

## LABORATORY REPORT

June 6, 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 16, 2008. For your reference, these analyses have been assigned our service request number P0801442.

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 **1215** 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 Horiuchi  
Project Manager

Page  
1 of **1215**

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

CAS Project No: P0801442

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## CASE NARRATIVE

The samples were received intact under chain of custody on May 16, 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 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 lower control criterion was exceeded for vinyl acetate and allyl chloride in the Continuing Calibration Verification (CCV) analyzed on May 21, 2008 and May 22, 2008 respectively. However, the reported sample result(s) associated with the CCV in question were for dilutions of other compounds; therefore, the results were not affected. No corrective action was necessary.

The upper control criterion was exceeded for 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene and hexachlorobutadiene in the Continuing Calibration Verification (CCV) analyzed on May 21, 2008 and hexachlorobutadiene on May 22, 2008. However, the reported sample result(s) associated with the CCV in question were for dilutions of other compounds; therefore, the results were not affected. No corrective action was necessary.

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: P0801442

Project: Soil Gas Sampling 04020-023-4311

### Detailed Sample Information

CAS Sample ID	Client Sample ID	Container Type	P1 (Hg)	P1 (psig)	P1 (Hg)	P2 (psig)	P2 (Hg)	Cont ID	Order #	FC ID	Order #
P0801442-001.01	SG73B-05	6.0 L-Summa Canister Source	-6.9	-3.4	3.6			SC00057	8616	OA00078	8616
P0801442-002.01	SG39B-05	6.0 L-Summa Canister Source	-7.2	-3.5	3.6			SC00223	8616	OA00034	8616
P0801442-003.01	SG37B-20	6.0 L-Summa Canister Source	-6.3	-3.1	3.6			SC00411	8616	OA00040	8616
P0801442-004.01	SG36B-20	6.0 L-Summa Canister Source	-6.1	-3.0	3.5			SC00910	8616	OA00077	8616
P0801442-005.01	SG44B-05	6.0 L-Summa Canister Source	-6.8	-3.3	3.8			SC00868	8616	OA00033	8616
P0801442-006.01	SG88B-05	6.0 L-Summa Canister Source	-7.6	-3.7	3.7			SC00796	8616	OA00021	8616
P0801442-007.01	SG72B-05	6.0 L-Summa Canister Source	-6.5	-3.2	3.5			SC00329	8616	OA00565	8616
P0801442-008.01	SG70B-05	6.0 L-Summa Canister Source	-6.7	-3.3	3.5			SC00072	8753	OA00566	8753
P0801442-009.01	SG71B-05	6.0 L-Summa Canister Source	-7.0	-3.4	3.5			SC00571	8753	OA00284	8616
P0801442-010.01	SG65B-05	6.0 L-Summa Canister Source	-4.7	-2.3	3.5			SC00201	8616	OA00090	8616
P0801442-011.01	SG65B-05D	6.0 L-Summa Canister Source	-4.4	-2.2	3.5			SC00420	8616		
P0801442-012.01	SG84B-05	6.0 L-Summa Canister Source	-5.6	-2.8	3.5			SC00886	8753	OA00663	8616
P0801442-013.01	SG85B-05	6.0 L-Summa Canister Source	-6.2	-3.0	3.5			SC00280	8753	OA00089	8753
P0801442-014.01	SG35B-05	6.0 L-Summa Canister Source	-6.8	-3.3	3.5			SC00693	8753	OA00569	8753
P0801442-015.01	SG94B-05	6.0 L-Summa Canister Source	-10.0	-4.9	3.5			SC00640	8753	OA00761	8753
P0801442-016.01	SG95B-05	6.0 L-Summa Canister Source	-6.2	-3.0	3.5			SC00671	8753	OA00561	8753
P0801442-017.01	SG89B-05	6.0 L-Summa Canister Source	-6.6	-3.2	3.5			SC00634	8753	OA00762	8753
P0801442-018.01	SG75B-05	6.0 L-Summa Canister Source	-7.4	-3.6	3.5			SC00575	8753	OA00560	8753



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. **POS01442**

Company Name & Address (Reporting Information) <b>ENSR</b> 1220 Avenida Acaso Camarillo, CA 93012		Project Name <b>SOIL GAS SAMPLING</b>		CAS Contact <b>KELLY HORIMUCHI</b>		Comments e.g. Actual Preservative or specific instructions	
Project Manager <b>MIKE FLACK</b>		Project Number <b>04020-023-4311</b>		Analysis Method and/or Analytes <b>Helium</b>			
R.O. # / Billing Information		Sampler (Print & Sign) <b>CANDACE WEIR</b>		CAS Contact			
Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Sample Type (Air/Tuber/Solid)	Canister ID (Bar Code # - AC, SC, etc.)	Flow Controller (Bar Code - FC #)	Sample Volume
5673B-05	0-6.9	5/14/08	1457	Air	5C00057	0A00078	6L
5679B-05	0-7.2	5/14/08	1520	Air	5C00223	0A00034	6L
5677B-20	0-6.3	5/14/08	1700	Air	5C00441	0A00040	6L
5676B-20	0-6.1	5/14/08	1025	Air	5C00910	0A00077	6L
5674B-05	0-6.5	5/14/08	1230	Air	5C00888	0A00033	6L
5678B-05		5/14/08	1343	Air	5C00910		6L
5688B-05	0-7.1	5/14/08	1343	Air	5C00710	0A00021	6L
5672B-05	0-6.5	5/14/08	1402	Air	5C00329	0A00565	6L
5670B-05	0-6.7	5/15/08	0922	Air	5C00072	0A00566	6L
5671B-05	0-7.0	5/15/08	1030	Air	5C00571	0A00284	6L
5665B-05	0-4.7	5/15/08	0844	Air	5C00201	0A00090	6L
5665B-05D	0-4.4	5/15/08	0910	Air	5C00420	0A00090	6L
5684B-05	0-5.6	5/15/08	1047	Air	5C00886	0A00663	6L
5685B-05	0-6.2	5/15/08	1330	Air	5C00280	0A00089	6L

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

EDD required Yes / No  
 Type: \_\_\_\_\_ EDD Units: \_\_\_\_\_

Relinquished by: (Signature) **CANDACE WEIR** Date: **5/15/08** Time: **11:10**

Relinquished by: (Signature) **W. TAMURA** Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Project Requirements (MRLs, QAPP)



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

Client: ENSR

Work order: P0801442

Project: Soil Gas Sampling / 04020-023-4311

Sample(s) received on: 05/16/08

Date opened: 05/16/08

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.

- |  | <u>Yes</u>                          | <u>No</u>                           | <u>N/A</u>                          |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 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
P0801442-001.01	6.0 L Source Can					
P0801442-002.01	6.0 L Source Can					
P0801442-003.01	6.0 L Source Can					
P0801442-004.01	6.0 L Source Can					
P0801442-005.01	6.0 L Source Can					
P0801442-006.01	6.0 L Source Can					
P0801442-007.01	6.0 L Source Can					

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



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

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

CAS Project ID: P0801442

**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: 5/14 - 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/21/08

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
<b>SG73B-05</b>	P0801442-001	1.00	1.62	<b>160</b>	41	
SG39B-05	P0801442-002	1.00	1.63	ND	41	
SG37B-20	P0801442-003	1.00	1.58	ND	40	
<b>SG36B-20</b>	P0801442-004	1.00	1.56	<b>110</b>	39	
SG44B-05	P0801442-005	1.00	1.62	ND	41	
SG88B-05	P0801442-006	1.00	1.67	ND	42	
SG72B-05	P0801442-007	1.00	1.58	ND	40	
SG70B-05	P0801442-008	1.00	1.60	ND	40	
SG71B-05	P0801442-009	1.00	1.61	ND	40	
SG65B-05	P0801442-010	1.00	1.47	ND	37	
SG65B-05D	P0801442-011	1.00	1.46	ND	37	
SG84B-05	P0801442-012	1.00	1.53	ND	38	
SG85B-05	P0801442-013	1.00	1.56	ND	39	
SG35B-05	P0801442-014	1.00	1.60	ND	40	
<b>SG94B-05</b>	P0801442-015	1.00	1.86	<b>1,700</b>	47	
SG95B-05	P0801442-016	1.00	1.56	ND	39	
SG89B-05	P0801442-017	1.00	1.58	ND	40	
SG75B-05	P0801442-018	1.00	1.64	ND	41	
Method Blank	P080521-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:     *Re*     Date:     5/23/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00057

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	1.6	0.16	0.41	0.33	0.033	
74-87-3	Chloromethane	0.29	0.32	0.16	0.14	0.16	0.078	J
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	0.32	0.16	ND	0.13	0.063	
74-83-9	Bromomethane	ND	0.32	0.16	ND	0.083	0.042	
75-00-3	Chloroethane	0.62	0.32	0.16	0.23	0.12	0.061	
64-17-5	Ethanol	4.0	16	0.16	2.1	8.6	0.086	J
67-64-1	Acetone	23	16	0.24	9.7	6.8	0.10	B
75-69-4	Trichlorofluoromethane	1.6	0.32	0.16	0.28	0.058	0.029	
107-13-1	Acrylonitrile	ND	1.6	0.23	ND	0.75	0.10	
75-35-4	1,1-Dichloroethene	55	0.32	0.16	14	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.90	1.6	0.24	0.30	0.53	0.079	J
75-09-2	Methylene Chloride	0.48	1.6	0.16	0.14	0.47	0.047	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.32	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.43	0.32	0.18	0.057	0.042	0.024	
75-15-0	Carbon Disulfide	1.1	1.6	0.39	0.35	0.52	0.12	J
156-60-5	trans-1,2-Dichloroethene	ND	0.32	0.16	ND	0.082	0.041	
75-34-3	1,1-Dichloroethane	0.28	0.32	0.16	0.068	0.080	0.040	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.32	0.16	ND	0.090	0.045	
108-05-4	Vinyl Acetate	20	16	0.52	5.8	4.6	0.15	
78-93-3	2-Butanone (MEK)	11	1.6	0.16	3.8	0.55	0.055	
156-59-2	cis-1,2-Dichloroethene	ND	0.32	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	270	0.32	0.19	55	0.066	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: Re

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00057

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	0.32	0.16	ND	0.080	0.040	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.24</b>	0.32	0.16	<b>0.044</b>	0.059	0.030	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.8</b>	0.32	0.16	<b>1.2</b>	0.10	0.051	
56-23-5	<b>Carbon Tetrachloride</b>	<b>3.7</b>	0.32	0.16	<b>0.59</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	<b>1,2-Dichloropropane</b>	<b>0.45</b>	0.32	0.16	<b>0.097</b>	0.070	0.035	
75-27-4	<b>Bromodichloromethane</b>	<b>3.6</b>	0.32	0.16	<b>0.53</b>	0.048	0.024	
79-01-6	<b>Trichloroethene</b>	<b>2.7</b>	0.32	0.16	<b>0.51</b>	0.060	0.030	
123-91-1	<b>1,4-Dioxane</b>	<b>0.31</b>	1.6	0.20	<b>0.086</b>	0.45	0.055	<b>J</b>
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.059	
142-82-5	n-Heptane	ND	1.6	0.21	ND	0.40	0.051	
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>0.56</b>	1.6	0.18	<b>0.14</b>	0.40	0.044	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.20	ND	0.36	0.045	
79-00-5	1,1,2-Trichloroethane	ND	0.32	0.16	ND	0.059	0.030	
108-88-3	<b>Toluene</b>	<b>1.6</b>	1.6	0.16	<b>0.43</b>	0.43	0.043	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>2.1</b>	1.6	0.25	<b>0.50</b>	0.40	0.060	
124-48-1	<b>Dibromochloromethane</b>	<b>0.44</b>	0.32	0.22	<b>0.051</b>	0.038	0.026	
106-93-4	1,2-Dibromoethane	ND	0.32	0.17	ND	0.042	0.023	
111-65-9	<b>n-Octane</b>	<b>0.35</b>	1.6	0.16	<b>0.076</b>	0.35	0.035	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>73</b>	0.32	0.16	<b>11</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>11</b>	0.32	0.17	<b>2.4</b>	0.070	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.

Verified By: RC      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00057

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	0.34	1.6	0.20	0.079	0.37	0.046	J
179601-23-1	m,p-Xylenes	1.6	1.6	0.42	0.38	0.37	0.097	
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	ND	1.6	0.25	ND	0.38	0.058	
95-47-6	o-Xylene	2.0	1.6	0.20	0.47	0.37	0.047	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.32	0.21	ND	0.047	0.030	
98-82-8	Cumene	0.29	1.6	0.18	0.058	0.33	0.037	J
103-65-1	n-Propylbenzene	ND	1.6	0.17	ND	0.33	0.034	
622-96-8	4-Ethyltoluene	0.23	1.6	0.18	0.046	0.33	0.038	J
108-67-8	1,3,5-Trimethylbenzene	0.26	1.6	0.19	0.053	0.33	0.040	J
98-83-9	alpha-Methylstyrene	ND	1.6	0.24	ND	0.34	0.049	
95-63-6	1,2,4-Trimethylbenzene	1.1	1.6	0.22	0.22	0.33	0.045	J
100-44-7	Benzyl Chloride	ND	0.32	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	2.7	0.32	0.20	0.44	0.054	0.033	
106-46-7	1,4-Dichlorobenzene	94	0.32	0.18	16	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)	0.29	1.6	0.21	0.053	0.30	0.038	J
95-50-1	1,2-Dichlorobenzene	4.5	0.32	0.21	0.75	0.054	0.036	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.25	ND	0.17	0.025	
120-82-1	1,2,4-Trichlorobenzene	0.94	0.32	0.25	0.13	0.044	0.033	
91-20-3	Naphthalene	3.3	0.65	0.24	0.64	0.12	0.046	
87-68-3	Hexachlorobutadiene	19	0.32	0.29	1.8	0.030	0.027	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	0.45	0.65	0.16	0.081	0.12	0.030	J

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00223

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 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)	2.0	1.6	0.16	0.41	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	0.26	0.33	0.16	0.10	0.12	0.062	J
64-17-5	Ethanol	4.4	16	0.16	2.3	8.7	0.087	J
67-64-1	Acetone	17	16	0.24	7.3	6.9	0.10	B
75-69-4	Trichlorofluoromethane	1.5	0.33	0.16	0.26	0.058	0.029	
107-13-1	Acrylonitrile	0.25	1.6	0.23	0.12	0.75	0.11	J
75-35-4	1,1-Dichloroethene	10	0.33	0.16	2.6	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.93	1.6	0.24	0.31	0.54	0.080	J
75-09-2	Methylene Chloride	0.29	1.6	0.16	0.084	0.47	0.047	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.33	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.48	0.33	0.18	0.063	0.043	0.024	
75-15-0	Carbon Disulfide	45	1.6	0.39	14	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	4.4	0.33	0.16	1.1	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	7.5	16	0.52	2.1	4.6	0.15	J
78-93-3	2-Butanone (MEK)	5.1	1.6	0.16	1.7	0.55	0.055	
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	370	0.33	0.19	75	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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00223

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 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
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	<b>1,1,1-Trichloroethane</b>	<b>10</b>	0.33	0.16	<b>1.9</b>	0.060	0.030	
71-43-2	<b>Benzene</b>	<b>3.2</b>	0.33	0.16	<b>0.99</b>	0.10	0.051	
56-23-5	<b>Carbon Tetrachloride</b>	<b>1.3</b>	0.33	0.16	<b>0.21</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	<b>Bromodichloromethane</b>	<b>0.64</b>	0.33	0.16	<b>0.095</b>	0.049	0.024	
79-01-6	<b>Trichloroethene</b>	<b>240</b>	0.33	0.16	<b>44</b>	0.061	0.030	
123-91-1	<b>1,4-Dioxane</b>	<b>0.90</b>	1.6	0.20	<b>0.25</b>	0.45	0.055	<b>J</b>
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.060	
142-82-5	n-Heptane	ND	1.6	0.21	ND	0.40	0.051	
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>0.27</b>	1.6	0.18	<b>0.067</b>	0.40	0.045	<b>J</b>
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>1.0</b>	1.6	0.16	<b>0.28</b>	0.43	0.043	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.54</b>	1.6	0.25	<b>0.13</b>	0.40	0.061	<b>J</b>
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	n-Octane	ND	1.6	0.16	ND	0.35	0.035	
127-18-4	<b>Tetrachloroethene</b>	<b>25</b>	0.33	0.16	<b>3.6</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>0.18</b>	0.33	0.17	<b>0.039</b>	0.071	0.036	<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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00223

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 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	0.38	1.6	0.20	0.087	0.38	0.047	J
179601-23-1	m,p-Xylenes	1.5	1.6	0.42	0.35	0.38	0.098	J
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	ND	1.6	0.25	ND	0.38	0.058	
95-47-6	o-Xylene	2.4	1.6	0.21	0.54	0.38	0.047	
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	ND	1.6	0.17	ND	0.33	0.034	
622-96-8	4-Ethyltoluene	ND	1.6	0.19	ND	0.33	0.038	
108-67-8	1,3,5-Trimethylbenzene	ND	1.6	0.20	ND	0.33	0.040	
98-83-9	alpha-Methylstyrene	ND	1.6	0.24	ND	0.34	0.049	
95-63-6	1,2,4-Trimethylbenzene	0.34	1.6	0.22	0.069	0.33	0.046	J
100-44-7	Benzyl Chloride	ND	0.33	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	ND	0.33	0.20	ND	0.054	0.034	
106-46-7	1,4-Dichlorobenzene	43	0.33	0.18	7.2	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)	ND	1.6	0.21	ND	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	1.1	0.65	0.24	0.20	0.12	0.046	
87-68-3	Hexachlorobutadiene	2.9	0.33	0.29	0.27	0.031	0.028	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	0.22	0.65	0.16	0.039	0.12	0.030	J

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00411

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	1.6	0.16	0.42	0.32	0.032	
74-87-3	Chloromethane	ND	0.32	0.16	ND	0.15	0.077	
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	0.32	0.16	ND	0.12	0.062	
74-83-9	Bromomethane	ND	0.32	0.16	ND	0.081	0.041	
75-00-3	Chloroethane	ND	0.32	0.16	ND	0.12	0.060	
64-17-5	Ethanol	4.1	16	0.16	2.2	8.4	0.084	J
67-64-1	Acetone	18	16	0.23	7.7	6.7	0.097	B
75-69-4	Trichlorofluoromethane	1.2	0.32	0.16	0.22	0.056	0.028	
107-13-1	Acrylonitrile	ND	1.6	0.22	ND	0.73	0.10	
75-35-4	1,1-Dichloroethene	1.9	0.32	0.16	0.48	0.080	0.040	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.6	1.6	0.23	0.52	0.52	0.077	J
75-09-2	Methylene Chloride	0.29	1.6	0.16	0.085	0.45	0.045	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.32	0.16	ND	0.10	0.050	
76-13-1	Trichlorotrifluoroethane	0.51	0.32	0.18	0.067	0.041	0.023	
75-15-0	Carbon Disulfide	1.4	1.6	0.38	0.45	0.51	0.12	J
156-60-5	trans-1,2-Dichloroethene	ND	0.32	0.16	ND	0.080	0.040	
75-34-3	1,1-Dichloroethane	0.56	0.32	0.16	0.14	0.078	0.039	
1634-04-4	Methyl tert-Butyl Ether	ND	0.32	0.16	ND	0.088	0.044	
108-05-4	Vinyl Acetate	14	16	0.51	3.9	4.5	0.14	J, M
78-93-3	2-Butanone (MEK)	12	1.6	0.16	4.2	0.54	0.054	
156-59-2	cis-1,2-Dichloroethene	ND	0.32	0.16	ND	0.080	0.040	
108-20-3	Diisopropyl Ether	ND	1.6	0.19	ND	0.38	0.045	
67-66-3	Chloroform	210	0.32	0.19	42	0.065	0.038	

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.

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

Verified By: Re

Date: 6/1/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00411

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	1.6	0.16	ND	0.38	0.039	
107-06-2	1,2-Dichloroethane	ND	0.32	0.16	ND	0.078	0.039	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.23</b>	0.32	0.16	<b>0.042</b>	0.058	0.029	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.2</b>	0.32	0.16	<b>1.0</b>	0.099	0.049	
56-23-5	<b>Carbon Tetrachloride</b>	<b>1.9</b>	0.32	0.16	<b>0.30</b>	0.050	0.025	
994-05-8	tert-Amyl Methyl Ether	ND	1.6	0.16	ND	0.38	0.038	
78-87-5	1,2-Dichloropropane	ND	0.32	0.16	ND	0.068	0.034	
75-27-4	<b>Bromodichloromethane</b>	<b>5.7</b>	0.32	0.16	<b>0.84</b>	0.047	0.024	
79-01-6	<b>Trichloroethene</b>	<b>2.2</b>	0.32	0.16	<b>0.41</b>	0.059	0.029	
123-91-1	1,4-Dioxane	ND	1.6	0.19	ND	0.44	0.054	
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.39	0.058	
142-82-5	n-Heptane	ND	1.6	0.20	ND	0.39	0.049	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.16	ND	0.35	0.036	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.68</b>	1.6	0.18	<b>0.17</b>	0.39	0.043	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.20	ND	0.35	0.044	
79-00-5	1,1,2-Trichloroethane	ND	0.32	0.16	ND	0.058	0.029	
108-88-3	<b>Toluene</b>	<b>1.1</b>	1.6	0.16	<b>0.30</b>	0.42	0.042	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.61</b>	1.6	0.24	<b>0.15</b>	0.39	0.059	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.32	0.21	ND	0.037	0.025	
106-93-4	1,2-Dibromoethane	ND	0.32	0.17	ND	0.041	0.022	
111-65-9	n-Octane	ND	1.6	0.16	ND	0.34	0.034	
127-18-4	<b>Tetrachloroethene</b>	<b>92</b>	0.32	0.16	<b>14</b>	0.047	0.023	
108-90-7	Chlorobenzene	ND	0.32	0.16	ND	0.069	0.035	

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: RC

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00411

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	0.50	1.6	0.20	0.11	0.36	0.045	J
179601-23-1	m,p-Xylenes	2.3	1.6	0.41	0.54	0.36	0.095	
75-25-2	Bromoform	ND	1.6	0.24	ND	0.15	0.023	
100-42-5	Styrene	ND	1.6	0.24	ND	0.37	0.056	
95-47-6	o-Xylene	0.87	1.6	0.20	0.20	0.36	0.046	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.32	0.20	ND	0.046	0.029	
98-82-8	Cumene	ND	1.6	0.18	ND	0.32	0.036	
103-65-1	n-Propylbenzene	ND	1.6	0.16	ND	0.32	0.033	
622-96-8	4-Ethyltoluene	0.24	1.6	0.18	0.049	0.32	0.037	J
108-67-8	1,3,5-Trimethylbenzene	0.33	1.6	0.19	0.067	0.32	0.039	J
98-83-9	alpha-Methylstyrene	ND	1.6	0.23	ND	0.33	0.048	
95-63-6	1,2,4-Trimethylbenzene	0.90	1.6	0.22	0.18	0.32	0.044	J
100-44-7	Benzyl Chloride	ND	0.32	0.27	ND	0.061	0.053	
541-73-1	1,3-Dichlorobenzene	ND	0.32	0.20	ND	0.053	0.033	
106-46-7	1,4-Dichlorobenzene	58	0.32	0.18	9.7	0.053	0.029	
135-98-8	sec-Butylbenzene	ND	1.6	0.18	ND	0.29	0.033	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.21	1.6	0.21	0.039	0.29	0.037	J
95-50-1	1,2-Dichlorobenzene	ND	0.32	0.21	ND	0.053	0.035	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.24	ND	0.16	0.025	
120-82-1	1,2,4-Trichlorobenzene	ND	0.32	0.24	ND	0.043	0.032	
91-20-3	Naphthalene	1.6	0.63	0.23	0.30	0.12	0.045	
87-68-3	Hexachlorobutadiene	ND	0.32	0.28	ND	0.030	0.027	
98-06-6	tert-Butylbenzene	ND	0.63	0.16	ND	0.12	0.029	
104-51-8	n-Butylbenzene	0.38	0.63	0.16	0.069	0.12	0.029	J

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00910

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.0050 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)	3.5	16	1.6	0.70	3.2	0.32	J
74-87-3	Chloromethane	ND	3.1	1.6	ND	1.5	0.76	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	16	1.6	ND	2.2	0.22	
75-01-4	Vinyl Chloride	ND	3.1	1.6	ND	1.2	0.61	
74-83-9	Bromomethane	ND	3.1	1.6	ND	0.80	0.40	
75-00-3	Chloroethane	ND	3.1	1.6	ND	1.2	0.59	
64-17-5	Ethanol	35	160	1.6	19	83	0.83	J
67-64-1	Acetone	31	160	2.3	13	66	0.96	J, B
75-69-4	Trichlorofluoromethane	2.0	3.1	1.6	0.36	0.56	0.28	J
107-13-1	Acrylonitrile	ND	16	2.2	ND	7.2	1.0	
75-35-4	1,1-Dichloroethene	5.3	3.1	1.6	1.3	0.79	0.39	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	16	2.3	ND	5.1	0.76	
75-09-2	Methylene Chloride	8.0	16	1.6	2.3	4.5	0.45	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.1	1.6	ND	1.0	0.50	
76-13-1	Trichlorotrifluoroethane	ND	3.1	1.7	ND	0.41	0.23	
75-15-0	Carbon Disulfide	6.4	16	3.7	2.0	5.0	1.2	J
156-60-5	trans-1,2-Dichloroethene	ND	3.1	1.6	ND	0.79	0.39	
75-34-3	1,1-Dichloroethane	2.0	3.1	1.6	0.50	0.77	0.39	J
1634-04-4	Methyl tert-Butyl Ether	ND	3.1	1.6	ND	0.87	0.43	
108-05-4	Vinyl Acetate	ND	160	5.0	ND	44	1.4	
78-93-3	2-Butanone (MEK)	10	16	1.6	3.5	5.3	0.53	J
156-59-2	cis-1,2-Dichloroethene	ND	3.1	1.6	ND	0.79	0.39	
108-20-3	Diisopropyl Ether	ND	16	1.8	ND	3.7	0.44	
67-66-3	Chloroform	14,000	3.1	1.8	2,900	0.64	0.38	

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: Re      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00910

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.0050 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	16	1.6	ND	3.7	0.38	
107-06-2	1,2-Dichloroethane	ND	3.1	1.6	ND	0.77	0.39	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>2.5</b>	3.1	1.6	<b>0.46</b>	0.57	0.29	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.2</b>	3.1	1.6	<b>1.0</b>	0.98	0.49	
56-23-5	<b>Carbon Tetrachloride</b>	<b>10</b>	3.1	1.6	<b>1.6</b>	0.50	0.25	
994-05-8	tert-Amyl Methyl Ether	ND	16	1.6	ND	3.7	0.37	
78-87-5	<b>1,2-Dichloropropane</b>	<b>2.1</b>	3.1	1.6	<b>0.45</b>	0.68	0.34	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>25</b>	3.1	1.6	<b>3.7</b>	0.47	0.23	
79-01-6	<b>Trichloroethene</b>	<b>71</b>	3.1	1.6	<b>13</b>	0.58	0.29	
123-91-1	1,4-Dioxane	ND	16	1.9	ND	4.3	0.53	
80-62-6	Methyl Methacrylate	ND	16	2.3	ND	3.8	0.57	
142-82-5	n-Heptane	ND	16	2.0	ND	3.8	0.49	
10061-01-5	cis-1,3-Dichloropropene	ND	16	1.6	ND	3.4	0.36	
108-10-1	4-Methyl-2-pentanone	ND	16	1.7	ND	3.8	0.43	
10061-02-6	trans-1,3-Dichloropropene	ND	16	2.0	ND	3.4	0.43	
79-00-5	1,1,2-Trichloroethane	ND	3.1	1.6	ND	0.57	0.29	
108-88-3	<b>Toluene</b>	<b>3.7</b>	16	1.6	<b>0.99</b>	4.1	0.41	<b>J</b>
591-78-6	2-Hexanone	ND	16	2.4	ND	3.8	0.58	
124-48-1	<b>Dibromochloromethane</b>	<b>3.1</b>	3.1	2.1	<b>0.36</b>	0.37	0.25	<b>J</b>
106-93-4	1,2-Dibromoethane	ND	3.1	1.7	ND	0.41	0.22	
111-65-9	n-Octane	ND	16	1.6	ND	3.3	0.33	
127-18-4	<b>Tetrachloroethene</b>	<b>630</b>	3.1	1.6	<b>93</b>	0.46	0.23	
108-90-7	Chlorobenzene	ND	3.1	1.6	ND	0.68	0.35	

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.

Verified By:     *Re*          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00910

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.0050 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	ND	16	1.9	ND	3.6	0.45	
179601-23-1	m,p-Xylenes	ND	16	4.1	ND	3.6	0.93	
75-25-2	Bromoform	ND	16	2.4	ND	1.5	0.23	
100-42-5	Styrene	ND	16	2.4	ND	3.7	0.56	
95-47-6	o-Xylene	ND	16	2.0	ND	3.6	0.45	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	2.0	ND	0.45	0.29	
98-82-8	Cumene	ND	16	1.7	ND	3.2	0.36	
103-65-1	n-Propylbenzene	ND	16	1.6	ND	3.2	0.33	
622-96-8	4-Ethyltoluene	ND	16	1.8	ND	3.2	0.36	
108-67-8	1,3,5-Trimethylbenzene	ND	16	1.9	ND	3.2	0.38	
98-83-9	alpha-Methylstyrene	ND	16	2.3	ND	3.2	0.47	
95-63-6	1,2,4-Trimethylbenzene	ND	16	2.2	ND	3.2	0.44	
100-44-7	Benzyl Chloride	ND	3.1	2.7	ND	0.60	0.52	
541-73-1	1,3-Dichlorobenzene	ND	3.1	1.9	ND	0.52	0.32	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>65</b>	3.1	1.7	<b>11</b>	0.52	0.29	
135-98-8	sec-Butylbenzene	ND	16	1.8	ND	2.8	0.33	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	16	2.0	ND	2.8	0.37	
95-50-1	1,2-Dichlorobenzene	ND	3.1	2.1	ND	0.52	0.34	
96-12-8	1,2-Dibromo-3-chloropropane	ND	16	2.4	ND	1.6	0.25	
120-82-1	1,2,4-Trichlorobenzene	ND	3.1	2.4	ND	0.42	0.32	
91-20-3	<b>Naphthalene</b>	<b>3.8</b>	6.2	2.3	<b>0.72</b>	1.2	0.44	<b>J</b>
87-68-3	<b>Hexachlorobutadiene</b>	<b>56</b>	3.1	2.8	<b>5.3</b>	0.29	0.26	
98-06-6	tert-Butylbenzene	ND	6.2	1.6	ND	1.1	0.28	
104-51-8	n-Butylbenzene	ND	6.2	1.6	ND	1.1	0.28	

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: RC      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00868

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.81	0.081	0.41	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.081	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.089	0.81	0.081	0.013	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.16	0.081	ND	0.063	0.032	
74-83-9	Bromomethane	ND	0.16	0.081	ND	0.042	0.021	
75-00-3	Chloroethane	ND	0.16	0.081	ND	0.061	0.031	
64-17-5	Ethanol	3.0	8.1	0.081	1.6	4.3	0.043	J
67-64-1	Acetone	13	8.1	0.12	5.5	3.4	0.050	B
75-69-4	Trichlorofluoromethane	1.1	0.16	0.081	0.19	0.029	0.014	
107-13-1	Acrylonitrile	0.17	0.81	0.11	0.078	0.37	0.052	J
75-35-4	1,1-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.52	0.81	0.12	0.17	0.27	0.040	J
75-09-2	Methylene Chloride	0.089	0.81	0.081	0.026	0.23	0.023	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	1.0	0.16	0.081	0.33	0.052	0.026	
76-13-1	Trichlorotrifluoroethane	0.46	0.16	0.091	0.060	0.021	0.012	
75-15-0	Carbon Disulfide	1.9	0.81	0.19	0.60	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-34-3	1,1-Dichloroethane	ND	0.16	0.081	ND	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.081	ND	0.045	0.022	
108-05-4	Vinyl Acetate	2.1	8.1	0.26	0.59	2.3	0.074	J, M
78-93-3	2-Butanone (MEK)	6.8	0.81	0.081	2.3	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
108-20-3	Diisopropyl Ether	ND	0.81	0.096	ND	0.19	0.023	
67-66-3	Chloroform	4.1	0.16	0.096	0.84	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.

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

Verified By:      Date: 5/24/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00868

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.81	0.083	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	ND	0.16	0.081	ND	0.040	0.020	
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
71-43-2	<b>Benzene</b>	<b>3.1</b>	0.16	0.081	<b>0.97</b>	0.051	0.025	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.92</b>	0.16	0.081	<b>0.15</b>	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.81	0.081	ND	0.19	0.019	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.20</b>	0.16	0.081	<b>0.043</b>	0.035	0.018	
75-27-4	Bromodichloromethane	ND	0.16	0.081	ND	0.024	0.012	
79-01-6	Trichloroethene	ND	0.16	0.081	ND	0.030	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.20</b>	0.81	0.099	<b>0.057</b>	0.22	0.027	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.81	0.12	ND	0.20	0.030	
142-82-5	n-Heptane	ND	0.81	0.10	ND	0.20	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	0.084	ND	0.18	0.019	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	0.81	0.091	<b>0.066</b>	0.20	0.022	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
108-88-3	<b>Toluene</b>	<b>1.0</b>	0.81	0.081	<b>0.28</b>	0.22	0.022	
591-78-6	<b>2-Hexanone</b>	<b>0.30</b>	0.81	0.12	<b>0.073</b>	0.20	0.030	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.087	ND	0.021	0.011	
111-65-9	n-Octane	ND	0.81	0.081	ND	0.17	0.017	
127-18-4	<b>Tetrachloroethene</b>	<b>0.50</b>	0.16	0.081	<b>0.074</b>	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.083	ND	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.

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Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00868

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.16	0.81	0.10	0.037	0.19	0.023	J
179601-23-1	m,p-Xylenes	0.74	0.81	0.21	0.17	0.19	0.049	J
75-25-2	Bromoform	ND	0.81	0.12	ND	0.078	0.012	
100-42-5	Styrene	ND	0.81	0.12	ND	0.19	0.029	
95-47-6	o-Xylene	0.58	0.81	0.10	0.13	0.19	0.024	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.024	0.015	
98-82-8	Cumene	ND	0.81	0.091	ND	0.16	0.018	
103-65-1	n-Propylbenzene	0.11	0.81	0.084	0.022	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.30	0.81	0.092	0.062	0.16	0.019	J
108-67-8	1,3,5-Trimethylbenzene	0.31	0.81	0.097	0.062	0.16	0.020	J
98-83-9	alpha-Methylstyrene	ND	0.81	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	0.38	0.81	0.11	0.076	0.16	0.023	J
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	78	0.16	0.091	13	0.027	0.015	
135-98-8	sec-Butylbenzene	ND	0.81	0.094	ND	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.18	0.81	0.11	0.033	0.15	0.019	J
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	0.81	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	1.8	0.32	0.12	0.35	0.062	0.023	
87-68-3	Hexachlorobutadiene	ND	0.16	0.15	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	
104-51-8	n-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00796

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

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

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)	2.1	0.84	0.084	0.42	0.17	0.017	
74-87-3	Chloromethane	0.15	0.17	0.084	0.072	0.081	0.040	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.099	0.84	0.084	0.014	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.17	0.084	ND	0.065	0.033	
74-83-9	Bromomethane	ND	0.17	0.084	ND	0.043	0.022	
75-00-3	Chloroethane	0.28	0.17	0.084	0.10	0.063	0.032	
64-17-5	Ethanol	2.9	8.4	0.084	1.5	4.4	0.044	J
67-64-1	Acetone	24	8.4	0.12	10	3.5	0.051	B
75-69-4	Trichlorofluoromethane	1.2	0.17	0.084	0.21	0.030	0.015	
107-13-1	Acrylonitrile	ND	0.84	0.12	ND	0.38	0.054	
75-35-4	1,1-Dichloroethene	ND	0.17	0.084	ND	0.042	0.021	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.27	0.84	0.12	0.089	0.28	0.041	J
75-09-2	Methylene Chloride	0.11	0.84	0.084	0.031	0.24	0.024	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.17	0.084	ND	0.053	0.027	
76-13-1	Trichlorotrifluoroethane	0.52	0.17	0.094	0.068	0.022	0.012	
75-15-0	Carbon Disulfide	9.6	0.84	0.20	3.1	0.27	0.064	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	0.084	ND	0.042	0.021	
75-34-3	1,1-Dichloroethane	0.18	0.17	0.084	0.044	0.041	0.021	
1634-04-4	Methyl tert-Butyl Ether	ND	0.17	0.084	ND	0.046	0.023	
108-05-4	Vinyl Acetate	14	8.4	0.27	3.9	2.4	0.076	
78-93-3	2-Butanone (MEK)	4.4	0.84	0.084	1.5	0.28	0.028	
156-59-2	cis-1,2-Dichloroethene	0.16	0.17	0.084	0.040	0.042	0.021	J
108-20-3	Diisopropyl Ether	ND	0.84	0.099	ND	0.20	0.024	
67-66-3	Chloroform	12	0.17	0.099	2.4	0.034	0.020	

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B = Analyte was found in the method blank.

Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00796

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

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

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	0.84	0.085	ND	0.20	0.020	
107-06-2	1,2-Dichloroethane	ND	0.17	0.084	ND	0.041	0.021	
71-55-6	1,1,1-Trichloroethane	ND	0.17	0.084	ND	0.031	0.015	
71-43-2	<b>Benzene</b>	<b>2.6</b>	0.17	0.084	<b>0.82</b>	0.052	0.026	
56-23-5	<b>Carbon Tetrachloride</b>	<b>20</b>	0.17	0.084	<b>3.2</b>	0.027	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.84	0.084	ND	0.20	0.020	
78-87-5	1,2-Dichloropropane	ND	0.17	0.084	ND	0.036	0.018	
75-27-4	<b>Bromodichloromethane</b>	<b>0.16</b>	0.17	0.084	<b>0.024</b>	0.025	0.012	<b>J</b>
79-01-6	<b>Trichloroethene</b>	<b>0.20</b>	0.17	0.084	<b>0.036</b>	0.031	0.016	
123-91-1	<b>1,4-Dioxane</b>	<b>0.29</b>	0.84	0.10	<b>0.081</b>	0.23	0.028	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.84	0.13	ND	0.20	0.031	
142-82-5	<b>n-Heptane</b>	<b>0.18</b>	0.84	0.11	<b>0.043</b>	0.20	0.026	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.84	0.087	ND	0.18	0.019	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.26</b>	0.84	0.094	<b>0.064</b>	0.20	0.023	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.84	0.11	ND	0.18	0.023	
79-00-5	1,1,2-Trichloroethane	ND	0.17	0.084	ND	0.031	0.015	
108-88-3	<b>Toluene</b>	<b>9.2</b>	0.84	0.084	<b>2.4</b>	0.22	0.022	
591-78-6	<b>2-Hexanone</b>	<b>0.87</b>	0.84	0.13	<b>0.21</b>	0.20	0.031	
124-48-1	Dibromochloromethane	ND	0.17	0.11	ND	0.020	0.013	
106-93-4	1,2-Dibromoethane	ND	0.17	0.090	ND	0.022	0.012	
111-65-9	<b>n-Octane</b>	<b>0.22</b>	0.84	0.084	<b>0.047</b>	0.18	0.018	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>8.4</b>	0.17	0.084	<b>1.2</b>	0.025	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>0.62</b>	0.17	0.085	<b>0.13</b>	0.036	0.019	

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

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Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00796

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

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

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	4.4	0.84	0.10	1.0	0.19	0.024	
179601-23-1	m,p-Xylenes	37	0.84	0.22	8.4	0.19	0.050	
75-25-2	Bromoform	ND	0.84	0.13	ND	0.081	0.012	
100-42-5	Styrene	0.14	0.84	0.13	0.034	0.20	0.030	J
95-47-6	o-Xylene	7.1	0.84	0.11	1.6	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	0.11	ND	0.024	0.016	
98-82-8	Cumene	0.18	0.84	0.094	0.036	0.17	0.019	J
103-65-1	n-Propylbenzene	0.53	0.84	0.087	0.11	0.17	0.018	J
622-96-8	4-Ethyltoluene	1.5	0.84	0.095	0.30	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	2.2	0.84	0.10	0.45	0.17	0.020	
98-83-9	alpha-Methylstyrene	ND	0.84	0.12	ND	0.17	0.025	
95-63-6	1,2,4-Trimethylbenzene	10	0.84	0.12	2.1	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.17	0.14	ND	0.032	0.028	
541-73-1	1,3-Dichlorobenzene	0.23	0.17	0.10	0.039	0.028	0.017	
106-46-7	1,4-Dichlorobenzene	110	0.17	0.094	19	0.028	0.016	
135-98-8	sec-Butylbenzene	ND	0.84	0.097	ND	0.15	0.018	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.91	0.84	0.11	0.17	0.15	0.020	
95-50-1	1,2-Dichlorobenzene	2.4	0.17	0.11	0.39	0.028	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.84	0.13	ND	0.086	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.17	0.13	ND	0.023	0.017	
91-20-3	Naphthalene	9.5	0.33	0.12	1.8	0.064	0.024	
87-68-3	Hexachlorobutadiene	ND	0.17	0.15	ND	0.016	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.084	ND	0.061	0.015	
104-51-8	n-Butylbenzene	1.5	0.33	0.084	0.27	0.061	0.015	

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Verified By: Re      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00329

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.25 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)	2.0	0.79	0.079	0.41	0.16	0.016	
74-87-3	Chloromethane	0.23	0.16	0.079	0.11	0.077	0.038	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.085	0.79	0.079	0.012	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.079	ND	0.062	0.031	
74-83-9	Bromomethane	0.72	0.16	0.079	0.19	0.041	0.020	
75-00-3	Chloroethane	0.77	0.16	0.079	0.29	0.060	0.030	
64-17-5	Ethanol	4.3	7.9	0.079	2.3	4.2	0.042	J
67-64-1	Acetone	17	7.9	0.12	7.0	3.3	0.049	B
75-69-4	Trichlorofluoromethane	1.5	0.16	0.079	0.27	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.79	0.11	ND	0.36	0.051	
75-35-4	1,1-Dichloroethene	72	0.16	0.079	18	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.9	0.79	0.12	0.64	0.26	0.039	
75-09-2	Methylene Chloride	0.54	0.79	0.079	0.16	0.23	0.023	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.079	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.16	0.088	0.072	0.021	0.012	
75-15-0	Carbon Disulfide	4.8	0.79	0.19	1.5	0.25	0.061	
156-60-5	trans-1,2-Dichloroethene	0.085	0.16	0.079	0.022	0.040	0.020	J
75-34-3	1,1-Dichloroethane	0.37	0.16	0.079	0.091	0.039	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.079	ND	0.044	0.022	
108-05-4	Vinyl Acetate	29	7.9	0.25	8.3	2.2	0.072	
78-93-3	2-Butanone (MEK)	4.0	0.79	0.079	1.4	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.79	0.093	ND	0.19	0.022	
67-66-3	Chloroform	590	0.16	0.093	120	0.032	0.019	

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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:     RC    

Date:     5/21/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00329

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.25 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	0.79	0.081	ND	0.19	0.019	
107-06-2	<b>1,2-Dichloroethane</b>	<b>0.15</b>	0.16	0.079	<b>0.036</b>	0.039	0.020	<b>J</b>
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.53</b>	0.16	0.079	<b>0.098</b>	0.029	0.014	
71-43-2	<b>Benzene</b>	<b>5.4</b>	0.16	0.079	<b>1.7</b>	0.049	0.025	
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.5</b>	0.16	0.079	<b>1.2</b>	0.025	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.79	0.079	ND	0.19	0.019	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.99</b>	0.16	0.079	<b>0.21</b>	0.034	0.017	
75-27-4	<b>Bromodichloromethane</b>	<b>12</b>	0.16	0.079	<b>1.7</b>	0.024	0.012	
79-01-6	<b>Trichloroethene</b>	<b>5.0</b>	0.16	0.079	<b>0.93</b>	0.029	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.27</b>	0.79	0.096	<b>0.074</b>	0.22	0.027	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.79	0.12	ND	0.19	0.029	
142-82-5	<b>n-Heptane</b>	<b>1.1</b>	0.79	0.10	<b>0.26</b>	0.19	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	0.082	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.35</b>	0.79	0.088	<b>0.086</b>	0.19	0.022	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	0.10	ND	0.17	0.022	
79-00-5	<b>1,1,2-Trichloroethane</b>	<b>0.53</b>	0.16	0.079	<b>0.097</b>	0.029	0.014	
108-88-3	<b>Toluene</b>	<b>5.3</b>	0.79	0.079	<b>1.4</b>	0.21	0.021	
591-78-6	<b>2-Hexanone</b>	<b>0.84</b>	0.79	0.12	<b>0.20</b>	0.19	0.029	
124-48-1	<b>Dibromochloromethane</b>	<b>1.2</b>	0.16	0.11	<b>0.15</b>	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.085	ND	0.021	0.011	
111-65-9	n-Octane	ND	0.79	0.079	ND	0.17	0.017	
127-18-4	<b>Tetrachloroethene</b>	<b>280</b>	0.16	0.079	<b>41</b>	0.023	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>3.3</b>	0.16	0.081	<b>0.72</b>	0.034	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.

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

Verified By:     *Rc*          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00329

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.25 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	0.96	0.79	0.098	0.22	0.18	0.023	
179601-23-1	m,p-Xylenes	5.7	0.79	0.21	1.3	0.18	0.047	
75-25-2	Bromoform	ND	0.79	0.12	ND	0.076	0.012	
100-42-5	Styrene	0.21	0.79	0.12	0.049	0.19	0.028	J
95-47-6	o-Xylene	2.5	0.79	0.10	0.57	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.12	0.79	0.088	0.024	0.16	0.018	J
103-65-1	n-Propylbenzene	0.18	0.79	0.082	0.037	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.33	0.79	0.090	0.067	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.46	0.79	0.095	0.093	0.16	0.019	J
98-83-9	alpha-Methylstyrene	0.21	0.79	0.12	0.044	0.16	0.024	J
95-63-6	1,2,4-Trimethylbenzene	1.5	0.79	0.11	0.30	0.16	0.022	
100-44-7	Benzyl Chloride	0.14	0.16	0.14	0.027	0.031	0.026	J
541-73-1	1,3-Dichlorobenzene	2.4	0.16	0.098	0.40	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	60	0.16	0.088	9.9	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.79	0.092	ND	0.14	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.47	0.79	0.10	0.086	0.14	0.019	J
95-50-1	1,2-Dichlorobenzene	16	0.16	0.10	2.7	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	0.12	ND	0.082	0.012	
120-82-1	1,2,4-Trichlorobenzene	1.9	0.16	0.12	0.26	0.021	0.016	
91-20-3	Naphthalene	1.4	0.32	0.12	0.27	0.060	0.022	
87-68-3	Hexachlorobutadiene	46	0.16	0.14	4.3	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.32	0.079	ND	0.058	0.014	
104-51-8	n-Butylbenzene	0.44	0.32	0.079	0.081	0.058	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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00072

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	16	ND	32	3.2	
74-87-3	Chloromethane	ND	32	16	ND	16	7.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	13	6.3	
74-83-9	Bromomethane	ND	32	16	ND	8.2	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.1	
64-17-5	Ethanol	ND	1,600	16	ND	850	8.5	
67-64-1	<b>Acetone</b>	<b>190</b>	1,600	23	<b>81</b>	670	9.8	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.7	2.8	
107-13-1	Acrylonitrile	ND	160	22	ND	74	10	
75-35-4	<b>1,1-Dichloroethene</b>	<b>25</b>	32	16	<b>6.3</b>	8.1	4.0	<b>J</b>
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	24	ND	53	7.8	
75-09-2	<b>Methylene Chloride</b>	<b>47</b>	160	16	<b>13</b>	46	4.6	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.1	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.2	2.3	
75-15-0	Carbon Disulfide	ND	160	38	ND	51	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.1	4.0	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	7.9	4.0	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.9	4.4	
108-05-4	Vinyl Acetate	ND	1,600	51	ND	450	15	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	54	5.4	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.1	4.0	
108-20-3	Diisopropyl Ether	ND	160	19	ND	38	4.5	
67-66-3	<b>Chloroform</b>	<b>130,000</b>	32	19	<b>26,000</b>	6.6	3.9	

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: RG

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00072

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/21/08 & 5/24/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	16	ND	38	3.9	
107-06-2	1,2-Dichloroethane	ND	32	16	ND	7.9	4.0	
71-55-6	1,1,1-Trichloroethane	ND	32	16	ND	5.9	2.9	
71-43-2	Benzene	ND	32	16	ND	10	5.0	
56-23-5	Carbon Tetrachloride	ND	32	16	ND	5.1	2.5	
994-05-8	tert-Amyl Methyl Ether	ND	160	16	ND	38	3.8	
78-87-5	1,2-Dichloropropane	ND	32	16	ND	6.9	3.5	
75-27-4	<b>Bromodichloromethane</b>	<b>29</b>	32	16	<b>4.3</b>	4.8	2.4	<b>J</b>
79-01-6	<b>Trichloroethene</b>	<b>36</b>	32	16	<b>6.7</b>	6.0	3.0	
123-91-1	1,4-Dioxane	ND	160	20	ND	44	5.4	
80-62-6	Methyl Methacrylate	ND	160	24	ND	39	5.9	
142-82-5	n-Heptane	ND	160	20	ND	39	5.0	
10061-01-5	cis-1,3-Dichloropropene	ND	160	17	ND	35	3.7	
108-10-1	4-Methyl-2-pentanone	ND	160	18	ND	39	4.4	
10061-02-6	trans-1,3-Dichloropropene	ND	160	20	ND	35	4.4	
79-00-5	1,1,2-Trichloroethane	ND	32	16	ND	5.9	2.9	
108-88-3	Toluene	ND	160	16	ND	42	4.2	
591-78-6	2-Hexanone	ND	160	24	ND	39	5.9	
124-48-1	Dibromochloromethane	ND	32	22	ND	3.8	2.6	
106-93-4	1,2-Dibromoethane	ND	32	17	ND	4.2	2.2	
111-65-9	n-Octane	ND	160	16	ND	34	3.4	
127-18-4	<b>Tetrachloroethene</b>	<b>230</b>	32	16	<b>35</b>	4.7	2.4	
108-90-7	Chlorobenzene	ND	32	16	ND	7.0	3.5	

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:     *Re*          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00072

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	20	ND	37	4.6	
179601-23-1	m,p-Xylenes	ND	160	42	ND	37	9.6	
75-25-2	Bromoform	ND	160	24	ND	15	2.4	
100-42-5	Styrene	ND	160	24	ND	38	5.7	
95-47-6	o-Xylene	ND	160	20	ND	37	4.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	20	ND	4.7	3.0	
98-82-8	Cumene	ND	160	18	ND	33	3.6	
103-65-1	n-Propylbenzene	ND	160	17	ND	33	3.4	
622-96-8	4-Ethyltoluene	ND	160	18	ND	33	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	33	3.9	
98-83-9	alpha-Methylstyrene	ND	160	23	ND	33	4.8	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	33	4.5	
100-44-7	Benzyl Chloride	ND	32	28	ND	6.2	5.3	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.3	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.3	3.0	
135-98-8	sec-Butylbenzene	ND	160	19	ND	29	3.4	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.8	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.3	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	17	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.3	
91-20-3	<b>Naphthalene</b>	<b>27</b>	64	24	<b>5.2</b>	12	4.5	<b>J</b>
87-68-3	Hexachlorobutadiene	ND	32	29	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	64	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	64	16	ND	12	2.9	

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.

Verified By:     *Re*          Date:     5/21/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG71B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00571

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.5

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	160	16	ND	33	3.3	
74-87-3	Chloromethane	ND	32	16	ND	16	7.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	13	6.3	
74-83-9	Bromomethane	ND	32	16	ND	8.3	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.1	
64-17-5	Ethanol	ND	1,600	16	ND	850	8.5	
67-64-1	<b>Acetone</b>	<b>65</b>	1,600	24	<b>27</b>	680	9.9	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.7	2.9	
107-13-1	Acrylonitrile	ND	160	23	ND	74	10	
75-35-4	1,1-Dichloroethene	ND	32	16	ND	8.1	4.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	24	ND	53	7.9	
75-09-2	<b>Methylene Chloride</b>	<b>33</b>	160	16	<b>9.4</b>	46	4.6	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.1	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.2	2.4	
75-15-0	Carbon Disulfide	ND	160	39	ND	52	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.1	4.1	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	8.0	4.0	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.9	4.5	
108-05-4	Vinyl Acetate	ND	1,600	52	ND	460	15	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	55	5.5	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.1	4.1	
108-20-3	Diisopropyl Ether	ND	160	19	ND	39	4.5	
67-66-3	<b>Chloroform</b>	<b>120,000</b>	32	19	<b>24,000</b>	6.6	3.9	

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: Re      Date: 6/2/08





**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG71B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-009

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00571

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/21/08 & 5/24/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.5

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	ND	160	20	ND	37	4.6	
179601-23-1	m,p-Xylenes	ND	160	42	ND	37	9.6	
75-25-2	Bromoform	ND	160	24	ND	16	2.4	
100-42-5	Styrene	ND	160	24	ND	38	5.8	
95-47-6	o-Xylene	ND	160	20	ND	37	4.7	
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	21	ND	4.7	3.0	
98-82-8	Cumene	ND	160	18	ND	33	3.7	
103-65-1	n-Propylbenzene	ND	160	17	ND	33	3.4	
622-96-8	4-Ethyltoluene	ND	160	18	ND	33	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	33	3.9	
98-83-9	alpha-Methylstyrene	ND	160	24	ND	33	4.9	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	33	4.5	
100-44-7	Benzyl Chloride	ND	32	28	ND	6.2	5.4	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.4	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.4	3.0	
135-98-8	sec-Butylbenzene	ND	160	19	ND	29	3.4	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.8	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.4	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	17	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.3	
91-20-3	Naphthalene	ND	64	24	ND	12	4.5	
87-68-3	Hexachlorobutadiene	ND	32	29	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	64	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	64	16	ND	12	2.9	

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.

Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00201

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	0.74	0.074	0.41	0.15	0.015	
74-87-3	Chloromethane	0.11	0.15	0.074	0.051	0.071	0.036	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.10	0.74	0.074	0.015	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.15	0.074	ND	0.058	0.029	
74-83-9	Bromomethane	ND	0.15	0.074	ND	0.038	0.019	
75-00-3	Chloroethane	0.30	0.15	0.074	0.11	0.056	0.028	
64-17-5	Ethanol	53	7.4	0.074	28	3.9	0.039	
67-64-1	Acetone	27	7.4	0.11	12	3.1	0.045	B
75-69-4	Trichlorofluoromethane	1.2	0.15	0.074	0.21	0.026	0.013	
107-13-1	Acrylonitrile	0.11	0.74	0.10	0.053	0.34	0.047	J
75-35-4	1,1-Dichloroethene	0.087	0.15	0.074	0.022	0.037	0.019	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.54	0.74	0.11	0.18	0.24	0.036	J
75-09-2	Methylene Chloride	0.29	0.74	0.074	0.083	0.21	0.021	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.074	ND	0.047	0.023	
76-13-1	Trichlorotrifluoroethane	0.52	0.15	0.082	0.068	0.019	0.011	
75-15-0	Carbon Disulfide	9.0	0.74	0.18	2.9	0.24	0.057	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.074	ND	0.037	0.019	
75-34-3	1,1-Dichloroethane	ND	0.15	0.074	ND	0.036	0.018	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	0.074	ND	0.041	0.020	
108-05-4	Vinyl Acetate	ND	7.4	0.24	ND	2.1	0.067	
78-93-3	2-Butanone (MEK)	4.6	0.74	0.074	1.6	0.25	0.025	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.074	ND	0.037	0.019	
108-20-3	Diisopropyl Ether	ND	0.74	0.087	ND	0.18	0.021	
67-66-3	Chloroform	6.3	0.15	0.087	1.3	0.030	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.

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:     Rc          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00201

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	0.74	0.075	ND	0.18	0.018	
107-06-2	1,2-Dichloroethane	ND	0.15	0.074	ND	0.036	0.018	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.11</b>	0.15	0.074	<b>0.020</b>	0.027	0.013	<b>J</b>
71-43-2	<b>Benzene</b>	<b>2.1</b>	0.15	0.074	<b>0.66</b>	0.046	0.023	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.44</b>	0.15	0.074	<b>0.070</b>	0.023	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.74	0.074	ND	0.18	0.018	
78-87-5	1,2-Dichloropropane	ND	0.15	0.074	ND	0.032	0.016	
75-27-4	<b>Bromodichloromethane</b>	<b>0.48</b>	0.15	0.074	<b>0.072</b>	0.022	0.011	
79-01-6	<b>Trichloroethene</b>	<b>0.38</b>	0.15	0.074	<b>0.071</b>	0.027	0.014	
123-91-1	1,4-Dioxane	ND	0.74	0.090	ND	0.20	0.025	
80-62-6	Methyl Methacrylate	ND	0.74	0.11	ND	0.18	0.027	
142-82-5	<b>n-Heptane</b>	<b>0.24</b>	0.74	0.094	<b>0.058</b>	0.18	0.023	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	0.076	ND	0.16	0.017	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.42</b>	0.74	0.082	<b>0.10</b>	0.18	0.020	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	0.093	ND	0.16	0.020	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.074	ND	0.027	0.013	
108-88-3	<b>Toluene</b>	<b>9.5</b>	0.74	0.074	<b>2.5</b>	0.20	0.020	
591-78-6	<b>2-Hexanone</b>	<b>0.44</b>	0.74	0.11	<b>0.11</b>	0.18	0.027	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.26</b>	0.15	0.10	<b>0.030</b>	0.017	0.012	
106-93-4	1,2-Dibromoethane	ND	0.15	0.079	ND	0.019	0.010	
111-65-9	<b>n-Octane</b>	<b>0.36</b>	0.74	0.074	<b>0.078</b>	0.16	0.016	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>2.9</b>	0.15	0.074	<b>0.43</b>	0.022	0.011	
108-90-7	<b>Chlorobenzene</b>	<b>0.093</b>	0.15	0.075	<b>0.020</b>	0.032	0.016	<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:         Rc              Date:         6/2/08        

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00201

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	1.0	0.74	0.091	0.23	0.17	0.021	
179601-23-1	m,p-Xylenes	5.0	0.74	0.19	1.2	0.17	0.044	
75-25-2	Bromoform	0.14	0.74	0.11	0.013	0.071	0.011	J
100-42-5	Styrene	0.78	0.74	0.11	0.18	0.17	0.026	
95-47-6	o-Xylene	2.6	0.74	0.093	0.59	0.17	0.021	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	0.094	ND	0.021	0.014	
98-82-8	Cumene	0.15	0.74	0.082	0.030	0.15	0.017	J
103-65-1	n-Propylbenzene	0.44	0.74	0.076	0.089	0.15	0.016	J
622-96-8	4-Ethyltoluene	0.64	0.74	0.084	0.13	0.15	0.017	J
108-67-8	1,3,5-Trimethylbenzene	0.68	0.74	0.088	0.14	0.15	0.018	J
98-83-9	alpha-Methylstyrene	0.11	0.74	0.11	0.023	0.15	0.022	J
95-63-6	1,2,4-Trimethylbenzene	1.8	0.74	0.10	0.36	0.15	0.021	
100-44-7	Benzyl Chloride	ND	0.15	0.13	ND	0.028	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.15	0.091	ND	0.024	0.015	
106-46-7	1,4-Dichlorobenzene	78	0.15	0.082	13	0.024	0.014	
135-98-8	sec-Butylbenzene	ND	0.74	0.085	ND	0.13	0.016	
99-87-6	4-Isopropyltoluene (p-Cymene)	1.2	0.74	0.096	0.22	0.13	0.017	
95-50-1	1,2-Dichlorobenzene	0.38	0.15	0.097	0.064	0.024	0.016	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	0.11	ND	0.076	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.15	0.11	ND	0.020	0.015	
91-20-3	Naphthalene	0.21	0.29	0.11	0.041	0.056	0.021	J
87-68-3	Hexachlorobutadiene	ND	0.15	0.13	ND	0.014	0.012	
98-06-6	tert-Butylbenzene	ND	0.29	0.074	ND	0.054	0.013	
104-51-8	n-Butylbenzene	0.39	0.29	0.074	0.070	0.054	0.013	

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:     R          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.73	0.073	0.42	0.15	0.015	
74-87-3	Chloromethane	ND	0.15	0.073	ND	0.071	0.035	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.11	0.73	0.073	0.016	0.10	0.010	J
75-01-4	Vinyl Chloride	ND	0.15	0.073	ND	0.057	0.029	
74-83-9	Bromomethane	ND	0.15	0.073	ND	0.038	0.019	
75-00-3	Chloroethane	0.17	0.15	0.073	0.063	0.055	0.028	
64-17-5	Ethanol	12	7.3	0.073	6.4	3.9	0.039	
67-64-1	Acetone	14	7.3	0.11	6.0	3.1	0.045	B
75-69-4	Trichlorofluoromethane	1.2	0.15	0.073	0.22	0.026	0.013	
107-13-1	Acrylonitrile	ND	0.73	0.10	ND	0.34	0.047	
75-35-4	1,1-Dichloroethene	0.074	0.15	0.073	0.019	0.037	0.018	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.47	0.73	0.11	0.15	0.24	0.036	J
75-09-2	Methylene Chloride	0.26	0.73	0.073	0.076	0.21	0.021	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.073	ND	0.047	0.023	
76-13-1	Trichlorotrifluoroethane	0.51	0.15	0.082	0.067	0.019	0.011	
75-15-0	Carbon Disulfide	3.8	0.73	0.18	1.2	0.23	0.056	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.073	ND	0.037	0.018	
75-34-3	1,1-Dichloroethane	ND	0.15	0.073	ND	0.036	0.018	
1634-04-4	Methyl tert-Butyl Ether	0.099	0.15	0.073	0.028	0.041	0.020	J
108-05-4	Vinyl Acetate	2.7	7.3	0.23	0.78	2.1	0.066	J
78-93-3	2-Butanone (MEK)	3.8	0.73	0.073	1.3	0.25	0.025	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.073	ND	0.037	0.018	
108-20-3	Diisopropyl Ether	ND	0.73	0.086	ND	0.17	0.021	
67-66-3	Chloroform	7.5	0.15	0.086	1.5	0.030	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.

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: Re

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.73	0.074	ND	0.17	0.018	
107-06-2	1,2-Dichloroethane	ND	0.15	0.073	ND	0.036	0.018	
71-55-6	1,1,1-Trichloroethane	ND	0.15	0.073	ND	0.027	0.013	
71-43-2	<b>Benzene</b>	<b>1.8</b>	0.15	0.073	<b>0.55</b>	0.046	0.023	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.50</b>	0.15	0.073	<b>0.080</b>	0.023	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.73	0.073	ND	0.17	0.017	
78-87-5	1,2-Dichloropropane	ND	0.15	0.073	ND	0.032	0.016	
75-27-4	<b>Bromodichloromethane</b>	<b>0.55</b>	0.15	0.073	<b>0.082</b>	0.022	0.011	
79-01-6	<b>Trichloroethene</b>	<b>0.32</b>	0.15	0.073	<b>0.060</b>	0.027	0.014	
123-91-1	<b>1,4-Dioxane</b>	<b>0.30</b>	0.73	0.089	<b>0.083</b>	0.20	0.025	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.73	0.11	ND	0.18	0.027	
142-82-5	<b>n-Heptane</b>	<b>0.17</b>	0.73	0.093	<b>0.042</b>	0.18	0.023	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.73	0.076	ND	0.16	0.017	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	0.73	0.082	<b>0.066</b>	0.18	0.020	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.73	0.092	ND	0.16	0.020	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.073	ND	0.027	0.013	
108-88-3	<b>Toluene</b>	<b>5.2</b>	0.73	0.073	<b>1.4</b>	0.19	0.019	
591-78-6	<b>2-Hexanone</b>	<b>0.34</b>	0.73	0.11	<b>0.084</b>	0.18	0.027	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.31</b>	0.15	0.099	<b>0.036</b>	0.017	0.012	
106-93-4	1,2-Dibromoethane	ND	0.15	0.079	ND	0.019	0.010	
111-65-9	<b>n-Octane</b>	<b>0.16</b>	0.73	0.073	<b>0.035</b>	0.16	0.016	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>2.0</b>	0.15	0.073	<b>0.30</b>	0.022	0.011	
108-90-7	Chlorobenzene	ND	0.15	0.074	ND	0.032	0.016	

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: RC      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.63	0.73	0.091	0.14	0.17	0.021	J
179601-23-1	m,p-Xylenes	2.6	0.73	0.19	0.60	0.17	0.044	
75-25-2	Bromoform	0.18	0.73	0.11	0.018	0.071	0.011	J
100-42-5	Styrene	ND	0.73	0.11	ND	0.17	0.026	
95-47-6	o-Xylene	1.4	0.73	0.092	0.33	0.17	0.021	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	0.093	ND	0.021	0.014	
98-82-8	Cumene	ND	0.73	0.082	ND	0.15	0.017	
103-65-1	n-Propylbenzene	0.25	0.73	0.076	0.051	0.15	0.015	J
622-96-8	4-Ethyltoluene	0.43	0.73	0.083	0.088	0.15	0.017	J
108-67-8	1,3,5-Trimethylbenzene	0.27	0.73	0.088	0.056	0.15	0.018	J
98-83-9	alpha-Methylstyrene	0.11	0.73	0.11	0.024	0.15	0.022	J
95-63-6	1,2,4-Trimethylbenzene	1.1	0.73	0.10	0.22	0.15	0.021	
100-44-7	Benzyl Chloride	ND	0.15	0.13	ND	0.028	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.15	0.091	ND	0.024	0.015	
106-46-7	1,4-Dichlorobenzene	37	0.15	0.082	6.2	0.024	0.014	
135-98-8	sec-Butylbenzene	ND	0.73	0.085	ND	0.13	0.015	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.36	0.73	0.095	0.066	0.13	0.017	J
95-50-1	1,2-Dichlorobenzene	0.12	0.15	0.096	0.021	0.024	0.016	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.73	0.11	ND	0.076	0.011	
120-82-1	1,2,4-Trichlorobenzene	0.24	0.15	0.11	0.033	0.020	0.015	
91-20-3	Naphthalene	2.8	0.29	0.11	0.54	0.056	0.021	
87-68-3	Hexachlorobutadiene	ND	0.15	0.13	ND	0.014	0.012	
98-06-6	tert-Butylbenzene	ND	0.29	0.073	ND	0.053	0.013	
104-51-8	n-Butylbenzene	ND	0.29	0.073	ND	0.053	0.013	

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:     Re          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	3.8	0.38	0.42	0.77	0.077	J
74-87-3	Chloromethane	ND	0.77	0.38	ND	0.37	0.19	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.8	0.38	ND	0.55	0.055	
75-01-4	Vinyl Chloride	ND	0.77	0.38	ND	0.30	0.15	
74-83-9	Bromomethane	ND	0.77	0.38	ND	0.20	0.099	
75-00-3	Chloroethane	ND	0.77	0.38	ND	0.29	0.15	
64-17-5	Ethanol	14	38	0.38	7.6	20	0.20	J
67-64-1	Acetone	29	38	0.56	12	16	0.24	J, B
75-69-4	Trichlorofluoromethane	1.5	0.77	0.38	0.27	0.14	0.068	
107-13-1	Acrylonitrile	ND	3.8	0.54	ND	1.8	0.25	
75-35-4	1,1-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.8	3.8	0.57	0.60	1.3	0.19	J
75-09-2	Methylene Chloride	2.9	3.8	0.38	0.84	1.1	0.11	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	0.38	ND	0.24	0.12	
76-13-1	Trichlorotrifluoroethane	0.51	0.77	0.43	0.067	0.10	0.056	J
75-15-0	Carbon Disulfide	1.9	3.8	0.92	0.61	1.2	0.29	J
156-60-5	trans-1,2-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
75-34-3	1,1-Dichloroethane	0.40	0.77	0.38	0.098	0.19	0.095	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	0.38	ND	0.21	0.11	
108-05-4	Vinyl Acetate	3.8	38	1.2	1.1	11	0.35	J
78-93-3	2-Butanone (MEK)	62	3.8	0.38	21	1.3	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
108-20-3	Diisopropyl Ether	ND	3.8	0.45	ND	0.92	0.11	
67-66-3	Chloroform	4,400	0.77	0.45	900	0.16	0.092	

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: Re      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	3.8	0.39	ND	0.92	0.093	
107-06-2	1,2-Dichloroethane	ND	0.77	0.38	ND	0.19	0.095	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.58</b>	0.77	0.38	<b>0.11</b>	0.14	0.070	<b>J</b>
71-43-2	<b>Benzene</b>	<b>5.4</b>	0.77	0.38	<b>1.7</b>	0.24	0.12	
56-23-5	<b>Carbon Tetrachloride</b>	<b>8.7</b>	0.77	0.38	<b>1.4</b>	0.12	0.061	
994-05-8	tert-Amyl Methyl Ether	ND	3.8	0.38	ND	0.92	0.092	
78-87-5	1,2-Dichloropropane	ND	0.77	0.38	ND	0.17	0.083	
75-27-4	<b>Bromodichloromethane</b>	<b>3.8</b>	0.77	0.38	<b>0.57</b>	0.11	0.057	
79-01-6	<b>Trichloroethene</b>	<b>2.7</b>	0.77	0.38	<b>0.51</b>	0.14	0.071	
123-91-1	1,4-Dioxane	ND	3.8	0.47	ND	1.1	0.13	
80-62-6	Methyl Methacrylate	ND	3.8	0.57	ND	0.93	0.14	
142-82-5	<b>n-Heptane</b>	<b>0.78</b>	3.8	0.49	<b>0.19</b>	0.93	0.12	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.40	ND	0.84	0.088	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.2</b>	3.8	0.43	<b>0.29</b>	0.93	0.10	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.48	ND	0.84	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.77	0.38	ND	0.14	0.070	
108-88-3	<b>Toluene</b>	<b>16</b>	3.8	0.38	<b>4.2</b>	1.0	0.10	
591-78-6	<b>2-Hexanone</b>	<b>0.89</b>	3.8	0.58	<b>0.22</b>	0.93	0.14	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.77	0.52	ND	0.090	0.061	
106-93-4	1,2-Dibromoethane	ND	0.77	0.41	ND	0.10	0.054	
111-65-9	<b>n-Octane</b>	<b>0.73</b>	3.8	0.38	<b>0.16</b>	0.82	0.082	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>26</b>	0.77	0.38	<b>3.8</b>	0.11	0.056	
108-90-7	Chlorobenzene	ND	0.77	0.39	ND	0.17	0.085	

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:     Ru          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	1.9	3.8	0.47	0.44	0.88	0.11	J
179601-23-1	m,p-Xylenes	5.1	3.8	0.99	1.2	0.88	0.23	
75-25-2	Bromoform	ND	3.8	0.58	ND	0.37	0.056	
100-42-5	Styrene	1.7	3.8	0.58	0.41	0.90	0.14	J
95-47-6	o-Xylene	2.1	3.8	0.48	0.49	0.88	0.11	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	0.49	ND	0.11	0.071	
98-82-8	Cumene	ND	3.8	0.43	ND	0.78	0.087	
103-65-1	n-Propylbenzene	0.44	3.8	0.40	0.090	0.78	0.081	J
622-96-8	4-Ethyltoluene	0.63	3.8	0.44	0.13	0.78	0.089	J
108-67-8	1,3,5-Trimethylbenzene	0.65	3.8	0.46	0.13	0.78	0.093	J
98-83-9	alpha-Methylstyrene	ND	3.8	0.56	ND	0.79	0.12	
95-63-6	1,2,4-Trimethylbenzene	2.2	3.8	0.53	0.45	0.78	0.11	J
100-44-7	Benzyl Chloride	ND	0.77	0.66	ND	0.15	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.77	0.47	ND	0.13	0.079	
106-46-7	1,4-Dichlorobenzene	15	0.77	0.43	2.4	0.13	0.071	
135-98-8	sec-Butylbenzene	ND	3.8	0.44	ND	0.70	0.081	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	3.8	0.50	ND	0.70	0.091	
95-50-1	1,2-Dichlorobenzene	ND	0.77	0.50	ND	0.13	0.084	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.8	0.58	ND	0.40	0.060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	0.58	ND	0.10	0.078	
91-20-3	Naphthalene	1.6	1.5	0.57	0.30	0.29	0.11	
87-68-3	Hexachlorobutadiene	ND	0.77	0.69	ND	0.072	0.065	
98-06-6	tert-Butylbenzene	ND	1.5	0.38	ND	0.28	0.070	
104-51-8	n-Butylbenzene	ND	1.5	0.38	ND	0.28	0.070	

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:     *Re*          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00280

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 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)	2.2	0.78	0.078	0.44	0.16	0.016	
74-87-3	Chloromethane	0.42	0.16	0.078	0.20	0.076	0.038	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.098	0.78	0.078	0.014	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.078	ND	0.061	0.031	
74-83-9	Bromomethane	0.59	0.16	0.078	0.15	0.040	0.020	
75-00-3	Chloroethane	0.30	0.16	0.078	0.11	0.059	0.030	
64-17-5	Ethanol	2.8	7.8	0.078	1.5	4.1	0.041	J
67-64-1	Acetone	12	7.8	0.11	4.9	3.3	0.048	B
75-69-4	Trichlorofluoromethane	1.8	0.16	0.078	0.33	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.78	0.11	ND	0.36	0.050	
75-35-4	1,1-Dichloroethene	0.38	0.16	0.078	0.096	0.039	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.60	0.78	0.12	0.20	0.26	0.038	J
75-09-2	Methylene Chloride	0.10	0.78	0.078	0.030	0.22	0.022	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.078	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.16	0.087	0.072	0.020	0.011	
75-15-0	Carbon Disulfide	47	0.78	0.19	15	0.25	0.060	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-34-3	1,1-Dichloroethane	0.081	0.16	0.078	0.020	0.039	0.019	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.078	ND	0.043	0.022	
108-05-4	Vinyl Acetate	3.1	7.8	0.25	0.88	2.2	0.071	J
78-93-3	2-Butanone (MEK)	4.2	0.78	0.078	1.4	0.26	0.026	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
108-20-3	Diisopropyl Ether	ND	0.78	0.092	ND	0.19	0.022	
67-66-3	Chloroform	71	0.16	0.092	15	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:     *Rca*          Date:     5/21/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00280

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 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	0.78	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>7.2</b>	0.16	0.078	<b>1.3</b>	0.029	0.014	
71-43-2	<b>Benzene</b>	<b>4.6</b>	0.16	0.078	<b>1.4</b>	0.049	0.024	
56-23-5	<b>Carbon Tetrachloride</b>	<b>3.8</b>	0.16	0.078	<b>0.60</b>	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.78	0.078	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	ND	0.16	0.078	ND	0.034	0.017	
75-27-4	<b>Bromodichloromethane</b>	<b>0.96</b>	0.16	0.078	<b>0.14</b>	0.023	0.012	<b>M</b>
79-01-6	<b>Trichloroethene</b>	<b>0.63</b>	0.16	0.078	<b>0.12</b>	0.029	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.57</b>	0.78	0.095	<b>0.16</b>	0.22	0.026	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.78	0.12	ND	0.19	0.029	
142-82-5	<b>n-Heptane</b>	<b>1.4</b>	0.78	0.10	<b>0.34</b>	0.19	0.024	
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	0.081	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.5</b>	0.78	0.087	<b>0.37</b>	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	0.098	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
108-88-3	<b>Toluene</b>	<b>1.4</b>	0.78	0.078	<b>0.38</b>	0.21	0.021	
591-78-6	<b>2-Hexanone</b>	<b>0.74</b>	0.78	0.12	<b>0.18</b>	0.19	0.029	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.018	0.012	
106-93-4	1,2-Dibromoethane	ND	0.16	0.084	ND	0.020	0.011	
111-65-9	<b>n-Octane</b>	<b>0.34</b>	0.78	0.078	<b>0.073</b>	0.17	0.017	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>49</b>	0.16	0.078	<b>7.3</b>	0.023	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>0.14</b>	0.16	0.080	<b>0.031</b>	0.034	0.017	<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.

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

Verified By:     Ru    

Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00280

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 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	0.80	0.78	0.097	0.18	0.18	0.022	
179601-23-1	m,p-Xylenes	4.5	0.78	0.20	1.0	0.18	0.047	
75-25-2	Bromoform	ND	0.78	0.12	ND	0.075	0.011	
100-42-5	Styrene	0.18	0.78	0.12	0.043	0.18	0.028	J
95-47-6	o-Xylene	1.2	0.78	0.098	0.27	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.25	0.78	0.087	0.050	0.16	0.018	J
103-65-1	n-Propylbenzene	0.37	0.78	0.081	0.075	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.49	0.78	0.089	0.10	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.82	0.78	0.094	0.17	0.16	0.019	
98-83-9	alpha-Methylstyrene	ND	0.78	0.11	ND	0.16	0.024	
95-63-6	1,2,4-Trimethylbenzene	2.6	0.78	0.11	0.53	0.16	0.022	
100-44-7	Benzyl Chloride	0.17	0.16	0.13	0.033	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.097	ND	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	2.7	0.16	0.087	0.44	0.026	0.015	
135-98-8	sec-Butylbenzene	0.11	0.78	0.090	0.021	0.14	0.016	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.46	0.78	0.10	0.084	0.14	0.018	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.021	0.016	
91-20-3	Naphthalene	2.5	0.31	0.12	0.47	0.060	0.022	
87-68-3	Hexachlorobutadiene	0.50	0.16	0.14	0.047	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.078	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.66	0.31	0.078	0.12	0.057	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: Rc      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.0	ND	4.0	0.40	
74-87-3	Chloromethane	ND	4.0	2.0	ND	1.9	0.97	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	20	2.0	ND	2.9	0.29	
75-01-4	Vinyl Chloride	ND	4.0	2.0	ND	1.6	0.78	
74-83-9	Bromomethane	ND	4.0	2.0	ND	1.0	0.52	
75-00-3	Chloroethane	ND	4.0	2.0	ND	1.5	0.76	
64-17-5	<b>Ethanol</b>	<b>3.8</b>	200	2.0	<b>2.0</b>	110	1.1	<b>J</b>
67-64-1	<b>Acetone</b>	<b>14</b>	200	2.9	<b>5.9</b>	84	1.2	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	4.0	2.0	ND	0.71	0.36	
107-13-1	Acrylonitrile	ND	20	2.8	ND	9.2	1.3	
75-35-4	1,1-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	20	3.0	ND	6.6	0.98	
75-09-2	<b>Methylene Chloride</b>	<b>2.4</b>	20	2.0	<b>0.69</b>	5.8	0.58	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	4.0	2.0	ND	1.3	0.64	
76-13-1	Trichlorotrifluoroethane	ND	4.0	2.2	ND	0.52	0.29	
75-15-0	<b>Carbon Disulfide</b>	<b>11</b>	20	4.8	<b>3.4</b>	6.4	1.5	<b>J</b>
156-60-5	trans-1,2-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
75-34-3	1,1-Dichloroethane	ND	4.0	2.0	ND	0.99	0.49	
1634-04-4	Methyl tert-Butyl Ether	ND	4.0	2.0	ND	1.1	0.55	
108-05-4	Vinyl Acetate	ND	200	6.4	ND	57	1.8	
78-93-3	2-Butanone (MEK)	ND	20	2.0	ND	6.8	0.68	
156-59-2	cis-1,2-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
108-20-3	Diisopropyl Ether	ND	20	2.4	ND	4.8	0.56	
67-66-3	<b>Chloroform</b>	<b>4,700</b>	4.0	2.4	<b>960</b>	0.82	0.48	

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: RC      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.0	ND	4.8	0.49	
107-06-2	1,2-Dichloroethane	ND	4.0	2.0	ND	0.99	0.49	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>14</b>	4.0	2.0	<b>2.6</b>	0.73	0.37	
71-43-2	<b>Benzene</b>	<b>2.0</b>	4.0	2.0	<b>0.64</b>	1.3	0.63	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.6</b>	4.0	2.0	<b>1.2</b>	0.64	0.32	
994-05-8	tert-Amyl Methyl Ether	ND	20	2.0	ND	4.8	0.48	
78-87-5	1,2-Dichloropropane	ND	4.0	2.0	ND	0.87	0.43	
75-27-4	<b>Bromodichloromethane</b>	<b>5.1</b>	4.0	2.0	<b>0.76</b>	0.60	0.30	
79-01-6	<b>Trichloroethene</b>	<b>140</b>	4.0	2.0	<b>26</b>	0.74	0.37	
123-91-1	1,4-Dioxane	ND	20	2.4	ND	5.6	0.68	
80-62-6	Methyl Methacrylate	ND	20	3.0	ND	4.9	0.73	
142-82-5	n-Heptane	ND	20	2.6	ND	4.9	0.62	
10061-01-5	cis-1,3-Dichloropropene	ND	20	2.1	ND	4.4	0.46	
108-10-1	4-Methyl-2-pentanone	ND	20	2.2	ND	4.9	0.55	
10061-02-6	trans-1,3-Dichloropropene	ND	20	2.5	ND	4.4	0.56	
79-00-5	1,1,2-Trichloroethane	ND	4.0	2.0	ND	0.73	0.37	
108-88-3	<b>Toluene</b>	<b>23</b>	20	2.0	<b>6.2</b>	5.3	0.53	
591-78-6	2-Hexanone	ND	20	3.0	ND	4.9	0.74	
124-48-1	Dibromochloromethane	ND	4.0	2.7	ND	0.47	0.32	
106-93-4	1,2-Dibromoethane	ND	4.0	2.2	ND	0.52	0.28	
111-65-9	n-Octane	ND	20	2.0	ND	4.3	0.43	
127-18-4	<b>Tetrachloroethene</b>	<b>2,300</b>	4.0	2.0	<b>330</b>	0.59	0.30	
108-90-7	Chlorobenzene	ND	4.0	2.0	ND	0.87	0.44	

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: Res

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00693

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.5	ND	4.6	0.57	
179601-23-1	m,p-Xylenes	ND	20	5.2	ND	4.6	1.2	
75-25-2	Bromoform	ND	20	3.0	ND	1.9	0.29	
100-42-5	Styrene	ND	20	3.0	ND	4.7	0.71	
95-47-6	o-Xylene	ND	20	2.5	ND	4.6	0.58	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	2.6	ND	0.58	0.37	
98-82-8	Cumene	ND	20	2.2	ND	4.1	0.46	
103-65-1	n-Propylbenzene	ND	20	2.1	ND	4.1	0.42	
622-96-8	4-Ethyltoluene	ND	20	2.3	ND	4.1	0.46	
108-67-8	1,3,5-Trimethylbenzene	ND	20	2.4	ND	4.1	0.49	
98-83-9	alpha-Methylstyrene	ND	20	2.9	ND	4.1	0.60	
95-63-6	1,2,4-Trimethylbenzene	ND	20	2.8	ND	4.1	0.56	
100-44-7	Benzyl Chloride	ND	4.0	3.4	ND	0.77	0.66	
541-73-1	1,3-Dichlorobenzene	ND	4.0	2.5	ND	0.67	0.41	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>2.5</b>	4.0	2.2	<b>0.41</b>	0.67	0.37	<b>J</b>
135-98-8	sec-Butylbenzene	ND	20	2.3	ND	3.6	0.42	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	20	2.6	ND	3.6	0.47	
95-50-1	1,2-Dichlorobenzene	ND	4.0	2.6	ND	0.67	0.44	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	3.0	ND	2.1	0.31	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	3.0	ND	0.54	0.41	
91-20-3	Naphthalene	ND	8.0	3.0	ND	1.5	0.56	
87-68-3	<b>Hexachlorobutadiene</b>	<b>460</b>	4.0	3.6	<b>43</b>	0.38	0.34	
98-06-6	tert-Butylbenzene	ND	8.0	2.0	ND	1.5	0.36	
104-51-8	n-Butylbenzene	ND	8.0	2.0	ND	1.5	0.36	

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: Re      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00640

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.19	0.40	0.38	0.038	
74-87-3	Chloromethane	0.26	0.37	0.19	0.13	0.18	0.090	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.9	0.19	ND	0.27	0.027	
75-01-4	Vinyl Chloride	ND	0.37	0.19	ND	0.15	0.073	
74-83-9	Bromomethane	ND	0.37	0.19	ND	0.096	0.048	
75-00-3	Chloroethane	ND	0.37	0.19	ND	0.14	0.071	
64-17-5	Ethanol	6.9	19	0.19	3.7	9.9	0.099	J
67-64-1	Acetone	7.9	19	0.27	3.3	7.8	0.11	J, B
75-69-4	Trichlorofluoromethane	1.1	0.37	0.19	0.19	0.066	0.033	
107-13-1	Acrylonitrile	ND	1.9	0.26	ND	0.86	0.12	
75-35-4	1,1-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.67	1.9	0.28	0.22	0.61	0.091	J
75-09-2	Methylene Chloride	0.34	1.9	0.19	0.097	0.54	0.054	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.37	0.19	ND	0.12	0.059	
76-13-1	Trichlorotrifluoroethane	0.51	0.37	0.21	0.066	0.049	0.027	
75-15-0	Carbon Disulfide	3.2	1.9	0.45	1.0	0.60	0.14	
156-60-5	trans-1,2-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
75-34-3	1,1-Dichloroethane	ND	0.37	0.19	ND	0.092	0.046	
1634-04-4	Methyl tert-Butyl Ether	ND	0.37	0.19	ND	0.10	0.052	
108-05-4	Vinyl Acetate	1.5	19	0.60	0.43	5.3	0.17	J
78-93-3	2-Butanone (MEK)	6.8	1.9	0.19	2.3	0.63	0.063	
156-59-2	cis-1,2-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
108-20-3	Diisopropyl Ether	ND	1.9	0.22	ND	0.45	0.053	
67-66-3	Chloroform	1.5	0.37	0.22	0.31	0.076	0.045	

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00640

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.19	ND	0.45	0.045	
107-06-2	1,2-Dichloroethane	ND	0.37	0.19	ND	0.092	0.046	
71-55-6	1,1,1-Trichloroethane	ND	0.37	0.19	ND	0.068	0.034	
71-43-2	<b>Benzene</b>	<b>3.6</b>	0.37	0.19	<b>1.1</b>	0.12	0.058	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.40</b>	0.37	0.19	<b>0.064</b>	0.059	0.030	
994-05-8	tert-Amyl Methyl Ether	ND	1.9	0.19	ND	0.45	0.045	
78-87-5	1,2-Dichloropropane	ND	0.37	0.19	ND	0.081	0.040	
75-27-4	Bromodichloromethane	ND	0.37	0.19	ND	0.056	0.028	
79-01-6	<b>Trichloroethene</b>	<b>0.40</b>	0.37	0.19	<b>0.075</b>	0.069	0.035	
123-91-1	1,4-Dioxane	ND	1.9	0.23	ND	0.52	0.063	
80-62-6	Methyl Methacrylate	ND	1.9	0.28	ND	0.45	0.068	
142-82-5	n-Heptane	ND	1.9	0.24	ND	0.45	0.058	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.19	ND	0.41	0.043	
108-10-1	4-Methyl-2-pentanone	ND	1.9	0.21	ND	0.45	0.051	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.23	ND	0.41	0.052	
79-00-5	1,1,2-Trichloroethane	ND	0.37	0.19	ND	0.068	0.034	
108-88-3	<b>Toluene</b>	<b>1.7</b>	1.9	0.19	<b>0.44</b>	0.49	0.049	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.55</b>	1.9	0.28	<b>0.14</b>	0.45	0.069	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.37	0.25	ND	0.044	0.030	
106-93-4	1,2-Dibromoethane	ND	0.37	0.20	ND	0.048	0.026	
111-65-9	<b>n-Octane</b>	<b>0.31</b>	1.9	0.19	<b>0.065</b>	0.40	0.040	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>3.9</b>	0.37	0.19	<b>0.58</b>	0.055	0.027	
108-90-7	Chlorobenzene	ND	0.37	0.19	ND	0.081	0.041	

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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00640

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.23	ND	0.43	0.053	
179601-23-1	<b>m,p-Xylenes</b>	<b>0.51</b>	1.9	0.48	<b>0.12</b>	0.43	0.11	<b>J</b>
75-25-2	Bromoform	ND	1.9	0.28	ND	0.18	0.027	
100-42-5	Styrene	ND	1.9	0.28	ND	0.44	0.066	
95-47-6	<b>o-Xylene</b>	<b>0.23</b>	1.9	0.23	<b>0.054</b>	0.43	0.054	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.37	0.24	ND	0.054	0.035	
98-82-8	Cumene	ND	1.9	0.21	ND	0.38	0.042	
103-65-1	n-Propylbenzene	ND	1.9	0.19	ND	0.38	0.039	
622-96-8	4-Ethyltoluene	ND	1.9	0.21	ND	0.38	0.043	
108-67-8	1,3,5-Trimethylbenzene	ND	1.9	0.22	ND	0.38	0.045	
98-83-9	alpha-Methylstyrene	ND	1.9	0.27	ND	0.38	0.056	
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>0.35</b>	1.9	0.26	<b>0.071</b>	0.38	0.052	<b>J</b>
100-44-7	Benzyl Chloride	ND	0.37	0.32	ND	0.072	0.062	
541-73-1	1,3-Dichlorobenzene	ND	0.37	0.23	ND	0.062	0.038	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>2.7</b>	0.37	0.21	<b>0.45</b>	0.062	0.035	
135-98-8	sec-Butylbenzene	ND	1.9	0.22	ND	0.34	0.039	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	1.9	0.24	ND	0.34	0.044	
95-50-1	1,2-Dichlorobenzene	ND	0.37	0.25	ND	0.062	0.041	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.9	0.28	ND	0.19	0.029	
120-82-1	1,2,4-Trichlorobenzene	ND	0.37	0.28	ND	0.050	0.038	
91-20-3	<b>Naphthalene</b>	<b>2.6</b>	0.74	0.28	<b>0.50</b>	0.14	0.053	
87-68-3	Hexachlorobutadiene	ND	0.37	0.33	ND	0.035	0.031	
98-06-6	tert-Butylbenzene	ND	0.74	0.19	ND	0.14	0.034	
104-51-8	n-Butylbenzene	ND	0.74	0.19	ND	0.14	0.034	

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:     PC          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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)	2.0	2.0	0.20	0.40	0.39	0.039	
74-87-3	Chloromethane	0.30	0.39	0.20	0.15	0.19	0.094	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	0.20	ND	0.28	0.028	
75-01-4	Vinyl Chloride	ND	0.39	0.20	ND	0.15	0.076	
74-83-9	Bromomethane	ND	0.39	0.20	ND	0.10	0.050	
75-00-3	Chloroethane	0.41	0.39	0.20	0.16	0.15	0.074	
64-17-5	Ethanol	4.4	20	0.20	2.3	10	0.10	J
67-64-1	Acetone	13	20	0.28	5.5	8.2	0.12	J, B
75-69-4	Trichlorofluoromethane	1.1	0.39	0.20	0.19	0.069	0.035	
107-13-1	Acrylonitrile	ND	2.0	0.27	ND	0.90	0.13	
75-35-4	1,1-Dichloroethene	8.9	0.39	0.20	2.2	0.098	0.049	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.0	2.0	0.29	0.33	0.64	0.095	J
75-09-2	Methylene Chloride	1.6	2.0	0.20	0.47	0.56	0.056	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.39	0.20	ND	0.12	0.062	
76-13-1	Trichlorotrifluoroethane	0.50	0.39	0.22	0.065	0.051	0.029	
75-15-0	Carbon Disulfide	1.8	2.0	0.47	0.57	0.63	0.15	J
156-60-5	trans-1,2-Dichloroethene	ND	0.39	0.20	ND	0.098	0.049	
75-34-3	1,1-Dichloroethane	0.40	0.39	0.20	0.099	0.096	0.048	
1634-04-4	Methyl tert-Butyl Ether	ND	0.39	0.20	ND	0.11	0.054	
108-05-4	Vinyl Acetate	0.92	20	0.62	0.26	5.5	0.18	J
78-93-3	2-Butanone (MEK)	5.8	2.0	0.20	2.0	0.66	0.066	
156-59-2	cis-1,2-Dichloroethene	ND	0.39	0.20	ND	0.098	0.049	
108-20-3	Diisopropyl Ether	ND	2.0	0.23	ND	0.47	0.055	
67-66-3	Chloroform	1,700	0.39	0.23	340	0.080	0.047	

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B = Analyte was found in the method blank.

Verified By: RC

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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	2.0	0.20	ND	0.47	0.048	
107-06-2	1,2-Dichloroethane	ND	0.39	0.20	ND	0.096	0.048	
71-55-6	1,1,1-Trichloroethane	ND	0.39	0.20	ND	0.072	0.036	
71-43-2	<b>Benzene</b>	<b>2.2</b>	0.39	0.20	<b>0.68</b>	0.12	0.061	
56-23-5	<b>Carbon Tetrachloride</b>	<b>6.6</b>	0.39	0.20	<b>1.1</b>	0.062	0.031	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.20	ND	0.47	0.047	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.22</b>	0.39	0.20	<b>0.048</b>	0.084	0.042	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>7.4</b>	0.39	0.20	<b>1.1</b>	0.058	0.029	
79-01-6	<b>Trichloroethene</b>	<b>4.2</b>	0.39	0.20	<b>0.78</b>	0.073	0.036	
123-91-1	1,4-Dioxane	ND	2.0	0.24	ND	0.54	0.066	
80-62-6	Methyl Methacrylate	ND	2.0	0.29	ND	0.48	0.071	
142-82-5	n-Heptane	ND	2.0	0.25	ND	0.48	0.061	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.20	ND	0.43	0.045	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	2.0	0.22	<b>0.067</b>	0.48	0.053	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.25	ND	0.43	0.054	
79-00-5	1,1,2-Trichloroethane	ND	0.39	0.20	ND	0.072	0.036	
108-88-3	<b>Toluene</b>	<b>8.6</b>	2.0	0.20	<b>2.3</b>	0.52	0.052	
591-78-6	<b>2-Hexanone</b>	<b>0.37</b>	2.0	0.30	<b>0.090</b>	0.48	0.072	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>1.1</b>	0.39	0.27	<b>0.13</b>	0.046	0.031	
106-93-4	1,2-Dibromoethane	ND	0.39	0.21	ND	0.051	0.027	
111-65-9	n-Octane	ND	2.0	0.20	ND	0.42	0.042	
127-18-4	<b>Tetrachloroethene</b>	<b>17</b>	0.39	0.20	<b>2.5</b>	0.058	0.029	
108-90-7	<b>Chlorobenzene</b>	<b>1.3</b>	0.39	0.20	<b>0.29</b>	0.085	0.043	

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Verified By: Re.      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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	0.97	2.0	0.24	0.22	0.45	0.056	J
179601-23-1	m,p-Xylenes	5.7	2.0	0.51	1.3	0.45	0.12	
75-25-2	Bromoform	ND	2.0	0.30	ND	0.19	0.029	
100-42-5	Styrene	0.32	2.0	0.30	0.076	0.46	0.070	J
95-47-6	o-Xylene	1.9	2.0	0.25	0.45	0.45	0.057	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.39	0.25	ND	0.057	0.036	
98-82-8	Cumene	0.39	2.0	0.22	0.079	0.40	0.044	J
103-65-1	n-Propylbenzene	0.32	2.0	0.20	0.064	0.40	0.041	J
622-96-8	4-Ethyltoluene	0.54	2.0	0.22	0.11	0.40	0.045	J, B
108-67-8	1,3,5-Trimethylbenzene	0.65	2.0	0.23	0.13	0.40	0.048	J
98-83-9	alpha-Methylstyrene	ND	2.0	0.28	ND	0.40	0.059	
95-63-6	1,2,4-Trimethylbenzene	2.2	2.0	0.27	0.44	0.40	0.055	
100-44-7	Benzyl Chloride	ND	0.39	0.34	ND	0.075	0.065	
541-73-1	1,3-Dichlorobenzene	82	0.39	0.24	14	0.065	0.040	
106-46-7	1,4-Dichlorobenzene	24	0.39	0.22	4.1	0.065	0.036	
135-98-8	sec-Butylbenzene	0.45	2.0	0.23	0.082	0.36	0.041	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.49	2.0	0.25	0.089	0.36	0.046	J
95-50-1	1,2-Dichlorobenzene	52	0.39	0.26	8.7	0.065	0.043	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.30	ND	0.20	0.031	
120-82-1	1,2,4-Trichlorobenzene	240	0.39	0.30	32	0.053	0.040	
91-20-3	Naphthalene	2.7	0.78	0.29	0.52	0.15	0.055	
87-68-3	Hexachlorobutadiene	3.9	0.39	0.35	0.37	0.037	0.033	
98-06-6	tert-Butylbenzene	ND	0.78	0.20	ND	0.14	0.036	
104-51-8	n-Butylbenzene	0.57	0.78	0.20	0.10	0.14	0.036	J

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B = Analyte was found in the method blank.

Verified By: Re

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00634

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 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)	ND	160	16	ND	32	3.2	
74-87-3	Chloromethane	ND	32	16	ND	15	7.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	12	6.2	
74-83-9	Bromomethane	ND	32	16	ND	8.1	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.0	
64-17-5	Ethanol	ND	1,600	16	ND	840	8.4	
67-64-1	<b>Acetone</b>	<b>44</b>	1,600	23	<b>19</b>	670	9.7	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.6	2.8	
107-13-1	Acrylonitrile	ND	160	22	ND	73	10	
75-35-4	<b>1,1-Dichloroethene</b>	<b>44</b>	32	16	<b>11</b>	8.0	4.0	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	23	ND	52	7.7	
75-09-2	<b>Methylene Chloride</b>	<b>27</b>	160	16	<b>7.8</b>	45	4.5	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.0	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.1	2.3	
75-15-0	Carbon Disulfide	ND	160	38	ND	51	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.0	4.0	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	7.8	3.9	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.8	4.4	
108-05-4	Vinyl Acetate	ND	1,600	51	ND	450	14	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	54	5.4	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.0	4.0	
108-20-3	Diisopropyl Ether	ND	160	19	ND	38	4.5	
67-66-3	<b>Chloroform</b>	<b>130,000</b>	32	19	<b>28,000</b>	6.5	3.8	

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.

B = Analyte was found in the method blank.

Verified By:     RC    

Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00634

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 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	160	16	ND	38	3.9	
107-06-2	1,2-Dichloroethane	ND	32	16	ND	7.8	3.9	
71-55-6	1,1,1-Trichloroethane	ND	32	16	ND	5.8	2.9	
71-43-2	Benzene	ND	32	16	ND	9.9	4.9	
56-23-5	<b>Carbon Tetrachloride</b>	<b>40</b>	32	16	<b>6.3</b>	5.0	2.5	
994-05-8	tert-Amyl Methyl Ether	ND	160	16	ND	38	3.8	
78-87-5	1,2-Dichloropropane	ND	32	16	ND	6.8	3.4	
75-27-4	<b>Bromodichloromethane</b>	<b>200</b>	32	16	<b>30</b>	4.7	2.4	
79-01-6	<b>Trichloroethene</b>	<b>28</b>	32	16	<b>5.2</b>	5.9	2.9	<b>J</b>
123-91-1	1,4-Dioxane	ND	160	19	ND	44	5.4	
80-62-6	Methyl Methacrylate	ND	160	24	ND	39	5.8	
142-82-5	n-Heptane	ND	160	20	ND	39	4.9	
10061-01-5	cis-1,3-Dichloropropene	ND	160	16	ND	35	3.6	
108-10-1	4-Methyl-2-pentanone	ND	160	18	ND	39	4.3	
10061-02-6	trans-1,3-Dichloropropene	ND	160	20	ND	35	4.4	
79-00-5	1,1,2-Trichloroethane	ND	32	16	ND	5.8	2.9	
108-88-3	Toluene	ND	160	16	ND	42	4.2	
591-78-6	2-Hexanone	ND	160	24	ND	39	5.9	
124-48-1	<b>Dibromochloromethane</b>	<b>160</b>	32	21	<b>19</b>	3.7	2.5	
106-93-4	1,2-Dibromoethane	ND	32	17	ND	4.1	2.2	
111-65-9	n-Octane	ND	160	16	ND	34	3.4	
127-18-4	<b>Tetrachloroethene</b>	<b>95</b>	32	16	<b>14</b>	4.7	2.3	
108-90-7	Chlorobenzene	ND	32	16	ND	6.9	3.5	

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: RC      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00634

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/22/08 & 5/24/08  
 Volume(s) Analyzed: 0.0050 Liter(s)  
 0.0010 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	ND	160	20	ND	36	4.5	
179601-23-1	m,p-Xylenes	ND	160	41	ND	36	9.5	
75-25-2	<b>Bromoform</b>	<b>140</b>	160	24	<b>14</b>	15	2.3	<b>J</b>
100-42-5	Styrene	ND	160	24	ND	37	5.6	
95-47-6	<b>o-Xylene</b>	<b>37</b>	160	20	<b>8.6</b>	36	4.6	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	20	ND	4.6	2.9	
98-82-8	Cumene	ND	160	18	ND	32	3.6	
103-65-1	n-Propylbenzene	ND	160	16	ND	32	3.3	
622-96-8	4-Ethyltoluene	ND	160	18	ND	32	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	32	3.9	
98-83-9	alpha-Methylstyrene	ND	160	23	ND	33	4.8	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	32	4.4	
100-44-7	Benzyl Chloride	ND	32	27	ND	6.1	5.3	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.3	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.3	2.9	
135-98-8	sec-Butylbenzene	ND	160	18	ND	29	3.3	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.7	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.3	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	16	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.2	
91-20-3	Naphthalene	ND	63	23	ND	12	4.5	
87-68-3	Hexachlorobutadiene	ND	32	28	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	63	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	63	16	ND	12	2.9	

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.

Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.1	0.42	2.2	0.22	J
74-87-3	Chloromethane	2.4	2.2	1.1	1.1	1.1	0.53	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	11	1.1	ND	1.6	0.16	
75-01-4	Vinyl Chloride	ND	2.2	1.1	ND	0.86	0.43	
74-83-9	Bromomethane	ND	2.2	1.1	ND	0.56	0.28	
75-00-3	Chloroethane	ND	2.2	1.1	ND	0.83	0.41	
64-17-5	Ethanol	61	110	1.1	32	58	0.58	J
67-64-1	Acetone	19	110	1.6	8.0	46	0.67	J, B
75-69-4	Trichlorofluoromethane	1.3	2.2	1.1	0.23	0.39	0.19	J
107-13-1	Acrylonitrile	ND	11	1.5	ND	5.0	0.71	
75-35-4	1,1-Dichloroethene	17	2.2	1.1	4.3	0.55	0.28	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	11	1.6	ND	3.6	0.53	
75-09-2	Methylene Chloride	1.9	11	1.1	0.54	3.1	0.31	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	1.1	ND	0.70	0.35	
76-13-1	Trichlorotrifluoroethane	ND	2.2	1.2	ND	0.29	0.16	
75-15-0	Carbon Disulfide	4.3	11	2.6	1.4	3.5	0.84	J
156-60-5	trans-1,2-Dichloroethene	ND	2.2	1.1	ND	0.55	0.28	
75-34-3	1,1-Dichloroethane	ND	2.2	1.1	ND	0.54	0.27	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	1.1	ND	0.61	0.30	
108-05-4	Vinyl Acetate	ND	110	3.5	ND	31	0.99	
78-93-3	2-Butanone (MEK)	3.5	11	1.1	1.2	3.7	0.37	J
156-59-2	cis-1,2-Dichloroethene	ND	2.2	1.1	ND	0.55	0.28	
108-20-3	Diisopropyl Ether	ND	11	1.3	ND	2.6	0.31	
67-66-3	Chloroform	11,000	2.2	1.3	2,200	0.45	0.26	

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:     *Re*          Date:     5/22/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.1	ND	2.6	0.27	
107-06-2	1,2-Dichloroethane	ND	2.2	1.1	ND	0.54	0.27	
71-55-6	1,1,1-Trichloroethane	ND	2.2	1.1	ND	0.40	0.20	
71-43-2	<b>Benzene</b>	<b>2.8</b>	2.2	1.1	<b>0.88</b>	0.68	0.34	
56-23-5	<b>Carbon Tetrachloride</b>	<b>19</b>	2.2	1.1	<b>3.0</b>	0.35	0.17	
994-05-8	tert-Amyl Methyl Ether	ND	11	1.1	ND	2.6	0.26	
78-87-5	1,2-Dichloropropane	ND	2.2	1.1	ND	0.47	0.24	
75-27-4	<b>Bromodichloromethane</b>	<b>4.0</b>	2.2	1.1	<b>0.59</b>	0.33	0.16	
79-01-6	<b>Trichloroethene</b>	<b>180</b>	2.2	1.1	<b>33</b>	0.41	0.20	
123-91-1	1,4-Dioxane	ND	11	1.3	ND	3.0	0.37	
80-62-6	Methyl Methacrylate	ND	11	1.6	ND	2.7	0.40	
142-82-5	n-Heptane	ND	11	1.4	ND	2.7	0.34	
10061-01-5	cis-1,3-Dichloropropene	ND	11	1.1	ND	2.4	0.25	
108-10-1	4-Methyl-2-pentanone	ND	11	1.2	ND	2.7	0.30	
10061-02-6	trans-1,3-Dichloropropene	ND	11	1.4	ND	2.4	0.30	
79-00-5	1,1,2-Trichloroethane	ND	2.2	1.1	ND	0.40	0.20	
108-88-3	<b>Toluene</b>	<b>2.9</b>	11	1.1	<b>0.78</b>	2.9	0.29	<b>J</b>
591-78-6	2-Hexanone	ND	11	1.7	ND	2.7	0.41	
124-48-1	Dibromochloromethane	ND	2.2	1.5	ND	0.26	0.17	
106-93-4	1,2-Dibromoethane	ND	2.2	1.2	ND	0.28	0.15	
111-65-9	n-Octane	ND	11	1.1	ND	2.3	0.23	
127-18-4	<b>Tetrachloroethene</b>	<b>15</b>	2.2	1.1	<b>2.2</b>	0.32	0.16	
108-90-7	Chlorobenzene	ND	2.2	1.1	ND	0.48	0.24	

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:     *RU*          Date:     *6/2/08*

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.4	ND	2.5	0.31	
179601-23-1	m,p-Xylenes	ND	11	2.8	ND	2.5	0.65	
75-25-2	Bromoform	ND	11	1.7	ND	1.1	0.16	
100-42-5	Styrene	ND	11	1.7	ND	2.6	0.39	
95-47-6	o-Xylene	ND	11	1.4	ND	2.5	0.32	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	1.4	ND	0.32	0.20	
98-82-8	Cumene	ND	11	1.2	ND	2.2	0.25	
103-65-1	n-Propylbenzene	ND	11	1.1	ND	2.2	0.23	
622-96-8	4-Ethyltoluene	ND	11	1.2	ND	2.2	0.25	
108-67-8	1,3,5-Trimethylbenzene	ND	11	1.3	ND	2.2	0.27	
98-83-9	alpha-Methylstyrene	ND	11	1.6	ND	2.3	0.33	
95-63-6	1,2,4-Trimethylbenzene	ND	11	1.5	ND	2.2	0.31	
100-44-7	Benzyl Chloride	ND	2.2	1.9	ND	0.42	0.36	
541-73-1	1,3-Dichlorobenzene	ND	2.2	1.4	ND	0.36	0.23	
106-46-7	1,4-Dichlorobenzene	ND	2.2	1.2	ND	0.36	0.20	
135-98-8	sec-Butylbenzene	ND	11	1.3	ND	2.0	0.23	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	11	1.4	ND	2.0	0.26	
95-50-1	1,2-Dichlorobenzene	ND	2.2	1.4	ND	0.36	0.24	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	1.7	ND	1.1	0.17	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	1.7	ND	0.29	0.22	
91-20-3	Naphthalene	ND	4.4	1.6	ND	0.83	0.31	
87-68-3	Hexachlorobutadiene	ND	2.2	2.0	ND	0.21	0.18	
98-06-6	tert-Butylbenzene	ND	4.4	1.1	ND	0.80	0.20	
104-51-8	n-Butylbenzene	ND	4.4	1.1	ND	0.80	0.20	

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

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

CAS Project ID: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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>0.22</b>	5.0	0.073	<b>0.094</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
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	<b>V</b>
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	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.

V = The continuing calibration verification standard was outside (biased low) the specified limits for this compound.

Verified By: RC Date: 5/21/08

**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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: Re Date: 5/21/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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

CAS Project ID: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	V
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	V
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	V

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.

V = The continuing calibration verification standard was outside (biased high) the specified limits for this compound.

Verified By: Re Date: 6/2/08

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

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	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>0.11</b>	5.0	0.050	<b>0.061</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>0.56</b>	5.0	0.073	<b>0.24</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	<b>L, V</b>
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	<b>2-Butanone (MEK)</b>	<b>0.089</b>	0.50	0.050	<b>0.030</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.

V = The continuing calibration verification standard was outside (biased low) the specified limits for this compound.

L = Laboratory control sample recovery outside the specified limits, results may be biased low.

Verified By: Re Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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

CAS Project ID: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	L
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.

L = Laboratory control sample recovery outside the specified limits, results may be biased low.

Verified By:     Rc     Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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

CAS Project ID: P0801442  
 CAS Sample ID: P080522-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:** 5/22/08  
**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	V

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.

V = The continuing calibration verification standard was outside (biased high) the specified limits for this compound.

Verified By: Re Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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

CAS Project ID: P0801442  
 CAS Sample ID: P080524-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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>0.19</b>	5.0	0.073	<b>0.079</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
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	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: R.

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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

CAS Project ID: P0801442  
 CAS Sample ID: P080524-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/24/08  
 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: Re Date: 6/2/08

**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: P0801442  
 CAS Sample ID: P080524-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/24/08  
 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: Re Date: 6/2/08

**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: P0801442

**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:** 5/14 - 5/15/08  
**Date(s) Received:** 5/16/08  
**Date(s) Analyzed:** 5/21 - 5/24/08

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	P080521-MB	84	70-130	106	70-130	111	70-130	
Method Blank	P080522-MB	82	70-130	106	70-130	111	70-130	
Method Blank	P080524-MB	97	70-130	102	70-130	99	70-130	
Lab Control Sample	P080521-LCS	86	70-130	103	70-130	113	70-130	
Lab Control Sample	P080522-LCS	84	70-130	105	70-130	112	70-130	
Lab Control Sample	P080524-LCS	96	70-130	100	70-130	103	70-130	
SG73B-05	P0801442-001	97	70-130	97	70-130	100	70-130	
SG39B-05	P0801442-002	95	70-130	98	70-130	100	70-130	
SG37B-20	P0801442-003	93	70-130	96	70-130	100	70-130	
SG36B-20	P0801442-004	100	70-130	98	70-130	98	70-130	
SG44B-05	P0801442-005	92	70-130	99	70-130	103	70-130	
SG88B-05	P0801442-006	92	70-130	98	70-130	101	70-130	
SG72B-05	P0801442-007	89	70-130	98	70-130	102	70-130	
SG70B-05	P0801442-008	95	70-130	101	70-130	100	70-130	
SG71B-05	P0801442-009	96	70-130	100	70-130	99	70-130	
SG65B-05	P0801442-010	89	70-130	100	70-130	102	70-130	
SG65B-05D	P0801442-011	92	70-130	100	70-130	101	70-130	
SG84B-05	P0801442-012	91	70-130	100	70-130	100	70-130	
SG85B-05	P0801442-013	91	70-130	98	70-130	102	70-130	
SG35B-05	P0801442-014	102	70-130	101	70-130	98	70-130	
SG35B-05	P0801442-014DUP	101	70-130	101	70-130	99	70-130	
SG94B-05	P0801442-015	91	70-130	100	70-130	102	70-130	
SG95B-05	P0801442-016	90	70-130	101	70-130	102	70-130	
SG89B-05	P0801442-017	96	70-130	100	70-130	97	70-130	
SG75B-05	P0801442-018	91	70-130	102	70-130	102	70-130	

**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	19.6	77	69-117	
74-87-3	Chloromethane	24.5	20.6	84	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	23.3	90	58-133	
75-01-4	Vinyl Chloride	24.8	18.2	73	61-127	
74-83-9	Bromomethane	25.0	19.6	78	67-124	
75-00-3	Chloroethane	25.0	20.5	82	69-123	
64-17-5	Ethanol	23.8	20.9	88	56-137	
67-64-1	Acetone	26.8	19.8	74	63-116	
75-69-4	Trichlorofluoromethane	26.3	22.1	84	71-120	
107-13-1	Acrylonitrile	25.5	22.5	88	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.7	85	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	19.5	76	35-141	
75-09-2	Methylene Chloride	27.8	21.0	76	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	20.6	77	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	27.0	97	63-129	
75-15-0	Carbon Disulfide	25.0	19.8	79	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	21.1	80	74-118	
75-34-3	1,1-Dichloroethane	26.8	20.3	76	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	20.8	78	72-119	
108-05-4	Vinyl Acetate	25.3	19.7	78	32-163	
78-93-3	2-Butanone (MEK)	27.0	21.9	81	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	21.5	80	74-117	
108-20-3	Diisopropyl Ether	26.3	21.7	83	70-131	
67-66-3	Chloroform	29.8	24.9	84	72-113	

Verified By: Re Date: 6/2/08

**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	22.2	85	74-123	
107-06-2	1,2-Dichloroethane	26.3	20.5	78	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	22.7	85	78-114	
71-43-2	Benzene	27.0	21.0	78	73-111	
56-23-5	Carbon Tetrachloride	26.0	25.6	98	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	21.2	82	81-118	
78-87-5	1,2-Dichloropropane	26.5	21.7	82	78-117	
75-27-4	Bromodichloromethane	27.8	23.8	86	77-120	
79-01-6	Trichloroethene	27.3	25.6	94	80-116	
123-91-1	1,4-Dioxane	27.5	24.1	88	79-122	
80-62-6	Methyl Methacrylate	25.8	25.3	98	79-128	
142-82-5	n-Heptane	26.8	22.1	82	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	20.6	82	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	21.9	80	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	23.2	83	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	22.9	87	80-117	
108-88-3	Toluene	26.5	24.0	91	76-116	
591-78-6	2-Hexanone	26.3	22.4	85	69-131	
124-48-1	Dibromochloromethane	27.0	28.4	105	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.1	99	79-122	
111-65-9	n-Octane	26.0	24.0	92	78-122	
127-18-4	Tetrachloroethene	26.0	27.8	107	77-118	
108-90-7	Chlorobenzene	26.5	25.9	98	78-117	

Verified By:     Re     Date:     6/2/08



**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	24.2	92	79-116	
179601-23-1	m,p-Xylenes	62.5	57.7	92	80-117	
75-25-2	Bromoform	31.3	37.9	121	77-128	
100-42-5	Styrene	26.3	26.4	100	80-124	
95-47-6	o-Xylene	29.8	27.8	93	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	27.2	91	79-120	
98-82-8	Cumene	27.0	26.7	99	81-119	
103-65-1	n-Propylbenzene	26.3	24.6	94	82-120	
622-96-8	4-Ethyltoluene	26.5	26.8	101	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.7	99	80-120	
98-83-9	alpha-Methylstyrene	25.5	27.1	106	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.7	99	80-122	
100-44-7	Benzyl Chloride	25.8	25.0	97	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	27.0	106	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	28.3	108	81-119	
135-98-8	sec-Butylbenzene	26.8	26.6	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	30.0	104	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	27.1	105	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	29.7	115	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	31.1	120	75-138	
91-20-3	Naphthalene	26.3	28.4	108	76-143	
87-68-3	Hexachlorobutadiene	26.3	32.4	123	72-128	

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	19.1	75	69-117	
74-87-3	Chloromethane	24.5	19.9	81	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	23.3	90	58-133	
75-01-4	Vinyl Chloride	24.8	18.1	73	61-127	
74-83-9	Bromomethane	25.0	20.4	82	67-124	
75-00-3	Chloroethane	25.0	20.3	81	69-123	
64-17-5	Ethanol	23.8	20.0	84	56-137	
67-64-1	Acetone	26.8	19.4	72	63-116	
75-69-4	Trichlorofluoromethane	26.3	22.0	84	71-120	
107-13-1	Acrylonitrile	25.5	21.9	86	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.4	84	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	19.1	74	35-141	
75-09-2	Methylene Chloride	27.8	20.4	73	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	19.7	74	75-127	L
76-13-1	Trichlorotrifluoroethane	27.8	26.6	96	63-129	
75-15-0	Carbon Disulfide	25.0	19.5	78	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	20.7	78	74-118	
75-34-3	1,1-Dichloroethane	26.8	19.8	74	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	20.3	76	72-119	
108-05-4	Vinyl Acetate	25.3	20.5	81	32-163	
78-93-3	2-Butanone (MEK)	27.0	21.5	80	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	20.9	77	74-117	
108-20-3	Diisopropyl Ether	26.3	21.5	82	70-131	
67-66-3	Chloroform	29.8	24.5	82	72-113	

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

**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: P0801442  
 CAS Sample ID: P080522-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:** 5/22/08  
**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	21.6	83	74-123	
107-06-2	1,2-Dichloroethane	26.3	19.9	76	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	22.4	84	78-114	
71-43-2	Benzene	27.0	20.7	77	73-111	
56-23-5	Carbon Tetrachloride	26.0	25.4	98	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	20.7	80	81-118	L
78-87-5	1,2-Dichloropropane	26.5	21.3	80	78-117	
75-27-4	Bromodichloromethane	27.8	23.5	85	77-120	
79-01-6	Trichloroethene	27.3	25.5	93	80-116	
123-91-1	1,4-Dioxane	27.5	23.7	86	79-122	
80-62-6	Methyl Methacrylate	25.8	25.0	97	79-128	
142-82-5	n-Heptane	26.8	21.5	80	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	20.3	81	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	21.4	78	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	22.8	81	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	22.5	86	80-117	
108-88-3	Toluene	26.5	24.5	92	76-116	
591-78-6	2-Hexanone	26.3	22.1	84	69-131	
124-48-1	Dibromochloromethane	27.0	28.9	107	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.8	102	79-122	
111-65-9	n-Octane	26.0	24.3	93	78-122	
127-18-4	Tetrachloroethene	26.0	28.8	111	77-118	
108-90-7	Chlorobenzene	26.5	26.5	100	78-117	

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

**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: P0801442  
 CAS Sample ID: P080522-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:** 5/22/08  
**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	24.6	94	79-116	
179601-23-1	m,p-Xylenes	62.5	58.6	94	80-117	
75-25-2	Bromoform	31.3	38.7	124	77-128	
100-42-5	Styrene	26.3	26.7	102	80-124	
95-47-6	o-Xylene	29.8	28.0	94	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	27.2	91	79-120	
98-82-8	Cumene	27.0	27.0	100	81-119	
103-65-1	n-Propylbenzene	26.3	24.8	94	82-120	
622-96-8	4-Ethyltoluene	26.5	26.9	102	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	26.1	100	80-120	
98-83-9	alpha-Methylstyrene	25.5	27.5	108	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.8	99	80-122	
100-44-7	Benzyl Chloride	25.8	25.1	97	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	27.5	108	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	28.8	110	81-119	
135-98-8	sec-Butylbenzene	26.8	26.8	100	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	30.3	105	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	27.3	106	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	30.0	116	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	31.1	120	75-138	
91-20-3	Naphthalene	26.3	28.2	107	76-143	
87-68-3	Hexachlorobutadiene	26.3	32.8	125	72-128	

Verified By:     R     Date:     6/2/08

**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: P0801442  
 CAS Sample ID: P080524-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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	20.2	79	69-117	
74-87-3	Chloromethane	24.5	18.3	75	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	21.4	82	58-133	
75-01-4	Vinyl Chloride	24.8	21.1	85	61-127	
74-83-9	Bromomethane	25.0	21.8	87	67-124	
75-00-3	Chloroethane	25.0	21.7	87	69-123	
64-17-5	Ethanol	23.8	18.3	77	56-137	
67-64-1	Acetone	26.8	22.9	85	63-116	
75-69-4	Trichlorofluoromethane	26.3	21.9	83	71-120	
107-13-1	Acrylonitrile	25.5	23.0	90	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.8	86	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	23.2	90	35-141	
75-09-2	Methylene Chloride	27.8	22.6	81	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	29.0	108	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	23.2	83	63-129	
75-15-0	Carbon Disulfide	25.0	20.7	83	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	23.6	89	74-118	
75-34-3	1,1-Dichloroethane	26.8	23.2	87	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	23.1	86	72-119	
108-05-4	Vinyl Acetate	25.3	29.2	115	32-163	
78-93-3	2-Butanone (MEK)	27.0	23.7	88	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	23.1	86	74-117	
108-20-3	Diisopropyl Ether	26.3	22.8	87	70-131	
67-66-3	Chloroform	29.8	26.2	88	72-113	

Verified By: RC Date: 6/2/08

**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: P0801442  
 CAS Sample ID: P080524-LCS

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/24/08  
 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	22.9	88	74-123	
107-06-2	1,2-Dichloroethane	26.3	22.2	84	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	23.0	86	78-114	
71-43-2	Benzene	27.0	23.2	86	73-111	
56-23-5	Carbon Tetrachloride	26.0	23.6	91	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	23.3	90	81-118	
78-87-5	1,2-Dichloropropane	26.5	23.2	88	78-117	
75-27-4	Bromodichloromethane	27.8	25.4	91	77-120	
79-01-6	Trichloroethene	27.3	21.8	80	80-116	
123-91-1	1,4-Dioxane	27.5	23.9	87	79-122	
80-62-6	Methyl Methacrylate	25.8	23.7	92	79-128	
142-82-5	n-Heptane	26.8	23.8	89	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	23.5	94	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	22.7	83	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	27.2	97	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	23.3	89	80-117	
108-88-3	Toluene	26.5	23.2	88	76-116	
591-78-6	2-Hexanone	26.3	21.6	82	69-131	
124-48-1	Dibromochloromethane	27.0	25.4	94	80-128	
106-93-4	1,2-Dibromoethane	26.3	23.8	90	79-122	
111-65-9	n-Octane	26.0	23.7	91	78-122	
127-18-4	Tetrachloroethene	26.0	22.6	87	77-118	
108-90-7	Chlorobenzene	26.5	23.1	87	78-117	

**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: P0801442  
 CAS Sample ID: P080524-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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	23.4	89	79-116	
179601-23-1	m,p-Xylenes	62.5	55.8	89	80-117	
75-25-2	Bromoform	31.3	31.8	102	77-128	
100-42-5	Styrene	26.3	23.7	90	80-124	
95-47-6	o-Xylene	29.8	26.5	89	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.5	99	79-120	
98-82-8	Cumene	27.0	24.4	90	81-119	
103-65-1	n-Propylbenzene	26.3	24.3	92	82-120	
622-96-8	4-Ethyltoluene	26.5	24.2	91	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	23.2	89	80-120	
98-83-9	alpha-Methylstyrene	25.5	20.9	82	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	24.0	92	80-122	
100-44-7	Benzyl Chloride	25.8	29.0	112	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	23.5	92	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	24.1	92	81-119	
135-98-8	sec-Butylbenzene	26.8	24.7	92	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	28.0	97	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	23.6	91	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	24.2	93	75-138	
91-20-3	Naphthalene	26.3	23.6	90	76-143	
87-68-3	Hexachlorobutadiene	26.3	24.1	92	72-128	
98-06-6	tert-Butylbenzene	26.3	24.4	93	70-130	
104-51-8	n-Butylbenzene	26.8	25.1	94	70-130	

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00693

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	2.24	0.453	-	-	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	
<b>Ethanol</b>	3.84	2.04	3.76	2.00	3.8	<b>2</b>	25	<b>J</b>
<b>Acetone</b>	14.1	5.95	13.1	5.51	13.6	<b>7</b>	25	<b>J, B</b>
Trichlorofluoromethane	ND	ND	ND	ND	-	-	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	
Methylene Chloride	2.40	0.691	ND	ND	-	-	25	<b>J</b>
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
<b>Carbon Disulfide</b>	10.6	3.42	10.9	3.51	10.75	<b>3</b>	25	<b>J</b>
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Diisopropyl Ether	ND	ND	ND	ND	-	-	25	
<b>Chloroform</b>	4,700	962	4,670	956	4685	<b>0.6</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: RC Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	
<b>1,1,1-Trichloroethane</b>	14.3	2.63	15.0	2.74	14.65	<b>5</b>	25	
Benzene	2.04	0.639	ND	ND	-	-	25	J
<b>Carbon Tetrachloride</b>	7.56	1.20	7.40	1.18	7.48	<b>2</b>	25	
tert-Amyl Methyl Ether	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
<b>Bromodichloromethane</b>	5.08	0.759	4.32	0.645	4.7	<b>16</b>	25	
<b>Trichloroethene</b>	137	25.5	137	25.4	137	<b>0</b>	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>	23.5	6.23	23.8	6.33	23.65	<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	
n-Octane	ND	ND	ND	ND	-	-	25	
<b>Tetrachloroethene</b>	2,260	334	2,240	331	2250	<b>0.9</b>	25	
Chlorobenzene	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.

**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00693

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
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	ND	ND	ND	ND	-	-	25	
alpha-Methylstyrene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
<b>1,4-Dichlorobenzene</b>	2.48	0.413	2.48	0.413	2.48	<b>0</b>	25	<b>J</b>
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	
<b>Hexachlorobutadiene</b>	457	42.8	461	43.2	459	<b>0.9</b>	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: Re

Date: 6/2/08

**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: P0801442

**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: 05210801.D  
 Date Analyzed: 5/21/08  
 Time Analyzed: 07:03

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	280453	9.20	1159366	11.35	455765	16.45
<b>Upper Limit</b>	392634	9.53	1623112	11.68	638071	16.78
<b>Lower Limit</b>	168272	8.87	695620	11.02	273459	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	265459	9.19	1108808
02	Lab Control Sample	271810	9.23	1132838
03	SG70B-05 (Dilution)	278945	9.19	1159225
04	SG71B-05 (Dilution)	261196	9.20	1111432
05				
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: Rc Date: 6/2/08

**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: P0801442

**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: 05220801.D  
 Date Analyzed: 5/22/08  
 Time Analyzed: 06:45

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	290078	9.20	1224526	11.36	472512	16.45
<b>Upper Limit</b>	406109	9.53	1714336	11.69	661517	16.78
<b>Lower Limit</b>	174047	8.87	734716	11.03	283507	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	291099	9.19	1200703
02	Lab Control Sample	292129	9.22	1211752
03	SG36B-20 (Dilution)	294338	9.19	1253056
04	SG89B-05 (Dilution)	295772	9.19	1263184
05	SG72B-05 (Dilution)	291546	9.20	1227593
06	SG84B-05 (Dilution)	250673	9.20	1092477
07	SG95B-05 (Dilution)	261506	9.20	1145449
08	SG75B-05 (Dilution)	275771	9.19	1188439
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: RC Date: 6/2/08

**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: P0801442

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05240801.D  
 Date Analyzed: 5/24/08  
 Time Analyzed: 06:59

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	448388	12.59	1911390	15.52	908326	21.35
<b>Upper Limit</b>	627743	12.92	2675946	15.85	1271656	21.68
<b>Lower Limit</b>	269033	12.26	1146834	15.19	544996	21.02

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	443208	12.58	1904075
02	Lab Control Sample	459665	12.59	1955735
03	SG70B-05	463631	12.58	1946379
04	SG71B-05	444409	12.58	1882384
05	SG36B-20	441193	12.58	1908057
06	SG89B-05	432946	12.58	1838073
07	SG35B-05	408720	12.58	1810368
08	SG35B-05 (Lab Duplicate)	413362	12.58	1798004
09	SG73B-05	405189	12.58	1793020
10	SG39B-05	483630	12.58	2073700
11	SG37B-20	502403	12.58	2138148
12	SG44B-05	528796	12.58	2294376
13	SG88B-05	542028	12.58	2318224
14	SG72B-05	585660	12.58	2449883
15	SG65B-05	604273	12.58	2567002
16	SG65B-05D	564336	12.58	2463090
17	SG84B-05	579106	12.58	2412558
18	SG85B-05	561245	12.58	2384740
19	SG94B-05	564641	12.58	2380094
20	SG95B-05	575733	12.58	2414649
21	SG75B-05	558421	12.58	2357400

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: RC Date: 6/2/08

## RESULTS OF HELIUM ANALYSIS

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 1

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

CAS Project ID: P0801442

**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:** 5/14 - 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SG73B-05	P0801442-001	1.00	1.62	160	41	
SG39B-05	P0801442-002	1.00	1.63	ND	41	
SG37B-20	P0801442-003	1.00	1.58	ND	40	
SG36B-20	P0801442-004	1.00	1.56	110	39	
SG44B-05	P0801442-005	1.00	1.62	ND	41	
SG88B-05	P0801442-006	1.00	1.67	ND	42	
SG72B-05	P0801442-007	1.00	1.58	ND	40	
SG70B-05	P0801442-008	1.00	1.60	ND	40	
SG71B-05	P0801442-009	1.00	1.61	ND	40	
SG65B-05	P0801442-010	1.00	1.47	ND	37	
SG65B-05D	P0801442-011	1.00	1.46	ND	37	
SG84B-05	P0801442-012	1.00	1.53	ND	38	
SG85B-05	P0801442-013	1.00	1.56	ND	39	
SG35B-05	P0801442-014	1.00	1.60	ND	40	
SG94B-05	P0801442-015	1.00	1.86	1,700	47	
SG95B-05	P0801442-016	1.00	1.56	ND	39	
SG89B-05	P0801442-017	1.00	1.58	ND	40	
SG75B-05	P0801442-018	1.00	1.64	ND	41	
Method Blank	P080521-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:     *Per*    

Date:     5/23/08

## RESULTS OF VOLATILE ORGANIC ANALYSIS



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00057

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	1.6	0.16	0.41	0.33	0.033	
74-87-3	Chloromethane	0.29	0.32	0.16	0.14	0.16	0.078	J
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	0.32	0.16	ND	0.13	0.063	
74-83-9	Bromomethane	ND	0.32	0.16	ND	0.083	0.042	
75-00-3	Chloroethane	0.62	0.32	0.16	0.23	0.12	0.061	
64-17-5	Ethanol	4.0	16	0.16	2.1	8.6	0.086	J
67-64-1	Acetone	23	16	0.24	9.7	6.8	0.10	B
75-69-4	Trichlorofluoromethane	1.6	0.32	0.16	0.28	0.058	0.029	
107-13-1	Acrylonitrile	ND	1.6	0.23	ND	0.75	0.10	
75-35-4	1,1-Dichloroethene	55	0.32	0.16	14	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.90	1.6	0.24	0.30	0.53	0.079	J
75-09-2	Methylene Chloride	0.48	1.6	0.16	0.14	0.47	0.047	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.32	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.43	0.32	0.18	0.057	0.042	0.024	
75-15-0	Carbon Disulfide	1.1	1.6	0.39	0.35	0.52	0.12	J
156-60-5	trans-1,2-Dichloroethene	ND	0.32	0.16	ND	0.082	0.041	
75-34-3	1,1-Dichloroethane	0.28	0.32	0.16	0.068	0.080	0.040	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.32	0.16	ND	0.090	0.045	
108-05-4	Vinyl Acetate	20	16	0.52	5.8	4.6	0.15	
78-93-3	2-Butanone (MEK)	11	1.6	0.16	3.8	0.55	0.055	
156-59-2	cis-1,2-Dichloroethene	ND	0.32	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	270	0.32	0.19	55	0.066	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: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00057

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	0.32	0.16	ND	0.080	0.040	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.24</b>	0.32	0.16	<b>0.044</b>	0.059	0.030	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.8</b>	0.32	0.16	<b>1.2</b>	0.10	0.051	
56-23-5	<b>Carbon Tetrachloride</b>	<b>3.7</b>	0.32	0.16	<b>0.59</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	<b>1,2-Dichloropropane</b>	<b>0.45</b>	0.32	0.16	<b>0.097</b>	0.070	0.035	
75-27-4	<b>Bromodichloromethane</b>	<b>3.6</b>	0.32	0.16	<b>0.53</b>	0.048	0.024	
79-01-6	<b>Trichloroethene</b>	<b>2.7</b>	0.32	0.16	<b>0.51</b>	0.060	0.030	
123-91-1	<b>1,4-Dioxane</b>	<b>0.31</b>	1.6	0.20	<b>0.086</b>	0.45	0.055	<b>J</b>
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.059	
142-82-5	n-Heptane	ND	1.6	0.21	ND	0.40	0.051	
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>0.56</b>	1.6	0.18	<b>0.14</b>	0.40	0.044	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.20	ND	0.36	0.045	
79-00-5	1,1,2-Trichloroethane	ND	0.32	0.16	ND	0.059	0.030	
108-88-3	<b>Toluene</b>	<b>1.6</b>	1.6	0.16	<b>0.43</b>	0.43	0.043	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>2.1</b>	1.6	0.25	<b>0.50</b>	0.40	0.060	
124-48-1	<b>Dibromochloromethane</b>	<b>0.44</b>	0.32	0.22	<b>0.051</b>	0.038	0.026	
106-93-4	1,2-Dibromoethane	ND	0.32	0.17	ND	0.042	0.023	
111-65-9	<b>n-Octane</b>	<b>0.35</b>	1.6	0.16	<b>0.076</b>	0.35	0.035	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>73</b>	0.32	0.16	<b>11</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>11</b>	0.32	0.17	<b>2.4</b>	0.070	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.

Verified By: Re      Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG73B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-001

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00057

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.6

Canister Dilution Factor: 1.62

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	0.34	1.6	0.20	0.079	0.37	0.046	J
179601-23-1	m,p-Xylenes	1.6	1.6	0.42	0.38	0.37	0.097	
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	ND	1.6	0.25	ND	0.38	0.058	
95-47-6	o-Xylene	2.0	1.6	0.20	0.47	0.37	0.047	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.32	0.21	ND	0.047	0.030	
98-82-8	Cumene	0.29	1.6	0.18	0.058	0.33	0.037	J
103-65-1	n-Propylbenzene	ND	1.6	0.17	ND	0.33	0.034	
622-96-8	4-Ethyltoluene	0.23	1.6	0.18	0.046	0.33	0.038	J
108-67-8	1,3,5-Trimethylbenzene	0.26	1.6	0.19	0.053	0.33	0.040	J
98-83-9	alpha-Methylstyrene	ND	1.6	0.24	ND	0.34	0.049	
95-63-6	1,2,4-Trimethylbenzene	1.1	1.6	0.22	0.22	0.33	0.045	J
100-44-7	Benzyl Chloride	ND	0.32	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	2.7	0.32	0.20	0.44	0.054	0.033	
106-46-7	1,4-Dichlorobenzene	94	0.32	0.18	16	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)	0.29	1.6	0.21	0.053	0.30	0.038	J
95-50-1	1,2-Dichlorobenzene	4.5	0.32	0.21	0.75	0.054	0.036	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.25	ND	0.17	0.025	
120-82-1	1,2,4-Trichlorobenzene	0.94	0.32	0.25	0.13	0.044	0.033	
91-20-3	Naphthalene	3.3	0.65	0.24	0.64	0.12	0.046	
87-68-3	Hexachlorobutadiene	19	0.32	0.29	1.8	0.030	0.027	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	0.45	0.65	0.16	0.081	0.12	0.030	J

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

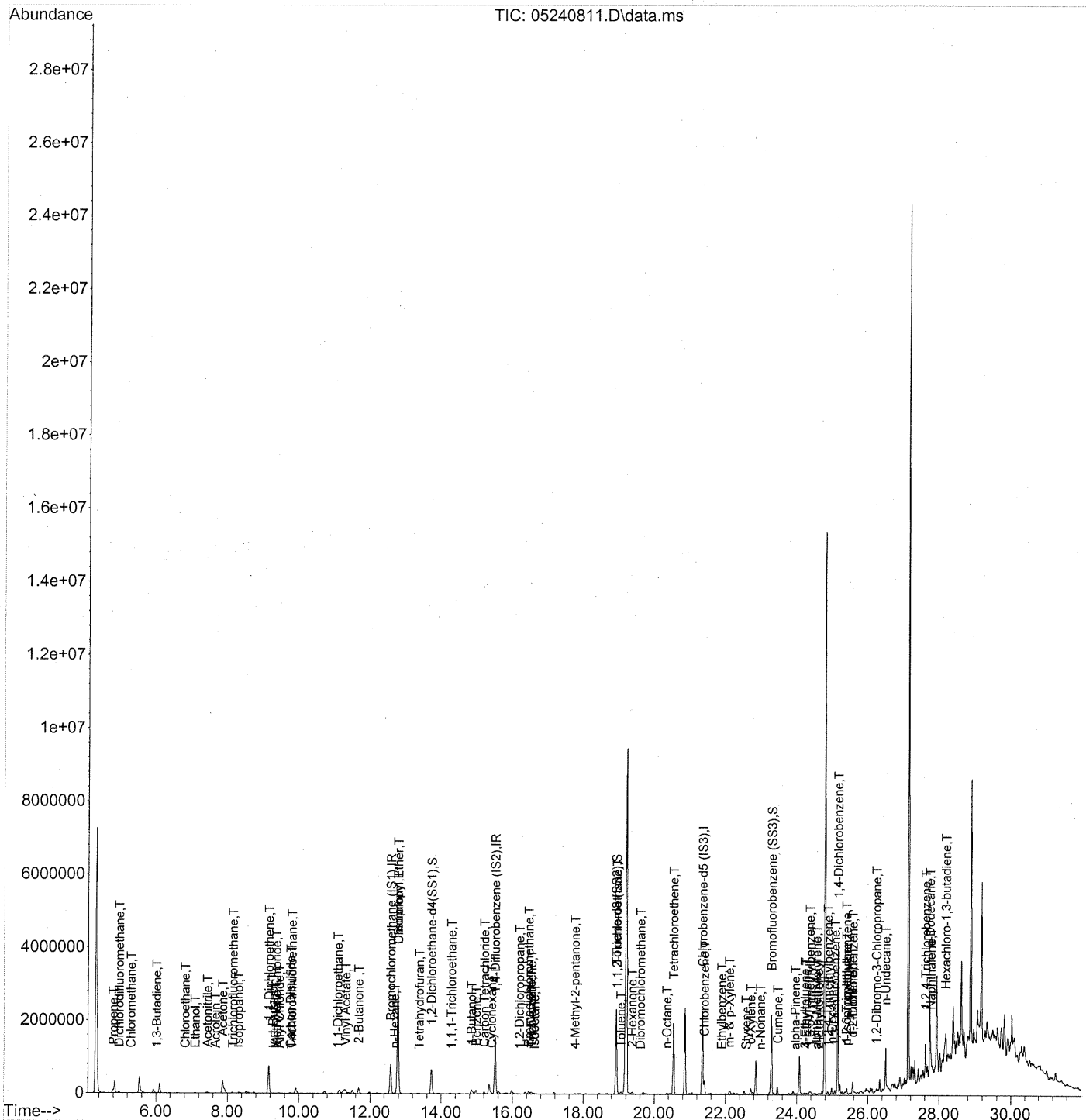
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

Verified By: Re      Date: 6/2/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	405189	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1793020	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	871340	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	683941	24.361	ng	0.00
Spiked Amount	25.000			Recovery =		97.44%
57) Toluene-d8 (SS2)	18.93	98	1900592	24.287	ng	0.00
Spiked Amount	25.000			Recovery =		97.16%
73) Bromofluorobenzene (SS3)	23.29	174	796814	25.040	ng	0.00
Spiked Amount	25.000			Recovery =		100.16%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	42379	1.324	ng	94
3) Dichlorodifluoromethane	4.96	85	37071	0.628	ng	99
4) Chloromethane	5.30	50	3486	0.091	ng	80
5) Freon 114	5.54	135	530	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	6.02	54	1728	0.061	ng	# 82
8) Bromomethane	6.49	94	1045	N.D.	✓	
9) Chloroethane	6.82	64	3456	0.190	ng	94
10) Ethanol	7.10	45	26164m	1.228	ng	
11) Acetonitrile	7.44	41	47721	0.775	ng	98
12) Acrolein	7.67	56	8770	0.576	ng	89
13) Acetone	7.87	58	155128m	7.112	ng	
14) Trichlorofluoromethane	8.15	101	24393	0.482	ng	99
15) Isopropanol	8.32	45	42771	0.615	ng	86
16) Acrylonitrile	8.65	53	1123	N.D.		
17) 1,1-Dichloroethene	9.16	96	381024	17.116	ng	# 81
18) tert-Butanol	9.27	59	16370m	0.277	ng	
19) Methylene Chloride	9.37	84	3572	0.147	ng	# 81
20) Allyl Chloride	9.45	41	4484	0.138	ng	NR # 44
21) Trichlorotrifluoroethane	9.80	151	3090	0.134	ng	# 1
22) Carbon Disulfide	9.77	76	30729	0.332	ng	98
23) trans-1,2-Dichloroethene	10.80	61	57	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	3615	0.085	ng	91
25) Methyl tert-Butyl Ether	11.21	73	1707	N.D.	✓	
26) Vinyl Acetate	11.31	86	25345m	6.287	ng	
27) 2-Butanone	11.68	72	55332	3.476	ng	94
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	316849	16.243	ng	NR # 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	12.70	57	8278	0.191	ng	88

95

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	3044900	82.410	ng	100
34) Tetrahydrofuran	13.38	72	1694	0.111	ng #	36
35) Ethyl tert-Butyl Ether	13.73	87	59	N.D. ✓		
36) 1,2-Dichloroethane	13.90	62	358	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	3025	0.074	ng #	66
39) Isopropyl Acetate	14.97	61	461	N.D.		
40) 1-Butanol	14.85	56	110585	4.487	ng	92
41) Benzene	14.99	78	109284	1.164	ng	100
42) Carbon Tetrachloride	15.21	117	41606	1.151	ng	99
43) Cyclohexane	15.41	84	11473	0.314	ng #	1
44) tert-Amyl Methyl Ether	15.87	73	1719	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	3487	0.139	ng #	75
46) Bromodichloromethane	16.46	83	34917	1.100	ng	100
47) Trichloroethene	16.54	130	24394	0.847	ng	98
48) 1,4-Dioxane	16.53	88	1694	0.096	ng	95
49) Isooctane	16.62	57	12527	0.116	ng #	55
50) Methyl Methacrylate	16.70	100	130	N.D. ✓		
51) n-Heptane	16.97	71	1081	N.D. ✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	17.77	58	4300	0.173	ng	82
54) trans-1,3-Dichloropropene	18.44	75	72	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	165955	7.153	ng UR #	9
58) Toluene	19.06	91	52851	0.497	ng	98
59) 2-Hexanone	19.37	43	46506	0.634	ng	78
60) Dibromochloromethane	19.61	129	3879	0.135	ng	97
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.20	43	3621	N.D.		
63) n-Octane	20.35	57	2565	0.109	ng	86
64) Tetrachloroethene	20.54	166	711013	22.589	ng	99
65) Chlorobenzene	21.41	112	240806	3.377	ng	99
66) Ethylbenzene	21.89	91	12987	0.106	ng	93
67) m- & p-Xylene	22.10	91	41374	0.507	ng	96
68) Bromoform	22.20	173	1026	N.D. ✓		
69) Styrene	22.58	104	4126	0.057	ng	94
70) o-Xylene	22.71	91	55079	0.625	ng	95
71) n-Nonane	22.98	43	10423	0.167	ng	93
72) 1,1,2,2-Tetrachloroethane	22.71	83	1298	N.D. ✓		
74) Cumene	23.47	105	10282	0.088	ng	97
75) alpha-Pinene	23.96	93	4507	0.074	ng #	46
76) n-Propylbenzene	24.10	91	5333	N.D. ✓		
77) 3-Ethyltoluene	24.23	105	19604	0.157	ng	94
78) 4-Ethyltoluene	24.28	105	8098	0.070	ng	99
79) 1,3,5-Trimethylbenzene	24.37	105	8361	0.080	ng	93

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

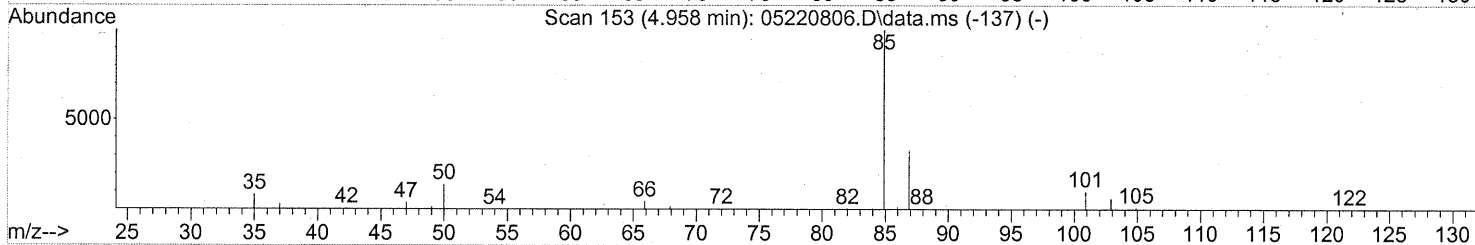
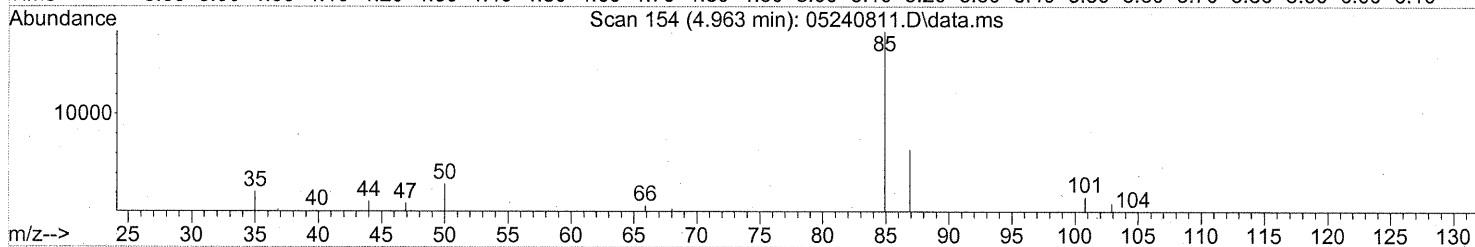
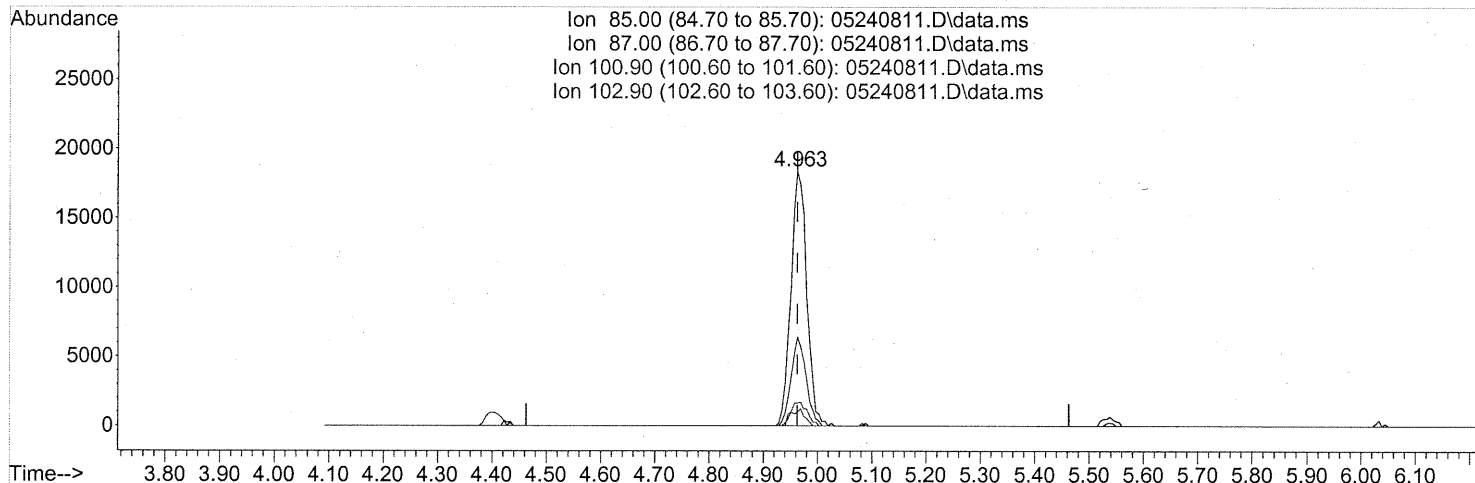
Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
80) alpha-Methylstyrene	24.56	118	4095	<del>0.072 ng</del>	86
81) 2-Ethyltoluene	24.61	105	17709	0.140 ng	99
82) 1,2,4-Trimethylbenzene	<u>24.88</u>	105	35403	<u>0.331 ng</u>	88
83) n-Decane	24.98	57	61688	1.047 ng	79
84) Benzyl Chloride	25.04	91	1611	N.D. ✓	
85) 1,3-Dichlorobenzene	<u>25.08</u>	146	55000	<u>0.822 ng</u>	99
86) 1,4-Dichlorobenzene	<u>25.15</u>	146	1878475	<u>28.954 ng</u>	99
87) sec-Butylbenzene	25.21	105	2879	N.D. ✓	
88) p-Isopropyltoluene	<u>25.39</u>	119	10147	<u>0.090 ng</u>	# 73
89) 1,2,3-Trimethylbenzene	25.40	105	31171	0.298 ng	86
90) 1,2-Dichlorobenzene	<u>25.57</u>	146	87801	<u>1.383 ng</u>	99
91) d-Limonene	25.57	68	35284	0.827 ng	85
92) 1,2-Dibromo-3-Chloropr...	26.24	157	2246	<del>0.114 ng</del> NR#	1
93) n-Undecane	26.50	57	410416	6.658 ng	81
94) 1,2,4-Trichlorobenzene	<u>27.62</u>	180	13466	<u>0.290 ng</u>	86
95) Naphthalene	<u>27.77</u>	128	145086	<u>1.028 ng</u>	98
96) n-Dodecane	27.74	57	749763	12.231 ng	87
97) Hexachloro-1,3-butadiene	<u>28.19</u>	225	186186	<u>6.016 ng</u>	98

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(3) Dichlorodifluoromethane (T)

4.963min (-0.000) 0.63ng

response 37071

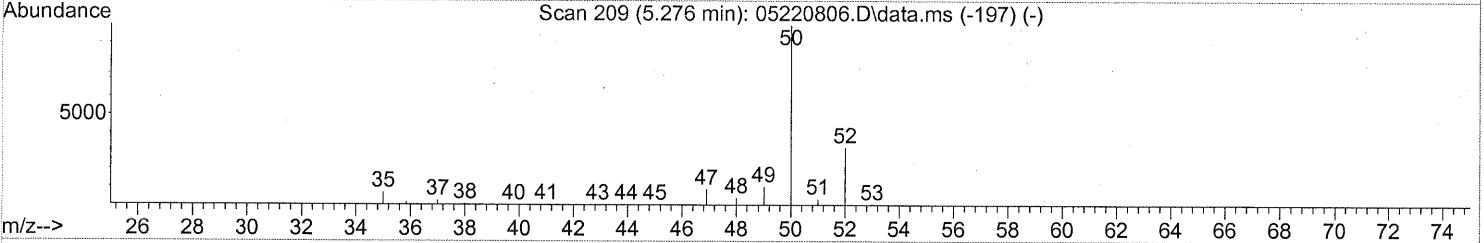
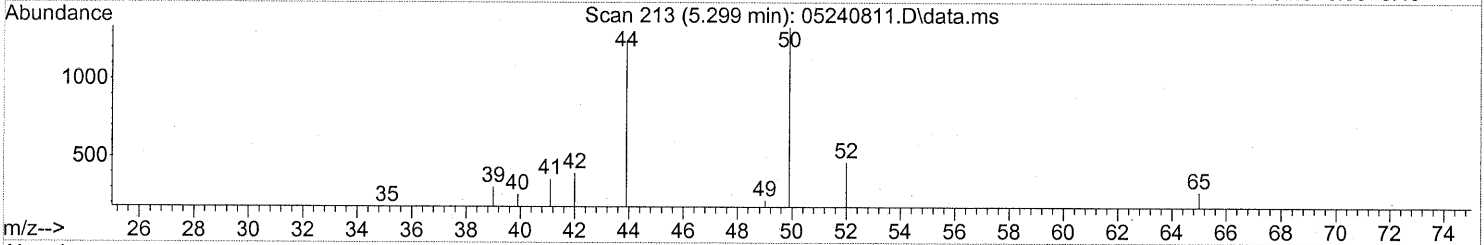
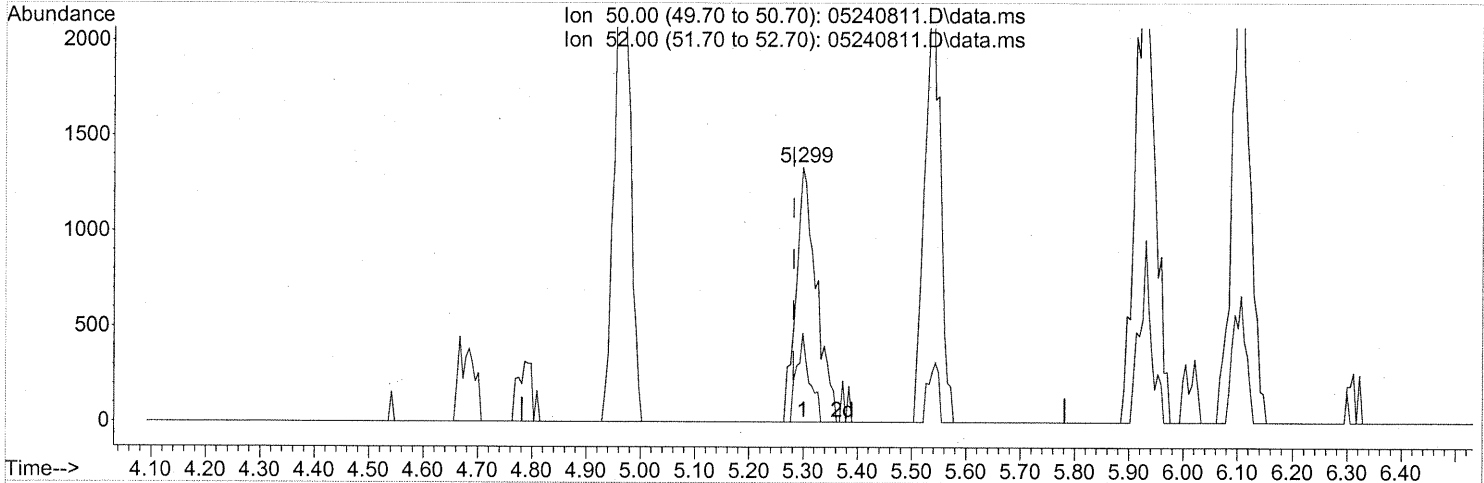
Ion	Exp%	Act%
85.00	100	100
87.00	32.50	33.01
100.90	9.30	9.48
102.90	6.00	5.78



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(4) Chloromethane (T)

5.299min (+0.017) 0.09ng

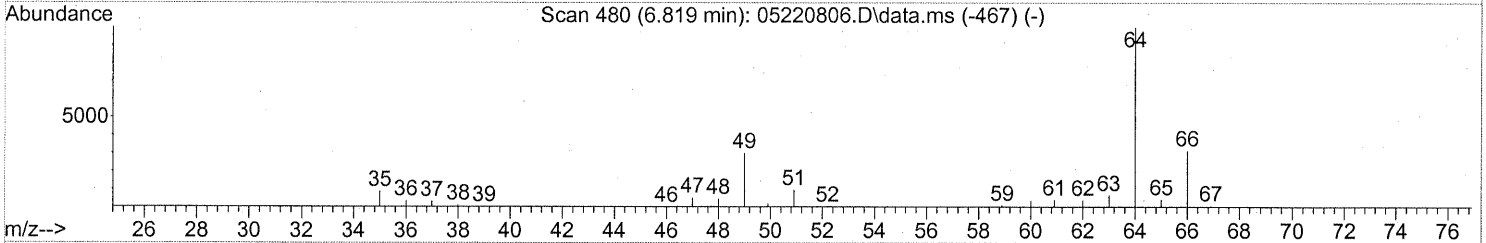
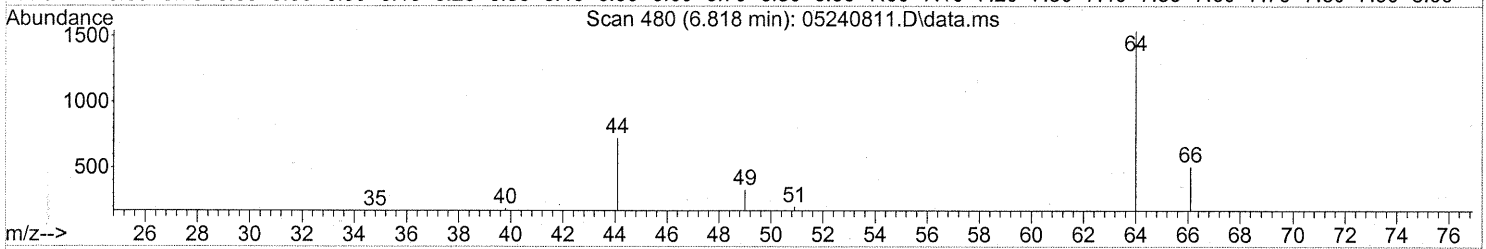
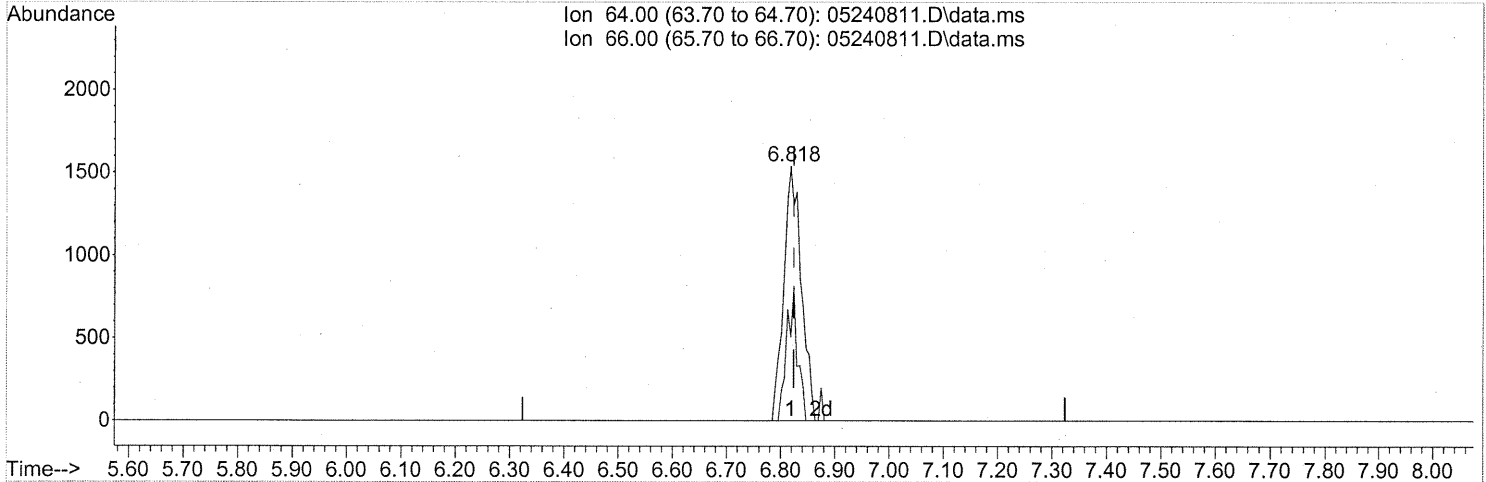
response 3486

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	22.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(9) Chloroethane (T)

6.818min (-0.006) 0.19ng

response 3456

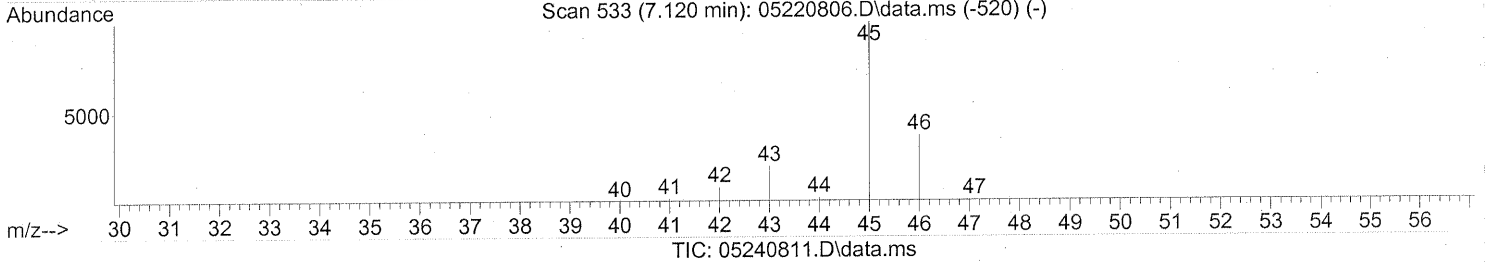
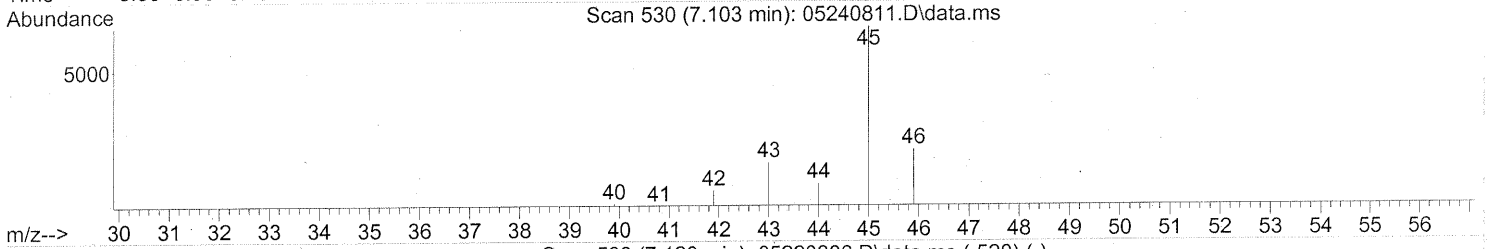
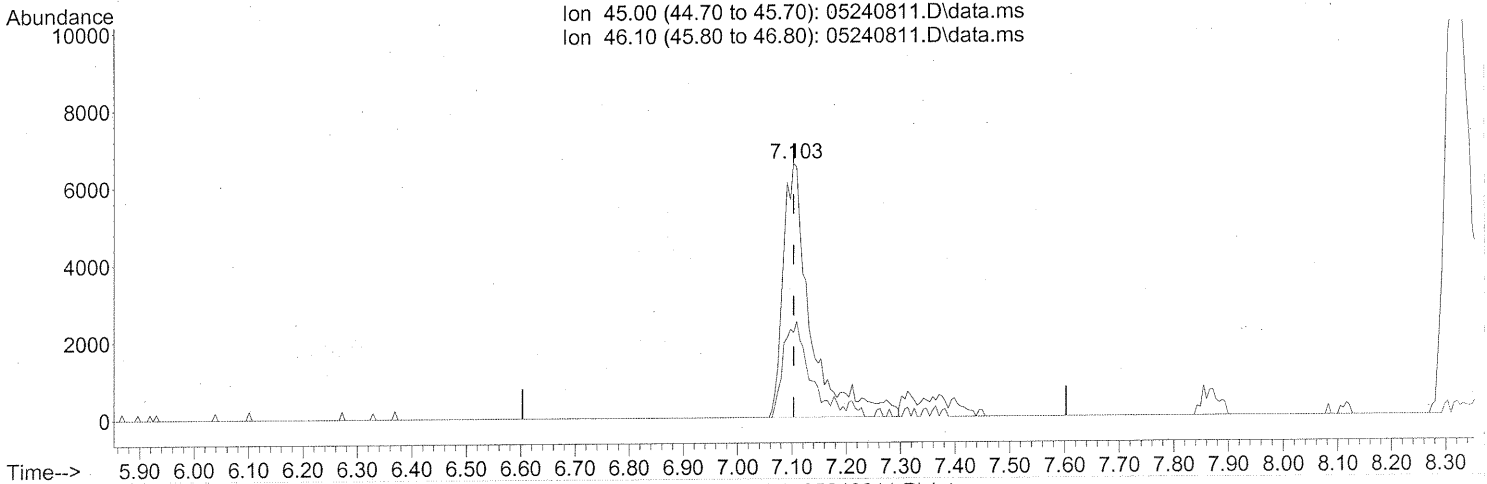
Ion	Exp%	Act%
64.00	100	100
66.00	29.60	32.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA 4  
Sample : P0801422-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

*WA 5/26/08*

Quant Time: May 24 17:53:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(10) Ethanol (T)

7.103min (-0.000) 1.07ng

response 22887

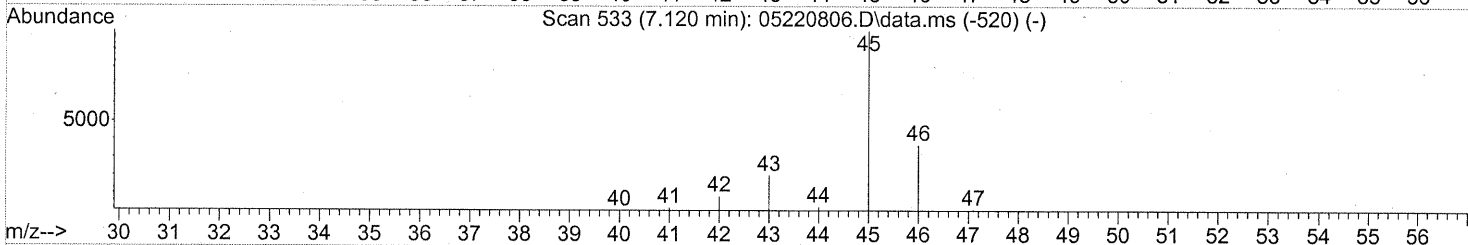
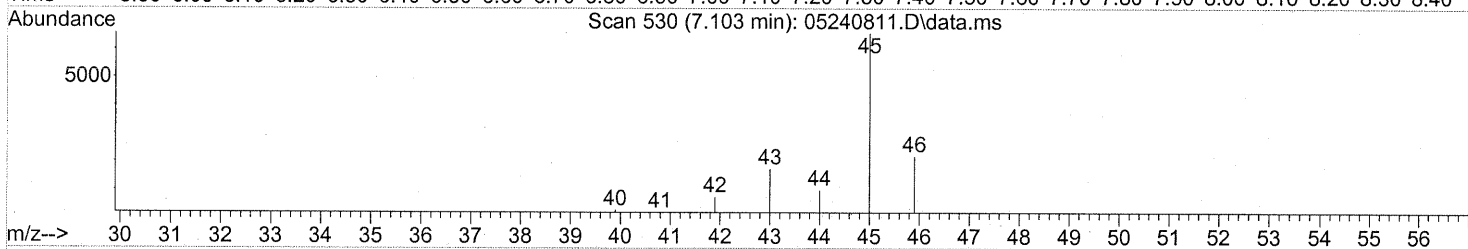
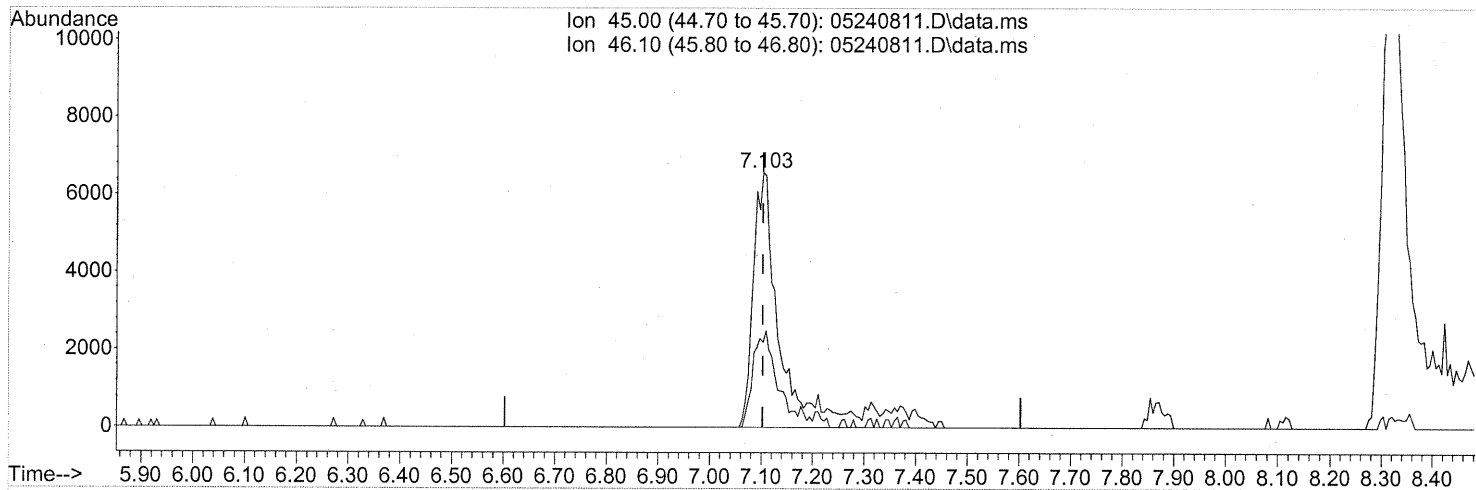
*tailing*

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(10) Ethanol (T)

7.103min (-0.000) 1.23ng m

response 26164

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	32.12
0.00	0.00	0.00
0.00	0.00	0.00

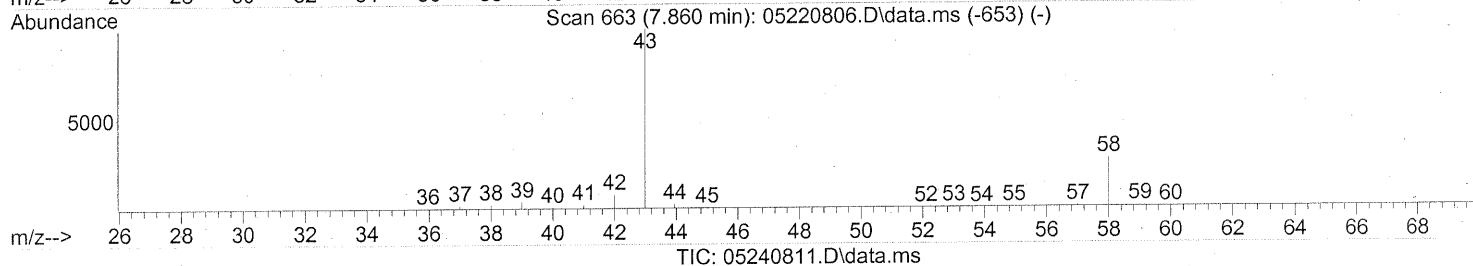
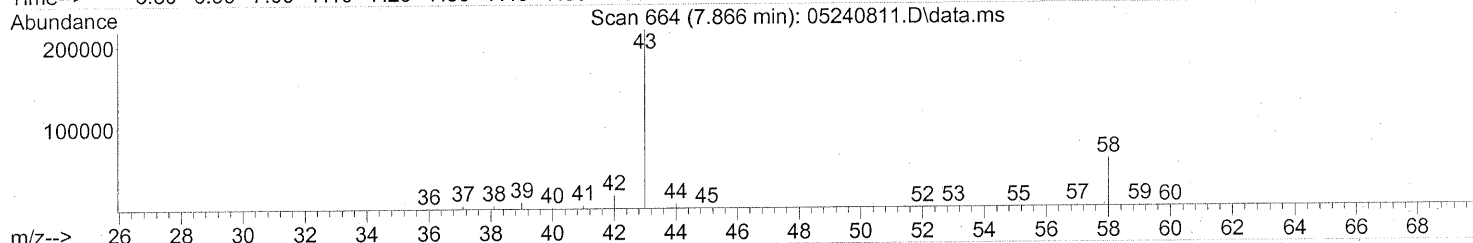
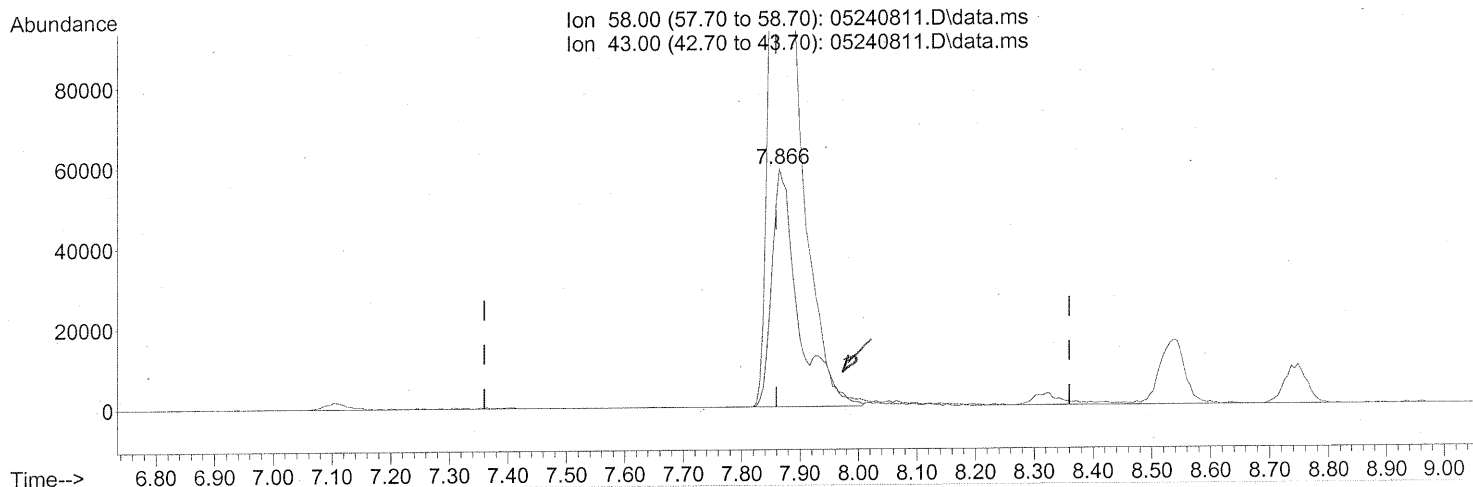
*added tailing*  
*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801422-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

*PA 5/26/08*

Quant Time: May 24 17:53:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)

7.866min (+0.006) 8.52ng

response 185924

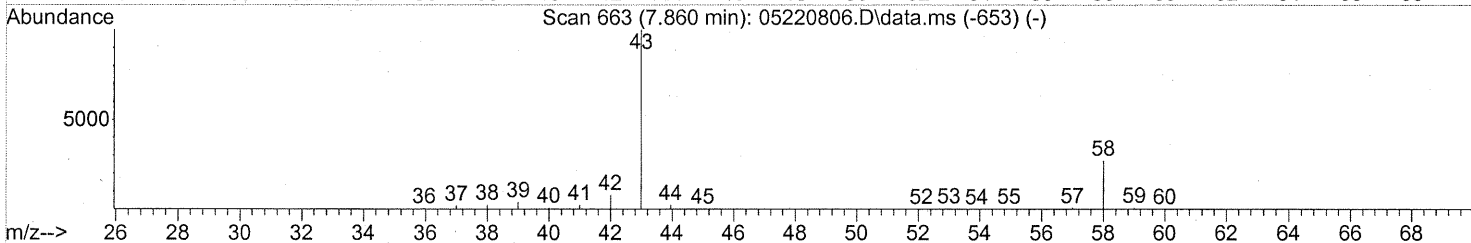
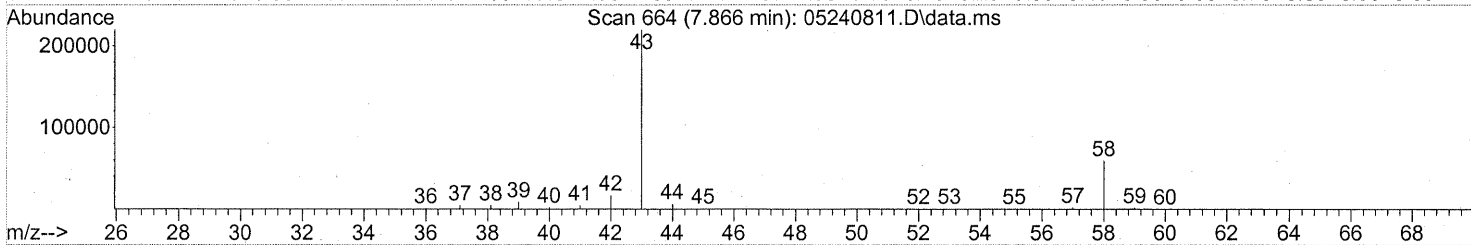
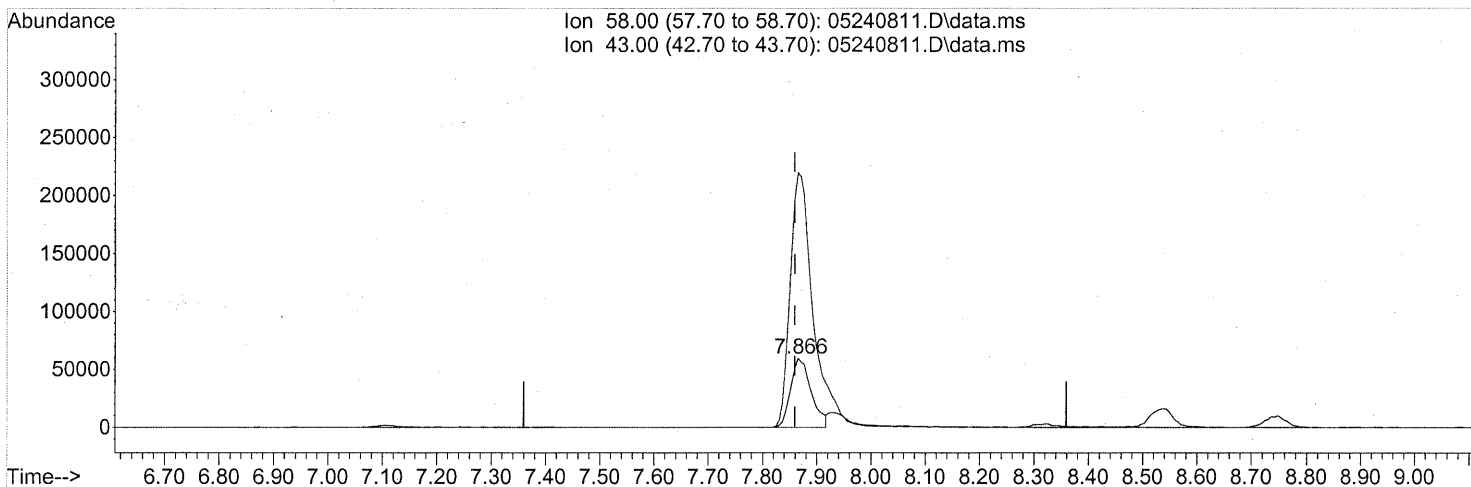
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	351.65#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240811.D\data.ms

(13) Acetone (T)

7.866min (+0.006) 7.11ng m  
response 155128

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	421.46#
0.00	0.00	0.00
0.00	0.00	0.00

*int. no shoulder*

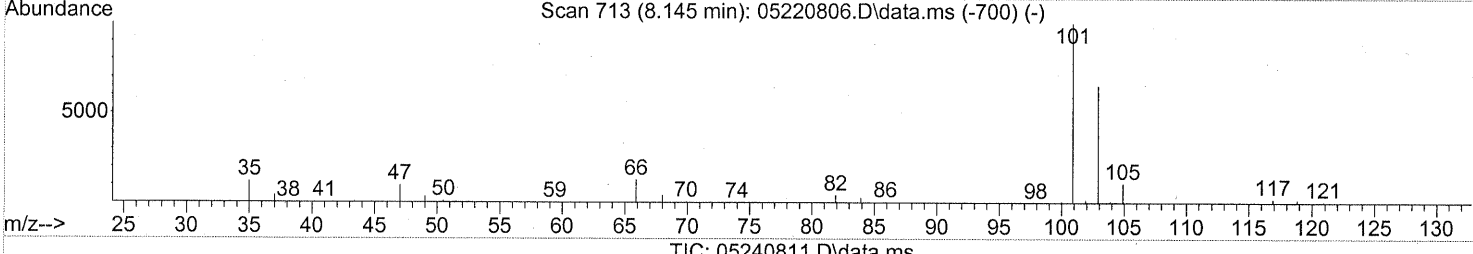
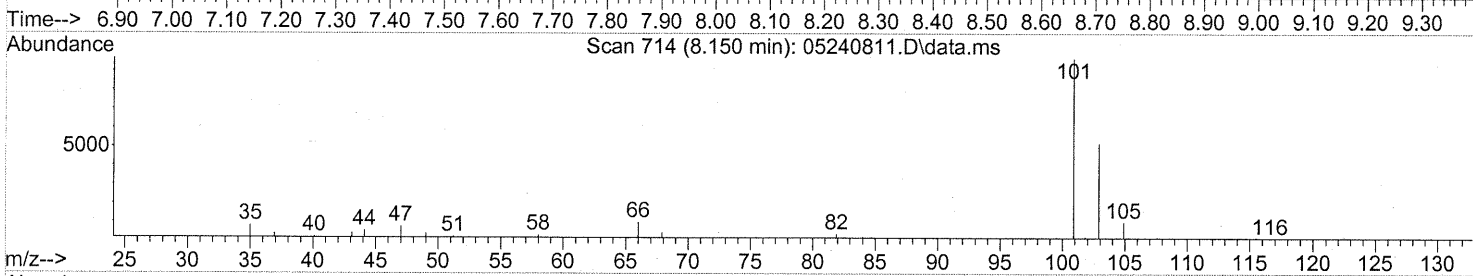
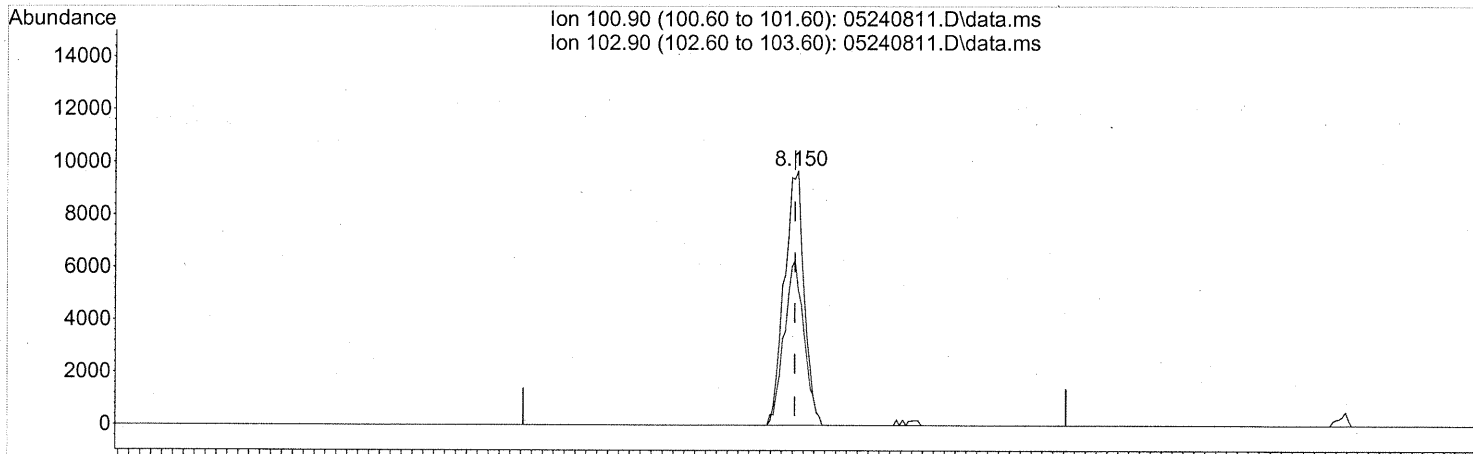
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.150min (+0.006) 0.48ng

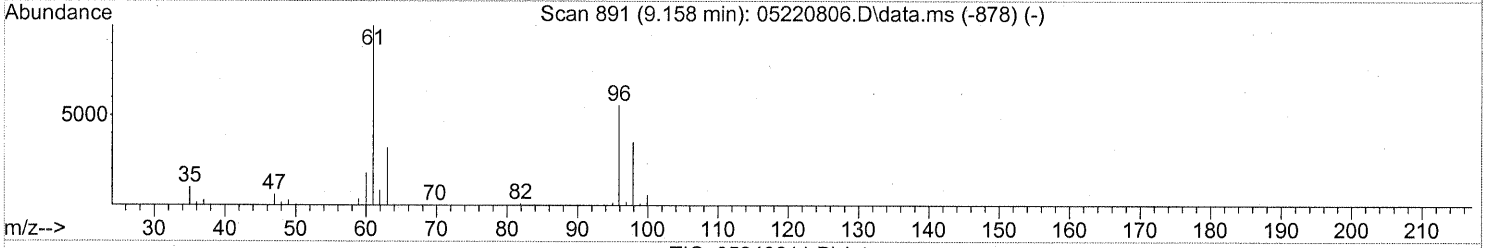
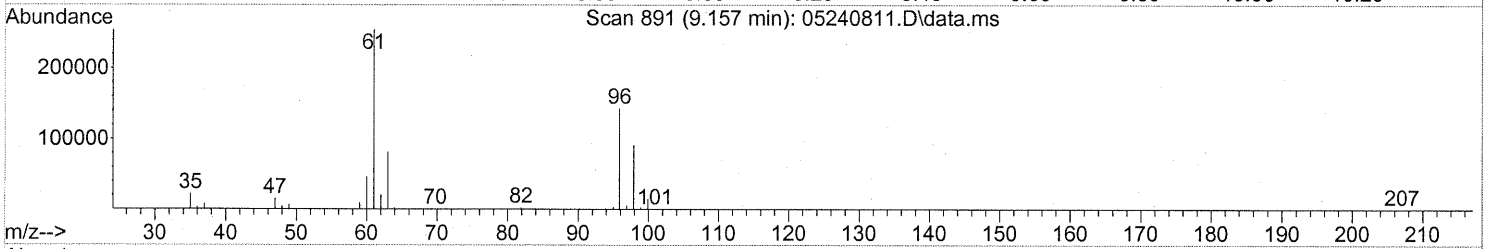
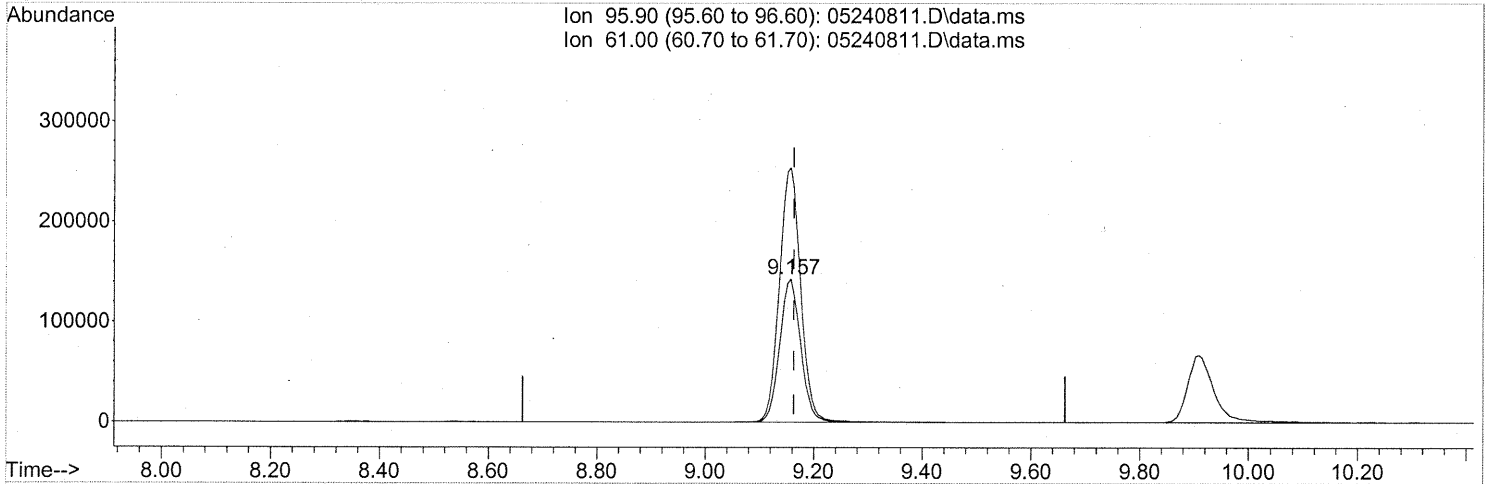
response 24393

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	65.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.157min (-0.006) 17.12ng

response 381024

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	180.19#
0.00	0.00	0.00
0.00	0.00	0.00

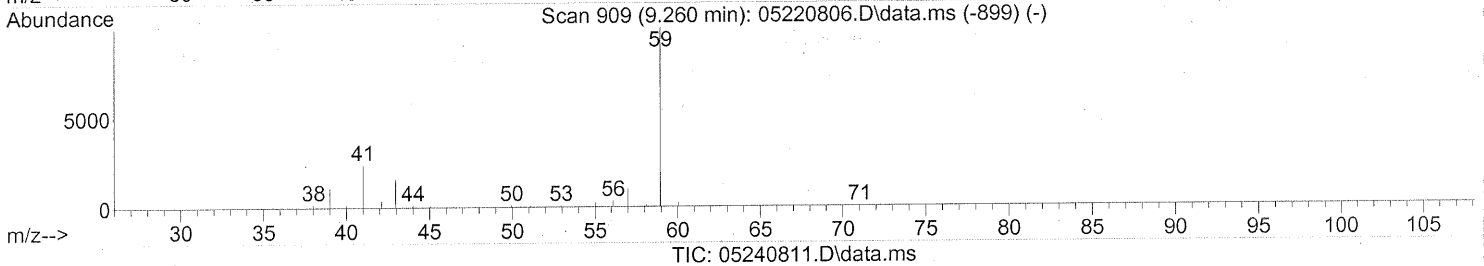
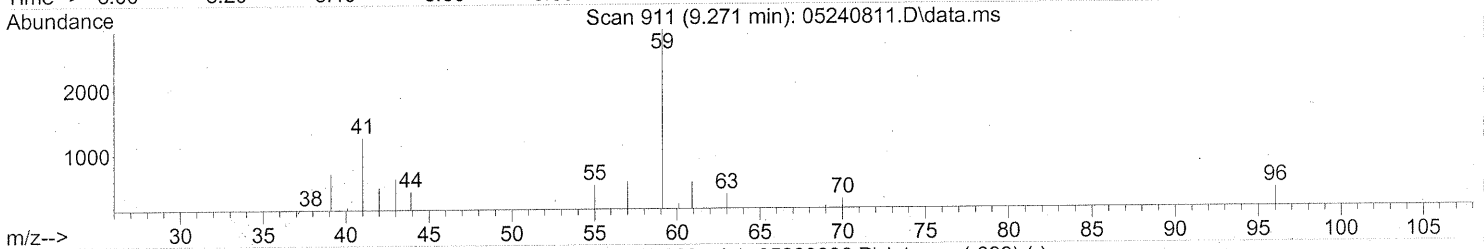
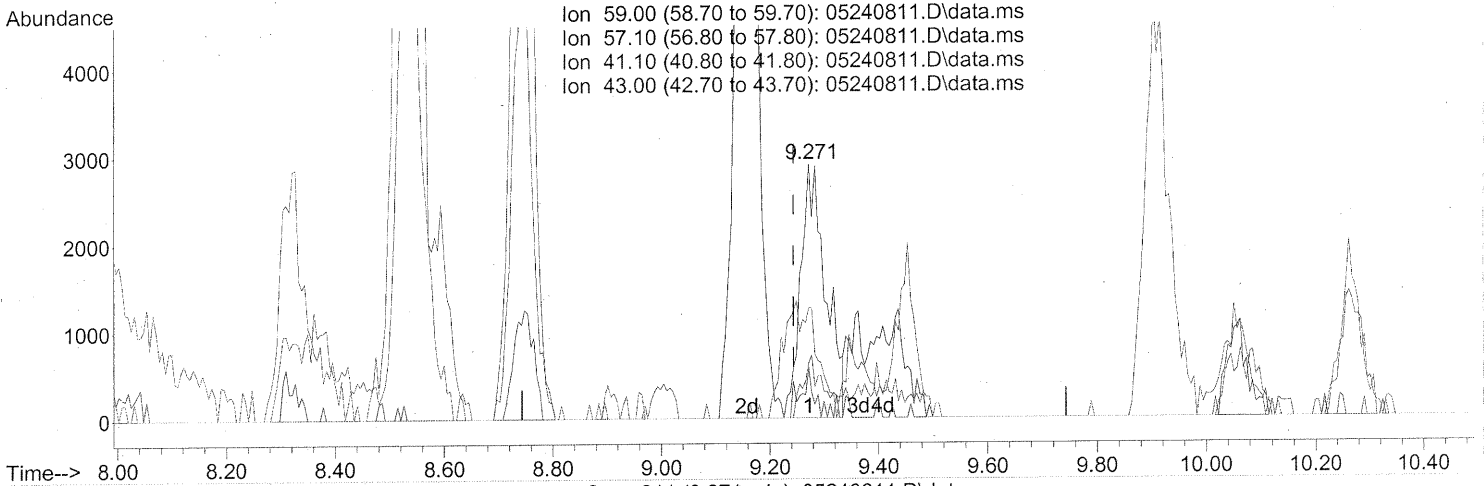


Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801422-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

*WA 5/26/08*

Quant Time: May 24 17:53:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
9.271min (+0.028) 0.16ng  
response 9305

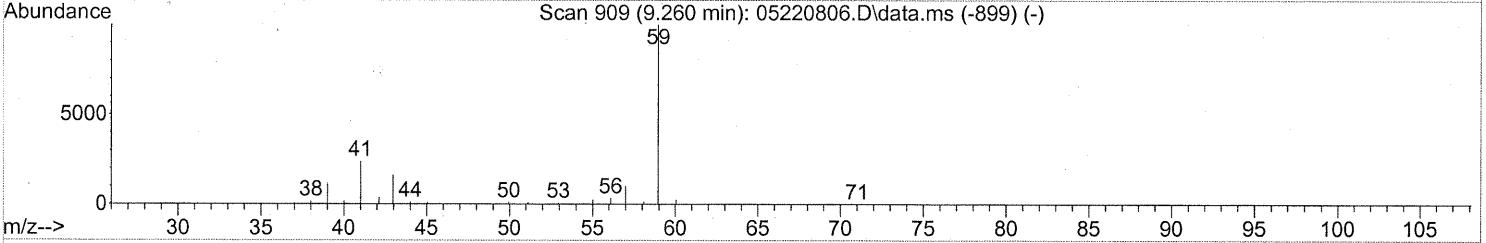
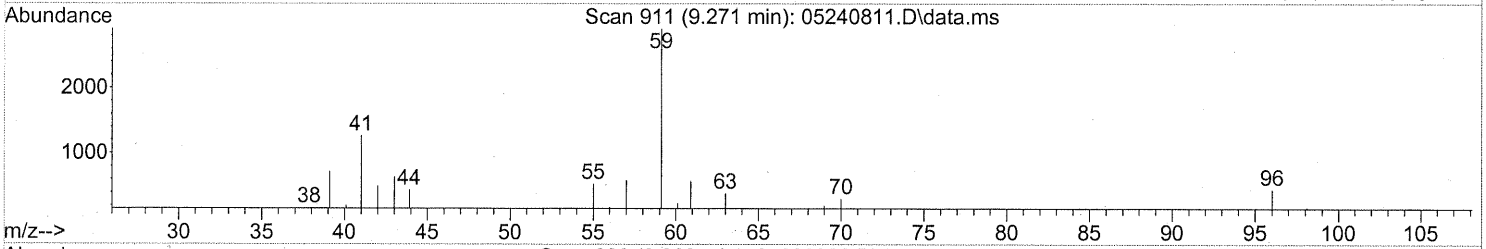
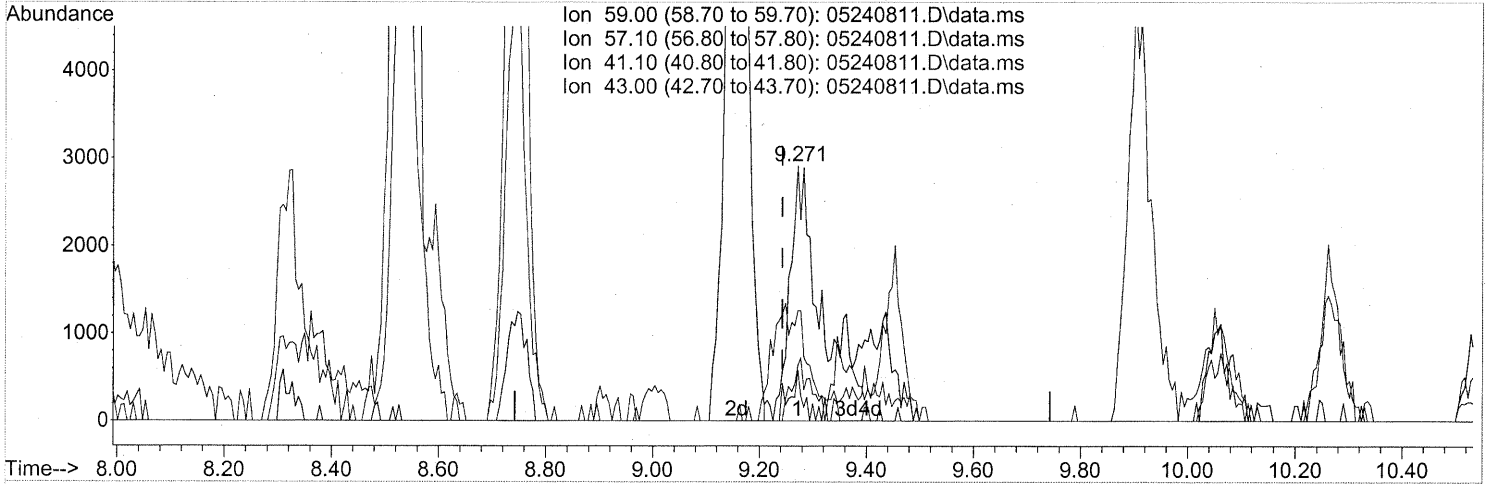
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	7.42
41.10	20.10	0.00#
43.00	12.30	20.73

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



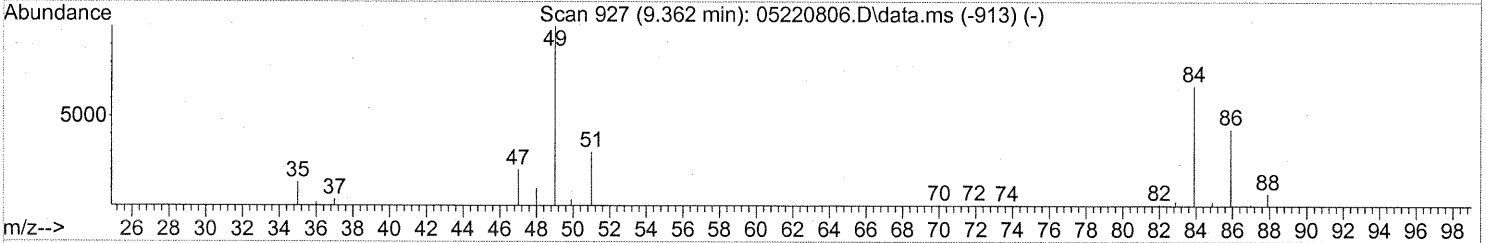
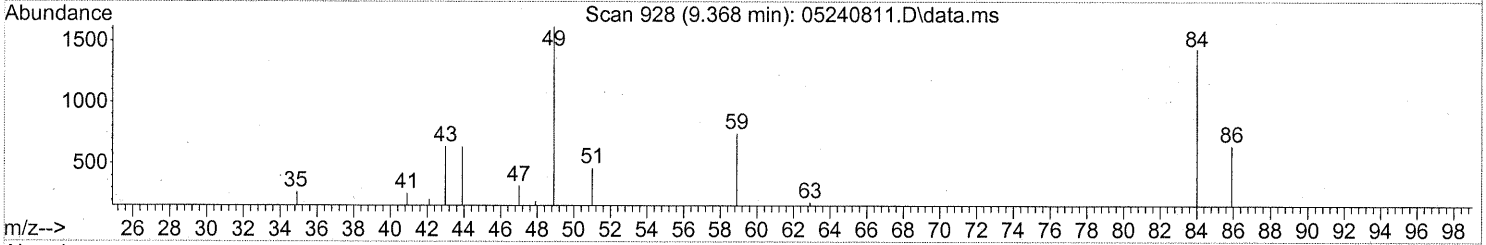
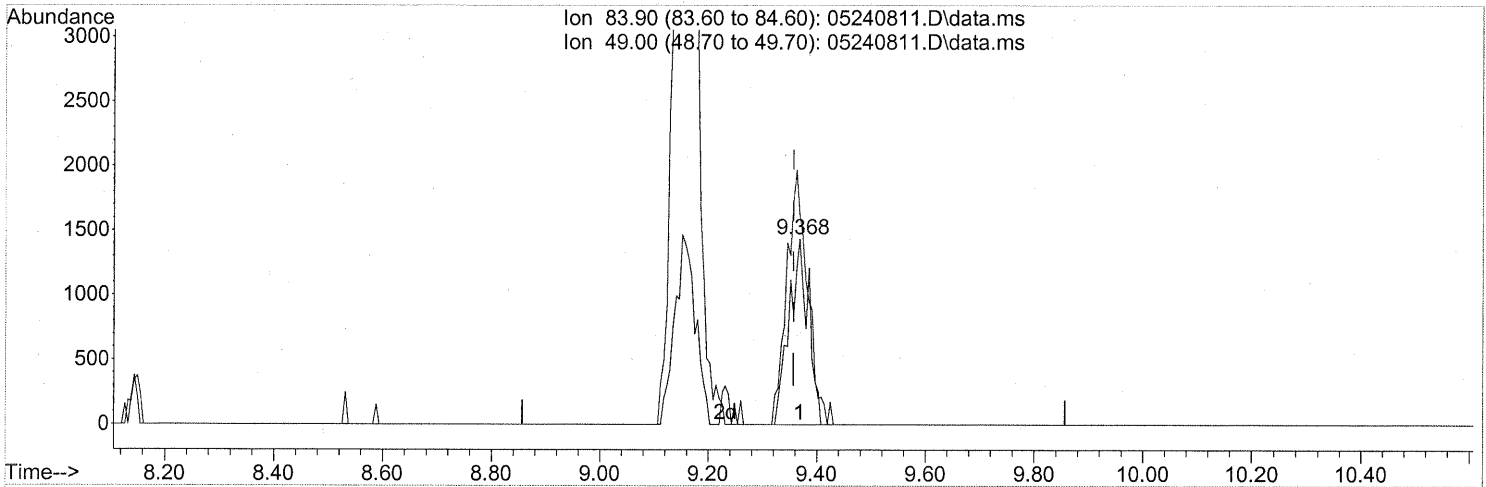
(18) tert-Butanol (T)  
9.271min (+0.028) 0.28ng m  
response 16370

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	4.22
41.10	20.10	0.00#
43.00	12.30	11.78

*int. whole peaks*  
*WA 5/29/08*  
*WA 5/30/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(19) Methylene Chloride (T)

9.368min (+0.011) 0.15ng

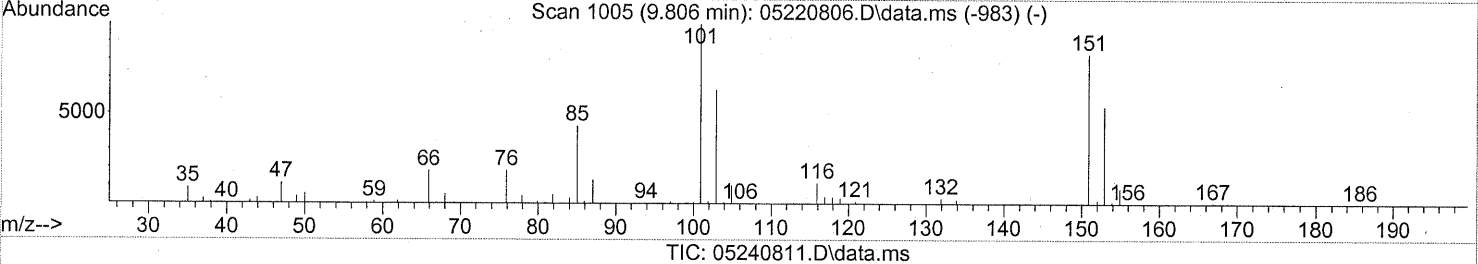
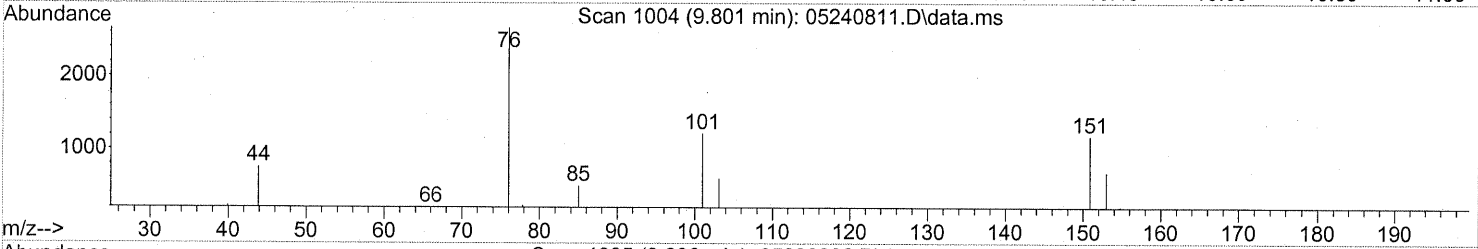
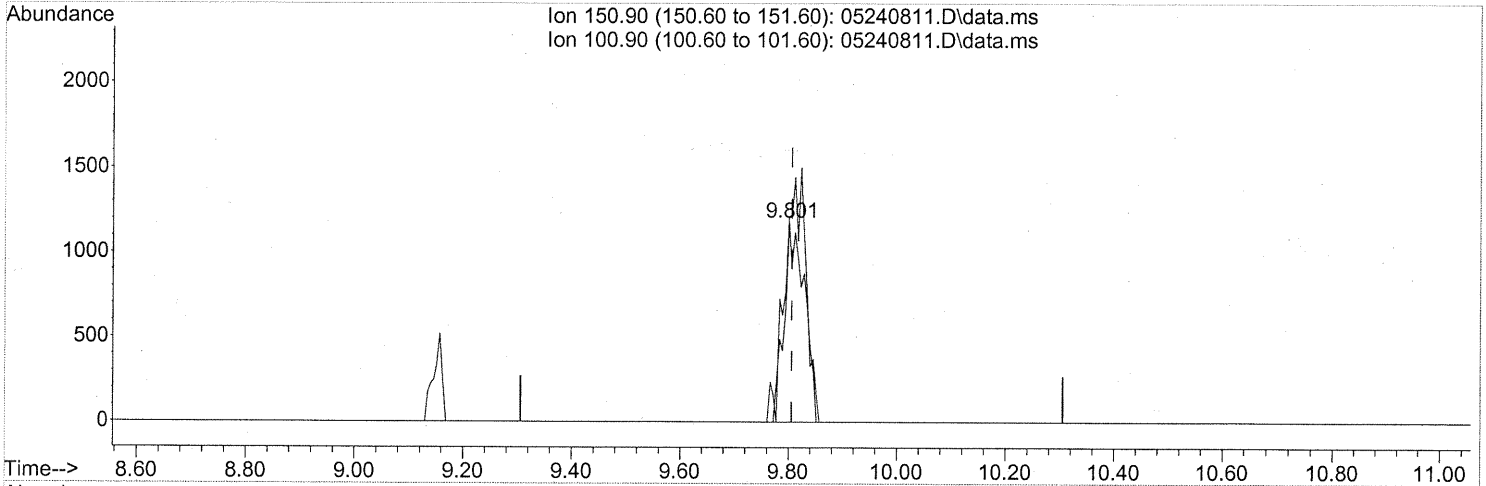
response 3572

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	146.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.801min (-0.006) 0.13ng

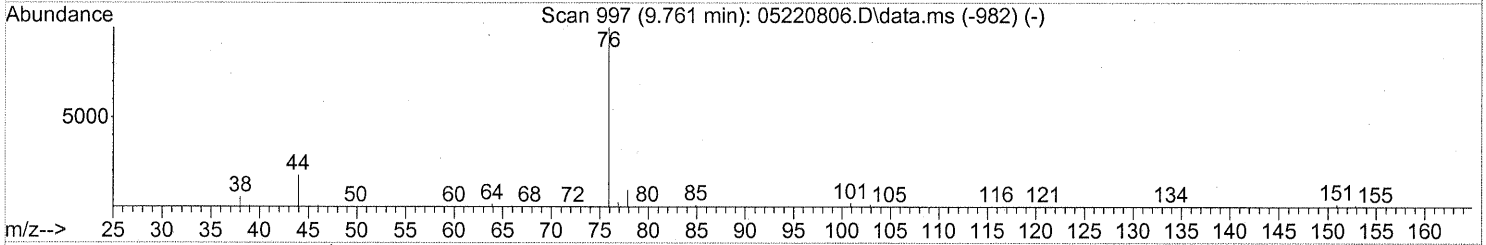
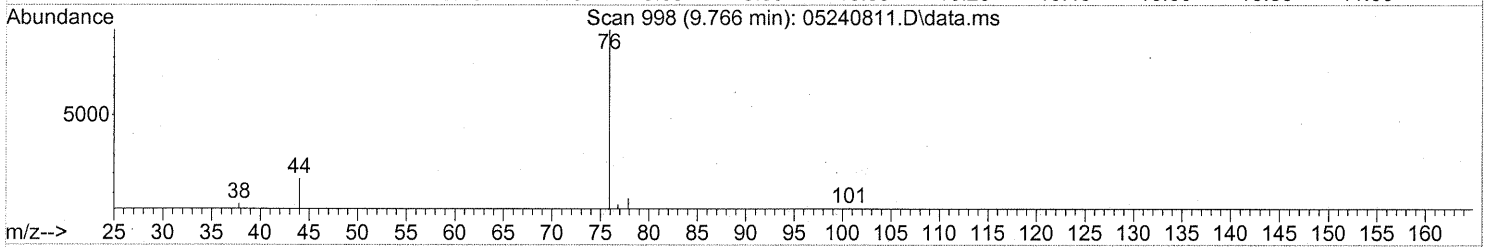
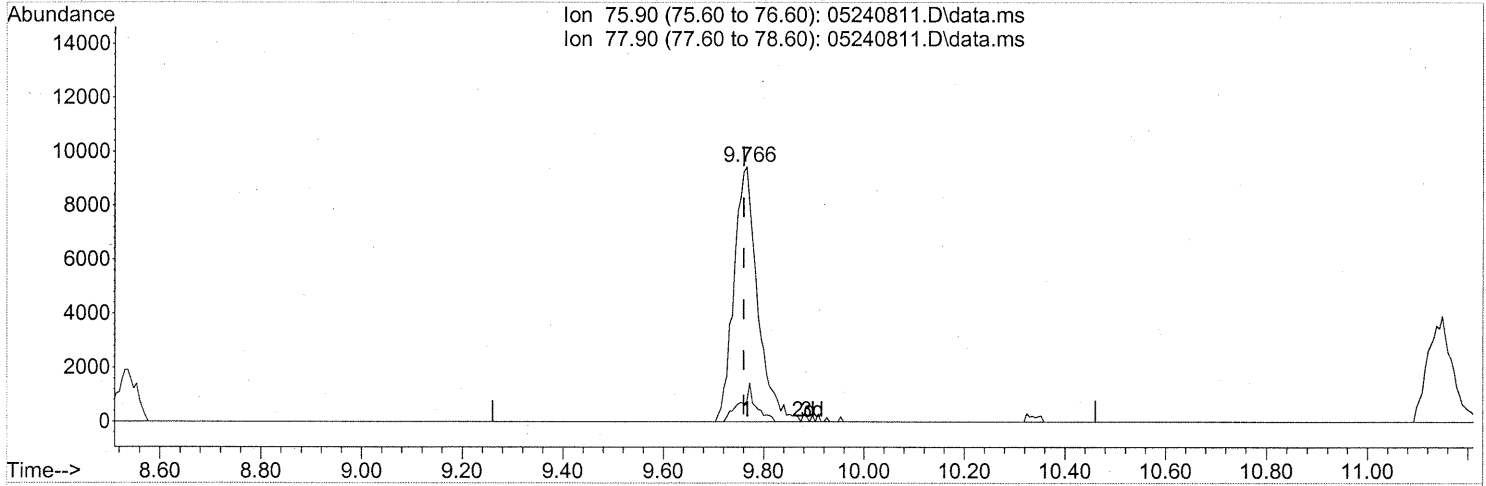
response 3090

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(22) Carbon Disulfide (T)

9.766min (+0.006) 0.33ng

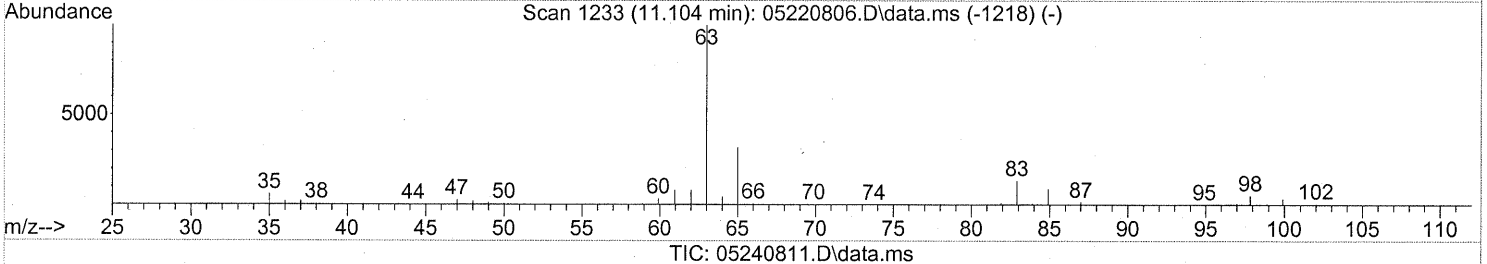
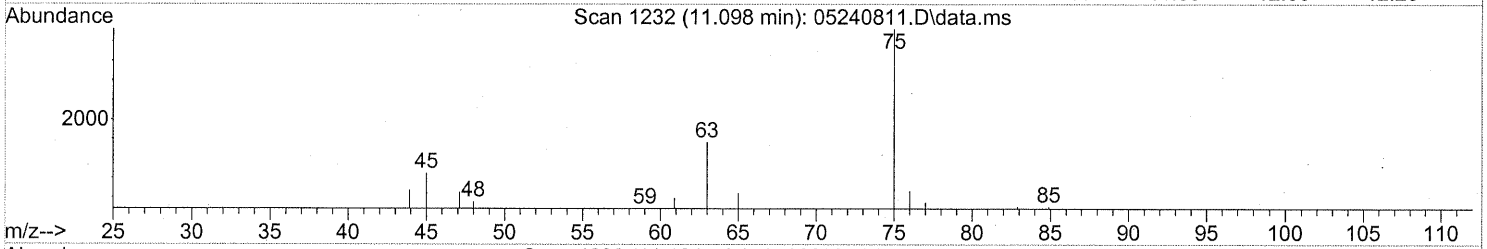
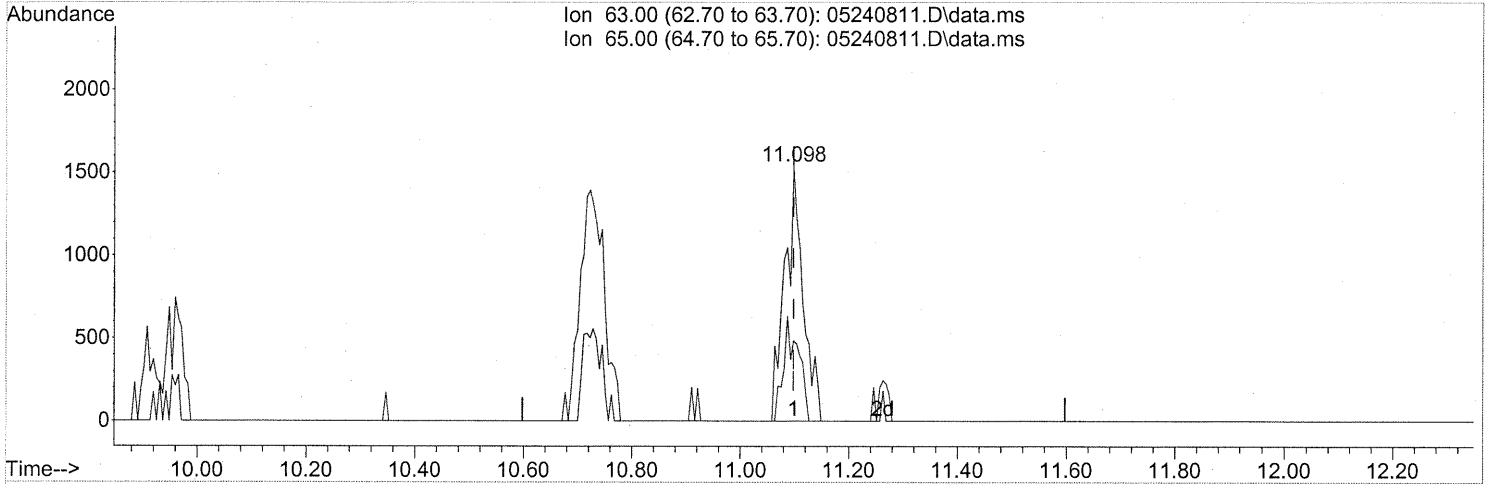
response 30729

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.098min (-0.000) 0.09ng

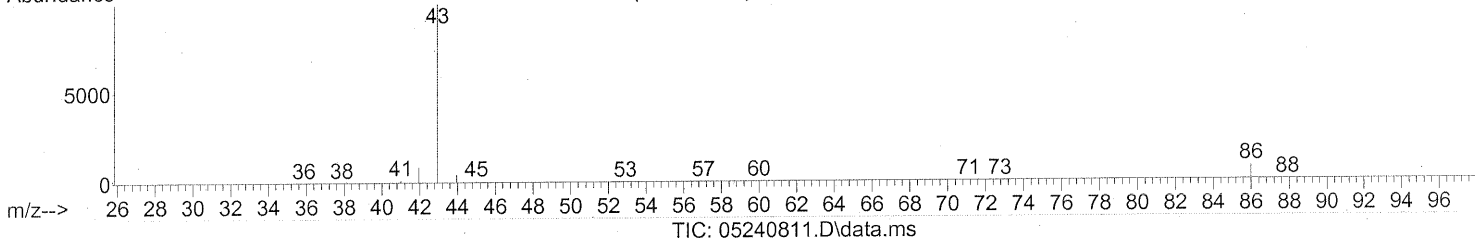
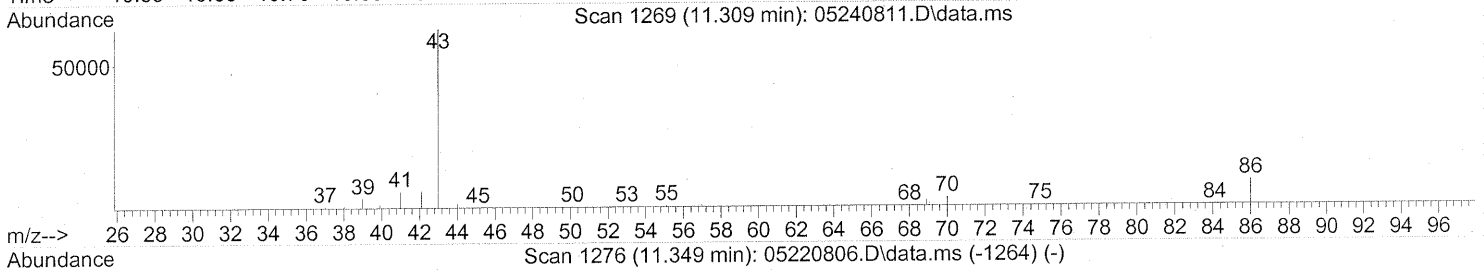
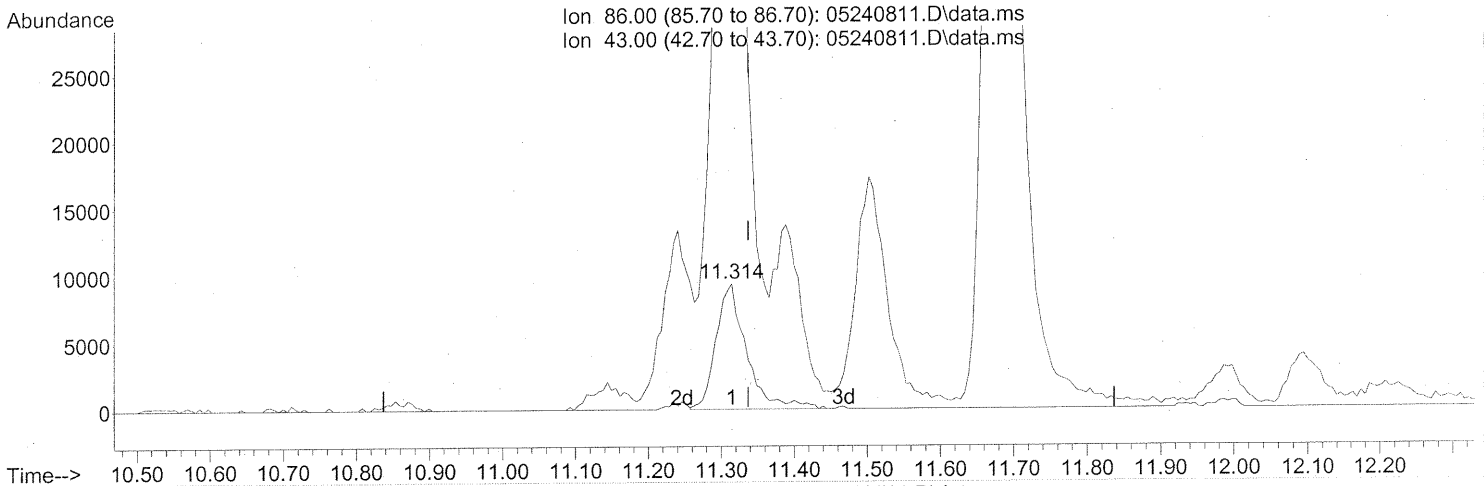
response 3615

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	33.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801422-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 17:53:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.314min (-0.023) 6.74ng

response 27160

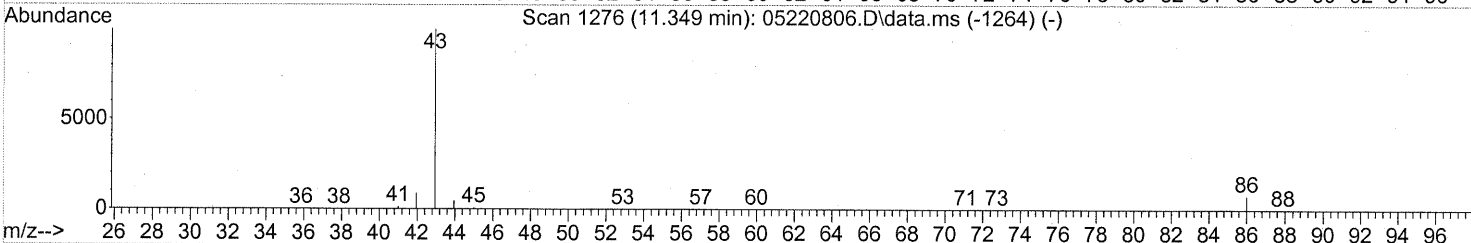
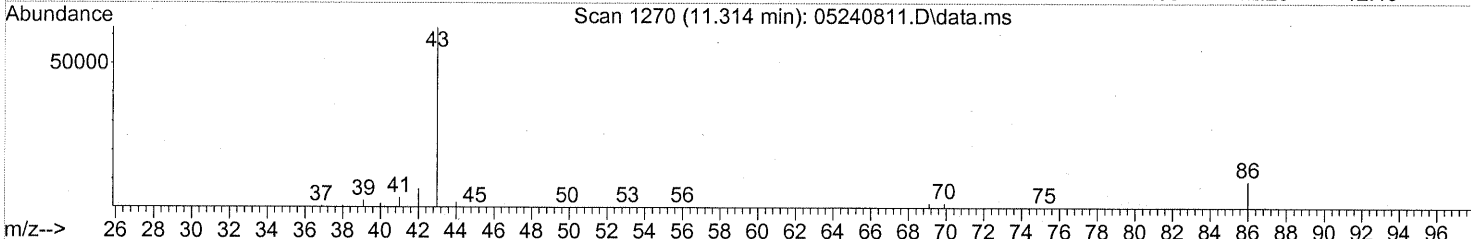
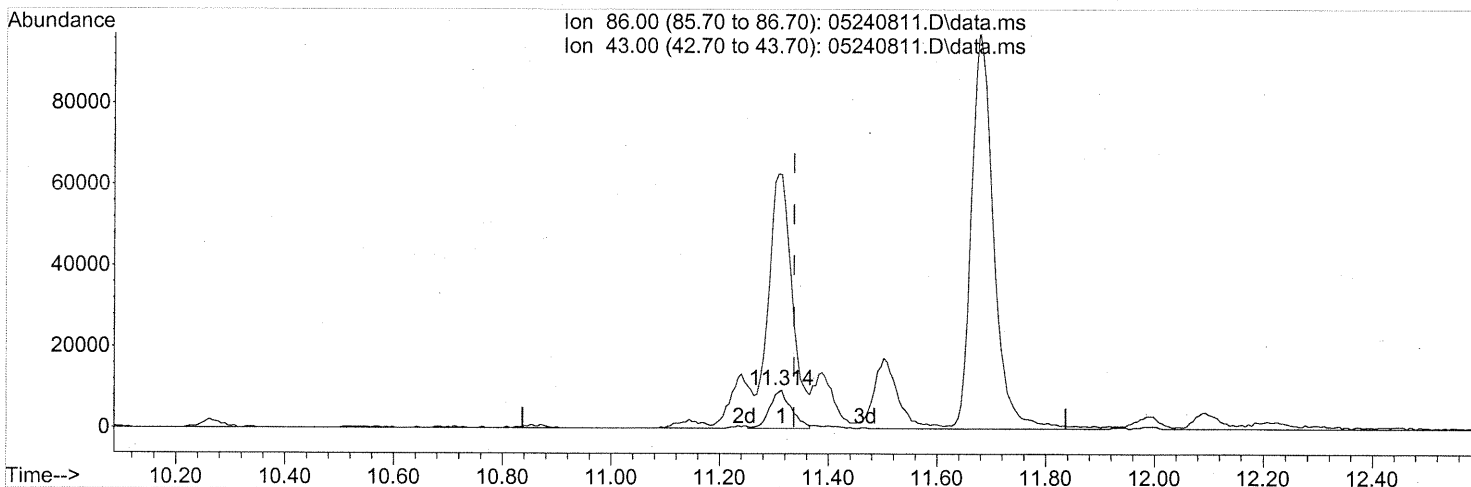
*excess tailing*

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	693.42#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.314min (-0.023) 6.29ng m

response 25345

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	743.07#
0.00	0.00	0.00
0.00	0.00	0.00

*corr. baseline*

*WA 5/29/08*

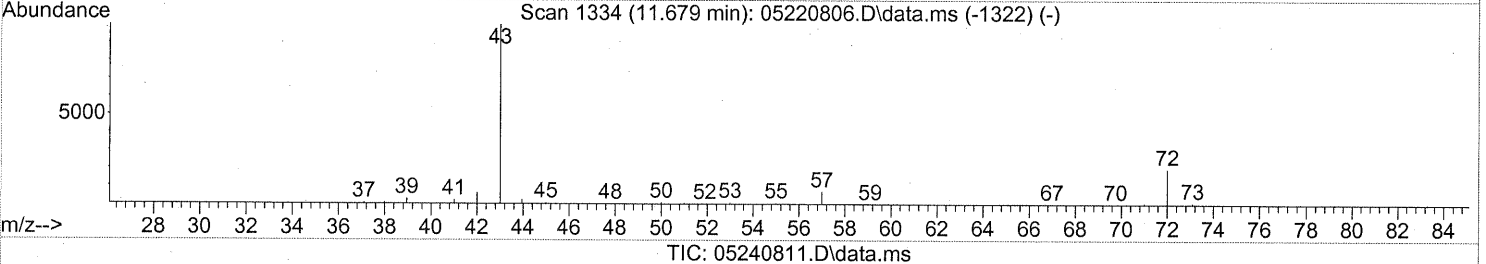
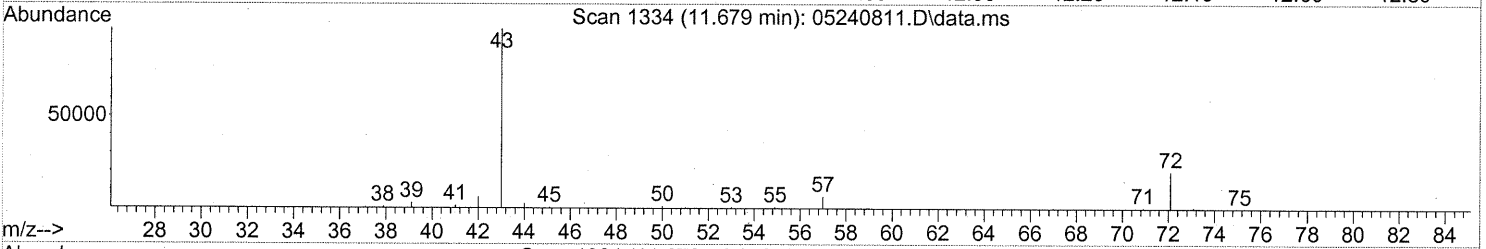
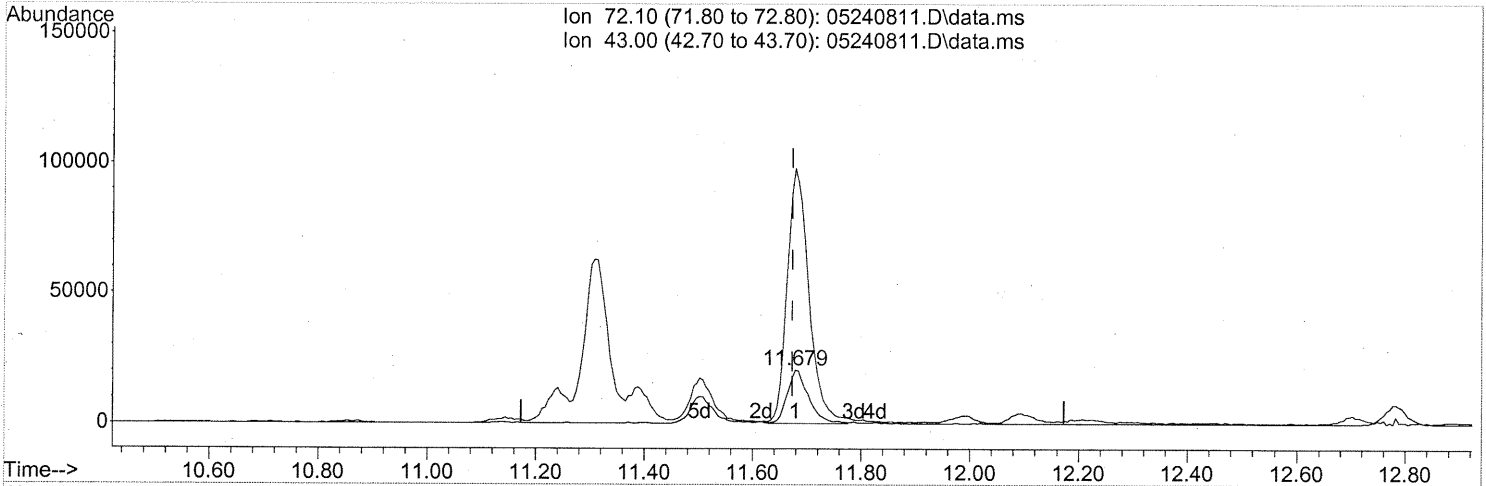
*WA 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



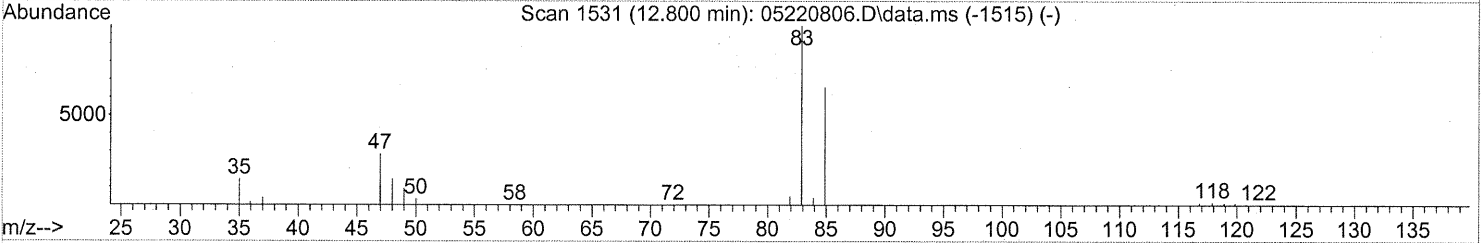
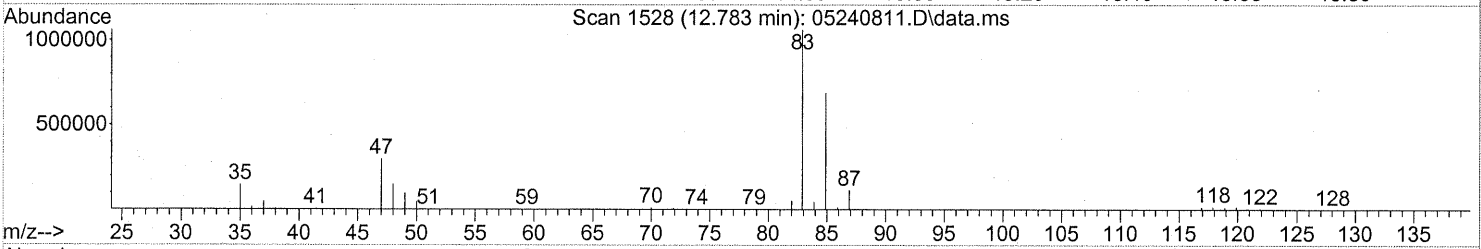
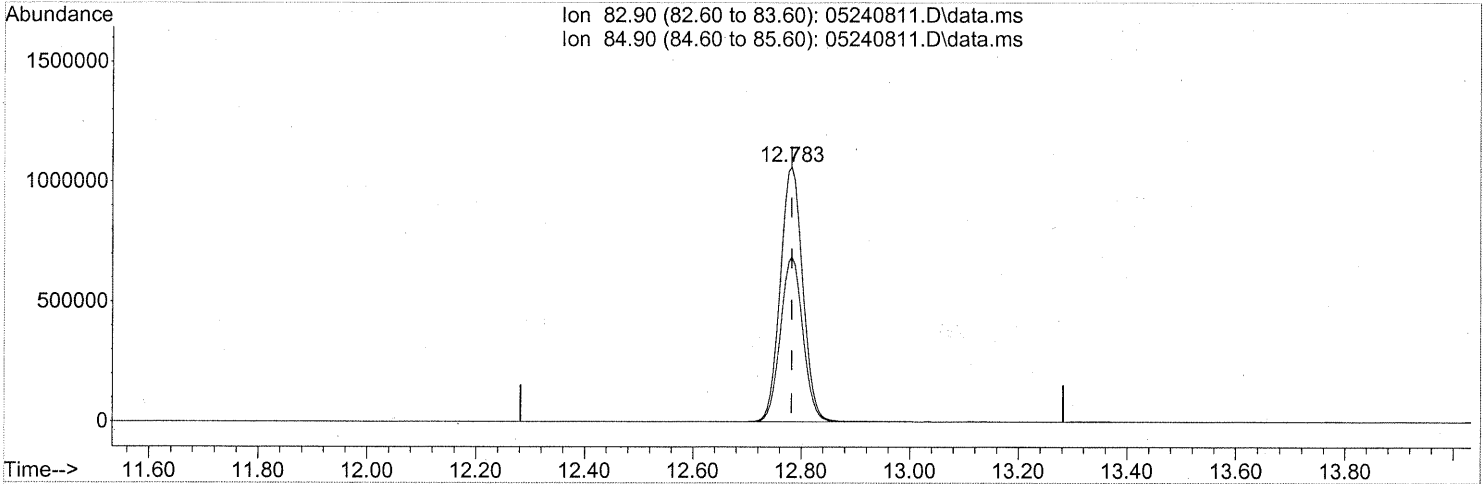
(27) 2-Butanone (T)  
11.679min (+0.006) 3.48ng  
response 55332

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	490.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(32) Chloroform (T)

12.783min (-0.000) 82.41ng

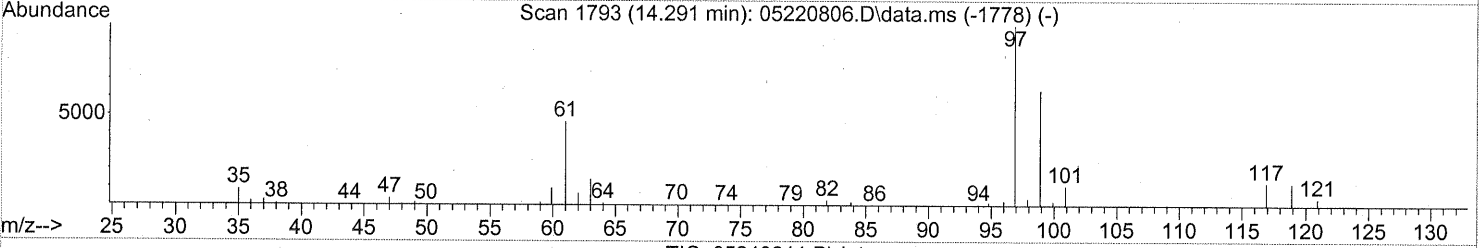
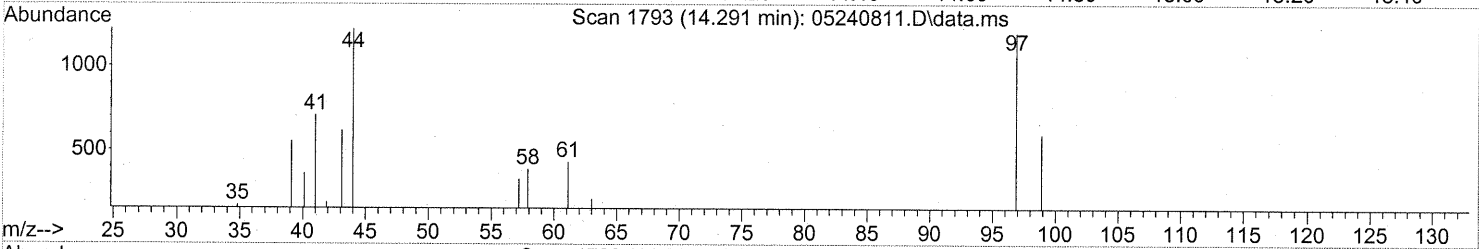
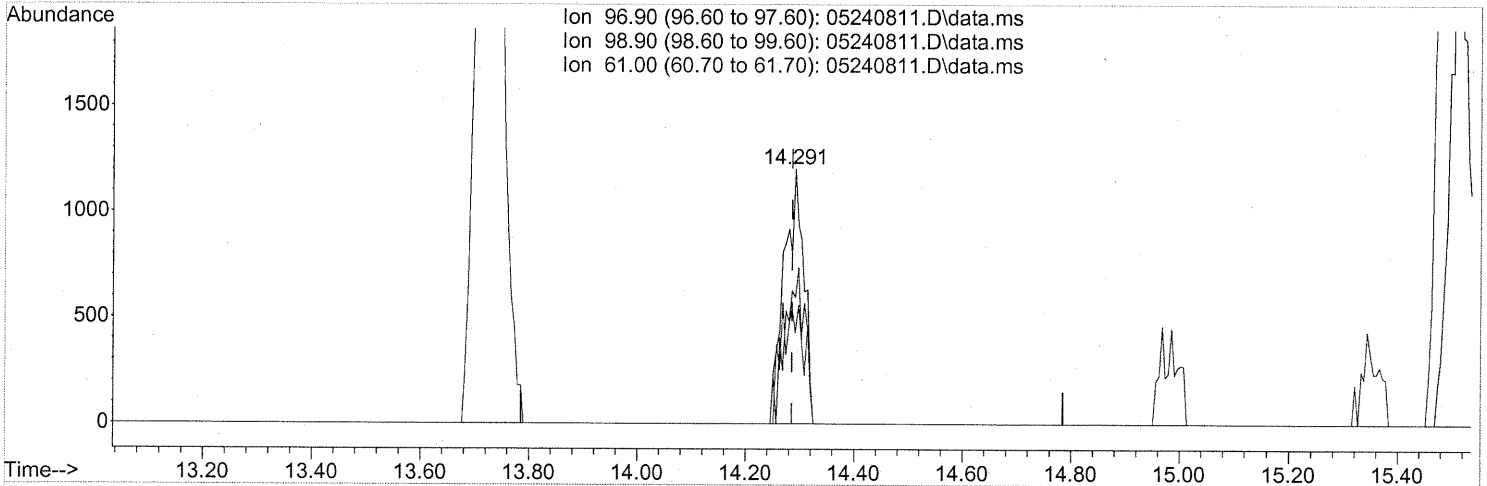
response 3044900

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.291min (+0.006) 0.07ng

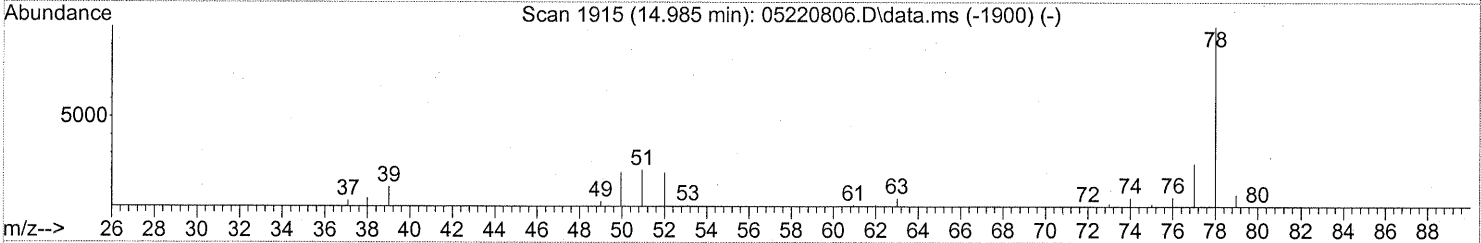
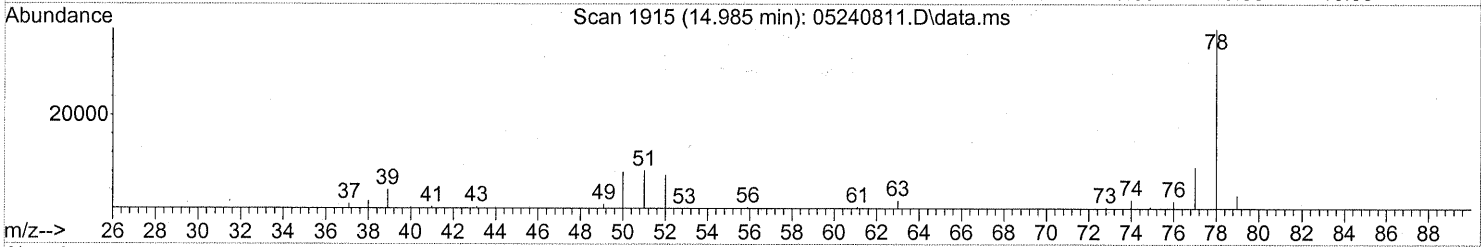
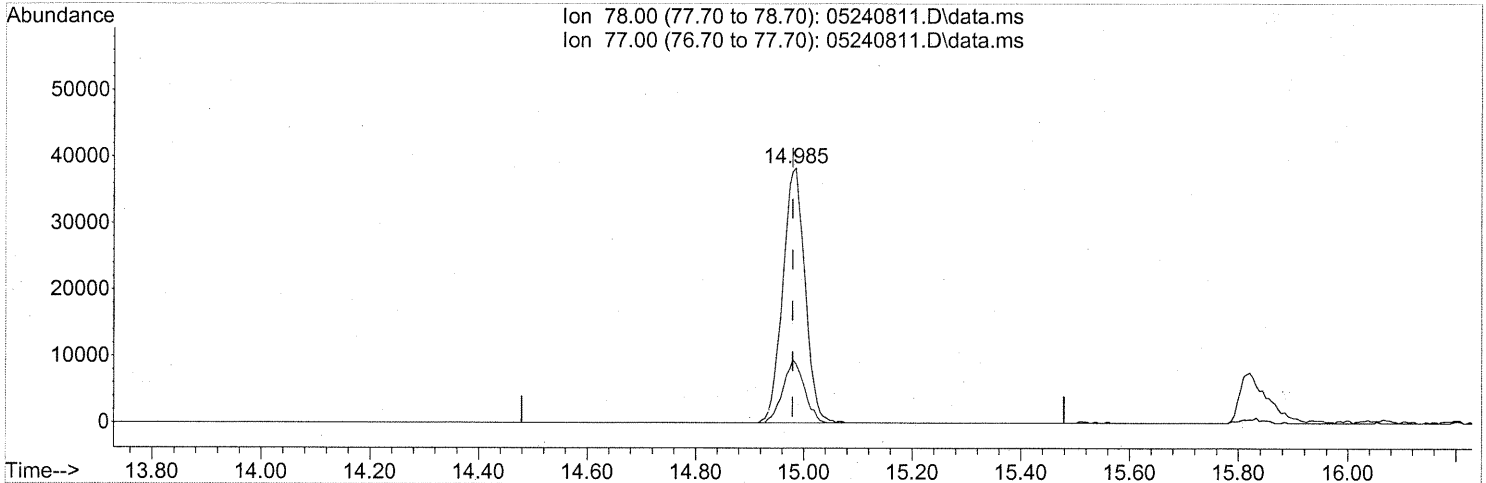
response 3025

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	61.16
61.00	50.50	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240811.D\data.ms

(41) Benzene (T)

14.985min (+0.006) 1.16ng

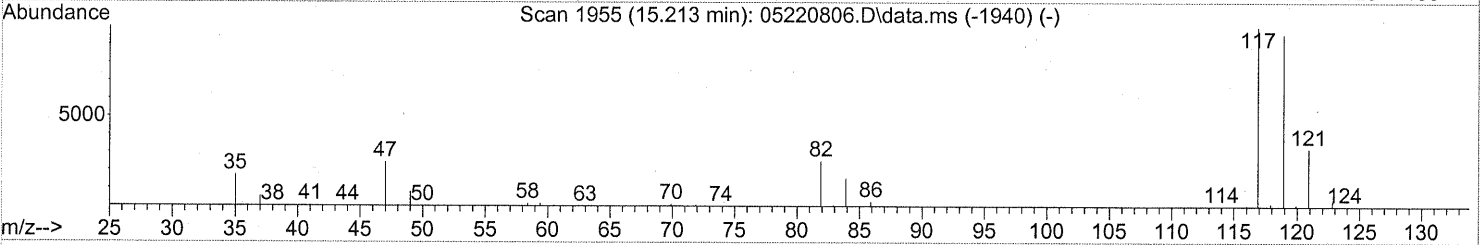
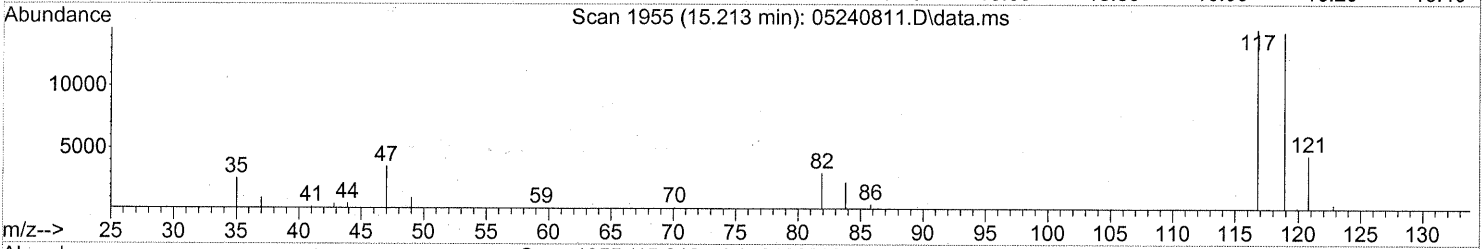
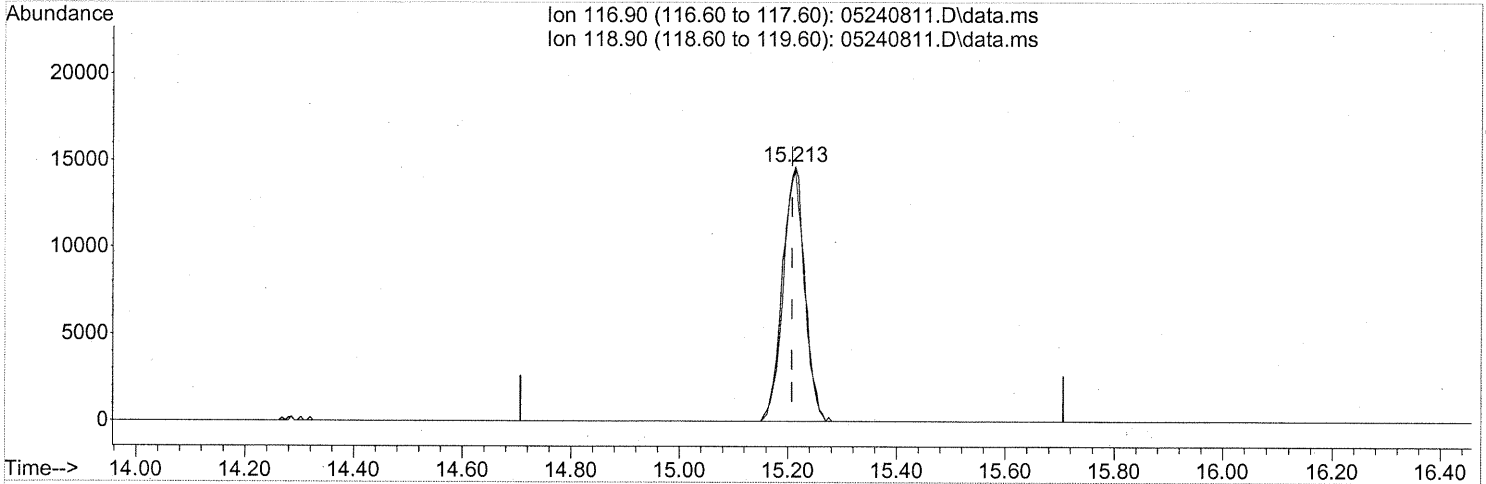
response 109284

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 1.15ng

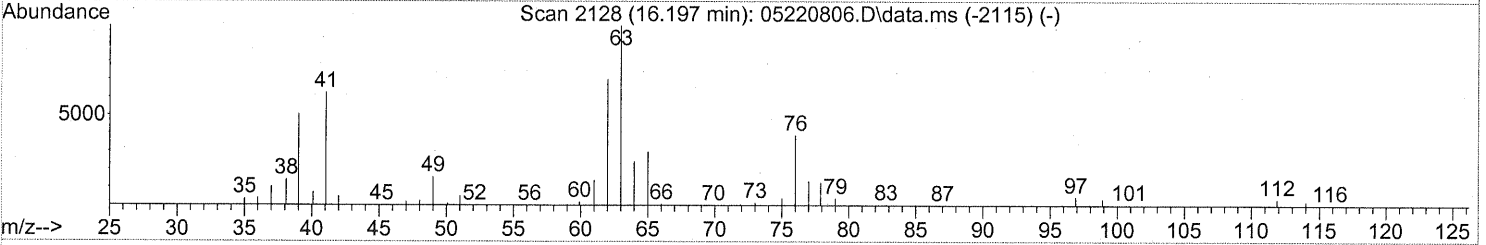
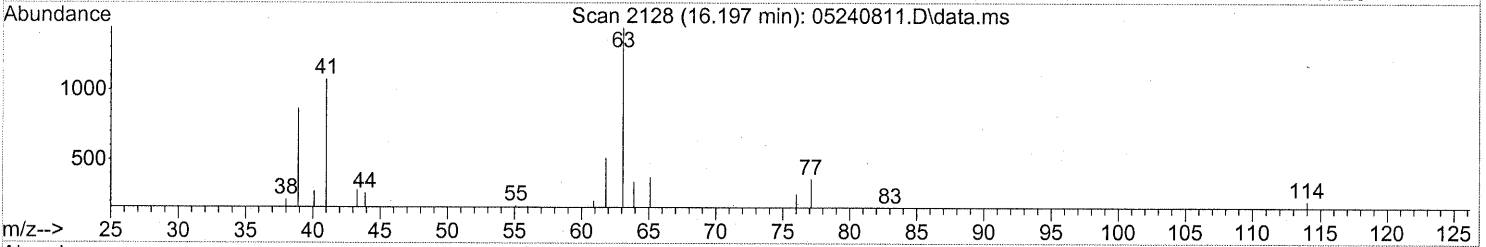
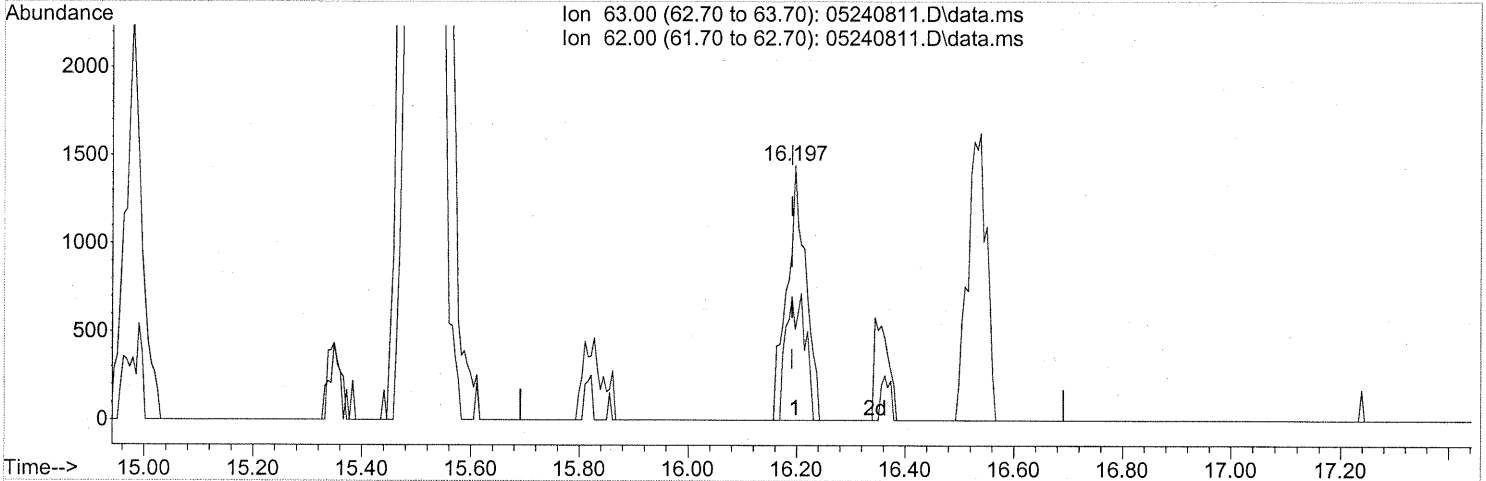
response 41606

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	95.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

16.197min (+0.006) 0.14ng

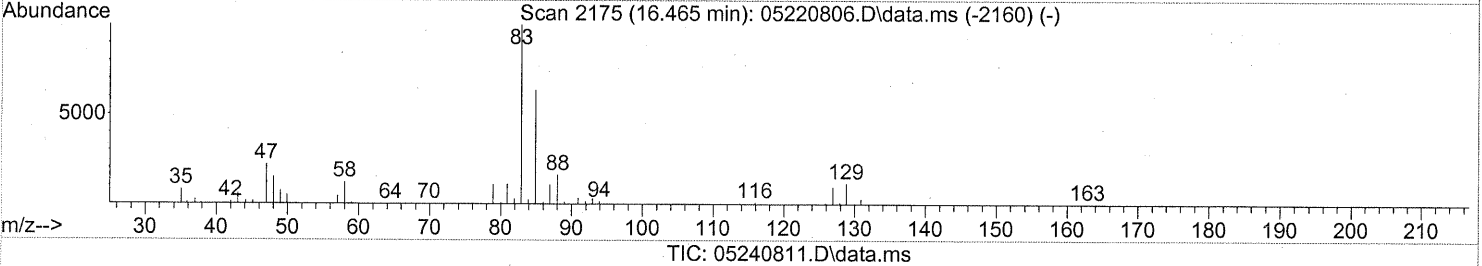
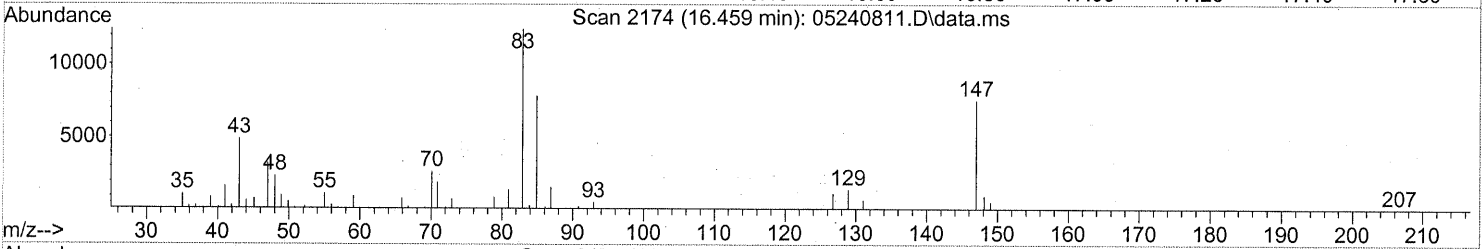
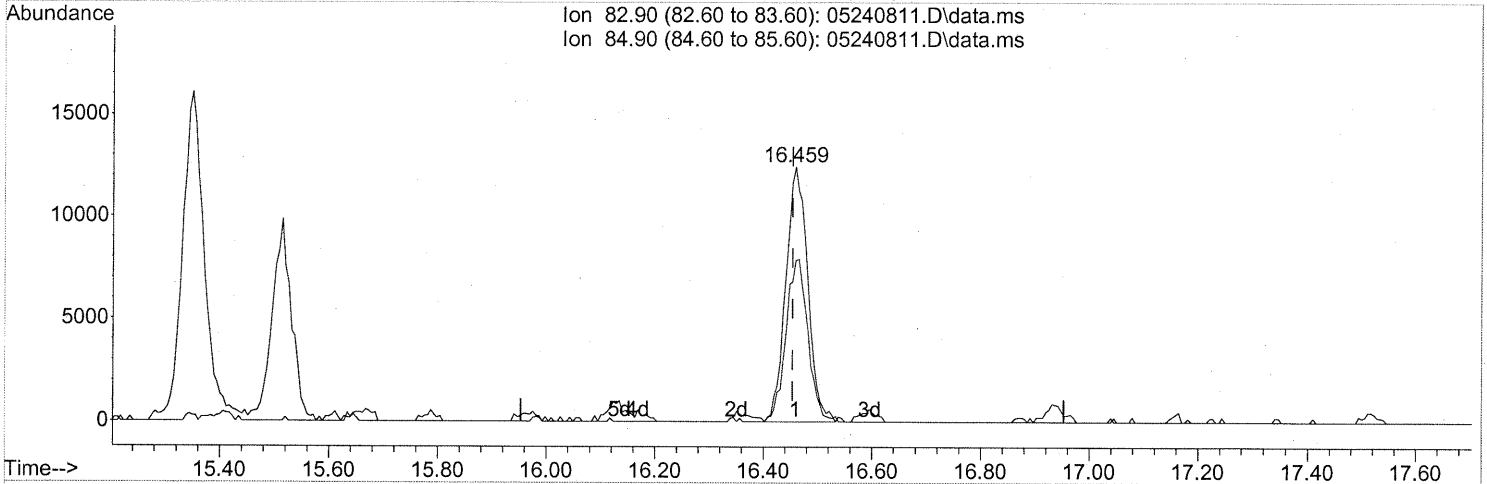
response 3487

Ion	Exp%	Act%
63.00	100	100
62.00	71.30	50.59#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.459min (+0.006) 1.10ng

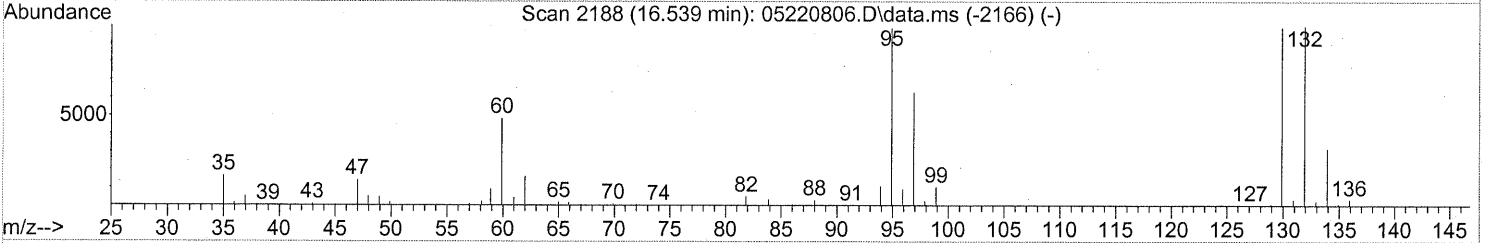
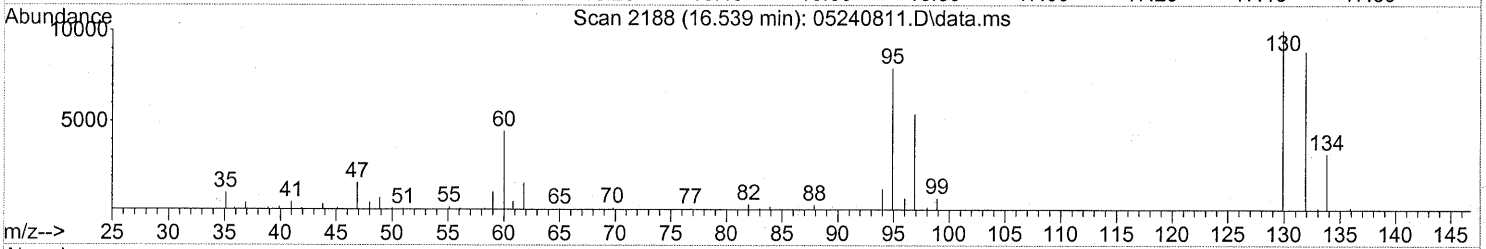
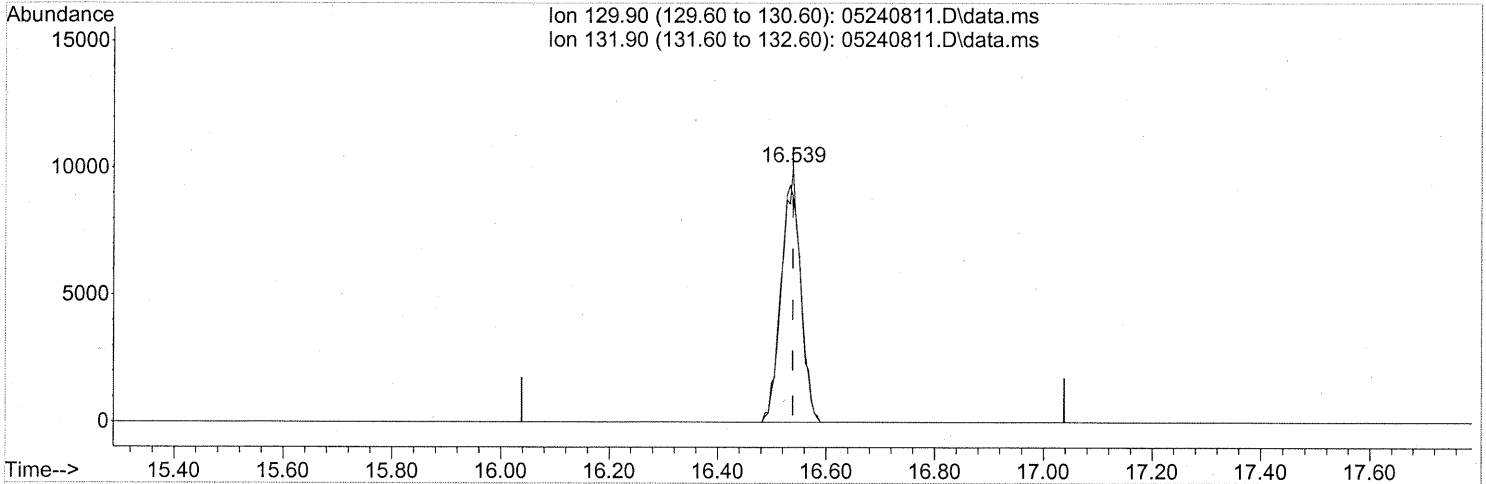
response 34917

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	63.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(47) Trichloroethene (T)

16.539min (-0.000) 0.85ng

response 24394

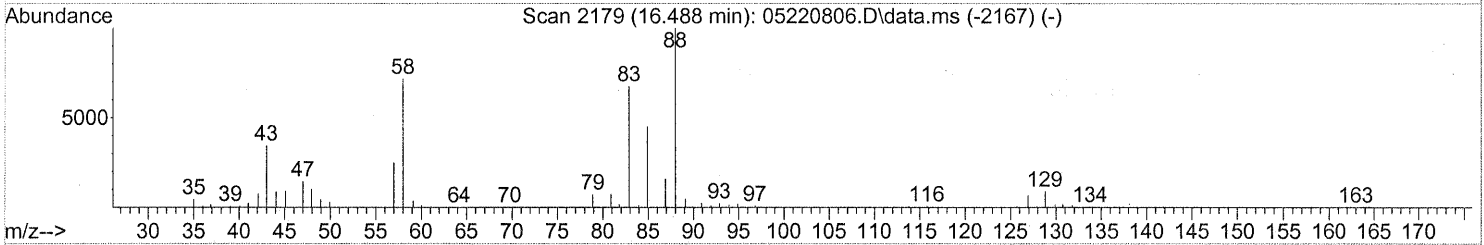
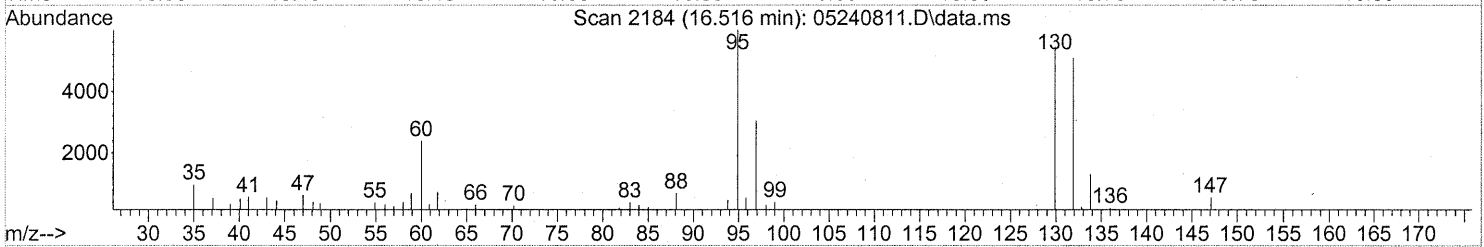
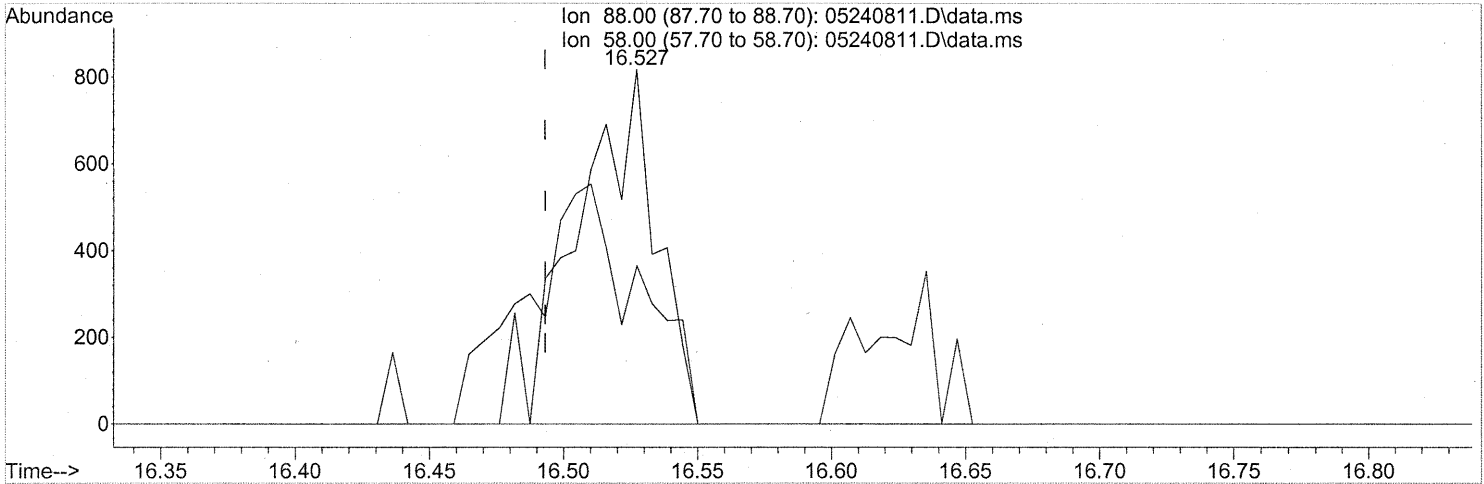
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	98.82
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



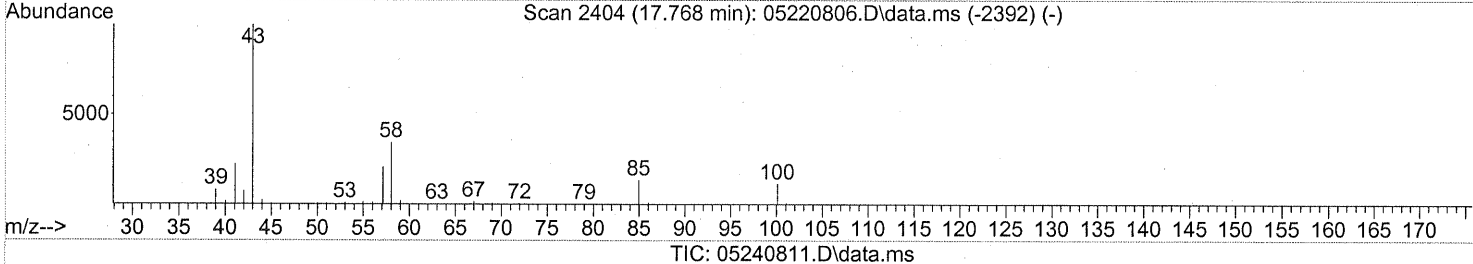
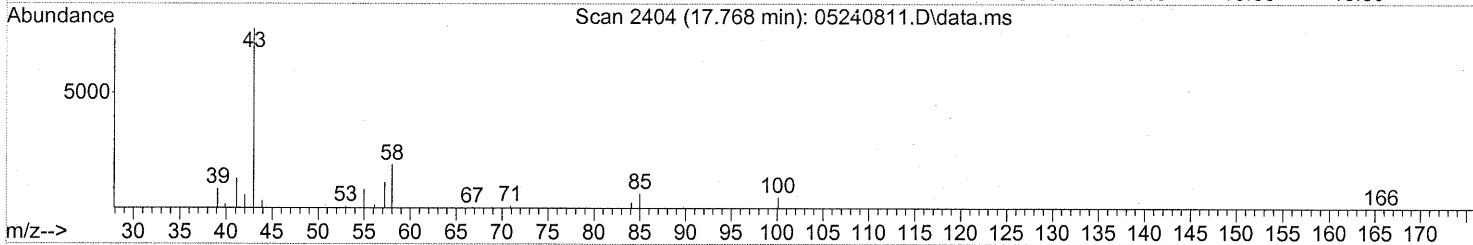
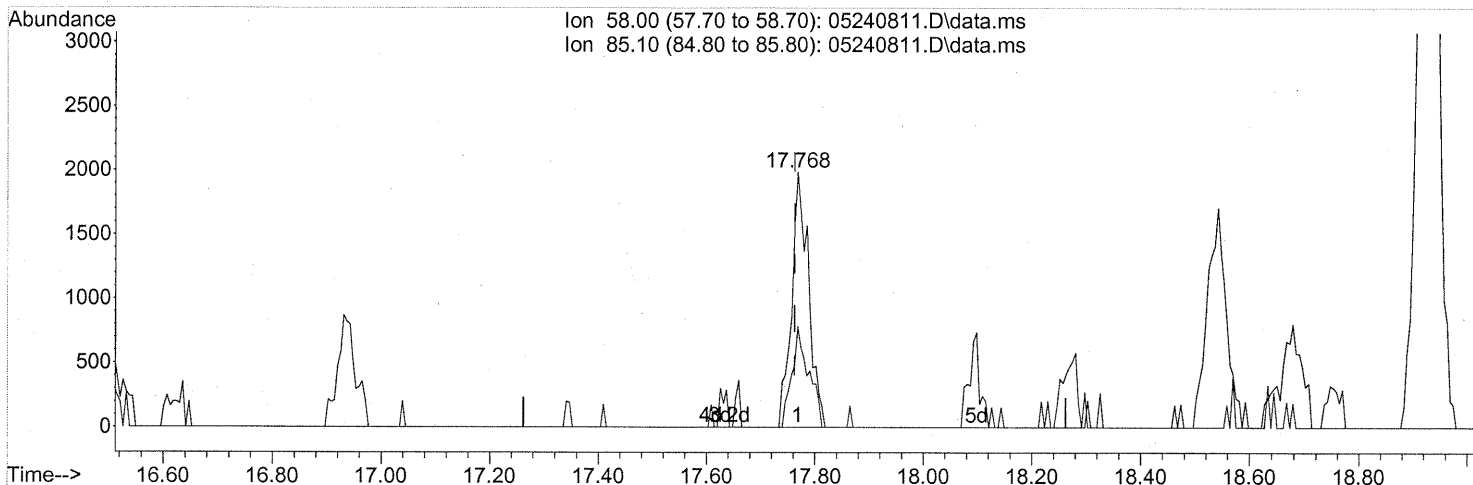
(48) 1,4-Dioxane (T)  
 16.527min (+0.034) 0.10ng  
 response 1694

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	94.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.768min (+0.006) 0.17ng

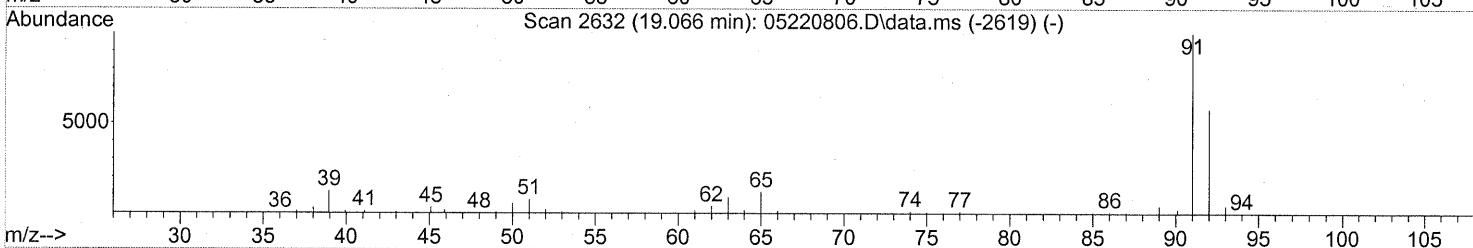
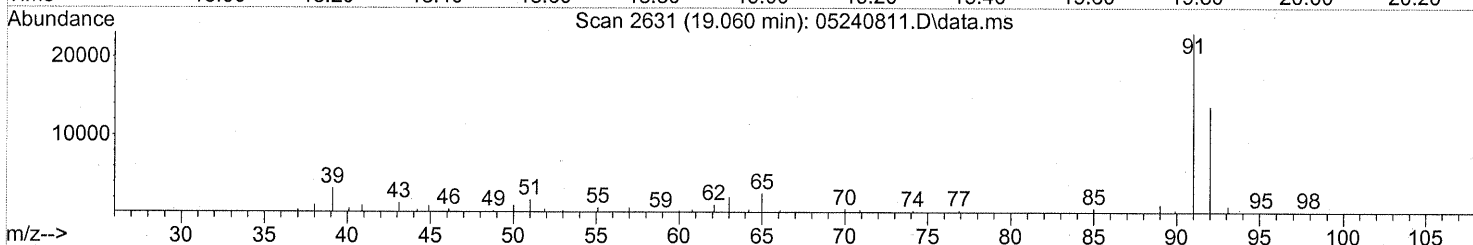
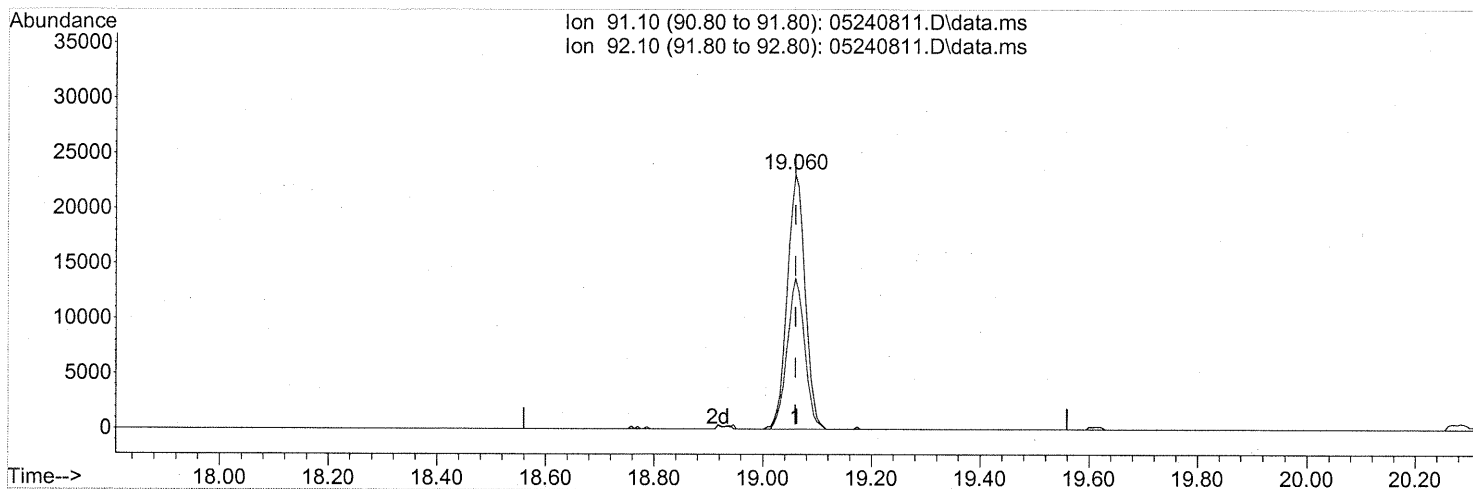
response 4300

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	39.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(58) Toluene (T)

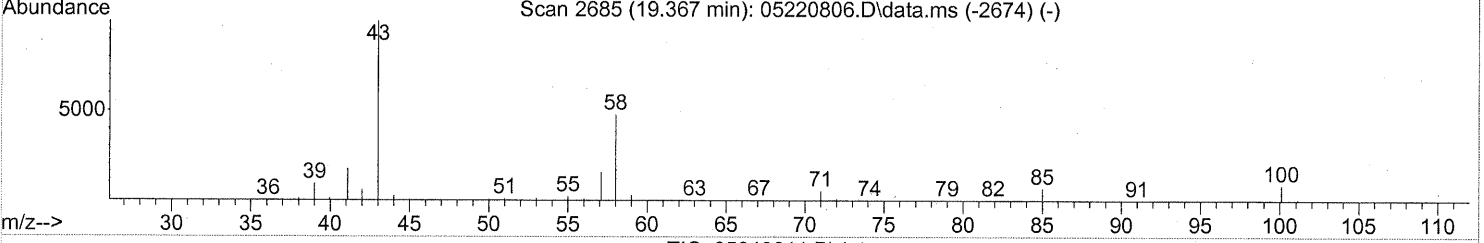
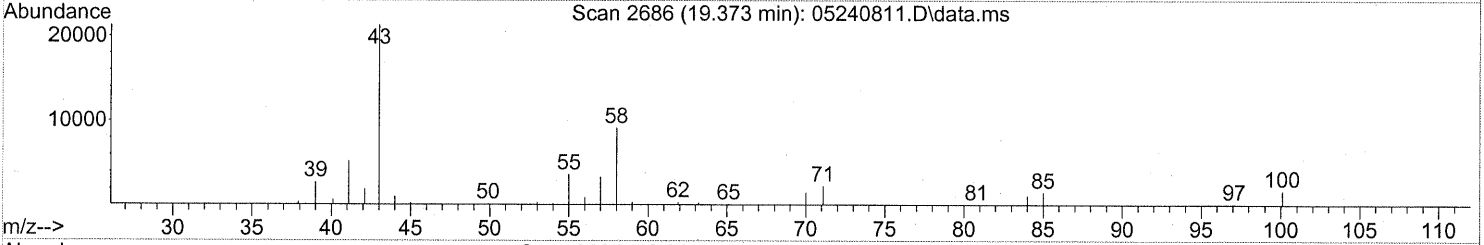
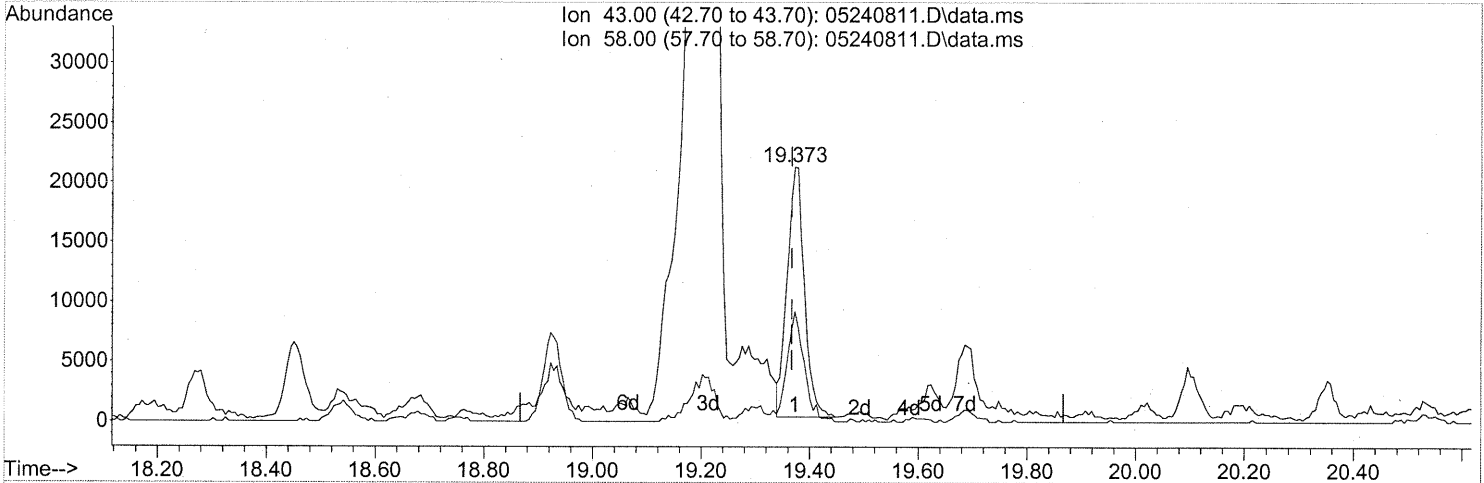
19.060min (-0.000) 0.50ng

response 52851

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.92
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(59) 2-Hexanone (T)

19.373min (+0.006) 0.63ng

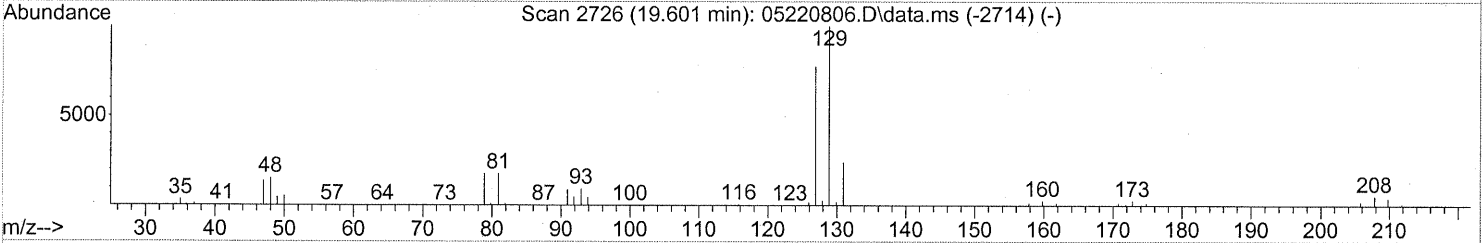
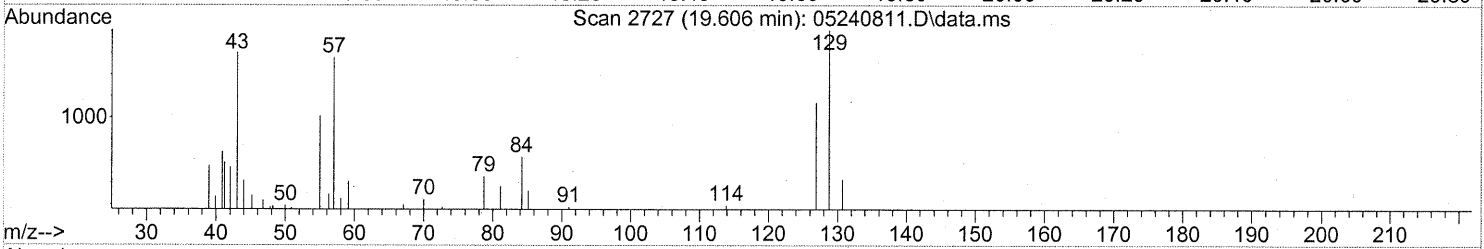
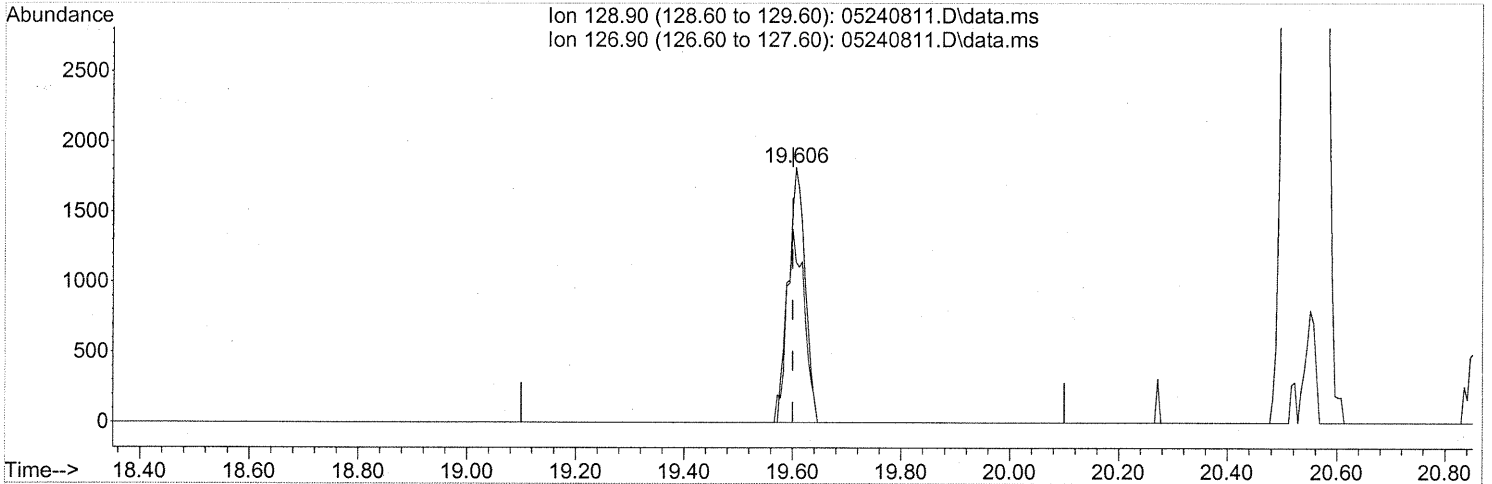
response 46506

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	44.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(60) Dibromochloromethane (T)

19.606min (+0.006) 0.14ng

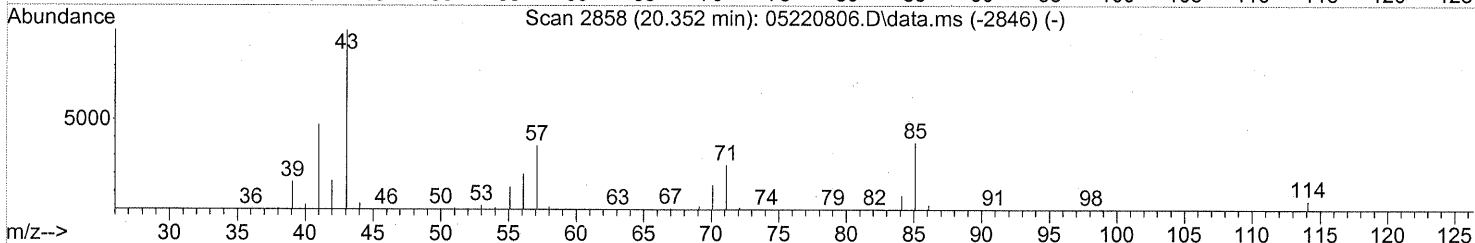
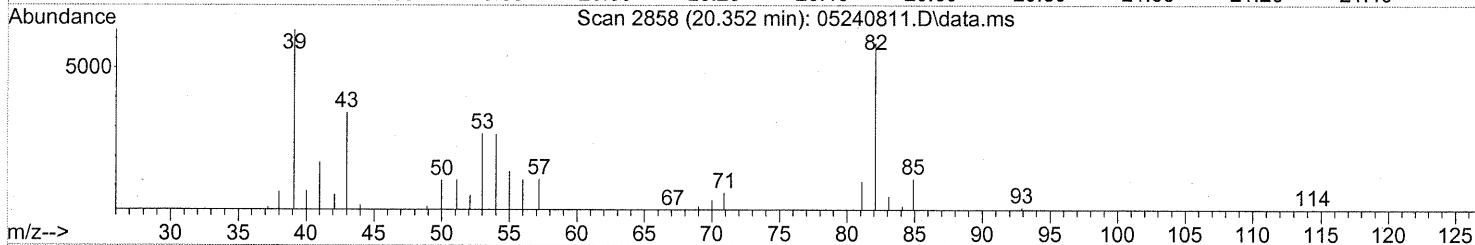
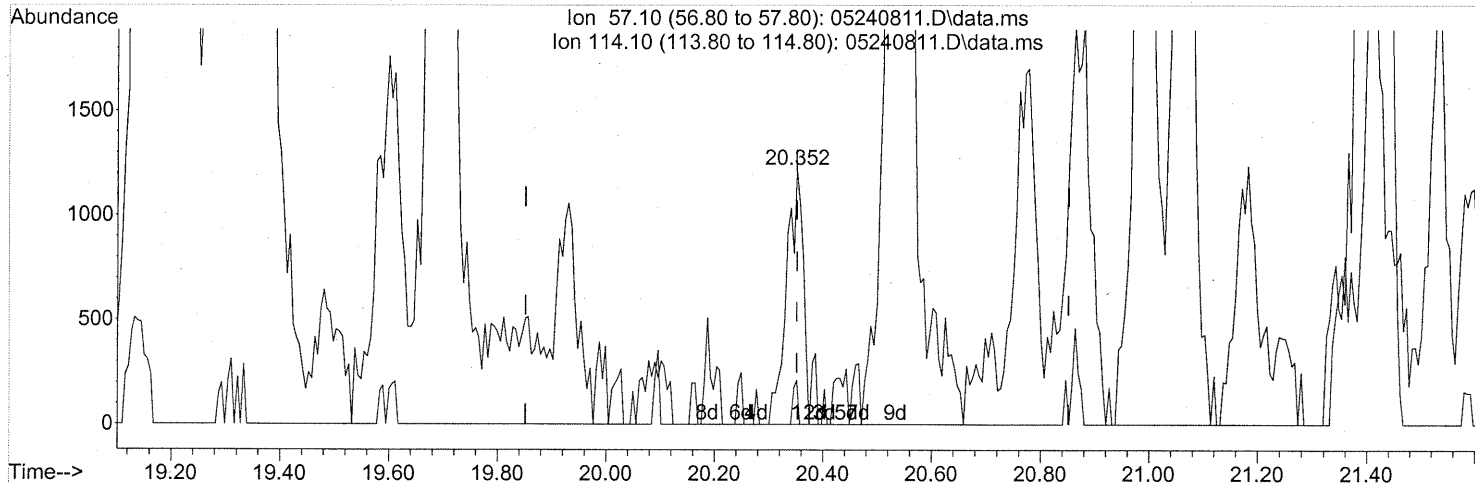
response 3879

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	79.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(63) n-Octane (T)

20.352min (-0.000) 0.11ng

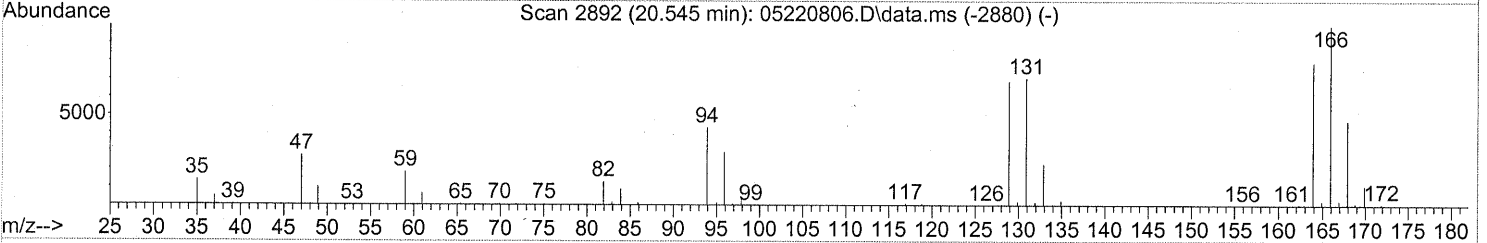
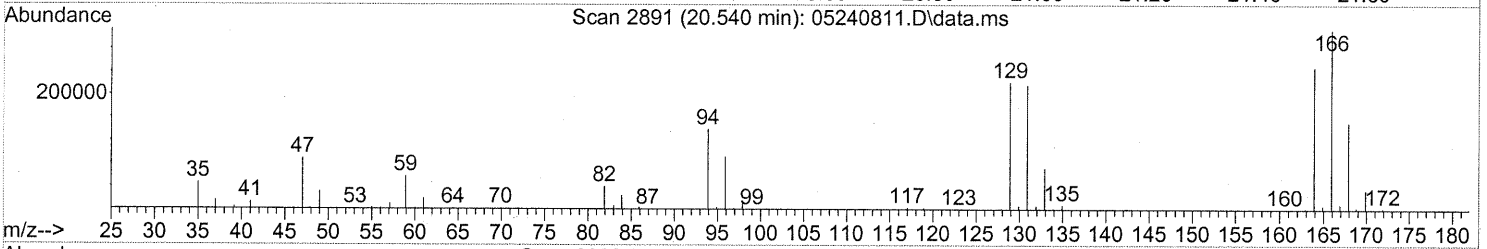
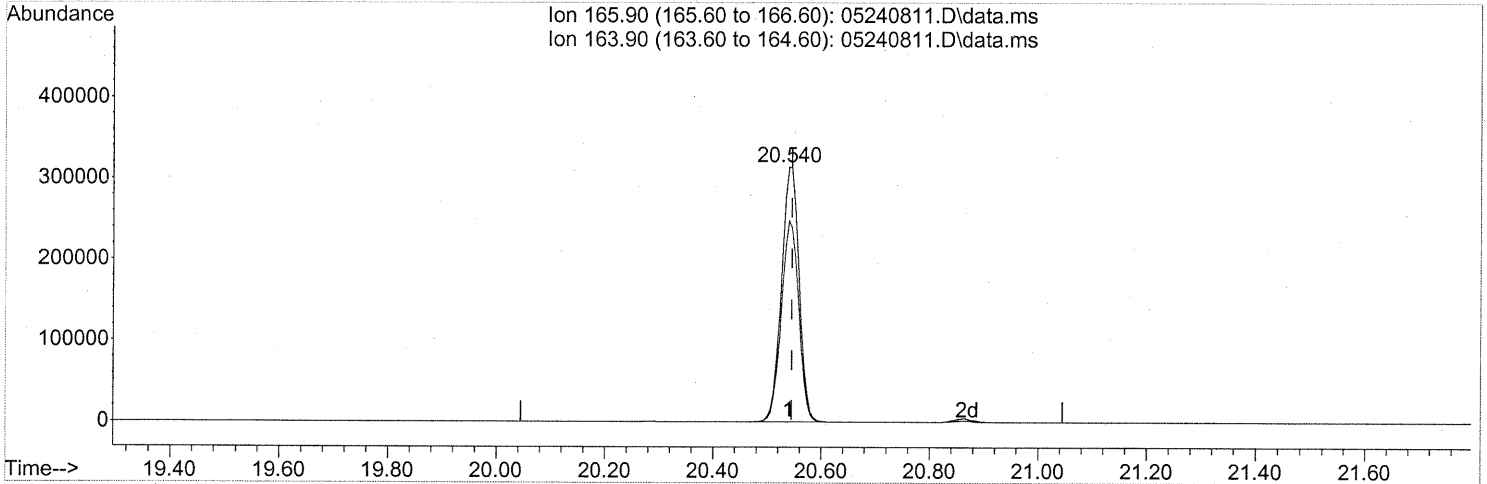
response 2565

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	5.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.540min (-0.006) 22.59ng

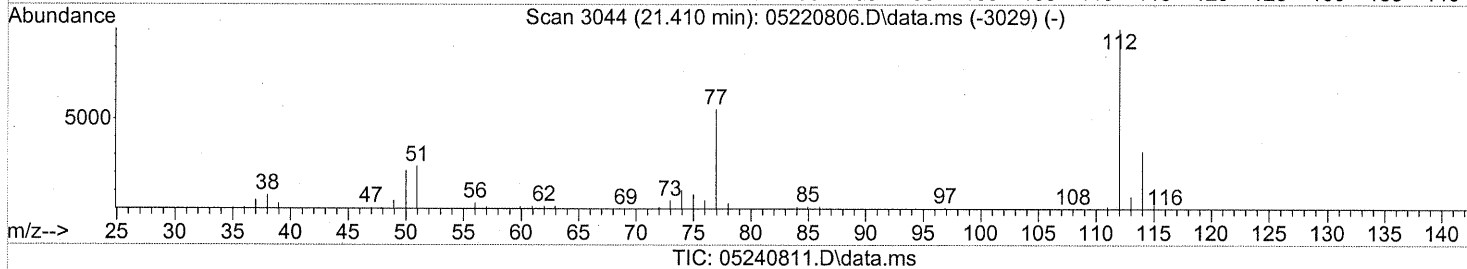
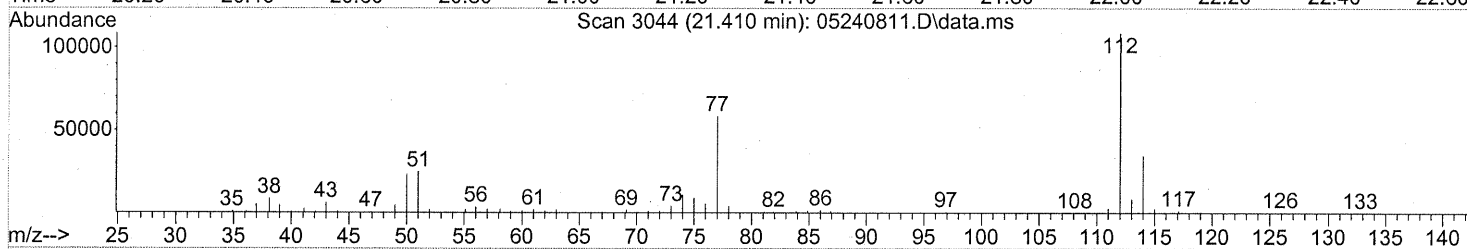
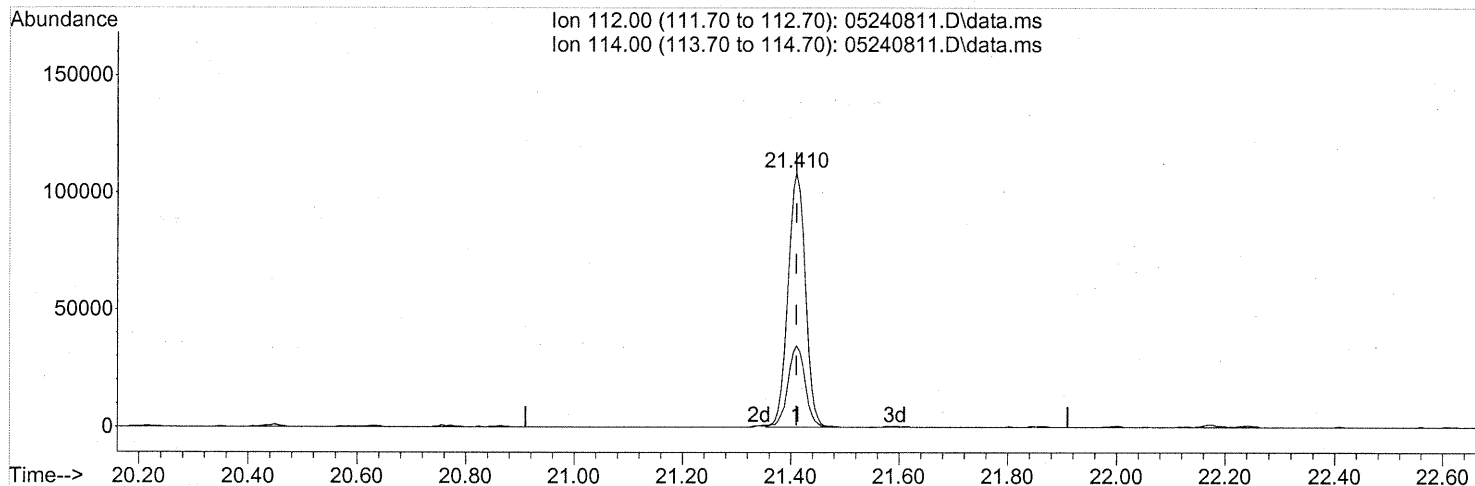
response 711013

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	77.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(65) Chlorobenzene (T)  
 21.410min (-0.000) 3.38ng  
 response 240806

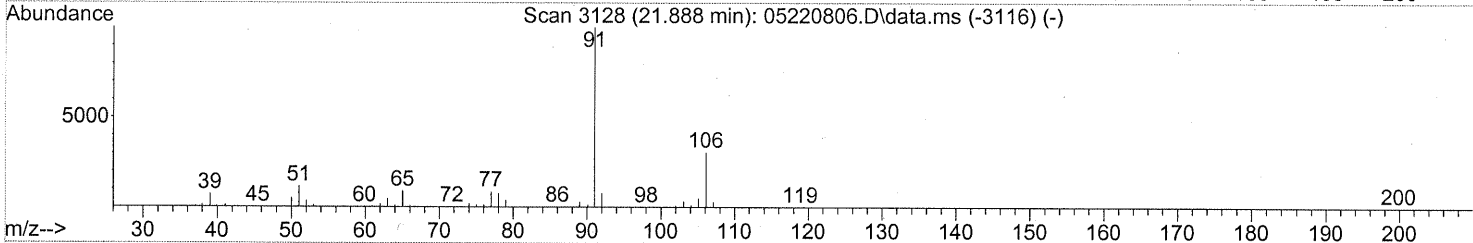
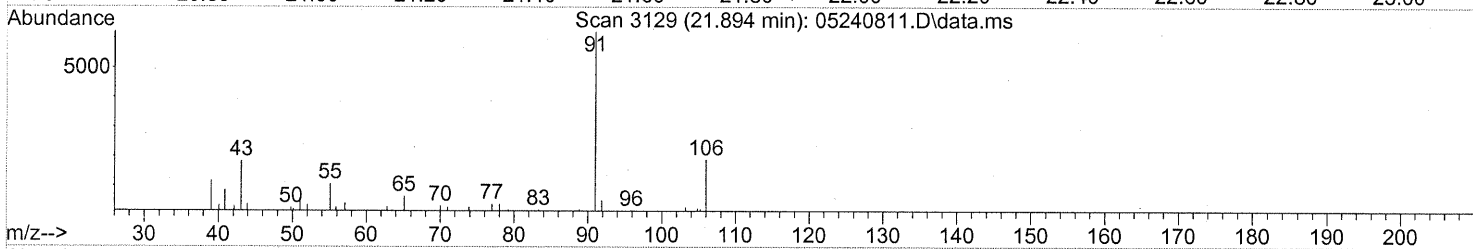
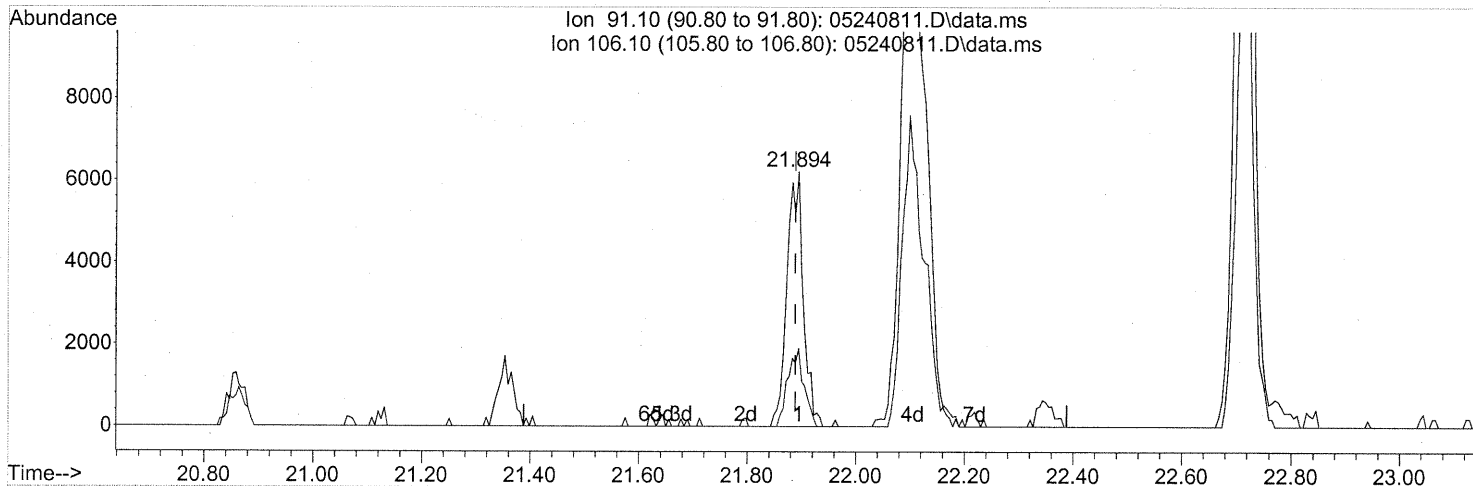
Ion	Exp%	Act%
112.00	100	100
114.00	32.40	31.84
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

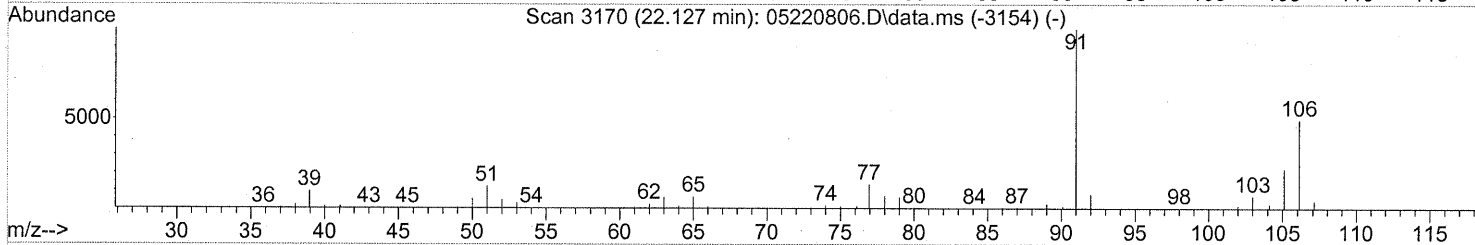
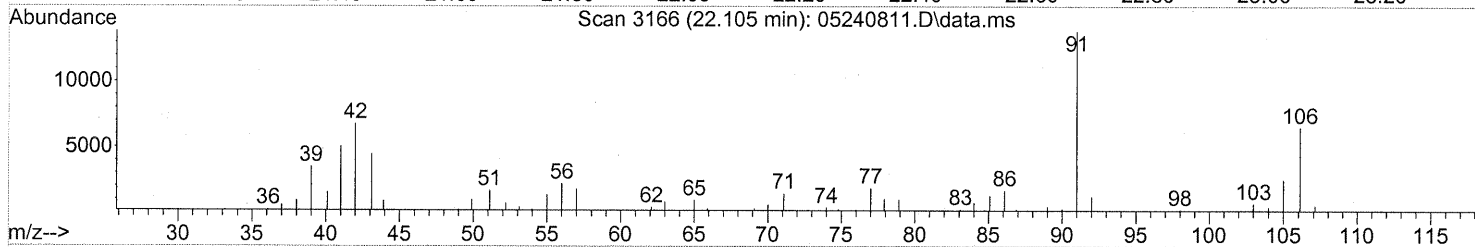
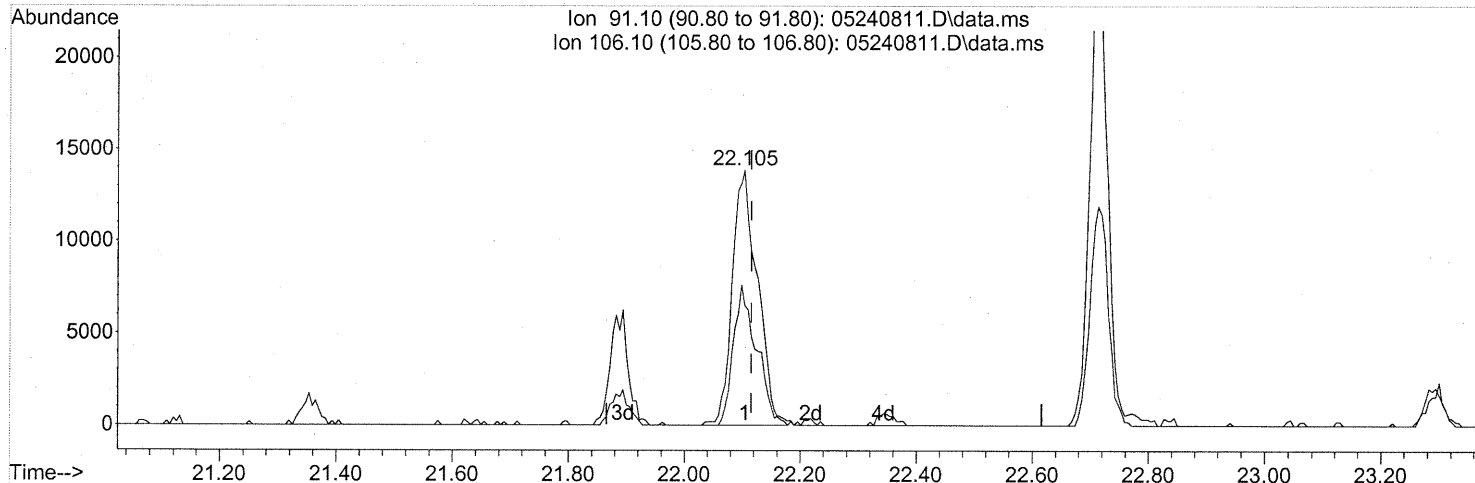
(66) Ethylbenzene (T)  
 21.894min (+0.006) 0.11ng  
 response 12987

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	30.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

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

22.105min (-0.011) 0.51ng

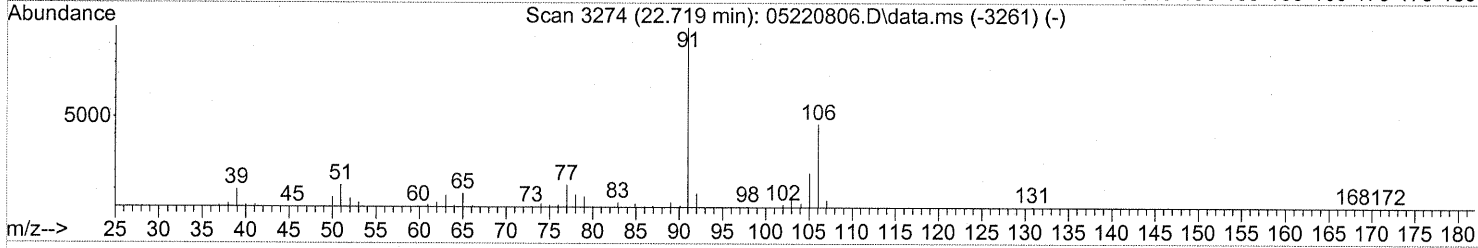
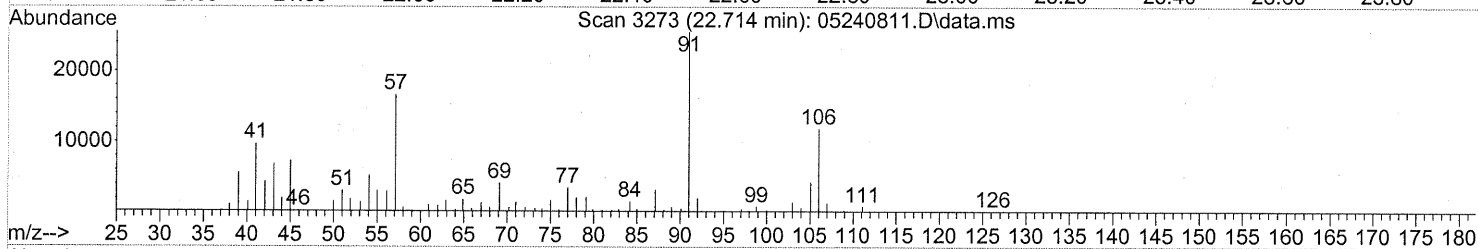
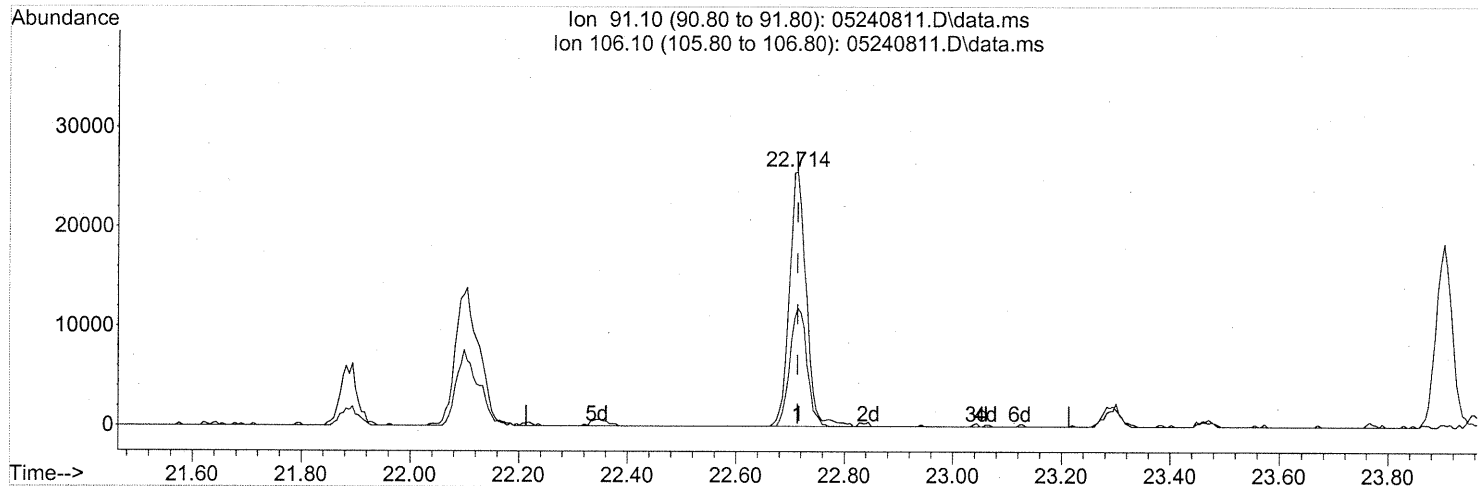
response 41374

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	51.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



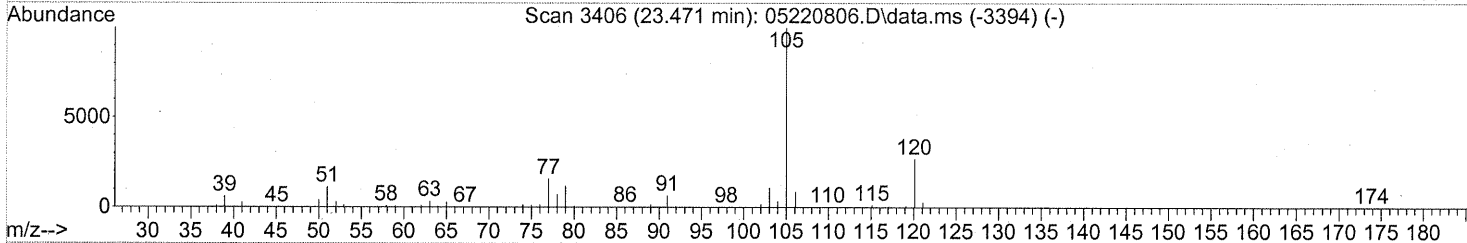
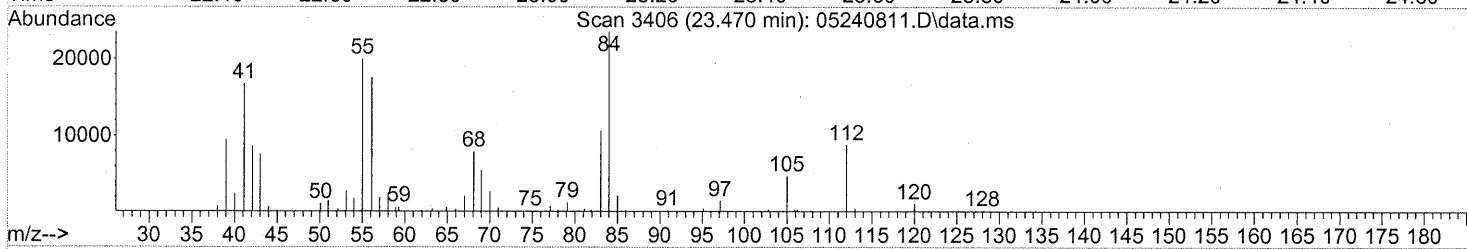
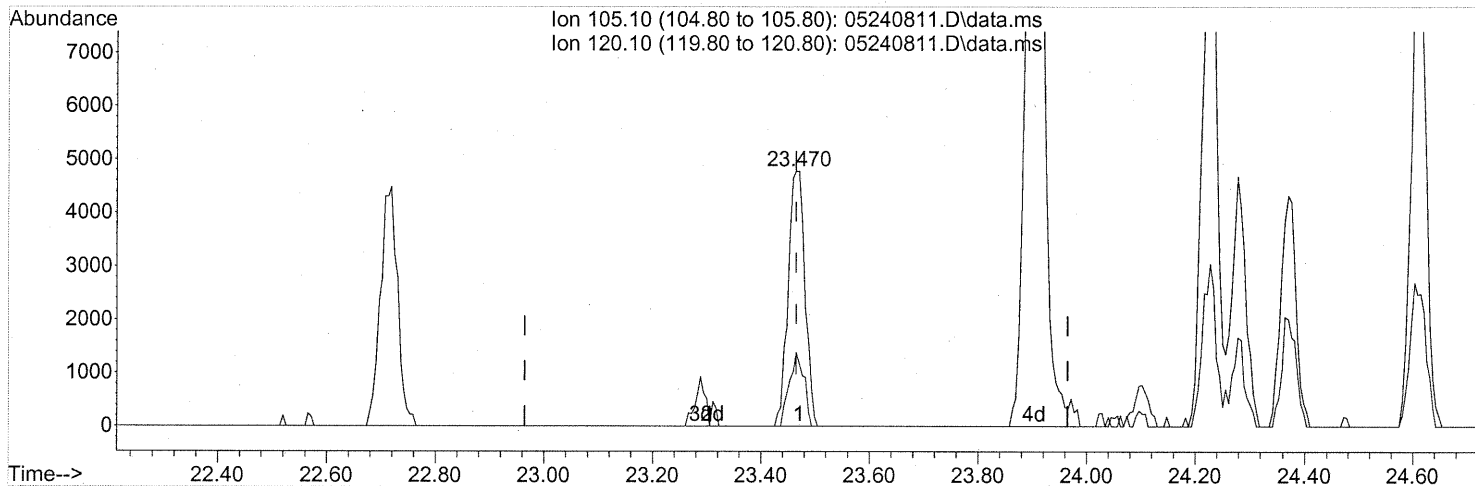
(70) o-Xylene (T)  
 22.714min (-0.000) 0.63ng  
 response 55079

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	47.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

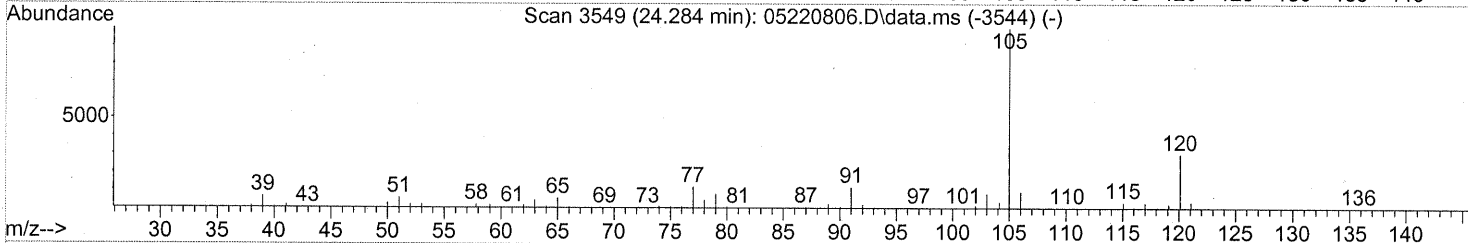
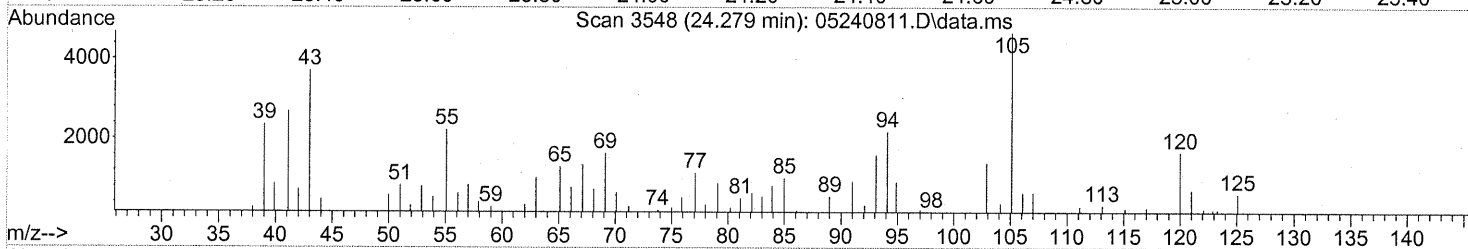
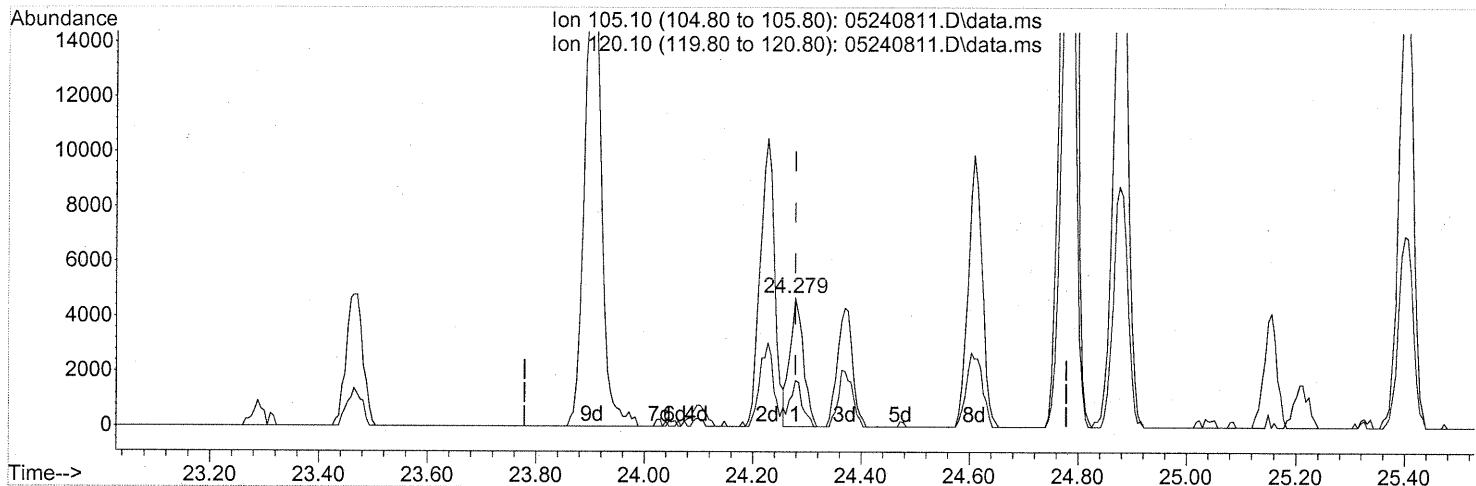
(74) Cumene (T)  
 23.470min (+0.006) 0.09ng  
 response 10282

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	25.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



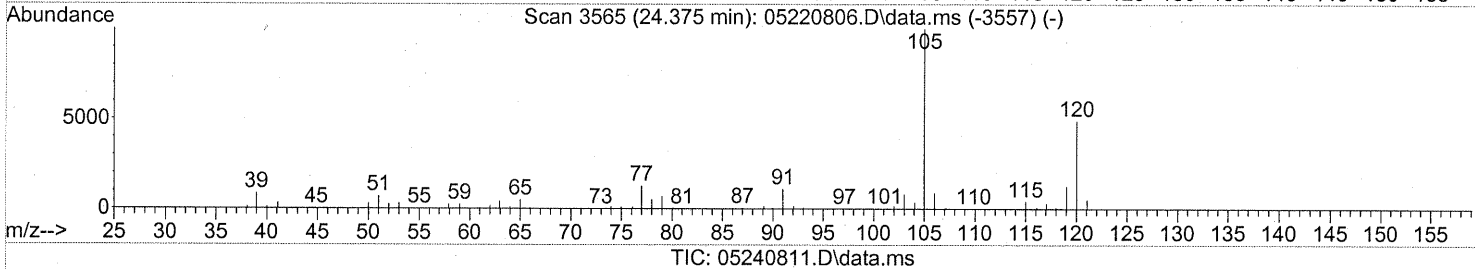
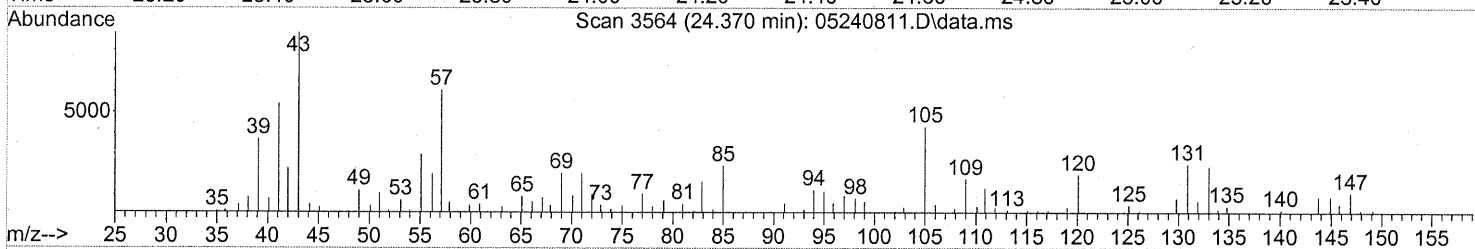
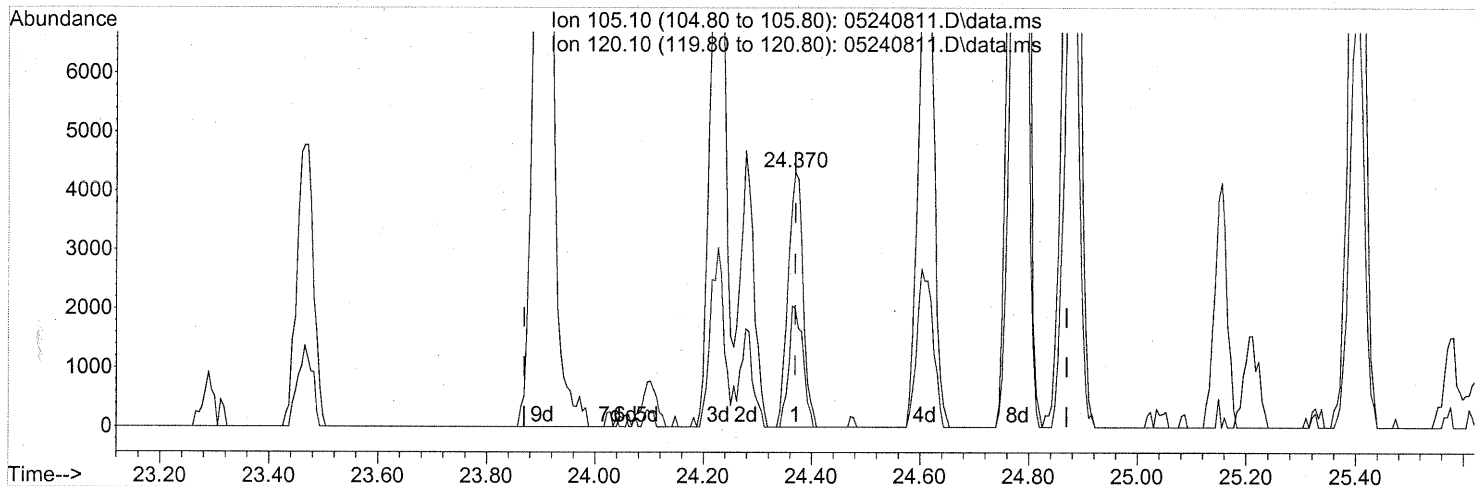
(78) 4-Ethyltoluene (T)  
 24.279min (-0.000) 0.07ng  
 response 8098

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	30.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.370min (-0.000) 0.08ng

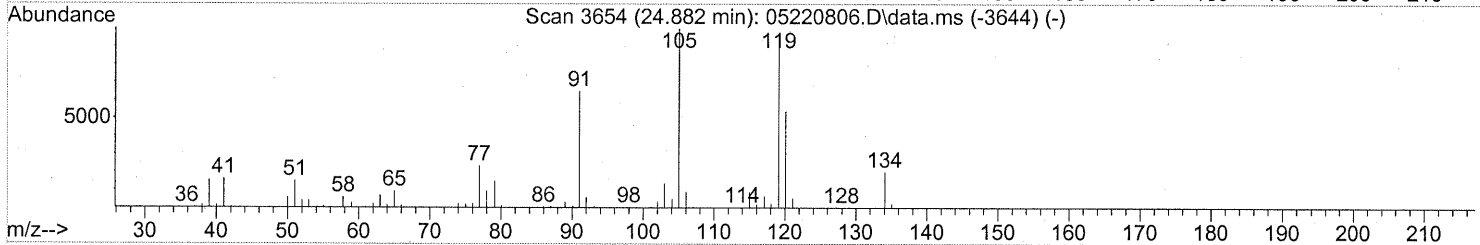
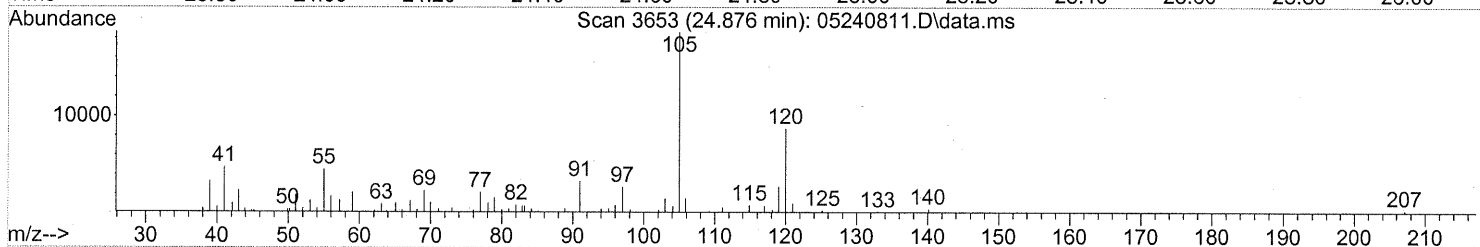
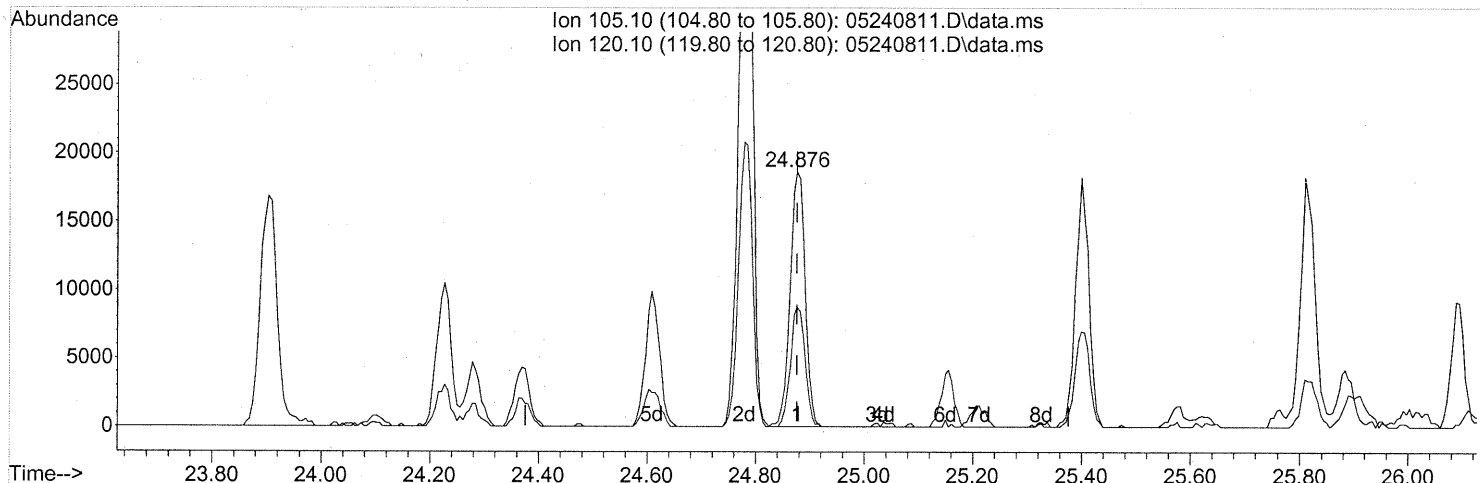
response 8361

