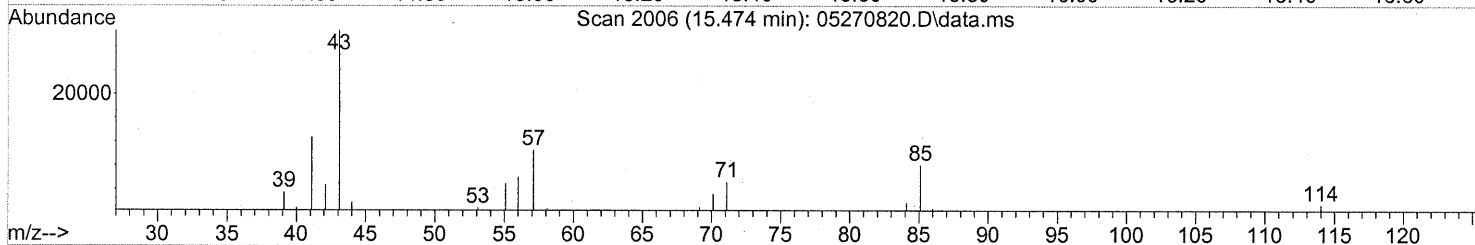
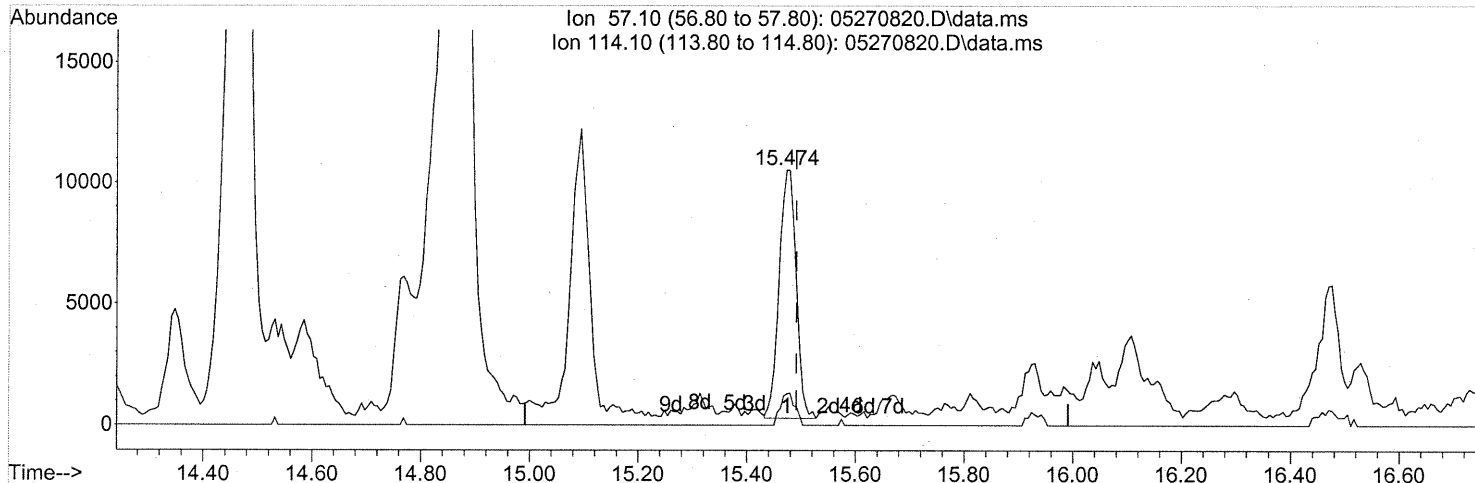
*DA 6/4/08*

*C. 6/4/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(63) n-Octane (T)

15.474min (-0.018) 0.94ng

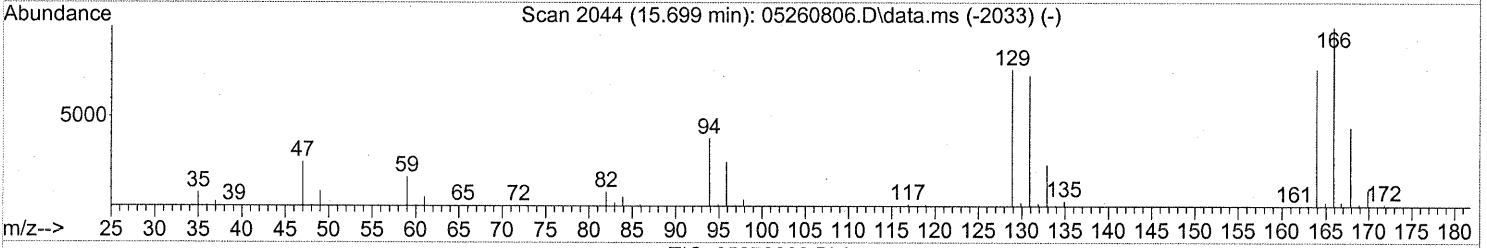
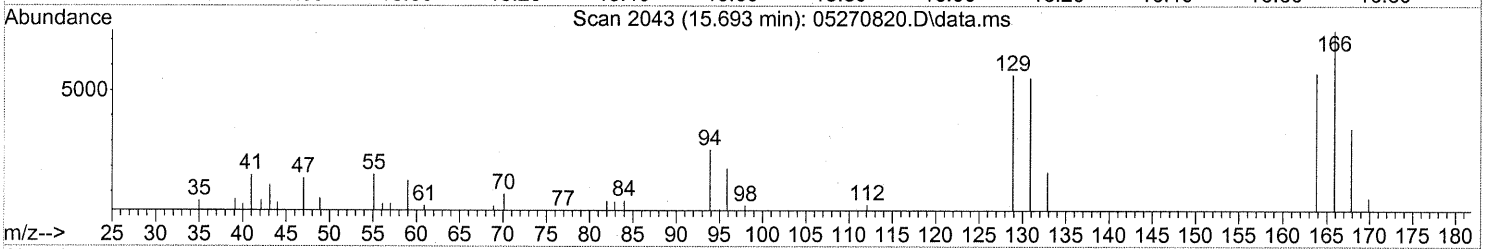
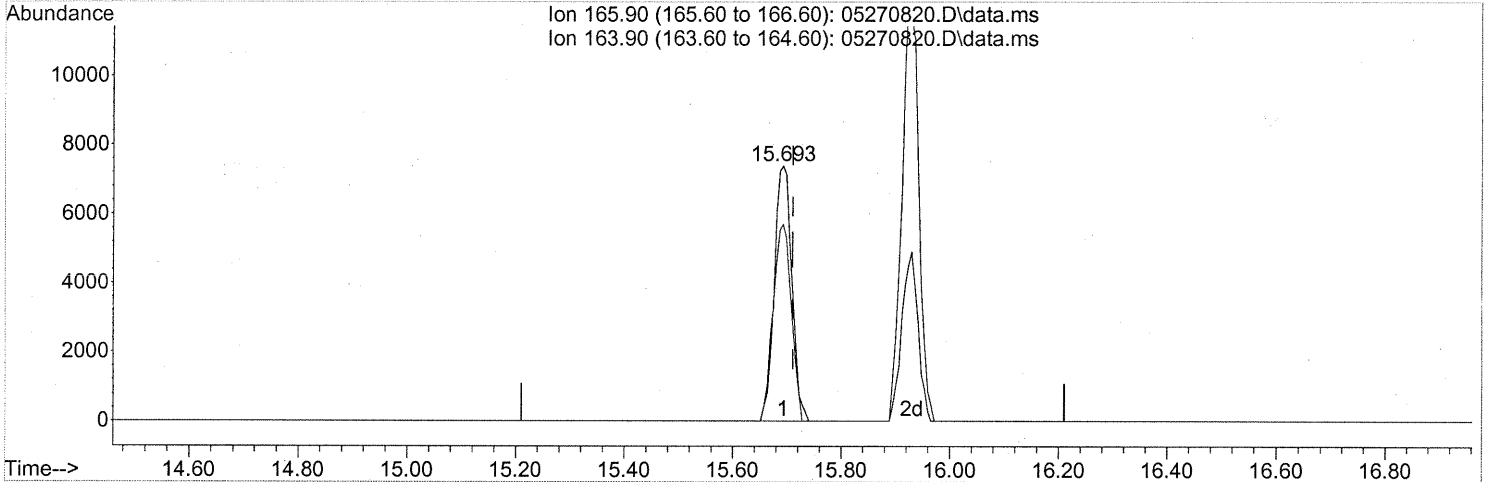
response 22197

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.693min (-0.018) 0.73ng

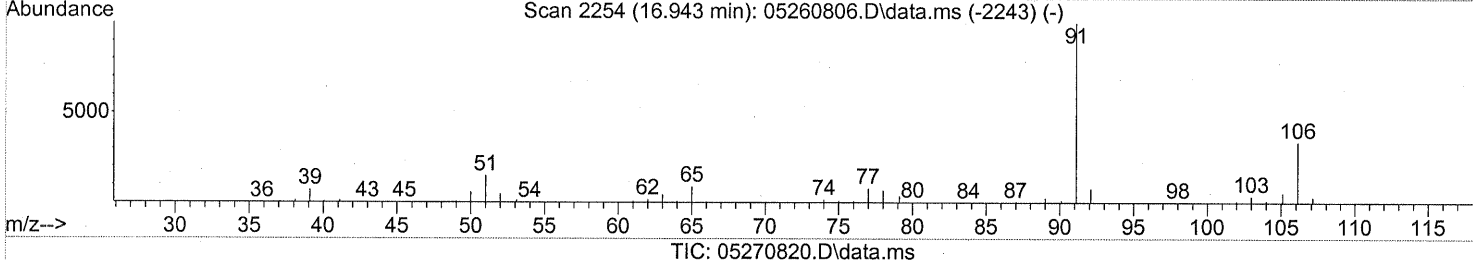
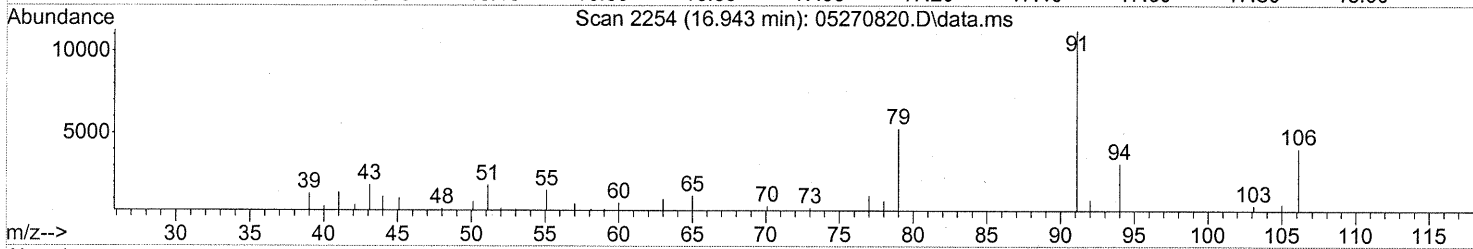
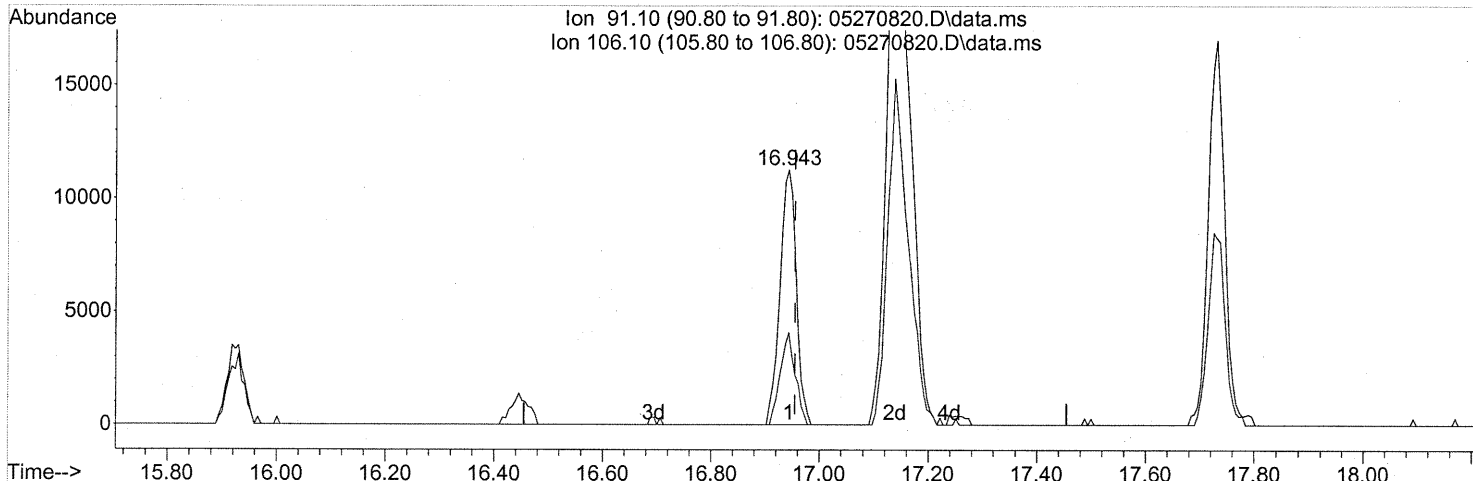
response 16929

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	77.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

16.943min (-0.012) 0.27ng

response 23852

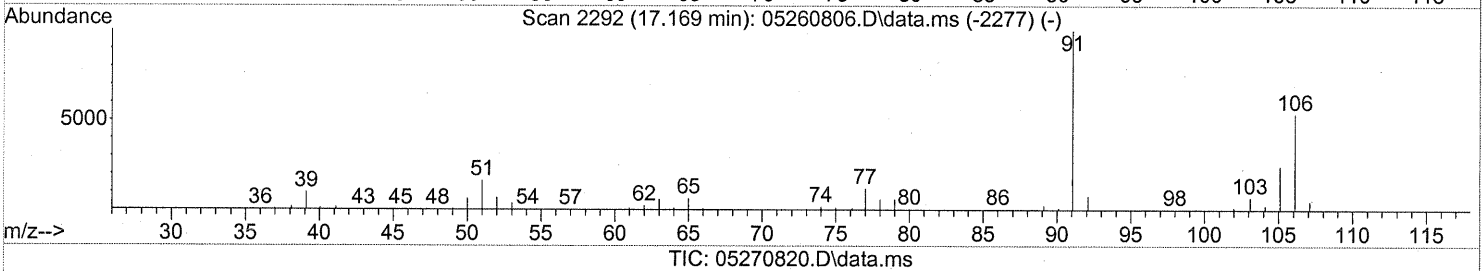
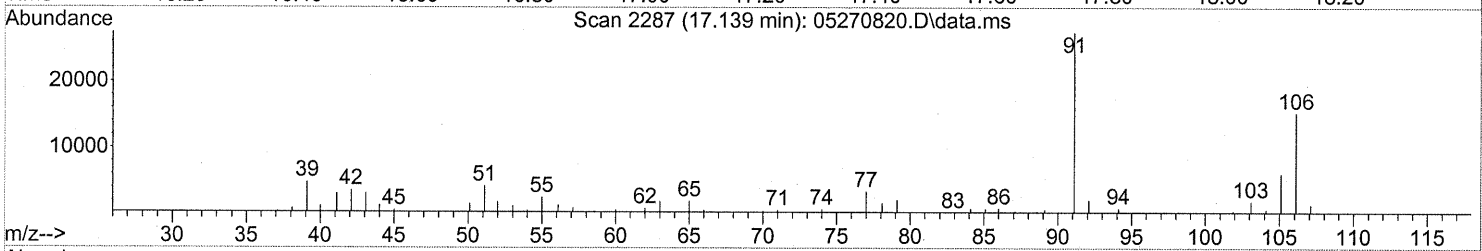
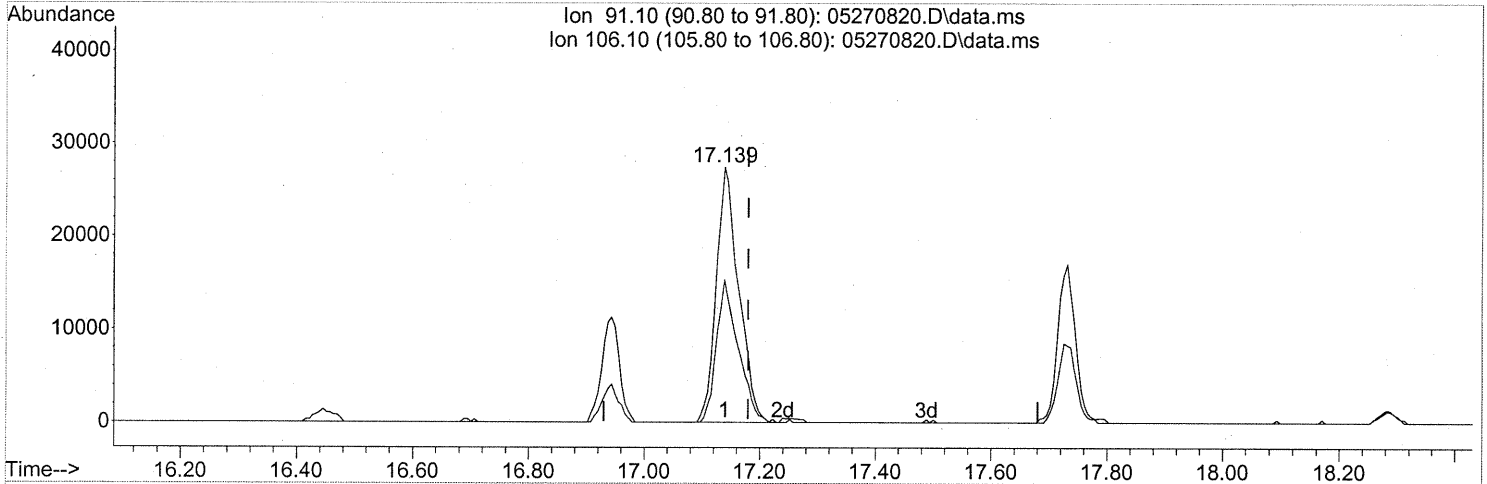
Ion	Exp%	Act%
91.10	100	100
106.10	29.90	33.36
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



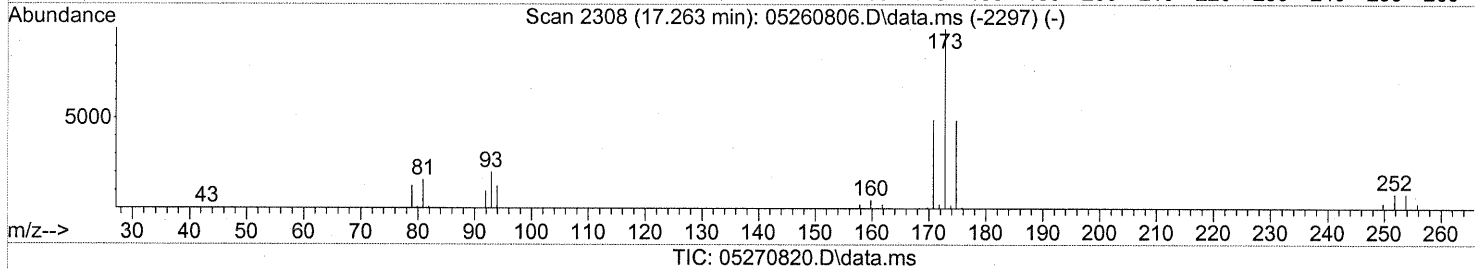
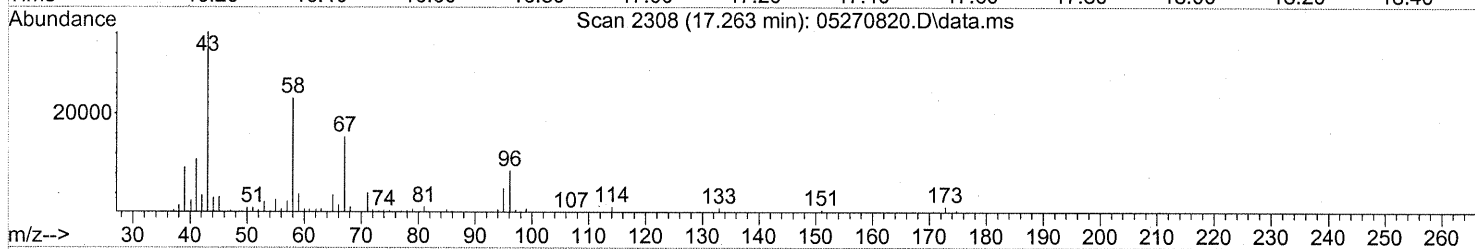
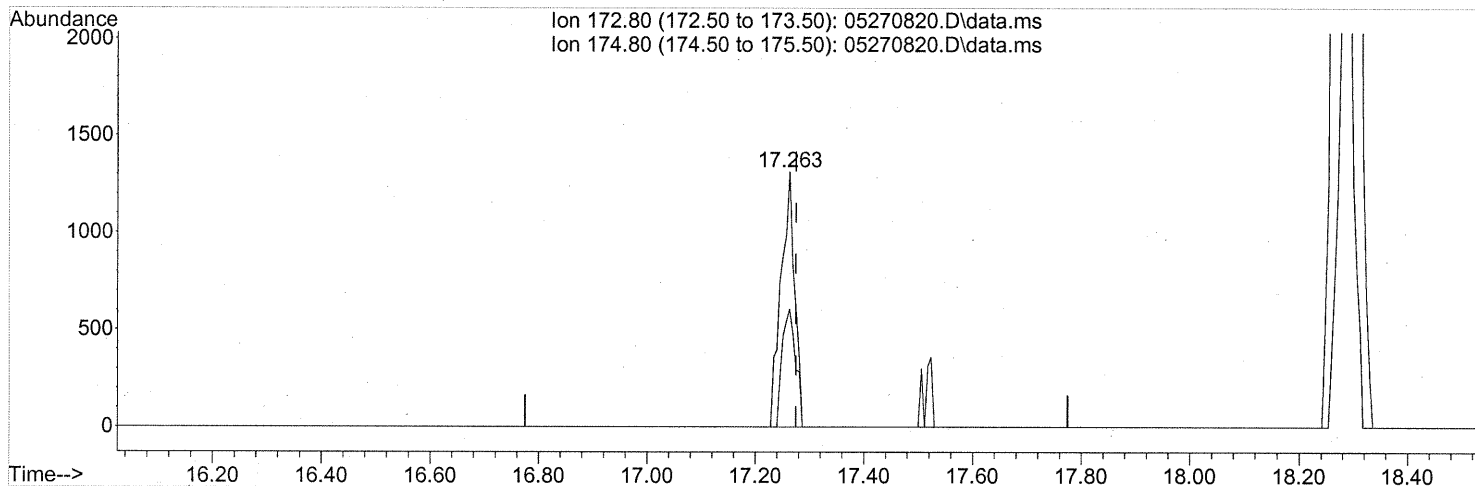
(67) m- & p-Xylene (T)  
 17.139min (-0.042) 1.26ng  
 response 74048

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	54.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

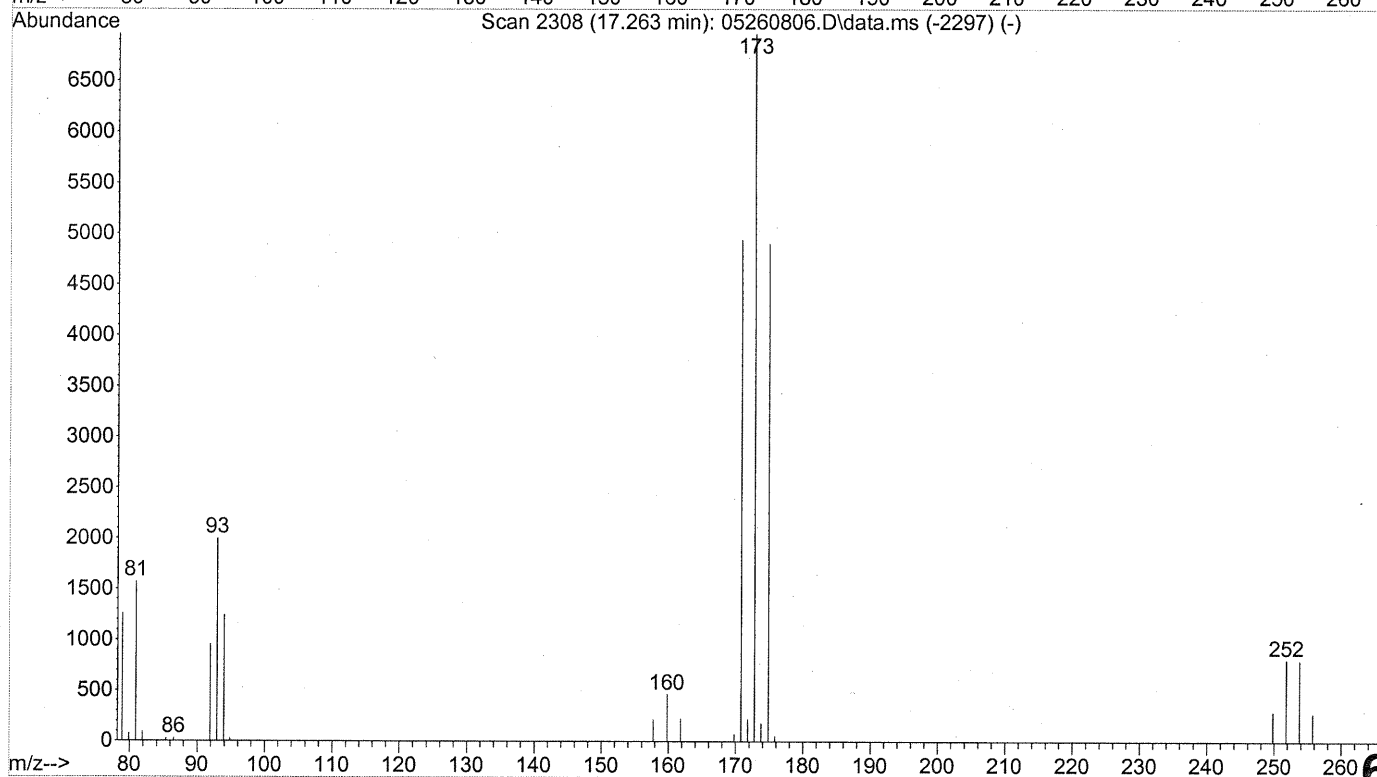
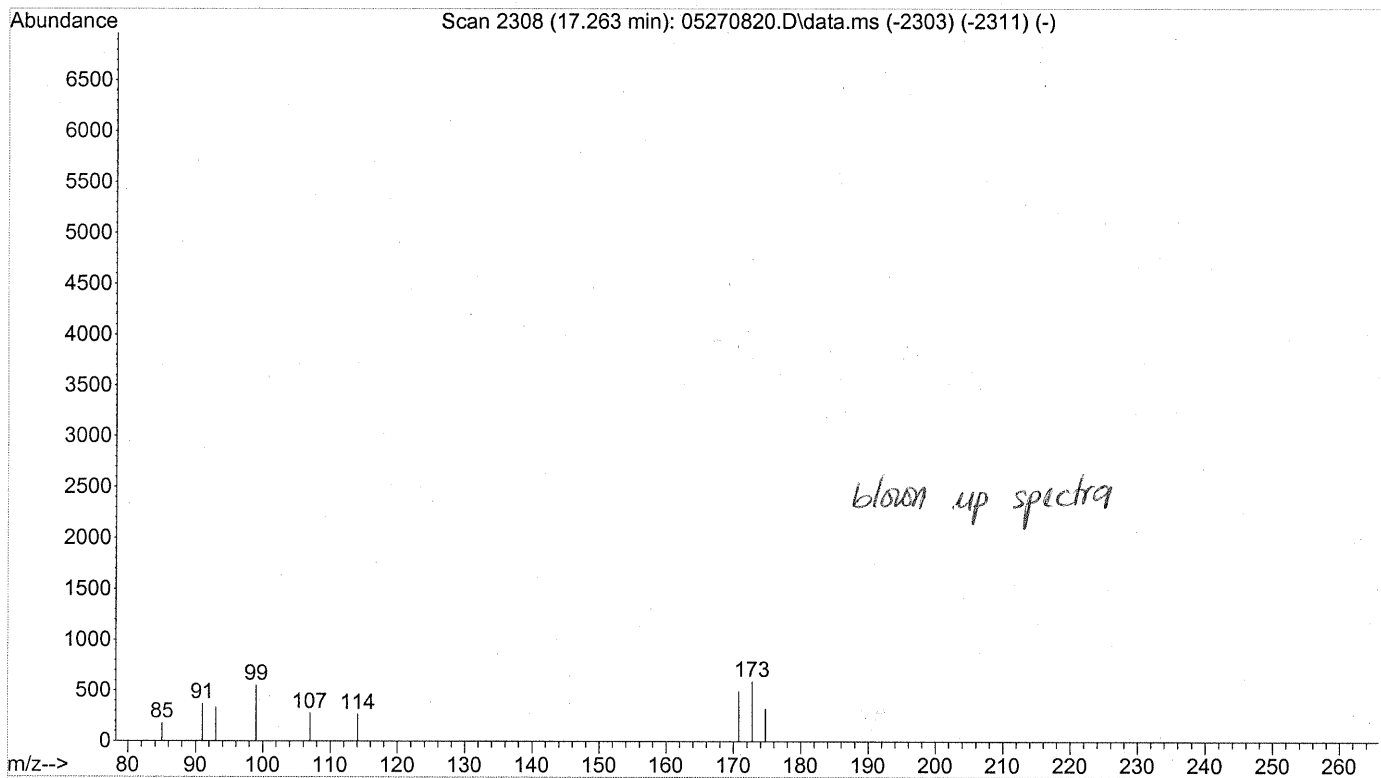


(68) Bromoform (T)  
 17.263min (-0.012) 0.17ng  
 response 2307

Ion	Exp%	Act%
172.80	100	100
174.80	48.50	45.30
0.00	0.00	0.00
0.00	0.00	0.00

*see blown up spectra*

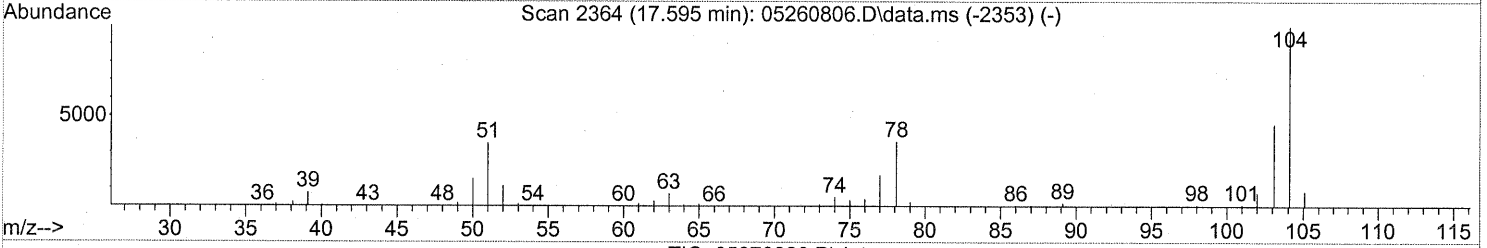
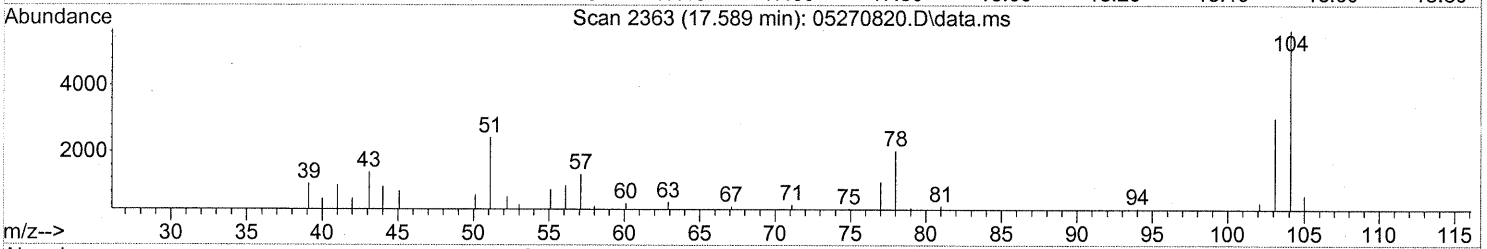
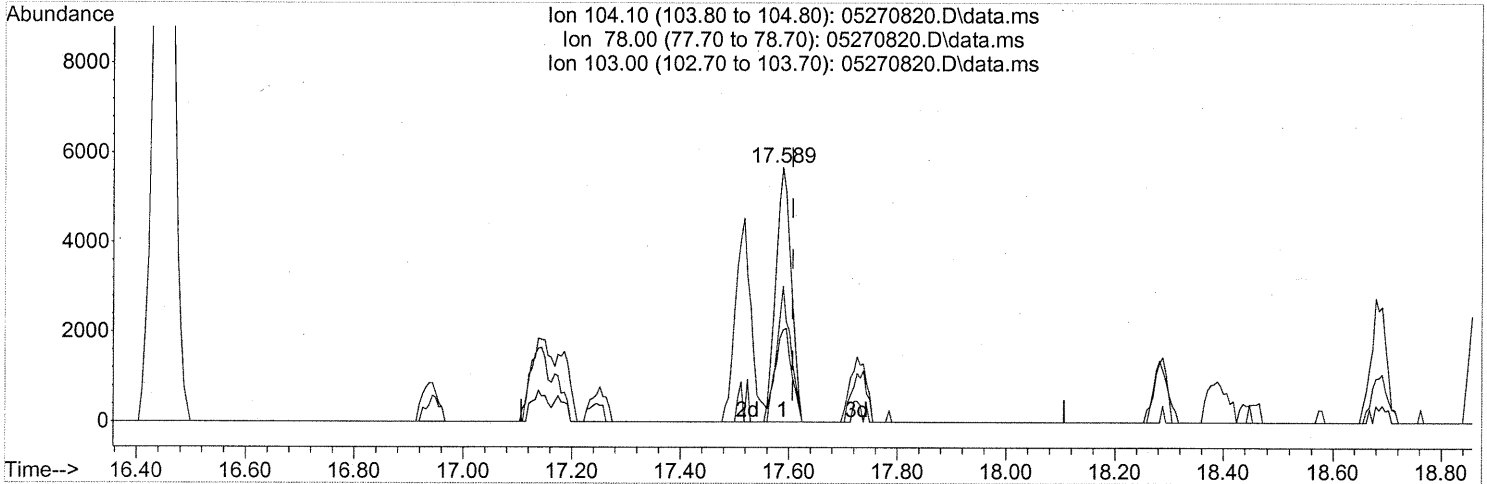
File : J:\MS16\DATA\2008\_05\27\05270820.D  
Operator : WA  
Acquired : 28 May 2008 1:01 using AcqMethod TO15.M  
Instrument : GCMS-16  
Sample Name: P0801507-015 (1000ml)  
Misc Info : ENSR SG06B-05 (-2.9, 3.5)  
Vial Number: 12



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



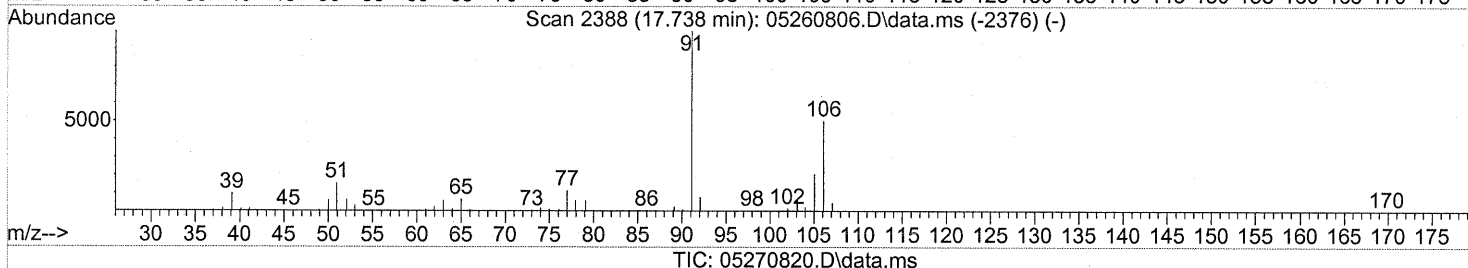
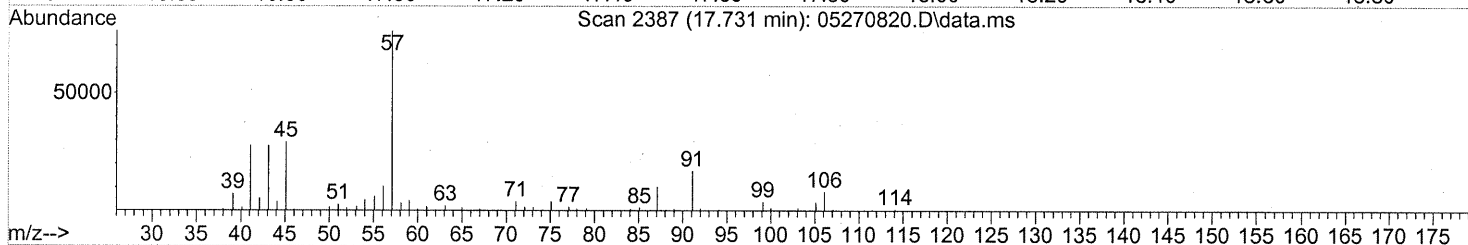
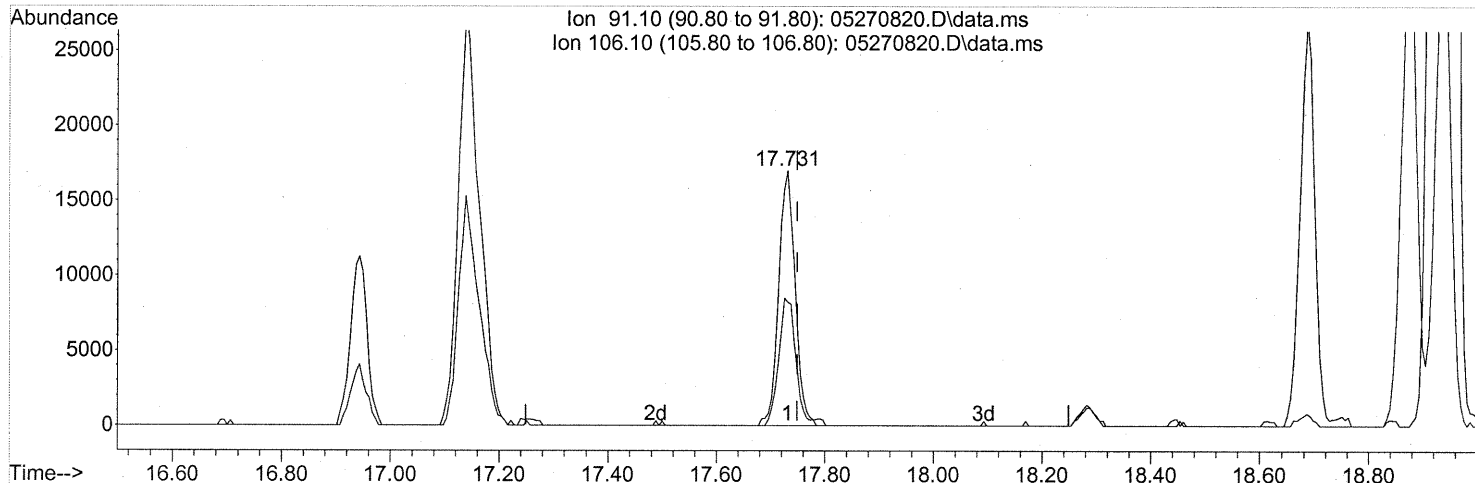
(69) Styrene (T)  
 17.589min (-0.018) 0.20ng  
 response 11401

Ion	Exp%	Act%
104.10	100	100
78.00	43.30	38.45
103.00	47.60	47.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



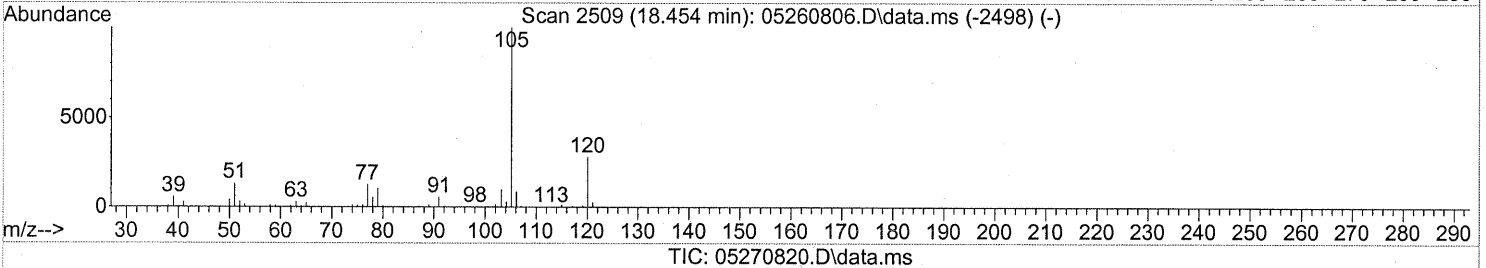
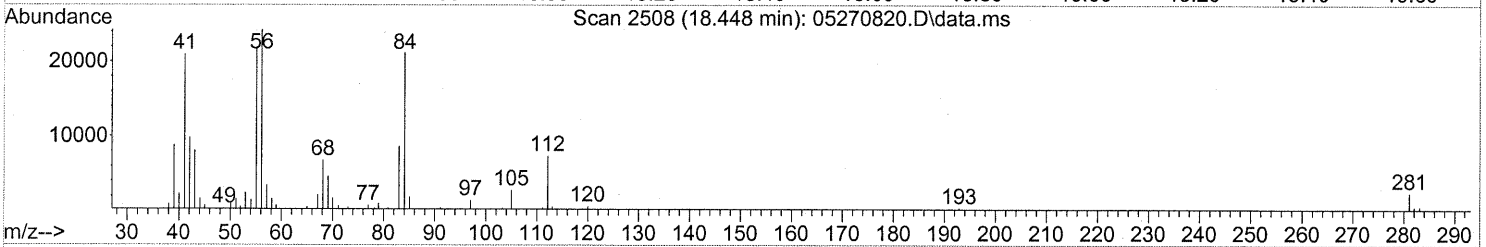
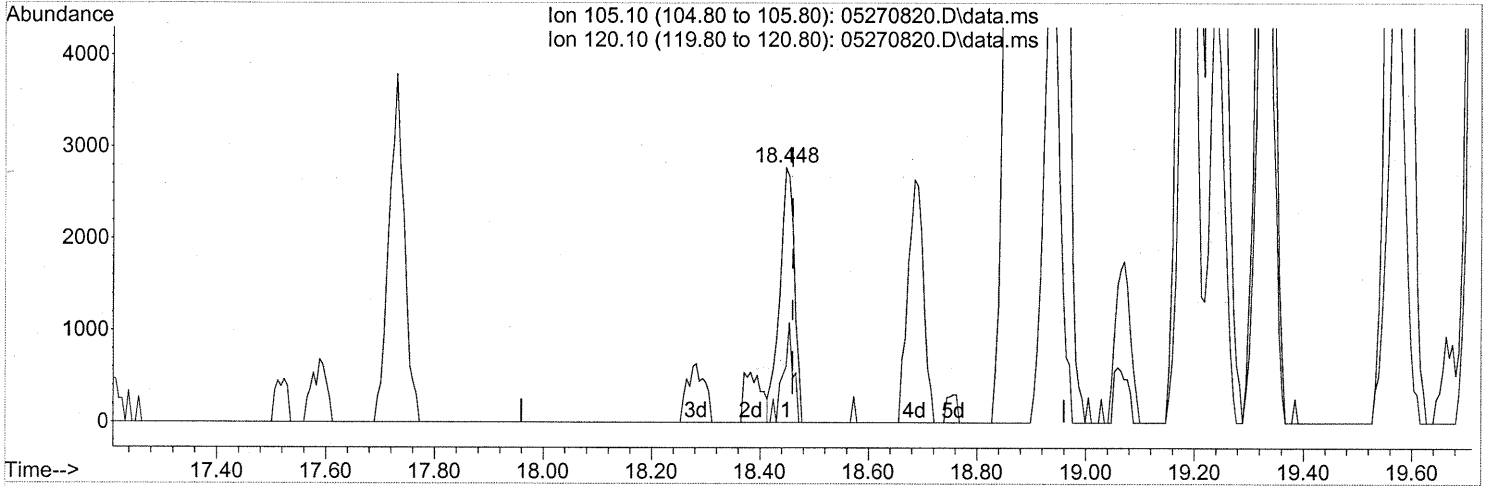
(70) o-Xylene (T)  
 17.731min (-0.018) 0.58ng  
 response 36403

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	51.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(74) Cumene (T)

18.448min (-0.012) 0.06ng

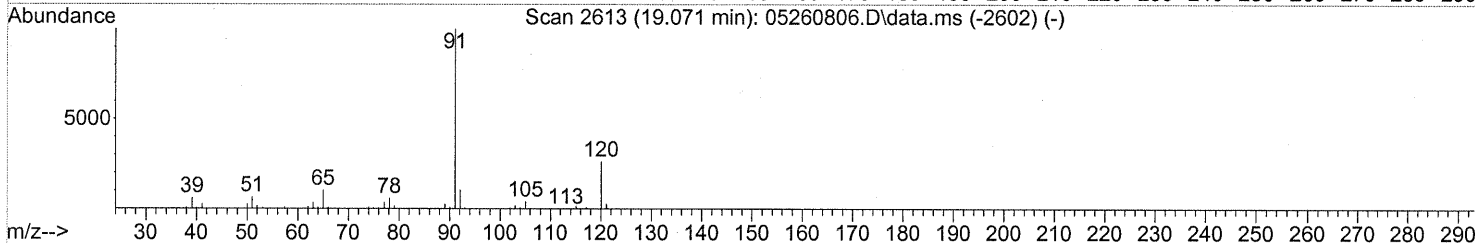
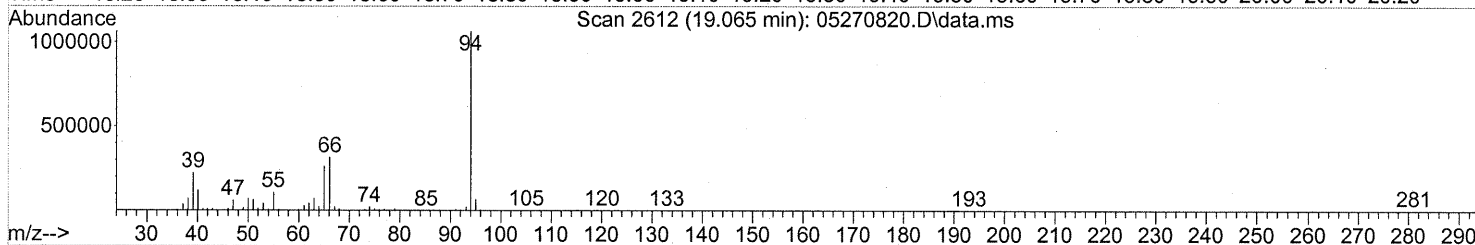
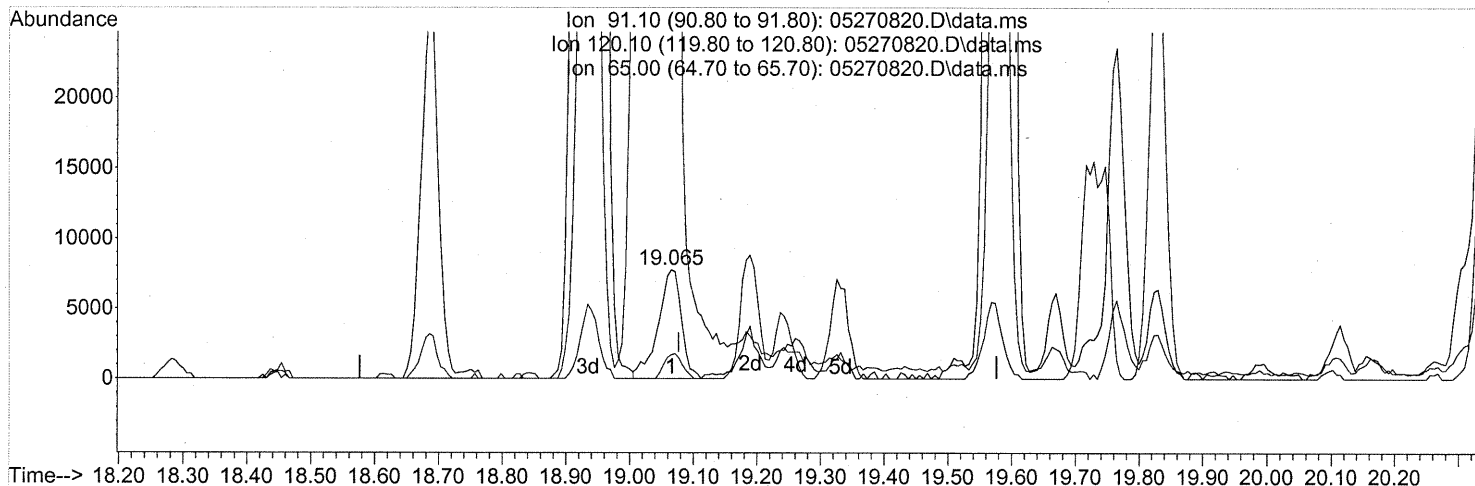
response 5232

Ion	Exp%	Act%
105.10	100	100
120.10	25.60	26.47
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)  
 19.065min (-0.012) 0.18ng  
 response 19538

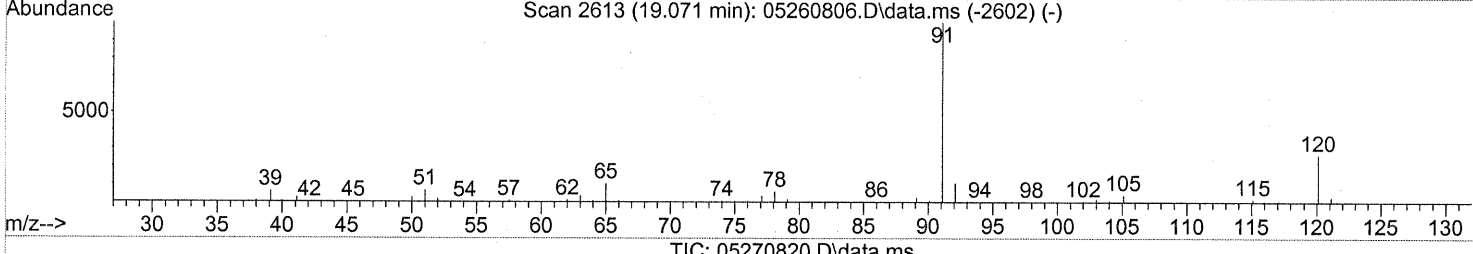
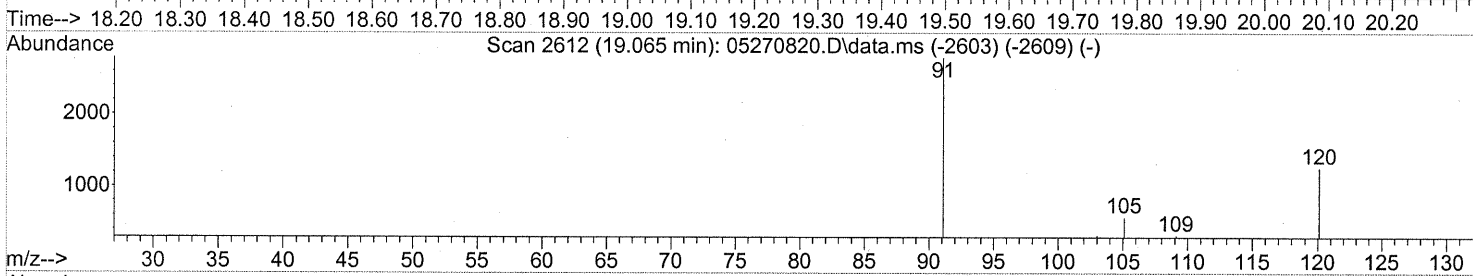
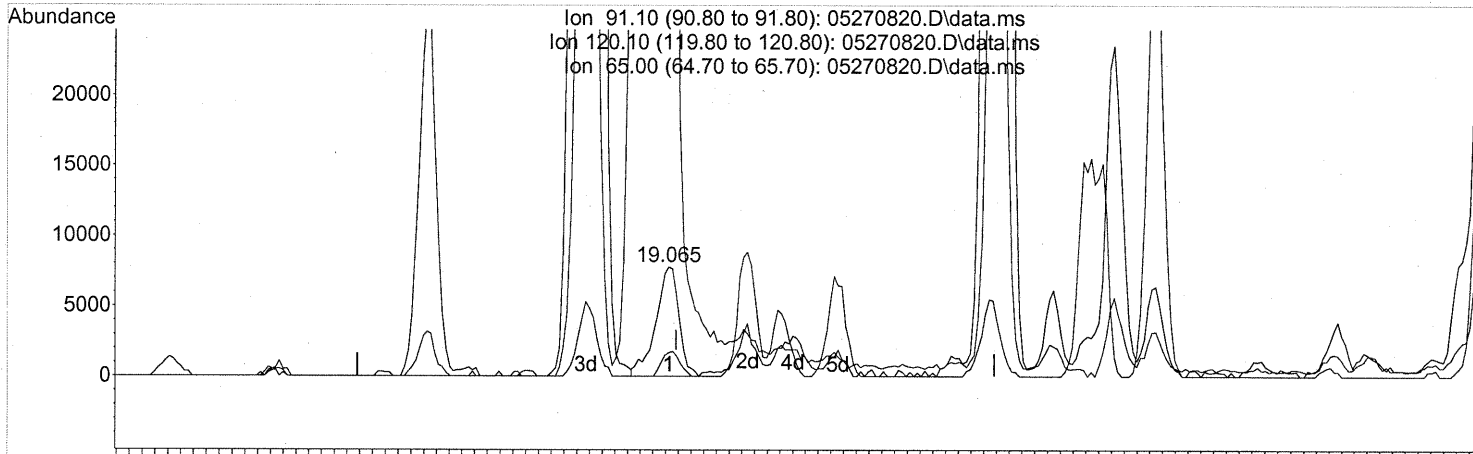
Ion	Exp%	Act%
91.10	100	100
120.10	21.00	17.43
65.00	10.40	0.00
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

19.065min (-0.012) 0.18ng

response 19538

Ion	Exp%	Act%
91.10	100	100
120.10	21.00	17.43
65.00	10.40	0.00
0.00	0.00	0.00

*after substr.*

*WA 6/4/08*

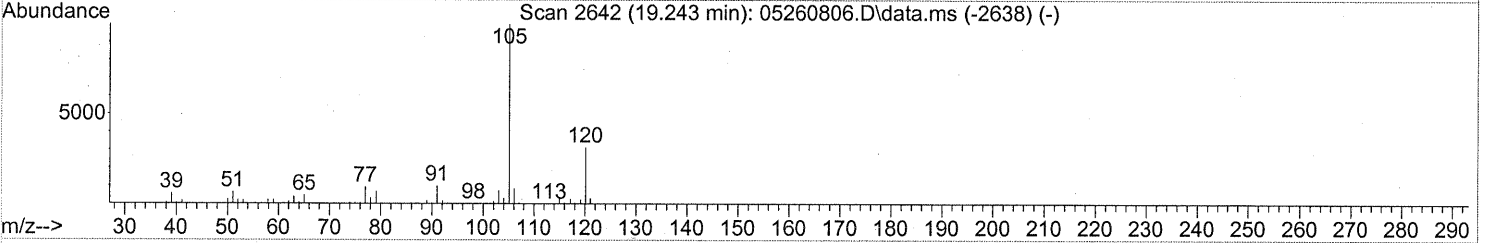
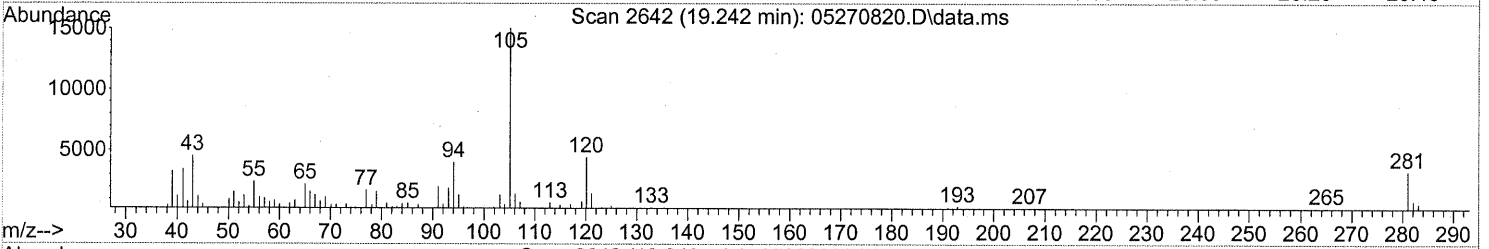
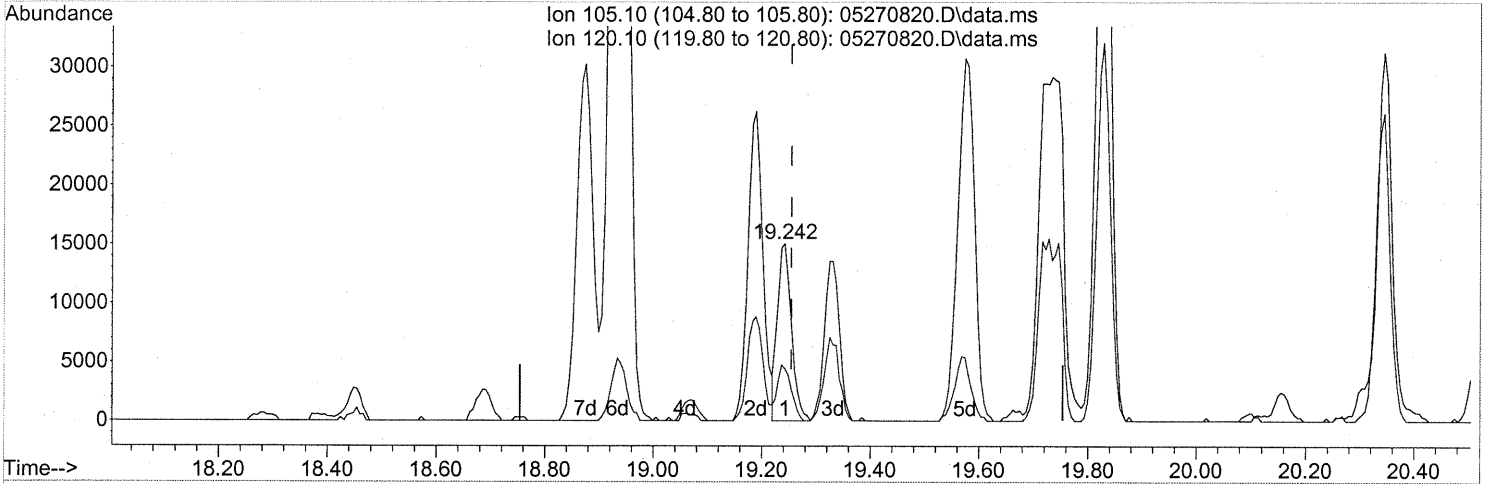
*6/4/08*



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(78) 4-Ethyltoluene (T)

19.242min (-0.012) 0.30ng

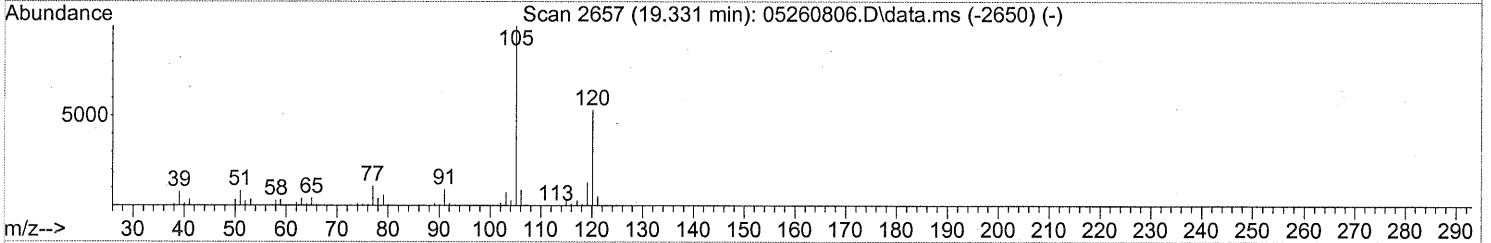
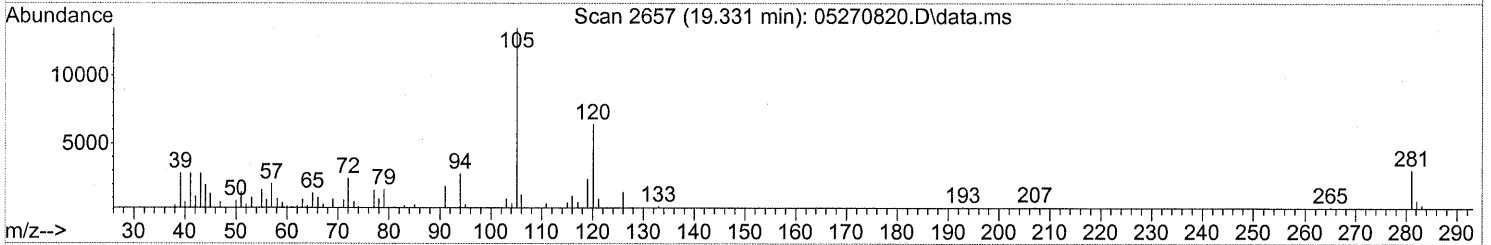
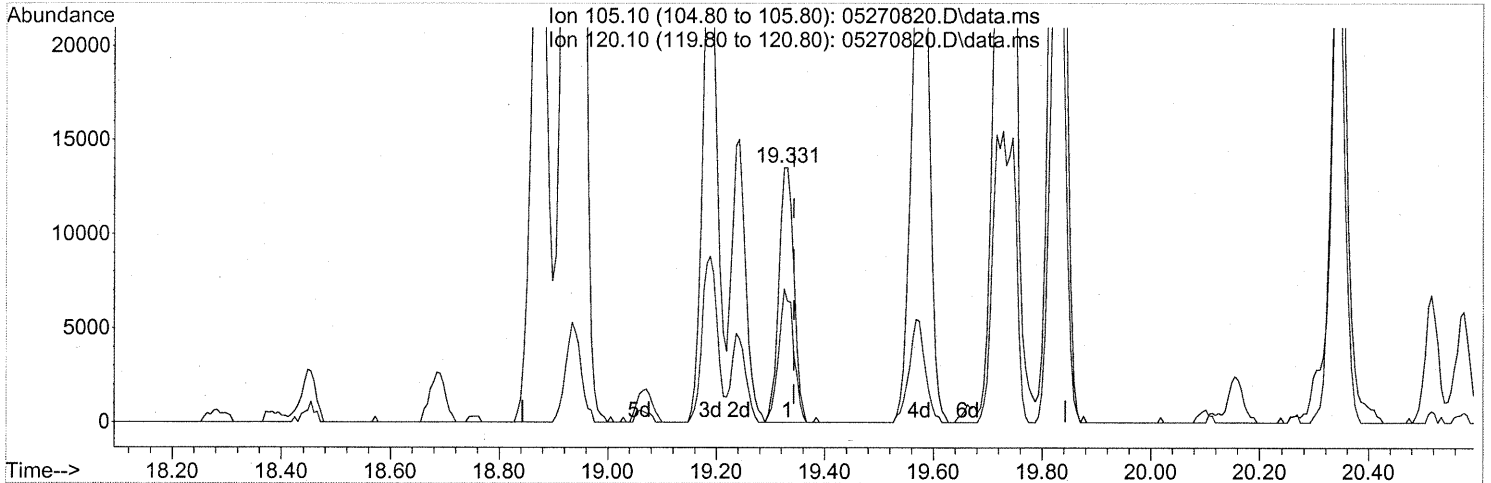
response 26922

Ion	Exp%	Act%
105.10	100	100
120.10	28.60	31.32
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(79) 1,3,5-Trimethylbenzene (T)

19.331min (-0.012) 0.33ng

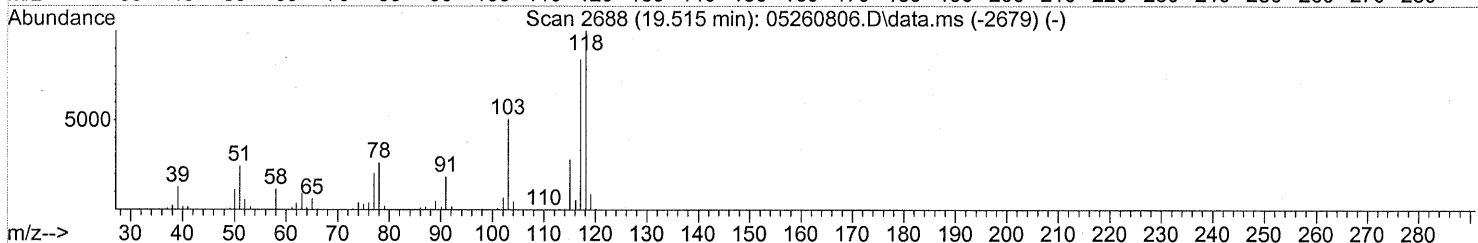
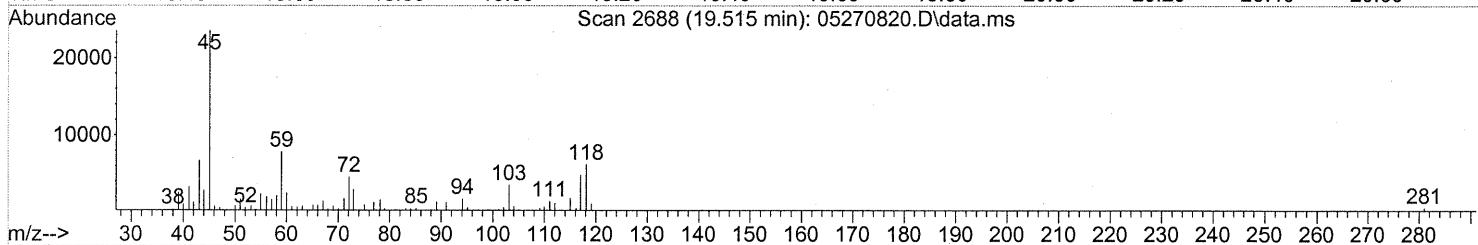
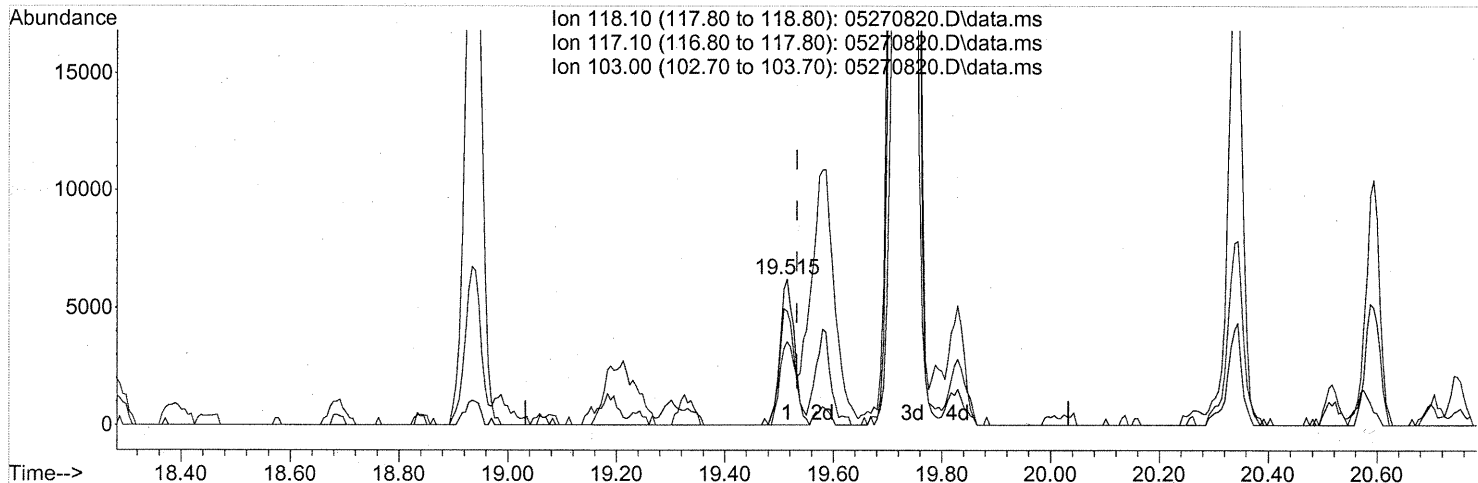
response 26318

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	51.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(80) alpha-Methylstyrene (T)

19.515min (-0.018) 0.25ng

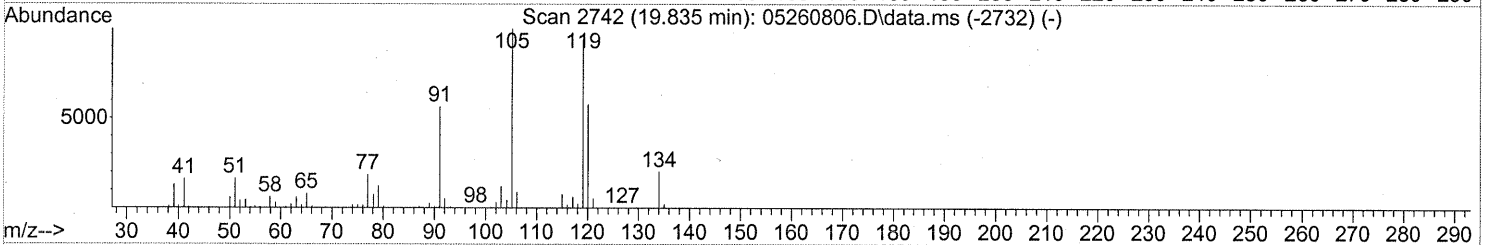
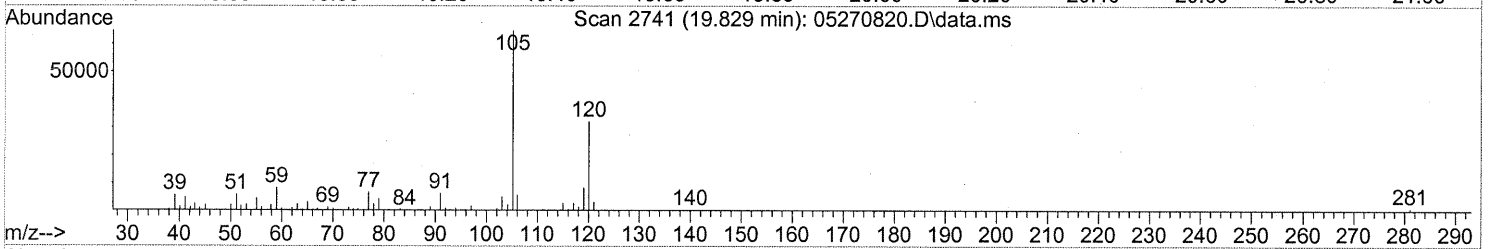
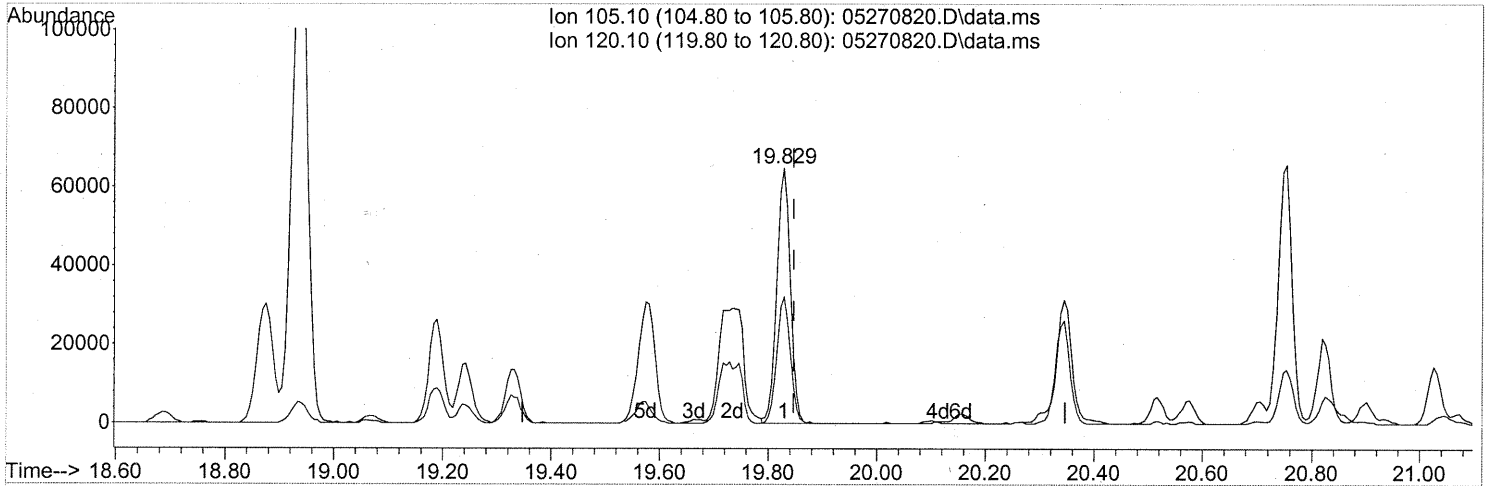
response 11391

Ion	Exp%	Act%
118.10	100	100
117.10	85.30	86.65
103.00	55.10	59.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 1.40ng

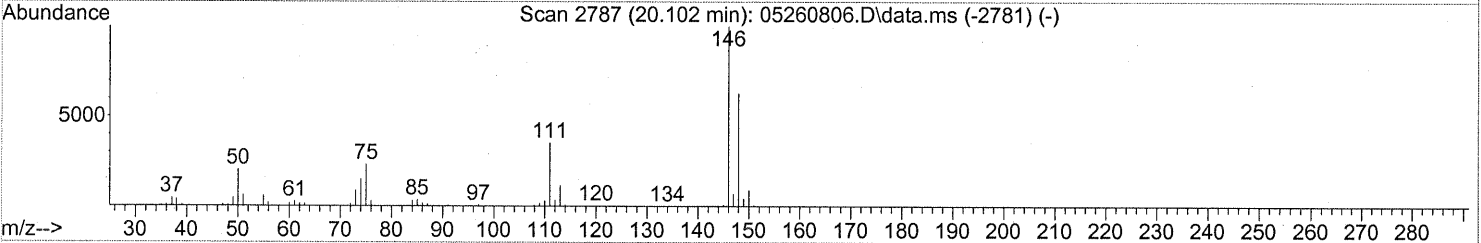
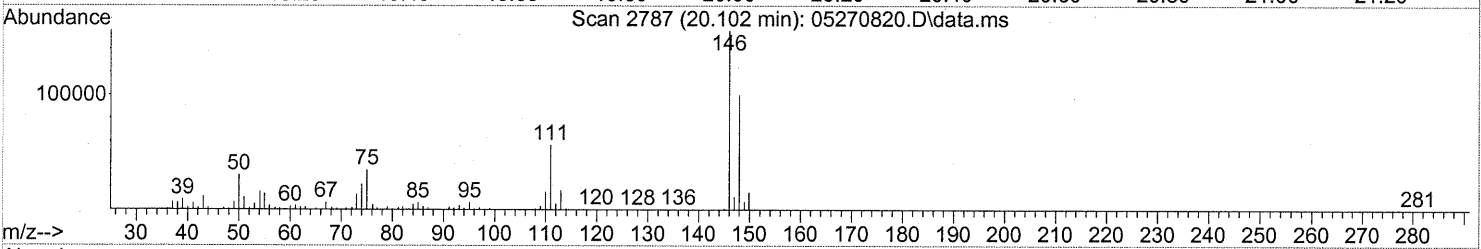
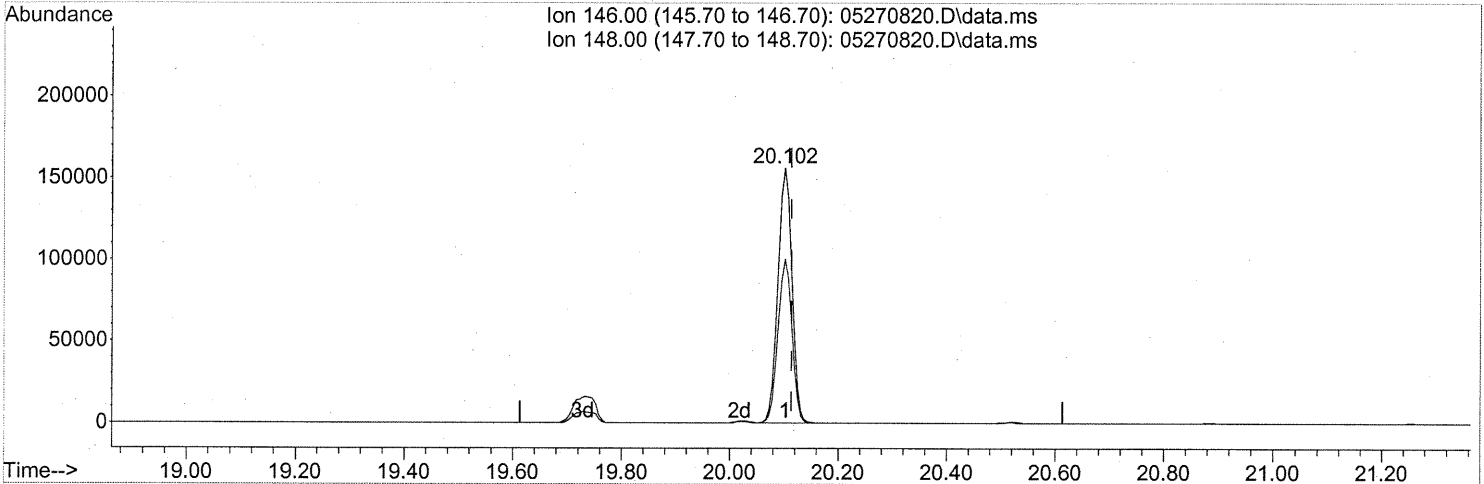
response 114126

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	49.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270820.D  
Acq On : 28 May 2008 1:01  
Operator : WA  
Sample : P0801507-015 (1000ml)  
Misc : ENSR SG06B-05 (-2.9, 3.5)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270820.D\data.ms

(86) 1,4-Dichlorobenzene (T)

20.102min (-0.012) 5.64ng

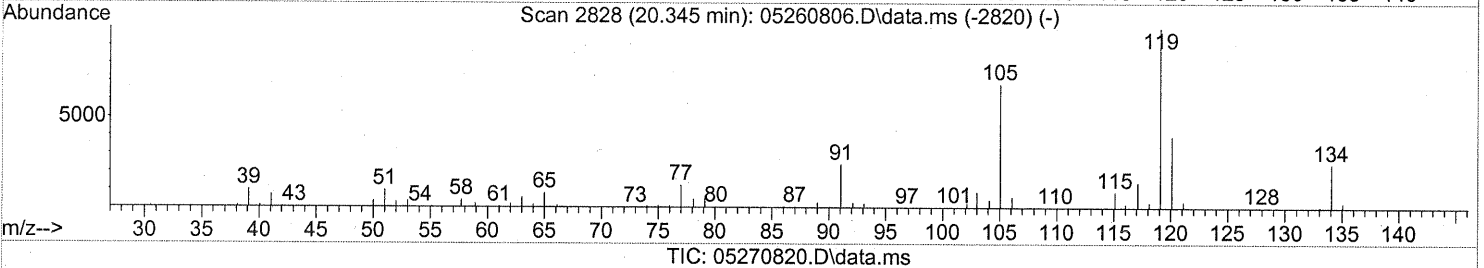
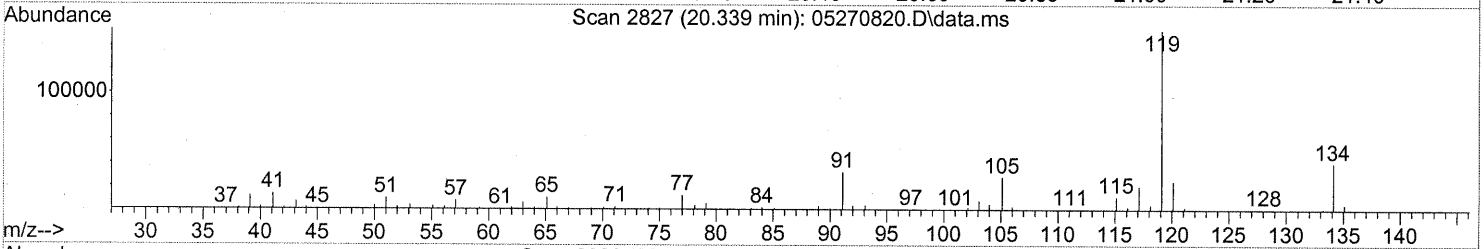
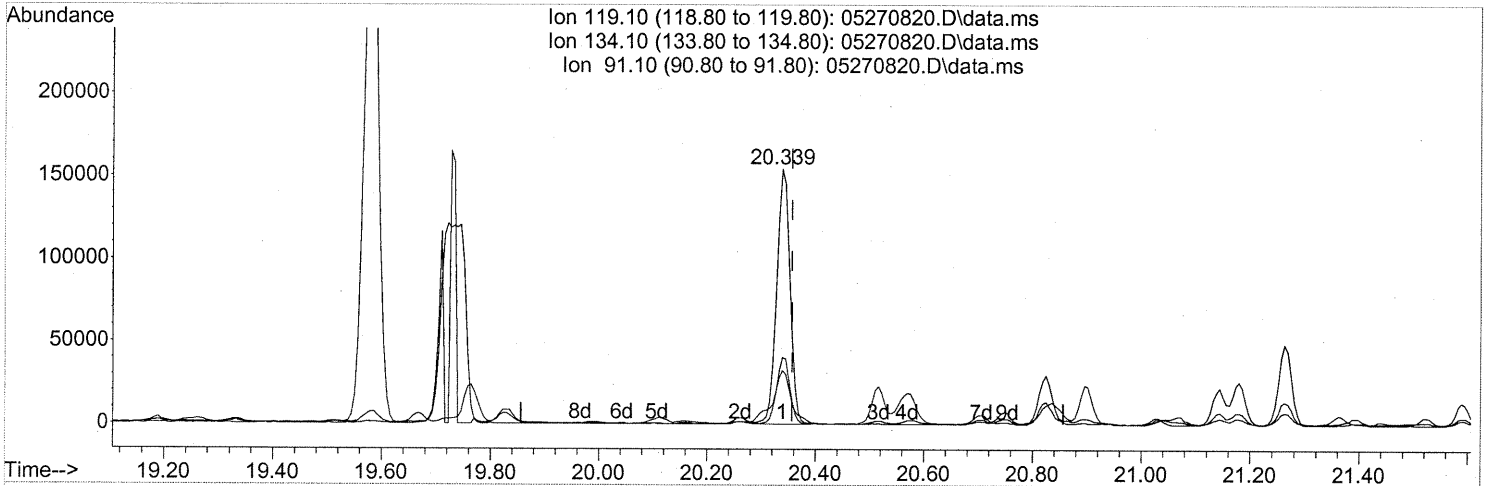
response 281902

Ion	Exp%	Act%
146.00	100	100
148.00	62.70	63.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

20.339min (-0.018) 2.85ng

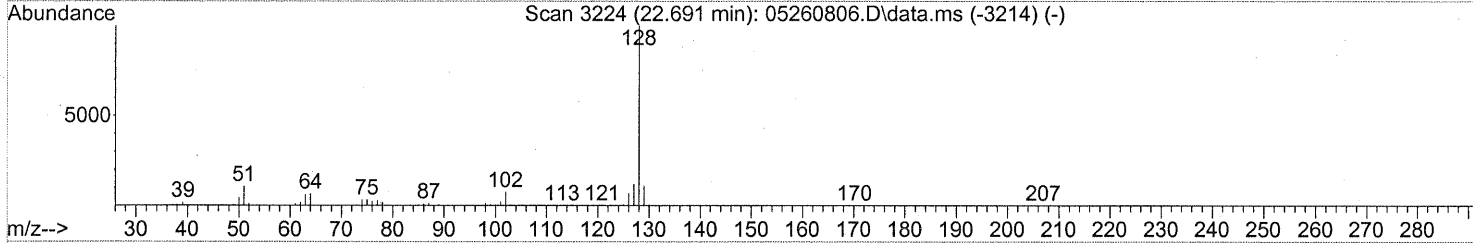
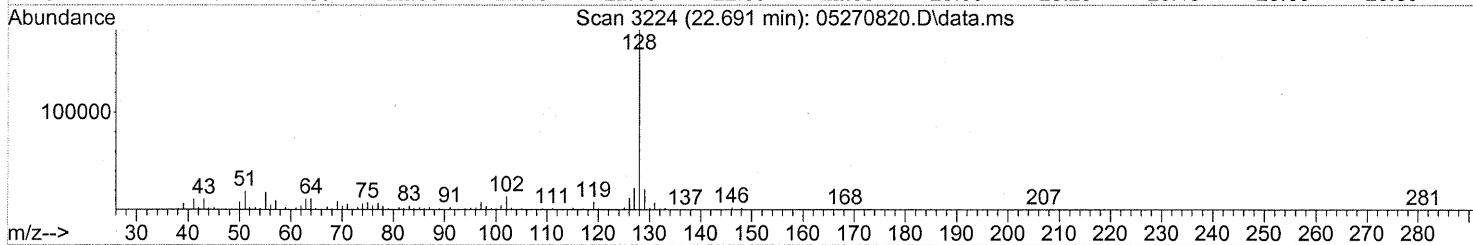
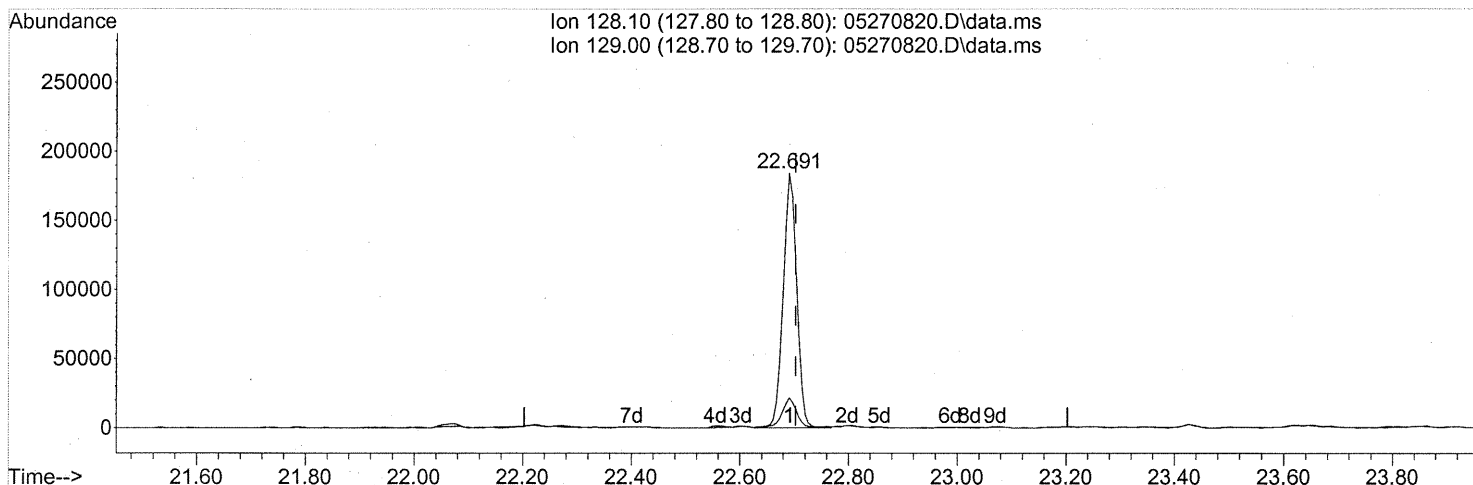
response 262790

Ion	Exp%	Act%
119.10	100	100
134.10	23.00	26.05
91.10	30.60	29.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 28 04:48:18 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(95) Naphthalene (T)

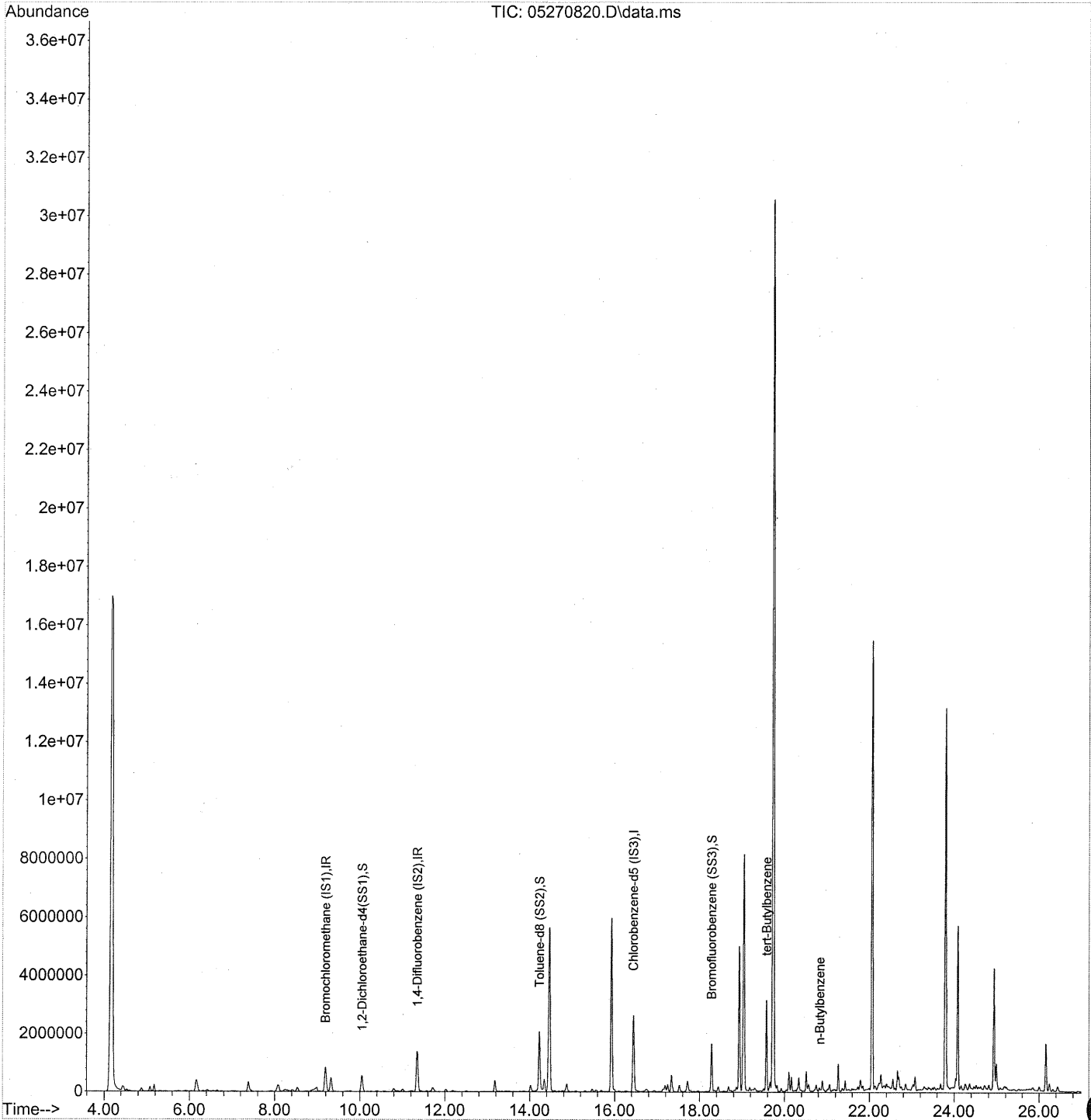
22.691min (-0.012) 2.70ng

response 319255

Ion	Exp%	Act%
128.10	100	100
129.00	10.40	12.63
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 14:39:37 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



634



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 14:39:37 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

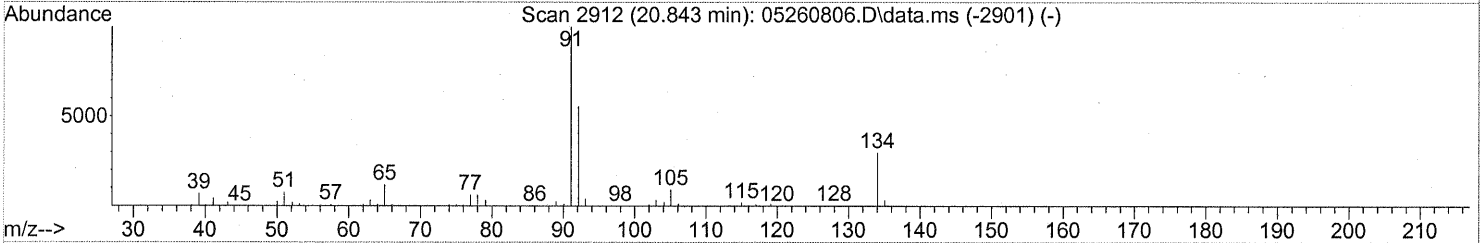
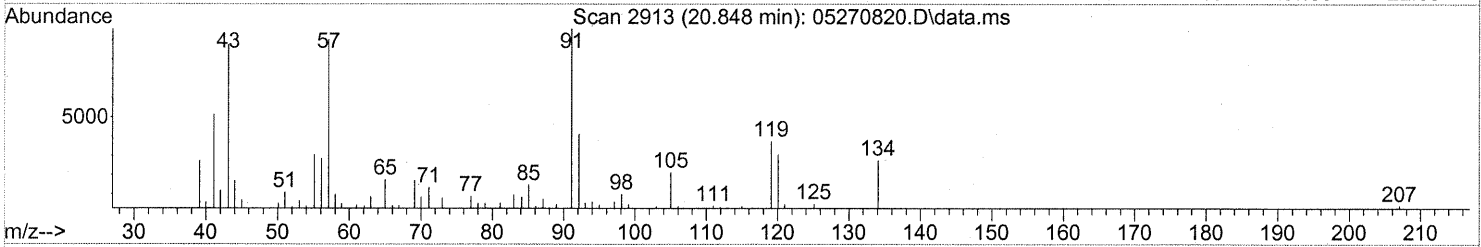
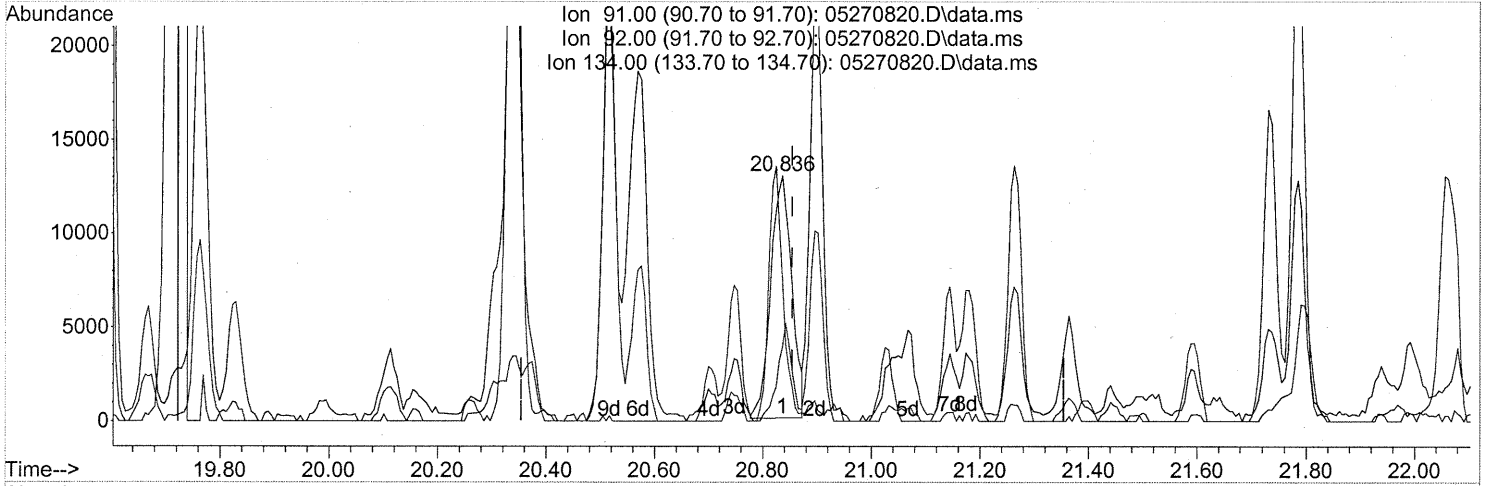
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	389303	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1623961	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	666312	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.05	65	546780	24.563	ng	-0.04
Spiked Amount	25.000		Recovery	=	98.24%	
5) Toluene-d8 (SS2)	14.23	98	1659883	24.163	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.64%	
6) Bromofluorobenzene (SS3)	18.29	174	593715	25.995	ng	0.00
Spiked Amount	25.000		Recovery	=	104.00%	
Target Compounds						
7) tert-Butylbenzene	19.58	119	13028	<del>0.157</del> ng	NR	93
8) n-Butylbenzene	<u>20.84</u>	91	34838	<u>0.441</u> ng	#	44

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270820.D  
 Acq On : 28 May 2008 1:01  
 Operator : WA  
 Sample : P0801507-015 (1000ml)  
 Misc : ENSR SG06B-05 (-2.9, 3.5)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jun 04 14:39:37 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



TIC: 05270820.D\data.ms

(8) n-Butylbenzene

20.836min (-0.018) 0.44ng

response 34838

Ion	Exp%	Act%
91.00	100	100
92.00	53.60	27.32#
134.00	23.40	72.40#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	<b>Ethanol</b>	<b>0.082</b>	5.0	0.050	<b>0.044</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>1.0</b>	5.0	0.073	<b>0.42</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.076</b>	0.50	0.050	<b>0.022</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	<b>Vinyl Acetate</b>	<b>0.26</b>	5.0	0.16	<b>0.074</b>	1.4	0.045	<b>J</b>
78-93-3	<b>2-Butanone (MEK)</b>	<b>0.072</b>	0.50	0.050	<b>0.024</b>	0.17	0.017	<b>J</b>
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	Chloroform	ND	0.10	0.059	ND	0.020	0.012	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	<b>Benzene</b>	<b>0.059</b>	0.10	0.050	<b>0.018</b>	0.031	0.016	<b>J</b>
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/27/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

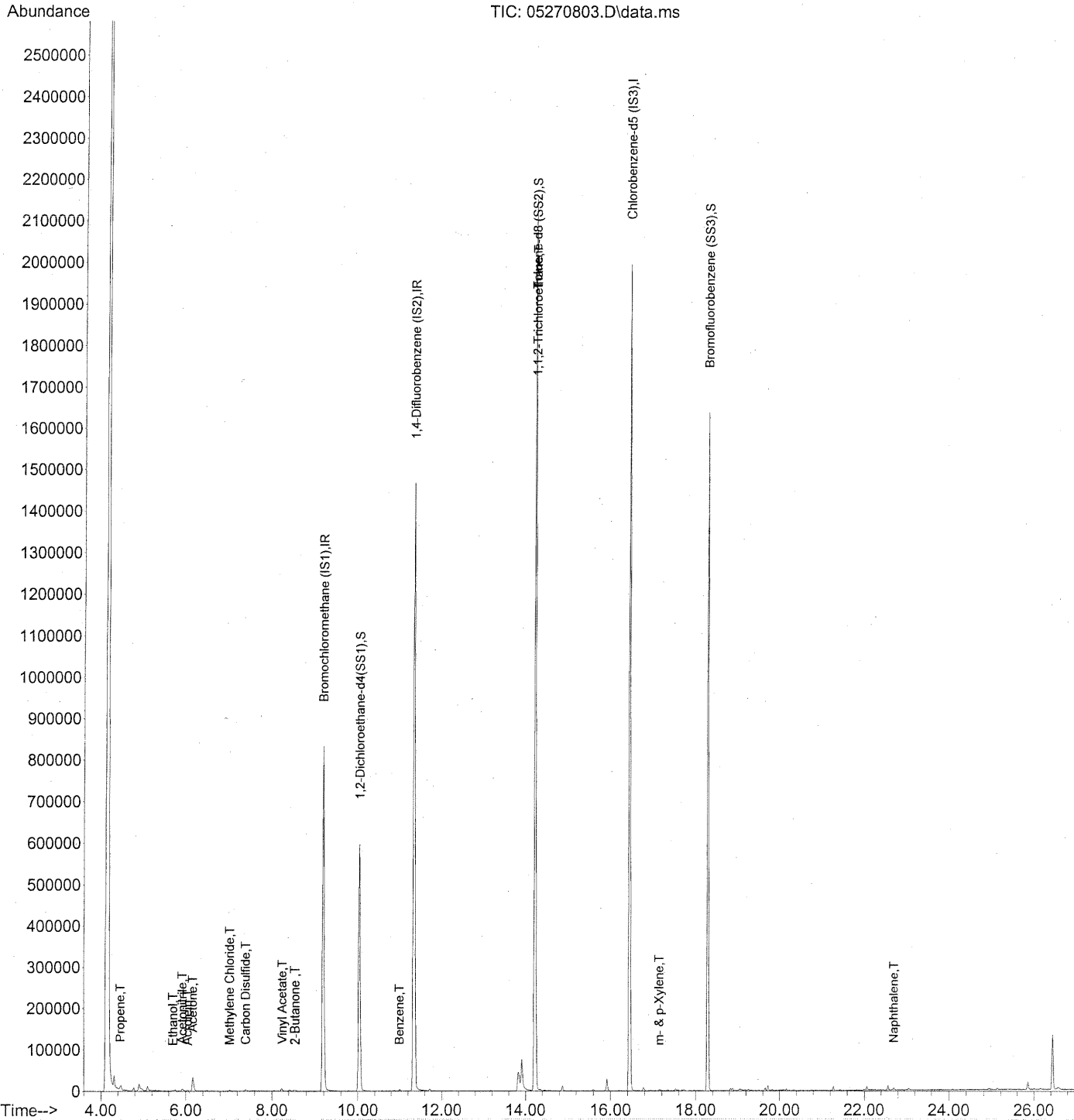
ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By:          Date: 6/5/08

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



640

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 27 08:50:43 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	411633	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1710469	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	681215	25.000	ng	-0.02

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.04	65	569346	24.189	ng	-0.05
Spiked Amount	25.000		Recovery	=	96.76%	✓
57) Toluene-d8 (SS2)	14.22	98	1724695	24.558	ng	-0.02
Spiked Amount	25.000		Recovery	=	98.24%	✓
73) Bromofluorobenzene (SS3)	18.28	174	599836	25.689	ng	-0.01
Spiked Amount	25.000		Recovery	=	102.76%	

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	2750	0.086	ng	# 73
3) Dichlorodifluoromethane	4.55	85	1035	N.D.		
4) Chloromethane	4.76	50	357	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	4.99	62	199	N.D.		
7) 1,3-Butadiene	5.13	54	294	N.D.		
8) Bromomethane	5.41	94	104	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	1780	0.082	ng	# 49
11) Acetonitrile	5.92	41	8050	0.129	ng	# 47
12) Acrolein	6.04	56	2905	0.186	ng	97
13) Acetone	6.16	58	21586	1.004	ng	# 53
14) Trichlorofluoromethane	6.32	101	209	N.D.		
15) Isopropanol	6.38	45	1235	N.D.		
16) Acrylonitrile	6.61	53	935	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.96	59	385	N.D.		
19) Methylene Chloride	7.02	84	1261	0.076	ng	# 47
20) Allyl Chloride	7.15	41	414	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	6363	0.095	ng	< HDL 81
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	8.20	73	214	N.D.		
26) Vinyl Acetate	8.24	86	914	0.259	ng	# 67 <i>yes OK</i>
27) 2-Butanone	8.54	72	810	0.072	ng	< HDL 1 <i>in 6/5/08</i>
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.23	57	900	N.D.		

641

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
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 Operator : WA  
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 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	0.00	83	0	N.D.		
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	10.47	97	96	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	135	N.D.		
41) Benzene	10.99	78	4237	0.059 ng		94
42) Carbon Tetrachloride	11.17	117	305	N.D.		
43) Cyclohexane	11.34	84	1277	N.D.		
44) tert-Amyl Methyl Ether	11.64	73	214	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.23	57	1913	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	145411	<del>8.290 ng</del> UR #		7
58) Toluene	14.34	91	2920	N.D.		
59) 2-Hexanone	14.58	43	2295	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	15.14	107	119	N.D.		
62) Butyl Acetate	15.31	43	1334	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	16.50	112	1023	N.D.		
66) Ethylbenzene	16.93	91	1625	N.D.		
67) m- & p-Xylene	17.13	91	3506	0.058 ng		99
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	1465	N.D.		
70) o-Xylene	17.73	91	1532	N.D.		
71) n-Nonane	17.97	43	1026	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.44	105	1648	N.D.		
75) alpha-Pinene	18.93	93	195	N.D.		
76) n-Propylbenzene	19.06	91	1827	N.D.		
77) 3-Ethyltoluene	19.19	105	2364	N.D.		
78) 4-Ethyltoluene	19.24	105	1785	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	1215	N.D.		