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	44.60
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

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

24.876min (-0.000) 0.33ng

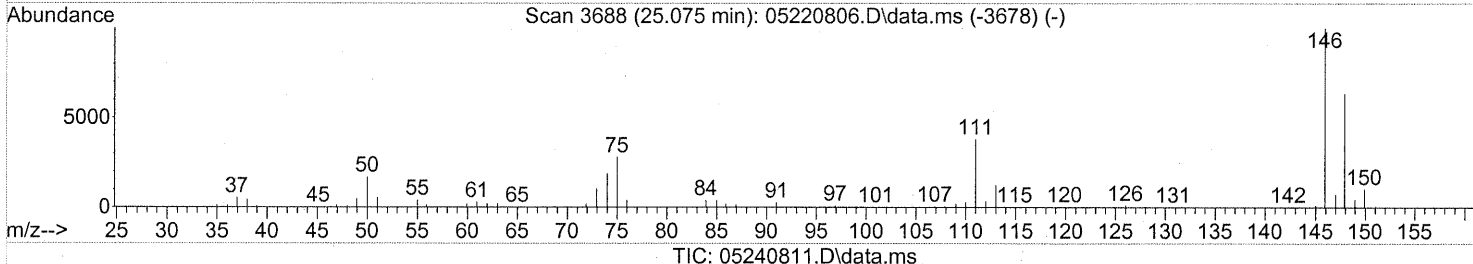
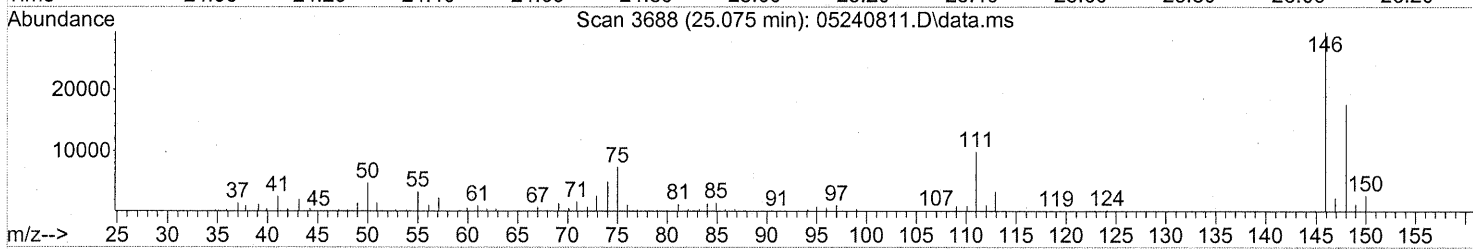
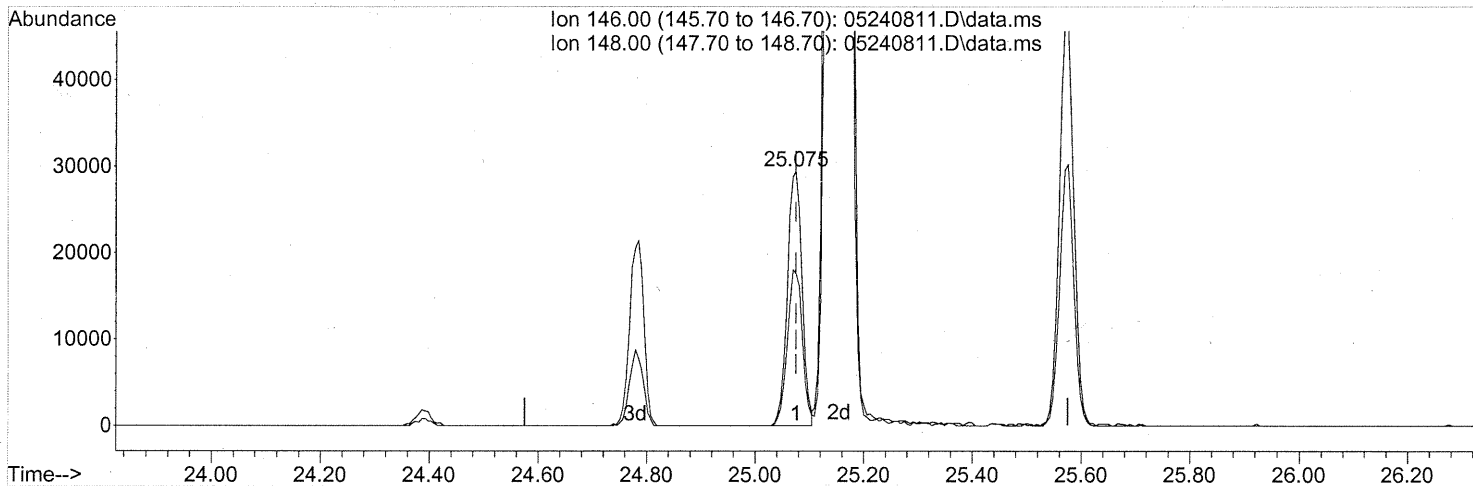
response 35403

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	45.75
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.075min (-0.000) 0.82ng

response 55000

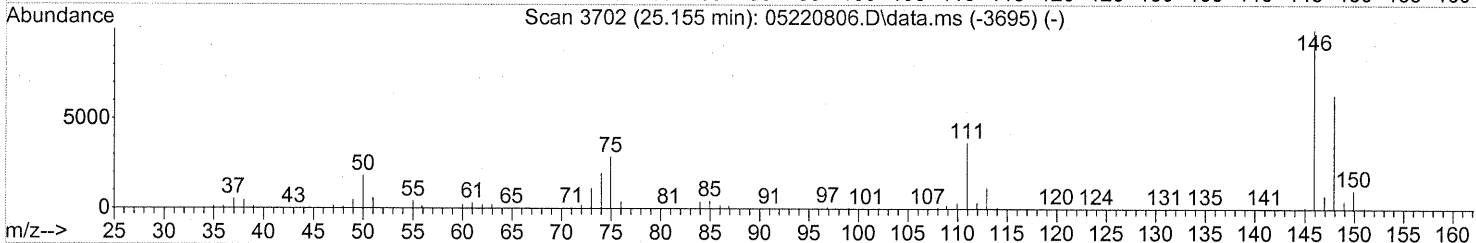
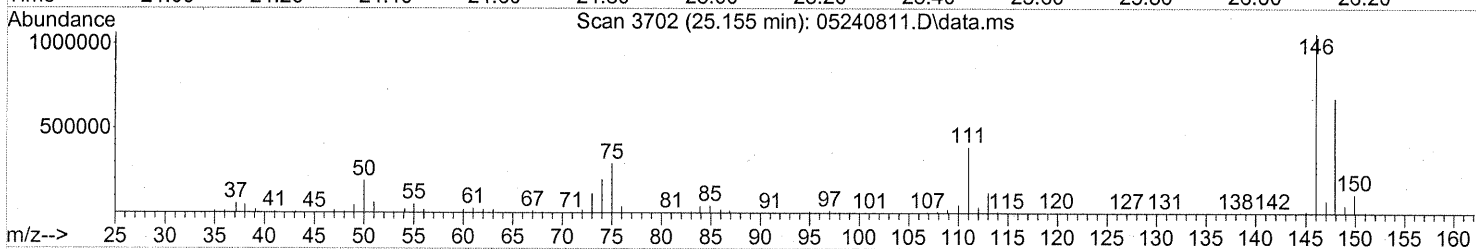
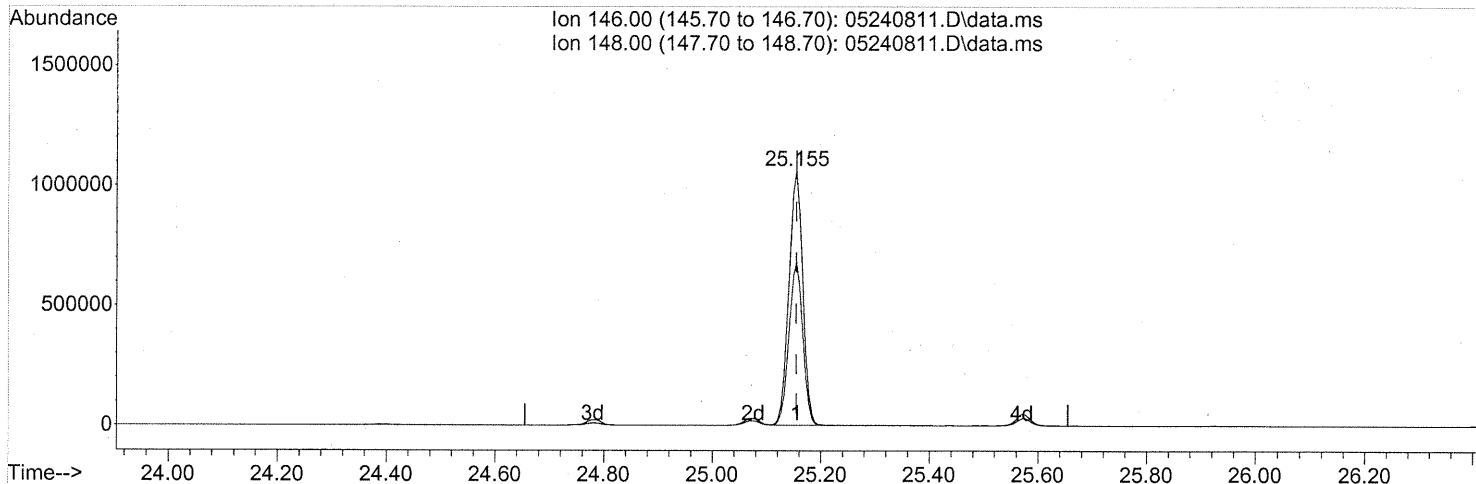
Ion	Exp%	Act%
146.00	100	100
148.00	64.00	63.11
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 28.95ng

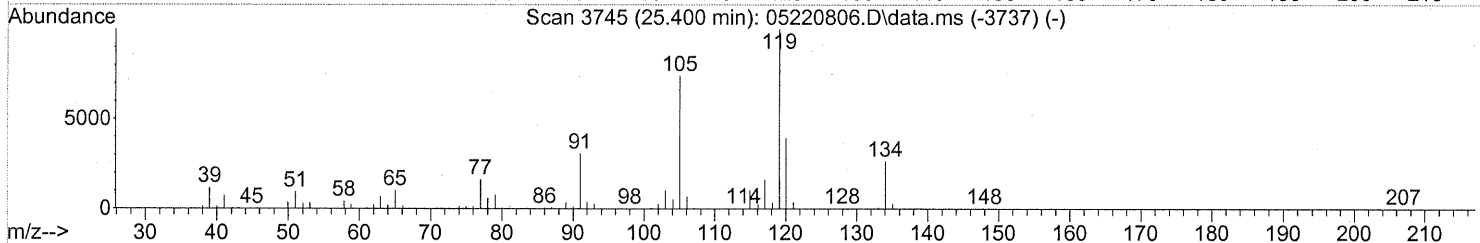
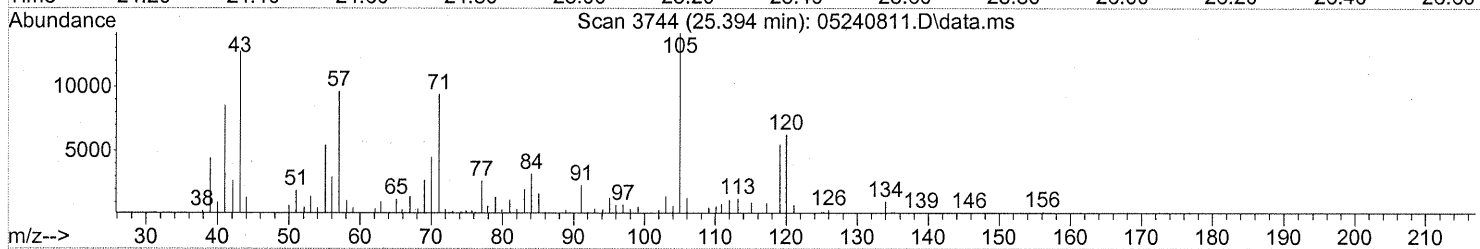
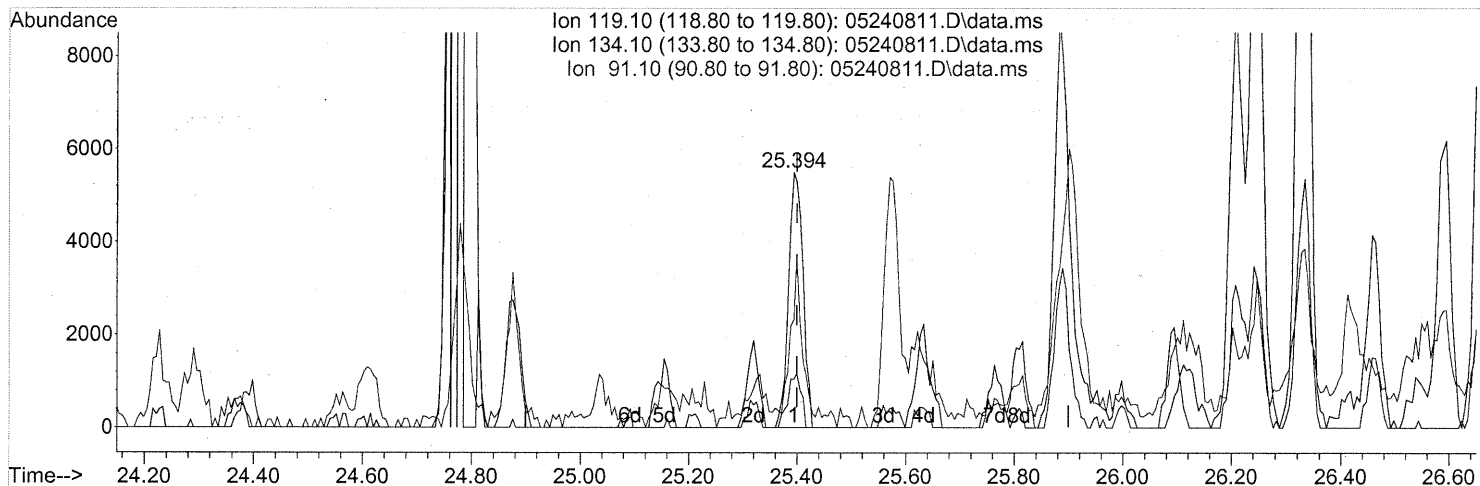
response 1878475

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(88) p-Isopropyltoluene (T)

25.394min (-0.006) 0.09ng

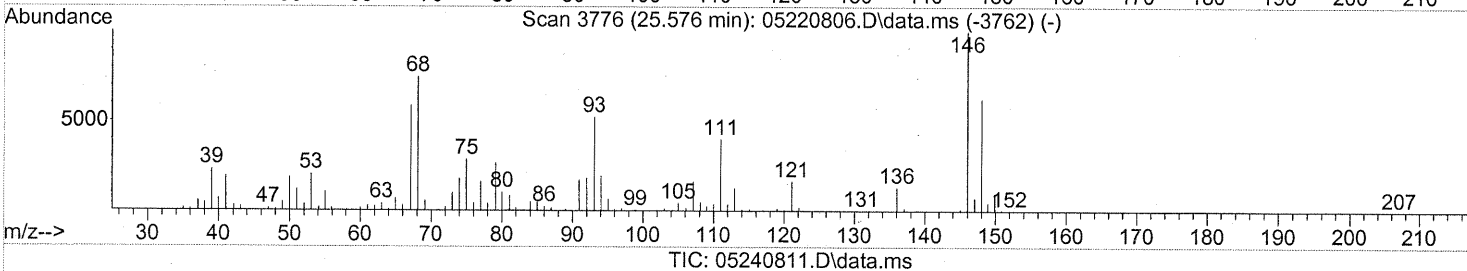
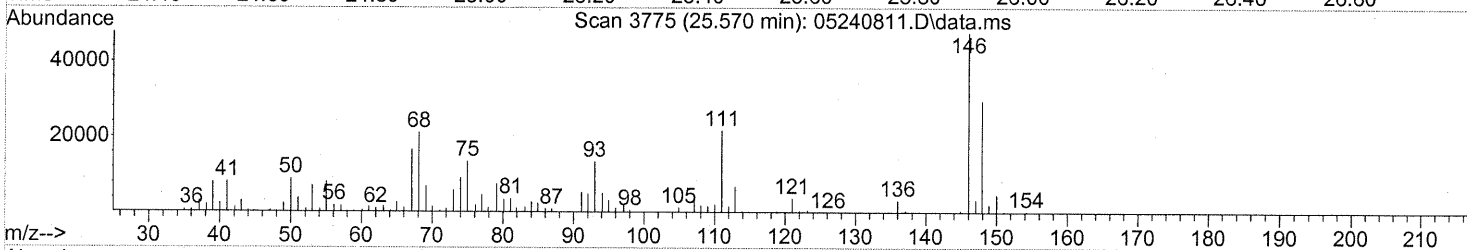
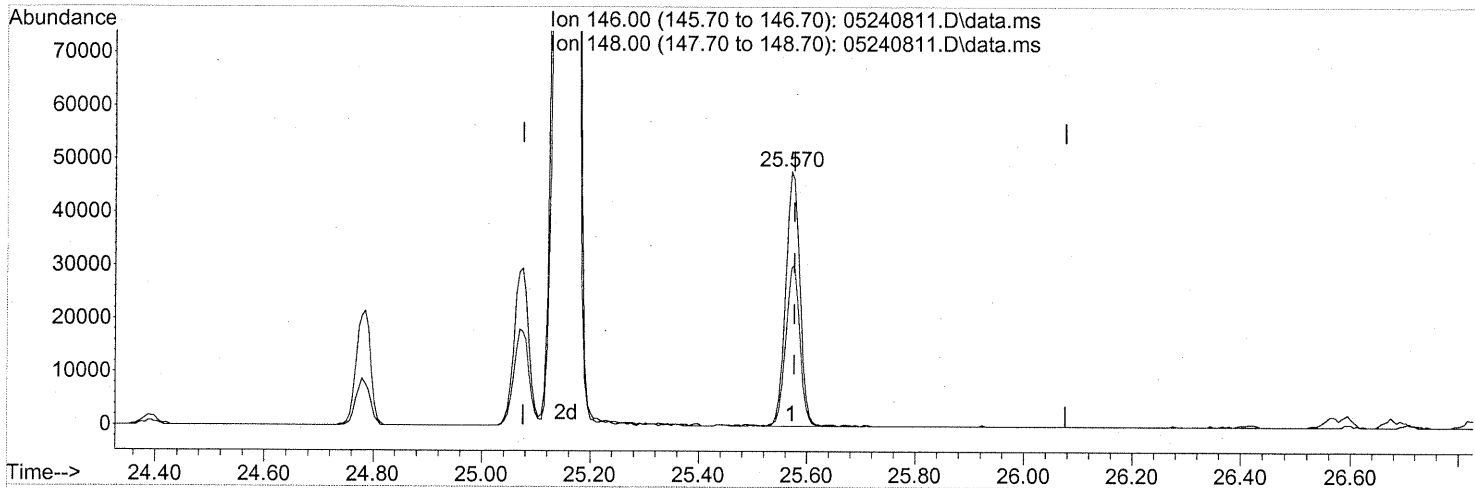
response 10147

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	19.56
91.10	27.10	47.18#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(90) 1,2-Dichlorobenzene (T)

25.570min (-0.006) 1.38ng

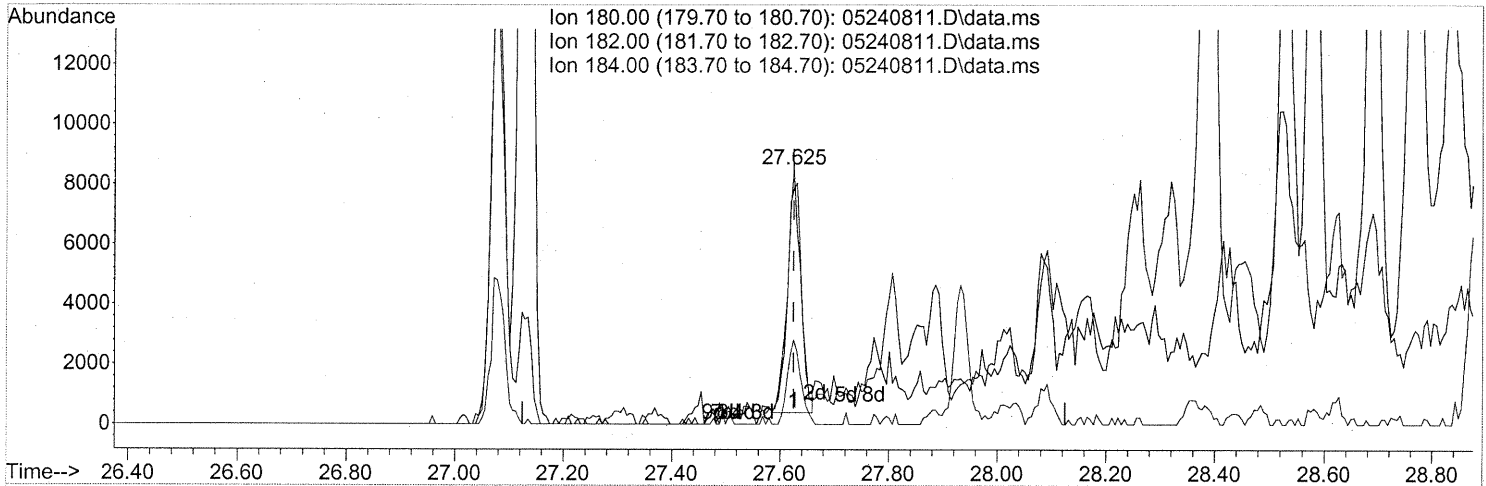
response 87801

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	62.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

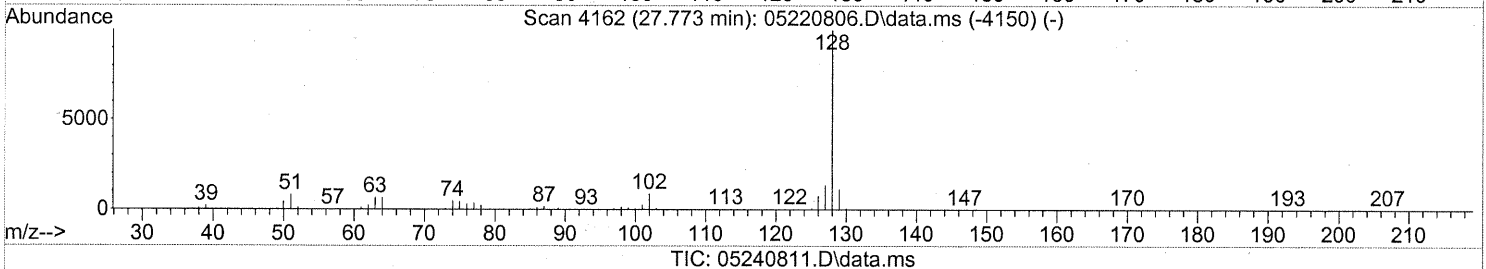
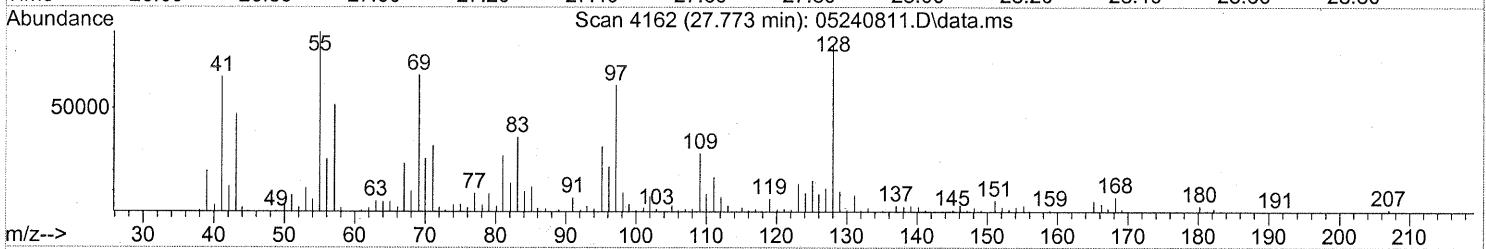
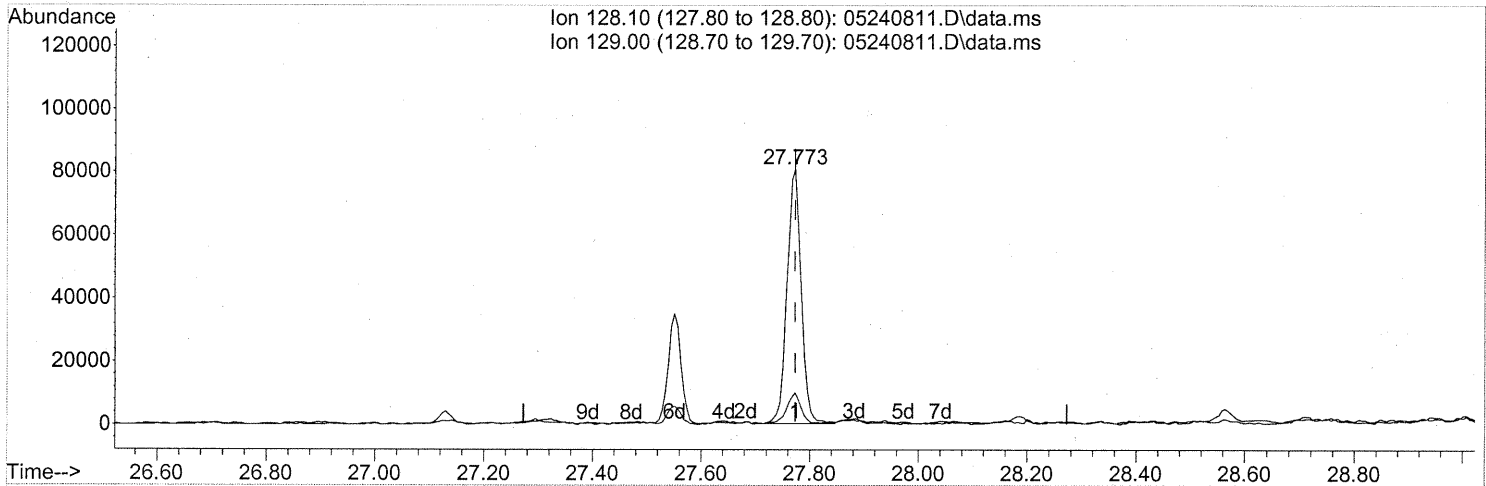
Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



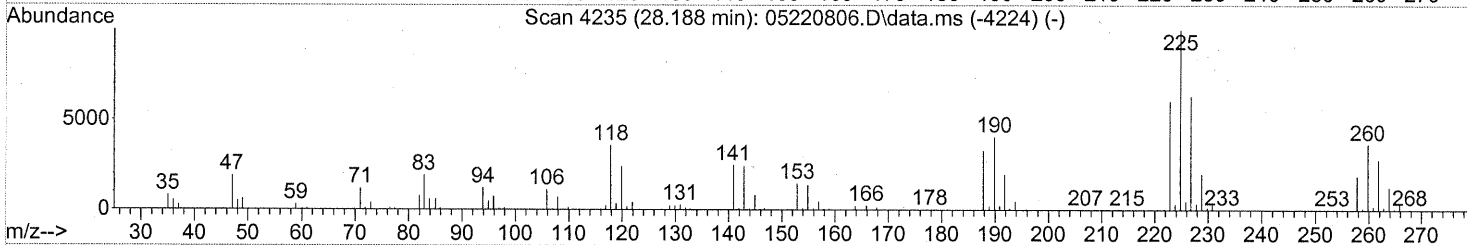
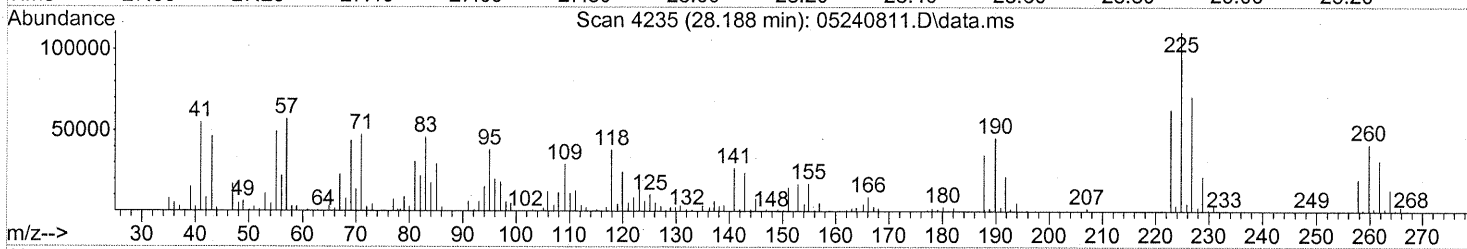
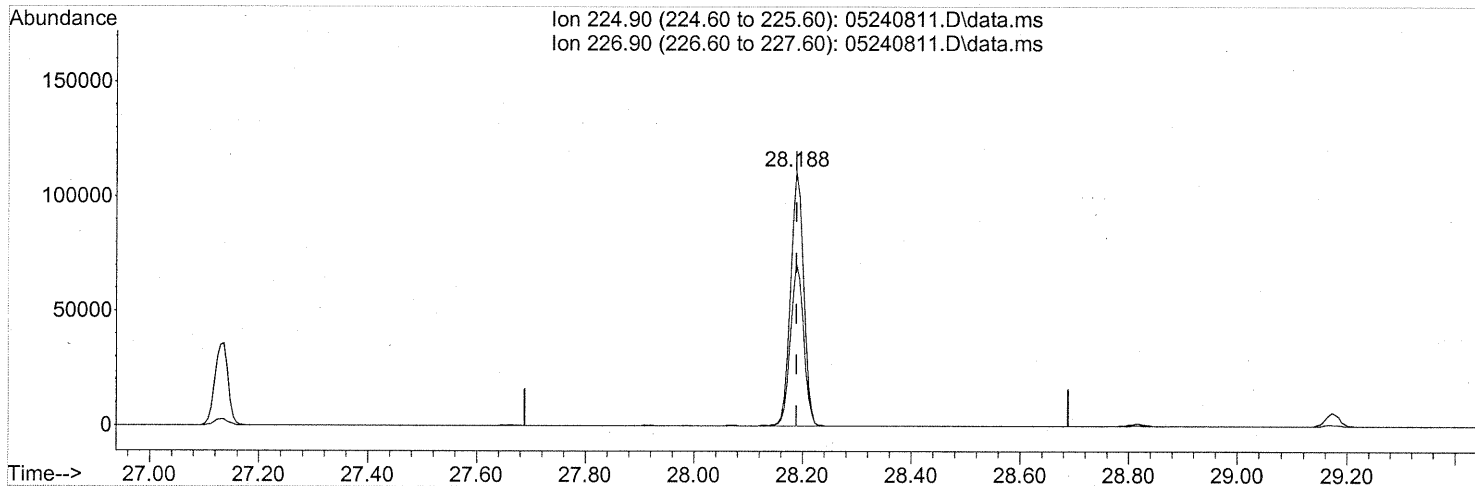
(95) Naphthalene (T)  
 27.773min (-0.000) 1.03ng  
 response 145086

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	12.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 24 19:47:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

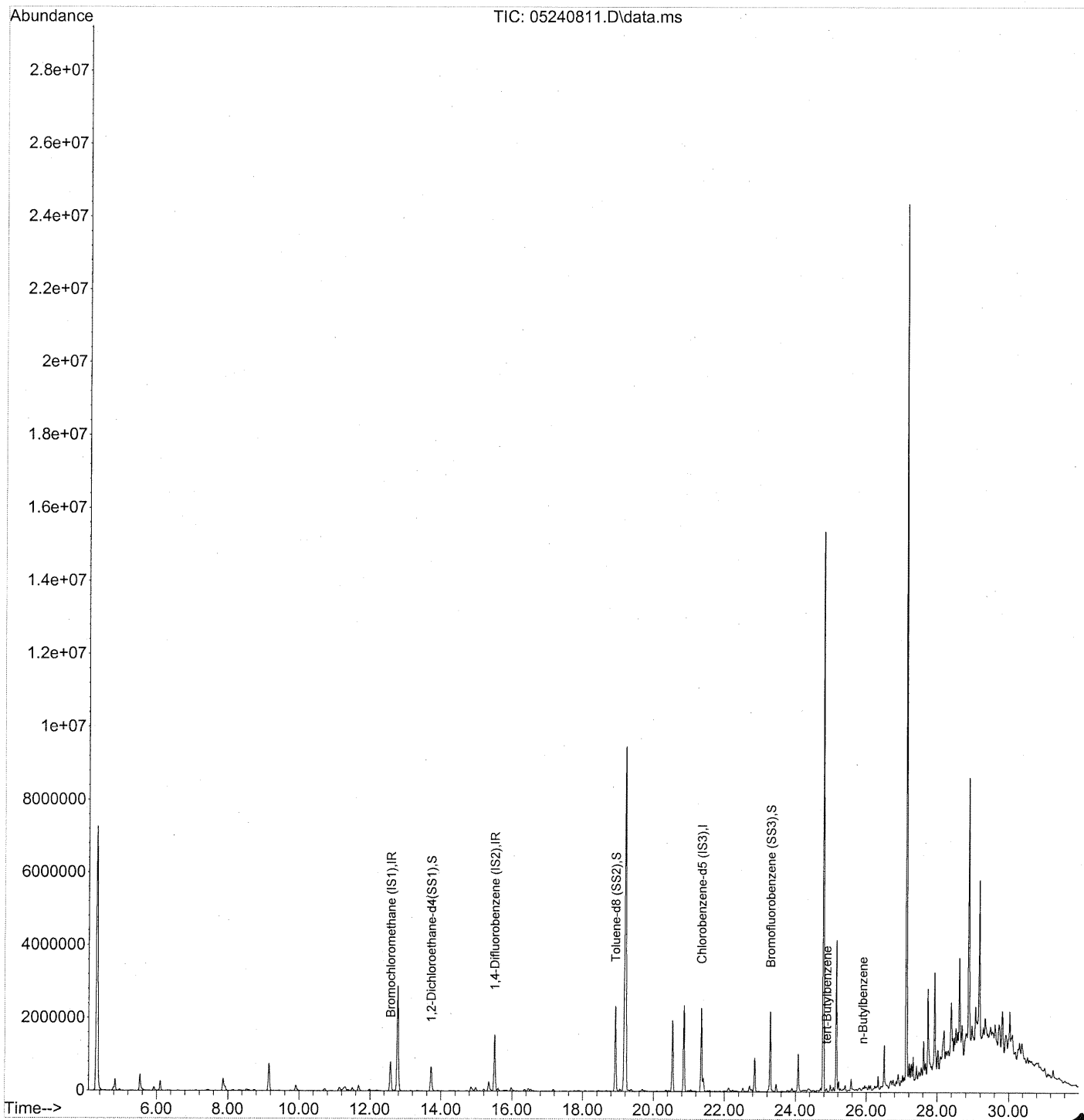
28.188min (-0.000) 6.02ng

response 186186

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	64.31
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240811.D  
Acq On : 24 May 2008 13:56  
Operator : WA  
Sample : P0801442-001 (500ml)  
Misc : ENSR SG73B-05 (-3.4, 3.6)  
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 25 20:36:35 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 25 20:36:35 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	405189	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1793020	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	871340	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	683941	24.361	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.44%	
5) Toluene-d8 (SS2)	18.93	98	1900592	24.287	ng	-0.01
Spiked Amount	25.000		Recovery	=	97.16%	
6) Bromofluorobenzene (SS3)	23.29	174	796814	25.040	ng	0.00
Spiked Amount	25.000		Recovery	=	100.16%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	5285	<del>0.052</del> ng	MR #	54
8) n-Butylbenzene	25.90	91	15590	0.138 ng	#	63

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

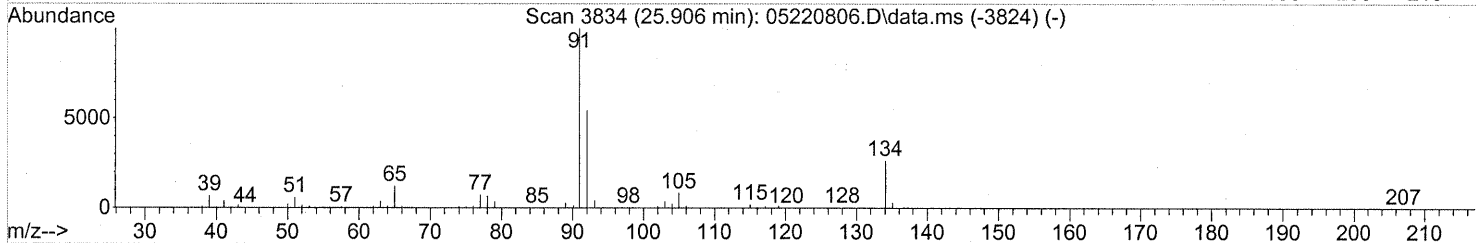
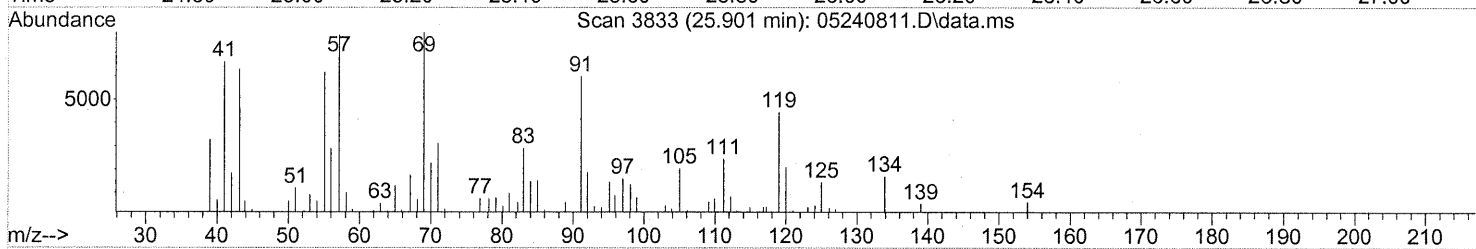
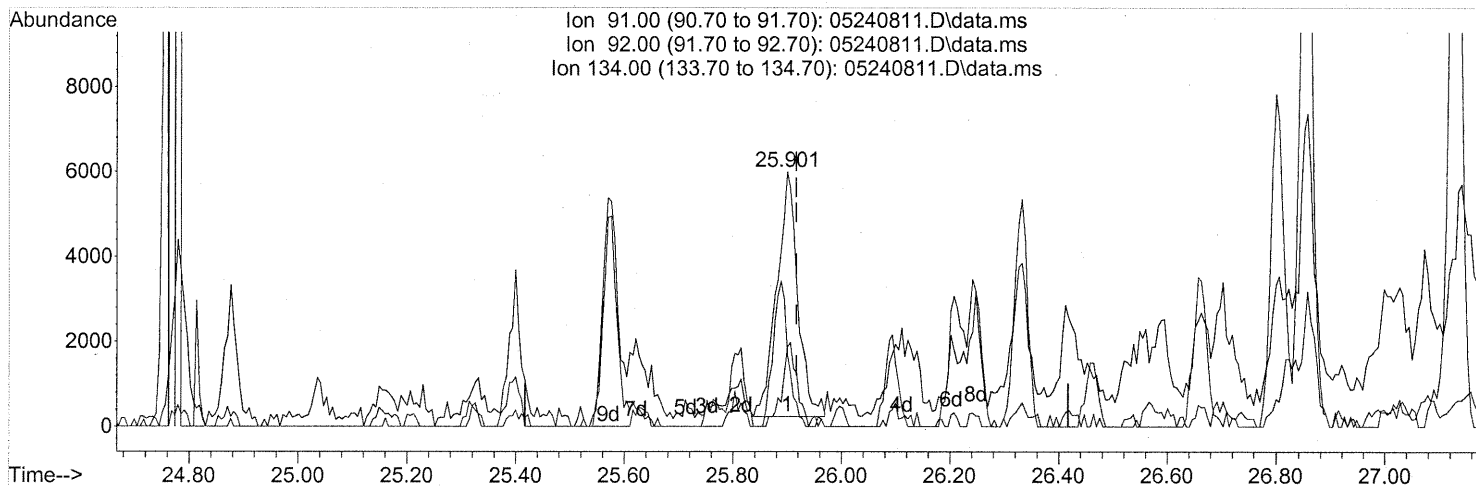
5/29/08



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240811.D  
 Acq On : 24 May 2008 13:56  
 Operator : WA  
 Sample : P0801442-001 (500ml)  
 Misc : ENSR SG73B-05 (-3.4, 3.6)  
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 25 20:36:35 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



TIC: 05240811.D\data.ms

(8) n-Butylbenzene

25.901min (-0.017) 0.14ng

response 15590

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	24.27#
134.00	28.80	42.84#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00223

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 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)	2.0	1.6	0.16	0.41	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	0.26	0.33	0.16	0.10	0.12	0.062	J
64-17-5	Ethanol	4.4	16	0.16	2.3	8.7	0.087	J
67-64-1	Acetone	17	16	0.24	7.3	6.9	0.10	B
75-69-4	Trichlorofluoromethane	1.5	0.33	0.16	0.26	0.058	0.029	
107-13-1	Acrylonitrile	0.25	1.6	0.23	0.12	0.75	0.11	J
75-35-4	1,1-Dichloroethene	10	0.33	0.16	2.6	0.082	0.041	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.93	1.6	0.24	0.31	0.54	0.080	J
75-09-2	Methylene Chloride	0.29	1.6	0.16	0.084	0.47	0.047	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.33	0.16	ND	0.10	0.052	
76-13-1	Trichlorotrifluoroethane	0.48	0.33	0.18	0.063	0.043	0.024	
75-15-0	Carbon Disulfide	45	1.6	0.39	14	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	4.4	0.33	0.16	1.1	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	7.5	16	0.52	2.1	4.6	0.15	J
78-93-3	2-Butanone (MEK)	5.1	1.6	0.16	1.7	0.55	0.055	
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	370	0.33	0.19	75	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: RG

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00223

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 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
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	<b>1,1,1-Trichloroethane</b>	<b>10</b>	0.33	0.16	<b>1.9</b>	0.060	0.030	
71-43-2	<b>Benzene</b>	<b>3.2</b>	0.33	0.16	<b>0.99</b>	0.10	0.051	
56-23-5	<b>Carbon Tetrachloride</b>	<b>1.3</b>	0.33	0.16	<b>0.21</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	<b>Bromodichloromethane</b>	<b>0.64</b>	0.33	0.16	<b>0.095</b>	0.049	0.024	
79-01-6	<b>Trichloroethene</b>	<b>240</b>	0.33	0.16	<b>44</b>	0.061	0.030	
123-91-1	<b>1,4-Dioxane</b>	<b>0.90</b>	1.6	0.20	<b>0.25</b>	0.45	0.055	<b>J</b>
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.40	0.060	
142-82-5	n-Heptane	ND	1.6	0.21	ND	0.40	0.051	
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>0.27</b>	1.6	0.18	<b>0.067</b>	0.40	0.045	<b>J</b>
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>1.0</b>	1.6	0.16	<b>0.28</b>	0.43	0.043	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.54</b>	1.6	0.25	<b>0.13</b>	0.40	0.061	<b>J</b>
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	n-Octane	ND	1.6	0.16	ND	0.35	0.035	
127-18-4	<b>Tetrachloroethene</b>	<b>25</b>	0.33	0.16	<b>3.6</b>	0.048	0.024	
108-90-7	<b>Chlorobenzene</b>	<b>0.18</b>	0.33	0.17	<b>0.039</b>	0.071	0.036	<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: Re

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG39B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-002

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00223

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 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	0.38	1.6	0.20	0.087	0.38	0.047	J
179601-23-1	m,p-Xylenes	1.5	1.6	0.42	0.35	0.38	0.098	J
75-25-2	Bromoform	ND	1.6	0.25	ND	0.16	0.024	
100-42-5	Styrene	ND	1.6	0.25	ND	0.38	0.058	
95-47-6	o-Xylene	2.4	1.6	0.21	0.54	0.38	0.047	
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	ND	1.6	0.17	ND	0.33	0.034	
622-96-8	4-Ethyltoluene	ND	1.6	0.19	ND	0.33	0.038	
108-67-8	1,3,5-Trimethylbenzene	ND	1.6	0.20	ND	0.33	0.040	
98-83-9	alpha-Methylstyrene	ND	1.6	0.24	ND	0.34	0.049	
95-63-6	1,2,4-Trimethylbenzene	0.34	1.6	0.22	0.069	0.33	0.046	J
100-44-7	Benzyl Chloride	ND	0.33	0.28	ND	0.063	0.054	
541-73-1	1,3-Dichlorobenzene	ND	0.33	0.20	ND	0.054	0.034	
106-46-7	1,4-Dichlorobenzene	43	0.33	0.18	7.2	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)	ND	1.6	0.21	ND	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	1.1	0.65	0.24	0.20	0.12	0.046	
87-68-3	Hexachlorobutadiene	2.9	0.33	0.29	0.27	0.031	0.028	
98-06-6	tert-Butylbenzene	ND	0.65	0.16	ND	0.12	0.030	
104-51-8	n-Butylbenzene	0.22	0.65	0.16	0.039	0.12	0.030	J

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: Re      Date: 6/2/08



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	483630	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2073700	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	990343	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	791887	23.631	ng	0.00
Spiked Amount	25.000		Recovery	=	94.52%	
57) Toluene-d8 (SS2)	18.93	98	2179102	24.500	ng	0.00
Spiked Amount	25.000		Recovery	=	98.00%	
73) Bromofluorobenzene (SS3)	23.29	174	901118	24.915	ng	0.00
Spiked Amount	25.000		Recovery	=	99.64%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.81	42	13498	0.353	ng	# 48
3) Dichlorodifluoromethane	4.97	85	43705	0.621	ng	99
4) Chloromethane	5.29	50	1927	N.D.	✓	
5) Freon 114	5.54	135	915	N.D.	✓	
6) Vinyl Chloride	5.74	62	777	N.D.	✓	
7) 1,3-Butadiene	6.02	54	1917	0.056	ng	# 63
8) Bromomethane	6.48	94	774	N.D.	✓	
9) Chloroethane	6.81	64	1751	0.081	ng	84
10) Ethanol	7.10	45	34240m	1.347	ng	
11) Acetonitrile	7.44	41	82867	1.127	ng	98
12) Acrolein	7.66	56	11202	0.617	ng	96
13) Acetone	7.87	58	137521m	5.282	ng	
14) Trichlorofluoromethane	8.14	101	26883	0.445	ng	97
15) Isopropanol	8.32	45	36627	0.441	ng	96
16) Acrylonitrile	8.65	53	3109	0.078	ng	95
17) 1,1-Dichloroethene	9.16	96	82726	3.113	ng	# 79
18) tert-Butanol	9.27	59	20231m	0.286	ng	
19) Methylene Chloride	9.35	84	2596	0.089	ng	96
20) Allyl Chloride	9.57	41	178	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	4027	0.147	ng	95
22) Carbon Disulfide	9.76	76	1523965	13.803	ng	99
23) trans-1,2-Dichloroethene	10.80	61	364	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	68217	1.351	ng	91
25) Methyl tert-Butyl Ether	11.21	73	530	N.D.	✓	
26) Vinyl Acetate	11.31	86	11081	2.303	ng	# 1
27) 2-Butanone	11.68	72	29818	1.569	ng	# 91
28) cis-1,2-Dichloroethene	12.35	61	403	N.D.	✓	
29) Diisopropyl Ether	12.78	87	518574	22.272	ng	# 1
30) Ethyl Acetate	12.71	61	55	N.D.		
31) n-Hexane	12.70	57	1225	N.D.		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	4939324	112.000 ng		100
34) Tetrahydrofuran	13.37	72	2060	0.113 ng	#	19
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.77	62	56	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	150946	3.196 ng		96
39) Isopropyl Acetate	14.97	61	528	N.D.		
40) 1-Butanol	14.85	56	128269	4.500 ng		89
41) Benzene	14.98	78	105569	0.972 ng		99
42) Carbon Tetrachloride	15.21	117	16962	0.406 ng		97
43) Cyclohexane	15.34	84	17757	0.420 ng	#	1
44) tert-Amyl Methyl Ether	15.88	73	3224	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	711	N.D. ✓		
46) Bromodichloromethane	16.45	83	7211	0.196 ng		96
47) Trichloroethene	16.53	130	2414496	12.490 ng		100
48) 1,4-Dioxane	16.50	88	5682	0.277 ng		97
49) Isooctane	16.61	57	2587	N.D.		
50) Methyl Methacrylate	16.90	100	58	N.D. ✓		
51) n-Heptane	16.98	71	626	N.D. ✓		
52) cis-1,3-Dichloropropene	17.84	75	127	N.D. ✓		
53) 4-Methyl-2-pentanone	17.77	58	2427	0.084 ng		81
54) trans-1,3-Dichloropropene	18.44	75	119	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	192887	7.189 ng	NR#	7
58) Toluene	19.06	91	38867	0.321 ng		98
59) 2-Hexanone	19.37	43	13787	0.165 ng	#	71
60) Dibromochloromethane	19.73	129	53	N.D. ✓		
61) 1,2-Dibromoethane	19.94	107	64	N.D. ✓		
62) Butyl Acetate	20.19	43	1382	N.D.		
63) n-Octane	20.35	57	2147	0.080 ng	NR	79
64) Tetrachloroethene	20.54	166	270722	7.567 ng		100
65) Chlorobenzene	21.42	112	4491	0.055 ng		98
66) Ethylbenzene	21.88	91	16071	0.116 ng		91
67) m- & p-Xylene	22.10	91	42849	0.462 ng		89
68) Bromoform	22.22	173	54	N.D. ✓		
69) Styrene	22.58	104	1687	N.D. ✓		
70) o-Xylene	22.71	91	72527	0.725 ng		96
71) n-Nonane	22.97	43	5085	0.072 ng	#	70
72) 1,1,2,2-Tetrachloroethane	22.66	83	438	N.D. ✓		
74) Cumene	23.46	105	1801	N.D. ✓		
75) alpha-Pinene	23.96	93	1462	N.D.		
76) n-Propylbenzene	24.10	91	2145	N.D. ✓		
77) 3-Ethyltoluene	24.23	105	7831	0.055 ng		89
78) 4-Ethyltoluene	24.27	105	4156	N.D. ✓		
79) 1,3,5-Trimethylbenzene	24.38	105	5086	N.D. ✓		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	1949	N.D.	✓	
81) 2-Ethyltoluene	24.61	105	10319	0.072	ng	91
82) 1,2,4-Trimethylbenzene	24.88	105	12663	0.104	ng	87
83) n-Decane	24.98	57	23213	0.347	ng	72
84) Benzyl Chloride	25.04	91	3045	N.D.	✓	
85) 1,3-Dichlorobenzene	25.16	146	972420	<del>12.784</del>	ng	UR 99
86) 1,4-Dichlorobenzene	25.16	146	972420	<del>13.188</del>	ng	99
87) sec-Butylbenzene	25.21	105	1731	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	6743	<del>0.053</del>	ng	# 68
89) 1,2,3-Trimethylbenzene	25.40	105	7467	0.063	ng	91
90) 1,2-Dichlorobenzene	25.57	146	2717	N.D.	✓	
91) d-Limonene	25.57	68	12628	0.261	ng	93
92) 1,2-Dibromo-3-Chloropr...	26.11	157	618	N.D.	✓	
93) n-Undecane	26.50	57	101739	1.452	ng	80
94) 1,2,4-Trichlorobenzene	27.62	180	1006	N.D.	✓	
95) Naphthalene	27.77	128	52059	0.324	ng	100
96) n-Dodecane	27.73	57	195562	2.807	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	31280	0.889	ng	98

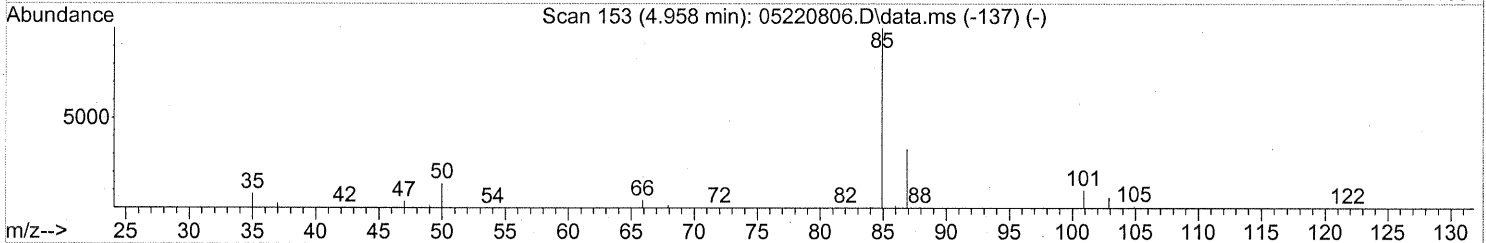
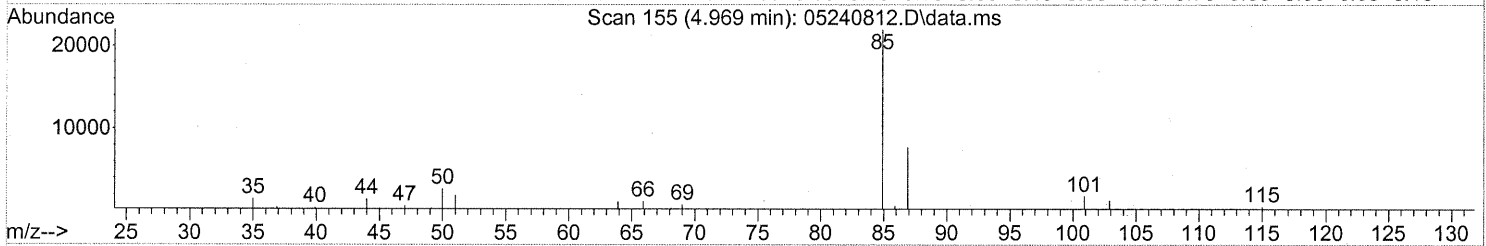
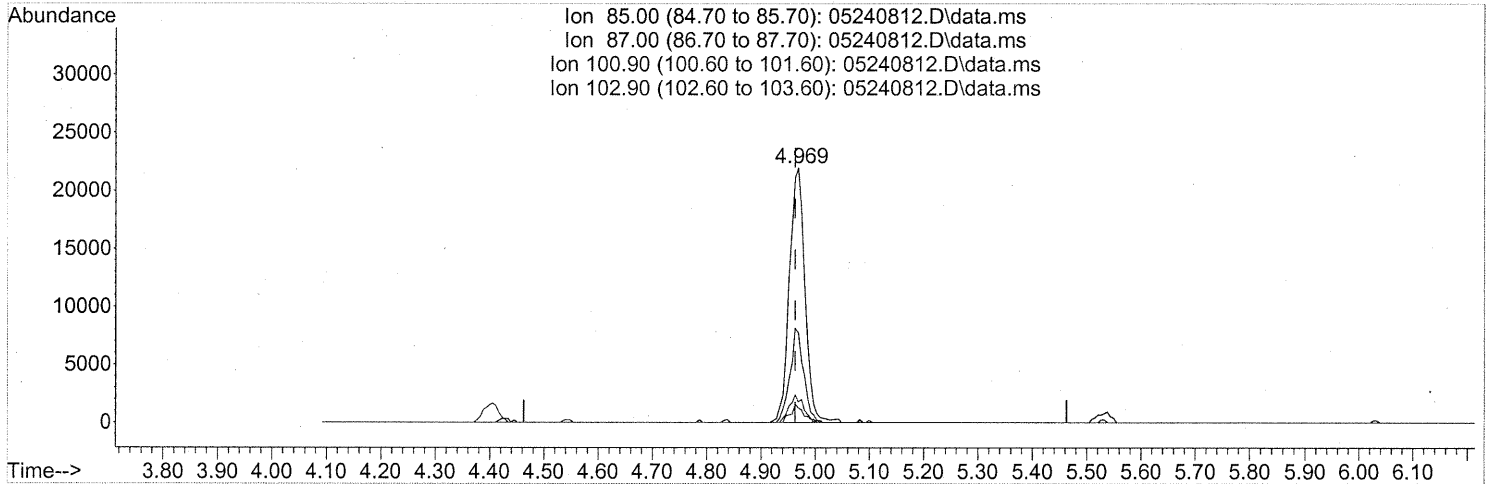
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(3) Dichlorodifluoromethane (T)

4.969min (+0.006) 0.62ng

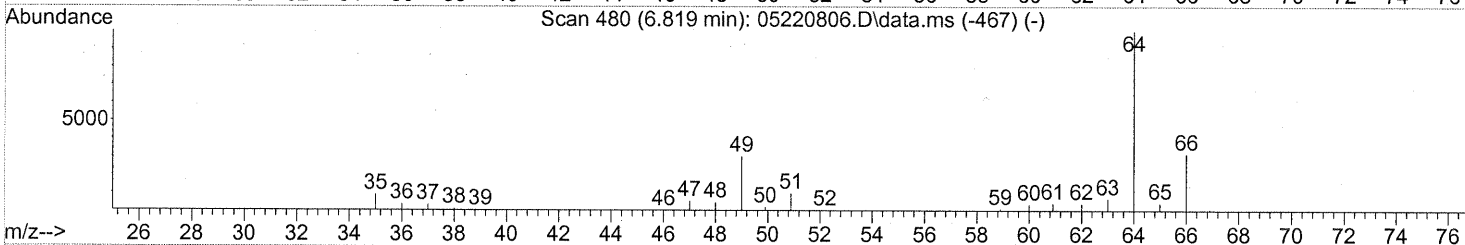
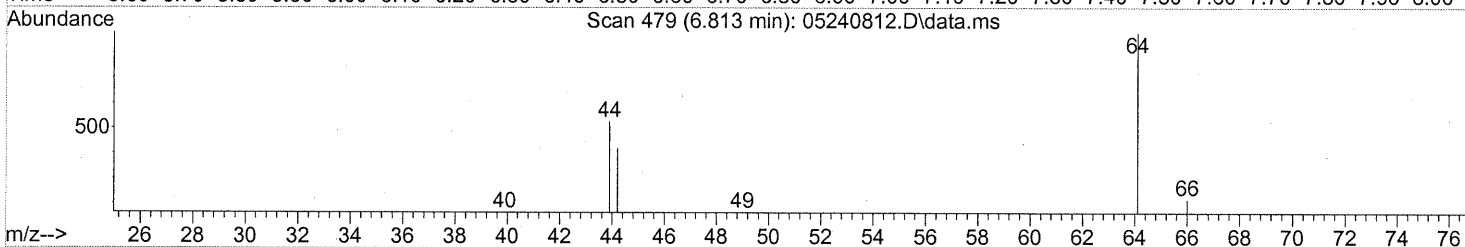
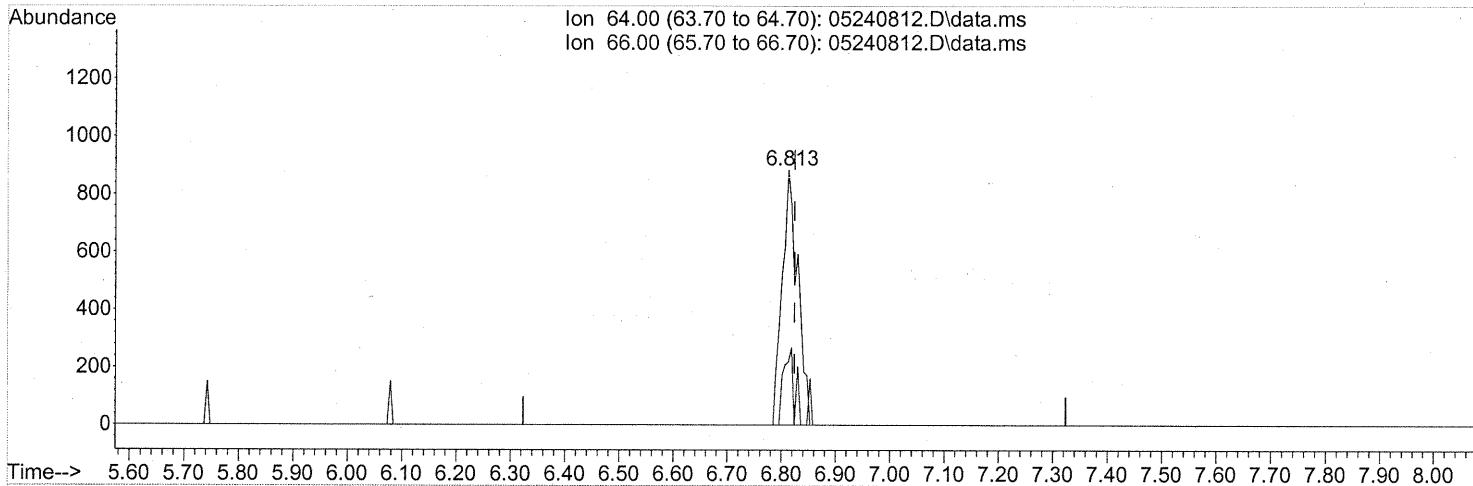
response 43705

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	32.33
100.90	9.30	9.80
102.90	6.00	5.63

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

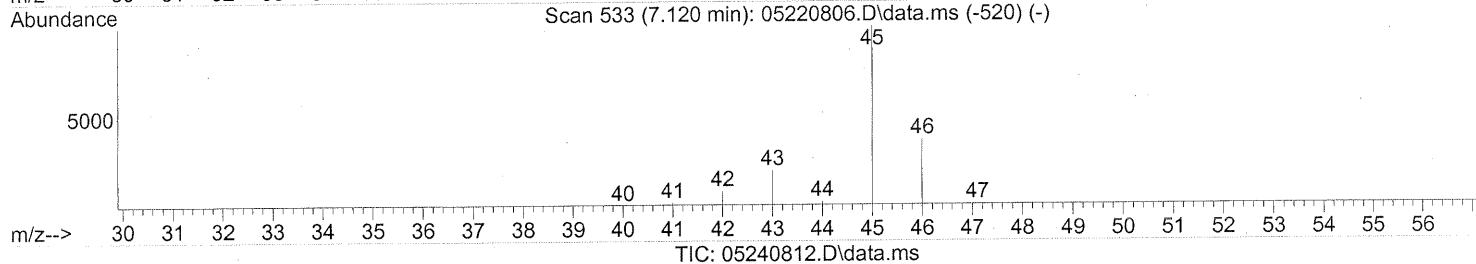
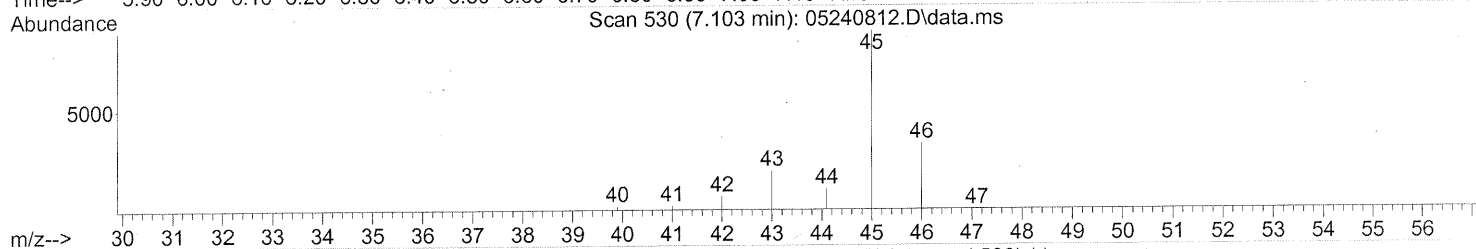
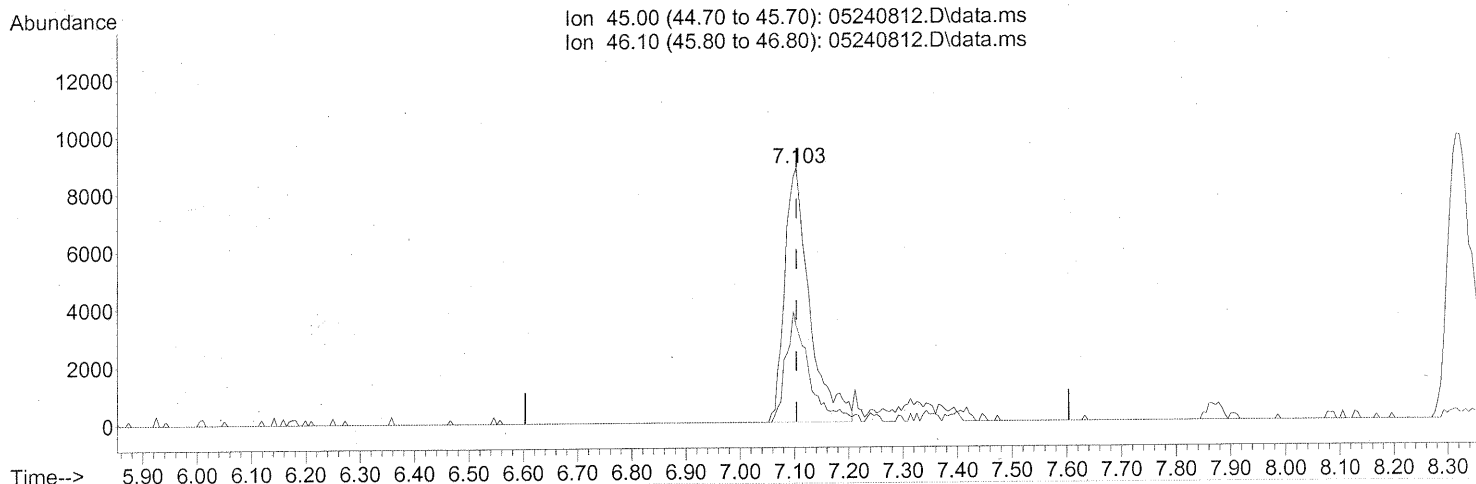
(9) Chloroethane (T)  
 6.813min (-0.011) 0.08ng  
 response 1751

Ion	Exp%	Act%
64.00	100	100
66.00	29.60	20.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA 4  
 Sample : P0801422-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:03:50 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.103min (-0.000) 1.11ng

response 28113

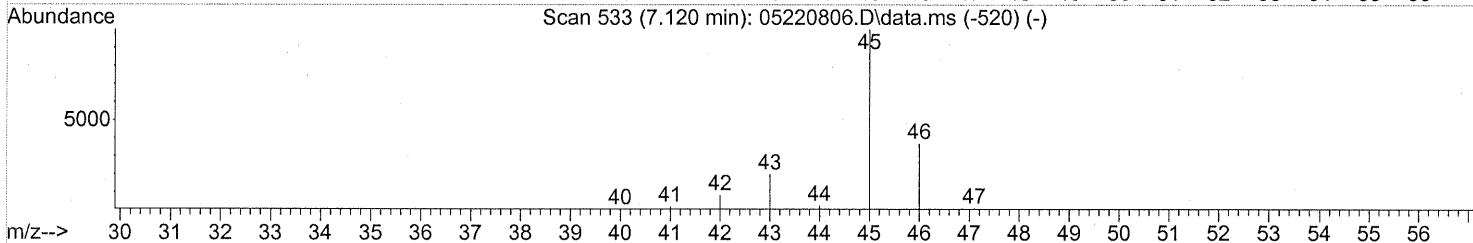
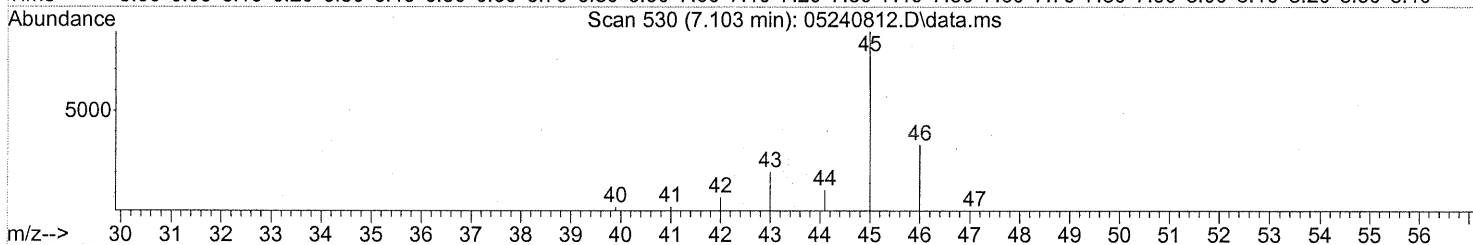
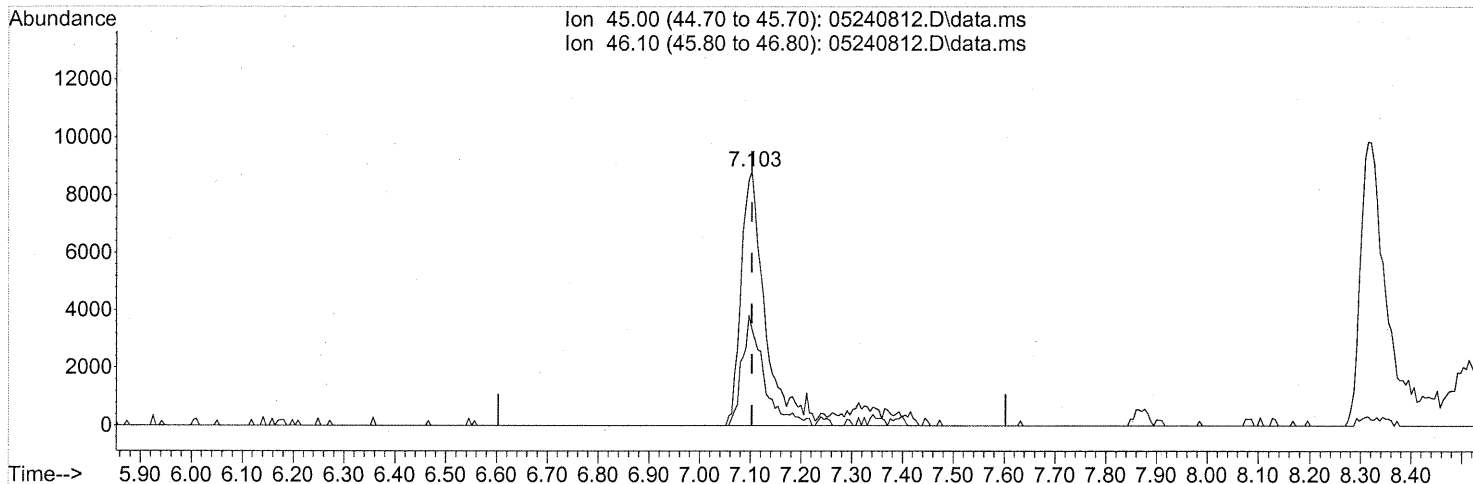
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	40.44
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(10) Ethanol (T)

7.103min (-0.000) 1.35ng m

response 34240

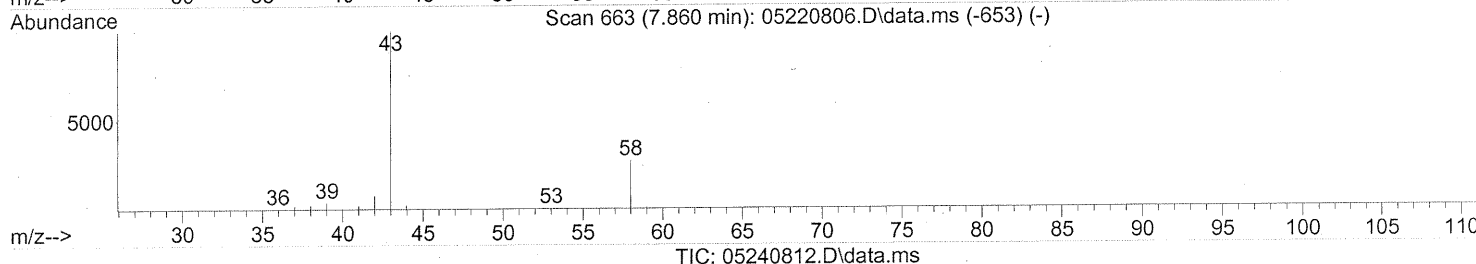
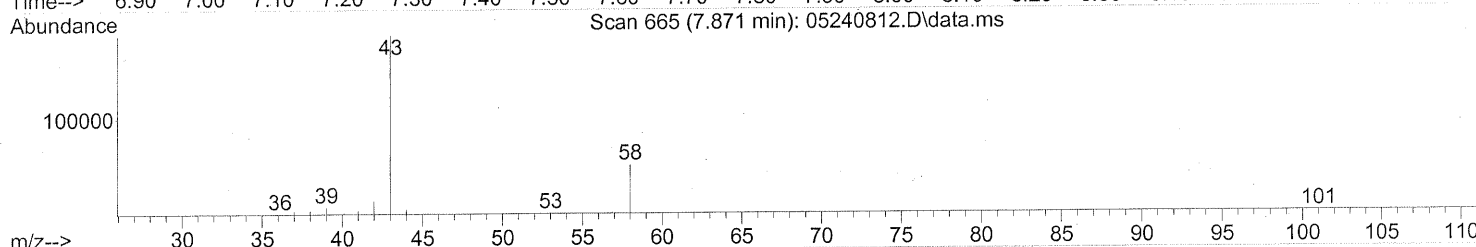
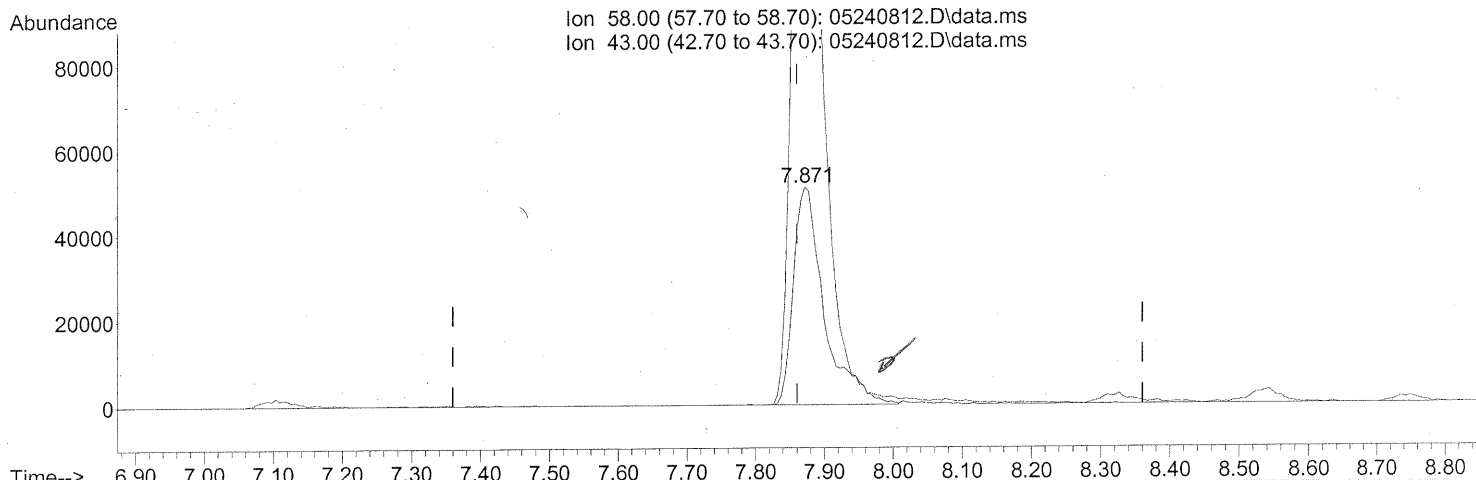
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	33.20
0.00	0.00	0.00
0.00	0.00	0.00

*incl. tailing*  
*WA 5/29/08*  
*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240812.D  
Acq On : 24 May 2008 14:37  
Operator : WA  
Sample : P0801422-002 (500ml)  
Misc : ENSR SG39B-05 (-3.5, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:03:50 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(13) Acetone (T)  
7.871min (+0.011) 6.06ng  
response 157683

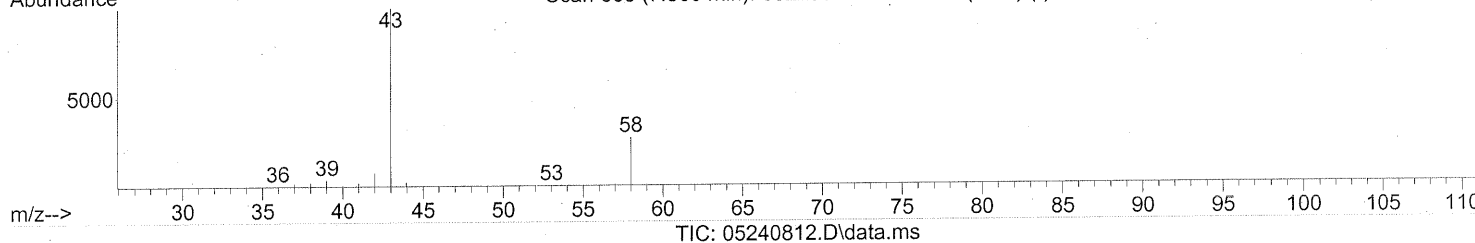
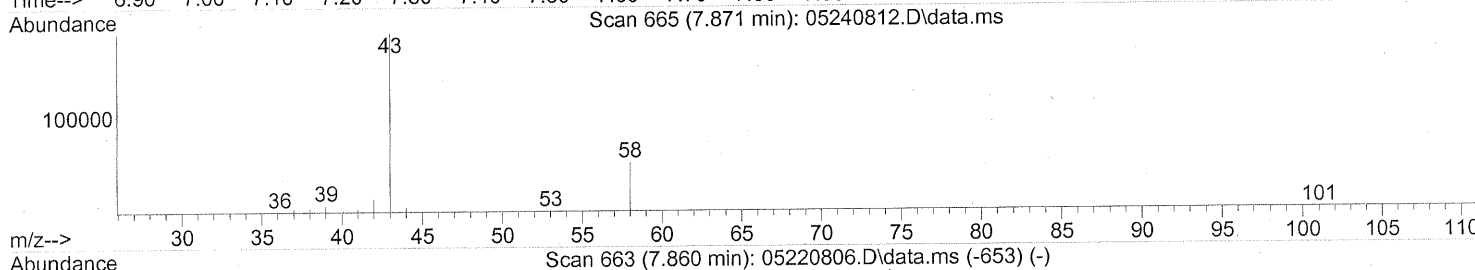
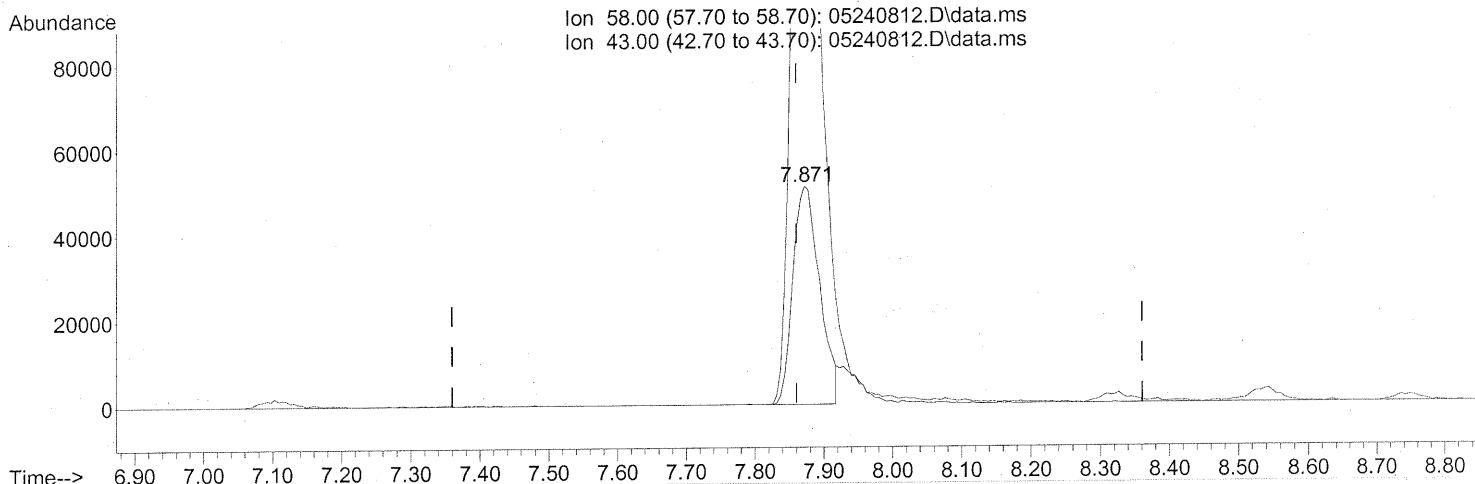
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	341.66#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801422-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:03:50 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)

7.871min (+0.011) 5.28ng m

response 137521

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	391.75#
0.00	0.00	0.00
0.00	0.00	0.00

*10% shoulder*

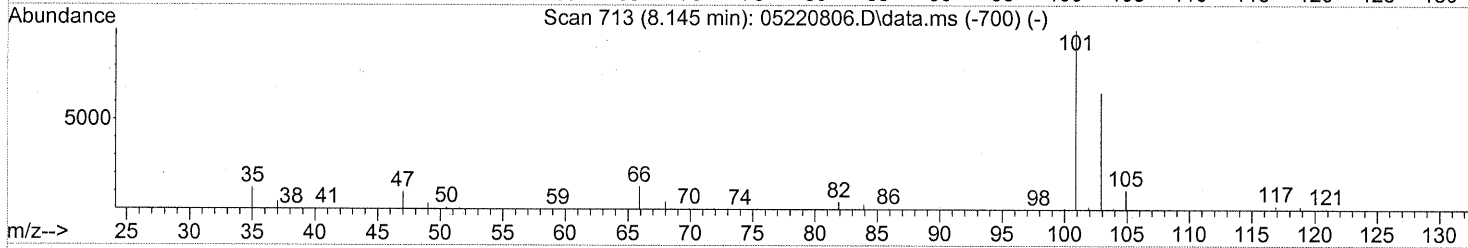
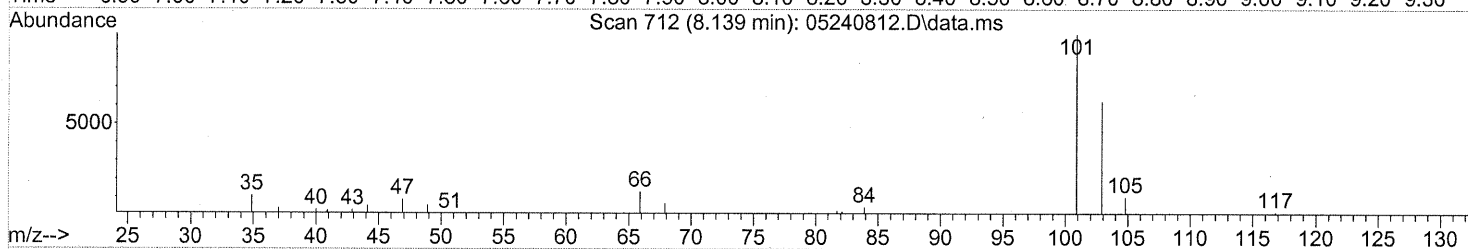
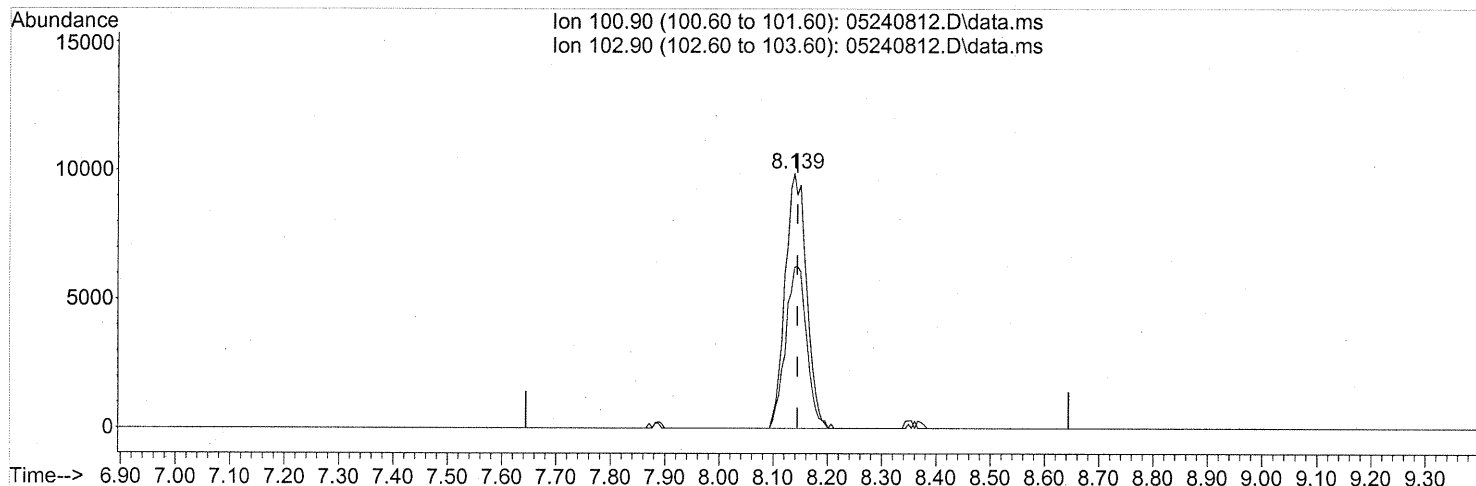
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(14) Trichlorofluoromethane (T)

8.139min (-0.006) 0.45ng

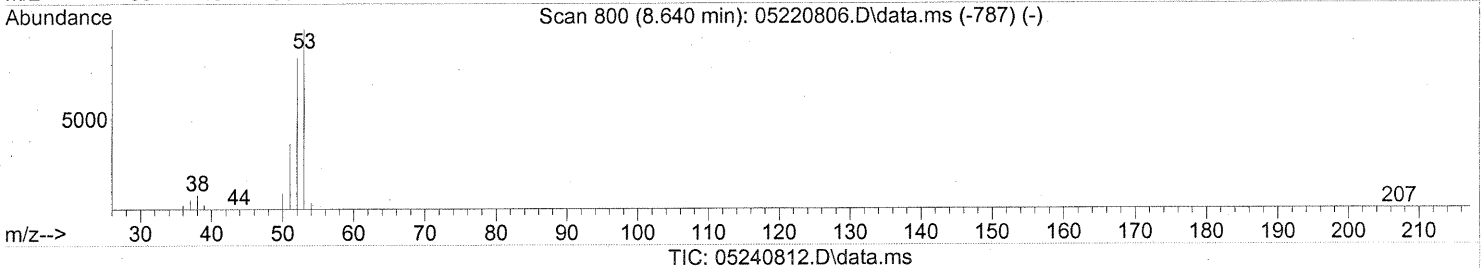
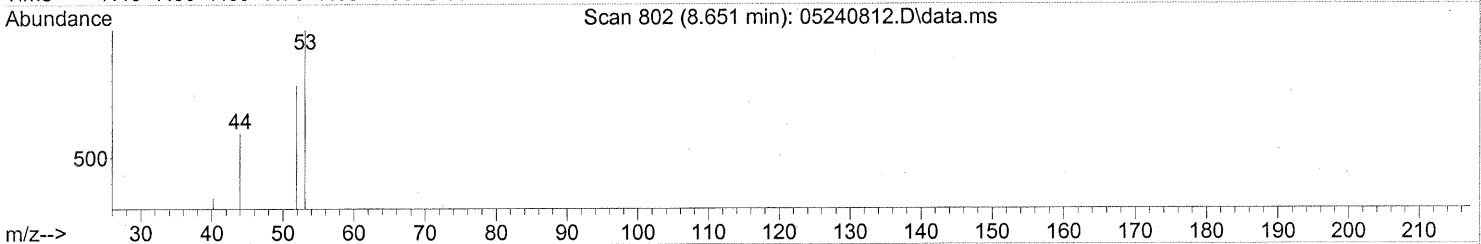
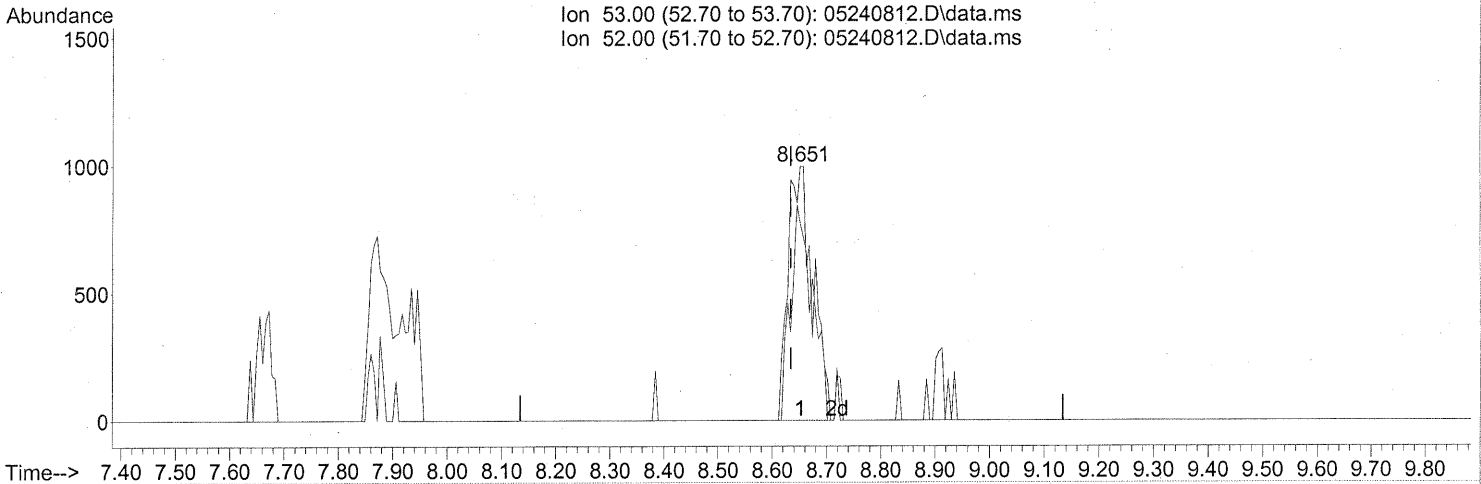
response 26883

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	62.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 2:37 pm  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(16) Acrylonitrile (T)

8.651min (+0.017) 0.08ng

response 3109

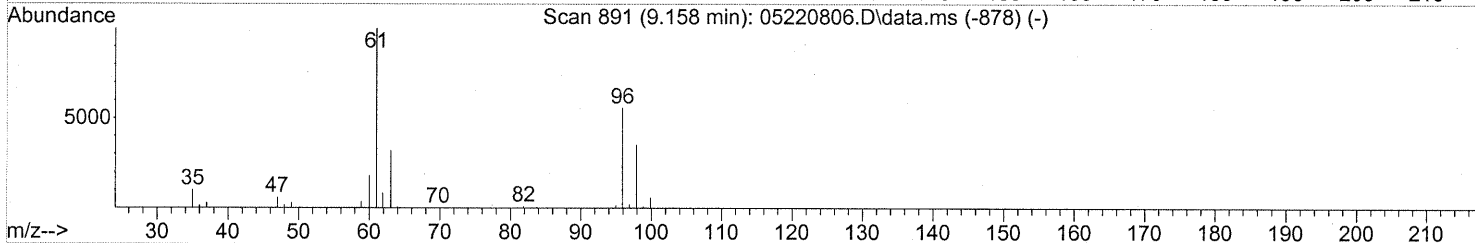
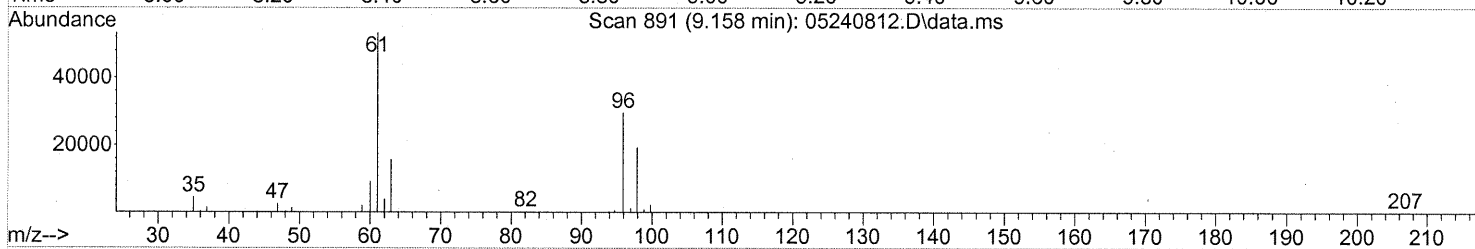
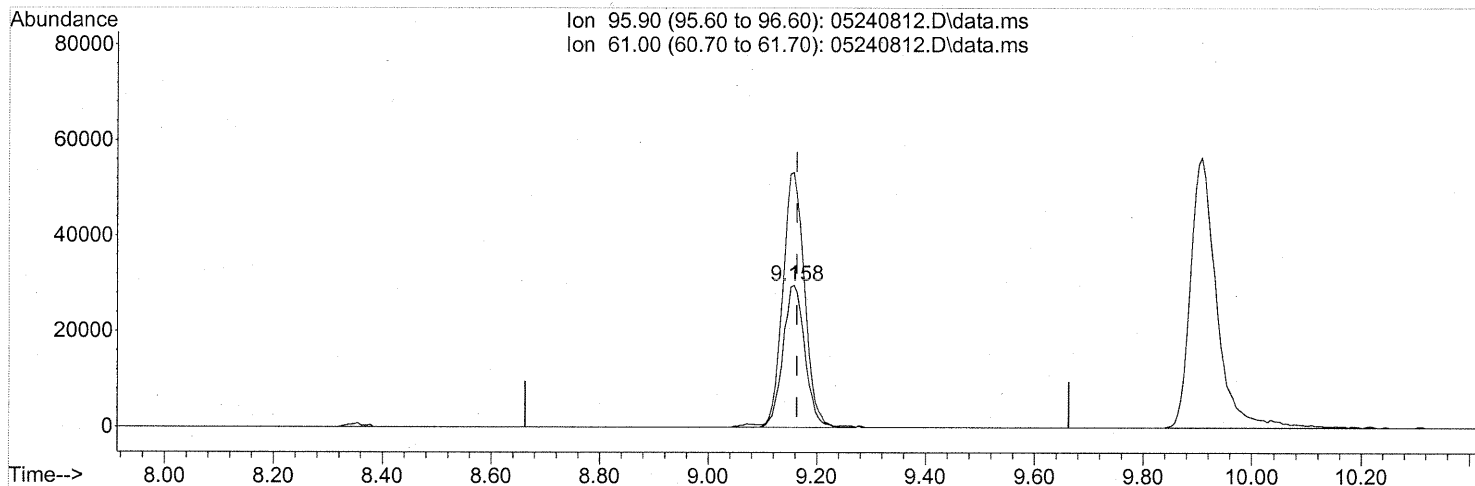
Ion	Exp%	Act%
53.00	100	100
52.00	82.50	78.39
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.158min (-0.006) 3.11ng

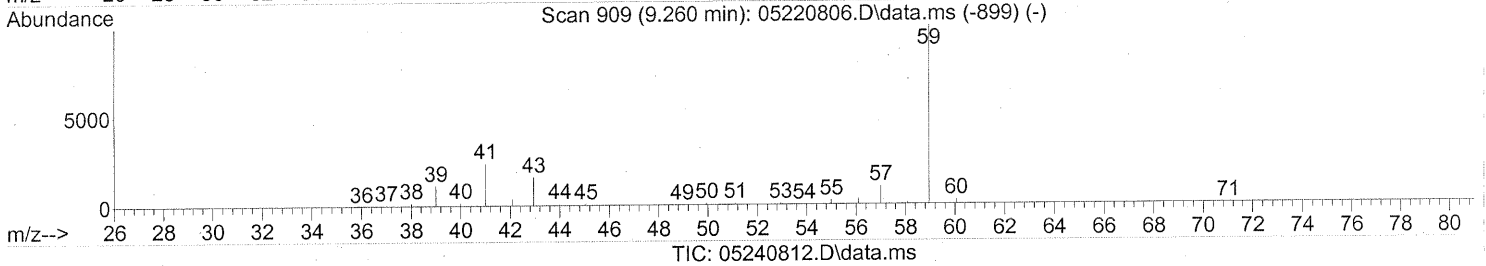
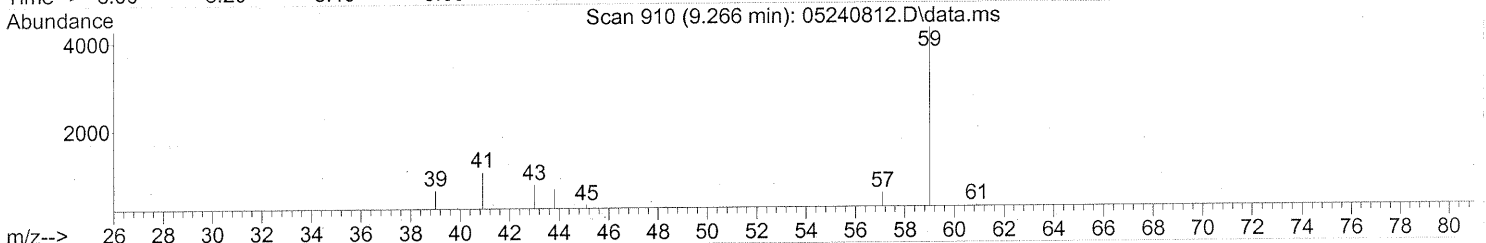
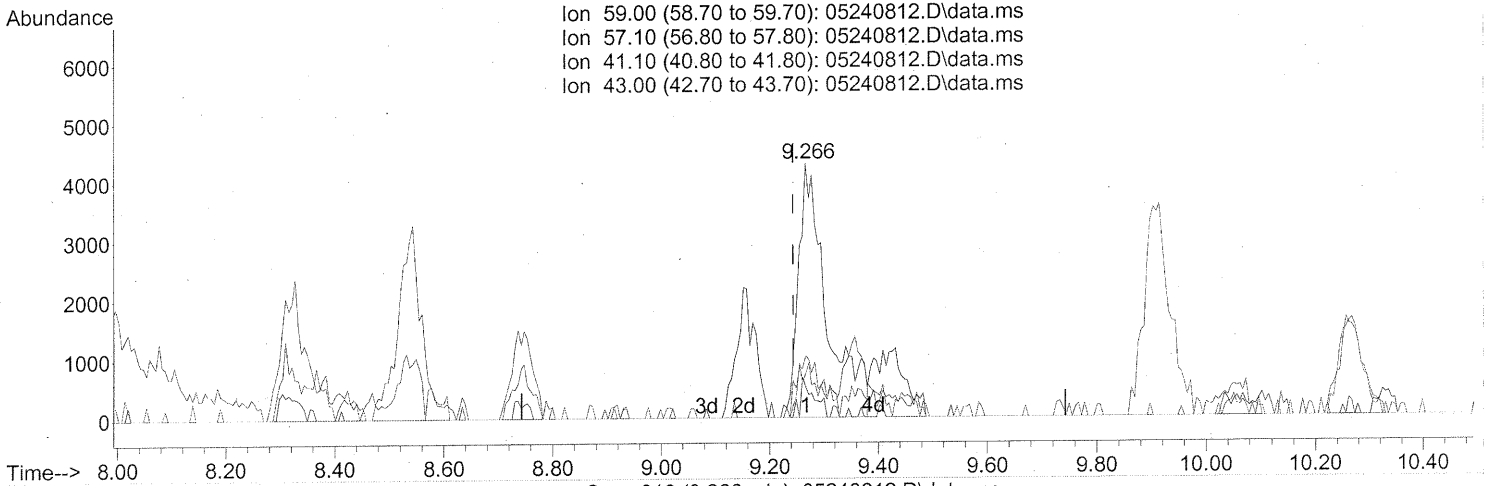
response 82726

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	177.55#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA 4  
 Sample : P0801422-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:03:50 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.266min (+0.023) 0.22ng  
 response 15676

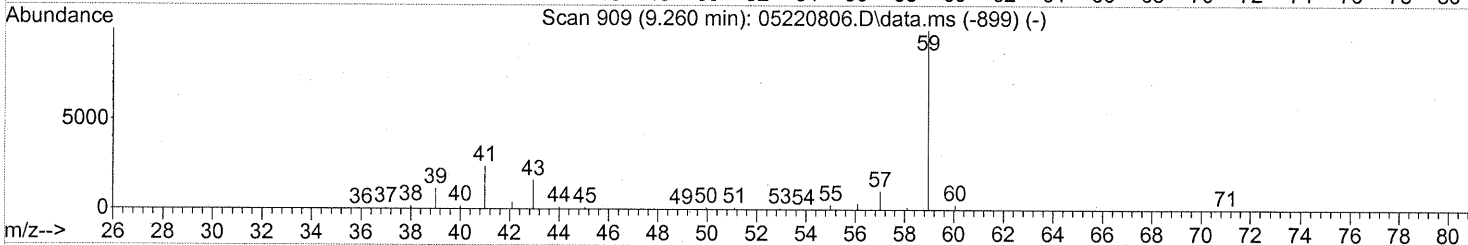
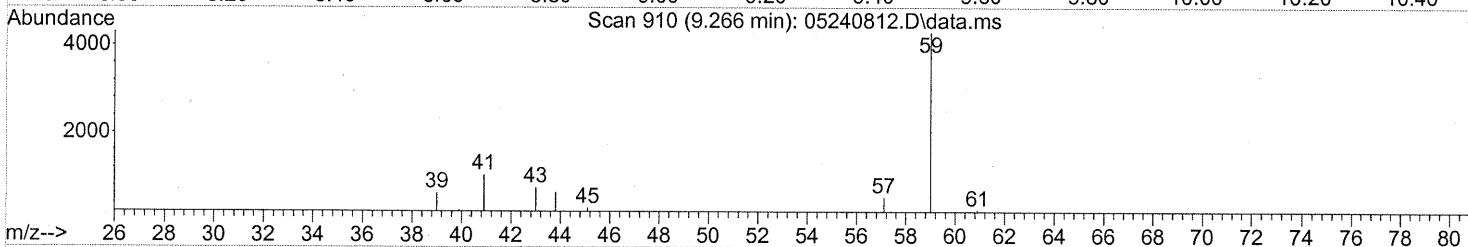
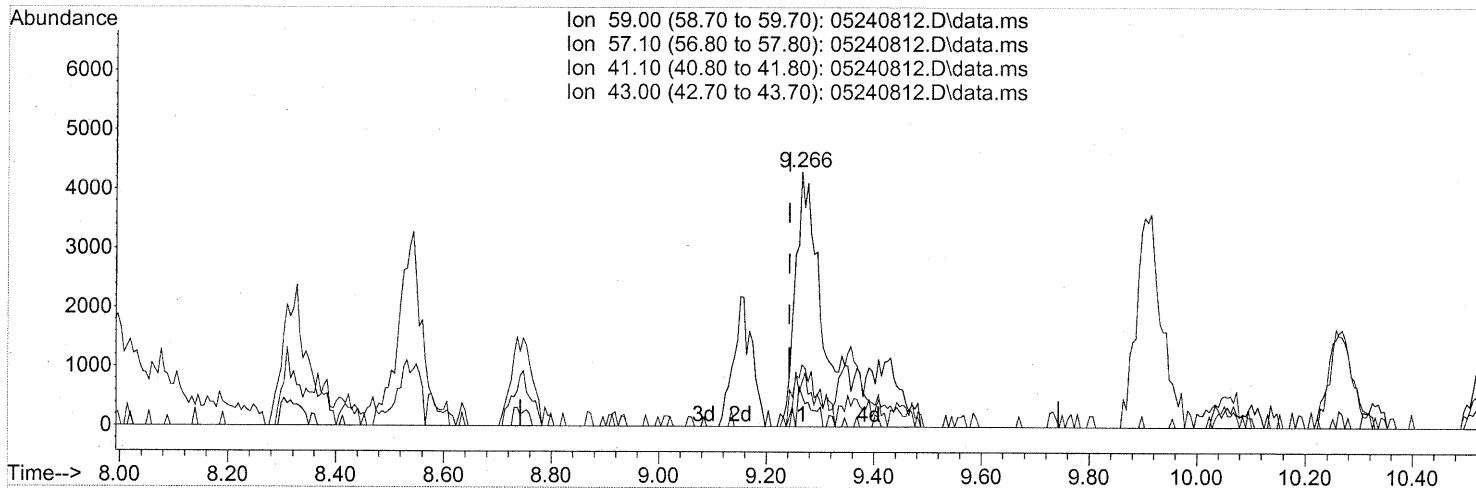
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	7.46
41.10	20.10	21.64
43.00	12.30	15.67

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.266min (+0.023) 0.29ng m  
 response 20231

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	5.78
41.10	20.10	16.77
43.00	12.30	12.14

*int. whole peaks*

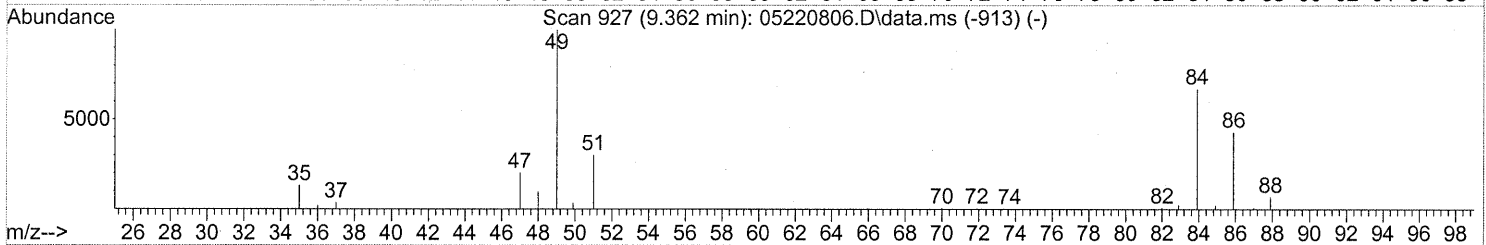
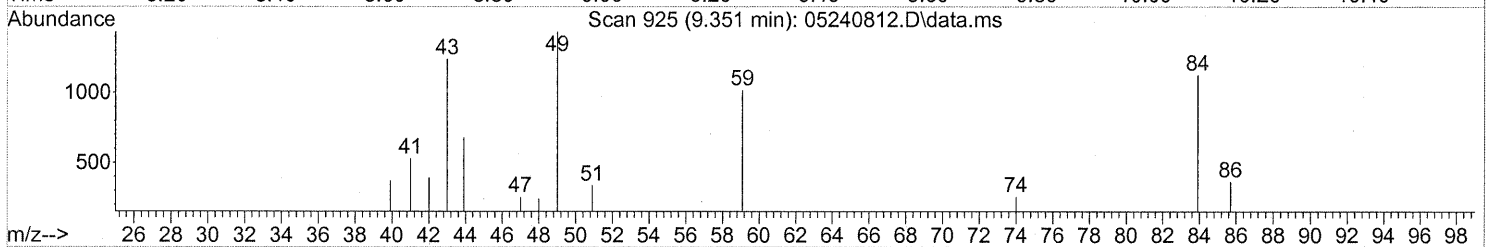
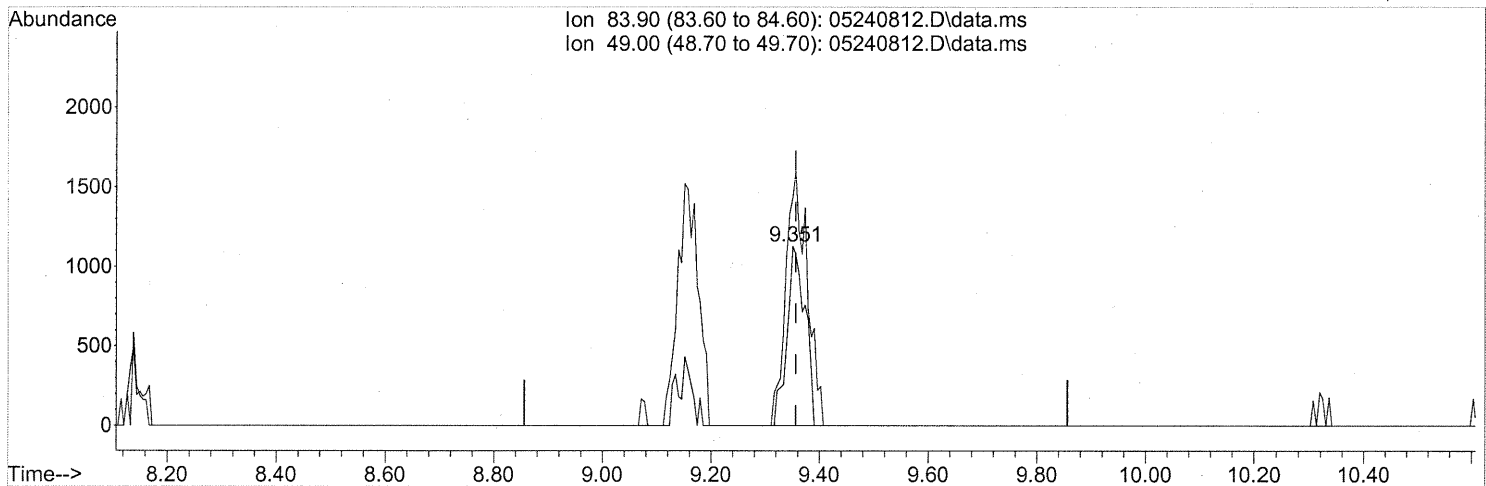
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(19) Methylene Chloride (T)

9.351min (-0.006) 0.09ng

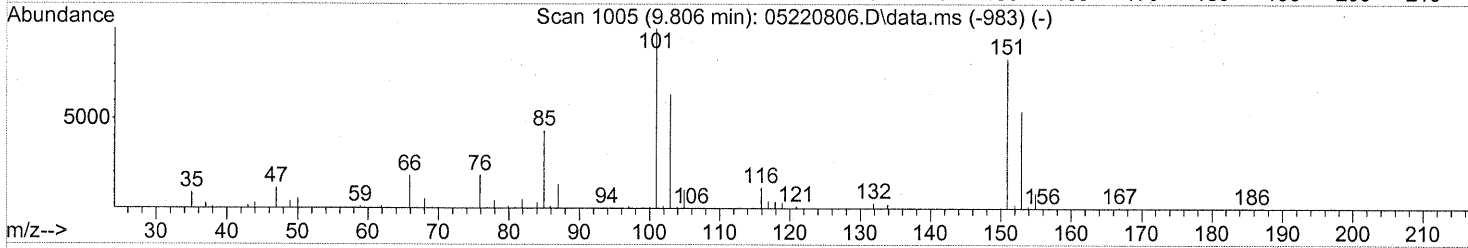
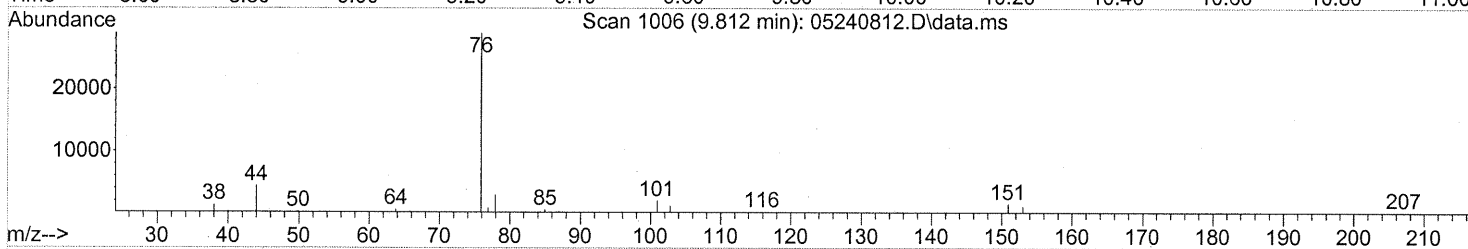
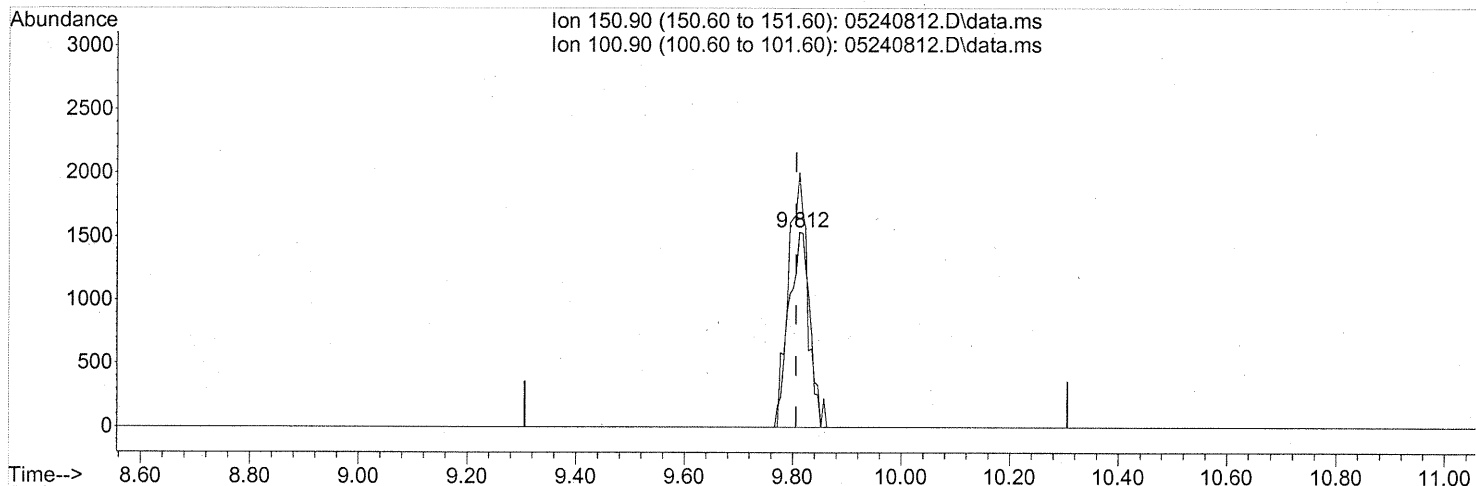
response 2596

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	167.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.15ng

response 4027

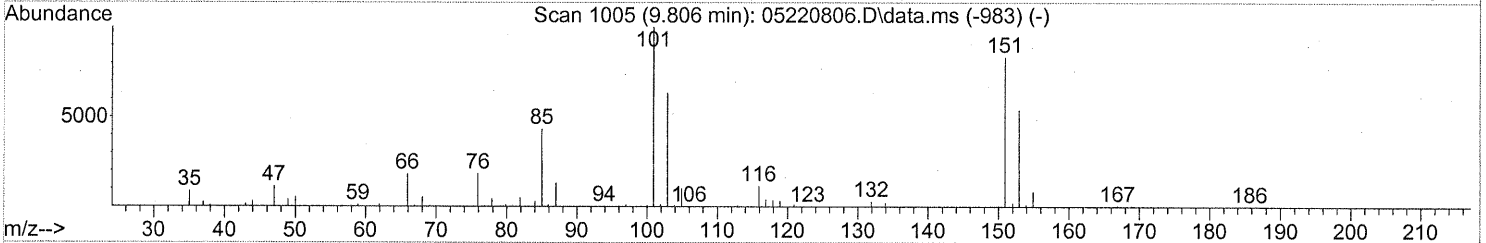
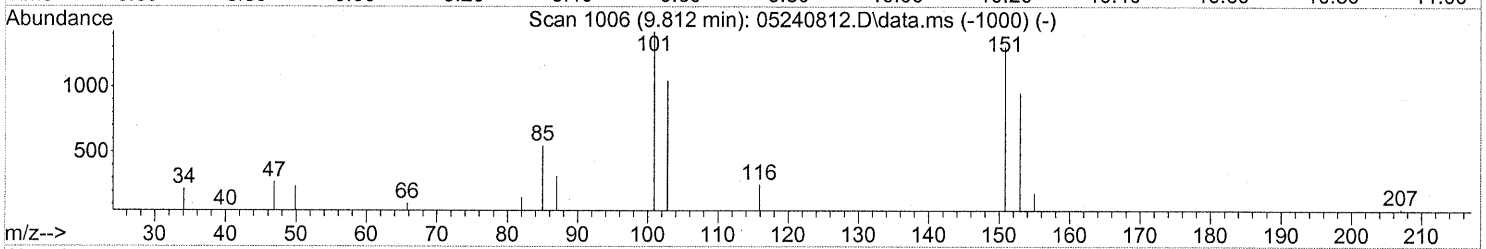
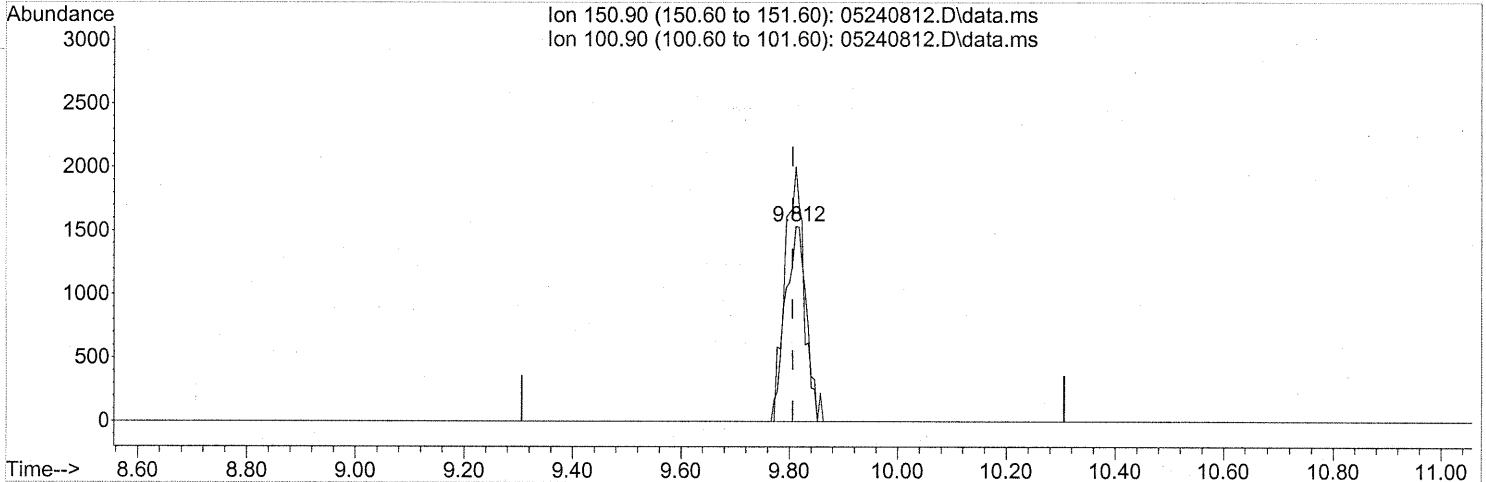
*before*

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	121.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.15ng

response 4027

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	121.31
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

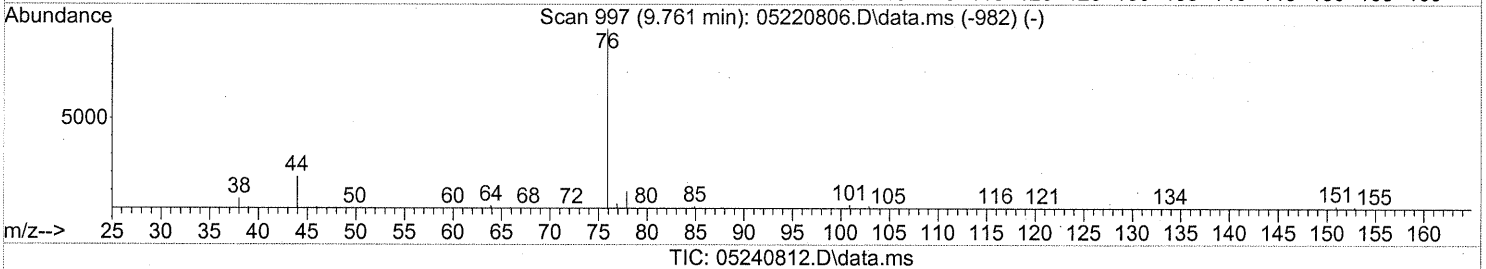
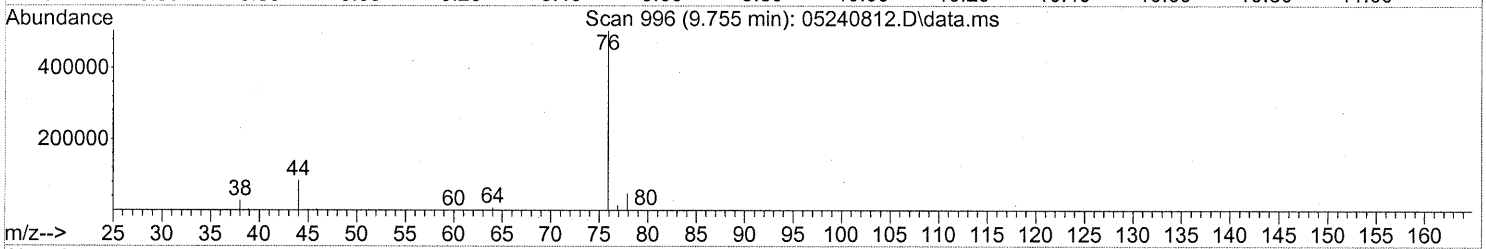
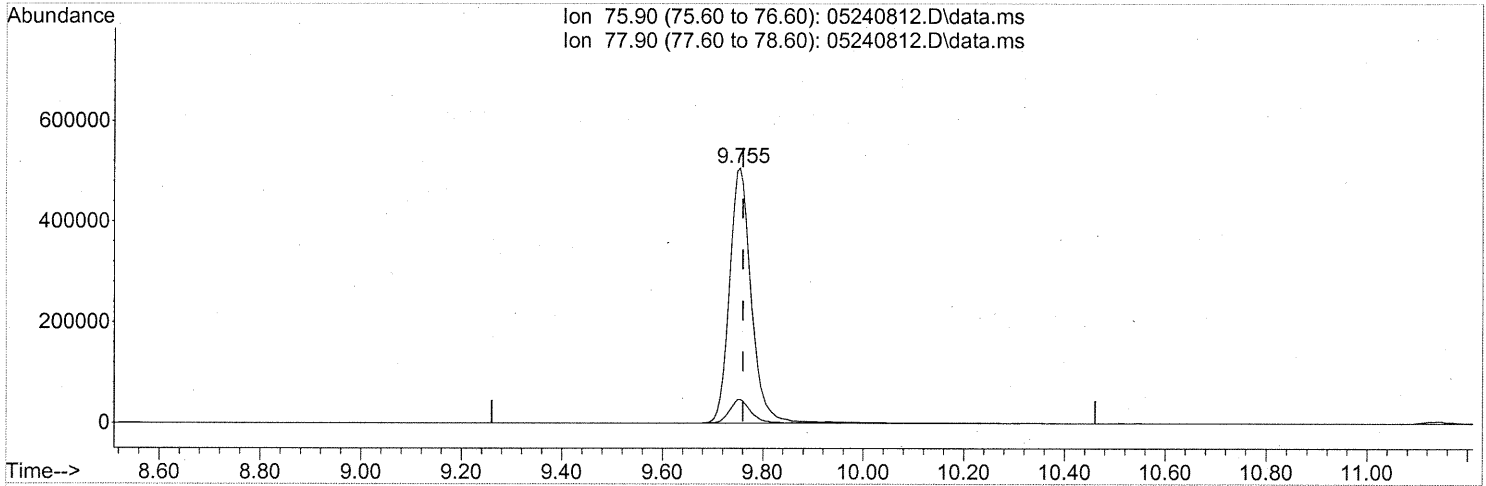
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(22) Carbon Disulfide (T)

9.755min (-0.006) 13.80ng

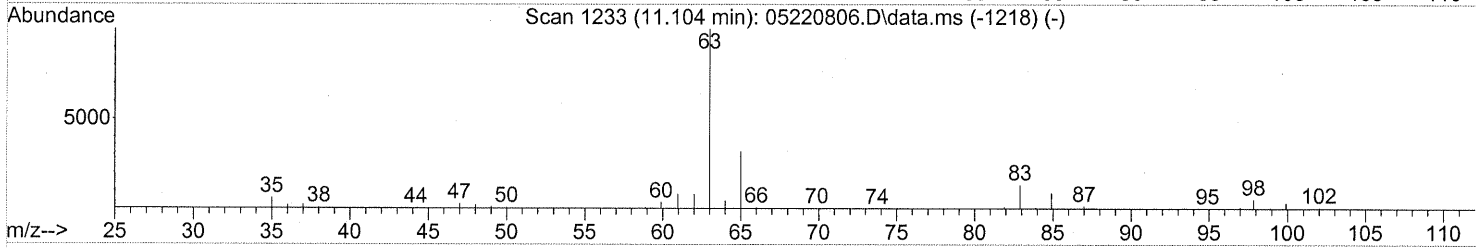
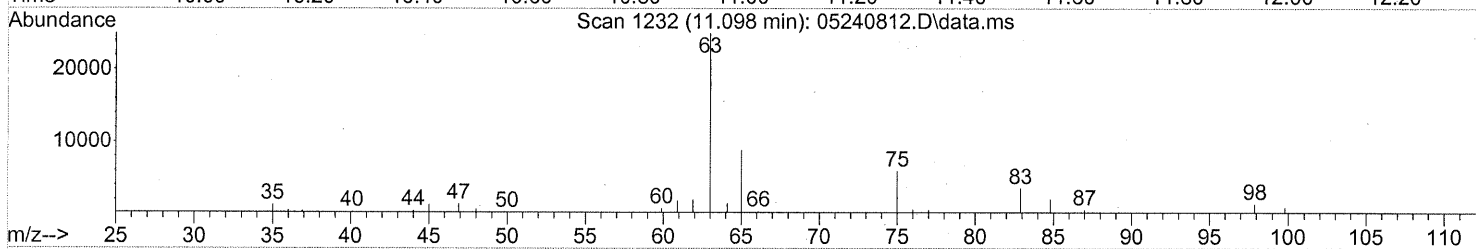
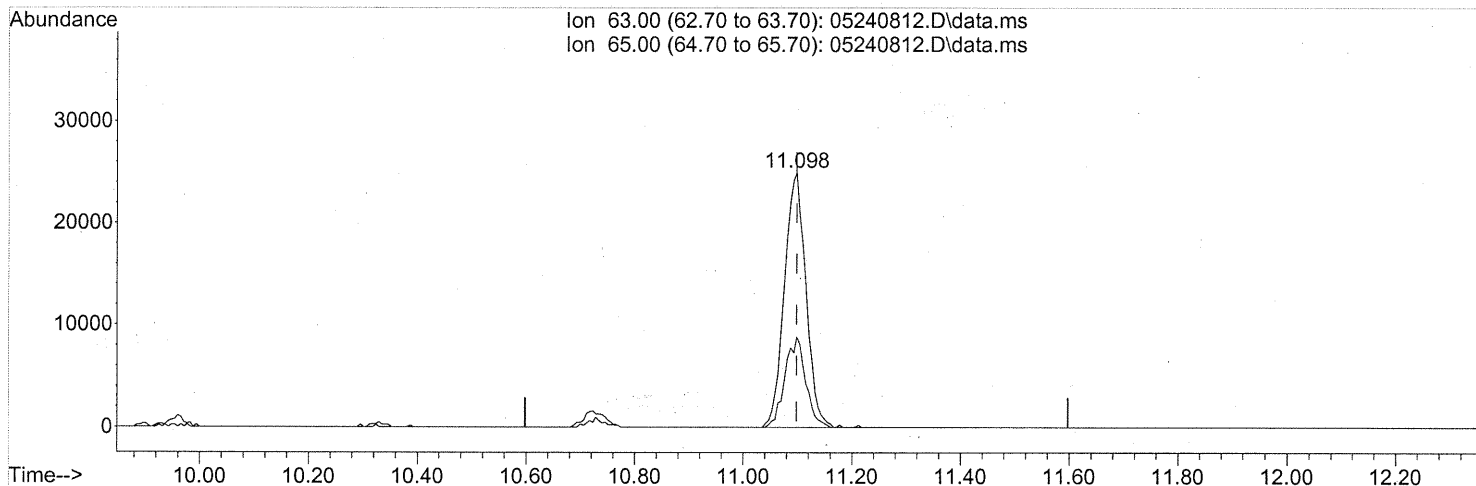
response 1523965

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.098min (-0.000) 1.35ng

response 68217

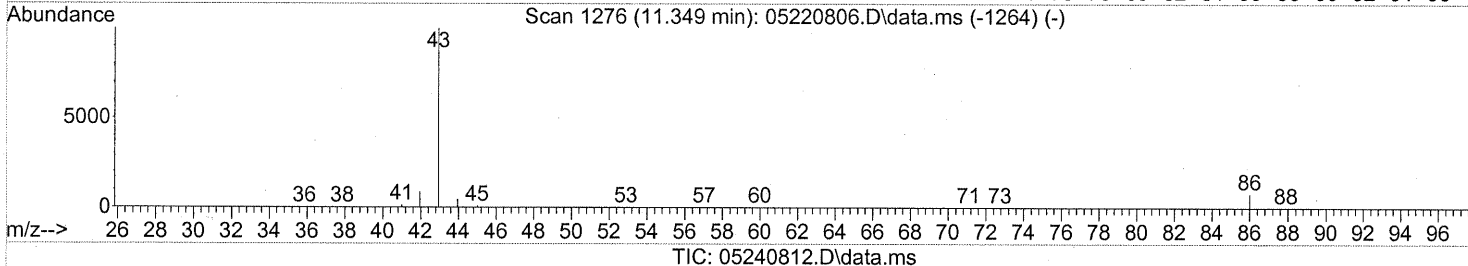
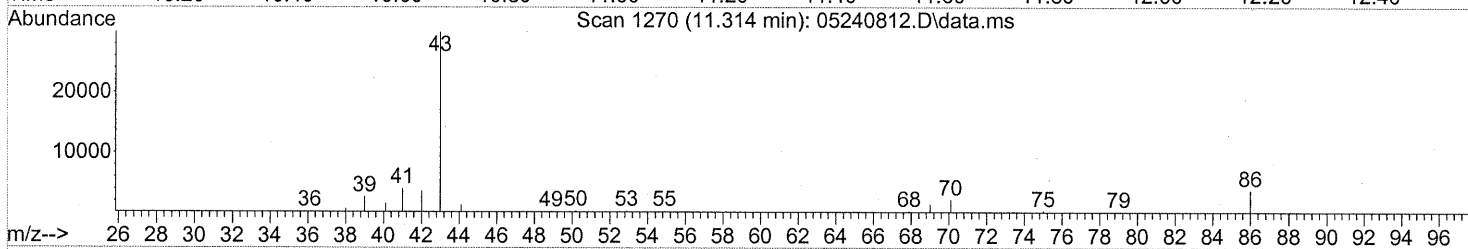
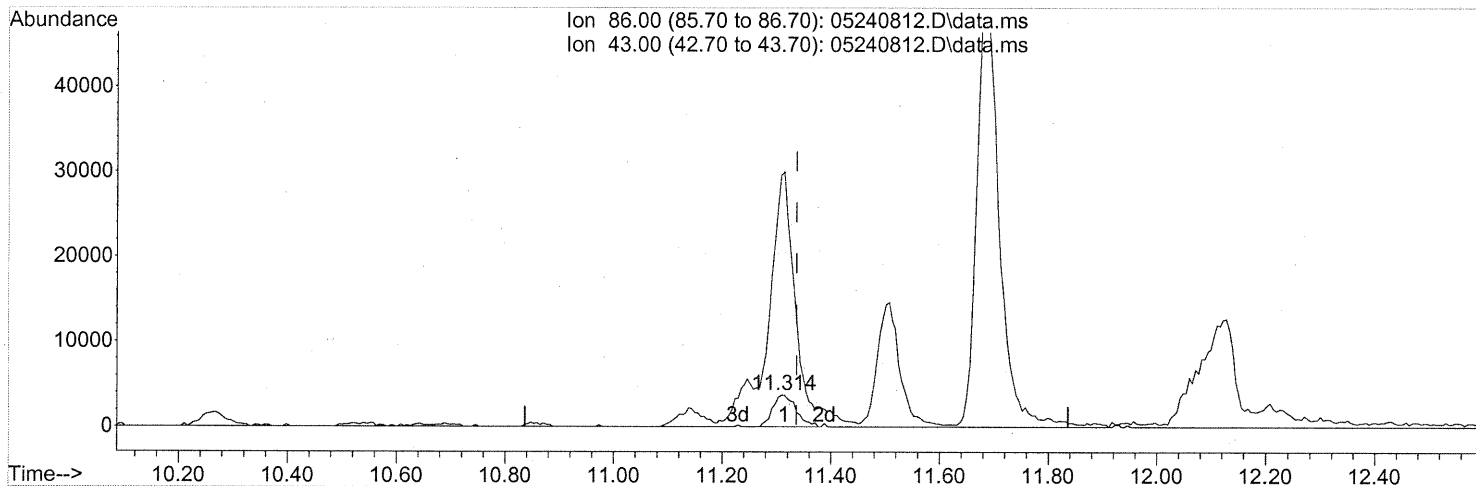
Ion	Exp%	Act%
63.00	100	100
65.00	29.10	33.95
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.314min (-0.023) 2.30ng

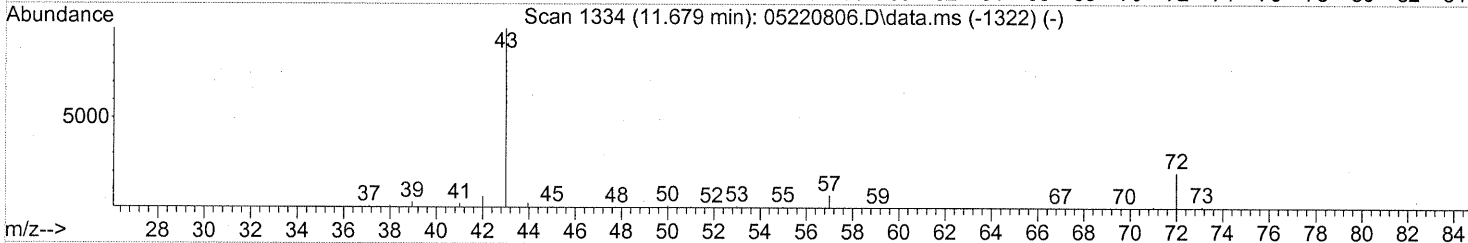
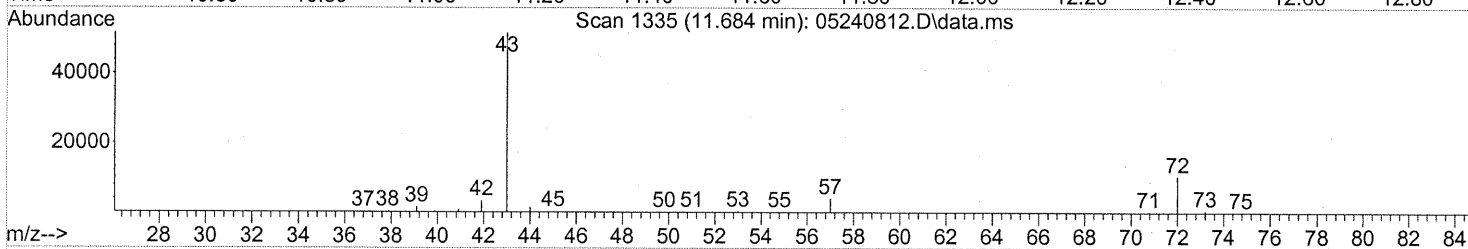
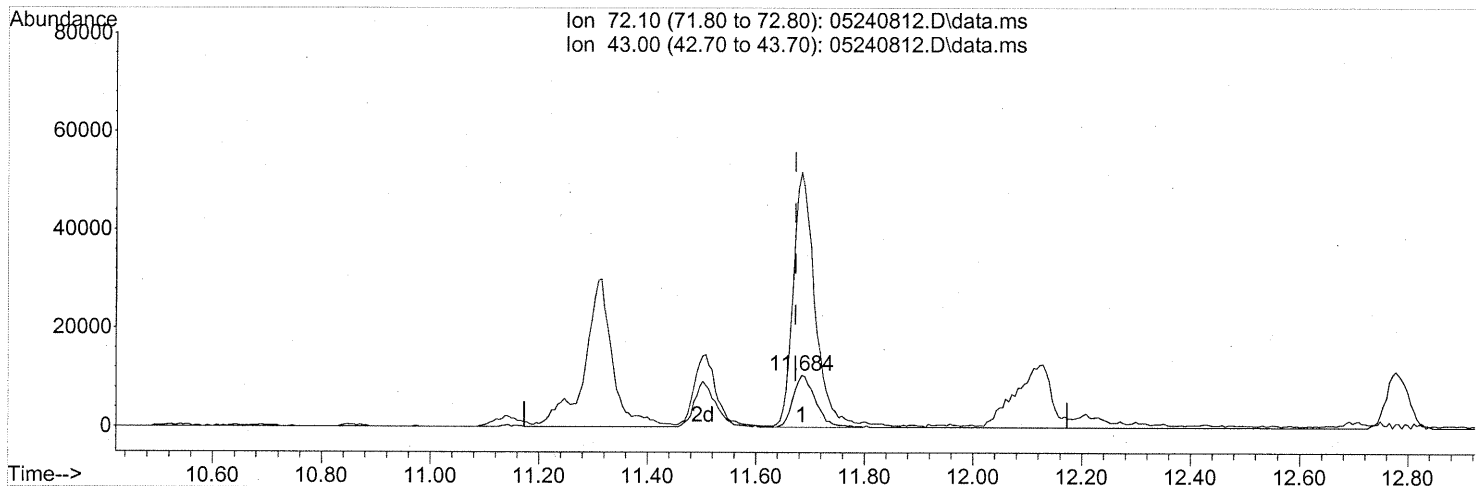
response 11081

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	816.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.684min (+0.011) 1.57ng

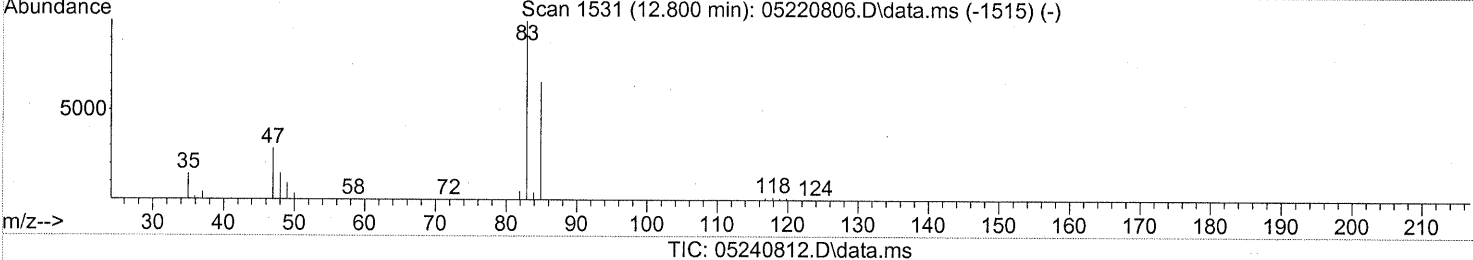
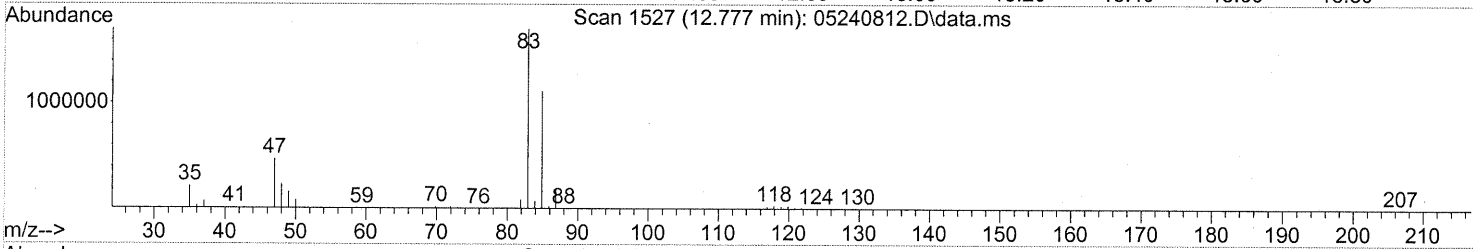
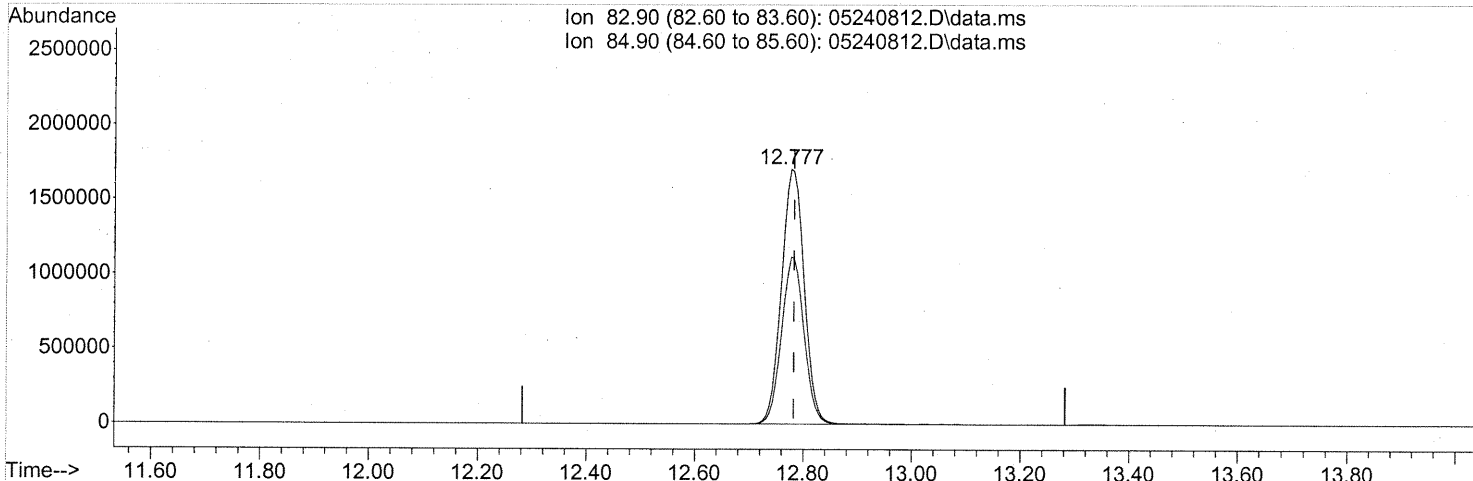
response 29818

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	481.62#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

12.777min (-0.006) 112.00ng

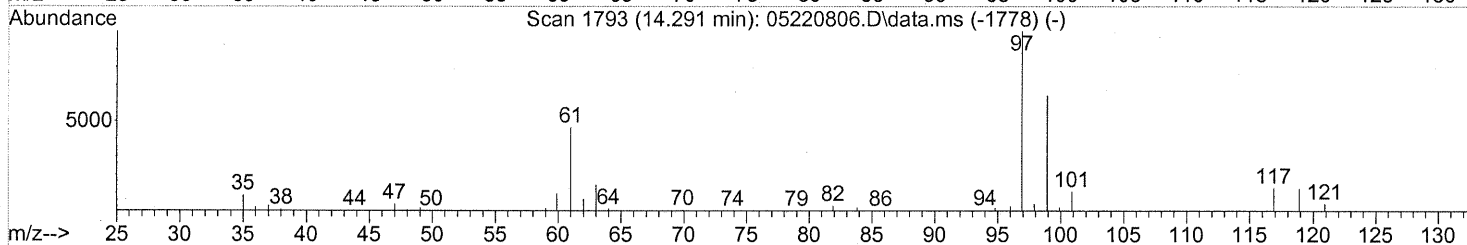
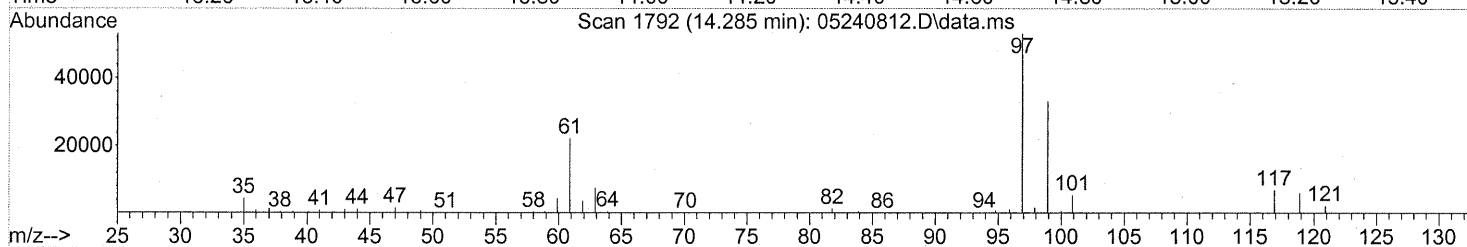
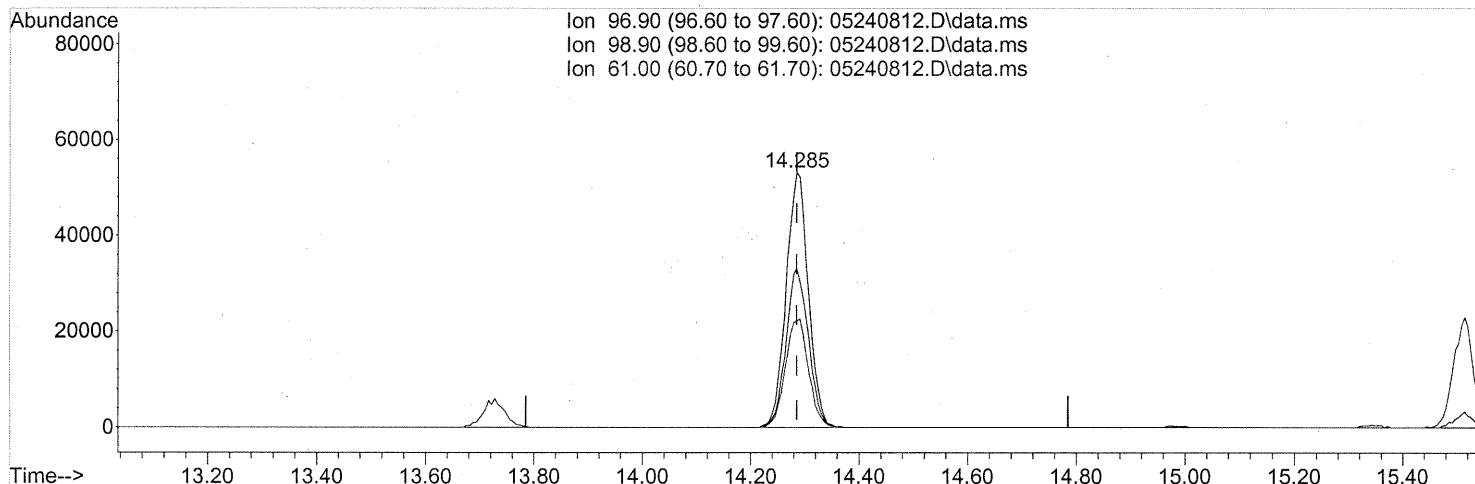
response 4939324

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.285min (-0.000) 3.20ng

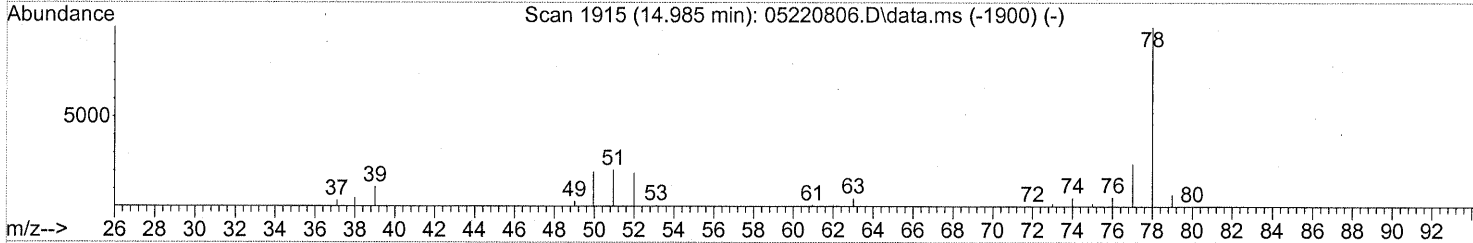
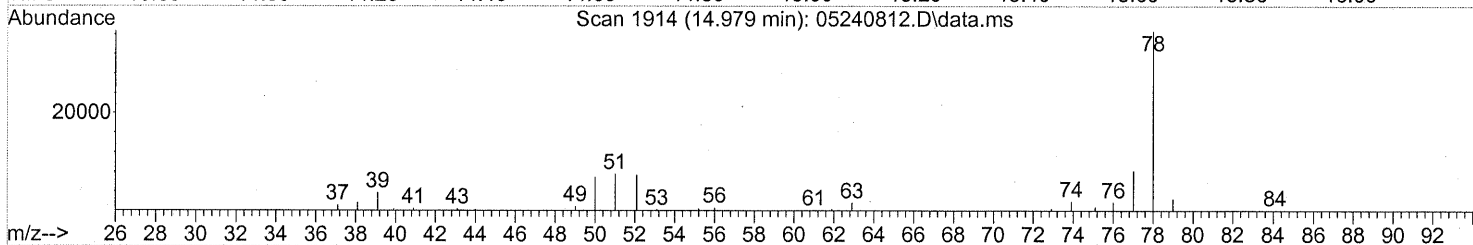
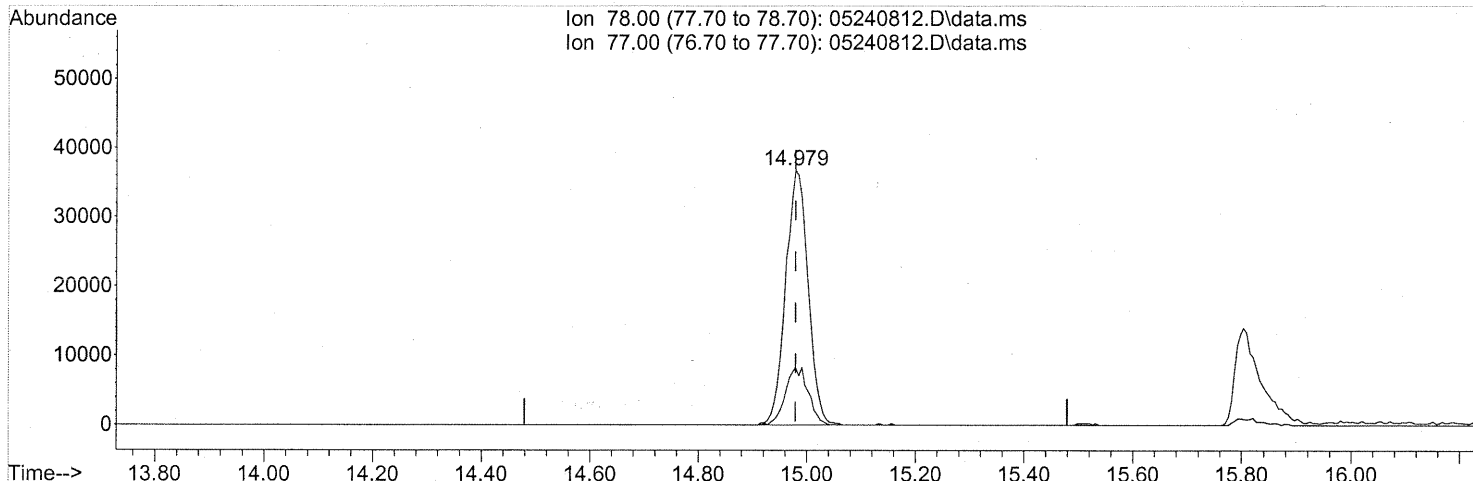
response 150946

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	62.94
61.00	50.50	44.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240812.D  
Acq On : 24 May 2008 14:37  
Operator : WA  
Sample : P0801442-002 (500ml)  
Misc : ENSR SG39B-05 (-3.5, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240812.D\data.ms

(41) Benzene (T)

14.979min (-0.000) 0.97ng

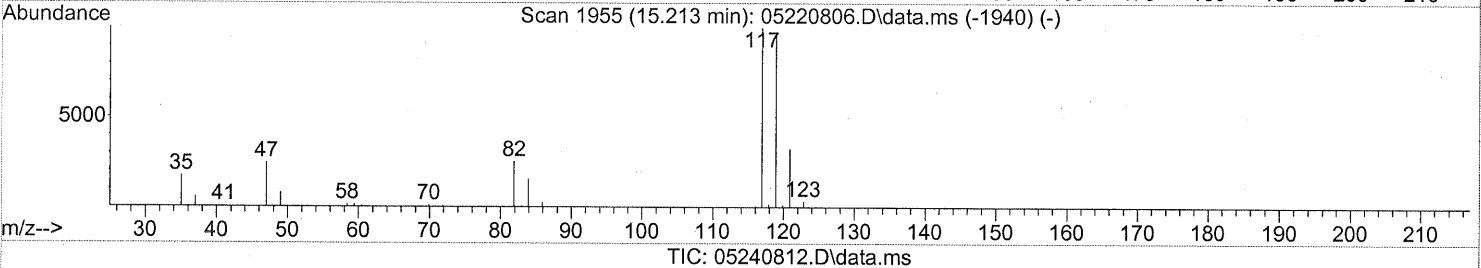
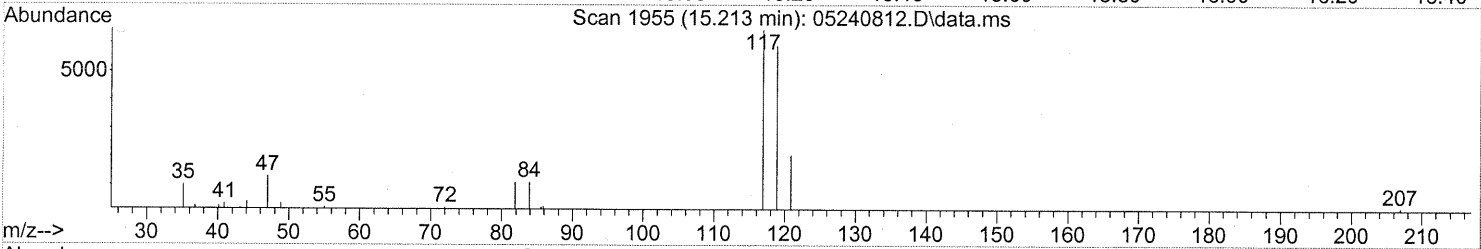
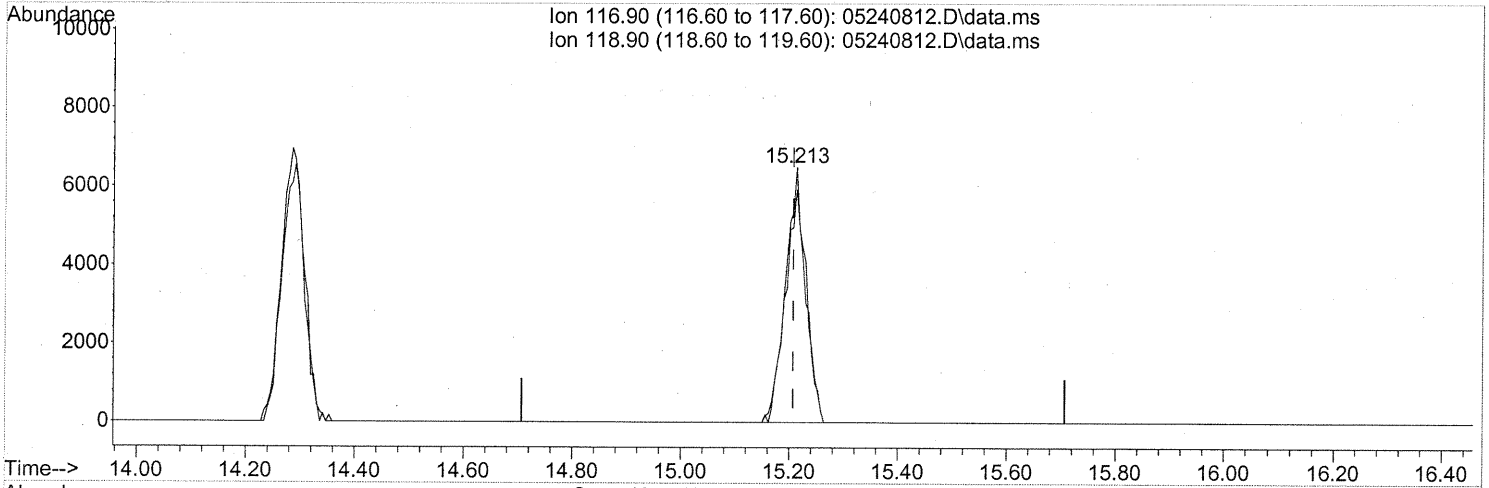
response 105569

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

15.213min (+0.006) 0.41ng

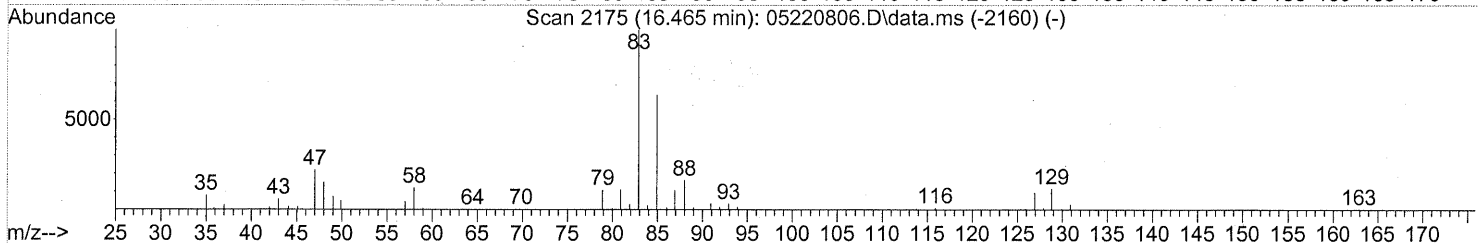
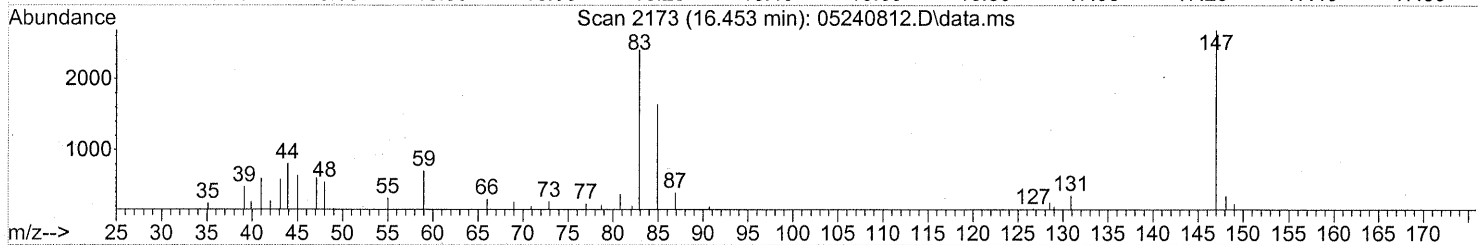
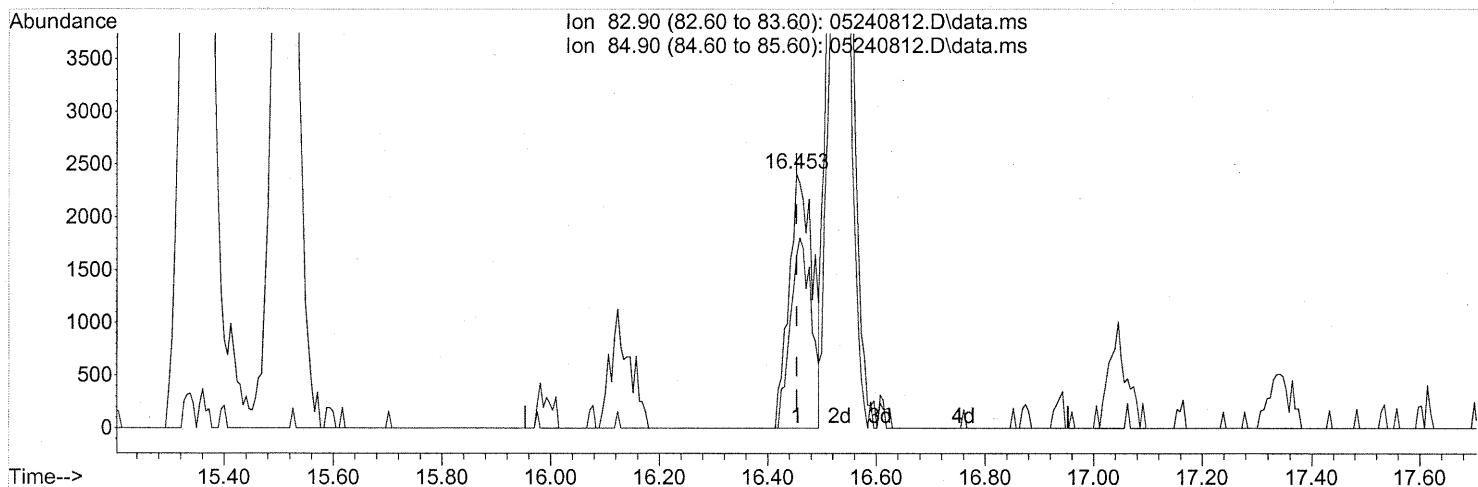
response 16962

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	93.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(46) Bromodichloromethane (T)

16.453min (-0.000) 0.20ng

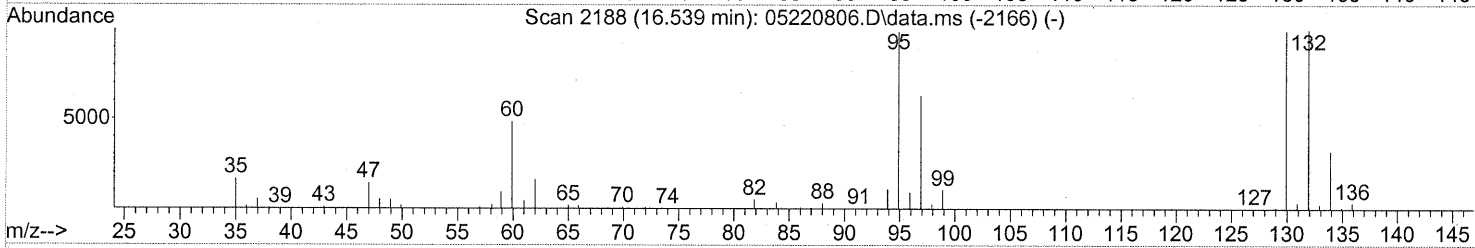
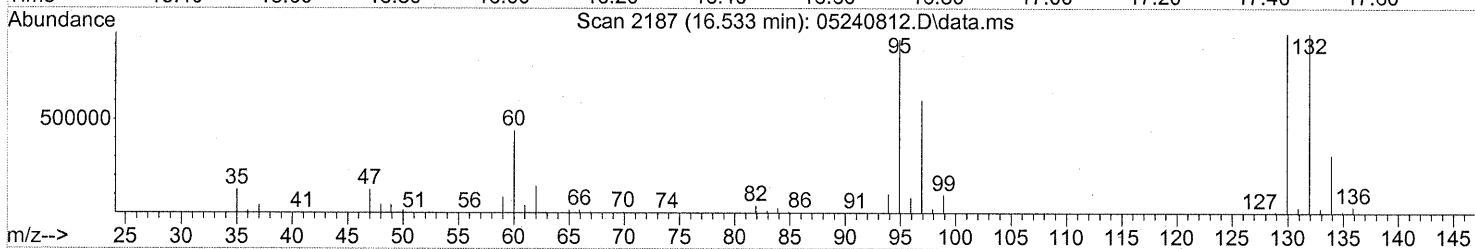
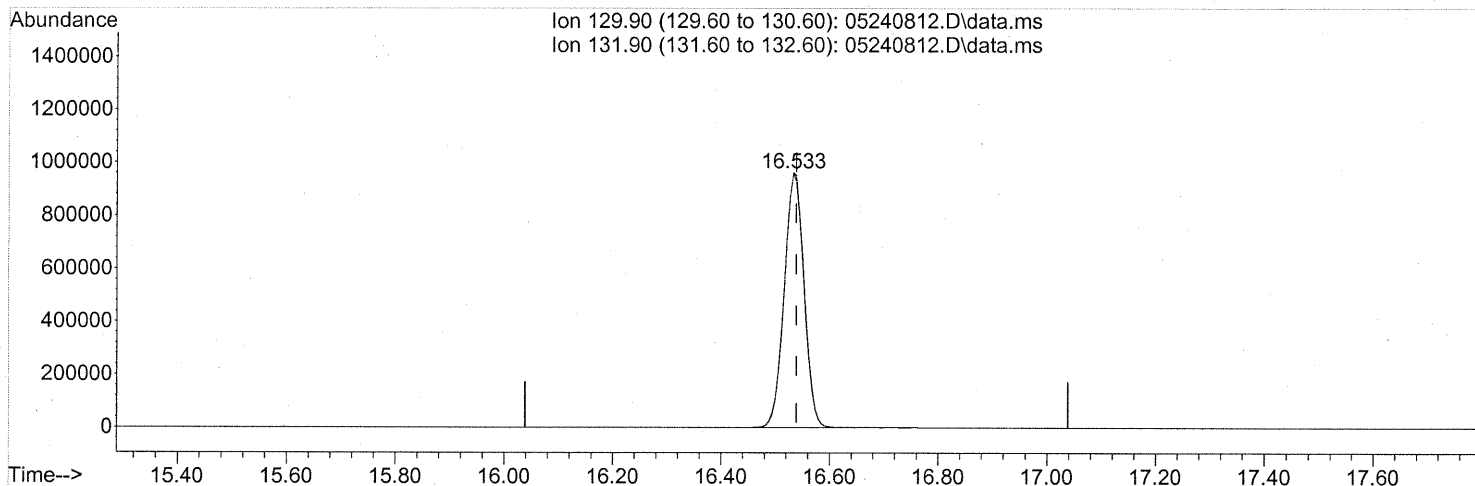
response 7211

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	67.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(47) Trichloroethene (T)  
 16.533min (-0.006) 72.49ng  
 response 2414496

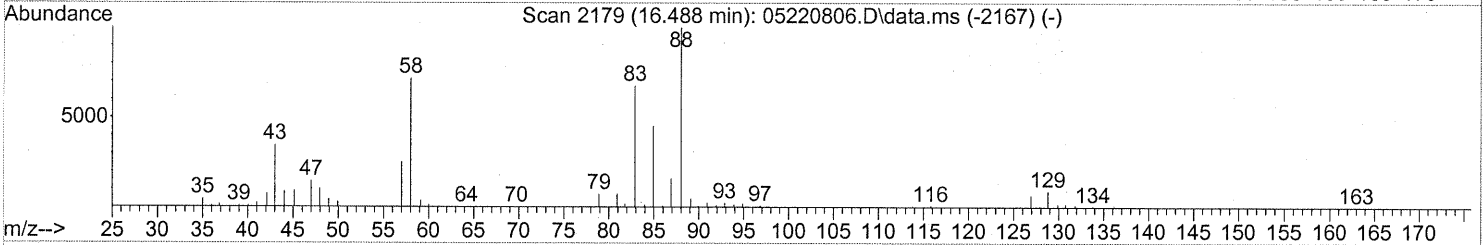
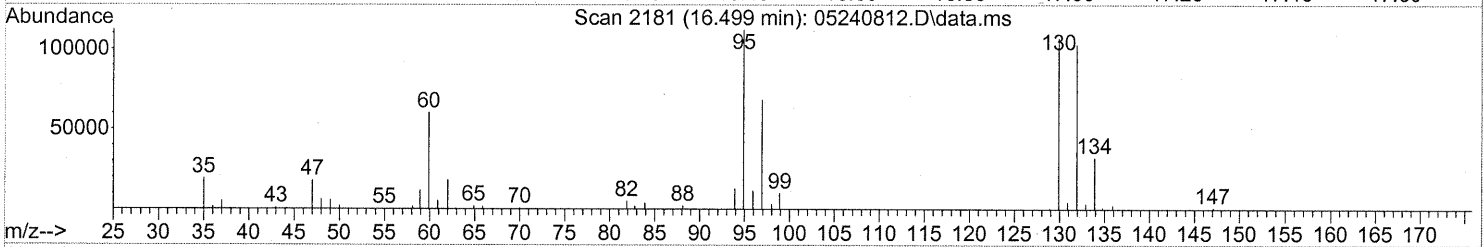
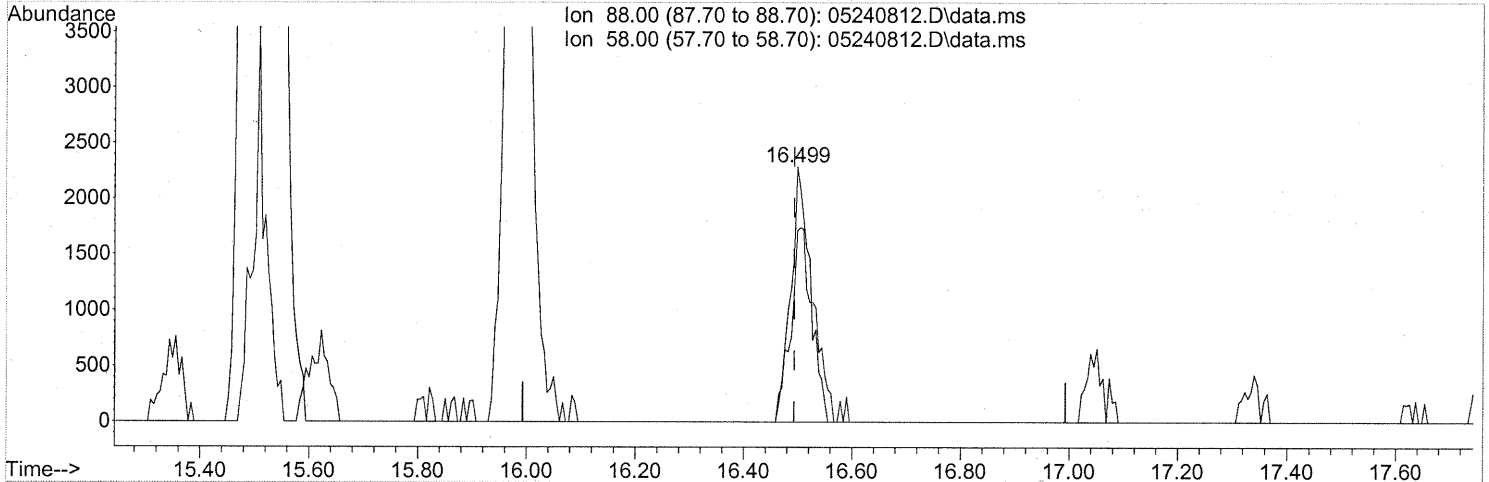
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	100.94
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.499min (+0.006) 0.28ng  
 response 5682

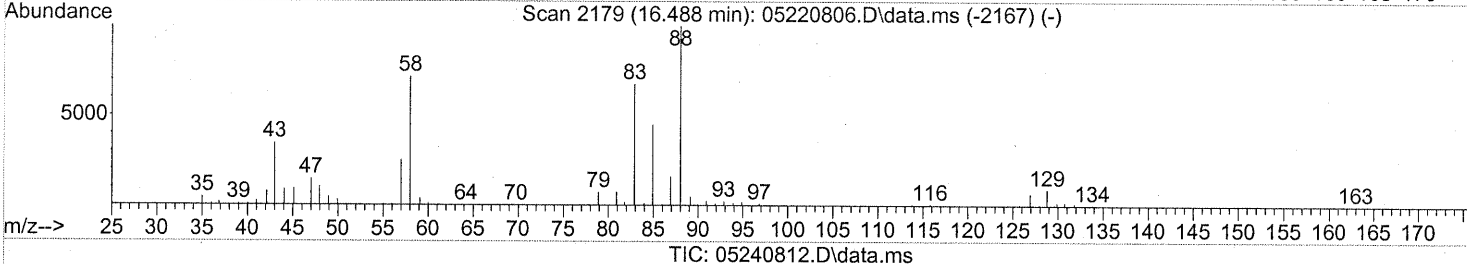
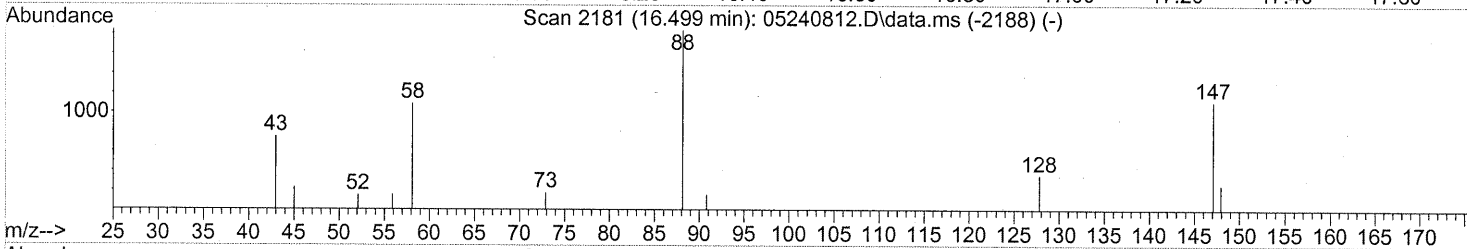
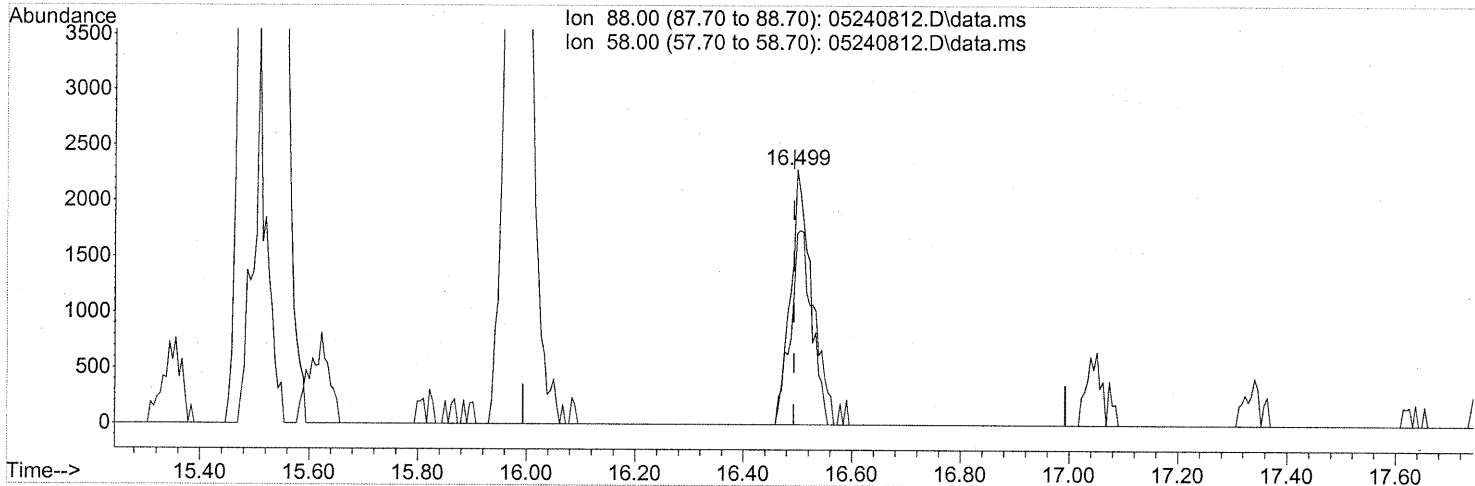
Ion	Exp%	Act%
88.00	100	100
58.00	90.10	93.26
0.00	0.00	0.00
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.499min (+0.006) 0.28ng  
 response 5682

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	93.26
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

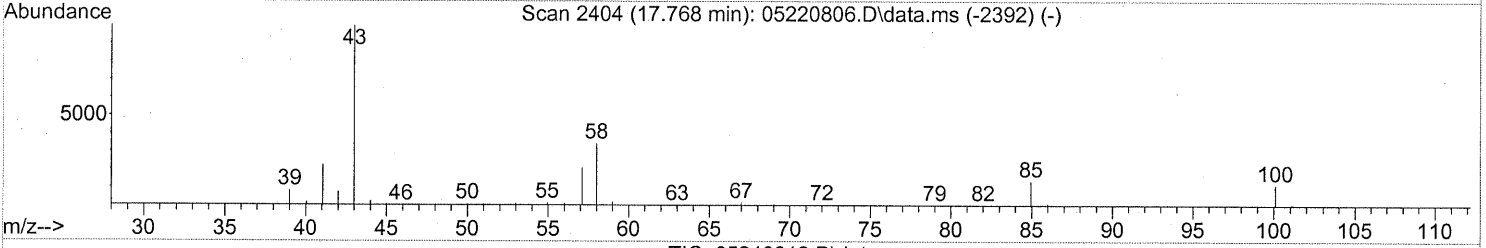
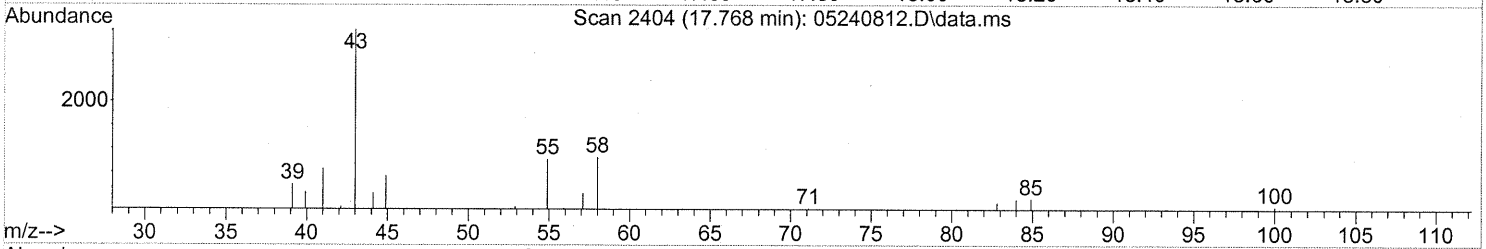
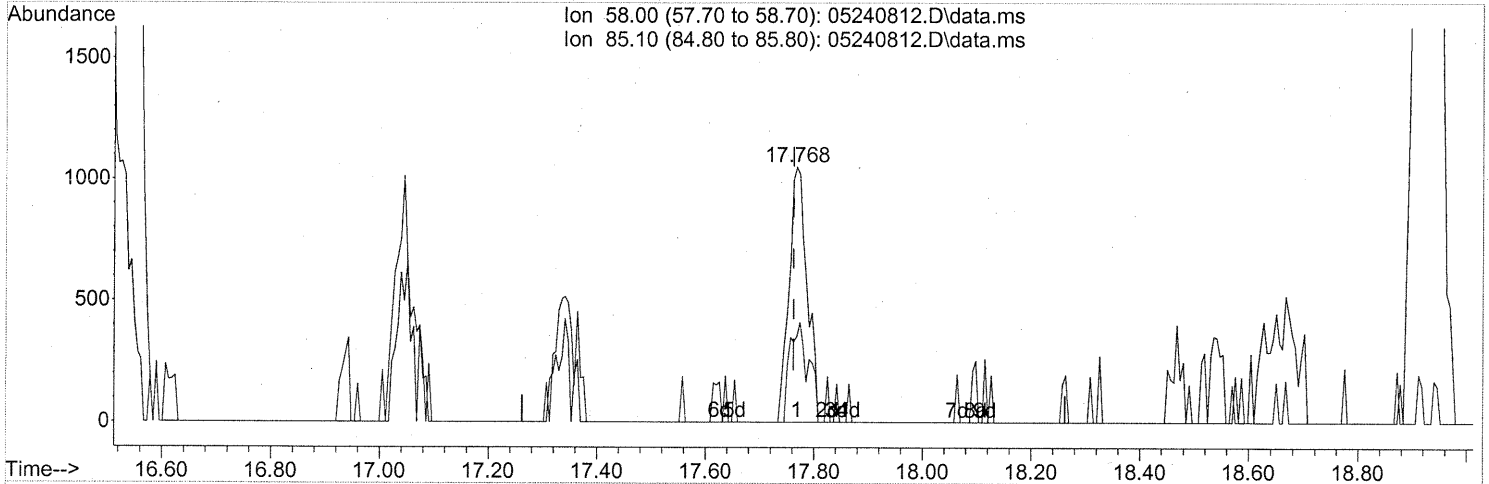
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(53) 4-Methyl-2-pentanone (T)

17.768min (+0.006) 0.08ng

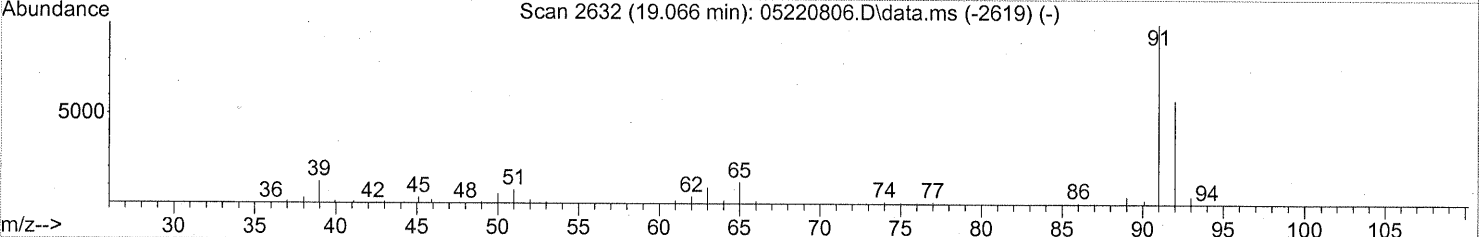
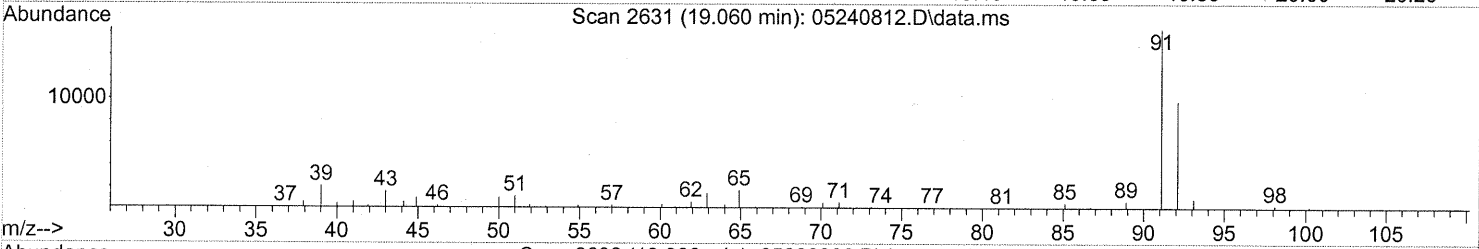
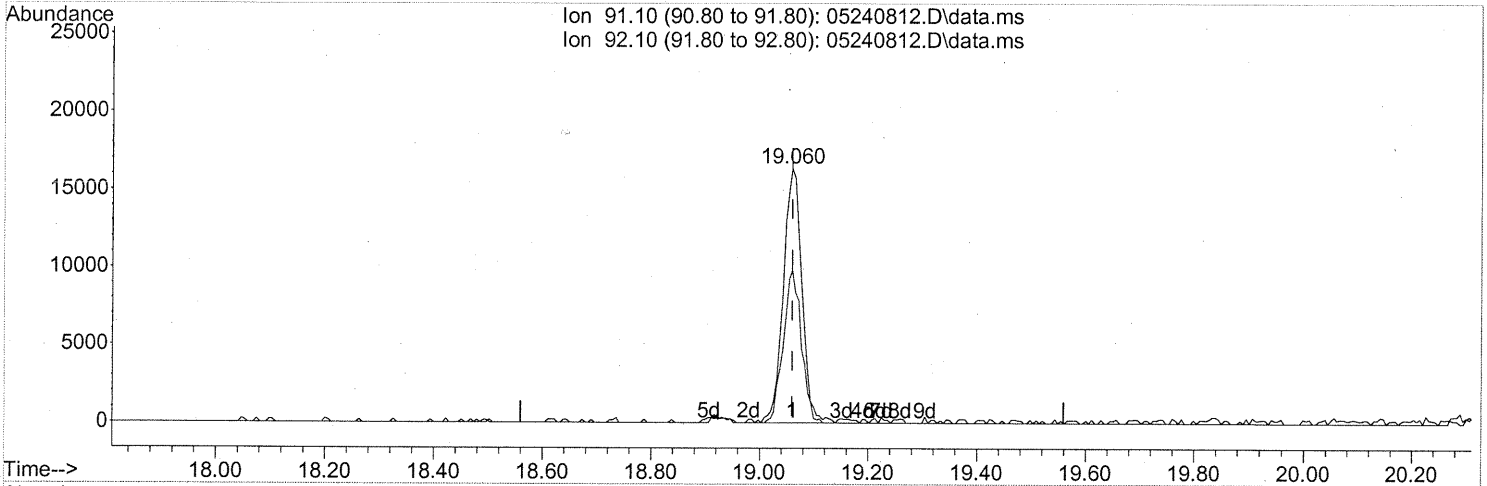
response 2427

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	40.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

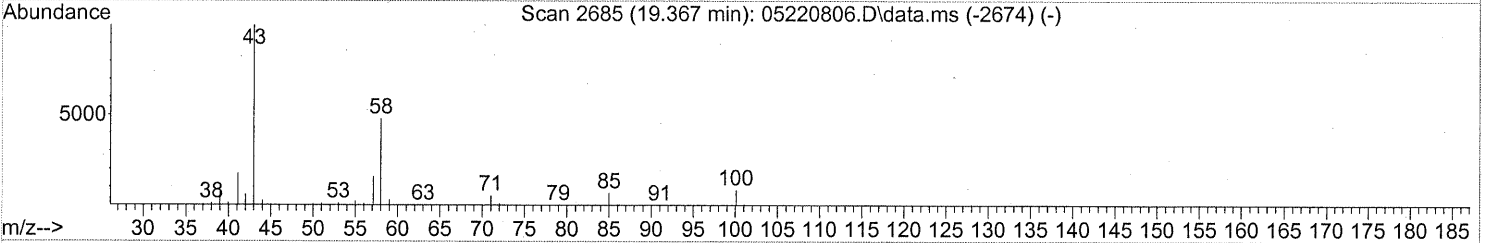
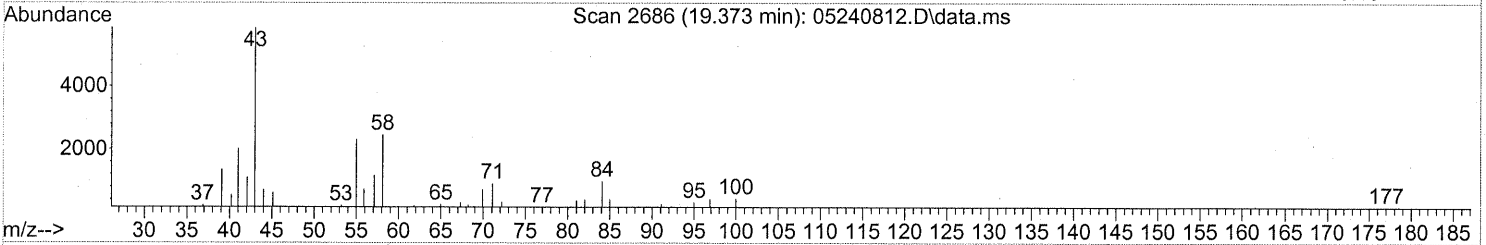
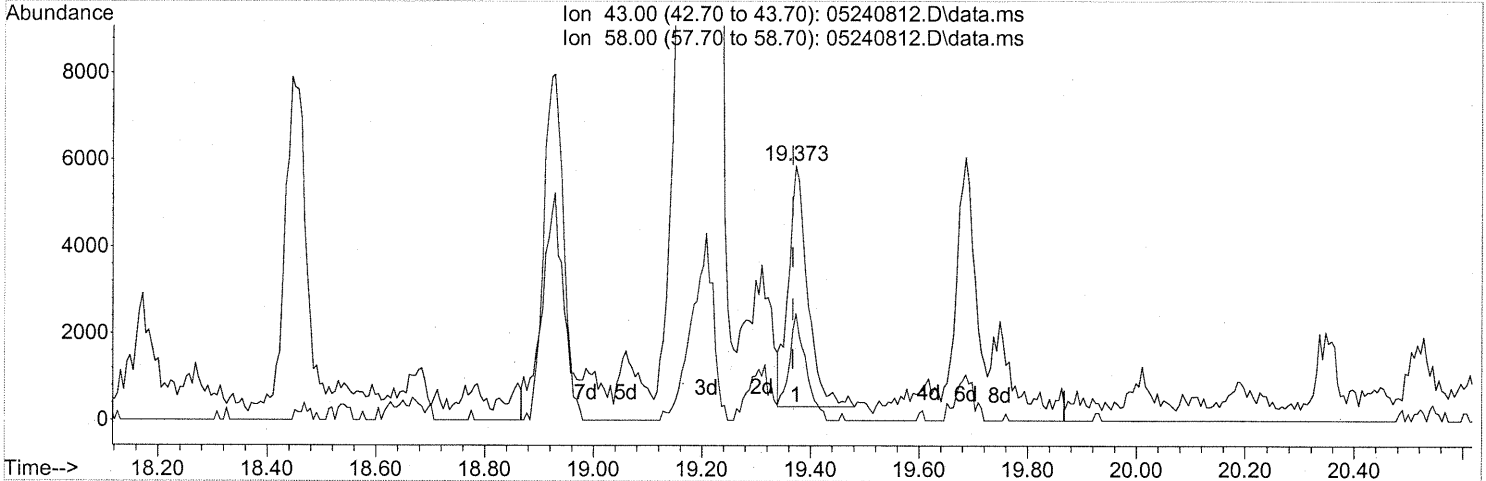
(58) Toluene (T)  
 19.060min (-0.000) 0.32ng  
 response 38867

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	58.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(59) 2-Hexanone (T)

19.373min (+0.006) 0.17ng

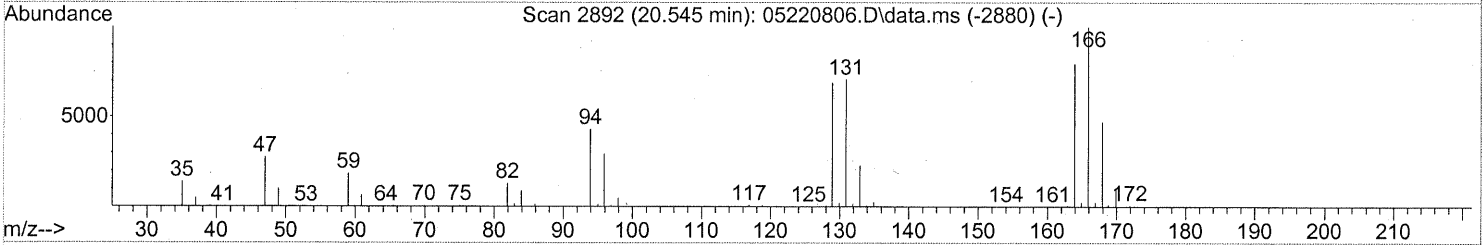
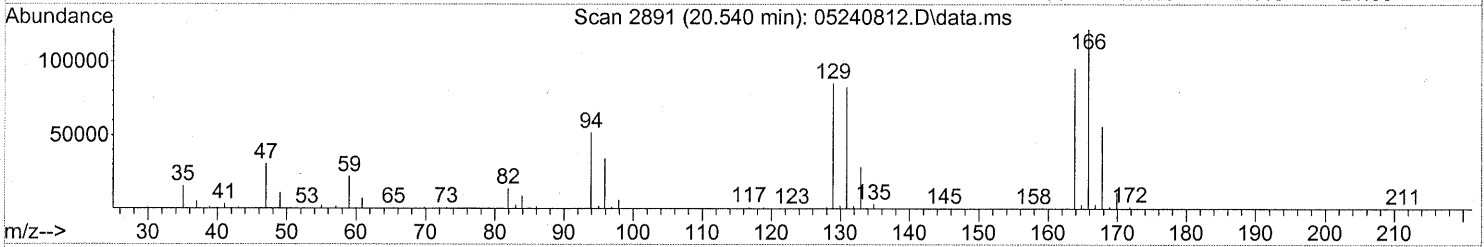
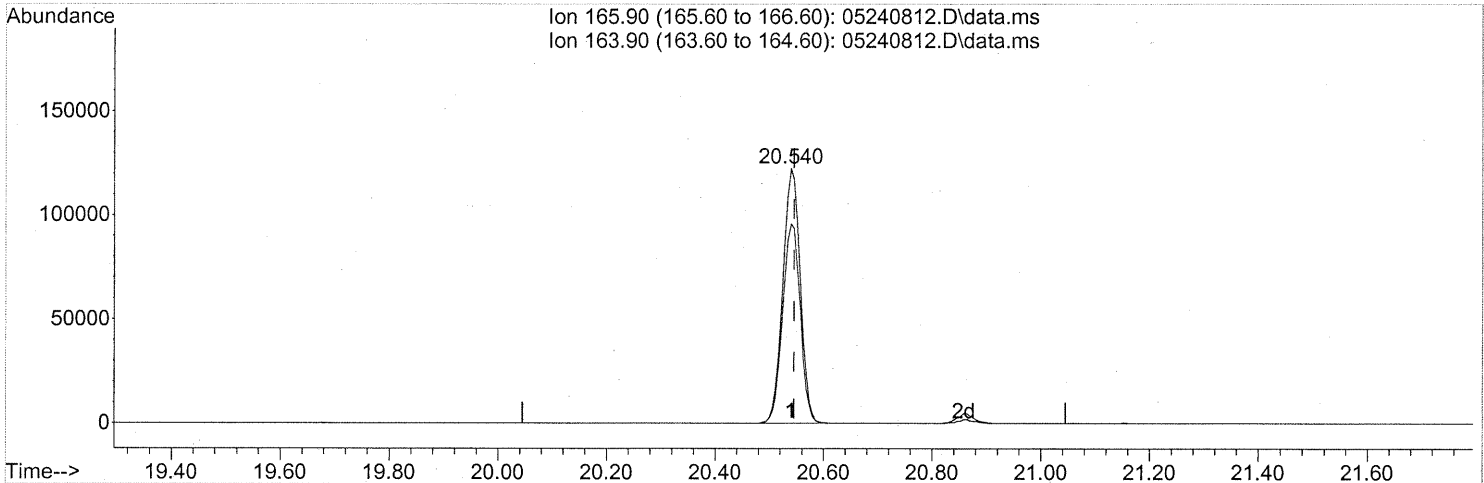
response 13787

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	39.81#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240812.D  
Acq On : 24 May 2008 14:37  
Operator : WA  
Sample : P0801442-002 (500ml)  
Misc : ENSR SG39B-05 (-3.5, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240812.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 7.57ng

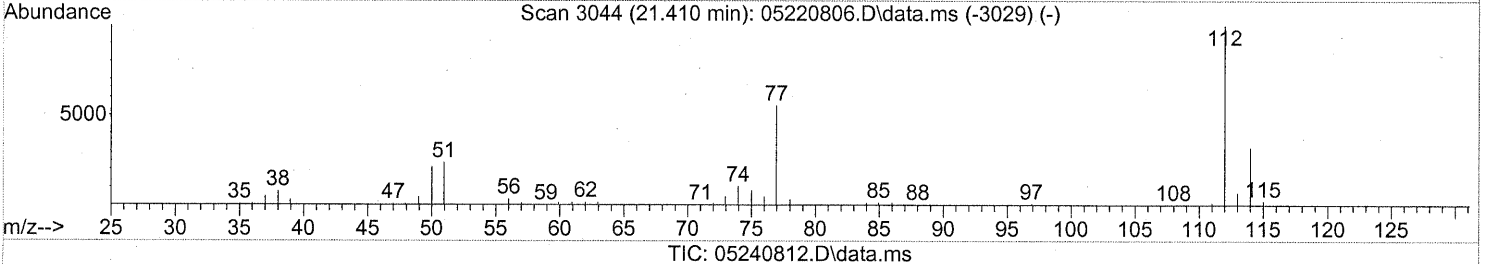
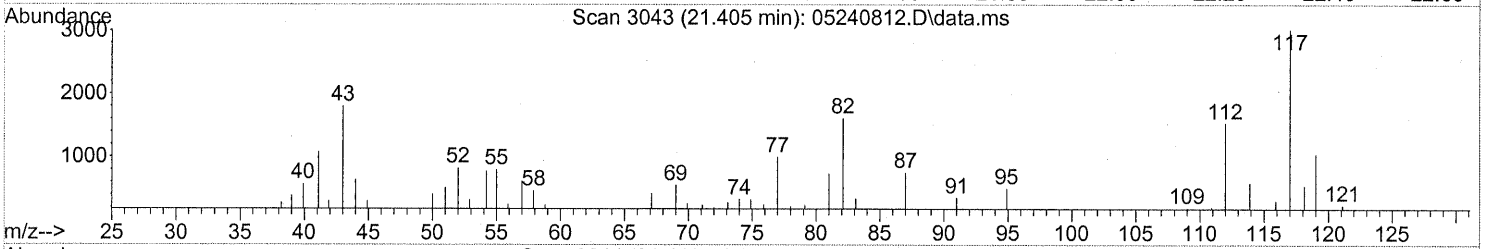
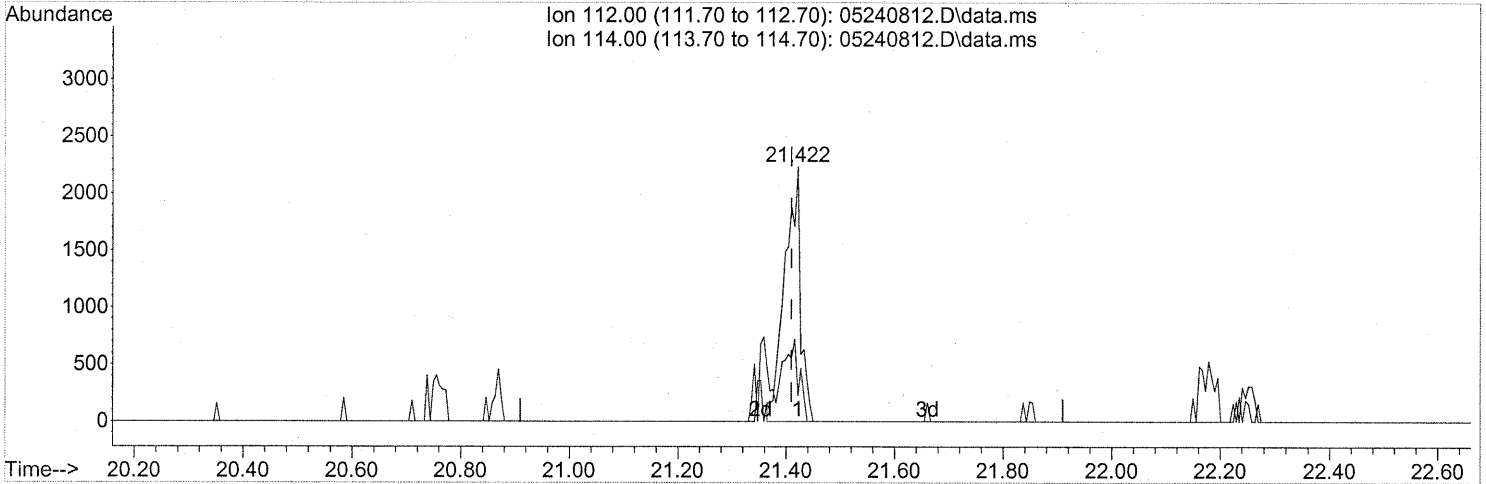
response 270722

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



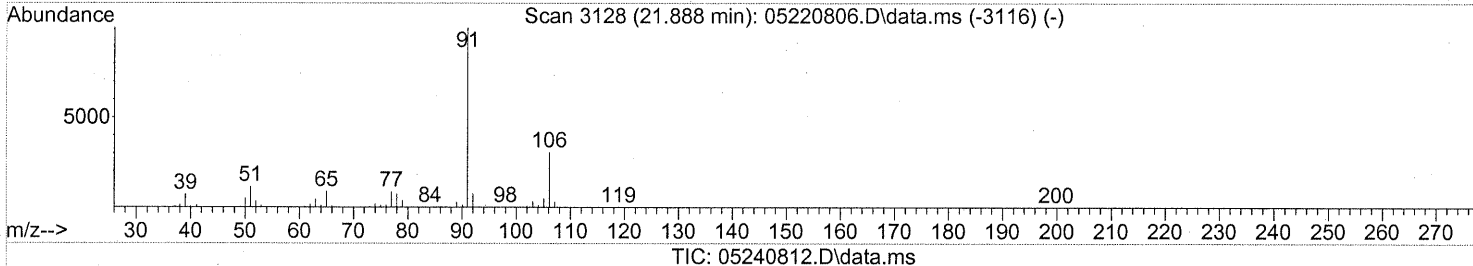
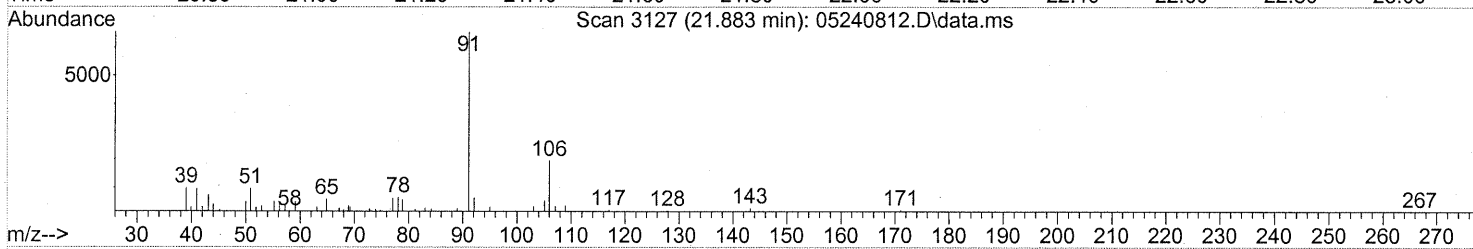
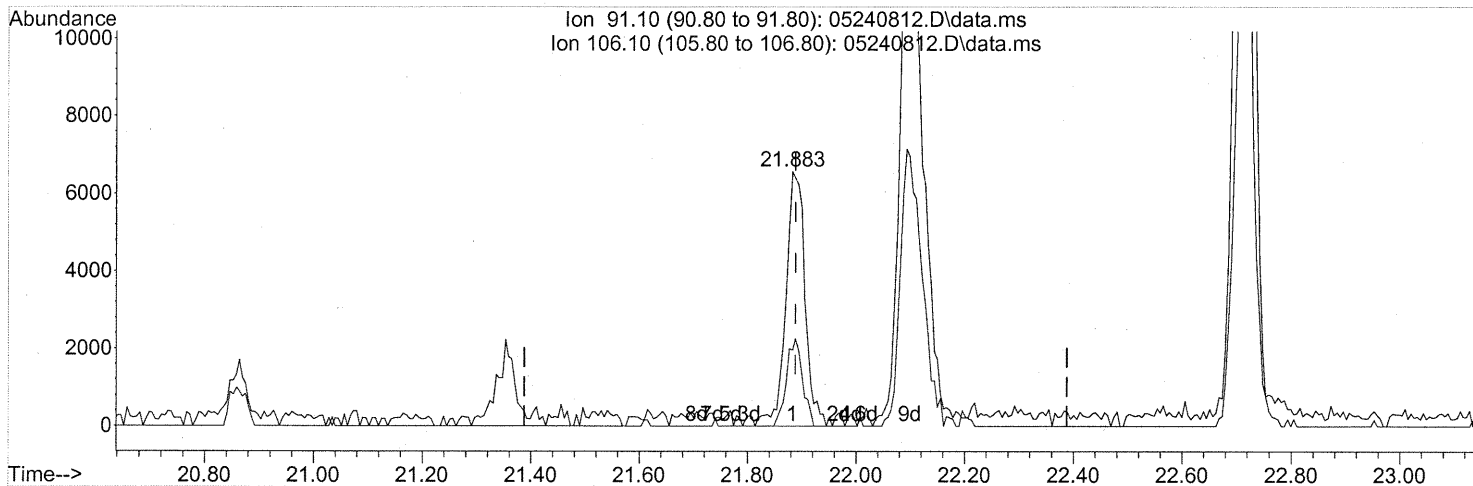
(65) Chlorobenzene (T)  
 21.422min (+0.011) 0.06ng  
 response 4491

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	31.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)  
 21.883min (-0.006) 0.12ng  
 response 16071

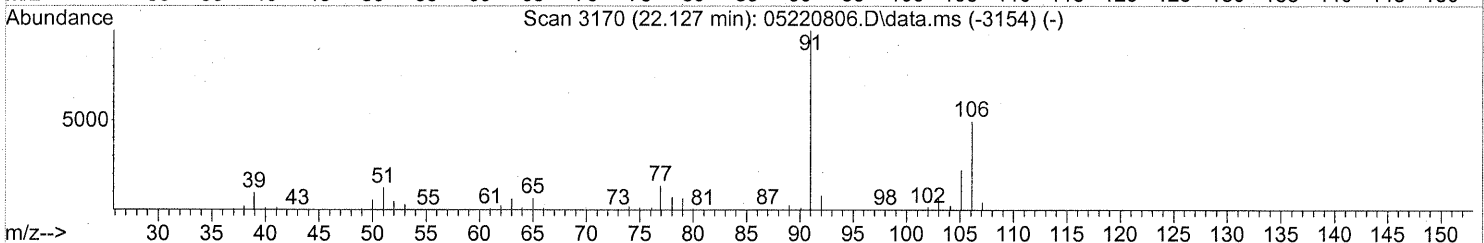
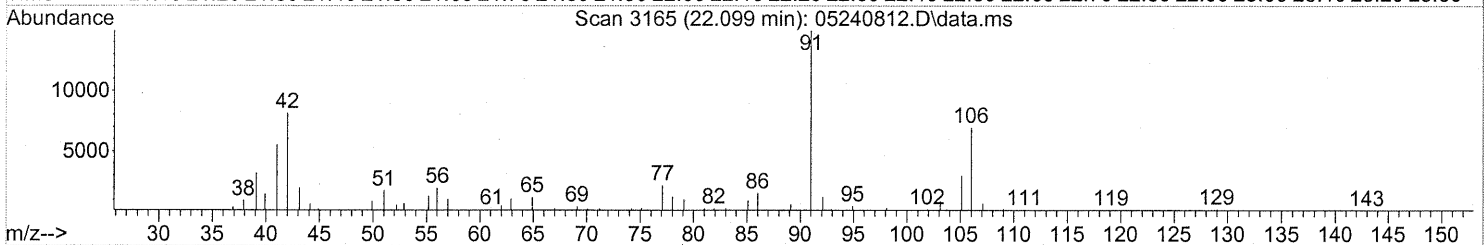
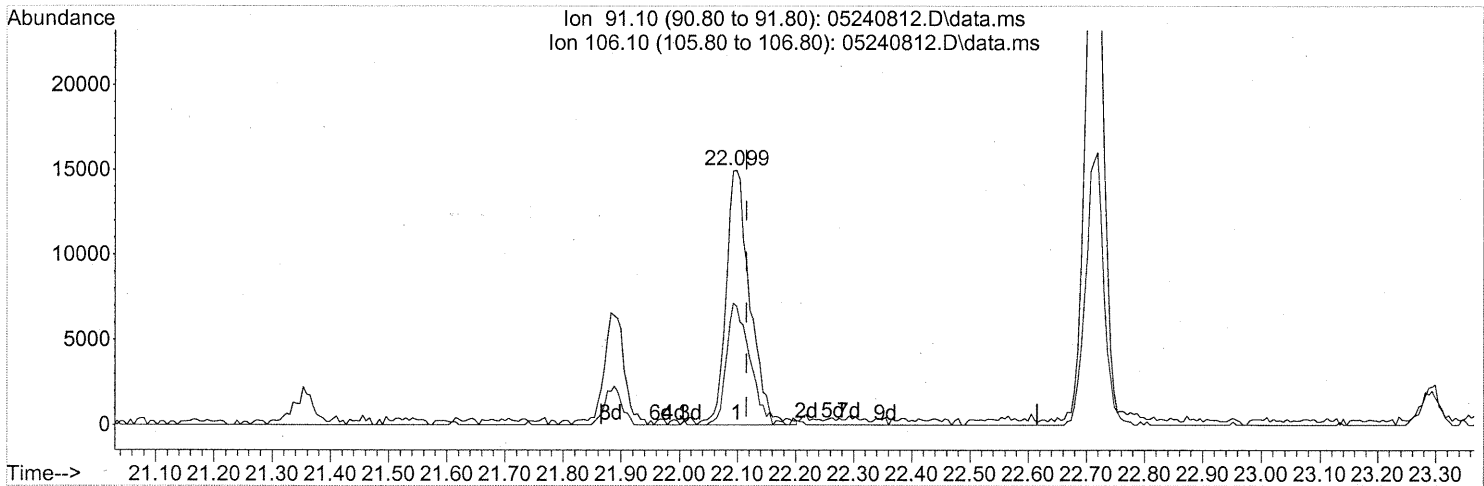
Ion	Exp%	Act%
91.10	100	100
106.10	34.10	28.73
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

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

22.099min (-0.017) 0.46ng

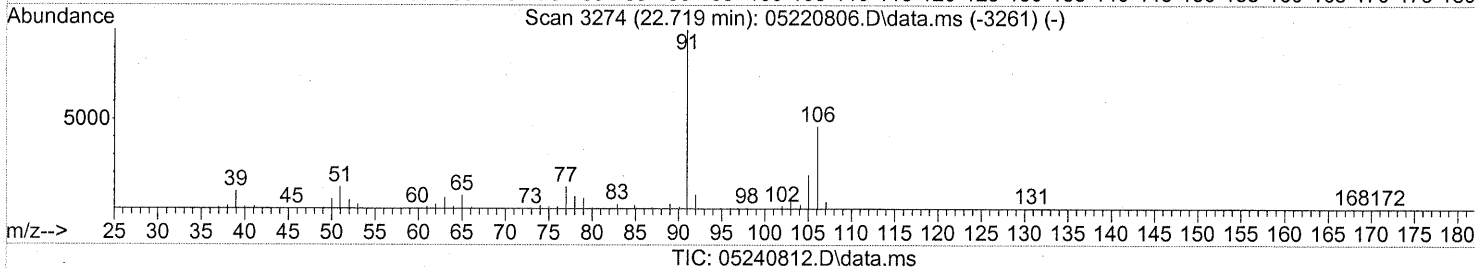
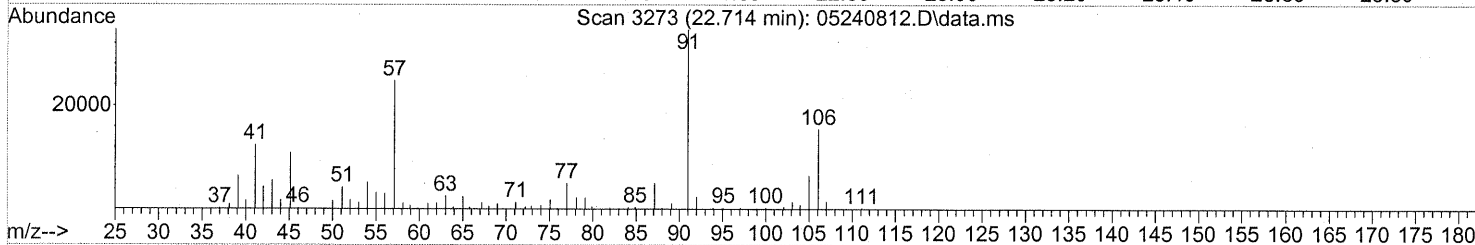
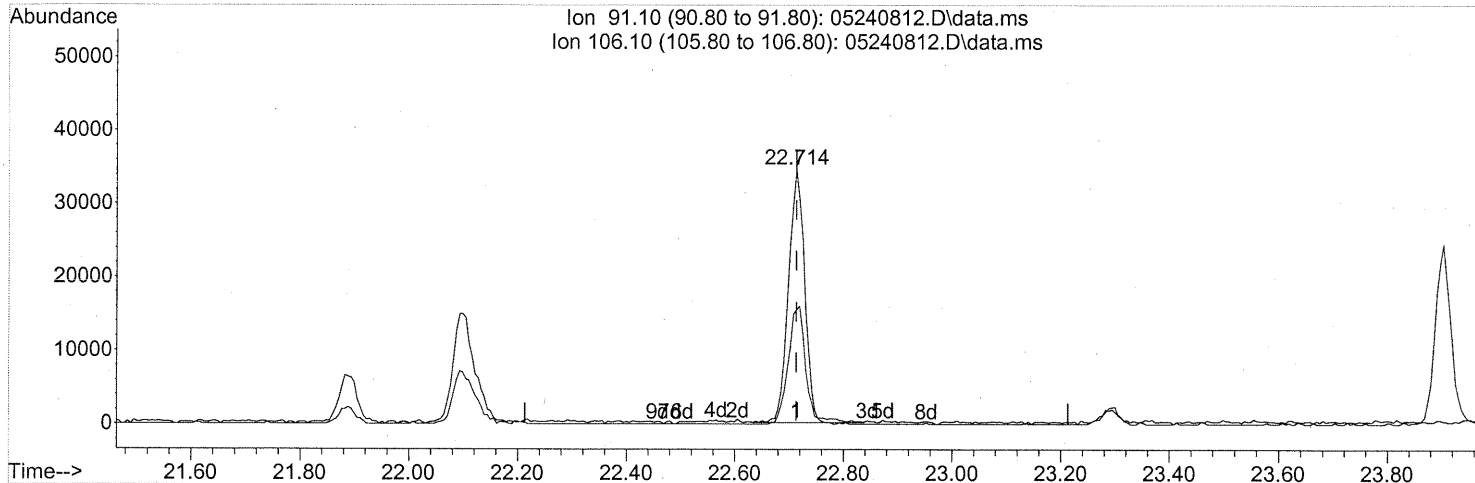
response 42849

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	46.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



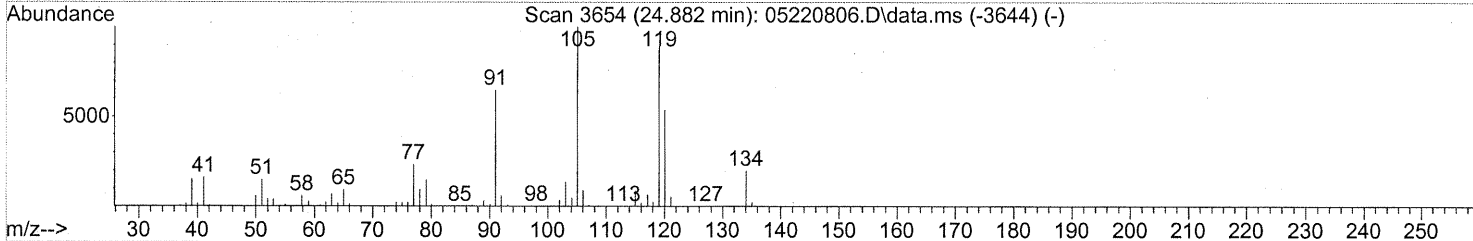
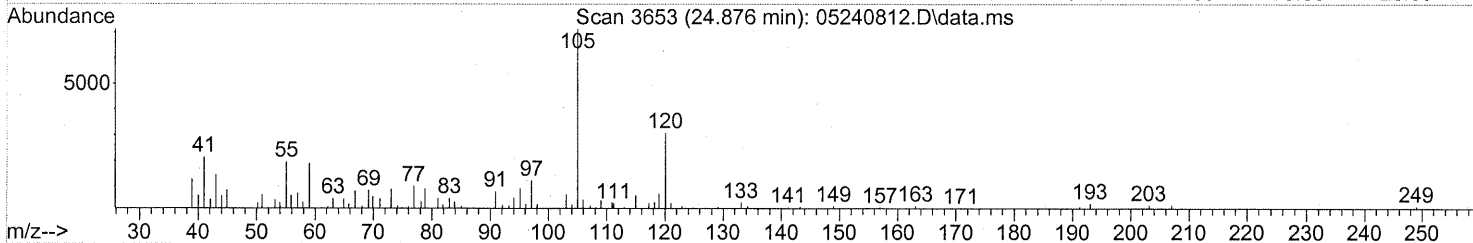
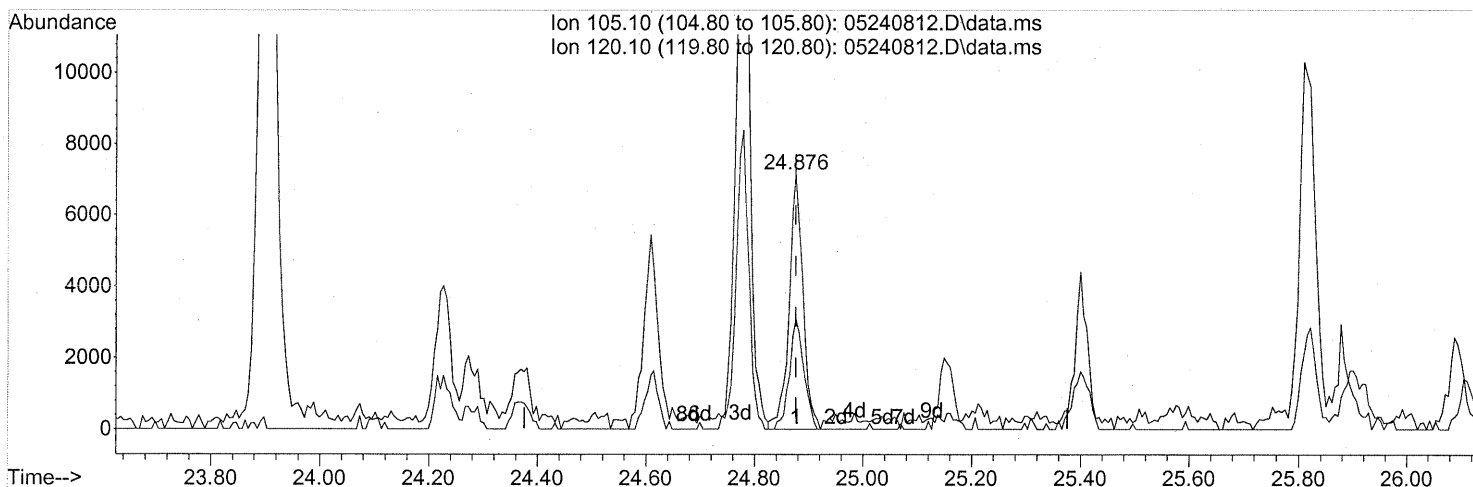
(70) o-Xylene (T)  
 22.714min (-0.000) 0.72ng  
 response 72527

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	47.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

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

24.876min (-0.000) 0.10ng

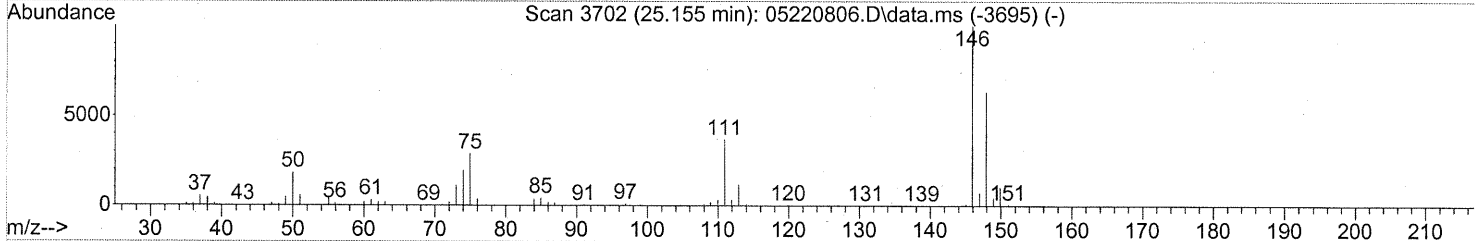
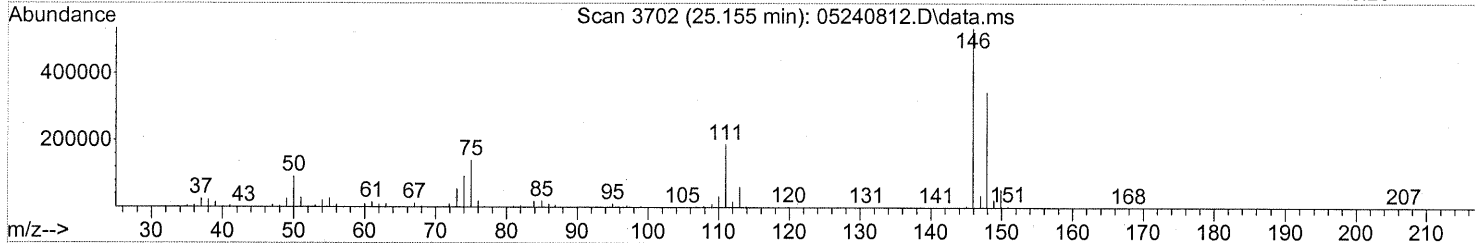
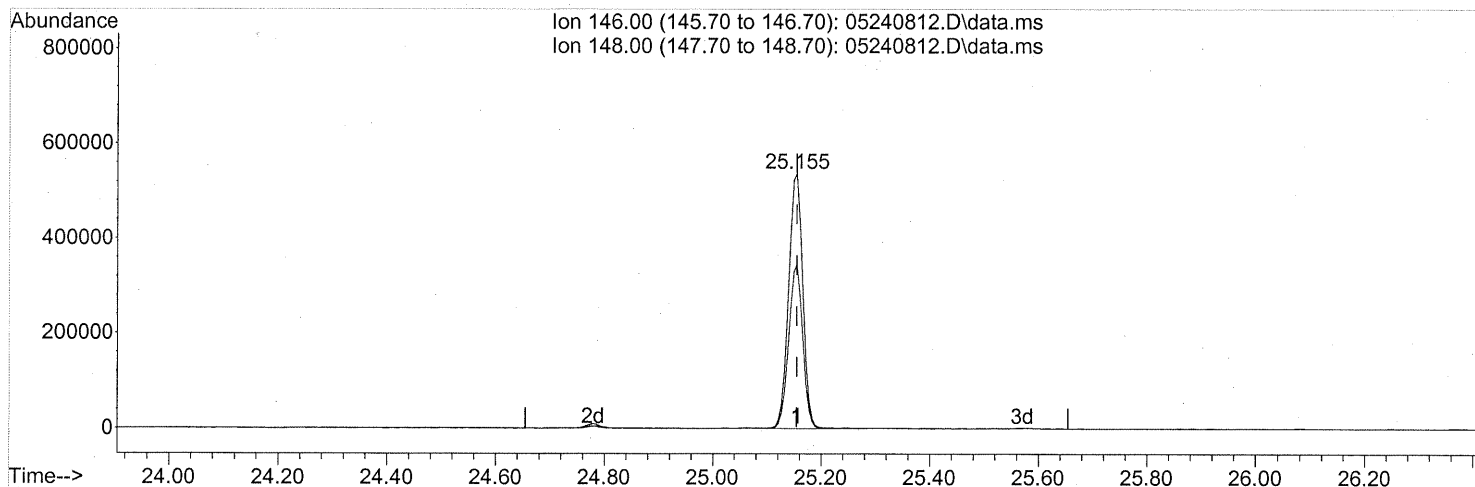
response 12663

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	45.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240812.D  
Acq On : 24 May 2008 14:37  
Operator : WA  
Sample : P0801442-002 (500ml)  
Misc : ENSR SG39B-05 (-3.5, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240812.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 13.19ng

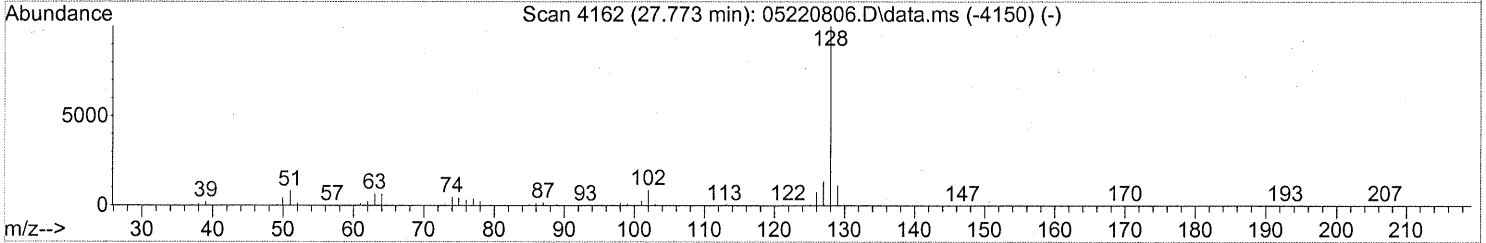
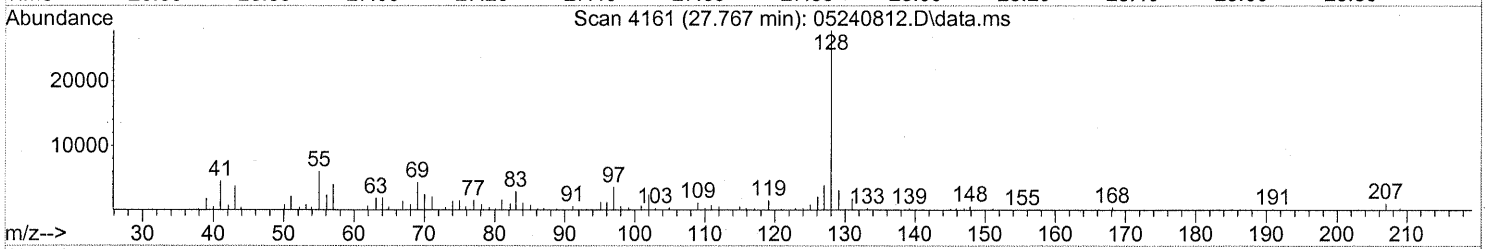
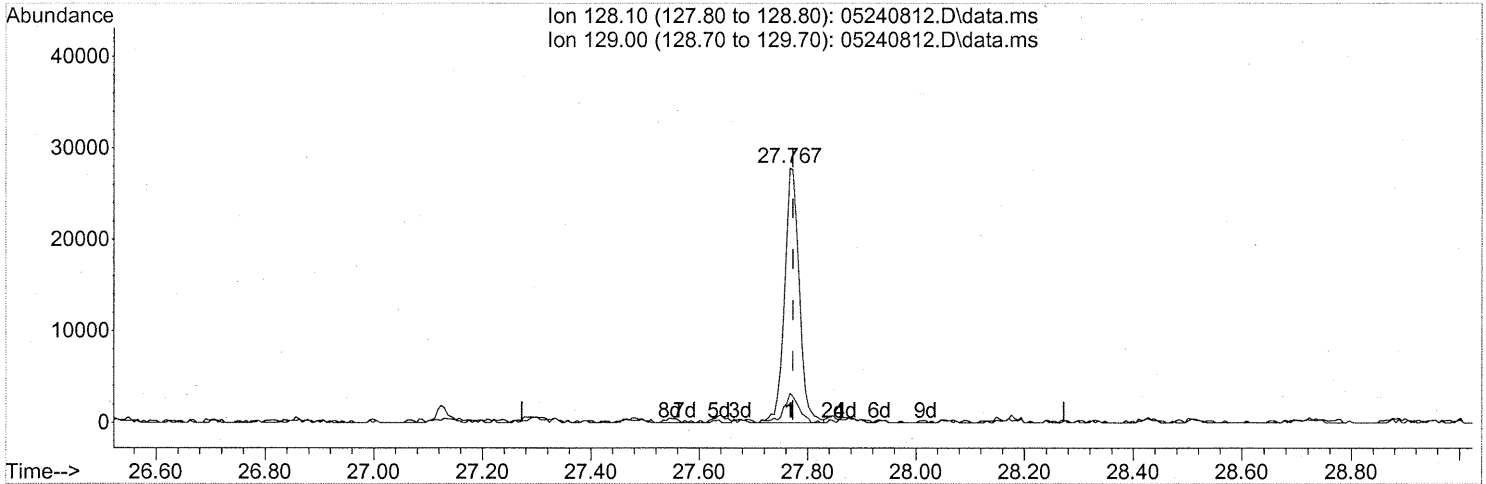
response 972420

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.47
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

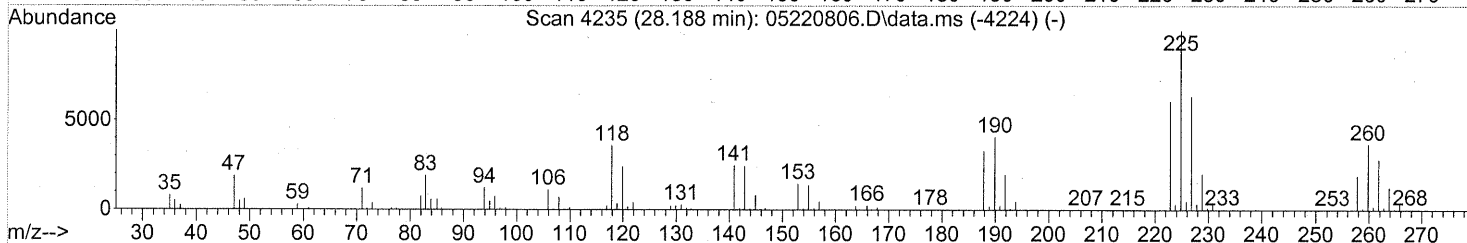
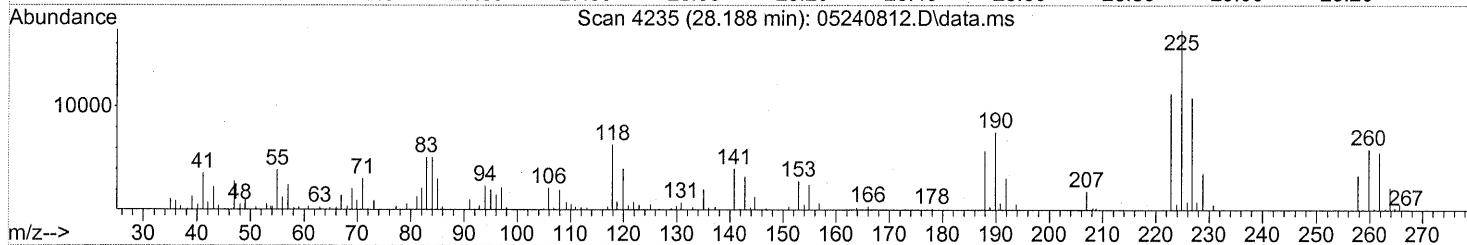
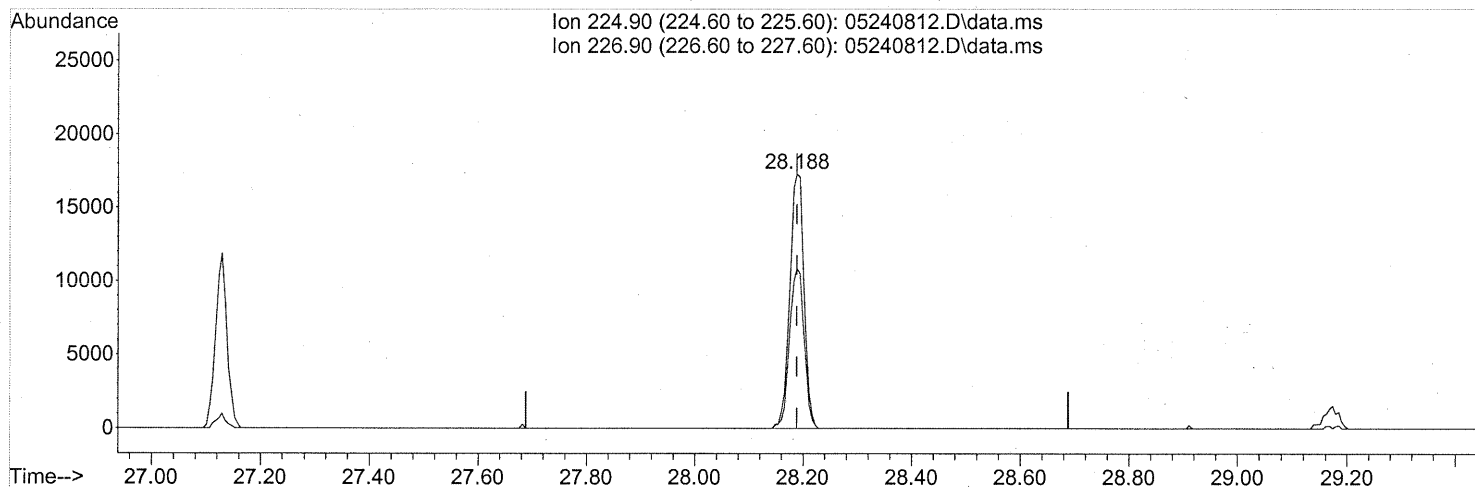
(95) Naphthalene (T)  
 27.767min (-0.006) 0.32ng  
 response 52059

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	11.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 24 20:06:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240812.D\data.ms

(97) Hexachloro-1,3-butadiene (T)

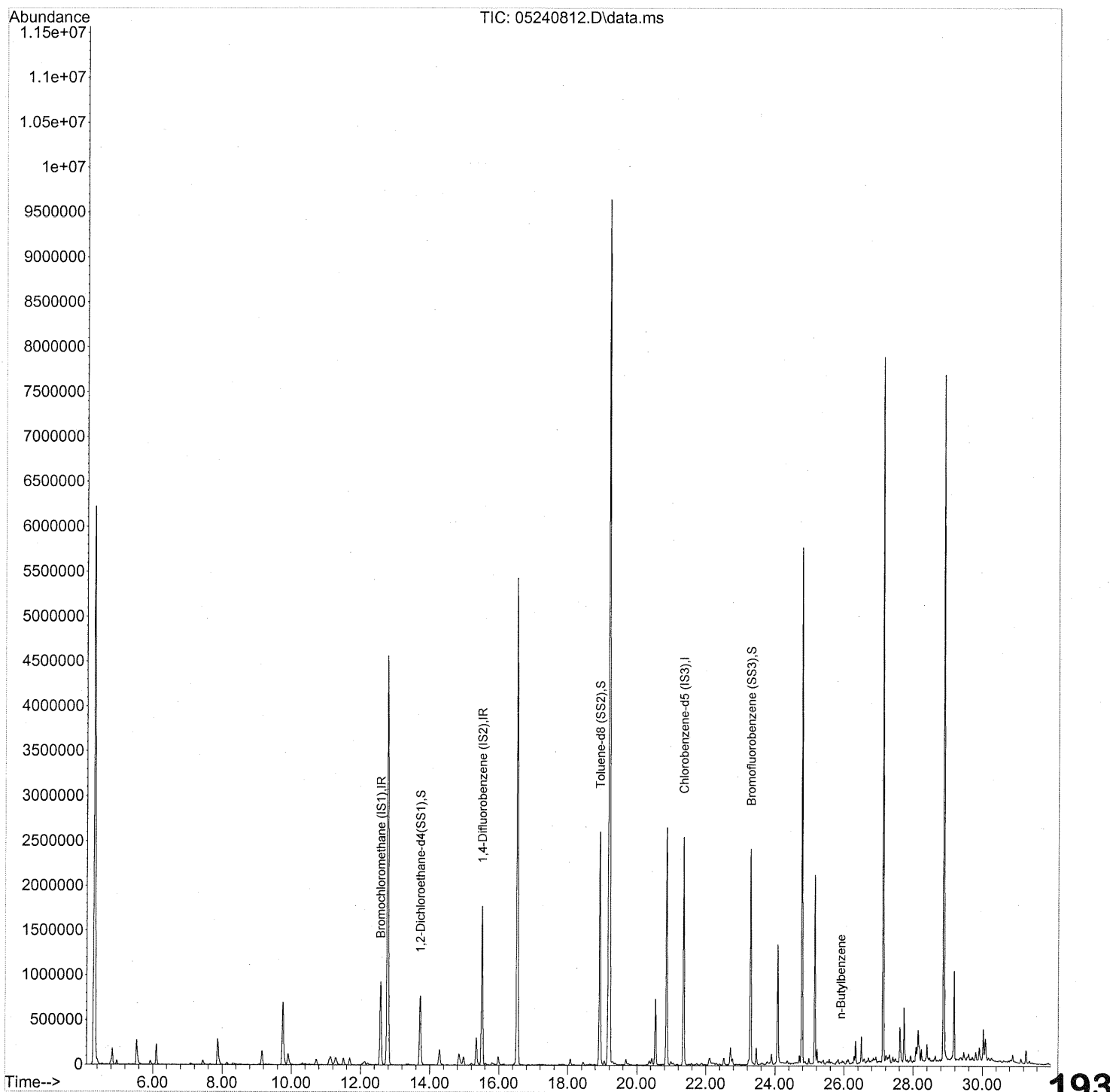
28.188min (-0.000) 0.89ng

response 31280

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	64.29
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240812.D  
Acq On : 24 May 2008 14:37  
Operator : WA  
Sample : P0801442-002 (500ml)  
Misc : ENSR SG39B-05 (-3.5, 3.6)  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 25 20:36:41 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 25 20:36:41 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	483630	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2073700	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	990343	25.000	ng	0.00
<b>System Monitoring Compounds</b>						
2) 1,2-Dichloroethane-d4(...)	13.73	65	791887	23.631	ng	-0.02
Spiked Amount	25.000		Recovery	=	94.52%	
5) Toluene-d8 (SS2)	18.93	98	2179102	24.500	ng	-0.01
Spiked Amount	25.000		Recovery	=	98.00%	
6) Bromofluorobenzene (SS3)	23.29	174	901118	24.915	ng	0.00
Spiked Amount	25.000		Recovery	=	99.64%	
<b>Target Compounds</b>						
7) tert-Butylbenzene	24.88	119	2382	N.D.		Qvalue
8) n-Butylbenzene	25.91	91	8460	0.066 ng	#	51

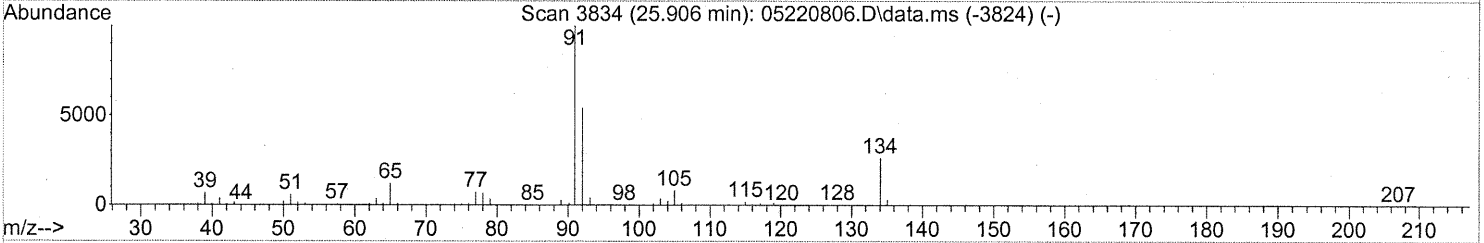
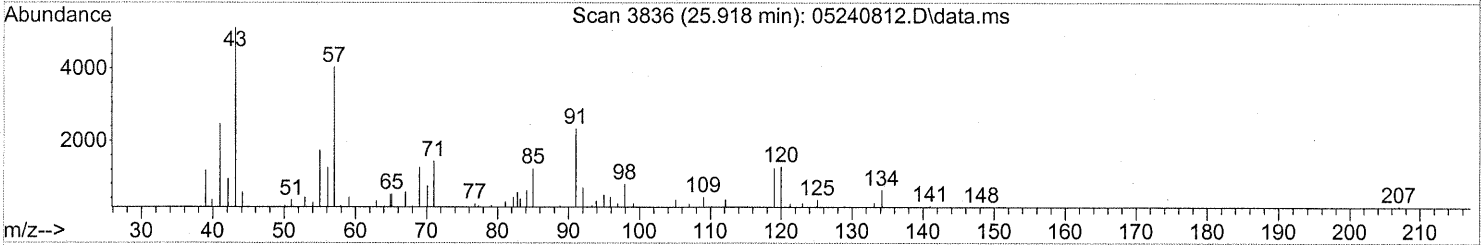
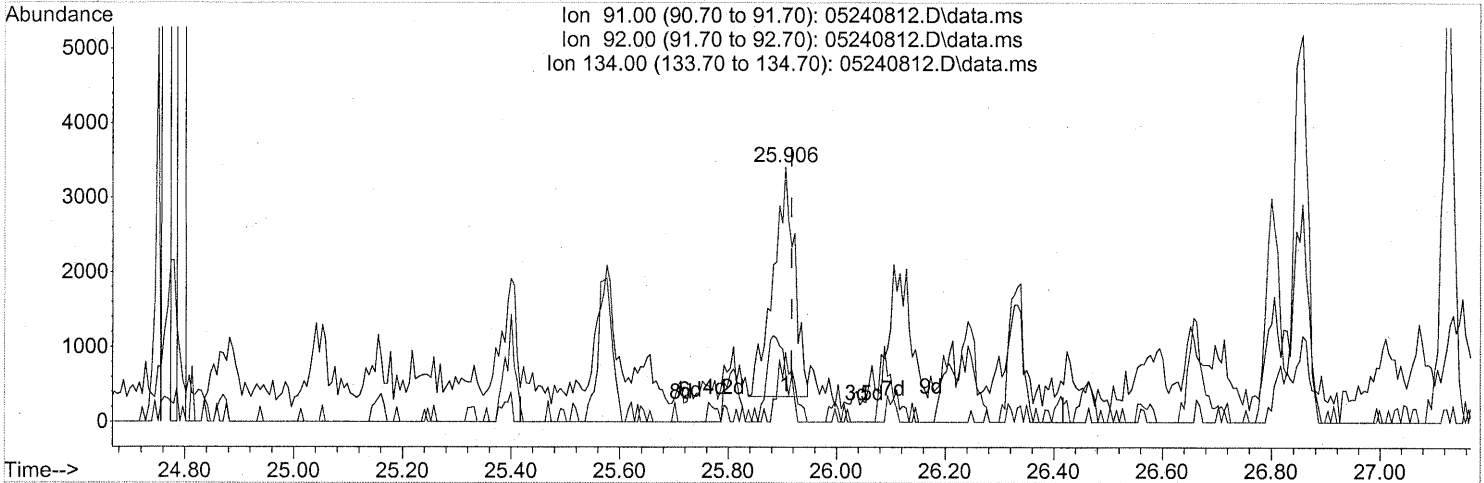
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240812.D  
 Acq On : 24 May 2008 14:37  
 Operator : WA  
 Sample : P0801442-002 (500ml)  
 Misc : ENSR SG39B-05 (-3.5, 3.6)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 25 20:36:41 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene  
 25.906min (-0.011) 0.07ng  
 response 8460

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	21.84#
134.00	28.80	0.00#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00411

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	1.6	0.16	0.42	0.32	0.032	
74-87-3	Chloromethane	ND	0.32	0.16	ND	0.15	0.077	
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	0.32	0.16	ND	0.12	0.062	
74-83-9	Bromomethane	ND	0.32	0.16	ND	0.081	0.041	
75-00-3	Chloroethane	ND	0.32	0.16	ND	0.12	0.060	
64-17-5	Ethanol	4.1	16	0.16	2.2	8.4	0.084	J
67-64-1	Acetone	18	16	0.23	7.7	6.7	0.097	B
75-69-4	Trichlorofluoromethane	1.2	0.32	0.16	0.22	0.056	0.028	
107-13-1	Acrylonitrile	ND	1.6	0.22	ND	0.73	0.10	
75-35-4	1,1-Dichloroethene	1.9	0.32	0.16	0.48	0.080	0.040	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.6	1.6	0.23	0.52	0.52	0.077	J
75-09-2	Methylene Chloride	0.29	1.6	0.16	0.085	0.45	0.045	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.32	0.16	ND	0.10	0.050	
76-13-1	Trichlorotrifluoroethane	0.51	0.32	0.18	0.067	0.041	0.023	
75-15-0	Carbon Disulfide	1.4	1.6	0.38	0.45	0.51	0.12	J
156-60-5	trans-1,2-Dichloroethene	ND	0.32	0.16	ND	0.080	0.040	
75-34-3	1,1-Dichloroethane	0.56	0.32	0.16	0.14	0.078	0.039	
1634-04-4	Methyl tert-Butyl Ether	ND	0.32	0.16	ND	0.088	0.044	
108-05-4	Vinyl Acetate	14	16	0.51	3.9	4.5	0.14	J, M
78-93-3	2-Butanone (MEK)	12	1.6	0.16	4.2	0.54	0.054	
156-59-2	cis-1,2-Dichloroethene	ND	0.32	0.16	ND	0.080	0.040	
108-20-3	Diisopropyl Ether	ND	1.6	0.19	ND	0.38	0.045	
67-66-3	Chloroform	210	0.32	0.19	42	0.065	0.038	

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.

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

Verified By: Re

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00411

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	1.6	0.16	ND	0.38	0.039	
107-06-2	1,2-Dichloroethane	ND	0.32	0.16	ND	0.078	0.039	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.23</b>	0.32	0.16	<b>0.042</b>	0.058	0.029	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.2</b>	0.32	0.16	<b>1.0</b>	0.099	0.049	
56-23-5	<b>Carbon Tetrachloride</b>	<b>1.9</b>	0.32	0.16	<b>0.30</b>	0.050	0.025	
994-05-8	tert-Amyl Methyl Ether	ND	1.6	0.16	ND	0.38	0.038	
78-87-5	1,2-Dichloropropane	ND	0.32	0.16	ND	0.068	0.034	
75-27-4	<b>Bromodichloromethane</b>	<b>5.7</b>	0.32	0.16	<b>0.84</b>	0.047	0.024	
79-01-6	<b>Trichloroethene</b>	<b>2.2</b>	0.32	0.16	<b>0.41</b>	0.059	0.029	
123-91-1	1,4-Dioxane	ND	1.6	0.19	ND	0.44	0.054	
80-62-6	Methyl Methacrylate	ND	1.6	0.24	ND	0.39	0.058	
142-82-5	n-Heptane	ND	1.6	0.20	ND	0.39	0.049	
10061-01-5	cis-1,3-Dichloropropene	ND	1.6	0.16	ND	0.35	0.036	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.68</b>	1.6	0.18	<b>0.17</b>	0.39	0.043	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	1.6	0.20	ND	0.35	0.044	
79-00-5	1,1,2-Trichloroethane	ND	0.32	0.16	ND	0.058	0.029	
108-88-3	<b>Toluene</b>	<b>1.1</b>	1.6	0.16	<b>0.30</b>	0.42	0.042	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.61</b>	1.6	0.24	<b>0.15</b>	0.39	0.059	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.32	0.21	ND	0.037	0.025	
106-93-4	1,2-Dibromoethane	ND	0.32	0.17	ND	0.041	0.022	
111-65-9	n-Octane	ND	1.6	0.16	ND	0.34	0.034	
127-18-4	<b>Tetrachloroethene</b>	<b>92</b>	0.32	0.16	<b>14</b>	0.047	0.023	
108-90-7	Chlorobenzene	ND	0.32	0.16	ND	0.069	0.035	

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: RC

Date: 6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG37B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-003

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00411

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -3.1      Final Pressure (psig): 3.6

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	0.50	1.6	0.20	0.11	0.36	0.045	J
179601-23-1	m,p-Xylenes	2.3	1.6	0.41	0.54	0.36	0.095	
75-25-2	Bromoform	ND	1.6	0.24	ND	0.15	0.023	
100-42-5	Styrene	ND	1.6	0.24	ND	0.37	0.056	
95-47-6	o-Xylene	0.87	1.6	0.20	0.20	0.36	0.046	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.32	0.20	ND	0.046	0.029	
98-82-8	Cumene	ND	1.6	0.18	ND	0.32	0.036	
103-65-1	n-Propylbenzene	ND	1.6	0.16	ND	0.32	0.033	
622-96-8	4-Ethyltoluene	0.24	1.6	0.18	0.049	0.32	0.037	J
108-67-8	1,3,5-Trimethylbenzene	0.33	1.6	0.19	0.067	0.32	0.039	J
98-83-9	alpha-Methylstyrene	ND	1.6	0.23	ND	0.33	0.048	
95-63-6	1,2,4-Trimethylbenzene	0.90	1.6	0.22	0.18	0.32	0.044	J
100-44-7	Benzyl Chloride	ND	0.32	0.27	ND	0.061	0.053	
541-73-1	1,3-Dichlorobenzene	ND	0.32	0.20	ND	0.053	0.033	
106-46-7	1,4-Dichlorobenzene	58	0.32	0.18	9.7	0.053	0.029	
135-98-8	sec-Butylbenzene	ND	1.6	0.18	ND	0.29	0.033	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.21	1.6	0.21	0.039	0.29	0.037	J
95-50-1	1,2-Dichlorobenzene	ND	0.32	0.21	ND	0.053	0.035	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.6	0.24	ND	0.16	0.025	
120-82-1	1,2,4-Trichlorobenzene	ND	0.32	0.24	ND	0.043	0.032	
91-20-3	Naphthalene	1.6	0.63	0.23	0.30	0.12	0.045	
87-68-3	Hexachlorobutadiene	ND	0.32	0.28	ND	0.030	0.027	
98-06-6	tert-Butylbenzene	ND	0.63	0.16	ND	0.12	0.029	
104-51-8	n-Butylbenzene	0.38	0.63	0.16	0.069	0.12	0.029	J

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.

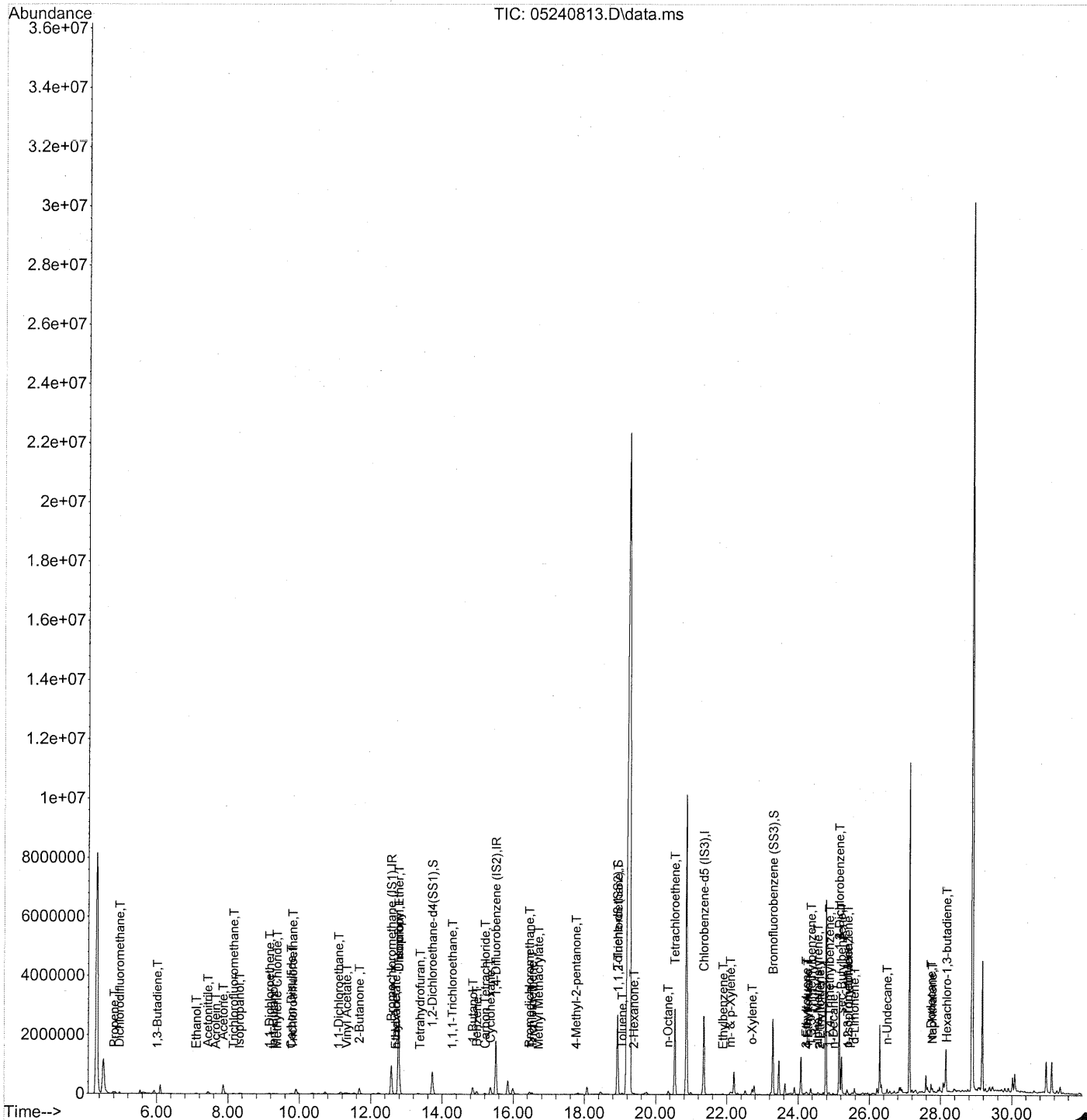
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: *Re*

Date: *6/2/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	502403	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2138148	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1047220	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
33) 1,2-Dichloroethane-d4(...)	13.73	65	808737	23.232	ng	0.00
Spiked Amount				25.000		
				Recovery =		92.92%
57) Toluene-d8 (SS2)	18.93	98	2255487	23.982	ng	0.00
Spiked Amount				25.000		
				Recovery =		95.92%
73) Bromofluorobenzene (SS3)	23.29	174	956196	25.001	ng	0.00
Spiked Amount				25.000		
				Recovery =		100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.81	42	20467	0.516	ng	# 86
3) Dichlorodifluoromethane	4.97	85	48074	0.657	ng	98
4) Chloromethane	5.31	50	569	N.D.	✓	
5) Freon 114	5.54	135	924	N.D.	✓	
6) Vinyl Chloride	5.75	62	52	N.D.	✓	
7) 1,3-Butadiene	6.02	54	1808	0.051	ng	# 5
8) Bromomethane	6.51	94	903	N.D.	✓	
9) Chloroethane	6.83	64	186	N.D.	✓	
10) Ethanol	7.11	45	34071m	1.290	ng	
11) Acetonitrile	7.43	41	125477	1.643	ng	95
12) Acrolein	7.66	56	7347	0.389	ng	86
13) Acetone	7.87	58	156331	5.780	ng	# 61
14) Trichlorofluoromethane	8.16	101	24776	0.395	ng	99
15) Isopropanol	8.33	45	54183	0.628	ng	96
16) Acrylonitrile	8.62	53	970	N.D.	✓	
17) 1,1-Dichloroethene	9.17	96	16568	0.600	ng	# 79
18) tert-Butanol	9.27	59	36502	0.498	ng	92
19) Methylene Chloride	9.38	84	2819	0.093	ng	# 77
20) Allyl Chloride	9.55	41	113	N.D.	✓	
21) Trichlorotrifluoroethane	9.82	151	4634	0.162	ng	90
22) Carbon Disulfide	9.77	76	51071	0.445	ng	96
23) trans-1,2-Dichloroethene	10.73	61	1131	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	9226	0.176	ng	94
25) Methyl tert-Butyl Ether	11.21	73	3768	N.D.	✓	
26) Vinyl Acetate	11.33	86	21798	4.361	ng	M# 1
27) 2-Butanone	11.68	72	77129	3.907	ng	# 90
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	313185	12.948	ng	NR# 1
30) Ethyl Acetate	12.70	61	889	0.083	ng	89
31) n-Hexane	12.70	57	3841	0.071	ng	# 71

**200**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	2986644	65.192	ng	100
34) Tetrahydrofuran	13.38	72	3653	0.194	ng	97
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.73	62	293	N.D.	✓	
38) 1,1,1-Trichloroethane	14.29	97	3537	0.073	ng	82
39) Isopropyl Acetate	14.99	61	772	N.D.		
40) 1-Butanol	14.87	56	206939	7.041	ng	86
41) Benzene	14.98	78	114414	1.022	ng	98
42) Carbon Tetrachloride	15.21	117	26049	0.604	ng	96
43) Cyclohexane	15.36	84	13719	0.315	ng	# 1
44) tert-Amyl Methyl Ether	15.92	73	1254	N.D.	✓	
45) 1,2-Dichloropropane	16.19	63	585	N.D.	✓	
46) Bromodichloromethane	16.46	83	67738	1.790	ng	98
47) Trichloroethene	16.53	130	23699	0.690	ng	96
48) 1,4-Dioxane	16.52	88	279	N.D.	✓	
49) Isooctane	16.60	57	5277	N.D.		
50) Methyl Methacrylate	16.72	100	941	<del>0.084</del>	ng NR#	1
51) n-Heptane	16.98	71	1204	N.D.	✓	
52) cis-1,3-Dichloropropene	17.82	75	612	N.D.	✓	
53) 4-Methyl-2-pentanone	17.77	58	6381	0.215	ng	77
54) trans-1,3-Dichloropropene	18.43	75	83	N.D.	✓	
55) 1,1,2-Trichloroethane	18.94	97	198297	<del>7.168</del>	ng NR#	8
58) Toluene	19.06	91	45127	0.353	ng	95
59) 2-Hexanone	19.38	43	17009	0.193	ng	76
60) Dibromochloromethane	0.00	129	0	N.D.	✓	
61) 1,2-Dibromoethane	19.73	107	55	N.D.	✓	
62) Butyl Acetate	20.19	43	875	N.D.		
63) n-Octane	20.35	57	1675	<del>0.059</del>	ng NR#	73
64) Tetrachloroethene	20.55	166	1099362	29.061	ng	100
65) Chlorobenzene	21.42	112	1327	N.D.	✓	
66) Ethylbenzene	21.89	91	22966	0.157	ng	89
67) m- & p-Xylene	22.10	91	72657	0.741	ng	91
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	22.57	104	2285	N.D.	✓	
70) o-Xylene	22.71	91	28991	0.274	ng	97
71) n-Nonane	22.98	43	3650	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.67	83	241	N.D.	✓	
74) Cumene	23.46	105	1744	N.D.	✓	
75) alpha-Pinene	23.95	93	2811	N.D.		
76) n-Propylbenzene	24.10	91	8731	N.D.	✓	
77) 3-Ethyltoluene	24.23	105	21916	0.146	ng	96
78) 4-Ethyltoluene	24.28	105	10668	0.076	ng	95
79) 1,3,5-Trimethylbenzene	24.37	105	13169	0.104	ng	89

201

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.56	118	3890	<del>0.057</del>	ng	90
81) 2-Ethyltoluene	24.61	105	9525	0.063	ng	91
82) 1,2,4-Trimethylbenzene	<u>24.88</u>	105	36550	<u>0.284</u>	ng	88
83) n-Decane	24.98	57	14060	0.199	ng #	57
84) Benzyl Chloride	25.05	91	3140	N.D.	✓	
85) 1,3-Dichlorobenzene	25.16	146	1435075	<del>17.842</del>	ng NR	100
86) 1,4-Dichlorobenzene	<u>25.16</u>	146	1435075	<u>18.405</u>	ng	99
87) sec-Butylbenzene	25.21	105	19638	<del>0.119</del>	ng NR#	1
88) p-Isopropyltoluene	<u>25.40</u>	119	9034	<u>0.067</u>	ng #	69
89) 1,2,3-Trimethylbenzene	25.40	105	13140	0.104	ng	94
90) 1,2-Dichlorobenzene	<u>25.16</u>	146	1435075	<del>48.812</del>	ng NR	100
91) d-Limonene	25.58	68	26606	0.519	ng	90
92) 1,2-Dibromo-3-Chloropr...	26.50	157	268	N.D.	✓	
93) n-Undecane	26.50	57	51240	0.692	ng #	68
94) 1,2,4-Trichlorobenzene	27.63	180	638	N.D.	✓	
95) Naphthalene	<u>27.77</u>	128	84617	<u>0.499</u>	ng	89
96) n-Dodecane	27.73	57	93312	<u>1.267</u>	ng	83
97) Hexachloro-1,3-butadiene	28.18	225	2543	<del>0.068</del>	ng	86

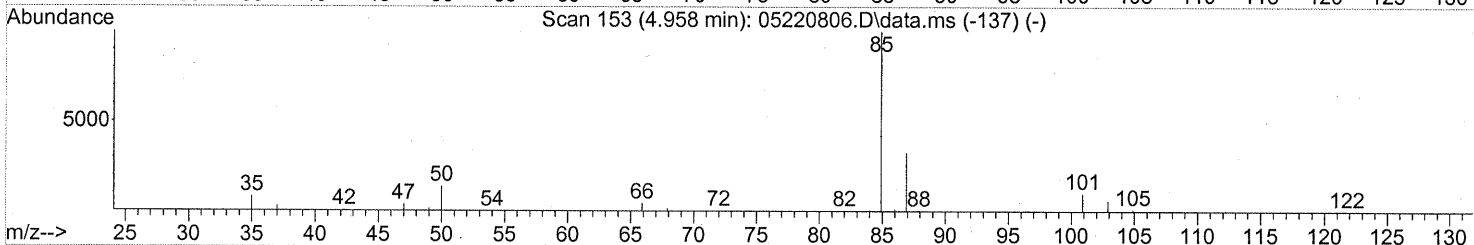
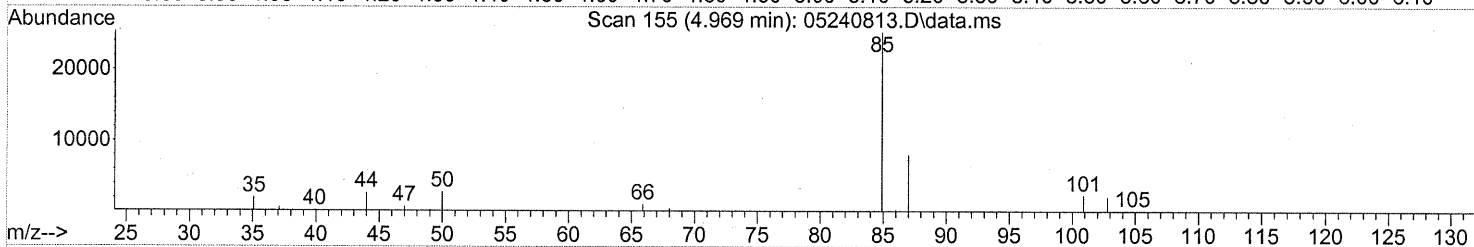
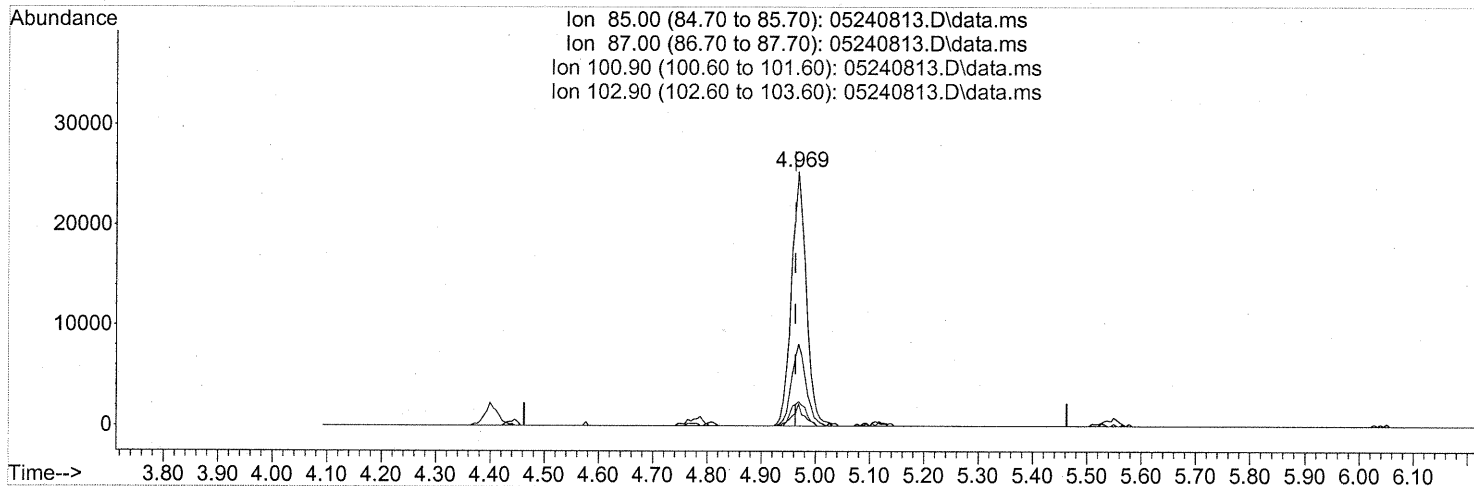
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(3) Dichlorodifluoromethane (T)

4.969min (+0.006) 0.66ng

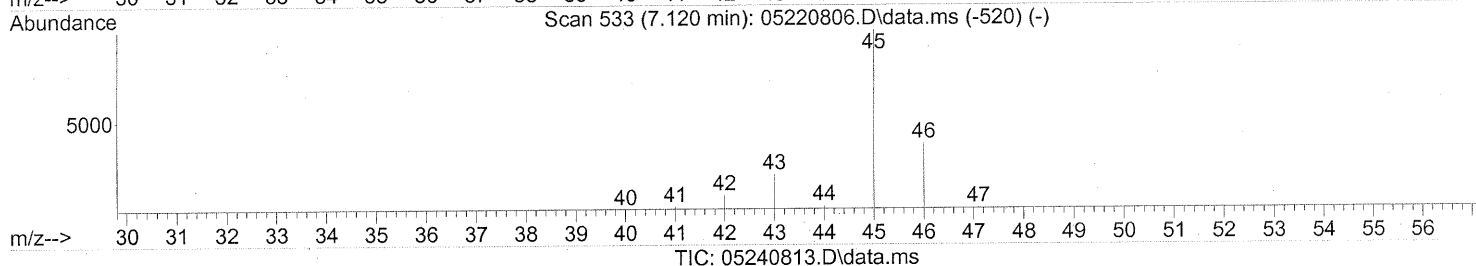
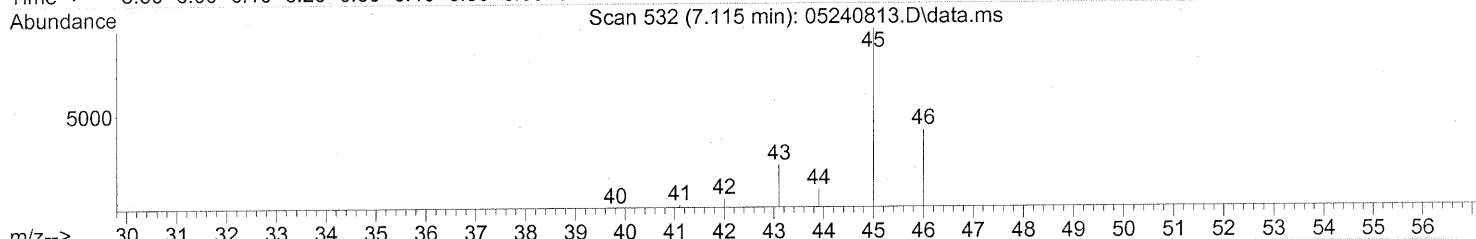
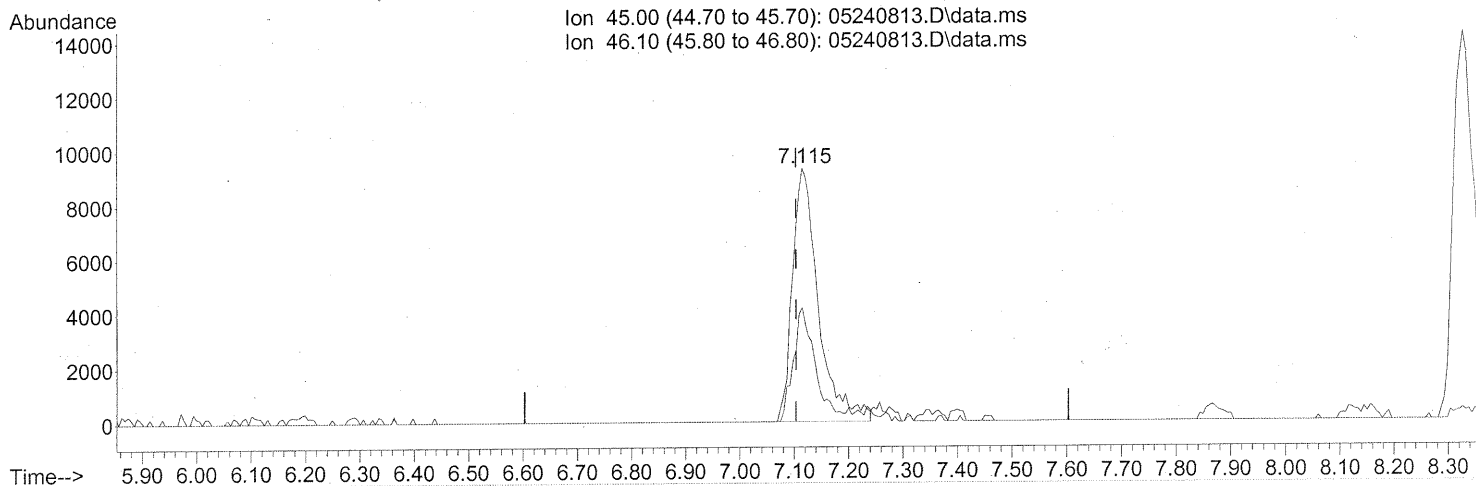
response 48074

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.18
100.90	9.30	9.70
102.90	6.00	6.16

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA 4  
 Sample : P0801422-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:20:40 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.115min (+0.011) 1.17ng

response 30811

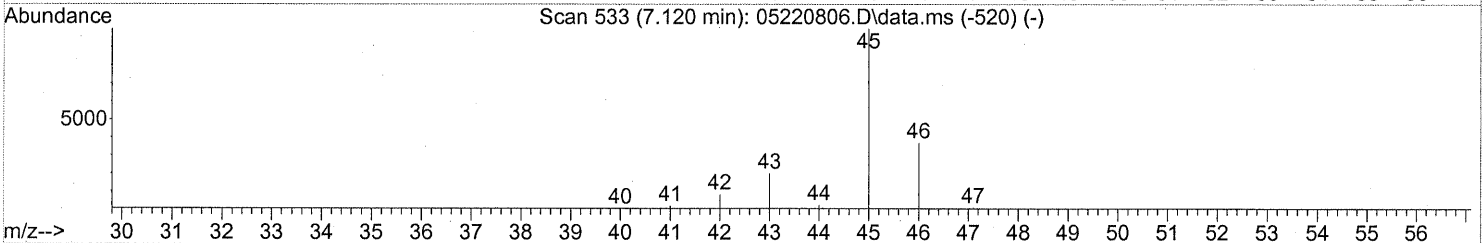
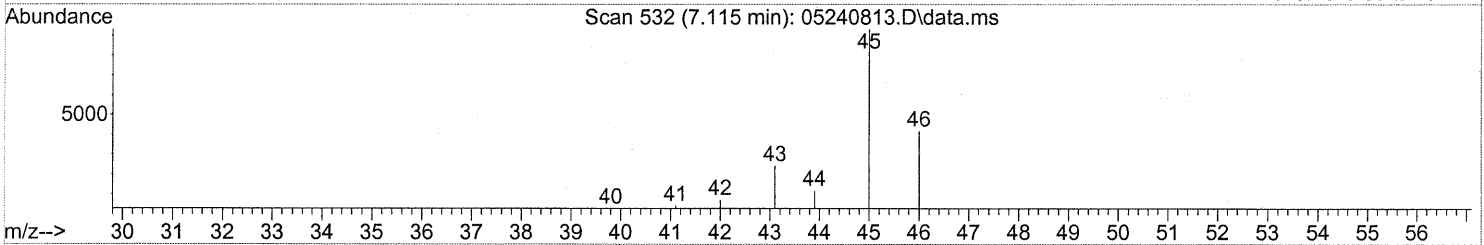
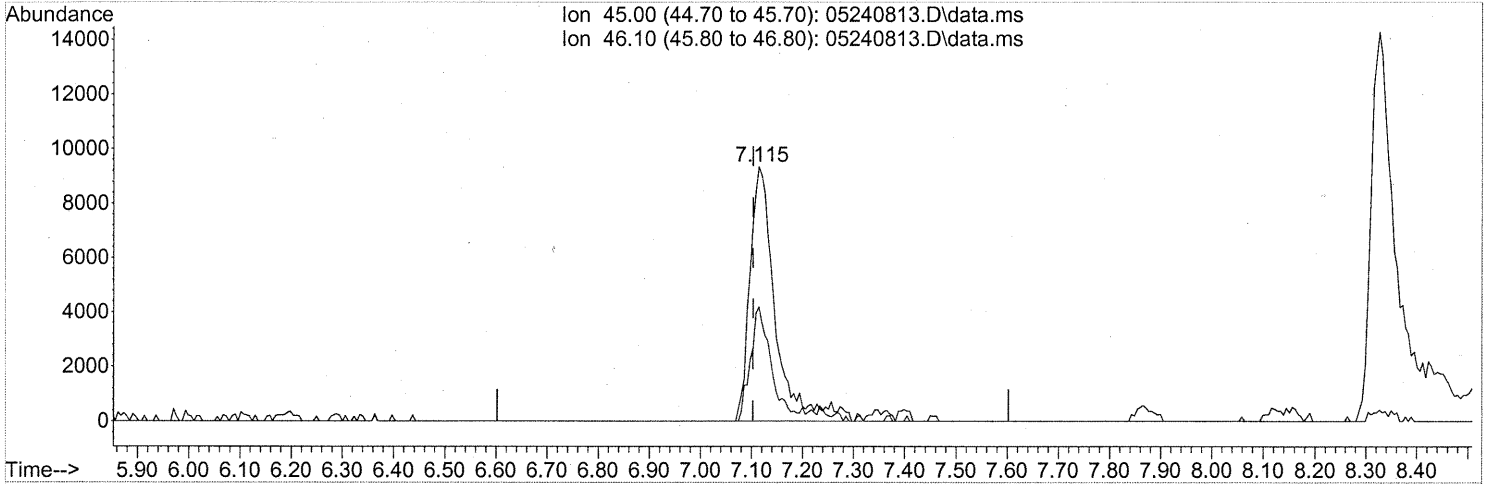
*tailing*

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	40.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(10) Ethanol (T)  
 7.115min (+0.011) 1.29ng m

response 34071

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.51
0.00	0.00	0.00
0.00	0.00	0.00

*incl tailing*

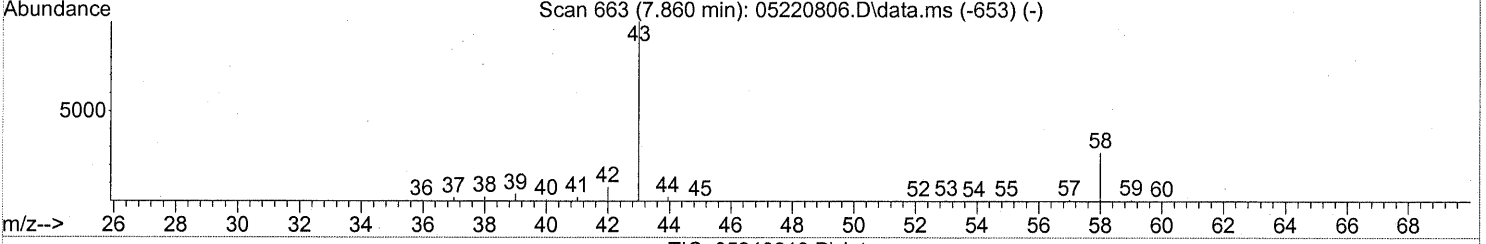
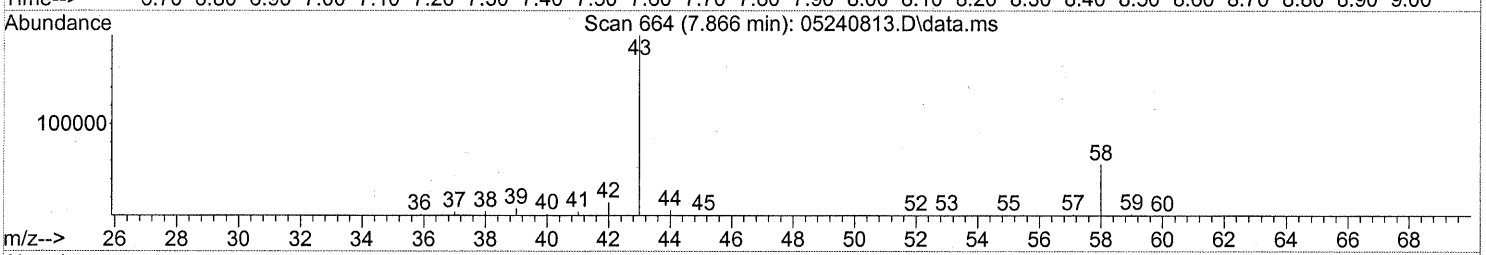
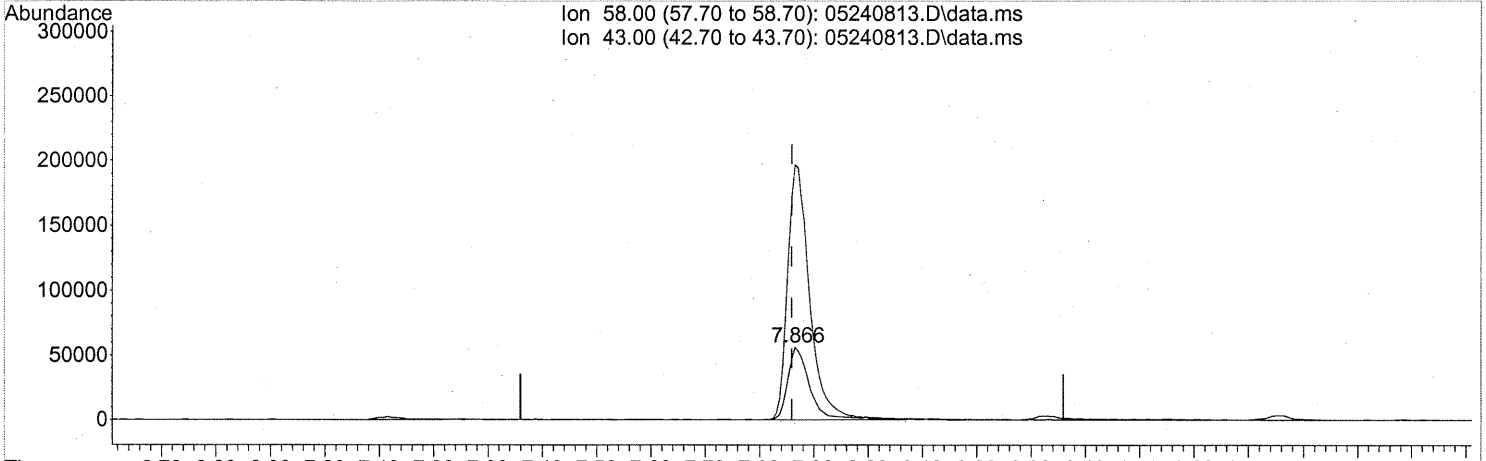
*WA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

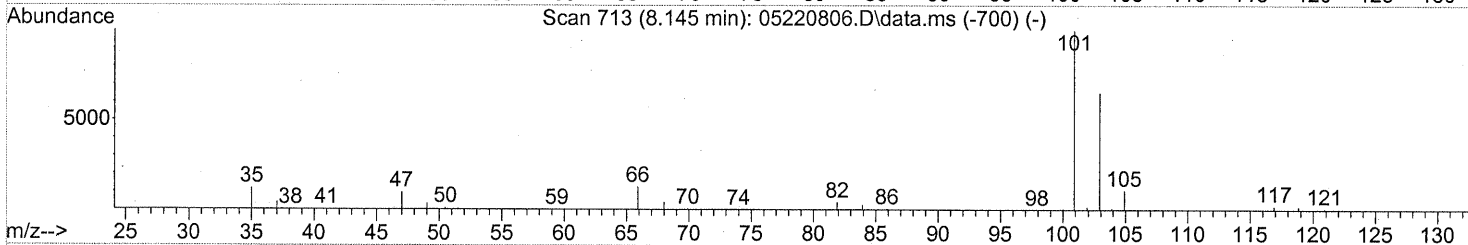
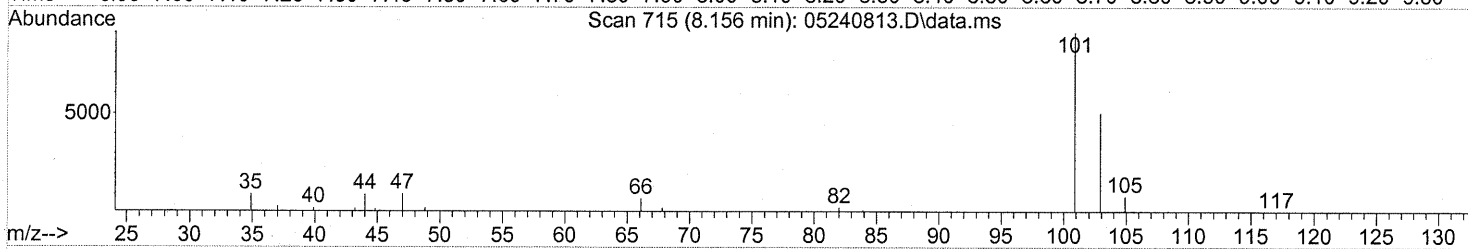
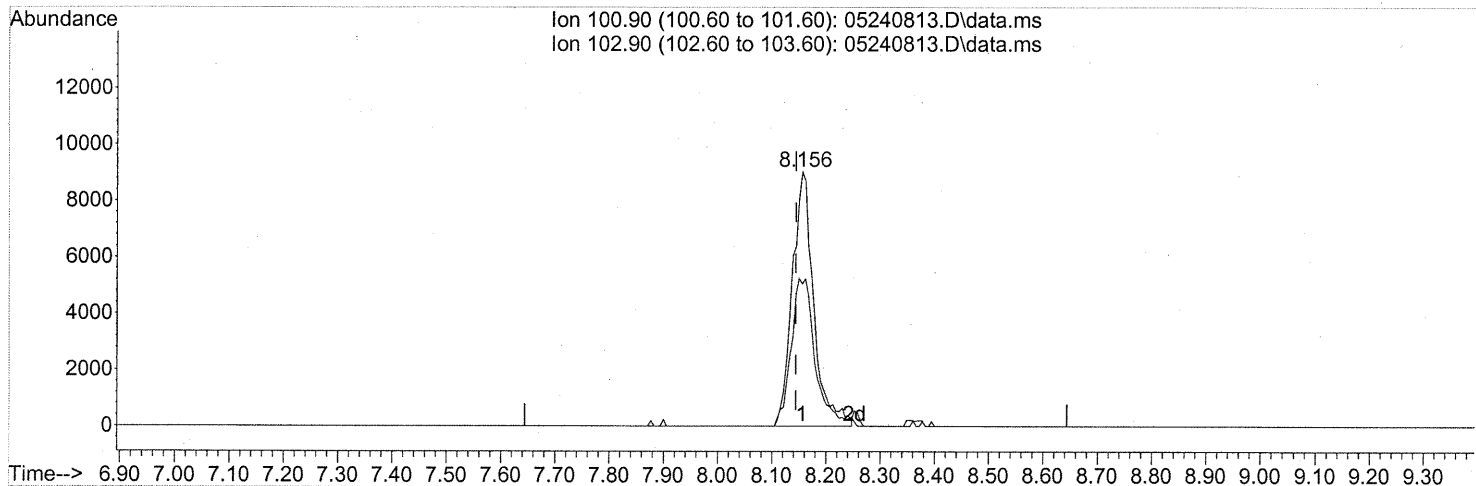
(13) Acetone (T)  
 7.866min (+0.006) 5.78ng  
 response 156331

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	357.27#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(14) Trichlorofluoromethane (T)

8.156min (+0.011) 0.39ng

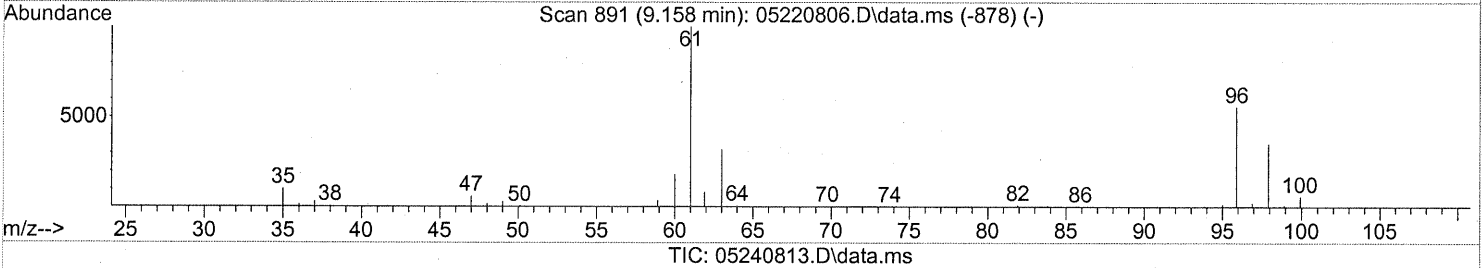
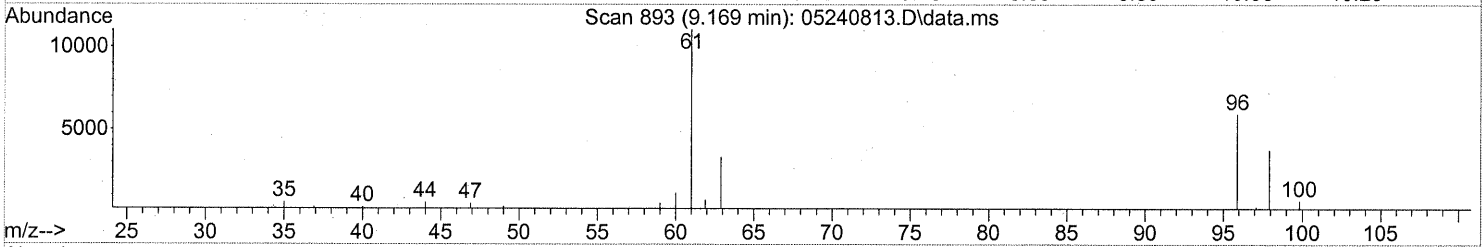
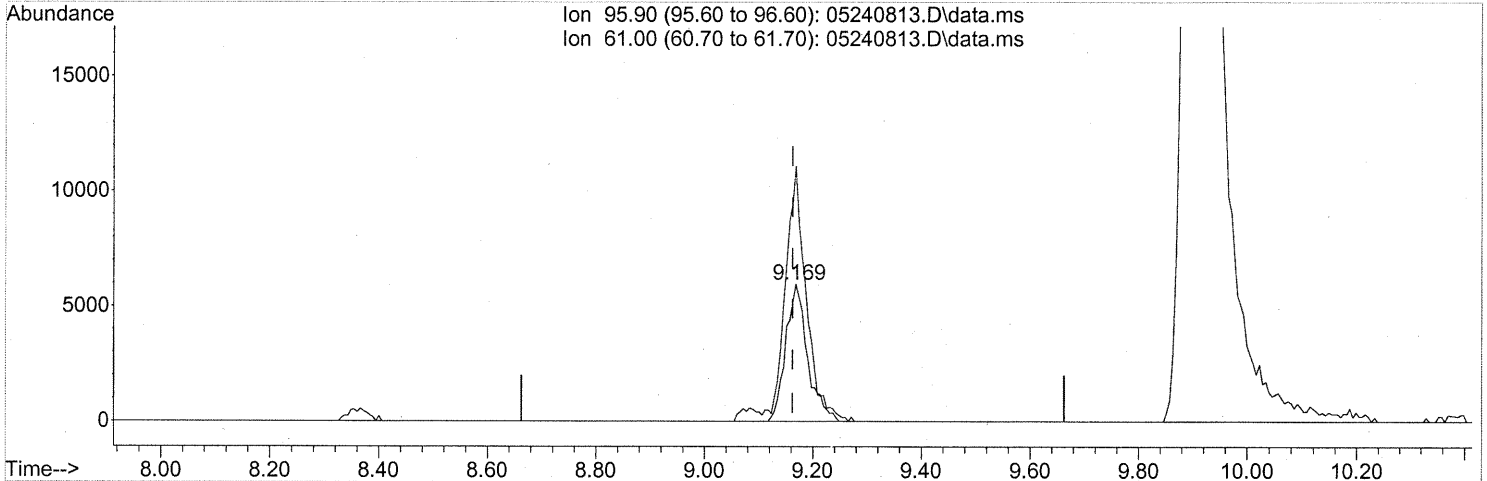
response 24776

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	65.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.169min (+0.006) 0.60ng

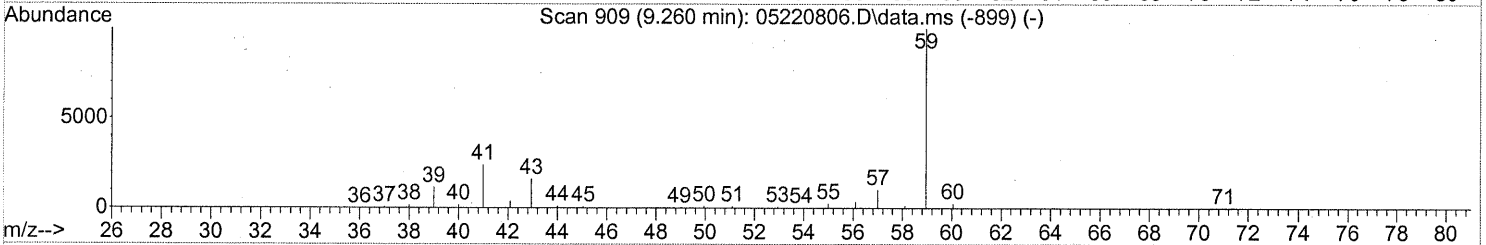
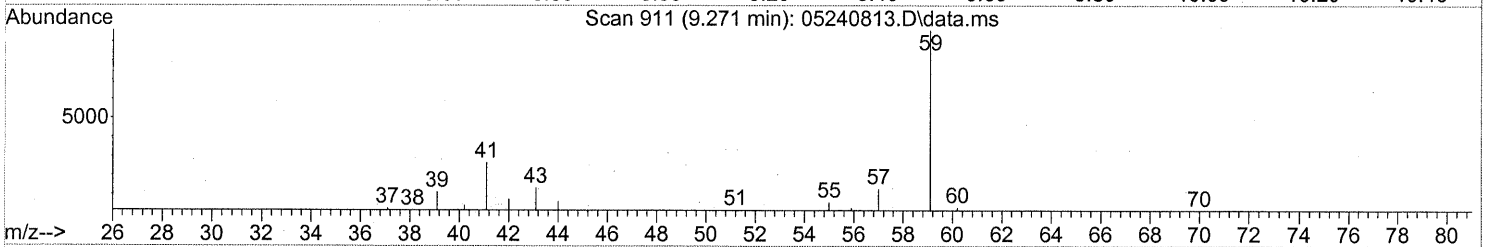
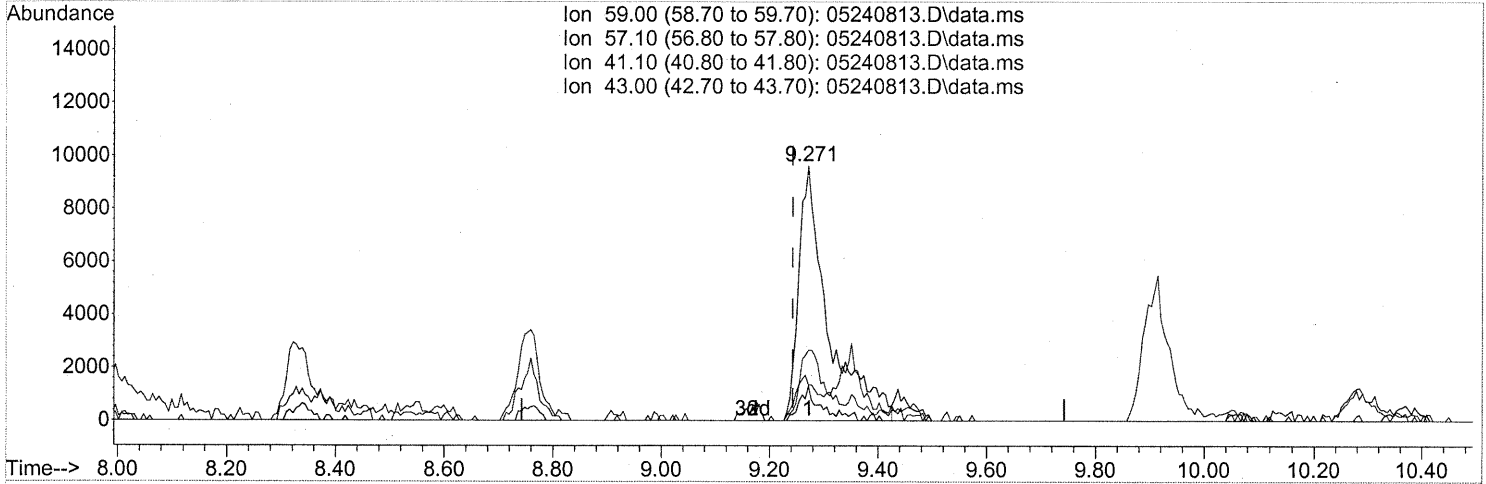
response 16568

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	177.75#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(18) tert-Butanol (T)

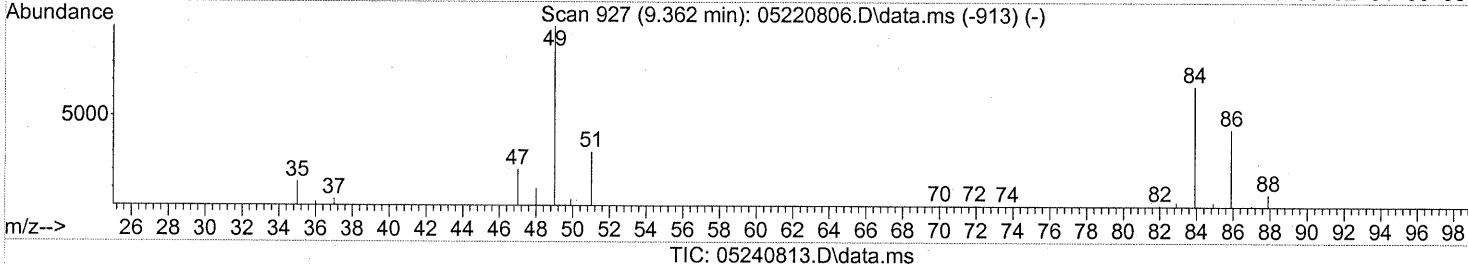
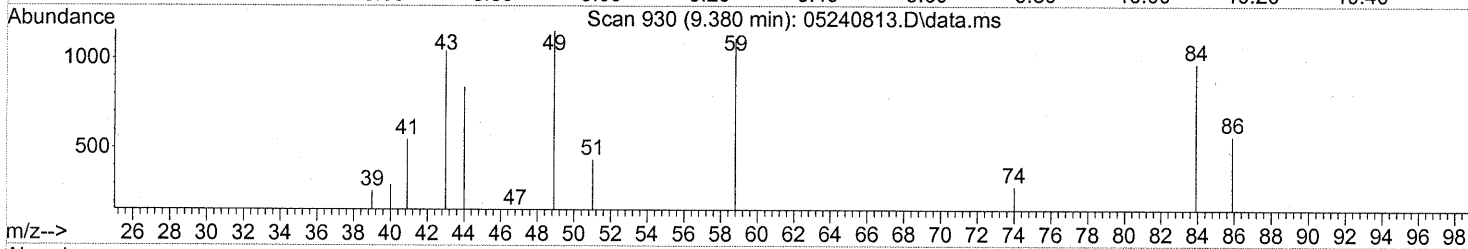
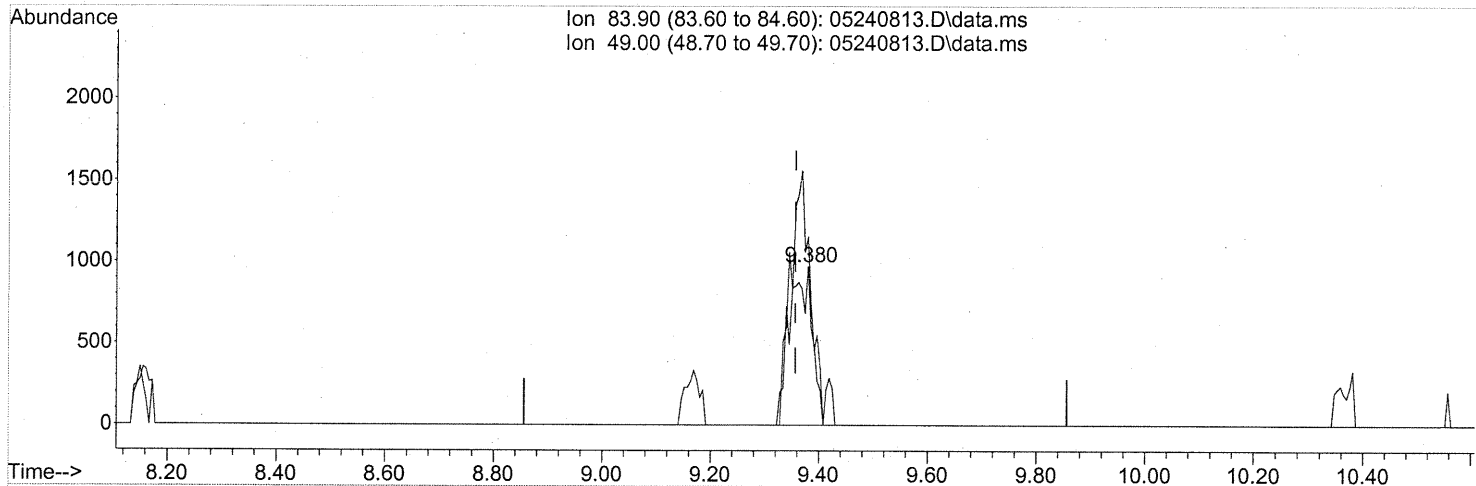
9.271min (+0.029) 0.50ng  
 response 36502

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.11
41.10	20.10	25.04
43.00	12.30	13.88

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

9.380min (+0.023) 0.09ng

response 2819

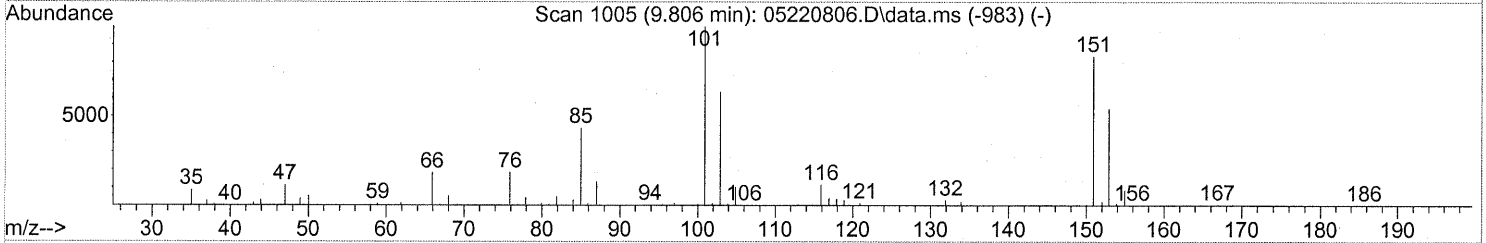
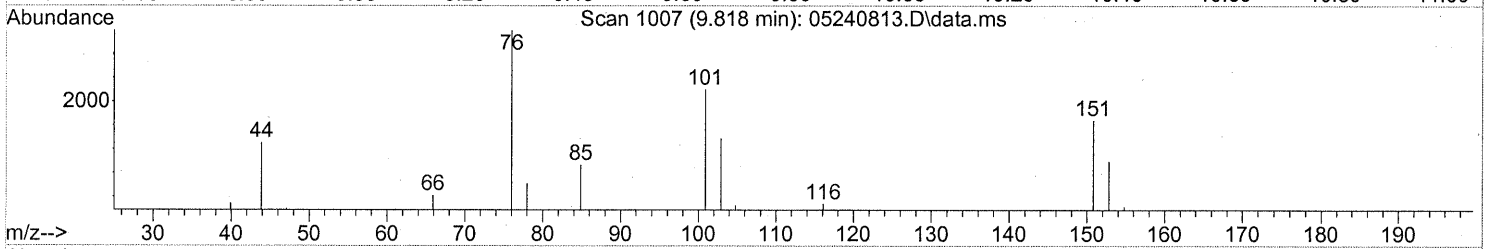
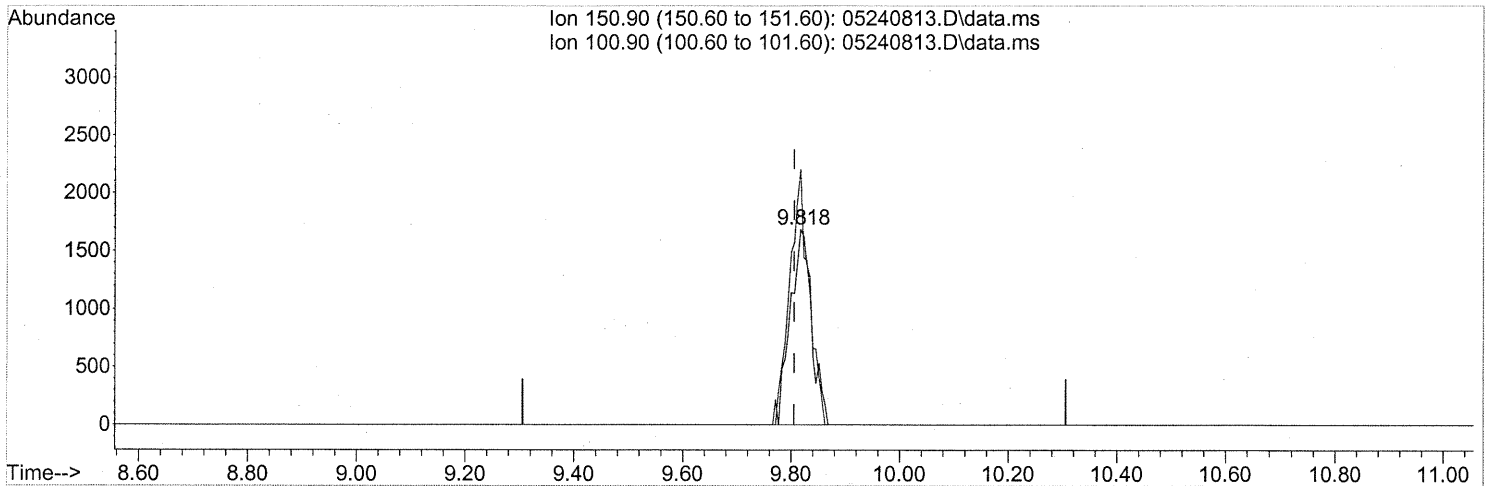
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	140.65#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.818min (+0.011) 0.16ng

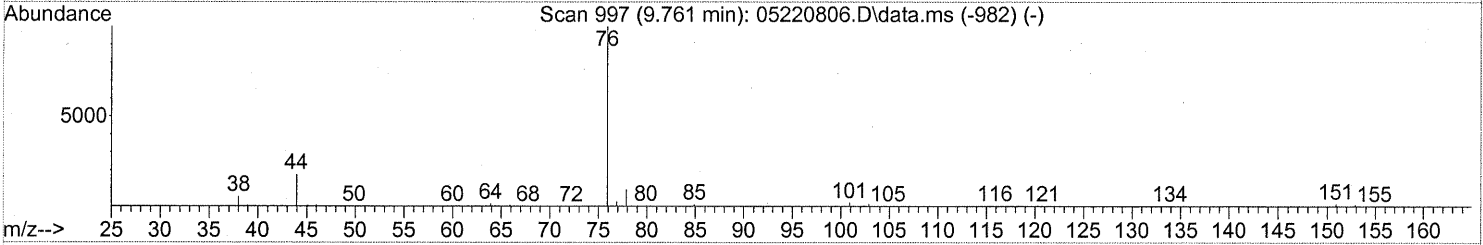
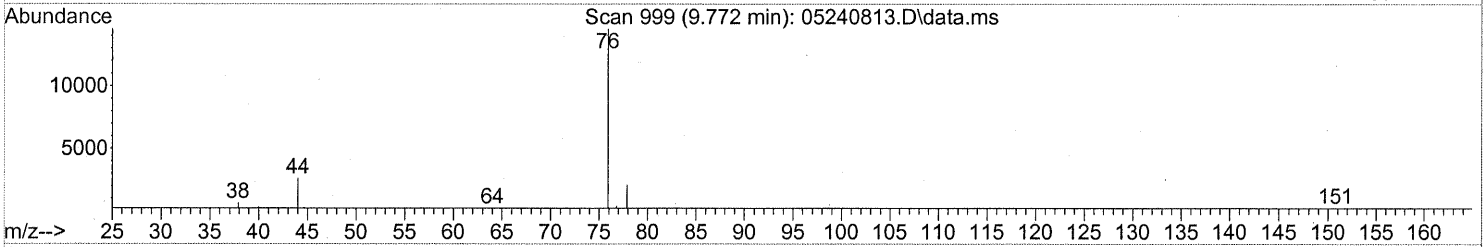
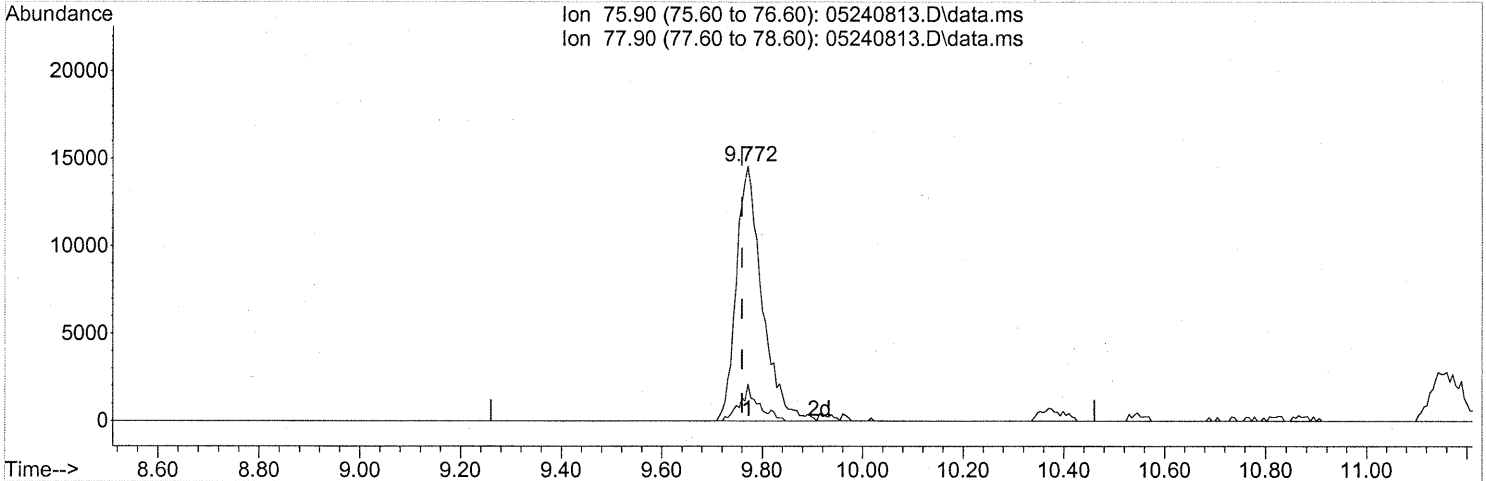
response 4634

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	115.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240813.D  
Acq On : 24 May 2008 15:17  
Operator : WA  
Sample : P0801442-003 (500ml)  
Misc : ENSR SG37B-20 (-3.1, 3.6)  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240813.D\data.ms

(22) Carbon Disulfide (T)

9.772min (+0.011) 0.45ng

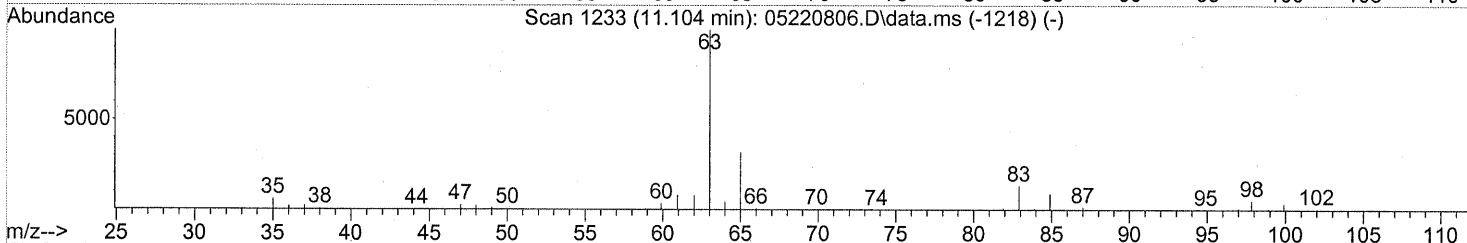
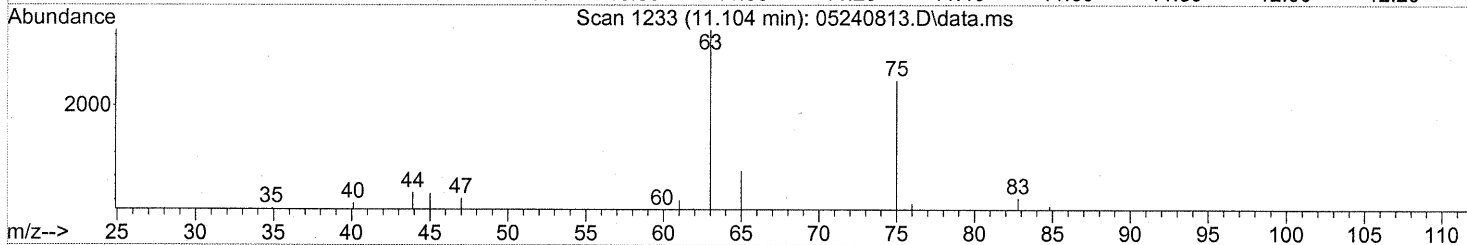
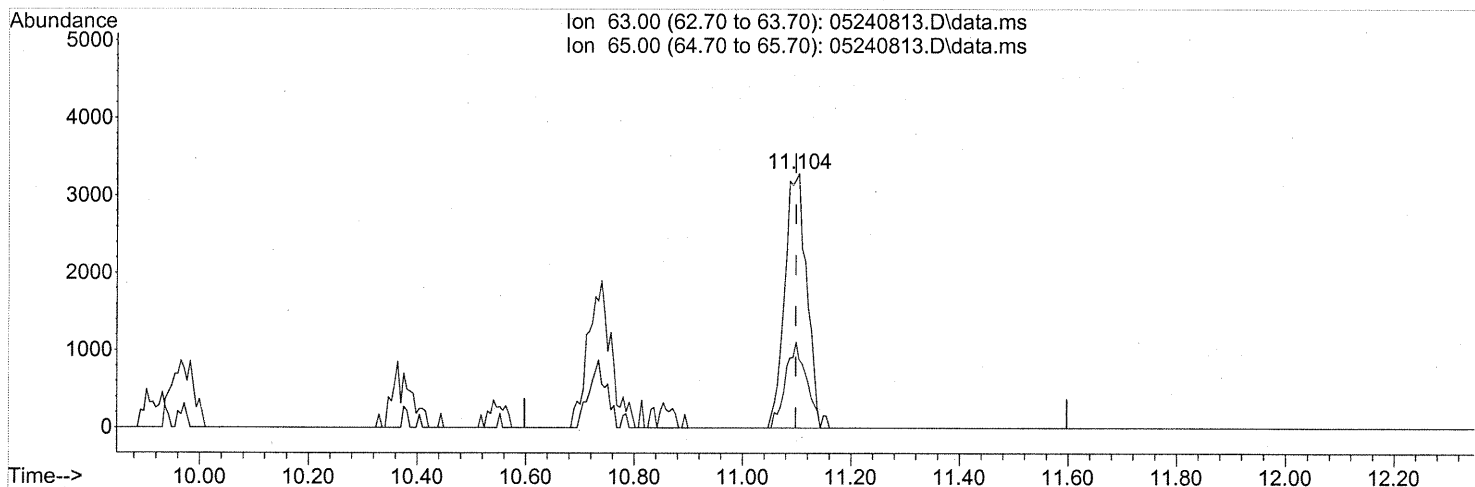
response 51071

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	10.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(24) 1,1-Dichloroethane (T)

11.104min (+0.006) 0.18ng

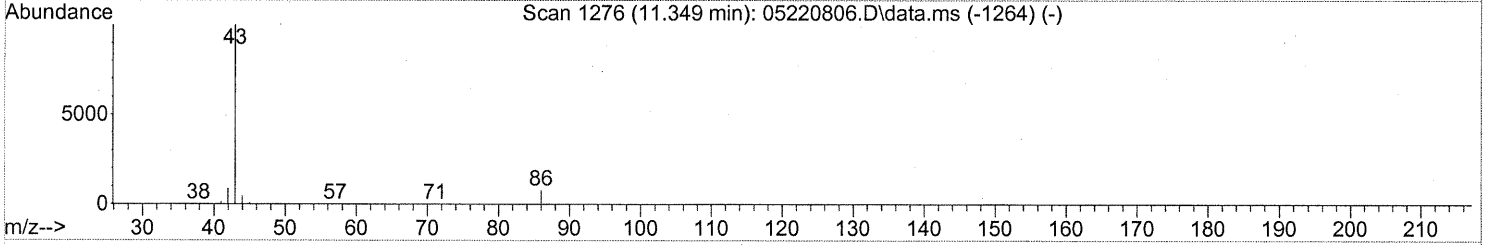
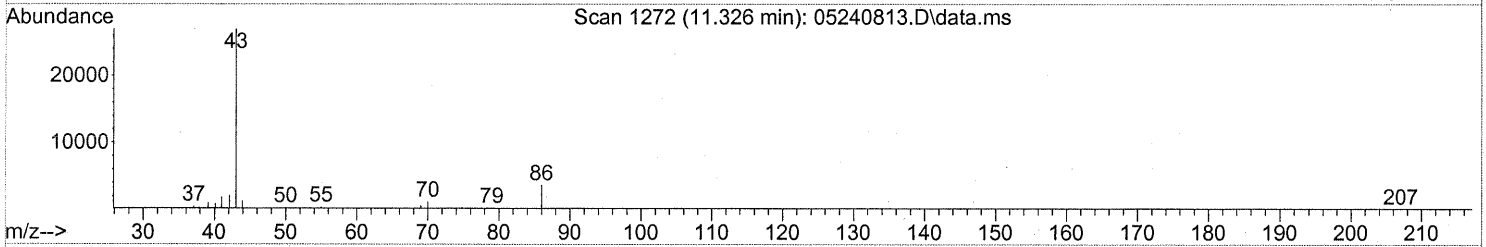
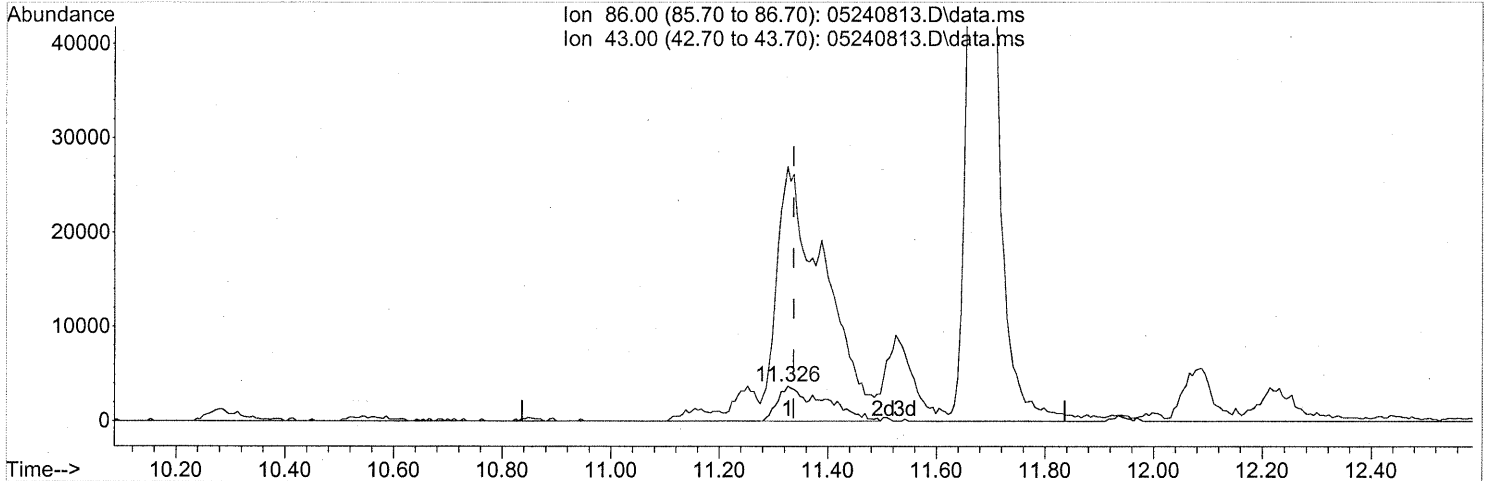
response 9226

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	32.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(26) Vinyl Acetate (T)

11.326min (-0.011) 4.36ng

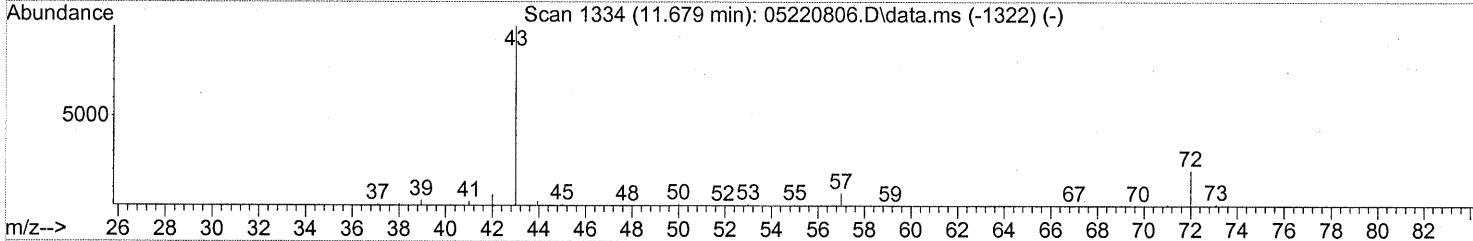
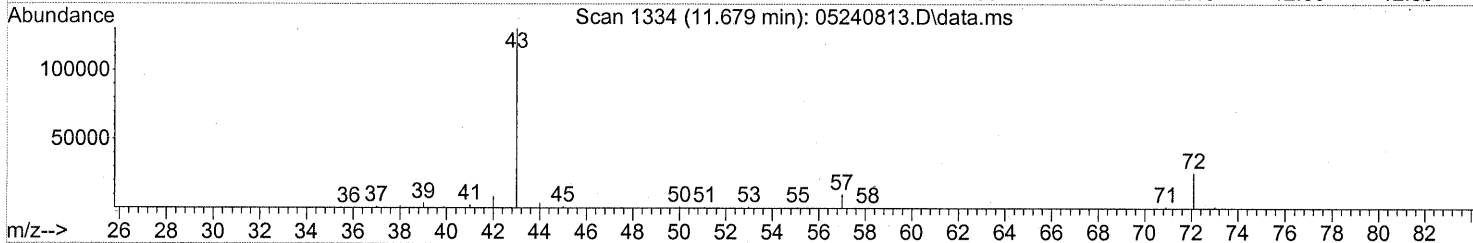
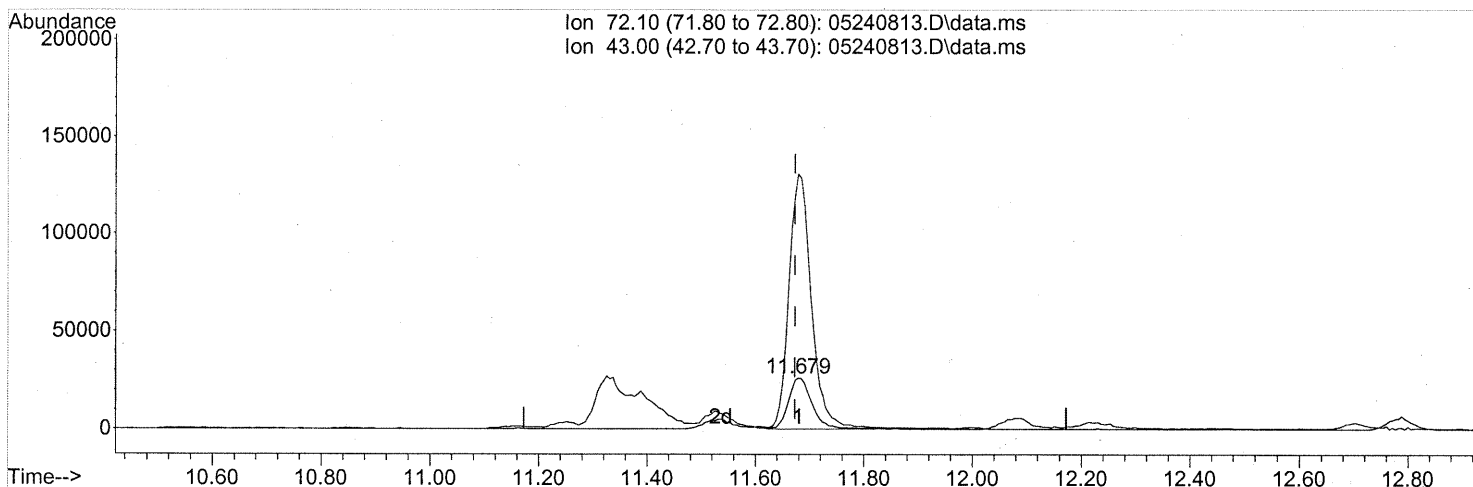
response 21798

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	729.08#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.679min (+0.006) 3.91ng

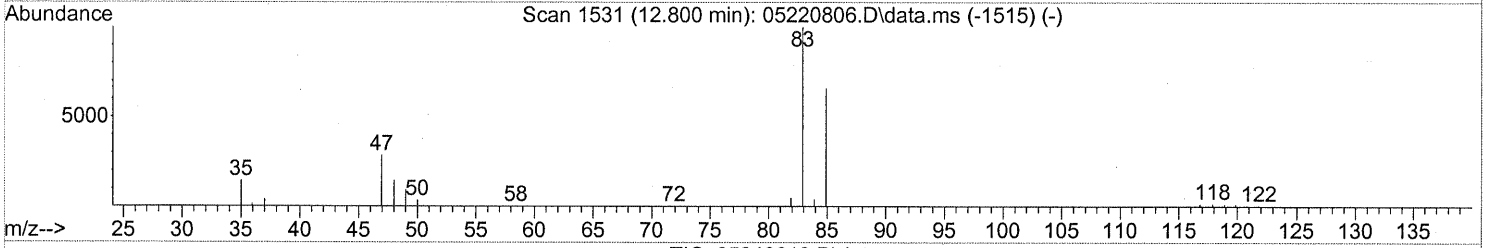
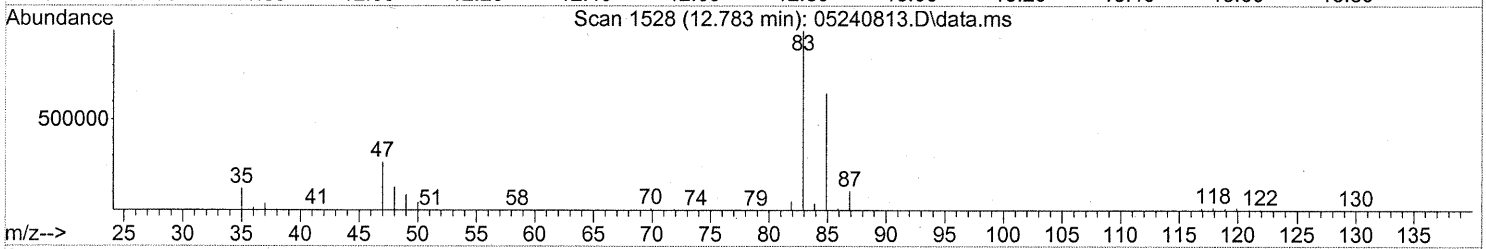
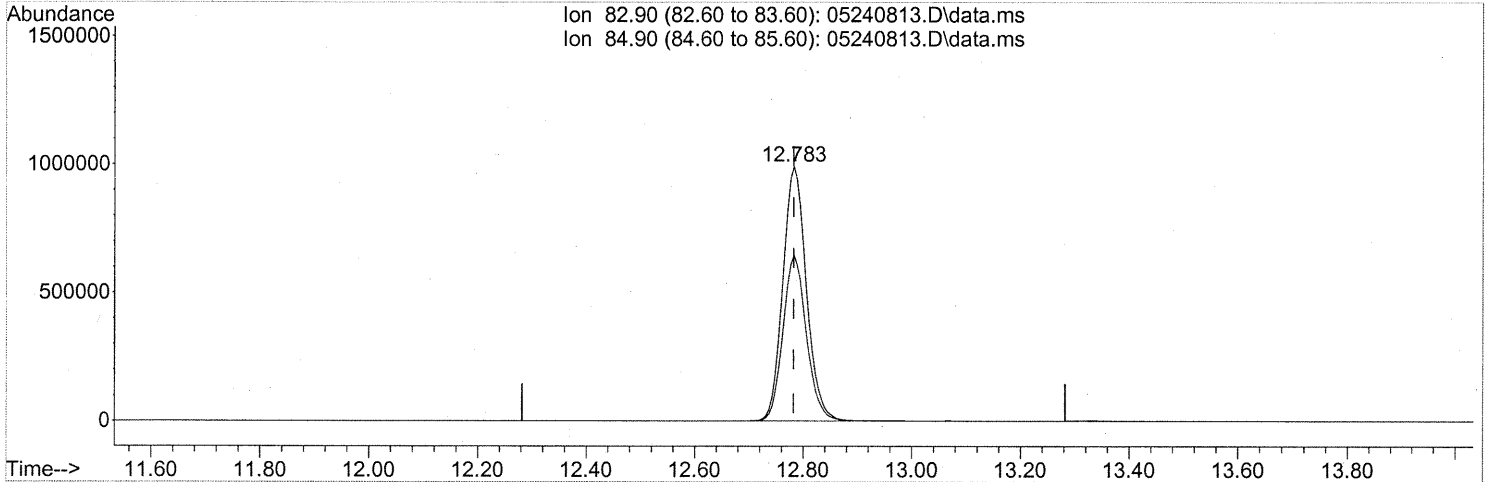
response 77129

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	477.74#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



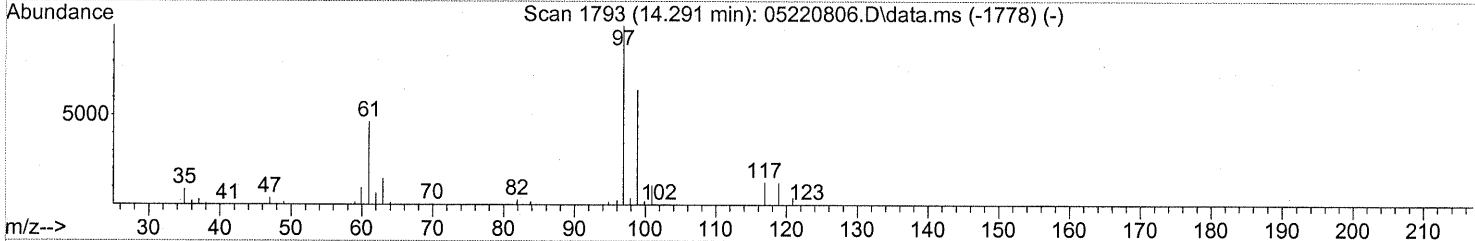
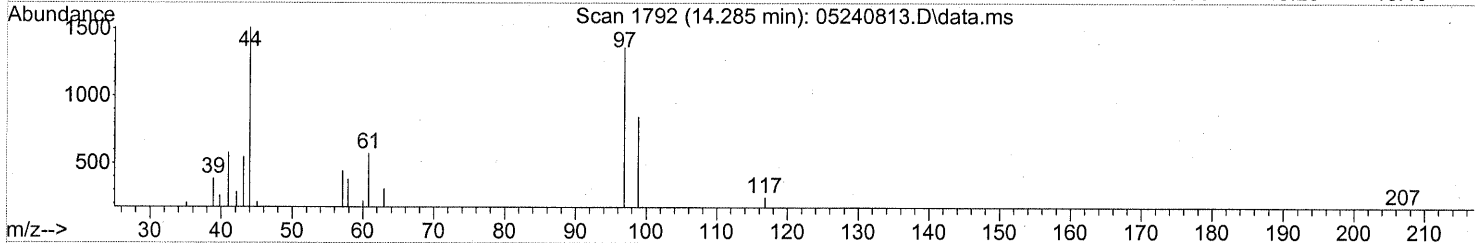
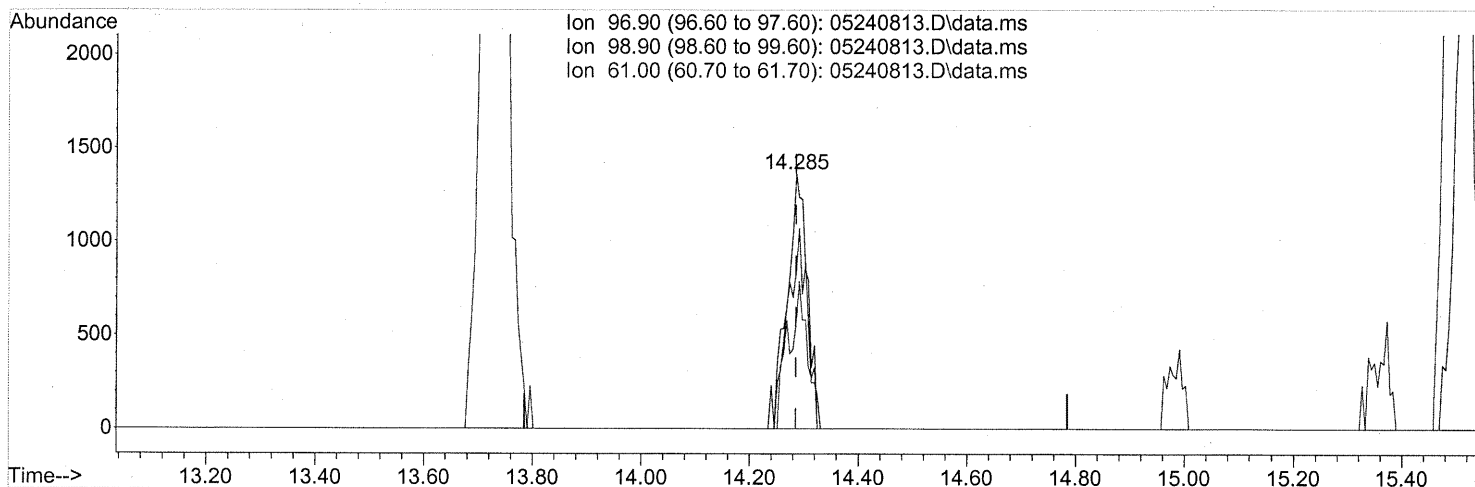
(32) Chloroform (T)  
 12.783min (+0.000) 65.19ng  
 response 2986644