642



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
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 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

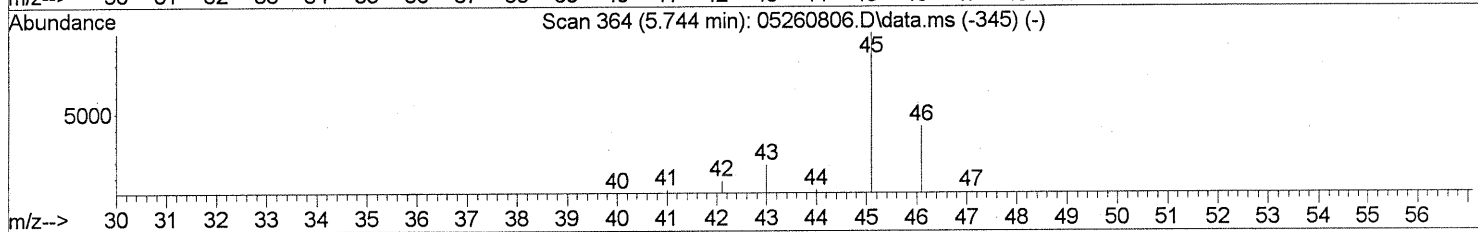
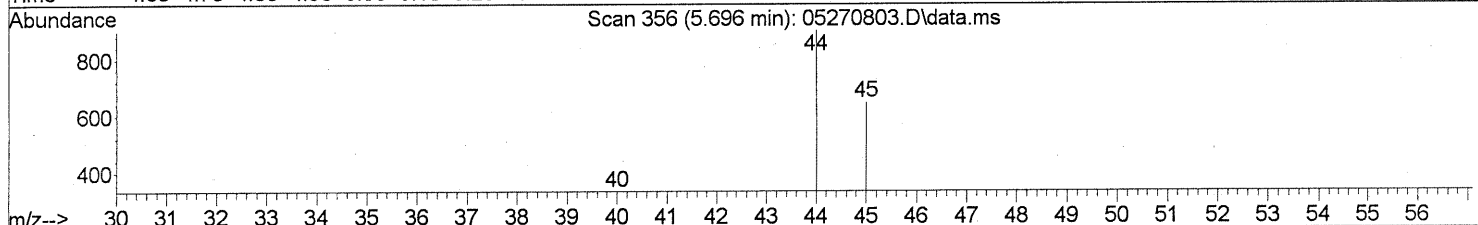
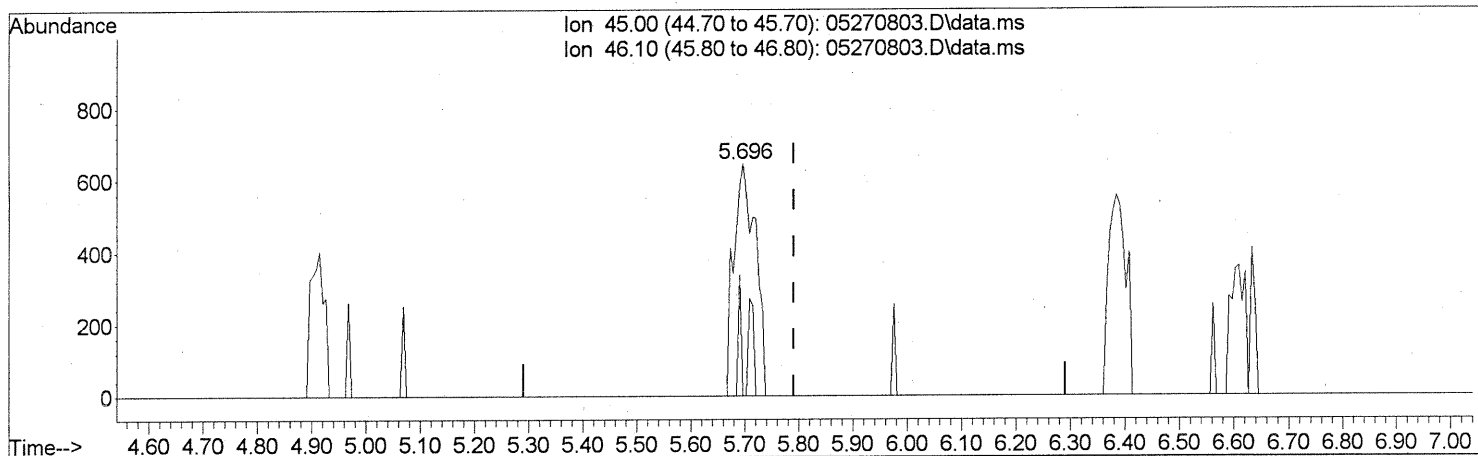
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	393	N.D.		
81) 2-Ethyltoluene	19.57	105	1613	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	1472	N.D.		
83) n-Decane	19.92	57	610	N.D.		
84) Benzyl Chloride	19.99	91	1726	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	1181	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	1456	N.D.		
87) sec-Butylbenzene	20.16	105	1063	N.D.		
88) p-Isopropyltoluene	20.34	119	1334	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	1196	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	1115	N.D.		
91) d-Limonene	20.50	68	321	N.D.		
92) 1,2-Dibromo-3-Chloropr...	21.03	157	99	N.D.		
93) n-Undecane	21.43	57	644	N.D.		
94) 1,2,4-Trichlorobenzene	22.55	184	104	N.D.		
95) Naphthalene	22.69	128	6372	<del>0.053 ng</del>		89
96) n-Dodecane	22.66	57	807	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



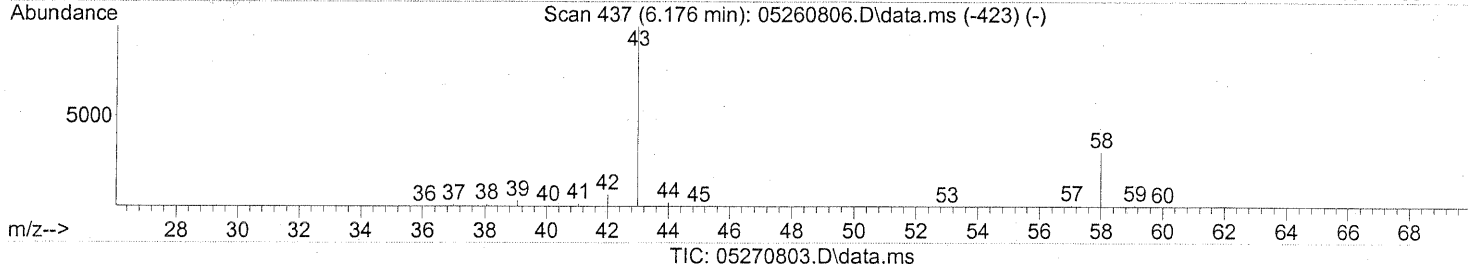
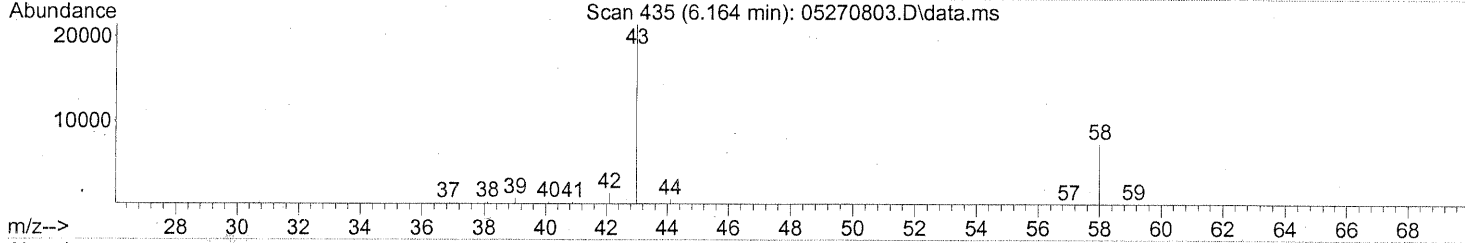
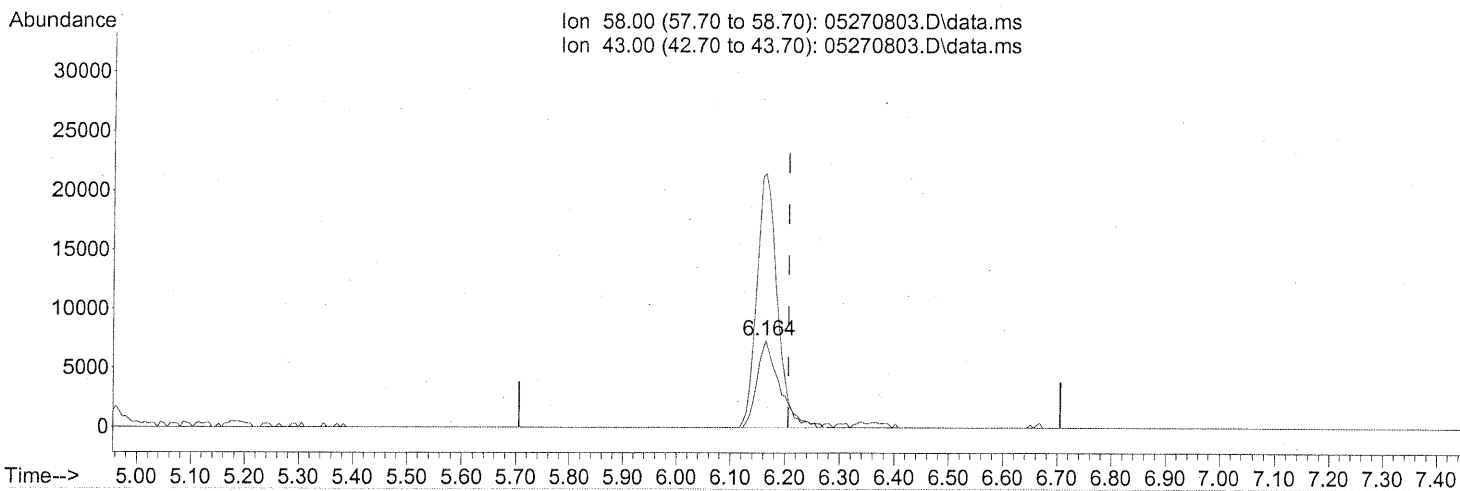
TIC: 05270803.D\data.ms

(10) Ethanol (T)  
 5.696min (-0.095) 0.08ng  
 response 1780

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	6.74#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
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 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(13) Acetone (T)

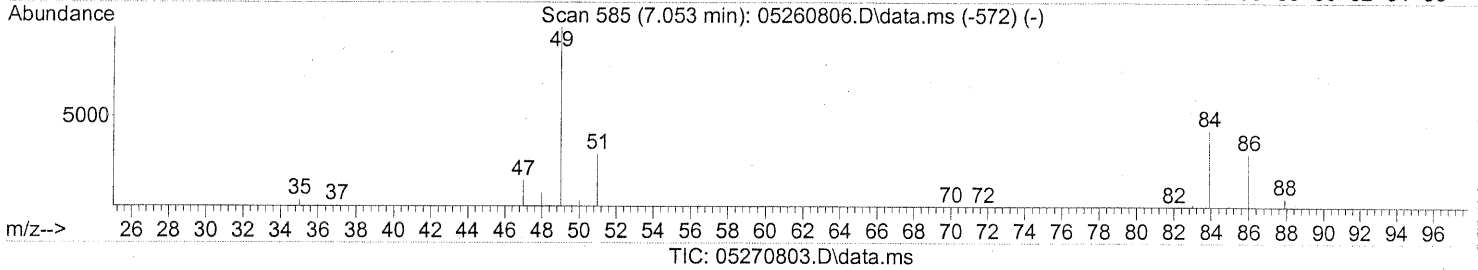
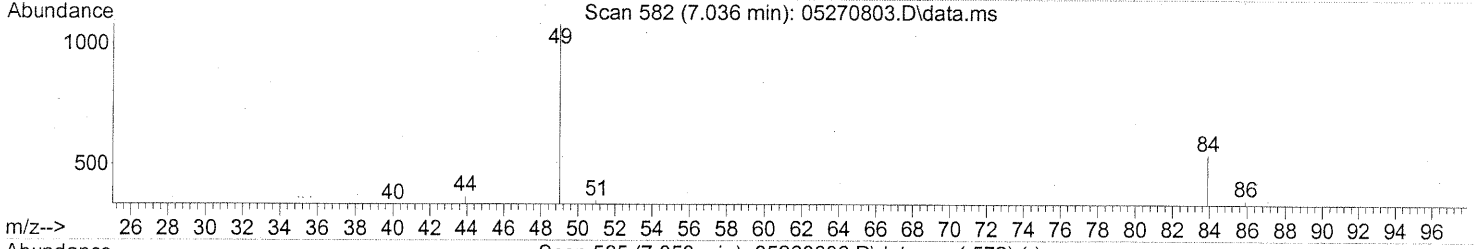
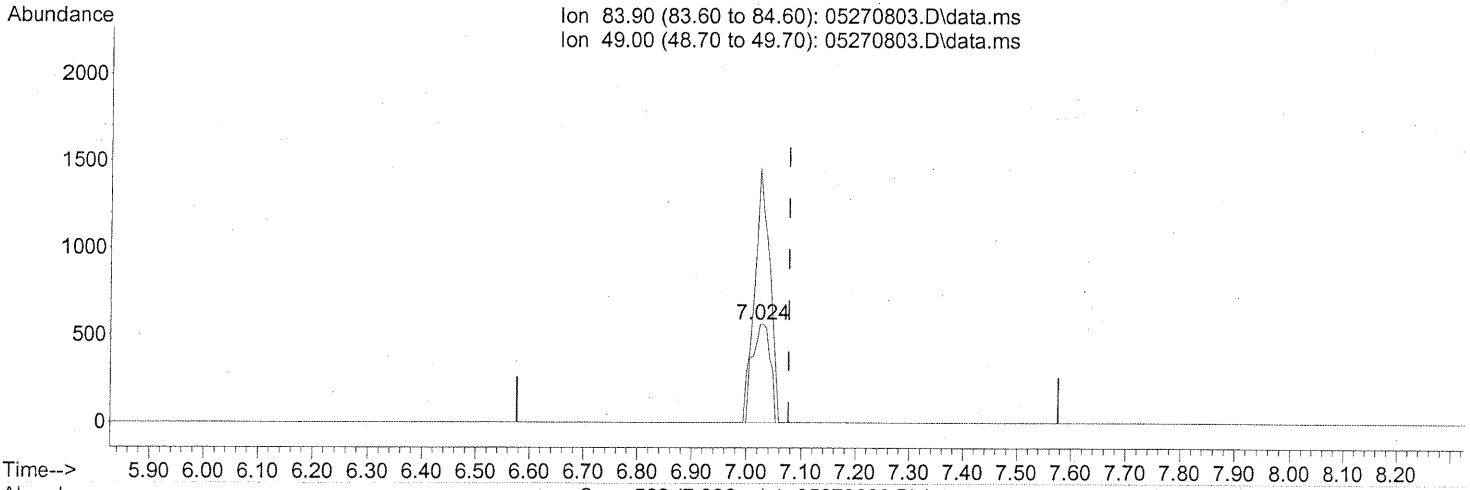
6.164min (-0.042) 1.00ng

response 21586

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	262.11#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
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 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.024min (-0.053) 0.08ng

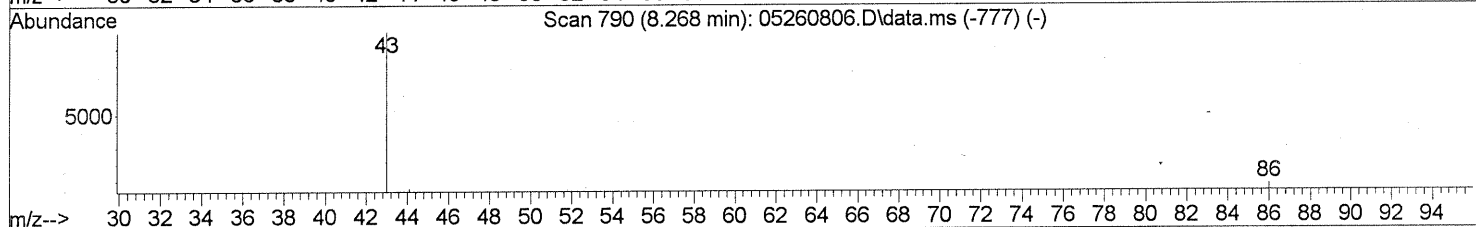
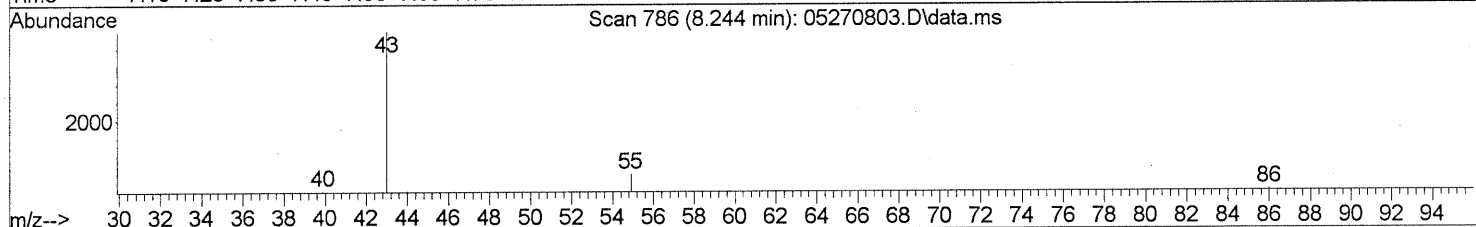
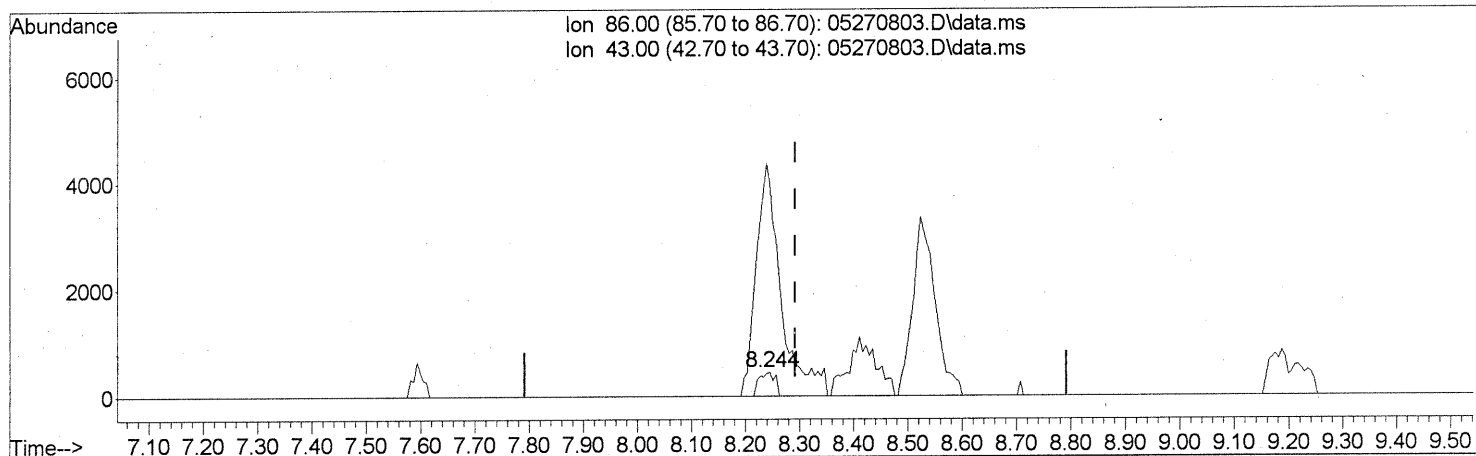
response 1261

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	224.82#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
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 Operator : WA  
 Sample : TO-15 Method Blank  
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TIC: 05270803.D\data.ms

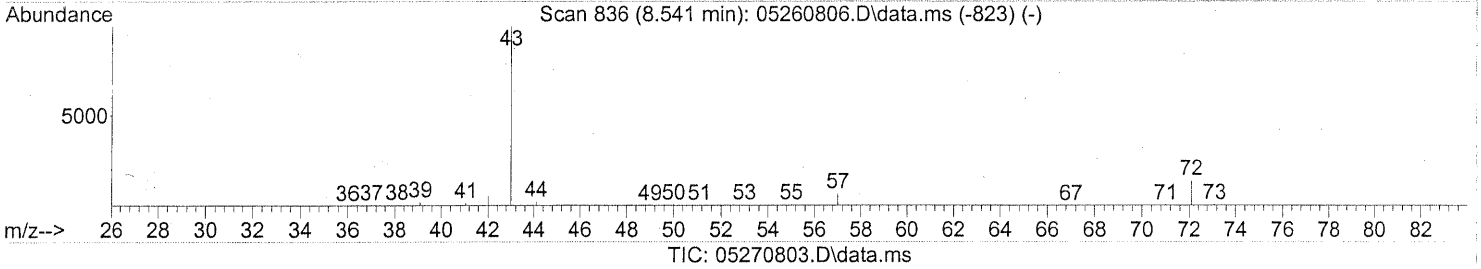
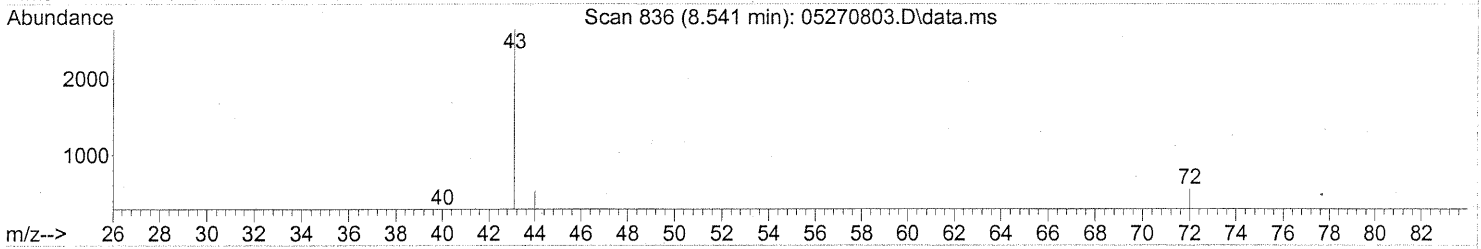
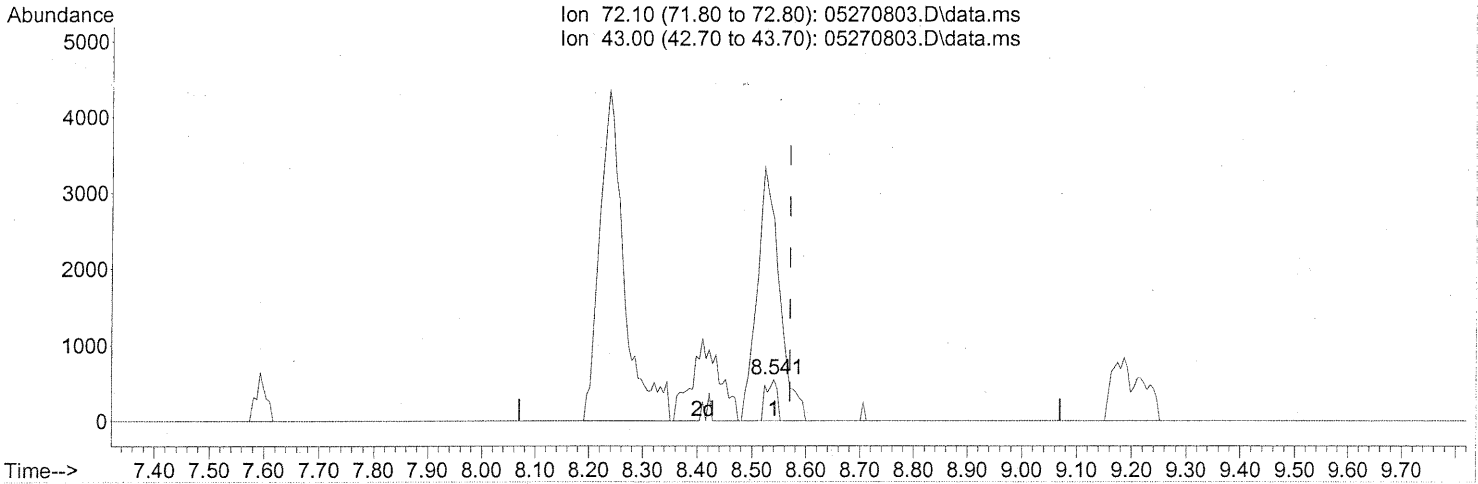
(26) Vinyl Acetate (T)  
 8.244min (-0.048) 0.26ng  
 response 914

Ion	Exp%	Act%
86.00	100	100
43.00	1344.50	1527.46#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

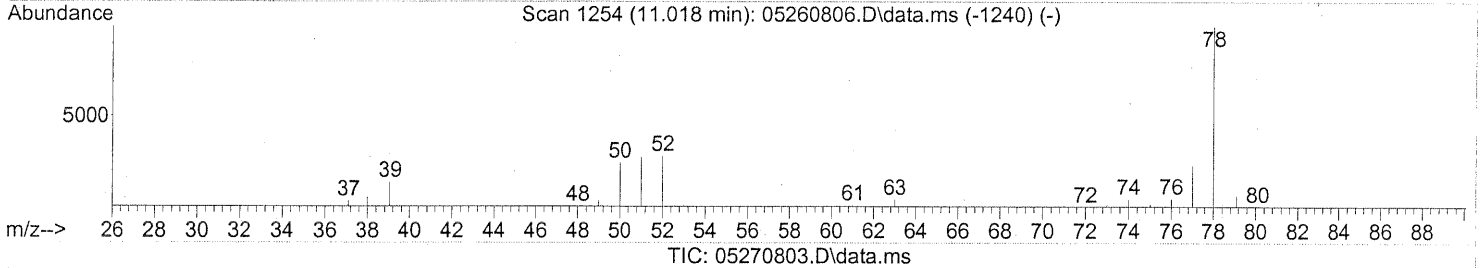
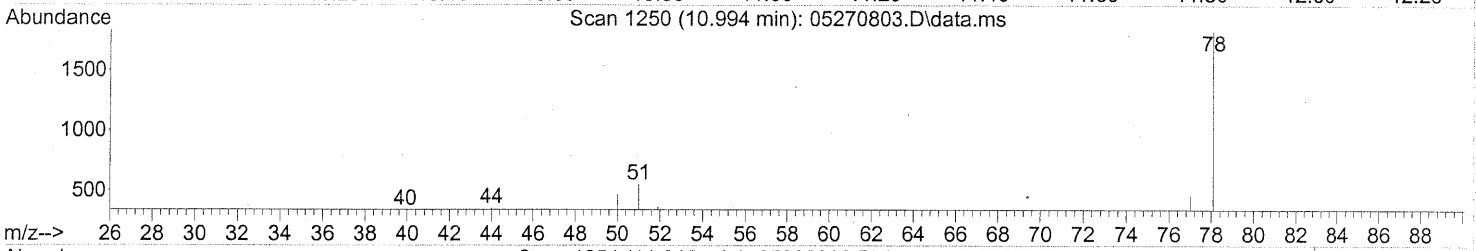
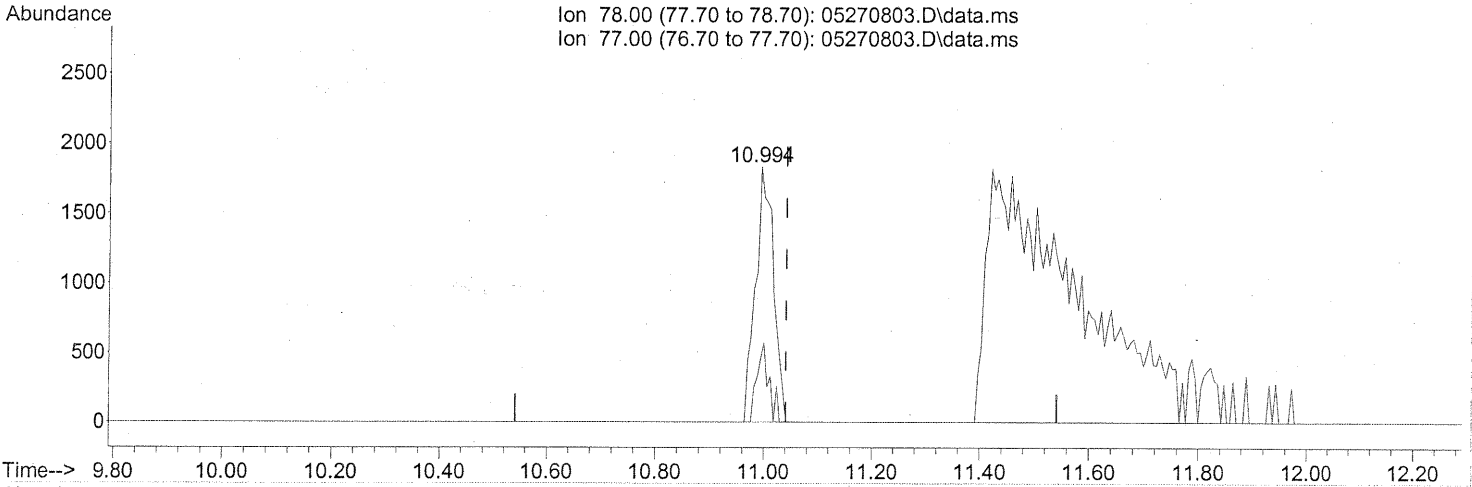
8.541min (-0.030) 0.07ng

response 810

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	1195.43#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 04:46:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(41) Benzene (T)

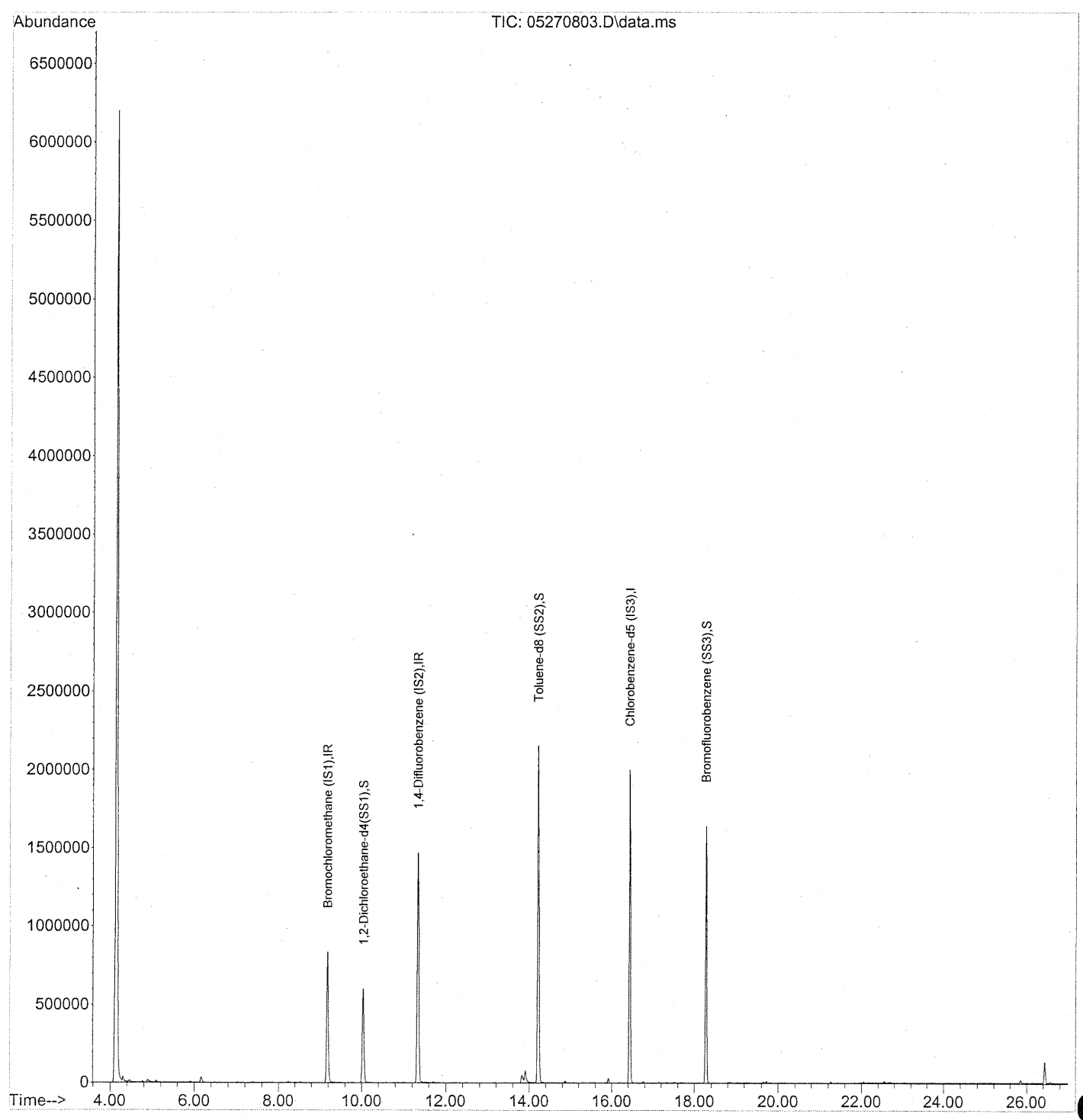
10.994min (-0.047) 0.06ng

response 4237

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	20.60
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270803.D  
Acq On : 27 May 2008 11:44  
Operator : WA  
Sample : TO-15 Method Blank  
Misc : S20-05120801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:12 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



650



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270803.D  
 Acq On : 27 May 2008 11:44  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:12 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)	
1) Bromochloromethane (IS1)	9.19	130	411633	25.000	ng	-0.06	
3) 1,4-Difluorobenzene (IS2)	11.34	114	1710469	25.000	ng	-0.04	
4) Chlorobenzene-d5 (IS3)	16.44	82	681215	25.000	ng	-0.02	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4 (...)	10.04	65	569346	24.189	ng	-0.05	
Spiked Amount	25.000						Recovery = 96.76%
5) Toluene-d8 (SS2)	14.22	98	1724695	24.558	ng	-0.02	
Spiked Amount	25.000						Recovery = 98.24%
6) Bromofluorobenzene (SS3)	18.28	174	599836	25.689	ng	-0.01	
Spiked Amount	25.000						Recovery = 102.76%
Target Compounds							
7) tert-Butylbenzene	19.82	119	1164		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	1194		N.D.		

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	Ethanol	ND	5.0	0.050	ND	2.7	0.027	
67-64-1	<b>Acetone</b>	<b>0.35</b>	5.0	0.073	<b>0.15</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.064</b>	0.50	0.050	<b>0.018</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	<b>Chloroform</b>	<b>0.090</b>	0.10	0.059	<b>0.018</b>	0.020	0.012	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:         

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	Benzene	ND	0.10	0.050	ND	0.031	0.016	
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/28/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

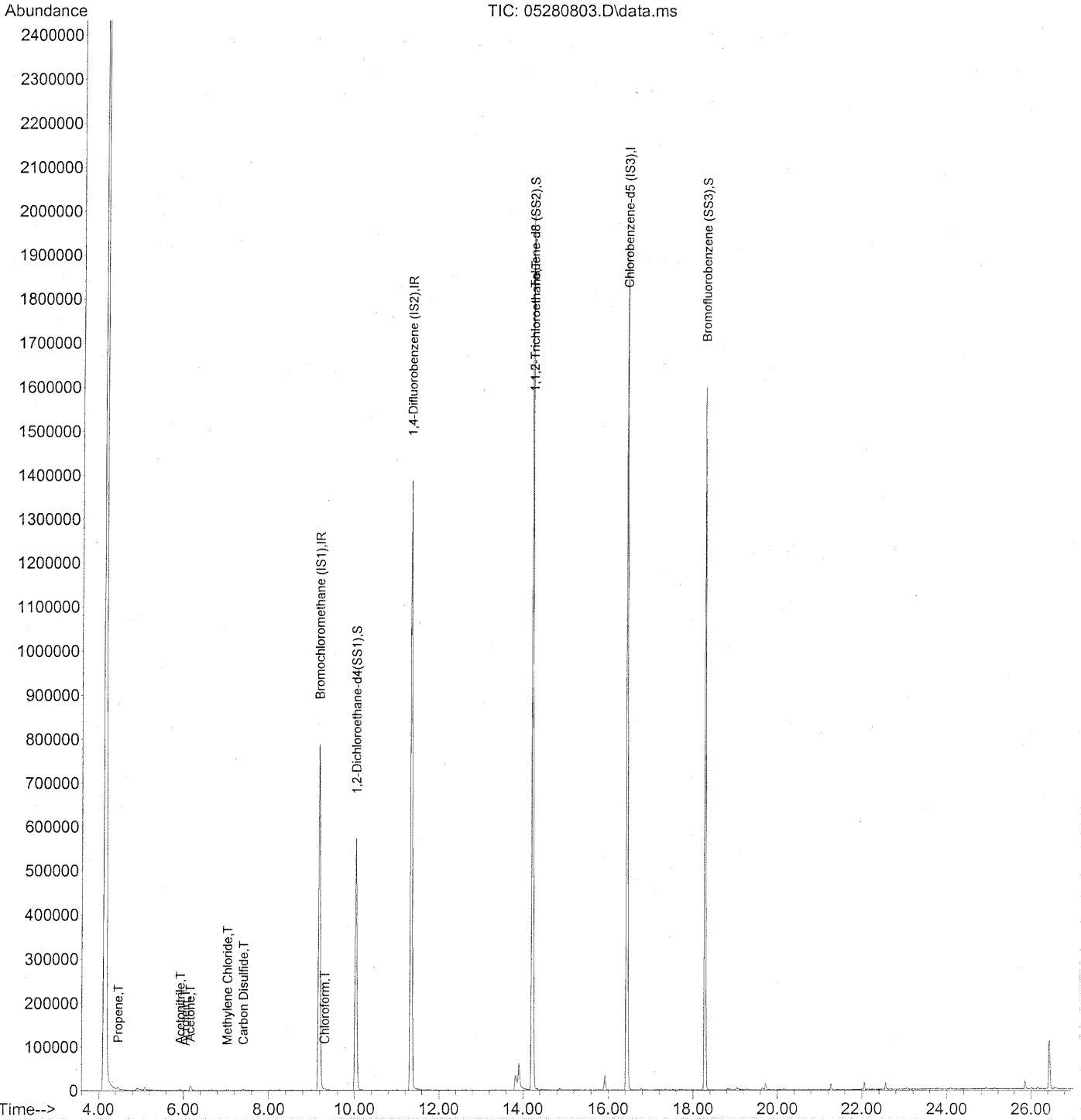
CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280803.D  
Acq On : 28 May 2008 10:19 am  
Operator : WA  
Sample : TO-15 Method Blank  
Misc : S20-05120801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 10:55:46 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280803.D  
 Acq On : 28 May 2008 10:19 am  
 Operator : WA  
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 Misc : S20-05120801  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	385506	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1591554	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	648424	25.000	ng	-0.02

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	542940	24.631	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.52%	
57) Toluene-d8 (SS2)	14.22	98	1623034	24.279	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.12%	
73) Bromofluorobenzene (SS3)	18.28	174	580146	26.102	ng	-0.01
Spiked Amount	25.000		Recovery	=	104.40%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1803	0.060	ng	97
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.73	45	93	N.D.		
11) Acetonitrile	5.93	41	5620	0.096	ng	# 56
12) Acrolein	6.05	56	869	0.060	ng	97
13) Acetone	6.16	58	7024	0.349	ng	J# 58
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.40	45	481	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.03	84	988	0.064	ng	J# 39
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	4870	0.078	ng	< HDL 81
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	0.00	72	0	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	868	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	2056	0.090	ng	98
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	0.00	62	0	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.86	56	91	N.D.		
41) Benzene	10.99	78	2145	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.34	84	666	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	0.00	83	0	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	450	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	138177	<del>8.466</del> ng	NRH	7
58) Toluene	14.34	91	1430	N.D.		
59) 2-Hexanone	14.60	43	636	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	534	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	227	N.D.		
67) m- & p-Xylene	17.13	91	1197	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	93	N.D.		
70) o-Xylene	0.00	91	0	N.D.		
71) n-Nonane	17.96	43	674	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	699	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	19.06	91	98	N.D.		
77) 3-Ethyltoluene	19.20	105	208	N.D.		
78) 4-Ethyltoluene	19.23	105	102	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	99	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280803.D  
Acq On : 28 May 2008 10:19 am  
Operator : WA  
Sample : TO-15 Method Blank  
Misc : S20-05120801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 10:55:46 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration

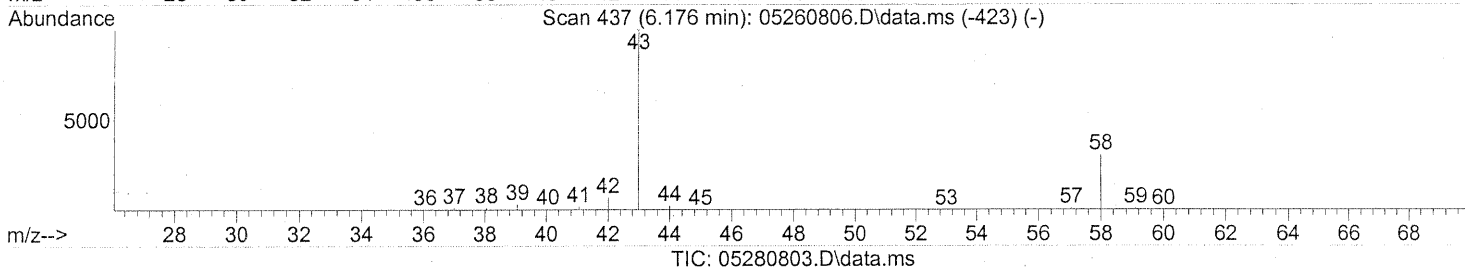
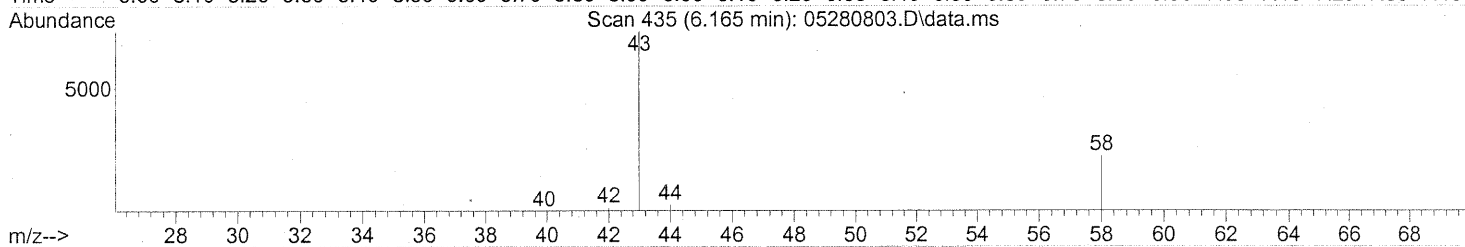
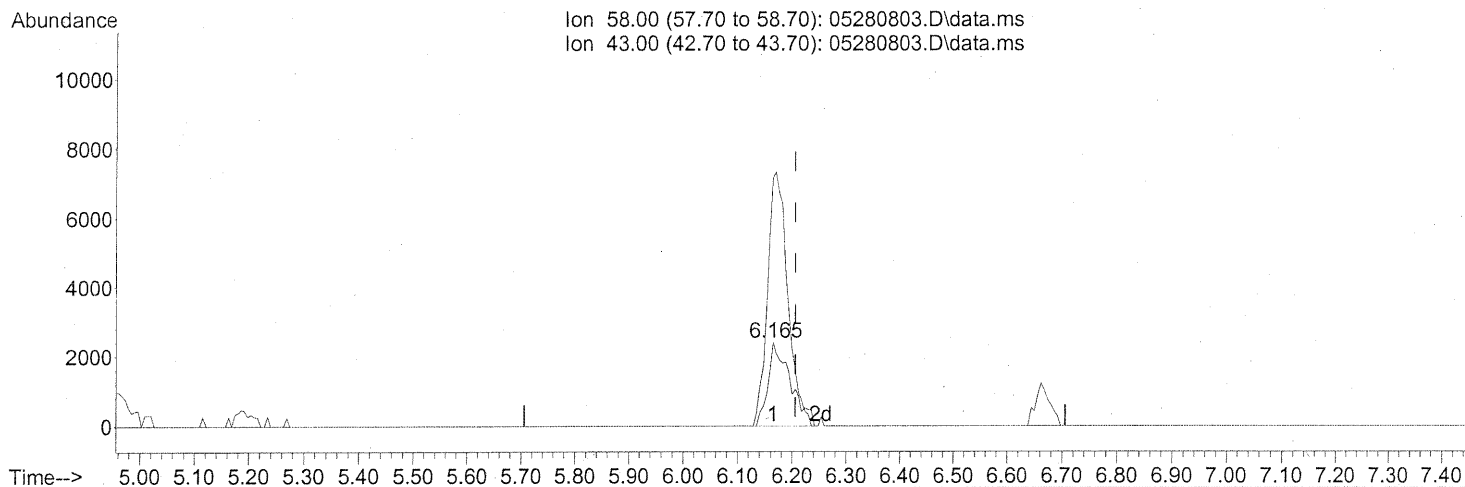
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0		N.D.	
81) 2-Ethyltoluene	19.83	105	587		N.D.	
82) 1,2,4-Trimethylbenzene	19.83	105	587		N.D.	
83) n-Decane	19.92	57	101		N.D.	
84) Benzyl Chloride	0.00	91	0		N.D.	
85) 1,3-Dichlorobenzene	0.00	146	0		N.D.	
86) 1,4-Dichlorobenzene	0.00	146	0		N.D.	
87) sec-Butylbenzene	19.83	105	587		N.D.	
88) p-Isopropyltoluene	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	20.75	105	686		N.D.	
90) 1,2-Dichlorobenzene	0.00	146	0		N.D.	
91) d-Limonene	20.50	68	295		N.D.	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0		N.D.	
93) n-Undecane	21.44	57	292		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.70	128	1447		N.D.	
96) n-Dodecane	22.67	57	411		N.D.	
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

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



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280803.D  
 Acq On : 28 May 2008 10:19 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 10:55:46 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(13) Acetone (T)

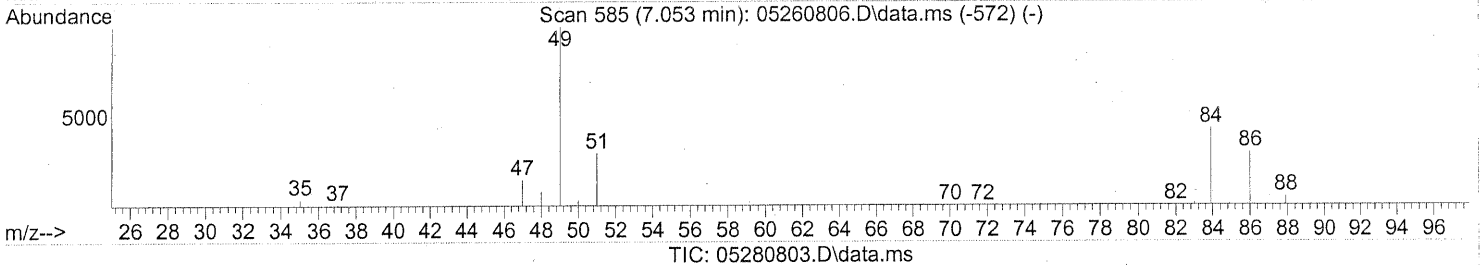
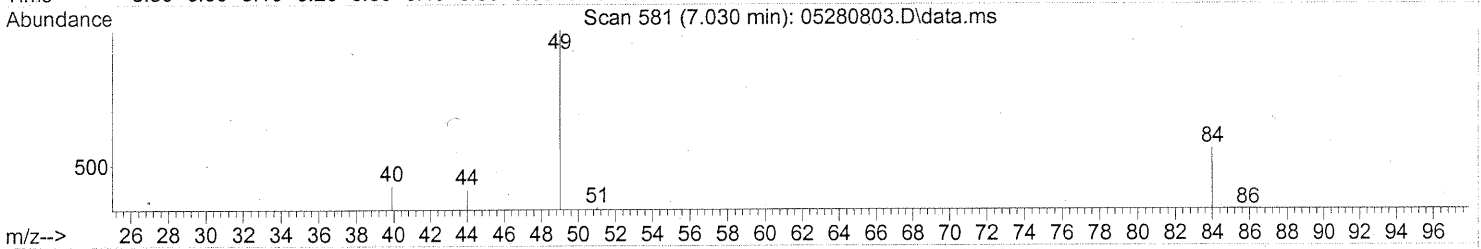
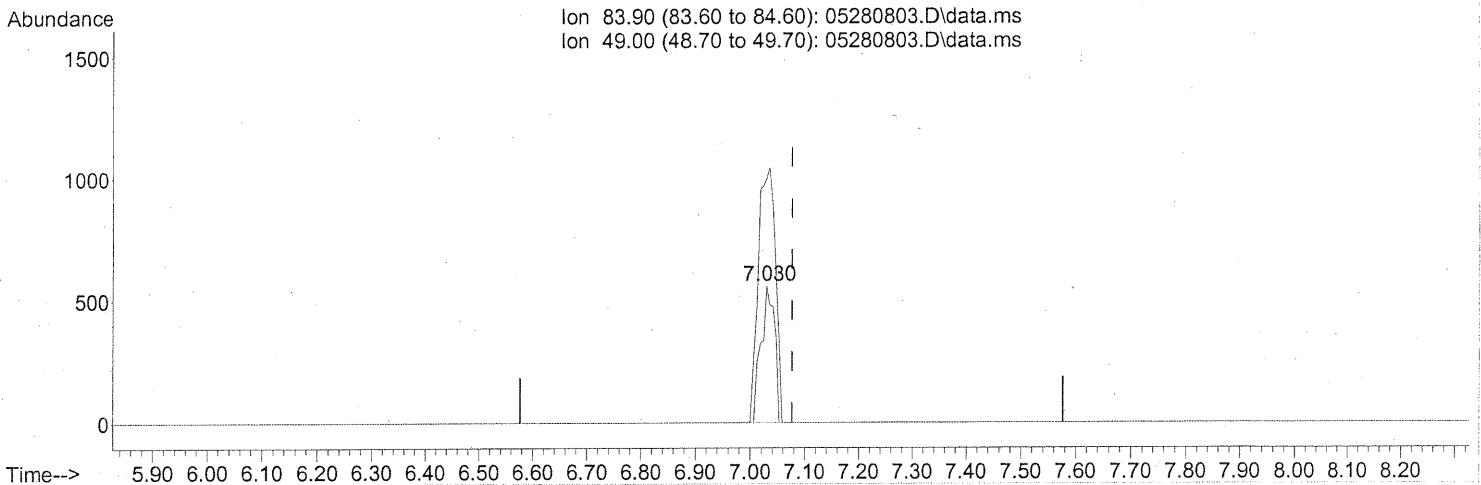
6.165min (-0.041) 0.35ng

response 7024

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	273.46#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280803.D  
 Acq On : 28 May 2008 10:19 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 10:55:46 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

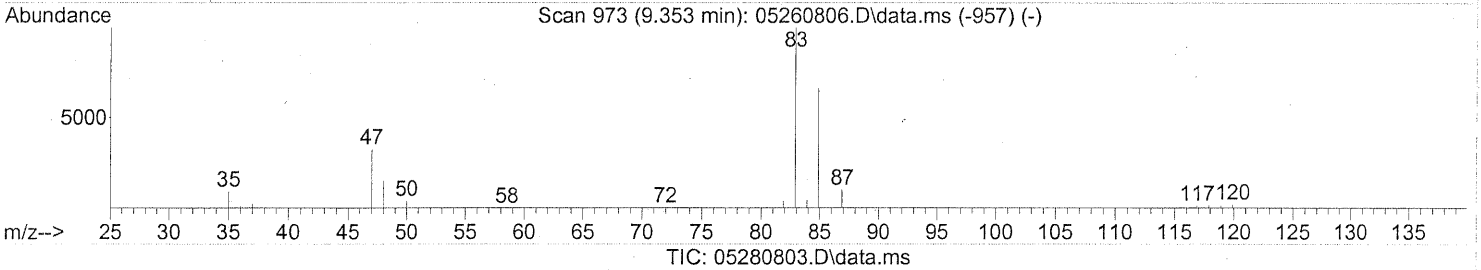
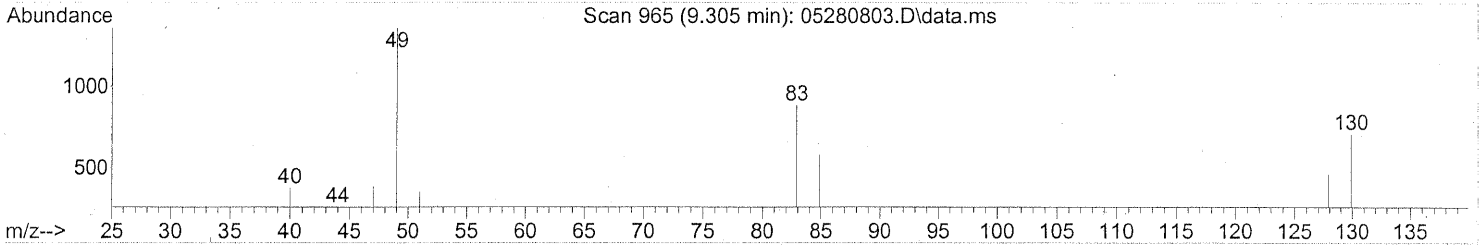
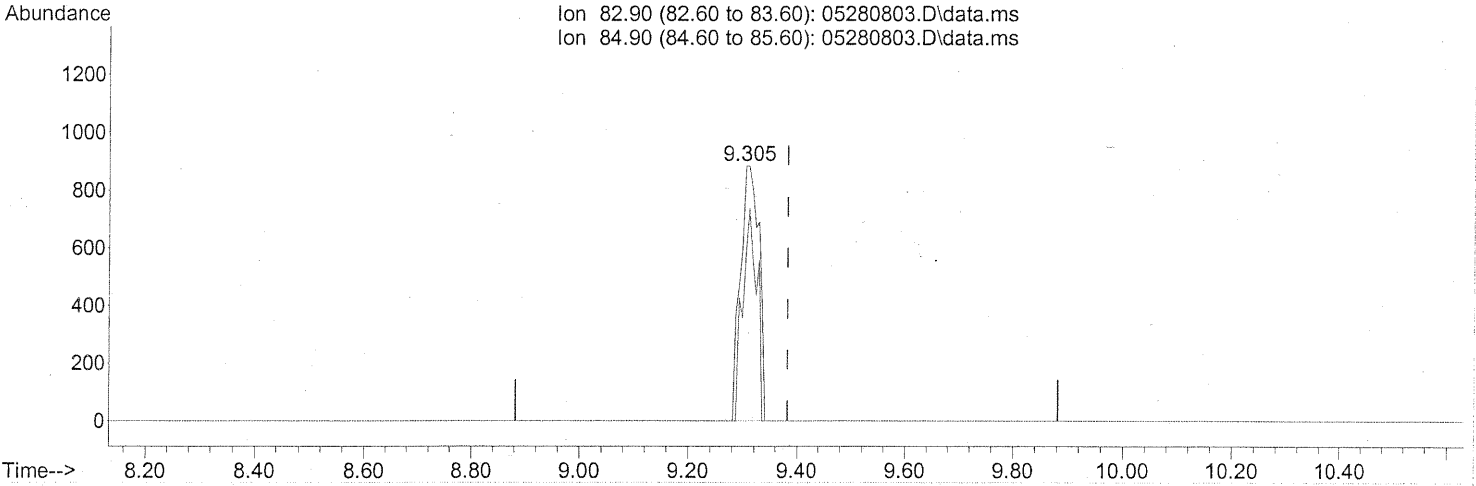
7.030min (-0.047) 0.06ng

response 988

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	234.92#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280803.D  
 Acq On : 28 May 2008 10:19 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 10:55:46 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

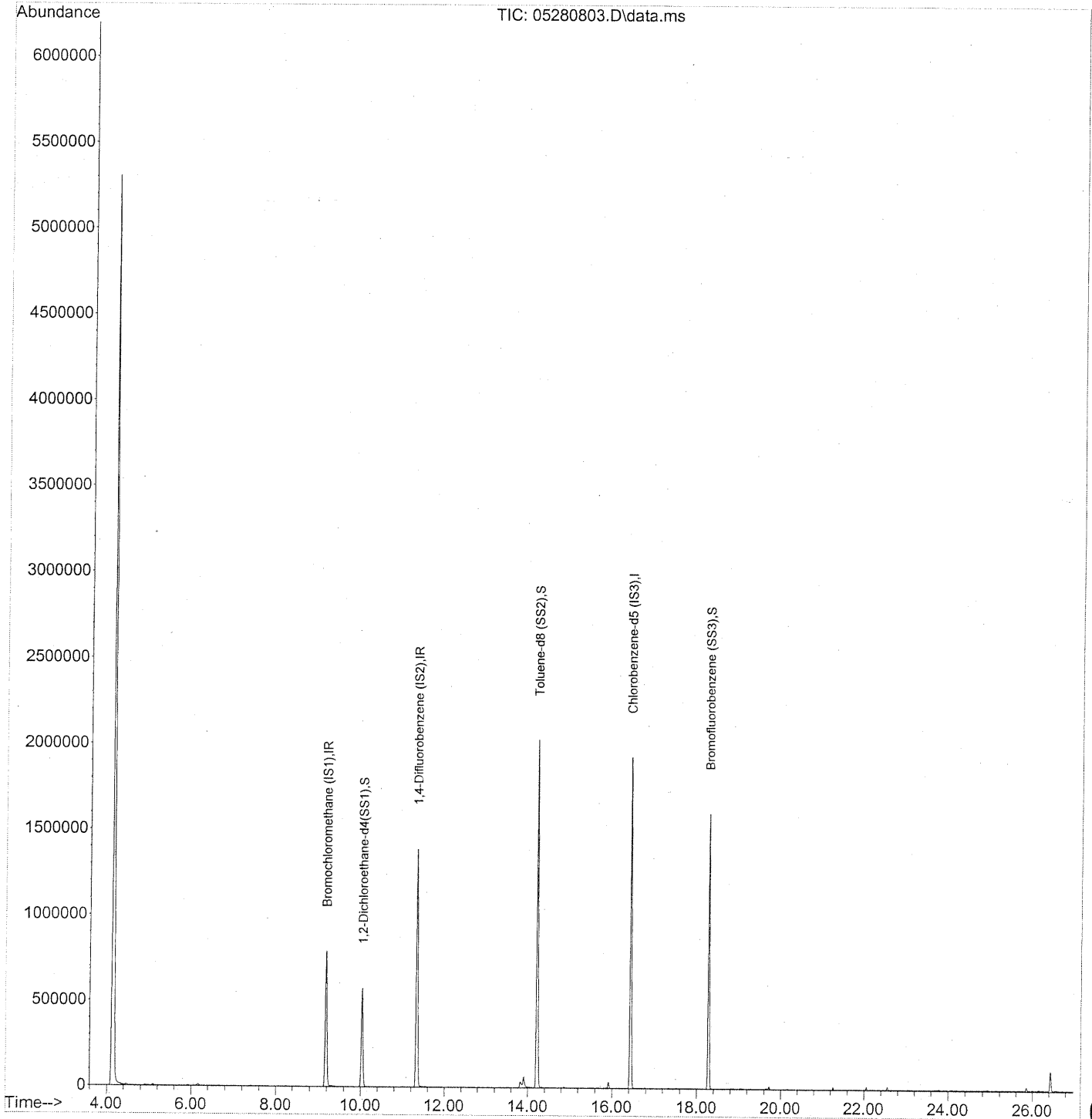
9.305min (-0.077) 0.09ng

response 2056

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	63.23
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280803.D  
Acq On : 28 May 2008 10:19  
Operator : WA  
Sample : TO-15 Method Blank  
Misc : S20-05120801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:41 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280803.D  
 Acq On : 28 May 2008 10:19  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:41 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	385506	25.000	ng	-0.06
3) 1,4-Difluorobenzene (IS2)	11.34	114	1591554	25.000	ng	-0.04
4) Chlorobenzene-d5 (IS3)	16.44	82	648424	25.000	ng	-0.02
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.04	65	542940	24.631	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.52%	
5) Toluene-d8 (SS2)	14.22	98	1623034	24.279	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.12%	
6) Bromofluorobenzene (SS3)	18.28	174	580146	26.102	ng	-0.01
Spiked Amount	25.000		Recovery	=	104.40%	
Target Compounds						
7) tert-Butylbenzene	0.00	119	0		N.D.	Qvalue
8) n-Butylbenzene	0.00	91	0		N.D.	

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	<b>Ethanol</b>	<b>0.062</b>	5.0	0.050	<b>0.033</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>0.55</b>	5.0	0.073	<b>0.23</b>	2.1	0.031	<b>J</b>
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	<b>Methylene Chloride</b>	<b>0.055</b>	0.50	0.050	<b>0.016</b>	0.14	0.014	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	<b>Chloroform</b>	<b>0.087</b>	0.10	0.059	<b>0.018</b>	0.020	0.012	<b>J</b>

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:          Date: 6/5/08 **664**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.50	0.051	ND	0.12	0.012	
107-06-2	1,2-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
71-55-6	1,1,1-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
71-43-2	Benzene	ND	0.10	0.050	ND	0.031	0.016	
56-23-5	Carbon Tetrachloride	ND	0.10	0.050	ND	0.016	0.0080	
994-05-8	tert-Amyl Methyl Ether	ND	0.50	0.050	ND	0.12	0.012	
78-87-5	1,2-Dichloropropane	ND	0.10	0.050	ND	0.022	0.011	
75-27-4	Bromodichloromethane	ND	0.10	0.050	ND	0.015	0.0075	
79-01-6	Trichloroethene	ND	0.10	0.050	ND	0.019	0.0093	
123-91-1	1,4-Dioxane	ND	0.50	0.061	ND	0.14	0.017	
80-62-6	Methyl Methacrylate	ND	0.50	0.075	ND	0.12	0.018	
142-82-5	n-Heptane	ND	0.50	0.064	ND	0.12	0.016	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.052	ND	0.11	0.011	
108-10-1	4-Methyl-2-pentanone	ND	0.50	0.056	ND	0.12	0.014	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.063	ND	0.11	0.014	
79-00-5	1,1,2-Trichloroethane	ND	0.10	0.050	ND	0.018	0.0092	
108-88-3	Toluene	ND	0.50	0.050	ND	0.13	0.013	
591-78-6	2-Hexanone	ND	0.50	0.076	ND	0.12	0.019	
124-48-1	Dibromochloromethane	ND	0.10	0.068	ND	0.012	0.0080	
106-93-4	1,2-Dibromoethane	ND	0.10	0.054	ND	0.013	0.0070	
111-65-9	n-Octane	ND	0.50	0.050	ND	0.11	0.011	
127-18-4	Tetrachloroethene	ND	0.10	0.050	ND	0.015	0.0074	
108-90-7	Chlorobenzene	ND	0.10	0.051	ND	0.022	0.011	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/29/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	MDL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	0.50	0.062	ND	0.12	0.014	
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

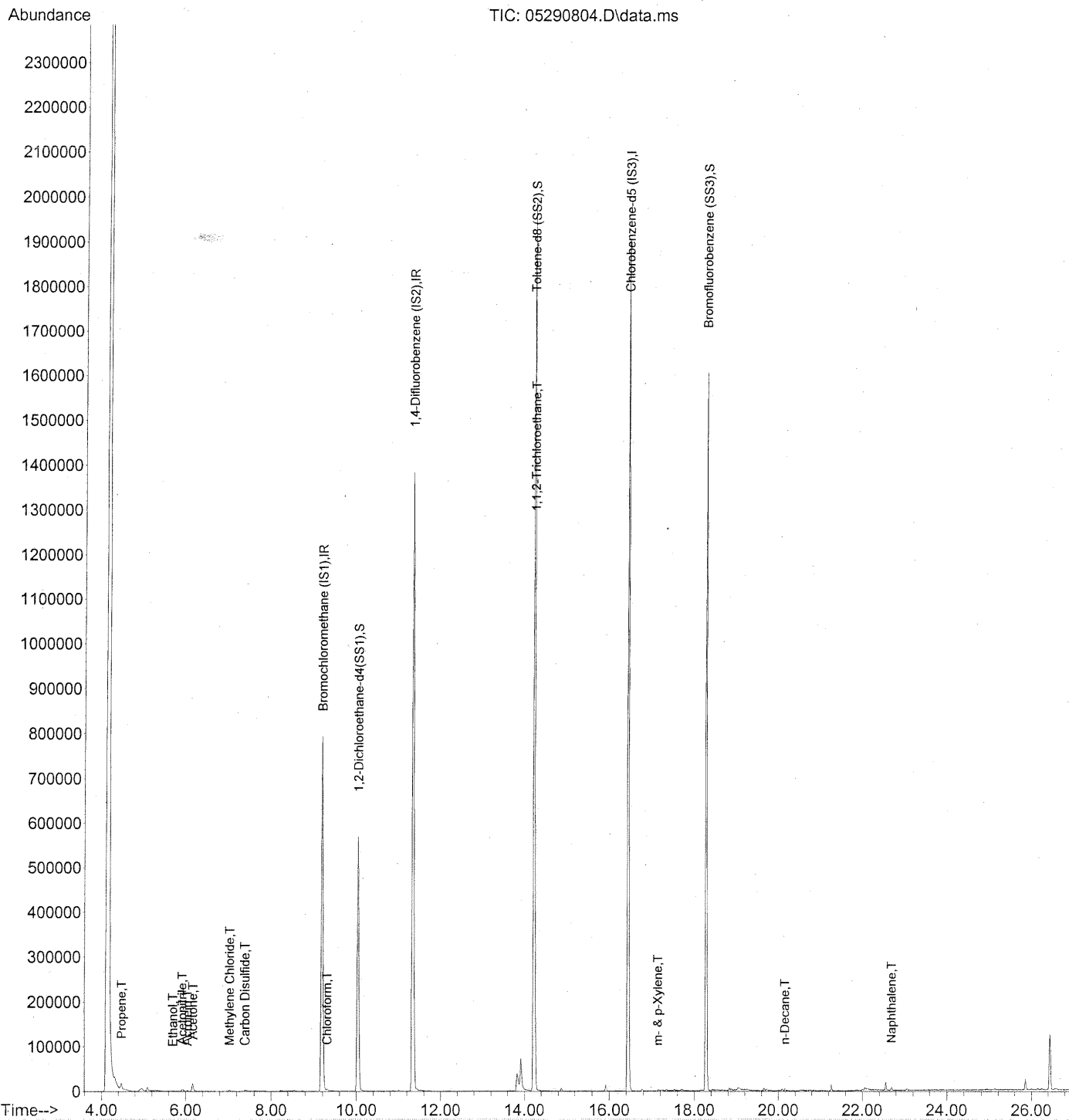
ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	381746	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1582084	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	649804	25.000	ng	-0.02

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.04	65	537134	24.607	ng	-0.05
Spiked Amount	25.000		Recovery	=	98.44%	
57) Toluene-d8 (SS2)	14.22	98	1618315	24.157	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.64%	
73) Bromofluorobenzene (SS3)	18.28	174	586517	26.333	ng	-0.01
Spiked Amount	25.000		Recovery	=	105.32%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.48	42	1862	0.063	ng	# 25
3) Dichlorodifluoromethane	4.51	85	90	N.D.		
4) Chloromethane	4.76	50	92	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	5.44	94	101	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	1240	0.062	ng	# 53
11) Acetonitrile	5.92	41	7226	0.125	ng	# 59
12) Acrolein	6.05	56	1754	0.121	ng	# 92
13) Acetone	6.18	58	10866	0.545	ng	# 59
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.40	45	591	N.D.		
16) Acrylonitrile	6.59	53	317	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.98	59	547	N.D.		
19) Methylene Chloride	7.03	84	839	0.055	ng	# 14
20) Allyl Chloride	7.14	41	100	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.39	76	4351	0.070	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.53	72	212	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

*yes m6/s/or*

*DA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
32) Chloroform	9.31	83	1958	0.087 ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	0.00	62	0	N.D.	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	
39) Isopropyl Acetate	0.00	61	0	N.D.	
40) 1-Butanol	10.80	56	461	N.D.	
41) Benzene	11.00	78	2714	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	11.34	84	1001	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	0.00	83	0	N.D.	
47) Trichloroethene	0.00	130	0	N.D.	
48) 1,4-Dioxane	0.00	88	0	N.D.	
49) Isooctane	12.23	57	543	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	
51) n-Heptane	0.00	71	0	N.D.	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	
55) 1,1,2-Trichloroethane	14.24	97	135973	<del>8.381 ng</del> <i>NR#</i>	7
58) Toluene	14.35	91	2522	N.D.	
59) 2-Hexanone	14.59	43	1444	N.D.	
60) Dibromochloromethane	0.00	129	0	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) Butyl Acetate	15.30	43	2476	N.D.	
63) n-Octane	15.45	57	94	N.D.	
64) Tetrachloroethene	0.00	166	0	N.D.	
65) Chlorobenzene	16.50	112	361	N.D.	
66) Ethylbenzene	16.93	91	2377	N.D.	
67) m- & p-Xylene	17.14	91	4264	<del>0.075 ng</del> #	41
68) Bromoform	0.00	173	0	N.D.	
69) Styrene	17.58	104	981	N.D.	
70) o-Xylene	17.72	91	1618	N.D.	
71) n-Nonane	17.97	43	338	N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	
74) Cumene	18.47	105	81	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	19.07	91	1616	N.D.	
77) 3-Ethyltoluene	19.19	105	628	N.D.	
78) 4-Ethyltoluene	19.24	105	1186	N.D.	
79) 1,3,5-Trimethylbenzene	19.33	105	844	N.D.	

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

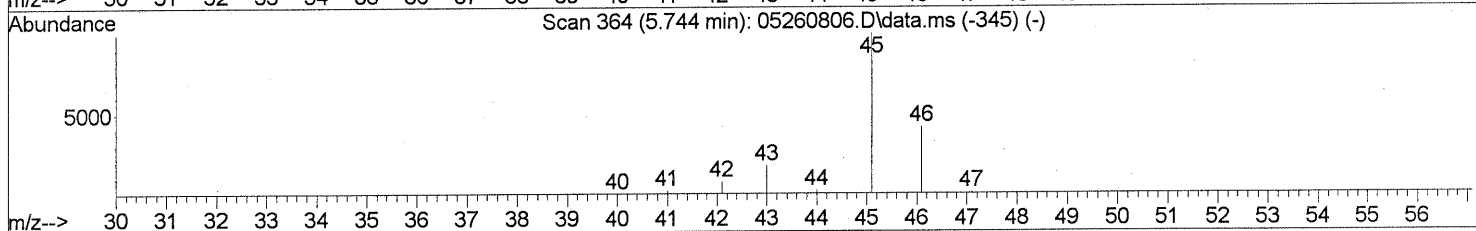
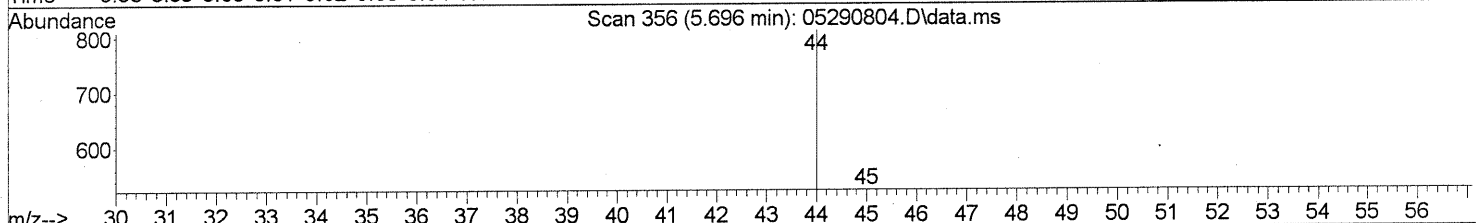
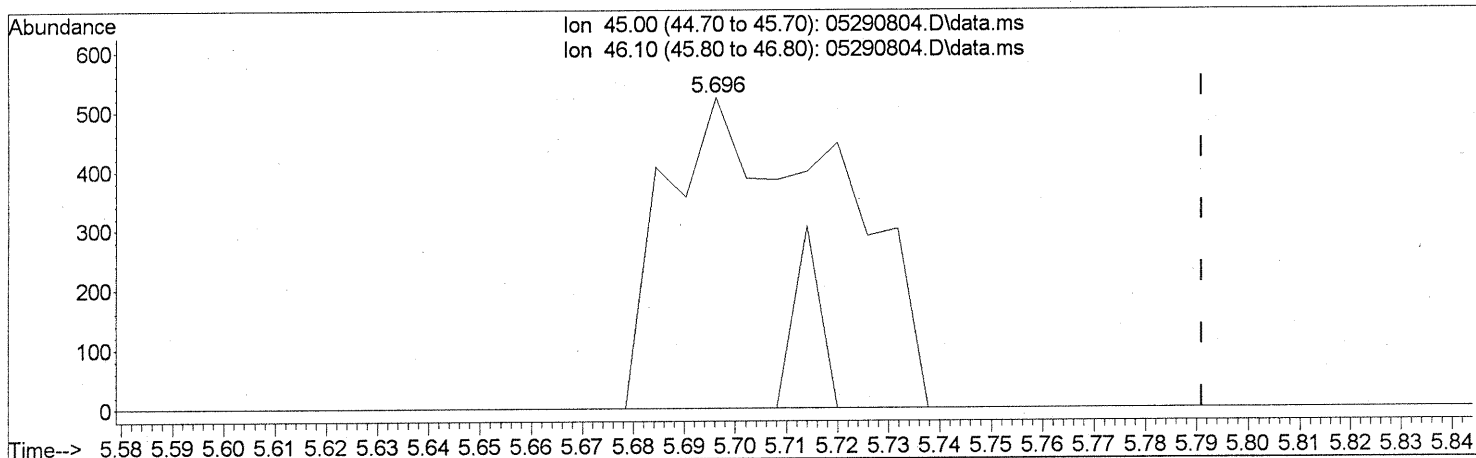
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	458	N.D.		
81) 2-Ethyltoluene	19.57	105	2056	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	1320	N.D.		
83) n-Decane	20.15	57	2940	<del>0.052</del> ng	#	41
84) Benzyl Chloride	20.00	91	2680	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	1038	N.D.		
86) 1,4-Dichlorobenzene	20.11	146	1714	N.D.		
87) sec-Butylbenzene	20.16	105	345	N.D.		
88) p-Isopropyltoluene	20.34	119	575	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	731	N.D.		
90) 1,2-Dichlorobenzene	20.52	146	1019	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.43	57	89	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	7631	<del>0.066</del> ng		97
96) n-Dodecane	22.66	57	537	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



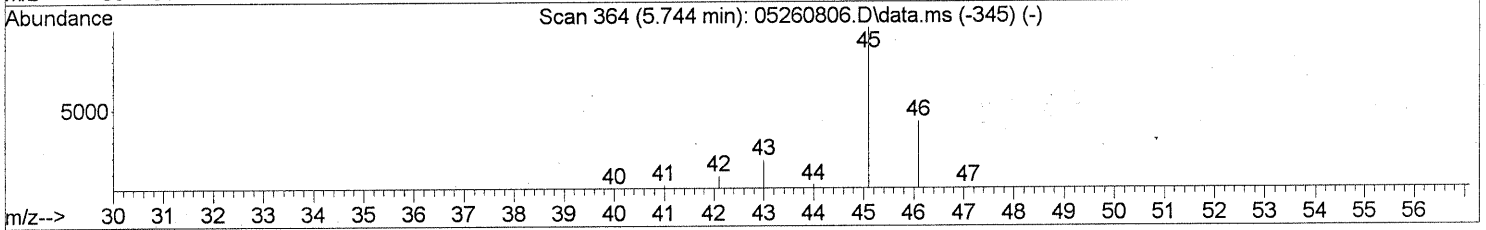
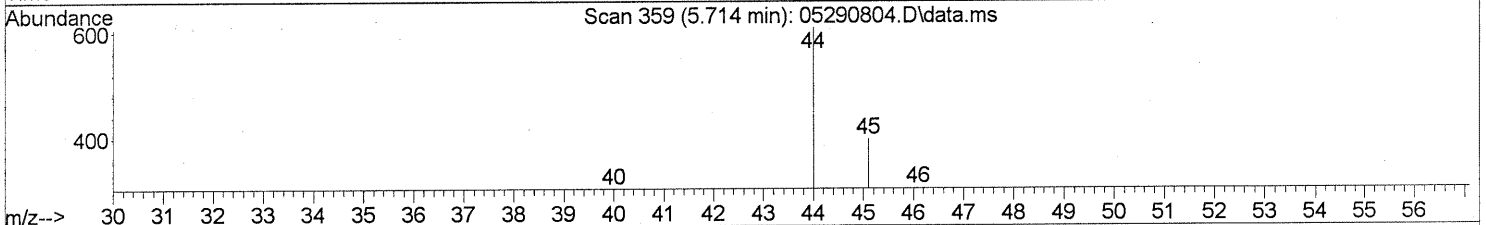
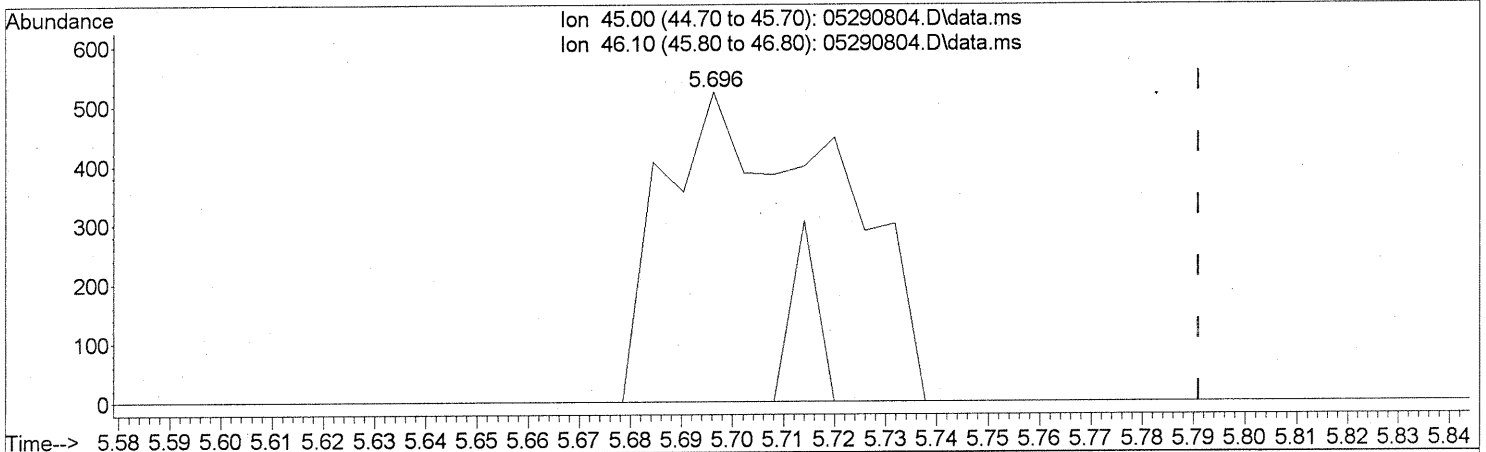
TIC: 05290804.D\data.ms

(10) Ethanol (T)		
5.696min (-0.095)	0.06ng	
response	1240	
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	8.79#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05290804.D\data.ms

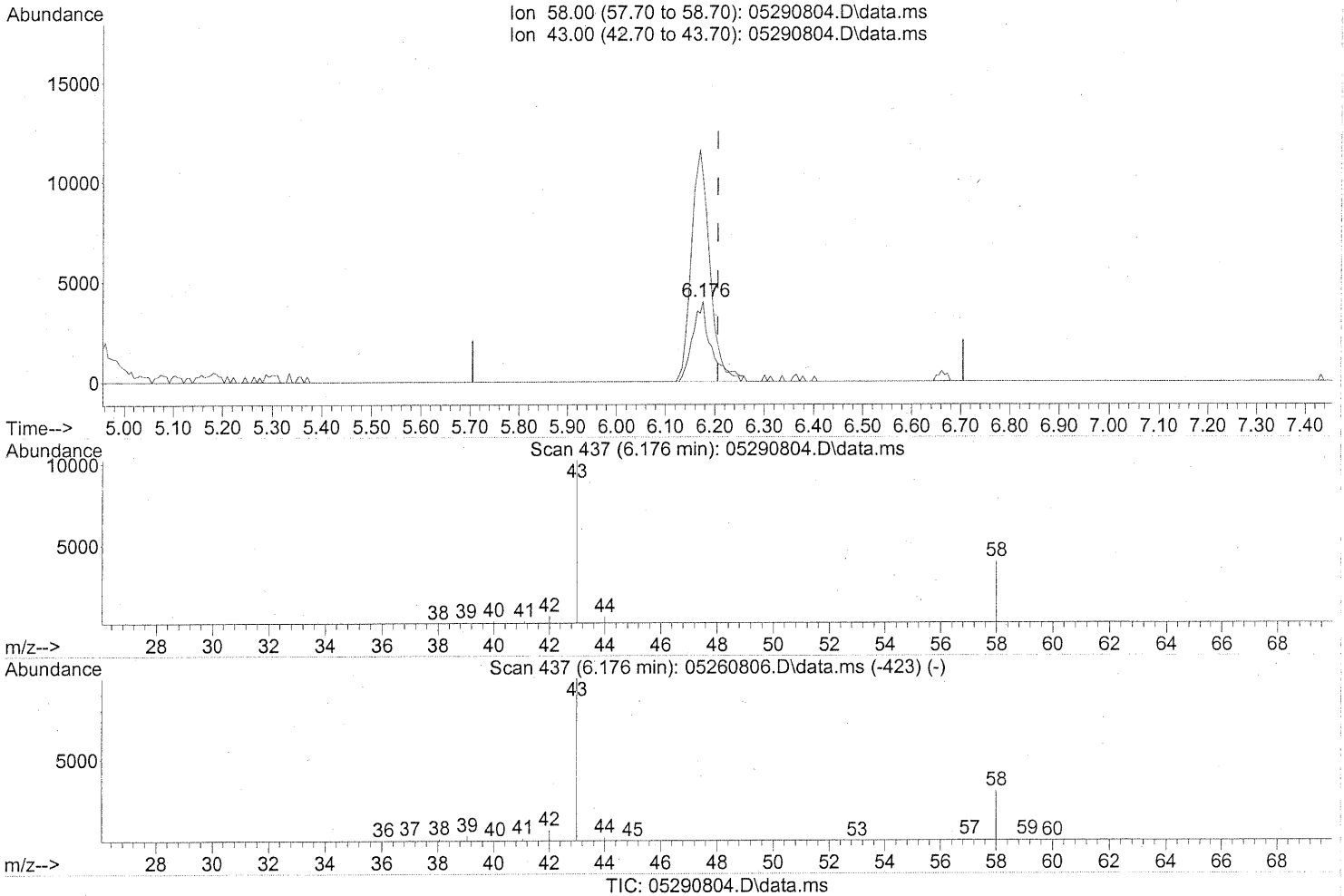
(10) Ethanol (T)  
 5.696min (-0.095) 0.06ng  
 response 1240

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	8.79#
0.00	0.00	0.00
0.00	0.00	0.00

*Spectra taken on the middle of the peak on 6/5/08*

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(13) Acetone (T)

6.176min (-0.030) 0.54ng

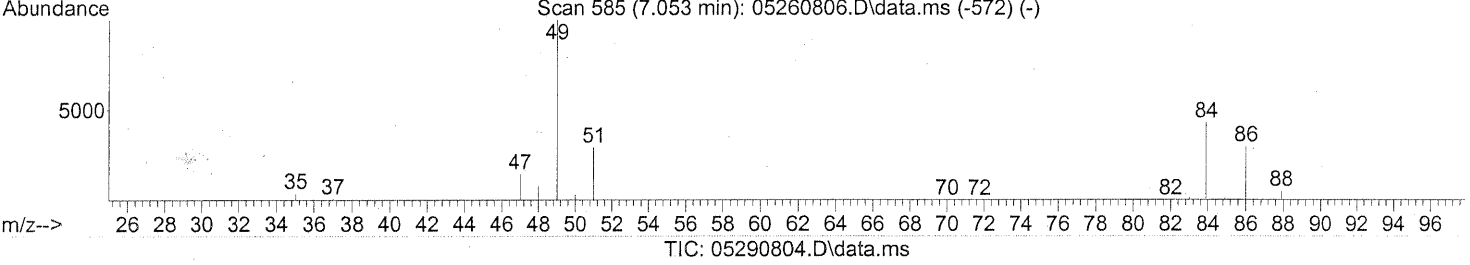
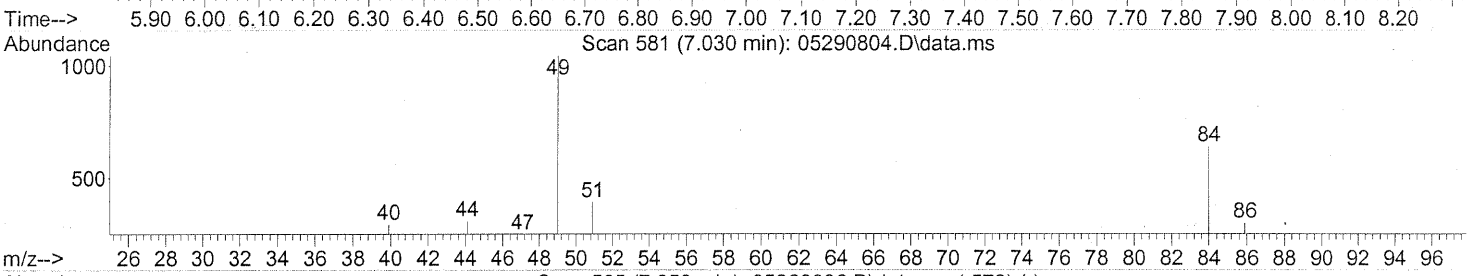
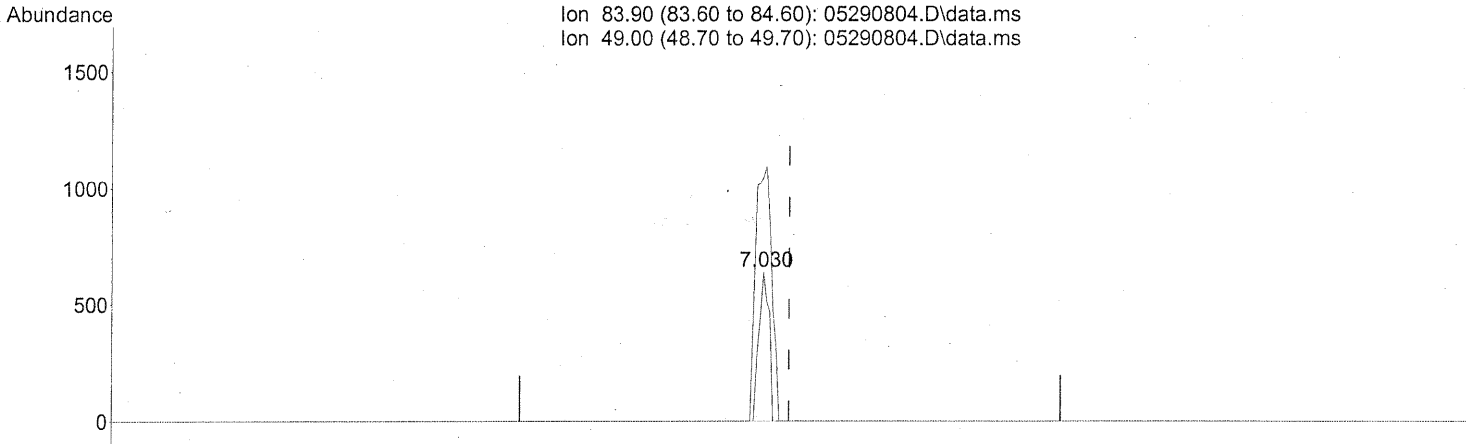
response 10866

ion	Exp%	Act%
58.00	100	100
43.00	368.40	275.47#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290804.D  
Acq On : 29 May 2008 10:34 am  
Operator : WA  
Sample : TO-15 Method Blank  
Misc : S20-05120801  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(19) Methylene Chloride (T)

7.030min (-0.047) 0.05ng

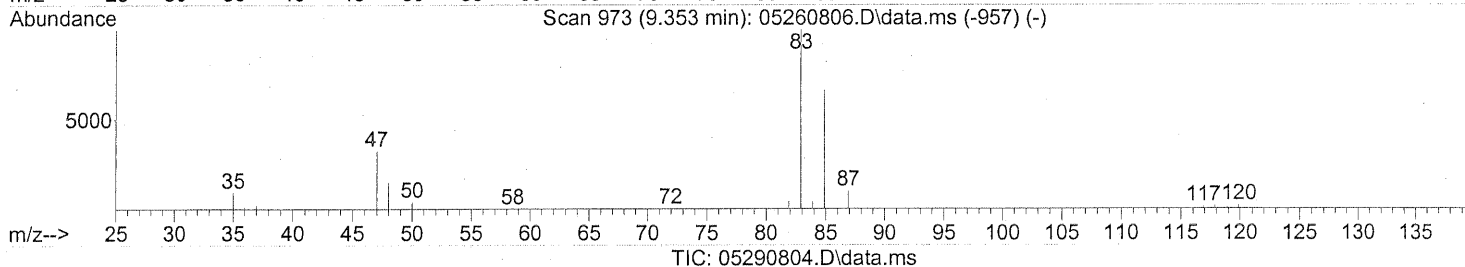
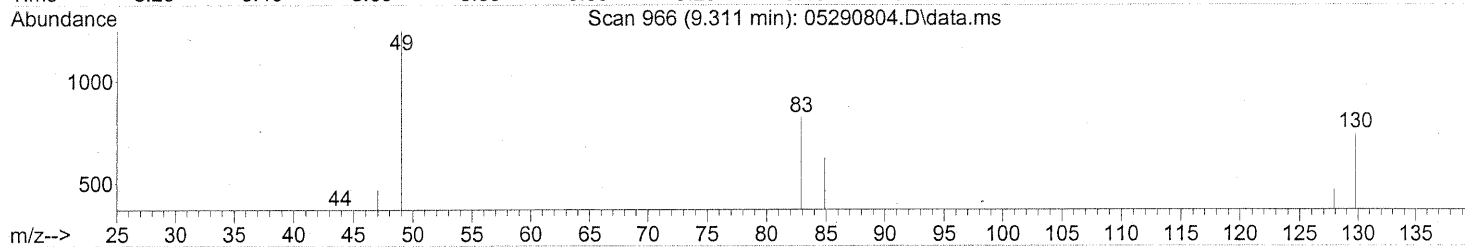
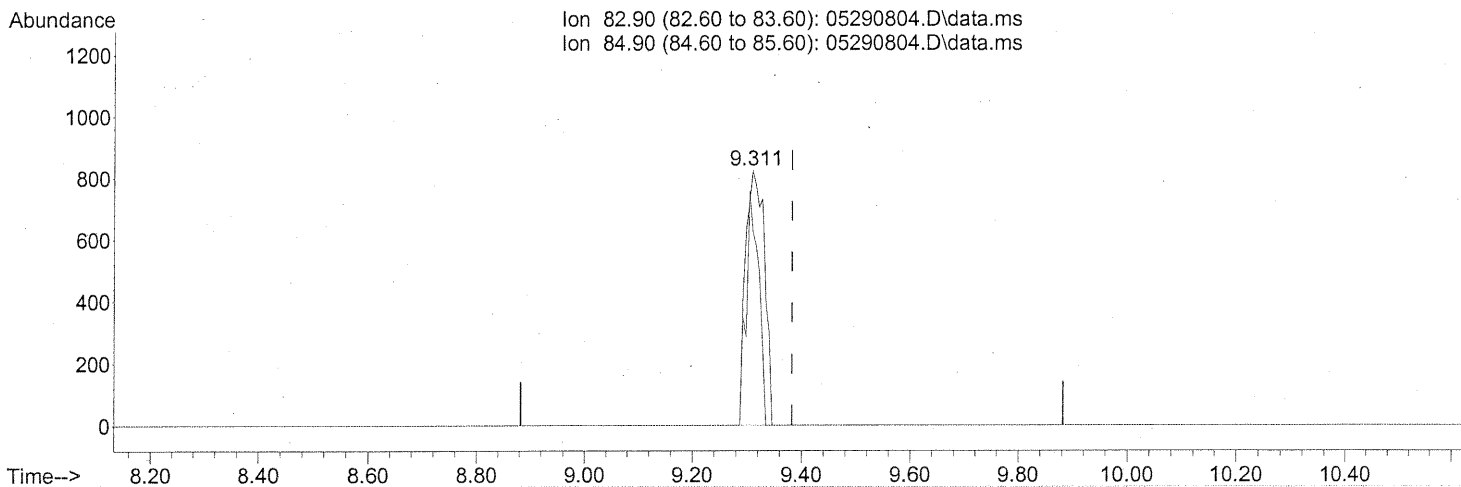
response 839

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	266.98#
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34 am  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 29 15:16:19 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

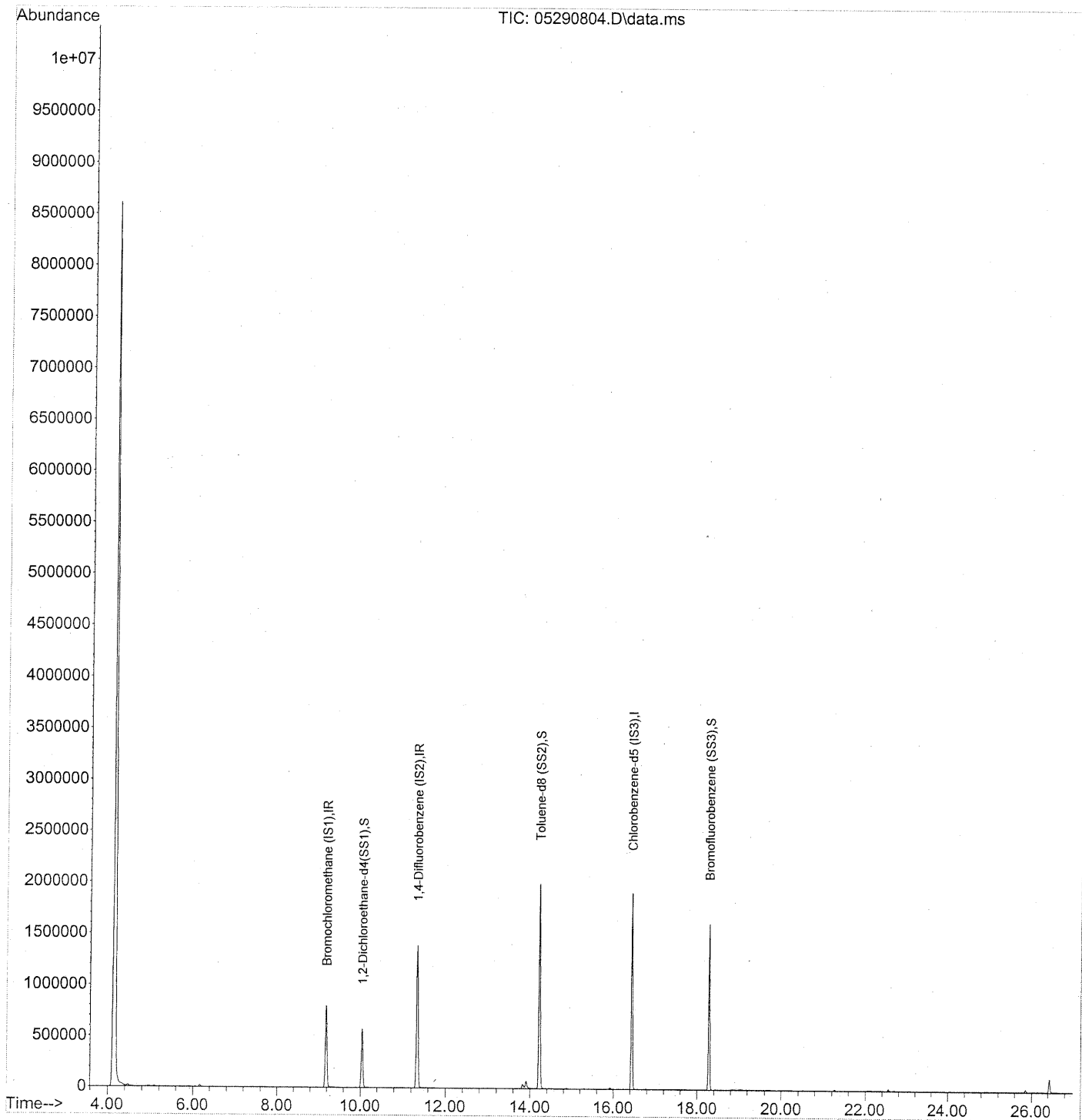
9.311min (-0.071) 0.09ng

response 1958

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	60.98
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 14:39:55 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290804.D  
 Acq On : 29 May 2008 10:34  
 Operator : WA  
 Sample : TO-15 Method Blank  
 Misc : S20-05120801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 14:39:55 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)	
1) Bromochloromethane (IS1)	9.19	130	381746	25.000	ng	-0.05	
3) 1,4-Difluorobenzene (IS2)	11.34	114	1582084	25.000	ng	-0.04	
4) Chlorobenzene-d5 (IS3)	16.44	82	649804	25.000	ng	-0.02	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.04	65	537134	24.607	ng	-0.05	
Spiked Amount				25.000			Recovery = 98.44%
5) Toluene-d8 (SS2)	14.22	98	1618315	24.157	ng	-0.02	
Spiked Amount				25.000			Recovery = 96.64%
6) Bromofluorobenzene (SS3)	18.28	174	586517	26.333	ng	-0.01	
Spiked Amount				25.000			Recovery = 105.32%
Target Compounds							
7) tert-Butylbenzene	19.84	119	202		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	759		N.D.		

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

QC SUMMARY FORMS

**COLUMBIA ANALYTICAL SERVICES, INC.**

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister(s)  
**Test Notes:**

**Date(s) Collected:** 5/19 - 5/20/08  
**Date(s) Received:** 5/21/08  
**Date(s) Analyzed:** 5/27 - 5/29/08

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P080527-MB	97	70-130	98	70-130	103	70-130	
Method Blank	P080528-MB	99	70-130	97	70-130	104	70-130	
Method Blank	P080529-MB	98	70-130	97	70-130	105	70-130	
Lab Control Sample	P080527-LCS	98	70-130	98	70-130	102	70-130	
Lab Control Sample	P080528-LCS	100	70-130	97	70-130	104	70-130	
Lab Control Sample	P080529-LCS	100	70-130	95	70-130	106	70-130	
SG77B-05	P0801507-001	96	70-130	98	70-130	103	70-130	
SG30B-05	P0801507-002	98	70-130	99	70-130	103	70-130	
SG29B-05	P0801507-003	99	70-130	96	70-130	102	70-130	
SG59B-05	P0801507-004	98	70-130	98	70-130	103	70-130	
SG31B-05	P0801507-005	98	70-130	96	70-130	103	70-130	
SG60B-05	P0801507-006	99	70-130	96	70-130	103	70-130	
SG58B-05	P0801507-007	99	70-130	96	70-130	105	70-130	
SG56B-05	P0801507-008	98	70-130	98	70-130	102	70-130	
SG56B-05	P0801507-008DUP	99	70-130	97	70-130	101	70-130	
SG56B-05D	P0801507-009	100	70-130	97	70-130	104	70-130	
SG55B-05	P0801507-010	100	70-130	98	70-130	102	70-130	
SG57B-05	P0801507-011	100	70-130	97	70-130	103	70-130	
SG13B-05	P0801507-012	100	70-130	96	70-130	102	70-130	
SG15B-05	P0801507-013	110	70-130	75	70-130	127	70-130	
SG14B-05	P0801507-014	100	70-130	97	70-130	103	70-130	
SG06B-05	P0801507-015	98	70-130	97	70-130	104	70-130	

Verified By:         *CA*         Date:         6/5/08        

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	26.6	102	74-123	
107-06-2	1,2-Dichloroethane	26.3	26.3	100	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	26.7	100	78-114	
71-43-2	Benzene	27.0	24.8	92	73-111	
56-23-5	Carbon Tetrachloride	26.0	26.5	102	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	26.9	103	81-118	
78-87-5	1,2-Dichloropropane	26.5	26.6	100	78-117	
75-27-4	Bromodichloromethane	27.8	28.6	103	77-120	
79-01-6	Trichloroethene	27.3	27.6	101	80-116	
123-91-1	1,4-Dioxane	27.5	29.1	106	79-122	
80-62-6	Methyl Methacrylate	25.8	28.2	109	79-128	
142-82-5	n-Heptane	26.8	27.2	101	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	26.5	106	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.2	95	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	29.4	105	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.0	103	80-117	
108-88-3	Toluene	26.5	25.2	95	76-116	
591-78-6	2-Hexanone	26.3	23.3	89	69-131	
124-48-1	Dibromochloromethane	27.0	27.2	101	80-128	
106-93-4	1,2-Dibromoethane	26.3	25.8	98	79-122	
111-65-9	n-Octane	26.0	25.6	98	78-122	
127-18-4	Tetrachloroethene	26.0	25.6	98	77-118	
108-90-7	Chlorobenzene	26.5	25.6	97	78-117	

Verified By:          Date: 6/15/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080527-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/27/08  
**Volume(s) Analyzed:** NA Liter(s)

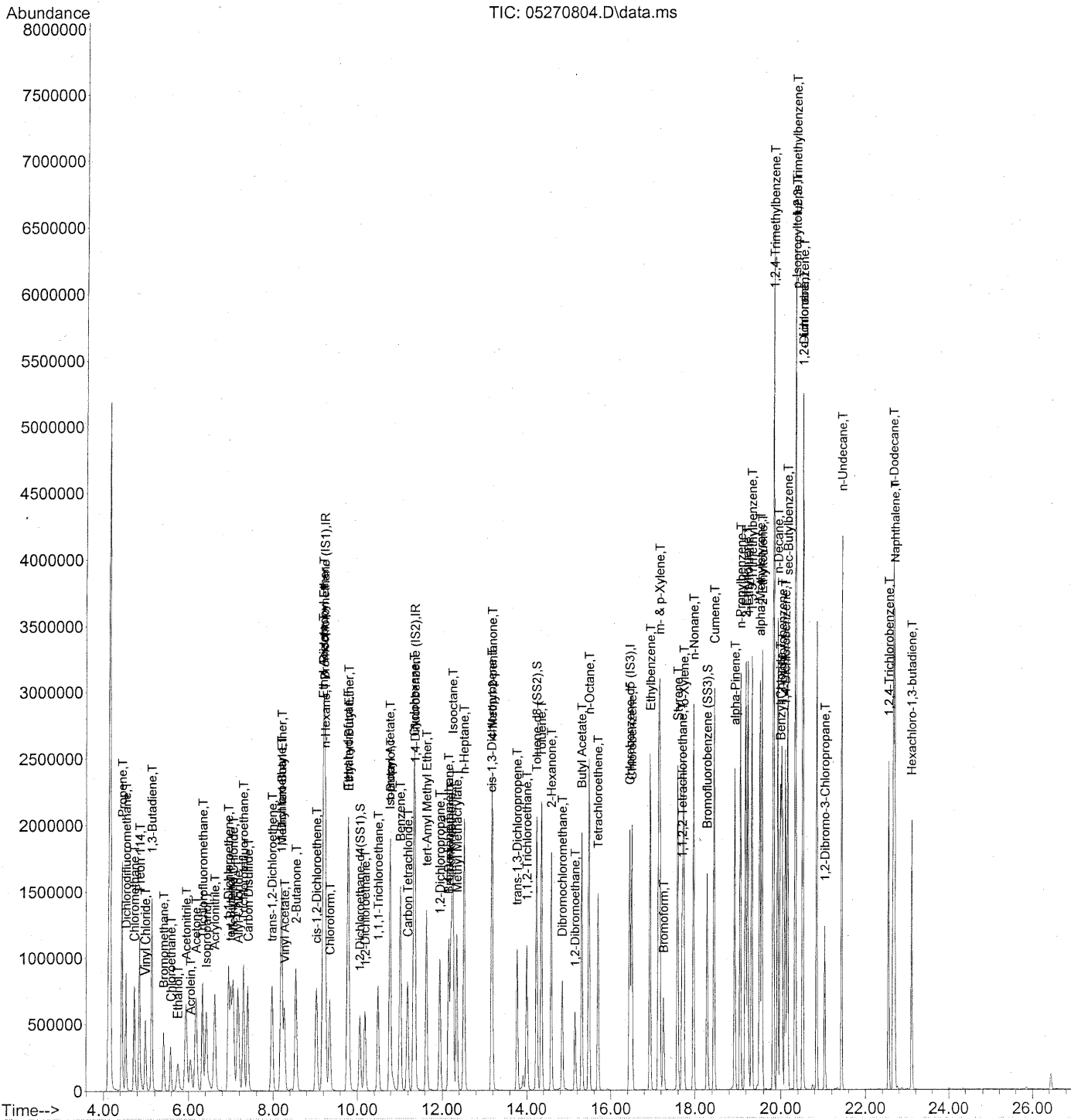
CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	25.7	98	79-116	
179601-23-1	m,p-Xylenes	62.5	60.3	96	80-117	
75-25-2	Bromoform	31.3	34.4	110	77-128	
100-42-5	Styrene	26.3	26.9	102	80-124	
95-47-6	o-Xylene	29.8	28.7	96	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.1	98	79-120	
98-82-8	Cumene	27.0	26.6	99	81-119	
103-65-1	n-Propylbenzene	26.3	26.0	99	82-120	
622-96-8	4-Ethyltoluene	26.5	26.4	100	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.5	98	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.2	103	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.5	98	80-122	
100-44-7	Benzyl Chloride	25.8	27.5	107	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.1	98	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	25.8	98	81-119	
135-98-8	sec-Butylbenzene	26.8	26.4	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.1	101	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.3	98	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	27.4	106	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	28.0	108	75-138	
91-20-3	Naphthalene	26.3	27.1	103	76-143	
87-68-3	Hexachlorobutadiene	26.3	26.6	101	72-128	
98-06-6	tert-Butylbenzene	26.3	25.8	98	70-130	
104-51-8	n-Butylbenzene	26.8	26.3	98	70-130	

Verified By: CA Date: 6/5/08



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 18:37:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



683

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 18:37:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	406006	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1679145	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	16.45	82	677576	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.07	65	567327	24.437	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.76%	
57) Toluene-d8 (SS2)	14.24	98	1708167	24.453	ng	-0.01
Spiked Amount	25.000		Recovery	=	97.80%	
73) Bromofluorobenzene (SS3)	18.29	174	594352	25.591	ng	0.00
Spiked Amount	25.000		Recovery	=	102.36%	

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	815534	25.949	ng	92
3) Dichlorodifluoromethane	4.53	85	902538	23.742	ng	98
4) Chloromethane	4.73	50	1151311	24.105	ng	100
5) Freon 114	4.85	135	548967	25.838	ng	97
6) Vinyl Chloride	4.98	62	724530	23.819	ng	94
7) 1,3-Butadiene	5.13	54	865707	31.224	ng	# 85
8) Bromomethane	5.42	94	394828	25.182	ng	98
9) Chloroethane	5.59	64	371770	23.652	ng	96
10) Ethanol	5.75	45	529867m	24.847	ng	
11) Acetonitrile	5.95	41	1391969	22.645	ng	98
12) Acrolein	6.05	56	399096	25.956	ng	100
13) Acetone	6.18	58	540061	25.457	ng	# 75
14) Trichlorofluoromethane	6.34	101	905711	25.451	ng	100
15) Isopropanol	6.43	45	1555358m	24.339	ng	
16) Acrylonitrile	6.63	53	1018161	26.405	ng	97
17) 1,1-Dichloroethene	6.95	96	463344	27.901	ng	94
18) tert-Butanol	7.00	59	1581437	26.544	ng	96
19) Methylene Chloride	7.05	84	440692	26.933	ng	# 45
20) Allyl Chloride	7.17	41	1080373	28.644	ng	83
21) Trichlorotrifluoroethane	7.30	151	473094	27.359	ng	85
22) Carbon Disulfide	7.40	76	1522422	23.132	ng	100
23) trans-1,2-Dichloroethene	7.97	61	870375	26.610	ng	93
24) 1,1-Dichloroethane	8.19	63	944845	27.203	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1367778	26.971	ng	80
26) Vinyl Acetate	8.27	86	98877	28.458	ng	# 1
27) 2-Butanone	8.55	72	303703	27.381	ng	# 26
28) cis-1,2-Dichloroethene	9.04	61	816058	27.128	ng	94
29) Diisopropyl Ether	9.20	87	391228	26.778	ng	# 51
30) Ethyl Acetate	9.19	61	233070	30.117	ng	85
31) n-Hexane	9.25	57	1212911	26.221	ng	93

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 18:37:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.36	83	740399	30.903	ng	95
34) Tetrahydrofuran	9.78	72	290464	27.862	ng	# 49
35) Ethyl tert-Butyl Ether	9.80	87	569379	26.627	ng	# 78
36) 1,2-Dichloroethane	10.19	62	721786	26.277	ng	96
38) 1,1,1-Trichloroethane	10.50	97	762559	26.674	ng	94
39) Isopropyl Acetate	10.78	61	379301	26.717	ng	# 69
40) 1-Butanol	10.79	56	654130	23.668	ng	96
41) Benzene	11.02	78	1752274	24.750	ng	99
42) Carbon Tetrachloride	11.20	117	770730	26.542	ng	98
43) Cyclohexane	11.34	84	693558	25.056	ng	# 49
44) tert-Amyl Methyl Ether	11.64	73	1265807	26.852	ng	78
45) 1,2-Dichloropropane	11.95	63	555649	26.578	ng	96
46) Bromodichloromethane	12.16	83	595609	28.621	ng	93
47) Trichloroethene	12.21	130	609120	27.641	ng	99
48) 1,4-Dioxane	12.16	88	384506	29.073	ng	# 70
49) Isooctane	12.26	57	2993062	26.444	ng	91
50) Methyl Methacrylate	12.36	100	213998	28.172	ng	# 71
51) n-Heptane	12.52	71	459004	27.161	ng	# 51
52) cis-1,3-Dichloropropene	13.17	75	697938	26.488	ng	100
53) 4-Methyl-2-pentanone	13.19	58	645354	26.218	ng	85
54) trans-1,3-Dichloropropene	13.77	75	714207	29.405	ng	99
55) 1,1,2-Trichloroethane	14.00	97	464240	26.960	ng	90
58) Toluene	14.35	91	1997860	25.213	ng	98
59) 2-Hexanone	14.59	43	1740713	23.261	ng	100
60) Dibromochloromethane	14.85	129	637140	27.248	ng	100
61) 1,2-Dibromoethane	15.15	107	562015	25.835	ng	99
62) Butyl Acetate	15.31	43	1935427	25.722	ng	92
63) n-Octane	15.49	57	613807	25.618	ng	95
64) Tetrachloroethene	15.70	166	599032	25.559	ng	99
65) Chlorobenzene	16.50	112	1446402	25.617	ng	100
66) Ethylbenzene	16.95	91	2311926	25.668	ng	93
67) m- & p-Xylene	17.16	91	3597599	60.287	ng	92
68) Bromoform	17.26	173	467371	34.427	ng	100
69) Styrene	17.60	104	1549280	26.875	ng	94
70) o-Xylene	17.74	91	1832518	28.691	ng	93
71) n-Nonane	17.97	43	1564591	24.823	ng	95
72) 1,1,2,2-Tetrachloroethane	17.70	83	768752	29.066	ng	94
74) Cumene	18.45	105	2474675	26.614	ng	95
75) alpha-Pinene	18.94	93	1169170	26.799	ng	92
76) n-Propylbenzene	19.07	91	2805706	25.966	ng	92
77) 3-Ethyltoluene	19.20	105	2509708	24.604	ng	95
78) 4-Ethyltoluene	19.24	105	2434133	26.449	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	2080080	25.492	ng	92

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 18:37:28 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

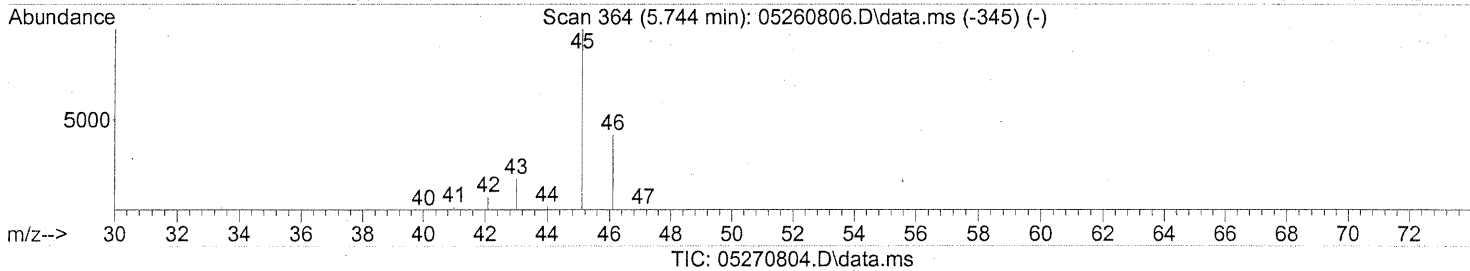
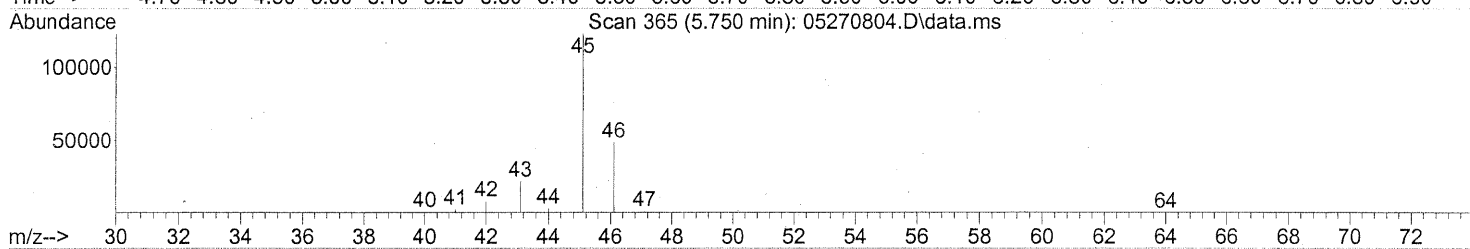
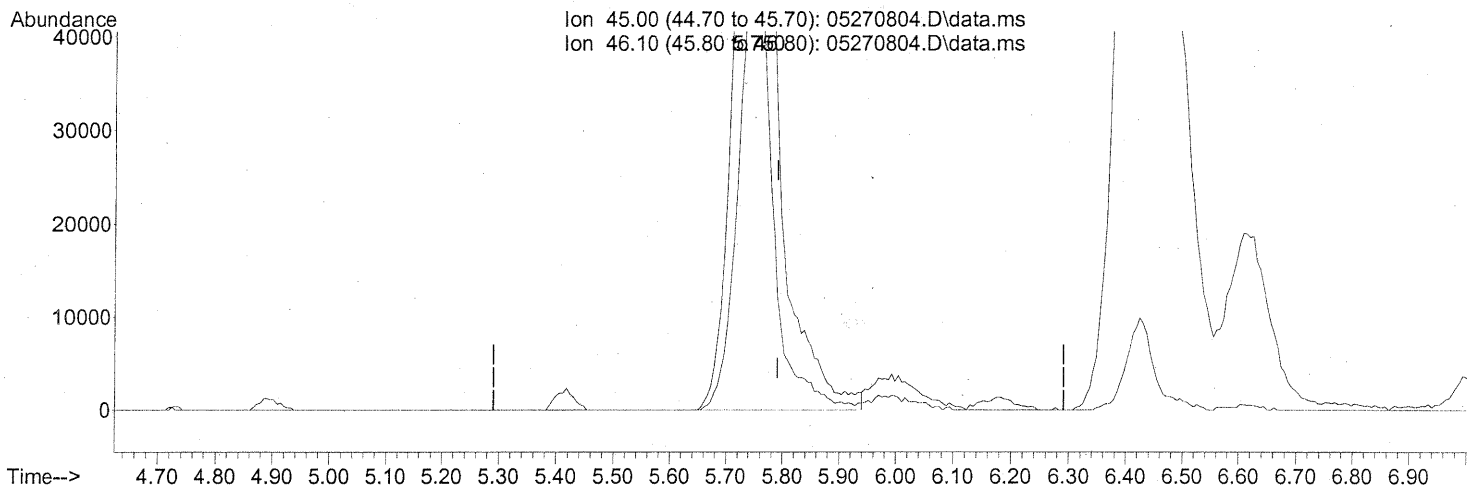
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	1204302	26.247	ng	98
81) 2-Ethyltoluene	19.57	105	2446060	24.731	ng	93
82) 1,2,4-Trimethylbenzene	19.84	105	2107906	25.516	ng	91
83) n-Decane	19.93	57	1531189	26.181	ng	80
84) Benzyl Chloride	20.00	91	1757683	27.537	ng	89
85) 1,3-Dichlorobenzene	20.03	146	1314219	25.107	ng	99
86) 1,4-Dichlorobenzene	20.11	146	1310703	25.794	ng	98
87) sec-Butylbenzene	20.16	105	2832172	26.426	ng	95
88) p-Isopropyltoluene	20.34	119	2728396	29.139	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	2206931	27.823	ng	89
90) 1,2-Dichlorobenzene	20.52	146	1214346	25.273	ng	99
91) d-Limonene	20.52	68	675734	26.544	ng	87
92) 1,2-Dibromo-3-Chloropr...	21.04	157	422830	27.377	ng	80
93) n-Undecane	21.43	57	1643434	26.795	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	243378	28.001	ng #	88
95) Naphthalene	22.69	128	3250977	27.086	ng	99
96) n-Dodecane	22.66	57	1625727	27.203	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	384027	26.593	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 14:17:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.750min (-0.041) 23.84ng  
 response 508419

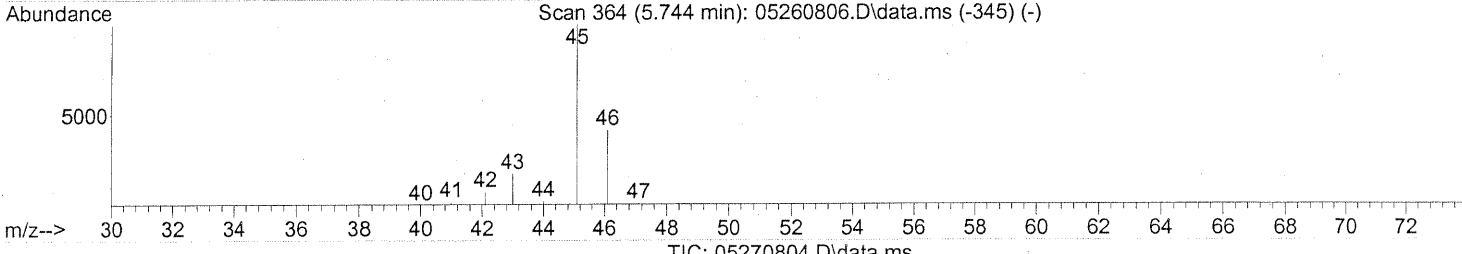
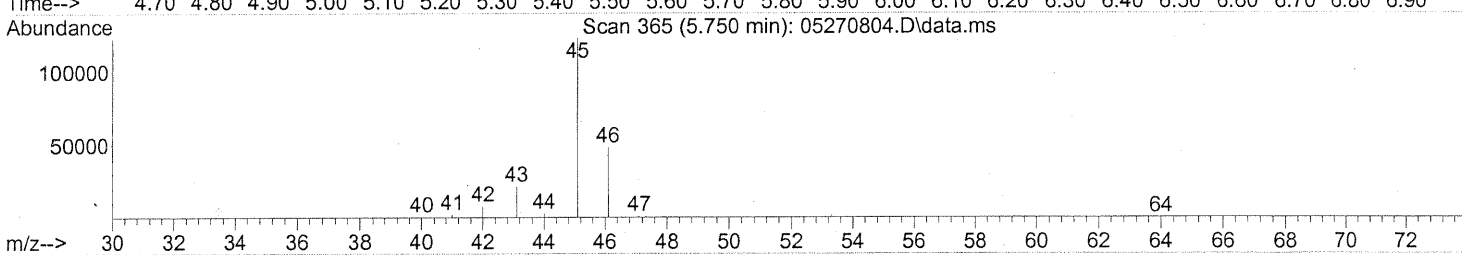
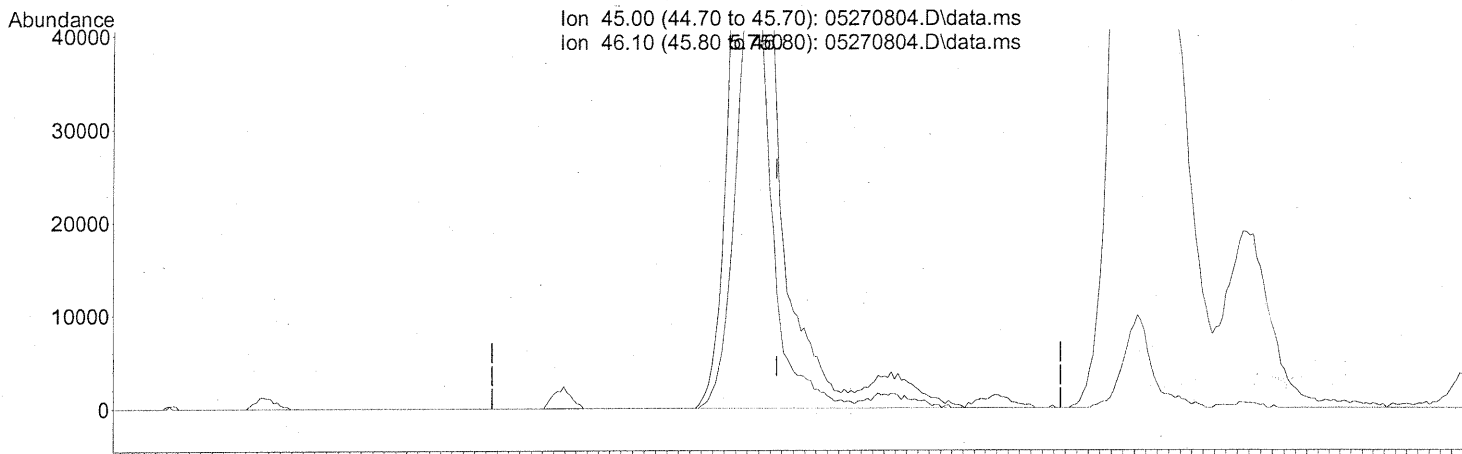
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 14:17:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.750min (-0.041) 24.85ng m

response 529867

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.46
0.00	0.00	0.00
0.00	0.00	0.00

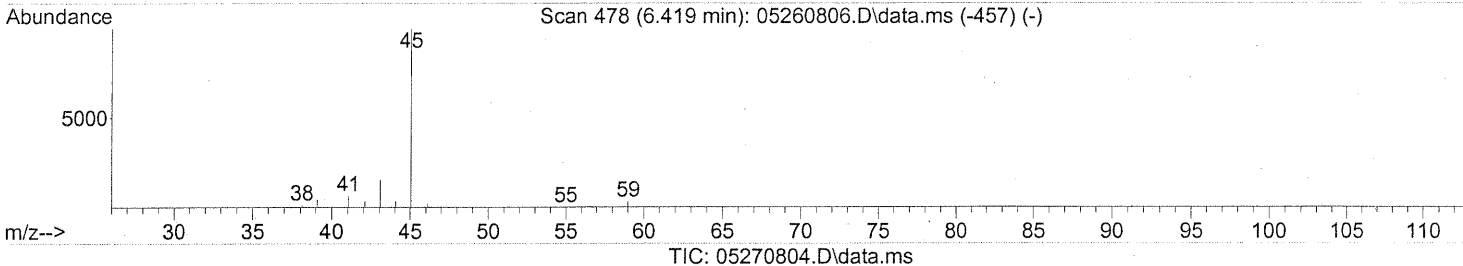
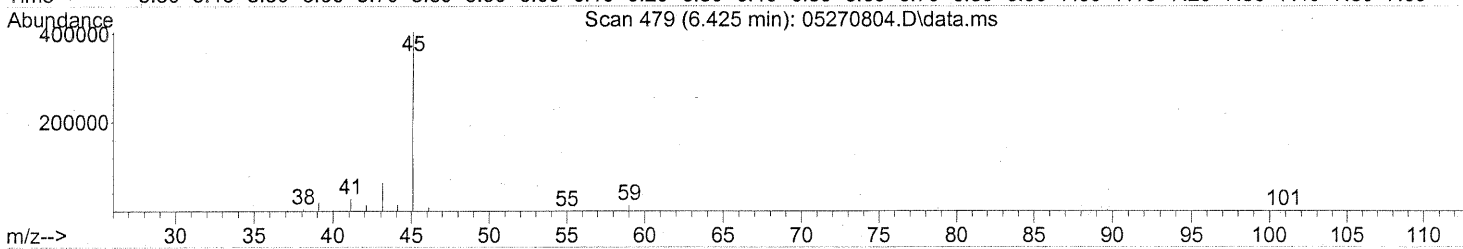
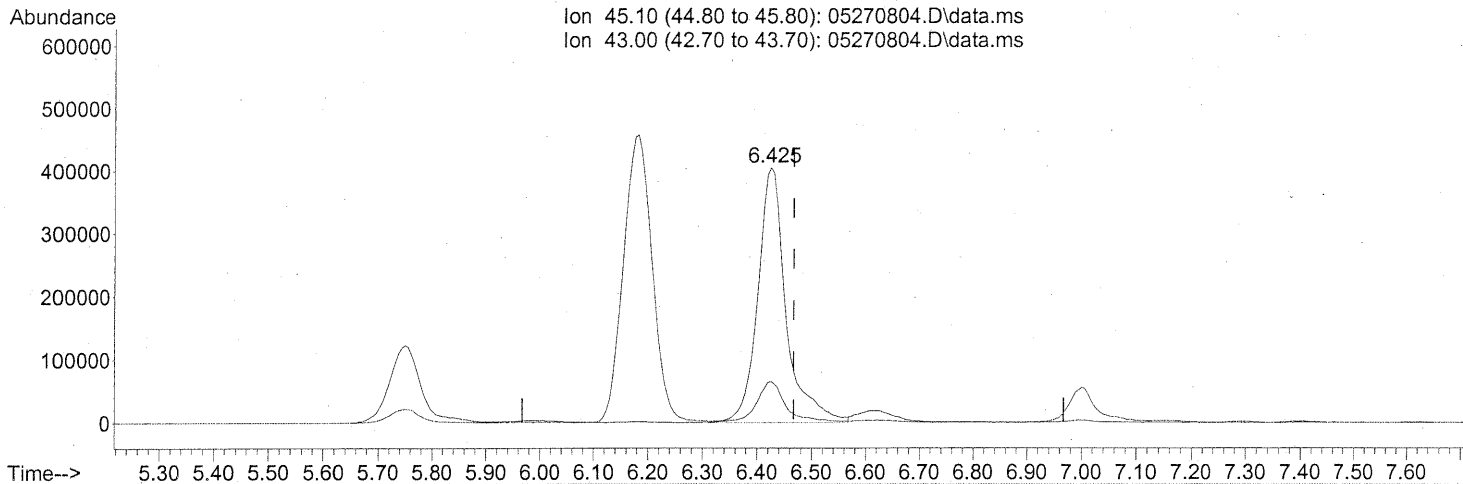
*int. whole peaks*  
*WA 5/28/08*

*WA 5/28/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 14:17:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.425min (-0.042) 22.90ng  
 response 1463641

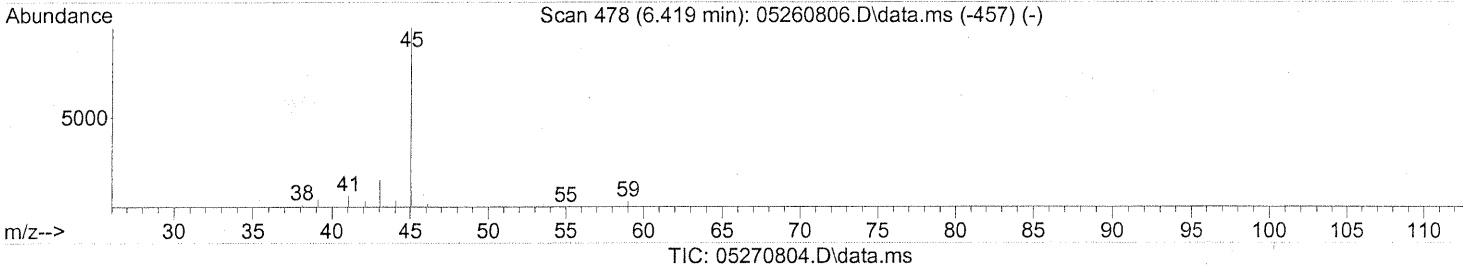
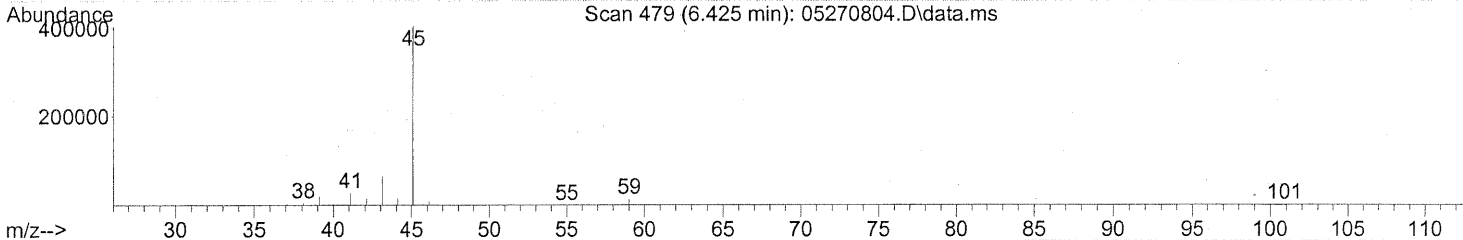
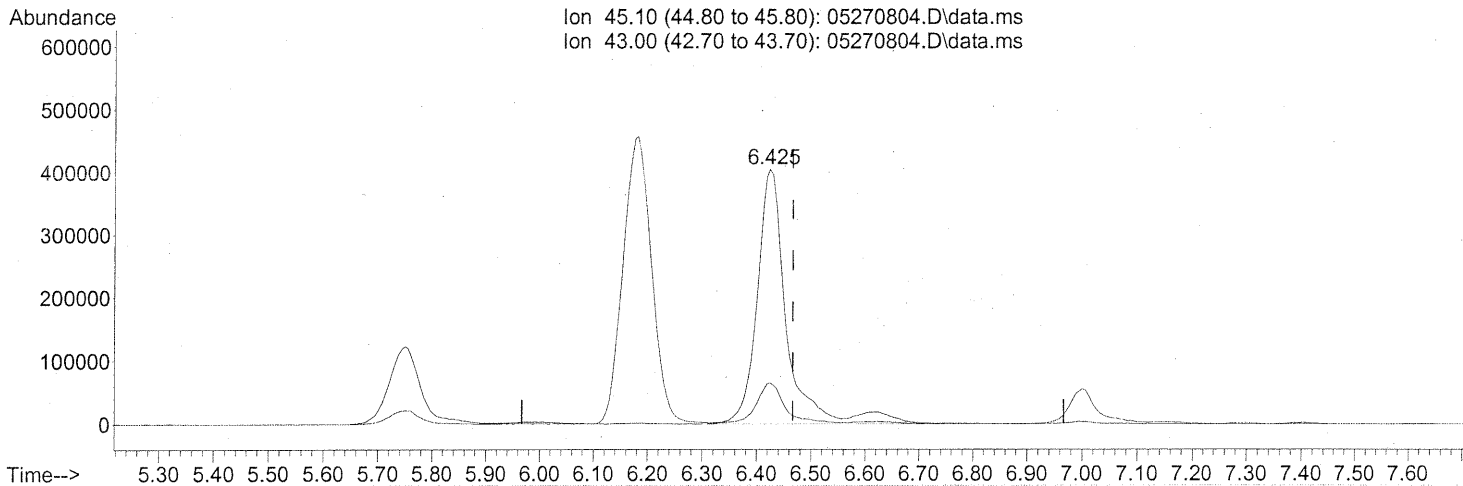
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.47
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 14:17:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.425min (-0.042) 24.34ng m

response 1555358

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.49
0.00	0.00	0.00
0.00	0.00	0.00

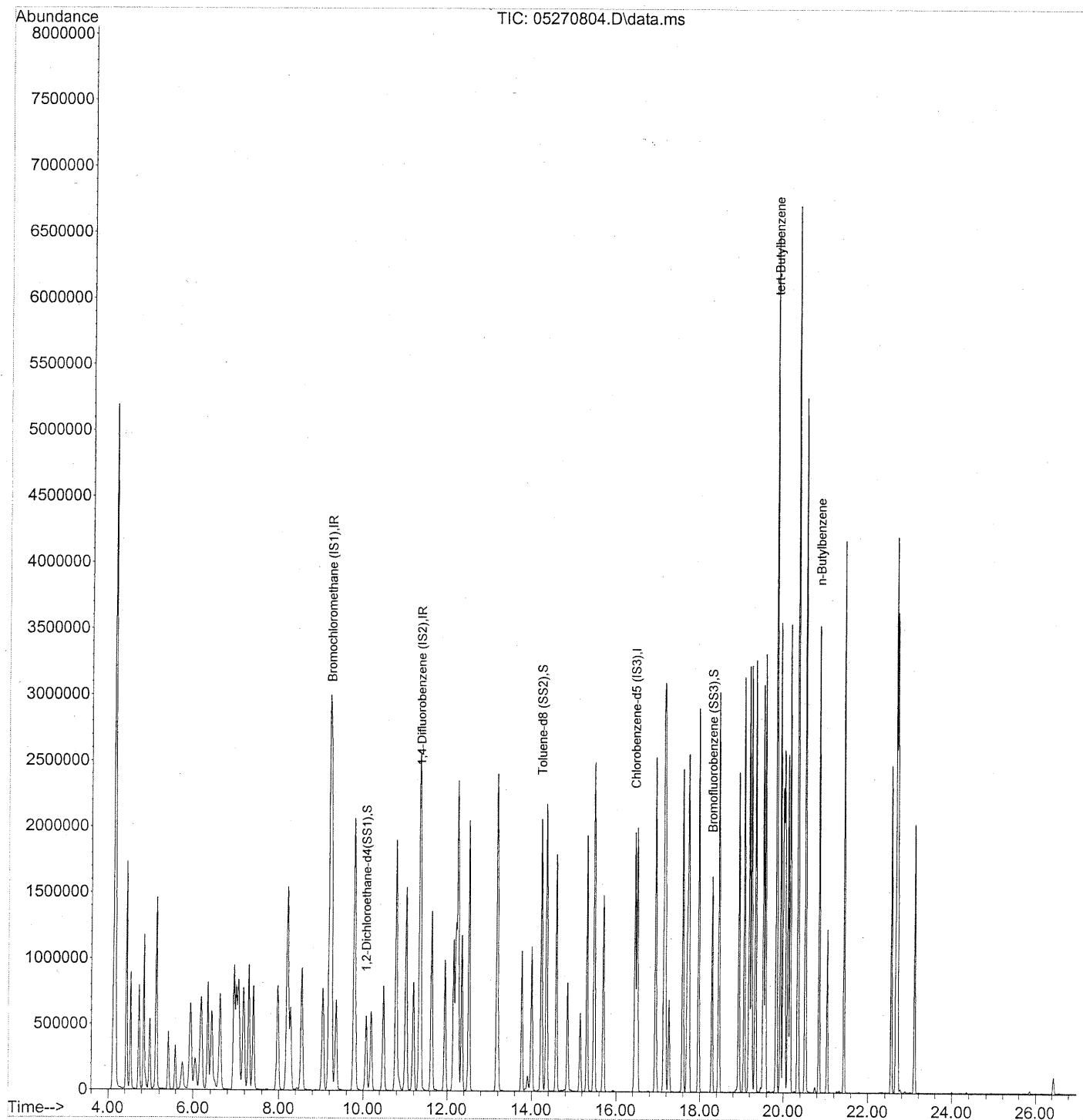
*added tailing*  
*10/1 5/28/08*

*WBS/jalor*



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:39:14 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270804.D  
 Acq On : 27 May 2008 12:22  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:39:14 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.23	130	406006	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.37	114	1679145	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	16.45	82	677576	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.07	65	567327	24.437	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.76%	
5) Toluene-d8 (SS2)	14.24	98	1708167	24.453	ng	-0.01
Spiked Amount	25.000		Recovery	=	97.80%	
6) Bromofluorobenzene (SS3)	18.29	174	594352	25.591	ng	0.00
Spiked Amount	25.000		Recovery	=	102.36%	
Target Compounds						
7) tert-Butylbenzene	19.84	119	2172949	25.756	ng	Qvalue 97
8) n-Butylbenzene	20.85	91	2111864	26.279	ng	# 94