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.285min (+0.000) 0.07ng

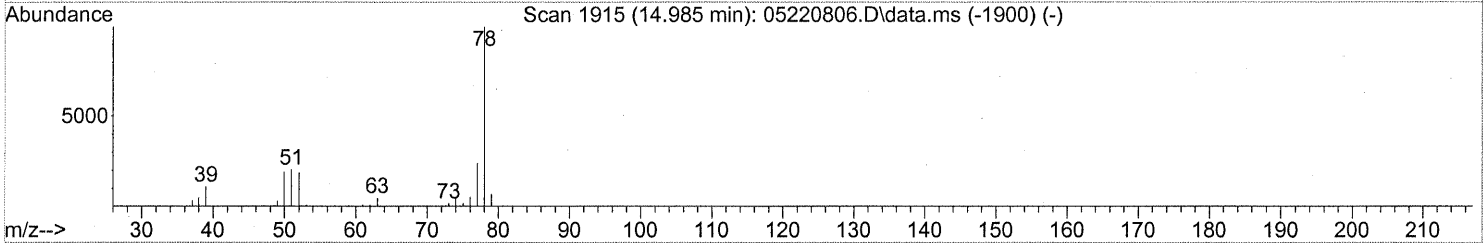
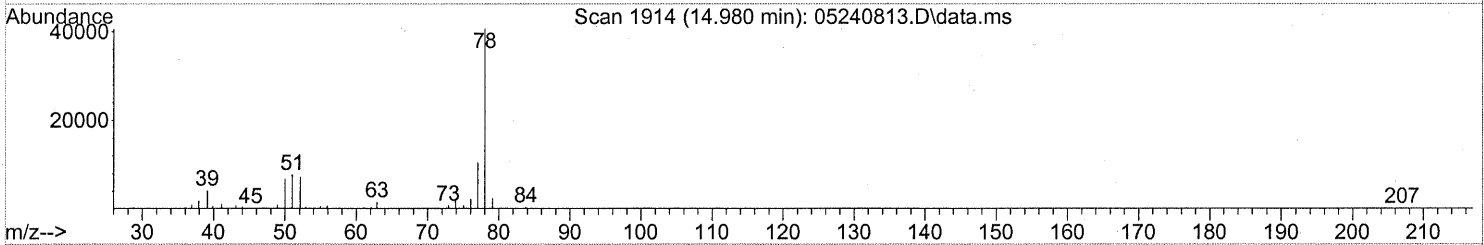
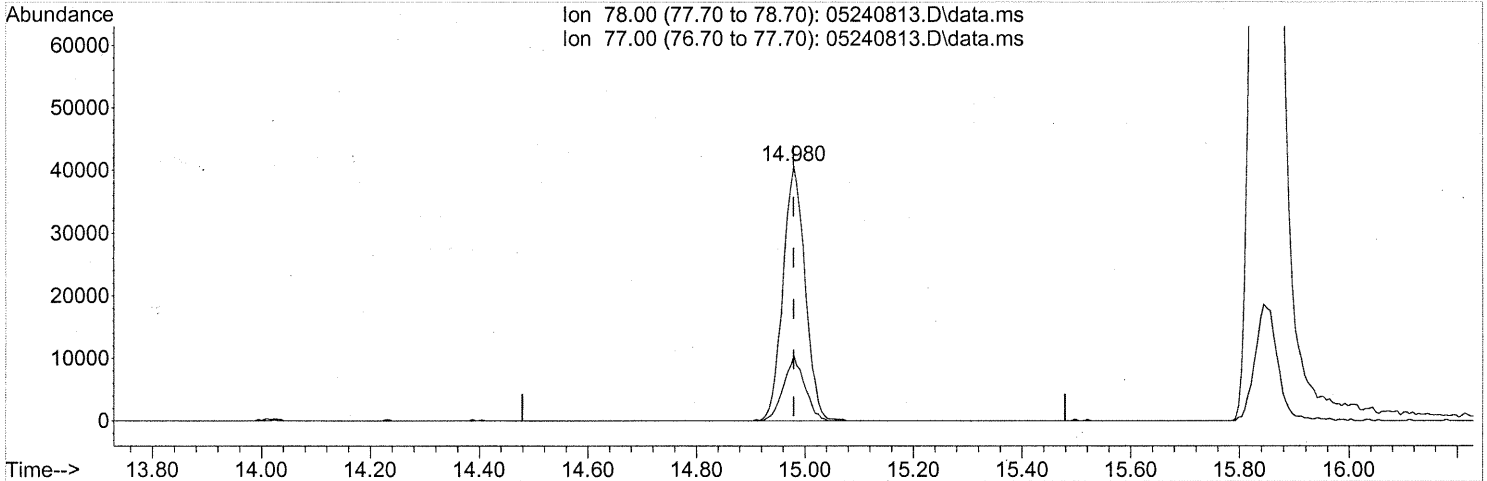
response 3537

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	76.36
61.00	50.50	37.38
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(41) Benzene (T)

14.980min (+0.000) 1.02ng

response 114414

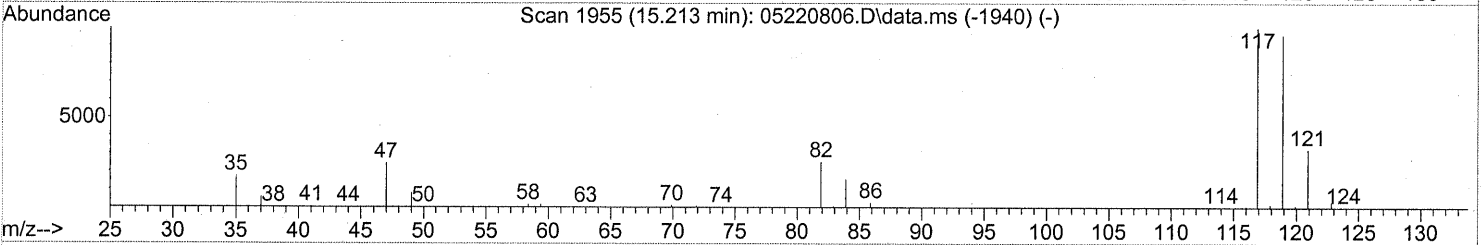
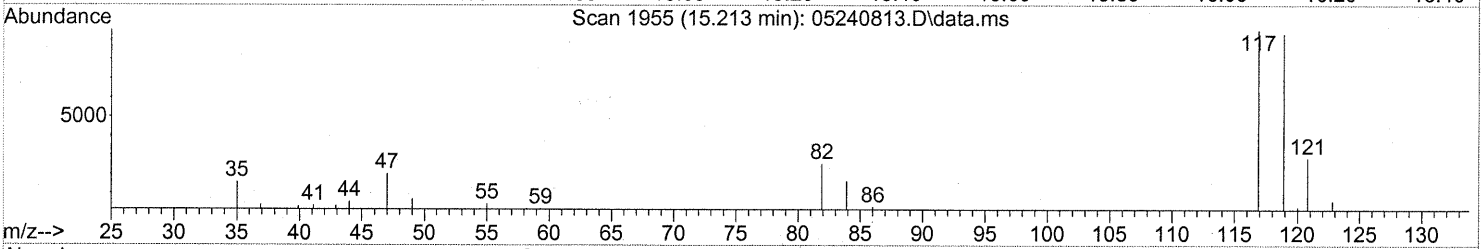
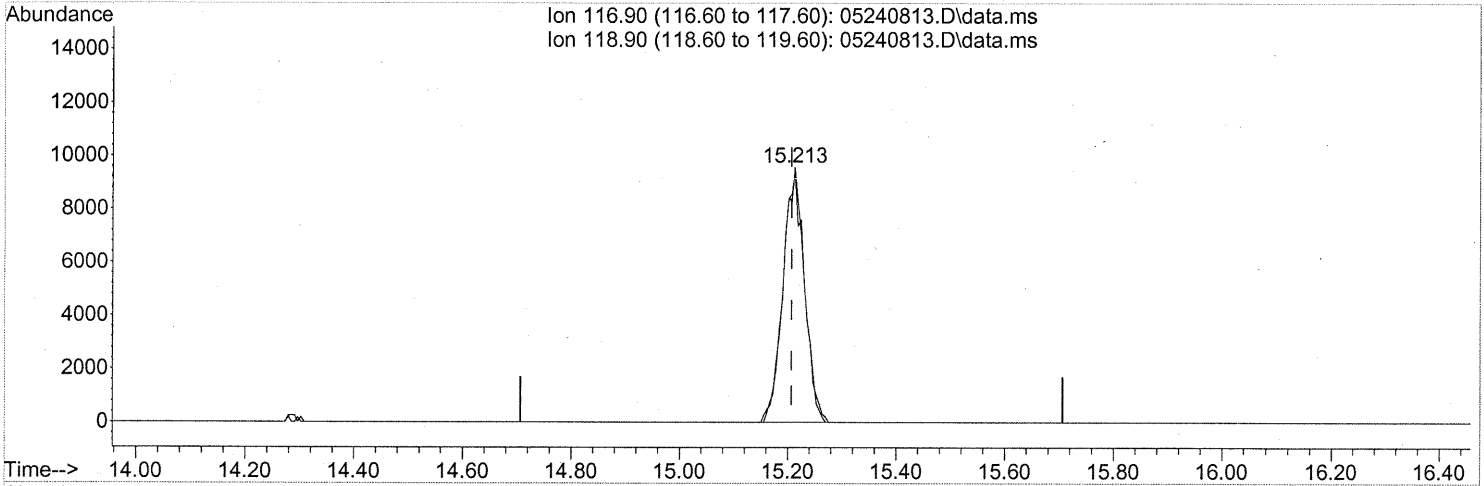
Ion	Exp%	Act%
78.00	100	100
77.00	23.50	24.25
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 0.60ng

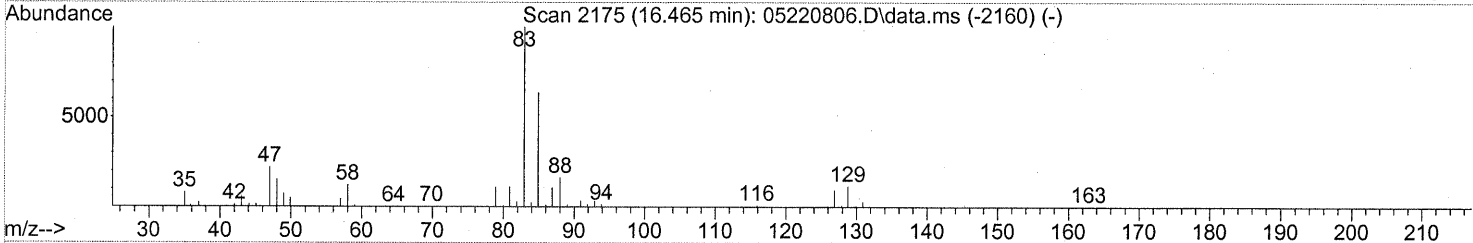
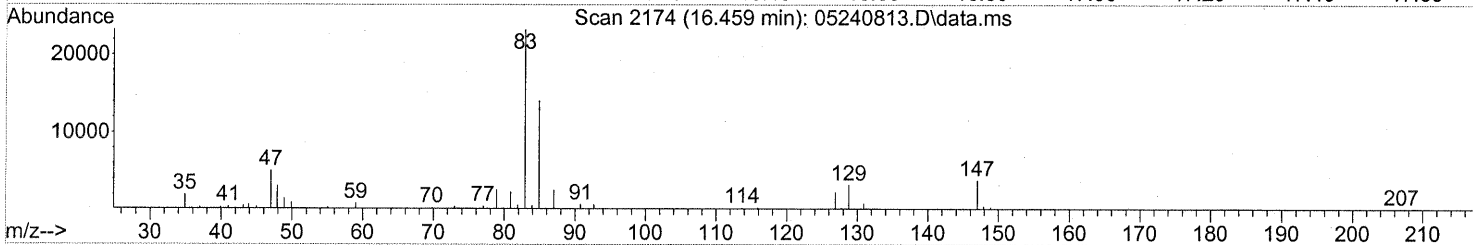
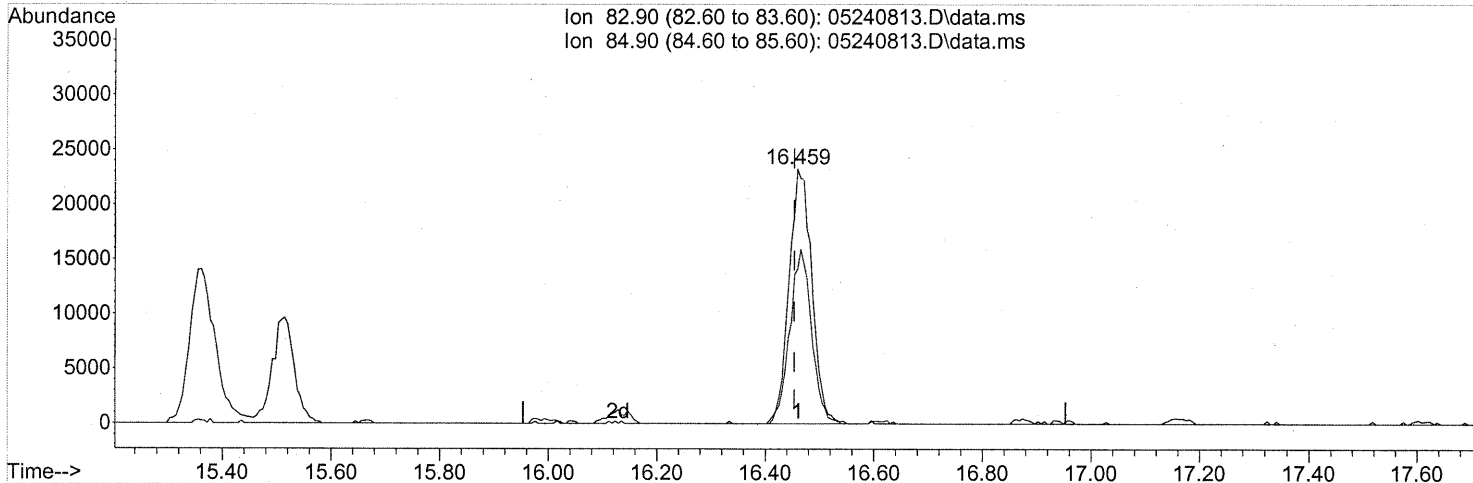
response 26049

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	100.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.459min (+0.006) 1.79ng

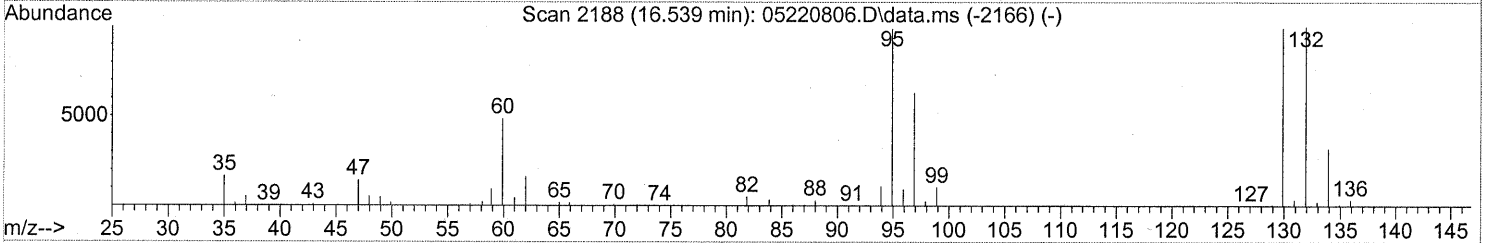
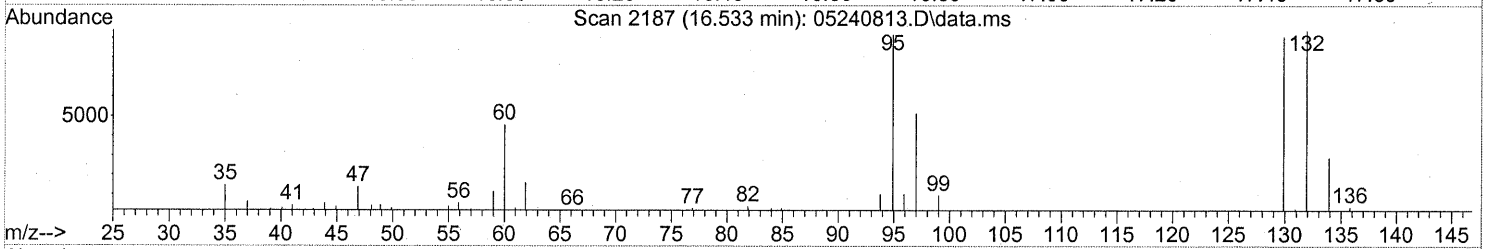
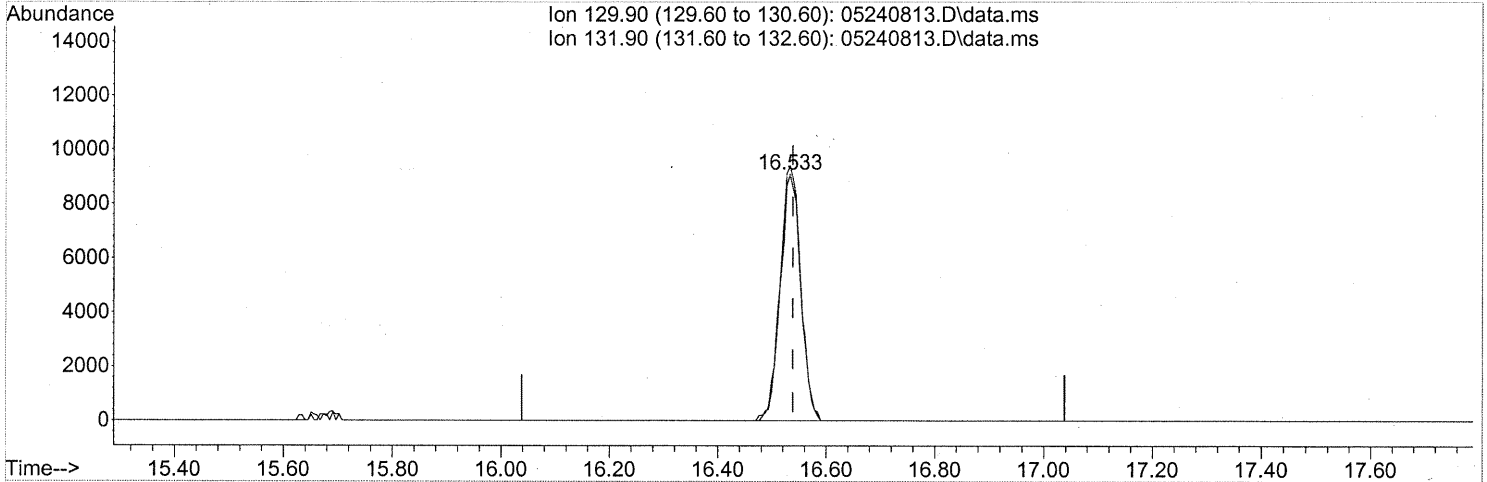
response 67738

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	65.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(47) Trichloroethene (T)

16.533min (-0.006) 0.69ng

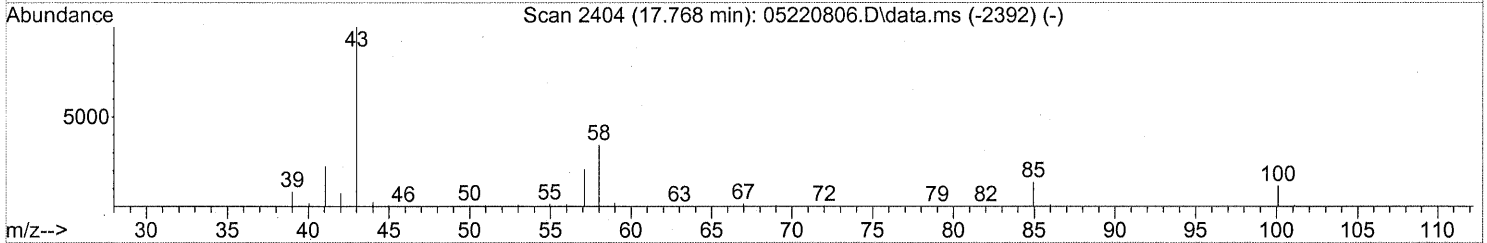
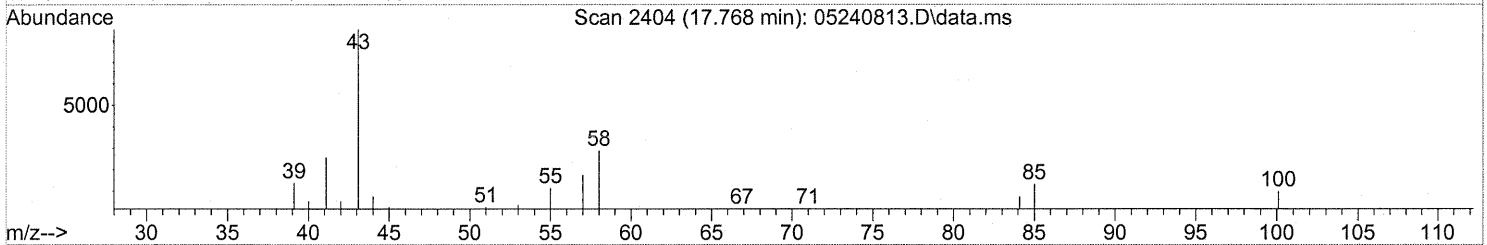
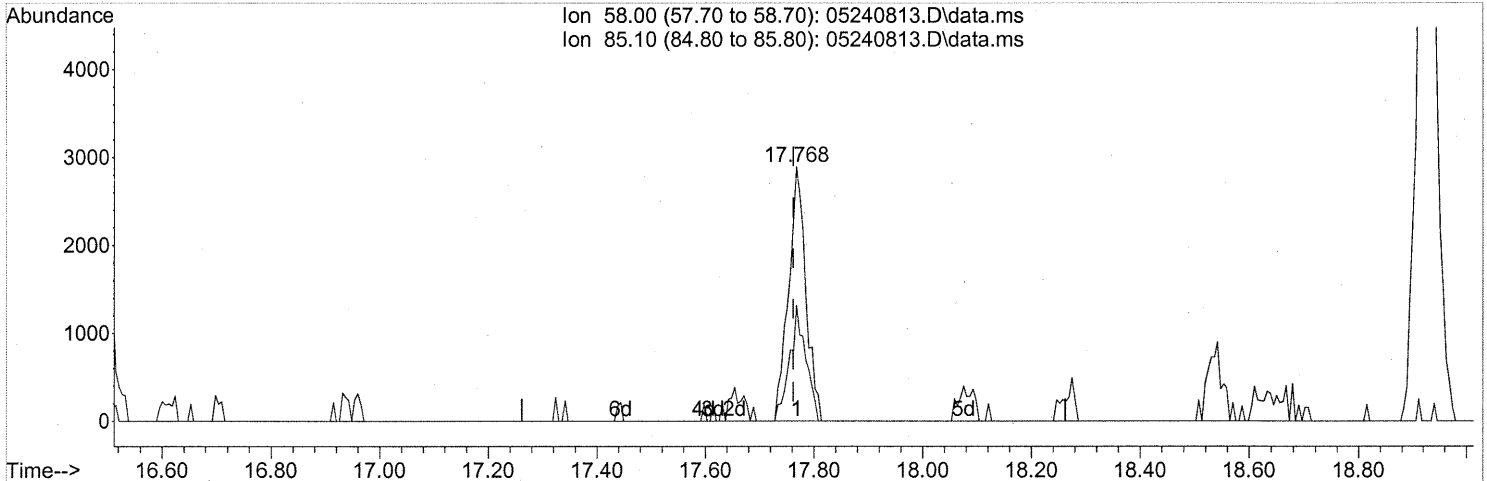
response 23699

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	104.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(53) 4-Methyl-2-pentanone (T)

17.768min (+0.006) 0.21ng

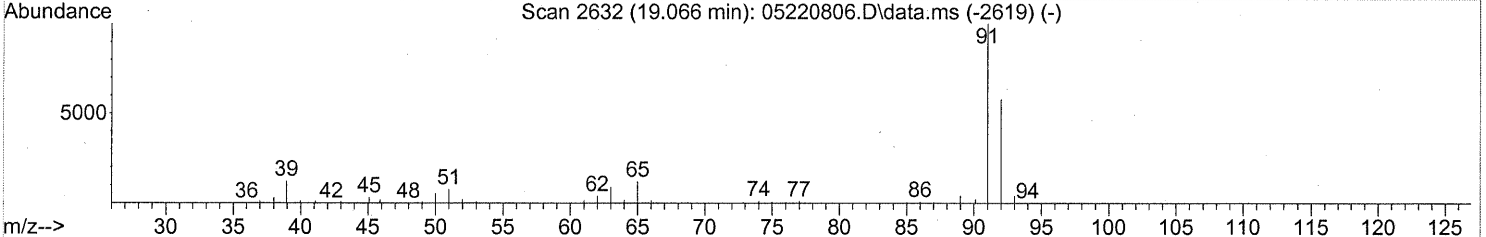
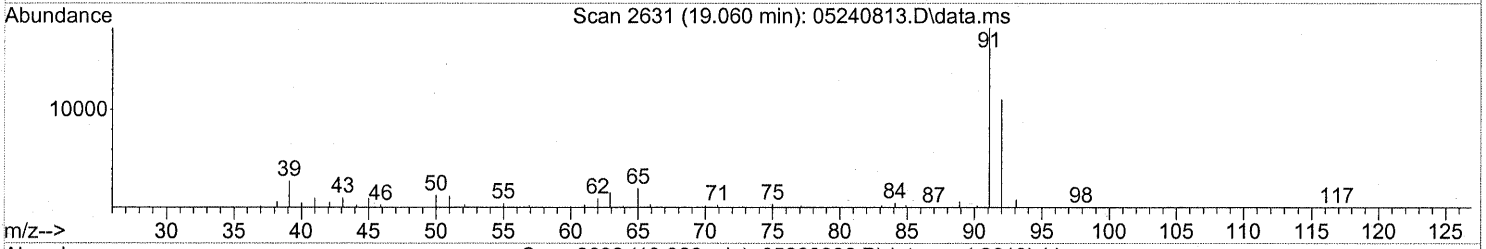
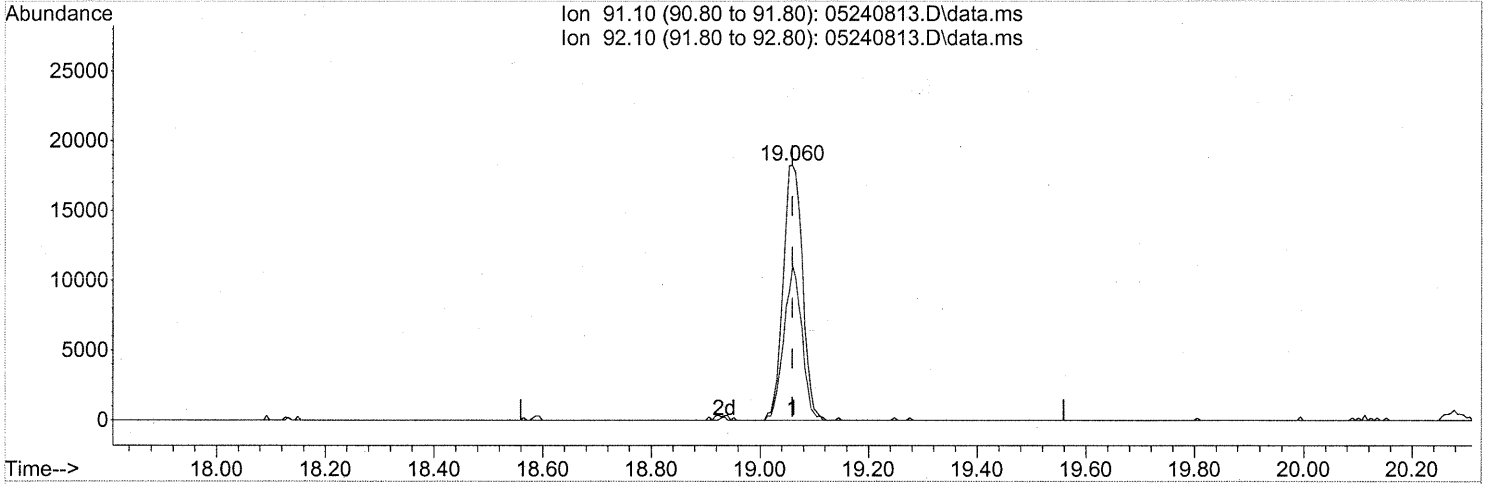
response 6381

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	42.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(58) Toluene (T)

19.060min (+0.000) 0.35ng

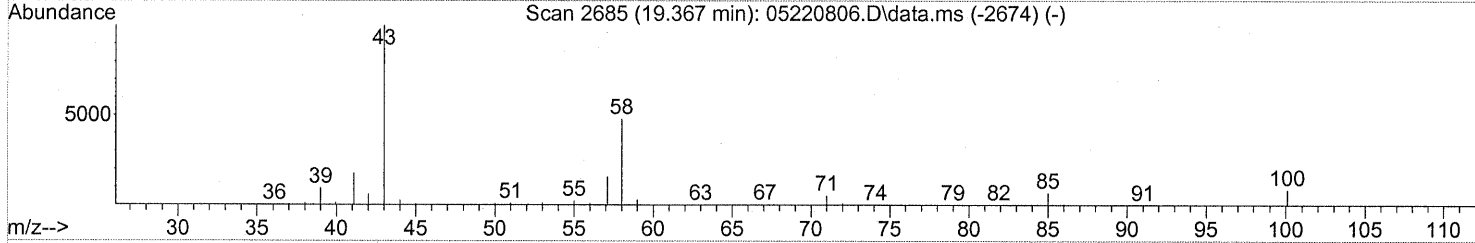
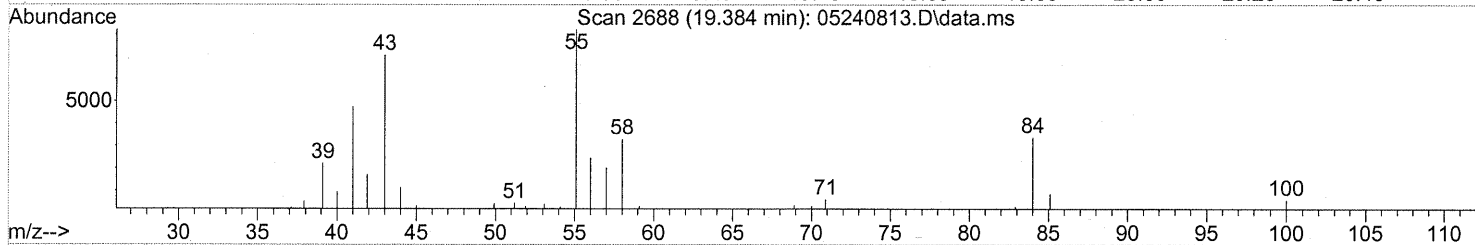
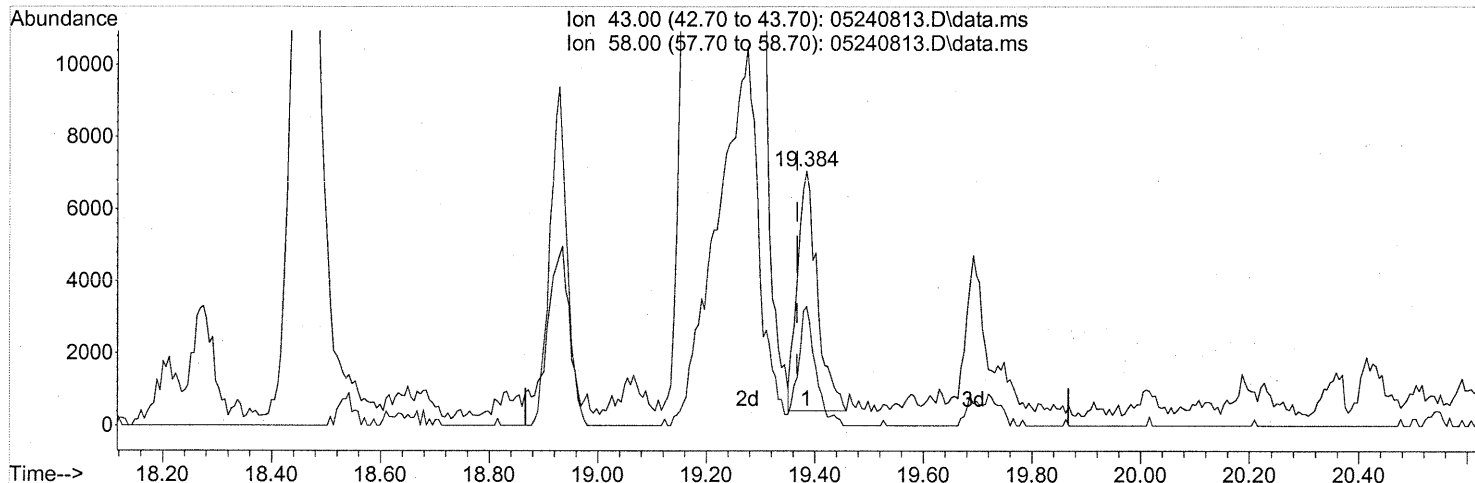
response 45127

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	56.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

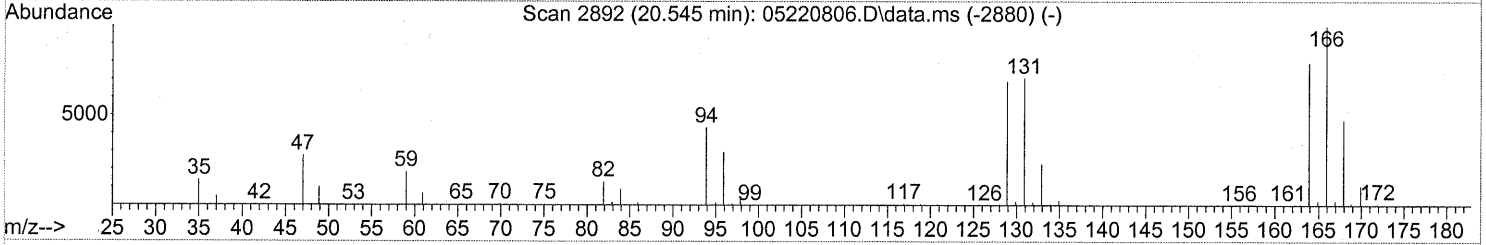
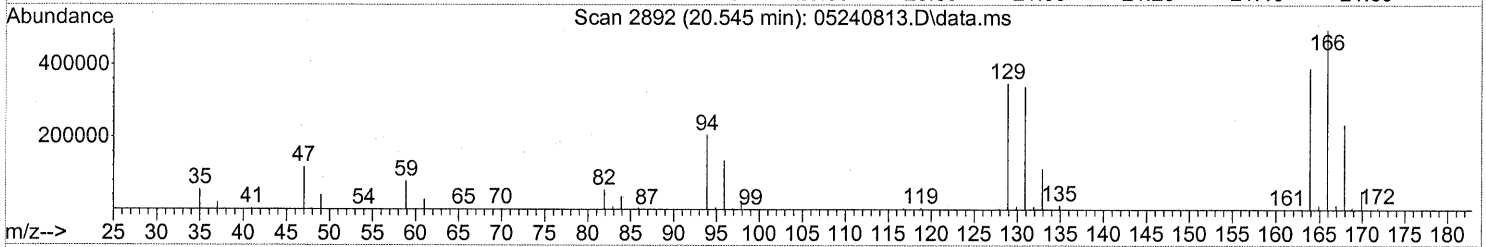
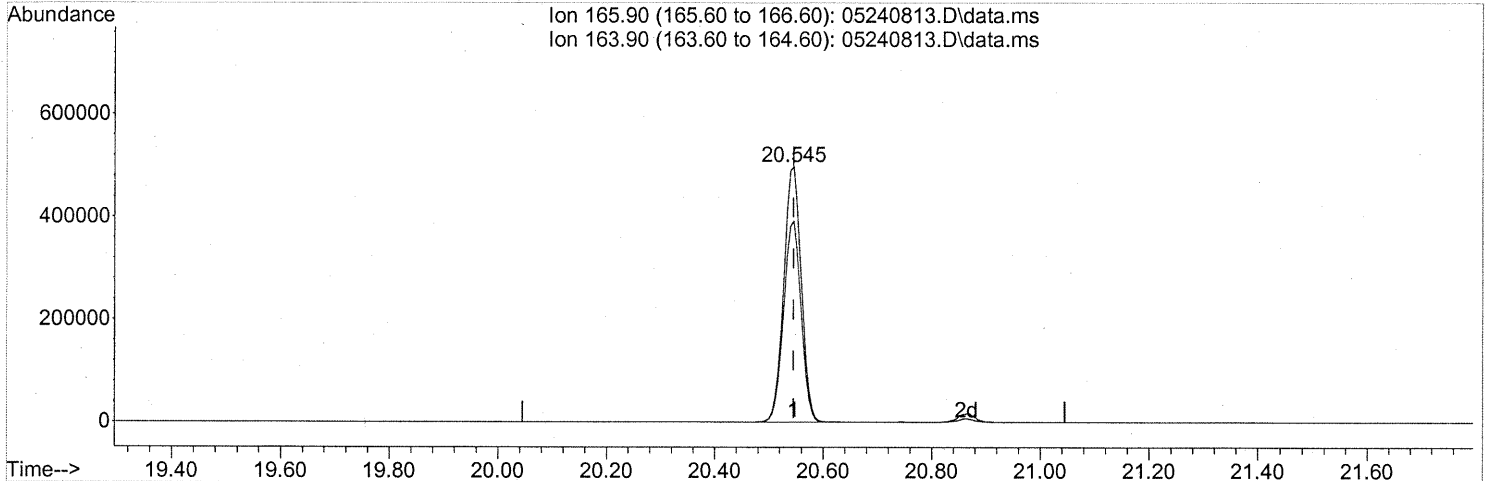
(59) 2-Hexanone (T)  
 19.384min (+0.017) 0.19ng  
 response 17009

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	43.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.545min (+0.000) 29.06ng

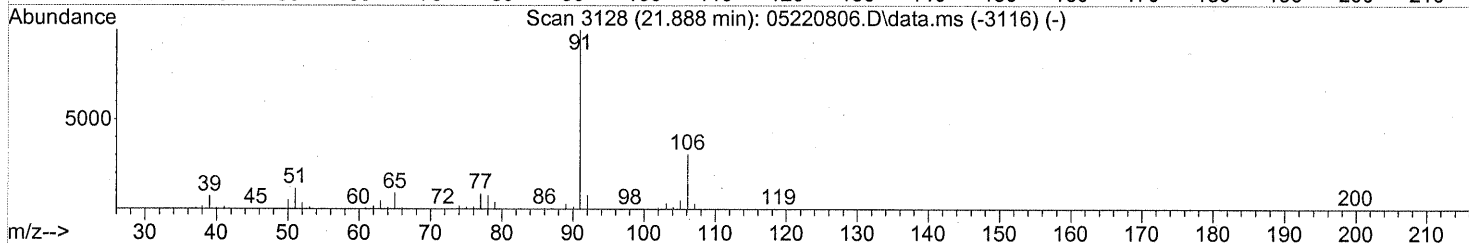
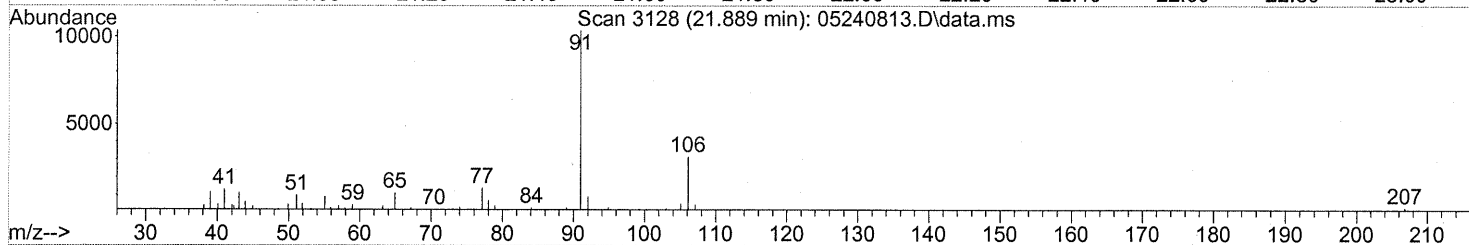
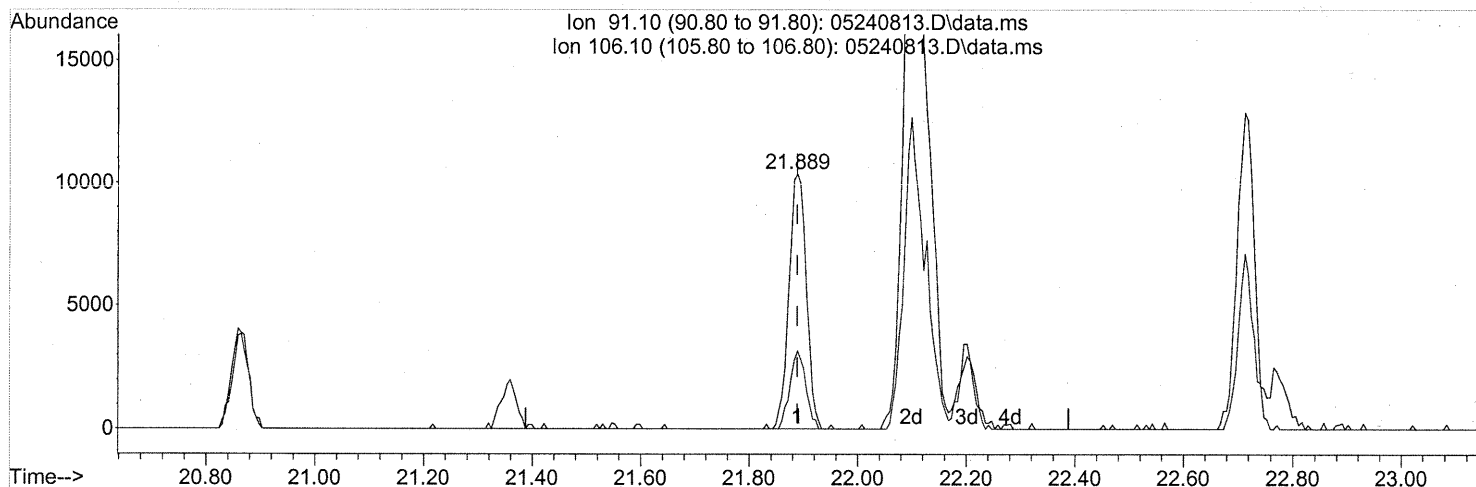
response 1099362

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	78.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(66) Ethylbenzene (T)

21.889min (+0.000) 0.16ng

response 22966

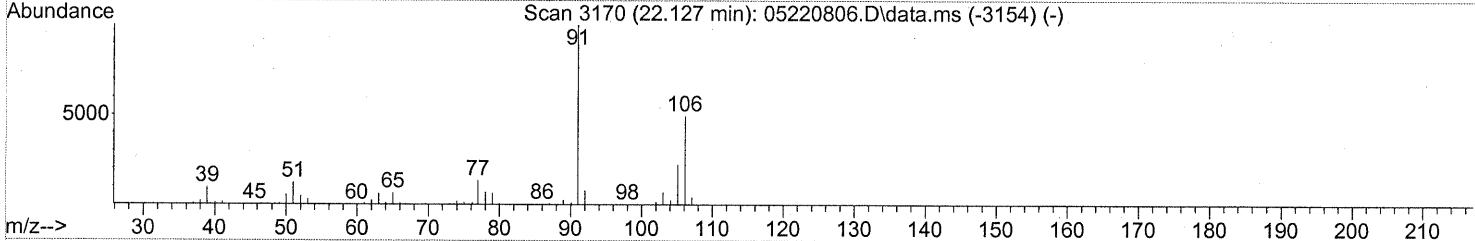
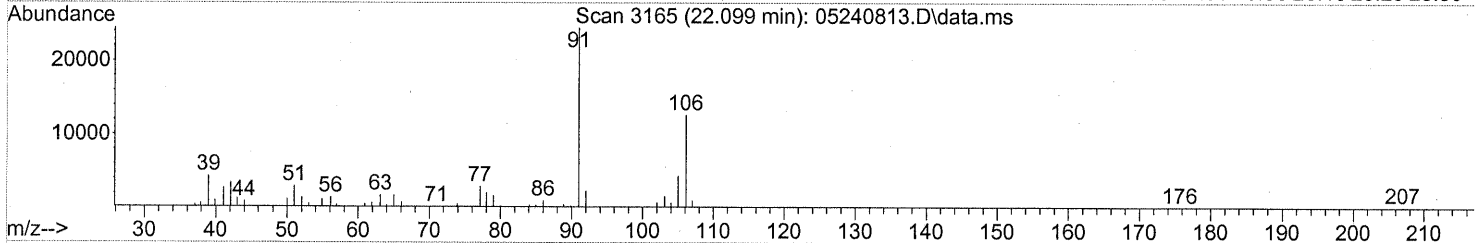
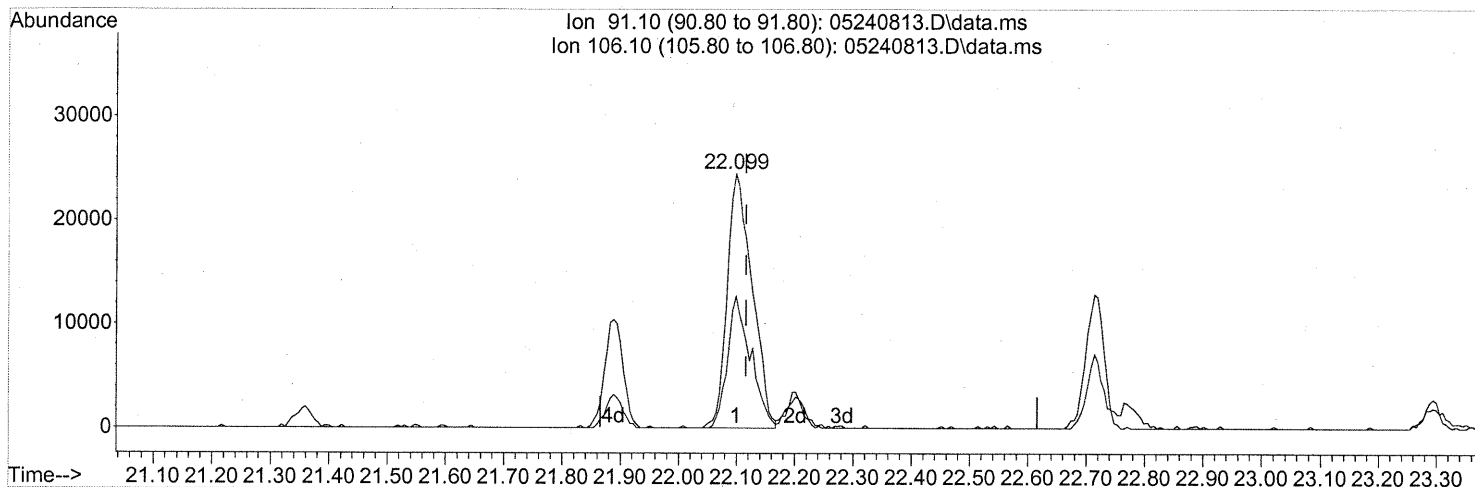
Ion	Exp%	Act%
91.10	100	100
106.10	34.10	28.05
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

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

22.099min (-0.017) 0.74ng

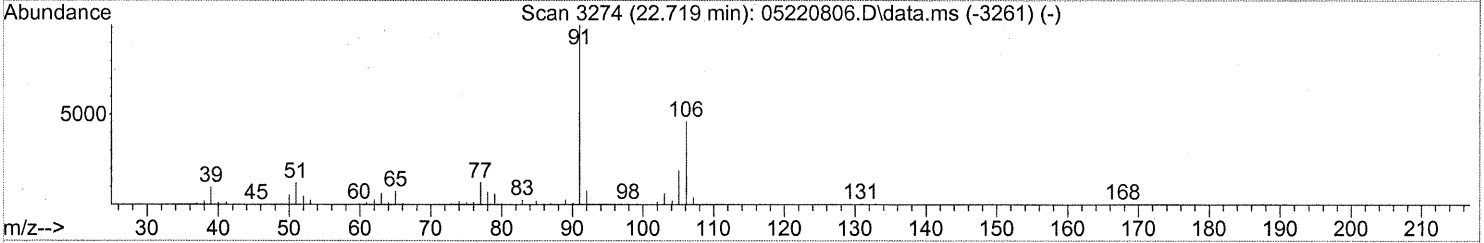
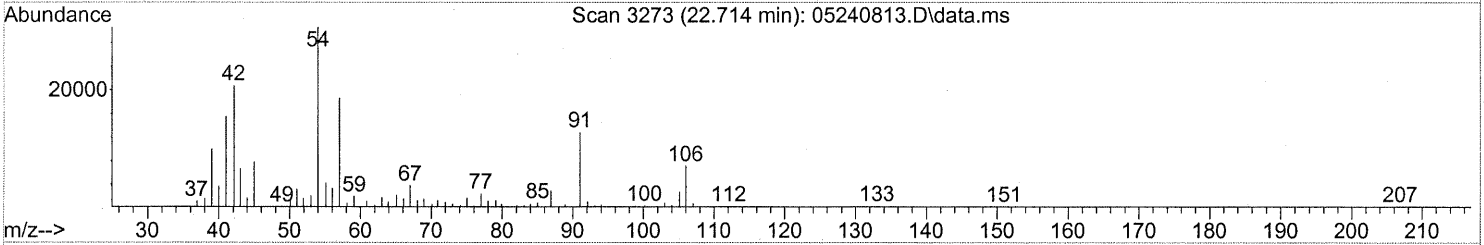
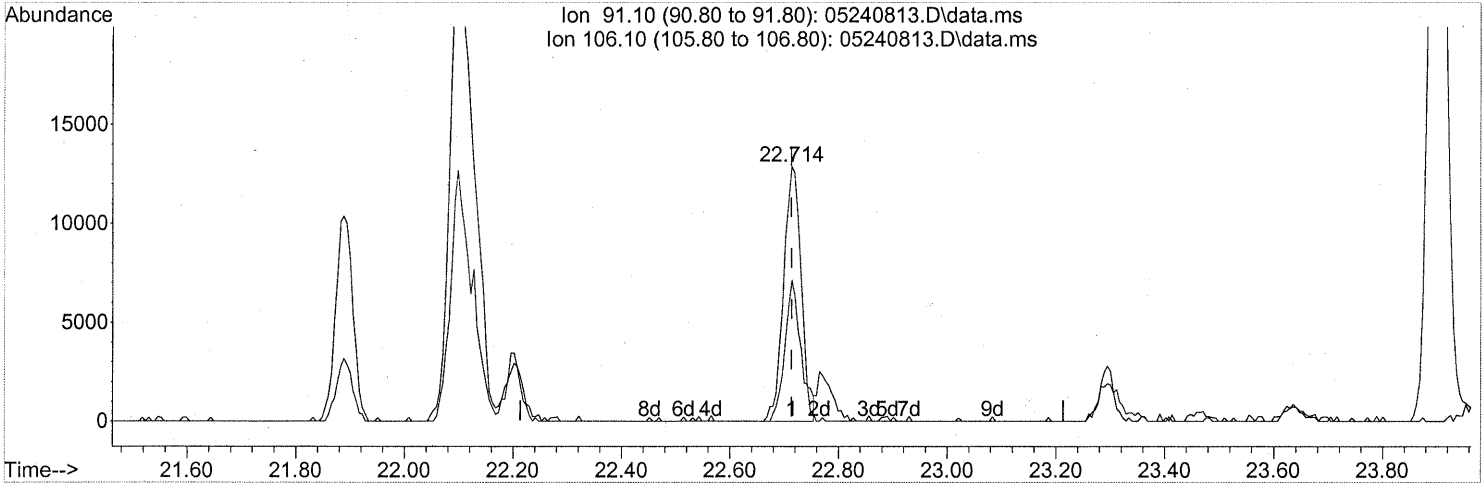
response 72657

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	47.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(70) o-Xylene (T)  
 22.714min (+0.000) 0.27ng

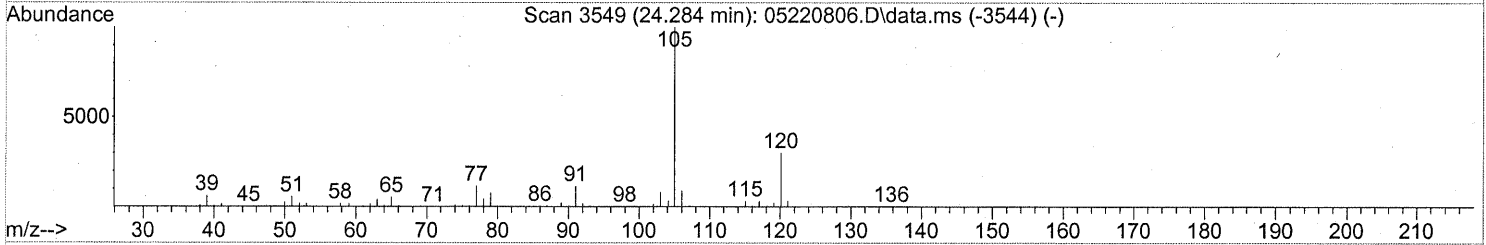
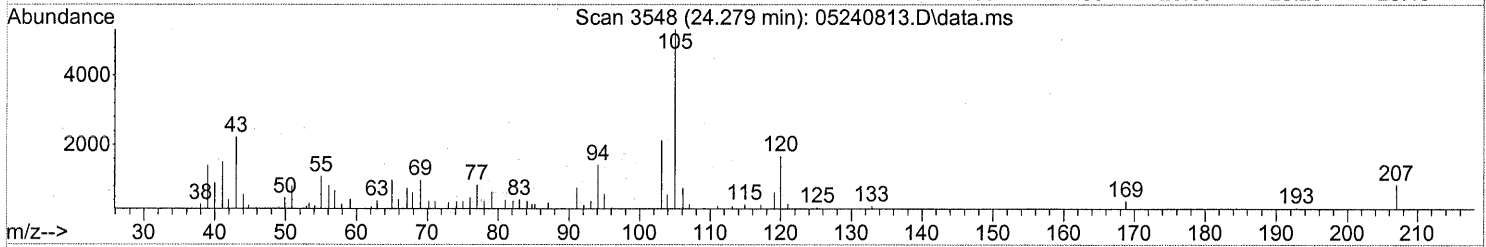
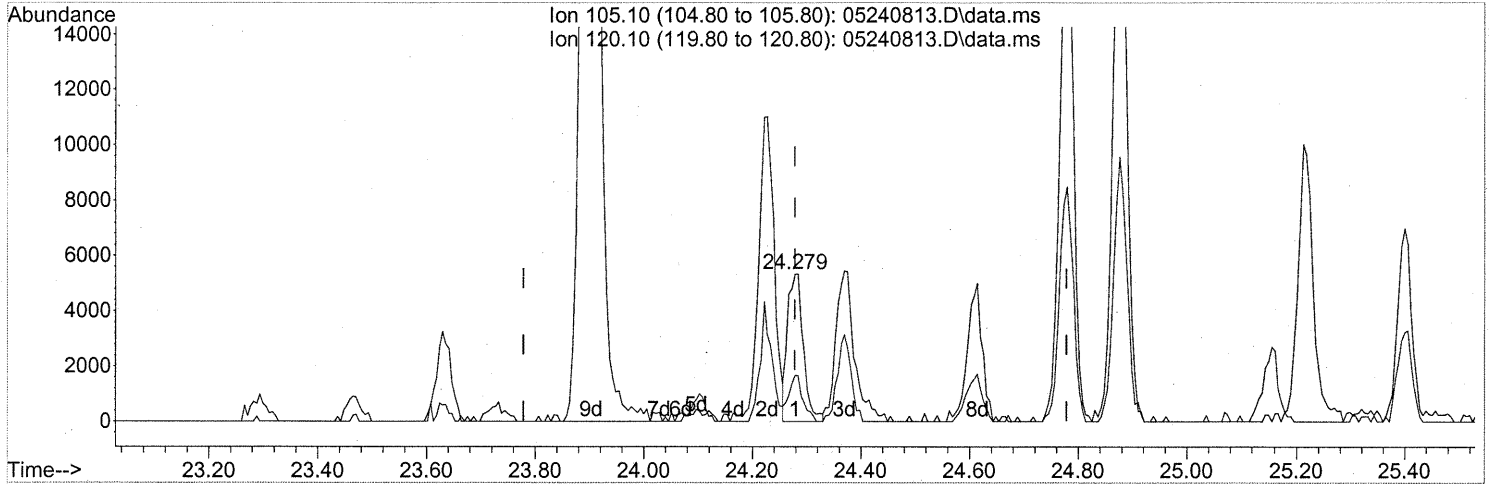
response 28991

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	48.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(78) 4-Ethyltoluene (T)

24.279min (+0.000) 0.08ng

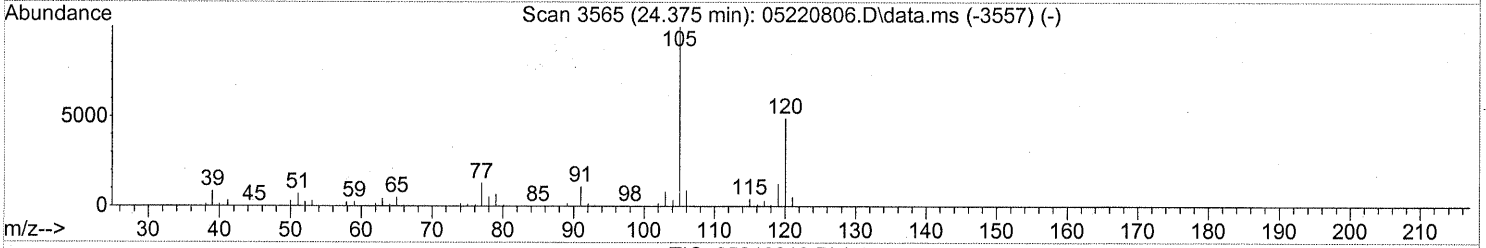
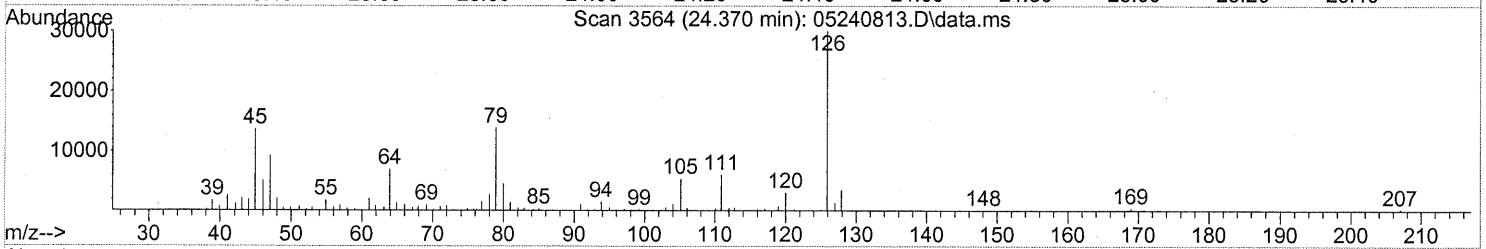
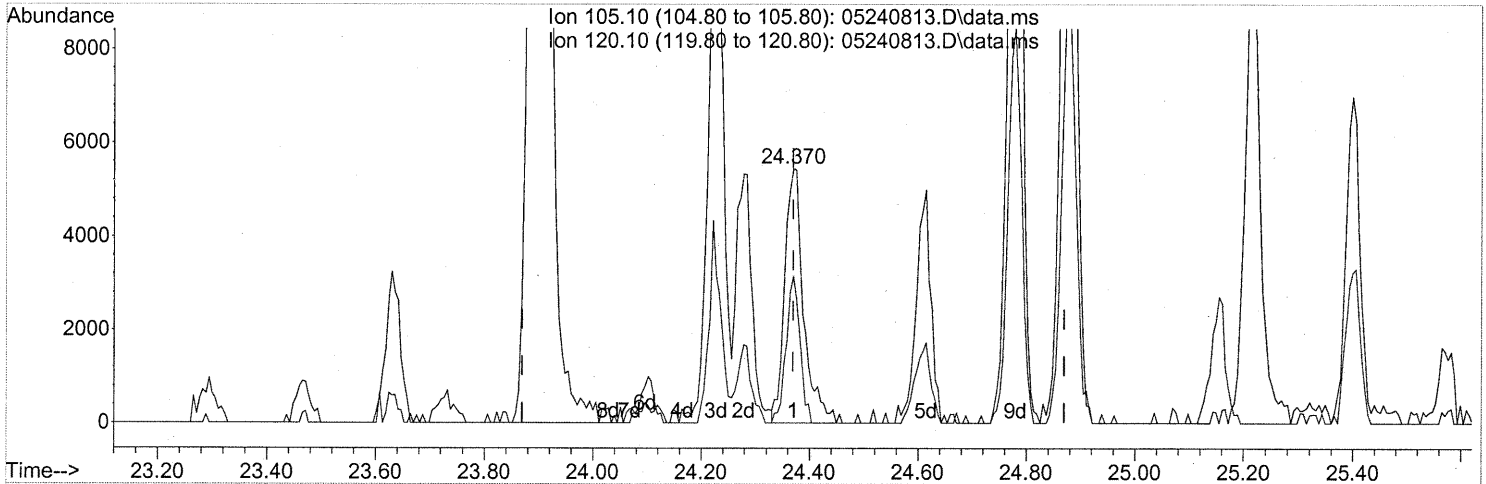
response 10668

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	27.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

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

24.370min (+0.000) 0.10ng

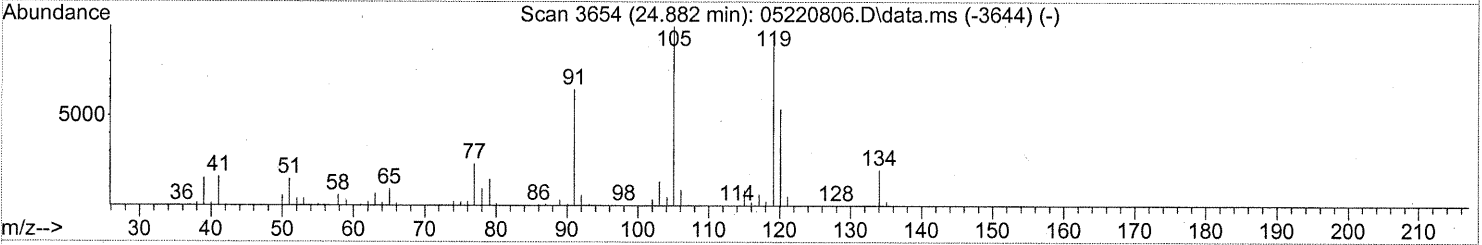
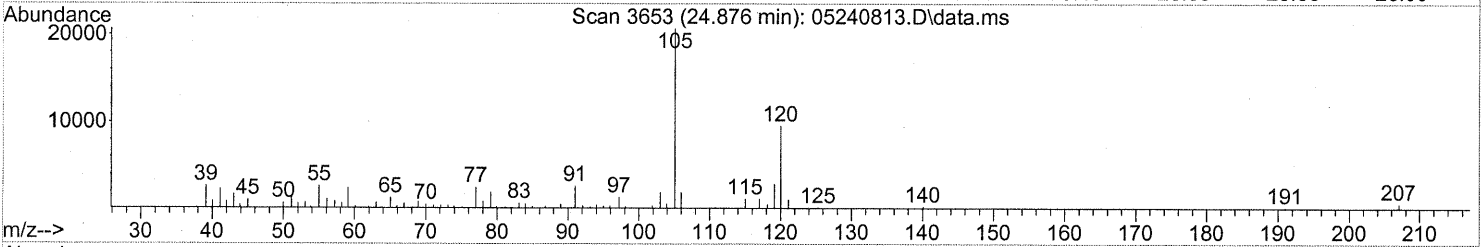
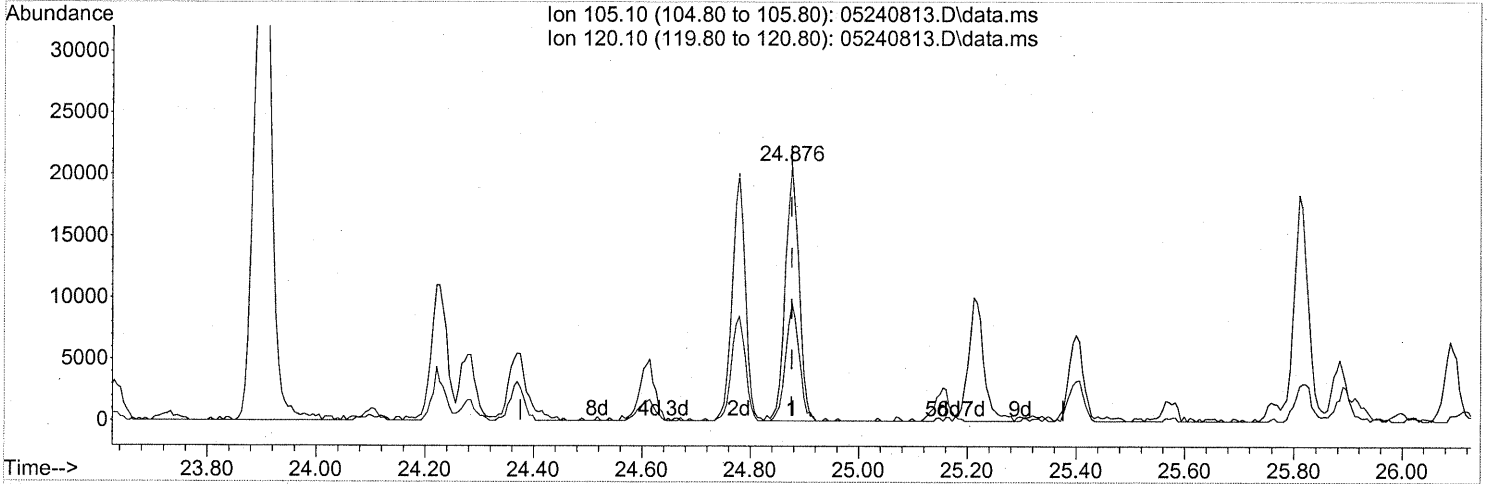
response 13169

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	42.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

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

24.876min (+0.000) 0.28ng

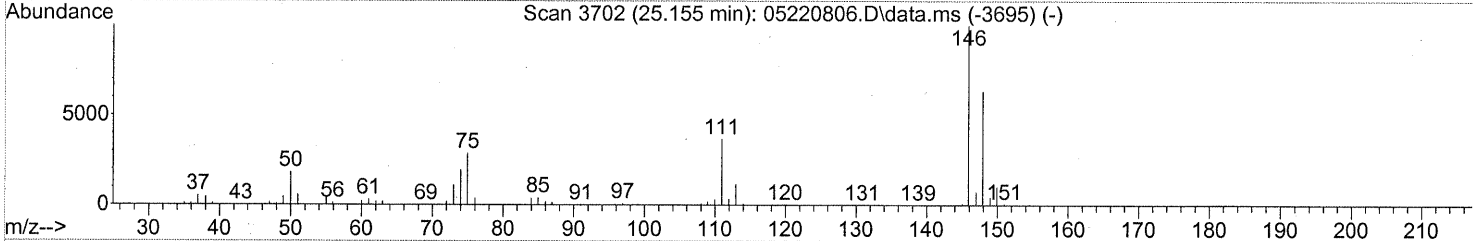
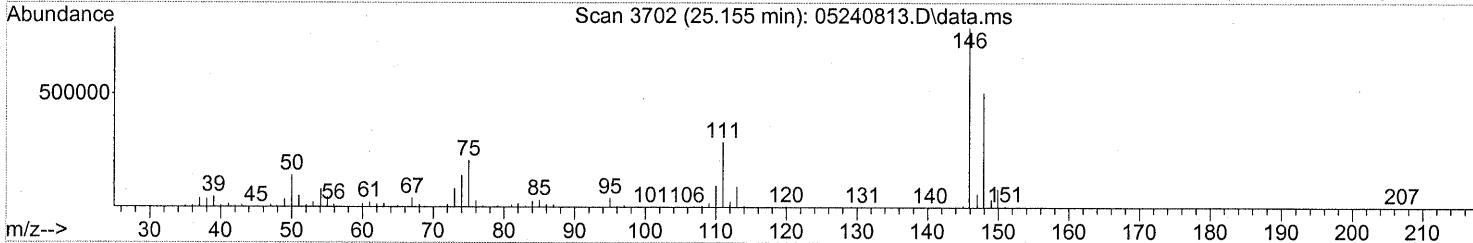
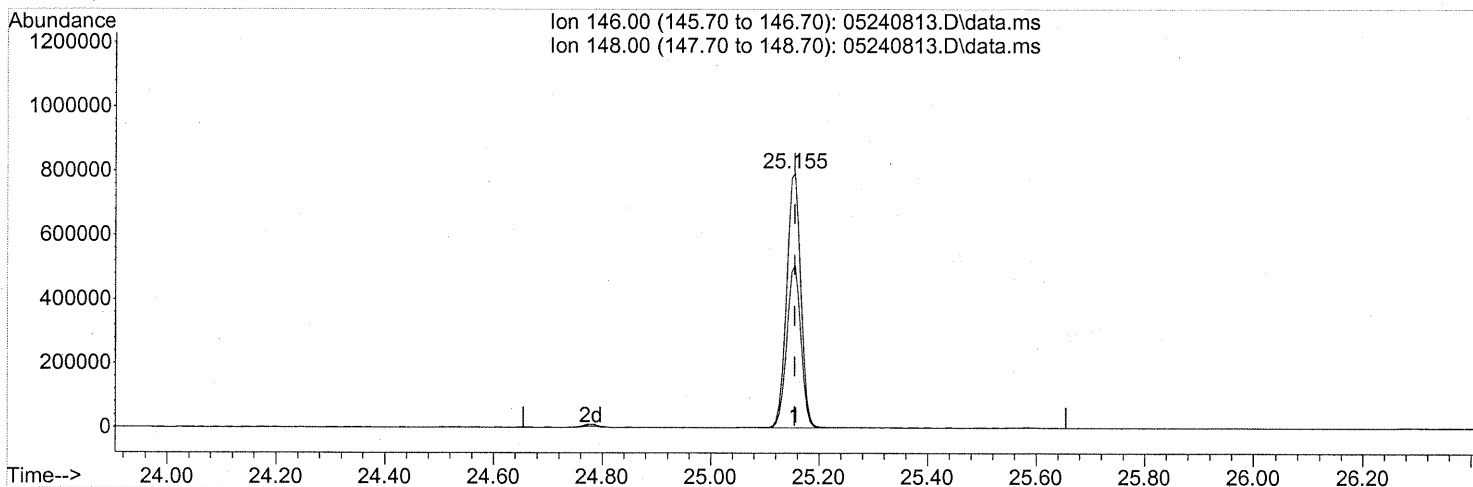
response 36550

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	45.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (+0.000) 18.40ng

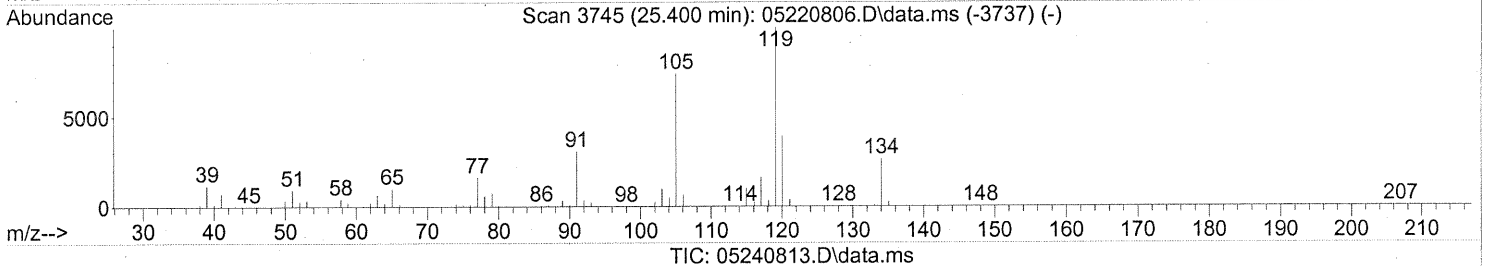
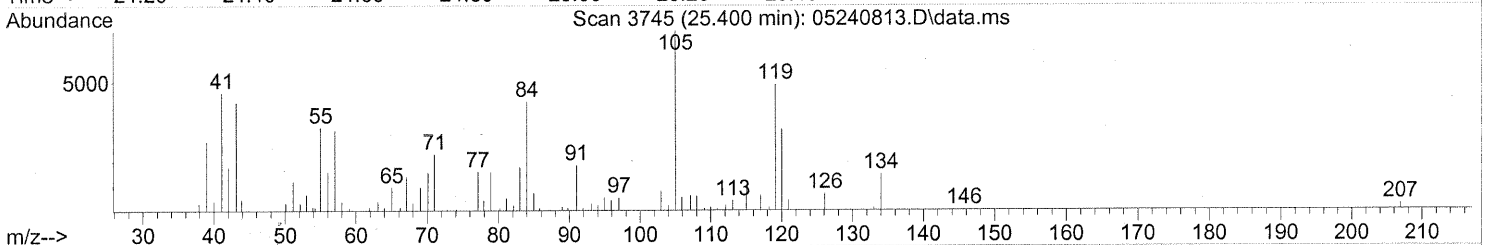
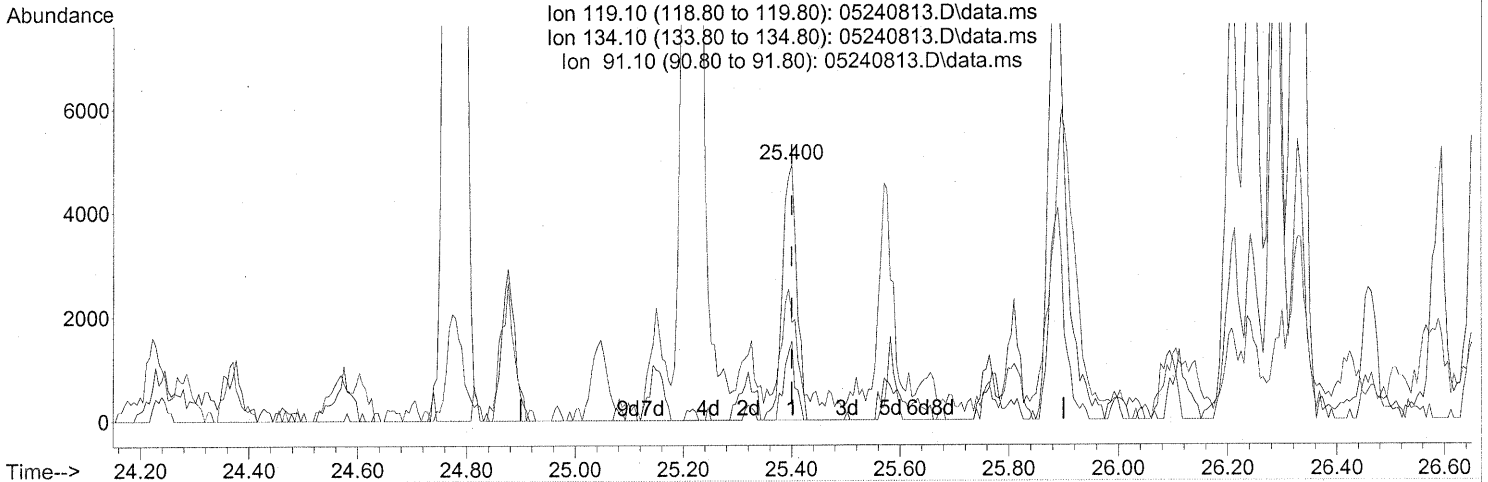
response 1435075

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 3:17 pm  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

25.400min (+0.000) 0.07ng

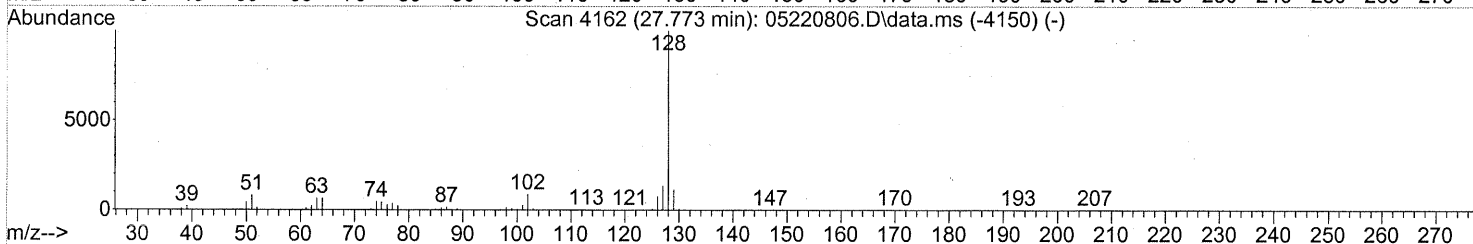
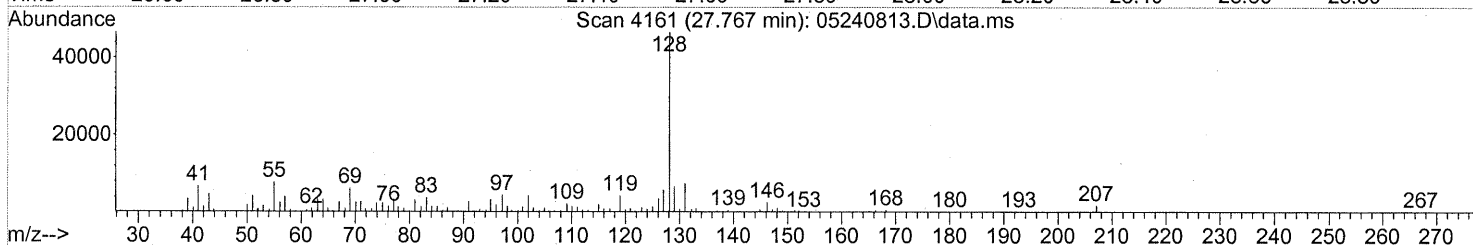
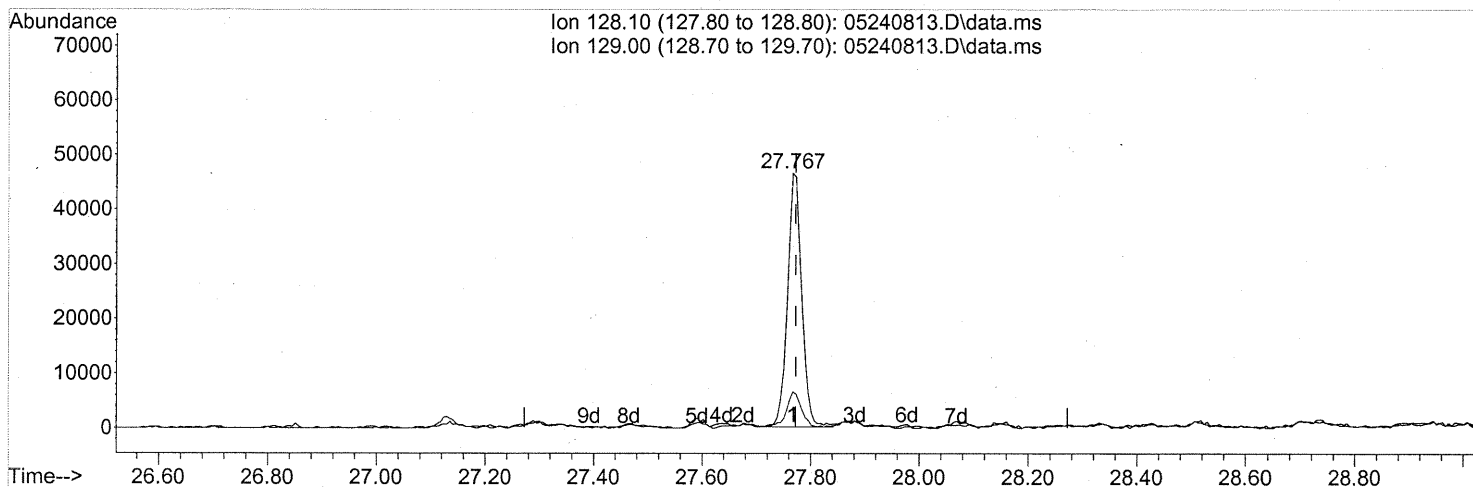
response 9034

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	23.89
91.10	27.10	56.22#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 24 20:21:14 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



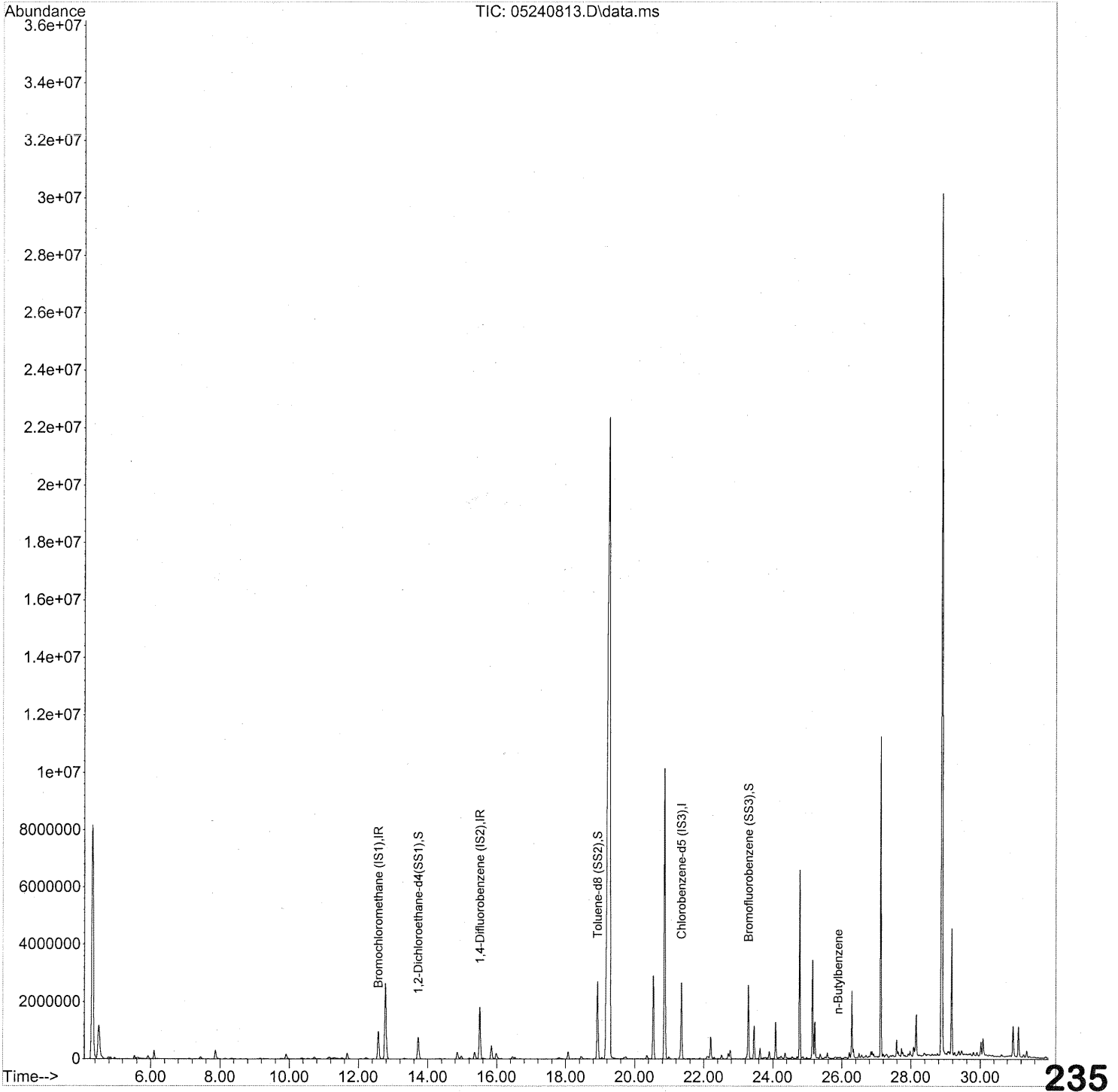
(95) Naphthalene (T)  
 27.767min (-0.006) 0.50ng  
 response 84617

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	15.73
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 25 20:36:45 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 25 20:36:45 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

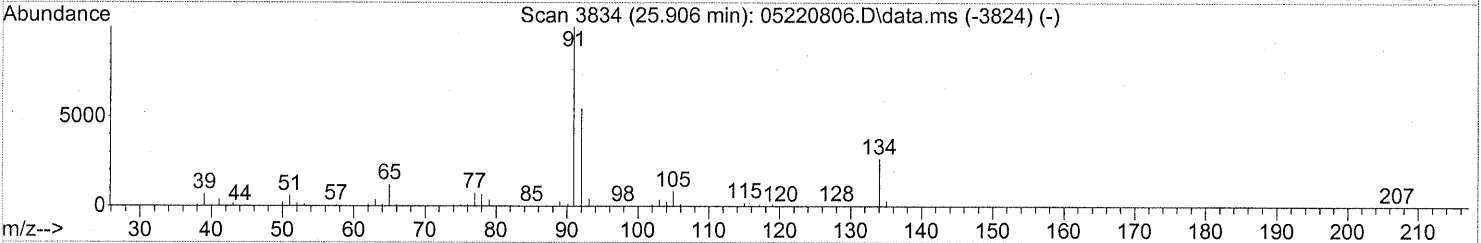
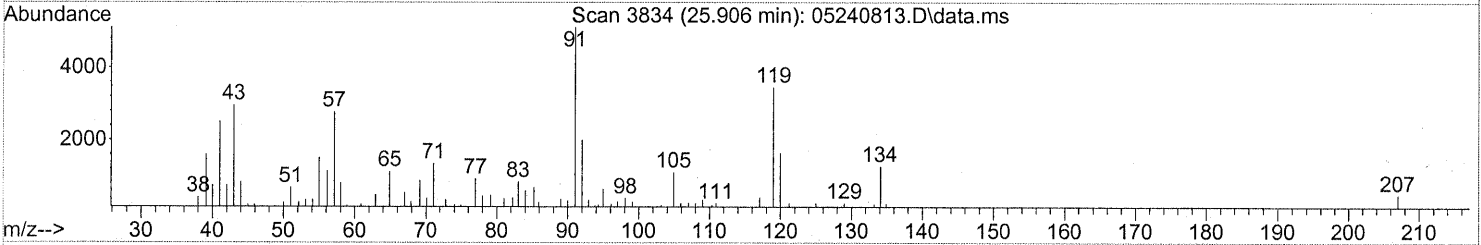
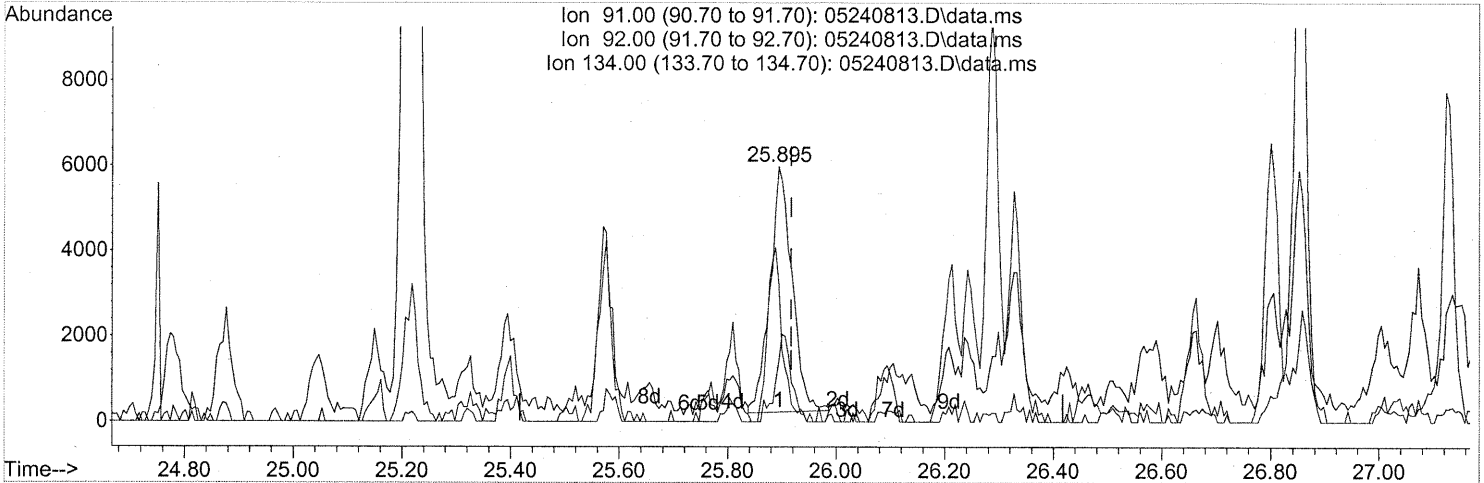
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	502403	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2138148	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1047220	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	808737	23.232	ng	-0.02
Spiked Amount	25.000		Recovery	=	92.92%	
5) Toluene-d8 (SS2)	18.93	98	2255487	23.982	ng	-0.01
Spiked Amount	25.000		Recovery	=	95.92%	
6) Bromofluorobenzene (SS3)	23.29	174	956196	25.001	ng	0.00
Spiked Amount	25.000		Recovery	=	100.00%	
Target Compounds						
7) tert-Butylbenzene	25.32	119	1659	N.D.		Qvalue
8) n-Butylbenzene	25.90	91	16192	0.119 ng	#	60

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

DA 5/29/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240813.D  
 Acq On : 24 May 2008 15:17  
 Operator : WA  
 Sample : P0801442-003 (500ml)  
 Misc : ENSR SG37B-20 (-3.1, 3.6)  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 25 20:36:45 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



TIC: 05240813.D\data.ms

(8) n-Butylbenzene

25.895min (-0.022) 0.12ng

response 16192

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	25.54#
134.00	28.80	48.66#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00910

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/22/08 & 5/24/08  
 Volume(s) Analyzed: 0.050 Liter(s)  
 0.0050 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)	3.5	16	1.6	0.70	3.2	0.32	J
74-87-3	Chloromethane	ND	3.1	1.6	ND	1.5	0.76	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	16	1.6	ND	2.2	0.22	
75-01-4	Vinyl Chloride	ND	3.1	1.6	ND	1.2	0.61	
74-83-9	Bromomethane	ND	3.1	1.6	ND	0.80	0.40	
75-00-3	Chloroethane	ND	3.1	1.6	ND	1.2	0.59	
64-17-5	Ethanol	35	160	1.6	19	83	0.83	J
67-64-1	Acetone	31	160	2.3	13	66	0.96	J, B
75-69-4	Trichlorofluoromethane	2.0	3.1	1.6	0.36	0.56	0.28	J
107-13-1	Acrylonitrile	ND	16	2.2	ND	7.2	1.0	
75-35-4	1,1-Dichloroethene	5.3	3.1	1.6	1.3	0.79	0.39	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	16	2.3	ND	5.1	0.76	
75-09-2	Methylene Chloride	8.0	16	1.6	2.3	4.5	0.45	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.1	1.6	ND	1.0	0.50	
76-13-1	Trichlorotrifluoroethane	ND	3.1	1.7	ND	0.41	0.23	
75-15-0	Carbon Disulfide	6.4	16	3.7	2.0	5.0	1.2	J
156-60-5	trans-1,2-Dichloroethene	ND	3.1	1.6	ND	0.79	0.39	
75-34-3	1,1-Dichloroethane	2.0	3.1	1.6	0.50	0.77	0.39	J
1634-04-4	Methyl tert-Butyl Ether	ND	3.1	1.6	ND	0.87	0.43	
108-05-4	Vinyl Acetate	ND	160	5.0	ND	44	1.4	
78-93-3	2-Butanone (MEK)	10	16	1.6	3.5	5.3	0.53	J
156-59-2	cis-1,2-Dichloroethene	ND	3.1	1.6	ND	0.79	0.39	
108-20-3	Diisopropyl Ether	ND	16	1.8	ND	3.7	0.44	
67-66-3	Chloroform	14,000	3.1	1.8	2,900	0.64	0.38	

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: Re      Date: 6/2/08      **238**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00910

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.0050 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	16	1.6	ND	3.7	0.38	
107-06-2	1,2-Dichloroethane	ND	3.1	1.6	ND	0.77	0.39	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>2.5</b>	3.1	1.6	<b>0.46</b>	0.57	0.29	<b>J</b>
71-43-2	<b>Benzene</b>	<b>3.2</b>	3.1	1.6	<b>1.0</b>	0.98	0.49	
56-23-5	<b>Carbon Tetrachloride</b>	<b>10</b>	3.1	1.6	<b>1.6</b>	0.50	0.25	
994-05-8	tert-Amyl Methyl Ether	ND	16	1.6	ND	3.7	0.37	
78-87-5	<b>1,2-Dichloropropane</b>	<b>2.1</b>	3.1	1.6	<b>0.45</b>	0.68	0.34	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>25</b>	3.1	1.6	<b>3.7</b>	0.47	0.23	
79-01-6	<b>Trichloroethene</b>	<b>71</b>	3.1	1.6	<b>13</b>	0.58	0.29	
123-91-1	1,4-Dioxane	ND	16	1.9	ND	4.3	0.53	
80-62-6	Methyl Methacrylate	ND	16	2.3	ND	3.8	0.57	
142-82-5	n-Heptane	ND	16	2.0	ND	3.8	0.49	
10061-01-5	cis-1,3-Dichloropropene	ND	16	1.6	ND	3.4	0.36	
108-10-1	4-Methyl-2-pentanone	ND	16	1.7	ND	3.8	0.43	
10061-02-6	trans-1,3-Dichloropropene	ND	16	2.0	ND	3.4	0.43	
79-00-5	1,1,2-Trichloroethane	ND	3.1	1.6	ND	0.57	0.29	
108-88-3	<b>Toluene</b>	<b>3.7</b>	16	1.6	<b>0.99</b>	4.1	0.41	<b>J</b>
591-78-6	2-Hexanone	ND	16	2.4	ND	3.8	0.58	
124-48-1	<b>Dibromochloromethane</b>	<b>3.1</b>	3.1	2.1	<b>0.36</b>	0.37	0.25	<b>J</b>
106-93-4	1,2-Dibromoethane	ND	3.1	1.7	ND	0.41	0.22	
111-65-9	n-Octane	ND	16	1.6	ND	3.3	0.33	
127-18-4	<b>Tetrachloroethene</b>	<b>630</b>	3.1	1.6	<b>93</b>	0.46	0.23	
108-90-7	Chlorobenzene	ND	3.1	1.6	ND	0.68	0.35	

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: Re      Date: 6/2/08      **239**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG36B-20  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-004

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00910

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.050 Liter(s)  
 0.0050 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	ND	16	1.9	ND	3.6	0.45	
179601-23-1	m,p-Xylenes	ND	16	4.1	ND	3.6	0.93	
75-25-2	Bromoform	ND	16	2.4	ND	1.5	0.23	
100-42-5	Styrene	ND	16	2.4	ND	3.7	0.56	
95-47-6	o-Xylene	ND	16	2.0	ND	3.6	0.45	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	2.0	ND	0.45	0.29	
98-82-8	Cumene	ND	16	1.7	ND	3.2	0.36	
103-65-1	n-Propylbenzene	ND	16	1.6	ND	3.2	0.33	
622-96-8	4-Ethyltoluene	ND	16	1.8	ND	3.2	0.36	
108-67-8	1,3,5-Trimethylbenzene	ND	16	1.9	ND	3.2	0.38	
98-83-9	alpha-Methylstyrene	ND	16	2.3	ND	3.2	0.47	
95-63-6	1,2,4-Trimethylbenzene	ND	16	2.2	ND	3.2	0.44	
100-44-7	Benzyl Chloride	ND	3.1	2.7	ND	0.60	0.52	
541-73-1	1,3-Dichlorobenzene	ND	3.1	1.9	ND	0.52	0.32	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>65</b>	3.1	1.7	<b>11</b>	0.52	0.29	
135-98-8	sec-Butylbenzene	ND	16	1.8	ND	2.8	0.33	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	16	2.0	ND	2.8	0.37	
95-50-1	1,2-Dichlorobenzene	ND	3.1	2.1	ND	0.52	0.34	
96-12-8	1,2-Dibromo-3-chloropropane	ND	16	2.4	ND	1.6	0.25	
120-82-1	1,2,4-Trichlorobenzene	ND	3.1	2.4	ND	0.42	0.32	
91-20-3	<b>Naphthalene</b>	<b>3.8</b>	6.2	2.3	<b>0.72</b>	1.2	0.44	<b>J</b>
87-68-3	<b>Hexachlorobutadiene</b>	<b>56</b>	3.1	2.8	<b>5.3</b>	0.29	0.26	
98-06-6	tert-Butylbenzene	ND	6.2	1.6	ND	1.1	0.28	
104-51-8	n-Butylbenzene	ND	6.2	1.6	ND	1.1	0.28	

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.

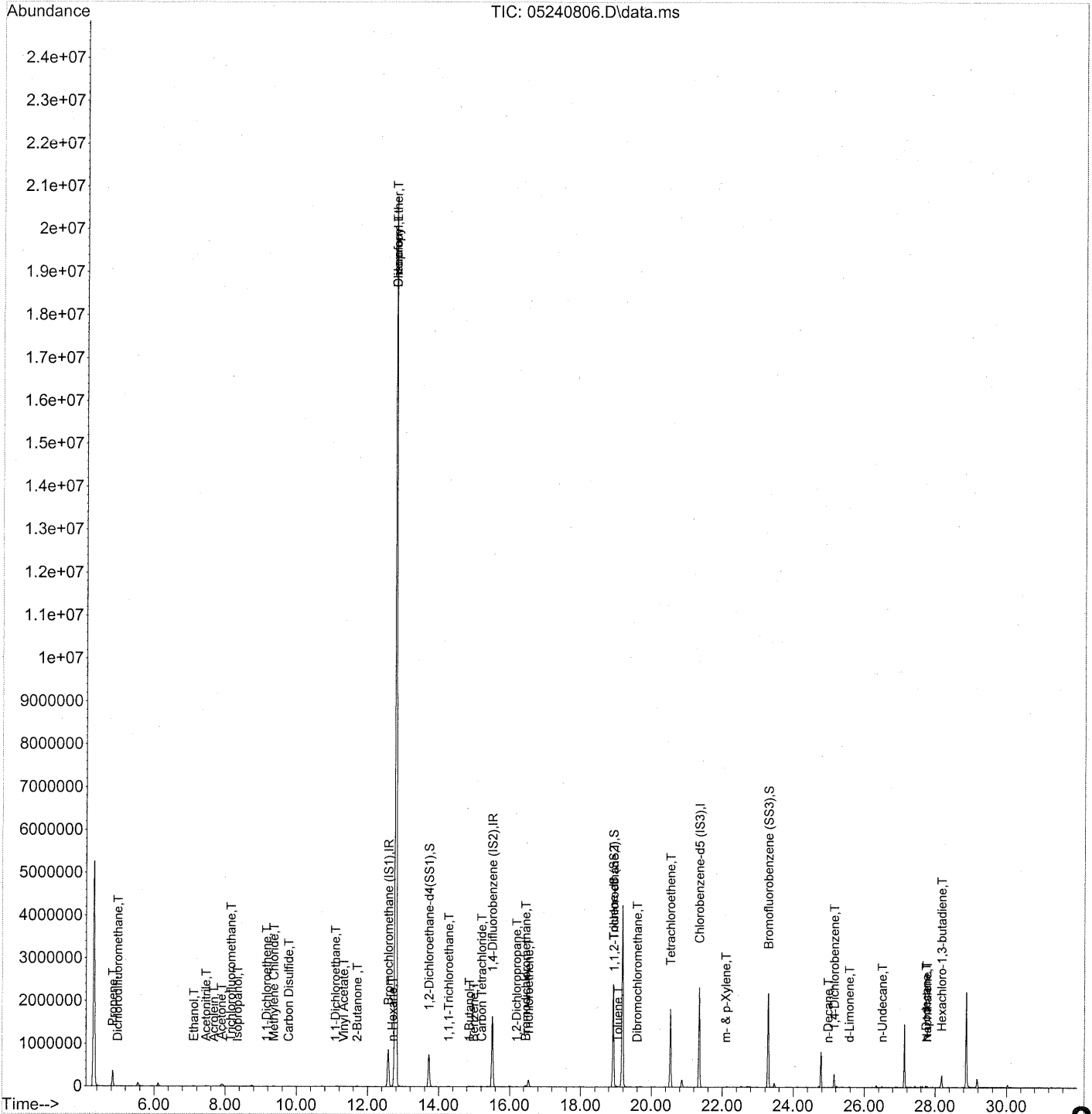
Verified By: RC

Date: 6/2/08

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	441193	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1908057	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	909547	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	761181	24.900	ng	0.00
Spiked Amount	25.000		Recovery	=	99.60%	
57) Toluene-d8 (SS2)	18.93	98	1997717	24.456	ng	0.00
Spiked Amount	25.000		Recovery	=	97.84%	
73) Bromofluorobenzene (SS3)	23.29	174	817701	24.616	ng	0.00
Spiked Amount	25.000		Recovery	=	98.48%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	40233	1.155	ng	# 1
3) Dichlorodifluoromethane	4.98	85	7129	0.111	ng	96
4) Chloromethane	5.33	50	460	N.D.	✓	
5) Freon 114	5.54	135	52	N.D.	✓	
6) Vinyl Chloride	5.77	62	216	N.D.	✓	
7) 1,3-Butadiene	5.94	54	149	N.D.	✓	
8) Bromomethane	6.51	94	184	N.D.	✓	
9) Chloroethane	6.84	64	528	N.D.	✓	
10) Ethanol	7.11	45	26179m	1.129	ng	
11) Acetonitrile	7.46	41	20366	0.304	ng	99
12) Acrolein	7.68	56	2263	0.137	ng	99
13) Acetone	7.89	58	23704	0.998	ng	# 37
14) Trichlorofluoromethane	8.16	101	3504	0.064	ng	96
15) Isopropanol	8.34	45	5575	0.074	ng	79
16) Acrylonitrile	8.66	53	110	N.D.	✓	
17) 1,1-Dichloroethene	9.16	96	4109	0.170	ng	# 68
18) tert-Butanol	9.29	59	2635	N.D.	✓	
19) Methylene Chloride	9.36	84	6818	0.257	ng	# 81
20) Allyl Chloride	9.46	41	514	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	240	N.D.	✓	
22) Carbon Disulfide	9.78	76	20570	0.204	ng	99
23) trans-1,2-Dichloroethene	10.80	61	453	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	2987	0.065	ng	87
25) Methyl tert-Butyl Ether	11.21	73	53	N.D.	✓	
26) Vinyl Acetate	11.33	86	434	0.099	ng	< NPL 71
27) 2-Butanone	11.71	72	5646	0.326	ng	# 84
28) cis-1,2-Dichloroethene	12.36	61	1261	N.D.	✓	
29) Diisopropyl Ether	12.79	87	2614788	123.103	ng	NR # 1
30) Ethyl Acetate	12.71	61	58	N.D.	✓	
31) n-Hexane	12.70	57	5512	0.117	ng	# 71

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.79	83	21562946	<del>535.973</del>	ng <i>see dil</i>	93
34) Tetrahydrofuran	13.39	72	93	N.D.		
35) Ethyl tert-Butyl Ether	13.51	87	62	N.D. ✓		
36) 1,2-Dichloroethane	13.90	62	922	N.D. ✓		
38) 1,1,1-Trichloroethane	14.28	97	3481	0.080	ng	97
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.87	56	13661	0.521	ng	99
41) Benzene	14.99	78	10250	0.103	ng	94
42) Carbon Tetrachloride	15.21	117	12450	0.324	ng	99
43) Cyclohexane	15.39	84	1072	N.D.		
44) tert-Amyl Methyl Ether	15.88	73	75	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	1801	0.067	ng	90
46) Bromodichloromethane	16.46	83	26628	0.788	ng	99
47) Trichloroethene	16.54	130	69801	2.278	ng	95
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	16.62	57	2255	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D. ✓		
51) n-Heptane	16.99	71	356	N.D. ✓		
52) cis-1,3-Dichloropropene	17.76	75	116	N.D. ✓		
53) 4-Methyl-2-pentanone	17.79	58	313	N.D. ✓		
54) trans-1,3-Dichloropropene	18.44	75	193	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	173012	7.008	ng <i>UR#</i>	7
58) Toluene	19.06	91	13180	0.119	ng	98
59) 2-Hexanone	19.40	43	3140	N.D. ✓		
60) Dibromochloromethane	19.60	129	2952	0.098	ng	95
61) 1,2-Dibromoethane	19.94	107	426	N.D. ✓		
62) Butyl Acetate	20.22	43	900	N.D.		
63) n-Octane	20.35	57	540	N.D. ✓		
64) Tetrachloroethene	20.54	166	662357	20.159	ng	98
65) Chlorobenzene	21.41	112	2292	N.D. ✓		
66) Ethylbenzene	21.90	91	3479	N.D. ✓		
67) m- & p-Xylene	22.10	91	8062	0.095	ng #	55
68) Bromoform	22.21	173	925	N.D. ✓		
69) Styrene	22.58	104	1378	N.D. ✓		
70) o-Xylene	22.72	91	2901	N.D. ✓		
71) n-Nonane	22.98	43	2762	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.70	83	1114	N.D. ✓		
74) Cumene	23.45	105	1327	N.D. ✓		
75) alpha-Pinene	23.95	93	752	N.D.		
76) n-Propylbenzene	24.11	91	2193	N.D. ✓		
77) 3-Ethyltoluene	24.23	105	3179	N.D.		
78) 4-Ethyltoluene	24.28	105	2500	N.D. ✓		
79) 1,3,5-Trimethylbenzene	24.38	105	1729	N.D. ✓		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

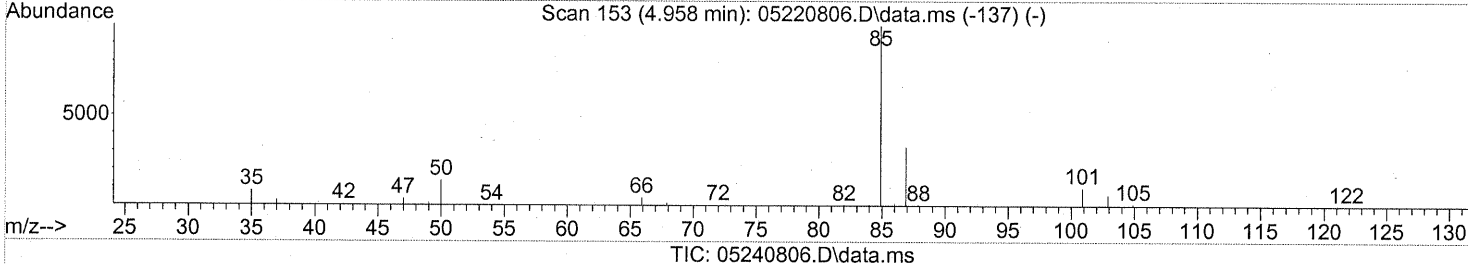
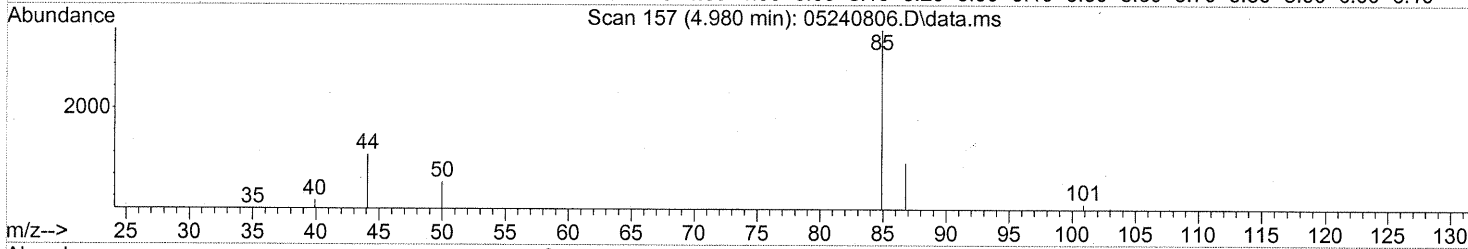
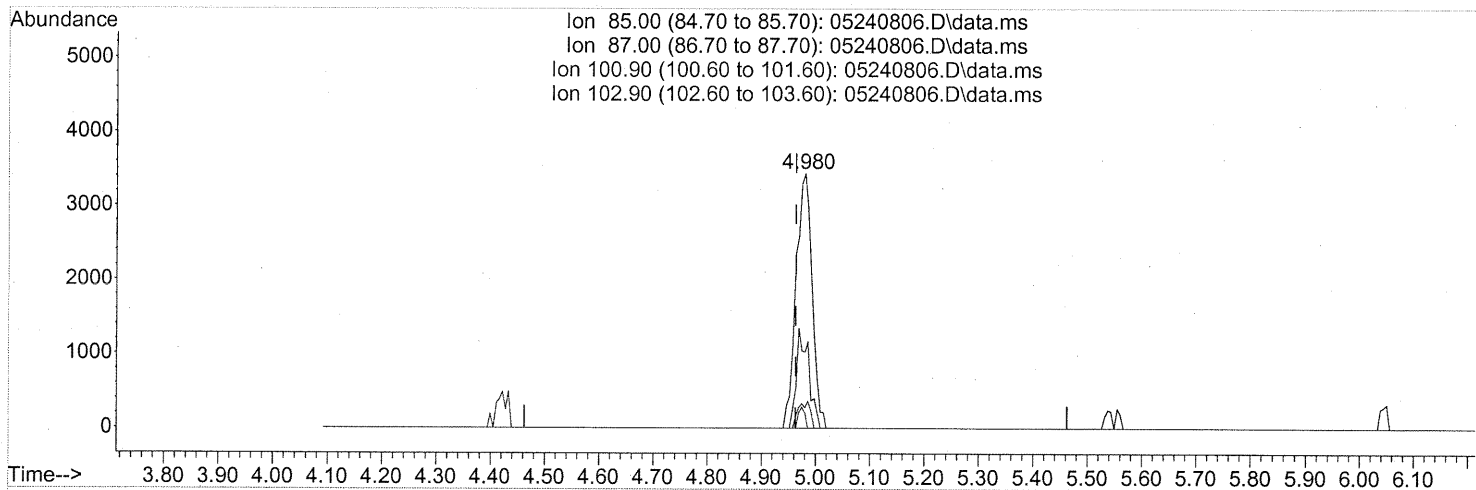
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.57	118	776	N.D.	✓	
81) 2-Ethyltoluene	24.61	105	2237	N.D.	✓	
82) 1,2,4-Trimethylbenzene	24.88	105	4122	N.D.	✓	
83) n-Decane	24.98	57	3086	0.050	ng	83
84) Benzyl Chloride	25.05	91	1024	N.D.	✓	
85) 1,3-Dichlorobenzene	25.08	146	1459	N.D.	✓	
86) 1,4-Dichlorobenzene	25.16	146	140353	2.072	ng	97
87) sec-Butylbenzene	25.22	105	1247	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	1977	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.40	105	2302	N.D.	✓	
90) 1,2-Dichlorobenzene	25.56	146	1815	N.D.	✓	
91) d-Limonene	25.58	68	3321	0.075	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.10	157	54	N.D.	✓	
93) n-Undecane	26.50	57	7890	0.123	ng	88
94) 1,2,4-Trichlorobenzene	27.63	180	1962	N.D.	✓	
95) Naphthalene	27.77	128	17794	0.121	ng	99
96) n-Dodecane	27.74	57	10414	0.163	ng	81
97) Hexachloro-1,3-butadiene	28.19	225	58335	1.806	ng	96

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.980min (+0.017) 0.11ng

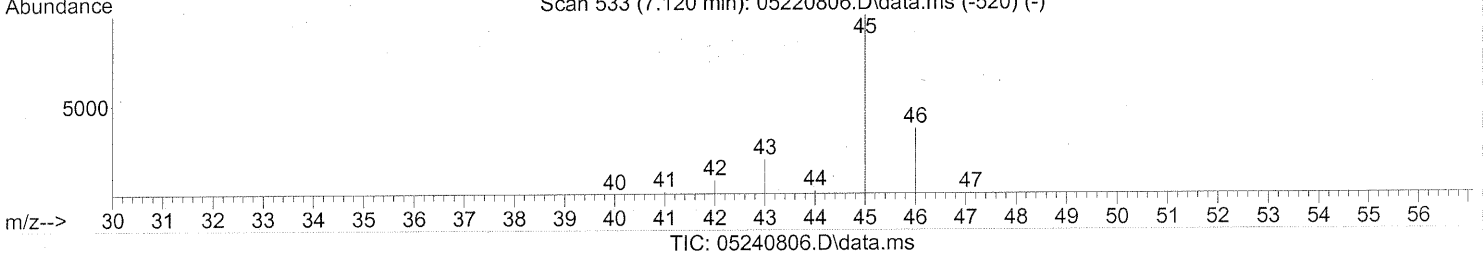
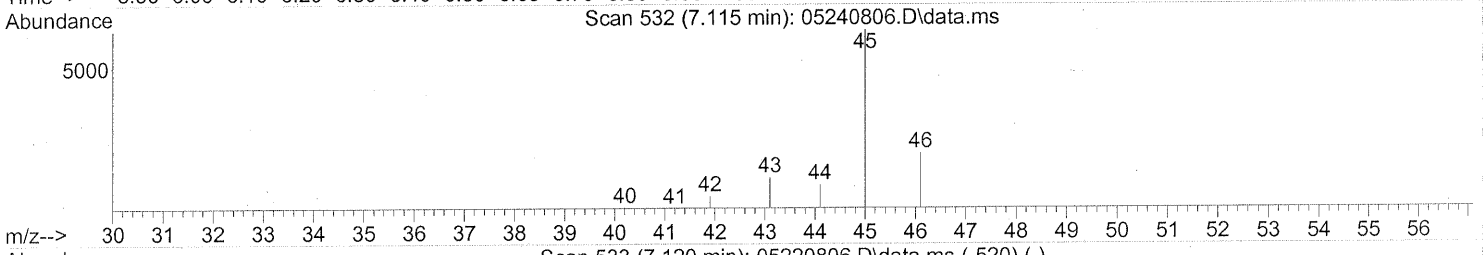
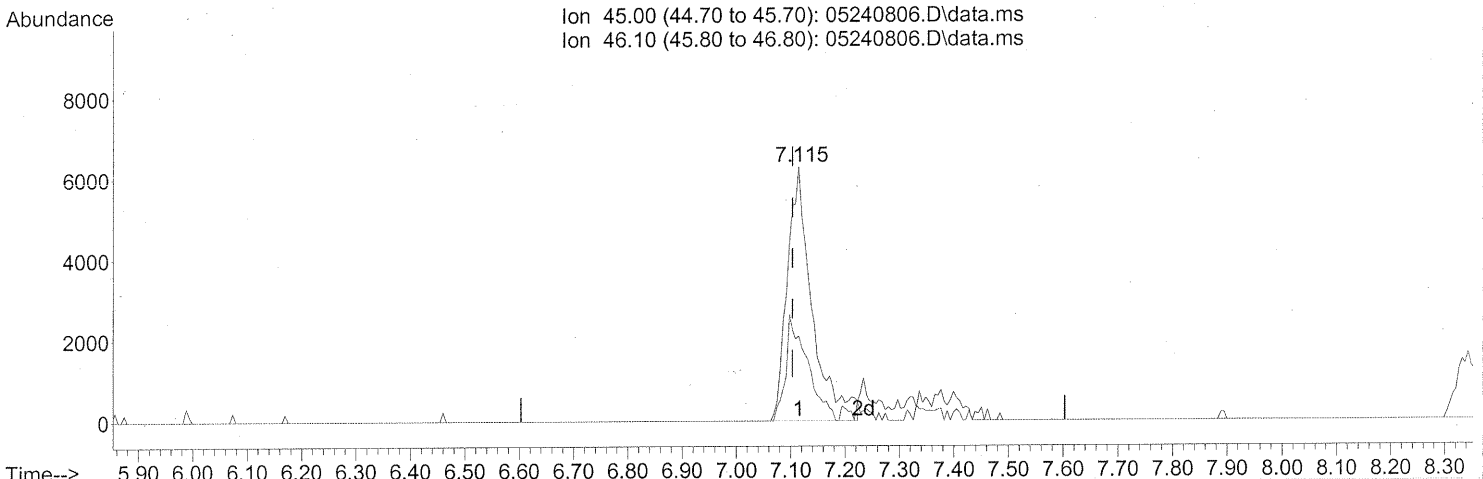
response 7129

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	30.38
100.90	9.30	7.87
102.90	6.00	3.28

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801422-004 (50ml) *5/26/08*  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:01 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(10) Ethanol (T)

7.115min (+0.011) 0.86ng

response 19870

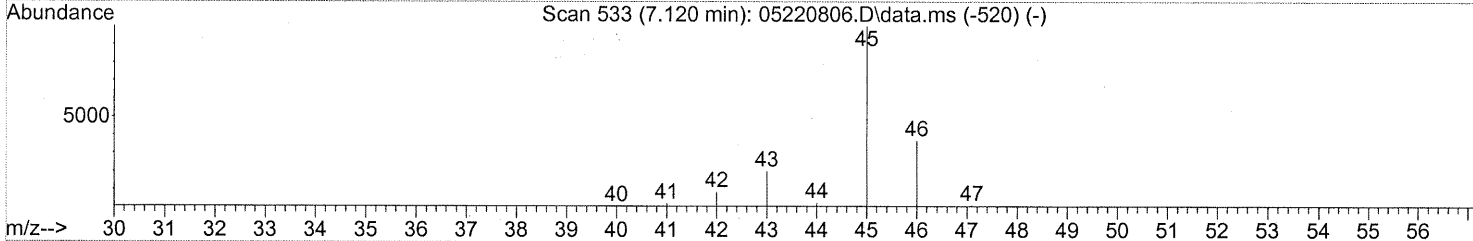
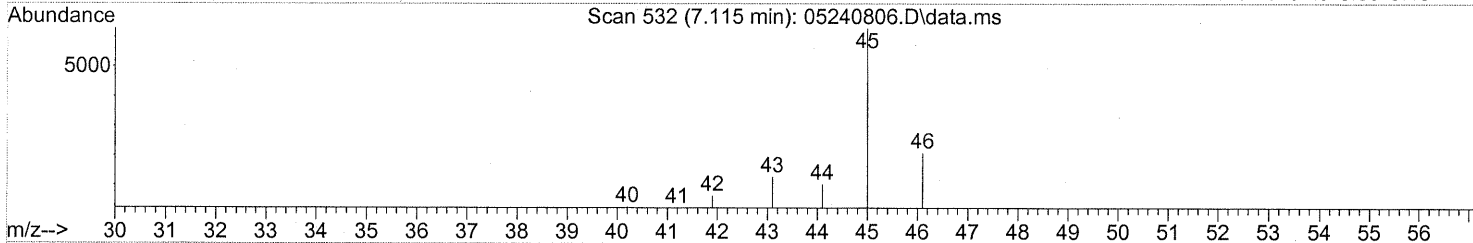
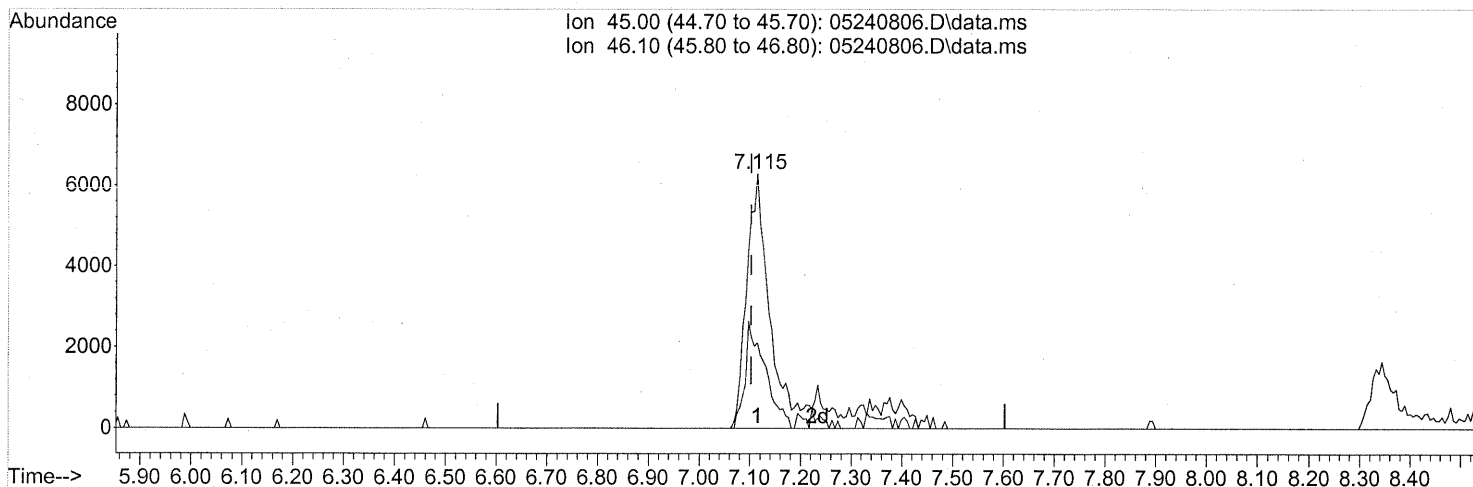
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.51
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(10) Ethanol (T)

7.115min (+0.011) 1.13ng m

response 26179

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	27.71
0.00	0.00	0.00
0.00	0.00	0.00

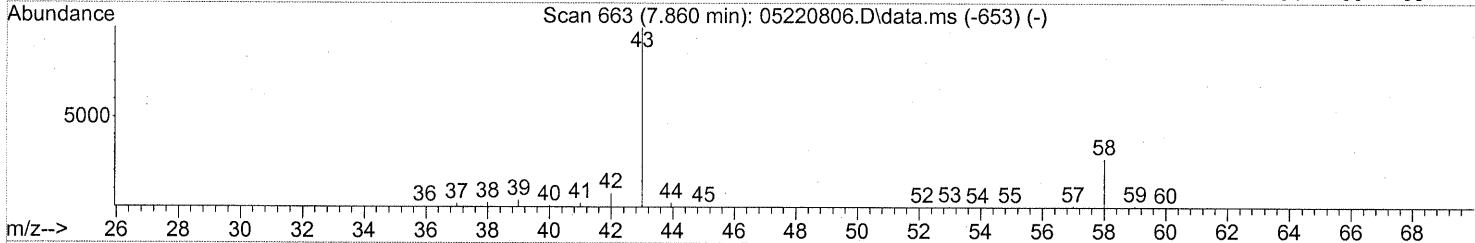
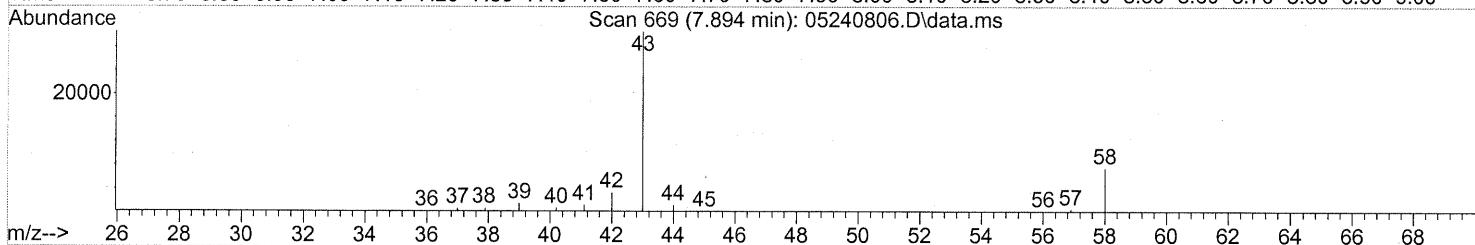
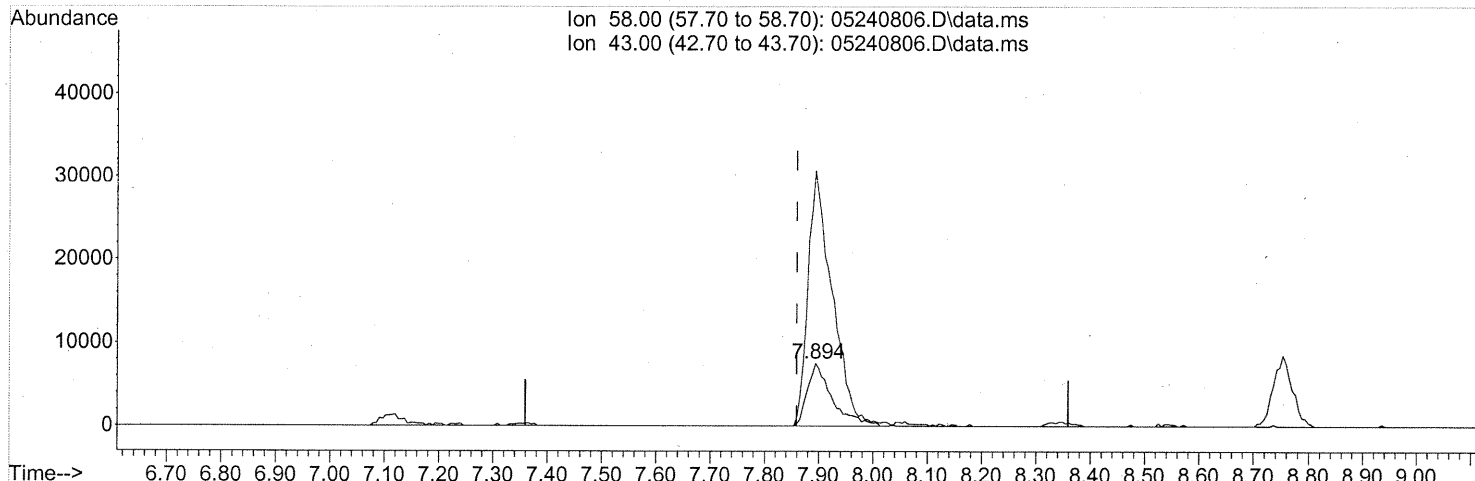
*incl tailing*  
*WA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801442-004 (50ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240806.D\data.ms

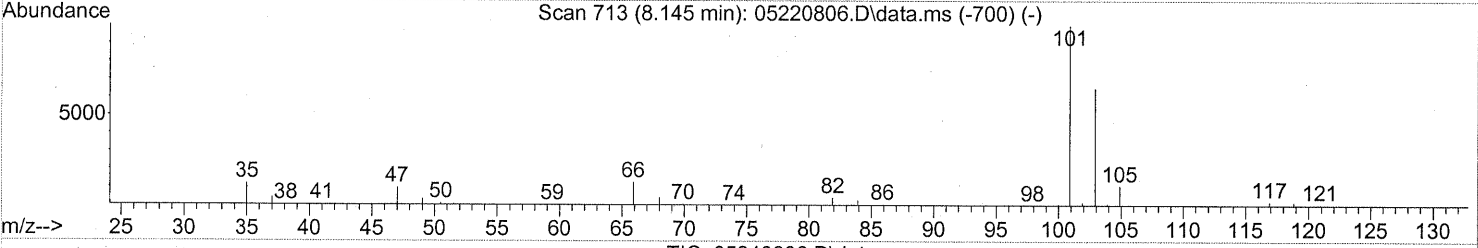
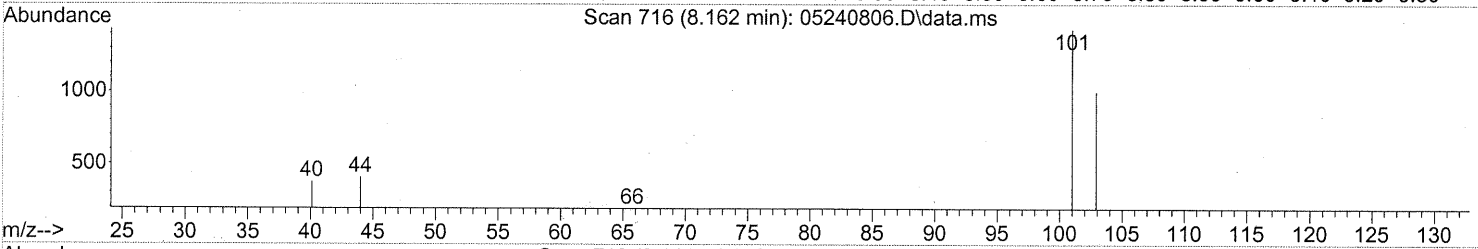
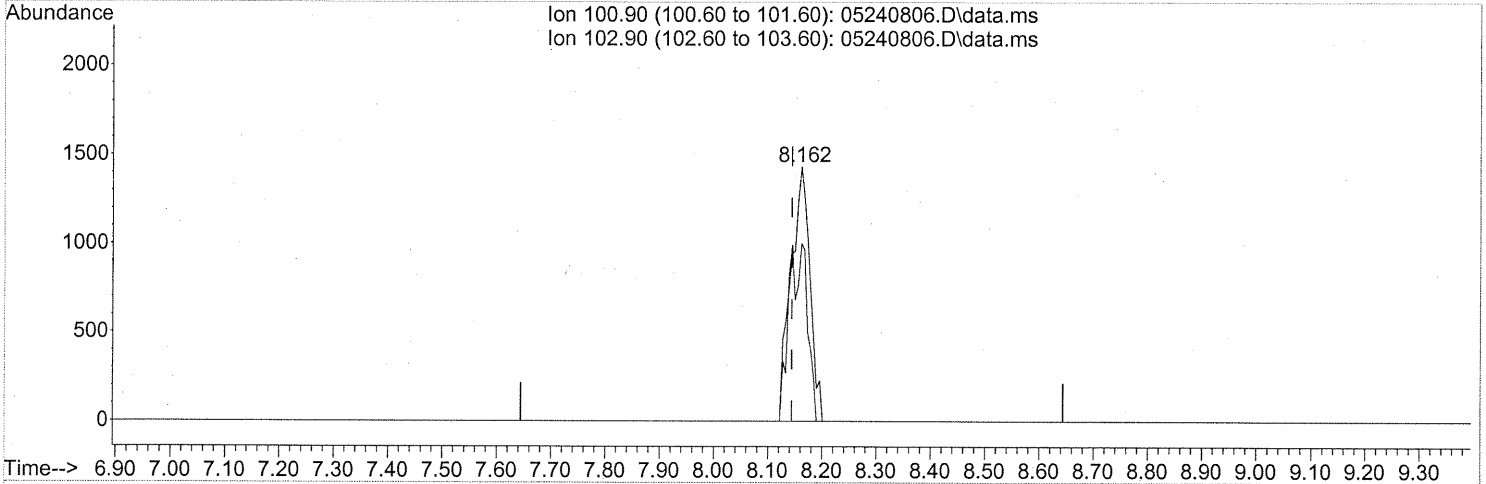
(13) Acetone (T)  
7.894min (+0.034) 1.00ng  
response 23704

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	401.39#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(14) Trichlorofluoromethane (T)

8.162min (+0.017) 0.06ng

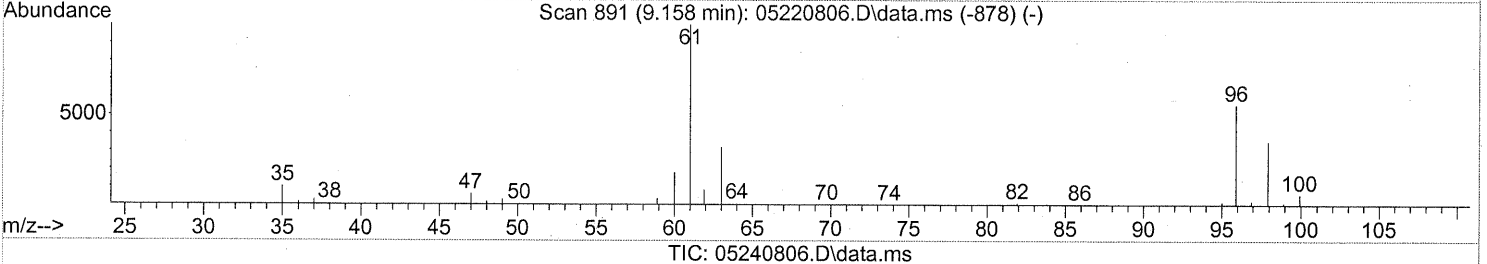
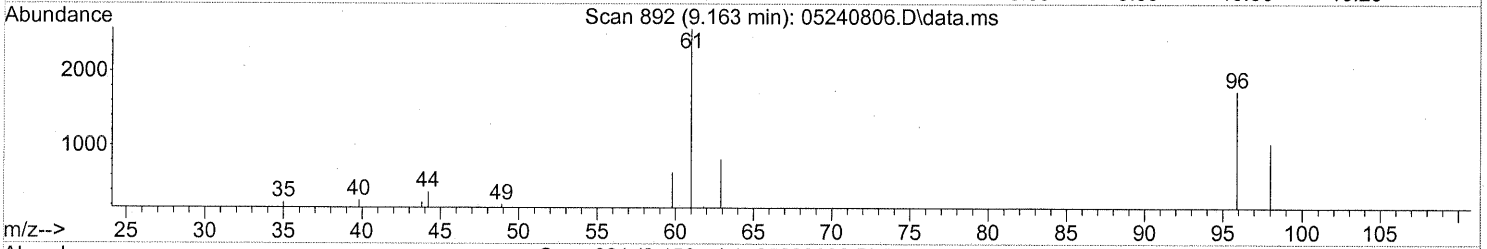
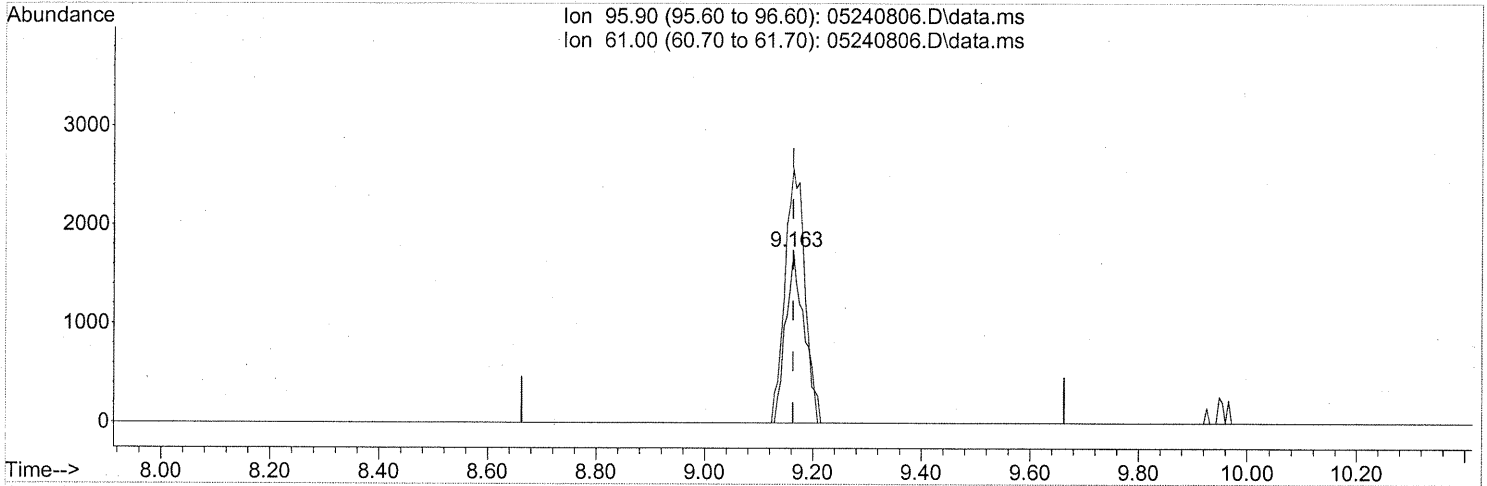
response 3504

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	67.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801442-004 (50ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.163min (+0.000) 0.17ng

response 4109

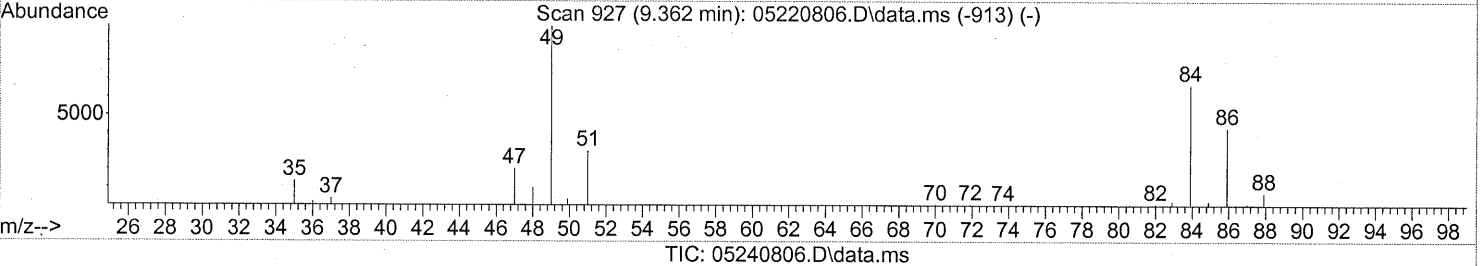
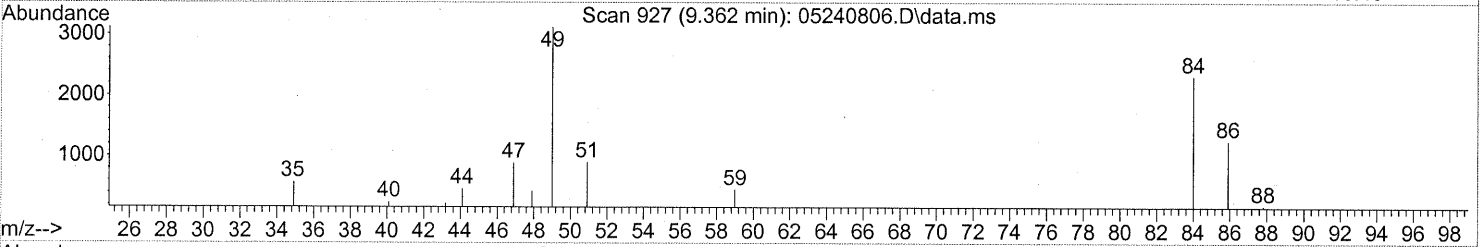
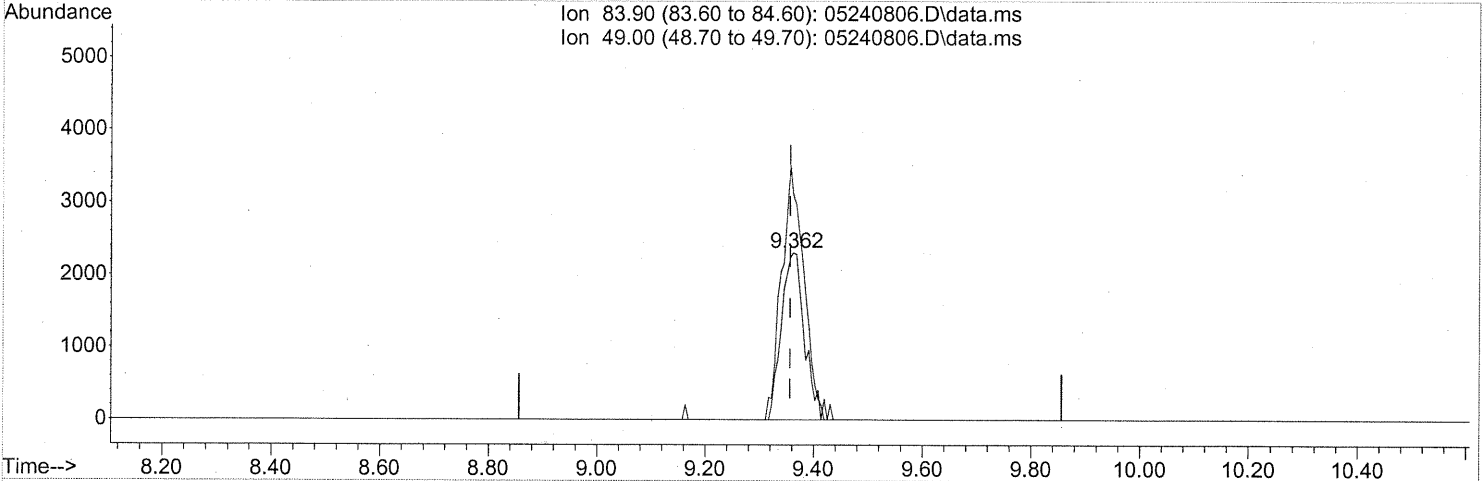
Ion	Exp%	Act%
95.90	100	100
61.00	210.00	159.89#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

9.362min (+0.006) 0.26ng

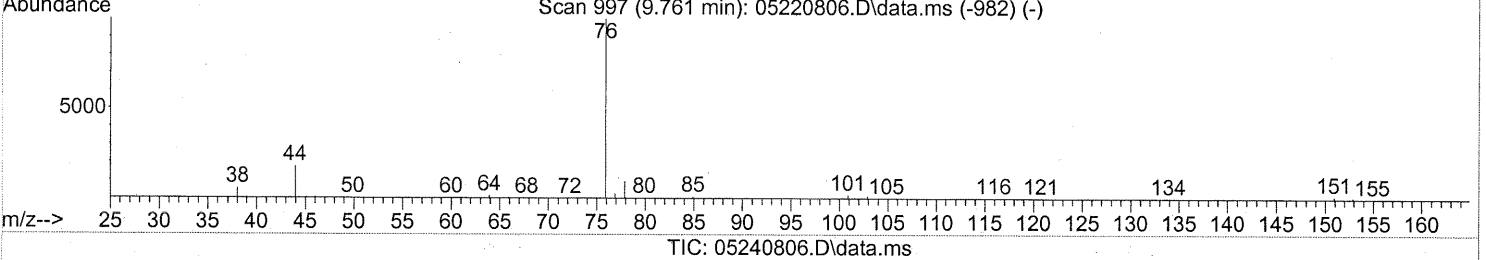
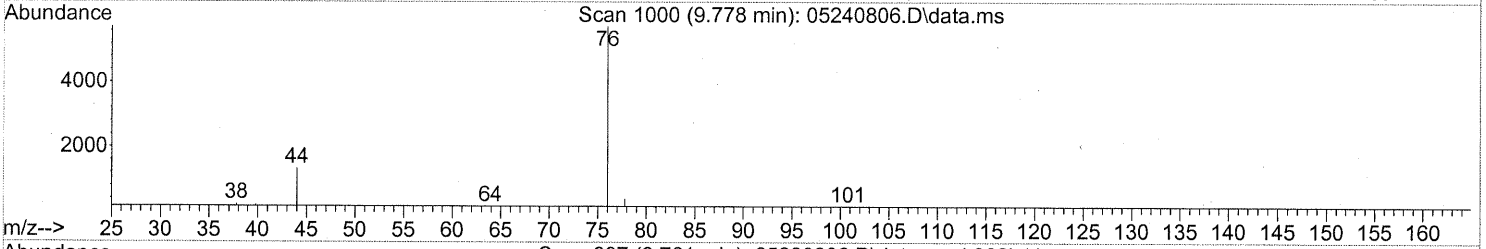
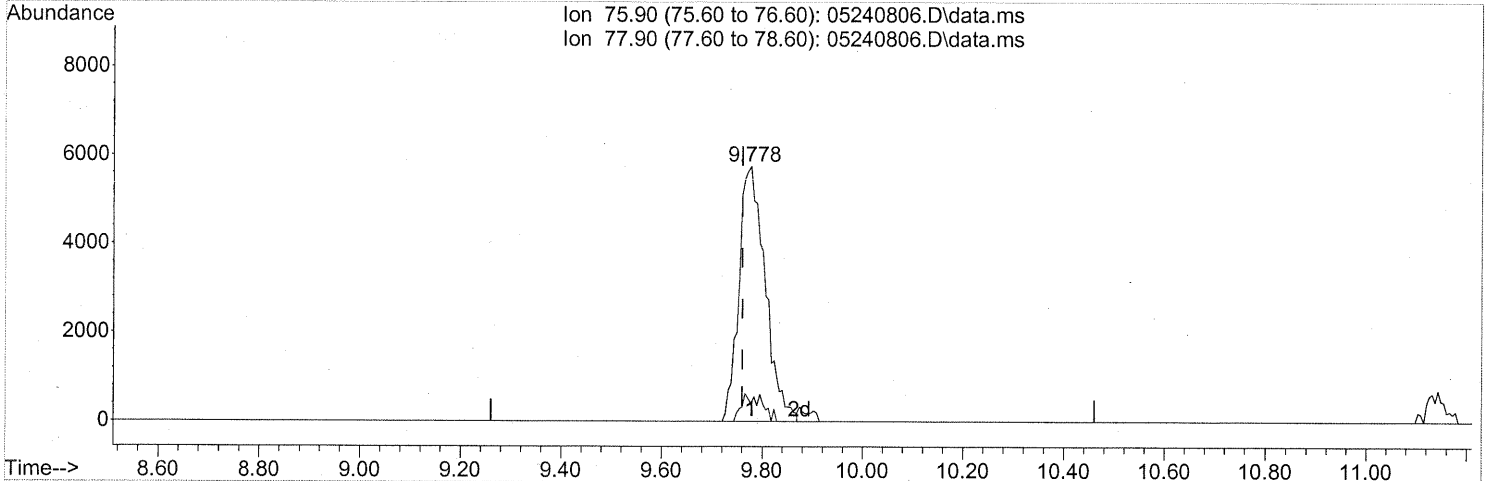
response 6818

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	146.89#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



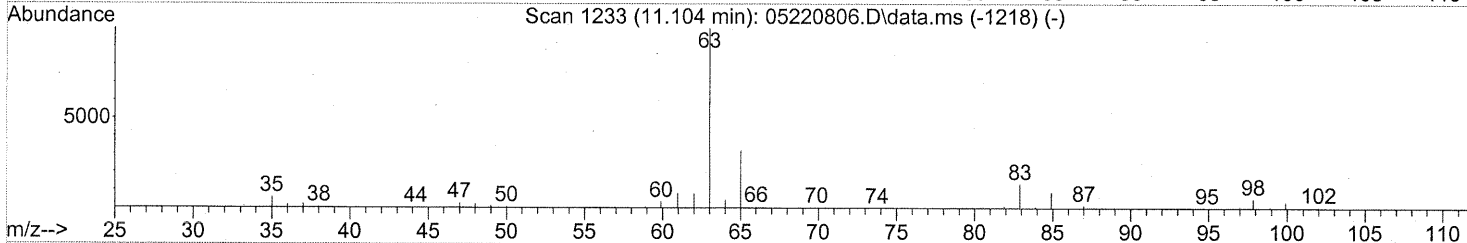
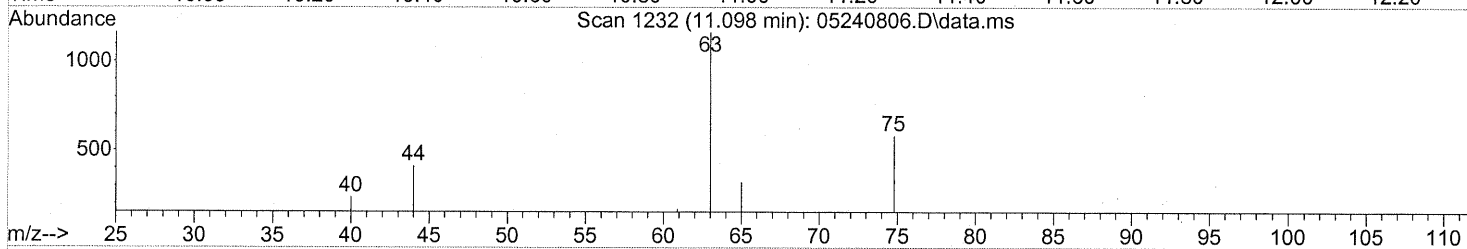
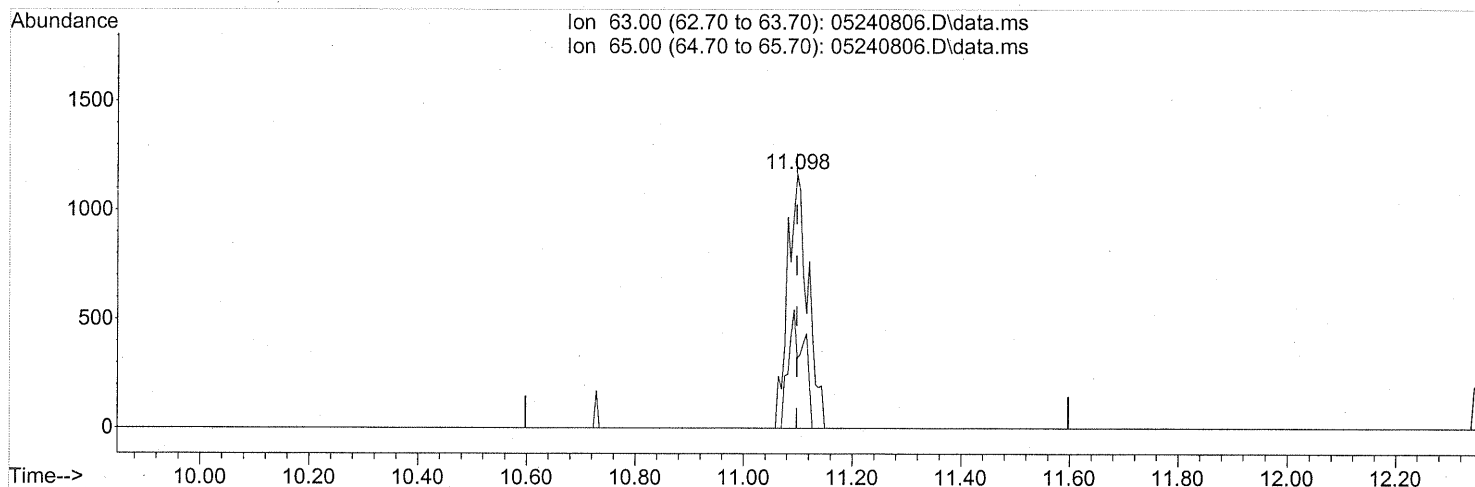
(22) Carbon Disulfide (T)  
 9.778min (+0.017) 0.20ng  
 response 20570

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.098min (+0.000) 0.06ng

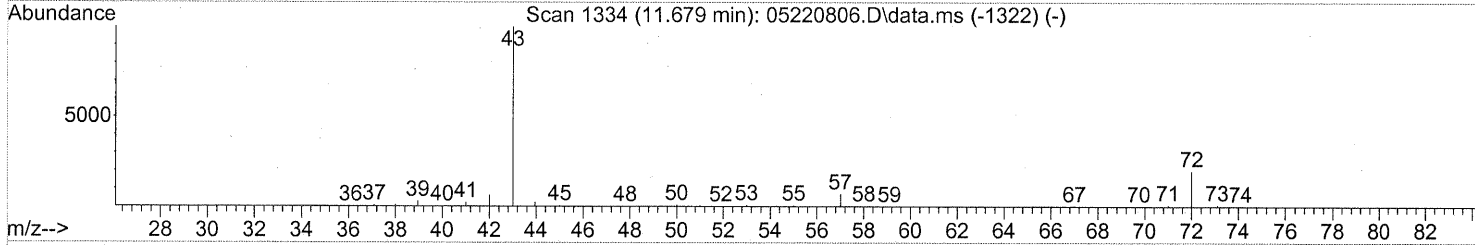
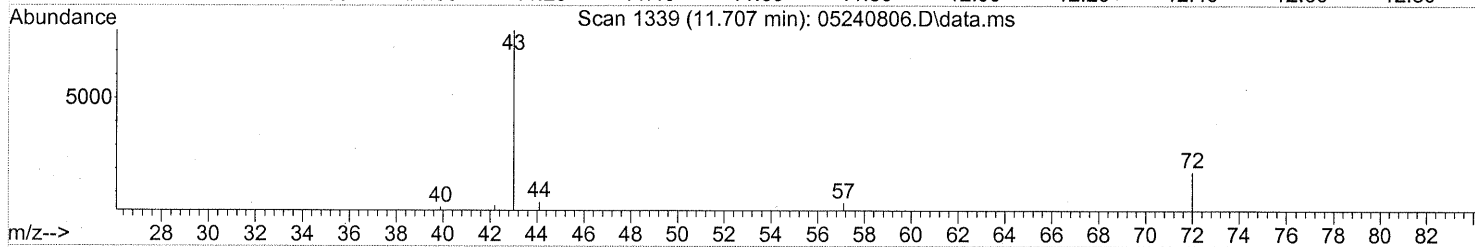
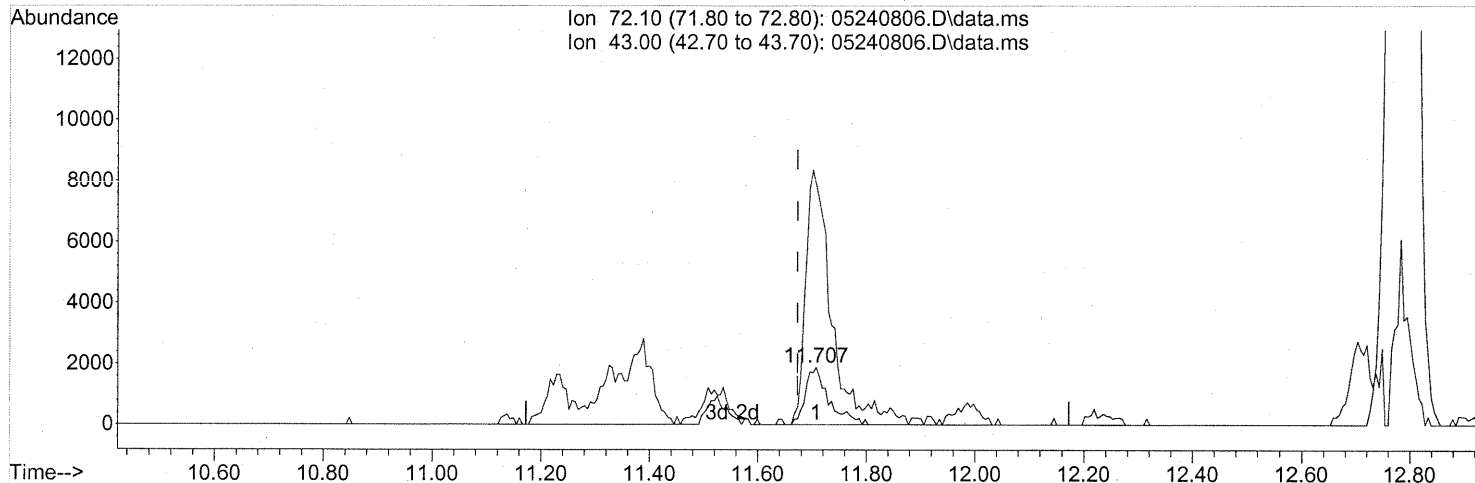
response 2987

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	35.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.707min (+0.034) 0.33ng

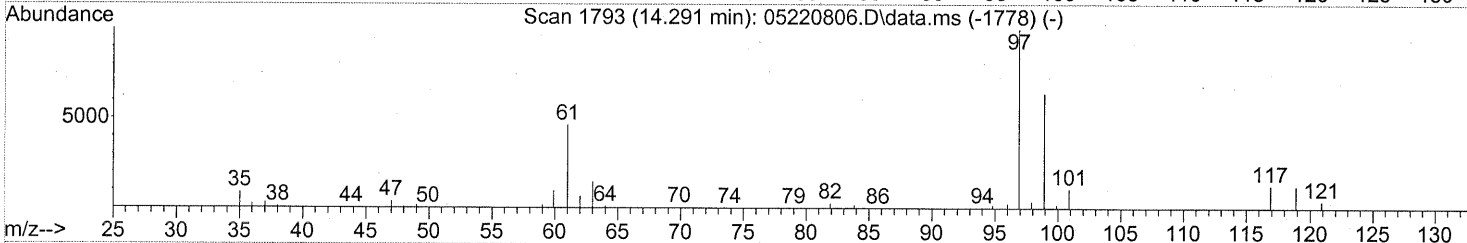
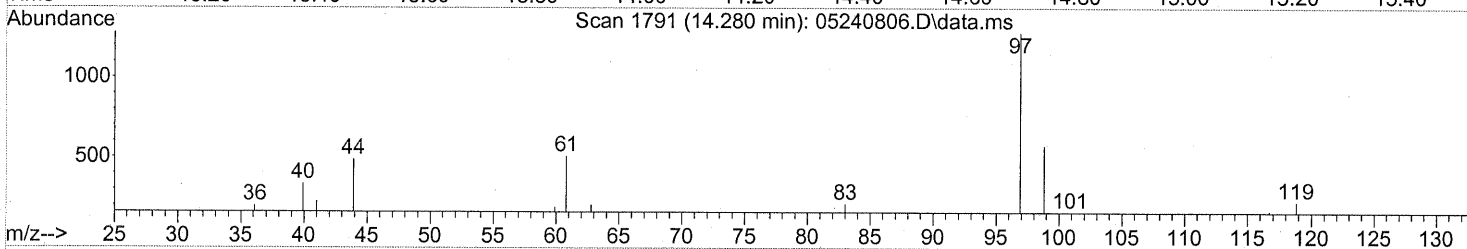
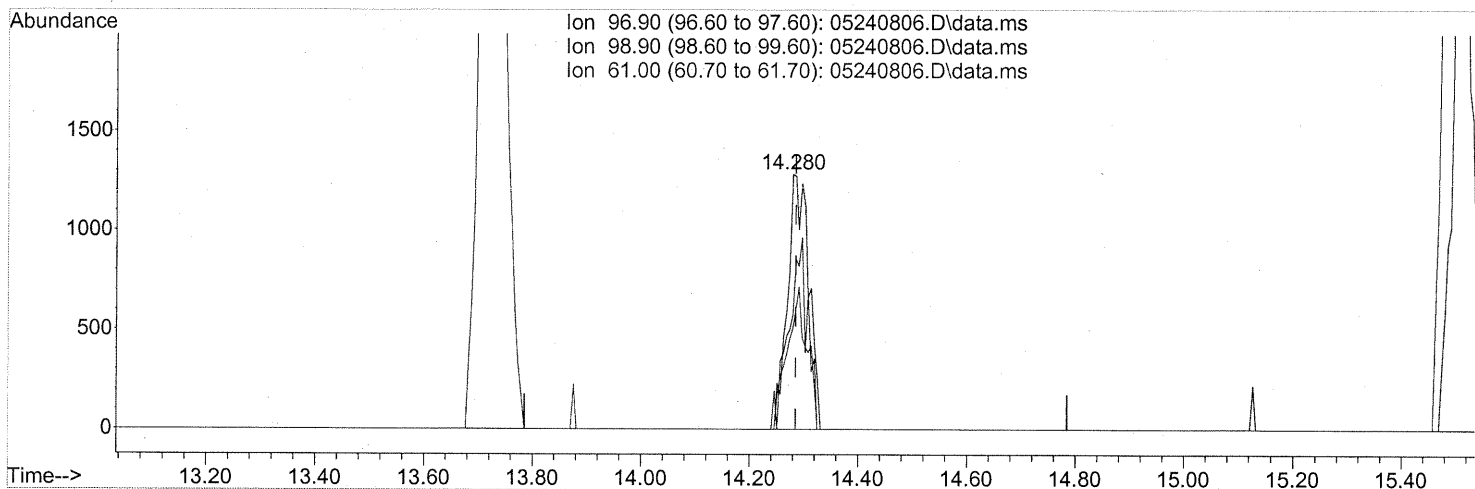
response 5646

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	462.56#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.280min (-0.006) 0.08ng

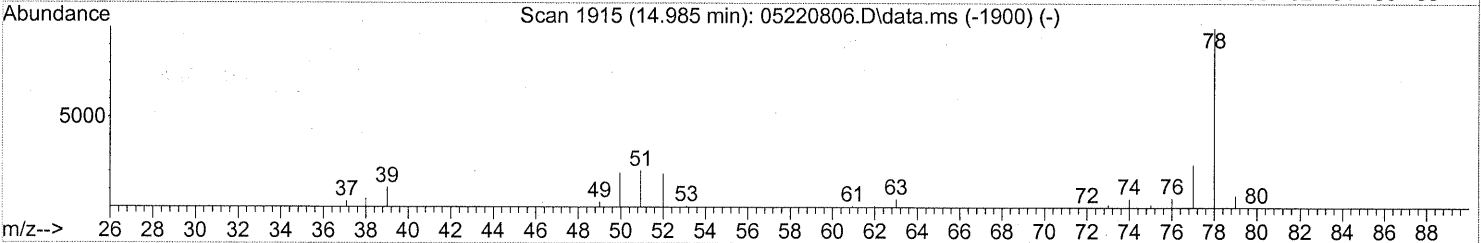
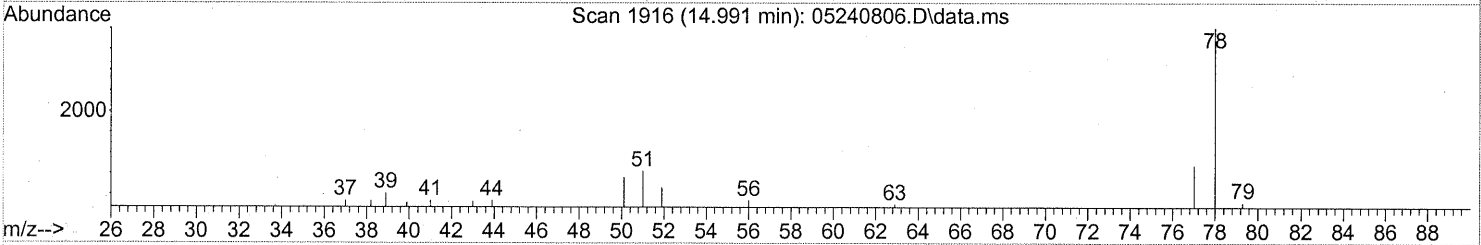
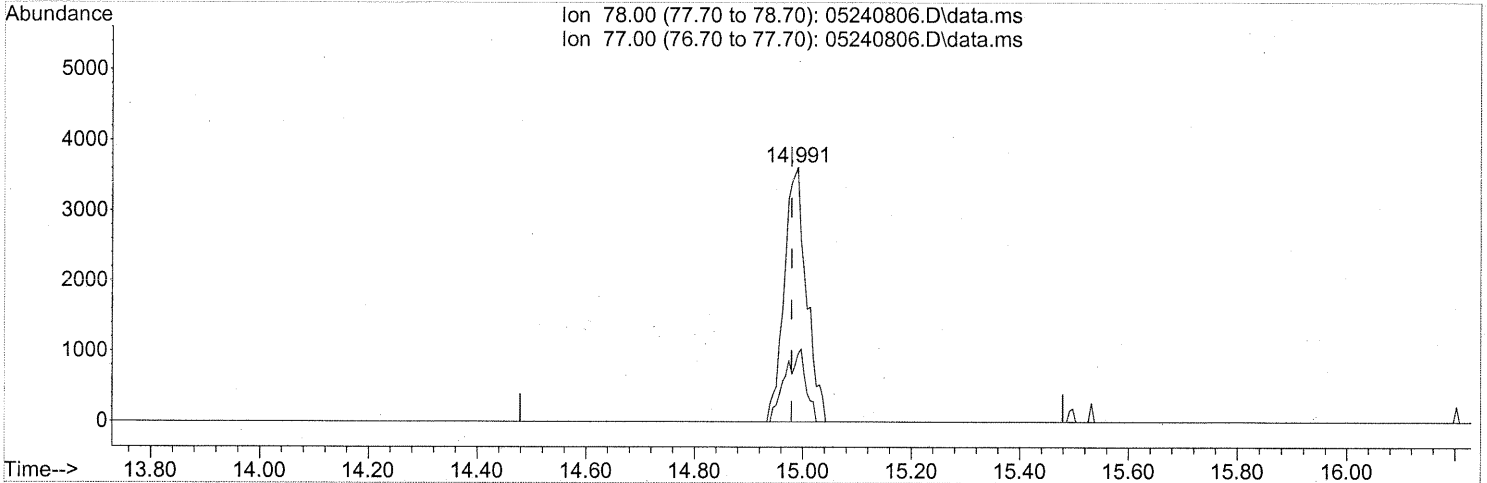
response 3481

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	66.56
61.00	50.50	51.77
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(41) Benzene (T)

14.991min (+0.011) 0.10ng

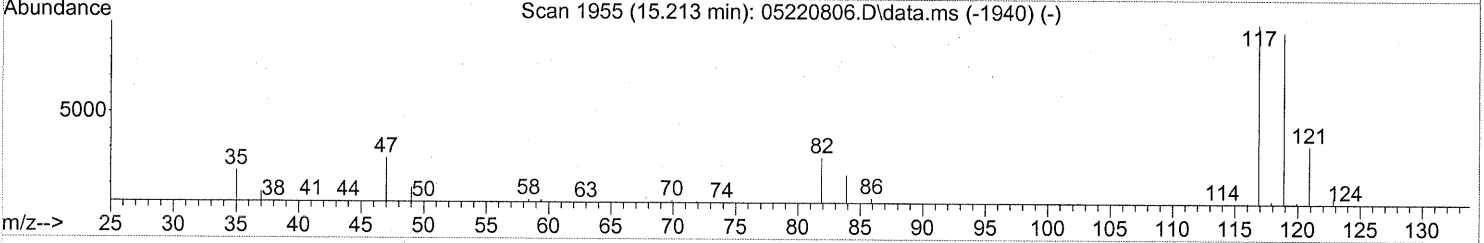
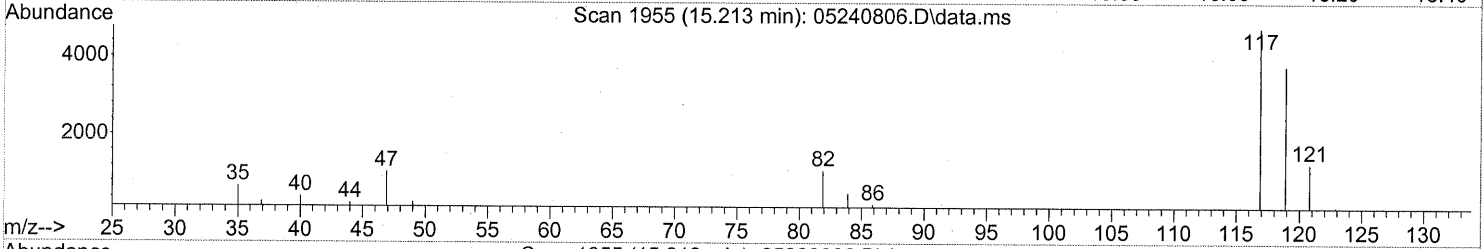
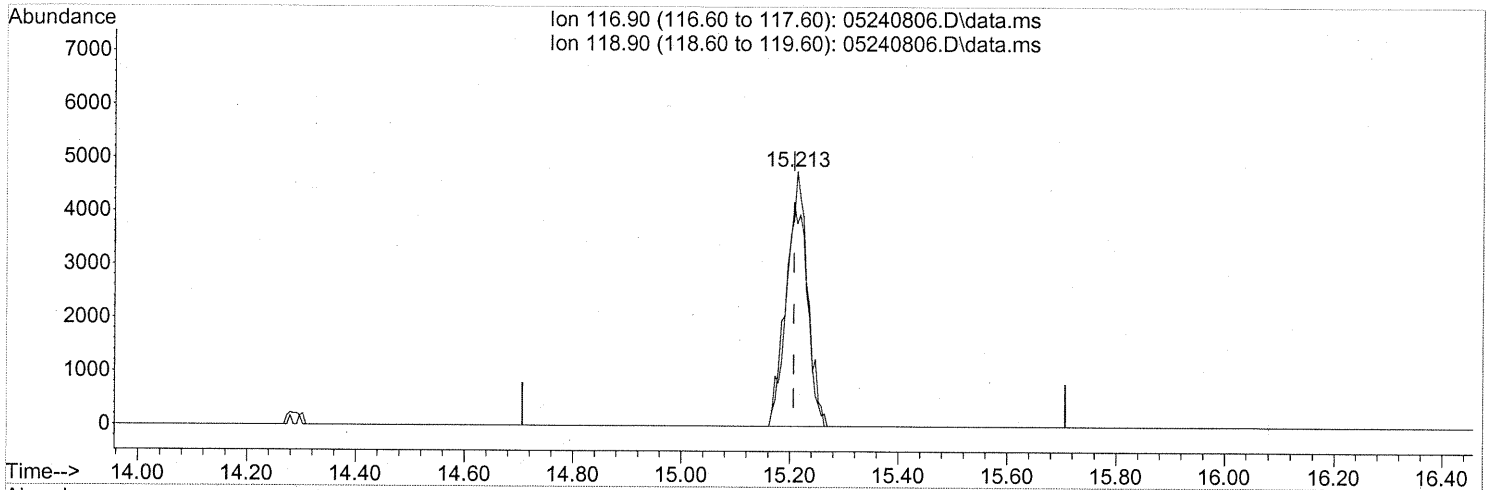
response 10250

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	26.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 0.32ng

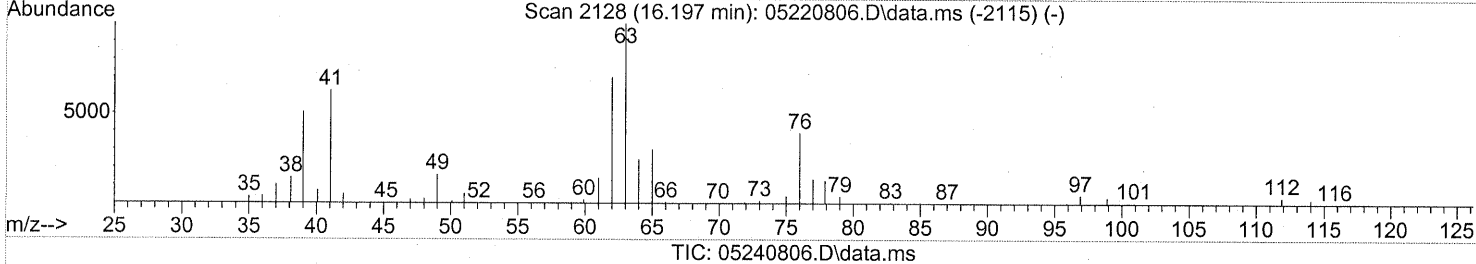
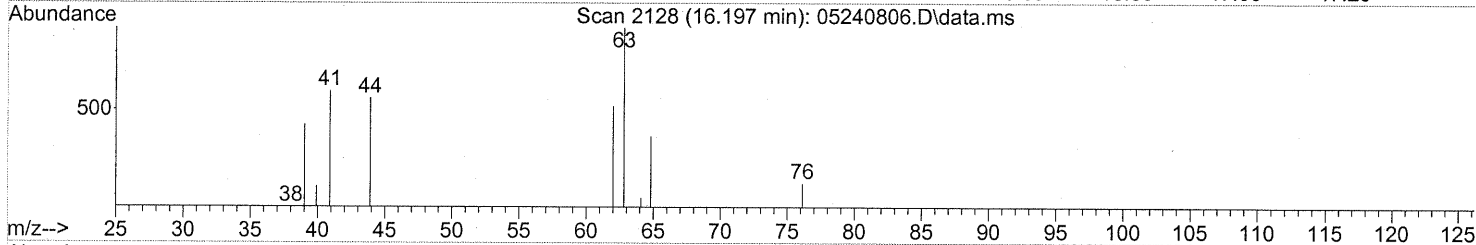
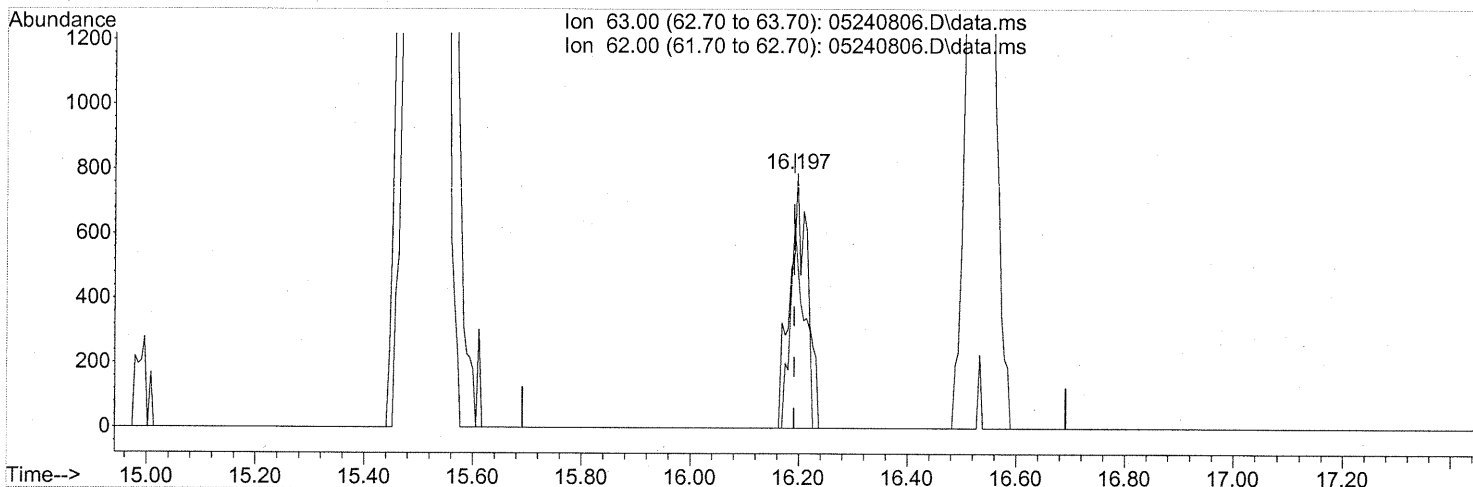
response 12450

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	95.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

16.197min (+0.006) 0.07ng

response 1801

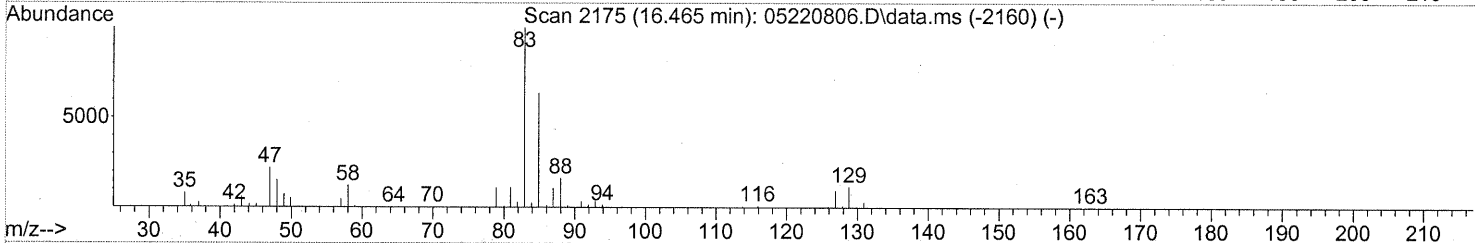
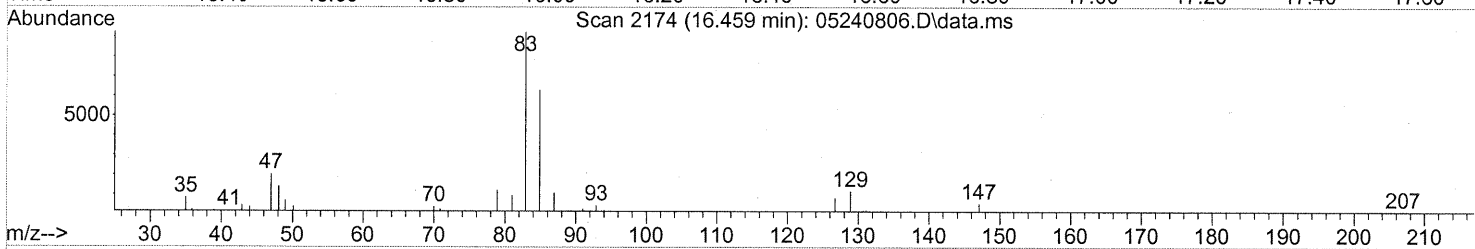
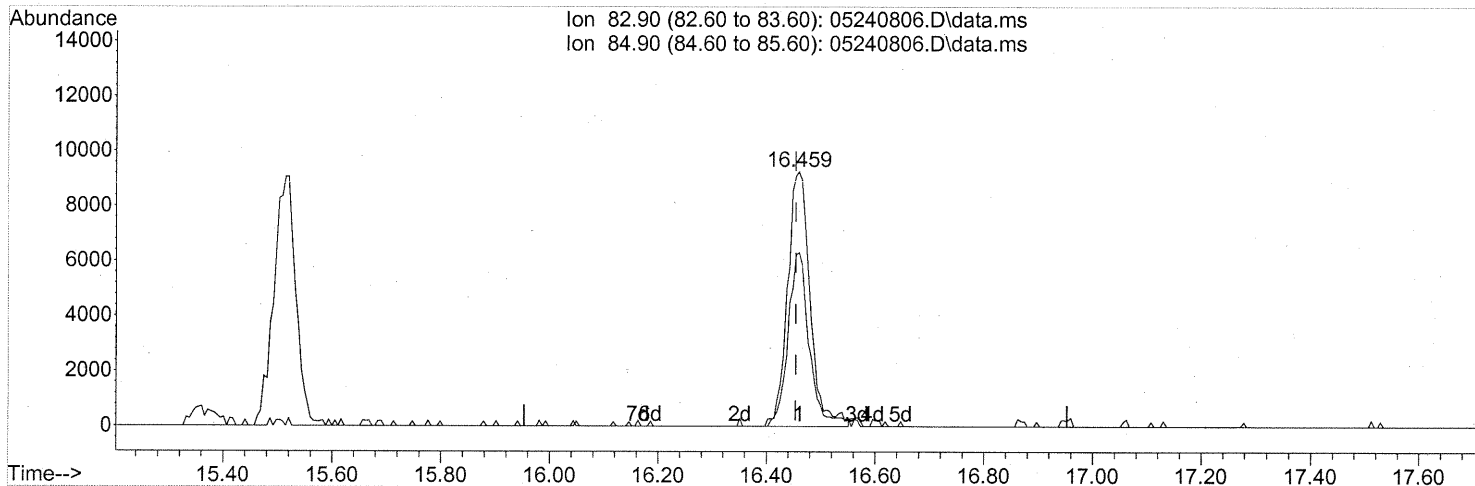
Ion	Exp%	Act%
63.00	100	100
62.00	71.30	62.74
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(46) Bromodichloromethane (T)

16.459min (+0.006) 0.79ng

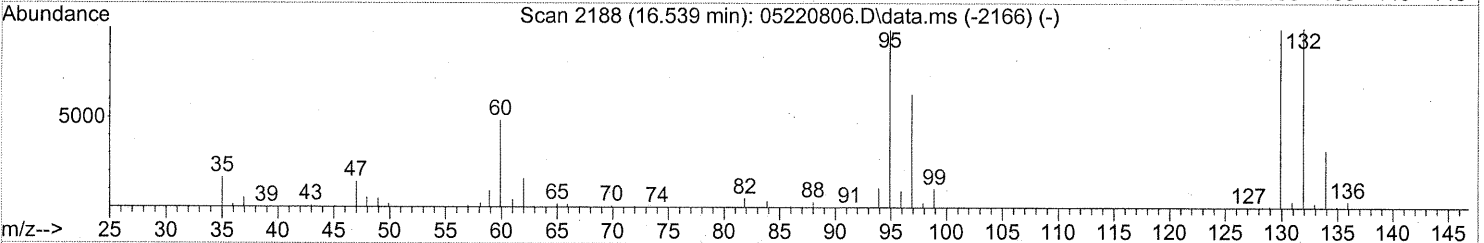
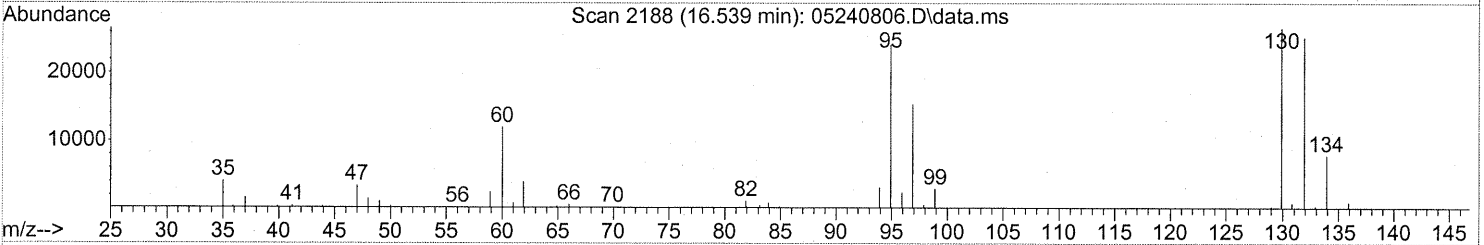
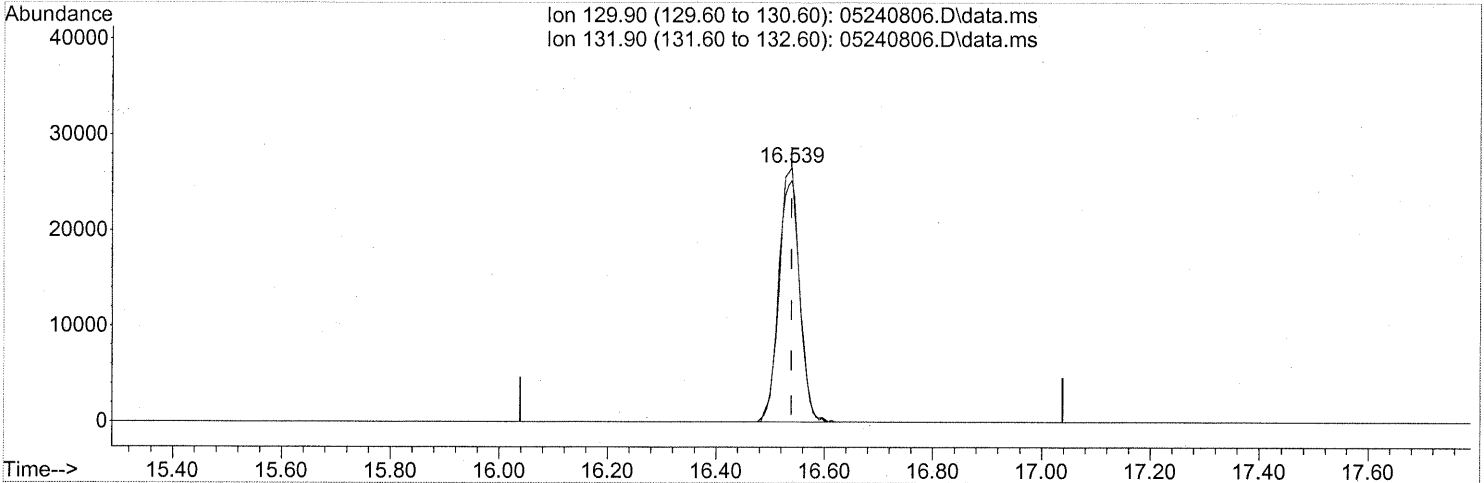
response 26628

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	64.28
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(47) Trichloroethene (T)

16.539min (+0.000) 2.28ng

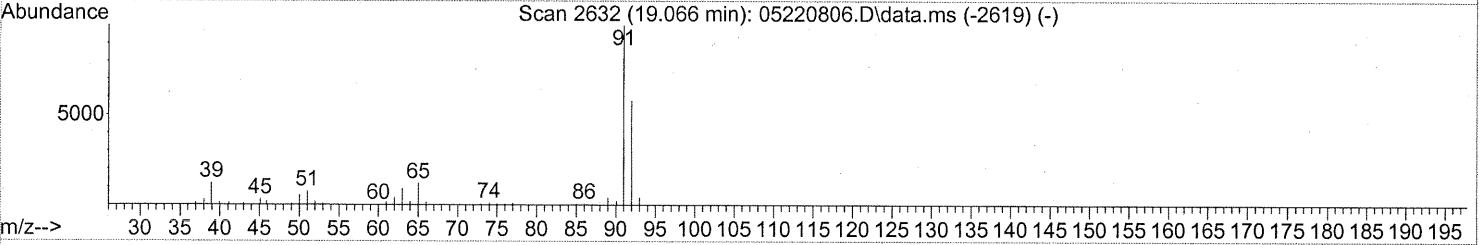
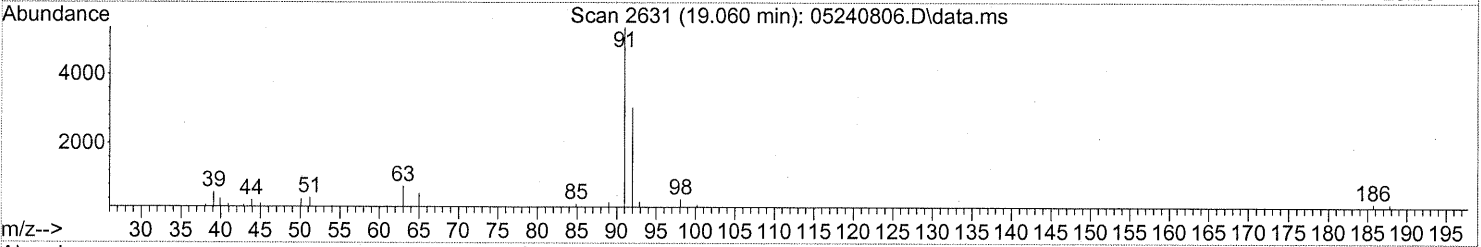
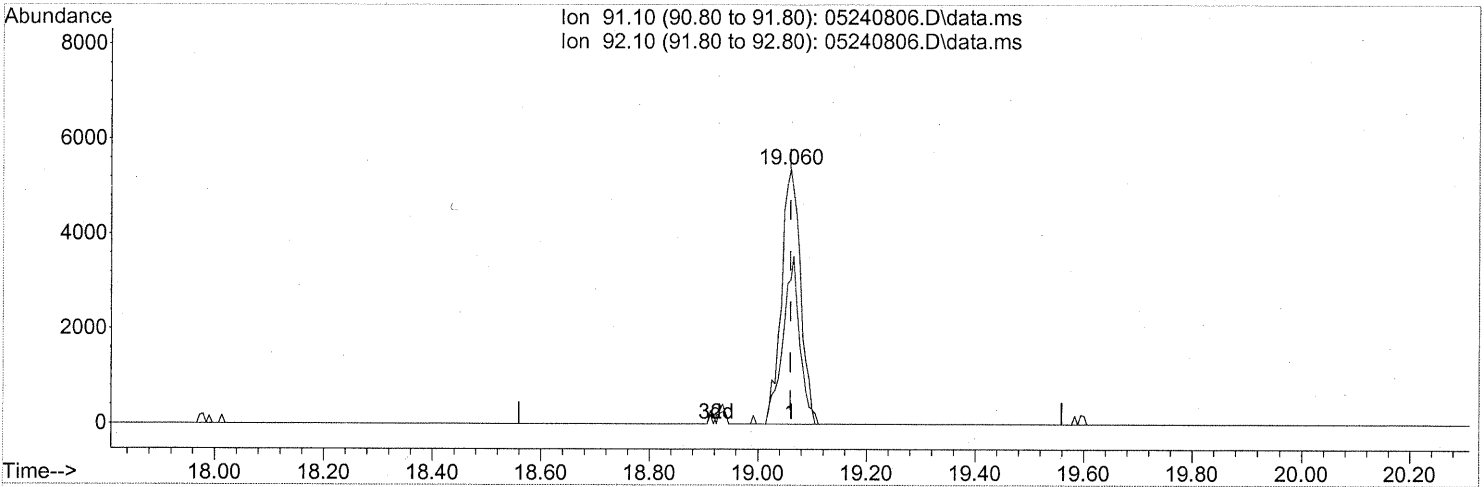
response 69801

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	96.16
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(58) Toluene (T)

19.060min (+0.000) 0.12ng

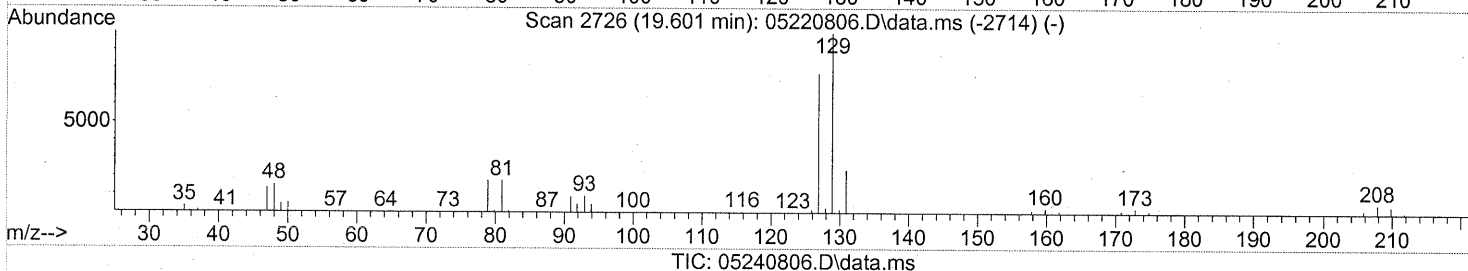
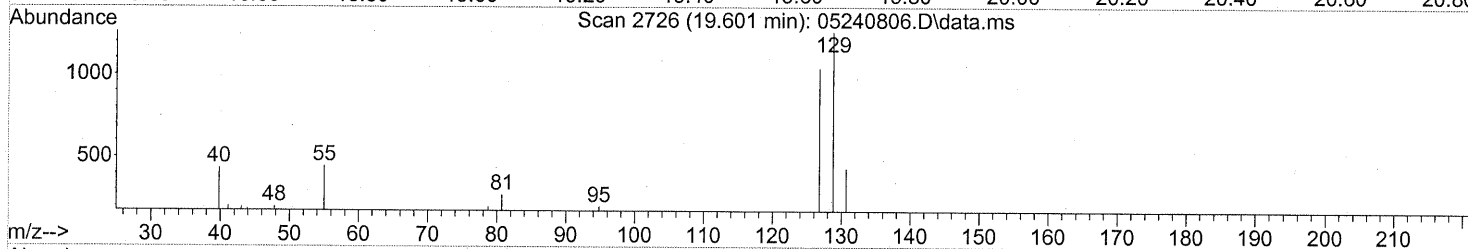
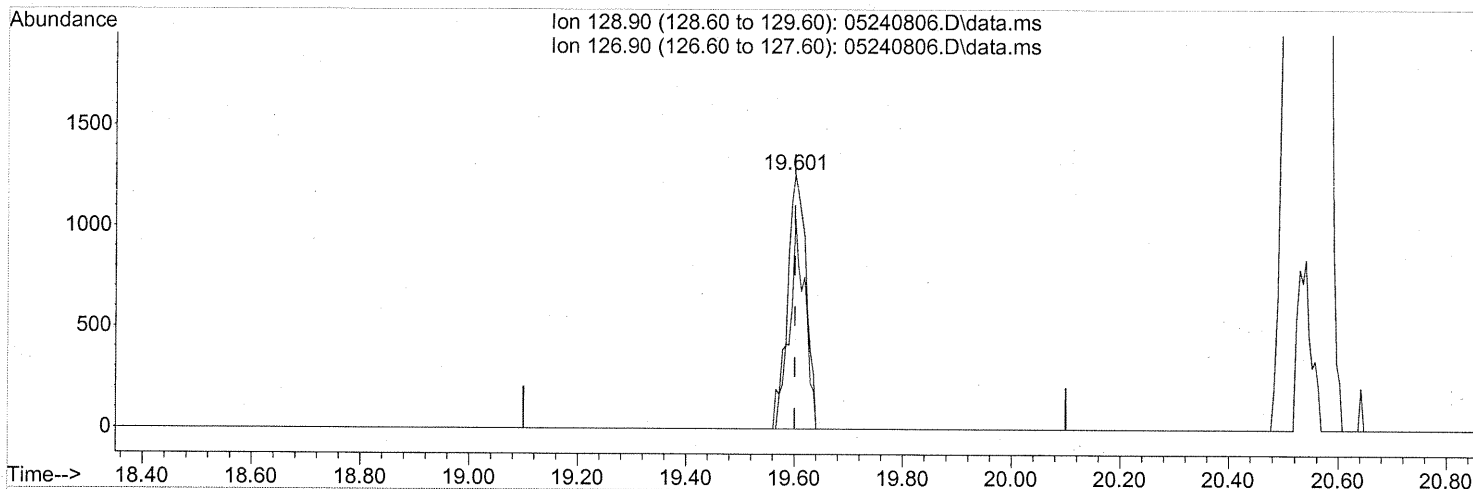
response 13180

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(60) Dibromochloromethane (T)

19.601min (+0.000) 0.10ng

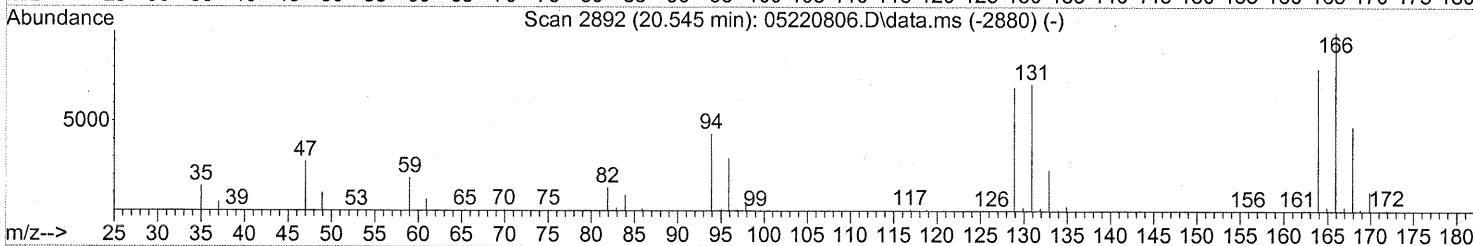
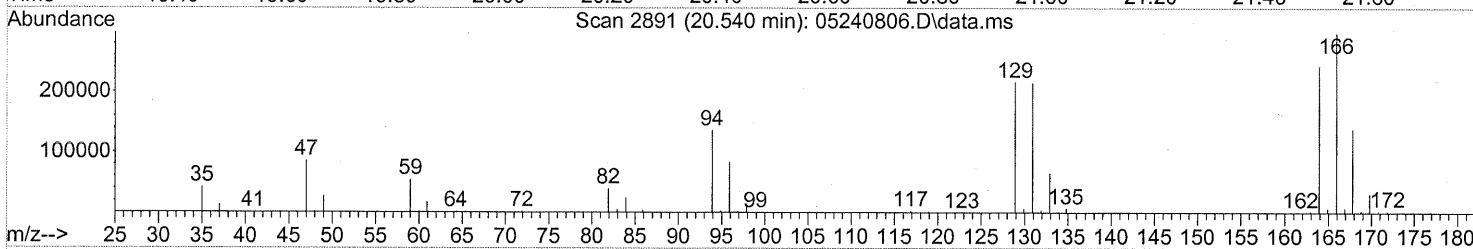
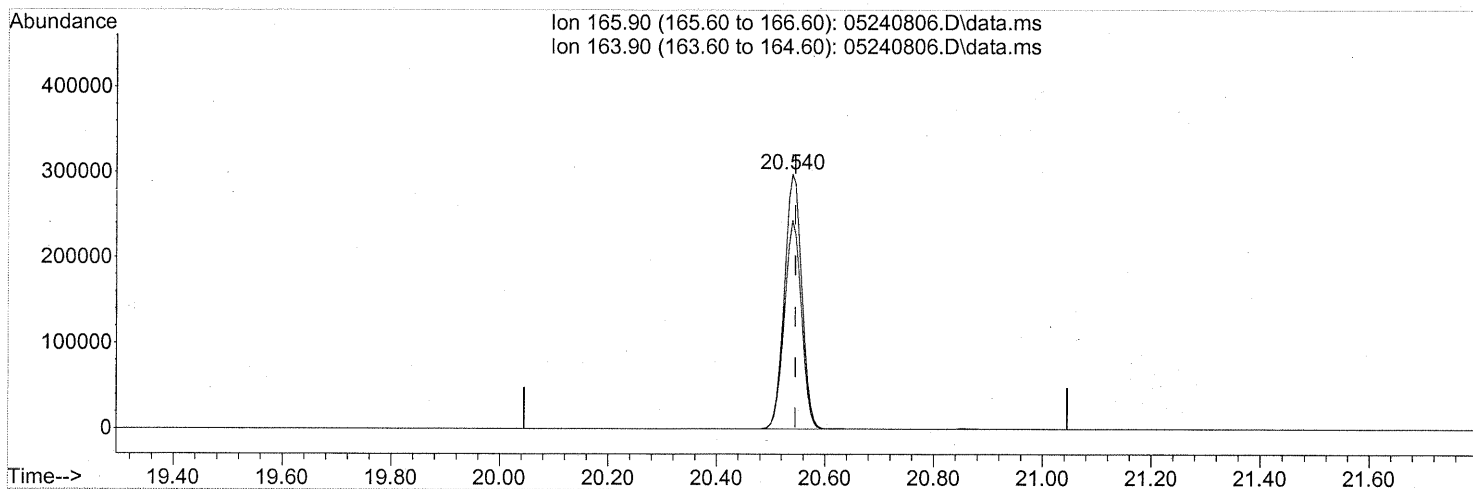
response 2952

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	72.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240806.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 20.16ng

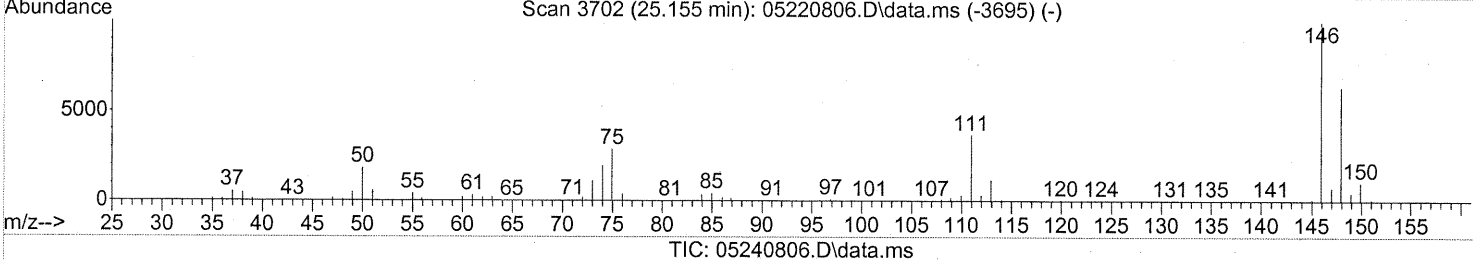
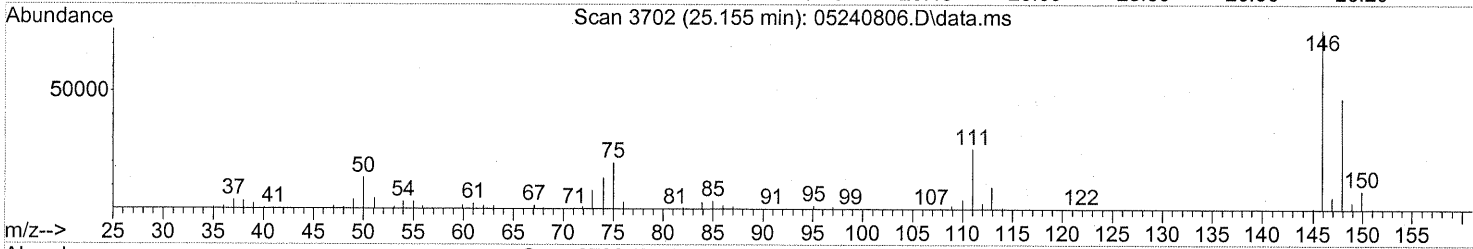
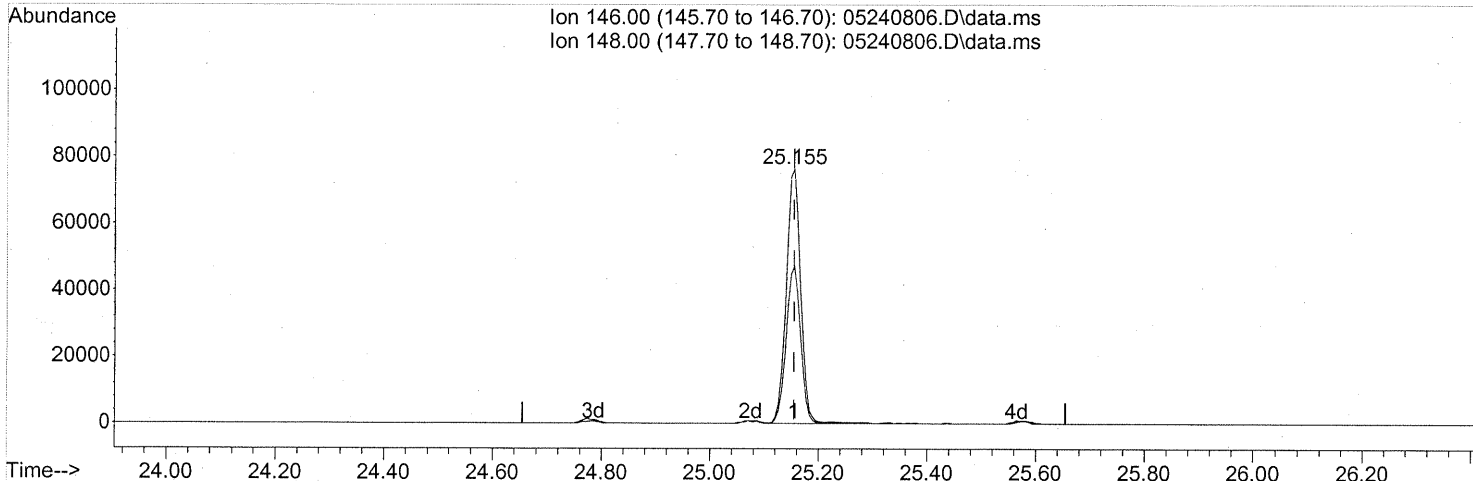
response 662357

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	80.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801442-004 (50ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

25.155min (+0.000) 2.07ng

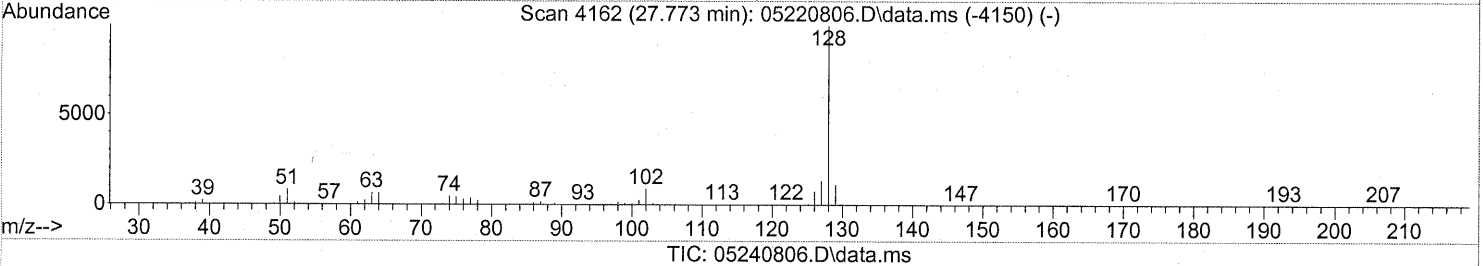
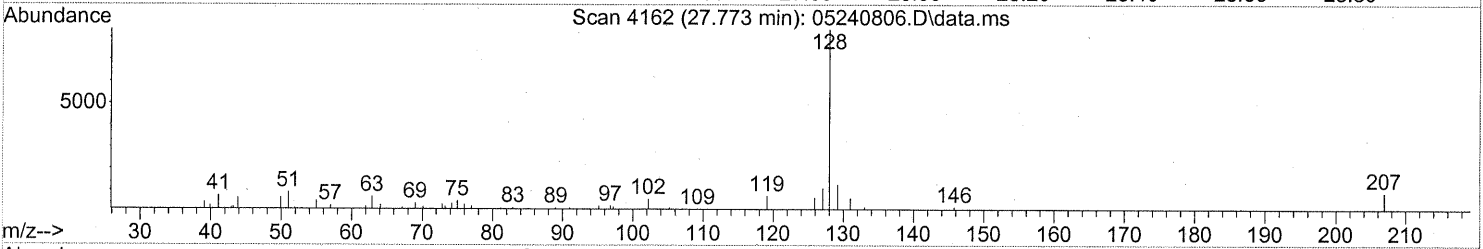
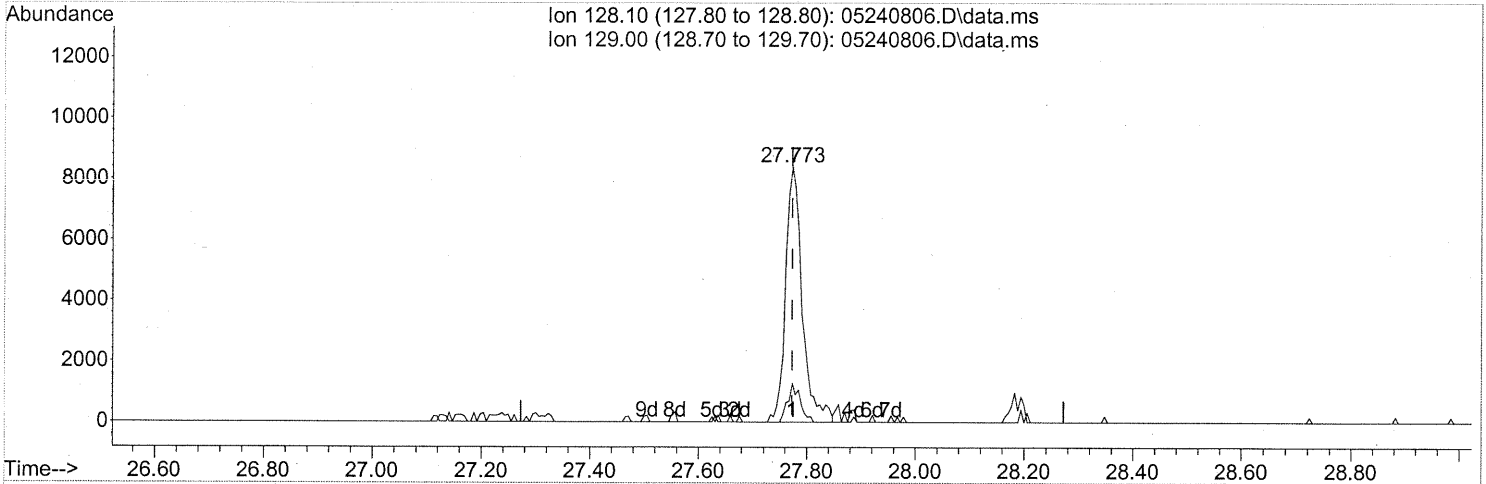
response 140353

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	61.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801442-004 (50ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



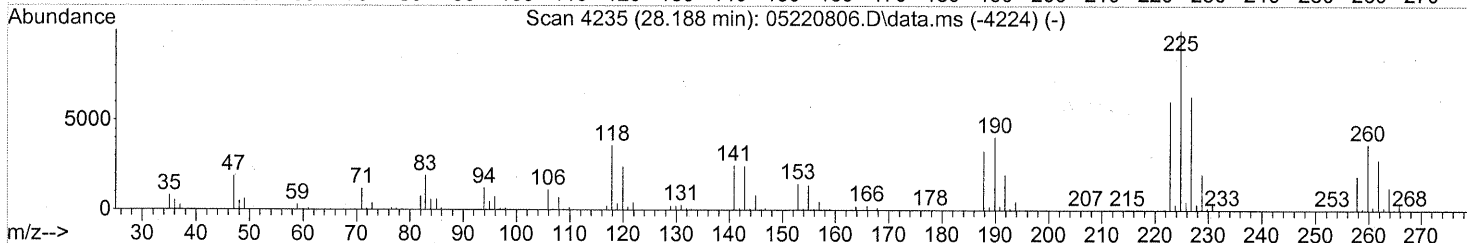
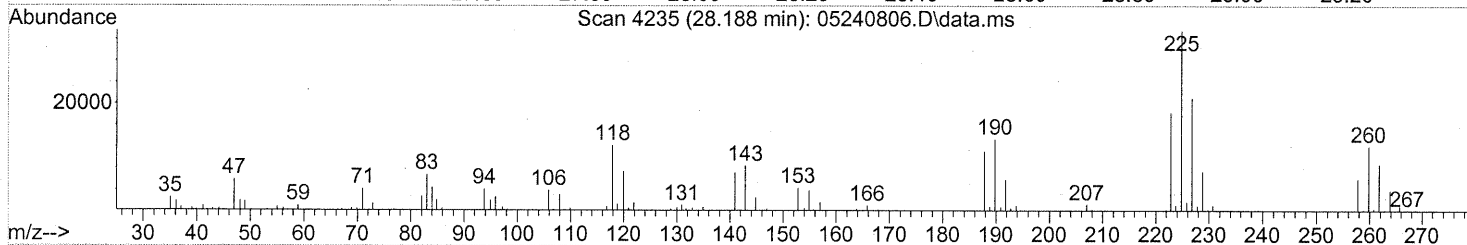
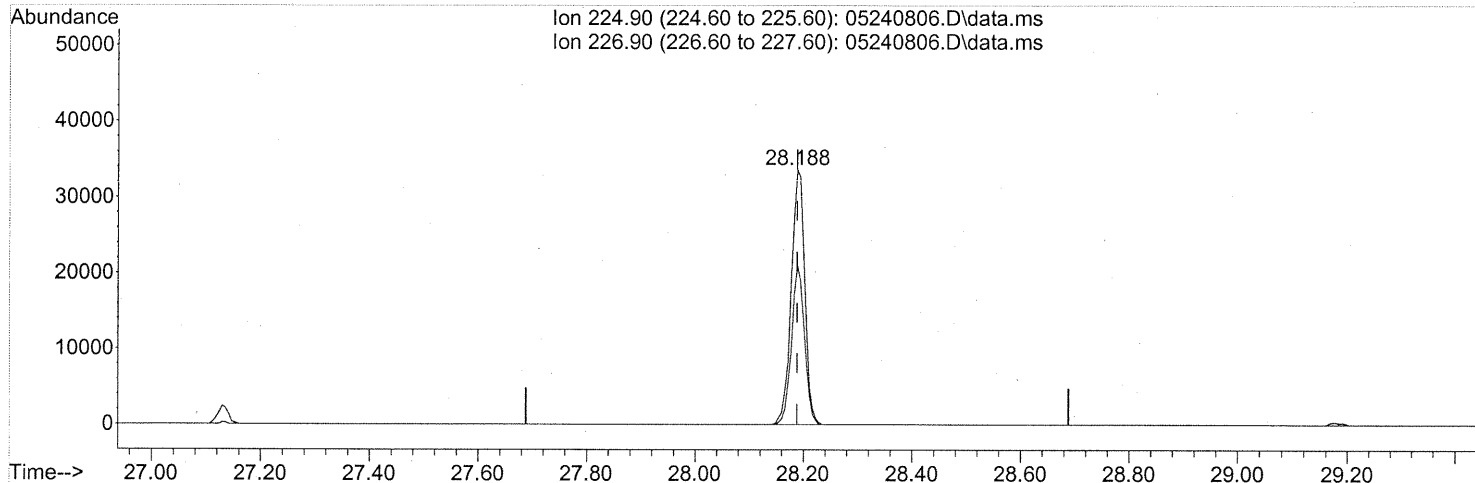
(95) Naphthalene (T)  
27.773min (0.000) 0.12ng  
response 17794

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	11.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 24 13:13:29 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

28.188min (0.000) 1.81ng

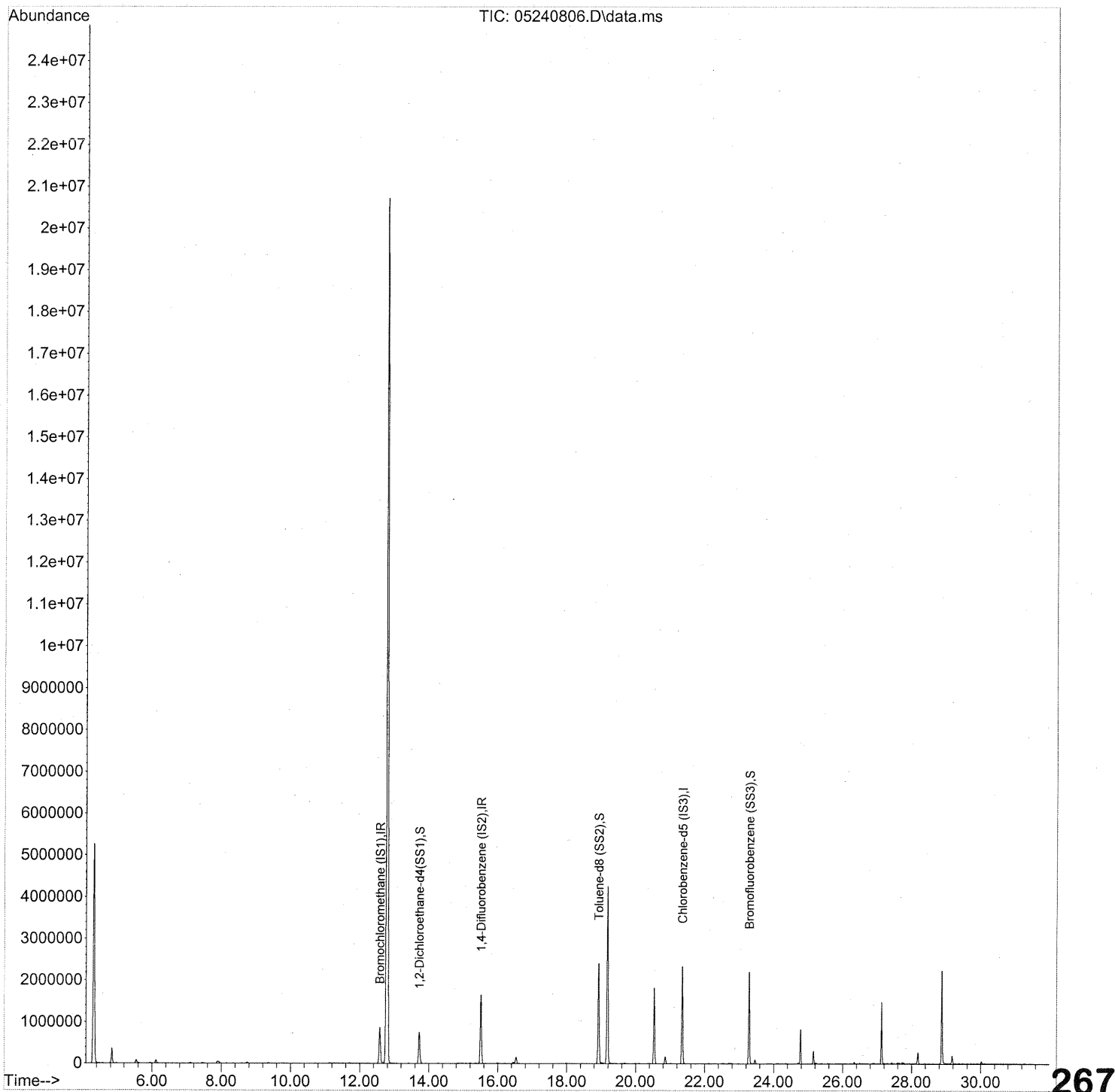
response 58335

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	59.90
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240806.D  
Acq On : 24 May 2008 10:31  
Operator : WA  
Sample : P0801442-004 (50ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 25 20:36:13 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240806.D  
 Acq On : 24 May 2008 10:31  
 Operator : WA  
 Sample : P0801442-004 (50ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 25 20:36:13 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

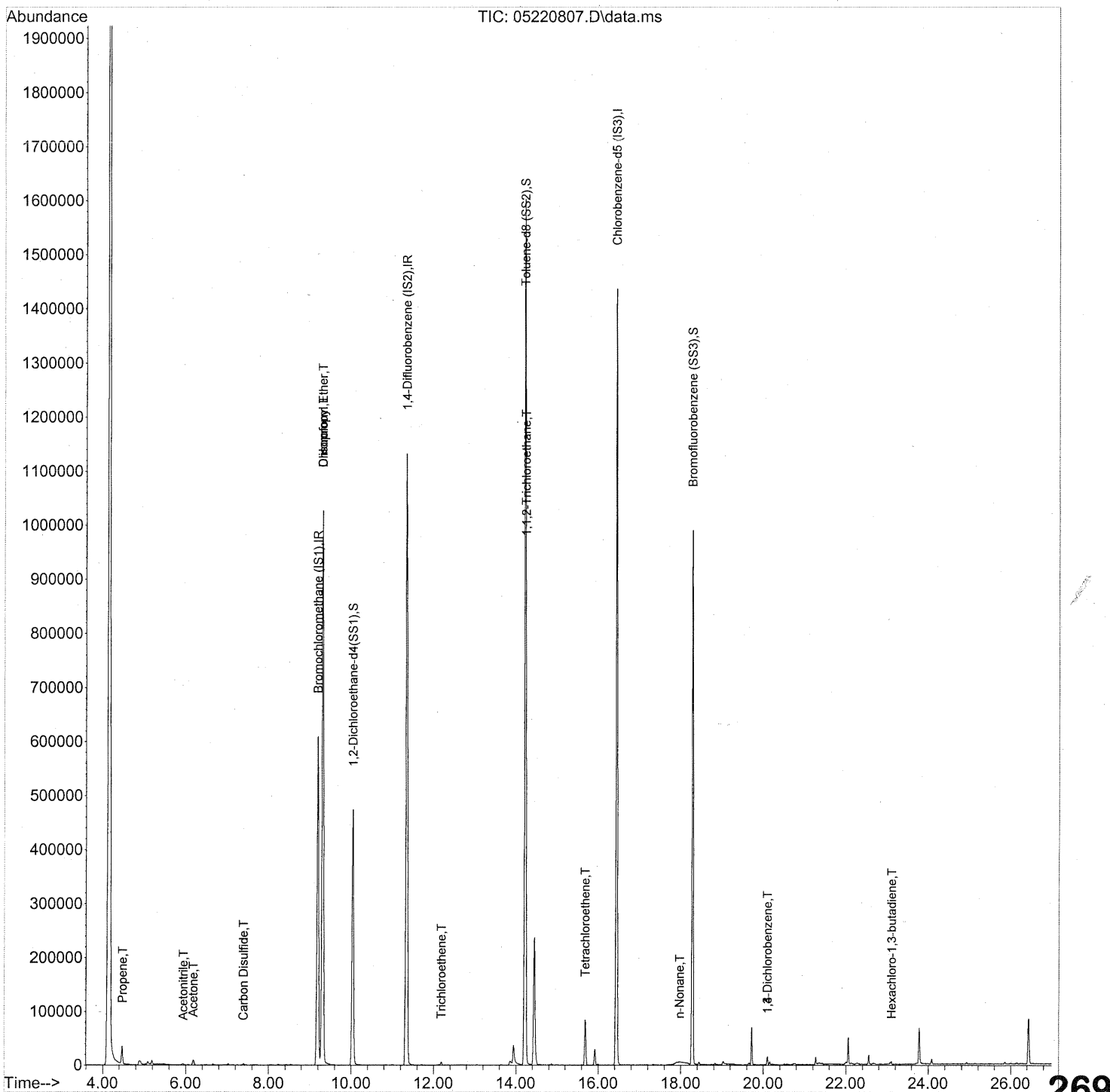
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	441193	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1908057	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	909547	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	761181	24.900	ng	-0.03
Spiked Amount	25.000		Recovery	=	99.60%	
5) Toluene-d8 (SS2)	18.93	98	1997717	24.456	ng	-0.01
Spiked Amount	25.000		Recovery	=	97.84%	
6) Bromofluorobenzene (SS3)	23.29	174	817701	24.616	ng	0.00
Spiked Amount	25.000		Recovery	=	98.48%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	1227	N.D.		Qvalue
8) n-Butylbenzene	25.91	91	1626	N.D.		

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

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220807.D  
Acq On : 22 May 2008 11:25  
Operator : WA  
Sample : P0801442-004 Dil (5.0ml)  
Misc : ENSR SG36B-20 (-3.0, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 08:59:58 2008  
Quant Method : J:\MS16\METHODS\R16051208.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\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 11:25  
 Operator : WA  
 Sample : P0801442-004 Dil (5.0ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 08:59:58 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	294338	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1253056	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	484420	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	436853	21.047	ng	-0.05
Spiked Amount	25.000		Recovery	=	84.20%	✓
57) Toluene-d8 (SS2)	14.22	98	1266470	26.552	ng	-0.02
Spiked Amount	25.000		Recovery	=	106.20%	✓
73) Bromofluorobenzene (SS3)	18.28	174	348205	28.050	ng	-0.01
Spiked Amount	25.000		Recovery	=	112.20%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.48	42	3362	0.114	ng	# 1
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	4.75	50	90	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	118	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.72	45	98	N.D.		
11) Acetonitrile	5.94	41	3551	0.068	ng	# 51
12) Acrolein	6.05	56	605	N.D.		
13) Acetone	6.18	58	3847	0.198	ng	# 86
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.39	45	434	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.98	59	91	N.D.		
19) Methylene Chloride	7.04	84	763	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	3864	0.067	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	108714	8.525	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\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 11:25  
 Operator : WA  
 Sample : P0801442-004 Dil (5.0ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 08:59:58 2008

Quant Method : J:\MS16\METHODS\R16051208.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	9.31	83	1002414	45.672	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	10.83	56	403	N.D.		
41) Benzene	11.00	78	1031	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	619	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	12.14	83	858	N.D.		
47) Trichloroethene	12.19	130	3000	0.177	ng	99
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	106600	7.151	ng	# 6
58) Toluene	14.35	91	799	N.D.		
59) 2-Hexanone	14.60	43	106	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	90	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.69	166	32834	2.273	ng	98
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	17.14	91	677	N.D.		
67) m- & p-Xylene	17.14	91	677	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	0.00	91	0	N.D.		
71) n-Nonane	17.97	43	15678	0.305	ng	# 19
72) 1,1,2,2-Tetrachloroethane	18.02	83	90	N.D.		
74) Cumene	18.28	105	551	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	19.20	105	96	N.D.		
78) 4-Ethyltoluene	19.24	105	131	N.D.		
79) 1,3,5-Trimethylbenzene	19.24	105	131	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 11:25  
 Operator : WA  
 Sample : P0801442-004 Dil (5.0ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 08:59:58 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

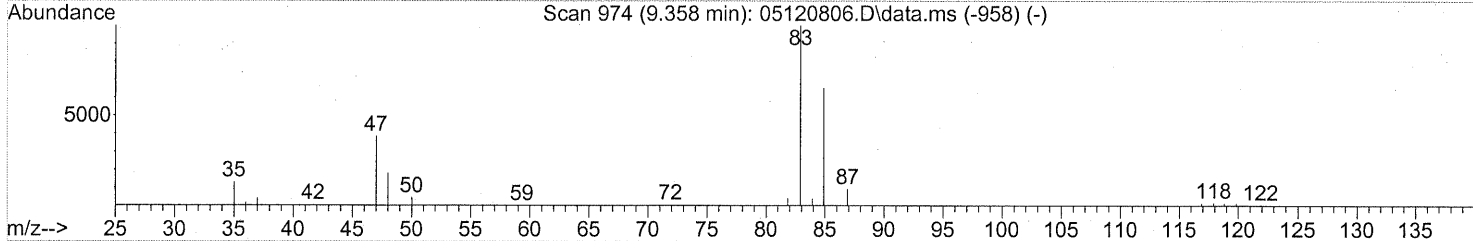
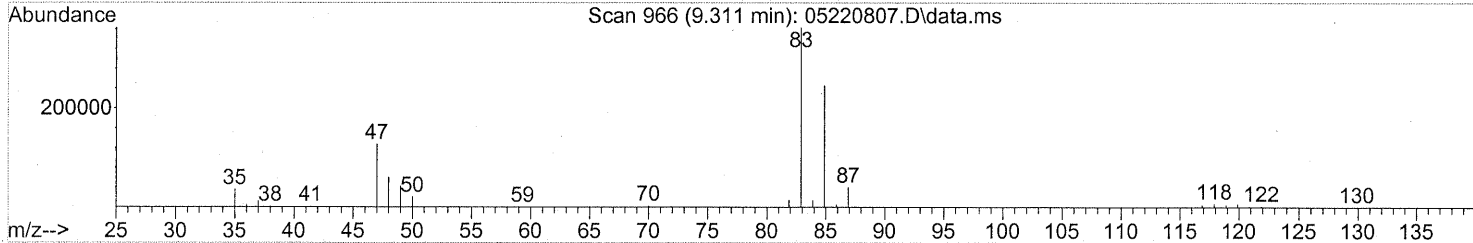
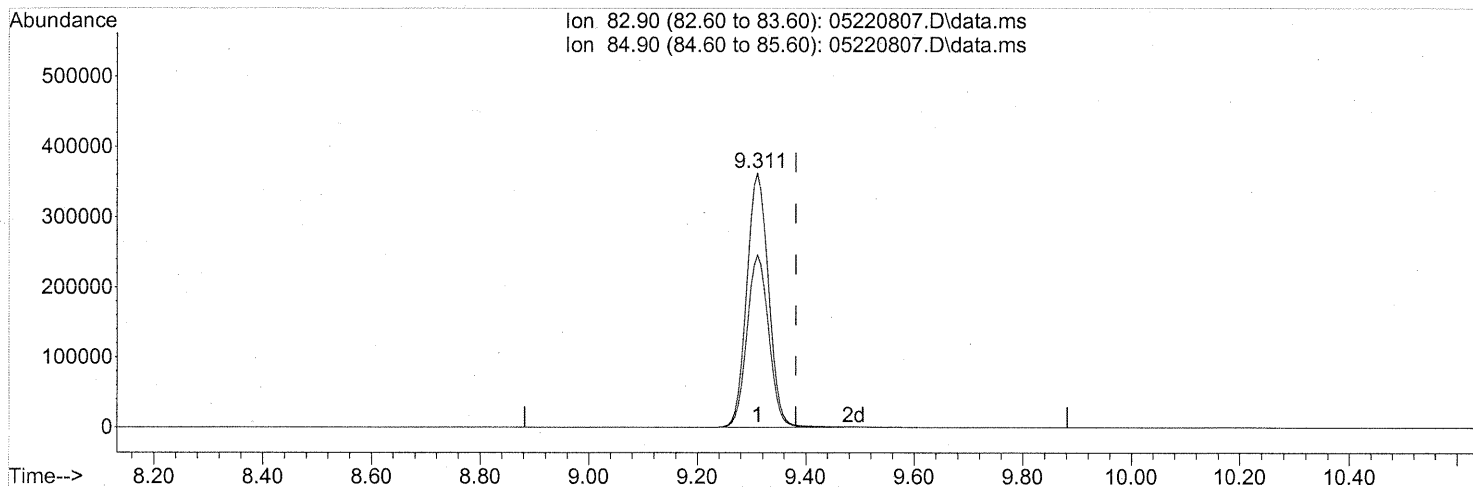
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.72	118	440	N.D.		
81) 2-Ethyltoluene	19.57	105	235	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	381	N.D.		
83) n-Decane	19.94	57	116	N.D.		
84) Benzyl Chloride	20.21	91	181	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	7745	0.229	ng	99
86) 1,4-Dichlorobenzene	20.10	146	7745	0.239	ng	98
87) sec-Butylbenzene	19.82	105	381	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	20.77	105	207	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	515	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	2498	N.D.		
96) n-Dodecane	22.66	57	1148	N.D.		
97) Hexachloro-1,3-butadiene	23.11	225	1272	0.156	ng	86

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 11:25  
 Operator : WA  
 Sample : P0801442-004 Dil (5.0ml)  
 Misc : ENSR SG36B-20 (-3.0, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 24 08:59:58 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05220807.D\data.ms

(32) Chloroform (T)  
 9.311min (-0.071) 45.67ng  
 response 1002414

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.00
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:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00868

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.81	0.081	0.41	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.081	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.089	0.81	0.081	0.013	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.16	0.081	ND	0.063	0.032	
74-83-9	Bromomethane	ND	0.16	0.081	ND	0.042	0.021	
75-00-3	Chloroethane	ND	0.16	0.081	ND	0.061	0.031	
64-17-5	Ethanol	3.0	8.1	0.081	1.6	4.3	0.043	J
67-64-1	Acetone	13	8.1	0.12	5.5	3.4	0.050	B
75-69-4	Trichlorofluoromethane	1.1	0.16	0.081	0.19	0.029	0.014	
107-13-1	Acrylonitrile	0.17	0.81	0.11	0.078	0.37	0.052	J
75-35-4	1,1-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.52	0.81	0.12	0.17	0.27	0.040	J
75-09-2	Methylene Chloride	0.089	0.81	0.081	0.026	0.23	0.023	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	1.0	0.16	0.081	0.33	0.052	0.026	
76-13-1	Trichlorotrifluoroethane	0.46	0.16	0.091	0.060	0.021	0.012	
75-15-0	Carbon Disulfide	1.9	0.81	0.19	0.60	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-34-3	1,1-Dichloroethane	ND	0.16	0.081	ND	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.081	ND	0.045	0.022	
108-05-4	Vinyl Acetate	2.1	8.1	0.26	0.59	2.3	0.074	J, M
78-93-3	2-Butanone (MEK)	6.8	0.81	0.081	2.3	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
108-20-3	Diisopropyl Ether	ND	0.81	0.096	ND	0.19	0.023	
67-66-3	Chloroform	4.1	0.16	0.096	0.84	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.

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

Verified By:     RC    

Date:     5/24/08    

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00868

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.81	0.083	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	ND	0.16	0.081	ND	0.040	0.020	
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
71-43-2	<b>Benzene</b>	<b>3.1</b>	0.16	0.081	<b>0.97</b>	0.051	0.025	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.92</b>	0.16	0.081	<b>0.15</b>	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.81	0.081	ND	0.19	0.019	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.20</b>	0.16	0.081	<b>0.043</b>	0.035	0.018	
75-27-4	Bromodichloromethane	ND	0.16	0.081	ND	0.024	0.012	
79-01-6	Trichloroethene	ND	0.16	0.081	ND	0.030	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.20</b>	0.81	0.099	<b>0.057</b>	0.22	0.027	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.81	0.12	ND	0.20	0.030	
142-82-5	n-Heptane	ND	0.81	0.10	ND	0.20	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	0.084	ND	0.18	0.019	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	0.81	0.091	<b>0.066</b>	0.20	0.022	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
108-88-3	<b>Toluene</b>	<b>1.0</b>	0.81	0.081	<b>0.28</b>	0.22	0.022	
591-78-6	<b>2-Hexanone</b>	<b>0.30</b>	0.81	0.12	<b>0.073</b>	0.20	0.030	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.087	ND	0.021	0.011	
111-65-9	n-Octane	ND	0.81	0.081	ND	0.17	0.017	
127-18-4	<b>Tetrachloroethene</b>	<b>0.50</b>	0.16	0.081	<b>0.074</b>	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.083	ND	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.

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

Verified By: Re      Date: 6/2/08      **275**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG44B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-005

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00868

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.8

Canister Dilution Factor: 1.62

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	0.16	0.81	0.10	0.037	0.19	0.023	J
179601-23-1	m,p-Xylenes	0.74	0.81	0.21	0.17	0.19	0.049	J
75-25-2	Bromoform	ND	0.81	0.12	ND	0.078	0.012	
100-42-5	Styrene	ND	0.81	0.12	ND	0.19	0.029	
95-47-6	o-Xylene	0.58	0.81	0.10	0.13	0.19	0.024	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.024	0.015	
98-82-8	Cumene	ND	0.81	0.091	ND	0.16	0.018	
103-65-1	n-Propylbenzene	0.11	0.81	0.084	0.022	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.30	0.81	0.092	0.062	0.16	0.019	J
108-67-8	1,3,5-Trimethylbenzene	0.31	0.81	0.097	0.062	0.16	0.020	J
98-83-9	alpha-Methylstyrene	ND	0.81	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	0.38	0.81	0.11	0.076	0.16	0.023	J
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	78	0.16	0.091	13	0.027	0.015	
135-98-8	sec-Butylbenzene	ND	0.81	0.094	ND	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.18	0.81	0.11	0.033	0.15	0.019	J
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	0.81	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	1.8	0.32	0.12	0.35	0.062	0.023	
87-68-3	Hexachlorobutadiene	ND	0.16	0.15	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	
104-51-8	n-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	

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

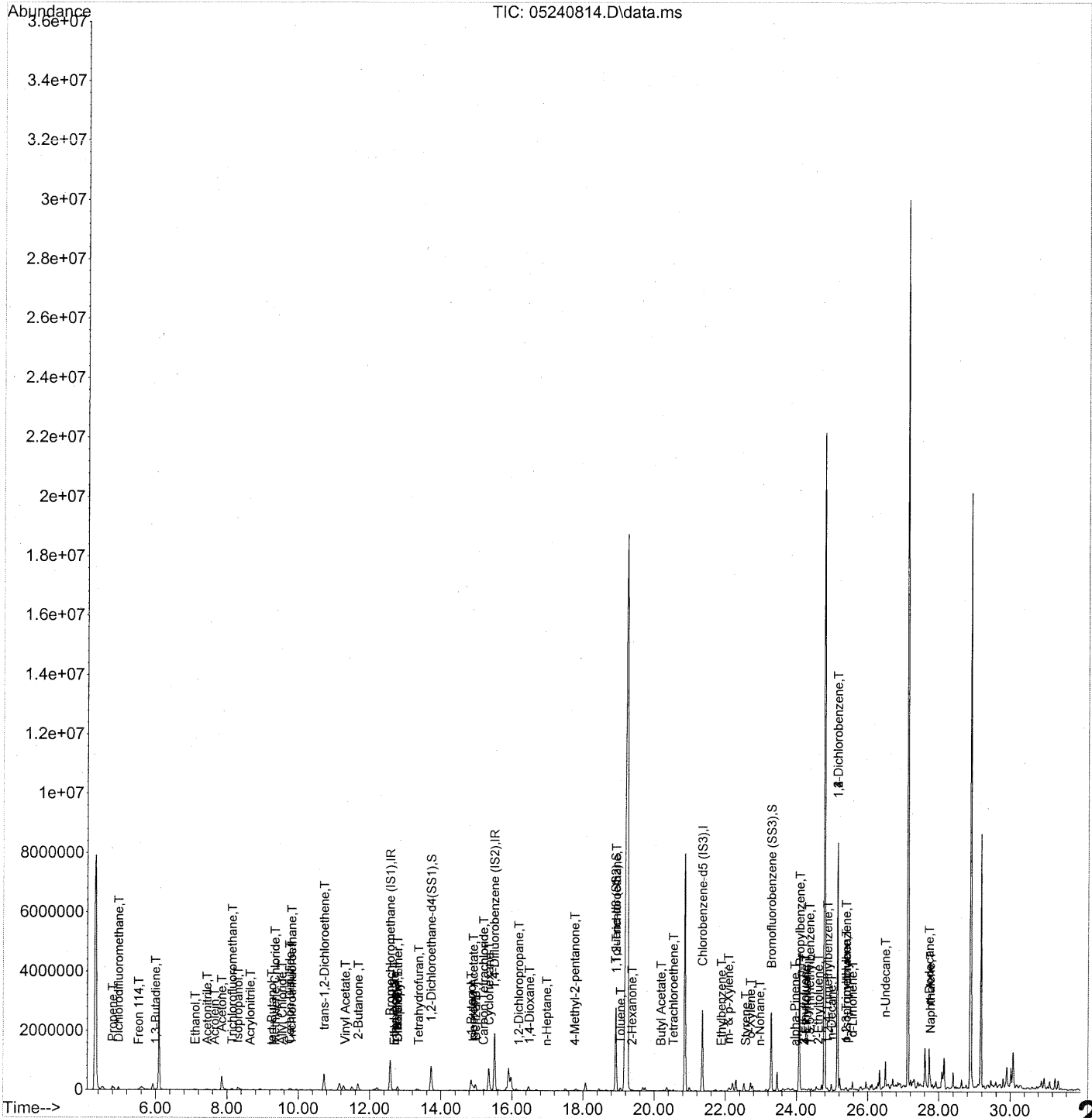
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

Verified By: Re      Date: 6/2/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	528796	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2294376	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1068545	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4(...)	13.72	65	847118	23.120	ng	0.00
Spiked Amount				25.000		
				Recovery =		92.48%
57) Toluene-d8 (SS2)	18.92	98	2380986	24.811	ng	0.00
Spiked Amount				25.000		
				Recovery =		99.24%
73) Bromofluorobenzene (SS3)	23.29	174	1000648	25.642	ng	0.00
Spiked Amount				25.000		
				Recovery =		102.56%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	62904	1.506	ng	# 73
3) Dichlorodifluoromethane	4.96	85	96769	1.257	ng	99
4) Chloromethane	5.28	50	69	N.D.	✓	
5) Freon 114	5.53	135	2085	0.055	ng	82
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	6.00	54	13907	0.375	ng	# 78
8) Bromomethane	6.49	94	354	N.D.	✓	
9) Chloroethane	6.84	64	306	N.D.	✓	
10) Ethanol	7.11	45	52118m	1.875	ng	
11) Acetonitrile	7.44	41	55848	0.695	ng	95
12) Acrolein	7.65	56	28985	1.459	ng	99
13) Acetone	7.85	58	230920m	8.112	ng	
14) Trichlorofluoromethane	8.14	101	43532	0.659	ng	96
15) Isopropanol	8.31	45	195181	2.150	ng	96
16) Acrylonitrile	8.65	53	4532	0.105	ng	91
17) 1,1-Dichloroethene	0.00	96	0	N.D.	✓	
18) tert-Butanol	9.26	59	24970m	0.323	ng	
19) Methylene Chloride	9.35	84	1764	0.055	ng	88
20) Allyl Chloride	9.54	41	27325	0.644	ng	99
21) Trichlorotrifluoroethane	9.81	151	8558	0.285	ng	90
22) Carbon Disulfide	9.76	76	138895	1.151	ng	100
23) trans-1,2-Dichloroethene	10.73	61	8161	0.173	ng	NR# 24
24) 1,1-Dichloroethane	11.14	63	182	N.D.	✓	
25) Methyl tert-Butyl Ether	11.16	73	4141	N.D.	✓	
26) Vinyl Acetate	11.31	86	6701	1.274	ng	# 1
27) 2-Butanone	11.68	72	87281	4.201	ng	# 85
28) cis-1,2-Dichloroethene	12.34	61	576	N.D.	✓	
29) Diisopropyl Ether	12.79	87	12627	0.496	ng	NR# 1
30) Ethyl Acetate	12.69	61	2631	0.235	ng	84
31) n-Hexane	12.71	57	3208	0.057	ng	83

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.79	83	121664	2.523 ng		99
34) Tetrahydrofuran	13.37	72	10578	0.533 ng	#	89
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.74	62	398	N.D. ✓		
38) 1,1,1-Trichloroethane	14.30	97	1694	N.D. ✓		
39) Isopropyl Acetate	14.92	61	1014	0.052 ng	#	1
40) 1-Butanol	14.86	56	314396	9.969 ng		88
41) Benzene	14.98	78	230788	1.921 ng		94
42) Carbon Tetrachloride	15.20	117	26350	0.570 ng		96
43) Cyclohexane	15.36	84	39253	0.840 ng	#	1
44) tert-Amyl Methyl Ether	15.82	73	1139	N.D. ✓		
45) 1,2-Dichloropropane	16.19	63	3982	0.124 ng		98
46) Bromodichloromethane	16.46	83	210	N.D. ✓		
47) Trichloroethene	16.53	130	1725	N.D. ✓		
48) 1,4-Dioxane	16.49	88	2851	0.126 ng	#	67
49) Isooctane	16.61	57	5348	N.D.		
50) Methyl Methacrylate	16.79	100	51	N.D. ✓		
51) n-Heptane	16.98	71	2006	0.063 ng	#	75
52) cis-1,3-Dichloropropene	17.81	75	749	N.D. ✓		
53) 4-Methyl-2-pentanone	17.77	58	5363m	0.168 ng		
54) trans-1,3-Dichloropropene	18.45	75	485	N.D. ✓		
55) 1,1,2-Trichloroethane	18.93	97	208773	7.033 ng	UR #	9
58) Toluene	19.06	91	84562	0.648 ng		97
59) 2-Hexanone	19.38	43	16540	0.184 ng		77
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	19.75	107	72	N.D. ✓		
62) Butyl Acetate	20.19	43	8165	0.089 ng		74
63) n-Octane	20.36	57	544	N.D. ✓		
64) Tetrachloroethene	20.54	166	11934	0.309 ng		98
65) Chlorobenzene	21.42	112	1344	N.D. ✓		
66) Ethylbenzene	21.89	91	14997	0.100 ng		93
67) m- & p-Xylene	22.09	91	45609	0.456 ng		94
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	22.57	104	5623	0.063 ng	#	50
70) o-Xylene	22.71	91	38743	0.359 ng		99
71) n-Nonane	22.98	43	13229	0.173 ng	#	76
72) 1,1,2,2-Tetrachloroethane	22.67	83	292	N.D. ✓		
74) Cumene	23.46	105	3169	N.D. ✓		
75) alpha-Pinene	23.96	93	5324	0.072 ng	#	46
76) n-Propylbenzene	24.10	91	12261	0.067 ng	#	1
77) 3-Ethyltoluene	24.23	105	24639	0.161 ng		95
78) 4-Ethyltoluene	24.28	105	26864	0.188 ng		64
79) 1,3,5-Trimethylbenzene	24.37	105	24379m	0.189 ng		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

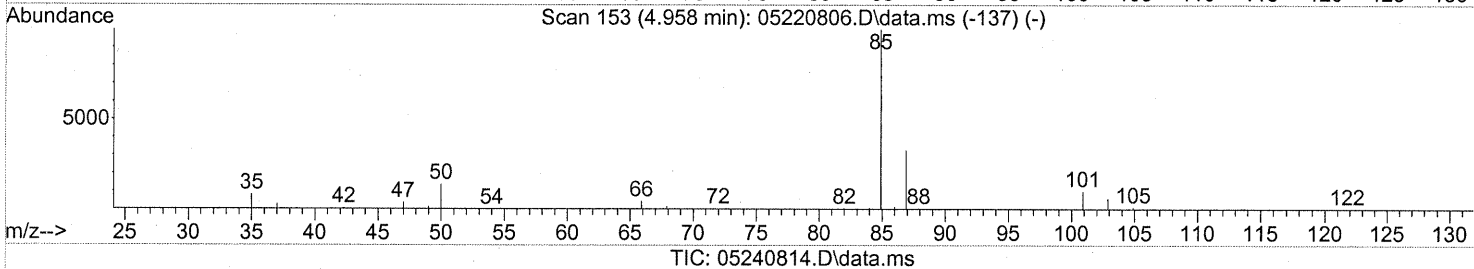
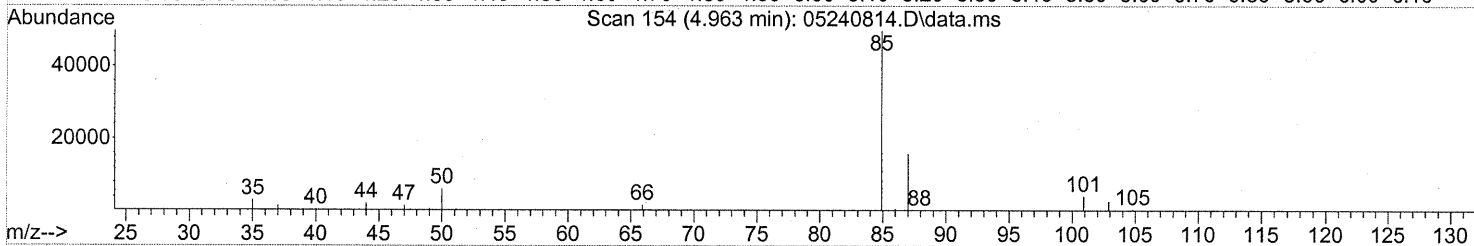
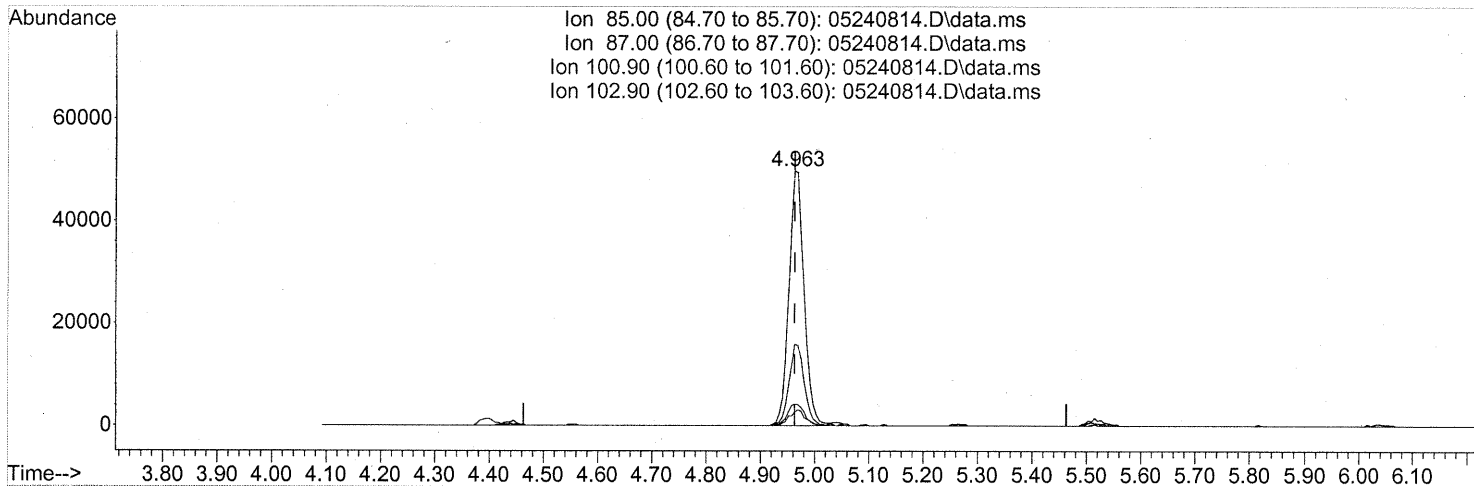
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.55	118	3069	N.D.	✓	
81) 2-Ethyltoluene	24.61	105	17002	0.110	ng	97
82) 1,2,4-Trimethylbenzene	24.88	105	30396	0.232	ng	90
83) n-Decane	24.98	57	85576	1.185	ng	77
84) Benzyl Chloride	25.03	91	2556	N.D.	✓	
85) 1,3-Dichlorobenzene	25.15	146	3849571	46.906	ng NR	100
86) 1,4-Dichlorobenzene	25.15	146	3849571	48.385	ng	100
87) sec-Butylbenzene	25.21	105	4102	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	15362	0.111	ng #	73
89) 1,2,3-Trimethylbenzene	25.40	105	23107	0.180	ng	93
90) 1,2-Dichlorobenzene	25.15	146	3849067	49.451	ng M	99
91) d-Limonene	25.57	68	70311	1.344	ng	92
92) 1,2-Dibromo-3-Chloropr...	26.14	157	54	N.D.	✓	
93) n-Undecane	26.50	57	331558	4.386	ng	75
94) 1,2,4-Trichlorobenzene	27.63	180	1186	N.D.	✓	
95) Naphthalene	27.77	128	195854	1.131	ng	98
96) n-Dodecane	27.73	57	427616	5.688	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	116	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.963min (-0.000) 1.26ng

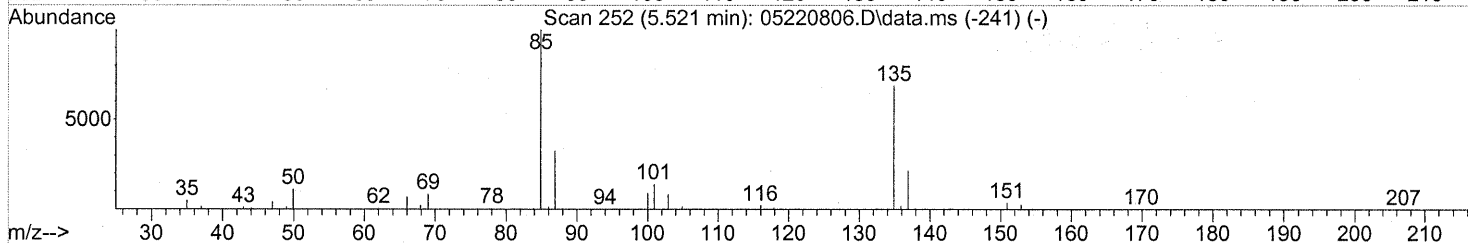
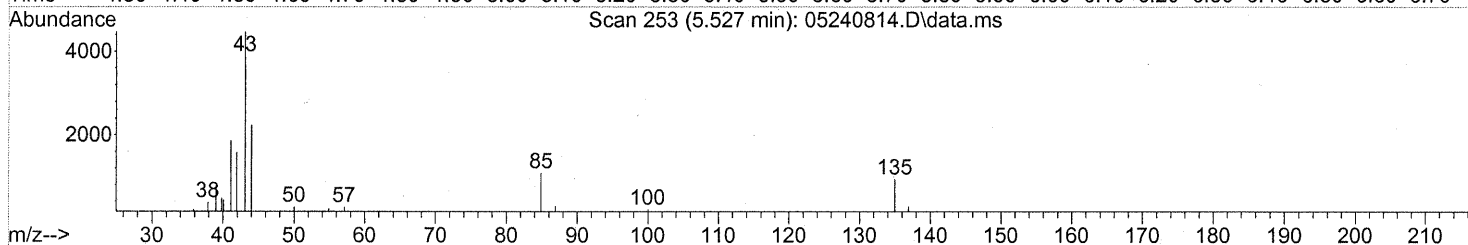
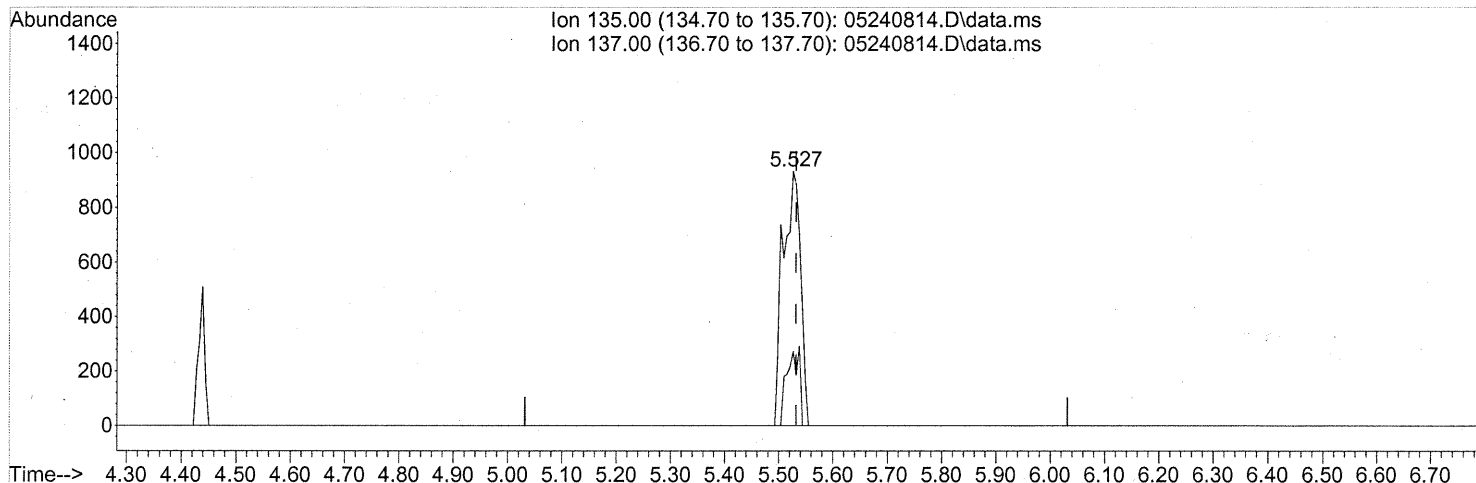
response 96769

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.72
100.90	9.30	9.23
102.90	6.00	6.22

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(5) Freon 114 (T)

5.527min (-0.006) 0.06ng

response 2085

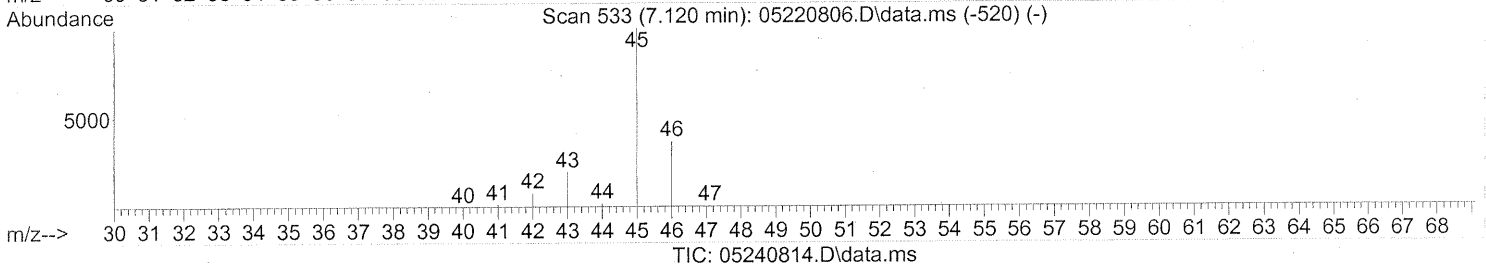
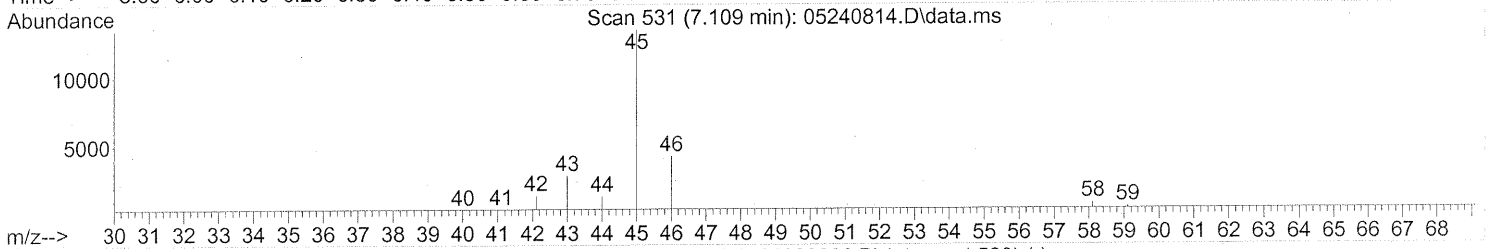
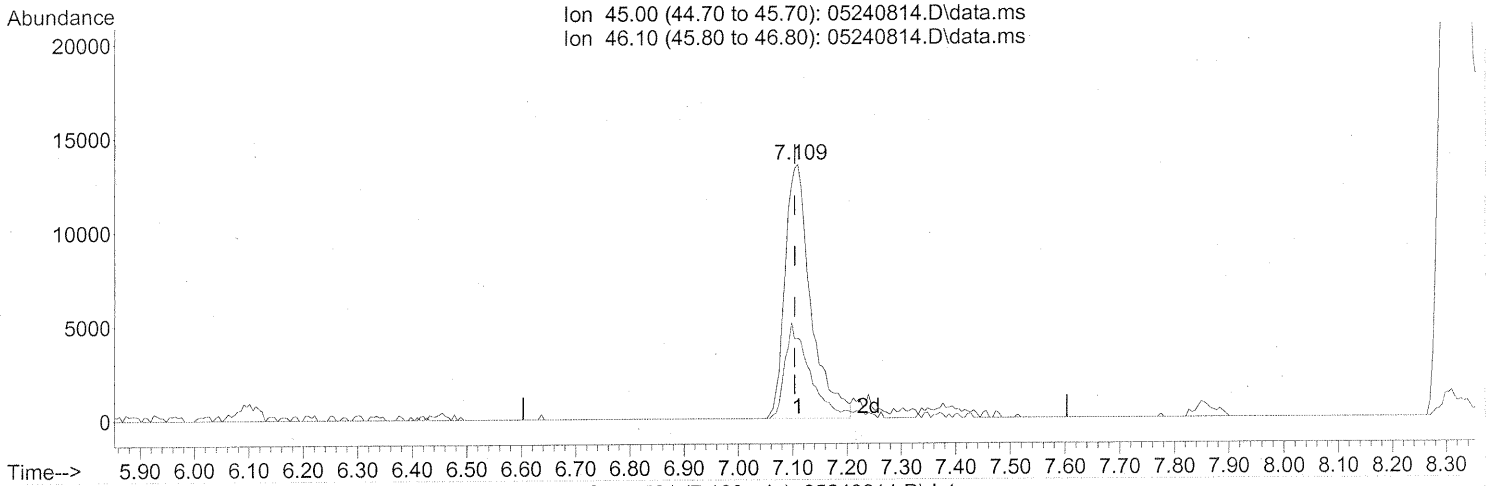
Ion	Exp%	Act%
135.00	100	100
137.00	31.50	21.73
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.109min (+0.006) 1.61ng

response 44713

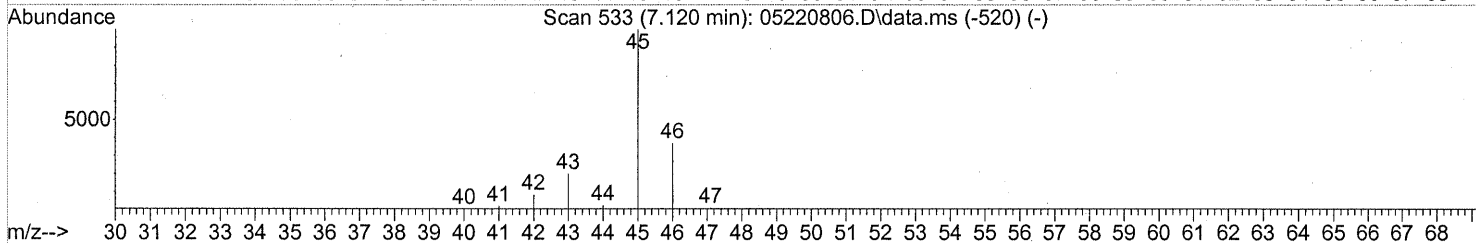
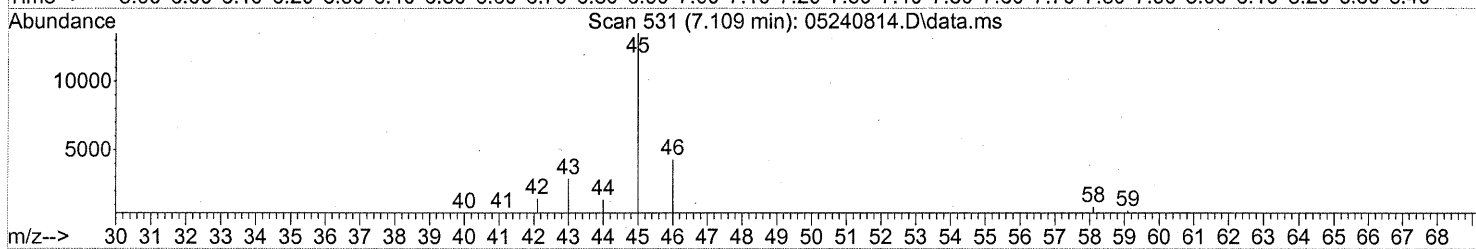
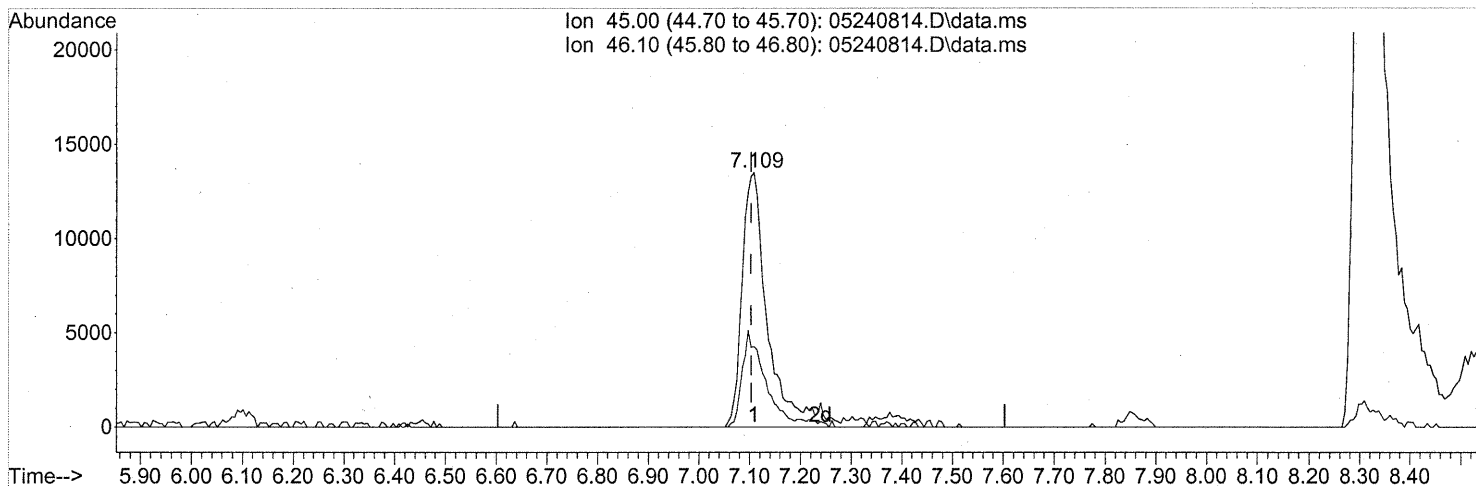
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.50
0.00	0.00	0.00
0.00	0.00	0.00

*tuling*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(10) Ethanol (T)

7.109min (+0.006) 1.87ng m

response 52118

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	32.17
0.00	0.00	0.00
0.00	0.00	0.00

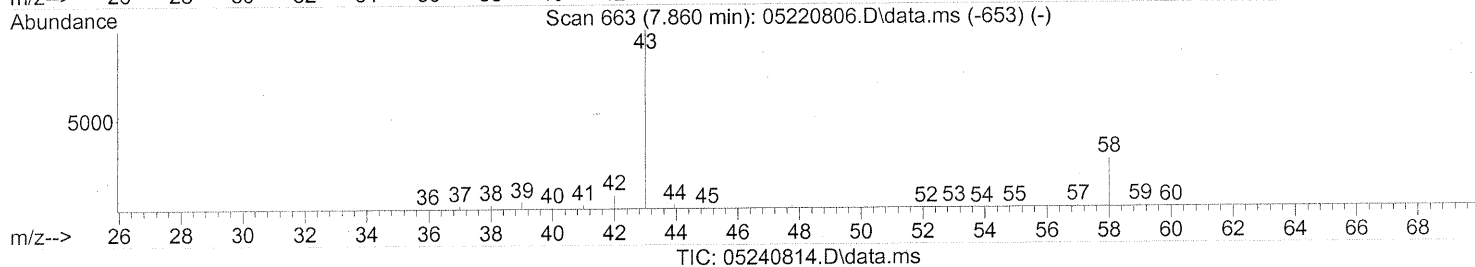
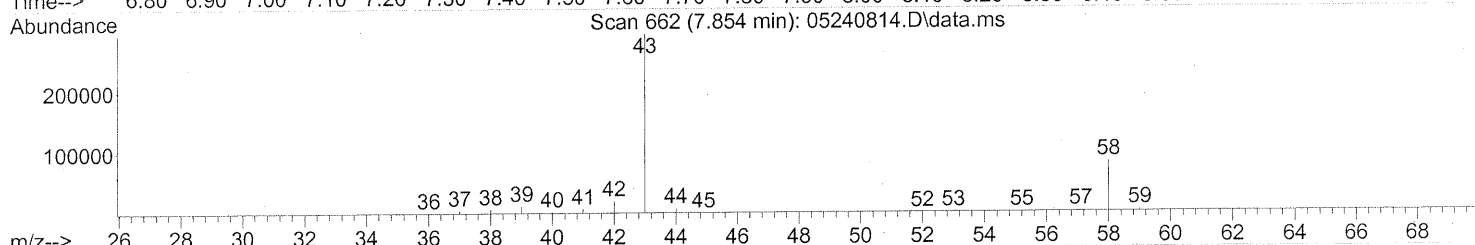
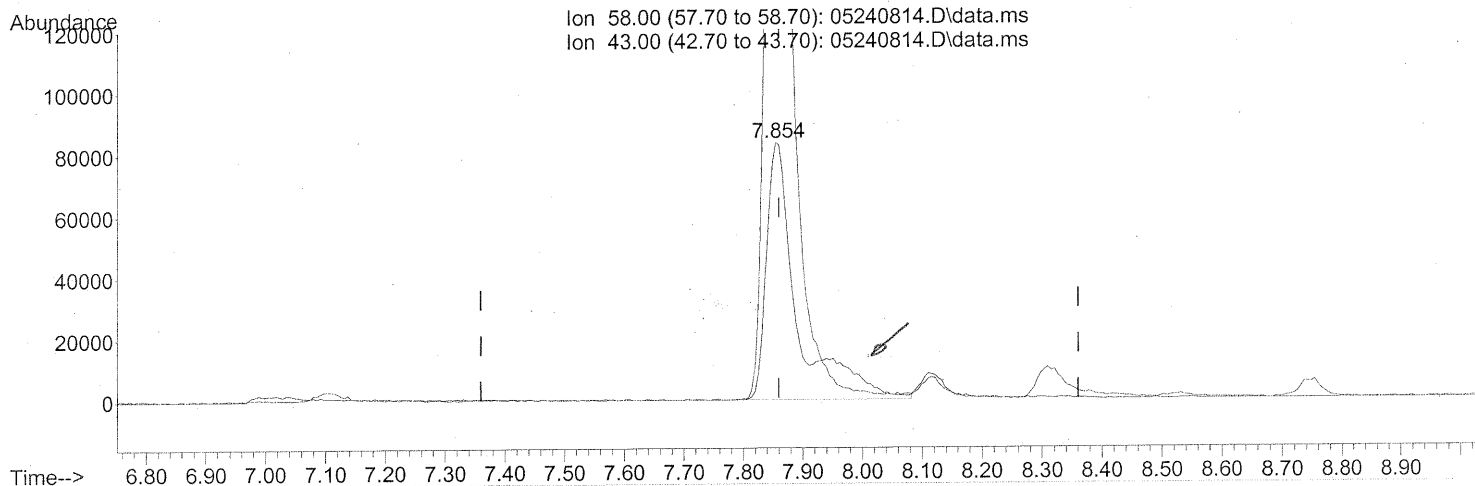
*incl. tailing*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)

7.854min (-0.006) 10.60ng

response 301823

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	283.75
0.00	0.00	0.00
0.00	0.00	0.00

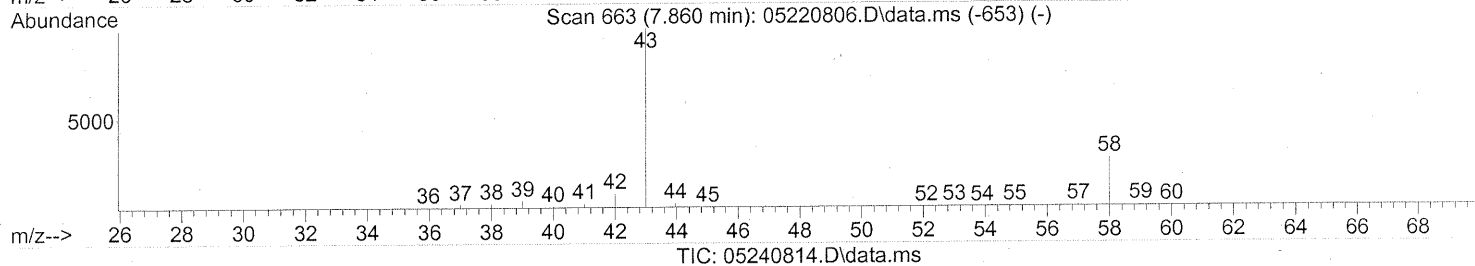
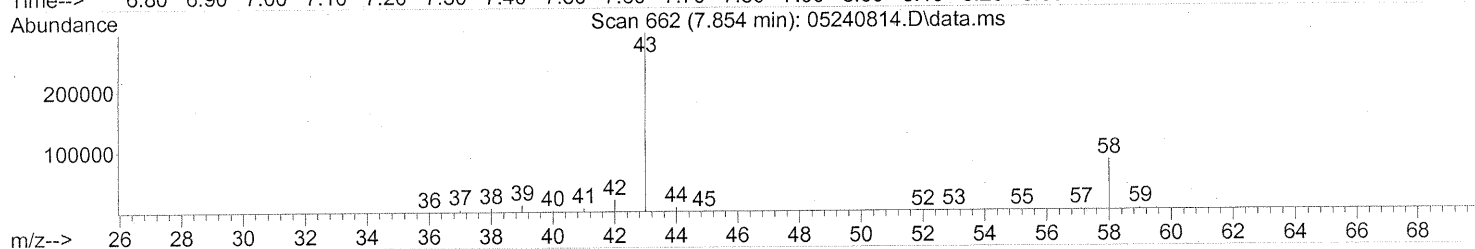
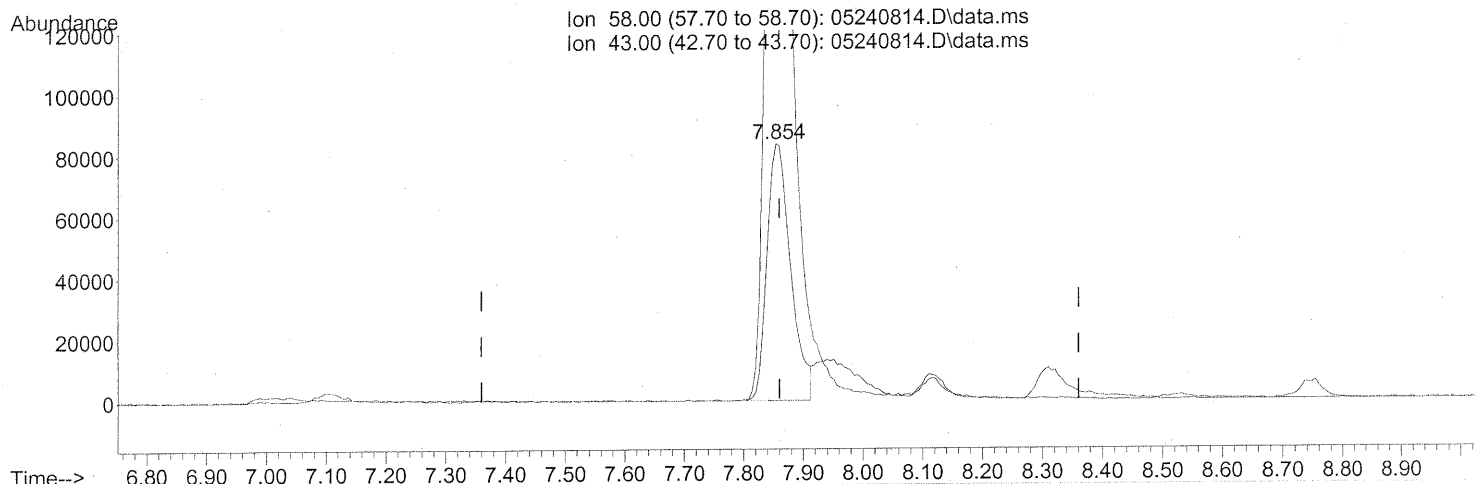
*interf. shoulder*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.854min (-0.006) 8.11ng m  
 response 230920

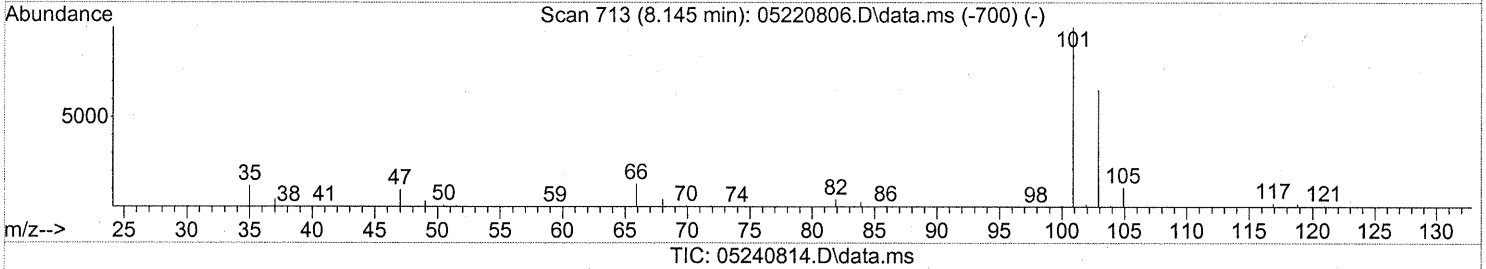
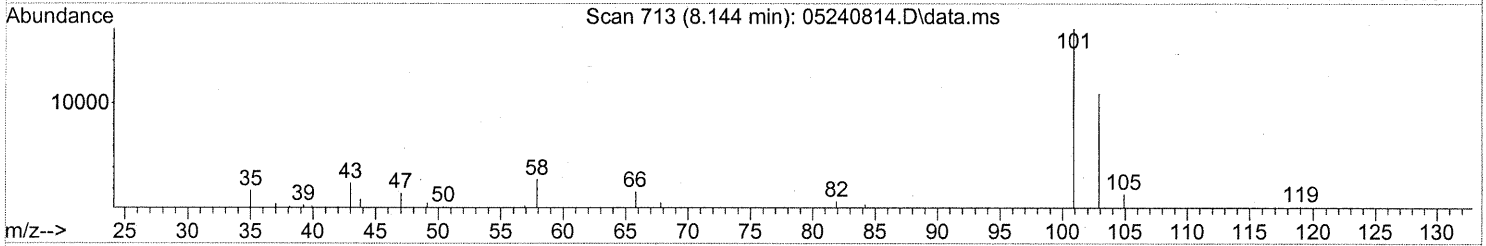
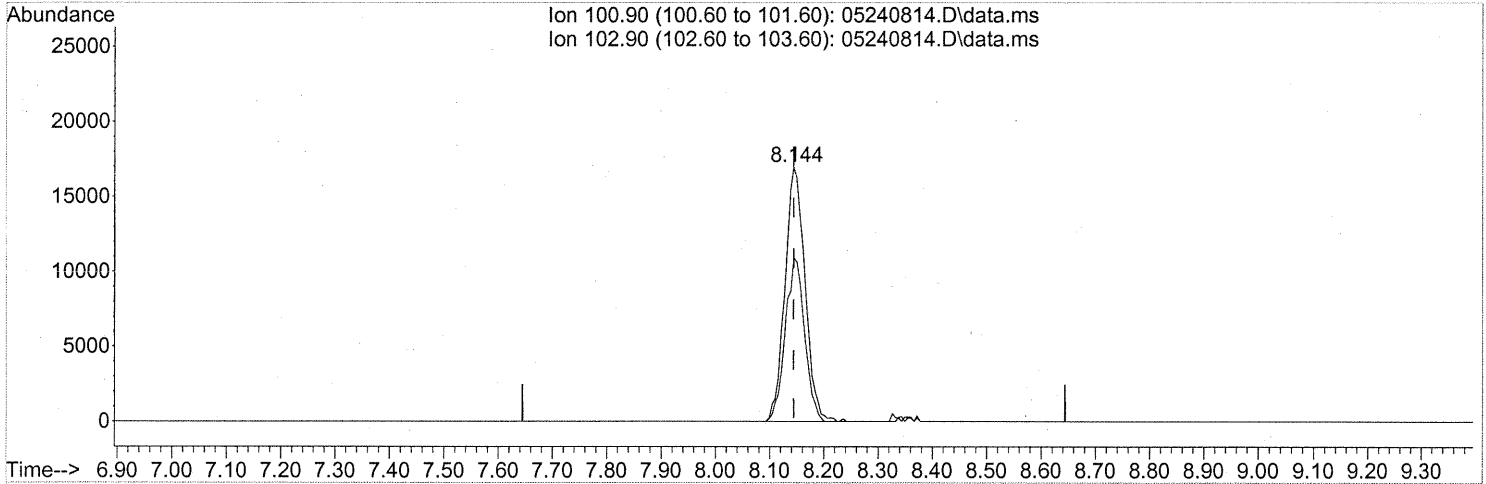
Ion	Exp%	Act%
58.00	100	100
43.00	283.10	370.88#
0.00	0.00	0.00
0.00	0.00	0.00

*AD shoulder*  
*AD 5/29/08*  
*Wt 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.144min (-0.000) 0.66ng

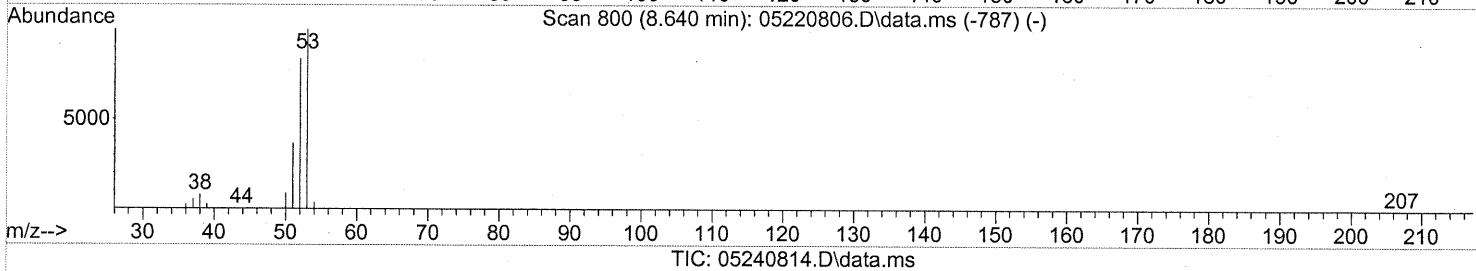
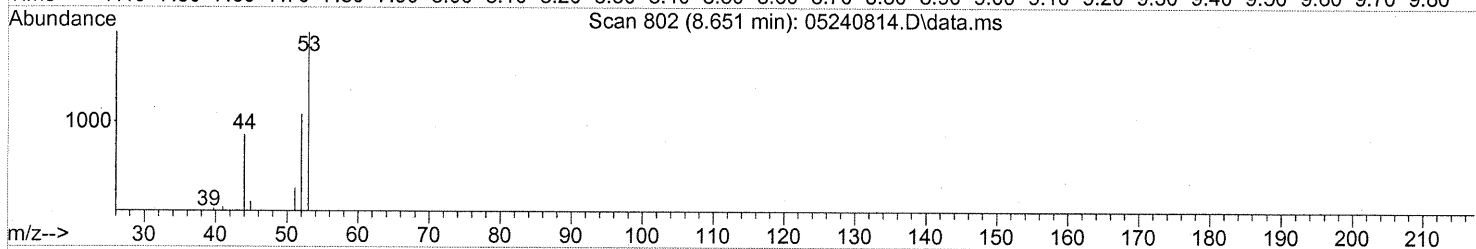
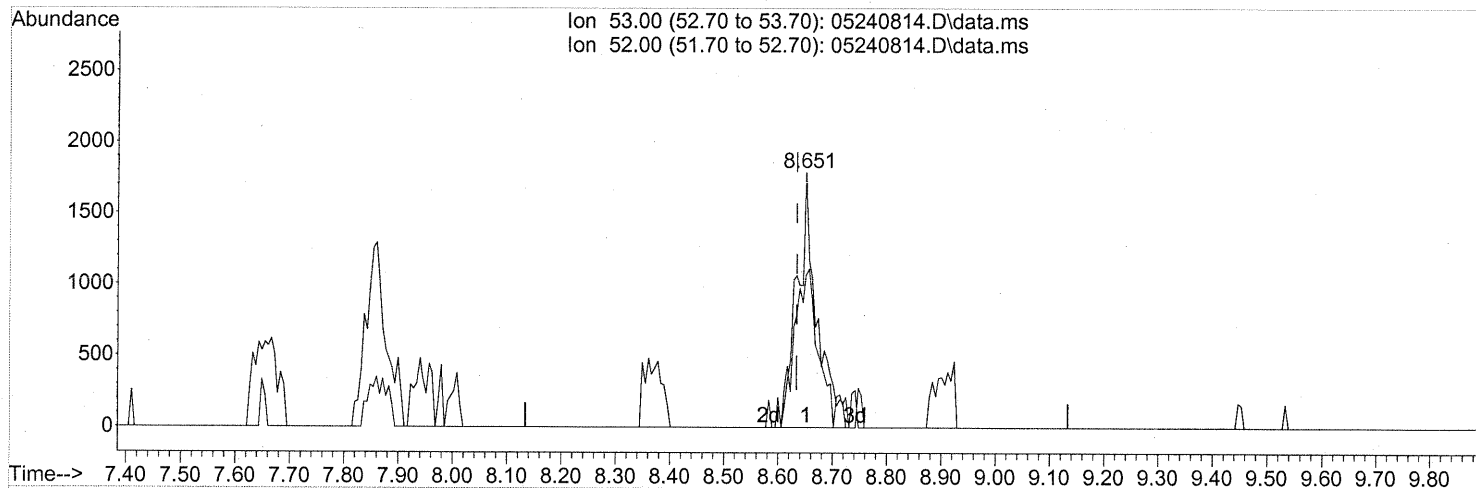
response 43532

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	61.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(16) Acrylonitrile (T)

8.651min (+0.017) 0.10ng

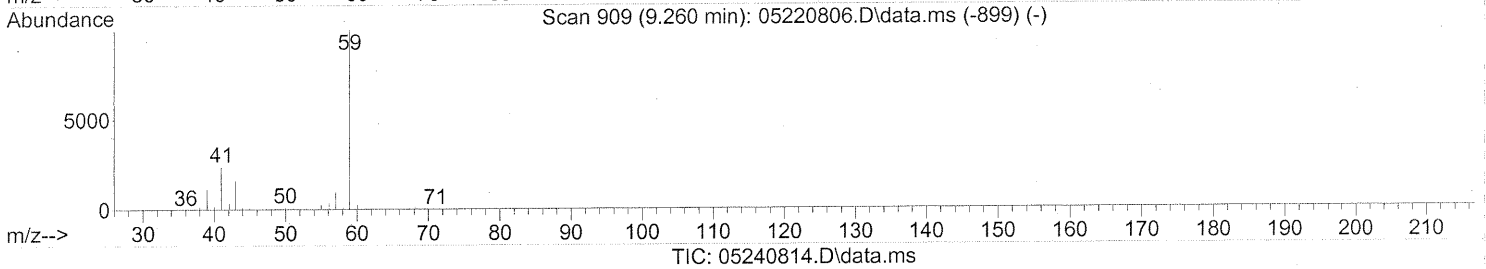
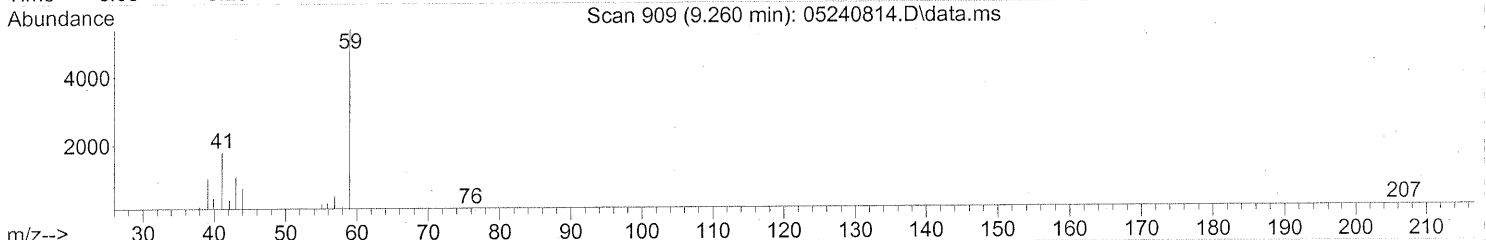
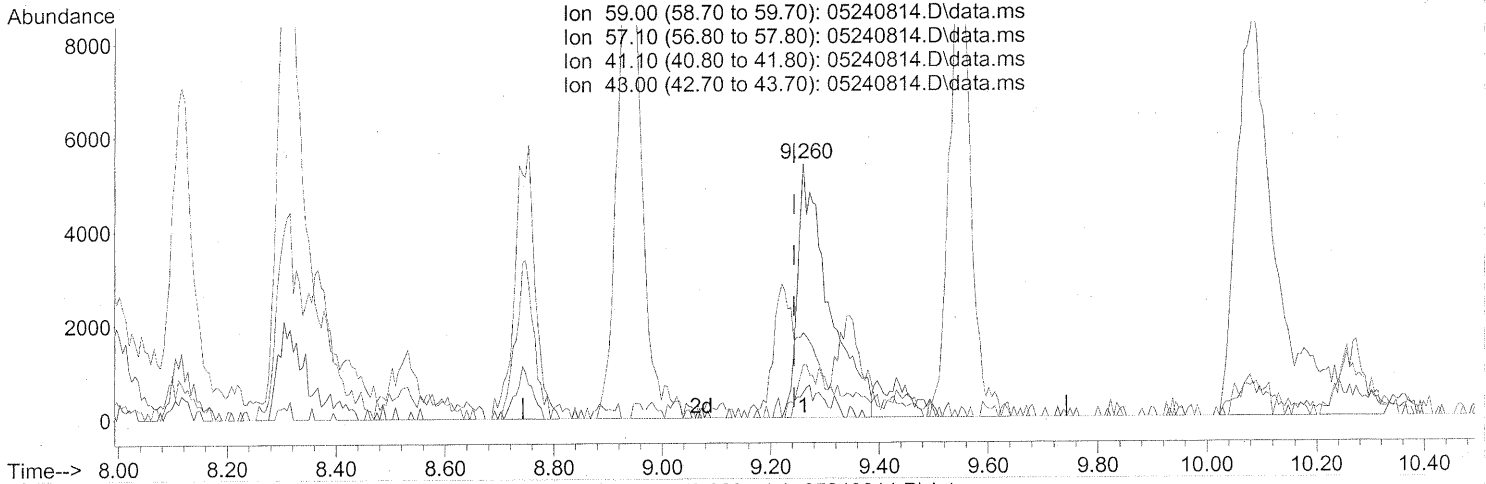
response 4532

Ion	Exp%	Act%
53.00	100	100
52.00	82.50	74.16
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.260min (+0.017) 0.28ng

response 21549

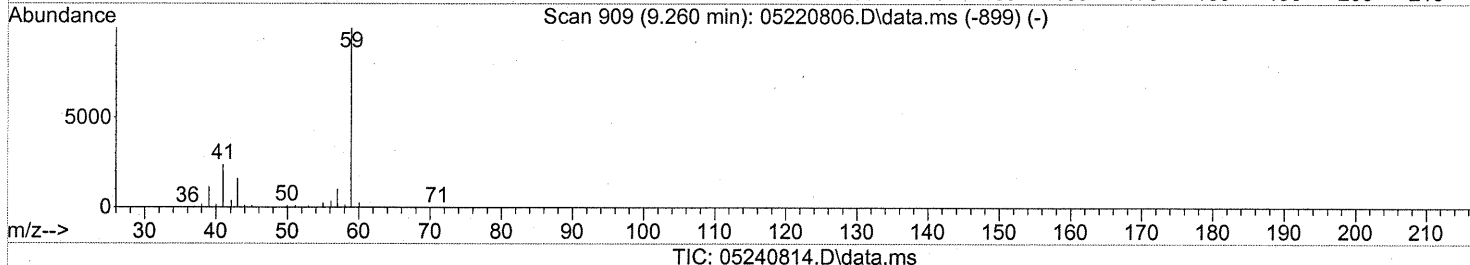
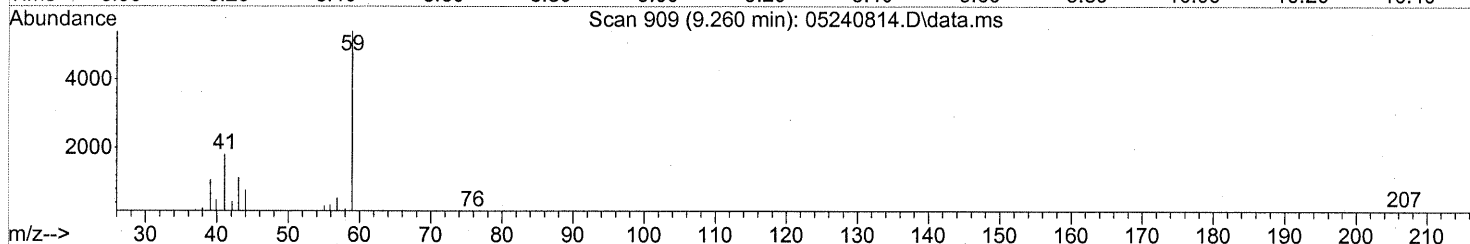
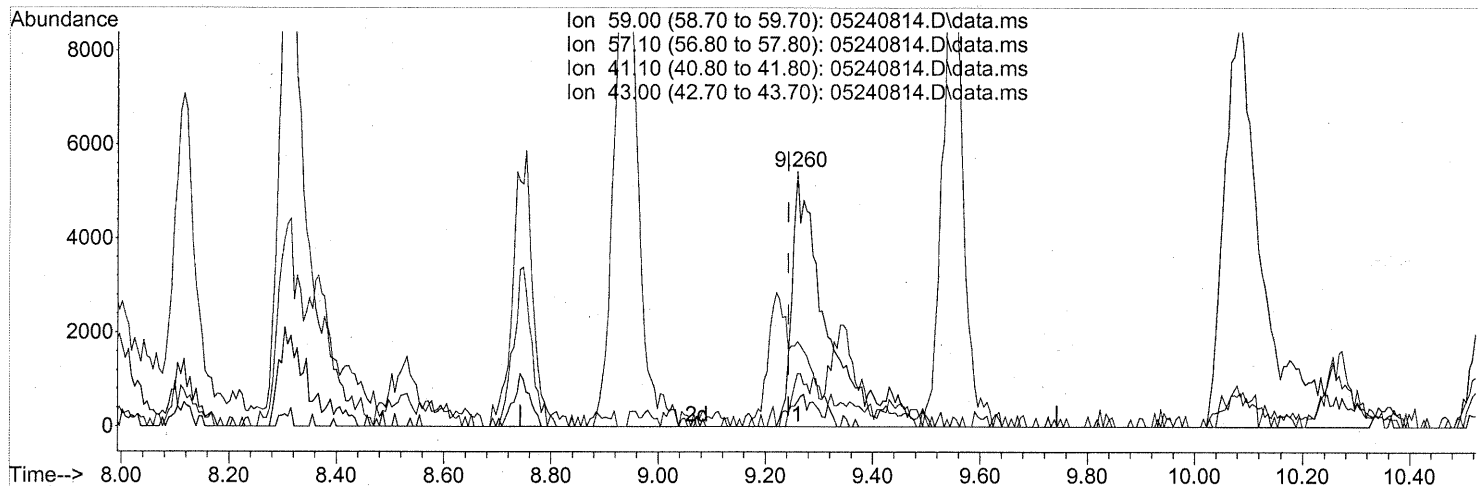
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.93
41.10	20.10	0.00#
43.00	12.30	16.40

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.260min (+0.017) 0.32ng m  
 response 24970

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	7.71
41.10	20.10	0.00#
43.00	12.30	14.15

*int. whole peaks*

*WA 5/29/08*

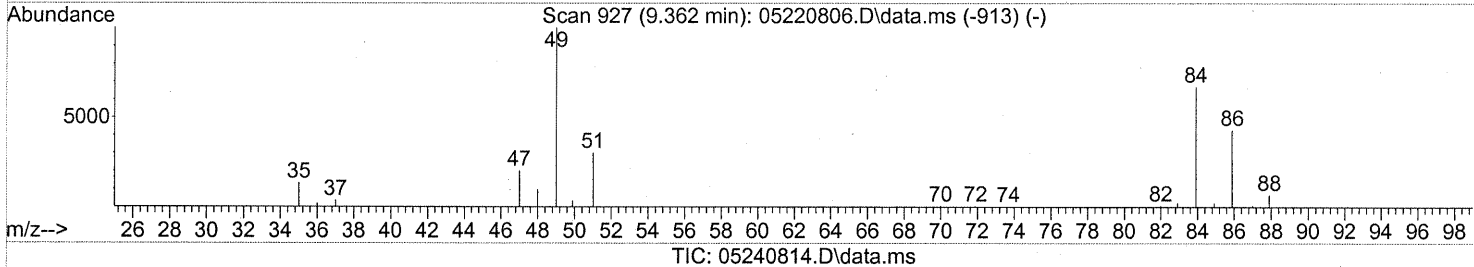
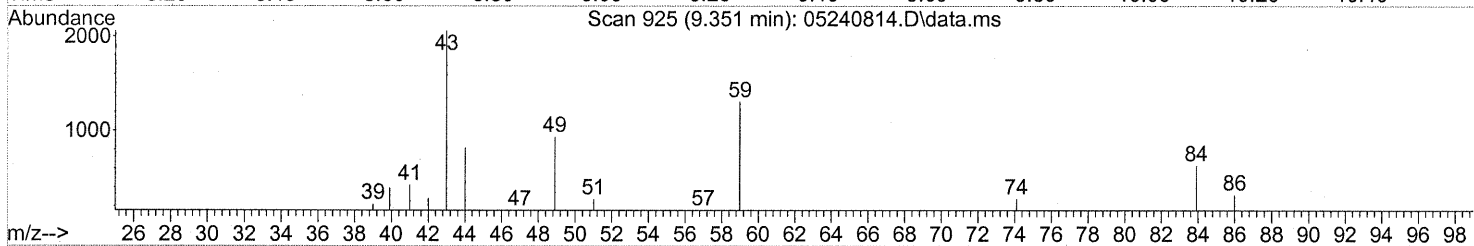
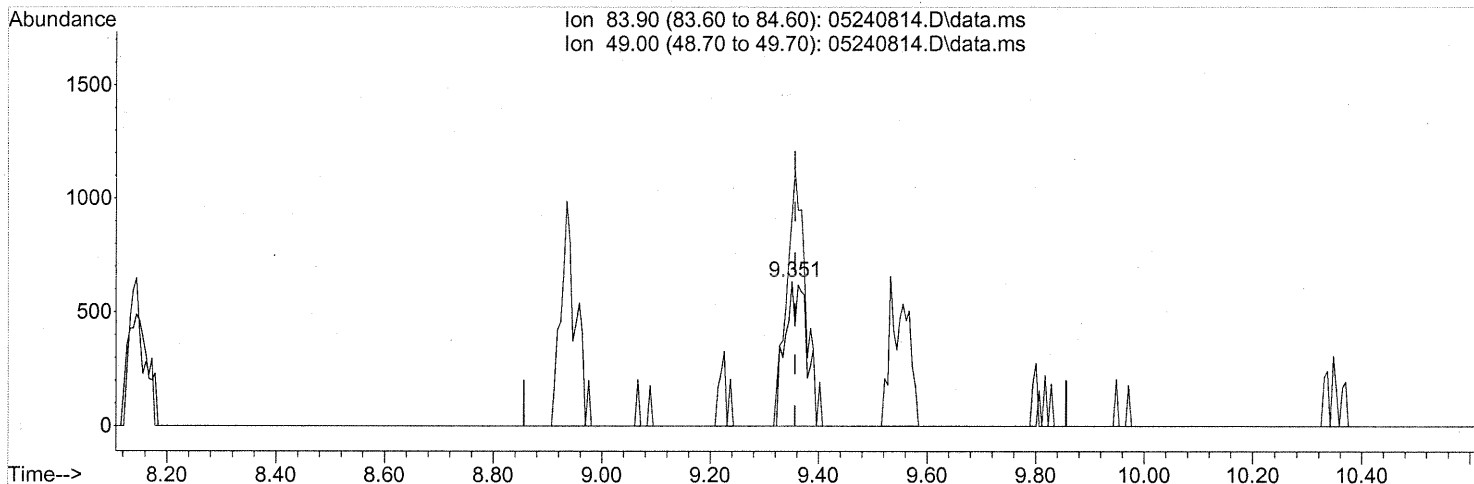
*WA 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

9.351min (-0.006) 0.06ng

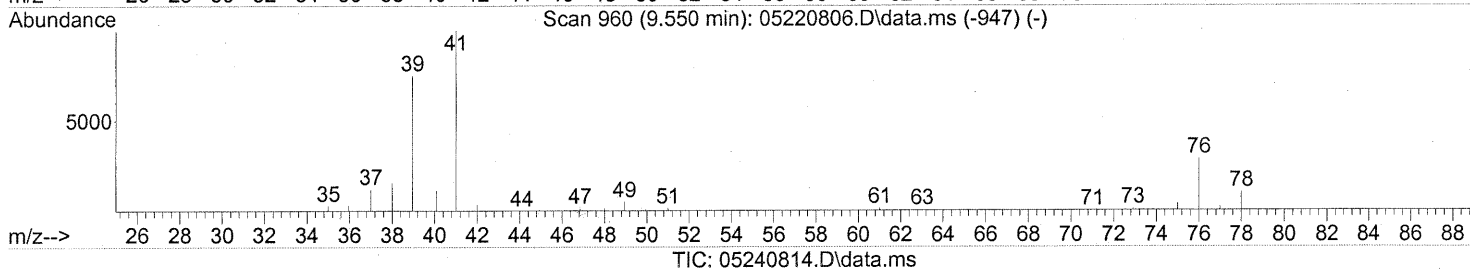
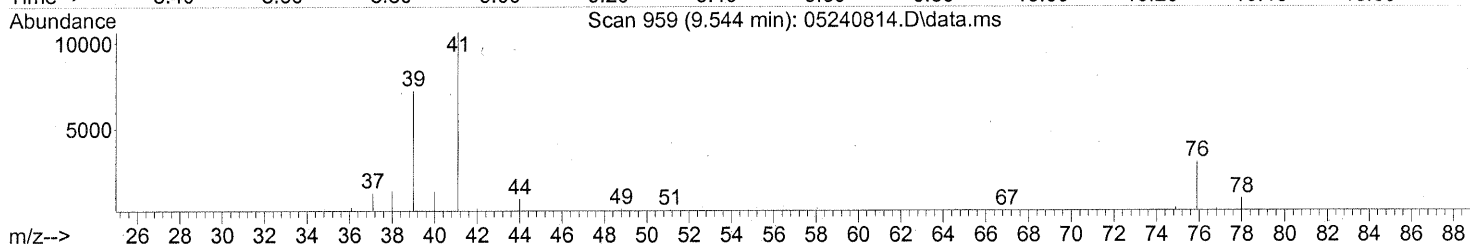
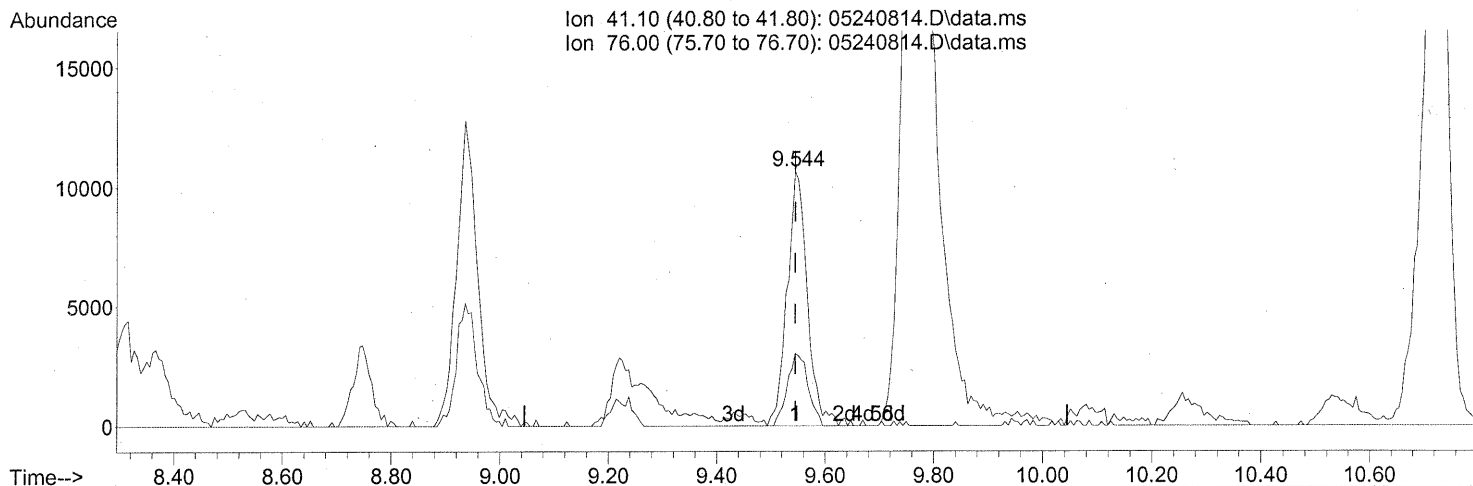
response 1764

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	155.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 4:00 pm  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(20) Allyl Chloride (T)

9.544min (-0.000) 0.64ng

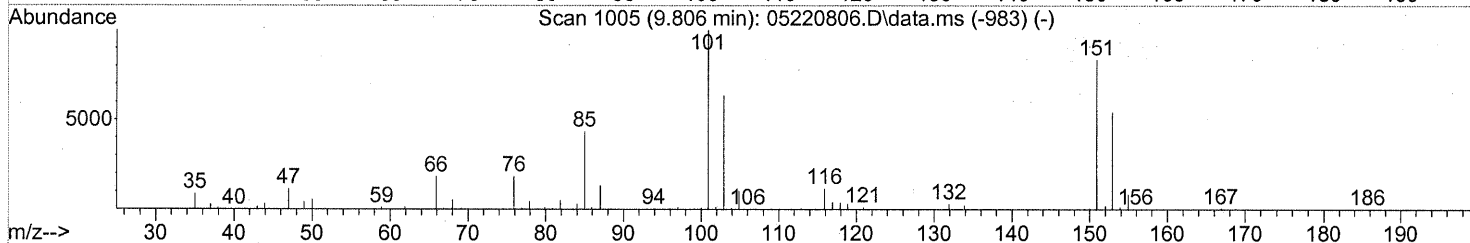
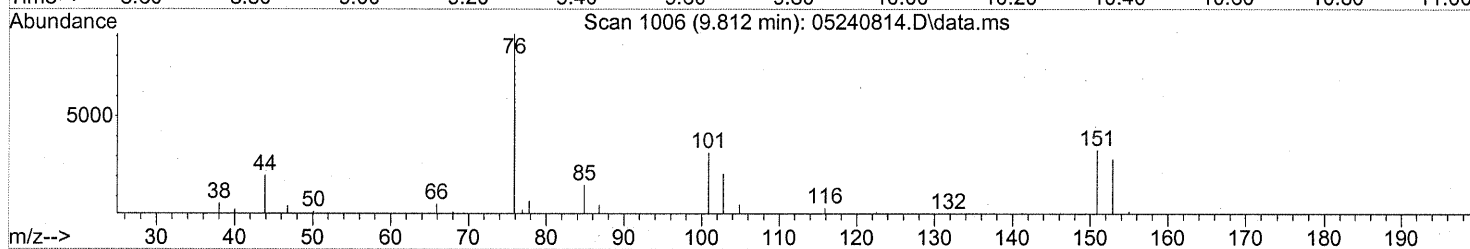
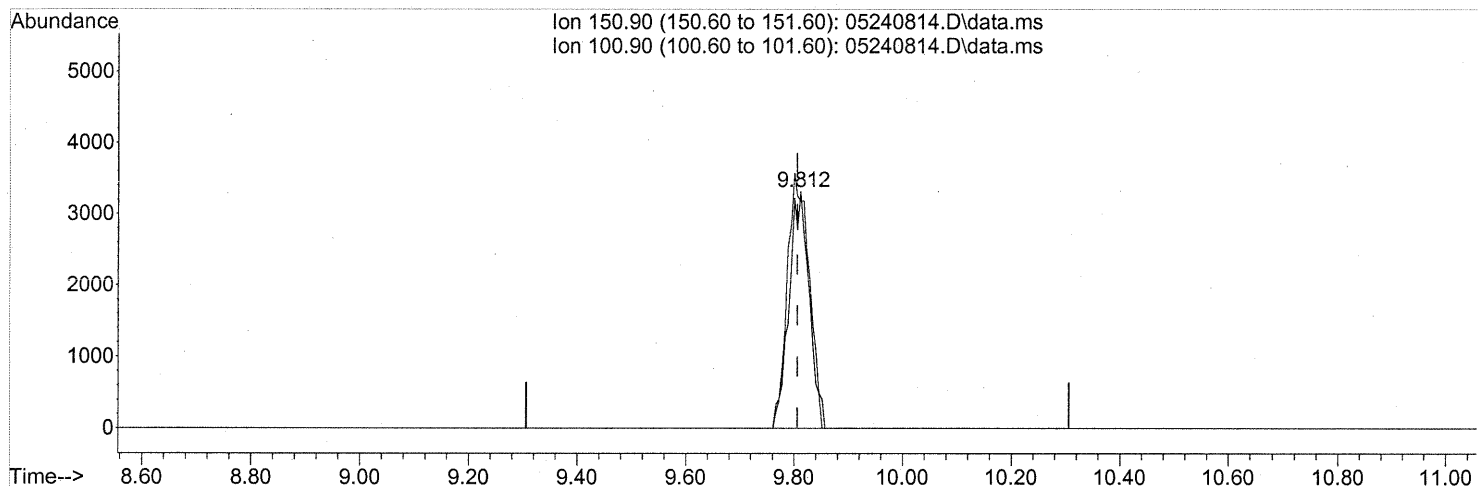
response 27325

Ion	Exp%	Act%
41.10	100	100
76.00	30.20	29.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.28ng

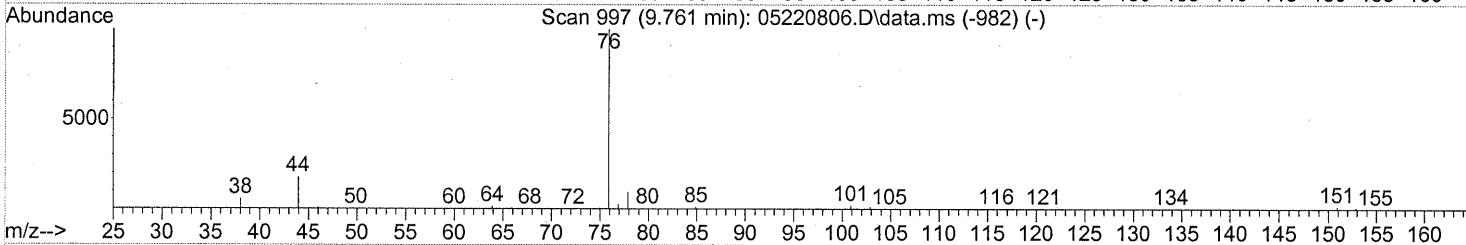
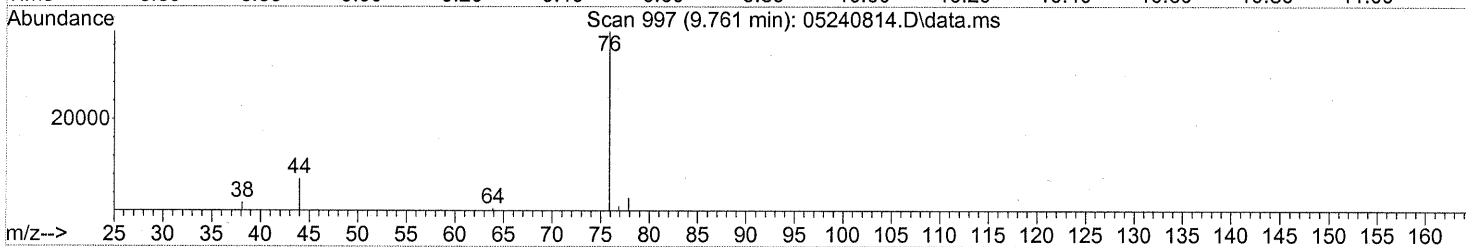
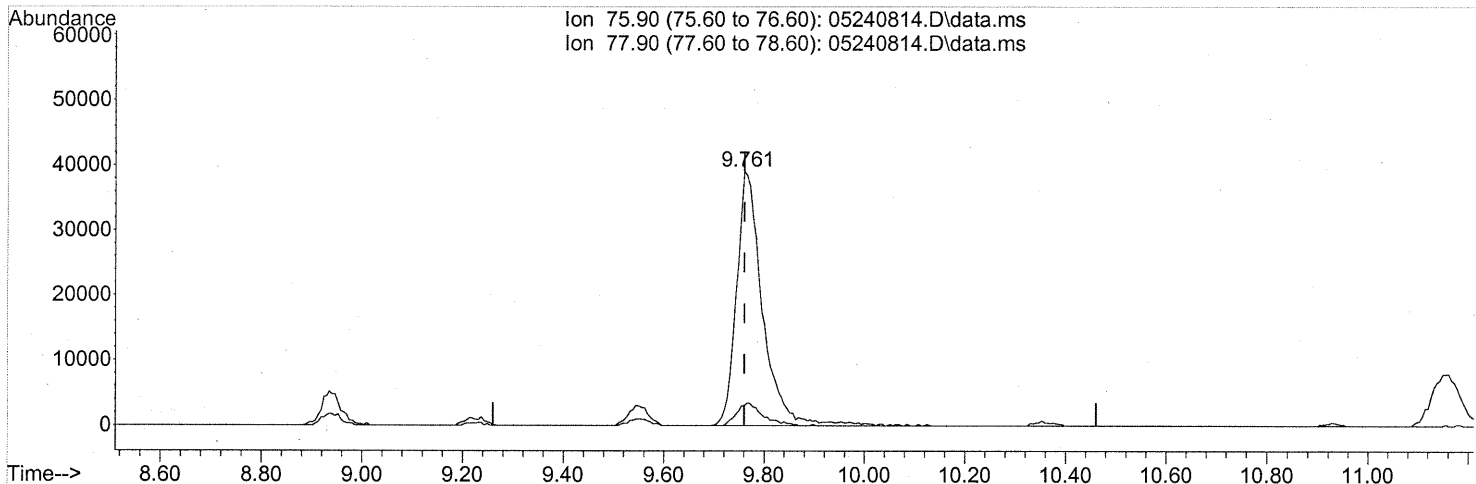
response 8558

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	115.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240814.D  
Acq On : 24 May 2008 16:00  
Operator : WA  
Sample : P0801442-005 (1000ml)  
Misc : ENSR SG44B-05 (-3.3, 3.8)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240814.D\data.ms

(22) Carbon Disulfide (T)

9.761min (-0.000) 1.15ng

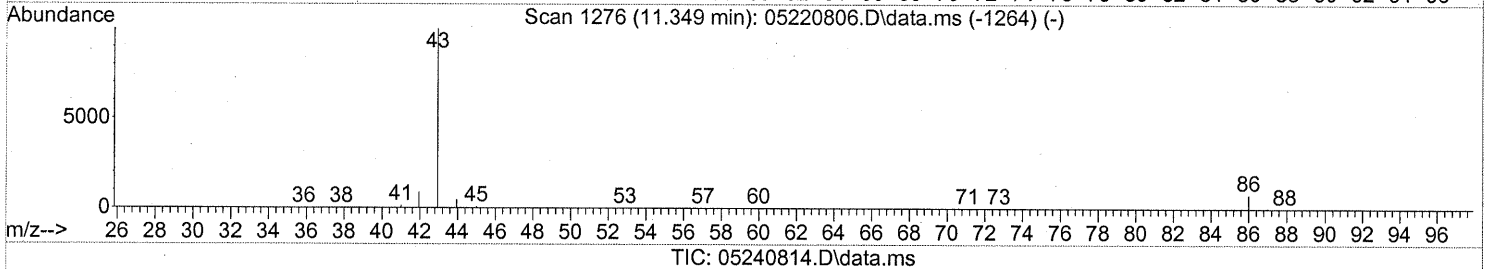
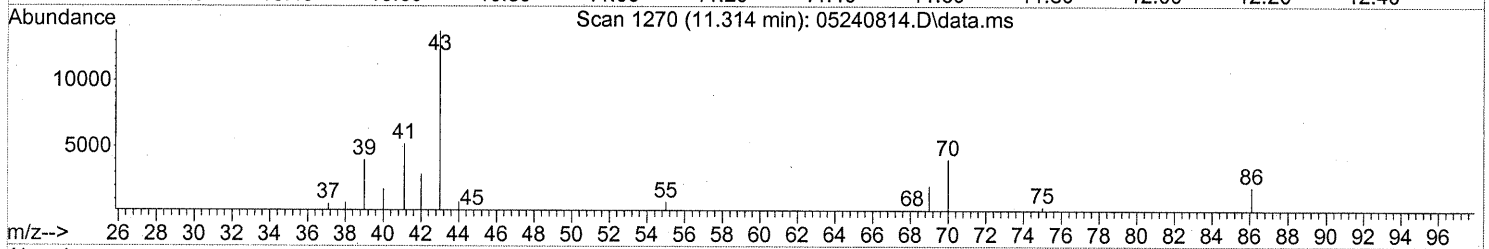
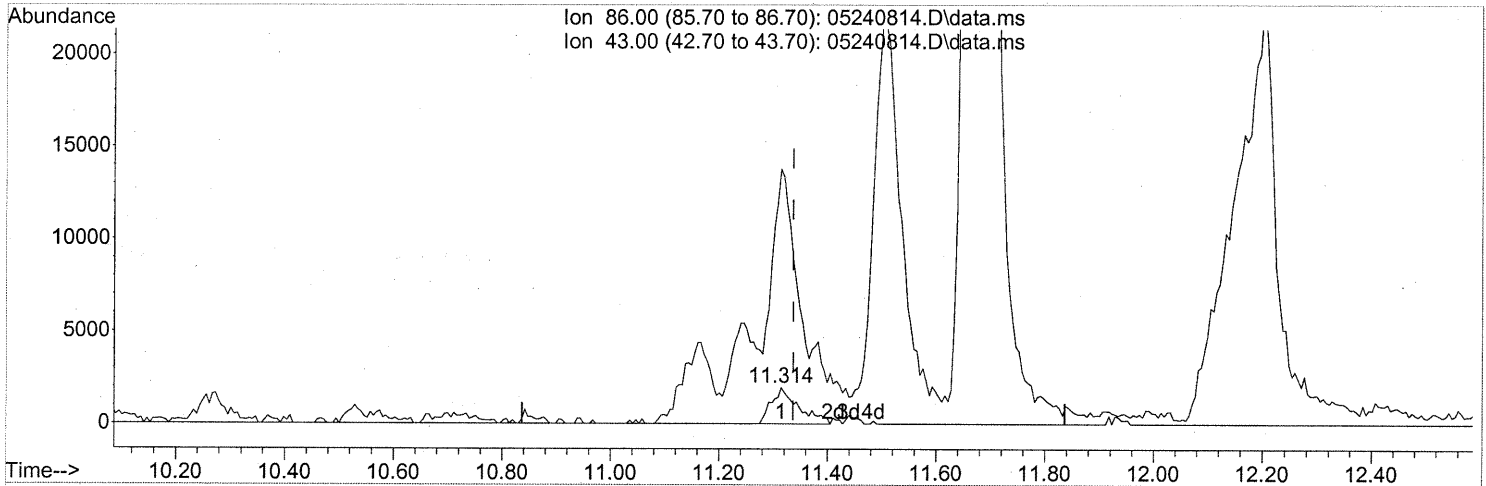
response 138895

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



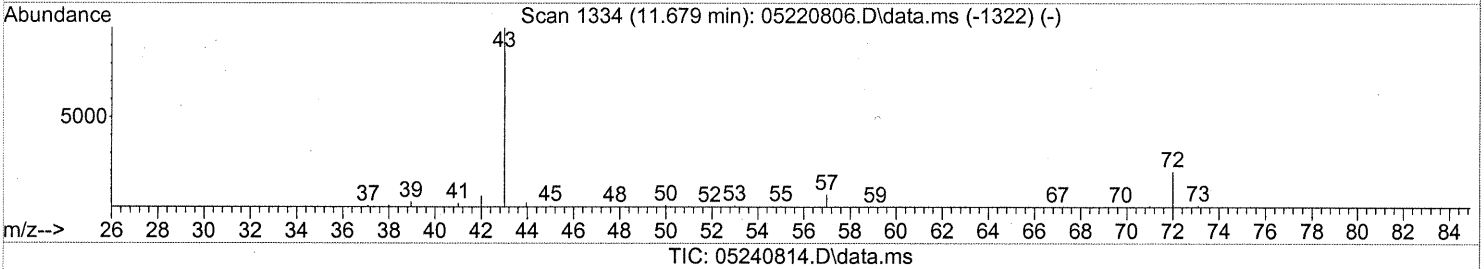
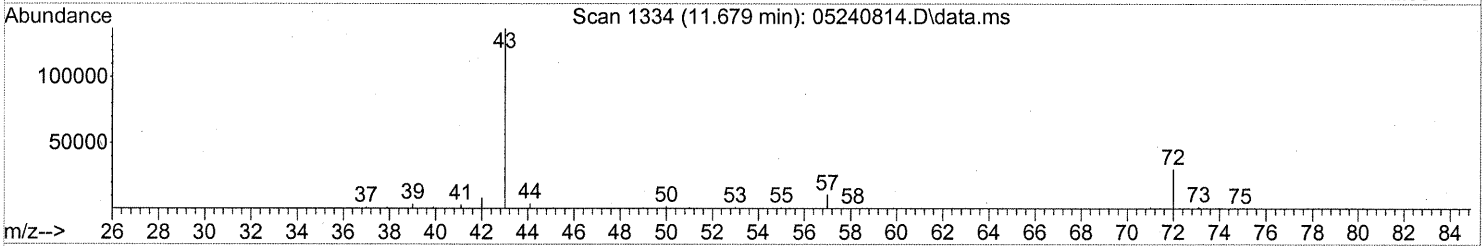
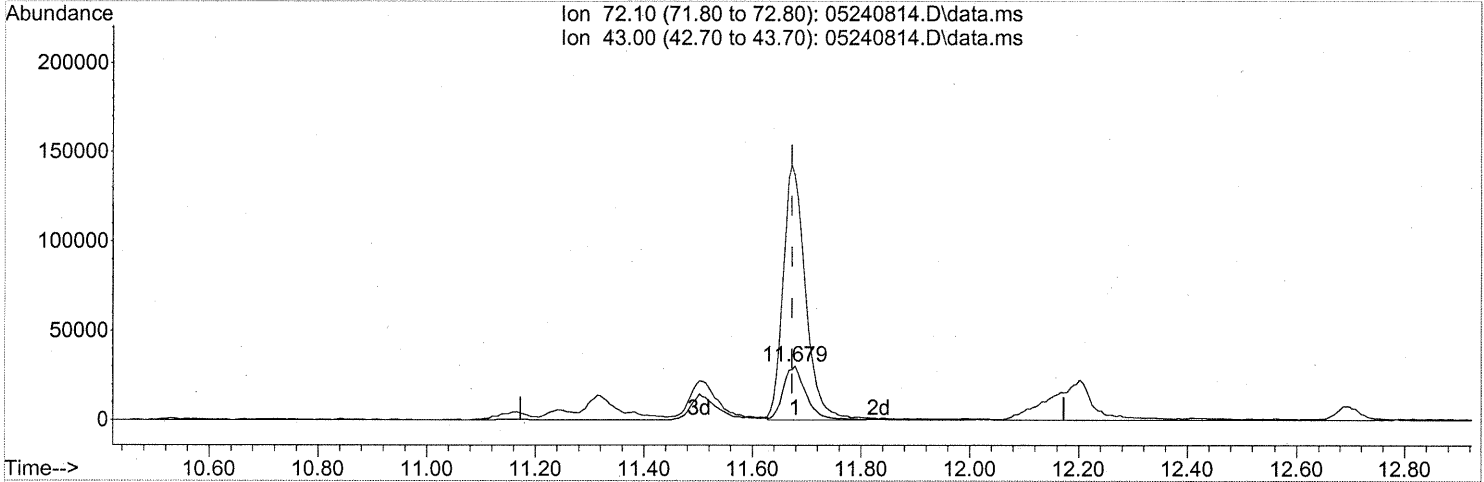
(26) Vinyl Acetate (T)  
 11.314min (-0.023) 1.27ng  
 response 6701

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	776.47#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.679min (+0.006) 4.20ng

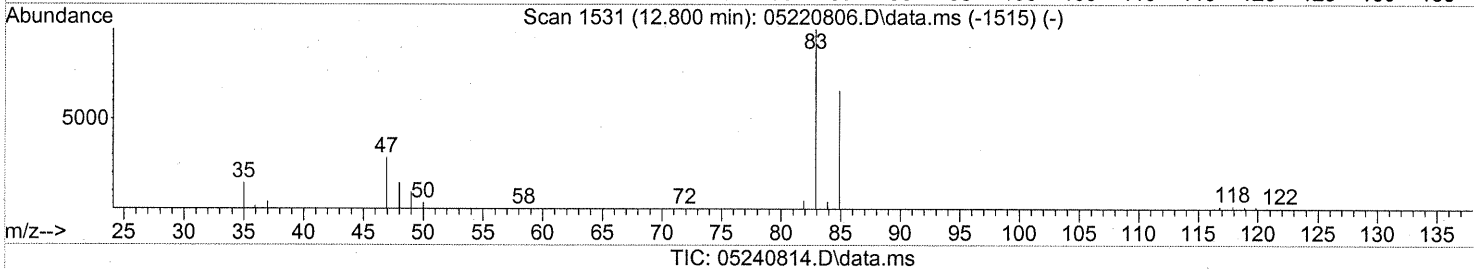
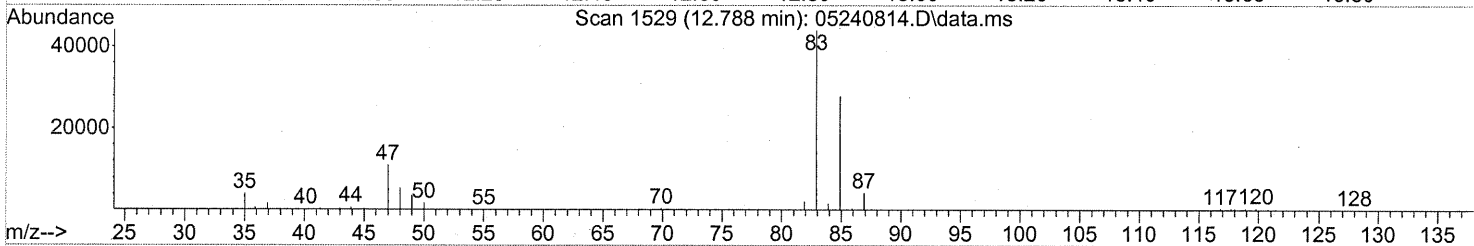
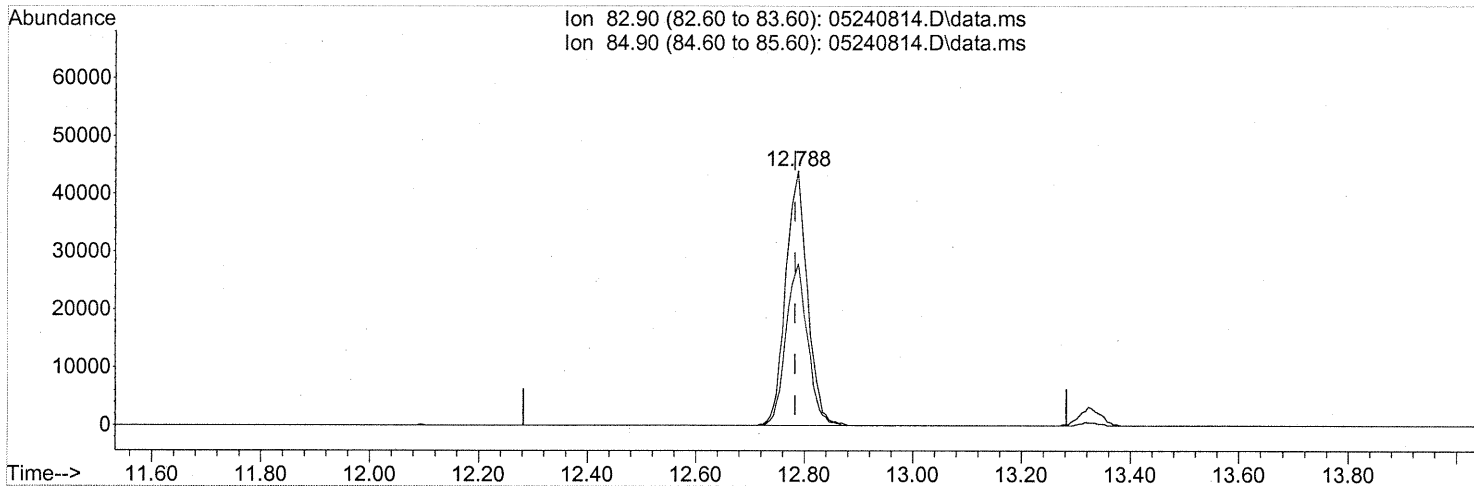
response 87281

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	465.31#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240814.D  
Acq On : 24 May 2008 16:00  
Operator : WA  
Sample : P0801442-005 (1000ml)  
Misc : ENSR SG44B-05 (-3.3, 3.8)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



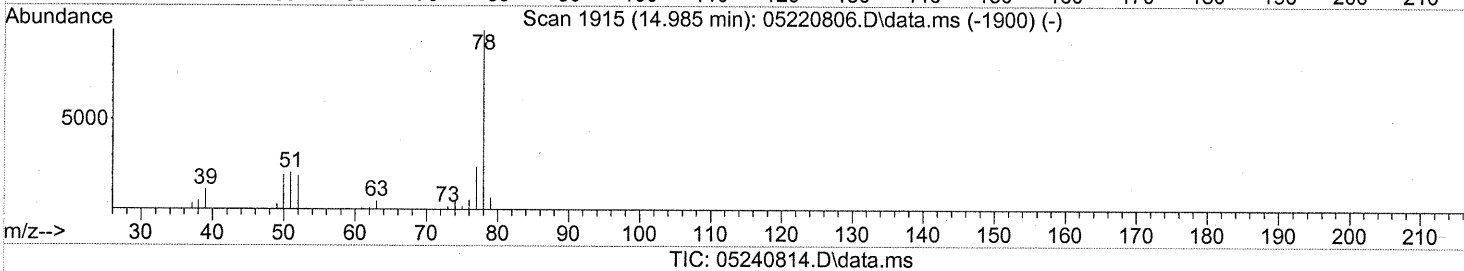
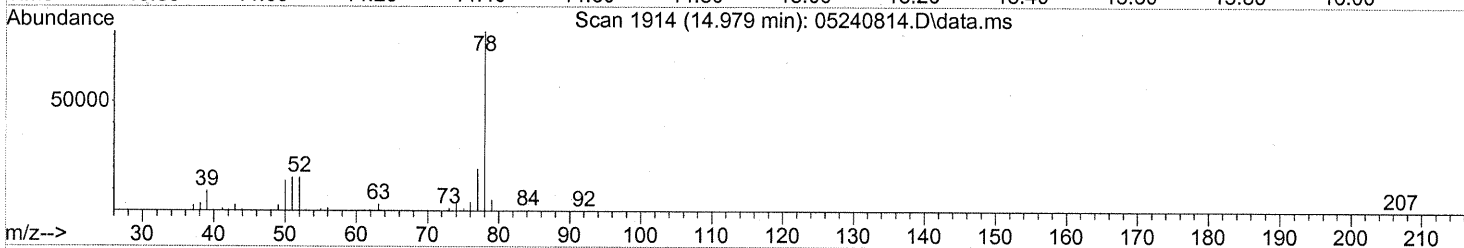
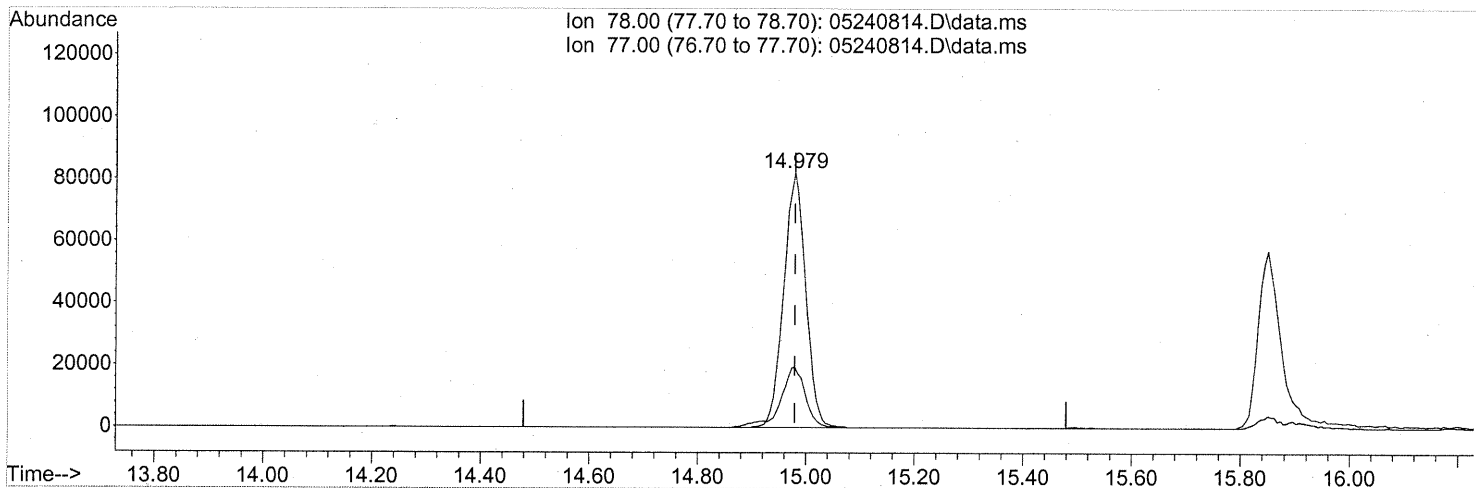
(32) Chloroform (T)  
12.788min (+0.006) 2.52ng  
response 121664

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	63.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(41) Benzene (T)  
 14.979min (-0.000) 1.92ng  
 response 230788

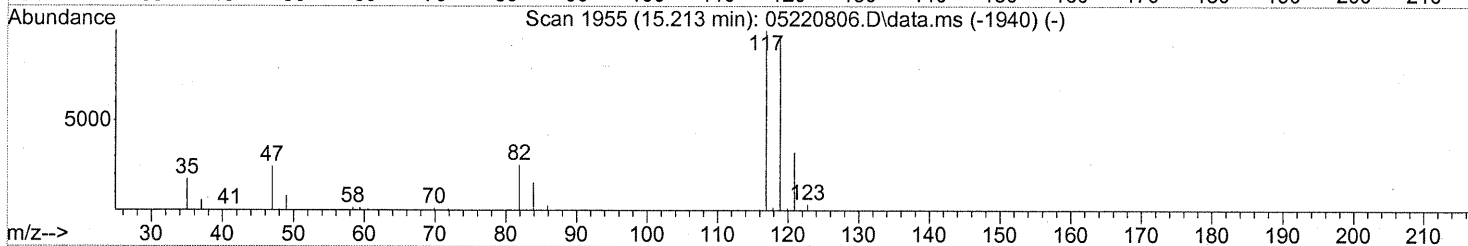
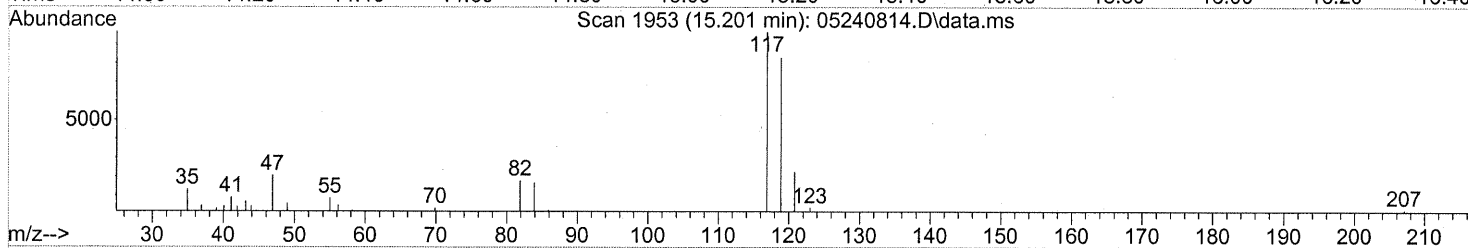
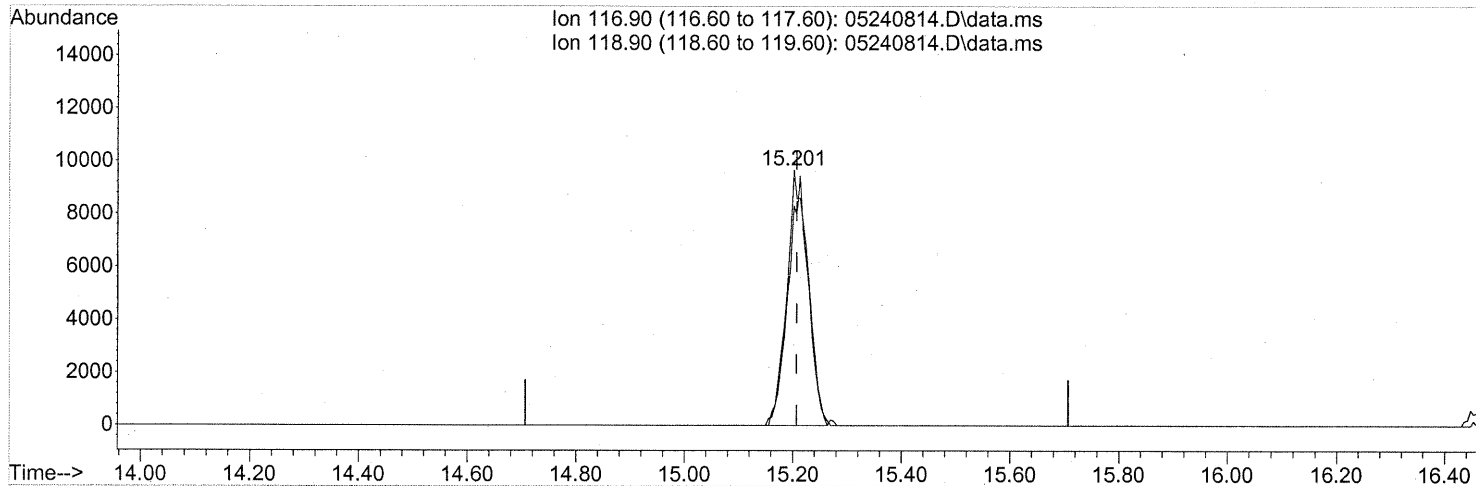
Ion	Exp%	Act%
78.00	100	100
77.00	23.50	26.32
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(42) Carbon Tetrachloride (T)