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	24.3	95	69-117	
74-87-3	Chloromethane	24.5	25.5	104	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	26.5	102	58-133	
75-01-4	Vinyl Chloride	24.8	24.8	100	61-127	
74-83-9	Bromomethane	25.0	25.6	102	67-124	
75-00-3	Chloroethane	25.0	24.3	97	69-123	
64-17-5	Ethanol	23.8	26.8	113	56-137	
67-64-1	Acetone	26.8	26.7	100	63-116	
75-69-4	Trichlorofluoromethane	26.3	26.6	101	71-120	
107-13-1	Acrylonitrile	25.5	27.6	108	74-129	
75-35-4	1,1-Dichloroethene	27.8	28.8	104	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	27.3	106	35-141	
75-09-2	Methylene Chloride	27.8	27.4	99	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	30.5	114	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	28.4	102	63-129	
75-15-0	Carbon Disulfide	25.0	24.4	98	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	27.6	104	74-118	
75-34-3	1,1-Dichloroethane	26.8	28.2	105	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	27.6	103	72-119	
108-05-4	Vinyl Acetate	25.3	30.7	121	32-163	
78-93-3	2-Butanone (MEK)	27.0	28.1	104	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	27.8	103	74-117	
108-20-3	Diisopropyl Ether	26.3	27.3	104	70-131	
67-66-3	Chloroform	29.8	32.3	108	72-113	

Verified By: CA Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	27.5	106	74-123	
107-06-2	1,2-Dichloroethane	26.3	27.4	104	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	27.5	103	78-114	
71-43-2	Benzene	27.0	25.4	94	73-111	
56-23-5	Carbon Tetrachloride	26.0	27.6	106	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	27.5	106	81-118	
78-87-5	1,2-Dichloropropane	26.5	27.4	103	78-117	
75-27-4	Bromodichloromethane	27.8	29.8	107	77-120	
79-01-6	Trichloroethene	27.3	28.4	104	80-116	
123-91-1	1,4-Dioxane	27.5	29.4	107	79-122	
80-62-6	Methyl Methacrylate	25.8	28.4	110	79-128	
142-82-5	n-Heptane	26.8	27.8	104	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	27.2	109	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.9	98	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	30.2	108	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.9	106	80-117	
108-88-3	Toluene	26.5	25.6	97	76-116	
591-78-6	2-Hexanone	26.3	24.2	92	69-131	
124-48-1	Dibromochloromethane	27.0	27.8	103	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.4	100	79-122	
111-65-9	n-Octane	26.0	26.2	101	78-122	
127-18-4	Tetrachloroethene	26.0	25.8	99	77-118	
108-90-7	Chlorobenzene	26.5	25.9	98	78-117	

Verified By: CA Date: 6/5/08 **694**

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080528-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/28/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	25.9	98	79-116	
179601-23-1	m,p-Xylenes	62.5	61.1	98	80-117	
75-25-2	Bromoform	31.3	35.2	112	77-128	
100-42-5	Styrene	26.3	27.0	103	80-124	
95-47-6	o-Xylene	29.8	29.1	98	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.3	98	79-120	
98-82-8	Cumene	27.0	27.0	100	81-119	
103-65-1	n-Propylbenzene	26.3	26.4	100	82-120	
622-96-8	4-Ethyltoluene	26.5	26.5	100	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.9	100	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.7	105	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	26.0	100	80-122	
100-44-7	Benzyl Chloride	25.8	27.9	108	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.5	100	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	26.5	101	81-119	
135-98-8	sec-Butylbenzene	26.8	26.9	100	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.9	104	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.8	100	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	28.3	110	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	28.8	111	75-138	
91-20-3	Naphthalene	26.3	28.0	106	76-143	
87-68-3	Hexachlorobutadiene	26.3	27.6	105	72-128	
98-06-6	tert-Butylbenzene	26.3	26.1	99	70-130	
104-51-8	n-Butylbenzene	26.8	27.0	101	70-130	

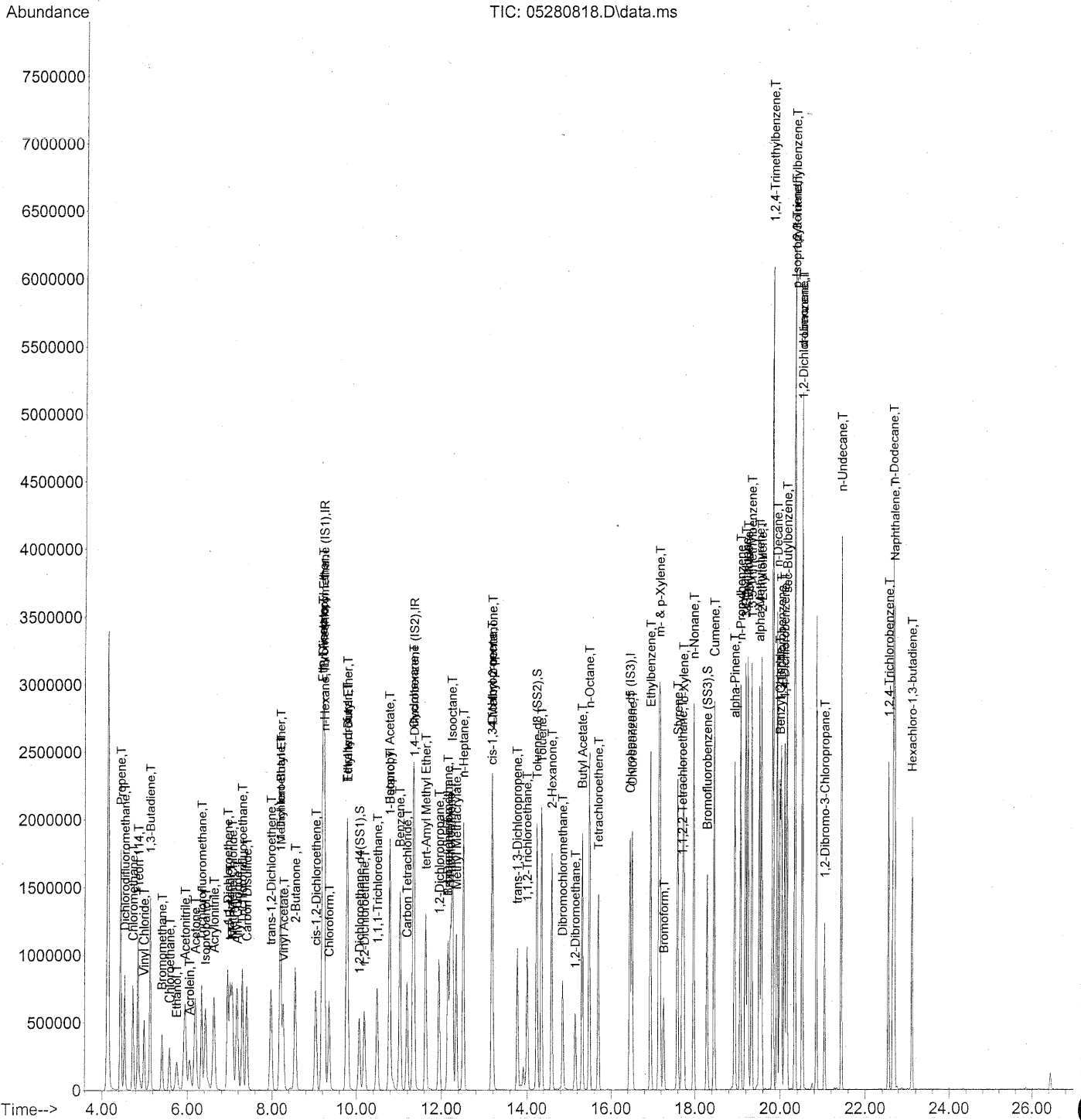
Verified By: CA

Date: 6/5/08

**695**

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280818.D  
Acq On : 29 May 2008 6:22 am  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 10:34:49 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.22	130	377949	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.36	114	1568486	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	642257	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
33) 1,2-Dichloroethane-d4(...)	10.07	65	542466	25.101	ng	-0.02
Spiked Amount				25.000		
						Recovery = 100.40%
57) Toluene-d8 (SS2)	14.24	98	1610210	24.318	ng	-0.01
Spiked Amount				25.000		
						Recovery = 97.28%
73) Bromofluorobenzene (SS3)	18.29	174	573091	26.032	ng	0.00
Spiked Amount				25.000		
						Recovery = 104.12%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	810350	27.698	ng	93
3) Dichlorodifluoromethane	4.54	85	858468	24.259	ng	98
4) Chloromethane	4.73	50	1133689	25.498	ng	99
5) Freon 114	4.85	135	524466	26.517	ng	98
6) Vinyl Chloride	4.98	62	702653	24.815	ng	94
7) 1,3-Butadiene	5.13	54	853110	33.054	ng	# 86
8) Bromomethane	5.41	94	373082	25.561	ng	97
9) Chloroethane	5.59	64	354980	24.260	ng	96
10) Ethanol	5.76	45	531279m	26.763	ng	
11) Acetonitrile	5.95	41	1391280	24.314	ng	98
12) Acrolein	6.05	56	387394	27.066	ng	100
13) Acetone	6.18	58	527198	26.696	ng	# 78
14) Trichlorofluoromethane	6.33	101	880272	26.573	ng	100
15) Isopropanol	6.43	45	1551710m	26.085	ng	
16) Acrylonitrile	6.63	53	991012	27.609	ng	98
17) 1,1-Dichloroethene	6.95	96	445968	28.848	ng	92
18) tert-Butanol	7.00	59	1512400m	27.269	ng	
19) Methylene Chloride	7.05	84	417091	27.383	ng	# 39
20) Allyl Chloride	7.17	41	1069275	30.454	ng	82
21) Trichlorotrifluoroethane	7.29	151	456712	28.373	ng	85
22) Carbon Disulfide	7.40	76	1492857	24.367	ng	100
23) trans-1,2-Dichloroethene	7.97	61	840540	27.606	ng	92
24) 1,1-Dichloroethane	8.19	63	910976	28.175	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1305134	27.646	ng	79
26) Vinyl Acetate	8.27	86	99319	30.707	ng	# 1
27) 2-Butanone	8.55	72	289865	28.074	ng	# 19
28) cis-1,2-Dichloroethene	9.04	61	778003	27.783	ng	95
29) Diisopropyl Ether	9.20	87	370600	27.250	ng	# 41
30) Ethyl Acetate	9.19	61	223036	30.960	ng	86
31) n-Hexane	9.24	57	1174424	27.274	ng	92

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*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 10:34:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.35	83	719283	32.251	ng	95
34) Tetrahydrofuran	9.78	72	276617	28.503	ng #	44
35) Ethyl tert-Butyl Ether	9.79	87	546630	27.461	ng #	77
36) 1,2-Dichloroethane	10.19	62	699808	27.368	ng	96
38) 1,1,1-Trichloroethane	10.50	97	733978	27.486	ng	94
39) Isopropyl Acetate	10.78	61	365633	27.571	ng #	64
40) 1-Butanol	10.79	56	633928	24.555	ng	97
41) Benzene	11.02	78	1680184	25.406	ng	98
42) Carbon Tetrachloride	11.19	117	749891	27.646	ng	99
43) Cyclohexane	11.34	84	659703	25.515	ng #	46
44) tert-Amyl Methyl Ether	11.63	73	1209590	27.470	ng	77
45) 1,2-Dichloropropane	11.95	63	534941	27.393	ng	97
46) Bromodichloromethane	12.15	83	579680	29.821	ng	93
47) Trichloroethene	12.21	130	584972	28.418	ng	100
48) 1,4-Dioxane	12.15	88	362822	29.369	ng #	69
49) Isooctane	12.25	57	2884071	27.279	ng	93
50) Methyl Methacrylate	12.35	100	201800	28.441	ng #	73
51) n-Heptane	12.52	71	439392	27.835	ng #	50
52) cis-1,3-Dichloropropene	13.17	75	669112	27.186	ng	100
53) 4-Methyl-2-pentanone	13.19	58	618997	26.922	ng	85
54) trans-1,3-Dichloropropene	13.77	75	686080	30.240	ng	98
55) 1,1,2-Trichloroethane	14.00	97	449169	27.926	ng	90
58) Toluene	14.35	91	1919975	25.563	ng	98
59) 2-Hexanone	14.59	43	1717458	24.213	ng	99
60) Dibromochloromethane	14.85	129	617133	27.844	ng	99
61) 1,2-Dibromoethane	15.15	107	544901	26.426	ng	99
62) Butyl Acetate	15.31	43	1905130	26.712	ng	92
63) n-Octane	15.48	57	595179	26.207	ng	95
64) Tetrachloroethene	15.70	166	573691	25.824	ng	99
65) Chlorobenzene	16.50	112	1388320	25.940	ng	100
66) Ethylbenzene	16.94	91	2214522	25.939	ng	93
67) m- & p-Xylene	17.16	91	3458403	61.142	ng	92
68) Bromoform	17.26	173	452414	35.158	ng	100
69) Styrene	17.60	104	1473046	26.958	ng	95
70) o-Xylene	17.73	91	1763157	29.124	ng	93
71) n-Nonane	17.97	43	1533658	25.670	ng	94
72) 1,1,2,2-Tetrachloroethane	17.70	83	735670	29.345	ng	92
74) Cumene	18.45	105	2382283	27.029	ng	95
75) alpha-Pinene	18.93	93	1116427	26.997	ng	93
76) n-Propylbenzene	19.07	91	2703182	26.393	ng	93
77) 3-Ethyltoluene	19.19	105	2433222	25.166	ng	95
78) 4-Ethyltoluene	19.24	105	2315161	26.539	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	2003471	25.903	ng	91

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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 10:34:49 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

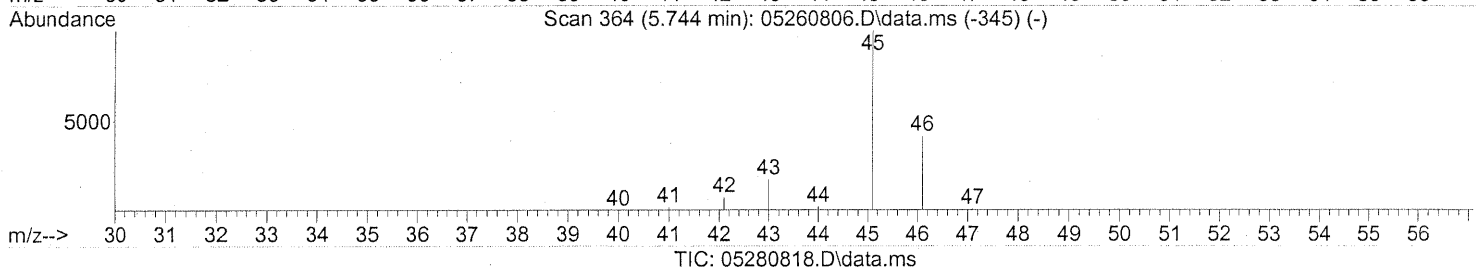
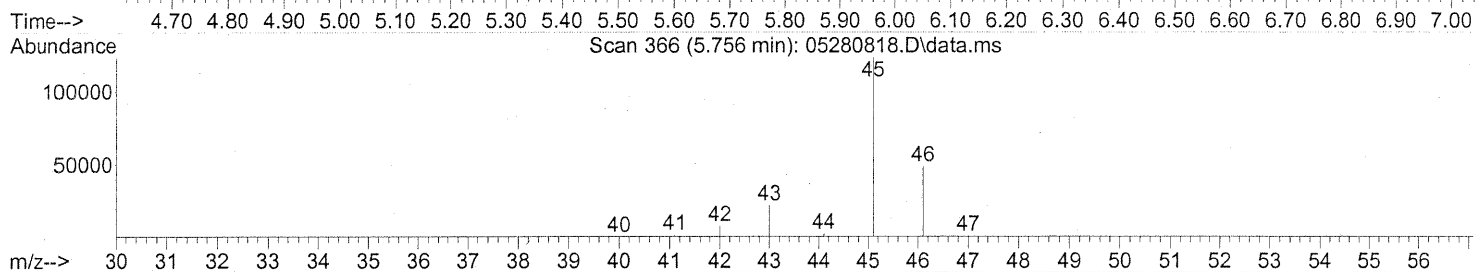
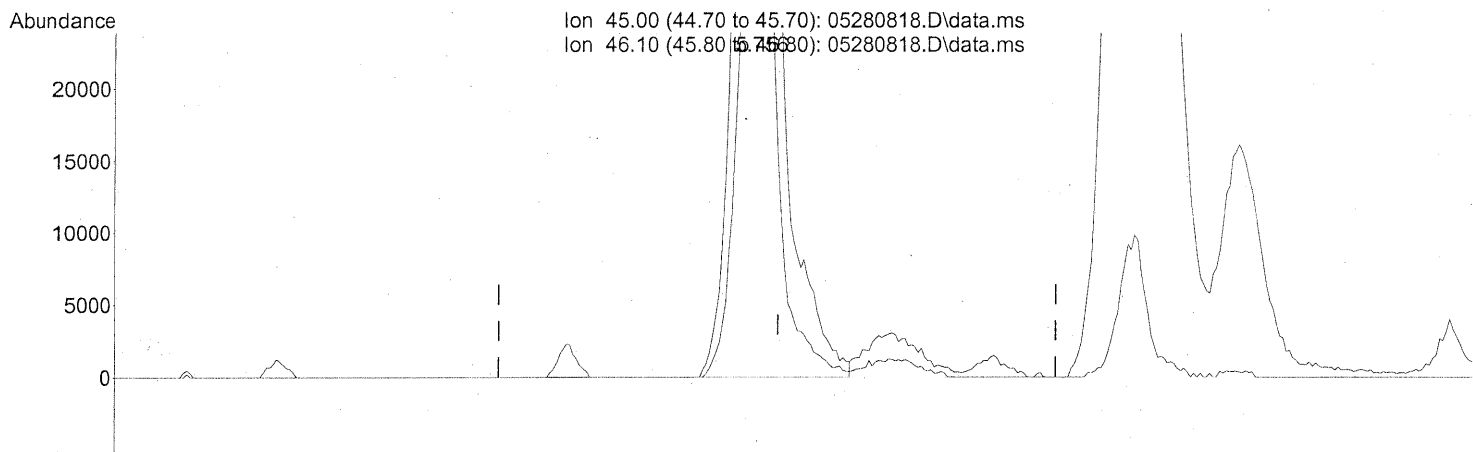
Internal Standards	R.T.	QI on	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	1162342	26.726	ng	98
81) 2-Ethyltoluene	19.57	105	2360798	25.182	ng	93
82) 1,2,4-Trimethylbenzene	19.84	105	2034607	25.983	ng	91
83) n-Decane	19.93	57	1491975	26.914	ng	79
84) Benzyl Chloride	20.00	91	1687191	27.886	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1266979	25.536	ng	99
86) 1,4-Dichlorobenzene	20.10	146	1274691	26.465	ng	99
87) sec-Butylbenzene	20.16	105	2729979	26.874	ng	95
88) p-Isopropyltoluene	20.34	119	2650321	29.862	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	2142839	28.501	ng	89
90) 1,2-Dichlorobenzene	20.52	146	1176838	25.839	ng	100
91) d-Limonene	20.52	68	643475	26.667	ng	87
92) 1,2-Dibromo-3-Chloropr...	21.04	157	413773	28.264	ng	82
93) n-Undecane	21.44	57	1611573	27.720	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	236954	28.761	ng	# 86
95) Naphthalene	22.69	128	3179886	27.950	ng	99
96) n-Dodecane	22.66	57	1598202	28.213	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	377344	27.567	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280818.D  
Acq On : 29 May 2008 6:22 am  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 07:04:08 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



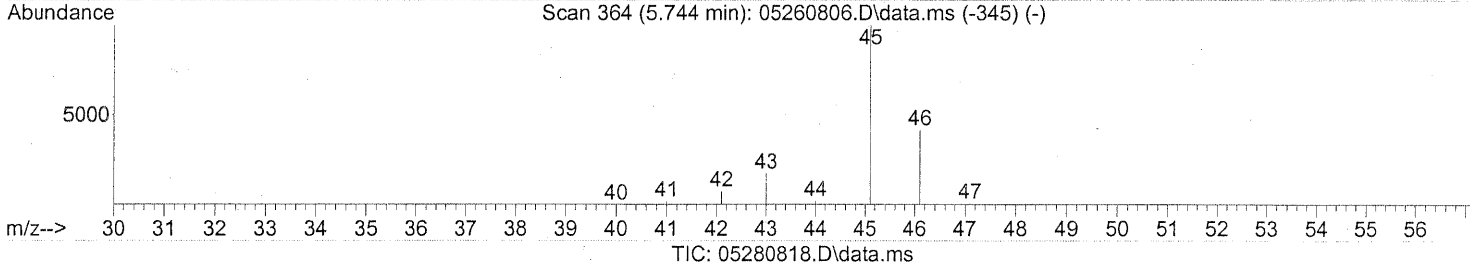
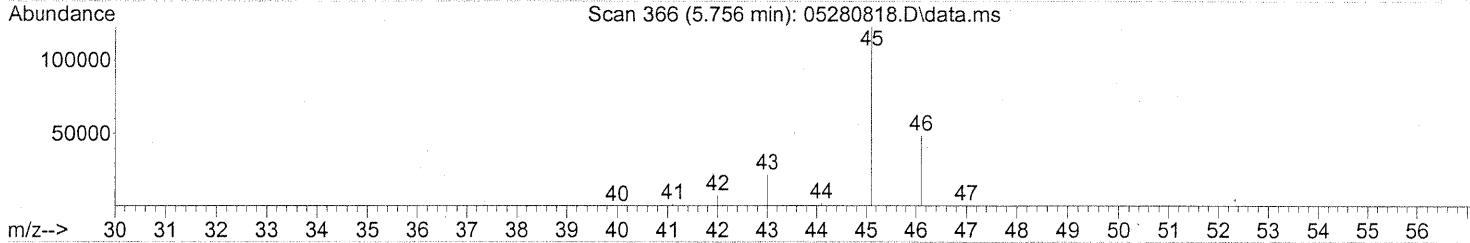
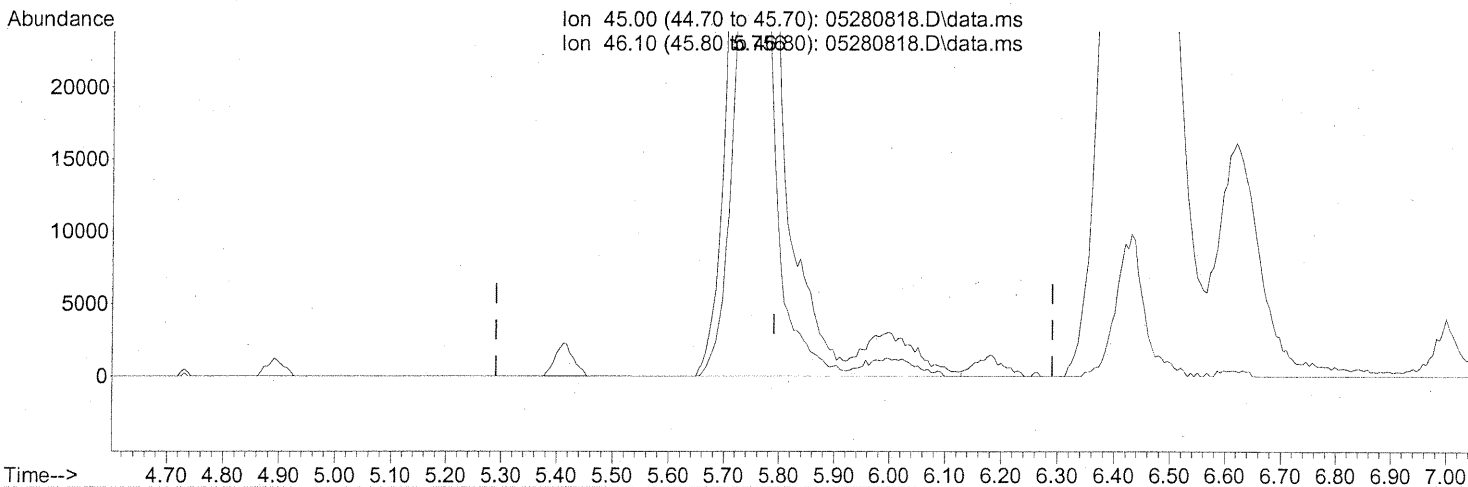
(10) Ethanol (T)  
5.756min (-0.035) 25.72ng  
response 510483

*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.92
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280818.D  
Acq On : 29 May 2008 6:22 am  
Operator : WA  
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Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(10) Ethanol (T)

5.756min (-0.035) 26.76ng m

response 531279

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.35
0.00	0.00	0.00
0.00	0.00	0.00

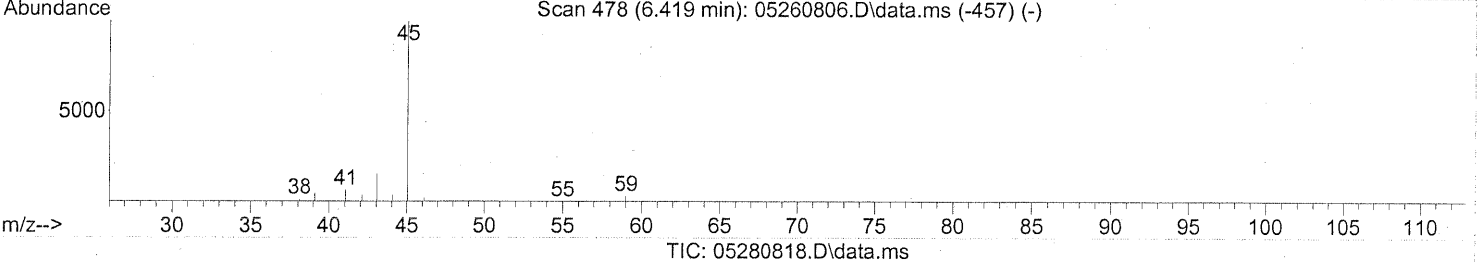
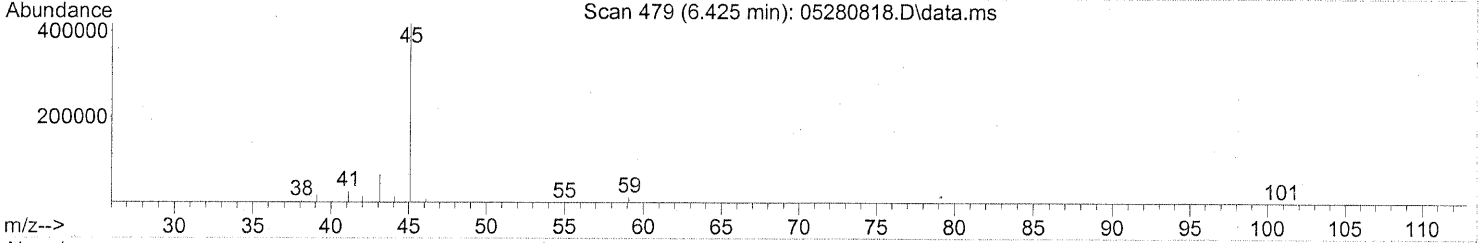
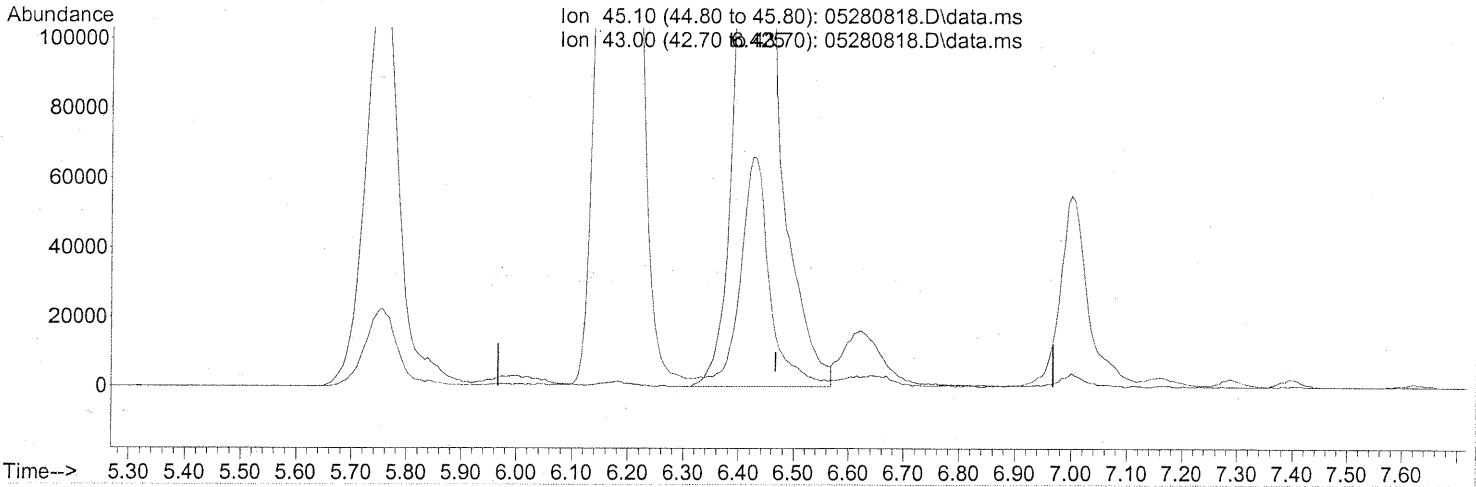
*int. whole peaks*

*WA 5/29/08*

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 07:04:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



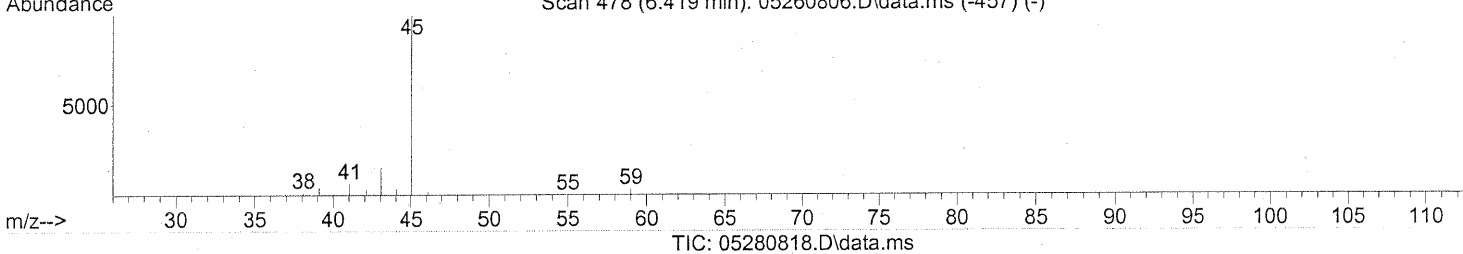
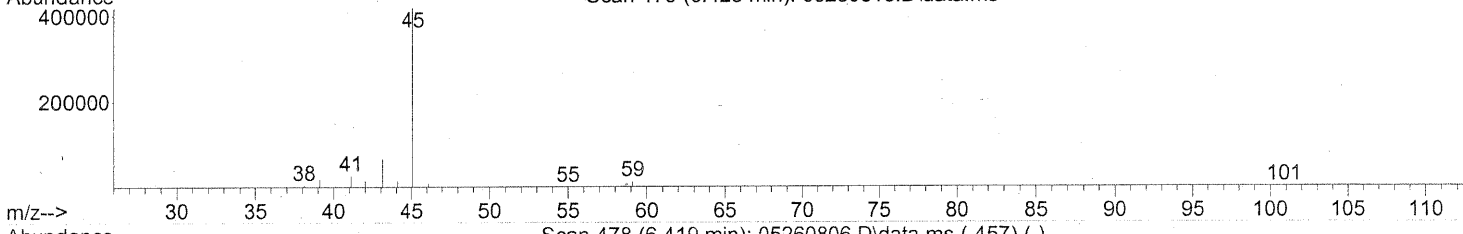
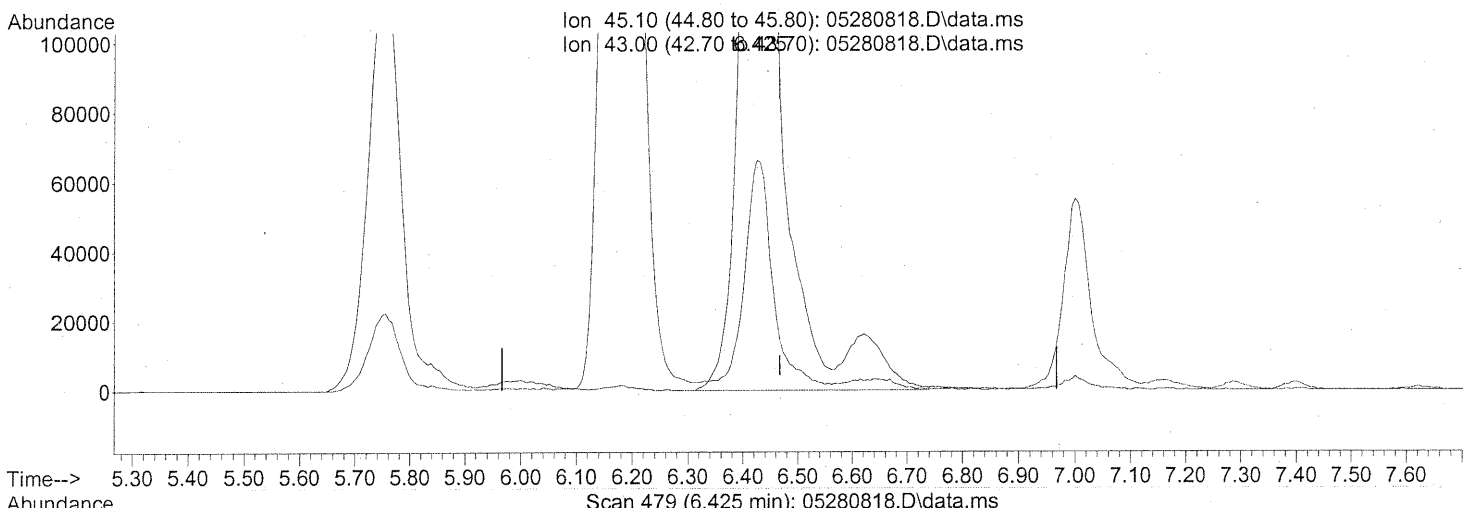
(15) Isopropanol (T)  
 6.425min (-0.042) 24.72ng  
 response 1470820

*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.28
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 07:04:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.425min (-0.042) 26.08ng m  
 response 1551710

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.43
0.00	0.00	0.00
0.00	0.00	0.00

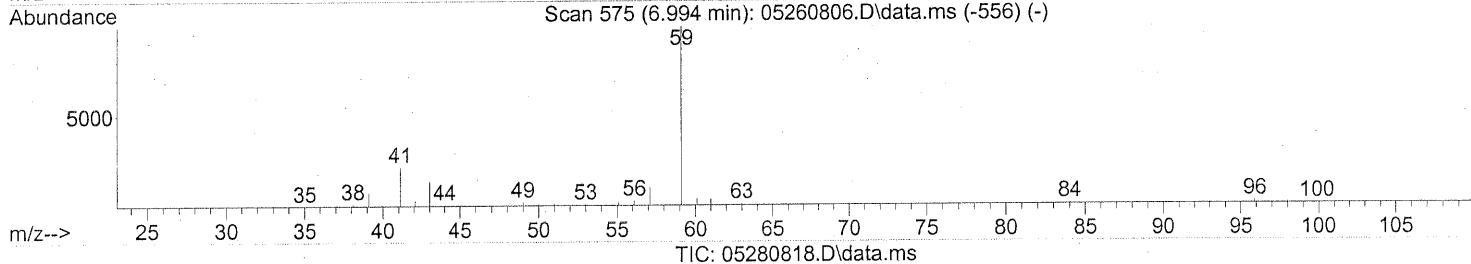
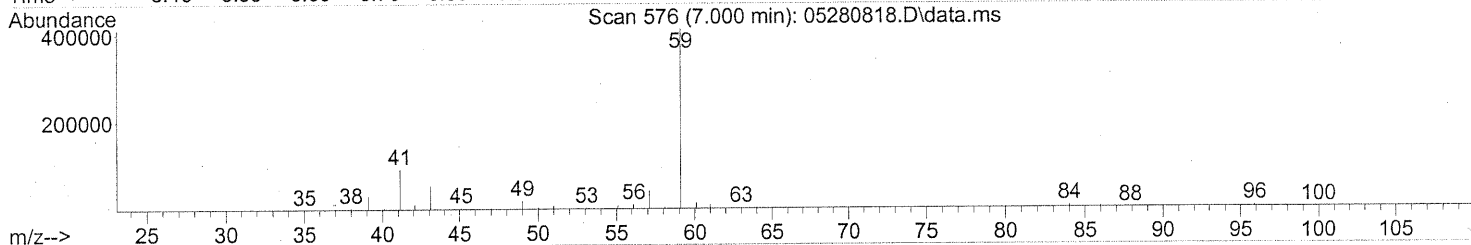
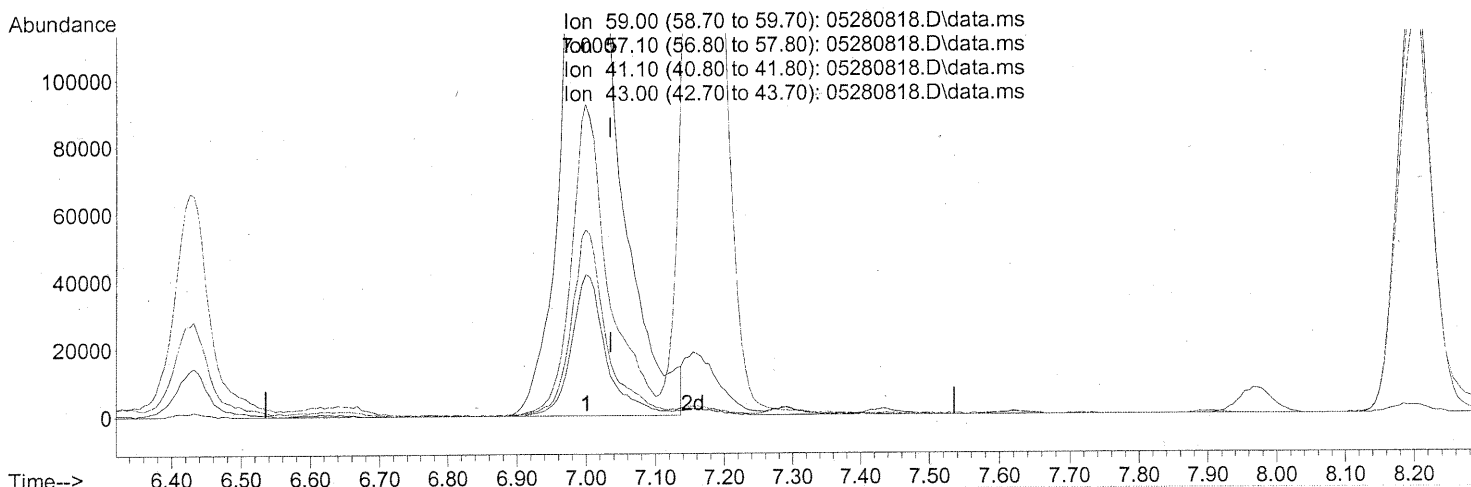
*int. whole peaks*

*WA 5/29/08*

*5/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280818.D  
Acq On : 29 May 2008 6:22 am  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 07:04:08 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



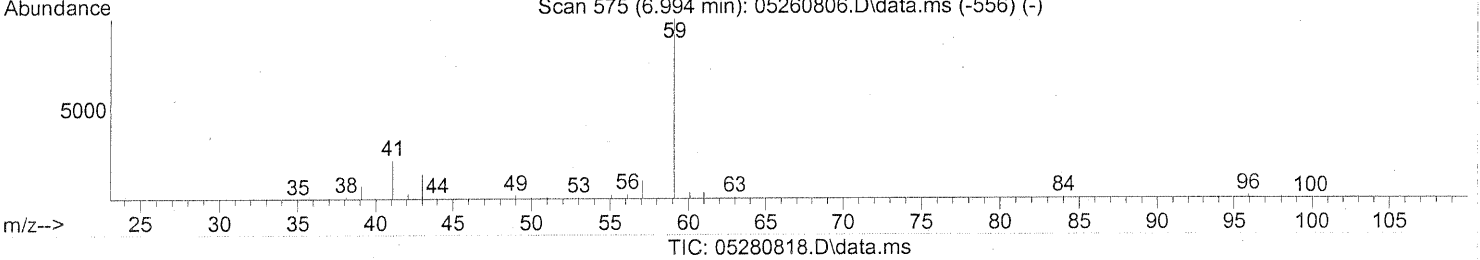
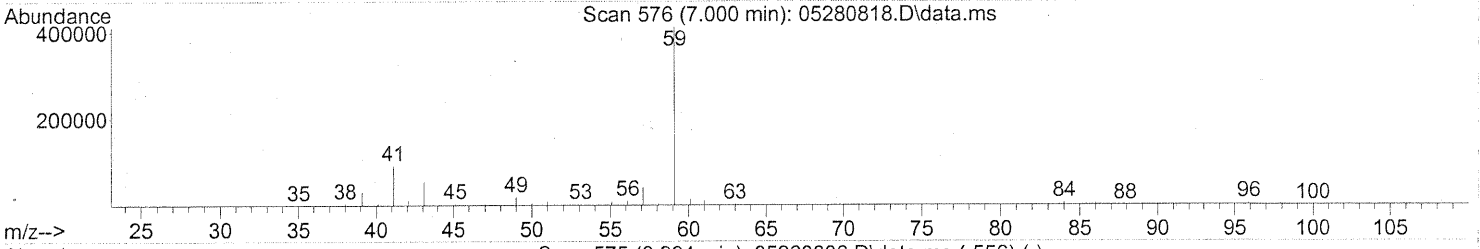
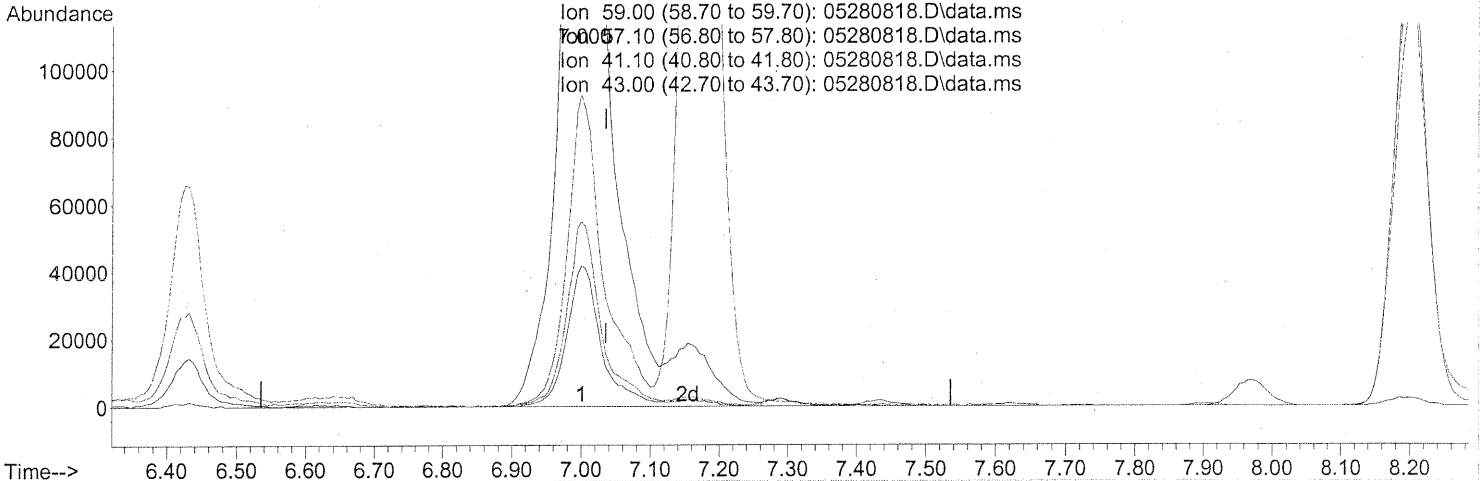
(18) tert-Butanol (T)  
7.000min (-0.036) 26.11ng  
response 1448339

*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	10.11
41.10	21.90	23.77
43.00	17.20	13.46

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 07:04:08 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



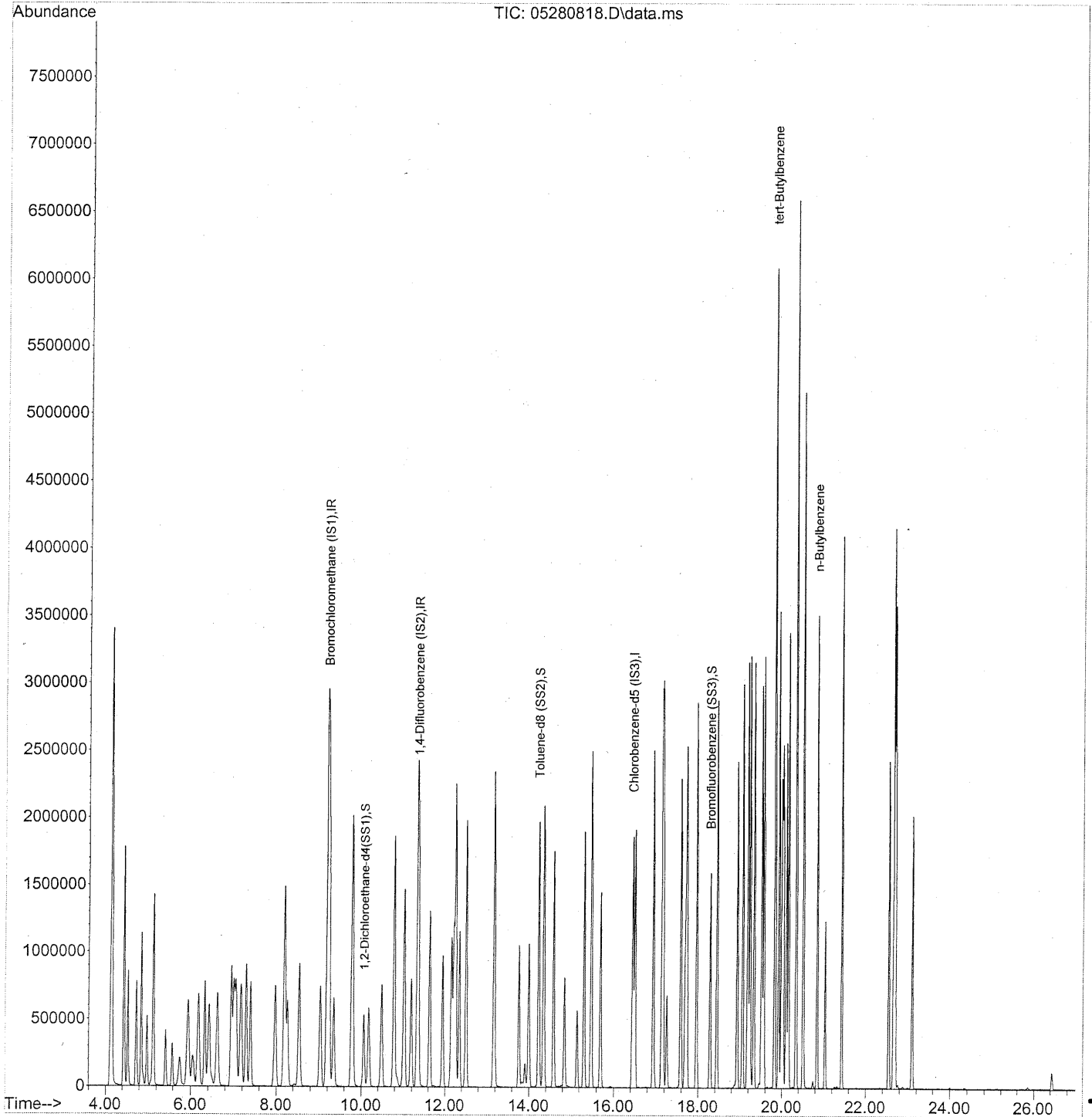
(18) tert-Butanol (T)  
 7.000min (-0.036) 27.27ng m  
 response 1512400

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.68
41.10	21.90	22.76
43.00	17.20	12.89

*int. whole peaks*  
*IDA 5/29/08*  
*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 15:06:49 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



706



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280818.D  
 Acq On : 29 May 2008 6:22  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 15:06:49 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.22	130	377949	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.36	114	1568486	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	642257	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.07	65	542466	25.101	ng	-0.02
Spiked Amount	25.000					Recovery = 100.40%
5) Toluene-d8 (SS2)	14.24	98	1610210	24.318	ng	-0.01
Spiked Amount	25.000					Recovery = 97.28%
6) Bromofluorobenzene (SS3)	18.29	174	573091	26.032	ng	0.00
Spiked Amount	25.000					Recovery = 104.12%
Target Compounds						
7) tert-Butylbenzene	19.84	119	2085449	26.078	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	2054881	26.976	ng	# 94

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/29/08  
 Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	24.1	95	69-117	
74-87-3	Chloromethane	24.5	25.5	104	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	26.4	102	58-133	
75-01-4	Vinyl Chloride	24.8	24.3	98	61-127	
74-83-9	Bromomethane	25.0	25.9	104	67-124	
75-00-3	Chloroethane	25.0	24.3	97	69-123	
64-17-5	Ethanol	23.8	26.8	113	56-137	
67-64-1	Acetone	26.8	26.3	98	63-116	
75-69-4	Trichlorofluoromethane	26.3	26.6	101	71-120	
107-13-1	Acrylonitrile	25.5	27.6	108	74-129	
75-35-4	1,1-Dichloroethene	27.8	28.8	104	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	27.1	105	35-141	
75-09-2	Methylene Chloride	27.8	27.4	99	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	30.7	115	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	27.9	100	63-129	
75-15-0	Carbon Disulfide	25.0	24.0	96	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	27.5	104	74-118	
75-34-3	1,1-Dichloroethane	26.8	28.1	105	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	27.5	103	72-119	
108-05-4	Vinyl Acetate	25.3	29.7	117	32-163	
78-93-3	2-Butanone (MEK)	27.0	28.2	104	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	27.8	103	74-117	
108-20-3	Diisopropyl Ether	26.3	27.2	103	70-131	
67-66-3	Chloroform	29.8	31.9	107	72-113	

Verified By: CA

Date: 6/5/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
637-92-3	Ethyl tert-Butyl Ether	26.0	27.3	105	74-123	
107-06-2	1,2-Dichloroethane	26.3	27.6	105	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	27.6	103	78-114	
71-43-2	Benzene	27.0	25.2	93	73-111	
56-23-5	Carbon Tetrachloride	26.0	27.4	105	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	27.3	105	81-118	
78-87-5	1,2-Dichloropropane	26.5	27.3	103	78-117	
75-27-4	Bromodichloromethane	27.8	29.6	106	77-120	
79-01-6	Trichloroethene	27.3	28.1	103	80-116	
123-91-1	1,4-Dioxane	27.5	29.3	107	79-122	
80-62-6	Methyl Methacrylate	25.8	28.9	112	79-128	
142-82-5	n-Heptane	26.8	27.4	102	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	27.1	108	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	26.9	98	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	30.2	108	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	27.6	105	80-117	
108-88-3	Toluene	26.5	25.1	95	76-116	
591-78-6	2-Hexanone	26.3	23.9	91	69-131	
124-48-1	Dibromochloromethane	27.0	27.3	101	80-128	
106-93-4	1,2-Dibromoethane	26.3	25.8	98	79-122	
111-65-9	n-Octane	26.0	25.9	100	78-122	
127-18-4	Tetrachloroethene	26.0	25.4	98	77-118	
108-90-7	Chlorobenzene	26.5	25.4	96	78-117	

Verified By: CA Date: 6/5/08 **709**

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P080529-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

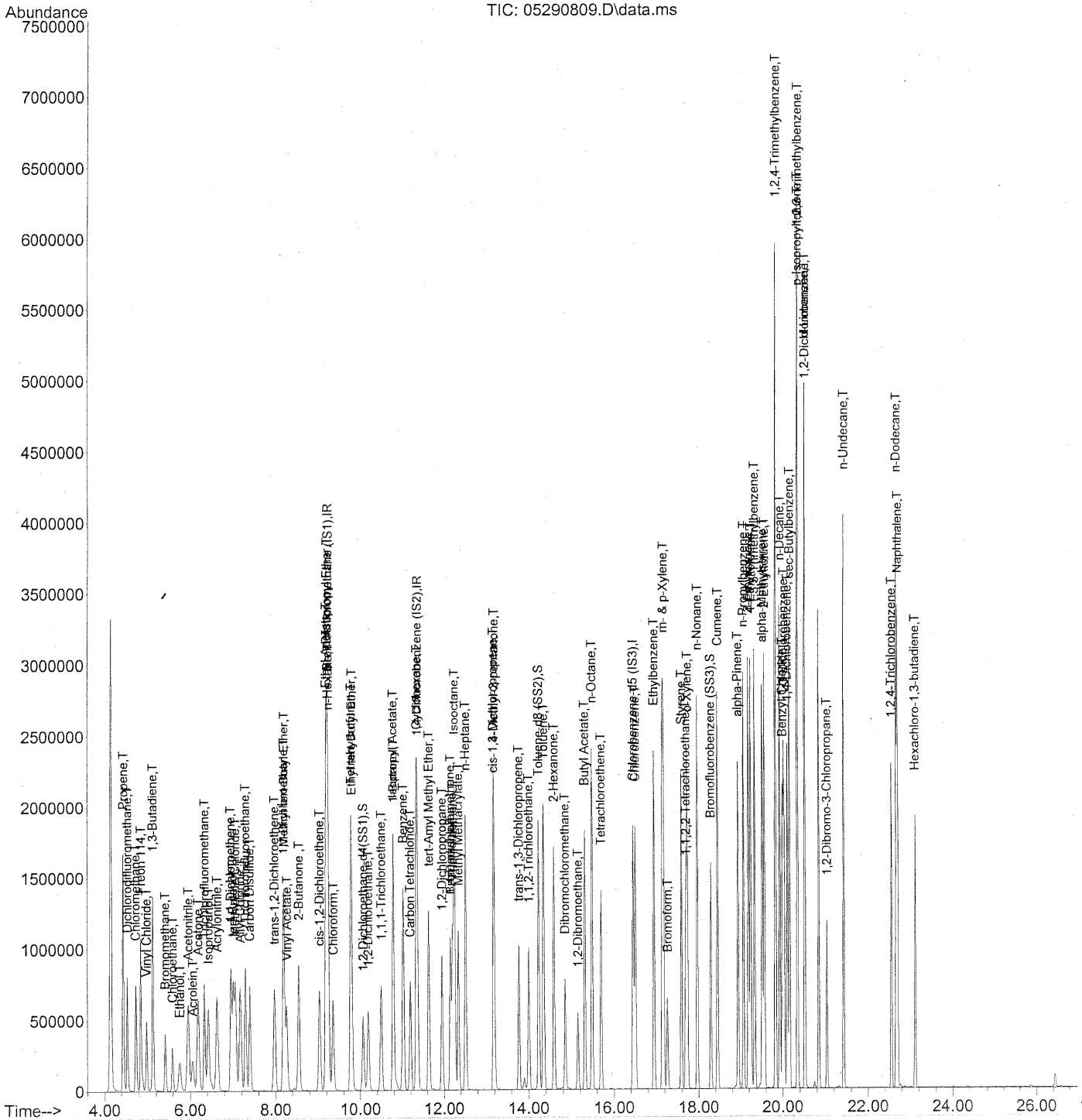
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/29/08  
**Volume(s) Analyzed:** NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	25.6	97	79-116	
179601-23-1	m,p-Xylenes	62.5	59.9	96	80-117	
75-25-2	Bromoform	31.3	34.2	109	77-128	
100-42-5	Styrene	26.3	26.6	101	80-124	
95-47-6	o-Xylene	29.8	28.5	96	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.0	97	79-120	
98-82-8	Cumene	27.0	26.5	98	81-119	
103-65-1	n-Propylbenzene	26.3	25.9	98	82-120	
622-96-8	4-Ethyltoluene	26.5	26.2	99	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.4	98	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.0	102	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.4	98	80-122	
100-44-7	Benzyl Chloride	25.8	27.4	106	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.1	98	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	26.0	99	81-119	
135-98-8	sec-Butylbenzene	26.8	26.4	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.2	101	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	25.2	98	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	27.8	108	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	27.9	107	75-138	
91-20-3	Naphthalene	26.3	27.4	104	76-143	
87-68-3	Hexachlorobutadiene	26.3	26.9	102	72-128	
98-06-6	tert-Butylbenzene	26.3	25.7	98	70-130	
104-51-8	n-Butylbenzene	26.8	26.5	99	70-130	

Verified By: CA Date: 6/5/08 **710**

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290809.D  
Acq On : 29 May 2008 2:36 pm  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:12:47 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
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Quant Time: May 29 15:12:47 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.23	130	366705	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.36	114	1518501	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	629252	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.07	65	523030	24.944	ng	-0.02
Spiked Amount	25.000		Recovery	=	99.76%	
57) Toluene-d8 (SS2)	14.24	98	1544149	23.803	ng	-0.01
Spiked Amount	25.000		Recovery	=	95.20%	
73) Bromofluorobenzene (SS3)	18.29	174	569614	26.409	ng	0.00
Spiked Amount	25.000		Recovery	=	105.64%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	800062	28.185	ng	92
3) Dichlorodifluoromethane	4.53	85	827316	24.096	ng	98
4) Chloromethane	4.73	50	1101666	25.537	ng	100
5) Freon 114	4.85	135	507211	26.431	ng	97
6) Vinyl Chloride	4.98	62	667518	24.297	ng	96
7) 1,3-Butadiene	5.13	54	821093	32.789	ng	# 85
8) Bromomethane	5.42	94	366745	25.897	ng	98
9) Chloroethane	5.59	64	344912	24.295	ng	96
10) Ethanol	5.76	45	516624m	26.823	ng	
11) Acetonitrile	5.95	41	1344181	24.212	ng	98
12) Acrolein	6.06	56	371779	26.771	ng	100
13) Acetone	6.19	58	503914	26.299	ng	# 80
14) Trichlorofluoromethane	6.34	101	856168	26.637	ng	100
15) Isopropanol	6.43	45	1463771m	25.361	ng	
16) Acrylonitrile	6.63	53	962564	27.638	ng	98
17) 1,1-Dichloroethene	6.95	96	432684	28.847	ng	93
18) tert-Butanol	7.00	59	1457165	27.079	ng	95
19) Methylene Chloride	7.05	84	404963	27.402	ng	# 39
20) Allyl Chloride	7.17	41	1044895	30.672	ng	81
21) Trichlorotrifluoroethane	7.30	151	435337	27.874	ng	86
22) Carbon Disulfide	7.40	76	1425725	23.985	ng	100
23) trans-1,2-Dichloroethene	7.97	61	813470	27.536	ng	92
24) 1,1-Dichloroethane	8.19	63	881440	28.097	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1259131	27.490	ng	79
26) Vinyl Acetate	8.27	86	93183	29.694	ng	# 1
27) 2-Butanone	8.55	72	282556	28.205	ng	# 16
28) cis-1,2-Dichloroethene	9.04	61	756371	27.838	ng	94
29) Diisopropyl Ether	9.20	87	358524	27.170	ng	# 39
30) Ethyl Acetate	9.19	61	214292	30.659	ng	85
31) n-Hexane	9.24	57	1139259	27.269	ng	92

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5/29/08

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:12:47 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.36	83	689842	31.879	ng	95
34) Tetrahydrofuran	9.78	72	270097	28.685	ng #	44
35) Ethyl tert-Butyl Ether	9.80	87	527318	27.303	ng #	76
36) 1,2-Dichloroethane	10.19	62	684232	27.579	ng	96
38) 1,1,1-Trichloroethane	10.50	97	712609	27.564	ng	94
39) Isopropyl Acetate	10.78	61	349023	27.185	ng #	61
40) 1-Butanol	10.79	56	604552	24.188	ng	99
41) Benzene	11.02	78	1615569	25.233	ng	98
42) Carbon Tetrachloride	11.19	117	719827	27.411	ng	98
43) Cyclohexane	11.34	84	639375	25.543	ng #	47
44) tert-Amyl Methyl Ether	11.64	73	1163437	27.291	ng	76
45) 1,2-Dichloropropane	11.95	63	516649	27.327	ng	96
46) Bromodichloromethane	12.16	83	557920	29.646	ng	93
47) Trichloroethene	12.21	130	560001	28.100	ng	99
48) 1,4-Dioxane	12.16	88	350390	29.297	ng #	66
49) Isooctane	12.26	57	2806071	27.415	ng	92
50) Methyl Methacrylate	12.35	100	198495	28.896	ng #	70
51) n-Heptane	12.52	71	418114	27.359	ng #	48
52) cis-1,3-Dichloropropene	13.17	75	645175	27.076	ng	100
53) 4-Methyl-2-pentanone	13.19	58	599161	26.917	ng	84
54) trans-1,3-Dichloropropene	13.77	75	663937	30.227	ng	99
55) 1,1,2-Trichloroethane	14.00	97	429286	27.568	ng	90
58) Toluene	14.35	91	1846232	25.089	ng	98
59) 2-Hexanone	14.59	43	1661851	23.913	ng	98
60) Dibromochloromethane	14.85	129	591881	27.256	ng	100
61) 1,2-Dibromoethane	15.15	107	521540	25.815	ng	98
62) Butyl Acetate	15.31	43	1852779	26.515	ng	93
63) n-Octane	15.48	57	576370	25.903	ng	95
64) Tetrachloroethene	15.70	166	551766	25.350	ng	98
65) Chlorobenzene	16.50	112	1329808	25.361	ng	100
66) Ethylbenzene	16.94	91	2138024	25.561	ng	93
67) m- & p-Xylene	17.16	91	3317195	59.857	ng	92
68) Bromoform	17.26	173	431383	34.216	ng	100
69) Styrene	17.59	104	1421350	26.550	ng	94
70) o-Xylene	17.74	91	1690417	28.499	ng	93
71) n-Nonane	17.97	43	1498420	25.598	ng	93
72) 1,1,2,2-Tetrachloroethane	17.70	83	711432	28.964	ng	93
74) Cumene	18.45	105	2289425	26.513	ng	94
75) alpha-Pinene	18.93	93	1071266	26.441	ng	93
76) n-Propylbenzene	19.07	91	2601165	25.922	ng	92
77) 3-Ethyltoluene	19.19	105	2327012	24.565	ng	94
78) 4-Ethyltoluene	19.24	105	2238288	26.188	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	1926240	25.419	ng	91

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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:12:47 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

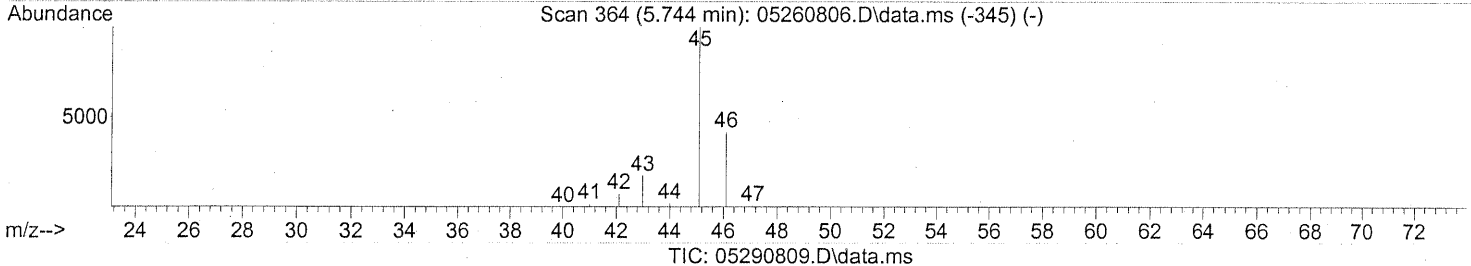
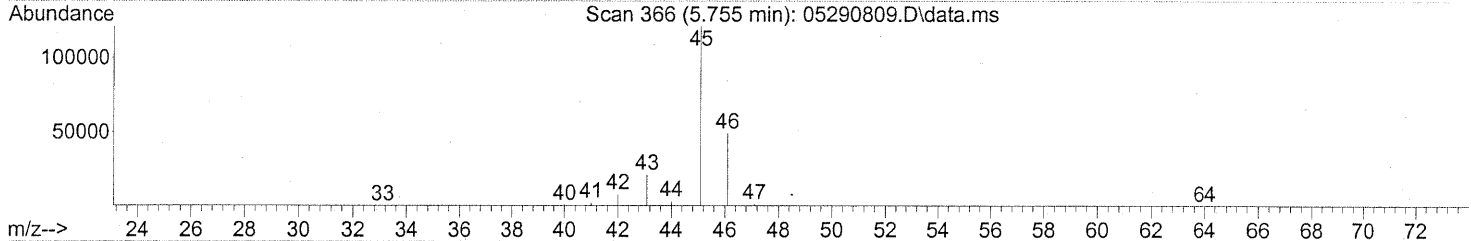
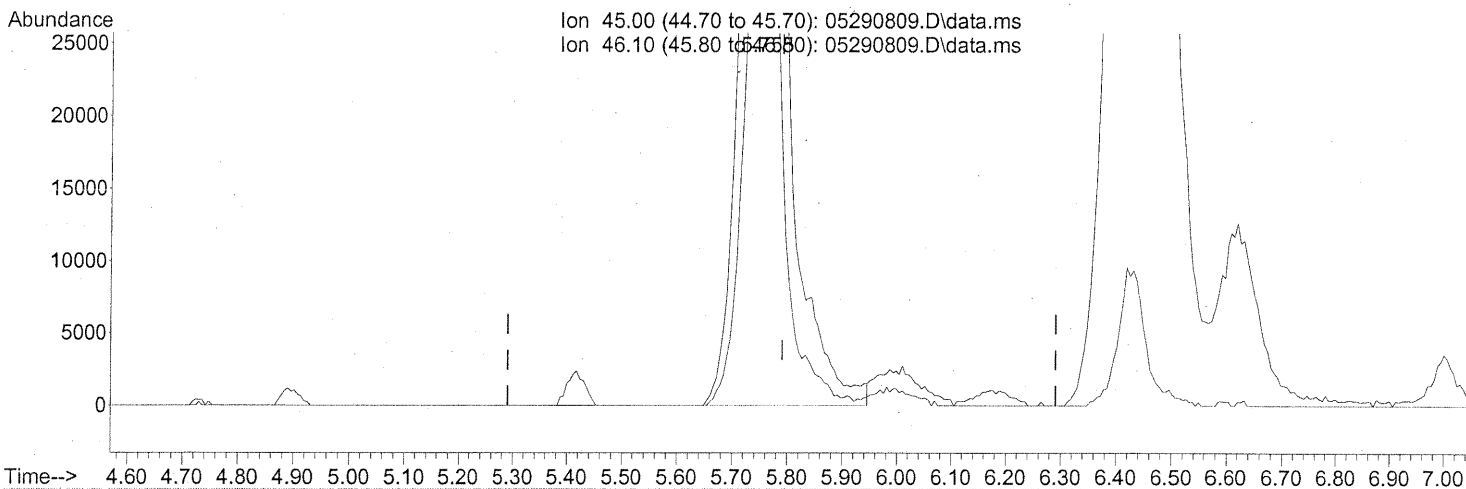
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	1105949	25.955	ng	98
81) 2-Ethyltoluene	19.57	105	2277508	24.795	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	1951302	25.434	ng	90
83) n-Decane	19.93	57	1440566	26.523	ng	79
84) Benzyl Chloride	19.99	91	1623200	27.383	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1220847	25.115	ng	99
86) 1,4-Dichlorobenzene	20.11	146	1225281	25.965	ng	99
87) sec-Butylbenzene	20.16	105	2624696	26.371	ng	95
88) p-Isopropyltoluene	20.34	119	2543207	29.248	ng	94
89) 1,2,3-Trimethylbenzene	20.35	105	2043956	27.748	ng	88
90) 1,2-Dichlorobenzene	20.52	146	1123439	25.176	ng	99
91) d-Limonene	20.52	68	622379	26.325	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	398730	27.799	ng	82
93) n-Undecane	21.43	57	1552159	27.250	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	225602	27.949	ng #	86
95) Naphthalene	22.70	128	3057607	27.431	ng	99
96) n-Dodecane	22.66	57	1526535	27.505	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	361267	26.938	ng	100

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



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:05:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.755min (-0.036) 26.06ng

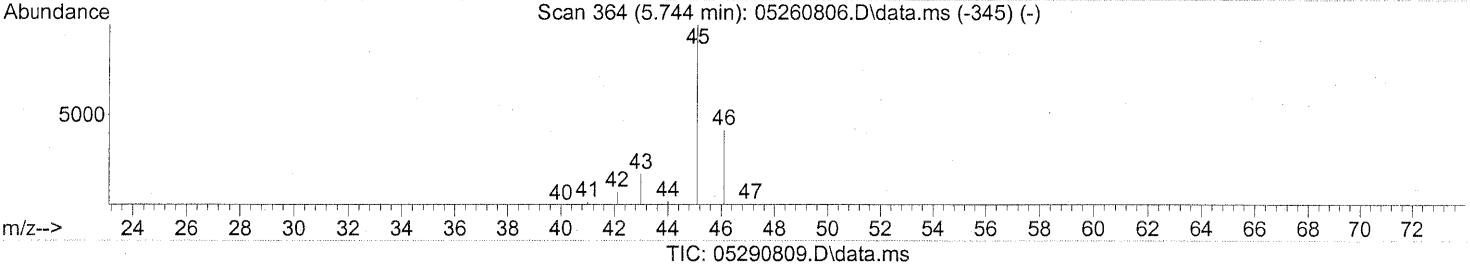
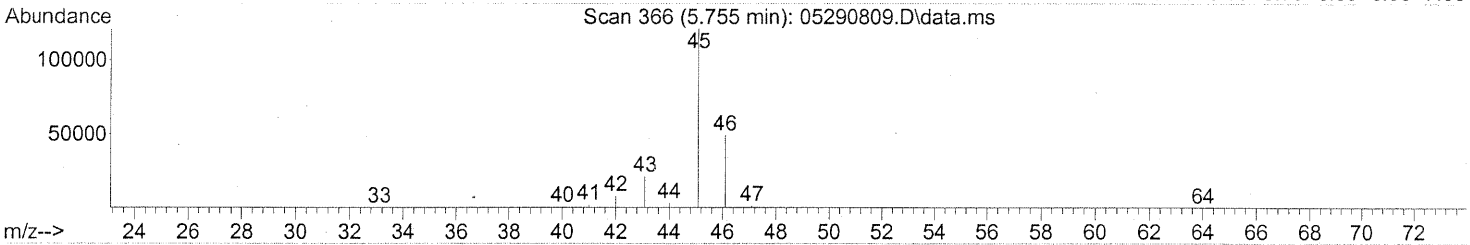
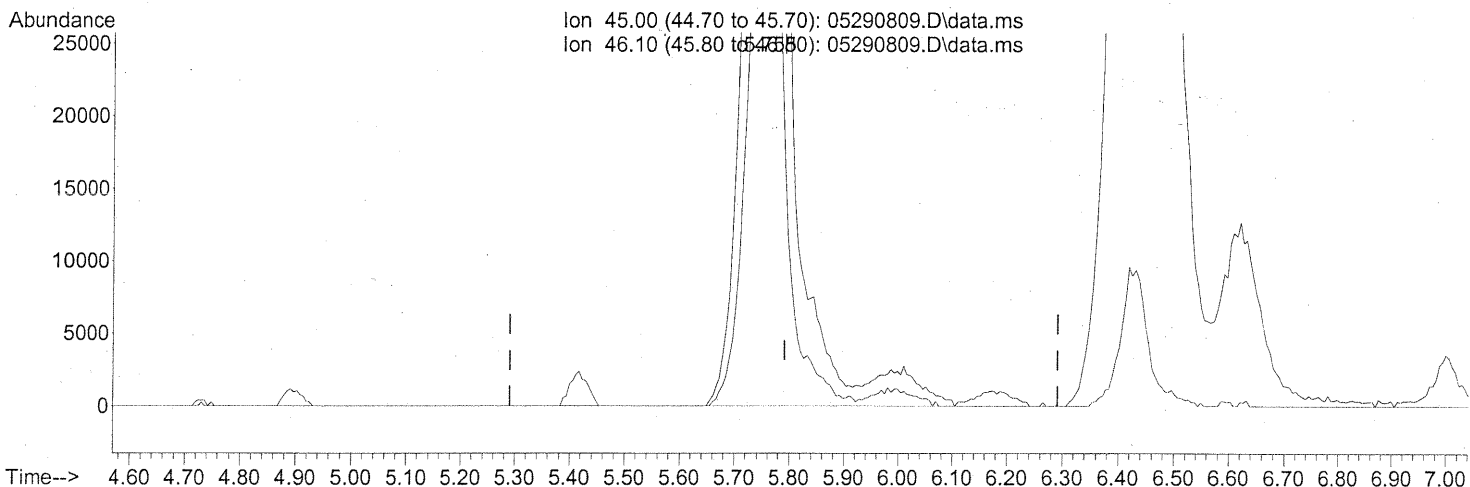
response 501953

*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.12
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:05:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



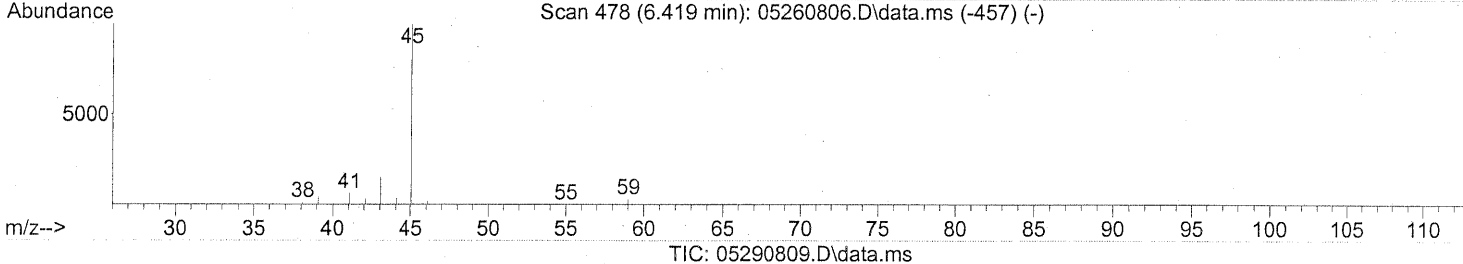
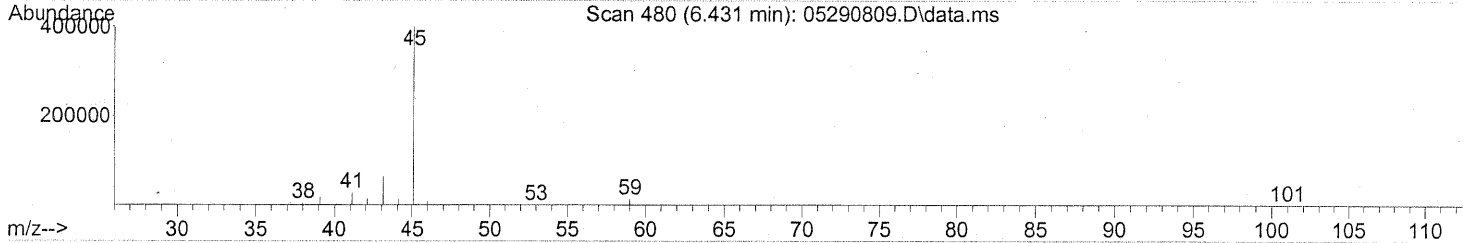
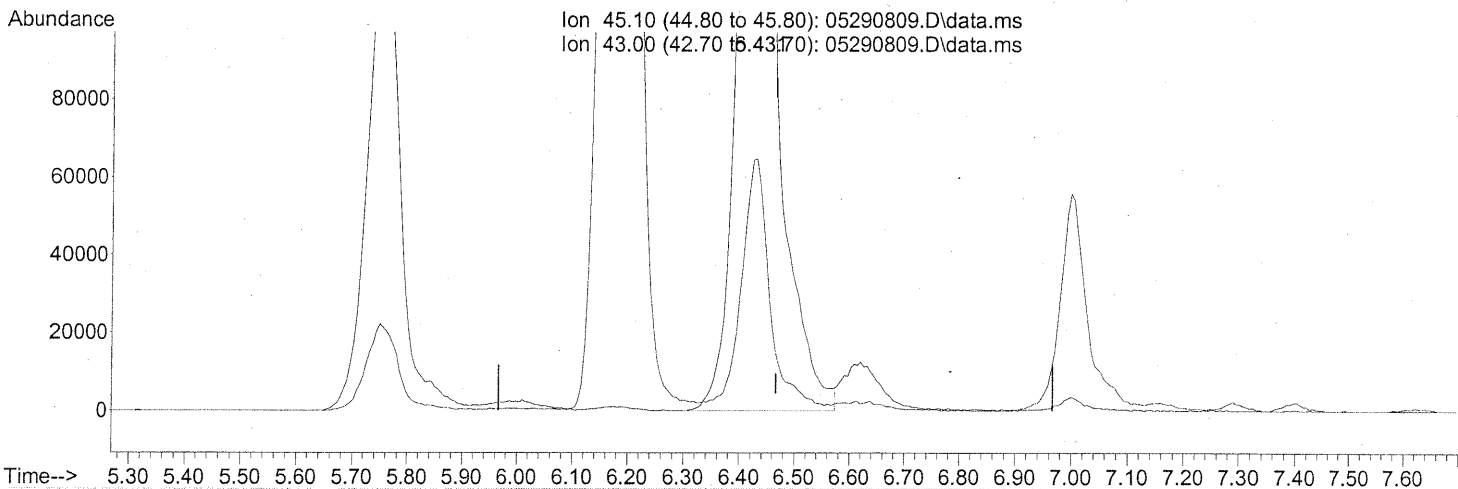
(10) Ethanol (T)  
 5.755min (-0.036) 26.82ng m  
 response 516624

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.98
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*WA 5/29/08*  
*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290809.D  
Acq On : 29 May 2008 2:36 pm  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:05:00 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



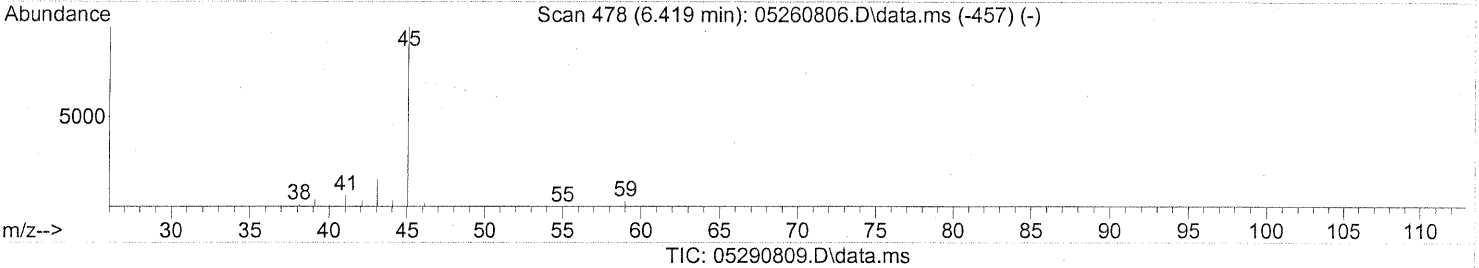
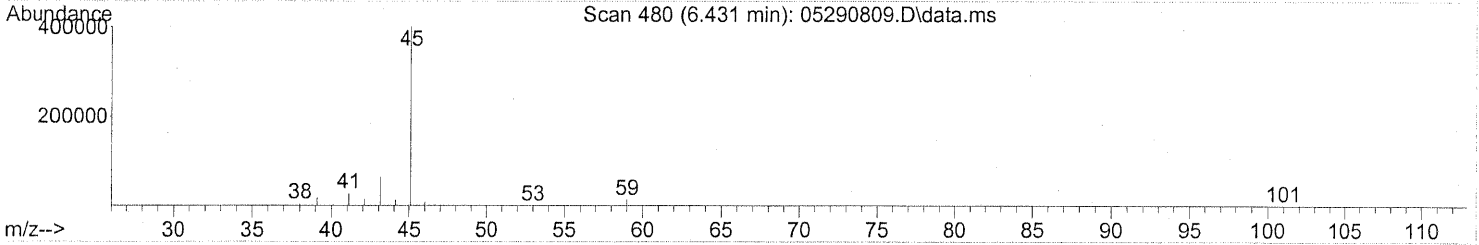
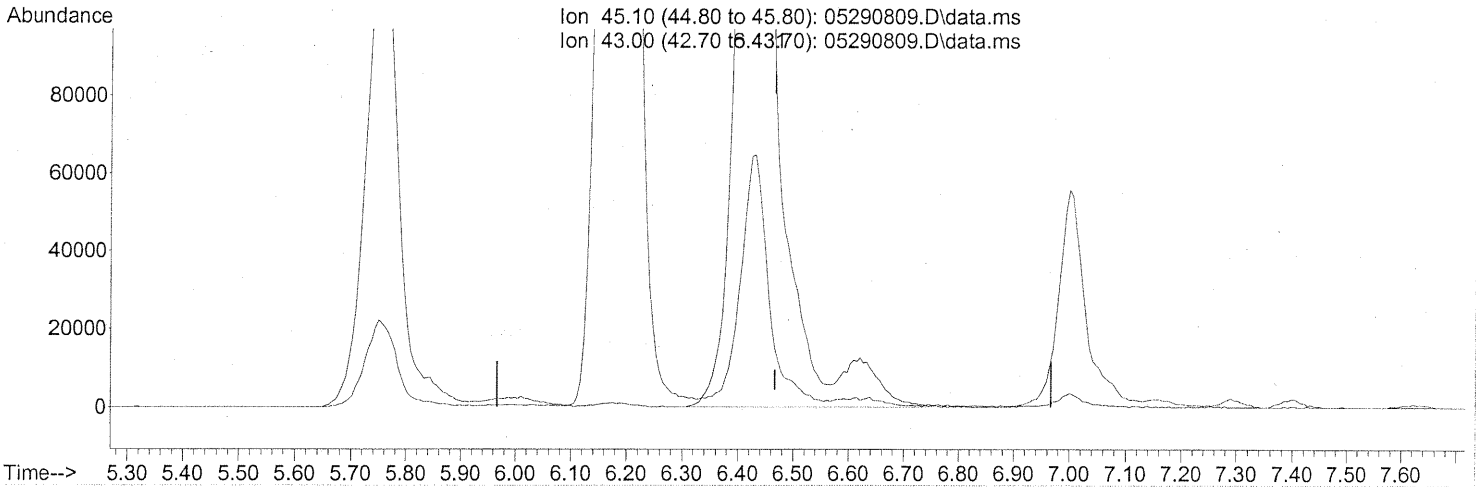
(15) Isopropanol (T)  
6.431min (-0.036) 24.34ng  
response 1404867

*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.58
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 2:36 pm  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 15:05:00 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.431min (-0.036) 25.36ng m  
 response 1463771

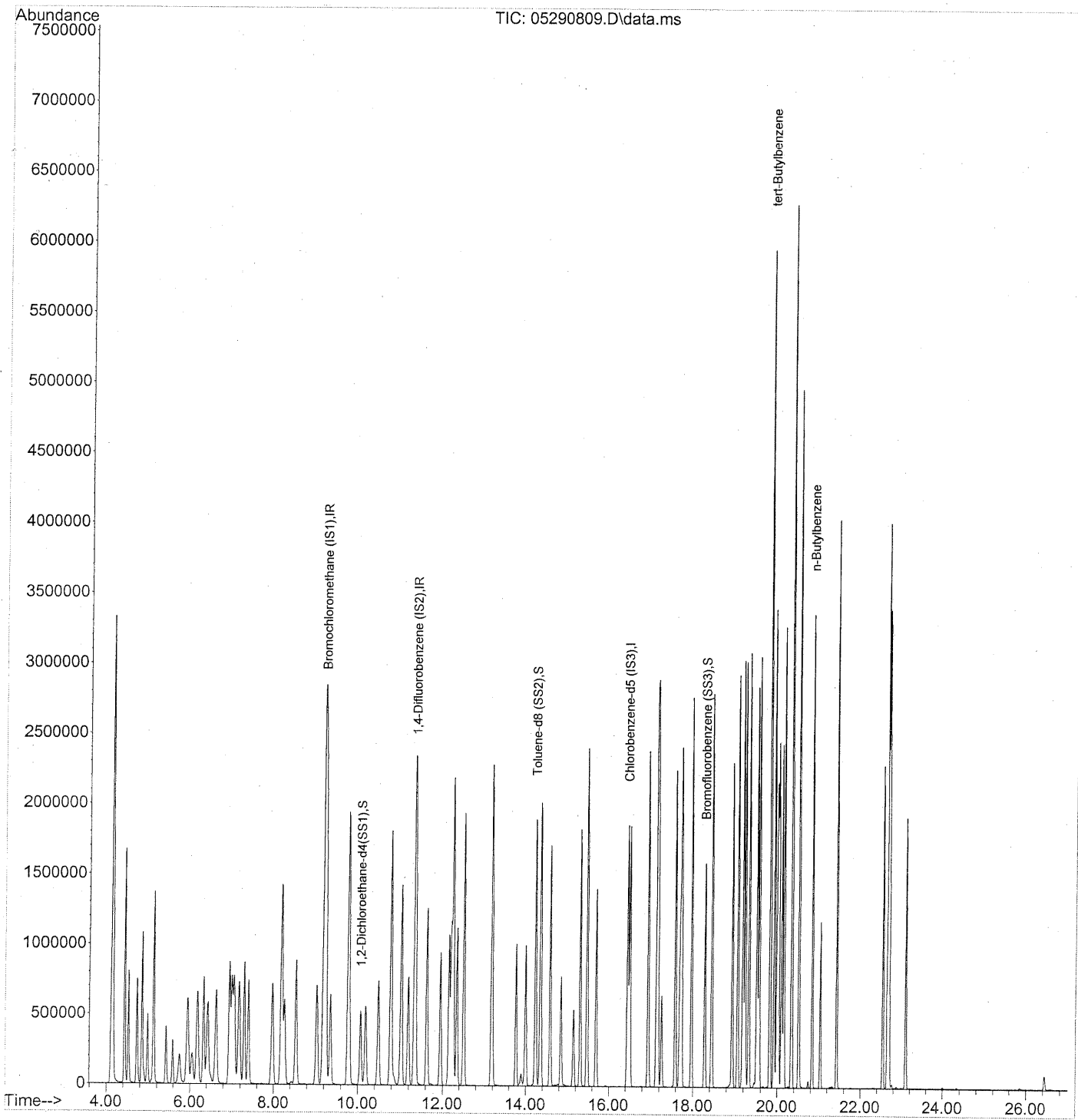
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.91
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*WA 5/29/08*

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290809.D  
Acq On : 29 May 2008 14:36  
Operator : WA  
Sample : 25ng TO-15 LCS  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:39:59 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290809.D  
 Acq On : 29 May 2008 14:36  
 Operator : WA  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:39:59 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	366705	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.36	114	1518501	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	629252	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.07	65	523030	24.944	ng	-0.02
Spiked Amount	25.000					Recovery = 99.76%
5) Toluene-d8 (SS2)	14.24	98	1544149	23.803	ng	-0.01
Spiked Amount	25.000					Recovery = 95.20%
6) Bromofluorobenzene (SS3)	18.29	174	569614	26.409	ng	0.00
Spiked Amount	25.000					Recovery = 105.64%
Target Compounds						
7) tert-Butylbenzene	19.83	119	2010299	25.658	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	1979267	26.520	ng	# 94

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** ENSR

**Client Sample ID:** SG56B-05

**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

CAS Sample ID: P0801507-008DUP

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16

Analyst: Wida Ang

Sampling Media: 6.0 L Summa Canister

Test Notes:

Container ID: SC00943

Date Collected: 5/20/08

Date Received: 5/21/08

Date Analyzed: 5/27 - 5/28/08

Volume(s) Analyzed: 0.050 Liter(s)

0.020 Liter(s)

Initial Pressure (psig): -3.8

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

Compound	Sample Result		Duplicate Sample Result		Average $\mu\text{g}/\text{m}^3$	% RPD	RPD Limit	Data Qualifier
	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV				
<b>Dichlorodifluoromethane (CFC 12)</b>	ND	ND	2.20	0.446	-	-	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	ND	ND	ND	-	-	25	
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	ND	ND	ND	ND	-	-	25	
Ethanol	ND	ND	ND	ND	-	-	25	
<b>Acetone</b>	25.9	10.9	25.6	10.8	25.75	<b>1</b>	25	<b>J, B</b>
<b>Trichlorofluoromethane</b>	55.8	9.94	55.5	9.88	55.65	<b>0.5</b>	25	
Acrylonitrile	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	
2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	ND	ND	ND	-	-	25	
<b>Methylene Chloride</b>	3.44	0.991	3.77	1.09	3.605	<b>9</b>	25	<b>J, B</b>
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
Carbon Disulfide	ND	ND	ND	ND	-	-	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
<b>1,1-Dichloroethane</b>	7.18	1.77	7.01	1.73	7.095	<b>2</b>	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
<b>2-Butanone (MEK)</b>	7.41	2.52	7.11	2.41	7.26	<b>4</b>	25	<b>J, B</b>
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Diisopropyl Ether	ND	ND	ND	ND	-	-	25	
<b>Chloroform</b>	7,490	1,530	7,410	1,520	7450	<b>1</b>	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

B = Analyte was found in the method blank.

Verified By:         

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008DUP

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00943

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

Compound	Sample Result		Duplicate Sample Result		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Ethyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
<b>Benzene</b>	6.28	1.97	6.38	2.00	6.33	<b>2</b>	25	<b>B</b>
<b>Carbon Tetrachloride</b>	209	33.3	209	33.3	209	<b>0</b>	25	
tert-Amyl Methyl Ether	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
Bromodichloromethane	ND	ND	ND	ND	-	-	25	
Trichloroethene	ND	ND	ND	ND	-	-	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	ND	ND	ND	ND	-	-	25	
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
4-Methyl-2-pentanone	ND	ND	ND	ND	-	-	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
<b>Toluene</b>	32.3	8.57	32.7	8.68	32.5	<b>1</b>	25	
2-Hexanone	ND	ND	ND	ND	-	-	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
<b>n-Octane</b>	25.7	5.51	26.3	5.63	26	<b>2</b>	25	
<b>Tetrachloroethene</b>	30.8	4.54	30.2	4.46	30.5	<b>2</b>	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

B = Analyte was found in the method blank.

Verified By:          Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG56B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507  
 CAS Sample ID: P0801507-008DUP

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00943

Date Collected: 5/20/08  
 Date Received: 5/21/08  
 Date Analyzed: 5/27 - 5/28/08  
 Volume(s) Analyzed: 0.050 Liter(s)  
 0.020 Liter(s)

Initial Pressure (psig): -3.8

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.67

Compound	Sample Result		Duplicate		Average µg/m <sup>3</sup>	% RPD	RPD Limit	Data Qualifier
	µg/m <sup>3</sup>	ppbV	µg/m <sup>3</sup>	ppbV				
Ethylbenzene	8.88	2.05	8.52	1.96	8.7	4	25	J
m,p-Xylenes	46.7	10.7	47.2	10.9	46.95	1	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	16.6	3.82	16.5	3.81	16.55	0.6	25	J
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	ND	ND	ND	ND	-	-	25	
n-Propylbenzene	ND	ND	ND	ND	-	-	25	
4-Ethyltoluene	ND	ND	ND	ND	-	-	25	
1,3,5-Trimethylbenzene	3.64	0.741	3.27	0.666	3.455	11	25	J
alpha-Methylstyrene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	5.18	1.05	5.08	1.03	5.13	2	25	J
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	4.34	0.722	4.18	0.695	4.26	4	25	
1,4-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
sec-Butylbenzene	ND	ND	ND	ND	-	-	25	
4-Isopropyltoluene (p-Cymene)	ND	ND	ND	ND	-	-	25	
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	ND	ND	ND	ND	-	-	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	
tert-Butylbenzene	ND	ND	ND	ND	-	-	25	
n-Butylbenzene	ND	ND	ND	ND	-	-	25	

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

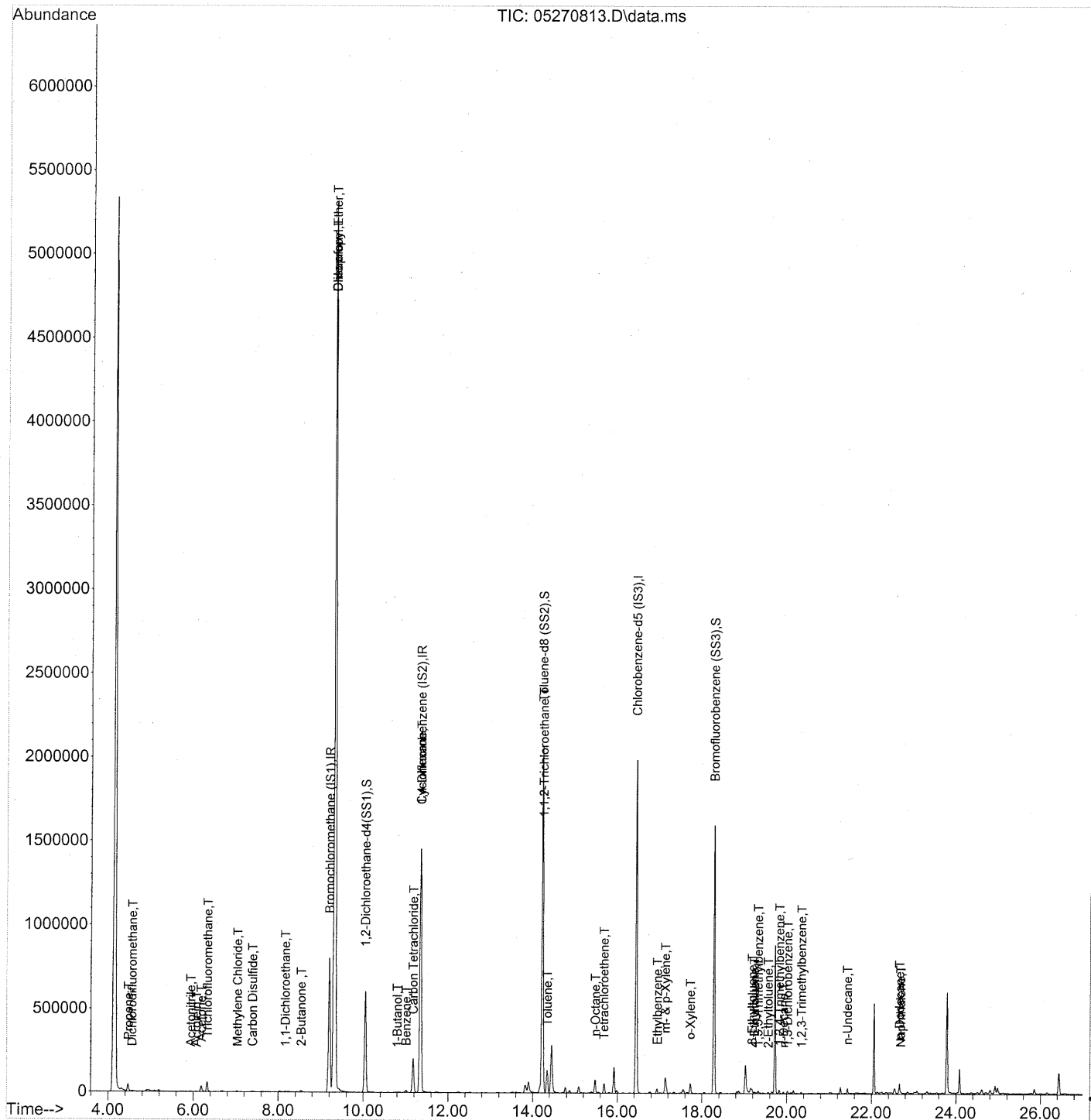
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: CA Date: 6/5/08

**723**

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



724

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	392730	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1634694	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	660800	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	557417	24.822	ng	-0.05
Spiked Amount	25.000			Recovery =	99.28%	✓
57) Toluene-d8 (SS2)	14.23	98	1653444	24.271	ng	-0.02
Spiked Amount	25.000			Recovery =	97.08%	✓
73) Bromofluorobenzene (SS3)	18.28	174	570356	25.181	ng	-0.01
Spiked Amount	25.000			Recovery =	100.72%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	1683	0.055	ng	# 88
3) Dichlorodifluoromethane	4.56	85	2412	0.066	ng	# 89
4) Chloromethane	4.76	50	196	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	0.00	54	0	N.D.	✓	
8) Bromomethane	0.00	94	0	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	5.69	45	800	N.D.	✓	
11) Acetonitrile	5.94	41	4361	0.073	ng	# 62
12) Acrolein	6.08	56	1522	0.102	ng	99
13) Acetone	6.19	58	15721	0.766	ng	# 76
14) Trichlorofluoromethane	6.33	101	57174	1.661	ng	98
15) Isopropanol	6.45	45	91	N.D.	✓	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	6.96	59	91	N.D.	✓	
19) Methylene Chloride	7.04	84	1796	0.113	ng	# 28
20) Allyl Chloride	0.00	41	0	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	7.40	76	6568	<del>0.103</del>	ng	84
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	8.17	63	7062	0.210	ng	98
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	8.53	72	2288	0.213	ng	# 1
28) cis-1,2-Dichloroethene	9.17	61	112	N.D.	✓	
29) Diisopropyl Ether	9.32	87	614586	<del>43.489</del>	ng NR#	1
30) Ethyl Acetate	9.17	61	112	N.D.	✓	
31) n-Hexane	9.23	57	874	N.D.	✓	

725

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.32	83	5640956	<del>243.405</del> ng	see dil	96
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	10.16	62	742	N.D.	✓	
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.	✓	
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.80	56	1638	0.061 ng	#	1
41) Benzene	11.01	78	13197	0.191 ng		98
42) Carbon Tetrachloride	11.18	117	177212	6.269 ng		99
43) Cyclohexane	11.35	84	2247	0.083 ng	#	1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	✓	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	✓	
46) Bromodichloromethane	12.14	83	834	N.D.	✓	
47) Trichloroethene	12.19	130	198	N.D.	✓	
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	12.25	57	3595	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.	✓	
51) n-Heptane	0.00	71	0	N.D.	✓	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
53) 4-Methyl-2-pentanone	13.19	58	823	N.D.	✓	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
55) 1,1,2-Trichloroethane	14.24	97	139947	<del>8.348</del> ng	NR#	7
58) Toluene	14.35	91	75639	0.979 ng		98
59) 2-Hexanone	14.58	43	2284	N.D.	✓	
60) Dibromochloromethane	0.00	129	0	N.D.	✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	✓	
62) Butyl Acetate	15.31	43	330	N.D.		
63) n-Octane	15.48	57	18380	0.787 ng		95
64) Tetrachloroethene	15.69	166	20683	0.905 ng		99
65) Chlorobenzene	16.50	112	1100	N.D.	✓	
66) Ethylbenzene	16.94	91	22393	0.255 ng		90
67) m- & p-Xylene	17.14	91	82180	1.412 ng		92
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	17.59	104	945	N.D.	✓	
70) o-Xylene	17.73	91	30831	0.495 ng		94
71) n-Nonane	17.96	43	1568	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.	✓	
74) Cumene	18.45	105	706	N.D.	✓	
75) alpha-Pinene	18.93	93	431	N.D.		
76) n-Propylbenzene	19.06	91	2958	N.D.	✓	
77) 3-Ethyltoluene	19.18	105	14533	0.146 ng		96
78) 4-Ethyltoluene	19.24	105	4570	<del>0.051</del> ng		98
79) 1,3,5-Trimethylbenzene	19.33	105	7832	0.098 ng		8726

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

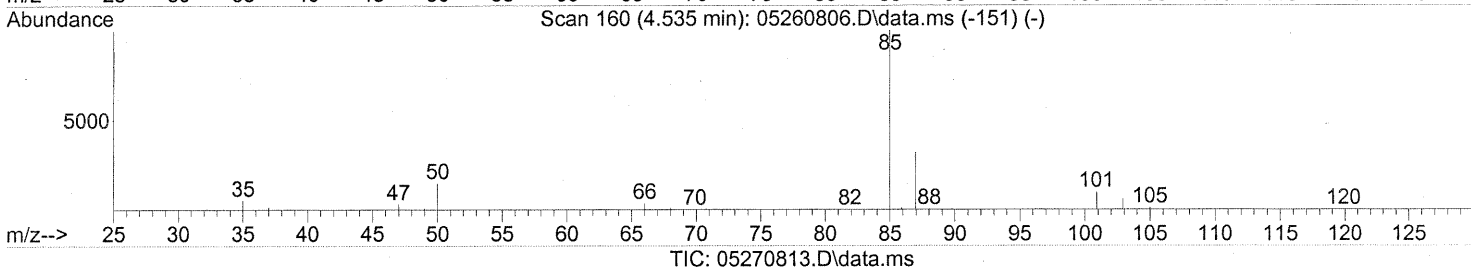
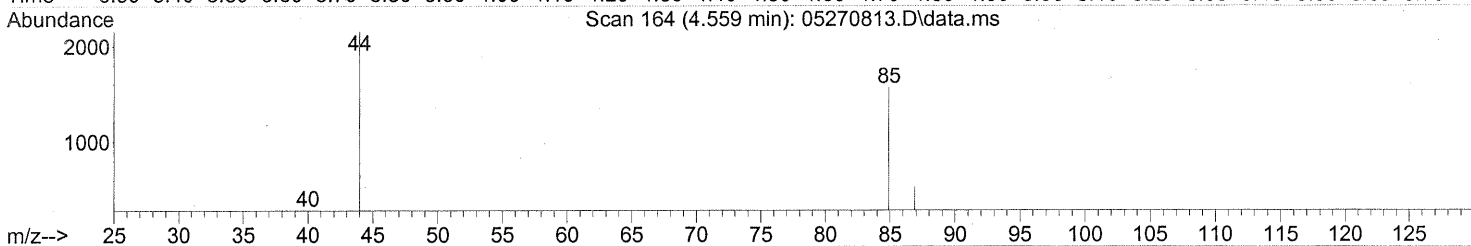
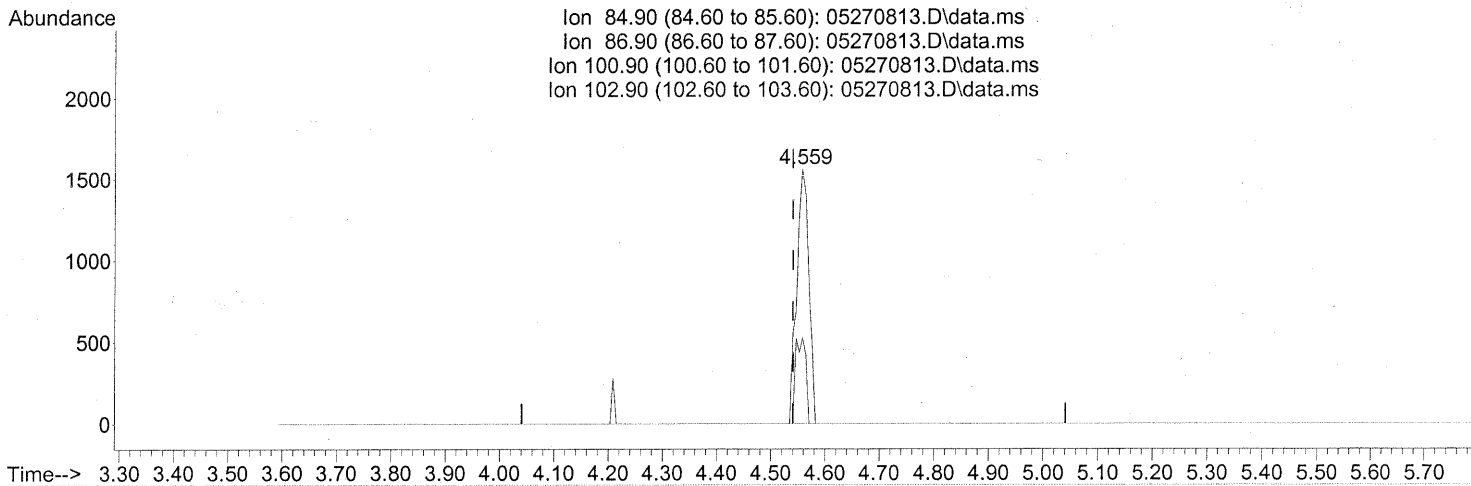
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	93	N.D.	✓	
81) 2-Ethyltoluene	19.56	105	5754	0.060	ng	95
82) 1,2,4-Trimethylbenzene	19.83	105	12256	0.152	ng	98
83) n-Decane	19.92	57	4076	0.071	ng	78
84) Benzyl Chloride	19.98	91	195	N.D.	✓	
85) 1,3-Dichlorobenzene	20.02	146	6397	0.125	ng	95
86) 1,4-Dichlorobenzene	20.10	146	2114	N.D.	✓	
87) sec-Butylbenzene	20.16	105	243	N.D.	✓	
88) p-Isopropyltoluene	20.34	119	943	N.D.	✓	
89) 1,2,3-Trimethylbenzene	20.34	105	4193	0.054	ng	97
90) 1,2-Dichlorobenzene	20.51	146	646	N.D.	✓	
91) d-Limonene	20.51	68	356	N.D.	✓	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	21.43	57	10248	0.171	ng	96
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.	✓	
95) Naphthalene	22.69	128	5956	0.051	ng	83
96) n-Dodecane	22.66	57	21530	0.369	ng	78
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.559min (+0.018) 0.07ng

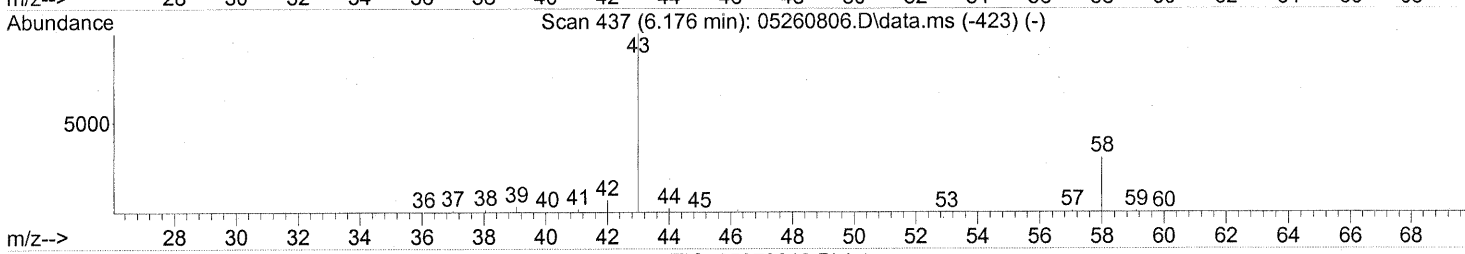
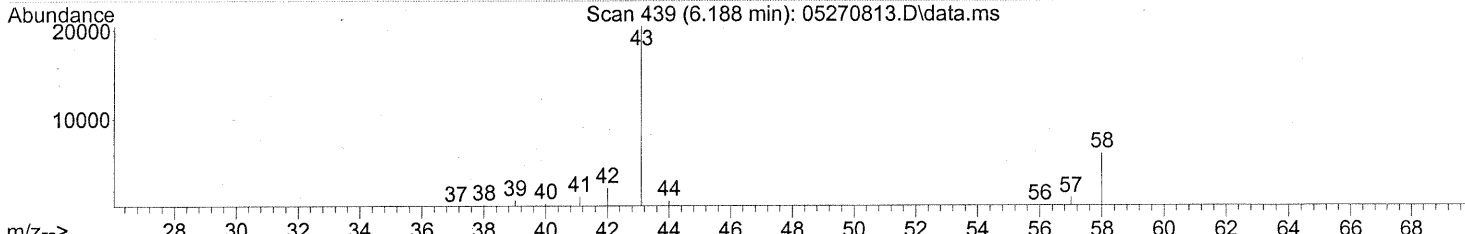
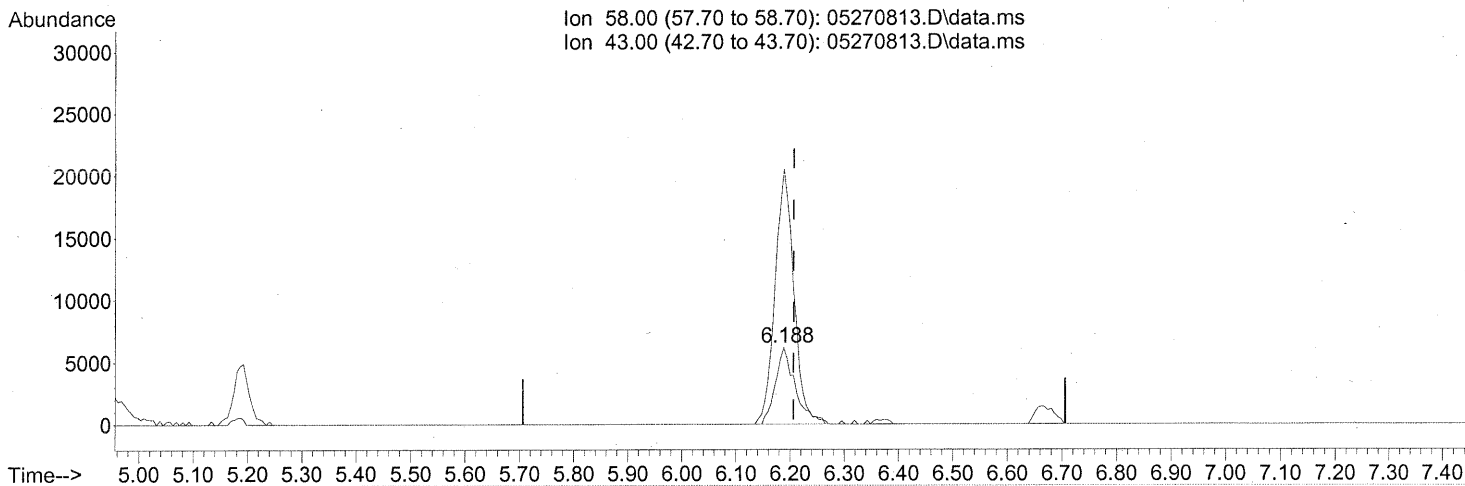
response 2412

Ion	Exp%	Act%
84.90	100	100
86.90	31.50	28.07
100.90	8.40	0.00
102.90	5.50	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



TIC: 05270813.D\data.ms

(13) Acetone (T)

6.188min (-0.018) 0.77ng

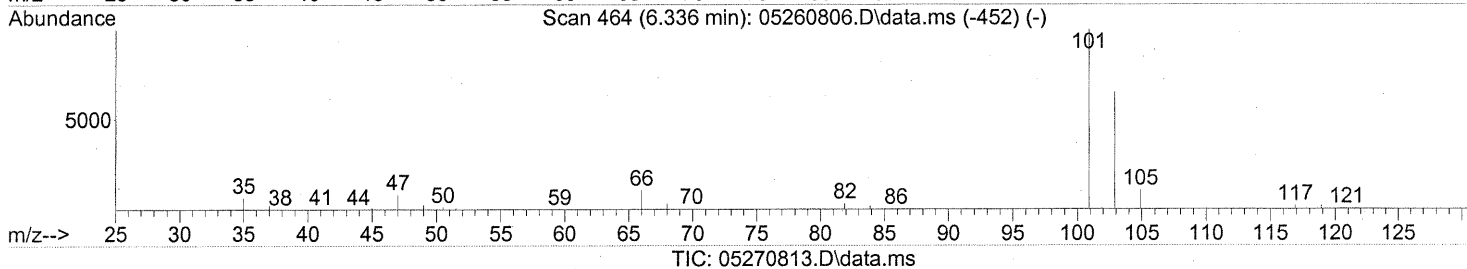
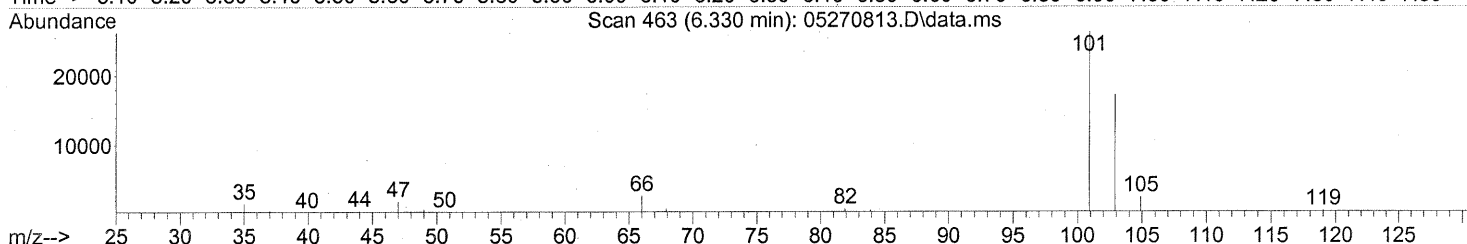
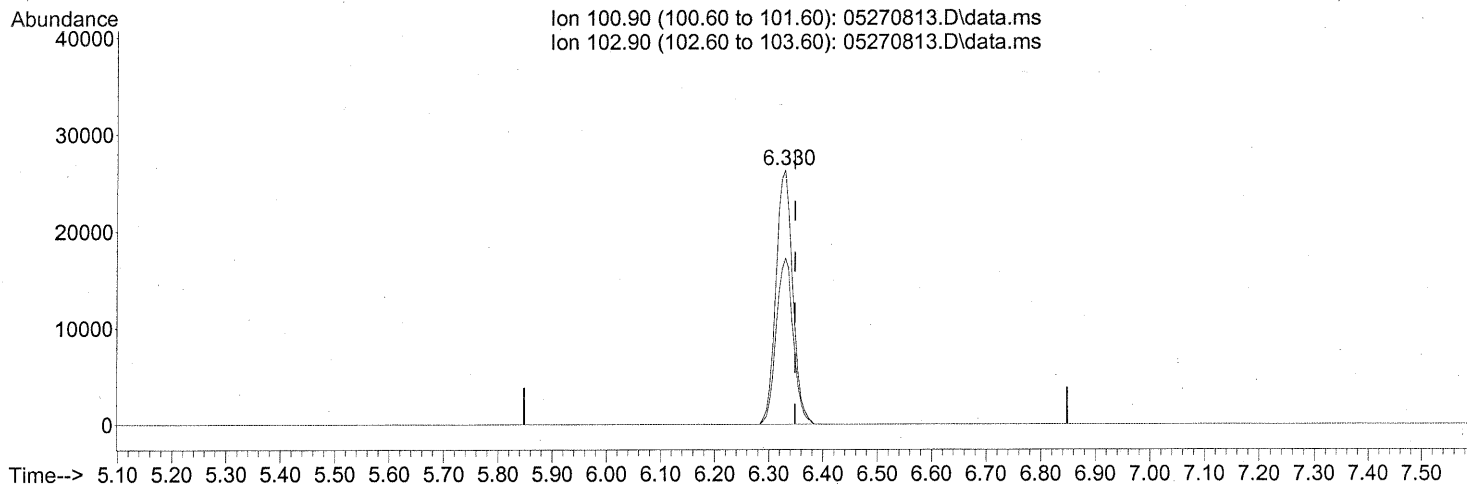
response 15721

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	314.31#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

6.330min (-0.018) 1.66ng

response 57174

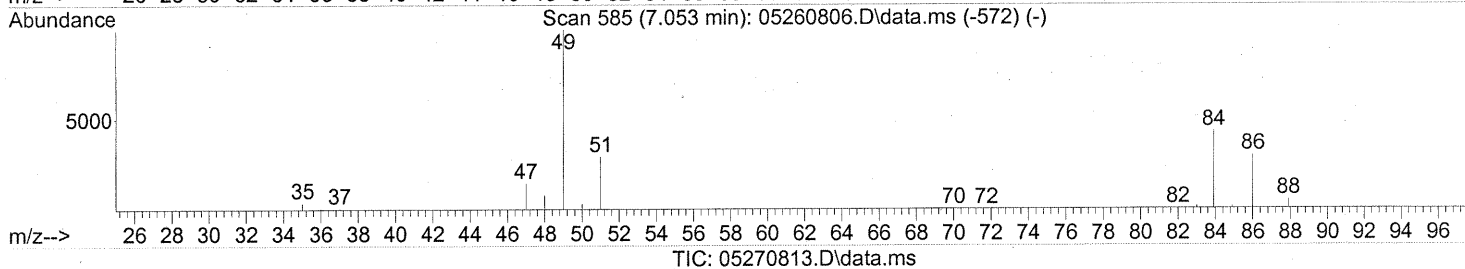
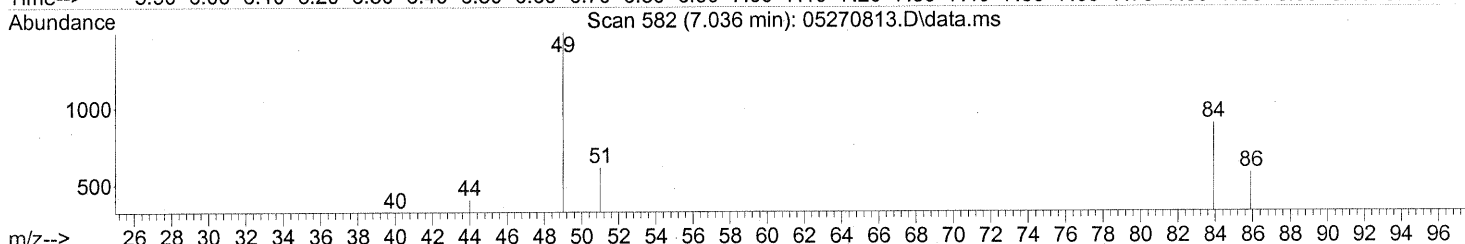
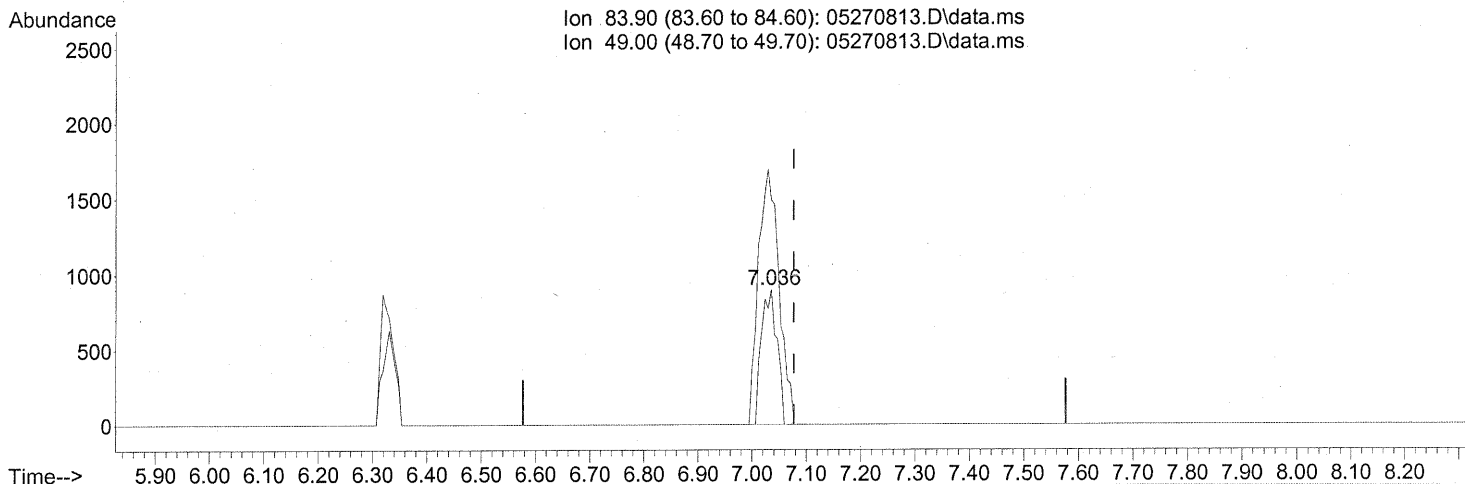
Ion	Exp%	Act%
100.90	100	100
102.90	64.90	66.60
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