15.201min (-0.006) 0.57ng

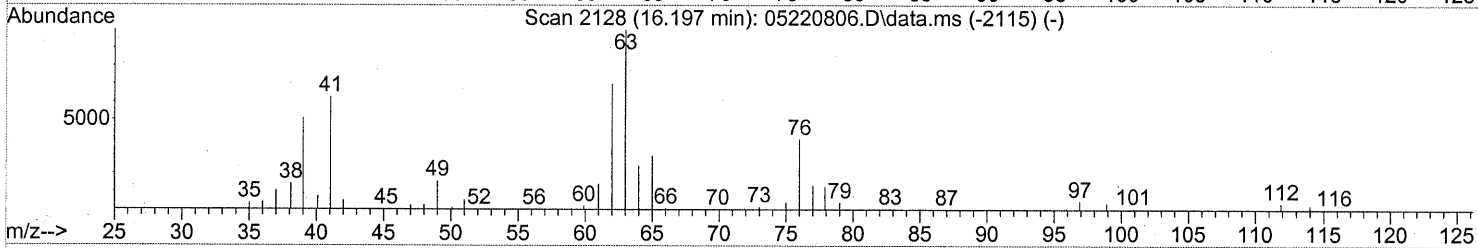
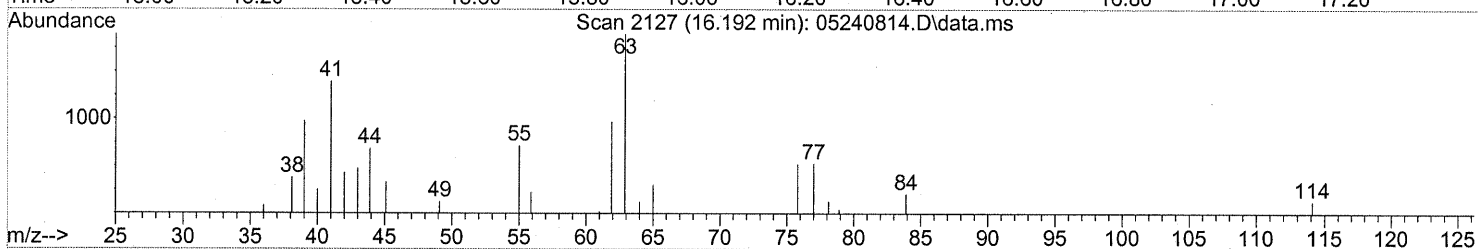
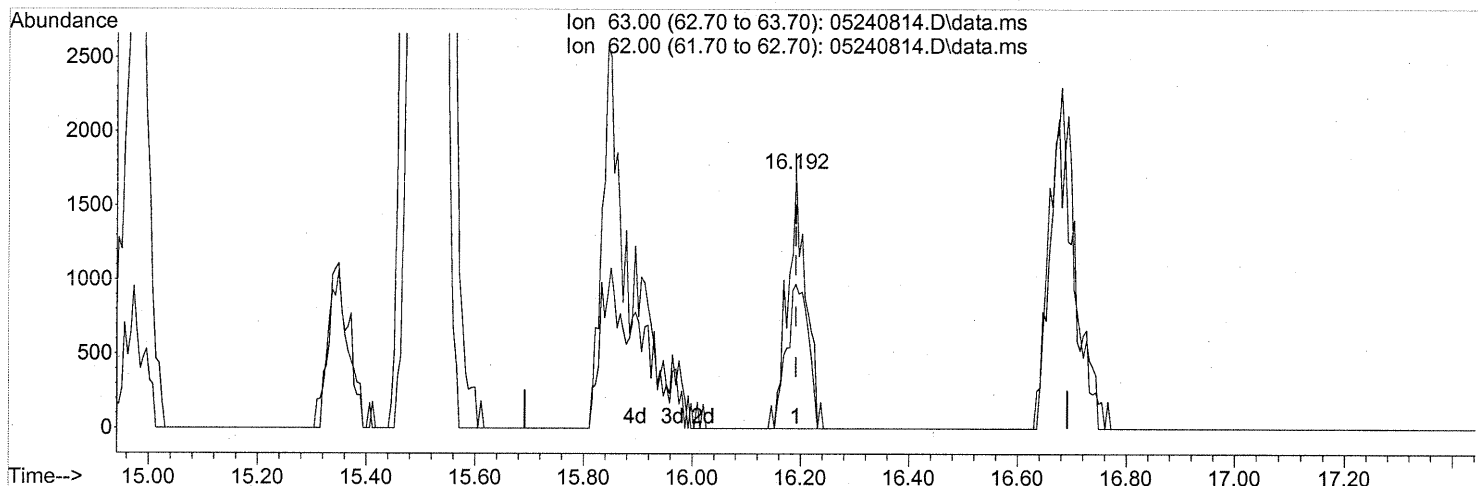
response 26350

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	92.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

16.192min (-0.000) 0.12ng

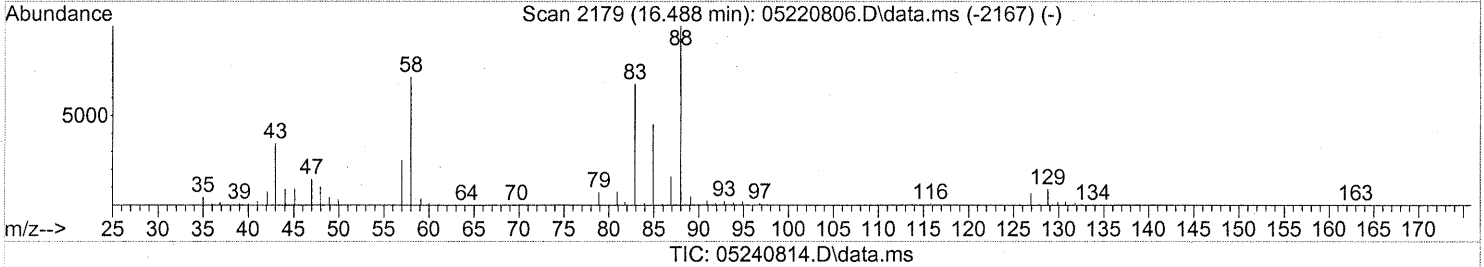
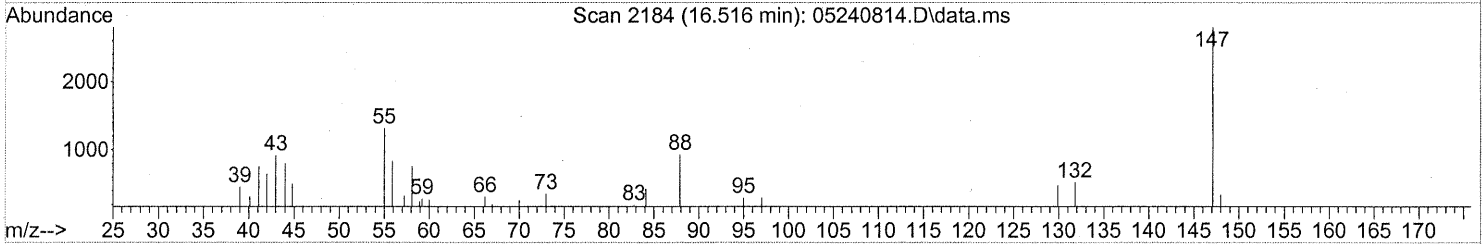
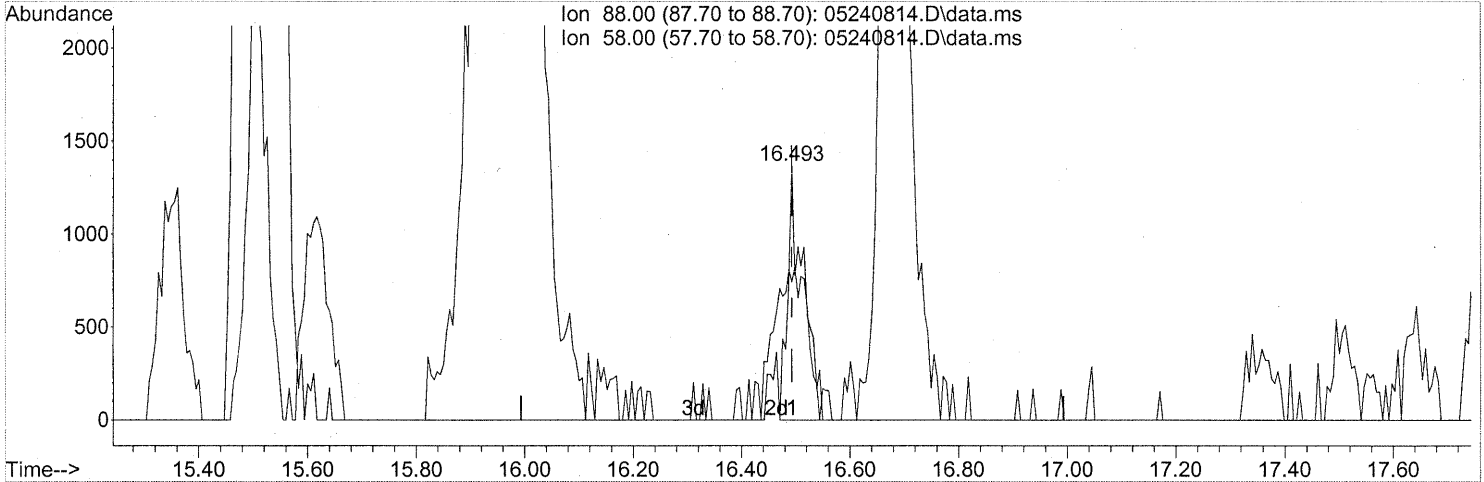
response 3982

Ion	Exp%	Act%
63.00	100	100
62.00	71.30	69.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.493min (-0.000) 0.13ng  
 response 2851  

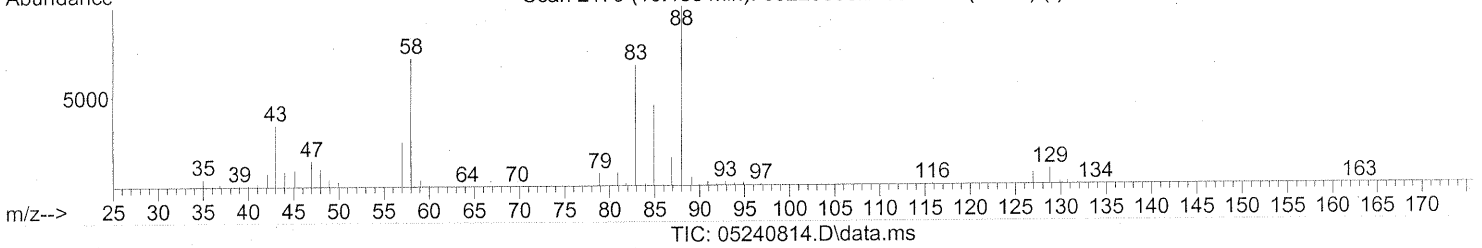
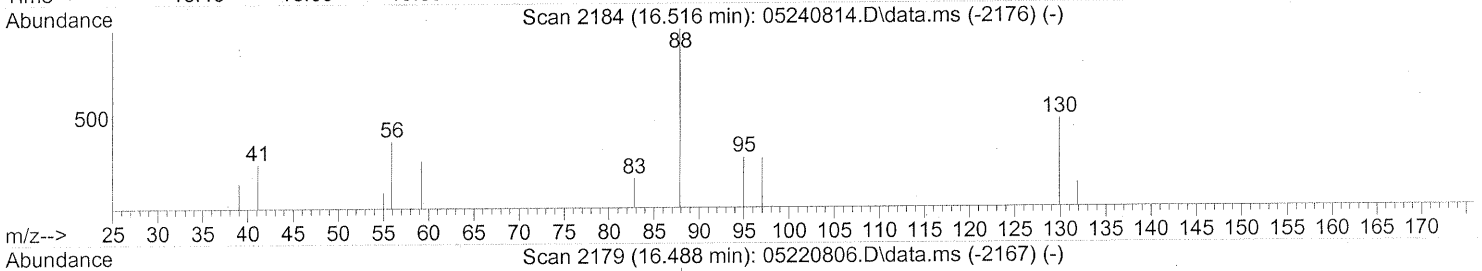
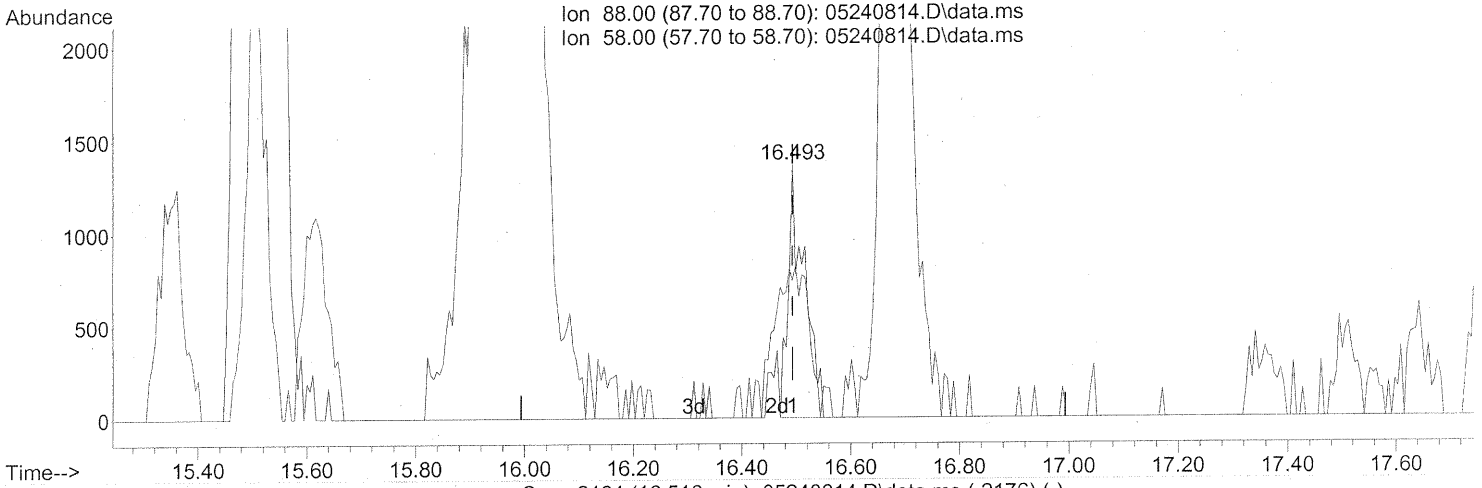
Ion	Exp%	Act%
88.00	100	100
58.00	90.10	121.47#
0.00	0.00	0.00
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA 4  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.493min (-0.000) 0.13ng  
 response 2851

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	121.47#
0.00	0.00	0.00
0.00	0.00	0.00

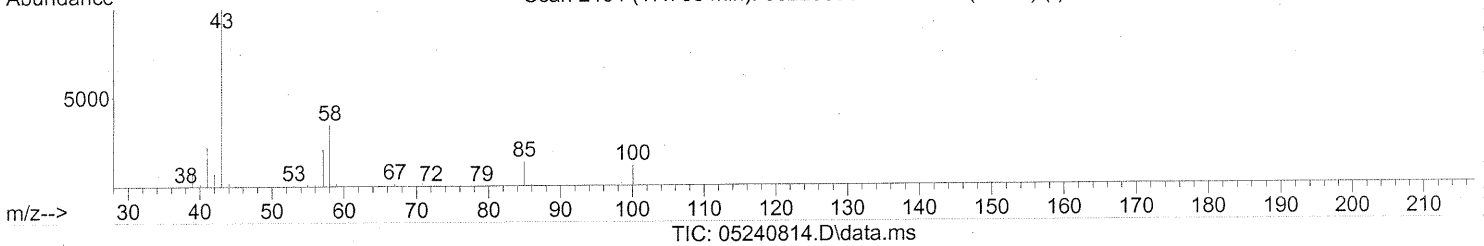
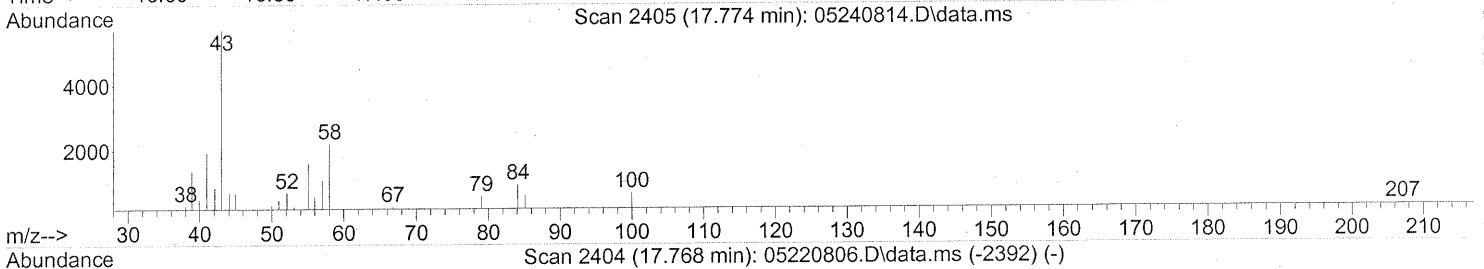
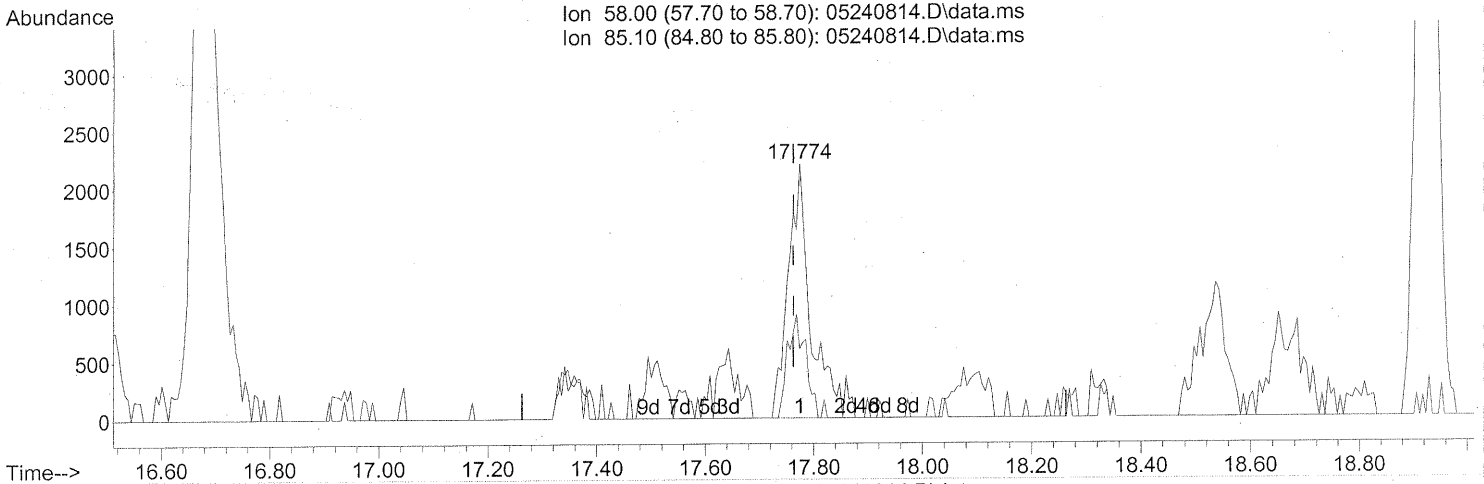
*after substr*

*Wt 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.774min (+0.011) 0.20ng

response 6278

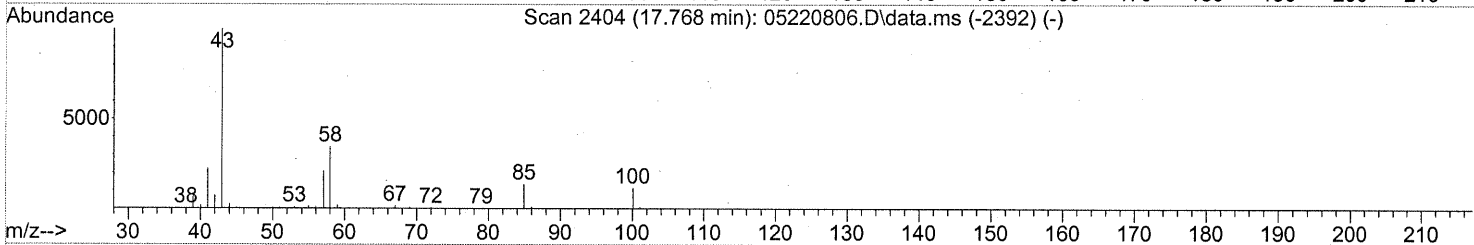
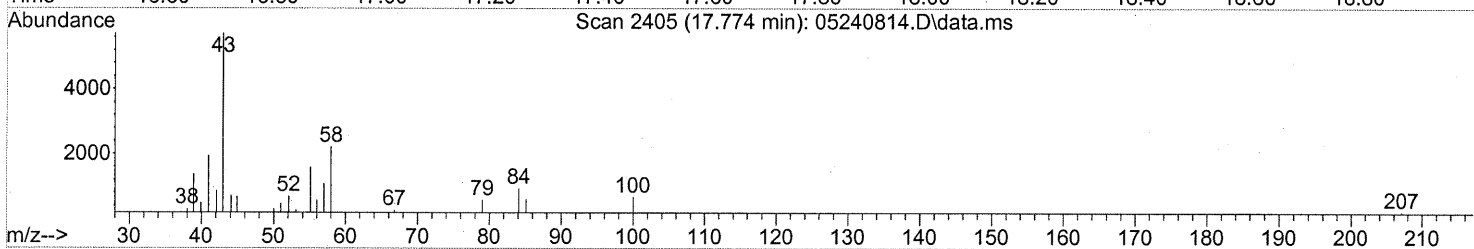
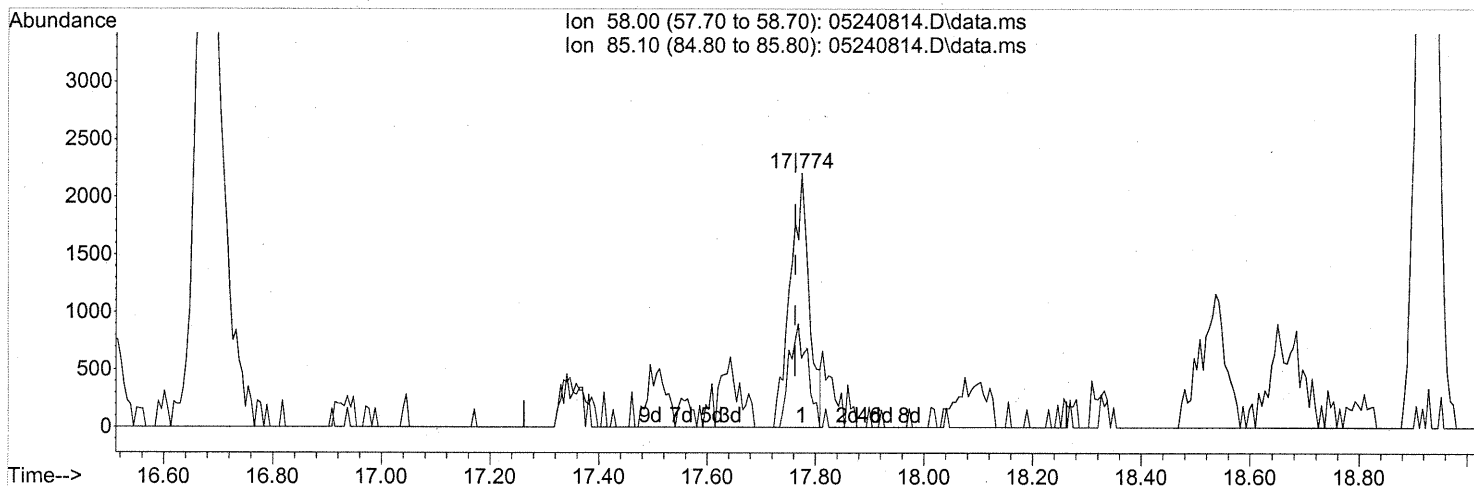
*extra tailing*

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	32.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(53) 4-Methyl-2-pentanone (T)

17.774min (+0.011) 0.17ng m

response 5363

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	38.32
0.00	0.00	0.00
0.00	0.00	0.00

*corr. baseline*

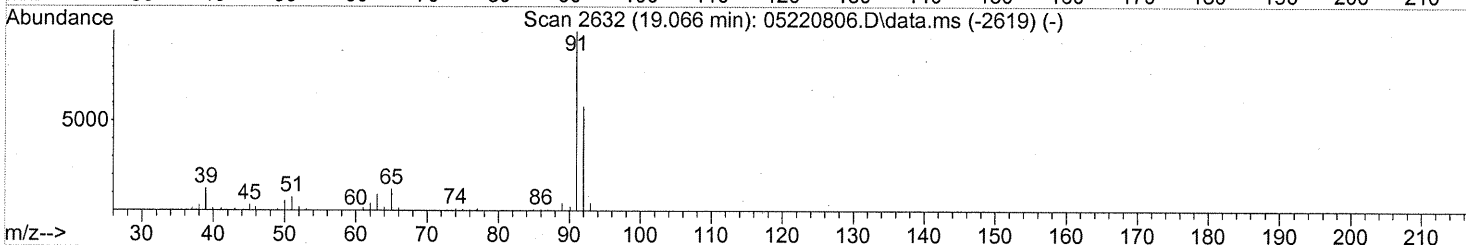
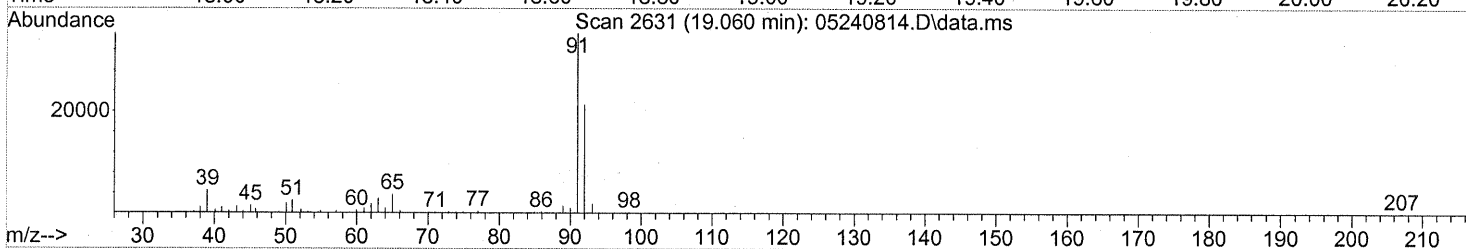
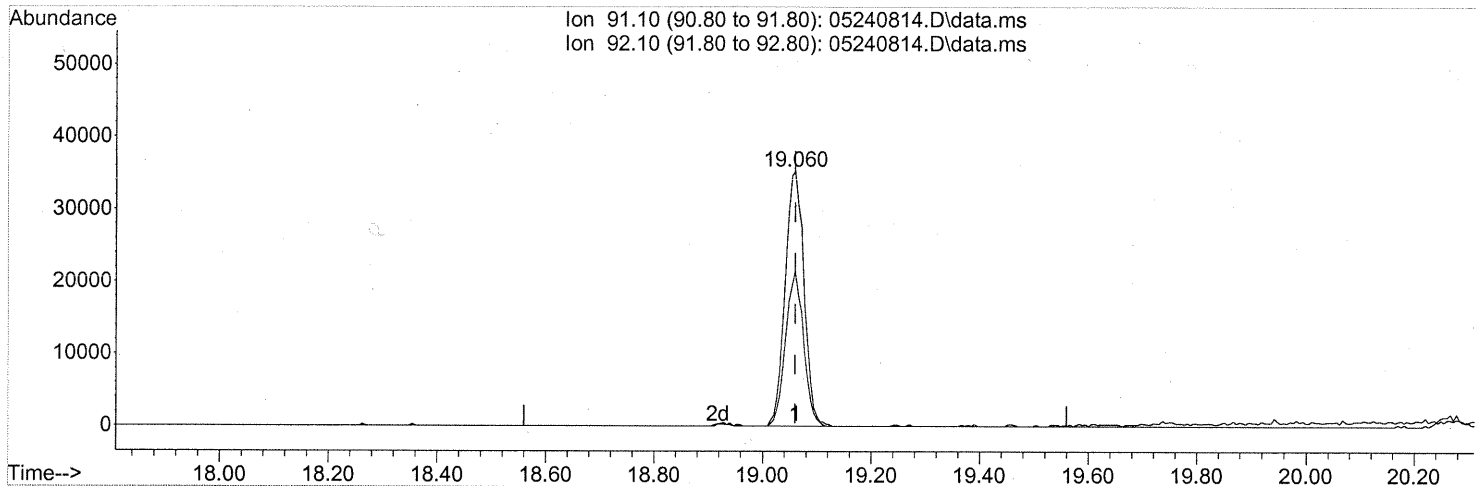
*107 5/29/08*

*WJ/20/07*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 0.65ng

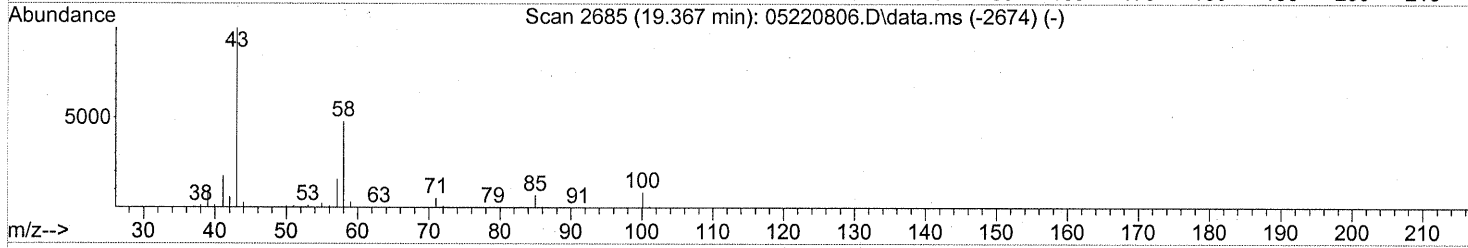
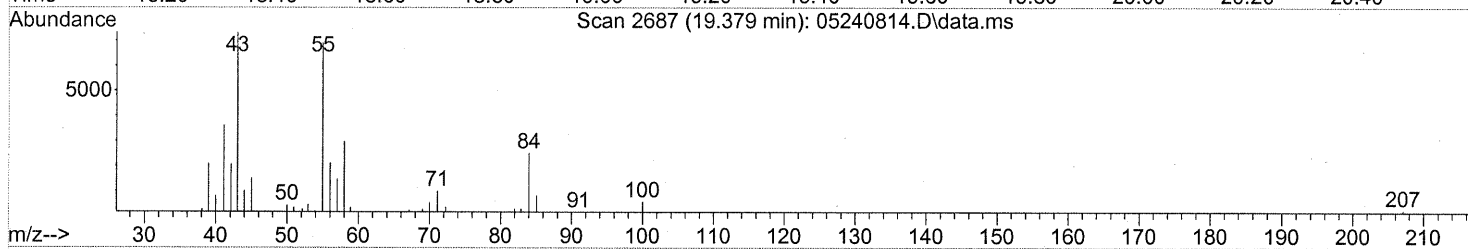
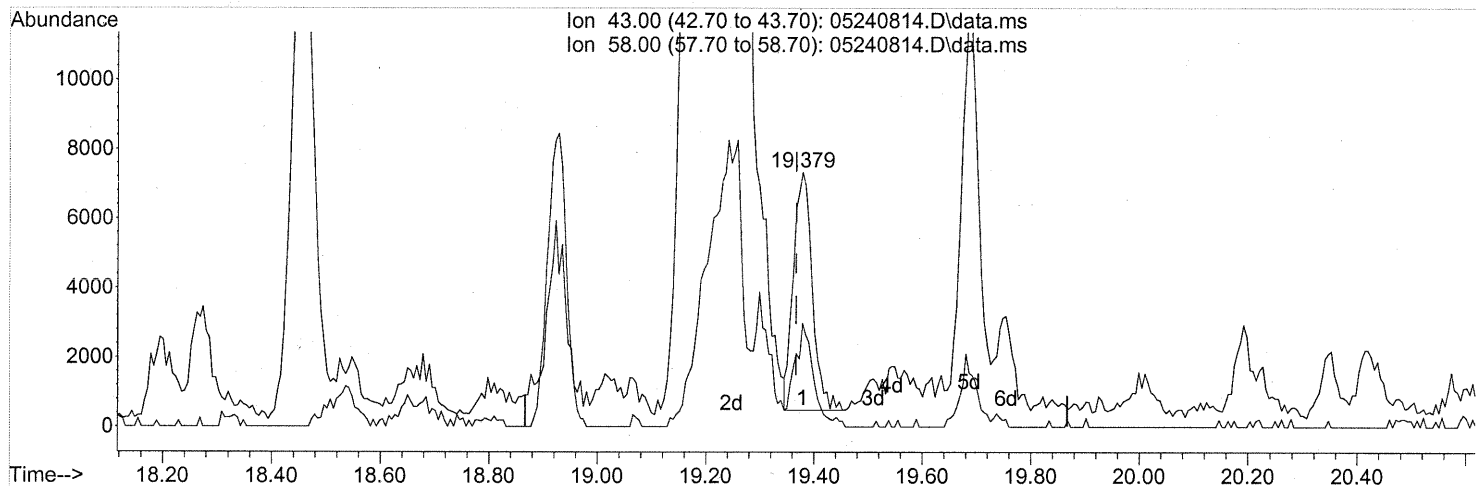
response 84562

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(59) 2-Hexanone (T)  
 19.379min (+0.011) 0.18ng  
 response 16540

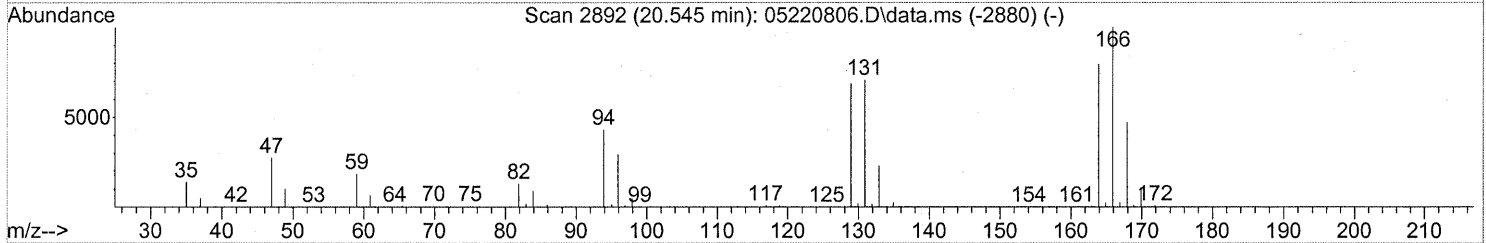
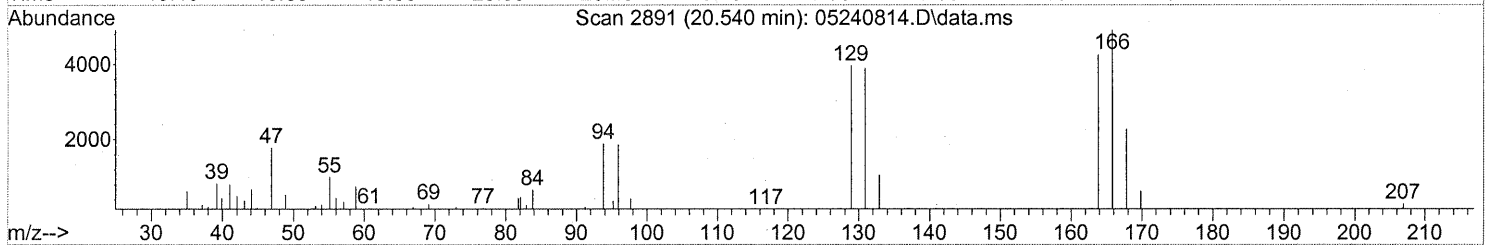
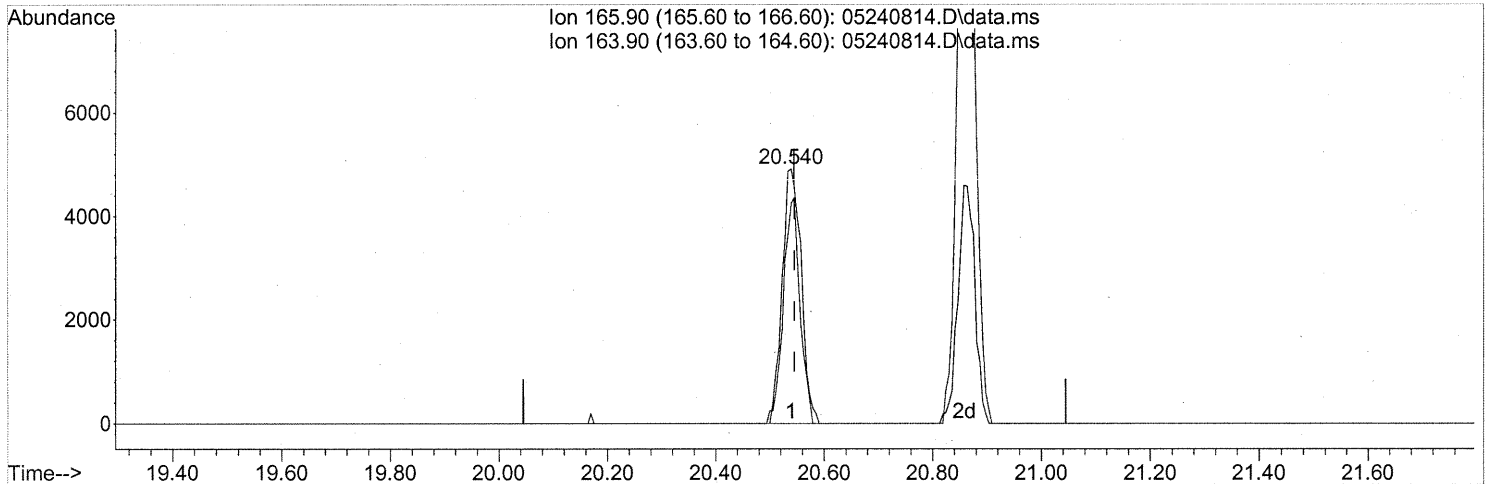
Ion	Exp%	Act%
43.00	100	100
58.00	61.70	44.20
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 0.31ng

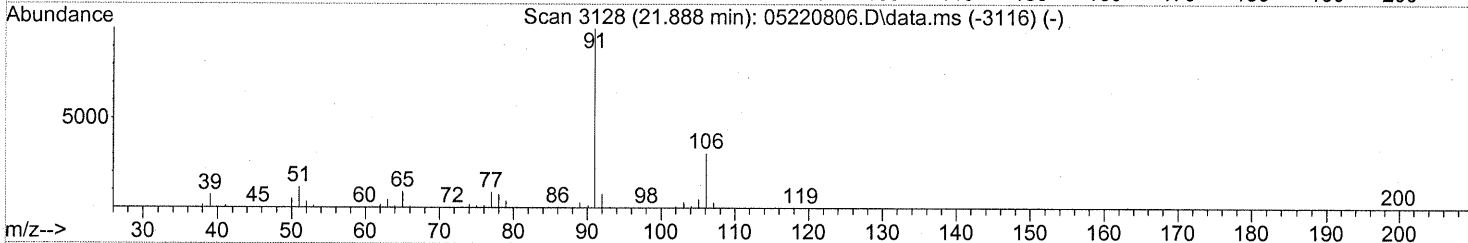
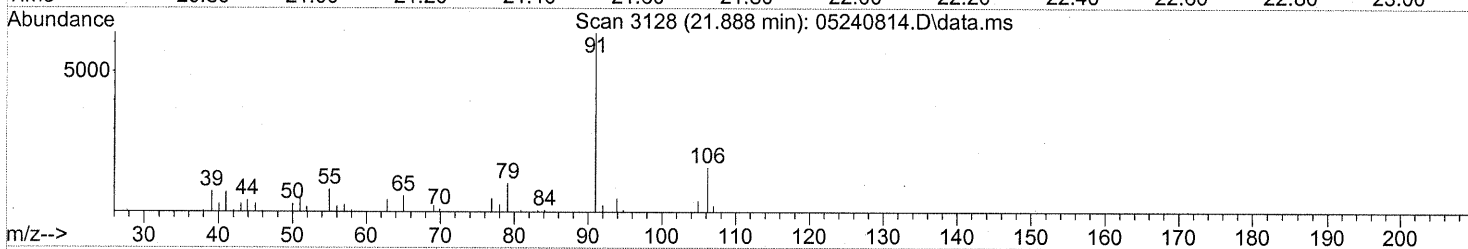
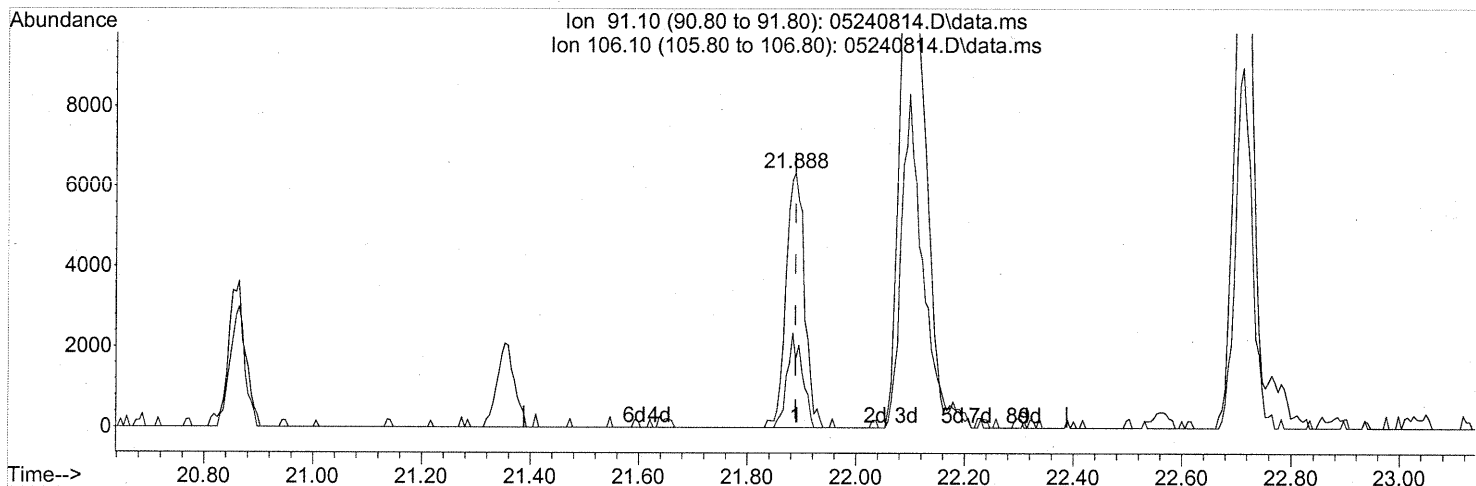
response 11934

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	77.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

21.888min (-0.000) 0.10ng

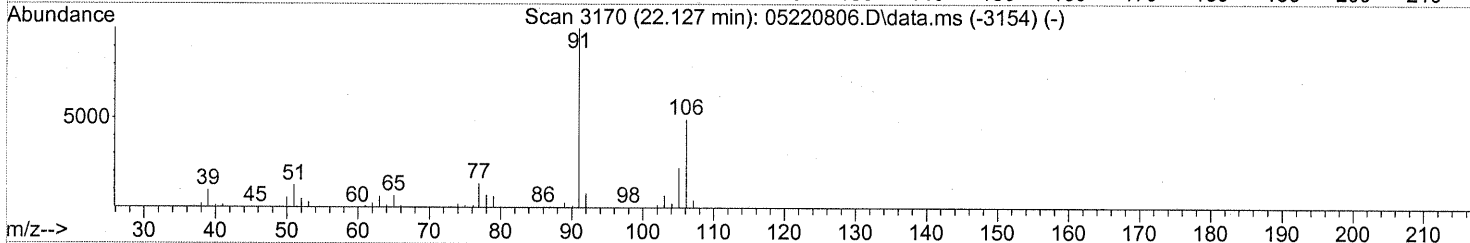
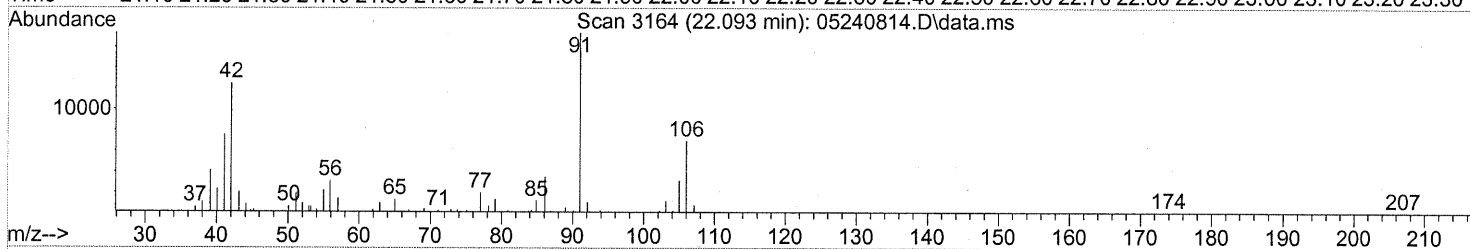
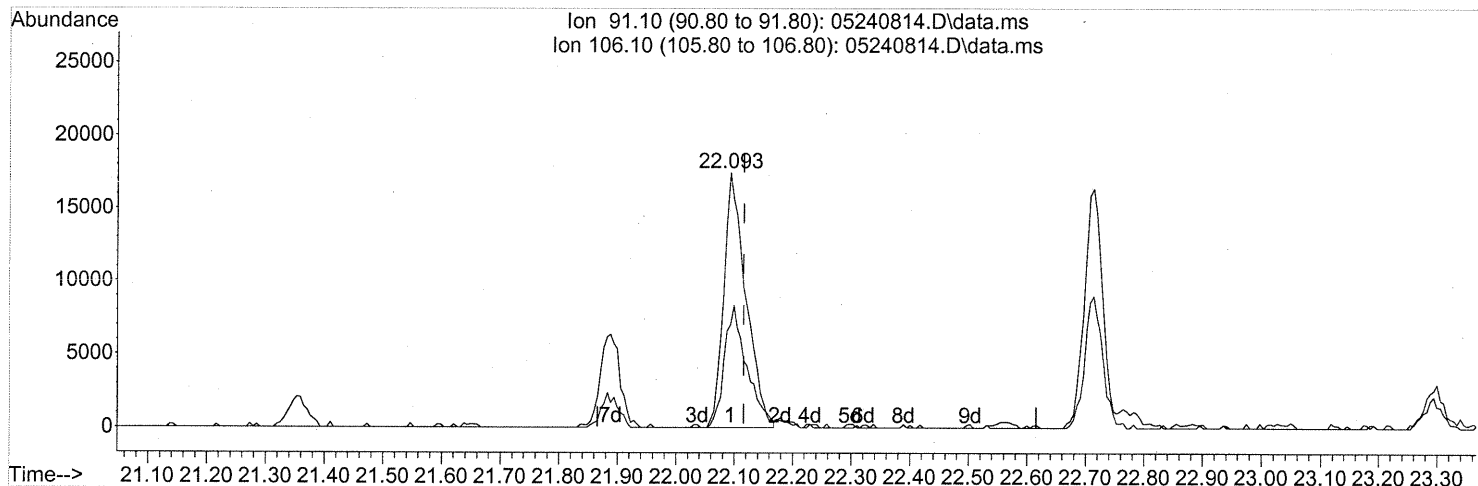
response 14997

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	30.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

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

22.093min (-0.023) 0.46ng

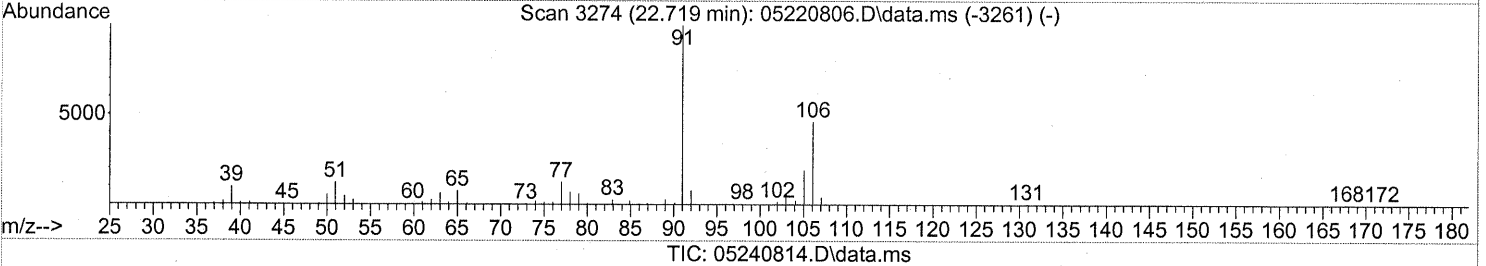
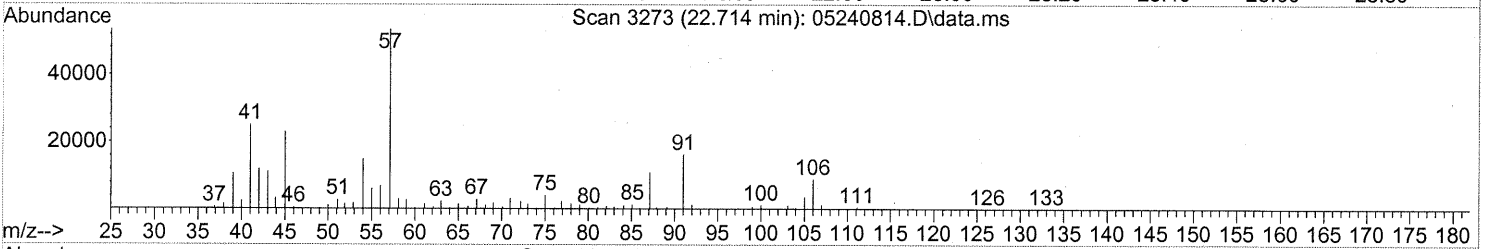
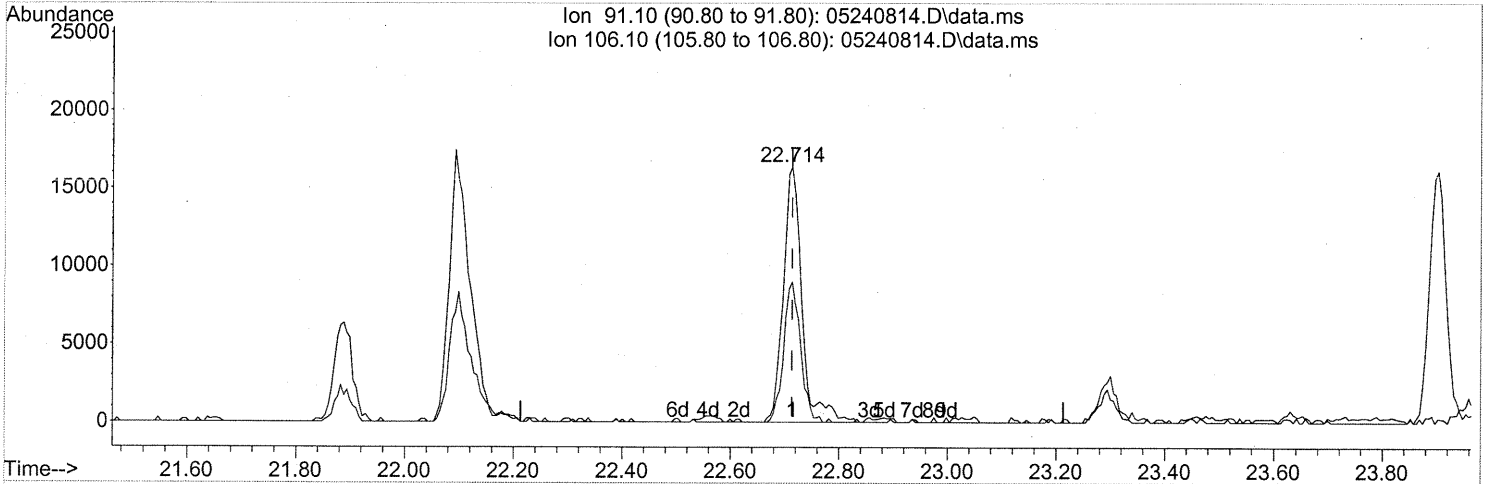
response 45609

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	50.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



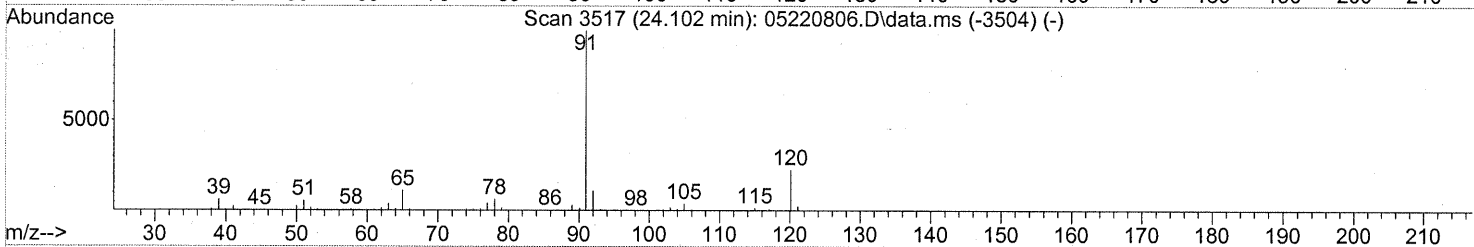
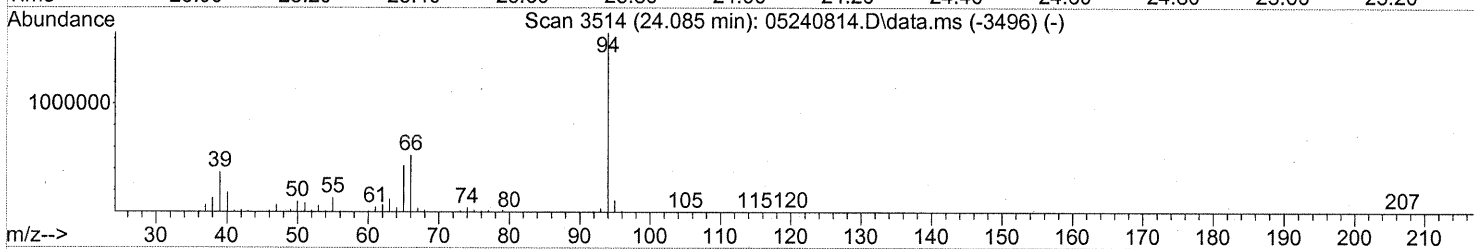
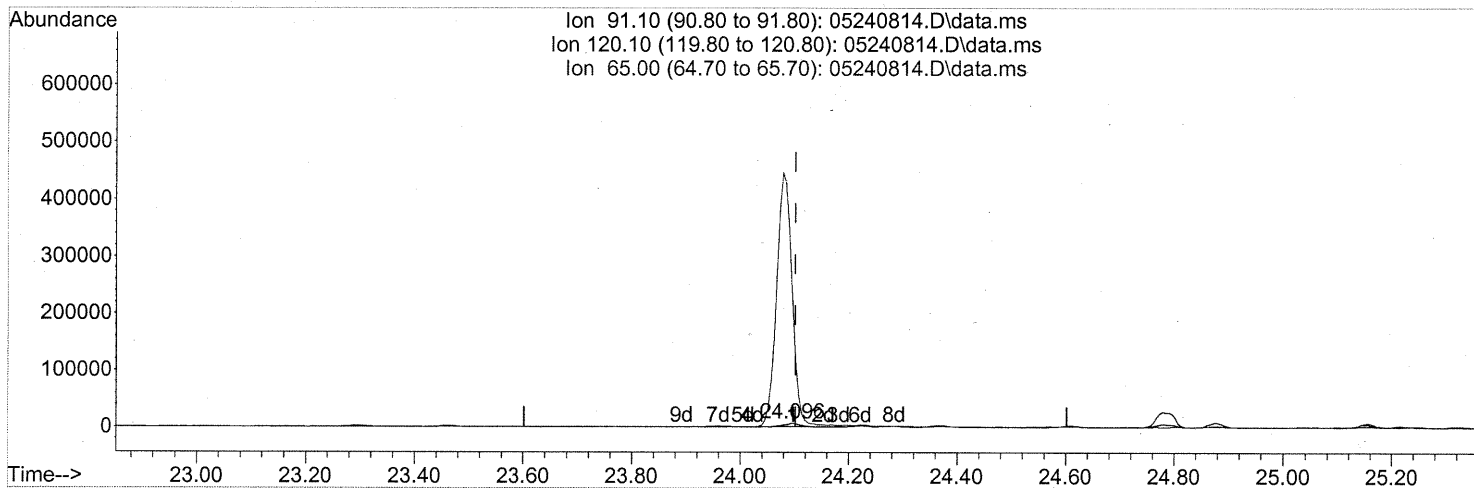
(70) o-Xylene (T)  
 22.714min (-0.000) 0.36ng  
 response 38743

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	49.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(76) n-Propylbenzene (T)

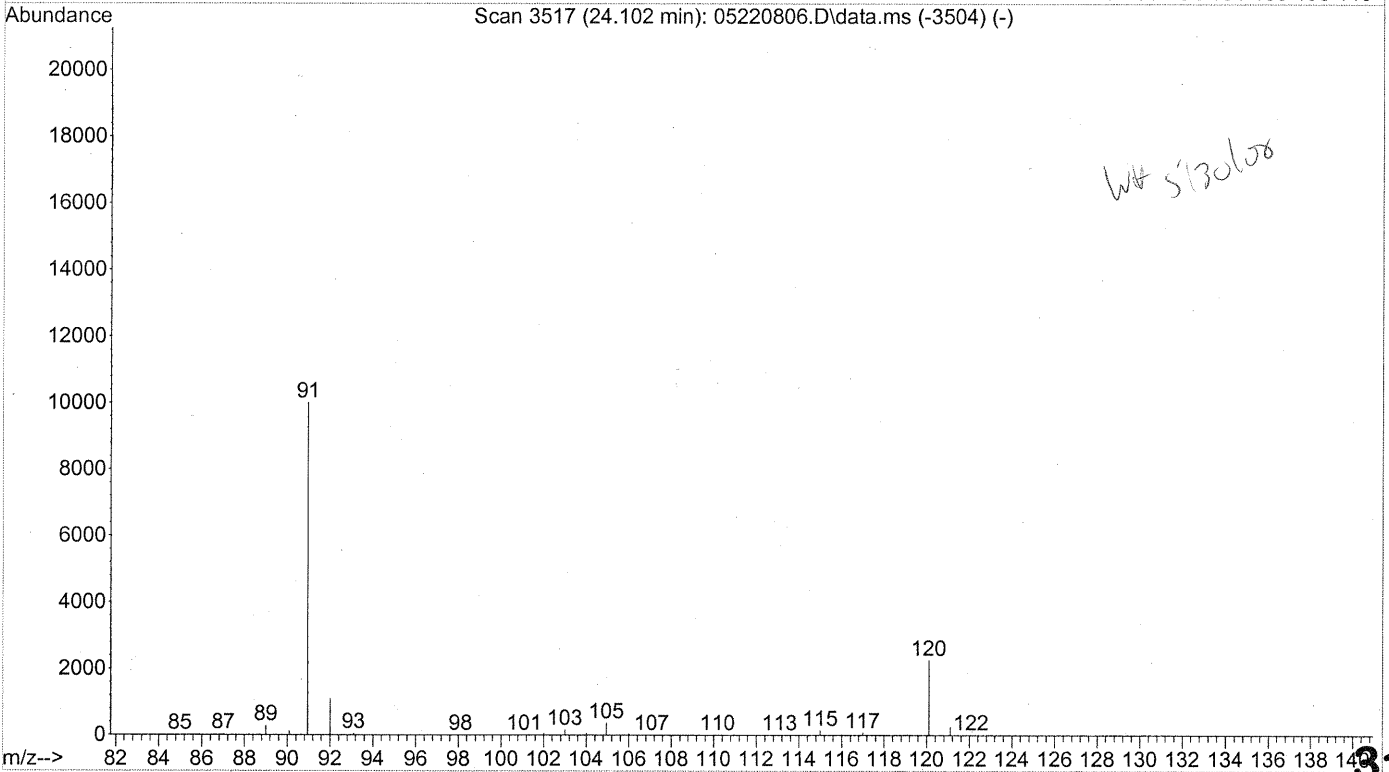
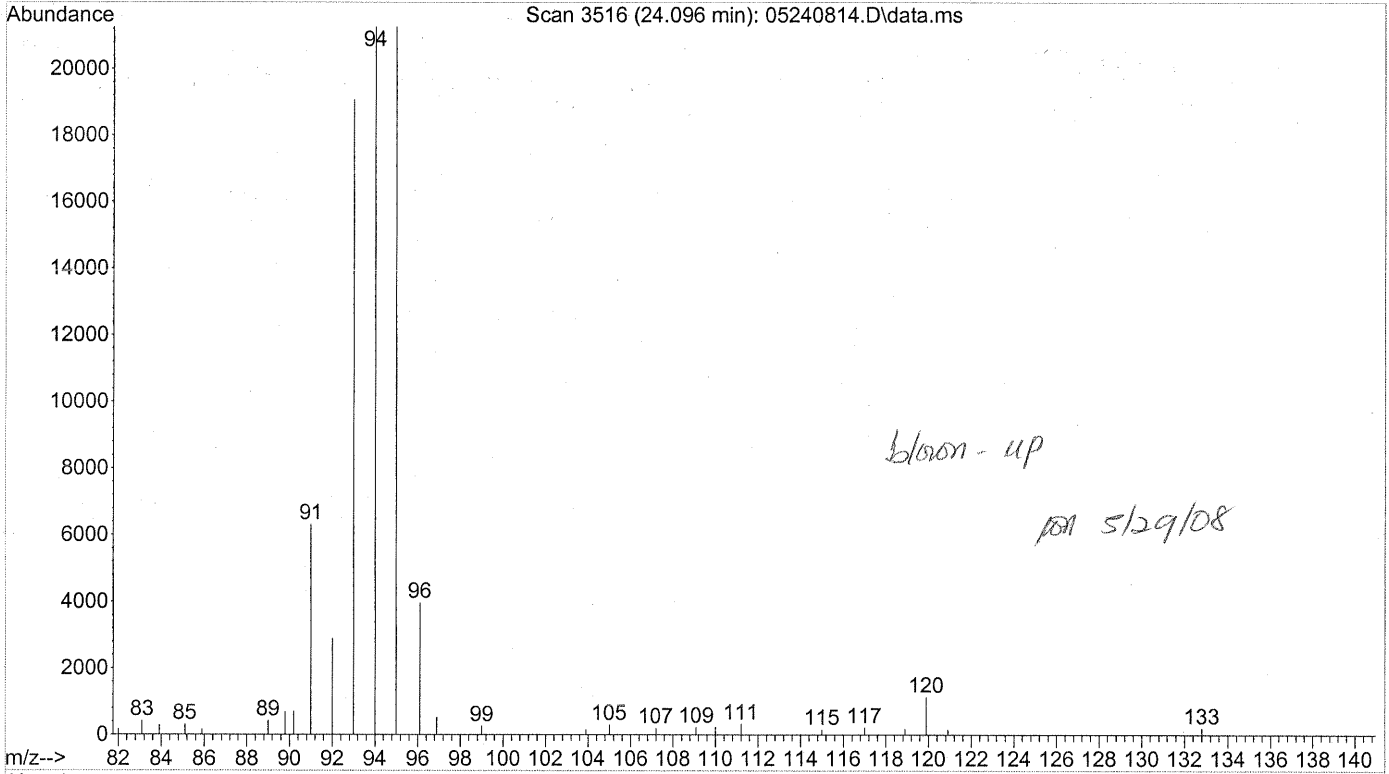
24.096min (-0.006) 0.07ng

response 12261

*see blown-up spectra*

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	18.25
65.00	11.40	7412.28#
0.00	0.00	0.00

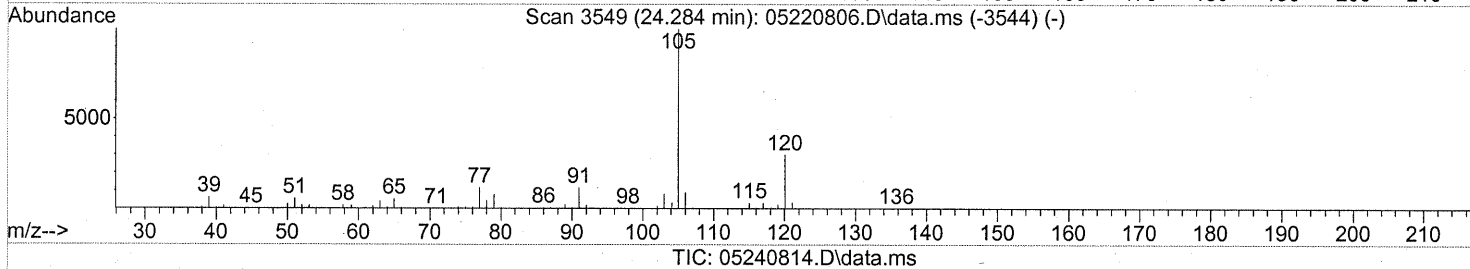
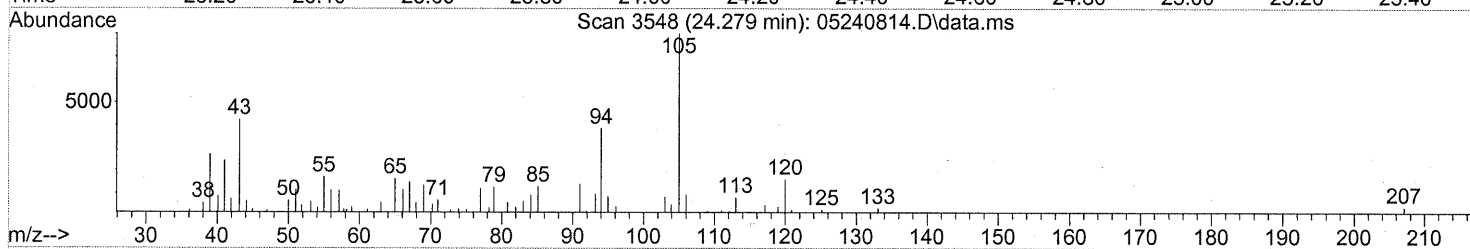
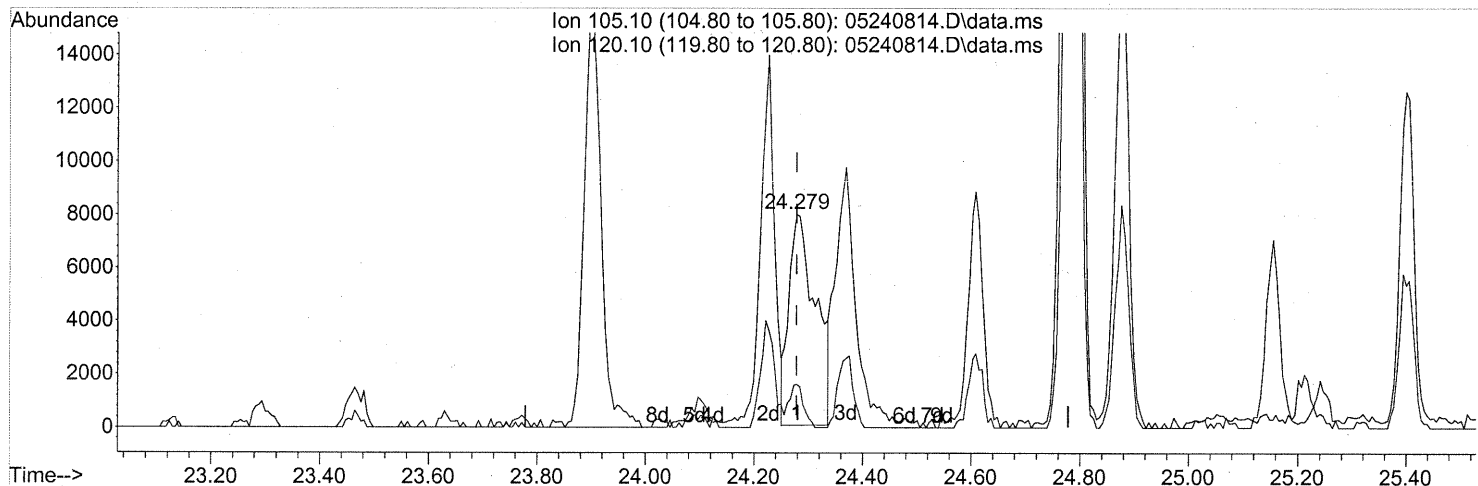
File : J:\MS13\DATA\2008\_05\24\05240814.D  
Operator : WA  
Acquired : 24 May 2008 16:00 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-005 (1000ml)  
Misc Info : ENSR SG44B-05 (-3.3, 3.8)  
Vial Number: 11



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



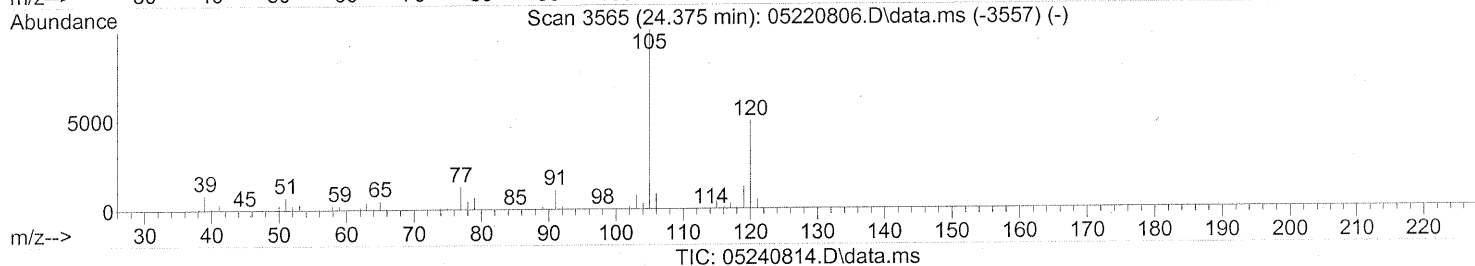
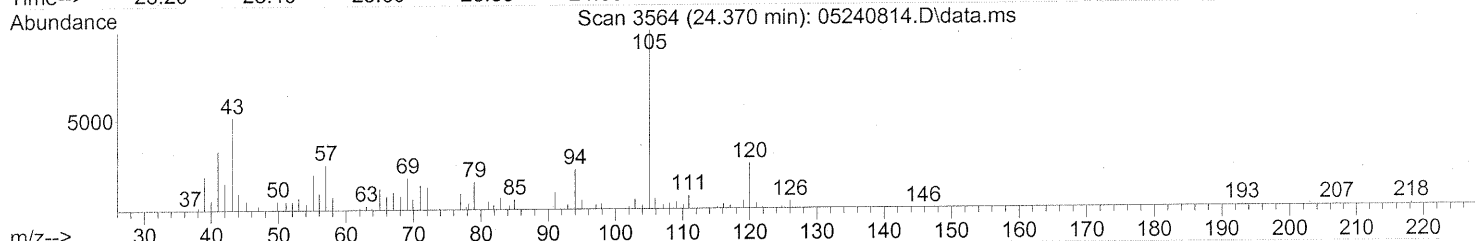
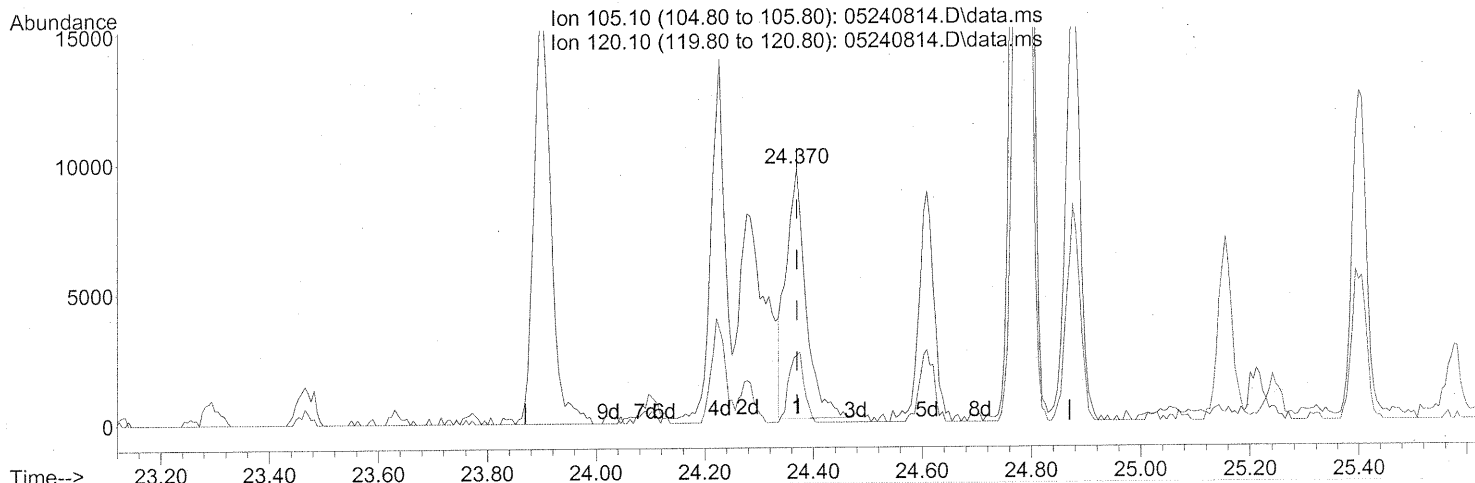
(78) 4-Ethyltoluene (T)  
 24.279min (-0.000) 0.19ng  
 response 26864

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	10.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801422-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:06:52 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.370min (-0.000) 0.19ng

response 24405

*shoulder*

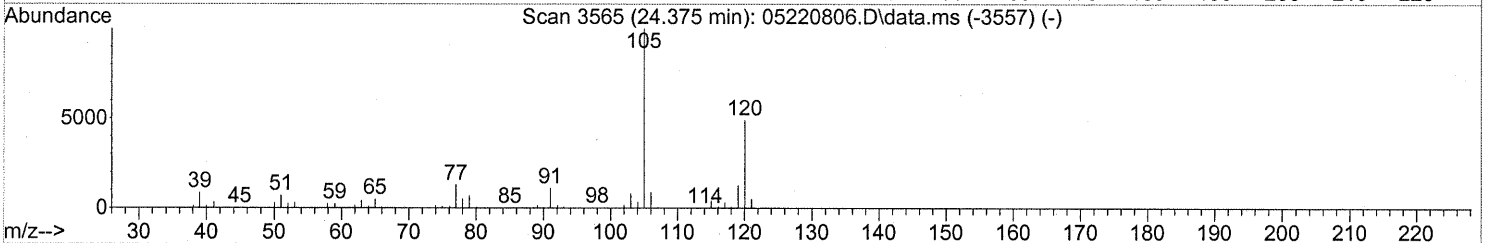
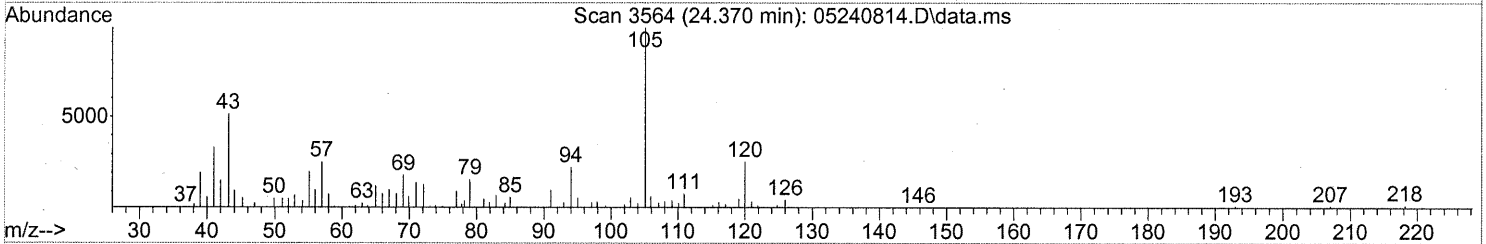
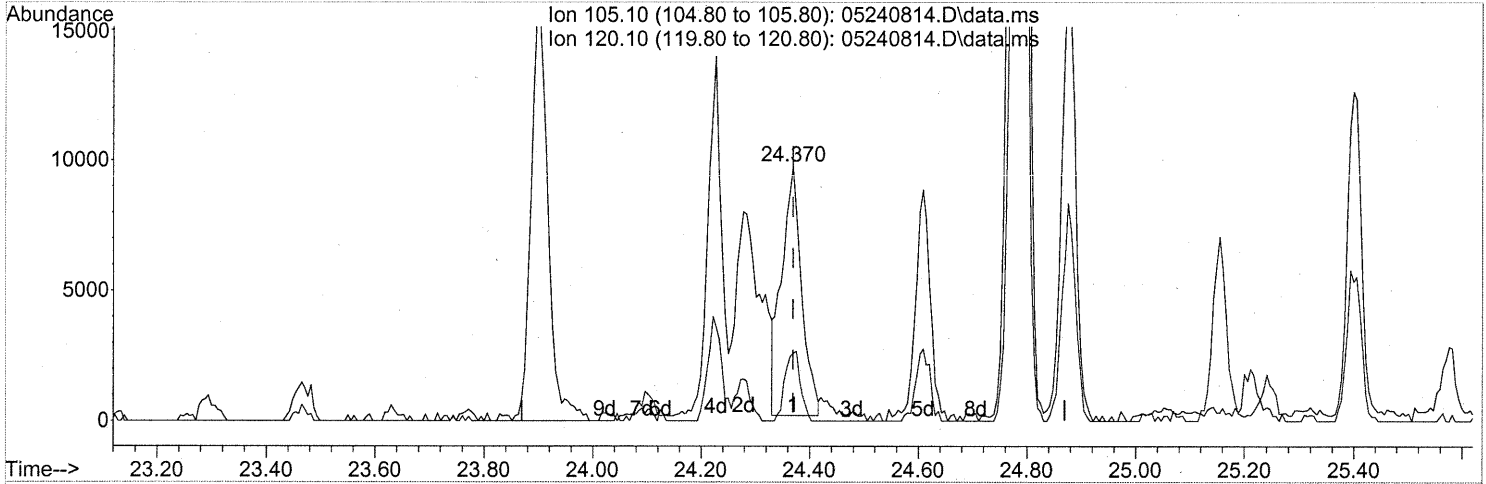
Ion	Exp%	Act%
105.10	100	100
120.10	49.40	21.41#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.370min (-0.000) 0.19ng m

response 24379

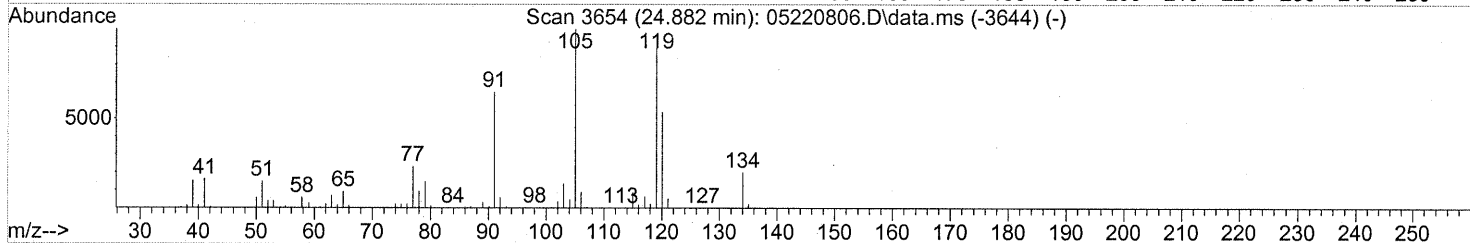
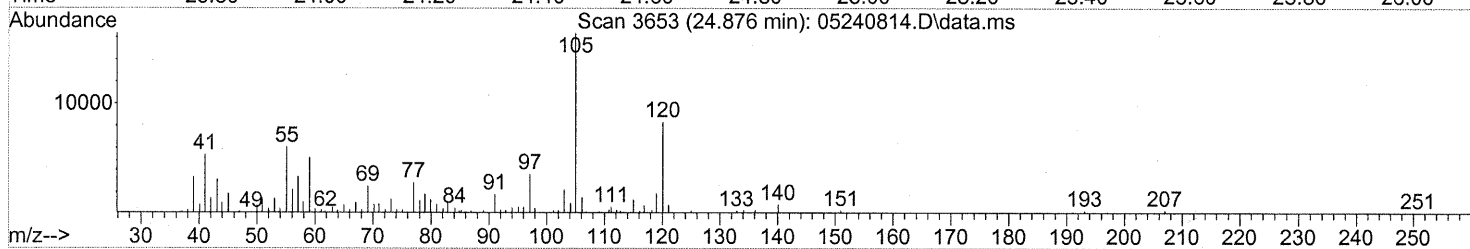
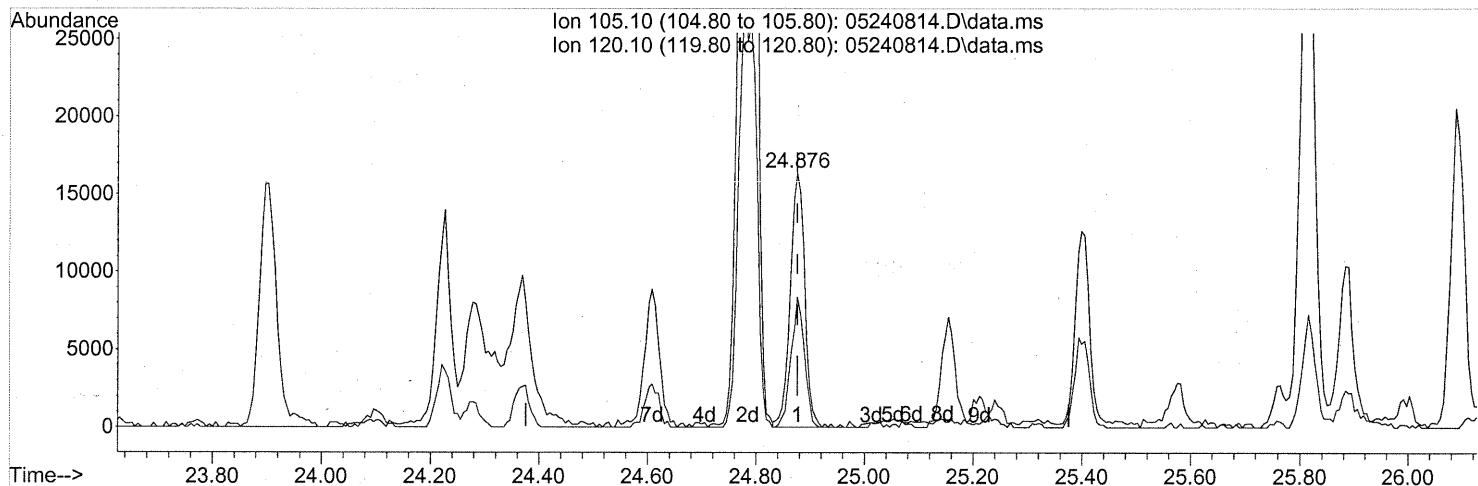
Ion	Exp%	Act%
105.10	100	100
120.10	49.40	21.44#
0.00	0.00	0.00
0.00	0.00	0.00

*40% shoulder*  
*WA 5/30/08*  
*PA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

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

24.876min (-0.000) 0.23ng

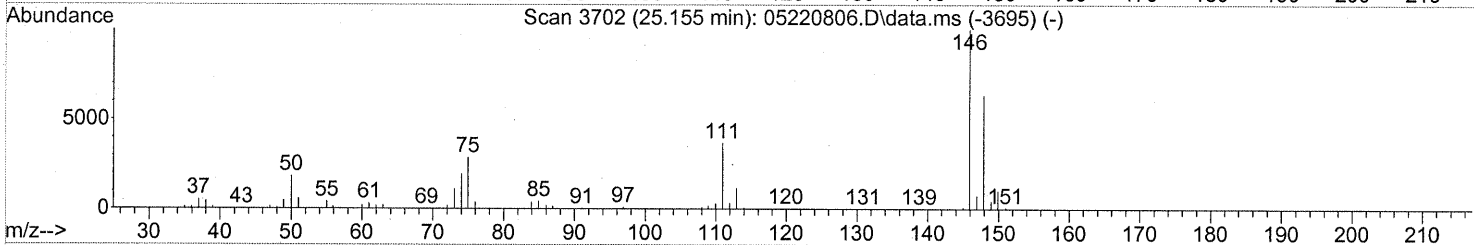
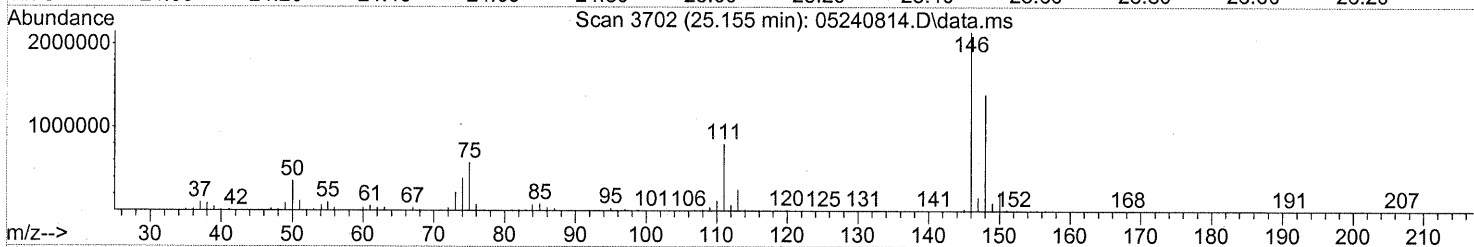
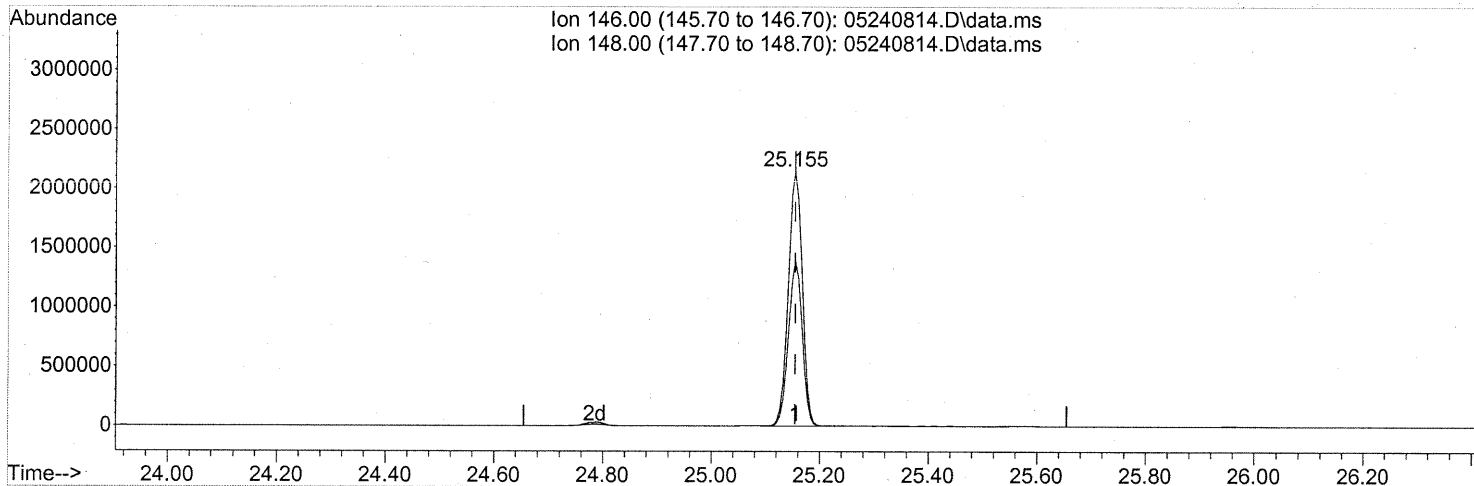
response 30396

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	47.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 48.39ng

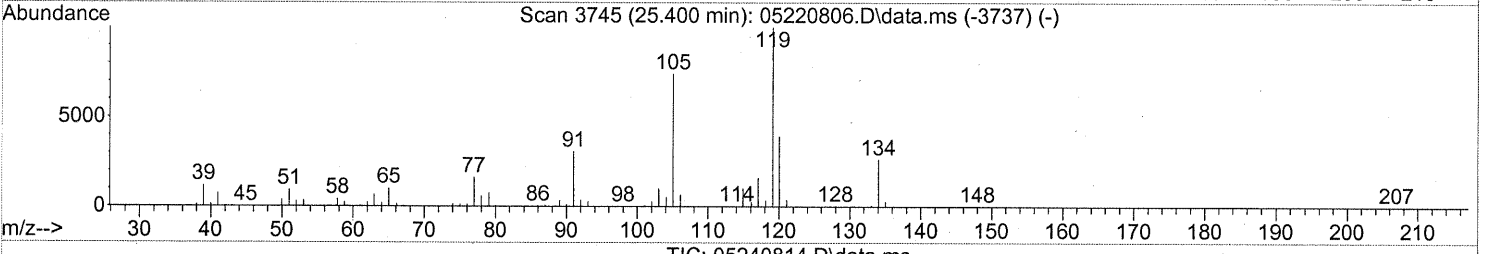
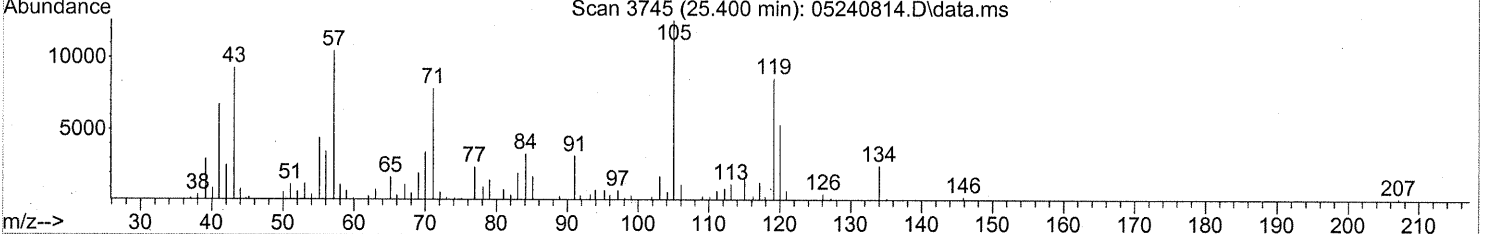
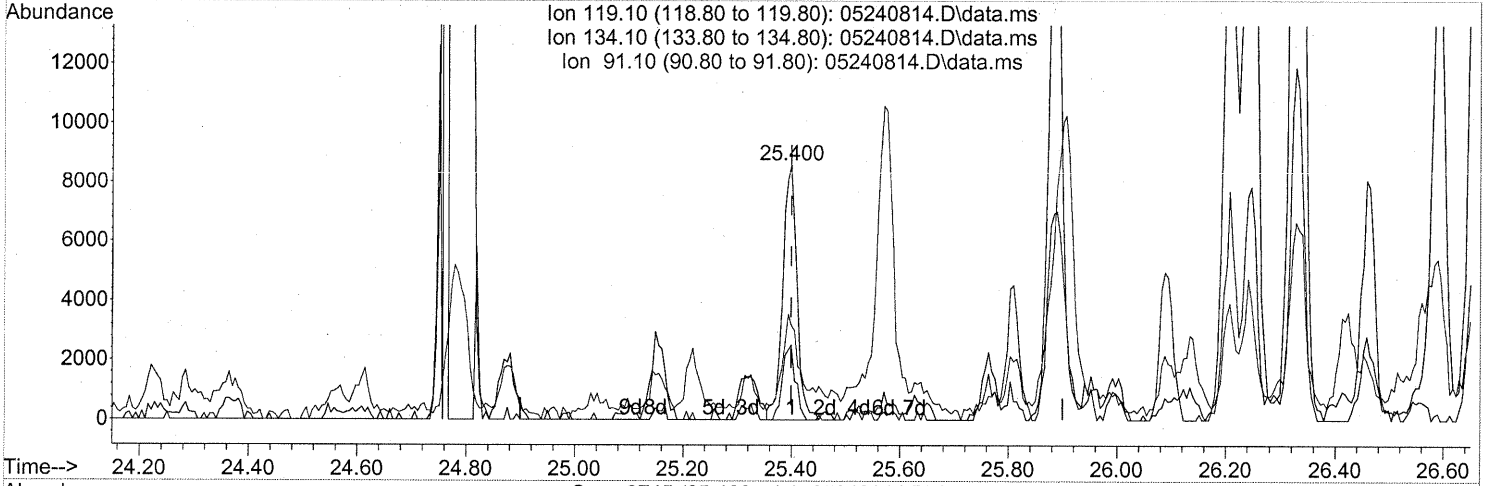
response 3849571

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	64.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240814.D\data.ms

(88) p-Isopropyltoluene (T)

25.400min (-0.000) 0.11ng

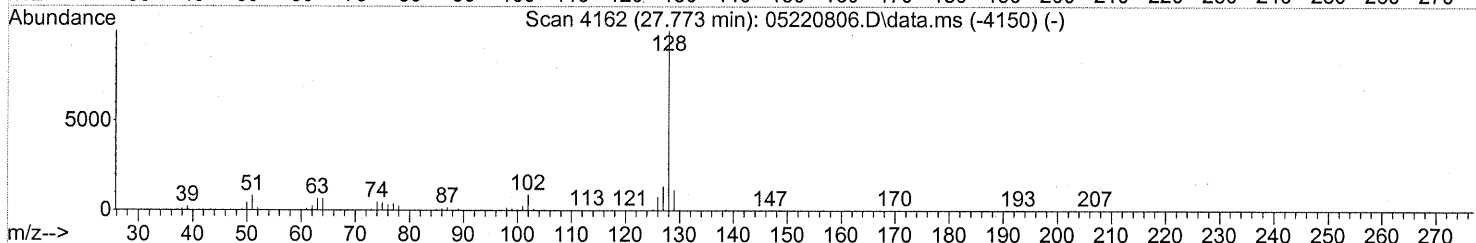
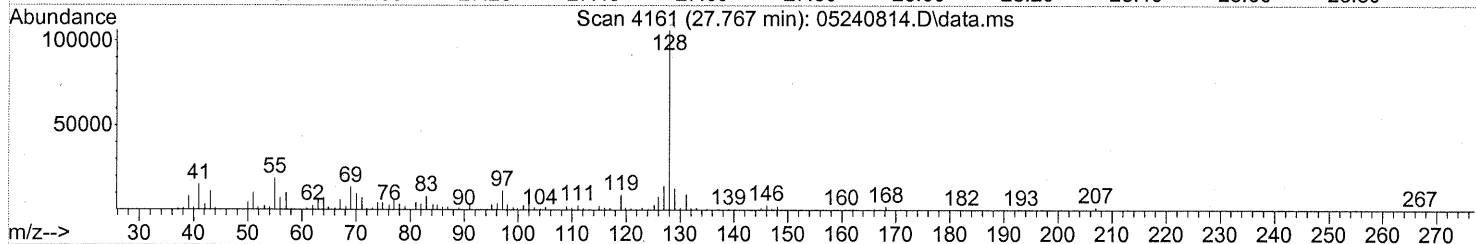
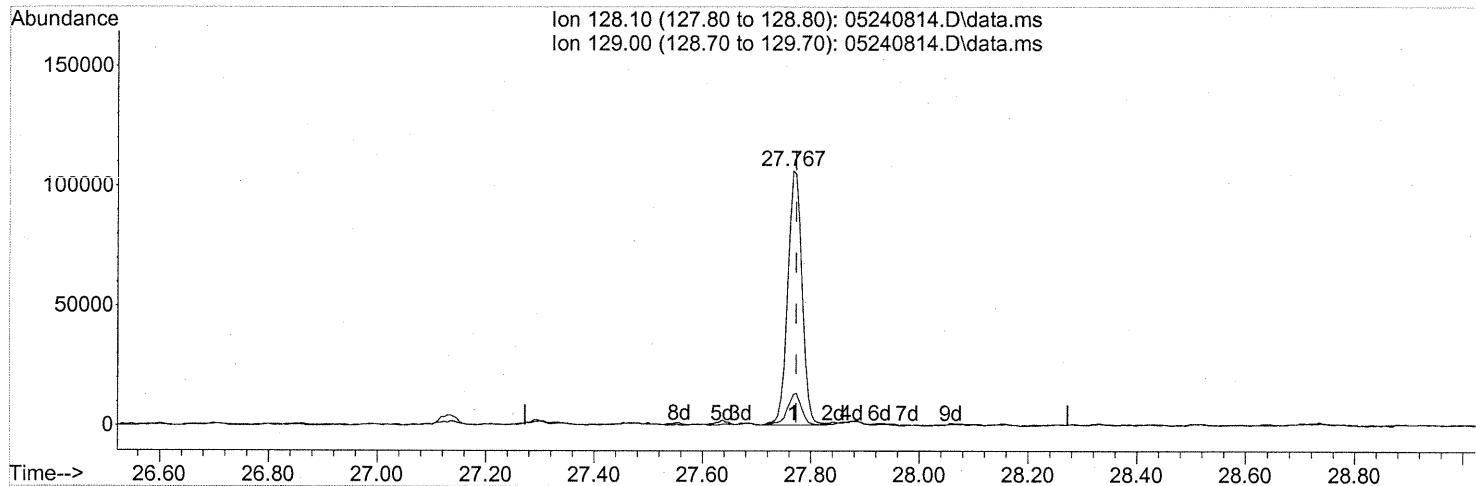
response 15362

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	26.83
91.10	27.10	54.47#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 07:22:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



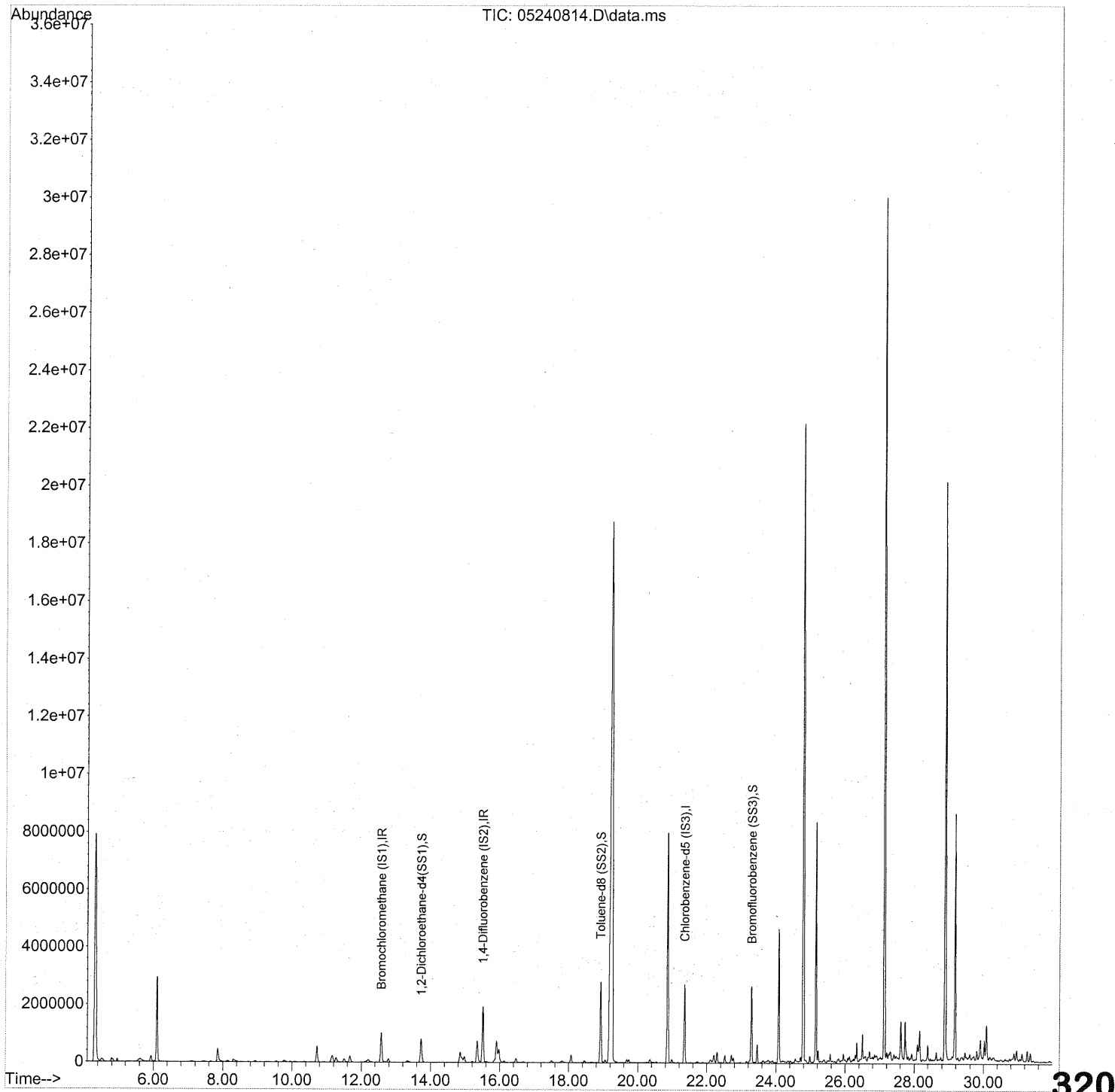
TIC: 05240814.D\data.ms

(95) Naphthalene (T)  
 27.767min (-0.006) 1.13ng  
 response 195854

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	12.52
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240814.D  
Acq On : 24 May 2008 16:00  
Operator : WA  
Sample : P0801442-005 (1000ml)  
Misc : ENSR SG44B-05 (-3.3, 3.8)  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 20:36:50 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240814.D  
 Acq On : 24 May 2008 16:00  
 Operator : WA  
 Sample : P0801442-005 (1000ml)  
 Misc : ENSR SG44B-05 (-3.3, 3.8)  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: May 25 20:36:50 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	528796	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2294376	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1068545	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	847118	23.120	ng	-0.03
Spiked Amount	25.000					Recovery = 92.48%
5) Toluene-d8 (SS2)	18.92	98	2380986	24.811	ng	-0.02
Spiked Amount	25.000					Recovery = 99.24%
6) Bromofluorobenzene (SS3)	23.29	174	1000648	25.642	ng	0.00
Spiked Amount	25.000					Recovery = 102.56%
Target Compounds						
7) tert-Butylbenzene	25.32	119	3683		N.D.	Qvalue
8) n-Butylbenzene	25.47	91	320		N.D.	

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

*WA 5/29/08*

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00796

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

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

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)	2.1	0.84	0.084	0.42	0.17	0.017	
74-87-3	Chloromethane	0.15	0.17	0.084	0.072	0.081	0.040	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.099	0.84	0.084	0.014	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.17	0.084	ND	0.065	0.033	
74-83-9	Bromomethane	ND	0.17	0.084	ND	0.043	0.022	
75-00-3	Chloroethane	0.28	0.17	0.084	0.10	0.063	0.032	
64-17-5	Ethanol	2.9	8.4	0.084	1.5	4.4	0.044	J
67-64-1	Acetone	24	8.4	0.12	10	3.5	0.051	B
75-69-4	Trichlorofluoromethane	1.2	0.17	0.084	0.21	0.030	0.015	
107-13-1	Acrylonitrile	ND	0.84	0.12	ND	0.38	0.054	
75-35-4	1,1-Dichloroethene	ND	0.17	0.084	ND	0.042	0.021	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.27	0.84	0.12	0.089	0.28	0.041	J
75-09-2	Methylene Chloride	0.11	0.84	0.084	0.031	0.24	0.024	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.17	0.084	ND	0.053	0.027	
76-13-1	Trichlorotrifluoroethane	0.52	0.17	0.094	0.068	0.022	0.012	
75-15-0	Carbon Disulfide	9.6	0.84	0.20	3.1	0.27	0.064	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	0.084	ND	0.042	0.021	
75-34-3	1,1-Dichloroethane	0.18	0.17	0.084	0.044	0.041	0.021	
1634-04-4	Methyl tert-Butyl Ether	ND	0.17	0.084	ND	0.046	0.023	
108-05-4	Vinyl Acetate	14	8.4	0.27	3.9	2.4	0.076	
78-93-3	2-Butanone (MEK)	4.4	0.84	0.084	1.5	0.28	0.028	
156-59-2	cis-1,2-Dichloroethene	0.16	0.17	0.084	0.040	0.042	0.021	J
108-20-3	Diisopropyl Ether	ND	0.84	0.099	ND	0.20	0.024	
67-66-3	Chloroform	12	0.17	0.099	2.4	0.034	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: Re      Date: 6/2/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00796

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

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

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	0.84	0.085	ND	0.20	0.020	
107-06-2	1,2-Dichloroethane	ND	0.17	0.084	ND	0.041	0.021	
71-55-6	1,1,1-Trichloroethane	ND	0.17	0.084	ND	0.031	0.015	
71-43-2	<b>Benzene</b>	<b>2.6</b>	0.17	0.084	<b>0.82</b>	0.052	0.026	
56-23-5	<b>Carbon Tetrachloride</b>	<b>20</b>	0.17	0.084	<b>3.2</b>	0.027	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.84	0.084	ND	0.20	0.020	
78-87-5	1,2-Dichloropropane	ND	0.17	0.084	ND	0.036	0.018	
75-27-4	<b>Bromodichloromethane</b>	<b>0.16</b>	0.17	0.084	<b>0.024</b>	0.025	0.012	<b>J</b>
79-01-6	<b>Trichloroethene</b>	<b>0.20</b>	0.17	0.084	<b>0.036</b>	0.031	0.016	
123-91-1	<b>1,4-Dioxane</b>	<b>0.29</b>	0.84	0.10	<b>0.081</b>	0.23	0.028	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.84	0.13	ND	0.20	0.031	
142-82-5	<b>n-Heptane</b>	<b>0.18</b>	0.84	0.11	<b>0.043</b>	0.20	0.026	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.84	0.087	ND	0.18	0.019	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.26</b>	0.84	0.094	<b>0.064</b>	0.20	0.023	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.84	0.11	ND	0.18	0.023	
79-00-5	1,1,2-Trichloroethane	ND	0.17	0.084	ND	0.031	0.015	
108-88-3	<b>Toluene</b>	<b>9.2</b>	0.84	0.084	<b>2.4</b>	0.22	0.022	
591-78-6	<b>2-Hexanone</b>	<b>0.87</b>	0.84	0.13	<b>0.21</b>	0.20	0.031	
124-48-1	Dibromochloromethane	ND	0.17	0.11	ND	0.020	0.013	
106-93-4	1,2-Dibromoethane	ND	0.17	0.090	ND	0.022	0.012	
111-65-9	<b>n-Octane</b>	<b>0.22</b>	0.84	0.084	<b>0.047</b>	0.18	0.018	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>8.4</b>	0.17	0.084	<b>1.2</b>	0.025	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>0.62</b>	0.17	0.085	<b>0.13</b>	0.036	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.

Verified By: Re

Date: 6/6/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG88B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-006

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00796

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

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

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	4.4	0.84	0.10	1.0	0.19	0.024	
179601-23-1	m,p-Xylenes	37	0.84	0.22	8.4	0.19	0.050	
75-25-2	Bromoform	ND	0.84	0.13	ND	0.081	0.012	
100-42-5	Styrene	0.14	0.84	0.13	0.034	0.20	0.030	J
95-47-6	o-Xylene	7.1	0.84	0.11	1.6	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	0.11	ND	0.024	0.016	
98-82-8	Cumene	0.18	0.84	0.094	0.036	0.17	0.019	J
103-65-1	n-Propylbenzene	0.53	0.84	0.087	0.11	0.17	0.018	J
622-96-8	4-Ethyltoluene	1.5	0.84	0.095	0.30	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	2.2	0.84	0.10	0.45	0.17	0.020	
98-83-9	alpha-Methylstyrene	ND	0.84	0.12	ND	0.17	0.025	
95-63-6	1,2,4-Trimethylbenzene	10	0.84	0.12	2.1	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.17	0.14	ND	0.032	0.028	
541-73-1	1,3-Dichlorobenzene	0.23	0.17	0.10	0.039	0.028	0.017	
106-46-7	1,4-Dichlorobenzene	110	0.17	0.094	19	0.028	0.016	
135-98-8	sec-Butylbenzene	ND	0.84	0.097	ND	0.15	0.018	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.91	0.84	0.11	0.17	0.15	0.020	
95-50-1	1,2-Dichlorobenzene	2.4	0.17	0.11	0.39	0.028	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.84	0.13	ND	0.086	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.17	0.13	ND	0.023	0.017	
91-20-3	Naphthalene	9.5	0.33	0.12	1.8	0.064	0.024	
87-68-3	Hexachlorobutadiene	ND	0.17	0.15	ND	0.016	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.084	ND	0.061	0.015	
104-51-8	n-Butylbenzene	1.5	0.33	0.084	0.27	0.061	0.015	

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

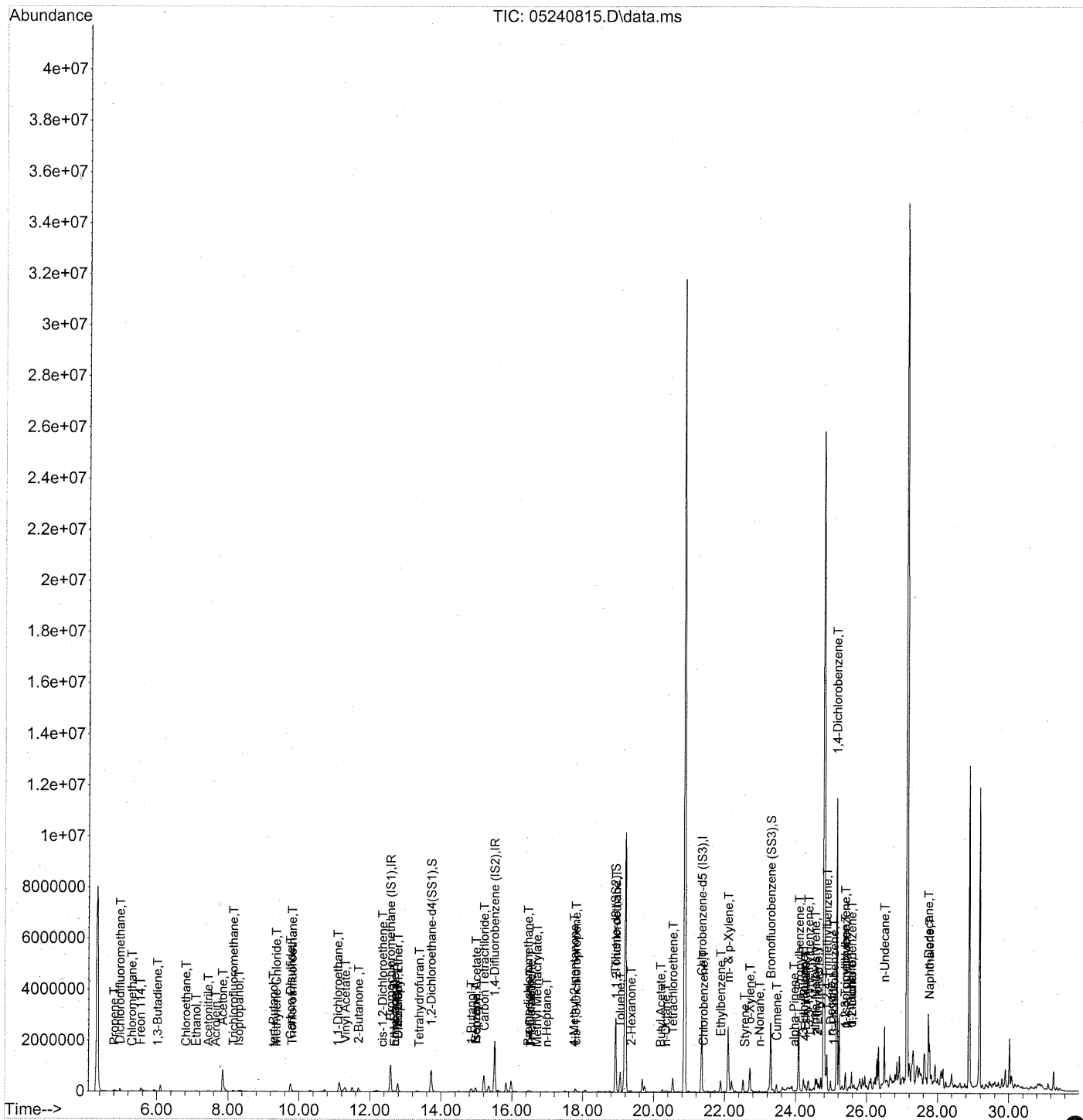
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

Verified By: RC      Date: 6/2/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	542028	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2318224	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1105781	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.73	65	867896	23.109	ng	0.00
Spiked Amount	25.000		Recovery	=	92.44%	
57) Toluene-d8 (SS2)	18.92	98	2429089	24.460	ng	0.00
Spiked Amount	25.000		Recovery	=	97.84%	
73) Bromofluorobenzene (SS3)	23.29	174	1023064	25.333	ng	0.00
Spiked Amount	25.000		Recovery	=	101.32%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	25899	0.605	ng	# 66
3) Dichlorodifluoromethane	4.97	85	97457	1.235	ng	99
4) Chloromethane	5.30	50	4529	0.089	ng	# 41
5) Freon 114	5.54	135	2295	0.059	ng	93
6) Vinyl Chloride	5.75	62	453	N.D.	✓	
7) 1,3-Butadiene	6.02	54	2956	0.078	ng	# 47
8) Bromomethane	6.49	94	1234	N.D.	✓	
9) Chloroethane	6.82	64	4011	0.165	ng	96
10) Ethanol	7.10	45	49217m	1.727	ng	
11) Acetonitrile	7.44	41	47096	0.571	ng	93
12) Acrolein	7.66	56	25636	1.259	ng	96
13) Acetone	7.85	58	425011m	14.566	ng	
14) Trichlorofluoromethane	8.15	101	48221	0.712	ng	99
15) Isopropanol	8.31	45	115050	1.236	ng	99
16) Acrylonitrile	8.63	53	1058	N.D.	✓	
17) 1,1-Dichloroethene	9.15	96	387	N.D.	✓	
18) tert-Butanol	9.28	59	12748m	0.161	ng	
19) Methylene Chloride	9.36	84	2090	0.064	ng	# 72
20) Allyl Chloride	9.55	41	383	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	9541	0.310	ng	91
22) Carbon Disulfide	9.76	76	712515	5.758	ng	99
23) trans-1,2-Dichloroethene	10.79	61	127	N.D.	✓	
24) 1,1-Dichloroethane	11.09	63	6019	0.106	ng	99
25) Methyl tert-Butyl Ether	11.23	73	54	N.D.	✓	
26) Vinyl Acetate	11.31	86	44319	8.219	ng	# 1
27) 2-Butanone	11.68	72	56241	2.641	ng	# 88
28) cis-1,2-Dichloroethene	12.36	61	4346	0.094	ng	# 71
29) Diisopropyl Ether	12.78	87	35340	1.354	ng	NR # 1
30) Ethyl Acetate	12.69	61	3093	0.269	ng	75
31) n-Hexane	12.70	57	8274	0.143	ng	97

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DA 5/27/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	346809	7.017 ng		99
34) Tetrahydrofuran	13.38	72	2512	0.123 ng	#	77
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.87	62	58	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	1986	N.D. ✓		
39) Isopropyl Acetate	14.99	61	1511	0.076 ng	#	1
40) 1-Butanol	14.85	56	119321	3.745 ng		87
41) Benzene	14.98	78	189664	1.563 ng		99
42) Carbon Tetrachloride	15.21	117	558464	11.947 ng		99
43) Cyclohexane	15.46	84	293	N.D.		
44) tert-Amyl Methyl Ether	15.80	73	1970	N.D. ✓		
45) 1,2-Dichloropropane	15.98	63	308	N.D. ✓		
46) Bromodichloromethane	16.46	83	3987	0.097 ng		94
47) Trichloroethene	16.53	130	4338	0.117 ng		98
48) 1,4-Dioxane	16.50	88	4003	0.175 ng		80
49) Isooctane	16.62	57	4353	N.D.		
50) Methyl Methacrylate	16.71	100	1095	0.090 ng	UR #	1
51) n-Heptane	16.98	71	3378	0.105 ng		89
52) cis-1,3-Dichloropropene	17.81	75	2769	0.057 ng	UR	77
53) 4-Methyl-2-pentanone	17.76	58	5045	0.157 ng		66
54) trans-1,3-Dichloropropene	18.43	75	158	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	212953	7.100 ng	UR #	9
58) Toluene	19.06	91	741583	5.493 ng		98
59) 2-Hexanone	19.37	43	48466	0.521 ng		77
60) Dibromochloromethane	19.61	129	244	N.D. ✓		
61) 1,2-Dibromoethane	19.75	107	285	N.D. ✓		
62) Butyl Acetate	20.20	43	6489	0.069 ng		97
63) n-Octane	20.34	57	3903	0.131 ng		88
64) Tetrachloroethene	20.54	166	200088	5.009 ng		99
65) Chlorobenzene	21.40	112	33365	0.369 ng		99
66) Ethylbenzene	21.89	91	409118	2.643 ng		95
67) m- & p-Xylene	22.10	91	2272243	21.946 ng		92
68) Bromoform	22.21	173	213	N.D. ✓		
69) Styrene	22.57	104	7962	0.086 ng	#	59
70) o-Xylene	22.71	91	473854	4.240 ng		98
71) n-Nonane	22.98	43	25279	0.319 ng	#	78
72) 1,1,2,2-Tetrachloroethane	22.70	83	902	N.D. ✓		
74) Cumene	23.46	105	15876	0.107 ng		97
75) alpha-Pinene	23.96	93	5681	0.074 ng	#	46
76) n-Propylbenzene	24.10	91	60399	0.319 ng	#	1
77) 3-Ethyltoluene	24.22	105	294087	1.856 ng		98
78) 4-Ethyltoluene	24.28	105	131932	0.893 ng		99
79) 1,3,5-Trimethylbenzene	24.37	105	176545	1.323 ng		99

327

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

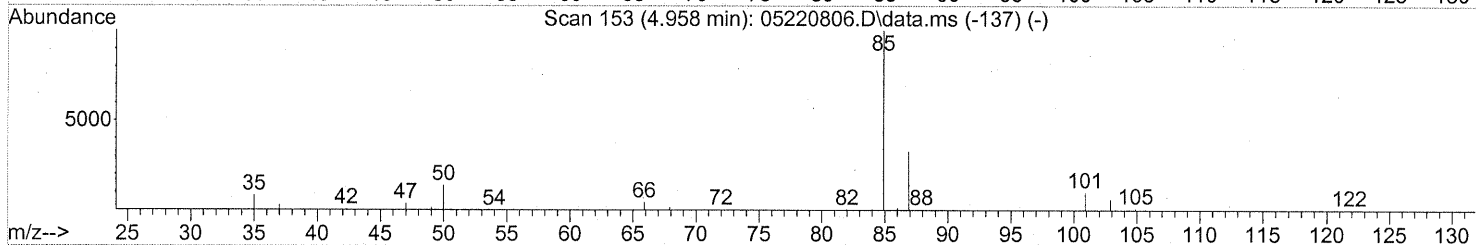
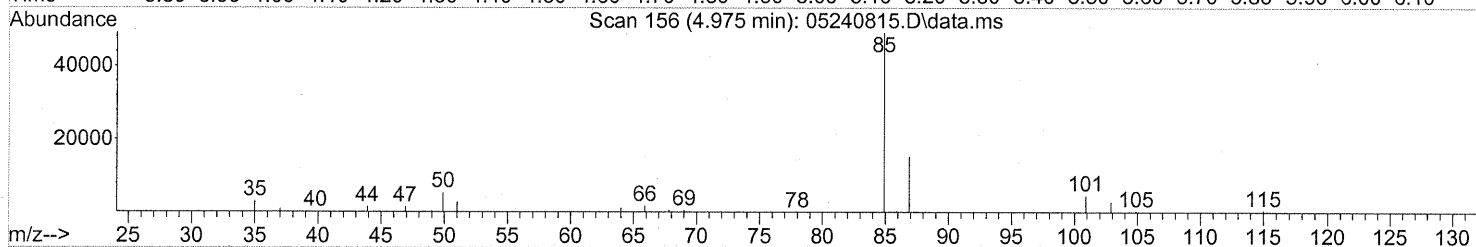
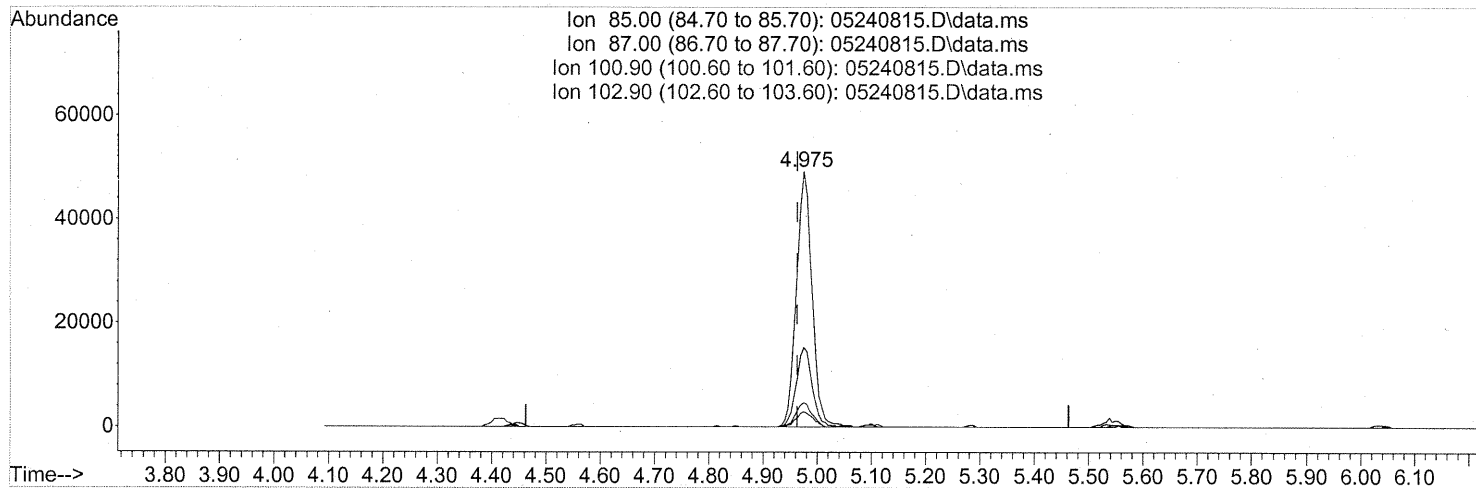
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	5467	<del>0.076</del>	ng	61
81) 2-Ethyltoluene	24.61	105	192047	1.196	ng	97
82) 1,2,4-Trimethylbenzene	24.88	105	824218	6.067	ng	89
83) n-Decane	24.98	57	156516	2.094	ng	78
84) Benzyl Chloride	25.04	91	3240	N.D.	✓	
85) 1,3-Dichlorobenzene	25.08	146	11822	0.139	ng	99
86) 1,4-Dichlorobenzene	25.16	146	5481503	66.577	ng	100
87) sec-Butylbenzene	25.21	105	7577	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	78048	0.546	ng	62
89) 1,2,3-Trimethylbenzene	25.40	105	307978	2.317	ng	89
90) 1,2-Dichlorobenzene	25.58	146	113529	1.409	ng	97
91) d-Limonene	25.58	68	113657	2.100	ng	94
92) 1,2-Dibromo-3-Chloropr...	26.12	157	211	N.D.	✓	
93) n-Undecane	26.50	57	856444	10.949	ng	80
94) 1,2,4-Trichlorobenzene	27.64	180	2059	N.D.	✓	
95) Naphthalene	27.77	128	1021676	5.702	ng	97
96) n-Dodecane	27.74	57	897221	11.534	ng	82
97) Hexachloro-1,3-butadiene	28.16	225	169	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(3) Dichlorodifluoromethane (T)

4.975min (+0.011) 1.24ng

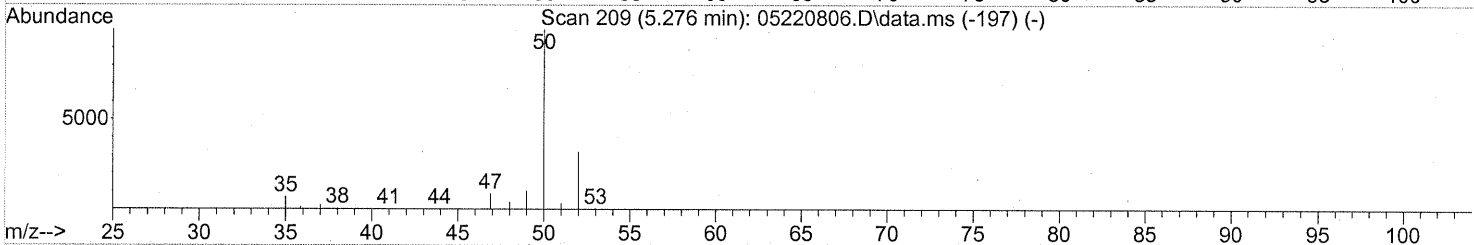
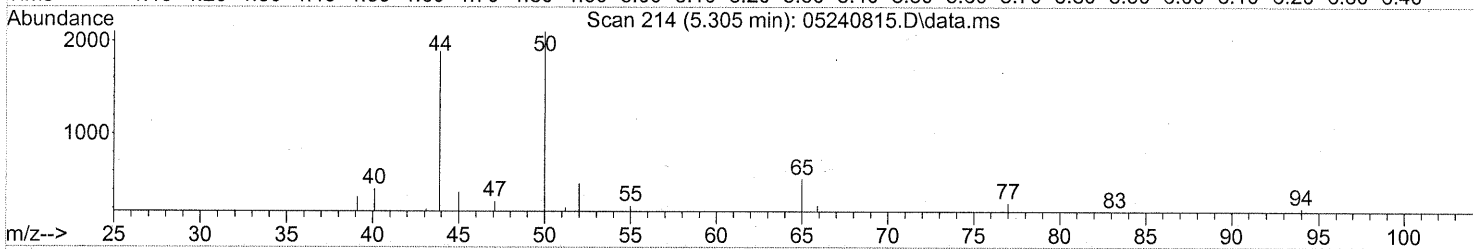
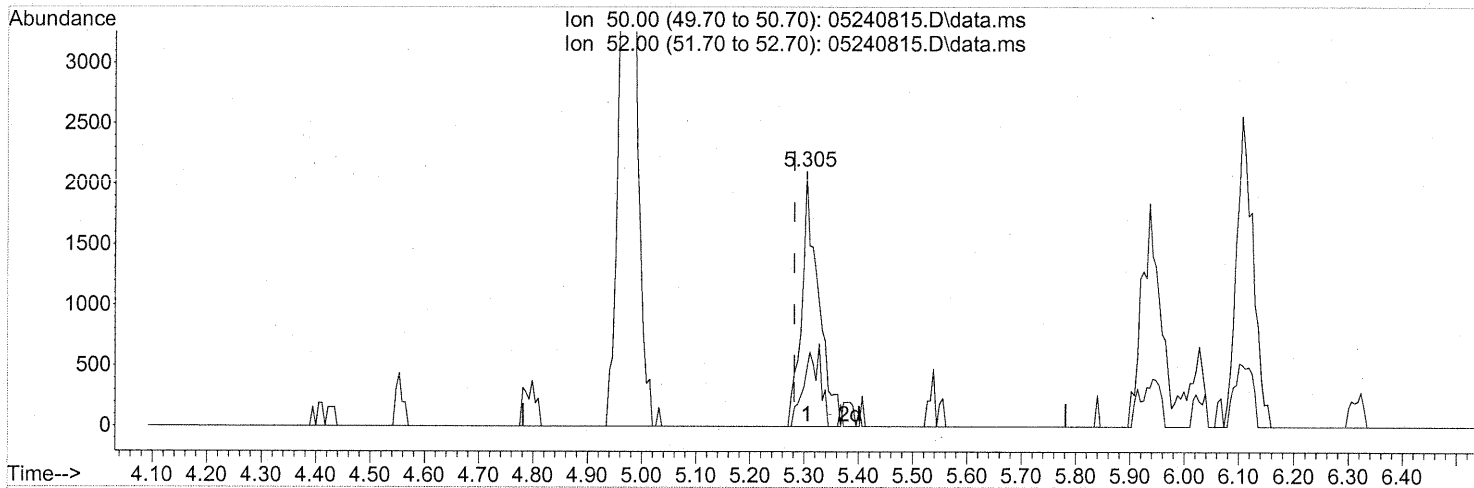
response 97457

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.56
100.90	9.30	9.54
102.90	6.00	6.14

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(4) Chloromethane (T)

5.305min (+0.023) 0.09ng

response 4529

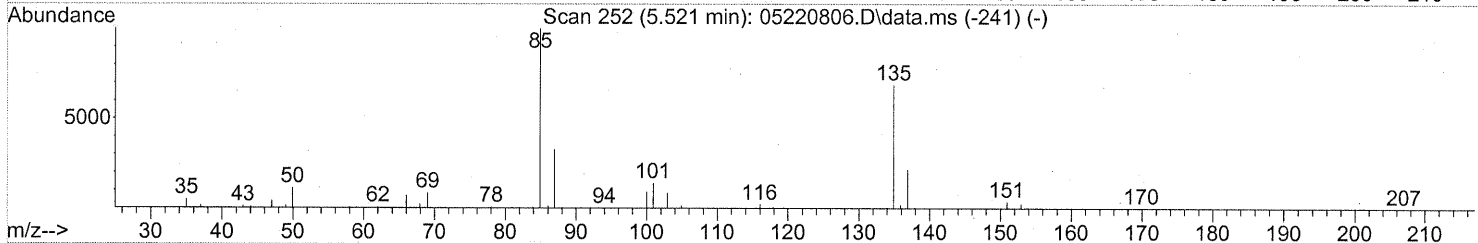
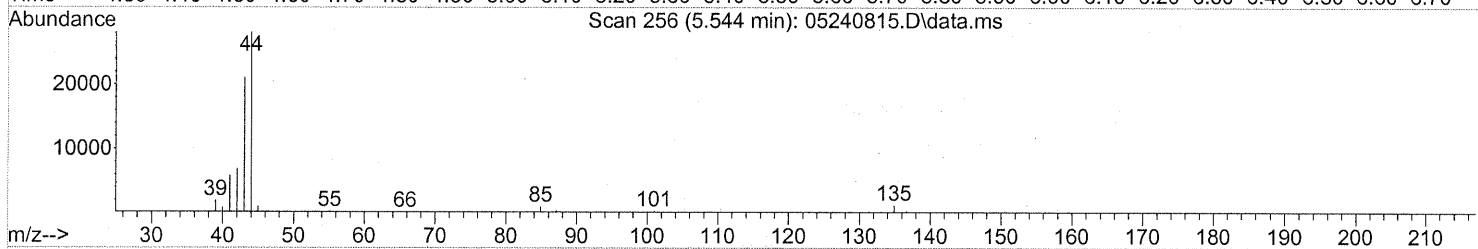
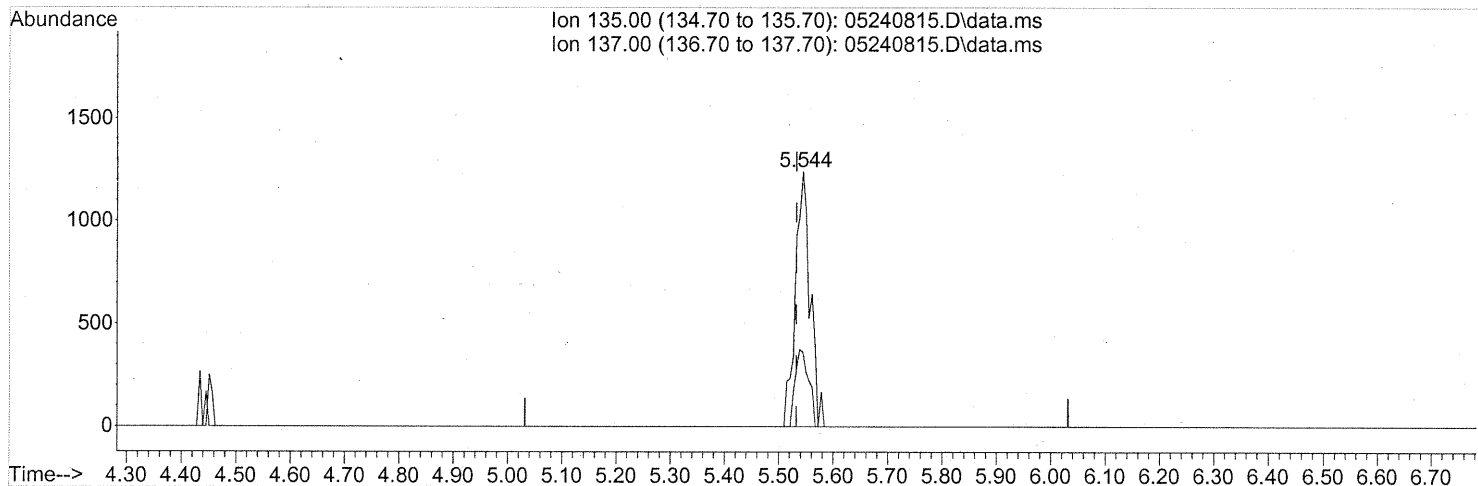
Ion	Exp%	Act%
50.00	100	100
52.00	33.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(5) Freon 114 (T)

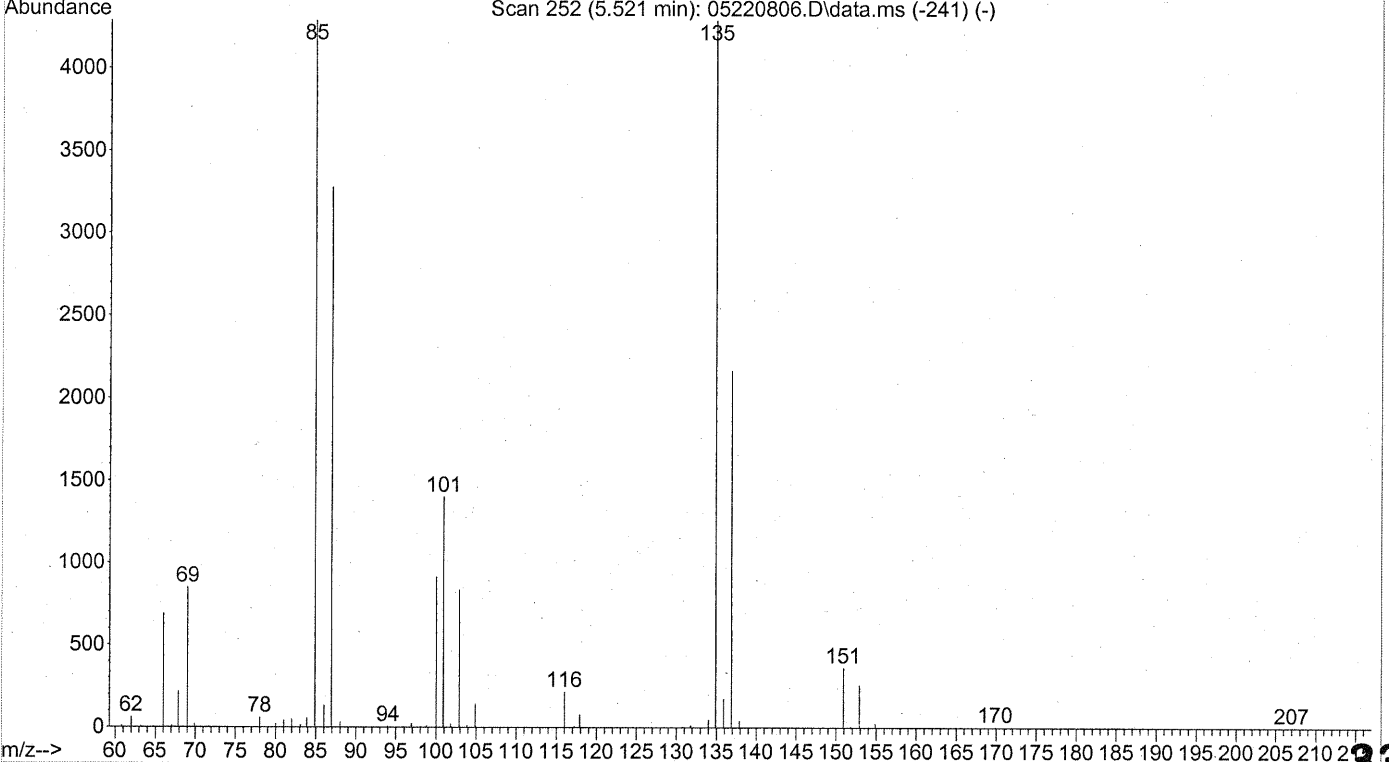
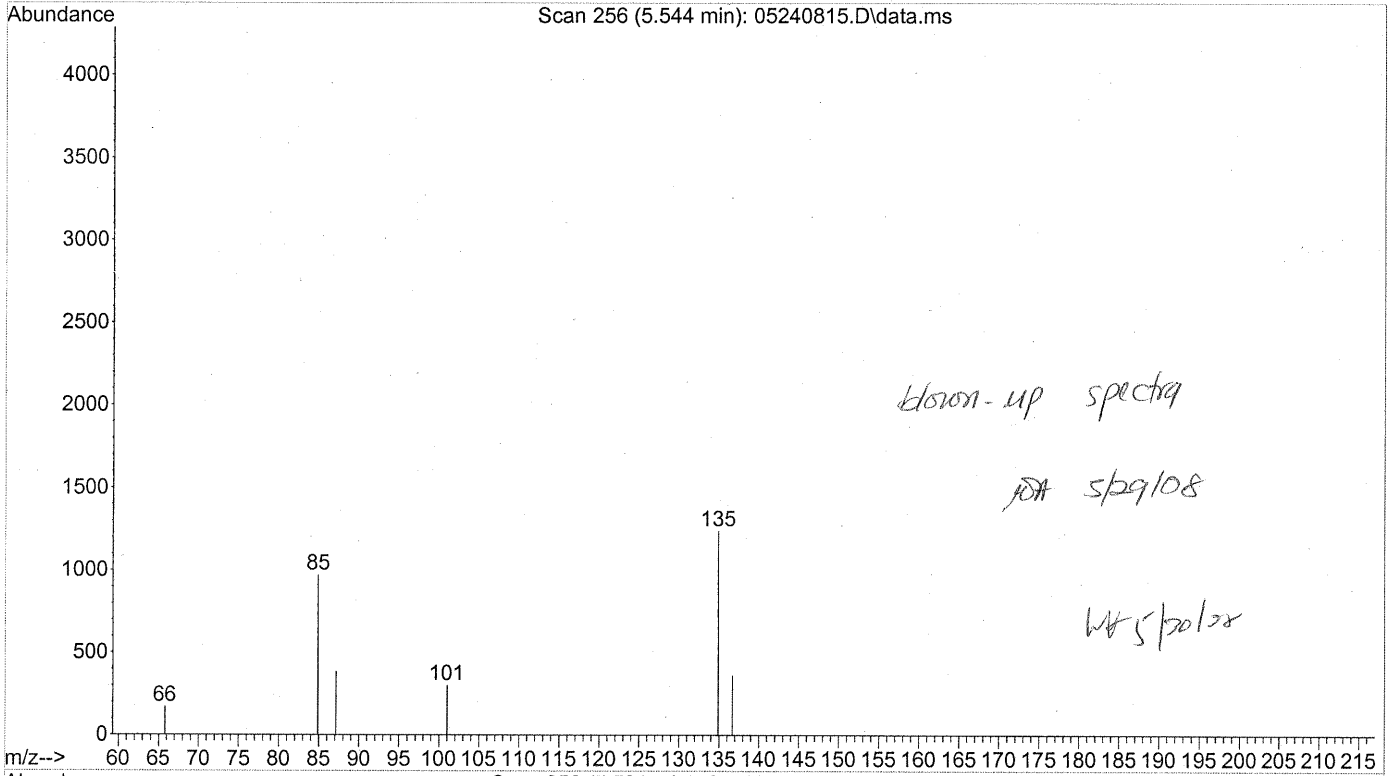
5.544min (+0.011) 0.06ng

response 2295

*see bloom-up spectra*

Ion	Exp%	Act%
135.00	100	100
137.00	31.50	27.71
0.00	0.00	0.00
0.00	0.00	0.00

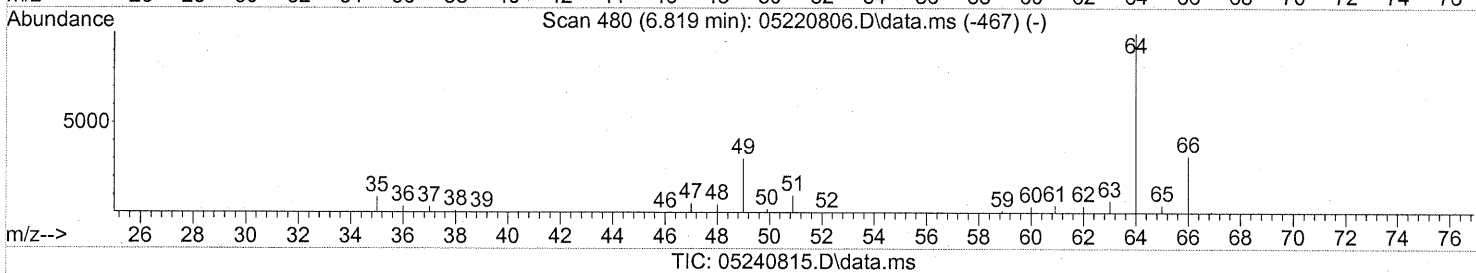
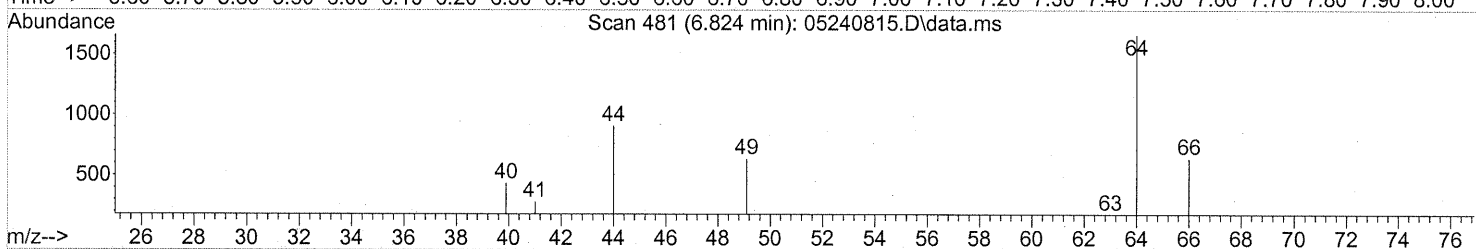
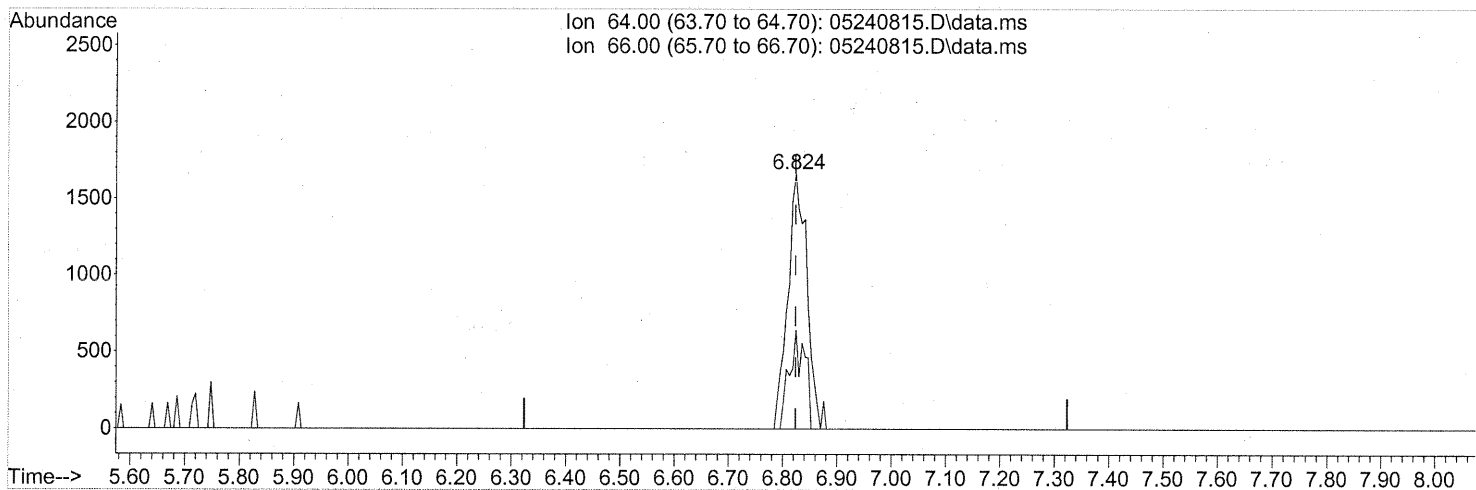
File : J:\MS13\DATA\2008\_05\24\05240815.D  
Operator : WA  
Acquired : 24 May 2008 16:42 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-006 (1000ml)  
Misc Info : ENSR SG88B-05 (-3.7, 3.7)  
Vial Number: 12



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(9) Chloroethane (T)

6.824min (0.000) 0.17ng

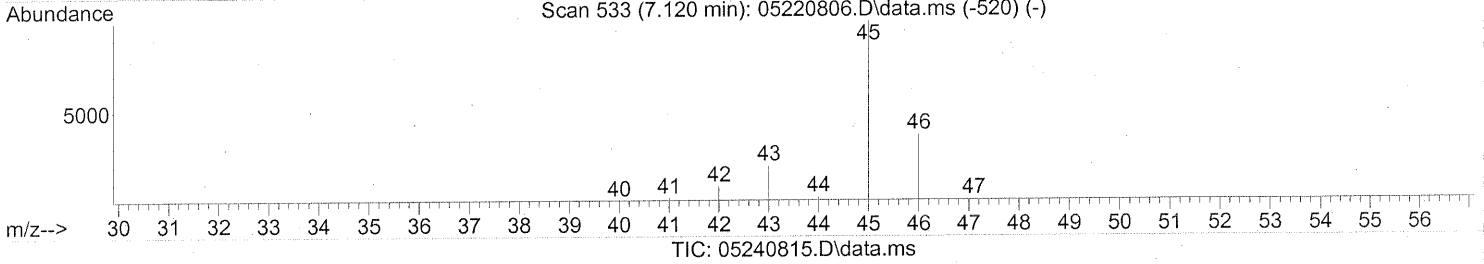
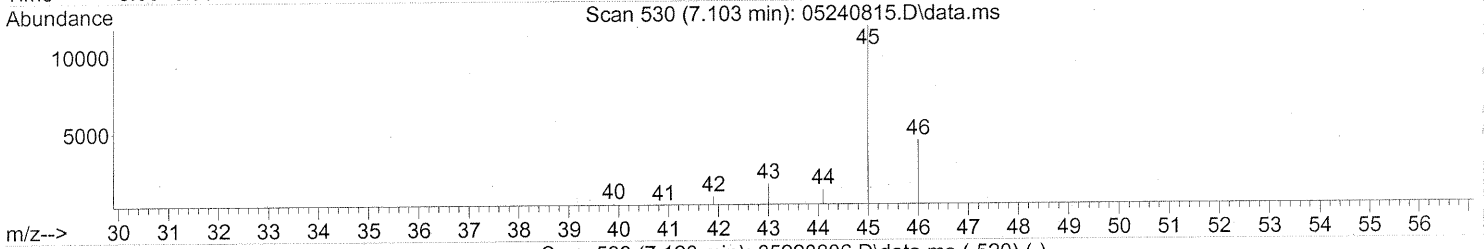
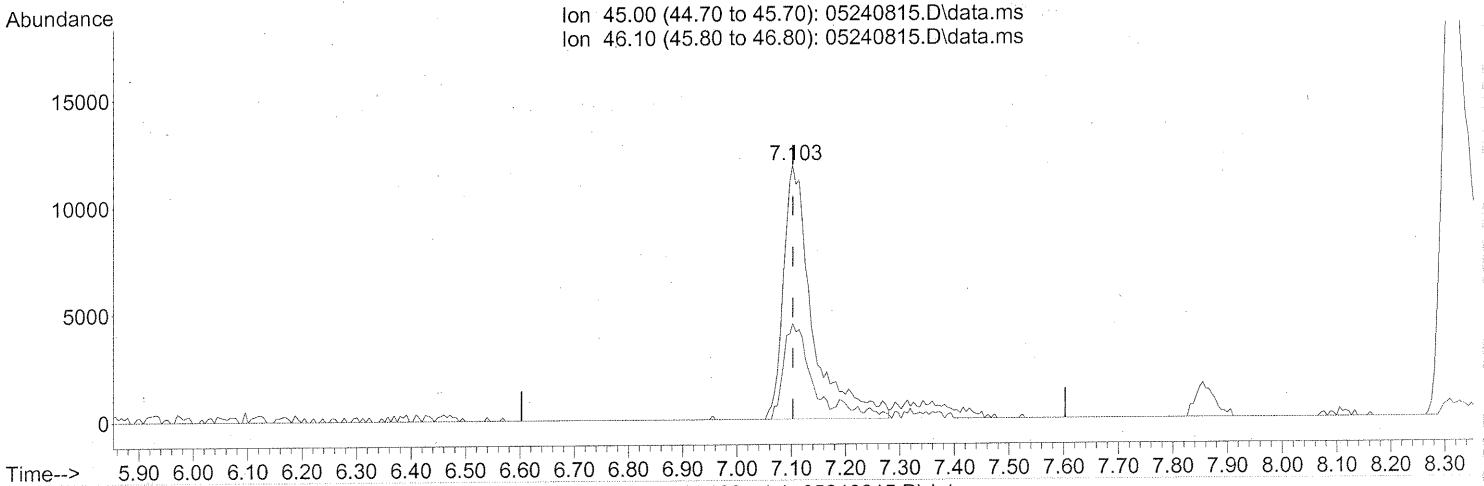
response 4011

Ion	Exp%	Act%
64.00	100	100
66.00	29.60	31.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801422-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(10) Ethanol (T)

7.103min (-0.000) 1.54ng

response 43803

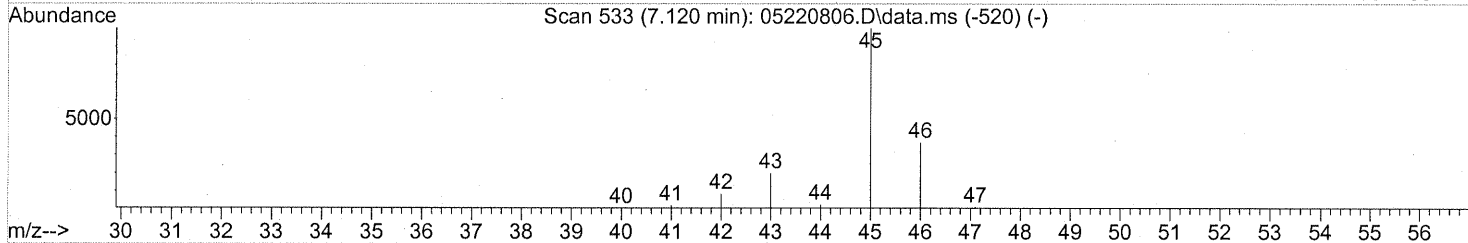
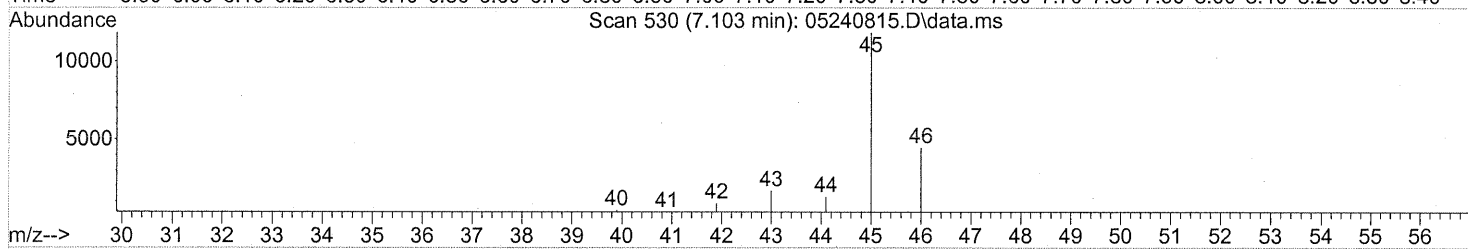
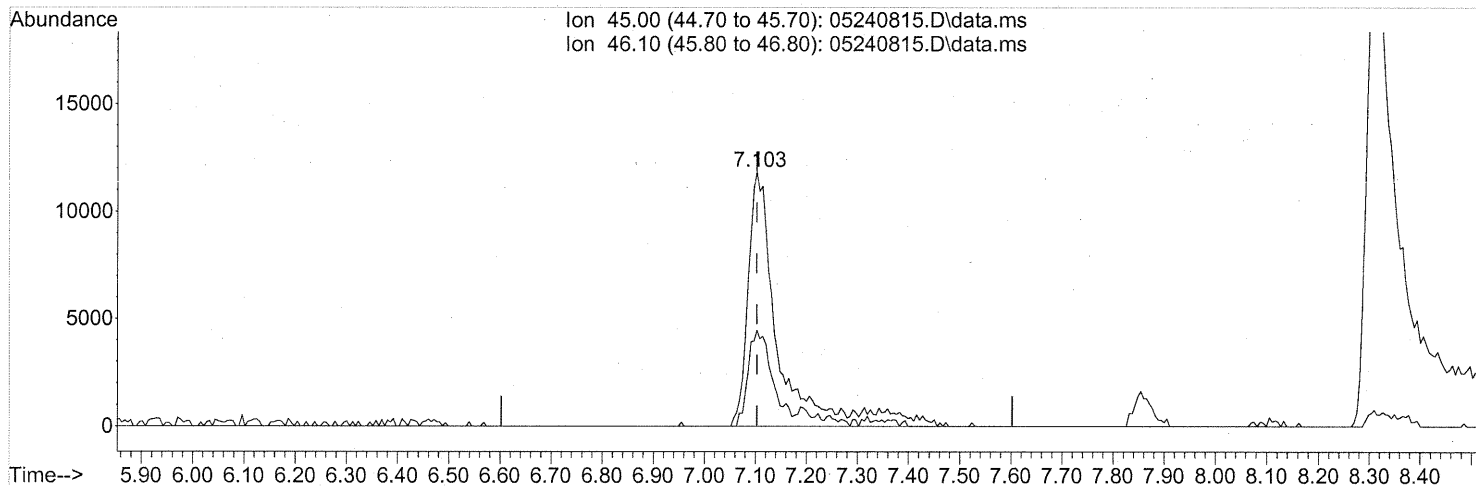
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	33.36
0.00	0.00	0.00
0.00	0.00	0.00

*failing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.103min (-0.000) 1.73ng m

response 49217

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	29.69
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

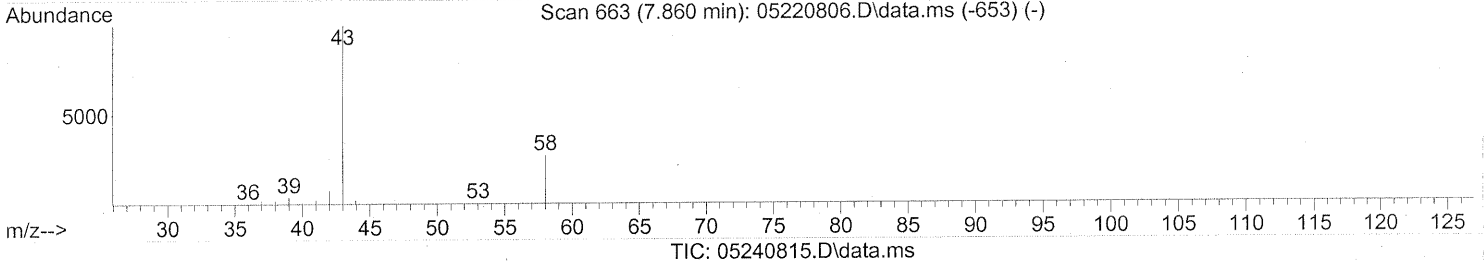
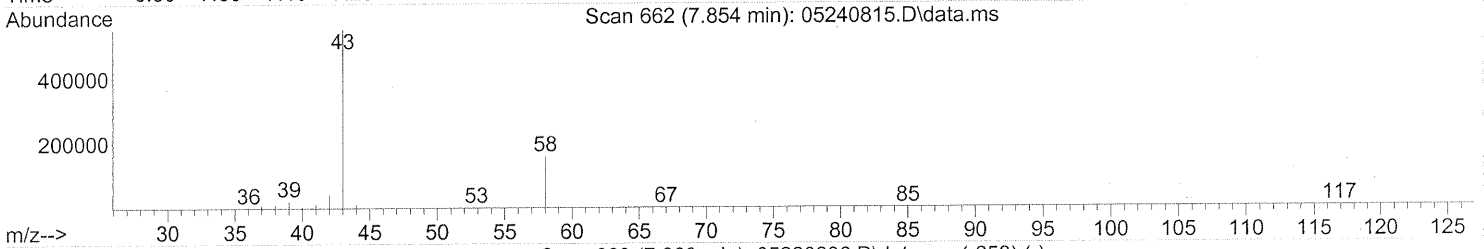
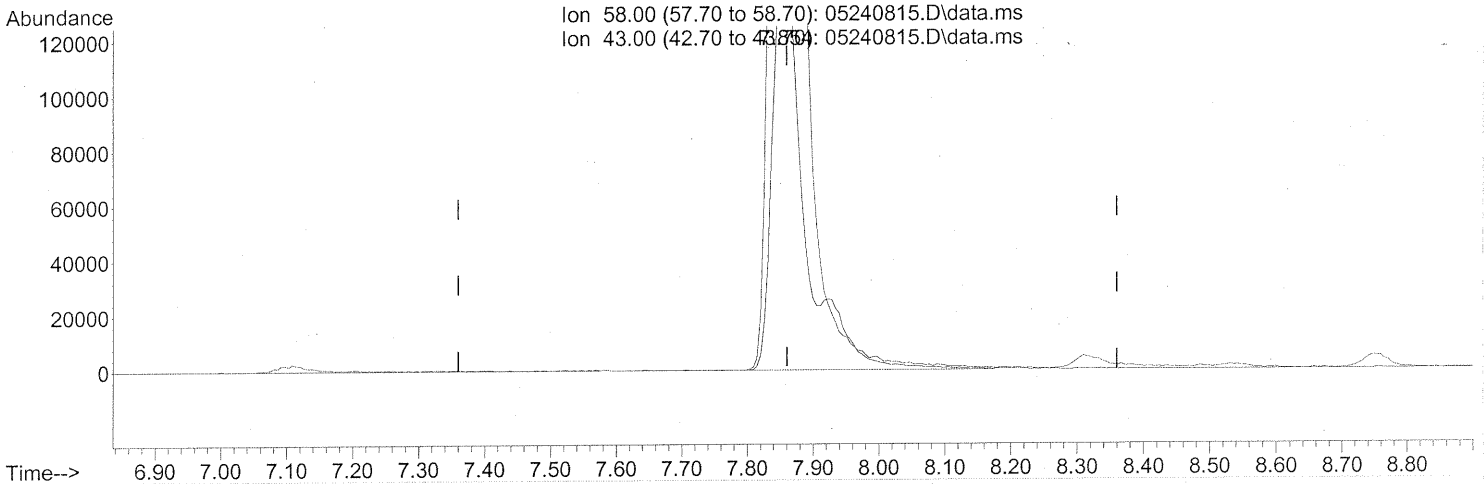
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA 4  
 Sample : P0801422-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)

7.854min (-0.006) 17.47ng

response 509649

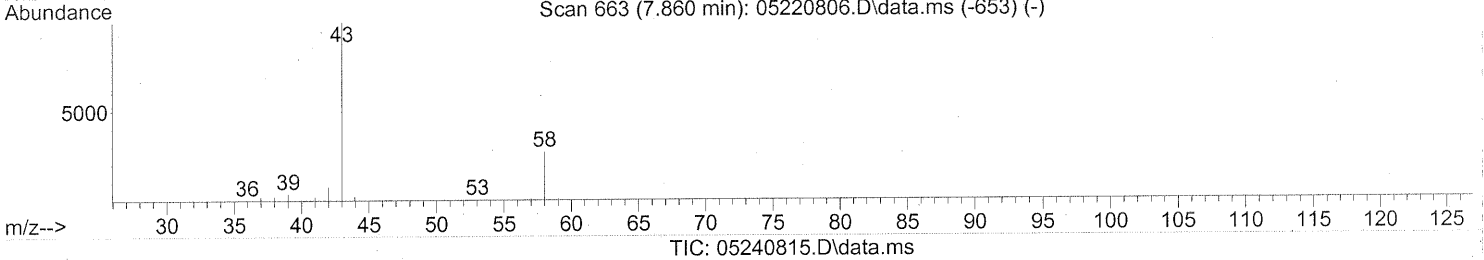
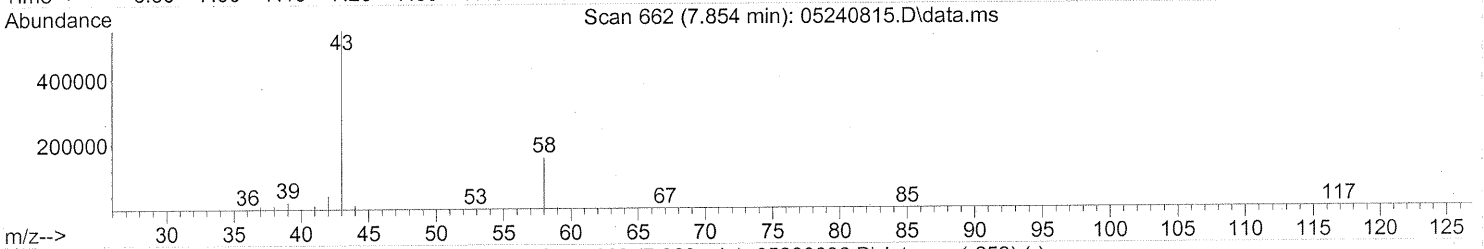
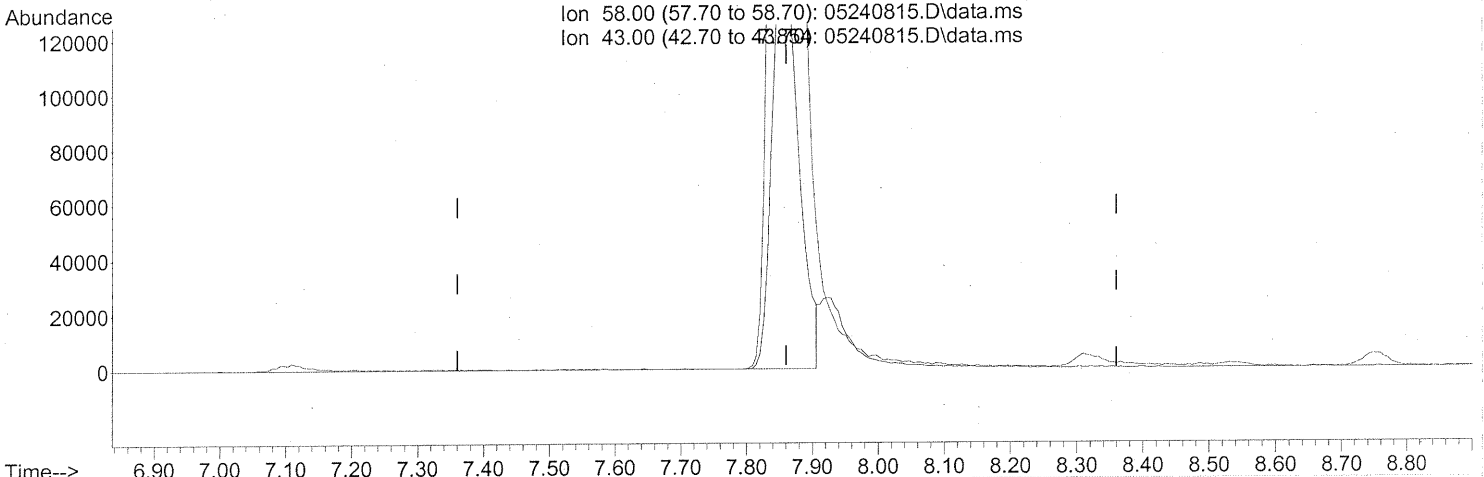
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	308.16
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA 4  
 Sample : P0801422-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.854min (-0.006) 14.57ng m  
 response 425011

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	369.53#
0.00	0.00	0.00
0.00	0.00	0.00

*100 shoulder*

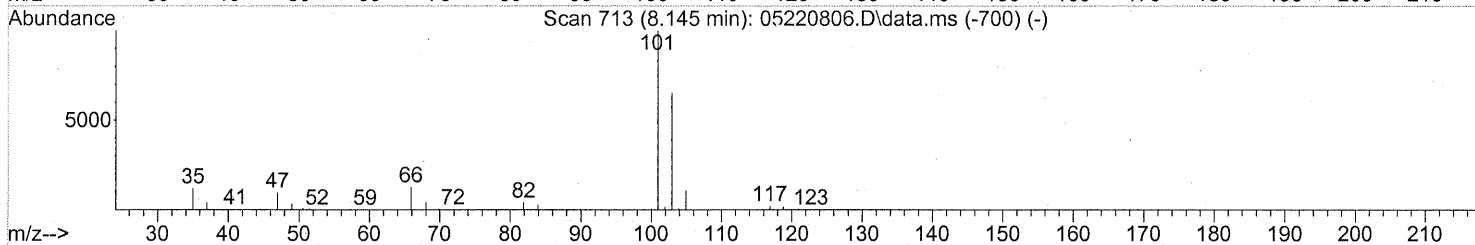
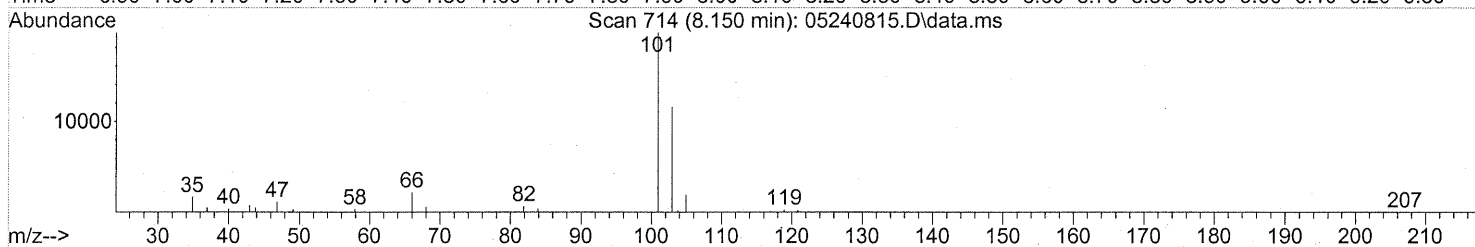
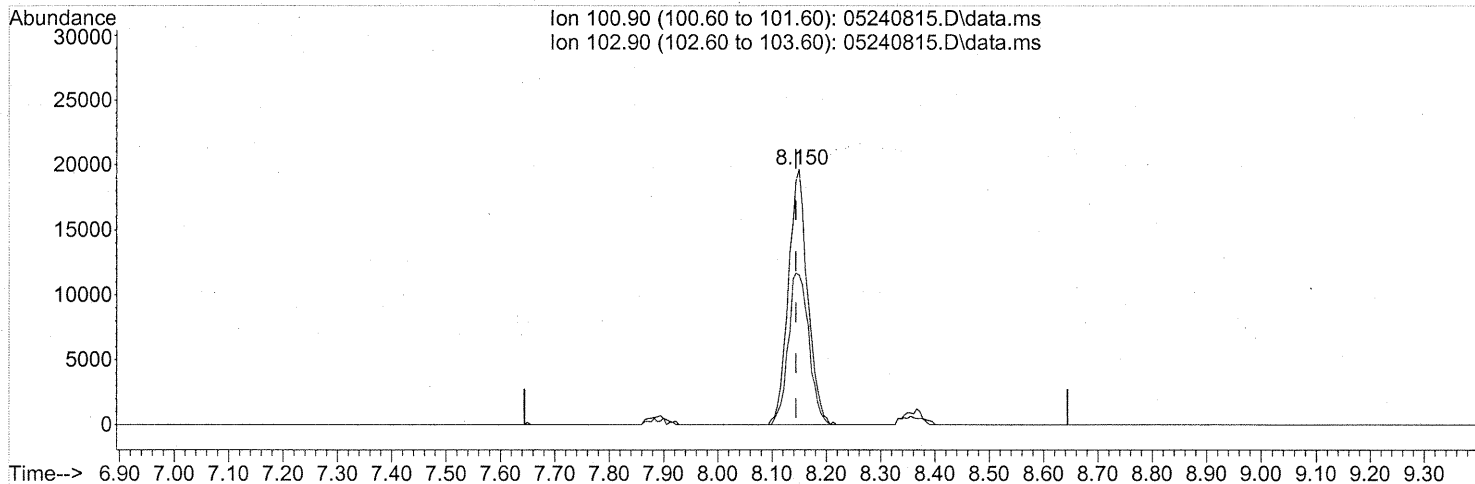
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(14) Trichlorofluoromethane (T)

8.150min (+0.006) 0.71ng

response 48221

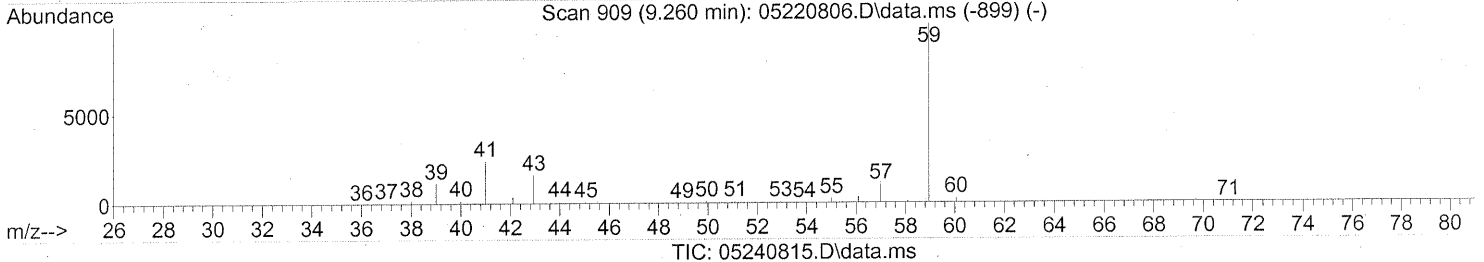
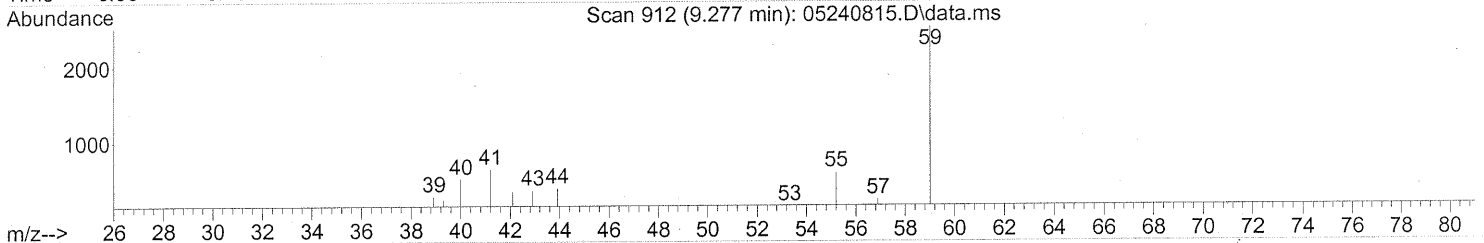
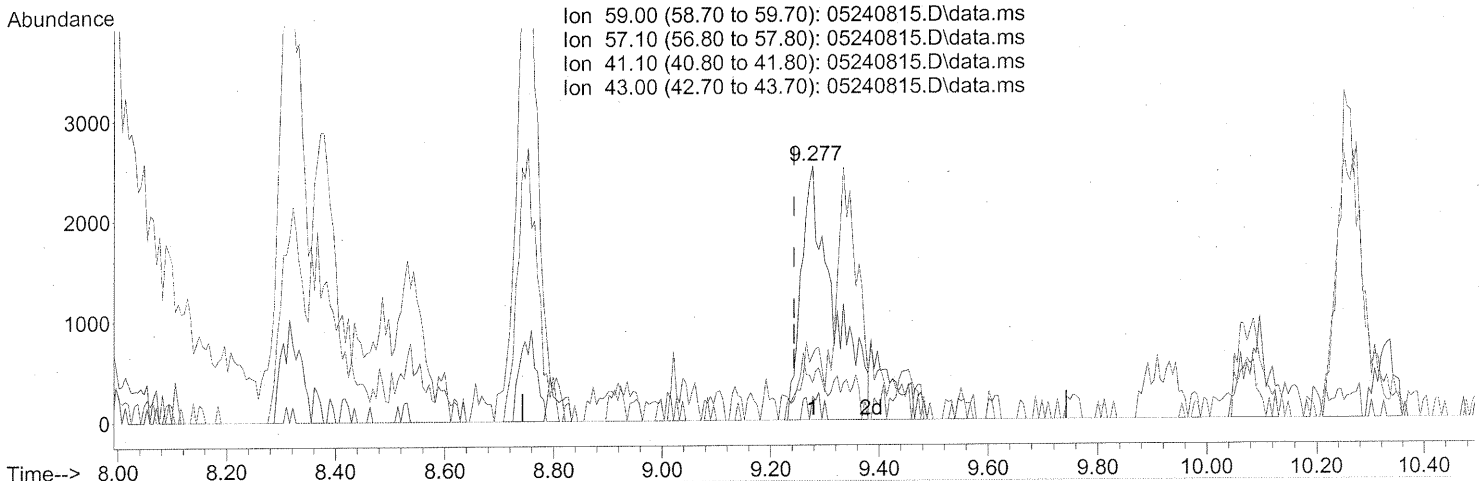
Ion	Exp%	Act%
100.90	100	100
102.90	64.80	63.91
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801422-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

9.277min (+0.034) 0.13ng

response 10466

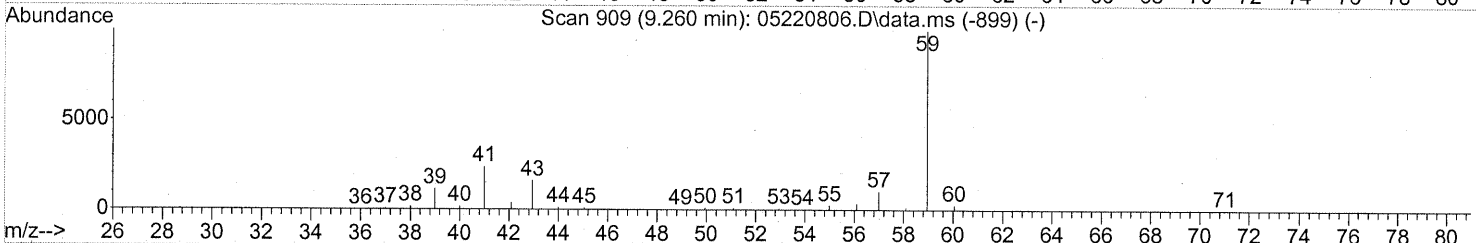
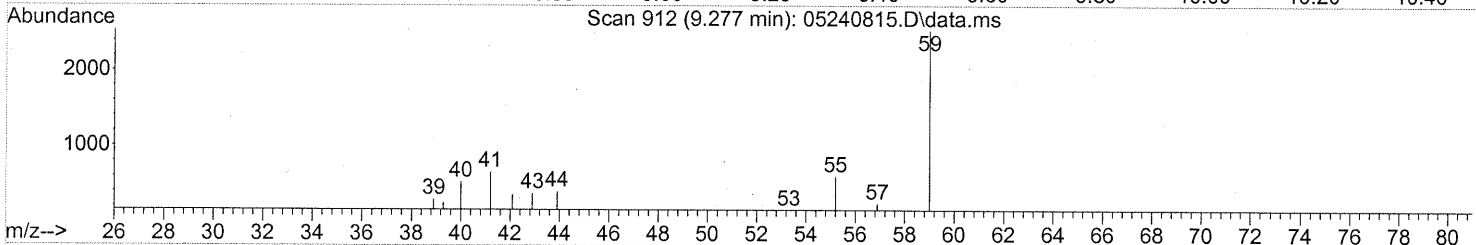
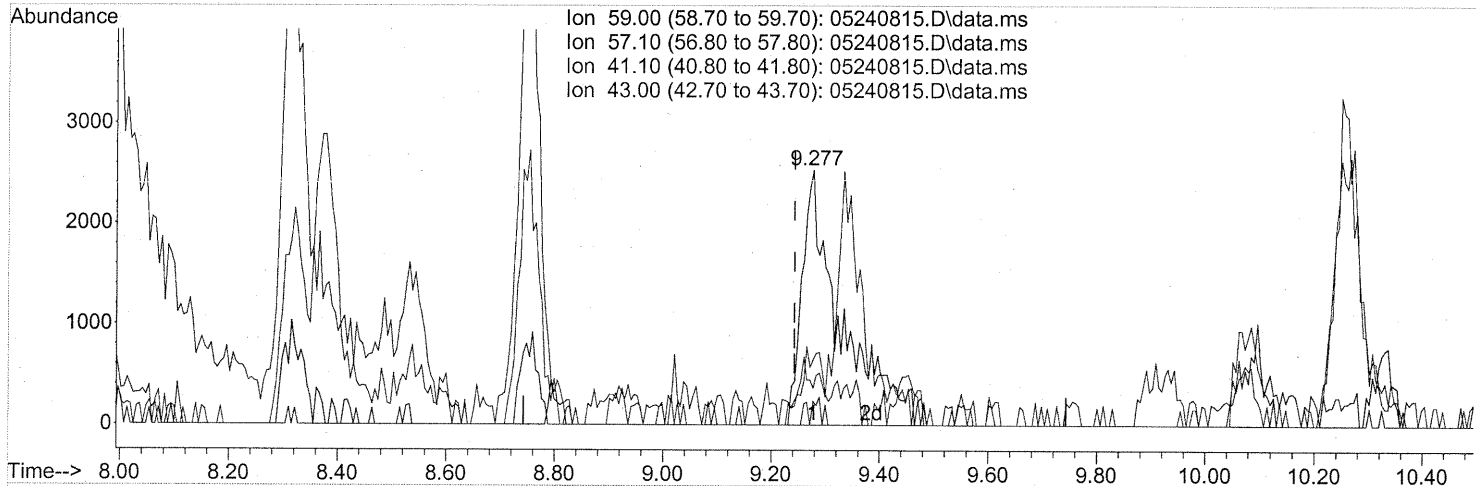
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	2.94
41.10	20.10	0.00#
43.00	12.30	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.277min (+0.034) 0.16ng m  
 response 12748

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	2.42
41.10	20.10	0.00#
43.00	12.30	0.00

*int. whole peaks*

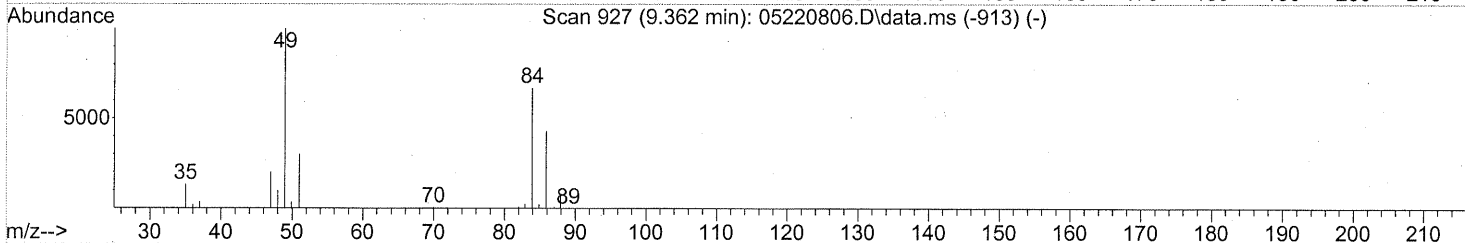
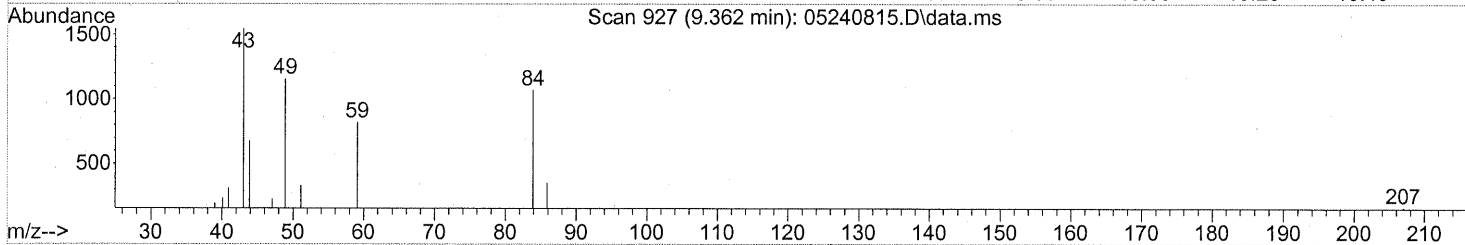
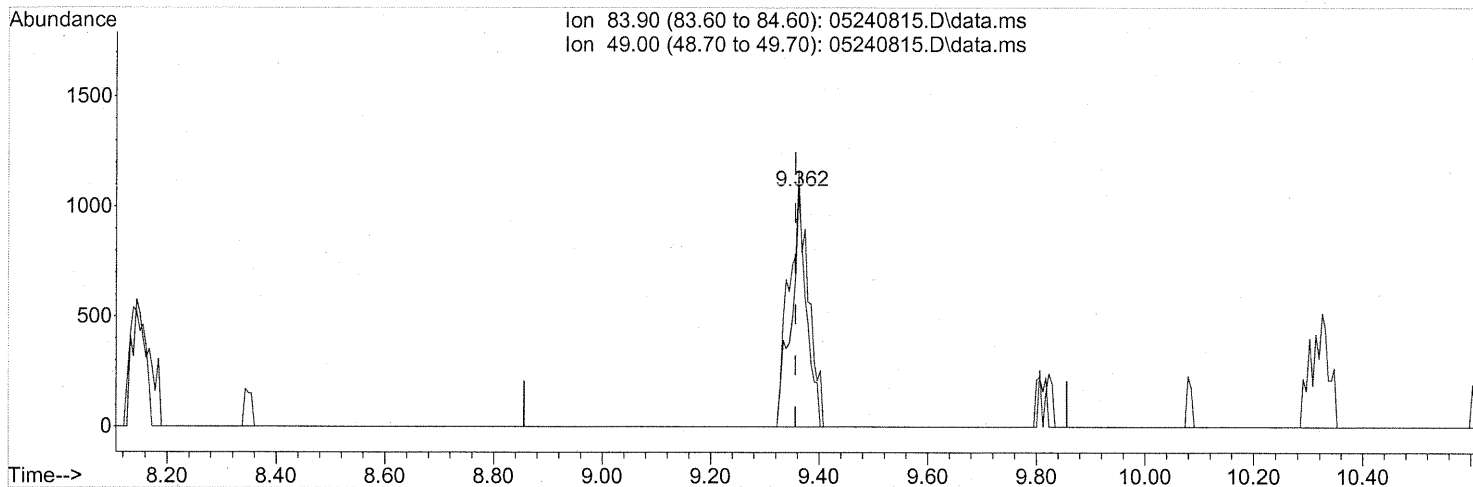
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(19) Methylene Chloride (T)

9.362min (+0.006) 0.06ng

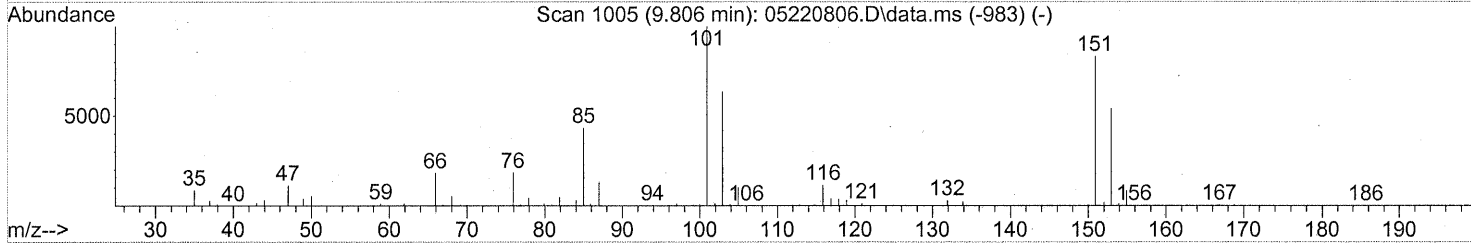
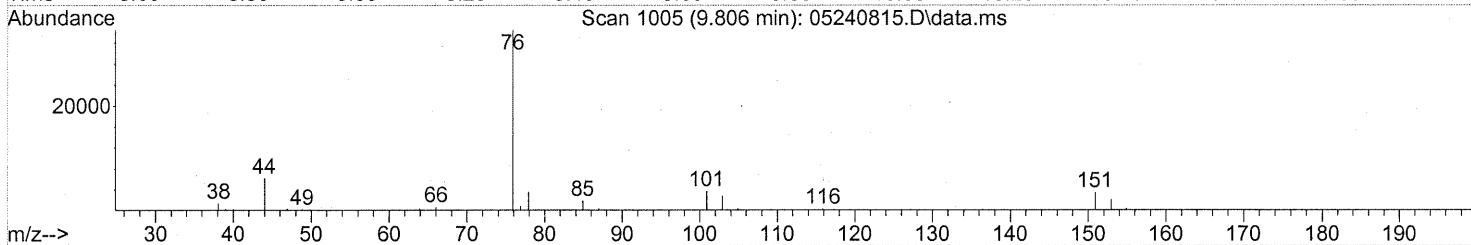
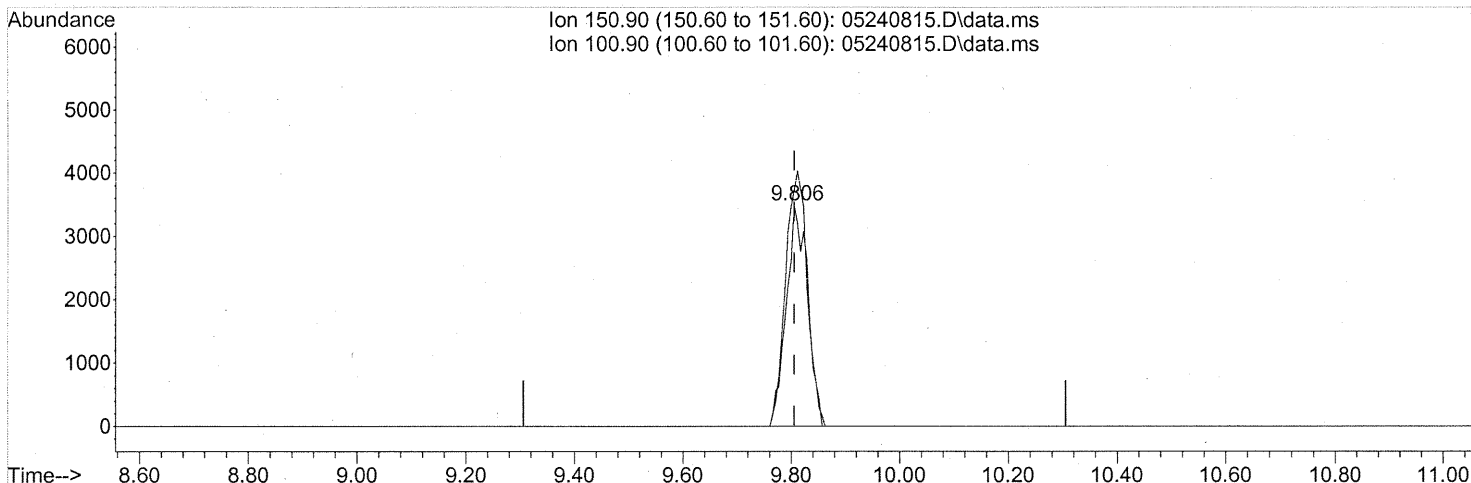
response 2090

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	133.88#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.806min (-0.000) 0.31ng

response 9541

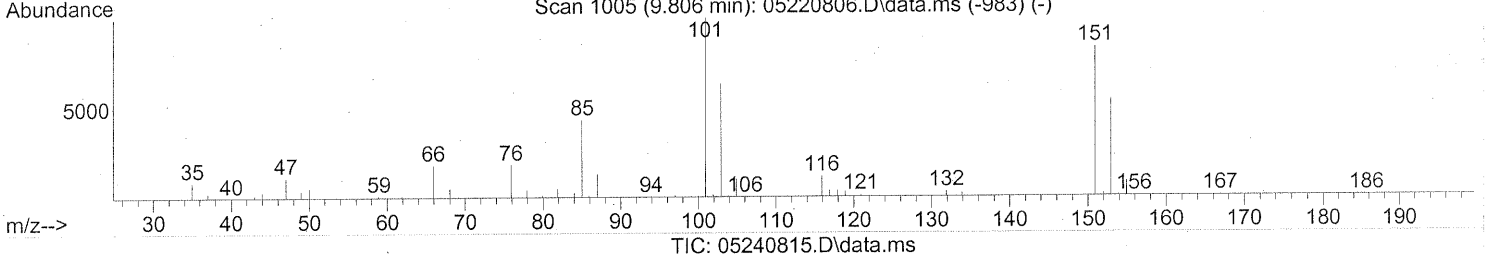
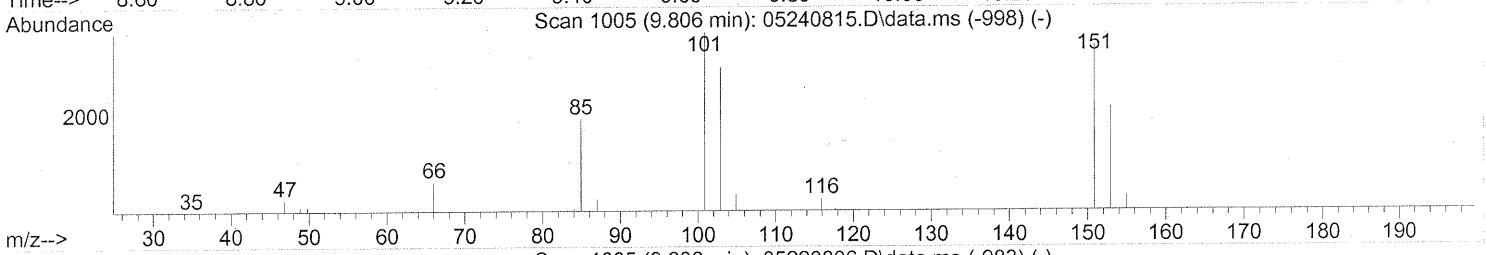
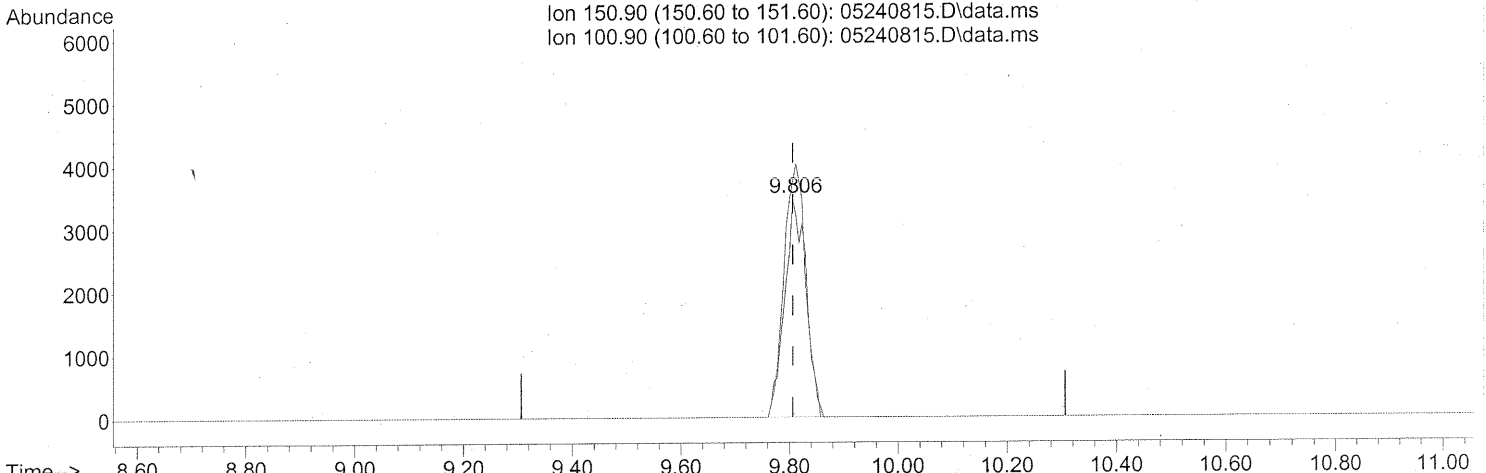
*before*

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	115.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA 4  
 Sample : P0801422-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.806min (-0.000) 0.31ng

response 9541

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	115.97
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

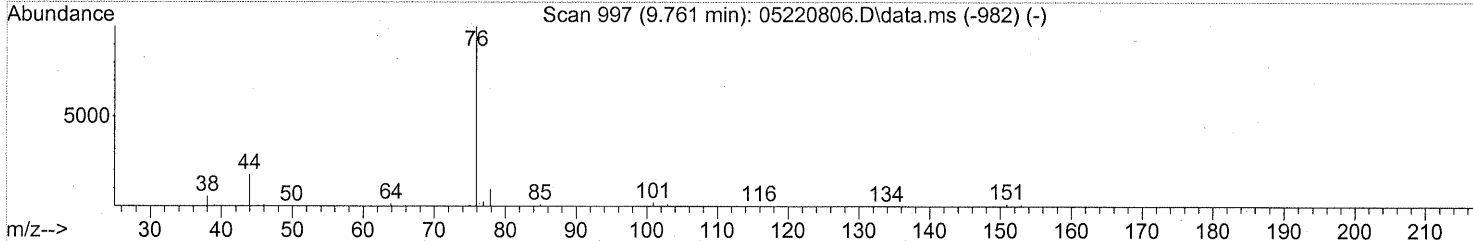
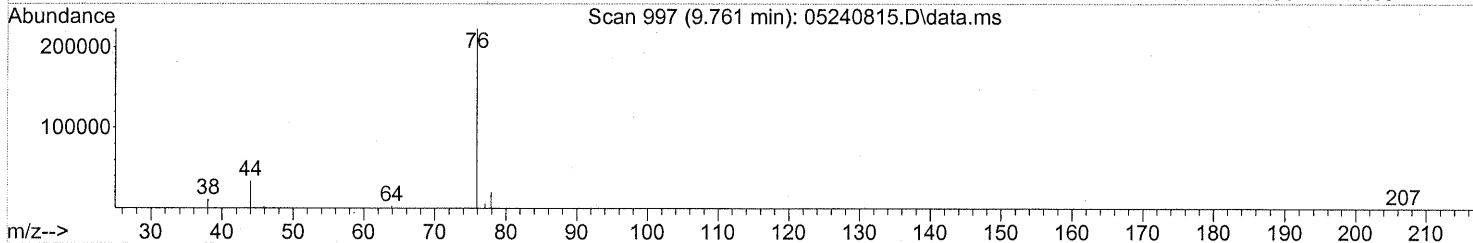
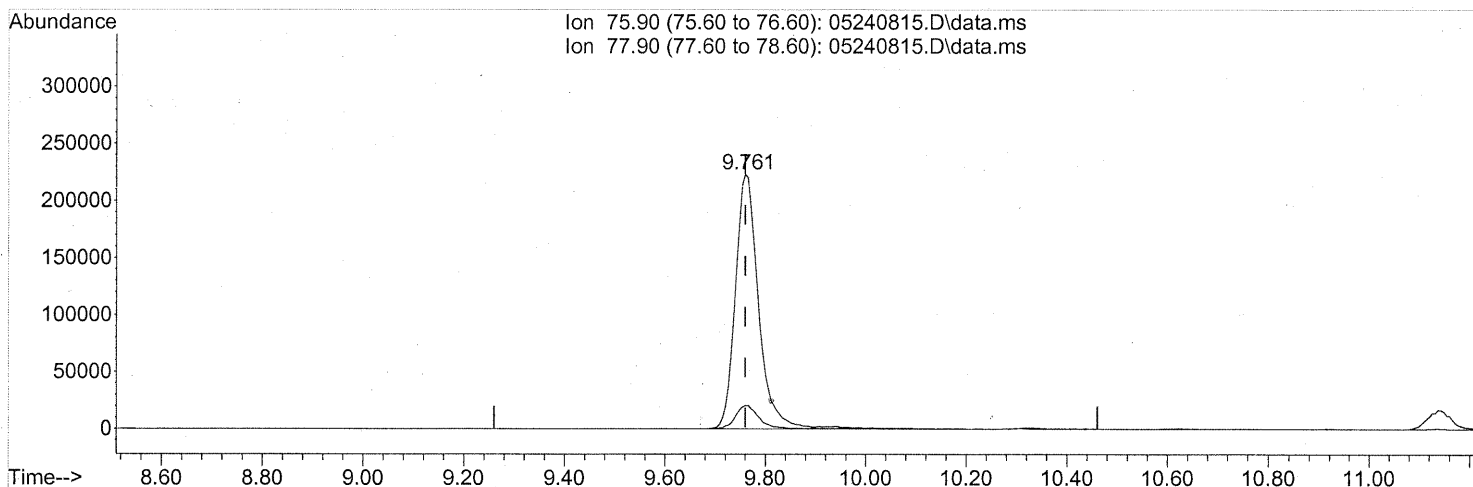
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(22) Carbon Disulfide (T)

9.761min (-0.000) 5.76ng

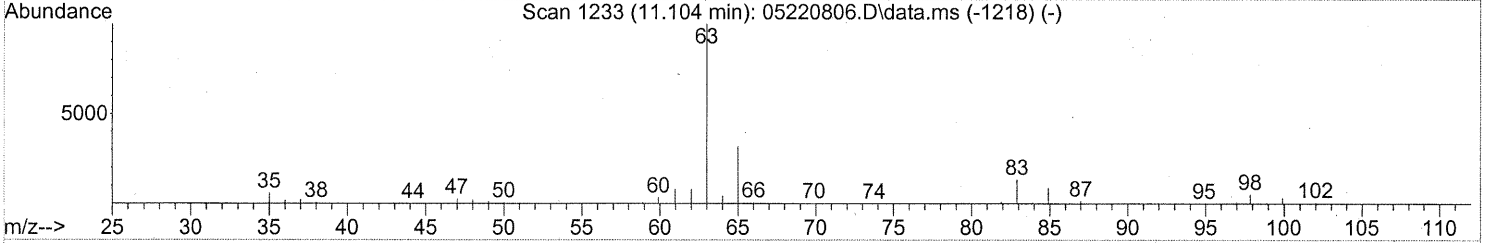
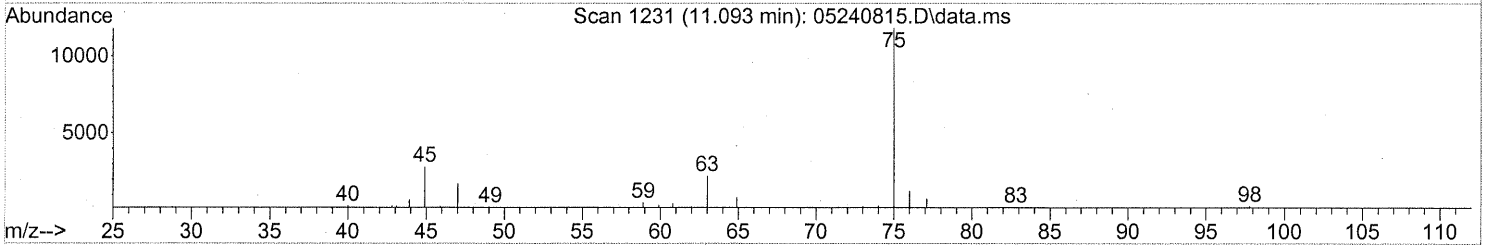
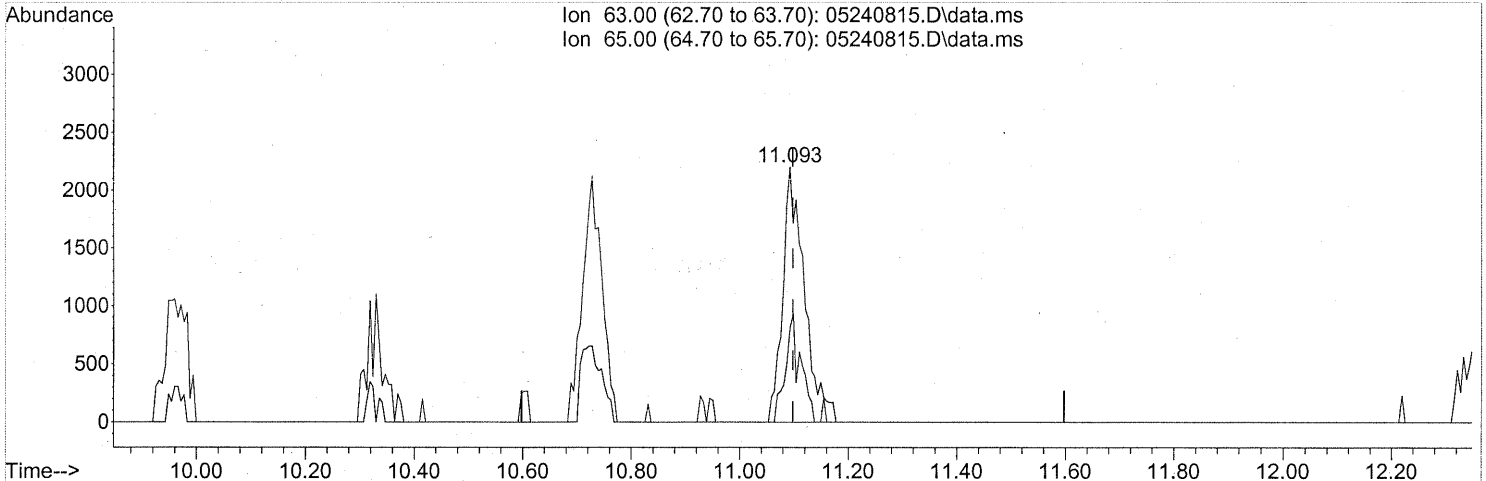
response 712515

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(24) 1,1-Dichloroethane (T)

11.093min (-0.006) 0.11ng

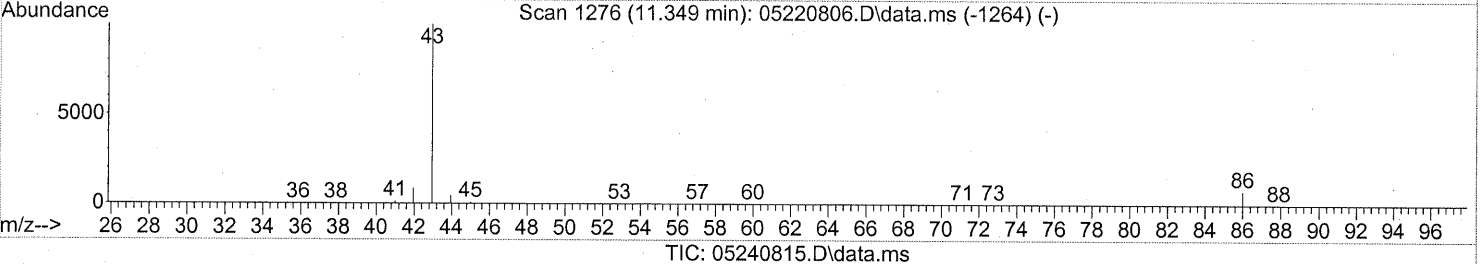
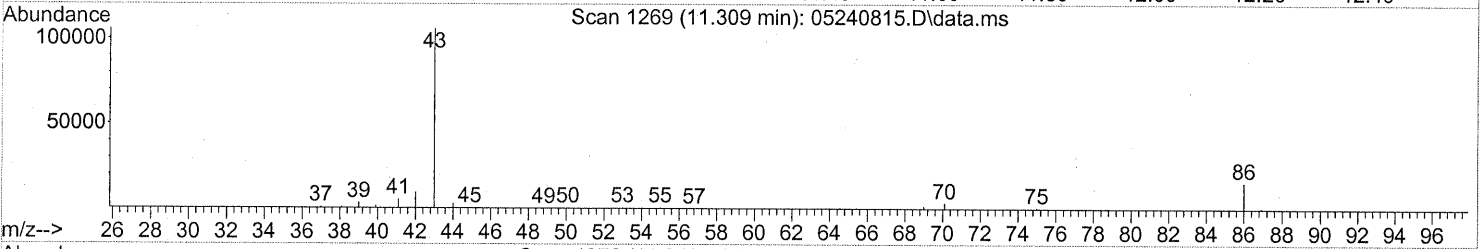
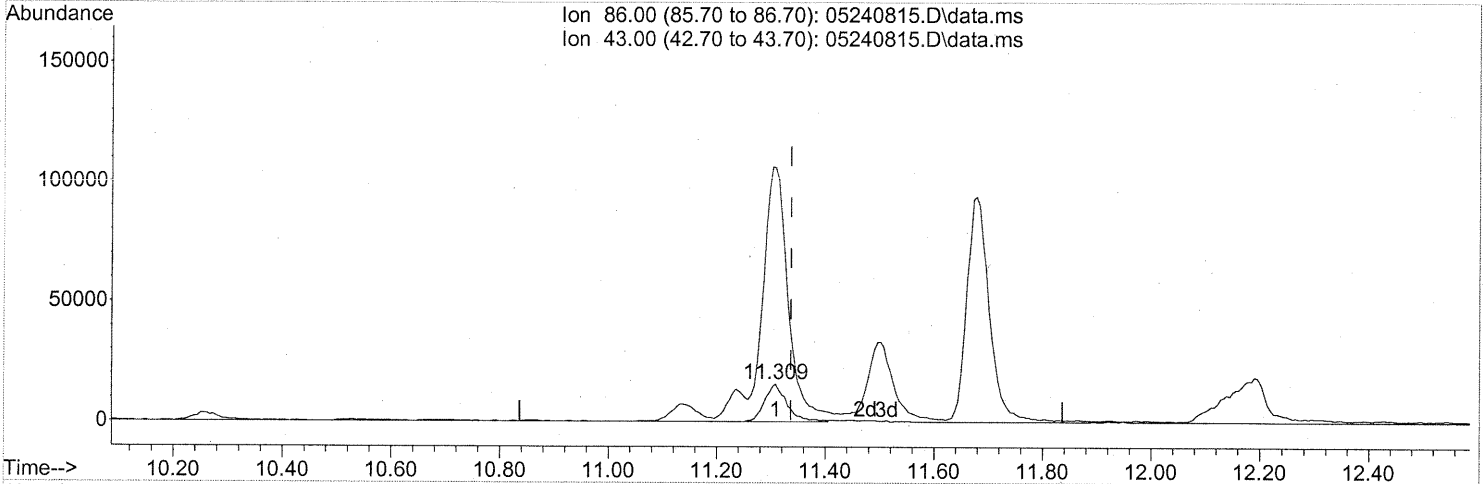
response 6019

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	29.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.309min (-0.028) 8.22ng

response 44319

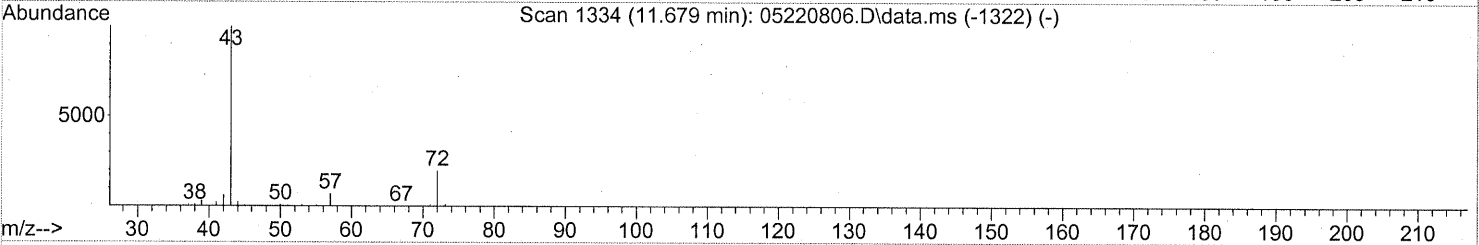
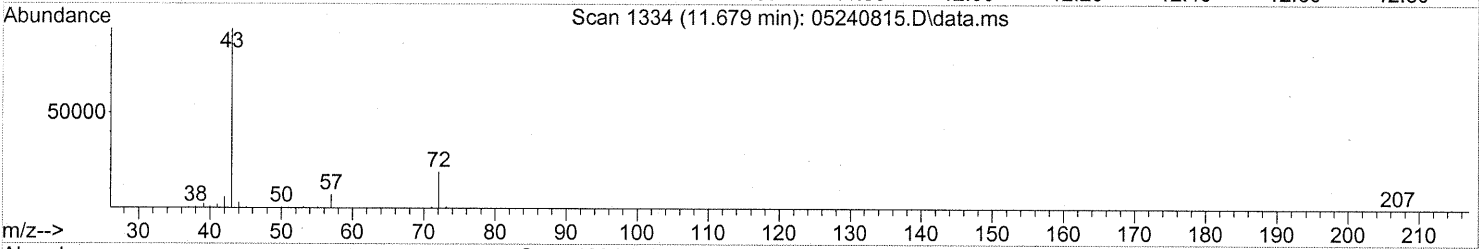
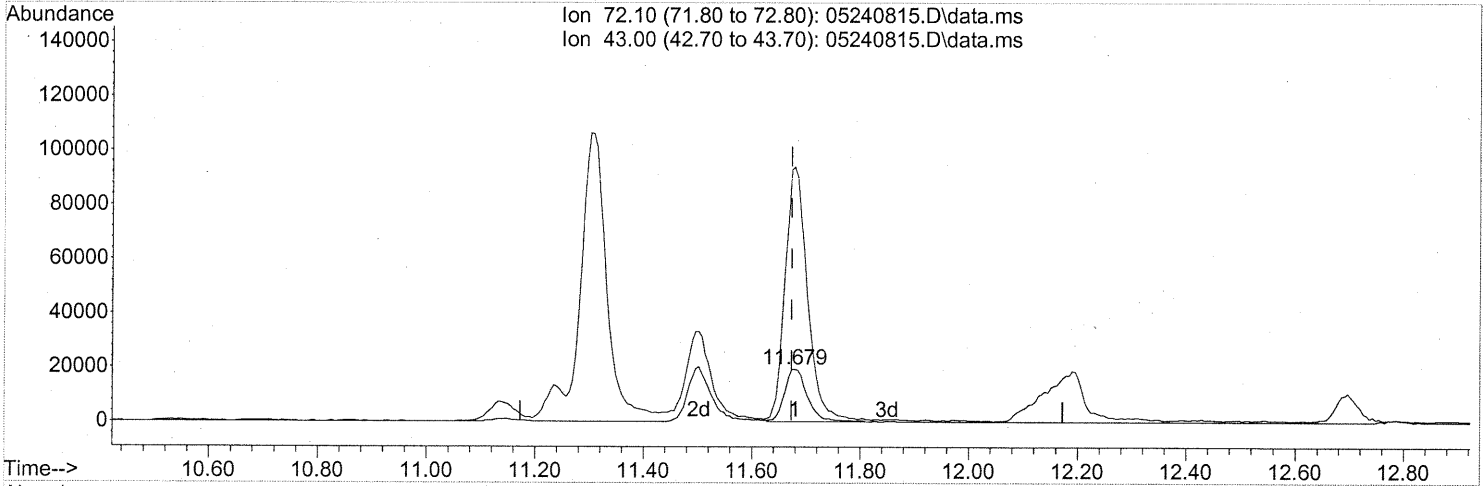
Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	767.67#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

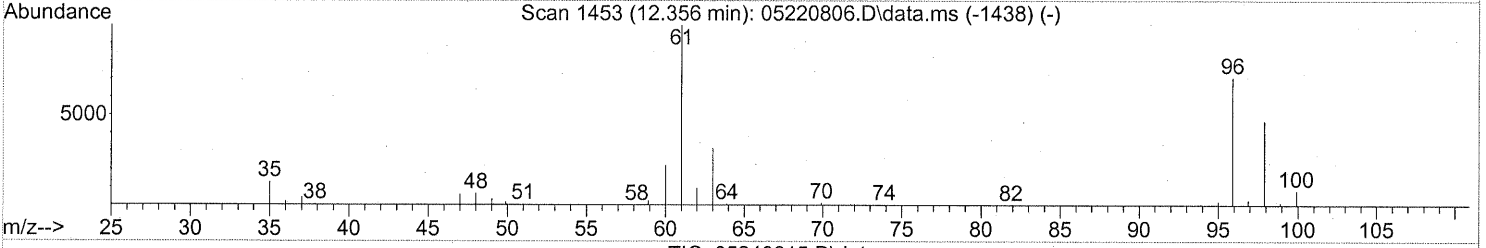
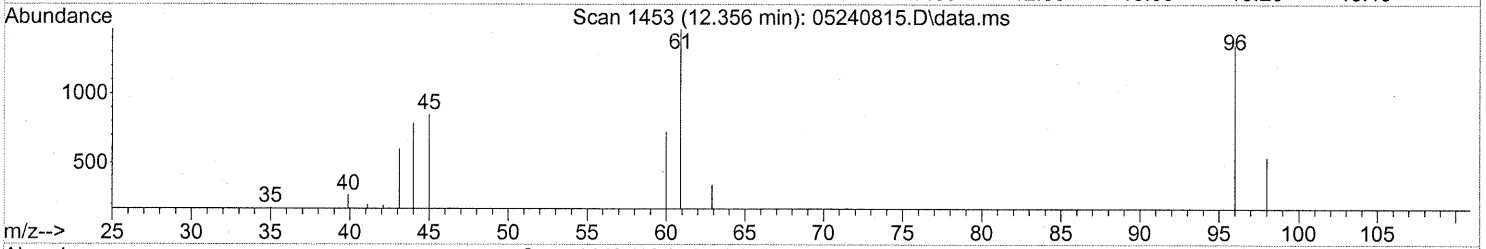
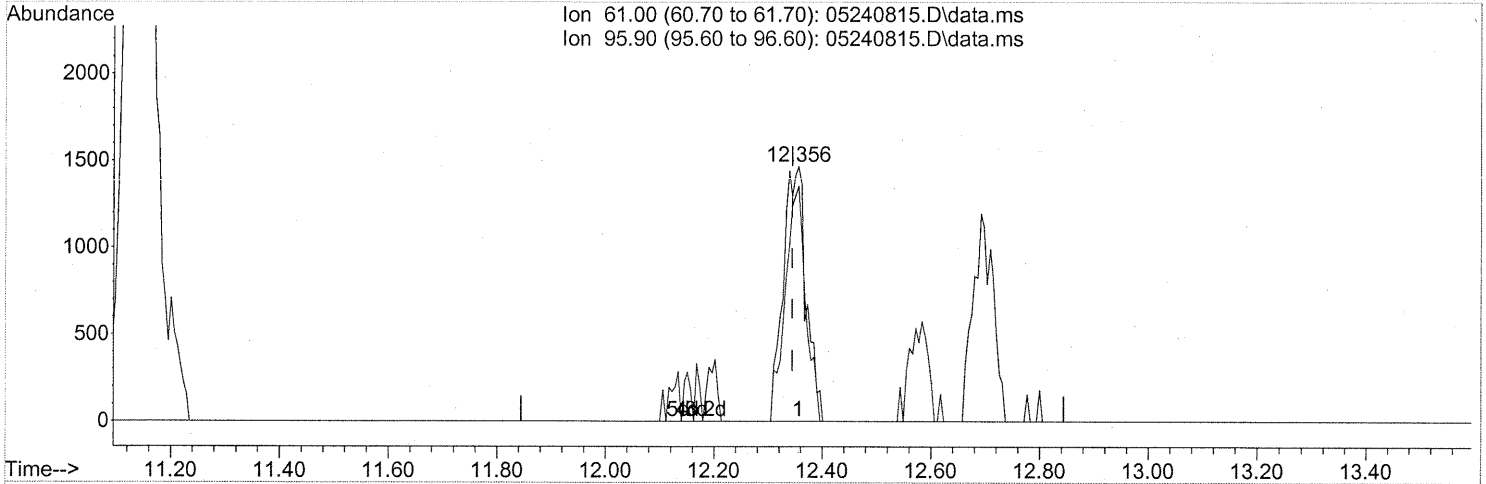
(27) 2-Butanone (T)

Retention Time (min)	Expected (%)	Actual (%)
11.679min (+0.006)	2.64ng	response 56241
72.10	100	100
43.00	506.80	472.96#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(28) cis-1,2-Dichloroethene (T)

12.356min (+0.011) 0.09ng

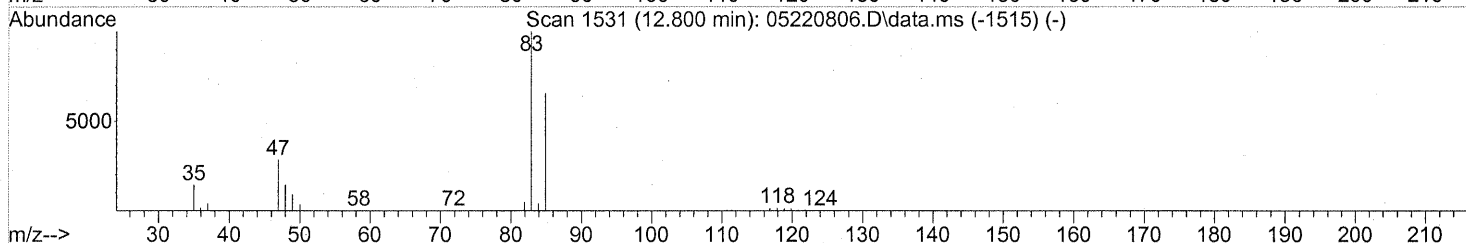
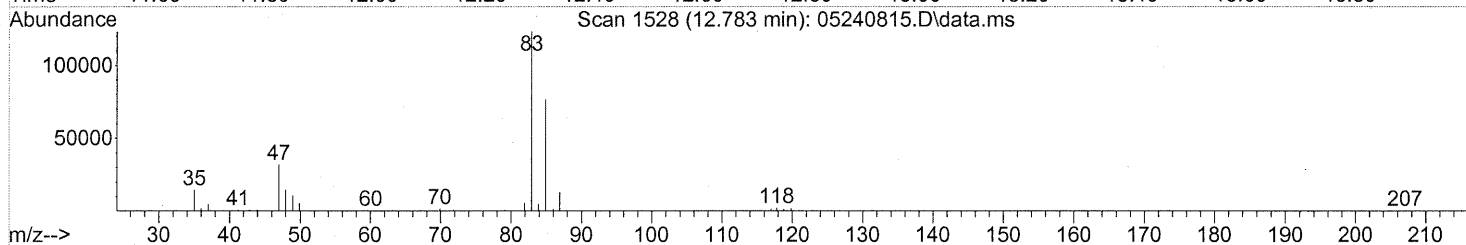
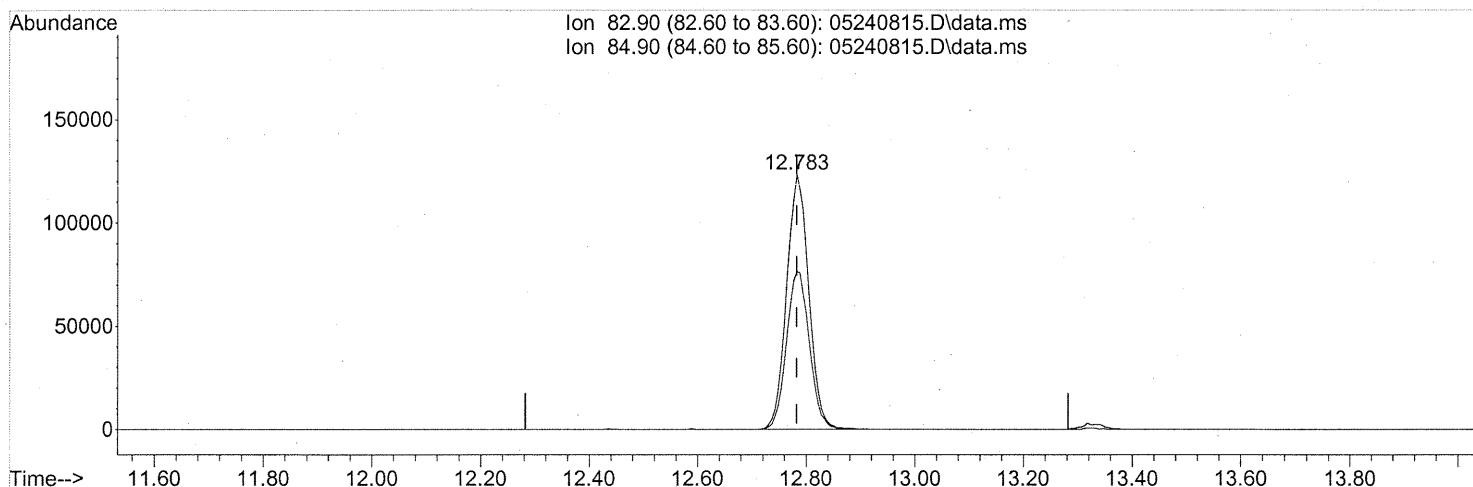
response 4346

Ion	Exp%	Act%
61.00	100	100
95.90	59.60	81.73#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(32) Chloroform (T)

12.783min (0.000) 7.02ng

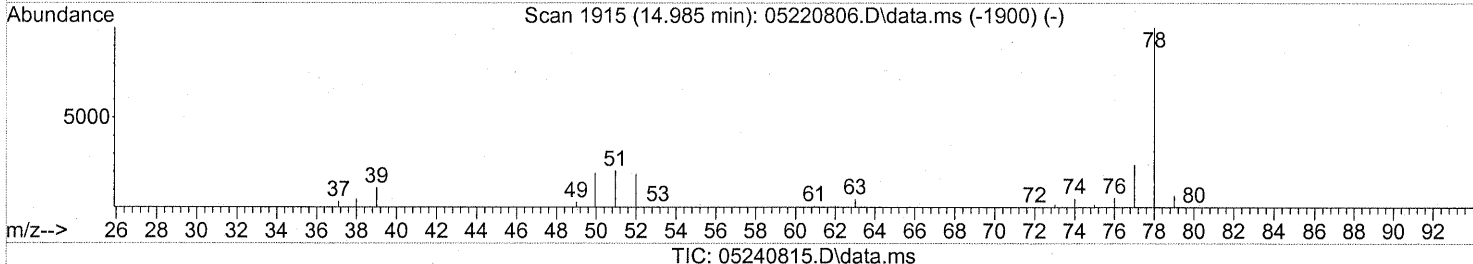
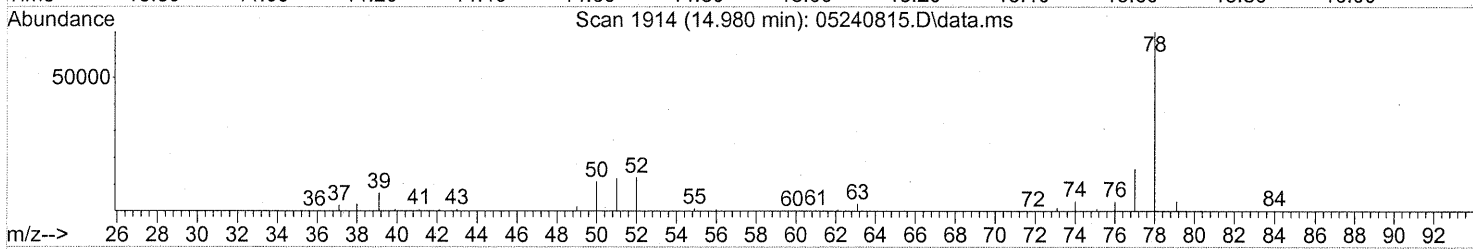
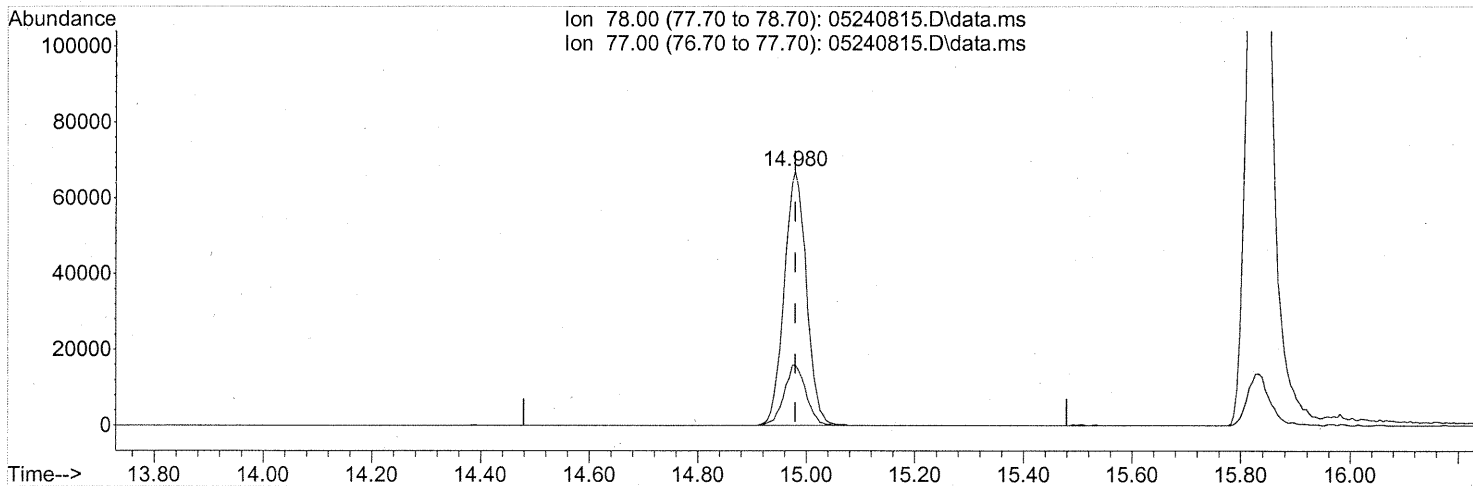
response 346809

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	63.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(41) Benzene (T)

14.980min (-0.000) 1.56ng

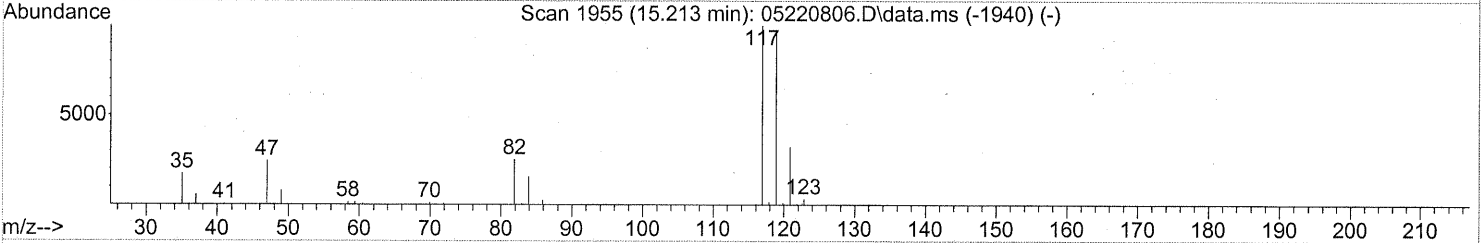
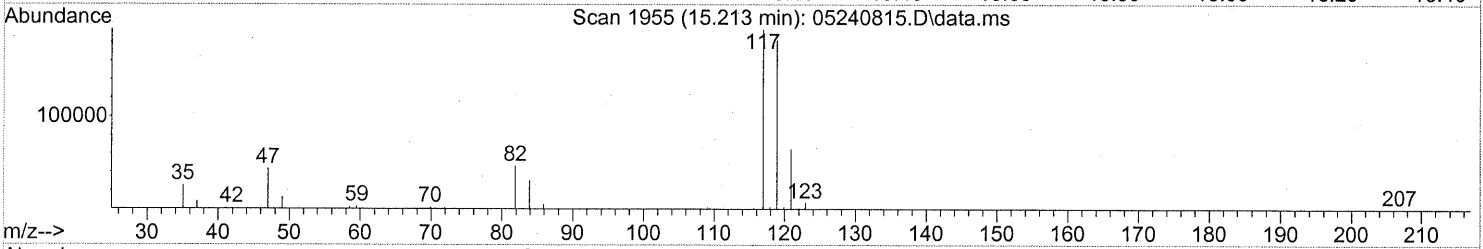
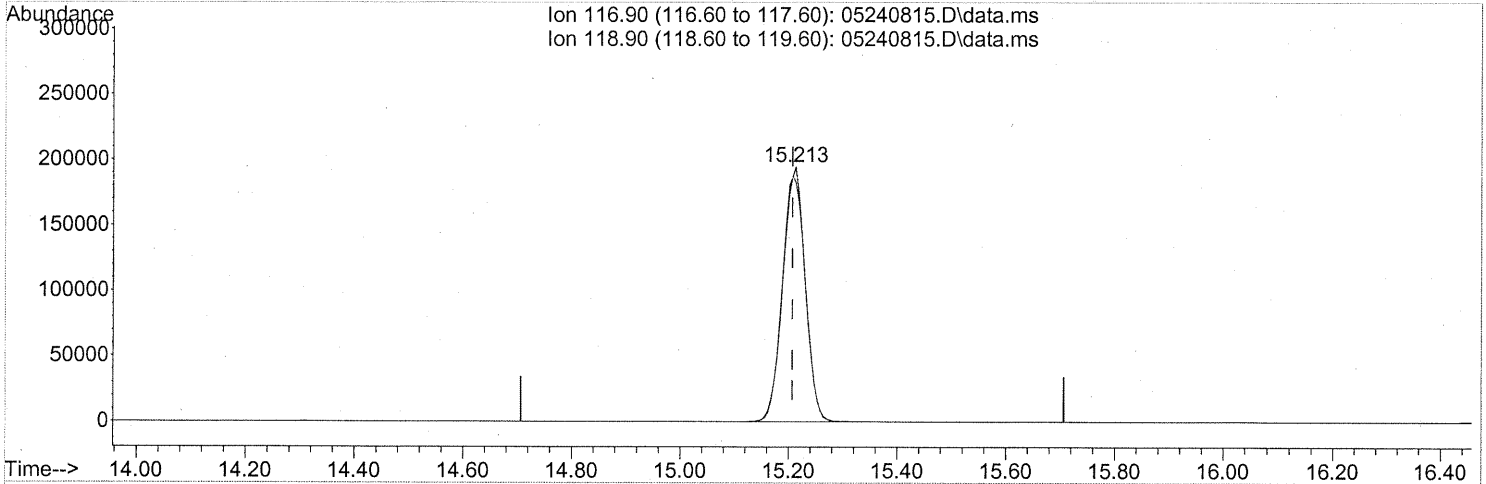
response 189664

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 11.95ng

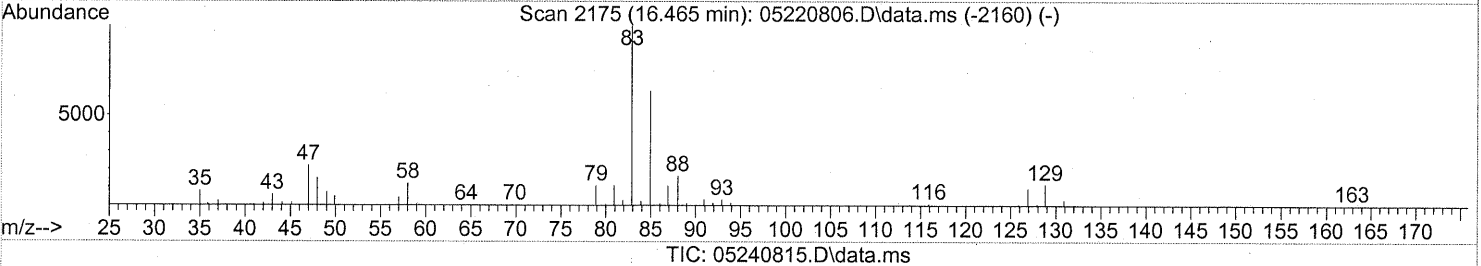
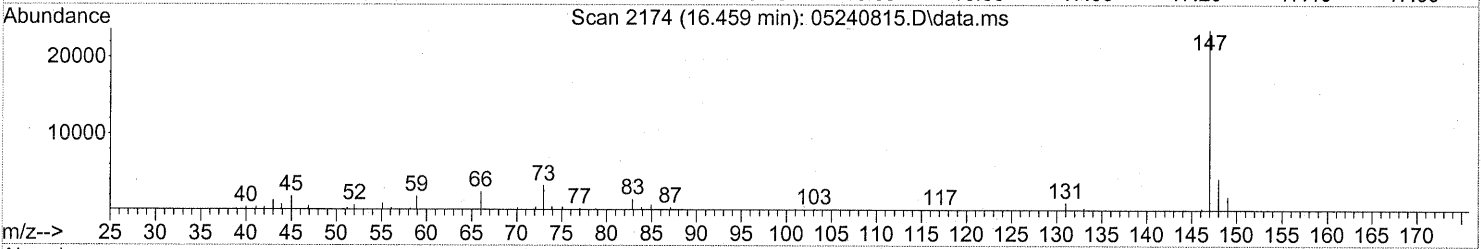
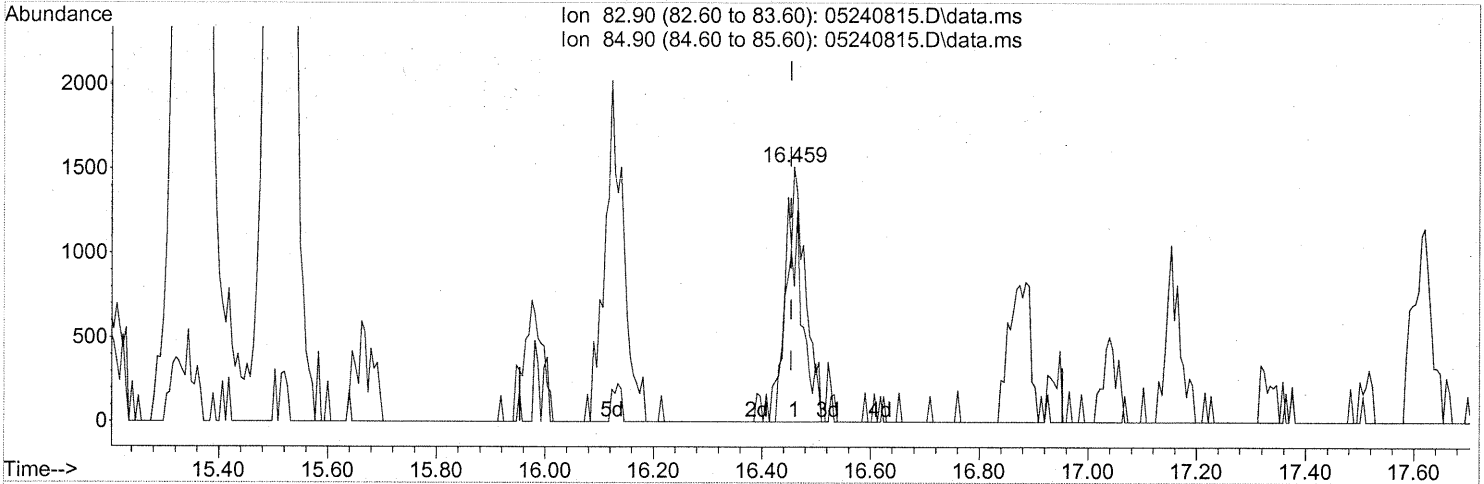
response 558464

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	97.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

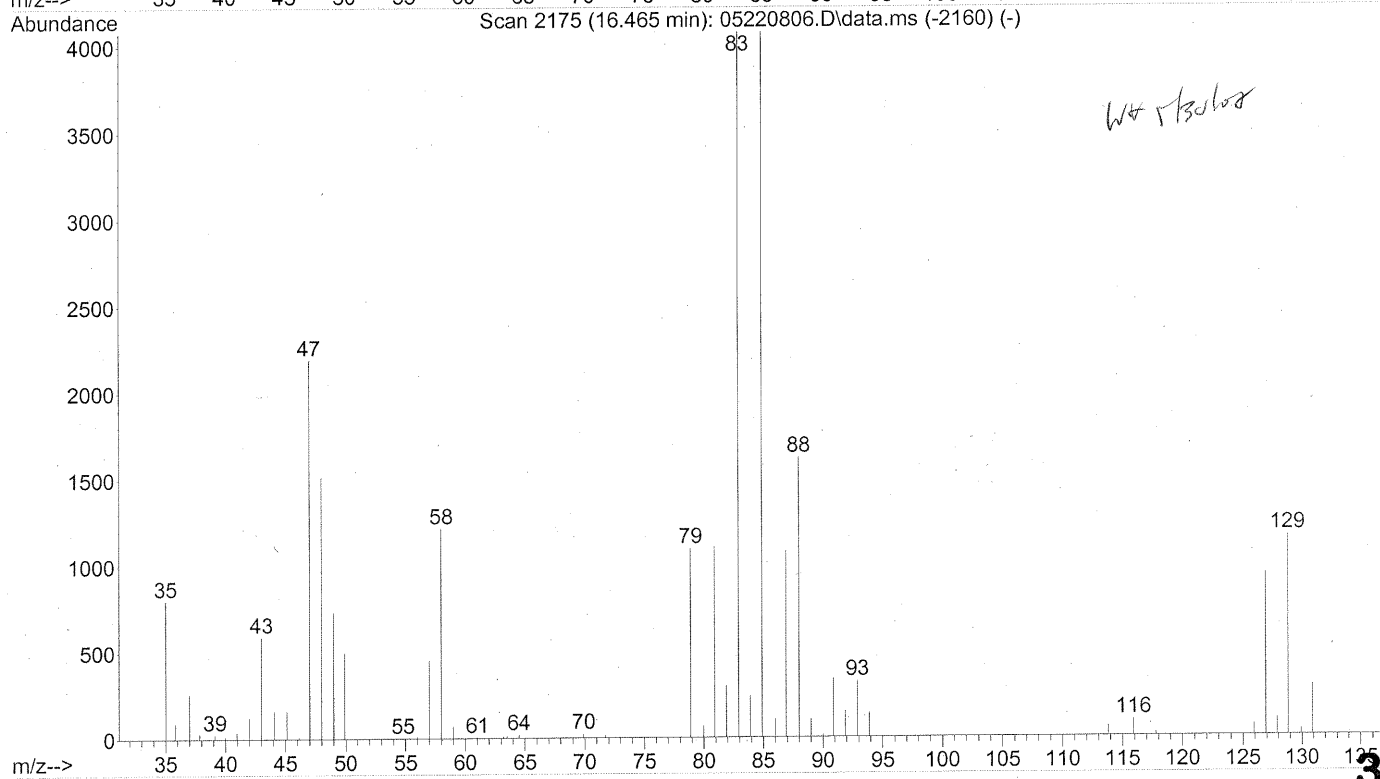
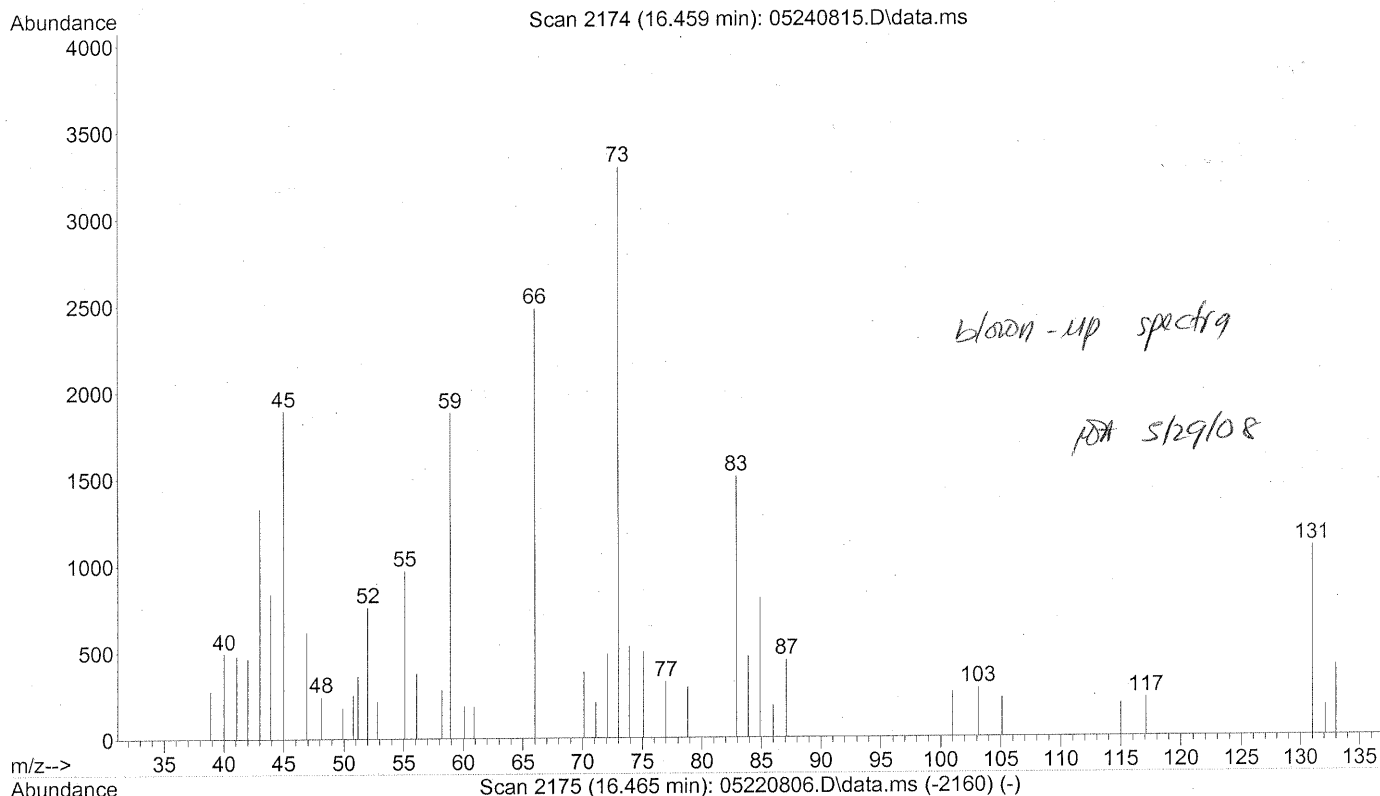
16.459min (+0.006) 0.10ng

response 3987

*see blown-up spectra*

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	68.35
0.00	0.00	0.00
0.00	0.00	0.00

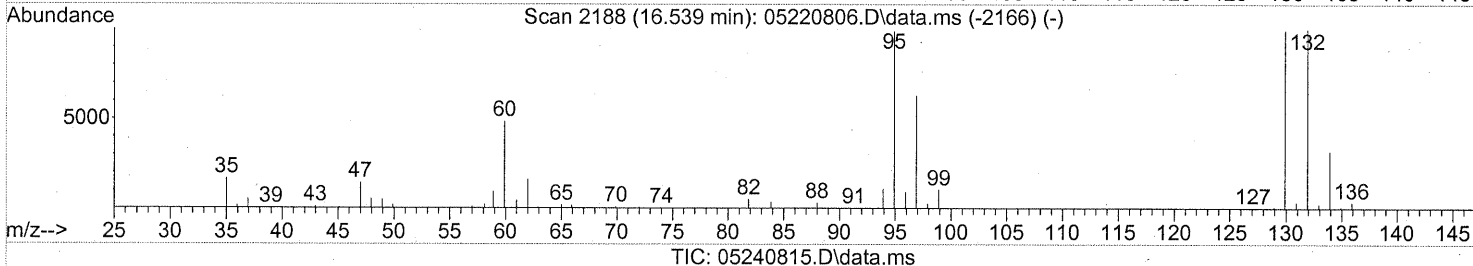
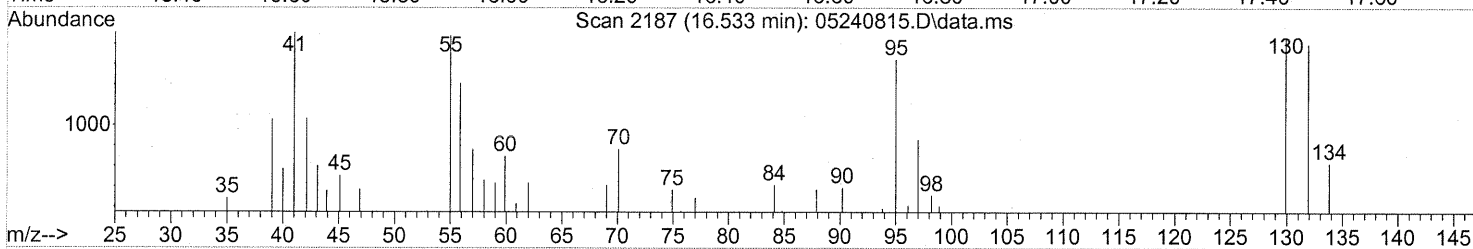
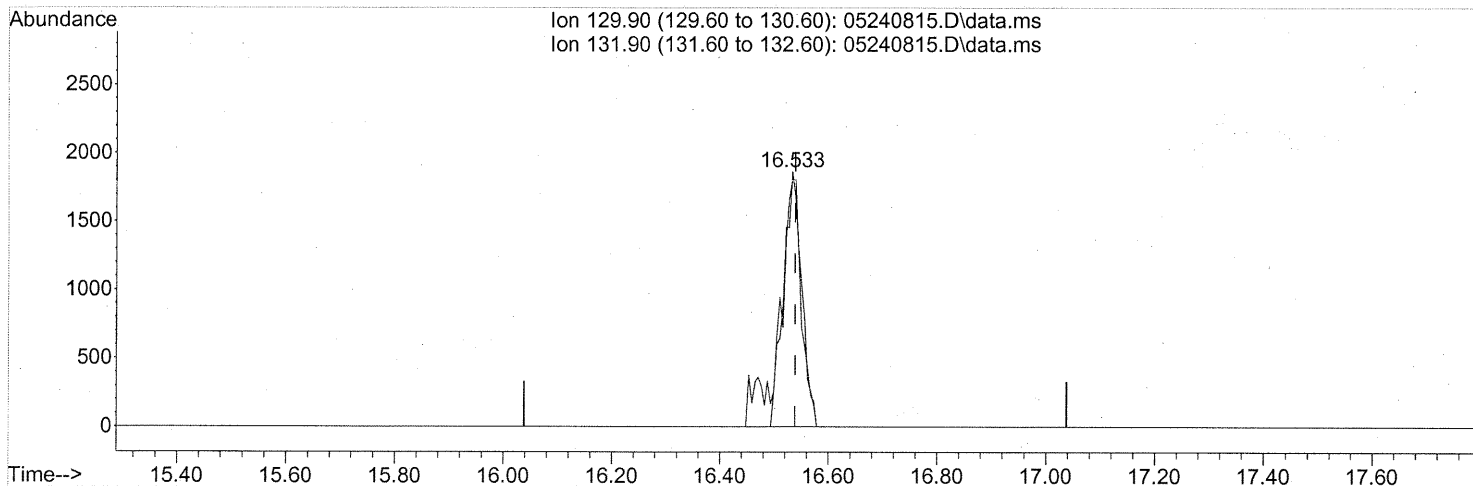
File : J:\MS13\DATA\2008\_05\24\05240815.D  
Operator : WA  
Acquired : 24 May 2008 16:42 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-006 (1000ml)  
Misc Info : ENSR SG88B-05 (-3.7, 3.7)  
Vial Number: 12



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(47) Trichloroethene (T)  
 16.533min (-0.006) 0.12ng  
 response 4338

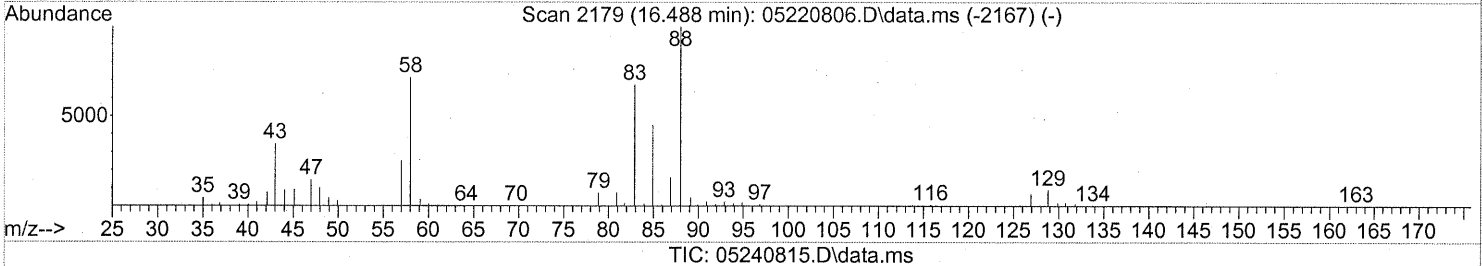
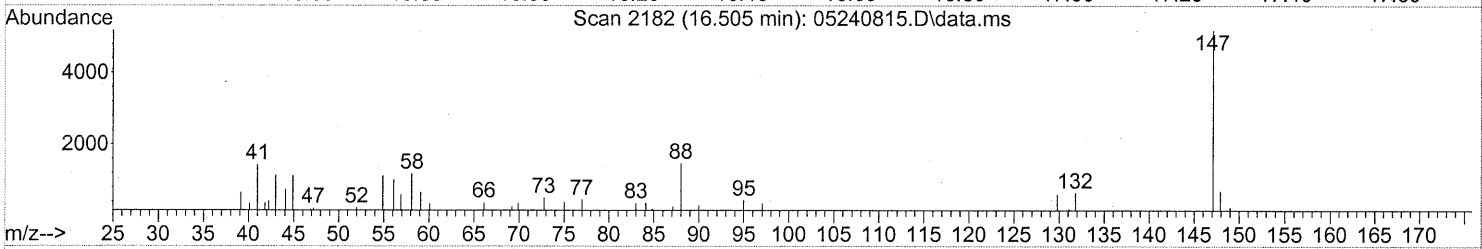
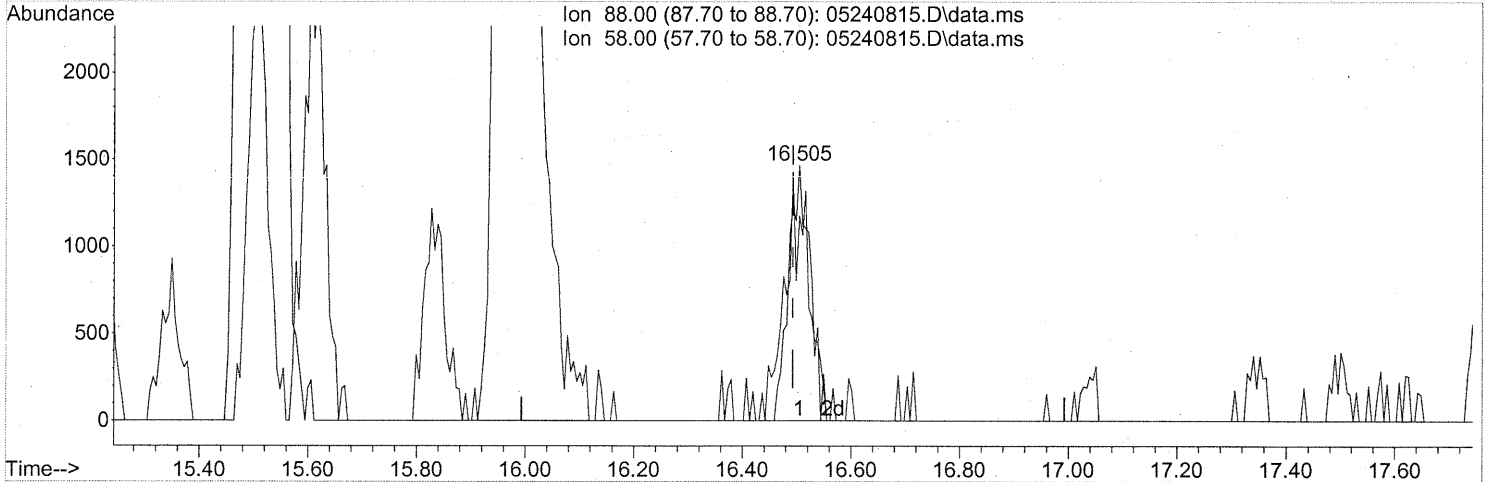
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	99.68
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.505min (+0.011) 0.17ng  
 response 4003

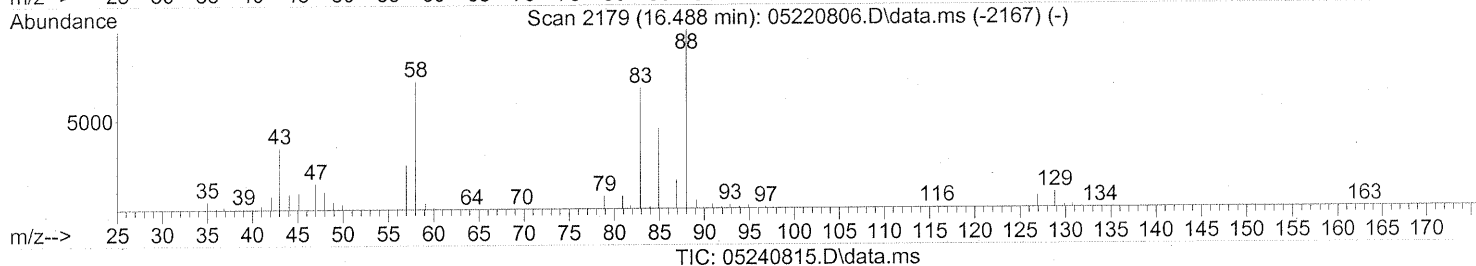
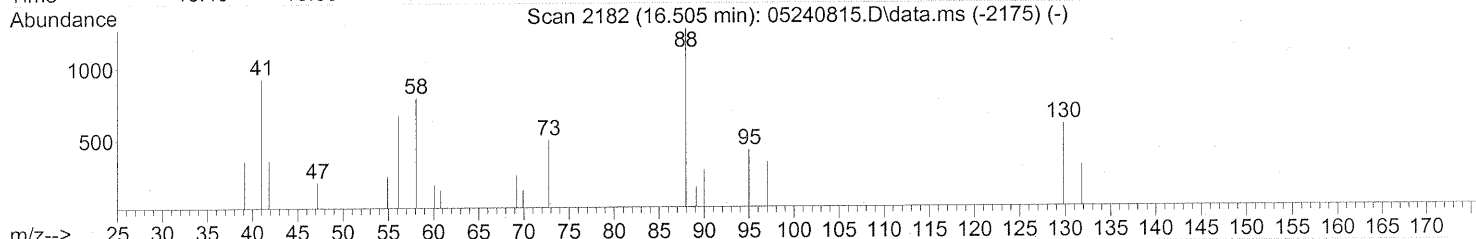
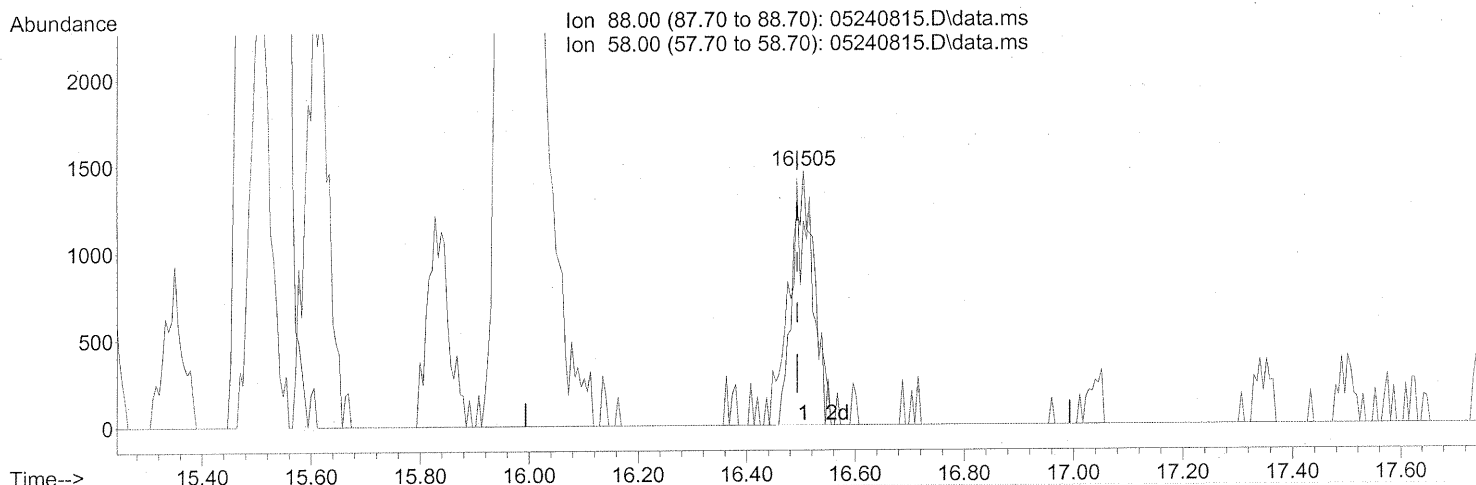
Ion	Exp%	Act%
88.00	100	100
58.00	90.10	108.69
0.00	0.00	0.00
0.00	0.00	0.00

*before*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801422-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:24:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.505min (+0.011) 0.17ng

response 4003

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	108.69
0.00	0.00	0.00
0.00	0.00	0.00

*after subst*

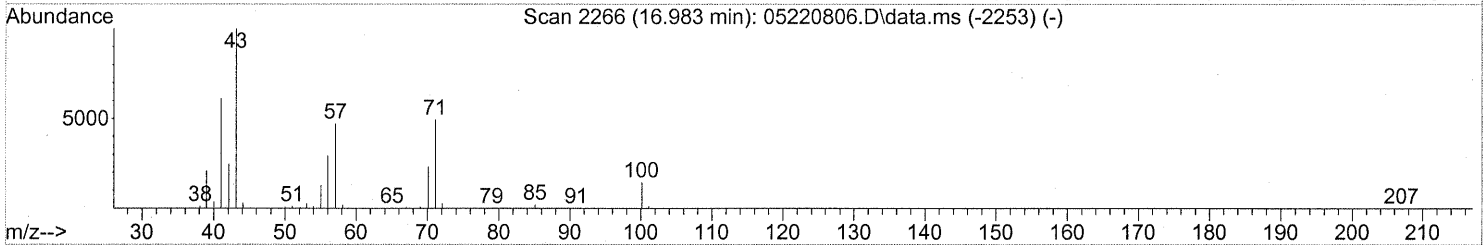
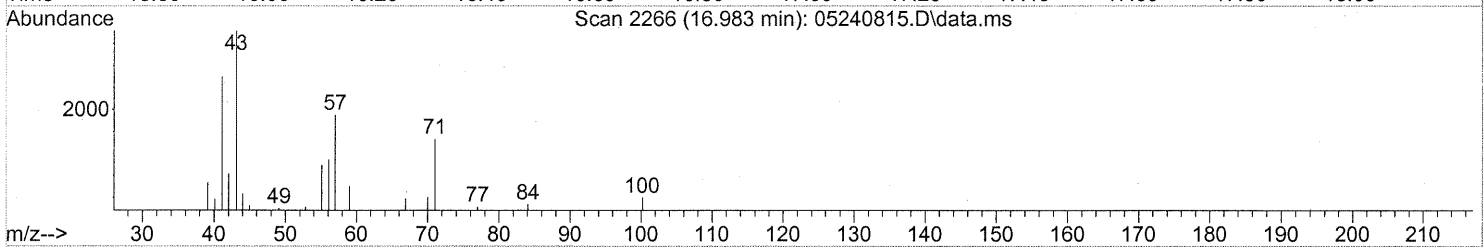
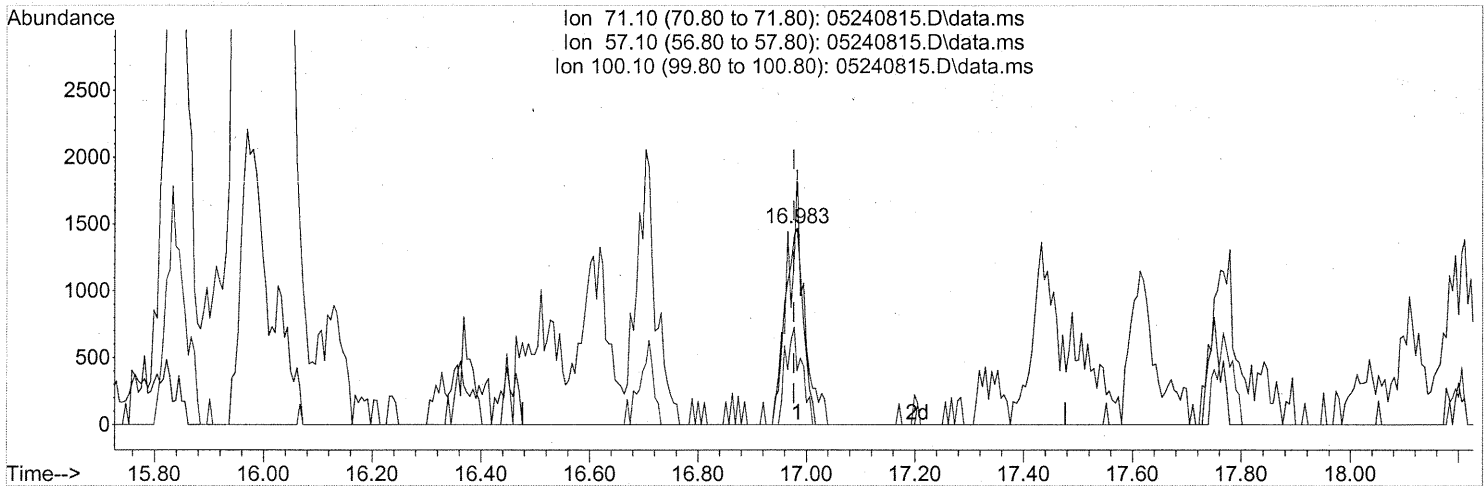
*IDA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(51) n-Heptane (T)

16.983min (+0.006) 0.10ng

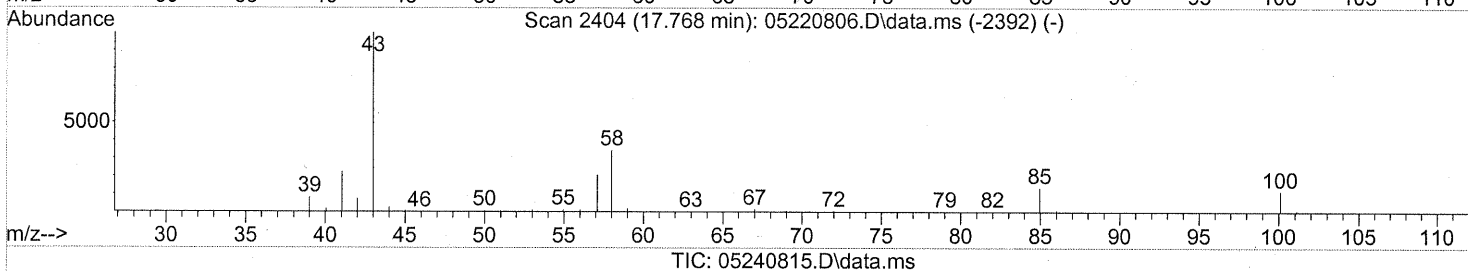
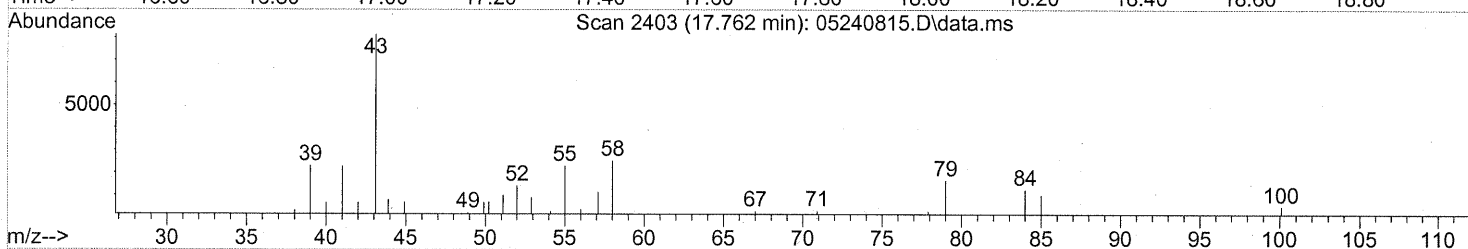
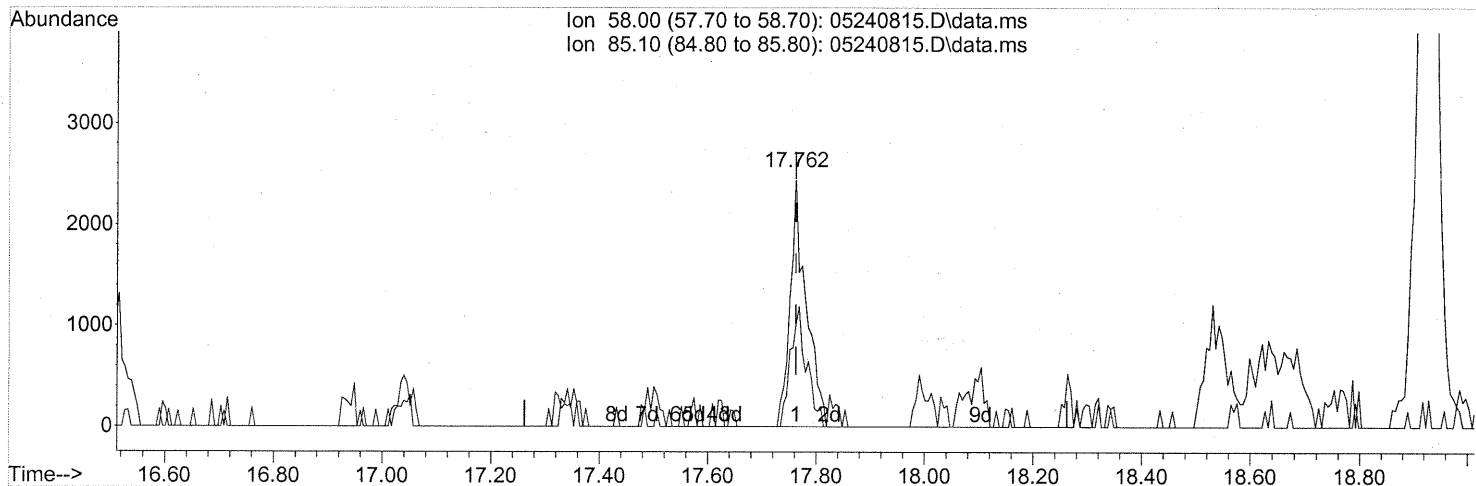
response 3378

Ion	Exp%	Act%
71.10	100	100
57.10	124.90	115.75
100.10	30.10	42.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.762min (-0.000) 0.16ng

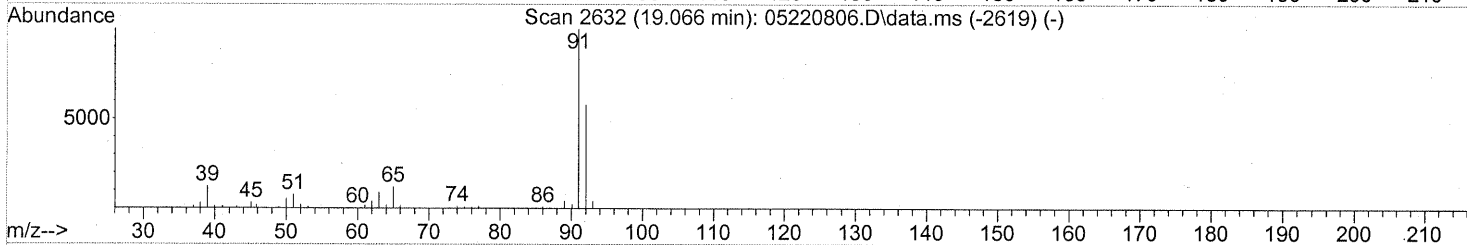
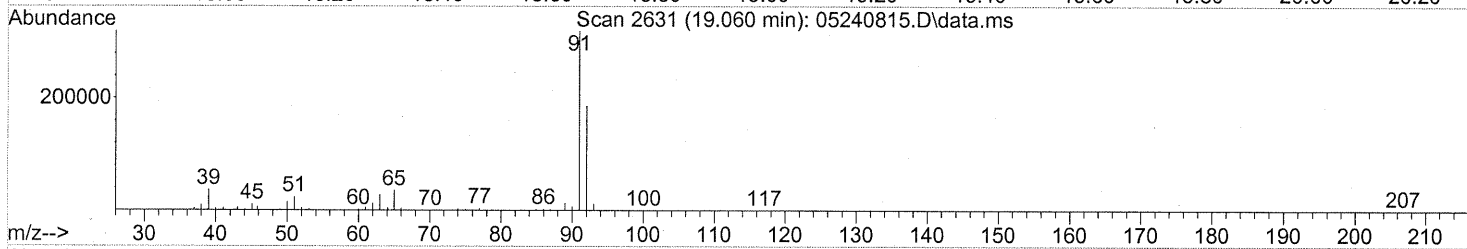
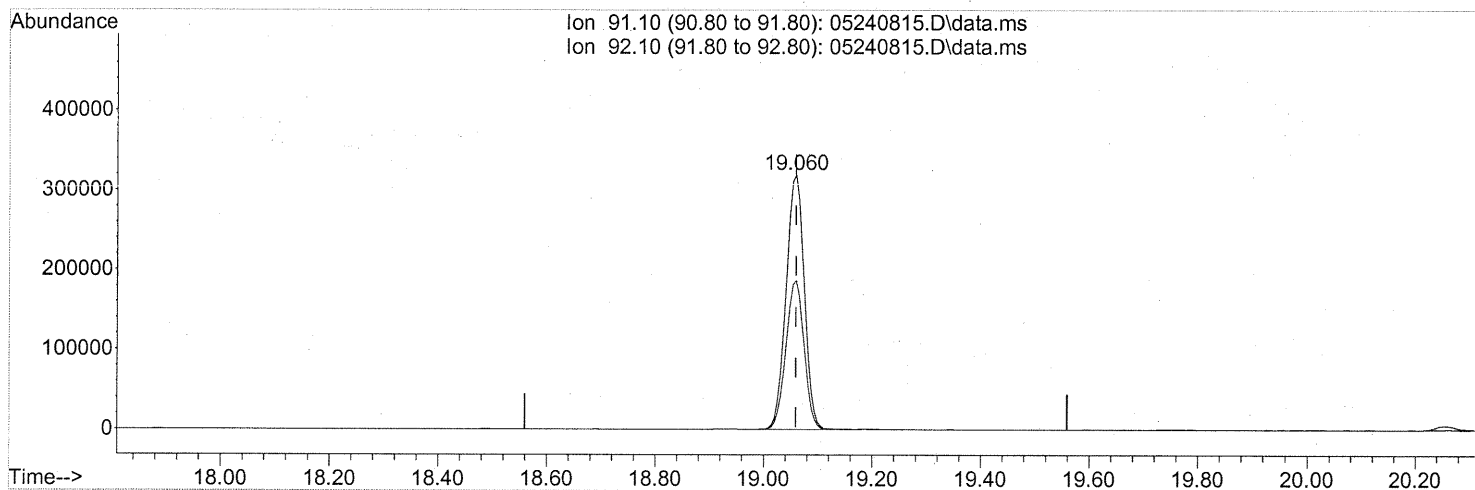
response 5045

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	48.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240815.D\data.ms

(58) Toluene (T)

19.060min (0.000) 5.49ng

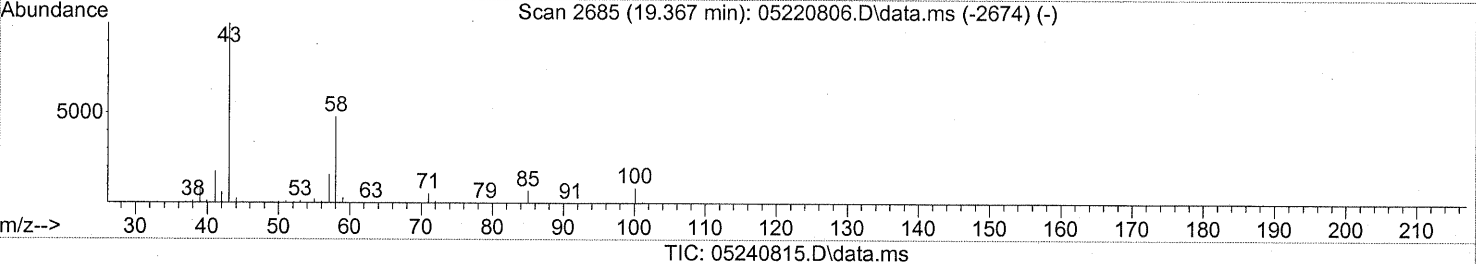
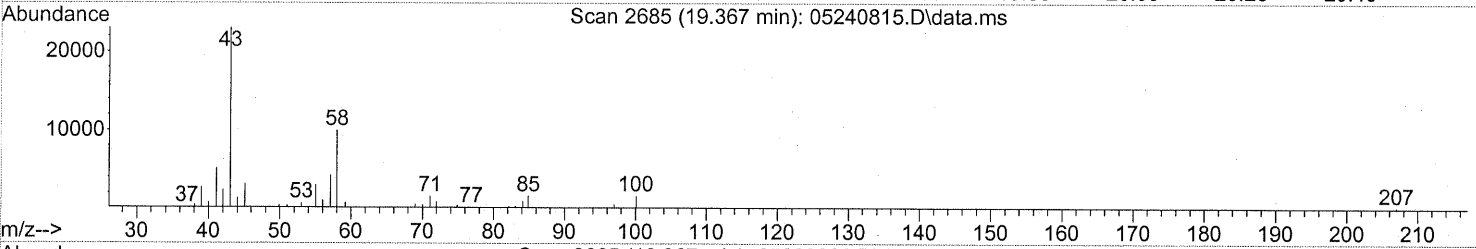
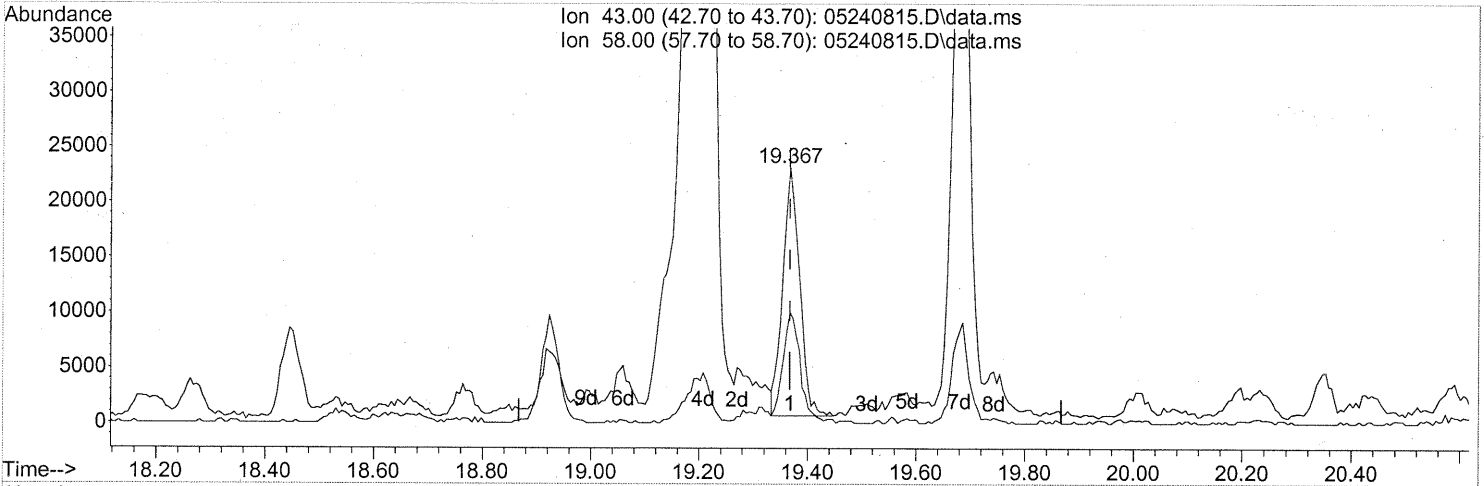
response 741583

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	58.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



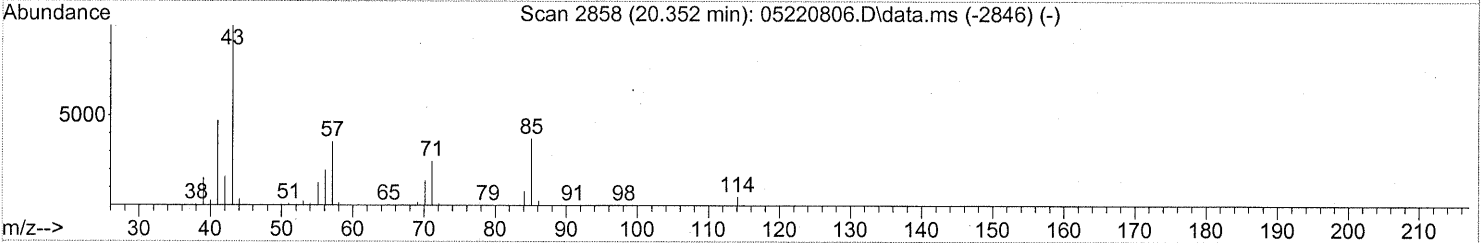
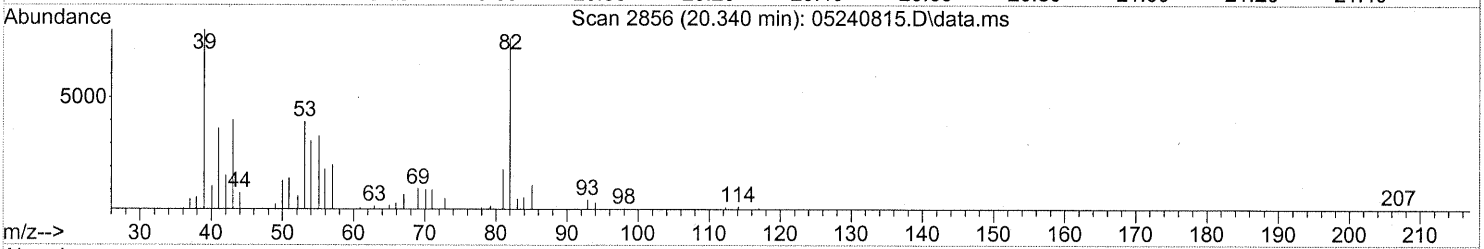
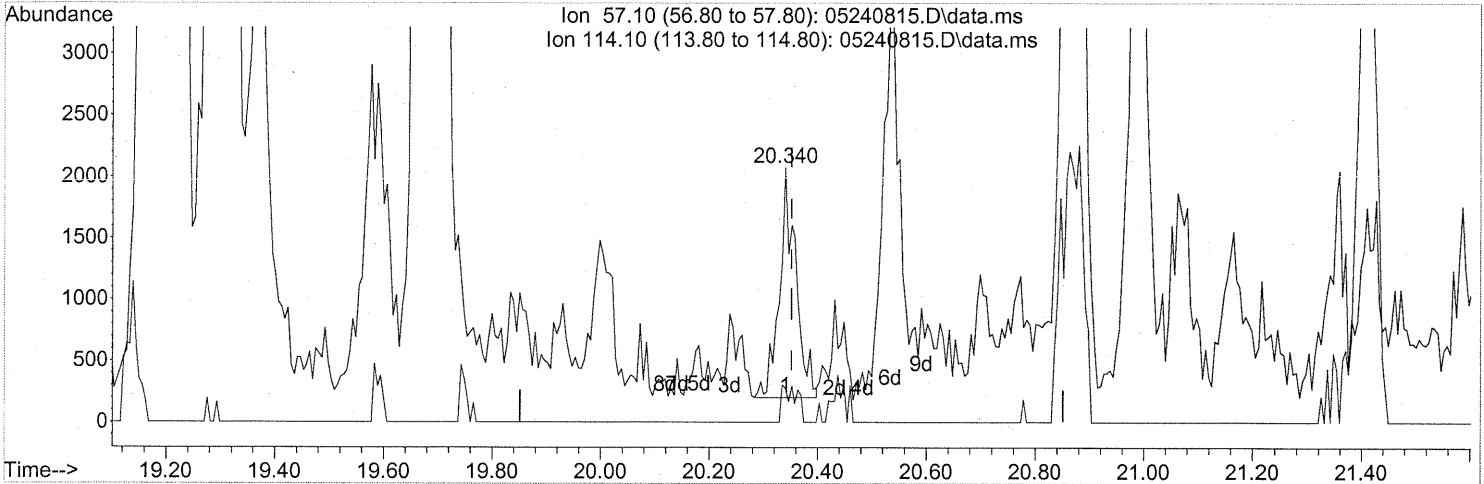
(59) 2-Hexanone (T)  
19.367min (0.000) 0.52ng  
response 48466

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	44.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(63) n-Octane (T)

20.340min (-0.011) 0.13ng

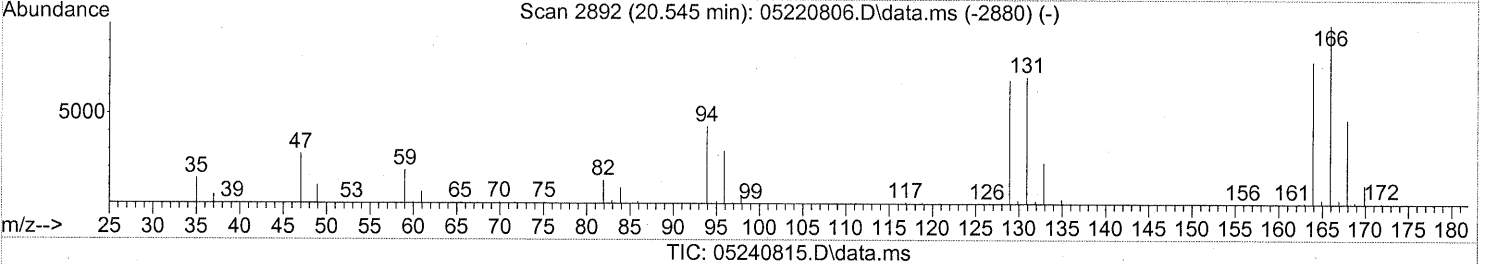
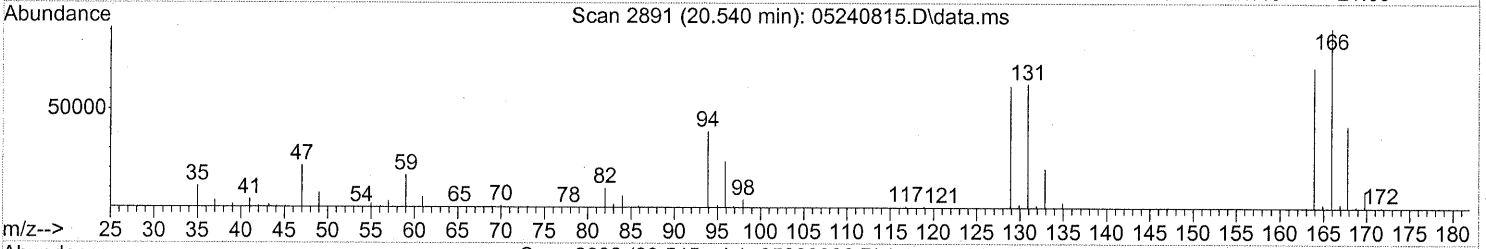
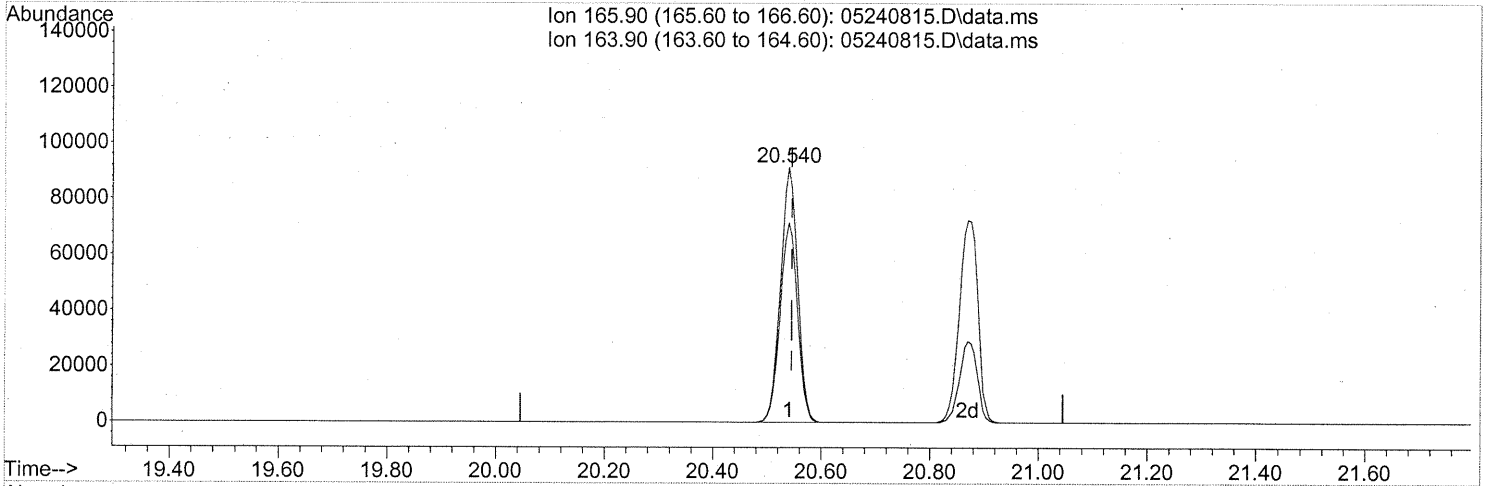
response 3903

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	14.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.540min (-0.006) 5.01ng

response 200088

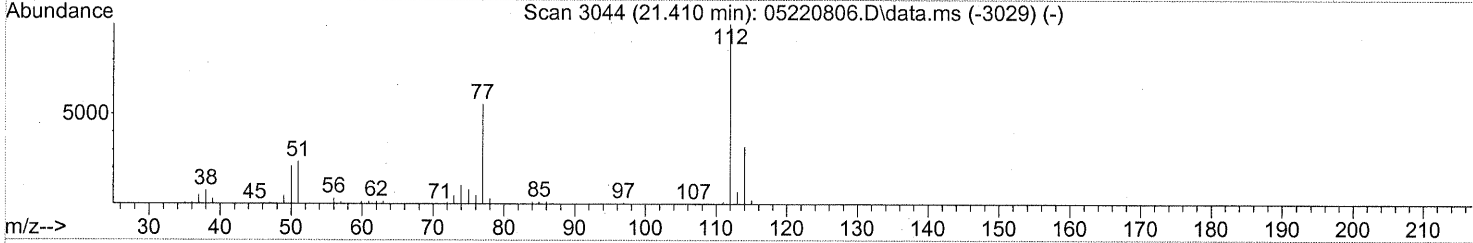
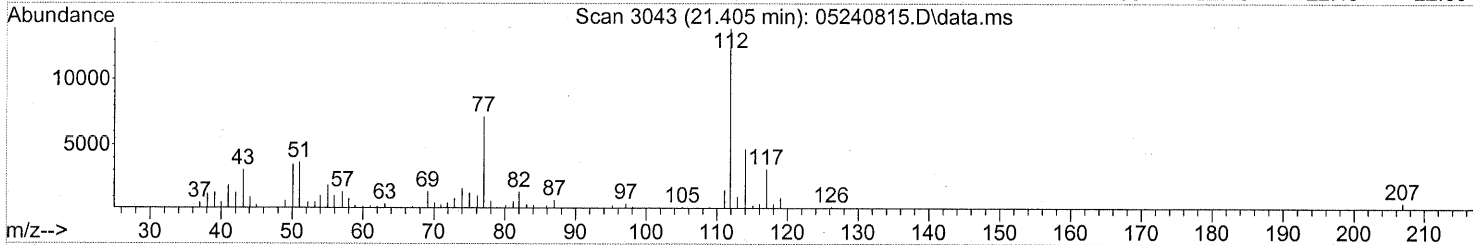
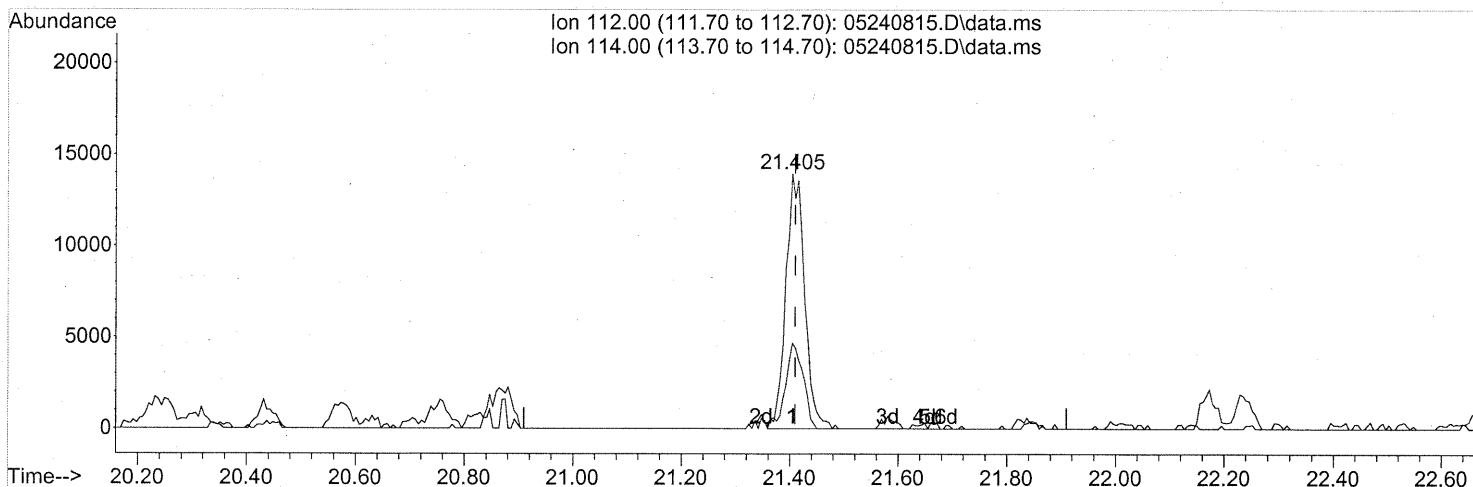
Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.16
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

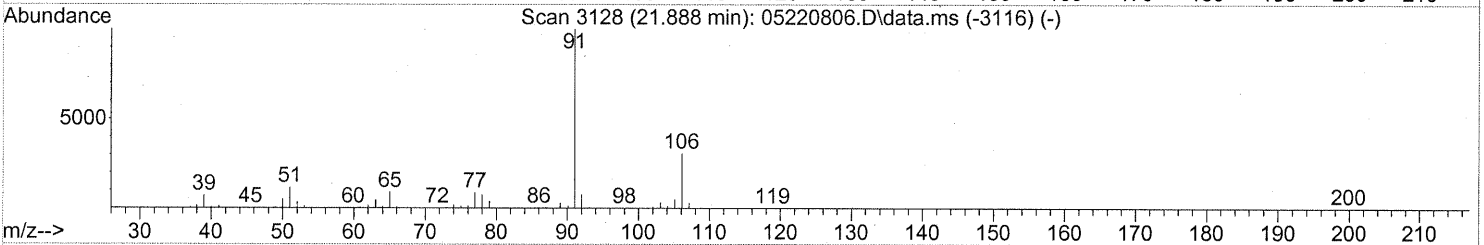
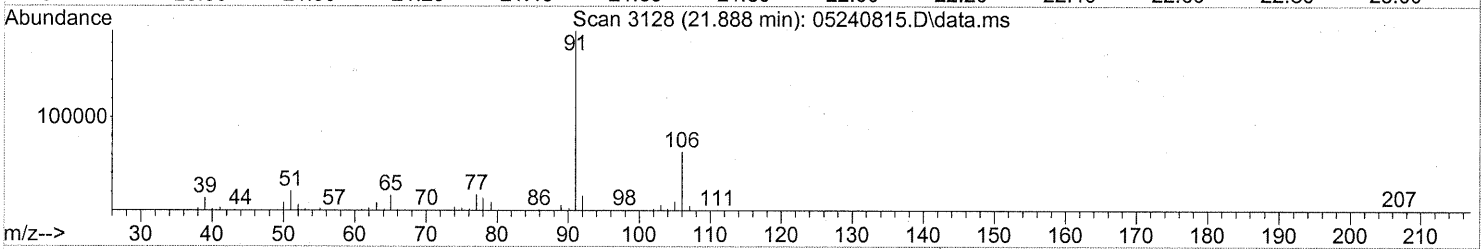
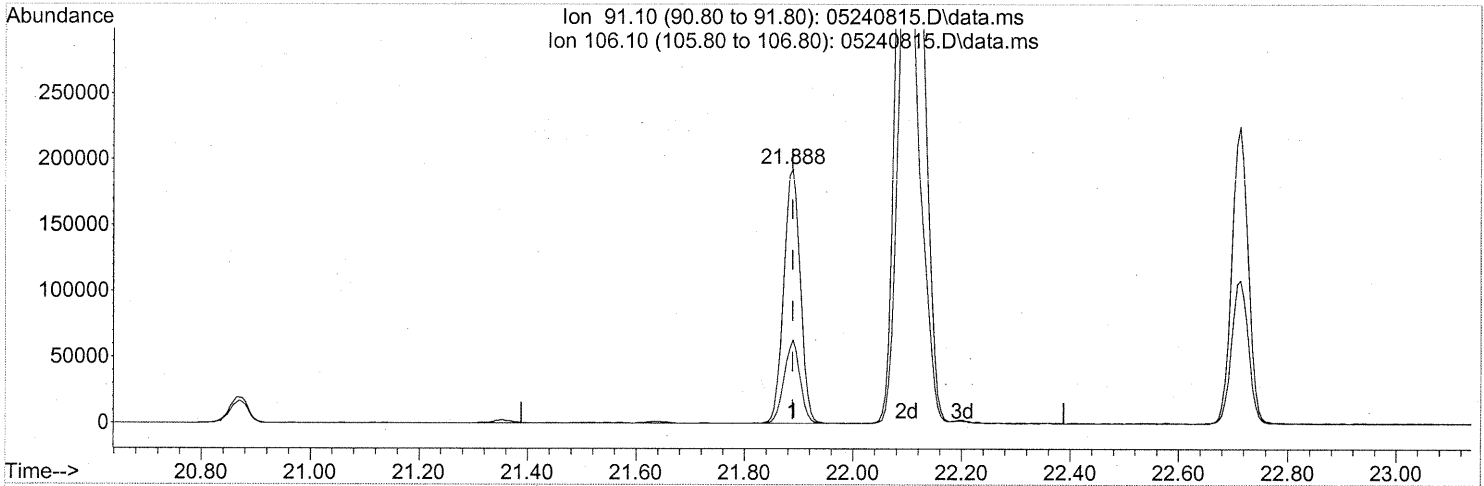
(65) Chlorobenzene (T)  
 21.405min (-0.006) 0.37ng  
 response 33365

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	31.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

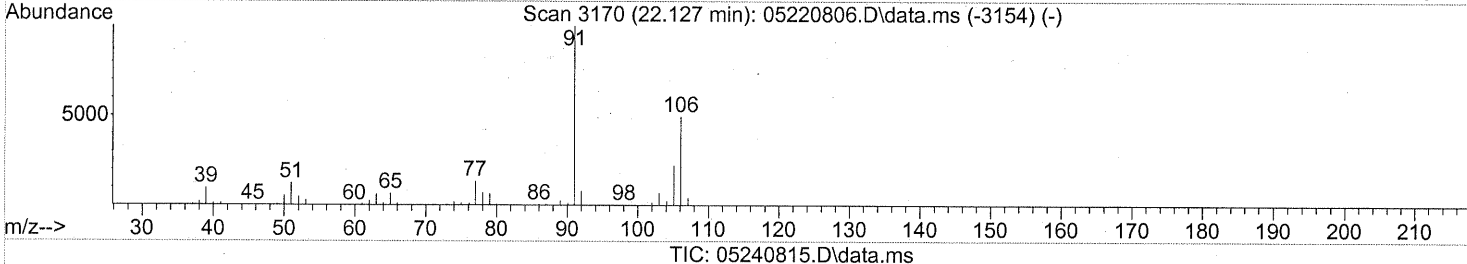
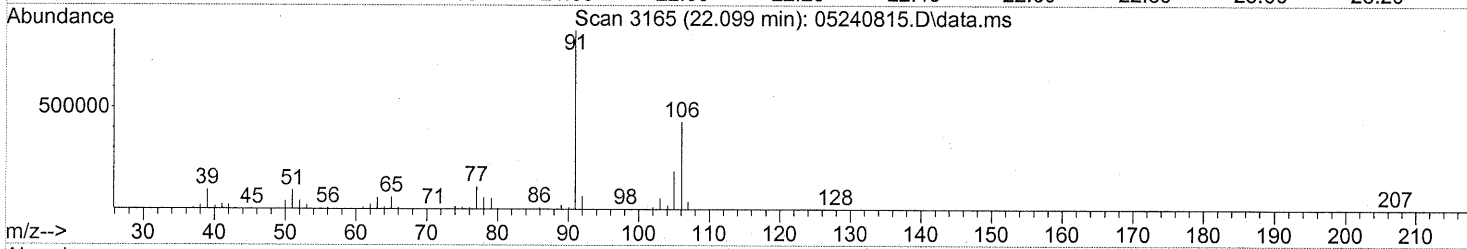
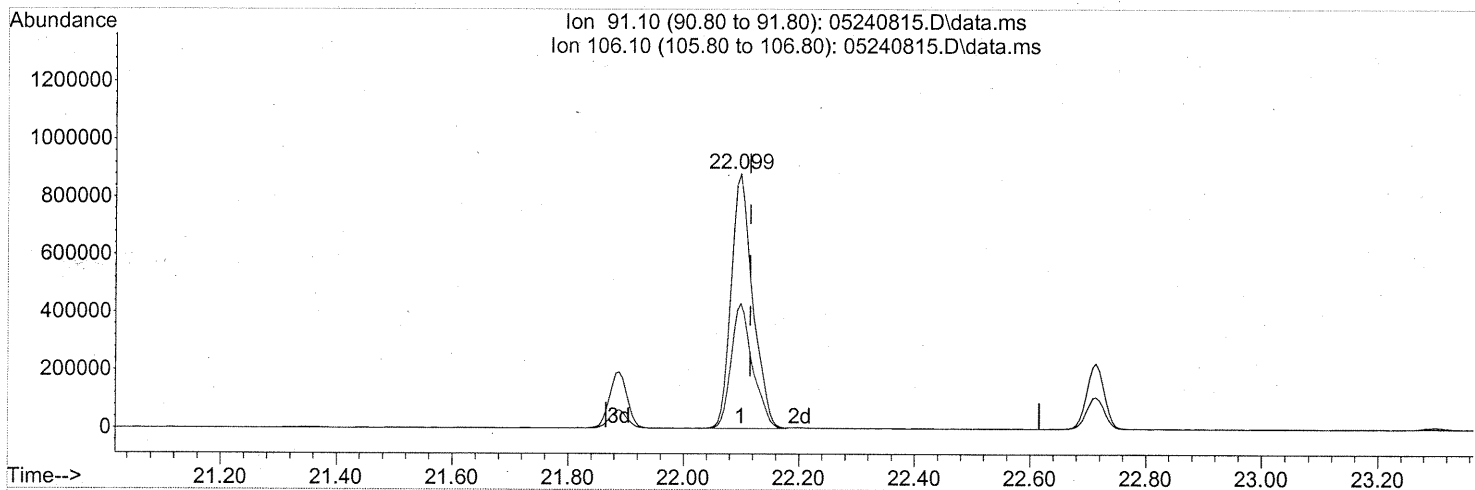
(66) Ethylbenzene (T)  
 21.888min (0.000) 2.64ng  
 response 409118

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	31.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240815.D\data.ms

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

22.099min (-0.017) 21.95ng

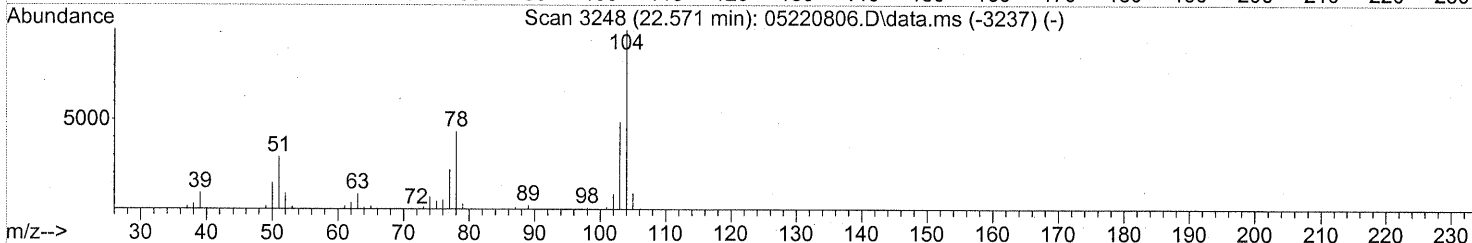
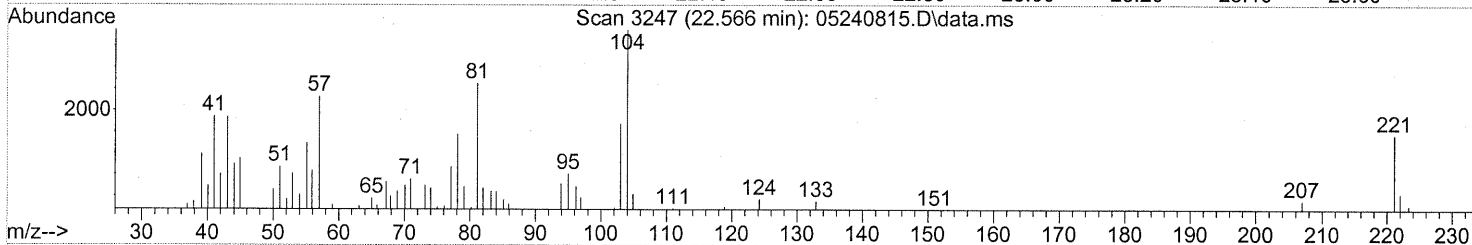
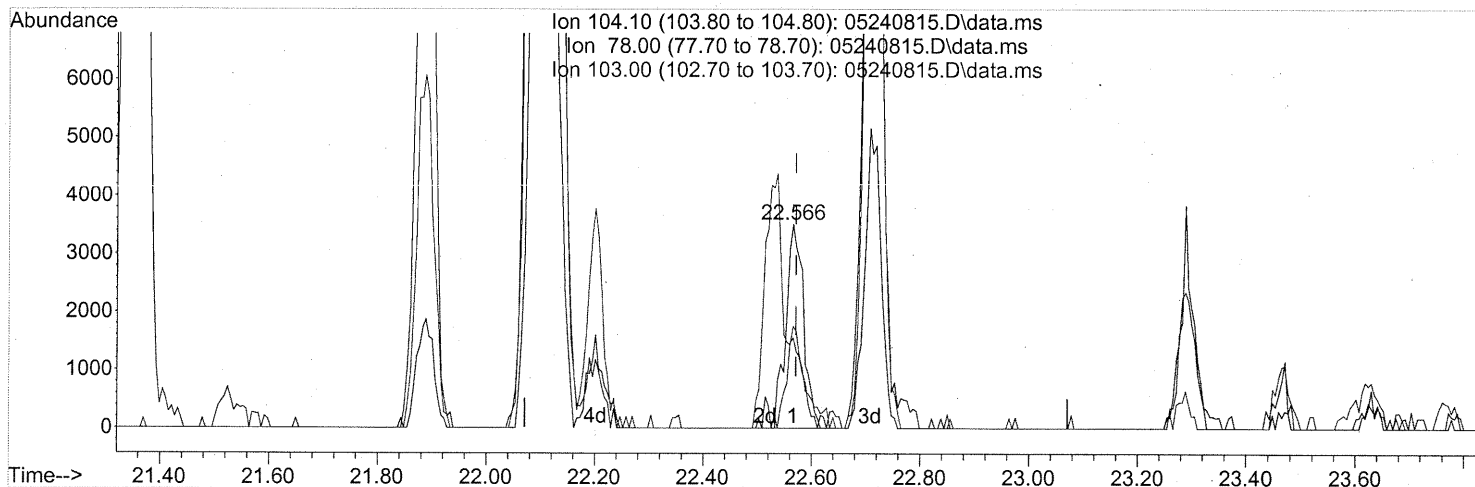
response 2272243

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	48.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(69) Styrene (T)

22.566min (-0.006) 0.09ng

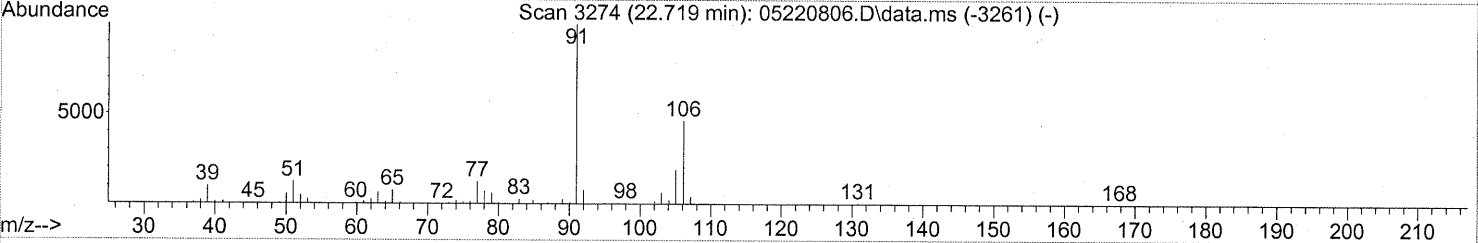
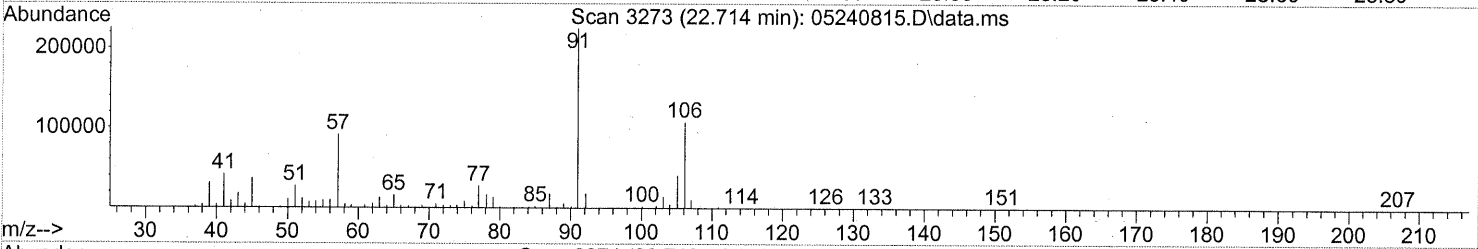
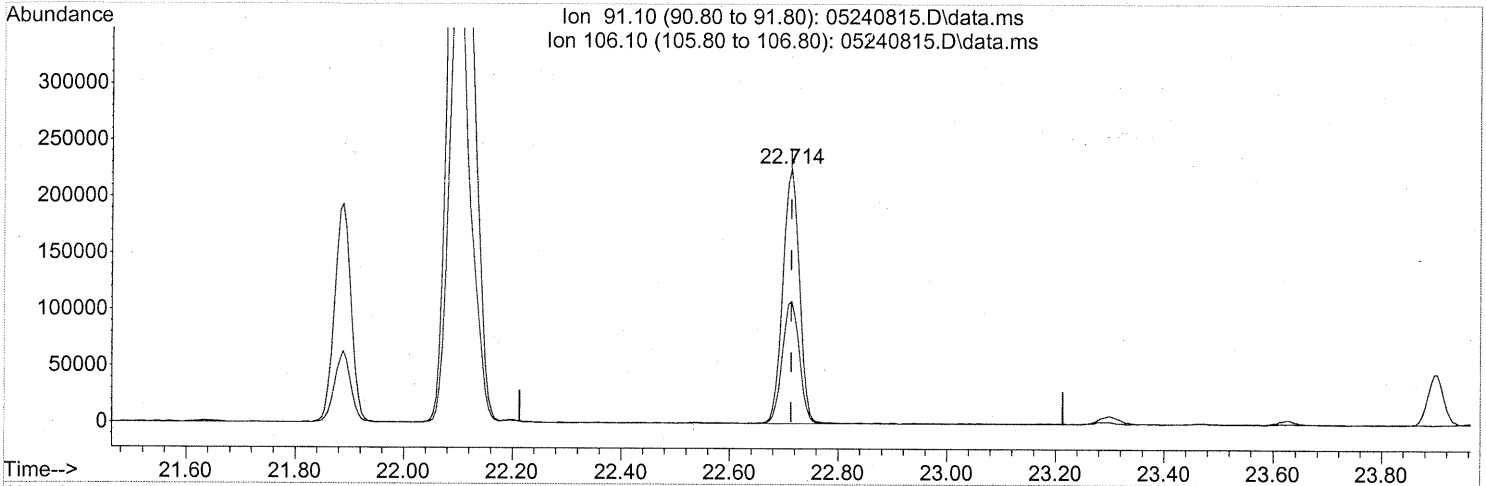
response 7962

Ion	Exp%	Act%
104.10	100	100
78.00	39.40	43.23
103.00	47.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240815.D\data.ms

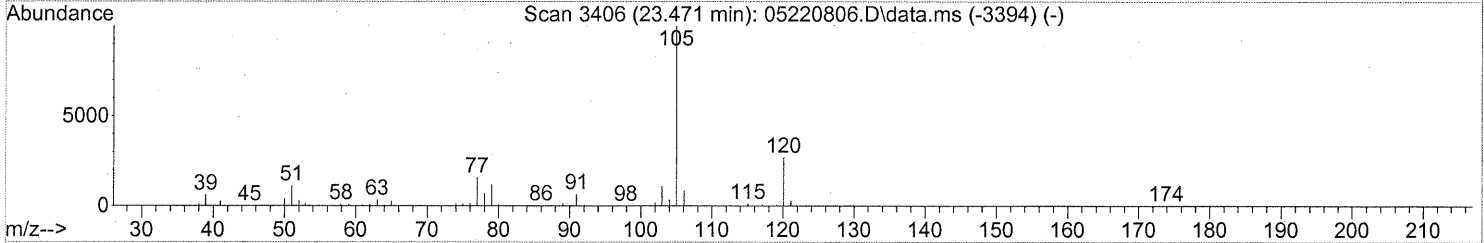
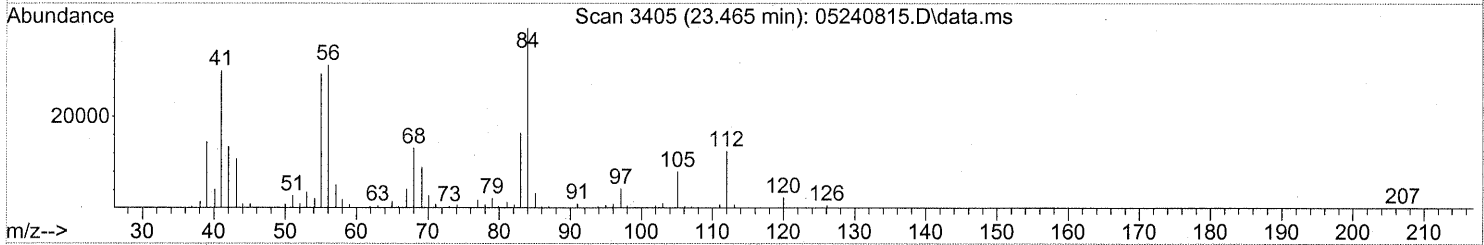
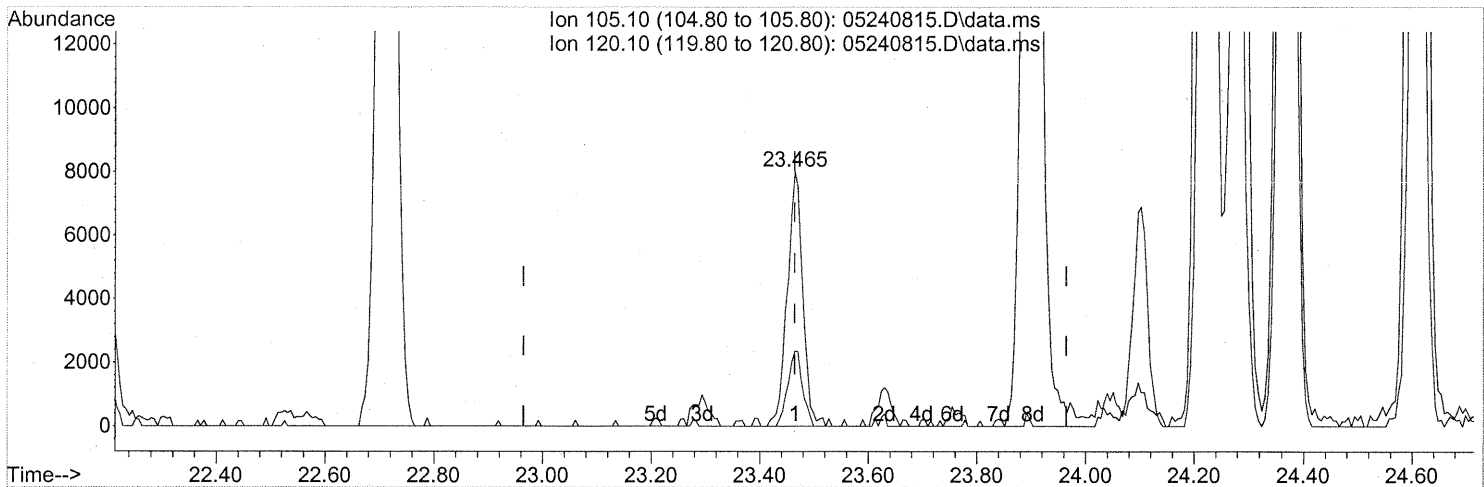
(70) o-Xylene (T)  
22.714min (0.000) 4.24ng  
response 473854

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	49.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240815.D\data.ms

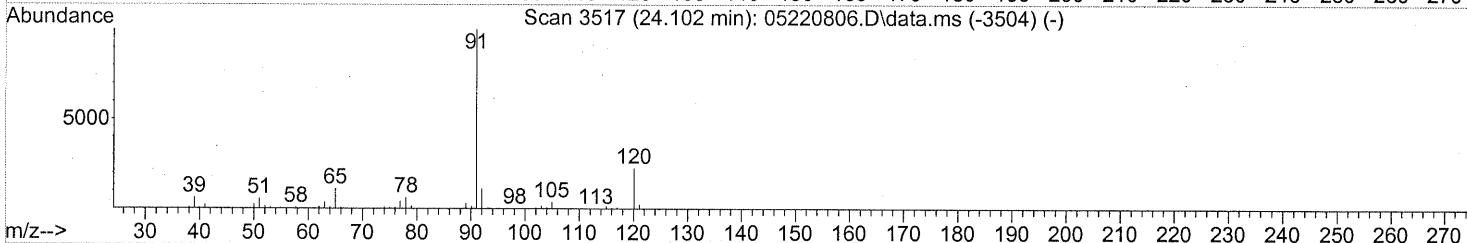
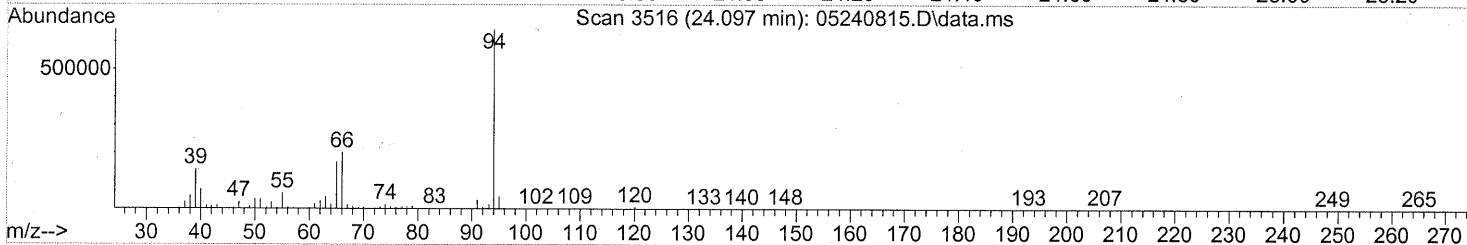
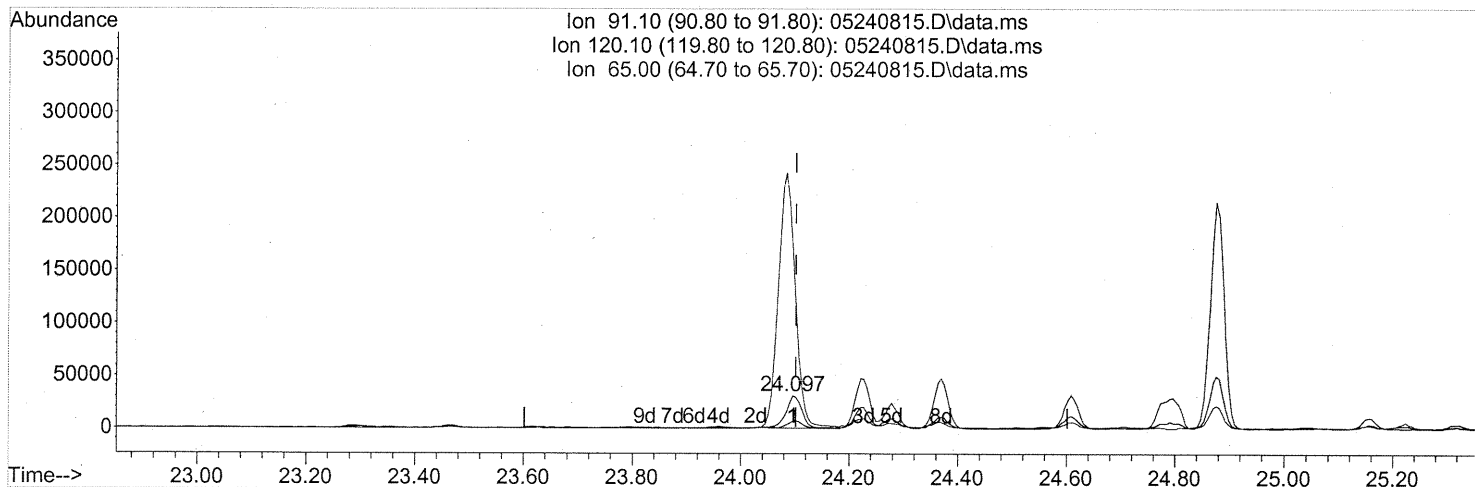
(74) Cumene (T)  
23.465min (0.000) 0.11ng  
response 15876

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	27.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(76) n-Propylbenzene (T)

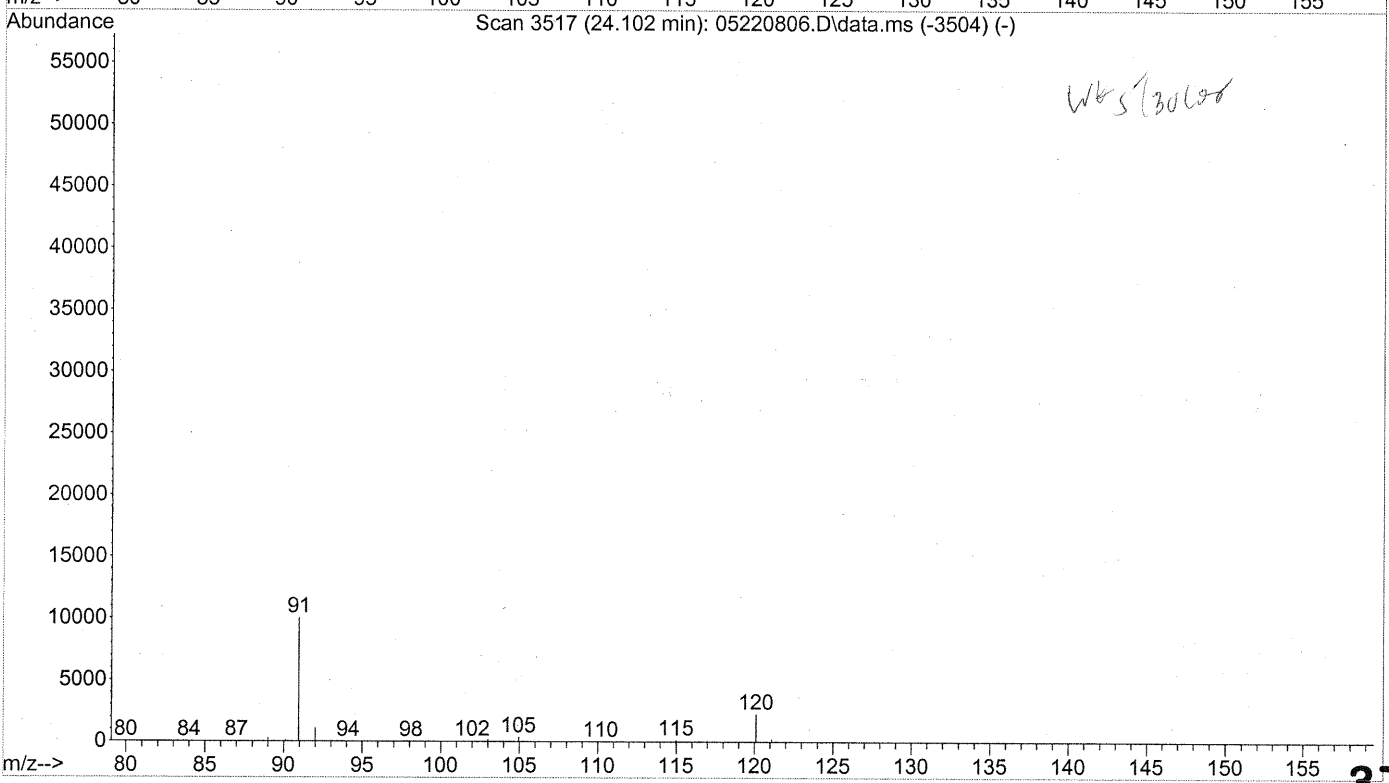
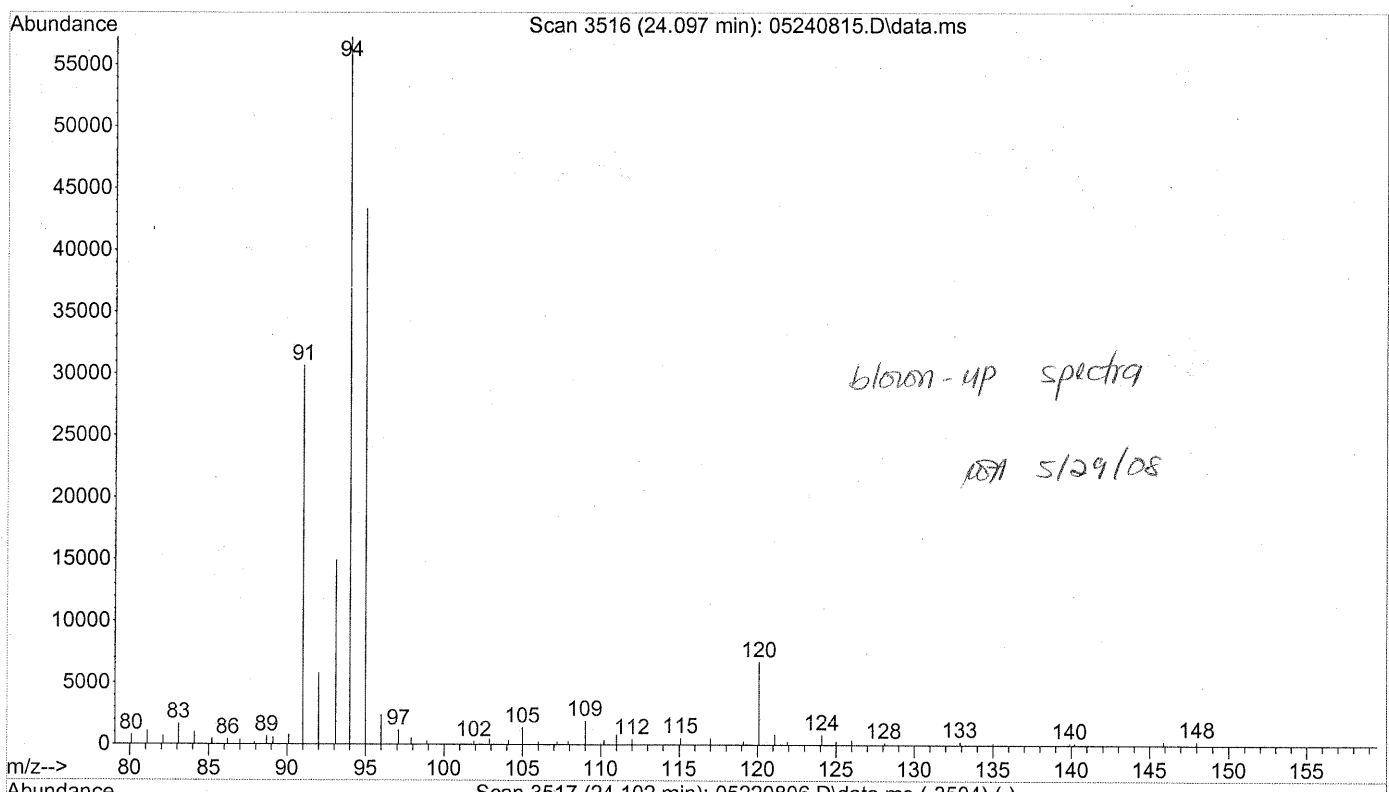
24.097min (-0.006) 0.32ng

response 60399

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	21.44
65.00	11.40	871.89#
0.00	0.00	0.00

*see blown-up spectra*

File : J:\MS13\DATA\2008\_05\24\05240815.D  
Operator : WA  
Acquired : 24 May 2008 16:42 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-006 (1000ml)  
Misc Info : ENSR SG88B-05 (-3.7, 3.7)  
Vial Number: 12

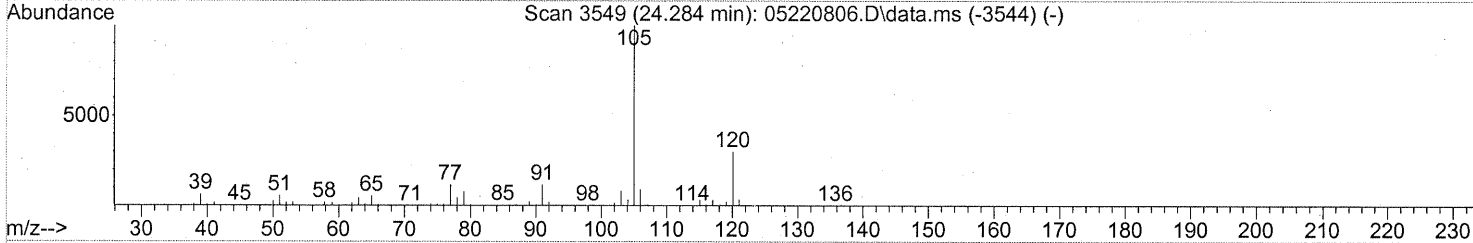
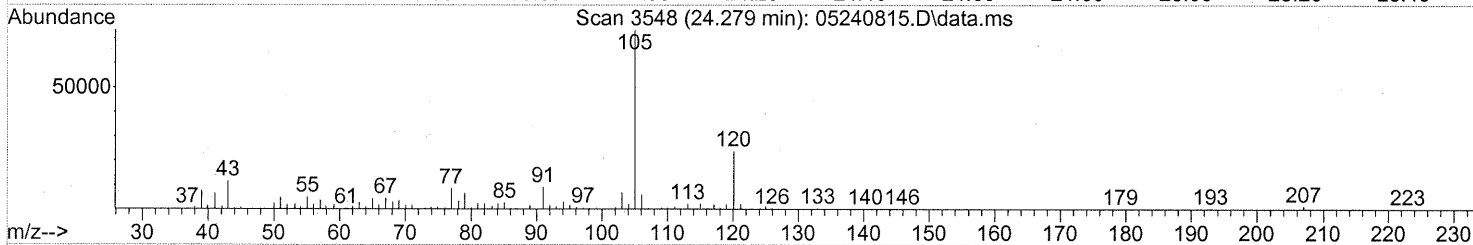
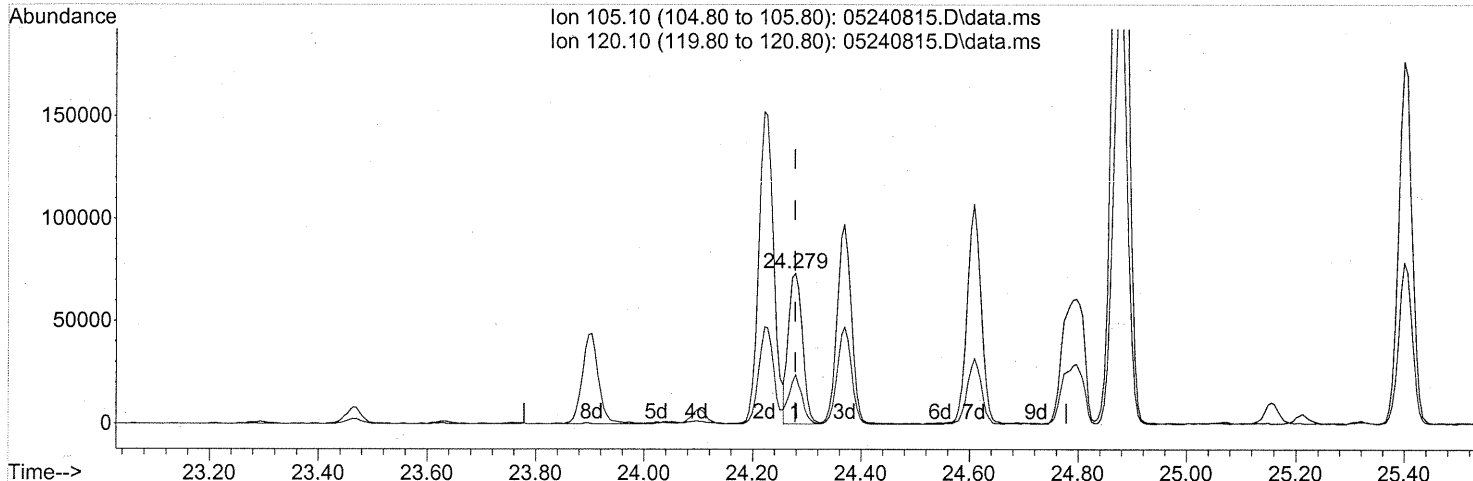




Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(78) 4-Ethyltoluene (T)

24.279min (0.000) 0.89ng

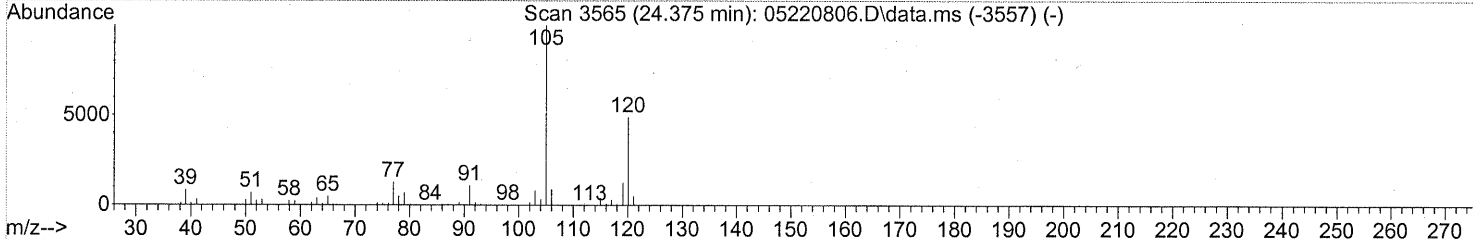
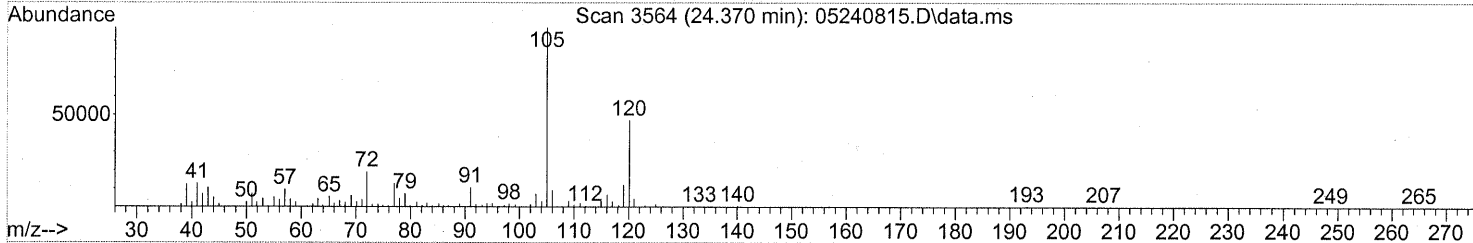
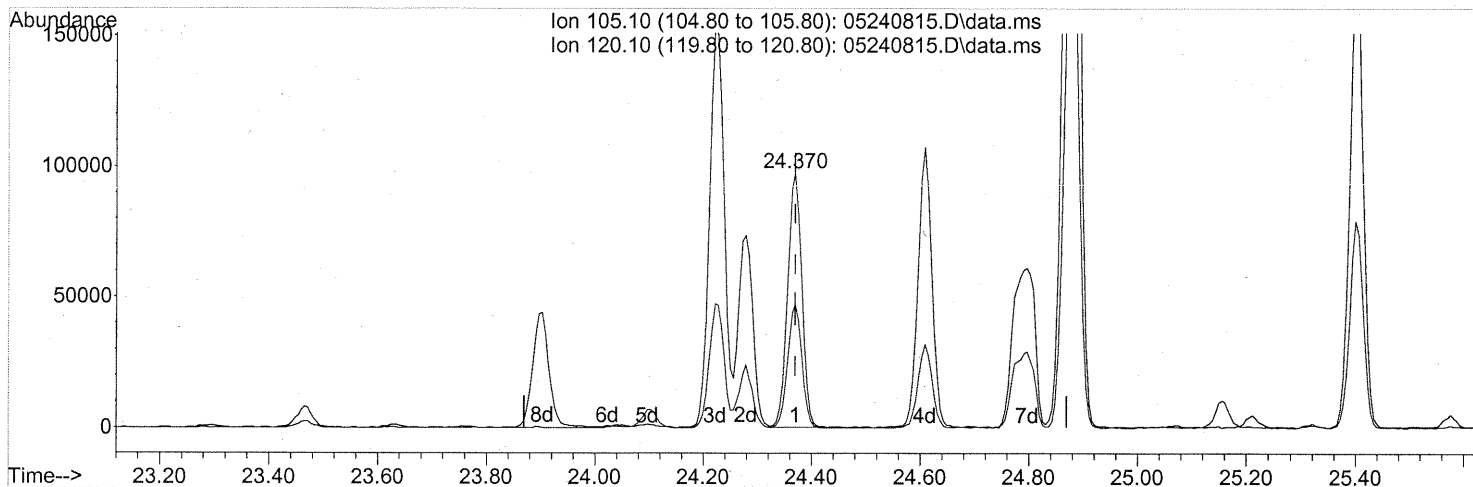
response 131932

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	29.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

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

24.370min (-0.000) 1.32ng

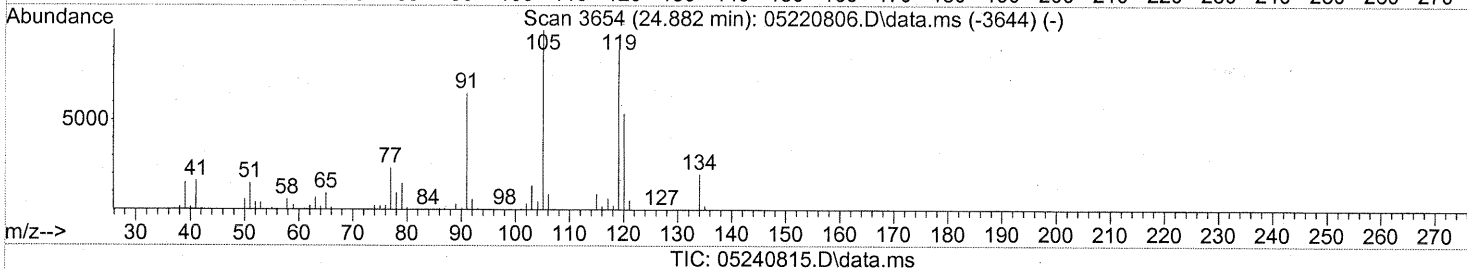
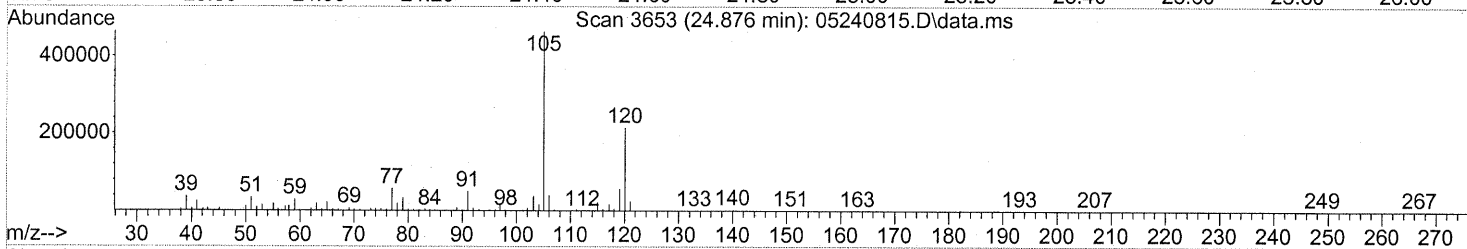
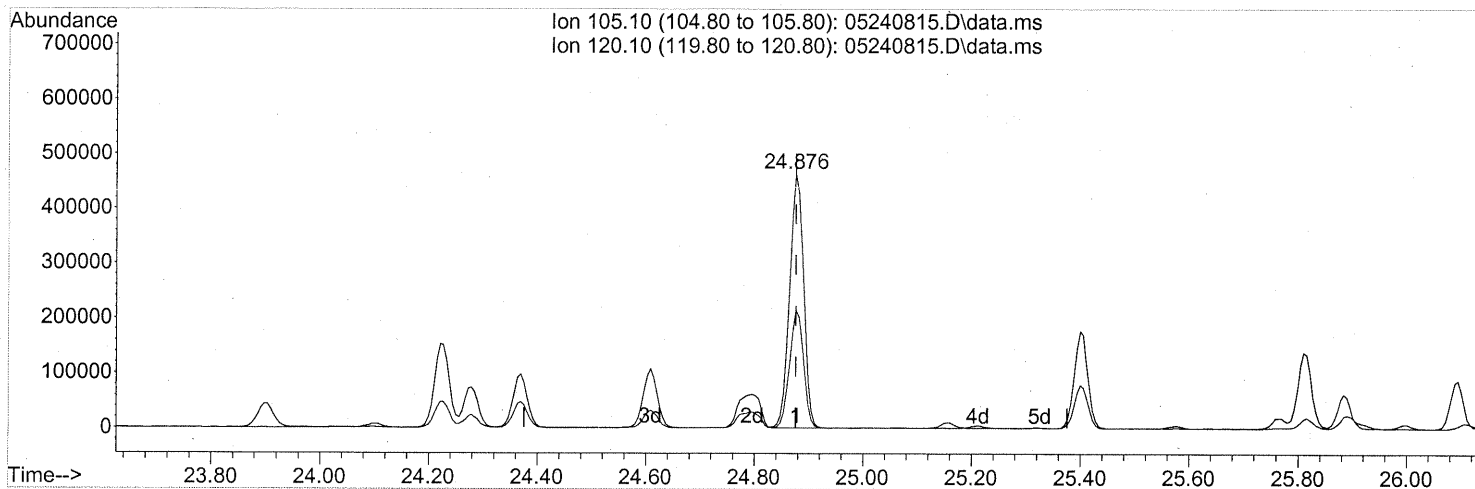
response 176545

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	48.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.876min (-0.000) 6.07ng

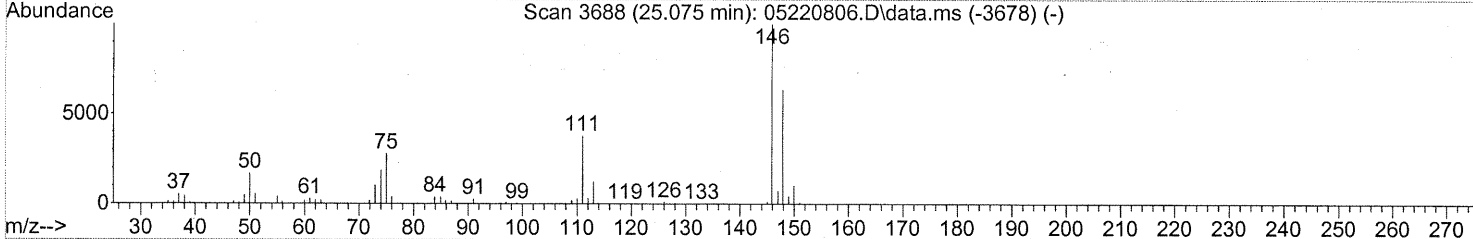
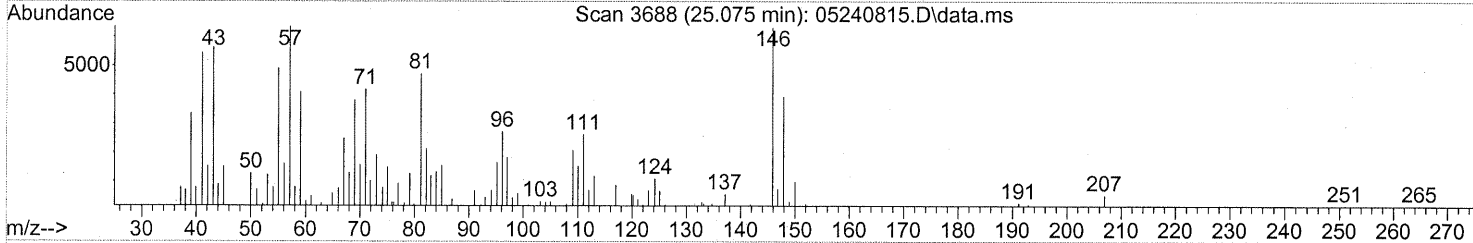
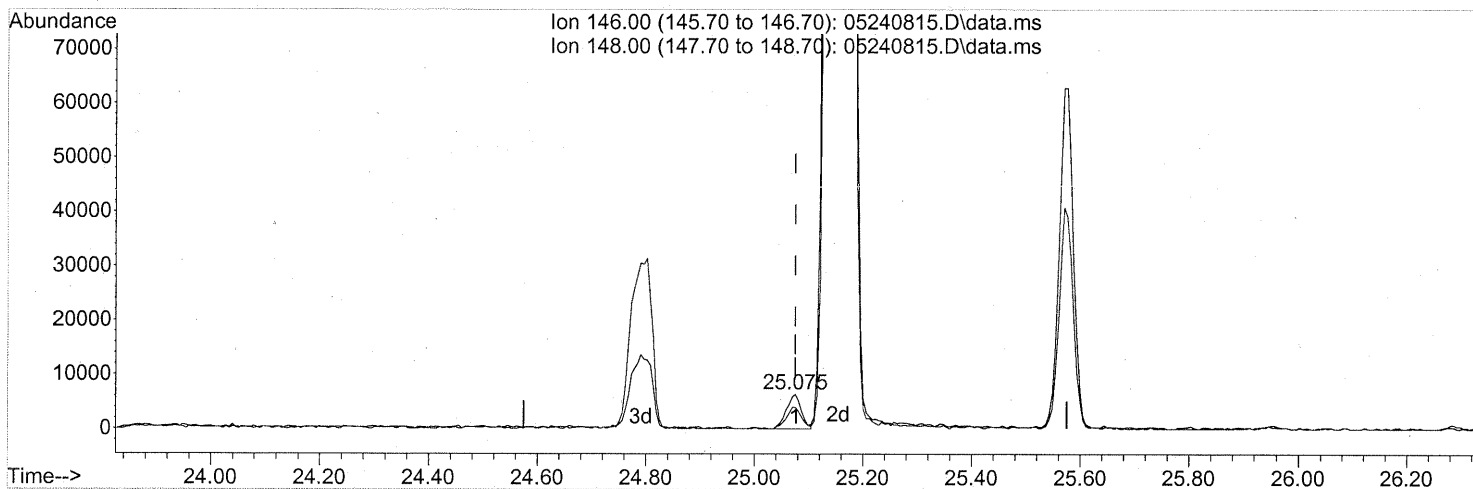
response 824218

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	46.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.075min (-0.000) 0.14ng

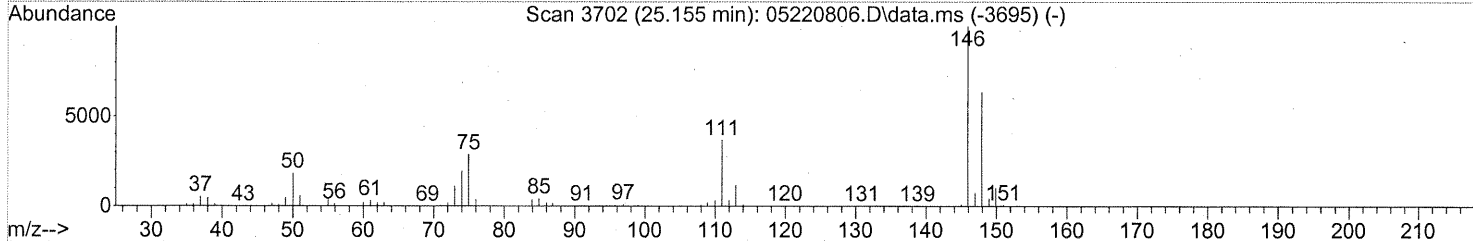
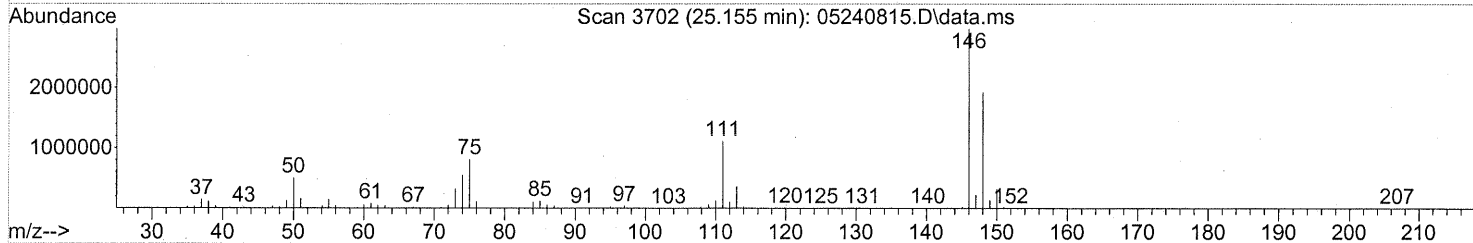
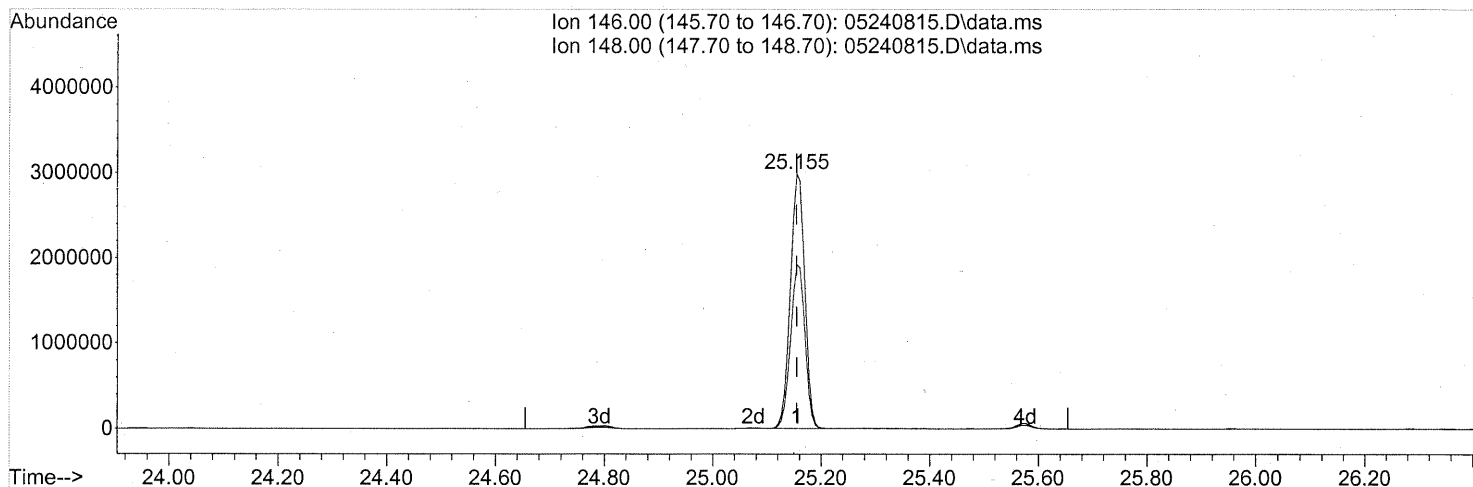
response 11822

Ion	Exp%	Act%
146.00	100	100
148.00	64.00	63.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (0.000) 66.58ng

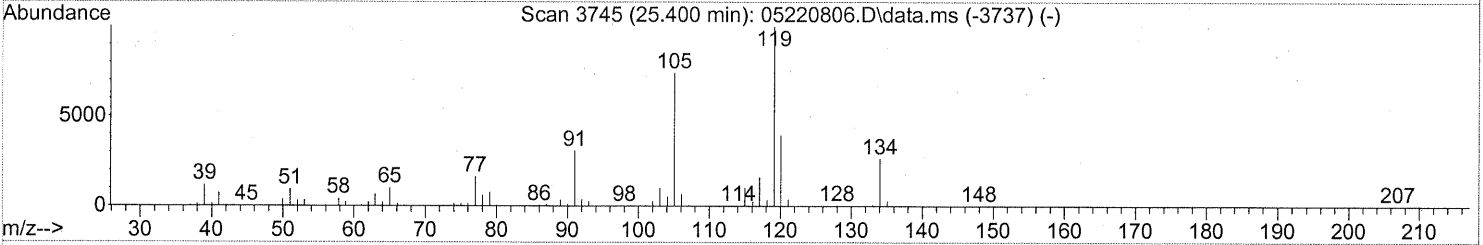
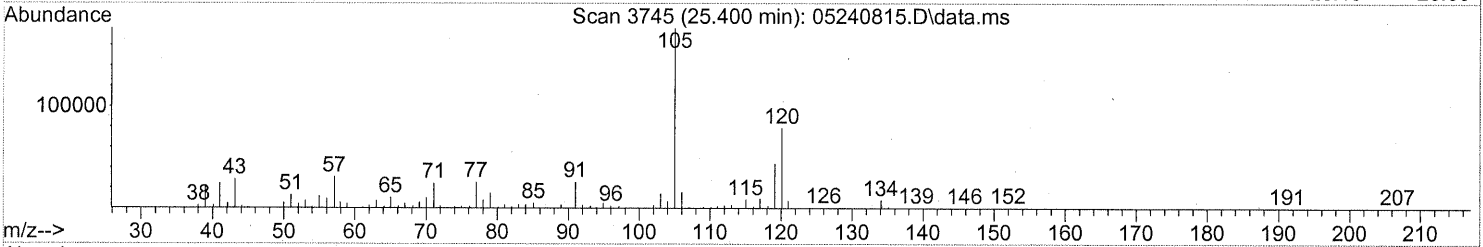
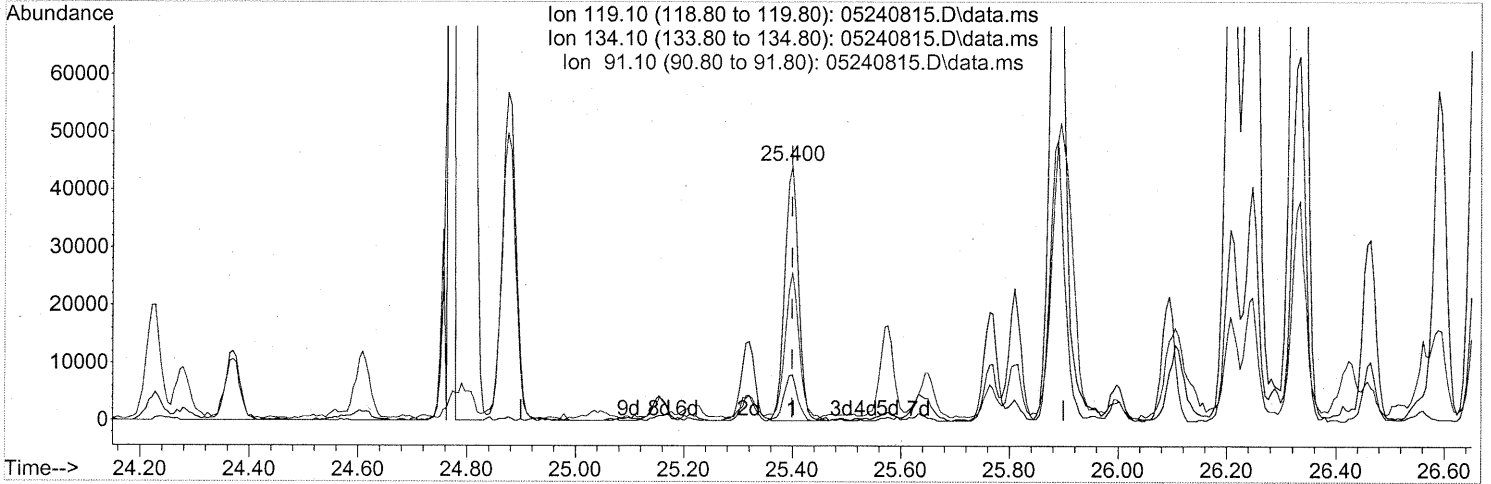
response 5481503

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	64.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

25.400min (0.000) 0.55ng

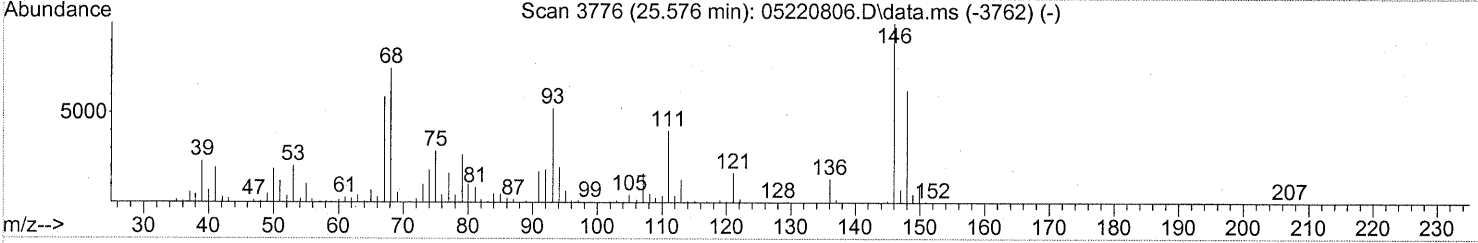
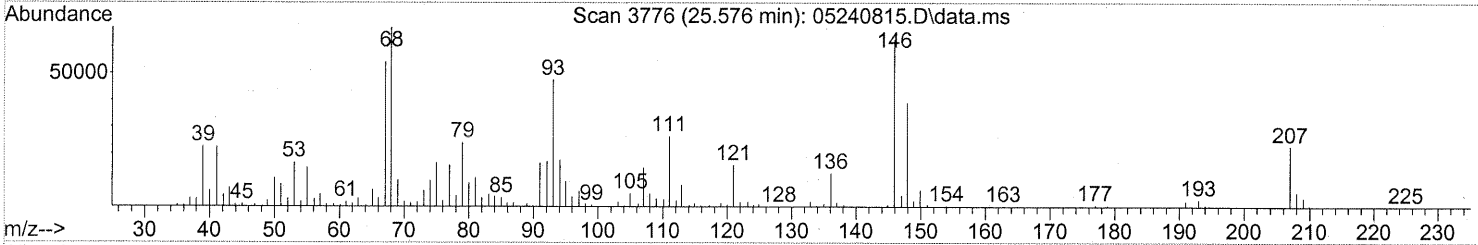
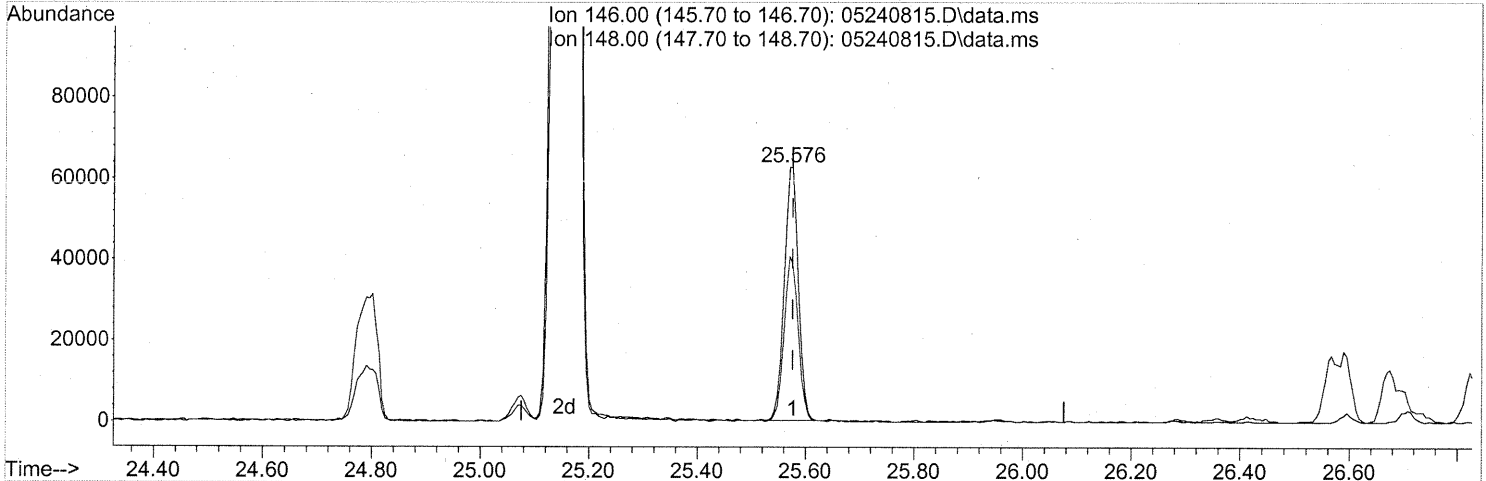
response 78048

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	17.67
91.10	27.10	56.64#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

(90) 1,2-Dichlorobenzene (T)

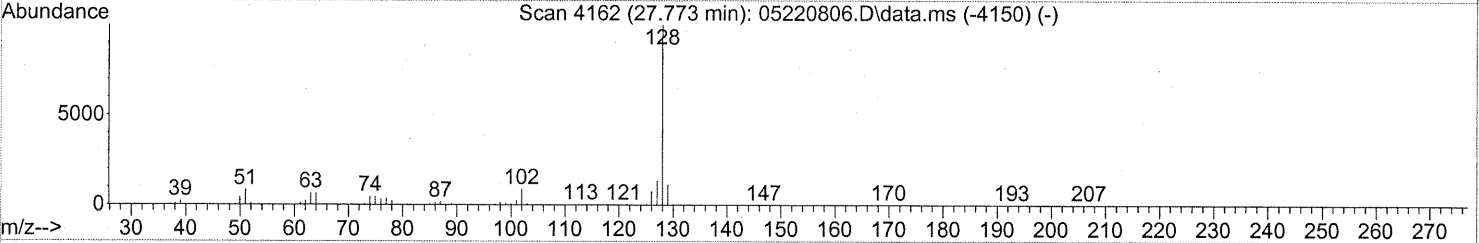
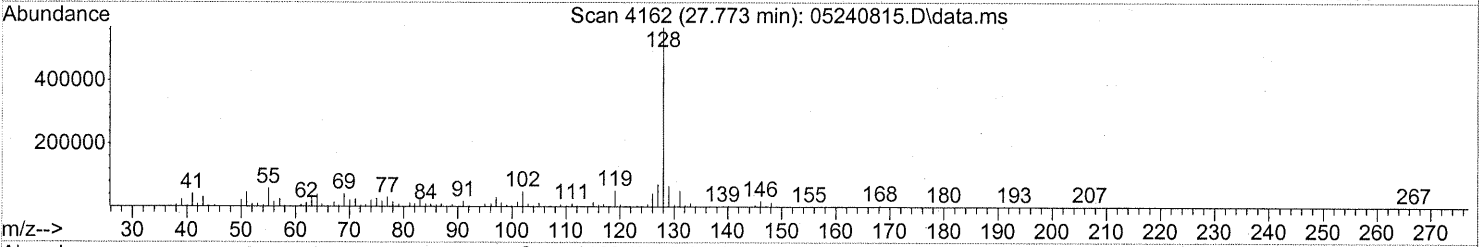
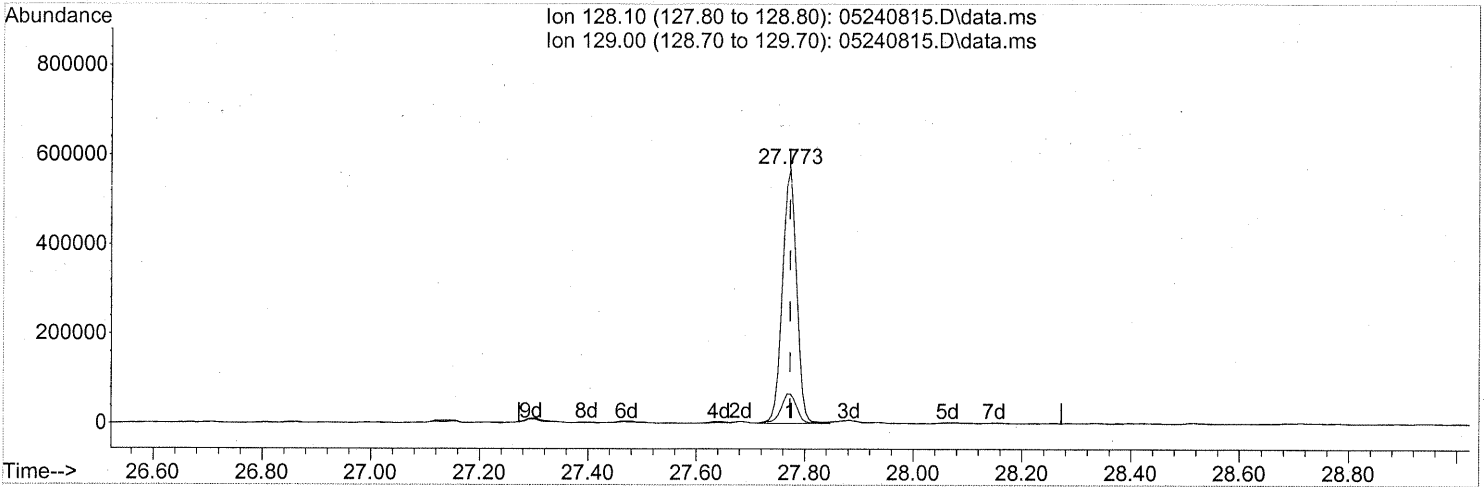
25.576min (-0.000) 1.41ng

response 113529

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	65.39
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 07:27:33 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240815.D\data.ms

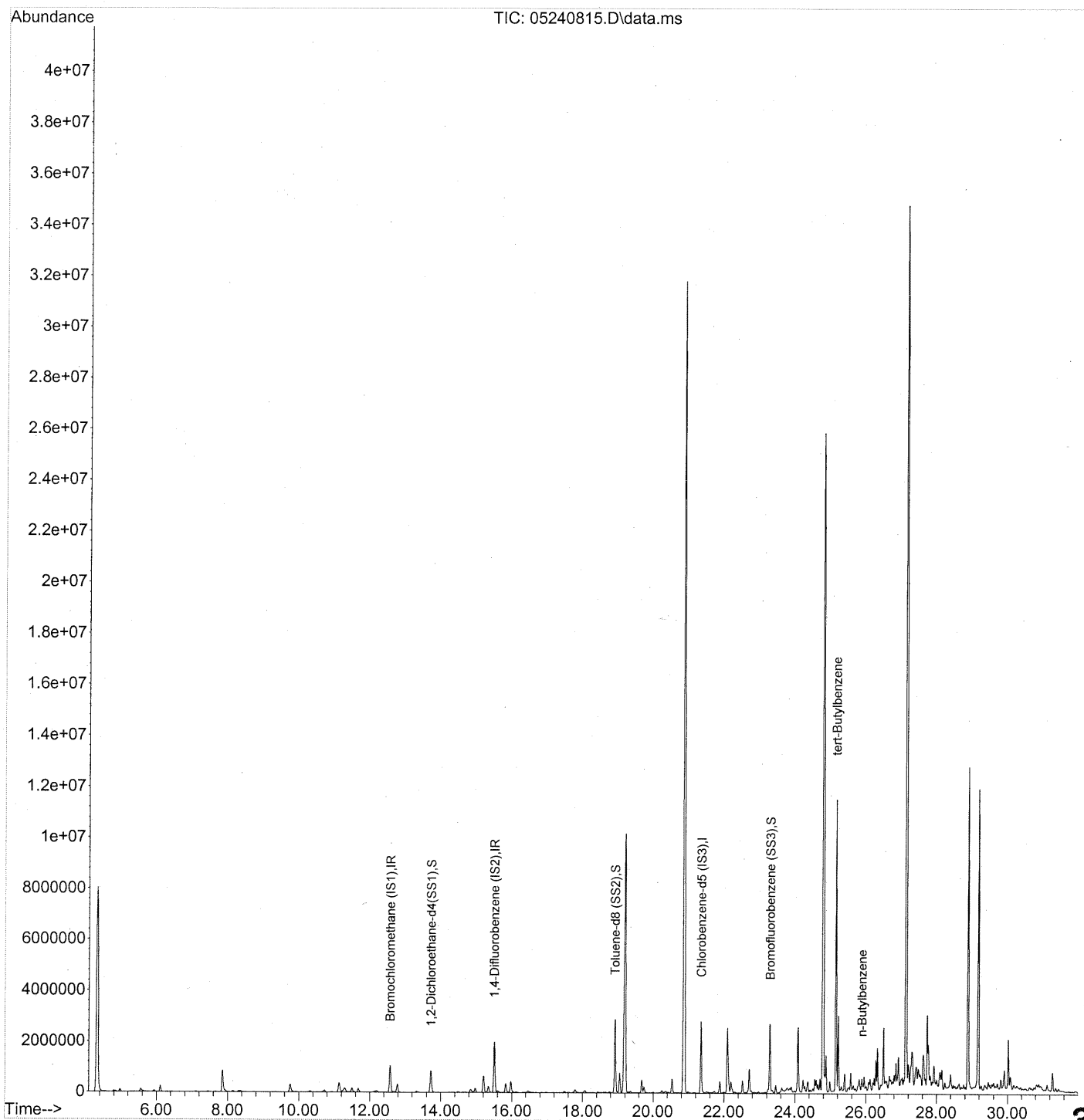
(95) Naphthalene (T)  
 27.773min (0.000) 5.70ng  
 response 1021676

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	12.73
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240815.D  
Acq On : 24 May 2008 16:42  
Operator : WA  
Sample : P0801442-006 (1000ml)  
Misc : ENSR SG88B-05 (-3.7, 3.7)  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 20:36:54 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 20:36:54 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

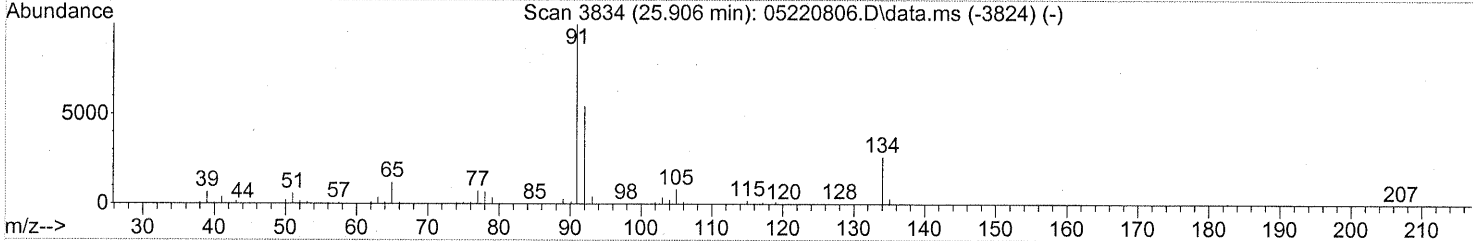
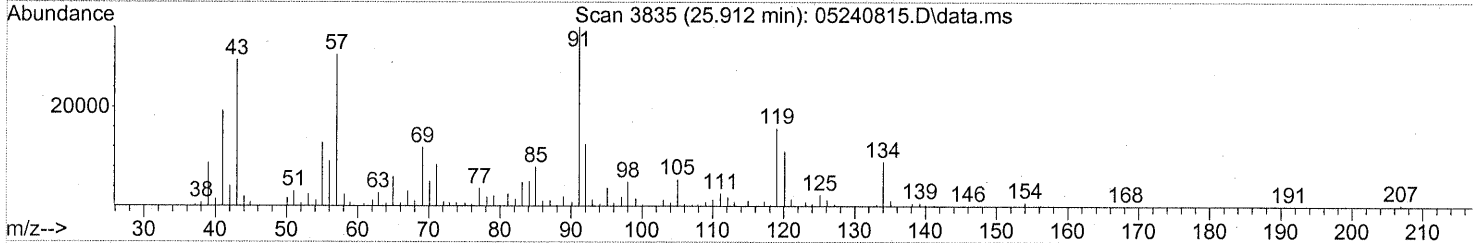
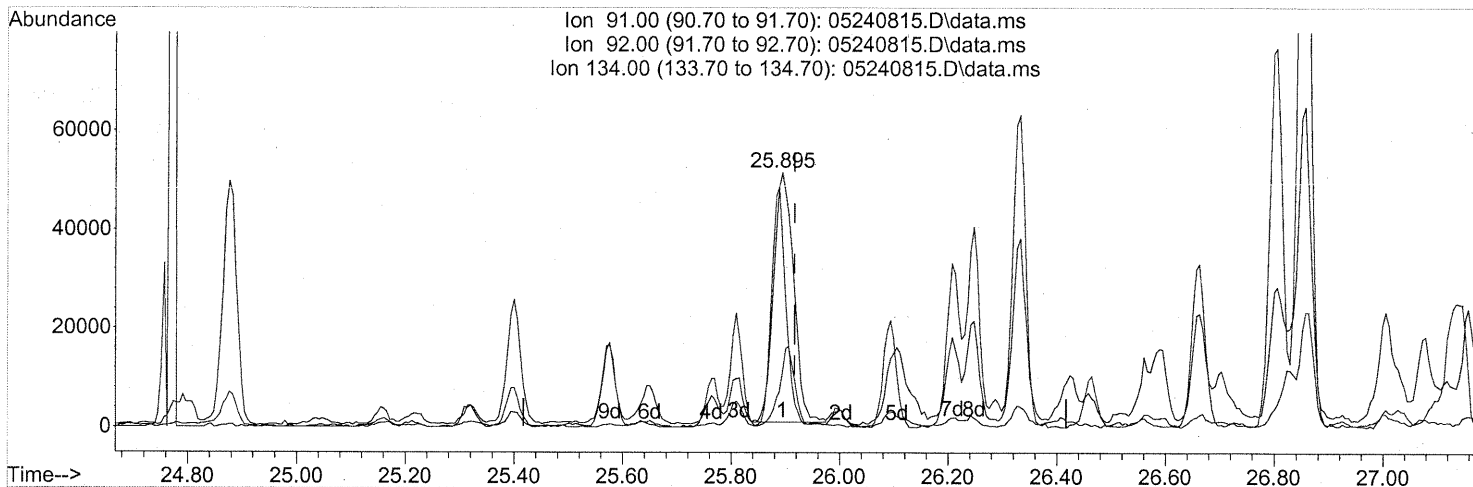
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	542028	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2318224	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1105781	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	867896	23.109	ng	-0.02
Spiked Amount	25.000					
				Recovery	=	92.44%
5) Toluene-d8 (SS2)	18.92	98	2429089	24.460	ng	-0.02
Spiked Amount	25.000					
				Recovery	=	97.84%
6) Bromofluorobenzene (SS3)	23.29	174	1023064	25.333	ng	0.00
Spiked Amount	25.000					
				Recovery	=	101.32%
Target Compounds						
7) tert-Butylbenzene	25.16	119	7753	<del>0.060</del> ng	UR	99
8) n-Butylbenzene	<u>25.89</u>	91	129447	<u>0.901</u> ng	#	45

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240815.D  
 Acq On : 24 May 2008 16:42  
 Operator : WA  
 Sample : P0801442-006 (1000ml)  
 Misc : ENSR SG88B-05 (-3.7, 3.7)  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: May 25 20:36:54 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene

25.895min (-0.023) 0.90ng

response 129447

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	24.47#
134.00	28.80	70.27#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00329

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.25 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)	2.0	0.79	0.079	0.41	0.16	0.016	
74-87-3	Chloromethane	0.23	0.16	0.079	0.11	0.077	0.038	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.085	0.79	0.079	0.012	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.079	ND	0.062	0.031	
74-83-9	Bromomethane	0.72	0.16	0.079	0.19	0.041	0.020	
75-00-3	Chloroethane	0.77	0.16	0.079	0.29	0.060	0.030	
64-17-5	Ethanol	4.3	7.9	0.079	2.3	4.2	0.042	J
67-64-1	Acetone	17	7.9	0.12	7.0	3.3	0.049	B
75-69-4	Trichlorofluoromethane	1.5	0.16	0.079	0.27	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.79	0.11	ND	0.36	0.051	
75-35-4	1,1-Dichloroethene	72	0.16	0.079	18	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.9	0.79	0.12	0.64	0.26	0.039	
75-09-2	Methylene Chloride	0.54	0.79	0.079	0.16	0.23	0.023	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.079	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.16	0.088	0.072	0.021	0.012	
75-15-0	Carbon Disulfide	4.8	0.79	0.19	1.5	0.25	0.061	
156-60-5	trans-1,2-Dichloroethene	0.085	0.16	0.079	0.022	0.040	0.020	J
75-34-3	1,1-Dichloroethane	0.37	0.16	0.079	0.091	0.039	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.079	ND	0.044	0.022	
108-05-4	Vinyl Acetate	29	7.9	0.25	8.3	2.2	0.072	
78-93-3	2-Butanone (MEK)	4.0	0.79	0.079	1.4	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.79	0.093	ND	0.19	0.022	
67-66-3	Chloroform	590	0.16	0.093	120	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: RC

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00329

Date Collected: 5/14/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/22/08 & 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)  
 0.25 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	0.79	0.081	ND	0.19	0.019	
107-06-2	<b>1,2-Dichloroethane</b>	<b>0.15</b>	0.16	0.079	<b>0.036</b>	0.039	0.020	<b>J</b>
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.53</b>	0.16	0.079	<b>0.098</b>	0.029	0.014	
71-43-2	<b>Benzene</b>	<b>5.4</b>	0.16	0.079	<b>1.7</b>	0.049	0.025	
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.5</b>	0.16	0.079	<b>1.2</b>	0.025	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.79	0.079	ND	0.19	0.019	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.99</b>	0.16	0.079	<b>0.21</b>	0.034	0.017	
75-27-4	<b>Bromodichloromethane</b>	<b>12</b>	0.16	0.079	<b>1.7</b>	0.024	0.012	
79-01-6	<b>Trichloroethene</b>	<b>5.0</b>	0.16	0.079	<b>0.93</b>	0.029	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.27</b>	0.79	0.096	<b>0.074</b>	0.22	0.027	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.79	0.12	ND	0.19	0.029	
142-82-5	<b>n-Heptane</b>	<b>1.1</b>	0.79	0.10	<b>0.26</b>	0.19	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	0.082	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.35</b>	0.79	0.088	<b>0.086</b>	0.19	0.022	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	0.10	ND	0.17	0.022	
79-00-5	<b>1,1,2-Trichloroethane</b>	<b>0.53</b>	0.16	0.079	<b>0.097</b>	0.029	0.014	
108-88-3	<b>Toluene</b>	<b>5.3</b>	0.79	0.079	<b>1.4</b>	0.21	0.021	
591-78-6	<b>2-Hexanone</b>	<b>0.84</b>	0.79	0.12	<b>0.20</b>	0.19	0.029	
124-48-1	<b>Dibromochloromethane</b>	<b>1.2</b>	0.16	0.11	<b>0.15</b>	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.085	ND	0.021	0.011	
111-65-9	n-Octane	ND	0.79	0.079	ND	0.17	0.017	
127-18-4	<b>Tetrachloroethene</b>	<b>280</b>	0.16	0.079	<b>41</b>	0.023	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>3.3</b>	0.16	0.081	<b>0.72</b>	0.034	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.