7.036min (-0.041) 0.11ng

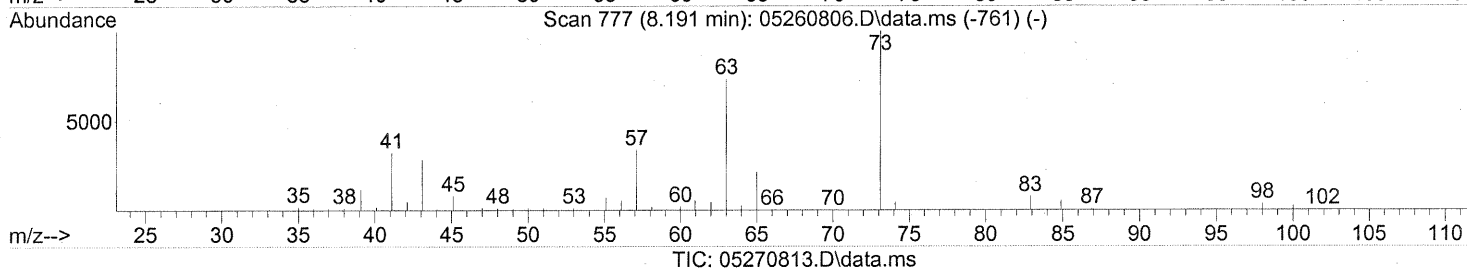
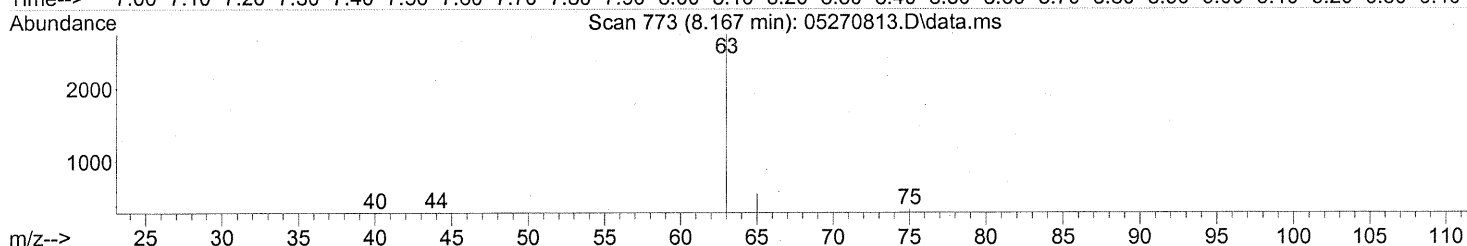
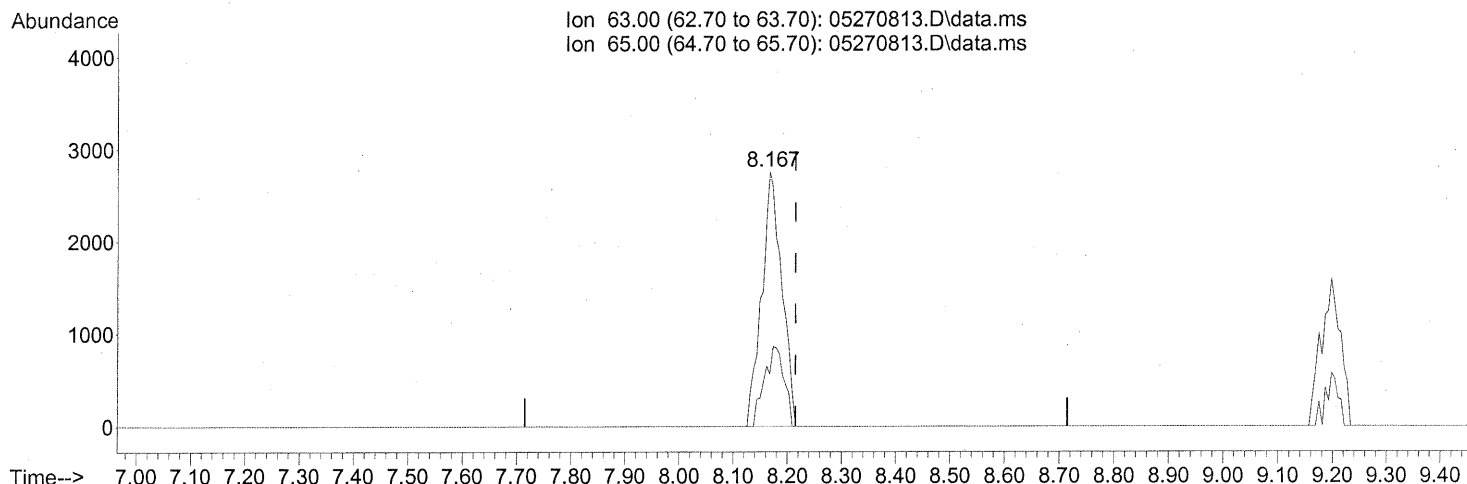
response 1796

Ion	Exp%	Act%
83.90	100	100
49.00	155.50	249.05#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
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 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

8.167min (-0.048) 0.21ng

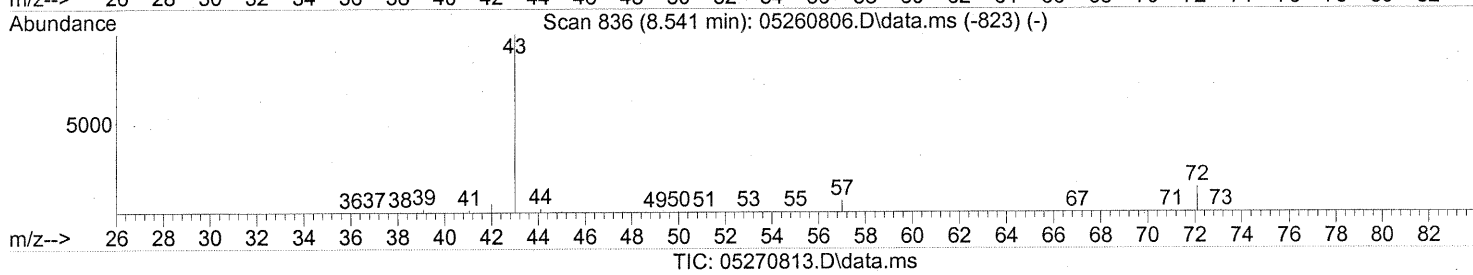
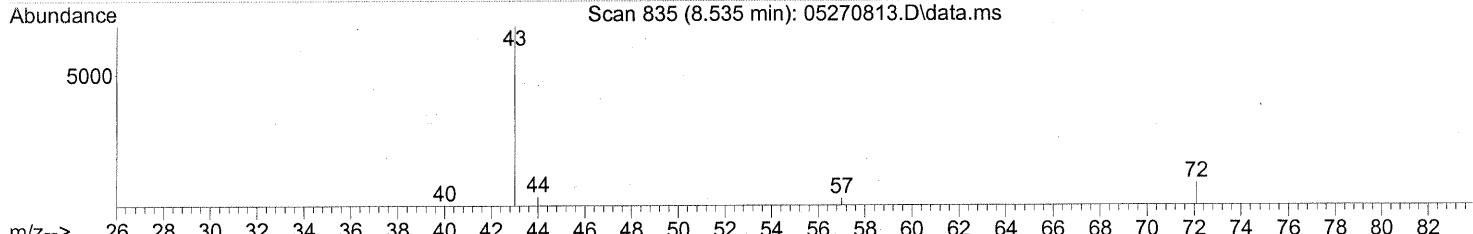
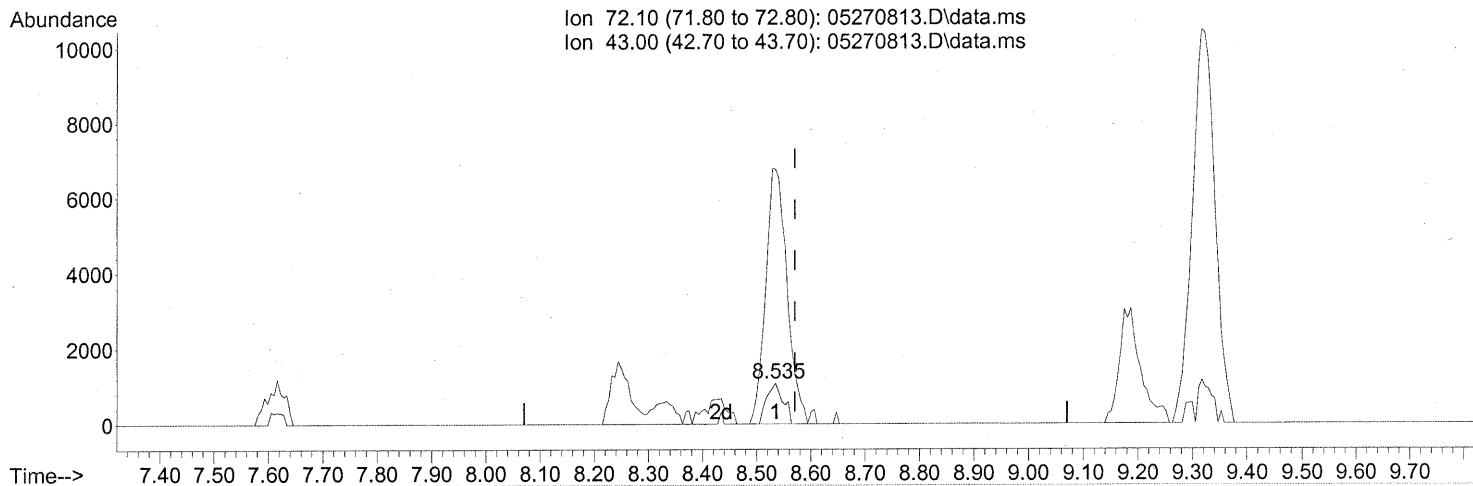
response 7062

Ion	Exp%	Act%
63.00	100	100
65.00	32.20	30.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

8.535min (-0.036) 0.21ng

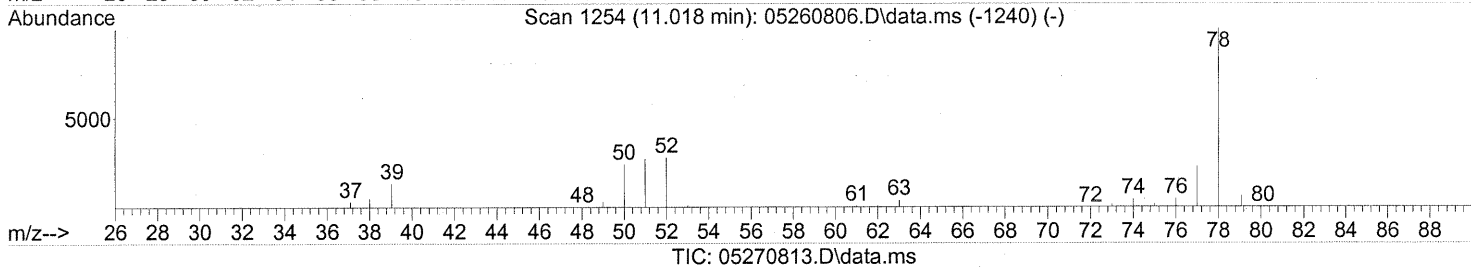
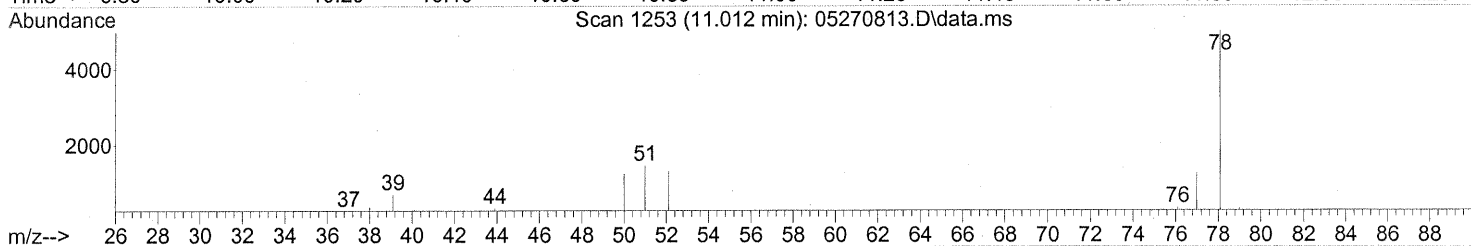
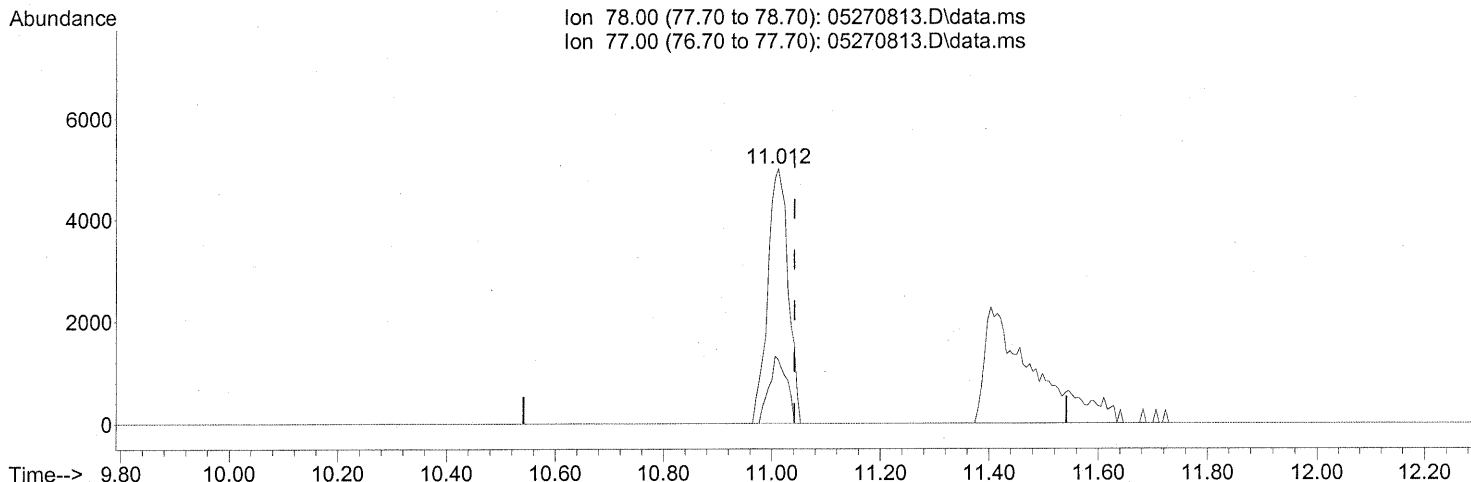
response 2288

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	815.17#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270813.D  
Acq On : 27 May 2008 20:27  
Operator : WA  
Sample : P0801507-008 Dup (50ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



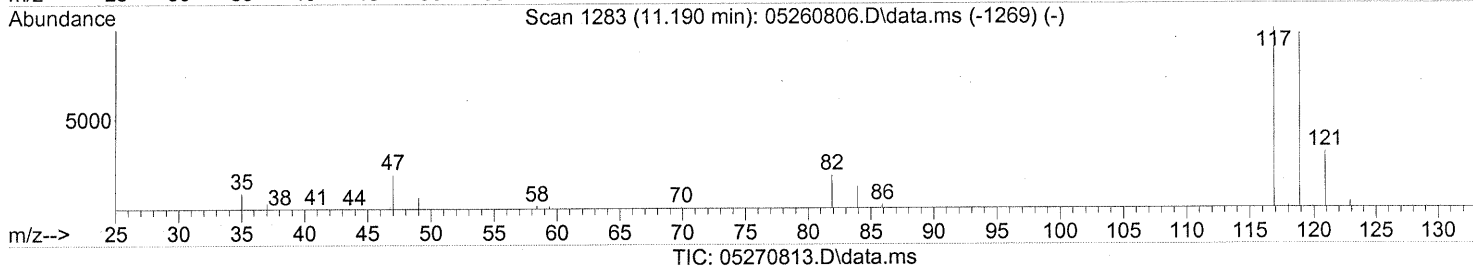
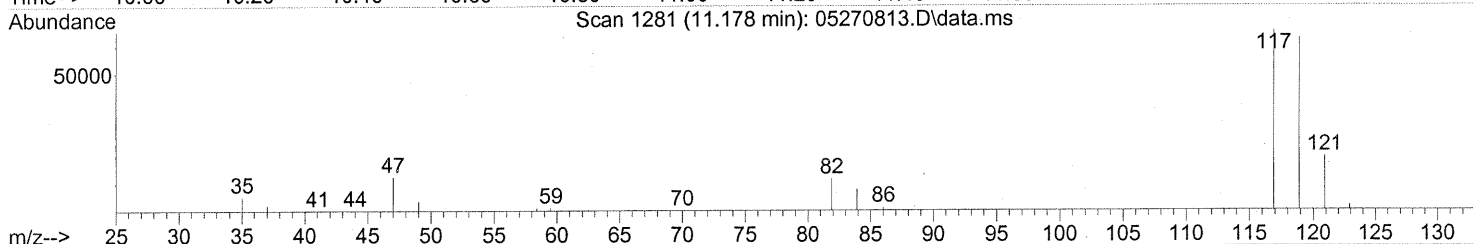
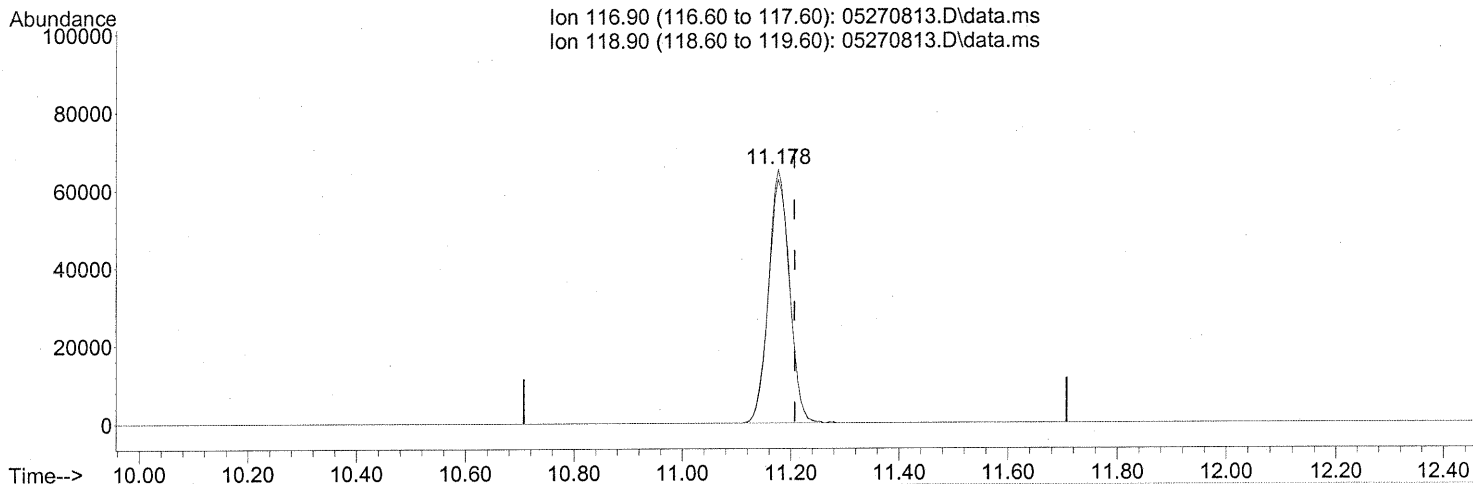
(41) Benzene (T)  
11.012min (-0.030) 0.19ng  
response 13197

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

11.178min (-0.030) 6.27ng

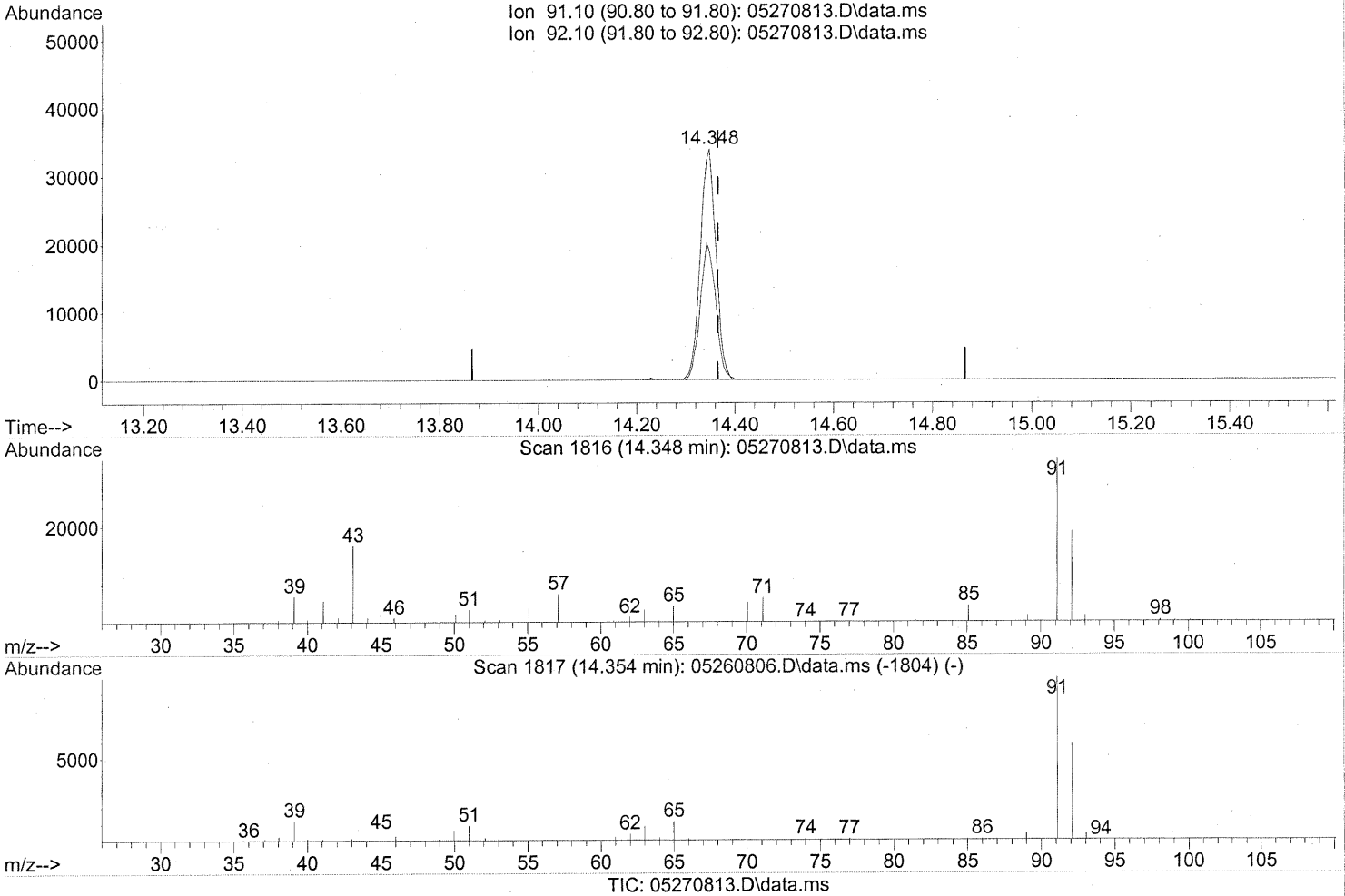
response 177212

Ion	Exp%	Act%
116.90	100	100
118.90	95.30	96.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



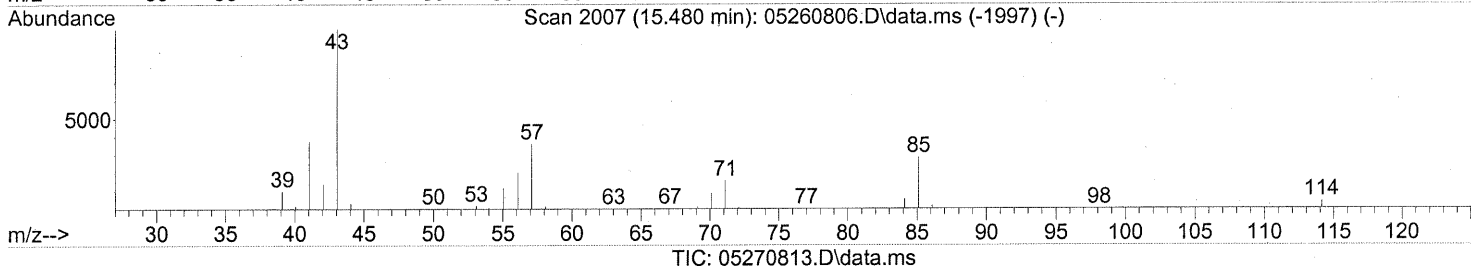
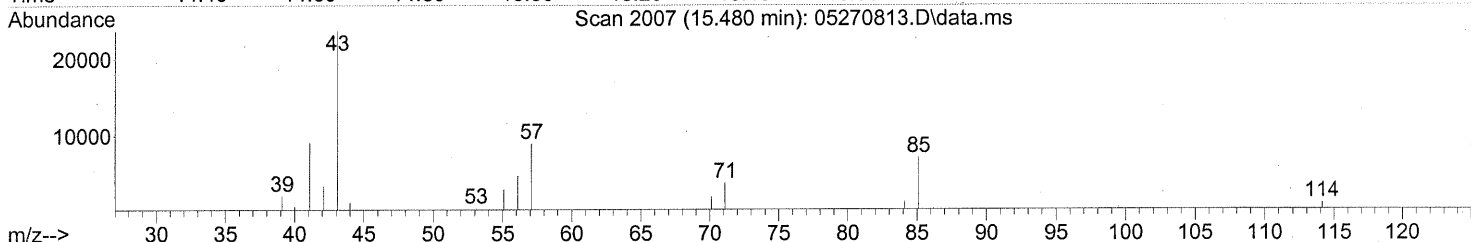
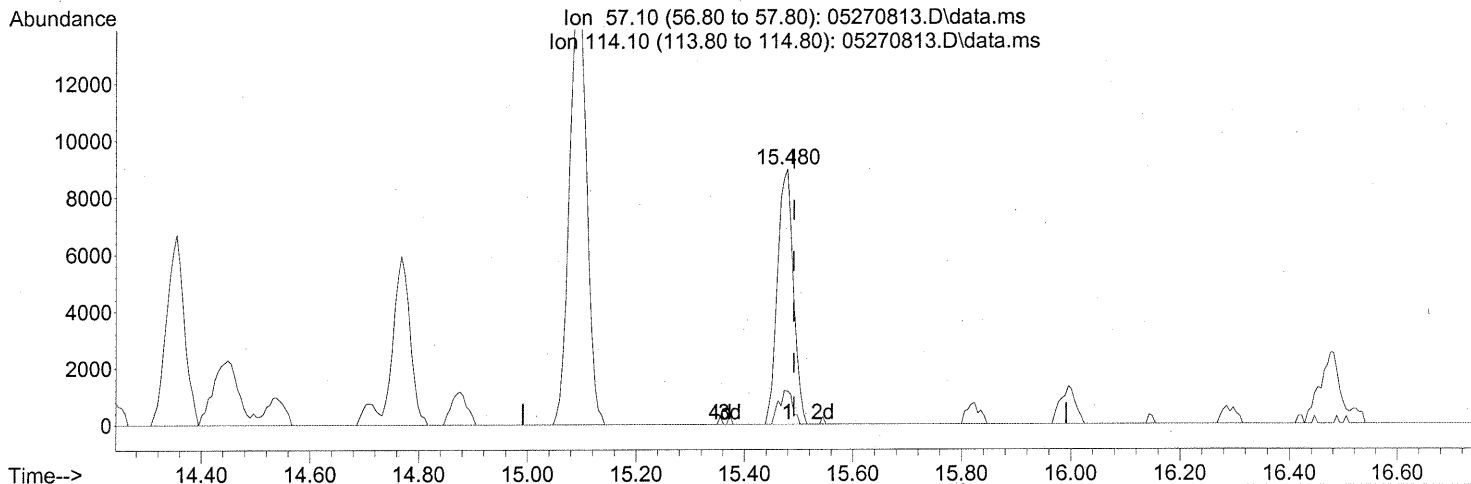
(58) Toluene (T)  
 14.348min (-0.018) 0.98ng  
 response 75639

Ion	Exp%	Act%
91.10	100	100
92.10	57.80	59.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



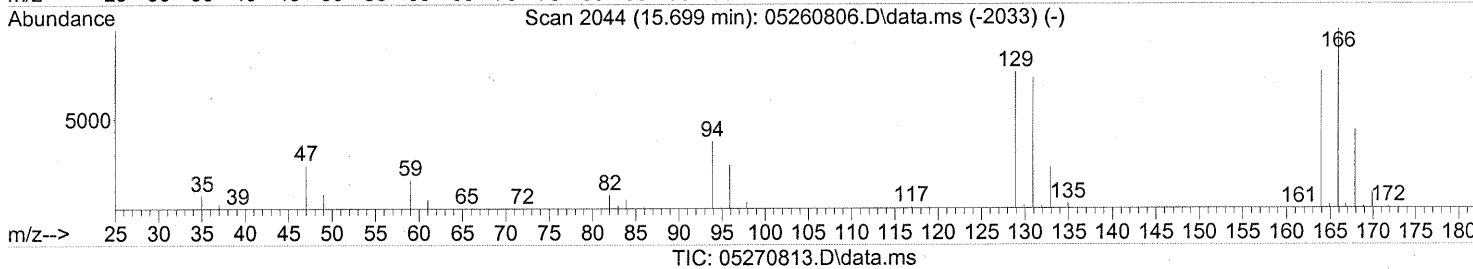
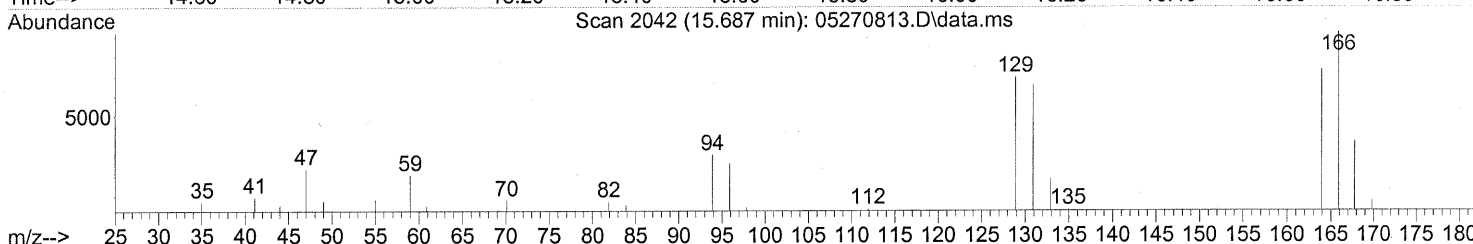
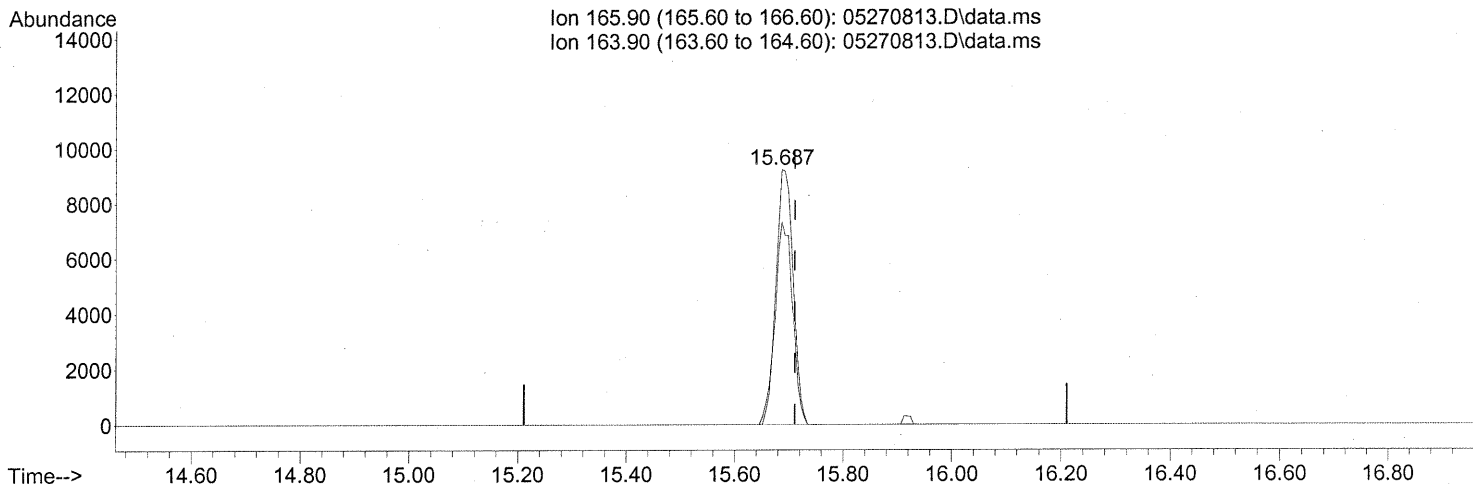
(63) n-Octane (T)  
 15.480min (-0.012) 0.79ng  
 response 18380

Ion	Exp%	Act%
57.10	100	100
114.10	13.60	11.45
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

15.687min (-0.024) 0.90ng

response 20683

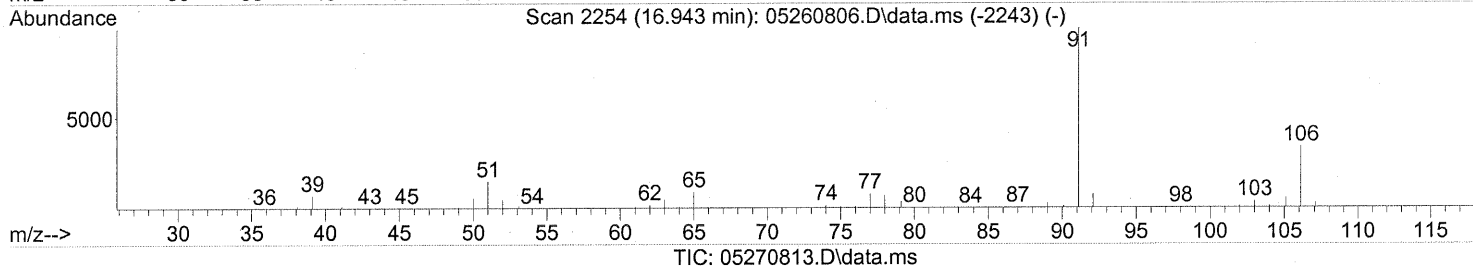
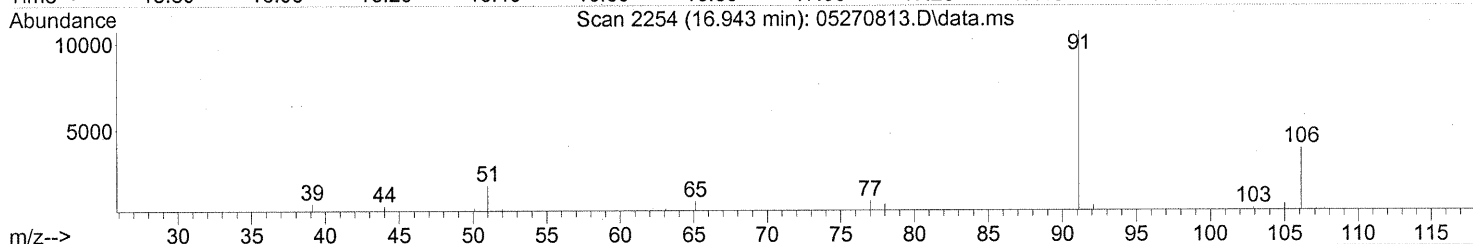
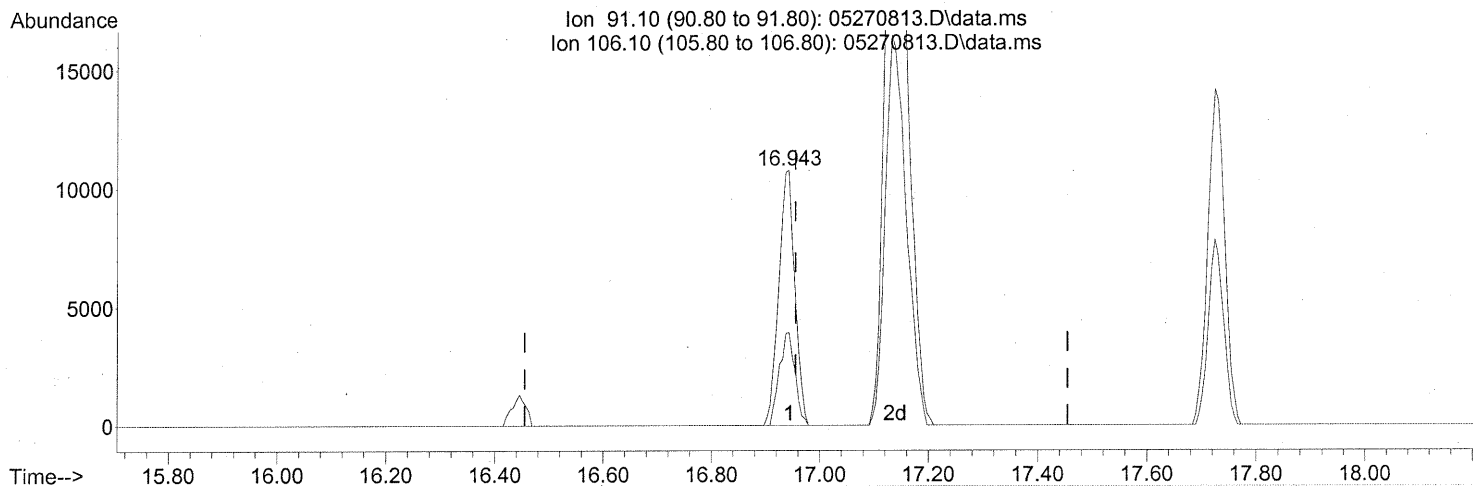
Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.56
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



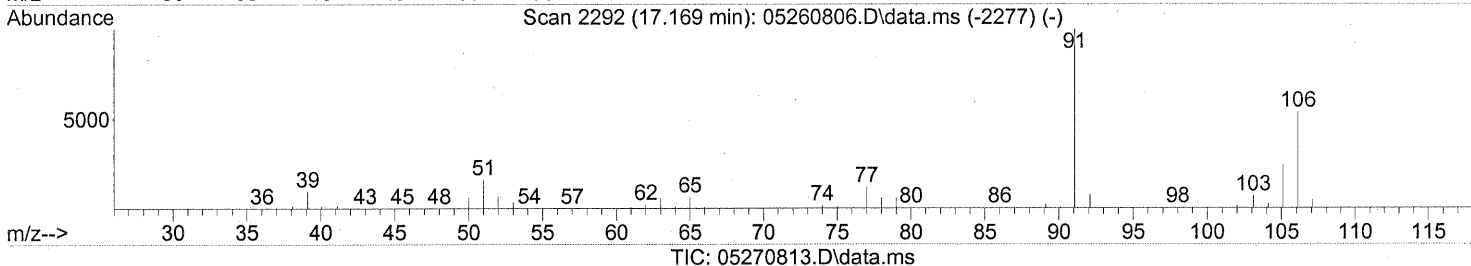
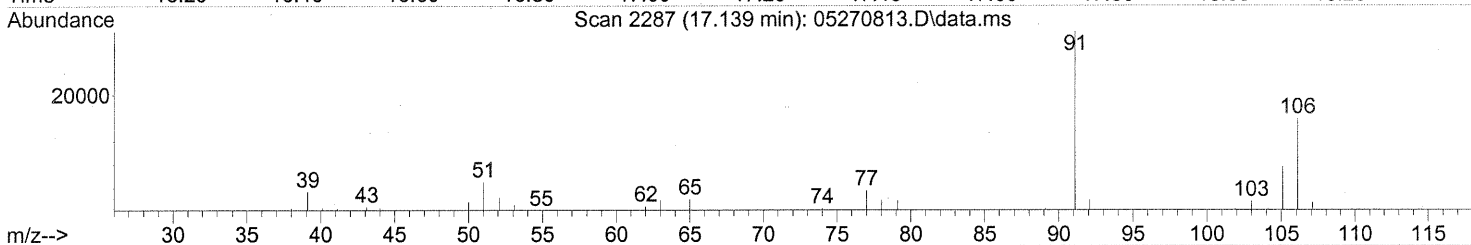
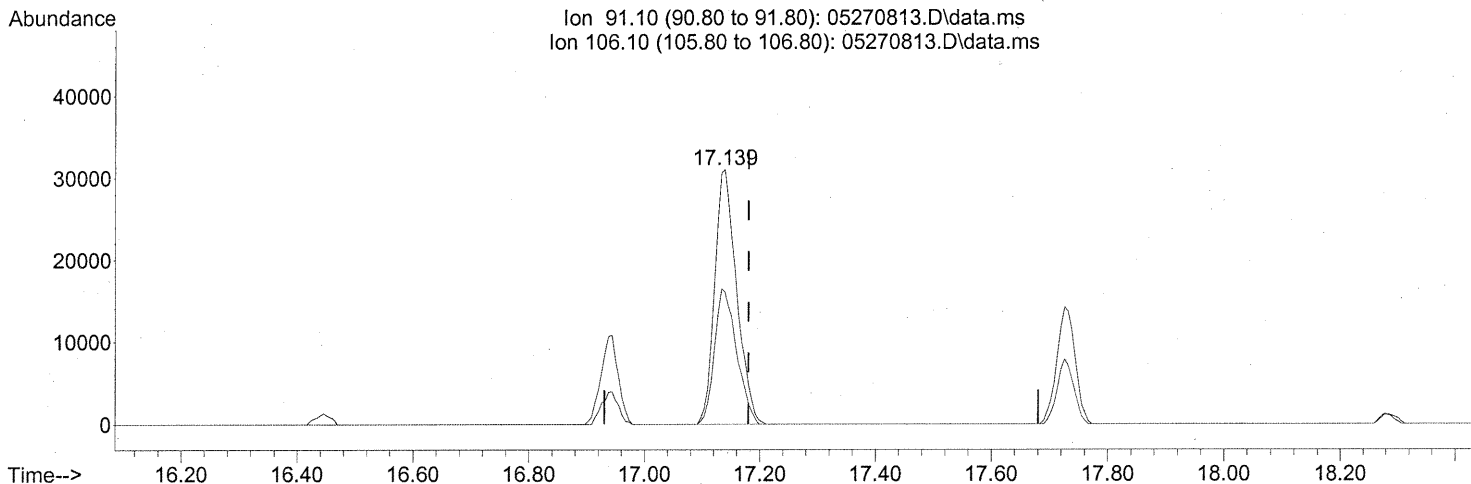
(66) Ethylbenzene (T)  
 16.943min (-0.012) 0.25ng  
 response 22393

Ion	Exp%	Act%
91.10	100	100
106.10	29.90	35.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(67) m- & p-Xylene (T)

17.139min (-0.042) 1.41ng

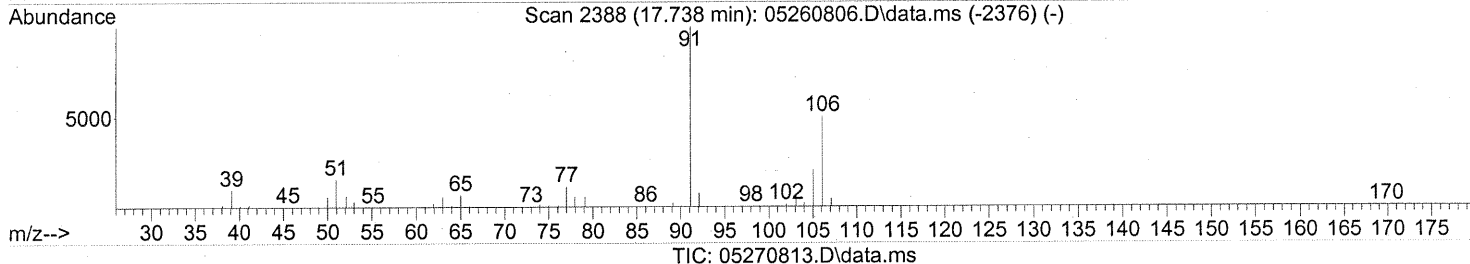
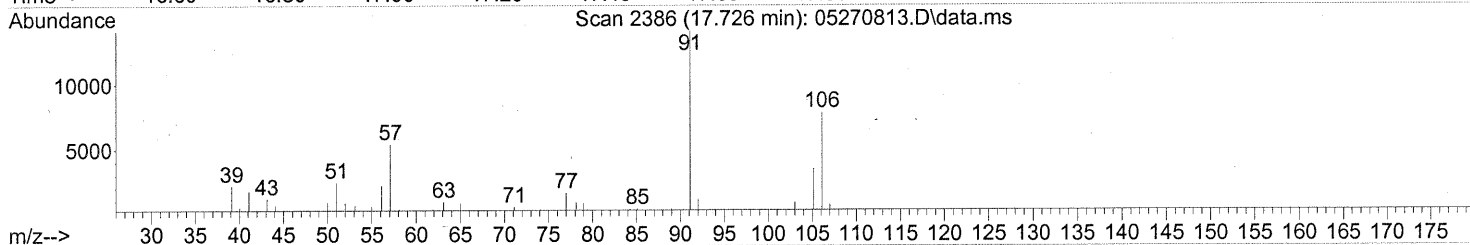
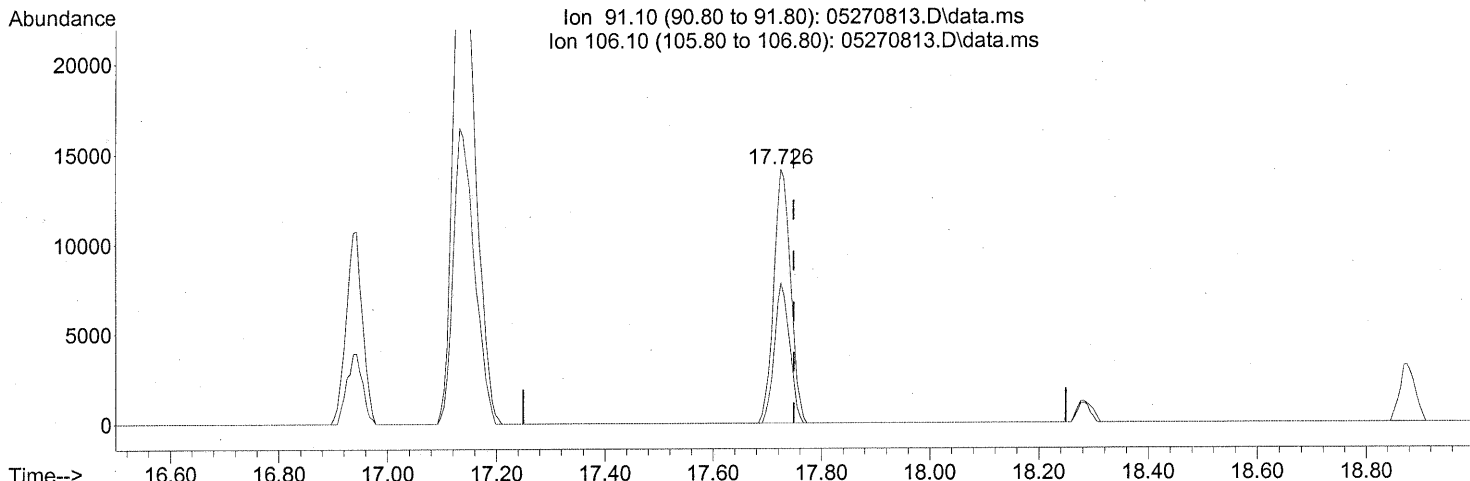
response 82180

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	53.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

17.726min (-0.024) 0.49ng

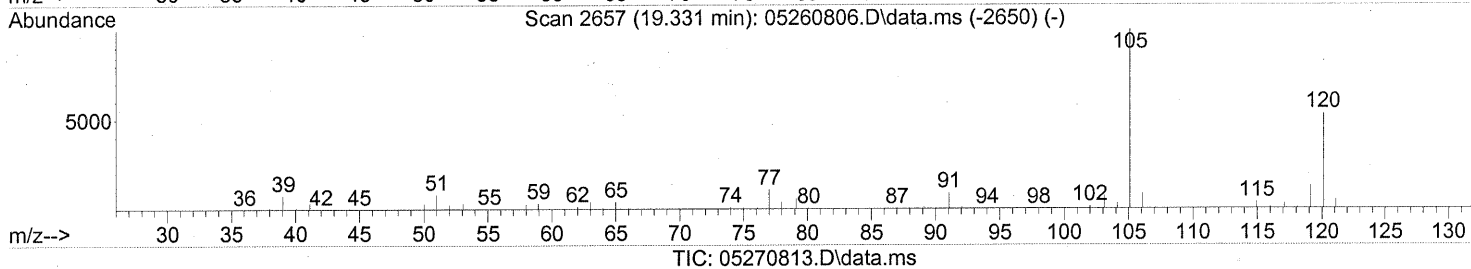
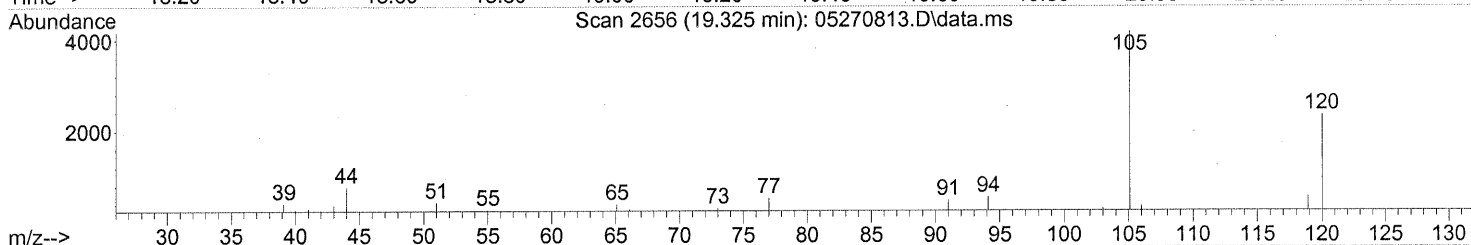
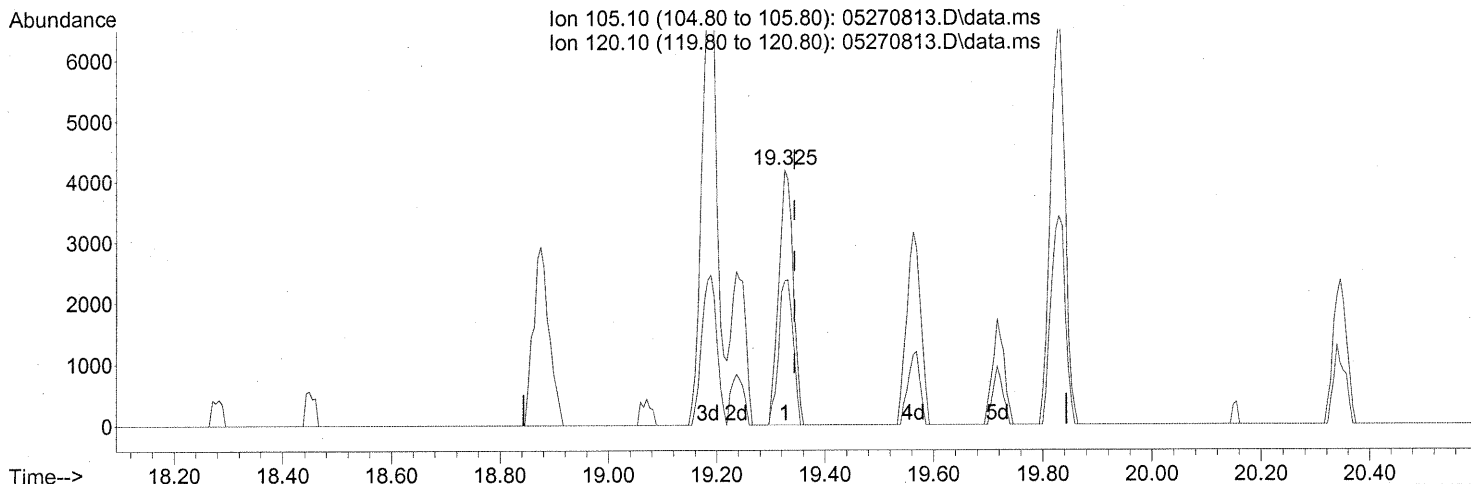
response 30831

Ion	Exp%	Act%
91.10	100	100
106.10	45.90	50.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(79) 1,3,5-Trimethylbenzene (T)

19.325min (-0.018) 0.10ng

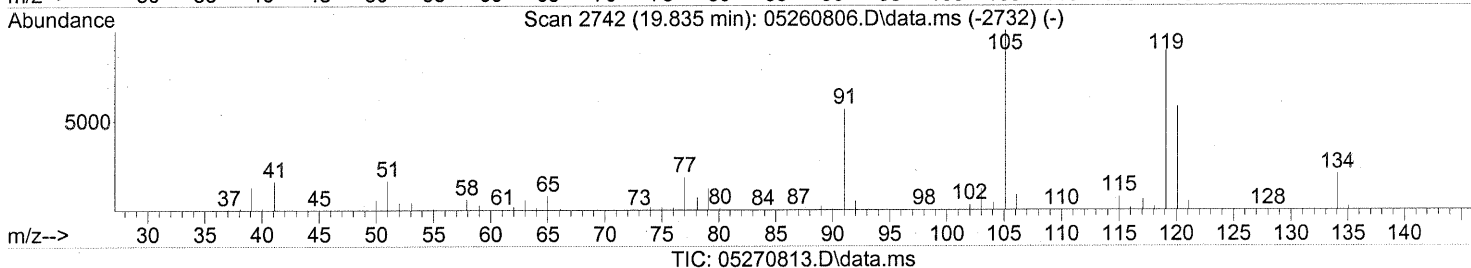
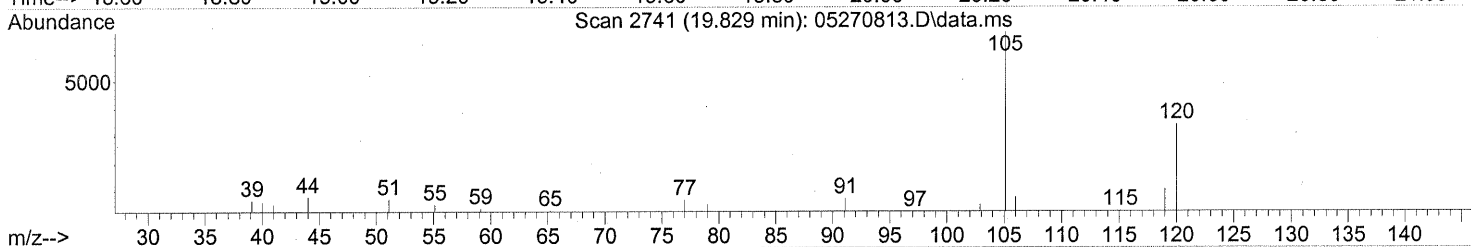
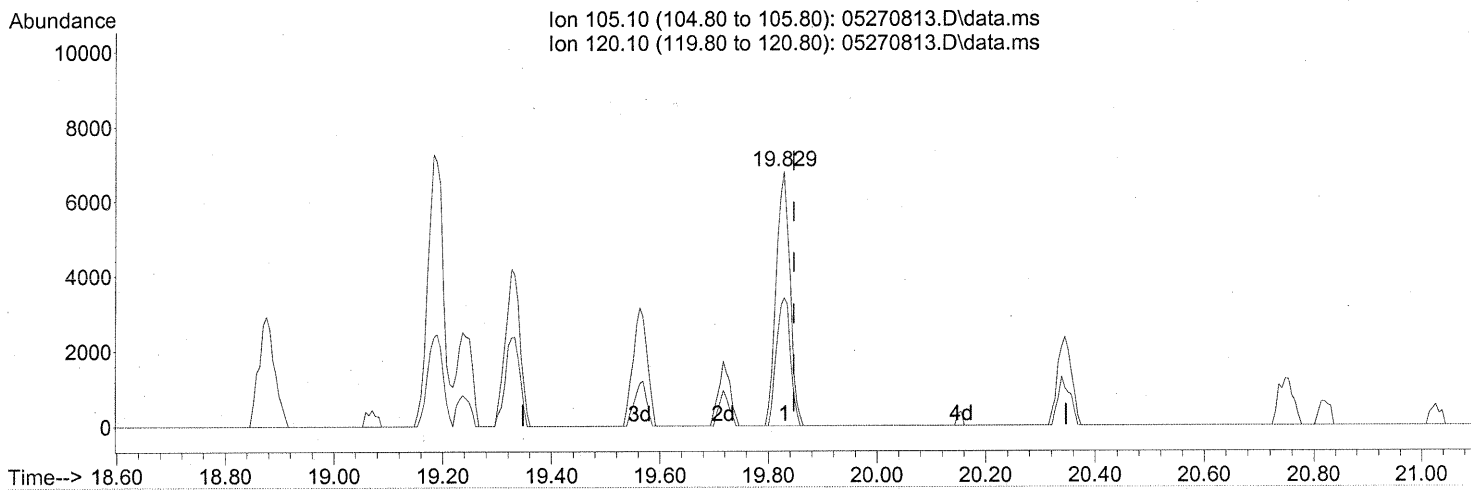
response 7832

Ion	Exp%	Act%
105.10	100	100
120.10	47.30	56.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(82) 1,2,4-Trimethylbenzene (T)

19.829min (-0.018) 0.15ng

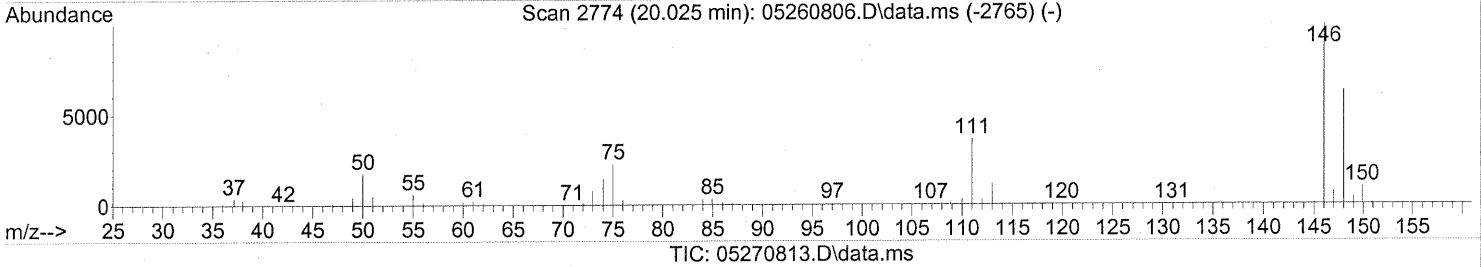
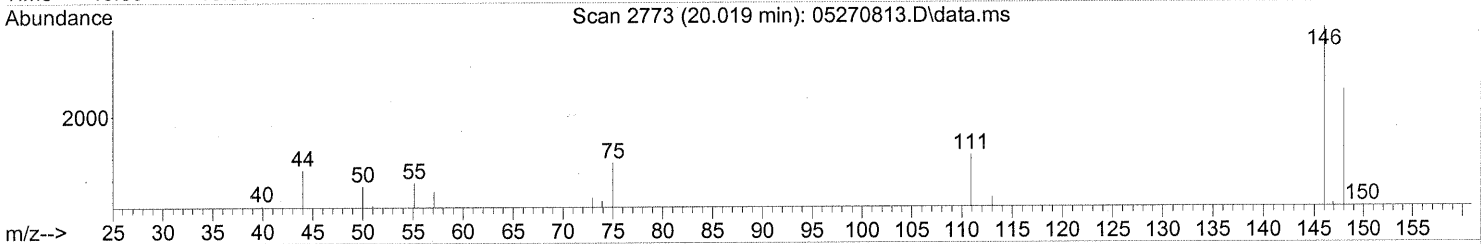
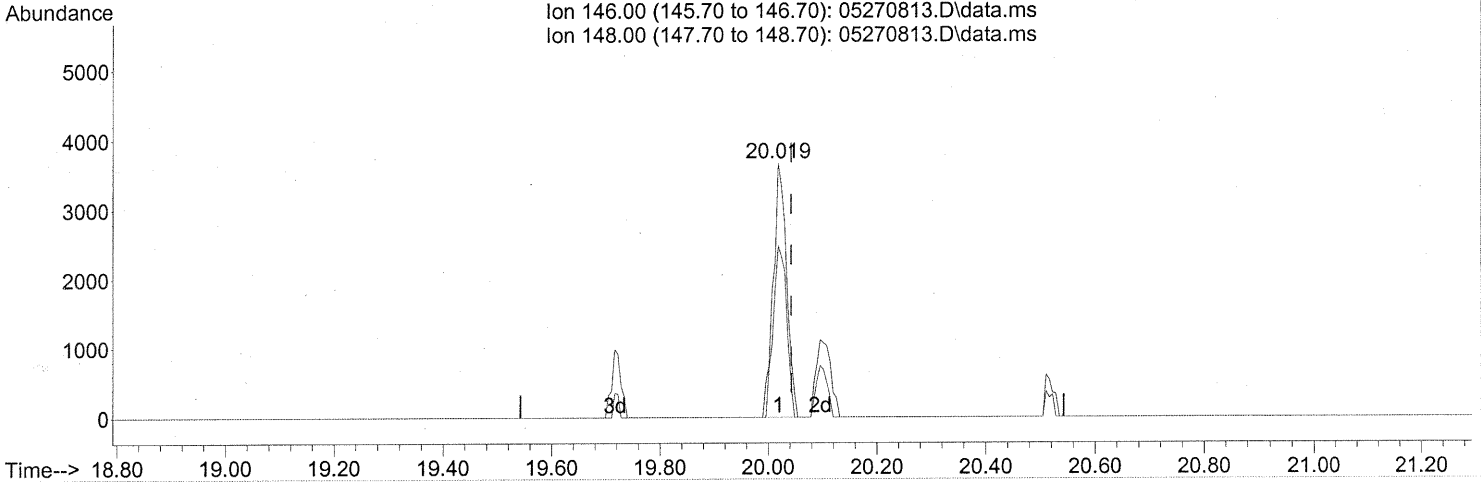
response 12256

Ion	Exp%	Act%
105.10	100	100
120.10	51.70	50.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270813.D  
Acq On : 27 May 2008 20:27  
Operator : WA  
Sample : P0801507-008 Dup (50ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:47:12 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

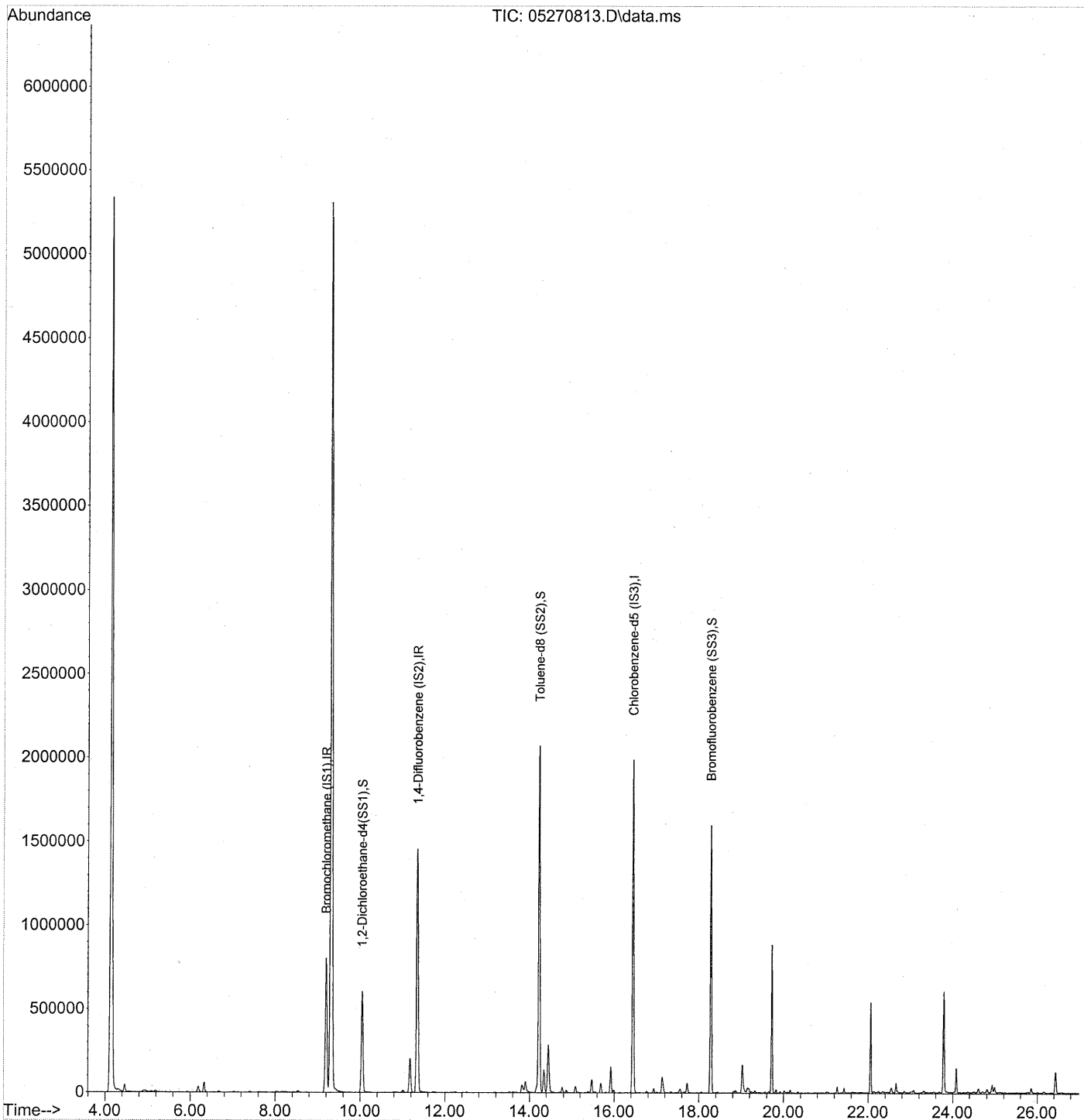
20.019min (-0.024) 0.13ng

response 6397

Ion	Exp%	Act%
146.00	100	100
148.00	63.10	67.19
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270813.D  
Acq On : 27 May 2008 20:27  
Operator : WA  
Sample : P0801507-008 Dup (50ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 15:21:31 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



745

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270813.D  
 Acq On : 27 May 2008 20:27  
 Operator : WA  
 Sample : P0801507-008 Dup (50ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jun 04 15:21:31 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	9.20	130	392730	25.000	ng	-0.05	
3) 1,4-Difluorobenzene (IS2)	11.35	114	1634694	25.000	ng	-0.03	
4) Chlorobenzene-d5 (IS3)	16.45	82	660800	25.000	ng	-0.01	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	10.05	65	557417	24.822	ng	-0.05	
Spiked Amount	25.000						Recovery = 99.28%
5) Toluene-d8 (SS2)	14.23	98	1653444	24.271	ng	-0.02	
Spiked Amount	25.000						Recovery = 97.08%
6) Bromofluorobenzene (SS3)	18.28	174	570356	25.181	ng	-0.01	
Spiked Amount	25.000						Recovery = 100.72%
Target Compounds							
7) tert-Butylbenzene	19.83	119	1738		N.D.		Qvalue
8) n-Butylbenzene	20.84	91	994		N.D.		

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





Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270822.D  
 Acq On : 28 May 2008 2:17  
 Operator : WA  
 Sample : P0801507-008 Dup Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:40 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	399452	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1672637	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	675510	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.04	65	560024	24.519	ng	-0.05
Spiked Amount	25.000			Recovery =	98.08%	✓
57) Toluene-d8 (SS2)	14.22	98	1698869	24.394	ng	-0.02
Spiked Amount	25.000			Recovery =	97.56%	✓
73) Bromofluorobenzene (SS3)	18.28	174	605116	26.134	ng	-0.01
Spiked Amount	25.000			Recovery =	104.52%	✓

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	854	N.D.		
3) Dichlorodifluoromethane	4.55	85	748	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.73	45	101	N.D.		
11) Acetonitrile	5.93	41	2869	N.D.		
12) Acrolein	6.06	56	1185	0.078	ng	# 62
13) Acetone	6.18	58	8859	0.424	ng	# 55
14) Trichlorofluoromethane	6.33	101	21292	0.608	ng	100
15) Isopropanol	6.38	45	880	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.97	59	121	N.D.		
19) Methylene Chloride	7.03	84	1163	0.072	ng	# 37
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	3851	0.059	ng	# 75
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.		
24) 1,1-Dichloroethane	8.16	63	2562	0.075	ng	# 55
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.53	72	831	0.076	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.31	87	229377	15.958	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	0.00	57	0	N.D.		

748

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270822.D  
 Acq On : 28 May 2008 2:17  
 Operator : WA  
 Sample : P0801507-008 Dup Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:40 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.31	83	2090923	88.704	ng	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	10.04	62	96	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	315	N.D.		
41) Benzene	11.01	78	7023	0.100	ng	91
42) Carbon Tetrachloride	11.17	117	65326	2.258	ng	99
43) Cyclohexane	11.33	84	1096	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	12.12	83	104	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	1254	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	0.00	71	0	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	0.00	58	0	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	144349	8.416	ng	# 7
58) Toluene	14.35	91	28437	0.360	ng	98
59) 2-Hexanone	14.59	43	1123	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.47	43	17675	0.236	ng	# 76
63) n-Octane	15.48	57	6631	0.278	ng	88
64) Tetrachloroethene	15.69	166	8440	0.361	ng	95
65) Chlorobenzene	16.49	112	112	N.D.		
66) Ethylbenzene	16.94	91	9119	0.102	ng	99
67) m- & p-Xylene	17.14	91	30539	0.513	ng	90
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.58	104	436	N.D.		
70) o-Xylene	17.73	91	12153	0.191	ng	100
71) n-Nonane	17.97	43	917	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.46	105	91	N.D.		
75) alpha-Pinene	19.03	93	1090	N.D.		
76) n-Propylbenzene	19.06	91	1466	N.D.		
77) 3-Ethyltoluene	19.19	105	6026	0.059	ng	98
78) 4-Ethyltoluene	19.24	105	1939	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	3031	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270822.D  
 Acq On : 28 May 2008 2:17  
 Operator : WA  
 Sample : P0801507-008 Dup Dil (20ml)  
 Misc : ENSR SG56B-05 (-3.8, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:40 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

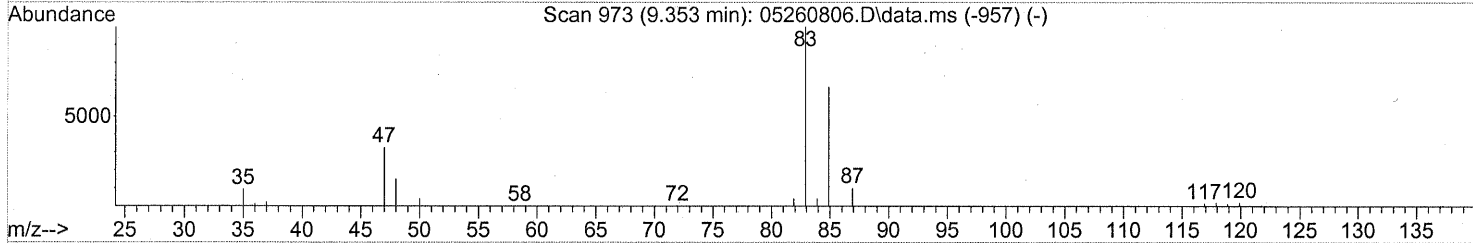
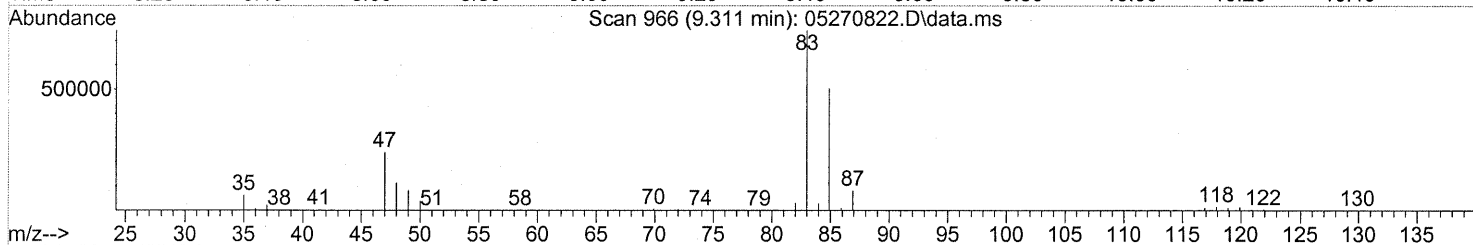
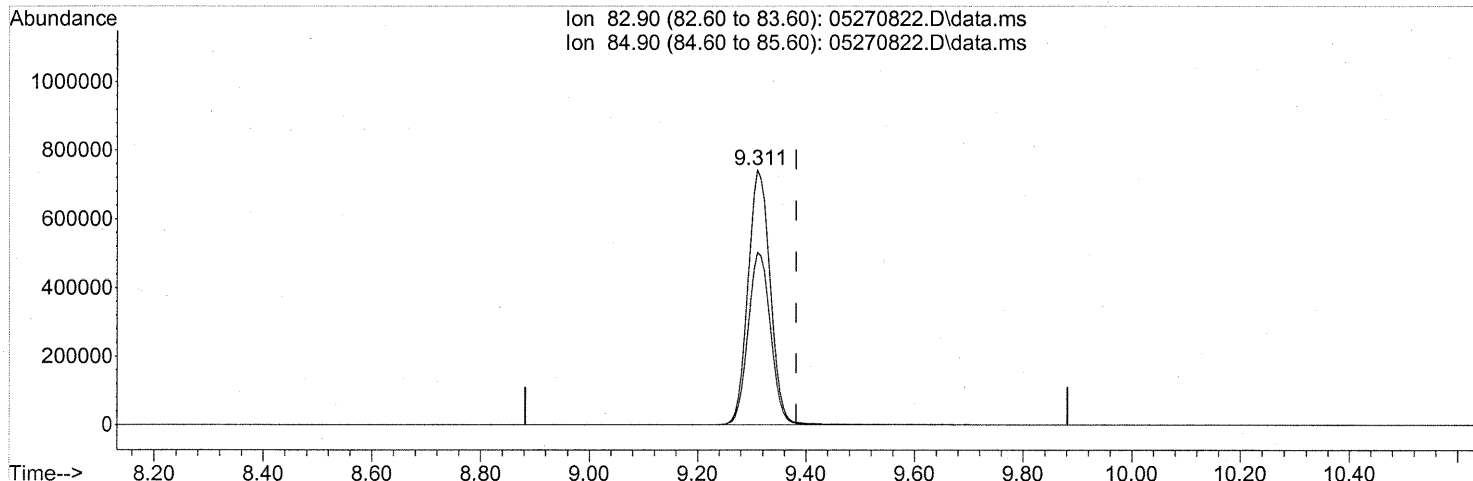
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.72	118	2767	0.060	ng	# 13
81) 2-Ethyltoluene	19.57	105	2377	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	4804	0.058	ng	94
83) n-Decane	19.92	57	1519	N.D.		
84) Benzyl Chloride	19.84	91	186	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	2342	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	600	N.D.		
87) sec-Butylbenzene	20.34	105	1704	N.D.		
88) p-Isopropyltoluene	20.34	119	349	N.D.		
89) 1,2,3-Trimethylbenzene	20.34	105	1704	N.D.		
90) 1,2-Dichlorobenzene	20.51	146	182	N.D.		
91) d-Limonene	0.00	68	0	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	4800	0.078	ng	76
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	2893	N.D.		
96) n-Dodecane	22.66	57	8651	0.145	ng	78
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270822.D  
Acq On : 28 May 2008 2:17  
Operator : WA  
Sample : P0801507-008 Dup Dil (20ml)  
Misc : ENSR SG56B-05 (-3.8, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 28 04:48:40 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05270822.D\data.ms

(32) Chloroform (T)  
9.311min (-0.071) 88.70ng  
response 2090923

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.42
0.00	0.00	0.00
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05270801.D  
 Date Analyzed: 5/27/08  
 Time Analyzed: 10:18

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	416189	9.22	1740493	11.36	689026	16.45
<b>Upper Limit</b>	582665	9.55	2436690	11.69	964636	16.78
<b>Lower Limit</b>	249713	8.89	1044296	11.03	413416	16.12

**Client Sample ID**

Client Sample ID	IS1 (BCM) AREA #	IS1 (BCM) RT #	IS2 (DFB) AREA #	IS2 (DFB) RT #	IS3 (CBZ) AREA #	IS3 (CBZ) RT #
01 Method Blank	411633	9.19	1710469	11.34	681215	16.44
02 Lab Control Sample	406006	9.23	1679145	11.37	677576	16.45
03 SG77B-05	416586	9.20	1711385	11.34	684381	16.45
04 SG77B-05 (Dilution)	414826	9.19	1697256	11.34	680501	16.44
05 SG30B-05	407143	9.20	1685075	11.35	671836	16.45
06 SG59B-05	406437	9.20	1677305	11.35	674760	16.45
07 SG31B-05 (Dilution)	402647	9.19	1659207	11.34	667638	16.45
08 SG56B-05	400661	9.20	1646575	11.35	663053	16.45
09 SG56B-05 (Lab Duplicate)	392730	9.20	1634694	11.35	660800	16.45
10 SG56B-05D (Dilution)	390553	9.19	1634882	11.34	658250	16.45
11 SG55B-05	390977	9.20	1623936	11.35	656497	16.45
12 SG57B-05	388924	9.20	1619160	11.35	656839	16.45
13 SG13B-05	380792	9.20	1597367	11.35	659426	16.45
14 SG15B-05	292426	9.17	1419564	11.33	494463	16.45
15 SG14B-05	379532	9.22	1577066	11.36	651799	16.45
16 SG06B-05	389303	9.20	1623961	11.35	666312	16.45
17 SG56B-05 (Dilution)	402096	9.19	1667992	11.34	682079	16.45
18 SG56B-05 (Lab Dup - Dilution)	399452	9.19	1672637	11.34	675510	16.45
19 SG13B-05 (Dilution)	403942	9.19	1653911	11.34	667568	16.45
20 SG15B-05 (Dilution)	394194	9.19	1641811	11.34	663545	16.45
21 SG14B-05 (Dilution)	388783	9.19	1614645	11.35	658561	16.45

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.

Verified By:         

Date: 6/5/08

**752**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05280801.D  
 Date Analyzed: 5/28/08  
 Time Analyzed: 08:29

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	393838	9.20	1621199	11.36	662879	16.45
<b>Upper Limit</b>	551373	9.53	2269679	11.69	928031	16.78
<b>Lower Limit</b>	236303	8.87	972719	11.03	397727	16.12

**Client Sample ID**

Client Sample ID	IS1 (BCM) AREA #	IS1 (BCM) RT #	IS2 (DFB) AREA #	IS2 (DFB) RT #	IS3 (CBZ) AREA #	IS3 (CBZ) RT #
01 Method Blank	385506	9.19	1591554	11.34	648424	16.44
02 SG30B-05 (Dilution)	381474	9.19	1555272	11.34	637855	16.45
03 SG59B-05 (Dilution)	373915	9.19	1544249	11.34	627480	16.45
04 SG31B-05	370470	9.20	1515272	11.35	626252	16.45
05 SG56B-05D	369769	9.21	1533976	11.36	624528	16.45
06 SG55B-05 (Dilution)	372167	9.19	1552178	11.34	637423	16.44
07 SG57B-05 (Dilution)	379052	9.19	1549547	11.34	630197	16.44
08 SG29B-05	374160	9.20	1530320	11.35	627102	16.45
09 SG60B-05	371218	9.20	1523833	11.35	623724	16.45
10 Lab Control Sample	377949	9.22	1568486	11.36	642257	16.45
11 SG60B-05 (Dilution)	384373	9.19	1575449	11.34	645600	16.45
12						
13						
14						
15						
16						
17						
18						
19						
20						

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

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RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.

Verified By:         

Date: 6/5/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

**Client:** ENSR  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801507

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05290801.D  
 Date Analyzed: 5/29/08  
 Time Analyzed: 08:31

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	383231	9.22	1598146	11.36	654560	16.45
<b>Upper Limit</b>	536523	9.55	2237404	11.69	916384	16.78
<b>Lower Limit</b>	229939	8.89	958888	11.03	392736	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	381746	9.19	1582084
02	SG29B-05 (Dilution)	381287	9.19	1569012
03	SG58B-05 (Dilution)	377706	9.19	1560046
04	SG58B-05	372594	9.20	1531812
05	Lab Control Sample	366705	9.23	1518501
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

IS1 (BCM) = Bromochloromethane  
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AREA UPPER LIMIT = 140% of internal standard area  
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 RT UPPER LIMIT = 0.33 minutes of internal standard RT  
 RT LOWER LIMIT = 0.33 minutes of internal standard RT

# Column used to flag values outside QC limits with an asterisk.

\* Values outside of QC limits.

Verified By: UA Date: 6/5/08

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## INITIAL CALIBRATION STANDARDS

Method Path : J:\MS16\METHODS\  
 Method File : R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:40:29 2008  
 Response Via : Initial Calibration

Calibration Files  
 0.1 =05260802.D 0.5 =05260803.D 1.0 =05260804.D 5.0 =05260805.D 25 =05260806.D 50 =05260807.D  
 100 =05260808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD
1) IR Bromochloromethane...									
2) T Propene	2.444	2.097	1.940	1.928	1.663	1.773	1.701	1.935	13.99
3) T Dichlorodifluo...	2.901	2.773	2.458	2.316	1.960	2.006	1.970	2.341	16.63
4) T Chloromethane	4.012	3.745	3.438	2.716	2.621	2.315	1.740	2.941	27.86
5) T Freon 114	1.445	1.581	1.407	1.316	1.143	1.144	1.122	1.308	13.68
6) T Vinyl Chloride	2.224	2.268	1.999	1.846	1.583	1.613	1.578	1.873	15.94
7) T 1,3-Butadiene	1.944	1.968	1.749	1.614	1.529	1.588	1.559	1.707	10.75
8) T Bromomethane	1.225	1.182	1.083	0.849	0.840	0.831	0.750	0.965	19.92
9) T Chloroethane	1.200	1.100	1.063	0.944	0.813	0.832	0.823	0.968	16.01
10) T Ethanol	1.010	1.626	1.513	1.402	1.199	1.212	1.229	1.313	16.10
11) T Acetonitrile	4.677	4.201	3.811	3.336	3.350	3.350	3.336	3.785	14.77
12) T Acrolein	1.160	0.992	0.885	0.885	0.858	0.884	0.901	0.947	12.07
13) T Acetone	1.837	1.479	1.065	1.070	1.070	1.080	1.306	26.44	26.44
14) T Trichlorofluor...	2.526	2.543	2.318	2.144	1.909	1.952	1.949	2.191	12.49
15) T Isopropanol	5.466	4.971	3.559	3.522	3.086	3.005	3.935	26.20	26.20
16) T Acrylonitrile	2.464	2.648	2.469	2.396	2.183	2.227	2.233	2.374	7.11
17) T 1,1-Dichloroet...	1.099	1.203	1.093	1.009	0.910	0.917	0.926	1.023	11.04
18) T tert-Butanol	4.544	4.581	4.131	3.794	3.354	3.352	1.924	3.669	25.06
19) T Methylene Chlo...	1.283	1.125	1.008	0.877	0.873	0.878	1.008	16.72	16.72
20) T Allyl Chloride	2.410	2.579	2.365	2.406	2.122	2.176	2.199	2.322	7.02
21) T Trichlorotrifl...	1.182	1.274	1.161	1.058	0.927	0.930	0.921	1.065	13.54
22) T Carbon Disulfide	4.991	4.319	3.940	3.651	3.695	3.719	4.053	12.89	12.89
23) T trans-1,2-Dich...	2.334	2.294	2.105	1.981	1.783	1.793	1.808	2.014	11.72
24) T 1,1-Dichloroet...	2.310	2.391	2.329	2.147	1.911	1.935	1.948	2.139	9.72
25) T Methyl tert-Bu...	3.576	3.611	3.308	3.092	2.728	2.769	2.774	3.123	12.27
26) T Vinyl Acetate	0.252	0.249	0.225	0.192	0.192	0.193	0.172	0.214	15.57
27) T 2-Butanone	0.778	0.799	0.738	0.699	0.603	0.611	0.553	0.683	13.93
28) T cis-1,2-Dichlo...	1.986	2.207	1.969	1.848	1.634	1.656	1.666	1.852	11.63
29) T Diisopropyl Ether	0.997	1.028	0.963	0.914	0.806	0.802	0.786	0.900	11.24
30) T Ethyl Acetate	0.552	0.508	0.496	0.434	0.434	0.441	0.428	0.477	10.44
31) T n-Hexane	3.461	3.260	3.018	2.769	2.477	2.492	2.461	2.848	14.30

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Method Path : J:\MS16\METHODS\  
 Method File : R16052608.M

Title	: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)									
71) T	n-Nonane	2.773	2.752	2.539	2.311	2.045	2.001	1.857	2.326	16.02
72) T	1,1,2,2-Tetrac...	1.256	1.091	1.046	0.955	0.851	0.834	0.798	0.976	16.95
73) S	Bromofluoroben...	0.838	0.834	0.839	0.860	0.871	0.879	0.876	0.857	2.28
74) T	Cumene	4.104	3.951	3.678	3.336	3.016	3.000	2.930	3.431	14.10
75) T	alpha-Pinene	1.698	1.847	1.738	1.646	1.472	1.458	1.410	1.610	10.28
76) T	n-Propylbenzene	4.743	4.567	4.278	3.896	3.518	3.505	3.401	3.987	13.73
77) T	3-Ethyltoluene	4.606	4.309	4.000	3.583	3.282	3.318	3.248	3.764	14.52
78) T	4-Ethyltoluene	3.973	4.046	3.654	3.359	2.969	2.925	2.844	3.396	14.88
79) T	1,3,5-Trimethy...	3.739	3.496	3.160	2.911	2.612	2.600	2.556	3.011	15.65
80) T	alpha-Methylst...	1.762	1.883	1.785	1.693	1.601	1.588	1.539	1.693	7.33
81) T	2-Ethyltoluene	4.139	4.277	3.896	3.588	3.255	3.230	3.160	3.649	12.60
82) T	1,2,4-Trimethy...	3.785	3.556	3.273	2.934	2.627	2.616	2.545	3.048	16.31
83) T	n-Decane	2.399	2.502	2.322	2.145	1.954	1.936	1.847	2.158	11.83
84) T	Benzyl Chloride	2.706	2.532	2.395	2.308	2.192	2.197	2.156	2.355	8.65
85) T	1,3-Dichlorobe...	2.431	2.236	2.072	1.850	1.668	1.658	1.603	1.931	16.65
86) T	1,4-Dichlorobe...	2.325	2.177	2.007	1.795	1.630	1.618	1.573	1.875	15.92
87) T	sec-Butylbenzene	4.523	4.638	4.226	3.881	3.516	3.487	3.409	3.954	12.97
88) T	p-Isopropyltol...	3.843	4.080	3.699	3.394	3.101	3.082	2.983	3.455	12.34
89) T	1,2,3-Trimethy...	3.413	3.395	3.104	2.842	2.614	2.597	2.523	2.927	12.96
90) T	1,2-Dichlorobe...	2.181	2.133	1.892	1.712	1.546	1.510	1.436	1.773	17.05
91) T	d-Limonene	0.939	1.091	0.989	0.957	0.880	0.874	0.844	0.939	8.99
92) T	1,2-Dibromo-3-...	0.594	0.614	0.580	0.557	0.554	0.552	0.538	0.570	4.74
93) T	n-Undecane	2.495	2.547	2.411	2.241	2.106	2.065	1.976	2.263	9.94
94) T	1,2,4-Trichlor...	0.377	0.361	0.332	0.303	0.298	0.293	0.281	0.321	11.41
95) T	Naphthalene	5.936	4.616	4.225	3.845	4.165	4.147	4.065	4.428	15.89
96) T	n-Dodecane	2.335	2.463	2.276	2.162	2.126	2.090	1.984	2.205	7.37
97) T	Hexachloro-1,3...	0.603	0.622	0.577	0.523	0.478	0.470	0.457	0.533	12.70

(#) = Out of Range

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5/29/08

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: S20-05210811  
 20ng/L Std. ID: S20-05210808  
 200ng/L Std. ID: S20-05210802

Dilution Factors:					Working STD Conc.(ng/L):	ICAL Concentrations (Primary Source)						
5      50      250						4	20	20	20	200	200	200
Compounds	Source Std.	Primary Working Standards			Injection (L):	0.025	0.025	0.050	0.25	0.125	0.25	0.50
	mg/m <sup>3</sup>	200ng/L	20ng/L	4ng/L	ICAL Points:	0.1ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Propene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
Dichlorodifluoromethane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
Chloromethane	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102
Freon-114	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107
Vinyl Chloride	1.03	206	20.6	4.12		0.103	0.515	1.03	5.15	25.8	51.5	103
1,3-Butadiene	1.09	218	21.8	4.36		0.109	0.545	1.09	5.45	27.3	54.5	109
Bromomethane	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
Chloroethane	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
Ethanol	0.91	182	18.2	3.64		0.091	0.455	0.910	4.55	22.8	45.5	91.0
Acetonitrile	0.980	196	19.6	3.92		0.098	0.490	0.980	4.90	24.5	49.0	98.0
Acrolein	0.960	192	19.2	3.84		0.096	0.480	0.960	4.80	24.0	48.0	96.0
Acetone	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
Trichlorofluoromethane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
Isopropanol	1.03	206	20.6	4.12		0.103	0.515	1.03	5.15	25.8	51.5	103
Acrylonitrile	1.010	202	20.2	4.04		0.101	0.505	1.01	5.05	25.3	50.5	101
1,1-Dichloroethene	1.13	226	22.6	4.52		0.113	0.565	1.13	5.65	28.3	56.5	113
tert-Butanol	1.020	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102
Methylene Chloride	1.12	224	22.4	4.48		0.112	0.560	1.12	5.60	28.0	56.0	112
Allyl Chloride	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
Trichlorotrifluoroethane	1.14	228	22.8	4.56		0.114	0.570	1.14	5.70	28.5	57.0	114
Carbon Disulfide	1.00	200	20.0	4.00		0.100	0.500	1.00	5.00	25.0	50.0	100
trans-1,2-Dichloroethene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
1,1-Dichloroethane	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
Methyl tert-Butyl Ether	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
Vinyl Acetate	0.98	196	19.6	3.92		0.098	0.490	0.980	4.90	24.5	49.0	98.0
2-Butanone	1.12	224	22.4	4.48		0.112	0.560	1.12	5.60	28.0	56.0	112
cis-1,2-Dichloroethene	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
Diisopropyl Ether	1.03	206	20.6	4.12		0.103	0.515	1.03	5.15	25.8	51.5	103
Ethyl Acetate	1.27	254	25.4	5.08		0.127	0.635	1.27	6.35	31.8	63.5	127
n-Hexane	1.12	224	22.4	4.48		0.112	0.560	1.12	5.60	28.0	56.0	112
Chloroform	1.29	258	25.8	5.16		0.129	0.645	1.29	6.45	32.3	64.5	129
Tetrahydrofuran	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
Ethyl tert-Butyl Ether	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
1,2-Dichloroethane	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
1,1,1-Trichloroethane	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
Isopropyl Acetate	1.010	202	20.2	4.04		0.101	0.505	1.01	5.05	25.3	50.5	101
1-Butanol	0.910	182	18.2	3.64		0.091	0.455	0.910	4.55	22.8	45.5	91.0
Benzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
Carbon Tetrachloride	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107
Cyclohexane	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
tert-Amyl Methyl Ether	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
1,2-Dichloropropane	1.09	218	21.8	4.36		0.109	0.545	1.09	5.45	27.3	54.5	109
Bromodichloromethane	1.15	230	23.0	4.60		0.115	0.575	1.15	5.75	28.8	57.5	115
Trichloroethene	1.14	228	22.8	4.56		0.114	0.570	1.14	5.70	28.5	57.0	114
1,4-Dioxane	1.15	230	23.0	4.60		0.115	0.575	1.15	5.75	28.8	57.5	115
Isooctane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
Methyl Methacrylate	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106
n-Heptane	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
cis-1,3-Dichloropropene	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
4-Methyl-2-pentanone	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
trans-1,3-Dichloropropene	1.16	232	23.2	4.64		0.116	0.580	1.16	5.80	29.0	58.0	116
1,1,2-Trichloroethane	1.09	218	21.8	4.36		0.109	0.545	1.09	5.45	27.3	54.5	109
Toluene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
2-Hexanone	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102
Dibromochloromethane	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
1,2-Dibromoethane	1.09	218	21.8	4.36		0.109	0.545	1.09	5.45	27.3	54.5	109
n-Butyl Acetate	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
n-Octane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
Tetrachloroethene	1.09	218	21.8	4.36		0.109	0.545	1.09	5.45	27.3	54.5	109
Chlorobenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
Ethylbenzene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
m-&p-Xylene	2.58	516	51.6	10.32		0.258	1.29	2.58	12.9	64.5	129	258

*RA 5/29/08*

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: S20-05210811  
 20ng/L Std. ID: S20-05210808  
 200ng/L Std. ID: S20-05210802

Compounds	Source Std. mg/m <sup>3</sup>	Dilution Factors:			Working STD Conc.(ng/L):	ICAL Concentrations (Primary Source)							
		5	50	250		Injection (L):	4	20	20	20	200	200	200
		200ng/L	20ng/L	4ng/L			ICAL Points:	0.1ng	0.5ng	1ng	5ng	25ng	50ng
Bromoform	1.31	262	26.2	5.24		0.025	0.025	0.05	0.25	0.125	0.25	0.50	
Styrene	1.08	216	21.6	4.32		0.131	0.655	1.31	6.55	32.8	65.5	131	
o-Xylene	1.22	244	24.4	4.88		0.108	0.540	1.08	5.40	27.0	54.0	108	
n-Nonane	1.03	206	20.6	4.12		0.122	0.610	1.22	6.10	30.5	61.0	122	
1,1,2,2-Tetrachloroethane	1.23	246	24.6	4.92		0.103	0.515	1.03	5.15	25.8	51.5	103	
Cumene	1.08	216	21.6	4.32		0.123	0.615	1.23	6.15	30.8	61.5	123	
alpha-Pinene	1.06	212	21.2	4.24		0.108	0.540	1.08	5.40	27.0	54.0	108	
n-Propylbenzene	1.05	210	21.0	4.20		0.106	0.530	1.06	5.30	26.5	53.0	106	
3-Ethyltoluene	1.02	204	20.4	4.08		0.105	0.525	1.05	5.25	26.3	52.5	105	
4-Ethyltoluene	1.11	222	22.2	4.44		0.102	0.510	1.02	5.10	25.5	51.0	102	
1,3,5-Trimethylbenzene	1.08	216	21.6	4.32		0.111	0.555	1.11	5.55	27.8	55.5	111	
alpha-Methylstyrene	1.02	204	20.4	4.08		0.108	0.540	1.08	5.40	27.0	54.0	108	
2-Ethyltoluene	0.990	198	19.8	3.96		0.102	0.510	1.02	5.10	25.5	51.0	102	
1,2,4-Trimethylbenzene	1.10	220	22.0	4.40		0.099	0.495	0.990	4.95	24.8	49.5	99.0	
n-Decane	1.04	208	20.8	4.16		0.110	0.550	1.10	5.50	27.5	55.0	110	
Benzyl Chloride	1.07	214	21.4	4.28		0.104	0.520	1.04	5.20	26.0	52.0	104	
1,3-Dichlorobenzene	1.06	212	21.2	4.24		0.107	0.535	1.07	5.35	26.8	53.5	107	
1,4-Dichlorobenzene	1.10	220	22.0	4.40		0.106	0.530	1.06	5.30	26.5	53.0	106	
sec-Butylbenzene	1.07	214	21.4	4.28		0.110	0.550	1.10	5.50	27.5	55.0	110	
p-Isopropyltoluene	1.180	236	23.6	4.72		0.107	0.535	1.07	5.35	26.8	53.5	107	
1,2,3-Trimethylbenzene	1.10	220	22.0	4.40		0.118	0.590	1.18	5.90	29.5	59.0	118	
1,2-Dichlorobenzene	1.08	216	21.6	4.32		0.110	0.550	1.10	5.50	27.5	55.0	110	
d-Limonene	1.06	212	21.2	4.24		0.108	0.540	1.08	5.40	27.0	54.0	108	
1,2-Dibromo-3-chloropropane	1.04	208	20.8	4.16		0.106	0.530	1.06	5.30	26.5	53.0	106	
n-Undecane	1.05	210	21.0	4.20		0.104	0.520	1.04	5.20	26.0	52.0	104	
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48		0.105	0.525	1.05	5.25	26.3	52.5	105	
Naphthalene	1.05	210	21.0	4.20		0.112	0.560	1.12	5.60	28.0	56.0	112	
n-Dodecane	1.06	212	21.2	4.24		0.105	0.525	1.05	5.25	26.3	52.5	105	
Hexachloro-1,3-butadiene	1.11	222	22.2	4.44		0.106	0.530	1.06	5.30	26.5	53.0	106	
						0.111	0.555	1.11	5.55	27.8	55.5	111	

\*Enter Information in the Solid Shaded Areas ONLY.

*DA 5/29/08*

Method Path : J:\MS16\METHODS\  
 Method File : R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:50:43 2008  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
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2	0.5	1	25	J:\MS16\DATA\2008_05\26\05260803.D
3	1.0	1	25	J:\MS16\DATA\2008_05\26\05260804.D
4	5.0	5	25	J:\MS16\DATA\2008_05\26\05260805.D
5	25	27	25	J:\MS16\DATA\2008_05\26\05260806.D
6	50	54	25	J:\MS16\DATA\2008_05\26\05260807.D
7	100	108	25	J:\MS16\DATA\2008_05\26\05260808.D

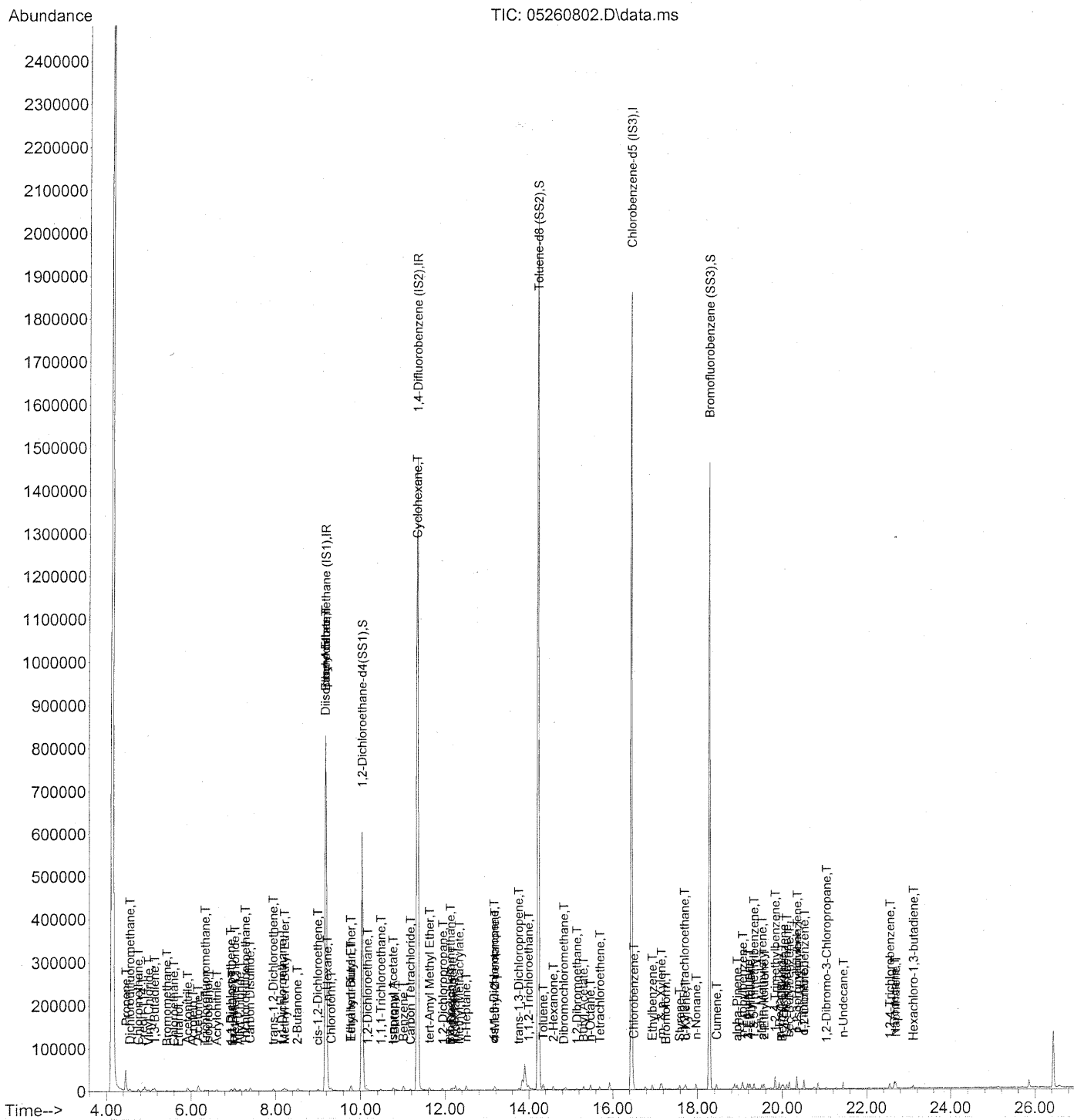
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2	0.5	May 27 08:39 2008	May 27 08:17 2008	26 May 2008 5:14 pm
3	1.0	May 27 08:39 2008	May 27 08:21 2008	26 May 2008 5:51 pm
4	5.0	May 27 08:39 2008	May 27 08:23 2008	26 May 2008 6:36 pm
5	25	May 27 08:40 2008	May 27 08:25 2008	26 May 2008 7:14 pm
6	50	May 27 08:40 2008	May 27 08:35 2008	26 May 2008 7:52 pm
7	100	May 27 08:40 2008	May 27 08:38 2008	26 May 2008 8:30 pm

R16052608.M Thu May 29 11:50:14 2008

SA 5/29/08

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:13:11 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:13:11 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	400141	25.000	ng	-0.07
37) 1,4-Difluorobenzene (IS2)	11.34	114	1673816	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	627739	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.04	65	566923	20.091	ng	-0.05
Spiked Amount	25.000		Recovery	=	80.36%	
57) Toluene-d8 (SS2)	14.22	98	1661708	26.885	ng	-0.02
Spiked Amount	25.000		Recovery	=	107.52%	
73) Bromofluorobenzene (SS3)	18.28	174	526226	32.713	ng	-0.01
Spiked Amount	25.000		Recovery	=	130.84%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	4224	0.106	ng	96
3) Dichlorodifluoromethane	4.56	85	4829	0.102	ng	95
4) Chloromethane	4.75	50	6550	0.112	ng	91
5) Freon 114	4.86	135	2475	0.108	ng	100
6) Vinyl Chloride	5.00	62	3667	0.091	ng	94
7) 1,3-Butadiene	5.14	54	3391	0.090	ng	92
8) Bromomethane	5.43	94	2058	0.124	ng	94
9) Chloroethane	5.60	64	2016	0.109	ng	82
10) Ethanol	5.71	45	1471	0.053	ng	# 50
11) Acetonitrile	5.92	41	13158	0.184	ng	76
12) Acrolein	6.05	56	2744	0.140	ng	99
13) Acetone	6.16	58	8349	0.316	ng	# 64
14) Trichlorofluoromethane	6.33	101	4204	0.107	ng	92
15) Isopropanol	6.40	45	9894m	0.115	ng	
16) Acrylonitrile	6.61	53	3984	0.085	ng	92
17) 1,1-Dichloroethene	6.94	96	1987	0.104	ng	# 80
18) tert-Butanol	6.98	59	7419m	0.095	ng	
19) Methylene Chloride	7.04	84	3045	0.146	ng	# 52
20) Allyl Chloride	7.15	41	4050	0.093	ng	71
21) Trichlorotrifluoroethane	7.28	151	2157	0.131	ng	88
22) Carbon Disulfide	7.40	76	12879	0.163	ng	97
23) trans-1,2-Dichloroethene	7.94	61	4109	0.100	ng	92
24) 1,1-Dichloroethane	8.16	63	4104	0.088	ng	91
25) Methyl tert-Butyl Ether	8.21	73	6354	0.101	ng	87
26) Vinyl Acetate	8.23	86	205	N.D.		
27) 2-Butanone	8.52	72	1394	0.102	ng	# 1
28) cis-1,2-Dichloroethene	9.00	61	3528	0.093	ng	98
29) Diisopropyl Ether	9.18	87	1644	0.095	ng	# 13
30) Ethyl Acetate	9.19	61	737	0.073	ng	# 34
31) n-Hexane	9.23	57	6205	0.109	ng	80

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Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:13:11 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	3442	0.115	ng	99
34) Tetrahydrofuran	9.77	72	1130	0.083	ng #	5
35) Ethyl tert-Butyl Ether	9.77	87	2423	0.099	ng #	80
36) 1,2-Dichloroethane	10.16	62	3289	0.092	ng	69
38) 1,1,1-Trichloroethane	10.48	97	3727	0.116	ng	93
39) Isopropyl Acetate	10.77	61	1401	0.082	ng #	40
40) 1-Butanol	10.80	56	2998	0.095	ng #	1
41) Benzene	11.01	78	11577	0.141	ng	97
42) Carbon Tetrachloride	11.18	117	3444	0.142	ng	92
43) Cyclohexane	11.33	84	4388	0.135	ng #	1
44) tert-Amyl Methyl Ether	11.63	73	5499	0.095	ng	76
45) 1,2-Dichloropropane	11.94	63	2646	0.104	ng	96
46) Bromodichloromethane	12.13	83	2654	0.109	ng	97
47) Trichloroethene	12.18	130	2936	0.130	ng	92
48) 1,4-Dioxane	12.16	88	1628	0.106	ng #	68
49) Isooctane	12.24	57	13181	0.097	ng	99
50) Methyl Methacrylate	12.34	100	515	0.064	ng #	89
51) n-Heptane	12.51	71	1969	0.094	ng #	39
52) cis-1,3-Dichloropropene	13.16	75	2905	0.089	ng	93
53) 4-Methyl-2-pentanone	13.18	58	2871	0.096	ng #	60
54) trans-1,3-Dichloropropene	13.76	75	3109	0.108	ng	89
55) 1,1,2-Trichloroethane	13.99	97	2106	0.106	ng	93
58) Toluene	14.34	91	10682	0.141	ng	98
59) 2-Hexanone	14.59	43	9331	0.117	ng	91
60) Dibromochloromethane	14.83	129	2967	0.150	ng	84
61) 1,2-Dibromoethane	15.15	107	2643	0.135	ng	99
62) Butyl Acetate	15.31	43	8397	0.103	ng	93
63) n-Octane	15.47	57	2530	0.104	ng #	66
64) Tetrachloroethene	15.69	166	3035	0.162	ng	90
65) Chlorobenzene	16.50	112	7030	0.140	ng	98
66) Ethylbenzene	16.94	91	10957	0.127	ng	95
67) m- & p-Xylene	17.15	91	17683	0.312	ng	92
68) Bromoform	17.26	173	1727	0.162	ng	77
69) Styrene	17.59	104	6707	0.128	ng	95
70) o-Xylene	17.73	91	9171	0.152	ng	95
71) n-Nonane	17.97	43	7173	0.108	ng	93
72) 1,1,2,2-Tetrachloroethane	17.70	83	3879	0.146	ng	96
74) Cumene	18.45	105	11130	0.132	ng	94
75) alpha-Pinene	18.93	93	4520	0.110	ng	98
76) n-Propylbenzene	19.06	91	12504	0.118	ng	74
77) 3-Ethyltoluene	19.19	105	11797	0.129	ng	97
78) 4-Ethyltoluene	19.24	105	11073	0.133	ng	90
79) 1,3,5-Trimethylbenzene	19.33	105	10140	0.139	ng	93

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5/29/08

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

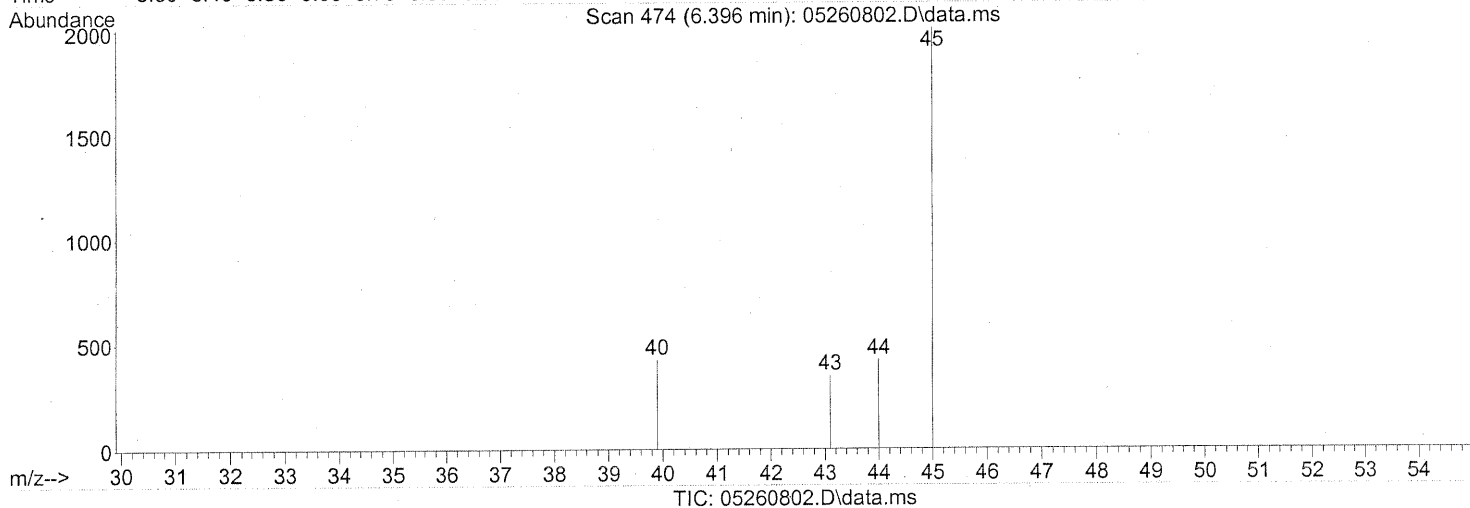
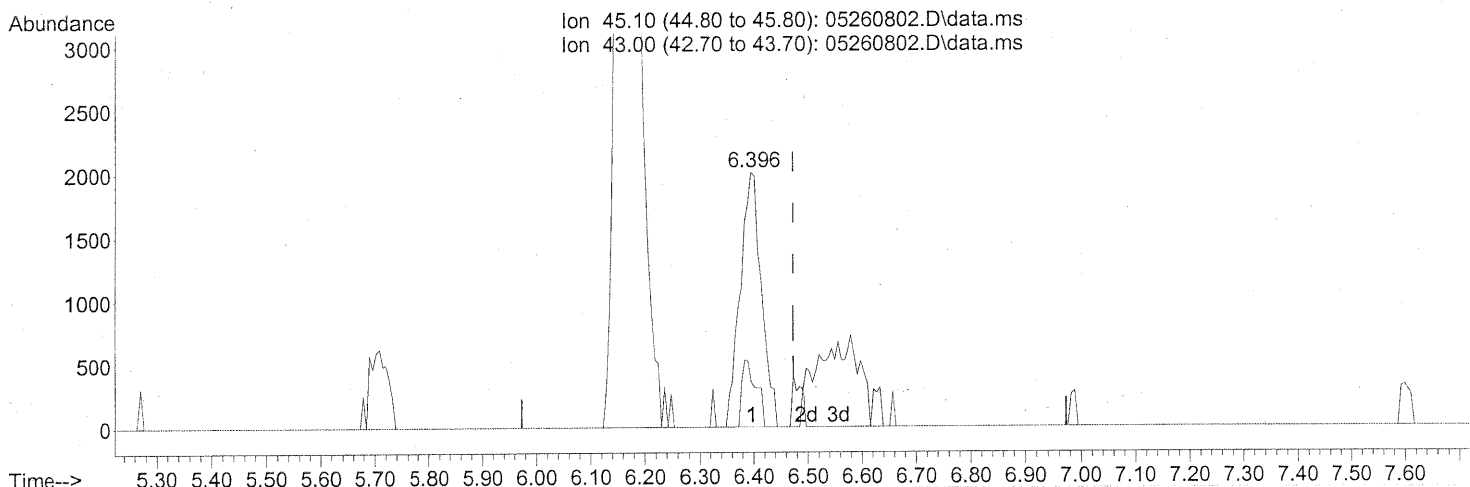
Quant Time: May 27 08:13:11 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	4513	0.114	ng	98
81) 2-Ethyltoluene	19.56	105	10288	0.114	ng	92
82) 1,2,4-Trimethylbenzene	19.83	105	10455	0.138	ng	92
83) n-Decane	19.93	57	6264	0.104	ng	80
84) Benzyl Chloride	19.99	91	7269	0.115	ng	92
85) 1,3-Dichlorobenzene	20.02	146	6470	0.147	ng	97
86) 1,4-Dichlorobenzene	20.10	146	6421	0.153	ng	95
87) sec-Butylbenzene	20.16	105	12151	0.123	ng	95
88) p-Isopropyltoluene	20.34	119	11386	0.136	ng	96
89) 1,2,3-Trimethylbenzene	20.34	105	9426	0.128	ng	91
90) 1,2-Dichlorobenzene	20.52	146	5914	0.145	ng	92
91) d-Limonene	20.51	68	2499	0.092	ng	82
92) 1,2-Dibromo-3-Chloropr...	21.04	157	1552	0.121	ng	# 83
93) n-Undecane	21.44	57	6578	0.104	ng	76
94) 1,2,4-Trichlorobenzene	22.55	184	1060	0.150	ng	# 65
95) Naphthalene	22.69	128	15651	0.146	ng	96
96) n-Dodecane	22.66	57	6214	0.101	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	1680	0.159	ng	89

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

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:12:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



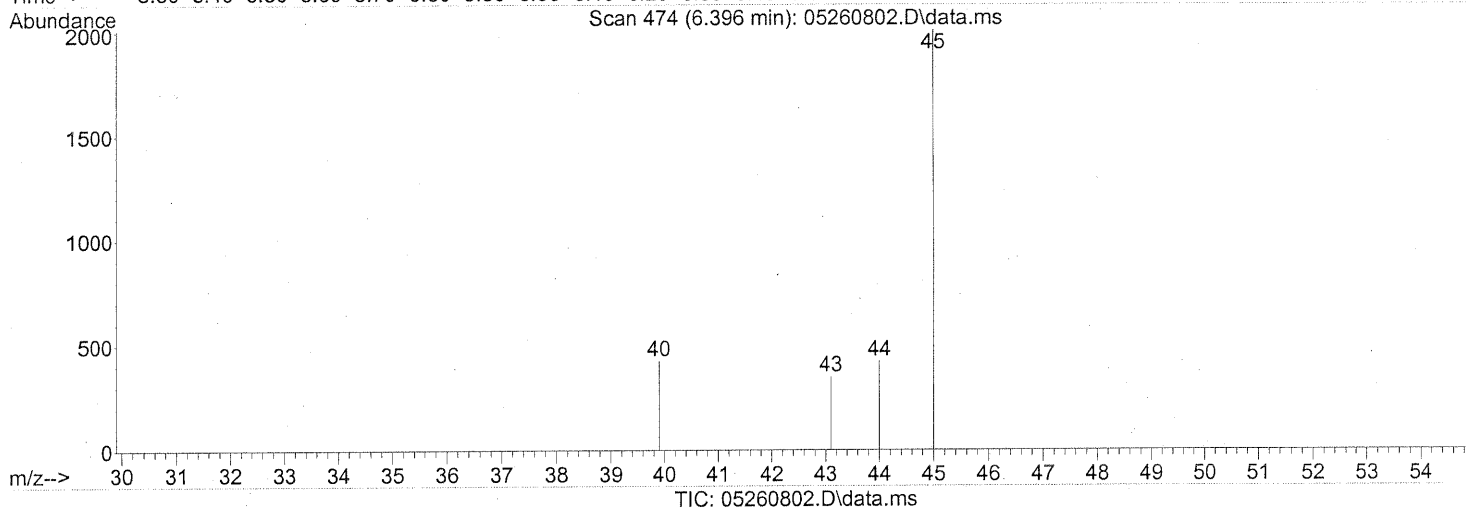
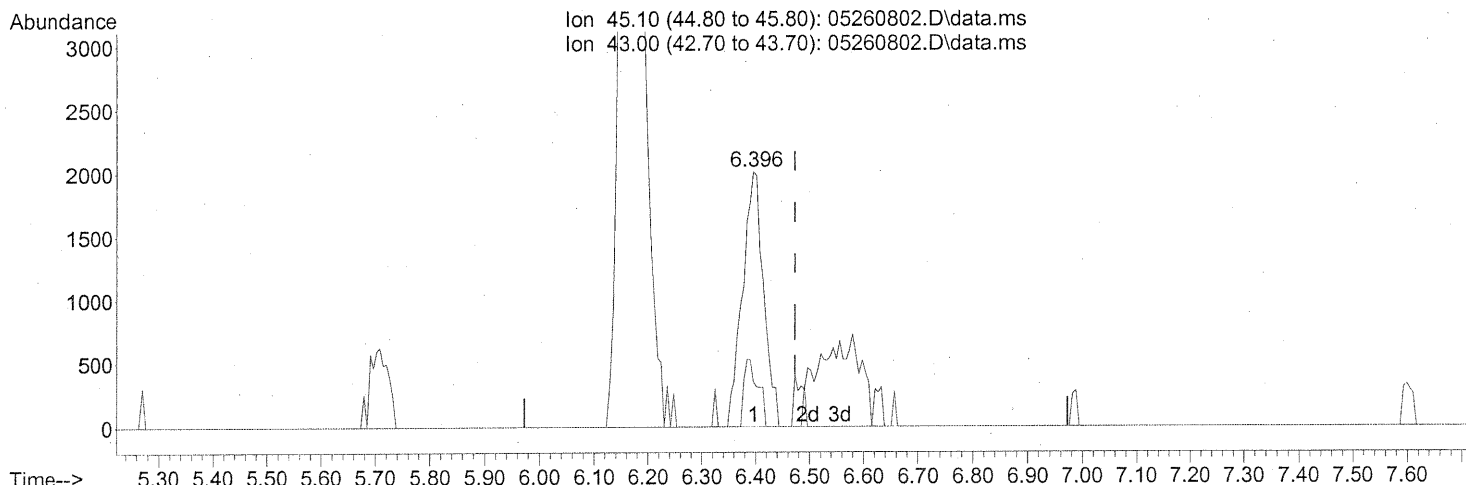
(15) Isopropanol (T)  
 6.396min (-0.077) 0.06ng  
 response 5444

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.60
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 4:36 pm  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:12:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



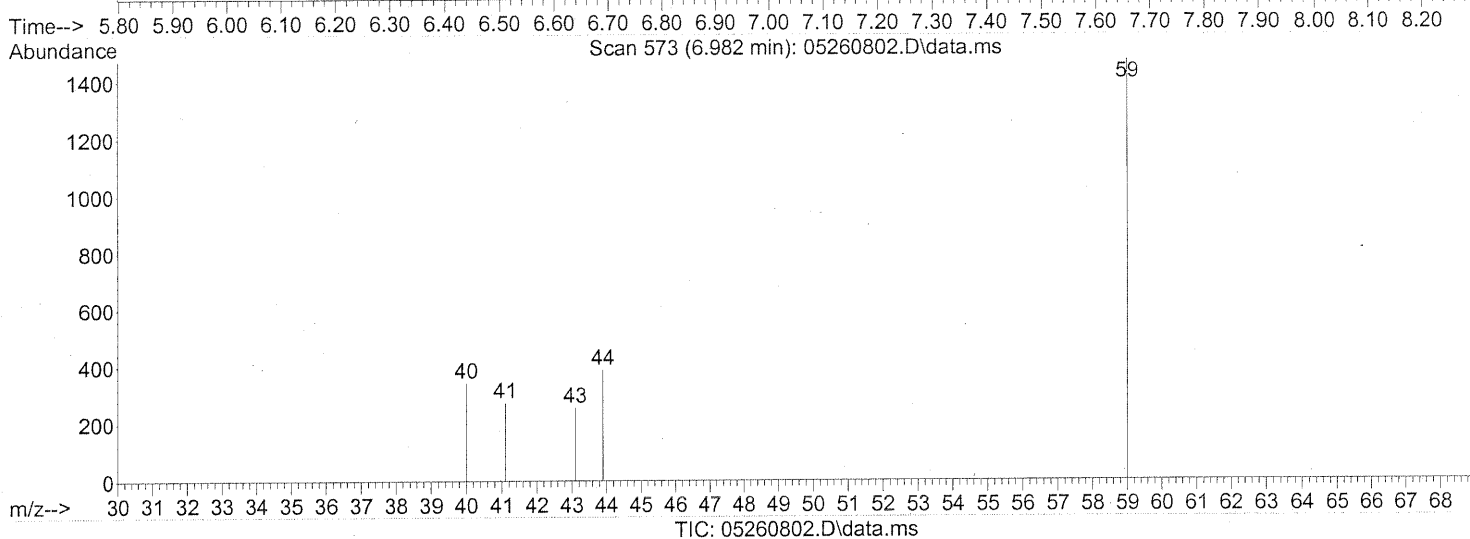
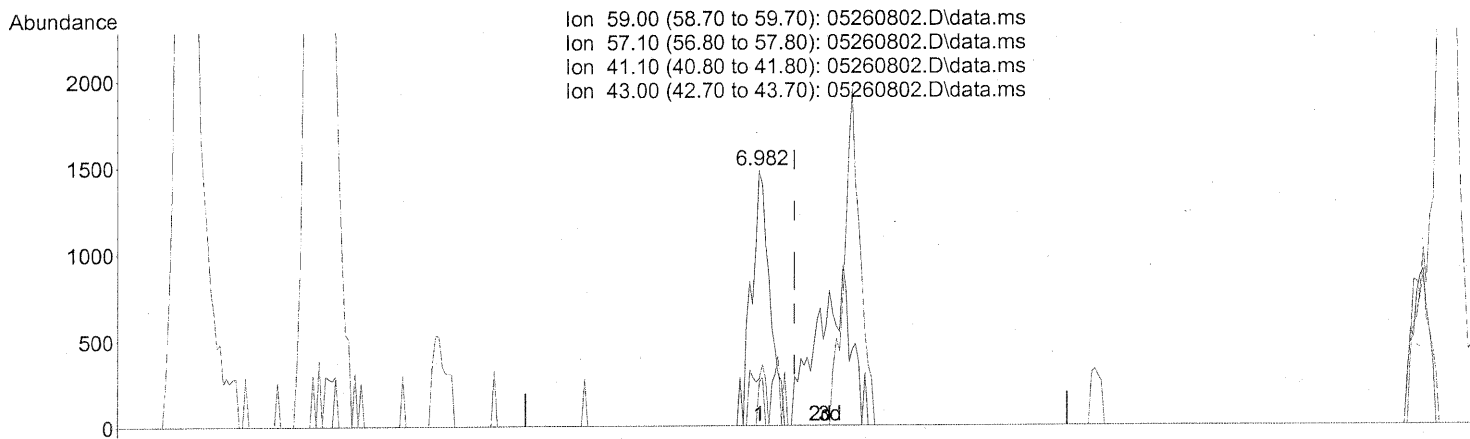
(15) Isopropanol (T)  
 6.396min (-0.077) 0.12ng m  
 response 9894

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	9.68
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*DA 5/29/08*  
*EM 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260802.D  
Acq On : 26 May 2008 4:36 pm  
Operator : WA  
Sample : 0.1ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210811  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:12:29 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.982min (-0.065) 0.04ng

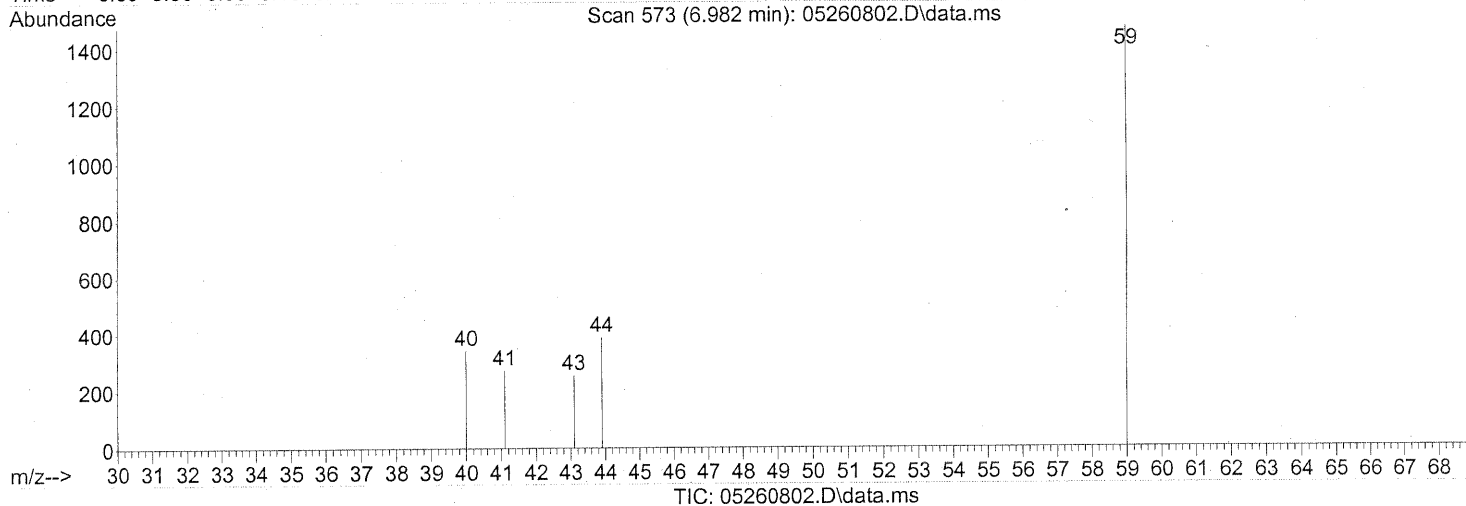
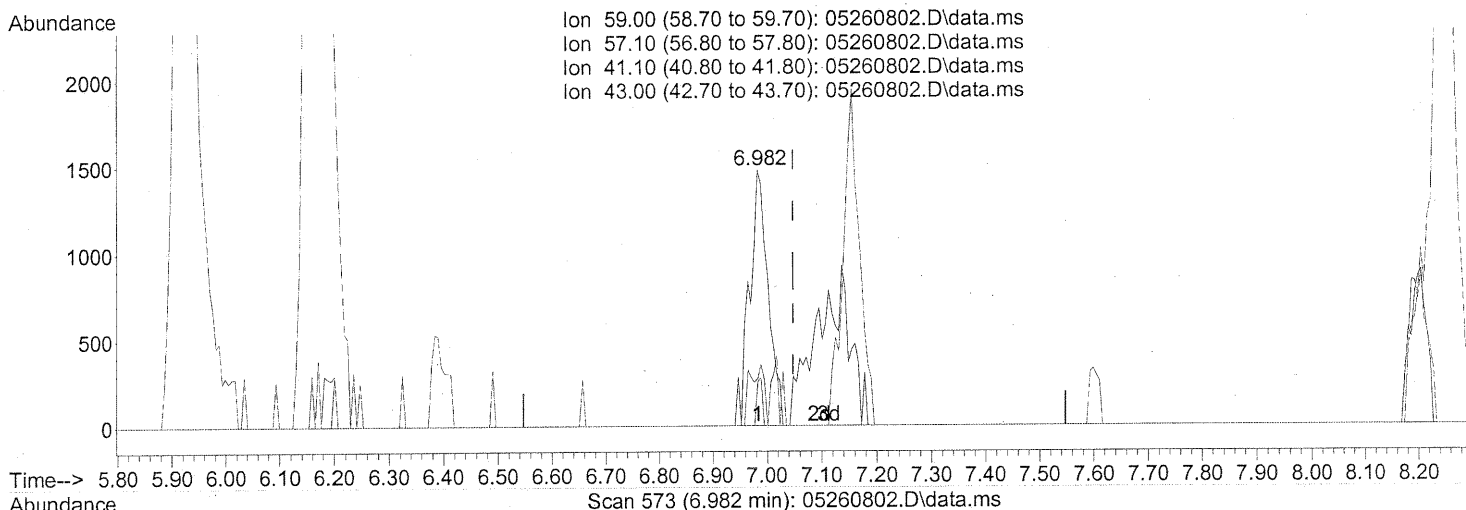
response 3488

*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	17.95
43.00	17.20	5.48

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260802.D  
Acq On : 26 May 2008 4:36 pm  
Operator : WA  
Sample : 0.1ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210811  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 08:12:29 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.982min (-0.065) 0.10ng m

response 7419

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	8.44
43.00	17.20	2.57

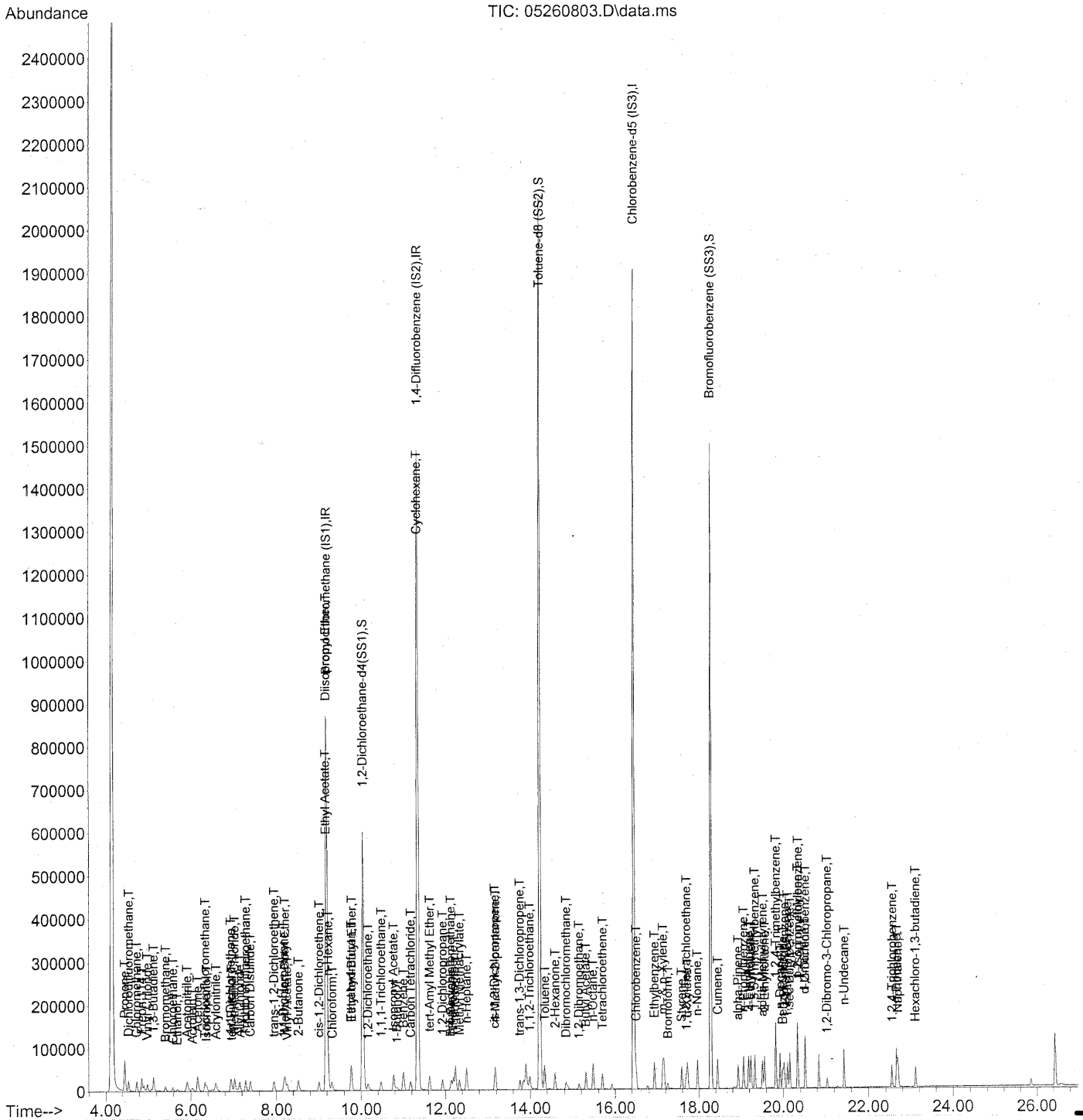
*int. whole peaks*

*WA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:17:54 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260803.D  
 Acq On : 26 May 2008 5:14 pm  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:17:54 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	401927	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1681603	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	646123	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	573396	20.231	ng	-0.05
Spiked Amount	25.000		Recovery	=	80.92%	
57) Toluene-d8 (SS2)	14.23	98	1686339	26.507	ng	-0.02
Spiked Amount	25.000		Recovery	=	106.04%	
73) Bromofluorobenzene (SS3)	18.28	174	538778	32.540	ng	-0.01
Spiked Amount	25.000		Recovery	=	130.16%	

Target Compounds

						Qvalue
2) Propene	4.45	42	18207	0.453	ng	96
3) Dichlorodifluoromethane	4.55	85	23186	0.488	ng	98
4) Chloromethane	4.74	50	30704	0.523	ng	98
5) Freon 114	4.85	135	13598	0.593	ng	98
6) Vinyl Chloride	4.98	62	18778	0.463	ng	95
7) 1,3-Butadiene	5.13	54	17240	0.455	ng	# 86
8) Bromomethane	5.42	94	9975	0.597	ng	100
9) Chloroethane	5.58	64	9285	0.501	ng	89
10) Ethanol	5.68	45	11895m	0.430	ng	
11) Acetonitrile	5.92	41	36843	0.513	ng	93
12) Acrolein	6.04	56	8955	0.455	ng	97
13) Acetone	6.16	58	20065	0.756	ng	# 67
14) Trichlorofluoromethane	6.33	101	21258	0.541	ng	97
15) Isopropanol	6.37	45	45256m	0.526	ng	
16) Acrylonitrile	6.60	53	21501	0.455	ng	99
17) 1,1-Dichloroethene	6.93	96	10929	0.568	ng	97
18) tert-Butanol	6.96	59	37559m	0.480	ng	
19) Methylene Chloride	7.02	84	11554	0.551	ng	# 43
20) Allyl Chloride	7.15	41	21772	0.495	ng	74
21) Trichlorotrifluoroethane	7.28	151	11677	0.707	ng	86
22) Carbon Disulfide	7.39	76	40121	0.507	ng	99
23) trans-1,2-Dichloroethene	7.94	61	20284	0.493	ng	95
24) 1,1-Dichloroethane	8.16	63	21332	0.455	ng	94
25) Methyl tert-Butyl Ether	8.19	73	32217	0.511	ng	81
26) Vinyl Acetate	8.25	86	1989	0.369	ng	# 1
27) 2-Butanone	8.52	72	7197	0.526	ng	# 7
28) cis-1,2-Dichloroethene	9.01	61	19695	0.519	ng	92
29) Diisopropyl Ether	9.18	87	8514	0.489	ng	# 22
30) Ethyl Acetate	9.17	61	5631	0.556	ng	84
31) n-Hexane	9.23	57	29350	0.513	ng	91

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SL29/08

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260803.D  
 Acq On : 26 May 2008 5:14 pm  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:17:54 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	17613	0.588	ng	95
34) Tetrahydrofuran	9.77	72	6712	0.489	ng #	47
35) Ethyl tert-Butyl Ether	9.78	87	12699	0.514	ng #	76
36) 1,2-Dichloroethane	10.16	62	17268	0.482	ng	97
38) 1,1,1-Trichloroethane	10.47	97	18245	0.564	ng	92
39) Isopropyl Acetate	10.77	61	8471	0.493	ng #	70
40) 1-Butanol	10.85	56	14060	0.441	ng #	1
41) Benzene	11.01	78	45203	0.548	ng	99
42) Carbon Tetrachloride	11.18	117	17774	0.728	ng	98
43) Cyclohexane	11.33	84	17716	0.543	ng #	1
44) tert-Amyl Methyl Ether	11.63	73	27234	0.469	ng	74
45) 1,2-Dichloropropane	11.93	63	12919	0.505	ng	90
46) Bromodichloromethane	12.13	83	13522	0.552	ng	96
47) Trichloroethene	12.19	130	14284	0.629	ng	94
48) 1,4-Dioxane	12.14	88	8805	0.569	ng #	60
49) Isooctane	12.24	57	68671	0.502	ng	93
50) Methyl Methacrylate	12.34	100	4242	0.521	ng #	77
51) n-Heptane	12.50	71	11249	0.536	ng #	52
52) cis-1,3-Dichloropropene	13.16	75	15530	0.472	ng	97
53) 4-Methyl-2-pentanone	13.18	58	14645	0.488	ng	86
54) trans-1,3-Dichloropropene	13.76	75	15667	0.539	ng	99
55) 1,1,2-Trichloroethane	13.99	97	10839	0.542	ng	96
58) Toluene	14.35	91	48882	0.627	ng	96
59) 2-Hexanone	14.58	43	42868	0.520	ng	95
60) Dibromochloromethane	14.84	129	13973	0.687	ng	97
61) 1,2-Dibromoethane	15.14	107	13056	0.649	ng	97
62) Butyl Acetate	15.31	43	42203	0.502	ng	93
63) n-Octane	15.47	57	14371	0.576	ng	92
64) Tetrachloroethene	15.69	166	14352	0.745	ng	99
65) Chlorobenzene	16.50	112	35691	0.692	ng	99
66) Ethylbenzene	16.94	91	54082	0.608	ng	95
67) m- & p-Xylene	17.14	91	86302	1.481	ng	92
68) Bromoform	17.26	173	9414	0.856	ng	97
69) Styrene	17.59	104	32872	0.609	ng	95
70) o-Xylene	17.73	91	42884	0.690	ng	91
71) n-Nonane	17.96	43	36634	0.534	ng	92
72) 1,1,2,2-Tetrachloroethane	17.70	83	17335	0.633	ng	91
74) Cumene	18.45	105	55143	0.635	ng	93
75) alpha-Pinene	18.93	93	25301	0.597	ng	95
76) n-Propylbenzene	19.06	91	61972	0.569	ng	89
77) 3-Ethyltoluene	19.19	105	56794	0.604	ng	95
78) 4-Ethyltoluene	19.24	105	58033	0.678	ng	92
79) 1,3,5-Trimethylbenzene	19.33	105	48794	0.648	ng	91

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WA 5/29/08

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260803.D  
 Acq On : 26 May 2008 5:14 pm  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

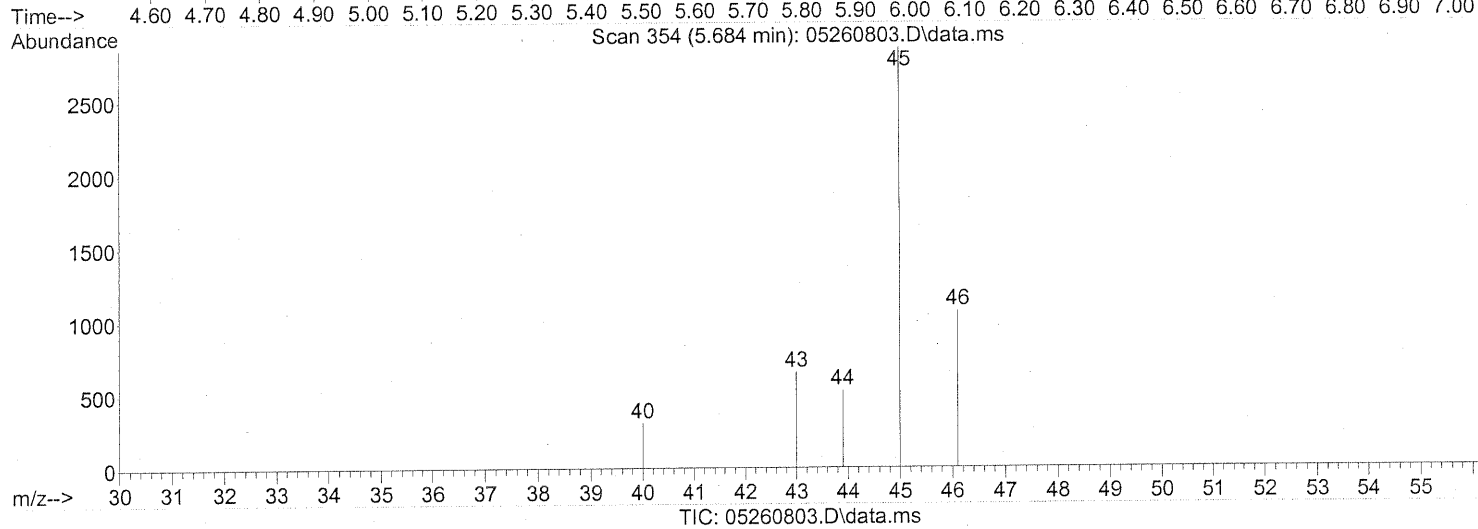
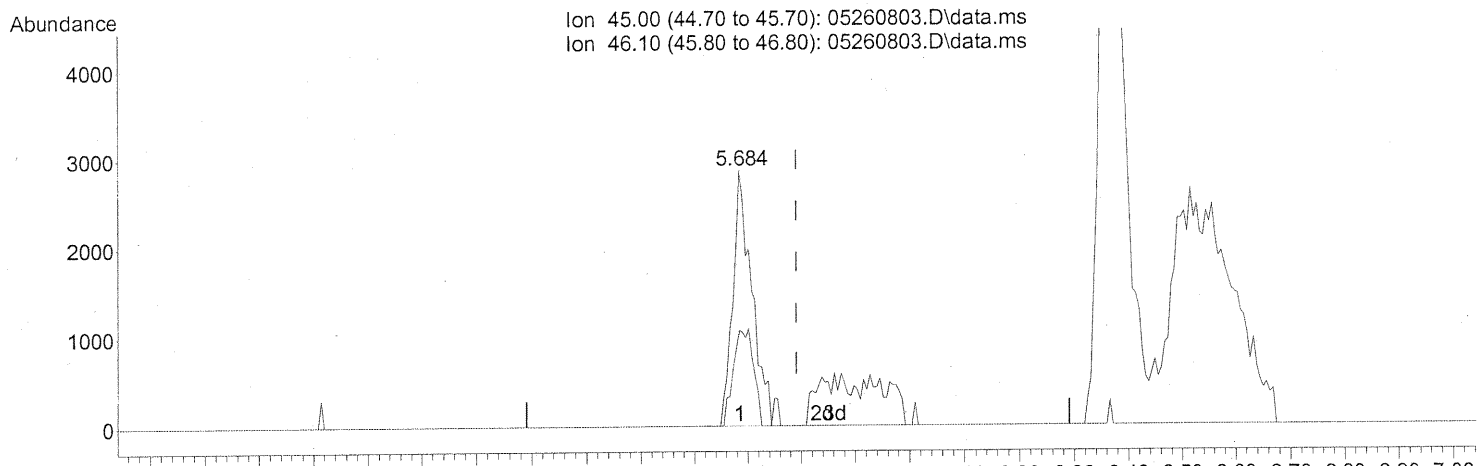
Quant Time: May 27 08:17:54 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	24814	0.607	ng	99
81) 2-Ethyltoluene	19.56	105	54713	0.587	ng	91
82) 1,2,4-Trimethylbenzene	19.83	105	50550	0.649	ng	90
83) n-Decane	19.93	57	33626	0.545	ng	79
84) Benzyl Chloride	19.99	91	35007	0.539	ng	89
85) 1,3-Dichlorobenzene	20.02	146	30633	0.678	ng	100
86) 1,4-Dichlorobenzene	20.10	146	30946	0.717	ng	98
87) sec-Butylbenzene	20.15	105	64132	0.632	ng	95
88) p-Isopropyltoluene	20.34	119	62212	0.722	ng	94
89) 1,2,3-Trimethylbenzene	20.34	105	48252	0.636	ng	88
90) 1,2-Dichlorobenzene	20.52	146	29763	0.710	ng	100
91) d-Limonene	20.51	68	14951	0.532	ng	92
92) 1,2-Dibromo-3-Chloropr...	21.03	157	8248	0.625	ng	89
93) n-Undecane	21.43	57	34558	0.532	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	5220	0.716	ng #	88
95) Naphthalene	22.69	128	62628	0.568	ng	98
96) n-Dodecane	22.66	57	33735	0.533	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	8918	0.818	ng	93

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

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(10) Ethanol (T)

5.684min (-0.107) 0.25ng

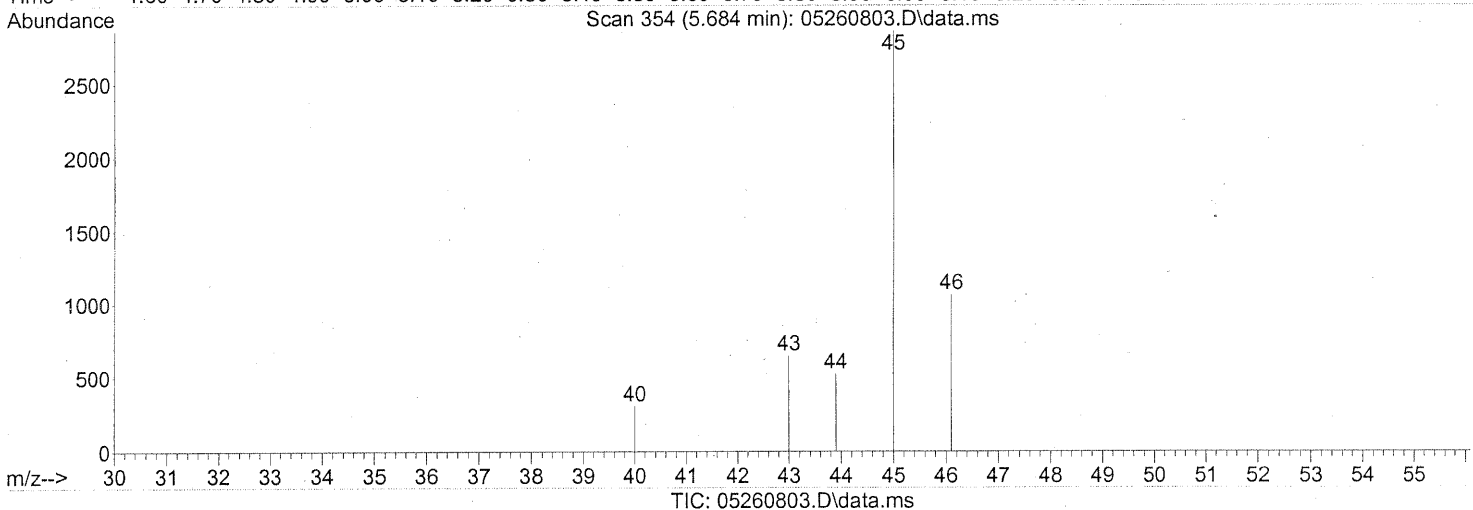
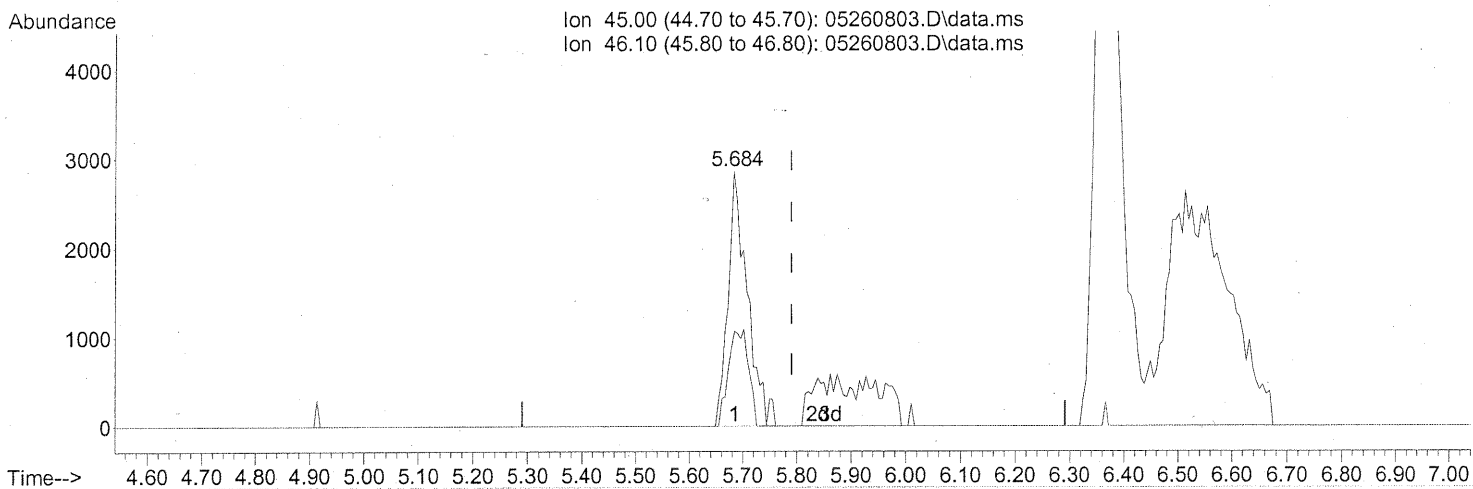
response 7042

*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.64
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260803.D  
 Acq On : 26 May 2008 5:14 pm  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.684min (-0.107) 0.43ng m

response 11895

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	24.06
0.00	0.00	0.00
0.00	0.00	0.00

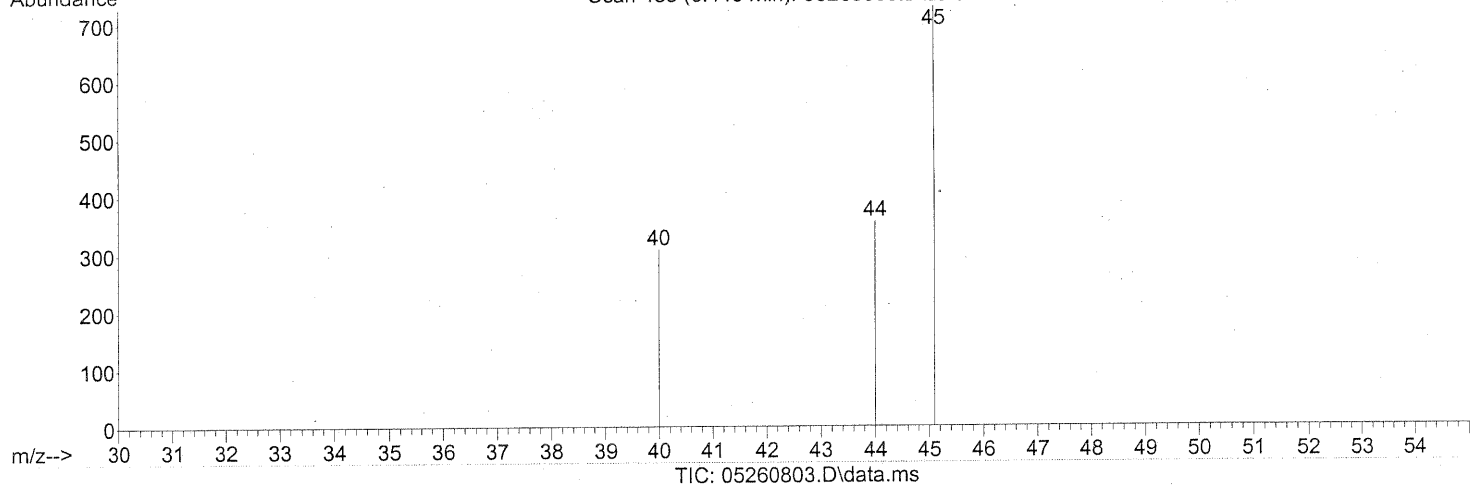
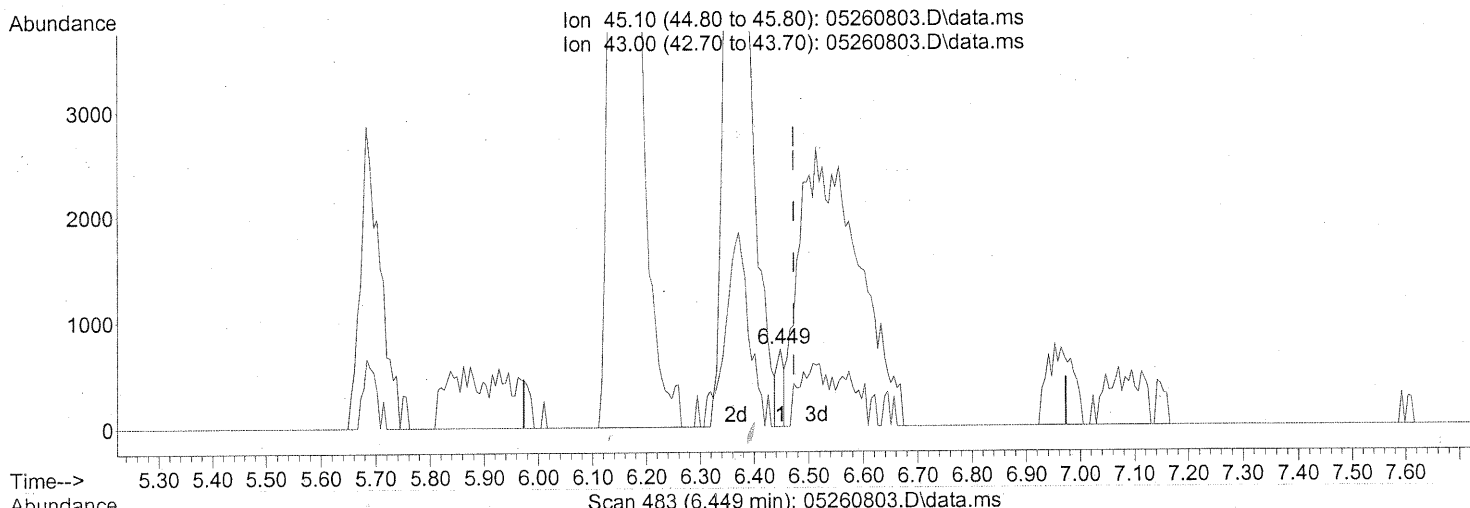
*int. whole peaks*

*WA 5/29/08*

*EW 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

6.449min (-0.024) 0.01ng

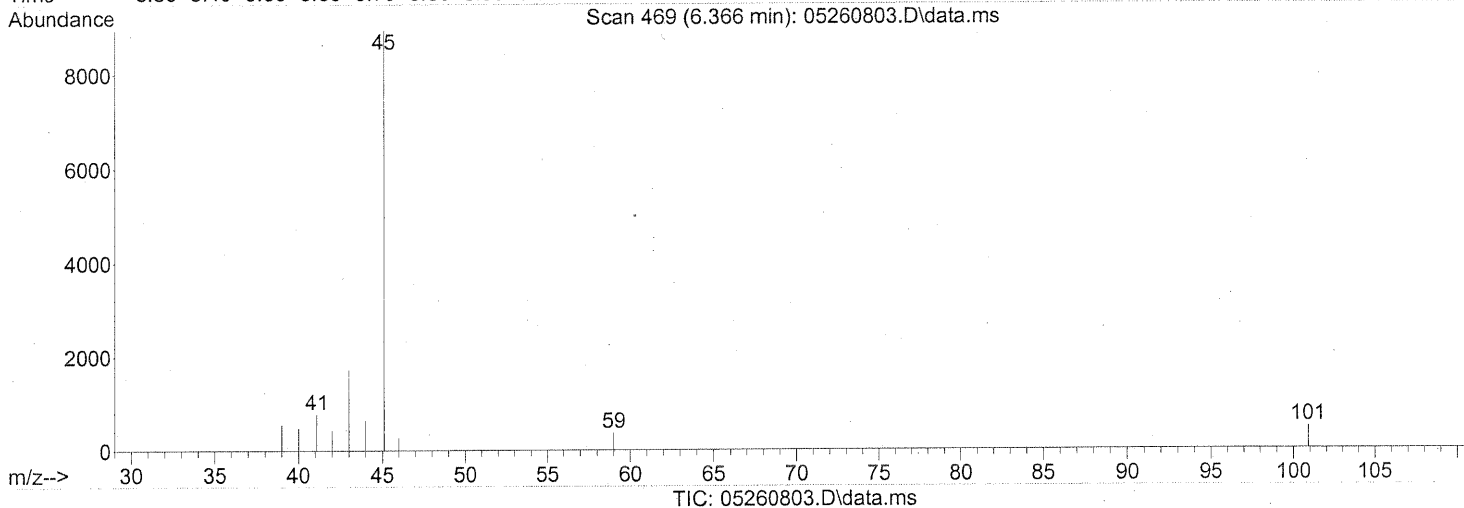
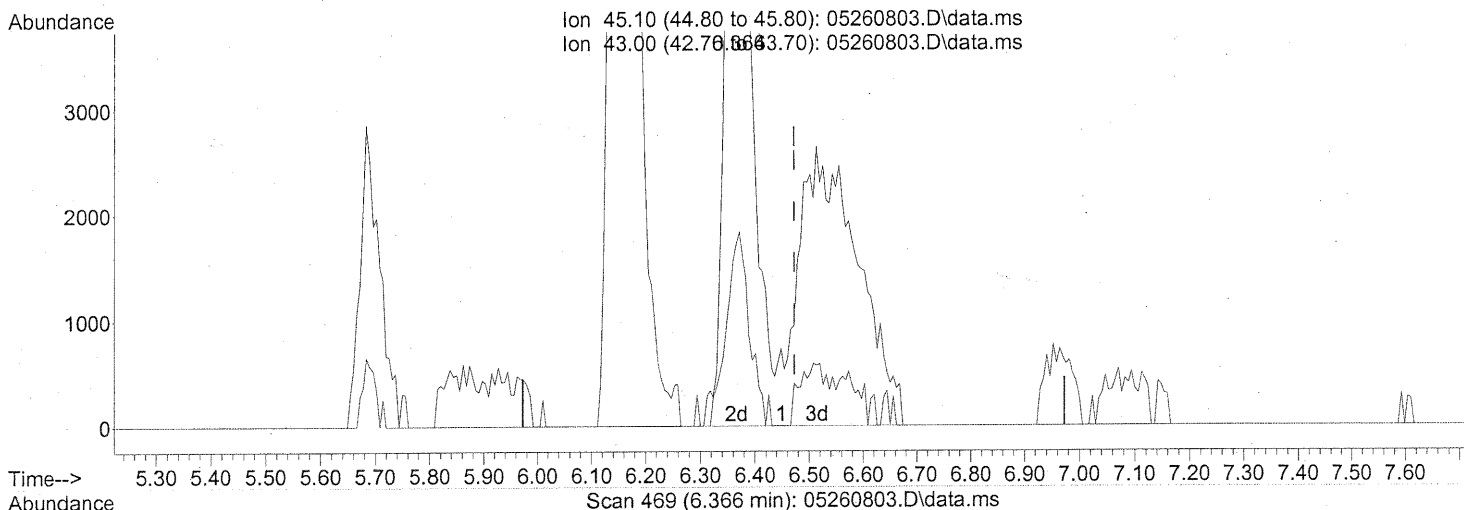
response 664

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	0.00
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.366min (-0.107) 0.53ng m  
response 45256

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	0.00
0.00	0.00	0.00
0.00	0.00	0.00

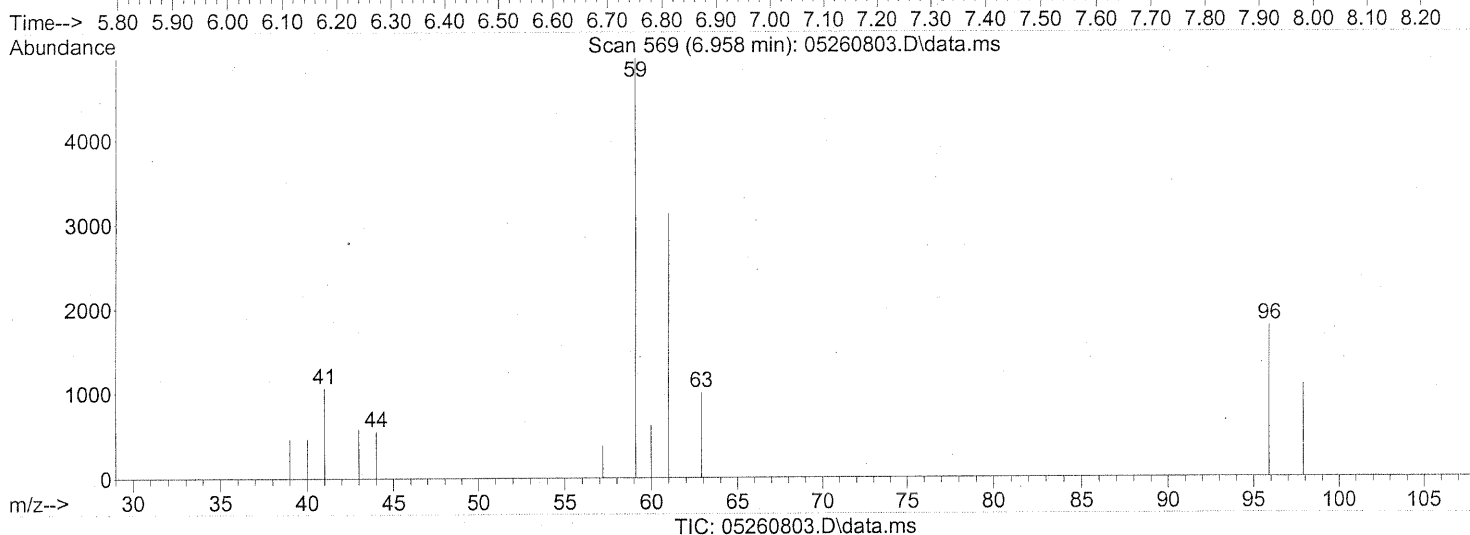
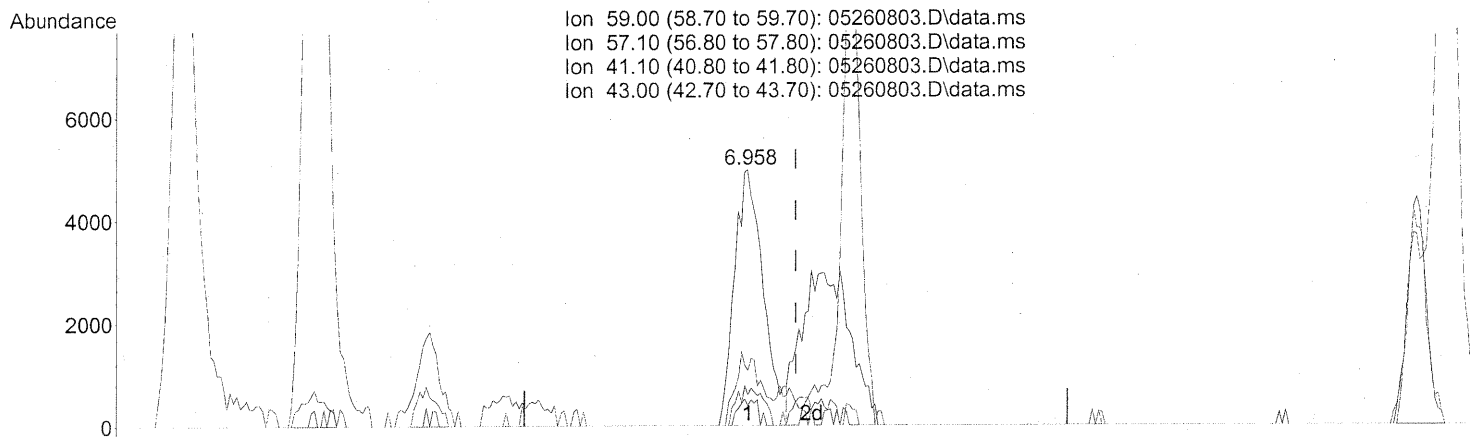
*int. whole peaks*

*IDA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.958min (-0.089) 0.24ng

response 18590

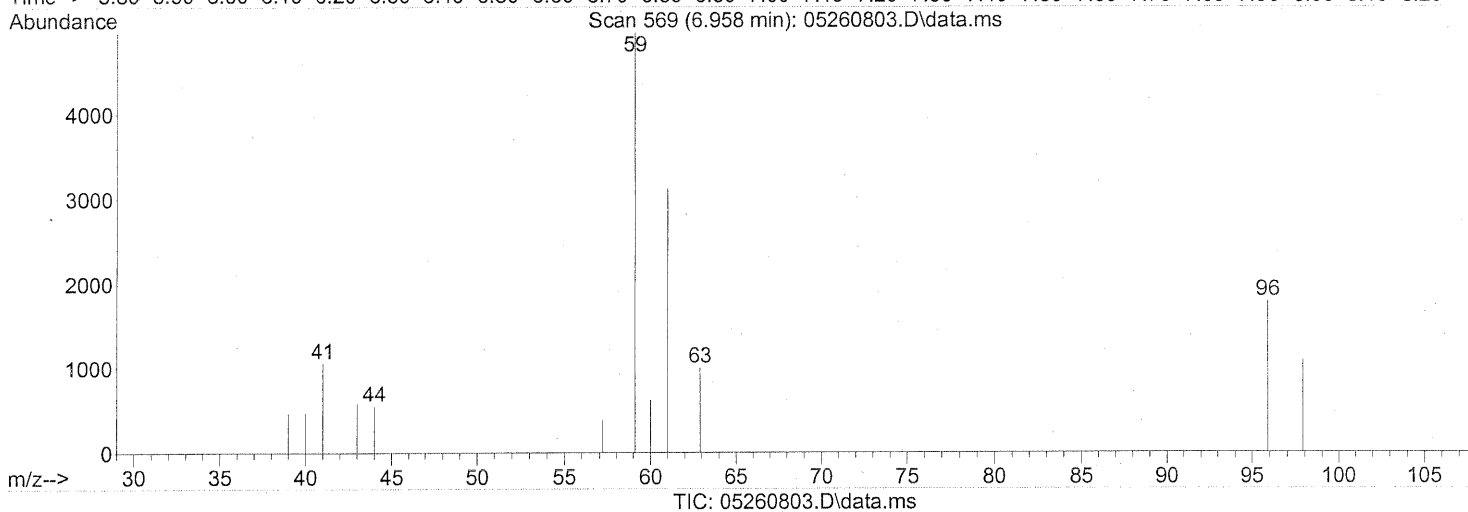
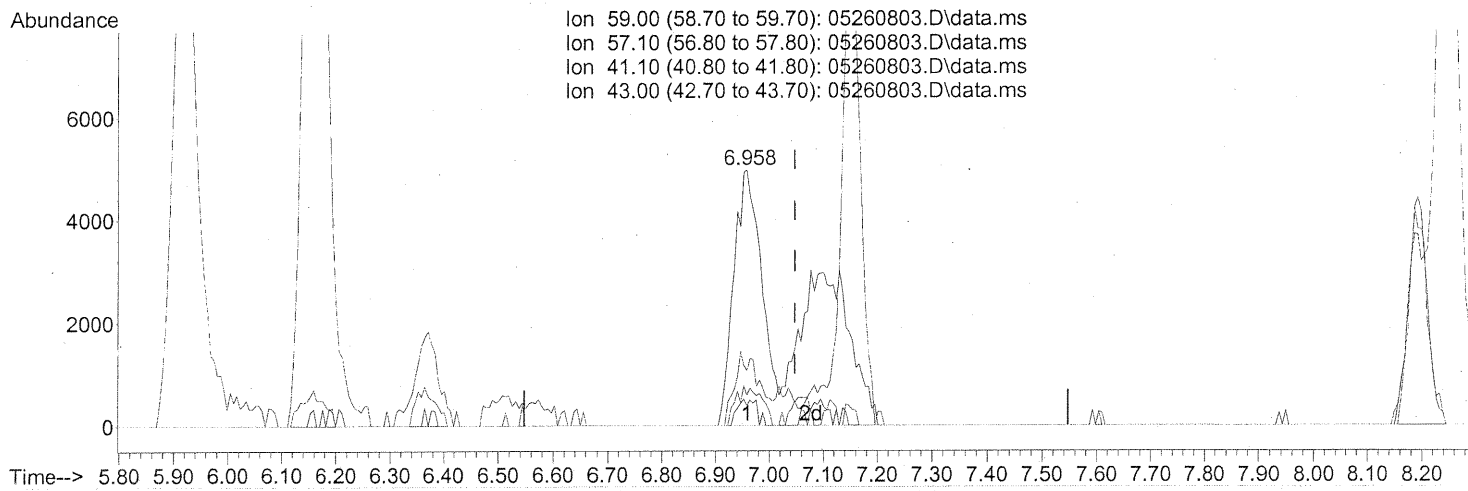
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	6.88
41.10	21.90	24.65
43.00	17.20	13.47



Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 5:14 pm  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:16:14 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.958min (-0.089) 0.48ng m  
response 37559

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	3.41
41.10	21.90	12.20
43.00	17.20	6.67

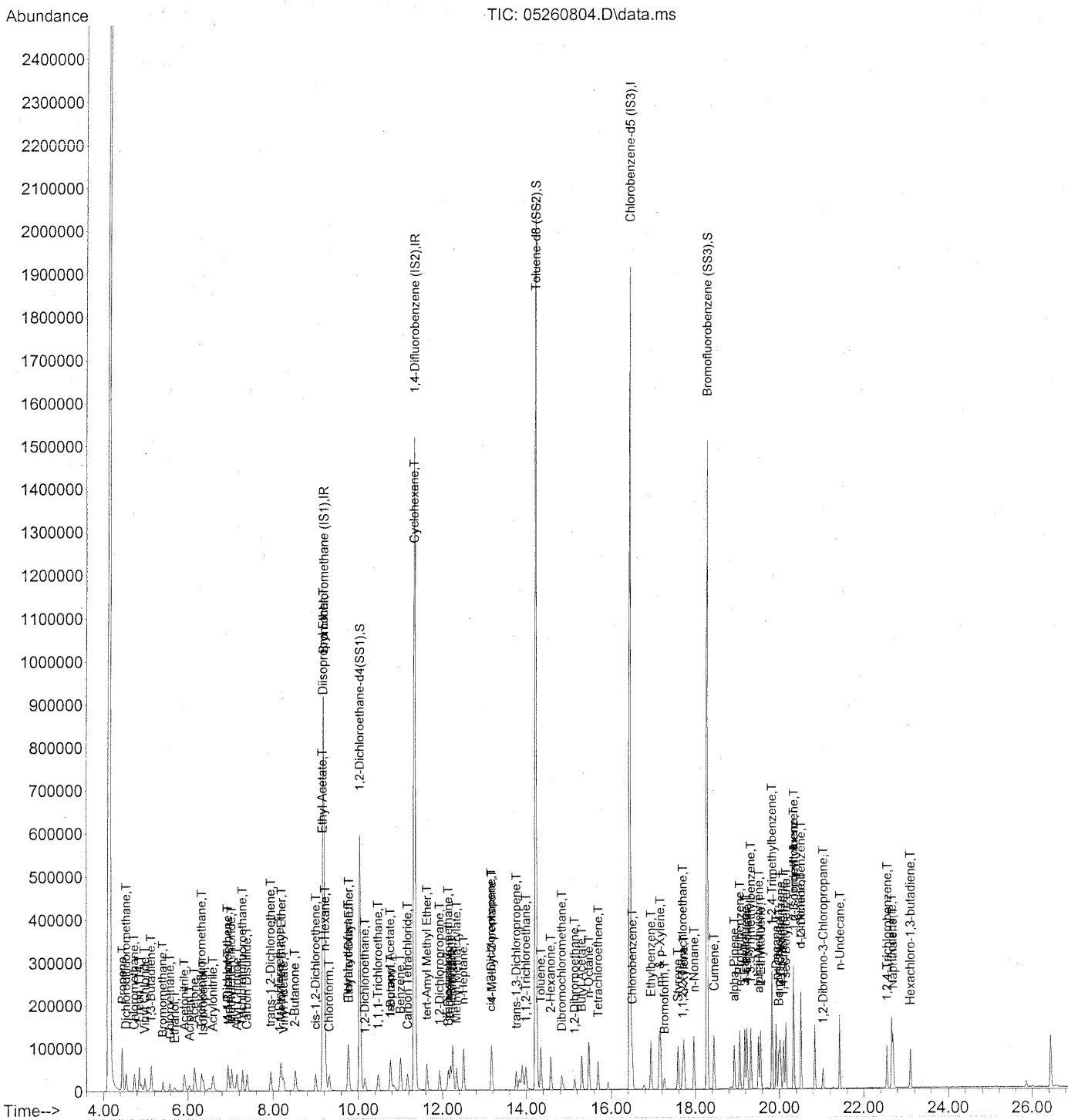
*int. whole peaks*

*WA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	400525	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1674056	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	647047	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	573073	20.290	ng	-0.05
Spiked Amount	25.000		Recovery	=	81.16%	
57) Toluene-d8 (SS2)	14.22	98	1679917	26.368	ng	-0.02
Spiked Amount	25.000		Recovery	=	105.48%	
73) Bromofluorobenzene (SS3)	18.28	174	543013	32.749	ng	-0.01
Spiked Amount	25.000		Recovery	=	131.00%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	33570	0.838	ng	93
3) Dichlorodifluoromethane	4.54	85	40962	0.865	ng	98
4) Chloromethane	4.74	50	56185	0.960	ng	98
5) Freon 114	4.85	135	24123	1.056	ng	94
6) Vinyl Chloride	4.98	62	32982	0.816	ng	93
7) 1,3-Butadiene	5.12	54	30538	0.809	ng	89
8) Bromomethane	5.41	94	18215	1.093	ng	99
9) Chloroethane	5.58	64	17881	0.968	ng	94
10) Ethanol	5.69	45	22061m	0.801	ng	
11) Acetonitrile	5.92	41	65956	0.922	ng	96
12) Acrolein	6.04	56	15251	0.778	ng	99
13) Acetone	6.16	58	32672	1.235	ng	# 70
14) Trichlorofluoromethane	6.32	101	38614	0.986	ng	100
15) Isopropanol	6.37	45	82028m	0.956	ng	
16) Acrylonitrile	6.60	53	39953	0.849	ng	98
17) 1,1-Dichloroethene	6.93	96	19791	1.032	ng	95
18) tert-Butanol	6.95	59	67512m	0.865	ng	
19) Methylene Chloride	7.02	84	20193	0.966	ng	# 43
20) Allyl Chloride	7.15	41	39791	0.908	ng	78
21) Trichlorotrifluoroethane	7.28	151	21202	1.288	ng	# 83
22) Carbon Disulfide	7.39	76	69199	0.877	ng	100
23) trans-1,2-Dichloroethene	7.94	61	37088	0.905	ng	94
24) 1,1-Dichloroethane	8.16	63	41421	0.886	ng	92
25) Methyl tert-Butyl Ether	8.20	73	58827	0.936	ng	79
26) Vinyl Acetate	8.25	86	3910	0.728	ng	# 19
27) 2-Butanone	8.52	72	13238	0.971	ng	# 6
28) cis-1,2-Dichloroethene	9.01	61	35017	0.926	ng	97
29) Diisopropyl Ether	9.18	87	15888	0.916	ng	# 25
30) Ethyl Acetate	9.17	61	10329	1.024	ng	86
31) n-Hexane	9.23	57	54152	0.950	ng	93

781

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	32822	1.099	ng	96
34) Tetrahydrofuran	9.77	72	12922	0.946	ng #	44
35) Ethyl tert-Butyl Ether	9.78	87	23314	0.947	ng #	73
36) 1,2-Dichloroethane	10.16	62	32391	0.907	ng	93
38) 1,1,1-Trichloroethane	10.47	97	34222	1.063	ng	96
39) Isopropyl Acetate	10.77	61	15493	0.905	ng #	66
40) 1-Butanol	10.77	56	25783m	0.813	ng	
41) Benzene	11.01	78	80961	0.987	ng	99
42) Carbon Tetrachloride	11.17	117	33137	1.364	ng	97
43) Cyclohexane	11.33	84	32994	1.015	ng #	1
44) tert-Amyl Methyl Ether	11.63	73	52381	0.906	ng	77
45) 1,2-Dichloropropane	11.93	63	24757	0.972	ng	98
46) Bromodichloromethane	12.14	83	26064	1.069	ng	93
47) Trichloroethene	12.19	130	27200	1.204	ng	100
48) 1,4-Dioxane	12.14	88	16333	1.059	ng #	69
49) Isooctane	12.24	57	126387	0.927	ng	93
50) Methyl Methacrylate	12.34	100	8581	1.059	ng #	73
51) n-Heptane	12.51	71	20216	0.968	ng #	49
52) cis-1,3-Dichloropropene	13.16	75	29028	0.887	ng	100
53) 4-Methyl-2-pentanone	13.18	58	26898	0.901	ng	85
54) trans-1,3-Dichloropropene	13.77	75	28839	0.998	ng	95
55) 1,1,2-Trichloroethane	13.99	97	19925	1.000	ng	93
58) Toluene	14.35	91	88851	1.138	ng	100
59) 2-Hexanone	14.58	43	75563	0.915	ng	98
60) Dibromochloromethane	14.84	129	24973	1.226	ng	96
61) 1,2-Dibromoethane	15.14	107	24497	1.216	ng	100
62) Butyl Acetate	15.31	43	80934	0.961	ng	93
63) n-Octane	15.47	57	25736	1.030	ng	96
64) Tetrachloroethene	15.69	166	25493	1.321	ng	95
65) Chlorobenzene	16.50	112	63839	1.236	ng	99
66) Ethylbenzene	16.94	91	99869	1.122	ng	93
67) m- & p-Xylene	17.16	91	157509	2.700	ng	93
68) Bromoform	17.26	173	17692	1.606	ng	98
69) Styrene	17.59	104	63008	1.165	ng	95
70) o-Xylene	17.73	91	78792	1.267	ng	93
71) n-Nonane	17.97	43	67696	0.985	ng	91
72) 1,1,2,2-Tetrachloroethane	17.70	83	33312	1.215	ng	94
74) Cumene	18.45	105	102814	1.183	ng	96
75) alpha-Pinene	18.93	93	47668	1.123	ng	93
76) n-Propylbenzene	19.06	91	116259	1.067	ng	91
77) 3-Ethyltoluene	19.19	105	105590	1.122	ng	95
78) 4-Ethyltoluene	19.24	105	104962	1.225	ng	93
79) 1,3,5-Trimethylbenzene	19.33	105	88320	1.170	ng	88

782

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

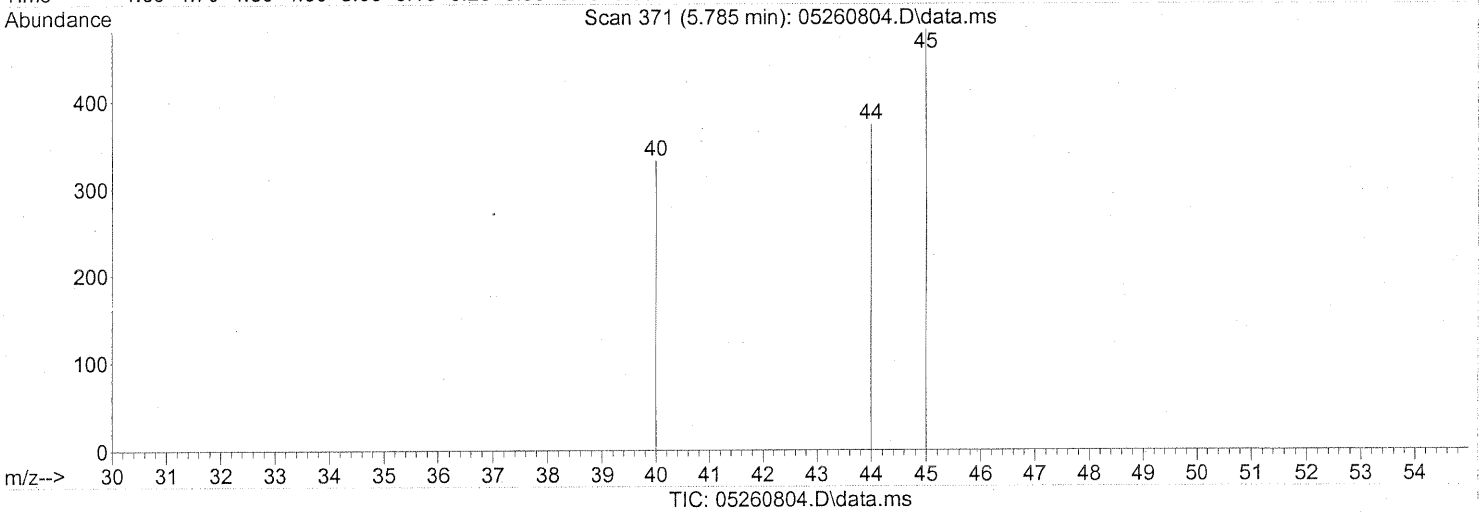
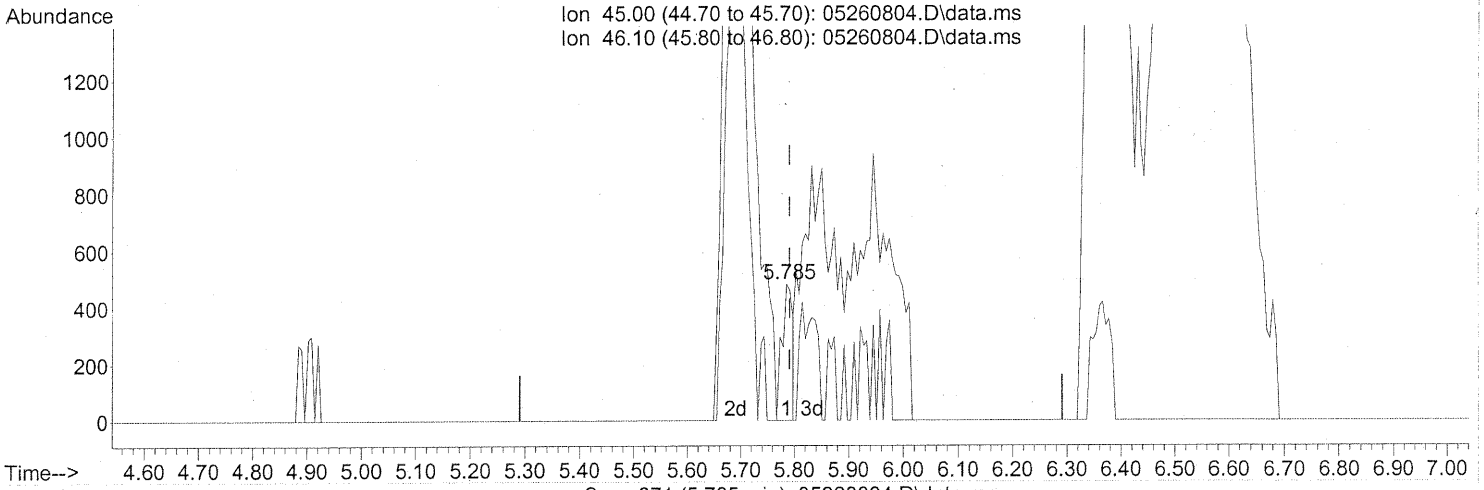
Quant Time: May 27 08:21:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	47129	1.151	ng	98
81) 2-Ethyltoluene	19.56	105	99840	1.069	ng	92
82) 1,2,4-Trimethylbenzene	19.83	105	93176	1.195	ng	91
83) n-Decane	19.92	57	62502	1.011	ng	80
84) Benzyl Chloride	19.99	91	66336	1.021	ng	90
85) 1,3-Dichlorobenzene	20.02	146	56857	1.256	ng	97
86) 1,4-Dichlorobenzene	20.10	146	57131	1.322	ng	99
87) sec-Butylbenzene	20.16	105	117023	1.152	ng	95
88) p-Isopropyltoluene	20.34	119	112983	1.310	ng	94
89) 1,2,3-Trimethylbenzene	20.34	105	88366	1.164	ng	86
90) 1,2-Dichlorobenzene	20.52	146	52899	1.260	ng	99
91) d-Limonene	20.51	68	27139	0.965	ng	85
92) 1,2-Dibromo-3-Chloropr...	21.04	157	15605	1.180	ng	86
93) n-Undecane	21.44	57	65532	1.008	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	9621	1.318	ng	89
95) Naphthalene	22.69	128	114826	1.041	ng	100
96) n-Dodecane	22.66	57	62441	0.984	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	16567	1.518	ng	100

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

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:19:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(10) Ethanol (T)

5.785min (-0.006) 0.02ng

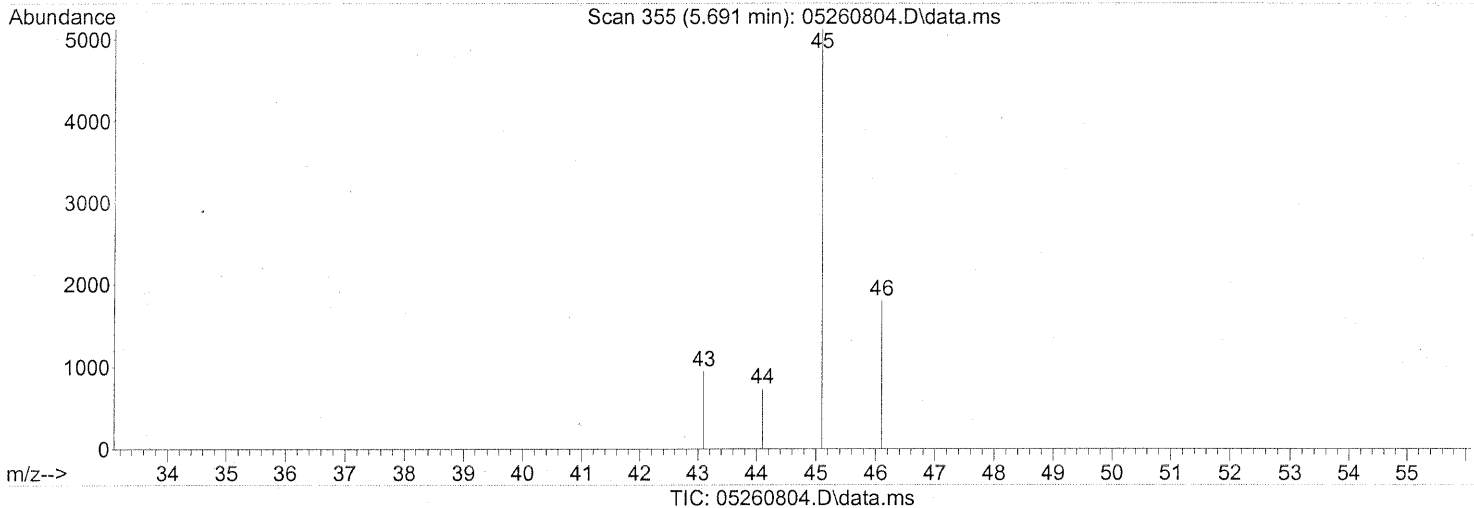
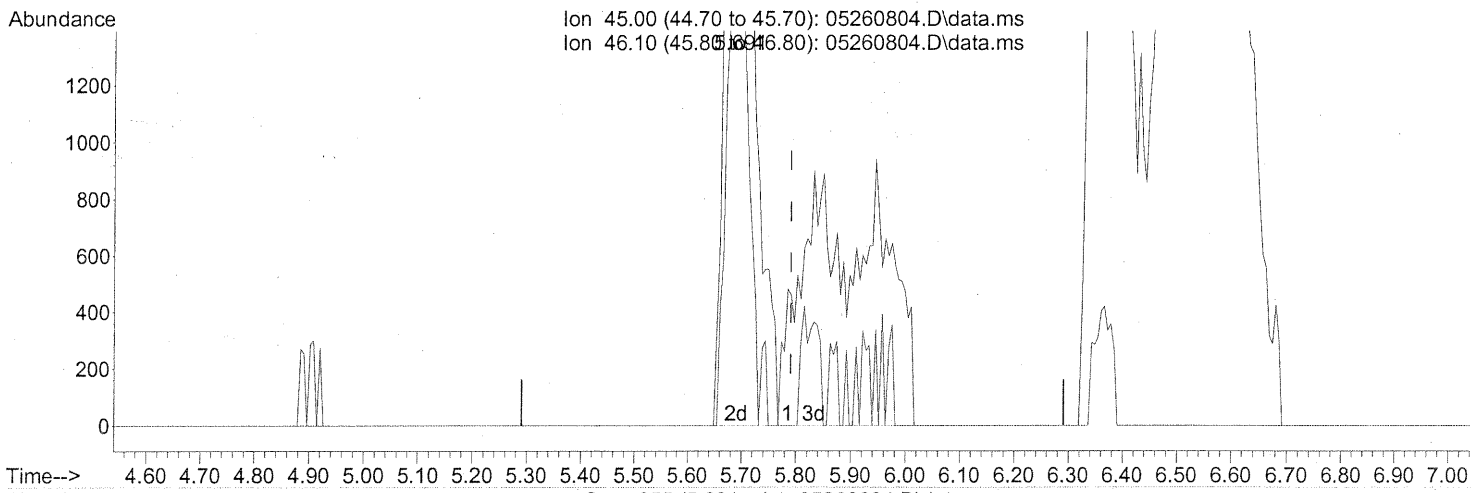
response 661

*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:19:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



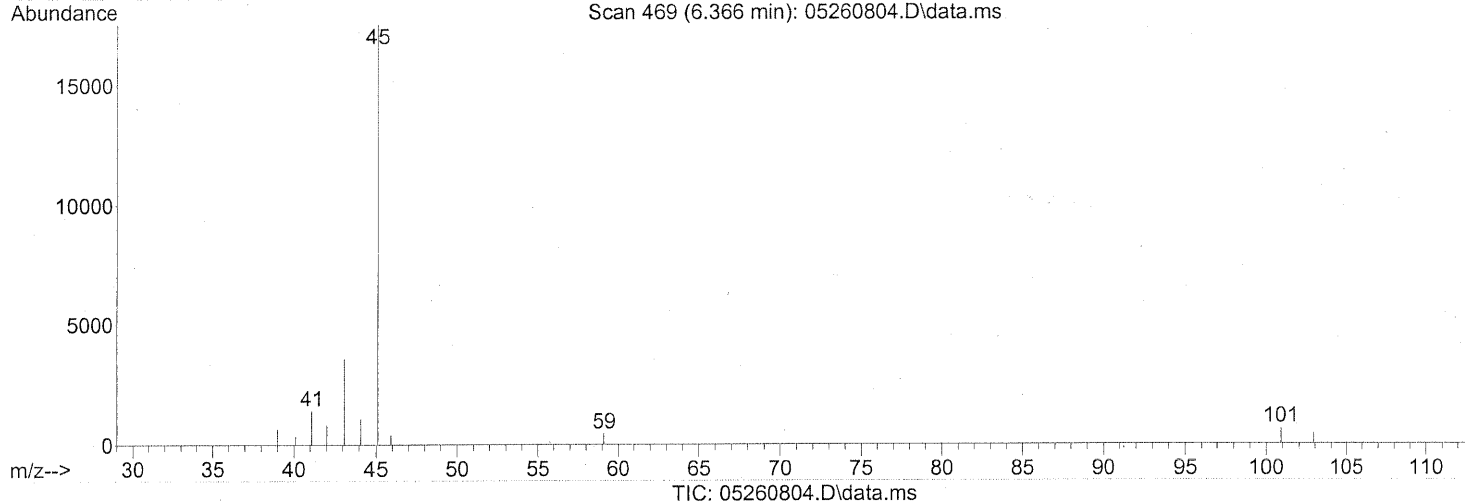
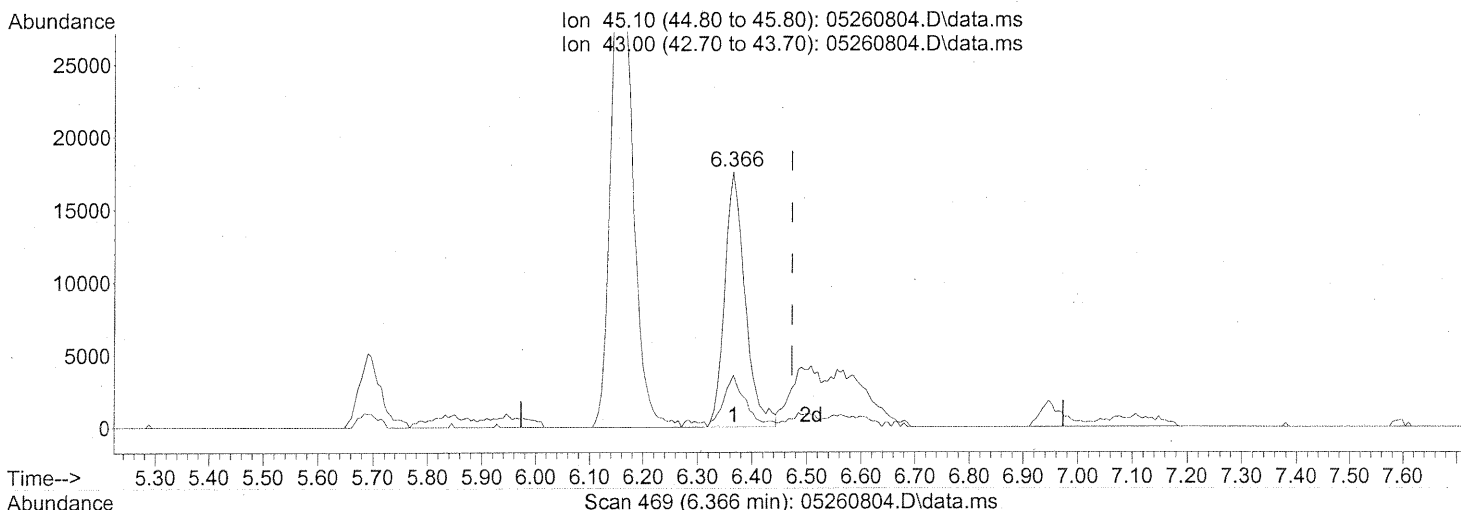
(10) Ethanol (T)  
5.691min (-0.101) 0.80ng m  
response 22061

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*WA 5/29/08*  
*EM 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:19:52 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.366min (-0.107) 0.54ng

response 45987

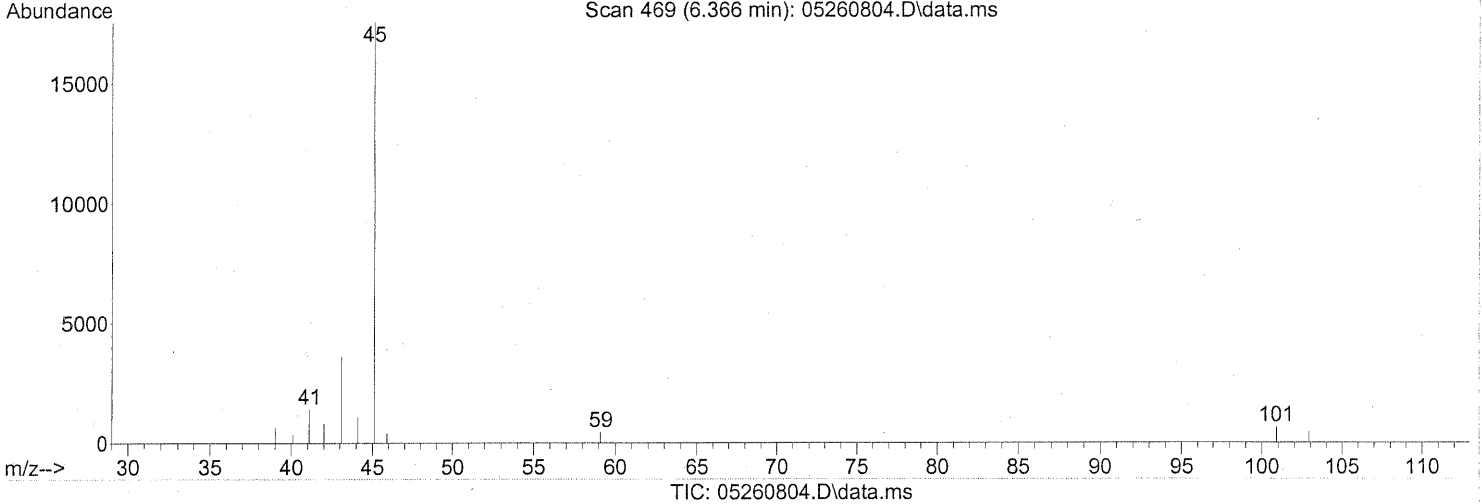
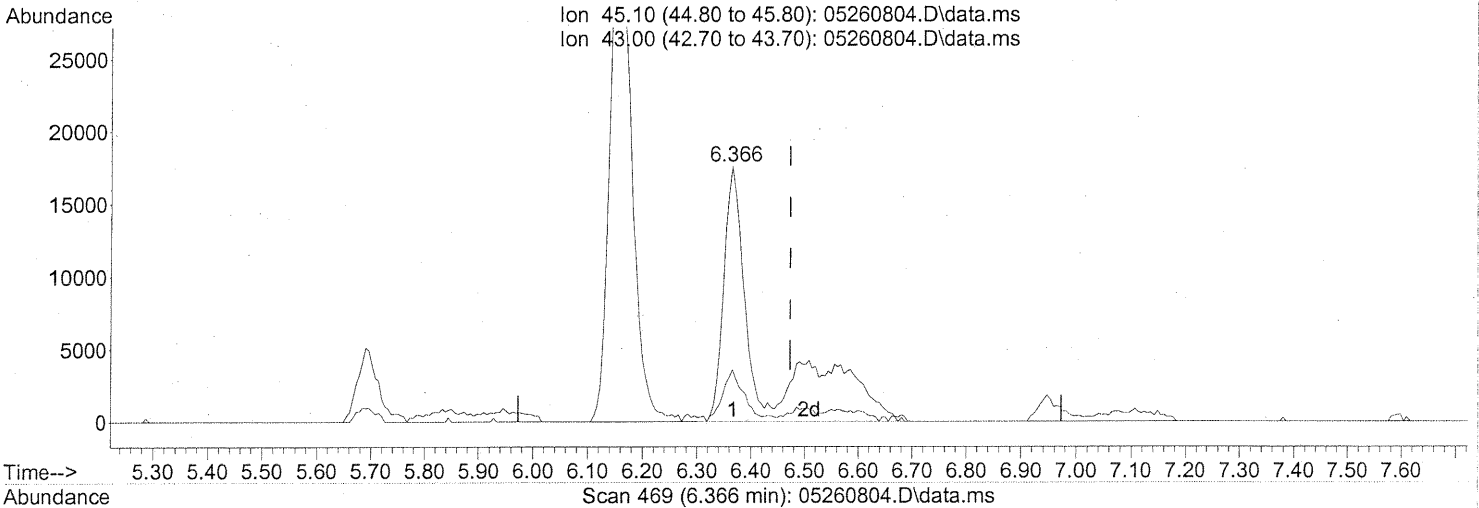
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	22.11
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*



Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.366min (-0.107) 0.96ng m  
response 82028

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	12.39
0.00	0.00	0.00
0.00	0.00	0.00

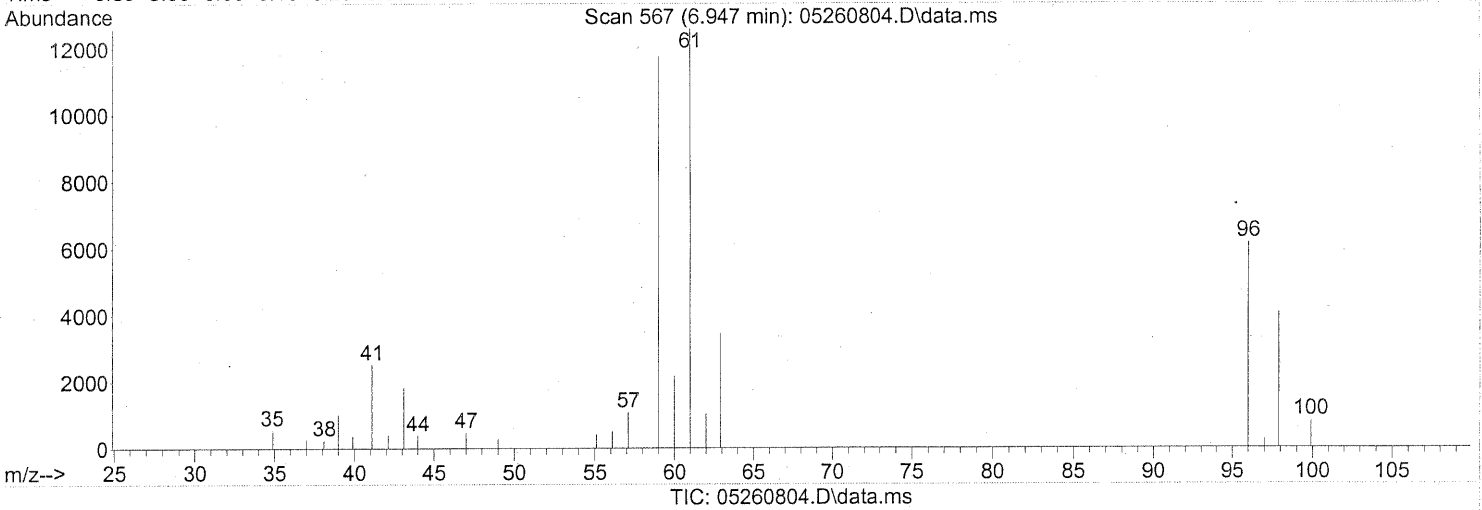
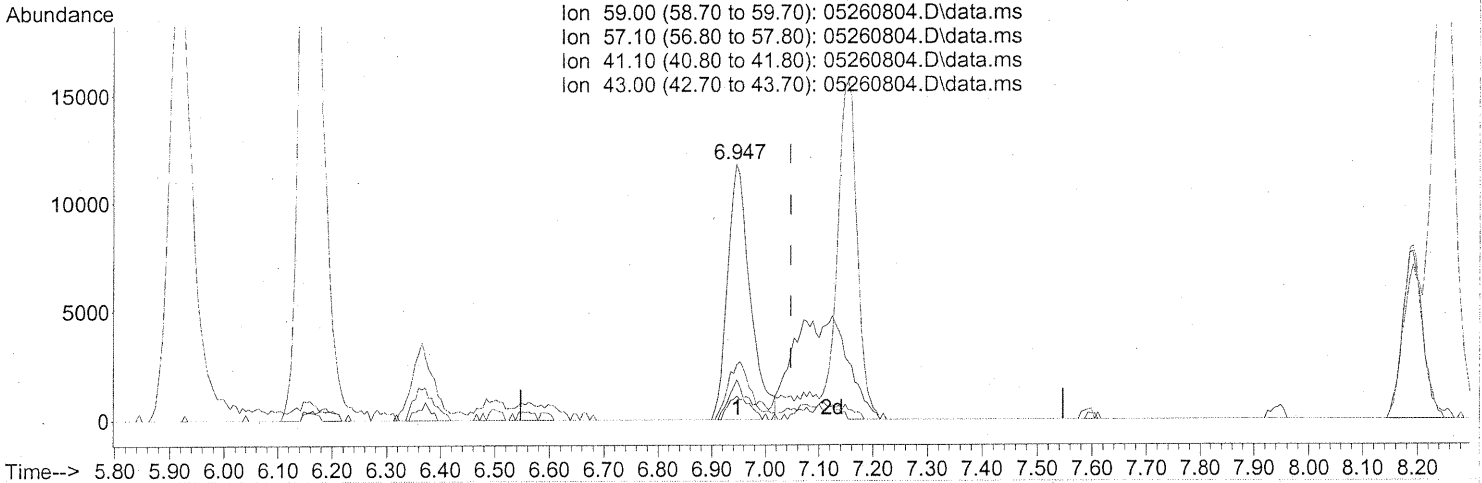
*int. whole peaks (reprint)*

*WA 5/30/08*

*WA 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:19:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.947min (-0.101) 0.44ng

response 34580

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	8.89
41.10	21.90	23.90
43.00	17.20	15.49

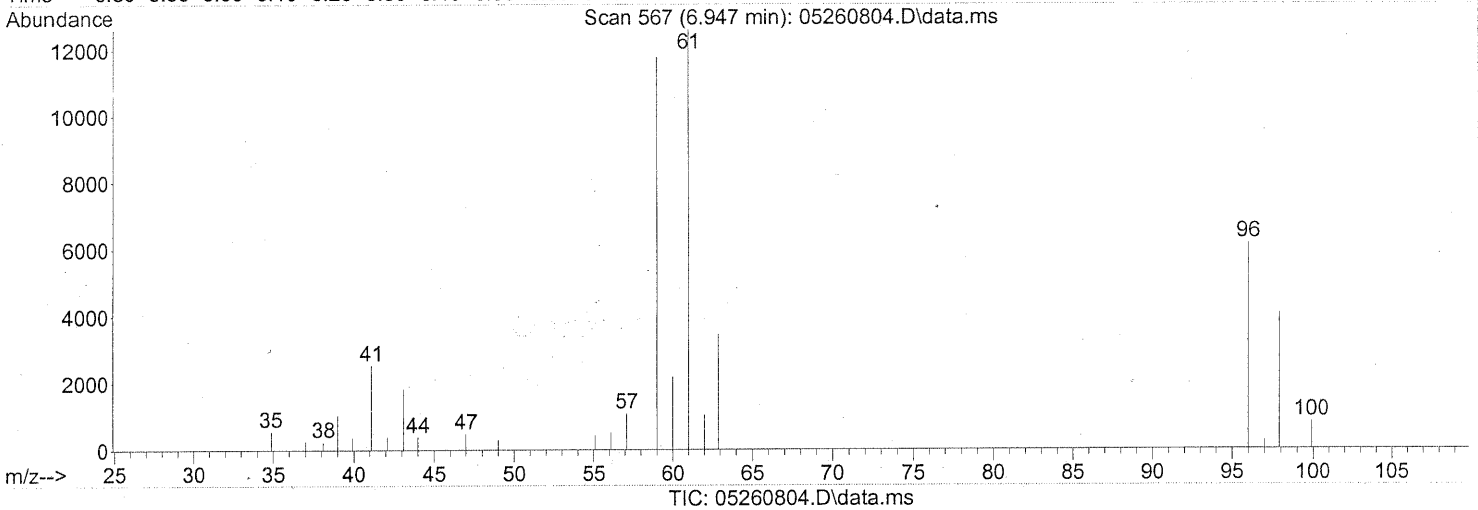
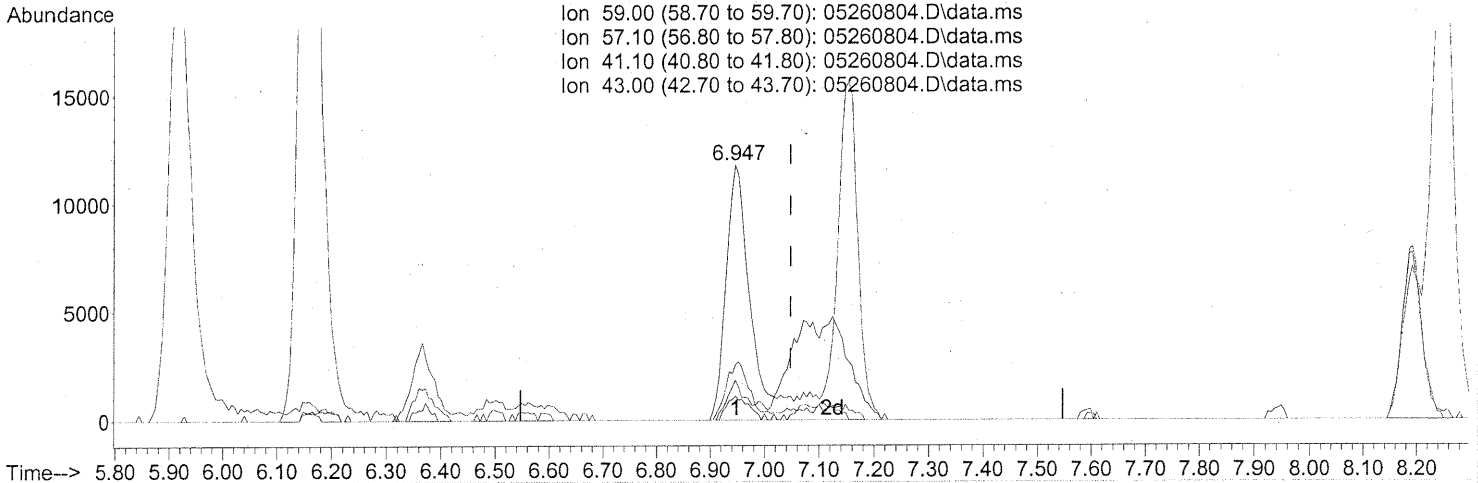
*split into whole peaks*

*WA 5/29/08*

*EM 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 5:51 pm  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 6.947min (-0.101) 0.87ng m  
 response 67512

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	4.55
41.10	21.90	12.24
43.00	17.20	7.93

*int. whole peaks*

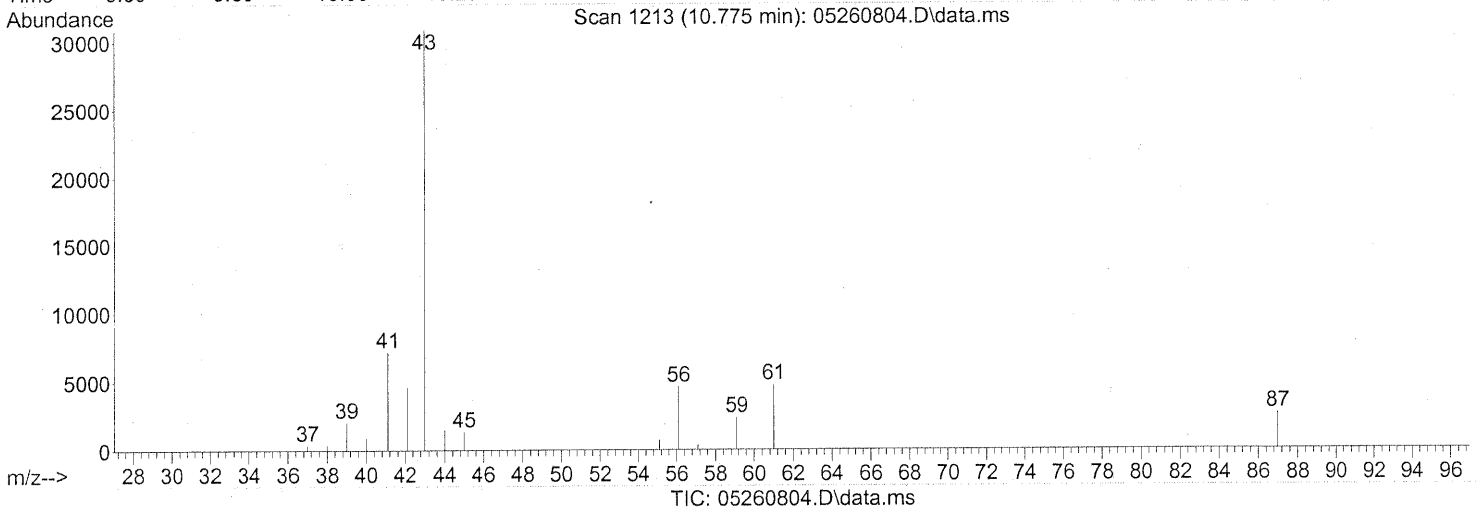
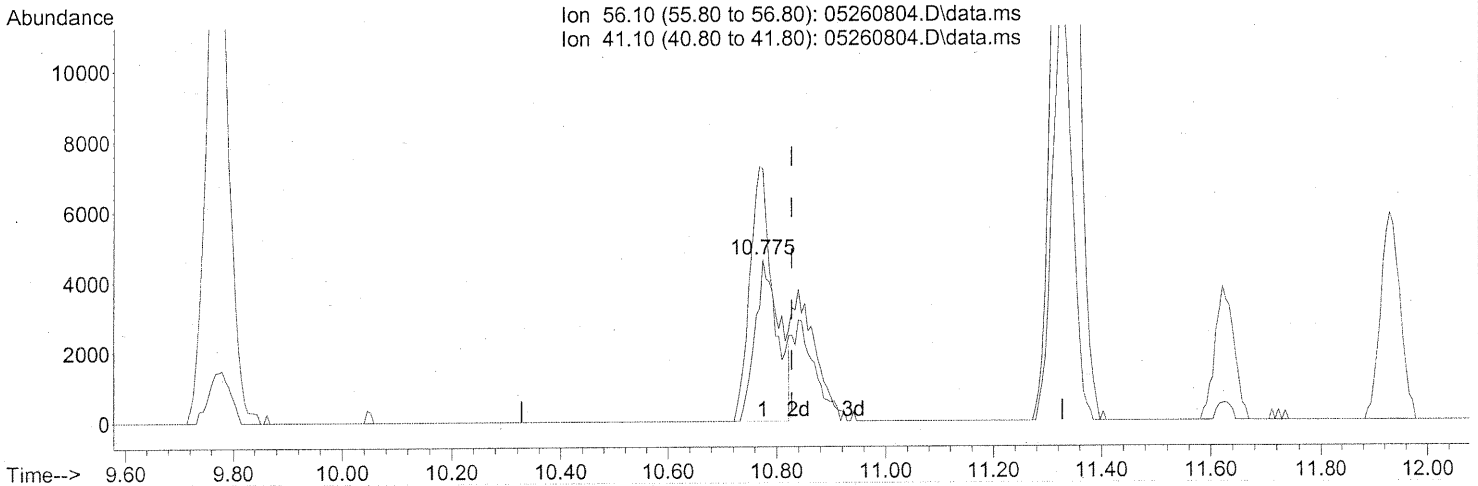
*WA 5/29/08*

*em 5/30/08*

Quantitation Report (Qealr)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:19:52 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(40) 1-Butanol (T)

10.775min (-0.053) 0.46ng

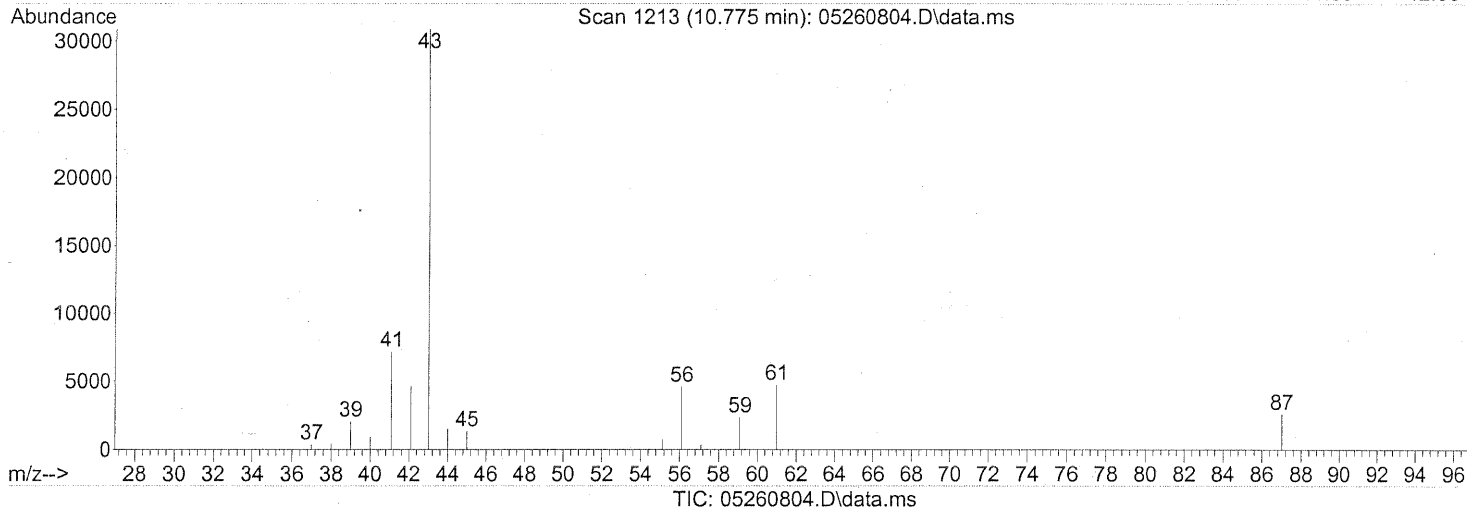
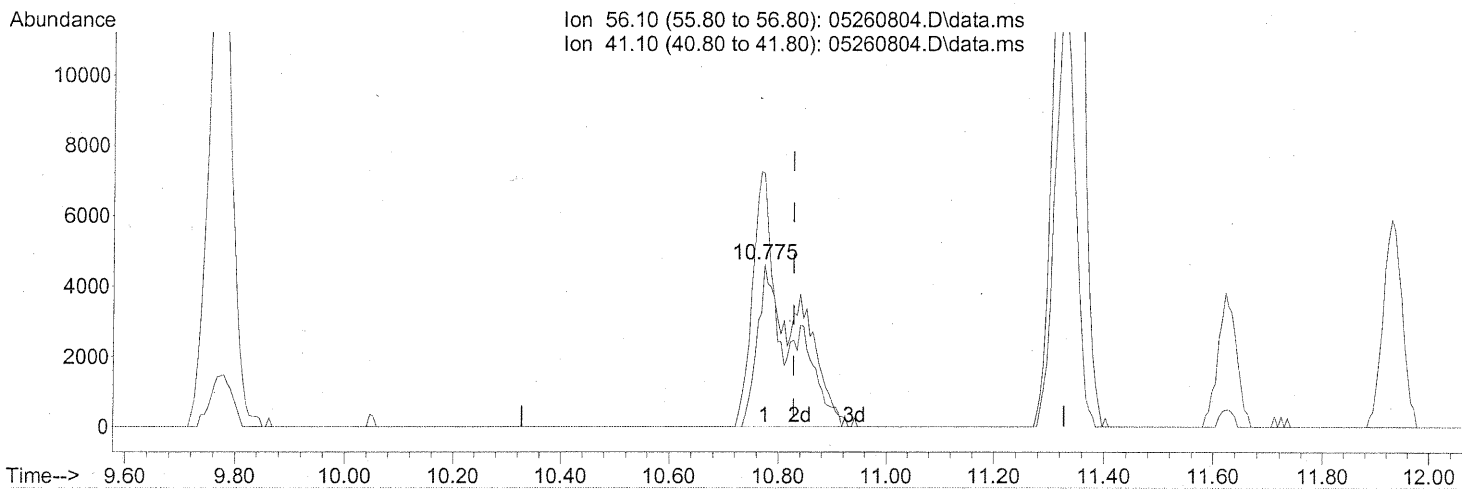
response 14478

Ion	Exp%	Act%
56.10	100	100
41.10	111.90	141.64#
0.00	0.00	0.00
0.00	0.00	0.00

*int whole split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 5:51 pm  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:21:24 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(40) 1-Butanol (T)

10.775min (-0.053) 0.81ng m

response 25783

Ion	Exp%	Act%
56.10	100	100
41.10	111.90	79.53#
0.00	0.00	0.00
0.00	0.00	0.00

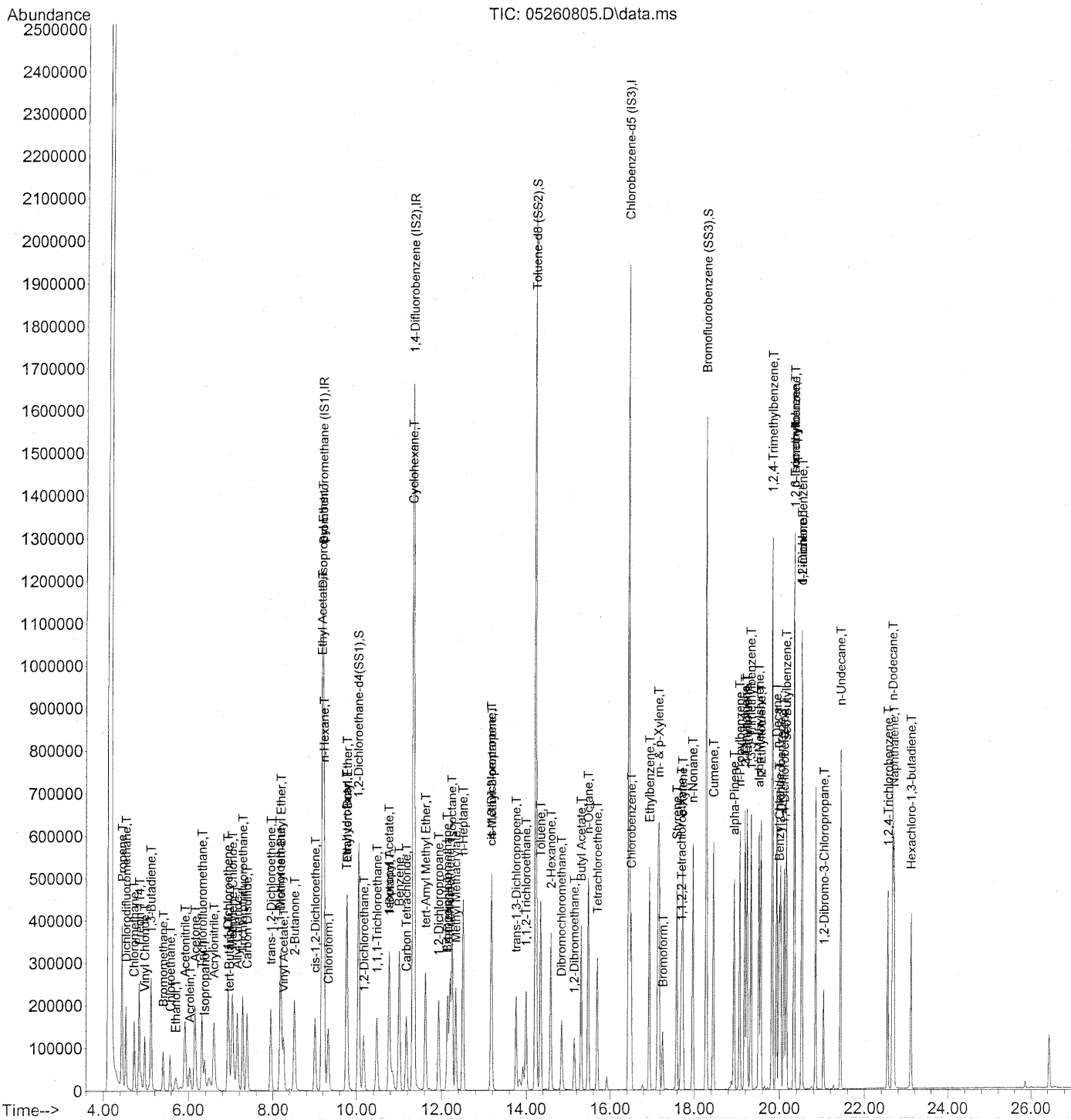
*int. whole peaks*

*PA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260805.D  
Acq On : 26 May 2008 6:36 pm  
Operator : WA  
Sample : 5.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:23:29 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 6:36 pm  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:23:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	398220	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1672349	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	656314	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.05	65	562574	20.033	ng	-0.05
Spiked Amount	25.000		Recovery	=	80.12%	
57) Toluene-d8 (SS2)	14.23	98	1682540	26.037	ng	-0.02
Spiked Amount	25.000		Recovery	=	104.16%	
73) Bromofluorobenzene (SS3)	18.28	174	564532	33.566	ng	-0.01
Spiked Amount	25.000		Recovery	=	134.28%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	165872	4.166	ng	91
3) Dichlorodifluoromethane	4.53	85	191797	4.074	ng	99
4) Chloromethane	4.72	50	220643	3.790	ng	99
5) Freon 114	4.85	135	112151	4.940	ng	96
6) Vinyl Chloride	4.97	62	151399	3.767	ng	96
7) 1,3-Butadiene	5.12	54	140094	3.733	ng	87
8) Bromomethane	5.41	94	70976	4.286	ng	97
9) Chloroethane	5.58	64	78983	4.299	ng	95
10) Ethanol	5.70	45	101632m	3.712	ng	
11) Acetonitrile	5.92	41	297425	4.184	ng	99
12) Acrolein	6.03	56	67672	3.471	ng	99
13) Acetone	6.16	58	130773	4.970	ng	# 76
14) Trichlorofluoromethane	6.32	101	177575	4.560	ng	100
15) Isopropanol	6.38	45	291949m	3.422	ng	
16) Acrylonitrile	6.60	53	192737	4.119	ng	97
17) 1,1-Dichloroethene	6.93	96	90816	4.764	ng	94
18) tert-Butanol	6.96	59	308175m	3.972	ng	
19) Methylene Chloride	7.03	84	89954	4.328	ng	# 42
20) Allyl Chloride	7.15	41	201201	4.619	ng	79
21) Trichlorotrifluoroethane	7.28	151	96040	5.869	ng	87
22) Carbon Disulfide	7.38	76	313785	4.000	ng	100
23) trans-1,2-Dichloroethene	7.95	61	173593	4.259	ng	94
24) 1,1-Dichloroethane	8.17	63	189842	4.085	ng	94
25) Methyl tert-Butyl Ether	8.18	73	273332	4.375	ng	80
26) Vinyl Acetate	8.25	86	17592	3.296	ng	# 22
27) 2-Butanone	8.52	72	62378	4.602	ng	# 18
28) cis-1,2-Dichloroethene	9.01	61	163376	4.348	ng	94
29) Diisopropyl Ether	9.18	87	74992	4.347	ng	# 31
30) Ethyl Acetate	9.17	61	50216	5.008	ng	84
31) n-Hexane	9.23	57	247007	4.359	ng	93

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DA 5/29/08

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 6:36 pm  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:23:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.33	83	149573	5.037	ng	96
34) Tetrahydrofuran	9.76	72	59479	4.378	ng #	47
35) Ethyl tert-Butyl Ether	9.78	87	109581	4.478	ng #	75
36) 1,2-Dichloroethane	10.18	62	147356	4.148	ng	96
38) 1,1,1-Trichloroethane	10.48	97	152020	4.727	ng	93
39) Isopropyl Acetate	10.76	61	71890	4.206	ng #	64
40) 1-Butanol	10.77	56	124276	3.923	ng	99
41) Benzene	11.01	78	353647	4.314	ng	100
42) Carbon Tetrachloride	11.18	117	153229	6.311	ng	98
43) Cyclohexane	11.33	84	141740	4.365	ng #	27
44) tert-Amyl Methyl Ether	11.63	73	242879	4.207	ng	76
45) 1,2-Dichloropropane	11.94	63	113744	4.472	ng	98
46) Bromodichloromethane	12.13	83	118652	4.870	ng	93
47) Trichloroethene	12.19	130	123906	5.488	ng	100
48) 1,4-Dioxane	12.14	88	77930	5.060	ng #	71
49) Isooctane	12.24	57	571496	4.197	ng	93
50) Methyl Methacrylate	12.34	100	41411	5.115	ng #	73
51) n-Heptane	12.50	71	96386	4.621	ng #	53
52) cis-1,3-Dichloropropene	13.17	75	138213	4.227	ng	98
53) 4-Methyl-2-pentanone	13.18	58	130008	4.357	ng	86
54) trans-1,3-Dichloropropene	13.76	75	139516	4.831	ng	97
55) 1,1,2-Trichloroethane	13.99	97	92901	4.669	ng	92
58) Toluene	14.34	91	405922	5.127	ng	98
59) 2-Hexanone	14.58	43	359088	4.289	ng	100
60) Dibromochloromethane	14.83	129	122676	5.937	ng	100
61) 1,2-Dibromoethane	15.14	107	111644	5.465	ng	97
62) Butyl Acetate	15.31	43	383471	4.489	ng	93
63) n-Octane	15.47	57	121279	4.786	ng	95
64) Tetrachloroethene	15.69	166	121317	6.200	ng	100
65) Chlorobenzene	16.50	112	293518	5.602	ng	100
66) Ethylbenzene	16.94	91	457743	5.068	ng	92
67) m- & p-Xylene	17.16	91	719735	12.163	ng	91
68) Bromoform	17.26	173	86250	7.718	ng	99
69) Styrene	17.59	104	299387	5.459	ng	94
70) o-Xylene	17.73	91	368054	5.833	ng	93
71) n-Nonane	17.96	43	312495	4.484	ng	93
72) 1,1,2,2-Tetrachloroethane	17.70	83	154117	5.544	ng	93
74) Cumene	18.45	105	472913	5.365	ng	94
75) alpha-Pinene	18.93	93	229060	5.318	ng	93
76) n-Propylbenzene	19.06	91	536928	4.857	ng	92
77) 3-Ethyltoluene	19.19	105	479773	5.025	ng	94
78) 4-Ethyltoluene	19.24	105	489427	5.629	ng	92
79) 1,3,5-Trimethylbenzene	19.33	105	412688	5.391	ng	91

794

DT 5/29/08



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 6:36 pm  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

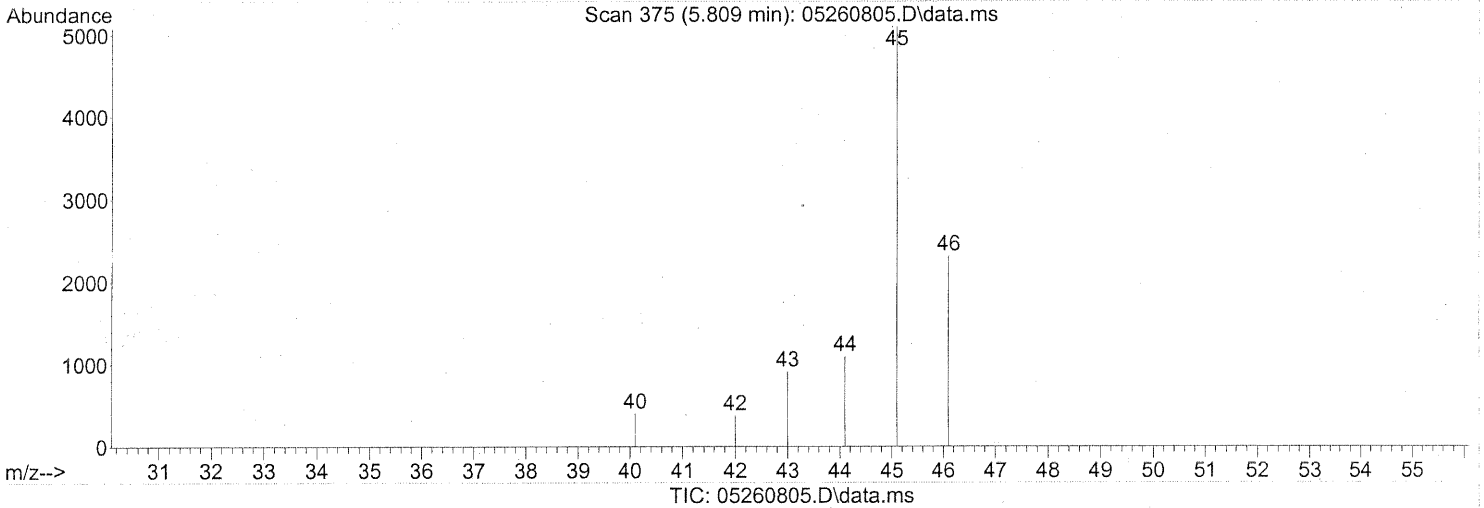
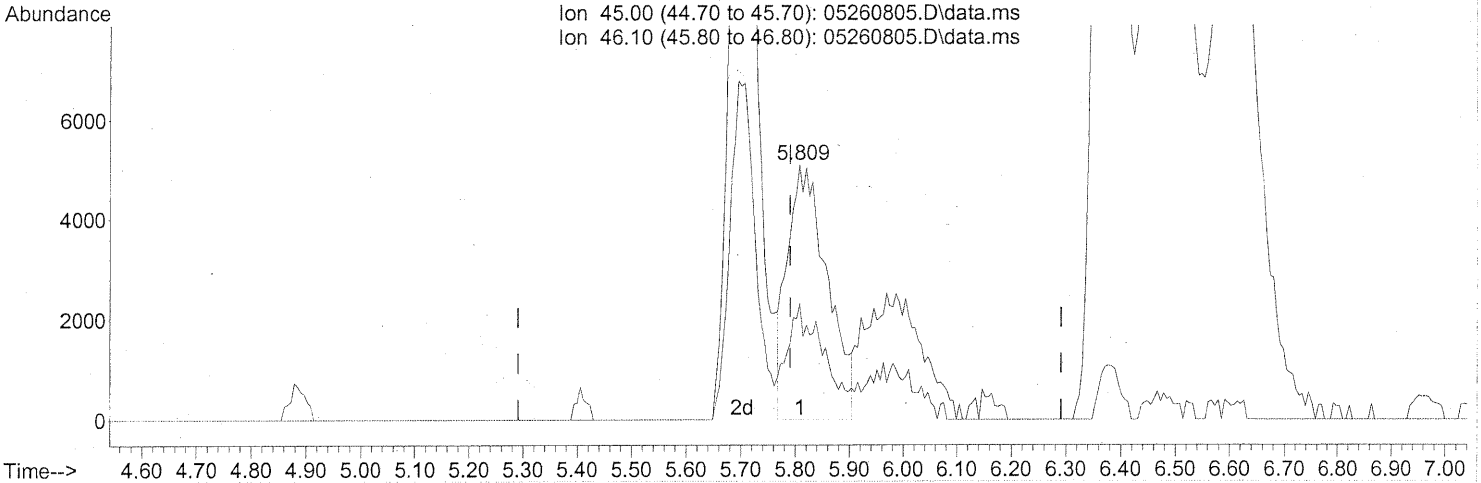
Quant Time: May 27 08:23:29 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	226617	5.457	ng	97
81) 2-Ethyltoluene	19.56	105	466308	4.923	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	423645	5.356	ng	91
83) n-Decane	19.93	57	292870	4.672	ng	81
84) Benzyl Chloride	19.99	91	324101	4.917	ng	89
85) 1,3-Dichlorobenzene	20.02	146	257435	5.608	ng	99
86) 1,4-Dichlorobenzene	20.10	146	259129	5.910	ng	99
87) sec-Butylbenzene	20.15	105	545118	5.290	ng	95
88) p-Isopropyltoluene	20.34	119	525742	6.008	ng	93
89) 1,2,3-Trimethylbenzene	20.34	105	410362	5.328	ng	87
90) 1,2-Dichlorobenzene	20.52	146	242720	5.701	ng	100
91) d-Limonene	20.52	68	133117	4.665	ng	87
92) 1,2-Dibromo-3-Chloropr...	21.04	157	76037	5.668	ng	83
93) n-Undecane	21.43	57	308882	4.685	ng	80
94) 1,2,4-Trichlorobenzene	22.55	184	44542	6.015	ng	# 89
95) Naphthalene	22.69	128	529936	4.735	ng	99
96) n-Dodecane	22.66	57	300809	4.676	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	76210	6.883	ng	98

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

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 6:36 pm  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.809min (+0.018) 0.95ng

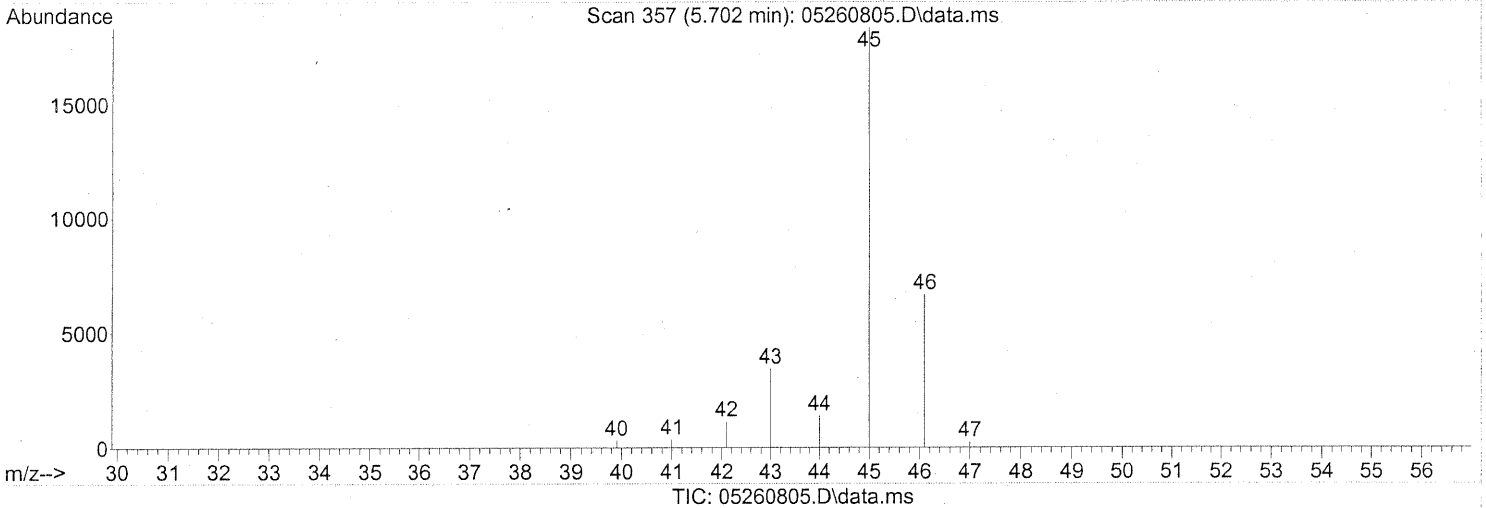
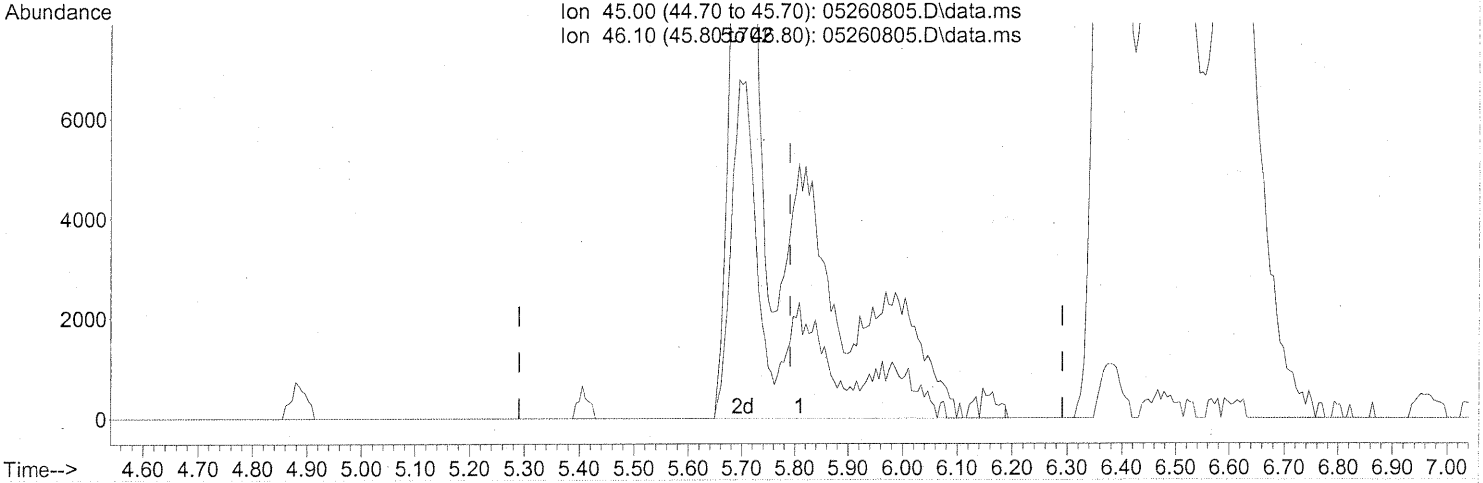
response 25973