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

Verified By:     RC    

Date:     6/2/08    

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG72B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-007

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00329

**Date Collected:** 5/14/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)  
 0.25 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	0.96	0.79	0.098	0.22	0.18	0.023	
179601-23-1	m,p-Xylenes	5.7	0.79	0.21	1.3	0.18	0.047	
75-25-2	Bromoform	ND	0.79	0.12	ND	0.076	0.012	
100-42-5	Styrene	0.21	0.79	0.12	0.049	0.19	0.028	J
95-47-6	o-Xylene	2.5	0.79	0.10	0.57	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.12	0.79	0.088	0.024	0.16	0.018	J
103-65-1	n-Propylbenzene	0.18	0.79	0.082	0.037	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.33	0.79	0.090	0.067	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.46	0.79	0.095	0.093	0.16	0.019	J
98-83-9	alpha-Methylstyrene	0.21	0.79	0.12	0.044	0.16	0.024	J
95-63-6	1,2,4-Trimethylbenzene	1.5	0.79	0.11	0.30	0.16	0.022	
100-44-7	Benzyl Chloride	0.14	0.16	0.14	0.027	0.031	0.026	J
541-73-1	1,3-Dichlorobenzene	2.4	0.16	0.098	0.40	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	60	0.16	0.088	9.9	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.79	0.092	ND	0.14	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.47	0.79	0.10	0.086	0.14	0.019	J
95-50-1	1,2-Dichlorobenzene	16	0.16	0.10	2.7	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	0.12	ND	0.082	0.012	
120-82-1	1,2,4-Trichlorobenzene	1.9	0.16	0.12	0.26	0.021	0.016	
91-20-3	Naphthalene	1.4	0.32	0.12	0.27	0.060	0.022	
87-68-3	Hexachlorobutadiene	46	0.16	0.14	4.3	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.32	0.079	ND	0.058	0.014	
104-51-8	n-Butylbenzene	0.44	0.32	0.079	0.081	0.058	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:     Re    

Date:     6/2/08



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	585660	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2449883	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1168878	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	13.73	65	903459	22.264	ng	0.00	89.04%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	18.93	98	2564155	24.426	ng	0.00	97.72%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	23.29	174	1091827	25.577	ng	0.00	102.32%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	284318	6.147	ng	98
3) Dichlorodifluoromethane	4.96	85	108000	1.267	ng	98
4) Chloromethane	5.31	50	7952	0.144	ng	96
5) Freon 114	5.53	135	2252	0.054	ng	# 43
6) Vinyl Chloride	5.74	62	1088	N.D.		
7) 1,3-Butadiene	6.02	54	7890	0.192	ng	# 69
8) Bromomethane	6.49	94	14018	0.456	ng	99
9) Chloroethane	6.82	64	12740	0.486	ng	98
10) Ethanol	7.11	45	83418m	2.709	ng	
11) Acetonitrile	7.46	41	66756	0.750	ng	95
12) Acrolein	7.67	56	26891	1.222	ng	# 73
13) Acetone	7.88	58	333219m	10.569	ng	
14) Trichlorofluoromethane	8.14	101	70729	0.967	ng	99
15) Isopropanol	8.32	45	147341	1.465	ng	92
16) Acrylonitrile	8.65	53	2287	N.D.		
17) 1,1-Dichloroethene	9.15	96	1462653	45.458	ng	# 75
18) tert-Butanol	9.27	59	104352	1.220	ng	86
19) Methylene Chloride	9.37	84	12092	0.343	ng	# 73
20) Allyl Chloride	9.56	41	2536	0.054	ng	# 44
21) Trichlorotrifluoroethane	9.81	151	11660	0.351	ng	94
22) Carbon Disulfide	9.76	76	403659	3.019	ng	99
23) trans-1,2-Dichloroethene	10.80	61	2802	0.054	ng	82
24) 1,1-Dichloroethane	11.10	63	14319	0.234	ng	95
25) Methyl tert-Butyl Ether	11.21	73	3202	N.D.		
26) Vinyl Acetate	11.31	86	107296	18.415	ng	# 1
27) 2-Butanone	11.69	72	58958	2.562	ng	# 88
28) cis-1,2-Dichloroethene	12.34	61	1757	N.D.		
29) Diisopropyl Ether	12.79	87	2155642	76.453	ng	# 1
30) Ethyl Acetate	12.70	61	1599	0.129	ng	# 50
31) n-Hexane	12.70	57	94876	1.514	ng	88

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	18469131	<del>345.831</del> ng	<i>see del</i>	95
34) Tetrahydrofuran	13.39	72	4848	0.220 ng	#	44
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	<u>13.89</u>	62	4809	<u>0.093</u> ng		90
38) 1,1,1-Trichloroethane	<u>14.29</u>	97	18775	<u>0.337</u> ng		93
39) Isopropyl Acetate	14.84	61	295	N.D.		
40) 1-Butanol	14.85	56	319781	9.496 ng		91
41) Benzene	<u>14.99</u>	78	435488	<u>3.395</u> ng		99
42) Carbon Tetrachloride	<u>15.21</u>	117	233284	<u>4.722</u> ng		99
43) Cyclohexane	15.41	84	35930	0.720 ng	#	1
44) tert-Amyl Methyl Ether	15.87	73	187	N.D.	✓	
45) 1,2-Dichloropropane	<u>16.19</u>	63	21543	<u>0.628</u> ng		99
46) Bromodichloromethane	<u>16.46</u>	83	316049	<u>7.289</u> ng		99
47) Trichloroethene	<u>16.53</u>	130	124925	<u>3.175</u> ng		99
48) 1,4-Dioxane	<u>16.51</u>	88	4091	<u>0.169</u> ng		98
49) Isooctane	16.60	57	68430	0.465 ng	#	1
50) Methyl Methacrylate	16.72	100	3495	<u>0.273</u> ng	<i>NR</i> #	1
51) n-Heptane	<u>16.98</u>	71	22999	<u>0.675</u> ng	#	82
52) cis-1,3-Dichloropropene	17.81	75	1460	N.D.	✓	
53) 4-Methyl-2-pentanone	<u>17.77</u>	58	7589	<u>0.223</u> ng		94
54) trans-1,3-Dichloropropene	18.45	75	667	N.D.	✓	
55) 1,1,2-Trichloroethane	<u>18.68</u>	97	10647	<u>0.336</u> ng		99
58) Toluene	<u>19.06</u>	91	480331	<u>3.366</u> ng		96
59) 2-Hexanone	<u>19.38</u>	43	51969	<u>0.529</u> ng	#	61
60) Dibromochloromethane	<u>19.62</u>	129	30219	<u>0.784</u> ng		97
61) 1,2-Dibromoethane	19.82	107	53	N.D.	✓	
62) Butyl Acetate	20.19	43	9782	0.098 ng	#	58
63) n-Octane	<del>20.35</del>	57	7184	<u>0.228</u> ng	<i>NR</i>	97
64) Tetrachloroethene	20.55	166	6001364	<u>142.132</u> ng	<i>see del</i>	99
65) Chlorobenzene	<u>21.41</u>	112	201292	<u>2.104</u> ng		100
66) Ethylbenzene	<u>21.89</u>	91	99184	<u>0.606</u> ng		94
67) m- & p-Xylene	<u>22.10</u>	91	396425	<u>3.622</u> ng		94
68) Bromoform	<u>22.21</u>	173	2046	<u>0.071</u> ng	<i>LMPL</i>	97
69) Styrene	<u>22.58</u>	104	12825	<u>0.131</u> ng		94
70) o-Xylene	<u>22.71</u>	91	184848	<u>1.565</u> ng		99
71) n-Nonane	22.98	43	10040	0.120 ng	#	20
72) 1,1,2,2-Tetrachloroethane	22.71	83	2964	<u>0.060</u> ng	<i>NR</i> #	1
74) Cumene	<u>23.46</u>	105	11909	<u>0.076</u> ng		98
75) alpha-Pinene	23.97	93	9686	0.119 ng	#	46
76) n-Propylbenzene	<u>24.10</u>	91	22952	<u>0.115</u> ng	#	1
77) 3-Ethyltoluene	24.23	105	76022	0.454 ng		99
78) 4-Ethyltoluene	<u>24.28</u>	105	32700	<u>0.209</u> ng		94
79) 1,3,5-Trimethylbenzene	<u>24.37</u>	105	40952	<u>0.290</u> ng		99

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*WA 5/29/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

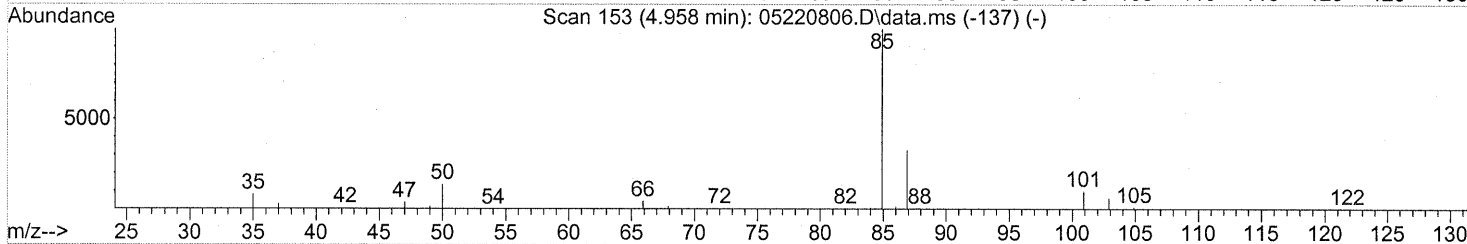
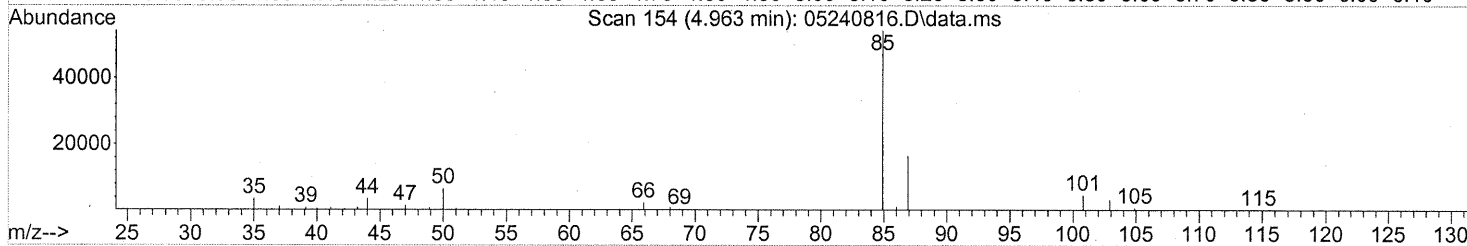
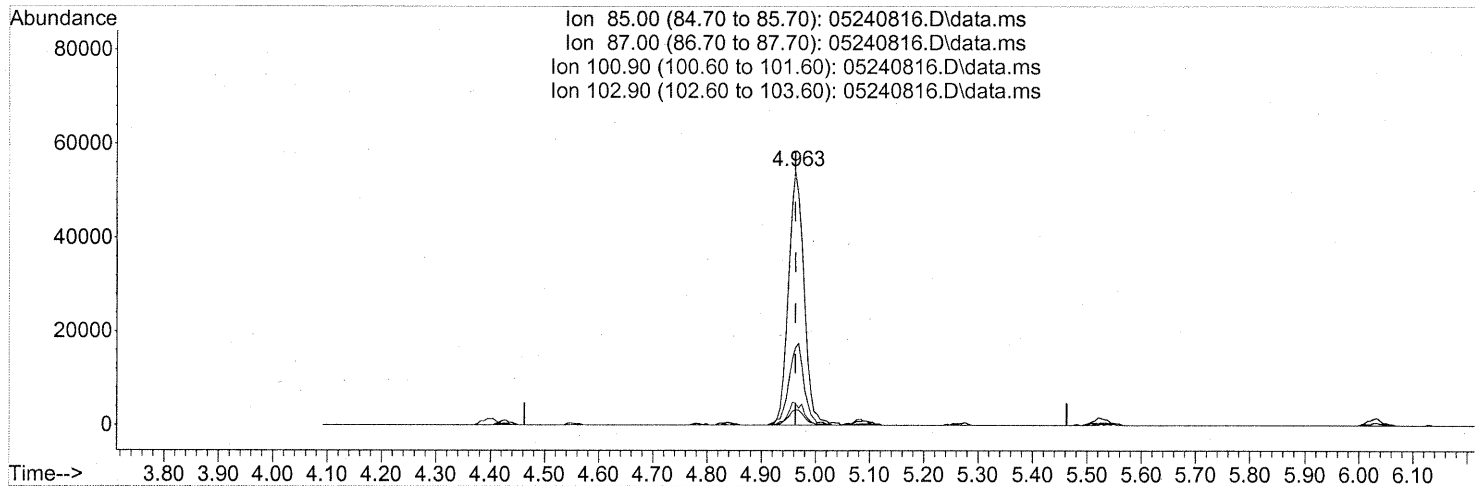
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	10338	0.135	ng	# 24
81) 2-Ethyltoluene	24.61	105	38757	0.228	ng	95
82) 1,2,4-Trimethylbenzene	24.88	105	132313	0.921	ng	89
83) n-Decane	24.98	57	56078	0.710	ng	71
84) Benzyl Chloride	25.04	91	8493	0.088	ng	100
85) 1,3-Dichlorobenzene	25.08	146	136363	1.519	ng	99
86) 1,4-Dichlorobenzene	25.16	146	3289716	37.799	ng	100
87) sec-Butylbenzene	25.21	105	10393	0.057	ng	NR# 1
88) p-Isopropyltoluene	25.40	119	44928	0.297	ng	89
89) 1,2,3-Trimethylbenzene	25.40	105	56261	0.400	ng	94
90) 1,2-Dichlorobenzene	25.58	146	880432	10.340	ng	98
91) d-Limonene	25.58	68	55698	0.974	ng	95
92) 1,2-Dibromo-3-Chloropr...	26.09	157	73	N.D.		✓
93) n-Undecane	26.50	57	296296	3.583	ng	# 64
94) 1,2,4-Trichlorobenzene	27.63	180	75440	1.210	ng	91
95) Naphthalene	27.77	128	167101	0.882	ng	94
96) n-Dodecane	27.74	57	456000	5.545	ng	79
97) Hexachloro-1,3-butadiene	28.19	225	1202428	28.964	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(3) Dichlorodifluoromethane (T)

4.963min (-0.000) 1.27ng

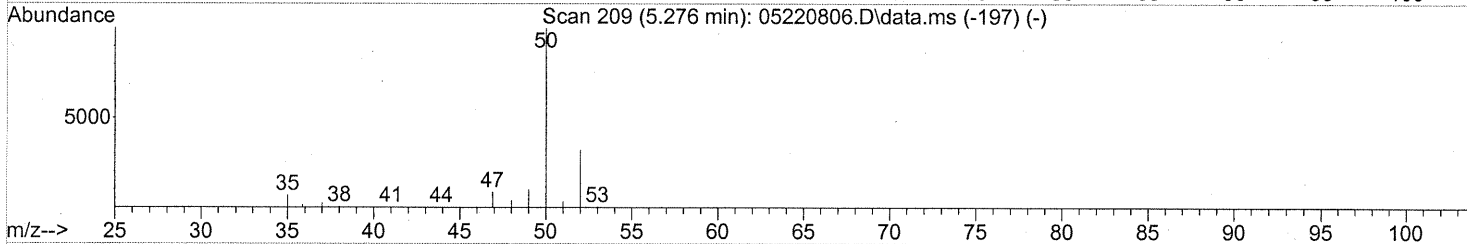
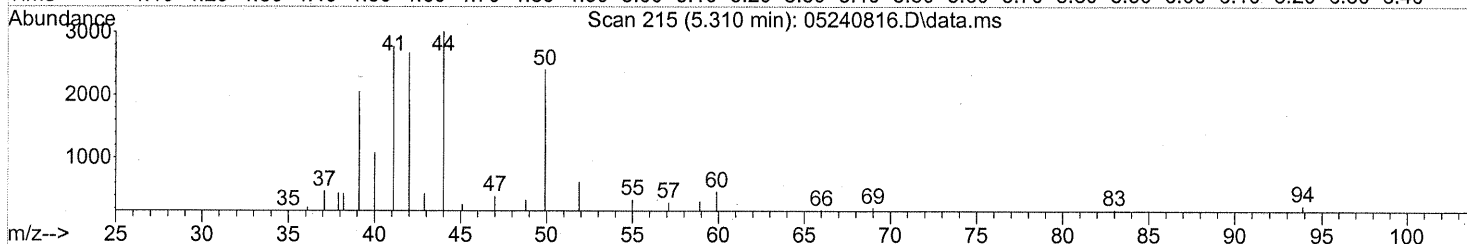
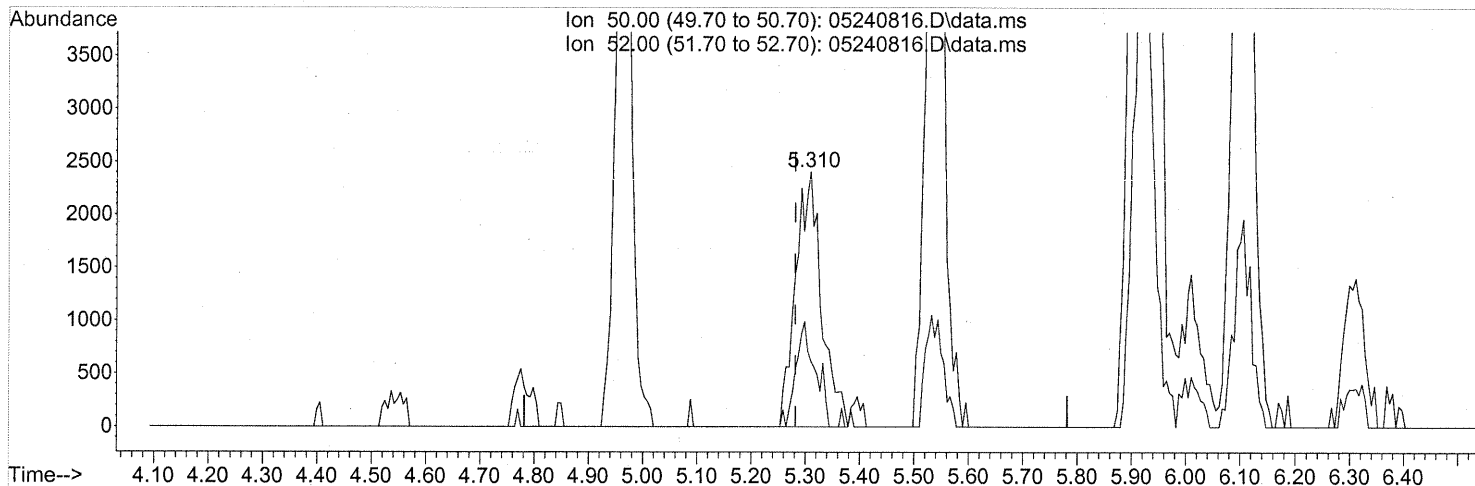
response 108000

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.37
100.90	9.30	9.02
102.90	6.00	5.93

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(4) Chloromethane (T)

5.310min (+0.028) 0.14ng

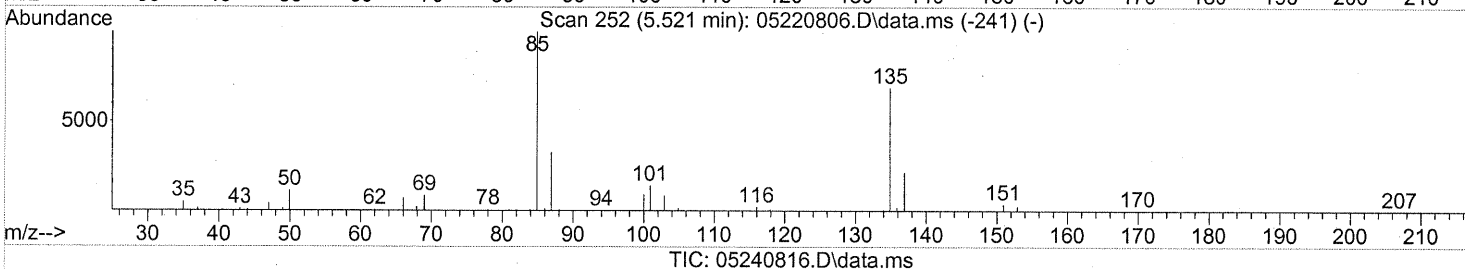
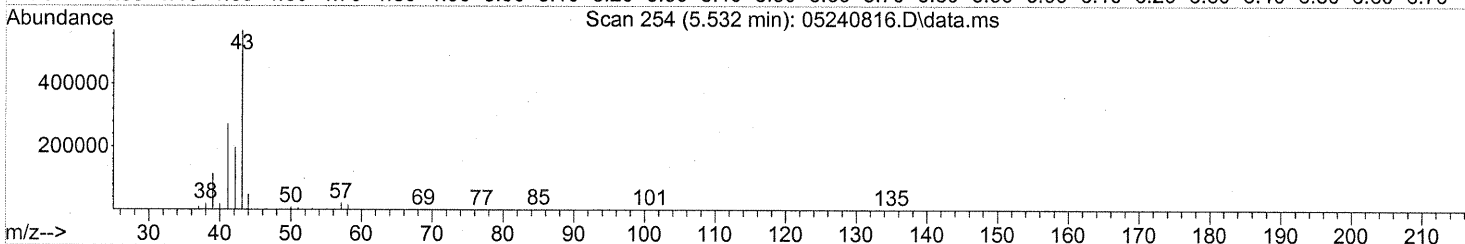
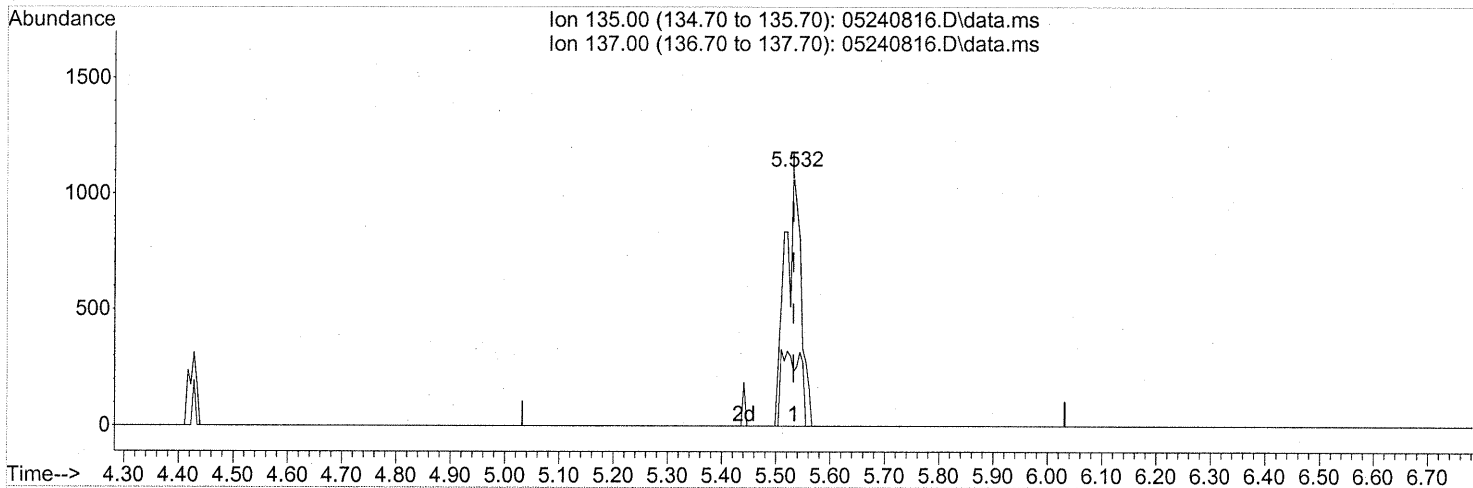
response 7952

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	31.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(5) Freon 114 (T)  
 5.532min (-0.000) 0.05ng  
 response 2252

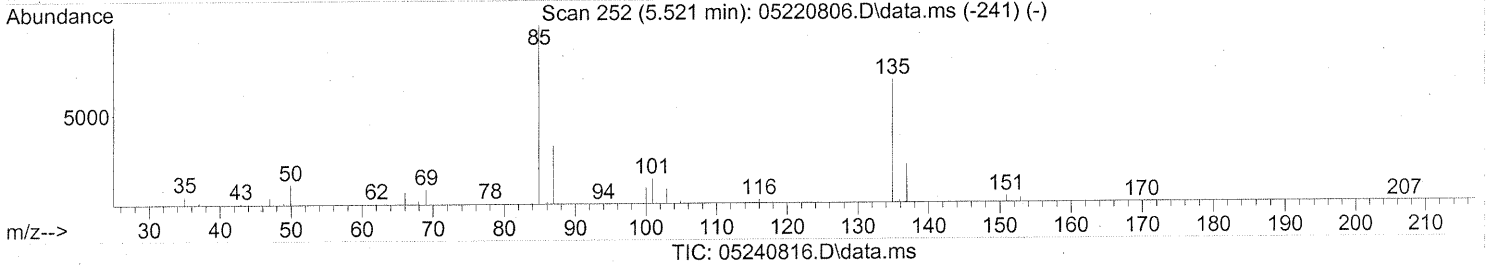
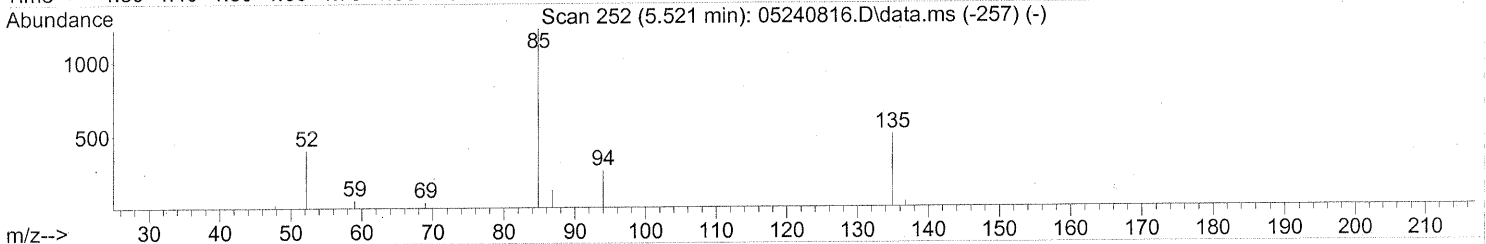
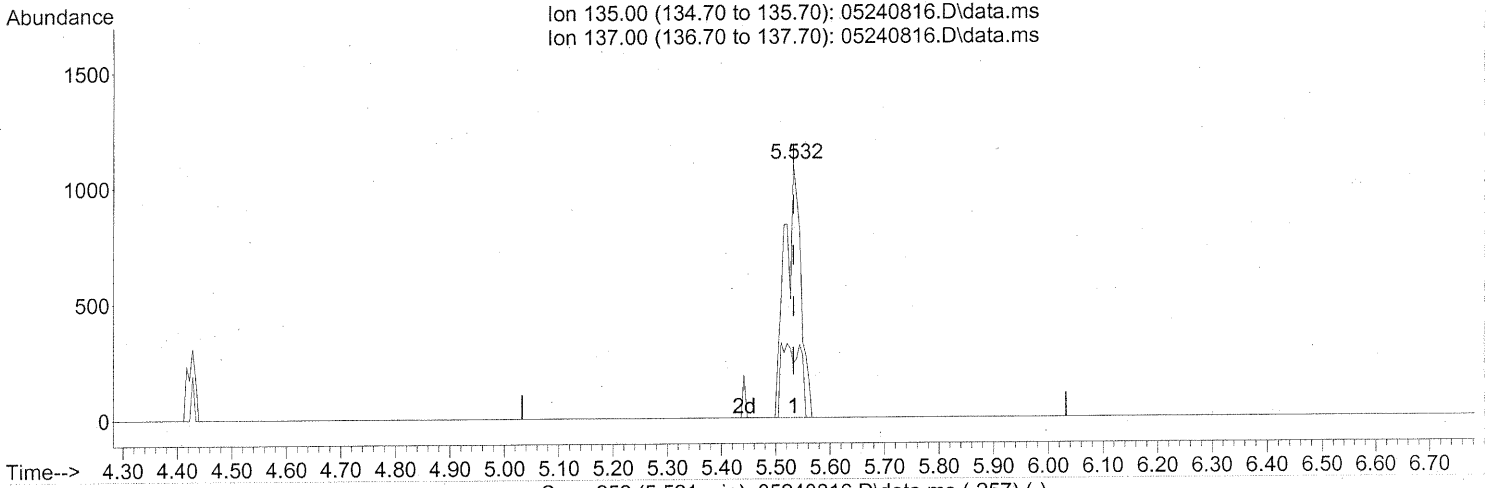
Ion	Exp%	Act%
135.00	100	100
137.00	31.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*see blown-up before*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801422-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:44:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(5) Freon 114 (T)  
 5.532min (-0.000) 0.05ng  
 response 2252

Ion	Exp%	Act%
135.00	100	100
137.00	31.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

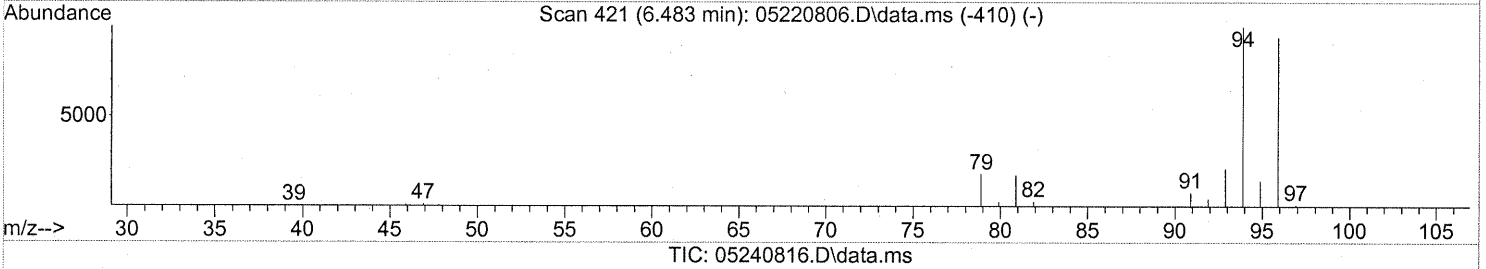
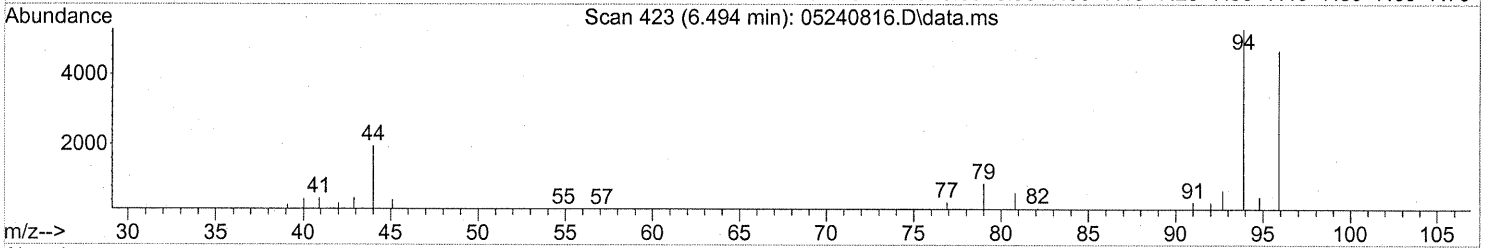
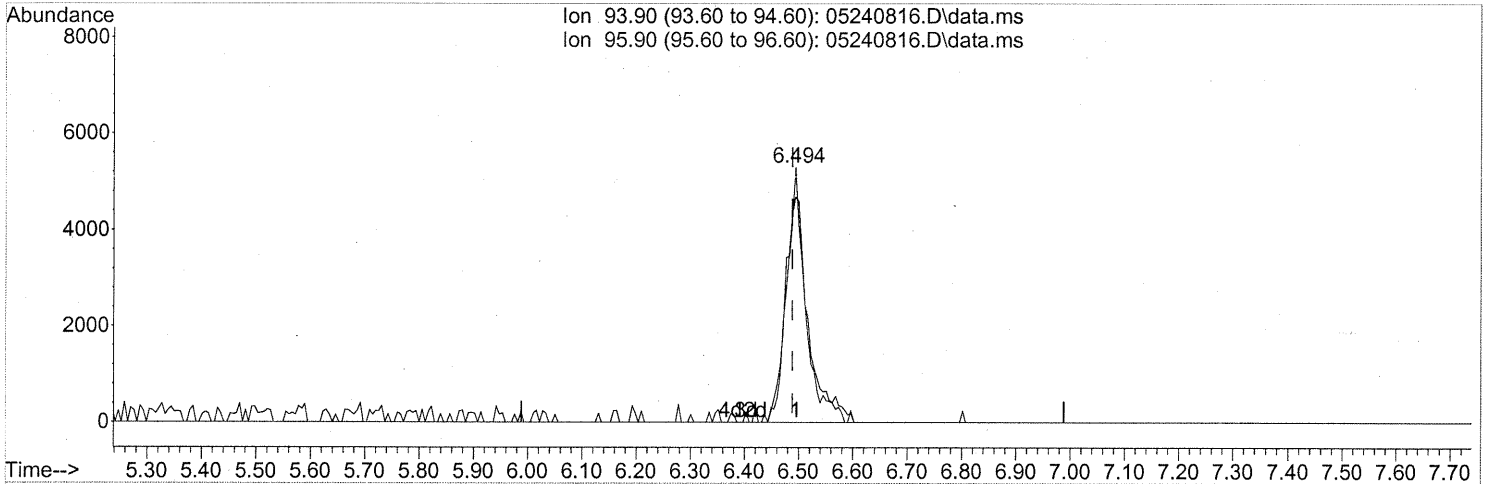
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(8) Bromomethane (T)

6.494min (+0.006) 0.46ng

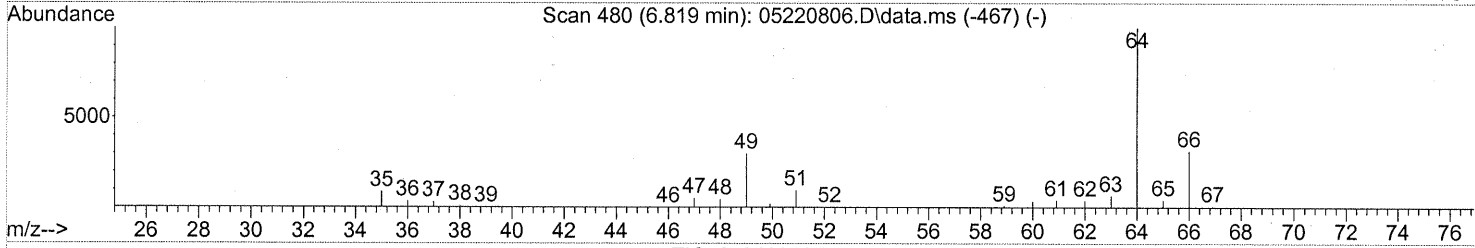
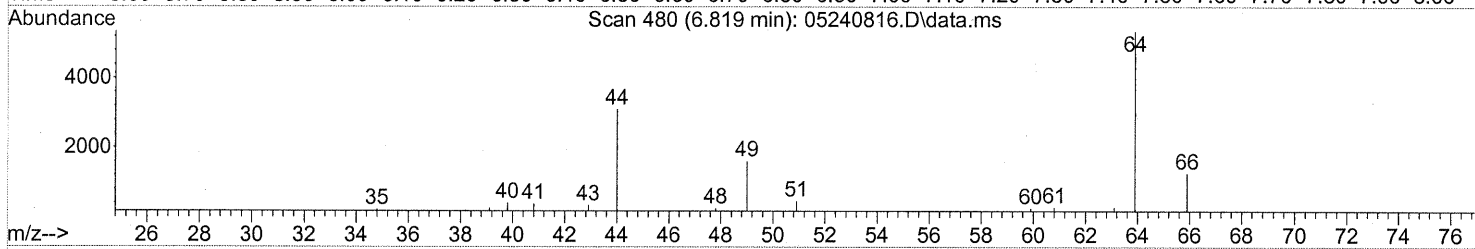
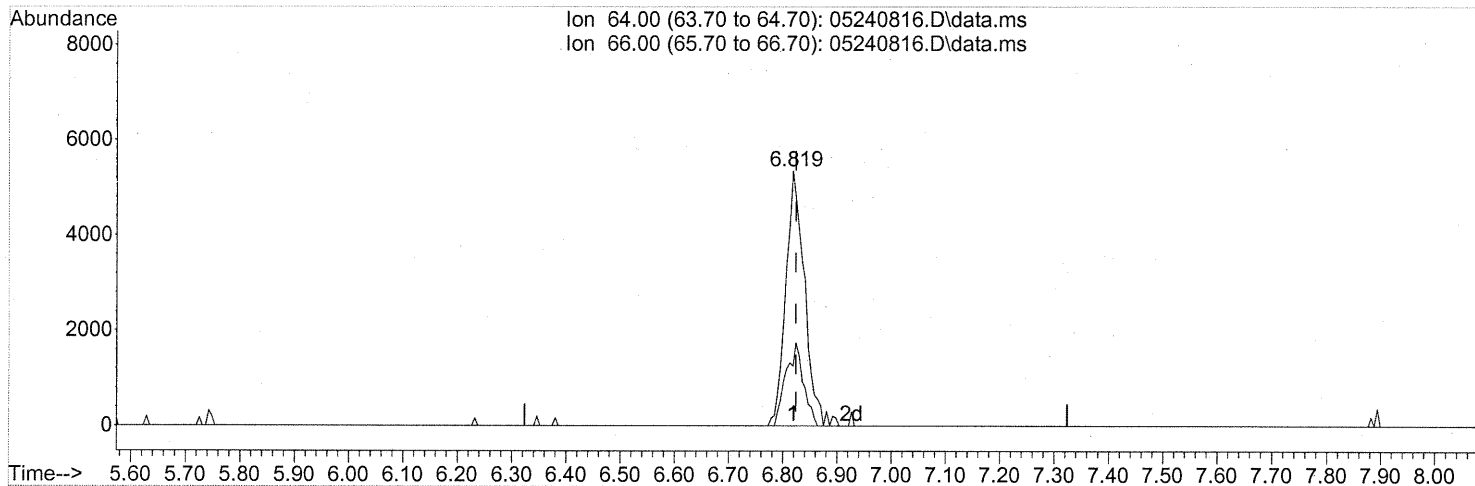
response 14018

Ion	Exp%	Act%
93.90	100	100
95.90	92.30	91.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(9) Chloroethane (T)  
 6.819min (-0.006) 0.49ng  
 response 12740

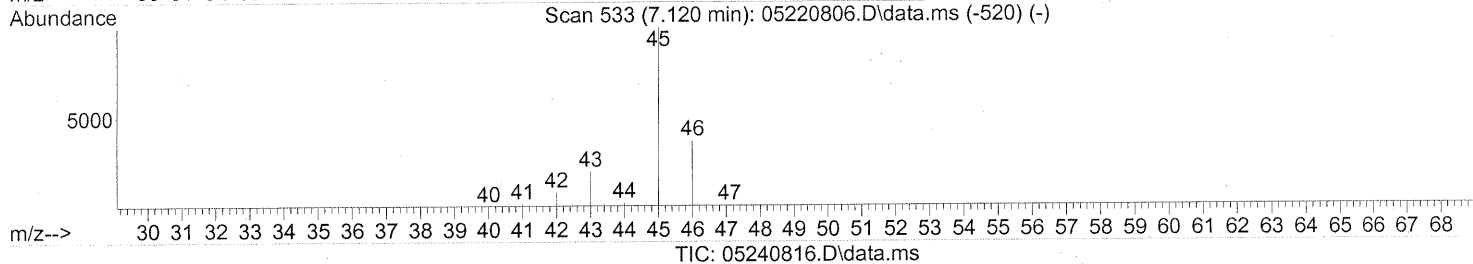
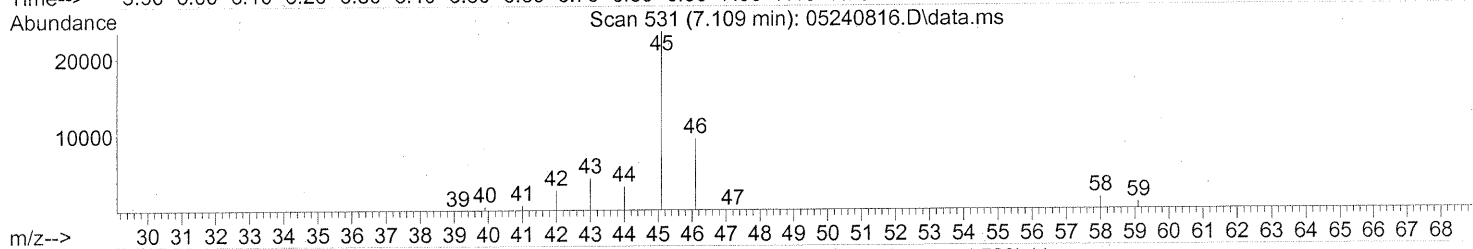
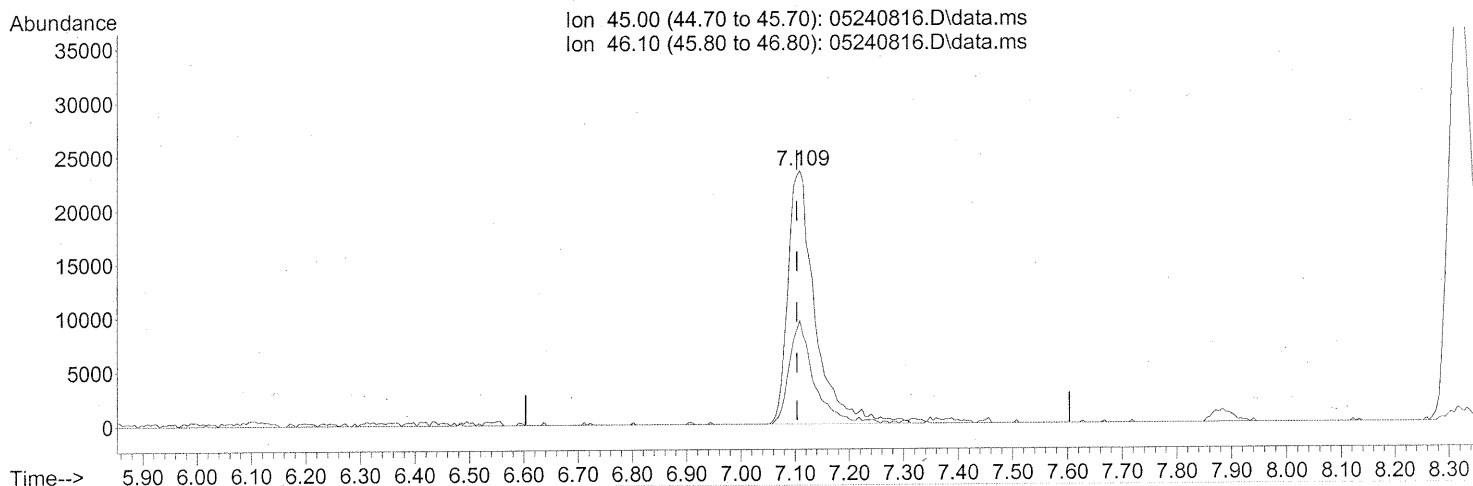
Ion	Exp%	Act%
64.00	100	100
66.00	29.60	30.61
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801422-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:44:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.109min (+0.006) 2.63ng

response 80876

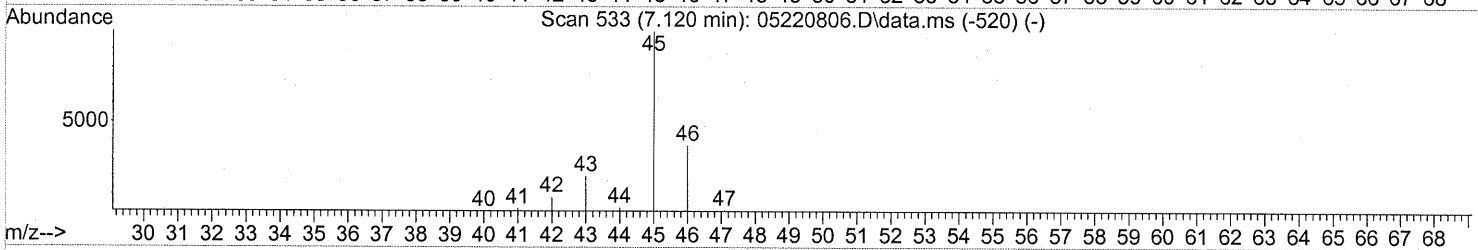
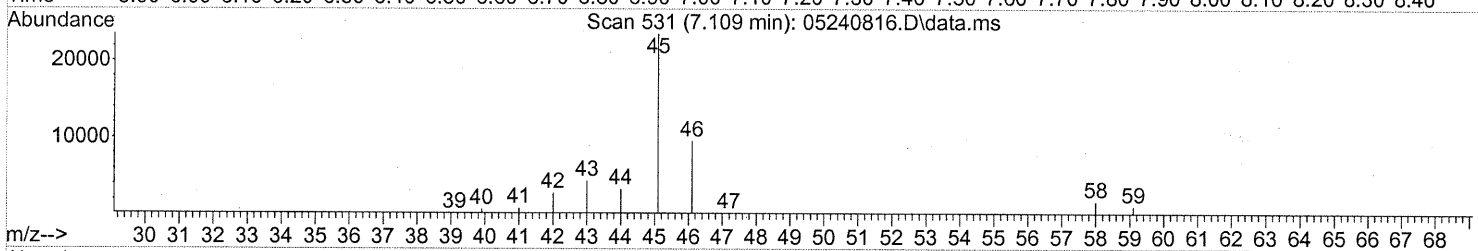
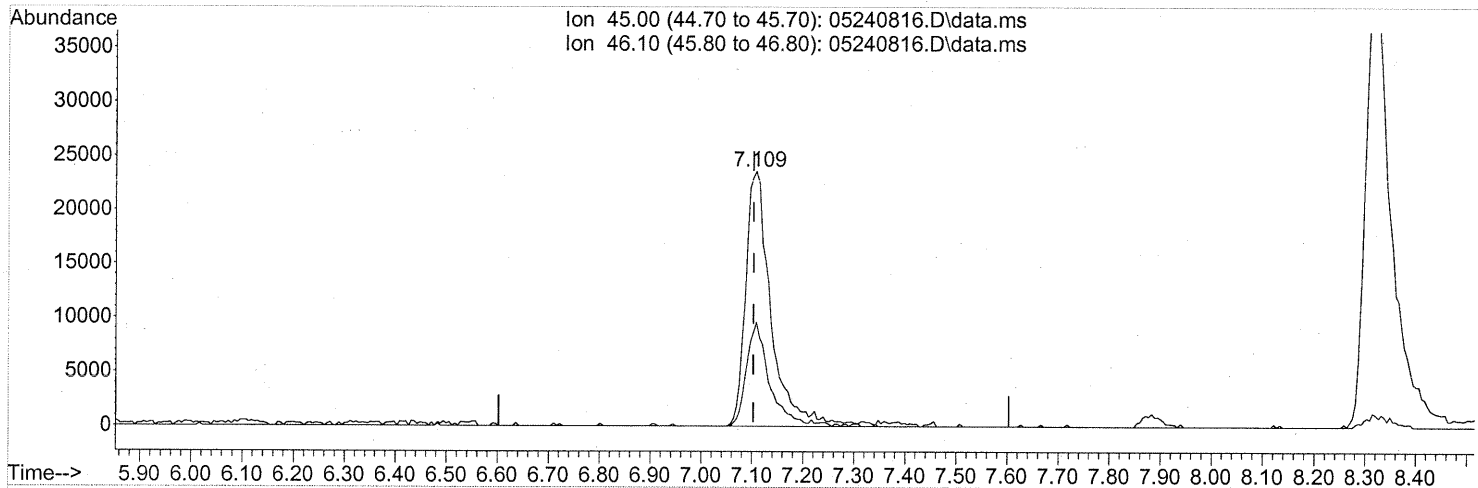
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.07
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.109min (+0.006) 2.71ng m

response 83418

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.97
0.00	0.00	0.00
0.00	0.00	0.00

*incl. tailing*

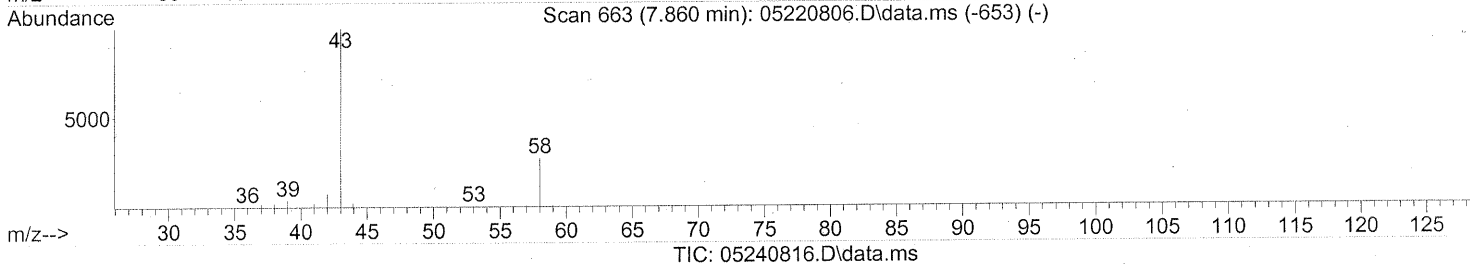
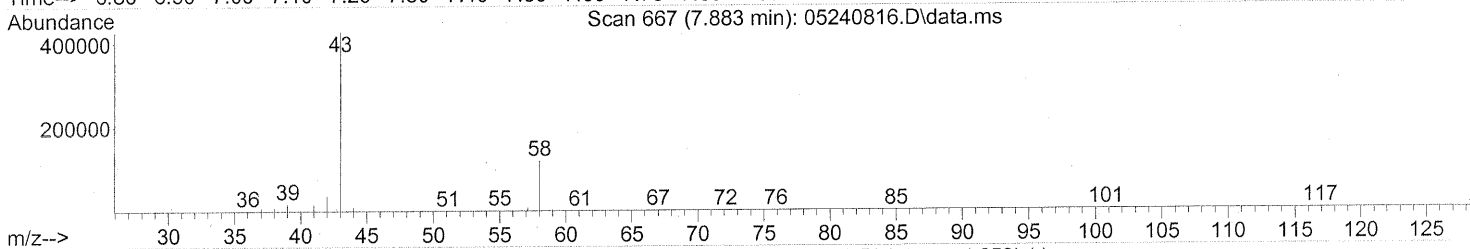
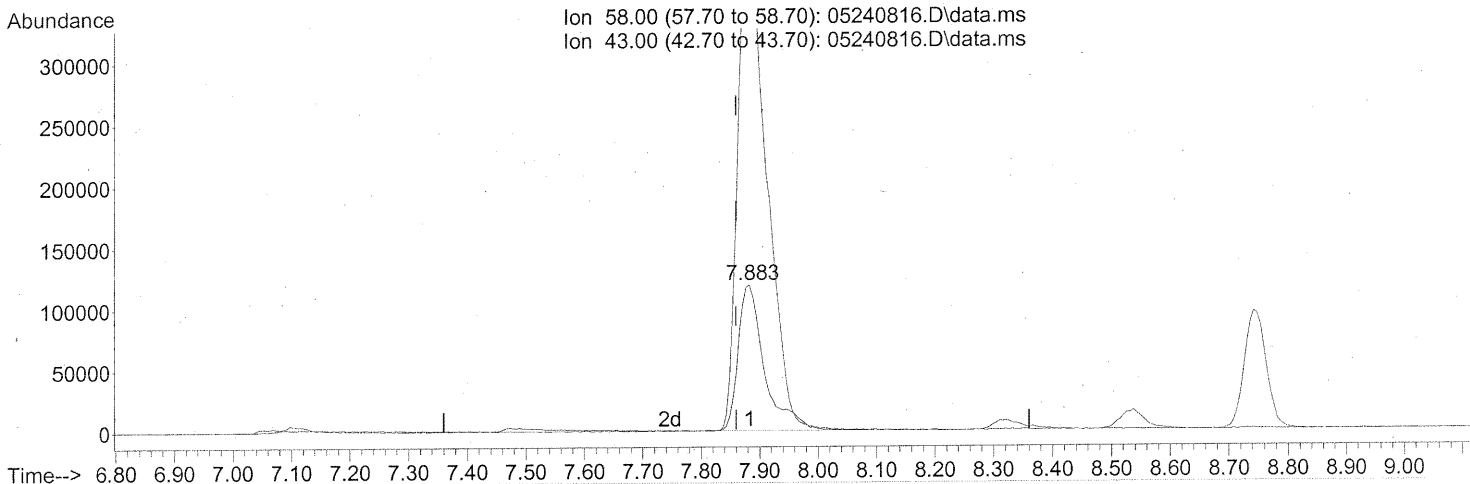
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801422-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:44:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.883min (+0.023) 11.73ng

response 369687

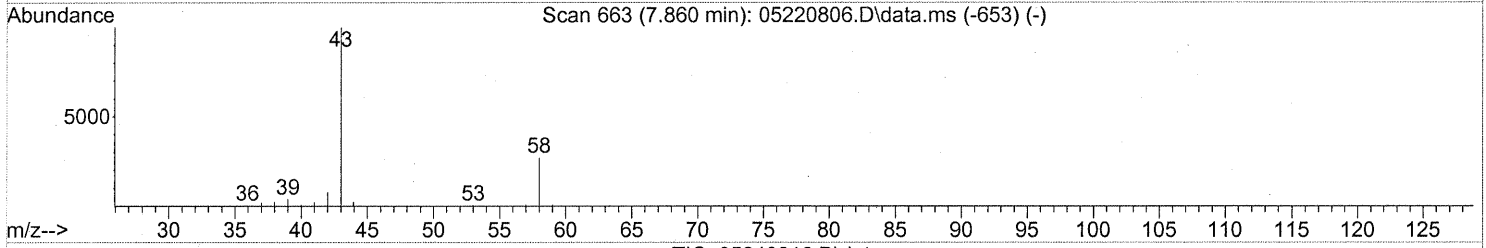
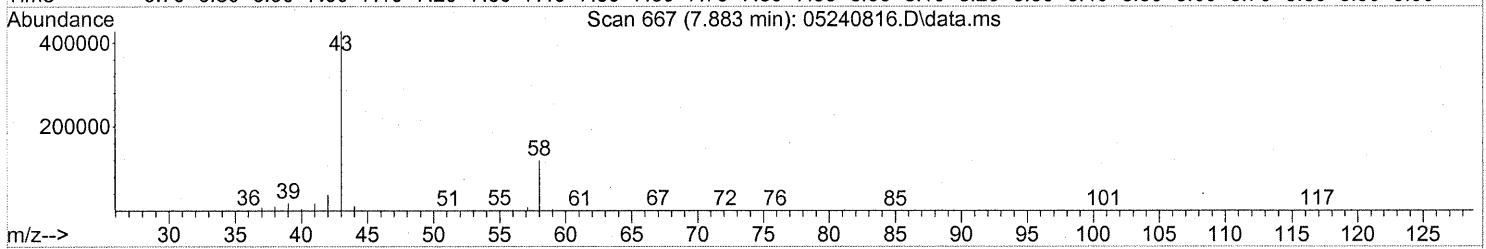
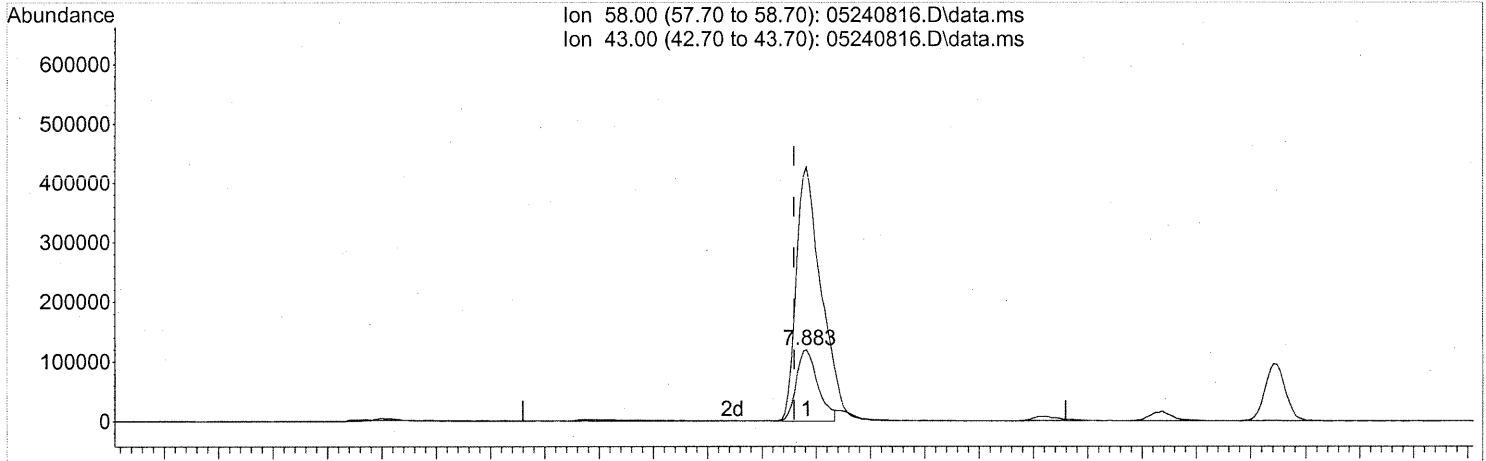
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	376.23#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)

7.883min (+0.023) 10.57ng m

response 333219

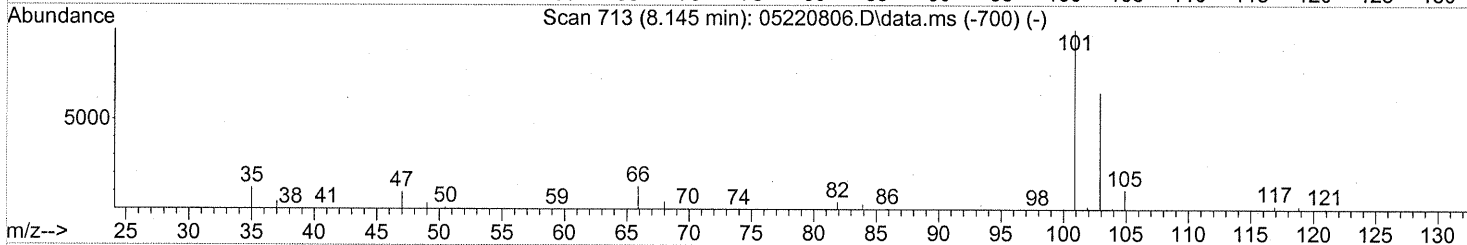
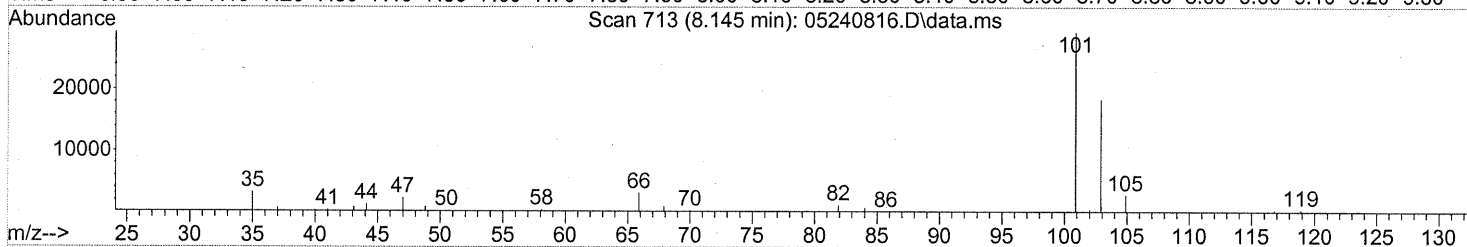
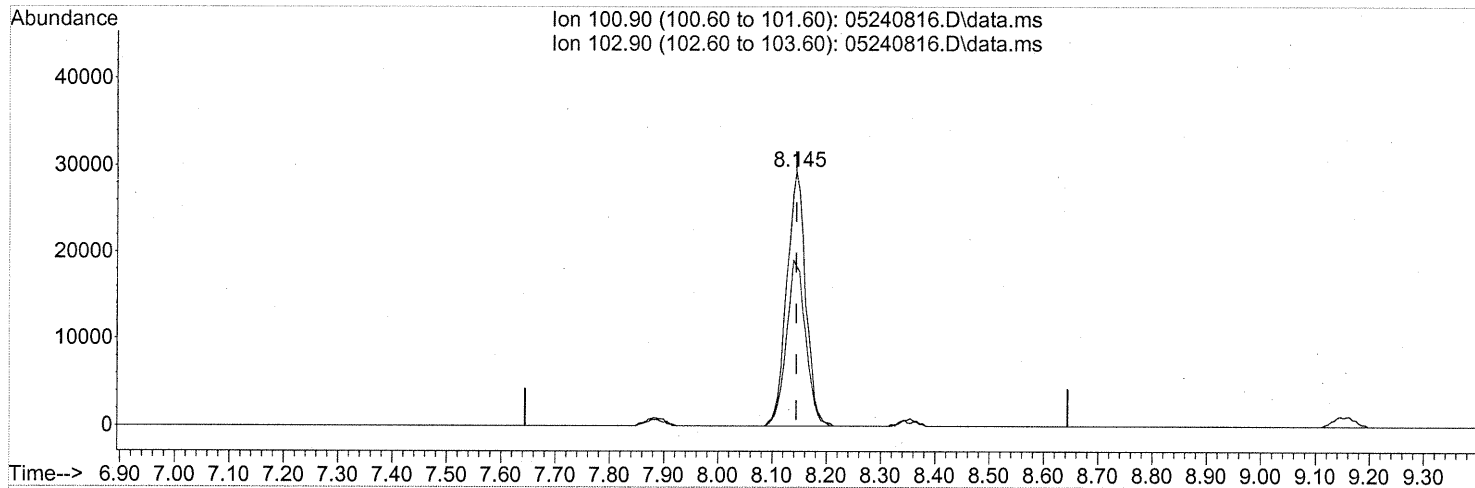
Ion	Exp%	Act%
58.00	100	100
43.00	283.10	417.40#
0.00	0.00	0.00
0.00	0.00	0.00

*100% shoulder*  
*WA 5/29/08*  
*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(14) Trichlorofluoromethane (T)

8.145min (-0.000) 0.97ng

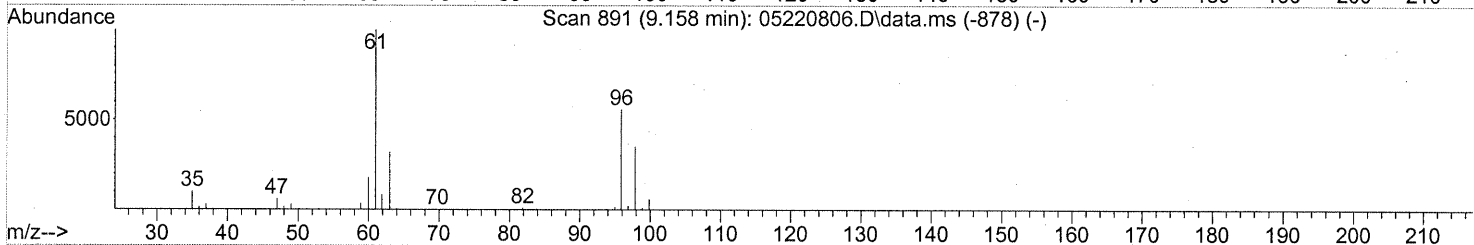
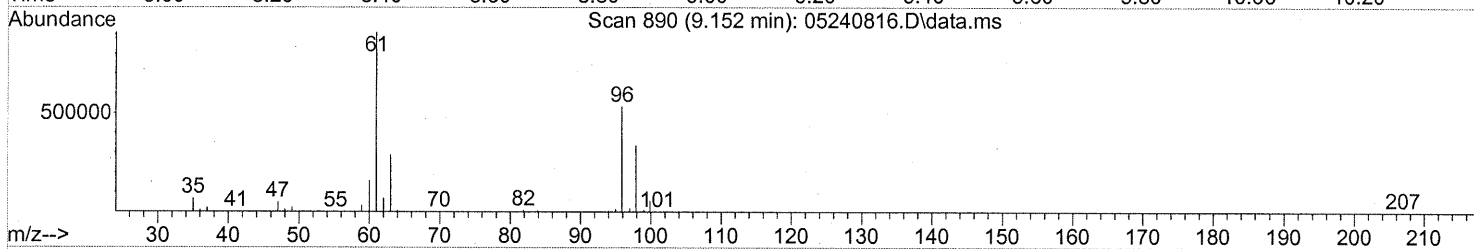
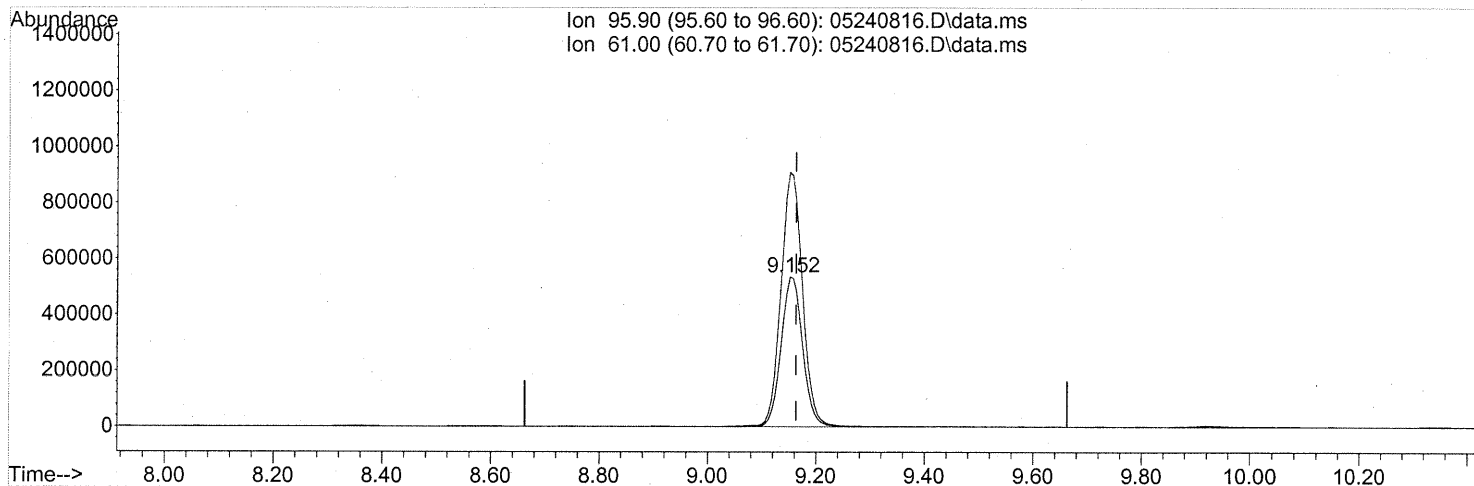
response 70729

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	65.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(17) 1,1-Dichloroethene (T)

9.152min (-0.011) 45.46ng

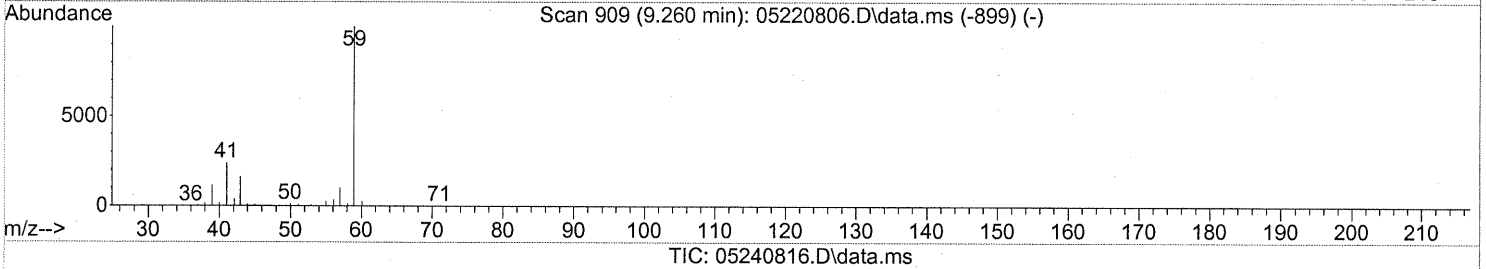
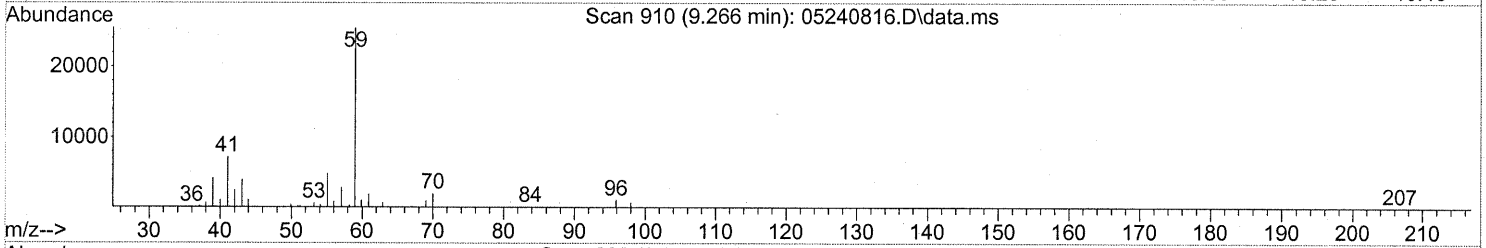
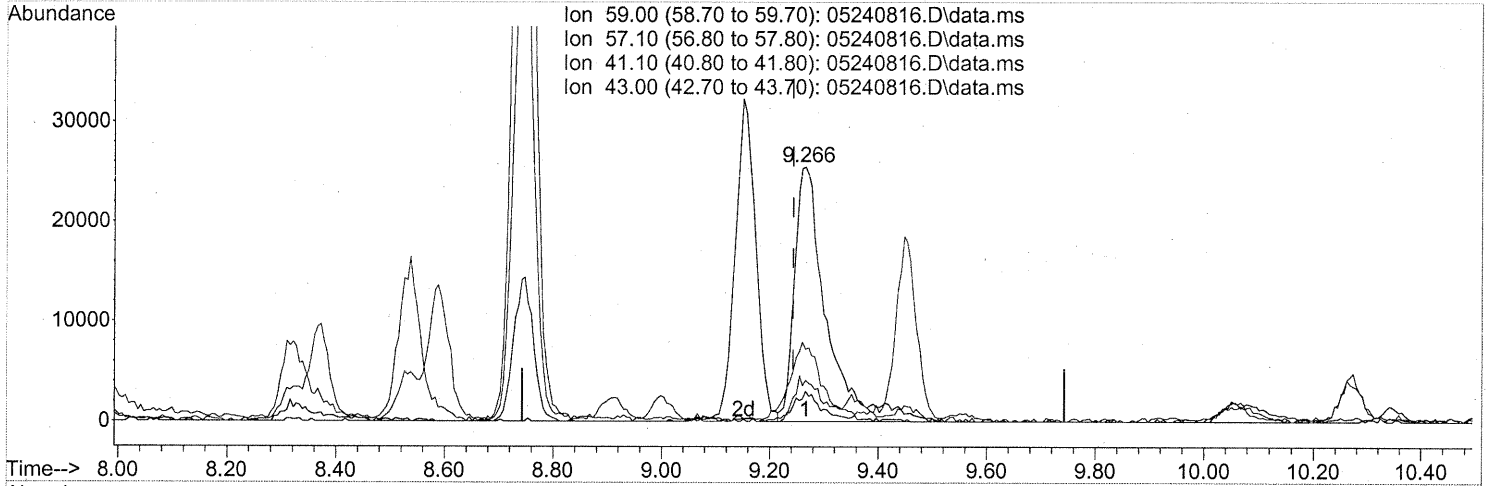
response 1462653

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	170.64#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



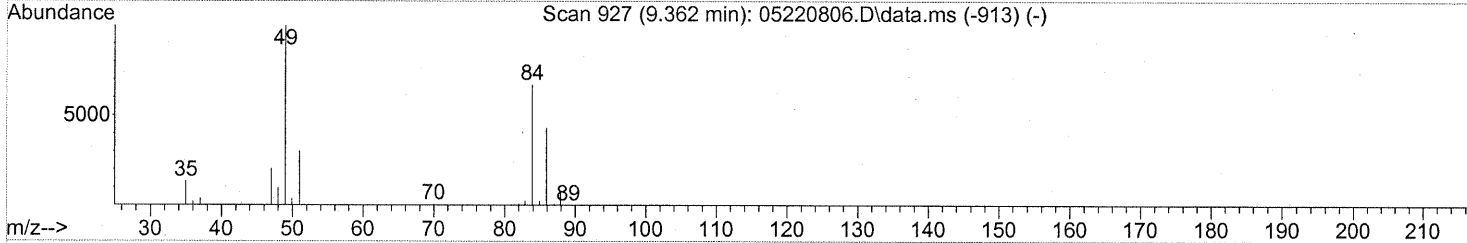
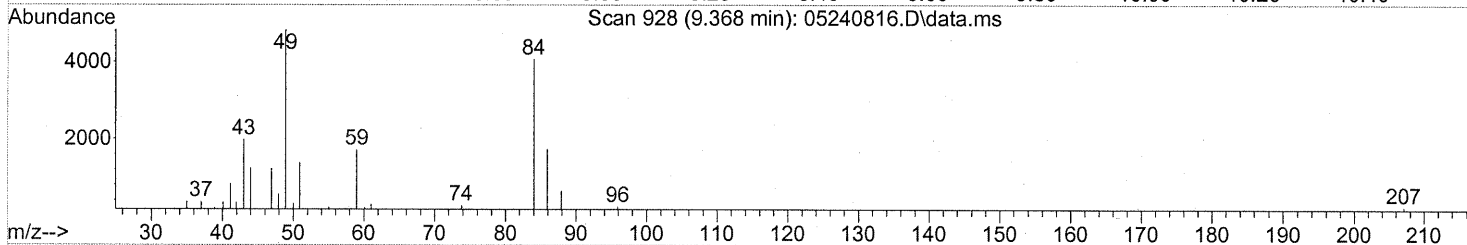
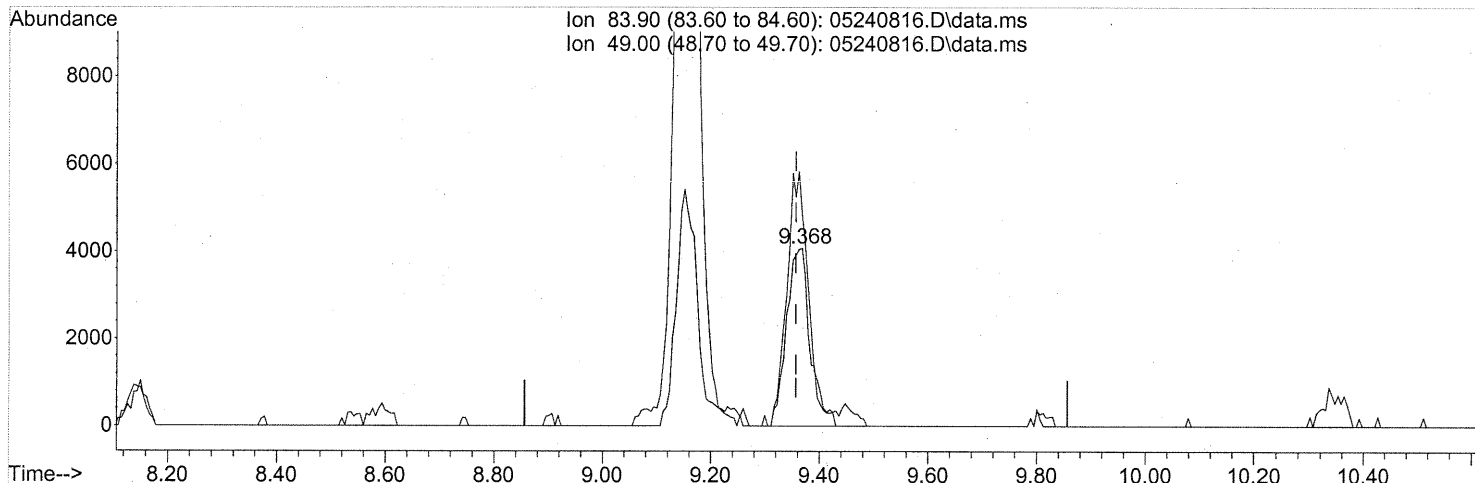
(18) tert-Butanol (T)  
 9.266min (+0.023) 1.22ng  
 response 104352

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	9.92
41.10	20.10	31.55
43.00	12.30	15.58

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(19) Methylene Chloride (T)

9.368min (+0.011) 0.34ng

response 12092

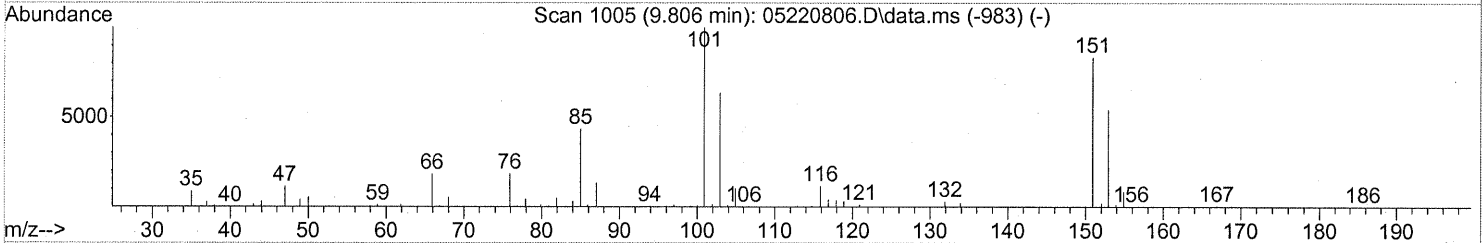
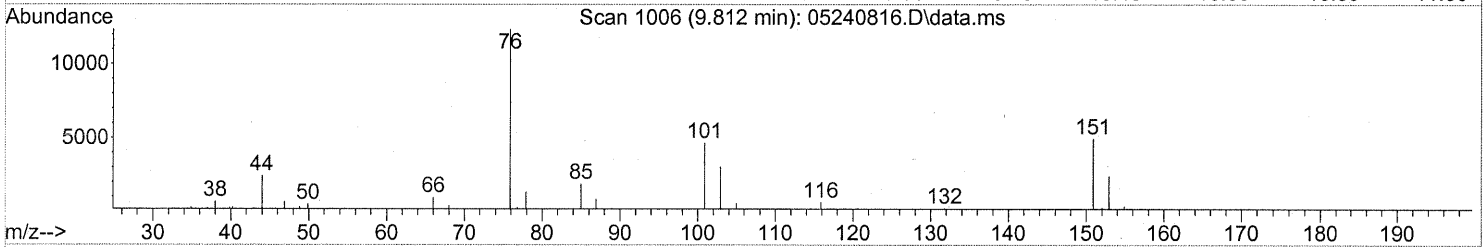
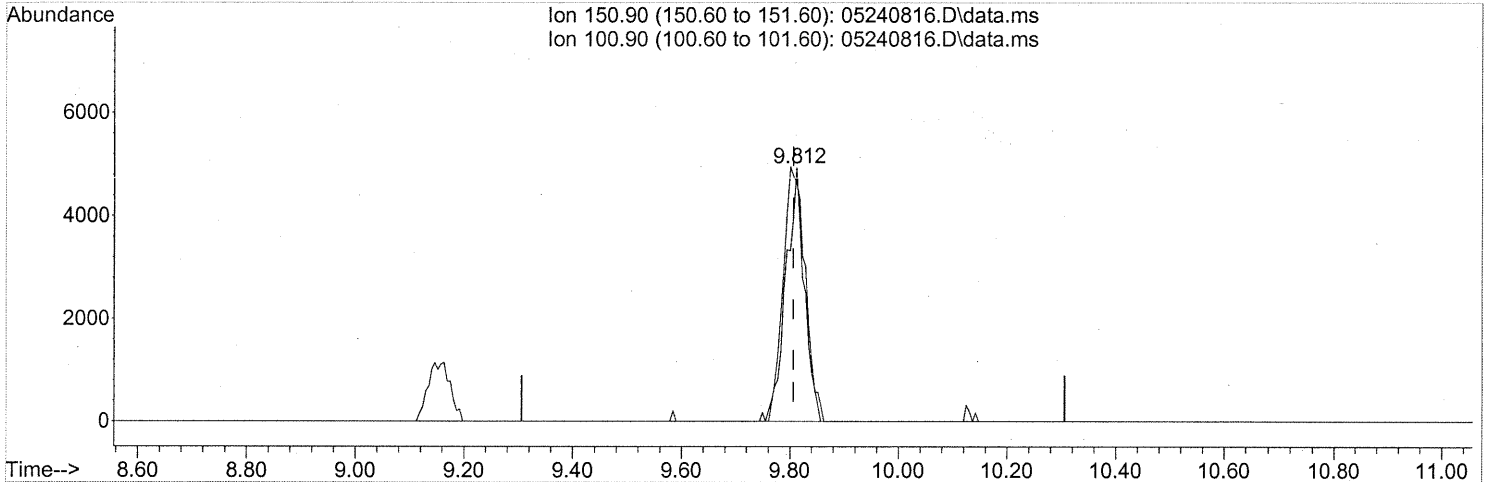
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	135.97#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.35ng

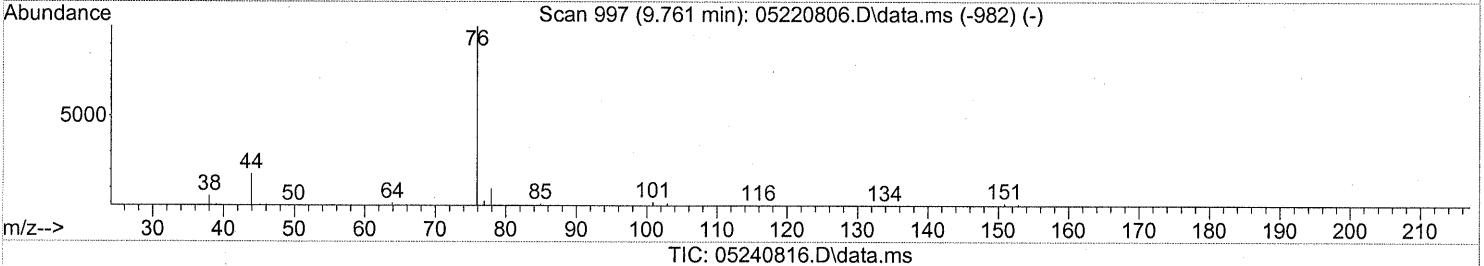
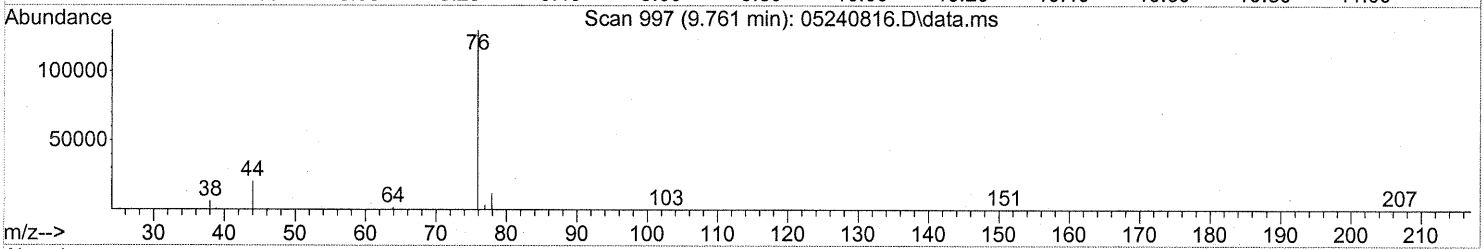
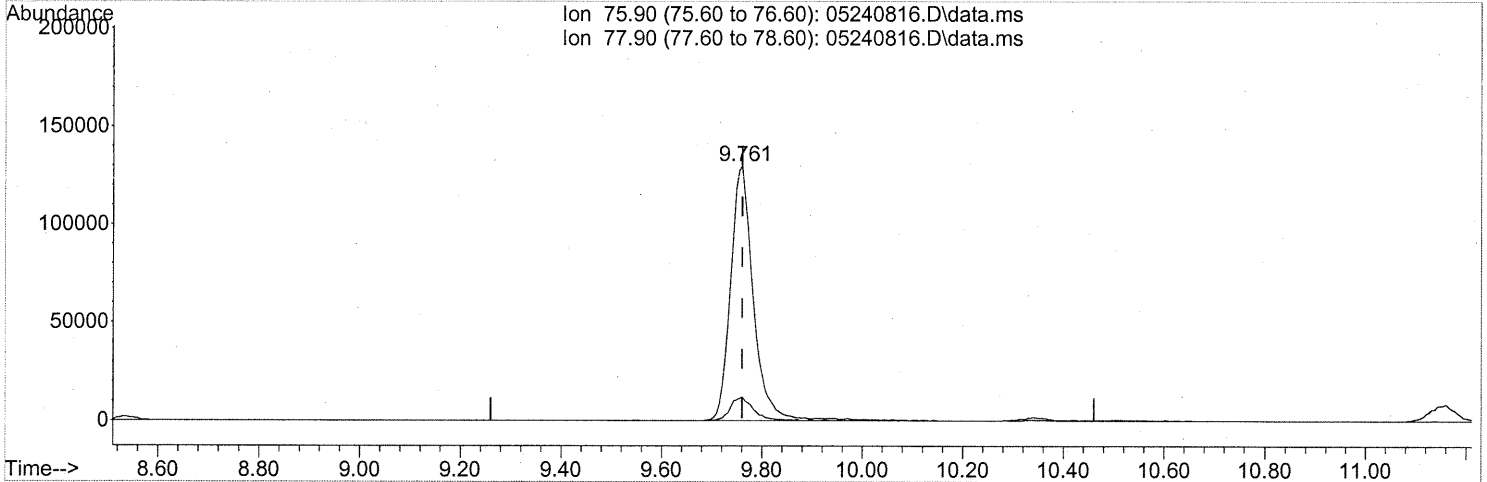
response 11660

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	119.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240816.D  
Acq On : 24 May 2008 17:25  
Operator : WA  
Sample : P0801442-007 (1000ml)  
Misc : ENSR SG72B-05 (-3.2, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(22) Carbon Disulfide (T)

9.761min (-0.000) 3.02ng

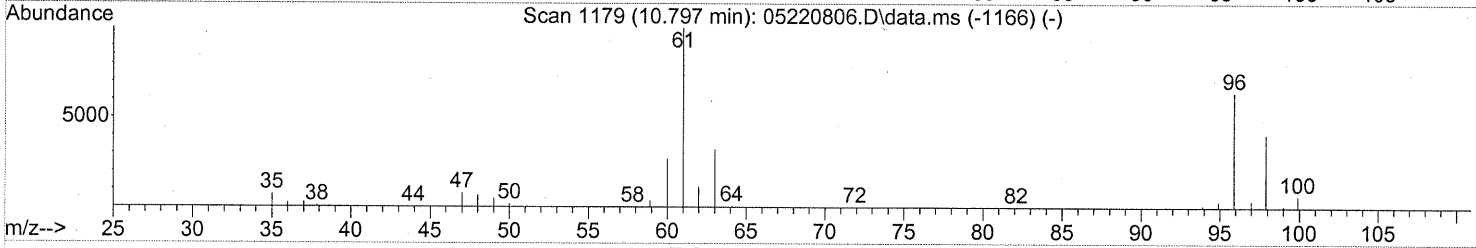
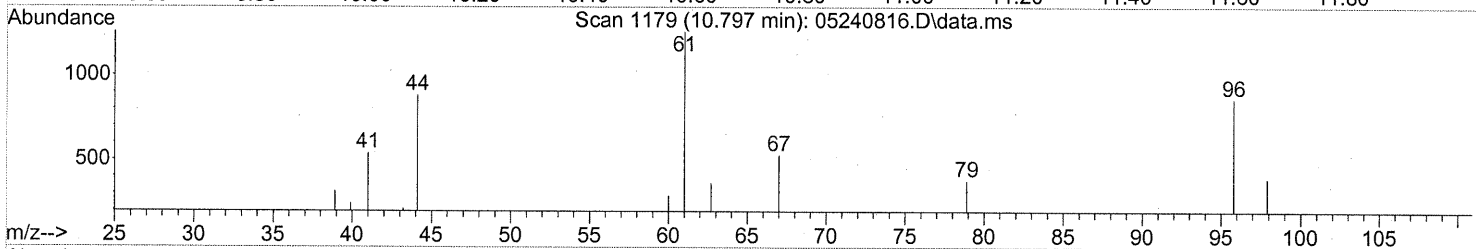
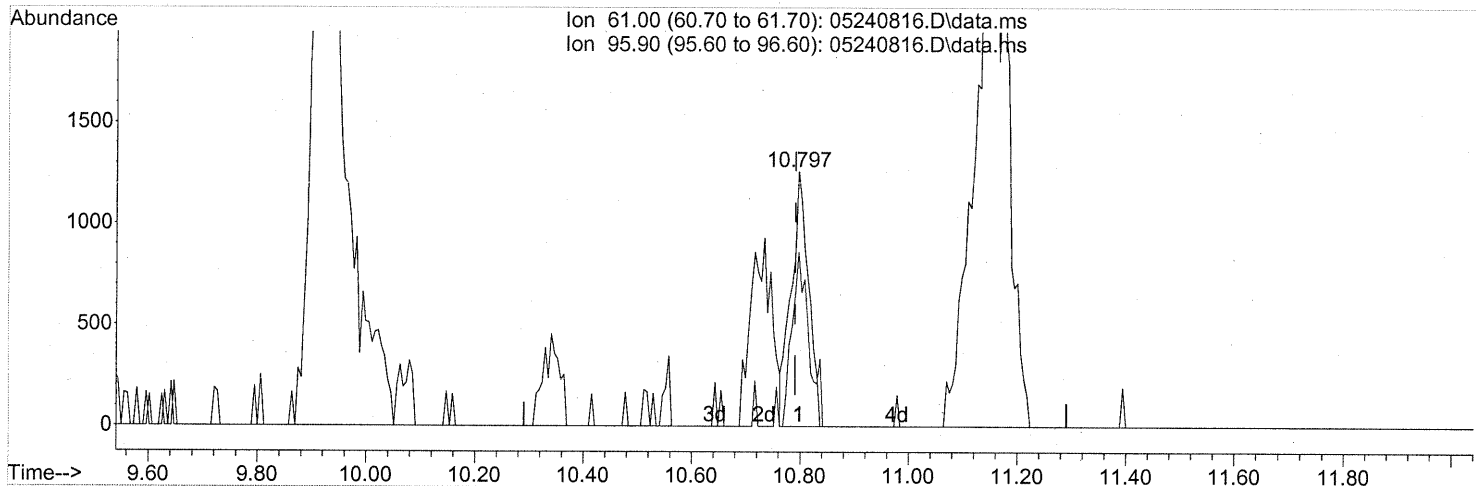
response 403659

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(23) trans-1,2-Dichloroethene (T)

10.797min (+0.006) 0.05ng

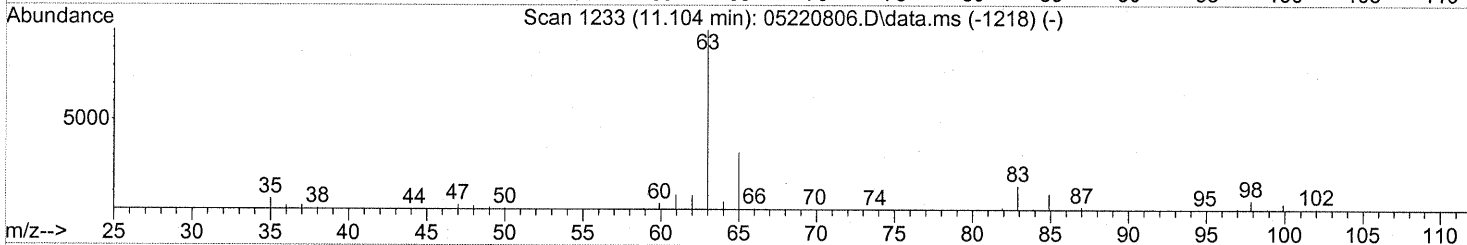
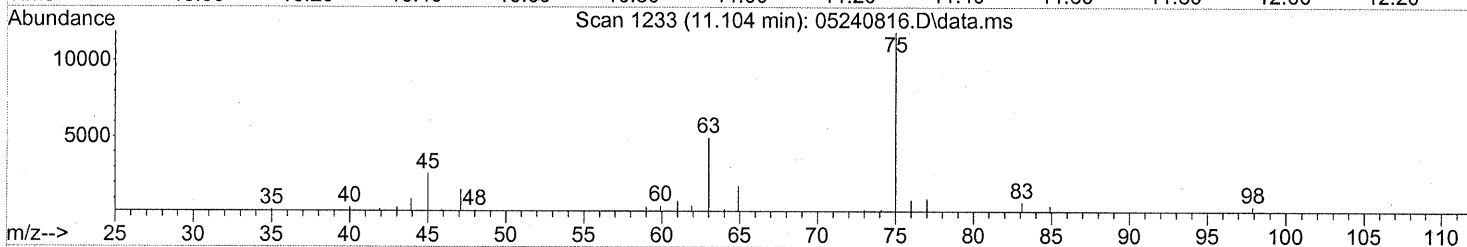
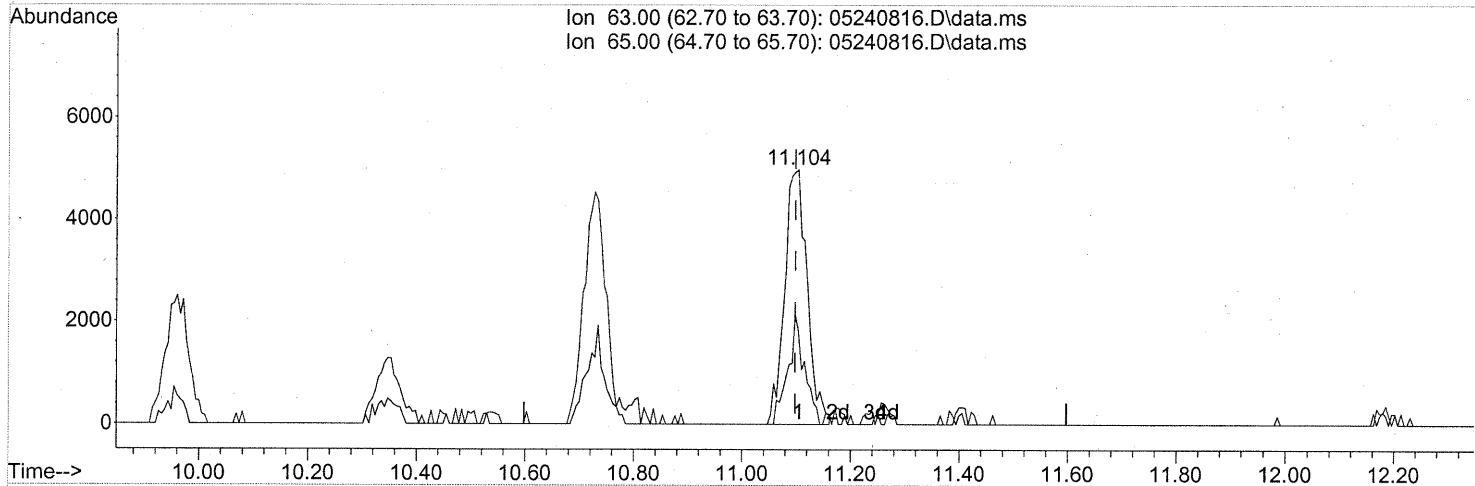
response 2802

Ion	Exp%	Act%
61.00	100	100
95.90	54.20	66.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(24) 1,1-Dichloroethane (T)

11.104min (+0.006) 0.23ng

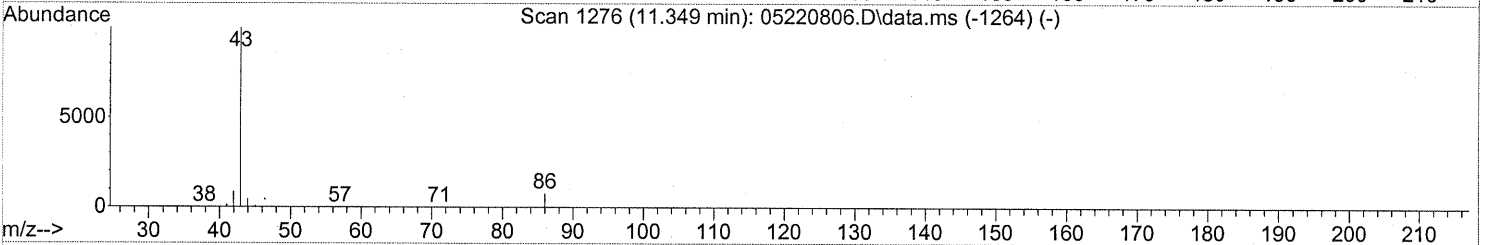
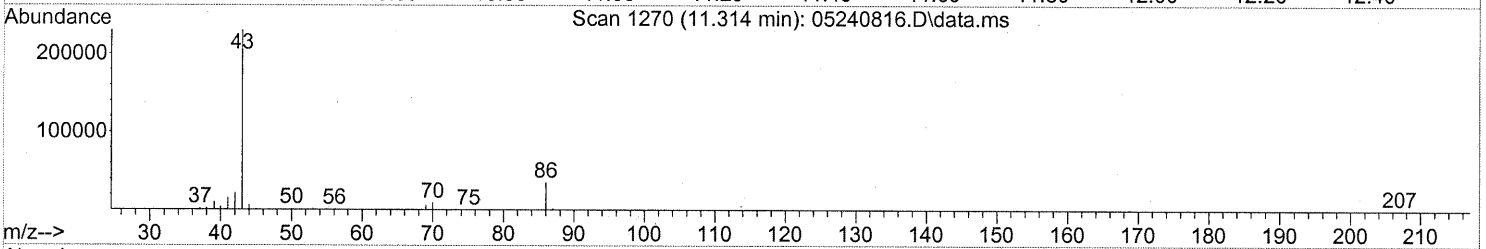
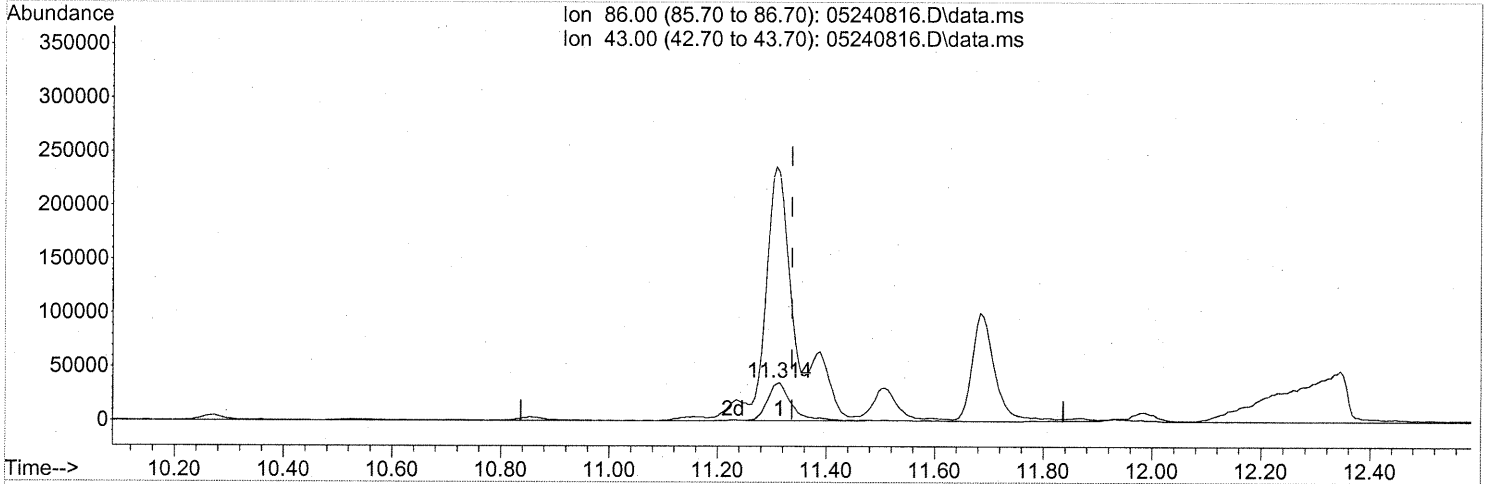
response 14319

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	31.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(26) Vinyl Acetate (T)

11.314min (-0.023) 18.41ng

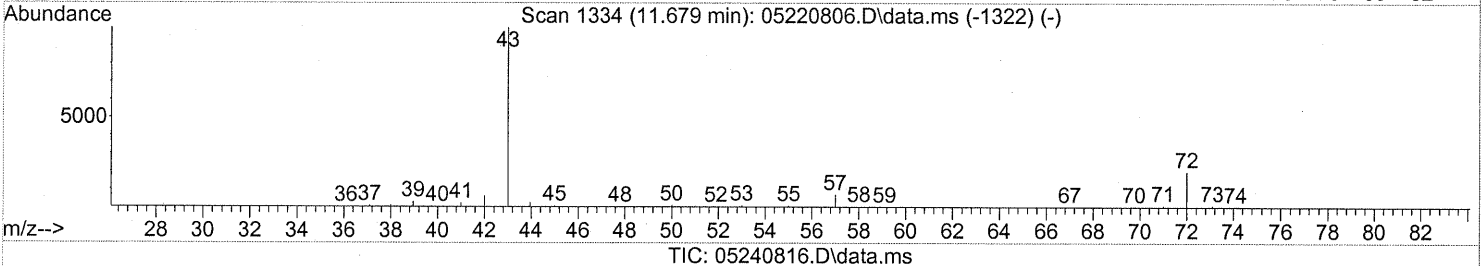
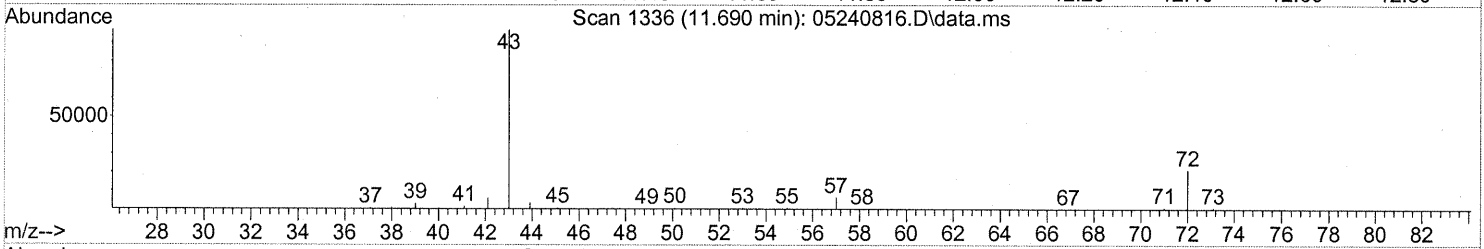
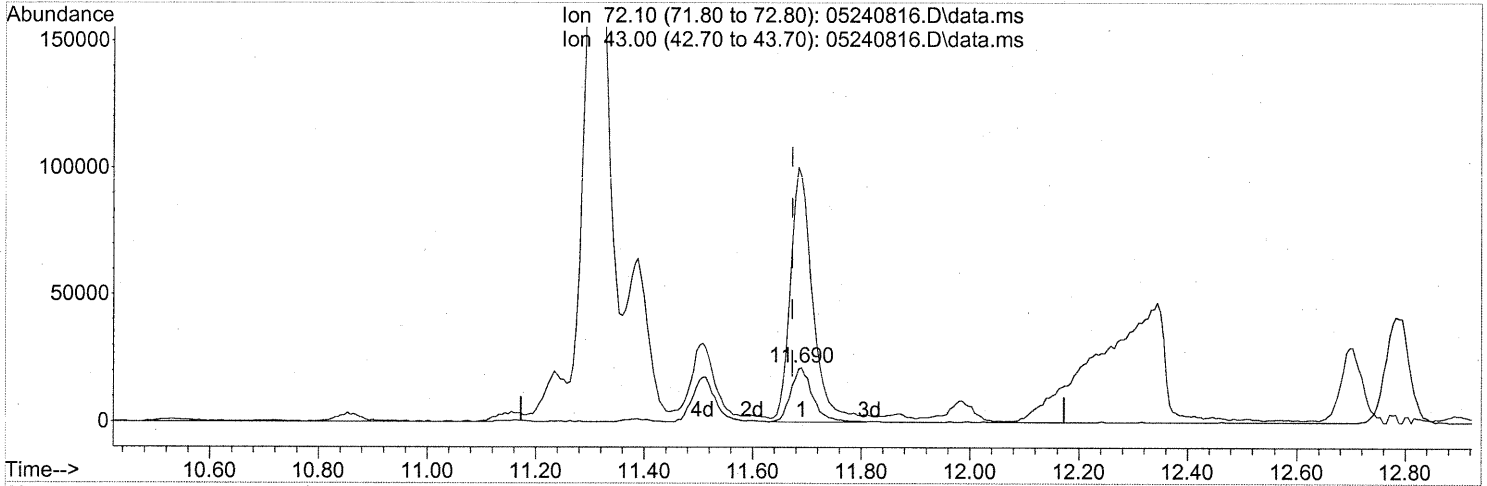
response 107296

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	675.04#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.690min (+0.017) 2.56ng

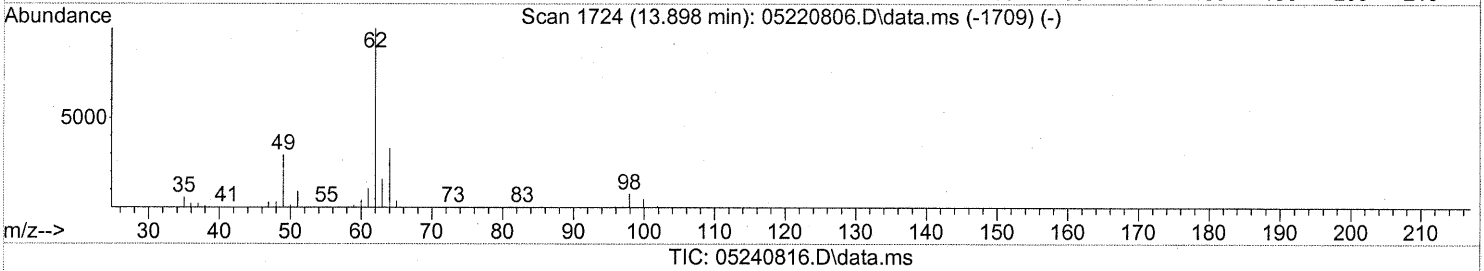
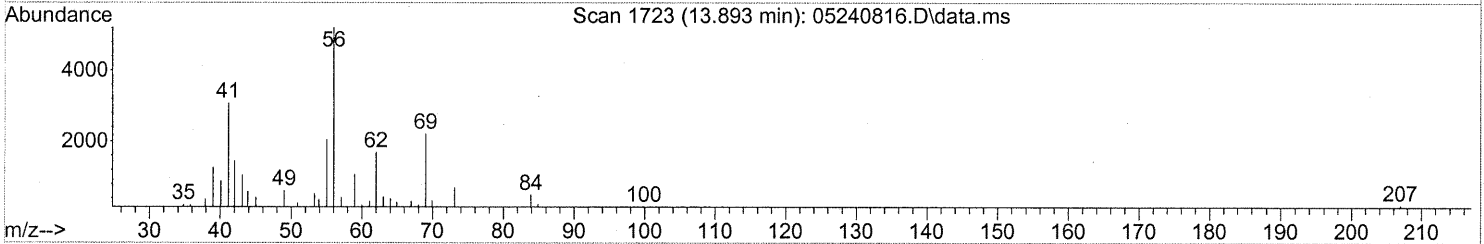
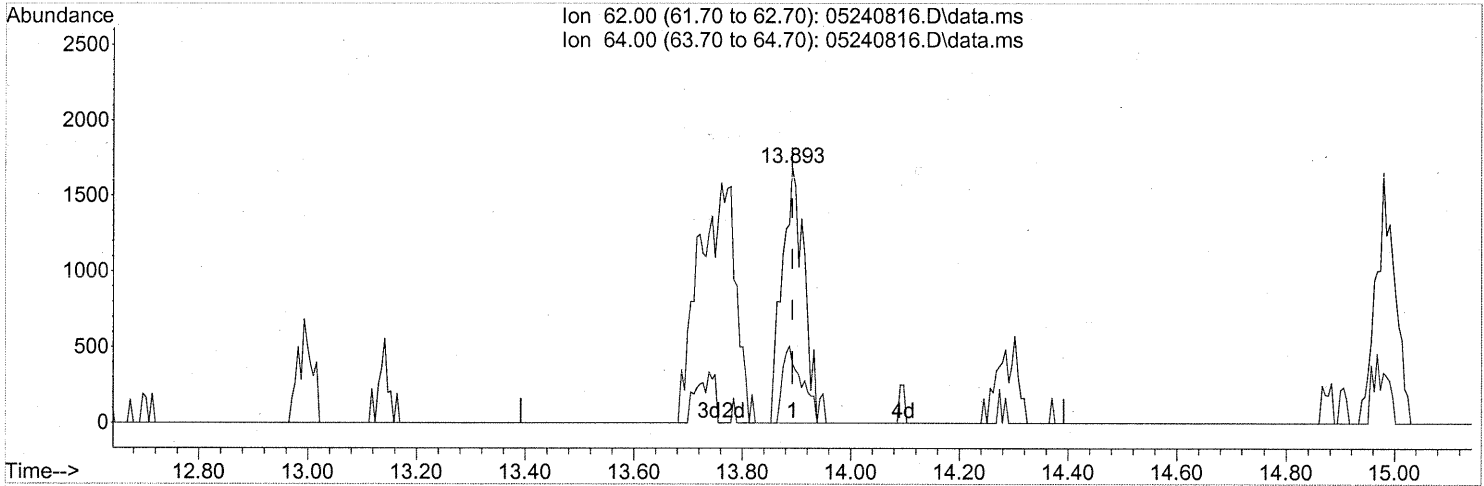
response 58958

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	473.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(36) 1,2-Dichloroethane (T)

13.893min (-0.000) 0.09ng

response 4809

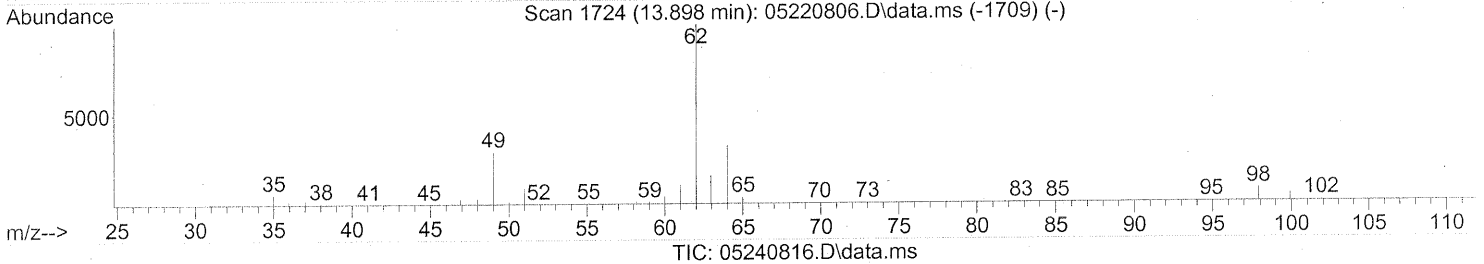
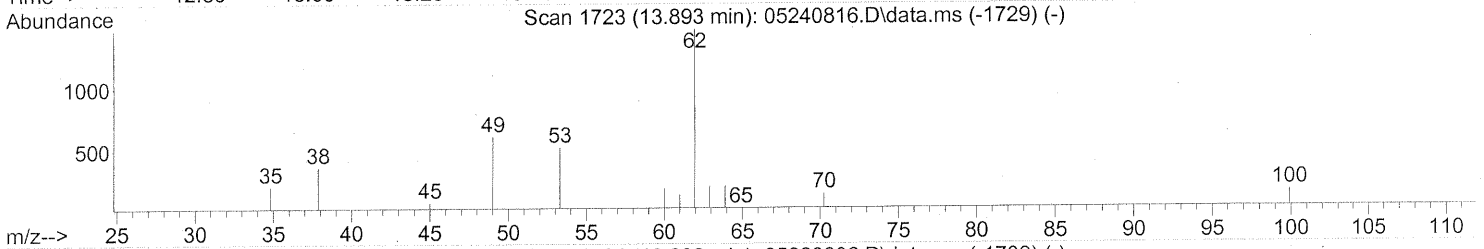
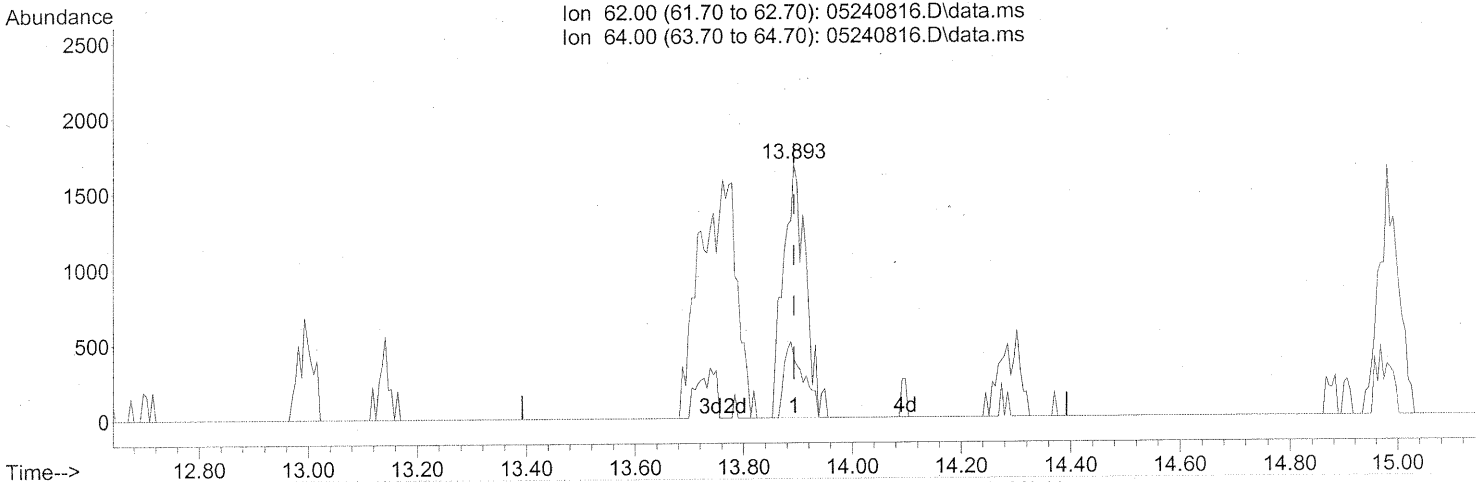
*before*

Ion	Exp%	Act%
62.00	100	100
64.00	30.90	25.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801422-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:44:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(36) 1,2-Dichloroethane (T)

13.893min (-0.000) 0.09ng

response 4809

Ion	Exp%	Act%
62.00	100	100
64.00	30.90	25.62
0.00	0.00	0.00
0.00	0.00	0.00

*after substr*

*WA 5/29/08*

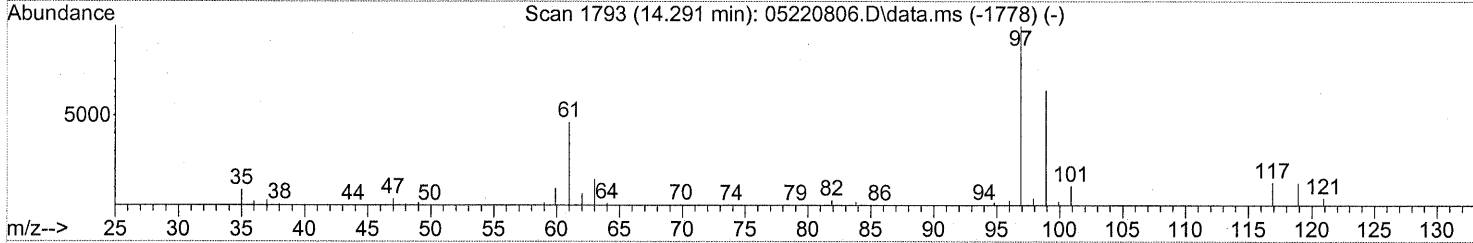
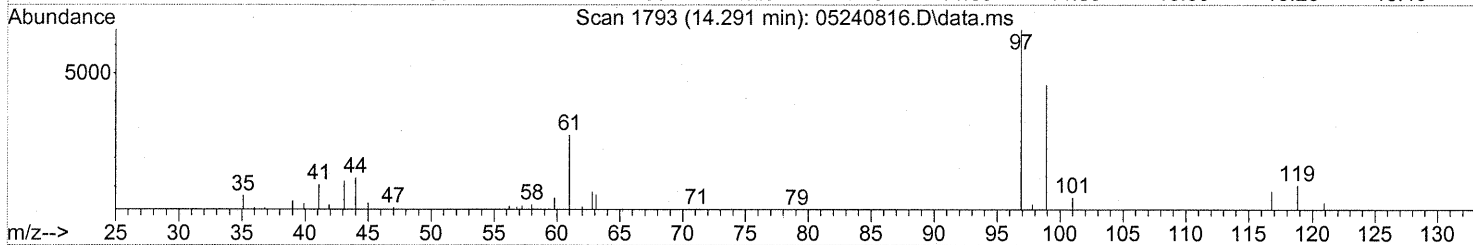
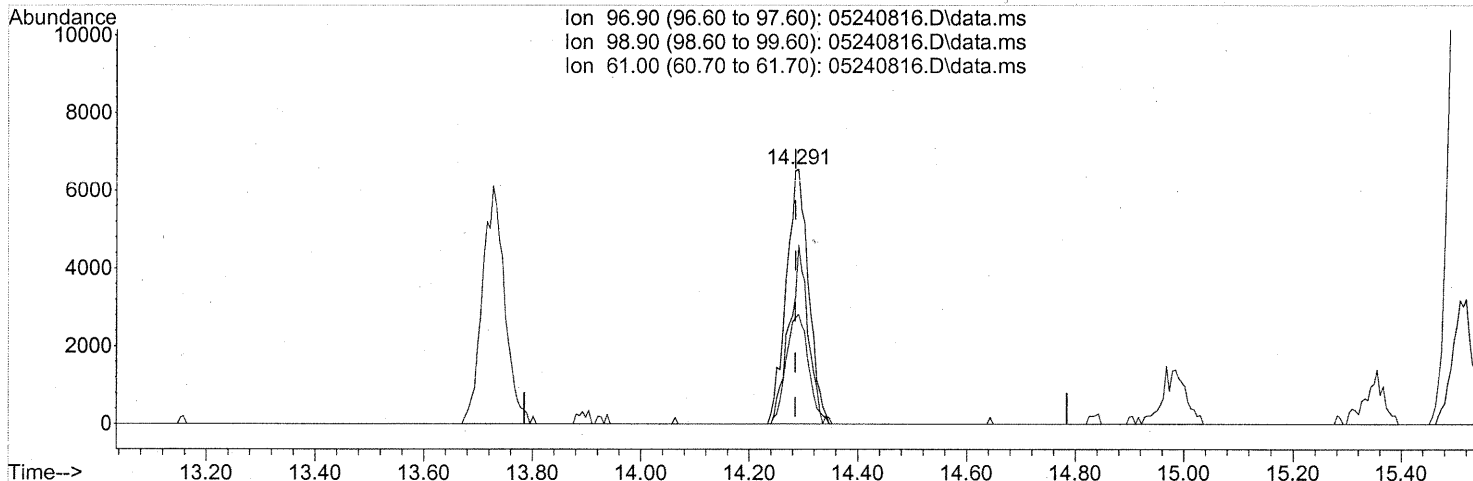
*WA 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(38) 1,1,1-Trichloroethane (T)

14.291min (+0.006) 0.34ng

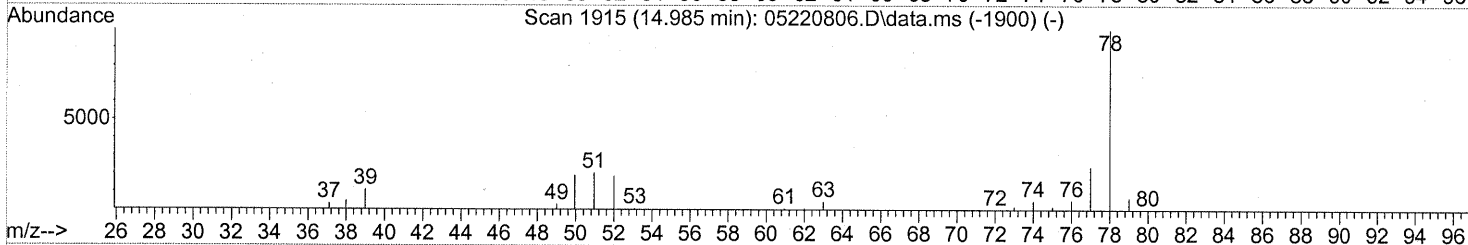
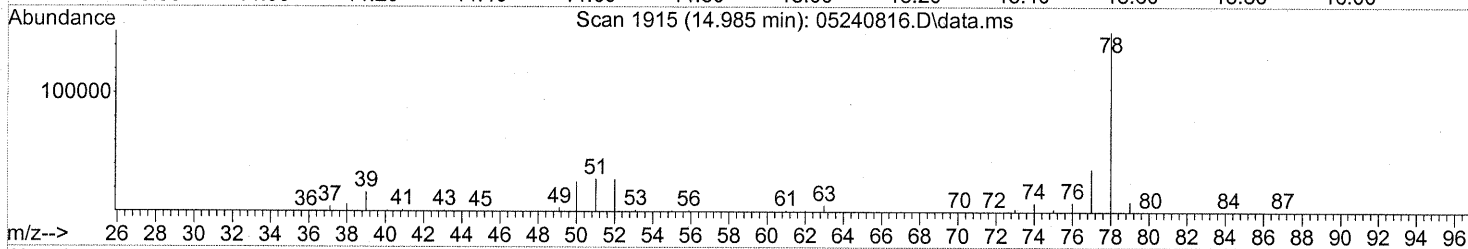
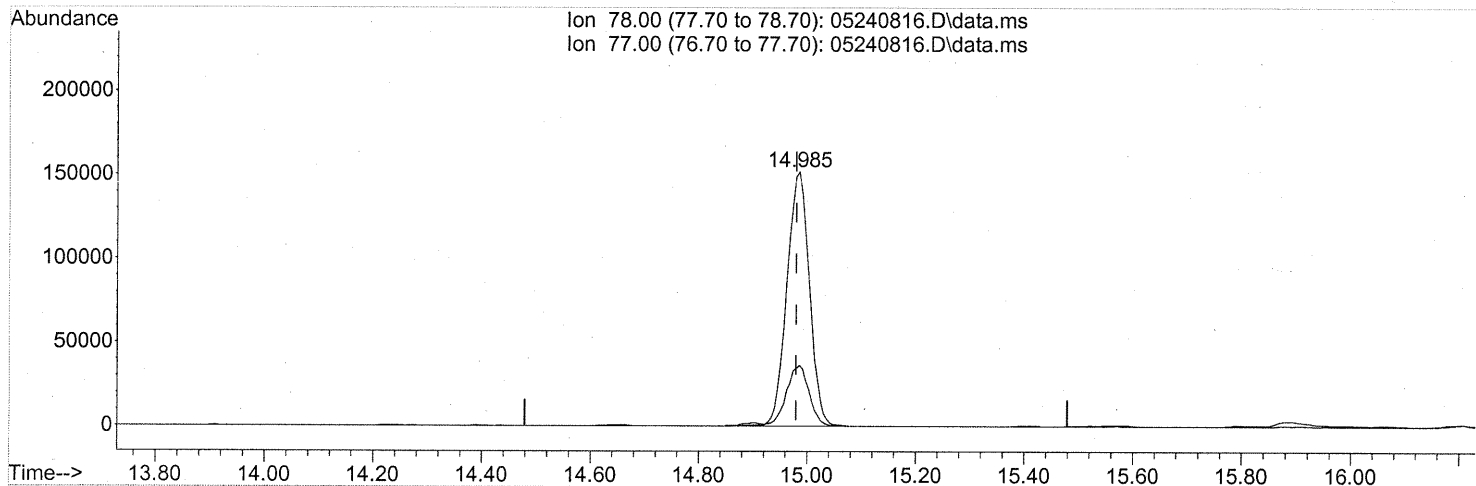
response 18775

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	60.32
61.00	50.50	42.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240816.D  
Acq On : 24 May 2008 17:25  
Operator : WA  
Sample : P0801442-007 (1000ml)  
Misc : ENSR SG72B-05 (-3.2, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240816.D\data.ms

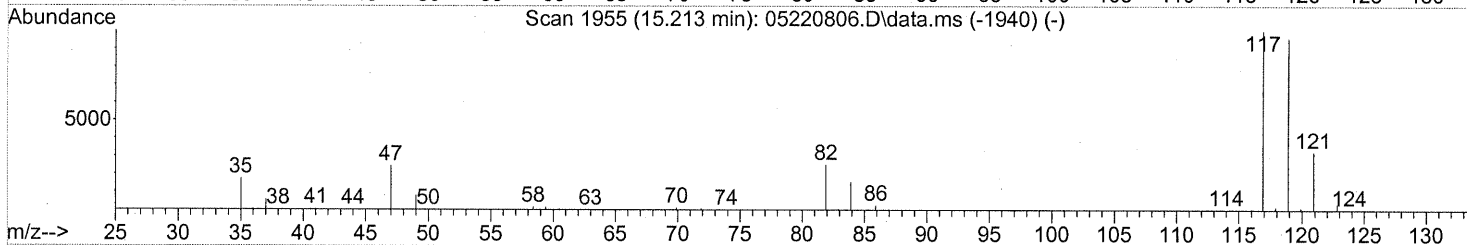
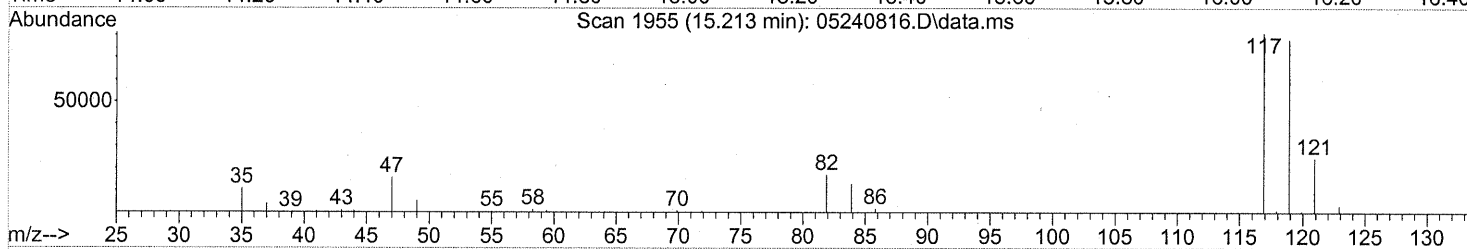
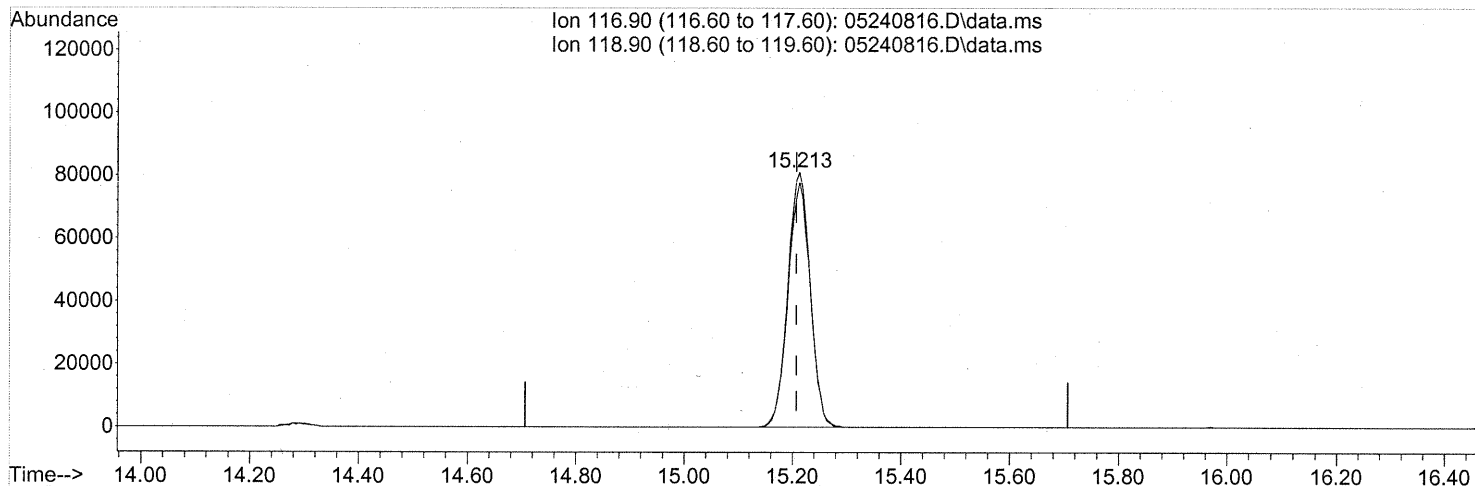
(41) Benzene (T)  
14.985min (+0.006) 3.39ng  
response 435488

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 4.72ng

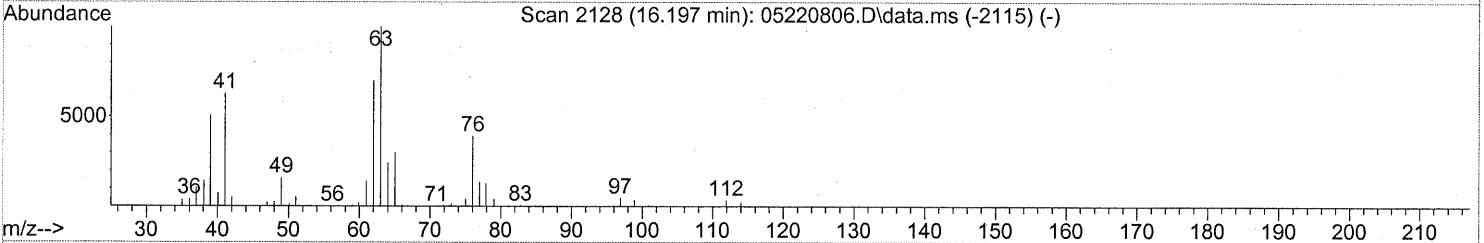
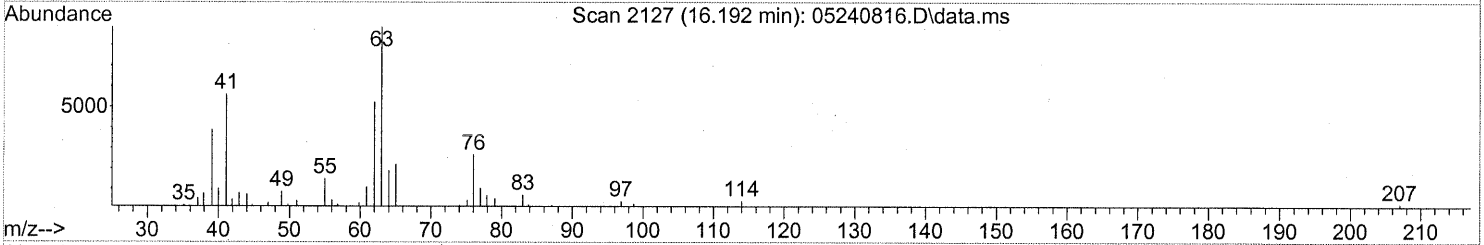
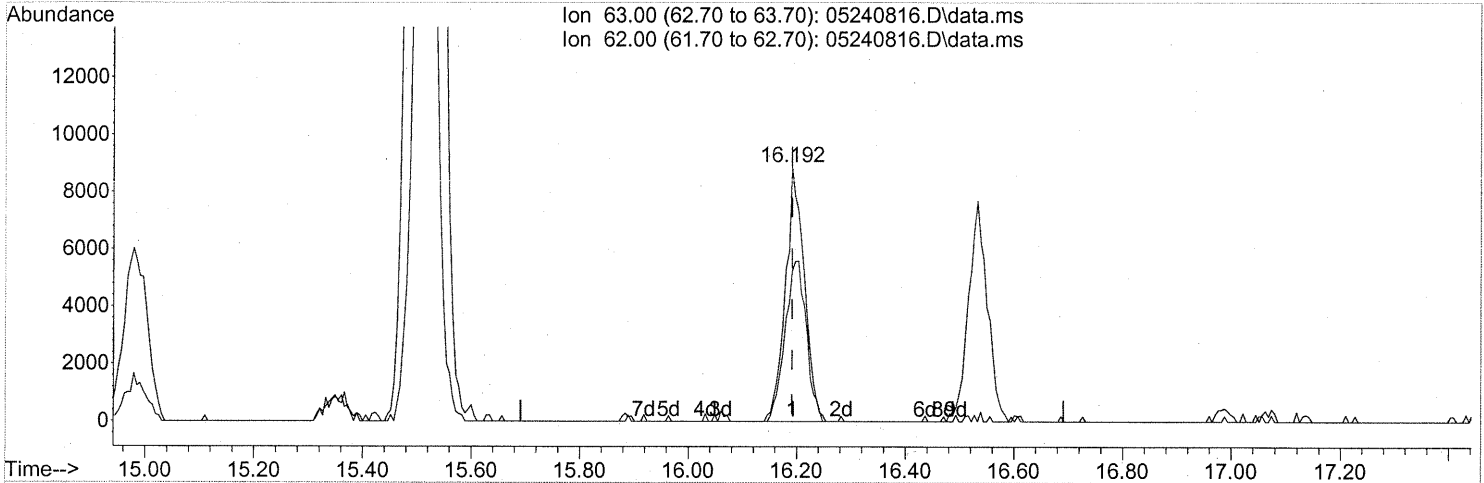
response 233284

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	95.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

16.192min (-0.000) 0.63ng

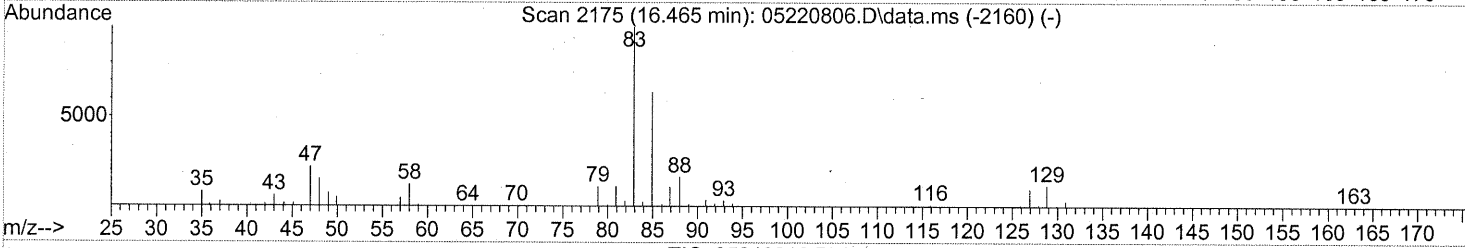
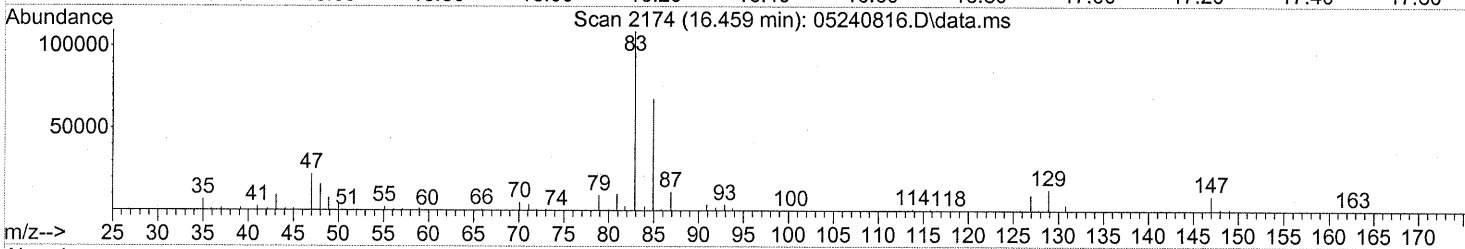
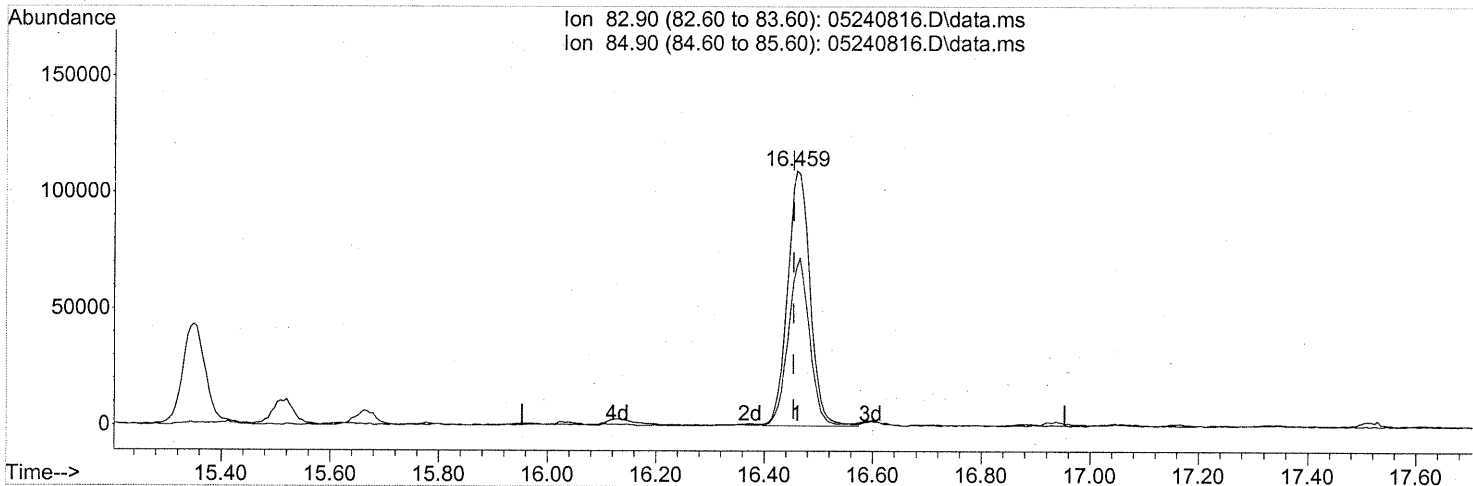
response 21543

Ion	Exp%	Act%
63.00	100	100
62.00	71.30	70.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.459min (+0.006) 7.29ng

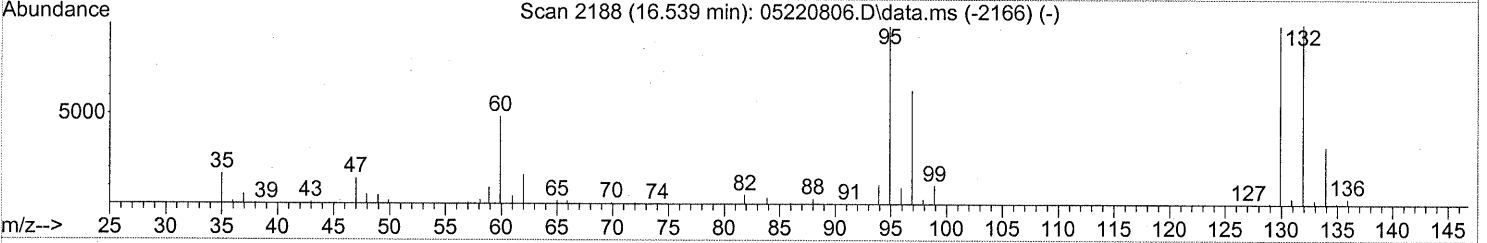
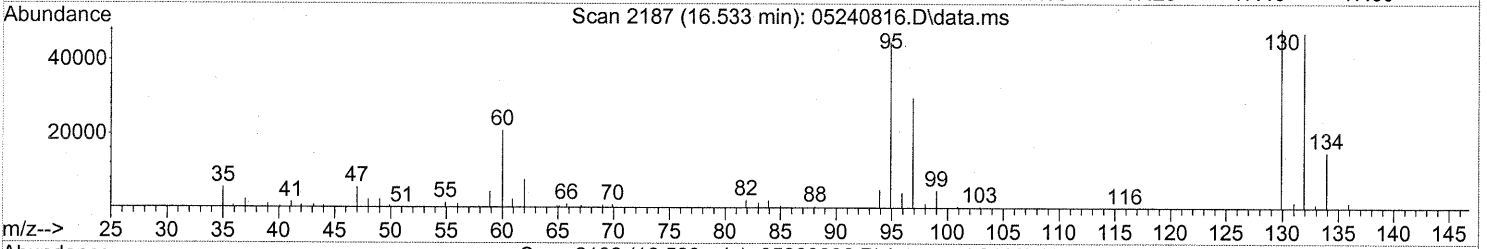
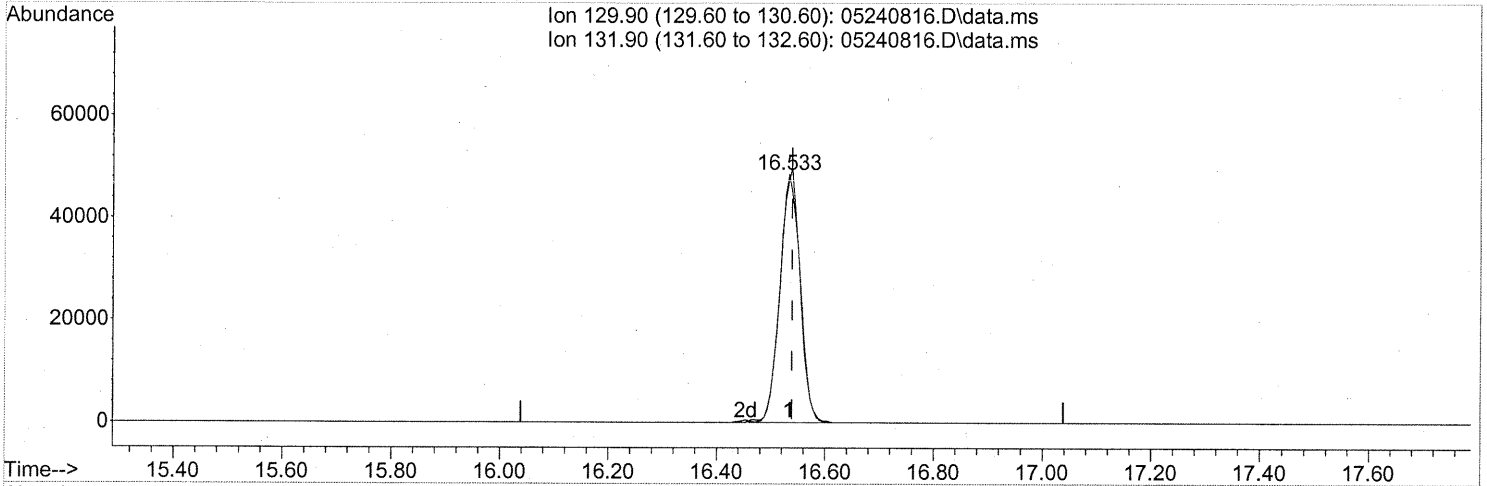
response 316049

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	62.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240816.D  
Acq On : 24 May 2008 17:25  
Operator : WA  
Sample : P0801442-007 (1000ml)  
Misc : ENSR SG72B-05 (-3.2, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



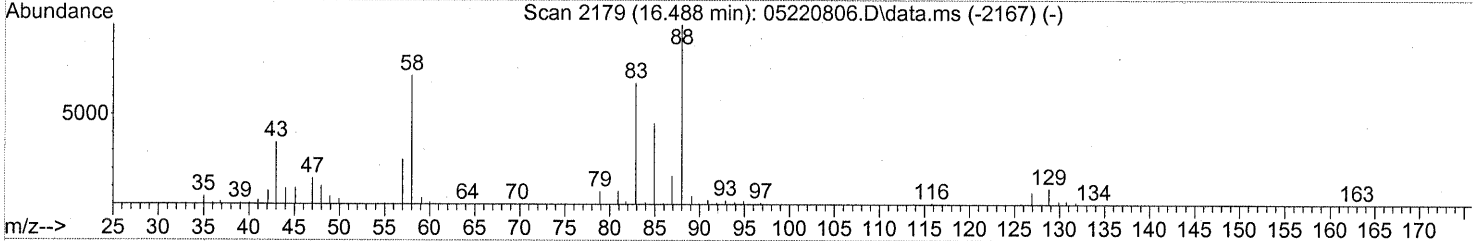
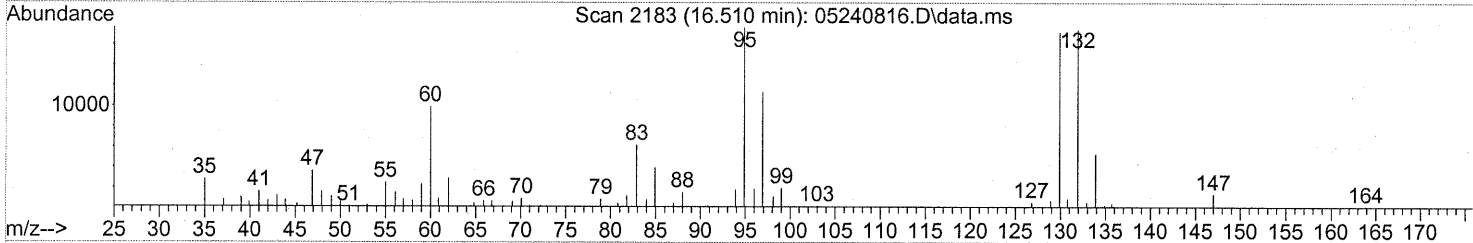
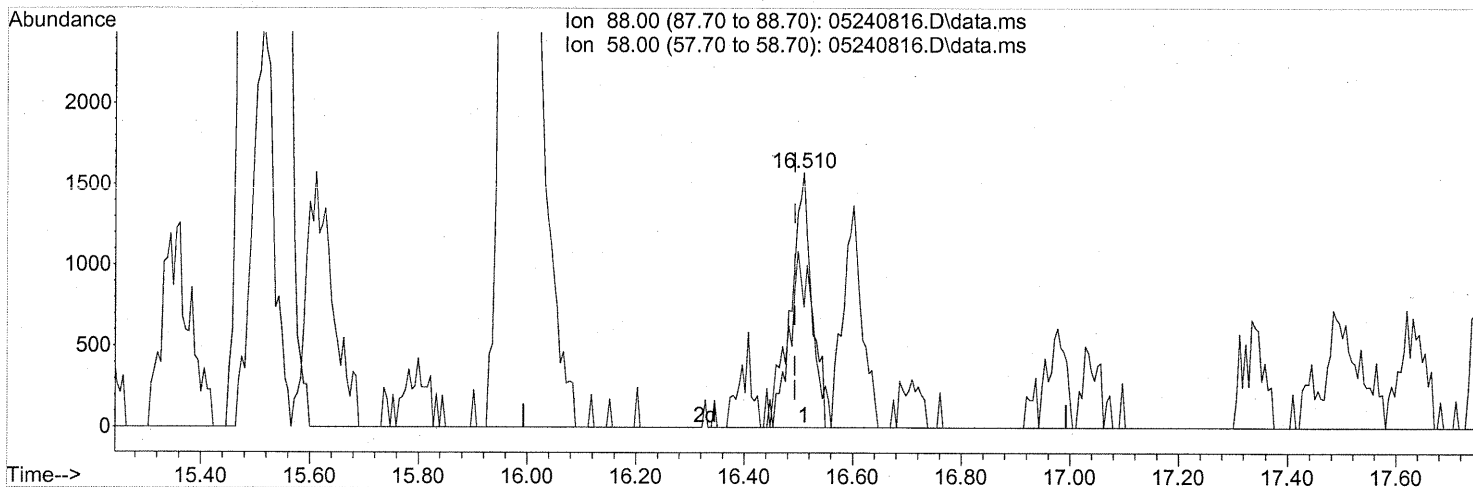
TIC: 05240816.D\data.ms

(47) Trichloroethene (T)  
16.533min (-0.006) 3.17ng  
response 124925  
Ion Exp% Act%  
129.90 100 100  
131.90 101.20 102.27  
0.00 0.00 0.00  
0.00 0.00 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)

16.510min (+0.017) 0.17ng

response 4091

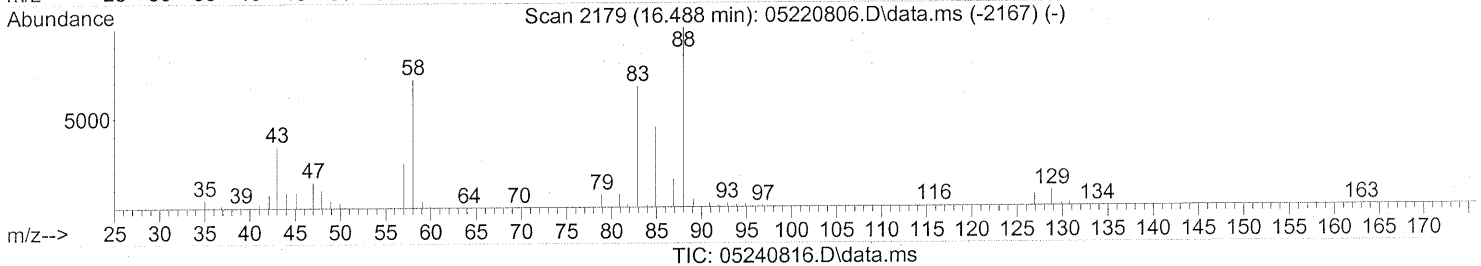
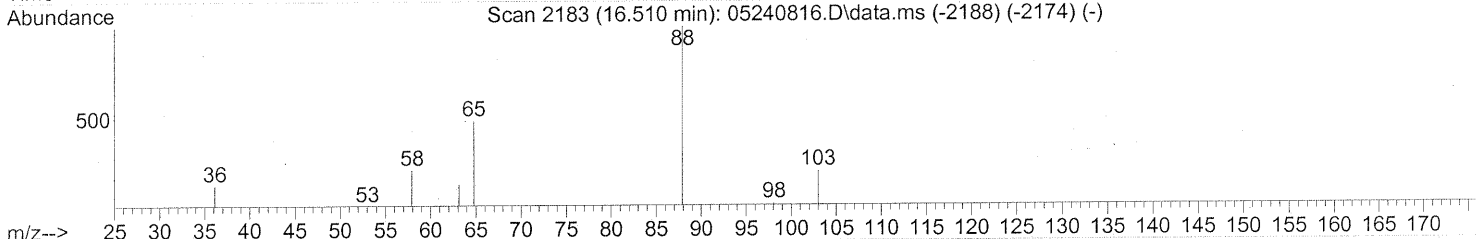
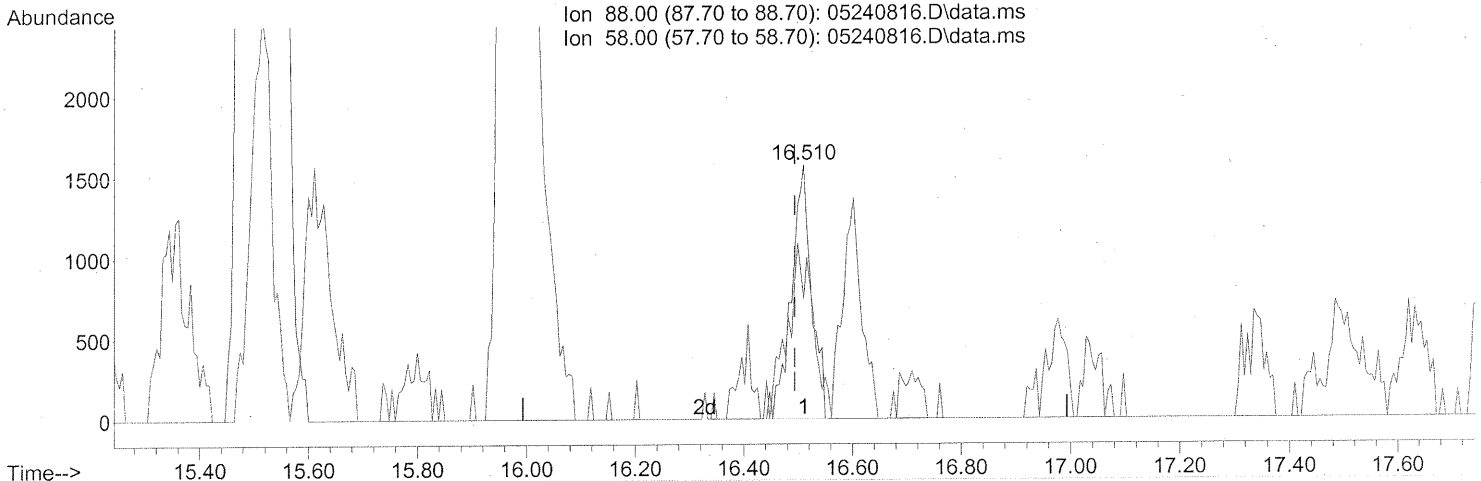
*before substr.*

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	88.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801422-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:44:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.510min (+0.017) 0.17ng

response 4091

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	88.41
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

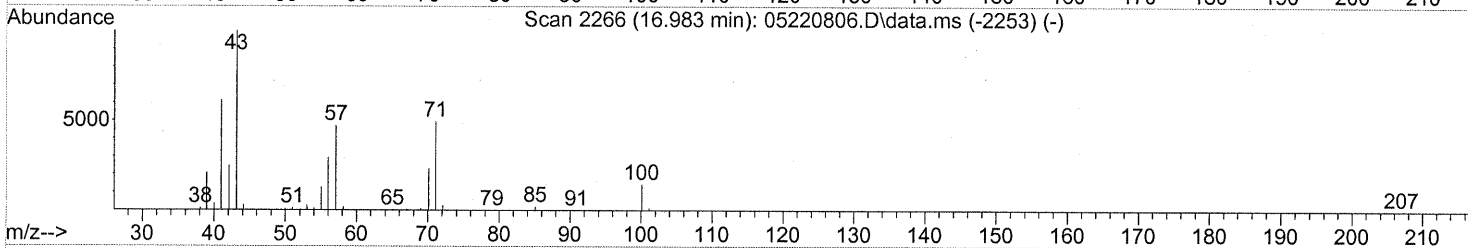
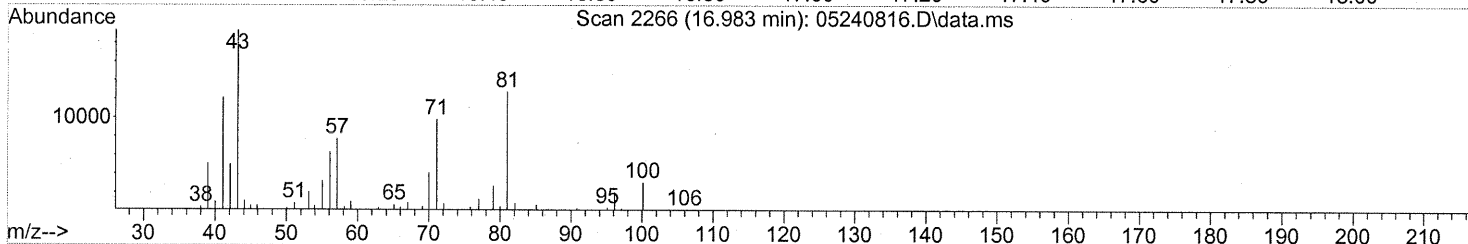
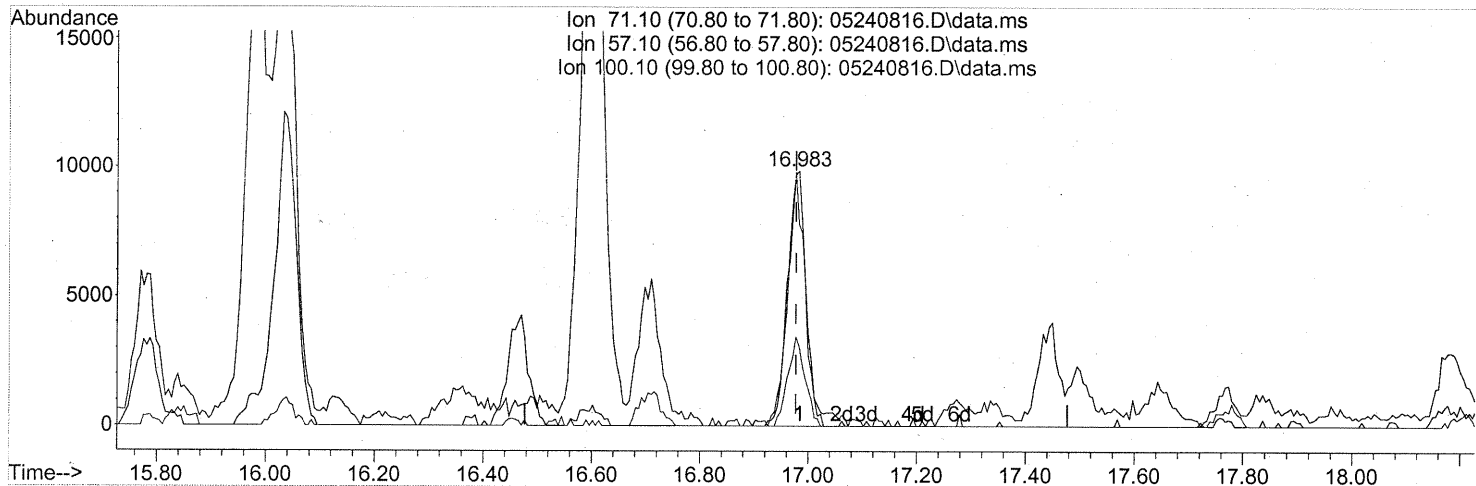
*WA 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



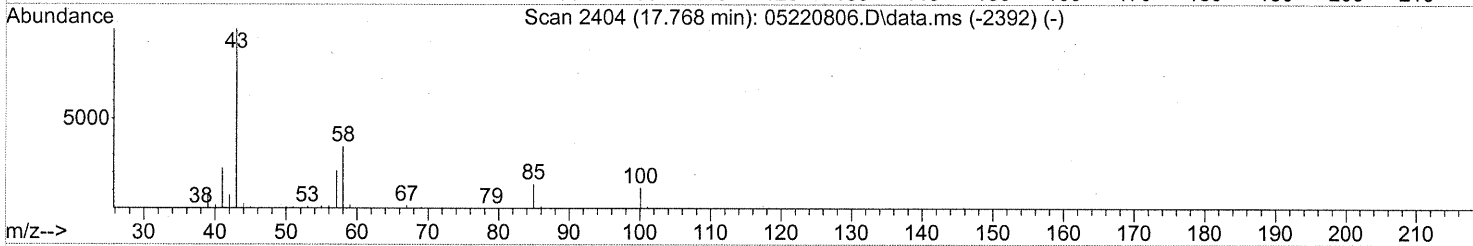
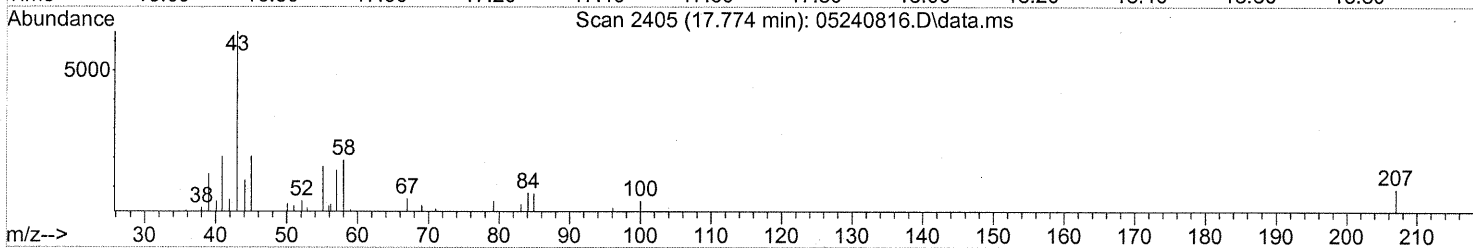
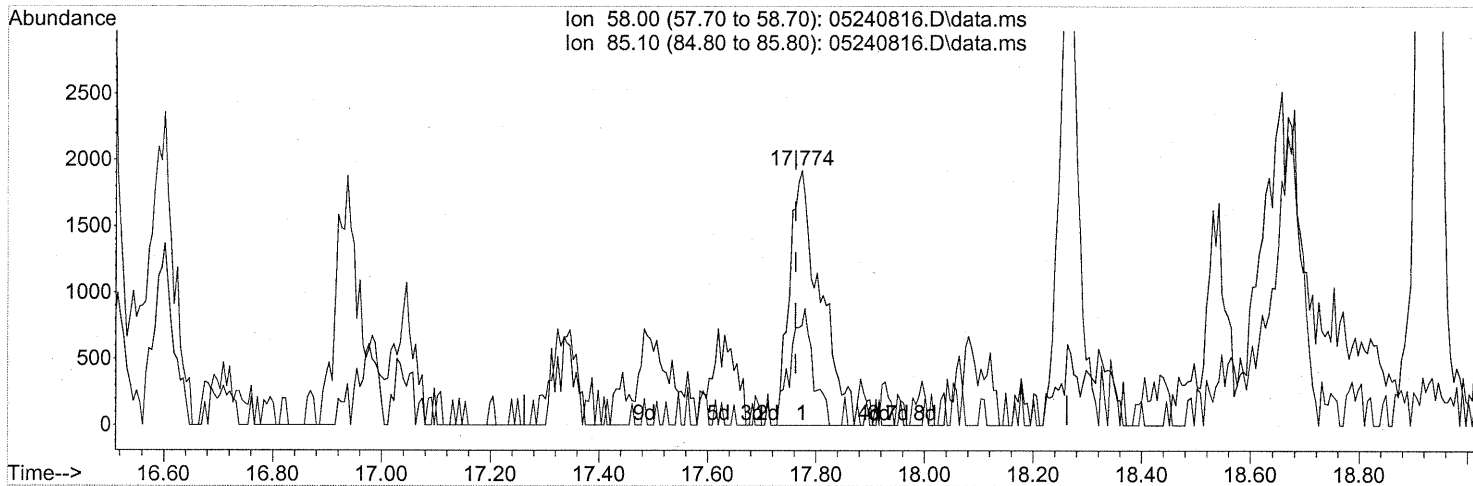
(51) n-Heptane (T)  
 16.983min (+0.006) 0.67ng  
 response 22999

Ion	Exp%	Act%
71.10	100	100
57.10	124.90	100.96#
100.10	30.10	33.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(53) 4-Methyl-2-pentanone (T)

17.774min (+0.011) 0.22ng

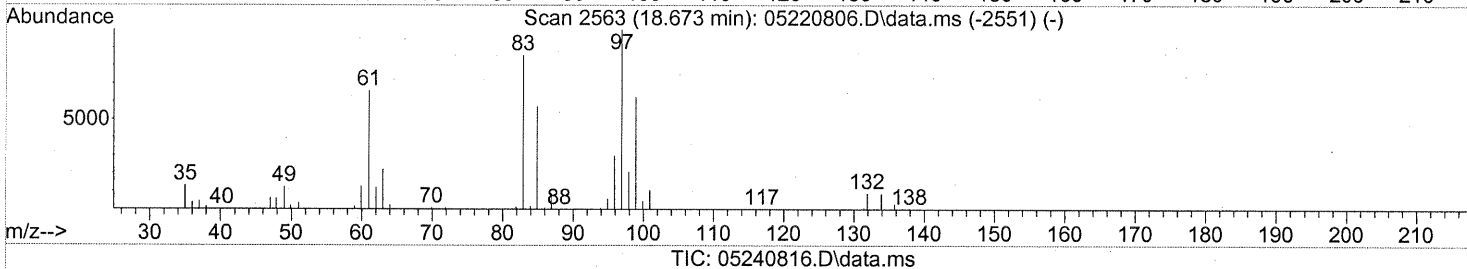
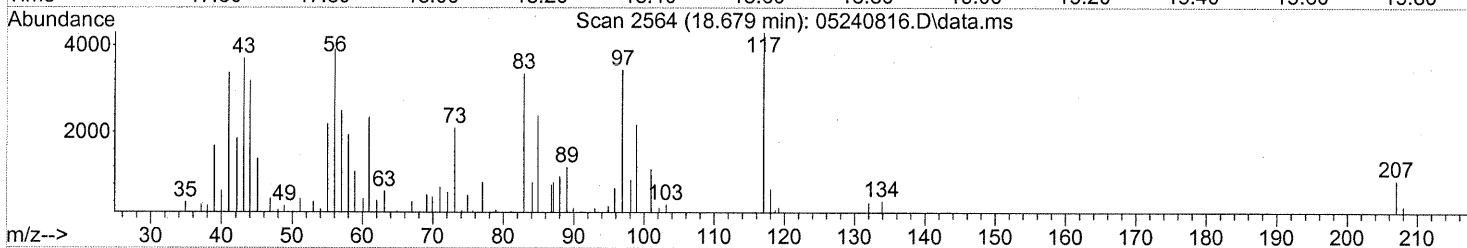
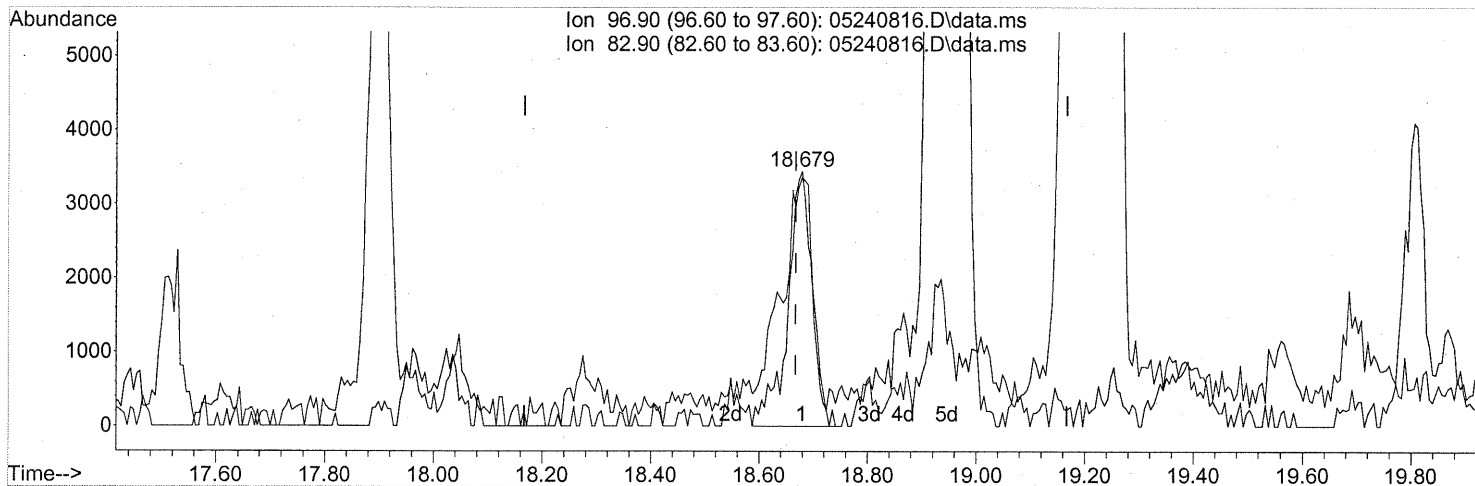
response 7589

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	33.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(55) 1,1,2-Trichloroethane (T)

18.679min (+0.011) 0.34ng

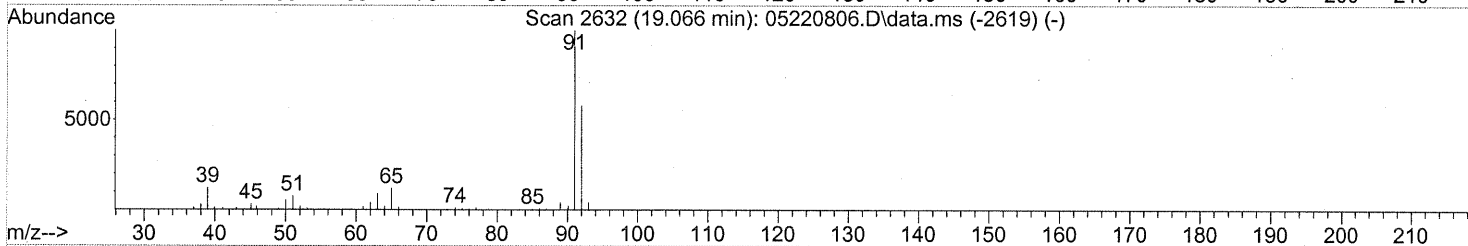
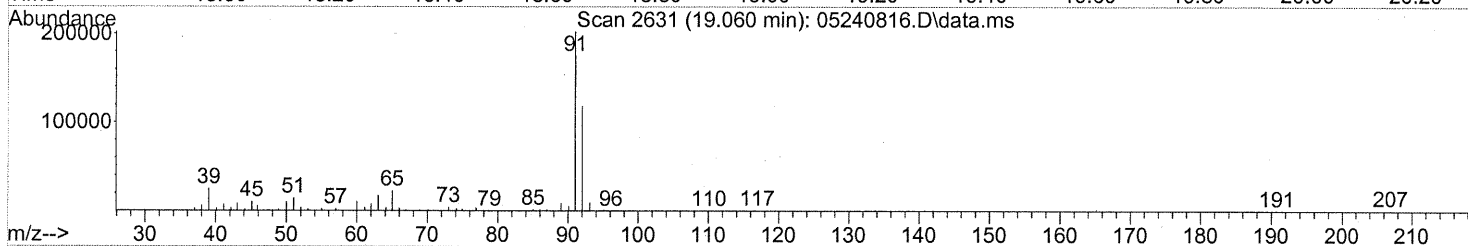
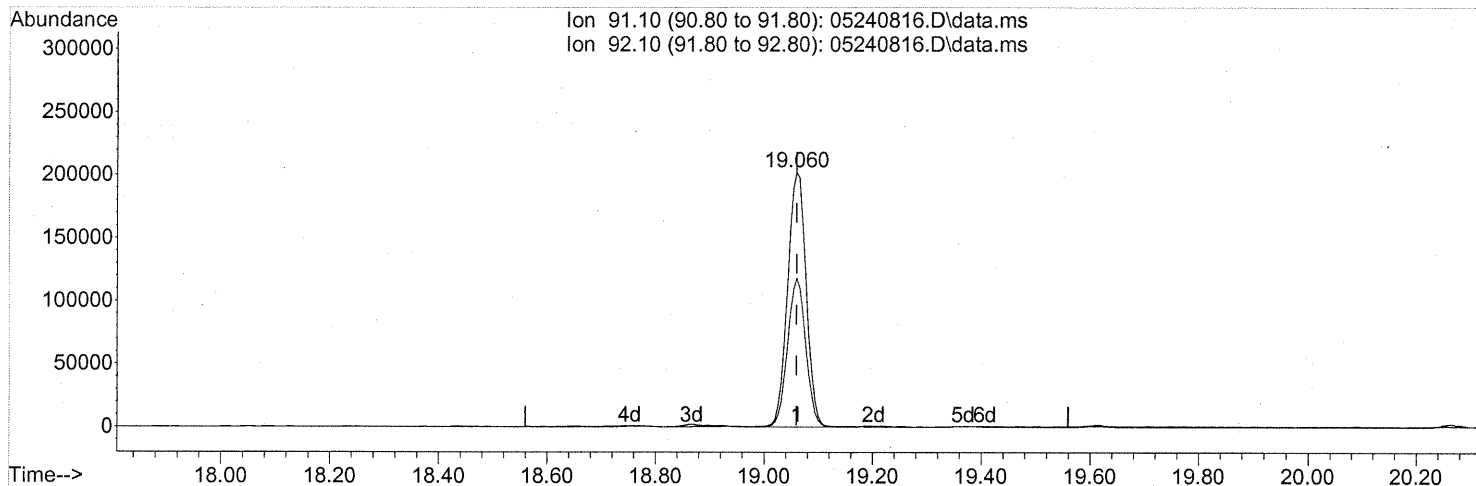
response 10647

Ion	Exp%	Act%
96.90	100	100
82.90	84.80	85.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 3.37ng

response 480331

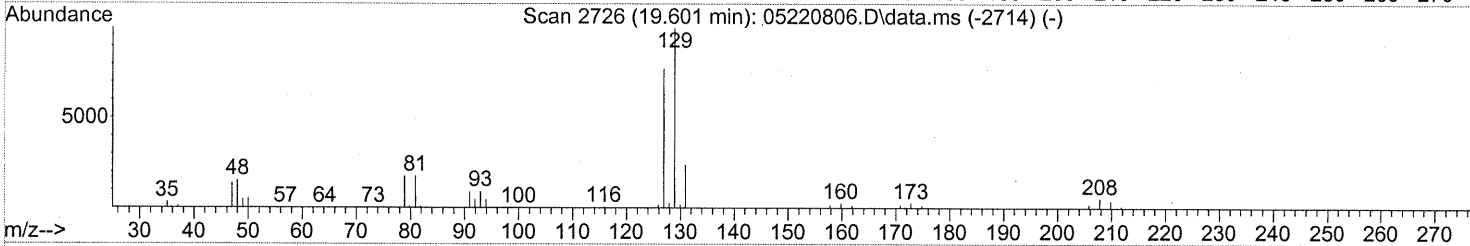
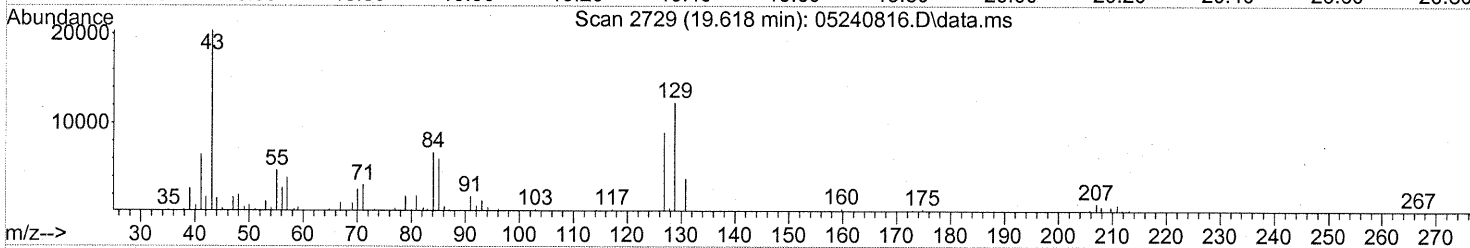
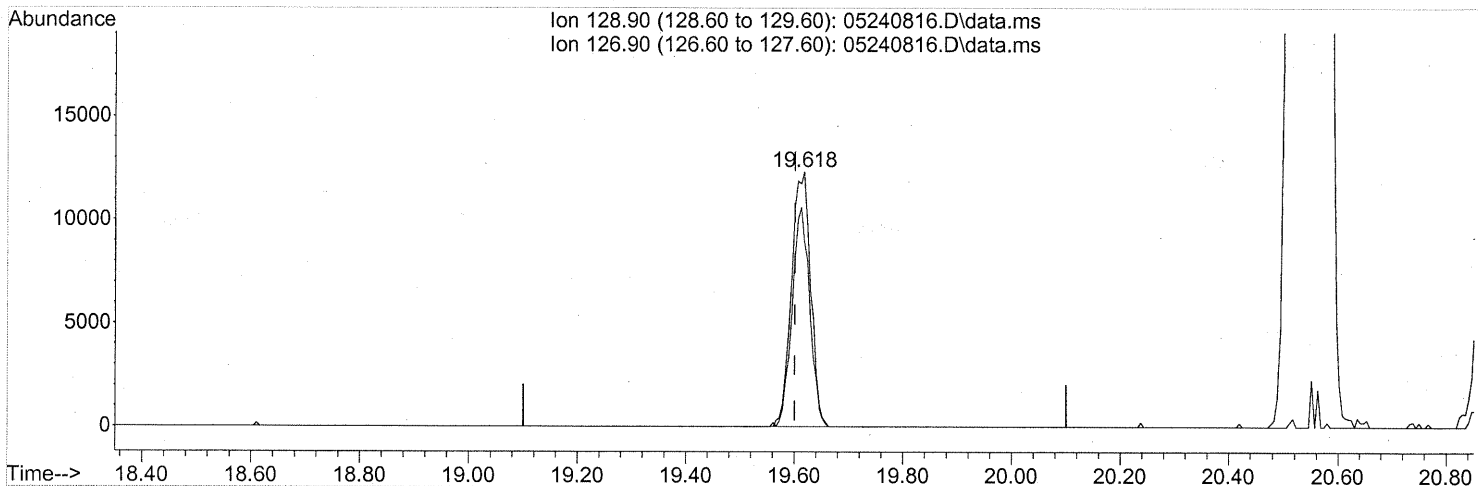
Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.09
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(60) Dibromochloromethane (T)

19.618min (+0.017) 0.78ng

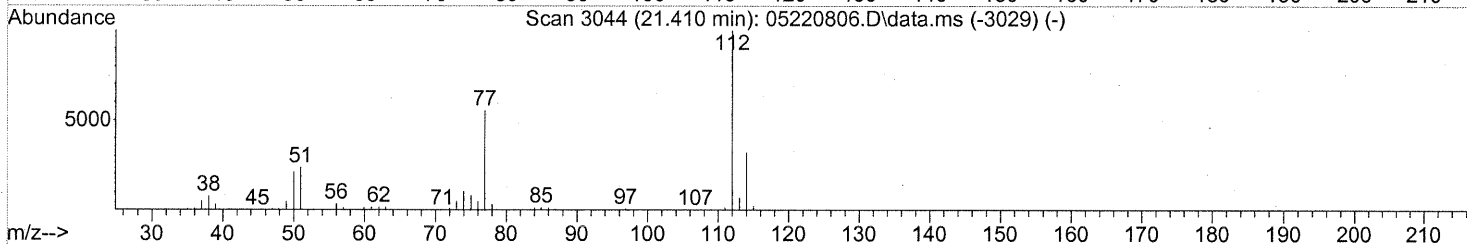
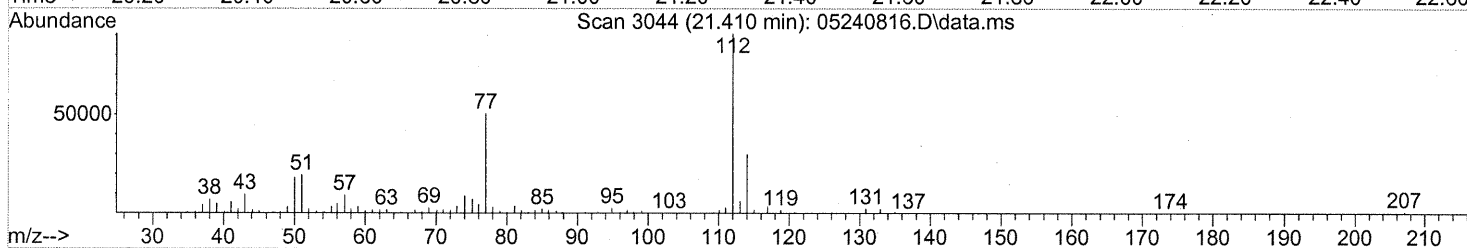
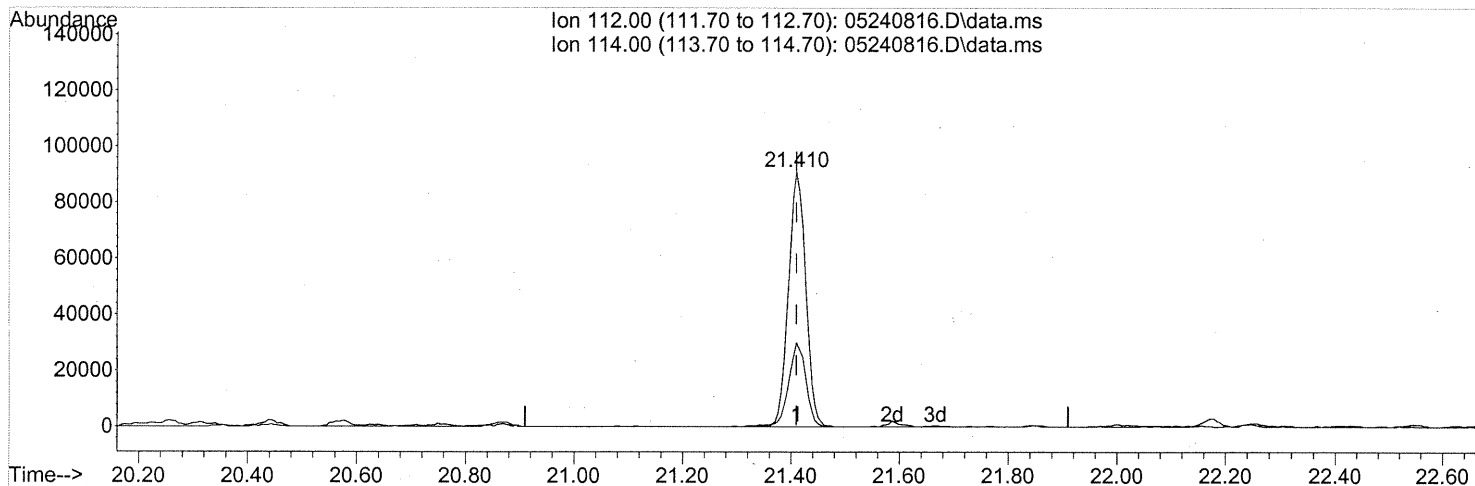
response 30219

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	79.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(65) Chlorobenzene (T)

21.410min (-0.000) 2.10ng

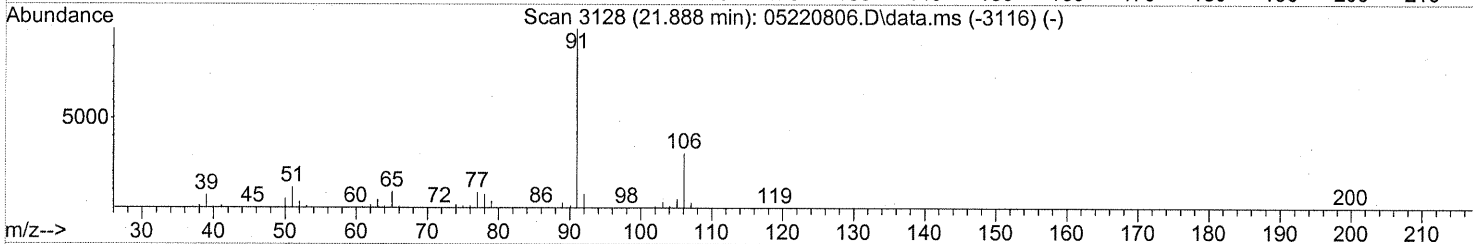
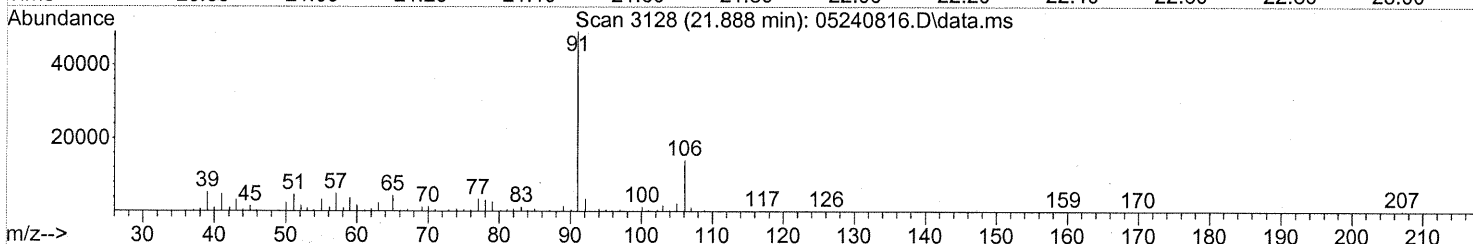
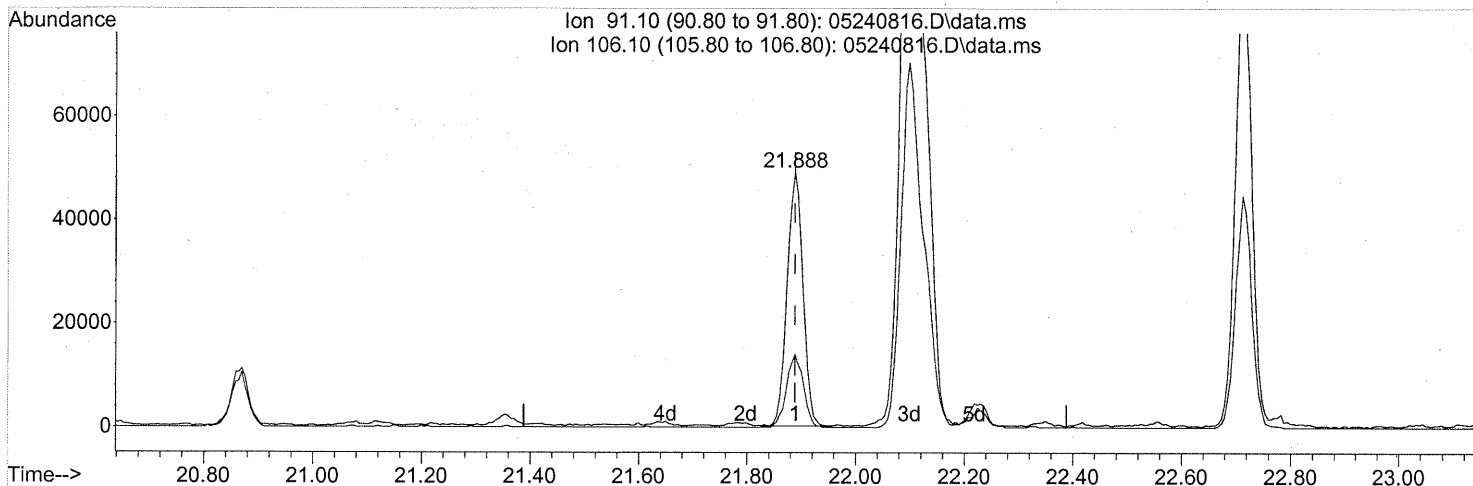
response 201292

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	32.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)  
 21.888min (-0.000) 0.61ng  
 response 99184

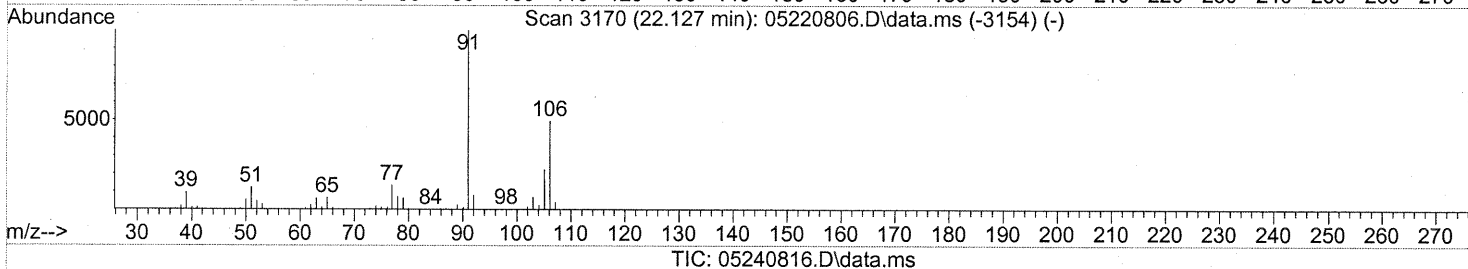
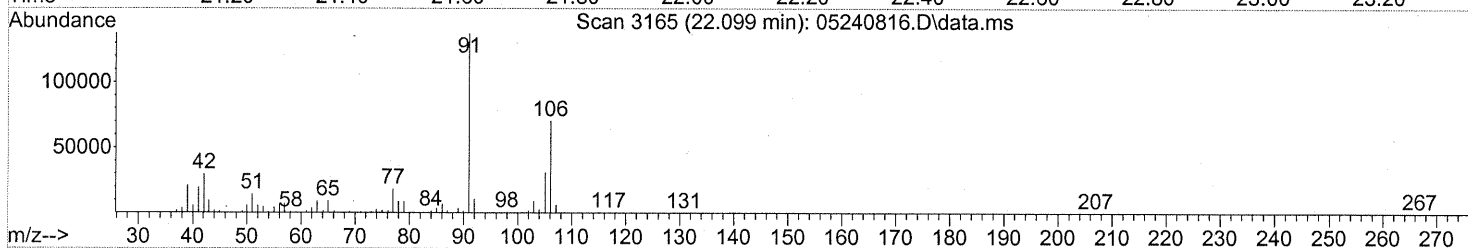
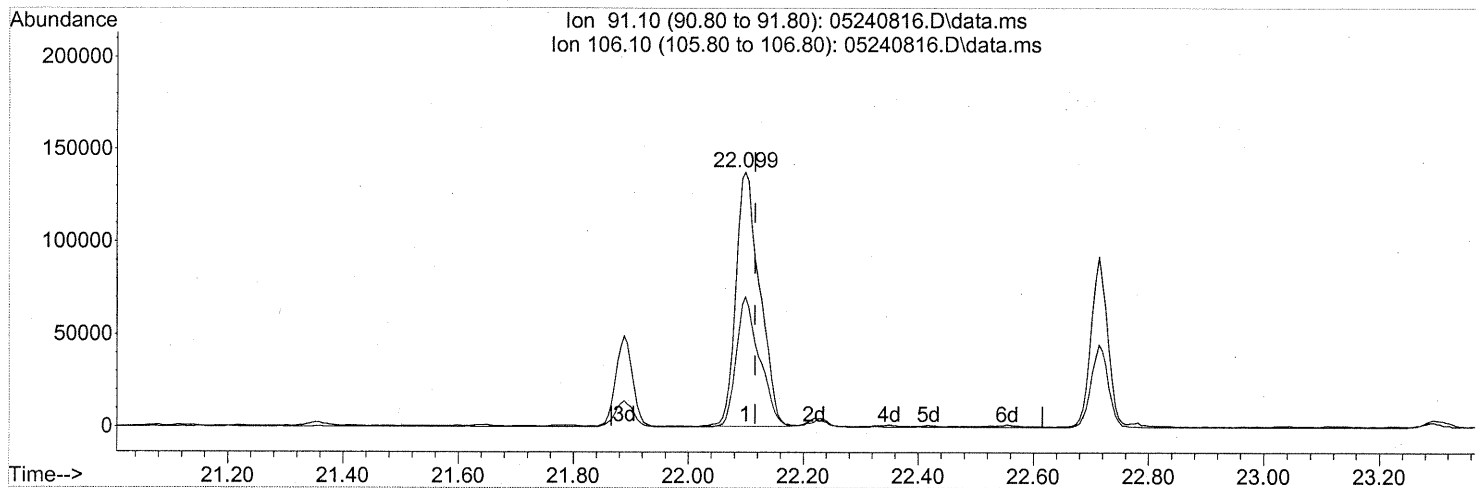
Ion	Exp%	Act%
91.10	100	100
106.10	34.10	30.55
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



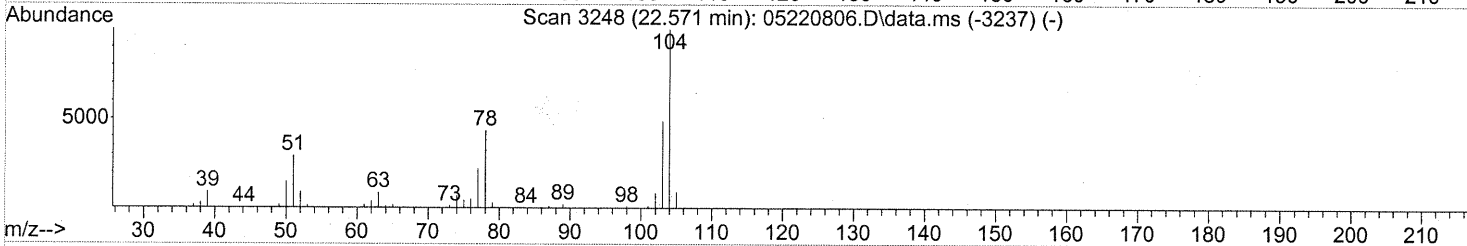
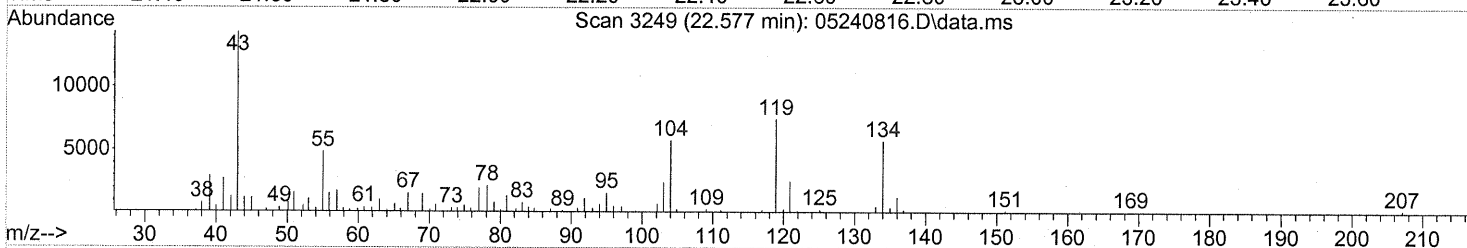
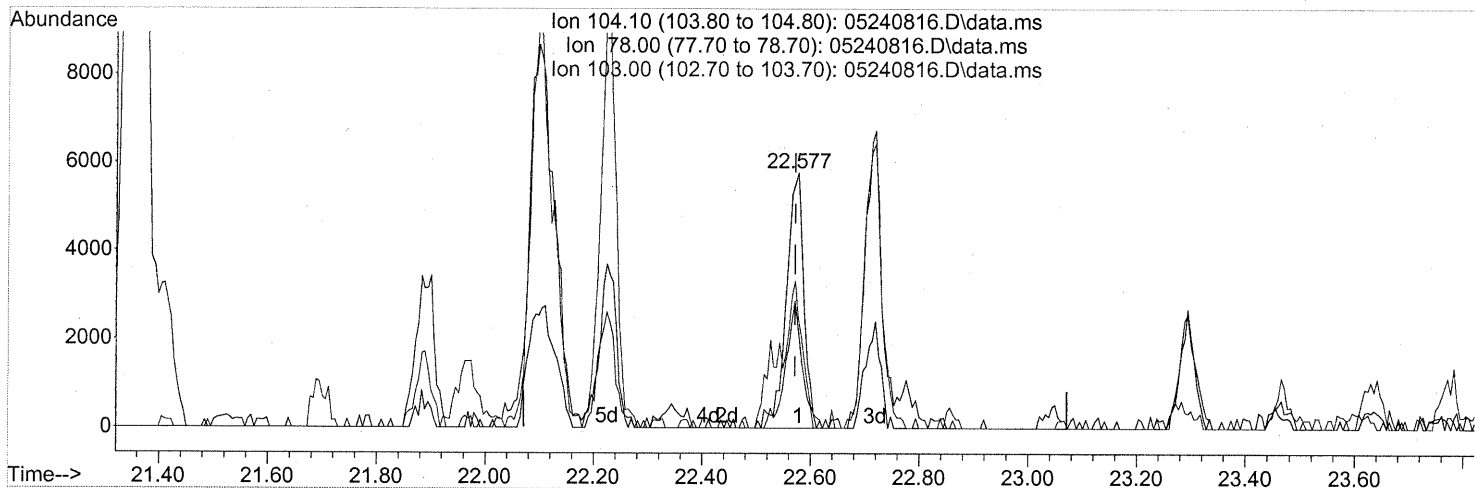
(67) m- & p-Xylene (T)  
 22.099min (-0.017) 3.62ng  
 response 396425

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	50.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(69) Styrene (T)

22.577min (+0.006) 0.13ng

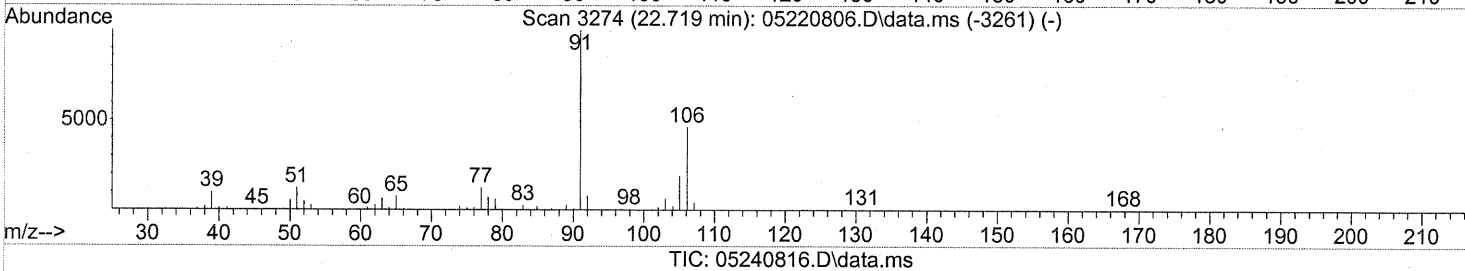
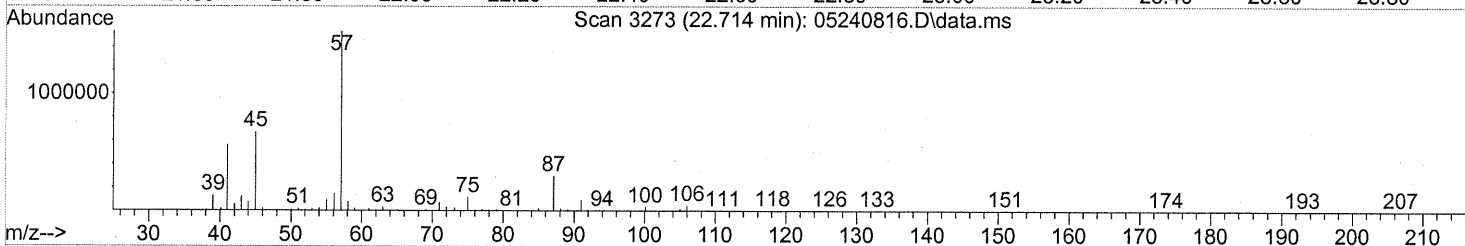
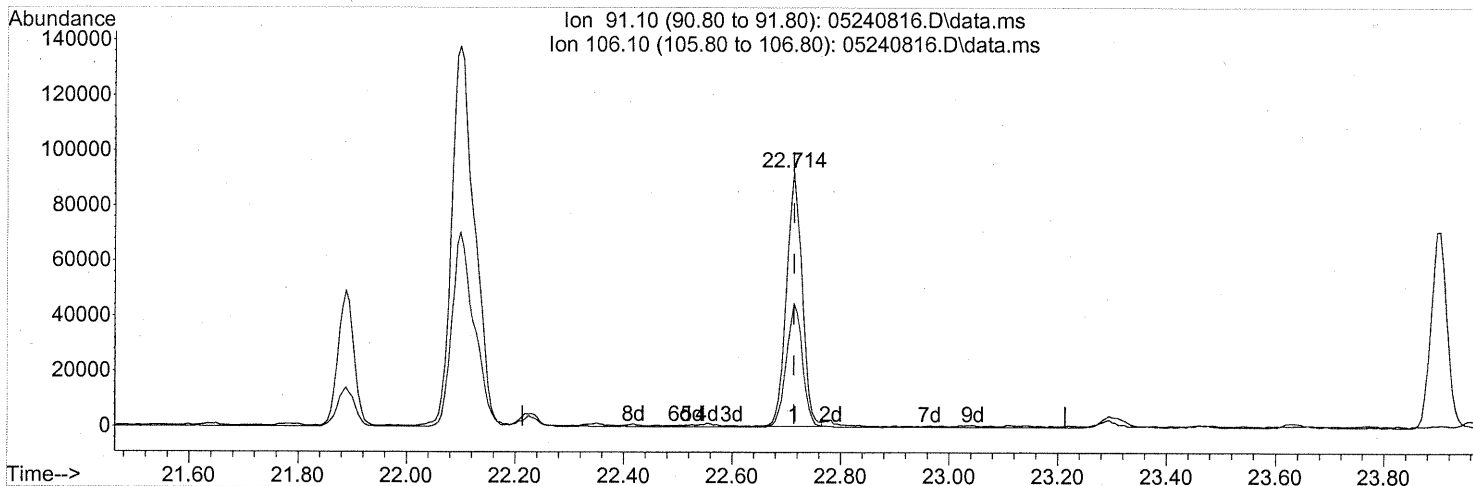
response 12825

Ion	Exp%	Act%
104.10	100	100
78.00	39.40	45.58
103.00	47.10	48.68
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

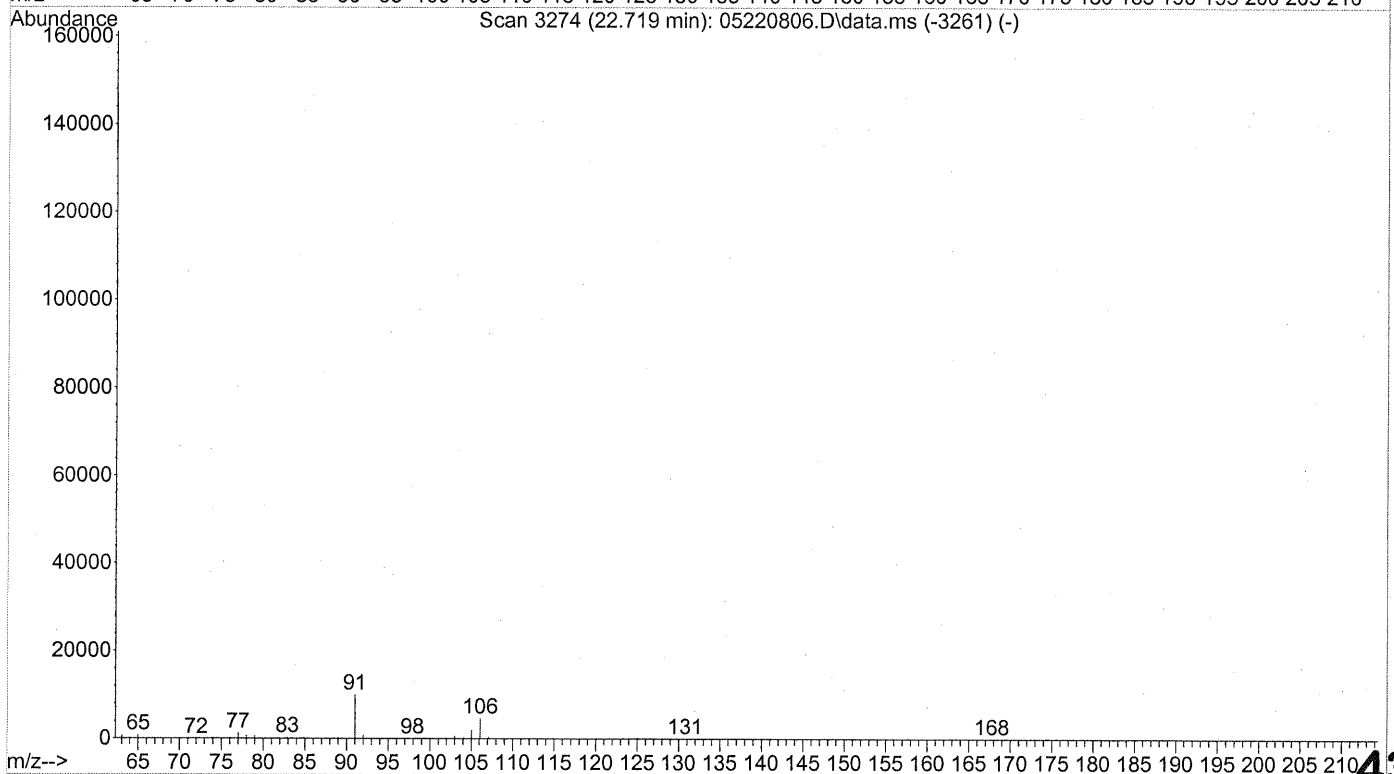
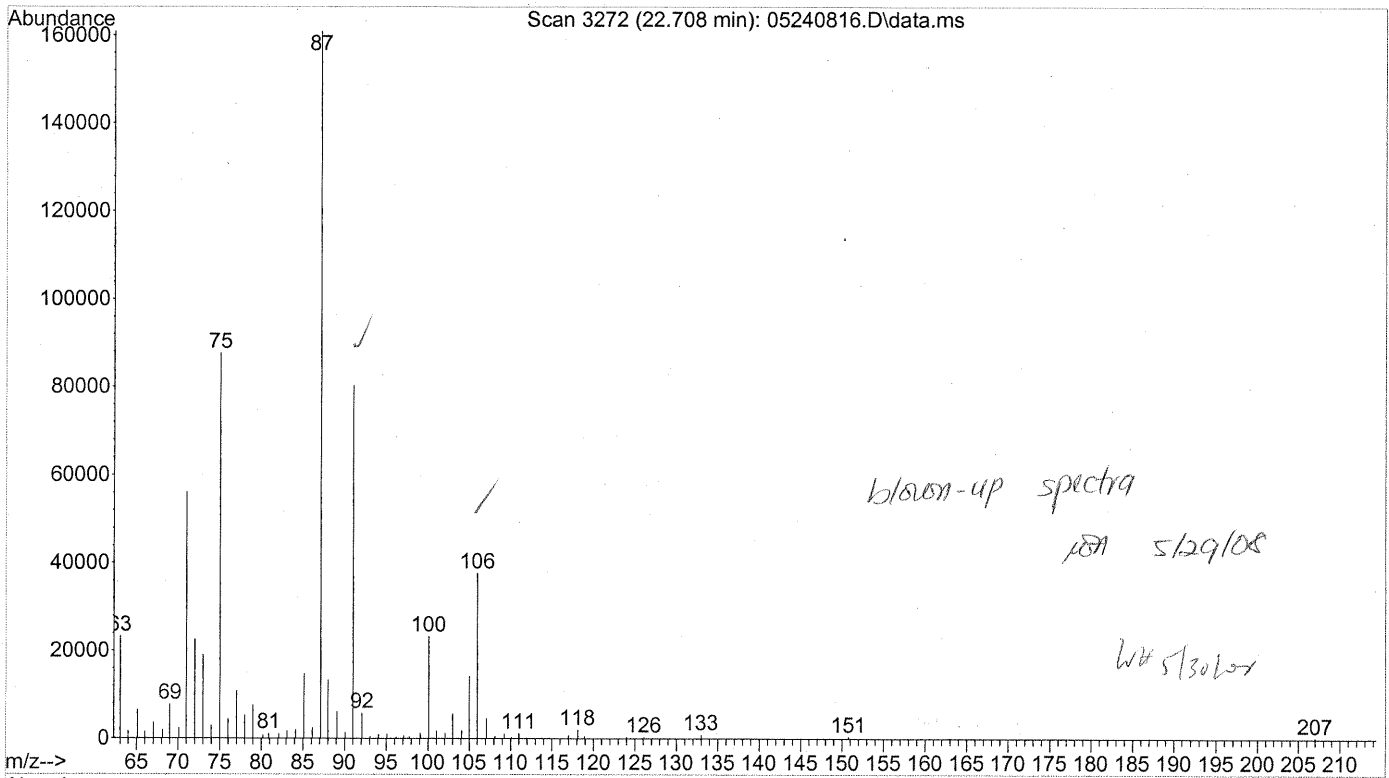


(70) o-Xylene (T)  
 22.714min (-0.000) 1.56ng  
 response 184848

*see bloom-up*

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	49.90
0.00	0.00	0.00
0.00	0.00	0.00

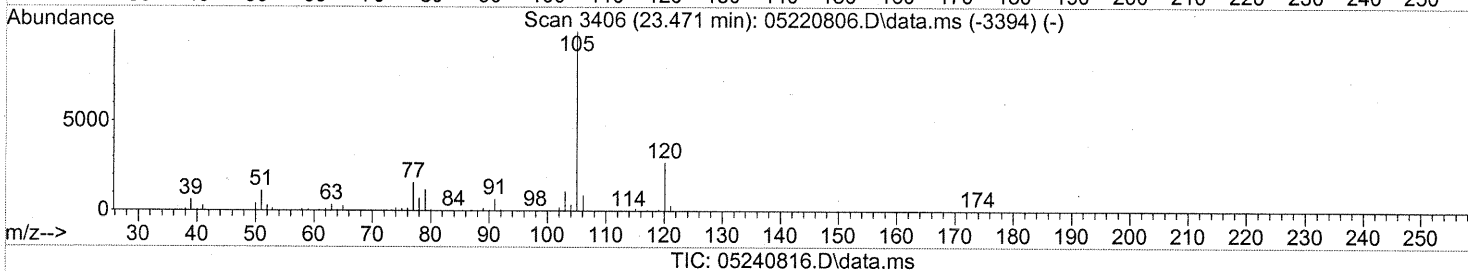
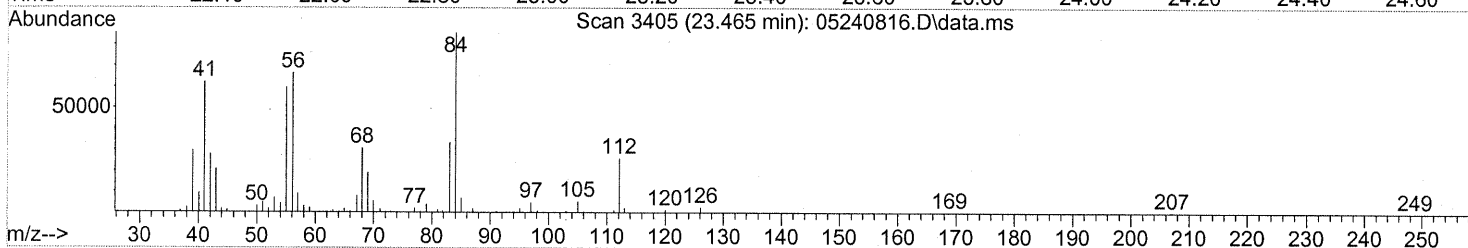
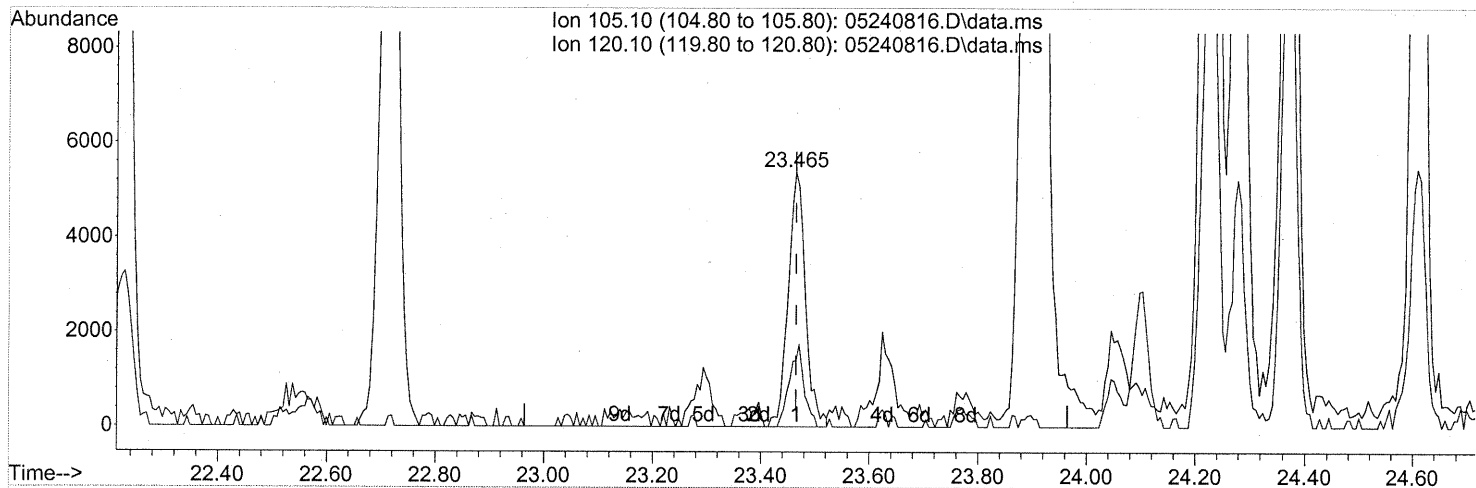
File : J:\MS13\DATA\2008\_05\24\05240816.D  
Operator : WA  
Acquired : 24 May 2008 17:25 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-007 (1000ml)  
Misc Info : ENSR SG72B-05 (-3.2, 3.5)  
Vial Number: 13



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

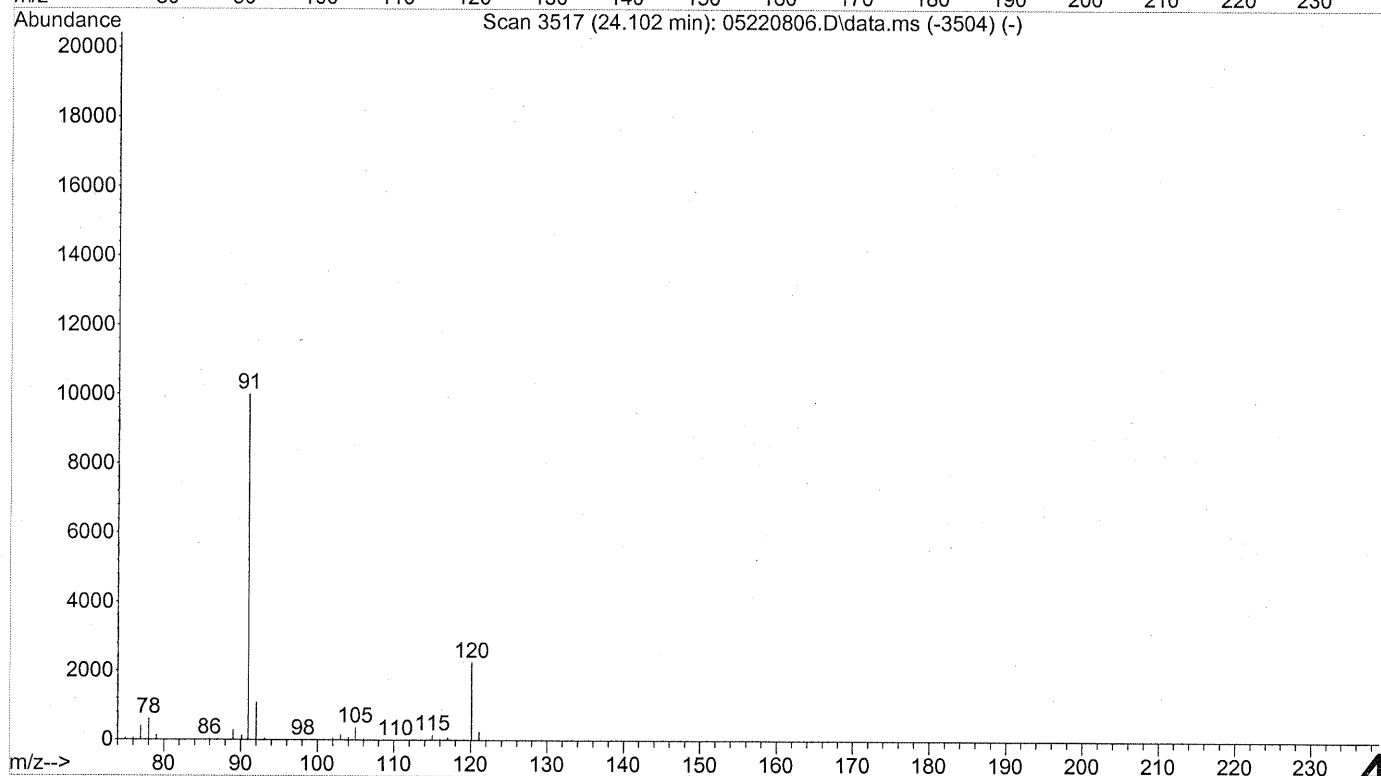
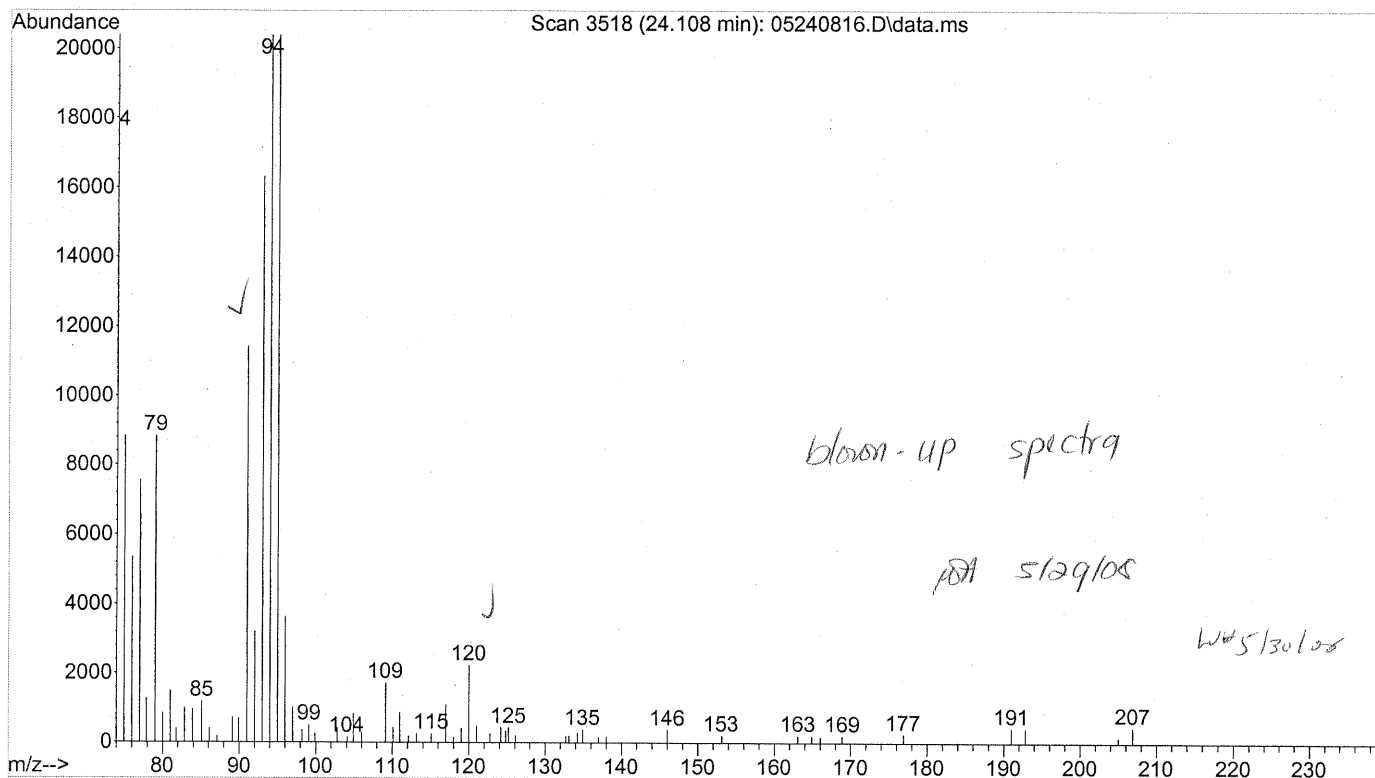


(74) Cumene (T)  
 23.465min (-0.000) 0.08ng  
 response 11909

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	27.45
0.00	0.00	0.00
0.00	0.00	0.00

*see blown-up*

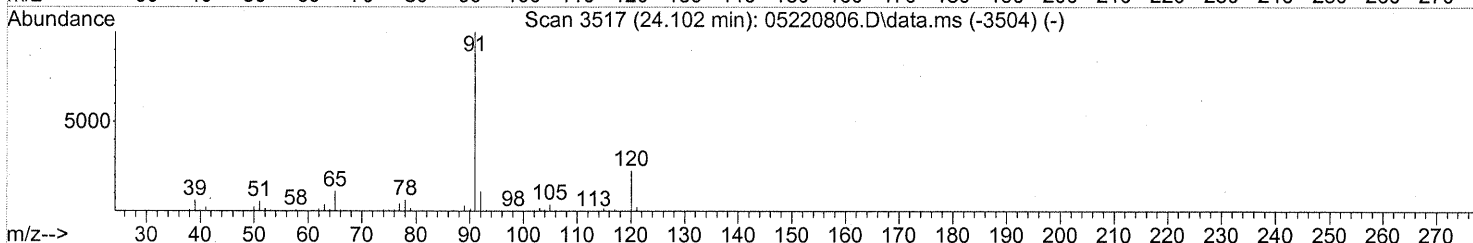
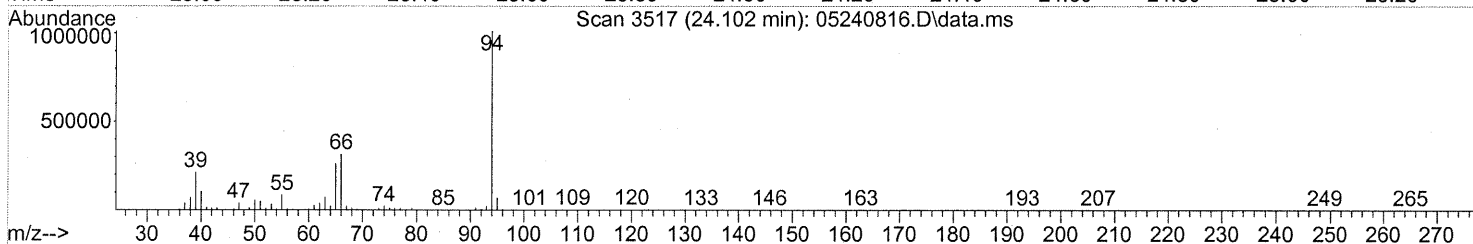
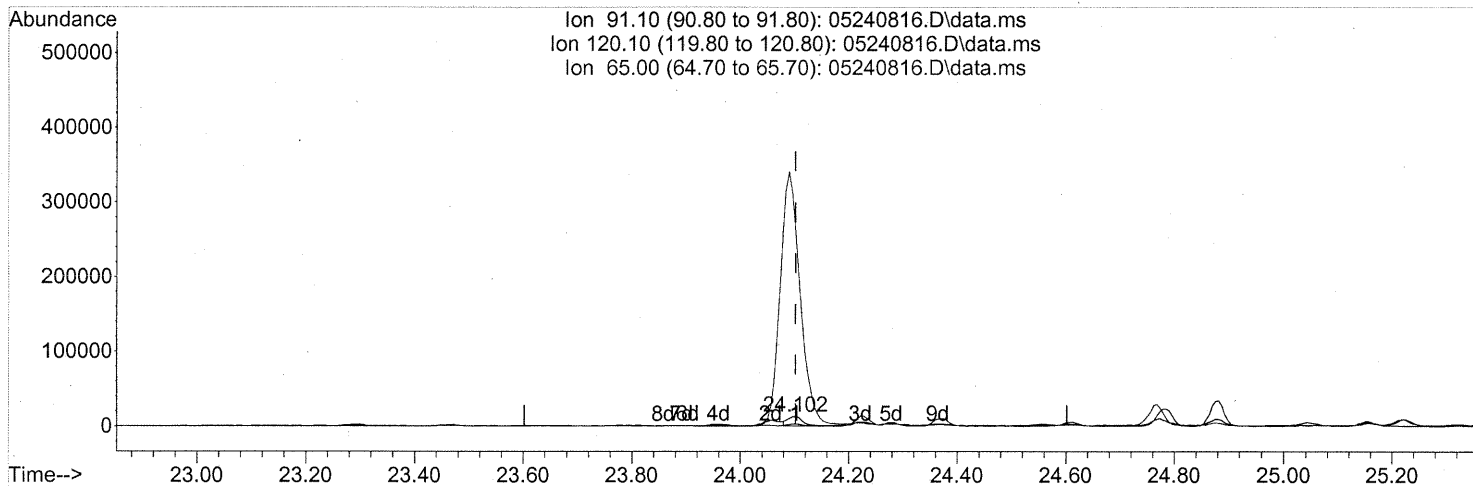
File : J:\MS13\DATA\2008\_05\24\05240816.D  
Operator : WA  
Acquired : 24 May 2008 17:25 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-007 (1000ml)  
Misc Info : ENSR SG72B-05 (-3.2, 3.5)  
Vial Number: 13



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

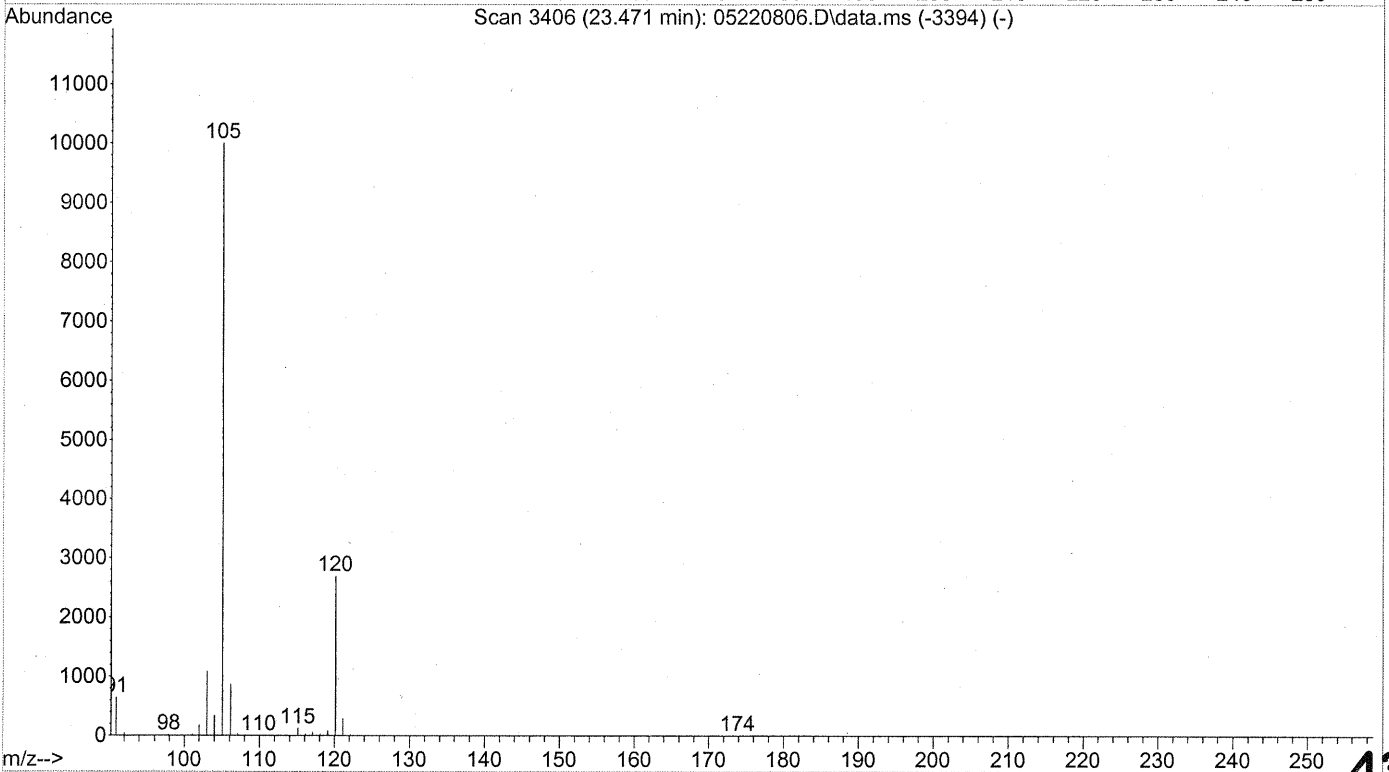
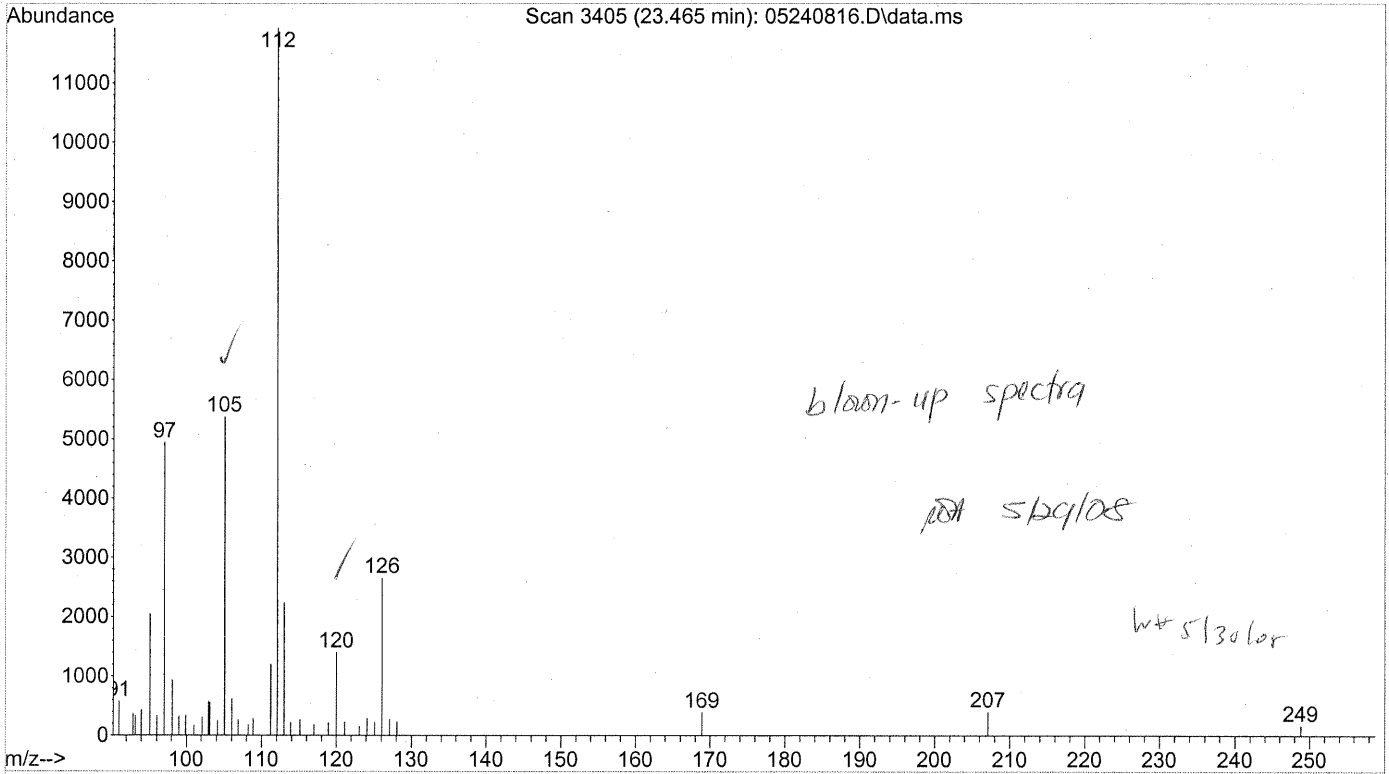


TIC: 05240816.D\data.ms

(76) n-Propylbenzene (T)  
 24.102min (-0.000) 0.11ng  
 response 22952

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	23.41
65.00	11.40	3772.37#
0.00	0.00	0.00

File : J:\MS13\DATA\2008\_05\24\05240816.D  
Operator : WA  
Acquired : 24 May 2008 17:25 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-007 (1000ml)  
Misc Info : ENSR SG72B-05 (-3.2, 3.5)  
Vial Number: 13

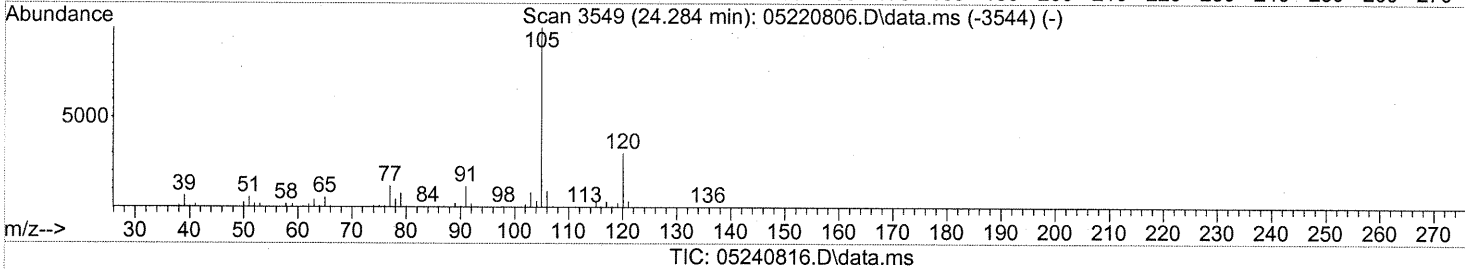
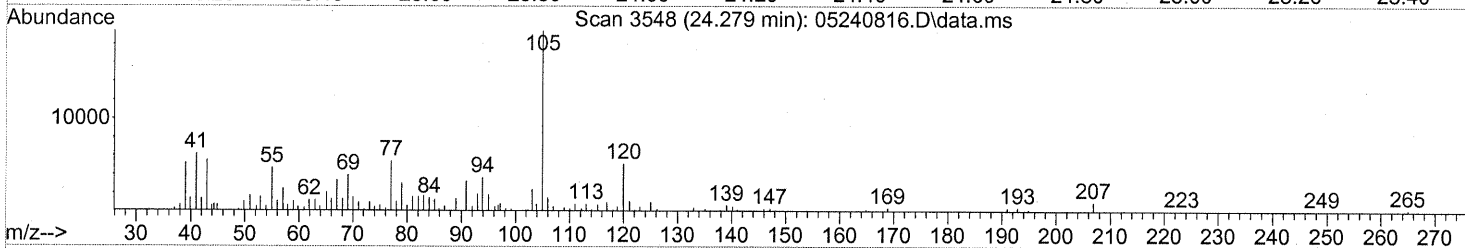
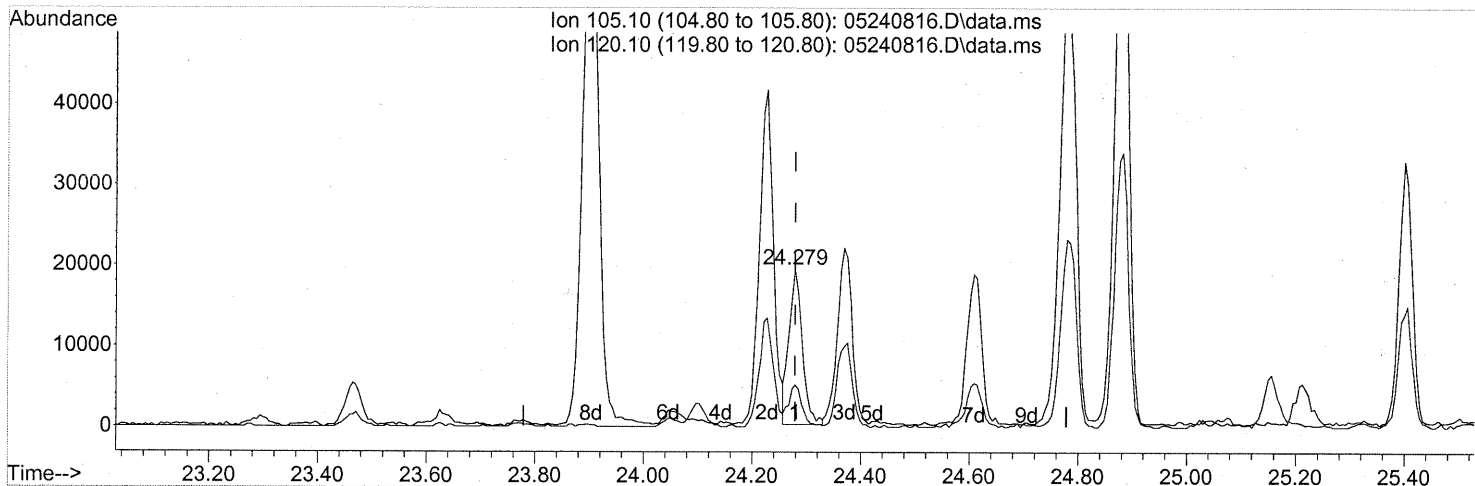




Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



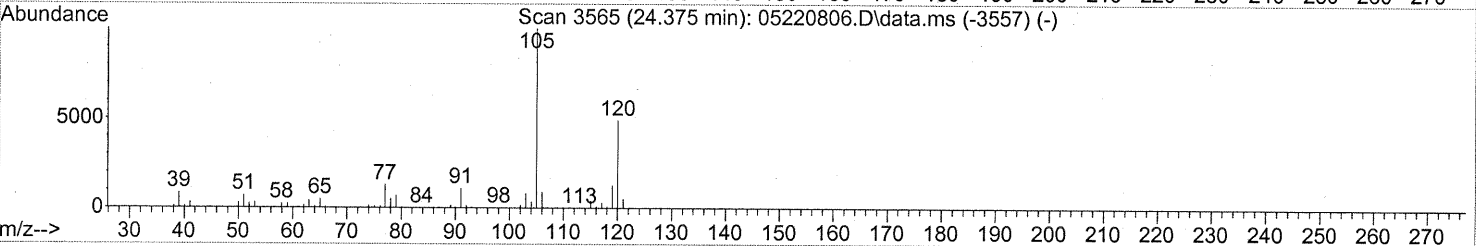
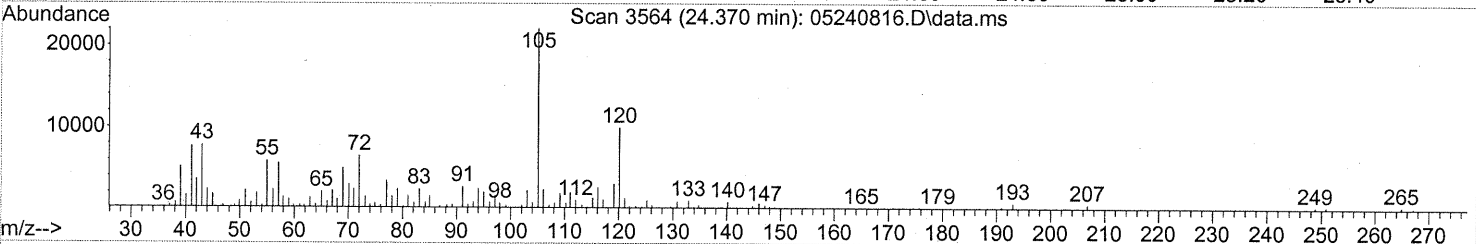
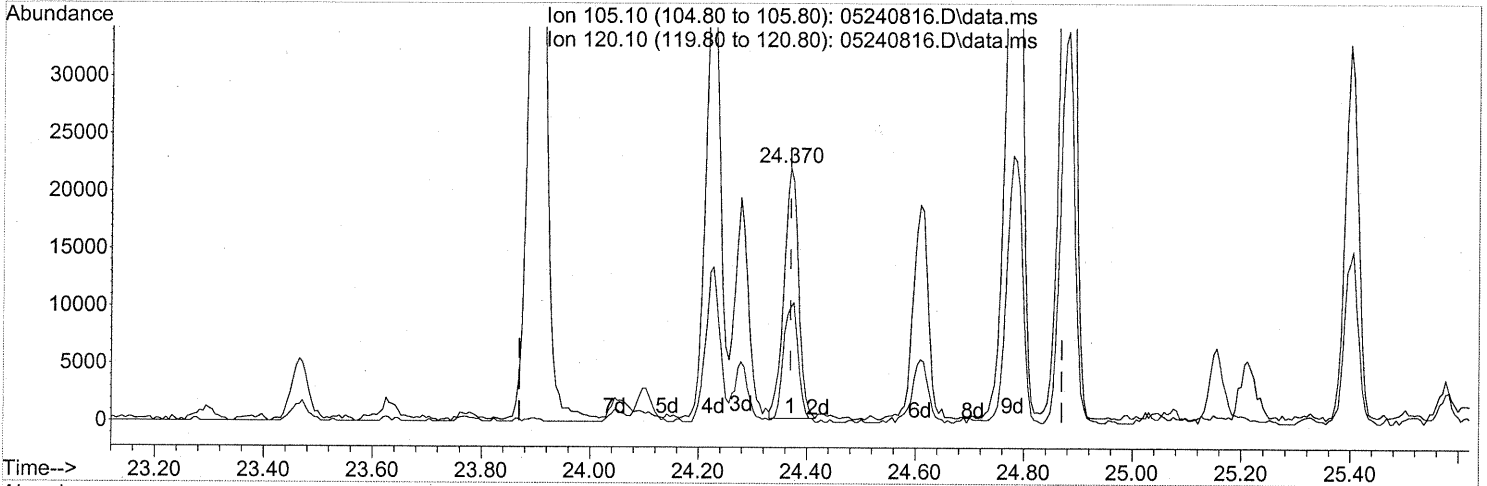
(78) 4-Ethyltoluene (T)  
 24.279min (-0.000) 0.21ng  
 response 32700

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	27.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

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

24.370min (-0.000) 0.29ng

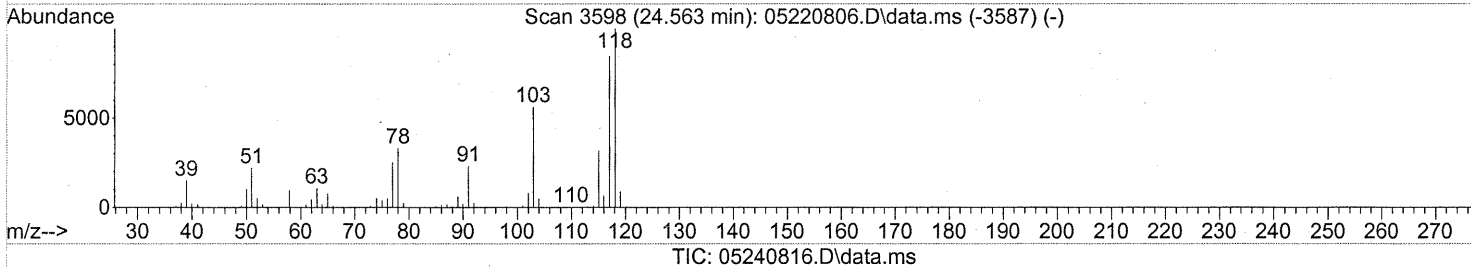
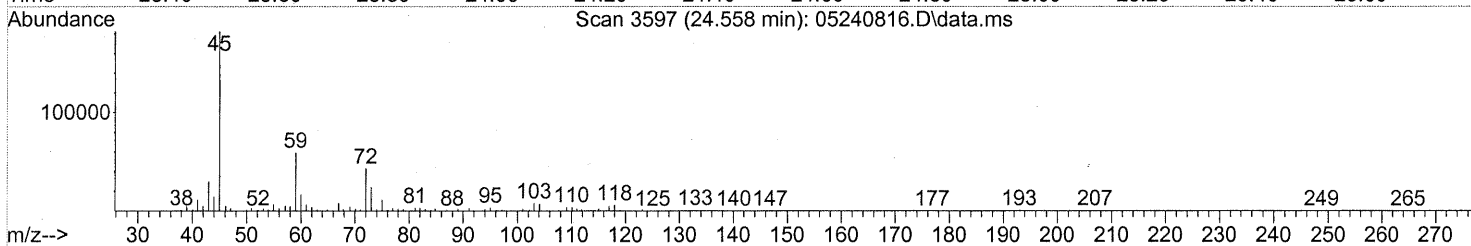
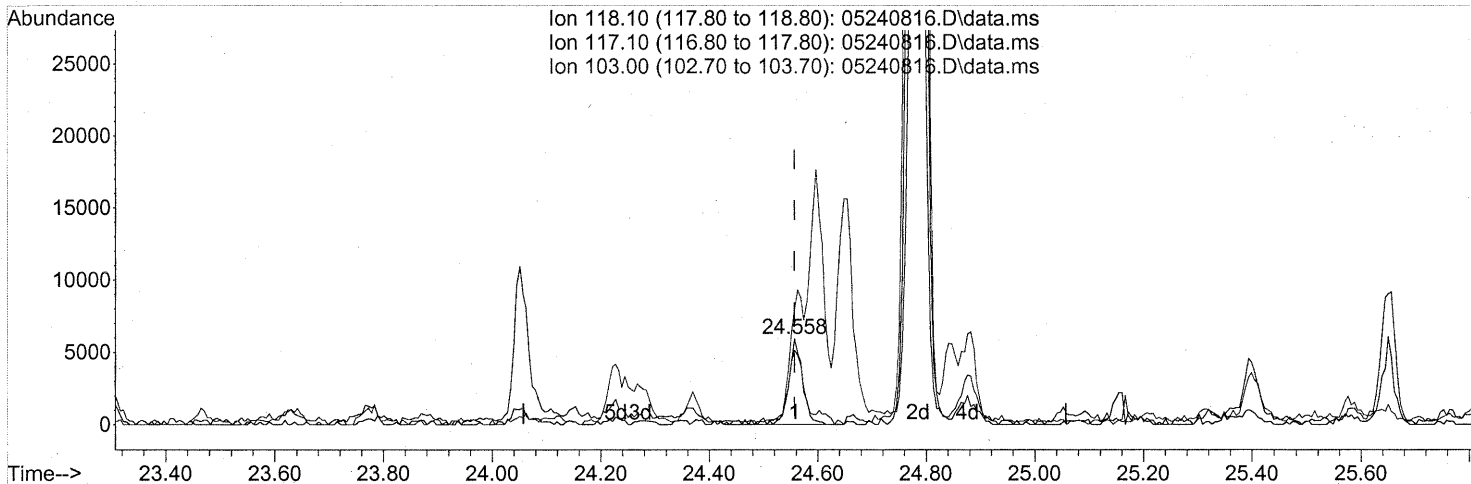
response 40952

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	48.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(80) alpha-Methylstyrene (T)

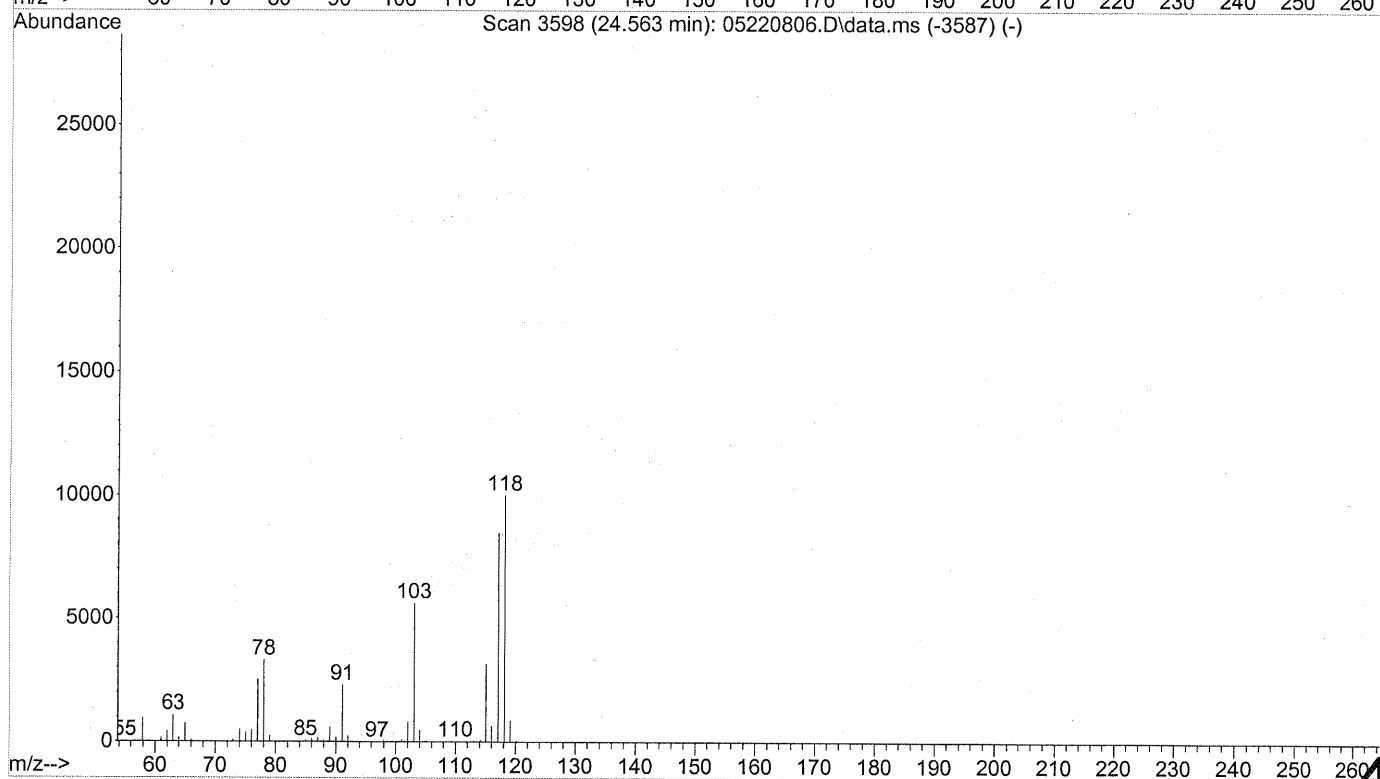
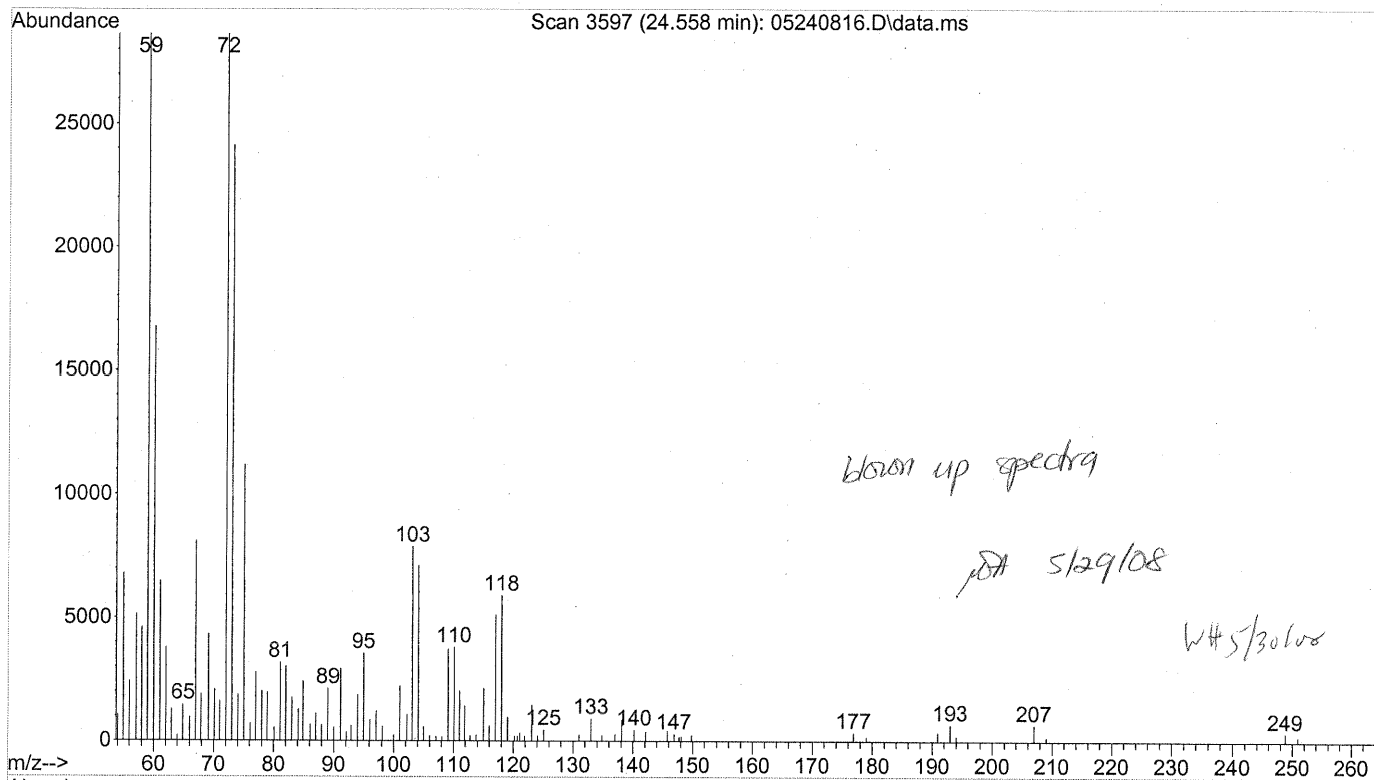
24.558min (-0.000) 0.14ng

response 10338

*see blow-up spectra*

Ion	Exp%	Act%
118.10	100	100
117.10	84.10	111.60#
103.00	55.30	160.38#
0.00	0.00	0.00

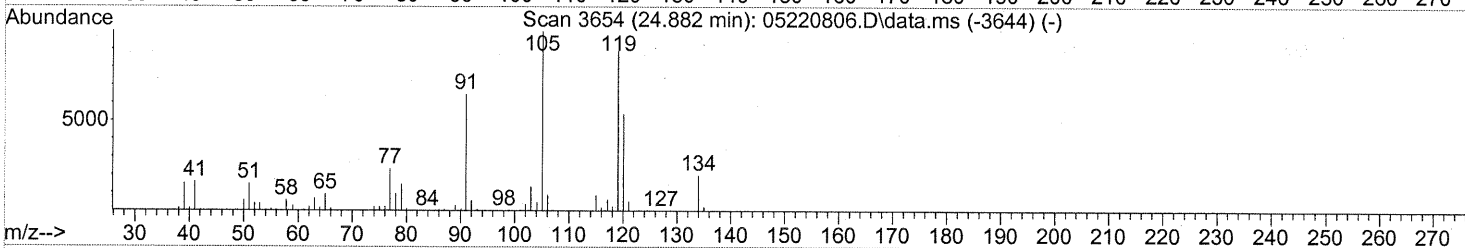
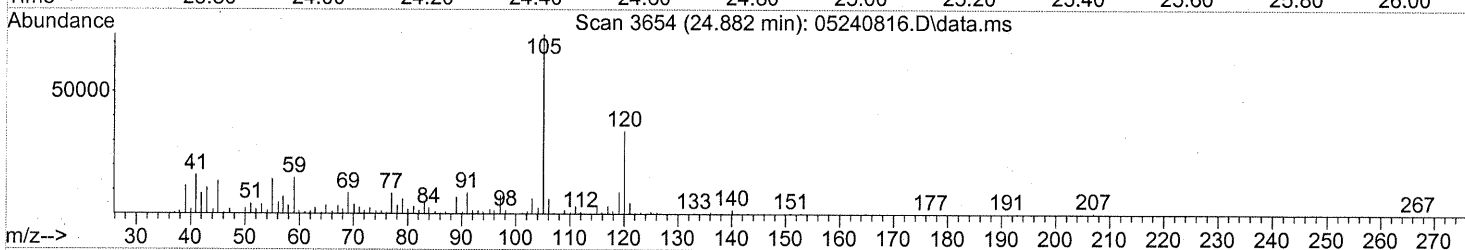
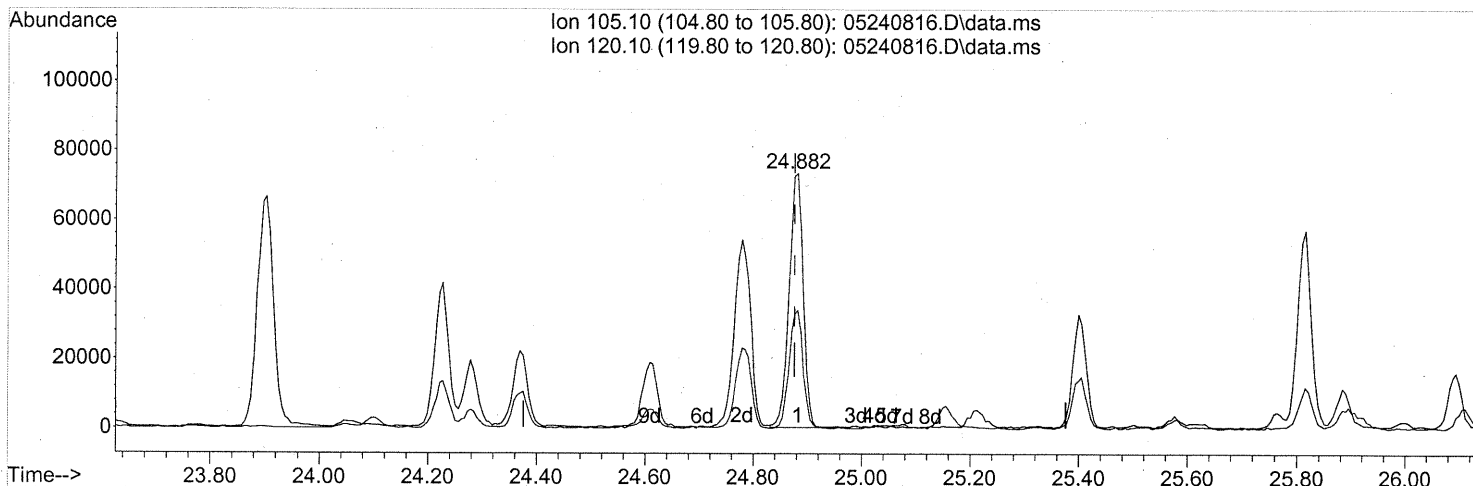
File : J:\MS13\DATA\2008\_05\24\05240816.D  
Operator : WA  
Acquired : 24 May 2008 17:25 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-007 (1000ml)  
Misc Info : ENSR SG72B-05 (-3.2, 3.5)  
Vial Number: 13



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.882min (+0.006) 0.92ng

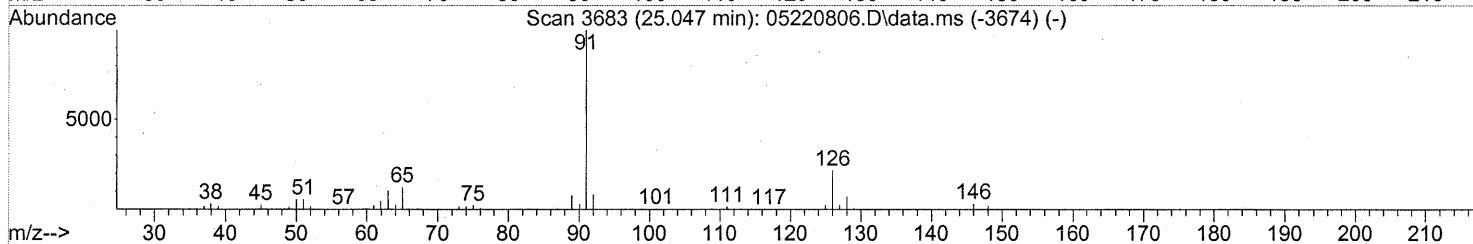
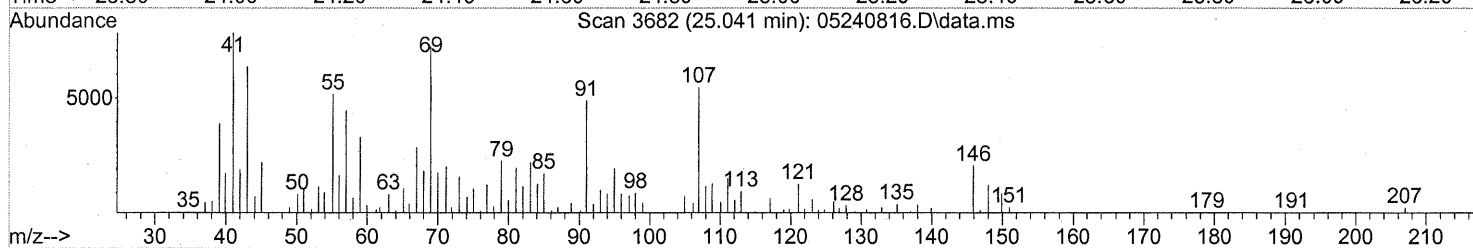
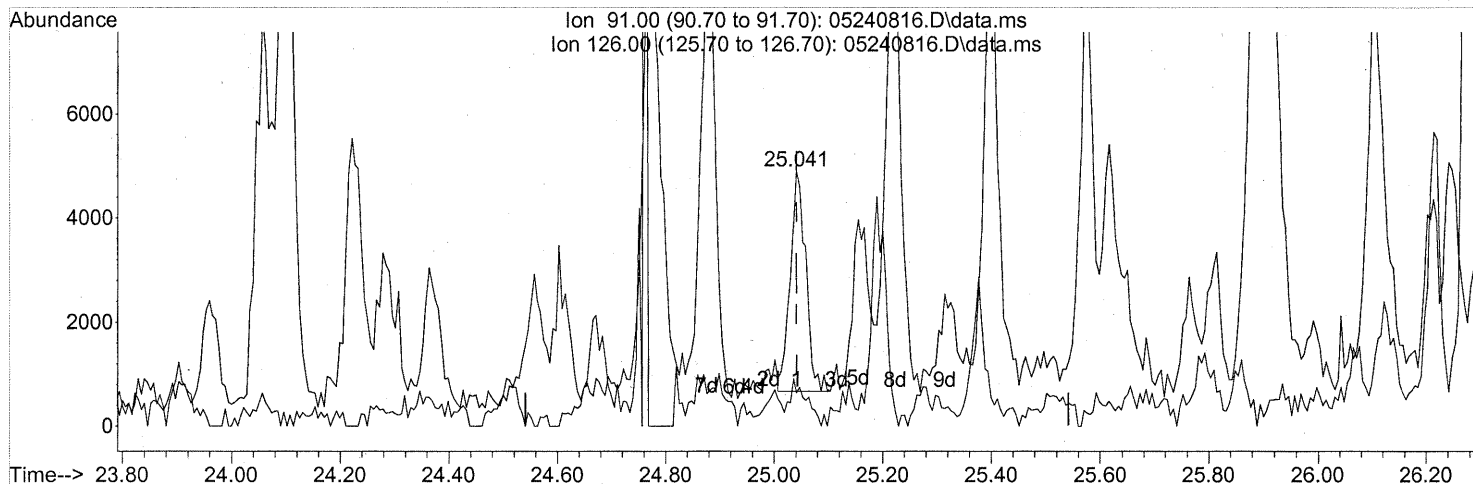
response 132313

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	46.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



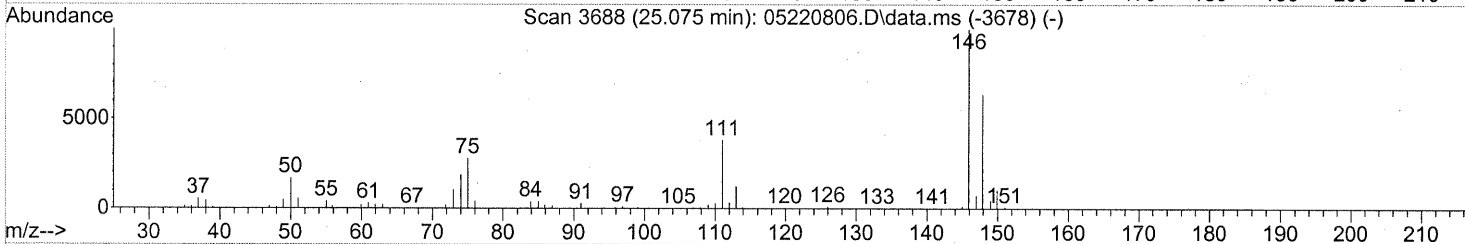
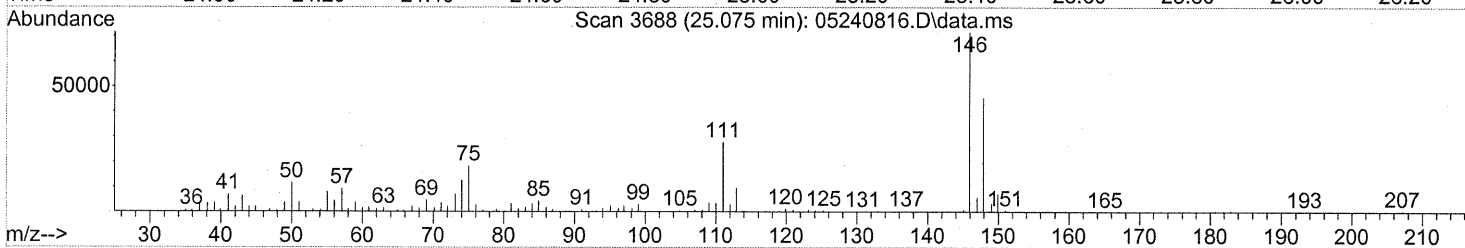
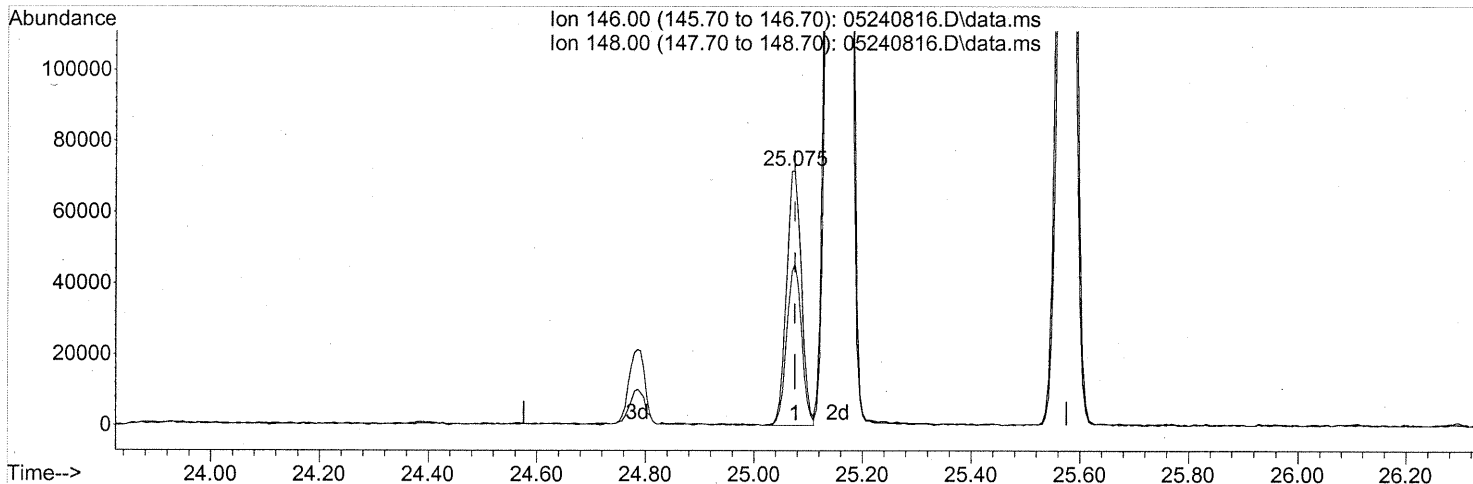
(84) Benzyl Chloride (T)  
 25.041min (-0.000) 0.09ng  
 response 8493

Ion	Exp%	Act%
91.00	100	100
126.00	22.50	22.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.075min (-0.000) 1.52ng

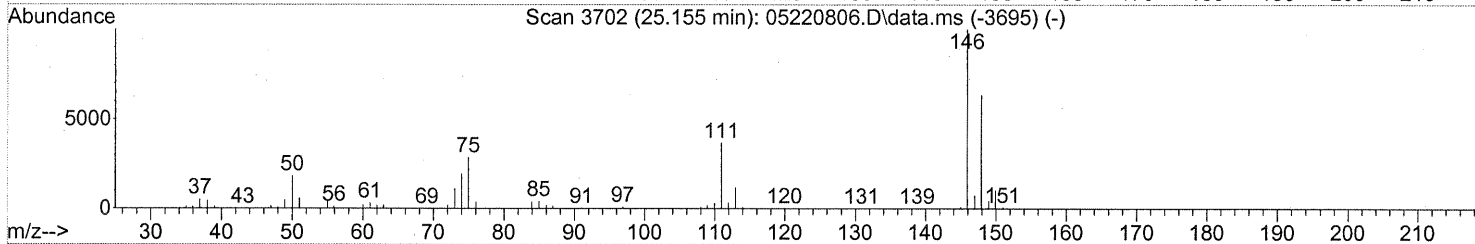
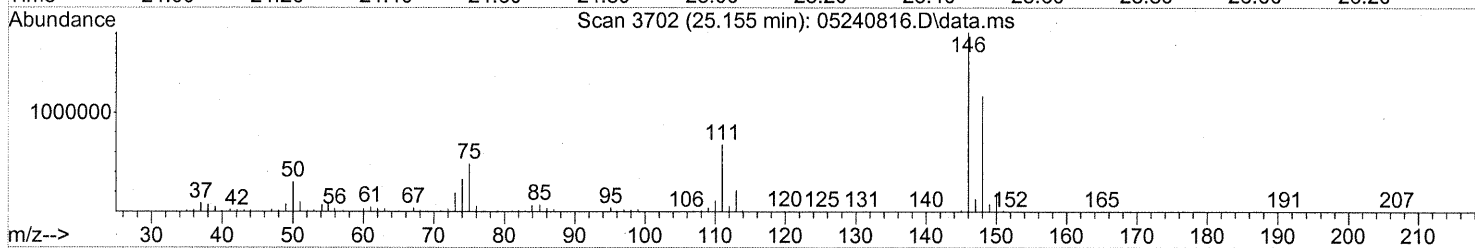
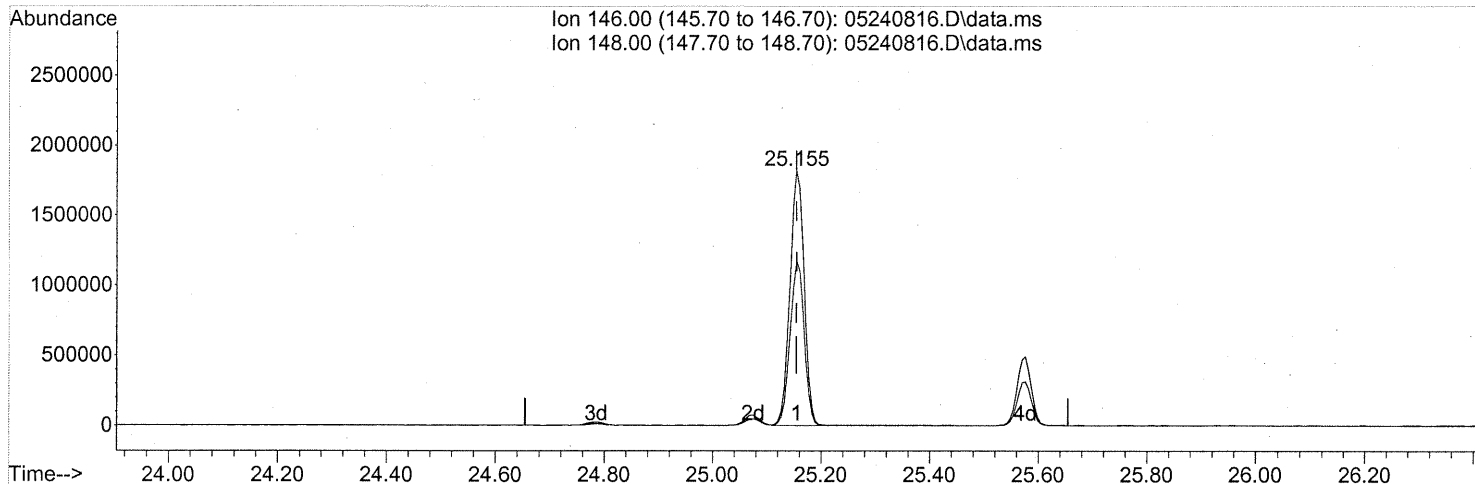
response 136363

Ion	Exp%	Act%
146.00	100	100
148.00	64.00	62.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 37.80ng

response 3289716

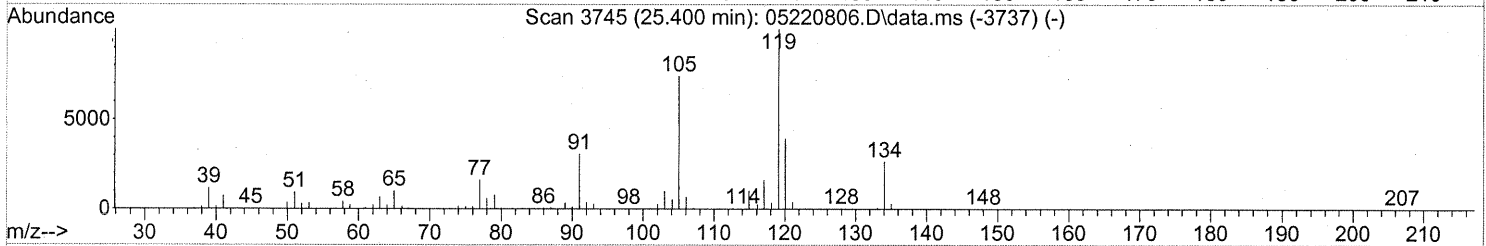
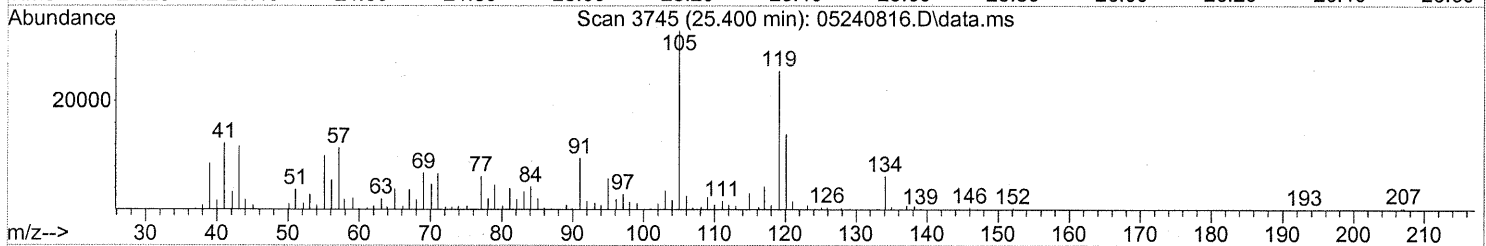
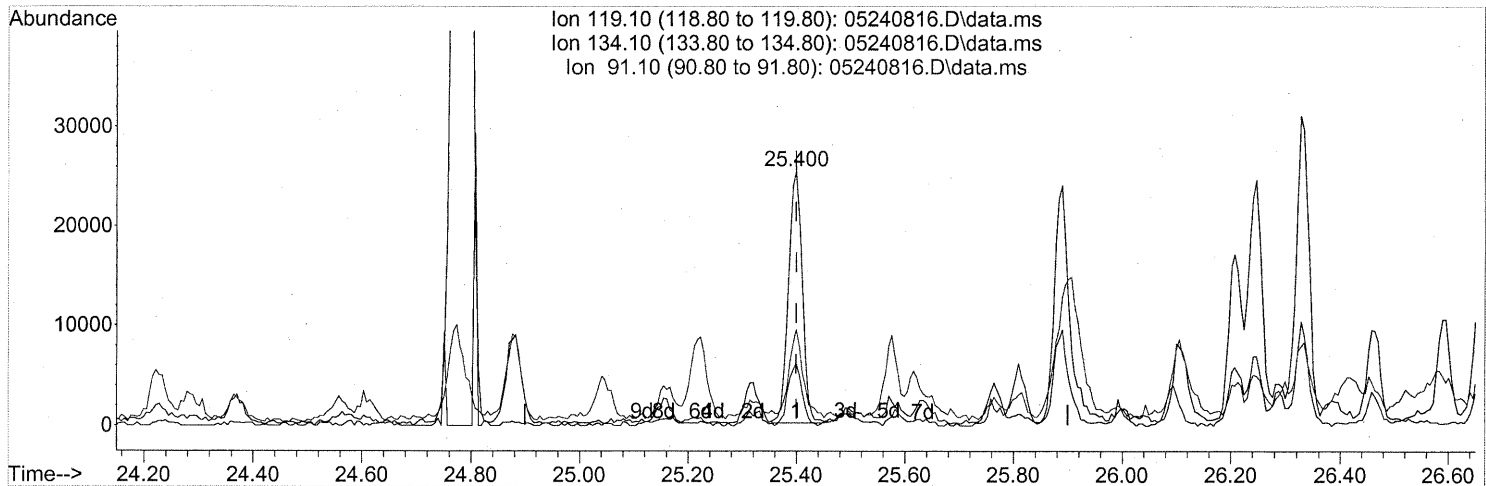
Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.82
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240816.D  
Acq On : 24 May 2008 17:25  
Operator : WA  
Sample : P0801442-007 (1000ml)  
Misc : ENSR SG72B-05 (-3.2, 3.5)  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240816.D\data.ms

(88) p-Isopropyltoluene (T)

25.400min (-0.000) 0.30ng

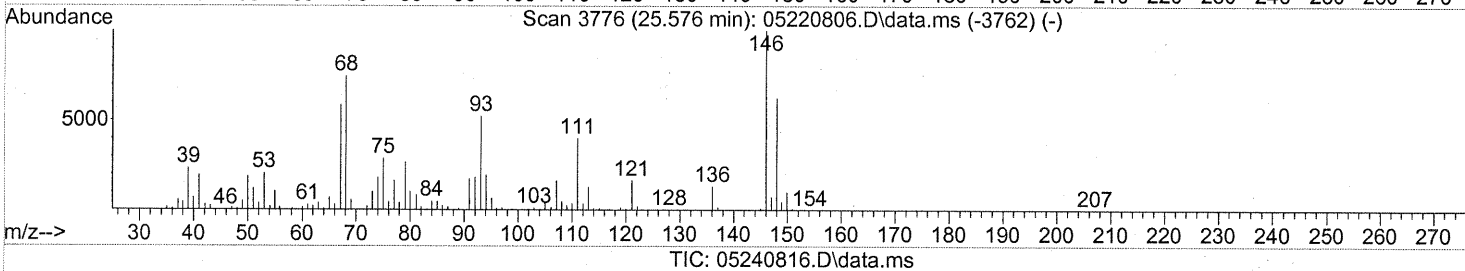
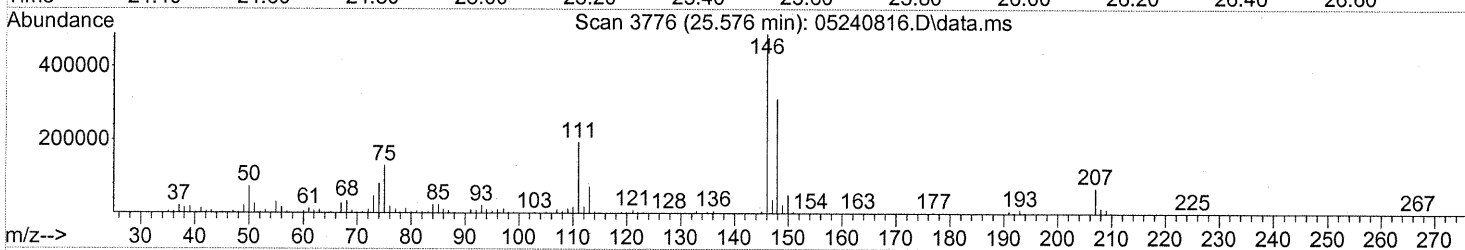
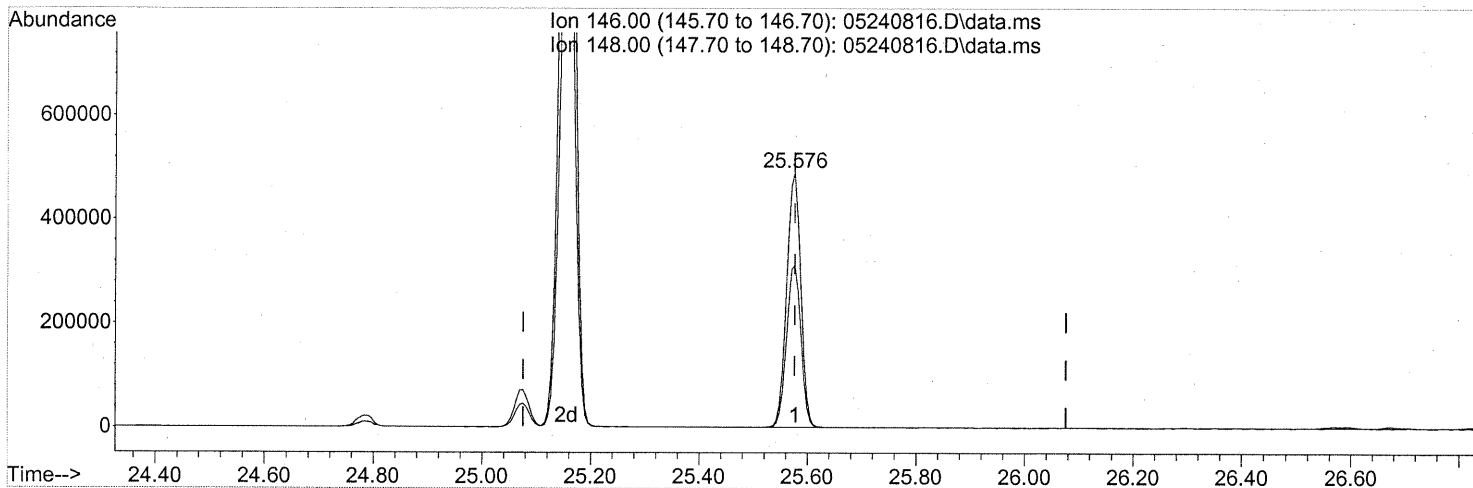
response 44928

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	25.25
91.10	27.10	36.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(90) 1,2-Dichlorobenzene (T)

25.576min (-0.000) 10.34ng

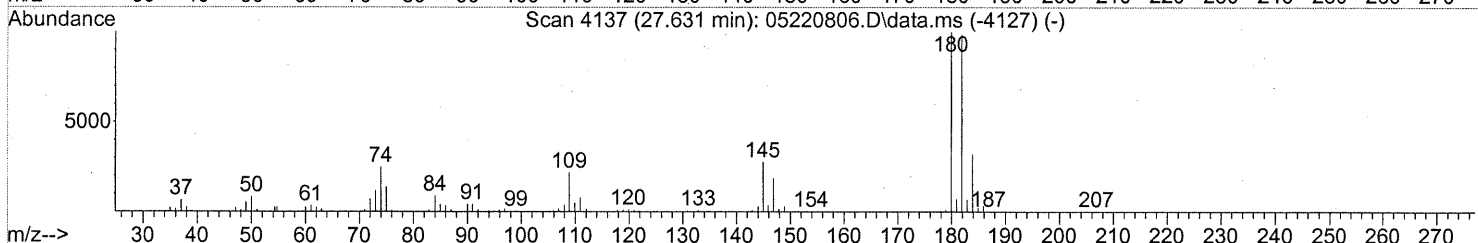
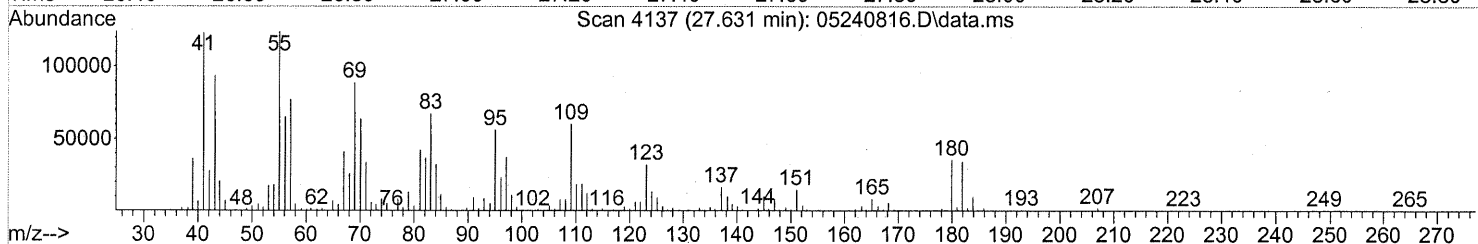
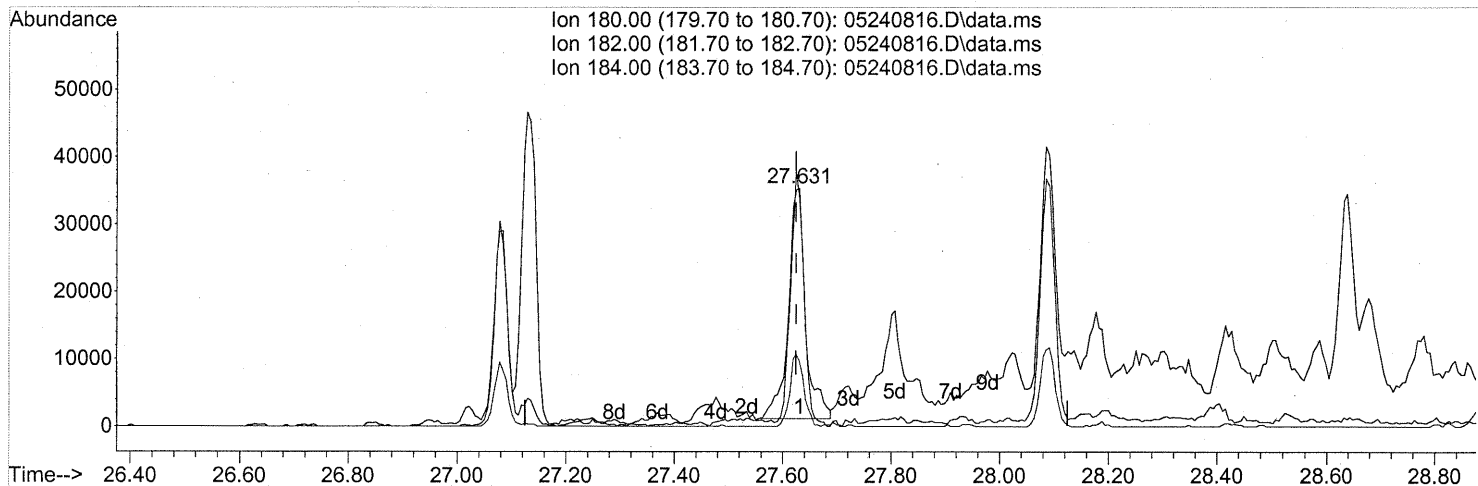
response 880432

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	64.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(94) 1,2,4-Trichlorobenzene (T)

27.631min (+0.006) 1.21ng

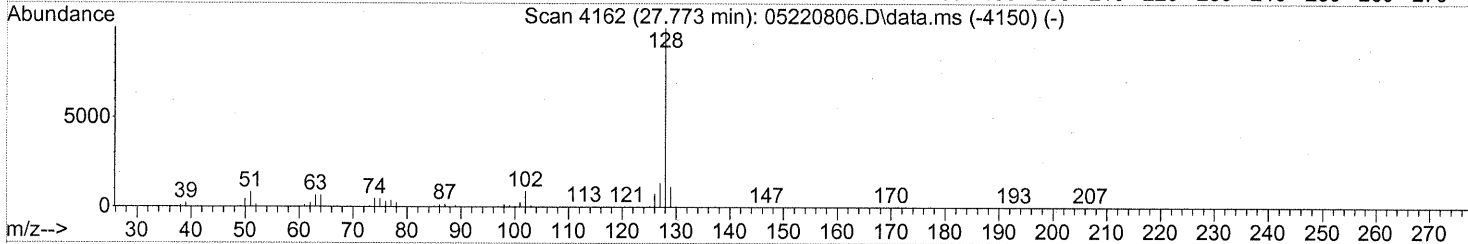
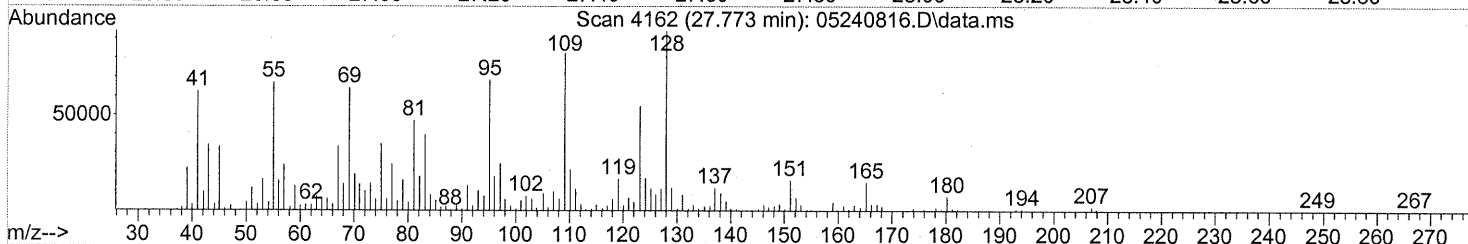
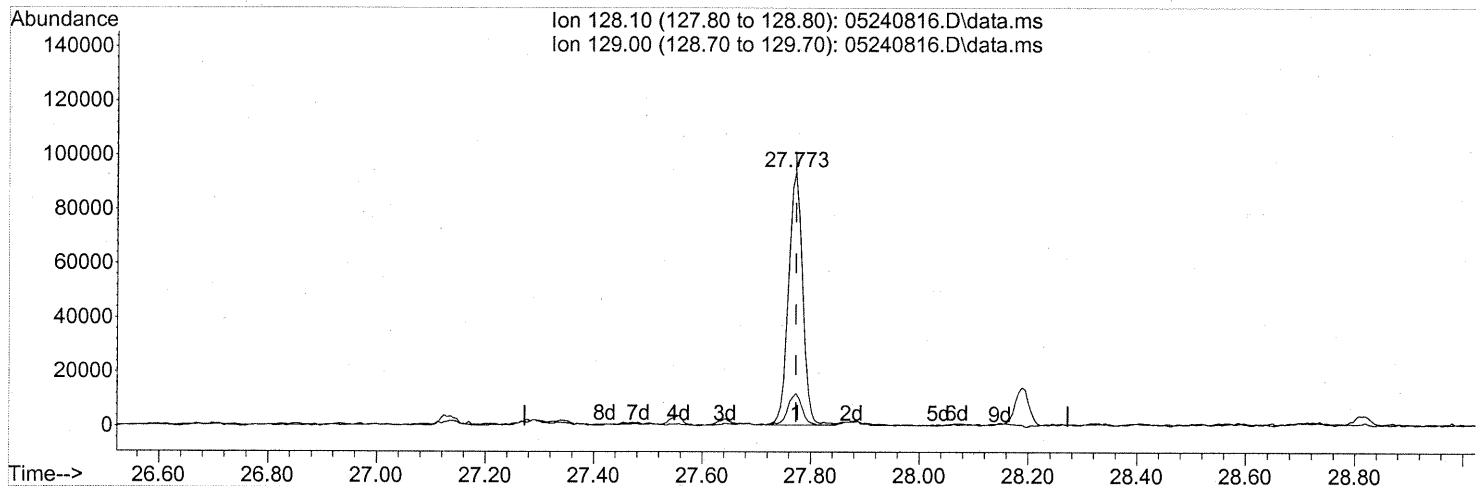
response 75440