*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	46.34
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260805.D  
Acq On : 26 May 2008 6:36 pm  
Operator : WA  
Sample : 5.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.702min (-0.089) 3.71ng m  
response 101632

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	11.84#
0.00	0.00	0.00
0.00	0.00	0.00

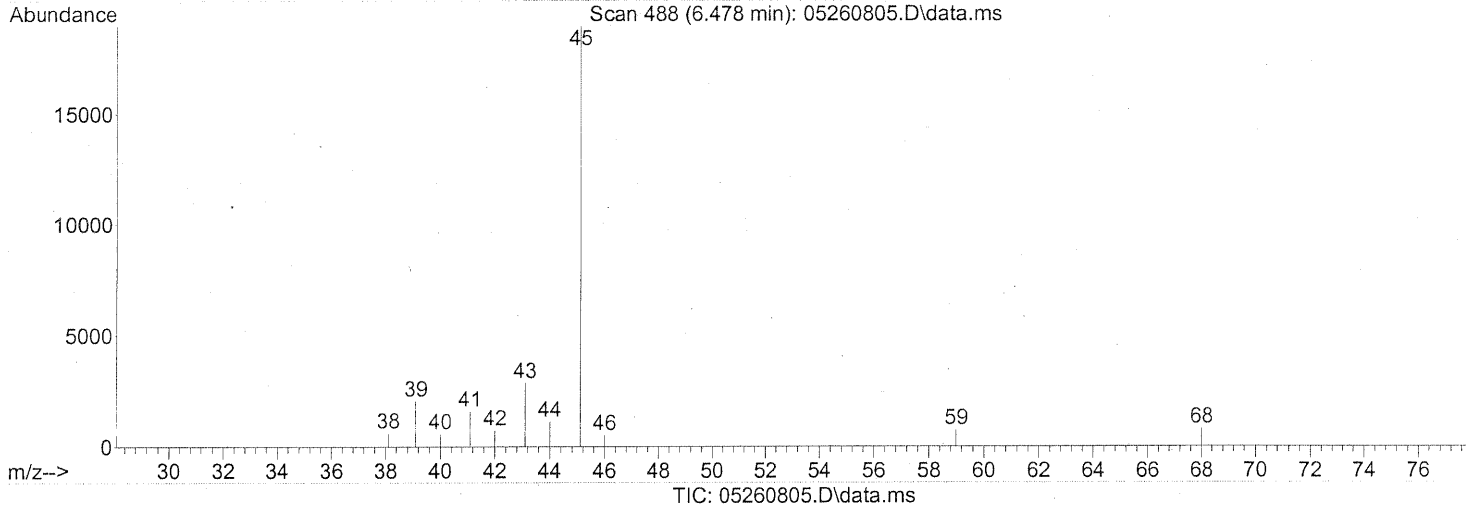
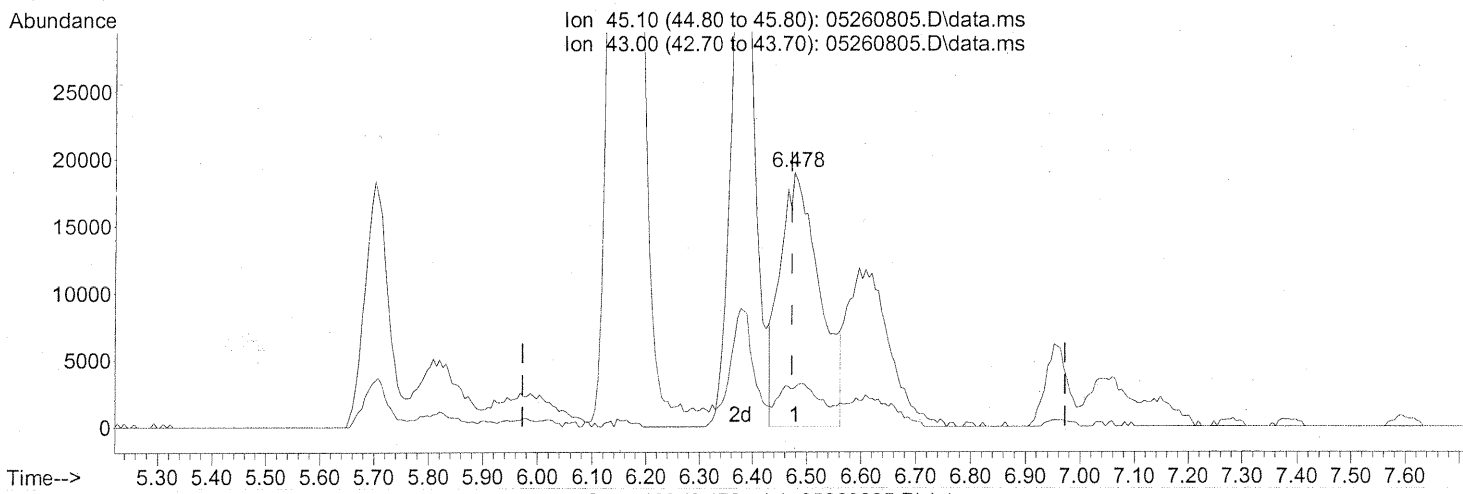
*int. whole peaks*

*IDA 5/29/08*

*em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260805.D  
Acq On : 26 May 2008 6:36 pm  
Operator : WA  
Sample : 5.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

6.478min (+0.005) 1.13ng

response 95977

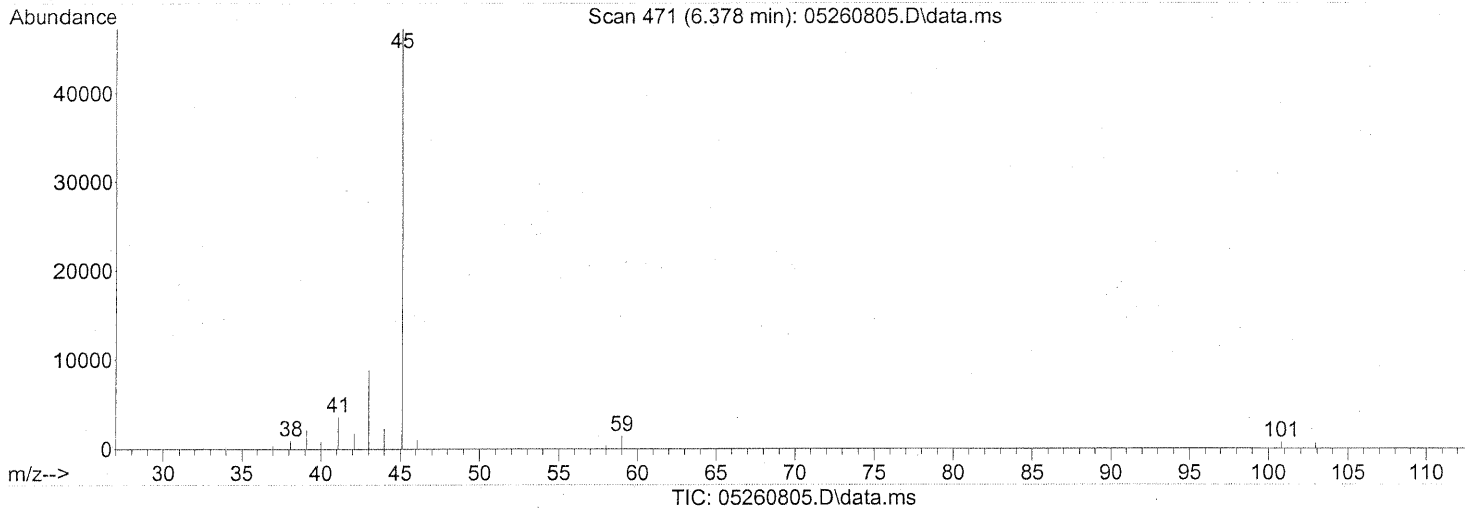
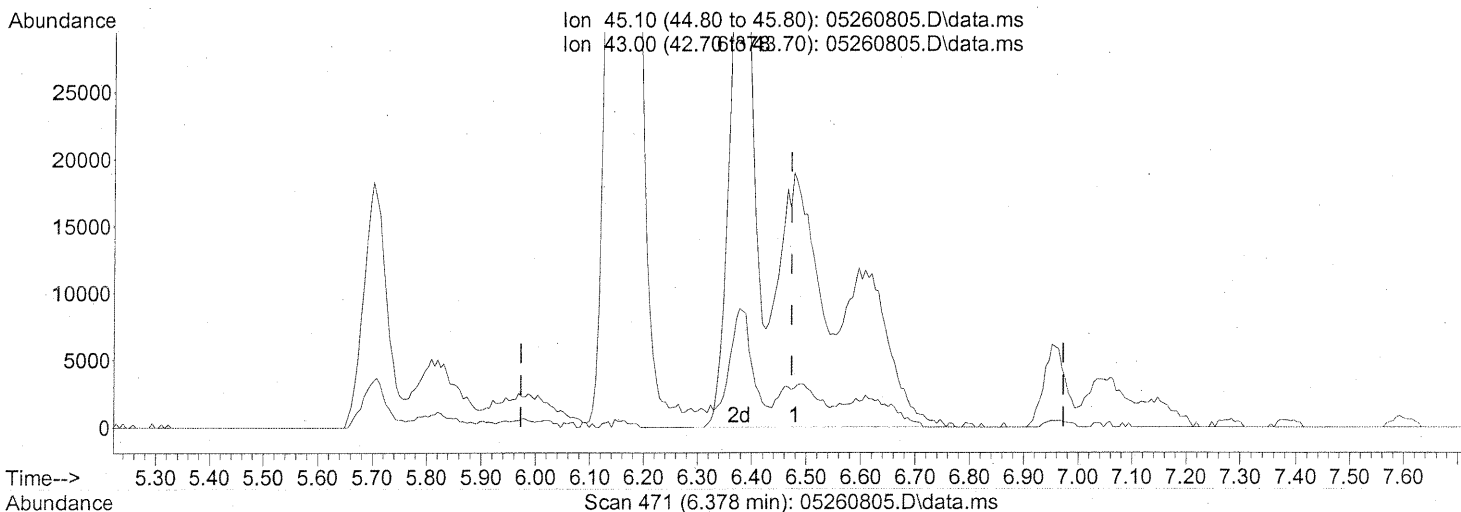
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	31.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 6:36 pm  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.378min (-0.095) 3.42ng m  
 response 291949

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	10.45
0.00	0.00	0.00
0.00	0.00	0.00

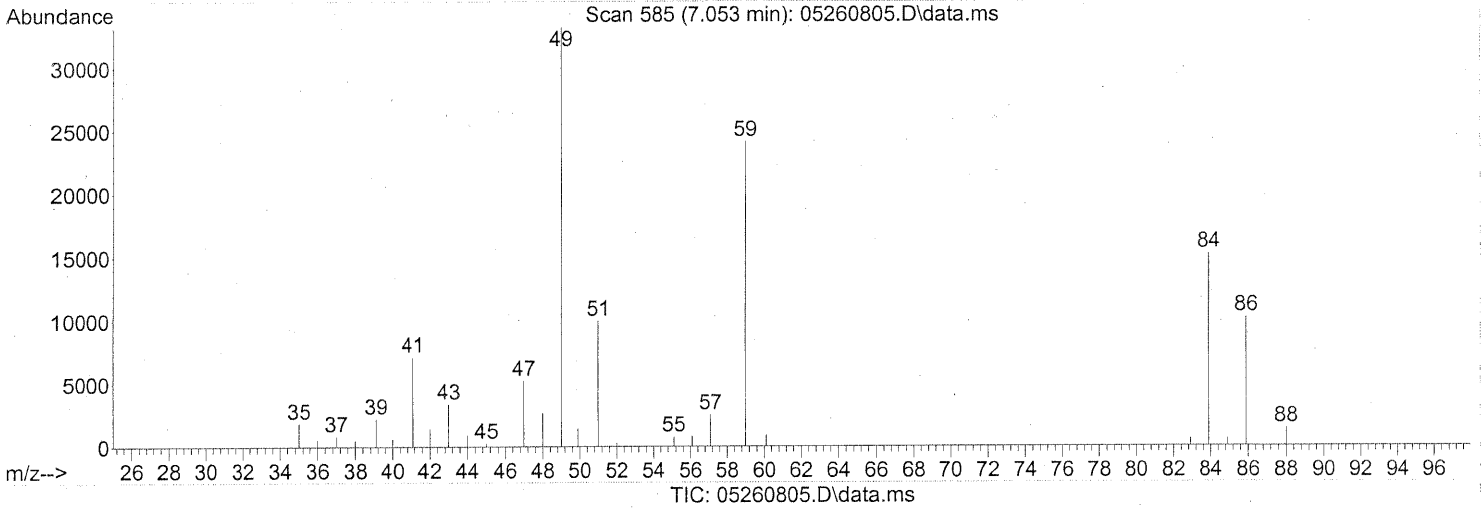
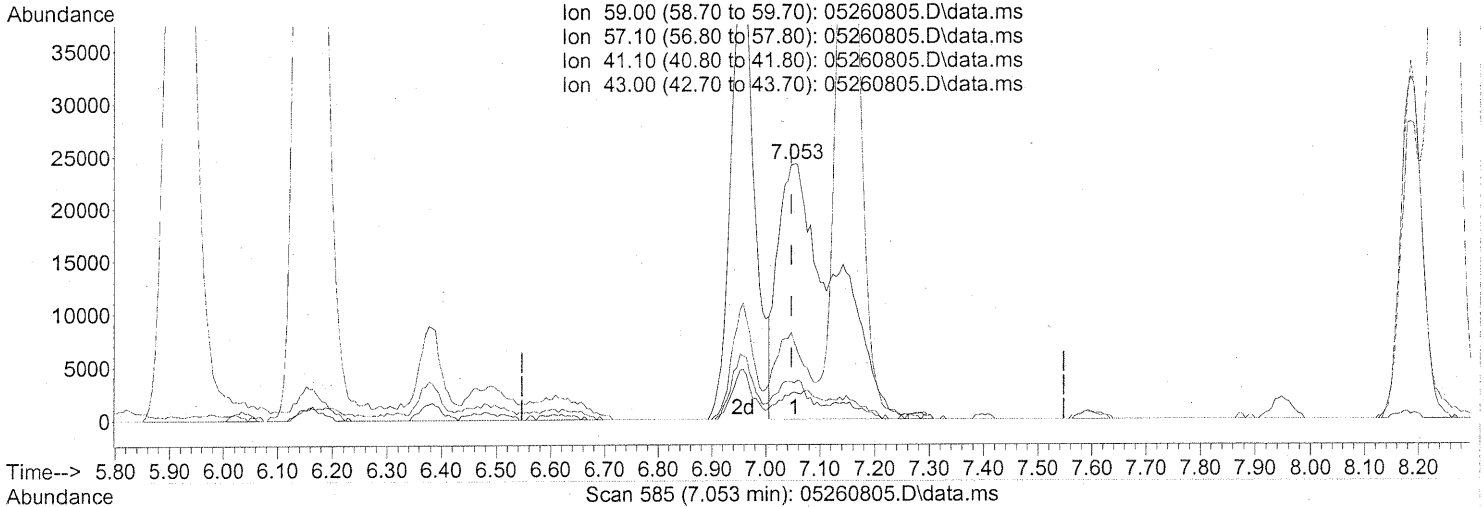
*int. whole peaks*

*WA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260805.D  
Acq On : 26 May 2008 6:36 pm  
Operator : WA  
Sample : 5.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



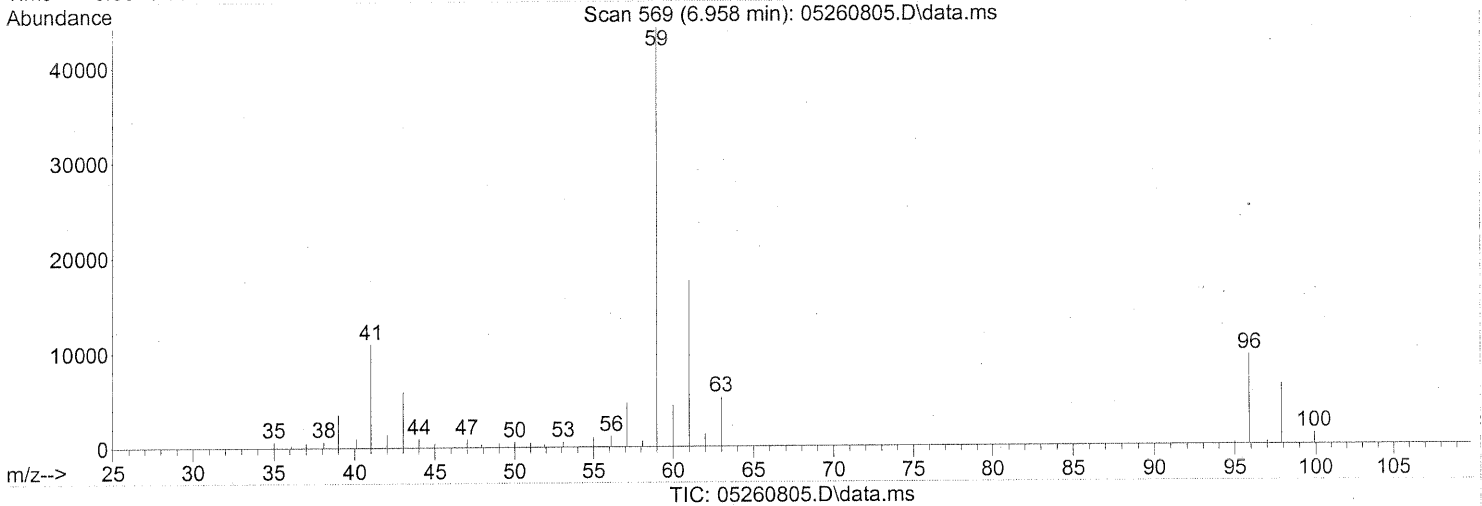
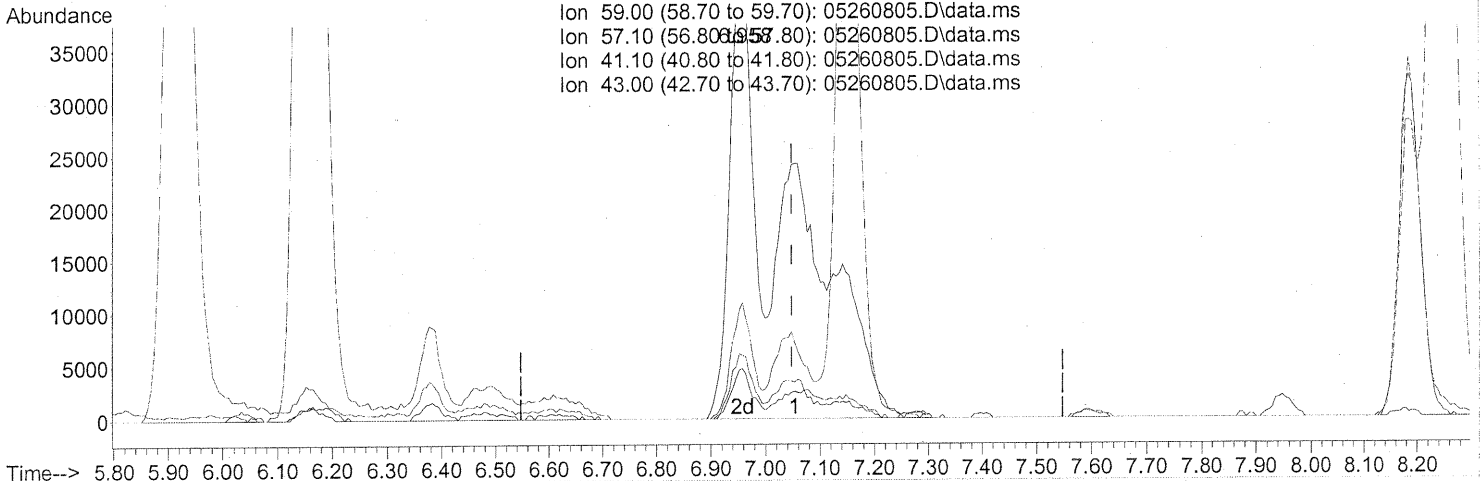
(18) tert-Butanol (T)  
7.053min (+0.006) 2.25ng  
response 174925

*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	18.92
43.00	17.20	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260805.D  
Acq On : 26 May 2008 6:36 pm  
Operator : WA  
Sample : 5.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:22:31 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
6.958min (-0.089) 3.97ng m  
response 308175

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	10.74
43.00	17.20	0.00

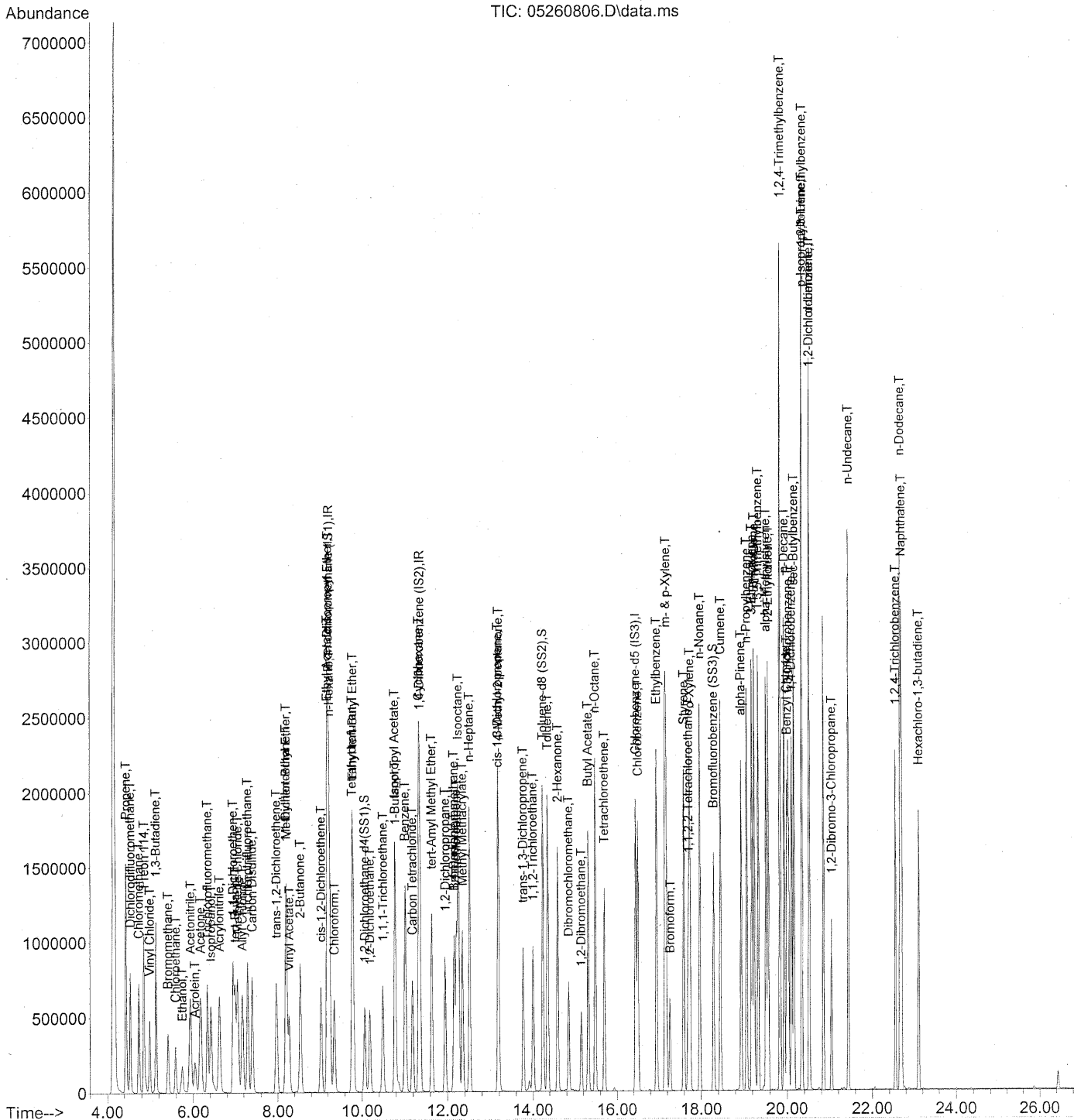
*int. whole peaks*

*WA 5/29/08*

*em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 7:14 pm  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:25:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 7:14 pm  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:25:44 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon May 12 20:47:38 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.22	130	395887	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	11.36	114	1634987	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	654511	25.000	ng	0.00

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.06	65	557560	19.972	ng	-0.03
Spiked Amount	25.000		Recovery	=	79.88%	
57) Toluene-d8 (SS2)	14.24	98	1660168	25.761	ng	-0.01
Spiked Amount	25.000		Recovery	=	103.04%	
73) Bromofluorobenzene (SS3)	18.29	174	570371	34.007	ng	0.00
Spiked Amount	25.000		Recovery	=	136.04%	

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	711066	17.962	ng	93
3) Dichlorodifluoromethane	4.54	85	807036	17.242	ng	98
4) Chloromethane	4.73	50	1058342	18.289	ng	99
5) Freon 114	4.85	135	484950	21.486	ng	97
6) Vinyl Chloride	4.98	62	646924	16.191	ng	95
7) 1,3-Butadiene	5.13	54	660983	17.719	ng	# 85
8) Bromomethane	5.41	94	349784	21.245	ng	98
9) Chloroethane	5.58	64	338526	18.535	ng	96
10) Ethanol	5.74	45	432975m	15.907	ng	
11) Acetonitrile	5.94	41	1294135	18.311	ng	98
12) Acrolein	6.05	56	326130	16.827	ng	97
13) Acetone	6.18	58	468682	17.918	ng	# 79
14) Trichlorofluoromethane	6.34	101	785881	20.301	ng	100
15) Isopropanol	6.42	45	1438967m	16.967	ng	
16) Acrylonitrile	6.62	53	874549	18.799	ng	98
17) 1,1-Dichloroethene	6.95	96	407867	21.523	ng	93
18) tert-Butanol	6.99	59	1354362	17.560	ng	96
19) Methylene Chloride	7.05	84	388813	18.816	ng	# 41
20) Allyl Chloride	7.17	41	883777	20.409	ng	82
21) Trichlorotrifluoroethane	7.29	151	418494	25.724	ng	86
22) Carbon Disulfide	7.40	76	1445312	18.531	ng	100
23) trans-1,2-Dichloroethene	7.97	61	776634	19.165	ng	93
24) 1,1-Dichloroethane	8.19	63	841365	18.209	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1200934	19.334	ng	80
26) Vinyl Acetate	8.27	86	74381	14.017	ng	# 24
27) 2-Butanone	8.54	72	267468	19.847	ng	# 16
28) cis-1,2-Dichloroethene	9.04	61	719537	19.260	ng	95
29) Diisopropyl Ether	9.20	87	329457	19.209	ng	# 32
30) Ethyl Acetate	9.19	61	218755	21.946	ng	86
31) n-Hexane	9.24	57	1098299	19.497	ng	92

803

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 7:14 pm  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:25:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.35	83	661772	22.417	ng	96
34) Tetrahydrofuran	9.77	72	262536	19.437	ng	# 46
35) Ethyl tert-Butyl Ether	9.79	87	494673	20.333	ng	# 77
36) 1,2-Dichloroethane	10.19	62	651423	18.447	ng	96
38) 1,1,1-Trichloroethane	10.50	97	664987	21.151	ng	93
39) Isopropyl Acetate	10.78	61	325499	19.477	ng	# 65
40) 1-Butanol	10.79	56	550712	17.781	ng	98
41) Benzene	11.02	78	1534046	19.139	ng	99
42) Carbon Tetrachloride	11.19	117	681759	28.723	ng	98
43) Cyclohexane	11.34	84	614898	19.368	ng	# 47
44) tert-Amyl Methyl Ether	11.63	73	1082550	19.179	ng	77
45) 1,2-Dichloropropane	11.95	63	489565	19.688	ng	96
46) Bromodichloromethane	12.15	83	529636	22.237	ng	93
47) Trichloroethene	12.21	130	544708	24.678	ng	99
48) 1,4-Dioxane	12.15	88	338329	22.469	ng	# 68
49) Isooctane	12.26	57	2583896	19.408	ng	92
50) Methyl Methacrylate	12.35	100	189120	23.895	ng	# 71
51) n-Heptane	12.52	71	411960	20.201	ng	# 51
52) cis-1,3-Dichloropropene	13.17	75	616710	19.293	ng	100
53) 4-Methyl-2-pentanone	13.19	58	576479	19.762	ng	85
54) trans-1,3-Dichloropropene	13.77	75	636098	22.529	ng	98
55) 1,1,2-Trichloroethane	14.00	97	412127	21.187	ng	91
58) Toluene	14.35	91	1765007	22.354	ng	98
59) 2-Hexanone	14.59	43	1580295	18.928	ng	99
60) Dibromochloromethane	14.85	129	557375	27.047	ng	100
61) 1,2-Dibromoethane	15.15	107	502191	24.648	ng	98
62) Butyl Acetate	15.31	43	1738953	20.414	ng	93
63) n-Octane	15.48	57	535703	21.199	ng	95
64) Tetrachloroethene	15.70	166	527210	27.016	ng	99
65) Chlorobenzene	16.50	112	1282950	24.553	ng	100
66) Ethylbenzene	16.94	91	2046467	22.722	ng	93
67) m- & p-Xylene	17.17	91	3191845	54.090	ng	92
68) Bromoform	17.26	173	403720	36.227	ng	100
69) Styrene	17.60	104	1361799	24.900	ng	94
70) o-Xylene	17.74	91	1619401	25.734	ng	93
71) n-Nonane	17.97	43	1381099	19.871	ng	94
72) 1,1,2,2-Tetrachloroethane	17.70	83	685924	24.741	ng	94
74) Cumene	18.45	105	2131977	24.251	ng	94
75) alpha-Pinene	18.93	93	1020963	23.769	ng	93
76) n-Propylbenzene	19.07	91	2422315	21.972	ng	92
77) 3-Ethyltoluene	19.19	105	2190869	23.010	ng	94
78) 4-Ethyltoluene	19.24	105	2160976	24.924	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	1846602	24.191	ng	91

804

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 7:14 pm  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:25:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

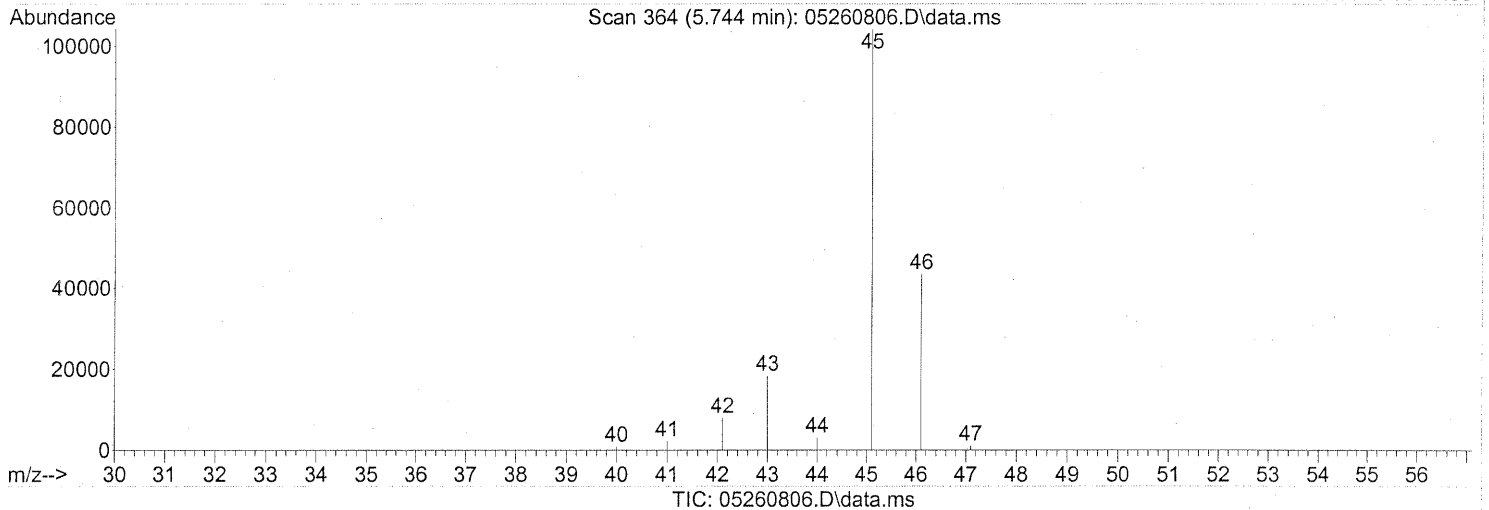
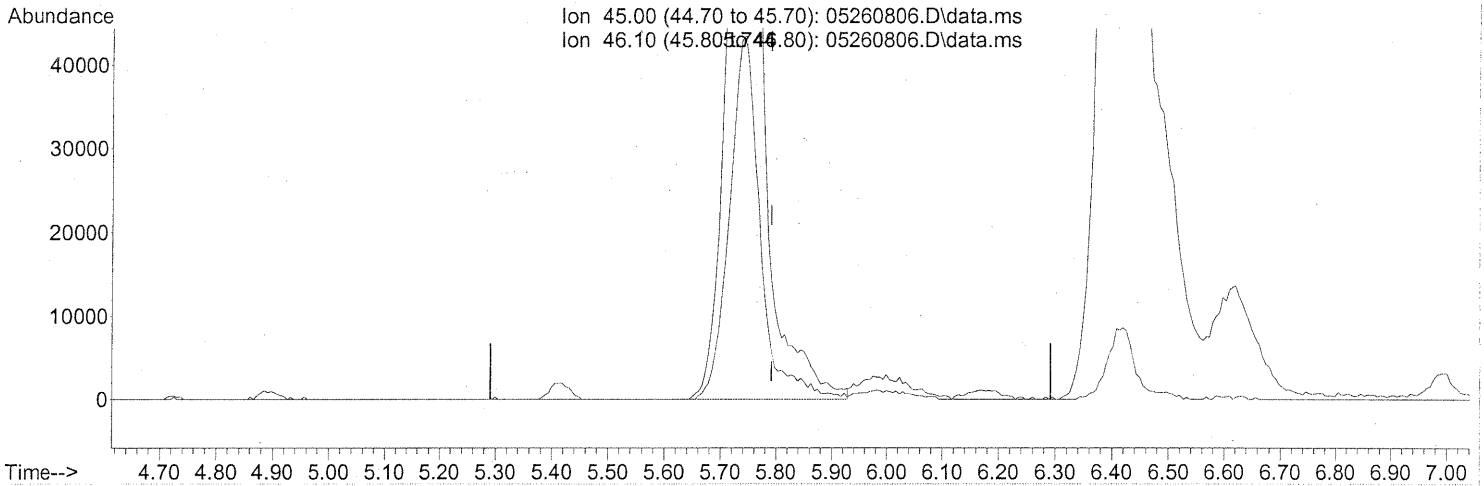
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	1068773	25.806	ng	98
81) 2-Ethyltoluene	19.57	105	2113100	22.369	ng	93
82) 1,2,4-Trimethylbenzene	19.84	105	1891296	23.978	ng	91
83) n-Decane	19.93	57	1329961	21.273	ng	80
84) Benzyl Chloride	20.00	91	1537896	23.396	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1157260	25.281	ng	99
86) 1,4-Dichlorobenzene	20.10	146	1173179	26.832	ng	99
87) sec-Butylbenzene	20.16	105	2467034	24.008	ng	95
88) p-Isopropyltoluene	20.34	119	2394860	27.443	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	1881635	24.498	ng	88
90) 1,2-Dichlorobenzene	20.52	146	1092803	25.741	ng	100
91) d-Limonene	20.52	68	610872	21.467	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	377273	28.200	ng	82
93) n-Undecane	21.44	57	1450299	22.059	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	218655	29.607	ng	# 86
95) Naphthalene	22.69	128	2867866	25.695	ng	99
96) n-Dodecane	22.66	57	1475297	22.995	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	348136	31.529	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260806.D  
Acq On : 26 May 2008 7:14 pm  
Operator : WA  
Sample : 25ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:24:58 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



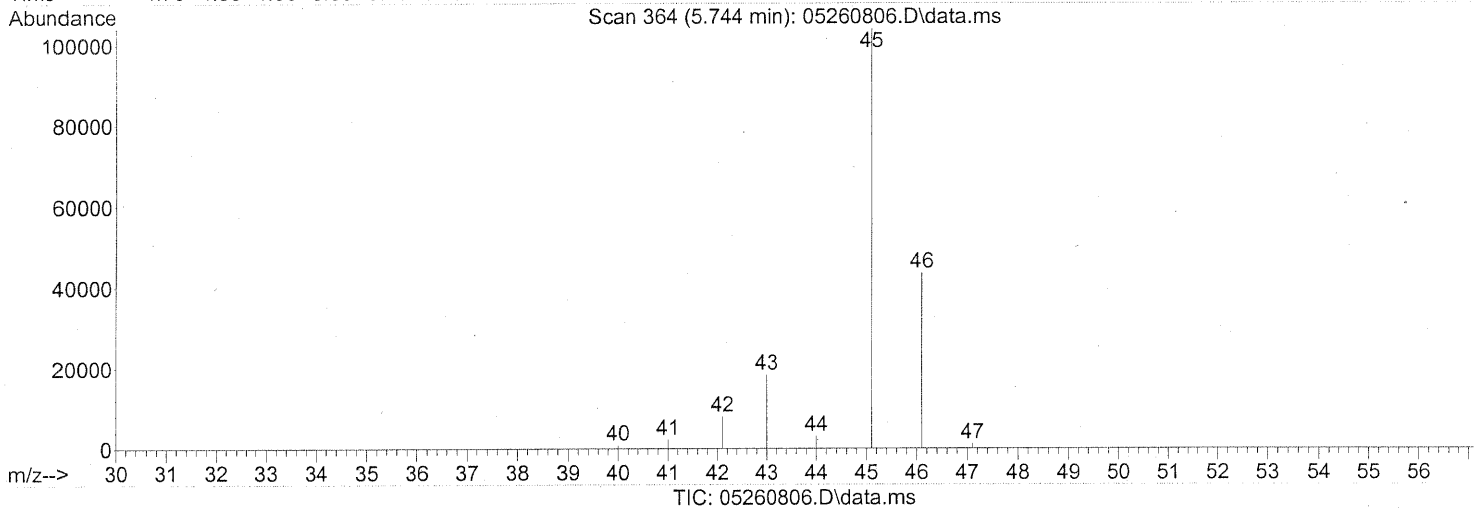
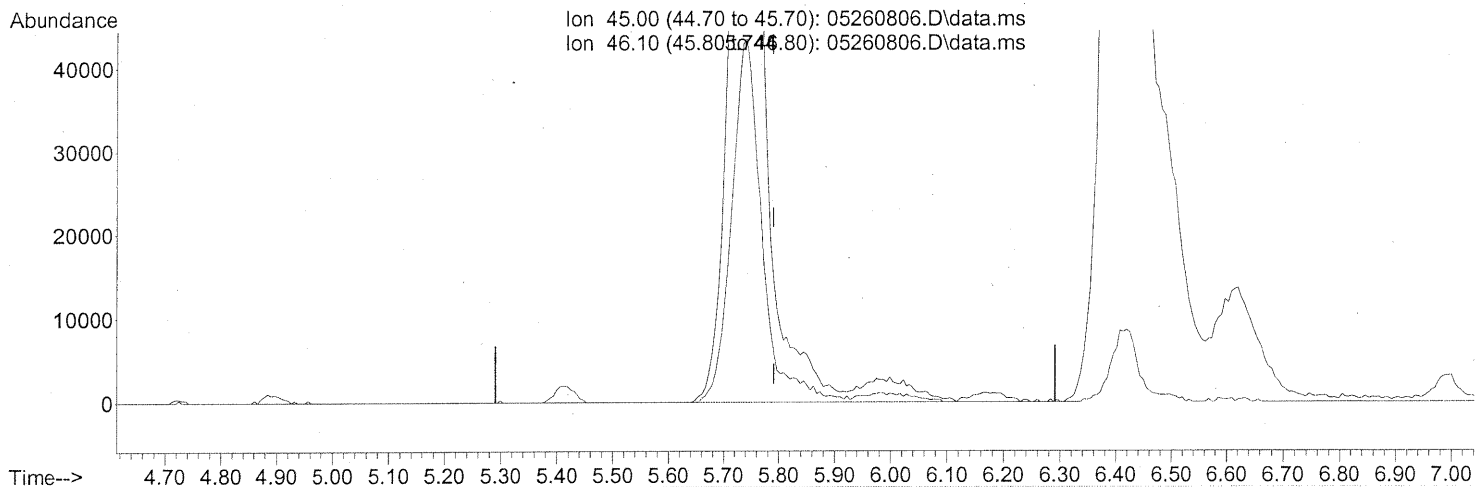
(10) Ethanol (T)  
5.744min (-0.047) 15.24ng  
response 414761

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.23
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260806.D  
Acq On : 26 May 2008 7:14 pm  
Operator : WA  
Sample : 25ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:24:58 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(10) Ethanol (T)

5.744min (-0.047) 15.91ng m

response 432975

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.54
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

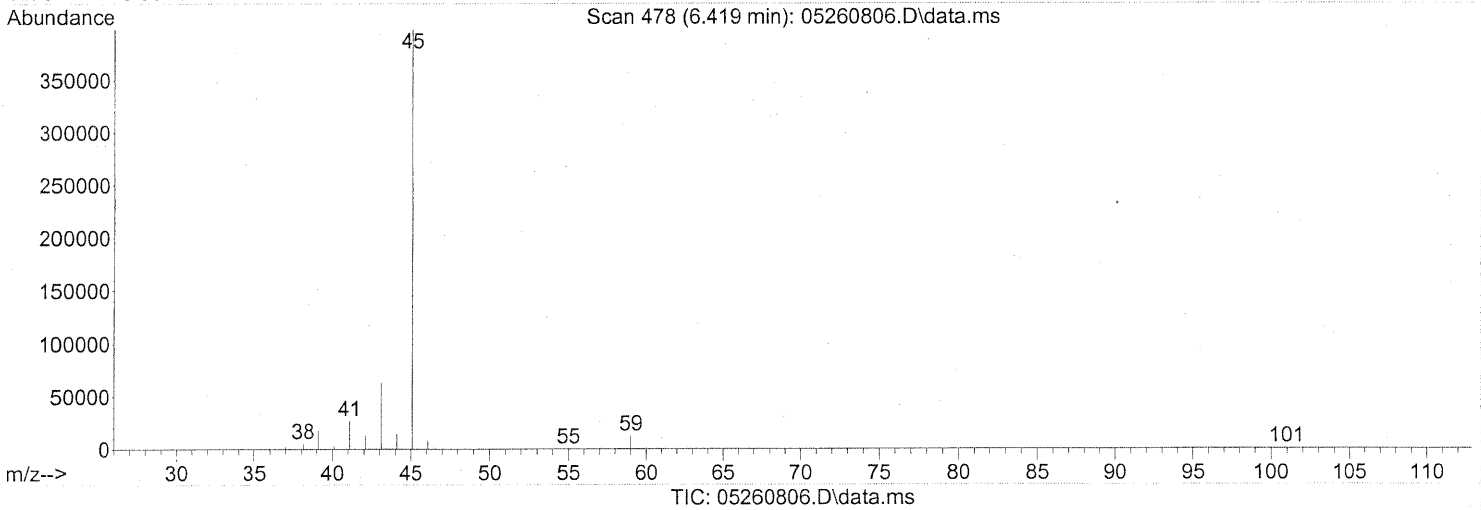
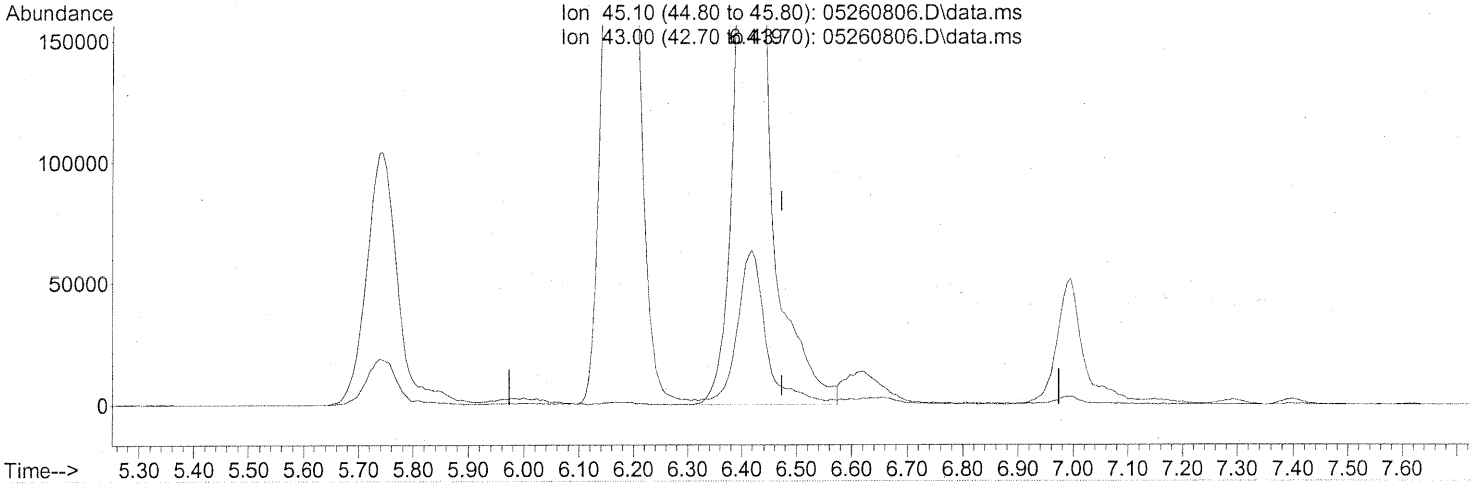
*WA 5/29/08*

*Can 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260806.D  
Acq On : 26 May 2008 7:14 pm  
Operator : WA  
Sample : 25ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:24:58 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.419min (-0.054) 16.17ng

response 1371401

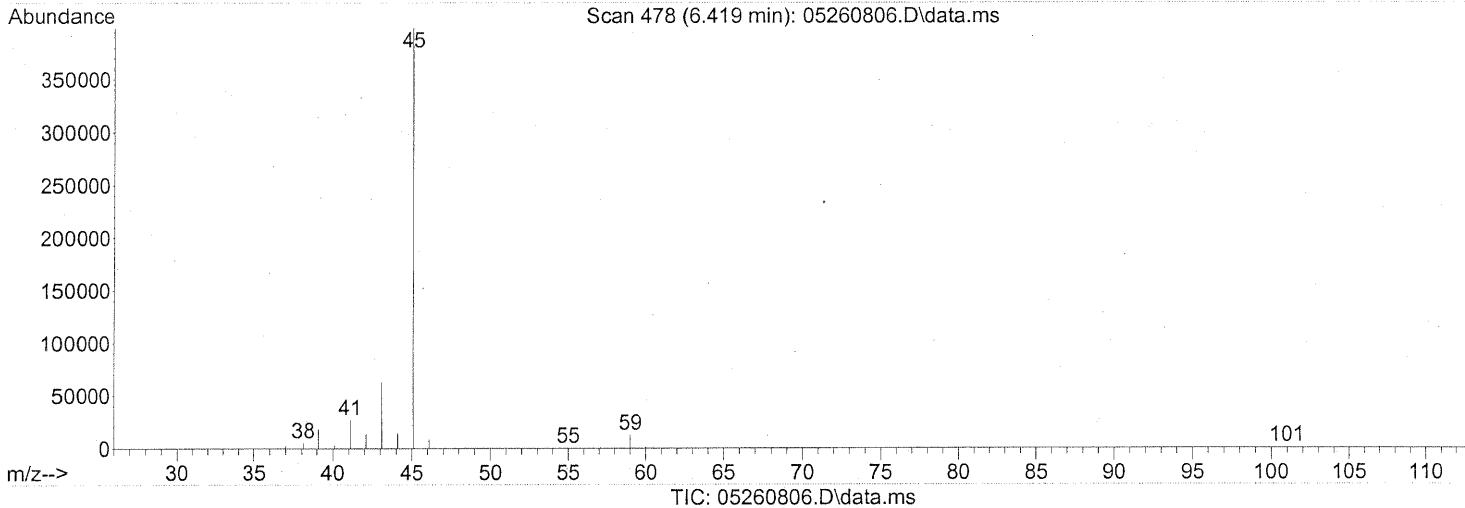
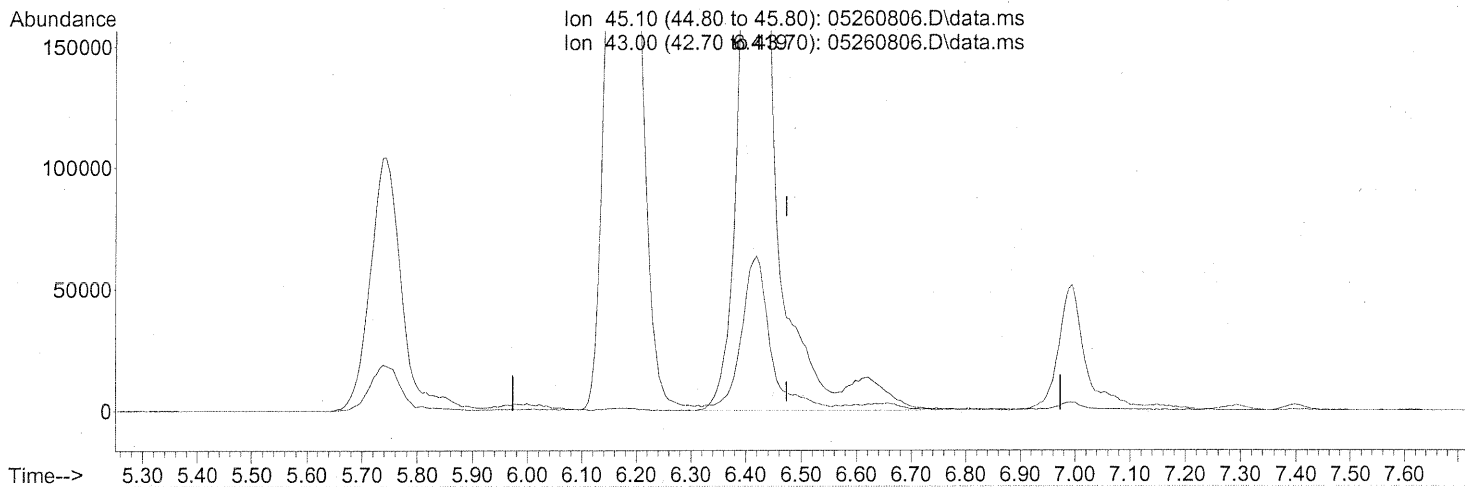
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qealr)

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 7:14 pm  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:24:58 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.419min (-0.054) 16.97ng m  
 response 1438967

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.93
0.00	0.00	0.00
0.00	0.00	0.00

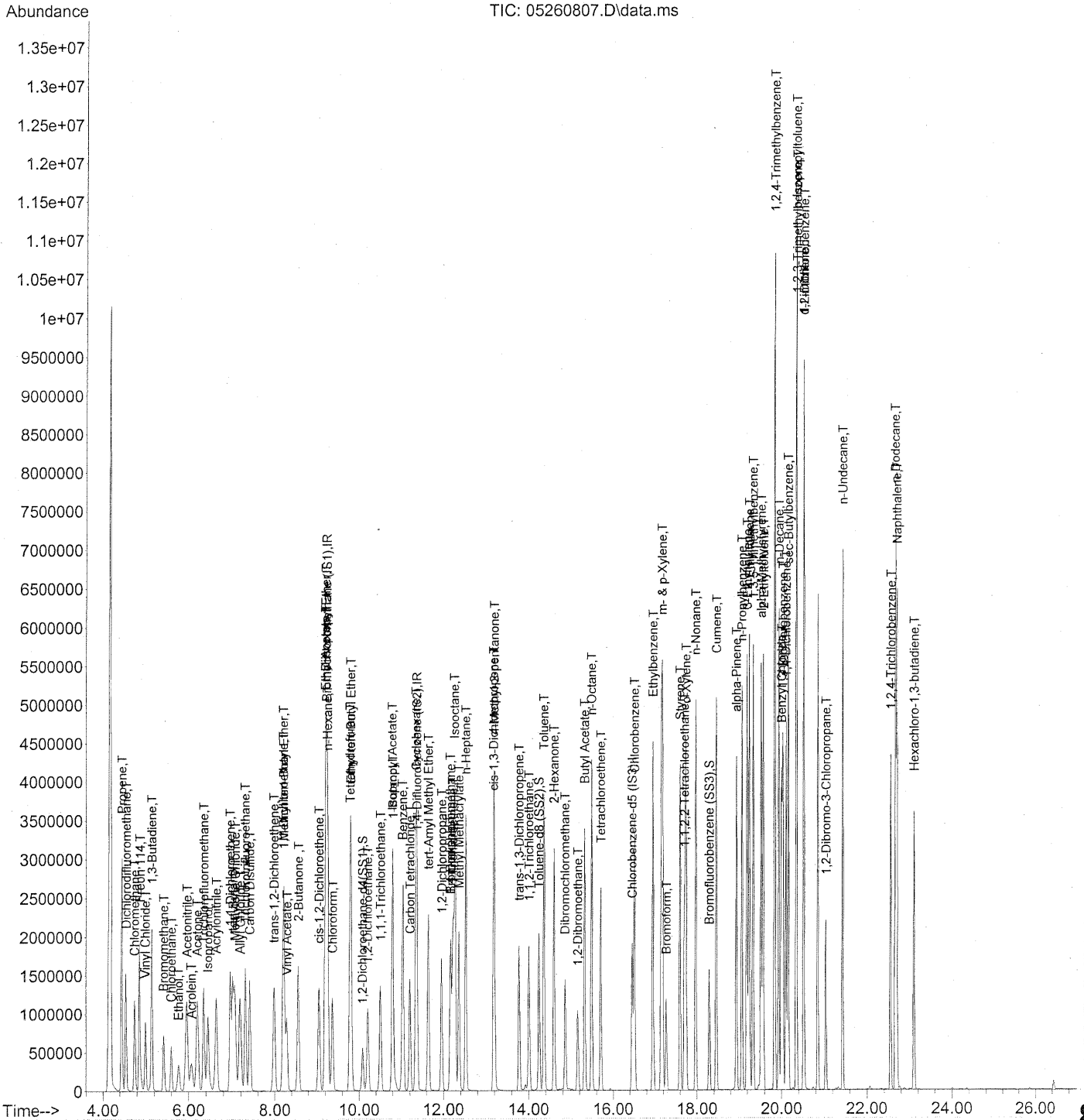
*int. whole peaks*

*WA 5/29/08*

*Em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260807.D  
Acq On : 26 May 2008 7:52 pm  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:35:27 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260807.D  
 Acq On : 26 May 2008 7:52 pm  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:35:27 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon May 12 20:47:38 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	388471	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1647237	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	16.46	82	658280	25.000	ng	0.00

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.08	65	561887	20.511	ng	-0.02
Spiked Amount	25.000		Recovery	=	82.04%	
57) Toluene-d8 (SS2)	14.24	98	1683278	25.970	ng	0.00
Spiked Amount	25.000		Recovery	=	103.88%	
73) Bromofluorobenzene (SS3)	18.29	174	578716	34.307	ng	0.00
Spiked Amount	25.000		Recovery	=	137.24%	

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	1488105	38.309	ng	92
3) Dichlorodifluoromethane	4.54	85	1621133	35.296	ng	98
4) Chloromethane	4.74	50	1834813	32.312	ng	99
5) Freon 114	4.86	135	950822	42.931	ng	98
6) Vinyl Chloride	4.99	62	1290533	32.916	ng	94
7) 1,3-Butadiene	5.14	54	1344963	36.742	ng	# 85
8) Bromomethane	5.42	94	677693	41.946	ng	99
9) Chloroethane	5.60	64	678681	37.868	ng	96
10) Ethanol	5.77	45	856770m	32.078	ng	
11) Acetonitrile	5.96	41	2550629	36.779	ng	98
12) Acrolein	6.06	56	659705	34.688	ng	97
13) Acetone	6.19	58	922838	35.954	ng	# 78
14) Trichlorofluoromethane	6.34	101	1577028	41.516	ng	100
15) Isopropanol	6.44	45	2469895m	29.680	ng	
16) Acrylonitrile	6.64	53	1747249	38.275	ng	97
17) 1,1-Dichloroethene	6.96	96	805359	43.310	ng	91
18) tert-Butanol	7.02	59	2656177	35.096	ng	96
19) Methylene Chloride	7.07	84	759421	37.452	ng	# 40
20) Allyl Chloride	7.18	41	1775021	41.772	ng	83
21) Trichlorotrifluoroethane	7.30	151	823320	51.574	ng	87
22) Carbon Disulfide	7.41	76	2870640	37.507	ng	100
23) trans-1,2-Dichloroethene	7.98	61	1532608	38.542	ng	93
24) 1,1-Dichloroethane	8.20	63	1668607	36.802	ng	94
25) Methyl tert-Butyl Ether	8.21	73	2388378	39.186	ng	79
26) Vinyl Acetate	8.29	86	147140	28.259	ng	# 49
27) 2-Butanone	8.56	72	531364	40.182	ng	# 20
28) cis-1,2-Dichloroethene	9.05	61	1427846	38.950	ng	94
29) Diisopropyl Ether	9.21	87	641768	38.132	ng	# 32
30) Ethyl Acetate	9.20	61	435021	44.476	ng	83
31) n-Hexane	9.25	57	2168320	39.226	ng	92

811

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260807.D  
 Acq On : 26 May 2008 7:52 pm  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:35:27 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon May 12 20:47:38 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.37	83	1307274	45.129	ng	95
34) Tetrahydrofuran	9.79	72	486473	36.704	ng	# 44
35) Ethyl tert-Butyl Ether	9.80	87	975544	40.865	ng	# 76
36) 1,2-Dichloroethane	10.20	62	1286163	37.117	ng	96
38) 1,1,1-Trichloroethane	10.51	97	1337307	42.219	ng	94
39) Isopropyl Acetate	10.79	61	643632	38.228	ng	# 66
40) 1-Butanol	10.80	56	1099028	35.220	ng	97
41) Benzene	11.03	78	3034770	37.581	ng	99
42) Carbon Tetrachloride	11.20	117	1362256	56.966	ng	99
43) Cyclohexane	11.35	84	1207794	37.760	ng	# 48
44) tert-Amyl Methyl Ether	11.65	73	2159046	37.967	ng	77
45) 1,2-Dichloropropane	11.96	63	971819	38.792	ng	96
46) Bromodichloromethane	12.16	83	1042770	43.456	ng	93
47) Trichloroethene	12.21	130	1070999	48.162	ng	99
48) 1,4-Dioxane	12.16	88	661926	43.633	ng	# 67
49) Isooctane	12.26	57	5082567	37.893	ng	92
50) Methyl Methacrylate	12.36	100	374571	46.974	ng	# 71
51) n-Heptane	12.53	71	808502	39.351	ng	# 50
52) cis-1,3-Dichloropropene	13.18	75	1222015	37.944	ng	100
53) 4-Methyl-2-pentanone	13.20	58	1141926	38.854	ng	85
54) trans-1,3-Dichloropropene	13.78	75	1262997	44.399	ng	98
55) 1,1,2-Trichloroethane	14.01	97	813929	41.533	ng	90
58) Toluene	14.36	91	3509775	44.196	ng	98
59) 2-Hexanone	14.60	43	3119465	37.149	ng	99
60) Dibromochloromethane	14.85	129	1126081	54.331	ng	100
61) 1,2-Dibromoethane	15.16	107	1002547	48.924	ng	99
62) Butyl Acetate	15.32	43	3436932	40.116	ng	92
63) n-Octane	15.49	57	1061248	41.756	ng	95
64) Tetrachloroethene	15.70	166	1045308	53.259	ng	99
65) Chlorobenzene	16.51	112	2555630	48.629	ng	100
66) Ethylbenzene	16.95	91	4066809	44.896	ng	93
67) m- & p-Xylene	17.17	91	6393111	107.719	ng	92
68) Bromoform	17.27	173	811442	72.397	ng	100
69) Styrene	17.60	104	2716028	49.377	ng	94
70) o-Xylene	17.74	91	3227592	50.996	ng	93
71) n-Nonane	17.97	43	2712805	38.808	ng	95
72) 1,1,2,2-Tetrachloroethane	17.71	83	1351121	48.456	ng	93
74) Cumene	18.46	105	4265057	48.237	ng	95
75) alpha-Pinene	18.94	93	2034056	47.083	ng	93
76) n-Propylbenzene	19.07	91	4844624	43.693	ng	92
77) 3-Ethyltoluene	19.20	105	4455656	46.528	ng	95
78) 4-Ethyltoluene	19.25	105	4274342	49.017	ng	94
79) 1,3,5-Trimethylbenzene	19.34	105	3697471	48.161	ng	92

812

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260807.D  
 Acq On : 26 May 2008 7:52 pm  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:35:27 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

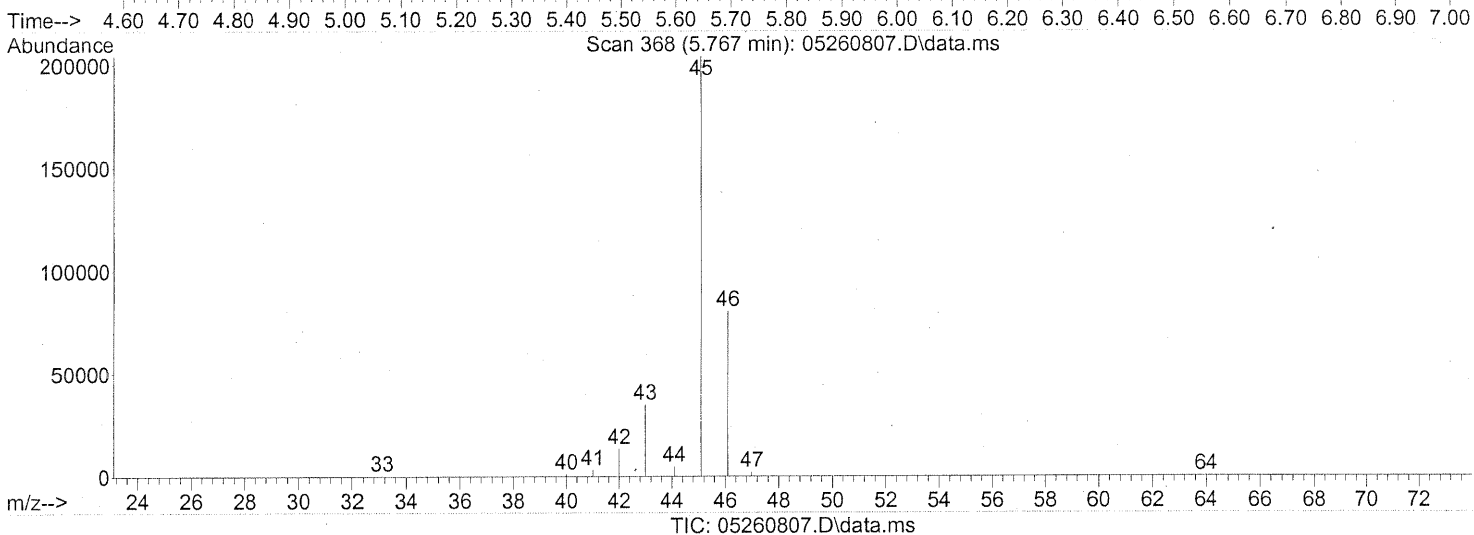
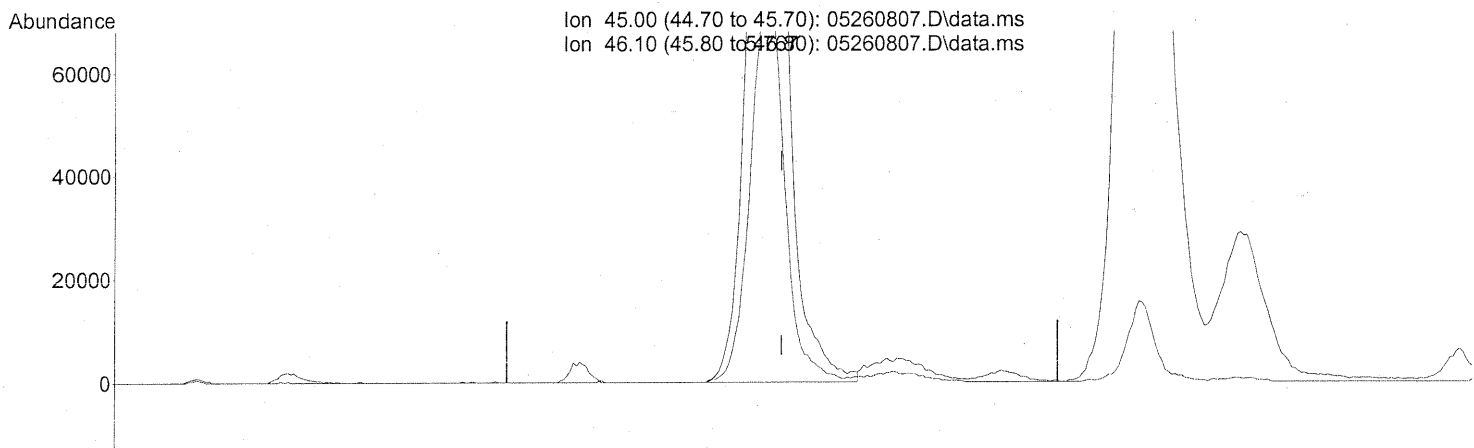
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	2132739	51.200	ng	98
81) 2-Ethyltoluene	19.57	105	4209587	44.306	ng	93
82) 1,2,4-Trimethylbenzene	19.84	105	3789214	47.764	ng	92
83) n-Decane	19.94	57	2651253	42.165	ng	79
84) Benzyl Chloride	20.00	91	3095199	46.818	ng	89
85) 1,3-Dichlorobenzene	20.03	146	2313825	50.258	ng	100
86) 1,4-Dichlorobenzene	20.11	146	2343469	53.292	ng	99
87) sec-Butylbenzene	20.16	105	4912874	47.536	ng	95
88) p-Isopropyltoluene	20.34	119	4788149	54.553	ng	93
89) 1,2,3-Trimethylbenzene	20.36	105	3760317	48.677	ng	89
90) 1,2-Dichlorobenzene	20.52	146	2147282	50.289	ng	100
91) d-Limonene	20.52	68	1220306	42.637	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	756263	56.204	ng	81
93) n-Undecane	21.43	57	2854154	43.162	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	432056	58.168	ng	# 86
95) Naphthalene	22.70	128	5732941	51.070	ng	99
96) n-Dodecane	22.66	57	2916336	45.196	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	686916	61.855	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260807.D  
 Acq On : 26 May 2008 7:52 pm  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:34:23 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.767min (-0.024) 30.86ng

response 824365

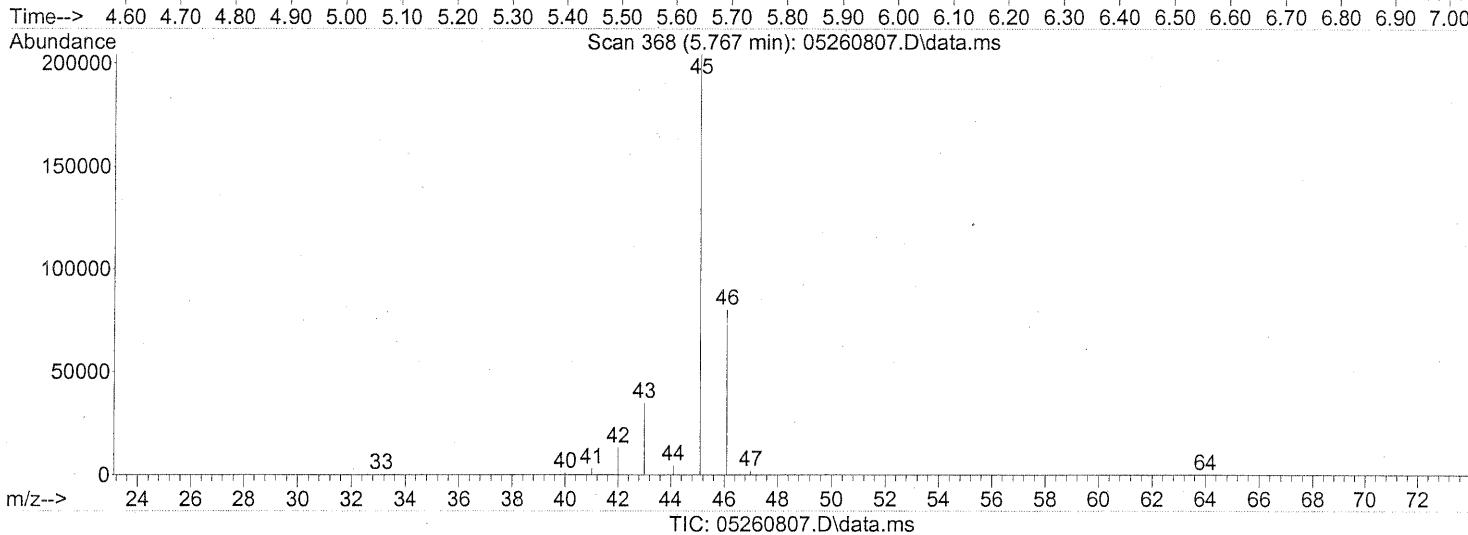
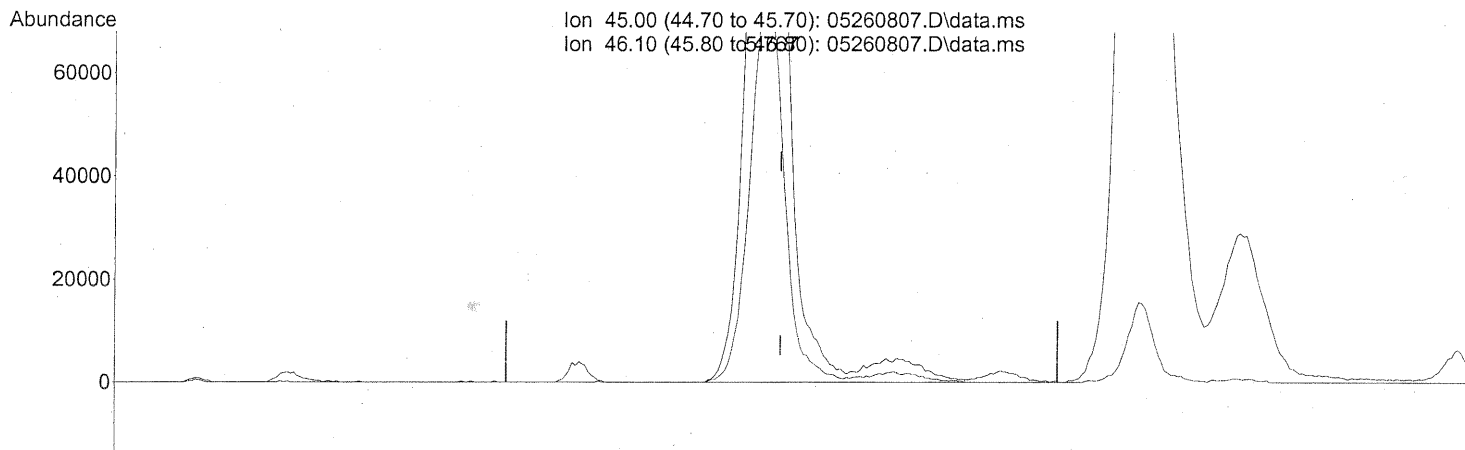
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260807.D  
Acq On : 26 May 2008 7:52 pm  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:34:23 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.767min (-0.024) 32.08ng m  
response 856770

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.18
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

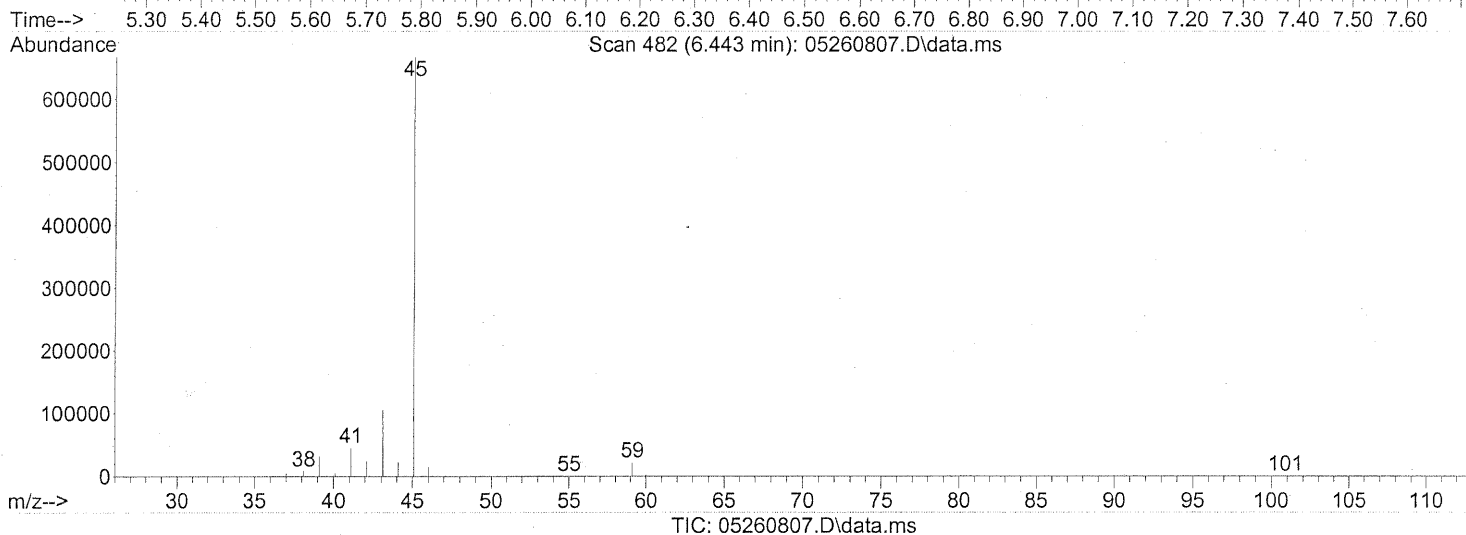
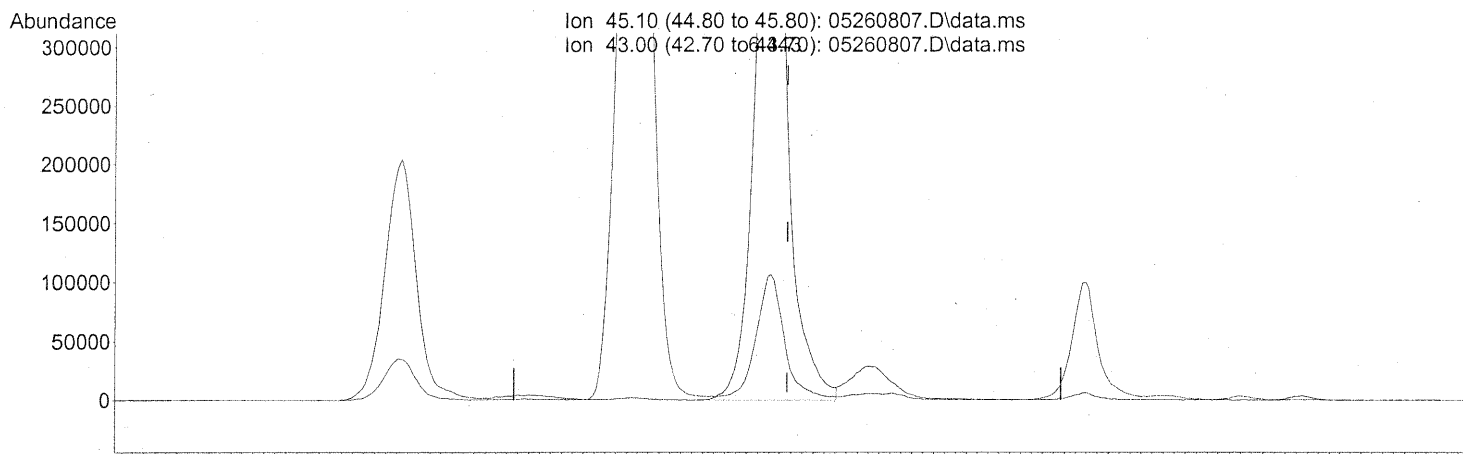
*DA 5/29/08*

*Em 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260807.D  
Acq On : 26 May 2008 7:52 pm  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:34:23 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



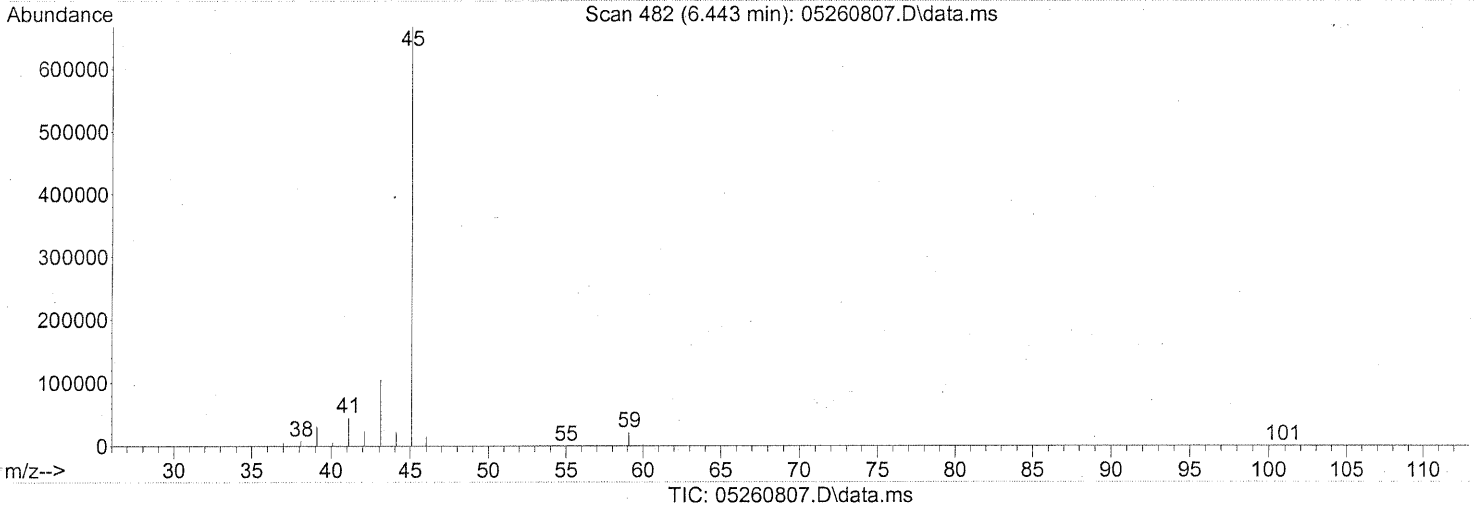
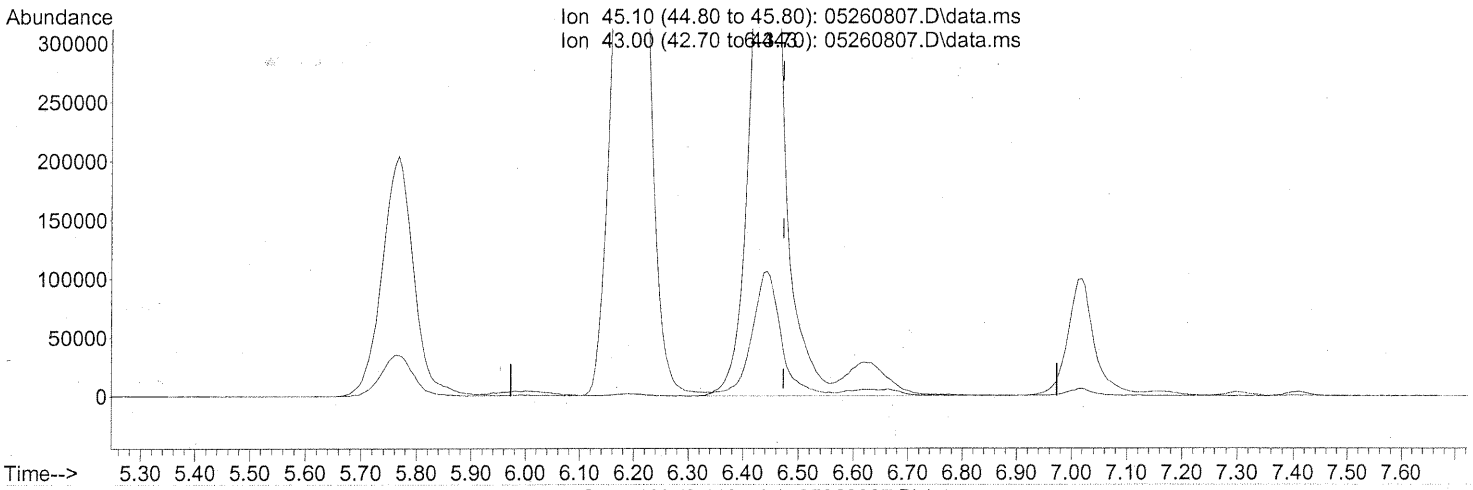
(15) Isopropanol (T)  
6.443min (-0.030) 27.79ng  
response 2312863

*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.50
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260807.D  
Acq On : 26 May 2008 7:52 pm  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:34:23 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.443min (-0.030) 29.68ng m  
response 2469895

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.45
0.00	0.00	0.00
0.00	0.00	0.00

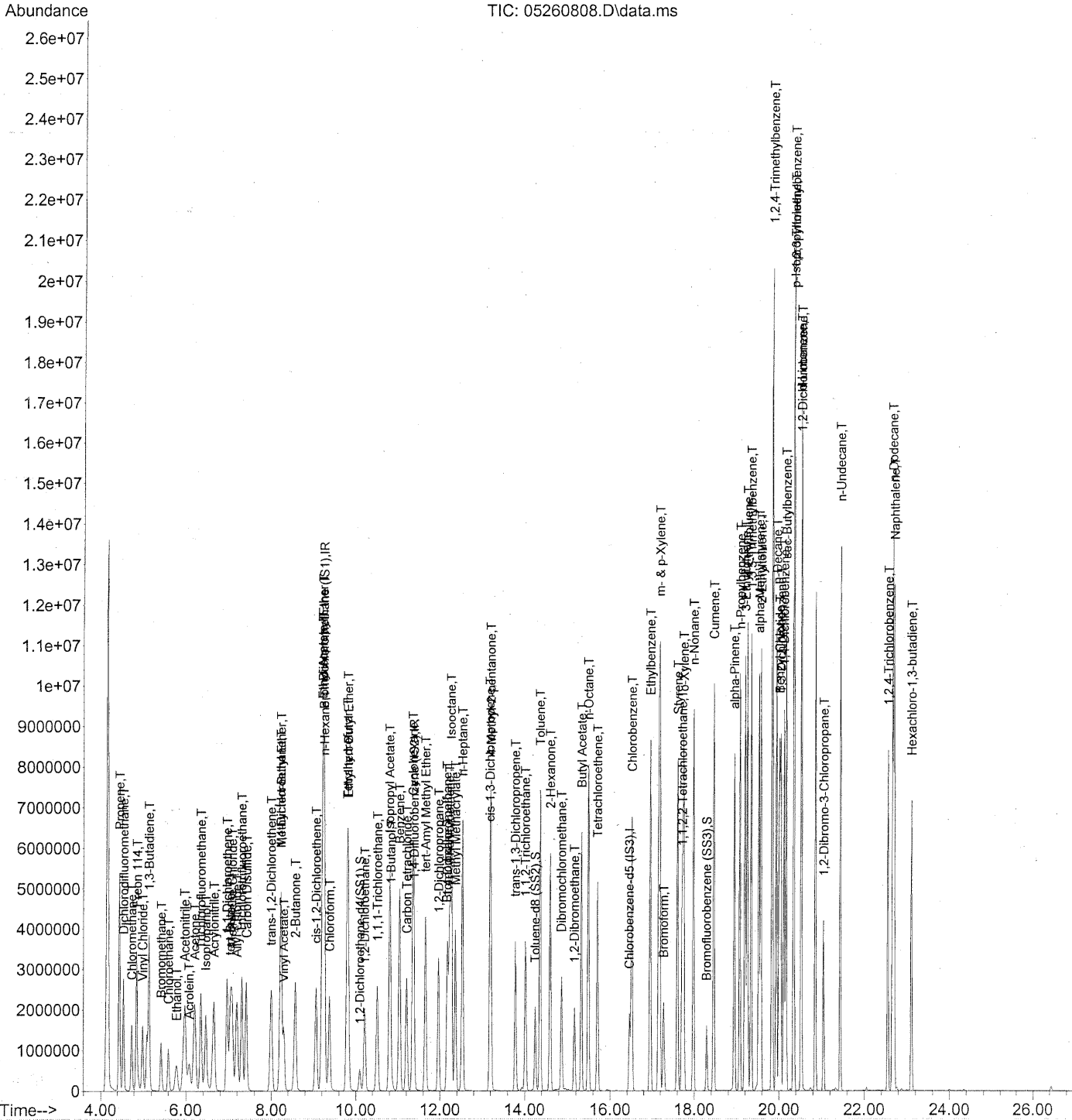
*int. whole peaks*

*WA 5/29/08*

*Tom 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 8:30 pm  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 8:30 pm  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:38:01 2008

Quant Method : J:\MS16\METHODS\R16052608.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Mon May 12 20:47:38 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.25	130	386095	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	11.38	114	1653539	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	16.46	82	678453	25.000	ng	0.00

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.09	65	565549	20.772	ng	0.00
Spiked Amount	25.000		Recovery	=	83.08%	
57) Toluene-d8 (SS2)	14.25	98	1717295	25.707	ng	0.00
Spiked Amount	25.000		Recovery	=	102.84%	
73) Bromofluorobenzene (SS3)	18.29	174	594590	34.200	ng	0.00
Spiked Amount	25.000		Recovery	=	136.80%	

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	2836829	73.478	ng	93
3) Dichlorodifluoromethane	4.54	85	3164778	69.330	ng	98
4) Chloromethane	4.74	50	2740968	48.567	ng	100
5) Freon 114	4.86	135	1854170	84.233	ng	97
6) Vinyl Chloride	4.99	62	2510365	64.422	ng	95
7) 1,3-Butadiene	5.14	54	2625216	72.158	ng	94
8) Bromomethane	5.43	94	1215673	75.708	ng	98
9) Chloroethane	5.60	64	1335144	74.956	ng	96
10) Ethanol	5.79	45	1727283	65.068	ng	97
11) Acetonitrile	5.97	41	5048612	73.246	ng	98
12) Acrolein	6.08	56	1335596	70.659	ng	97
13) Acetone	6.21	58	1851795	72.591	ng	# 77
14) Trichlorofluoromethane	6.35	101	3129612	82.895	ng	100
15) Isopropanol	6.47	45	4780400m	57.797	ng	
16) Acrylonitrile	6.66	53	3482951	76.767	ng	97
17) 1,1-Dichloroethene	6.96	96	1616756	87.479	ng	92
18) tert-Butanol	7.04	59	3031545	40.302	ng	95
19) Methylene Chloride	7.08	84	1519492	75.397	ng	# 41
20) Allyl Chloride	7.19	41	3565453	84.424	ng	83
21) Trichlorotrifluoroethane	7.31	151	1622190	102.243	ng	86
22) Carbon Disulfide	7.41	76	5744041	75.513	ng	100
23) trans-1,2-Dichloroethene	7.99	61	3071136	77.709	ng	92
24) 1,1-Dichloroethane	8.21	63	3338718	74.091	ng	94
25) Methyl tert-Butyl Ether	8.22	73	4755909	78.510	ng	80
26) Vinyl Acetate	8.29	86	259984	50.238	ng	# 1
27) 2-Butanone	8.57	72	956253	72.757	ng	# 22
28) cis-1,2-Dichloroethene	9.06	61	2855733	78.380	ng	94
29) Diisopropyl Ether	9.22	87	1250910	74.783	ng	# 36
30) Ethyl Acetate	9.22	61	839698	86.377	ng	83
31) n-Hexane	9.26	57	4256079	77.469	ng	92

819

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 8:30 pm  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.38	83	2628154	91.286	ng	95
34) Tetrahydrofuran	9.80	72	934904	70.972	ng	# 49
35) Ethyl tert-Butyl Ether	9.81	87	1930911	81.383	ng	# 75
36) 1,2-Dichloroethane	10.21	62	2544747	73.889	ng	96
38) 1,1,1-Trichloroethane	10.51	97	2645547	83.201	ng	94
39) Isopropyl Acetate	10.80	61	1275935	75.494	ng	# 69
40) 1-Butanol	10.83	56	2176266	69.476	ng	95
41) Benzene	11.04	78	6068695	74.864	ng	99
42) Carbon Tetrachloride	11.21	117	2729440	113.703	ng	99
43) Cyclohexane	11.36	84	2390624	74.454	ng	# 48
44) tert-Amyl Methyl Ether	11.65	73	4315624	75.601	ng	79
45) 1,2-Dichloropropane	11.97	63	1931077	76.789	ng	96
46) Bromodichloromethane	12.17	83	2062510	85.625	ng	93
47) Trichloroethene	12.23	130	2117063	94.839	ng	99
48) 1,4-Dioxane	12.17	88	1294622	85.014	ng	# 67
49) Isooctane	12.27	57	10174043	75.563	ng	90
50) Methyl Methacrylate	12.37	100	739610	92.399	ng	# 72
51) n-Heptane	12.53	71	1583461	76.776	ng	# 49
52) cis-1,3-Dichloropropene	13.19	75	2417177	74.769	ng	100
53) 4-Methyl-2-pentanone	13.21	58	2251466	76.314	ng	85
54) trans-1,3-Dichloropropene	13.79	75	2552526	89.388	ng	98
55) 1,1,2-Trichloroethane	14.02	97	1622420	82.473	ng	90
58) Toluene	14.37	91	7020369	85.775	ng	98
59) 2-Hexanone	14.61	43	6083087	70.288	ng	99
60) Dibromochloromethane	14.86	129	2268151	106.179	ng	99
61) 1,2-Dibromoethane	15.17	107	1999750	94.686	ng	99
62) Butyl Acetate	15.33	43	6742260	76.356	ng	92
63) n-Octane	15.49	57	2098429	80.111	ng	95
64) Tetrachloroethene	15.71	166	2093850	103.511	ng	99
65) Chlorobenzene	16.52	112	5089602	93.966	ng	100
66) Ethylbenzene	16.96	91	8177162	87.588	ng	94
67) m- & p-Xylene	17.18	91	12867420	210.360	ng	94
68) Bromoform	17.28	173	1639282	141.908	ng	100
69) Styrene	17.61	104	5444049	96.029	ng	94
70) o-Xylene	17.75	91	6459028	99.019	ng	94
71) n-Nonane	17.98	43	5192086	72.067	ng	94
72) 1,1,2,2-Tetrachloroethane	17.71	83	2665244	92.743	ng	92
74) Cumene	18.46	105	8588112	94.242	ng	96
75) alpha-Pinene	18.94	93	4054737	91.066	ng	93
76) n-Propylbenzene	19.08	91	9691442	84.807	ng	93
77) 3-Ethyltoluene	19.20	105	8989744	91.084	ng	96
78) 4-Ethyltoluene	19.25	105	8567996	95.333	ng	95
79) 1,3,5-Trimethylbenzene	19.34	105	7490986	94.671	ng	94

820

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 8:30 pm  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

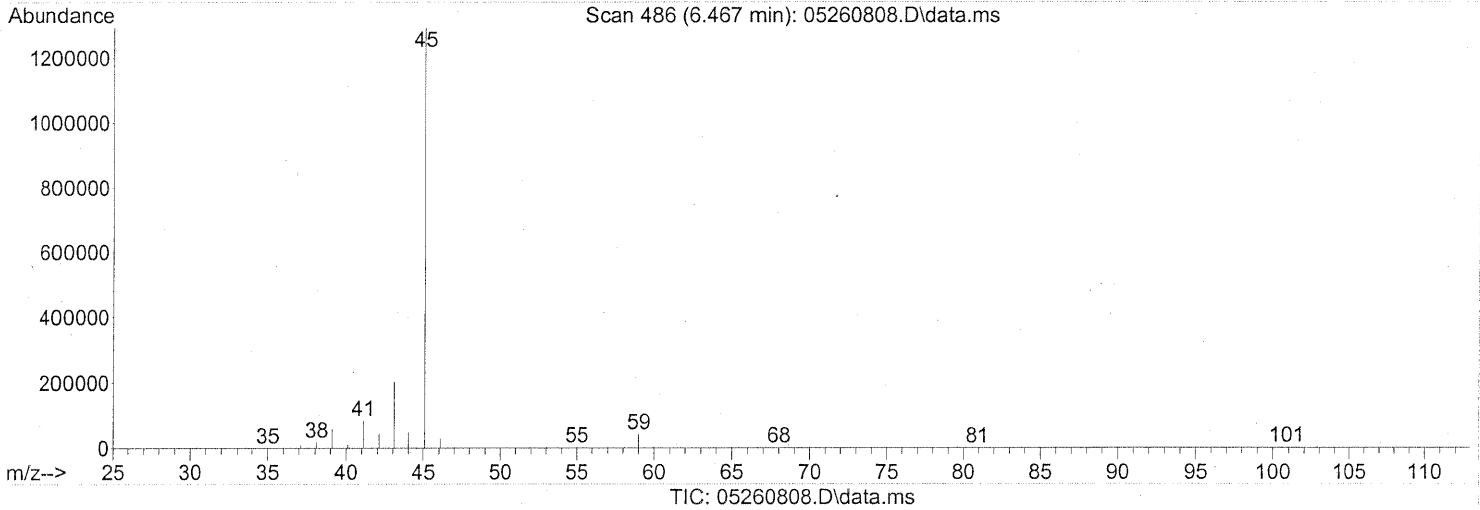
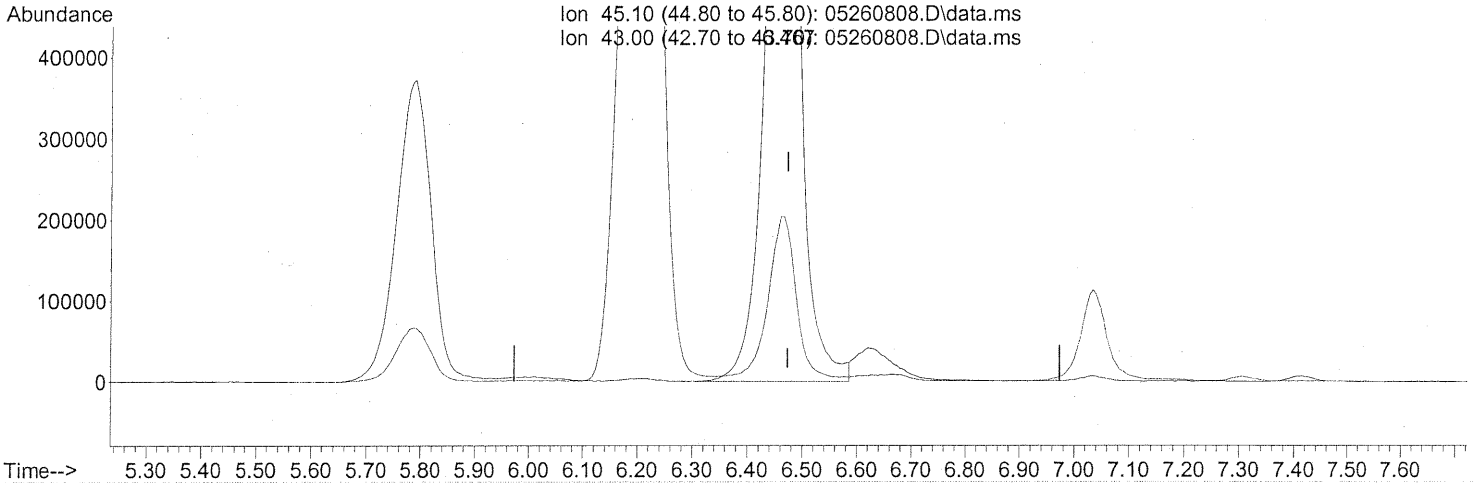
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.53	118	4259512	99.217	ng	99
81) 2-Ethyltoluene	19.58	105	8490812	86.710	ng	94
82) 1,2,4-Trimethylbenzene	19.85	105	7596628	92.911	ng	94
83) n-Decane	19.94	57	5211640	80.420	ng	79
84) Benzyl Chloride	20.01	91	6261225	91.891	ng	90
85) 1,3-Dichlorobenzene	20.04	146	4611892	97.195	ng	100
86) 1,4-Dichlorobenzene	20.11	146	4696419	103.623	ng	99
87) sec-Butylbenzene	20.17	105	9897976	92.924	ng	96
88) p-Isopropyltoluene	20.36	119	9553769	105.614	ng	94
89) 1,2,3-Trimethylbenzene	20.36	105	7531861	94.600	ng	90
90) 1,2-Dichlorobenzene	20.53	146	4208026	95.621	ng	100
91) d-Limonene	20.52	68	2427100	82.281	ng	89
92) 1,2-Dibromo-3-Chloropr...	21.05	157	1517346	109.413	ng	80
93) n-Undecane	21.44	57	5629788	82.606	ng	78
94) 1,2,4-Trichlorobenzene	22.56	184	854314	111.596	ng	# 84
95) Naphthalene	22.70	128	11582774	100.114	ng	99
96) n-Dodecane	22.67	57	5705966	85.800	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	1376955	120.304	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 8:30 pm  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:37:01 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration



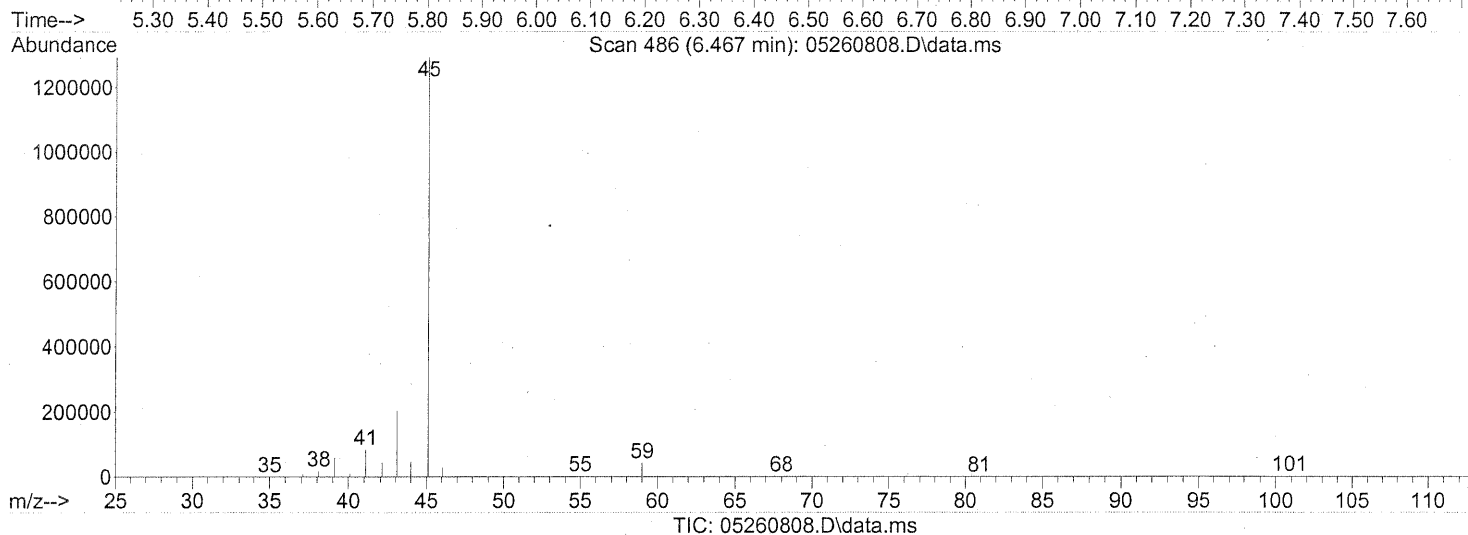
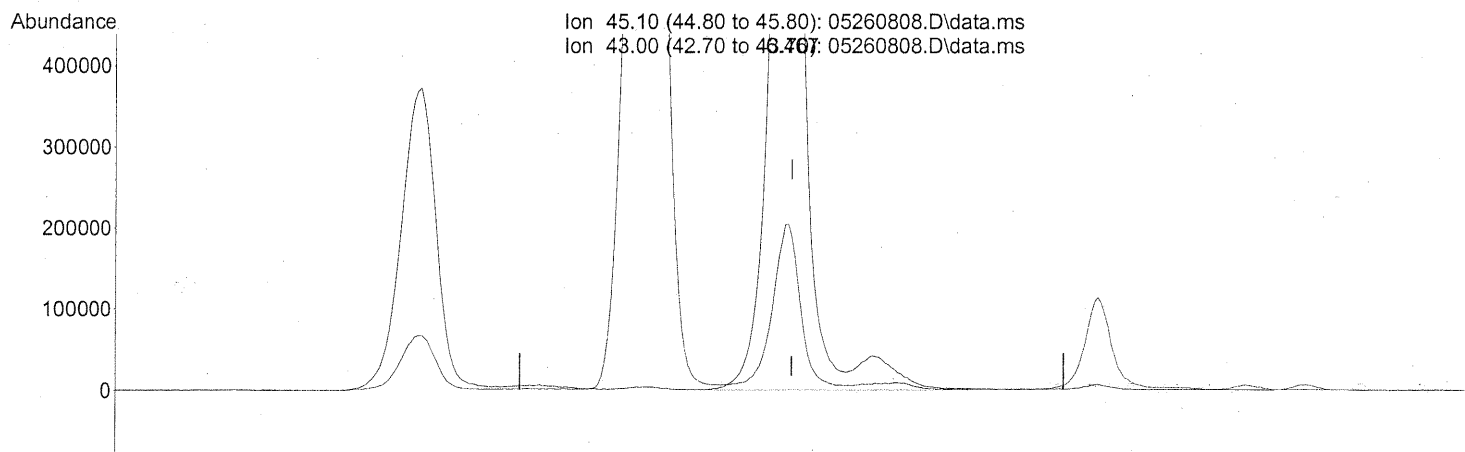
(15) Isopropanol (T)  
 6.467min (-0.006) 55.18ng  
 response 4564134

*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.36
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260808.D  
Acq On : 26 May 2008 8:30 pm  
Operator : WA  
Sample : 100ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 08:37:01 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:47:38 2008  
Response via : Initial Calibration



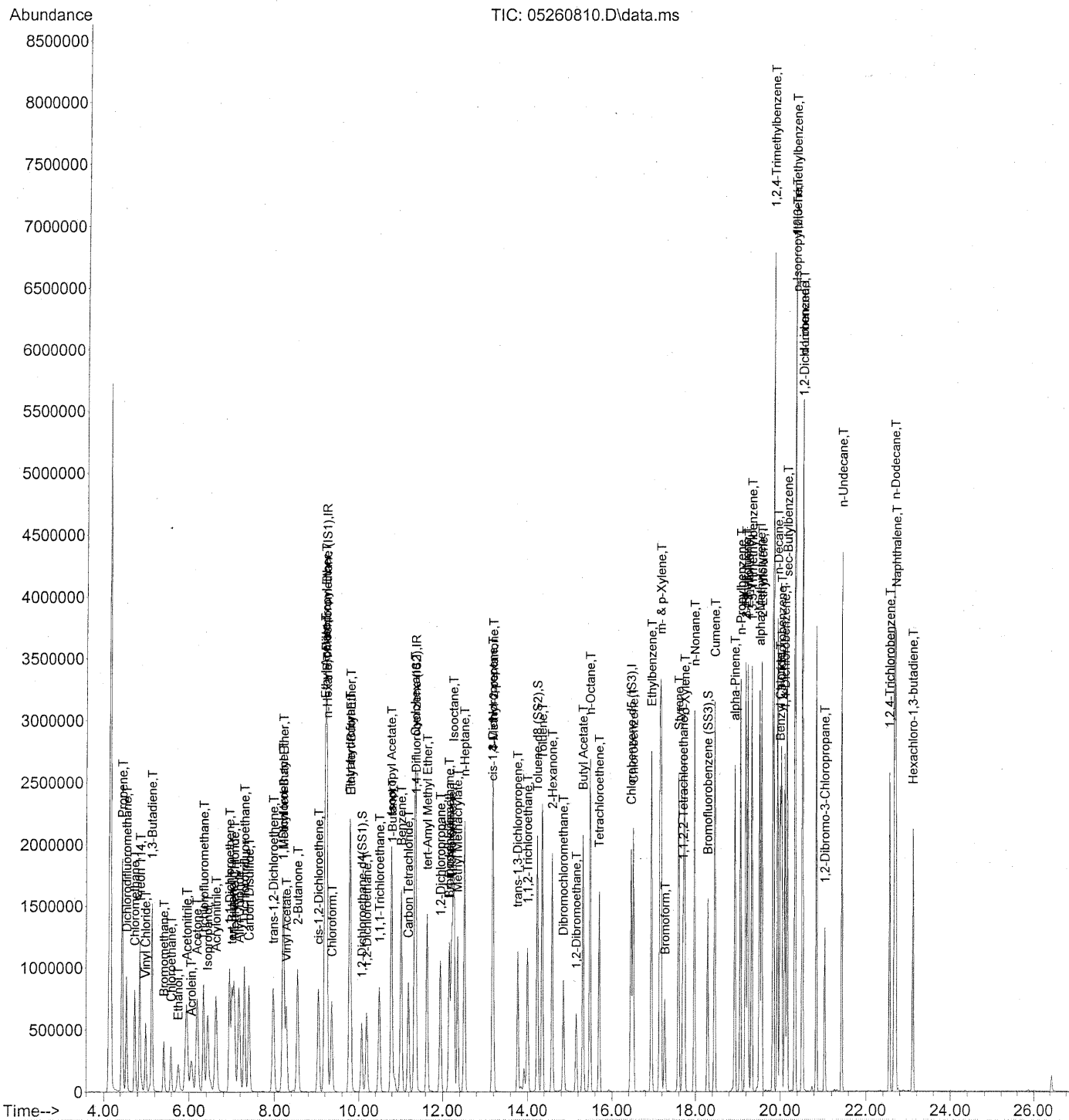
(15) Isopropanol (T)  
6.467min (-0.006) 57.80ng m  
response 4780400

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.62
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*DA 5/29/08*  
*em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 11:42:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 11:42:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	407859	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1689589	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	16.45	82	667061	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.07	65	569355	24.413	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.64%	
57) Toluene-d8 (SS2)	14.24	98	1713292	24.913	ng	-0.01
Spiked Amount	25.000		Recovery	=	99.64%	
73) Bromofluorobenzene (SS3)	18.29	174	581376	25.427	ng	0.00
Spiked Amount	25.000		Recovery	=	101.72%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	871029	27.588	ng	92
3) Dichlorodifluoromethane	4.53	85	956715	25.053	ng	98
4) Chloromethane	4.73	50	1227596	25.585	ng	100
5) Freon 114	4.85	135	586768	27.492	ng	97
6) Vinyl Chloride	4.98	62	766426	25.082	ng	95
7) 1,3-Butadiene	5.13	54	924731	33.202	ng	# 85
8) Bromomethane	5.42	94	365175	23.185	ng	98
9) Chloroethane	5.59	64	408506	25.871	ng	95
10) Ethanol	5.76	45	574235m	26.806	ng	
11) Acetonitrile	5.95	41	1528567	24.755	ng	98
12) Acrolein	6.05	56	435174	28.174	ng	97
13) Acetone	6.18	58	597804	28.051	ng	# 74
14) Trichlorofluoromethane	6.34	101	986041	27.583	ng	100
15) Isopropanol	6.43	45	1696236m	26.423	ng	
16) Acrylonitrile	6.63	53	1098277	28.353	ng	97
17) 1,1-Dichloroethene	6.95	96	508940	30.507	ng	96
18) tert-Butanol	7.01	59	1687948m	28.203	ng	
19) Methylene Chloride	7.06	84	479985	29.201	ng	# 49
20) Allyl Chloride	7.17	41	1164762	30.741	ng	83
21) Trichlorotrifluoroethane	7.30	151	509817	29.349	ng	86
22) Carbon Disulfide	7.40	76	1682270	25.445	ng	100
23) trans-1,2-Dichloroethene	7.97	61	944480	28.745	ng	94
24) 1,1-Dichloroethane	8.19	63	1027210	29.440	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1483694	29.124	ng	81
26) Vinyl Acetate	8.27	86	111507	31.947	ng	# 1
27) 2-Butanone	8.55	72	327282	29.373	ng	# 28
28) cis-1,2-Dichloroethene	9.04	61	876026	28.989	ng	95
29) Diisopropyl Ether	9.20	87	423126	28.830	ng	# 54
30) Ethyl Acetate	9.19	61	248591	31.977	ng	86
31) n-Hexane	9.24	57	1311592	28.226	ng	92

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 11:42:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.36	83	803558	33.387	ng	96
34) Tetrahydrofuran	9.78	72	313496	29.935	ng #	52
35) Ethyl tert-Butyl Ether	9.80	87	617165	28.731	ng #	79
36) 1,2-Dichloroethane	10.19	62	771745	27.968	ng	96
38) 1,1,1-Trichloroethane	10.50	97	813898	28.294	ng	94
39) Isopropyl Acetate	10.78	61	410147	28.711	ng #	71
40) 1-Butanol	10.80	56	710564	25.551	ng	94
41) Benzene	11.02	78	1886912	26.487	ng	99
42) Carbon Tetrachloride	11.19	117	830520	28.424	ng	98
43) Cyclohexane	11.34	84	745661	26.772	ng #	49
44) tert-Amyl Methyl Ether	11.64	73	1370343	28.890	ng	79
45) 1,2-Dichloropropane	11.95	63	597803	28.418	ng	96
46) Bromodichloromethane	12.15	83	641317	30.627	ng	93
47) Trichloroethene	12.21	130	652583	29.430	ng	99
48) 1,4-Dioxane	12.16	88	409402	30.764	ng #	70
49) Isooctane	12.26	57	3206684	28.156	ng	91
50) Methyl Methacrylate	12.35	100	233408	30.538	ng #	69
51) n-Heptane	12.52	71	495434	29.136	ng #	52
52) cis-1,3-Dichloropropene	13.17	75	746984	28.174	ng	99
53) 4-Methyl-2-pentanone	13.19	58	694096	28.024	ng	85
54) trans-1,3-Dichloropropene	13.77	75	764174	31.268	ng	99
55) 1,1,2-Trichloroethane	14.00	97	499675	28.839	ng	90
58) Toluene	14.35	91	2149242	27.551	ng	98
59) 2-Hexanone	14.59	43	1852856	25.150	ng	99
60) Dibromochloromethane	14.85	129	685950	29.798	ng	100
61) 1,2-Dibromoethane	15.15	107	603979	28.201	ng	98
62) Butyl Acetate	15.31	43	2068043	27.918	ng	91
63) n-Octane	15.48	57	660220	27.989	ng	95
64) Tetrachloroethene	15.70	166	644791	27.945	ng	99
65) Chlorobenzene	16.50	112	1549150	27.869	ng	100
66) Ethylbenzene	16.94	91	2462734	27.774	ng	93
67) m- & p-Xylene	17.16	91	3862781	65.751	ng	92
68) Bromoform	17.26	173	499298	37.358	ng	100
69) Styrene	17.60	104	1650770	29.087	ng	94
70) o-Xylene	17.74	91	1950703	31.023	ng	93
71) n-Nonane	17.97	43	1649502	26.582	ng	95
72) 1,1,2,2-Tetrachloroethane	17.70	83	819359	31.468	ng	93
74) Cumene	18.45	105	2654480	28.998	ng	95
75) alpha-Pinene	18.93	93	1240581	28.884	ng	92
76) n-Propylbenzene	19.07	91	2982474	28.037	ng	92
77) 3-Ethyltoluene	19.19	105	2684594	26.733	ng	95
78) 4-Ethyltoluene	19.24	105	2583452	28.514	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	2218816	27.621	ng	92

826



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 29 11:42:04 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

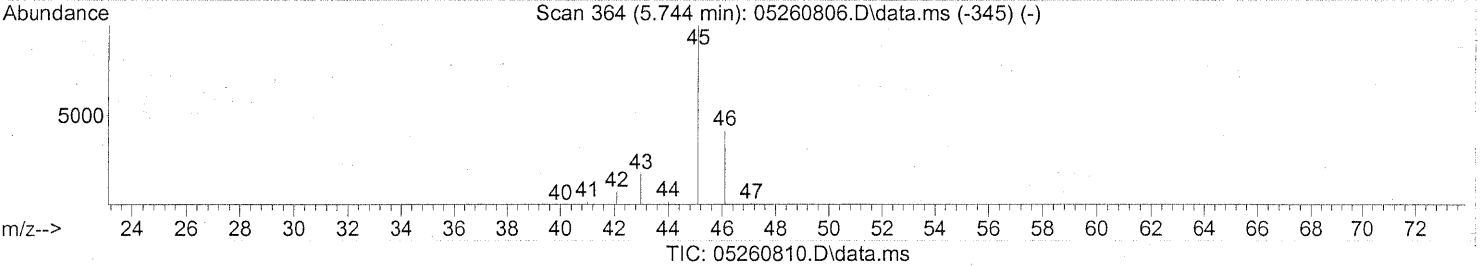
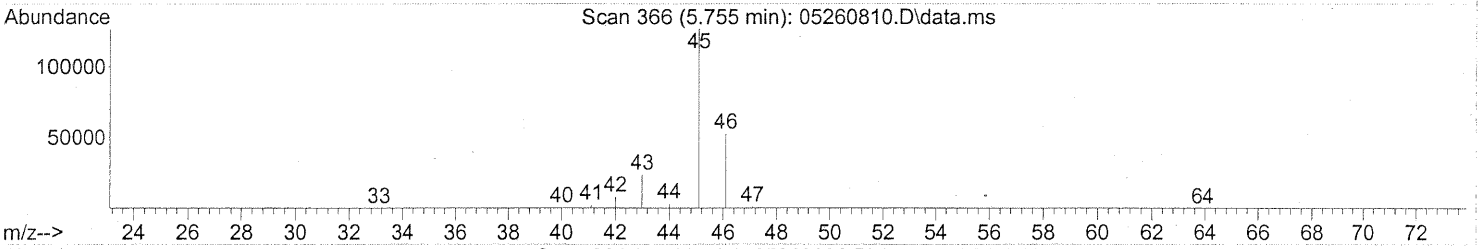
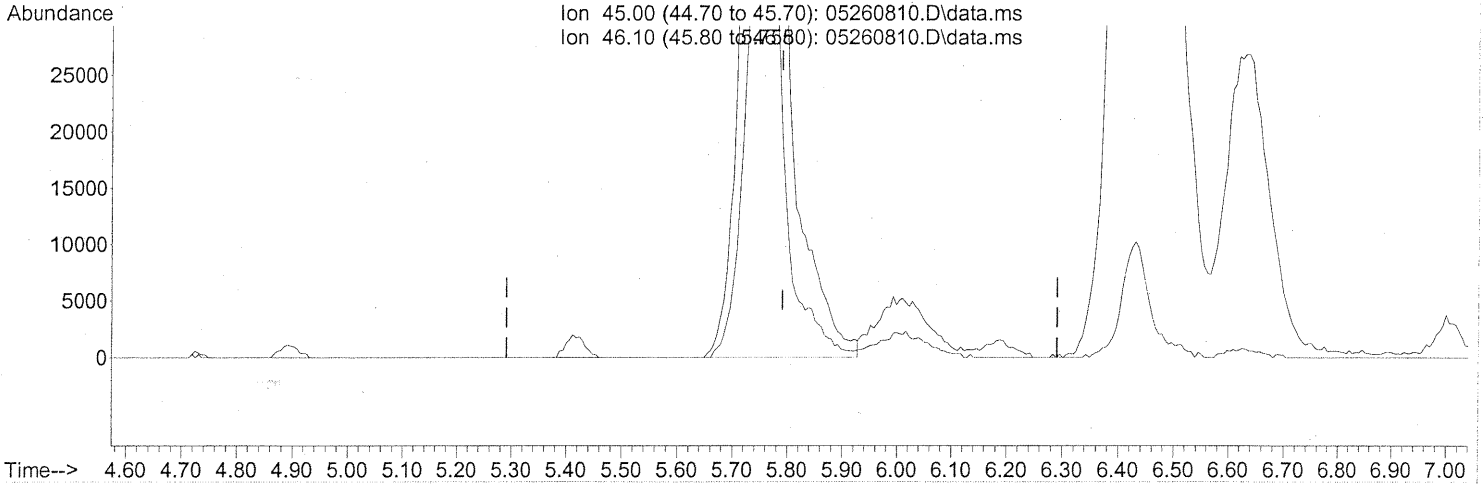
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	1279743	28.331	ng	98
81) 2-Ethyltoluene	19.57	105	2596793	26.669	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	2237271	27.509	ng	91
83) n-Decane	19.93	57	1621913	28.170	ng	80
84) Benzyl Chloride	19.99	91	1864065	29.664	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1391479	27.002	ng	99
86) 1,4-Dichlorobenzene	20.11	146	1408092	28.147	ng	99
87) sec-Butylbenzene	20.16	105	3012787	28.555	ng	95
88) p-Isopropyltoluene	20.34	119	2905255	31.517	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	2345312	30.034	ng	89
90) 1,2-Dichlorobenzene	20.52	146	1285779	27.181	ng	100
91) d-Limonene	20.52	68	718757	28.679	ng	87
92) 1,2-Dibromo-3-Chloropr...	21.04	157	447167	29.409	ng	80
93) n-Undecane	21.43	57	1733271	28.705	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	254025	29.687	ng #	86
95) Naphthalene	22.70	128	3414229	28.894	ng	99
96) n-Dodecane	22.66	57	1713461	29.123	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	404761	28.471	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260810.D  
Acq On : 27 May 2008 9:24 am  
Operator : WA  
Sample : 25ng TO-15 ICV STD  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



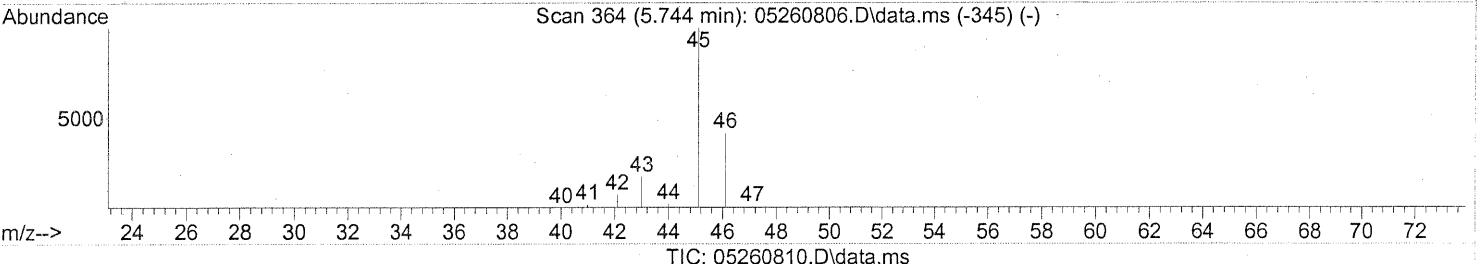
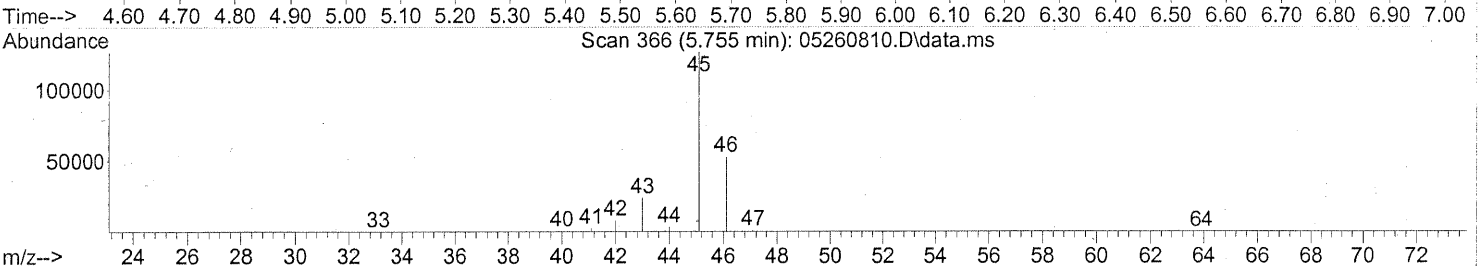
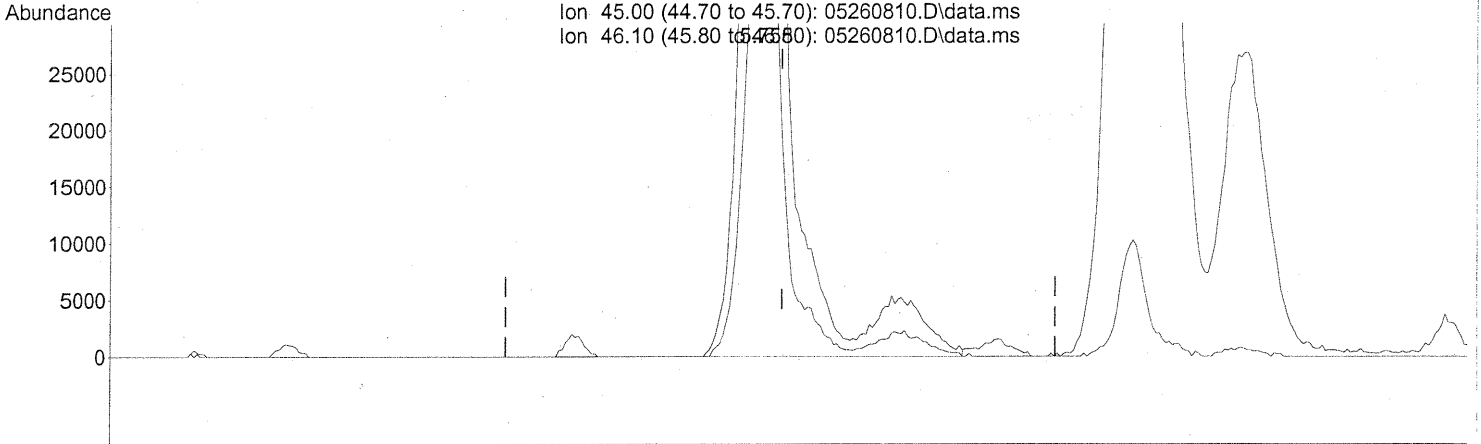
(10) Ethanol (T)  
5.755min (-0.036) 25.17ng  
response 539235

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.19
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260810.D  
Acq On : 27 May 2008 9:24 am  
Operator : WA  
Sample : 25ng TO-15 ICV STD  
Misc : S20-05120801/S20-05220809  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.755min (-0.036) 26.81ng m  
response 574235

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	37.74
0.00	0.00	0.00
0.00	0.00	0.00

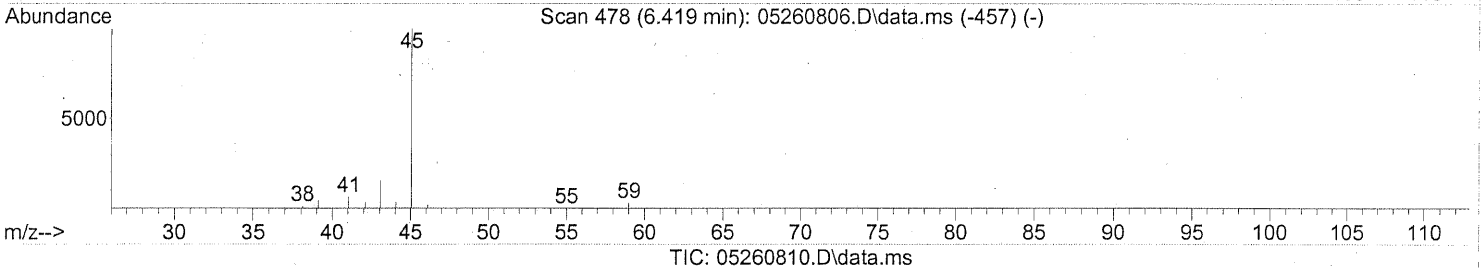
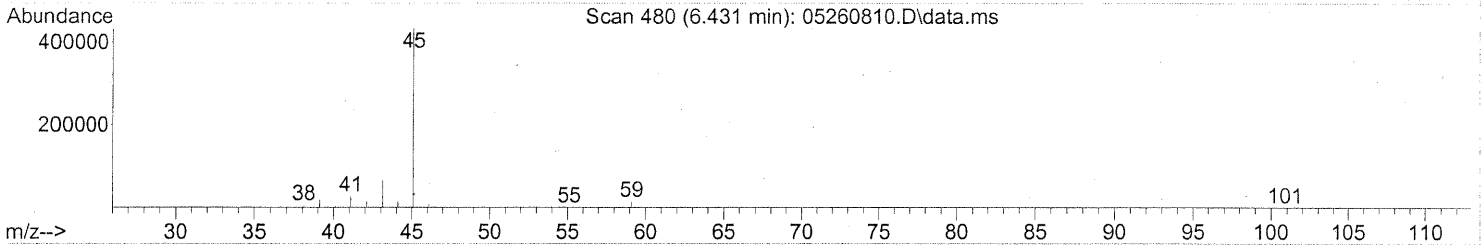
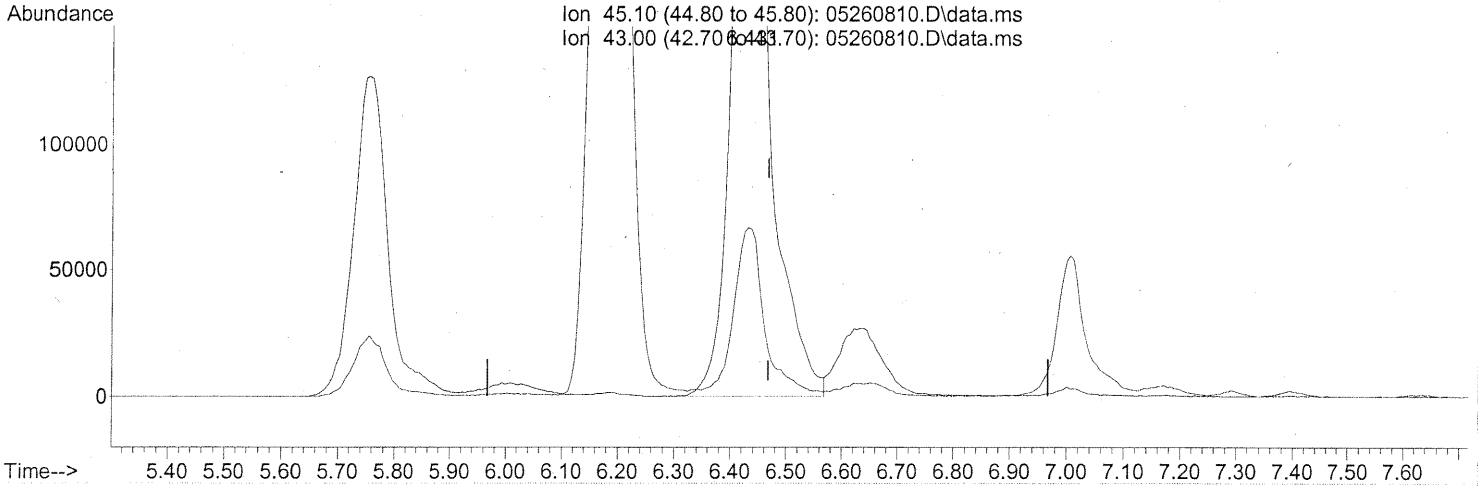
*int. whole peaks*

*DA 5/29/08*

*em 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



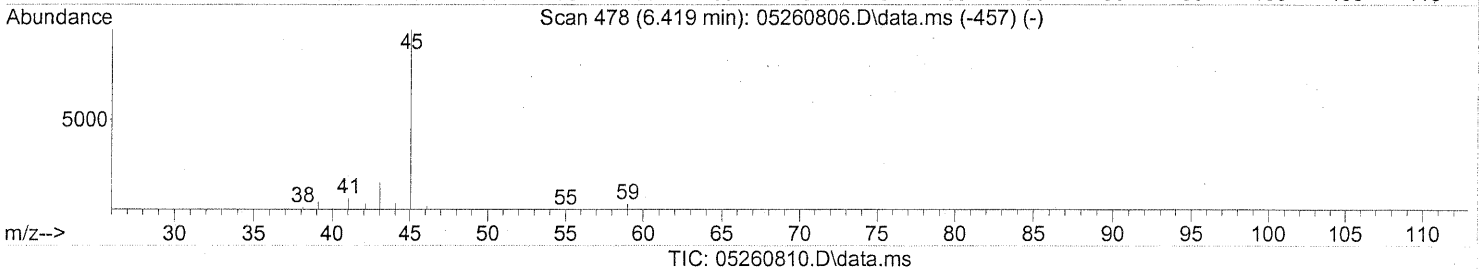
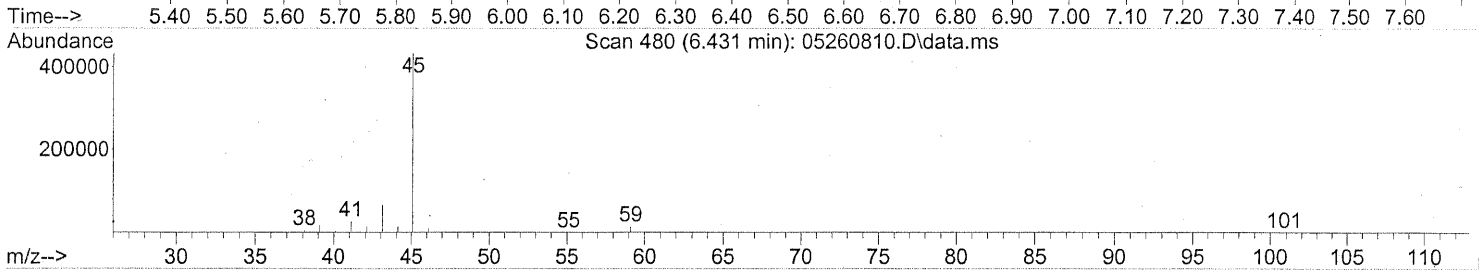
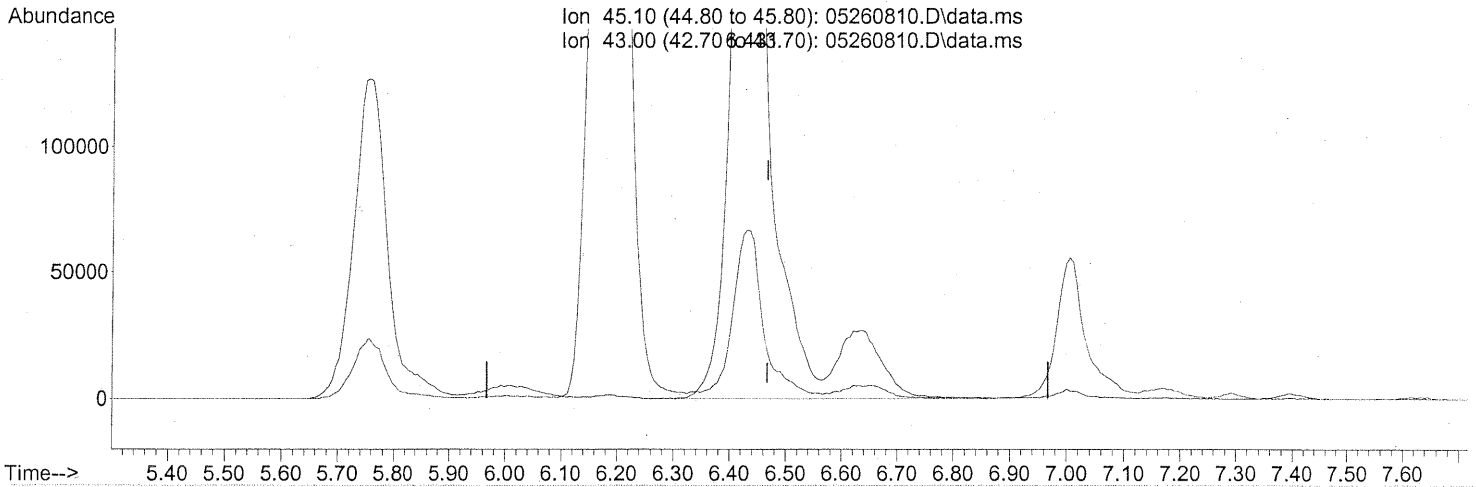
(15) Isopropanol (T)  
 6.431min (-0.036) 24.12ng  
 response 1548303

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.72
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.431min (-0.036) 26.42ng m  
 response 1696236

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.27
0.00	0.00	0.00
0.00	0.00	0.00

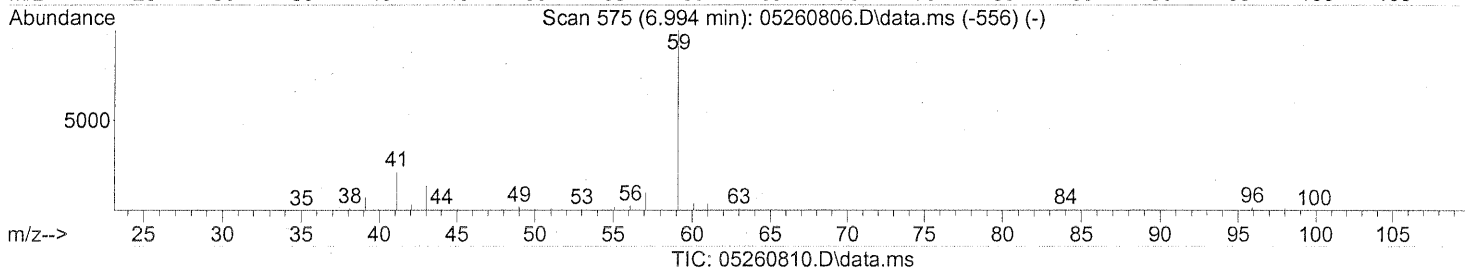
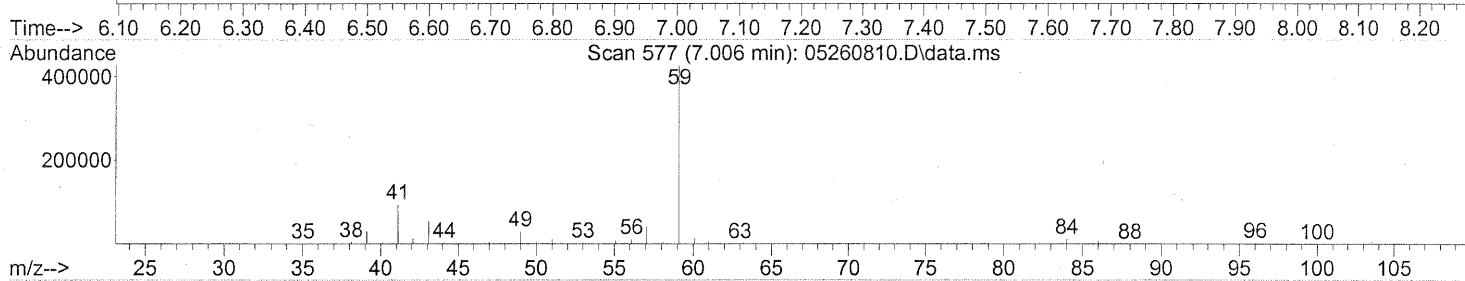
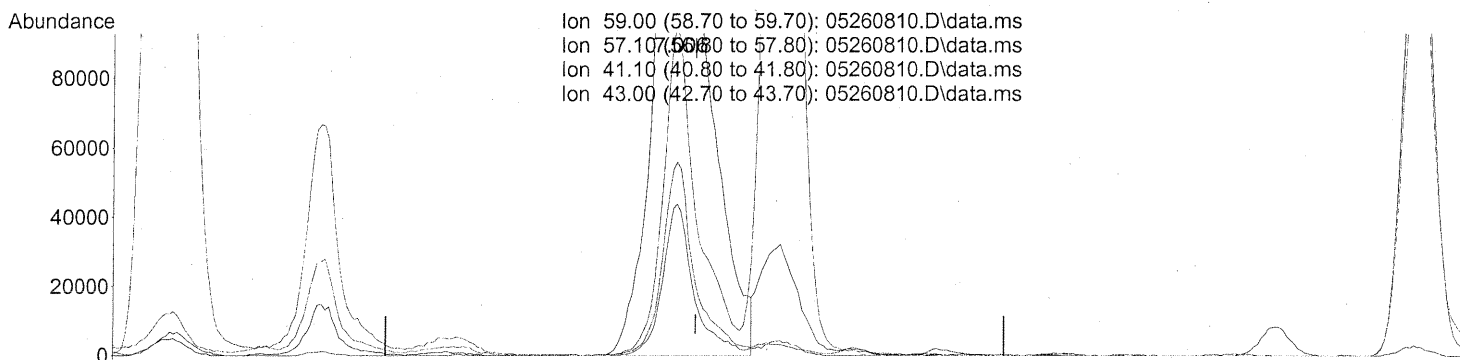
*int. whole peaks*

*WA 5/29/08*

*EM 5/30/08*

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

7.006min (-0.030) 25.79ng

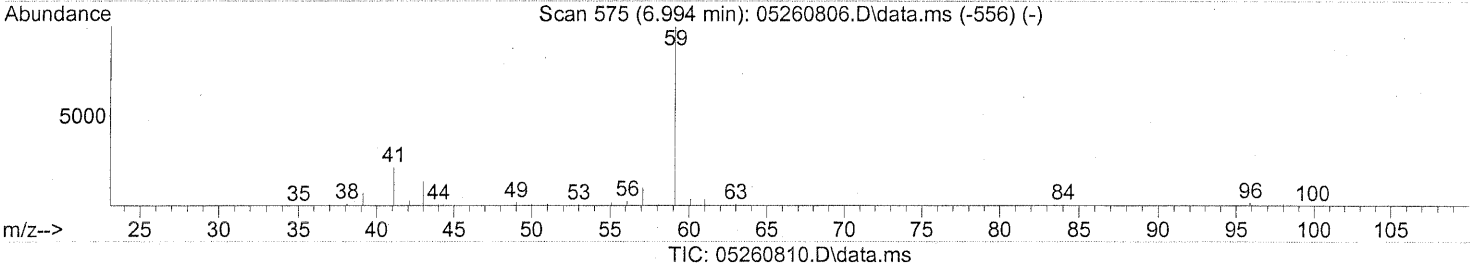
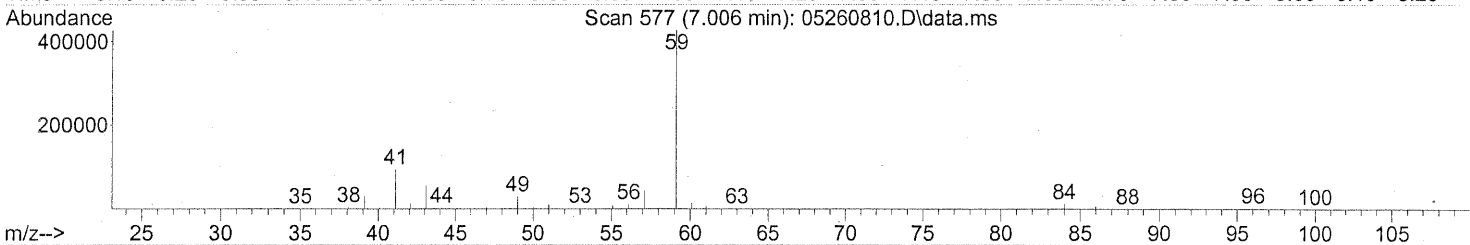
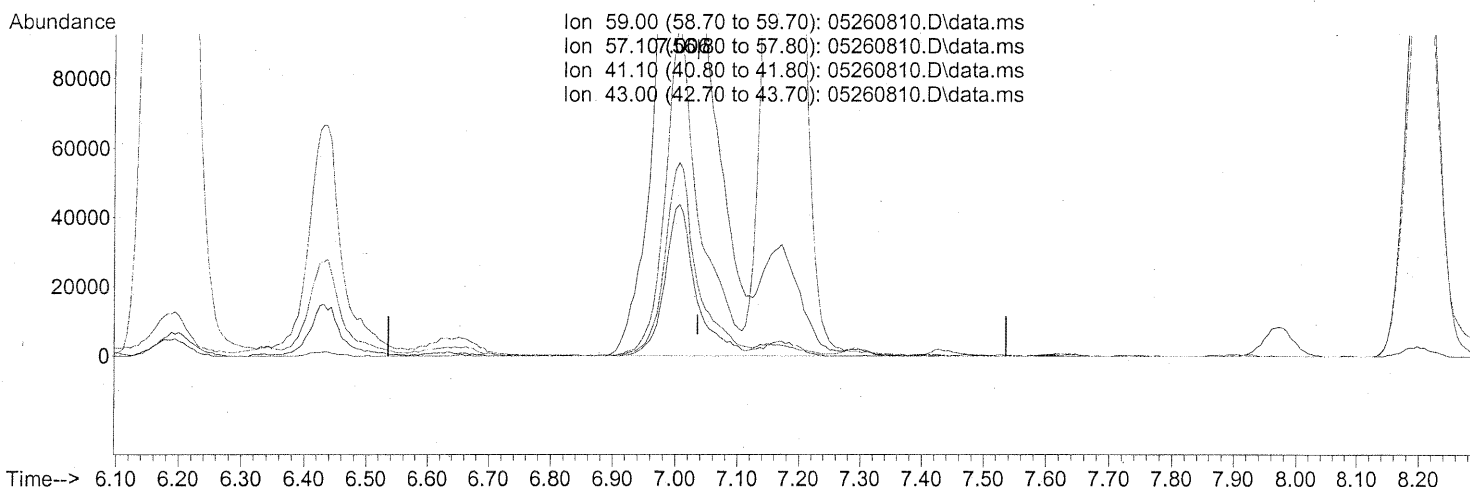
response 1543739

*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.86
41.10	21.90	23.49
43.00	17.20	13.19

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24 am  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 10:00:48 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 7.006min (-0.030) 28.20ng m  
 response 1687948

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.02
41.10	21.90	21.48
43.00	17.20	12.06

*int. whole peaks*  
*pdf 5/29/08*  
*em 5/30/08*

INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 05260810.D  
 Data File Path: J:\MS16\DATA\2008\_05\26\  
 Operator: WA  
 Date Acquired: 5/27/08 9:24  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV STD  
 Misc Info: S20-05120801/S20-05220809  
 Instrument Name: GCMS-16

#	Name Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
2)	Propene	4.43	27.59	26.3	104.9	70	130	*
3)	Dichlorodifluoromethane	4.53	25.05	25.5	98.2	70	130	*
4)	Chloromethane	4.73	25.59	24.5	104.4	70	130	*
5)	Freon 114	4.85	27.49	26.0	105.7	70	130	*
6)	Vinyl Chloride	4.98	25.08	24.8	101.1	70	130	*
7)	1,3-Butadiene	5.13	33.20	30.0	110.7	70	130	*
8)	Bromomethane	5.42	23.18	25.0	92.7	70	130	*
9)	Chloroethane	5.59	25.87	25.0	103.5	70	130	*
10)	Ethanol	5.76	26.81	23.8	112.6	70	130	*
11)	Acetonitrile	5.95	24.75	25.3	97.8	70	130	*
12)	Acrolein	6.05	28.17	24.8	113.6	70	130	*
13)	Acetone	6.18	28.05	26.8	104.7	70	130	*
14)	Trichlorofluoromethane	6.34	27.58	26.3	104.9	70	130	*
15)	Isopropanol	6.43	26.42	25.8	102.4	70	130	*
16)	Acrylonitrile	6.63	28.35	25.5	111.2	70	130	*
17)	1,1-Dichloroethene	6.95	30.51	27.8	109.7	70	130	*
18)	tert-Butanol	7.01	28.20	25.8	109.3	70	130	*
19)	Methylene Chloride	7.06	29.20	27.8	105.0	70	130	*
20)	Allyl Chloride	7.17	30.74	26.8	114.7	70	130	*
21)	Trichlorotrifluoroethane	7.30	29.35	27.8	105.6	70	130	*
22)	Carbon Disulfide	7.40	25.44	25.0	101.8	70	130	*
23)	trans-1,2-Dichloroethene	7.97	28.74	26.5	108.5	70	130	*
24)	1,1-Dichloroethane	8.19	29.44	26.8	109.9	70	130	*
25)	Methyl tert-Butyl Ether	8.20	29.12	26.8	108.7	70	130	*
26)	Vinyl Acetate	8.27	31.95	25.3	126.3	70	130	*
27)	2-Butanone	8.55	29.37	27.0	108.8	70	130	*
28)	cis-1,2-Dichloroethene	9.04	28.99	27.0	107.4	70	130	*
29)	Diisopropyl Ether	9.20	28.83	26.3	109.6	70	130	*
30)	Ethyl Acetate	9.19	31.98	29.3	109.1	70	130	*
31)	n-Hexane	9.24	28.23	27.0	104.5	70	130	*
32)	Chloroform	9.36	33.39	29.8	112.0	70	130	*
34)	Tetrahydrofuran	9.78	29.93	26.8	111.7	70	130	*
35)	Ethyl tert-Butyl Ether	9.80	28.73	26.0	110.5	70	130	*
36)	1,2-Dichloroethane	10.19	27.97	26.3	106.3	70	130	*
38)	1,1,1-Trichloroethane	10.50	28.29	26.8	105.6	70	130	*
39)	Isopropyl Acetate	10.78	28.71	25.5	112.6	70	130	*



INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 05260810.D  
 Data File Path: J:\MS16\DATA\2008\_05\26\  
 Operator: WA  
 Date Acquired: 5/27/08 9:24  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV STD  
 Misc Info: S20-05120801/S20-05220809  
 Instrument Name: GCMS-16

#	Name Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
40)	1-Butanol	10.80	25.55	24.8	103.0	70	130	*
41)	Benzene	11.02	26.49	27.0	98.1	70	130	*
42)	Carbon Tetrachloride	11.19	28.42	26.0	109.3	70	130	*
43)	Cyclohexane	11.34	26.77	26.8	99.9	70	130	*
44)	tert-Amyl Methyl Ether	11.64	28.89	26.0	111.1	70	130	*
45)	1,2-Dichloropropane	11.95	28.42	26.5	107.2	70	130	*
46)	Bromodichloromethane	12.15	30.63	27.8	110.2	70	130	*
47)	Trichloroethene	12.21	29.43	27.3	107.8	70	130	*
48)	1,4-Dioxane	12.16	30.76	27.5	111.9	70	130	*
49)	Isooctane	12.26	28.16	26.3	107.1	70	130	*
50)	Methyl Methacrylate	12.35	30.54	25.8	118.4	70	130	*
51)	n-Heptane	12.52	29.14	26.8	108.7	70	130	*
52)	cis-1,3-Dichloropropene	13.17	28.17	25.0	112.7	70	130	*
53)	4-Methyl-2-pentanone	13.19	28.02	27.5	101.9	70	130	*
54)	trans-1,3-Dichloropropene	13.77	31.27	28.0	111.7	70	130	*
55)	1,1,2-Trichloroethane	14.00	28.84	26.3	109.7	70	130	*
58)	Toluene	14.35	27.55	26.5	104.0	70	130	*
59)	2-Hexanone	14.59	25.15	26.3	95.6	70	130	*
60)	Dibromochloromethane	14.85	29.80	27.0	110.4	70	130	*
61)	1,2-Dibromoethane	15.15	28.20	26.3	107.2	70	130	*
62)	Butyl Acetate	15.31	27.92	26.3	106.2	70	130	*
63)	n-Octane	15.48	27.99	26.0	107.7	70	130	*
64)	Tetrachloroethene	15.70	27.94	26.0	107.5	70	130	*
65)	Chlorobenzene	16.50	27.87	26.5	105.2	70	130	*
66)	Ethylbenzene	16.94	27.77	26.3	105.6	70	130	*
67)	m- & p-Xylene	17.16	65.75	62.5	105.2	70	130	*
68)	Bromoform	17.26	37.36	31.3	119.4	70	130	*
69)	Styrene	17.60	29.09	26.3	110.6	70	130	*
70)	o-Xylene	17.74	31.02	29.8	104.1	70	130	*
71)	n-Nonane	17.97	26.58	26.0	102.2	70	130	*
72)	1,1,2,2-Tetrachloroethane	17.70	31.47	29.8	105.6	70	130	*
74)	Cumene	18.45	29.00	27.0	107.4	70	130	*
75)	alpha-Pinene	18.93	28.88	26.3	109.8	70	130	*
76)	n-Propylbenzene	19.07	28.04	26.3	106.6	70	130	*
77)	3-Ethyltoluene	19.19	26.73	25.5	104.8	70	130	*

**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: **05260810.D**  
 Data File Path: **J:\MS16\DATA\2008\_05\26\**  
 Operator: **WA**  
 Date Acquired: **5/27/08 9:24**  
 Acq. Method File: **TO15.M**  
 Sample Name: **25ng TO-15 ICV STD**  
 Misc Info: **S20-05120801/S20-05220809**  
 Instrument Name: **GCMS-16**

#	Name <u>Compound</u>	Ret. <u>Time</u>	Amt. <u>(ng)</u>	Spike <u>Amt.(ng)</u>	% <u>Rec.</u>	Lower <u>Limit</u>	Upper <u>Limit</u>	* OR <u>Fail</u>
78)	<b>4-Ethyltoluene</b>	<b>19.24</b>	<b>28.51</b>	<b>26.5</b>	<b>107.6</b>	<b>70</b>	<b>130</b>	*
79)	<b>1,3,5-Trimethylbenzene</b>	<b>19.33</b>	<b>27.62</b>	<b>26.0</b>	<b>106.2</b>	<b>70</b>	<b>130</b>	*
80)	alpha-Methylstyrene	19.52	28.33	25.5	111.1	70	130	*
81)	2-Ethyltoluene	19.57	26.67	24.8	107.5	70	130	*
82)	<b>1,2,4-Trimethylbenzene</b>	<b>19.83</b>	<b>27.51</b>	<b>26.0</b>	<b>105.8</b>	<b>70</b>	<b>130</b>	*
83)	n-Decane	19.93	28.17	26.3	107.1	70	130	*
84)	<b>Benzyl Chloride</b>	<b>19.99</b>	<b>29.66</b>	<b>25.8</b>	<b>115.0</b>	<b>70</b>	<b>130</b>	*
85)	<b>1,3-Dichlorobenzene</b>	<b>20.02</b>	<b>27.00</b>	<b>25.5</b>	<b>105.9</b>	<b>70</b>	<b>130</b>	*
86)	<b>1,4-Dichlorobenzene</b>	<b>20.11</b>	<b>28.15</b>	<b>26.3</b>	<b>107.0</b>	<b>70</b>	<b>130</b>	*
87)	sec-Butylbenzene	20.16	28.55	26.8	106.5	70	130	*
88)	p-Isopropyltoluene	20.34	31.52	28.8	109.4	70	130	*
89)	1,2,3-Trimethylbenzene	20.35	30.03	28.5	105.4	70	130	*
90)	<b>1,2-Dichlorobenzene</b>	<b>20.52</b>	<b>27.18</b>	<b>25.8</b>	<b>105.4</b>	<b>70</b>	<b>130</b>	*
91)	d-Limonene	20.52	28.68	26.0	110.3	70	130	*
92)	<b>1,2-Dibromo-3-Chloropropane</b>	<b>21.04</b>	<b>29.41</b>	<b>25.8</b>	<b>114.0</b>	<b>70</b>	<b>130</b>	*
93)	n-Undecane	21.43	28.70	26.5	108.3	70	130	*
94)	<b>1,2,4-Trichlorobenzene</b>	<b>22.55</b>	<b>29.69</b>	<b>26.0</b>	<b>114.2</b>	<b>70</b>	<b>130</b>	*
95)	<b>Naphthalene</b>	<b>22.70</b>	<b>28.89</b>	<b>26.3</b>	<b>109.9</b>	<b>70</b>	<b>130</b>	*
96)	n-Dodecane	22.66	29.12	26.5	109.9	70	130	*
97)	<b>Hexachloro-1,3-butadiene</b>	<b>23.11</b>	<b>28.47</b>	<b>26.3</b>	<b>108.3</b>	<b>70</b>	<b>130</b>	*

**Bold = 67 Compound List**

Method Path : J:\MS16\METHODS\  
Method File : S16052608.M  
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
Last Update : Wed Jun 04 14:29:57 2008  
Response Via : Initial Calibration

Calibration Files  
0.1 =05260802.D 0.5 =05260803.D 1.0 =05260804.D 5.0 =05260805.D  
25 =05260806.D 50 =05260807.D 100 =05260808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD
1) IR Bromochloromethane (I									
2) S 1,2-Dichloroethane-	1.417	1.427	1.431	1.413	1.408	1.446	1.465	1.430	1.41
3) IR 1,4-Difluorobenzene (									
4) I Chlorobenzene-d5 (IS3									
5) S Toluene-d8 (SS2)	2.647	2.610	2.596	2.564	2.537	2.557	2.531	2.577	1.64
6) S Bromofluorobenzene	0.838	0.834	0.839	0.860	0.871	0.879	0.876	0.857	2.28
7) tert-Butylbenzene	3.538	3.792	3.335	3.057	2.743	2.713	2.612	3.113	14.62
8) n-Butylbenzene	3.480	3.408	3.150	2.884	2.634	2.633	2.566	2.965	12.93

(#) = Out of Range

837  
6/4/08

Method Path : J:\MS16\METHODS\  
 Method File : S16052608.M  
 Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 Last Update : Wed Jun 04 14:30:18 2008  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS16\DATA\2008_05\26\05260802.D
2	0.5	1	25	J:\MS16\DATA\2008_05\26\05260803.D
3	1.0	1	25	J:\MS16\DATA\2008_05\26\05260804.D
4	5.0	5	25	J:\MS16\DATA\2008_05\26\05260805.D
5	25	26	25	J:\MS16\DATA\2008_05\26\05260806.D
6	50	52	25	J:\MS16\DATA\2008_05\26\05260807.D
7	100	104	25	J:\MS16\DATA\2008_05\26\05260808.D

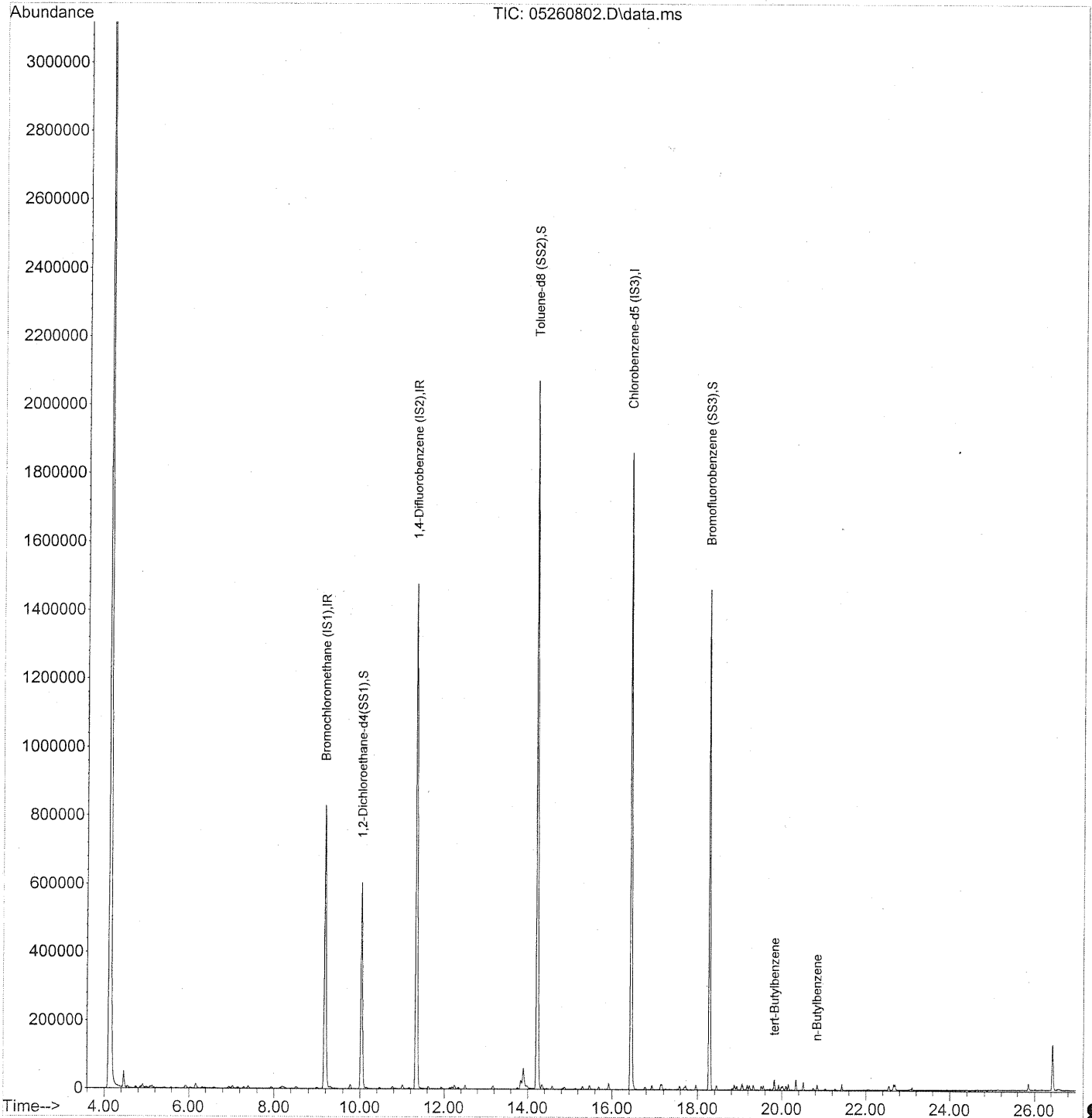
#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Jun 04 14:28 2008	Jun 04 13:44 2008	26 May 2008 16:36
2	0.5	Jun 04 14:28 2008	Jun 04 13:44 2008	26 May 2008 17:14
3	1.0	Jun 04 14:29 2008	Jun 04 13:44 2008	26 May 2008 17:51
4	5.0	Jun 04 14:29 2008	Jun 04 13:44 2008	26 May 2008 18:36
5	25	Jun 04 14:29 2008	Jun 04 13:44 2008	26 May 2008 19:14
6	50	Jun 04 14:29 2008	Jun 04 13:45 2008	26 May 2008 19:52
7	100	Jun 04 14:29 2008	Jun 04 13:45 2008	26 May 2008 20:30

S16052608.M Wed Jun 04 14:31:40 2008

DA 6/4/08

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260802.D  
Acq On : 26 May 2008 16:36  
Operator : WA  
Sample : 0.1ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210811  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jun 04 13:44:47 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260802.D  
 Acq On : 26 May 2008 16:36  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210811  
 ALS Vial : 16 Sample Multiplier: 1

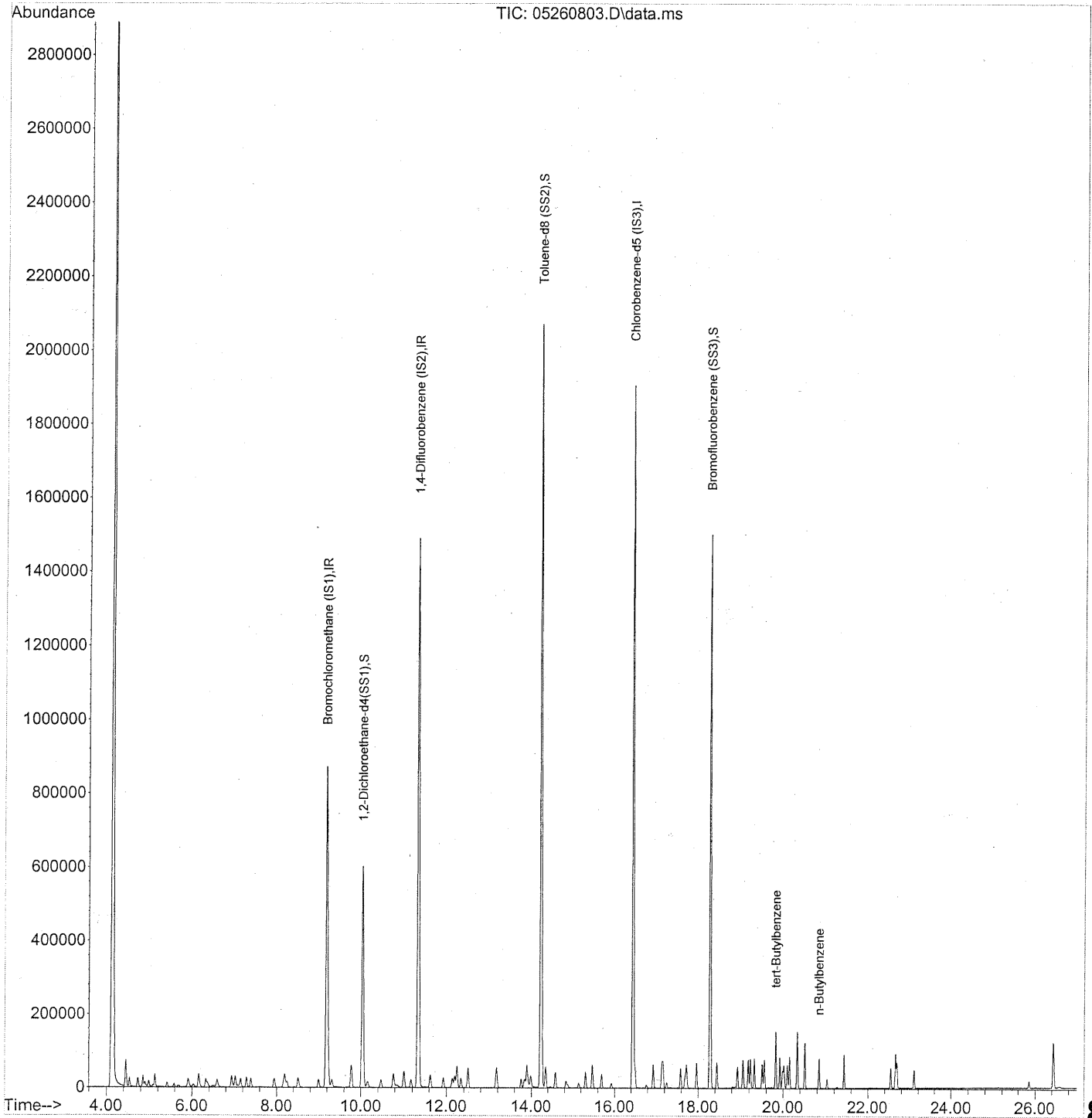
Quant Time: Jun 04 13:44:47 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	400141	25.000	ng	-0.07
3) 1,4-Difluorobenzene (IS2)	11.34	114	1673816	25.000	ng	-0.04
4) Chlorobenzene-d5 (IS3)	16.45	82	627739	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.04	65	566923	20.091	ng	-0.05
Spiked Amount	25.000		Recovery	=	80.36%	
5) Toluene-d8 (SS2)	14.22	98	1661708	26.885	ng	-0.02
Spiked Amount	25.000		Recovery	=	107.52%	
6) Bromofluorobenzene (SS3)	18.28	174	526226	32.713	ng	-0.01
Spiked Amount	25.000		Recovery	=	130.84%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	9239	0.123	ng	Qvalue 98
8) n-Butylbenzene	20.84	91	9351	0.119	ng	# 96

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

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260803.D  
Acq On : 26 May 2008 17:14  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:49 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



841

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260803.D  
 Acq On : 26 May 2008 17:14  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:49 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

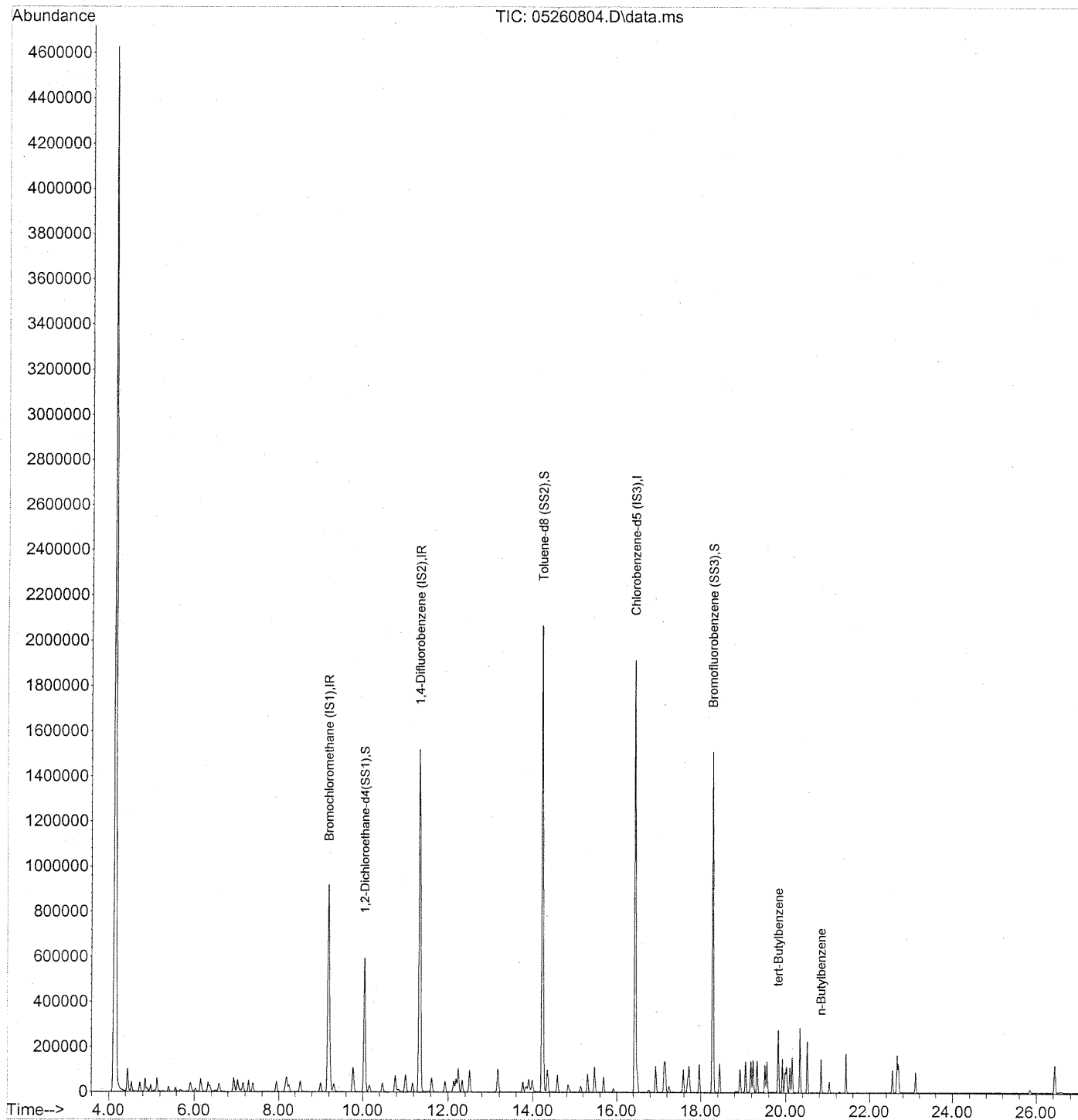
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.19	130	401927	25.000	ng	-0.06
3) 1,4-Difluorobenzene (IS2)	11.34	114	1681603	25.000	ng	-0.04
4) Chlorobenzene-d5 (IS3)	16.45	82	646123	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.04	65	573396	20.231	ng	-0.05
Spiked Amount	25.000					Recovery = 80.92%
5) Toluene-d8 (SS2)	14.23	98	1686339	26.507	ng	-0.02
Spiked Amount	25.000					Recovery = 106.04%
6) Bromofluorobenzene (SS3)	18.28	174	538778	32.540	ng	-0.01
Spiked Amount	25.000					Recovery = 130.16%
Target Compounds						
7) tert-Butylbenzene	19.83	119	50963	0.658	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	47129	0.581	ng	# 93

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



Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260804.D  
Acq On : 26 May 2008 17:51  
Operator : WA  
Sample : 1.0ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:51 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260804.D  
 Acq On : 26 May 2008 17:51  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

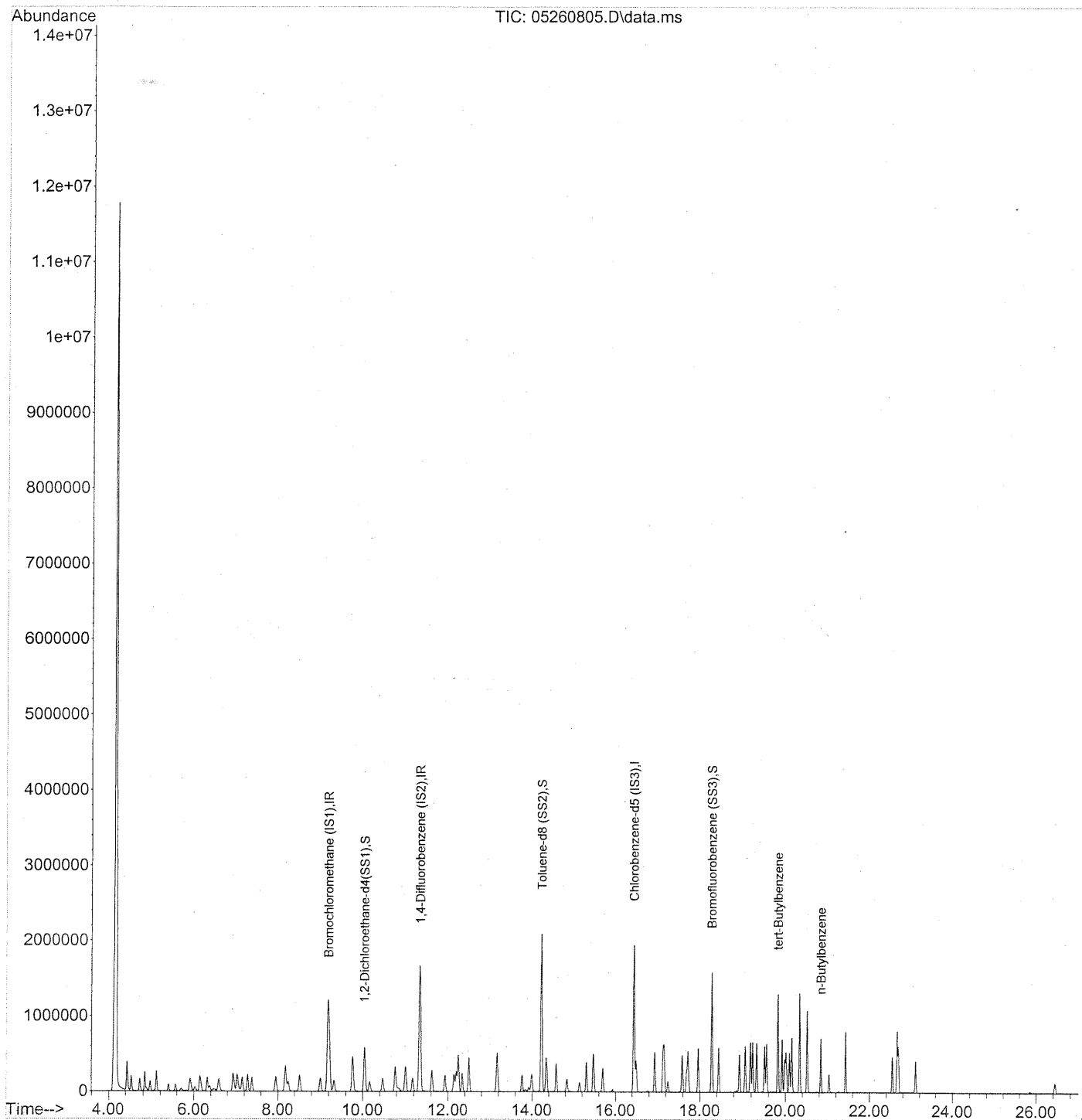
Quant Time: Jun 04 13:44:51 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	400525	25.000	ng	-0.06
3) 1,4-Difluorobenzene (IS2)	11.34	114	1674056	25.000	ng	-0.04
4) Chlorobenzene-d5 (IS3)	16.45	82	647047	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.04	65	573073	20.290	ng	-0.05
Spiked Amount	25.000		Recovery	=	81.16%	
5) Toluene-d8 (SS2)	14.22	98	1679917	26.368	ng	-0.02
Spiked Amount	25.000		Recovery	=	105.48%	
6) Bromofluorobenzene (SS3)	18.28	174	543013	32.749	ng	-0.01
Spiked Amount	25.000		Recovery	=	131.00%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	89775	1.158	ng	Qvalue 95
8) n-Butylbenzene	20.84	91	87248	1.075	ng	# 95

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

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 18:36  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:54 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260805.D  
 Acq On : 26 May 2008 18:36  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:54 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

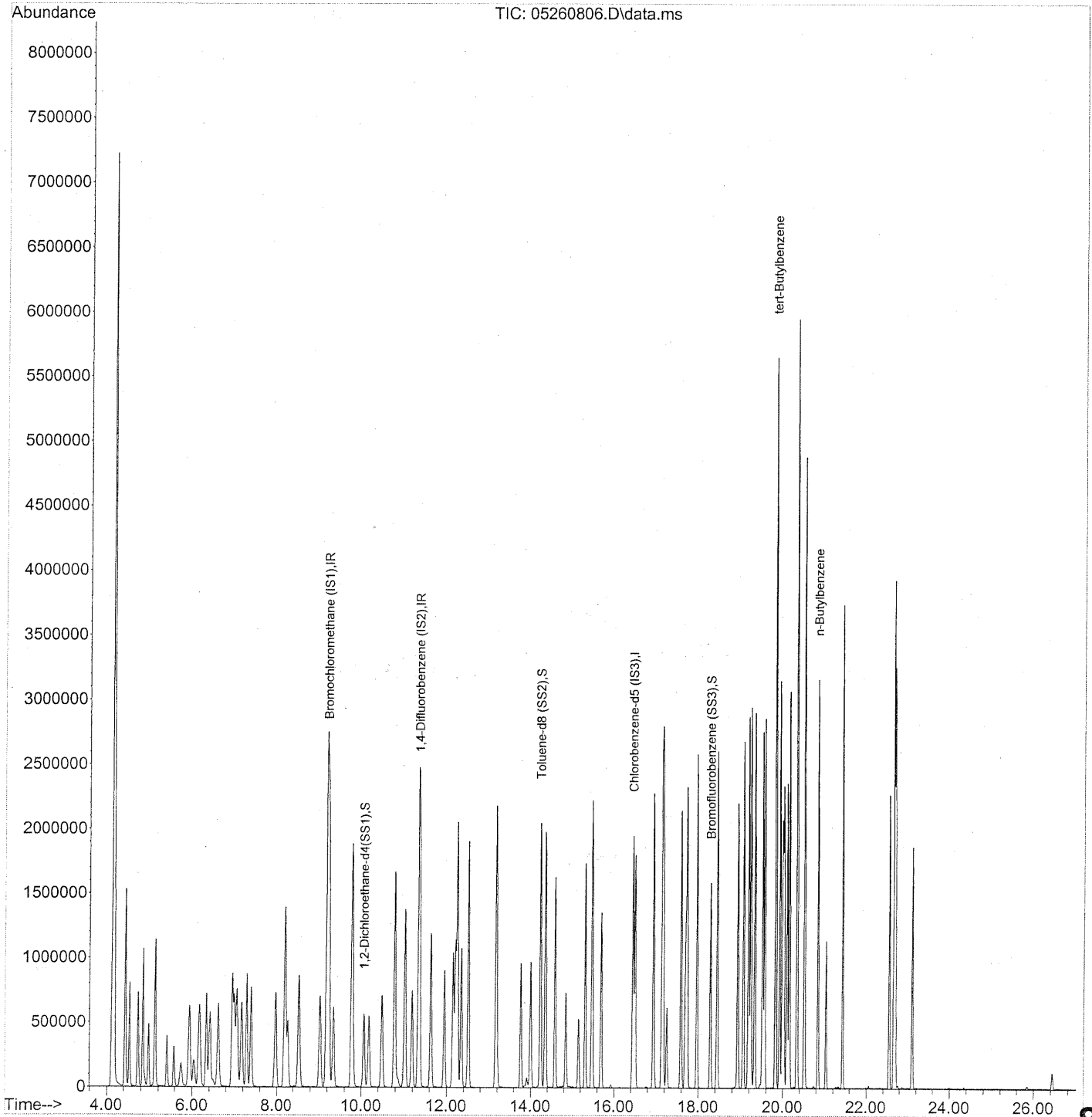
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	398220	25.000	ng	-0.05
3) 1,4-Difluorobenzene (IS2)	11.35	114	1672349	25.000	ng	-0.03
4) Chlorobenzene-d5 (IS3)	16.45	82	656314	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.05	65	562574	20.033	ng	-0.05
Spiked Amount	25.000		Recovery	=	80.12%	
5) Toluene-d8 (SS2)	14.23	98	1682540	26.037	ng	-0.02
Spiked Amount	25.000		Recovery	=	104.16%	
6) Bromofluorobenzene (SS3)	18.28	174	564532	33.566	ng	-0.01
Spiked Amount	25.000		Recovery	=	134.28%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	417267	5.308	ng	Qvalue 96
8) n-Butylbenzene	20.84	91	404994	4.919	ng	# 94

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

*WA* 6/4/08

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260806.D  
Acq On : 26 May 2008 19:14  
Operator : WA  
Sample : 25ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:44:57 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260806.D  
 Acq On : 26 May 2008 19:14  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

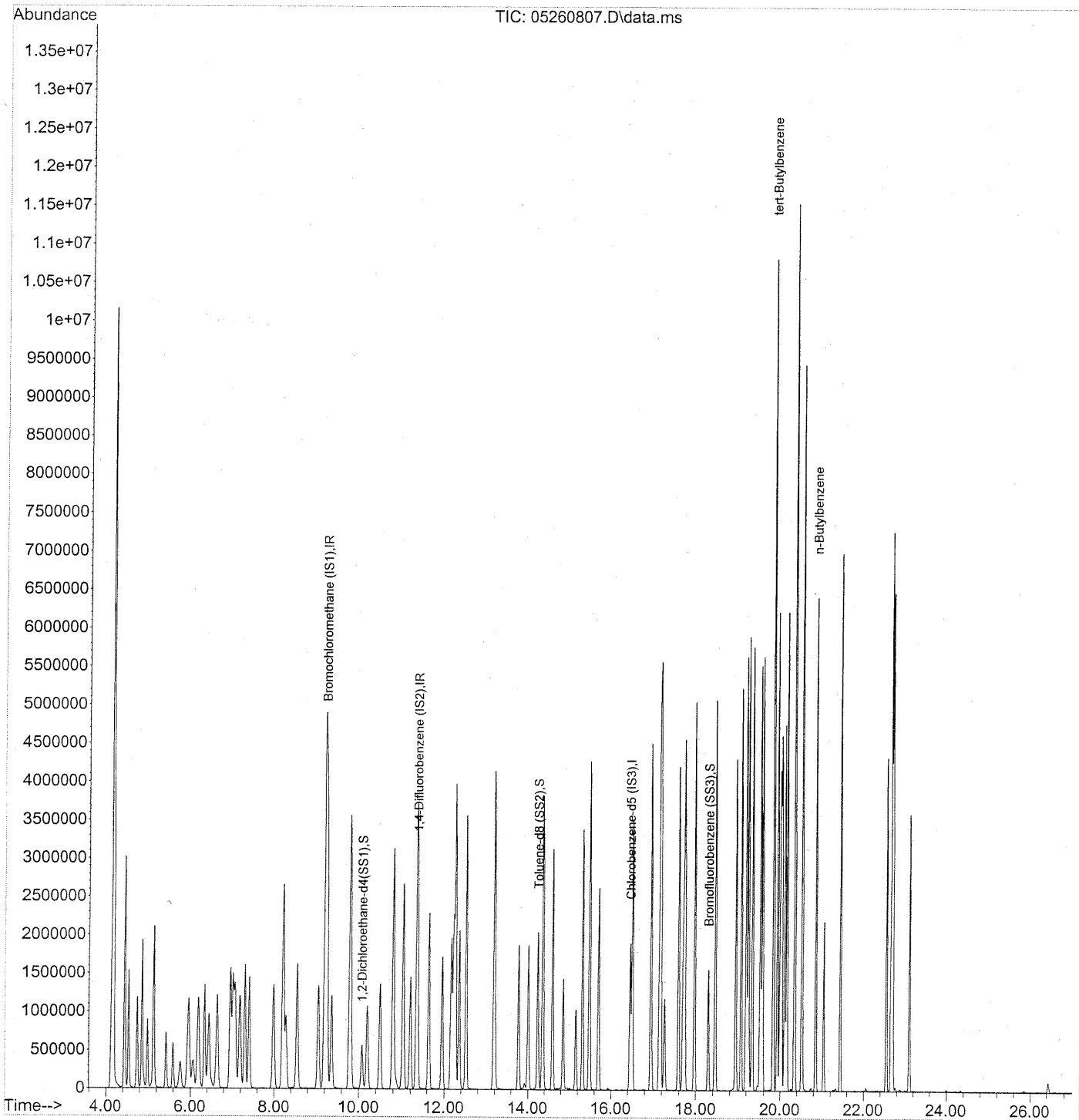
Quant Time: Jun 04 13:44:57 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.22	130	395887	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	11.36	114	1634987	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	654511	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.06	65	557560	19.972	ng	-0.03
Spiked Amount	25.000				Recovery =	79.88%
5) Toluene-d8 (SS2)	14.24	98	1660168	25.761	ng	-0.01
Spiked Amount	25.000				Recovery =	103.04%
6) Bromofluorobenzene (SS3)	18.29	174	570371	34.007	ng	0.00
Spiked Amount	25.000				Recovery =	136.04%
Target Compounds						
7) tert-Butylbenzene	19.84	119	1867093	23.815	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	1848334	22.511	ng	# 93

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

Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260807.D  
Acq On : 26 May 2008 19:52  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:45:00 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260807.D  
 Acq On : 26 May 2008 19:52  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:45:00 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

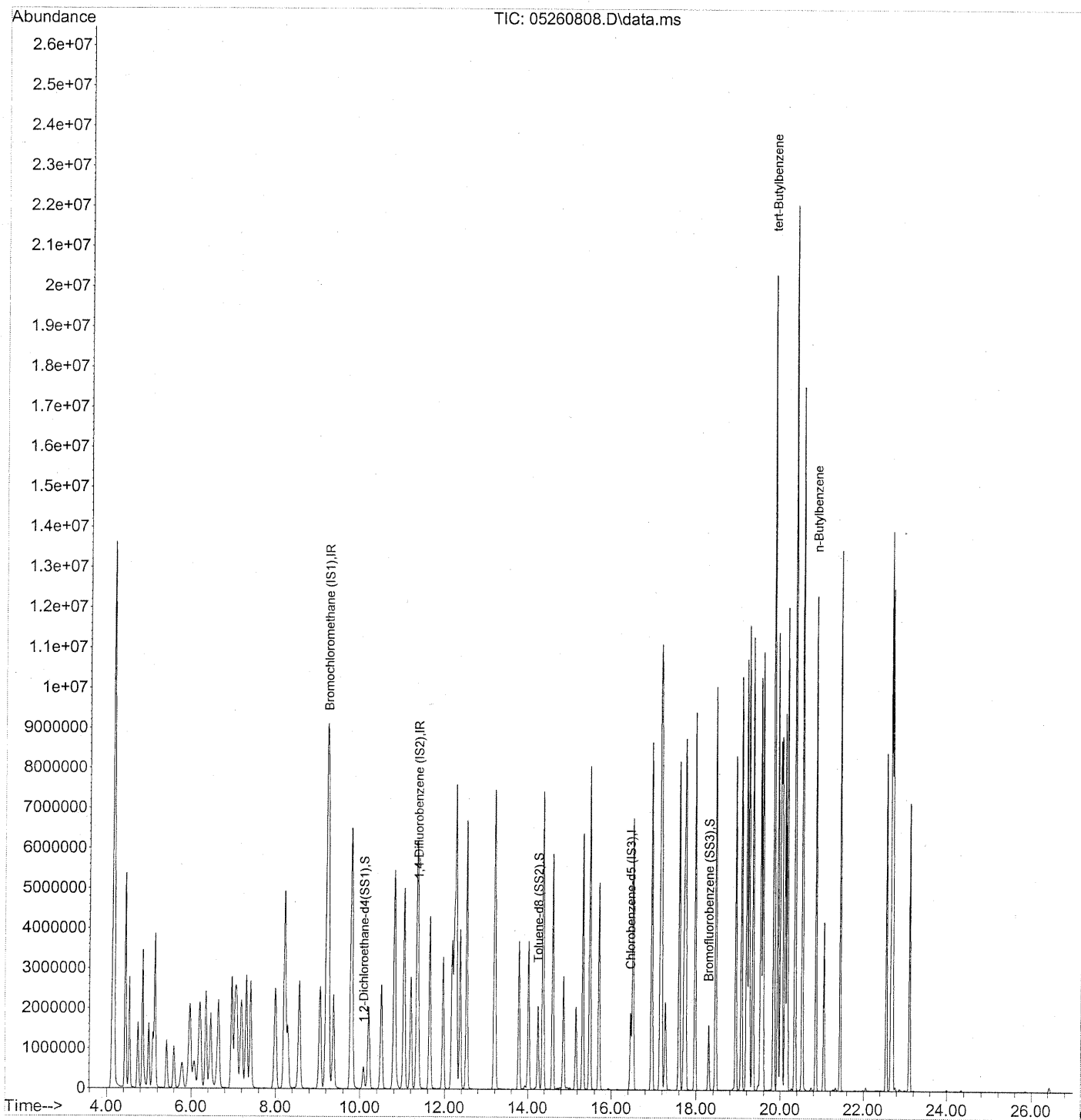
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	388471	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.37	114	1647237	25.000	ng	0.00
4) Chlorobenzene-d5 (IS3)	16.46	82	658280	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.08	65	561887	20.511	ng	-0.02
Spiked Amount	25.000		Recovery	=	82.04%	
5) Toluene-d8 (SS2)	14.24	98	1683278	25.970	ng	0.00
Spiked Amount	25.000		Recovery	=	103.88%	
6) Bromofluorobenzene (SS3)	18.29	174	578716	34.307	ng	0.00
Spiked Amount	25.000		Recovery	=	137.24%	
Target Compounds						
7) tert-Butylbenzene	19.84	119	3714559	47.109	ng	Qvalue 98
8) n-Butylbenzene	20.85	91	3709024	44.914	ng	# 94

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



Data Path : J:\MS16\DATA\2008\_05\26\  
Data File : 05260808.D  
Acq On : 26 May 2008 20:30  
Operator : WA  
Sample : 100ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 13:45:03 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed May 21 09:23:34 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260808.D  
 Acq On : 26 May 2008 20:30  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

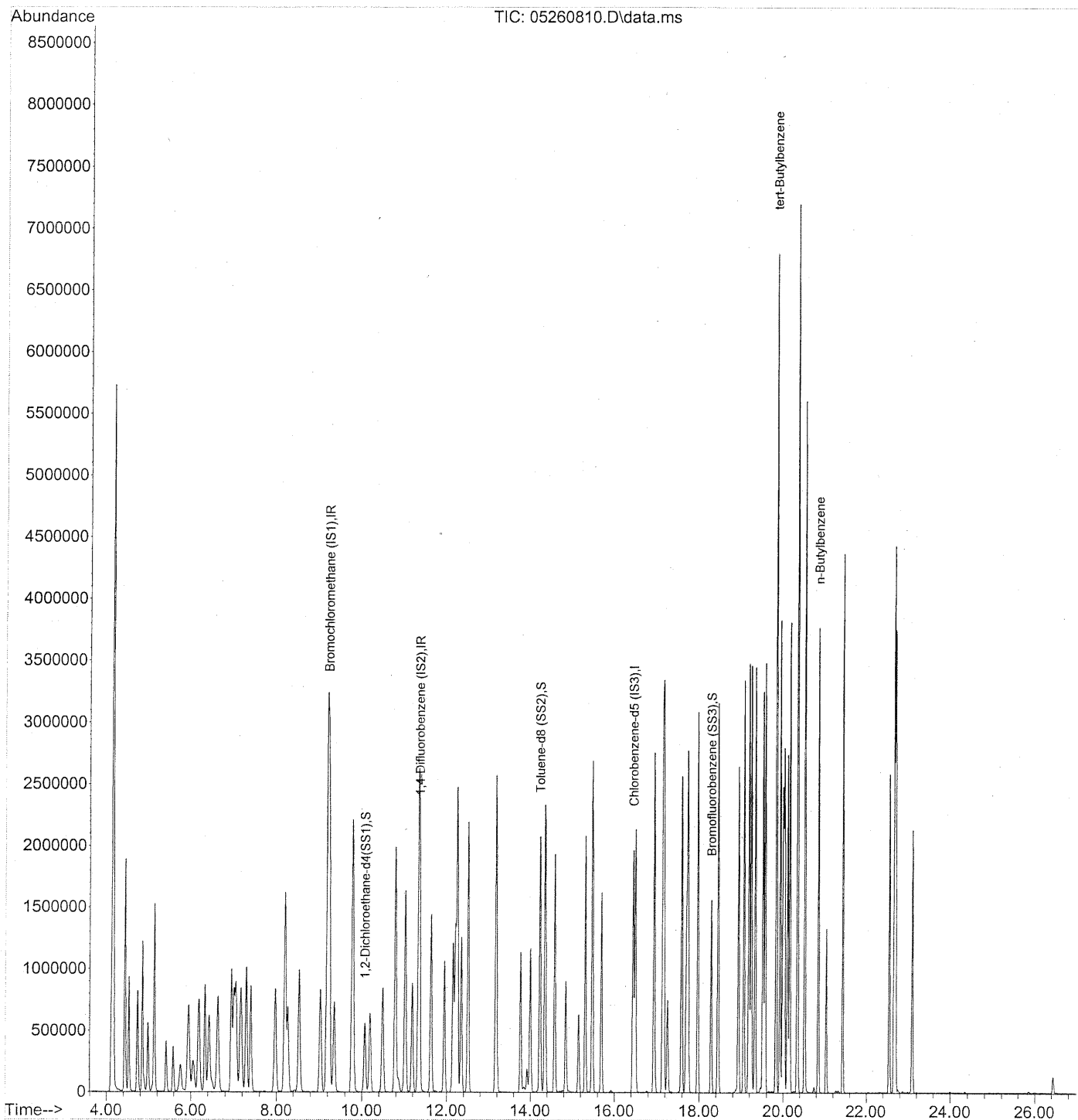
Quant Time: Jun 04 13:45:03 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed May 21 09:23:34 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.25	130	386095	25.000	ng	0.00
3) 1,4-Difluorobenzene (IS2)	11.38	114	1653539	25.000	ng	0.00
4) Chlorobenzene-d5 (IS3)	16.46	82	678453	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.09	65	565549	20.772	ng	0.00
Spiked Amount	25.000				Recovery =	83.08%
5) Toluene-d8 (SS2)	14.25	98	1717295	25.707	ng	0.00
Spiked Amount	25.000				Recovery =	102.84%
6) Bromofluorobenzene (SS3)	18.29	174	594590	34.200	ng	0.00
Spiked Amount	25.000				Recovery =	136.80%
Target Compounds						
7) tert-Butylbenzene	19.85	119	7371911	90.712	ng	Qvalue 99
8) n-Butylbenzene	20.85	91	7450179	87.534	ng	# 95

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

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:30:59 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260810.D  
 Acq On : 27 May 2008 9:24  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05220809  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jun 04 14:30:59 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	407859	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.37	114	1689589	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	16.45	82	667061	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.07	65	569355	24.413	ng	-0.02
Spiked Amount				25.000		
					Recovery =	97.64%
5) Toluene-d8 (SS2)	14.24	98	1713292	24.913	ng	-0.01
Spiked Amount				25.000		
					Recovery =	99.64%
6) Bromofluorobenzene (SS3)	18.29	174	581376	25.427	ng	0.00
Spiked Amount				25.000		
					Recovery =	101.72%
Target Compounds						
7) tert-Butylbenzene	19.83	119	2292354	27.600	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	2237602	28.282	ng	# 94

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

**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 05260810.D  
 Data File Path: J:\MS16\DATA\2008\_05\26\  
 Operator: WA  
 Date Acquired: 5/27/08 9:24  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV STD  
 Misc Info: S20-05120801/S20-05220809  
 Instrument Name: GCMS-16

#	Name <u>Compound</u>	Ret. <u>Time</u>	Amt. <u>(ng)</u>	Spike <u>Amt.(ng)</u>	% <u>Rec.</u>	Lower <u>Limit</u>	Upper <u>Limit</u>	* OR <u>Fail</u>
7)	tert-Butylbenzene	19.83	27.60	26.3	104.9	70	130	*
8)	n-Butylbenzene	20.84	28.28	26.8	105.5	70	130	*

*WA 6/4/08*

CONTINUING CALIBRATION STANDARDS

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
1	IR Bromochloromethane (IS1)	1.000	1.000	0.0	105	-0.03
2	T Propene	1.935	1.615	16.5	102	-0.01
3	T Dichlorodifluoromethane	2.341	1.889	19.3	101	-0.01
4	T Chloromethane	2.941	2.481	15.6	100	-0.02
5	T Freon 114	1.308	1.113	14.9	102	-0.02
6	T Vinyl Chloride	1.873	1.517	19.0	101	-0.02
7	T 1,3-Butadiene	1.707	1.481	13.2	102	-0.02
8	T Bromomethane	0.965	0.810	16.1	101	-0.02
9	T Chloroethane	0.968	0.801	17.3	104	-0.02
10	T Ethanol	1.313	1.169	11.0	102	-0.05
11	T Acetonitrile	3.785	3.232	14.6	102	-0.04
12	T Acrolein	0.947	0.863	8.9	106	-0.03
13	T Acetone	1.306	1.071	18.0	106	-0.04
14	T Trichlorofluoromethane	2.191	1.877	14.3	103	-0.02
15	T Isopropanol	3.935	3.322	15.6	99	-0.05
16	T Acrylonitrile	2.374	2.146	9.6	103	-0.04
17	T 1,1-Dichloroethene	1.023	0.905	11.5	105	-0.02
18	T tert-Butanol	3.669	3.330	9.2	104	-0.04
19	T Methylene Chloride	1.008	0.869	13.8	104	-0.03
20	T Allyl Chloride	2.322	2.102	9.5	104	-0.02
21	T Trichlorotrifluoroethane	1.065	0.918	13.8	104	-0.02
22	T Carbon Disulfide	4.053	3.623	10.6	104	-0.02
23	T trans-1,2-Dichloroethene	2.014	1.750	13.1	103	-0.02
24	T 1,1-Dichloroethane	2.139	1.893	11.5	104	-0.03
25	T Methyl tert-Butyl Ether	3.123	2.716	13.0	105	-0.02
26	T Vinyl Acetate	0.214	0.207	3.3	114	-0.02
27	T 2-Butanone	0.683	0.603	11.7	105	-0.03
28	T cis-1,2-Dichloroethene	1.852	1.616	12.7	104	-0.03
29	T Diisopropyl Ether	0.900	0.809	10.1	105	-0.03
30	T Ethyl Acetate	0.477	0.419	12.2	101	-0.03
31	T n-Hexane	2.848	2.453	13.9	104	-0.02
32	T Chloroform	1.475	1.280	13.2	104	-0.03
33	S 1,2-Dichloroethane-d4 (SS1)	1.430	1.397	2.3	104	-0.03
34	T Tetrahydrofuran	0.642	0.588	8.4	104	-0.02
35	T Ethyl tert-Butyl Ether	1.317	1.177	10.6	104	-0.02
36	T 1,2-Dichloroethane	1.691	1.459	13.7	103	-0.02
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	106	-0.02
38	T 1,1,1-Trichloroethane	0.426	0.367	13.8	106	-0.02

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev	Area%	Dev (min)
39 T	Isopropyl Acetate	0.211	0.192	9.0	104	-0.02
40 T	1-Butanol	0.411	0.360	12.4	104	-0.04
41 T	Benzene	1.054	0.840	20.3	105	-0.02
42 T	Carbon Tetrachloride	0.432	0.380	12.0	104	-0.02
43 T	Cyclohexane	0.412	0.333	19.2	105	-0.02
44 T	tert-Amyl Methyl Ether	0.702	0.631	10.1	106	-0.02
45 T	1,2-Dichloropropane	0.311	0.269	13.5	104	-0.02
46 T	Bromodichloromethane	0.310	0.275	11.3	104	-0.02
47 T	Trichloroethene	0.328	0.288	12.2	105	-0.02
48 T	1,4-Dioxane	0.197	0.178	9.6	105	-0.02
49 T	Isooctane	1.685	1.466	13.0	103	-0.02
50 T	Methyl Methacrylate	0.113	0.107	5.3	105	-0.02
51 T	n-Heptane	0.252	0.223	11.5	105	-0.02
52 T	cis-1,3-Dichloropropene	0.392	0.356	9.2	104	-0.01
53 T	4-Methyl-2-pentanone	0.366	0.326	10.9	103	-0.02
54 T	trans-1,3-Dichloropropene	0.362	0.328	9.4	104	-0.02
55 T	1,1,2-Trichloroethane	0.256	0.227	11.3	105	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	105	0.00
57 S	Toluene-d8 (SS2)	2.577	2.546	1.2	106	-0.02
58 T	Toluene	2.924	2.445	16.4	105	-0.01
59 T	2-Hexanone	2.761	2.254	18.4	100	-0.02
60 T	Dibromochloromethane	0.863	0.762	11.7	105	-0.02
61 T	1,2-Dibromoethane	0.803	0.695	13.4	104	-0.02
62 T	Butyl Acetate	2.776	2.392	13.8	100	-0.02
63 T	n-Octane	0.884	0.774	12.4	104	-0.01
64 T	Tetrachloroethene	0.865	0.743	14.1	106	-0.01
65 T	Chlorobenzene	2.083	1.781	14.5	105	-0.01
66 T	Ethylbenzene	3.323	2.876	13.5	105	-0.01
67 T	m- & p-Xylene	2.202	1.877	14.8	105	-0.02
68 T	Bromoform	0.501	0.464	7.4	104	-0.01
69 T	Styrene	2.127	1.911	10.2	104	-0.02
70 T	o-Xylene	2.357	2.023	14.2	105	-0.02
71 T	n-Nonane	2.326	1.957	15.9	101	-0.01
72 T	1,1,2,2-Tetrachloroethane	0.976	0.838	14.1	104	-0.02
73 S	Bromofluorobenzene (SS3)	0.857	0.875	-2.1	106	0.00
74 T	Cumene	3.431	3.009	12.3	105	0.00
75 T	alpha-Pinene	1.610	1.471	8.6	105	0.00
76 T	n-Propylbenzene	3.987	3.498	12.3	105	0.00

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

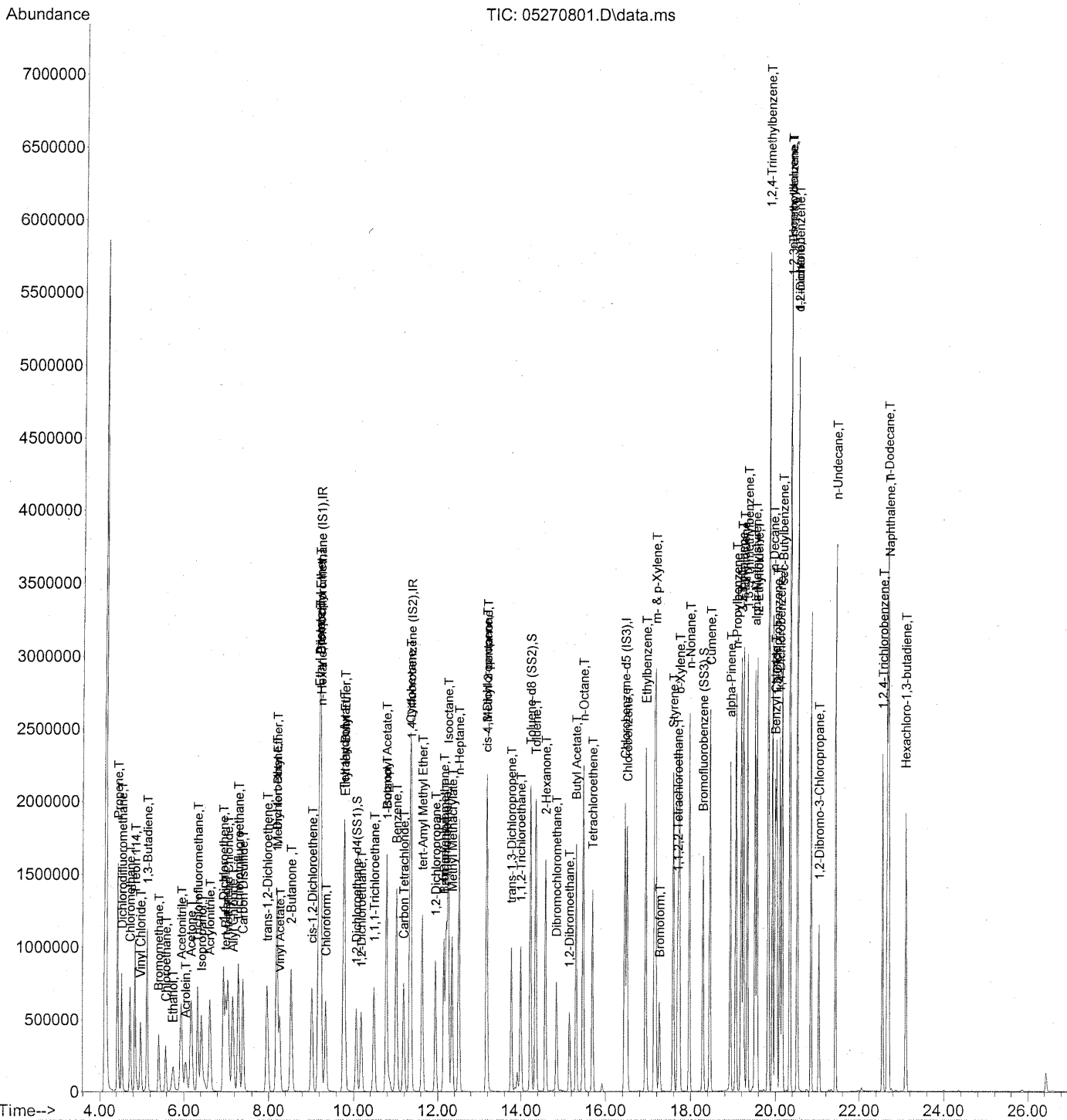
Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
77 T 3-Ethyltoluene	3.764	3.285	12.7	105	-0.01
78 T 4-Ethyltoluene	3.396	2.914	14.2	103	-0.01
79 T 1,3,5-Trimethylbenzene	3.011	2.595	13.8	105	-0.01
80 T alpha-Methylstyrene	1.693	1.591	6.0	105	-0.02
81 T 2-Ethyltoluene	3.649	3.219	11.8	104	-0.01
82 T 1,2,4-Trimethylbenzene	3.048	2.603	14.6	104	-0.02
83 T n-Decane	2.158	1.907	11.6	103	-0.01
84 T Benzyl Chloride	2.355	2.175	7.6	104	-0.02
85 T 1,3-Dichlorobenzene	1.931	1.660	14.0	105	-0.02
86 T 1,4-Dichlorobenzene	1.875	1.618	13.7	105	-0.01
87 T sec-Butylbenzene	3.954	3.485	11.9	104	-0.01
88 T p-Isopropyltoluene	3.455	3.088	10.6	105	-0.02
89 T 1,2,3-Trimethylbenzene	2.927	2.590	11.5	104	-0.01
90 T 1,2-Dichlorobenzene	1.773	1.535	13.4	105	-0.02
91 T d-Limonene	0.939	0.876	6.7	105	0.00
92 T 1,2-Dibromo-3-Chloropropane	0.570	0.548	3.9	104	-0.01
93 T n-Undecane	2.263	2.040	9.9	102	0.00
94 T 1,2,4-Trichlorobenzene	0.321	0.293	8.7	103	0.00
95 T Naphthalene	4.428	4.103	7.3	104	-0.01
96 T n-Dodecane	2.205	2.051	7.0	102	0.00
97 T Hexachloro-1,3-butadiene	0.533	0.470	11.8	104	0.00

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270801.D  
Acq On : 27 May 2008 10:18 am  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.22	130	416189	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	11.36	114	1740493	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	689026	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.06	65	581614	24.440	ng	-0.03
Spiked Amount	25.000		Recovery	=	97.76%	
57) Toluene-d8 (SS2)	14.23	98	1754045	24.692	ng	-0.02
Spiked Amount	25.000		Recovery	=	98.76%	
73) Bromofluorobenzene (SS3)	18.29	174	603108	25.536	ng	0.00
Spiked Amount	25.000		Recovery	=	102.16%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	725951	22.533	ng	92
3) Dichlorodifluoromethane	4.53	85	817463	20.978	ng	97
4) Chloromethane	4.72	50	1053229	21.512	ng	99
5) Freon 114	4.84	135	496481	22.796	ng	97
6) Vinyl Chloride	4.97	62	651645	20.899	ng	95
7) 1,3-Butadiene	5.12	54	673052	23.682	ng	# 84
8) Bromomethane	5.41	94	354628	22.064	ng	99
9) Chloroethane	5.58	64	350851	21.775	ng	96
10) Ethanol	5.74	45	443635m	20.295	ng	
11) Acetonitrile	5.94	41	1318157	20.920	ng	98
12) Acrolein	6.05	56	344697	21.870	ng	99
13) Acetone	6.17	58	495588	22.789	ng	# 73
14) Trichlorofluoromethane	6.32	101	812509	22.273	ng	100
15) Isopropanol	6.42	45	1426773m	21.781	ng	
16) Acrylonitrile	6.62	53	903829	22.866	ng	96
17) 1,1-Dichloroethene	6.94	96	426374	25.047	ng	94
18) tert-Butanol	6.99	59	1413591	23.146	ng	95
19) Methylene Chloride	7.05	84	405177	24.156	ng	# 48
20) Allyl Chloride	7.17	41	920124	23.798	ng	82
21) Trichlorotrifluoroethane	7.29	151	435473	24.568	ng	85
22) Carbon Disulfide	7.39	76	1507705	22.348	ng	100
23) trans-1,2-Dichloroethene	7.97	61	801097	23.893	ng	94
24) 1,1-Dichloroethane	8.19	63	876273	24.611	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1256948	24.179	ng	80
26) Vinyl Acetate	8.27	86	84607	23.755	ng	# 1
27) 2-Butanone	8.54	72	281274	24.739	ng	# 28
28) cis-1,2-Dichloroethene	9.03	61	747889	24.253	ng	95
29) Diisopropyl Ether	9.19	87	347485	23.202	ng	# 43
30) Ethyl Acetate	9.19	61	221966	27.981	ng	88
31) n-Hexane	9.23	57	1143262	24.111	ng	92

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.35	83	688064	28.016	ng	95
34) Tetrahydrofuran	9.77	72	272313	25.482	ng	# 52
35) Ethyl tert-Butyl Ether	9.79	87	515269	23.507	ng	# 77
36) 1,2-Dichloroethane	10.19	62	667926	23.721	ng	96
38) 1,1,1-Trichloroethane	10.49	97	703153	23.729	ng	94
39) Isopropyl Acetate	10.78	61	338475	23.001	ng	# 72
40) 1-Butanol	10.79	56	571937	19.965	ng	95
41) Benzene	11.02	78	1607615	21.906	ng	99
42) Carbon Tetrachloride	11.19	117	708911	23.552	ng	99
43) Cyclohexane	11.34	84	644441	22.461	ng	# 48
44) tert-Amyl Methyl Ether	11.63	73	1142592	23.384	ng	79
45) 1,2-Dichloropropane	11.94	63	510772	23.570	ng	96
46) Bromodichloromethane	12.15	83	550857	25.537	ng	94
47) Trichloroethene	12.20	130	570543	24.978	ng	100
48) 1,4-Dioxane	12.15	88	356877	26.033	ng	# 69
49) Isooctane	12.25	57	2654133	22.623	ng	91
50) Methyl Methacrylate	12.35	100	197793	25.121	ng	# 71
51) n-Heptane	12.51	71	430888	24.599	ng	# 50
52) cis-1,3-Dichloropropene	13.17	75	644244	23.588	ng	99
53) 4-Methyl-2-pentanone	13.19	58	596164	23.366	ng	86
54) trans-1,3-Dichloropropene	13.77	75	662685	26.322	ng	98
55) 1,1,2-Trichloroethane	14.00	97	430930	24.144	ng	90
58) Toluene	14.35	91	1853426	23.002	ng	98
59) 2-Hexanone	14.59	43	1583879	20.814	ng	99
60) Dibromochloromethane	14.85	129	583969	24.559	ng	100
61) 1,2-Dibromoethane	15.15	107	523295	23.655	ng	99
62) Butyl Acetate	15.31	43	1733812	22.660	ng	91
63) n-Octane	15.48	57	554585	22.762	ng	96
64) Tetrachloroethene	15.70	166	559421	23.472	ng	99
65) Chlorobenzene	16.50	112	1349551	23.504	ng	100
66) Ethylbenzene	16.94	91	2140175	23.367	ng	93
67) m- & p-Xylene	17.16	91	3336903	54.989	ng	91
68) Bromoform	17.26	173	419465	30.385	ng	100
69) Styrene	17.59	104	1422256	24.262	ng	94
70) o-Xylene	17.73	91	1700170	26.177	ng	93
71) n-Nonane	17.97	43	1391262	21.706	ng	96
72) 1,1,2,2-Tetrachloroethane	17.70	83	711206	26.443	ng	93
74) Cumene	18.45	105	2238997	23.679	ng	94
75) alpha-Pinene	18.93	93	1074054	24.210	ng	93
76) n-Propylbenzene	19.07	91	2535739	23.078	ng	92
77) 3-Ethyltoluene	19.19	105	2308563	22.256	ng	94
78) 4-Ethyltoluene	19.24	105	2232717	23.857	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	1930922	23.270	ng	91

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Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

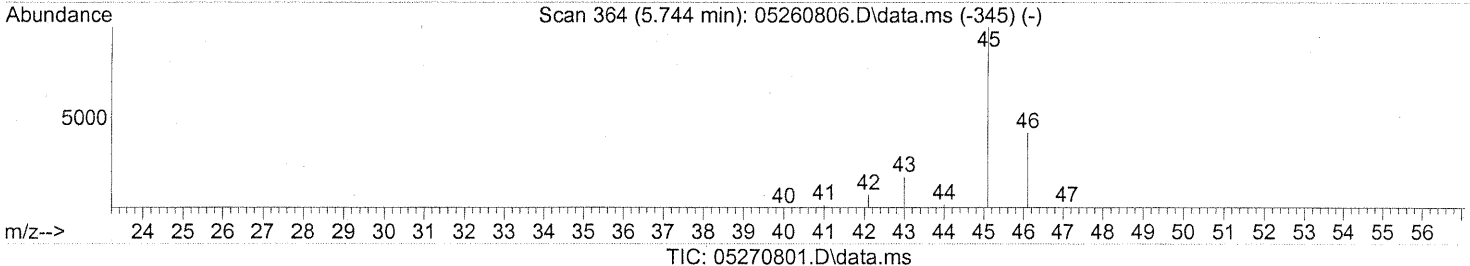
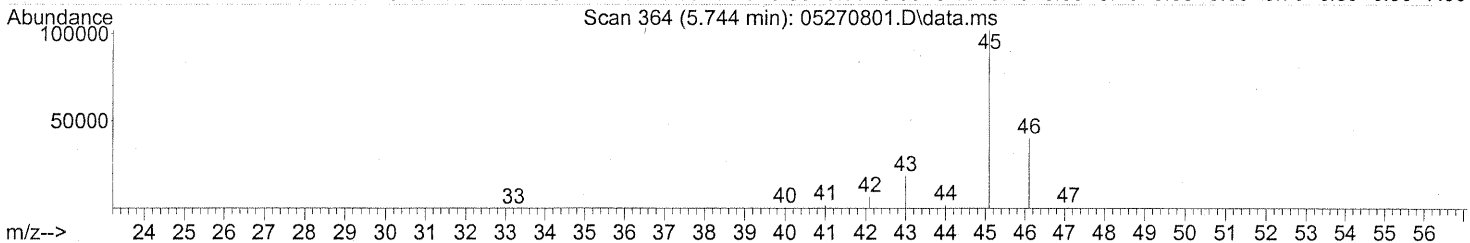
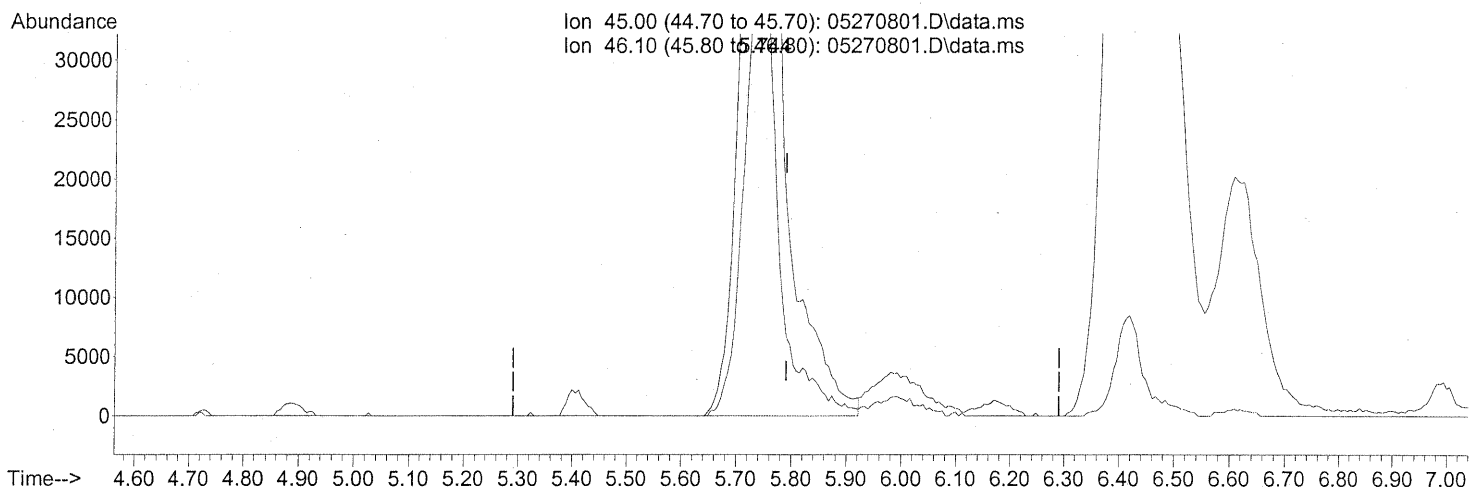
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	1118361	23.969	ng	97
81) 2-Ethyltoluene	19.57	105	2200240	21.876	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	1972599	23.481	ng	91
83) n-Decane	19.93	57	1366185	22.972	ng	80
84) Benzyl Chloride	20.00	91	1606694	24.753	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1212749	22.784	ng	99
86) 1,4-Dichlorobenzene	20.10	146	1226678	23.739	ng	98
87) sec-Butylbenzene	20.16	105	2574478	23.623	ng	95
88) p-Isopropyltoluene	20.34	119	2510829	26.370	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	1962925	24.336	ng	88
90) 1,2-Dichlorobenzene	20.52	146	1142094	23.374	ng	100
91) d-Limonene	20.52	68	639608	24.707	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	392456	24.988	ng	80
93) n-Undecane	21.44	57	1478945	23.712	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	226259	25.599	ng	# 87
95) Naphthalene	22.69	128	2974063	24.367	ng	99
96) n-Dodecane	22.66	57	1497668	24.644	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	360433	24.544	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 12:04:46 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.744min (-0.047) 19.17ng

response 419141

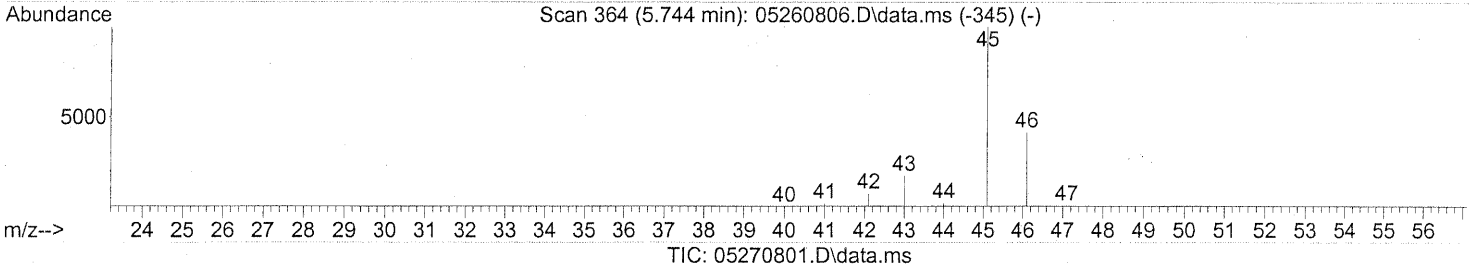
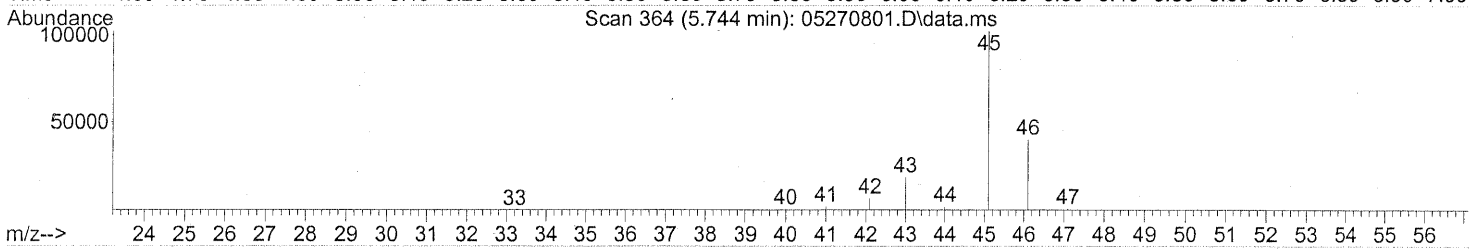
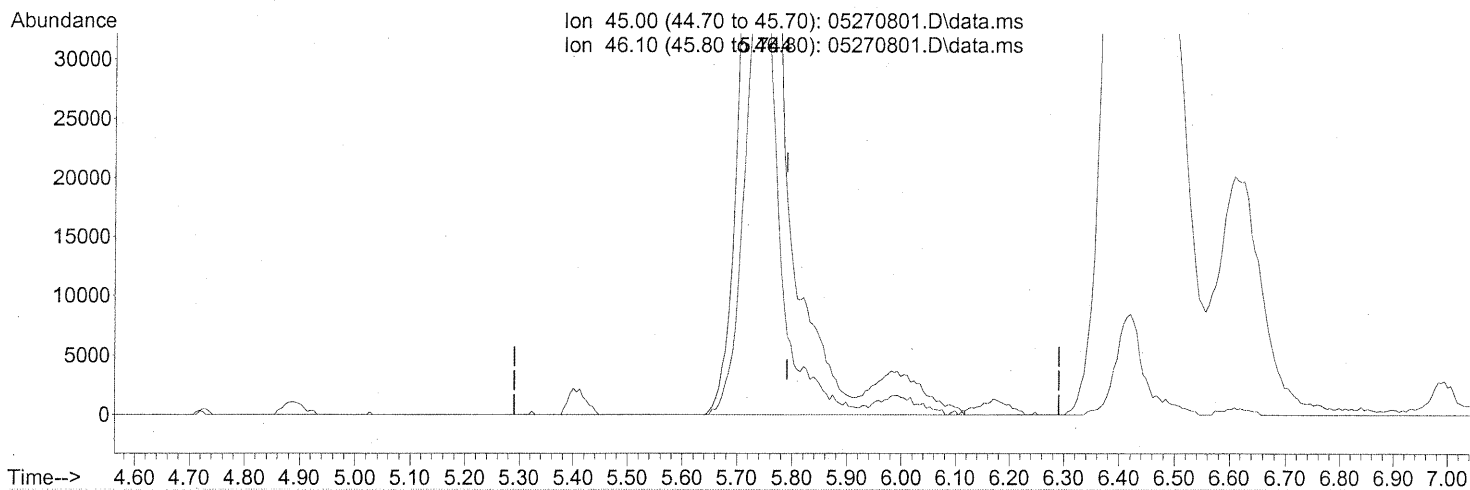
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.02
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270801.D  
Acq On : 27 May 2008 10:18 am  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 12:04:46 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.744min (-0.047) 20.29ng m  
response 443635

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	37.81
0.00	0.00	0.00
0.00	0.00	0.00

*int whole peaks*

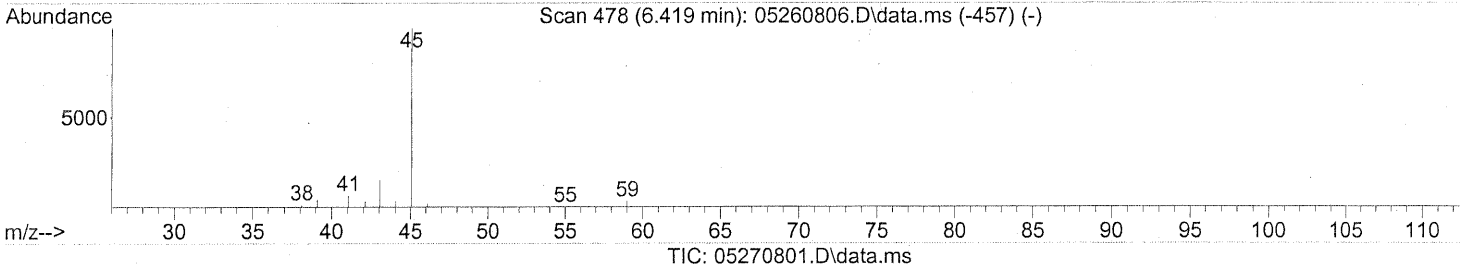
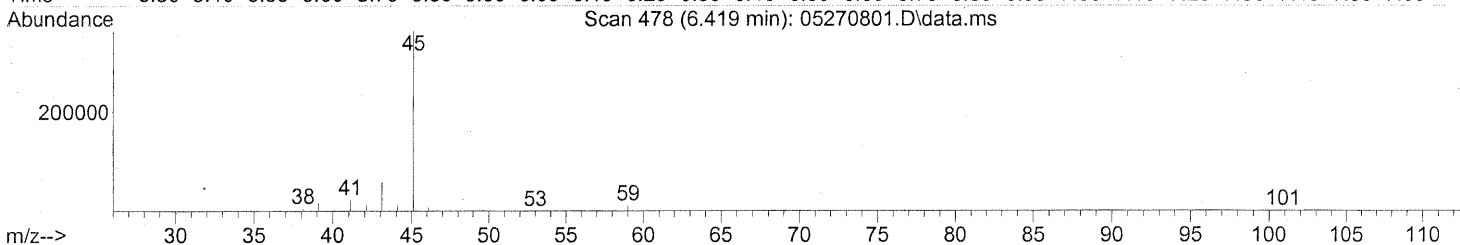
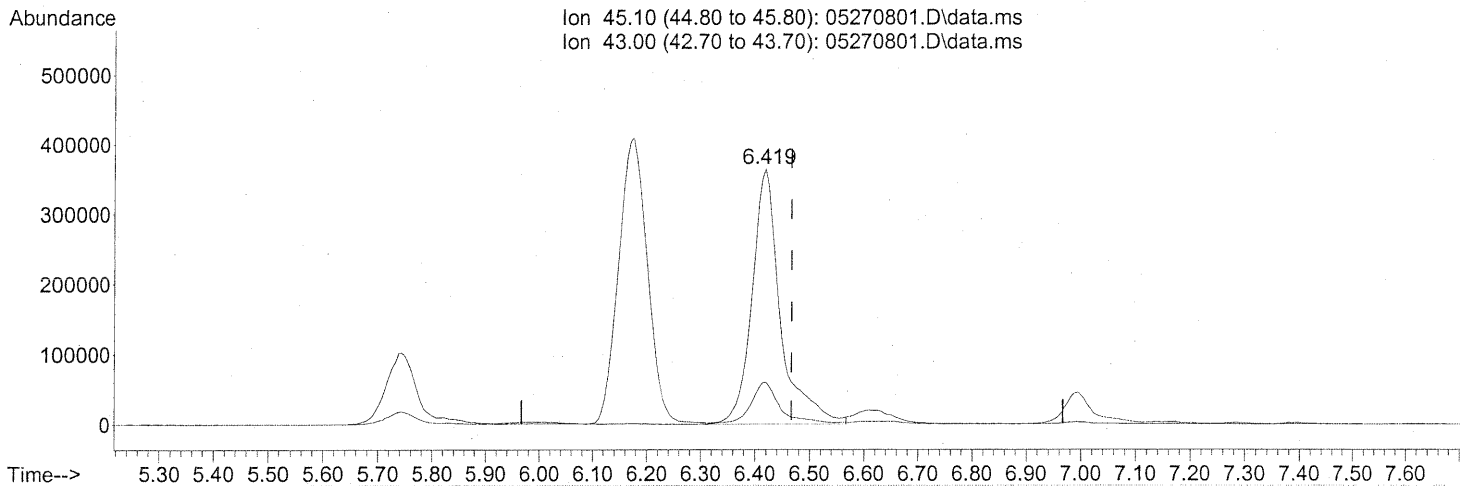
*WA 5/28/08*

*WA 5/28/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 12:04:46 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.419min (-0.048) 20.23ng  
 response 1325297

*tailing*

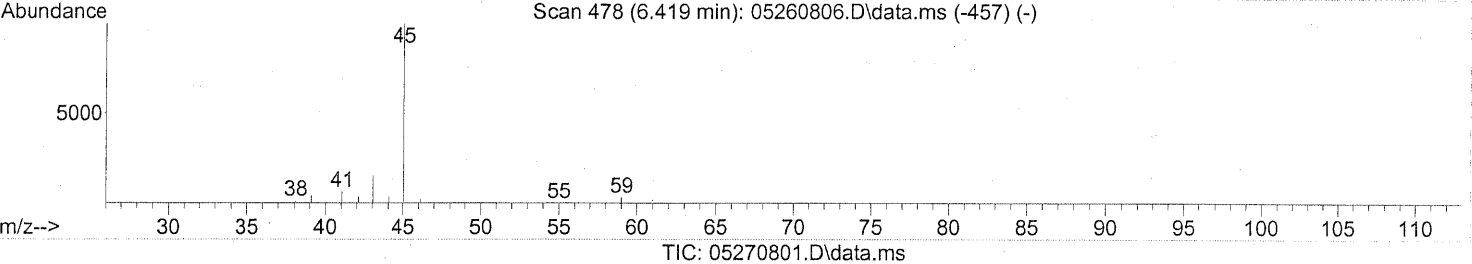
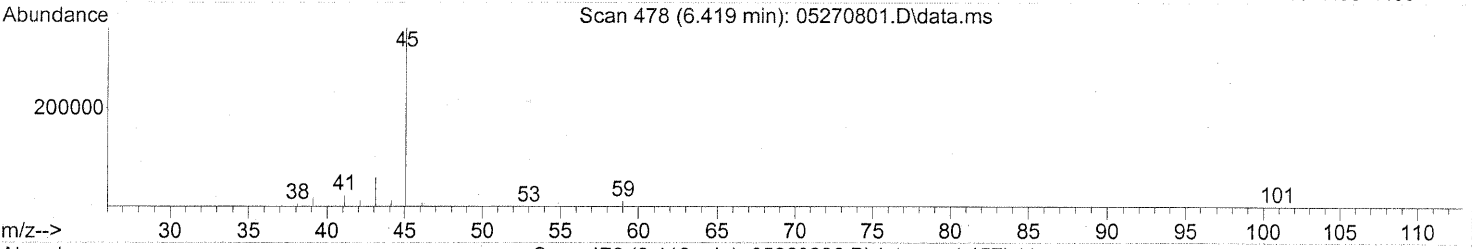
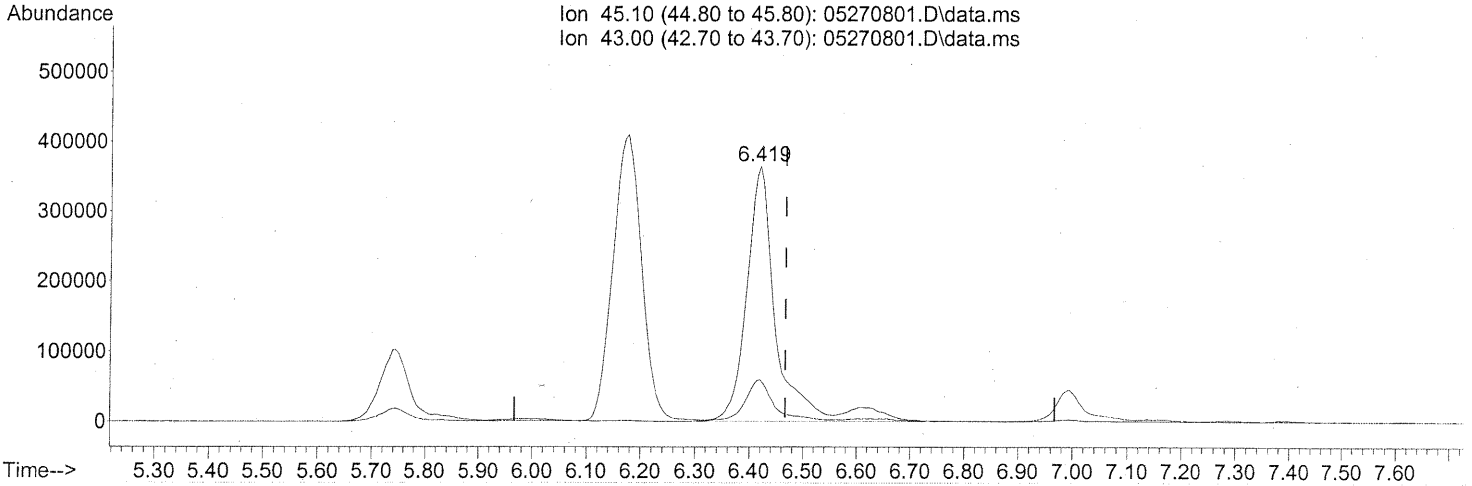
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.68
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270801.D  
Acq On : 27 May 2008 10:18 am  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 18:22:10 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

6.419min (-0.048) 21.78ng m

response 1426773

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.49
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*WA 5/29/08*

*WA 5/29/08*

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:10 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

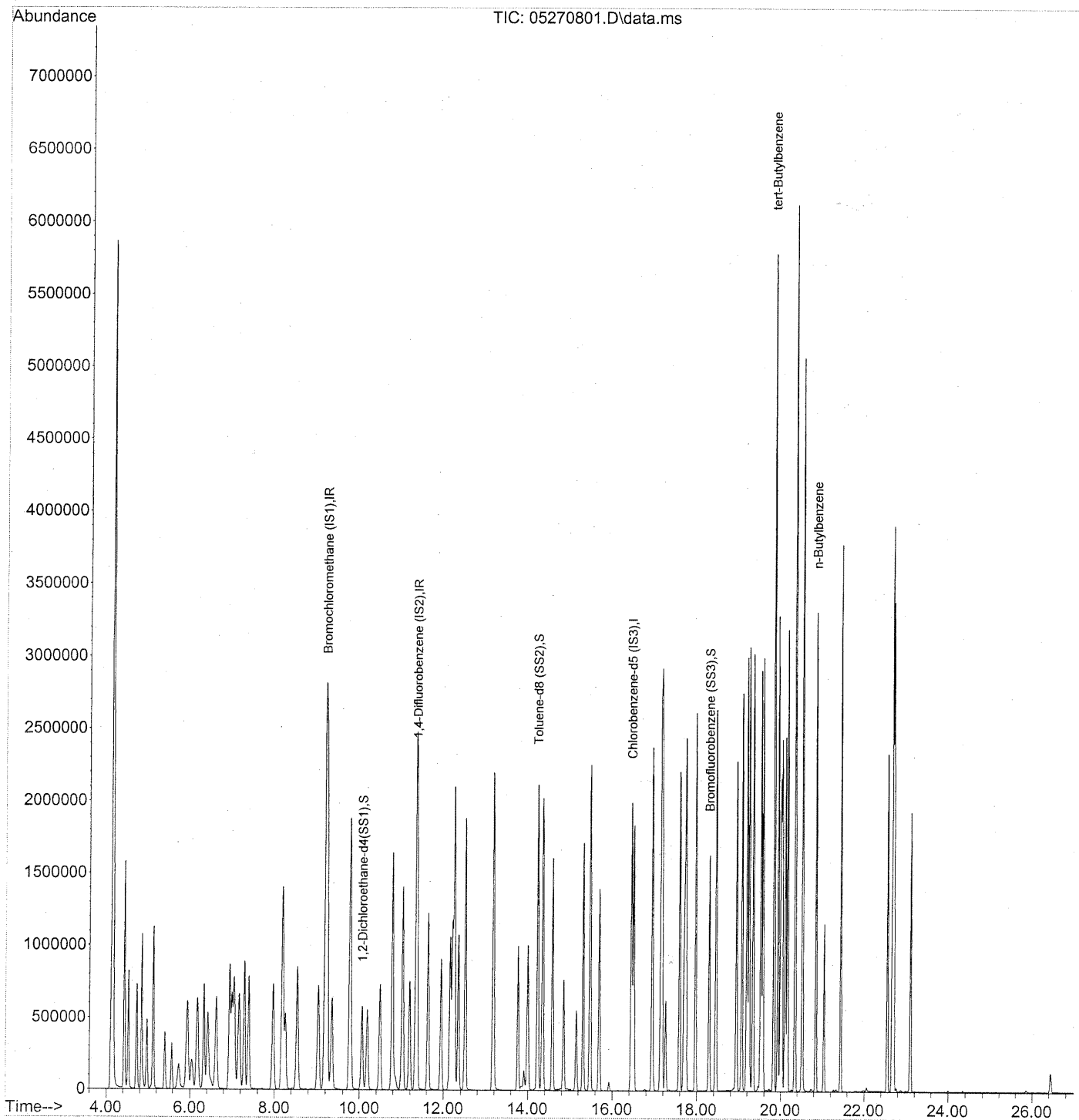
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 IR	Bromochloromethane (IS1)	1.000	1.000	0.0	105	-0.03
2 S	1,2-Dichloroethane-d4 (SS1)	1.430	1.397	2.3	104	-0.03
3 IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	106	-0.02
4 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	105	0.00
5 S	Toluene-d8 (SS2)	2.577	2.546	1.2	106	-0.02
6 S	Bromofluorobenzene (SS3)	0.857	0.875	-2.1	106	0.00
7	tert-Butylbenzene	3.113	2.732	12.2	105	-0.02
8	n-Butylbenzene	2.965	2.607	12.1	104	-0.01

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\27\  
Data File : 05270801.D  
Acq On : 27 May 2008 10:18  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210802  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:10 2008  
Quant Method : J:\MS16\METHODS\S16052608.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Wed Jun 04 14:30:18 2008  
Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:10 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.22	130	416189	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	11.36	114	1740493	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	689026	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	10.06	65	581614	24.440	ng	-0.03
Spiked Amount	25.000		Recovery	=	97.76%	
5) Toluene-d8 (SS2)	14.23	98	1754045	24.692	ng	-0.02
Spiked Amount	25.000		Recovery	=	98.76%	
6) Bromofluorobenzene (SS3)	18.29	174	603108	25.536	ng	0.00
Spiked Amount	25.000		Recovery	=	102.16%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	1957831	22.821	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	1925635	23.563	ng	# 94

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

DA 6/4/08

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1	IR Bromochloromethane (IS1)	1.000	1.000	0.0	99	-0.04
2	T Propene	1.935	1.863	3.7	96	0.00
3	T Dichlorodifluoromethane	2.341	2.241	4.3	96	0.00
4	T Chloromethane	2.941	2.626	10.7	96	-0.01
5	T Freon 114	1.308	1.293	1.1	97	-0.01
6	T Vinyl Chloride	1.873	1.827	2.5	98	-0.02
7	T 1,3-Butadiene	1.707	1.657	2.9	102	-0.02
8	T Bromomethane	0.965	0.831	13.9	97	-0.02
9	T Chloroethane	0.968	0.912	5.8	95	-0.02
10	T Ethanol	1.313	1.358	-3.4	96	-0.08
11	T Acetonitrile	3.785	3.522	6.9	91	-0.05
12	T Acrolein	0.947	0.839	11.4	94	-0.04
13	T Acetone	1.306	1.430	-9.5	96	-0.05
14	T Trichlorofluoromethane	2.191	2.053	6.3	95	-0.02
15	T Isopropanol	3.935	3.429	12.9	95	-0.08
16	T Acrylonitrile	2.374	2.268	4.5	94	-0.05
17	T 1,1-Dichloroethene	1.023	0.980	4.2	96	-0.03
18	T tert-Butanol	3.669	3.688	-0.5	96	-0.07
19	T Methylene Chloride	1.008	0.975	3.3	96	-0.04
20	T Allyl Chloride	2.322	2.236	3.7	92	-0.04
21	T Trichlorotrifluoroethane	1.065	1.015	4.7	95	-0.02
22	T Carbon Disulfide	4.053	3.841	5.2	96	-0.02
23	T trans-1,2-Dichloroethene	2.014	1.919	4.7	96	-0.04
24	T 1,1-Dichloroethane	2.139	2.040	4.6	94	-0.05
25	T Methyl tert-Butyl Ether	3.123	2.997	4.0	96	-0.03
26	T Vinyl Acetate	0.214	0.228	-6.5	100	-0.04
27	T 2-Butanone	0.683	0.679	0.6	96	-0.04
28	T cis-1,2-Dichloroethene	1.852	1.760	5.0	94	-0.04
29	T Diisopropyl Ether	0.900	0.873	3.0	94	-0.03
30	T Ethyl Acetate	0.477	0.480	-0.6	96	-0.04
31	T n-Hexane	2.848	2.694	5.4	96	-0.02
32	T Chloroform	1.475	1.389	5.8	94	-0.05
33	S 1,2-Dichloroethane-d4 (SS1)	1.430	1.395	2.4	98	-0.04
34	T Tetrahydrofuran	0.642	0.626	2.5	92	-0.03
35	T Ethyl tert-Butyl Ether	1.317	1.268	3.7	96	-0.04
36	T 1,2-Dichloroethane	1.691	1.604	5.1	94	-0.04
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	97	-0.02
38	T 1,1,1-Trichloroethane	0.426	0.410	3.8	96	-0.03