Ion	Exp%	Act%
180.00	100	100
182.00	95.20	86.04
184.00	30.30	25.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



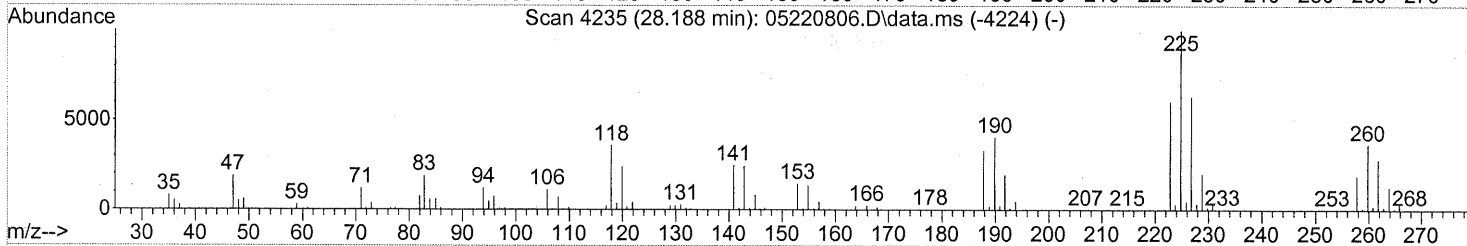
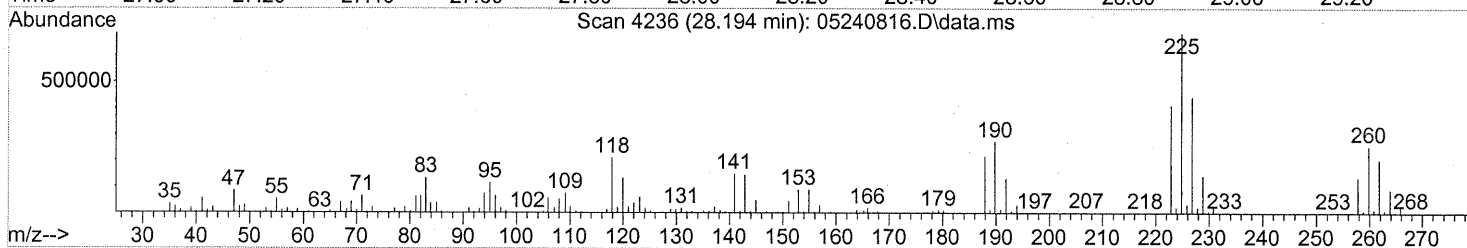
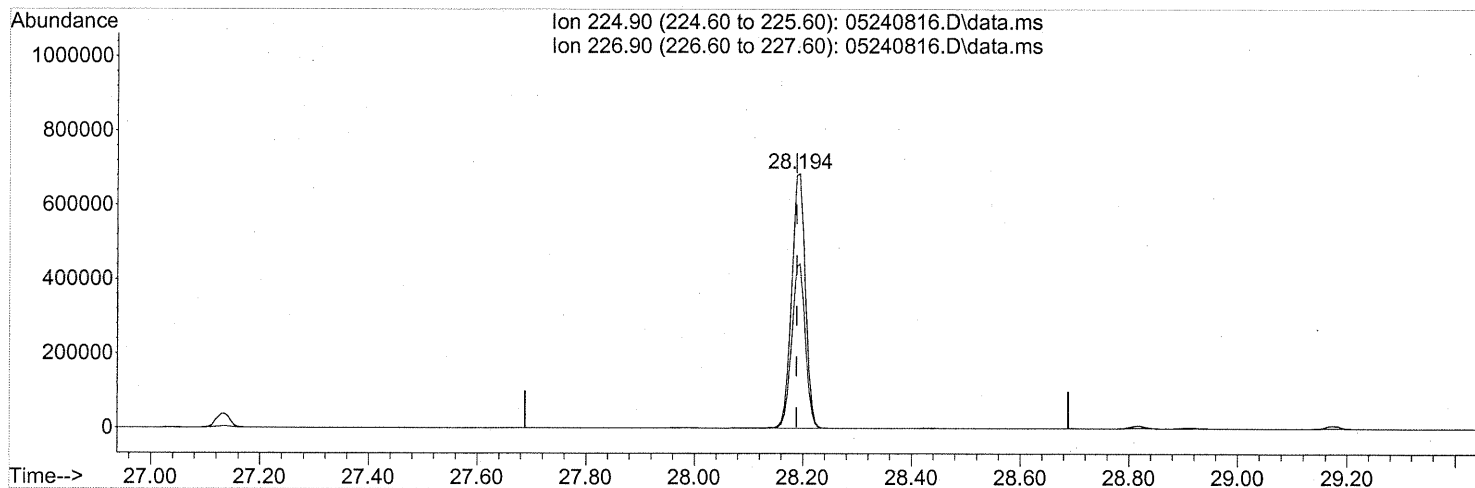
(95) Naphthalene (T)  
 27.773min (-0.000) 0.88ng  
 response 167101

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	13.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 07:49:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240816.D\data.ms

(97) Hexachloro-1,3-butadiene (T)

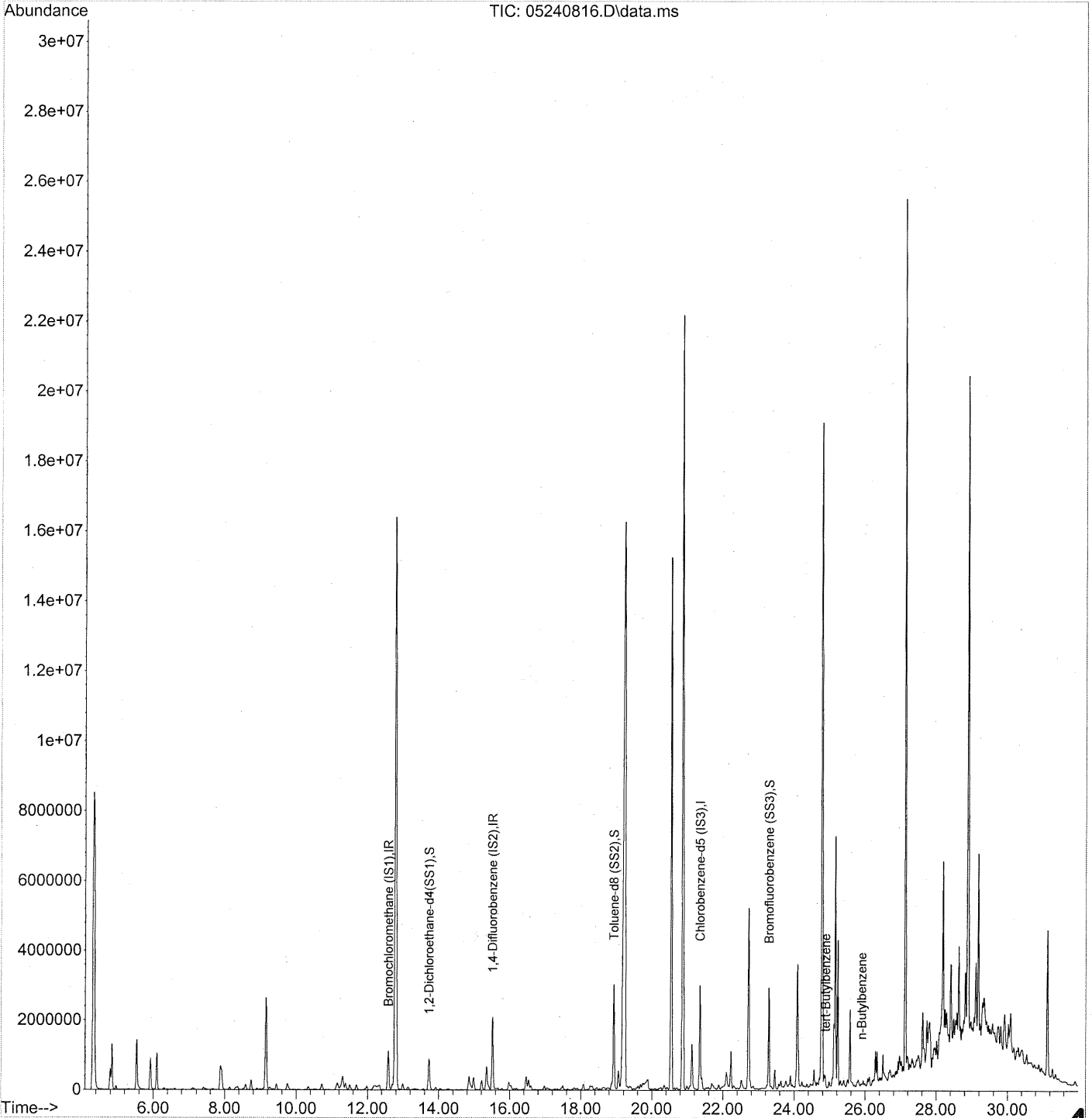
28.194min (+0.006) 28.96ng

response 1202428

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	63.92
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 20:36:59 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 20:36:59 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

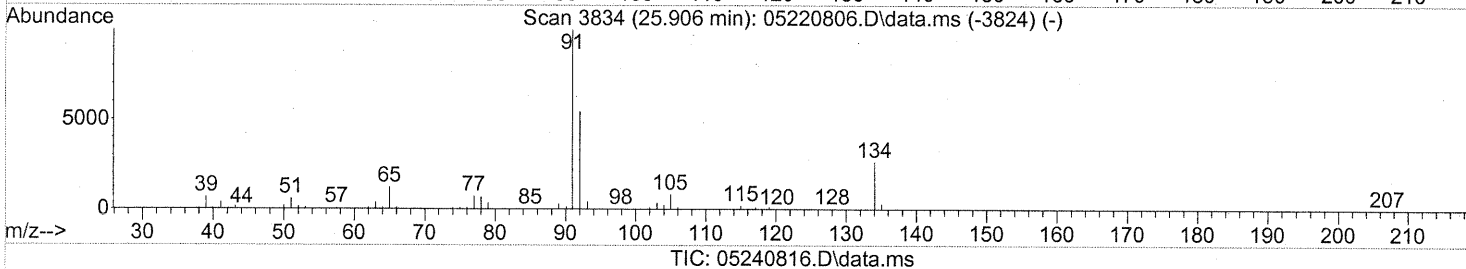
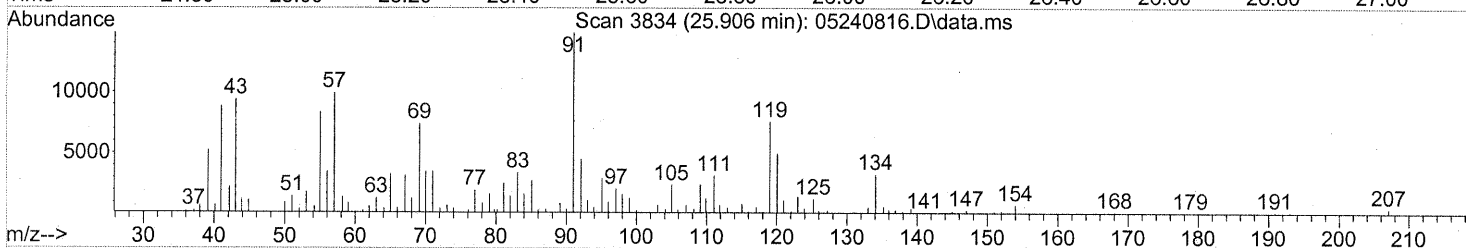
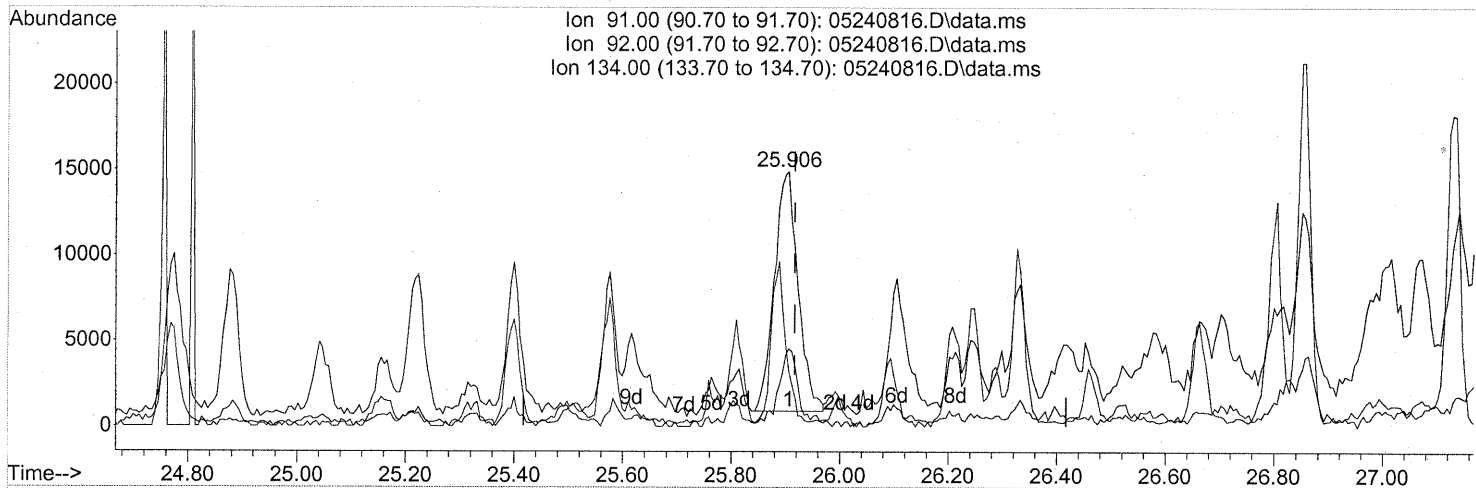
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	585660	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2449883	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1168878	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	903459	22.264	ng	-0.02
Spiked Amount	25.000			Recovery =	89.04%	
5) Toluene-d8 (SS2)	18.93	98	2564155	24.426	ng	-0.01
Spiked Amount	25.000			Recovery =	97.72%	
6) Bromofluorobenzene (SS3)	23.29	174	1091827	25.577	ng	0.00
Spiked Amount	25.000			Recovery =	102.32%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	17633	<del>0.128</del> ng	IR #	65
8) n-Butylbenzene	25.91	91	42622	0.281 ng	#	66

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240816.D  
 Acq On : 24 May 2008 17:25  
 Operator : WA  
 Sample : P0801442-007 (1000ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 25 20:36:59 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene

25.906min (-0.011) 0.28ng

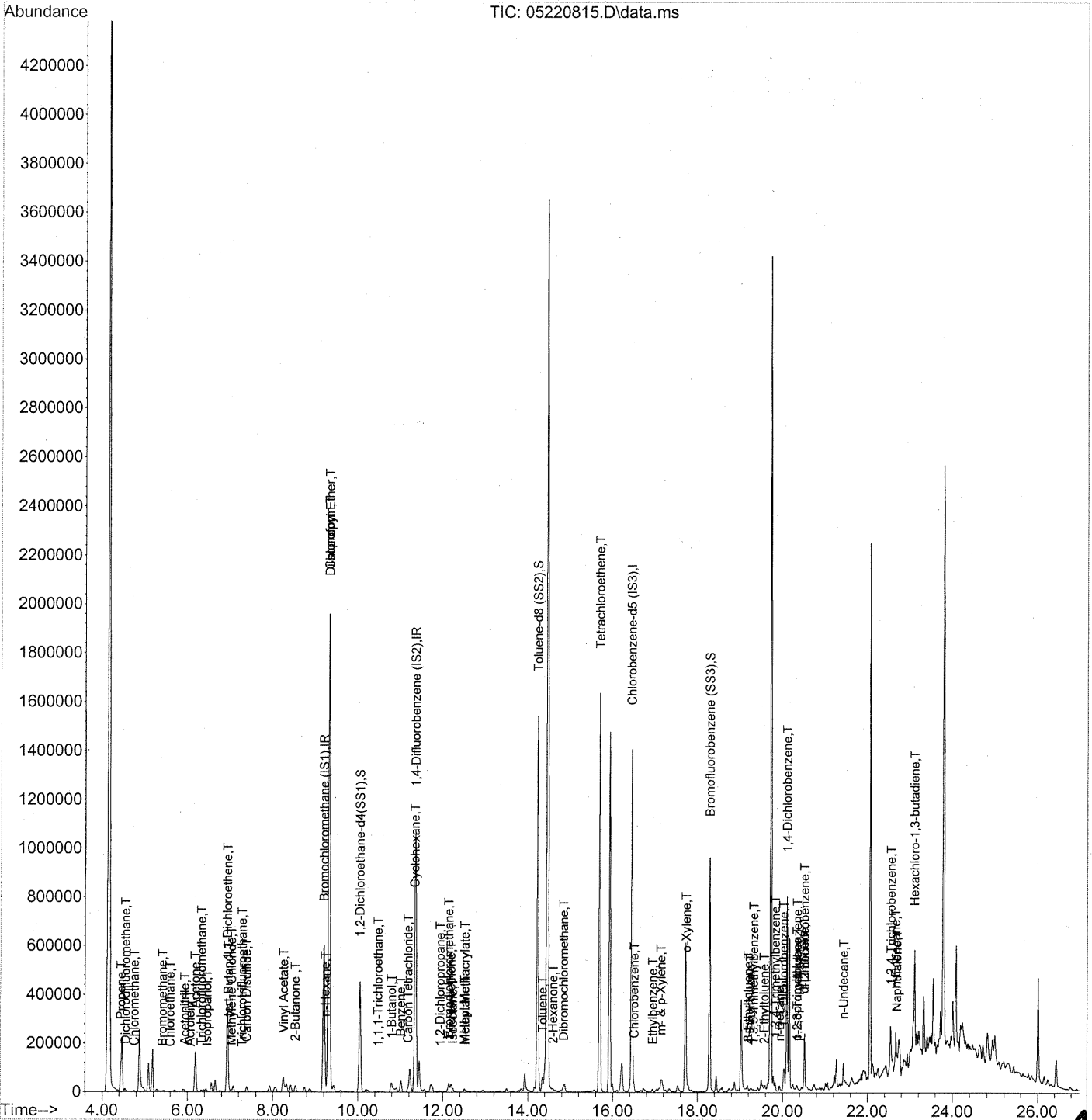
response 42622

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	28.15#
134.00	28.80	42.81#
0.00	0.00	0.00



Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220815.D  
 Acq On : 22 May 2008 17:55  
 Operator : WA  
 Sample : P0801442-007 Dil (250ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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\22\  
 Data File : 05220815.D  
 Acq On : 22 May 2008 17:55  
 Operator : WA  
 Sample : P0801442-007 Dil (250ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	291546	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1227593	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	479960	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	426457	20.743	ng	-0.05
Spiked Amount	25.000		Recovery	=	82.96%	✓
57) Toluene-d8 (SS2)	14.23	98	1230308	26.034	ng	-0.02
Spiked Amount	25.000		Recovery	=	104.12%	
73) Bromofluorobenzene (SS3)	18.29	174	344926	28.044	ng	0.00
Spiked Amount	25.000		Recovery	=	112.16%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	64278	2.205	ng	# 39
3) Dichlorodifluoromethane	4.55	85	10409	0.302	ng	97
4) Chloromethane	4.75	50	3643	0.085	ng	92
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	799	N.D.		
8) Bromomethane	5.42	94	1369	0.113	ng	89
9) Chloroethane	5.59	64	1223	0.091	ng	# 43
10) Ethanol	5.81	45	697	N.D.		
11) Acetonitrile	5.93	41	12855	0.247	ng	89
12) Acrolein	6.06	56	3638	0.255	ng	84
13) Acetone	6.18	58	48386	2.512	ng	93
14) Trichlorofluoromethane	6.32	101	6967	0.244	ng	97
15) Isopropanol	6.46	45	8595	0.138	ng	# 57
16) Acrylonitrile	6.66	53	220	N.D.		
17) 1,1-Dichloroethene	6.93	96	155410	11.136	ng	91
18) tert-Butanol	6.96	59	31591	0.556	ng	94
19) Methylene Chloride	7.03	84	1623	0.107	ng	# 3
20) Allyl Chloride	7.22	41	101	N.D.		
21) Trichlorotrifluoroethane	7.28	151	920	0.077	ng	# 79
22) Carbon Disulfide	7.39	76	35831	0.624	ng	99
23) trans-1,2-Dichloroethene	7.96	61	96	N.D.		
24) 1,1-Dichloroethane	8.17	63	1422	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	8.25	86	10703	2.739	ng	# 27
27) 2-Butanone	8.53	72	6862	0.691	ng	# 10
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	224295	17.758	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.23	57	14486	0.349	ng	90

452

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220815.D  
 Acq On : 22 May 2008 17:55  
 Operator : WA  
 Sample : P0801442-007 Dil (250ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	2040037	93.838	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	10.47	97	1484	0.063	ng	95
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.79	56	47126	2.026	ng	# 72
41) Benzene	11.01	78	46672	0.776	ng	98
42) Carbon Tetrachloride	11.18	117	14452	0.811	ng	100
43) Cyclohexane	11.33	84	4768	0.200	ng	# 1
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	11.93	63	2673	0.143	ng	91
46) Bromodichloromethane	12.14	83	29955	1.675	ng	95
47) Trichloroethene	12.19	130	15722	0.949	ng	97
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.23	57	9614	0.096	ng	# 1
50) Methyl Methacrylate	12.52	100	478	0.080	ng	# 1
51) n-Heptane	12.52	71	2027	0.132	ng	# 43
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	13.17	58	452	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.01	97	699	N.D.		
58) Toluene	14.35	91	52955	0.915	ng	99
59) 2-Hexanone	14.59	43	10268	0.168	ng	# 61
60) Dibromochloromethane	14.85	129	2970	0.197	ng	94
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	15.37	43	520	N.D.		
63) n-Octane	15.47	57	647	N.D.		
64) Tetrachloroethene	15.69	166	622695	43.514	ng	99
65) Chlorobenzene	16.50	112	23344	0.609	ng	99
66) Ethylbenzene	16.94	91	10123	0.153	ng	89
67) m- & p-Xylene	17.14	91	41410	0.957	ng	91
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	1402	N.D.		
70) o-Xylene	17.73	91	19666	0.426	ng	92
71) n-Nonane	17.97	43	1680	N.D.		
72) 1,1,2,2-Tetrachloroethane	17.79	83	91	N.D.		
74) Cumene	18.45	105	1124	N.D.		
75) alpha-Pinene	18.93	93	818	N.D.		
76) n-Propylbenzene	19.06	91	2323	N.D.		
77) 3-Ethyltoluene	19.19	105	7941	0.114	ng	95
78) 4-Ethyltoluene	19.24	105	3609	0.057	ng	89
79) 1,3,5-Trimethylbenzene	19.33	105	4243	0.076	ng	94

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Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220815.D  
 Acq On : 22 May 2008 17:55  
 Operator : WA  
 Sample : P0801442-007 Dil (250ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

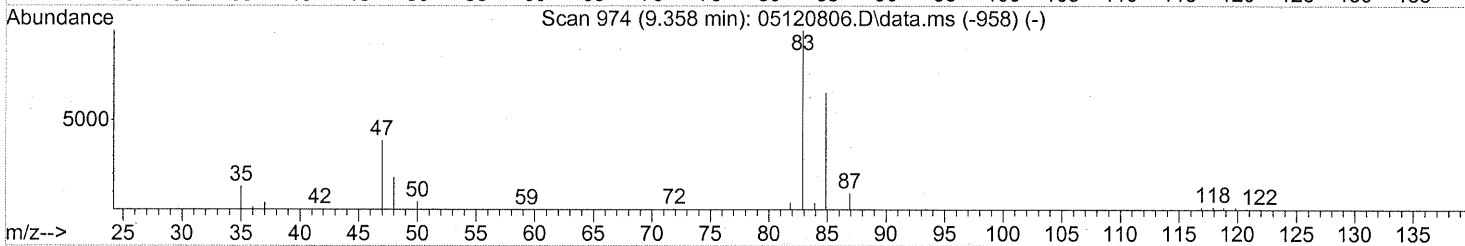
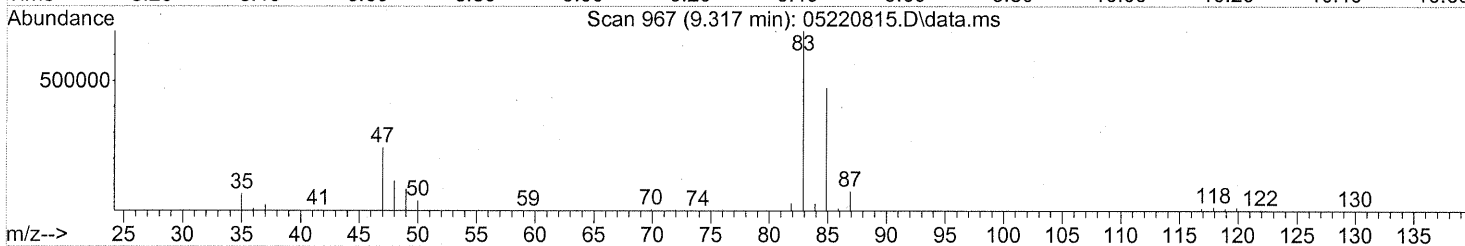
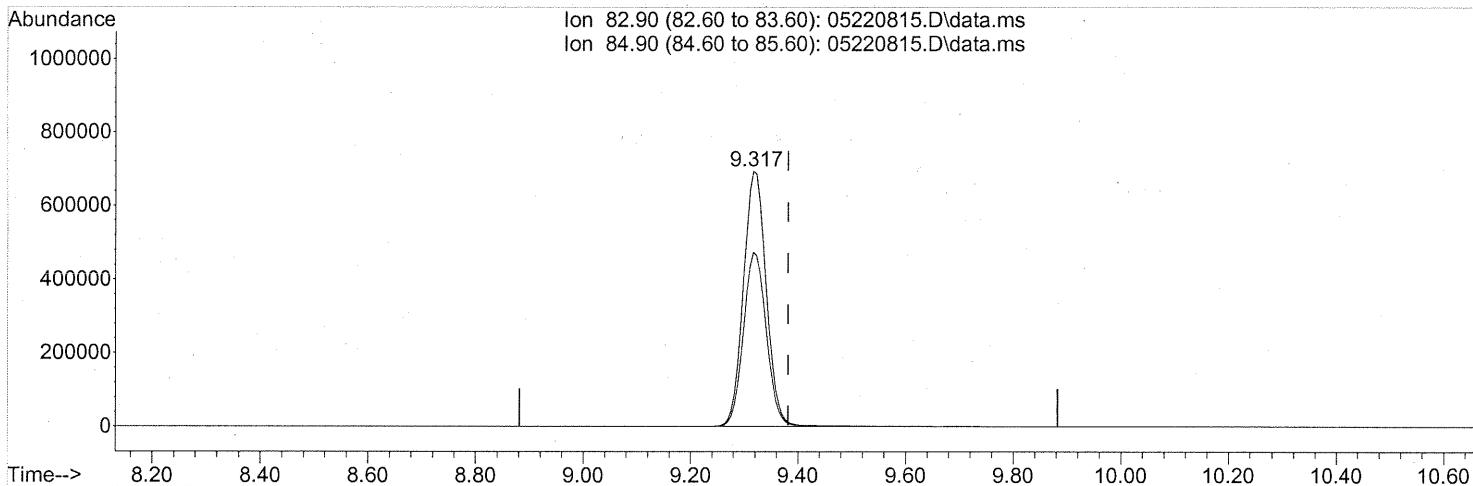
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	914	N.D.		
81) 2-Ethyltoluene	19.57	105	3942	0.057	ng	95
82) 1,2,4-Trimethylbenzene	19.83	105	14609	0.253	ng	98
83) n-Decane	19.93	57	8312	0.181	ng	91
84) Benzyl Chloride	19.99	91	903	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	15042	0.448	ng	96
86) 1,4-Dichlorobenzene	20.10	146	368553	11.495	ng	99
87) sec-Butylbenzene	20.15	105	1338	N.D.		
88) p-Isopropyltoluene	20.34	119	5180	0.081	ng	96
89) 1,2,3-Trimethylbenzene	20.34	105	6107	0.108	ng	100
90) 1,2-Dichlorobenzene	20.52	146	100893	3.241	ng	100
91) d-Limonene	20.51	68	5163	0.247	ng	# 58
92) 1,2-Dibromo-3-Chloropr...	21.18	157	261	N.D.		
93) n-Undecane	21.43	57	48147	0.999	ng	82
94) 1,2,4-Trichlorobenzene	22.55	184	1821	0.336	ng	97
95) Naphthalene	22.69	128	19780	0.242	ng	94
96) n-Dodecane	22.66	57	65483	1.392	ng	76
97) Hexachloro-1,3-butadiene	23.11	225	78633	9.711	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220815.D  
 Acq On : 22 May 2008 17:55  
 Operator : WA  
 Sample : P0801442-007 Dil (250ml)  
 Misc : ENSR SG72B-05 (-3.2, 3.5)  
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05220815.D\data.ms

(32) Chloroform (T)

9.317min (-0.065) 93.84ng

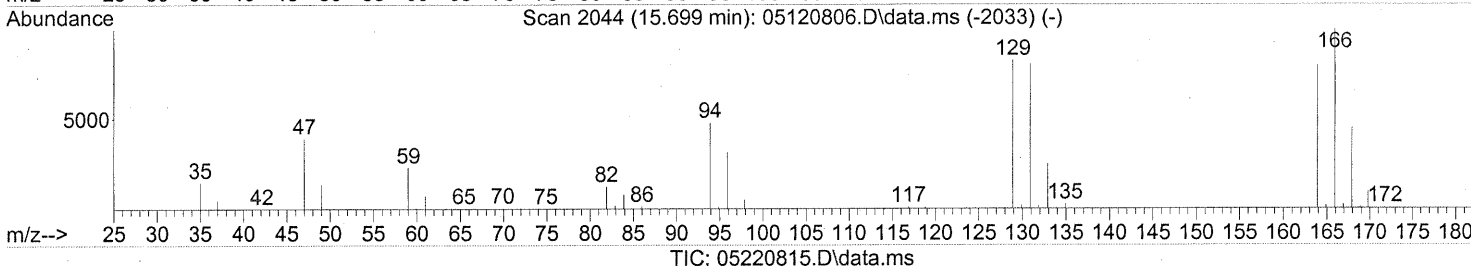
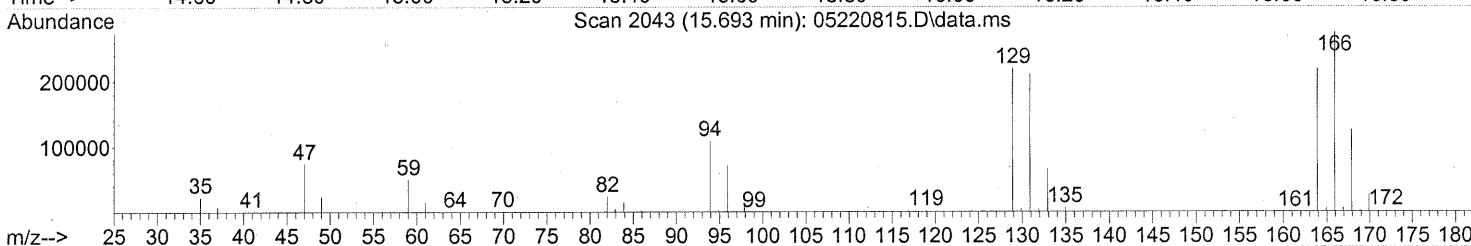
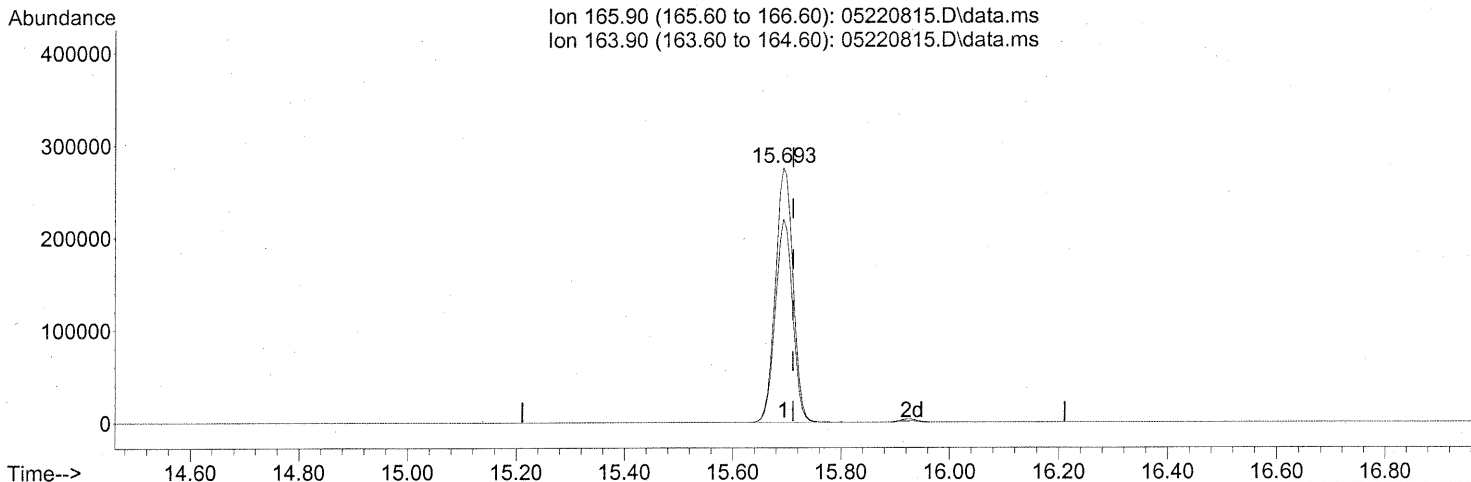
response 2040037

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220815.D  
Acq On : 22 May 2008 5:55 pm  
Operator : WA  
Sample : P0801442-007 Dil (250ml)  
Misc : ENSR SG72B-05 (-3.2, 3.5)  
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 23 06:36:43 2008  
Quant Method : J:\MS16\METHODS\R16051208.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



(64) Tetrachloroethene (T)

15.693min (-0.018) 43.51ng

response 622695

Ion	Exp%	Act%
165.90	100	100
163.90	77.50	78.46
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:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00072

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	16	ND	32	3.2	
74-87-3	Chloromethane	ND	32	16	ND	16	7.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	13	6.3	
74-83-9	Bromomethane	ND	32	16	ND	8.2	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.1	
64-17-5	Ethanol	ND	1,600	16	ND	850	8.5	
67-64-1	<b>Acetone</b>	<b>190</b>	1,600	23	<b>81</b>	670	9.8	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.7	2.8	
107-13-1	Acrylonitrile	ND	160	22	ND	74	10	
75-35-4	<b>1,1-Dichloroethene</b>	<b>25</b>	32	16	<b>6.3</b>	8.1	4.0	<b>J</b>
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	24	ND	53	7.8	
75-09-2	<b>Methylene Chloride</b>	<b>47</b>	160	16	<b>13</b>	46	4.6	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.1	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.2	2.3	
75-15-0	Carbon Disulfide	ND	160	38	ND	51	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.1	4.0	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	7.9	4.0	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.9	4.4	
108-05-4	Vinyl Acetate	ND	1,600	51	ND	450	15	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	54	5.4	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.1	4.0	
108-20-3	Diisopropyl Ether	ND	160	19	ND	38	4.5	
67-66-3	<b>Chloroform</b>	<b>130,000</b>	32	19	<b>26,000</b>	6.6	3.9	

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: RG

Date: 6/2/08

**457**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00072

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	16	ND	38	3.9	
107-06-2	1,2-Dichloroethane	ND	32	16	ND	7.9	4.0	
71-55-6	1,1,1-Trichloroethane	ND	32	16	ND	5.9	2.9	
71-43-2	Benzene	ND	32	16	ND	10	5.0	
56-23-5	Carbon Tetrachloride	ND	32	16	ND	5.1	2.5	
994-05-8	tert-Amyl Methyl Ether	ND	160	16	ND	38	3.8	
78-87-5	1,2-Dichloropropane	ND	32	16	ND	6.9	3.5	
75-27-4	<b>Bromodichloromethane</b>	<b>29</b>	32	16	<b>4.3</b>	4.8	2.4	<b>J</b>
79-01-6	<b>Trichloroethene</b>	<b>36</b>	32	16	<b>6.7</b>	6.0	3.0	
123-91-1	1,4-Dioxane	ND	160	20	ND	44	5.4	
80-62-6	Methyl Methacrylate	ND	160	24	ND	39	5.9	
142-82-5	n-Heptane	ND	160	20	ND	39	5.0	
10061-01-5	cis-1,3-Dichloropropene	ND	160	17	ND	35	3.7	
108-10-1	4-Methyl-2-pentanone	ND	160	18	ND	39	4.4	
10061-02-6	trans-1,3-Dichloropropene	ND	160	20	ND	35	4.4	
79-00-5	1,1,2-Trichloroethane	ND	32	16	ND	5.9	2.9	
108-88-3	Toluene	ND	160	16	ND	42	4.2	
591-78-6	2-Hexanone	ND	160	24	ND	39	5.9	
124-48-1	Dibromochloromethane	ND	32	22	ND	3.8	2.6	
106-93-4	1,2-Dibromoethane	ND	32	17	ND	4.2	2.2	
111-65-9	n-Octane	ND	160	16	ND	34	3.4	
127-18-4	<b>Tetrachloroethene</b>	<b>230</b>	32	16	<b>35</b>	4.7	2.4	
108-90-7	Chlorobenzene	ND	32	16	ND	7.0	3.5	

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:     Rc    

Date:     6/2/08    

**458**



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG70B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-008

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00072

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0012 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	160	20	ND	37	4.6	
179601-23-1	m,p-Xylenes	ND	160	42	ND	37	9.6	
75-25-2	Bromoform	ND	160	24	ND	15	2.4	
100-42-5	Styrene	ND	160	24	ND	38	5.7	
95-47-6	o-Xylene	ND	160	20	ND	37	4.6	
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	20	ND	4.7	3.0	
98-82-8	Cumene	ND	160	18	ND	33	3.6	
103-65-1	n-Propylbenzene	ND	160	17	ND	33	3.4	
622-96-8	4-Ethyltoluene	ND	160	18	ND	33	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	33	3.9	
98-83-9	alpha-Methylstyrene	ND	160	23	ND	33	4.8	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	33	4.5	
100-44-7	Benzyl Chloride	ND	32	28	ND	6.2	5.3	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.3	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.3	3.0	
135-98-8	sec-Butylbenzene	ND	160	19	ND	29	3.4	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.8	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.3	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	17	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.3	
91-20-3	<b>Naphthalene</b>	<b>27</b>	64	24	<b>5.2</b>	12	4.5	<b>J</b>
87-68-3	Hexachlorobutadiene	ND	32	29	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	64	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	64	16	ND	12	2.9	

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

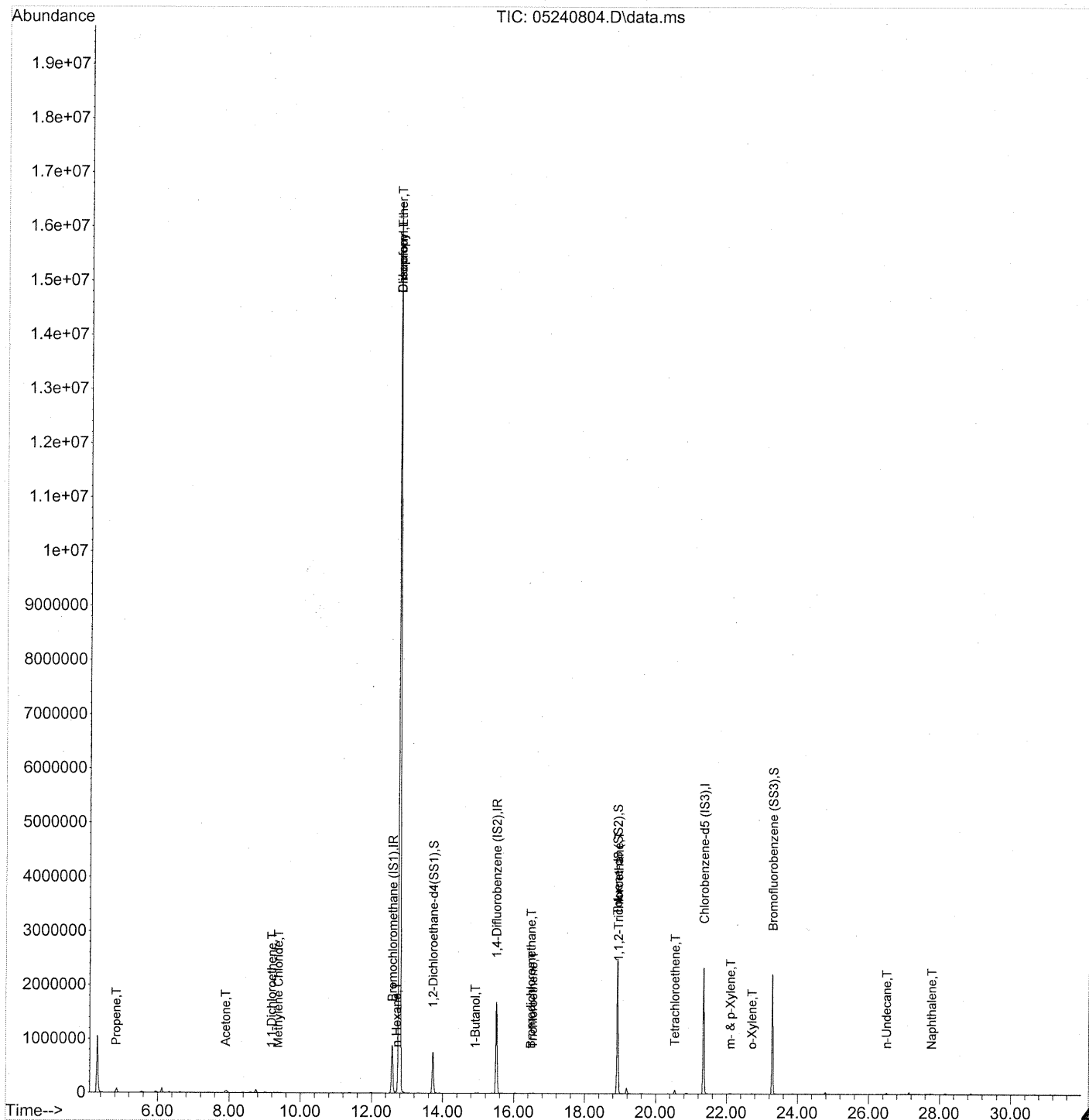
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

Verified By:     *Rer*          Date:     *6/2/08*          **459**

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240804.D  
Acq On : 24 May 2008 9:04  
Operator : WA  
Sample : P0801442-008 (5.0ml)  
Misc : ENSR SG70B-05 (-3.3, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	463631	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1946379	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	904087	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	765974	23.844	ng	0.00
Spiked Amount	25.000		Recovery	=	95.36%	✓
57) Toluene-d8 (SS2)	18.92	98	2057837	25.344	ng	0.00
Spiked Amount	25.000		Recovery	=	101.36%	✓
73) Bromofluorobenzene (SS3)	23.29	174	825240	24.993	ng	0.00
Spiked Amount	25.000		Recovery	=	99.96%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.83	42	19843	0.542	ng	# 23
3) Dichlorodifluoromethane	4.94	85	129	N.D.	✓	
4) Chloromethane	5.32	50	109	N.D.	✓	
5) Freon 114	0.00	135	0	N.D.	✓	
6) Vinyl Chloride	5.77	62	55	N.D.	✓	
7) 1,3-Butadiene	6.04	54	72	N.D.	✓	
8) Bromomethane	6.51	94	178	N.D.	✓	
9) Chloroethane	6.84	64	66	N.D.	✓	
10) Ethanol	7.11	45	272	N.D.	✓	
11) Acetonitrile	7.42	41	564	N.D.	✓	
12) Acrolein	7.70	56	533	N.D.	✓	
13) Acetone	7.90	58	15045	0.603	ng	# 10
14) Trichlorofluoromethane	8.16	101	383	N.D.	✓	
15) Isopropanol	8.37	45	539	N.D.	✓	
16) Acrylonitrile	8.61	53	1003	N.D.	✓	
17) 1,1-Dichloroethene	9.19	96	1993	0.078	ng	# 1
18) tert-Butanol	9.31	59	256	N.D.	✓	
19) Methylene Chloride	9.37	84	4062	0.146	ng	87
20) Allyl Chloride	9.45	41	1168	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	9.78	76	3329	N.D.	✓	
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	11.11	63	108	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	11.38	86	62	N.D.	✓	
27) 2-Butanone	11.72	72	181	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	1968372	88.185	ng	NR # 1
30) Ethyl Acetate	12.76	61	69	N.D.	✓	
31) n-Hexane	12.70	57	14457	0.291	ng	# 71461

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	17108405	<del>404.670</del> ng	su dil	96
34) Tetrahydrofuran	13.43	72	72	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.90	62	481	N.D.	✓	
38) 1,1,1-Trichloroethane	14.29	97	1332	N.D.	✓	
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.92	56	2547	0.095 ng	#	26
41) Benzene	14.99	78	4079	N.D.	✓	
42) Carbon Tetrachloride	15.20	117	747	N.D.	✓	
43) Cyclohexane	15.39	84	151	N.D.		
44) tert-Amyl Methyl Ether	15.58	73	62	N.D.	✓	
45) 1,2-Dichloropropane	16.20	63	350	N.D.	✓	
46) Bromodichloromethane	16.48	83	3107	0.090 ng		88
47) Trichloroethene	16.53	130	3505	0.112 ng		90
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	16.61	57	286	N.D.		
50) Methyl Methacrylate	16.97	100	84	N.D.	✓	
51) n-Heptane	16.98	71	661	N.D.	✓	
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
53) 4-Methyl-2-pentanone	17.80	58	651	N.D.	✓	
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
55) 1,1,2-Trichloroethane	18.94	97	180727	7.176 ng	NR #	8
58) Toluene	19.05	91	4402	N.D.	✓	
59) 2-Hexanone	19.38	43	1883	N.D.	✓	
60) Dibromochloromethane	19.60	129	1159	N.D.	✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	✓	
62) Butyl Acetate	20.21	43	249	N.D.		
63) n-Octane	20.35	57	263	N.D.	✓	
64) Tetrachloroethene	20.55	166	23984	0.734 ng		91
65) Chlorobenzene	21.41	112	1674	N.D.	✓	
66) Ethylbenzene	21.89	91	3145	N.D.	✓	
67) m- & p-Xylene	22.10	91	10484	0.124 ng		90
68) Bromoform	22.21	173	819	N.D.	✓	
69) Styrene	22.60	104	500	N.D.	✓	
70) o-Xylene	22.72	91	5656	0.062 ng		81
71) n-Nonane	22.97	43	1895	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.70	83	217	N.D.	✓	
74) Cumene	23.45	105	838	N.D.	✓	
75) alpha-Pinene	23.97	93	638	N.D.		
76) n-Propylbenzene	24.10	91	1703	N.D.	✓	
77) 3-Ethyltoluene	24.23	105	4411	N.D.		
78) 4-Ethyltoluene	24.27	105	3069	N.D.	✓	
79) 1,3,5-Trimethylbenzene	24.38	105	2382	N.D.	✓	

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.57	118	198	N.D.	✓	
81) 2-Ethyltoluene	24.63	105	3204	N.D.		
82) 1,2,4-Trimethylbenzene	24.88	105	4425	N.D.	✓	
83) n-Decane	24.97	57	1523	N.D.		
84) Benzyl Chloride	25.06	91	3062	N.D.	✓	
85) 1,3-Dichlorobenzene	25.08	146	1600	N.D.	✓	
86) 1,4-Dichlorobenzene	25.16	146	3158	N.D.	✓	
87) sec-Butylbenzene	25.22	105	1282	N.D.	✓	
88) p-Isopropyltoluene	25.41	119	1874	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.40	105	3122	N.D.		
90) 1,2-Dichlorobenzene	25.58	146	1250	N.D.	✓	
91) d-Limonene	25.58	68	509	N.D.		
92) 1,2-Dibromo-3-Chloropr...	26.12	157	274	N.D.	✓	
93) n-Undecane	26.50	57	8902	0.139	ng	76
94) 1,2,4-Trichlorobenzene	27.63	180	1924	N.D.	✓	
95) Naphthalene	27.78	128	12468	0.085	ng	83
96) n-Dodecane	27.74	57	2882	N.D.		
97) Hexachloro-1,3-butadiene	28.19	225	1159	N.D.	✓	

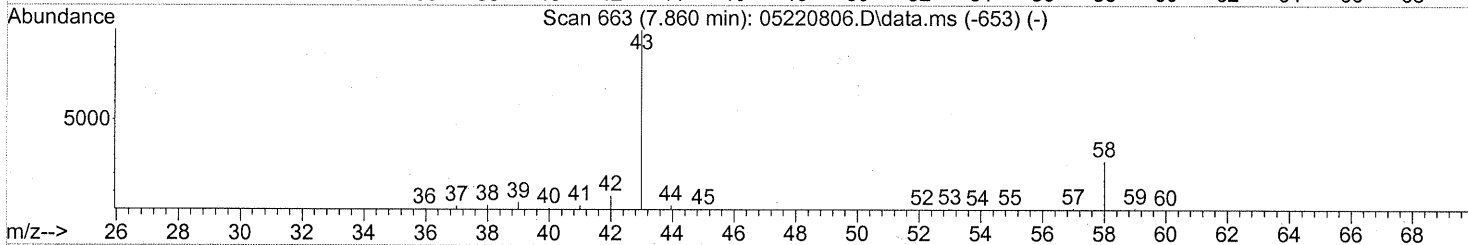
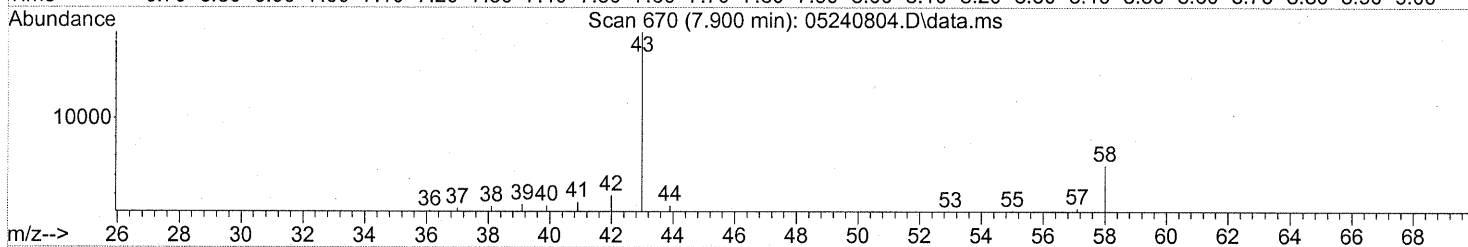
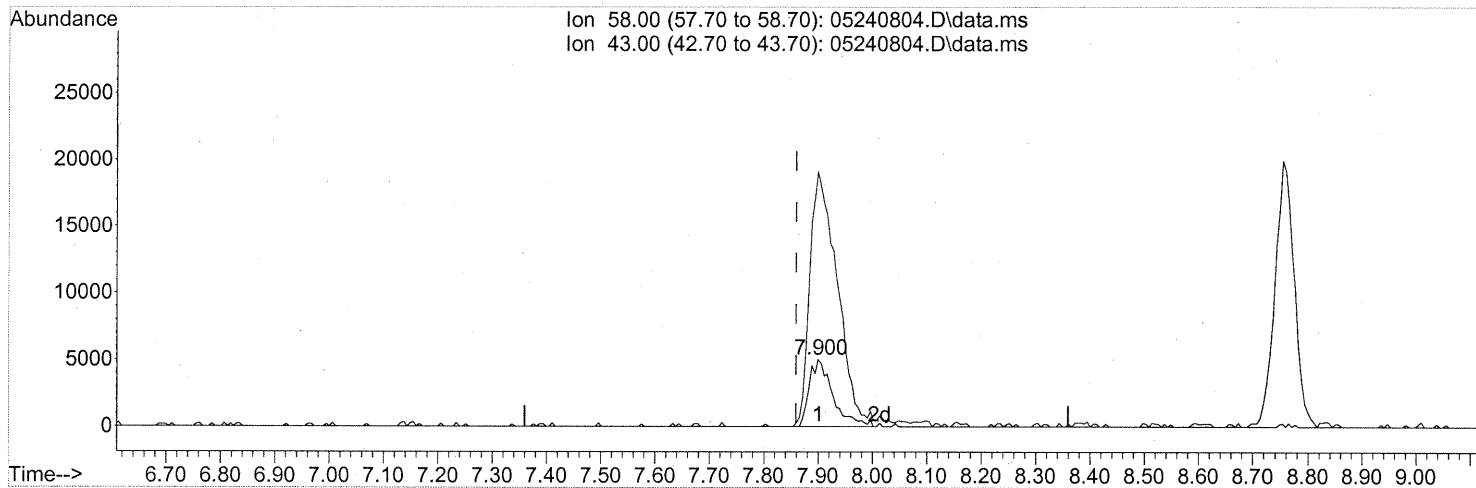
(#) = qualifier out of range (m) = manual integration (+) = signals summed

5/27/08

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240804.D\data.ms

(13) Acetone (T)

7.900min (+0.040) 0.60ng

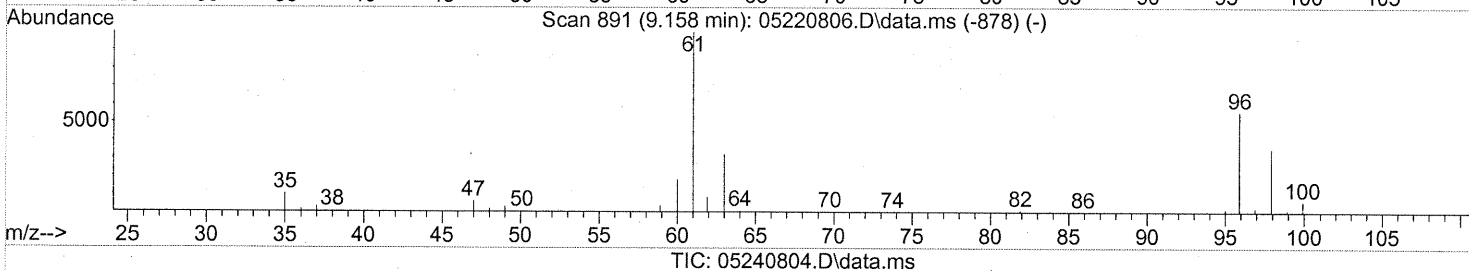
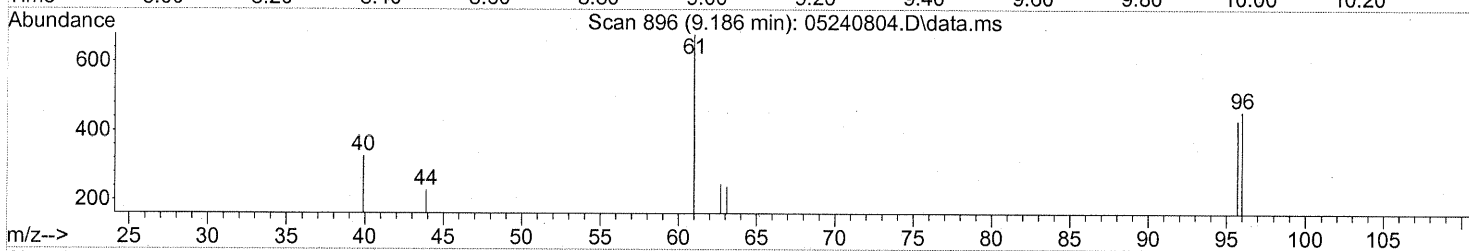
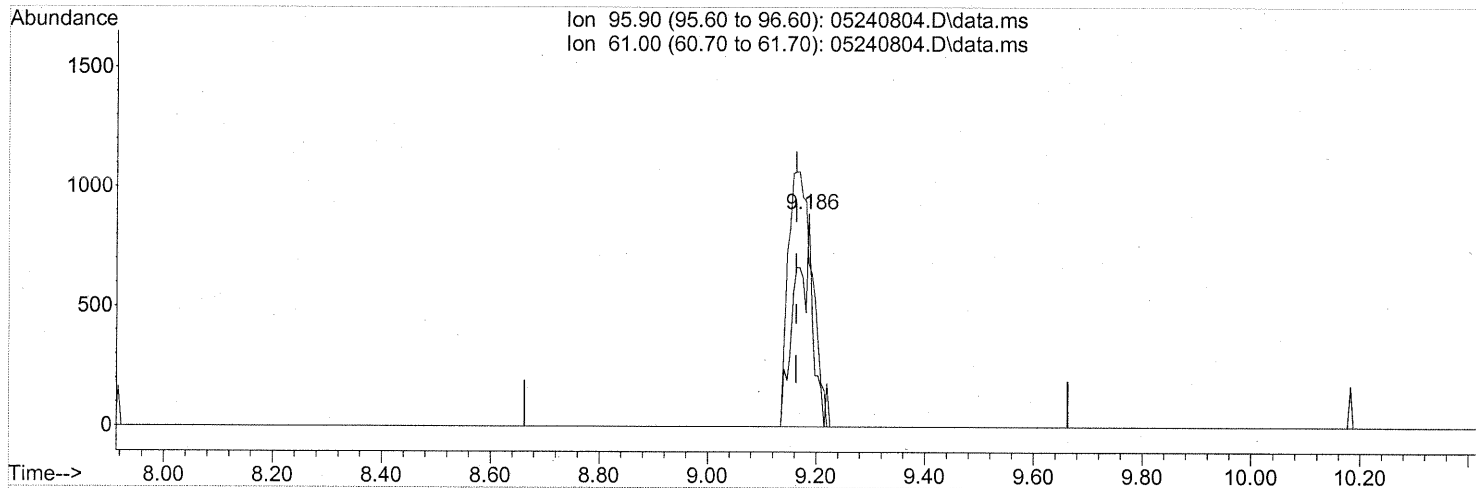
response 15045

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	452.56#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240804.D  
Acq On : 24 May 2008 9:04  
Operator : WA  
Sample : P0801442-008 (5.0ml)  
Misc : ENSR SG70B-05 (-3.3, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.186min (+0.023) 0.08ng

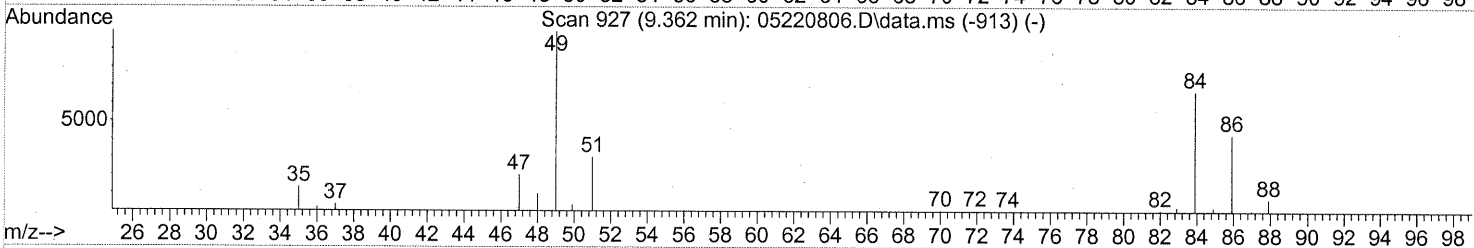
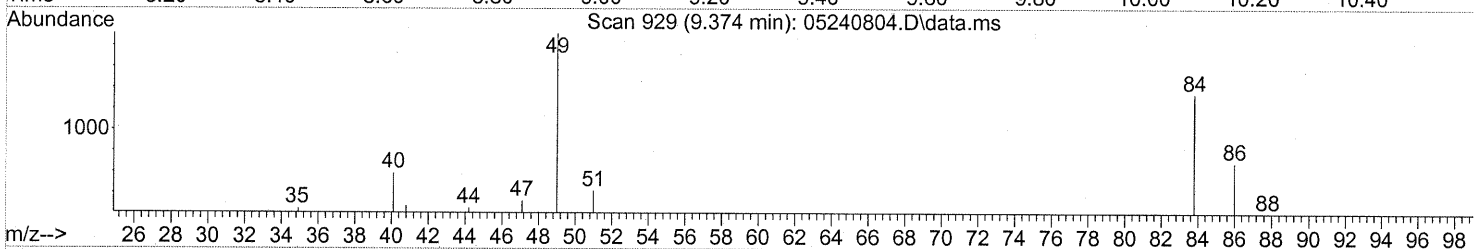
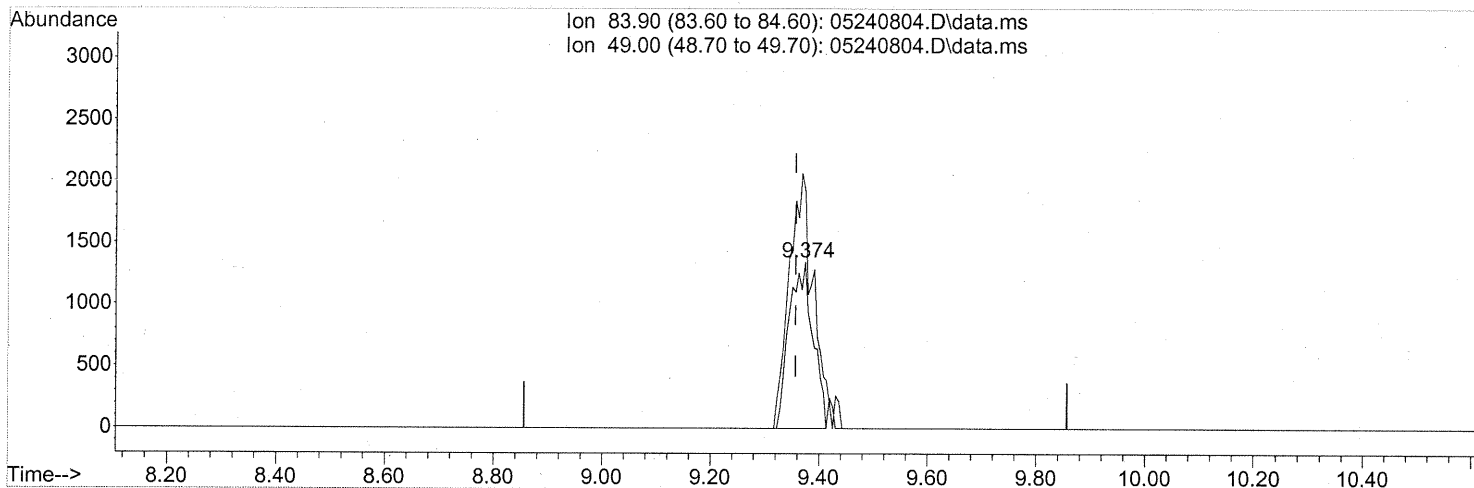
response 1993

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

9.374min (+0.017) 0.15ng

response 4062

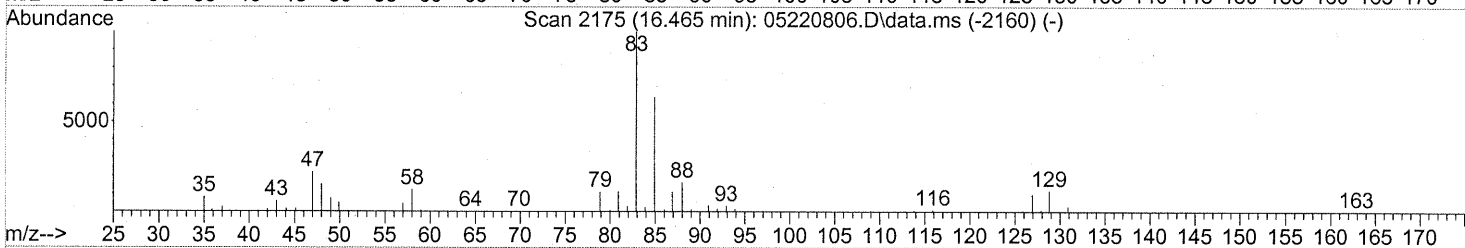
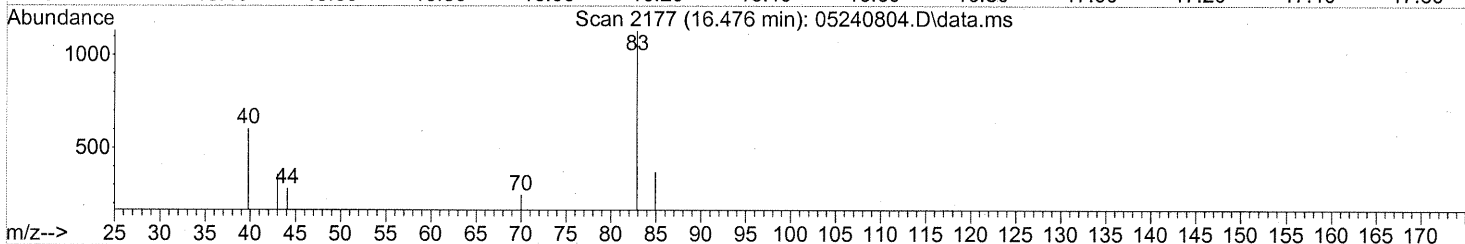
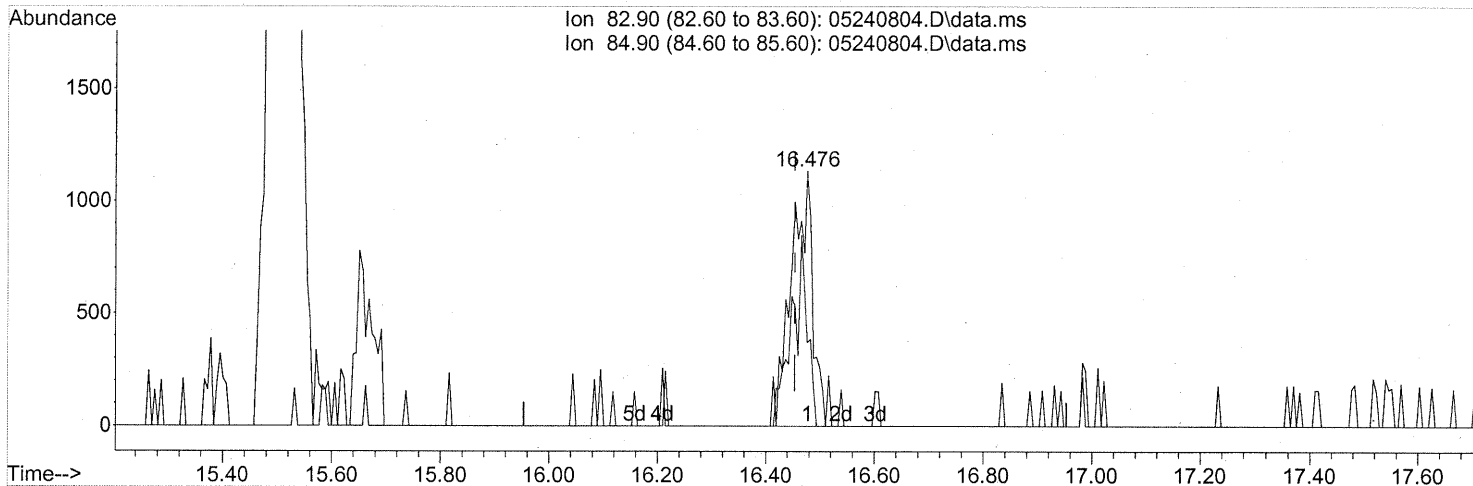
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	155.56
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.476min (+0.023) 0.09ng

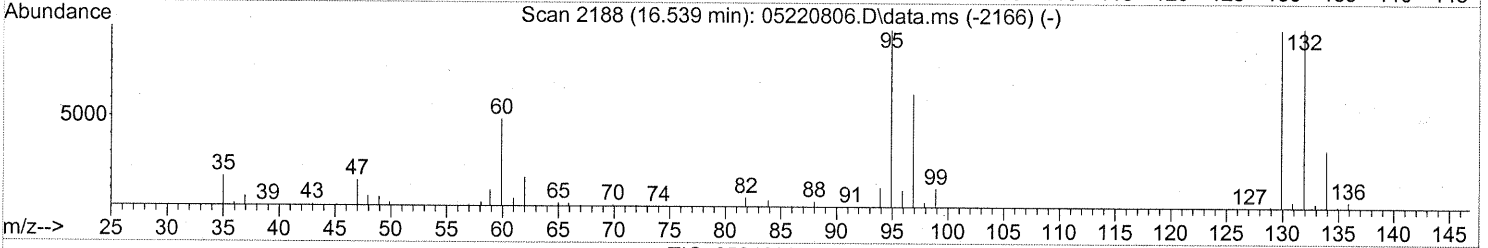
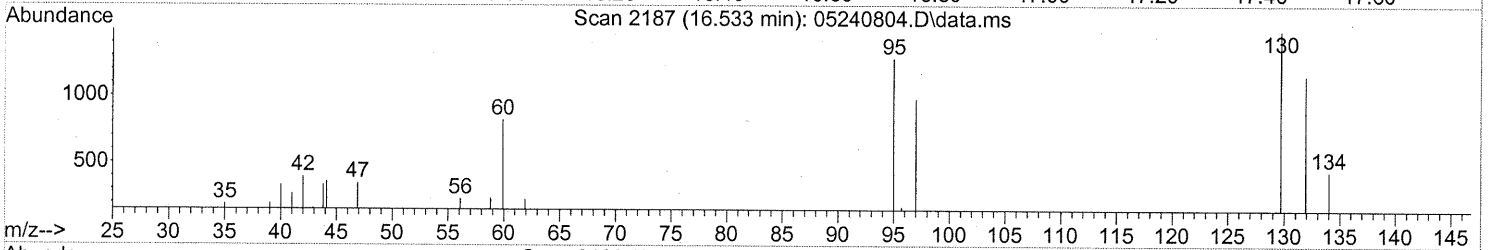
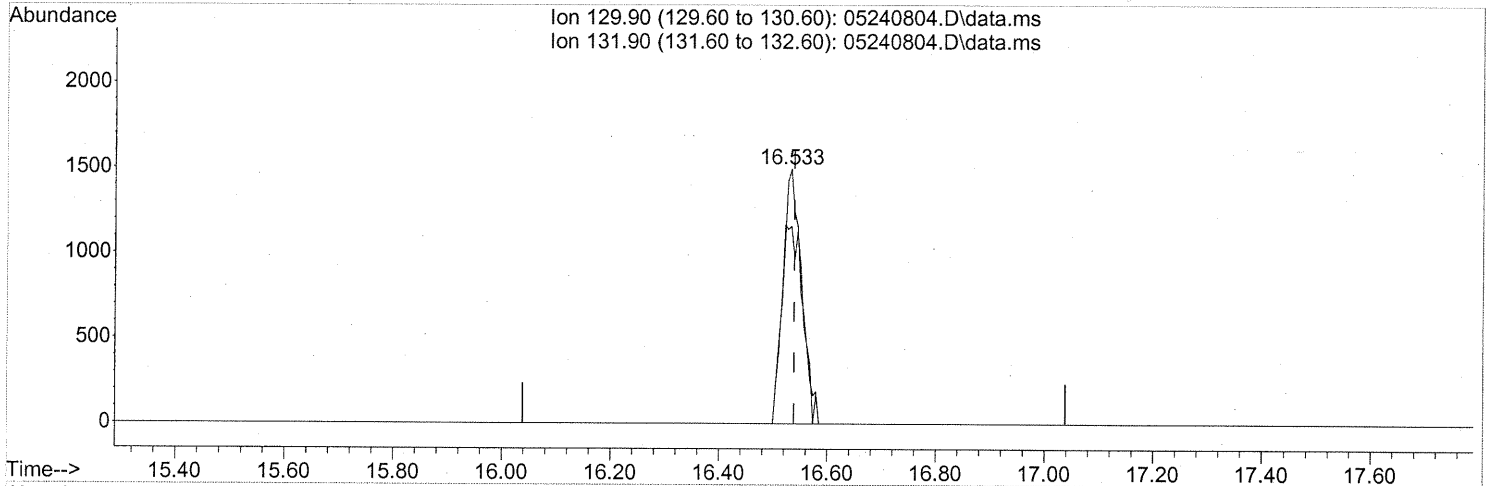
response 3107

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	54.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



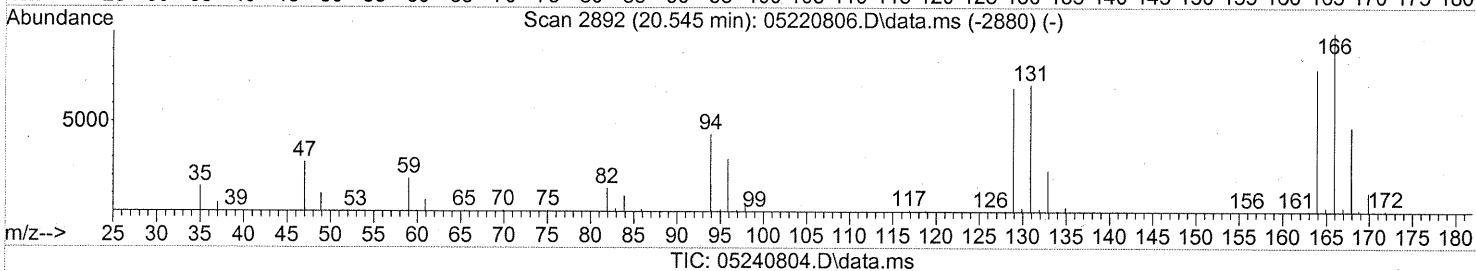
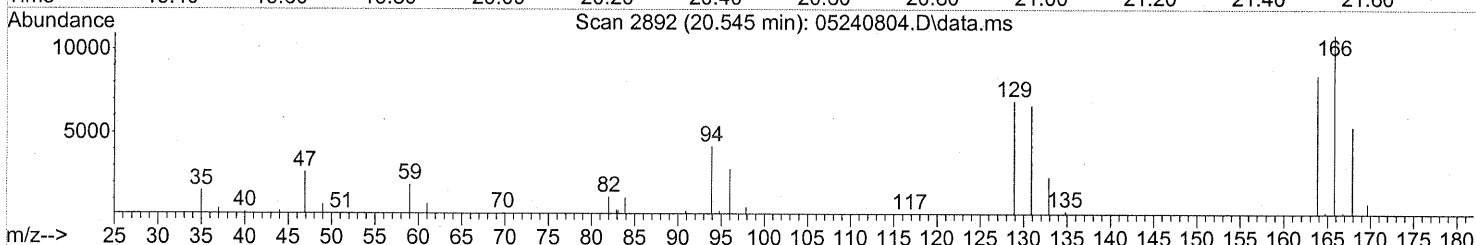
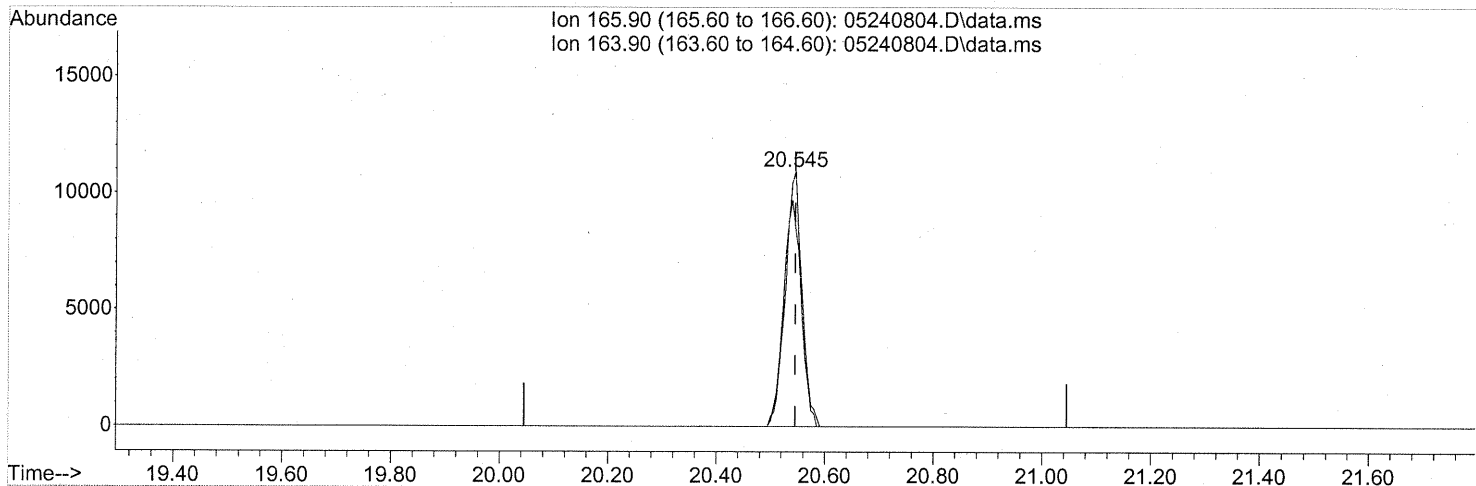
(47) Trichloroethene (T)  
 16.533min (-0.006) 0.11ng  
 response 3505

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	91.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.545min (+0.000) 0.73ng

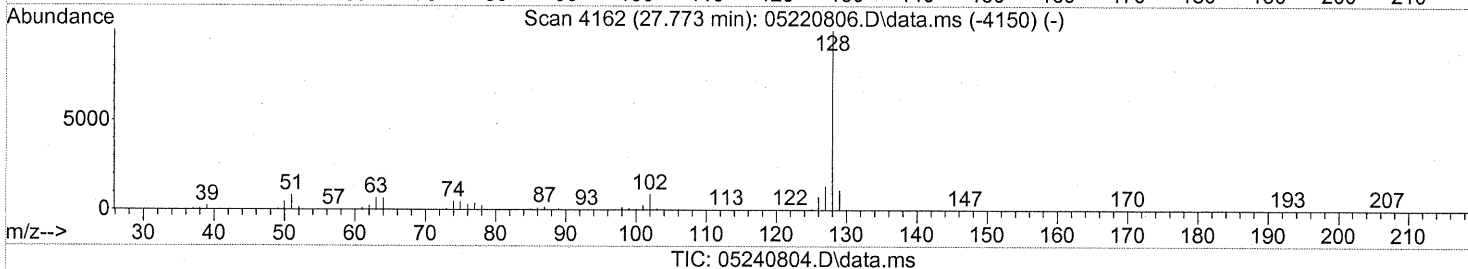
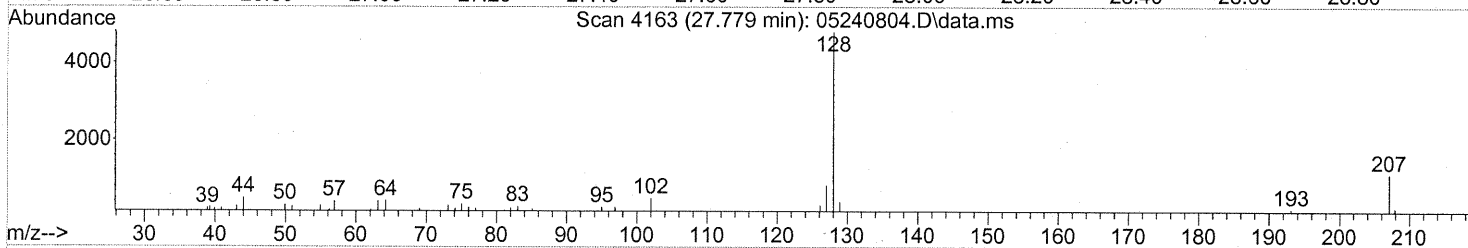
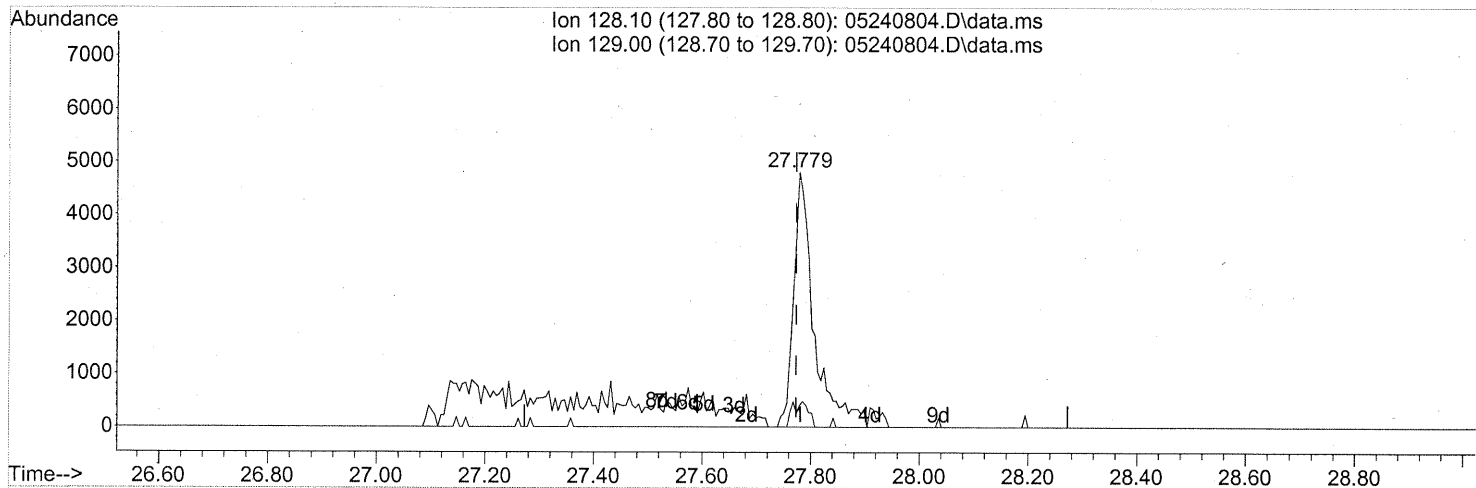
response 23984

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	86.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:07:06 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

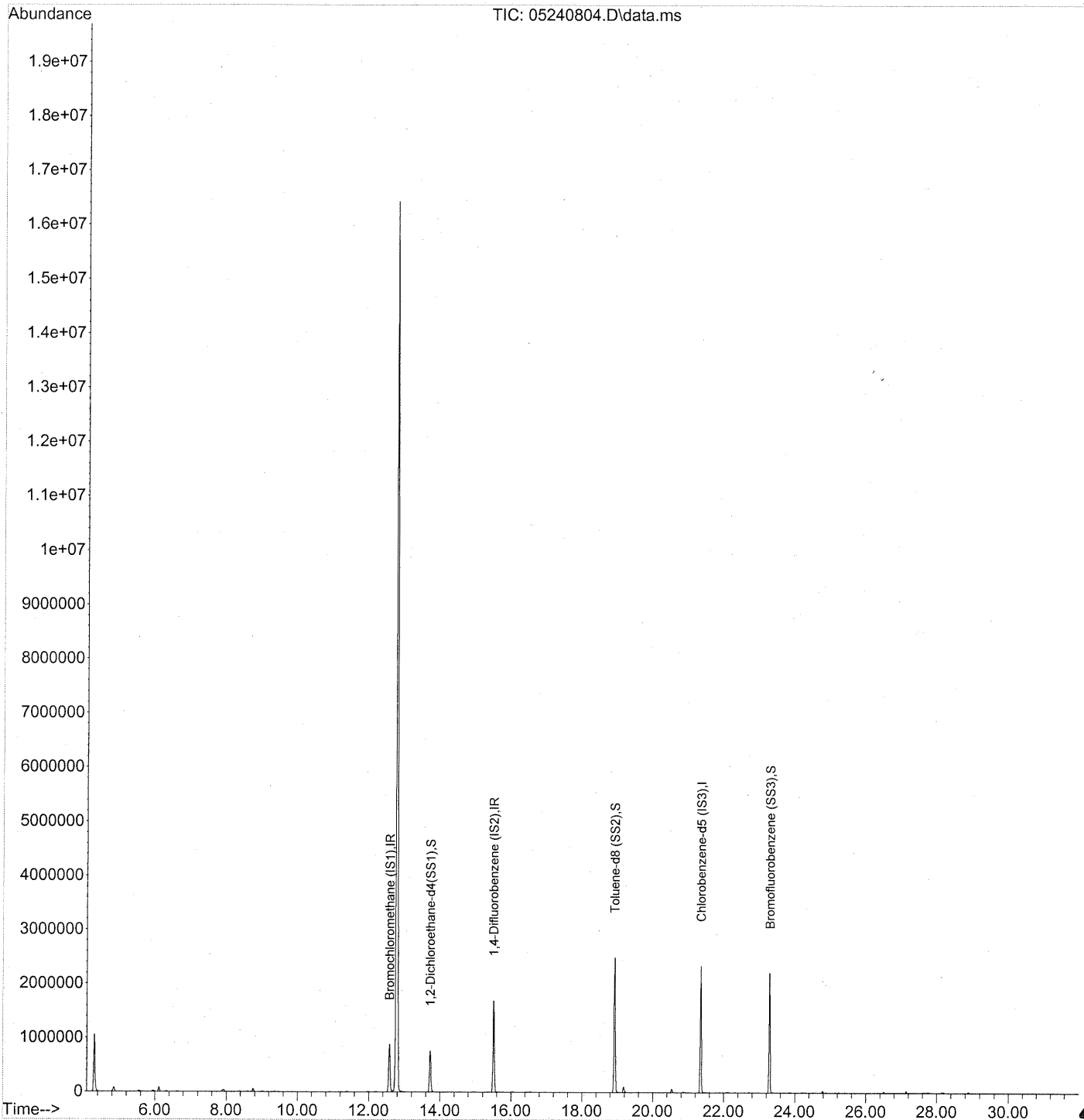


(95) Naphthalene (T)  
 27.779min (+0.006) 0.09ng  
 response 12468

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	4.97
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240804.D  
Acq On : 24 May 2008 9:04  
Operator : WA  
Sample : P0801442-008 (5.0ml)  
Misc : ENSR SG70B-05 (-3.3, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:03 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240804.D  
 Acq On : 24 May 2008 9:04  
 Operator : WA  
 Sample : P0801442-008 (5.0ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:03 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

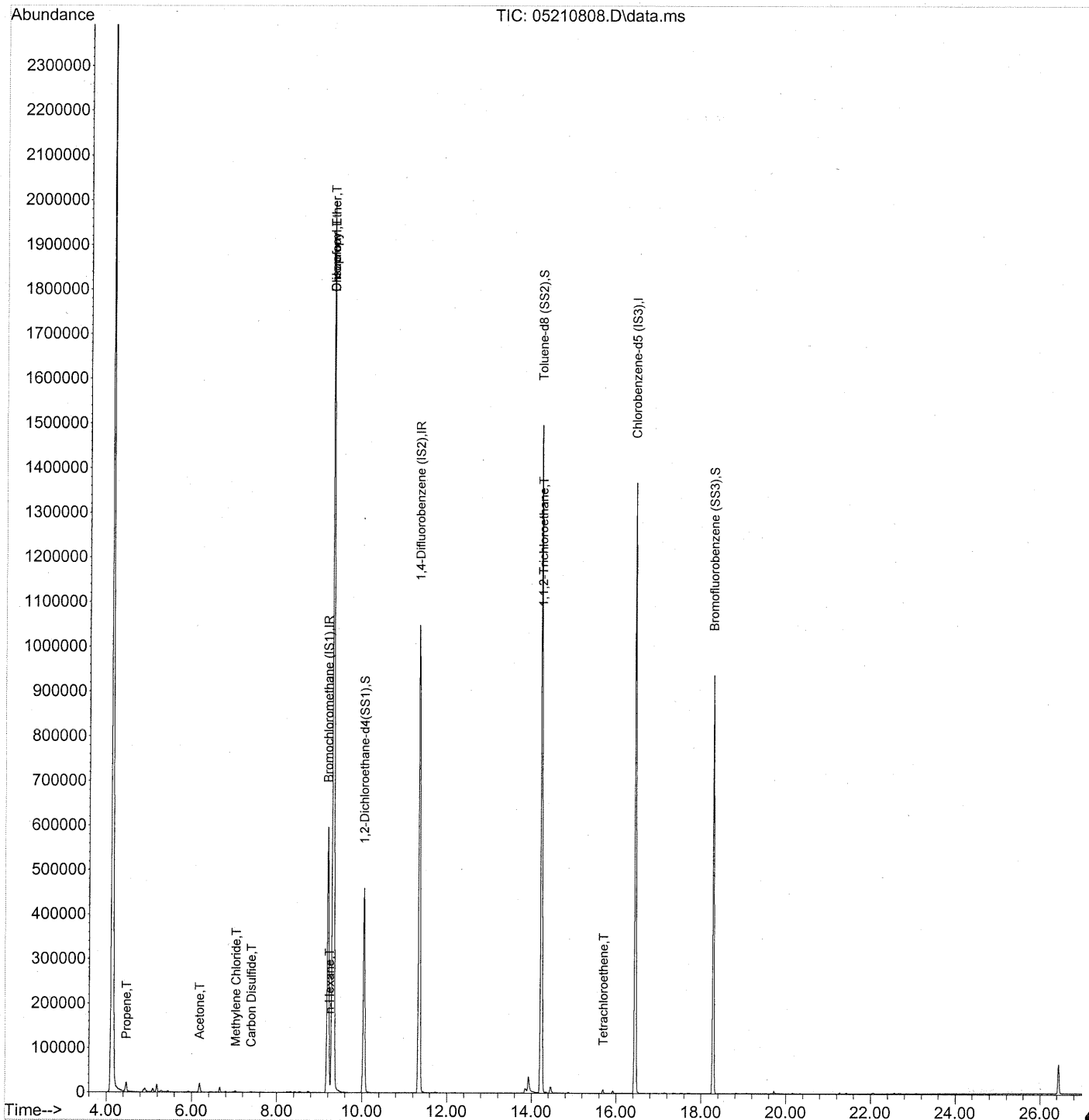
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	463631	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1946379	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	904087	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	765974	23.844	ng	-0.03
Spiked Amount	25.000		Recovery	=	95.36%	
5) Toluene-d8 (SS2)	18.92	98	2057837	25.344	ng	-0.02
Spiked Amount	25.000		Recovery	=	101.36%	
6) Bromofluorobenzene (SS3)	23.29	174	825240	24.993	ng	0.00
Spiked Amount	25.000		Recovery	=	99.96%	
Target Compounds						
7) tert-Butylbenzene	24.94	119	394	N.D.		Qvalue
8) n-Butylbenzene	25.92	91	512	N.D.		

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

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210808.D  
 Acq On : 21 May 2008 12:42  
 Operator : WA  
 Sample : P0801442-008 Dil (1.2ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:15:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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\21\  
 Data File : 05210808.D  
 Acq On : 21 May 2008 12:42  
 Operator : WA  
 Sample : P0801442-008 Dil (1.2ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:15:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	278945m	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1159225	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	454144	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	423379	21.523	ng	-0.05
Spiked Amount	25.000			Recovery	=	86.08%
57) Toluene-d8 (SS2)	14.23	98	1180998	26.411	ng	-0.02
Spiked Amount	25.000			Recovery	=	105.64%
73) Bromofluorobenzene (SS3)	18.28	174	325410	27.962	ng	-0.01
Spiked Amount	25.000			Recovery	=	111.84%

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	4096	0.147	ng	# 52
3) Dichlorodifluoromethane	0.00	85	0	N.D.		
4) Chloromethane	4.74	50	101	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	122	N.D.		
11) Acetonitrile	5.94	41	2244	N.D.		
12) Acrolein	6.07	56	214	N.D.		
13) Acetone	6.18	58	7707	0.418	ng	92
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.43	45	111	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	111	N.D.		
19) Methylene Chloride	7.03	84	875	0.060	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	2849	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	8.53	72	102	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	214886	17.781	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.23	57	2243	0.057	ng	# 65

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Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210808.D  
 Acq On : 21 May 2008 12:42  
 Operator : WA  
 Sample : P0801442-008 Dil (1.2ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:15:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	1982068	95.290	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	1041	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	215	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	186	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	277	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	100805	7.309	ng	# 7
58) Toluene	14.35	91	1004	N.D.		
59) 2-Hexanone	14.59	43	886	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.70	166	3150	0.233	ng	98
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	415	N.D.		
67) m- & p-Xylene	17.14	91	1686	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.73	91	611	N.D.		
71) n-Nonane	17.96	43	91	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.44	105	120	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	19.07	91	116	N.D.		
77) 3-Ethyltoluene	19.20	105	546	N.D.		
78) 4-Ethyltoluene	19.24	105	301	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	107	N.D.		

475

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210808.D  
 Acq On : 21 May 2008 12:42  
 Operator : WA  
 Sample : P0801442-008 Dil (1.2ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:15:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

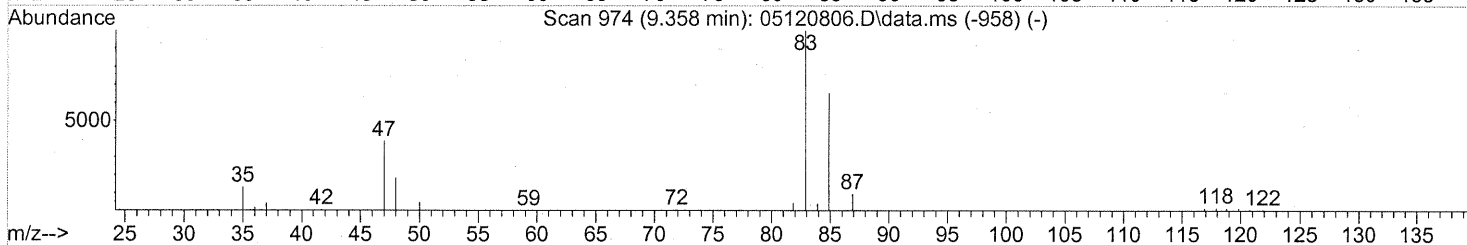
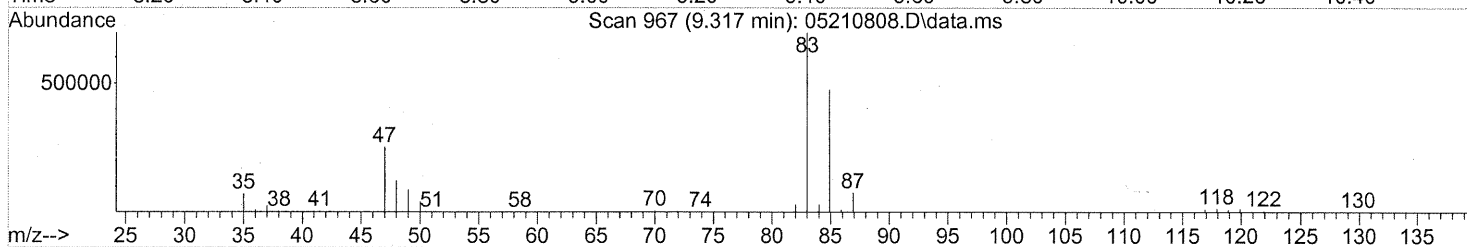
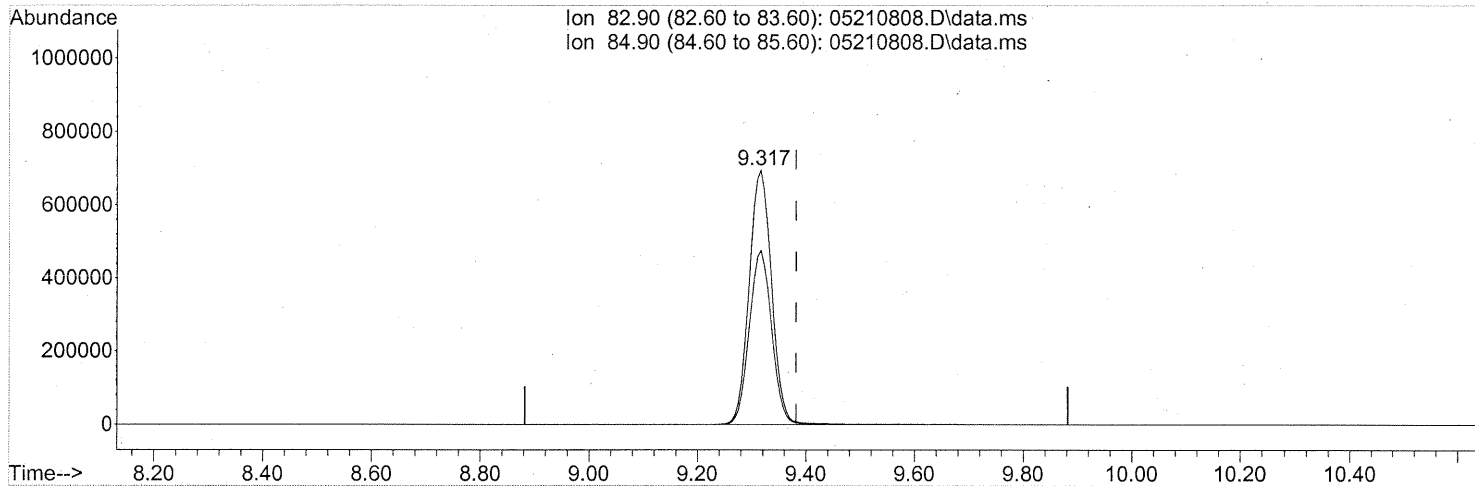
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	19.56	105	204	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	515	N.D.		
83) n-Decane	20.17	57	866	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	101	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	101	N.D.		
87) sec-Butylbenzene	20.36	105	450	N.D.		
88) p-Isopropyltoluene	20.34	119	215	N.D.		
89) 1,2,3-Trimethylbenzene	20.36	105	450	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	972	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	1364	N.D.		
96) n-Dodecane	22.66	57	366	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\21\  
 Data File : 05210808.D  
 Acq On : 21 May 2008 12:42  
 Operator : WA  
 Sample : P0801442-008 Dil (1.2ml)  
 Misc : ENSR SG70B-05 (-3.3, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:15:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05210808.D\data.ms

(32) Chloroform (T)

9.317min (-0.065) 95.29ng

response 1982068

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

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG71B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00571

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.5

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	160	16	ND	33	3.3	
74-87-3	Chloromethane	ND	32	16	ND	16	7.8	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	13	6.3	
74-83-9	Bromomethane	ND	32	16	ND	8.3	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.1	
64-17-5	Ethanol	ND	1,600	16	ND	850	8.5	
67-64-1	<b>Acetone</b>	<b>65</b>	1,600	24	<b>27</b>	680	9.9	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.7	2.9	
107-13-1	Acrylonitrile	ND	160	23	ND	74	10	
75-35-4	1,1-Dichloroethene	ND	32	16	ND	8.1	4.1	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	24	ND	53	7.9	
75-09-2	<b>Methylene Chloride</b>	<b>33</b>	160	16	<b>9.4</b>	46	4.6	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.1	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.2	2.4	
75-15-0	Carbon Disulfide	ND	160	39	ND	52	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.1	4.1	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	8.0	4.0	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.9	4.5	
108-05-4	Vinyl Acetate	ND	1,600	52	ND	460	15	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	55	5.5	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.1	4.1	
108-20-3	Diisopropyl Ether	ND	160	19	ND	39	4.5	
67-66-3	<b>Chloroform</b>	<b>120,000</b>	32	19	<b>24,000</b>	6.6	3.9	

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: RG

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG71B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00571

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.5

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	160	16	ND	39	3.9	
107-06-2	1,2-Dichloroethane	ND	32	16	ND	8.0	4.0	
71-55-6	1,1,1-Trichloroethane	ND	32	16	ND	5.9	3.0	
71-43-2	Benzene	ND	32	16	ND	10	5.0	
56-23-5	Carbon Tetrachloride	ND	32	16	ND	5.1	2.6	
994-05-8	tert-Amyl Methyl Ether	ND	160	16	ND	39	3.9	
78-87-5	1,2-Dichloropropane	ND	32	16	ND	7.0	3.5	
75-27-4	<b>Bromodichloromethane</b>	<b>140</b>	32	16	<b>22</b>	4.8	2.4	
79-01-6	Trichloroethene	ND	32	16	ND	6.0	3.0	
123-91-1	1,4-Dioxane	ND	160	20	ND	45	5.5	
80-62-6	Methyl Methacrylate	ND	160	24	ND	39	5.9	
142-82-5	n-Heptane	ND	160	21	ND	39	5.0	
10061-01-5	cis-1,3-Dichloropropene	ND	160	17	ND	35	3.7	
108-10-1	4-Methyl-2-pentanone	ND	160	18	ND	39	4.4	
10061-02-6	trans-1,3-Dichloropropene	ND	160	20	ND	35	4.5	
79-00-5	1,1,2-Trichloroethane	ND	32	16	ND	5.9	3.0	
108-88-3	Toluene	ND	160	16	ND	43	4.3	
591-78-6	2-Hexanone	ND	160	24	ND	39	6.0	
124-48-1	<b>Dibromochloromethane</b>	<b>37</b>	32	22	<b>4.3</b>	3.8	2.6	
106-93-4	1,2-Dibromoethane	ND	32	17	ND	4.2	2.3	
111-65-9	n-Octane	ND	160	16	ND	34	3.4	
127-18-4	<b>Tetrachloroethene</b>	<b>170</b>	32	16	<b>25</b>	4.8	2.4	
108-90-7	Chlorobenzene	ND	32	16	ND	7.0	3.6	

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:     kg          Date: 6/2/08      **479**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG71B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-009

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00571

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/21/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 Liter(s)

Initial Pressure (psig): -3.4      Final Pressure (psig): 3.5

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	ND	160	20	ND	37	4.6	
179601-23-1	m,p-Xylenes	ND	160	42	ND	37	9.6	
75-25-2	Bromoform	ND	160	24	ND	16	2.4	
100-42-5	Styrene	ND	160	24	ND	38	5.8	
95-47-6	o-Xylene	ND	160	20	ND	37	4.7	
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	21	ND	4.7	3.0	
98-82-8	Cumene	ND	160	18	ND	33	3.7	
103-65-1	n-Propylbenzene	ND	160	17	ND	33	3.4	
622-96-8	4-Ethyltoluene	ND	160	18	ND	33	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	33	3.9	
98-83-9	alpha-Methylstyrene	ND	160	24	ND	33	4.9	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	33	4.5	
100-44-7	Benzyl Chloride	ND	32	28	ND	6.2	5.4	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.4	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.4	3.0	
135-98-8	sec-Butylbenzene	ND	160	19	ND	29	3.4	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.8	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.4	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	17	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.3	
91-20-3	Naphthalene	ND	64	24	ND	12	4.5	
87-68-3	Hexachlorobutadiene	ND	32	29	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	64	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	64	16	ND	12	2.9	

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.

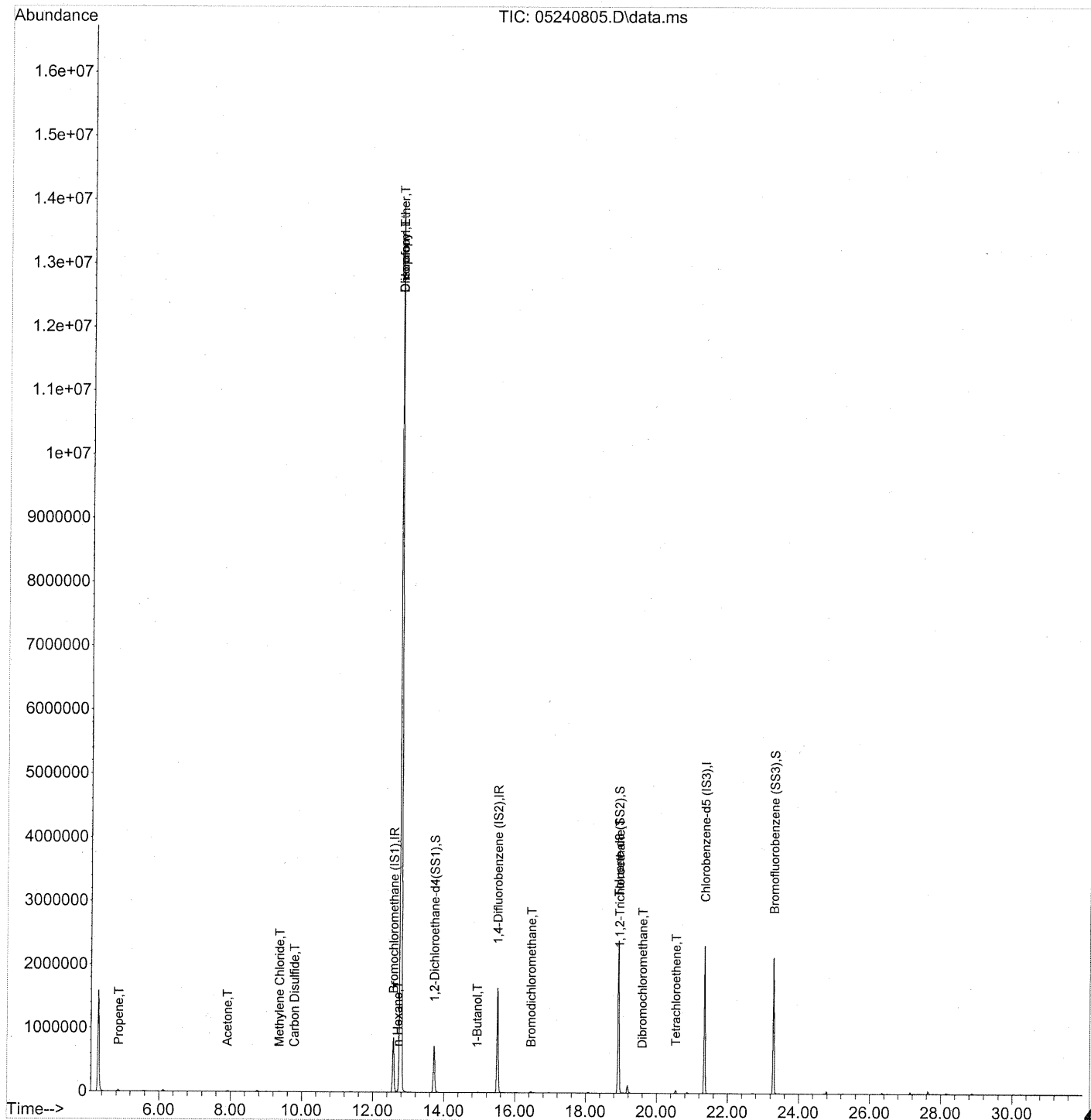
Verified By: Re

Date: 6/2/08

**480**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	444409	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1882384	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	881998	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	738393	23.979	ng	0.00
Spiked Amount	25.000		Recovery	=	95.92%	
57) Toluene-d8 (SS2)	18.92	98	1982731	25.031	ng	0.00
Spiked Amount	25.000		Recovery	=	100.12%	
73) Bromofluorobenzene (SS3)	23.29	174	794629	24.669	ng	0.00
Spiked Amount	25.000		Recovery	=	98.68%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.86	42	3312	0.094	ng	# 1
3) Dichlorodifluoromethane	4.99	85	297	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	7.13	45	251	N.D.	✓	
11) Acetonitrile	7.47	41	1298	N.D.		
12) Acrolein	7.68	56	687	N.D.		
13) Acetone	7.91	58	4799	0.201	ng	# 18
14) Trichlorofluoromethane	0.00	101	0	N.D.	✓	
15) Isopropanol	8.38	45	121	N.D.		
16) Acrylonitrile	8.76	53	310	N.D.	✓	
17) 1,1-Dichloroethene	9.16	96	145	N.D.	✓	
18) tert-Butanol	9.39	59	122	N.D.	✓	
19) Methylene Chloride	9.37	84	2698	0.101	ng	# 72
20) Allyl Chloride	9.49	41	124	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	9.78	76	7181	0.071	ng	79
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	190	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	11.33	86	57	N.D.	✓	
27) 2-Butanone	11.73	72	53	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	1614298	75.450	ng	NR # 1
30) Ethyl Acetate	12.75	61	53	N.D.		
31) n-Hexane	12.69	57	7957	0.167	ng	# 71

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WA 5/27/08



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	14432750	<del>356.147</del>	ng <i>su dil</i>	97
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.90	62	262	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	14.93	56	1297	0.050	ng	89
41) Benzene	14.98	78	4150	N.D. ✓		
42) Carbon Tetrachloride	15.20	117	541	N.D. ✓		
43) Cyclohexane	15.41	84	57	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	16.19	63	106	N.D. ✓		
46) Bromodichloromethane	16.46	83	14985	0.450	ng	99
47) Trichloroethene	16.54	130	1476	N.D. ✓		
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	16.61	57	61	N.D.		
50) Methyl Methacrylate	16.99	100	371	N.D. ✓		
51) n-Heptane	16.98	71	1186	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	18.94	97	176545	7.249	ng NR #	9
58) Toluene	19.07	91	4252	N.D. ✓		
59) 2-Hexanone	19.37	43	427	N.D. ✓		
60) Dibromochloromethane	19.59	129	3316	0.114	ng	91
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.25	43	56	N.D. ✓		
63) n-Octane	20.36	57	173	N.D. ✓		
64) Tetrachloroethene	20.54	166	16961	0.532	ng	90
65) Chlorobenzene	21.41	112	275	N.D. ✓		
66) Ethylbenzene	21.89	91	990	N.D. ✓		
67) m- & p-Xylene	22.10	91	1950	N.D. ✓		
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	22.59	104	120	N.D. ✓		
70) o-Xylene	22.72	91	1029	N.D. ✓		
71) n-Nonane	22.98	43	190	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.68	83	60	N.D. ✓		
74) Cumene	23.45	105	379	N.D. ✓		
75) alpha-Pinene	23.97	93	396	N.D.		
76) n-Propylbenzene	24.10	91	649	N.D. ✓		
77) 3-Ethyltoluene	24.22	105	982	N.D.		
78) 4-Ethyltoluene	24.29	105	575	N.D. ✓		
79) 1,3,5-Trimethylbenzene	24.38	105	881	N.D. ✓		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

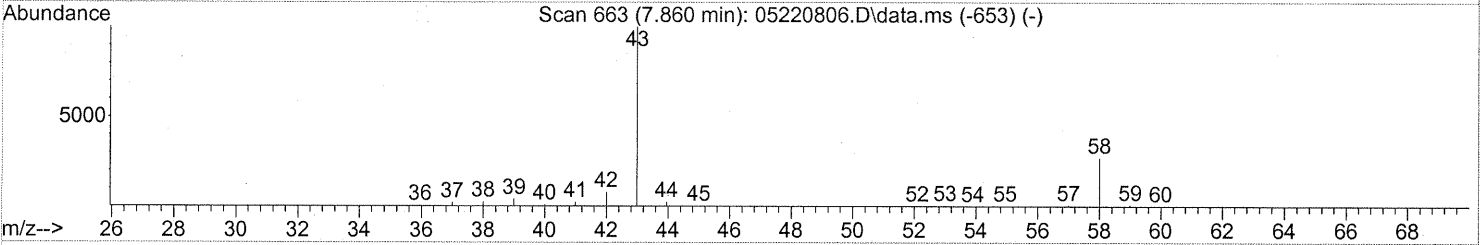
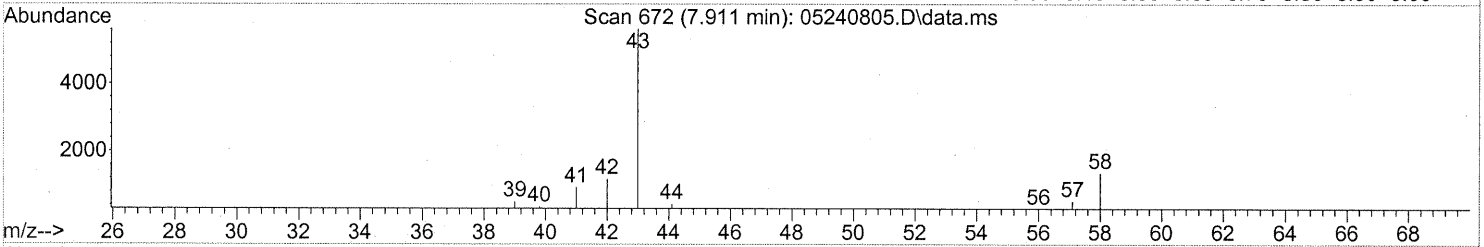
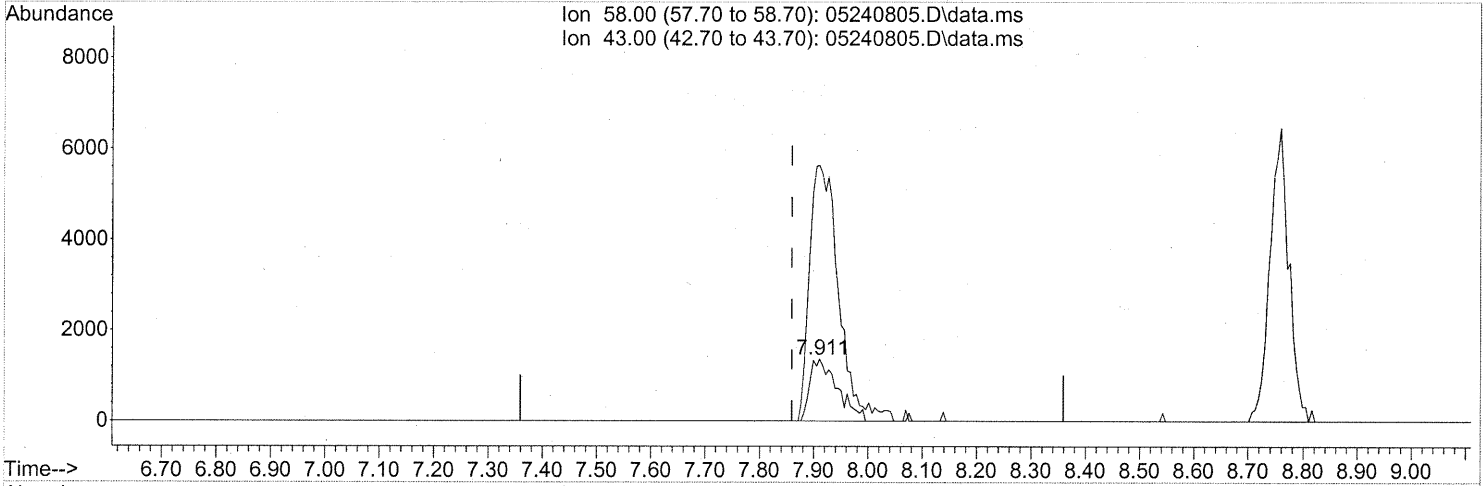
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.80	118	465	N.D.	✓	
81) 2-Ethyltoluene	24.62	105	431	N.D.		
82) 1,2,4-Trimethylbenzene	24.89	105	776	N.D.	✓	
83) n-Decane	24.98	57	137	N.D.		
84) Benzyl Chloride	25.05	91	475	N.D.	✓	
85) 1,3-Dichlorobenzene	25.09	146	339	N.D.	✓	
86) 1,4-Dichlorobenzene	25.17	146	2225	N.D.	✓	
87) sec-Butylbenzene	25.05	105	70	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	214	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.41	105	212	N.D.		
90) 1,2-Dichlorobenzene	25.59	146	422	N.D.	✓	
91) d-Limonene	25.58	68	163	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	26.50	57	844	N.D.		
94) 1,2,4-Trichlorobenzene	27.63	180	646	N.D.	✓	
95) Naphthalene	27.79	128	4786	N.D.	✓	
96) n-Dodecane	27.74	57	861	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:\MS13\DATA\2008\_05\24\  
Data File : 05240805.D  
Acq On : 24 May 2008 9:45  
Operator : WA  
Sample : P0801442-009 (5.0ml)  
Misc : ENSR SG71B-05 (-3.4, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240805.D\data.ms

(13) Acetone (T)

7.911min (+0.051) 0.20ng

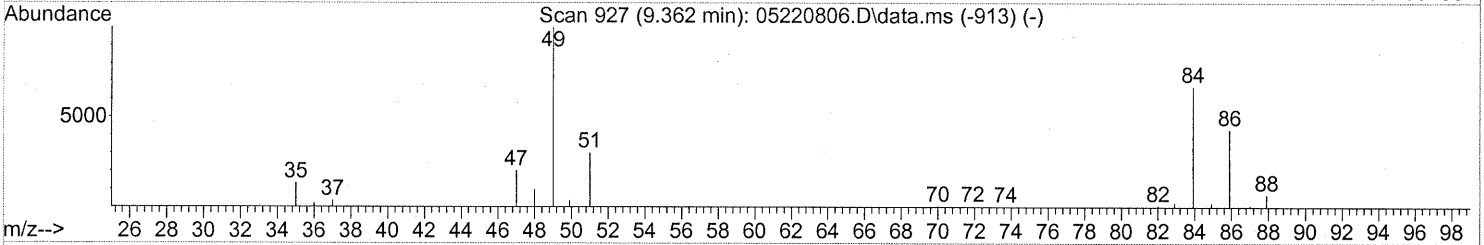
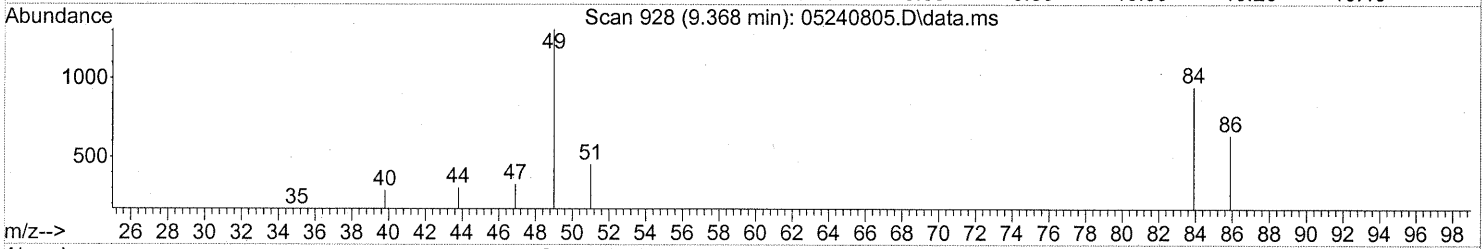
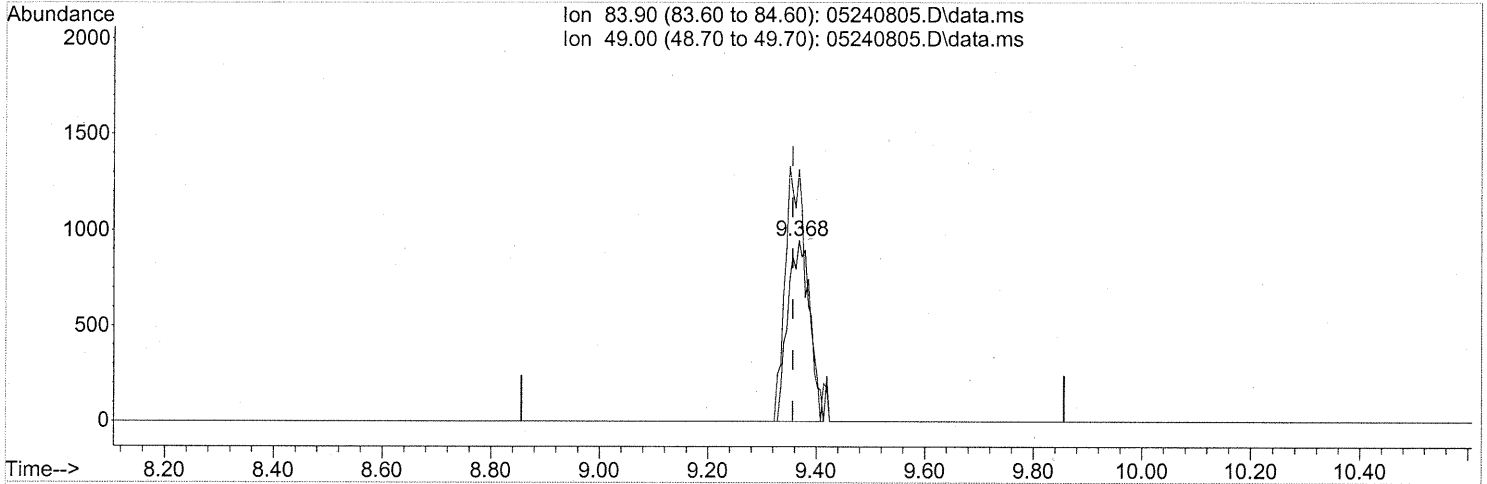
response 4799

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	438.53#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240805.D\data.ms

(19) Methylene Chloride (T)

9.368min (+0.011) 0.10ng

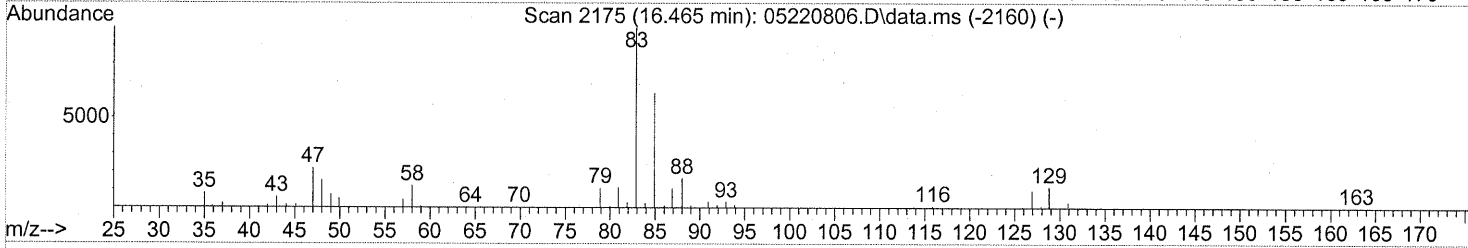
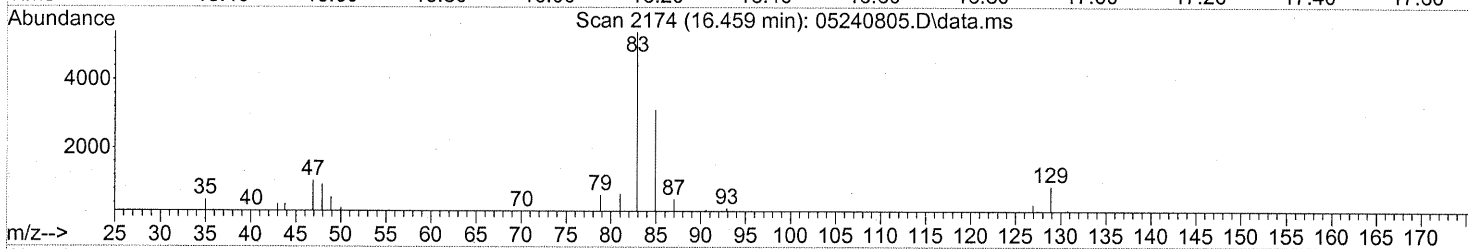
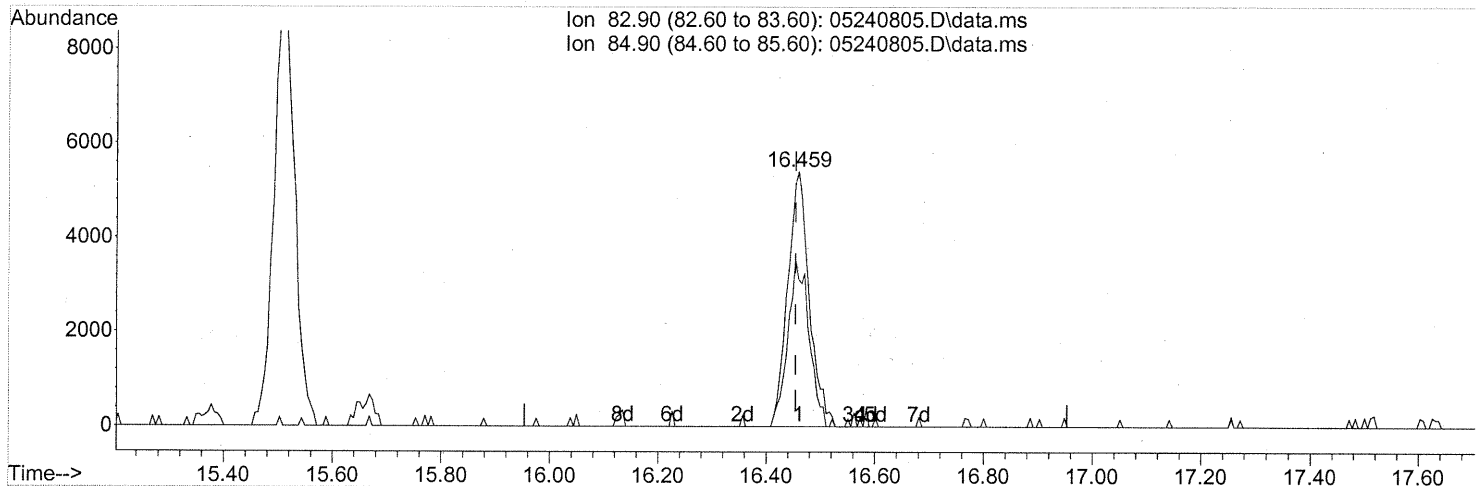
response 2698

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	134.32#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.459min (+0.006) 0.45ng

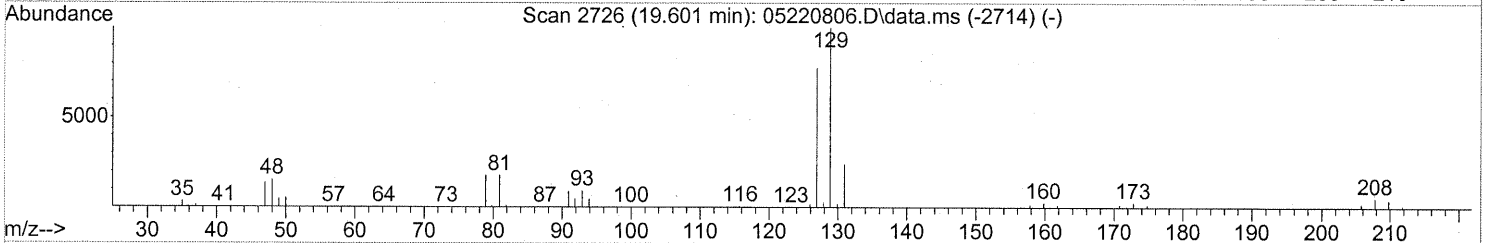
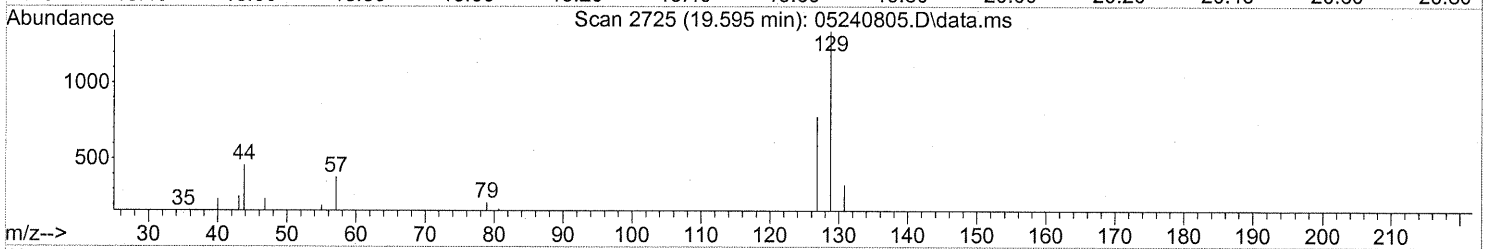
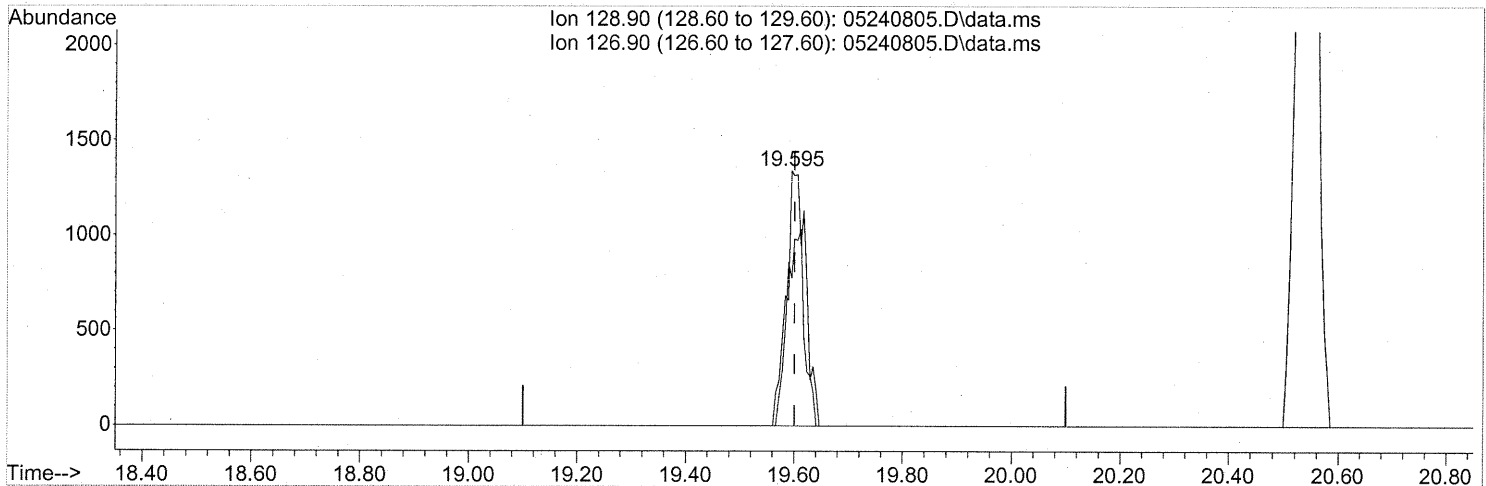
response 14985

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	64.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240805.D\data.ms

(60) Dibromochloromethane (T)

19.595min (-0.006) 0.11ng

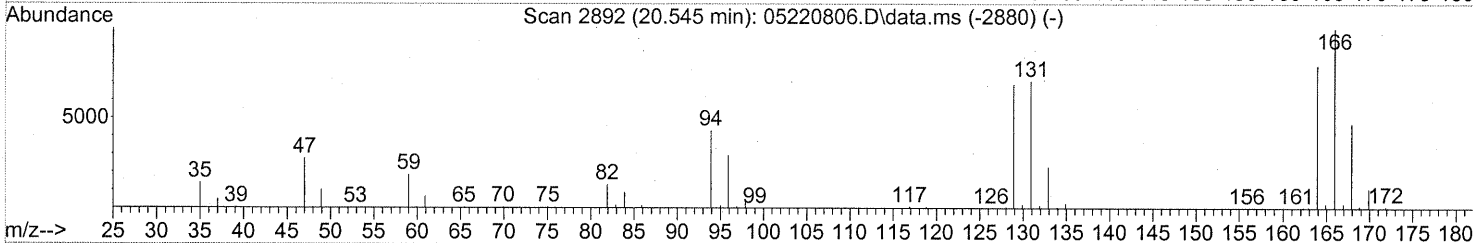
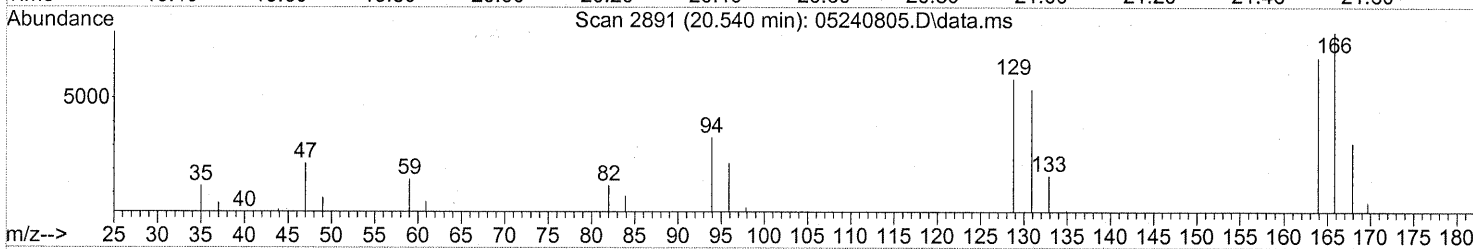
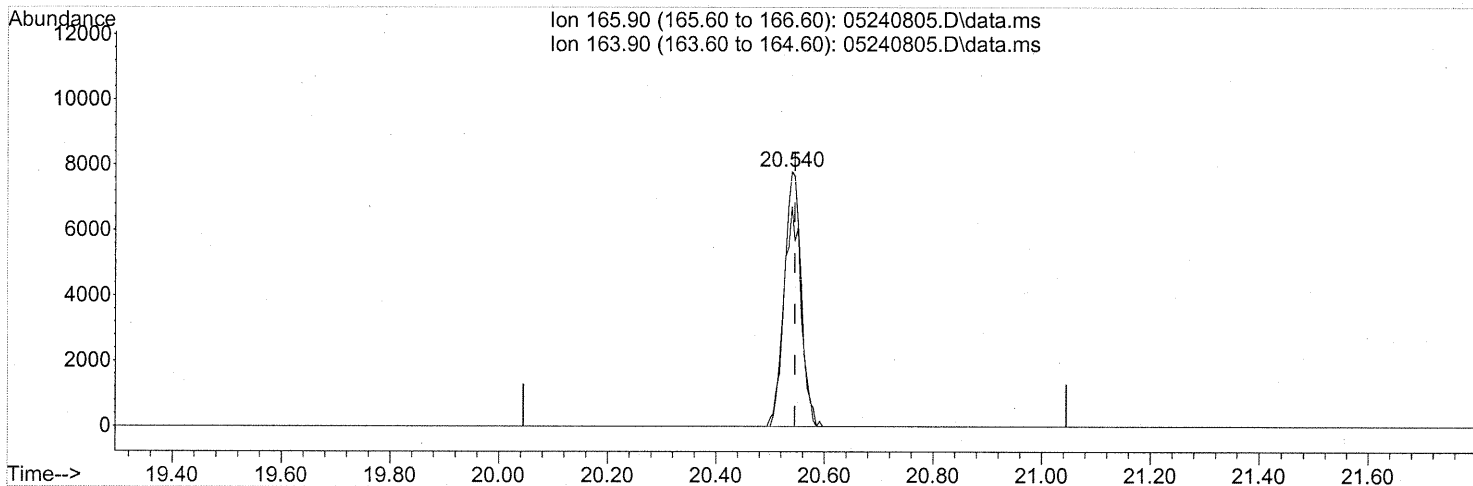
response 3316

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	69.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:10:38 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240805.D\data.ms

(64) Tetrachloroethene (T)

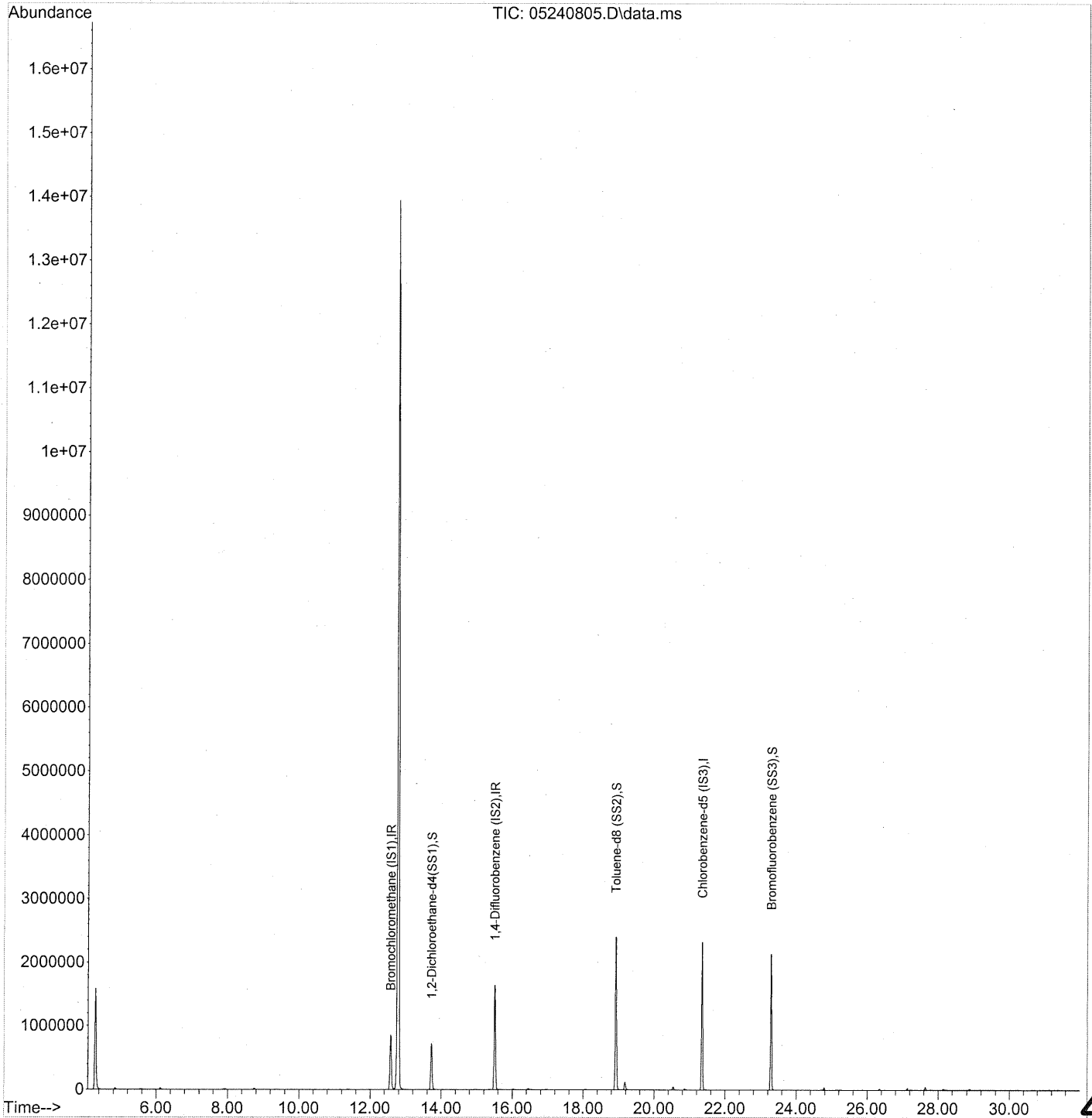
20.540min (-0.006) 0.53ng

response 16961

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	87.61
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240805.D  
Acq On : 24 May 2008 9:45  
Operator : WA  
Sample : P0801442-009 (5.0ml)  
Misc : ENSR SG71B-05 (-3.4, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:08 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



490



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240805.D  
 Acq On : 24 May 2008 9:45  
 Operator : WA  
 Sample : P0801442-009 (5.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:08 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

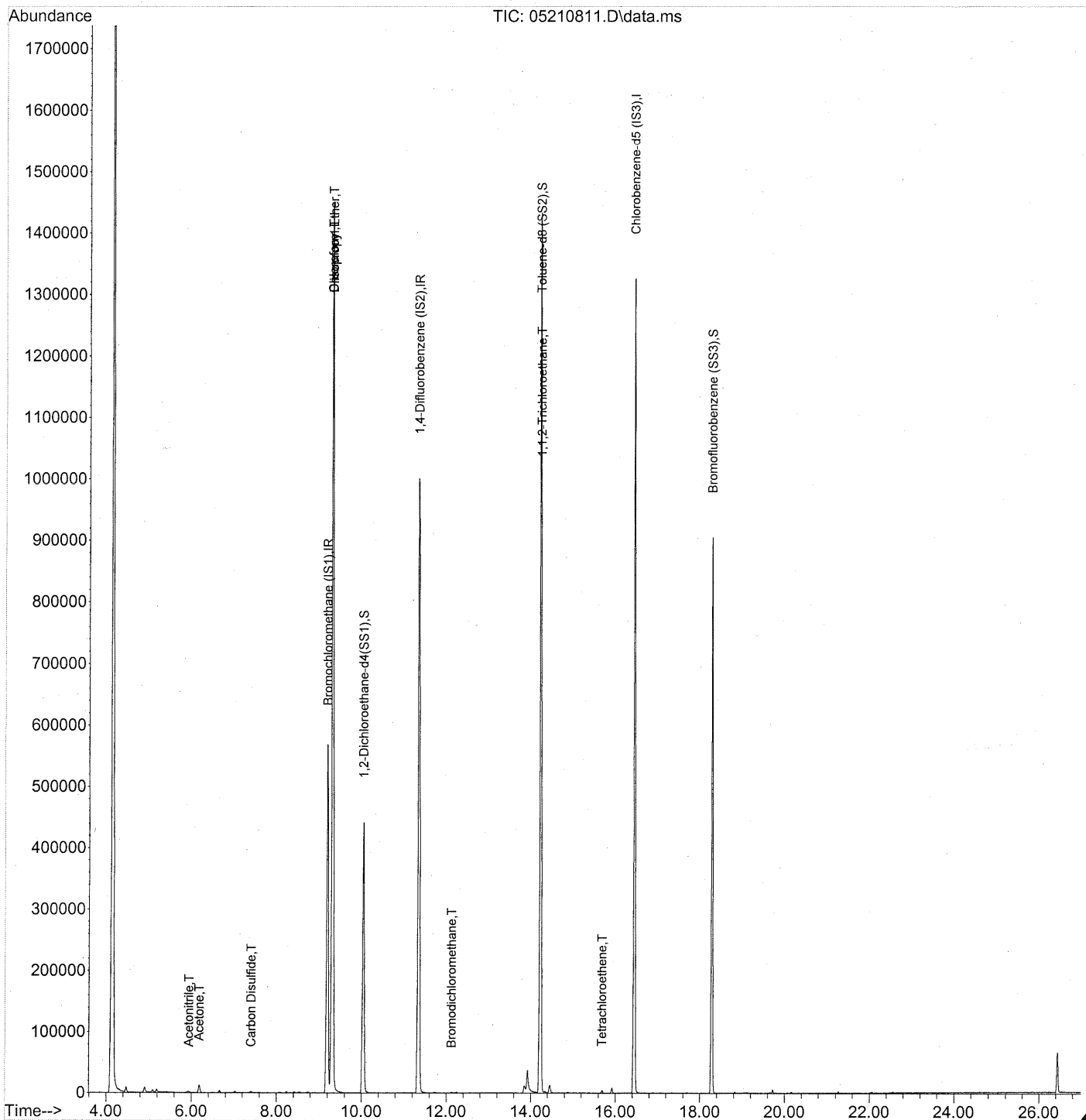
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	444409	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1882384	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	881998	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	738393	23.979	ng	-0.03
Spiked Amount	25.000					Recovery = 95.92%
5) Toluene-d8 (SS2)	18.92	98	1982731	25.031	ng	-0.02
Spiked Amount	25.000					Recovery = 100.12%
6) Bromofluorobenzene (SS3)	23.29	174	794629	24.669	ng	0.00
Spiked Amount	25.000					Recovery = 98.68%
Target Compounds						
7) tert-Butylbenzene	24.79	119	924		N.D.	Qvalue
8) n-Butylbenzene	25.91	91	105		N.D.	

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

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210811.D  
 Acq On : 21 May 2008 14:45  
 Operator : WA  
 Sample : P0801442-009 Dil (1.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:37:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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\21\  
 Data File : 05210811.D  
 Acq On : 21 May 2008 14:45  
 Operator : WA  
 Sample : P0801442-009 Dil (1.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:37:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	261196	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1111432	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	436653	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.05	65	405371	22.008	ng	-0.05
Spiked Amount	25.000		Recovery	=	88.04%	
57) Toluene-d8 (SS2)	14.23	98	1125171	26.171	ng	-0.02
Spiked Amount	25.000		Recovery	=	104.68%	
73) Bromofluorobenzene (SS3)	18.28	174	305757	27.325	ng	-0.01
Spiked Amount	25.000		Recovery	=	109.32%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	710	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	2948	0.063	ng	# 44
12) Acrolein	6.06	56	205	N.D.		
13) Acetone	6.18	58	5888	0.341	ng	# 82
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.40	45	105	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	1505	N.D.		
19) Methylene Chloride	7.03	84	336	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	3546	0.069	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	8.54	72	98	N.D.		
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	154565	13.659	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.23	57	888	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210811.D  
 Acq On : 21 May 2008 14:45  
 Operator : WA  
 Sample : P0801442-009 Dil (1.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:37:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	9.31	83	1414425	72.621 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	11.00	78	337	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	677	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	1086	0.067 ng		78
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.25	57	1284	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	95684	7.236 ng	#	7
58) Toluene	14.35	91	654	N.D.		
59) 2-Hexanone	14.59	43	344	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.69	166	1799	0.138 ng		96
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	17.14	91	90	N.D.		
67) m- & p-Xylene	17.14	91	90	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	0.00	91	0	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	18.29	105	95	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	0.00	105	0	N.D.		
78) 4-Ethyltoluene	0.00	105	0	N.D.		
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.		

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210811.D  
 Acq On : 21 May 2008 14:45  
 Operator : WA  
 Sample : P0801442-009 Dil (1.0ml)  
 Misc : ENSR SG71B-05 (-3.4, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:37:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

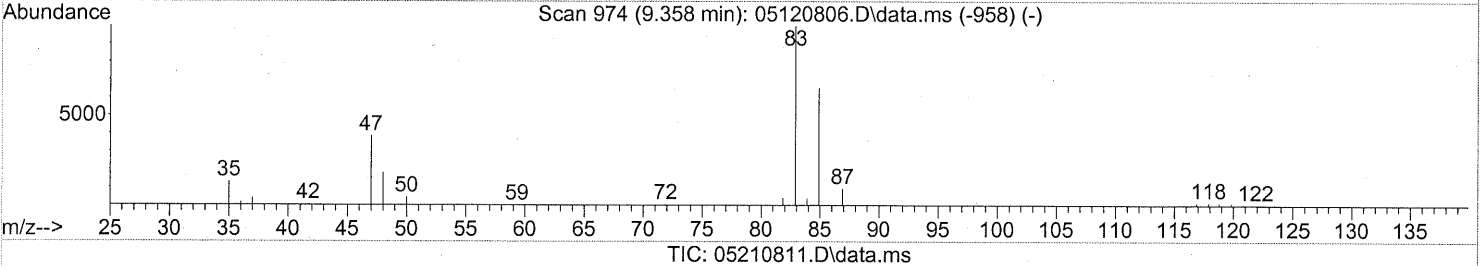
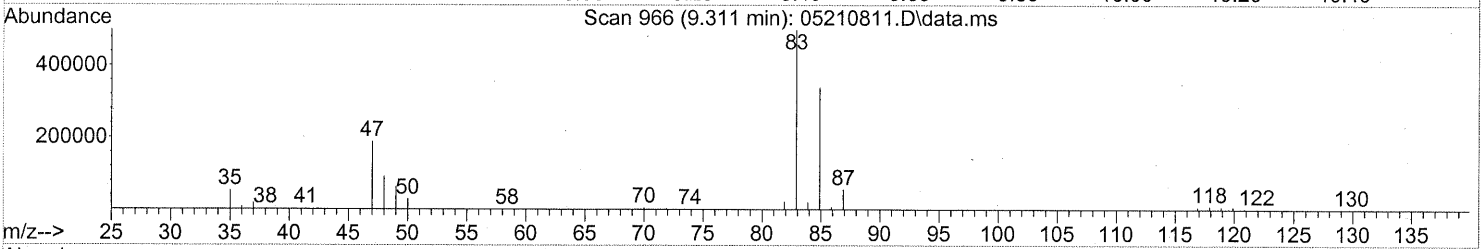
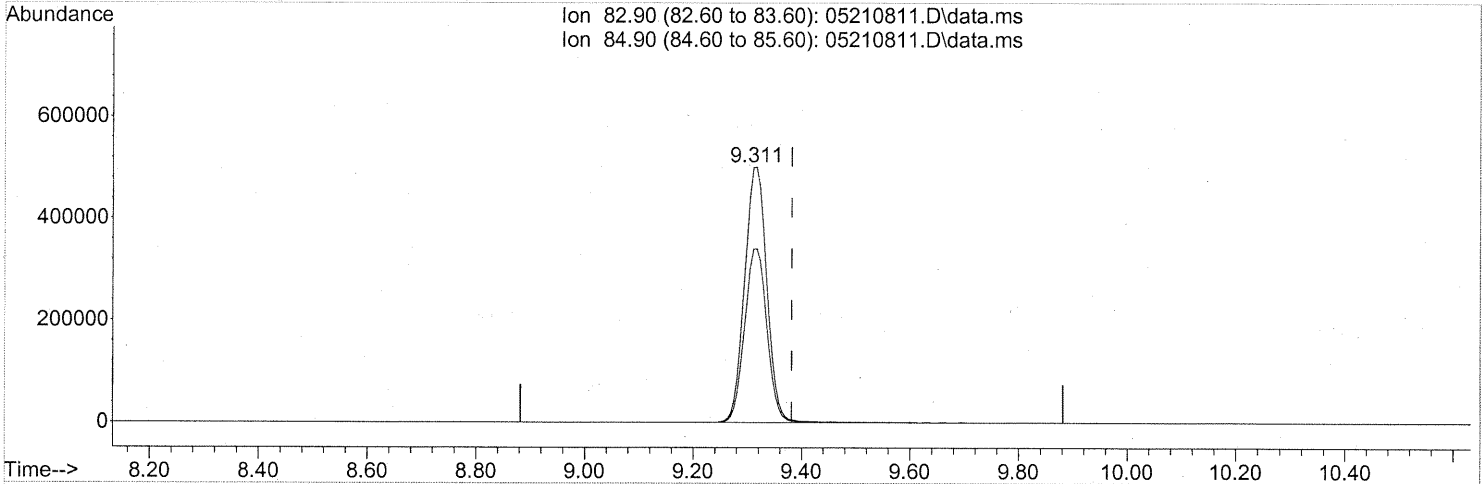
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.		
81) 2-Ethyltoluene	0.00	105	0	N.D.		
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.		
83) n-Decane	20.16	57	916	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.		
86) 1,4-Dichlorobenzene	0.00	146	0	N.D.		
87) sec-Butylbenzene	0.00	105	0	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	0.00	105	0	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	21.27	57	568	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	375	N.D.		
96) n-Dodecane	22.57	57	95	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\21\  
Data File : 05210811.D  
Acq On : 21 May 2008 14:45  
Operator : WA  
Sample : P0801442-009 Dil (1.0ml)  
Misc : ENSR SG71B-05 (-3.4, 3.5)  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 16:37:46 2008  
Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05210811.D\data.ms

(32) Chloroform (T)		
9.311min (-0.071) 72.62ng		
response 1414425		
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

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00201

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	0.74	0.074	0.41	0.15	0.015	
74-87-3	Chloromethane	0.11	0.15	0.074	0.051	0.071	0.036	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.10	0.74	0.074	0.015	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.15	0.074	ND	0.058	0.029	
74-83-9	Bromomethane	ND	0.15	0.074	ND	0.038	0.019	
75-00-3	Chloroethane	0.30	0.15	0.074	0.11	0.056	0.028	
64-17-5	Ethanol	53	7.4	0.074	28	3.9	0.039	
67-64-1	Acetone	27	7.4	0.11	12	3.1	0.045	B
75-69-4	Trichlorofluoromethane	1.2	0.15	0.074	0.21	0.026	0.013	
107-13-1	Acrylonitrile	0.11	0.74	0.10	0.053	0.34	0.047	J
75-35-4	1,1-Dichloroethene	0.087	0.15	0.074	0.022	0.037	0.019	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.54	0.74	0.11	0.18	0.24	0.036	J
75-09-2	Methylene Chloride	0.29	0.74	0.074	0.083	0.21	0.021	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.074	ND	0.047	0.023	
76-13-1	Trichlorotrifluoroethane	0.52	0.15	0.082	0.068	0.019	0.011	
75-15-0	Carbon Disulfide	9.0	0.74	0.18	2.9	0.24	0.057	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.074	ND	0.037	0.019	
75-34-3	1,1-Dichloroethane	ND	0.15	0.074	ND	0.036	0.018	
1634-04-4	Methyl tert-Butyl Ether	ND	0.15	0.074	ND	0.041	0.020	
108-05-4	Vinyl Acetate	ND	7.4	0.24	ND	2.1	0.067	
78-93-3	2-Butanone (MEK)	4.6	0.74	0.074	1.6	0.25	0.025	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.074	ND	0.037	0.019	
108-20-3	Diisopropyl Ether	ND	0.74	0.087	ND	0.18	0.021	
67-66-3	Chloroform	6.3	0.15	0.087	1.3	0.030	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.

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: Re      Date: 6/2/08      **497**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00201

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	0.74	0.075	ND	0.18	0.018	
107-06-2	1,2-Dichloroethane	ND	0.15	0.074	ND	0.036	0.018	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.11</b>	0.15	0.074	<b>0.020</b>	0.027	0.013	<b>J</b>
71-43-2	<b>Benzene</b>	<b>2.1</b>	0.15	0.074	<b>0.66</b>	0.046	0.023	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.44</b>	0.15	0.074	<b>0.070</b>	0.023	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.74	0.074	ND	0.18	0.018	
78-87-5	1,2-Dichloropropane	ND	0.15	0.074	ND	0.032	0.016	
75-27-4	<b>Bromodichloromethane</b>	<b>0.48</b>	0.15	0.074	<b>0.072</b>	0.022	0.011	
79-01-6	<b>Trichloroethene</b>	<b>0.38</b>	0.15	0.074	<b>0.071</b>	0.027	0.014	
123-91-1	1,4-Dioxane	ND	0.74	0.090	ND	0.20	0.025	
80-62-6	Methyl Methacrylate	ND	0.74	0.11	ND	0.18	0.027	
142-82-5	<b>n-Heptane</b>	<b>0.24</b>	0.74	0.094	<b>0.058</b>	0.18	0.023	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.74	0.076	ND	0.16	0.017	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.42</b>	0.74	0.082	<b>0.10</b>	0.18	0.020	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.74	0.093	ND	0.16	0.020	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.074	ND	0.027	0.013	
108-88-3	<b>Toluene</b>	<b>9.5</b>	0.74	0.074	<b>2.5</b>	0.20	0.020	
591-78-6	<b>2-Hexanone</b>	<b>0.44</b>	0.74	0.11	<b>0.11</b>	0.18	0.027	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.26</b>	0.15	0.10	<b>0.030</b>	0.017	0.012	
106-93-4	1,2-Dibromoethane	ND	0.15	0.079	ND	0.019	0.010	
111-65-9	<b>n-Octane</b>	<b>0.36</b>	0.74	0.074	<b>0.078</b>	0.16	0.016	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>2.9</b>	0.15	0.074	<b>0.43</b>	0.022	0.011	
108-90-7	<b>Chlorobenzene</b>	<b>0.093</b>	0.15	0.075	<b>0.020</b>	0.032	0.016	<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:         Rc              Date:         6/2/08              **498**



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG65B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-010

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00201

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -2.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.47

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	1.0	0.74	0.091	0.23	0.17	0.021	
179601-23-1	m,p-Xylenes	5.0	0.74	0.19	1.2	0.17	0.044	
75-25-2	Bromoform	0.14	0.74	0.11	0.013	0.071	0.011	J
100-42-5	Styrene	0.78	0.74	0.11	0.18	0.17	0.026	
95-47-6	o-Xylene	2.6	0.74	0.093	0.59	0.17	0.021	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	0.094	ND	0.021	0.014	
98-82-8	Cumene	0.15	0.74	0.082	0.030	0.15	0.017	J
103-65-1	n-Propylbenzene	0.44	0.74	0.076	0.089	0.15	0.016	J
622-96-8	4-Ethyltoluene	0.64	0.74	0.084	0.13	0.15	0.017	J
108-67-8	1,3,5-Trimethylbenzene	0.68	0.74	0.088	0.14	0.15	0.018	J
98-83-9	alpha-Methylstyrene	0.11	0.74	0.11	0.023	0.15	0.022	J
95-63-6	1,2,4-Trimethylbenzene	1.8	0.74	0.10	0.36	0.15	0.021	
100-44-7	Benzyl Chloride	ND	0.15	0.13	ND	0.028	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.15	0.091	ND	0.024	0.015	
106-46-7	1,4-Dichlorobenzene	78	0.15	0.082	13	0.024	0.014	
135-98-8	sec-Butylbenzene	ND	0.74	0.085	ND	0.13	0.016	
99-87-6	4-Isopropyltoluene (p-Cymene)	1.2	0.74	0.096	0.22	0.13	0.017	
95-50-1	1,2-Dichlorobenzene	0.38	0.15	0.097	0.064	0.024	0.016	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.74	0.11	ND	0.076	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.15	0.11	ND	0.020	0.015	
91-20-3	Naphthalene	0.21	0.29	0.11	0.041	0.056	0.021	J
87-68-3	Hexachlorobutadiene	ND	0.15	0.13	ND	0.014	0.012	
98-06-6	tert-Butylbenzene	ND	0.29	0.074	ND	0.054	0.013	
104-51-8	n-Butylbenzene	0.39	0.29	0.074	0.070	0.054	0.013	

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.

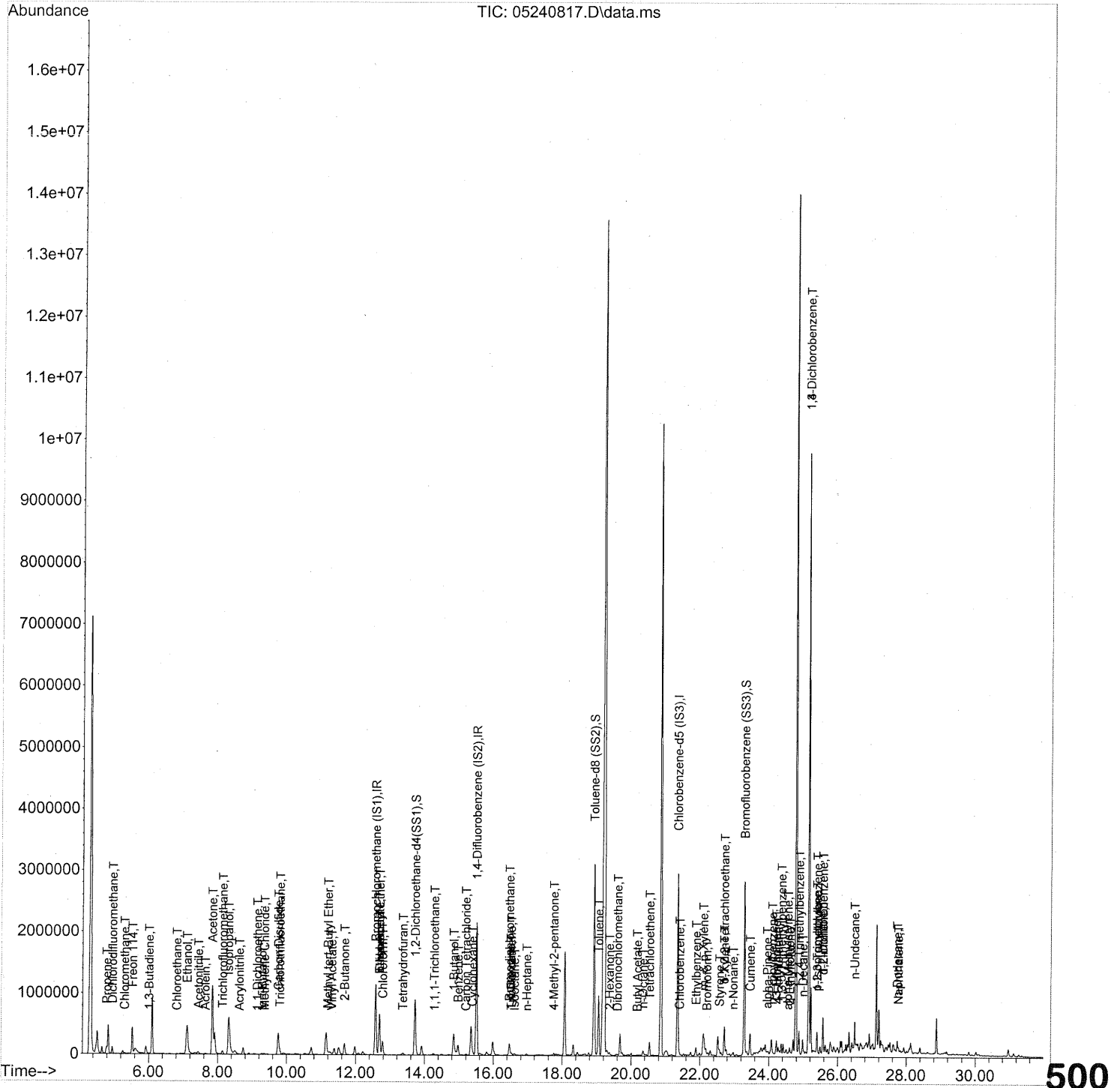
Verified By: Re

Date: 6/2/08

**499**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	604273	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2567002	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1175375	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	931497	22.247	ng	0.00
Spiked Amount	25.000		Recovery	=	89.00%	✓
57) Toluene-d8 (SS2)	18.92	98	2641326	25.022	ng	0.00
Spiked Amount	25.000		Recovery	=	100.08%	✓
73) Bromofluorobenzene (SS3)	23.29	174	1095917	25.530	ng	0.00
Spiked Amount	25.000		Recovery	=	102.12%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	49588	1.039	ng	94
3) Dichlorodifluoromethane	4.96	85	120686	1.372	ng	99
4) Chloromethane	5.30	50	4109	0.072	ng	75
5) Freon 114	5.54	135	3090	0.071	ng	98
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	6.01	54	4293	0.101	ng	# 71
8) Bromomethane	6.50	94	1209	N.D.	✓	
9) Chloroethane	6.82	64	5579	0.206	ng	96
10) Ethanol	7.11	45	1150657m	36.217	ng	
11) Acetonitrile	7.44	41	59688	0.650	ng	95
12) Acrolein	7.64	56	17470	0.770	ng	100
13) Acetone	7.85	58	606054m	18.631	ng	
14) Trichlorofluoromethane	8.14	101	59443	0.788	ng	100
15) Isopropanol	8.32	45	1414393	13.633	ng	98
16) Acrylonitrile	8.63	53	3866	0.078	ng	✓ 95
17) 1,1-Dichloroethene	9.15	96	1974	0.059	ng	# 85
18) tert-Butanol	9.29	59	32575	0.369	ng	94
19) Methylene Chloride	9.36	84	7112	0.196	ng	# 67
20) Allyl Chloride	9.56	41	827	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	12099	0.353	ng	93
22) Carbon Disulfide	9.76	76	847649	6.144	ng	99
23) trans-1,2-Dichloroethene	10.72	61	1970	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	576	N.D.	✓	
25) Methyl tert-Butyl Ether	11.20	73	5896	0.056	ng	NR # 43
26) Vinyl Acetate	11.31	86	2163	0.360	ng	NR # 1
27) 2-Butanone	11.68	72	74745	3.148	ng	# 83
28) cis-1,2-Dichloroethene	12.35	61	427	N.D.	✓	
29) Diisopropyl Ether	12.69	87	4236	0.146	ng	NR # 1
30) Ethyl Acetate	12.69	61	48031	3.748	ng	75
31) n-Hexane	12.70	57	321298	4.968	ng	90

501

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	236904	4.299 ng		100
34) Tetrahydrofuran	13.37	72	7176	0.316 ng	#	72
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.91	62	1347	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	4381	0.075 ng		82
39) Isopropyl Acetate	14.81	61	58	N.D.		
40) 1-Butanol	14.85	56	330071	9.355 ng		86
41) Benzene	14.98	78	192860	1.435 ng		98
42) Carbon Tetrachloride	15.20	117	15493	0.299 ng		96
43) Cyclohexane	15.40	84	10085	0.193 ng	#	1
44) tert-Amyl Methyl Ether	15.85	73	420	N.D. ✓		
45) 1,2-Dichloropropane	16.18	63	490	N.D. ✓		
46) Bromodichloromethane	16.46	83	14944	0.329 ng		97
47) Trichloroethene	16.52	130	10701	0.260 ng		94
48) 1,4-Dioxane	16.50	88	4993	0.197 ng	UR #	37
49) Isooctane	16.62	57	29891	0.194 ng		81
50) Methyl Methacrylate	16.80	100	52	N.D. ✓		
51) n-Heptane	16.97	71	5811	0.163 ng	#	85
52) cis-1,3-Dichloropropene	17.83	75	125	N.D. ✓		
53) 4-Methyl-2-pentanone	17.76	58	10203	0.286 ng		74
54) trans-1,3-Dichloropropene	18.43	75	52	N.D. ✓		
55) 1,1,2-Trichloroethane	18.46	97	1364	N.D. ✓		
58) Toluene	19.06	91	931979	6.495 ng		97
59) 2-Hexanone	19.37	43	29735	0.301 ng	#	67
60) Dibromochloromethane	19.61	129	6797	0.175 ng		89
61) 1,2-Dibromoethane	20.00	107	62	N.D. ✓		
62) Butyl Acetate	20.18	43	7352	0.073 ng		82
63) n-Octane	20.35	57	7826	0.247 ng		91
64) Tetrachloroethene	20.54	166	83735	1.972 ng		99
65) Chlorobenzene	21.41	112	6035	0.063 ng		84
66) Ethylbenzene	21.89	91	112356	0.683 ng		93
67) m- & p-Xylene	22.10	91	374954	3.407 ng		94
68) Bromoform	22.21	173	2693	0.093 ng		97
69) Styrene	22.57	104	52242	0.531 ng		88
70) o-Xylene	22.71	91	207143	1.744 ng		95
71) n-Nonane	22.98	43	29799	0.353 ng	#	80
72) 1,1,2,2-Tetrachloroethane	22.71	83	2505	0.051 ng	UR #	1
74) Cumene	23.46	105	15903	0.101 ng		96
75) alpha-Pinene	23.96	93	23531	0.288 ng		92
76) n-Propylbenzene	24.10	91	59708	0.297 ng	#	33
77) 3-Ethyltoluene	24.22	105	141646	0.841 ng		97
78) 4-Ethyltoluene	24.28	105	67820	0.432 ng		96
79) 1,3,5-Trimethylbenzene	24.37	105	65325	0.461 ng		96

502

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

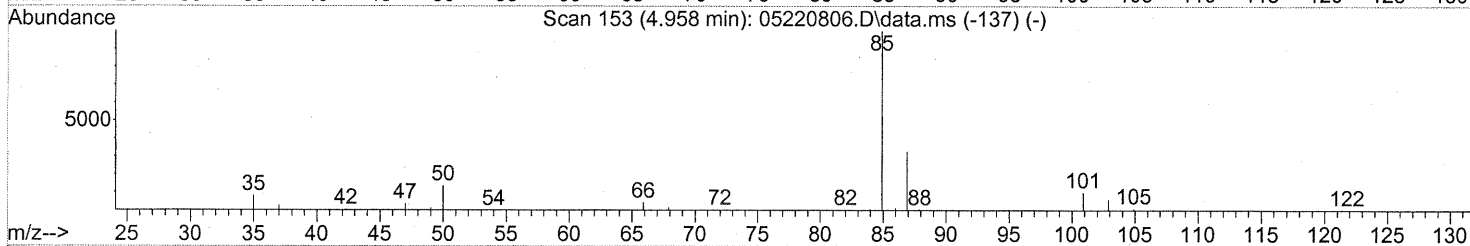
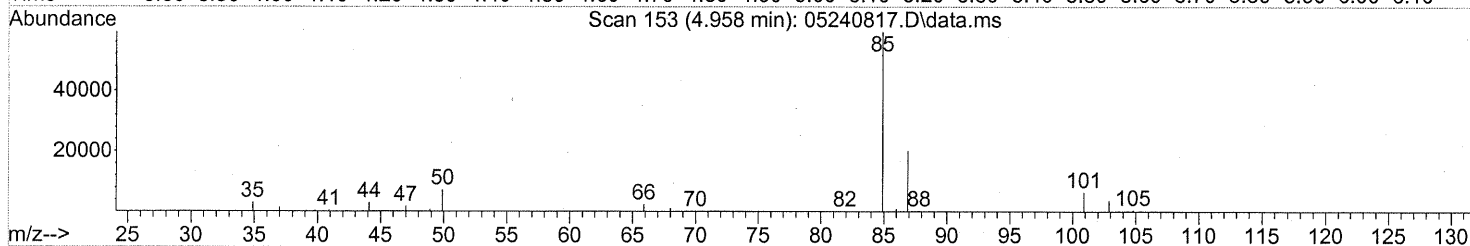
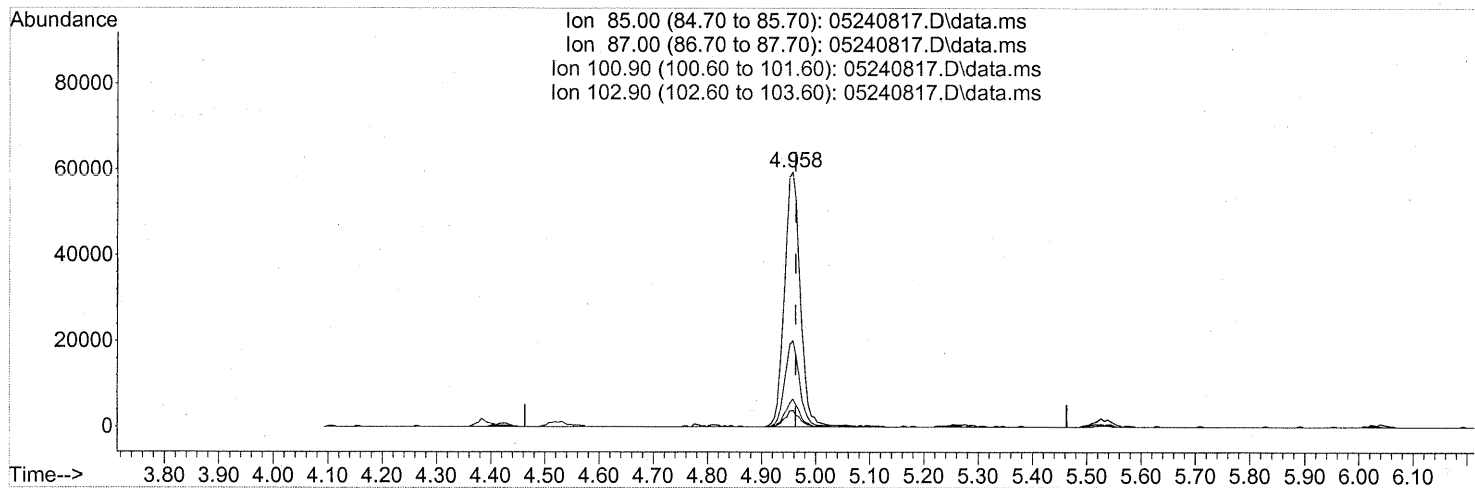
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	5755	0.075 ng	#	79
81) 2-Ethyltoluene	24.61	105	69863	0.409 ng		98
82) 1,2,4-Trimethylbenzene	24.88	105	175158	1.213 ng		88
83) n-Decane	24.98	57	98213	1.236 ng		77
84) Benzyl Chloride	25.05	91	2121	N.D. ✓		
85) 1,3-Dichlorobenzene	25.16	146	4652470	51.537 ng	NR	99
86) 1,4-Dichlorobenzene	25.16	146	4652470	53.162 ng		99
87) sec-Butylbenzene	25.21	105	8058	N.D. ✓		
88) p-Isopropyltoluene	25.39	119	124808	0.822 ng		95
89) 1,2,3-Trimethylbenzene	25.41	105	64586	0.457 ng		93
90) 1,2-Dichlorobenzene	25.57	146	22227	0.260 ng		89
91) d-Limonene	25.58	68	140260	2.438 ng		100
92) 1,2-Dibromo-3-Chloropr...	26.14	157	62	N.D. ✓		
93) n-Undecane	26.50	57	181855	2.187 ng	#	65
94) 1,2,4-Trichlorobenzene	27.63	180	2002	N.D. ✓		
95) Naphthalene	27.77	128	27818m	0.146 ng		
96) n-Dodecane	27.73	57	55580	0.672 ng		83
97) Hexachloro-1,3-butadiene	28.19	225	557	N.D. ✓		

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(3) Dichlorodifluoromethane (T)

4.958min (-0.006) 1.37ng

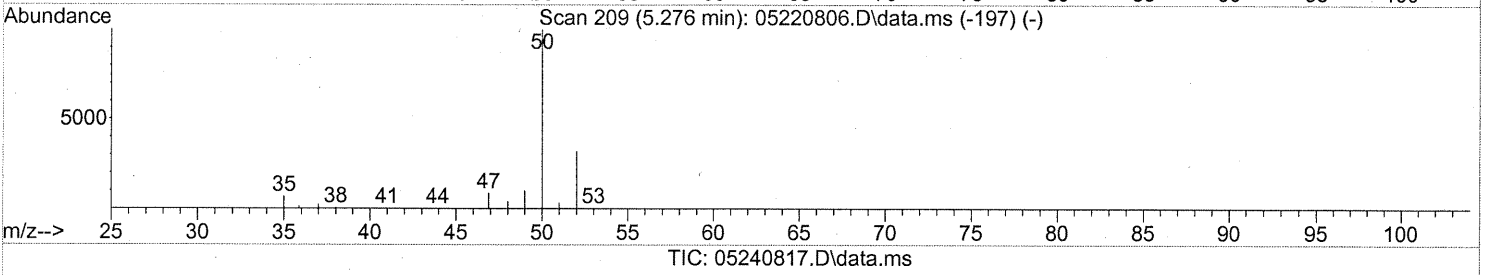
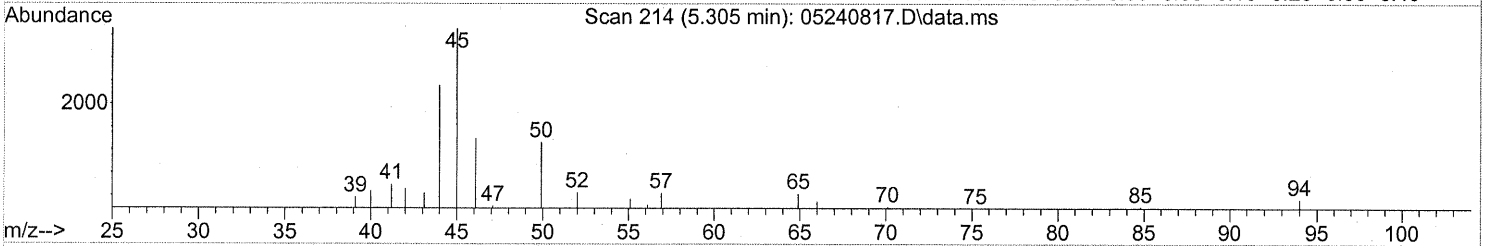
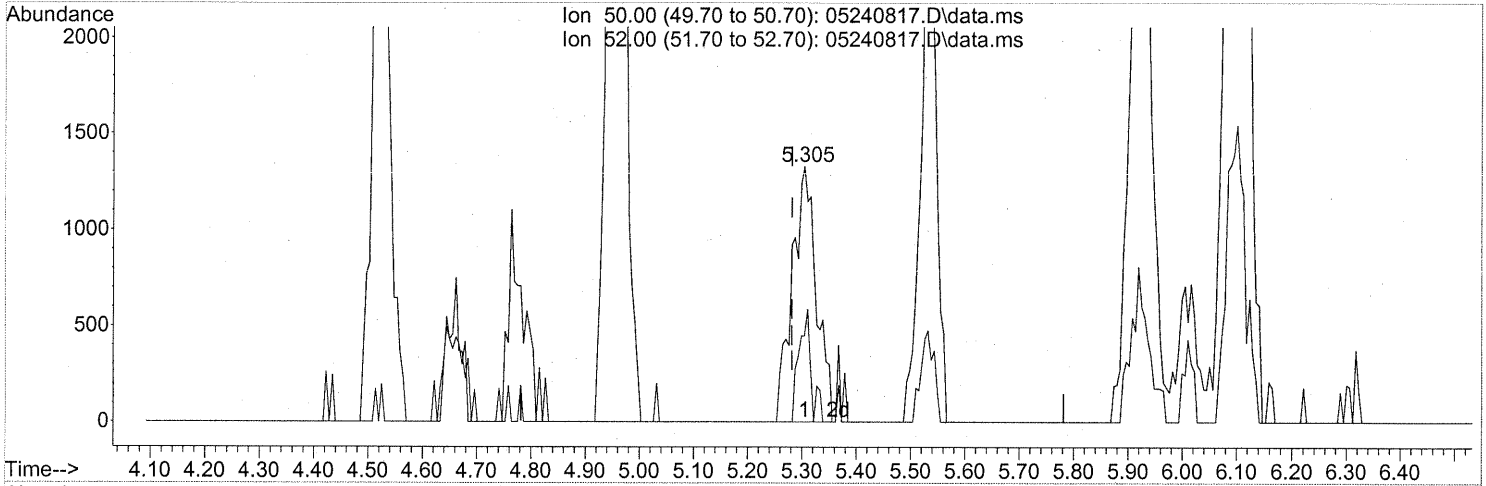
response 120686

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.64
100.90	9.30	9.41
102.90	6.00	5.76

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(4) Chloromethane (T)

5.305min (+0.023) 0.07ng

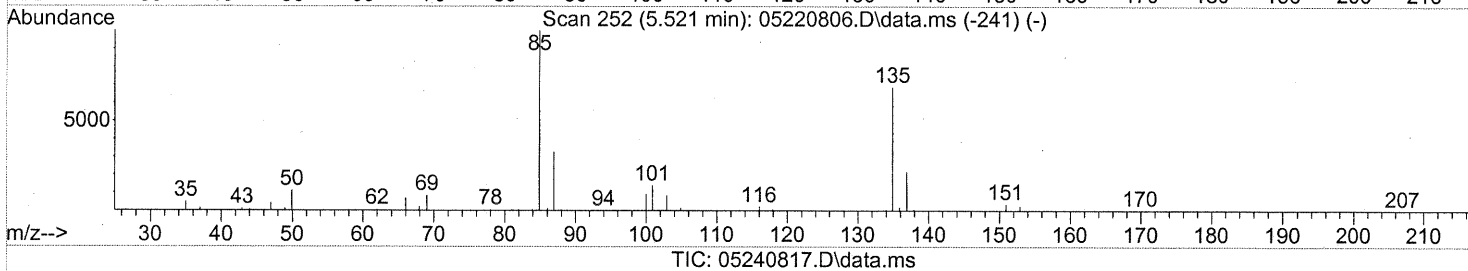
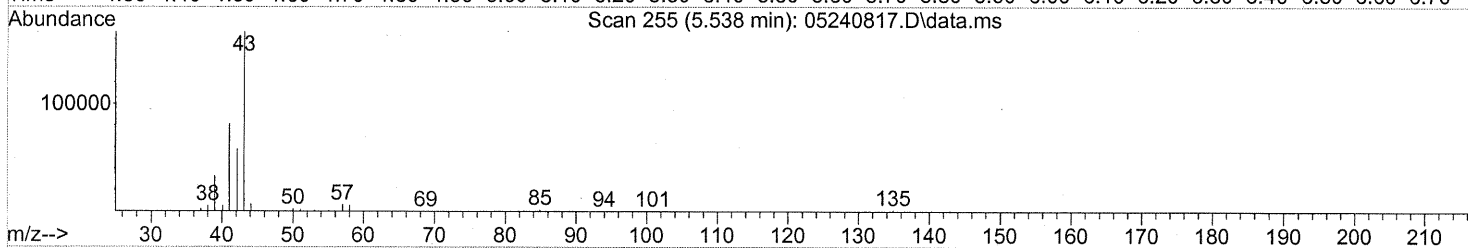
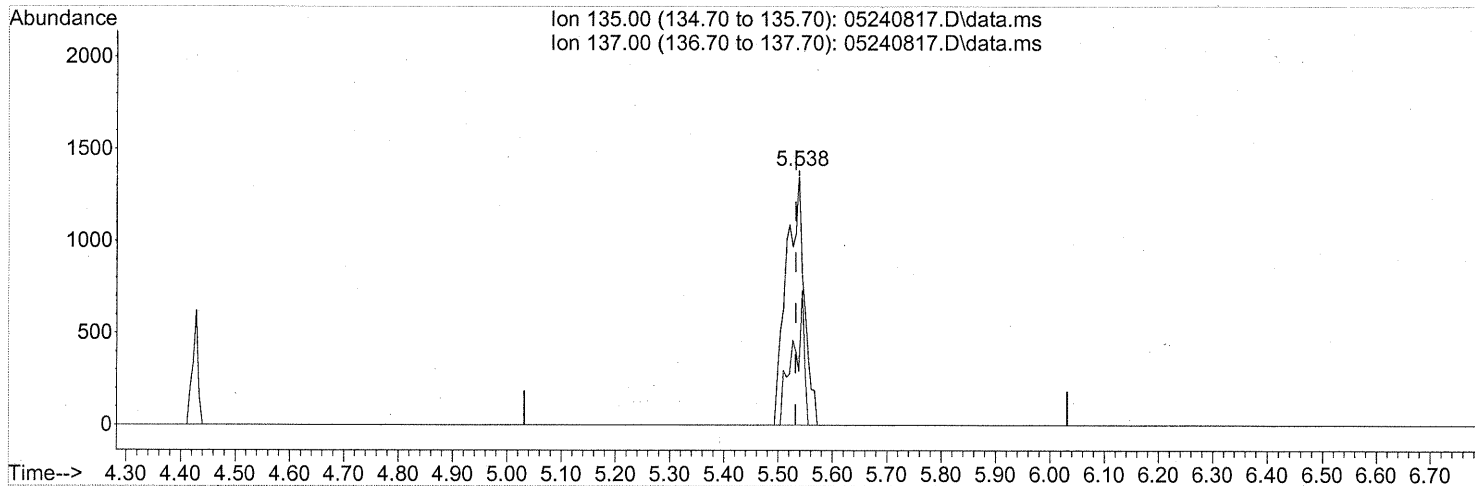
response 4109

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	19.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



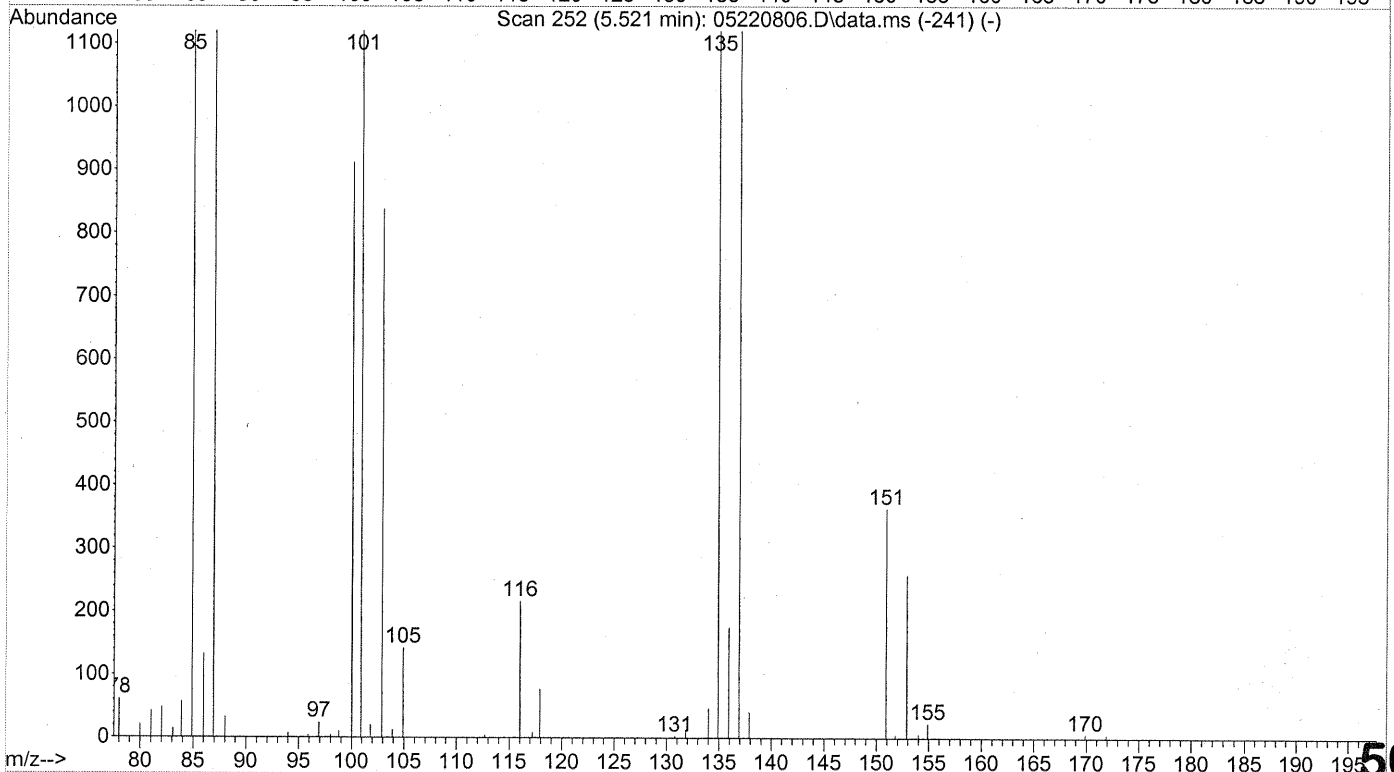
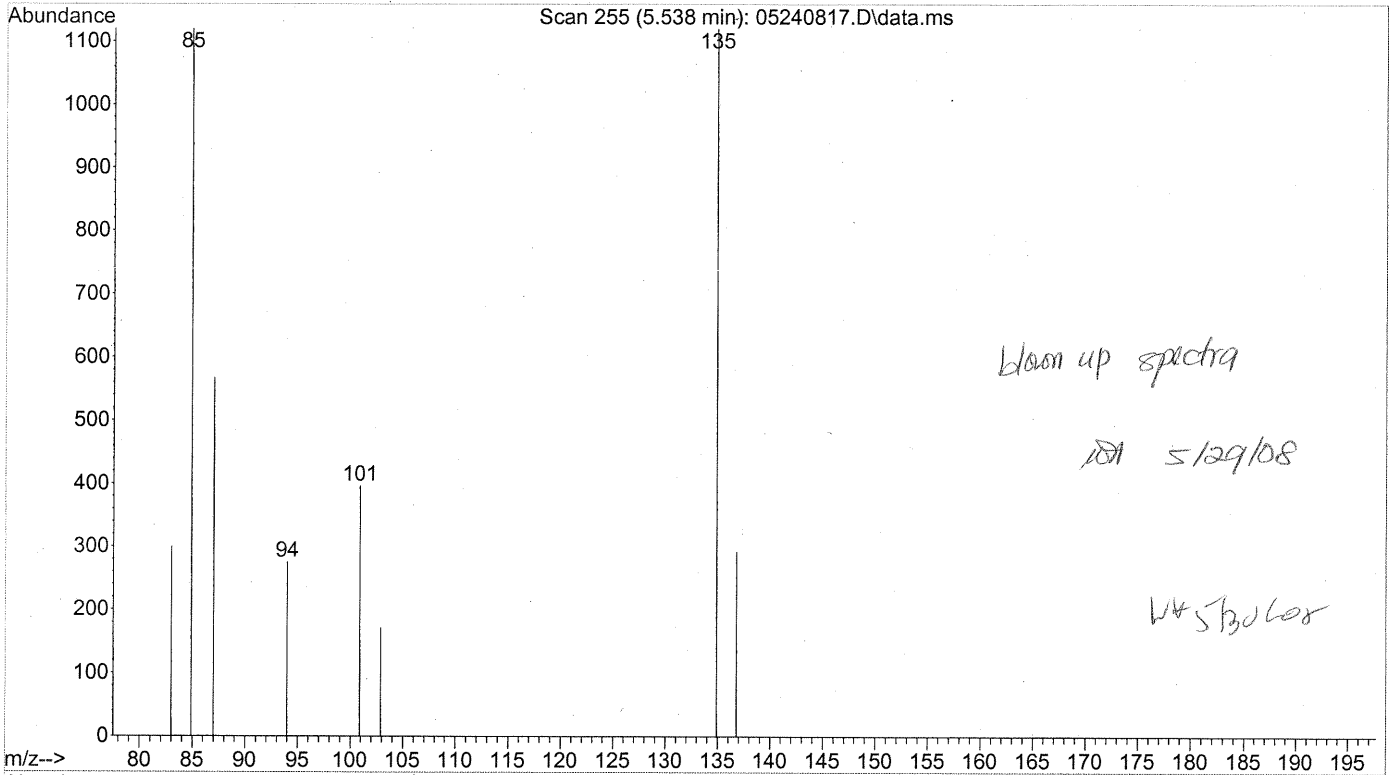
(5) Freon 114 (T)  
 5.538min (+0.006) 0.07ng  
 response 3090

Ion	Exp%	Act%
135.00	100	100
137.00	31.50	32.78
0.00	0.00	0.00
0.00	0.00	0.00

*see blown up spectra*



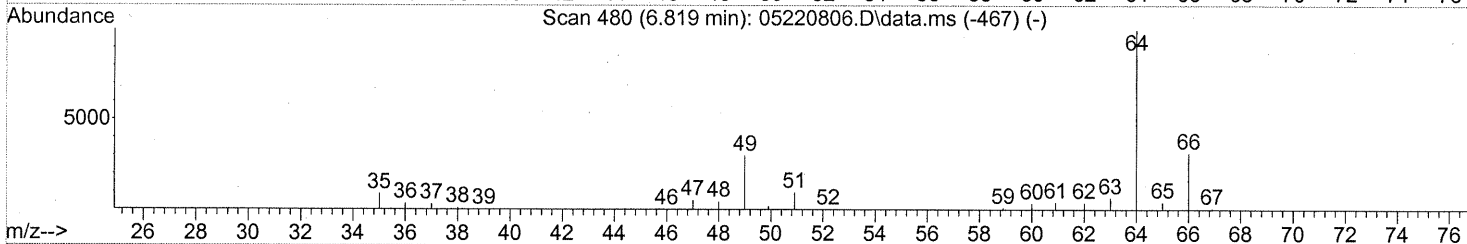
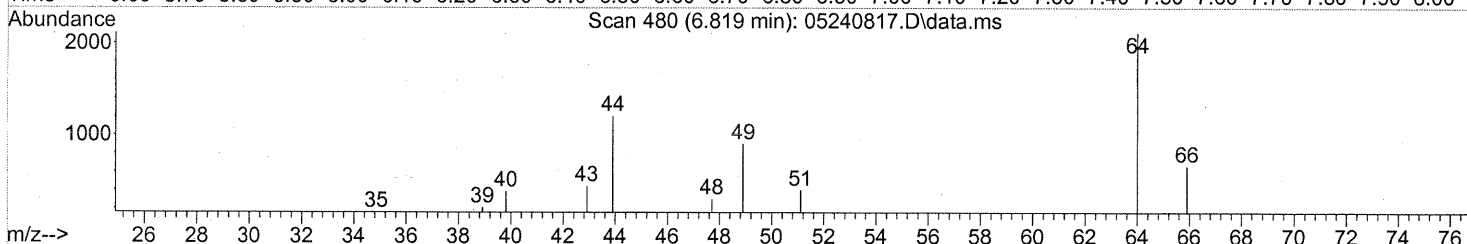
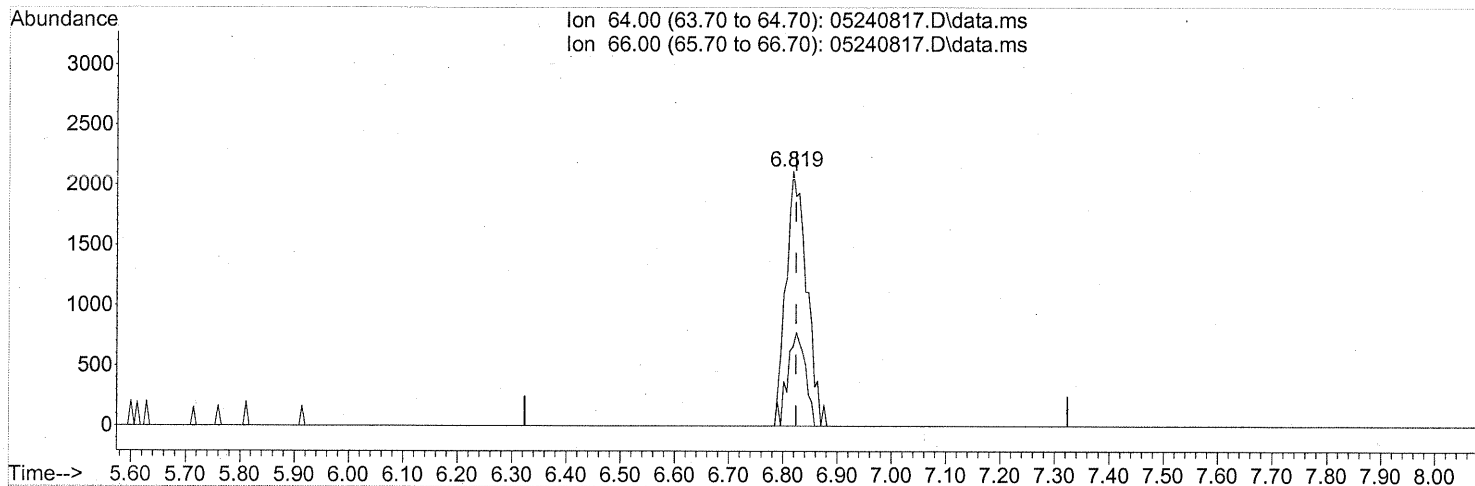
File : J:\MS13\DATA\2008\_05\24\05240817.D  
Operator : WA  
Acquired : 24 May 2008 18:08 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-010 (1000ml)  
Misc Info : ENSR SG65B-05 (-2.3, 3.5)  
Vial Number: 14



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



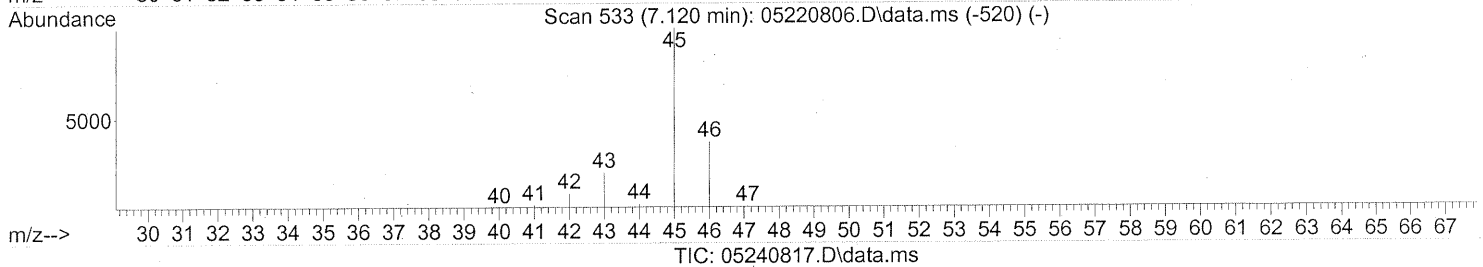
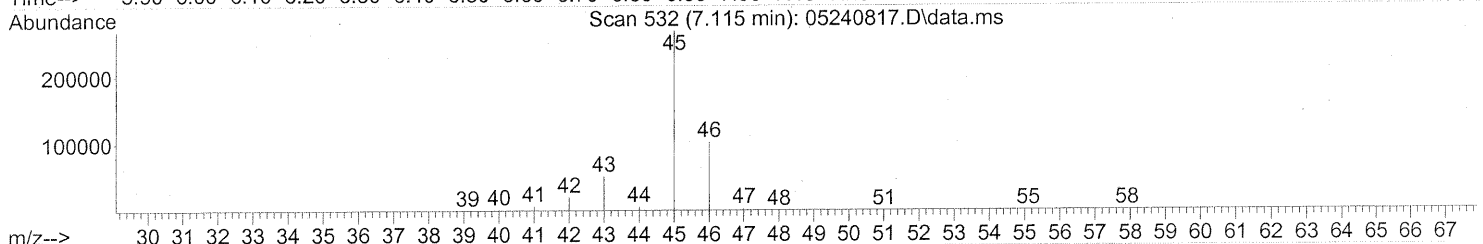
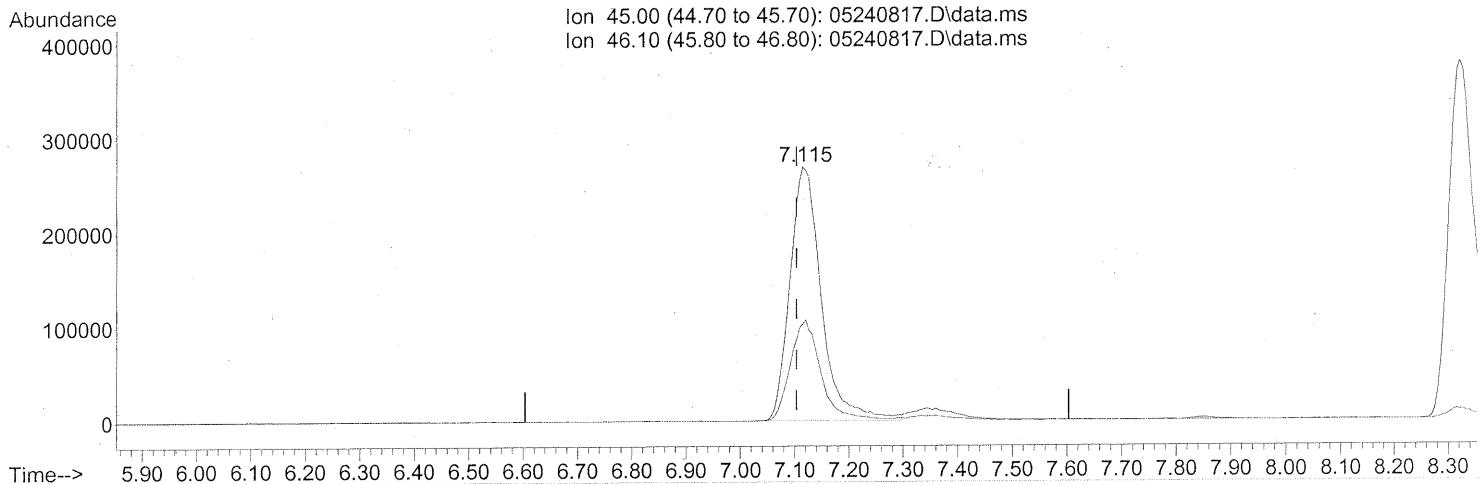
(9) Chloroethane (T)  
 6.819min (-0.006) 0.21ng  
 response 5579

Ion	Exp%	Act%
64.00	100	100
66.00	29.60	31.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801422-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 09:04:17 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.115min (+0.011) 33.98ng

response 1079440

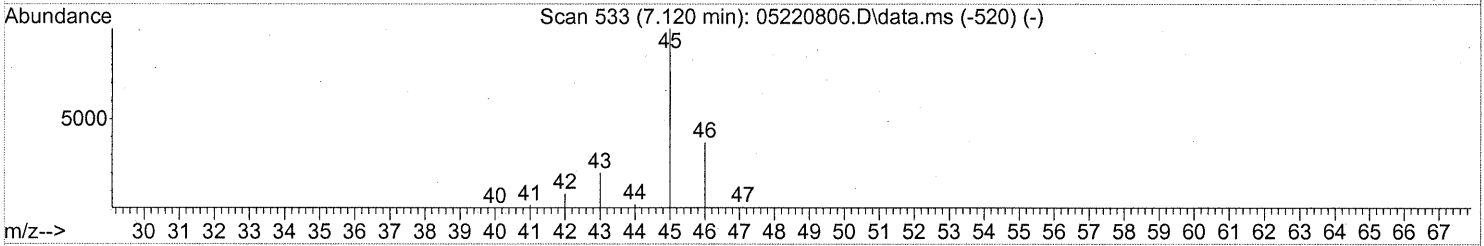
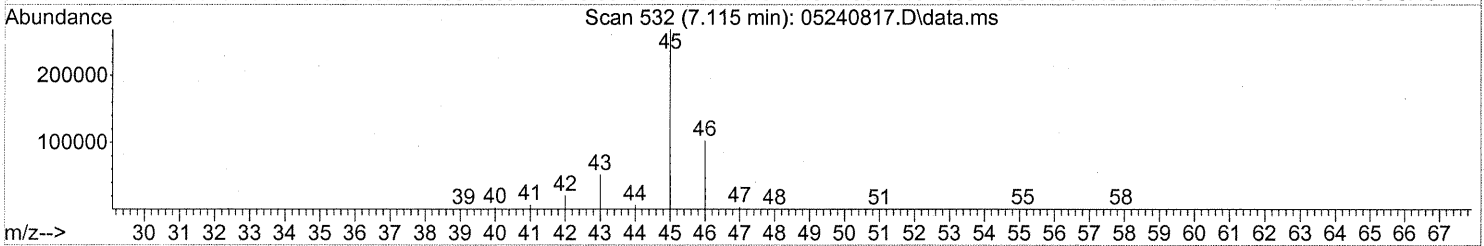
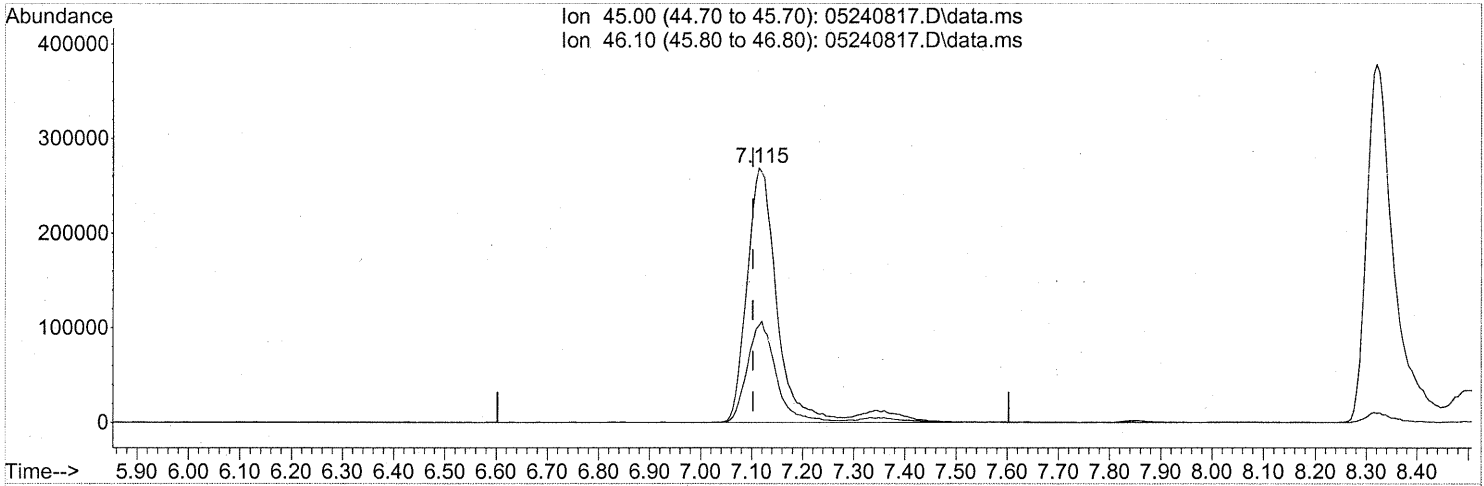
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	38.47
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.115min (+0.011) 36.22ng m

response 1150657

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.09
0.00	0.00	0.00
0.00	0.00	0.00

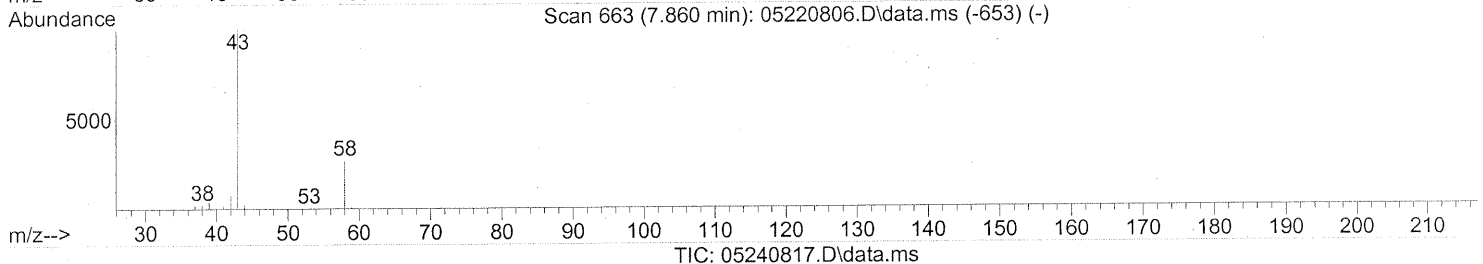
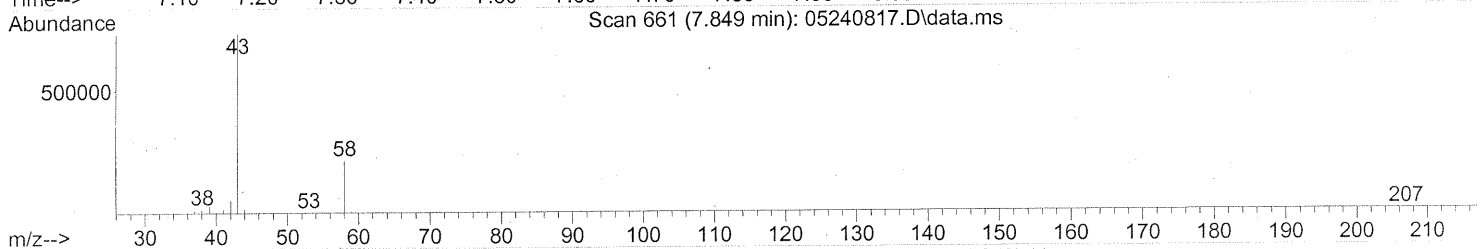
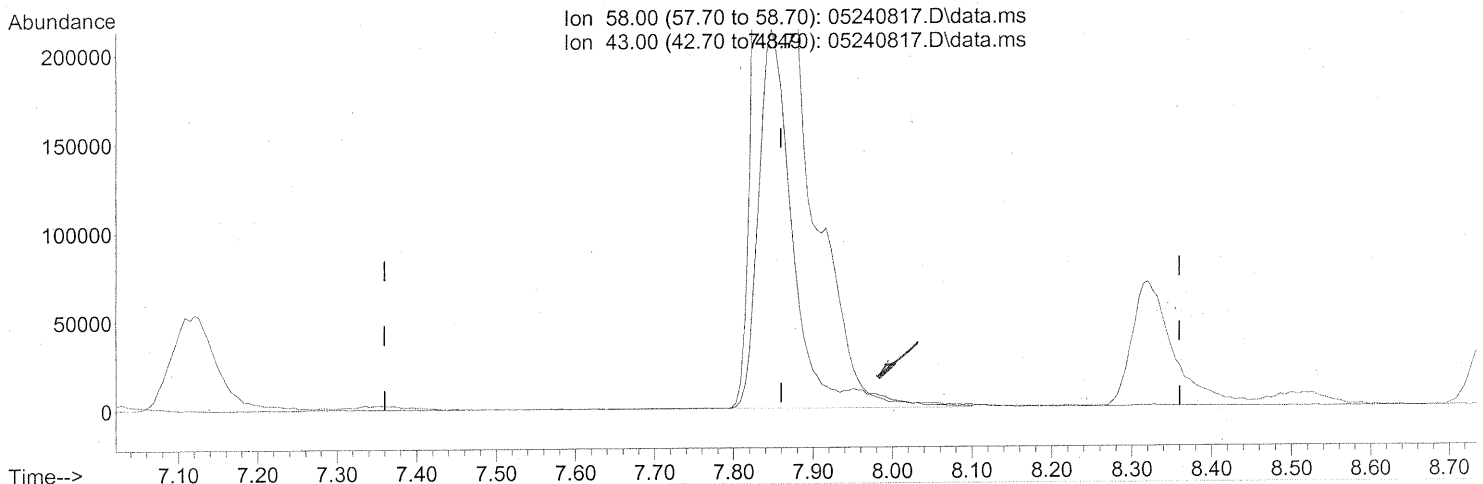
*added tailing*  
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240817.D  
Acq On : 24 May 2008 18:08  
Operator : WA 4 *5/29/08*  
Sample : P0801422-010 (1000ml)  
Misc : ENSR SG65B-05 (-2.3, 3.5)  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 09:04:17 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(13) Acetone (T)  
7.849min (-0.011) 19.97ng  
response 649737

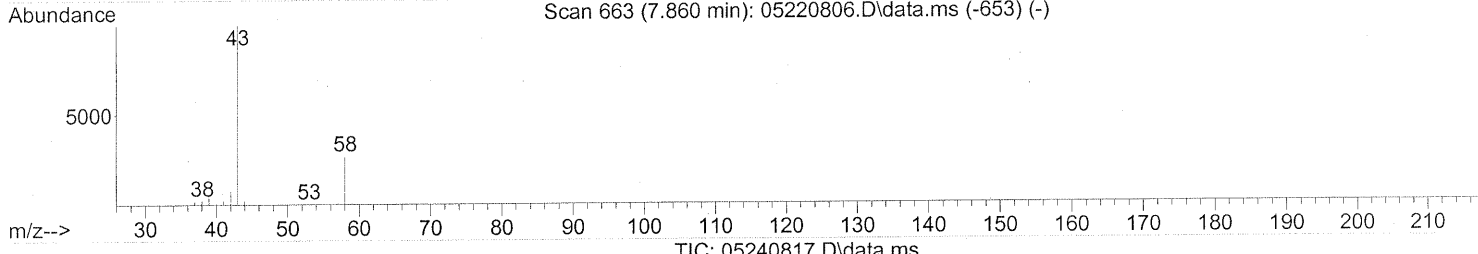
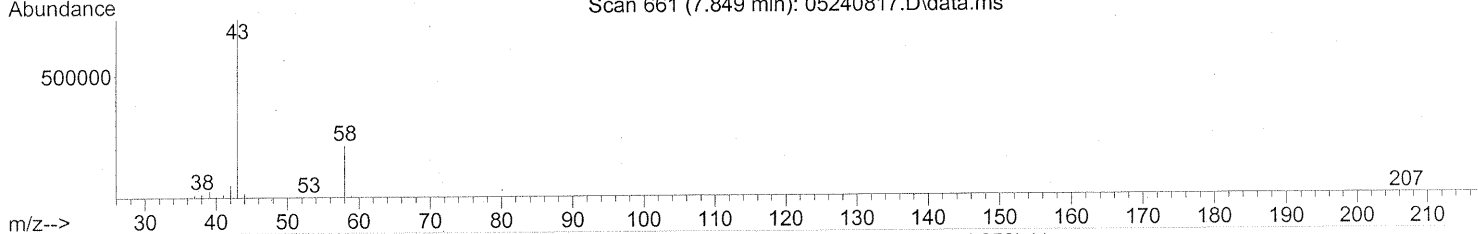
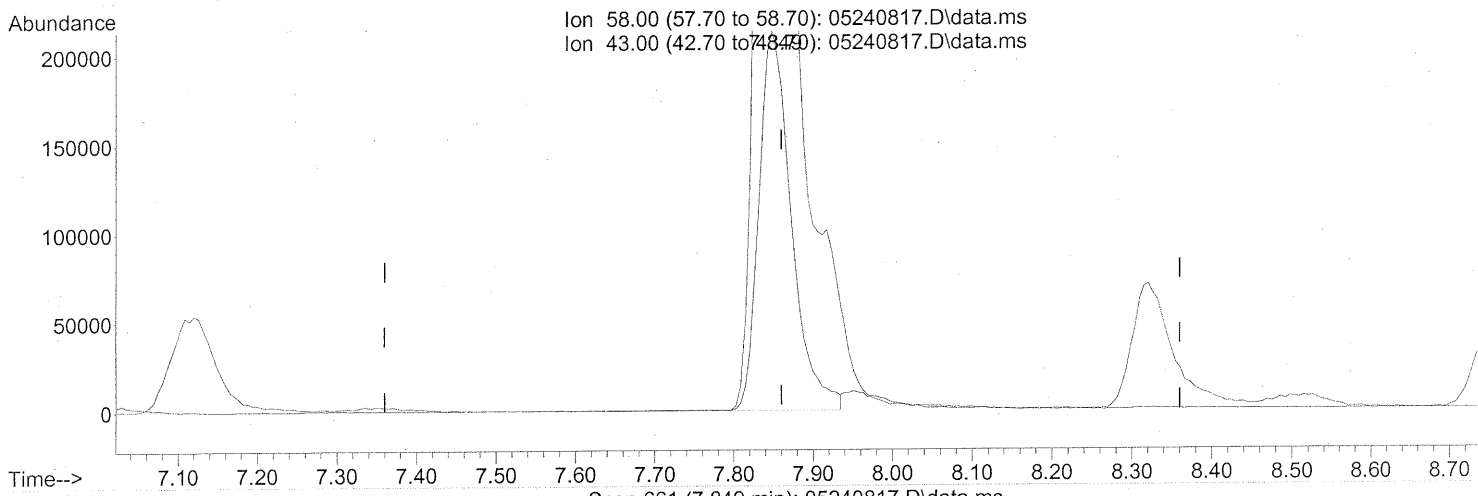
*interf. peak*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	352.41#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801422-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 09:04:17 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.849min (-0.011) 18.63ng m  
 response 606054

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	377.81#
0.00	0.00	0.00
0.00	0.00	0.00

*int. 10% shoulder*

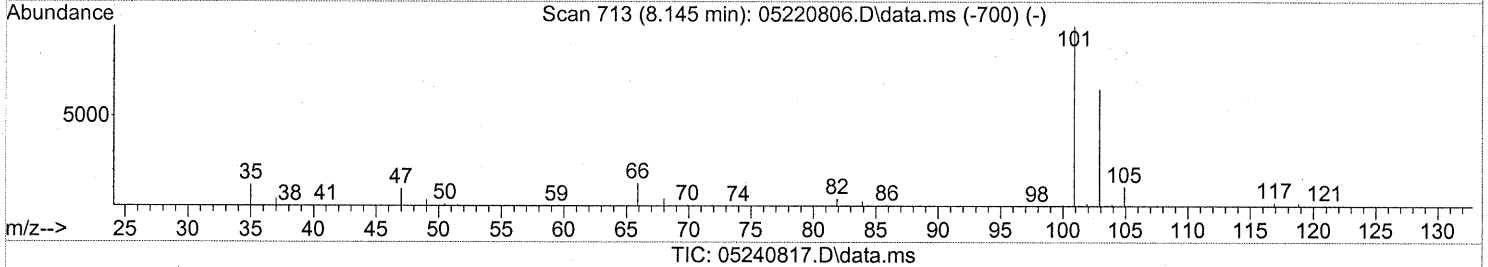
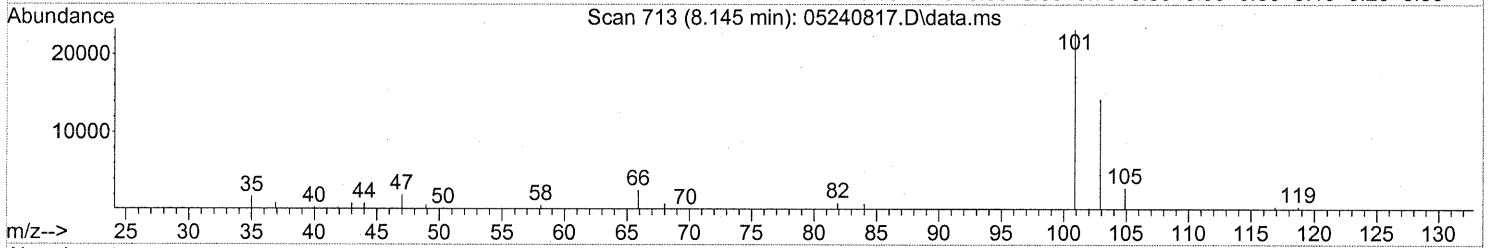
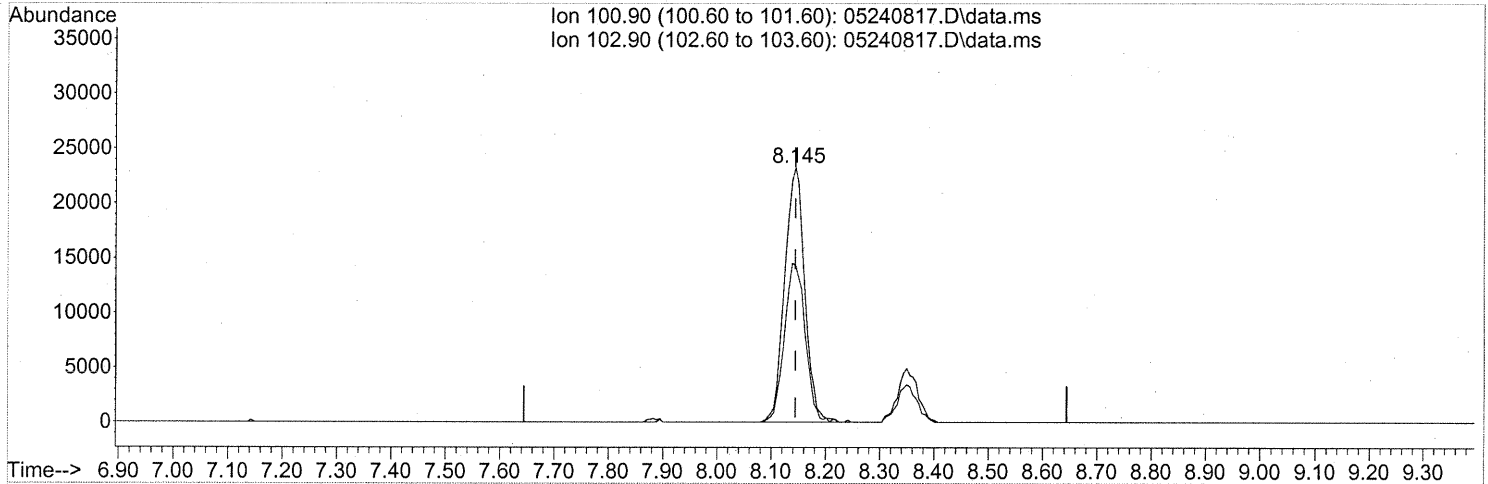
*not 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.145min (+0.000) 0.79ng

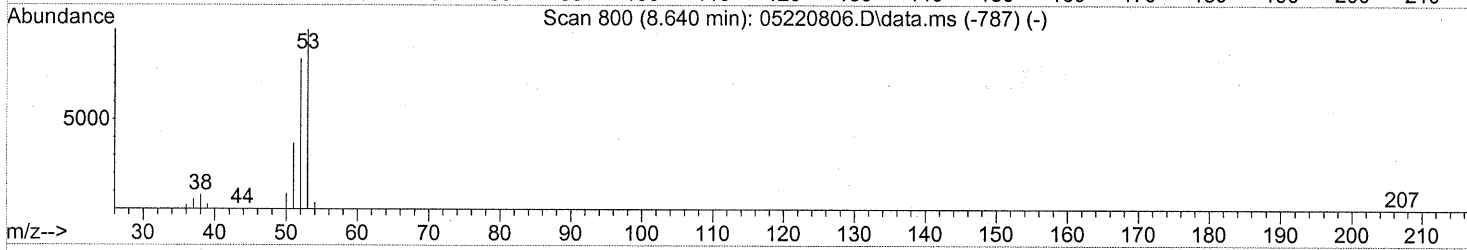
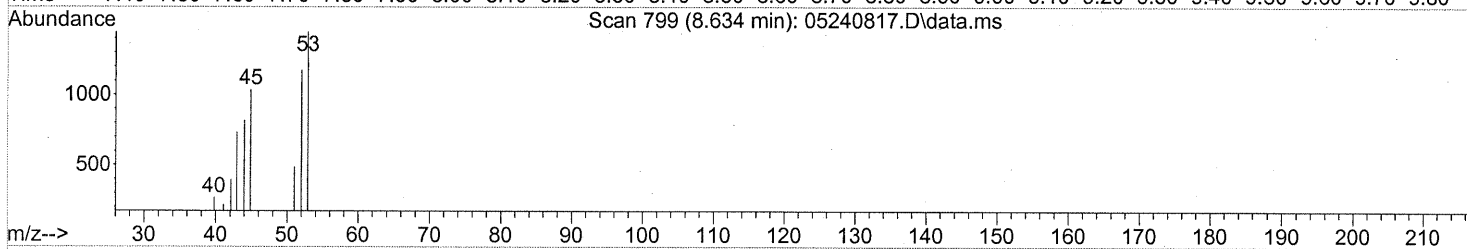
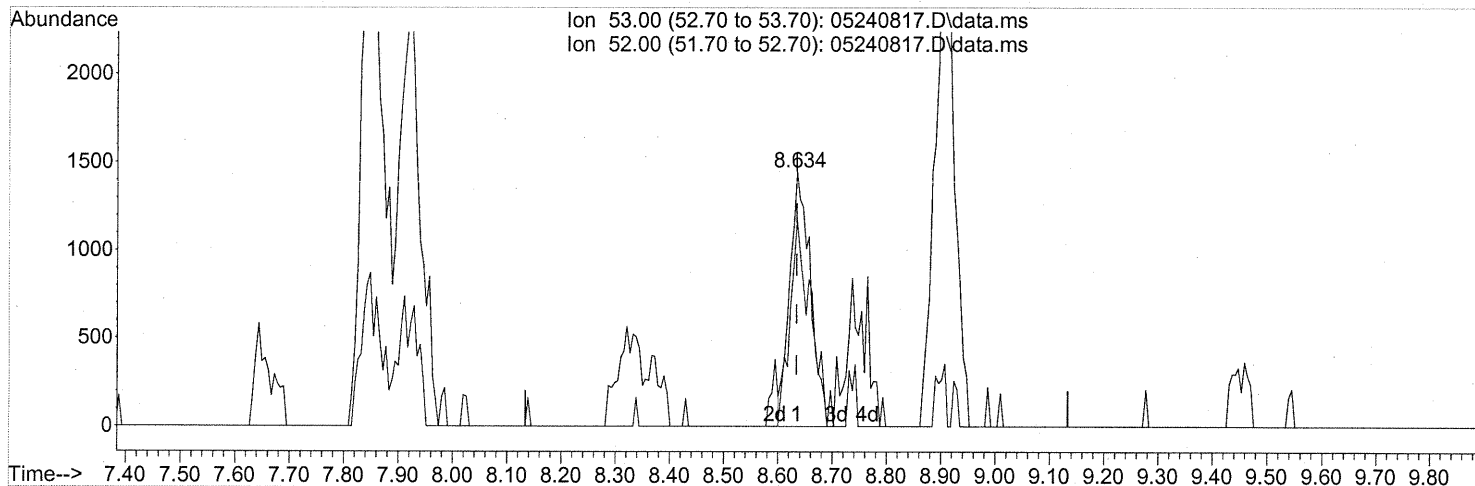
response 59443

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	64.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(16) Acrylonitrile (T)  
 8.634min (+0.000) 0.08ng  
 response 3866

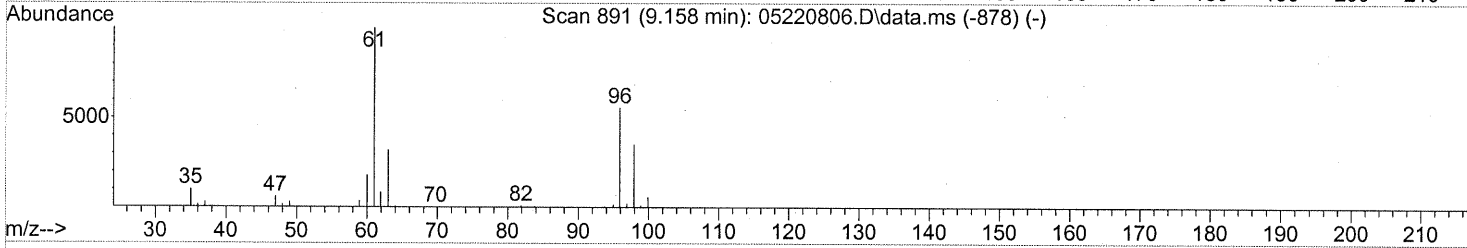
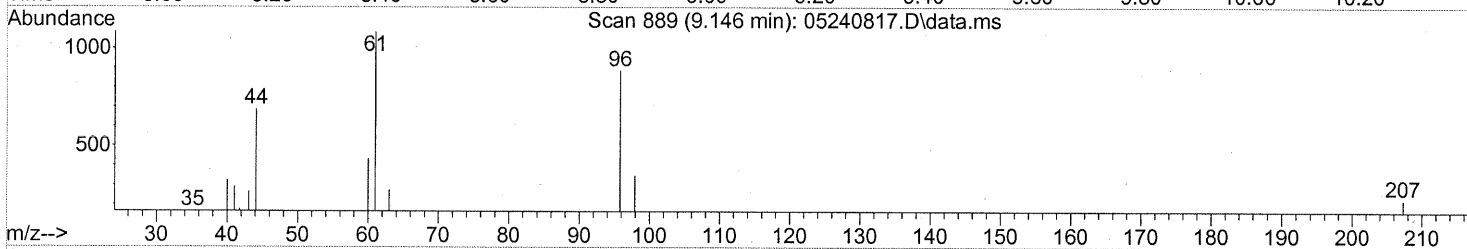
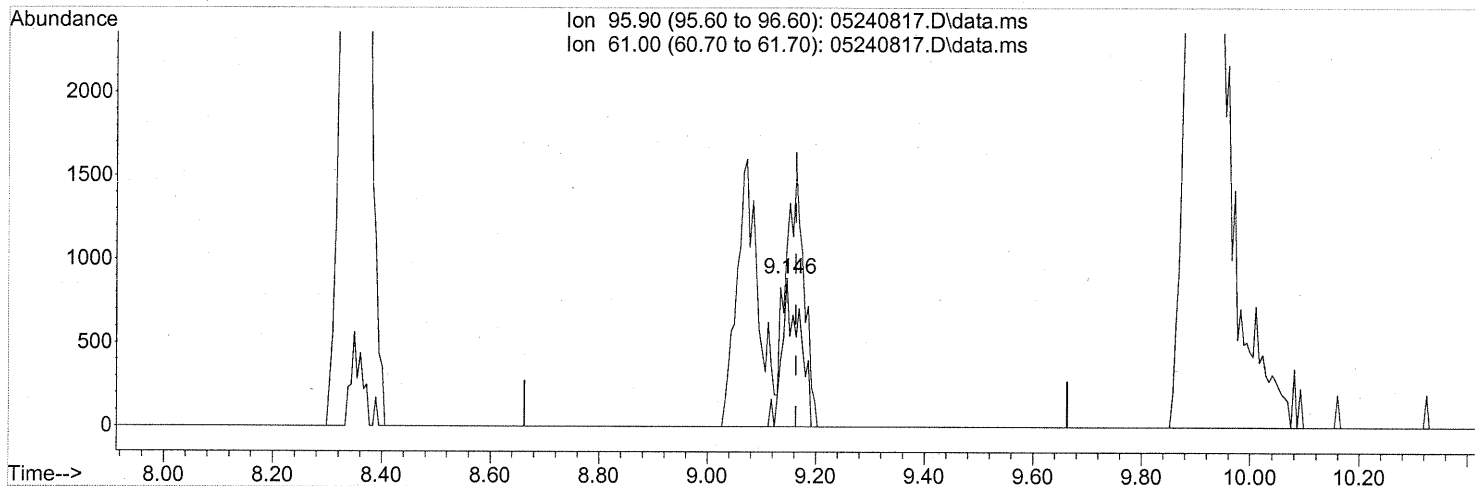
Ion	Exp%	Act%
53.00	100	100
52.00	82.50	78.30
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.146min (-0.017) 0.06ng

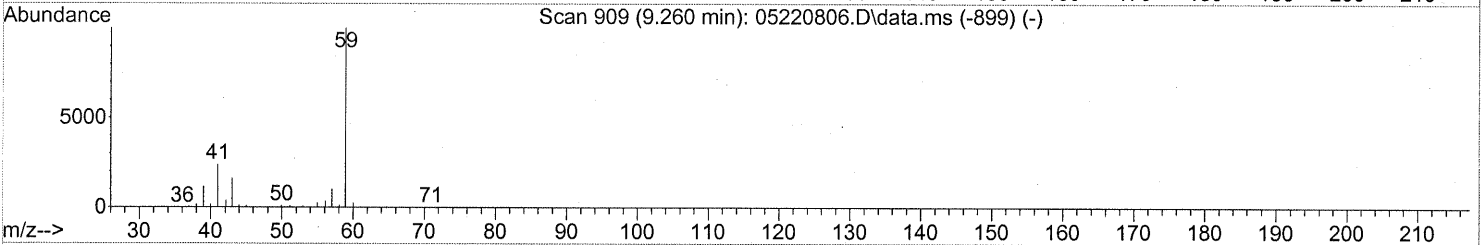
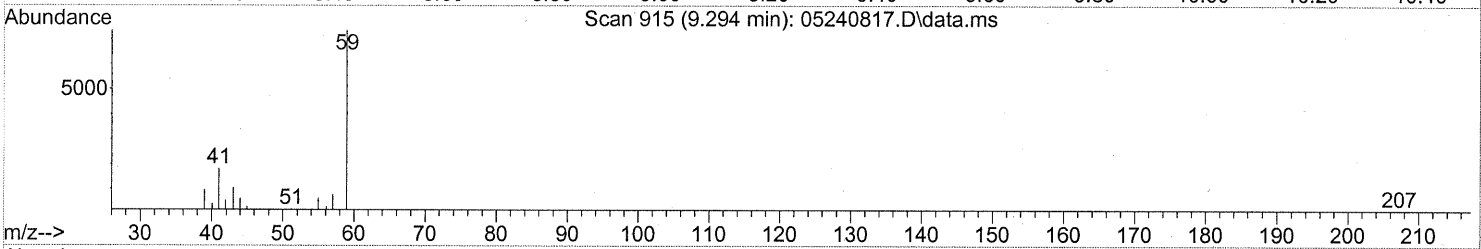
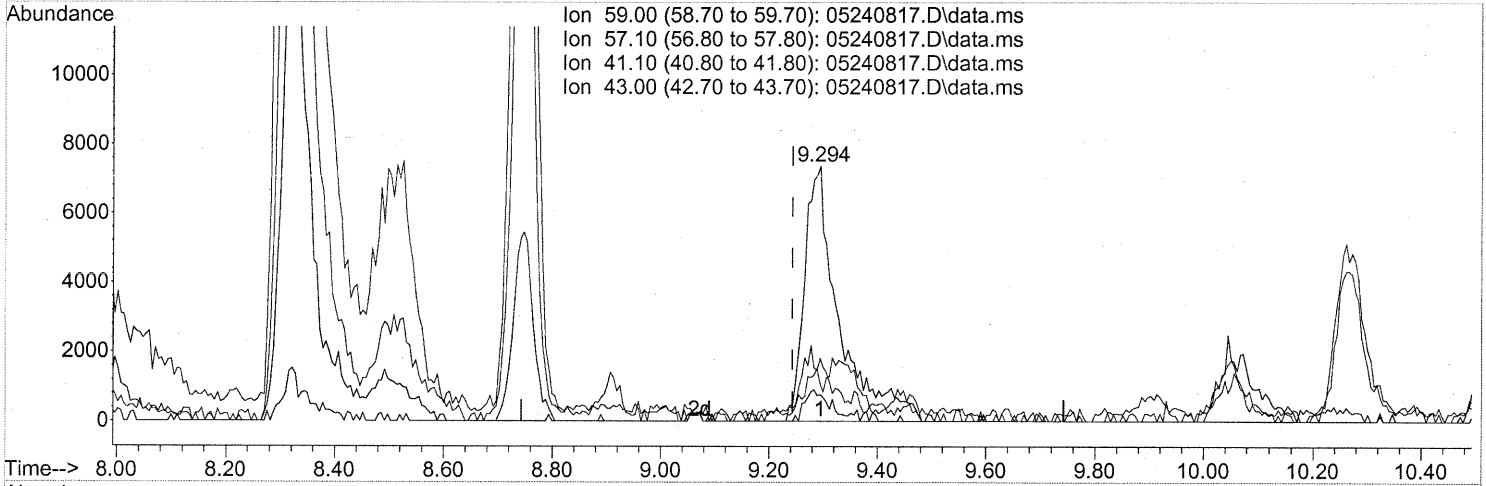
response 1974

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	186.12#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240817.D  
Acq On : 24 May 2008 18:08  
Operator : WA  
Sample : P0801442-010 (1000ml)  
Misc : ENSR SG65B-05 (-2.3, 3.5)  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240817.D\data.ms

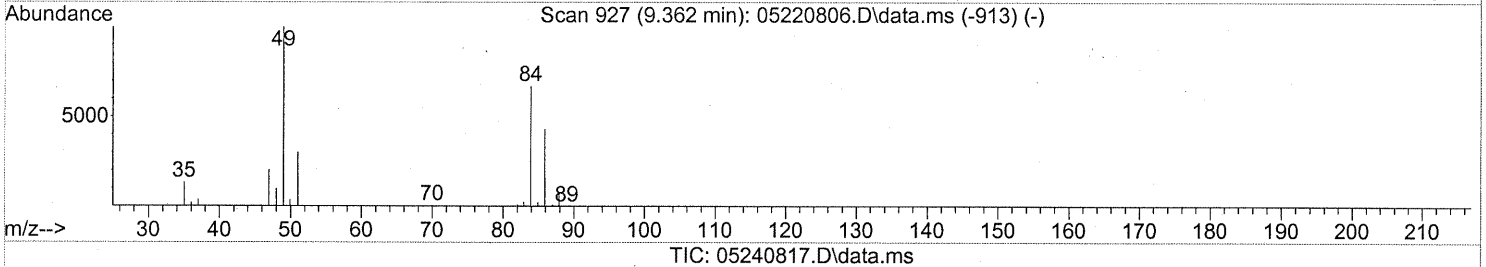
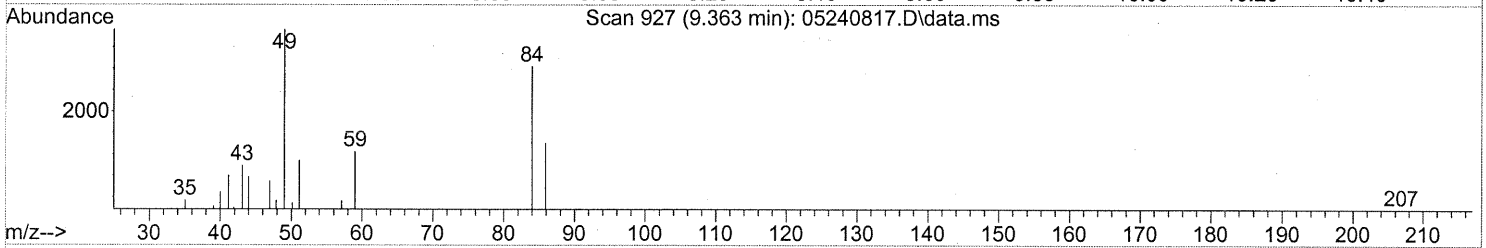
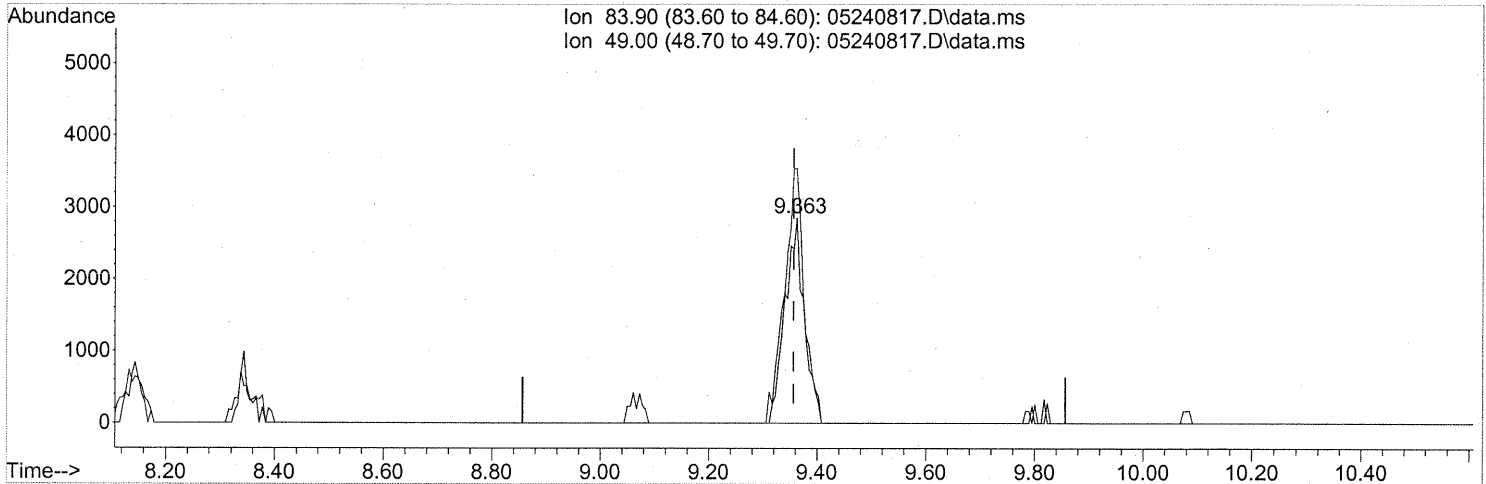
(18) tert-Butanol (T)  
9.294min (+0.051) 0.37ng  
response 32575

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.71
41.10	20.10	22.89
43.00	12.30	8.79

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(19) Methylene Chloride (T)

9.363min (+0.006) 0.20ng

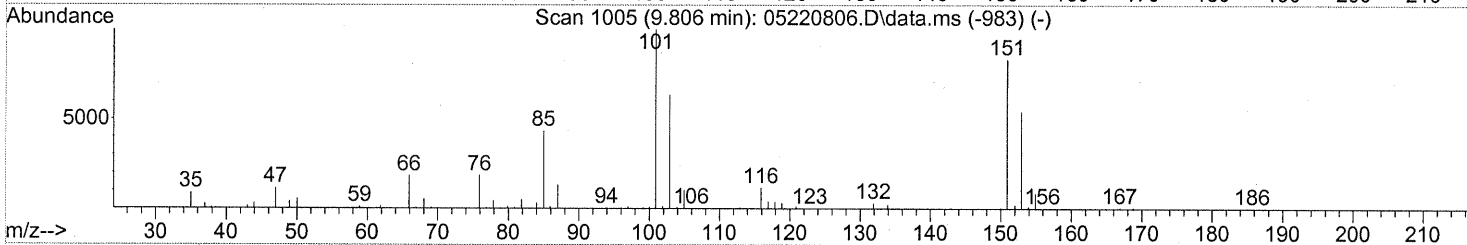
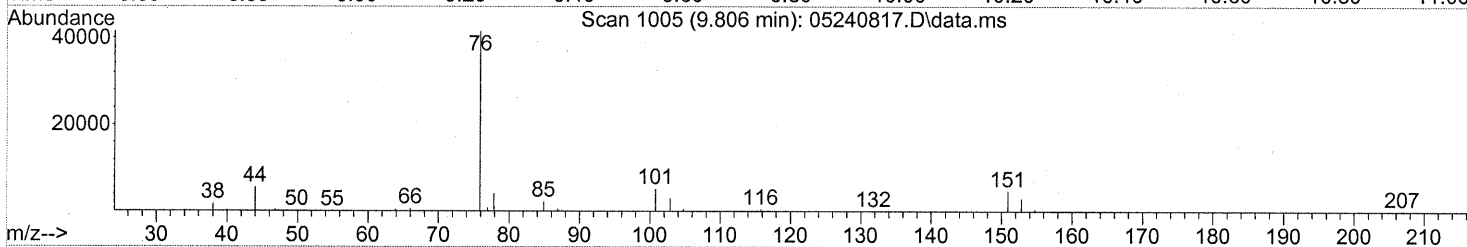
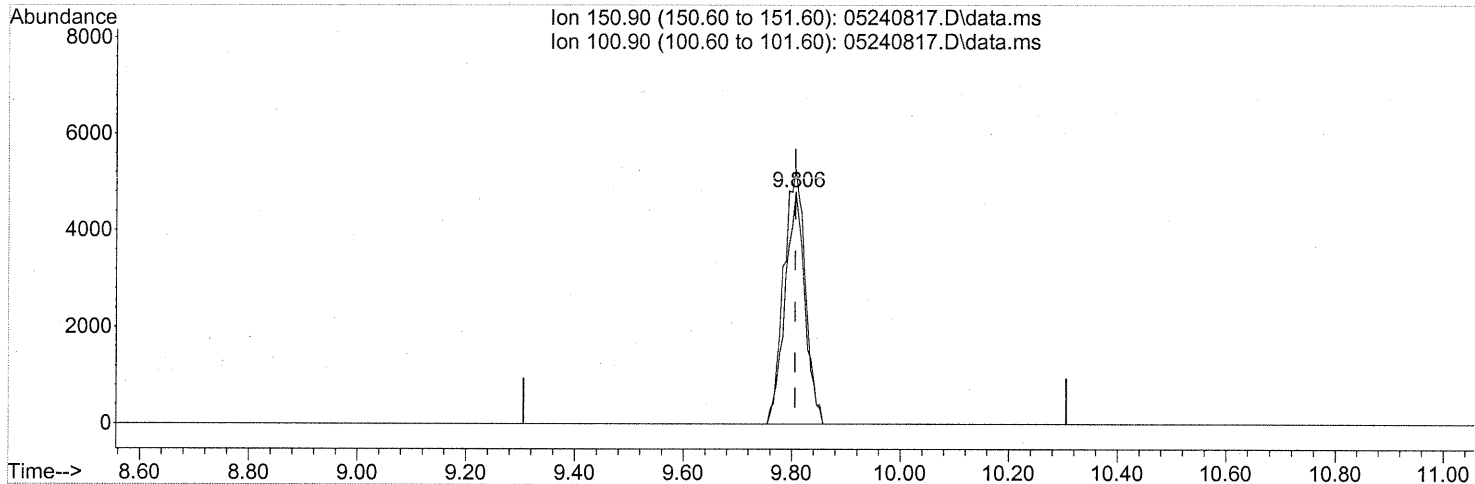
response 7112

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	126.66#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.806min (+0.000) 0.35ng

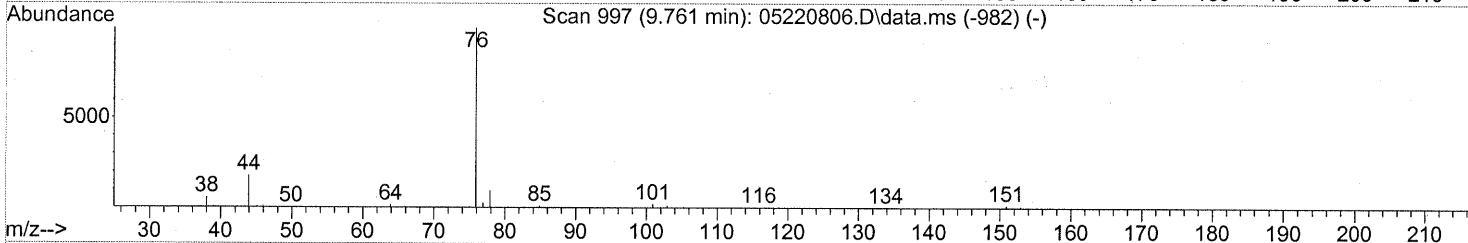
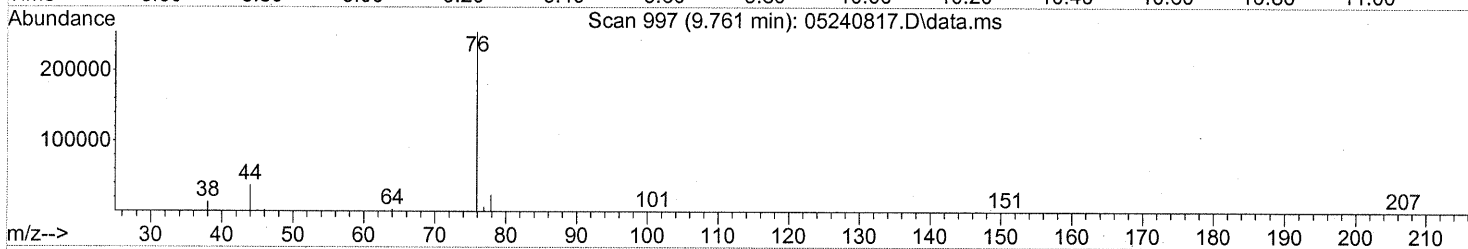
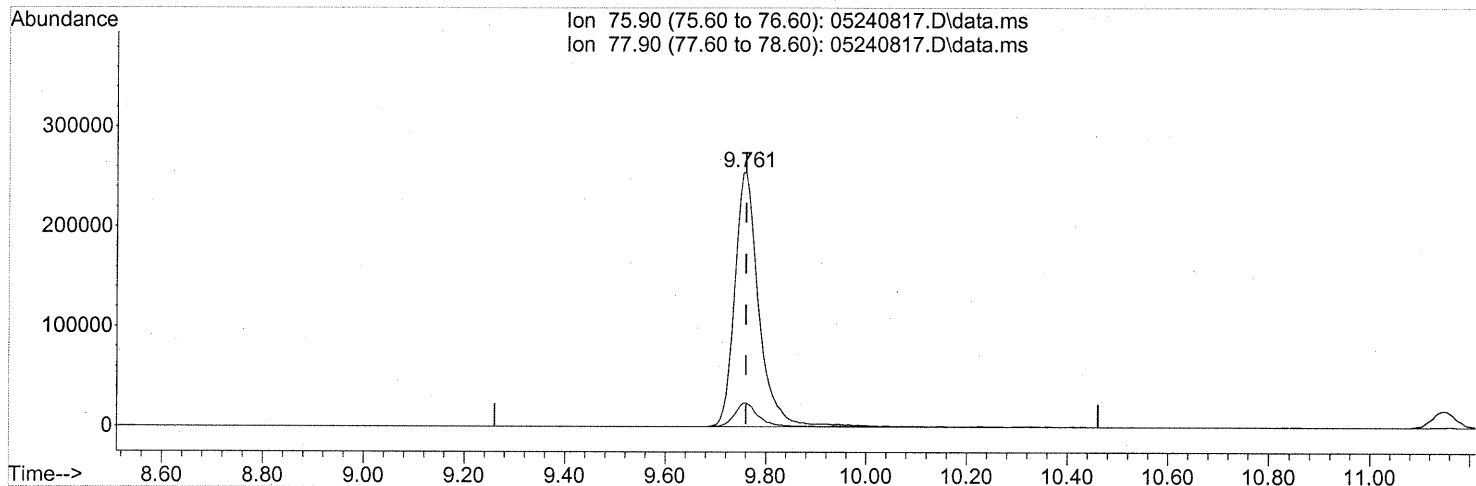
response 12099

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	119.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(22) Carbon Disulfide (T)

9.761min (+0.000) 6.14ng

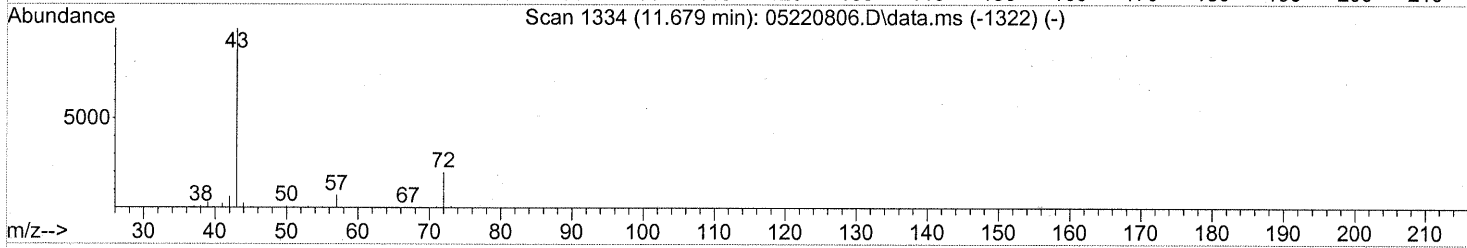
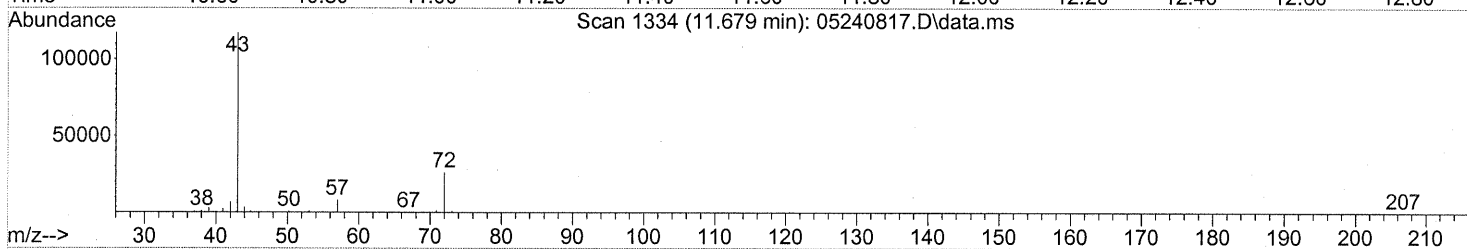
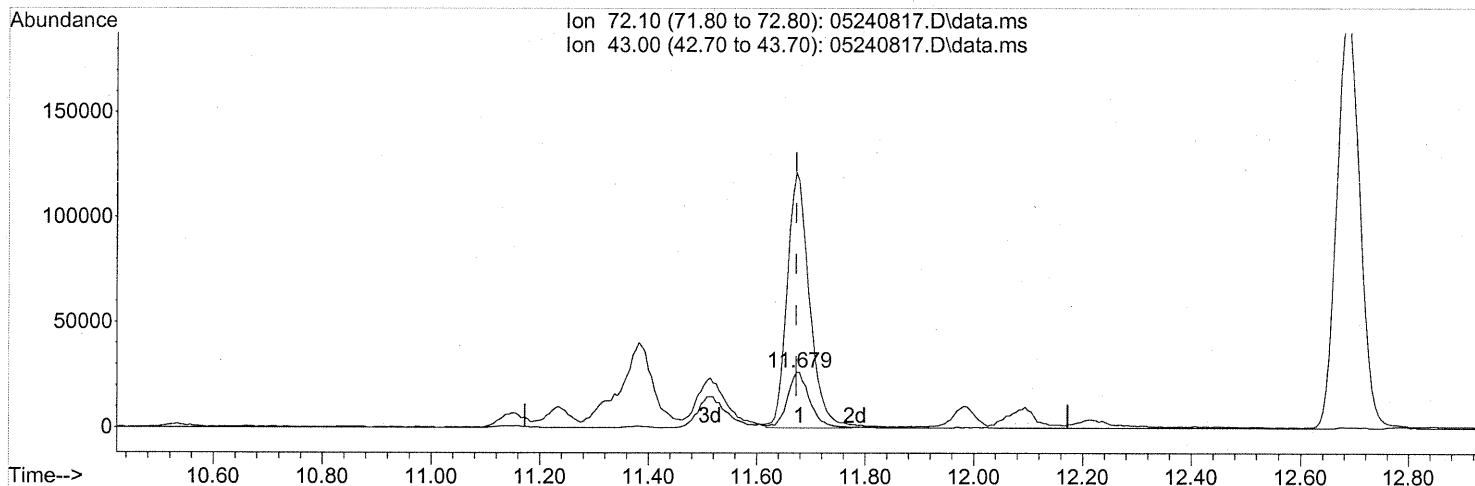
response 847649

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.679min (+0.006) 3.15ng

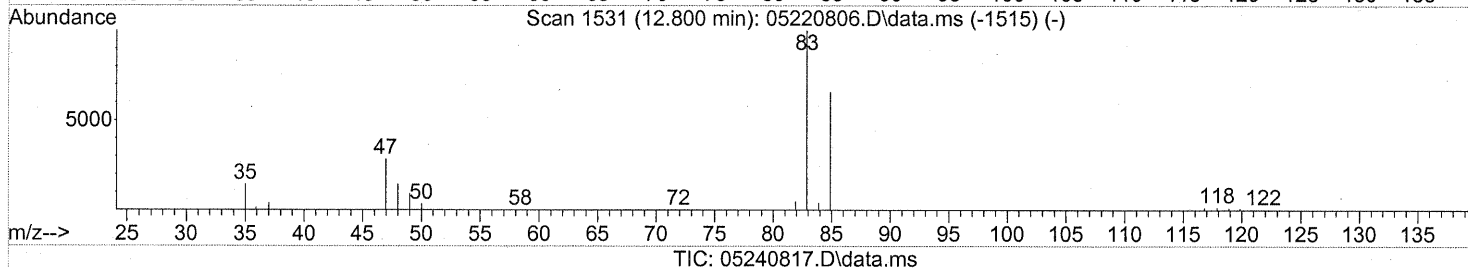
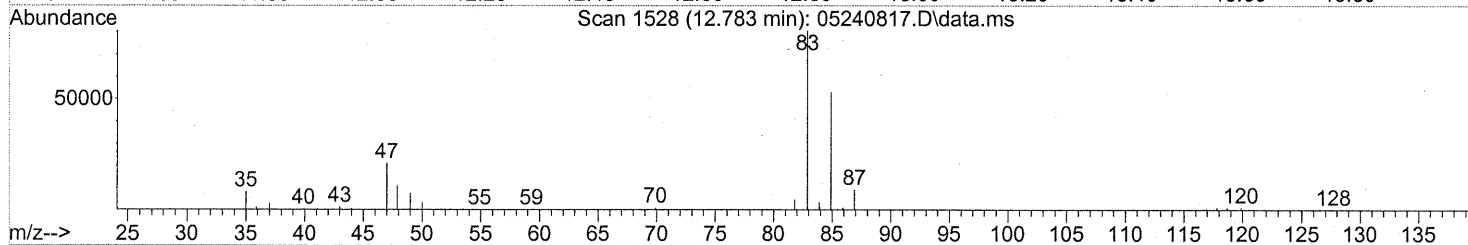
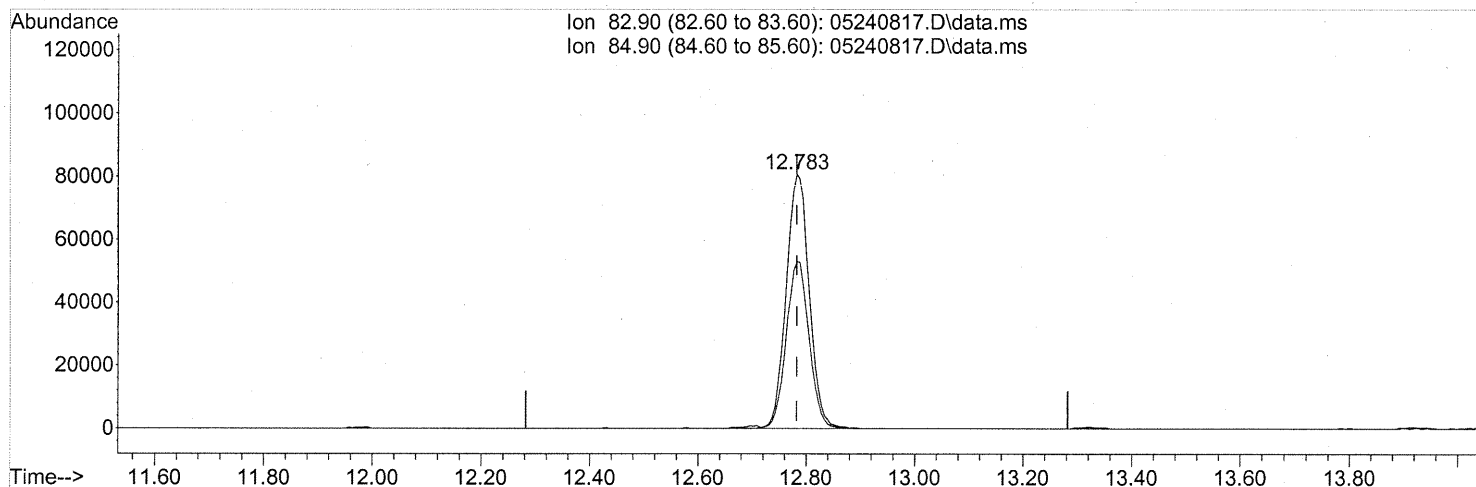
response 74745

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	459.51#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(32) Chloroform (T)

12.783min (+0.000) 4.30ng

response 236904

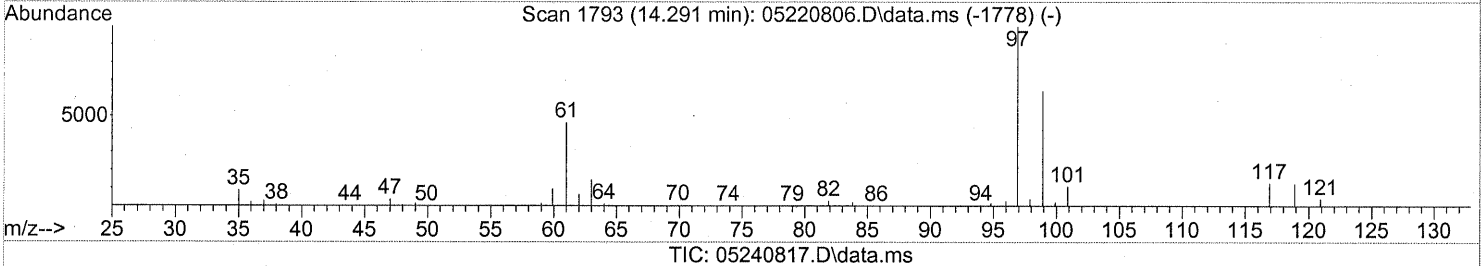
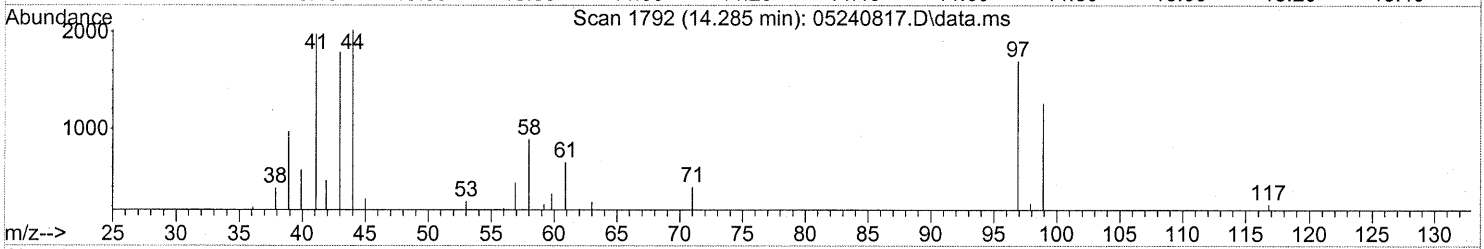
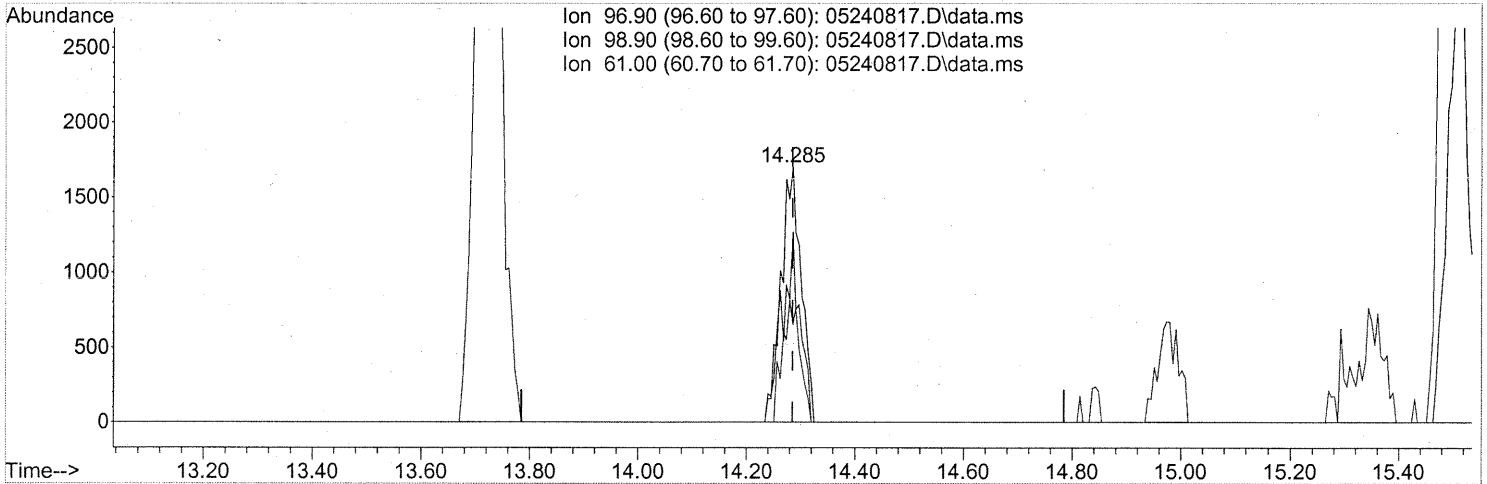
Ion	Exp%	Act%
82.90	100	100
84.90	64.70	65.03
0.00	0.00	0.00
0.00	0.00	0.00

521

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(38) 1,1,1-Trichloroethane (T)

14.285min (+0.000) 0.07ng

response 4381

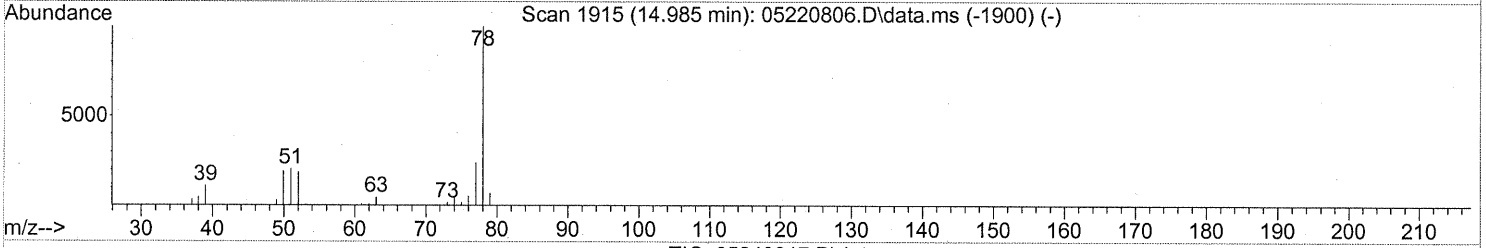
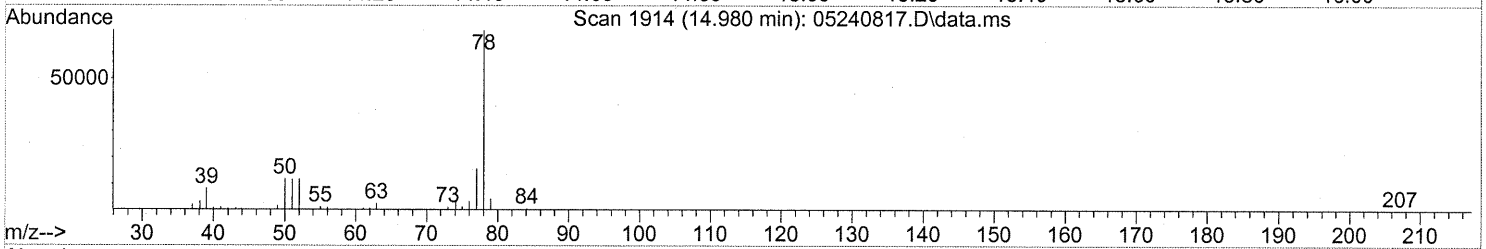
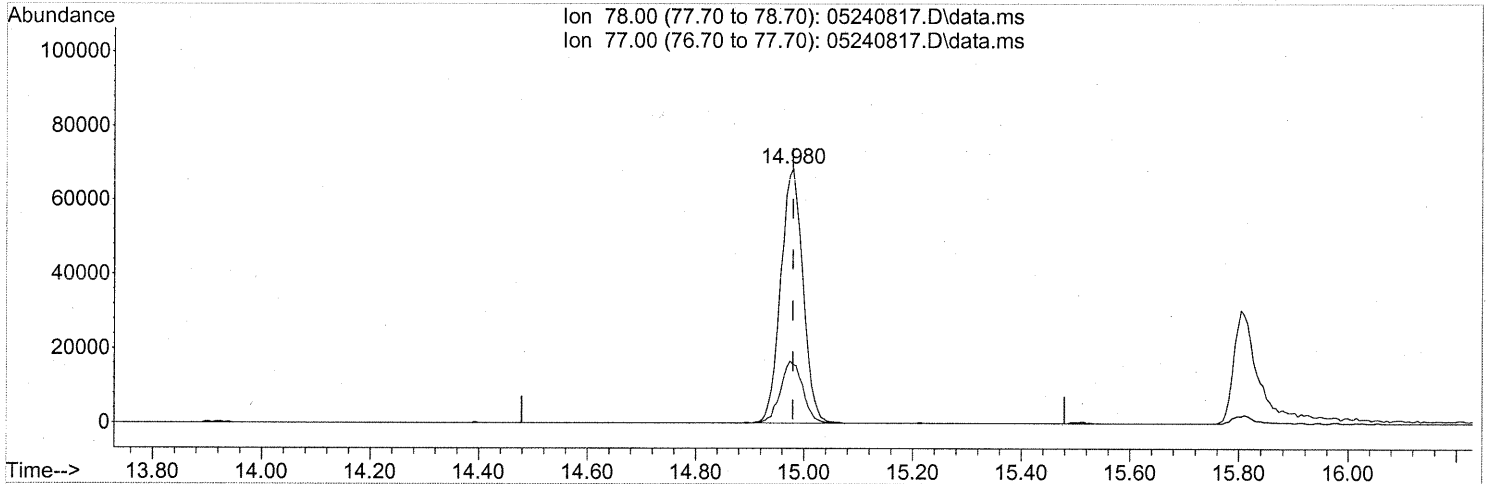
Ion	Exp%	Act%
96.90	100	100
98.90	63.40	45.93
61.00	50.50	41.52
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(41) Benzene (T)

14.980min (+0.000) 1.43ng

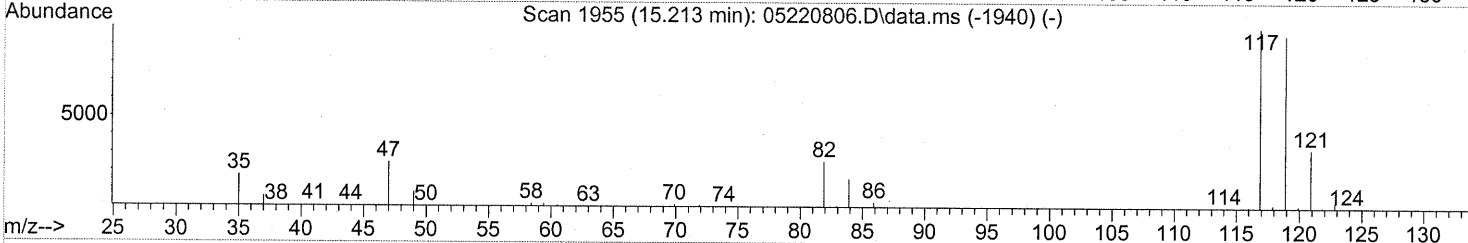
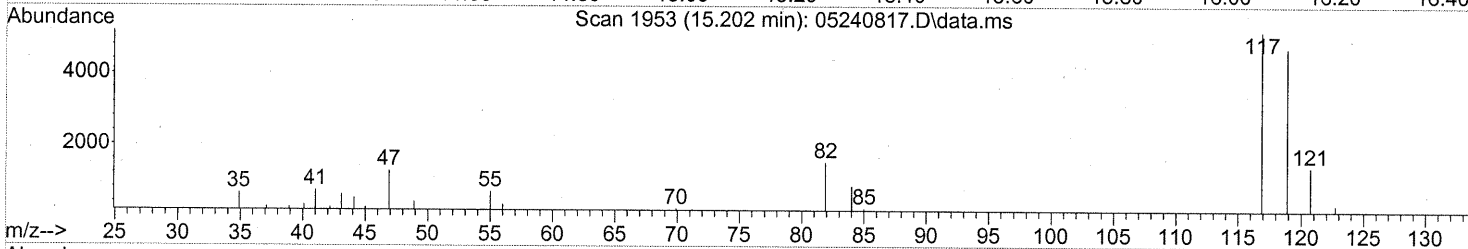
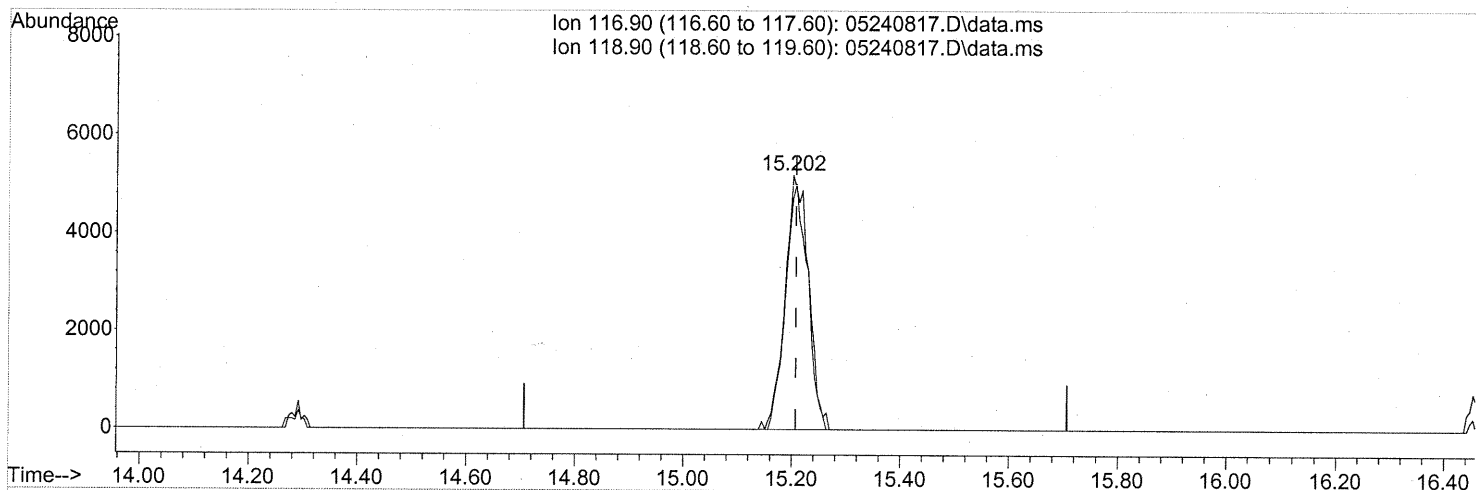
response 192860

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	24.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(42) Carbon Tetrachloride (T)

15.202min (-0.006) 0.30ng

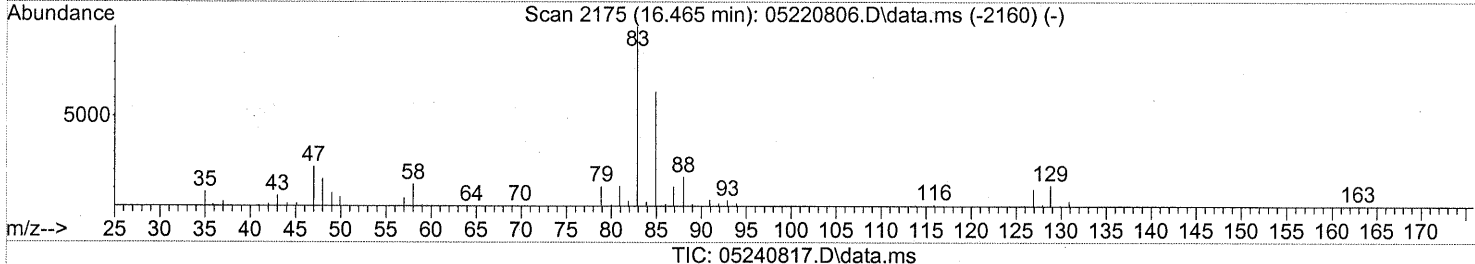
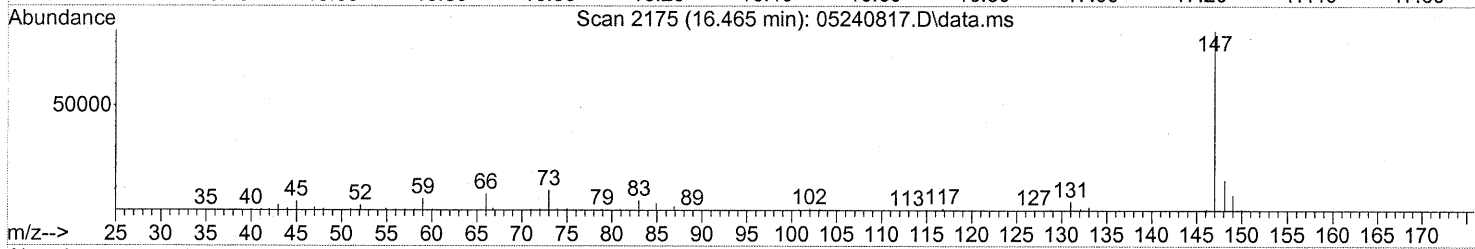
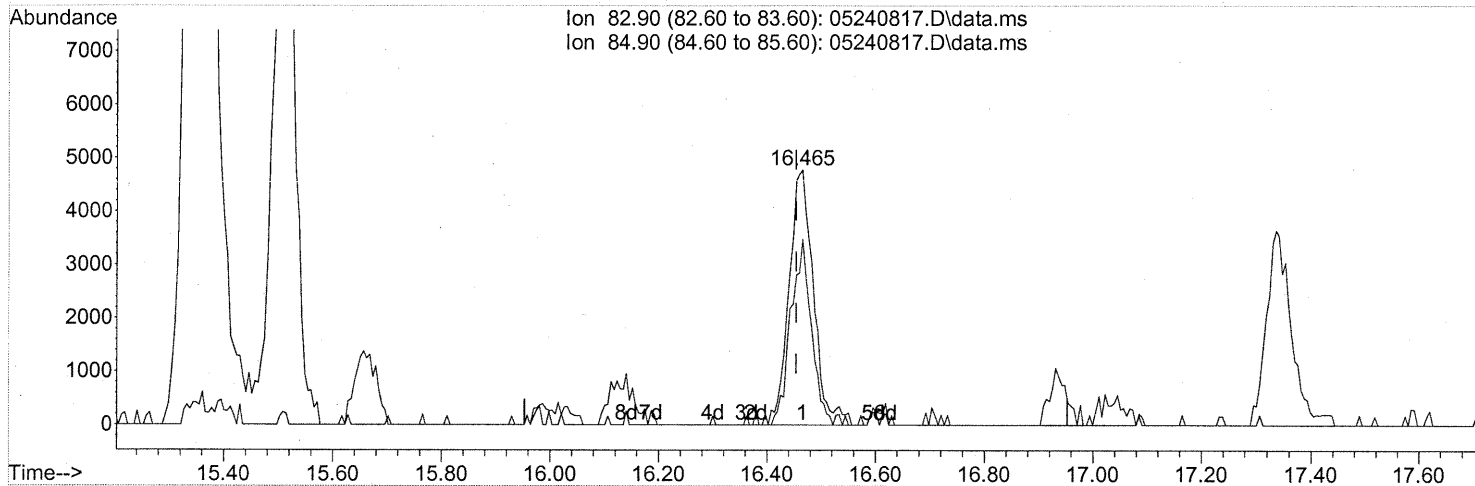
response 15493

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	92.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.465min (+0.011) 0.33ng

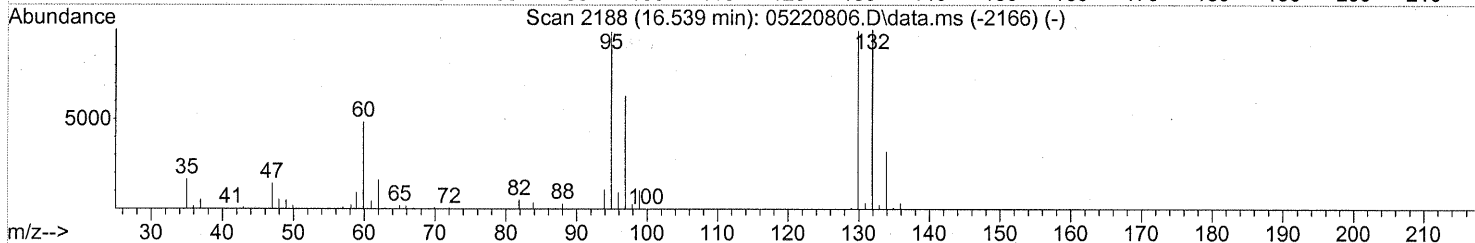
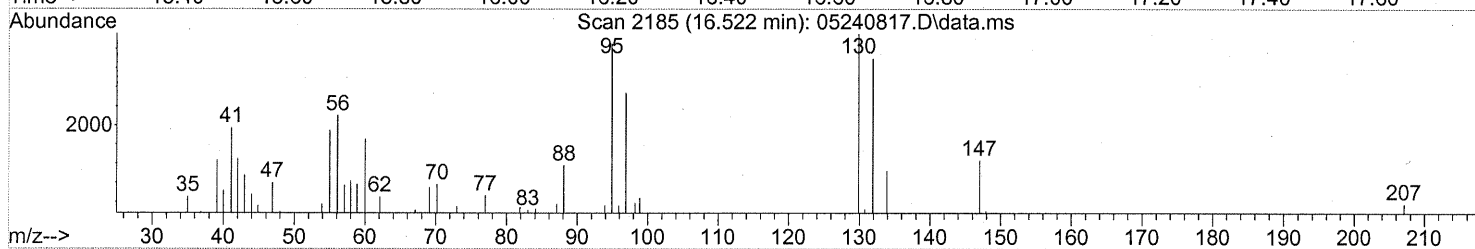
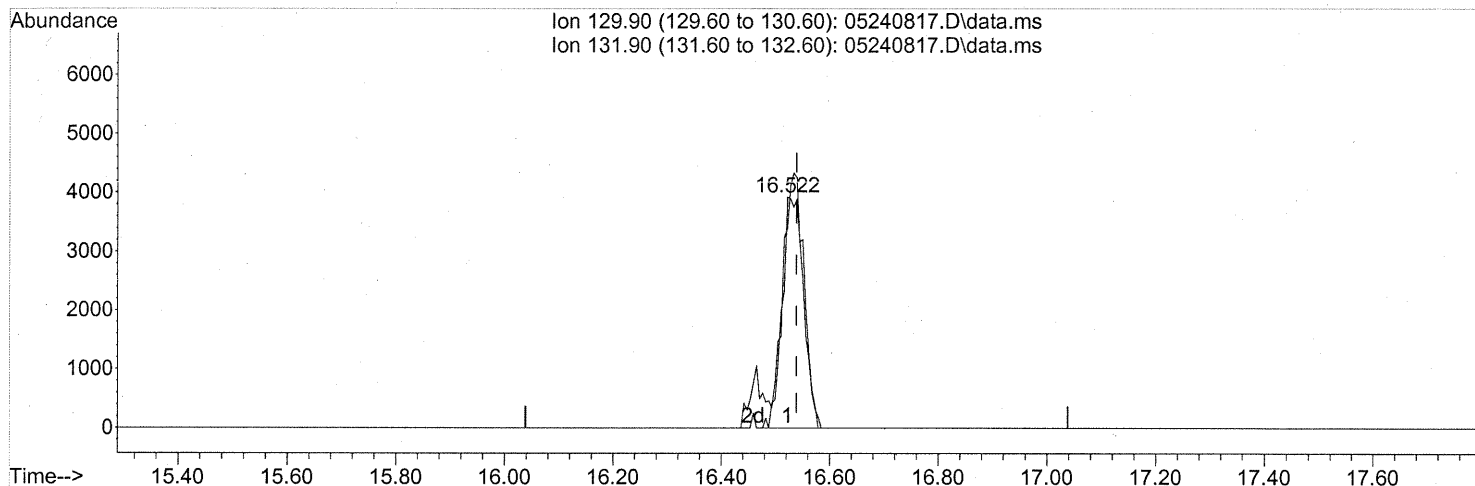
response 14944

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	61.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

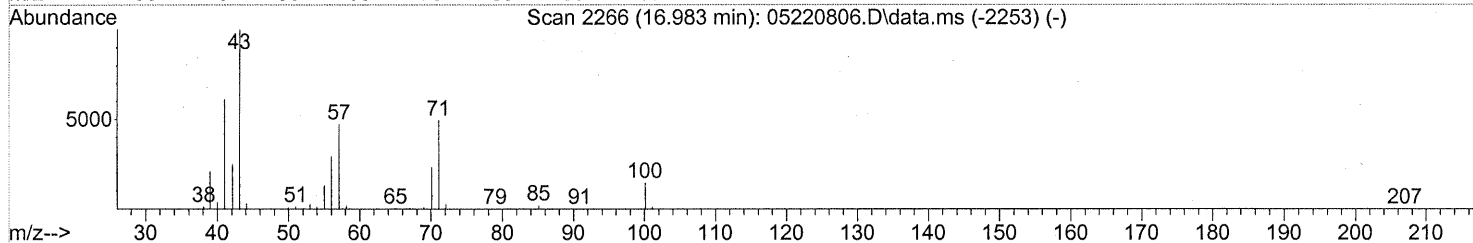
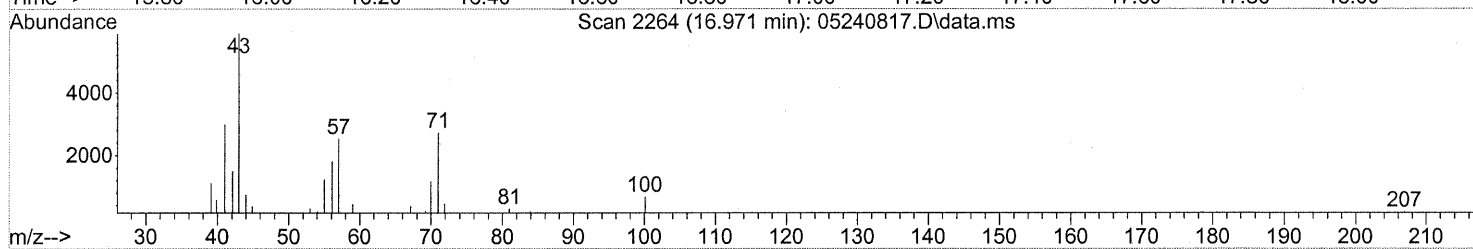
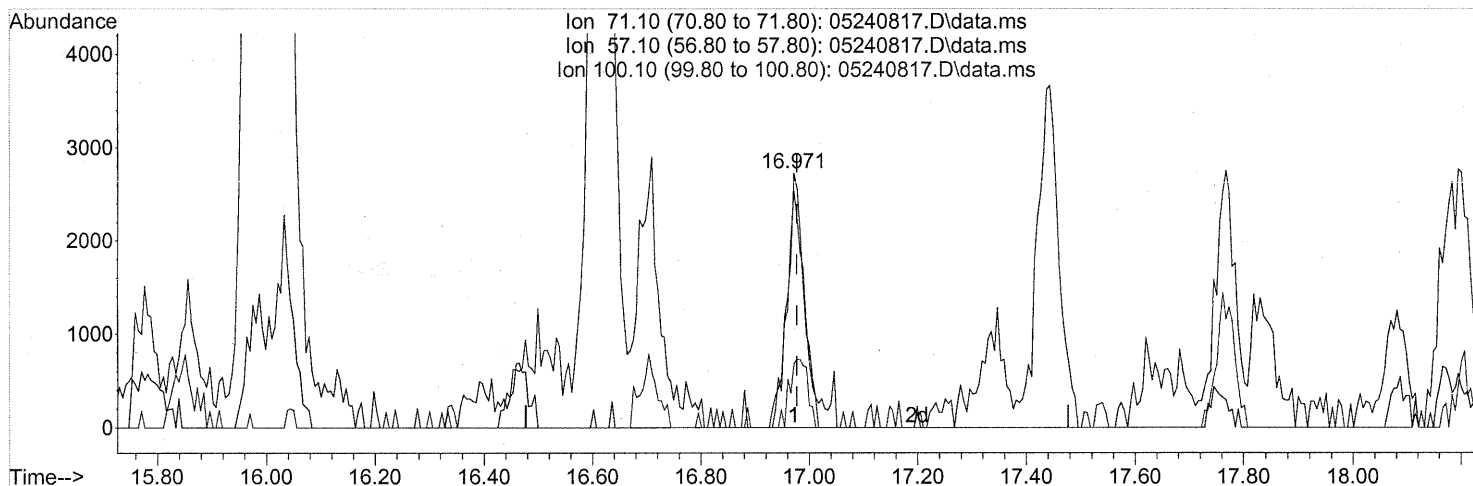
(47) Trichloroethene (T)  
 16.522min (-0.017) 0.26ng  
 response 10701

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	107.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(51) n-Heptane (T)

16.971min (-0.006) 0.16ng

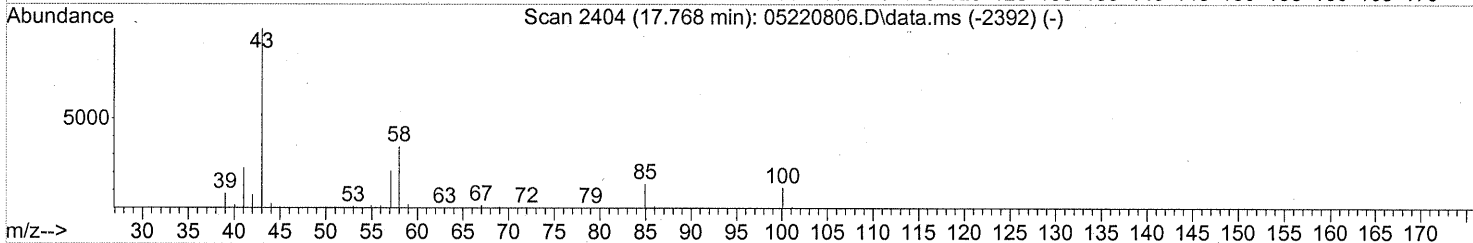
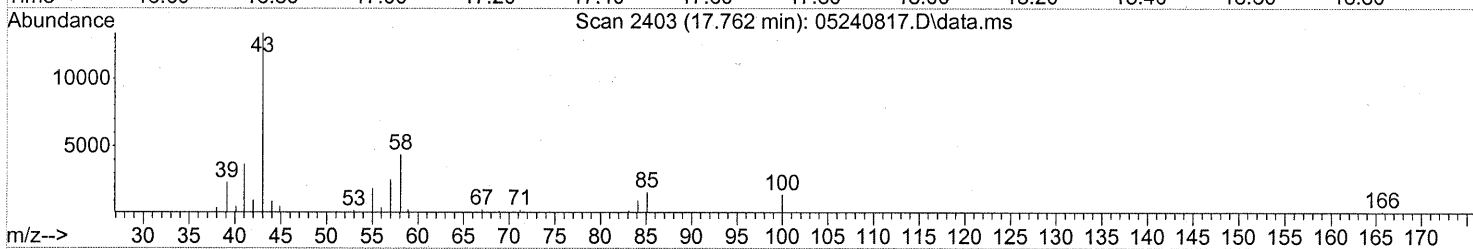
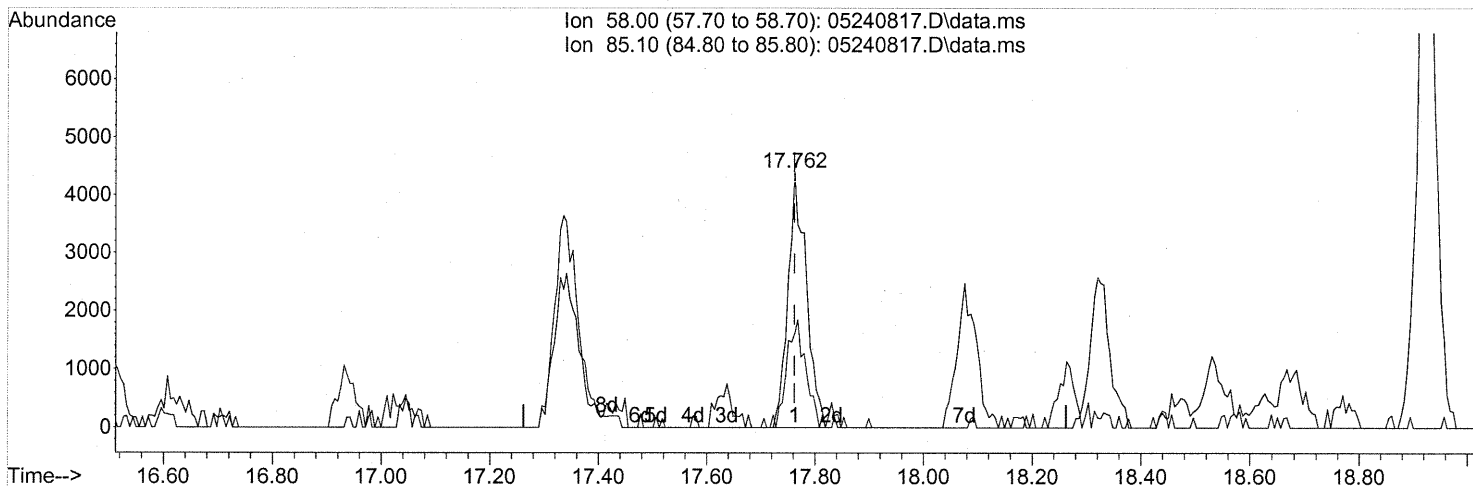
response 5811

Ion	Exp%	Act%
71.10	100	100
57.10	124.90	103.87#
100.10	30.10	29.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.762min (+0.000) 0.29ng

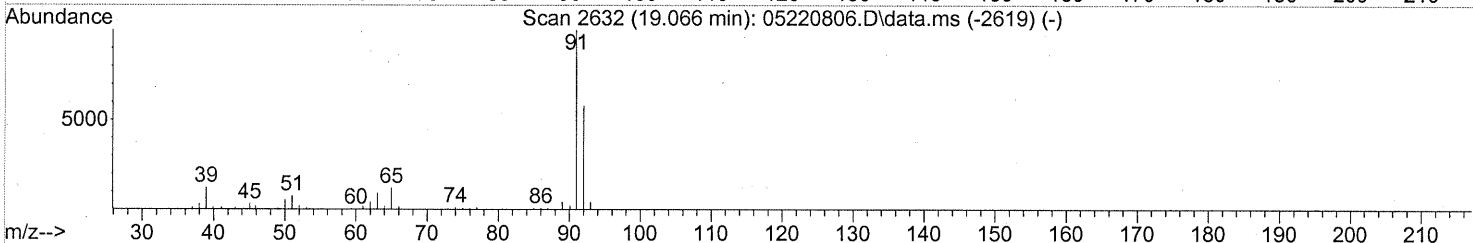
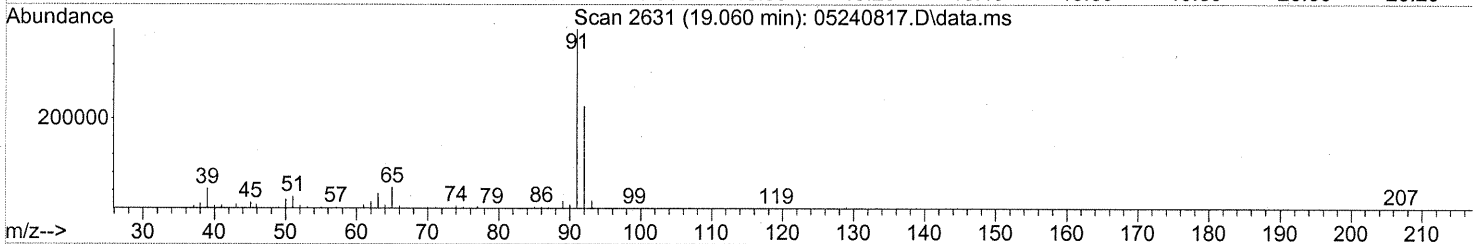
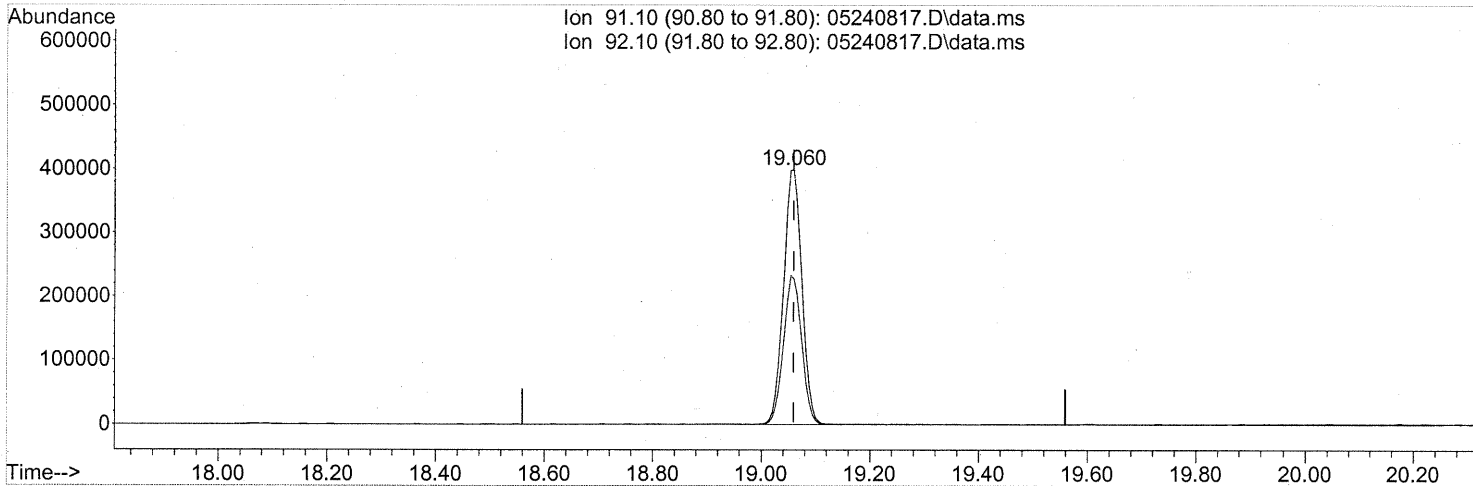
response 10203

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	44.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(58) Toluene (T)

19.060min (+0.000) 6.50ng

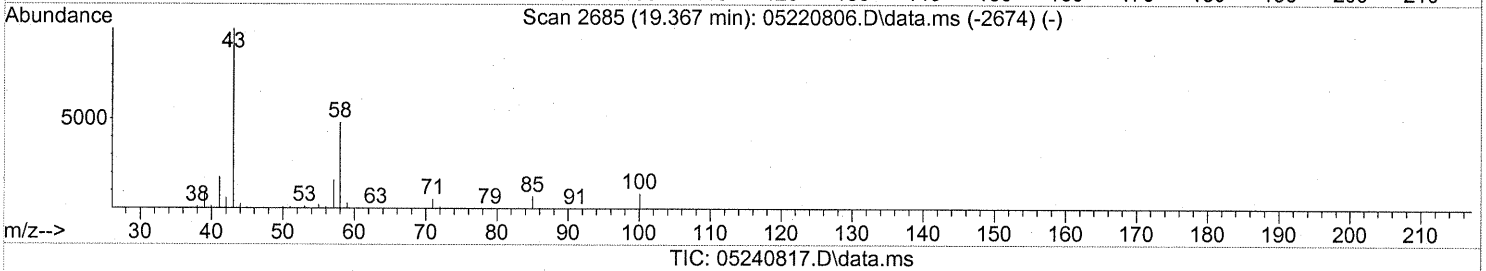
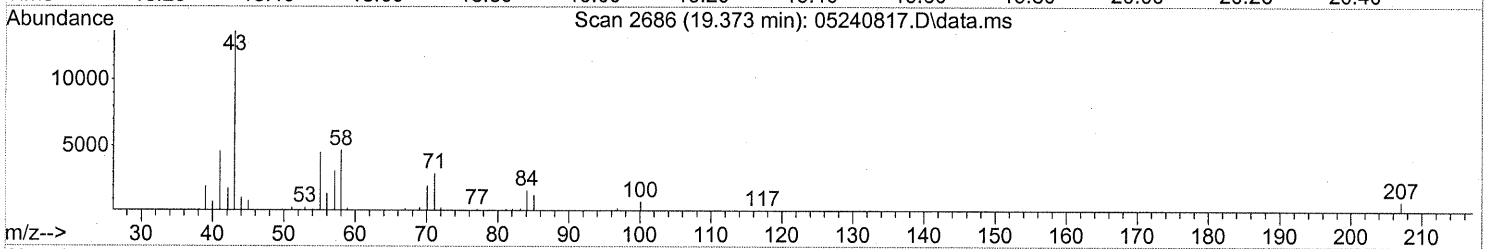
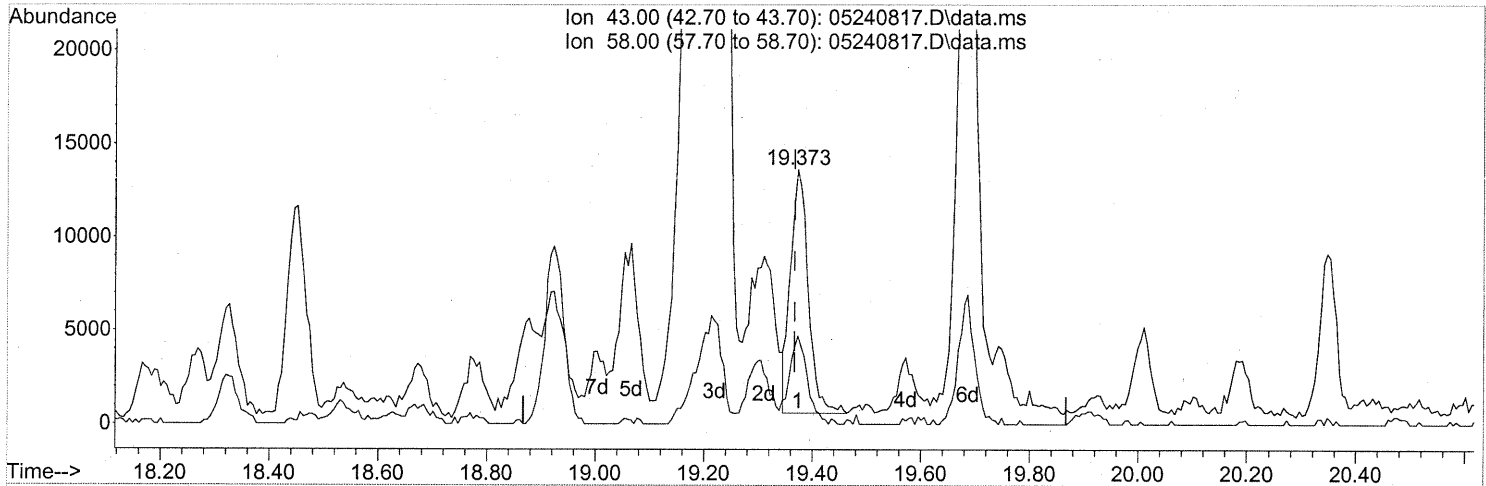
response 931979

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(59) 2-Hexanone (T)  
 19.373min (+0.006) 0.30ng  
 response 29735

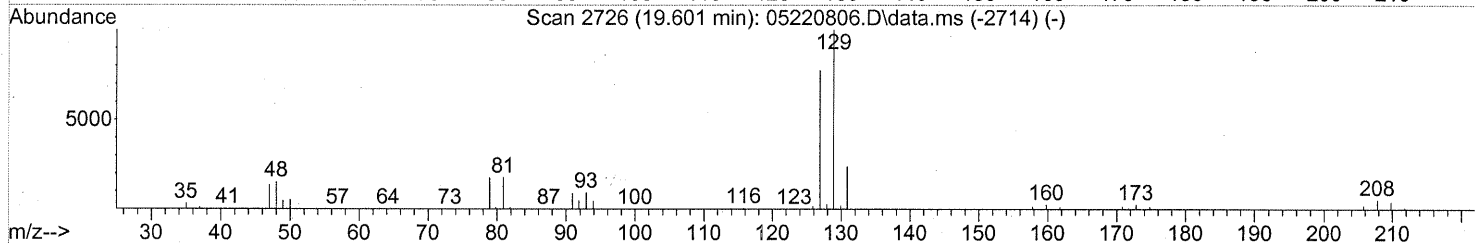
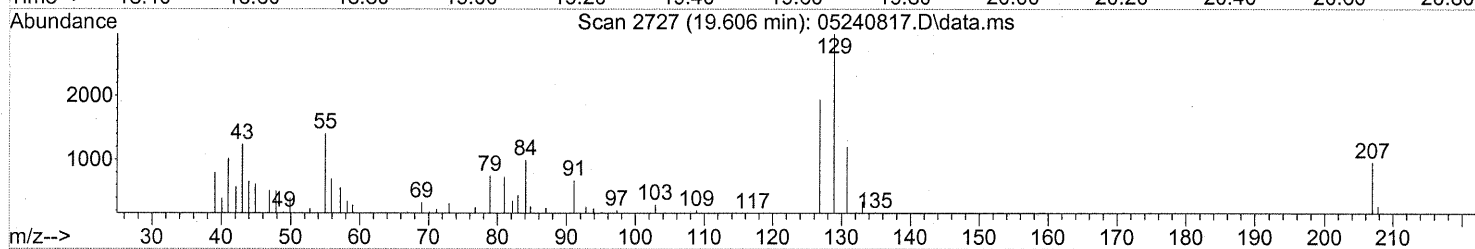
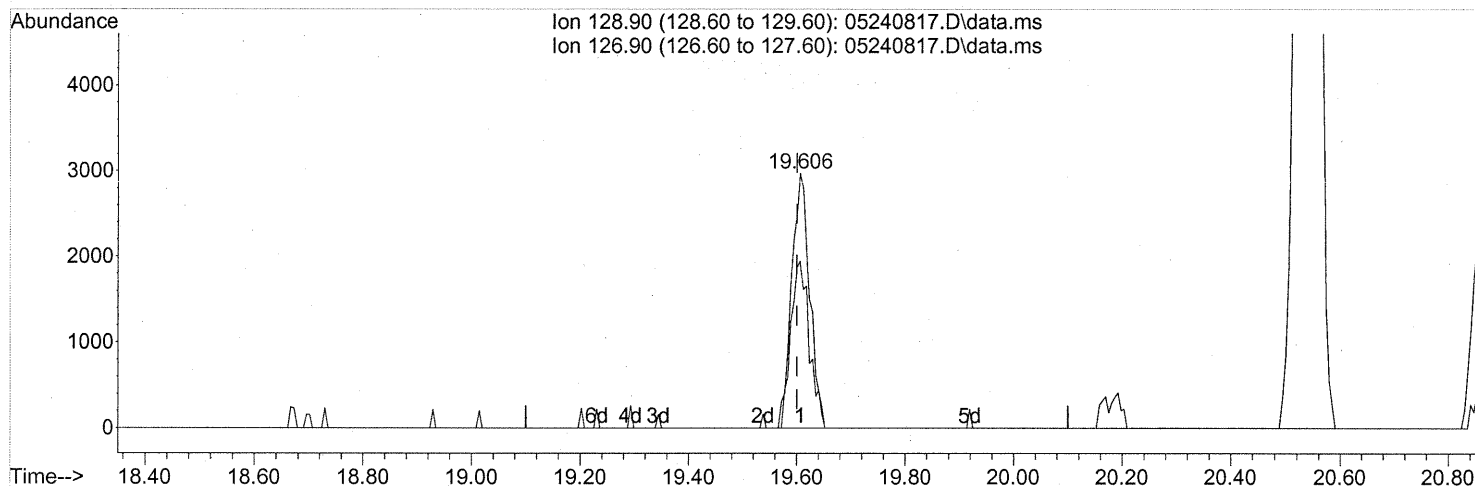
Ion	Exp%	Act%
43.00	100	100
58.00	61.70	36.45#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(60) Dibromochloromethane (T)

19.606min (+0.006) 0.18ng

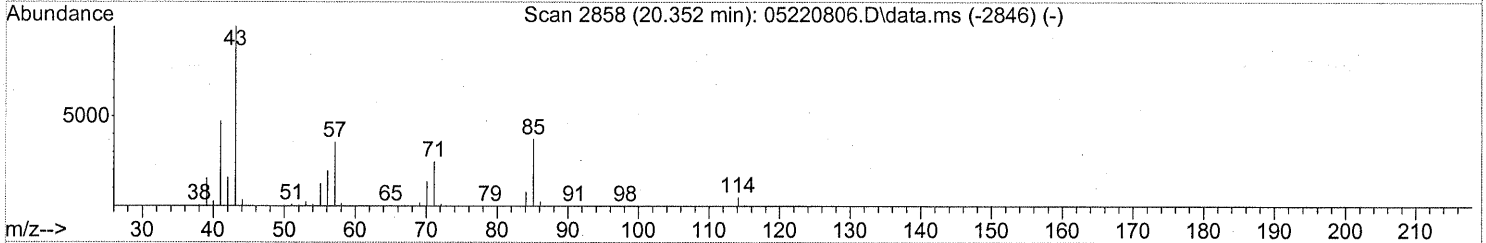
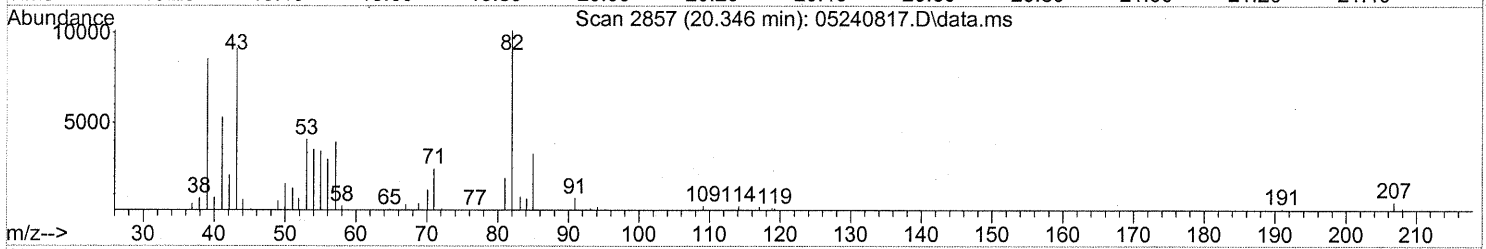
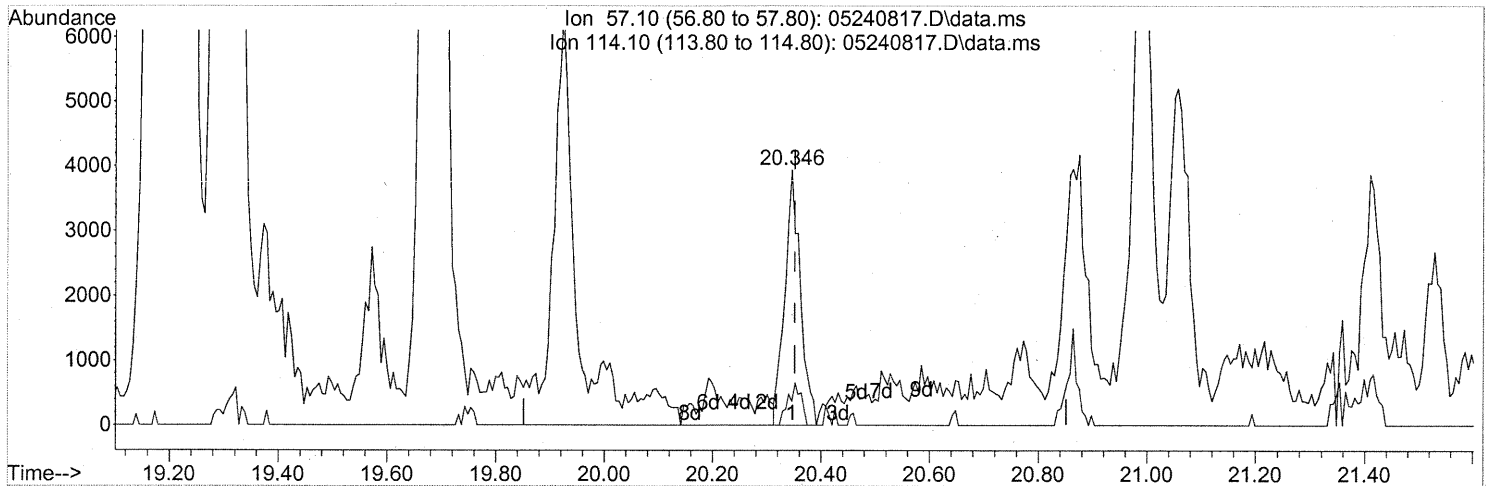
response 6797

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	67.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

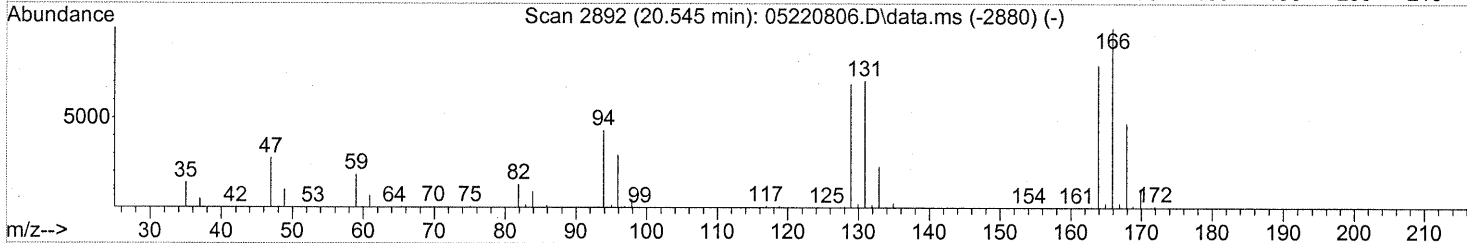
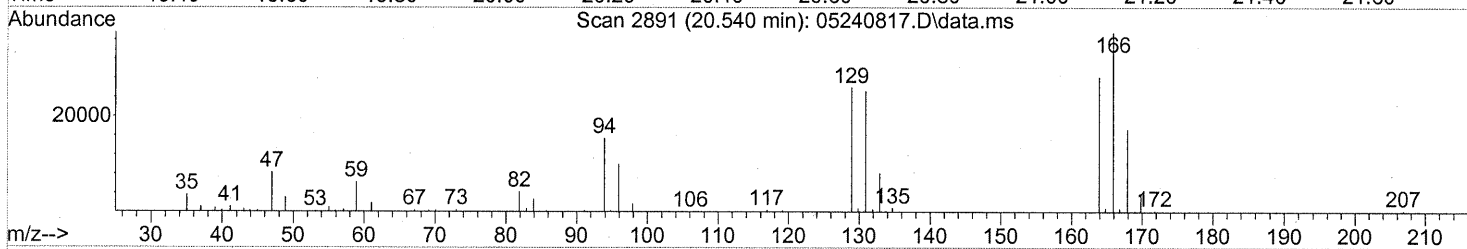
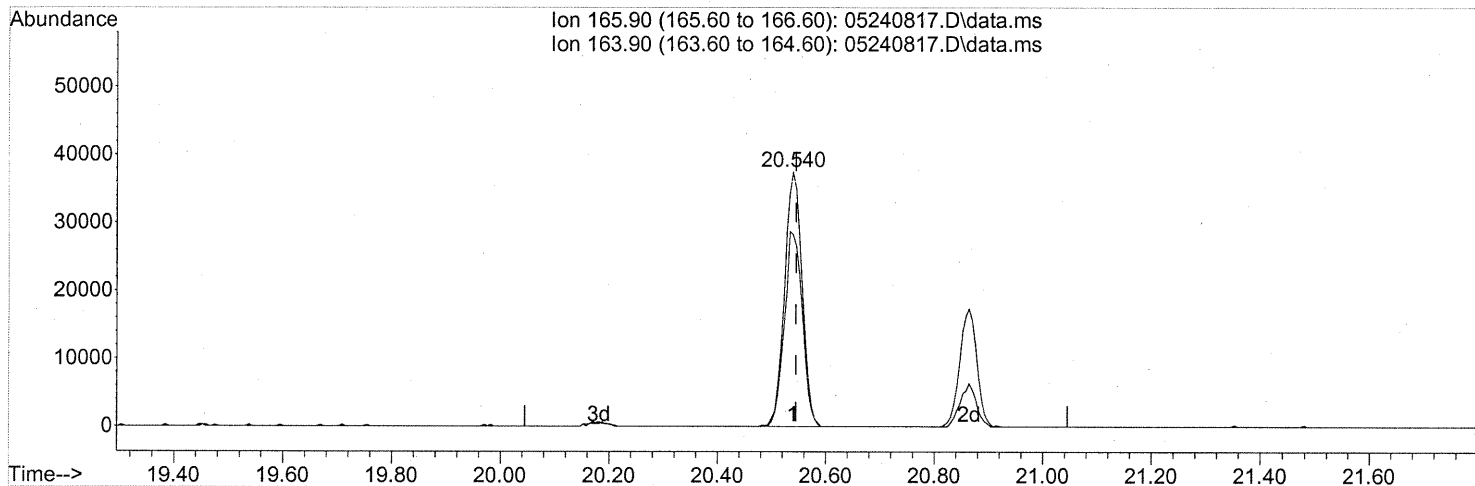
(63) n-Octane (T)  
 20.346min (-0.006) 0.25ng  
 response 7826

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	13.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.540min (-0.006) 1.97ng

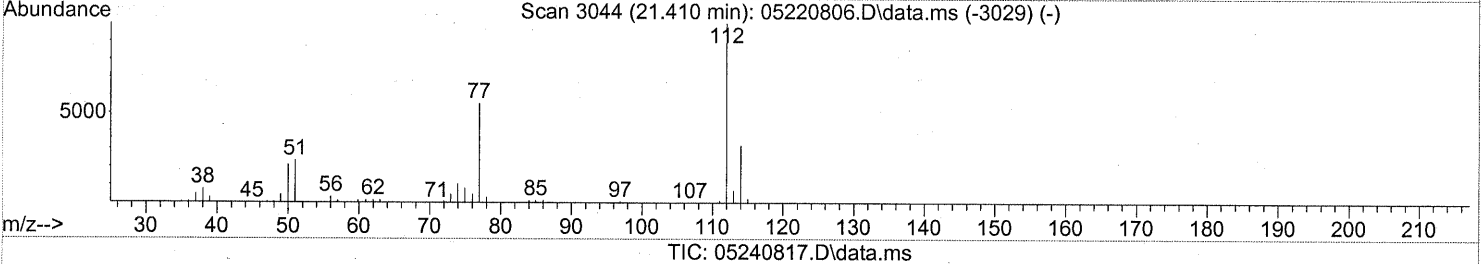
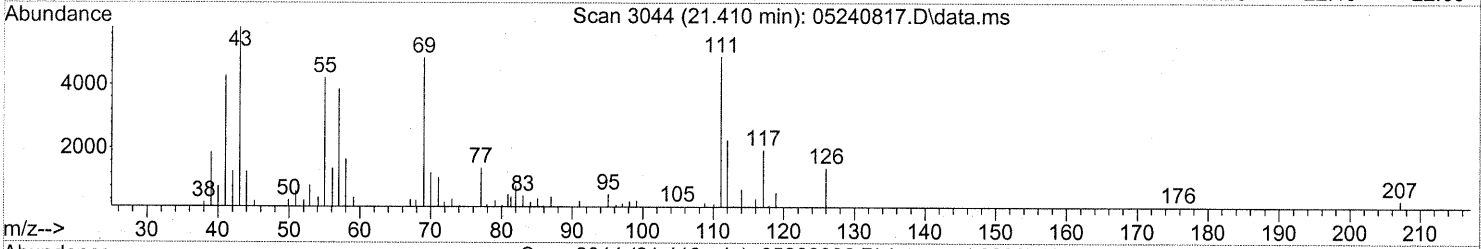
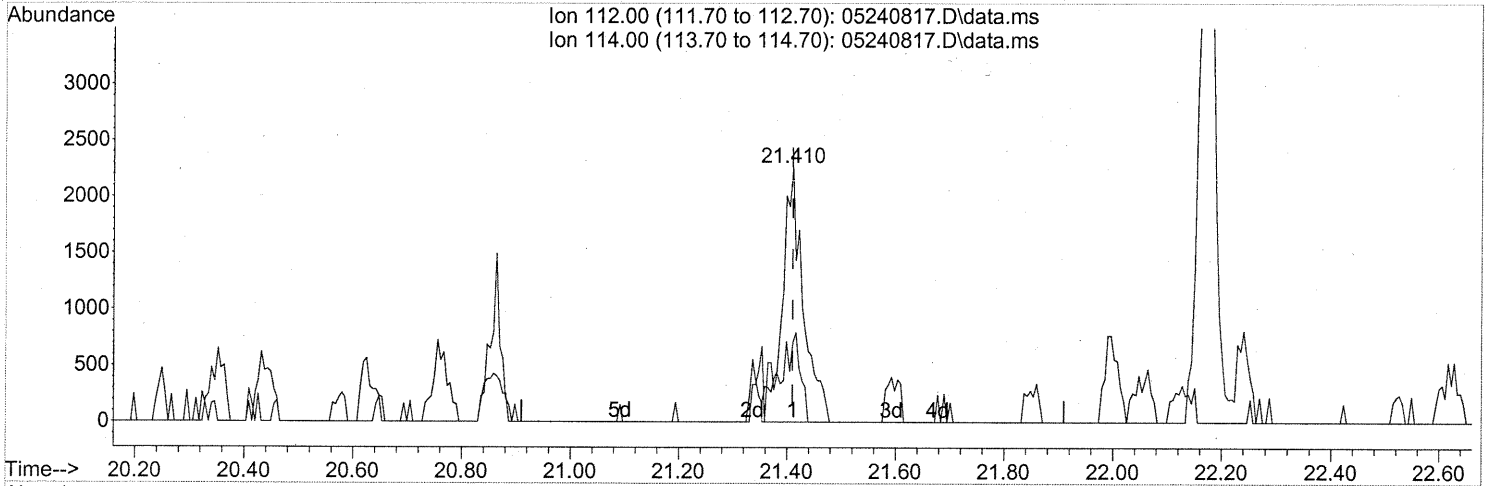
response 83735

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	78.05
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

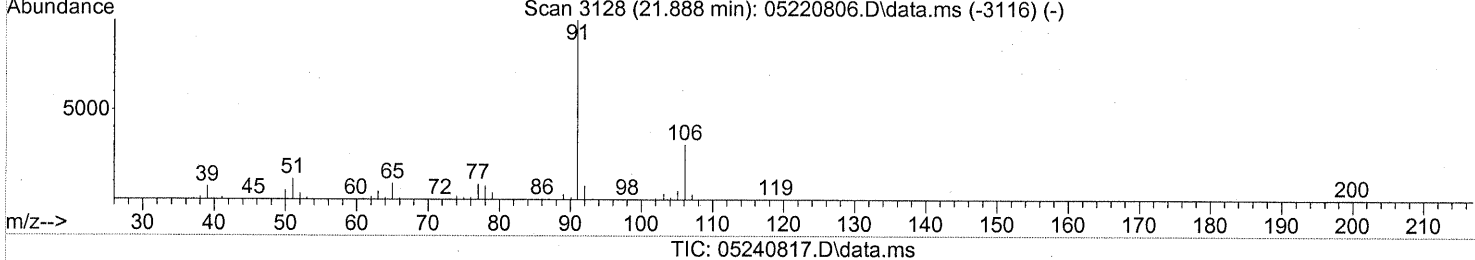
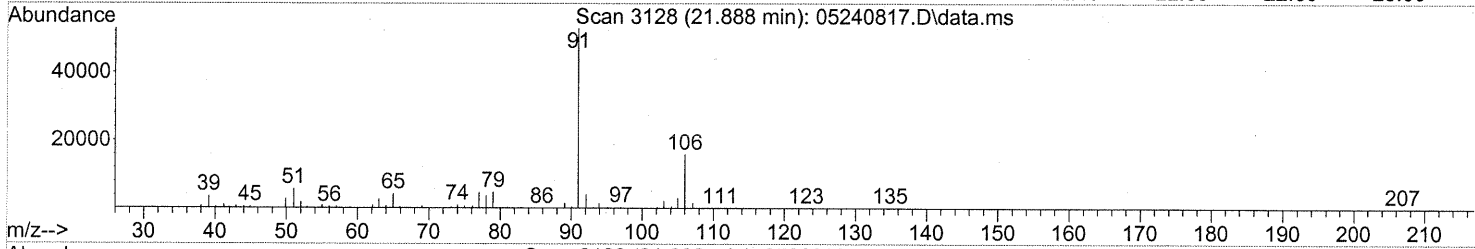
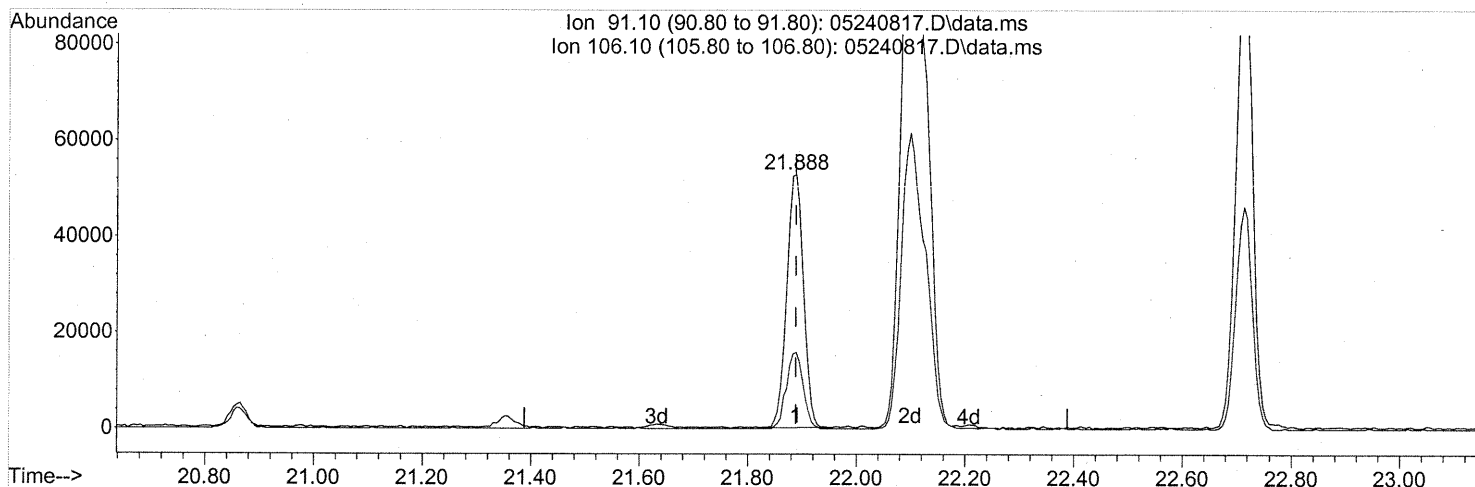
(65) Chlorobenzene (T)  
 21.410min (+0.000) 0.06ng  
 response 6035

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	23.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

21.888min (+0.000) 0.68ng

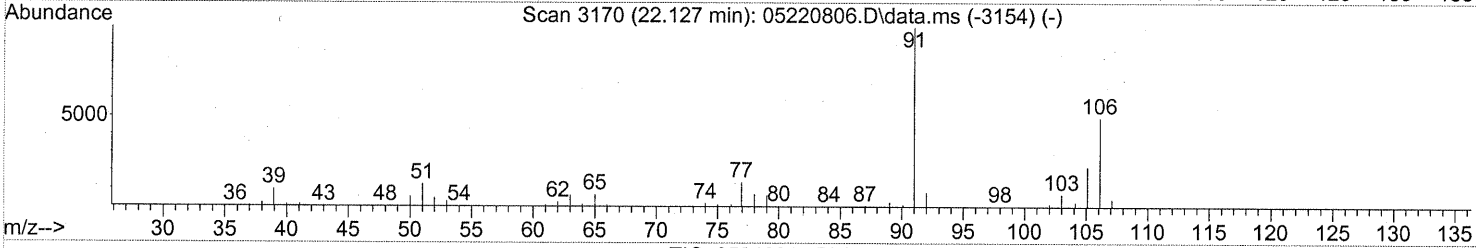
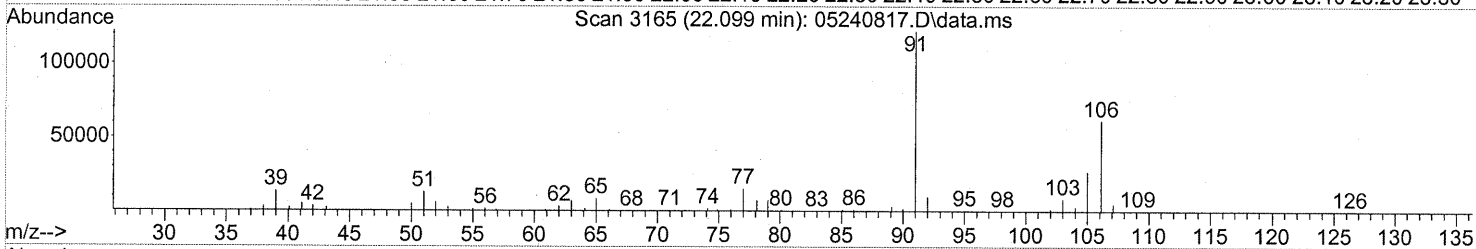
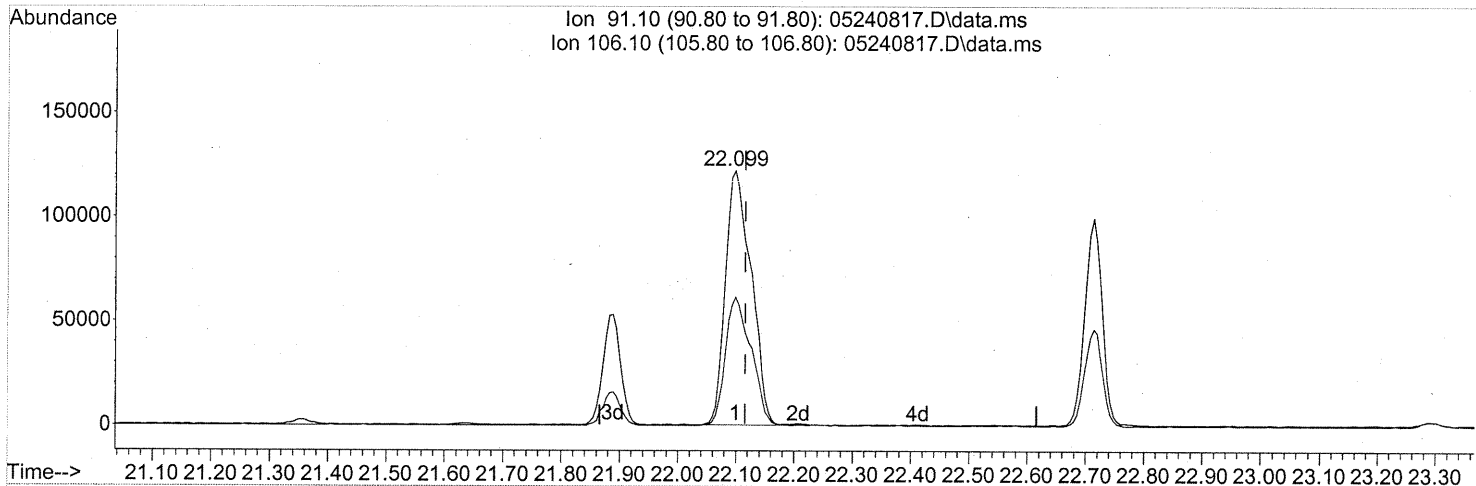
response 112356

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	30.34
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



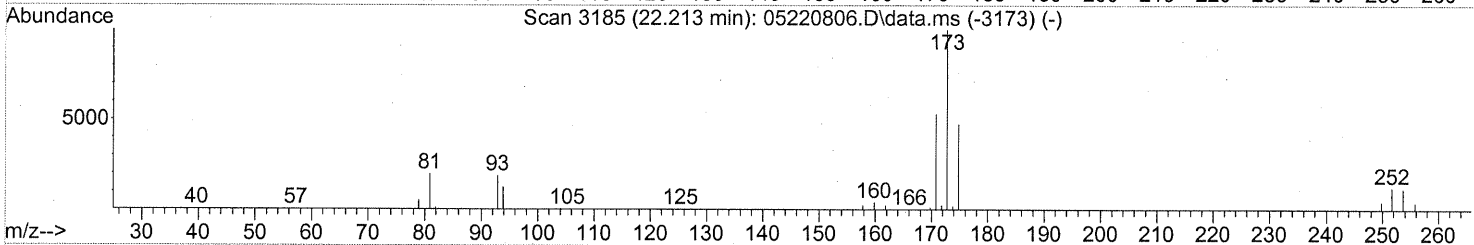
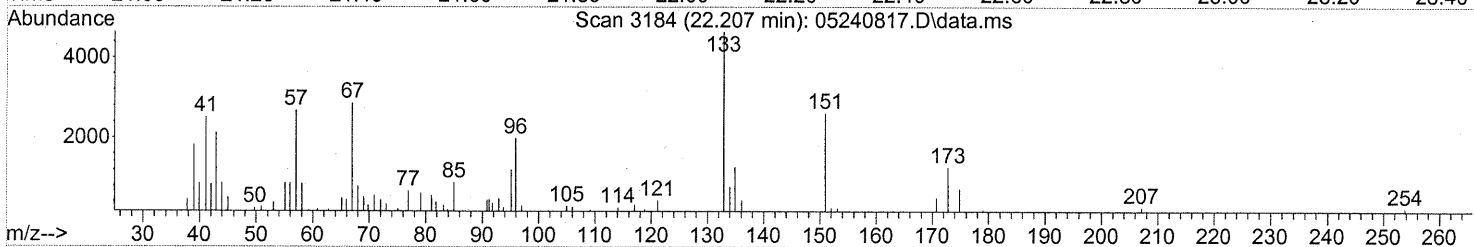
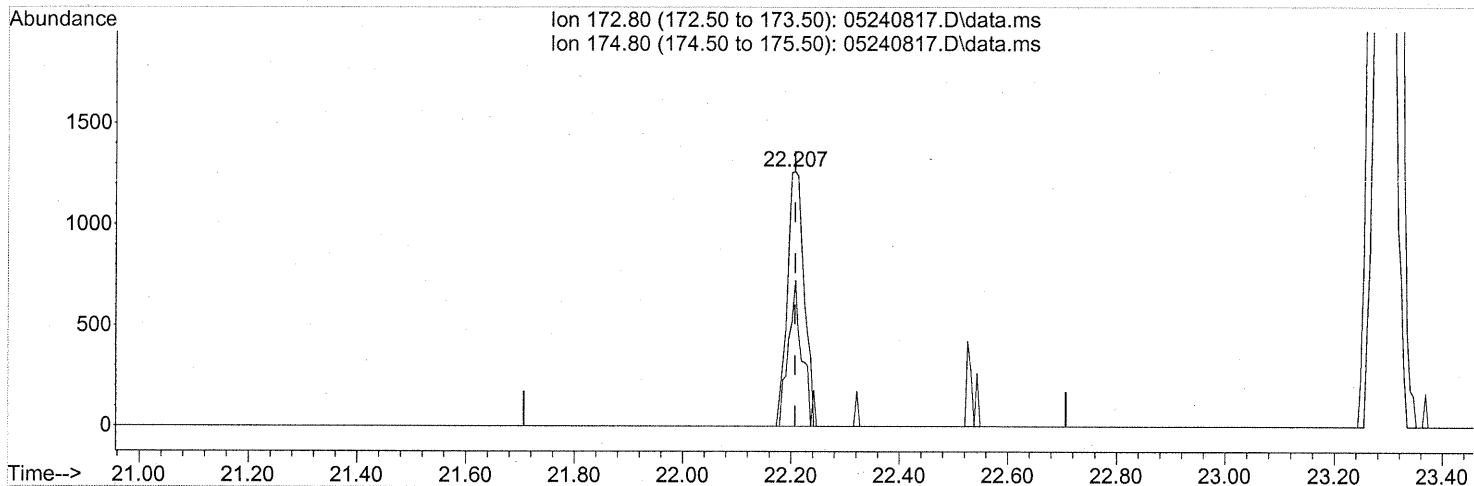
(67) m- & p-Xylene (T)  
 22.099min (-0.017) 3.41ng  
 response 374954

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	50.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