871

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
39 T	Isopropyl Acetate	0.211	0.214	-1.4	97	-0.04
40 T	1-Butanol	0.411	0.405	1.5	96	-0.05
41 T	Benzene	1.054	0.940	10.8	95	-0.03
42 T	Carbon Tetrachloride	0.432	0.423	2.1	96	-0.02
43 T	Cyclohexane	0.412	0.370	10.2	94	-0.02
44 T	tert-Amyl Methyl Ether	0.702	0.689	1.9	96	-0.02
45 T	1,2-Dichloropropane	0.311	0.302	2.9	94	-0.03
46 T	Bromodichloromethane	0.310	0.304	1.9	96	-0.03
47 T	Trichloroethene	0.328	0.318	3.0	95	-0.03
48 T	1,4-Dioxane	0.197	0.202	-2.5	96	-0.03
49 T	Isooctane	1.685	1.631	3.2	96	-0.02
50 T	Methyl Methacrylate	0.113	0.120	-6.2	100	-0.02
51 T	n-Heptane	0.252	0.247	2.0	92	-0.02
52 T	cis-1,3-Dichloropropene	0.392	0.393	-0.3	96	-0.02
53 T	4-Methyl-2-pentanone	0.366	0.361	1.4	94	-0.03
54 T	trans-1,3-Dichloropropene	0.362	0.357	1.4	96	-0.02
55 T	1,1,2-Trichloroethane	0.256	0.252	1.6	96	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	101	-0.01
57 S	Toluene-d8 (SS2)	2.577	2.485	3.6	98	-0.02
58 T	Toluene	2.924	2.635	9.9	95	-0.02
59 T	2-Hexanone	2.761	2.496	9.6	94	-0.02
60 T	Dibromochloromethane	0.863	0.804	6.8	96	-0.02
61 T	1,2-Dibromoethane	0.803	0.748	6.8	97	-0.02
62 T	Butyl Acetate	2.776	2.621	5.6	95	-0.02
63 T	n-Octane	0.884	0.828	6.3	94	-0.01
64 T	Tetrachloroethene	0.865	0.808	6.6	96	-0.02
65 T	Chlorobenzene	2.083	1.917	8.0	95	-0.02
66 T	Ethylbenzene	3.323	3.089	7.0	97	-0.01
67 T	m- & p-Xylene	2.202	2.011	8.7	96	-0.02
68 T	Bromoform	0.501	0.470	6.2	95	-0.02
69 T	Styrene	2.127	1.989	6.5	95	-0.02
70 T	o-Xylene	2.357	2.157	8.5	95	-0.02
71 T	n-Nonane	2.326	2.152	7.5	94	-0.01
72 T	1,1,2,2-Tetrachloroethane	0.976	0.897	8.1	95	-0.02
73 S	Bromofluorobenzene (SS3)	0.857	0.894	-4.3	105	0.00
74 T	Cumene	3.431	3.148	8.2	95	-0.01
75 T	alpha-Pinene	1.610	1.545	4.0	95	0.00
76 T	n-Propylbenzene	3.987	3.656	8.3	95	-0.01

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Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

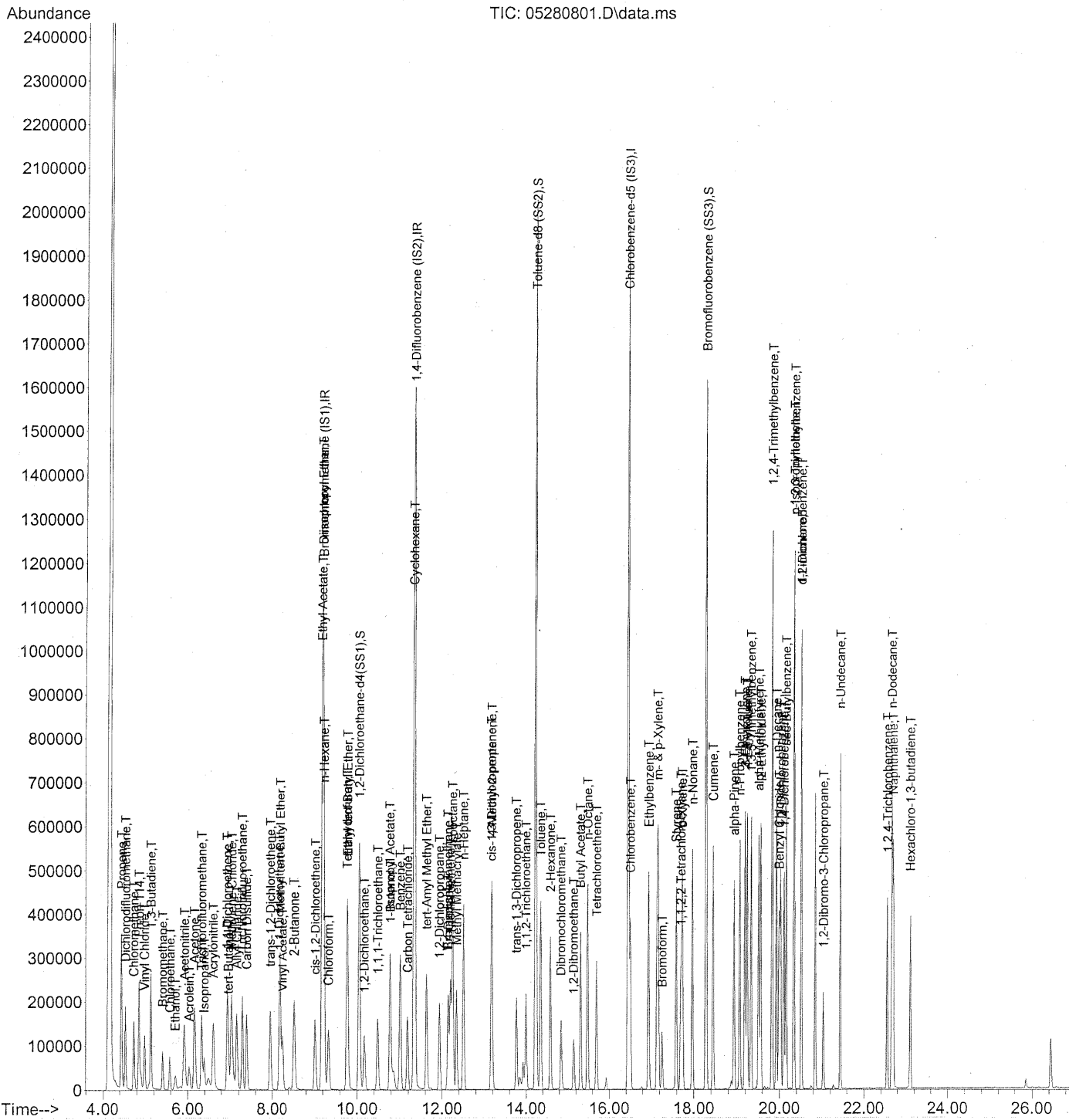
	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
77 T	3-Ethyltoluene	3.764	3.365	10.6	95	-0.01
78 T	4-Ethyltoluene	3.396	3.220	5.2	97	-0.01
79 T	1,3,5-Trimethylbenzene	3.011	2.759	8.4	96	-0.01
80 T	alpha-Methylstyrene	1.693	1.613	4.7	96	-0.02
81 T	2-Ethyltoluene	3.649	3.394	7.0	96	-0.02
82 T	1,2,4-Trimethylbenzene	3.048	2.793	8.4	96	-0.02
83 T	n-Decane	2.158	2.014	6.7	95	-0.01
84 T	Benzyl Chloride	2.355	2.180	7.4	95	-0.02
85 T	1,3-Dichlorobenzene	1.931	1.775	8.1	97	-0.02
86 T	1,4-Dichlorobenzene	1.875	1.693	9.7	95	-0.01
87 T	sec-Butylbenzene	3.954	3.653	7.6	95	-0.01
88 T	p-Isopropyltoluene	3.455	3.224	6.7	96	-0.02
89 T	1,2,3-Trimethylbenzene	2.927	2.693	8.0	96	-0.02
90 T	1,2-Dichlorobenzene	1.773	1.625	8.3	96	-0.02
91 T	d-Limonene	0.939	0.891	5.1	94	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.570	0.526	7.7	95	-0.01
93 T	n-Undecane	2.263	2.114	6.6	95	0.00
94 T	1,2,4-Trichlorobenzene	0.321	0.286	10.9	95	0.00
95 T	Naphthalene	4.428	3.625	18.1	95	-0.01
96 T	n-Dodecane	2.205	2.043	7.3	95	0.00
97 T	Hexachloro-1,3-butadiene	0.533	0.498	6.6	96	0.00

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



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Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.20	130	393838	25.000	ng	-0.04
37) 1,4-Difluorobenzene (IS2)	11.36	114	1621199	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	662879	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.05	65	549542	24.403	ng	-0.04
Spiked Amount	25.000		Recovery	=	97.60%	
57) Toluene-d8 (SS2)	14.23	98	1647502	24.107	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.44%	
73) Bromofluorobenzene (SS3)	18.29	174	592464	26.075	ng	0.00
Spiked Amount	25.000		Recovery	=	104.28%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	158486	5.199	ng	93
3) Dichlorodifluoromethane	4.53	85	183556	4.978	ng	98
4) Chloromethane	4.73	50	211009	4.554	ng	100
5) Freon 114	4.85	135	108999	5.289	ng	96
6) Vinyl Chloride	4.97	62	148191	5.022	ng	93
7) 1,3-Butadiene	5.12	54	142306	5.291	ng	# 86
8) Bromomethane	5.41	94	68727	4.519	ng	99
9) Chloroethane	5.58	64	75421	4.946	ng	95
10) Ethanol	5.71	45	97366m	4.707	ng	
11) Acetonitrile	5.92	41	271897	4.560	ng	100
12) Acrolein	6.03	56	63480	4.256	ng	99
13) Acetone	6.16	58	125012	6.075	ng	# 74
14) Trichlorofluoromethane	6.32	101	168191	4.872	ng	100
15) Isopropanol	6.38	45	278161m	4.487	ng	
16) Acrylonitrile	6.60	53	180449	4.824	ng	98
17) 1,1-Dichloroethene	6.93	96	87233	5.415	ng	92
18) tert-Butanol	6.96	59	296303m	5.127	ng	
19) Methylene Chloride	7.04	84	85983	5.417	ng	# 45
20) Allyl Chloride	7.15	41	184963	5.055	ng	79
21) Trichlorotrifluoroethane	7.28	151	91135	5.433	ng	86
22) Carbon Disulfide	7.39	76	302546	4.739	ng	100
23) trans-1,2-Dichloroethene	7.95	61	166284	5.241	ng	93
24) 1,1-Dichloroethane	8.17	63	178353	5.294	ng	95
25) Methyl tert-Butyl Ether	8.19	73	262059	5.327	ng	80
26) Vinyl Acetate	8.25	86	17574	5.214	ng	# 37
27) 2-Butanone	8.53	72	59878	5.565	ng	# 26
28) cis-1,2-Dichloroethene	9.02	61	153897	5.274	ng	96
29) Diisopropyl Ether	9.19	87	70853	5.000	ng	# 34
30) Ethyl Acetate	9.18	61	48039	6.399	ng	85
31) n-Hexane	9.23	57	237625	5.296	ng	92

875

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.33	83	141106	6.072	ng	96
34) Tetrahydrofuran	9.77	72	54704	5.409	ng #	45
35) Ethyl tert-Butyl Ether	9.78	87	104857	5.055	ng #	75
36) 1,2-Dichloroethane	10.17	62	138959	5.215	ng	97
38) 1,1,1-Trichloroethane	10.48	97	146099	5.293	ng	94
39) Isopropyl Acetate	10.77	61	69976	5.105	ng #	70
40) 1-Butanol	10.78	56	119645	4.484	ng	98
41) Benzene	11.01	78	335139	4.903	ng	99
42) Carbon Tetrachloride	11.18	117	146744	5.234	ng	98
43) Cyclohexane	11.33	84	133145	4.982	ng #	26
44) tert-Amyl Methyl Ether	11.63	73	232444	5.107	ng	77
45) 1,2-Dichloropropane	11.94	63	106701	5.286	ng	98
46) Bromodichloromethane	12.14	83	113333	5.641	ng	94
47) Trichloroethene	12.20	130	117719	5.533	ng	98
48) 1,4-Dioxane	12.14	88	75152	5.886	ng #	73
49) Isooctane	12.25	57	550124	5.034	ng	92
50) Methyl Methacrylate	12.34	100	41328	5.635	ng #	67
51) n-Heptane	12.51	71	89064	5.459	ng #	50
52) cis-1,3-Dichloropropene	13.17	75	132529	5.209	ng	99
53) 4-Methyl-2-pentanone	13.18	58	122833	5.169	ng	87
54) trans-1,3-Dichloropropene	13.76	75	134235	5.724	ng	98
55) 1,1,2-Trichloroethane	13.99	97	89092	5.359	ng	90
58) Toluene	14.35	91	384339	4.958	ng	98
59) 2-Hexanone	14.58	43	337545	4.611	ng	99
60) Dibromochloromethane	14.84	129	118297	5.171	ng	100
61) 1,2-Dibromoethane	15.14	107	108039	5.076	ng	100
62) Butyl Acetate	15.31	43	364880	4.957	ng	93
63) n-Octane	15.48	57	114155	4.870	ng	95
64) Tetrachloroethene	15.69	166	116828	5.095	ng	100
65) Chlorobenzene	16.50	112	279523	5.060	ng	99
66) Ethylbenzene	16.94	91	442254	5.019	ng	93
67) m- & p-Xylene	17.16	91	687820	11.782	ng	90
68) Bromoform	17.26	173	81572	6.142	ng	100
69) Styrene	17.59	104	284854	5.051	ng	95
70) o-Xylene	17.73	91	348866	5.583	ng	93
71) n-Nonane	17.97	43	293801	4.765	ng	95
72) 1,1,2,2-Tetrachloroethane	17.70	83	146289	5.654	ng	93
74) Cumene	18.45	105	450782	4.955	ng	94
75) alpha-Pinene	18.93	93	217155	5.088	ng	93
76) n-Propylbenzene	19.06	91	509001	4.815	ng	92
77) 3-Ethyltoluene	19.19	105	455104	4.560	ng	94
78) 4-Ethyltoluene	19.24	105	473911	5.264	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	395062	4.949	ng	90

876

at 5/29/08

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 15:52:44 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

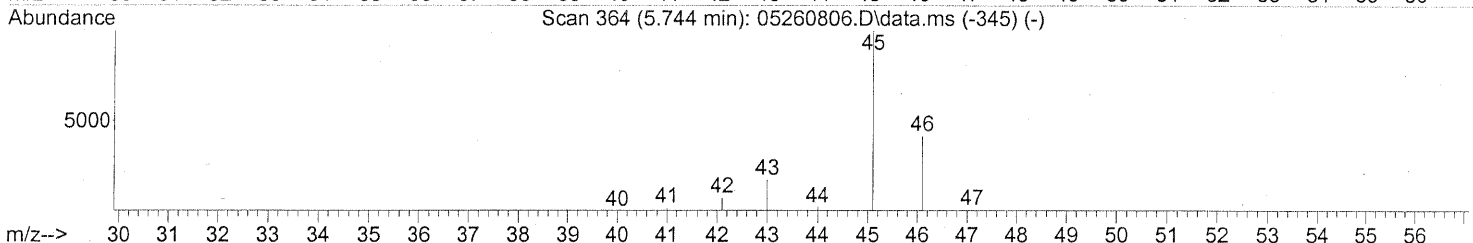
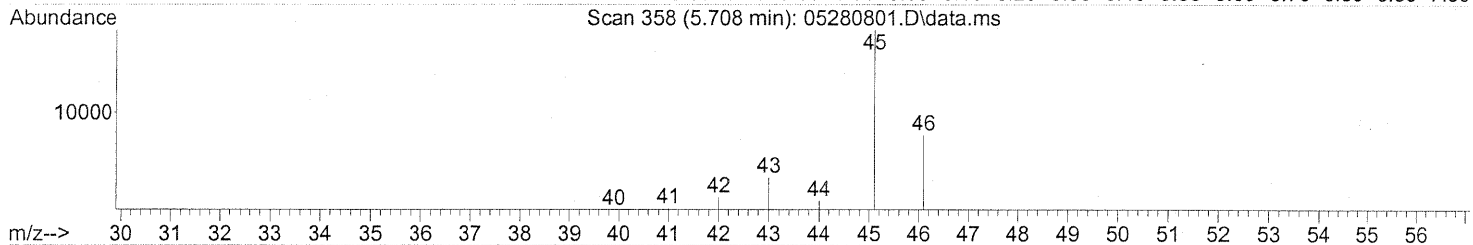
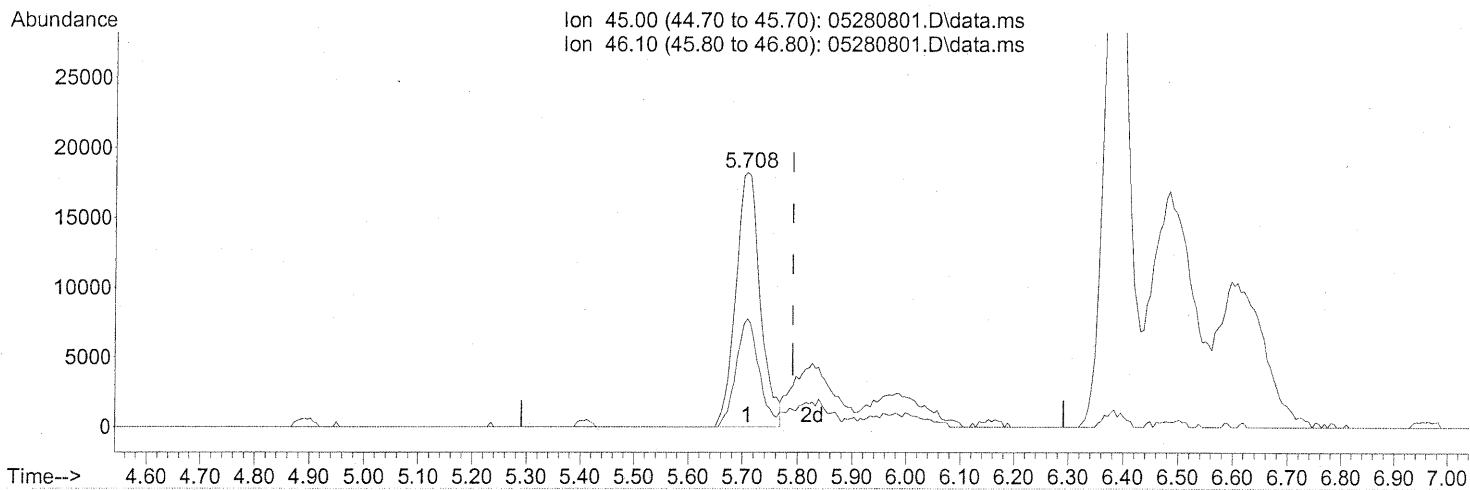
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	218061	4.858	ng	97
81) 2-Ethyltoluene	19.56	105	445459	4.604	ng	92
82) 1,2,4-Trimethylbenzene	19.83	105	407273	5.039	ng	91
83) n-Decane	19.93	57	277666	4.853	ng	80
84) Benzyl Chloride	19.99	91	309288	4.953	ng	89
85) 1,3-Dichlorobenzene	20.02	146	249448	4.871	ng	100
86) 1,4-Dichlorobenzene	20.10	146	246936	4.967	ng	97
87) sec-Butylbenzene	20.16	105	518149	4.942	ng	95
88) p-Isopropyltoluene	20.34	119	504435	5.507	ng	93
89) 1,2,3-Trimethylbenzene	20.34	105	392732	5.061	ng	87
90) 1,2-Dichlorobenzene	20.52	146	232715	4.951	ng	99
91) d-Limonene	20.52	68	125218	5.028	ng	85
92) 1,2-Dibromo-3-Chloropr...	21.04	157	72570	4.803	ng	83
93) n-Undecane	21.43	57	294313	4.905	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	42431	4.990	ng	89
95) Naphthalene	22.69	128	504550	4.297	ng	99
96) n-Dodecane	22.66	57	287048	4.910	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	73249	5.185	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280801.D  
Acq On : 28 May 2008 8:29 am  
Operator : WA  
Sample : 5ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



TIC: 05280801.D\data.ms

(10) Ethanol (T)

5.708min (-0.083) 2.73ng

response 56383

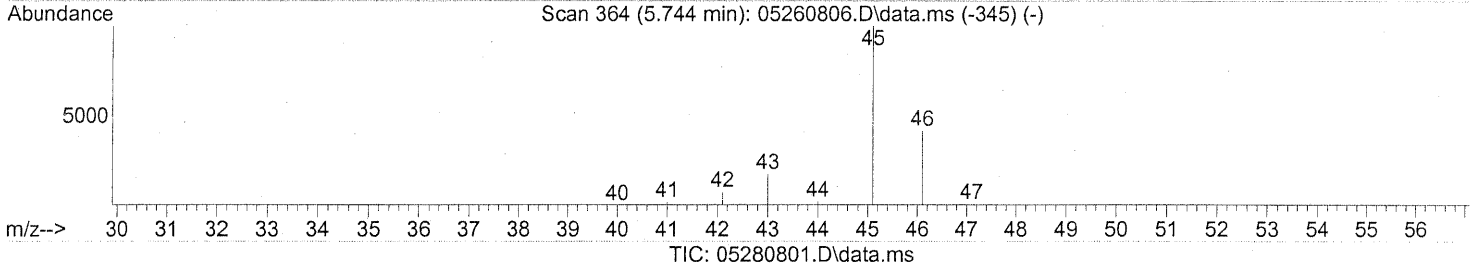
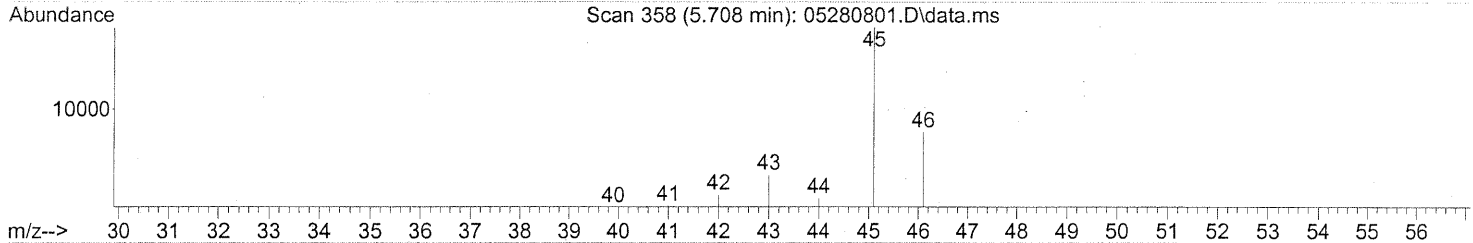
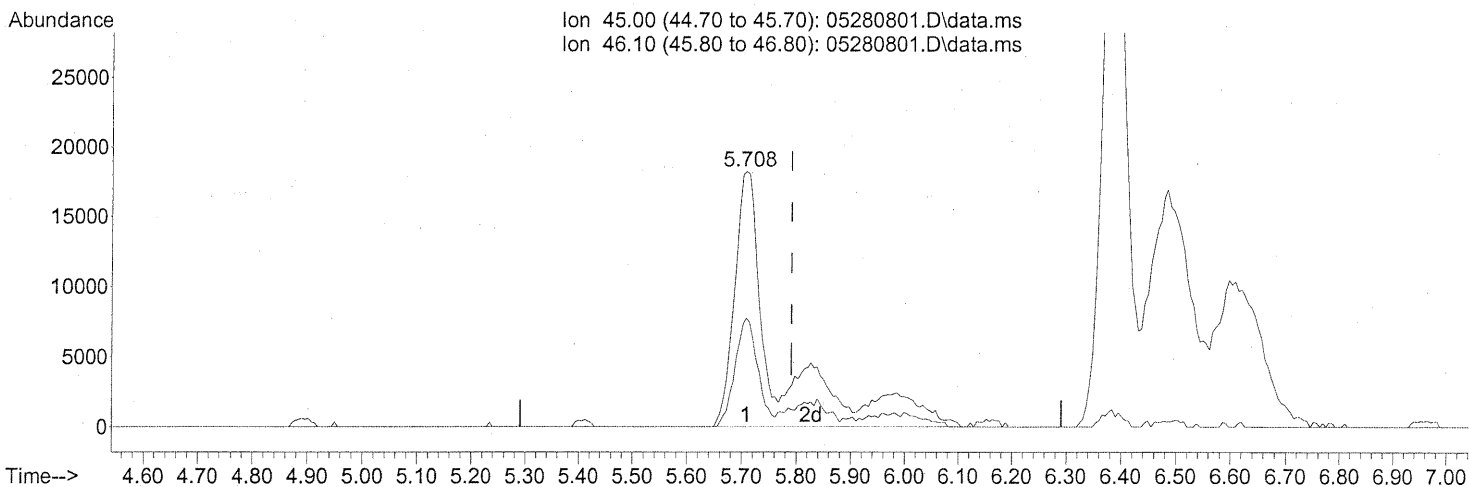
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.72
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.708min (-0.083) 4.71ng m

response 97366

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	23.00
0.00	0.00	0.00
0.00	0.00	0.00

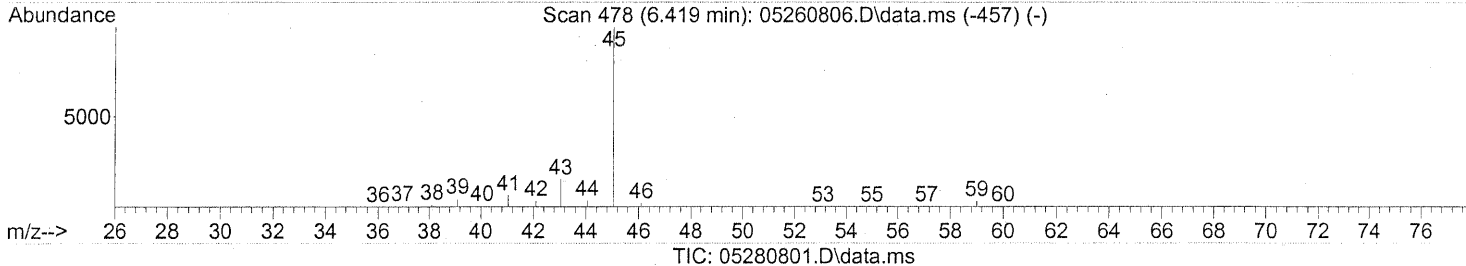
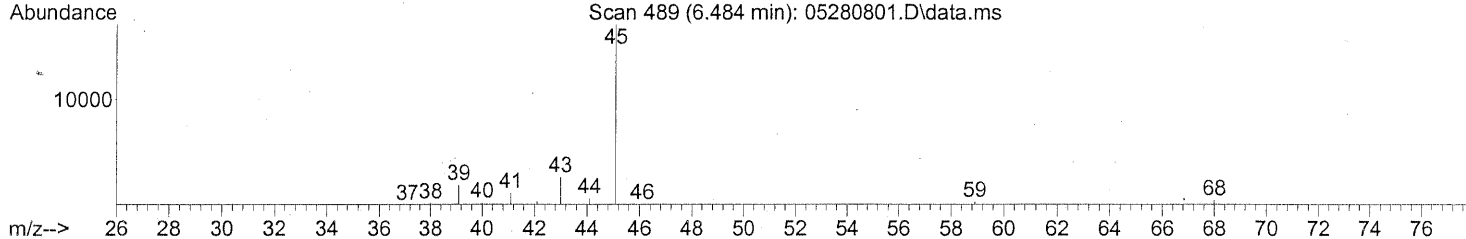
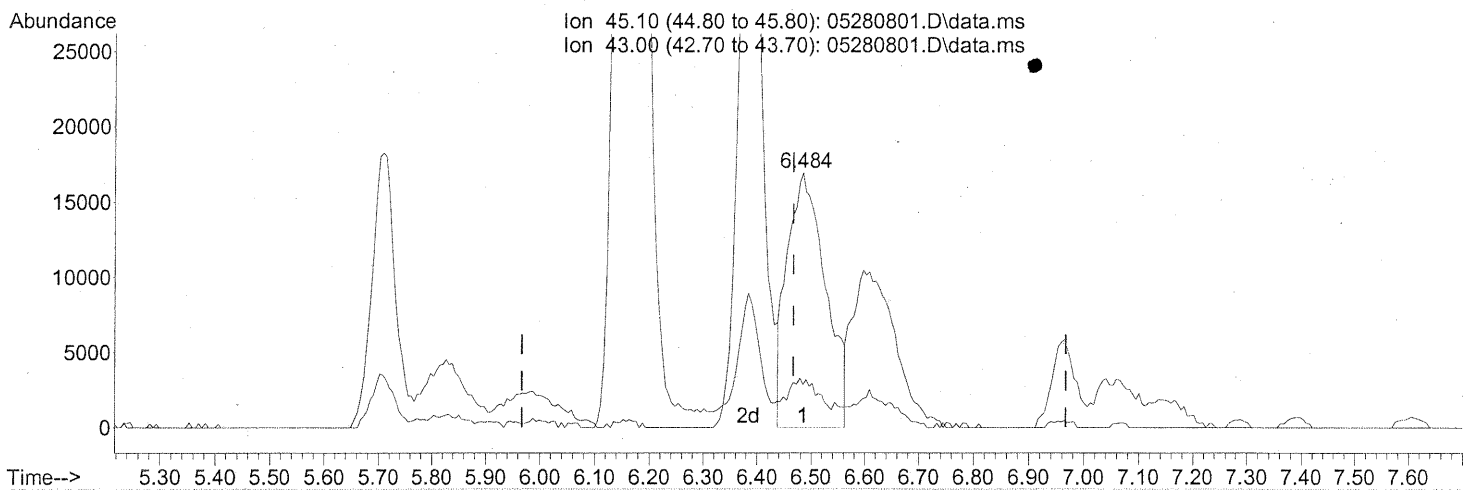
*int. whole peaks*

*WA 5/29/08*

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.484min (+0.017) 1.36ng

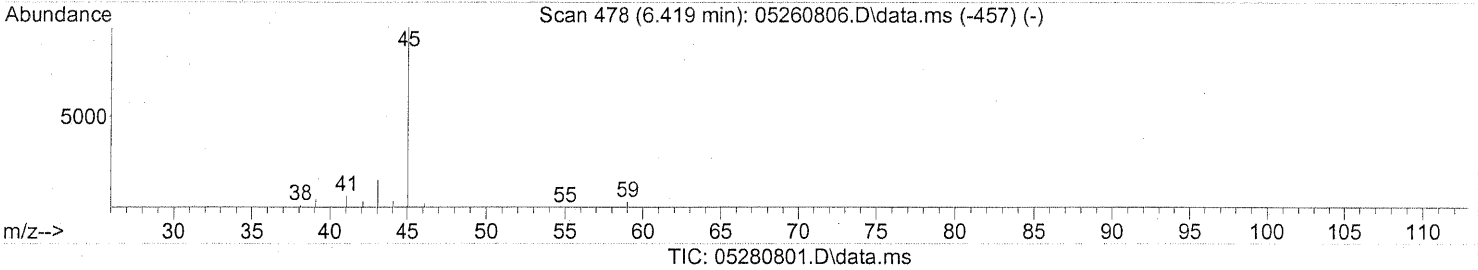
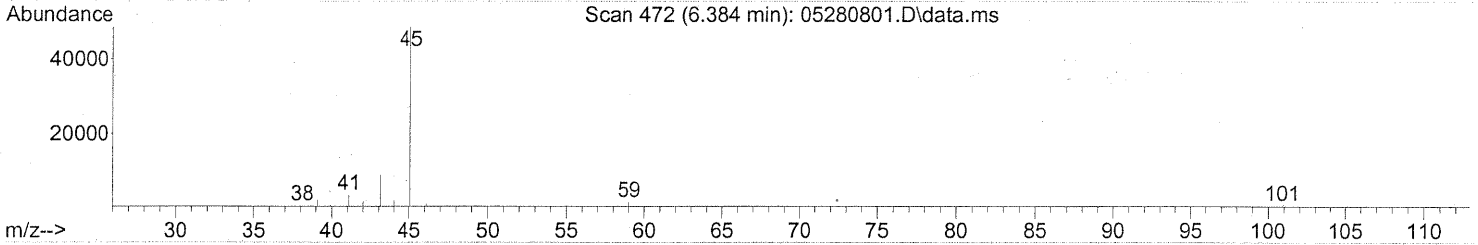
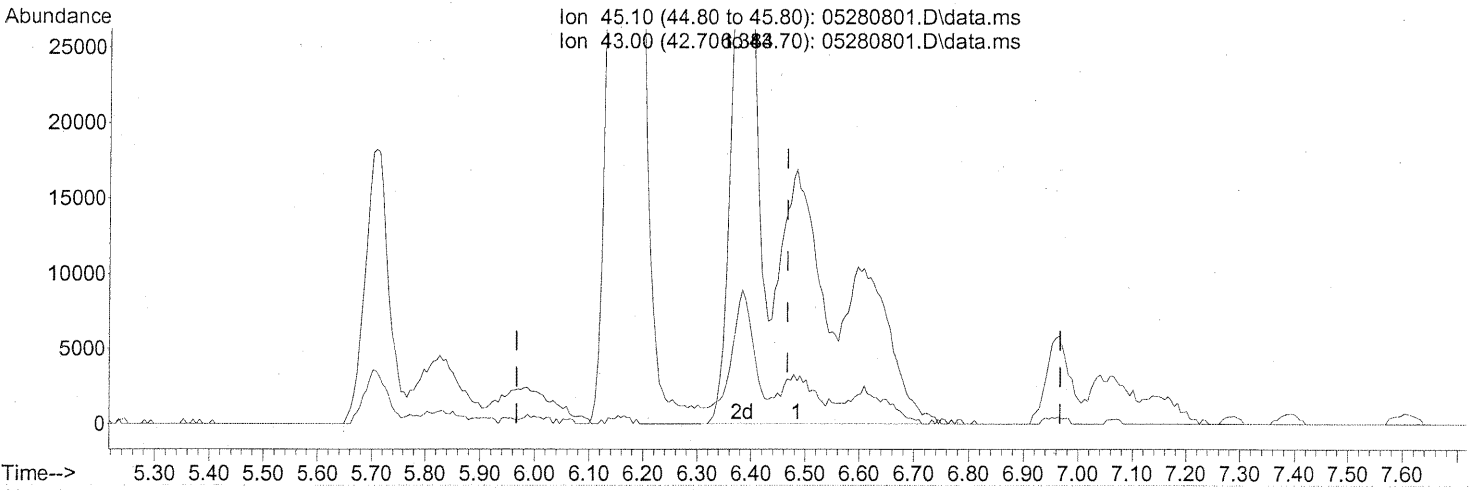
response 84091

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	19.43
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280801.D  
Acq On : 28 May 2008 8:29 am  
Operator : WA  
Sample : 5ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.384min (-0.083) 4.49ng m  
response 278161

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	5.87
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

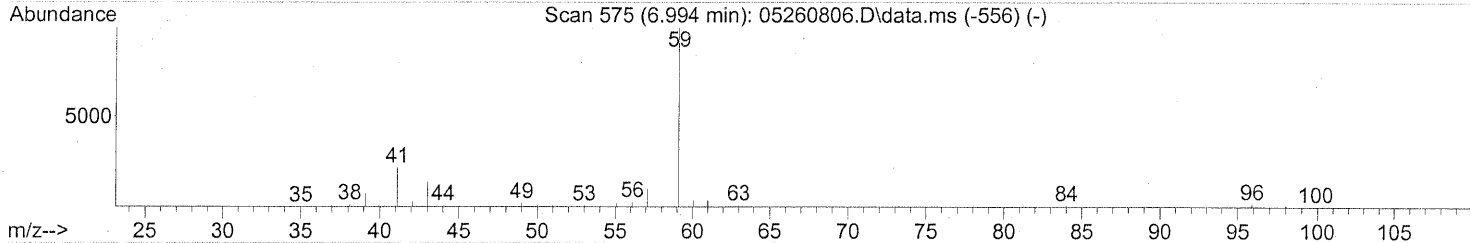
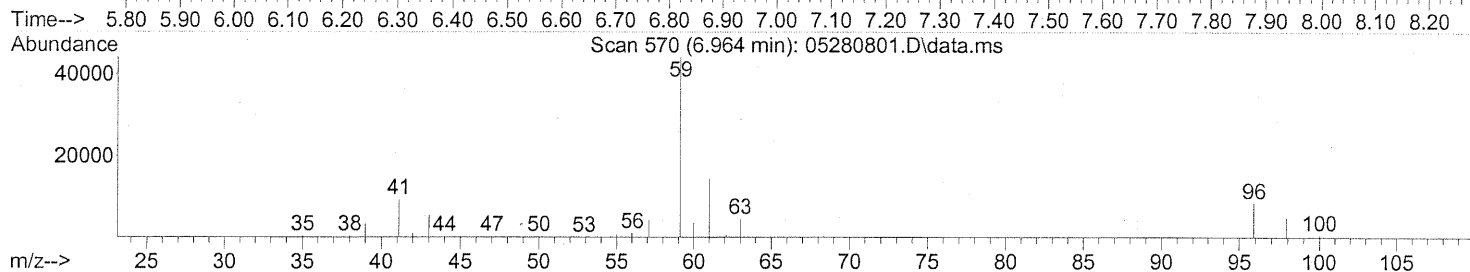
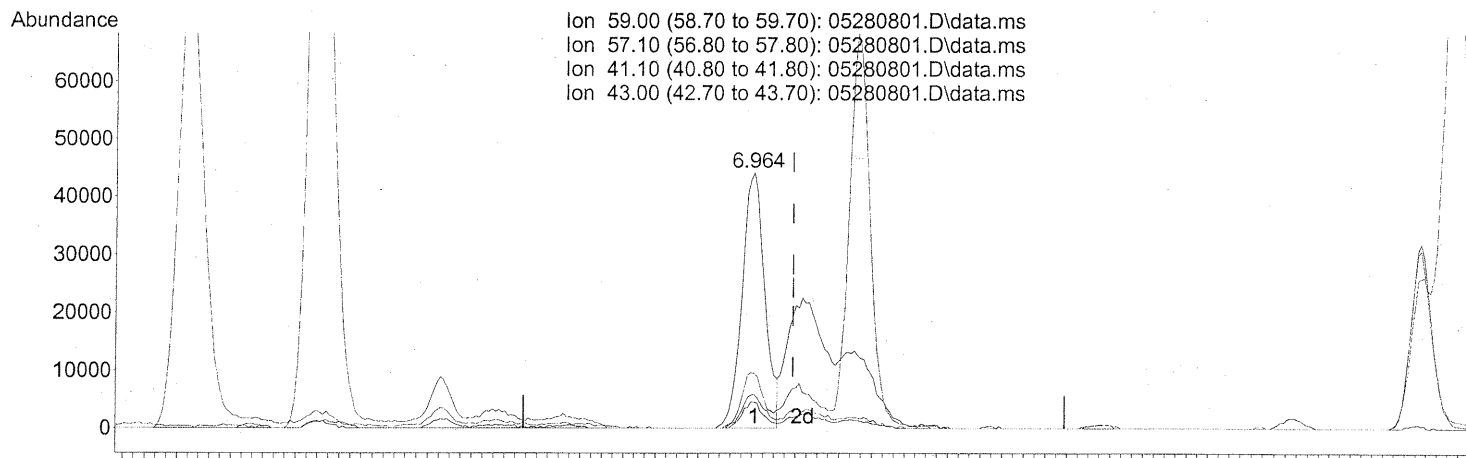
*WA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.964min (-0.071) 2.23ng

response 128866

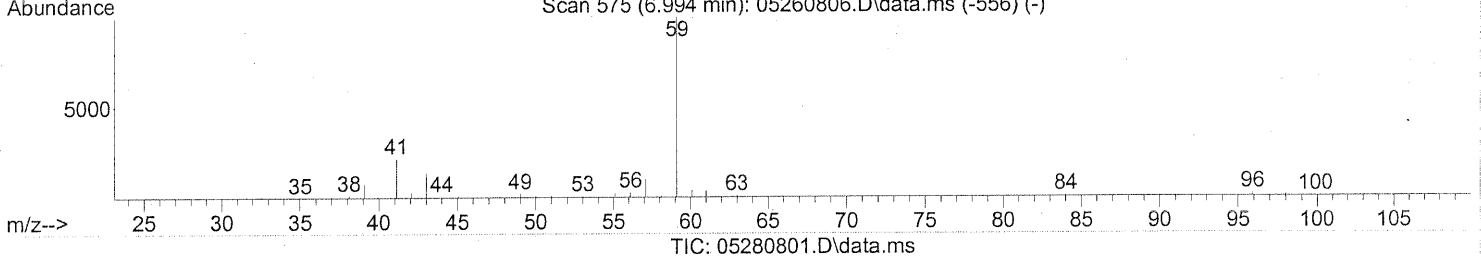
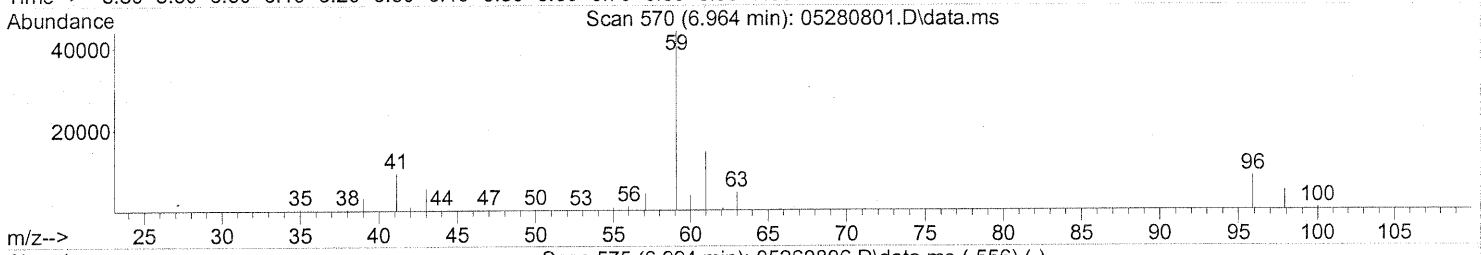
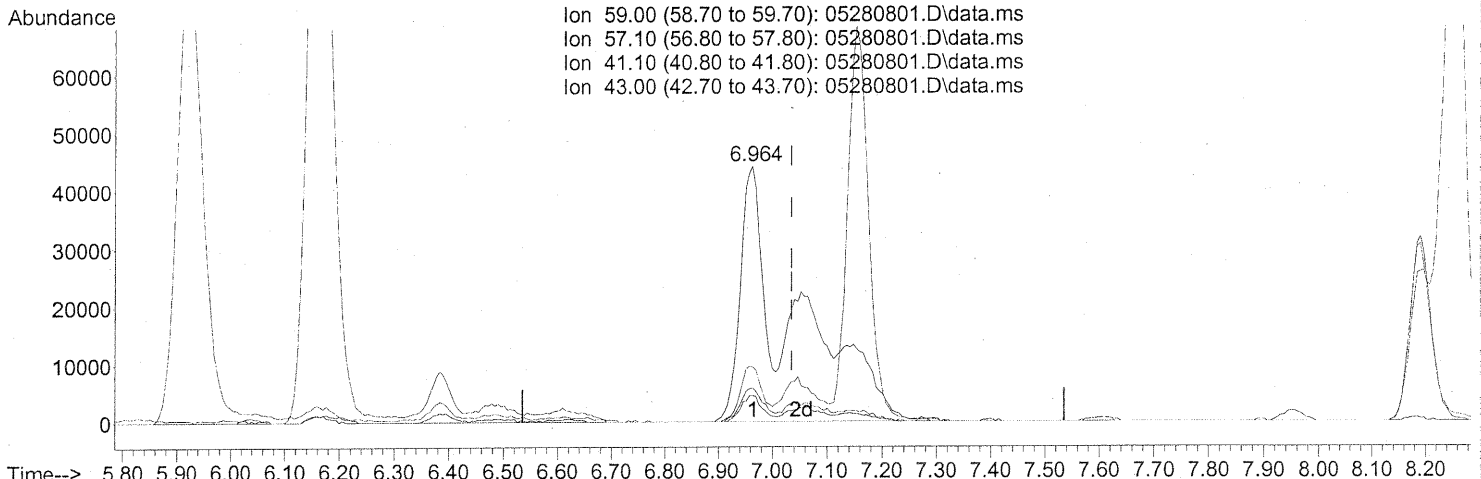
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.70
41.10	21.90	21.52
43.00	17.20	14.50



Data Path : J:\MS16\DATA\2008\_05\28\  
Data File : 05280801.D  
Acq On : 28 May 2008 8:29 am  
Operator : WA  
Sample : 5ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 28 09:32:13 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
6.964min (-0.071) 5.13ng m  
response 296303

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	4.22
41.10	21.90	9.36
43.00	17.20	6.31

*int. whole peaks*

*DA 5/29/08*

*WJY/29/08*

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:39 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

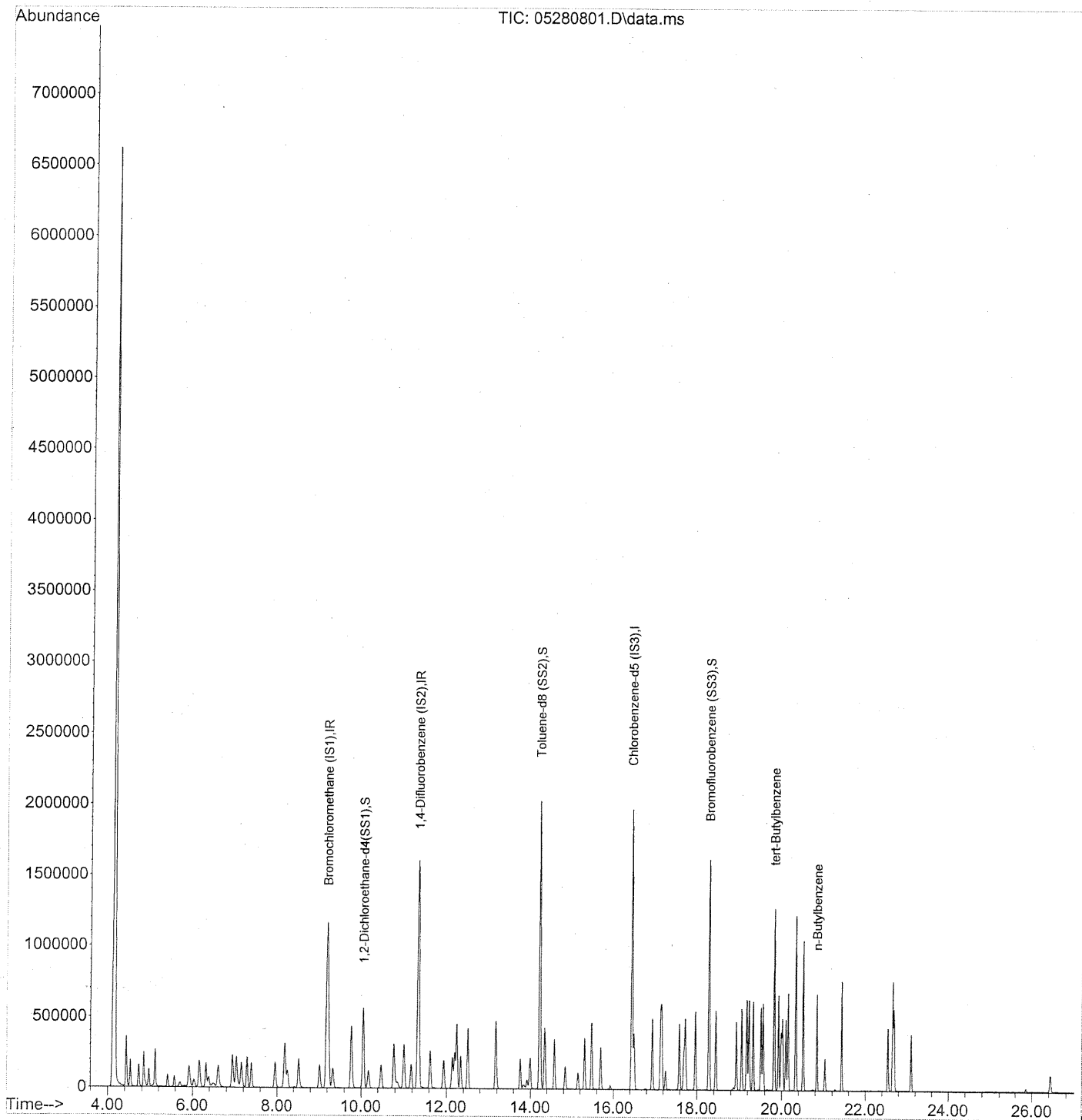
Compound		AvgRF	CCRF	%Dev	Area%	Dev (min)
1	IR Bromochloromethane (IS1)	1.000	1.000	0.0	99	-0.04
2	S 1,2-Dichloroethane-d4 (SS1)	1.430	1.395	2.4	98	-0.04
3	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	97	-0.02
4	I Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	101	-0.01
5	S Toluene-d8 (SS2)	2.577	2.485	3.6	98	-0.02
6	S Bromofluorobenzene (SS3)	0.857	0.894	-4.3	105	0.00
7	tert-Butylbenzene	3.113	2.897	6.9	96	-0.02
8	n-Butylbenzene	2.965	2.716	8.4	95	-0.01

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:39 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:39 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	393838	25.000	ng	-0.04
3) 1,4-Difluorobenzene (IS2)	11.36	114	1621199	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	662879	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.05	65	549542	24.403	ng	-0.04
Spiked Amount	25.000		Recovery	=	97.60%	
5) Toluene-d8 (SS2)	14.23	98	1647502	24.107	ng	-0.02
Spiked Amount	25.000		Recovery	=	96.44%	
6) Bromofluorobenzene (SS3)	18.29	174	592464	26.075	ng	0.00
Spiked Amount	25.000		Recovery	=	104.28%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	399370	4.839	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	385326	4.901	ng	# 93

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

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 IR	Bromochloromethane (IS1)	1.000	1.000	0.0	97	-0.02
2 T	Propene	1.935	1.661	14.2	97	0.00
3 T	Dichlorodifluoromethane	2.341	1.906	18.6	94	-0.01
4 T	Chloromethane	2.941	2.529	14.0	93	-0.01
5 T	Freon 114	1.308	1.126	13.9	95	-0.01
6 T	Vinyl Chloride	1.873	1.558	16.8	95	-0.02
7 T	1,3-Butadiene	1.707	1.524	10.7	97	-0.02
8 T	Bromomethane	0.965	0.829	14.1	96	-0.02
9 T	Chloroethane	0.968	0.784	19.0	93	-0.02
10 T	Ethanol	1.313	1.176	10.4	95	-0.05
11 T	Acetonitrile	3.785	3.246	14.2	94	-0.03
12 T	Acrolein	0.947	0.847	10.6	96	-0.03
13 T	Acetone	1.306	1.041	20.3	95	-0.03
14 T	Trichlorofluoromethane	2.191	1.864	14.9	95	-0.02
15 T	Isopropanol	3.935	3.306	16.0	91	-0.04
16 T	Acrylonitrile	2.374	2.116	10.9	94	-0.04
17 T	1,1-Dichloroethene	1.023	0.884	13.6	94	-0.02
18 T	tert-Butanol	3.669	3.277	10.7	95	-0.04
19 T	Methylene Chloride	1.008	0.844	16.3	93	-0.02
20 T	Allyl Chloride	2.322	2.119	8.7	97	-0.02
21 T	Trichlorotrifluoroethane	1.065	0.906	14.9	95	-0.02
22 T	Carbon Disulfide	4.053	3.553	12.3	94	-0.02
23 T	trans-1,2-Dichloroethene	2.014	1.726	14.3	94	-0.02
24 T	1,1-Dichloroethane	2.139	1.860	13.0	94	-0.03
25 T	Methyl tert-Butyl Ether	3.123	2.670	14.5	95	-0.02
26 T	Vinyl Acetate	0.214	0.197	7.9	99	-0.02
27 T	2-Butanone	0.683	0.583	14.6	94	-0.02
28 T	cis-1,2-Dichloroethene	1.852	1.589	14.2	94	-0.02
29 T	Diisopropyl Ether	0.900	0.785	12.8	94	-0.02
30 T	Ethyl Acetate	0.477	0.426	10.7	95	-0.02
31 T	n-Hexane	2.848	2.414	15.2	94	-0.02
32 T	Chloroform	1.475	1.258	14.7	94	-0.03
33 S	1,2-Dichloroethane-d4 (SS1)	1.430	1.424	0.4	98	-0.03
34 T	Tetrahydrofuran	0.642	0.574	10.6	93	-0.02
35 T	Ethyl tert-Butyl Ether	1.317	1.156	12.2	94	-0.02
36 T	1,2-Dichloroethane	1.691	1.462	13.5	95	-0.02
37 IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	98	-0.02
38 T	1,1,1-Trichloroethane	0.426	0.362	15.0	96	-0.02

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
39 T	Isopropyl Acetate	0.211	0.190	10.0	95	-0.02
40 T	1-Butanol	0.411	0.353	14.1	93	-0.04
41 T	Benzene	1.054	0.823	21.9	94	-0.02
42 T	Carbon Tetrachloride	0.432	0.380	12.0	95	-0.02
43 T	Cyclohexane	0.412	0.324	21.4	94	-0.01
44 T	tert-Amyl Methyl Ether	0.702	0.615	12.4	94	-0.01
45 T	1,2-Dichloropropane	0.311	0.266	14.5	95	-0.02
46 T	Bromodichloromethane	0.310	0.271	12.6	94	-0.02
47 T	Trichloroethene	0.328	0.282	14.0	94	-0.02
48 T	1,4-Dioxane	0.197	0.174	11.7	95	-0.02
49 T	Isooctane	1.685	1.461	13.3	94	-0.01
50 T	Methyl Methacrylate	0.113	0.106	6.2	95	-0.02
51 T	n-Heptane	0.252	0.217	13.9	93	-0.02
52 T	cis-1,3-Dichloropropene	0.392	0.349	11.0	94	-0.01
53 T	4-Methyl-2-pentanone	0.366	0.322	12.0	94	-0.02
54 T	trans-1,3-Dichloropropene	0.362	0.321	11.3	94	-0.02
55 T	1,1,2-Trichloroethane	0.256	0.224	12.5	95	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	100	-0.01
57 S	Toluene-d8 (SS2)	2.577	2.486	3.5	98	-0.01
58 T	Toluene	2.924	2.309	21.0	94	-0.01
59 T	2-Hexanone	2.761	2.211	19.9	93	-0.02
60 T	Dibromochloromethane	0.863	0.730	15.4	95	-0.02
61 T	1,2-Dibromoethane	0.803	0.662	17.6	94	-0.02
62 T	Butyl Acetate	2.776	2.341	15.7	93	-0.02
63 T	n-Octane	0.884	0.740	16.3	94	-0.01
64 T	Tetrachloroethene	0.865	0.703	18.7	95	-0.01
65 T	Chlorobenzene	2.083	1.683	19.2	94	-0.01
66 T	Ethylbenzene	3.323	2.716	18.3	94	-0.01
67 T	m- & p-Xylene	2.202	1.779	19.2	94	-0.02
68 T	Bromoform	0.501	0.440	12.2	94	-0.01
69 T	Styrene	2.127	1.806	15.1	94	-0.01
70 T	o-Xylene	2.357	1.903	19.3	94	-0.02
71 T	n-Nonane	2.326	1.913	17.8	94	-0.01
72 T	1,1,2,2-Tetrachloroethane	0.976	0.795	18.5	93	-0.01
73 S	Bromofluorobenzene (SS3)	0.857	0.903	-5.4	104	0.00
74 T	Cumene	3.431	2.835	17.4	94	0.00
75 T	alpha-Pinene	1.610	1.387	13.9	94	0.00
76 T	n-Propylbenzene	3.987	3.315	16.9	94	0.00

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Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

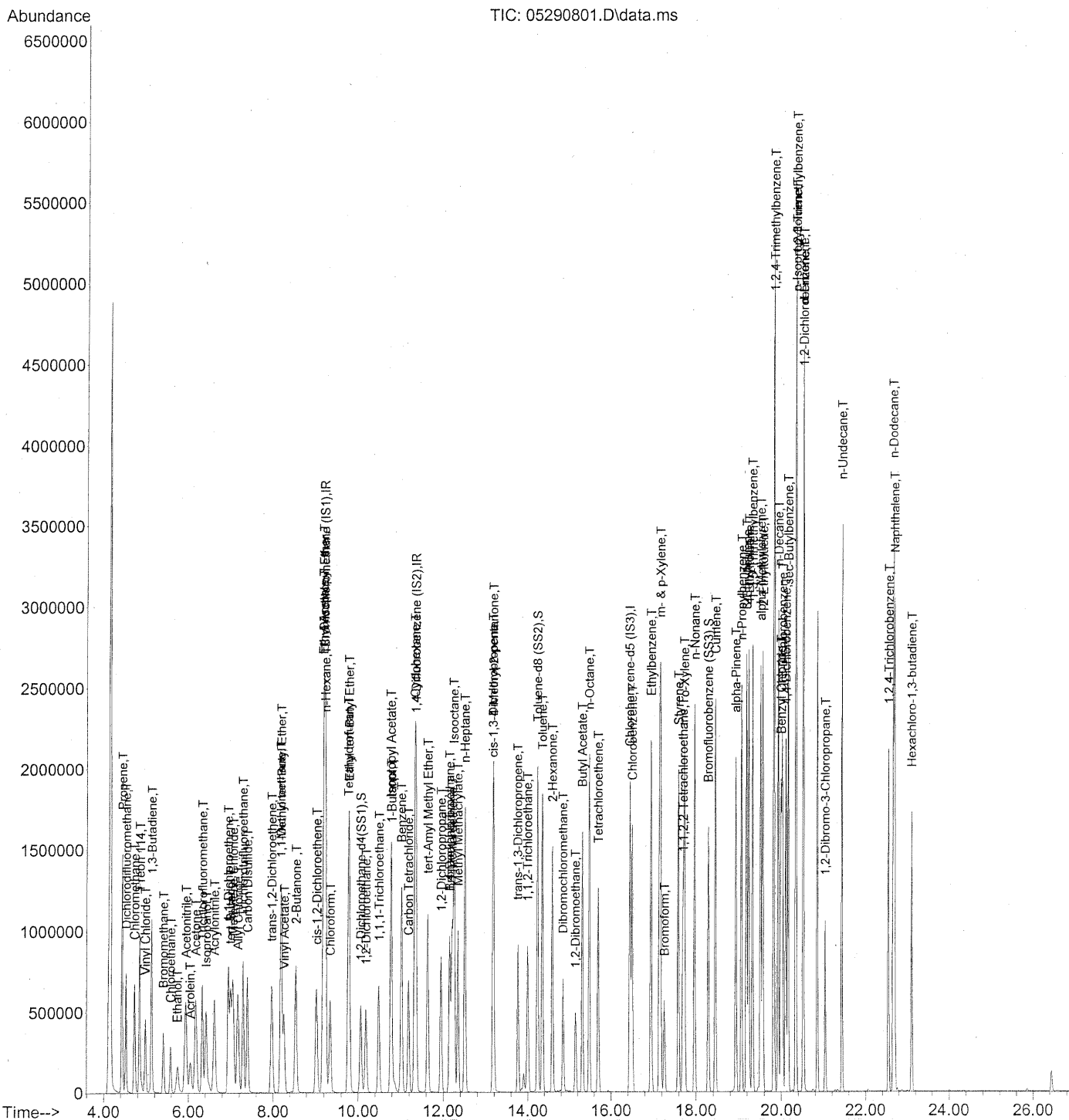
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77 T	3-Ethyltoluene	3.764	3.103	17.6	95	-0.01
78 T	4-Ethyltoluene	3.396	2.780	18.1	94	-0.01
79 T	1,3,5-Trimethylbenzene	3.011	2.452	18.6	94	-0.01
80 T	alpha-Methylstyrene	1.693	1.501	11.3	94	-0.02
81 T	2-Ethyltoluene	3.649	3.050	16.4	94	-0.01
82 T	1,2,4-Trimethylbenzene	3.048	2.476	18.8	94	-0.01
83 T	n-Decane	2.158	1.832	15.1	94	-0.01
84 T	Benzyl Chloride	2.355	2.060	12.5	94	-0.02
85 T	1,3-Dichlorobenzene	1.931	1.587	17.8	95	-0.02
86 T	1,4-Dichlorobenzene	1.875	1.537	18.0	94	0.00
87 T	sec-Butylbenzene	3.954	3.312	16.2	94	0.00
88 T	p-Isopropyltoluene	3.455	2.919	15.5	94	-0.01
89 T	1,2,3-Trimethylbenzene	2.927	2.461	15.9	94	-0.01
90 T	1,2-Dichlorobenzene	1.773	1.455	17.9	94	-0.01
91 T	d-Limonene	0.939	0.824	12.2	94	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.570	0.521	8.6	94	-0.01
93 T	n-Undecane	2.263	1.965	13.2	93	0.00
94 T	1,2,4-Trichlorobenzene	0.321	0.277	13.7	93	0.00
95 T	Naphthalene	4.428	3.919	11.5	94	-0.01
96 T	n-Dodecane	2.205	1.976	10.4	93	0.00
97 T	Hexachloro-1,3-butadiene	0.533	0.452	15.2	94	0.00

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290801.D  
Acq On : 29 May 2008 8:31 am  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration





Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.22	130	383231	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.36	114	1598146	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	654560	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4(...)	10.06	65	545847	24.909	ng	-0.03
Spiked Amount			Recovery =	25.000		99.64%
57) Toluene-d8 (SS2)	14.24	98	1627294	24.114	ng	-0.01
Spiked Amount			Recovery =	25.000		96.44%
73) Bromofluorobenzene (SS3)	18.29	174	590823	26.333	ng	0.00
Spiked Amount			Recovery =	25.000		105.32%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	687469	23.174	ng	93
3) Dichlorodifluoromethane	4.53	85	759821	21.176	ng	98
4) Chloromethane	4.73	50	988637	21.929	ng	99
5) Freon 114	4.85	135	462612	23.068	ng	97
6) Vinyl Chloride	4.97	62	616225	21.463	ng	94
7) 1,3-Butadiene	5.12	54	637915	24.376	ng	# 85
8) Bromomethane	5.41	94	334076	22.573	ng	99
9) Chloroethane	5.58	64	316006	21.299	ng	95
10) Ethanol	5.74	45	411179m	20.428	ng	
11) Acetonitrile	5.95	41	1218994	21.010	ng	97
12) Acrolein	6.05	56	311741	21.480	ng	100
13) Acetone	6.18	58	443448	22.145	ng	# 78
14) Trichlorofluoromethane	6.33	101	742859	22.115	ng	100
15) Isopropanol	6.43	45	1307387m	21.675	ng	
16) Acrylonitrile	6.62	53	820680	22.548	ng	97
17) 1,1-Dichloroethene	6.94	96	383485	24.465	ng	92
18) tert-Butanol	6.99	59	1281030	22.779	ng	95
19) Methylene Chloride	7.05	84	362438	23.467	ng	# 40
20) Allyl Chloride	7.17	41	854223	23.994	ng	81
21) Trichlorotrifluoroethane	7.29	151	395904	24.256	ng	85
22) Carbon Disulfide	7.40	76	1361777	21.921	ng	100
23) trans-1,2-Dichloroethene	7.97	61	727728	23.571	ng	93
24) 1,1-Dichloroethane	8.18	63	792749	24.180	ng	94
25) Methyl tert-Butyl Ether	8.20	73	1137616	23.766	ng	79
26) Vinyl Acetate	8.27	86	73915	22.538	ng	# 32
27) 2-Butanone	8.55	72	250124	23.891	ng	# 16
28) cis-1,2-Dichloroethene	9.04	61	677286	23.853	ng	94
29) Diisopropyl Ether	9.20	87	310527	22.518	ng	# 31
30) Ethyl Acetate	9.19	61	207641	28.426	ng	85
31) n-Hexane	9.24	57	1035941	23.727	ng	92

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WA sbq/08

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	9.35	83	622711	27.536	ng	95
34) Tetrahydrofuran	9.77	72	244547	24.851	ng #	46
35) Ethyl tert-Butyl Ether	9.79	87	465973	23.086	ng #	76
36) 1,2-Dichloroethane	10.19	62	616173	23.765	ng	96
38) 1,1,1-Trichloroethane	10.50	97	636723	23.401	ng	93
39) Isopropyl Acetate	10.78	61	307861	22.784	ng #	67
40) 1-Butanol	10.79	56	514453	19.558	ng	99
41) Benzene	11.02	78	1446523	21.467	ng	99
42) Carbon Tetrachloride	11.19	117	650173	23.525	ng	99
43) Cyclohexane	11.34	84	575655	21.851	ng #	45
44) tert-Amyl Methyl Ether	11.64	73	1022680	22.794	ng	77
45) 1,2-Dichloropropane	11.95	63	464677	23.353	ng	97
46) Bromodichloromethane	12.15	83	498271	25.157	ng	93
47) Trichloroethene	12.21	130	513118	24.465	ng	99
48) 1,4-Dioxane	12.15	88	320179	25.436	ng #	68
49) Isooctane	12.26	57	2429063	22.549	ng	92
50) Methyl Methacrylate	12.35	100	179726	24.860	ng #	69
51) n-Heptane	12.52	71	385033	23.939	ng #	49
52) cis-1,3-Dichloropropene	13.17	75	579364	23.102	ng	99
53) 4-Methyl-2-pentanone	13.19	58	541832	23.128	ng	85
54) trans-1,3-Dichloropropene	13.77	75	595565	25.763	ng	98
55) 1,1,2-Trichloroethane	14.00	97	390166	23.807	ng	88
58) Toluene	14.35	91	1662567	21.720	ng	98
59) 2-Hexanone	14.59	43	1476427	20.423	ng	99
60) Dibromochloromethane	14.85	129	531570	23.532	ng	100
61) 1,2-Dibromoethane	15.15	107	473164	22.515	ng	98
62) Butyl Acetate	15.31	43	1611959	22.176	ng	92
63) n-Octane	15.48	57	503609	21.758	ng	95
64) Tetrachloroethene	15.70	166	502662	22.201	ng	99
65) Chlorobenzene	16.50	112	1212003	22.220	ng	100
66) Ethylbenzene	16.94	91	1920277	22.070	ng	93
67) m- & p-Xylene	17.16	91	3004438	52.118	ng	92
68) Bromoform	17.26	173	377830	28.810	ng	100
69) Styrene	17.59	104	1276890	22.929	ng	94
70) o-Xylene	17.73	91	1520018	24.635	ng	93
71) n-Nonane	17.97	43	1292077	21.220	ng	94
72) 1,1,2,2-Tetrachloroethane	17.70	83	641207	25.096	ng	93
74) Cumene	18.45	105	2004012	22.310	ng	94
75) alpha-Pinene	18.93	93	962409	22.836	ng	92
76) n-Propylbenzene	19.07	91	2282842	21.870	ng	92
77) 3-Ethyltoluene	19.19	105	2071534	21.022	ng	94
78) 4-Ethyltoluene	19.24	105	2023265	22.757	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	1733282	21.989	ng	91

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Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:58:34 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration

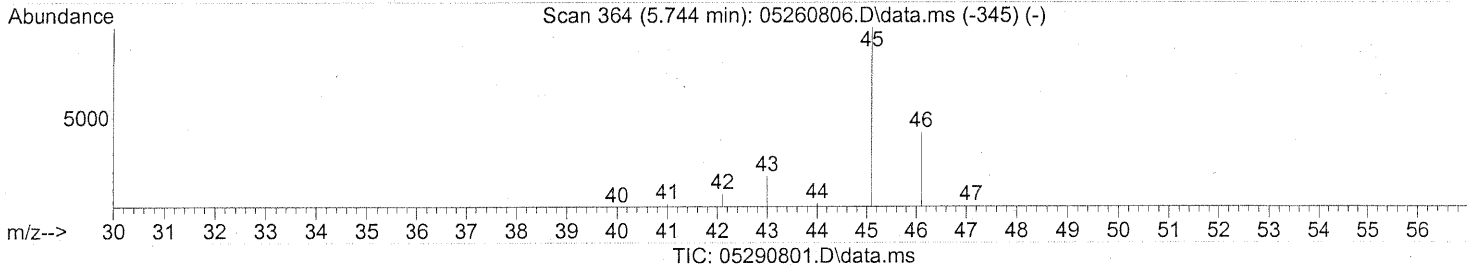
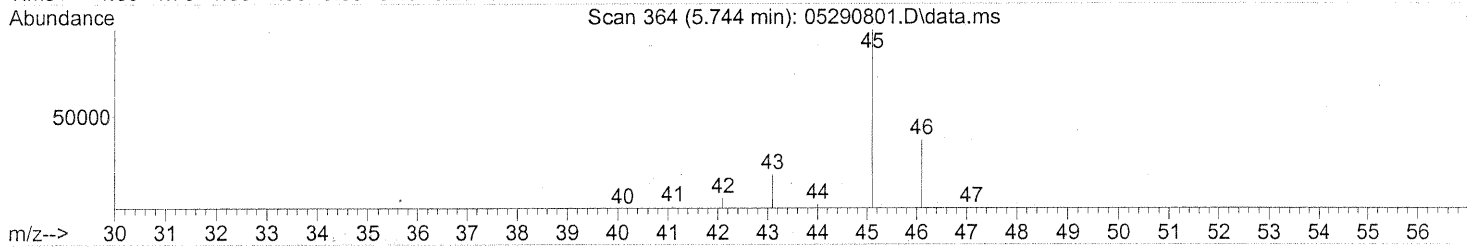
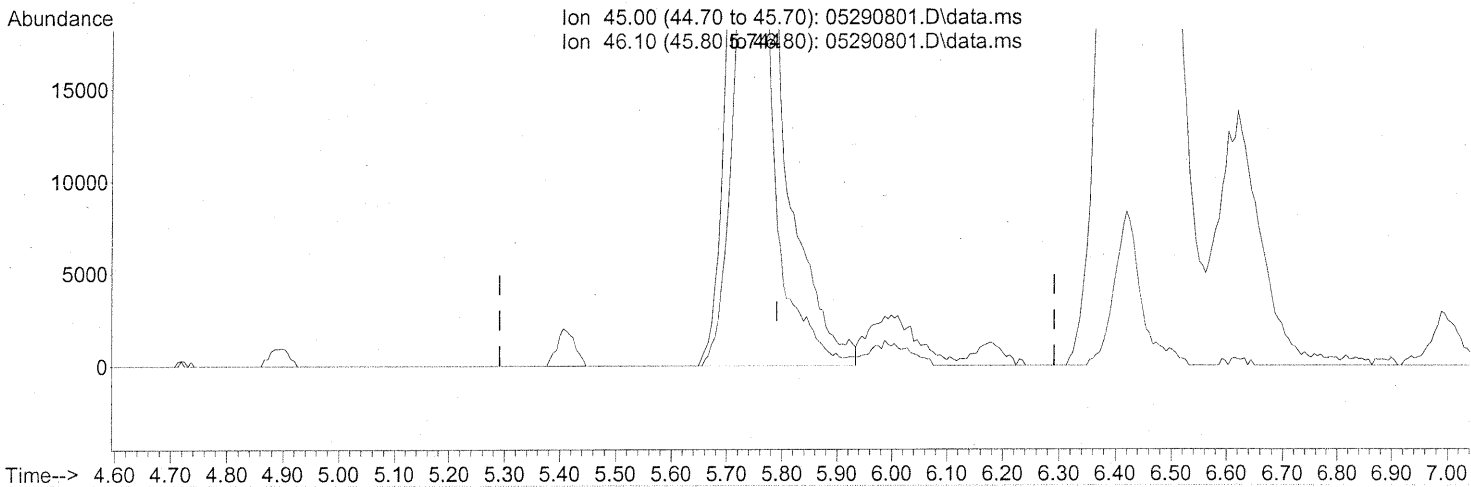
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	1002152	22.610	ng	97
81) 2-Ethyltoluene	19.57	105	1980702	20.730	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	1782483	22.335	ng	92
83) n-Decane	19.93	57	1246950	22.071	ng	80
84) Benzyl Chloride	19.99	91	1445266	23.439	ng	89
85) 1,3-Dichlorobenzene	20.02	146	1100951	21.773	ng	99
86) 1,4-Dichlorobenzene	20.11	146	1106921	22.550	ng	98
87) sec-Butylbenzene	20.16	105	2324239	22.449	ng	95
88) p-Isopropyltoluene	20.34	119	2254700	24.927	ng	93
89) 1,2,3-Trimethylbenzene	20.35	105	1772160	23.128	ng	88
90) 1,2-Dichlorobenzene	20.52	146	1028515	22.158	ng	100
91) d-Limonene	20.52	68	571663	23.245	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	354510	23.761	ng	82
93) n-Undecane	21.43	57	1353379	22.841	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	202790	24.152	ng	# 85
95) Naphthalene	22.69	128	2698867	23.277	ng	99
96) n-Dodecane	22.66	57	1370744	23.743	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	328985	23.583	ng	100

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

Quantitation Report (Qual)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:56:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.744min (-0.047) 19.61ng

response 394799

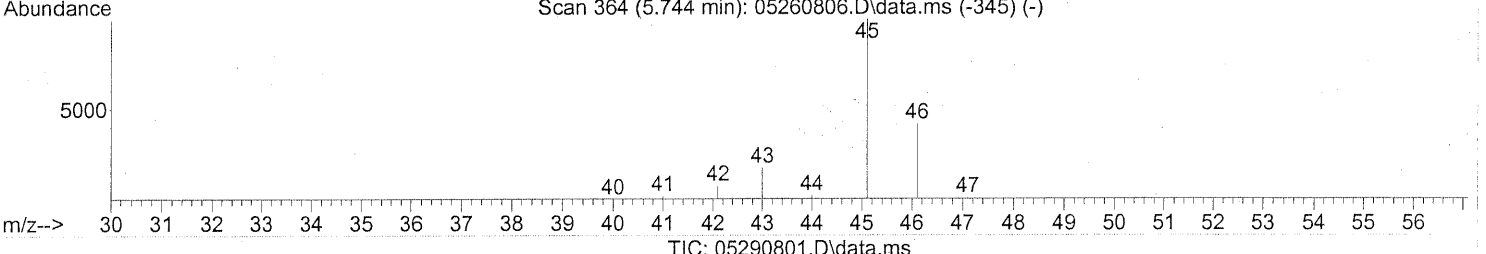
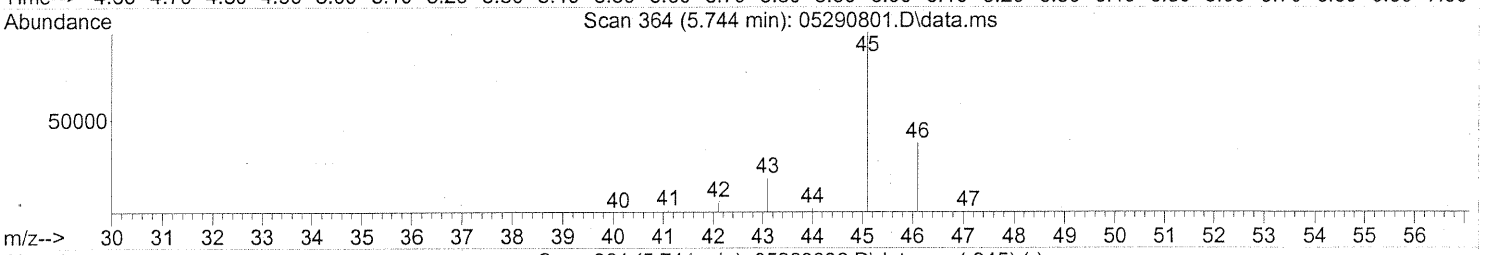
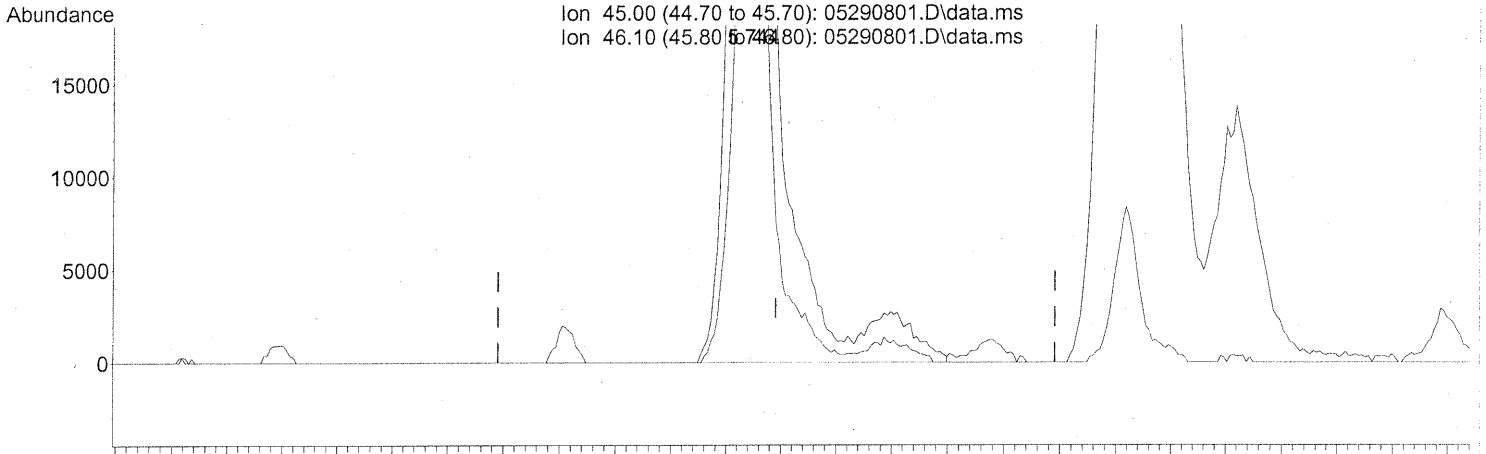
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.12
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:56:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.744min (-0.047) 20.43ng m

response 411179

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.52
0.00	0.00	0.00
0.00	0.00	0.00

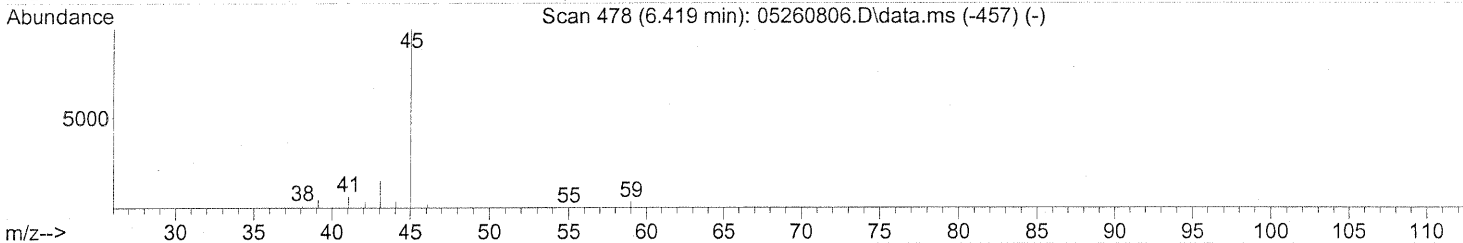
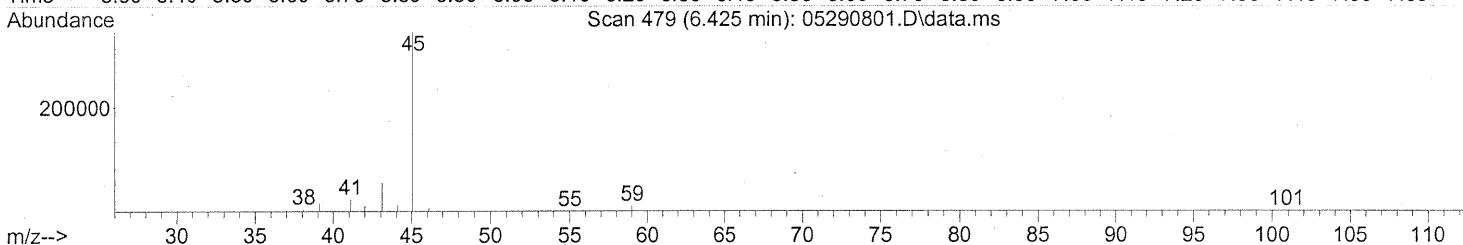
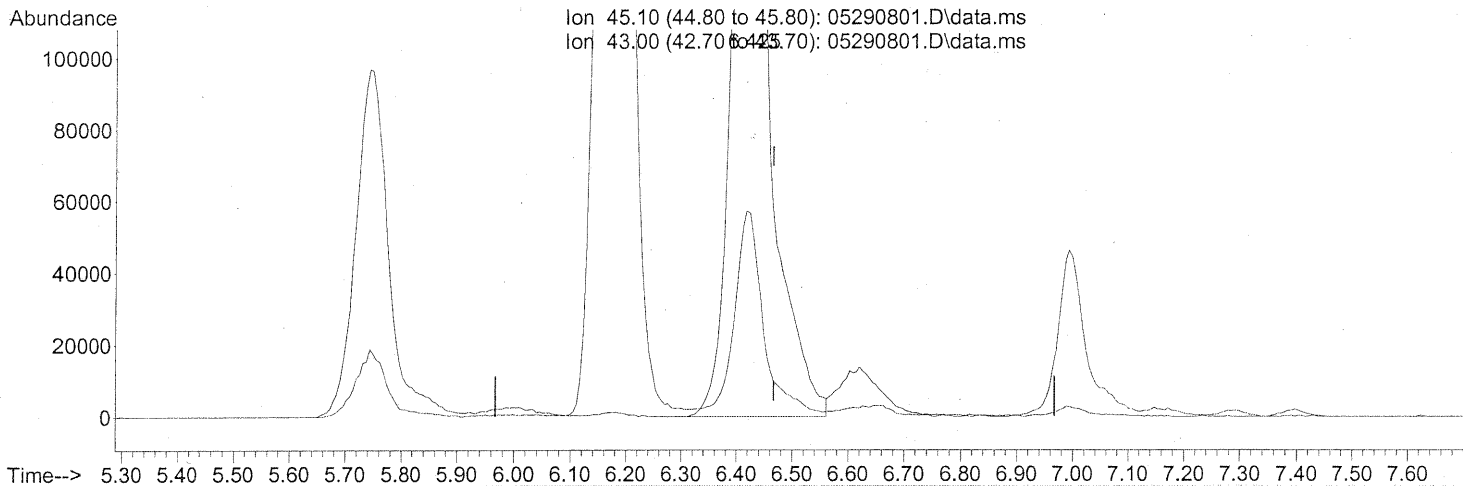
*int. whole peaks*  
*WA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:56:56 2008  
 Quant Method : J:\MS16\METHODS\R16052608.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 27 08:50:43 2008  
 Response via : Initial Calibration



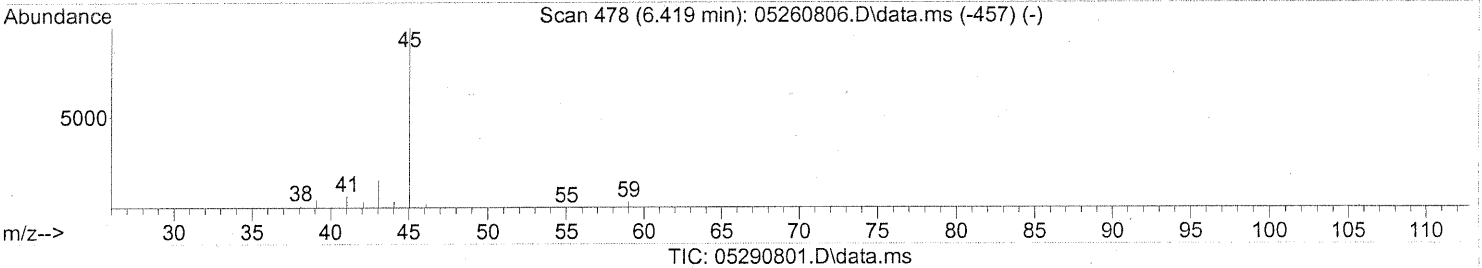
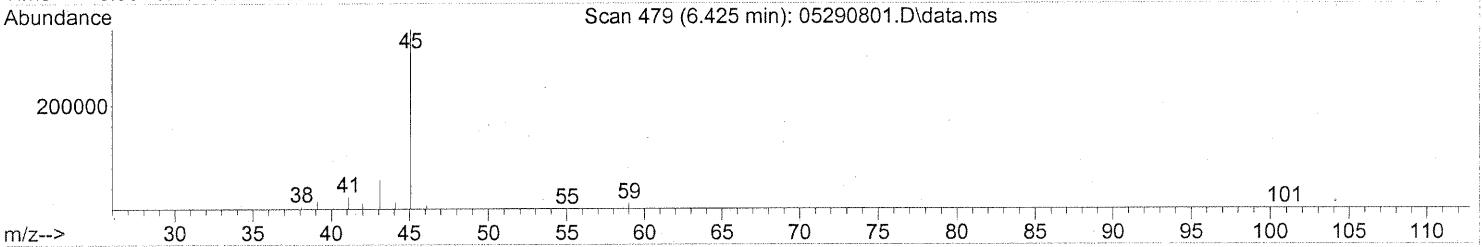
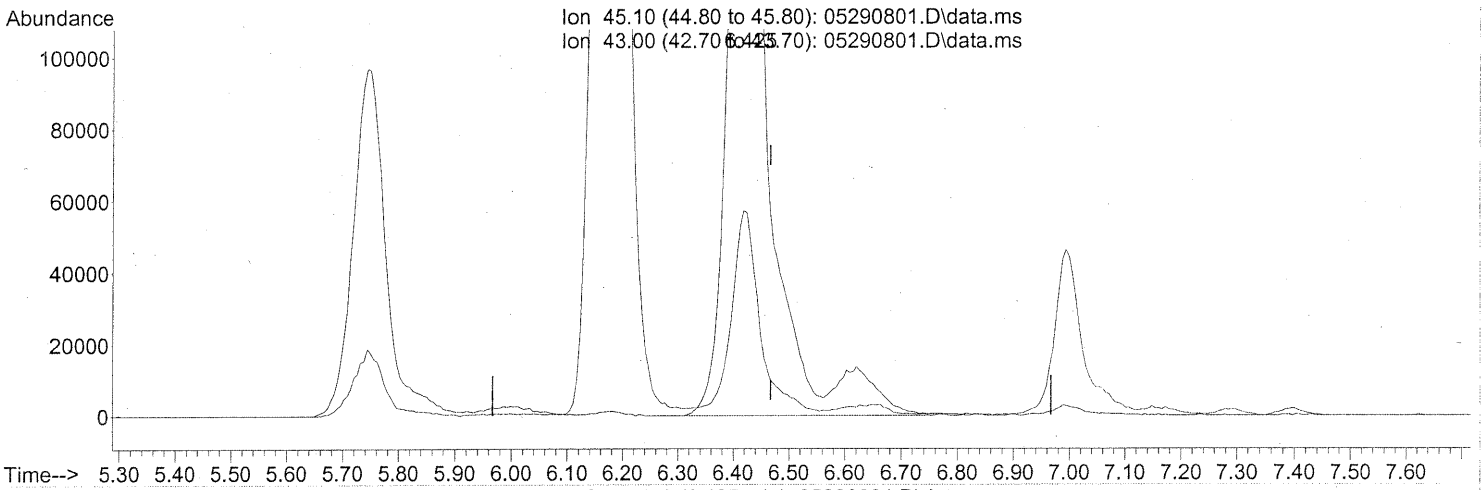
(15) Isopropanol (T)  
 6.425min (-0.042) 20.52ng  
 response 1237488

ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.87
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\29\  
Data File : 05290801.D  
Acq On : 29 May 2008 8:31 am  
Operator : WA  
Sample : 25ng TO-15 CCV STD  
Misc : S20-05120801/S20-05210808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 09:56:56 2008  
Quant Method : J:\MS16\METHODS\R16052608.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 27 08:50:43 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

6.425min (-0.042) 21.67ng m

response 1307387

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.97
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*WA 5/29/08*

*WA 5/29/08*

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:53 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
1 IR	Bromochloromethane (IS1)	1.000	1.000	0.0	97	-0.02
2 S	1,2-Dichloroethane-d4 (SS1)	1.430	1.424	0.4	98	-0.03
3 IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	98	-0.02
4 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	100	-0.01
5 S	Toluene-d8 (SS2)	2.577	2.486	3.5	98	-0.01
6 S	Bromofluorobenzene (SS3)	0.857	0.903	-5.4	104	0.00
7	tert-Butylbenzene	3.113	2.576	17.3	94	-0.01
8	n-Butylbenzene	2.965	2.493	15.9	95	-0.01

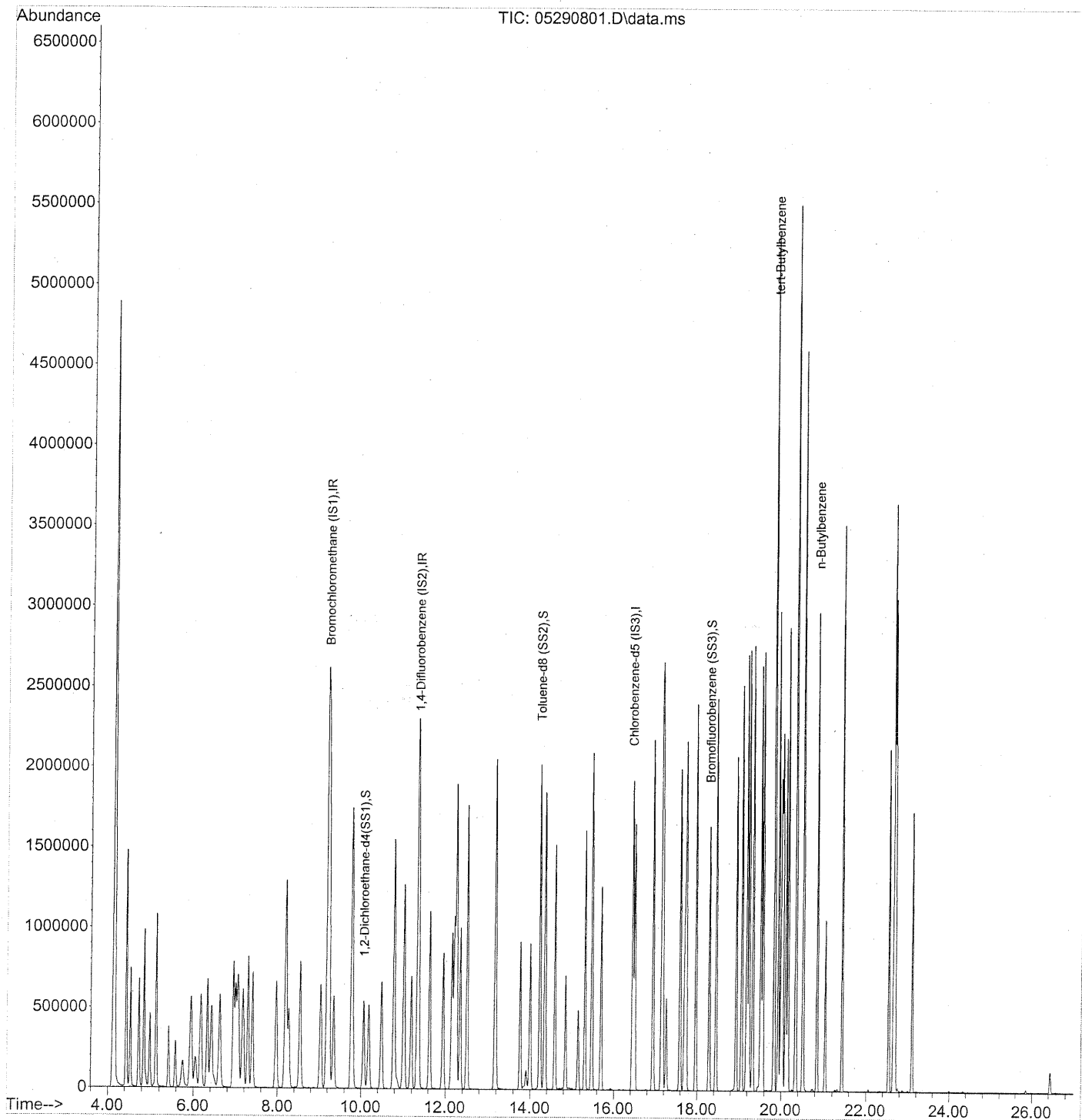
(#) = Out of Range

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



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:53 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration



Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 04 14:39:53 2008  
 Quant Method : J:\MS16\METHODS\S16052608.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Wed Jun 04 14:30:18 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.22	130	383231	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	11.36	114	1598146	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	16.45	82	654560	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	10.06	65	545847	24.909	ng	-0.03
Spiked Amount	25.000		Recovery	=	99.64%	
5) Toluene-d8 (SS2)	14.24	98	1627294	24.114	ng	-0.01
Spiked Amount	25.000		Recovery	=	96.44%	
6) Bromofluorobenzene (SS3)	18.29	174	590823	26.333	ng	0.00
Spiked Amount	25.000		Recovery	=	105.32%	
Target Compounds						
7) tert-Butylbenzene	19.83	119	1753392	21.514	ng	Qvalue 97
8) n-Butylbenzene	20.84	91	1749570	22.536	ng	# 94

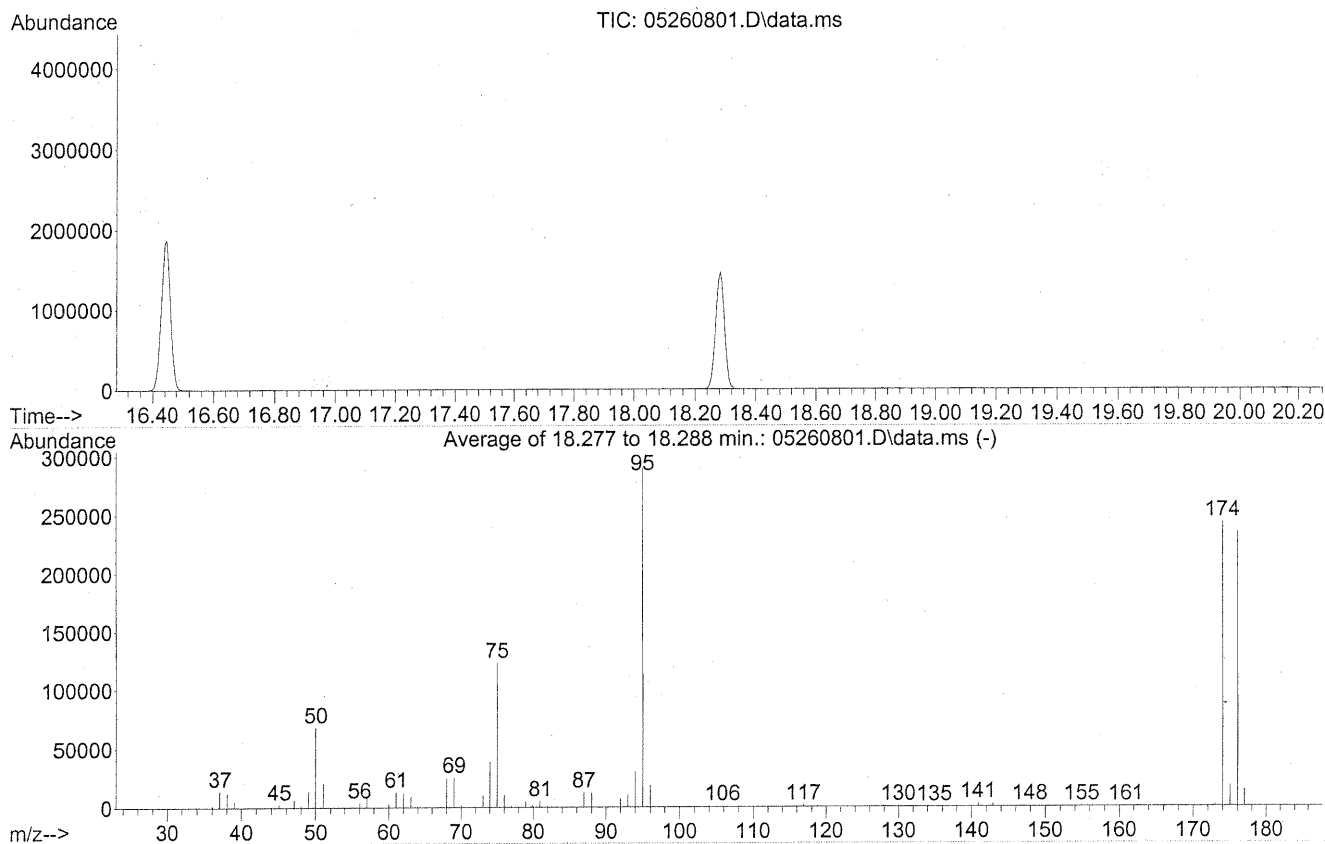
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS16\DATA\2008\_05\26\  
 Data File : 05260801.D  
 Acq On : 26 May 2008 3:58 pm  
 Operator : WA  
 Sample : 25ng BFB Tune  
 Misc : S20-05120801  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:50:43 2008



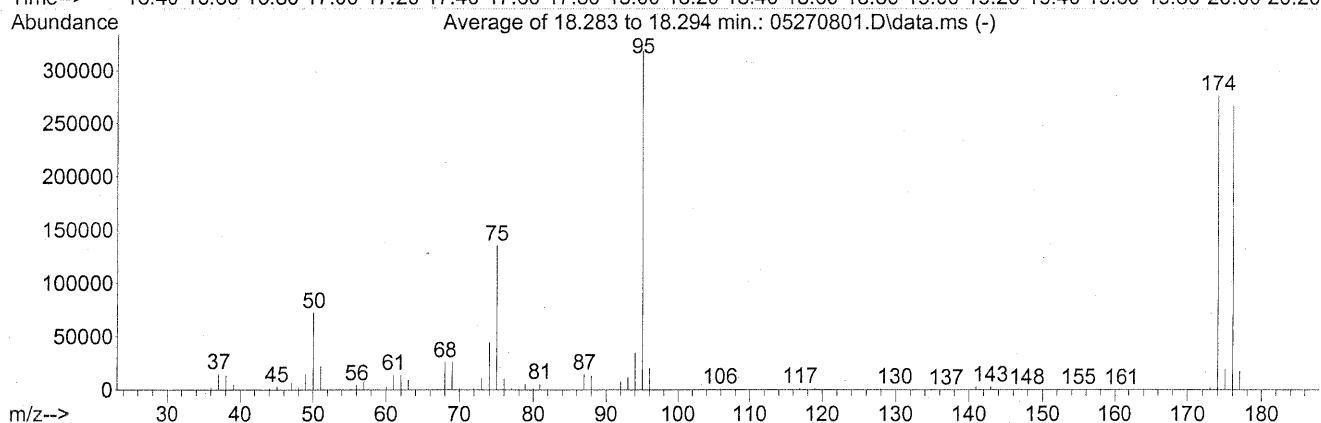
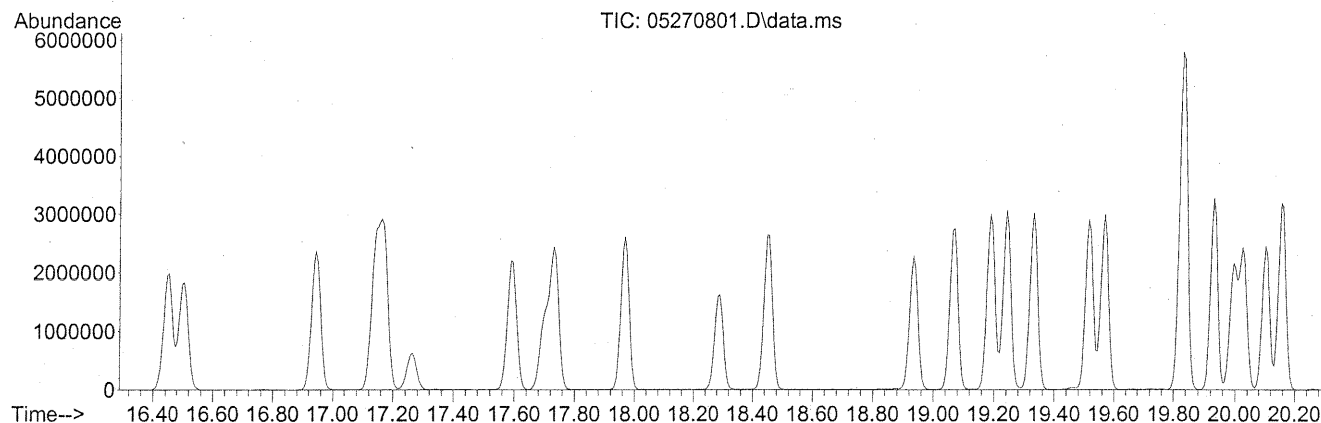
AutoFind: Scans 2479, 2480, 2481; Background Corrected with Scan 2469

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.5	68147	PASS
75	95	30	66	42.6	123432	PASS
95	95	100	100	100.0	289984	PASS
96	95	5	9	6.5	18763	PASS
173	174	0.00	2	0.8	2059	PASS
174	95	50	120	83.9	243179	PASS
175	174	4	9	7.4	18091	PASS
176	174	93	101	96.6	234901	PASS
177	176	5	9	6.2	14675	PASS

Data Path : J:\MS16\DATA\2008\_05\27\  
 Data File : 05270801.D  
 Acq On : 27 May 2008 10:18 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:50:43 2008



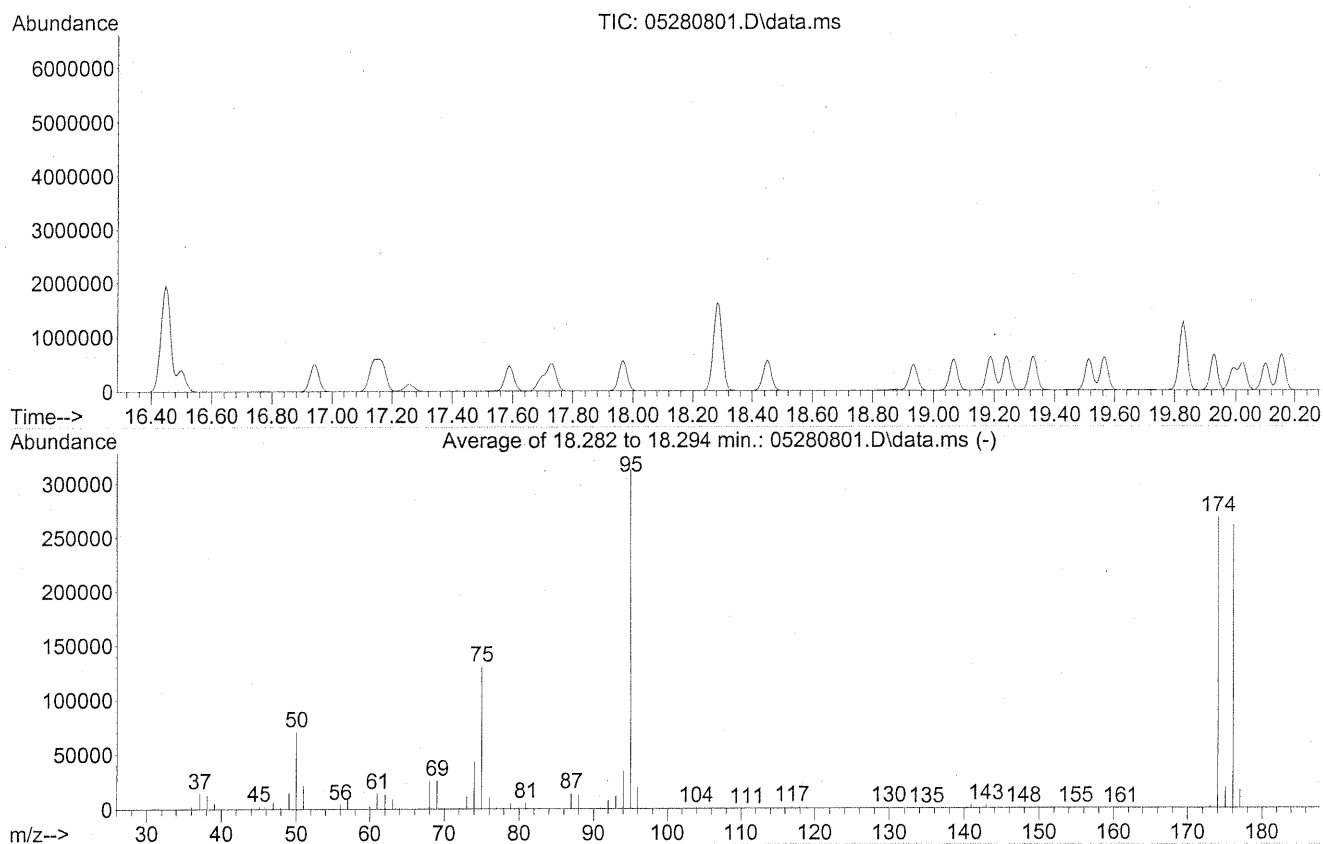
AutoFind: Scans 2480, 2481, 2482; Background Corrected with Scan 2470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.8	72669	PASS
75	95	30	66	42.5	135389	PASS
95	95	100	100	100.0	318891	PASS
96	95	5	9	6.5	20685	PASS
173	174	0.00	2	0.8	2302	PASS
174	95	50	120	86.8	276821	PASS
175	174	4	9	7.1	19755	PASS
176	174	93	101	96.5	267029	PASS
177	176	5	9	6.6	17677	PASS

Data Path : J:\MS16\DATA\2008\_05\28\  
 Data File : 05280801.D  
 Acq On : 28 May 2008 8:29 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:50:43 2008



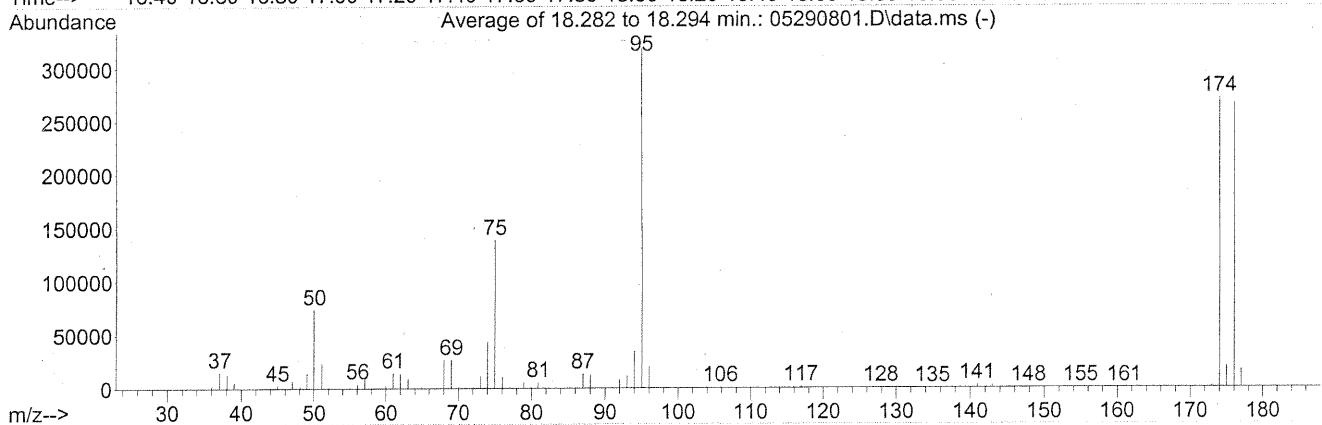
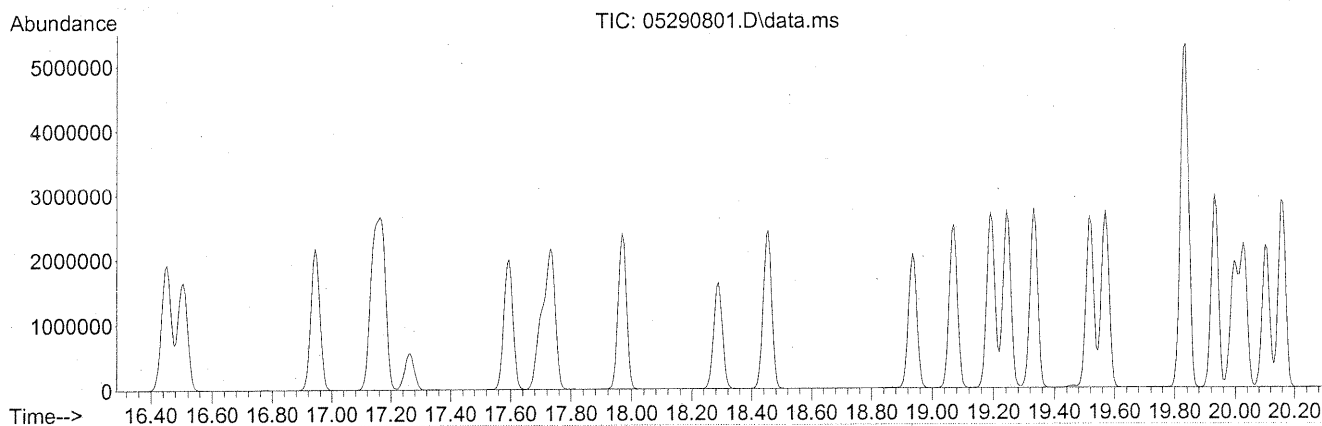
AutoFind: Scans 2480, 2481, 2482; Background Corrected with Scan 2470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.7	71045	PASS
75	95	30	66	41.7	130461	PASS
95	95	100	100	100.0	312661	PASS
96	95	5	9	6.3	19791	PASS
173	174	0.00	2	0.9	2304	PASS
174	95	50	120	85.8	268181	PASS
175	174	4	9	7.1	19056	PASS
176	174	93	101	97.3	260949	PASS
177	176	5	9	6.6	17105	PASS

Data Path : J:\MS16\DATA\2008\_05\29\  
 Data File : 05290801.D  
 Acq On : 29 May 2008 8:31 am  
 Operator : WA  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-05120801/S20-05210808  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16052608.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 27 08:50:43 2008



AutoFind: Scans 2480, 2481, 2482; Background Corrected with Scan 2470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.3	74363	PASS
75	95	30	66	43.6	139123	PASS
95	95	100	100	100.0	318848	PASS
96	95	5	9	6.3	20203	PASS
173	174	0.00	2	0.8	2071	PASS
174	95	50	120	85.3	271915	PASS
175	174	4	9	7.4	20013	PASS
176	174	93	101	98.4	267669	PASS
177	176	5	9	6.4	17219	PASS

## RUN LOGS



	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/26/08 15:58	05260801.D	25ng BFB Tune	S20-05120801	WA	1	Pass
2	05/26/08 16:36	05260802.D	0.1ng TO-15 ICAL STD	S20-05120801/S20-05210811	WA	16	Good ICAL?
3	05/26/08 17:14	05260803.D	0.5ng TO-15 ICAL STD	S20-05120801/S20-05210808	WA	1	0.1ng -> 100 ng except
4	05/26/08 17:51	05260804.D	1.0ng TO-15 ICAL STD	S20-05120801/S20-05210808	WA	1	Acetonitrile, Acrolein, PA VA, CS, EA, H <sub>2</sub> O, Methoxy
5	05/26/08 18:36	05260805.D	5.0ng TO-15 ICAL STD	S20-05120801/S20-05210808	WA	1	0.5 -> 100ng
6	05/26/08 19:14	05260806.D	25ng TO-15 ICAL STD	S20-05120801/S20-05210802	WA	1	Acetone 1.0ng -> 100ng
7	05/26/08 19:52	05260807.D	50ng TO-15 ICAL STD	S20-05120801/S20-05210802	WA	1	
8	05/26/08 20:30	05260808.D	100ng TO-15 ICAL STD	S20-05120801/S20-05210802	WA	1	
9	05/26/08 21:07	05260809.D	25ng TO-15 ICV STD	S20-05120801/S20-05220808	WA	3	failed, bad Std
10	05/27/08 9:24	05260810.D	25ng TO-15 ICV STD	S20-05120801/S20-05220809	WA	2	Passed all Cmpnts

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/27/08 10:18	05270801.D	25ng TO-15 CCV STD	S20-05120801/S20-05210802	WA	1	
2	05/27/08 10:56	05270802.D	0.5ng RL STD	S20-05120801/S20-05210808	WA	1	
3	05/27/08 11:44	05270803.D	TO-15 Method Blank	S20-05120801	WA	1	
4	05/27/08 12:22	05270804.D	25ng TO-15 LCS STD	S20-05120801/S20-05220809	WA	2	
5	05/27/08 13:35	05270805.D	25ng TO-15 LCSD STD	S20-05120801/S20-05220809	WA	2	
6	05/27/08 15:43	05270806.D	P0801507-001 (10ml)	ENSR SG77B-05 (-3.0, 3.5)	WA	4	
7	05/27/08 16:33	05270807.D	P0801507-001 (10ml)	ENSR SG77B-05 (-3.0, 3.5)	WA	4	
8	05/27/08 17:18	05270808.D	P0801507-001 Dil (2ml)	ENSR SG77B-05 (-3.0, 3.5)	WA	1	
9	05/27/08 17:56	05270809.D	P0801507-002 (25ml)	ENSR SG30B-05 (-3.0, 3.5)	WA	13	
10	05/27/08 18:34	05270810.D	P0801507-004 (20ml)	ENSR SG59B-05 (-4.2, 3.5)	WA	7	
11	05/27/08 19:12	05270811.D	P0801507-005 Dil (20ml)	ENSR SG31B-05 (-3.2, 3.5)	WA	3	
12	05/27/08 19:49	05270812.D	P0801507-008 (50ml)	ENSR SG56B-05 (-3.8, 3.5)	WA	4	
13	05/27/08 20:27	05270813.D	P0801507-008 Dup (50ml)	ENSR SG56B-05 (-3.8, 3.5)	WA	4	
14	05/27/08 21:04	05270814.D	P0801507-009 (20ml) Dil	ENSR SG56B-05D (-3.8, 3.5)	WA	5	
15	05/27/08 21:42	05270815.D	P0801507-010 (25ml)	ENSR SG55B-05 (-3.8, 3.8)	WA	6	
16	05/27/08 22:19	05270816.D	P0801507-011 (20ml)	ENSR SG57B-05 (-3.3, 3.6)	WA	8	
17	05/27/08 22:57	05270817.D	P0801507-012 (250ml)	ENSR SG13B-05 (-3.3, 3.6)	WA	9	
18	05/27/08 23:35	05270818.D	P0801507-013 (500ml)	ENSR SG15B-05 (-3.5, 3.5)	WA	10	
19	05/28/08 0:18	05270819.D	P0801507-014 (1000ml)	ENSR SG14B-05 (-3.5, 3.6)	WA	11	
20	05/28/08 1:01	05270820.D	P0801507-015 (1000ml)	ENSR SG06B-05 (-2.9, 3.5)	WA	12	
21	05/28/08 1:39	05270821.D	P0801507-008 Dil (20ml)	ENSR SG56B-05 (-3.8, 3.5)	WA	4	
22	05/28/08 2:17	05270822.D	P0801507-008 Dup Dil (20ml)	ENSR SG56B-05 (-3.8, 3.5)	WA	4	
23	05/28/08 5:10	05270823.D	P0801507-012 Dil (50ml)	ENSR SG13B-05 (-3.3, 3.6)	WA	9	
24	05/28/08 5:48	05270824.D	P0801507-013 Dil (50ml)	ENSR SG15B-05 (-3.5, 3.5)	WA	10	
25	05/28/08 6:26	05270825.D	P0801507-014 Dil (100ml)	ENSR SG14B-05 (-3.5, 3.6)	WA	11	
26	05/28/08 7:13	05270826.D	CAS CAN QC B# 1155A (400ml)	1SC00602	WA	12	
27	05/28/08 7:51	05270827.D	CAS CAN QC B# 1155B (400ml)	1SC00234	WA	13	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment		Date
1	05/28/08 8:29	05280801.D	5ng TO-15 CCV STD	S20-05120801/S20-05210808	WA	1		1	05/30/08
2	05/28/08 9:12	05280802.D	TO-15 Method Blank	S20-05120801	WA	14		2	05/30/08
3	05/28/08 10:19	05280803.D	TO-15 Method Blank	S20-05120801	WA	1		3	05/30/08
4	05/28/08 11:24	05280804.D	P0801507-002 Dil (2ml)	ENSR SG30B-05 (-3.0, 3.5)	WA	1		4	05/30/08
5	05/28/08 12:03	05280805.D	P0801507-002 Dil (2ml)	ENSR SG30B-05 (-3.0, 3.5)	WA	1		5	05/30/08
6	05/28/08 12:43	05280806.D	P0801507-004 Dil (2ml)	ENSR SG59B-05 (-4.2, 3.5)	WA	1		6	05/30/08
7	05/28/08 13:21	05280807.D	P0801507-005 (100ml)	ENSR SG31B-05 (-3.2, 3.5)	WA	3		7	05/30/08
8	05/28/08 13:58	05280808.D	P0801507-009 (150ml)	ENSR SG56B-05D (-3.8, 3.5)	WA	5		8	05/30/08
9	05/28/08 14:59	05280809.D	P0801507-010 Dil (5.0ml)	ENSR SG55B-05D (-3.8, 3.8)	WA	1		9	05/30/08
10	05/28/08 15:45	05280810.D	P0801507-011 Dil (2.0ml)	ENSR SG57B-05D (-3.3, 3.6)	WA	1		10	05/30/08
11	05/28/08 16:35	05280811.D	P0801507-003 (10ml)	ENSR SG55B-05D (-3.8, 3.8) <i>on 6/15/08</i>	WA	1		11	05/30/08
12	05/28/08 17:12	05280812.D	P0801507-006 (5ml)	ENSR SG60B-05D (-3.7, 3.5) <i>on 6/15/08</i>	WA	1		12	05/30/08
13	05/28/08 17:50	05280813.D	P0801507-007 (10ml)	ENSR SG580B-05 (-3.9, 3.7)	WA	1		13	05/30/08
14	05/28/08 18:28	05280814.D	25ng TO-15 LCS	S20-05120801/S20-05220809	WA	2		14	05/30/08
15	05/28/08 19:11	05280815.D	P0801572-001 (1000ml)	[REDACTED]	WA	6		15	05/30/08
16	05/28/08 19:54	05280816.D	P0801572-001 Dup (1000ml)	[REDACTED]	WA	6		16	05/30/08
17	05/28/08 20:37	05280817.D	P0801572-002 (1000ml)	[REDACTED]	WA	7		17	05/30/08
18	05/29/08 6:22	05280818.D	25ng TO-15 LCS	S20-05120801/S20-05220809	WA	2		18	05/30/08
19	05/29/08 7:06	05280819.D	P0801507-003 Dil (1.0ml)	ENSR SG55B-05D (-3.8, 3.8)	WA	1		19	05/30/08
20	05/29/08 7:44	05280820.D	P0801507-006 Dil (1.0ml)	ENSR SG60B-05D (-3.7, 3.5)	WA	1		20	05/30/08

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment		Date
1	05/29/08 8:31	05290801.D	25ng TO-15 CCV STD	S20-05120801/S20-05210808	WA	1		21	05/31/08
2	05/29/08 9:14	05290802.D	TO-15 Method Blank	S20-05120801	WA	1		22	05/31/08
3	05/29/08 9:52	05290803.D	25ng TO-15 LCS	S20-05120801/S20-05220809	WA	2		23	05/31/08
4	05/29/08 10:34	05290804.D	TO-15 Method Blank	S20-05120801	WA	4		24	05/31/08
5	05/29/08 11:32	05290805.D	P0801507-003 Dil (1.0ml)	ENSR SG29B-05 (-3.7, 3.5)	WA	1		25	05/31/08
6	05/29/08 12:19	05290806.D	P0801507-007 Dil (2.0ml)	ENSR SG58B-05 (-3.9, 3.7)	WA	1		26	05/31/08
7	05/29/08 12:56	05290807.D	P0801507-007 (15ml)	ENSR SG58B-05 (-3.9, 3.7)	WA	1		27	05/31/08
8	05/29/08 13:34	05290808.D	25ng TO-15 LCS	S20-05120801/S20-05220809	WA	2		28	05/31/08
9	05/29/08 14:36	05290809.D	25ng TO-15 LCS	S20-05120801/S20-05220809	WA	2		29	05/31/08
10	05/29/08 15:41	05290810.D	P0801599-001 (0.2ml)	[REDACTED]	WA	1		30	05/31/08
11	05/29/08 16:18	05290811.D	P0801599-002 (0.2ml)	[REDACTED]	WA	1		31	05/31/08
12	05/29/08 16:56	05290812.D	P0801599-001 (0.5ml)	[REDACTED]	WA	1			
13	05/29/08 17:48	05290813.D	Blank		WA	1			
14	05/29/08 18:26	05290814.D	P0801599-002 (100ml)	[REDACTED]	WA	8			
15	05/29/08 19:04	05290815.D	P0801522-001 (100ml)	[REDACTED]	WA	5			
16	05/29/08 19:41	05290816.D	P0801522-002 (100ml)	[REDACTED]	WA	6			
17	05/29/08 20:19	05290817.D	P0801522-014 Dil (100ml)	[REDACTED]	WA	7			
18	05/29/08 21:02	05290818.D	P0801522-012 (1000ml)	[REDACTED]	WA	5			
19	05/29/08 21:45	05290819.D	P0801522-012 Dup (1000ml)	[REDACTED]	WA	5			
20	05/29/08 22:29	05290820.D	P0801522-013 (1000ml)	[REDACTED]	WA	6			
21	05/29/08 23:12	05290821.D	P0801522-014 (1000ml)	[REDACTED]	WA	7			