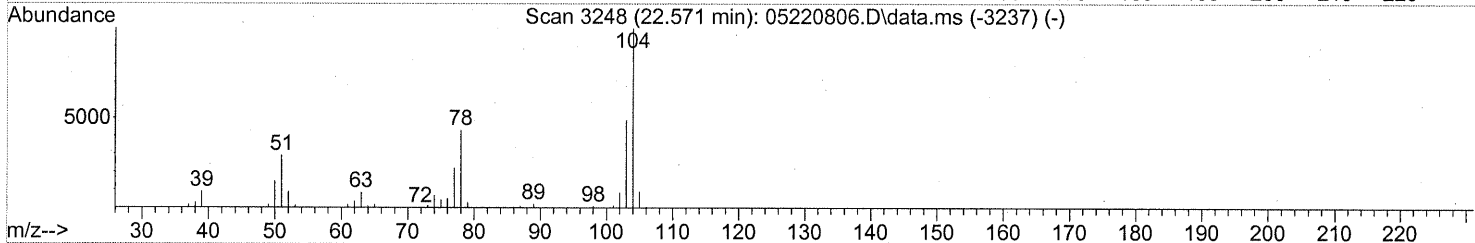
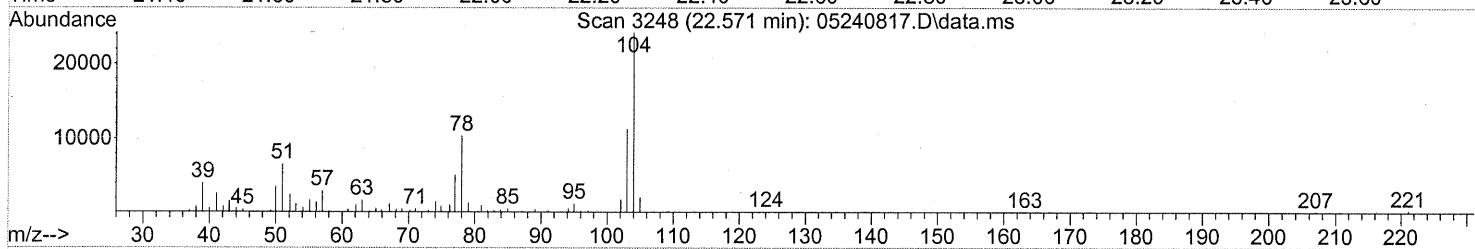
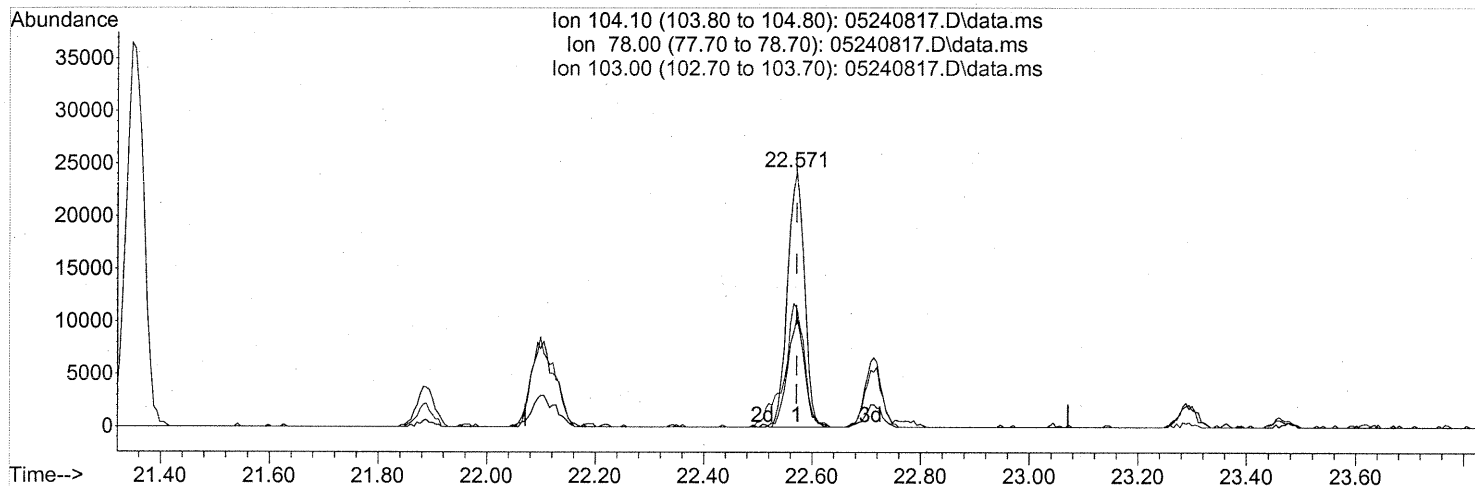
(68) Bromoform (T)  
 22.207min (+0.000) 0.09ng  
 response 2693

Ion	Exp%	Act%
172.80	100	100
174.80	49.40	47.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(69) Styrene (T)

22.571min (+0.000) 0.53ng

response 52242

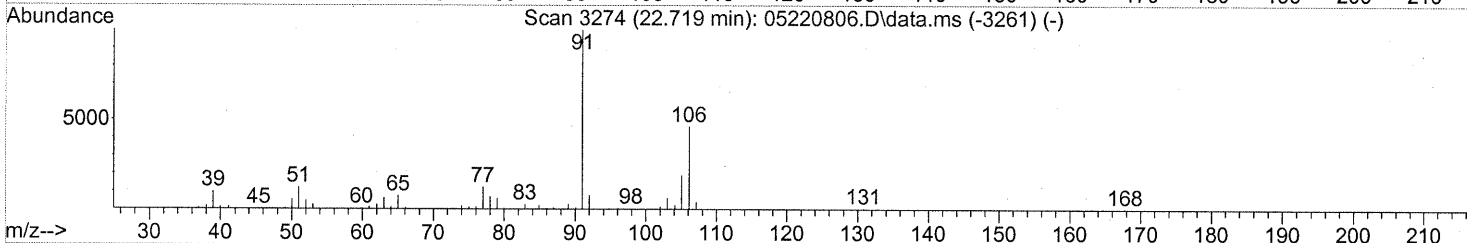
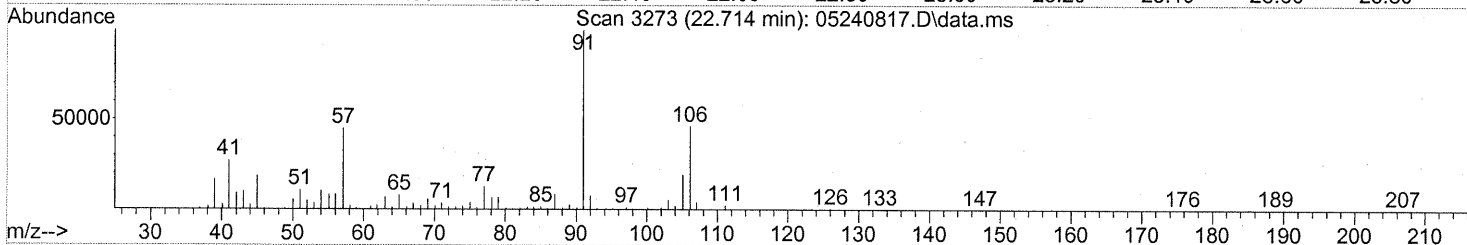
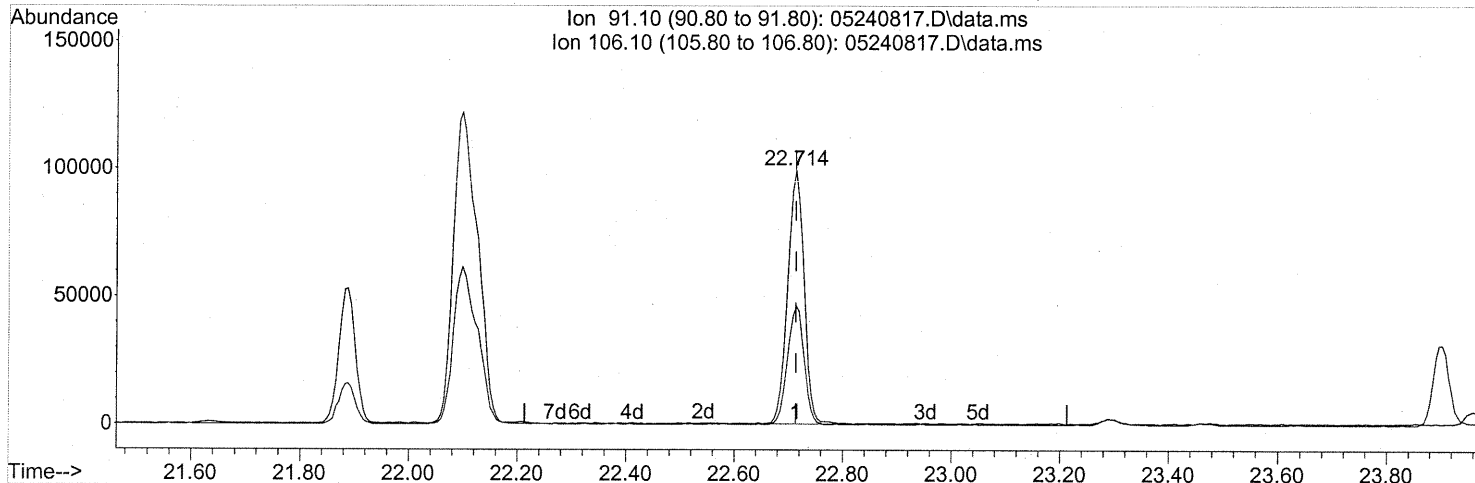
Ion	Exp%	Act%
104.10	100	100
78.00	39.40	43.11
103.00	47.10	58.68
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

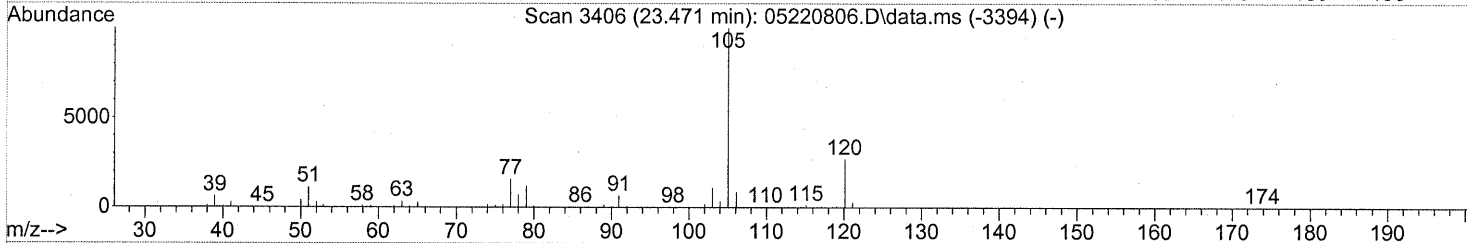
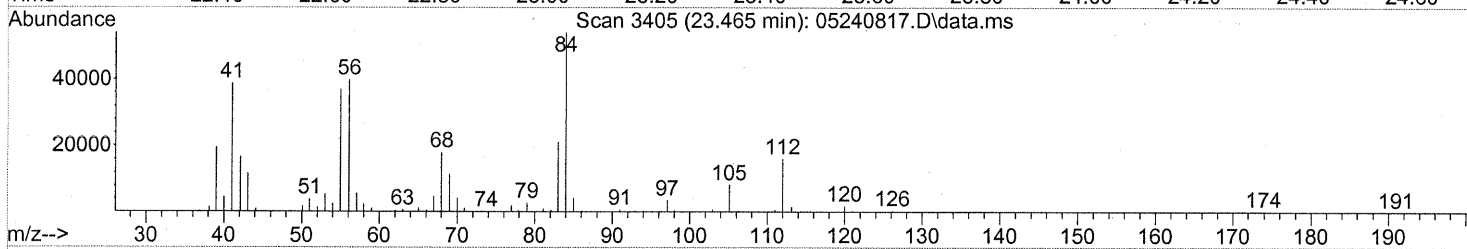
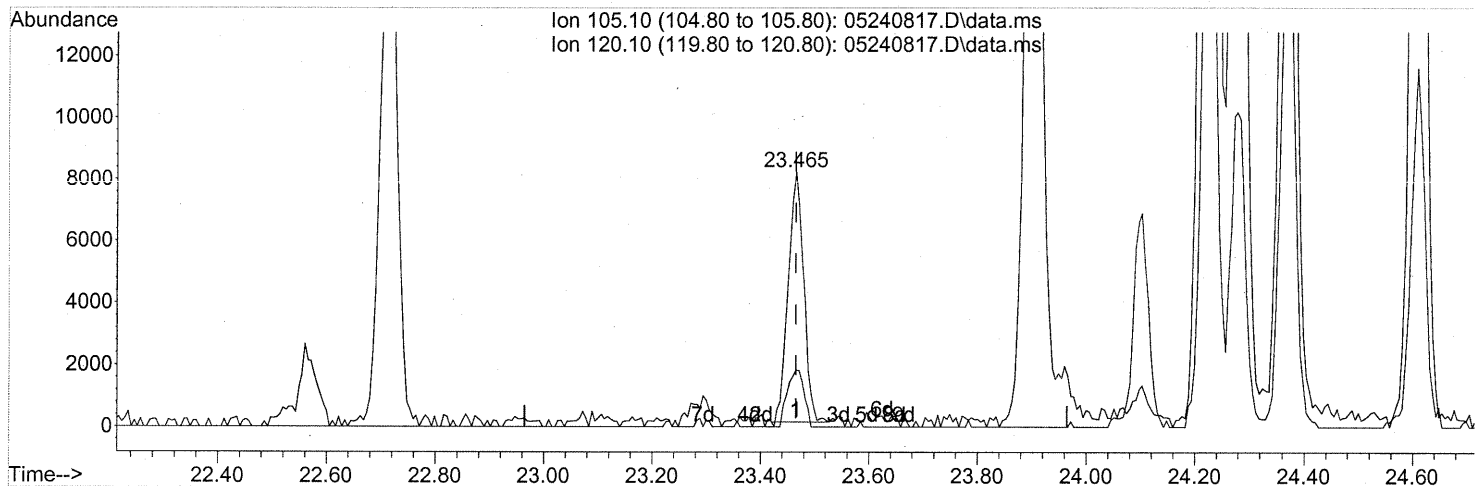
(70) o-Xylene (T)  
 22.714min (+0.000) 1.74ng  
 response 207143

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	47.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

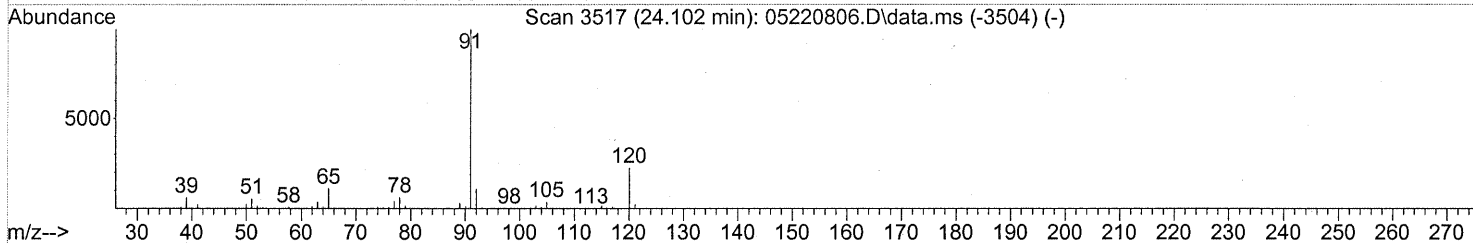
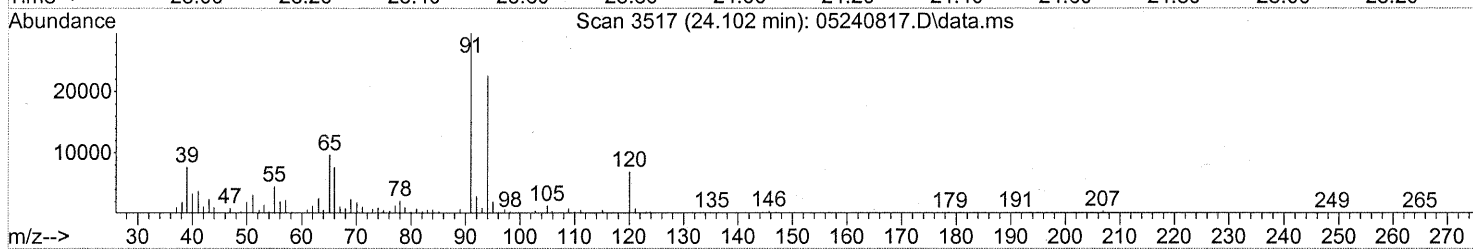
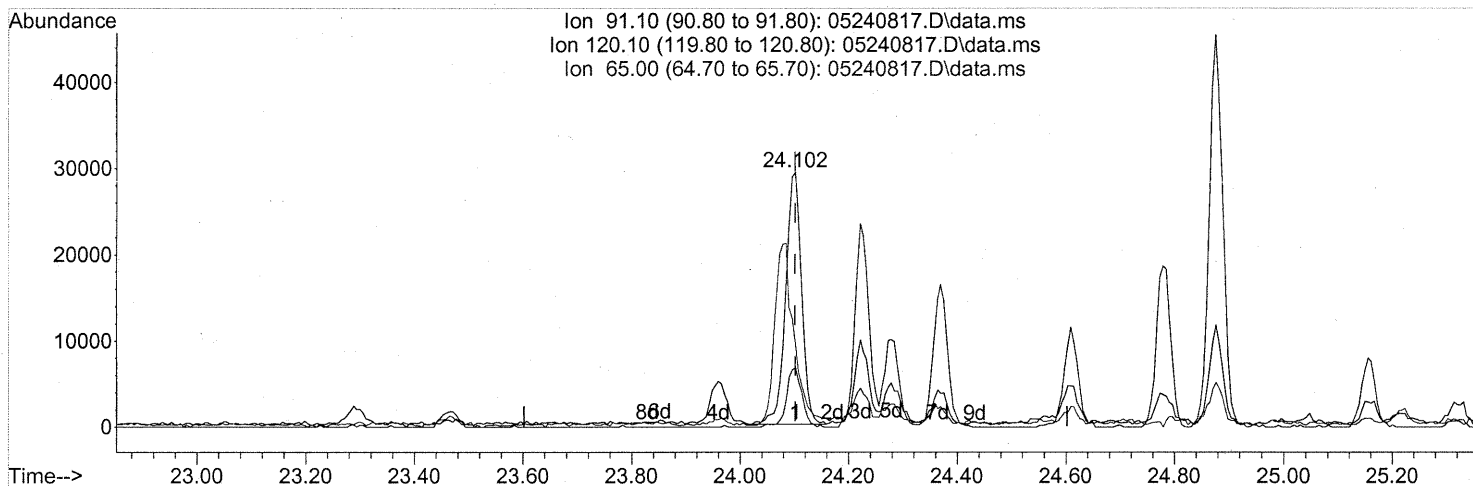
(74) Cumene (T)  
 23.465min (+0.000) 0.10ng  
 response 15903

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	24.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

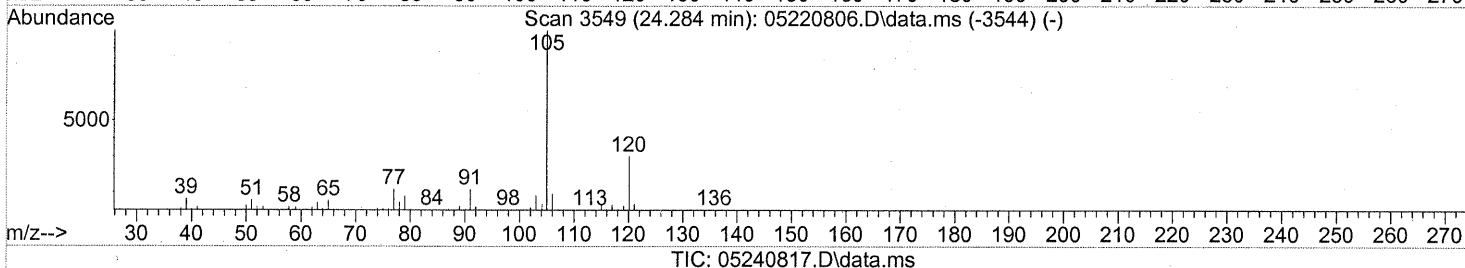
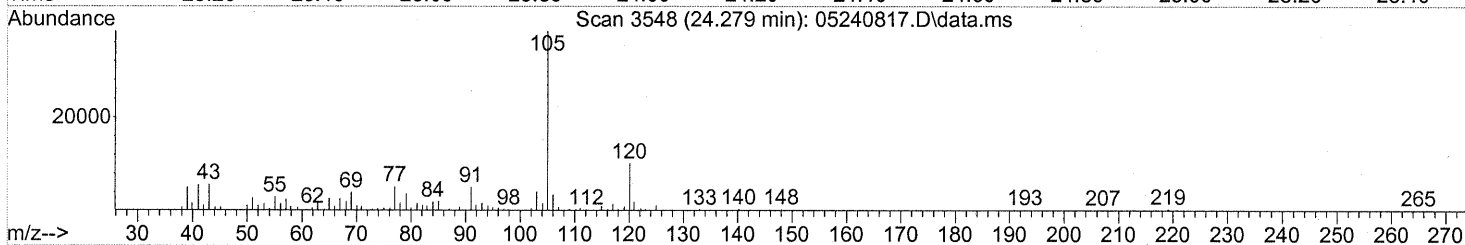
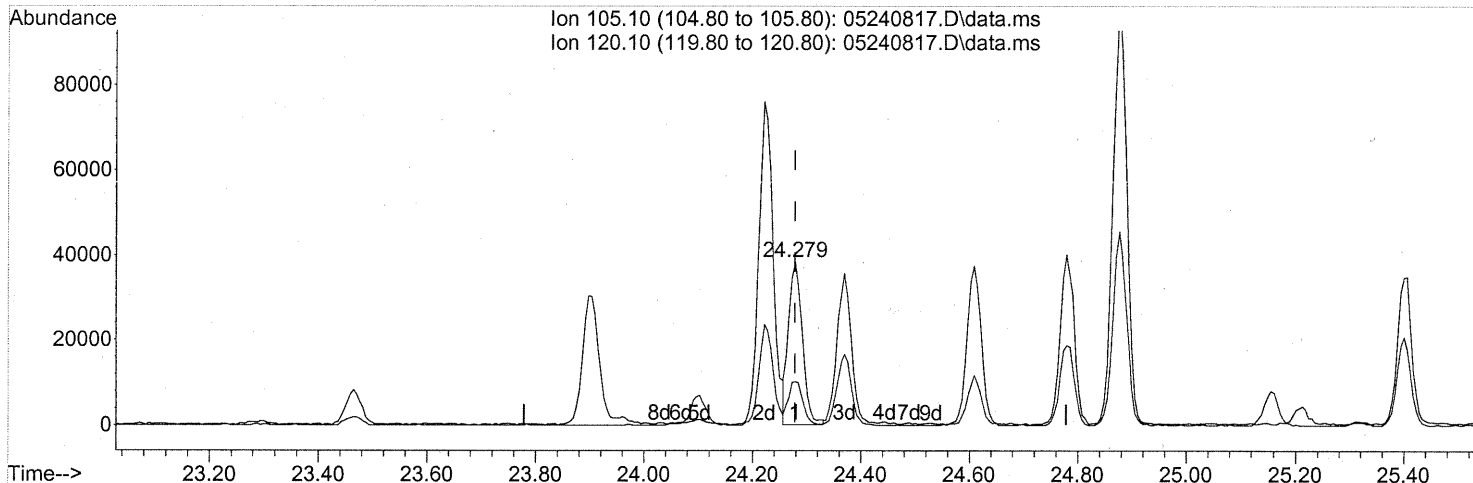
(76) n-Propylbenzene (T)  
 24.102min (+0.000) 0.30ng  
 response 59708

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	22.73
65.00	11.40	88.67#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(78) 4-Ethyltoluene (T)

24.279min (+0.000) 0.43ng

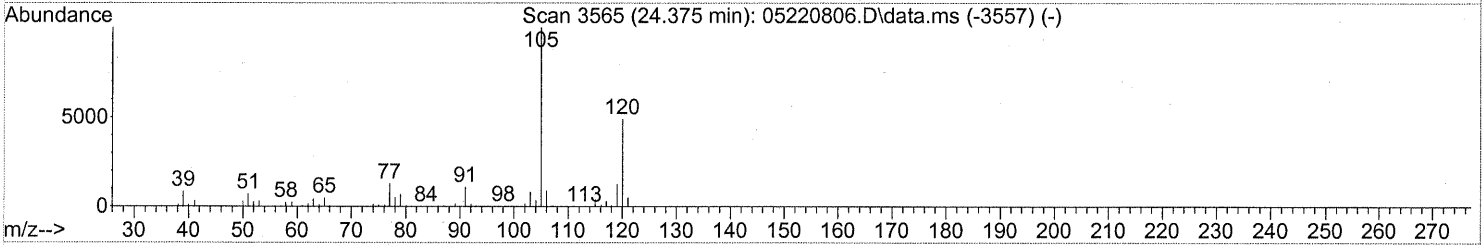
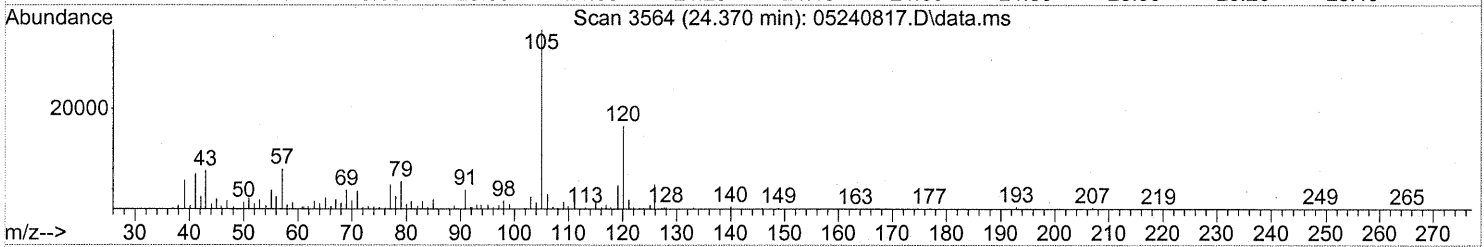
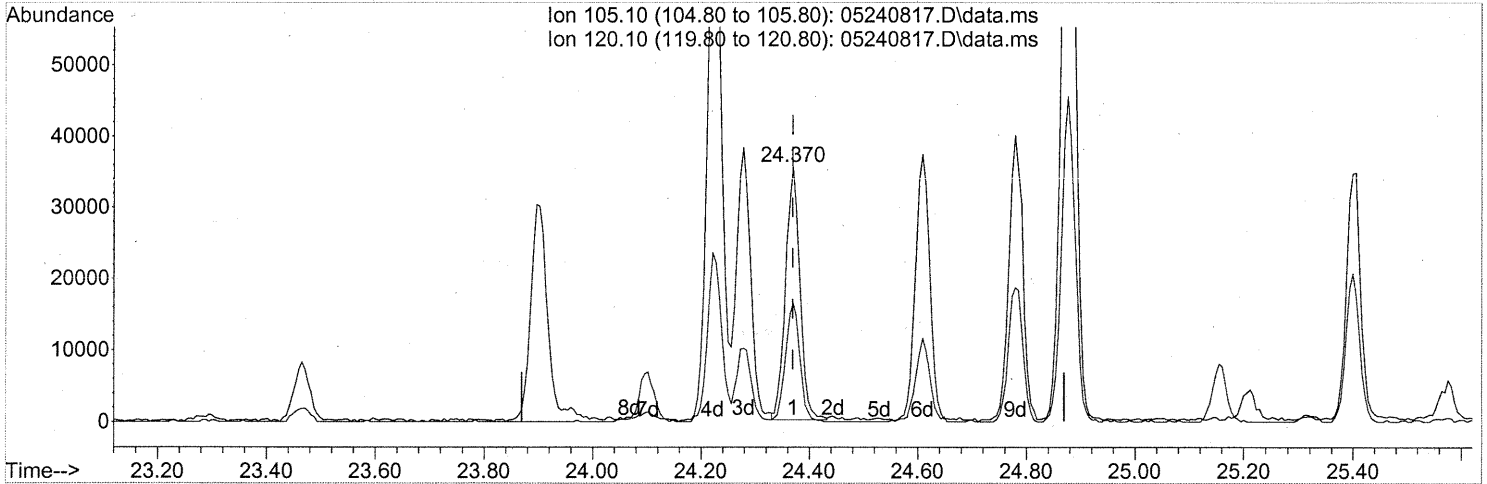
response 67820

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	28.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

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

24.370min (+0.000) 0.46ng

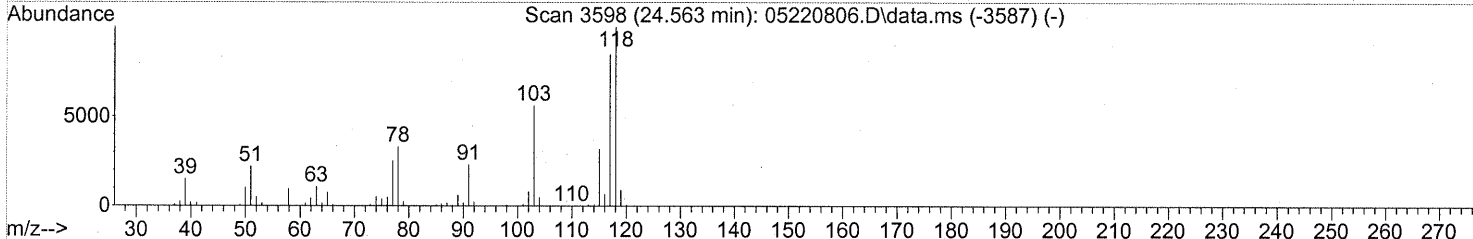
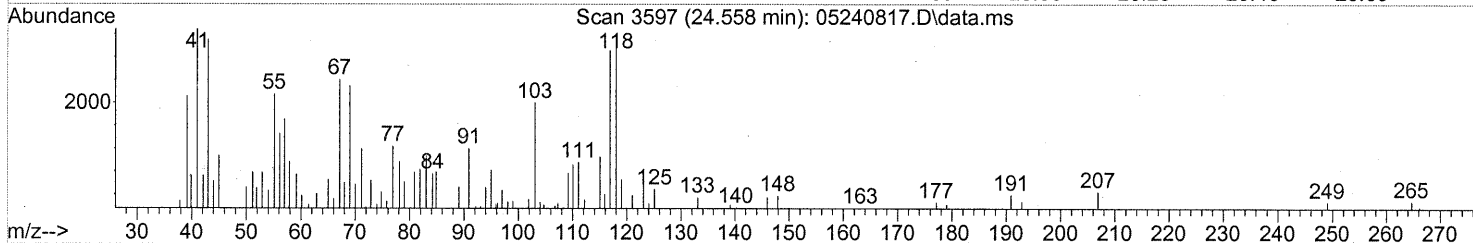
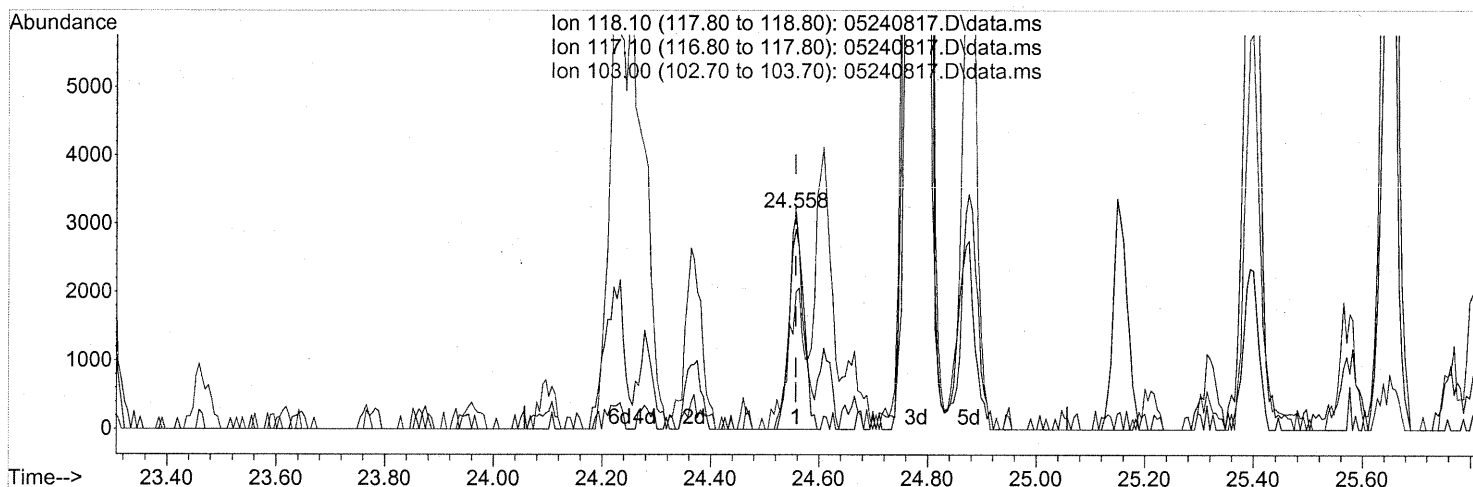
response 65325

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	46.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(80) alpha-Methylstyrene (T)

24.558min (+0.000) 0.07ng

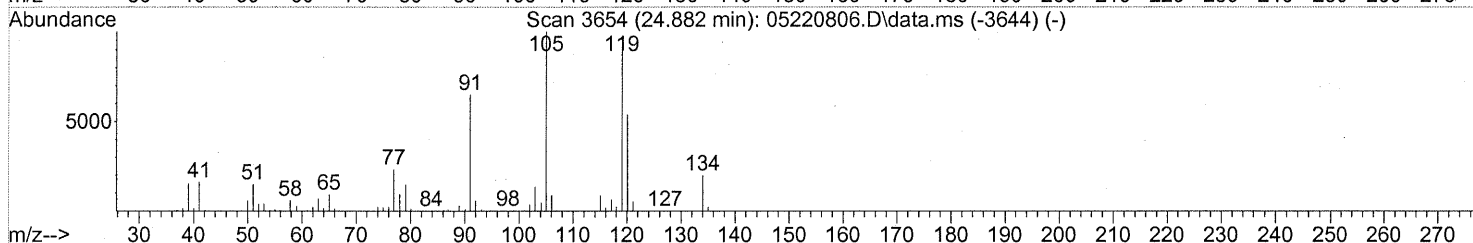
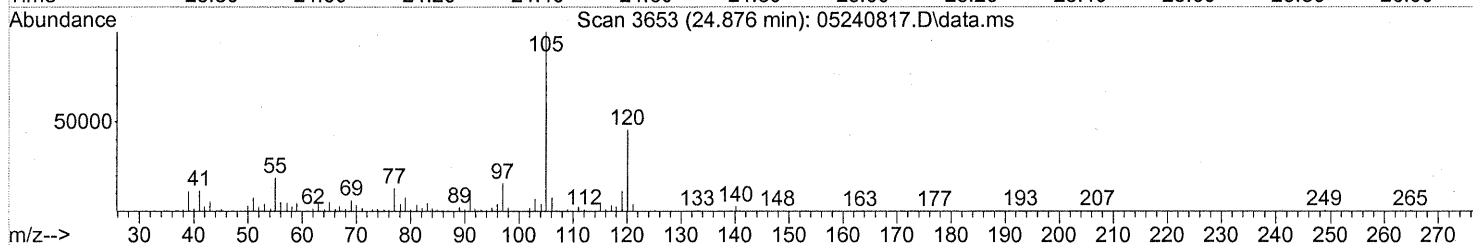
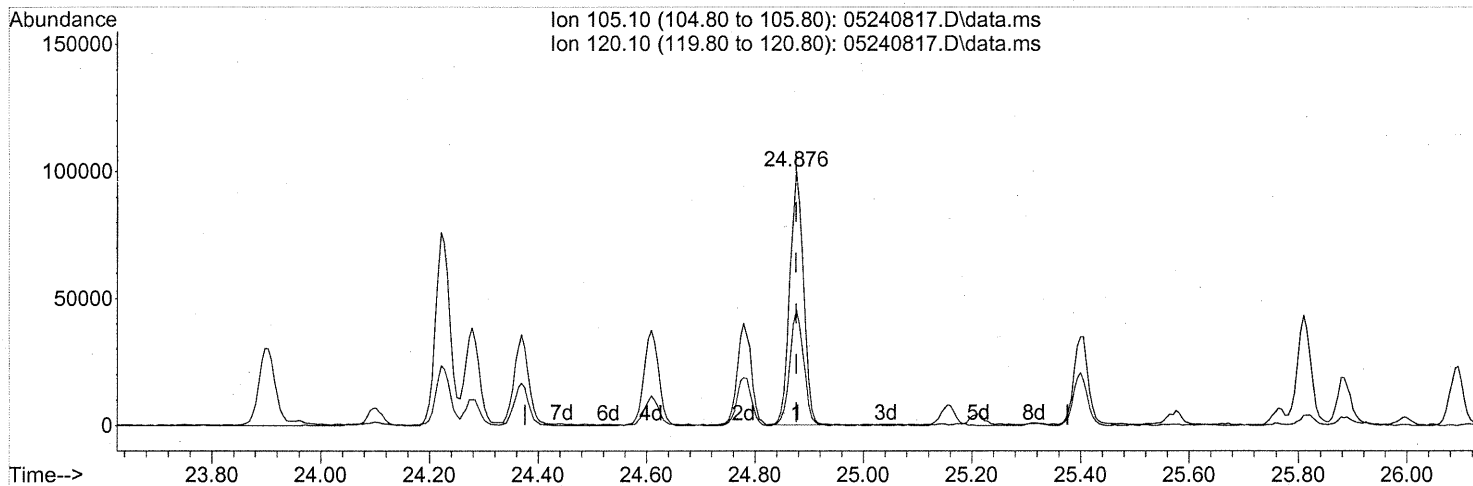
response 5755

Ion	Exp%	Act%
118.10	100	100
117.10	84.10	98.11
103.00	55.30	76.04#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

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

24.876min (+0.000) 1.21ng

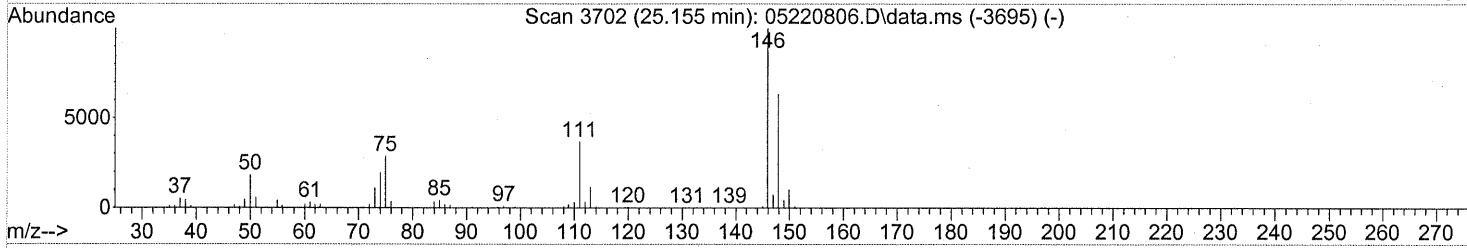
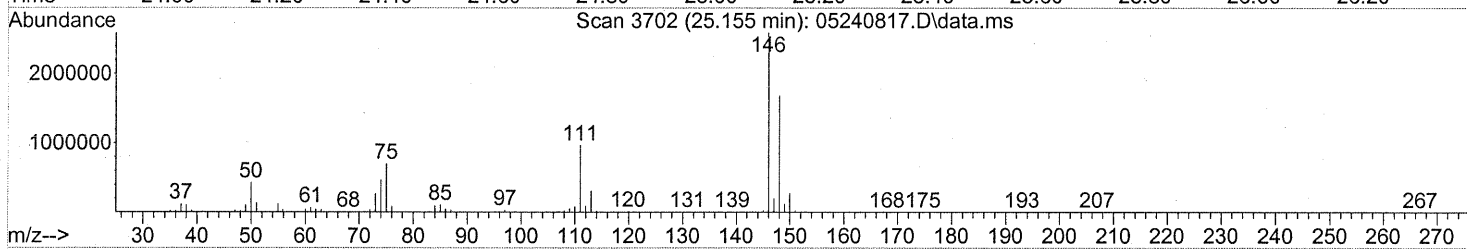
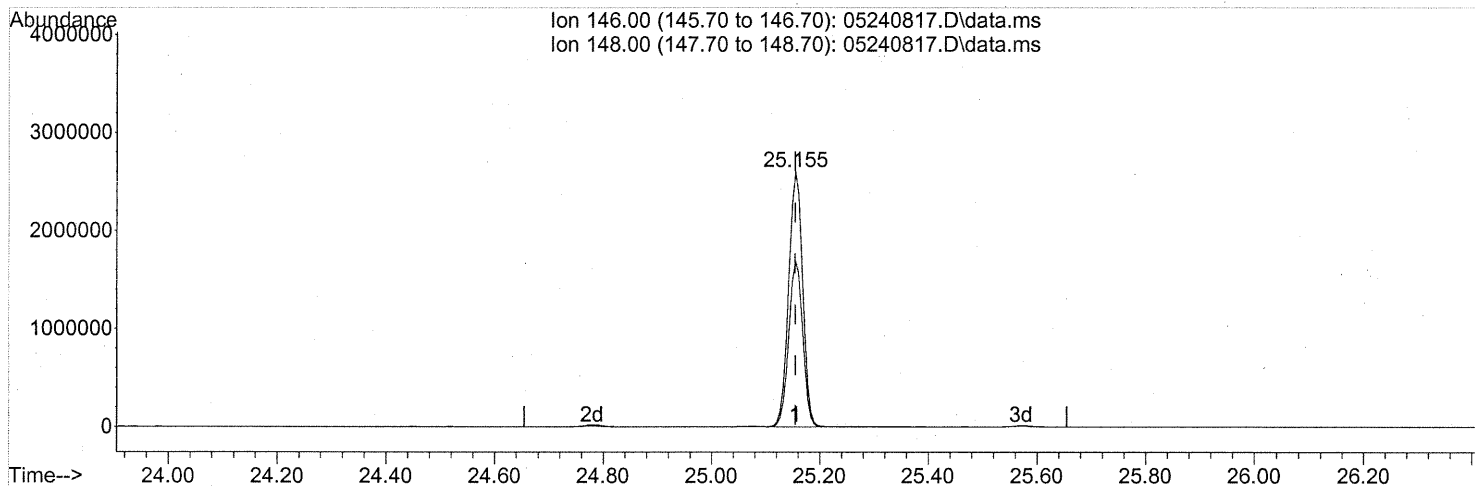
response 175158

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	45.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

25.155min (+0.000) 53.16ng

response 4652470

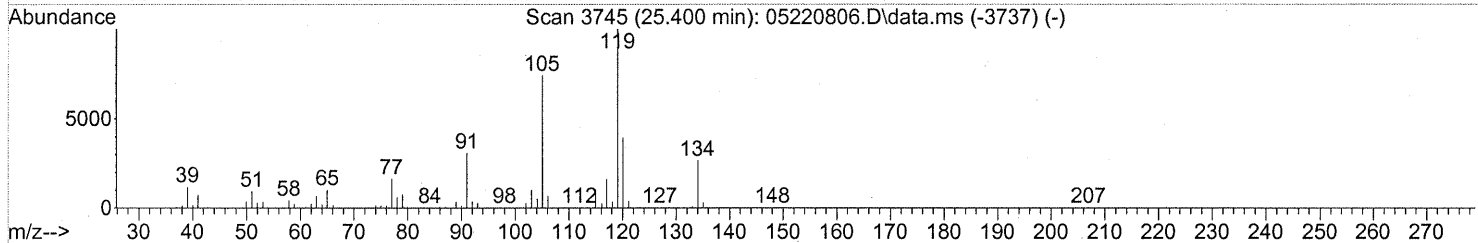
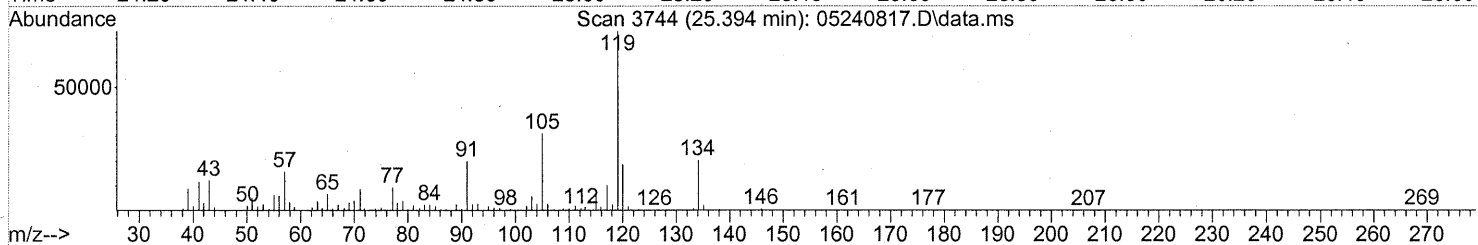
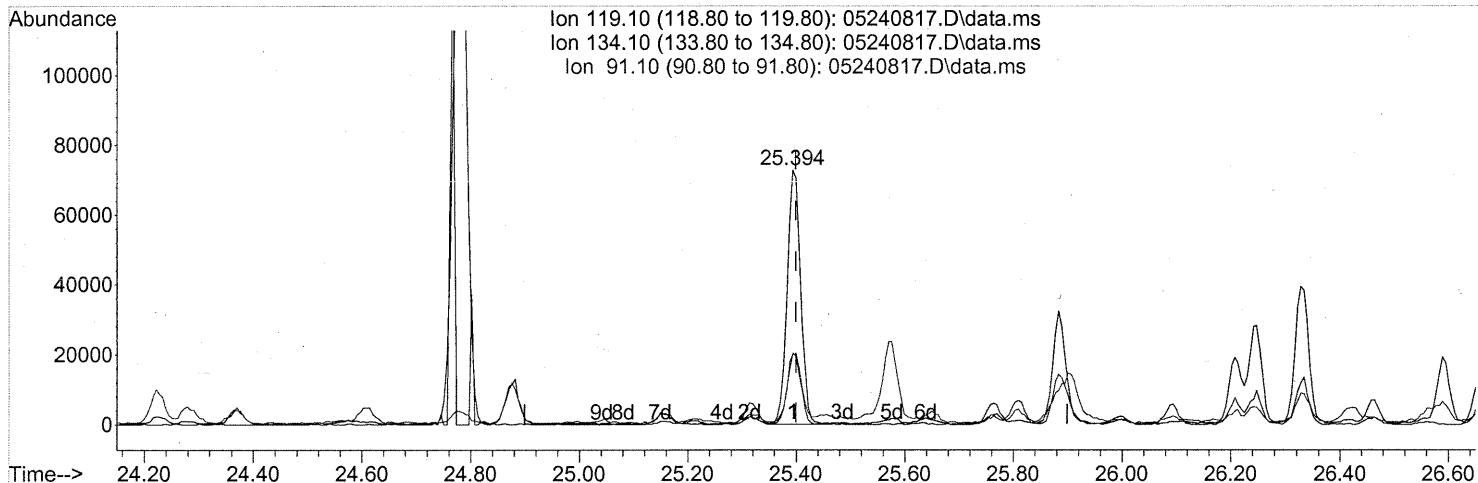
Ion	Exp%	Act%
146.00	100	100
148.00	64.20	64.61
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(88) p-Isopropyltoluene (T)

25.394min (-0.006) 0.82ng

response 124808

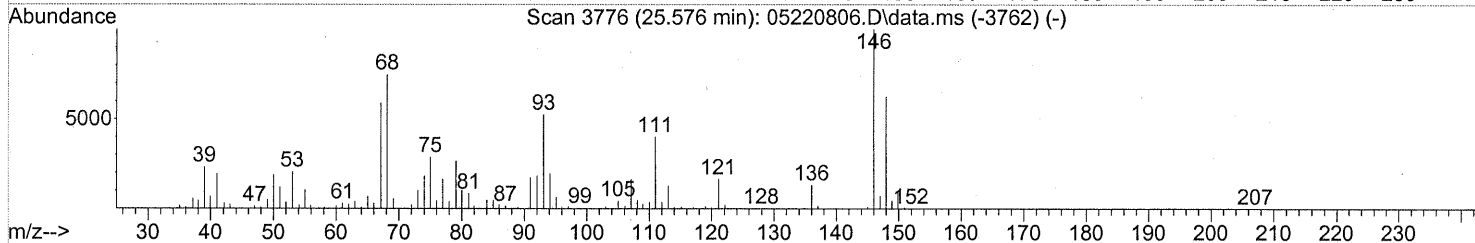
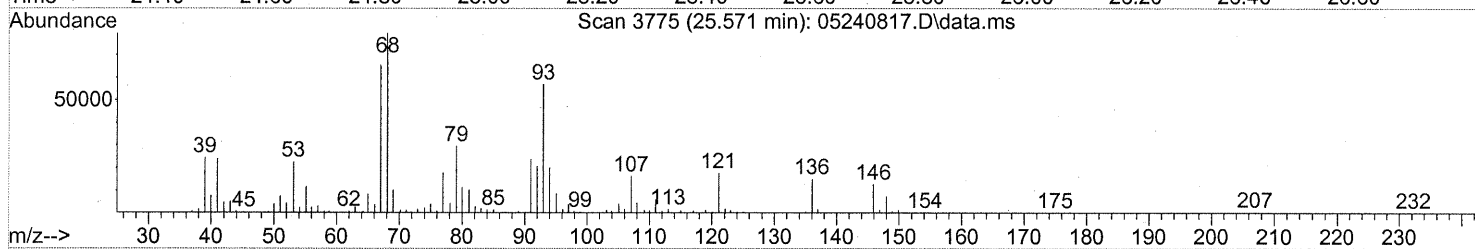
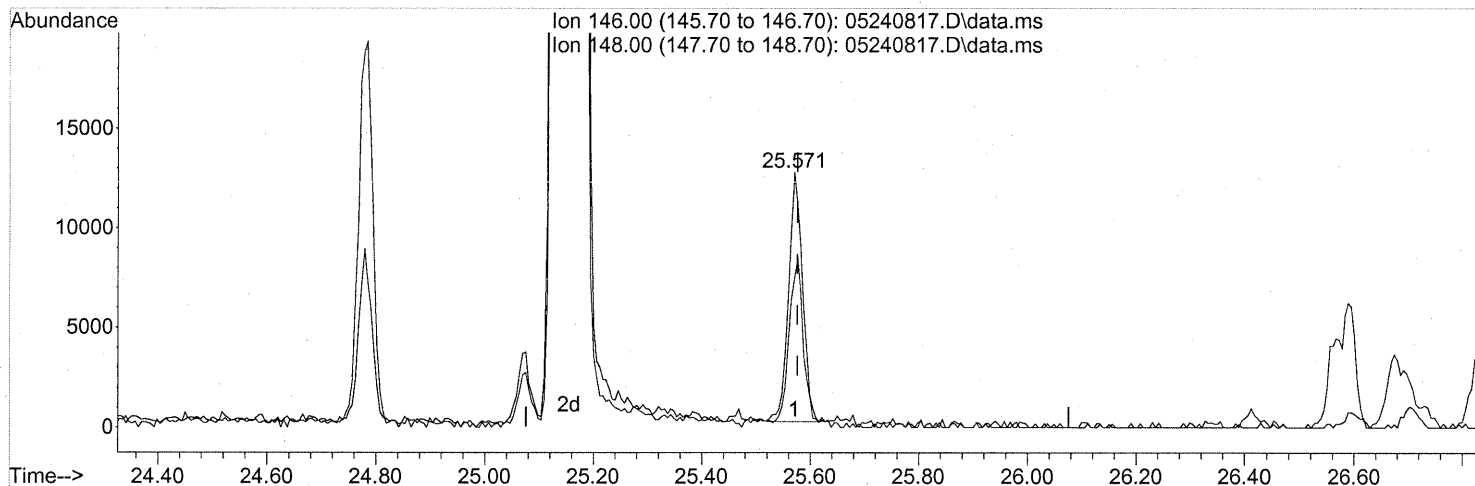
Ion	Exp%	Act%
119.10	100	100
134.10	27.20	28.29
91.10	27.10	30.78
0.00	0.00	0.00

547

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 18:01:56 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240817.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.571min (-0.006) 0.26ng

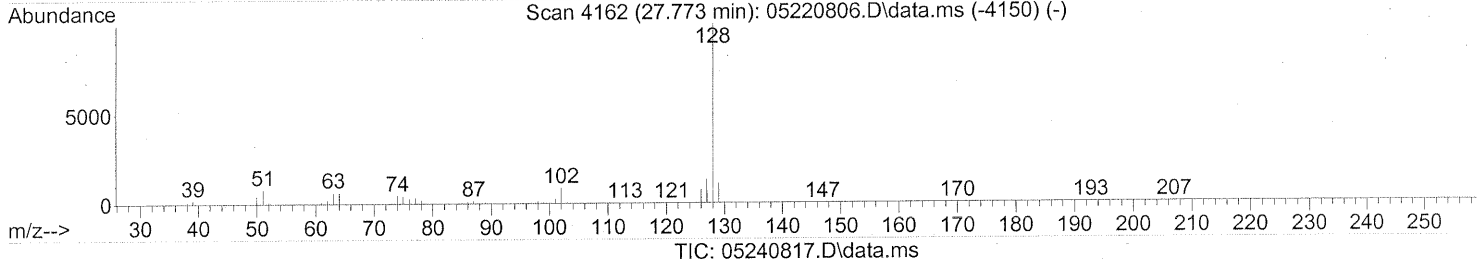
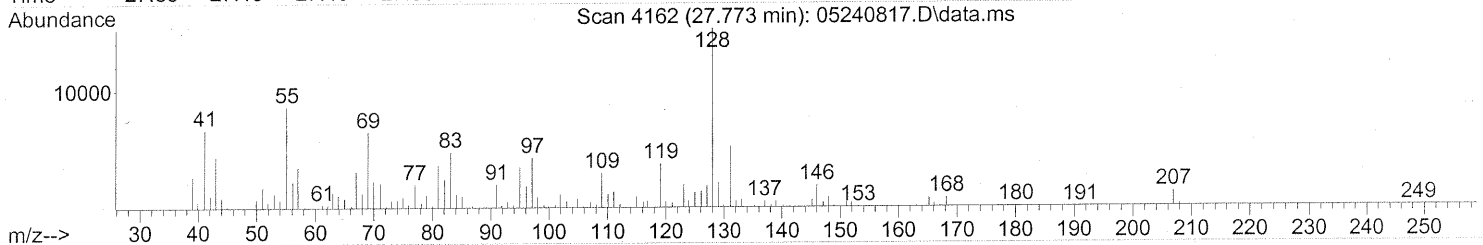
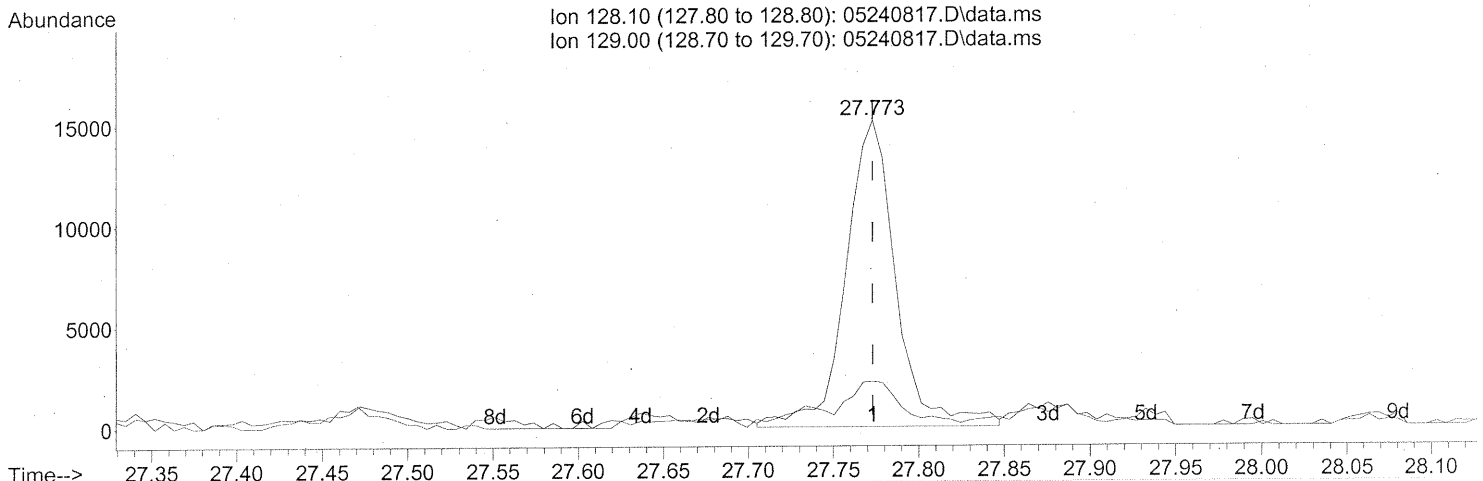
response 22227

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	71.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240817.D  
Acq On : 24 May 2008 18:08  
Operator : WA  
Sample : P0801422-010 (1000ml)  
Misc : ENSR SG65B-05 (-2.3, 3.5)  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 09:04:17 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(95) Naphthalene (T)  
27.773min (+0.000) 0.16ng  
response 31041

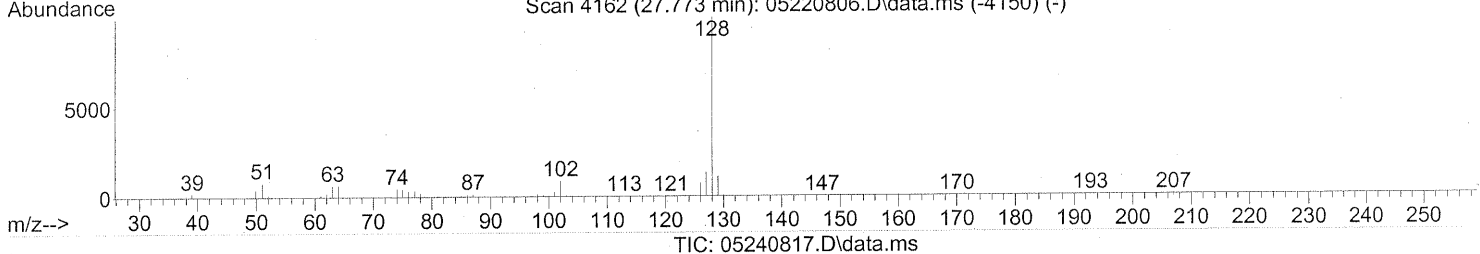
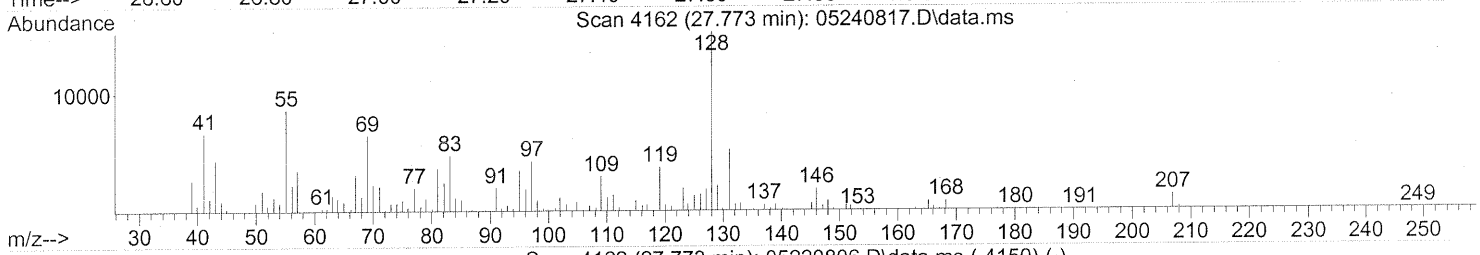
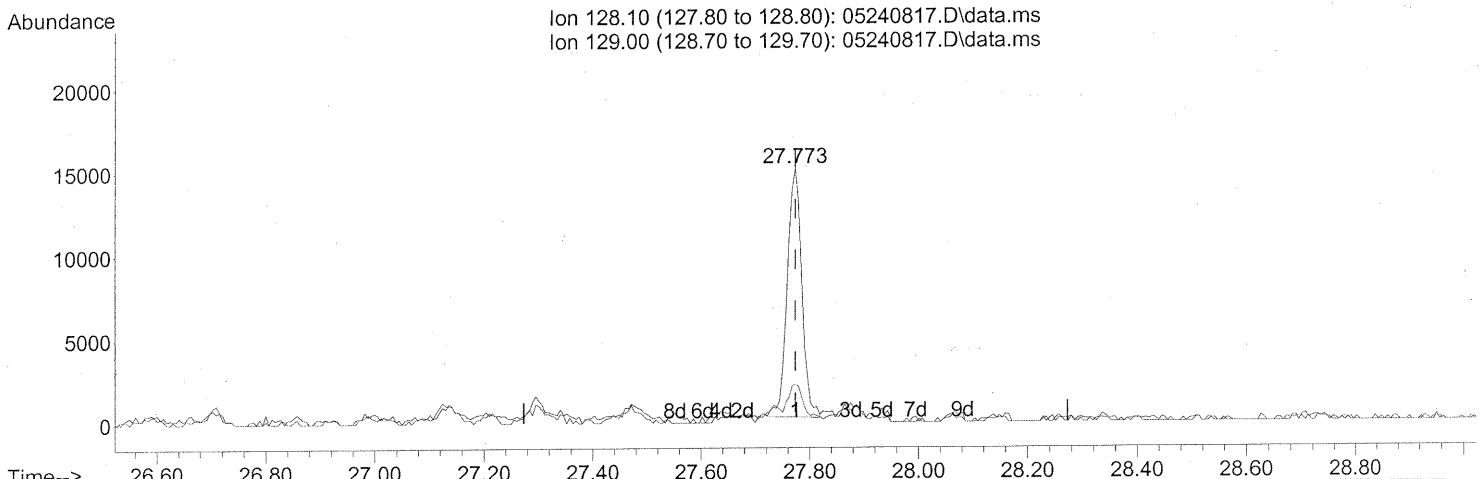
*extra tailing*

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	15.65
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Quant)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801422-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 09:04:17 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(95) Naphthalene (T)

27.773min (+0.000) 0.15ng m

response 27818

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	17.46
0.00	0.00	0.00
0.00	0.00	0.00

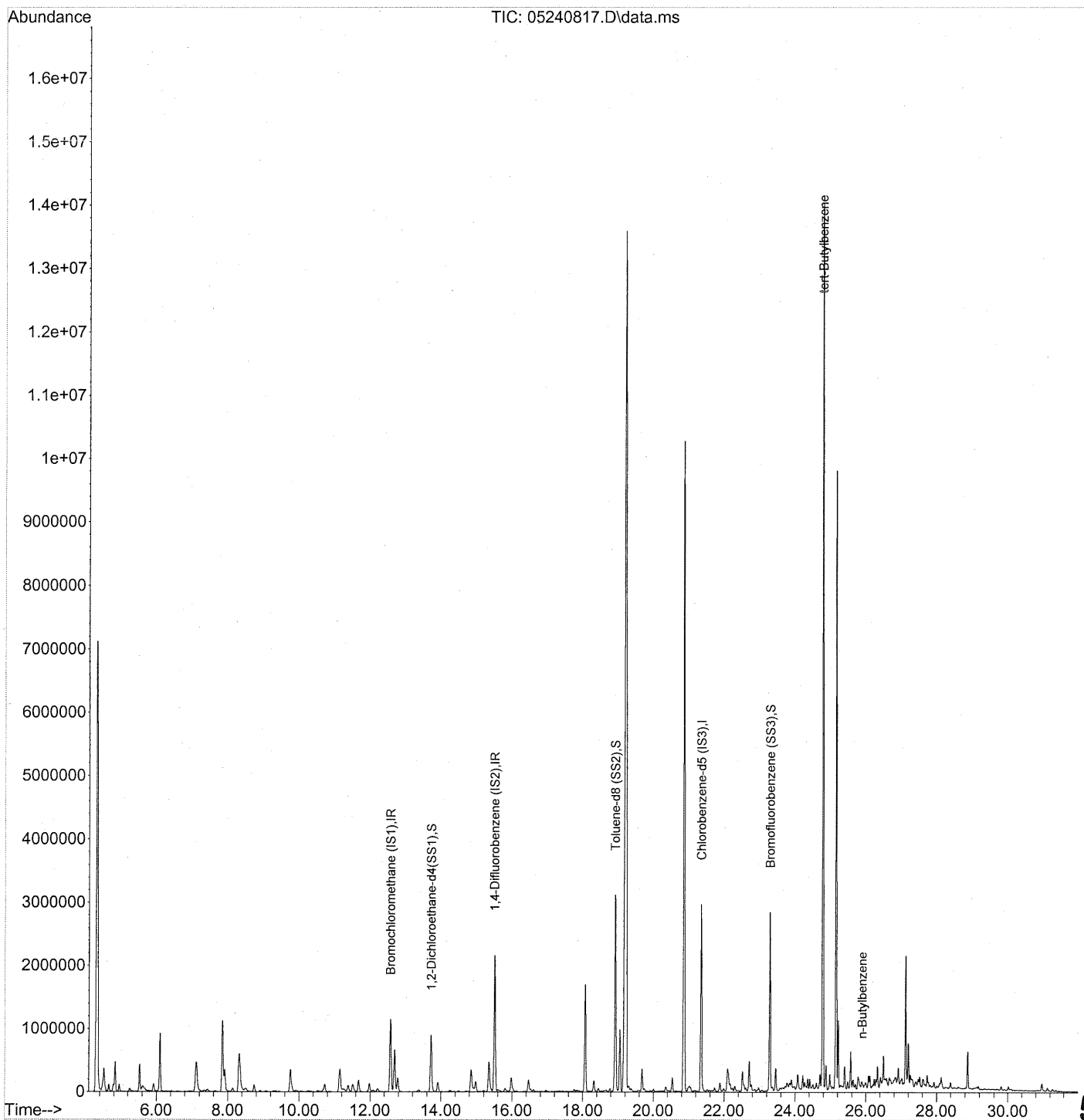
*corr. baseline*

*WA 5/29/08*

*WA 5/30/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240817.D  
Acq On : 24 May 2008 18:08  
Operator : WA  
Sample : P0801442-010 (1000ml)  
Misc : ENSR SG65B-05 (-2.3, 3.5)  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 20:37:04 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



551

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 20:37:04 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

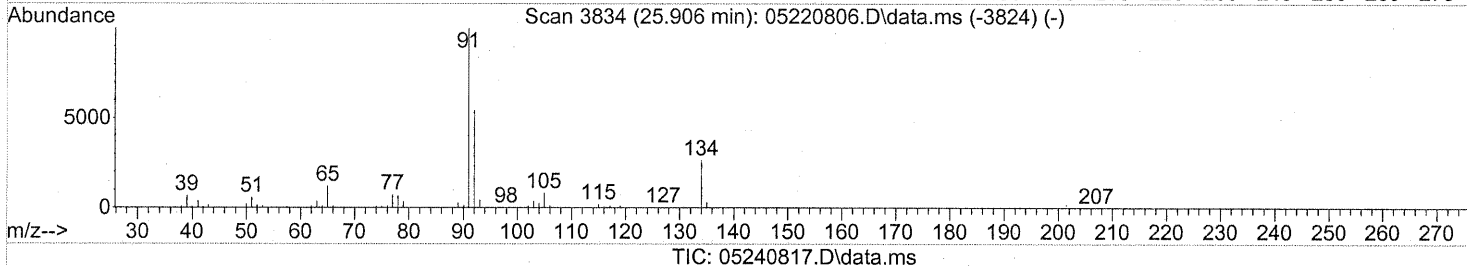
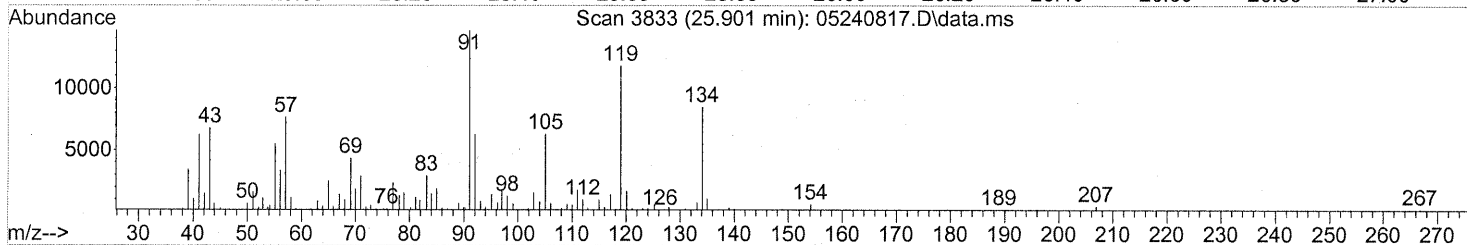
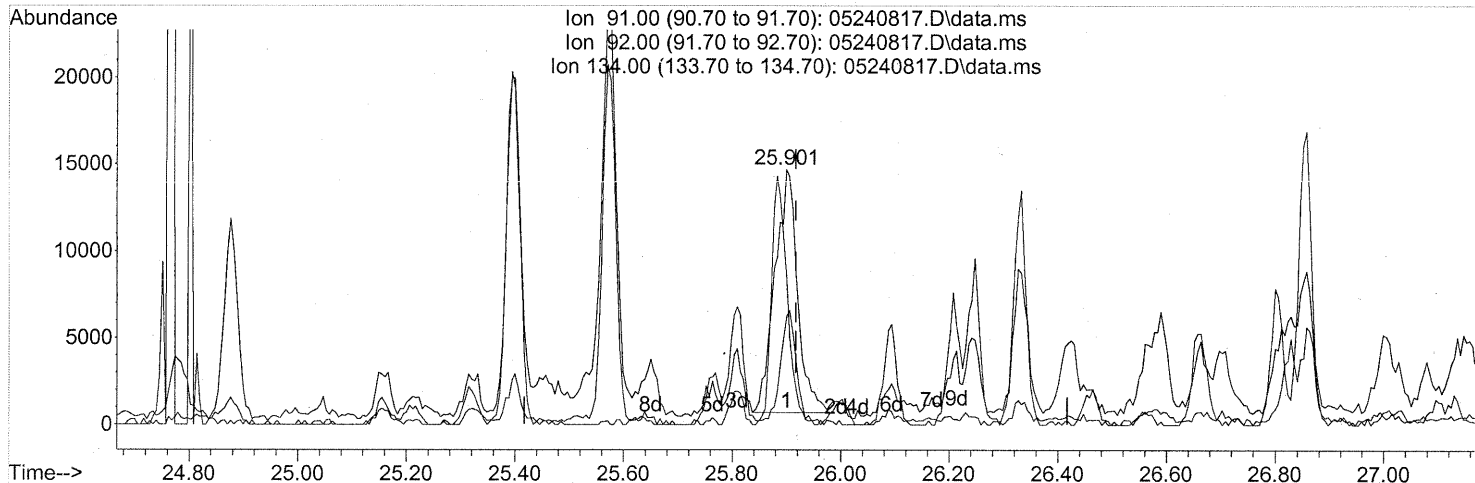
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	604273	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2567002	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1175375	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	931497	22.247	ng	-0.03
Spiked Amount	25.000			Recovery	=	89.00%
5) Toluene-d8 (SS2)	18.92	98	2641326	25.022	ng	-0.02
Spiked Amount	25.000			Recovery	=	100.08%
6) Bromofluorobenzene (SS3)	23.29	174	1095917	25.530	ng	0.00
Spiked Amount	25.000			Recovery	=	102.12%
Target Compounds						
7) tert-Butylbenzene	24.78	119	282500	<del>2.047</del> ng	NR	92
8) n-Butylbenzene	<u>25.90</u>	91	40211	<u>0.263</u> ng	#	61

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240817.D  
 Acq On : 24 May 2008 18:08  
 Operator : WA  
 Sample : P0801442-010 (1000ml)  
 Misc : ENSR SG65B-05 (-2.3, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 25 20:37:04 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene  
 25.901min (-0.017) 0.26ng  
 response 40211

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	33.22#
134.00	28.80	0.00#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.73	0.073	0.42	0.15	0.015	
74-87-3	Chloromethane	ND	0.15	0.073	ND	0.071	0.035	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.11	0.73	0.073	0.016	0.10	0.010	J
75-01-4	Vinyl Chloride	ND	0.15	0.073	ND	0.057	0.029	
74-83-9	Bromomethane	ND	0.15	0.073	ND	0.038	0.019	
75-00-3	Chloroethane	0.17	0.15	0.073	0.063	0.055	0.028	
64-17-5	Ethanol	12	7.3	0.073	6.4	3.9	0.039	
67-64-1	Acetone	14	7.3	0.11	6.0	3.1	0.045	B
75-69-4	Trichlorofluoromethane	1.2	0.15	0.073	0.22	0.026	0.013	
107-13-1	Acrylonitrile	ND	0.73	0.10	ND	0.34	0.047	
75-35-4	1,1-Dichloroethene	0.074	0.15	0.073	0.019	0.037	0.018	J
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.47	0.73	0.11	0.15	0.24	0.036	J
75-09-2	Methylene Chloride	0.26	0.73	0.073	0.076	0.21	0.021	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.15	0.073	ND	0.047	0.023	
76-13-1	Trichlorotrifluoroethane	0.51	0.15	0.082	0.067	0.019	0.011	
75-15-0	Carbon Disulfide	3.8	0.73	0.18	1.2	0.23	0.056	
156-60-5	trans-1,2-Dichloroethene	ND	0.15	0.073	ND	0.037	0.018	
75-34-3	1,1-Dichloroethane	ND	0.15	0.073	ND	0.036	0.018	
1634-04-4	Methyl tert-Butyl Ether	0.099	0.15	0.073	0.028	0.041	0.020	J
108-05-4	Vinyl Acetate	2.7	7.3	0.23	0.78	2.1	0.066	J
78-93-3	2-Butanone (MEK)	3.8	0.73	0.073	1.3	0.25	0.025	
156-59-2	cis-1,2-Dichloroethene	ND	0.15	0.073	ND	0.037	0.018	
108-20-3	Diisopropyl Ether	ND	0.73	0.086	ND	0.17	0.021	
67-66-3	Chloroform	7.5	0.15	0.086	1.5	0.030	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.

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: RC

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.73	0.074	ND	0.17	0.018	
107-06-2	1,2-Dichloroethane	ND	0.15	0.073	ND	0.036	0.018	
71-55-6	1,1,1-Trichloroethane	ND	0.15	0.073	ND	0.027	0.013	
71-43-2	<b>Benzene</b>	<b>1.8</b>	0.15	0.073	<b>0.55</b>	0.046	0.023	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.50</b>	0.15	0.073	<b>0.080</b>	0.023	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.73	0.073	ND	0.17	0.017	
78-87-5	1,2-Dichloropropane	ND	0.15	0.073	ND	0.032	0.016	
75-27-4	<b>Bromodichloromethane</b>	<b>0.55</b>	0.15	0.073	<b>0.082</b>	0.022	0.011	
79-01-6	<b>Trichloroethene</b>	<b>0.32</b>	0.15	0.073	<b>0.060</b>	0.027	0.014	
123-91-1	<b>1,4-Dioxane</b>	<b>0.30</b>	0.73	0.089	<b>0.083</b>	0.20	0.025	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.73	0.11	ND	0.18	0.027	
142-82-5	<b>n-Heptane</b>	<b>0.17</b>	0.73	0.093	<b>0.042</b>	0.18	0.023	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	0.73	0.076	ND	0.16	0.017	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	0.73	0.082	<b>0.066</b>	0.18	0.020	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	0.73	0.092	ND	0.16	0.020	
79-00-5	1,1,2-Trichloroethane	ND	0.15	0.073	ND	0.027	0.013	
108-88-3	<b>Toluene</b>	<b>5.2</b>	0.73	0.073	<b>1.4</b>	0.19	0.019	
591-78-6	<b>2-Hexanone</b>	<b>0.34</b>	0.73	0.11	<b>0.084</b>	0.18	0.027	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>0.31</b>	0.15	0.099	<b>0.036</b>	0.017	0.012	
106-93-4	1,2-Dibromoethane	ND	0.15	0.079	ND	0.019	0.010	
111-65-9	<b>n-Octane</b>	<b>0.16</b>	0.73	0.073	<b>0.035</b>	0.16	0.016	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>2.0</b>	0.15	0.073	<b>0.30</b>	0.022	0.011	
108-90-7	Chlorobenzene	ND	0.15	0.074	ND	0.032	0.016	

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:** SG65B-05D  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-011

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00420

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -2.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.46

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	0.63	0.73	0.091	0.14	0.17	0.021	J
179601-23-1	m,p-Xylenes	2.6	0.73	0.19	0.60	0.17	0.044	
75-25-2	Bromoform	0.18	0.73	0.11	0.018	0.071	0.011	J
100-42-5	Styrene	ND	0.73	0.11	ND	0.17	0.026	
95-47-6	o-Xylene	1.4	0.73	0.092	0.33	0.17	0.021	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.15	0.093	ND	0.021	0.014	
98-82-8	Cumene	ND	0.73	0.082	ND	0.15	0.017	
103-65-1	n-Propylbenzene	0.25	0.73	0.076	0.051	0.15	0.015	J
622-96-8	4-Ethyltoluene	0.43	0.73	0.083	0.088	0.15	0.017	J
108-67-8	1,3,5-Trimethylbenzene	0.27	0.73	0.088	0.056	0.15	0.018	J
98-83-9	alpha-Methylstyrene	0.11	0.73	0.11	0.024	0.15	0.022	J
95-63-6	1,2,4-Trimethylbenzene	1.1	0.73	0.10	0.22	0.15	0.021	
100-44-7	Benzyl Chloride	ND	0.15	0.13	ND	0.028	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.15	0.091	ND	0.024	0.015	
106-46-7	1,4-Dichlorobenzene	37	0.15	0.082	6.2	0.024	0.014	
135-98-8	sec-Butylbenzene	ND	0.73	0.085	ND	0.13	0.015	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.36	0.73	0.095	0.066	0.13	0.017	J
95-50-1	1,2-Dichlorobenzene	0.12	0.15	0.096	0.021	0.024	0.016	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.73	0.11	ND	0.076	0.011	
120-82-1	1,2,4-Trichlorobenzene	0.24	0.15	0.11	0.033	0.020	0.015	
91-20-3	Naphthalene	2.8	0.29	0.11	0.54	0.056	0.021	
87-68-3	Hexachlorobutadiene	ND	0.15	0.13	ND	0.014	0.012	
98-06-6	tert-Butylbenzene	ND	0.29	0.073	ND	0.053	0.013	
104-51-8	n-Butylbenzene	ND	0.29	0.073	ND	0.053	0.013	

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.

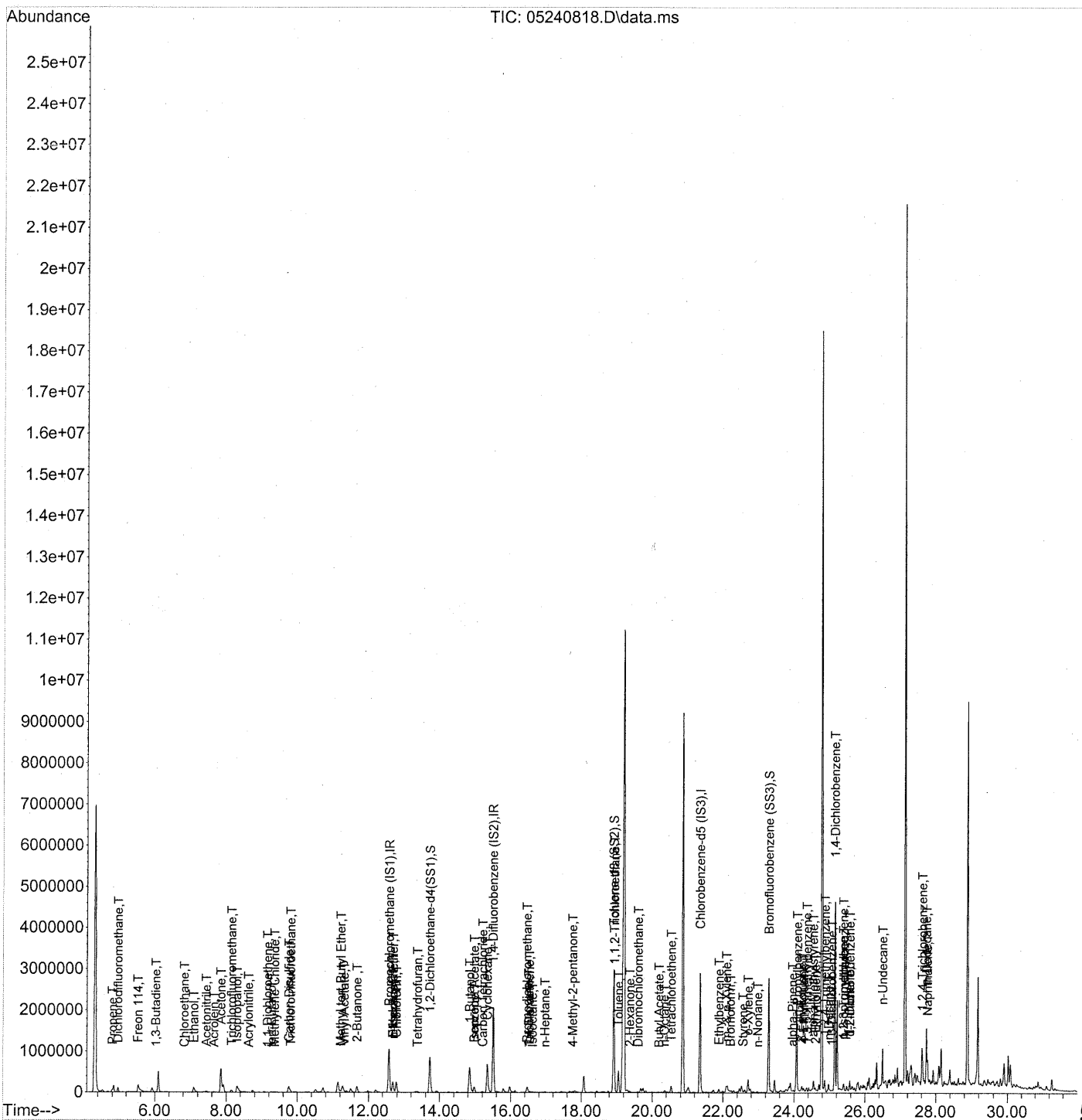
Verified By: RC

Date: 6/2/08

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



557

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	564336	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2463090	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1128628	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4 (...)	13.72	65	899997	23.016	ng	0.00
Spiked Amount				25.000		
				Recovery =		92.08%
57) Toluene-d8 (SS2)	18.92	98	2530078	24.961	ng	0.00
Spiked Amount				25.000		
				Recovery =		99.84%
73) Bromofluorobenzene (SS3)	23.29	174	1043399	25.314	ng	0.00
Spiked Amount				25.000		
				Recovery =		101.24%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	43821	0.983	ng	# 56
3) Dichlorodifluoromethane	4.97	85	117342	1.428	ng	100
4) Chloromethane	5.32	50	645	N.D.		
5) Freon 114	5.53	135	3028	0.075	ng	# 43
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	6.03	54	3965	0.100	ng	# 83
8) Bromomethane	6.50	94	343	N.D.		
9) Chloroethane	6.83	64	2892	0.114	ng	100
10) Ethanol	7.10	45	243501m	8.206	ng	
11) Acetonitrile	7.44	41	45491	0.530	ng	99
12) Acrolein	7.66	56	13920	0.657	ng	97
13) Acetone	7.85	58	294331m	9.689	ng	
14) Trichlorofluoromethane	8.15	101	58574	0.831	ng	98
15) Isopropanol	8.30	45	352728	3.641	ng	97
16) Acrylonitrile	8.63	53	3044	0.066	ng	# 8
17) 1,1-Dichloroethene	9.16	96	1586	0.051	ng	88
18) tert-Butanol	9.27	59	26443m	0.321	ng	
19) Methylene Chloride	9.36	84	6136	0.181	ng	# 78
20) Allyl Chloride	9.54	41	372	N.D.		
21) Trichlorotrifluoroethane	9.81	151	11211	0.350	ng	90
22) Carbon Disulfide	9.77	76	332595	2.582	ng	99
23) trans-1,2-Dichloroethene	10.72	61	1812	N.D.		
24) 1,1-Dichloroethane	11.10	63	307	N.D.		
25) Methyl tert-Butyl Ether	11.22	73	6701	0.068	ng	87
26) Vinyl Acetate	11.31	86	10498m	1.870	ng	
27) 2-Butanone	11.68	72	56954	2.569	ng	# 83
28) cis-1,2-Dichloroethene	12.35	61	140	N.D.		
29) Diisopropyl Ether	12.69	87	2907	0.107	ng	# 1
30) Ethyl Acetate	12.69	61	41873	3.498	ng	83
31) n-Hexane	12.70	57	49173	0.814	ng	89

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WA 5/30/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	265887	5.167 ng		99
34) Tetrahydrofuran	13.37	72	4066	0.192 ng	#	37
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.89	62	617	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	2647	N.D. ✓		
39) Isopropyl Acetate	14.97	61	1453	0.069 ng	#	1
40) 1-Butanol	14.85	56	579343	17.112 ng		86
41) Benzene	14.97	78	155197	1.203 ng		99
42) Carbon Tetrachloride	15.21	117	17059	0.343 ng		99
43) Cyclohexane	15.34	84	38688	0.771 ng	#	1
44) tert-Amyl Methyl Ether	15.86	73	120	N.D. ✓		
45) 1,2-Dichloropropane	16.19	63	156	N.D. ✓		
46) Bromodichloromethane	16.46	83	16405	0.376 ng		100
47) Trichloroethene	16.53	130	8755	0.221 ng		100
48) 1,4-Dioxane	16.52	88	5017	0.206 ng		88
49) Isooctane	16.62	57	15869	0.107 ng		60
50) Methyl Methacrylate	16.81	100	61	N.D. ✓		
51) n-Heptane	16.97	71	4031	0.118 ng	#	78
52) cis-1,3-Dichloropropene	17.81	75	676	N.D. ✓		
53) 4-Methyl-2-pentanone	17.76	58	6290	0.184 ng		70
54) trans-1,3-Dichloropropene	18.69	75	111	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	220149	6.908 ng	NR#	9
58) Toluene	19.06	91	494976	3.592 ng		97
59) 2-Hexanone	19.37	43	22427	0.236 ng	#	71
60) Dibromochloromethane	19.61	129	7760	0.209 ng		97
61) 1,2-Dibromoethane	19.75	107	80	N.D. ✓		
62) Butyl Acetate	20.19	43	7366	0.076 ng	#	91
63) n-Octane	20.35	57	3423	0.112 ng		100
64) Tetrachloroethene	20.54	166	56585	1.388 ng		99
65) Chlorobenzene	21.40	112	4459	N.D. ✓		
66) Ethylbenzene	21.89	91	68161	0.431 ng		95
67) m- & p-Xylene	22.10	91	188202	1.781 ng		93
68) Bromoform	22.21	173	3455	0.125 ng		99
69) Styrene	22.57	104	5292	0.056 ng	#	50
70) o-Xylene	22.71	91	110779	0.971 ng		93
71) n-Nonane	22.98	43	11778	0.145 ng		87
72) 1,1,2,2-Tetrachloroethane	22.72	83	2319	N.D. ✓		
74) Cumene	23.46	105	7036	N.D. ✓		
75) alpha-Pinene	23.96	93	7967	0.101 ng	#	46
76) n-Propylbenzene	24.10	91	33020	0.171 ng	#	1
77) 3-Ethyltoluene	24.23	105	70446	0.436 ng		97
78) 4-Ethyltoluene	24.28	105	44840	0.297 ng		98
79) 1,3,5-Trimethylbenzene	24.37	105	25407	0.187 ng		97

559

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

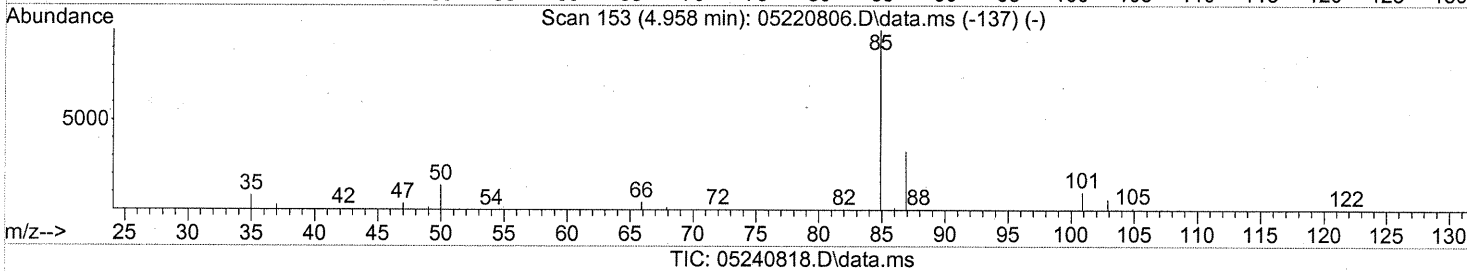
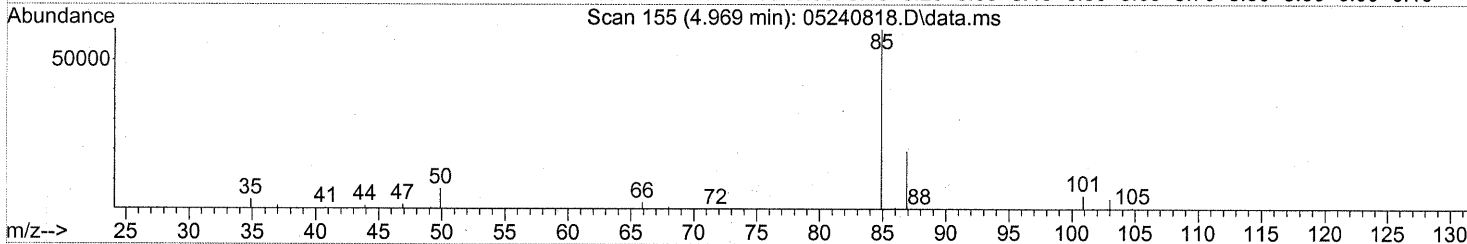
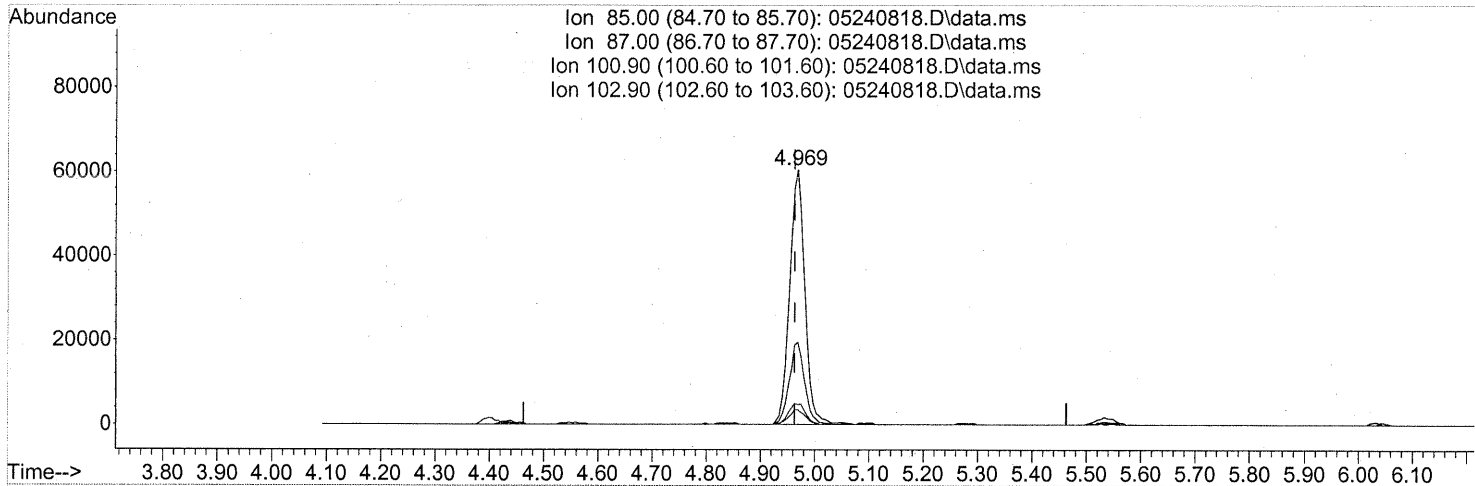
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.55	118	5784	0.078	ng	# 50
81) 2-Ethyltoluene	24.61	105	38491	0.235	ng	99
82) 1,2,4-Trimethylbenzene	24.88	105	104102	0.751	ng	87
83) n-Decane	24.98	57	72288	0.948	ng	75
84) Benzyl Chloride	25.05	91	893	N.D.	✓	
85) 1,3-Dichlorobenzene	25.07	146	4362	0.050	ng	<MDC 77
86) 1,4-Dichlorobenzene	25.15	146	2156828	25.666	ng	99
87) sec-Butylbenzene	25.21	105	5089	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	36240	0.248	ng	89
89) 1,2,3-Trimethylbenzene	25.40	105	40436	0.298	ng	95
90) 1,2-Dichlorobenzene	25.58	146	6976	0.085	ng	99
91) d-Limonene	25.58	68	61178	1.108	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.25	157	826	N.D.	✓	
93) n-Undecane	26.50	57	373685	4.681	ng	# 72
94) 1,2,4-Trichlorobenzene	27.62	180	10035	0.167	ng	97
95) Naphthalene	27.77	128	354629	1.939	ng	97
96) n-Dodecane	27.74	57	447699	5.639	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	1438	N.D.	✓	

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.969min (+0.006) 1.43ng

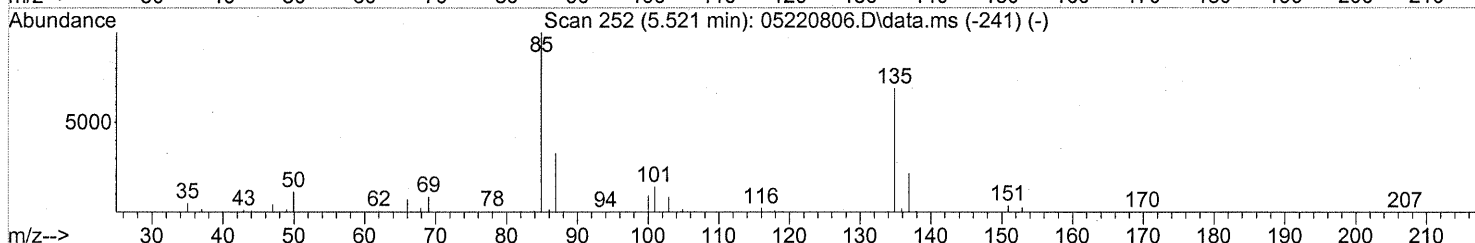
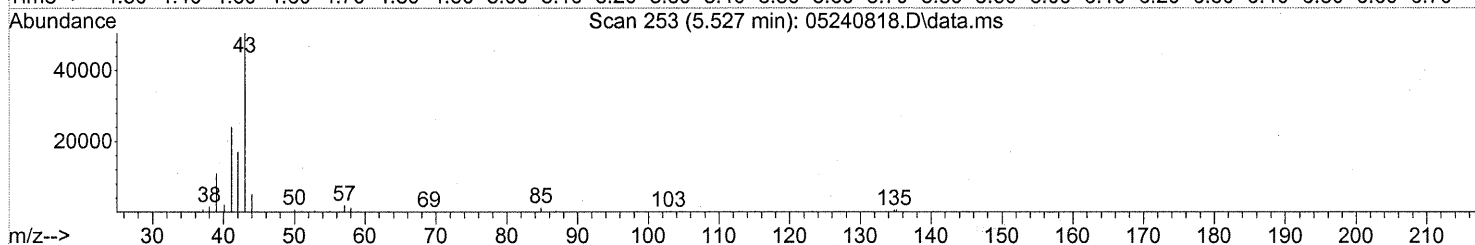
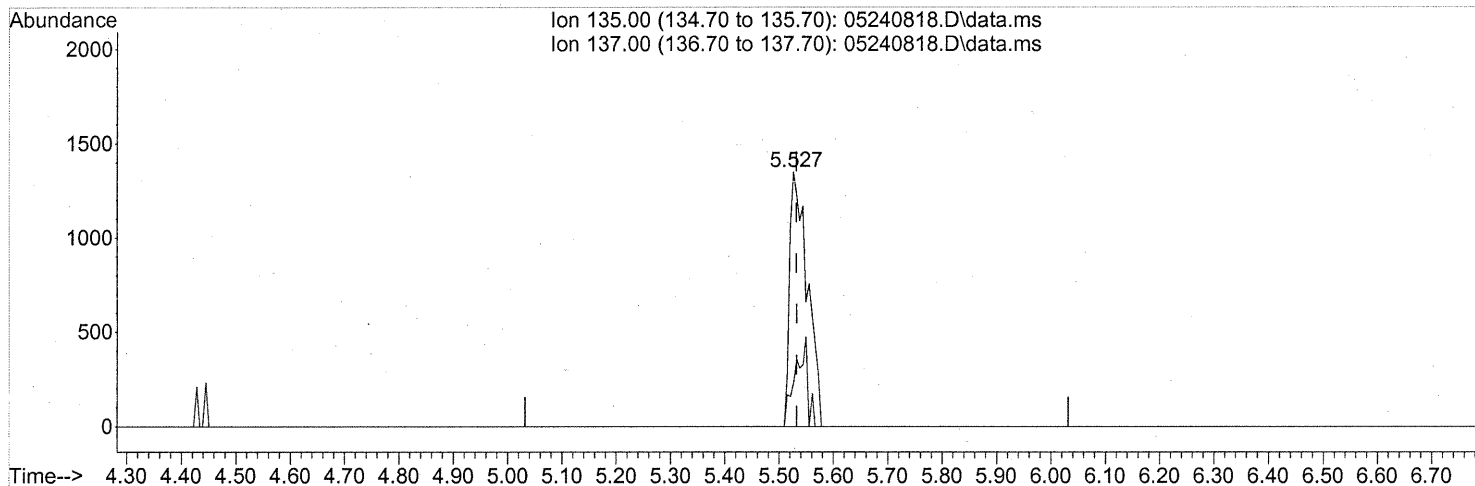
response 117342

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	32.38
100.90	9.30	8.86
102.90	6.00	6.05

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(5) Freon 114 (T)

5.527min (-0.006) 0.07ng

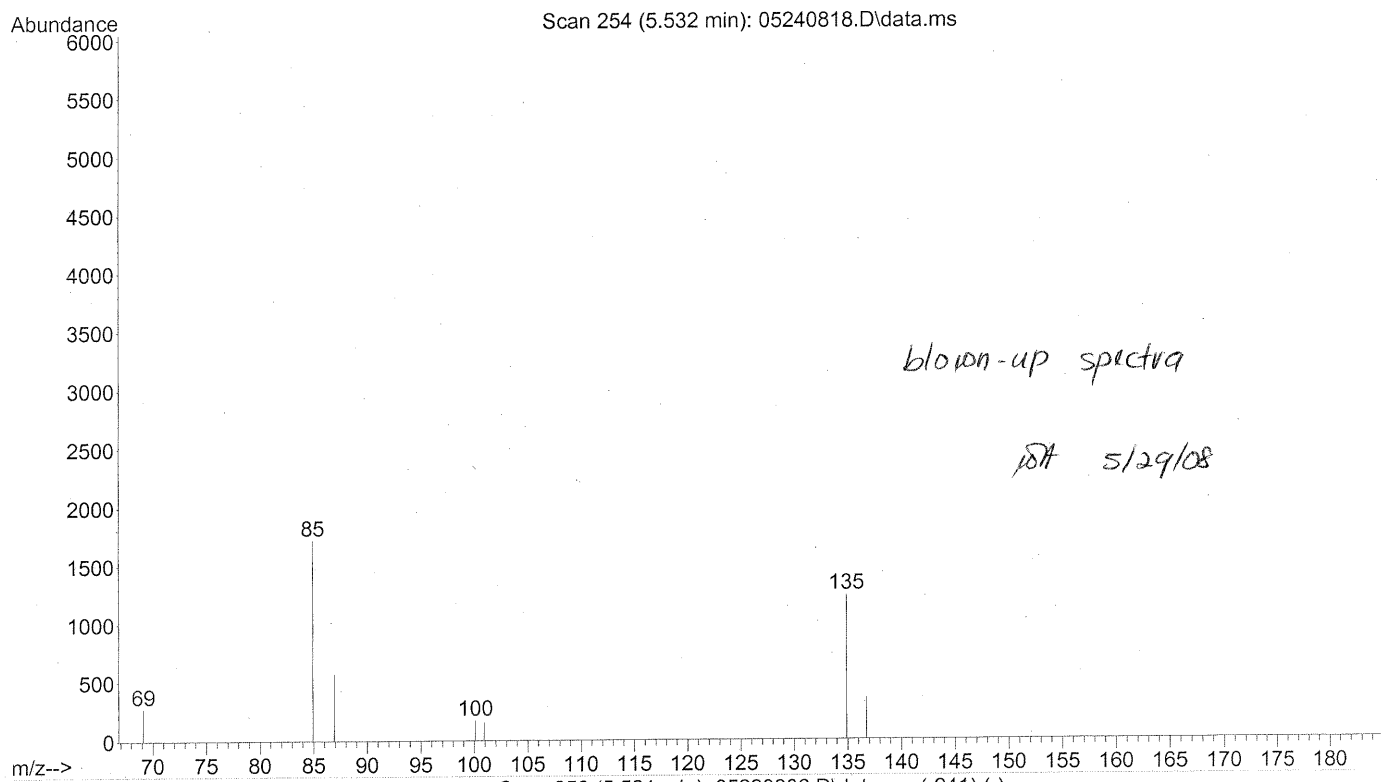
response 3028

Ion	Exp%	Act%
135.00	100	100
137.00	31.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

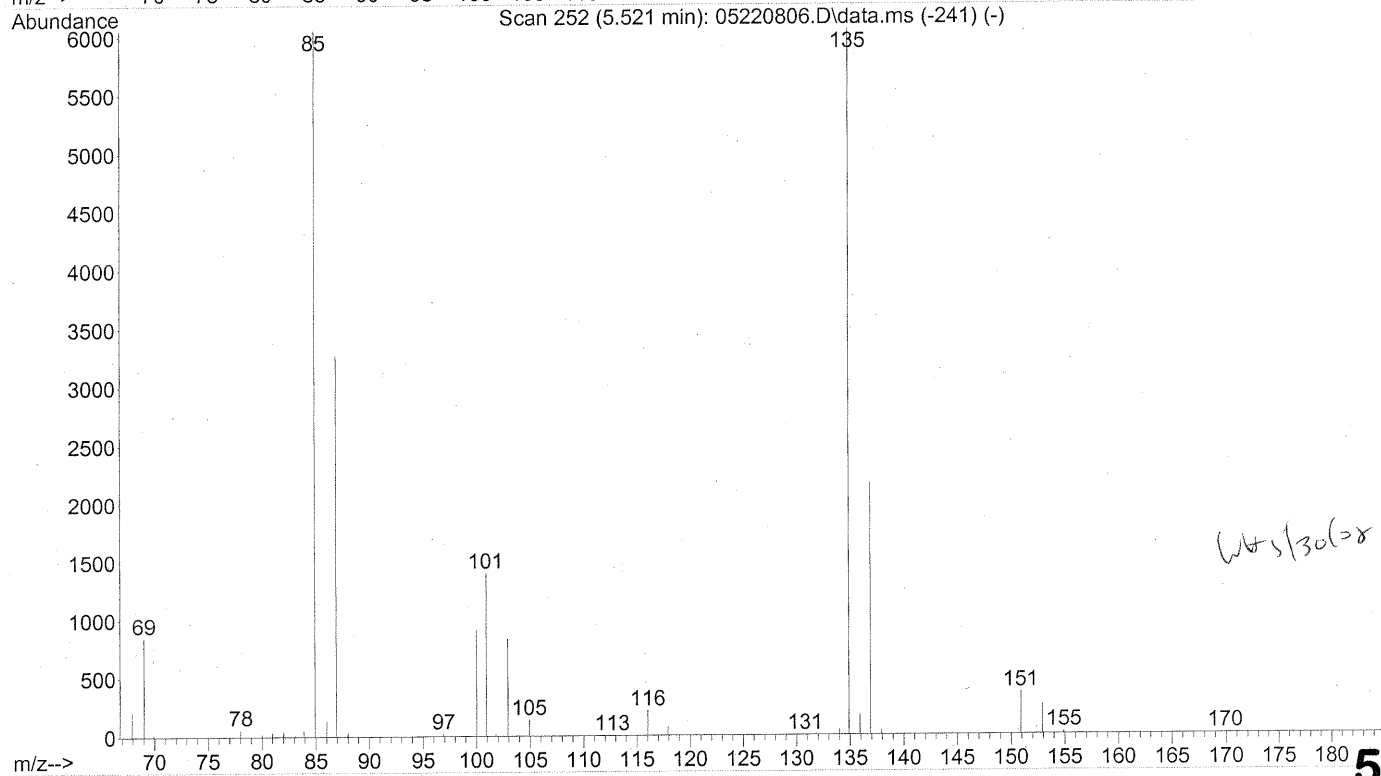
*see blown-up spectra*



File : J:\MS13\DATA\2008\_05\24\05240818.D  
Operator : WA  
Acquired : 24 May 2008 18:50 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-011 (1000ml)  
Misc Info : ENSR SG65B-05D (-2.2, 3.5)  
Vial Number: 15



*blown-up spectra*  
*IDA 5/29/08*

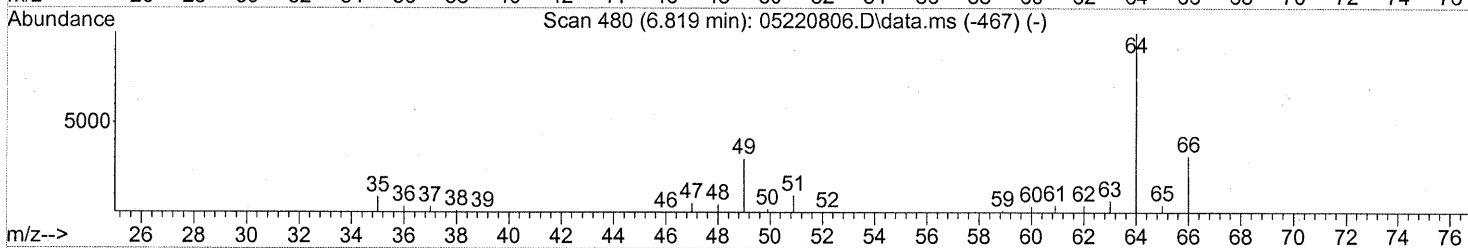
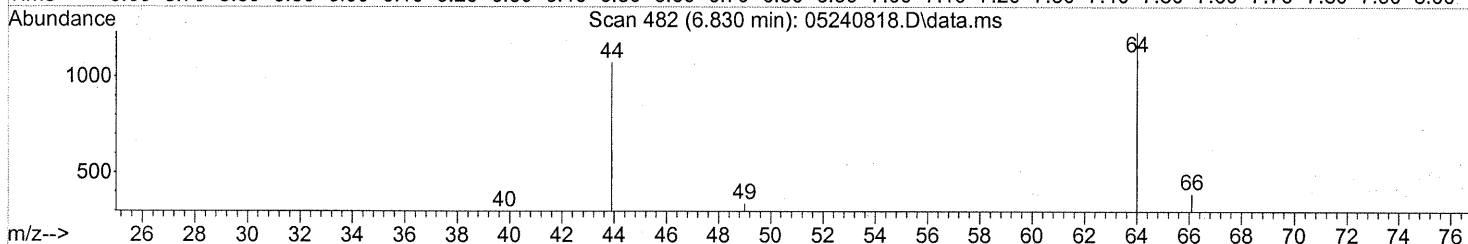
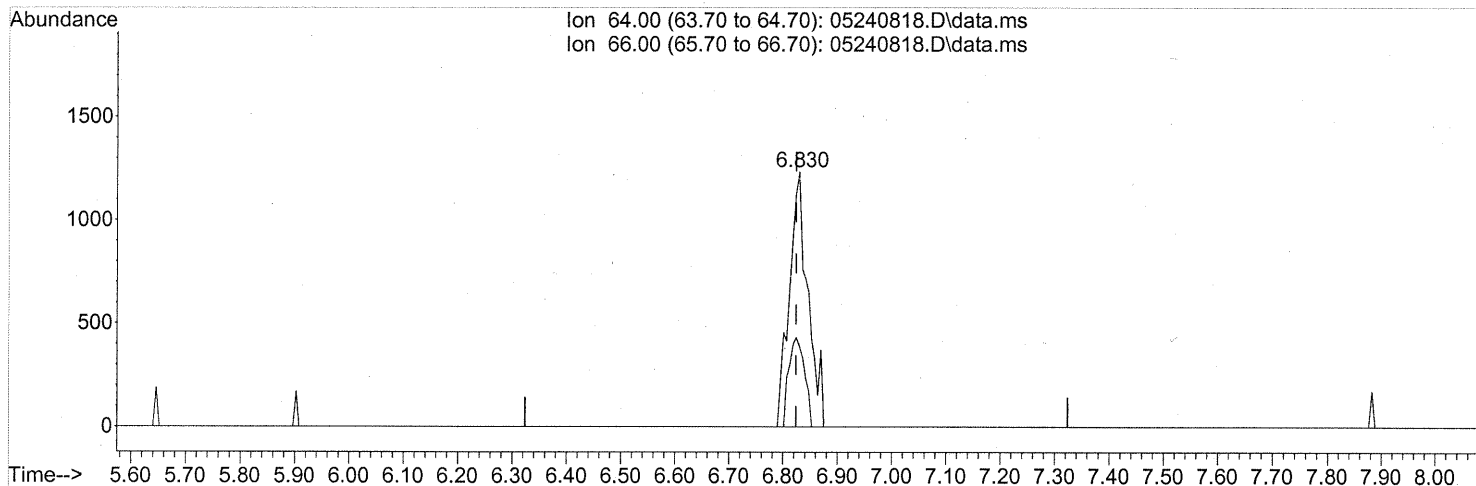


*Wt 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

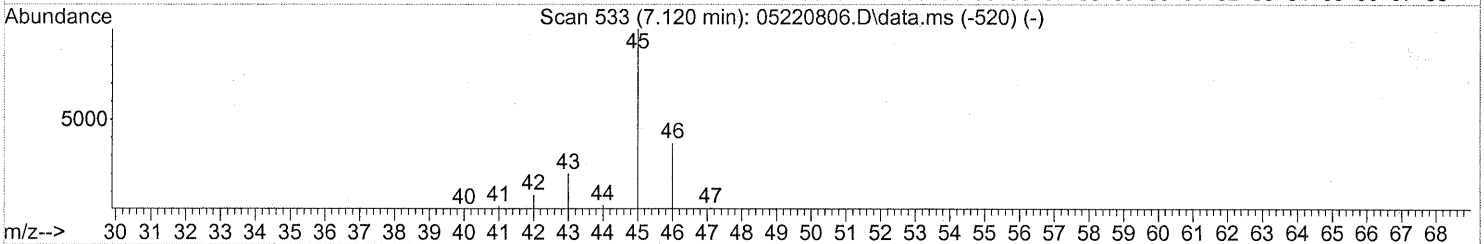
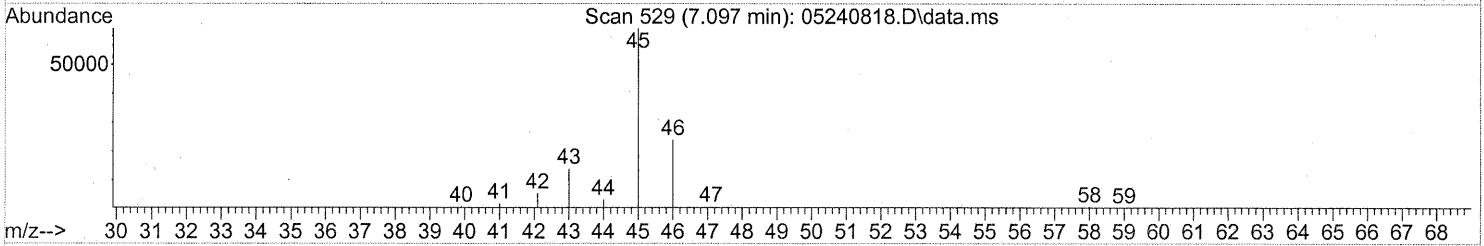
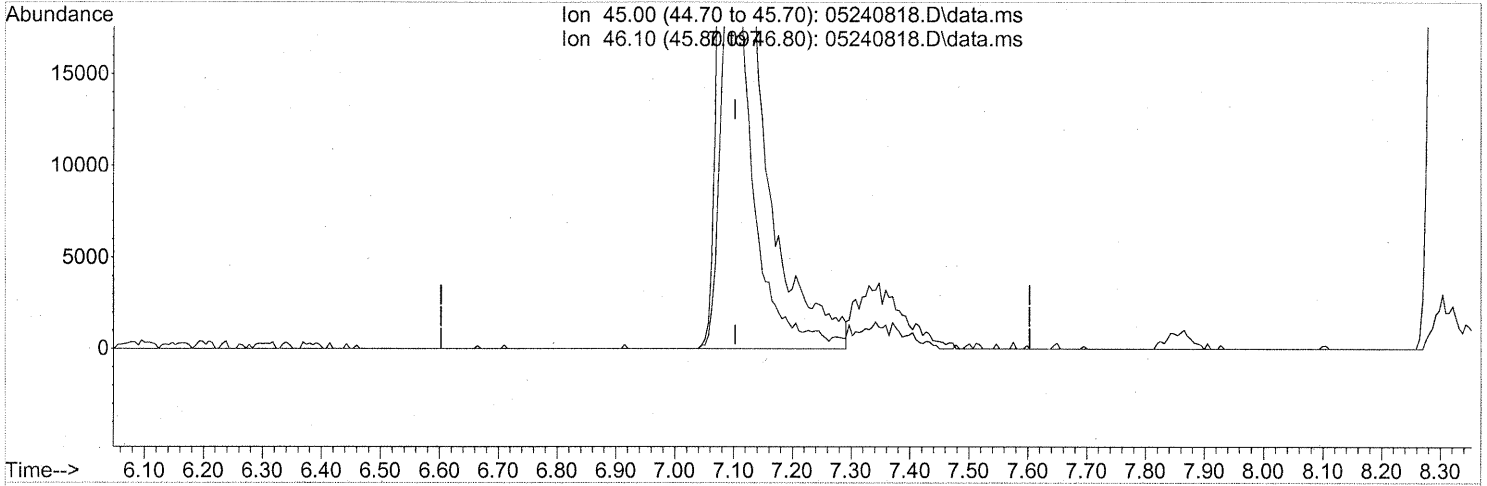
(9) Chloroethane (T)  
 6.830min (+0.006) 0.11ng  
 response 2892

Ion	Exp%	Act%
64.00	100	100
66.00	29.60	29.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.006) 7.55ng

response 224113

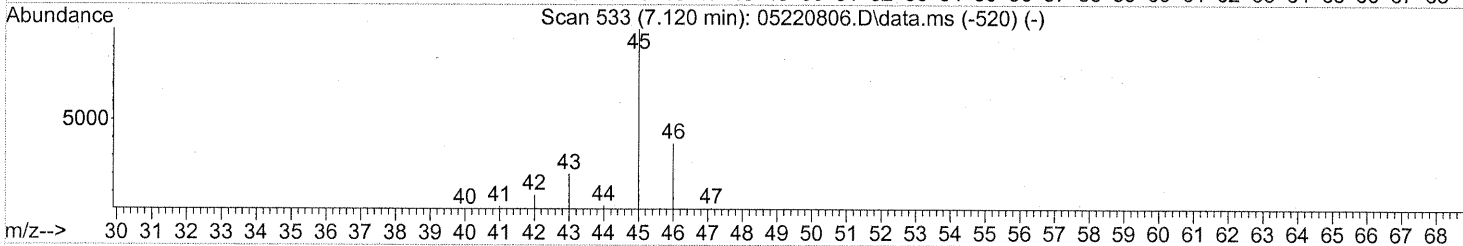
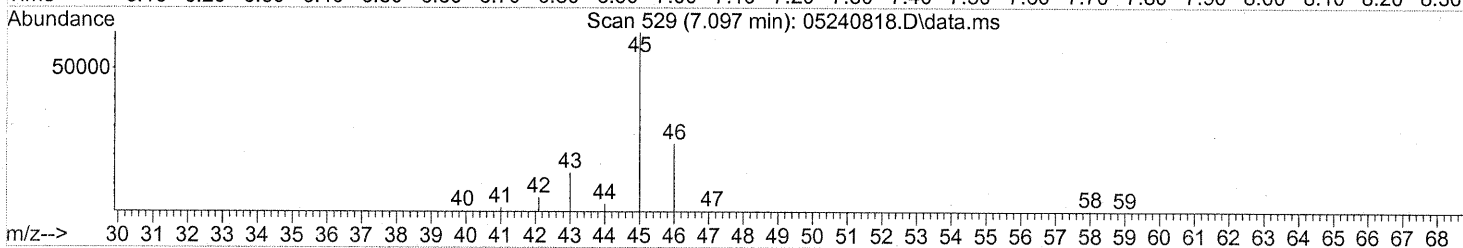
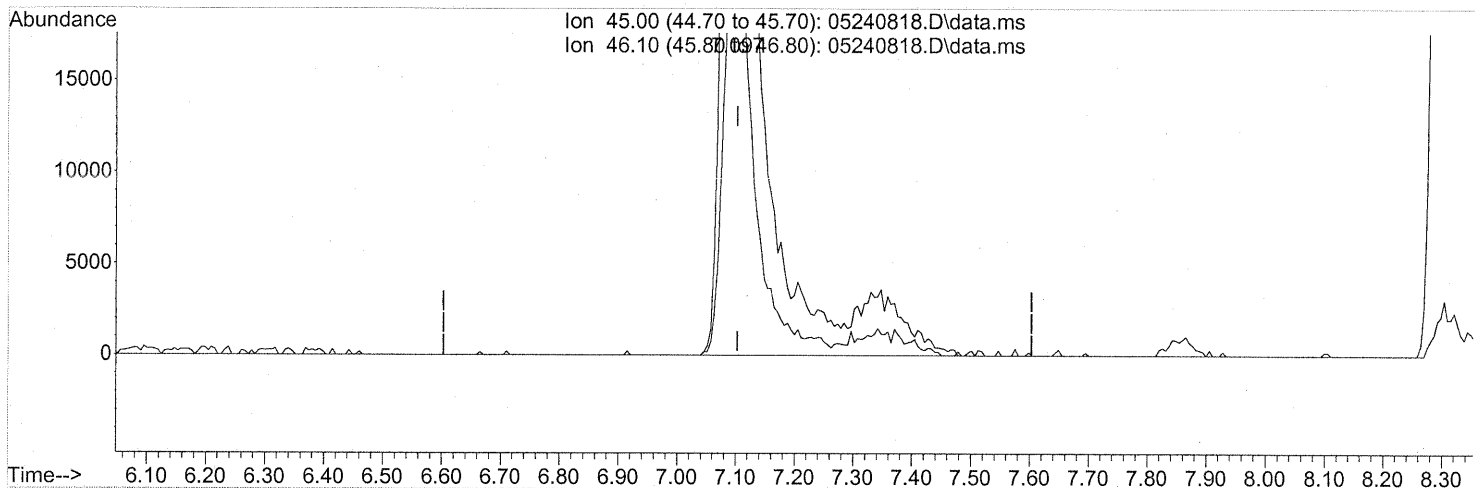
*split peak*

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 7.097min (-0.006) 8.21ng m  
 response 243501

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.30
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

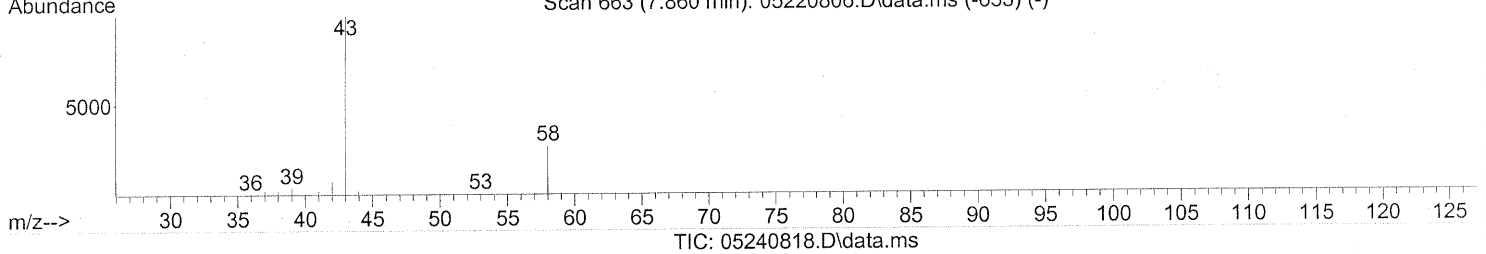
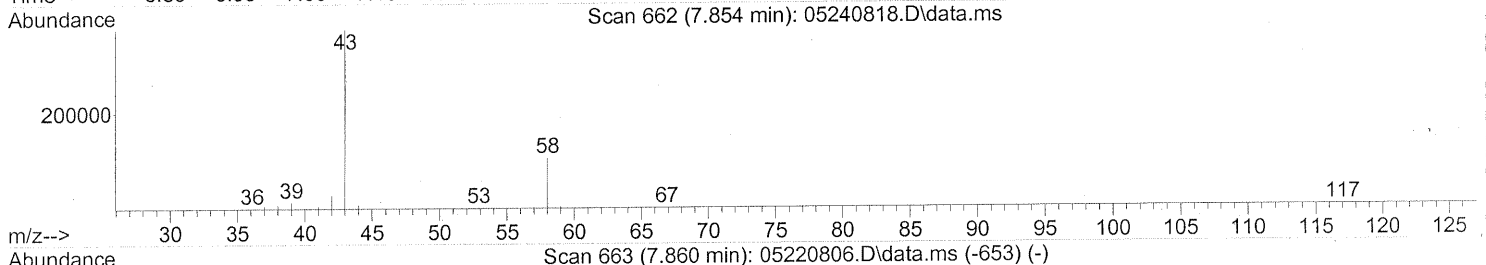
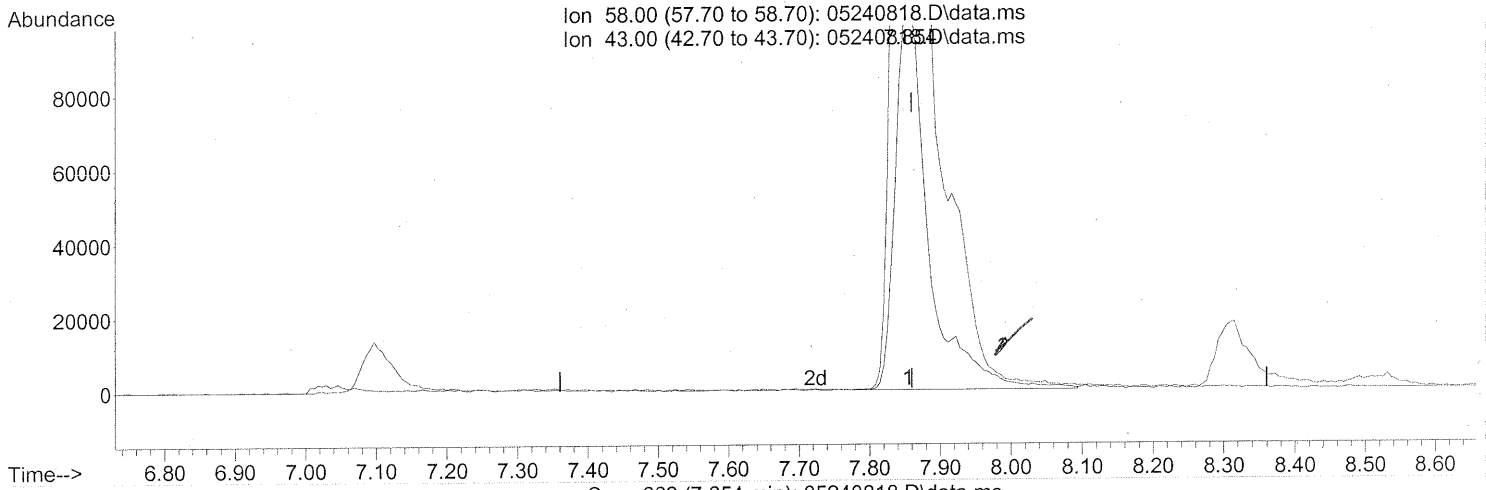
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA 4 *DA 5/29/08*  
 Sample : P0801422-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 09:04:53 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.854min (-0.006) 11.06ng  
 response 336031

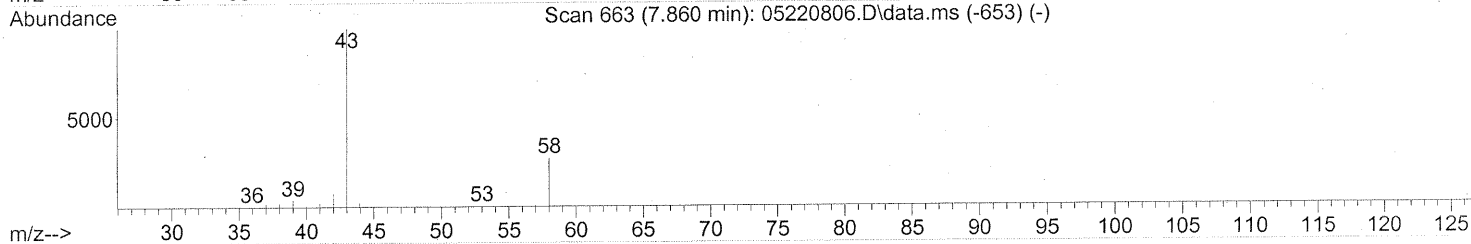
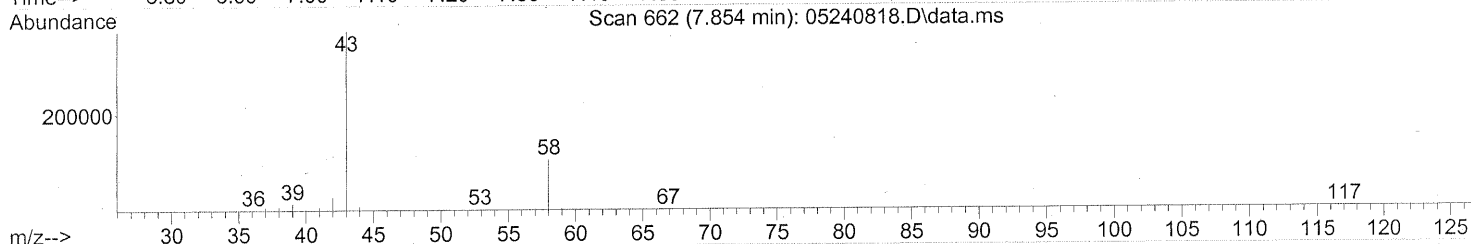
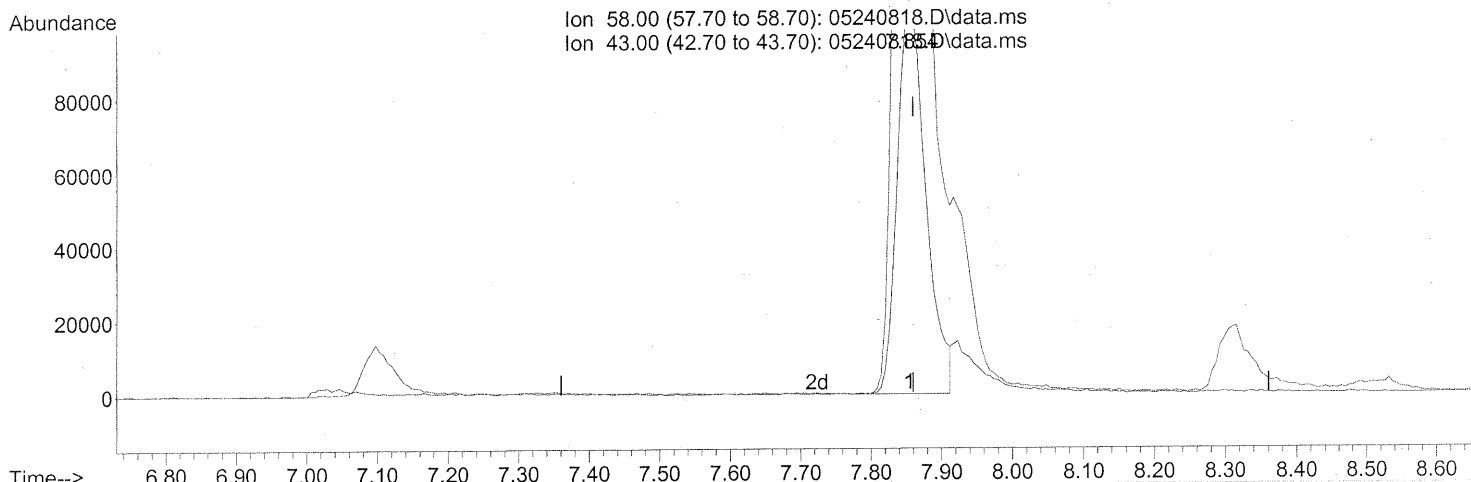
Ion	Exp%	Act%
58.00	100	100
43.00	283.10	343.39#
0.00	0.00	0.00
0.00	0.00	0.00

*interf. shoulder*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA 4  
 Sample : P0801422-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 09:04:53 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.854min (-0.006) 9.69ng m  
 response 294331

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	392.04#
0.00	0.00	0.00
0.00	0.00	0.00

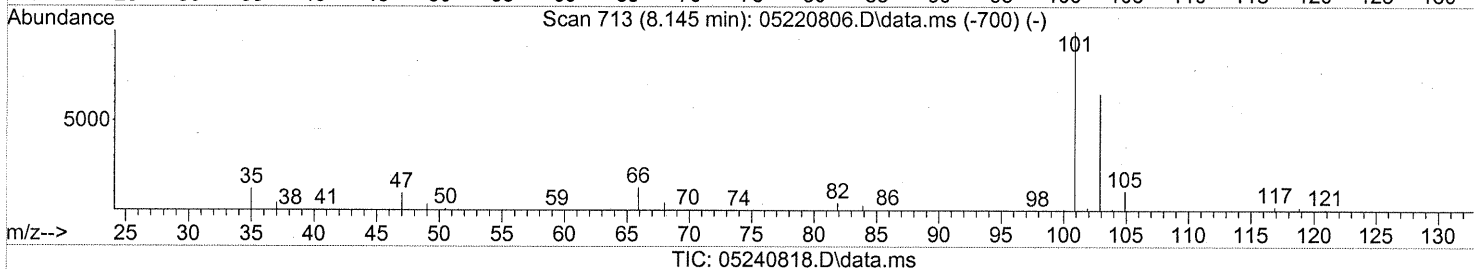
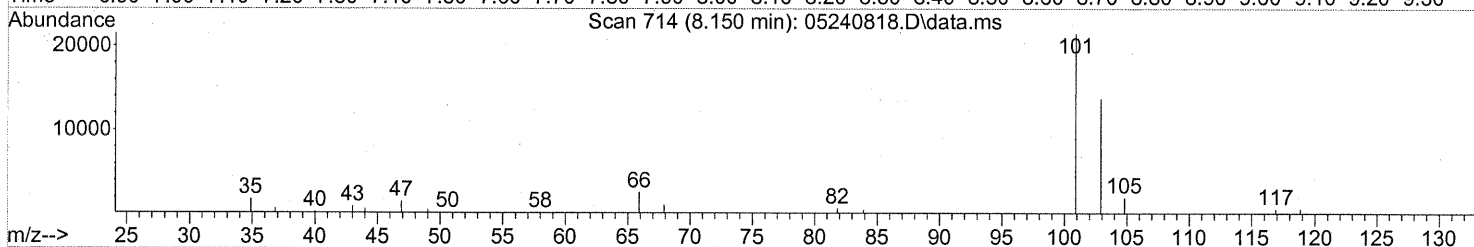
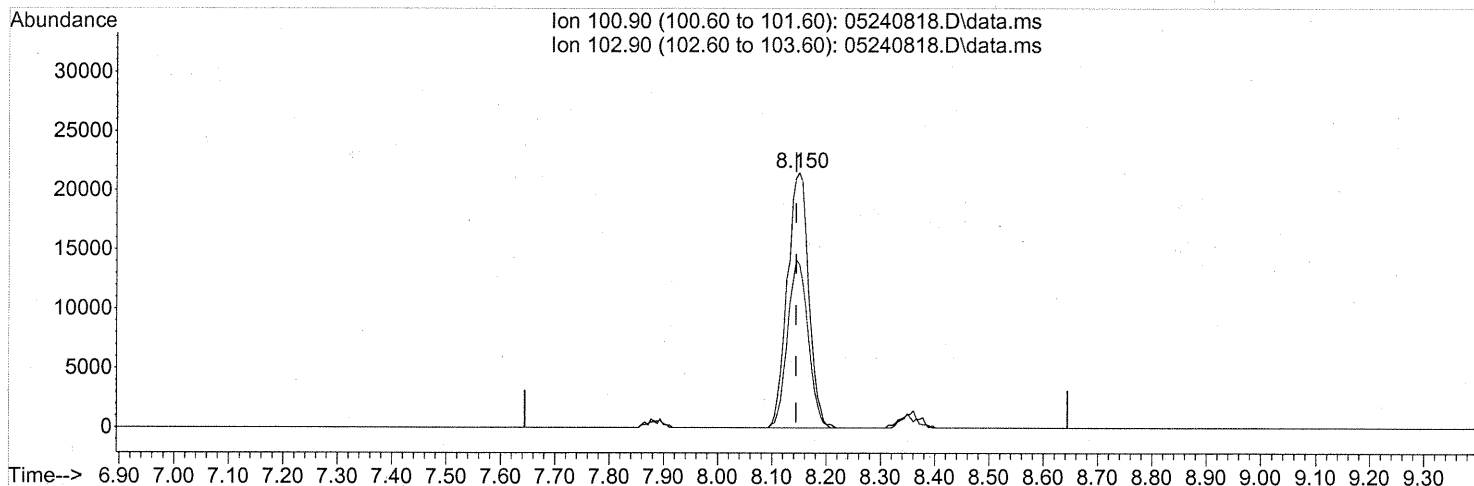
*int. w/o shoulder*  
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.150min (+0.006) 0.83ng

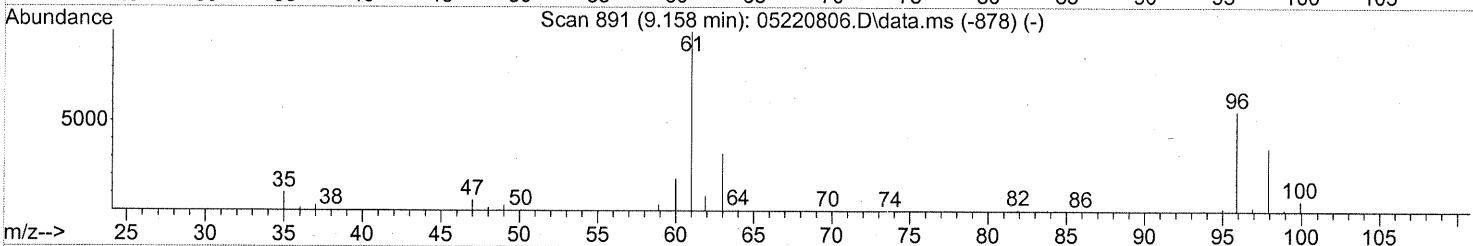
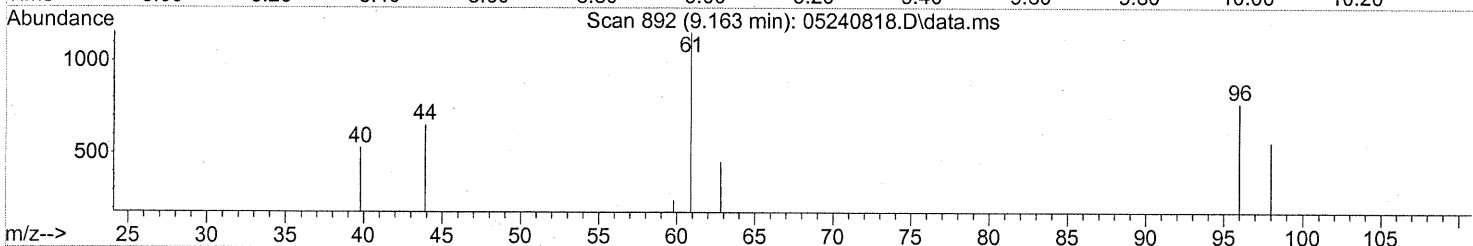
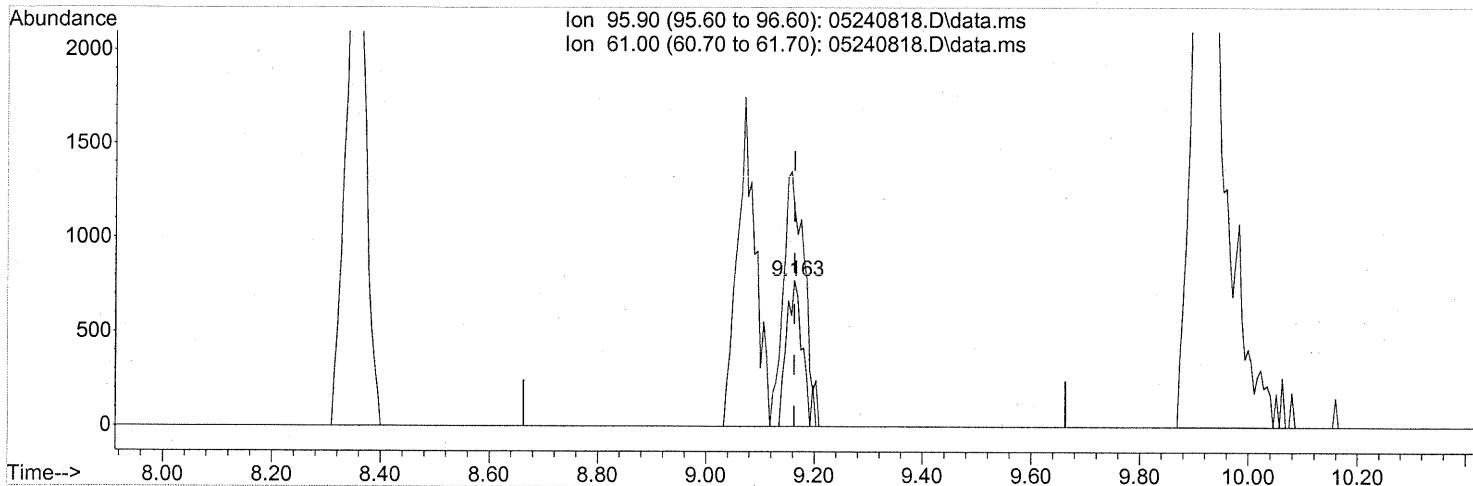
response 58574

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	63.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(17) 1,1-Dichloroethene (T)

9.163min (-0.000) 0.05ng

response 1586

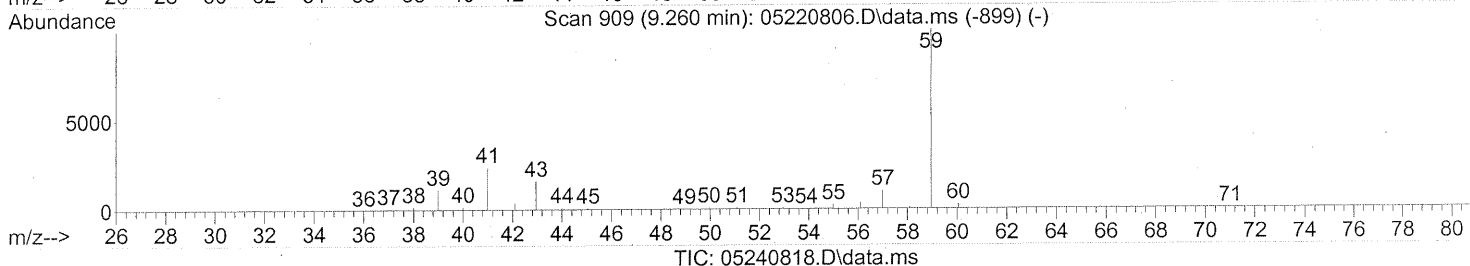
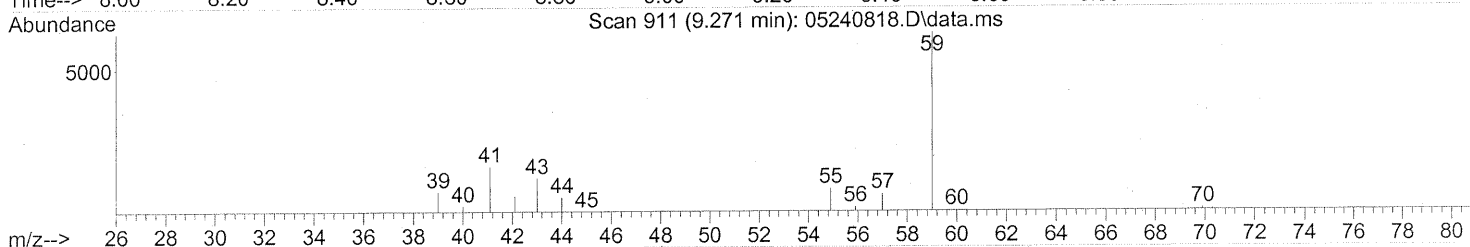
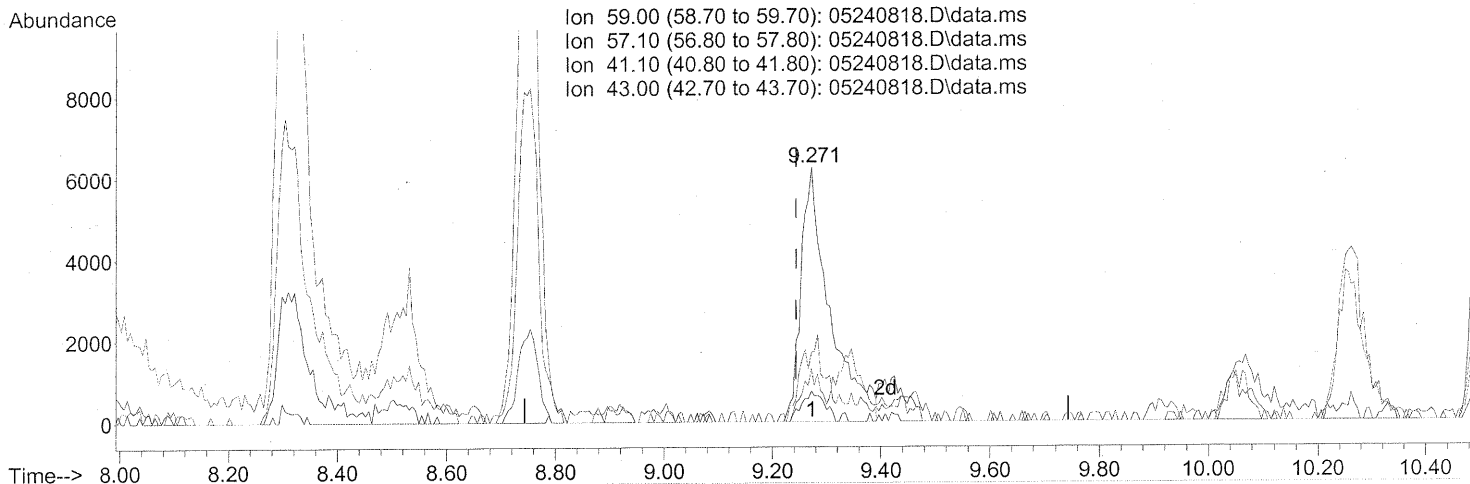
Ion	Exp%	Act%
95.90	100	100
61.00	210.00	229.32
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240818.D  
Acq On : 24 May 2008 18:50  
Operator : WA  
Sample : P0801422-011 (1000ml)  
Misc : ENSR SG65B-05D (-2.2, 3.5)  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 09:04:53 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
9.271min (+0.028) 0.28ng  
response 23056

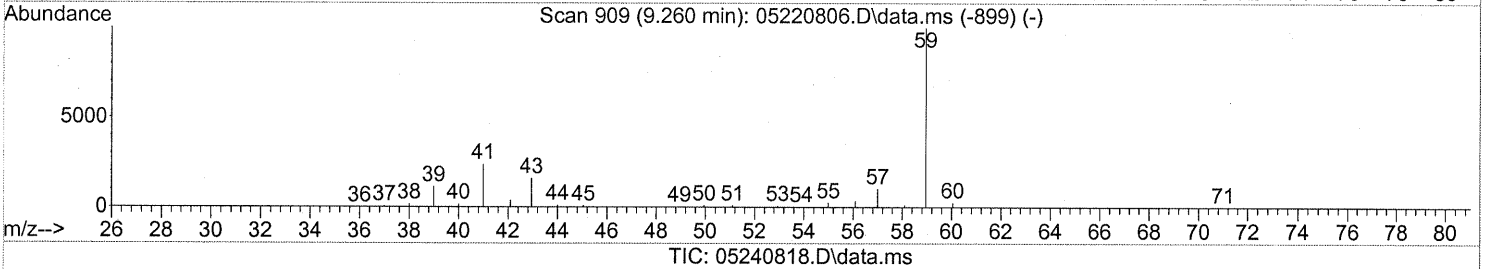
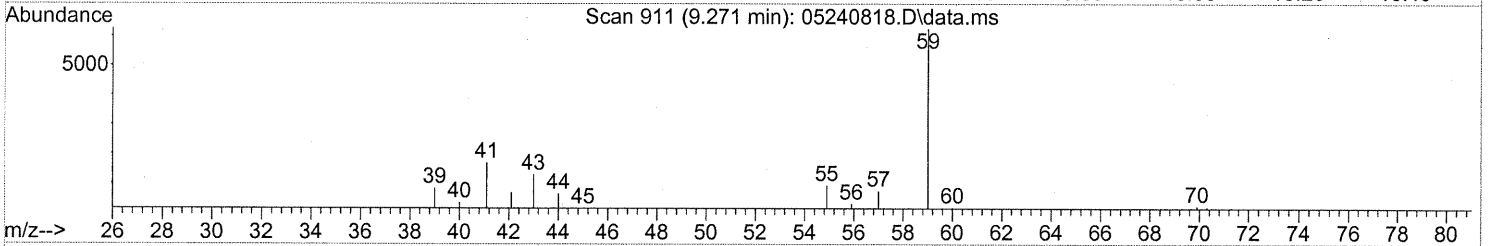
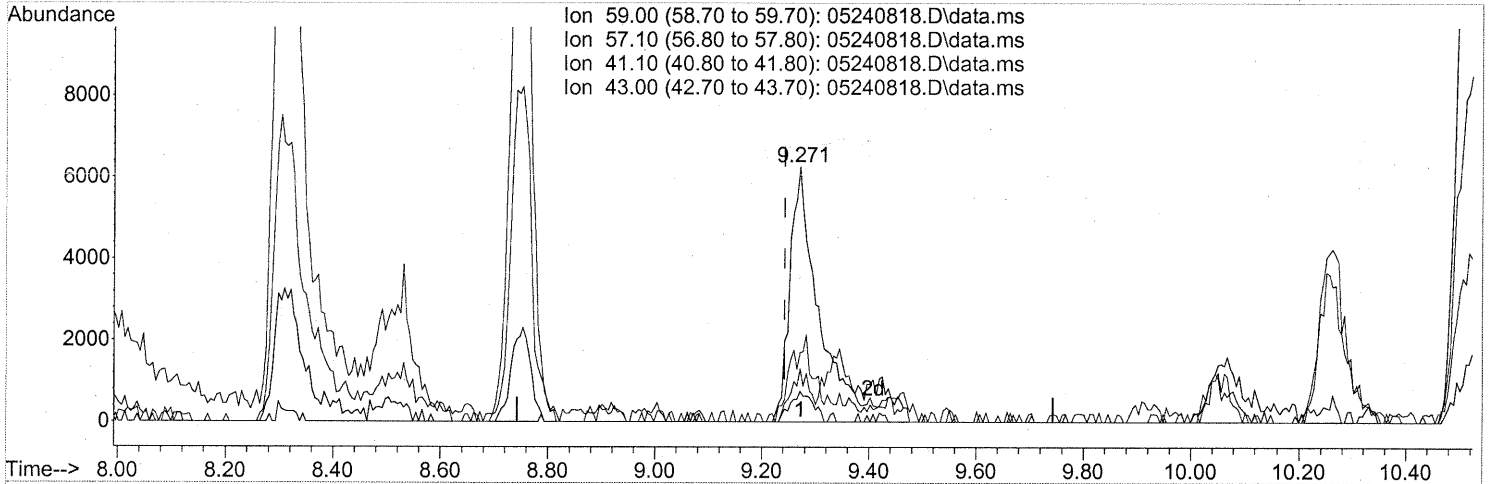
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	9.25
41.10	20.10	21.34
43.00	12.30	13.26

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

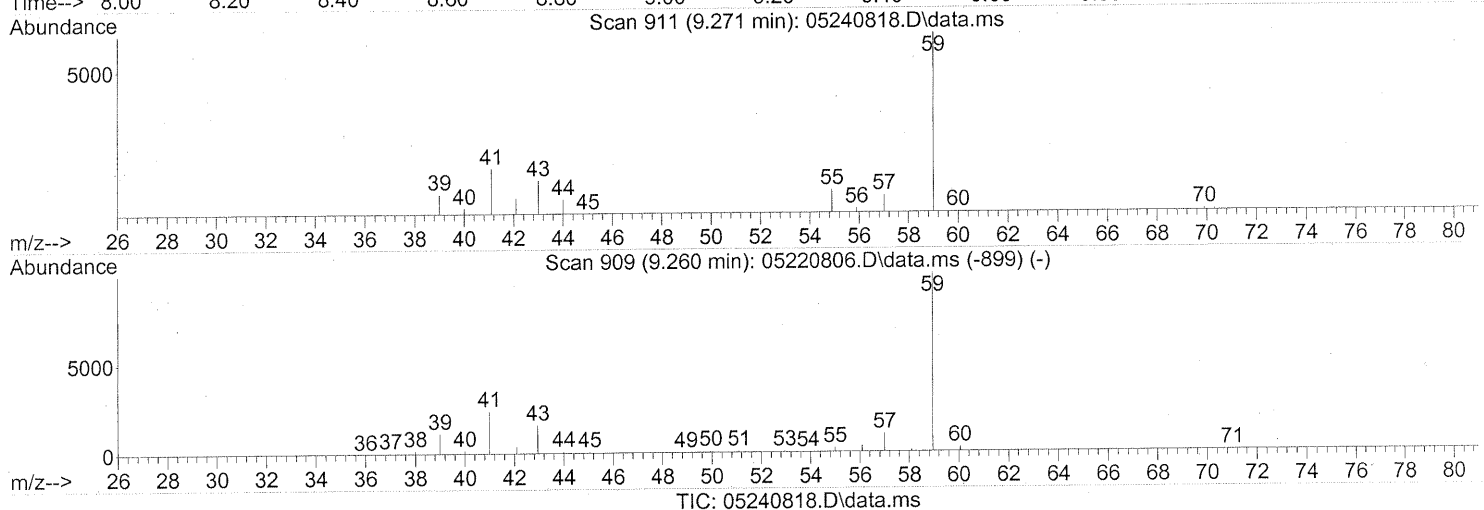
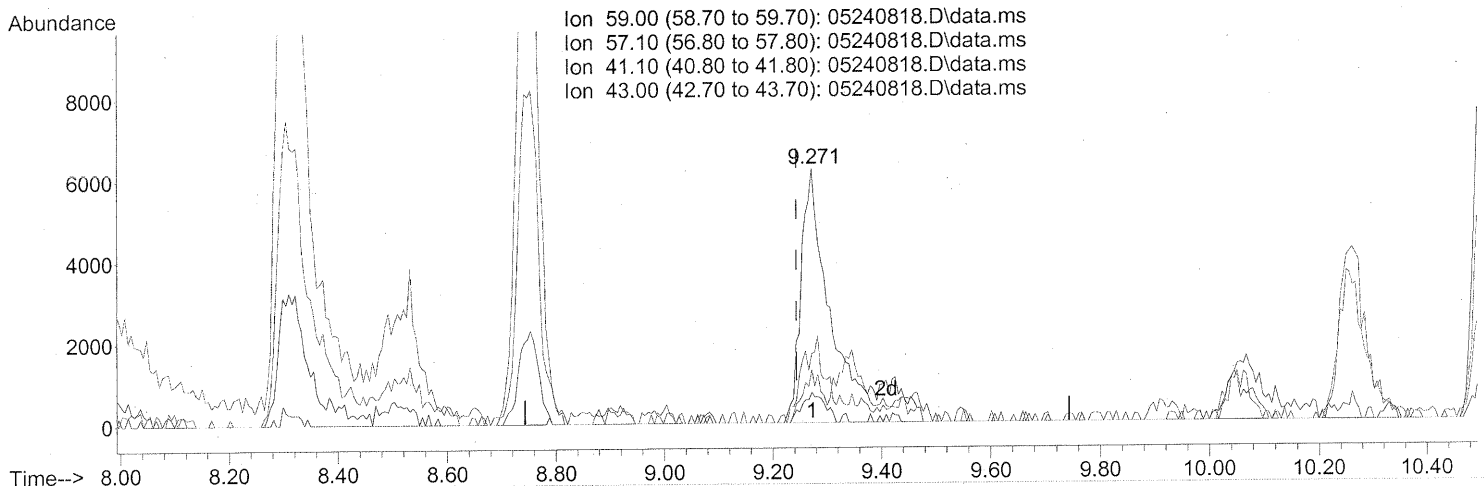
9.271min (+0.028) 0.32ng m  
 response 26443

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.07
41.10	20.10	18.61
43.00	12.30	11.56

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA *WA 5/29/08*  
 Sample : P0801422-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 09:04:53 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.271min (+0.028) 0.32ng m  
 response 26443

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.07
41.10	20.10	18.61
43.00	12.30	11.56

*added tailing*

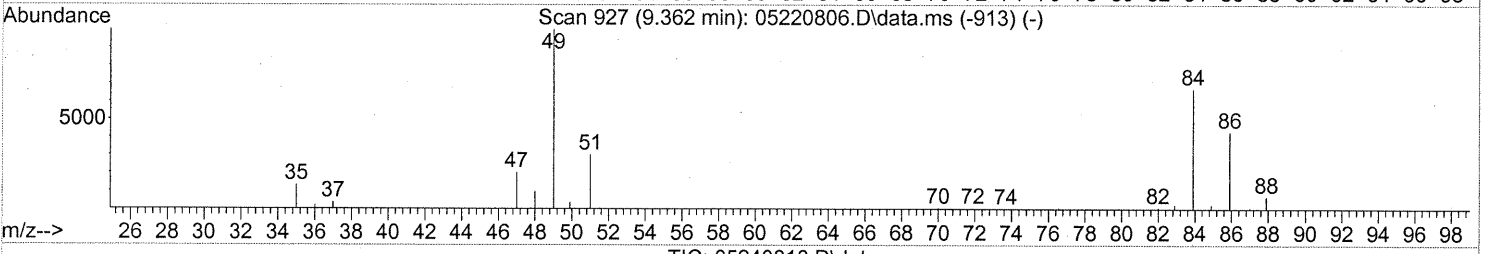
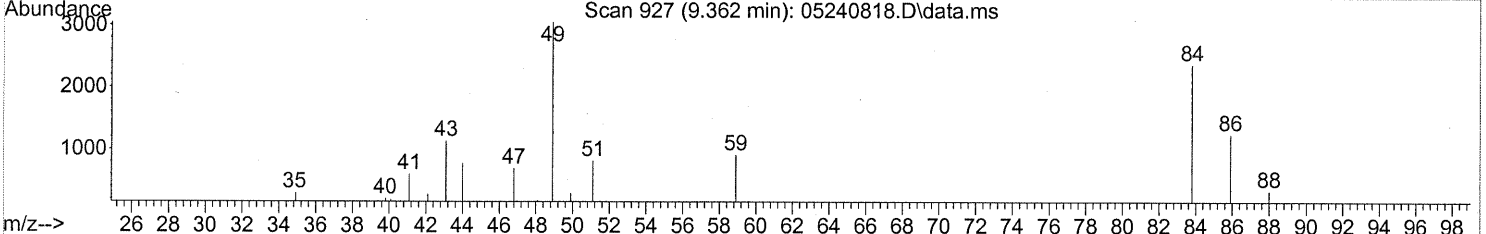
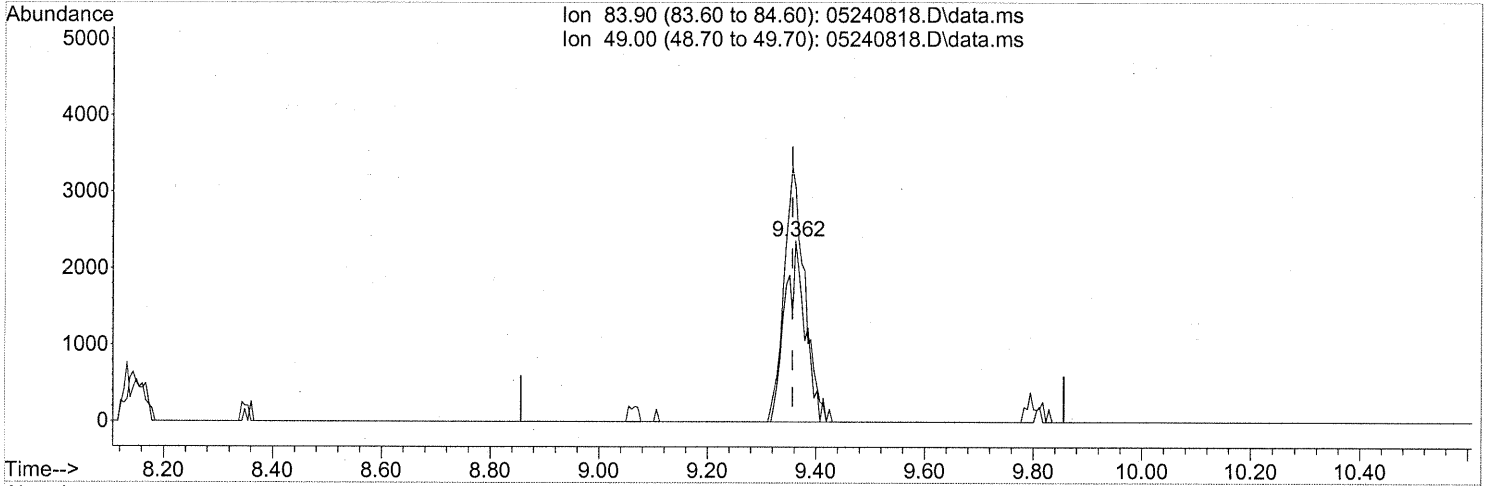
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(19) Methylene Chloride (T)

9.362min (+0.006) 0.18ng

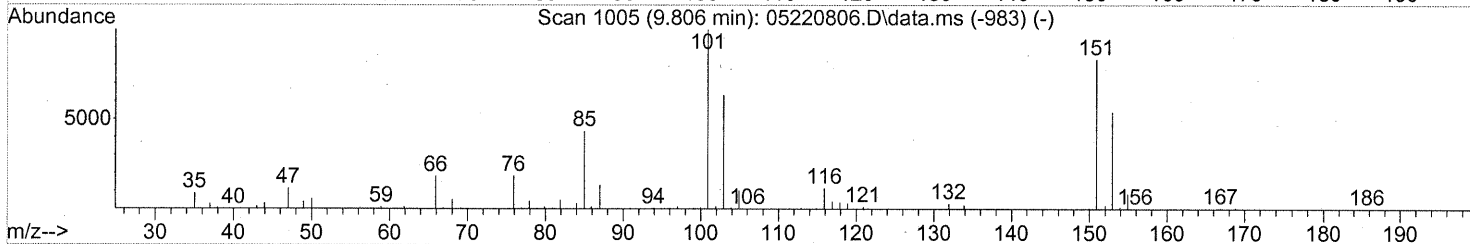
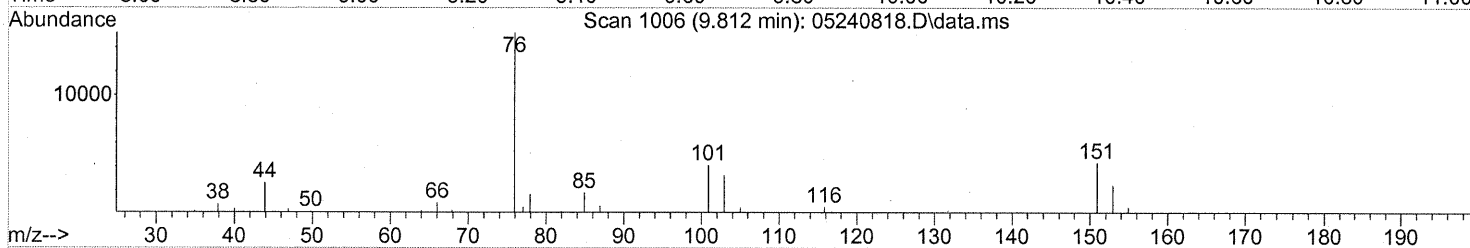
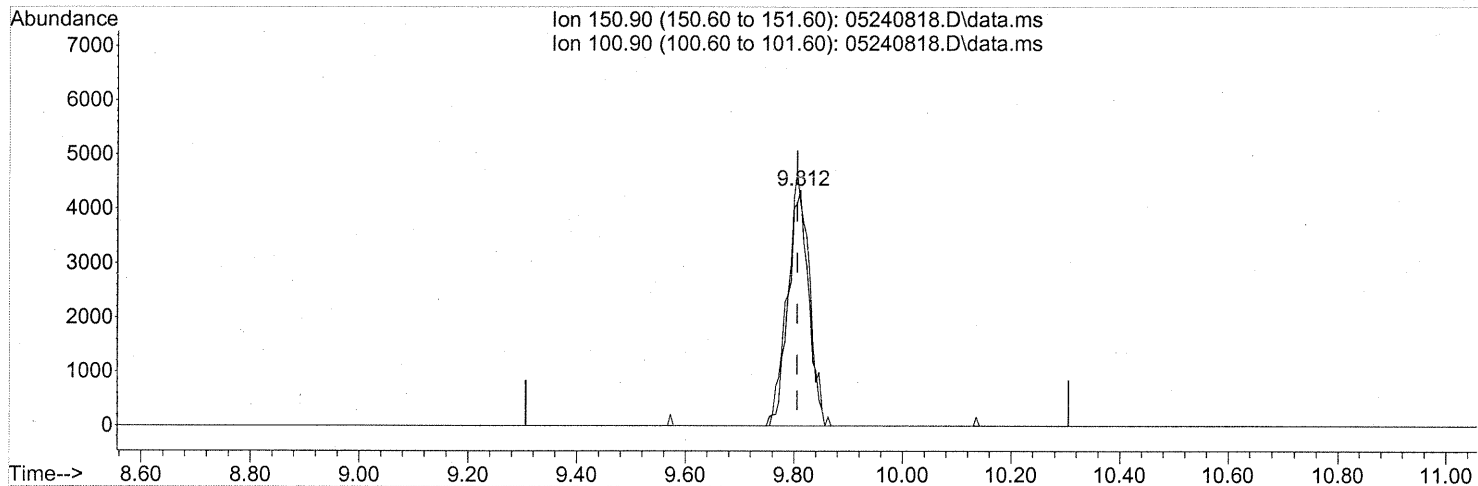
response 6136

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	142.91#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.35ng

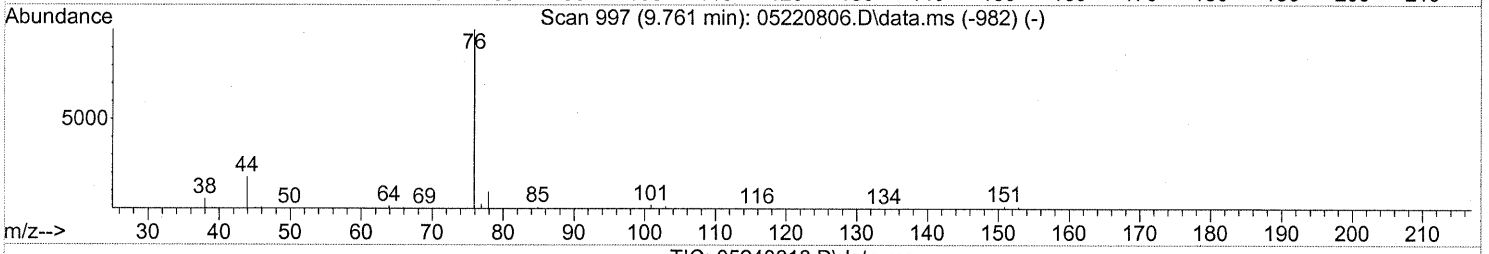
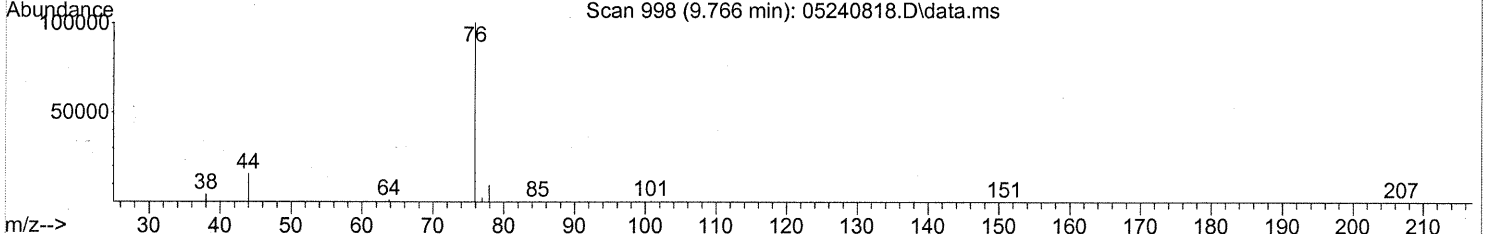
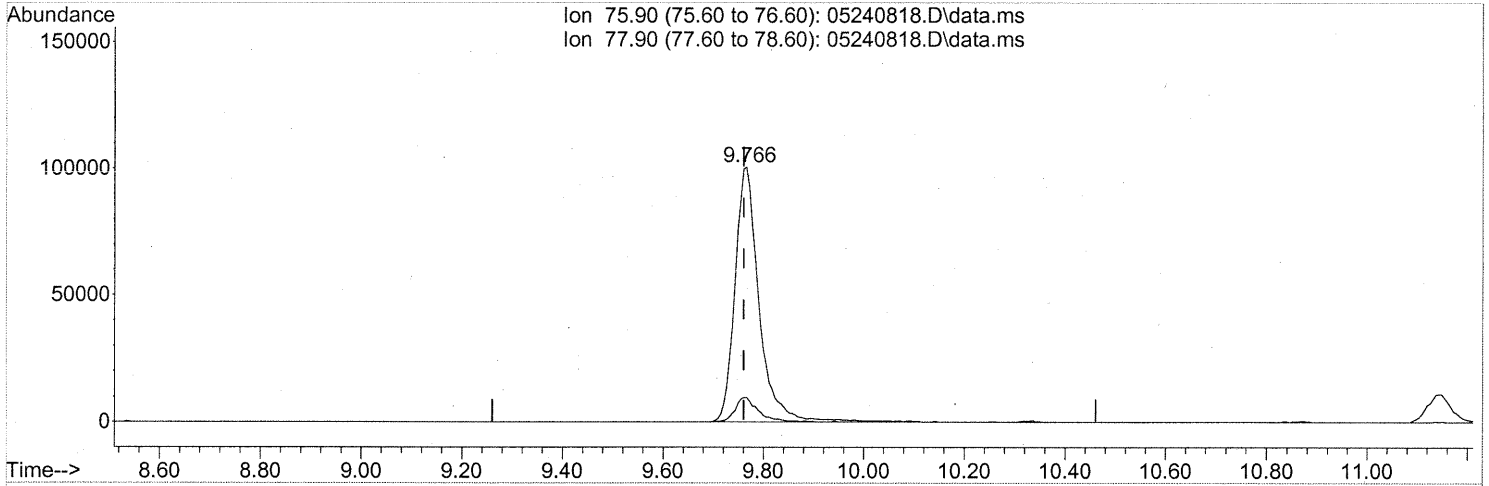
response 11211

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	115.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(22) Carbon Disulfide (T)

9.766min (+0.006) 2.58ng

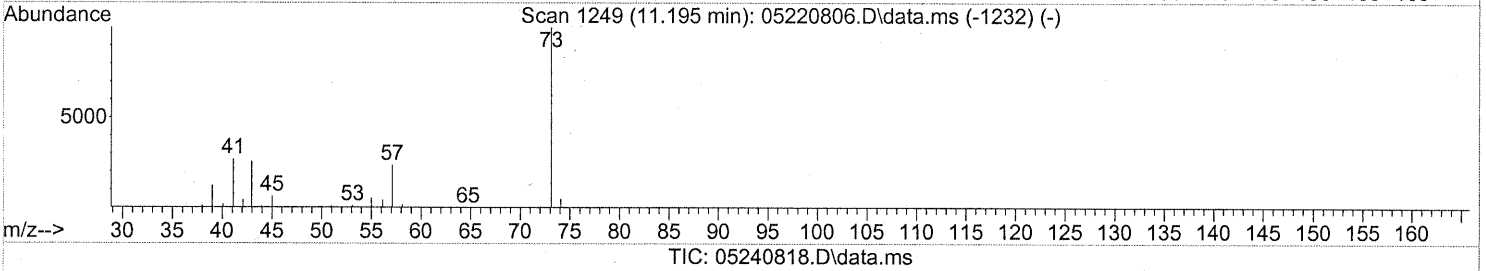
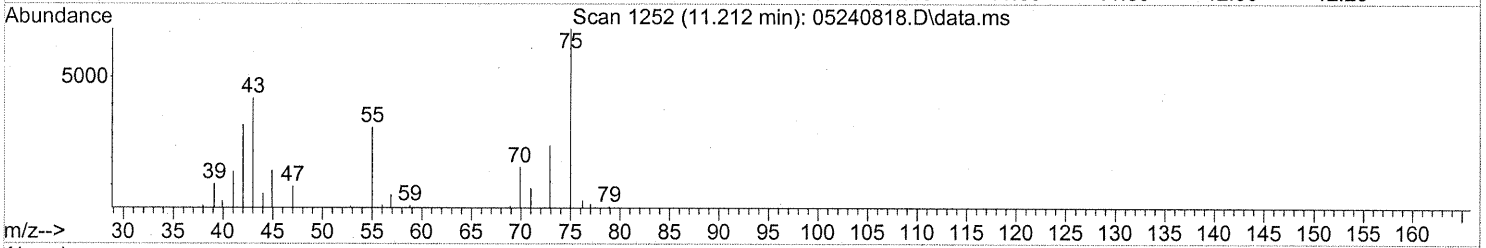
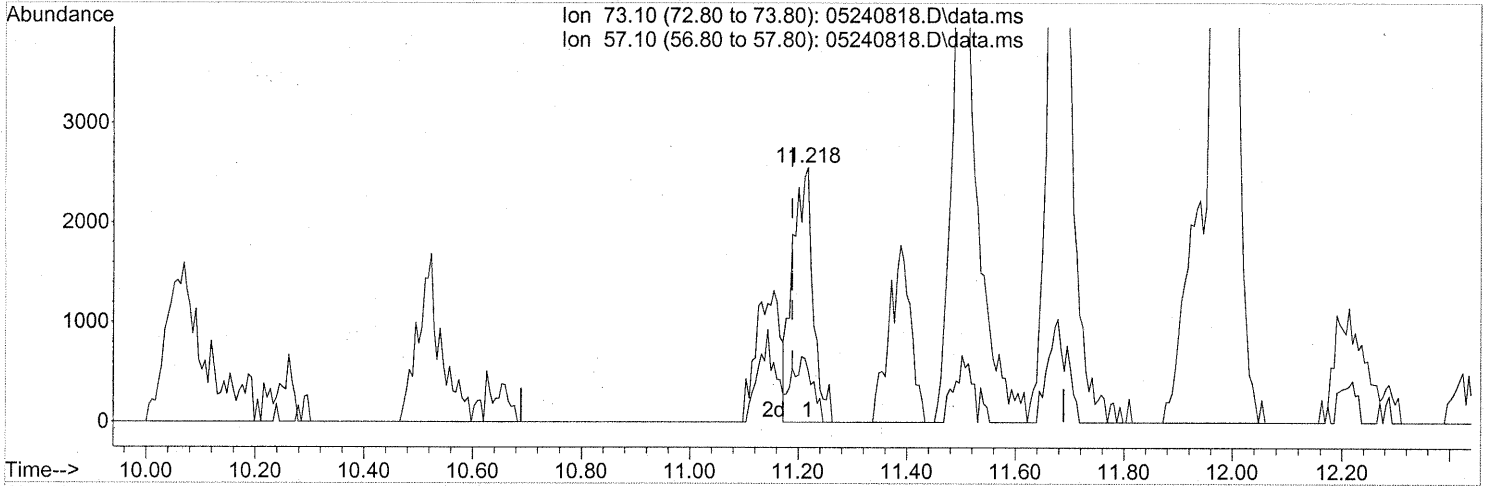
response 332595

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(25) Methyl tert-Butyl Ether (T)

11.218min (+0.028) 0.07ng

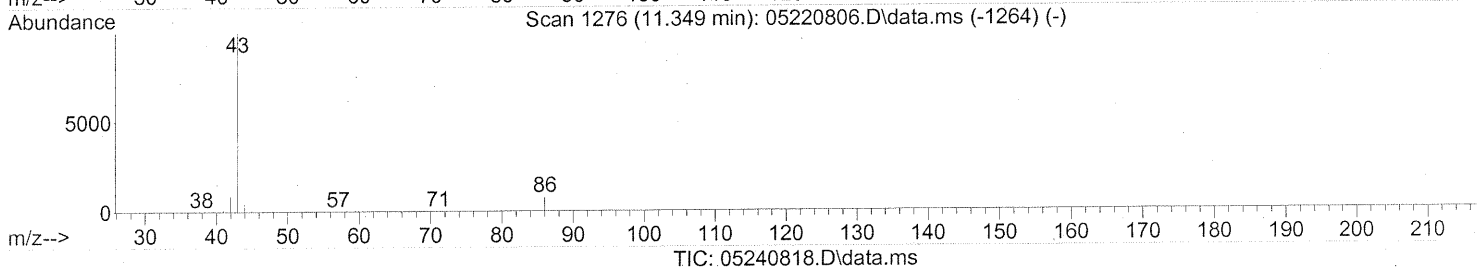
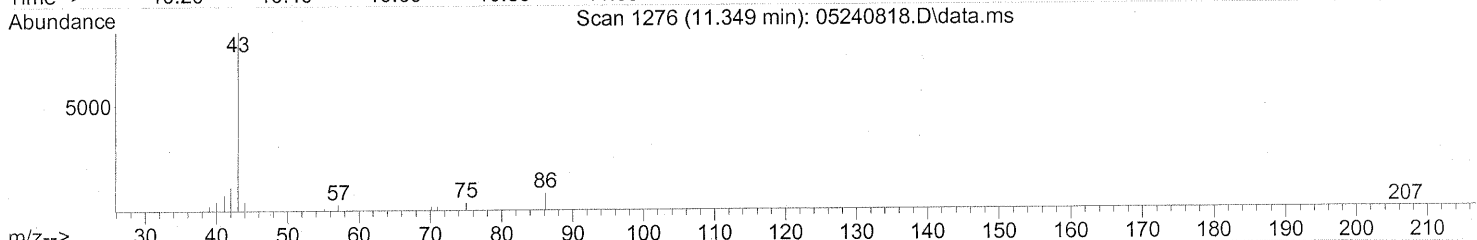
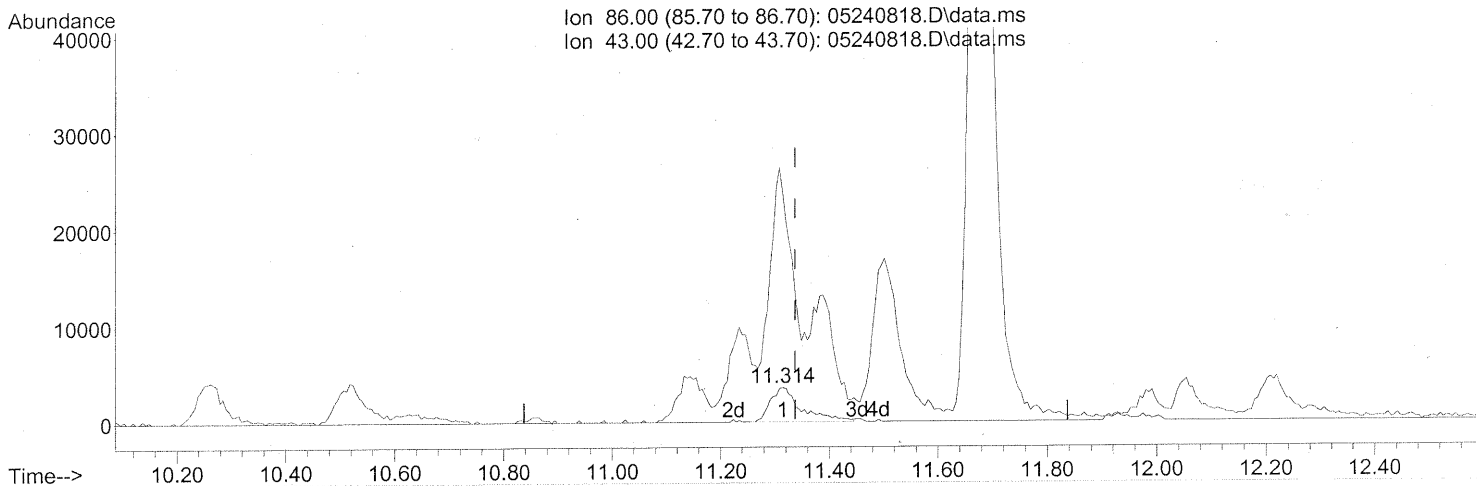
response 6701

Ion	Exp%	Act%
73.10	100	100
57.10	31.40	24.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801422-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 09:04:53 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.314min (-0.023) 2.48ng

response 13929

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	587.65#
0.00	0.00	0.00
0.00	0.00	0.00

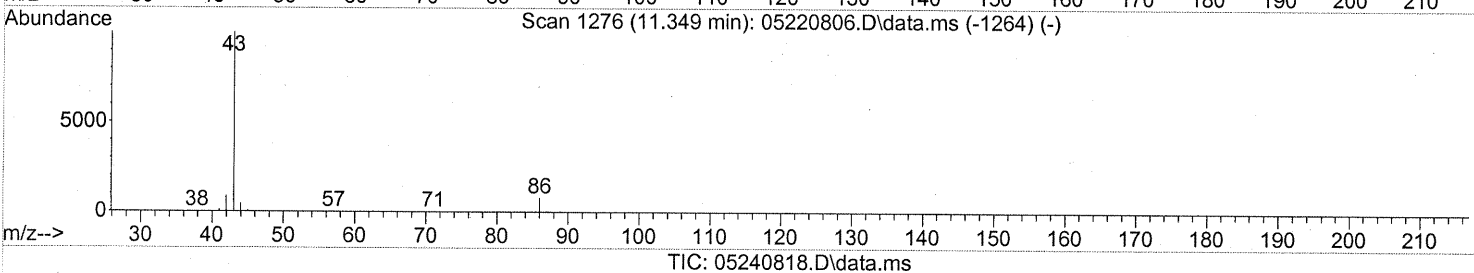
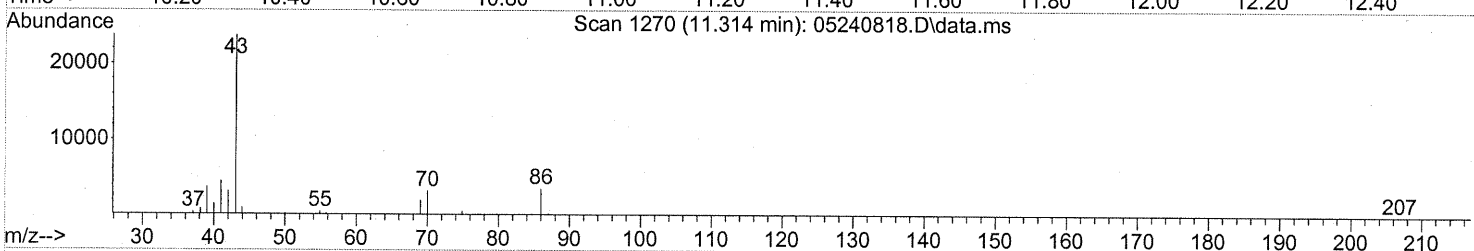
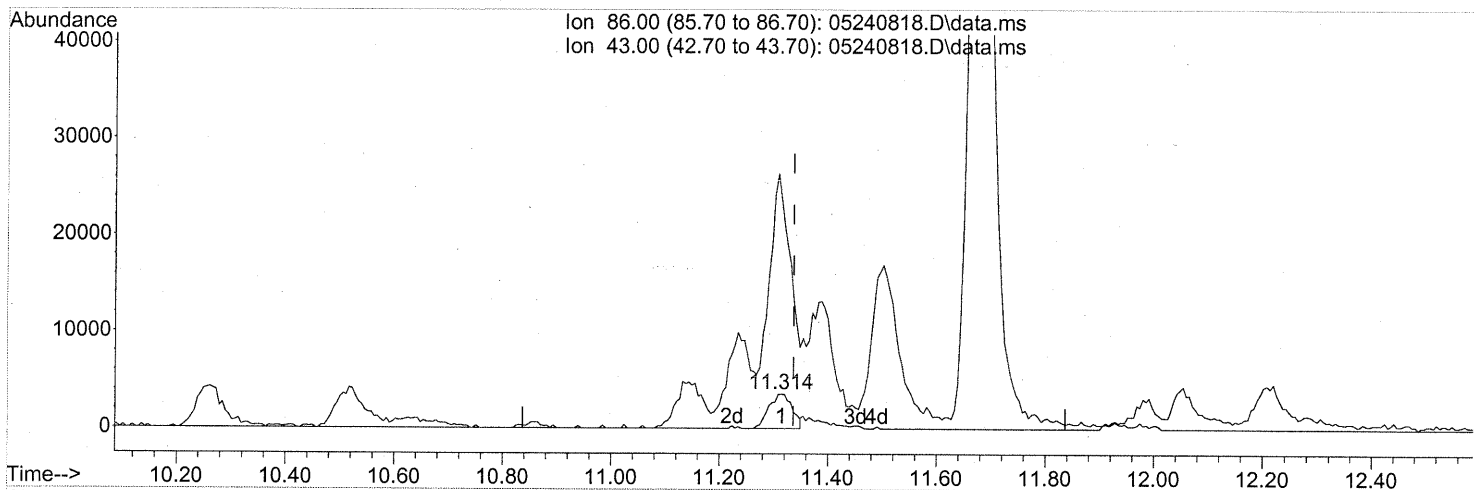
*tailing*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.314min (-0.023) 1.87ng m

response 10498

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	779.71#
0.00	0.00	0.00
0.00	0.00	0.00

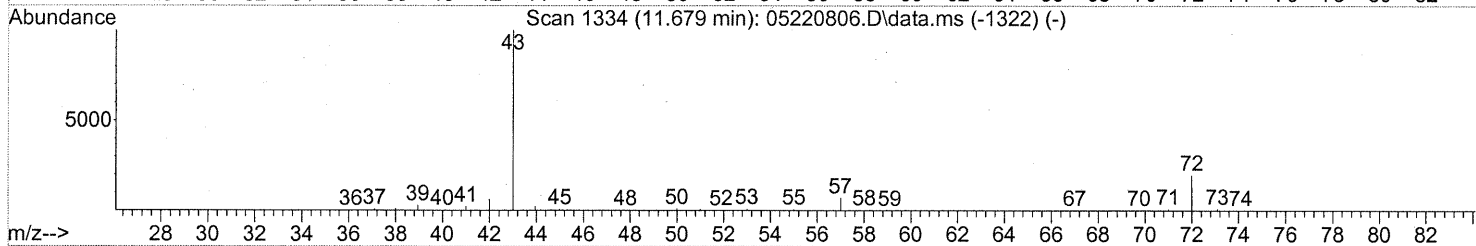
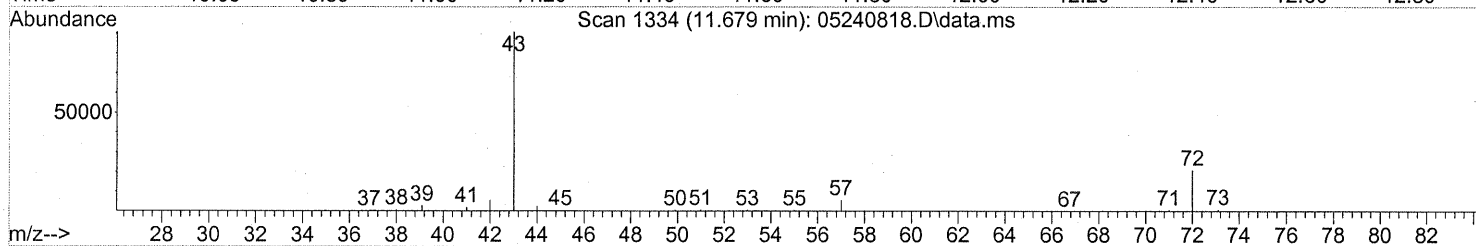
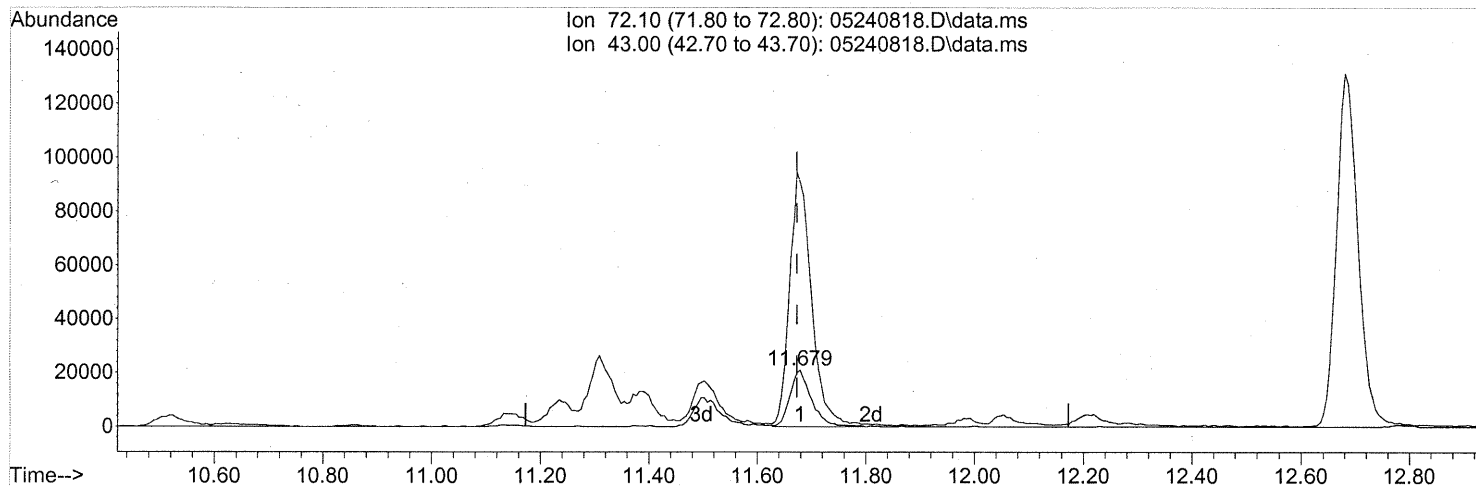
*No. tailing*  
*WA 5/29/08*

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.679min (+0.006) 2.57ng

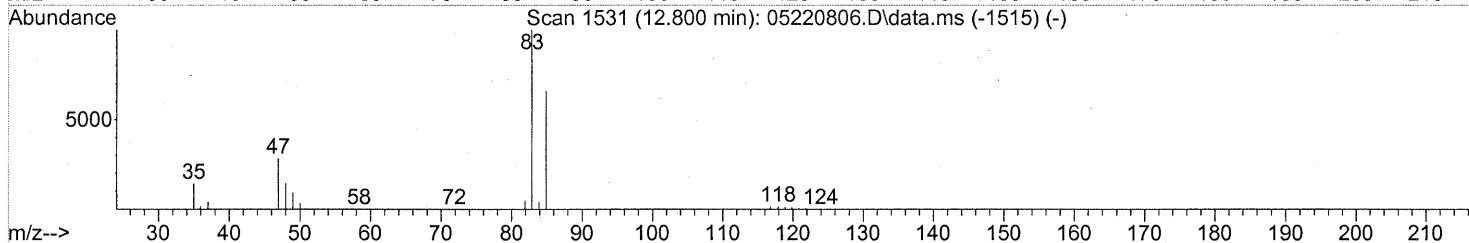
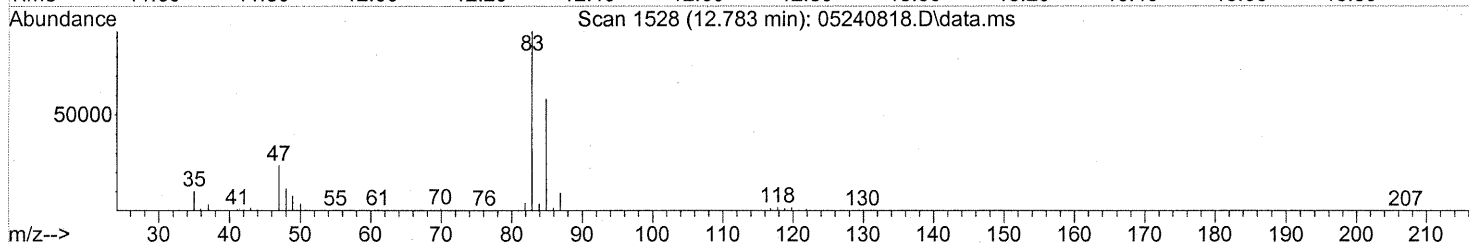
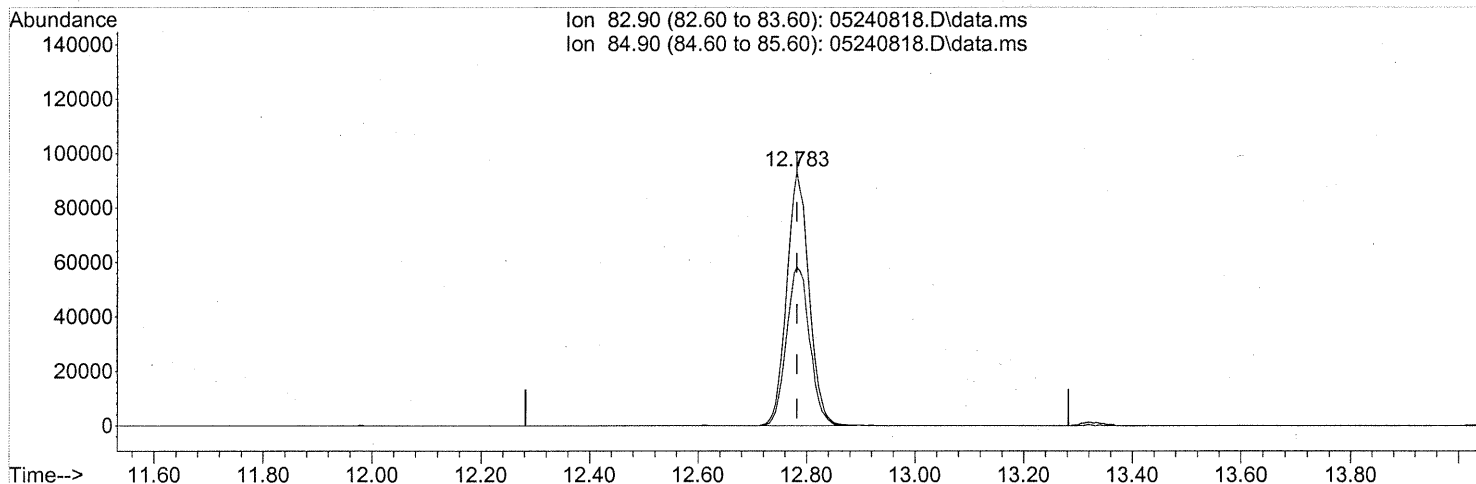
response 56954

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	458.53#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

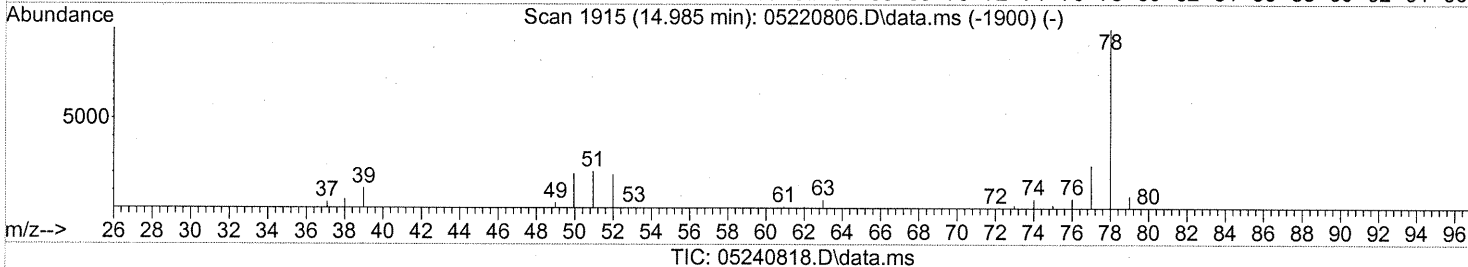
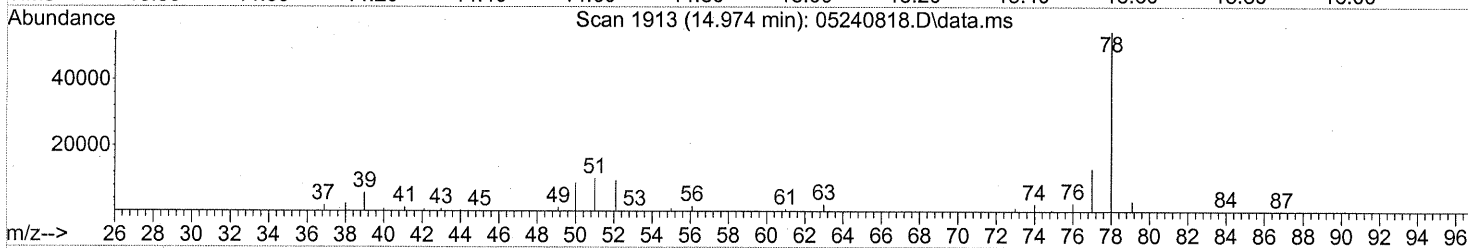
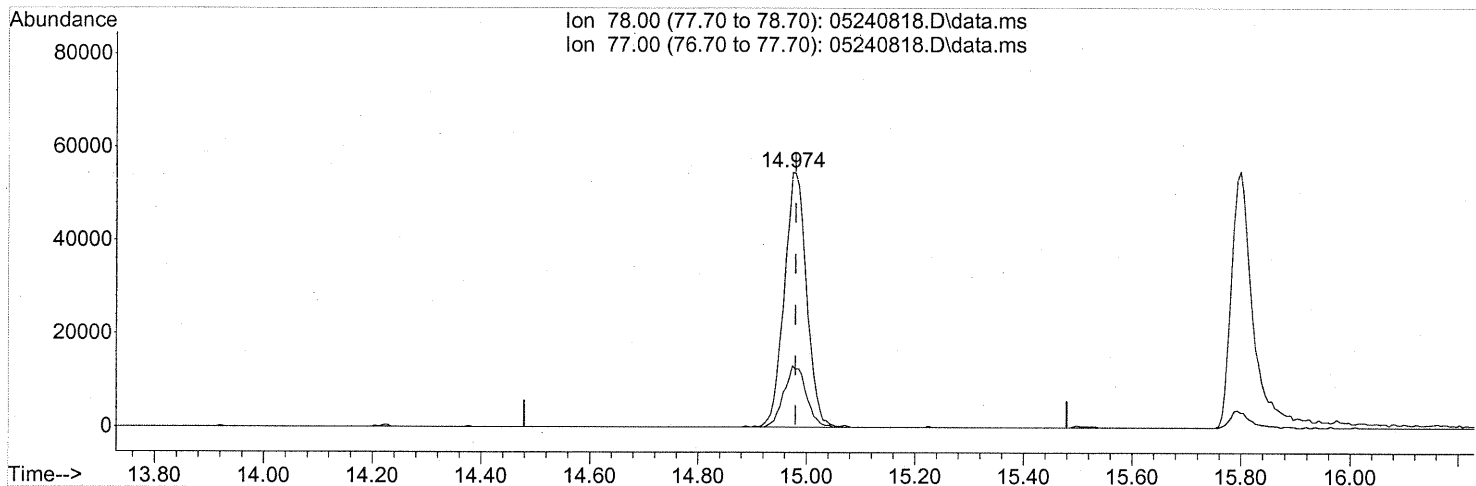
(32) Chloroform (T)  
 12.783min (-0.000) 5.17ng  
 response 265887

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	65.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



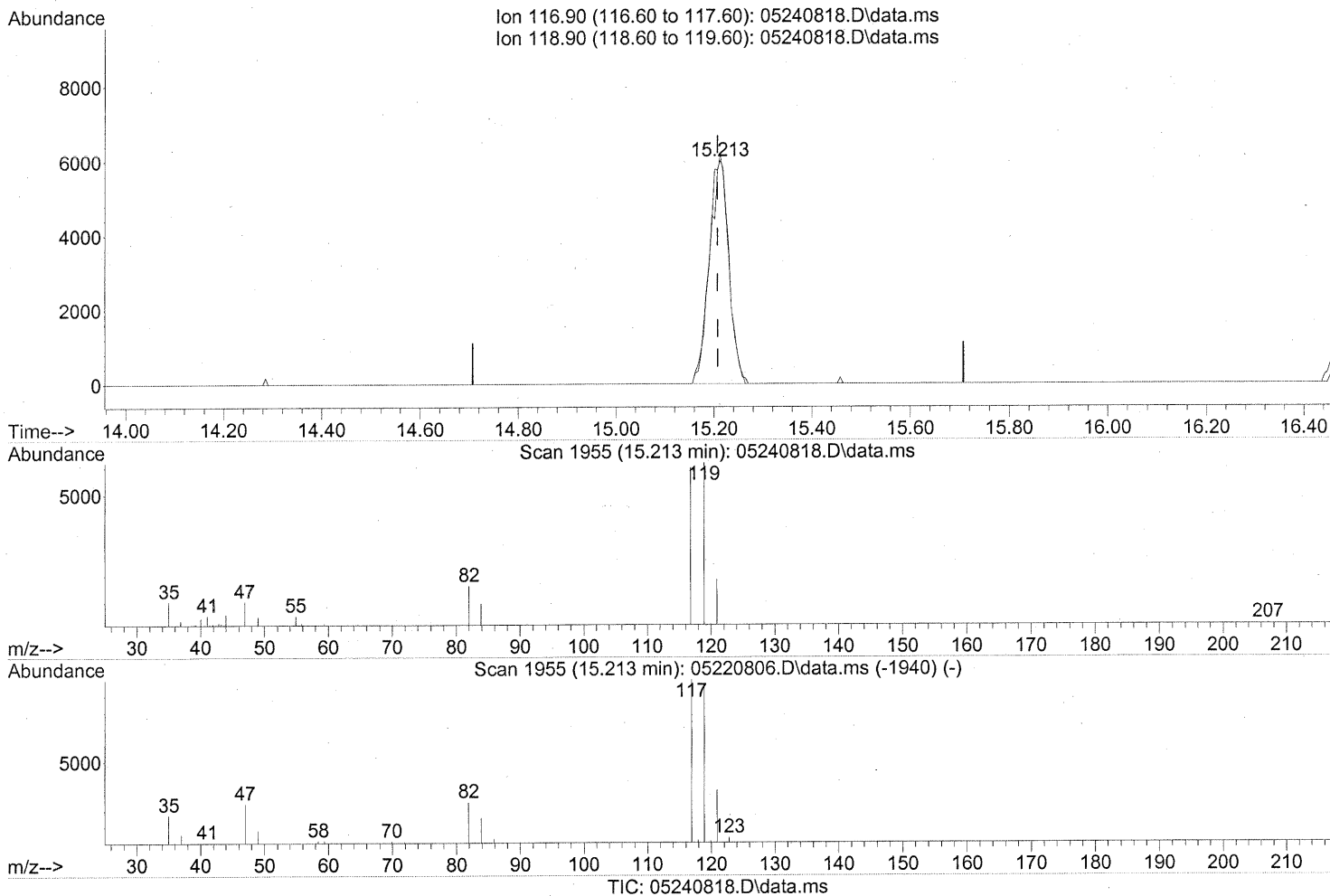
(41) Benzene (T)  
 14.974min (-0.006) 1.20ng  
 response 155197

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	24.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 6:50 pm  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 30 06:06:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

15.213min (+0.006) 0.34ng

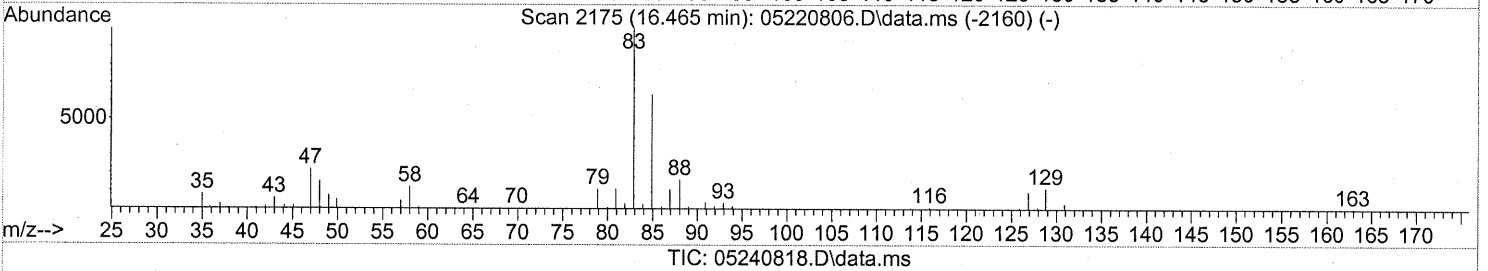
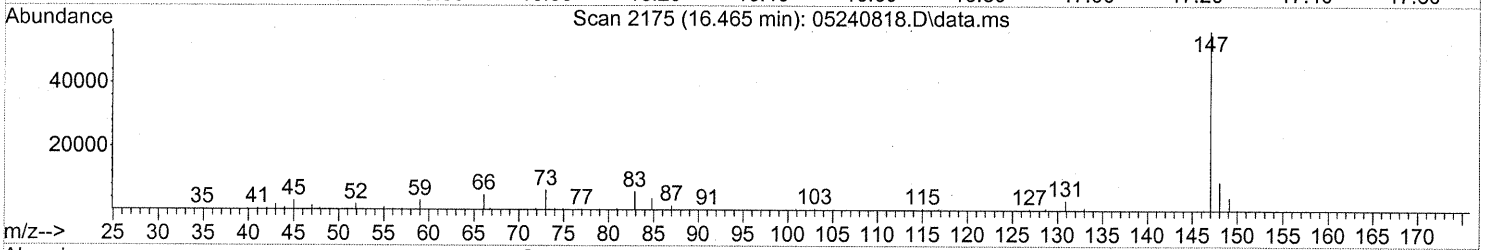
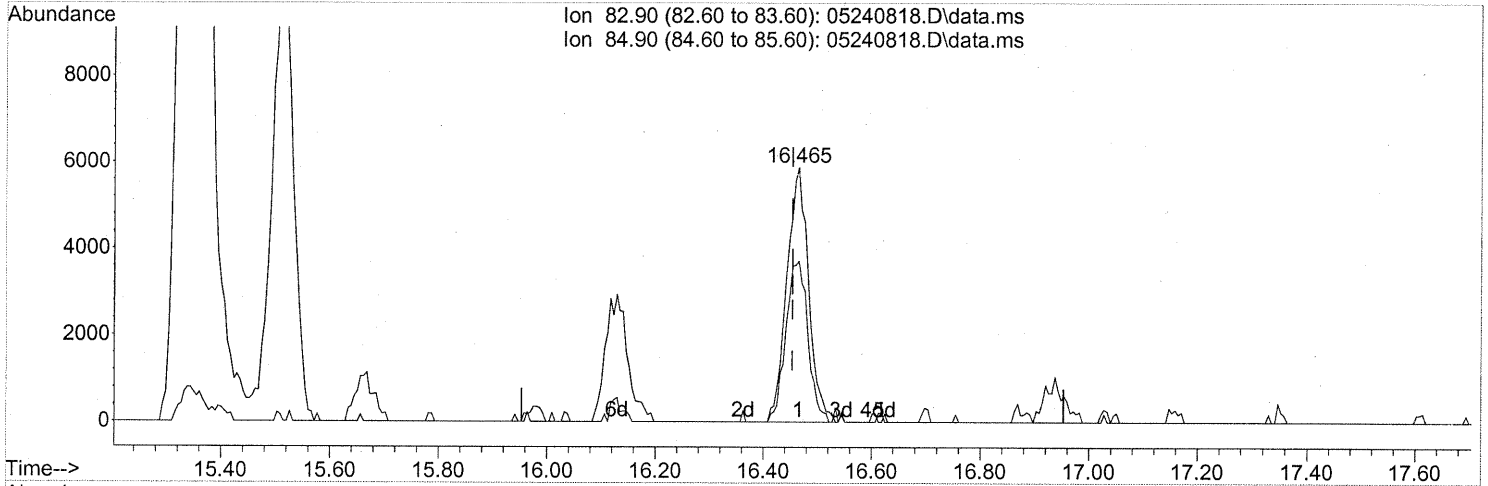
response 17059

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	95.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.465min (+0.011) 0.38ng

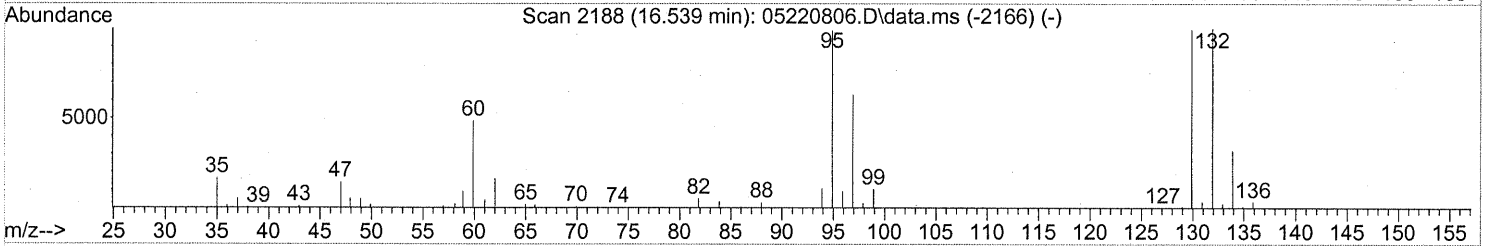
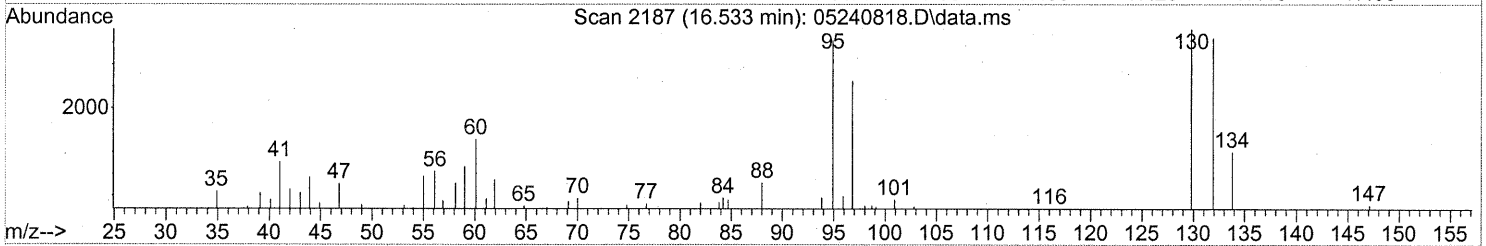
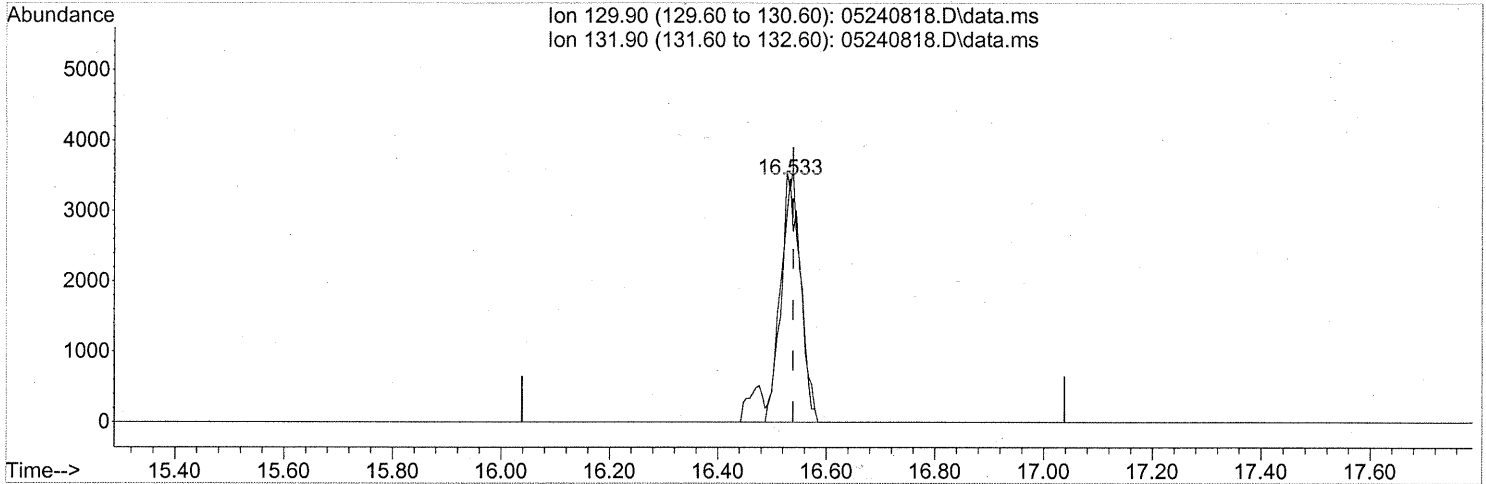
response 16405

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	64.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(47) Trichloroethene (T)

16.533min (-0.006) 0.22ng

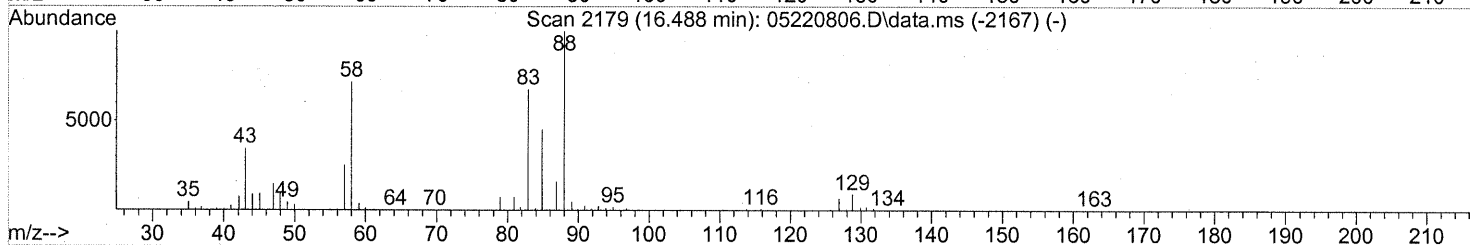
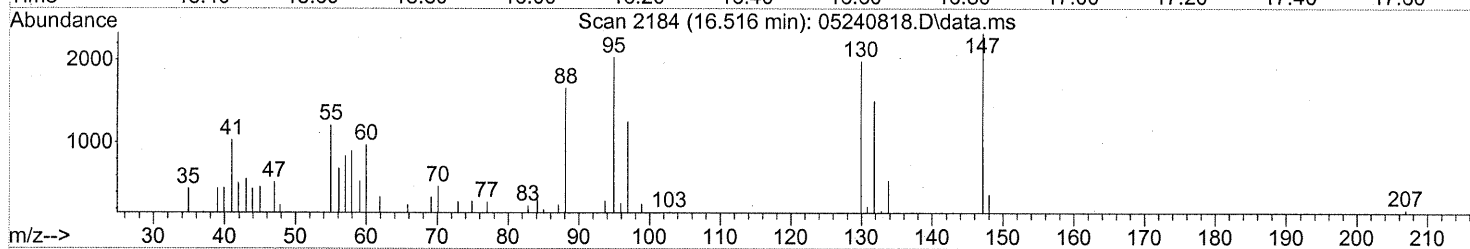
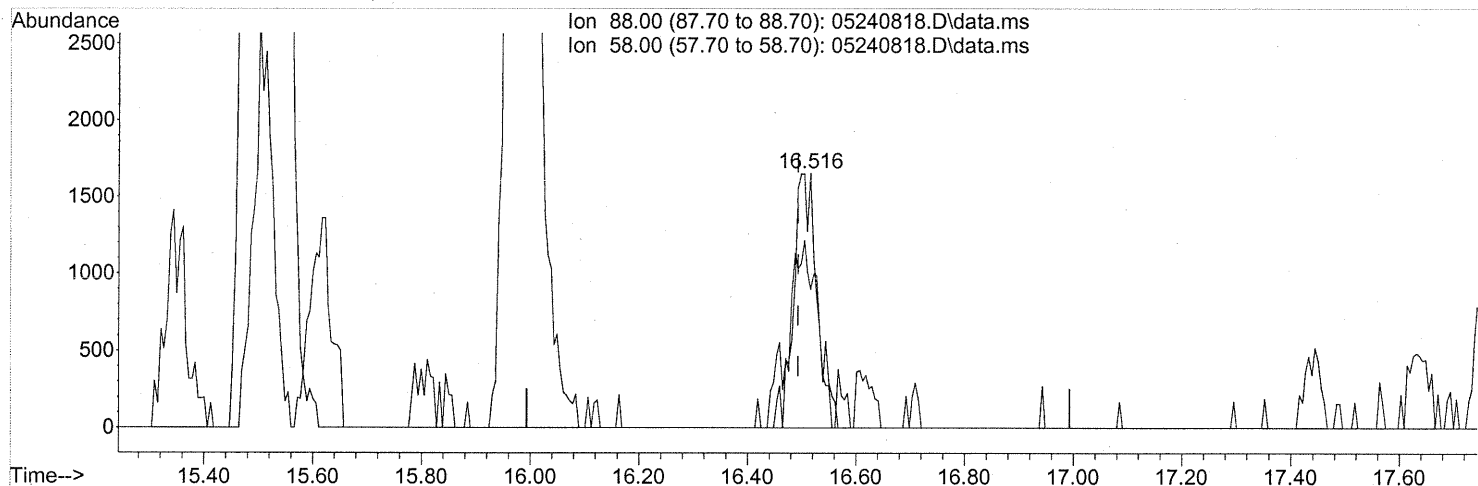
response 8755

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	101.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(48) 1,4-Dioxane (T)  
 16.516min (+0.023) 0.21ng  
 response 5017

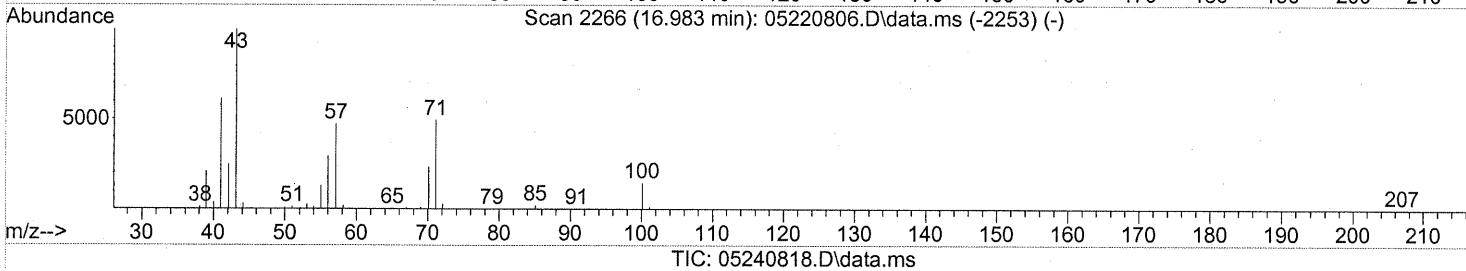
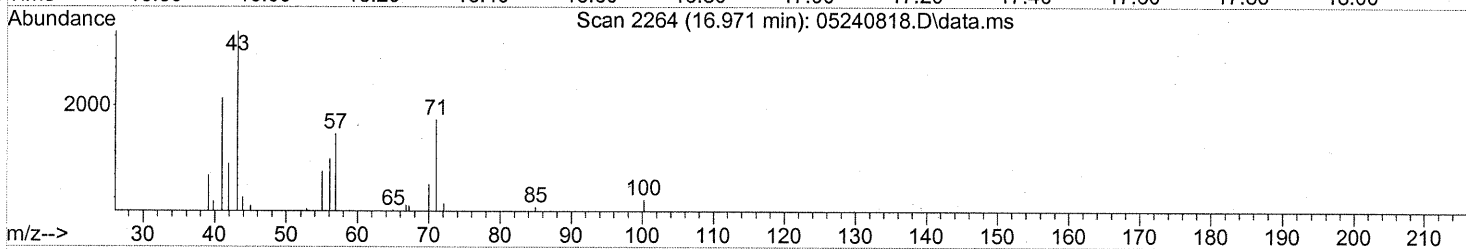
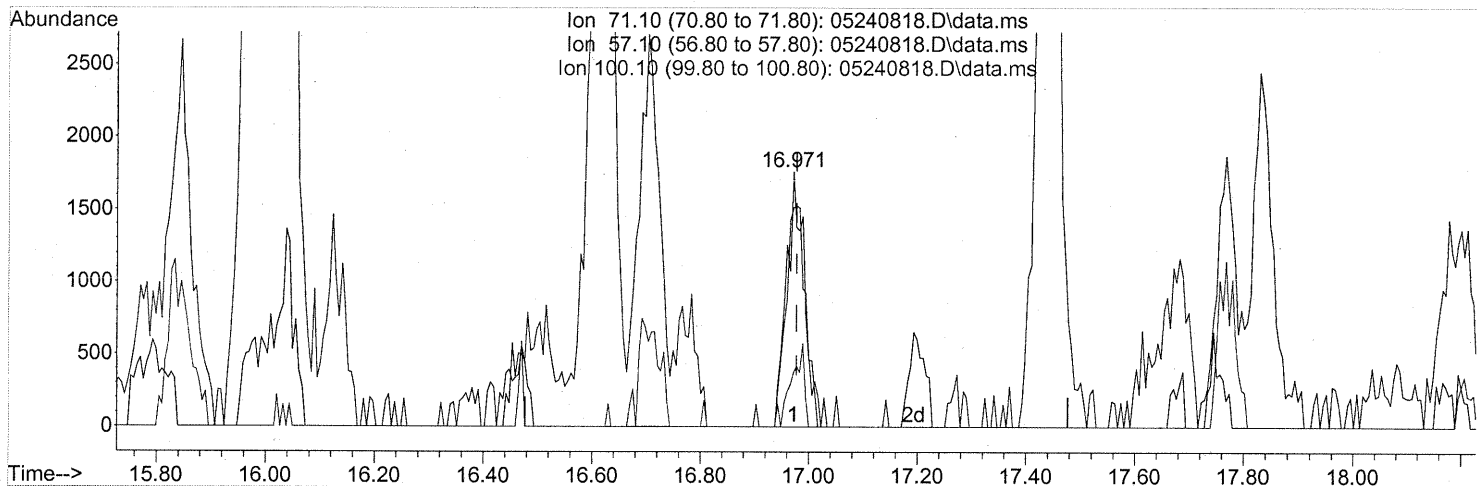
Ion	Exp%	Act%
88.00	100	100
58.00	90.10	78.49
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



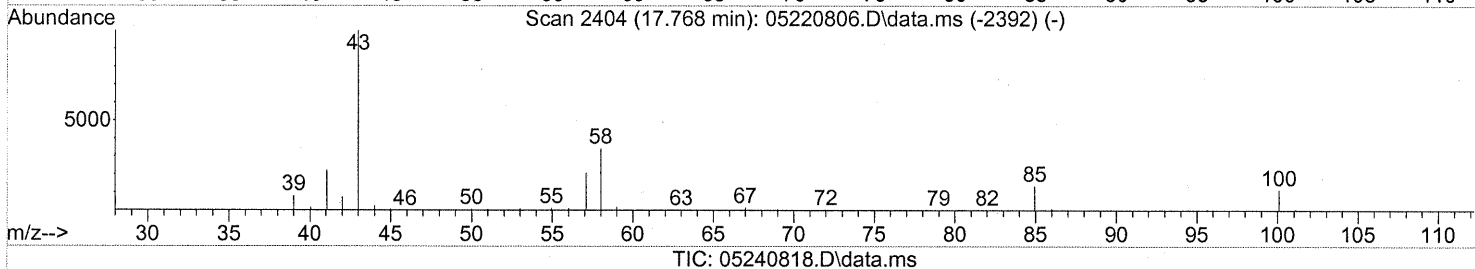
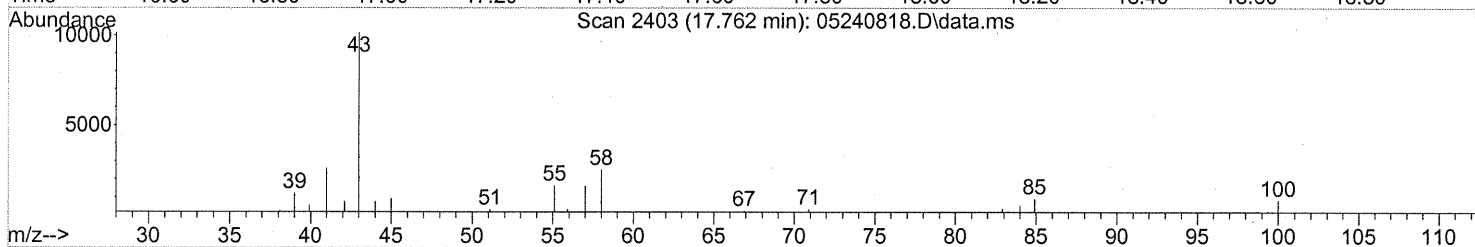
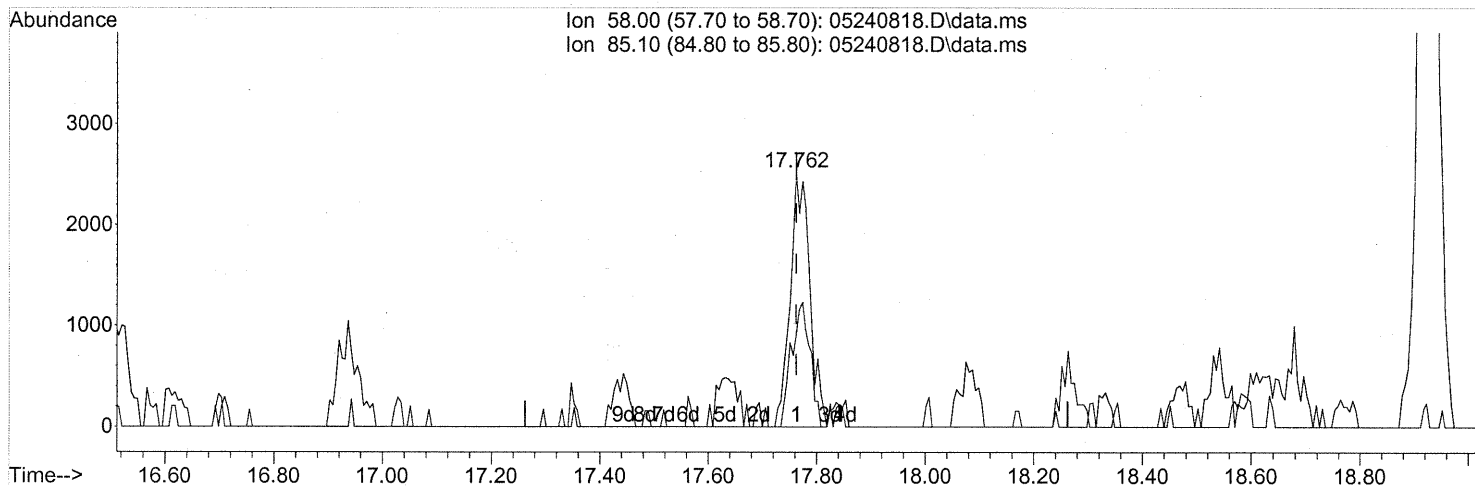
(51) n-Heptane (T)  
 16.971min (-0.006) 0.12ng  
 response 4031

Ion	Exp%	Act%
71.10	100	100
57.10	124.90	97.82#
100.10	30.10	23.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.762min (-0.000) 0.18ng

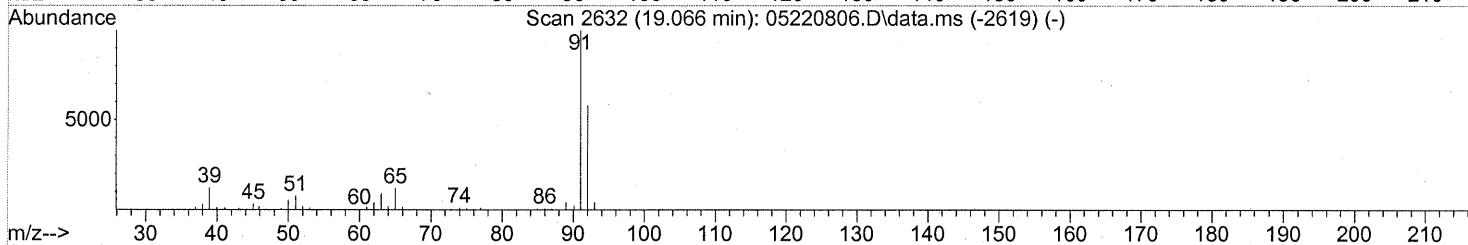
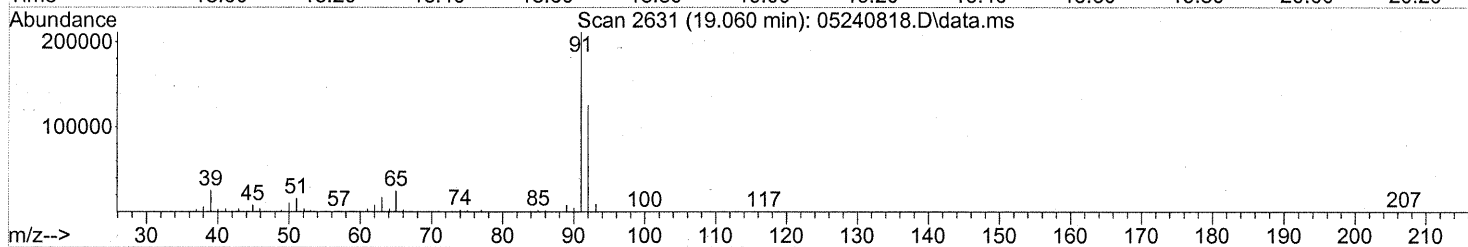
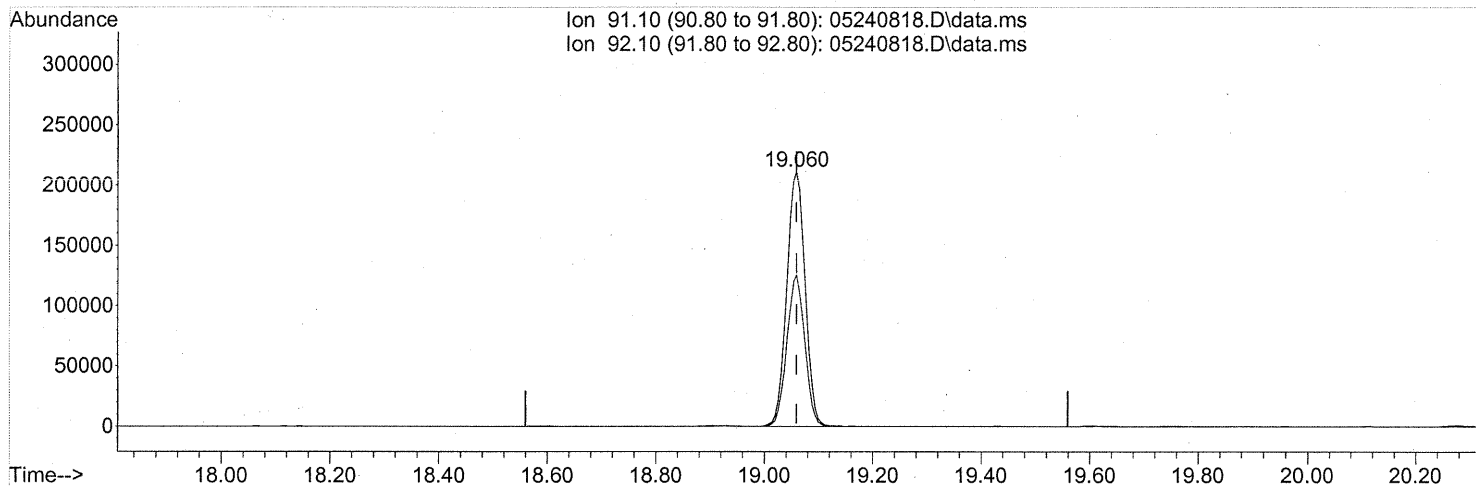
response 6290

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	46.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 3.59ng

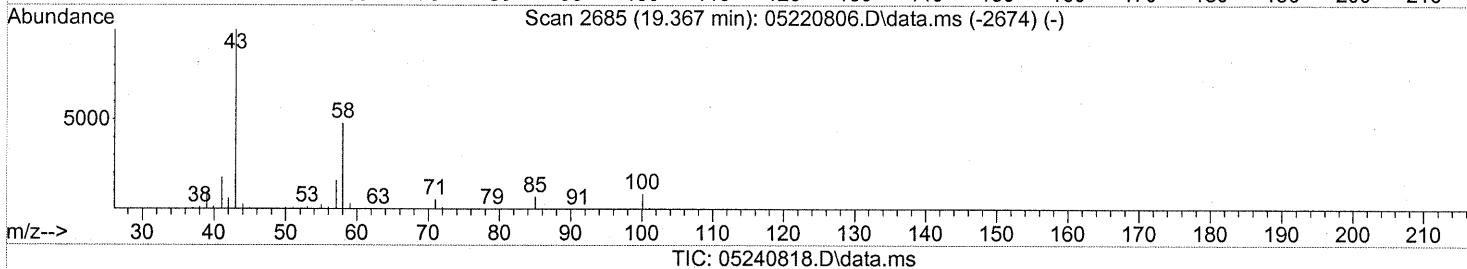
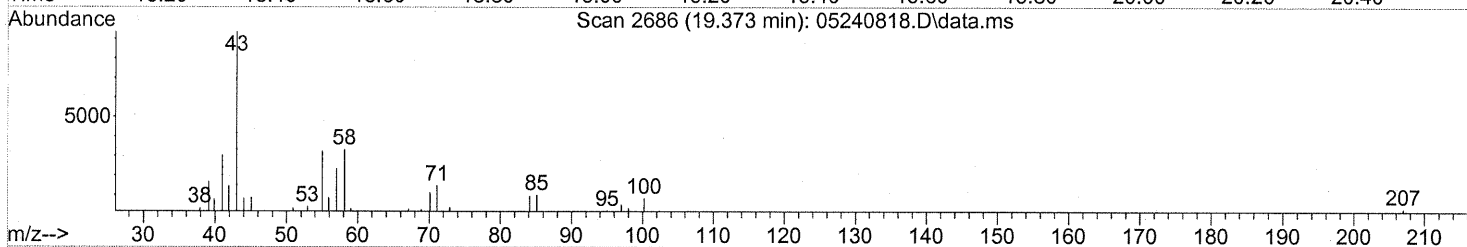
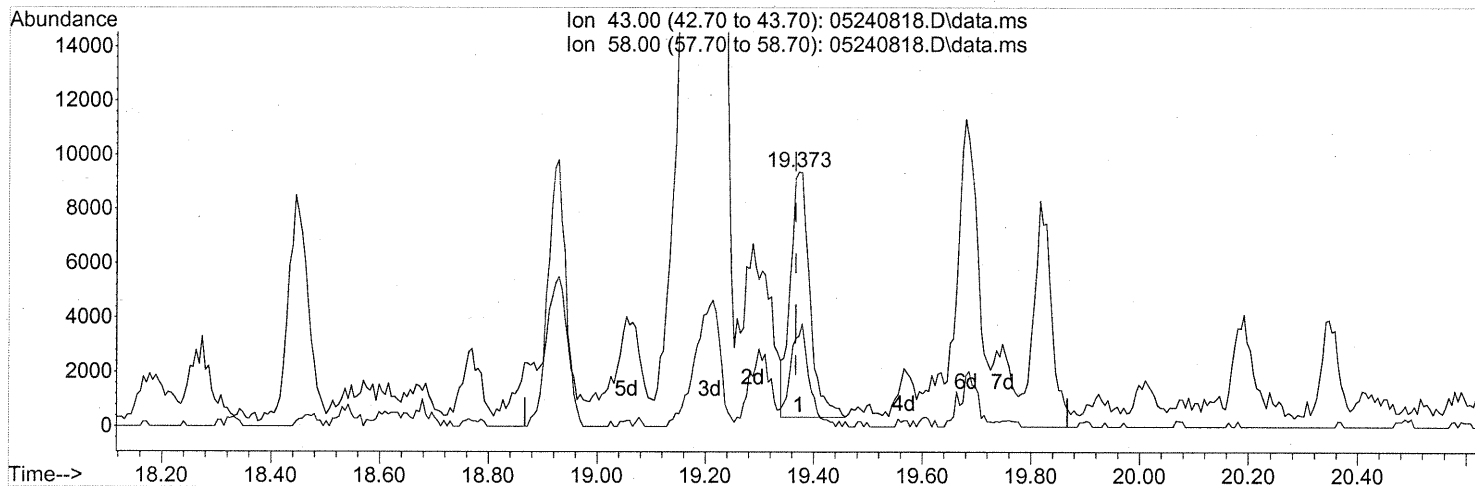
response 494976

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



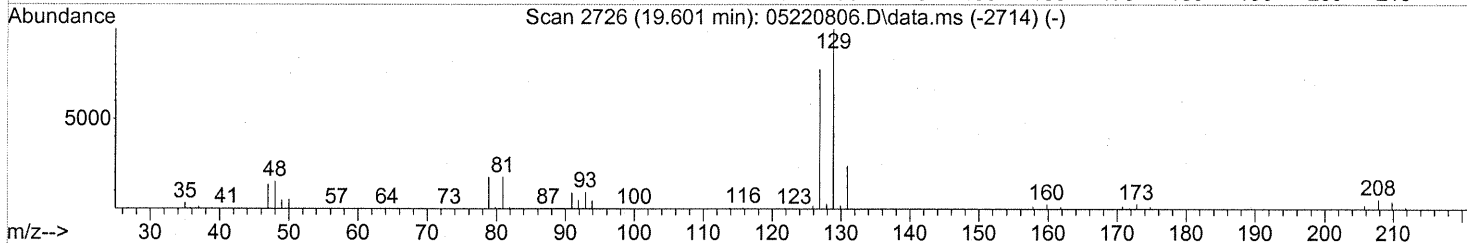
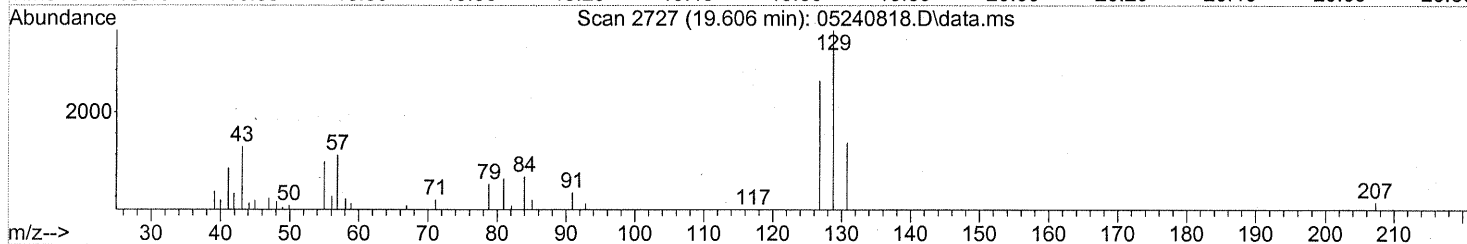
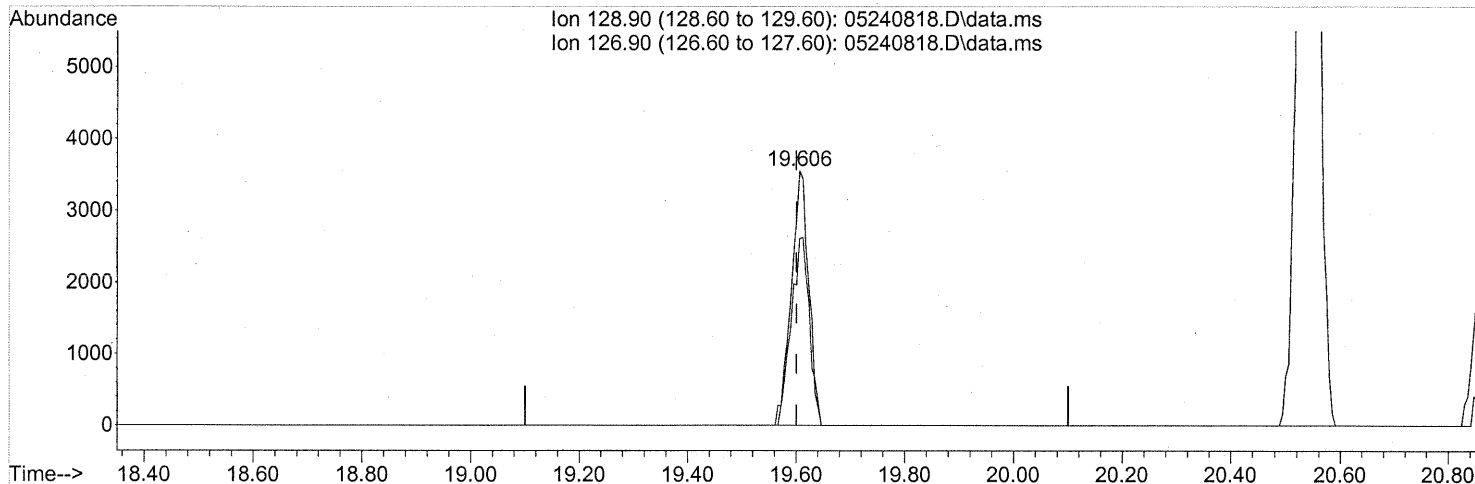
(59) 2-Hexanone (T)  
 19.373min (+0.006) 0.24ng  
 response 22427

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	39.48#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(60) Dibromochloromethane (T)

19.606min (+0.006) 0.21ng

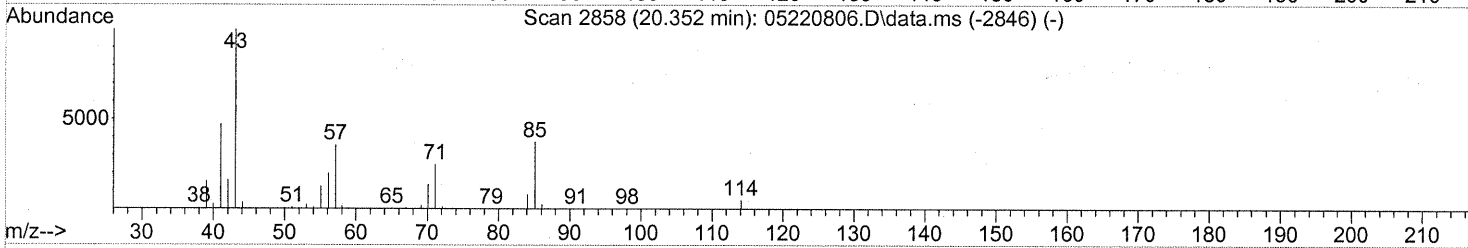
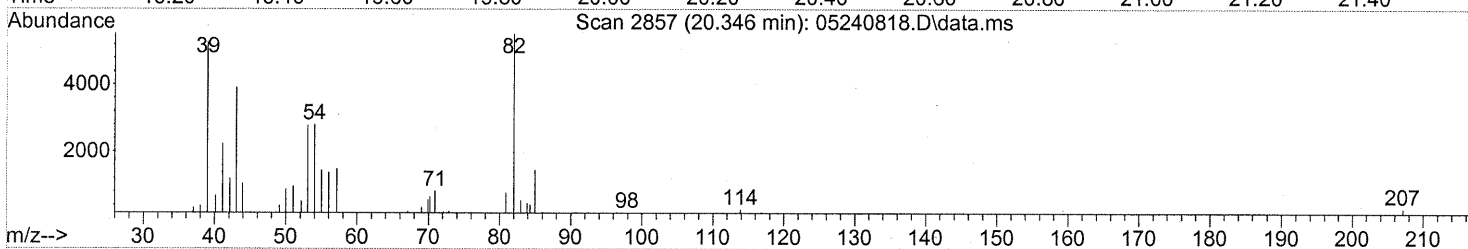
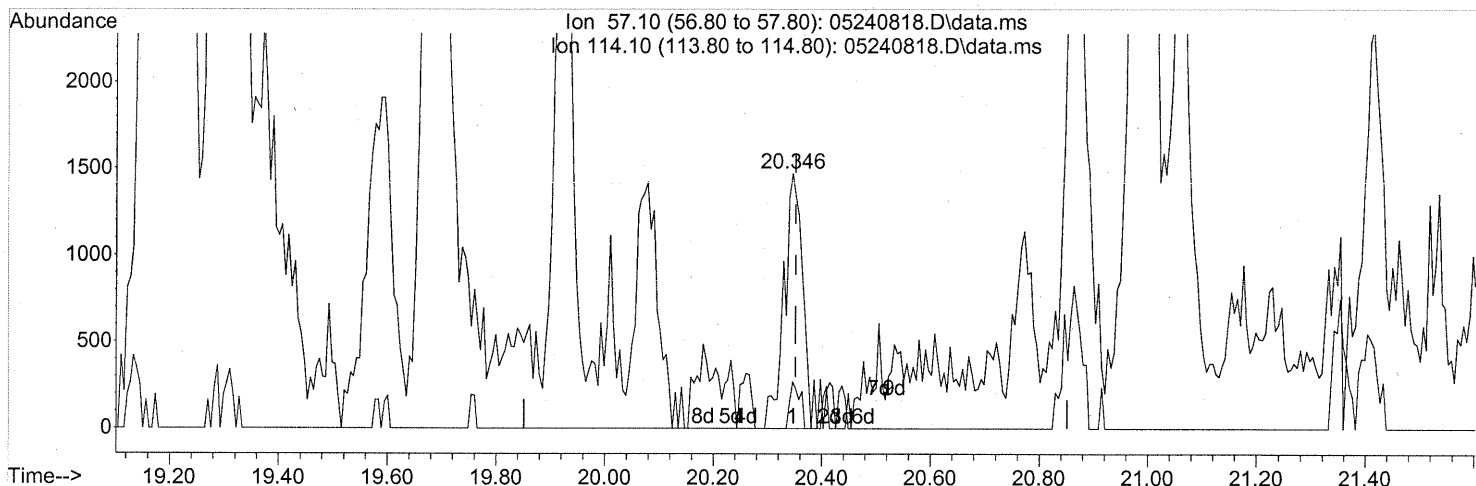
response 7760

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	79.79
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



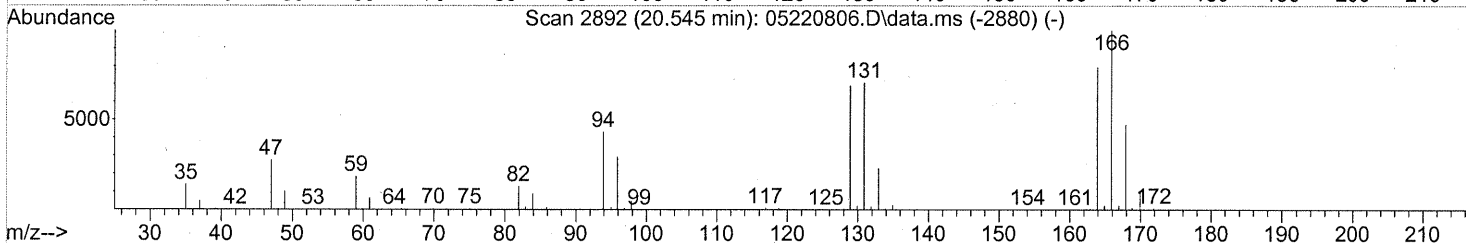
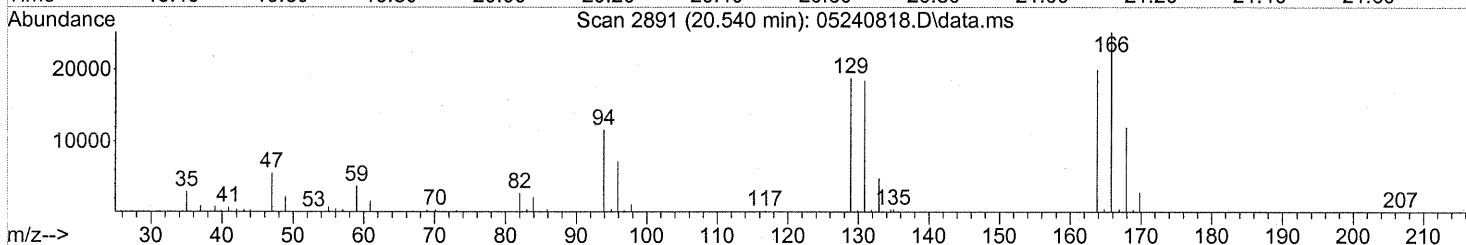
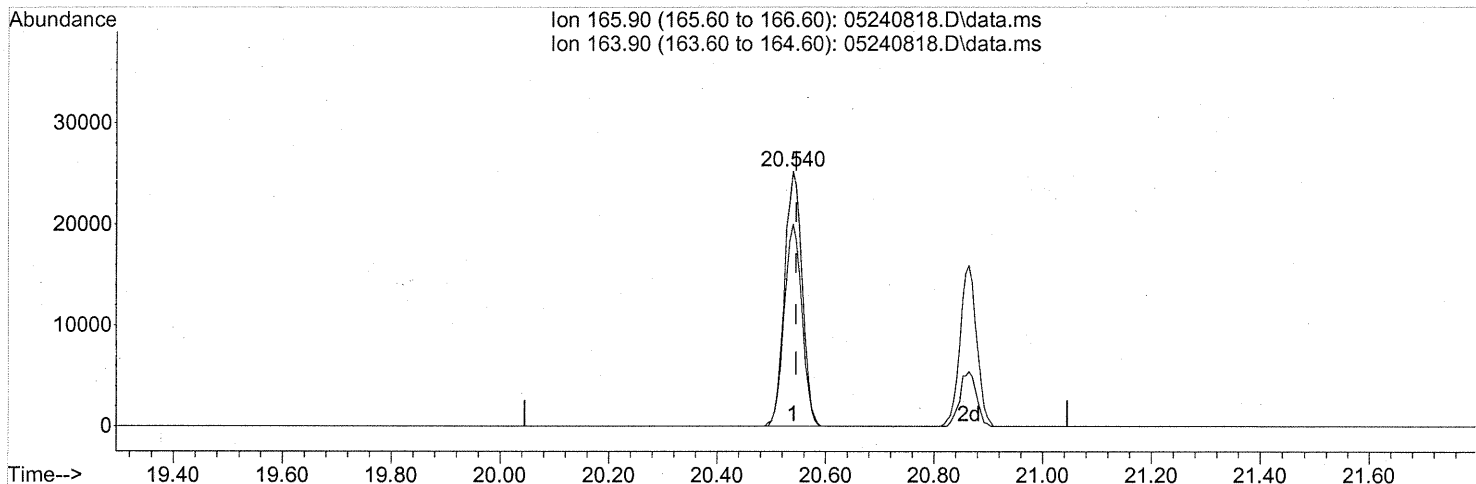
(63) n-Octane (T)  
 20.346min (-0.006) 0.11ng  
 response 3423

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	10.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 1.39ng

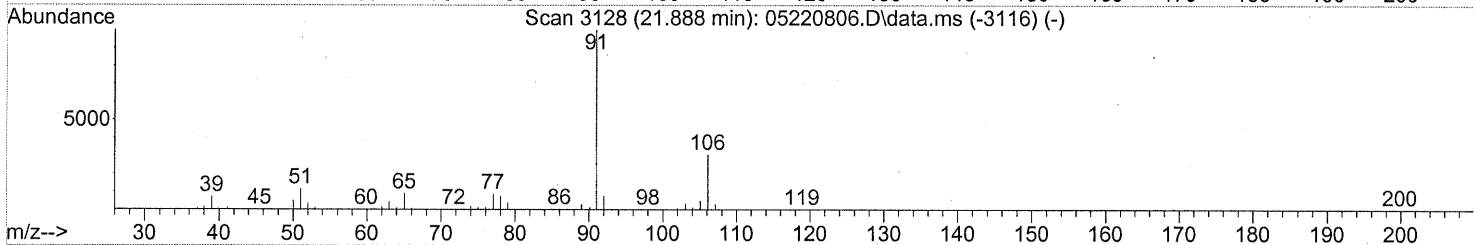
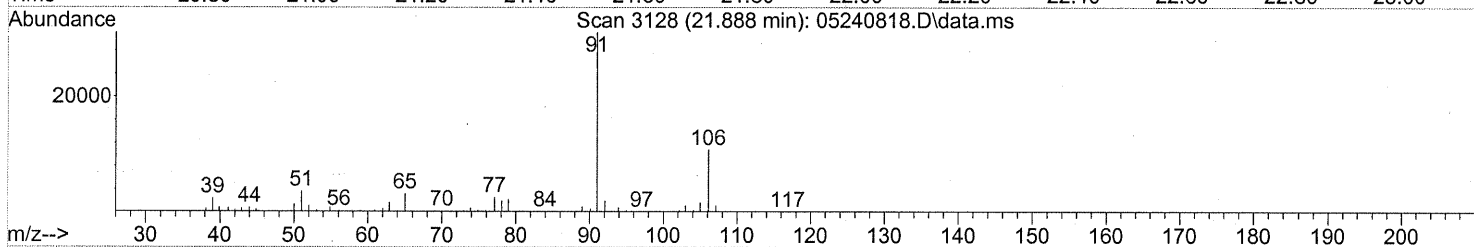
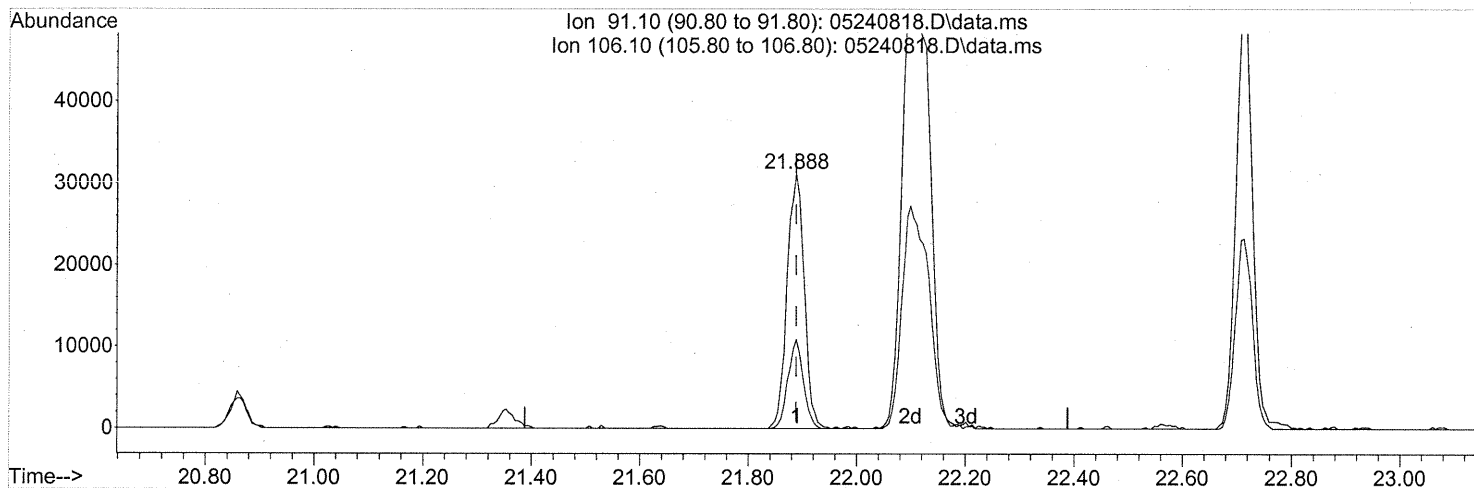
response 56585

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(66) Ethylbenzene (T)  
 21.888min (-0.000) 0.43ng  
 response 68161

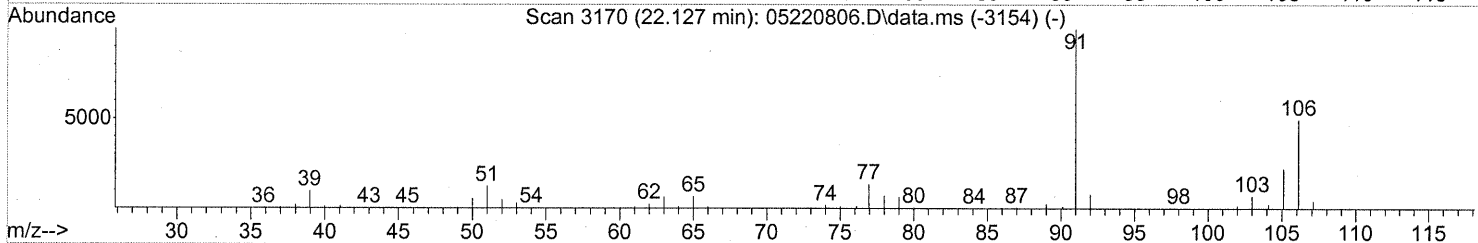
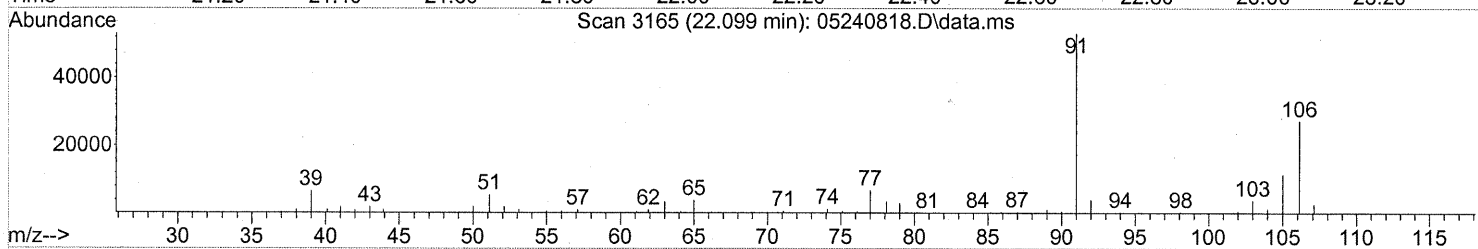
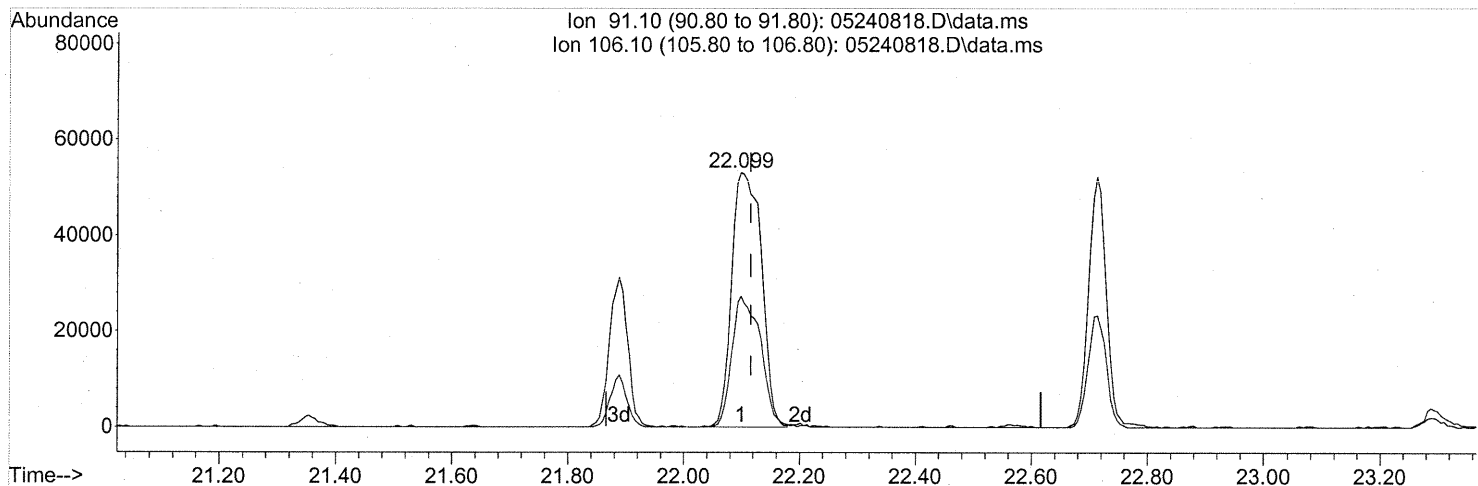
Ion	Exp%	Act%
91.10	100	100
106.10	34.10	31.17
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

22.099min (-0.017) 1.78ng

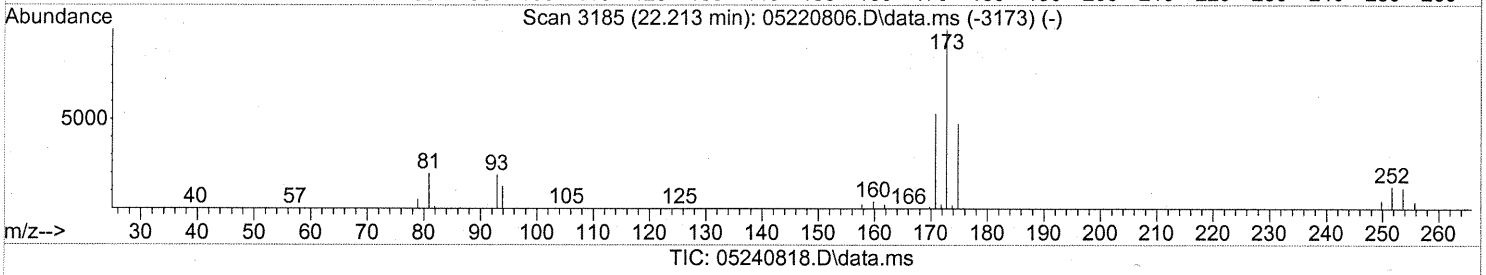
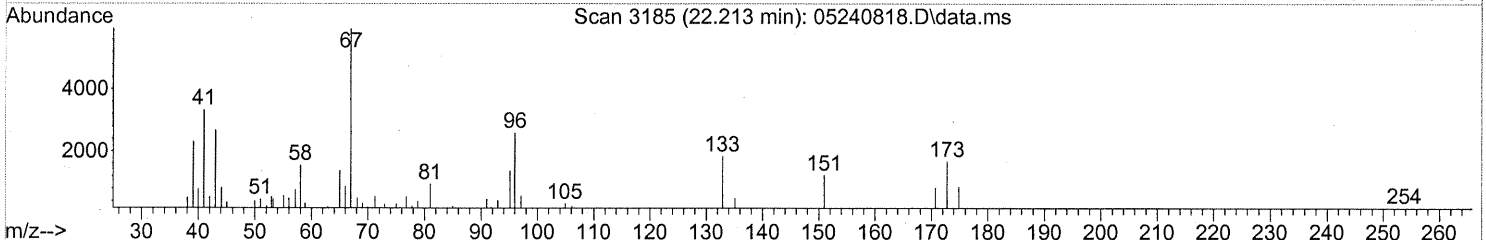
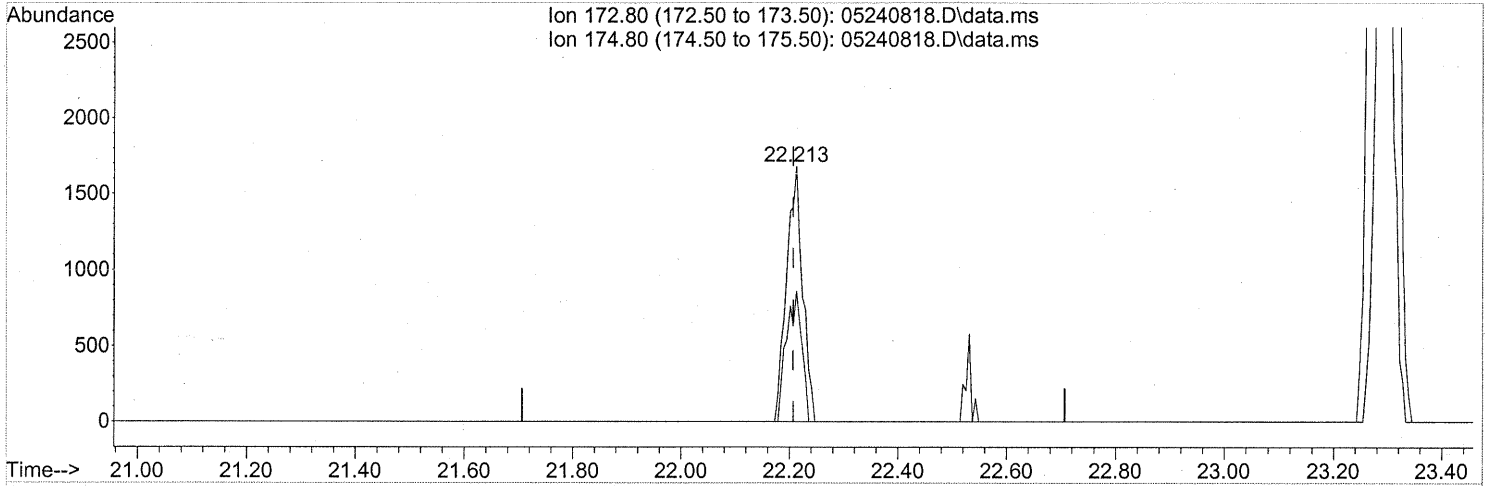
response 188202

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	49.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



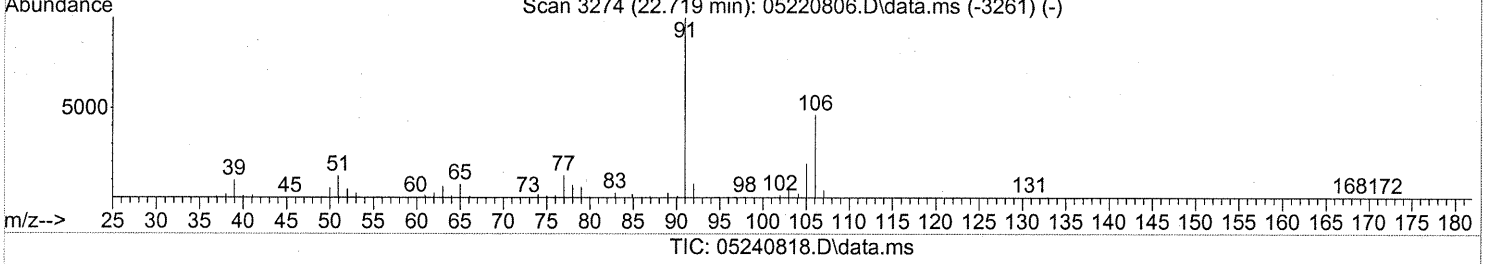
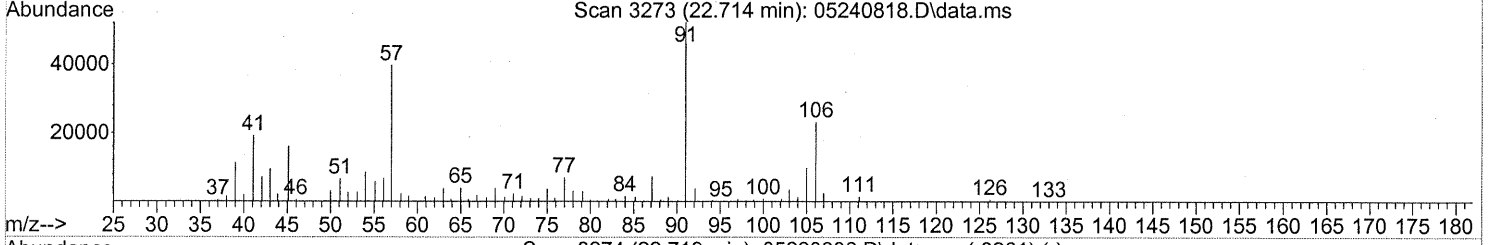
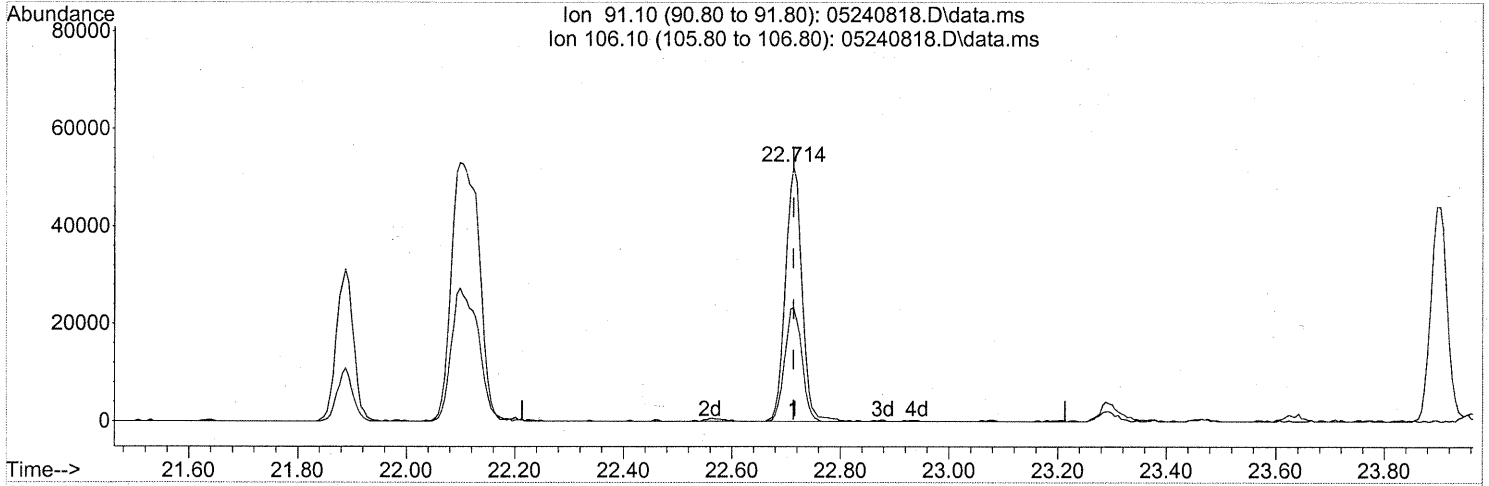
(68) Bromoform (T)  
 22.213min (+0.006) 0.12ng  
 response 3455

Ion	Exp%	Act%
172.80	100	100
174.80	49.40	48.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



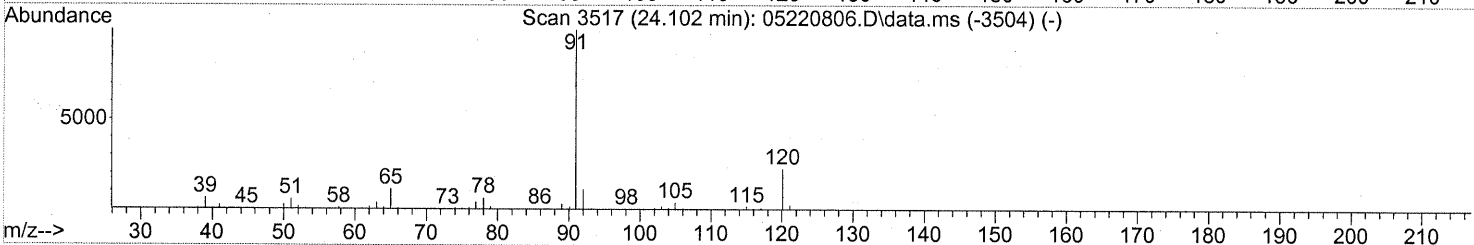
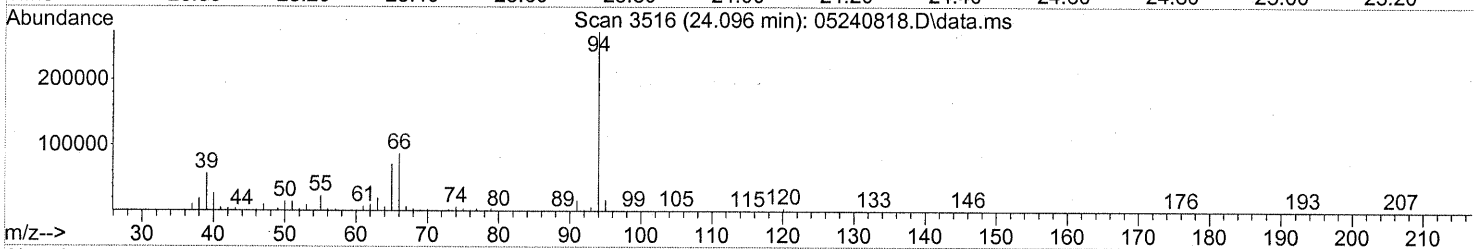
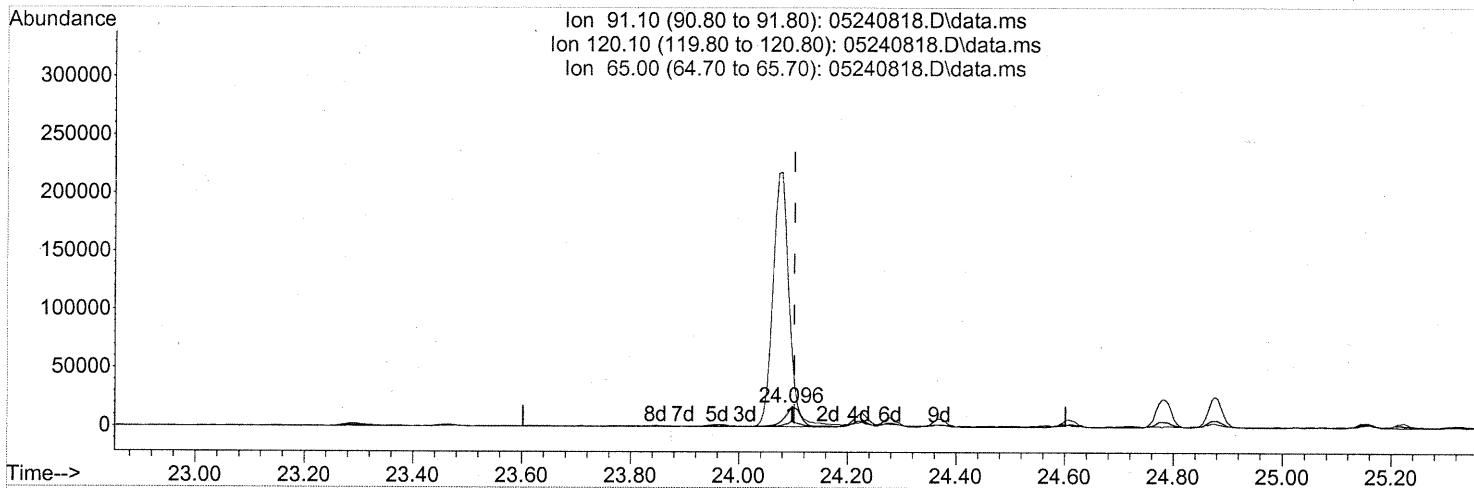
(70) o-Xylene (T)  
 22.714min (-0.000) 0.97ng  
 response 110779

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	45.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(76) n-Propylbenzene (T)

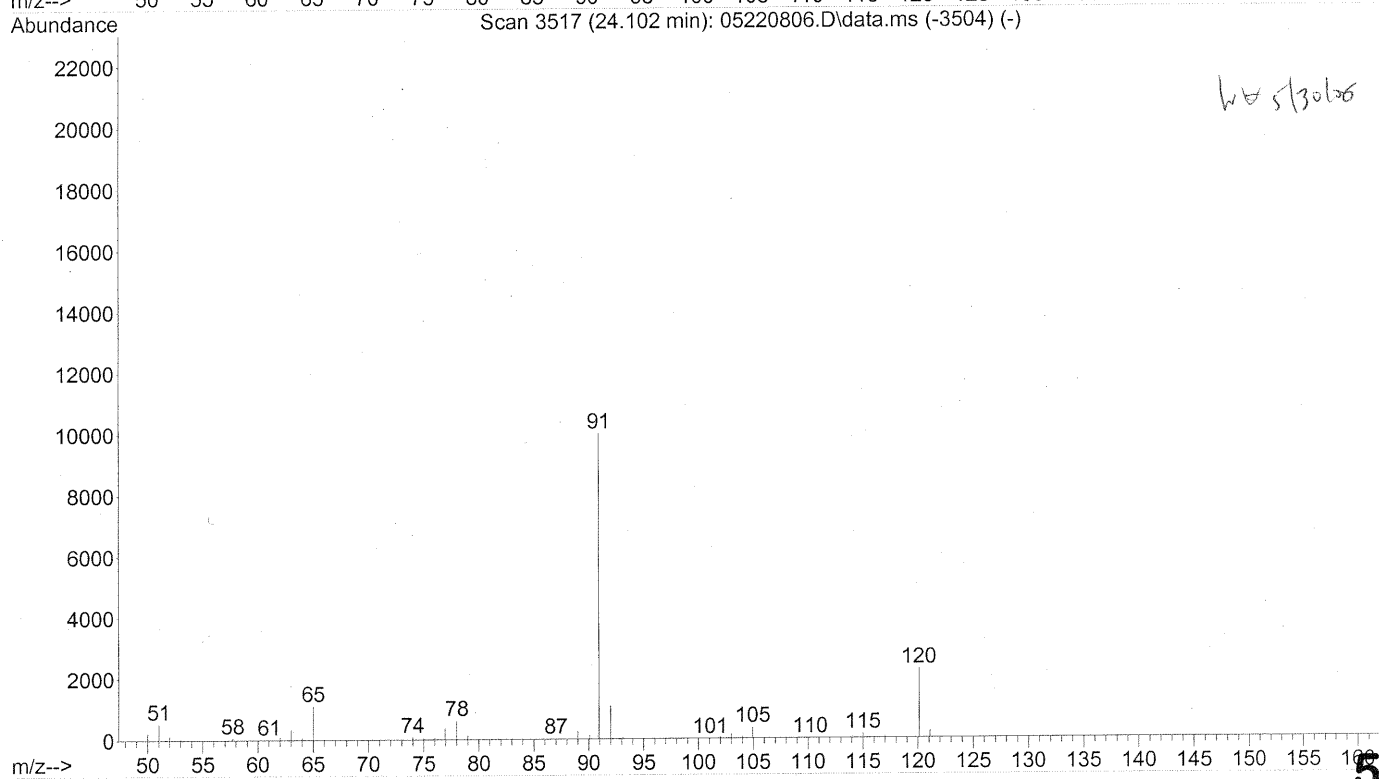
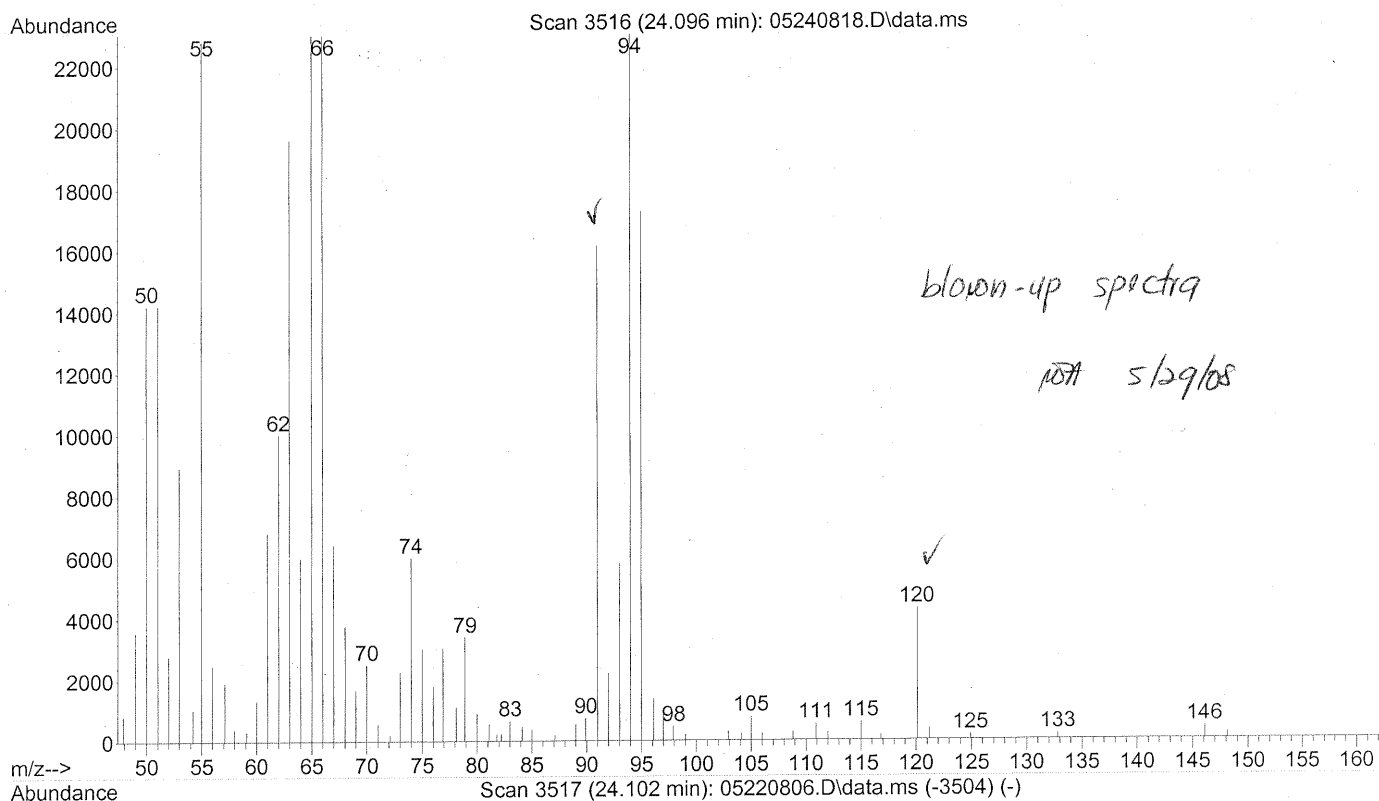
24.096min (-0.006) 0.17ng

response 33020

*see blown-up spectra*

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	21.11
65.00	11.40	1376.01#
0.00	0.00	0.00

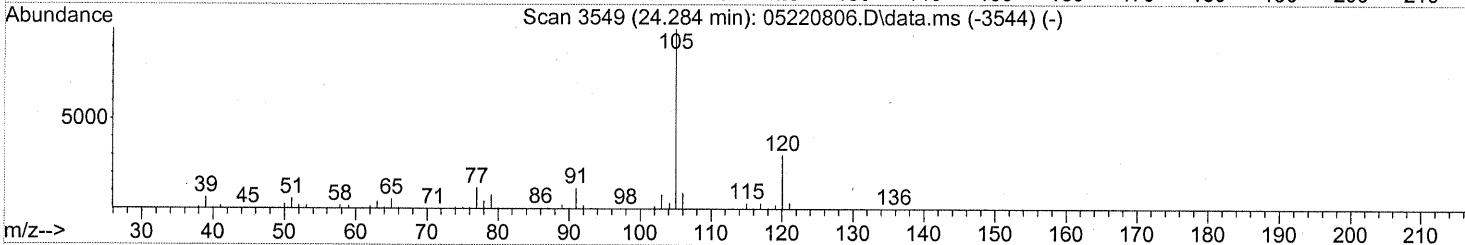
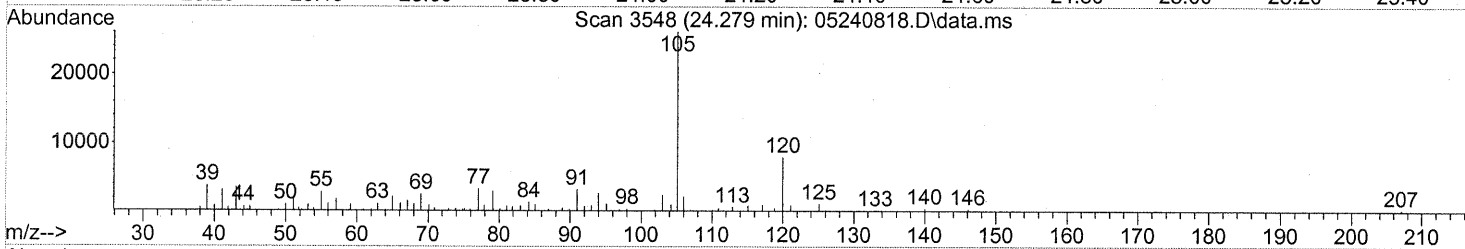
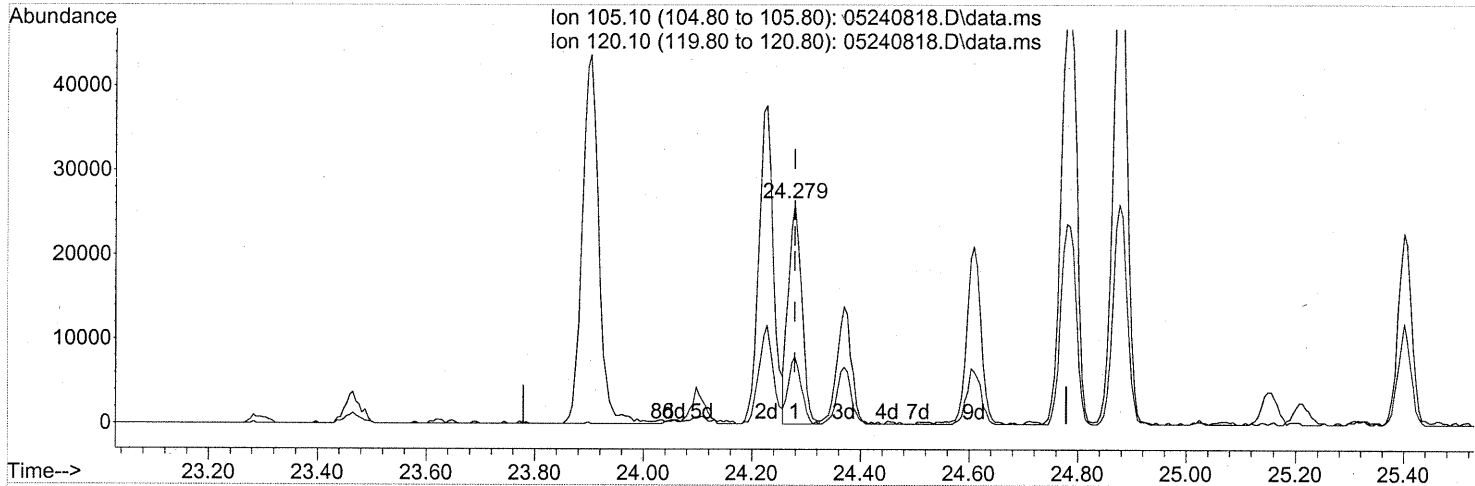
File : J:\MS13\DATA\2008\_05\24\05240818.D  
Operator : WA  
Acquired : 24 May 2008 18:50 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-011 (1000ml)  
Misc Info : ENSR SG65B-05D (-2.2, 3.5)  
Vial Number: 15



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(78) 4-Ethyltoluene (T)

24.279min (-0.000) 0.30ng

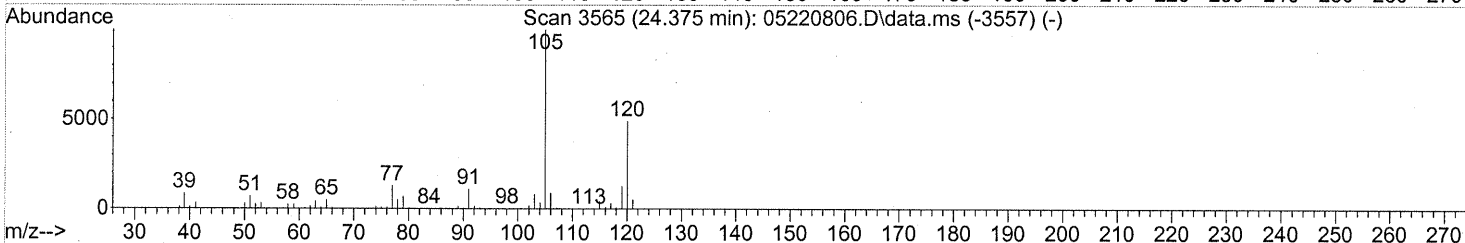
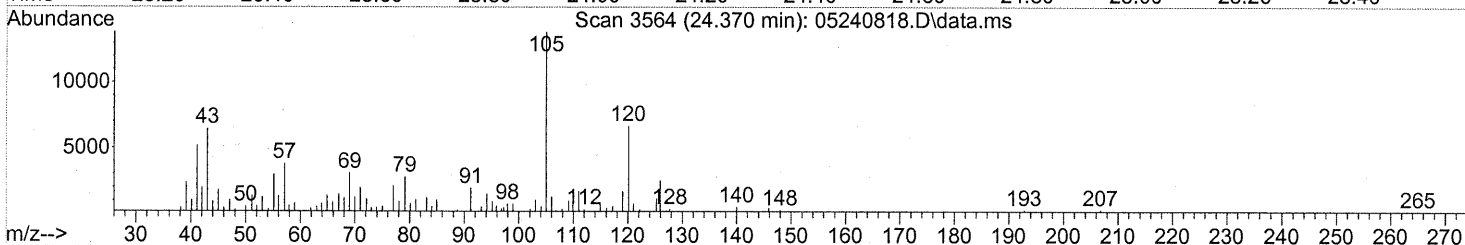
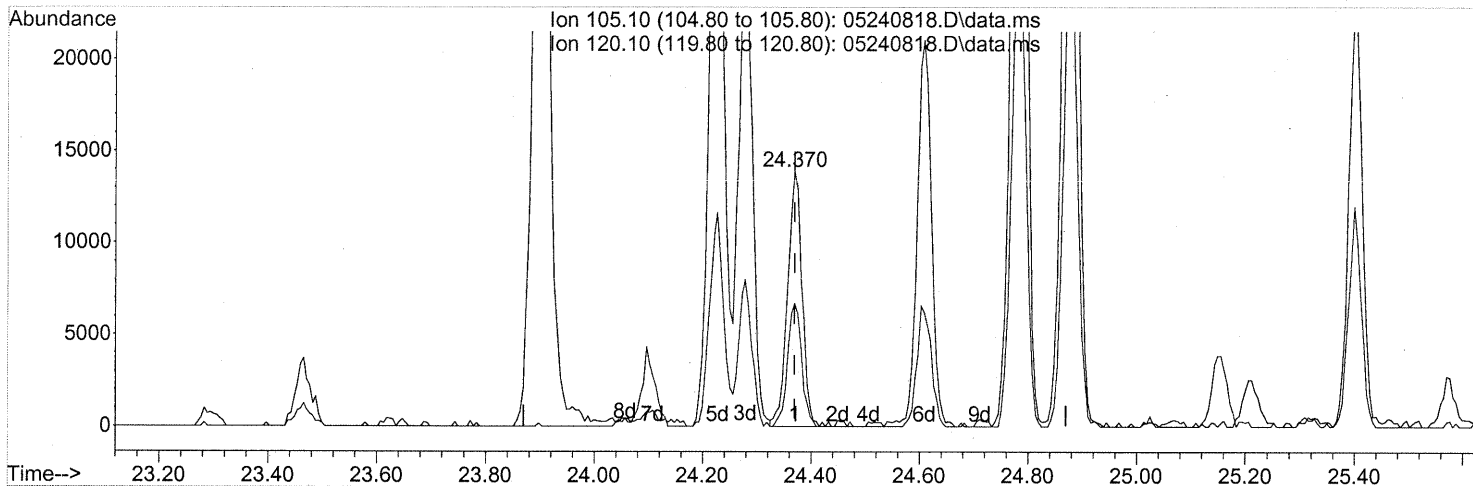
response 44840

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	29.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

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

24.370min (-0.000) 0.19ng

response 25407

Ion	Exp%	Act%
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105.10	100	100
--------	-----	-----

120.10	49.40	47.23
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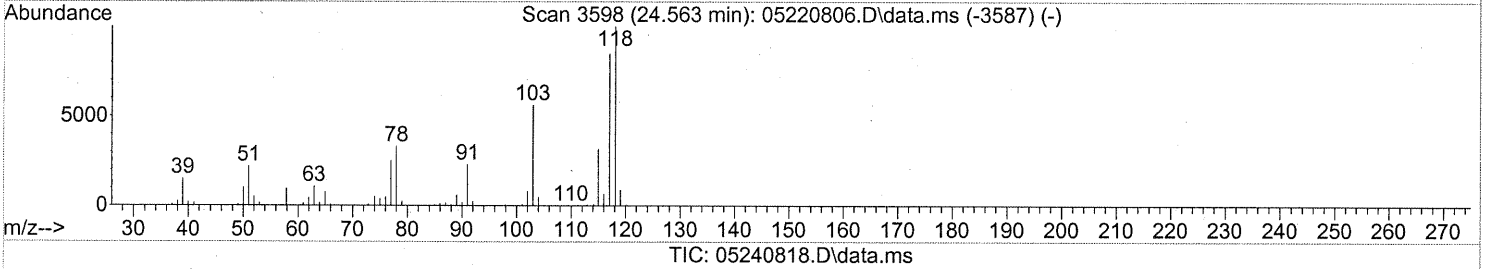
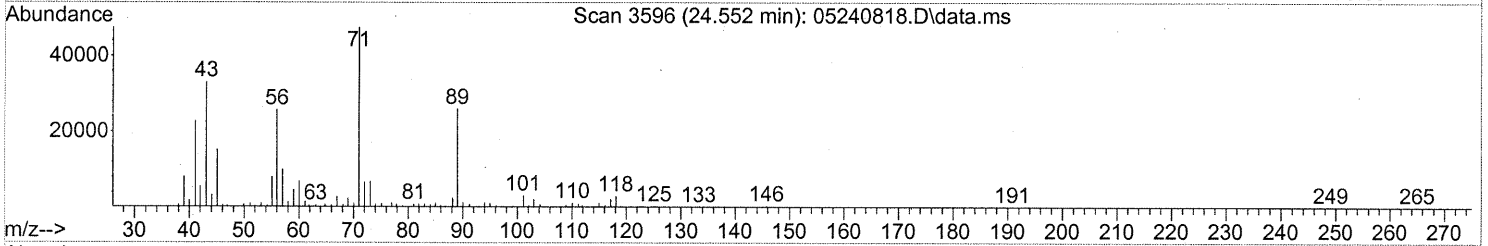
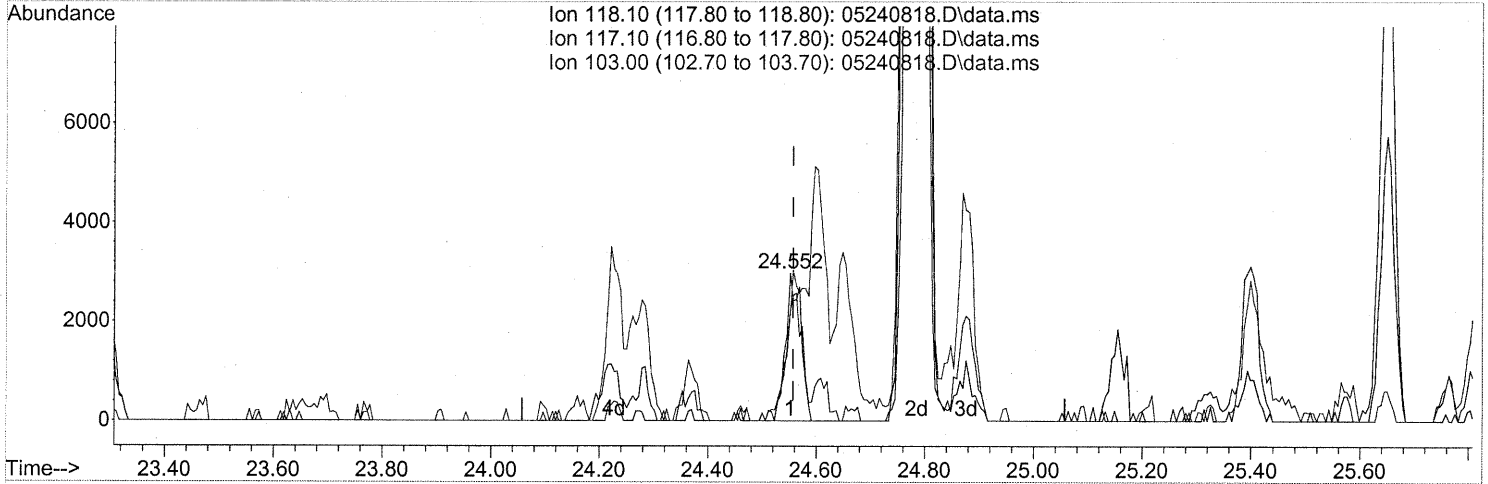
0.00	0.00	0.00
------	------	------

0.00	0.00	0.00
------	------	------

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(80) alpha-Methylstyrene (T)

24.552min (-0.006) 0.08ng

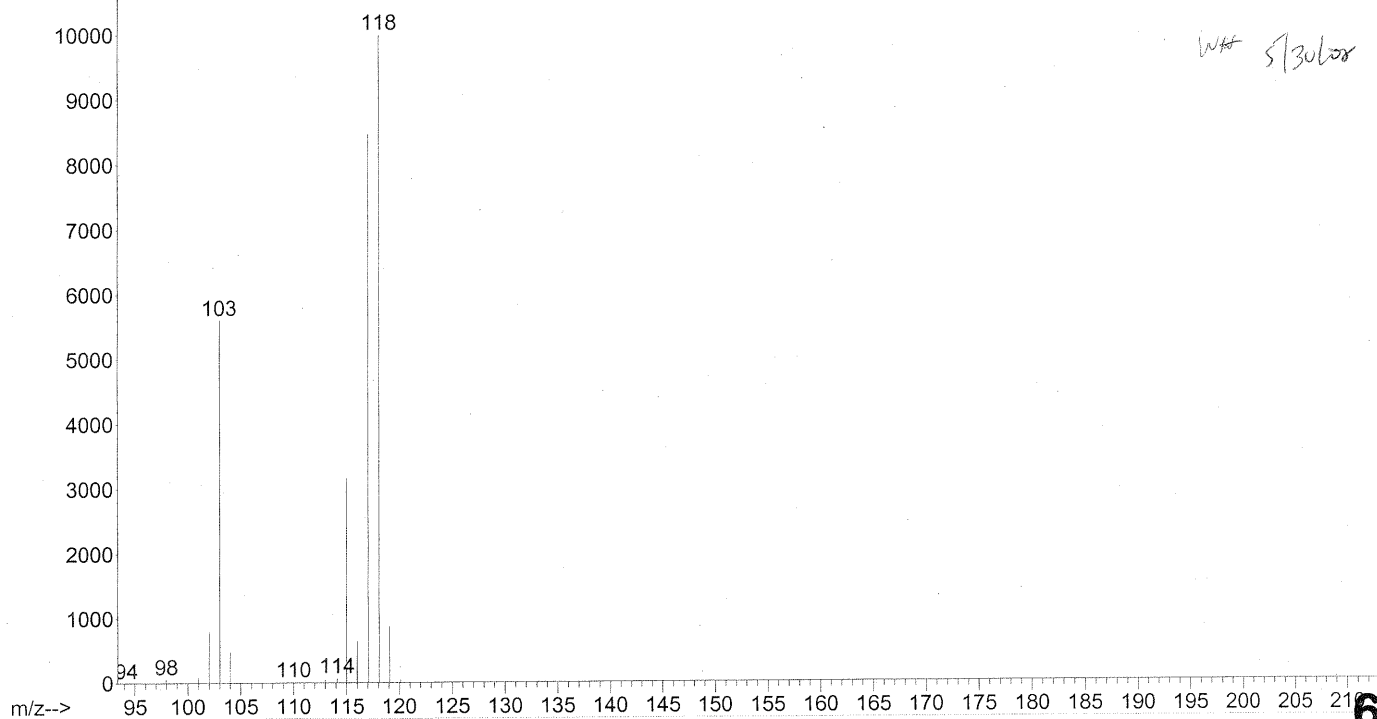
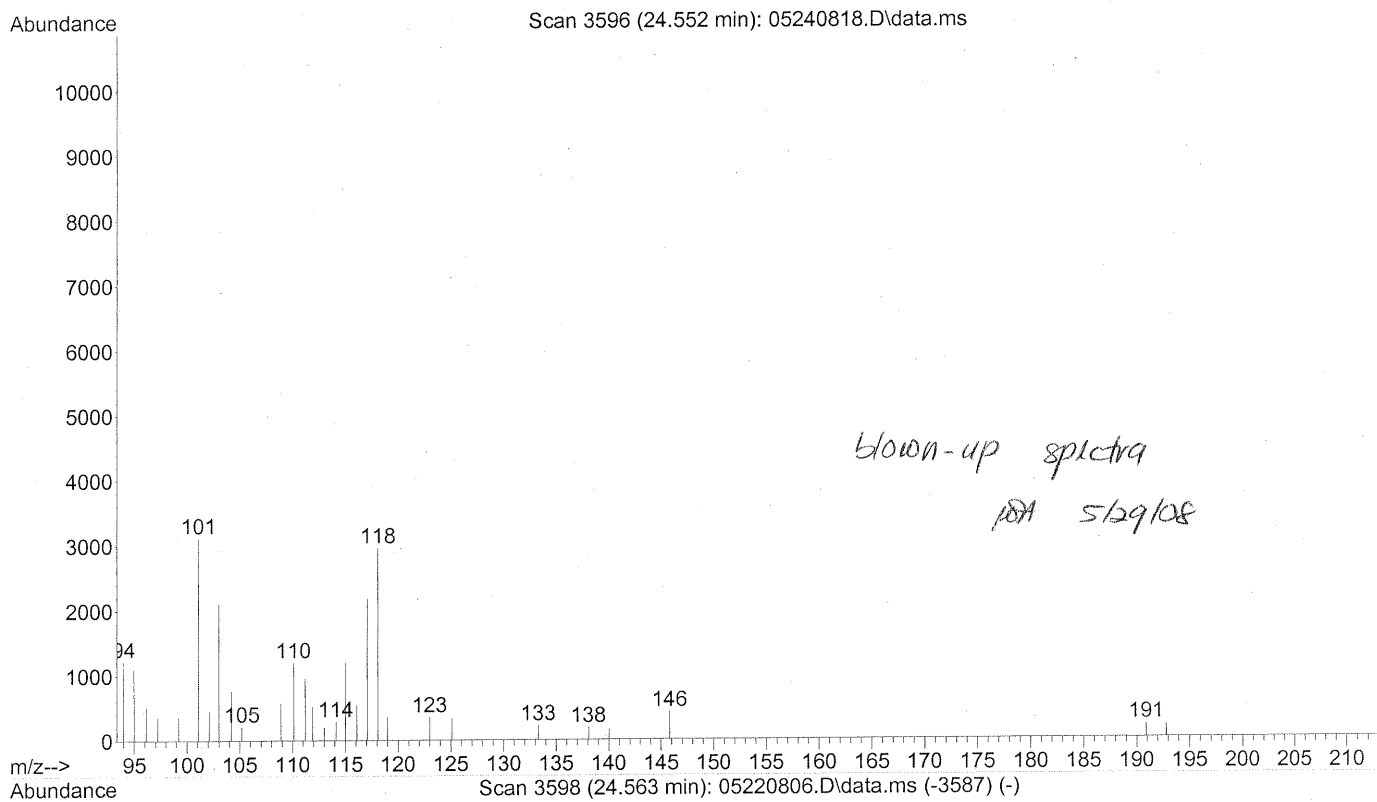
response 5784

Ion	Exp%	Act%
118.10	100	100
117.10	84.10	95.99
103.00	55.30	131.73#
0.00	0.00	0.00

*see blown-up spectra*



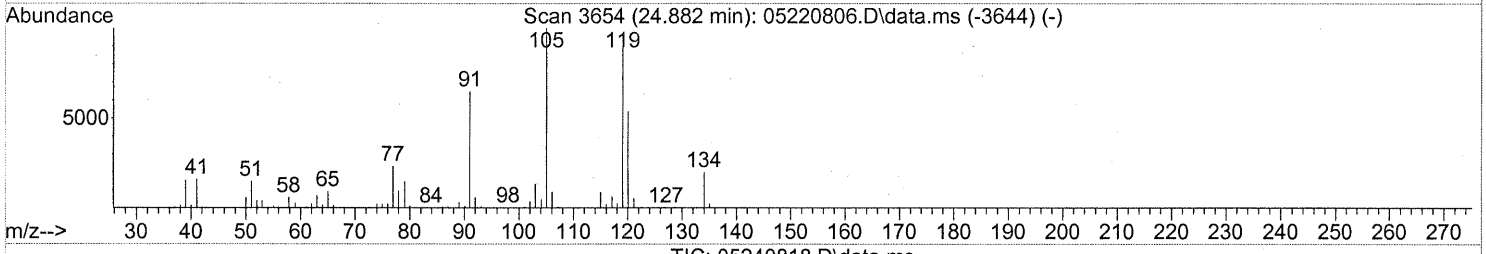
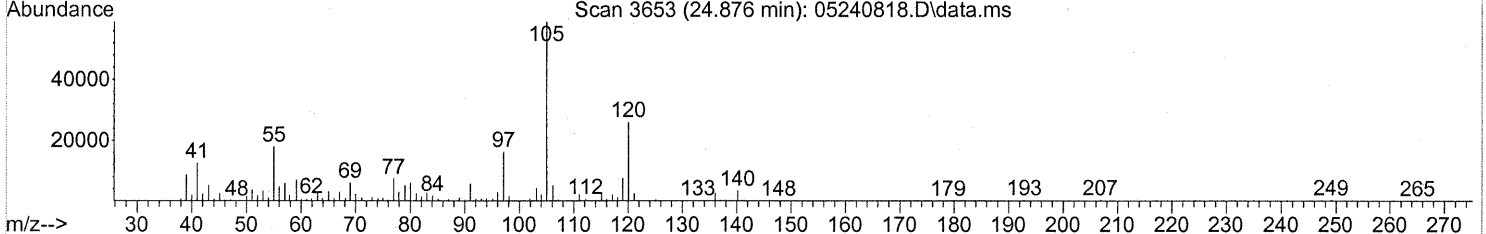
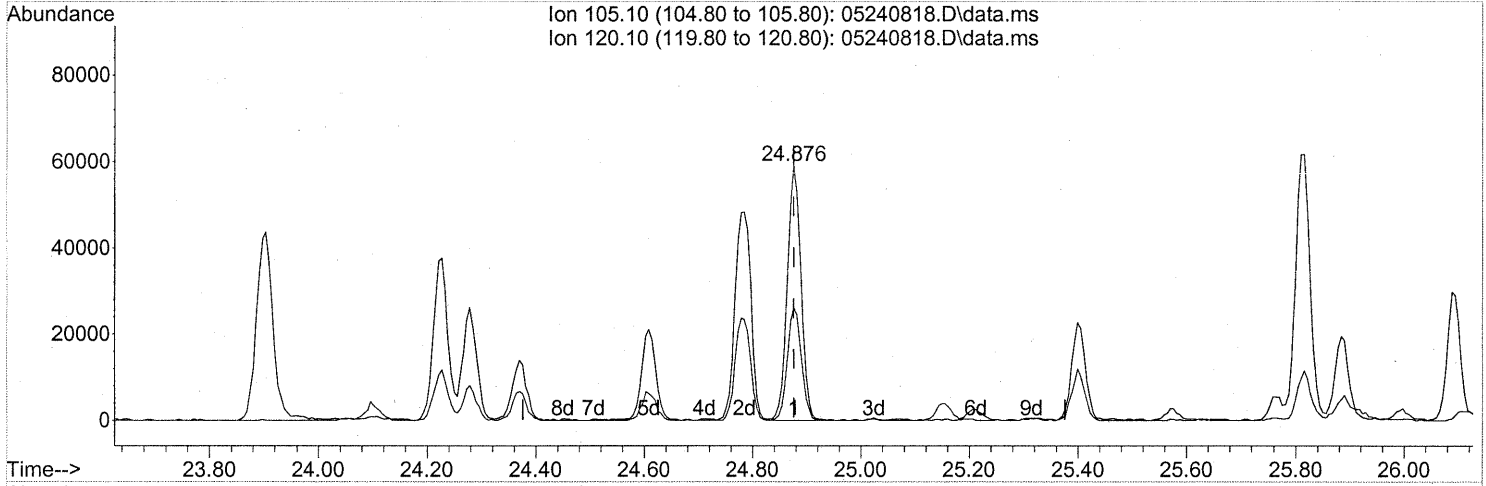
File : J:\MS13\DATA\2008\_05\24\05240818.D  
Operator : WA  
Acquired : 24 May 2008 18:50 using AcqMethod TO15.M  
Instrument : GCMS13 WA 5/29/08  
Sample Name: P0801422-011 (1000ml)  
Misc Info : ENSR SG65B-05D (-2.2, 3.5)  
Vial Number: 15



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.876min (-0.000) 0.75ng

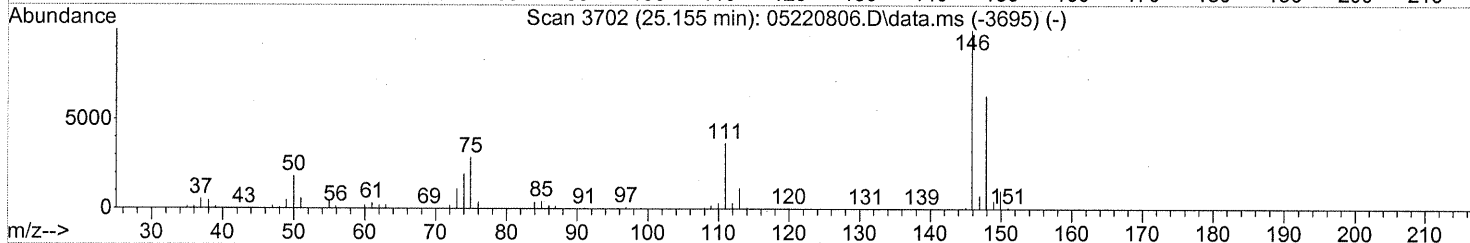
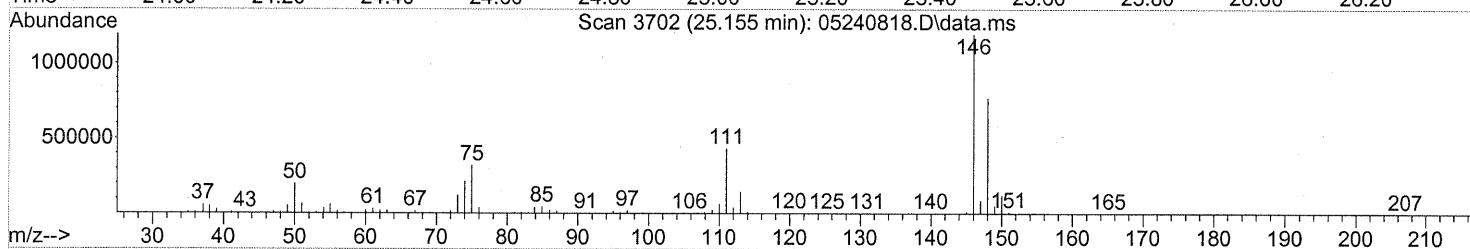
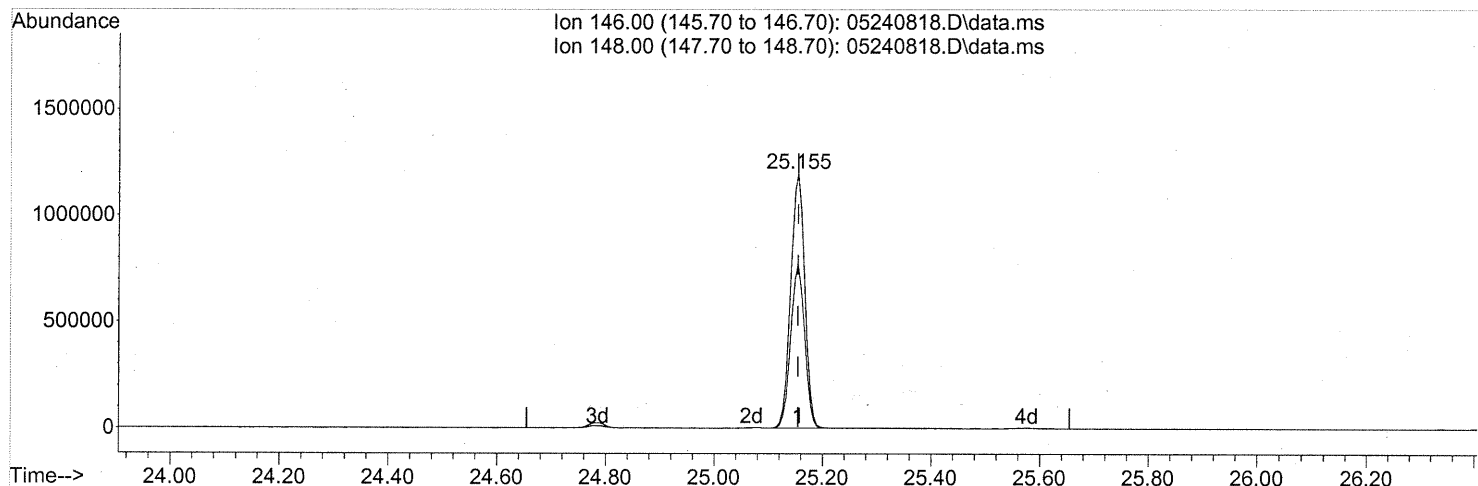
response 104102

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	45.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 25.67ng

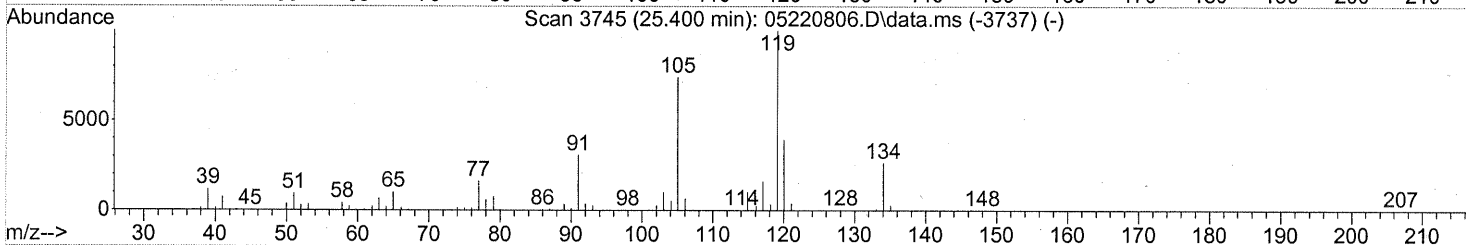
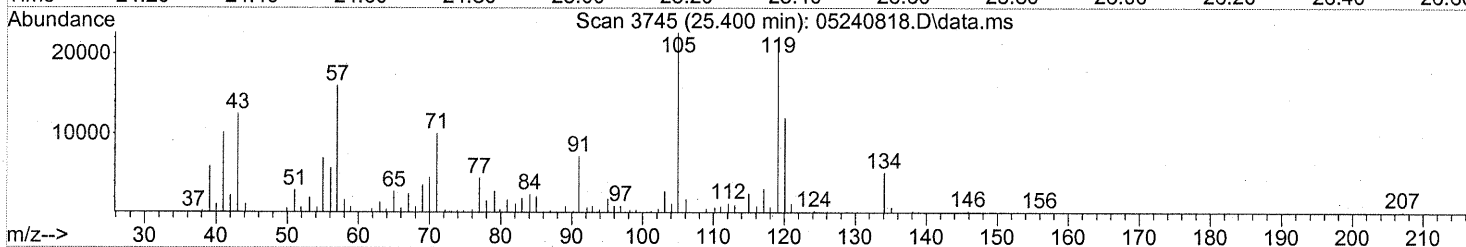
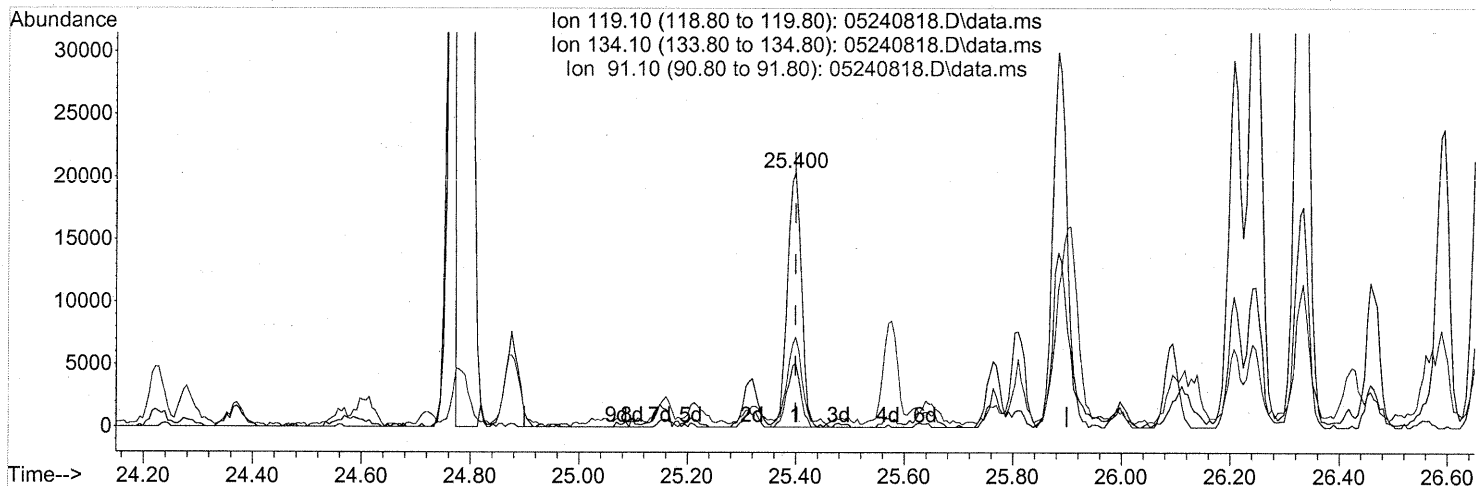
response 2156828

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.76
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240818.D\data.ms

(88) p-Isopropyltoluene (T)

25.400min (-0.000) 0.25ng

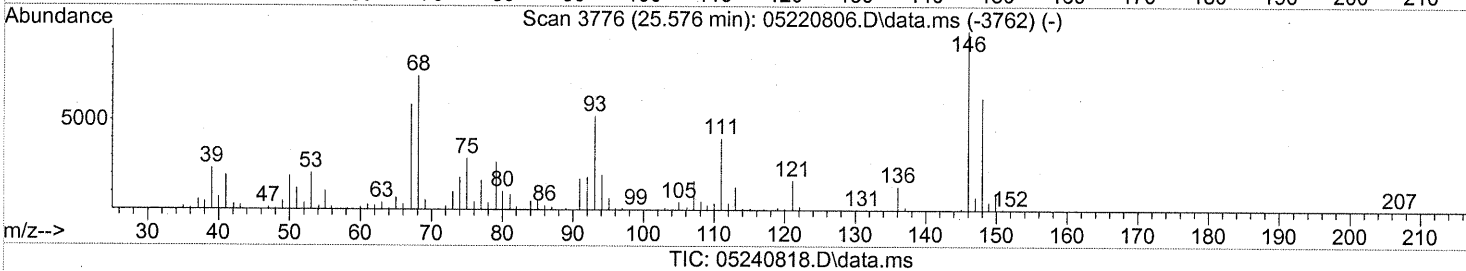
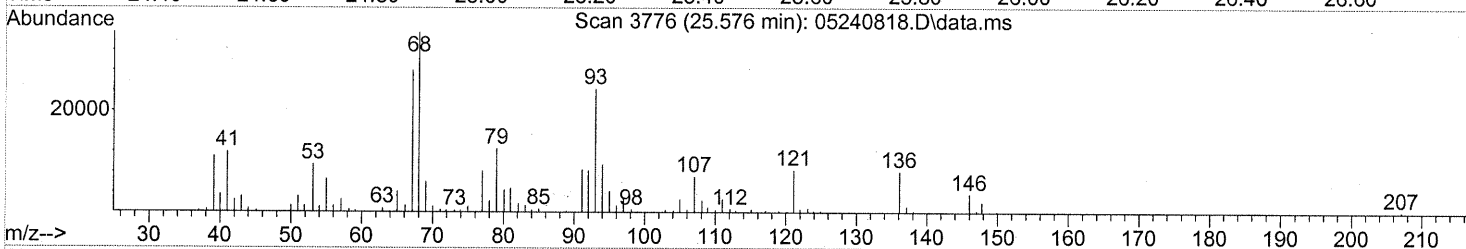
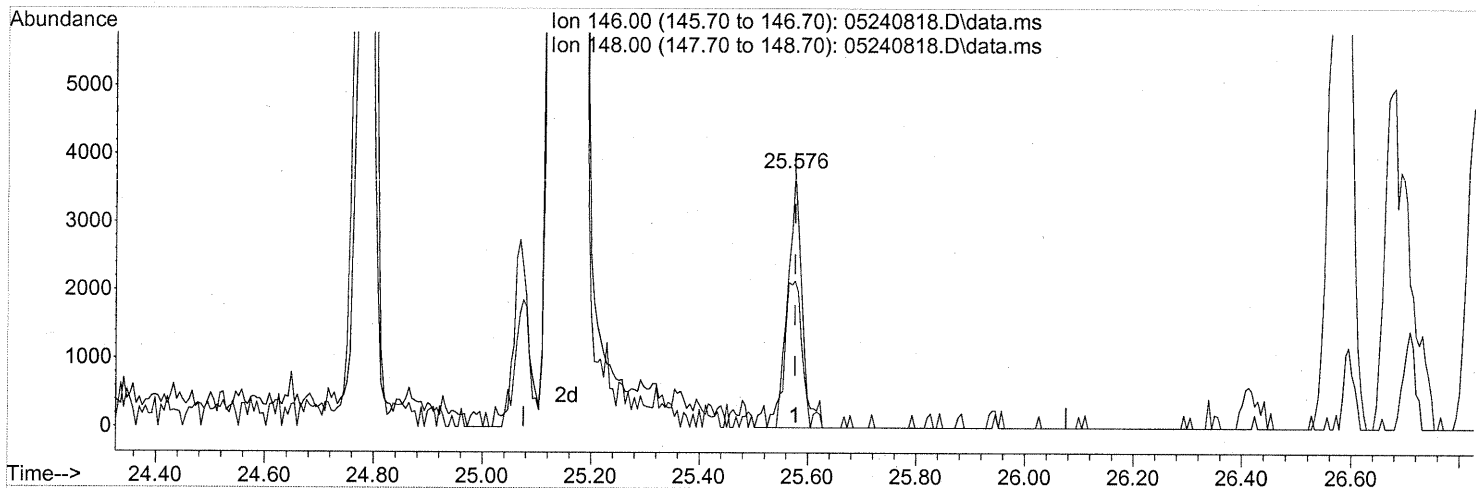
response 36240

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	24.26
91.10	27.10	35.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(90) 1,2-Dichlorobenzene (T)

25.576min (-0.000) 0.08ng

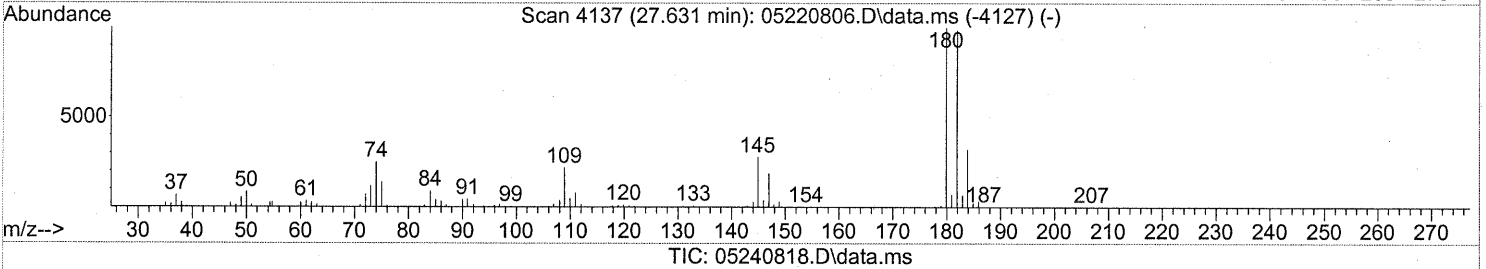
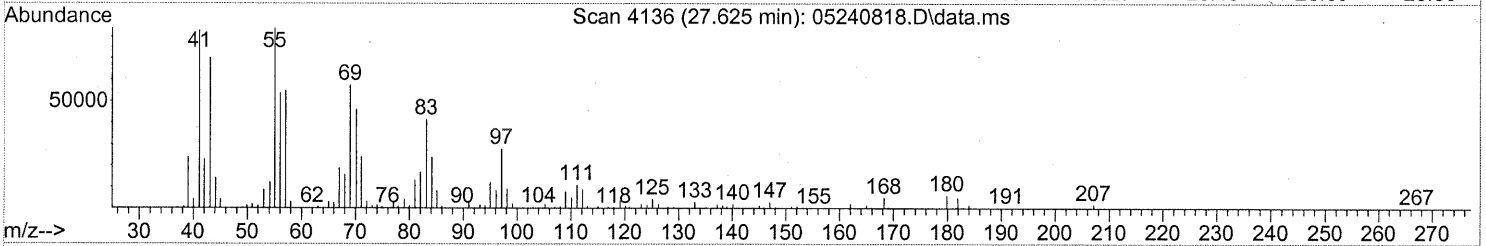
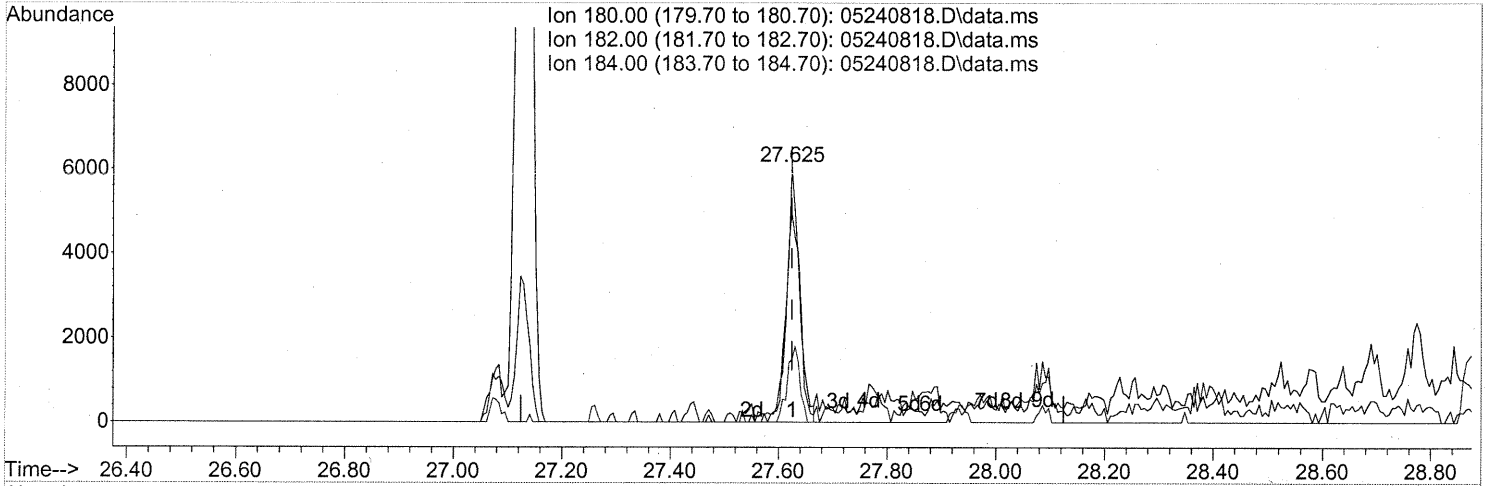
response 6976

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	64.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(94) 1,2,4-Trichlorobenzene (T)

27.625min (-0.000) 0.17ng

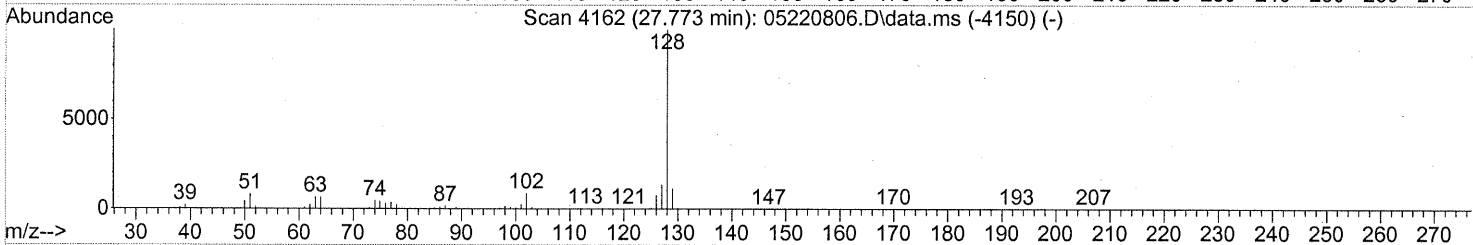
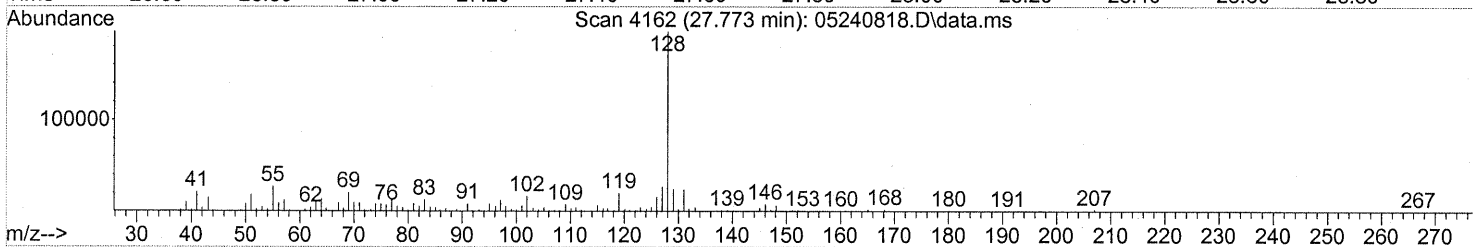
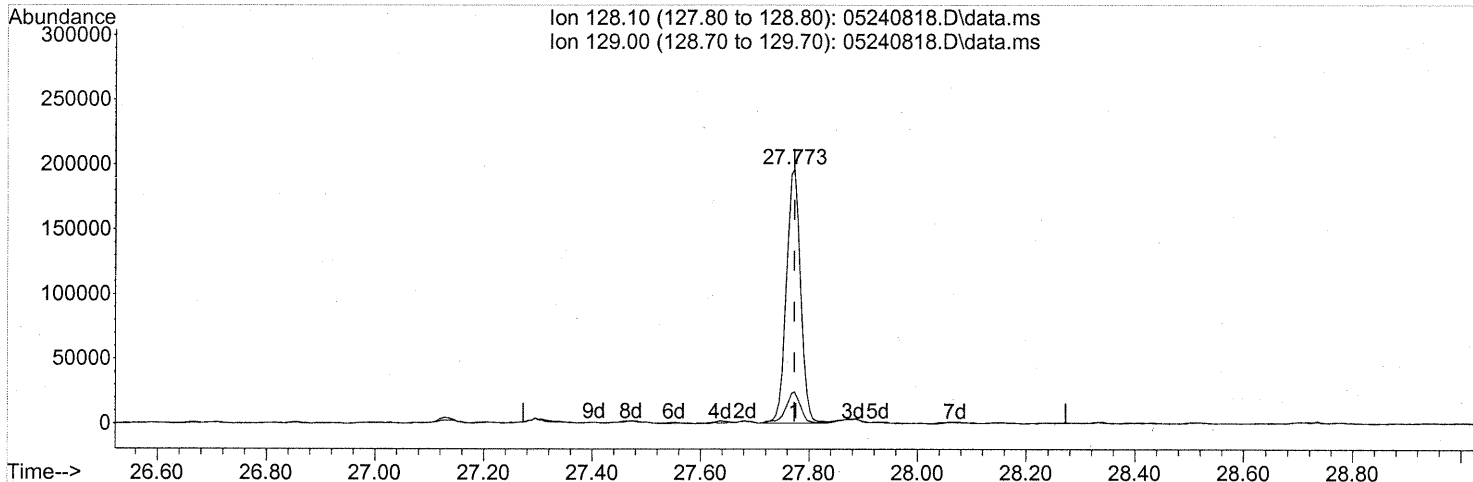
response 10035

Ion	Exp%	Act%
180.00	100	100
182.00	95.20	92.75
184.00	30.30	28.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 18:08:03 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



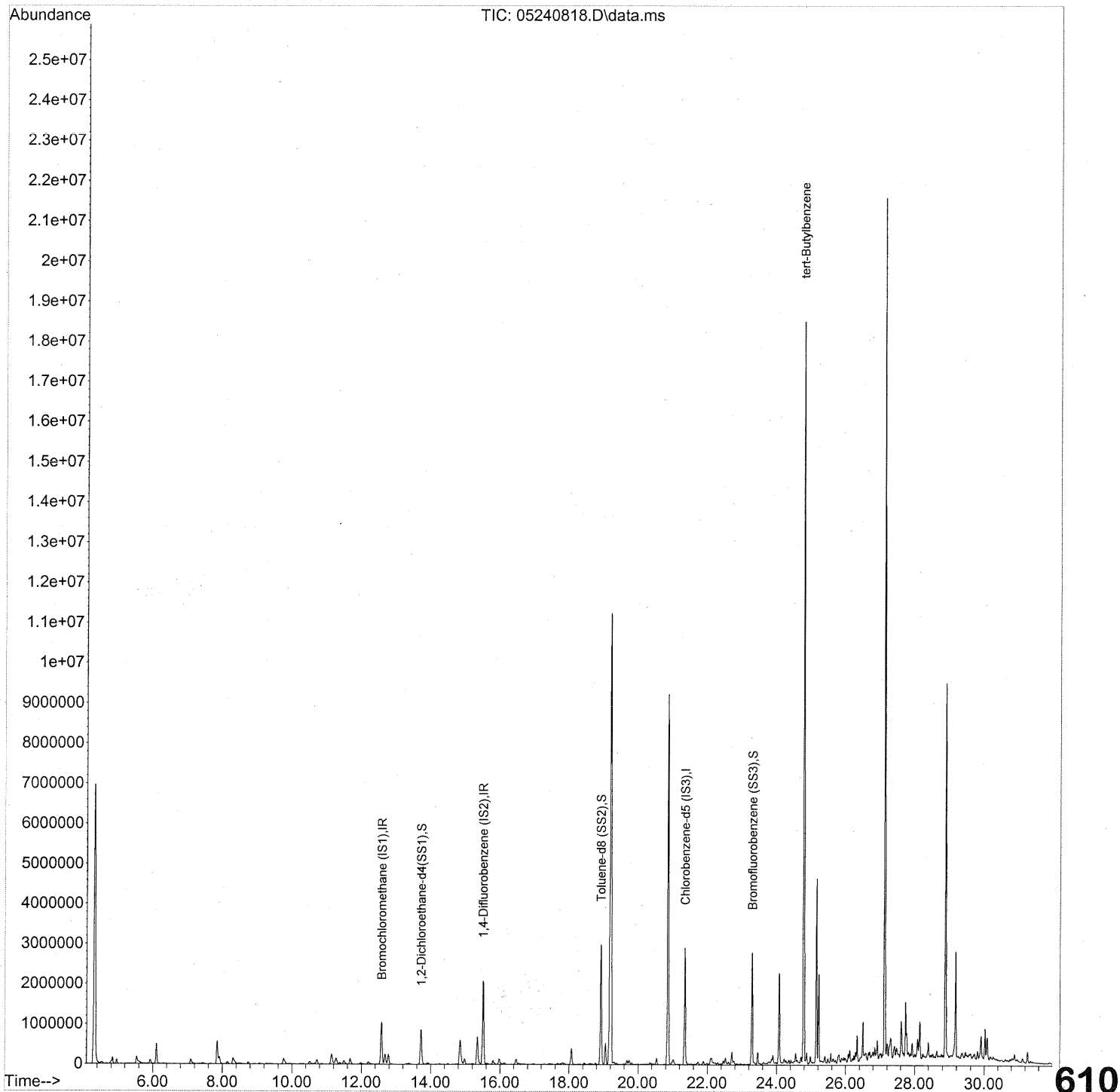
TIC: 05240818.D\data.ms

(95) Naphthalene (T)  
 27.773min (-0.000) 1.94ng  
 response 354629

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	12.71
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240818.D  
Acq On : 24 May 2008 18:50  
Operator : WA  
Sample : P0801442-011 (1000ml)  
Misc : ENSR SG65B-05D (-2.2, 3.5)  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 20:37:09 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration





Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240818.D  
 Acq On : 24 May 2008 18:50  
 Operator : WA  
 Sample : P0801442-011 (1000ml)  
 Misc : ENSR SG65B-05D (-2.2, 3.5)  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 20:37:09 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	564336	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2463090	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1128628	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	899997	23.016	ng	-0.03
Spiked Amount	25.000					Recovery = 92.08%
5) Toluene-d8 (SS2)	18.92	98	2530078	24.961	ng	-0.02
Spiked Amount	25.000					Recovery = 99.84%
6) Bromofluorobenzene (SS3)	23.29	174	1043399	25.314	ng	0.00
Spiked Amount	25.000					Recovery = 101.24%
Target Compounds						
7) tert-Butylbenzene	24.79	119	384197	<del>2.899</del> ng	NR	Qvalue 93
8) n-Butylbenzene	25.62	91	1333	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:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	3.8	0.38	0.42	0.77	0.077	J
74-87-3	Chloromethane	ND	0.77	0.38	ND	0.37	0.19	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.8	0.38	ND	0.55	0.055	
75-01-4	Vinyl Chloride	ND	0.77	0.38	ND	0.30	0.15	
74-83-9	Bromomethane	ND	0.77	0.38	ND	0.20	0.099	
75-00-3	Chloroethane	ND	0.77	0.38	ND	0.29	0.15	
64-17-5	Ethanol	14	38	0.38	7.6	20	0.20	J
67-64-1	Acetone	29	38	0.56	12	16	0.24	J, B
75-69-4	Trichlorofluoromethane	1.5	0.77	0.38	0.27	0.14	0.068	
107-13-1	Acrylonitrile	ND	3.8	0.54	ND	1.8	0.25	
75-35-4	1,1-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.8	3.8	0.57	0.60	1.3	0.19	J
75-09-2	Methylene Chloride	2.9	3.8	0.38	0.84	1.1	0.11	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.77	0.38	ND	0.24	0.12	
76-13-1	Trichlorotrifluoroethane	0.51	0.77	0.43	0.067	0.10	0.056	J
75-15-0	Carbon Disulfide	1.9	3.8	0.92	0.61	1.2	0.29	J
156-60-5	trans-1,2-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
75-34-3	1,1-Dichloroethane	0.40	0.77	0.38	0.098	0.19	0.095	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.77	0.38	ND	0.21	0.11	
108-05-4	Vinyl Acetate	3.8	38	1.2	1.1	11	0.35	J
78-93-3	2-Butanone (MEK)	62	3.8	0.38	21	1.3	0.13	
156-59-2	cis-1,2-Dichloroethene	ND	0.77	0.38	ND	0.19	0.097	
108-20-3	Diisopropyl Ether	ND	3.8	0.45	ND	0.92	0.11	
67-66-3	Chloroform	4,400	0.77	0.45	900	0.16	0.092	

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:     RC    

Date:     6/2/08    

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	3.8	0.39	ND	0.92	0.093	
107-06-2	1,2-Dichloroethane	ND	0.77	0.38	ND	0.19	0.095	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>0.58</b>	0.77	0.38	<b>0.11</b>	0.14	0.070	<b>J</b>
71-43-2	<b>Benzene</b>	<b>5.4</b>	0.77	0.38	<b>1.7</b>	0.24	0.12	
56-23-5	<b>Carbon Tetrachloride</b>	<b>8.7</b>	0.77	0.38	<b>1.4</b>	0.12	0.061	
994-05-8	tert-Amyl Methyl Ether	ND	3.8	0.38	ND	0.92	0.092	
78-87-5	1,2-Dichloropropane	ND	0.77	0.38	ND	0.17	0.083	
75-27-4	<b>Bromodichloromethane</b>	<b>3.8</b>	0.77	0.38	<b>0.57</b>	0.11	0.057	
79-01-6	<b>Trichloroethene</b>	<b>2.7</b>	0.77	0.38	<b>0.51</b>	0.14	0.071	
123-91-1	1,4-Dioxane	ND	3.8	0.47	ND	1.1	0.13	
80-62-6	Methyl Methacrylate	ND	3.8	0.57	ND	0.93	0.14	
142-82-5	<b>n-Heptane</b>	<b>0.78</b>	3.8	0.49	<b>0.19</b>	0.93	0.12	<b>J</b>
10061-01-5	cis-1,3-Dichloropropene	ND	3.8	0.40	ND	0.84	0.088	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.2</b>	3.8	0.43	<b>0.29</b>	0.93	0.10	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	3.8	0.48	ND	0.84	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.77	0.38	ND	0.14	0.070	
108-88-3	<b>Toluene</b>	<b>16</b>	3.8	0.38	<b>4.2</b>	1.0	0.10	
591-78-6	<b>2-Hexanone</b>	<b>0.89</b>	3.8	0.58	<b>0.22</b>	0.93	0.14	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.77	0.52	ND	0.090	0.061	
106-93-4	1,2-Dibromoethane	ND	0.77	0.41	ND	0.10	0.054	
111-65-9	<b>n-Octane</b>	<b>0.73</b>	3.8	0.38	<b>0.16</b>	0.82	0.082	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>26</b>	0.77	0.38	<b>3.8</b>	0.11	0.056	
108-90-7	Chlorobenzene	ND	0.77	0.39	ND	0.17	0.085	

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:     Ro          Date:     6/2/08

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

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**Client:** ENSR  
**Client Sample ID:** SG84B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-012

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00886

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.20 Liter(s)  
 0.040 Liter(s)

Initial Pressure (psig): -2.8      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.53

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	1.9	3.8	0.47	0.44	0.88	0.11	J
179601-23-1	m,p-Xylenes	5.1	3.8	0.99	1.2	0.88	0.23	
75-25-2	Bromoform	ND	3.8	0.58	ND	0.37	0.056	
100-42-5	Styrene	1.7	3.8	0.58	0.41	0.90	0.14	J
95-47-6	o-Xylene	2.1	3.8	0.48	0.49	0.88	0.11	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.77	0.49	ND	0.11	0.071	
98-82-8	Cumene	ND	3.8	0.43	ND	0.78	0.087	
103-65-1	n-Propylbenzene	0.44	3.8	0.40	0.090	0.78	0.081	J
622-96-8	4-Ethyltoluene	0.63	3.8	0.44	0.13	0.78	0.089	J
108-67-8	1,3,5-Trimethylbenzene	0.65	3.8	0.46	0.13	0.78	0.093	J
98-83-9	alpha-Methylstyrene	ND	3.8	0.56	ND	0.79	0.12	
95-63-6	1,2,4-Trimethylbenzene	2.2	3.8	0.53	0.45	0.78	0.11	J
100-44-7	Benzyl Chloride	ND	0.77	0.66	ND	0.15	0.13	
541-73-1	1,3-Dichlorobenzene	ND	0.77	0.47	ND	0.13	0.079	
106-46-7	1,4-Dichlorobenzene	15	0.77	0.43	2.4	0.13	0.071	
135-98-8	sec-Butylbenzene	ND	3.8	0.44	ND	0.70	0.081	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	3.8	0.50	ND	0.70	0.091	
95-50-1	1,2-Dichlorobenzene	ND	0.77	0.50	ND	0.13	0.084	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.8	0.58	ND	0.40	0.060	
120-82-1	1,2,4-Trichlorobenzene	ND	0.77	0.58	ND	0.10	0.078	
91-20-3	Naphthalene	1.6	1.5	0.57	0.30	0.29	0.11	
87-68-3	Hexachlorobutadiene	ND	0.77	0.69	ND	0.072	0.065	
98-06-6	tert-Butylbenzene	ND	1.5	0.38	ND	0.28	0.070	
104-51-8	n-Butylbenzene	ND	1.5	0.38	ND	0.28	0.070	

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.

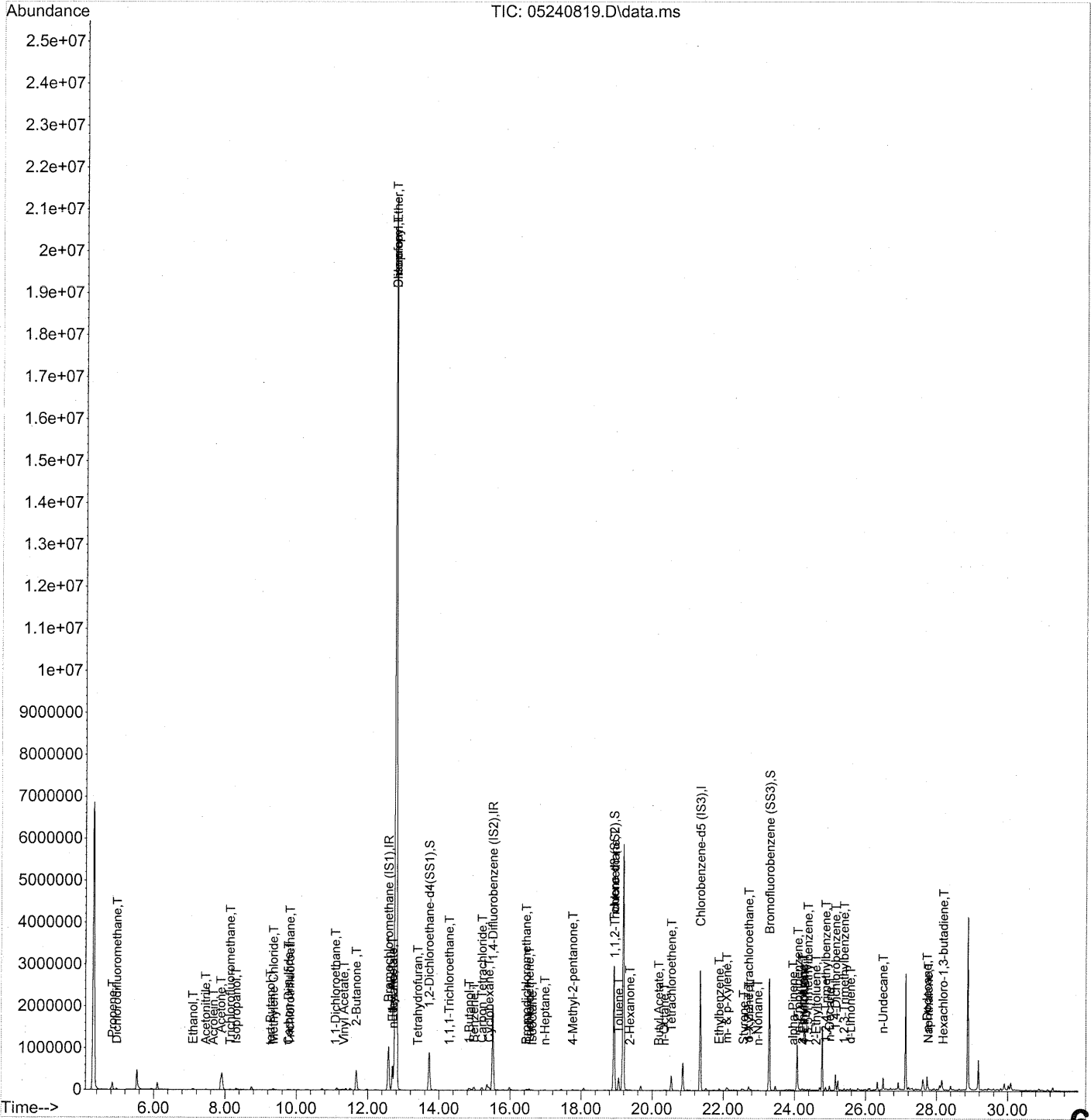
Verified By: Ro

Date: 6/2/08

**614**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	579106	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2412558	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1107058	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	13.73	65	908212	22.634	ng	0.00	90.52%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	18.93	98	2490267	25.047	ng	0.00	100.20%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	23.29	174	1015644	25.120	ng	0.00	100.48%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	27221	0.595	ng	# 1
3) Dichlorodifluoromethane	4.97	85	22955	0.272	ng	99
4) Chloromethane	5.32	50	1937	N.D.	✓	
5) Freon 114	5.53	135	710	N.D.	✓	
6) Vinyl Chloride	0.00	62	0	N.D.	✓	
7) 1,3-Butadiene	6.02	54	583	N.D.	✓	
8) Bromomethane	6.51	94	196	N.D.	✓	
9) Chloroethane	6.84	64	714	N.D.	✓	
10) Ethanol	7.10	45	57287m	1.881	ng	
11) Acetonitrile	7.46	41	18237	0.207	ng	96
12) Acrolein	7.67	56	8006	0.368	ng	92
13) Acetone	7.89	58	117280	3.762	ng	# 1
14) Trichlorofluoromethane	8.14	101	14303	0.198	ng	98
15) Isopropanol	8.32	45	82206	0.827	ng	96
16) Acrylonitrile	8.65	53	496	N.D.	✓	
17) 1,1-Dichloroethene	9.17	96	755	N.D.	✓	
18) tert-Butanol	9.27	59	20149m	0.238	ng	
19) Methylene Chloride	9.36	84	13266	0.381	ng	# 66
20) Allyl Chloride	9.54	41	169	N.D.	✓	
21) Trichlorotrifluoroethane	9.82	151	2202	0.067	ng	87
22) Carbon Disulfide	9.77	76	32986	0.249	ng	90
23) trans-1,2-Dichloroethene	10.72	61	204	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	3135	0.052	ng	98
25) Methyl tert-Butyl Ether	11.13	73	799	N.D.	✓	
26) Vinyl Acetate	11.33	86	2869	0.498	ng	# 1
27) 2-Butanone	11.68	72	183705	8.074	ng	# 89
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.79	87	2982752	106.984	ng	NR# 1
30) Ethyl Acetate	12.69	61	109255	8.895	ng	84
31) n-Hexane	12.71	57	12230	0.197	ng	# 71

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5/29/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.79	83	24098211	<del>456.342</del> ng	<i>sudil</i>	92
34) Tetrahydrofuran	13.40	72	1138	0.052 ng	#	1
35) Ethyl tert-Butyl Ether	13.50	87	299	N.D. ✓		
36) 1,2-Dichloroethane	13.89	62	453	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	4161	0.076 ng		88
39) Isopropyl Acetate	14.96	61	77	N.D.		
40) 1-Butanol	14.85	56	53664	1.618 ng		92
41) Benzene	14.99	78	89296	0.707 ng		98
42) Carbon Tetrachloride	15.21	117	55377	1.138 ng		99
43) Cyclohexane	15.41	84	42364	0.862 ng	#	49
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	752	N.D. ✓		
46) Bromodichloromethane	16.45	83	21155	0.495 ng		99
47) Trichloroethene	16.54	130	13786	0.356 ng		100
48) 1,4-Dioxane	16.53	88	61	N.D. ✓		
49) Isooctane	16.62	57	7769	0.054 ng	#	45
50) Methyl Methacrylate	16.80	100	181	N.D. ✓		
51) n-Heptane	16.98	71	3418	0.102 ng	#	75
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	17.77	58	5199	0.155 ng		72
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
55) 1,1,2-Trichloroethane	18.94	97	219442	7.030 ng	<i>NR#</i>	9
58) Toluene	19.06	91	281675	2.084 ng		98
59) 2-Hexanone	19.37	43	10772	0.116 ng	#	59
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.19	43	7659	0.081 ng		91
63) n-Octane	20.34	57	2854	0.095 ng		97
64) Tetrachloroethene	20.54	166	135472	3.388 ng		99
65) Chlorobenzene	21.41	112	2094	N.D. ✓		
66) Ethylbenzene	21.88	91	38206	0.247 ng		96
67) m- & p-Xylene	22.10	91	69248	0.668 ng		91
68) Bromoform	22.21	173	268	N.D. ✓		
69) Styrene	22.57	104	21013	0.227 ng		96
70) o-Xylene	22.72	91	31341	0.280 ng		94
71) n-Nonane	22.98	43	5969	0.075 ng		83
72) 1,1,2,2-Tetrachloroethane	22.71	83	2405	0.052 ng	<i>NR#</i>	51
74) Cumene	23.46	105	3667	N.D. ✓		
75) alpha-Pinene	23.95	93	8434	0.109 ng		88
76) n-Propylbenzene	24.10	91	10939	0.058 ng	#	86
77) 3-Ethyltoluene	24.23	105	24097	0.152 ng		98
78) 4-Ethyltoluene	24.27	105	12227	0.083 ng		91
79) 1,3,5-Trimethylbenzene	24.38	105	11355	0.085 ng		94

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.57	118	1303	N.D.	✓	
81) 2-Ethyltoluene	24.60	105	10020	0.062	ng	96
82) 1,2,4-Trimethylbenzene	24.88	105	39622	0.291	ng	87
83) n-Decane	24.98	57	41298	0.552	ng	74
84) Benzyl Chloride	25.04	91	590	N.D.	✓	
85) 1,3-Dichlorobenzene	25.07	146	954	N.D.	✓	
86) 1,4-Dichlorobenzene	25.16	146	157225	1.907	ng	99
87) sec-Butylbenzene	25.21	105	2048	N.D.	✓	
88) p-Isopropyltoluene	25.41	119	5722	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.40	105	11946	0.090	ng	87
90) 1,2-Dichlorobenzene	25.57	146	1376	N.D.	✓	
91) d-Limonene	25.58	68	14171	0.262	ng	94
92) 1,2-Dibromo-3-Chloropr...	26.24	157	61	N.D.	✓	
93) n-Undecane	26.50	57	97882	1.250	ng	74
94) 1,2,4-Trichlorobenzene	27.64	180	52	N.D.	✓	
95) Naphthalene	27.77	128	36369	0.203	ng	98
96) n-Dodecane	27.73	57	102511	1.316	ng	82
97) Hexachloro-1,3-butadiene	28.19	225	2723	0.069	ng <HDL	87

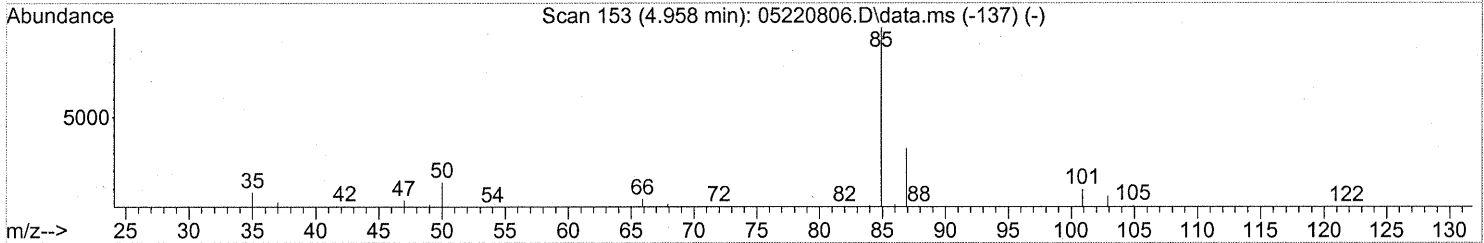
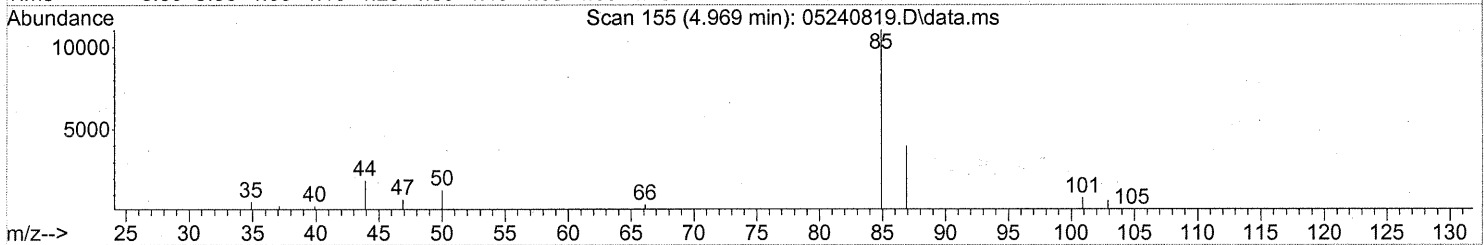
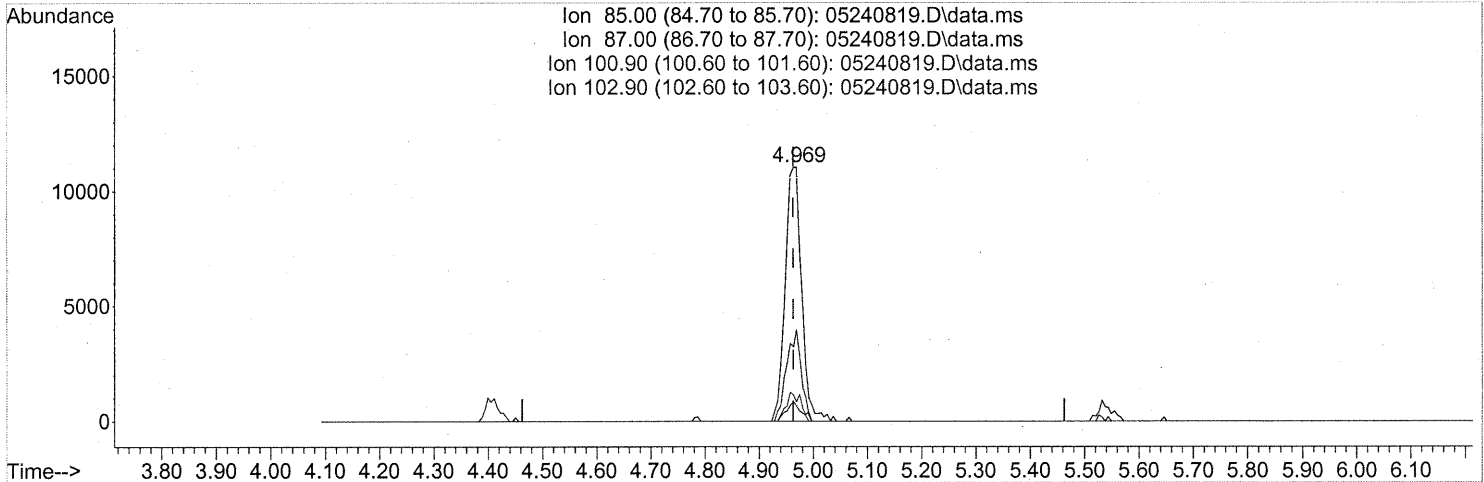
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(3) Dichlorodifluoromethane (T)

4.969min (+0.006) 0.27ng

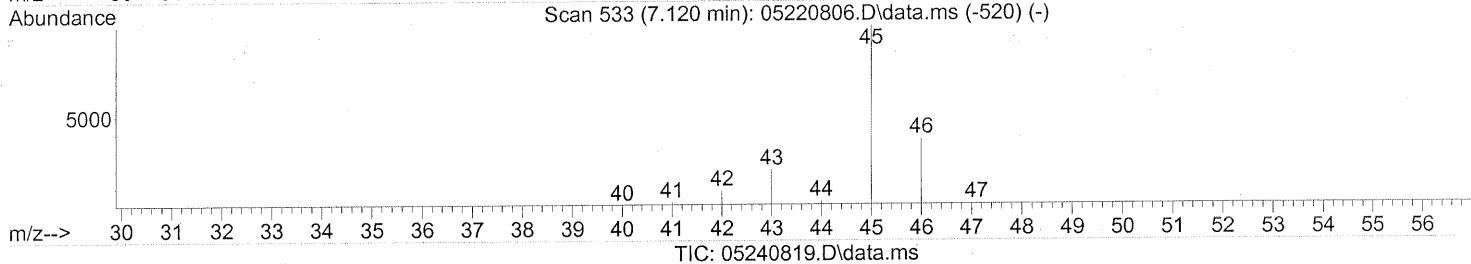
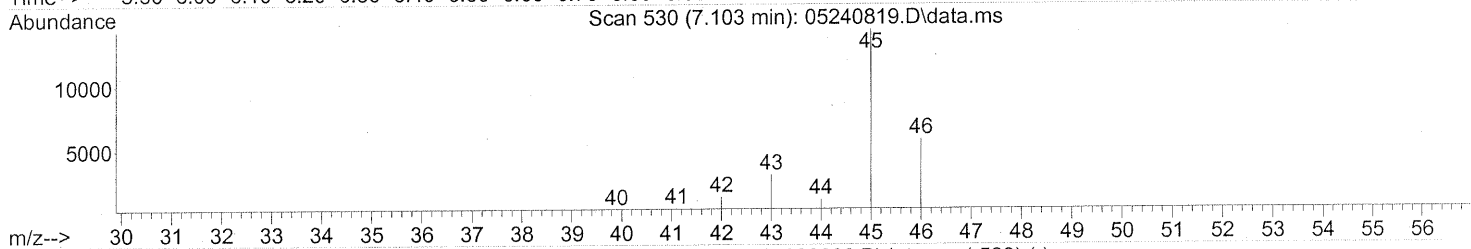
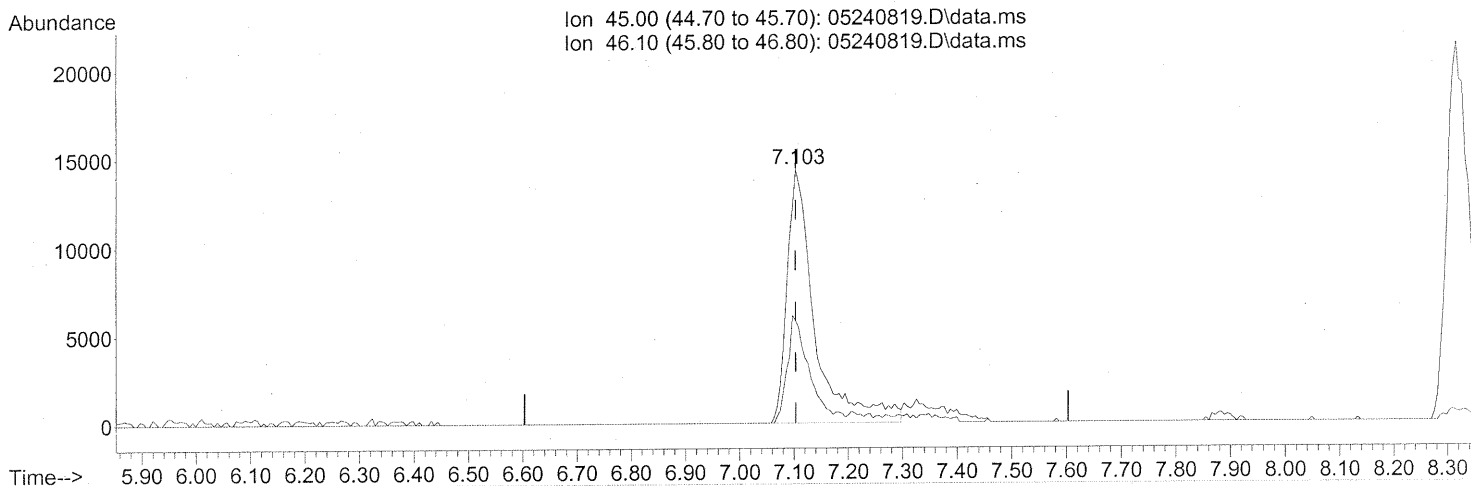
response 22955

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	32.09
100.90	9.30	10.42
102.90	6.00	6.20

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA *4* *DA 5/29/08*  
 Sample : P0801422-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 09:05:09 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 7.103min (+0.000) 1.68ng  
 response 51161

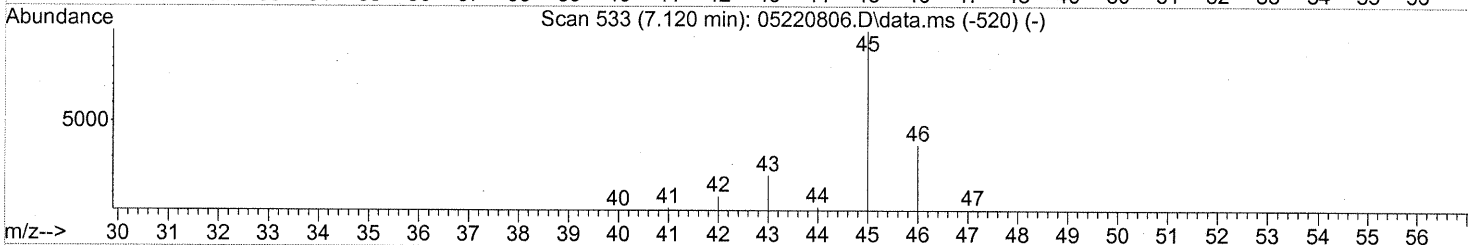
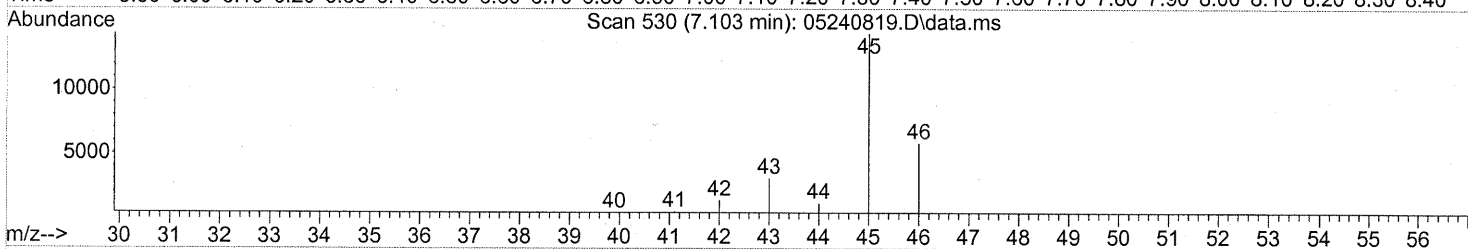
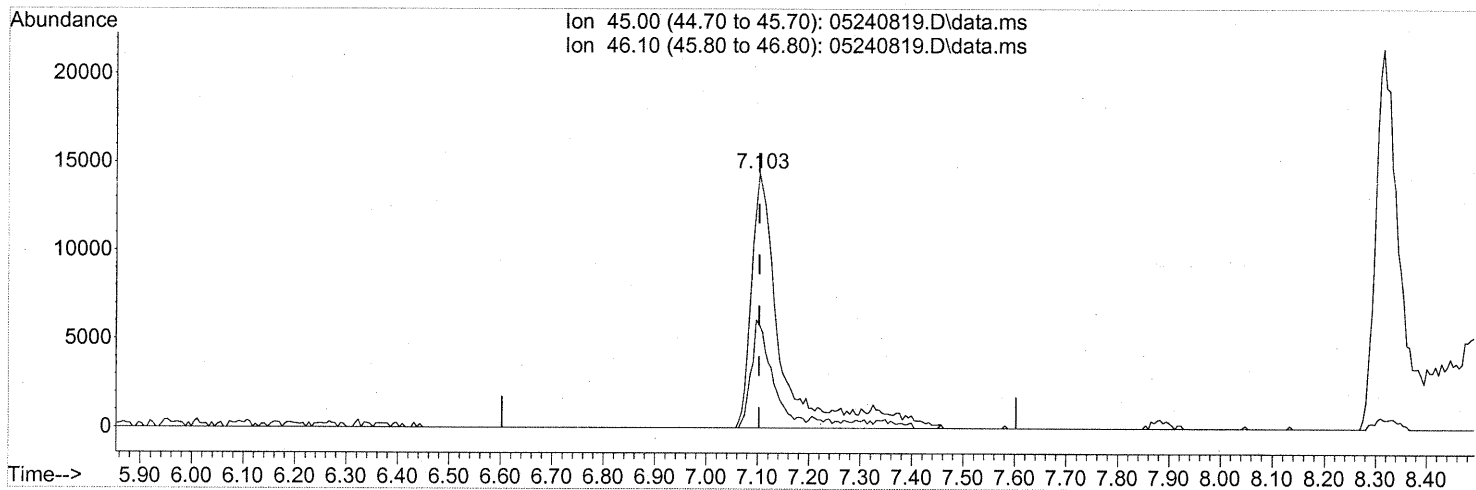
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	33.74
0.00	0.00	0.00
0.00	0.00	0.00

*teiling*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(10) Ethanol (T)

7.103min (+0.000) 1.88ng m

response 57287

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	30.13
0.00	0.00	0.00
0.00	0.00	0.00

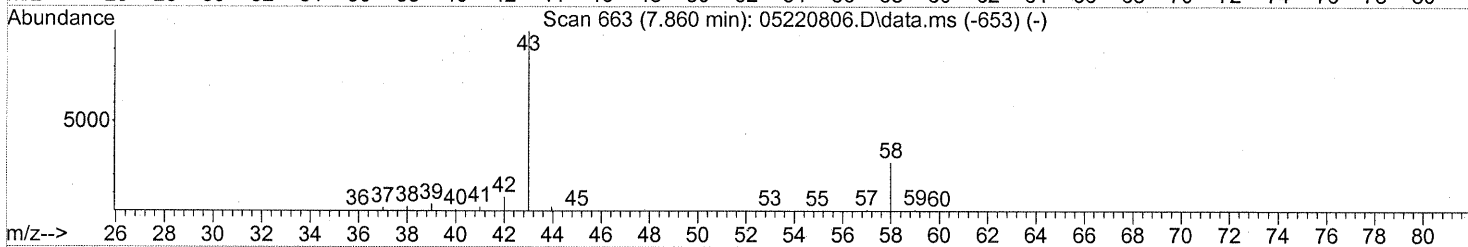
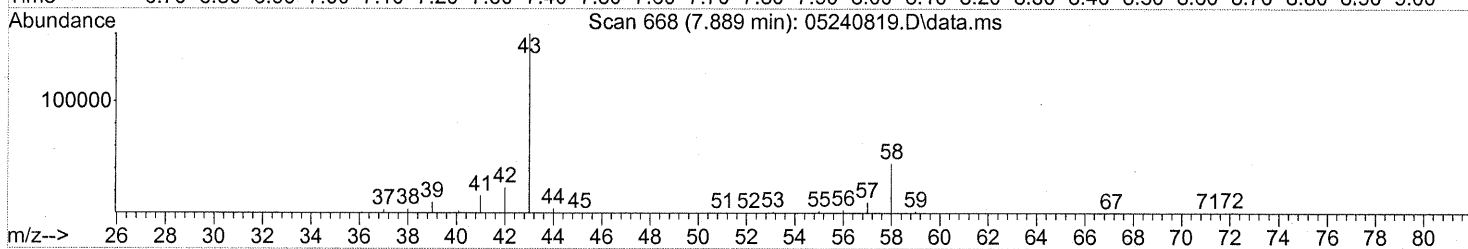
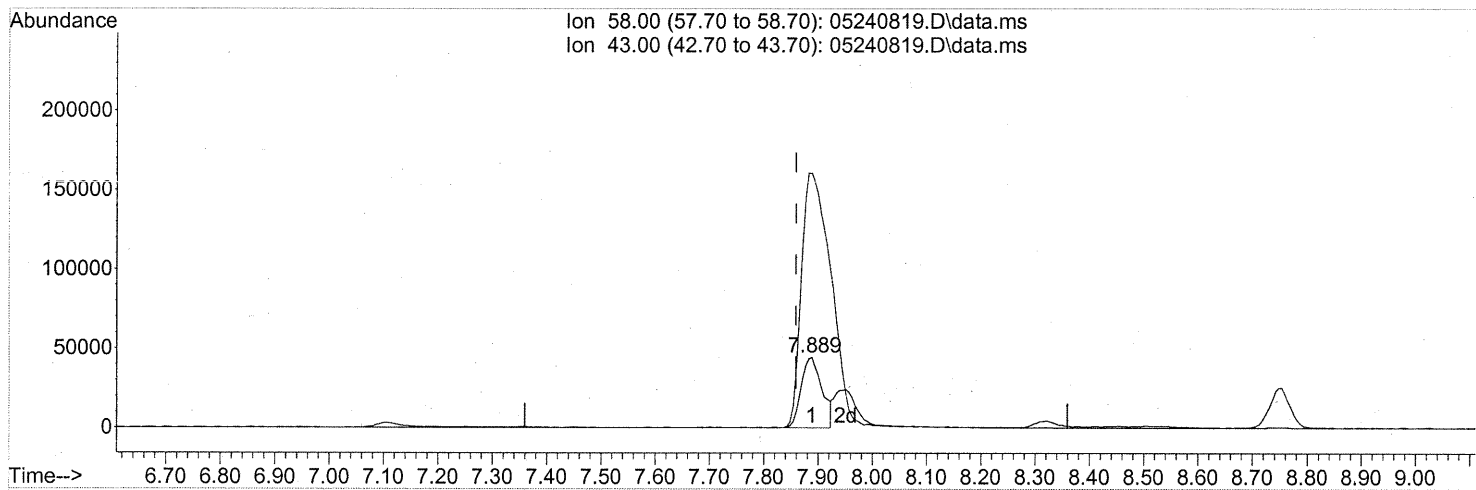
*added tailing*  
~~WA~~ 5/29/08

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(13) Acetone (T)

7.889min (+0.029) 3.76ng

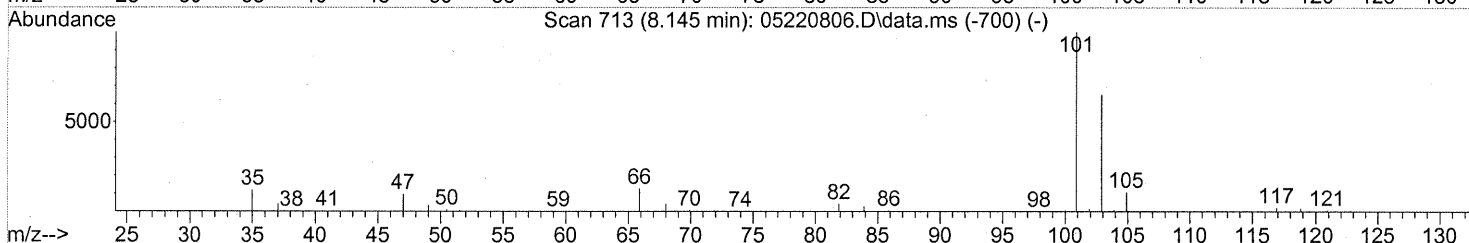
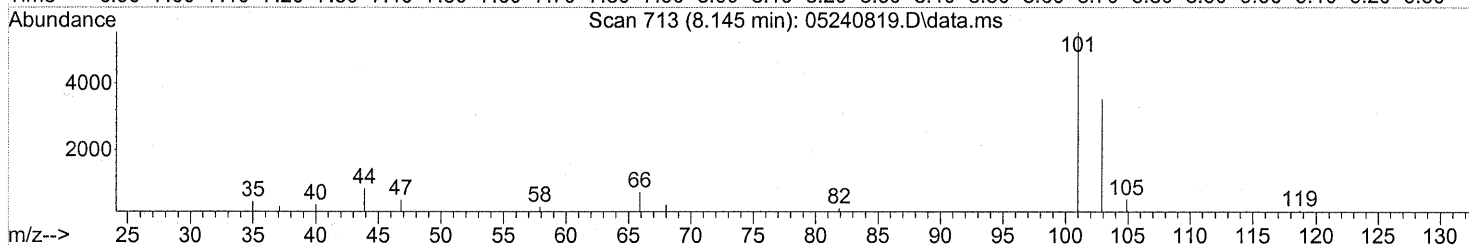
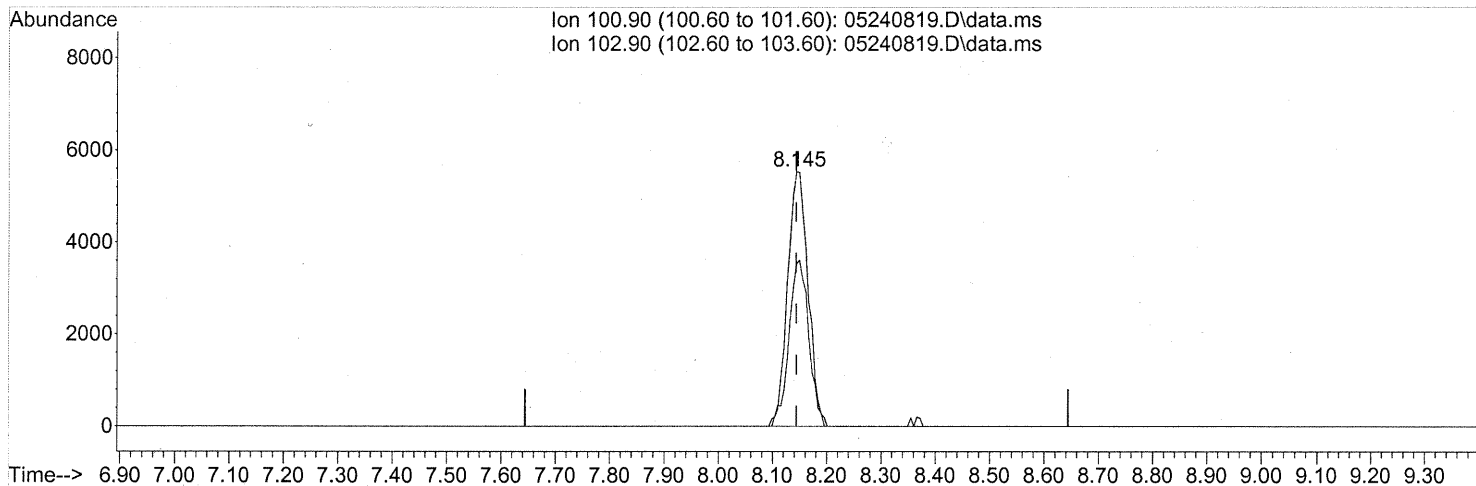
response 117280

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	522.95#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(14) Trichlorofluoromethane (T)

8.145min (+0.000) 0.20ng

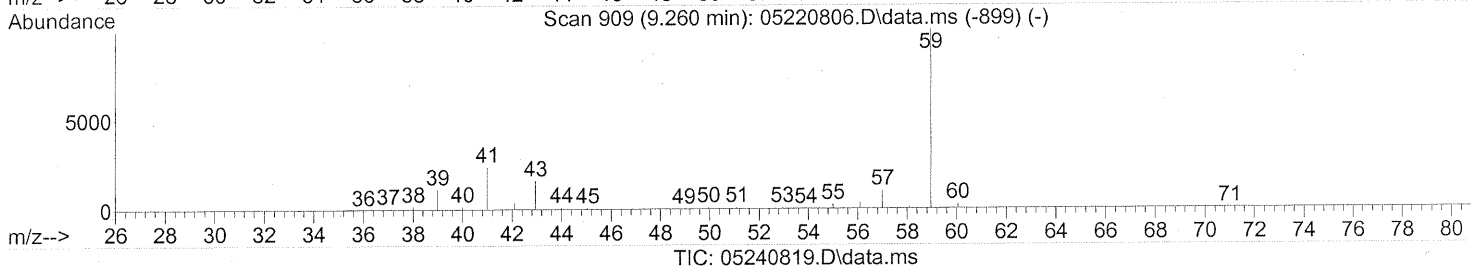
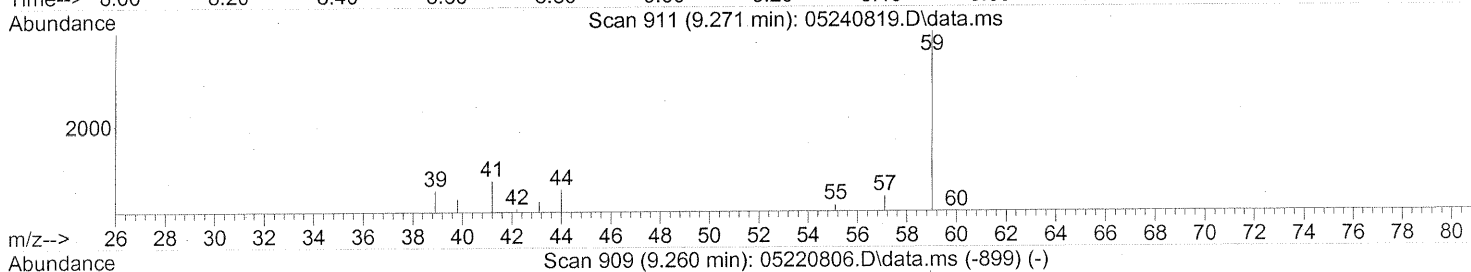
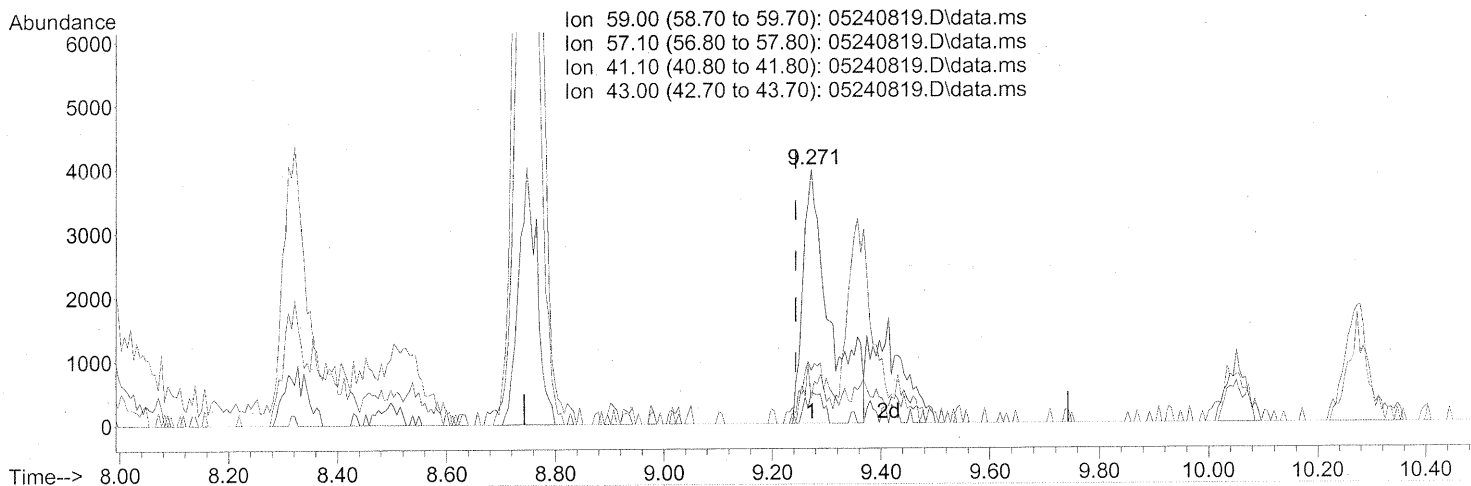
response 14303

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	63.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801422-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 09:05:09 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

9.271min (+0.028) 0.16ng

response 13803

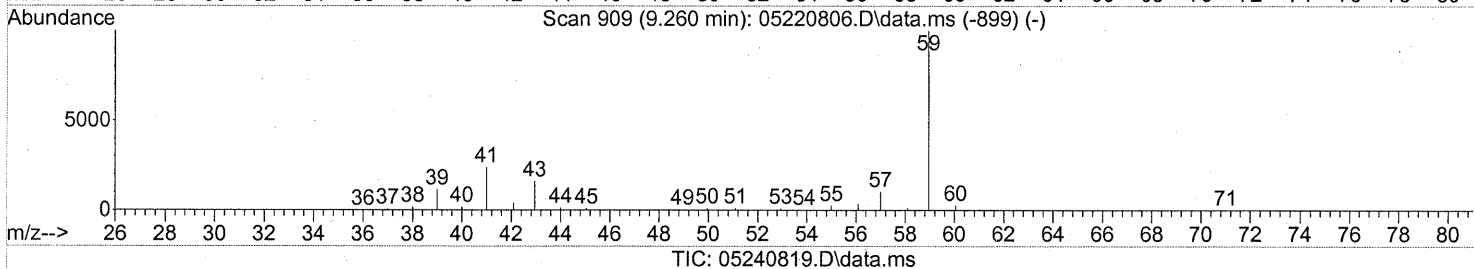
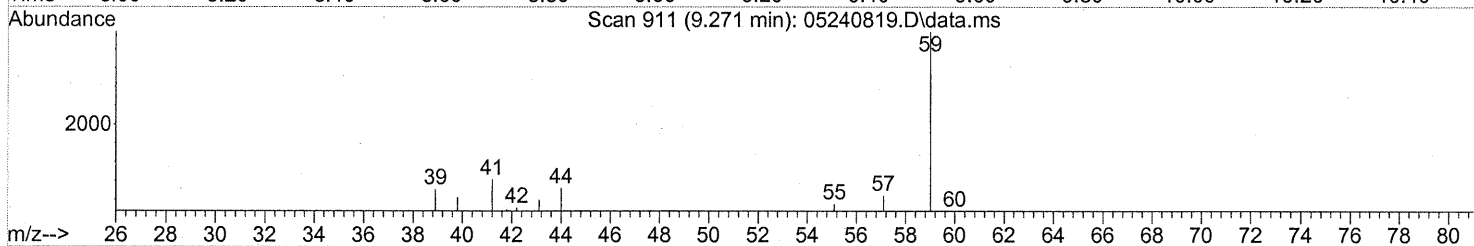
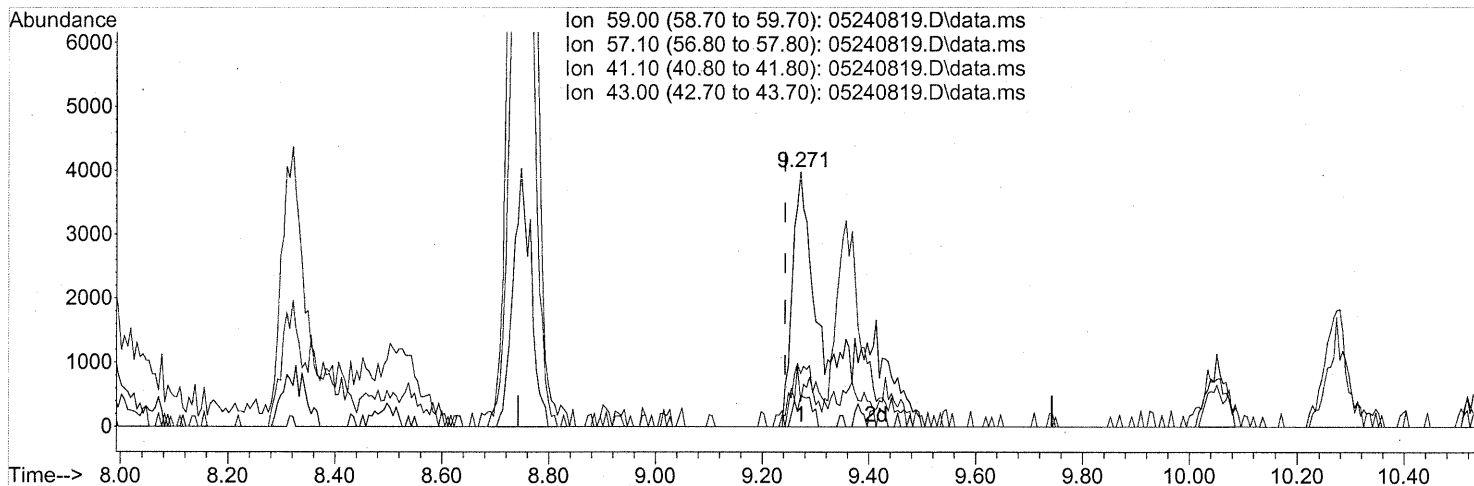
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	7.86
41.10	20.10	23.73
43.00	12.30	15.44

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

9.271min (+0.028) 0.24ng m

response 20149

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	5.38
41.10	20.10	16.26
43.00	12.30	10.58

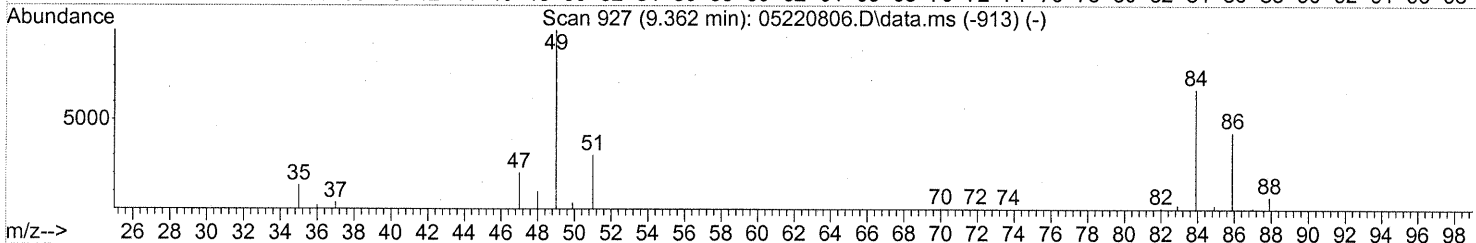
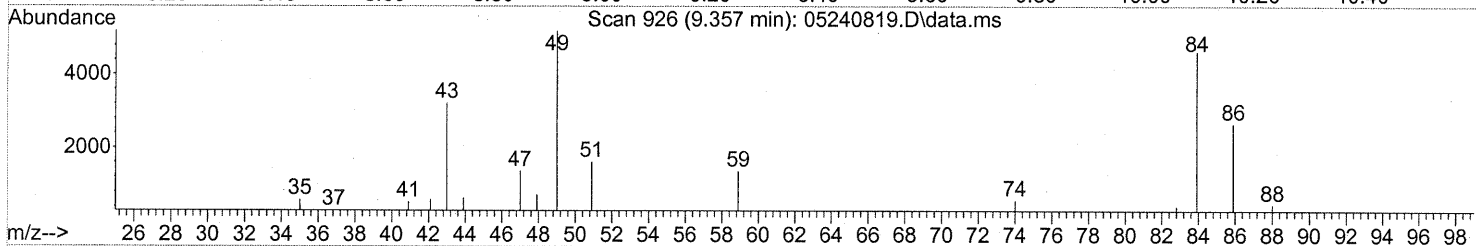
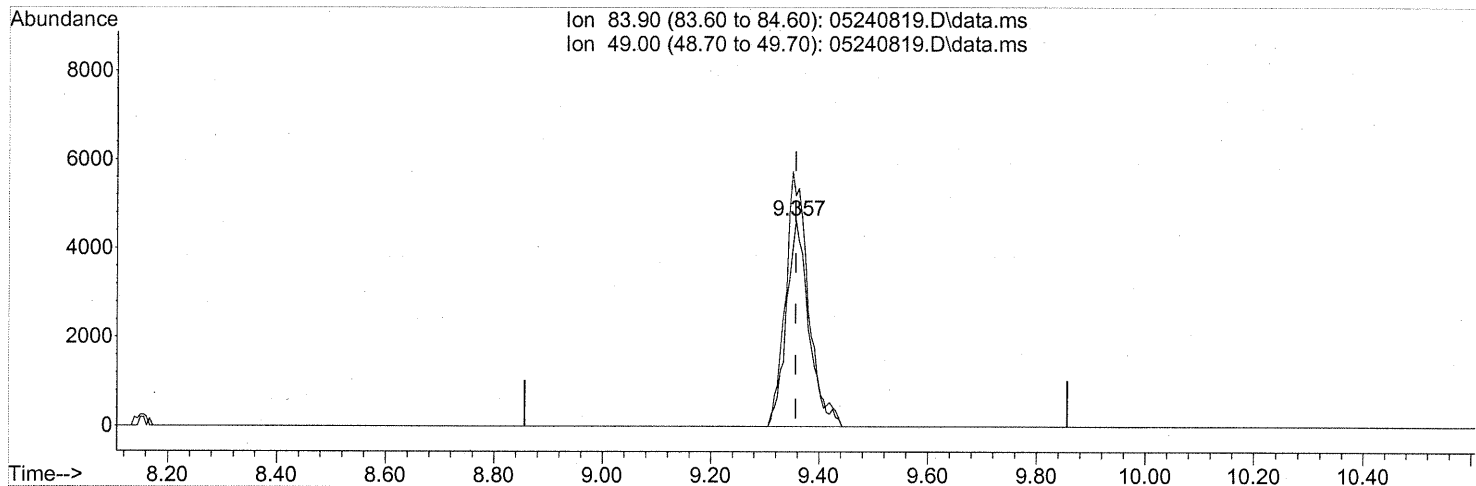
*int. whole plates*  
*10A 5/29/08*

*wt 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(19) Methylene Chloride (T)

9.357min (+0.000) 0.38ng

response 13266

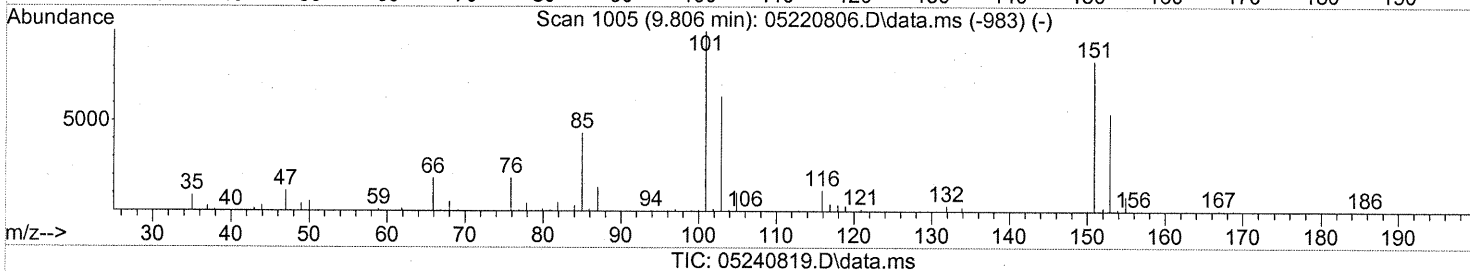
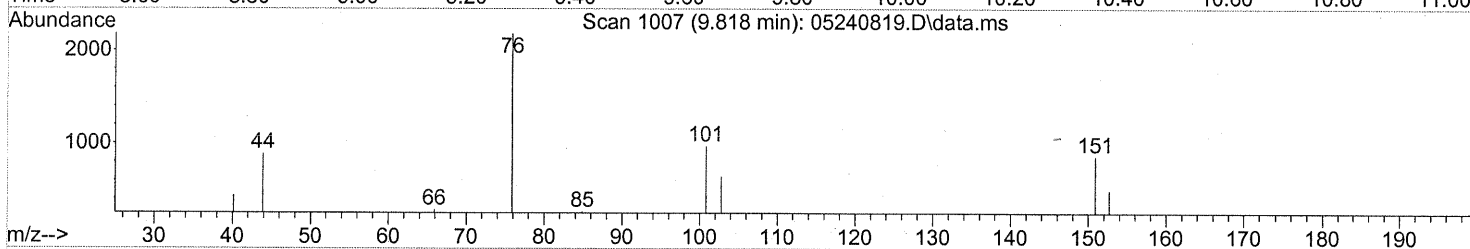
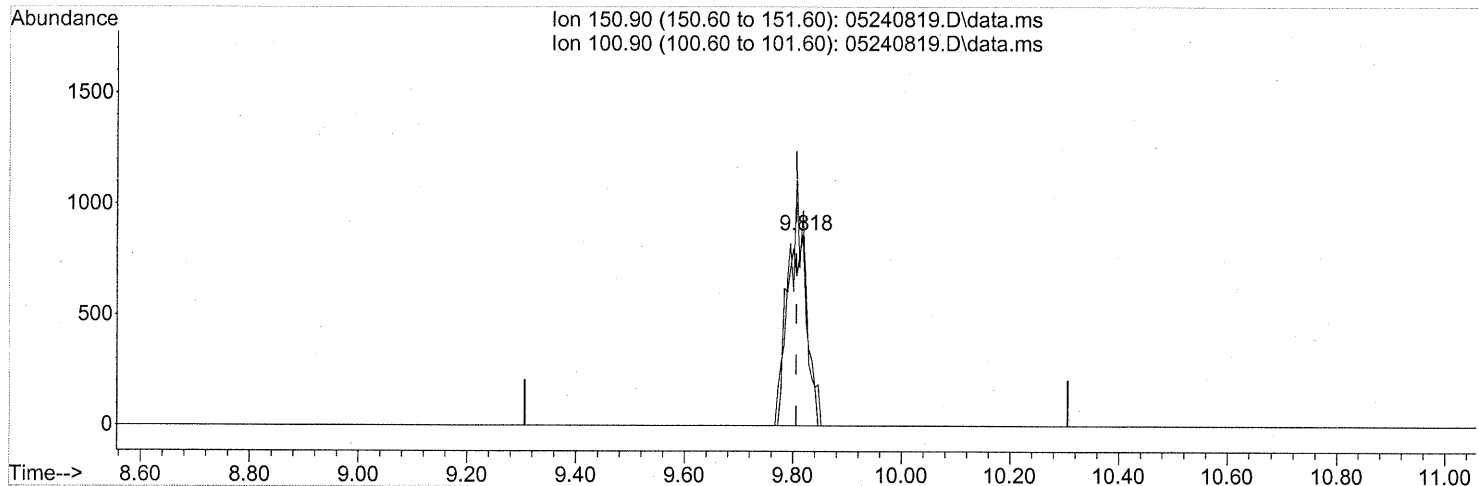
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	125.55#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.818min (+0.011) 0.07ng

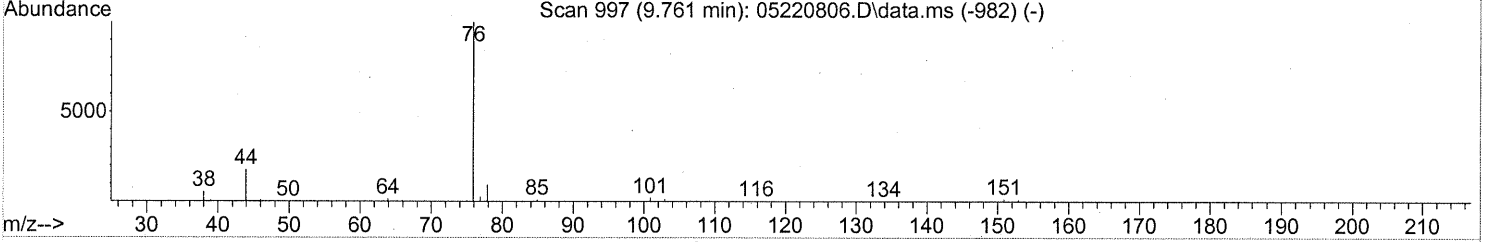
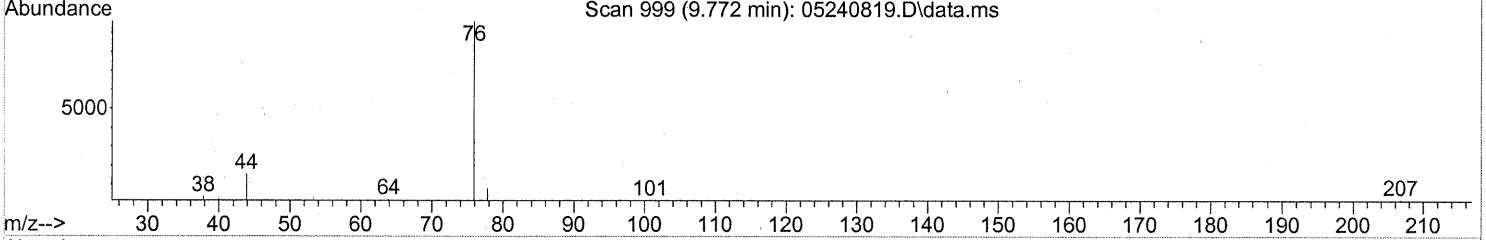
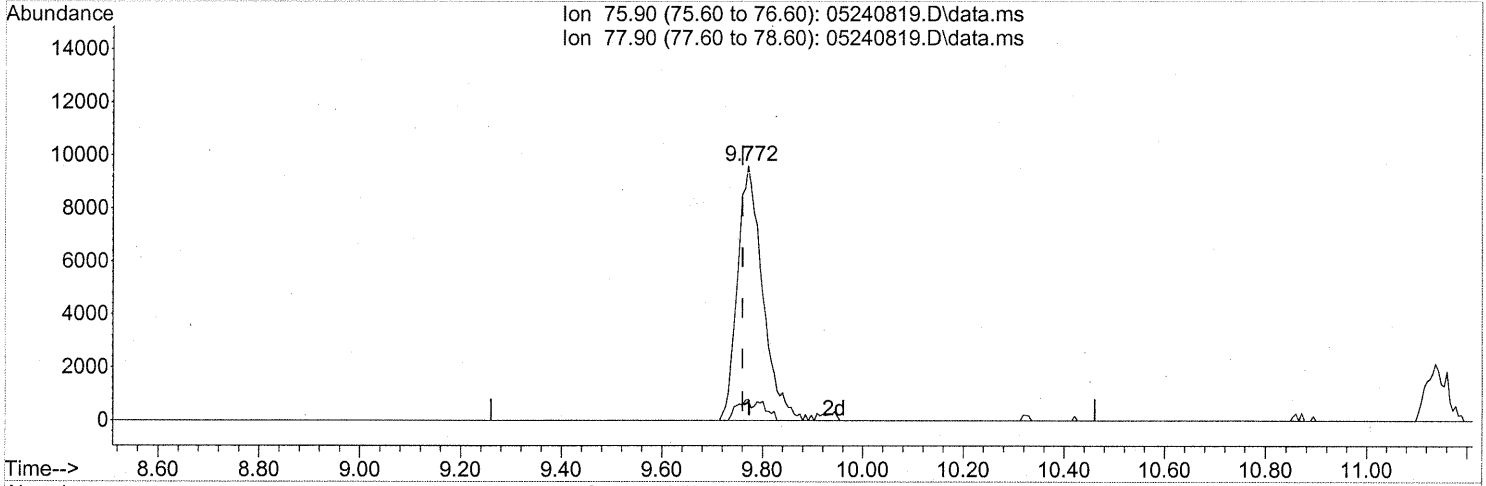
response 2202

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	111.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240819.D  
Acq On : 24 May 2008 19:31  
Operator : WA  
Sample : P0801442-012 (200ml)  
Misc : ENSR SG84B-05 (-2.8, 3.5)  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240819.D\data.ms

(22) Carbon Disulfide (T)

9.772min (+0.011) 0.25ng

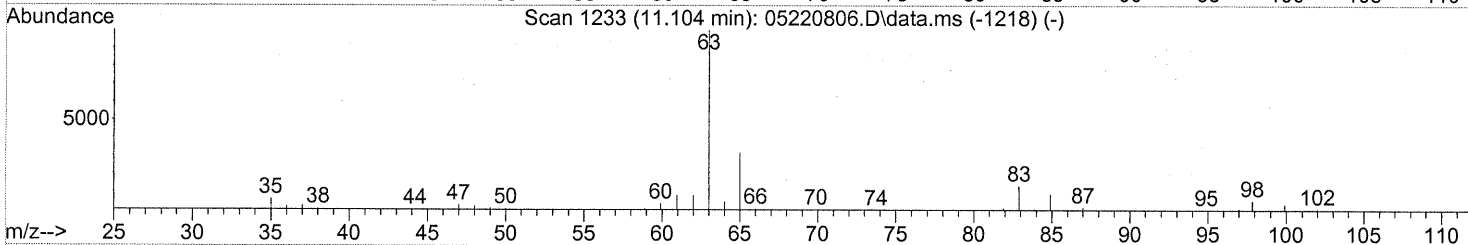
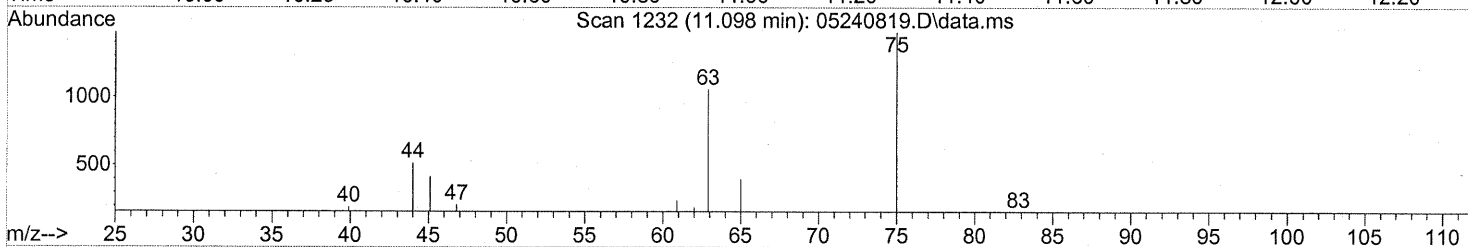
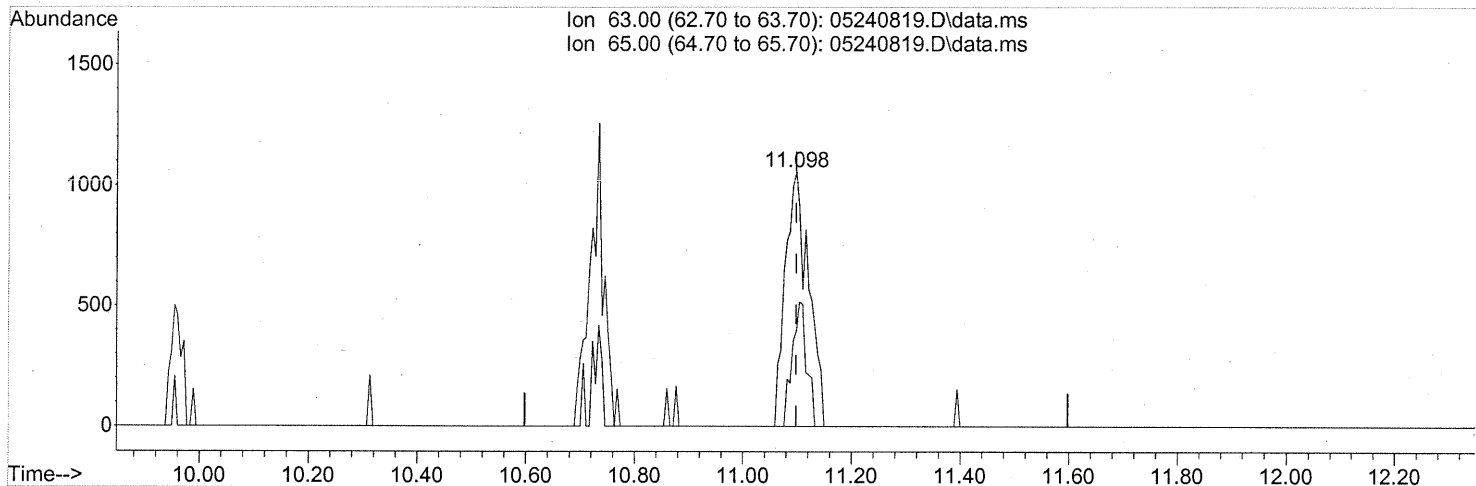
response 32986

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	5.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(24) 1,1-Dichloroethane (T)

11.098min (+0.000) 0.05ng

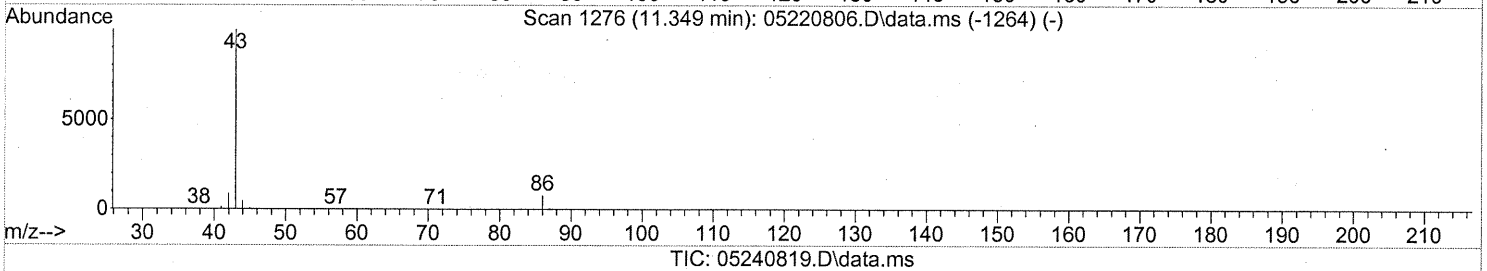
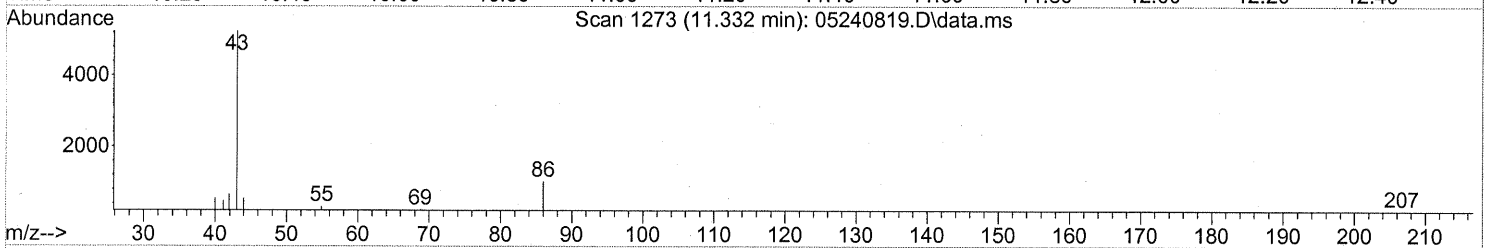
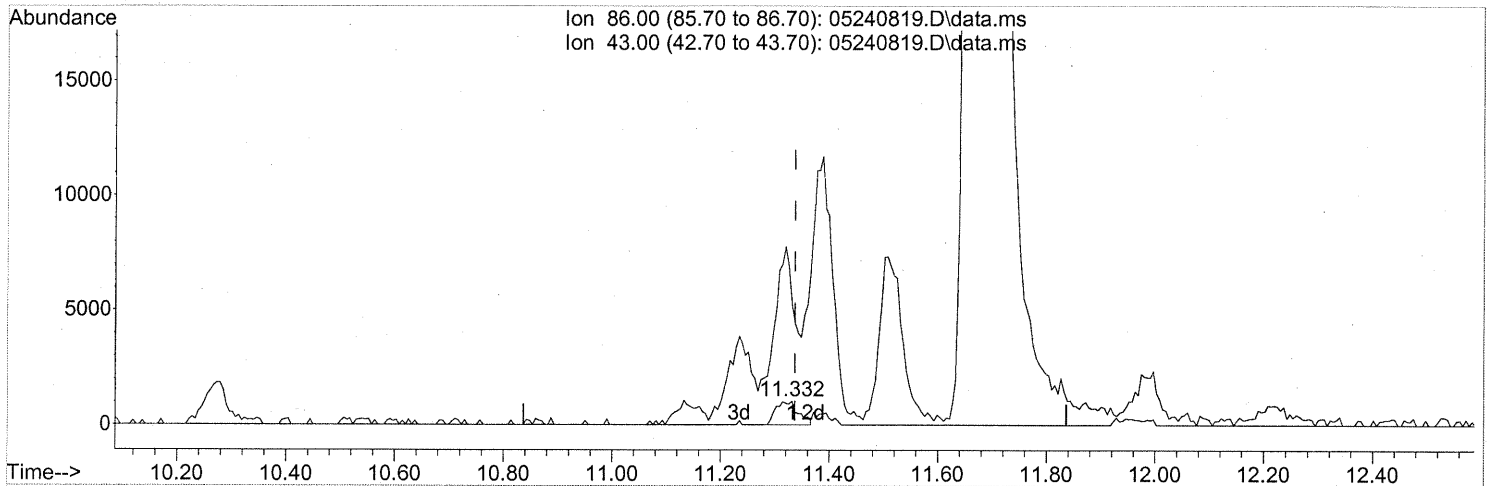
response 3135

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	30.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.332min (-0.005) 0.50ng

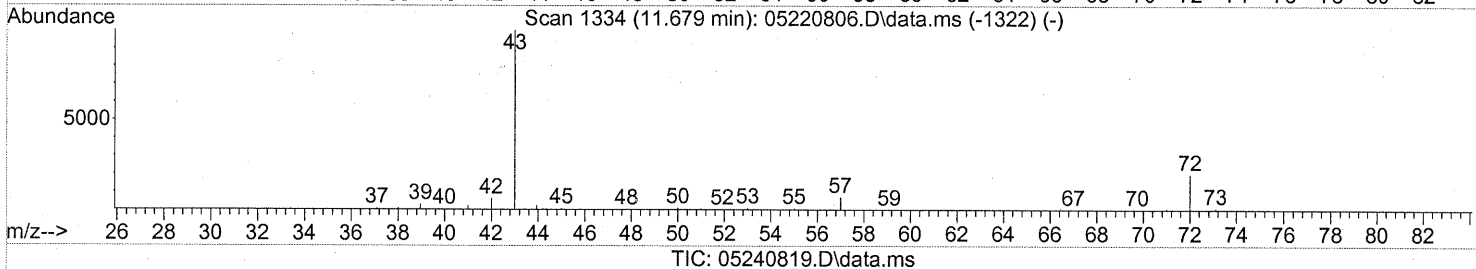
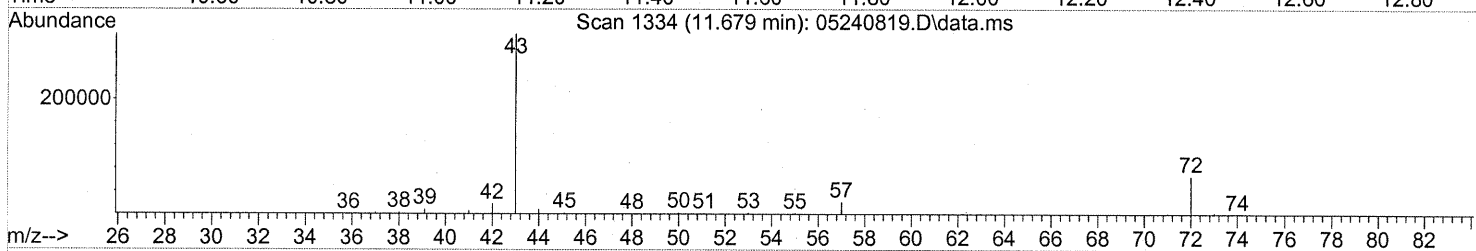
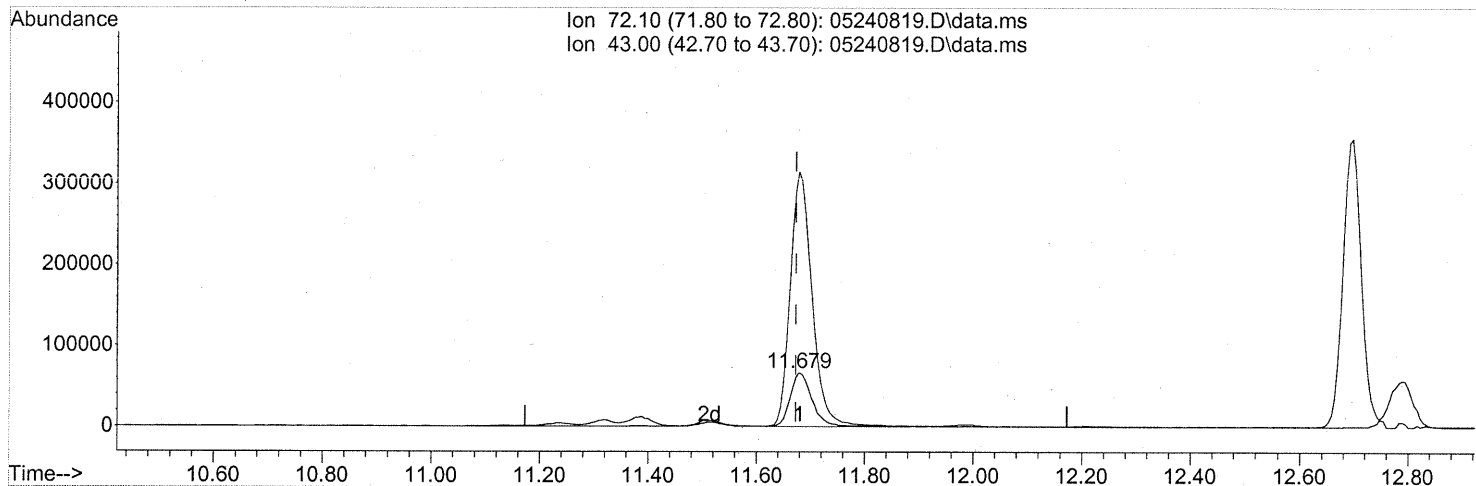
response 2869

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	662.43#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



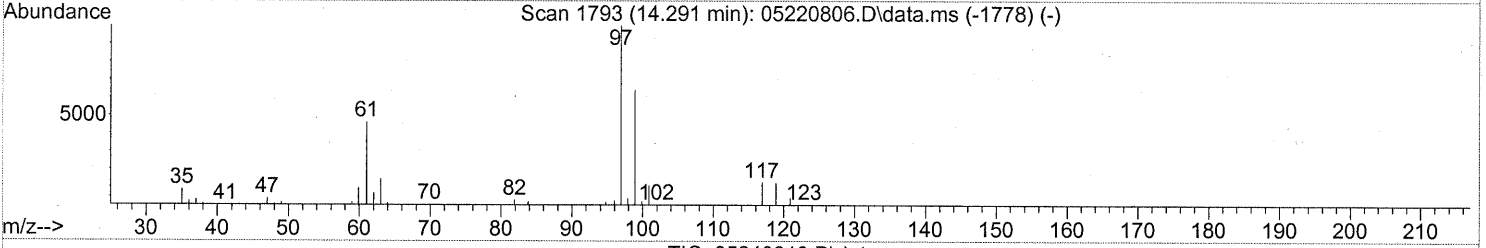
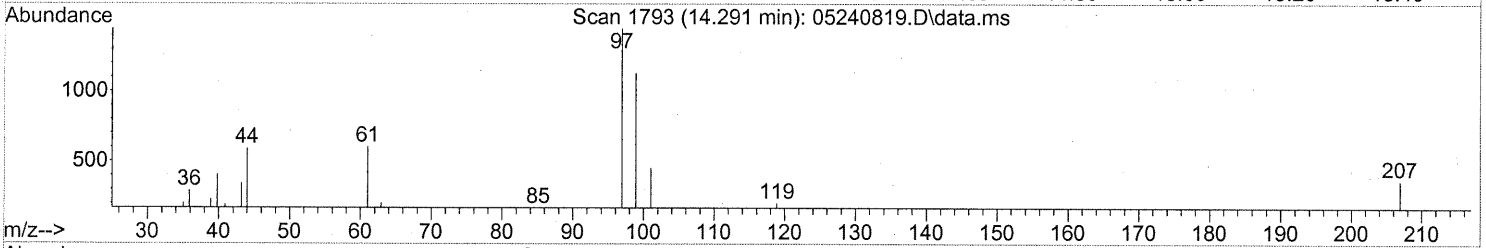
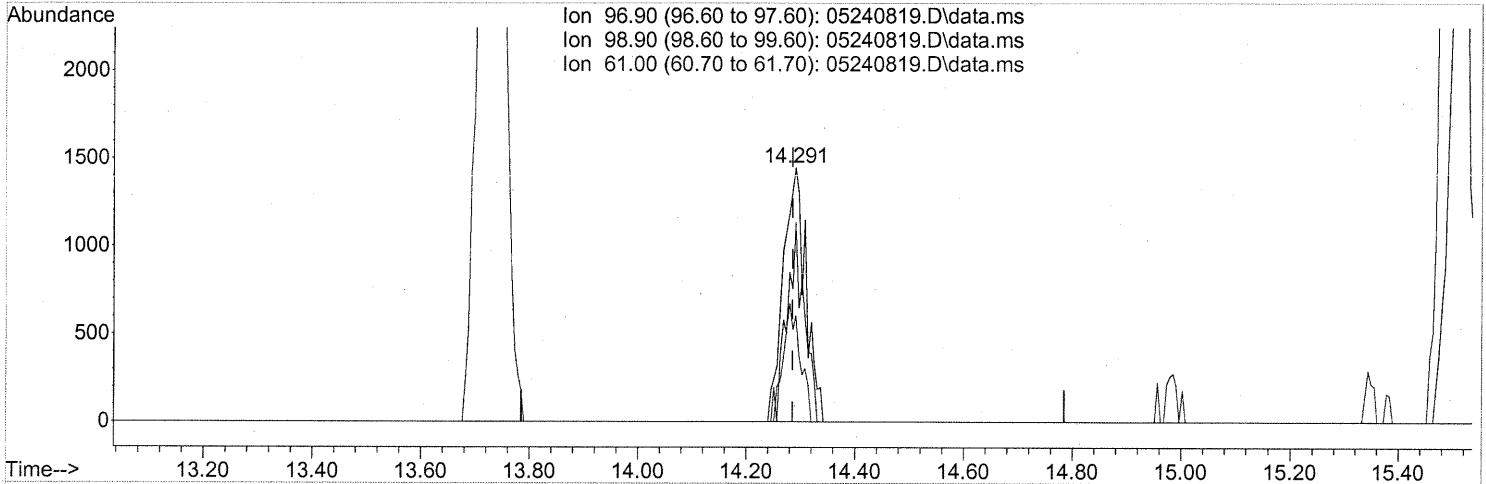
(27) 2-Butanone (T)  
 11.679min (+0.006) 8.07ng  
 response 183705

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	477.03#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.291min (+0.006) 0.08ng

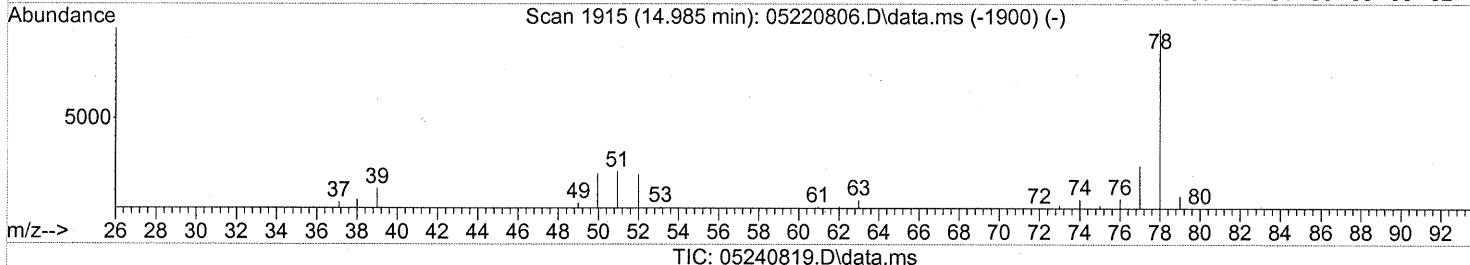
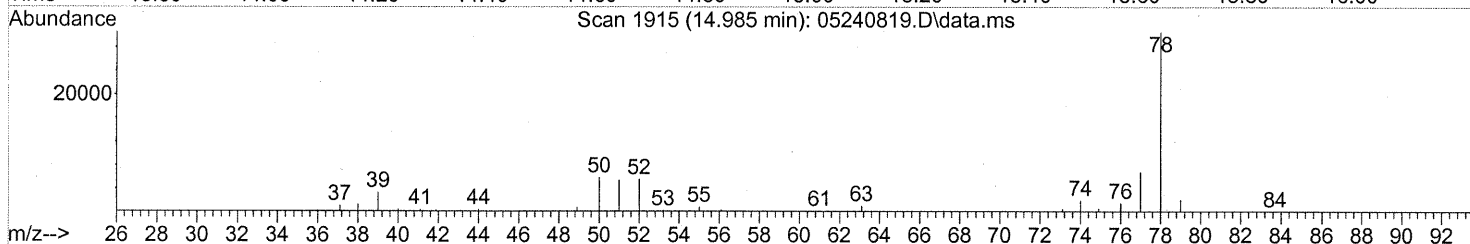
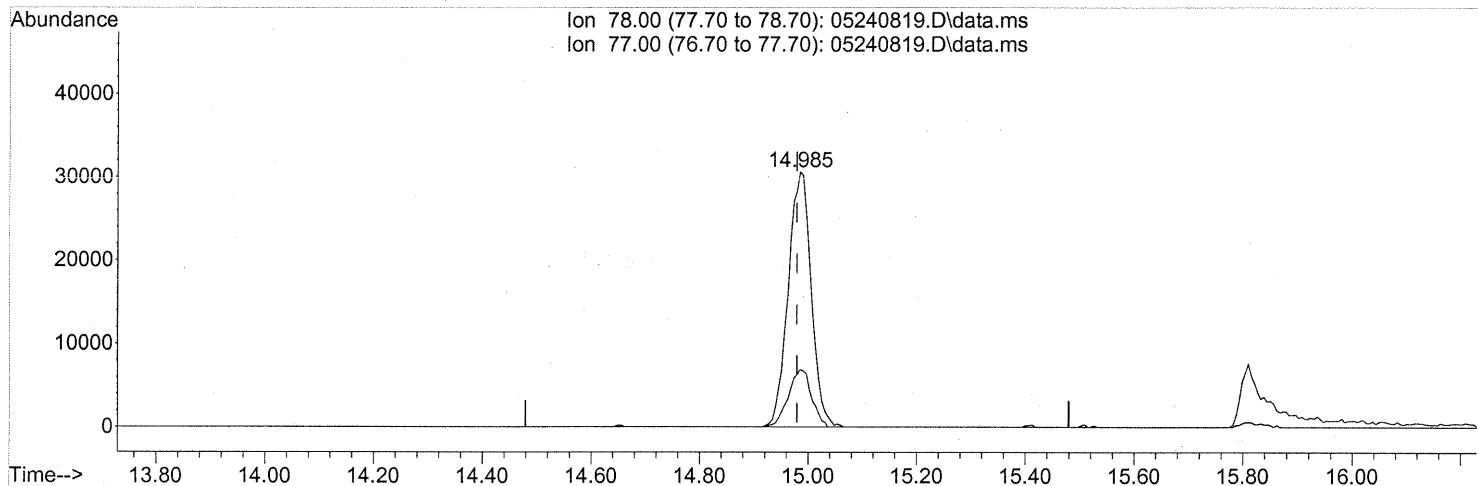
response 4161

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	61.02
61.00	50.50	35.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240819.D  
Acq On : 24 May 2008 19:31  
Operator : WA  
Sample : P0801442-012 (200ml)  
Misc : ENSR SG84B-05 (-2.8, 3.5)  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



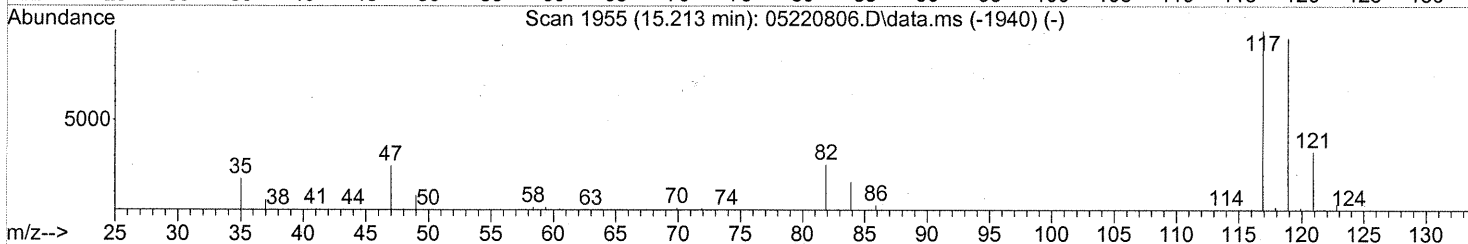
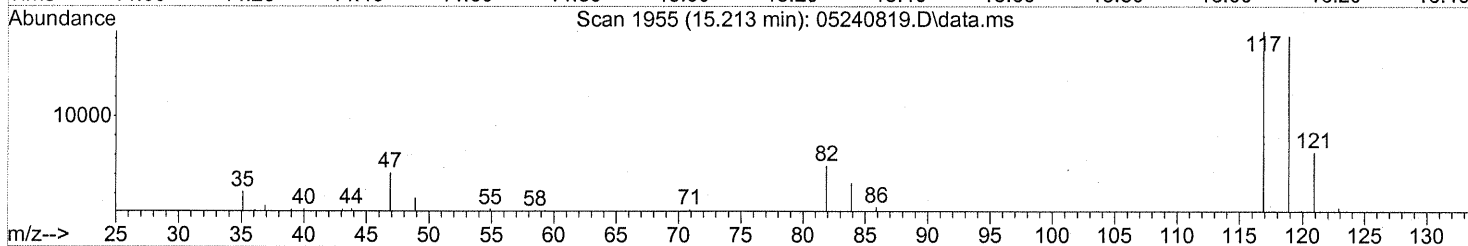
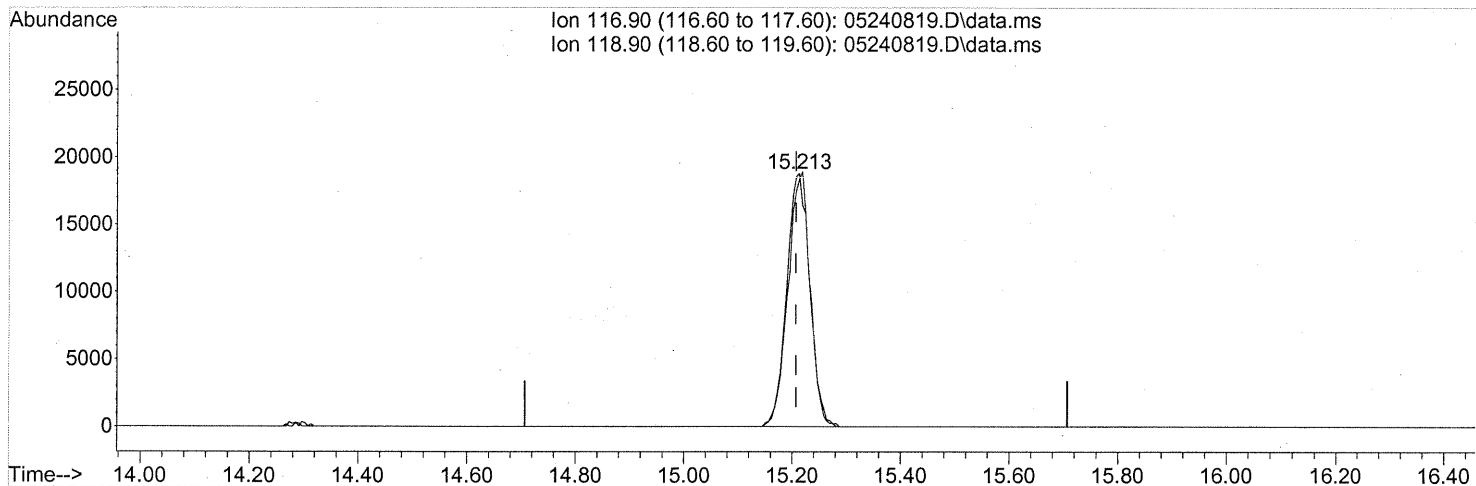
(41) Benzene (T)  
14.985min (+0.006) 0.71ng  
response 89296

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	22.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240819.D  
Acq On : 24 May 2008 19:31  
Operator : WA  
Sample : P0801442-012 (200ml)  
Misc : ENSR SG84B-05 (-2.8, 3.5)  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240819.D\data.ms

(42) Carbon Tetrachloride (T)

15.213min (+0.006) 1.14ng

response 55377

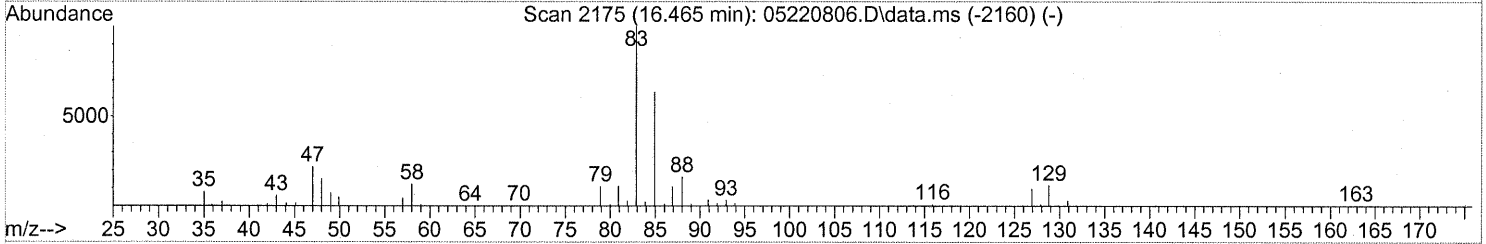
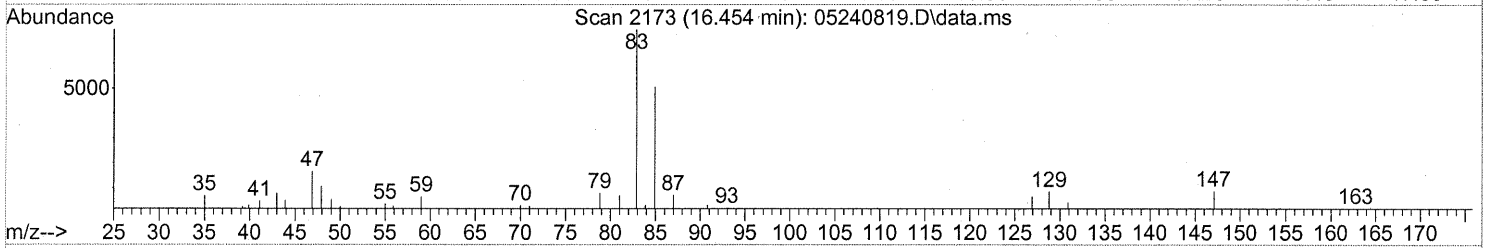
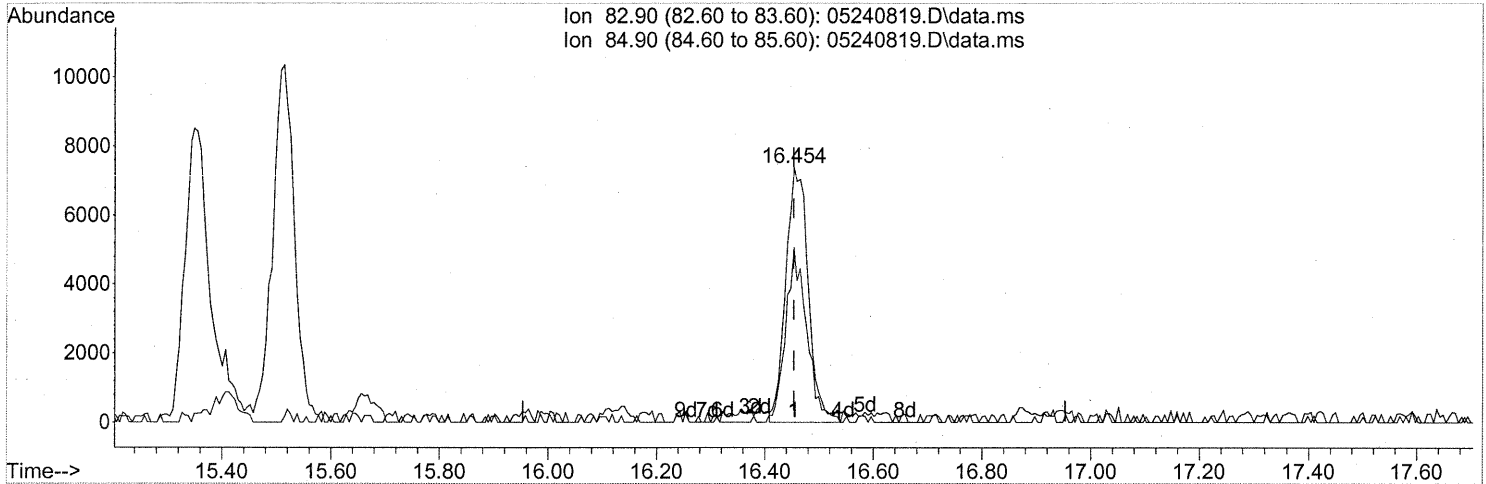
Ion	Exp%	Act%
116.90	100	100
118.90	96.60	96.02
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.454min (+0.000) 0.50ng

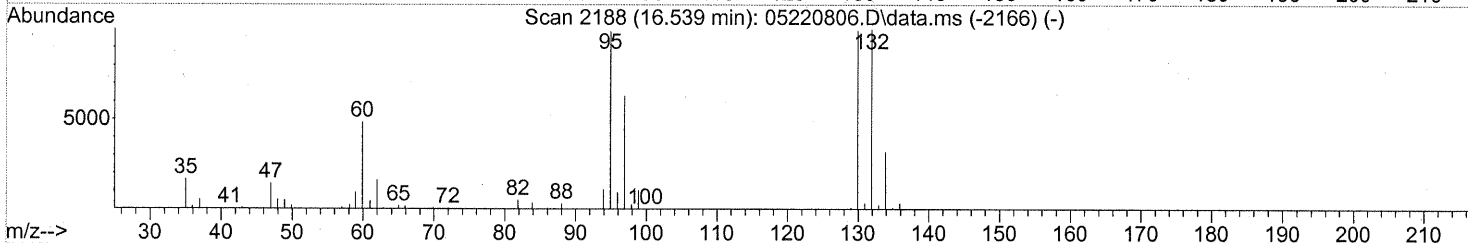
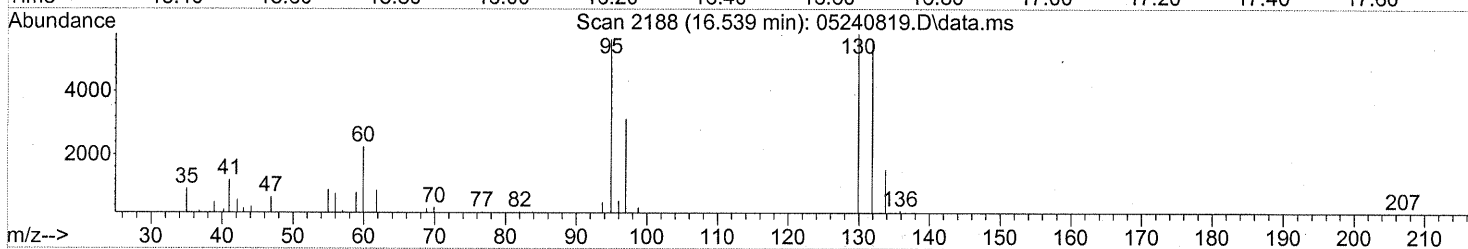
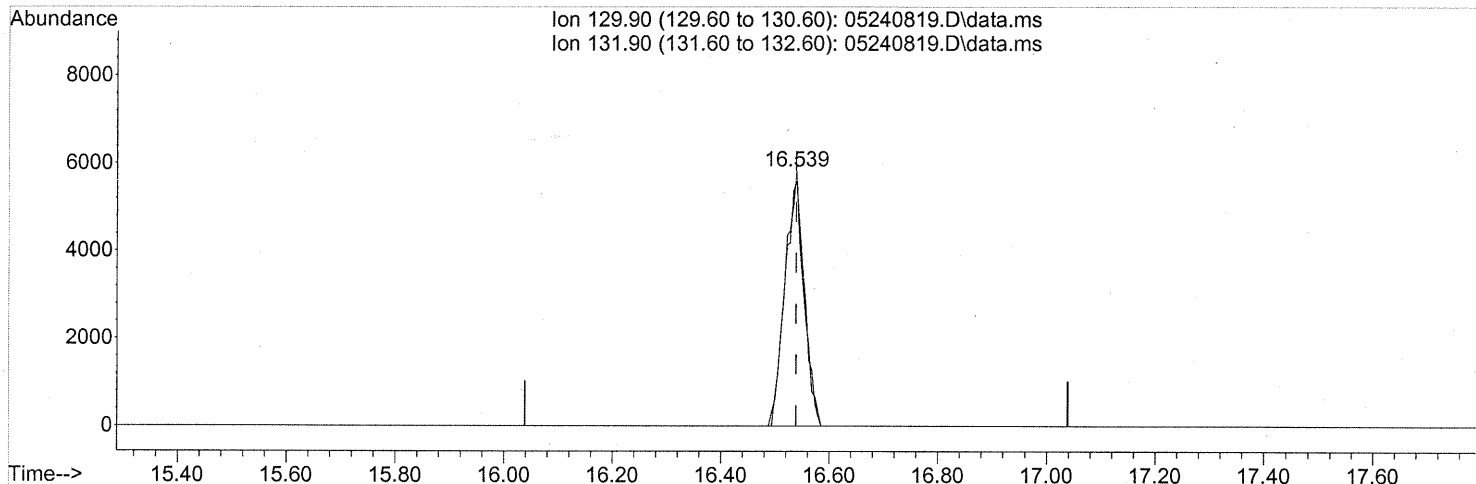
response 21155

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	64.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

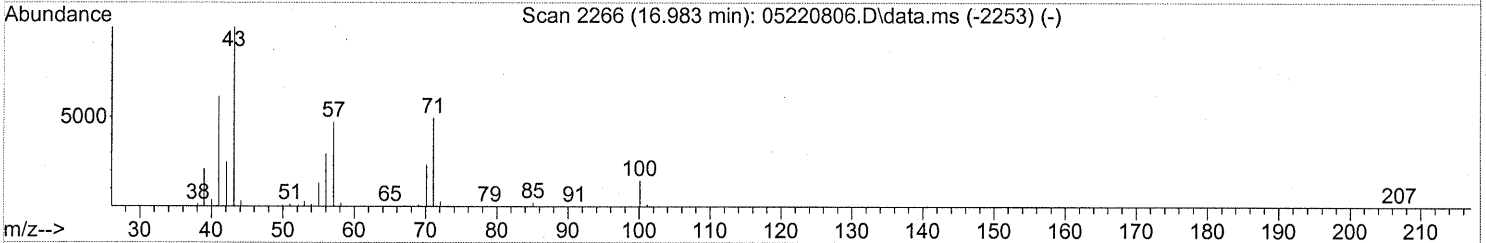
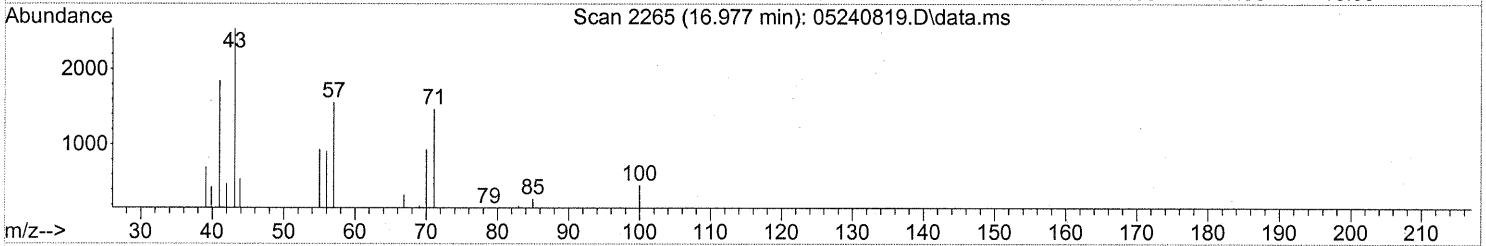
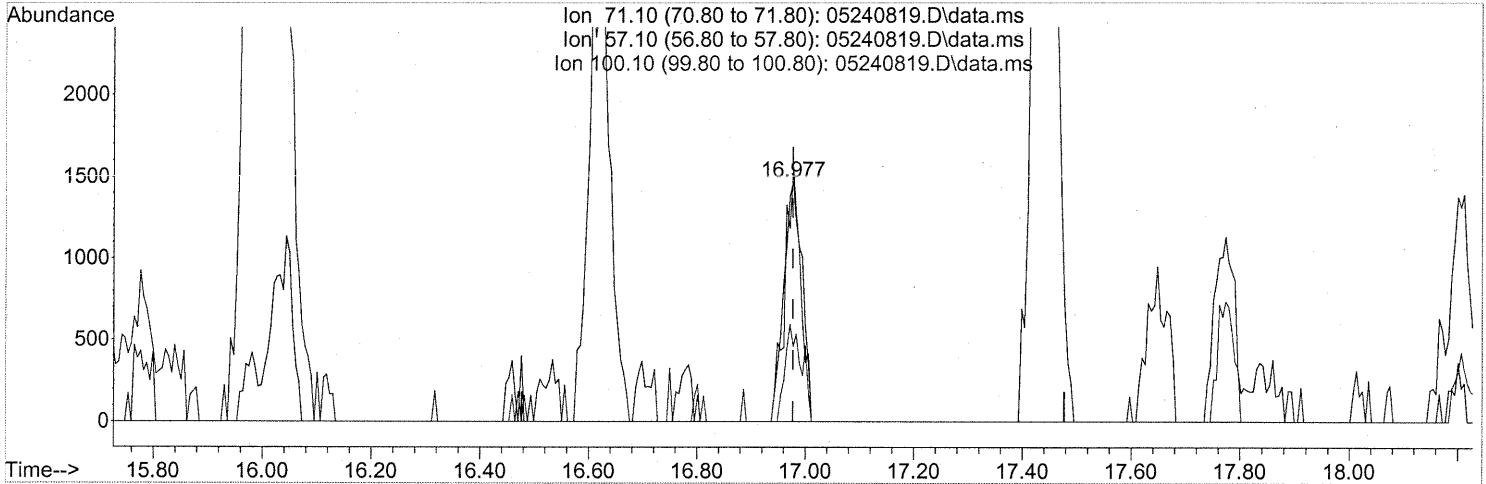
(47) Trichloroethene (T)  
 16.539min (+0.000) 0.36ng  
 response 13786

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	101.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

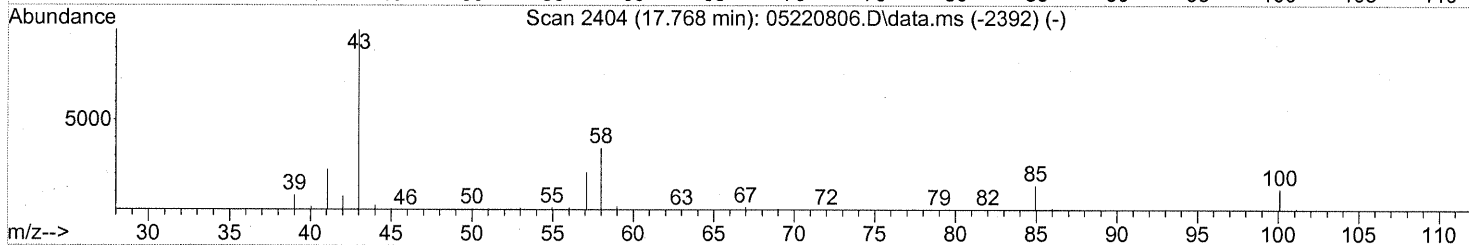
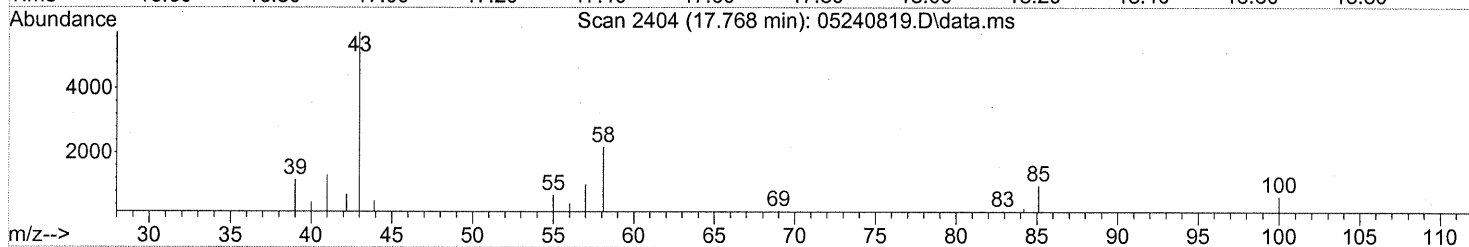
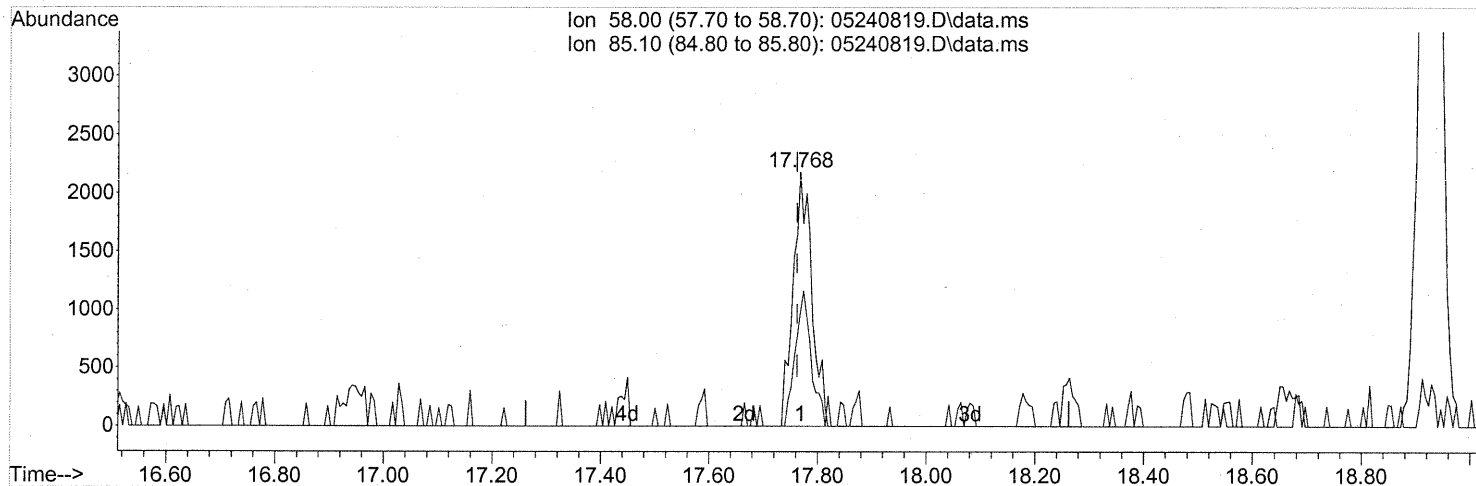
(51) n-Heptane (T)  
 16.977min (+0.000) 0.10ng  
 response 3418

Ion	Exp%	Act%
71.10	100	100
57.10	124.90	92.89#
100.10	30.10	36.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.768min (+0.006) 0.16ng

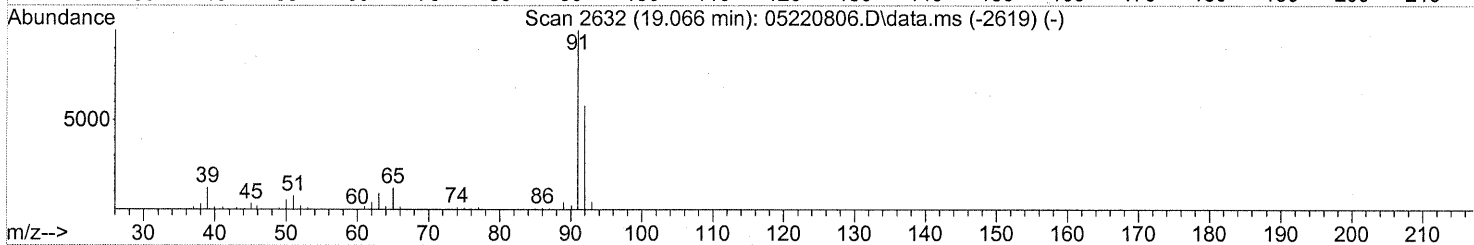
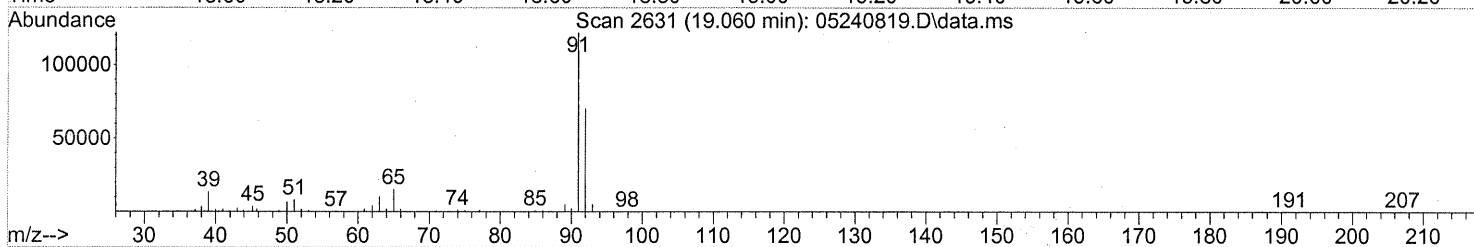
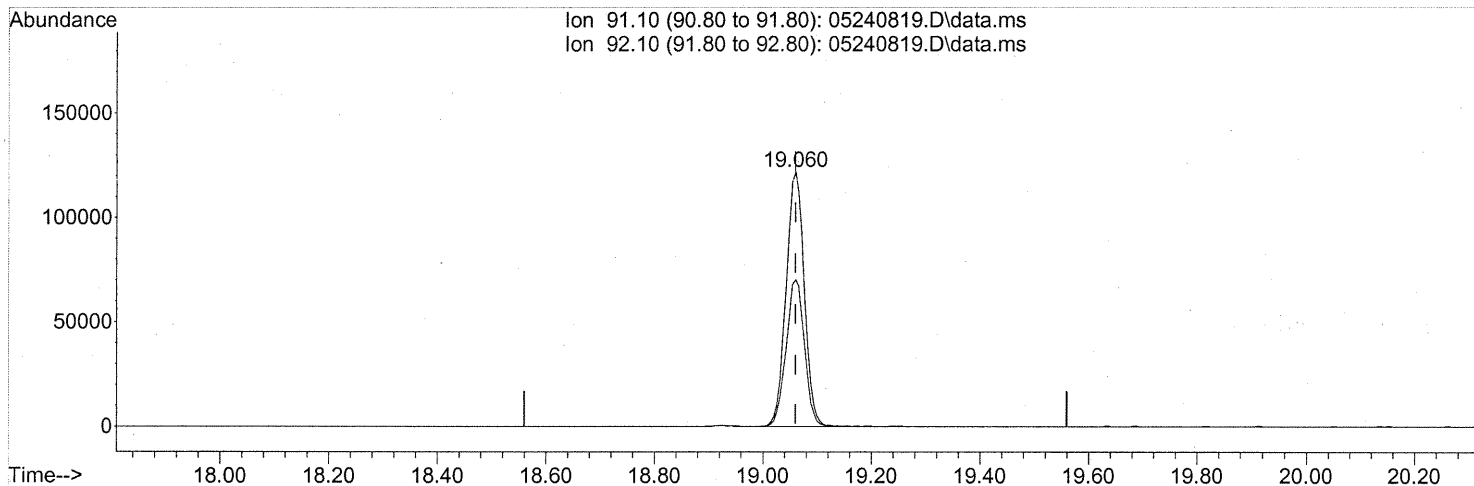
response 5199

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	45.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(58) Toluene (T)

19.060min (+0.000) 2.08ng

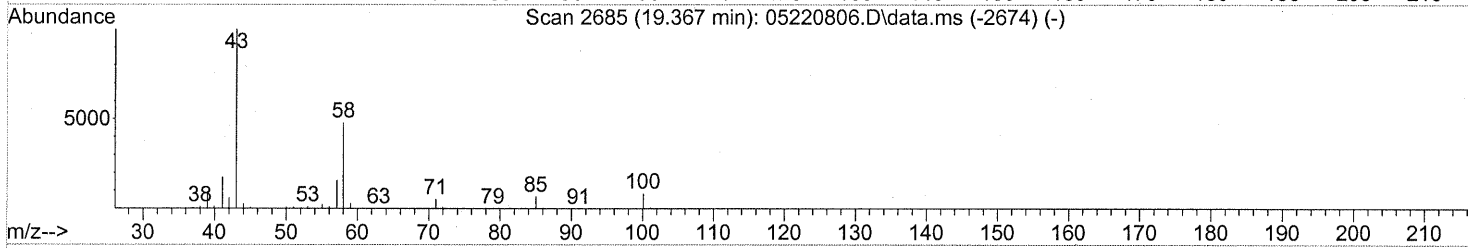
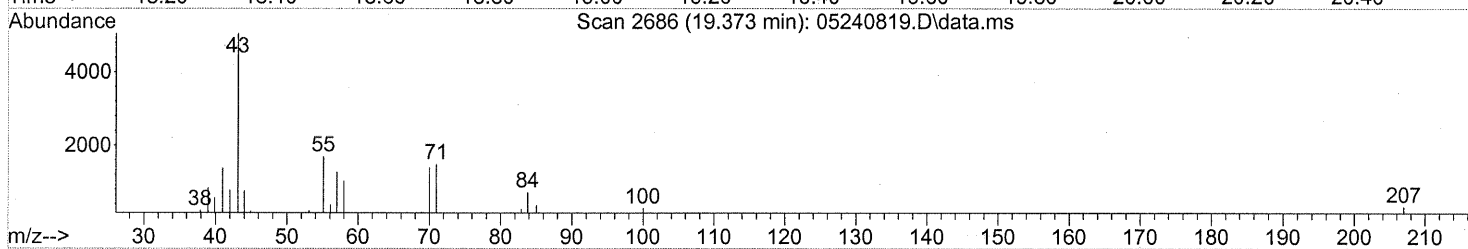
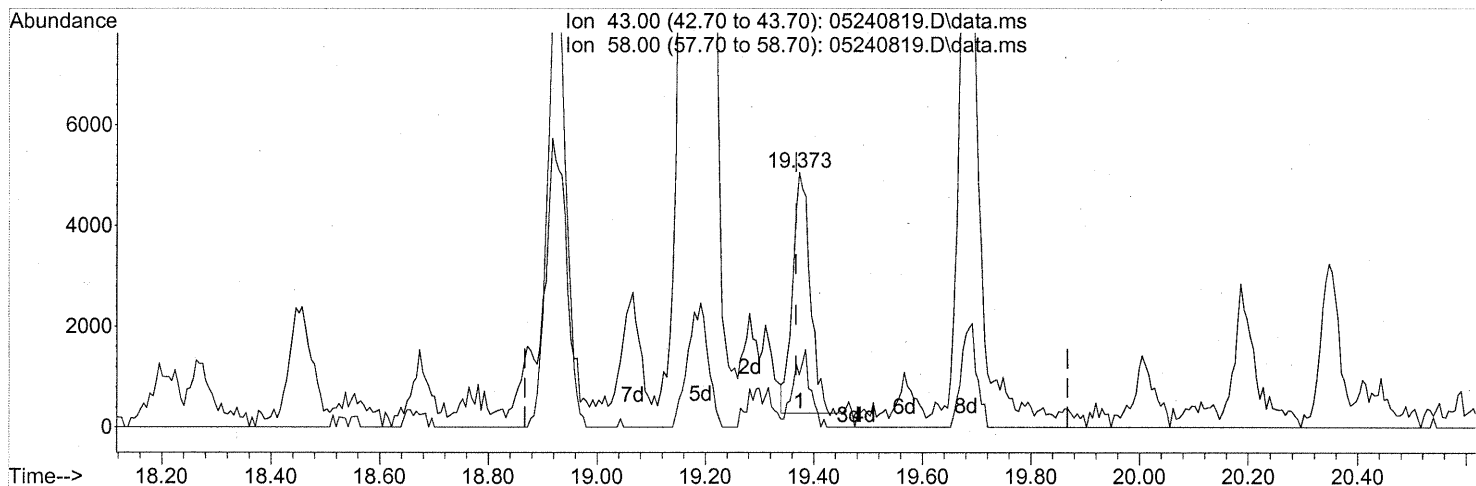
response 281675

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	58.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

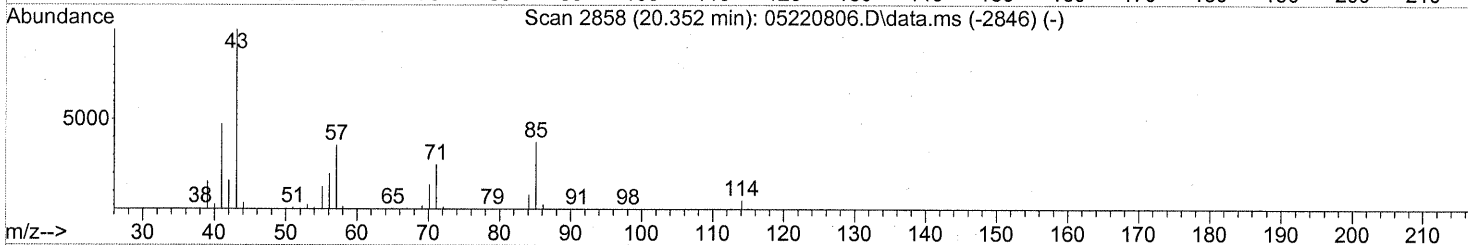
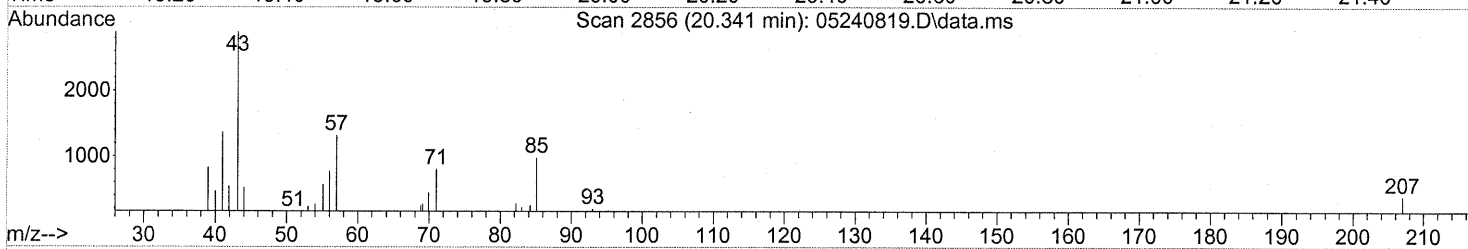
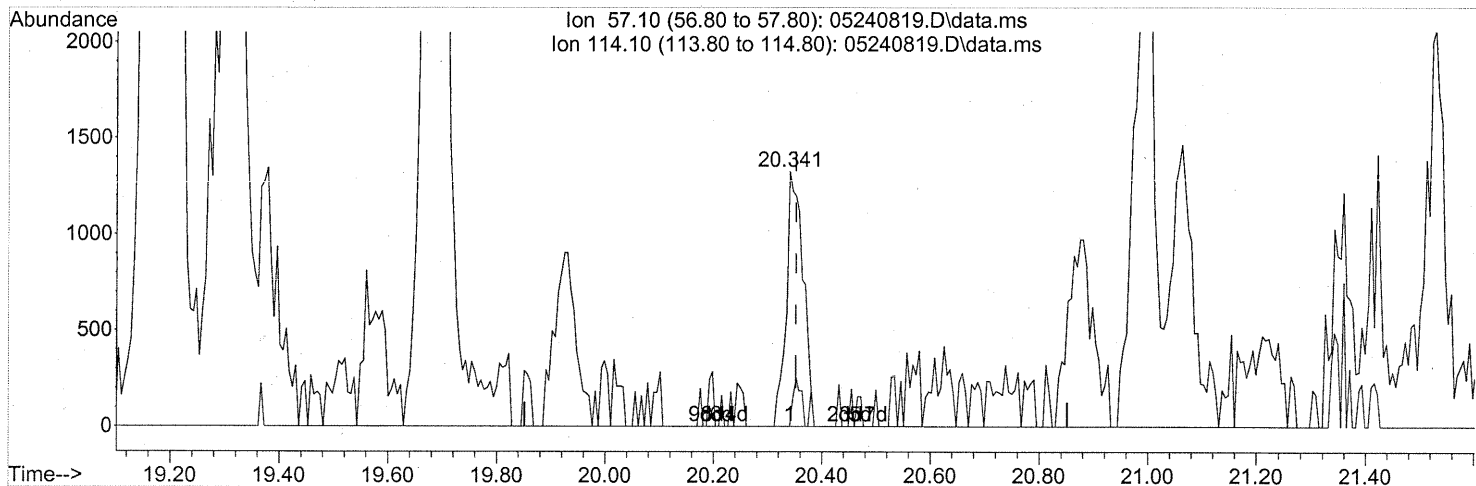
(59) 2-Hexanone (T)  
 19.373min (+0.006) 0.12ng  
 response 10772

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	29.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

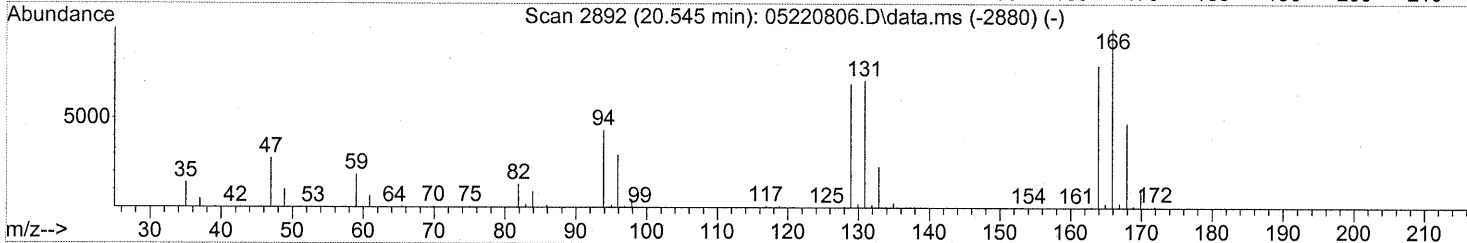
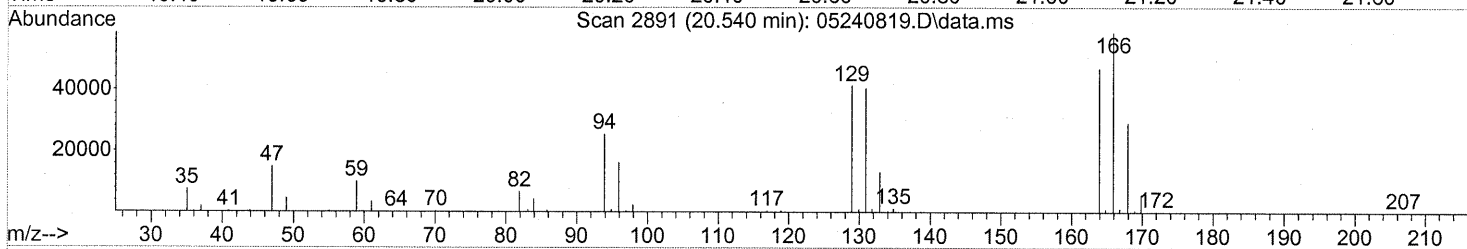
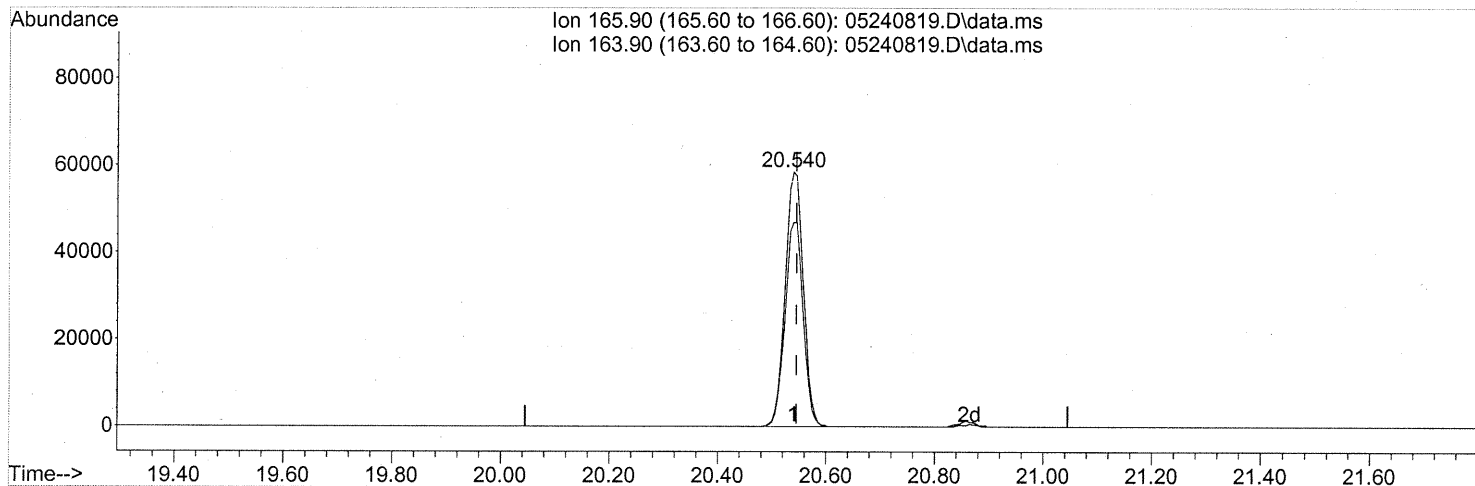
(63) n-Octane (T)  
 20.341min (-0.011) 0.10ng  
 response 2854

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	9.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 3.39ng

response 135472

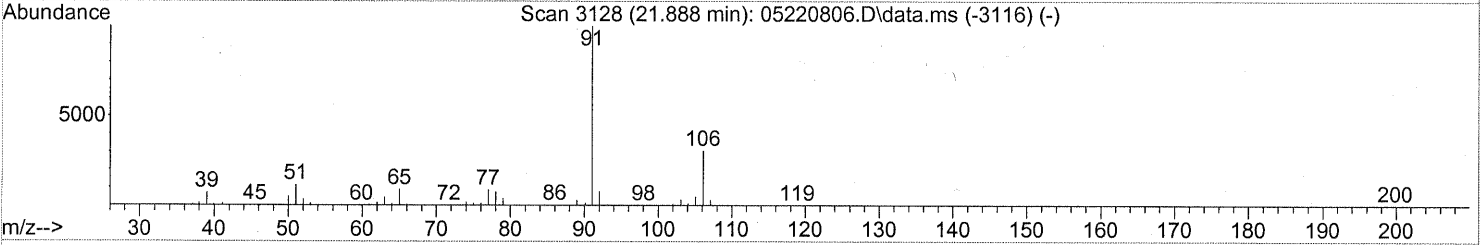
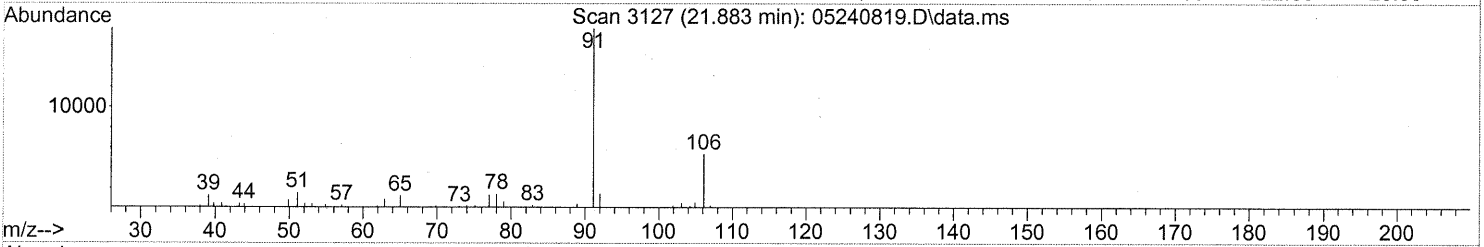
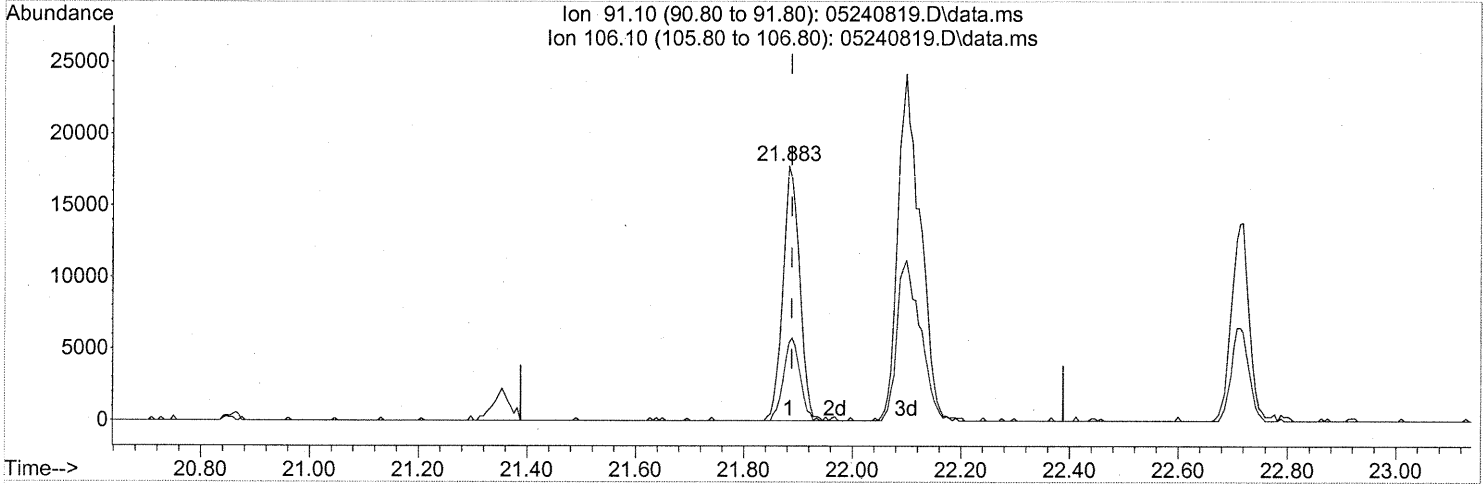
Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.95
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

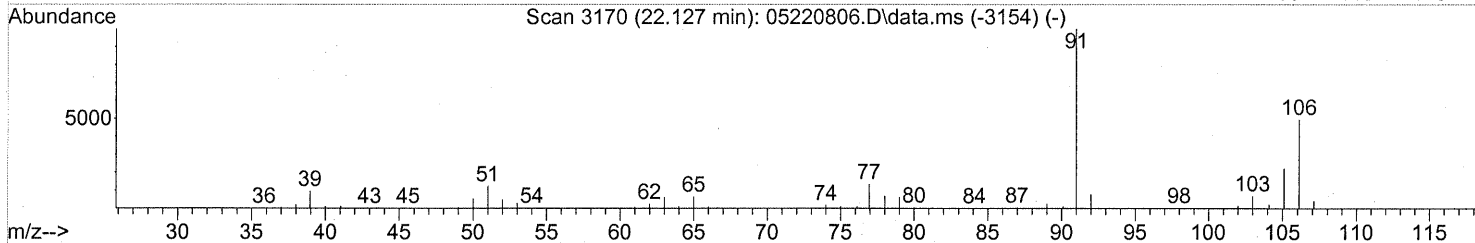
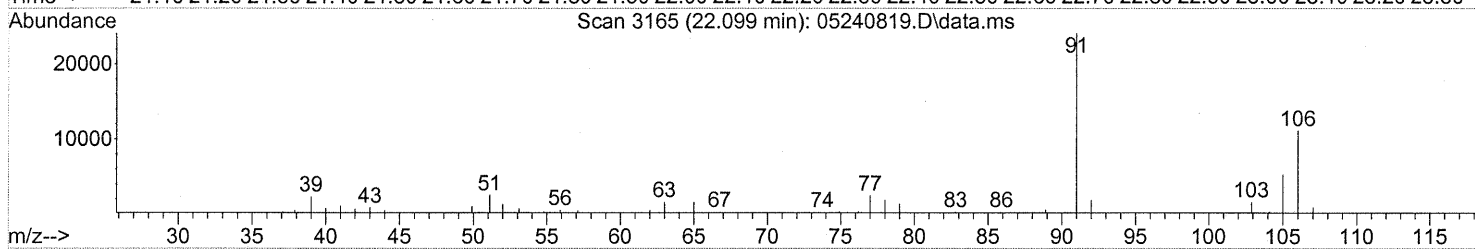
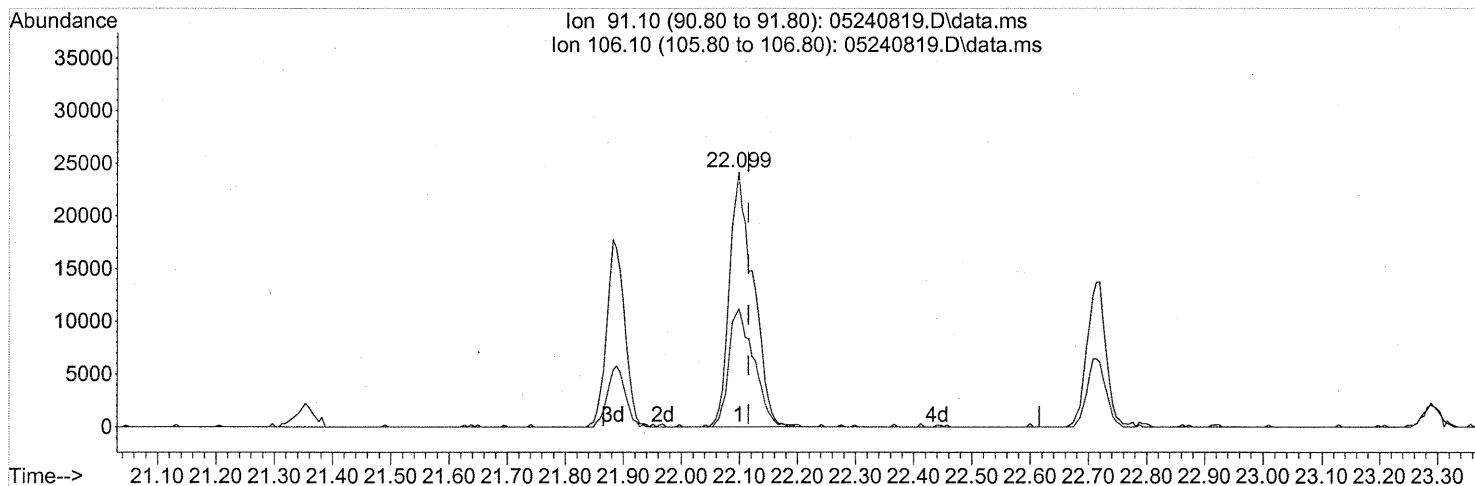
(66) Ethylbenzene (T)  
 21.883min (-0.006) 0.25ng  
 response 38206

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	31.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

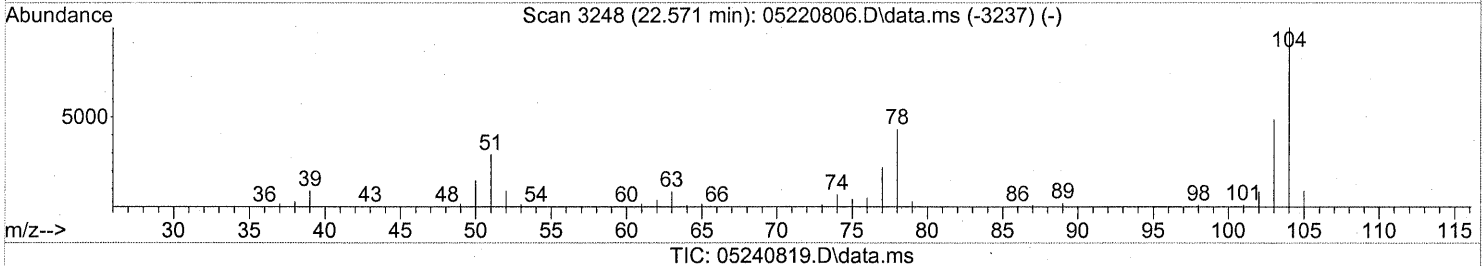
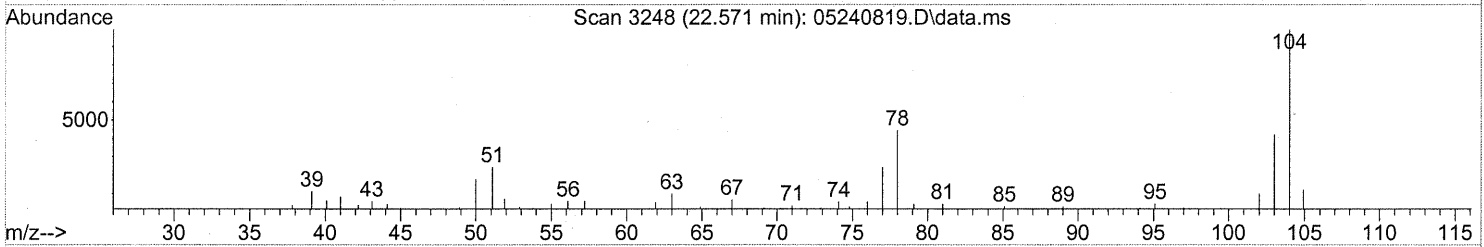
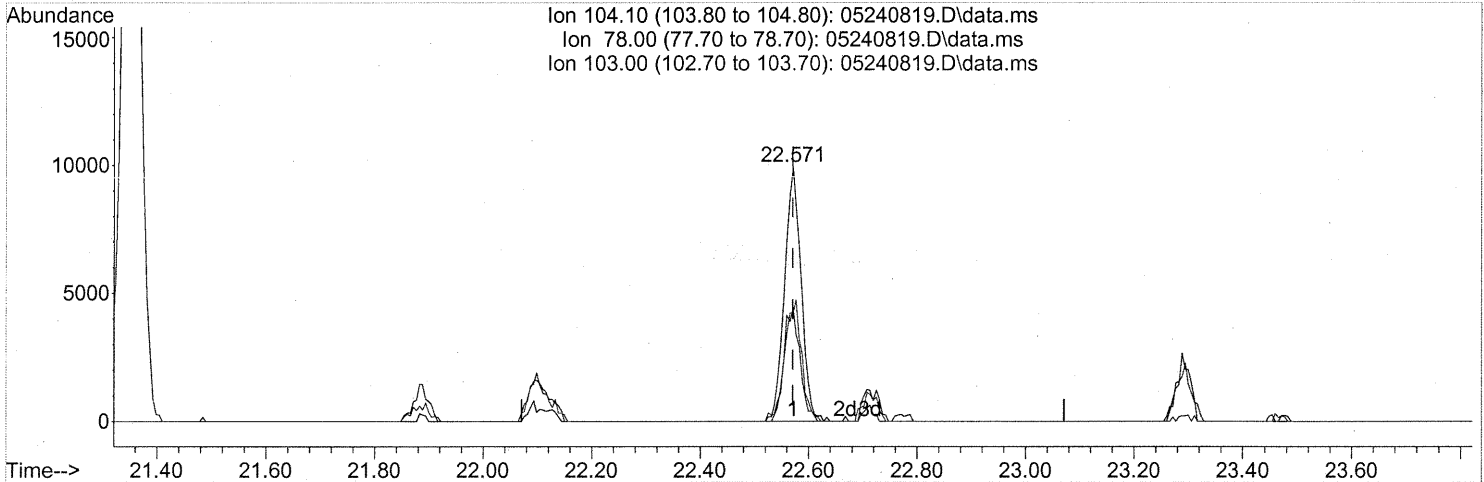
(67) m- & p-Xylene (T)  
 22.099min (-0.017) 0.67ng  
 response 69248

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	48.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



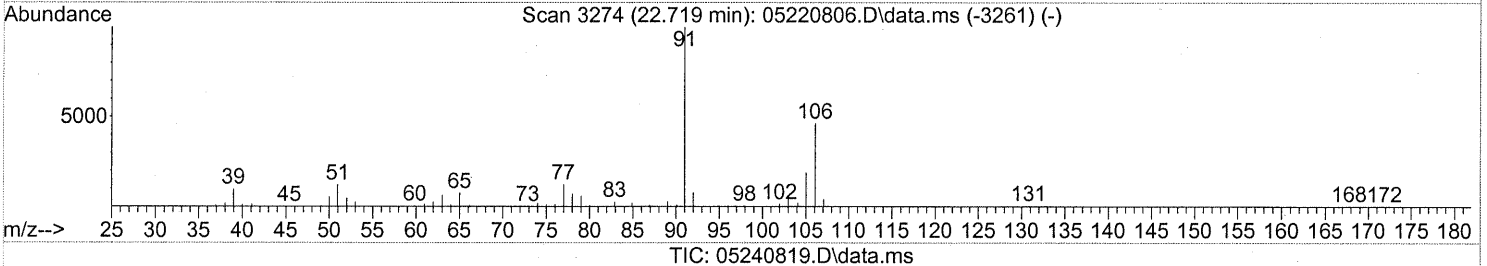
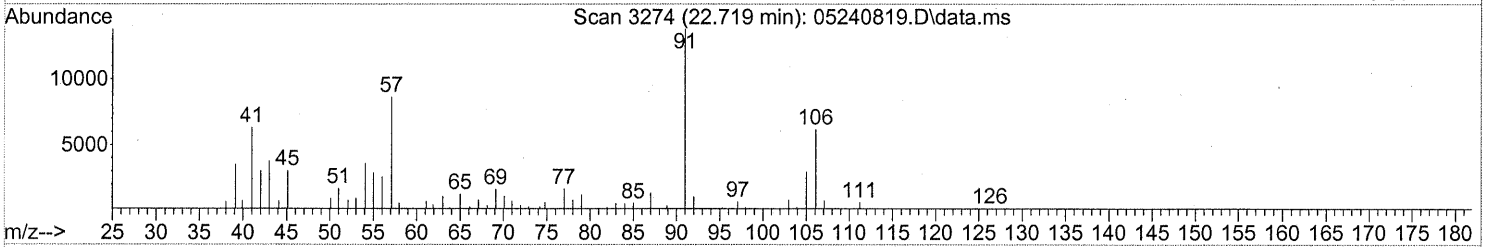
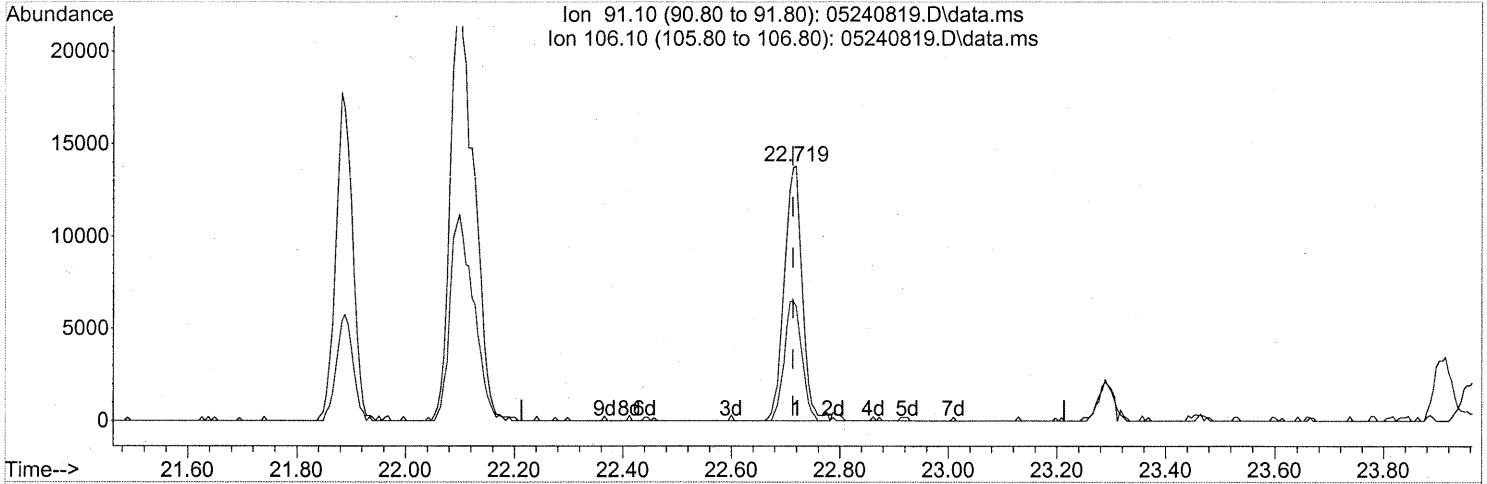
(69) Styrene (T)  
 22.571min (+0.000) 0.23ng  
 response 21013

Ion	Exp%	Act%
104.10	100	100
78.00	39.40	43.33
103.00	47.10	48.77
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)

22.719min (+0.006) 0.28ng

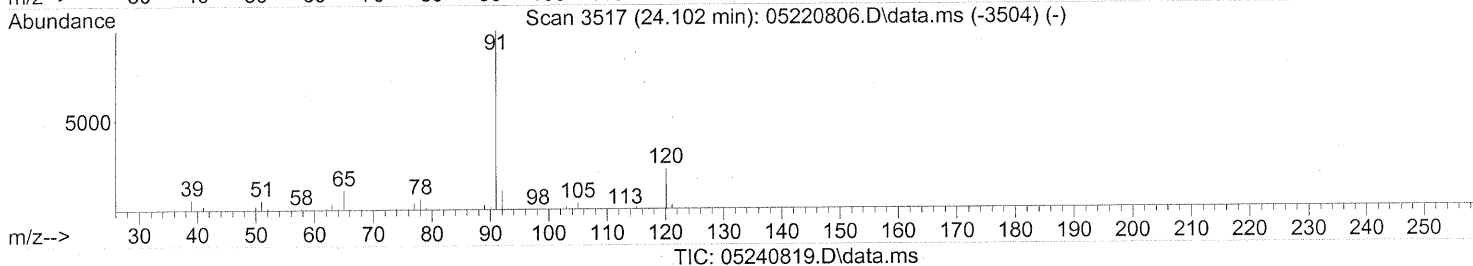
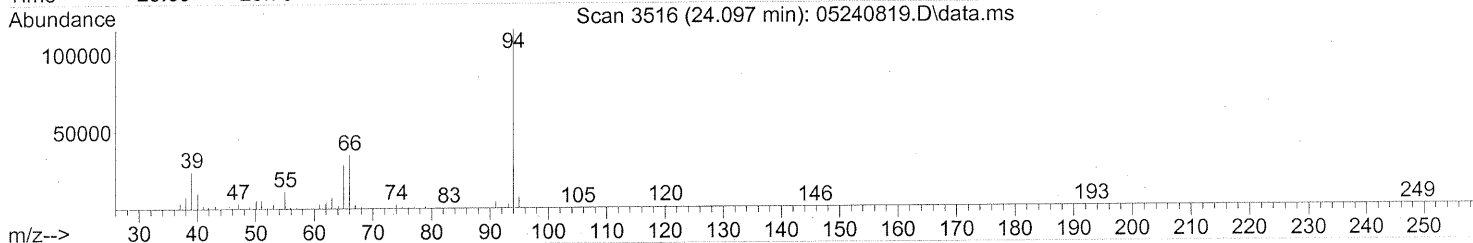
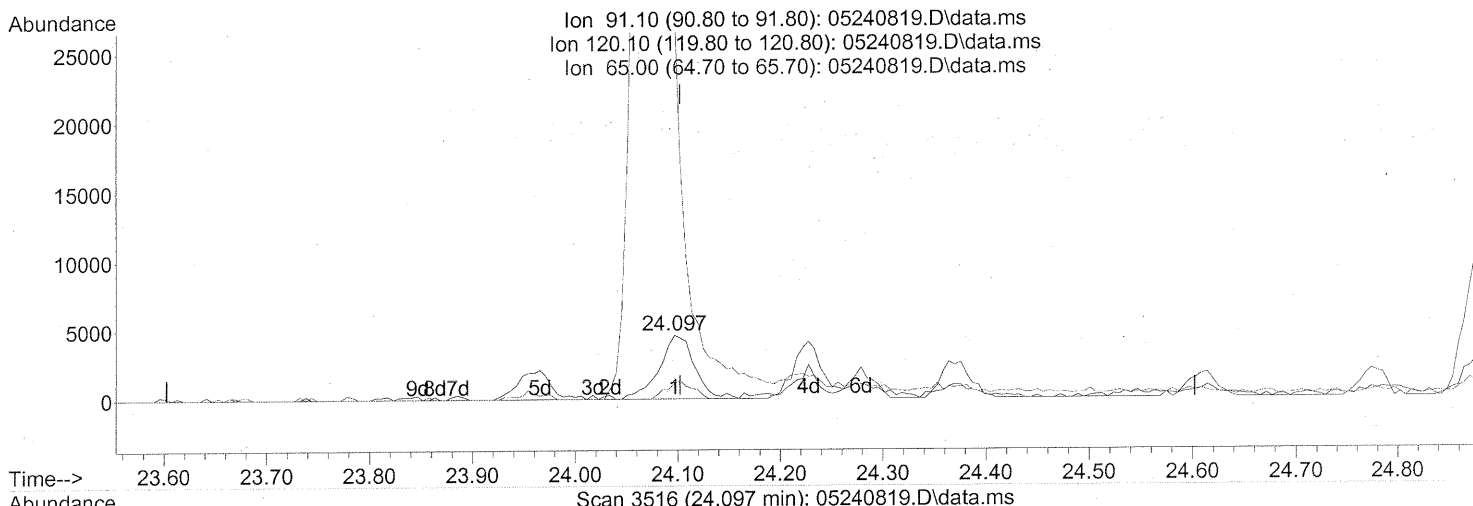
response 31341

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	46.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801422-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 09:05:09 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



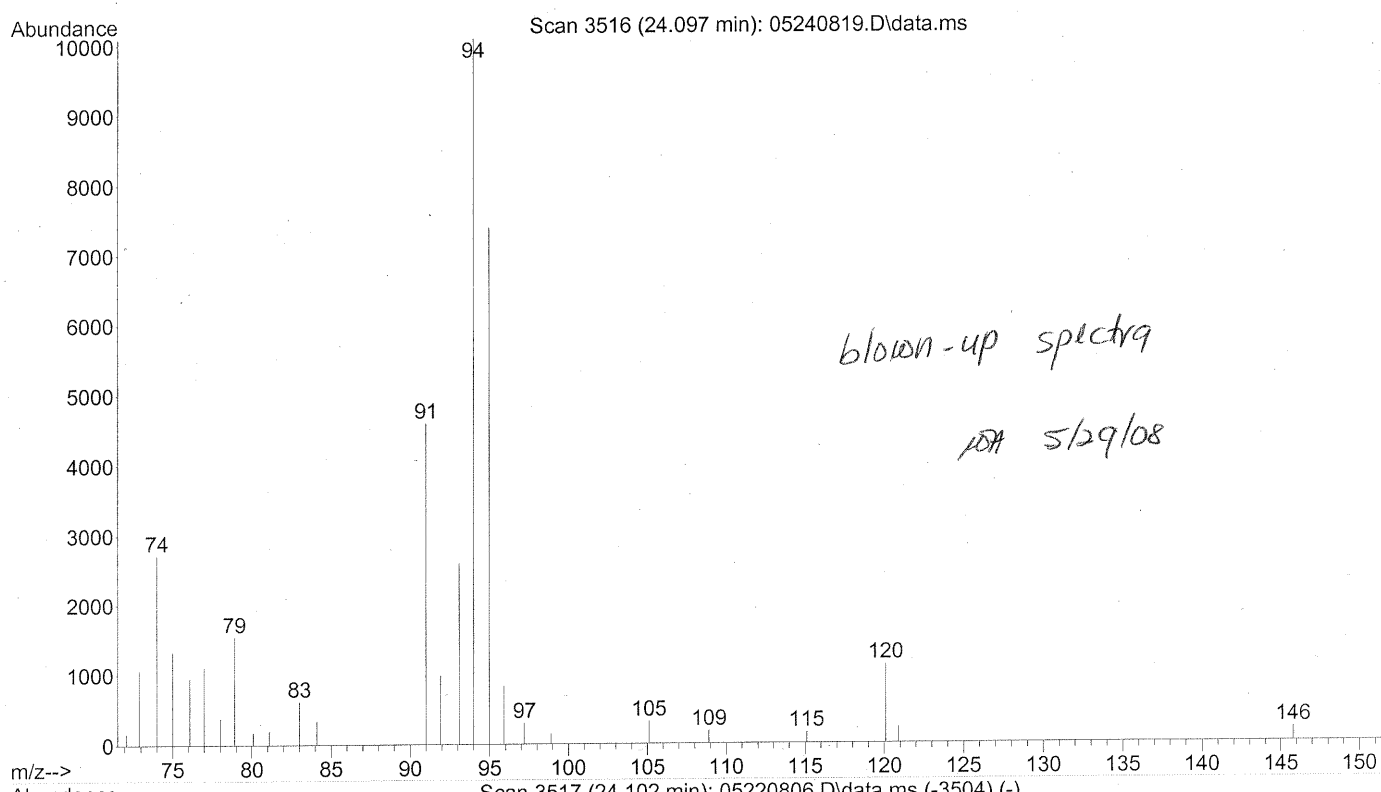
(76) n-Propylbenzene (T)

24.097min (-0.006) 0.06ng  
 response 10939

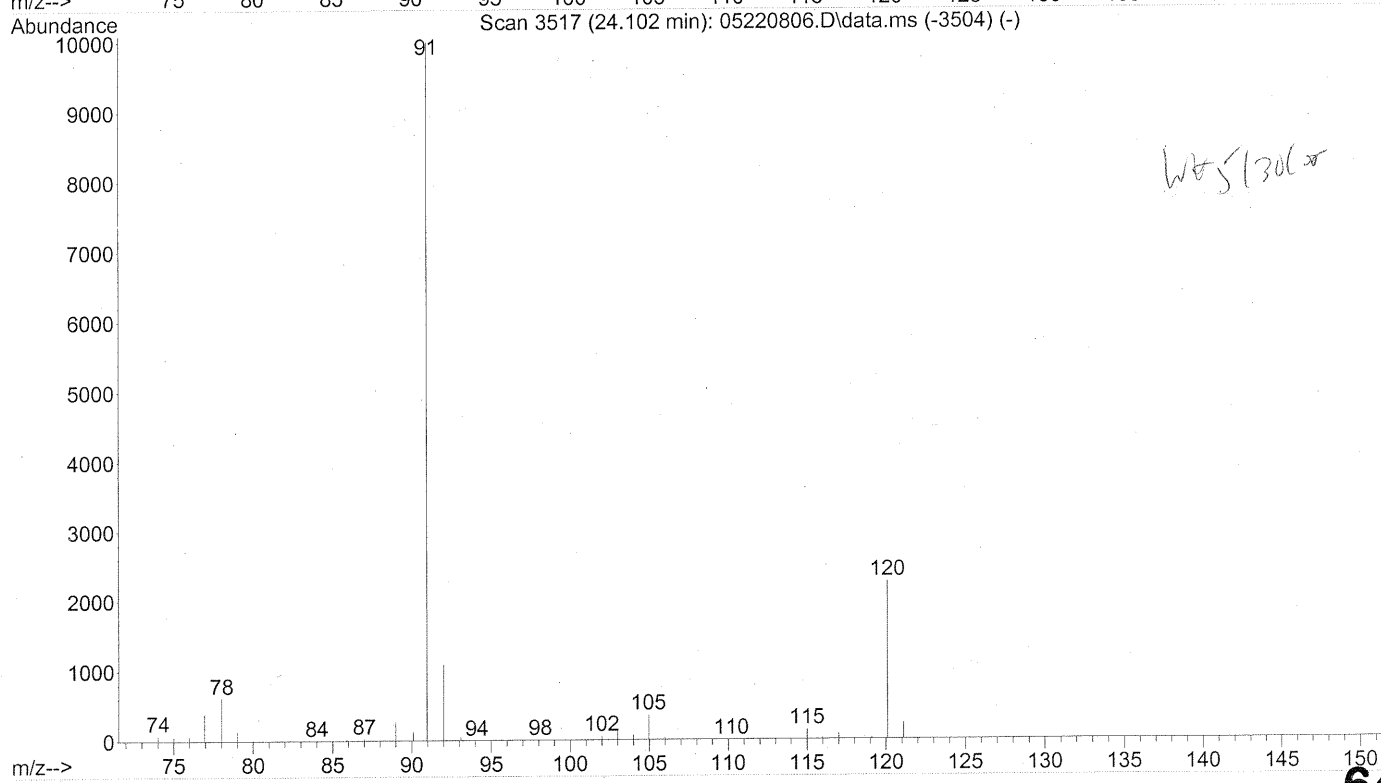
*see blown-up spectra*

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	20.29
65.00	11.40	0.00
0.00	0.00	0.00

File : J:\MS13\DATA\2008\_05\24\05240819.D  
Operator : WA  
Acquired : 24 May 2008 19:31 using AcqMethod TO15.M  
Instrument : GCMS13A  
Sample Name: P0801422-012 (200ml)  
Misc Info : ENSR SG84B-05 (-2.8, 3.5)  
Vial Number: 16



*blow-up spectra  
WA 5/29/08*

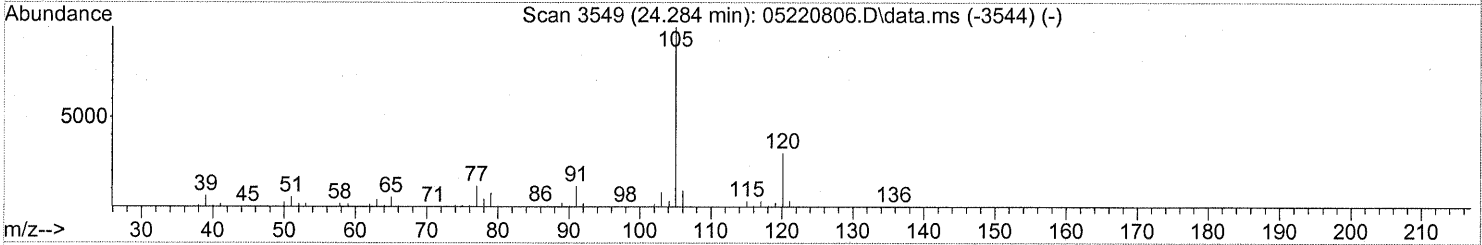
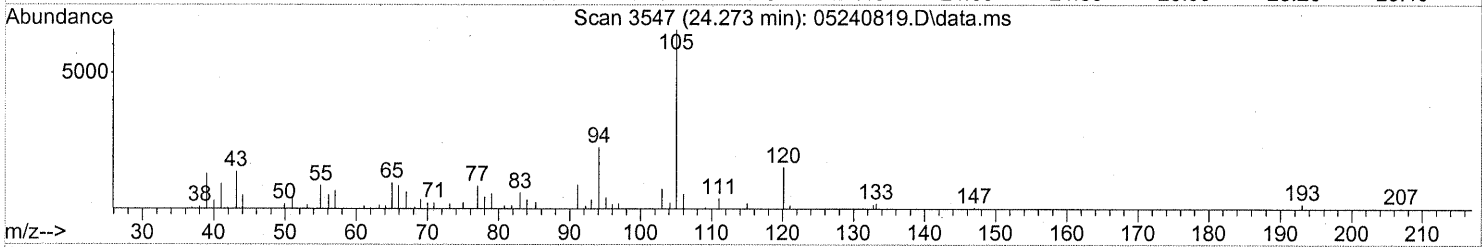
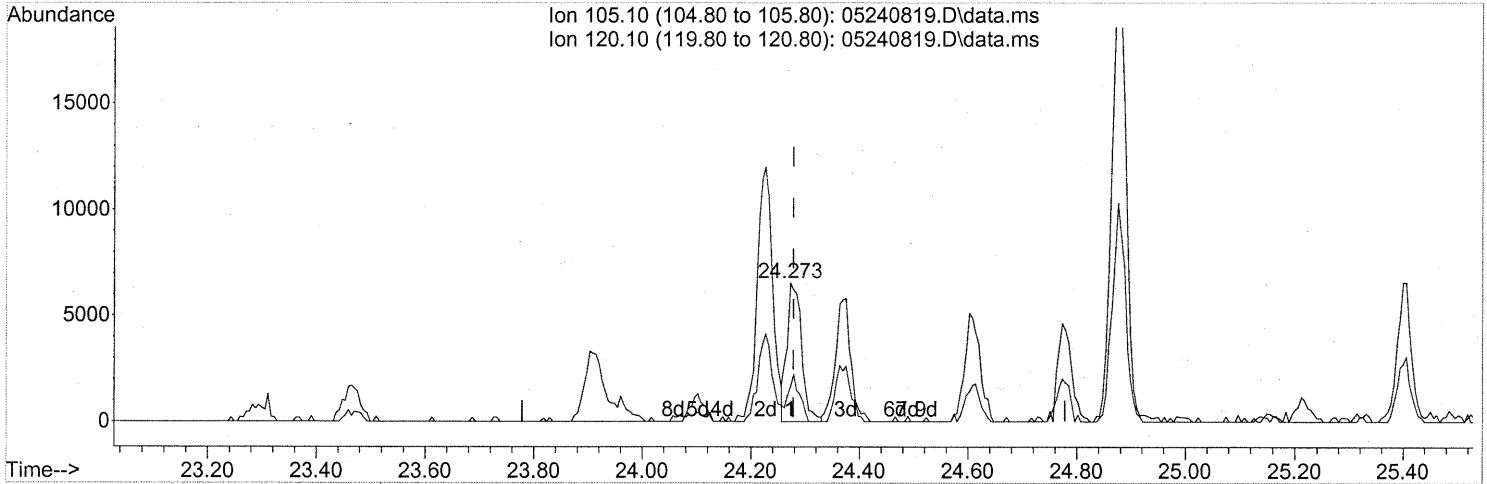


*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

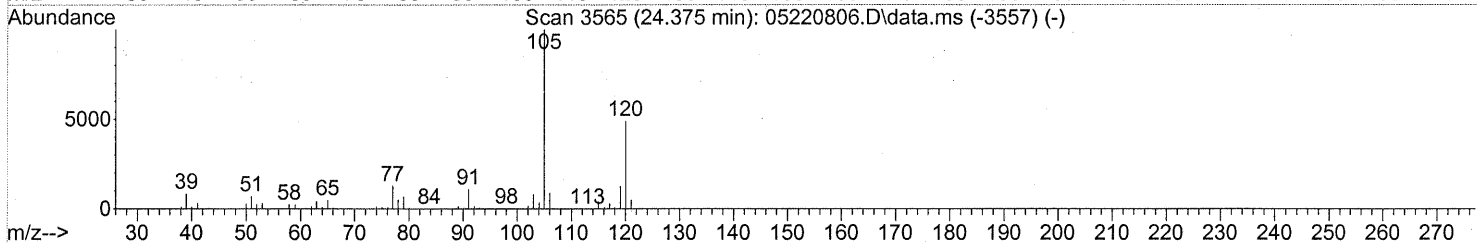
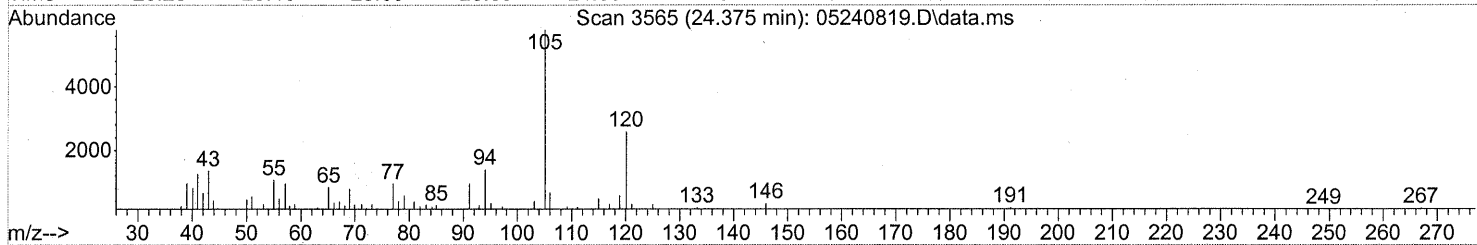
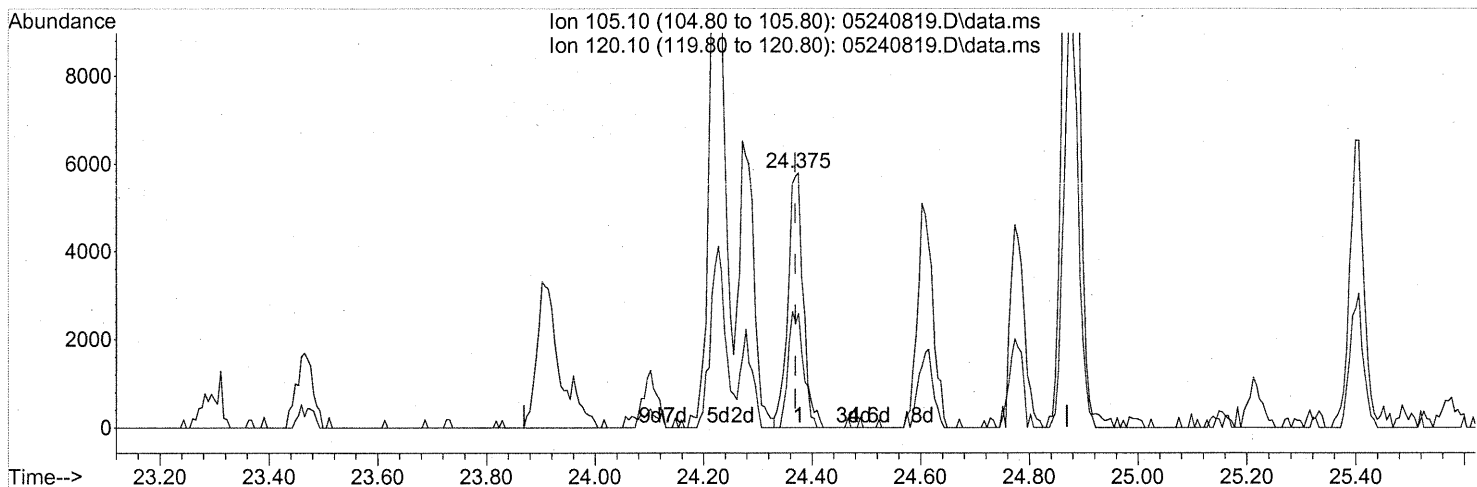
(78) 4-Ethyltoluene (T)  
 24.273min (-0.006) 0.08ng  
 response 12227

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	25.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

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

24.375min (+0.006) 0.09ng

response 11355

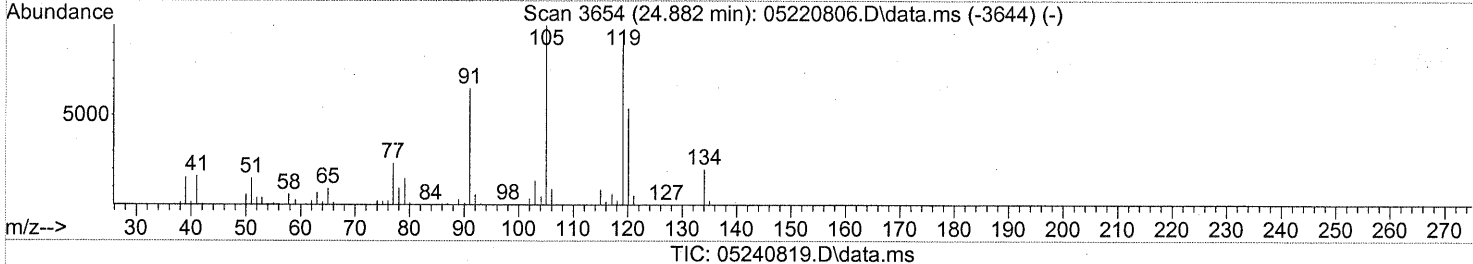
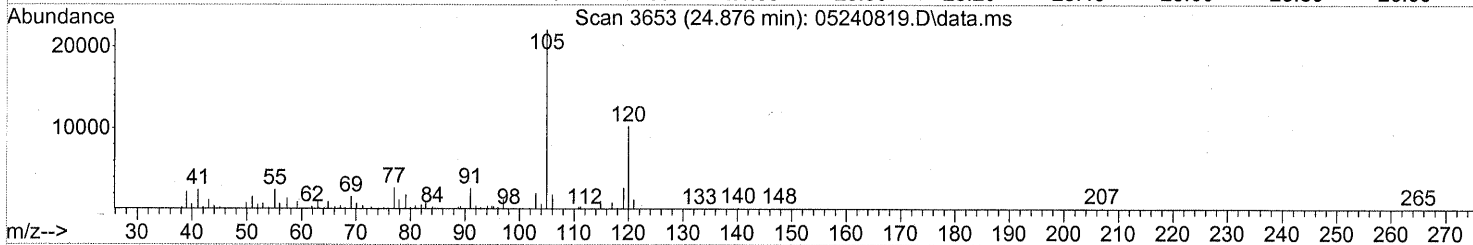
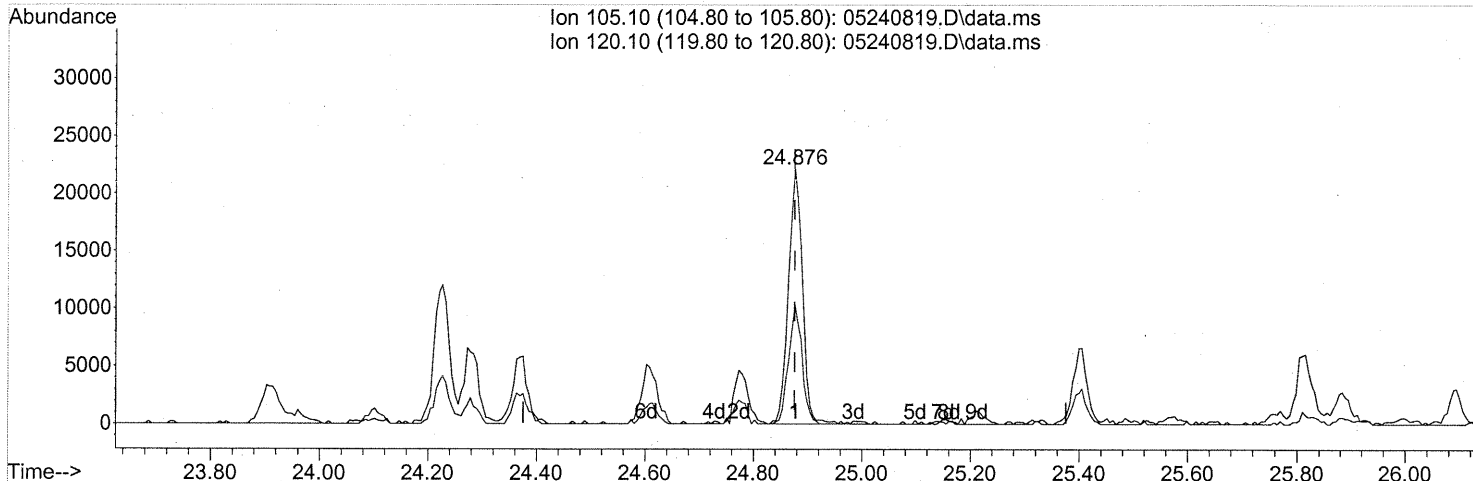
Ion	Exp%	Act%
105.10	100	100
120.10	49.40	45.06
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.876min (+0.000) 0.29ng

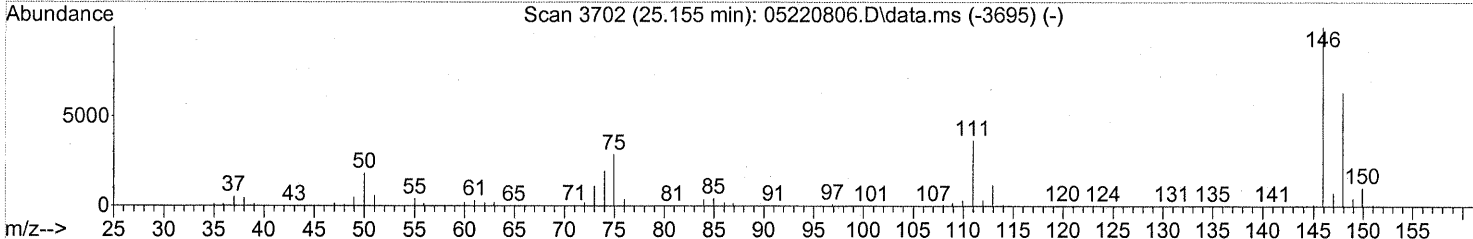
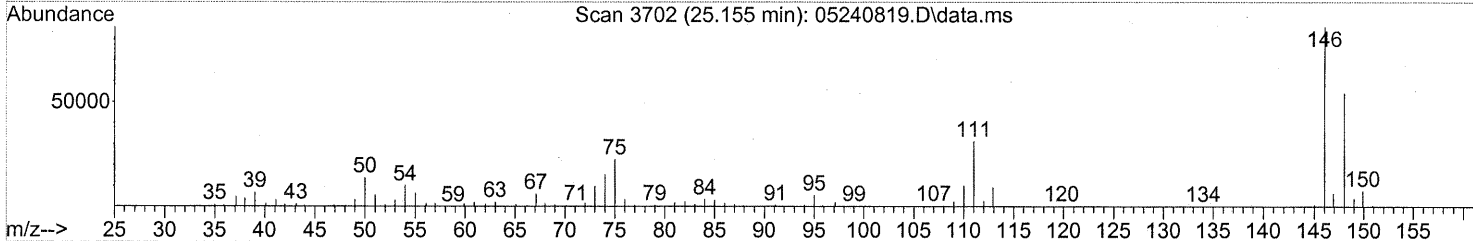
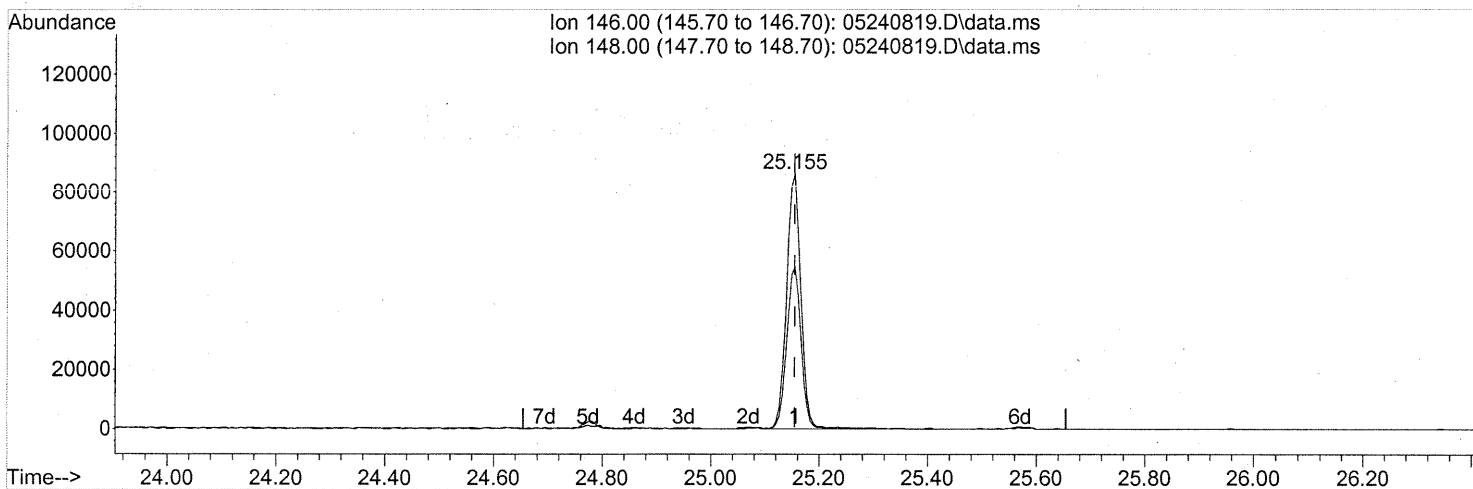
response 39622

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	44.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (+0.000) 1.91ng

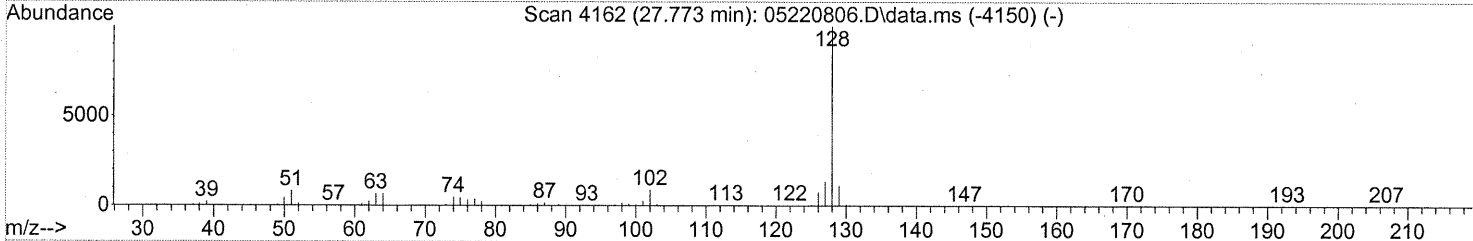
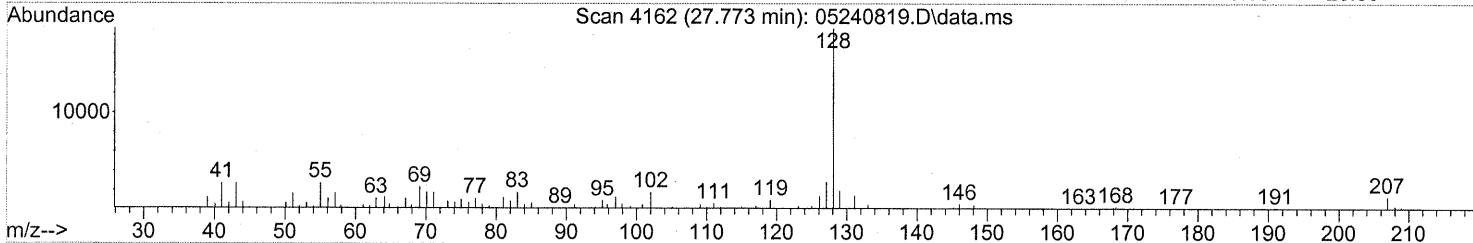
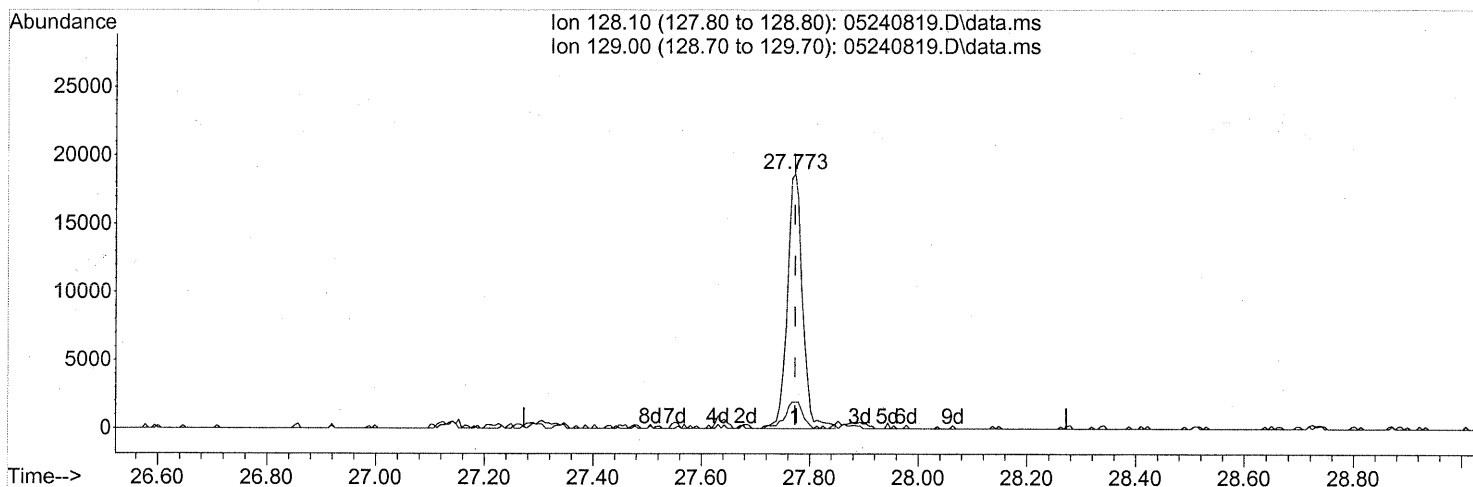
response 157225

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 18:24:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240819.D\data.ms

(95) Naphthalene (T)

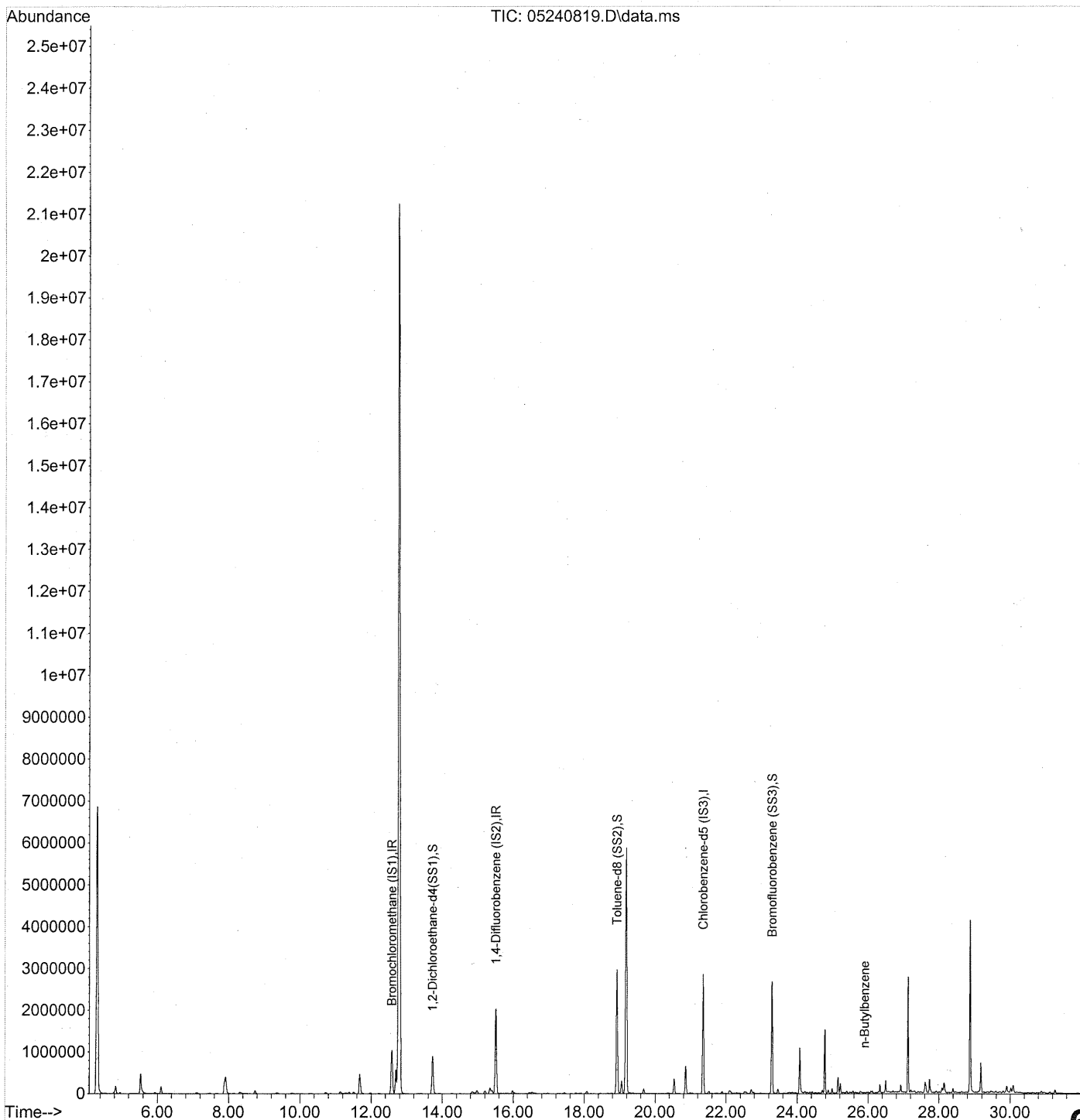
27.773min (+0.000) 0.20ng

response 36369

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	12.21
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240819.D  
Acq On : 24 May 2008 19:31  
Operator : WA  
Sample : P0801442-012 (200ml)  
Misc : ENSR SG84B-05 (-2.8, 3.5)  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:37:12 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240819.D  
 Acq On : 24 May 2008 19:31  
 Operator : WA  
 Sample : P0801442-012 (200ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:37:12 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	579106	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2412558	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1107058	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	908212	22.634	ng	-0.02
Spiked Amount	25.000					
					Recovery =	90.52%
5) Toluene-d8 (SS2)	18.93	98	2490267	25.047	ng	-0.01
Spiked Amount	25.000					
					Recovery =	100.20%
6) Bromofluorobenzene (SS3)	23.29	174	1015644	25.120	ng	0.00
Spiked Amount	25.000					
					Recovery =	100.48%
Target Compounds						
7) tert-Butylbenzene	25.33	119	2059		N.D.	Qvalue
8) n-Butylbenzene	25.90	91	6177	0.043	ng	<##L 51

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

10/1 5/29/08

655



Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220818.D  
 Acq On : 22 May 2008 19:48  
 Operator : WA  
 Sample : P0801442-012 Dil (40ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 23 06:36:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	250673	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.34	114	1092477	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	424798	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	395182	22.356	ng	-0.05	89.44%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.23	98	1095515	26.192	ng	-0.02	104.76%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.29	174	297970	27.373	ng	0.00	109.48%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	3063	0.122	ng	# 4
3) Dichlorodifluoromethane	4.54	85	1723	0.058	ng	# 81
4) Chloromethane	4.74	50	368	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	5.76	45	112	N.D.		
11) Acetonitrile	5.94	41	3375	0.075	ng	# 52
12) Acrolein	6.06	56	929	0.076	ng	# 72
13) Acetone	6.19	58	24263	1.465	ng	# 70
14) Trichlorofluoromethane	6.33	101	667	N.D.		
15) Isopropanol	6.38	45	9354	0.174	ng	94
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	6.96	59	913	N.D.		
19) Methylene Chloride	7.02	84	1229	0.094	ng	# 1
20) Allyl Chloride	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.39	76	4509	0.091	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	12504	1.465	ng	# 1
28) cis-1,2-Dichloroethene	9.18	61	9864	0.417	ng	# 17
29) Diisopropyl Ether	9.32	87	232080	21.370	ng	# 1
30) Ethyl Acetate	9.18	61	9864	1.563	ng	84
31) n-Hexane	9.23	57	1344	N.D.		

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BA 5/26/08

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220818.D  
 Acq On : 22 May 2008 19:48  
 Operator : WA  
 Sample : P0801442-012 Dil (40ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 23 06:36:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	2154771	115.277	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	10299	0.498	ng	# 45
41) Benzene	11.01	78	7432	0.139	ng	88
42) Carbon Tetrachloride	11.17	117	1275	0.080	ng	100
43) Cyclohexane	11.33	84	4673	0.220	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	1099	0.069	ng	84
47) Trichloroethene	12.18	130	1298	0.088	ng	91
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.24	57	808	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	90	N.D.		
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	14.24	97	95572	7.353	ng	# 7
58) Toluene	14.35	91	22405	0.437	ng	96
59) 2-Hexanone	14.58	43	1247	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	115	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.69	166	10283	0.812	ng	95
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	2608	N.D.		
67) m- & p-Xylene	17.15	91	4571	0.119	ng	88
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.60	104	1377	N.D.		
70) o-Xylene	17.73	91	2521	0.062	ng	97
71) n-Nonane	17.96	43	2160	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.45	105	111	N.D.		
75) alpha-Pinene	18.93	93	245	N.D.		
76) n-Propylbenzene	19.06	91	760	N.D.		
77) 3-Ethyltoluene	19.18	105	2188	N.D.		
78) 4-Ethyltoluene	19.24	105	1170	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	1077	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220818.D  
 Acq On : 22 May 2008 19:48  
 Operator : WA  
 Sample : P0801442-012 Dil (40ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 23 06:36:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

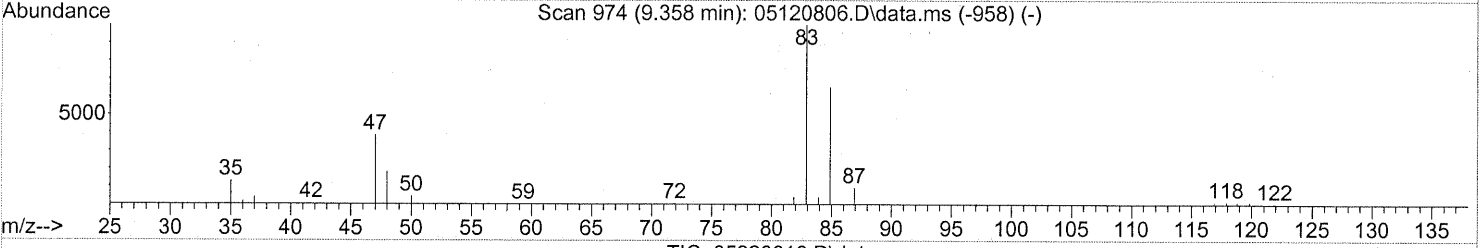
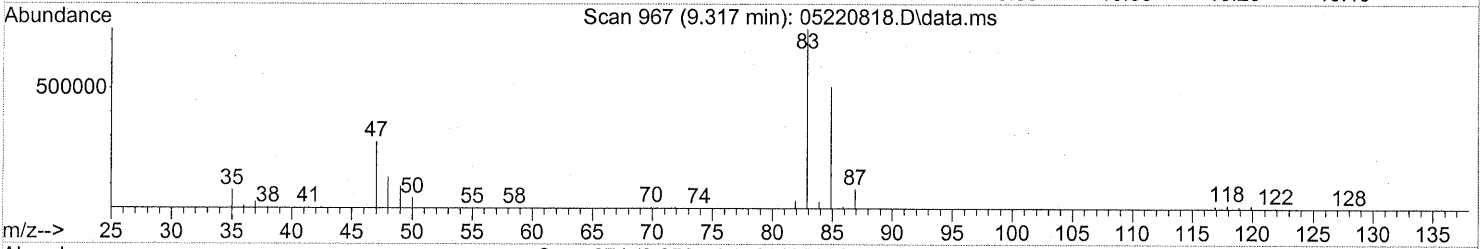
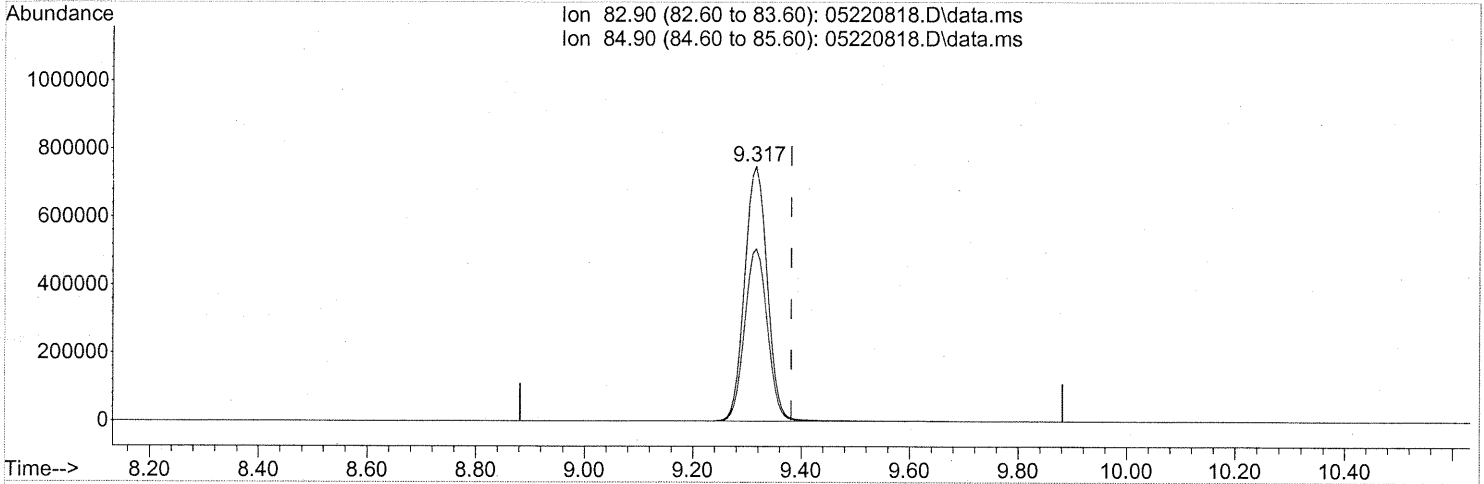
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	122	N.D.		
81) 2-Ethyltoluene	19.56	105	1376	N.D.		
82) 1,2,4-Trimethylbenzene	19.83	105	3779	0.074	ng	82
83) n-Decane	19.92	57	5436	0.134	ng #	67
84) Benzyl Chloride	20.16	91	100	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	13471	0.453	ng	96
86) 1,4-Dichlorobenzene	20.10	146	13471	0.475	ng	95
87) sec-Butylbenzene	20.16	105	423	N.D.		
88) p-Isopropyltoluene	20.34	119	1047	N.D.		
89) 1,2,3-Trimethylbenzene	20.35	105	994	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	20.51	68	745	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	21.44	57	11563	0.271	ng	87
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	3533	N.D.		
96) n-Dodecane	22.66	57	11406	0.274	ng	81
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\22\  
 Data File : 05220818.D  
 Acq On : 22 May 2008 19:48  
 Operator : WA  
 Sample : P0801442-012 Dil (40ml)  
 Misc : ENSR SG84B-05 (-2.8, 3.5)  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: May 23 06:36:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



(32) Chloroform (T)

9.317min (-0.065) 115.28ng

response 2154771

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.88
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:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00280

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 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)	2.2	0.78	0.078	0.44	0.16	0.016	
74-87-3	Chloromethane	0.42	0.16	0.078	0.20	0.076	0.038	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.098	0.78	0.078	0.014	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.078	ND	0.061	0.031	
74-83-9	Bromomethane	0.59	0.16	0.078	0.15	0.040	0.020	
75-00-3	Chloroethane	0.30	0.16	0.078	0.11	0.059	0.030	
64-17-5	Ethanol	2.8	7.8	0.078	1.5	4.1	0.041	J
67-64-1	Acetone	12	7.8	0.11	4.9	3.3	0.048	B
75-69-4	Trichlorofluoromethane	1.8	0.16	0.078	0.33	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.78	0.11	ND	0.36	0.050	
75-35-4	1,1-Dichloroethene	0.38	0.16	0.078	0.096	0.039	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.60	0.78	0.12	0.20	0.26	0.038	J
75-09-2	Methylene Chloride	0.10	0.78	0.078	0.030	0.22	0.022	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.078	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.55	0.16	0.087	0.072	0.020	0.011	
75-15-0	Carbon Disulfide	47	0.78	0.19	15	0.25	0.060	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-34-3	1,1-Dichloroethane	0.081	0.16	0.078	0.020	0.039	0.019	J
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.078	ND	0.043	0.022	
108-05-4	Vinyl Acetate	3.1	7.8	0.25	0.88	2.2	0.071	J
78-93-3	2-Butanone (MEK)	4.2	0.78	0.078	1.4	0.26	0.026	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
108-20-3	Diisopropyl Ether	ND	0.78	0.092	ND	0.19	0.022	
67-66-3	Chloroform	71	0.16	0.092	15	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:     Rg    

Date:     6/2/08    

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00280

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 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	0.78	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>7.2</b>	0.16	0.078	<b>1.3</b>	0.029	0.014	
71-43-2	<b>Benzene</b>	<b>4.6</b>	0.16	0.078	<b>1.4</b>	0.049	0.024	
56-23-5	<b>Carbon Tetrachloride</b>	<b>3.8</b>	0.16	0.078	<b>0.60</b>	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.78	0.078	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	ND	0.16	0.078	ND	0.034	0.017	
75-27-4	<b>Bromodichloromethane</b>	<b>0.96</b>	0.16	0.078	<b>0.14</b>	0.023	0.012	<b>M</b>
79-01-6	<b>Trichloroethene</b>	<b>0.63</b>	0.16	0.078	<b>0.12</b>	0.029	0.015	
123-91-1	<b>1,4-Dioxane</b>	<b>0.57</b>	0.78	0.095	<b>0.16</b>	0.22	0.026	<b>J</b>
80-62-6	Methyl Methacrylate	ND	0.78	0.12	ND	0.19	0.029	
142-82-5	<b>n-Heptane</b>	<b>1.4</b>	0.78	0.10	<b>0.34</b>	0.19	0.024	
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	0.081	ND	0.17	0.018	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>1.5</b>	0.78	0.087	<b>0.37</b>	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	0.098	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
108-88-3	<b>Toluene</b>	<b>1.4</b>	0.78	0.078	<b>0.38</b>	0.21	0.021	
591-78-6	<b>2-Hexanone</b>	<b>0.74</b>	0.78	0.12	<b>0.18</b>	0.19	0.029	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.018	0.012	
106-93-4	1,2-Dibromoethane	ND	0.16	0.084	ND	0.020	0.011	
111-65-9	<b>n-Octane</b>	<b>0.34</b>	0.78	0.078	<b>0.073</b>	0.17	0.017	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>49</b>	0.16	0.078	<b>7.3</b>	0.023	0.012	
108-90-7	<b>Chlorobenzene</b>	<b>0.14</b>	0.16	0.080	<b>0.031</b>	0.034	0.017	<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.

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

Verified By:     R    

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG85B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-013

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00280

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 1.00 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	0.80	0.78	0.097	0.18	0.18	0.022	
179601-23-1	m,p-Xylenes	4.5	0.78	0.20	1.0	0.18	0.047	
75-25-2	Bromoform	ND	0.78	0.12	ND	0.075	0.011	
100-42-5	Styrene	0.18	0.78	0.12	0.043	0.18	0.028	J
95-47-6	o-Xylene	1.2	0.78	0.098	0.27	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.25	0.78	0.087	0.050	0.16	0.018	J
103-65-1	n-Propylbenzene	0.37	0.78	0.081	0.075	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.49	0.78	0.089	0.10	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.82	0.78	0.094	0.17	0.16	0.019	
98-83-9	alpha-Methylstyrene	ND	0.78	0.11	ND	0.16	0.024	
95-63-6	1,2,4-Trimethylbenzene	2.6	0.78	0.11	0.53	0.16	0.022	
100-44-7	Benzyl Chloride	0.17	0.16	0.13	0.033	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.097	ND	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	2.7	0.16	0.087	0.44	0.026	0.015	
135-98-8	sec-Butylbenzene	0.11	0.78	0.090	0.021	0.14	0.016	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.46	0.78	0.10	0.084	0.14	0.018	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.021	0.016	
91-20-3	Naphthalene	2.5	0.31	0.12	0.47	0.060	0.022	
87-68-3	Hexachlorobutadiene	0.50	0.16	0.14	0.047	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.078	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.66	0.31	0.078	0.12	0.057	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.

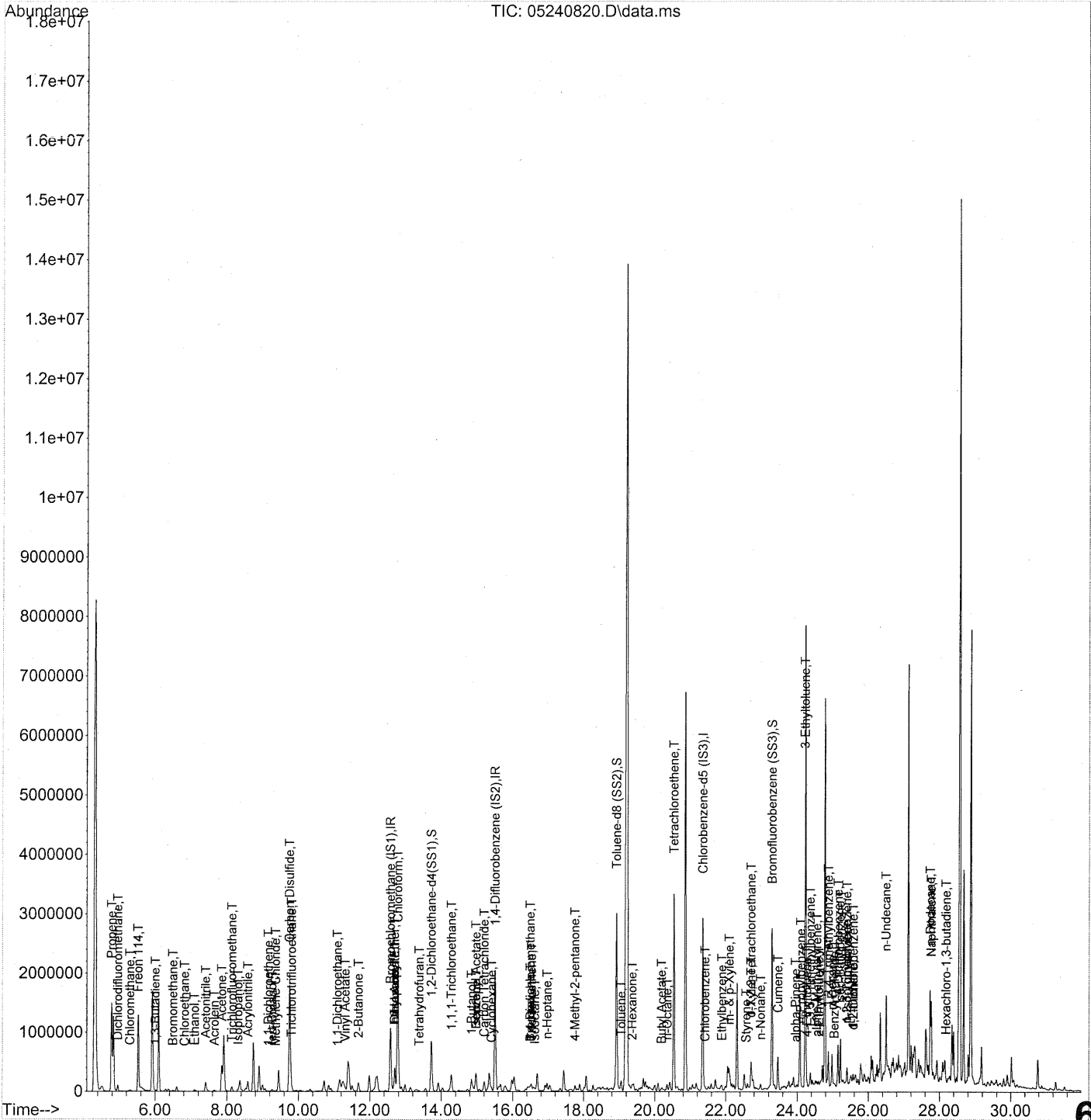
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By: RCS

Date: 6/2/08

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240820.D  
Acq On : 24 May 2008 20:14  
Operator : WA  
Sample : P0801442-013 (1000ml)  
Misc : ENSR SG85B-05 (-3.0, 3.5)  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	561245	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2384740	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1127495	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	13.72	65	887049	22.810	ng	0.00	91.24%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	18.93	98	2481133	24.503	ng	0.00	98.00%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	23.29	174	1049844	25.496	ng	0.00	102.00%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	811541	18.308	ng	91
3) Dichlorodifluoromethane	4.96	85	112799	1.381	ng	99
4) Chloromethane	5.30	50	14235	0.269	ng	99
5) Freon 114	5.52	135	2552	0.063	ng	97
6) Vinyl Chloride	5.74	62	1801	N.D.	✓	
7) 1,3-Butadiene	6.00	54	8481	0.215	ng	# 48
8) Bromomethane	6.49	94	11080	0.376	ng	96
9) Chloroethane	6.82	64	4885	0.194	ng	100
10) Ethanol	7.10	45	53107m	1.800	ng	
11) Acetonitrile	7.41	41	69601	0.816	ng	# 26
12) Acrolein	7.65	56	23596	1.119	ng	78
13) Acetone	7.86	58	227084m	7.516	ng	
14) Trichlorofluoromethane	8.14	101	82894	1.183	ng	99
15) Isopropanol	8.32	45	72105	0.748	ng	97
16) Acrylonitrile	8.59	53	18839	0.410	ng	NR# 23
17) 1,1-Dichloroethene	9.16	96	7527	0.244	ng	# 70
18) tert-Butanol	9.27	59	31560m	0.385	ng	
19) Methylene Chloride	9.36	84	2247	0.067	ng	95
20) Allyl Chloride	9.55	41	1878	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	11278	0.354	ng	96
22) Carbon Disulfide	9.76	76	3894857	30.397	ng	99
23) trans-1,2-Dichloroethene	10.82	61	125	N.D.	✓	
24) 1,1-Dichloroethane	11.09	63	3072	0.052	ng	94
25) Methyl tert-Butyl Ether	11.16	73	1152	N.D.	✓	
26) Vinyl Acetate	11.31	86	11071	1.983	ng	# 1
27) 2-Butanone	11.68	72	59821	2.713	ng	# 82
28) cis-1,2-Dichloroethene	12.22	61	481	N.D.	✓	
29) Diisopropyl Ether	12.70	87	2342	0.087	ng	NR# 1
30) Ethyl Acetate	12.69	61	6431	0.540	ng	# 29
31) n-Hexane	12.70	57	232099	3.864	ng	89

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	2341829	45.758 ng		100
34) Tetrahydrofuran	13.39	72	4499	0.213 ng	#	76
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.88	62	78	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	249808	4.600 ng		96
39) Isopropyl Acetate	14.98	61	2803	0.138 ng	#	1
40) 1-Butanol	14.85	56	186804	5.699 ng		91
41) Benzene	14.98	78	366227	2.933 ng		99
42) Carbon Tetrachloride	15.21	117	116242	2.417 ng		99
43) Cyclohexane	15.41	84	29833	0.614 ng	#	1
44) tert-Amyl Methyl Ether	15.84	73	476	N.D. ✓		
45) 1,2-Dichloropropane	16.21	63	576	N.D. ✓		
46) Bromodichloromethane	16.50	83	25862	0.613 ng	M #	18
47) Trichloroethene	16.54	130	15488	0.404 ng		99
48) 1,4-Dioxane	16.50	88	8660	0.368 ng		89
49) Isooctane	16.63	57	44324	0.310 ng	#	55
50) Methyl Methacrylate	16.79	100	161	N.D. ✓		
51) n-Heptane	16.98	71	29549	0.891 ng	#	78
52) cis-1,3-Dichloropropene	17.84	75	59	N.D. ✓		
53) 4-Methyl-2-pentanone	17.76	58	31987	0.965 ng		93
54) trans-1,3-Dichloropropene	18.42	75	55	N.D. ✓		
55) 1,1,2-Trichloroethane	18.68	97	685	N.D. ✓		
58) Toluene	19.06	91	127566	0.927 ng		97
59) 2-Hexanone	19.37	43	44997	0.474 ng	#	66
60) Dibromochloromethane	19.61	129	692	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.19	43	7360	0.076 ng	#	1
63) n-Octane	20.35	57	6651	0.218 ng		92
64) Tetrachloroethene	20.55	166	1284198	31.530 ng		99
65) Chlorobenzene	21.42	112	8357	0.091 ng		92
66) Ethylbenzene	21.89	91	80461	0.510 ng		94
67) m- & p-Xylene	22.10	91	303031	2.870 ng		90
68) Bromoform	22.21	173	876	N.D. ✓		
69) Styrene	22.57	104	11018	0.117 ng		83
70) o-Xylene	22.71	91	86090	0.755 ng		97
71) n-Nonane	22.98	43	80755	0.998 ng	#	38
72) 1,1,2,2-Tetrachloroethane	22.71	83	3037	0.064 ng	NR #	1
74) Cumene	23.46	105	24064	0.159 ng		100
75) alpha-Pinene	23.95	93	13813	0.176 ng	#	46
76) n-Propylbenzene	24.10	91	45333	0.235 ng	#	85
77) 3-Ethyltoluene	24.22	105	109675	0.679 ng		100
78) 4-Ethyltoluene	24.28	105	47377	0.315 ng		99
79) 1,3,5-Trimethylbenzene	24.37	105	71703	0.527 ng		97

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

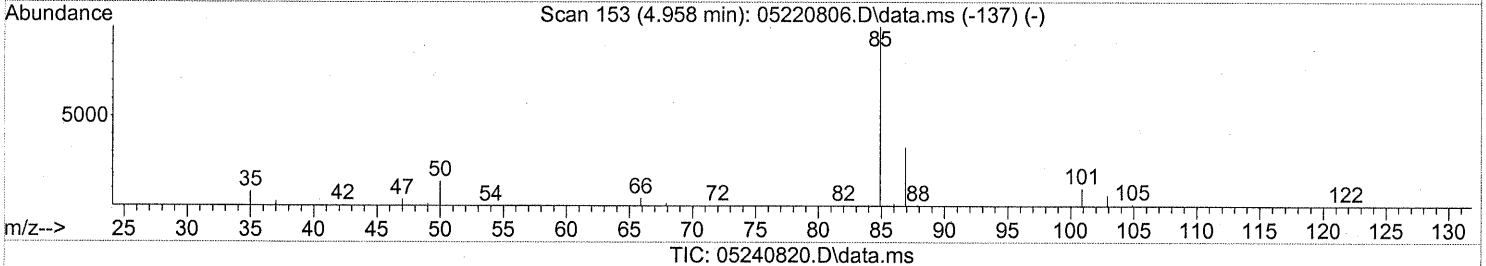
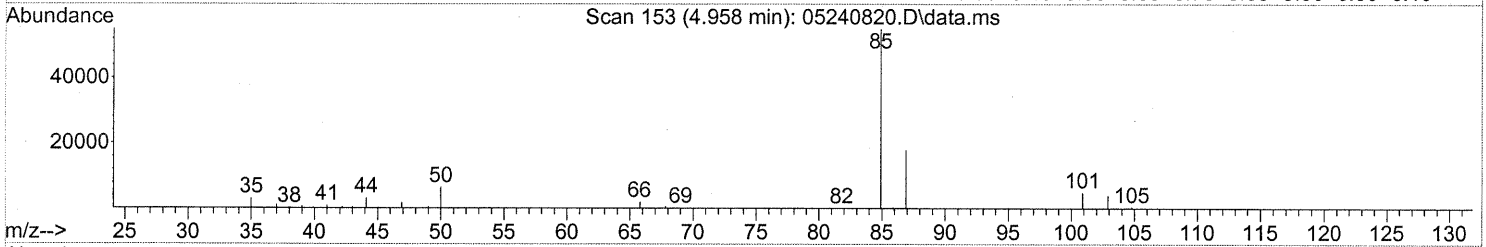
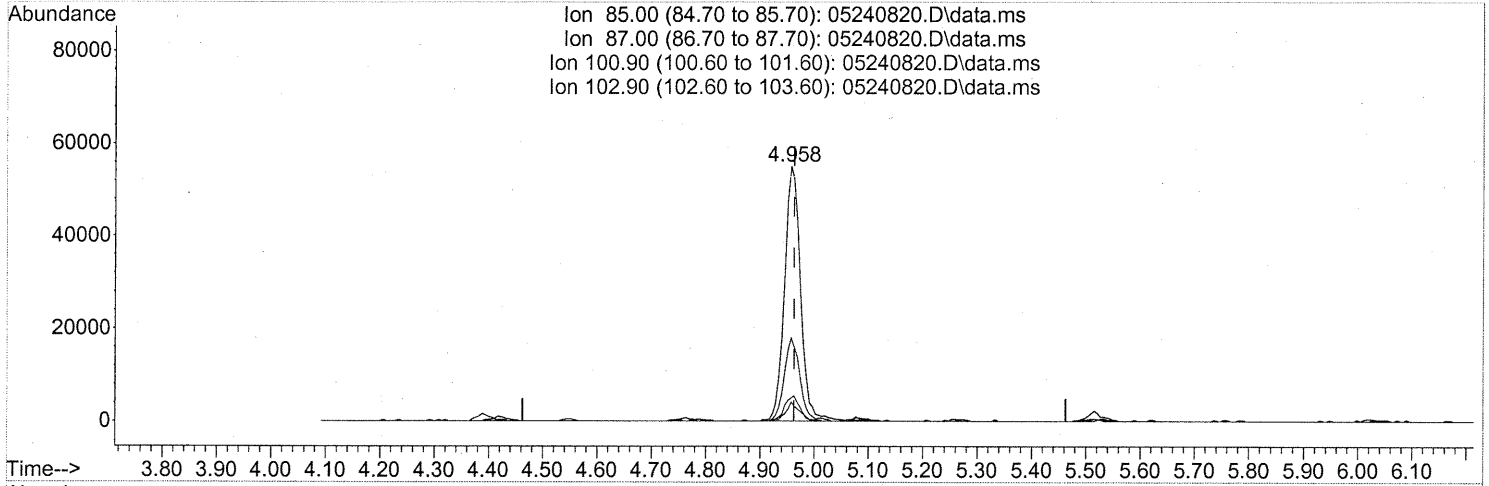
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	3785	<del>0.051</del>	ng	# 78
81) 2-Ethyltoluene	24.61	105	63149	0.386	ng	99
82) 1,2,4-Trimethylbenzene	<u>24.88</u>	105	229884	<u>1.660</u>	ng	85
83) n-Decane	24.98	57	289534	3.799	ng	81
84) Benzyl Chloride	<u>25.04</u>	91	10273	<u>0.111</u>	ng	78
85) 1,3-Dichlorobenzene	25.07	146	3826	N.D.		✓
86) 1,4-Dichlorobenzene	<u>25.16</u>	146	143693	<u>1.712</u>	ng	98
87) sec-Butylbenzene	<u>25.21</u>	105	12975	<u>0.073</u>	ng	80
88) p-Isopropyltoluene	<u>25.40</u>	119	43158	<u>0.296</u>	ng	76
89) 1,2,3-Trimethylbenzene	25.40	105	111088	0.820	ng	89
90) 1,2-Dichlorobenzene	25.58	146	5287	<del>0.064</del>	ng	99
91) d-Limonene	25.58	68	49164	0.891	ng	94
92) 1,2-Dibromo-3-Chloropr...	26.25	157	540	N.D.		✓
93) n-Undecane	26.50	57	578513	7.253	ng	76
94) 1,2,4-Trichlorobenzene	27.62	180	2856	N.D.		✓
95) Naphthalene	<u>27.77</u>	128	288104	<u>1.577</u>	ng	87
96) n-Dodecane	27.74	57	483808	6.099	ng	80
97) Hexachloro-1,3-butadiene	<u>28.19</u>	225	12796	<u>0.320</u>	ng	95

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.958min (-0.006) 1.38ng

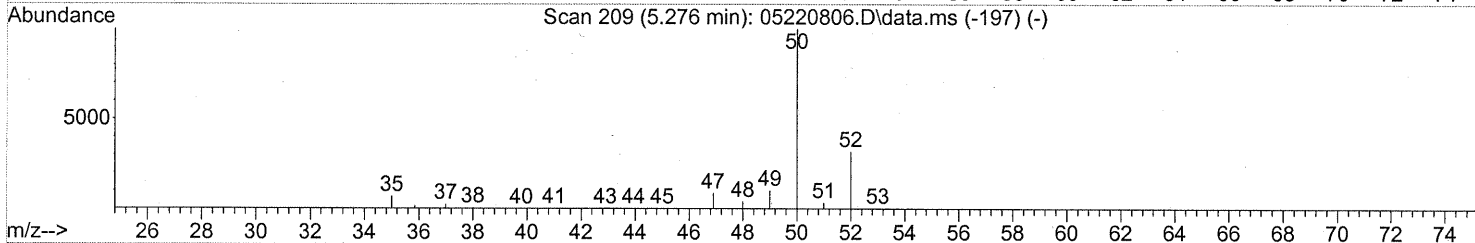
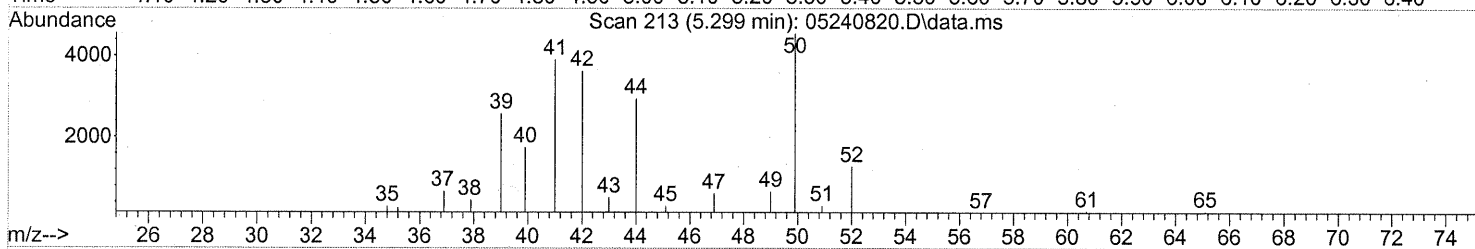
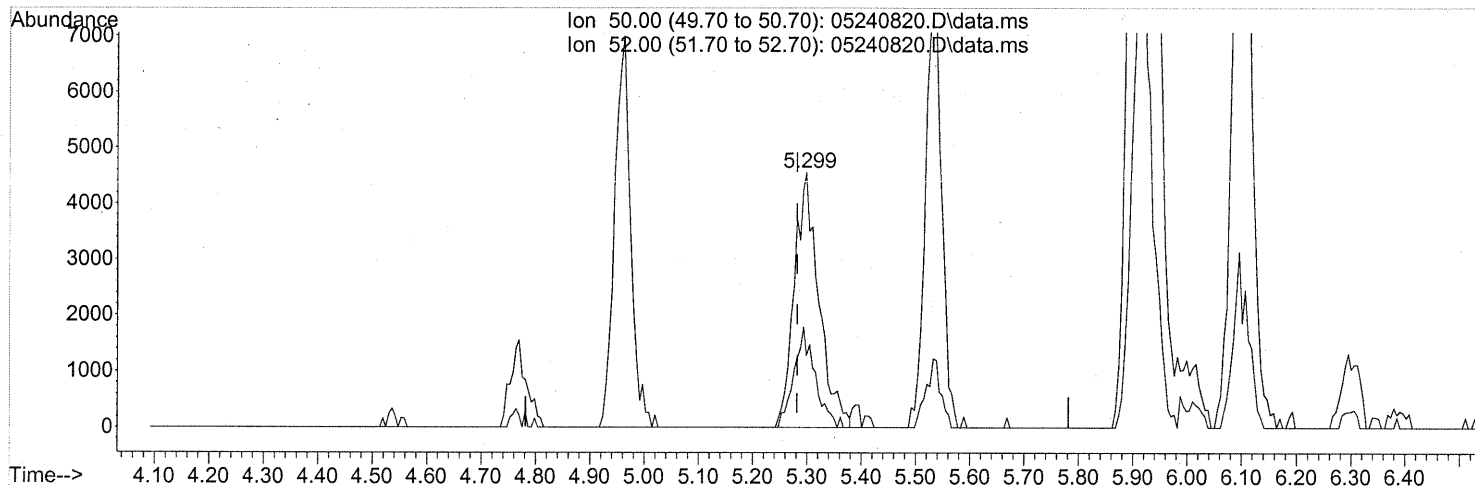
response 112799

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.83
100.90	9.30	9.37
102.90	6.00	6.04

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(4) Chloromethane (T)

5.299min (+0.017) 0.27ng

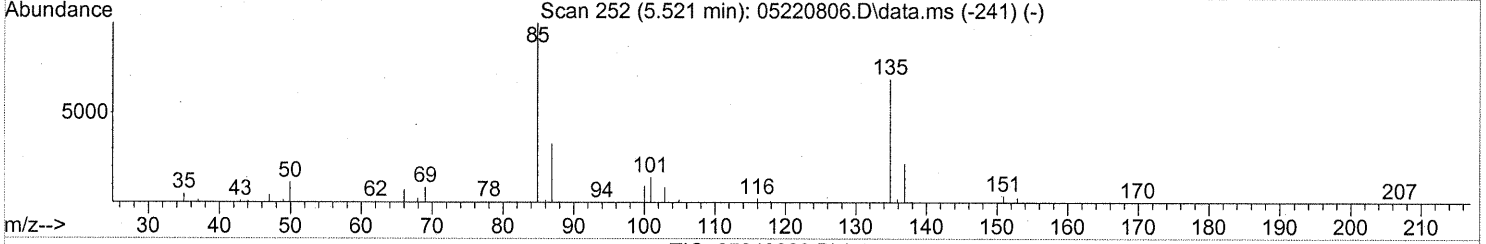
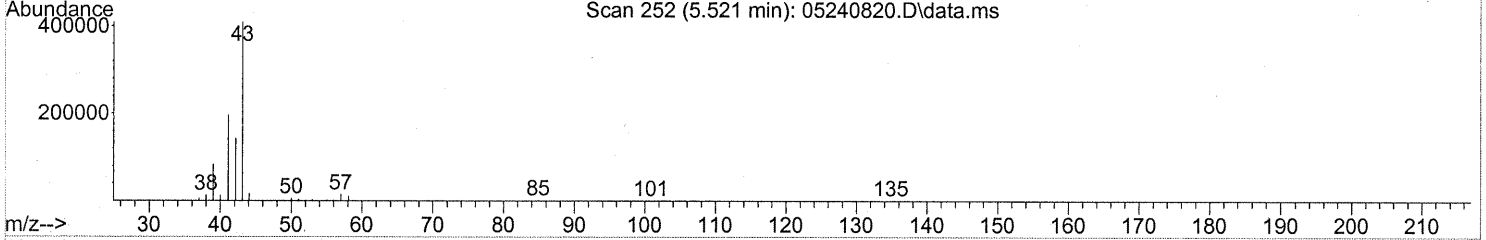
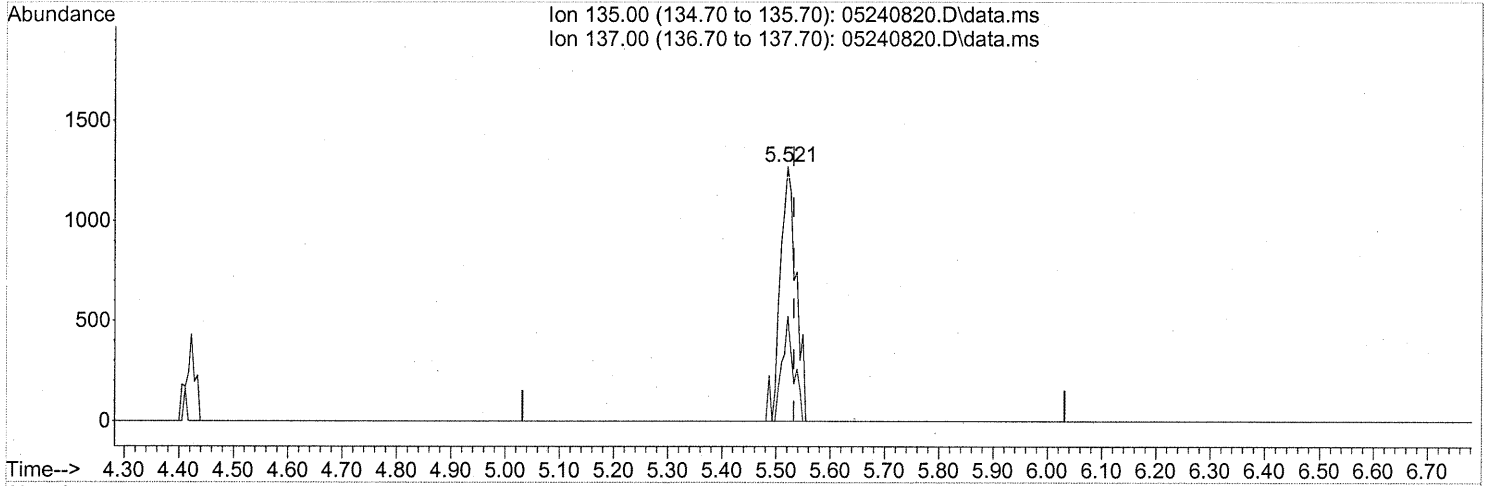
response 14235

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	33.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

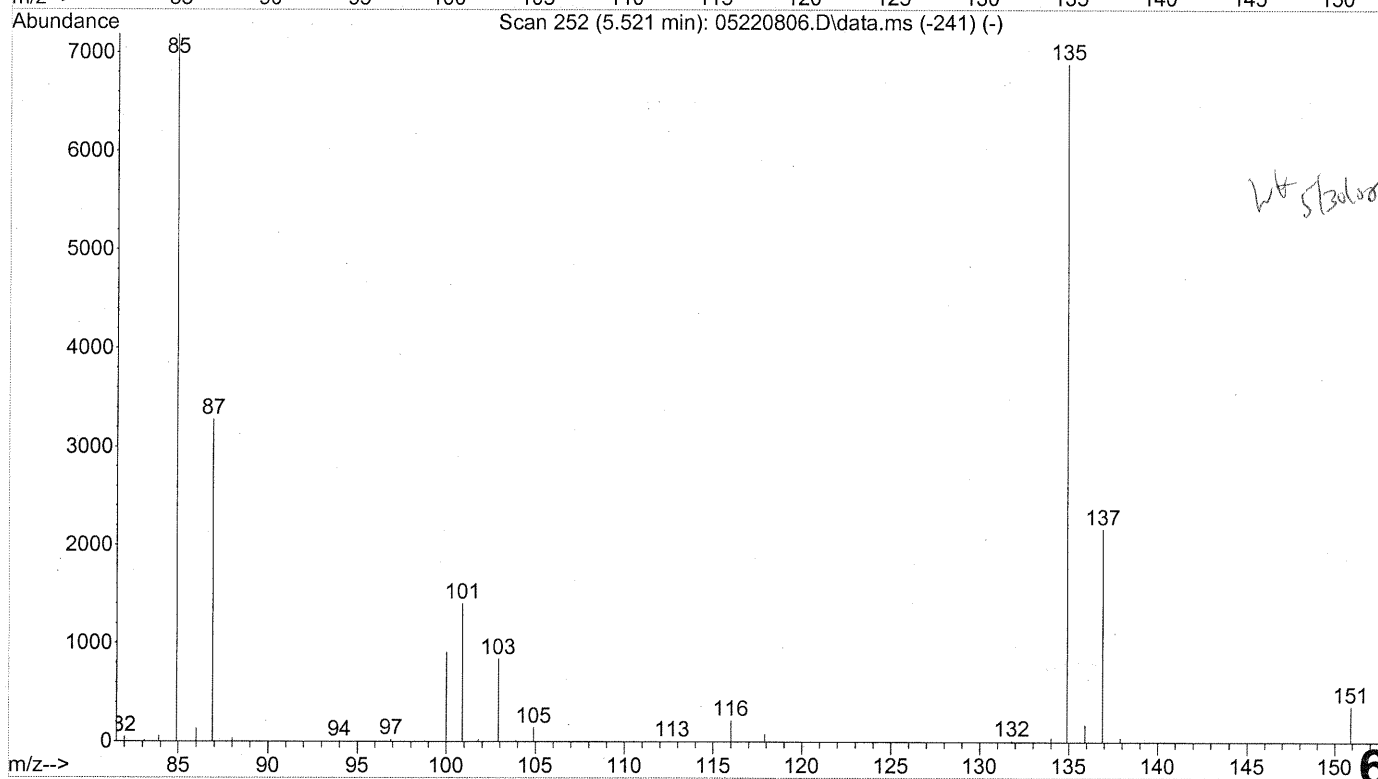
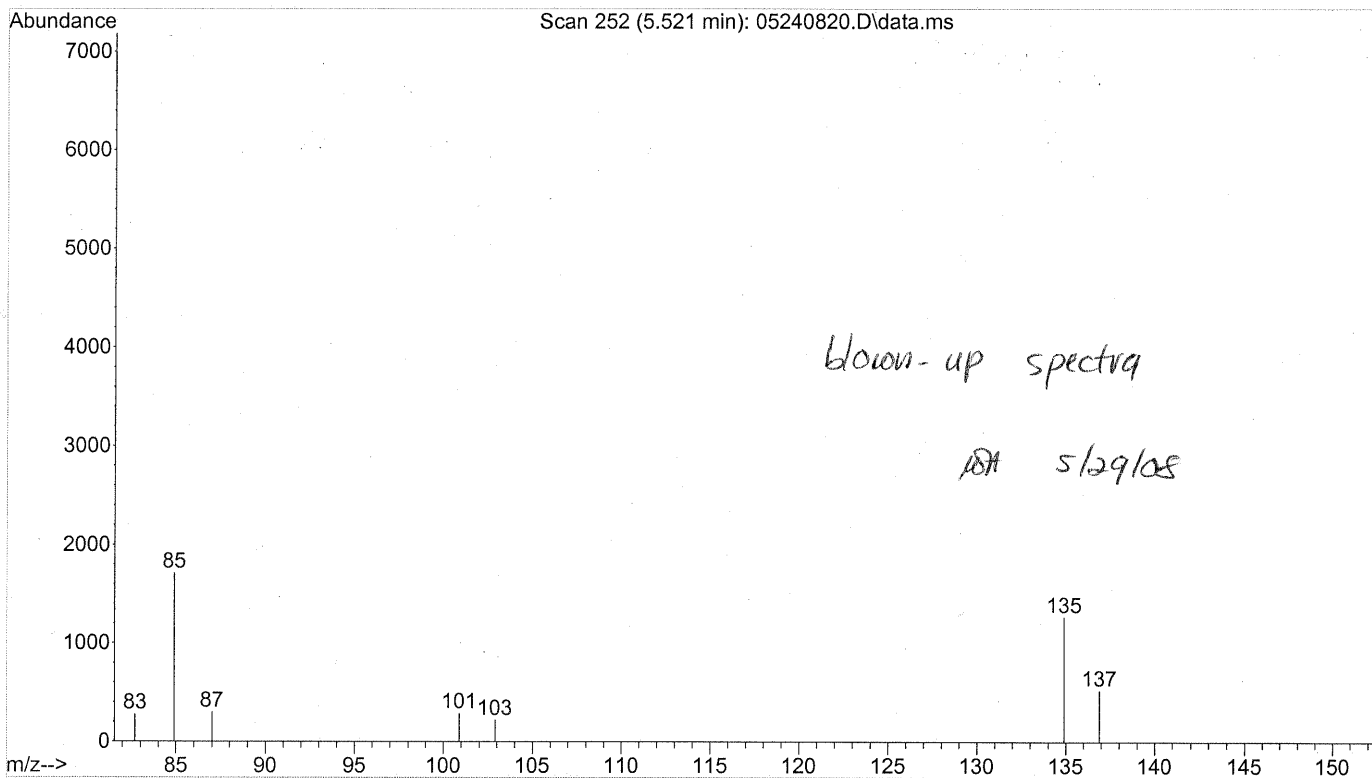


(5) Freon 114 (T)  
 5.521min (-0.011) 0.06ng  
 response 2552

Ion	Exp%	Act%
135.00	100	100
137.00	31.50	29.94
0.00	0.00	0.00
0.00	0.00	0.00

*see blown-up spectra*

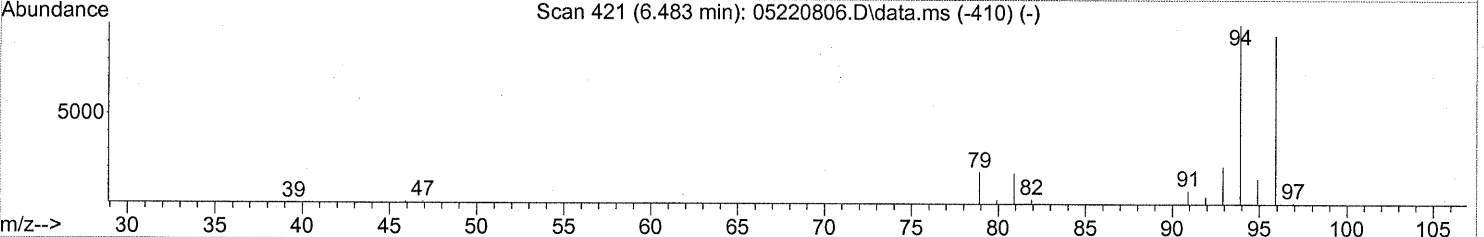
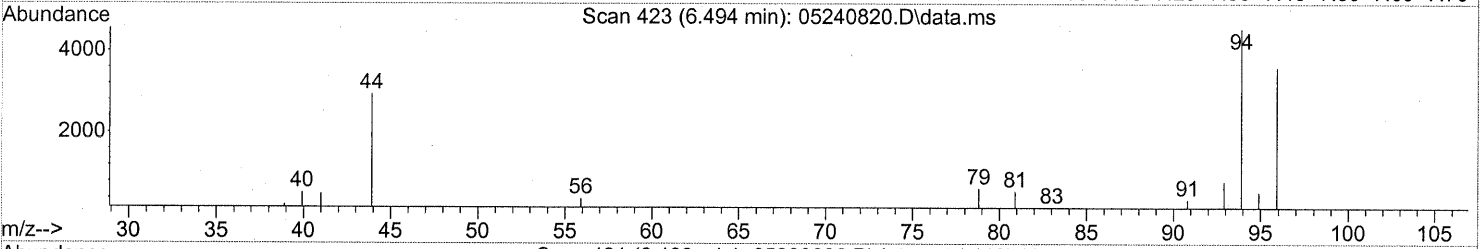
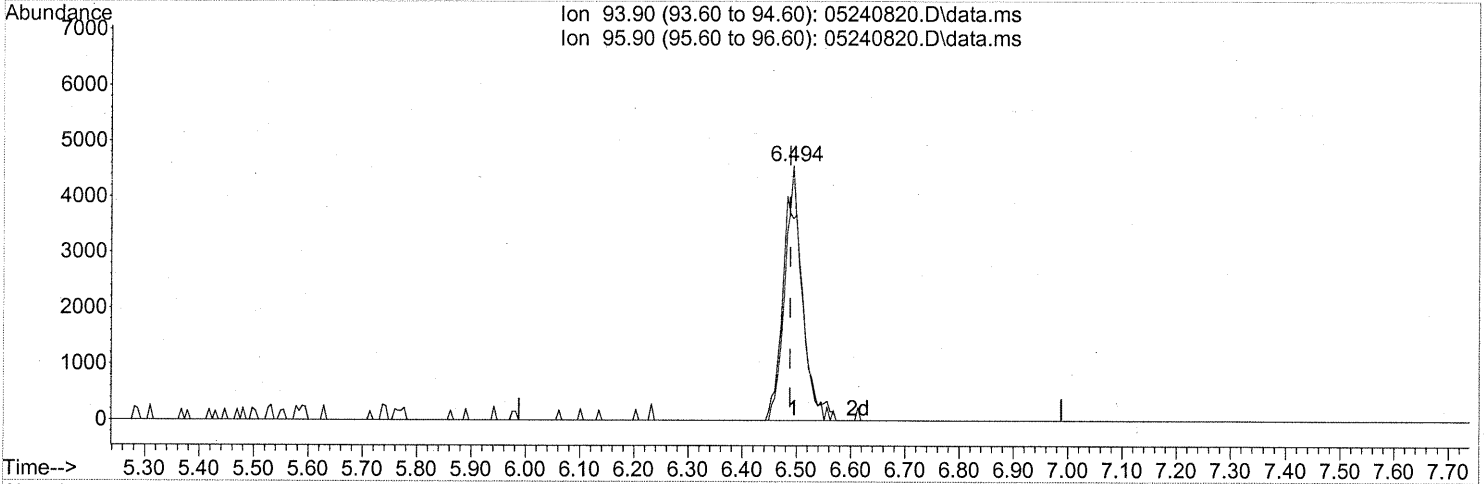
File : J:\MS13\DATA\2008\_05\24\05240820.D  
Operator : WA  
Acquired : 24 May 2008 20:14 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-013 (1000ml)  
Misc Info : ENSR SG85B-05 (-3.0, 3.5)  
Vial Number: 17



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

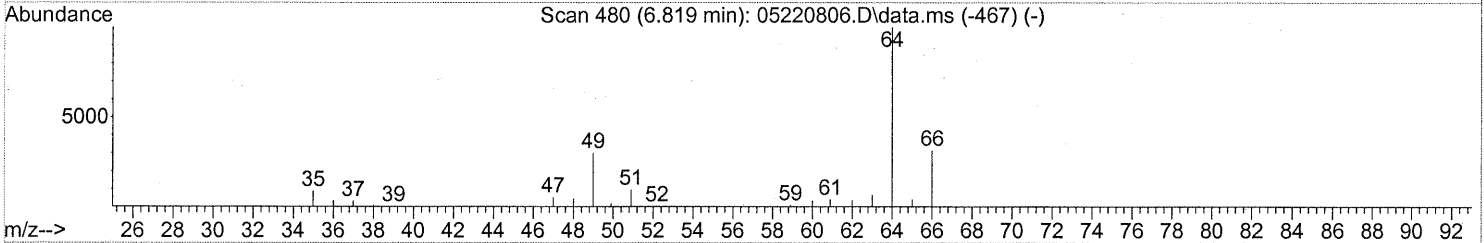
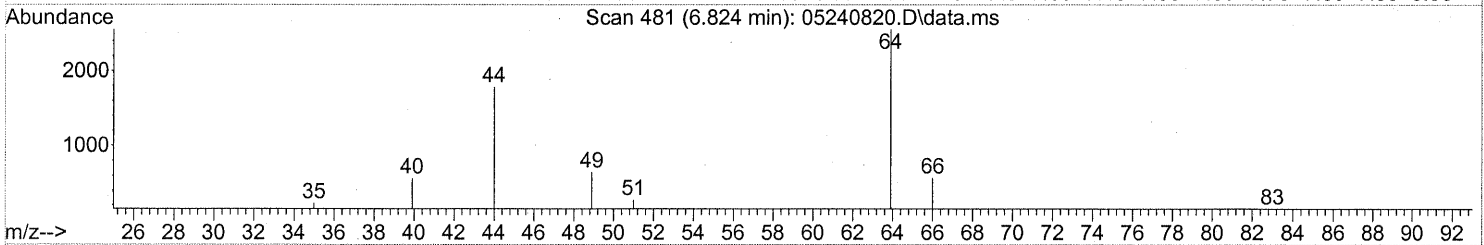
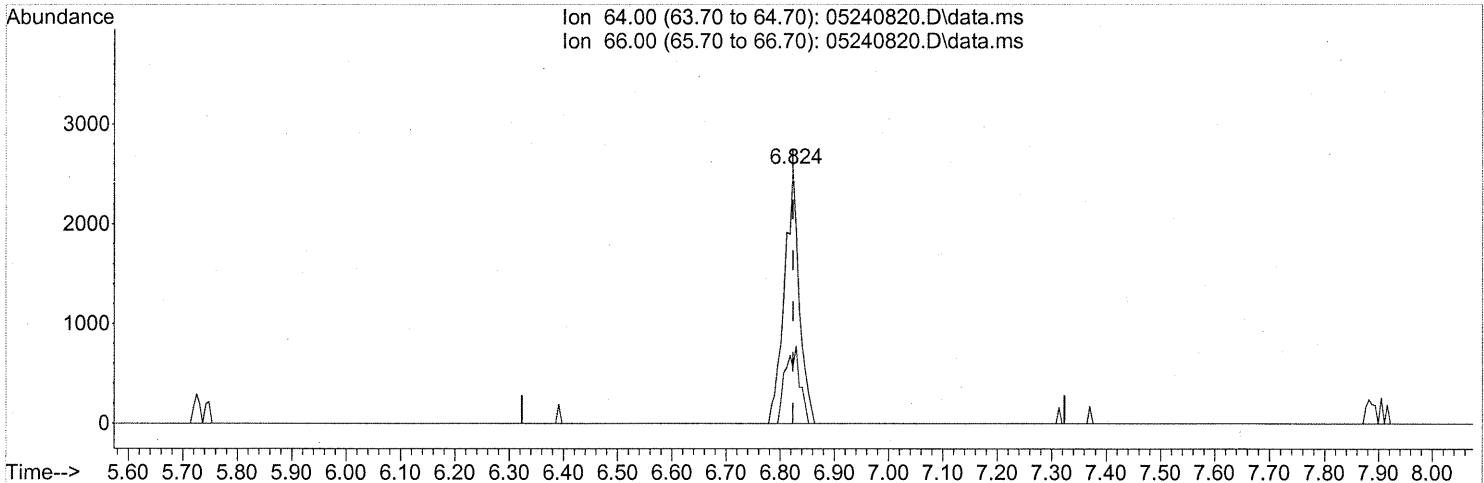
(8) Bromomethane (T)  
 6.494min (+0.006) 0.38ng  
 response 11080

Ion	Exp%	Act%
93.90	100	100
95.90	92.30	88.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(9) Chloroethane (T)

6.824min (-0.000) 0.19ng

response 4885

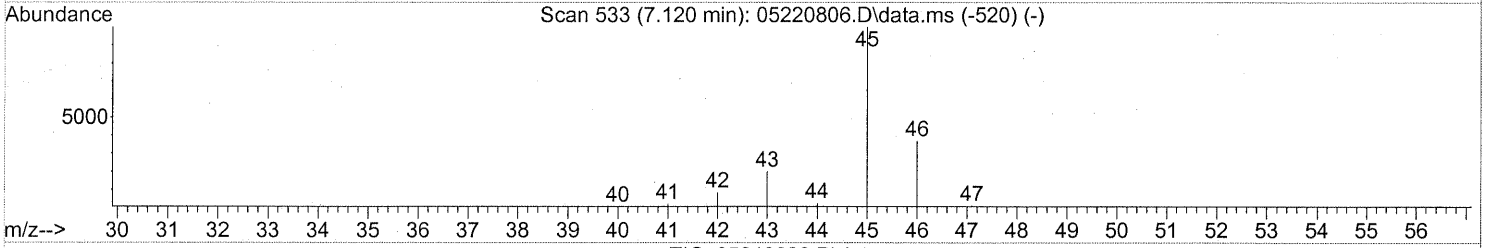
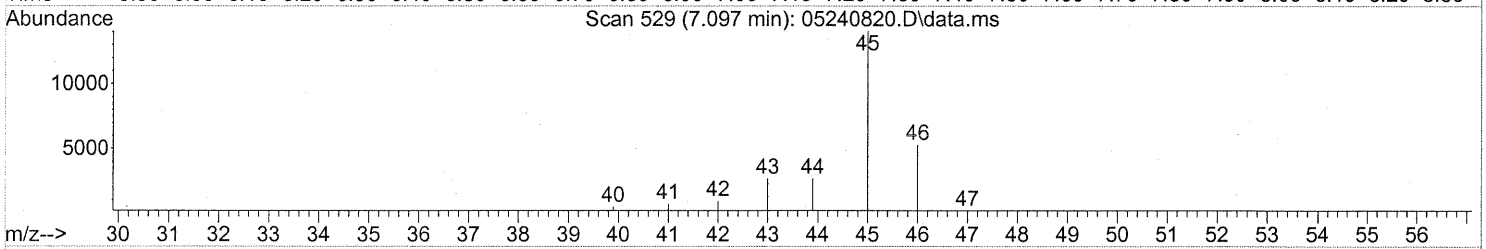
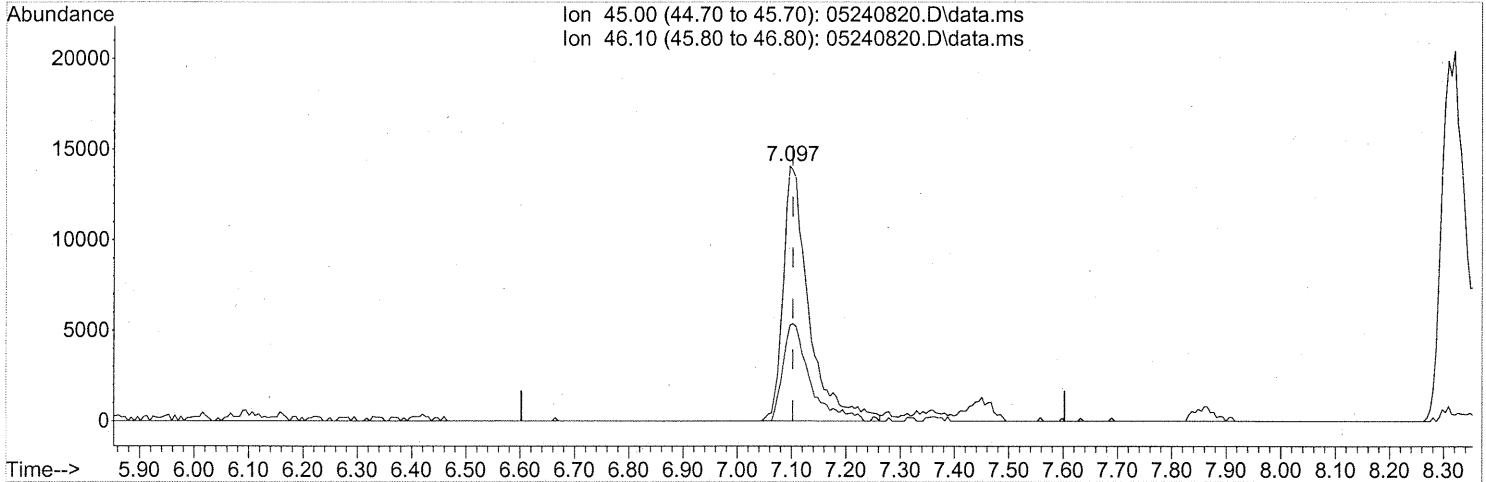
Ion	Exp%	Act%
64.00	100	100
66.00	29.60	29.38
0.00	0.00	0.00
0.00	0.00	0.00

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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.006) 1.56ng

response 46099

*tailing*

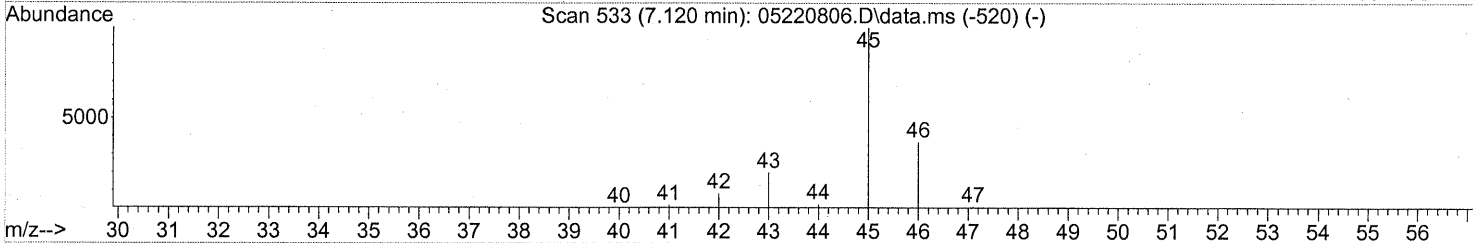
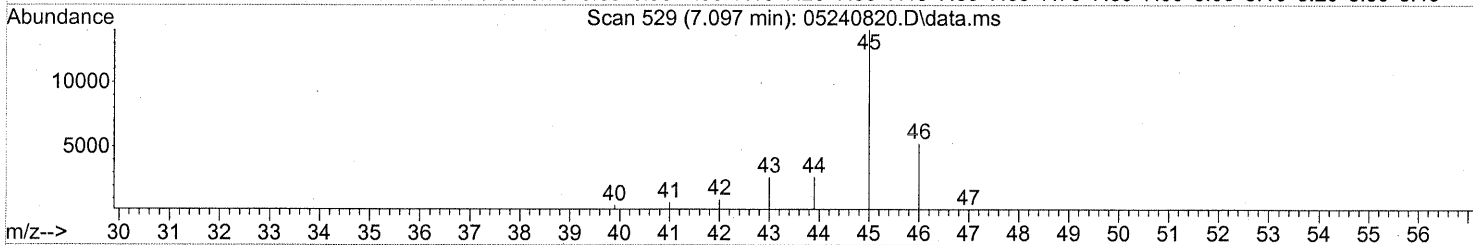
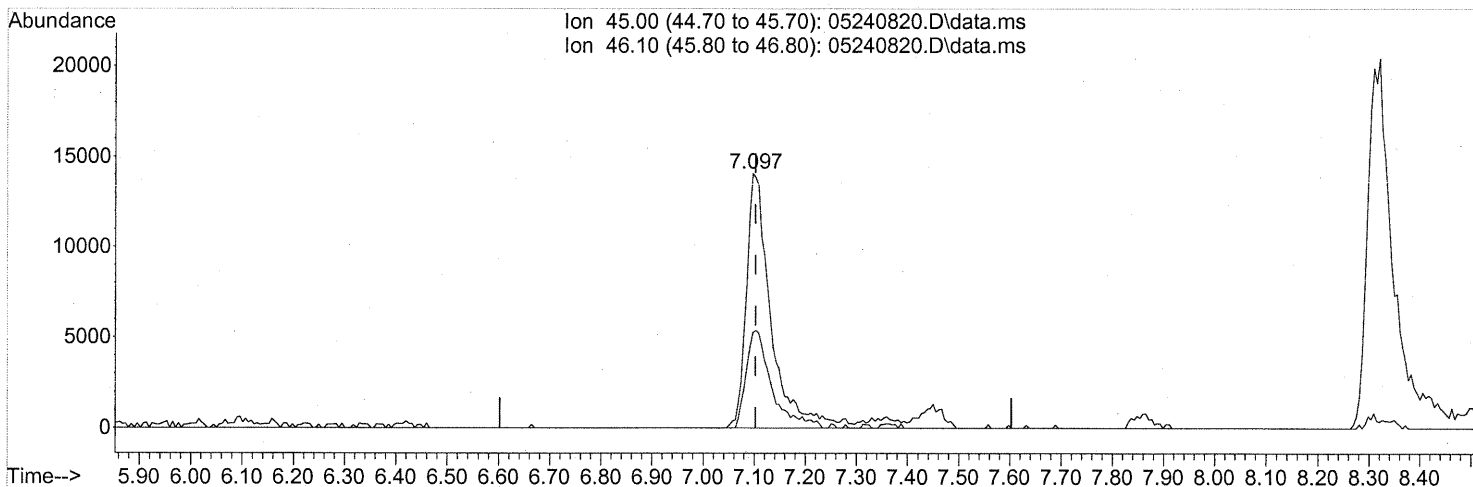
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	39.97
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240820.D  
Acq On : 24 May 2008 20:14  
Operator : WA  
Sample : P0801442-013 (1000ml)  
Misc : ENSR SG85B-05 (-3.0, 3.5)  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240820.D\data.ms

(10) Ethanol (T)

7.097min (-0.006) 1.80ng m

response 53107

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.70
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

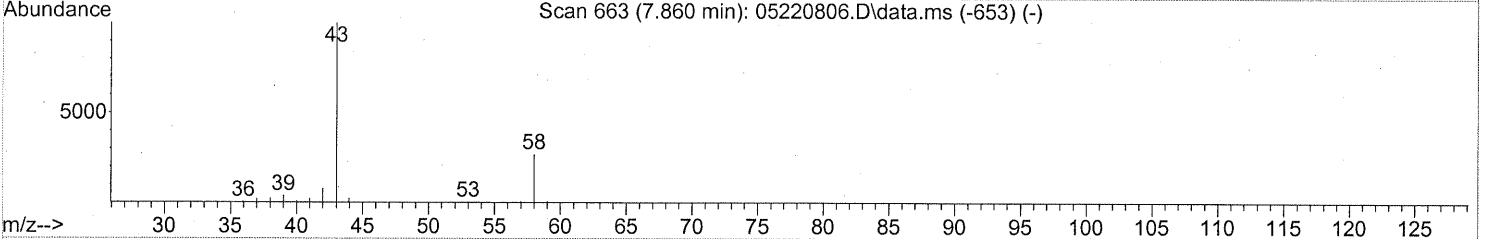
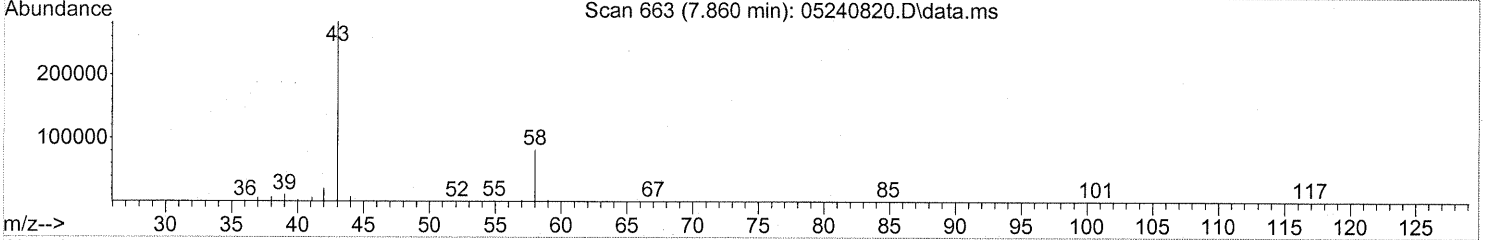
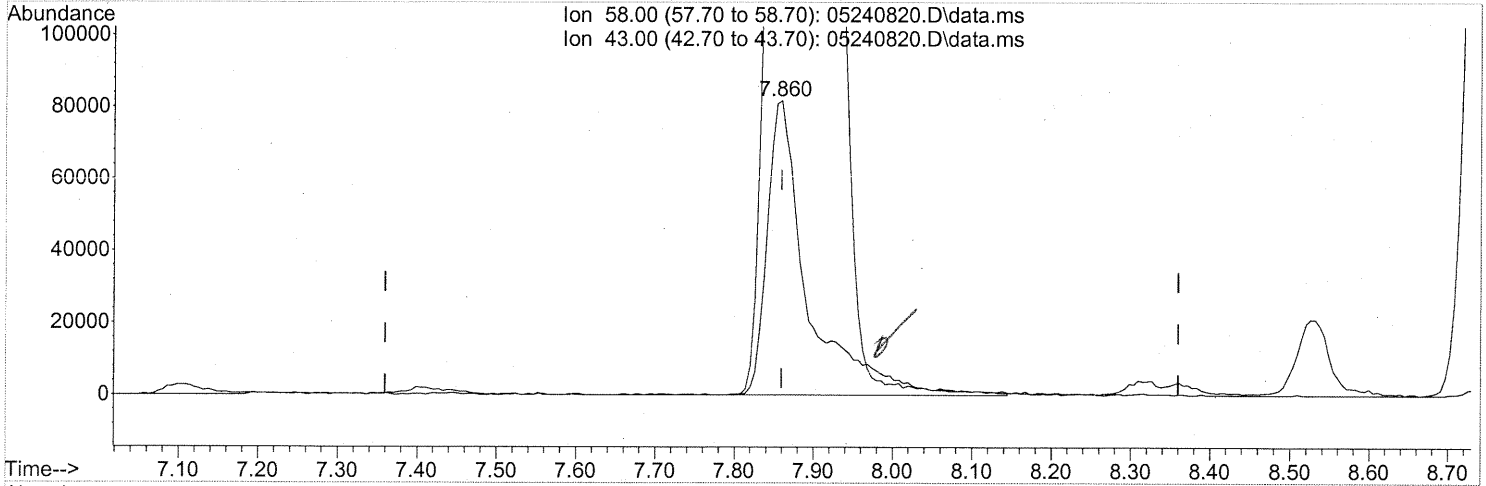
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(13) Acetone (T)

7.860min (-0.000) 9.63ng

response 290825

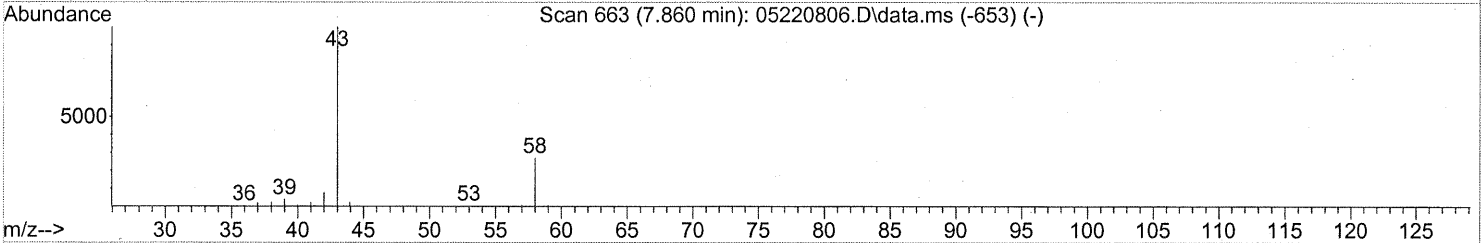
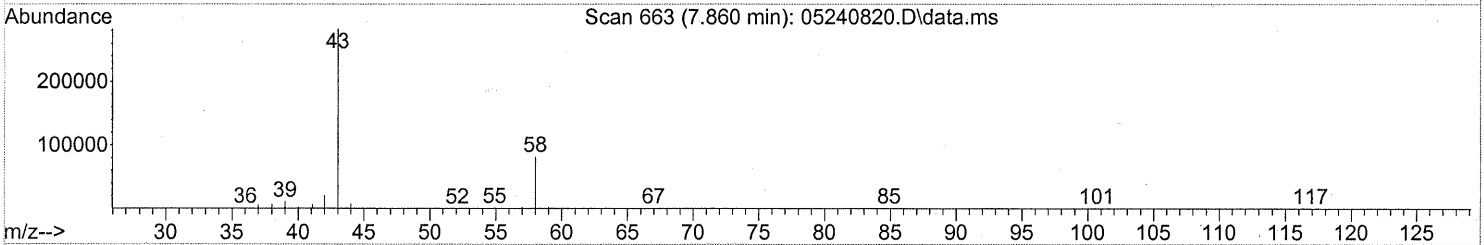
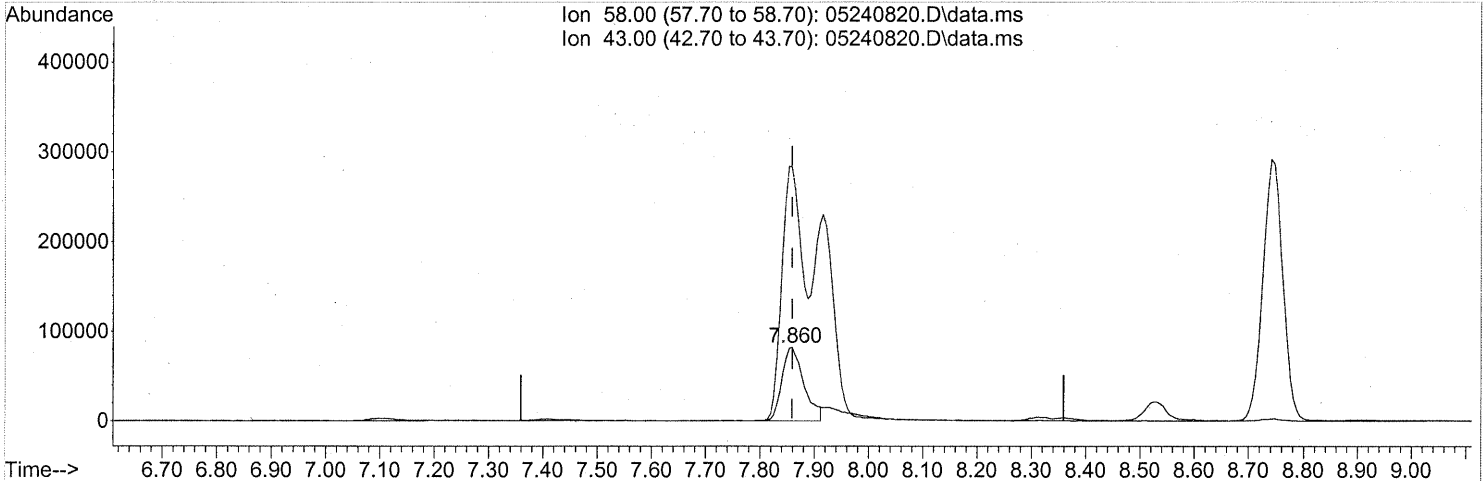
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	271.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240820.D  
Acq On : 24 May 2008 20:14  
Operator : WA  
Sample : P0801442-013 (1000ml)  
Misc : ENSR SG85B-05 (-3.0, 3.5)  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(13) Acetone (T)  
7.860min (-0.000) 7.52ng m  
response 227084

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	347.18#
0.00	0.00	0.00
0.00	0.00	0.00

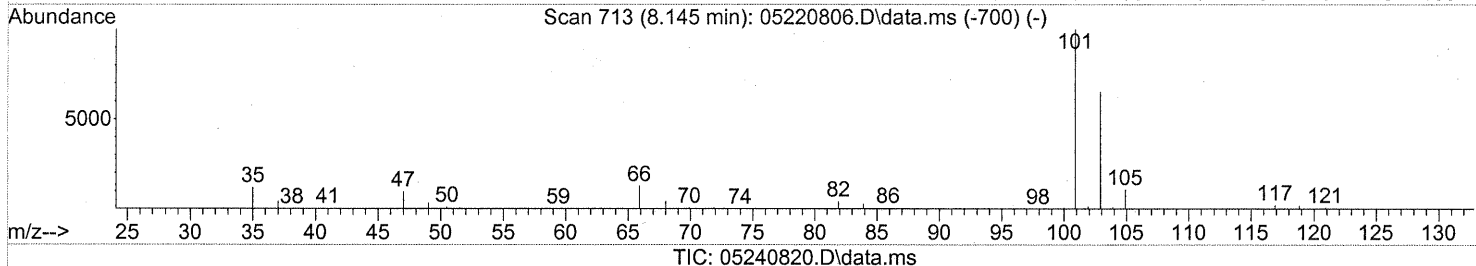
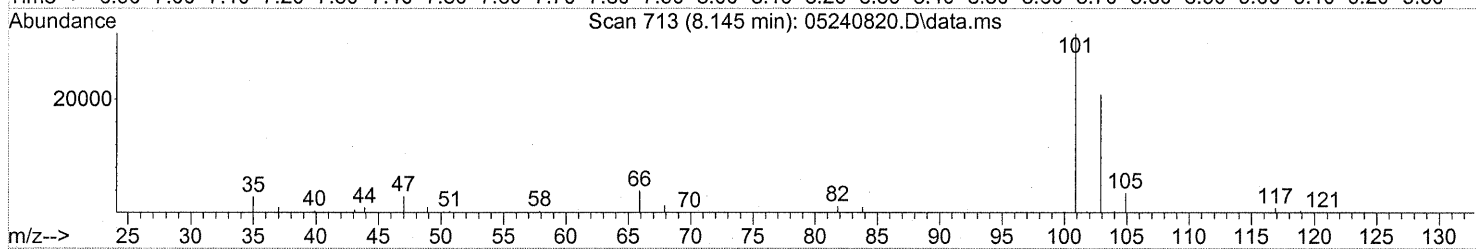
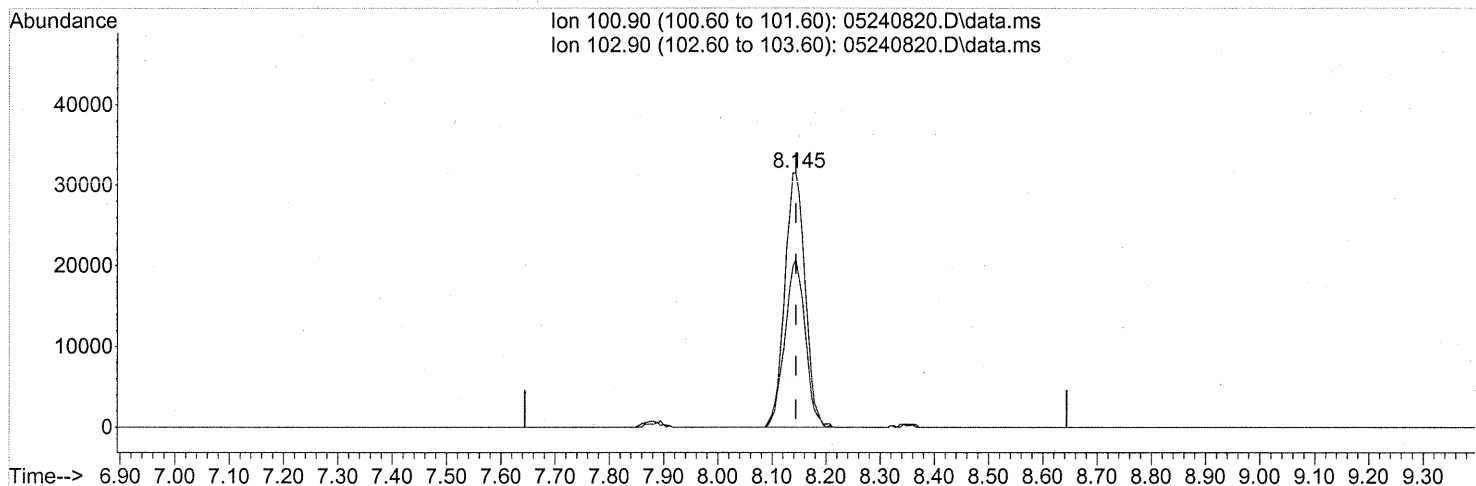
*10% shoulder*  
*10/1 5/29/08*  
*Wt 5/30/08*

677

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.145min (-0.000) 1.18ng

response 82894

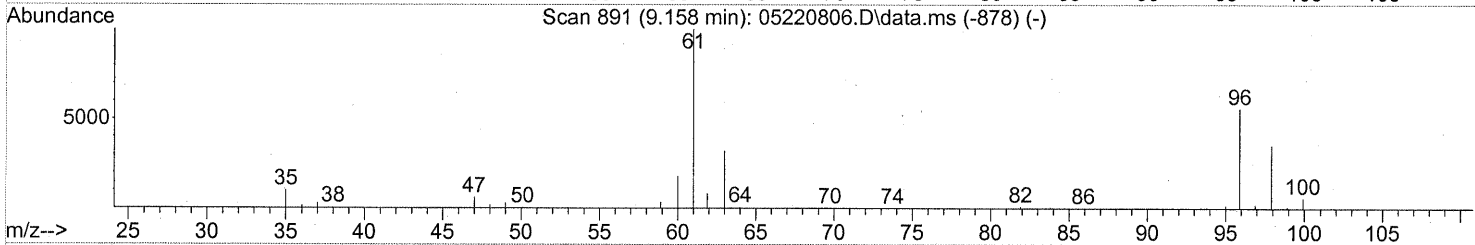
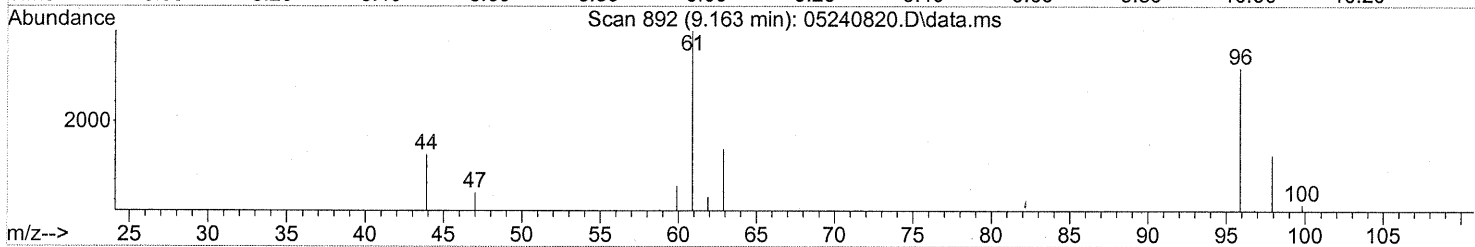
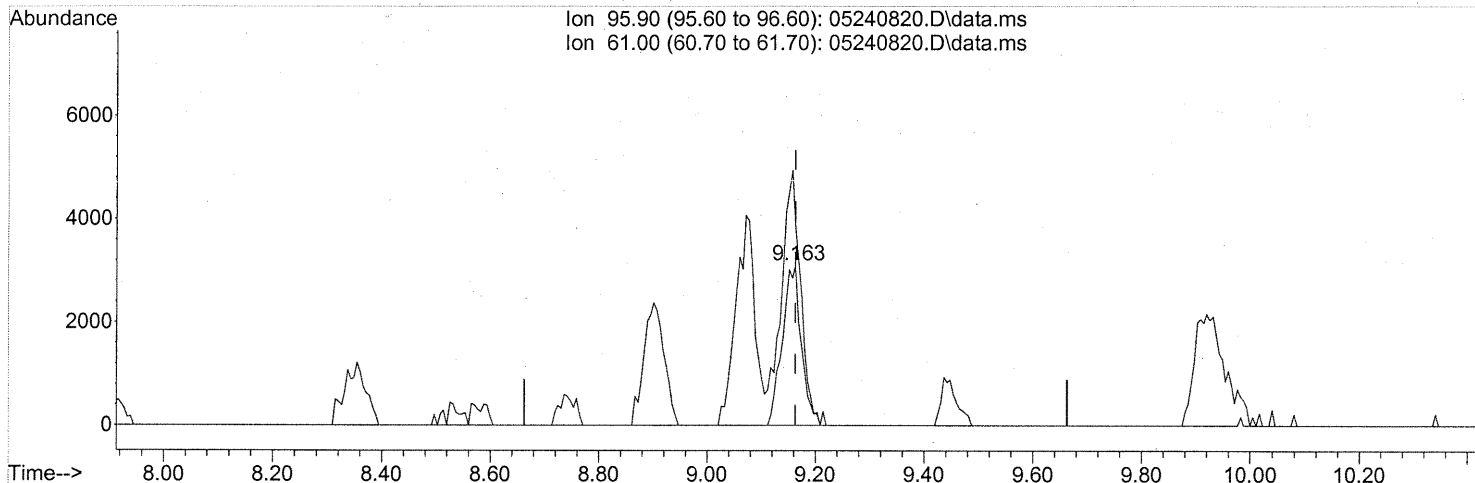
Ion	Exp%	Act%
100.90	100	100
102.90	64.80	65.57
0.00	0.00	0.00
0.00	0.00	0.00

678

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(17) 1,1-Dichloroethene (T)

9.163min (-0.000) 0.24ng

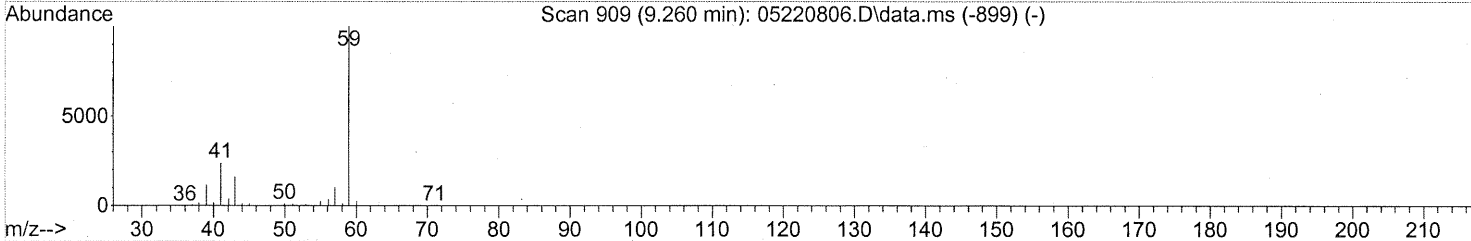
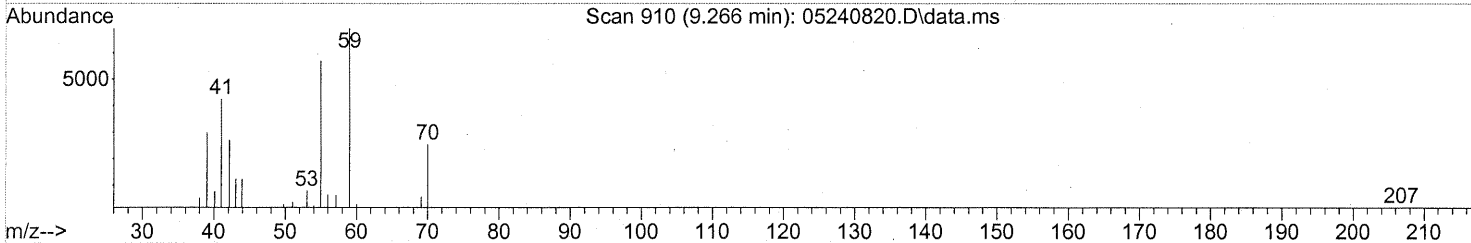
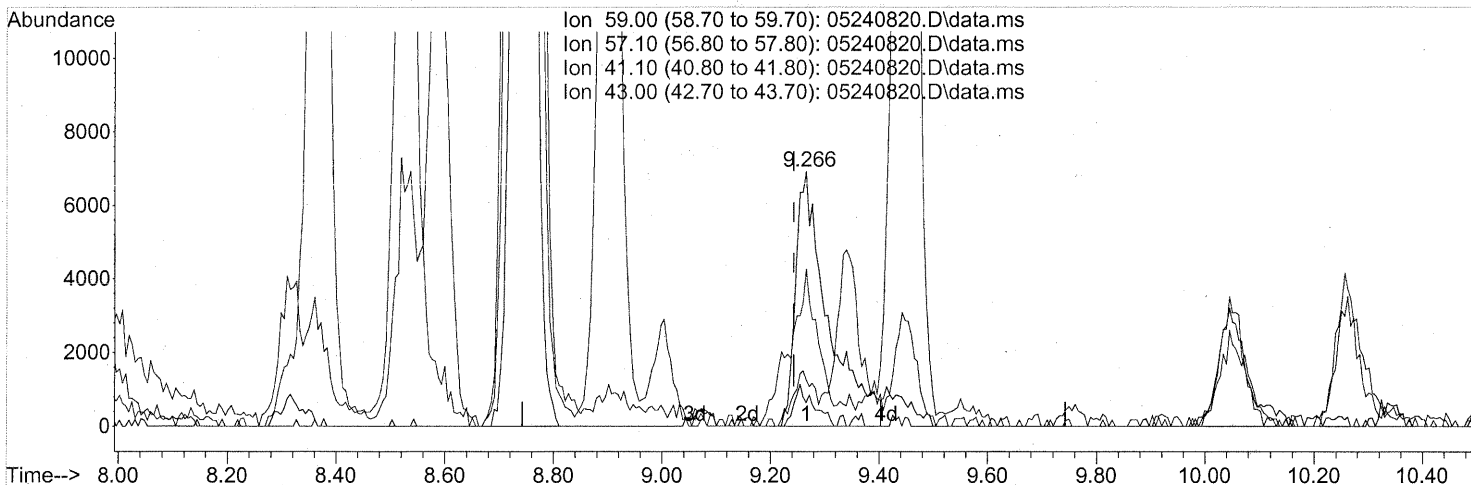
response 7527

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	162.64#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

9.266min (+0.023) 0.35ng

response 28317

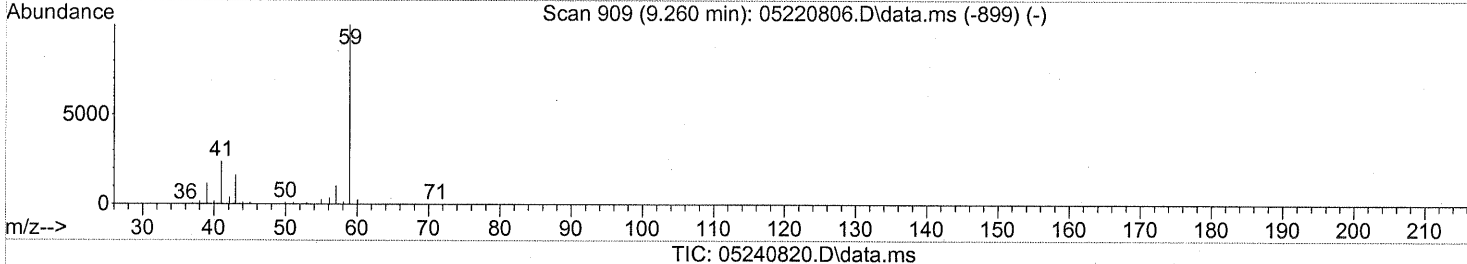
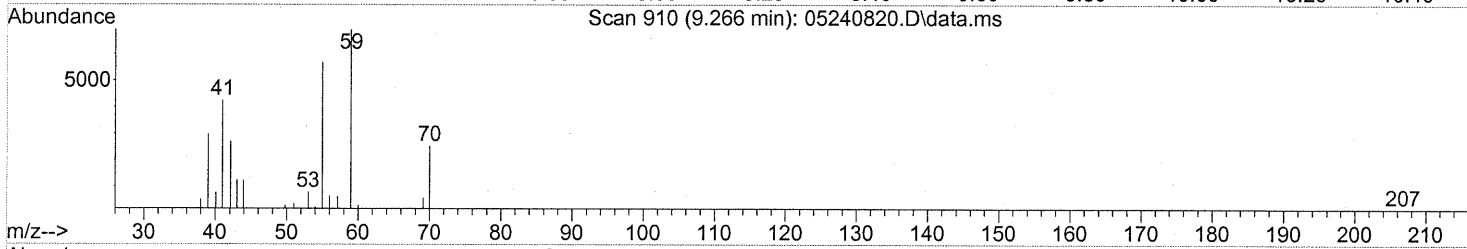
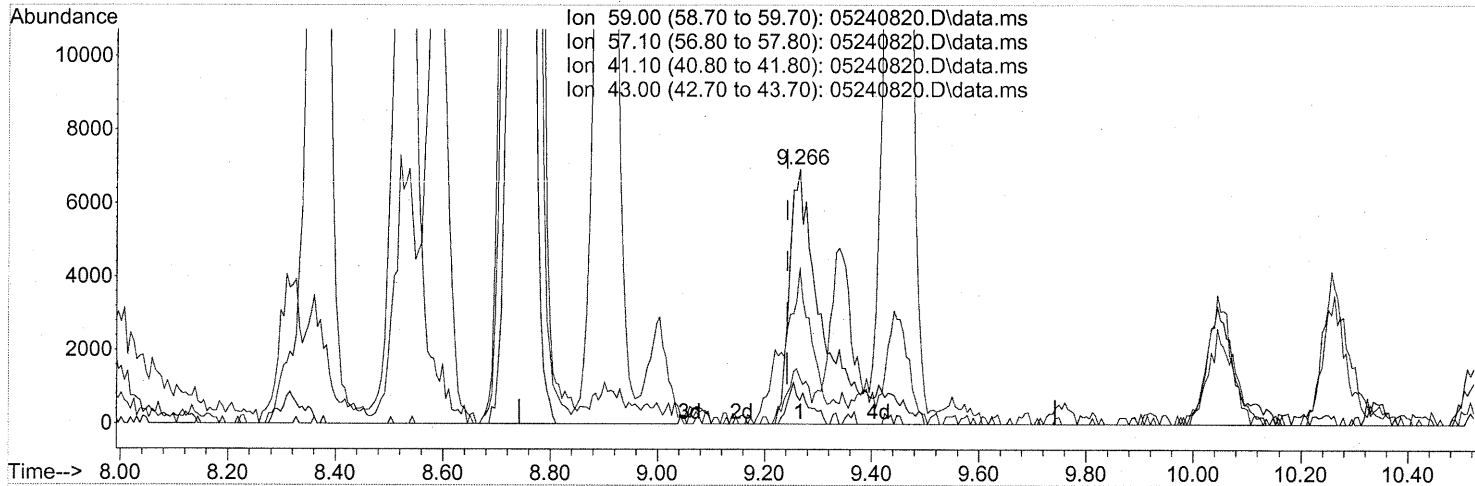
*split peak*

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	9.63
41.10	20.10	59.90#
43.00	12.30	14.83

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.266min (+0.023) 0.39ng m  
 response 31560

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	8.64
41.10	20.10	53.75#
43.00	12.30	13.30

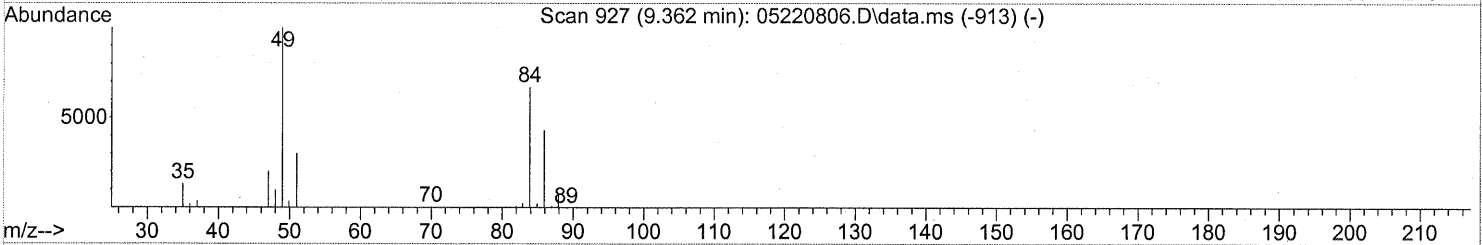
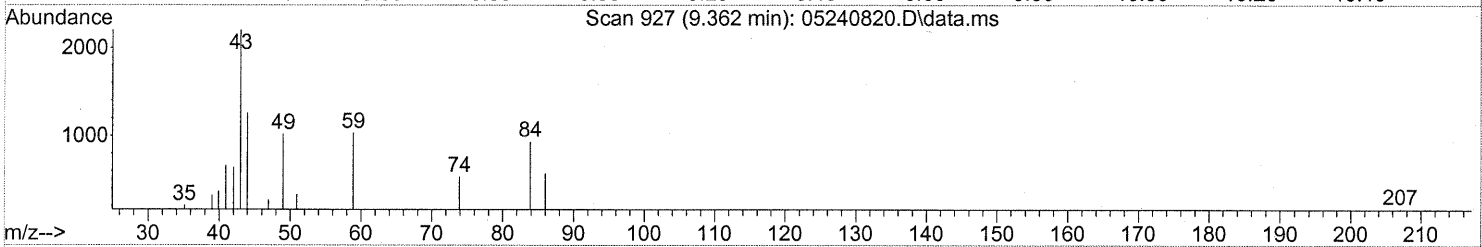
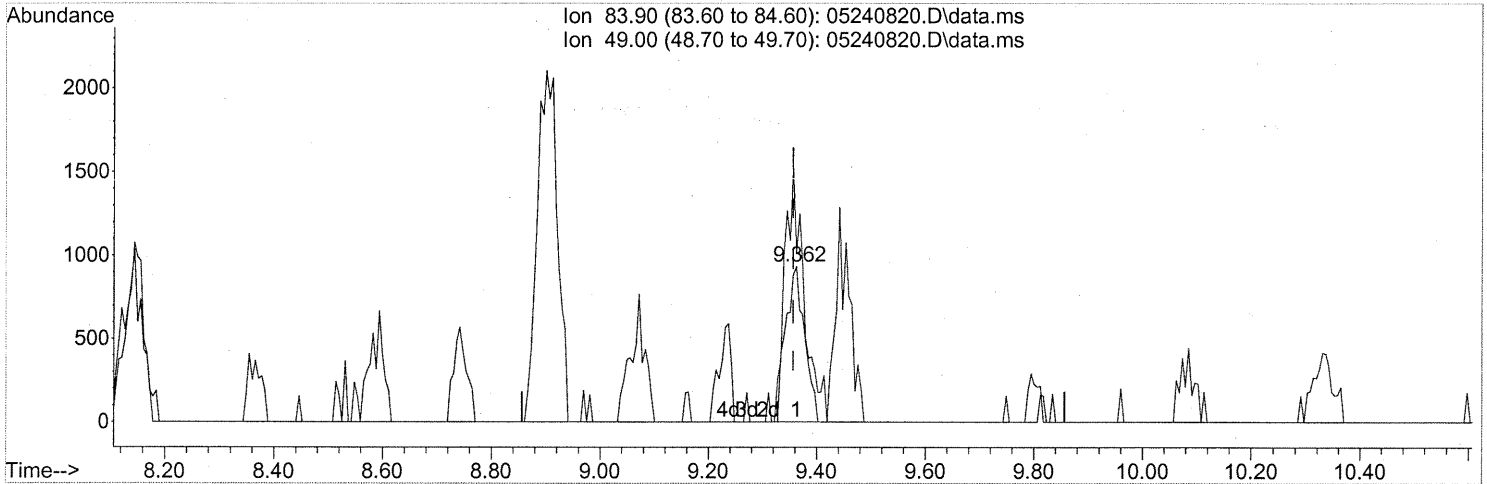
*int. whole peaks*  
*WA 5/29/08*

*WJ 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(19) Methylene Chloride (T)

9.362min (+0.006) 0.07ng

response 2247

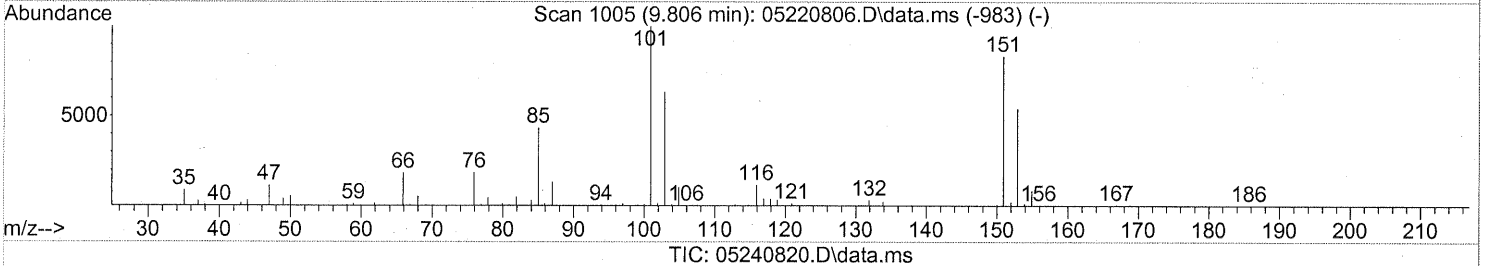
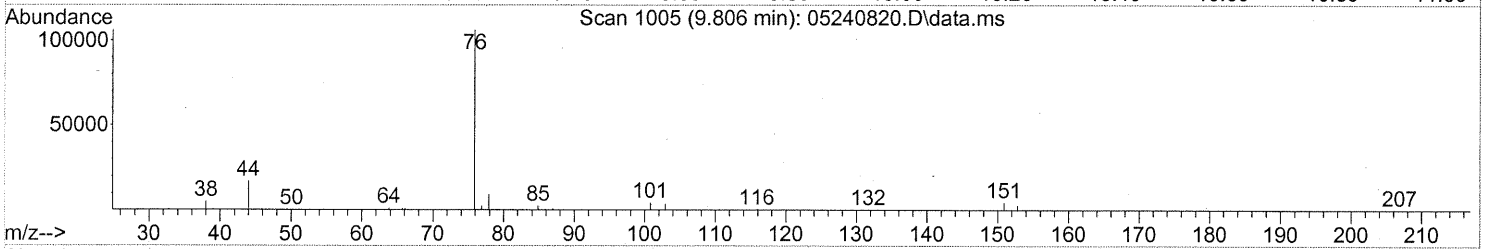
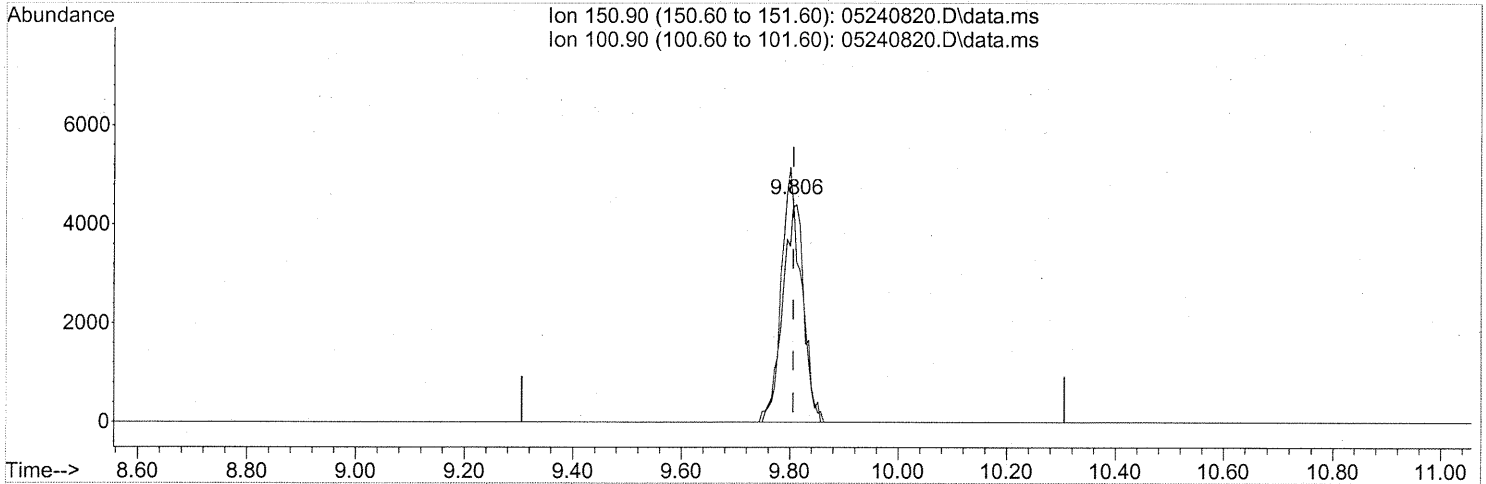
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	166.04
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.806min (-0.000) 0.35ng

*before*

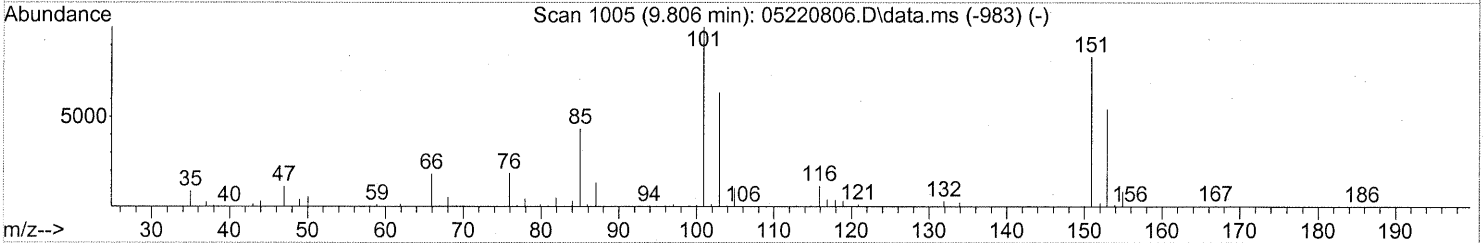
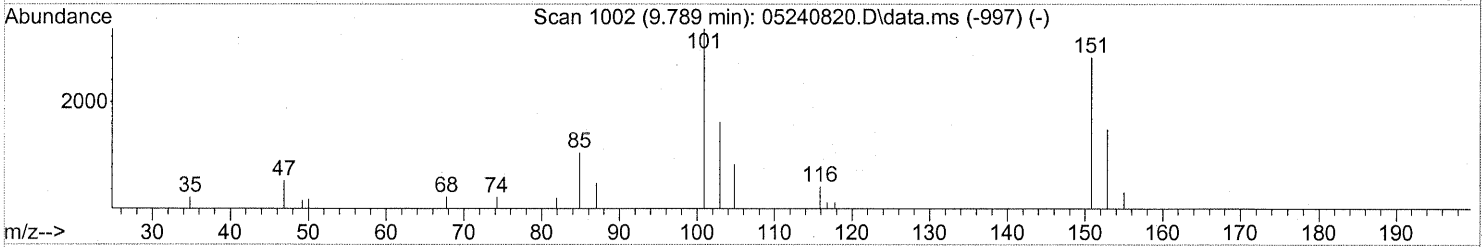
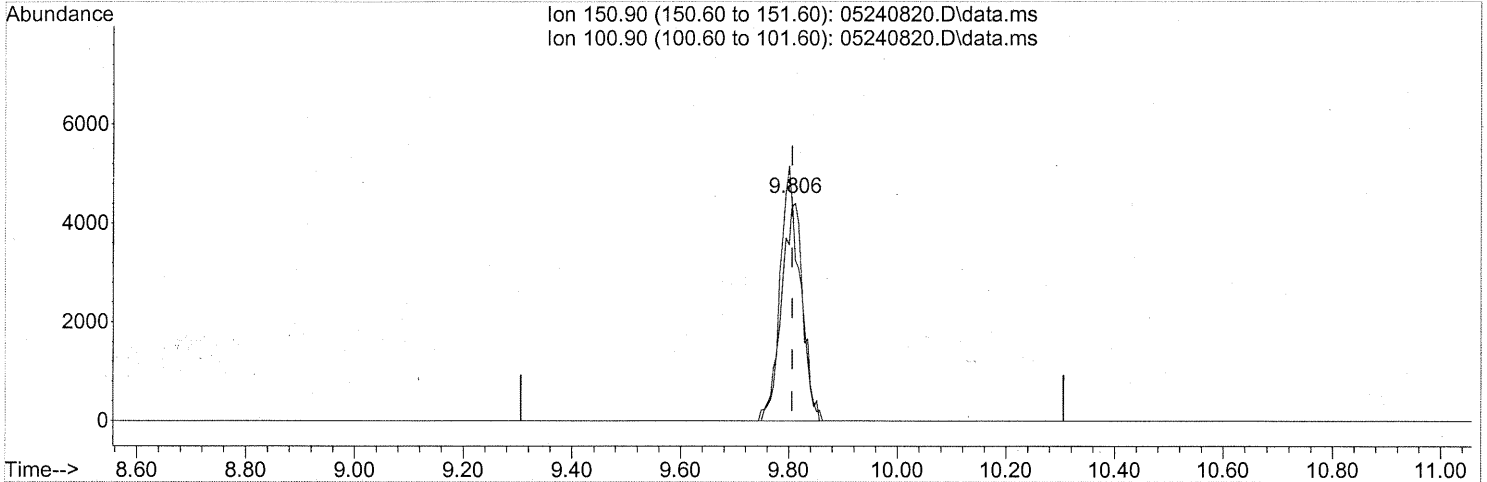
response 11278

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	122.48
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.806min (-0.000) 0.35ng

response 11278

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	122.48
0.00	0.00	0.00
0.00	0.00	0.00

*after substr.*

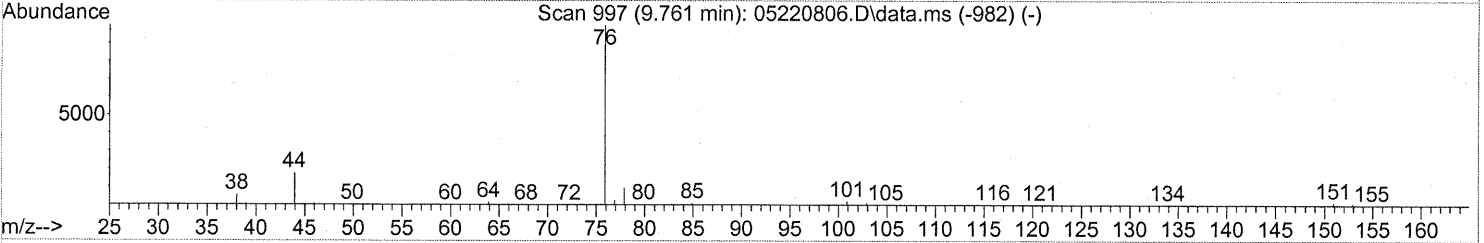
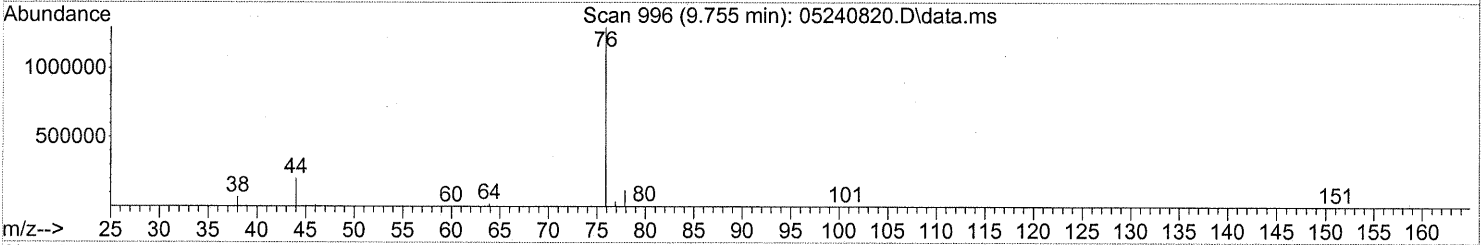
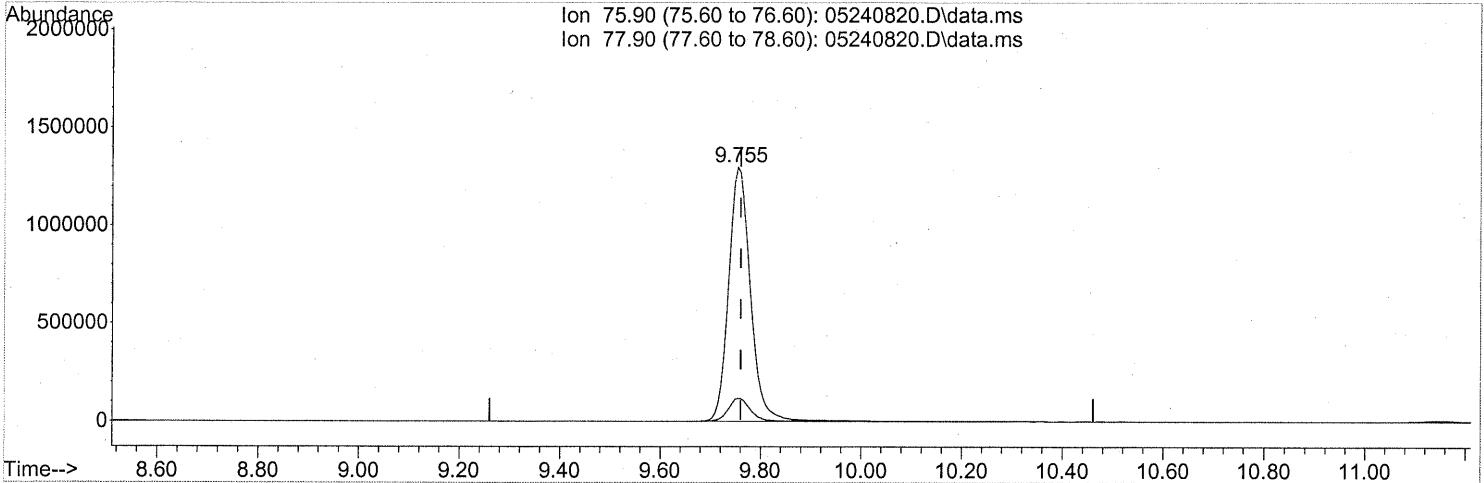
*WBS/30608*

*5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240820.D  
Acq On : 24 May 2008 20:14  
Operator : WA  
Sample : P0801442-013 (1000ml)  
Misc : ENSR SG85B-05 (-3.0, 3.5)  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240820.D\data.ms

(22) Carbon Disulfide (T)

9.755min (-0.006) 30.40ng

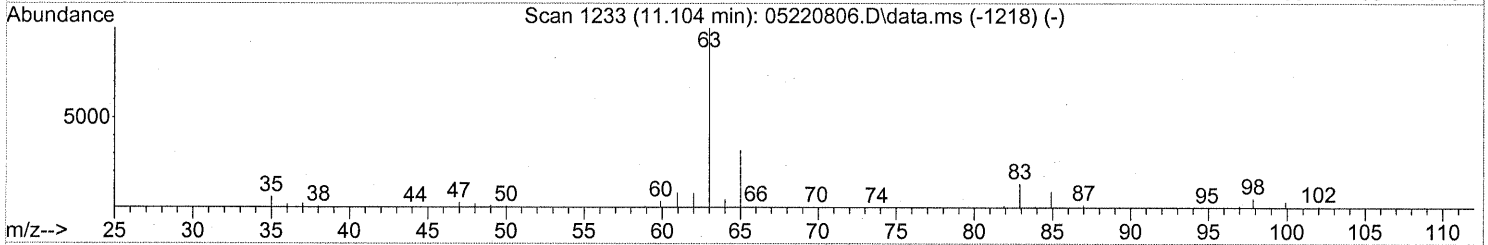
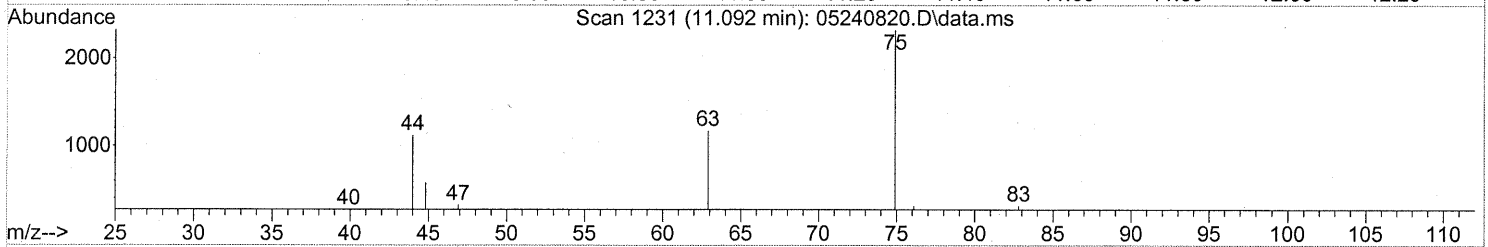
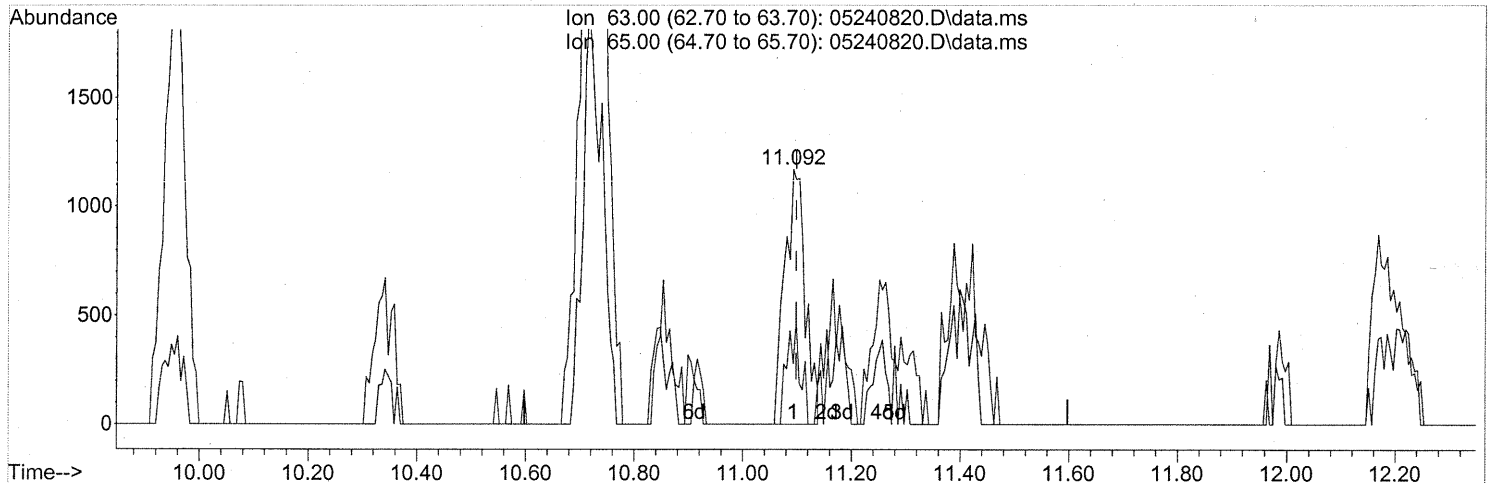
response 3894857

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.092min (-0.006) 0.05ng

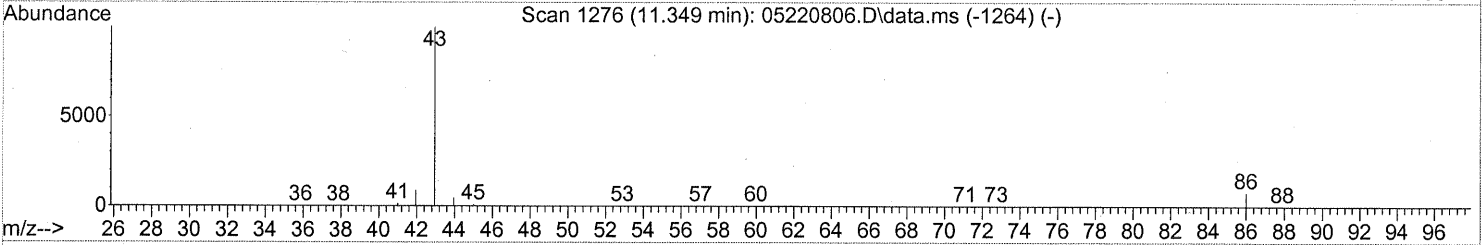
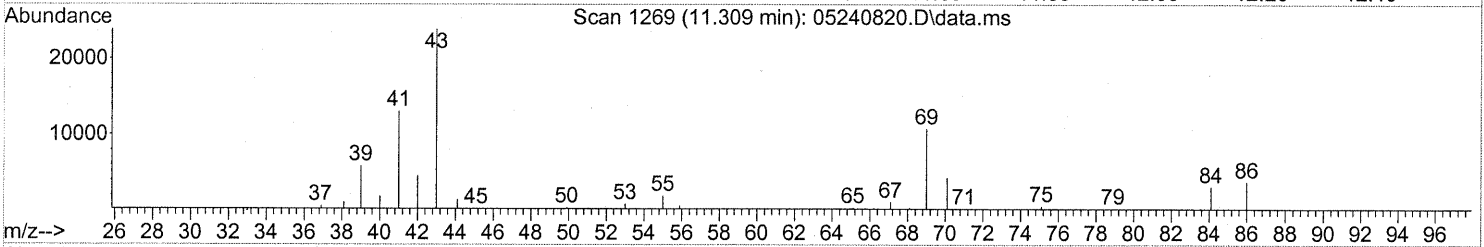
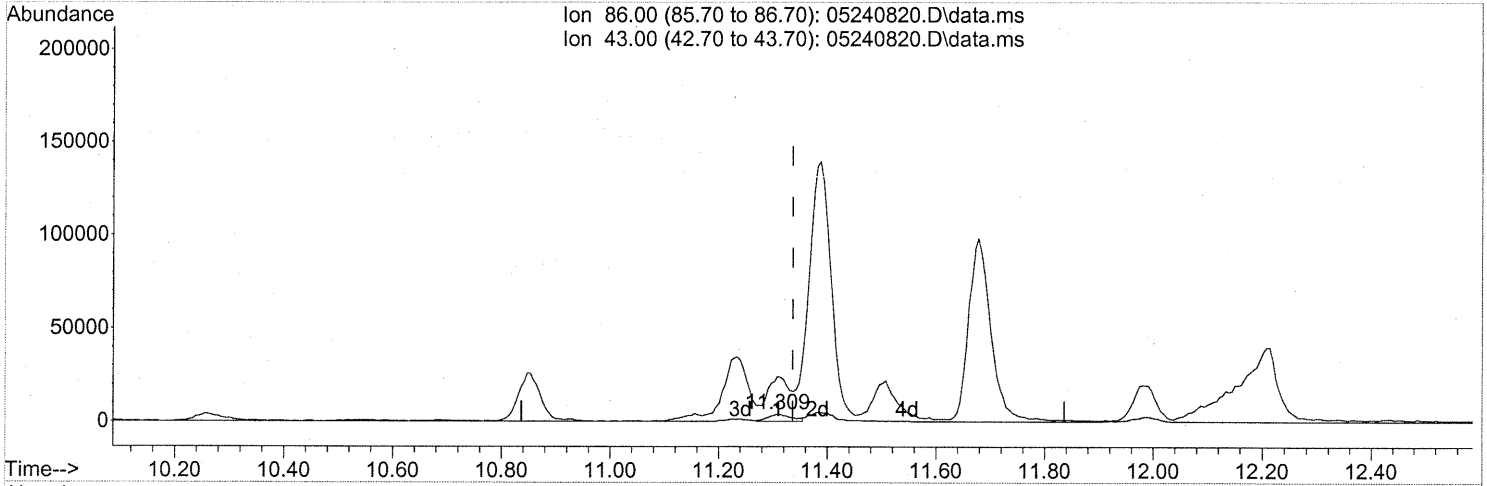
response 3072

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	26.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(26) Vinyl Acetate (T)

11.309min (-0.028) 1.98ng

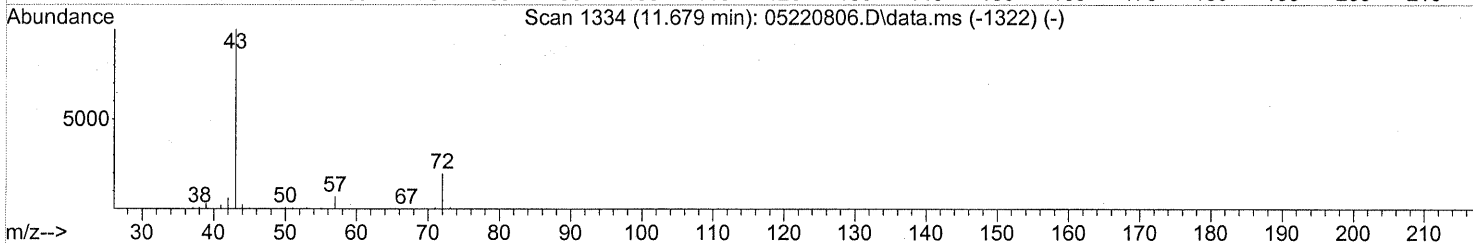
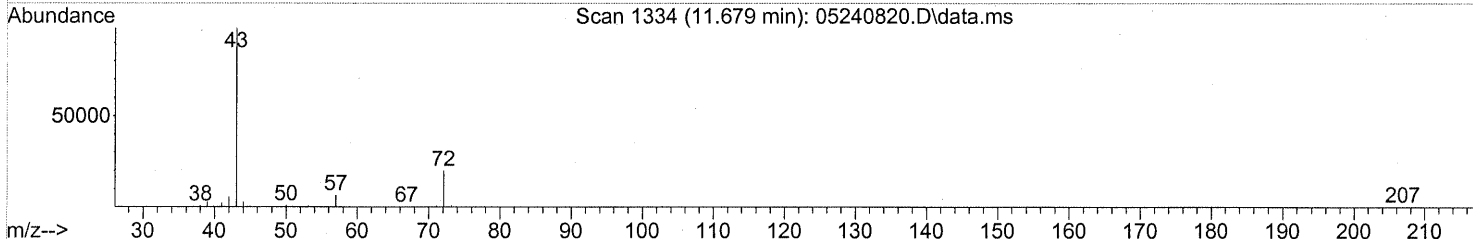
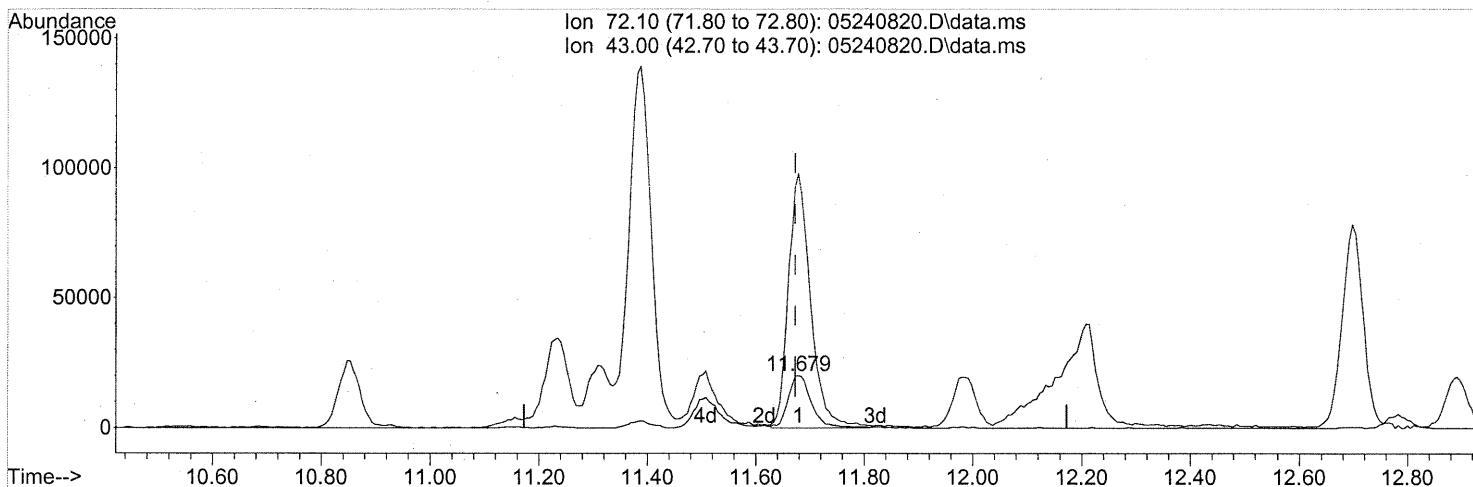
response 11071

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	610.05#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



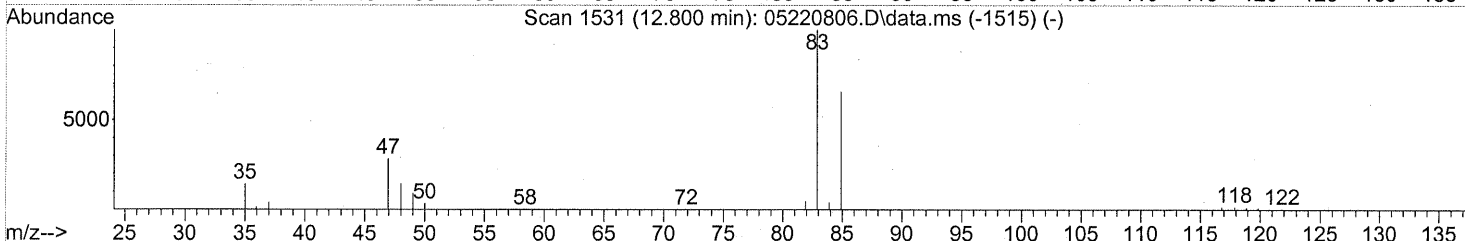
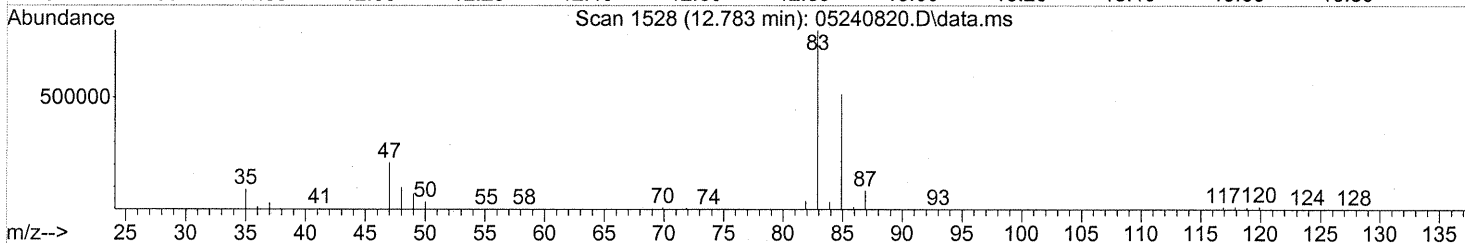
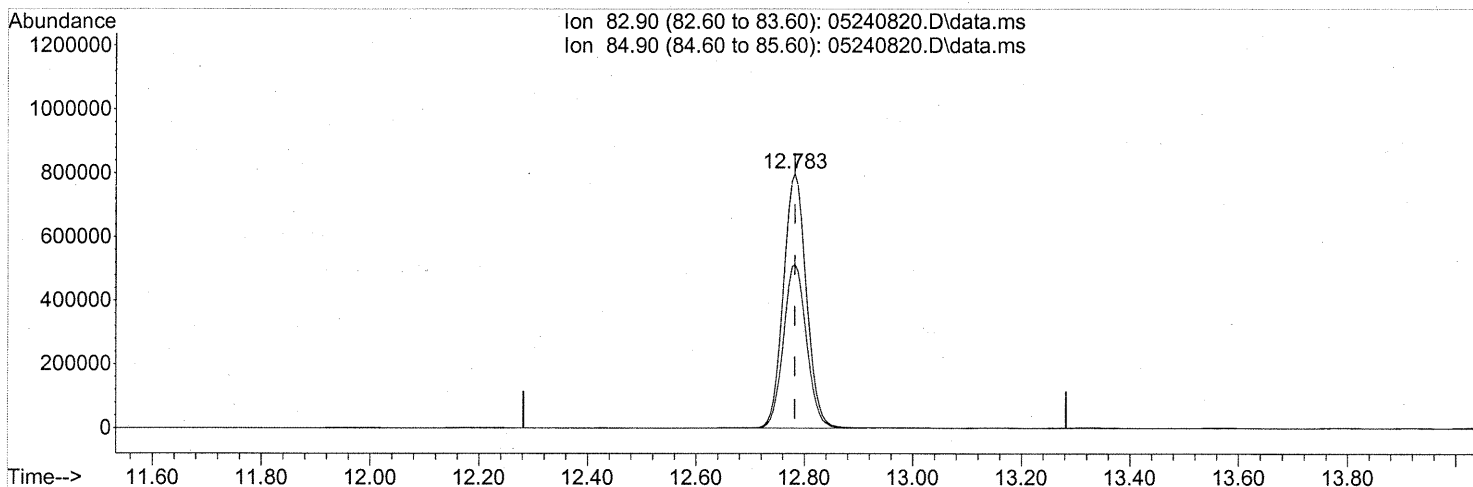
(27) 2-Butanone (T)  
 11.679min (+0.006) 2.71ng  
 response 59821

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	455.56#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(32) Chloroform (T)

12.783min (-0.000) 45.76ng

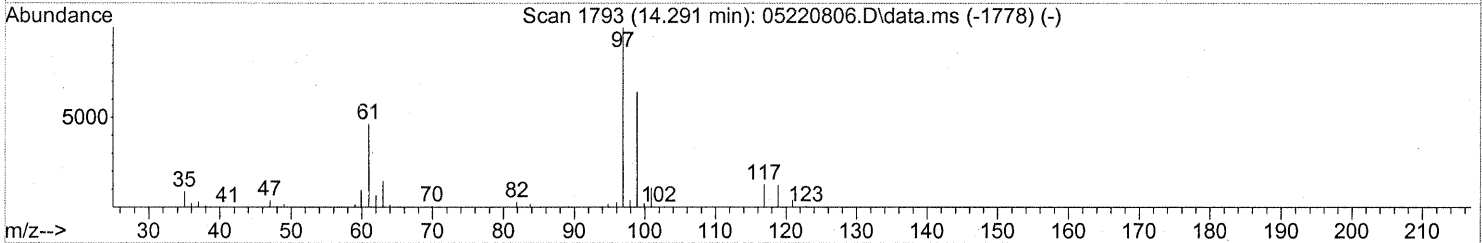
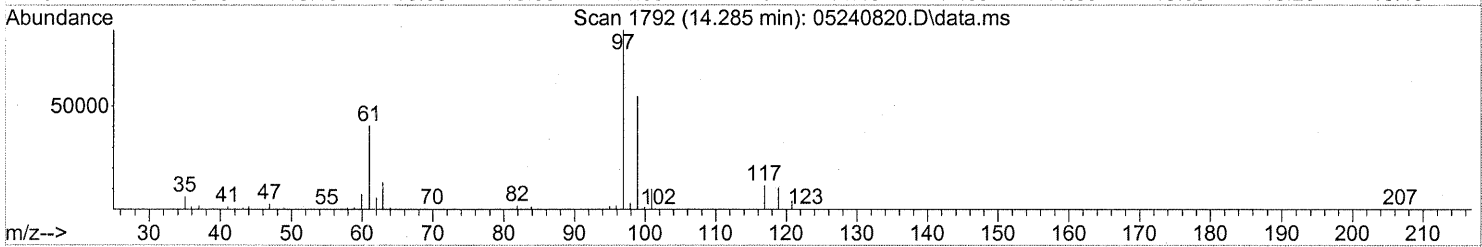
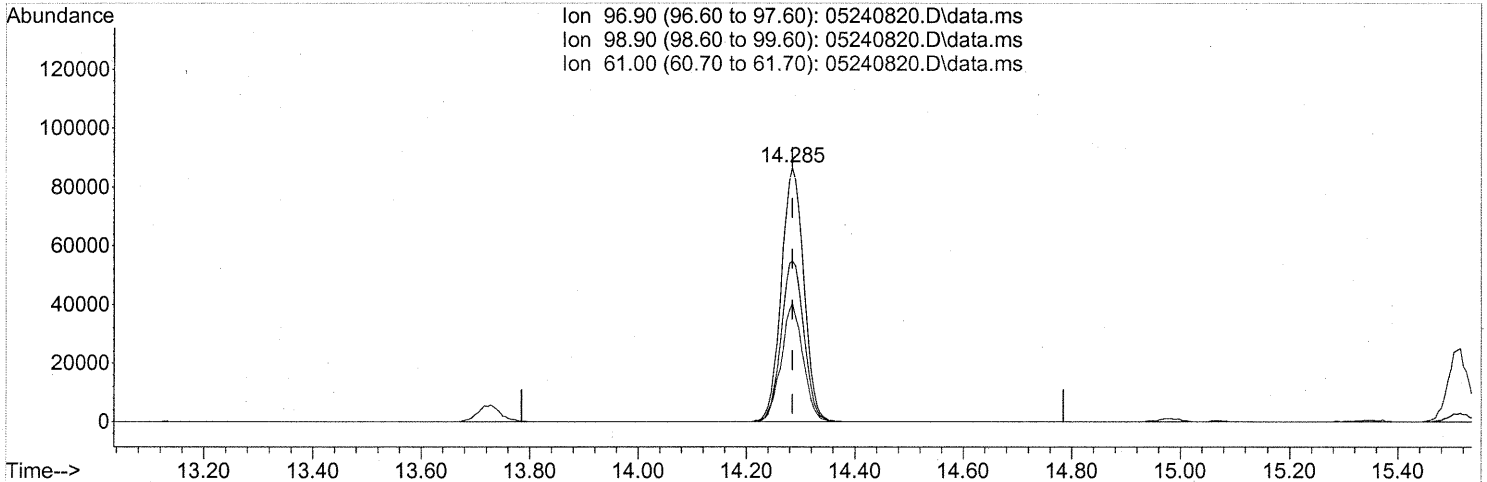
response 2341829

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.285min (-0.000) 4.60ng

response 249808

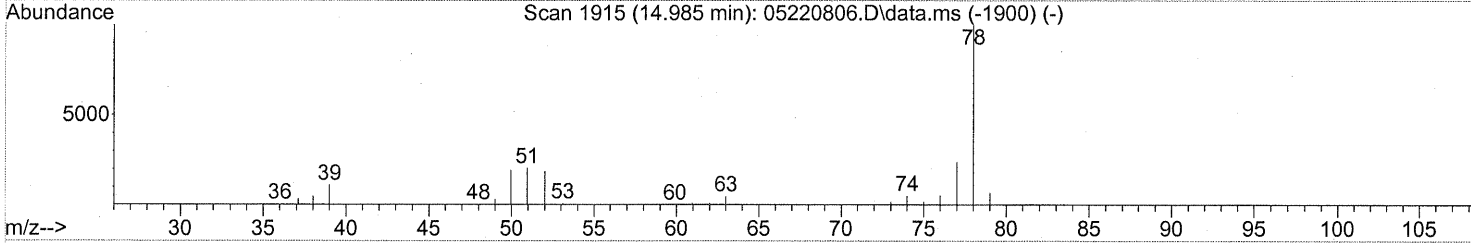
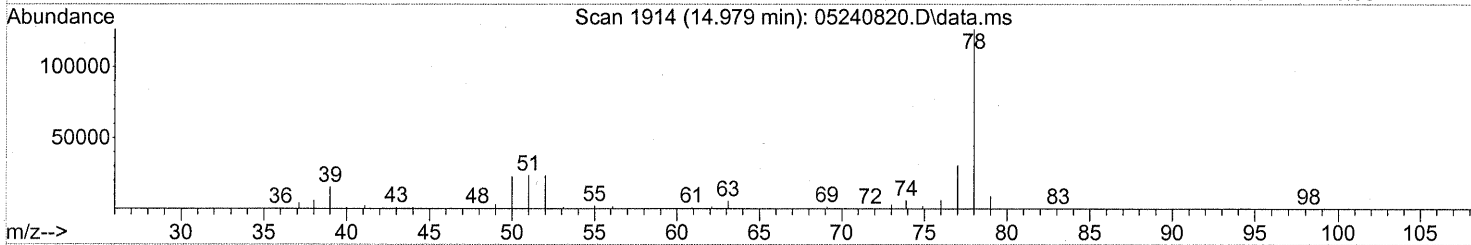
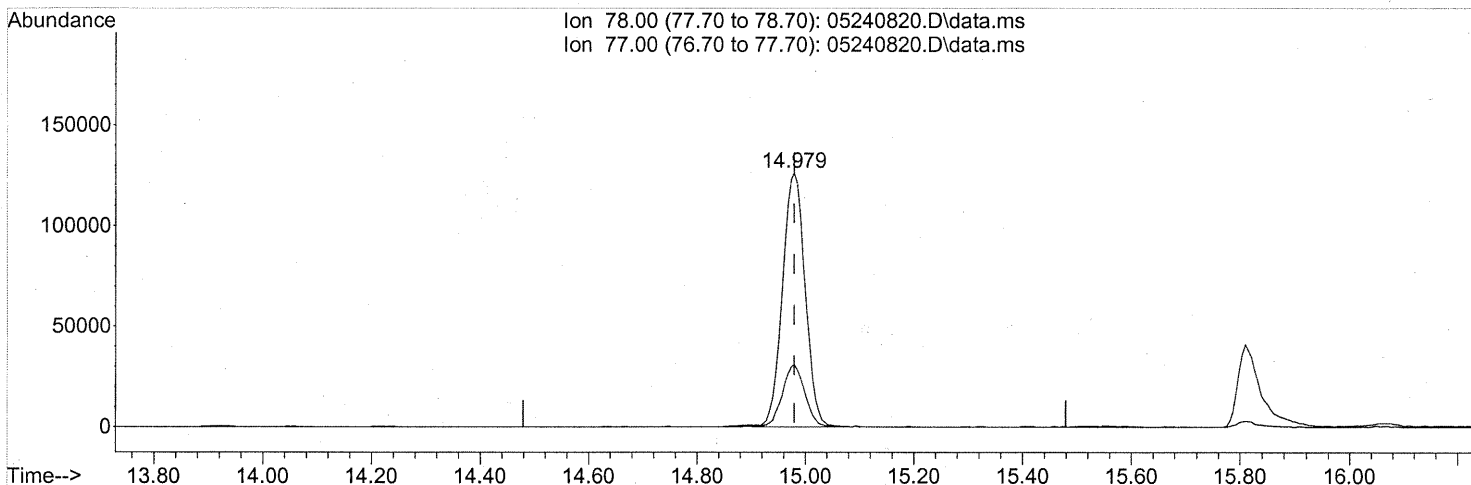
Ion	Exp%	Act%
96.90	100	100
98.90	63.40	64.21
61.00	50.50	44.90
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

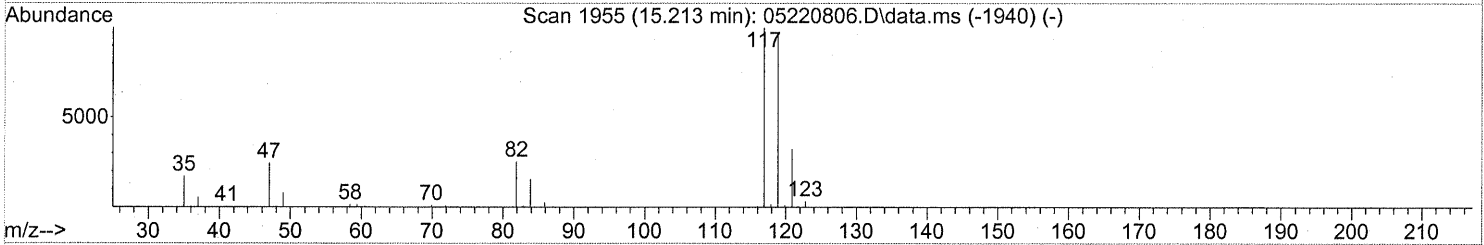
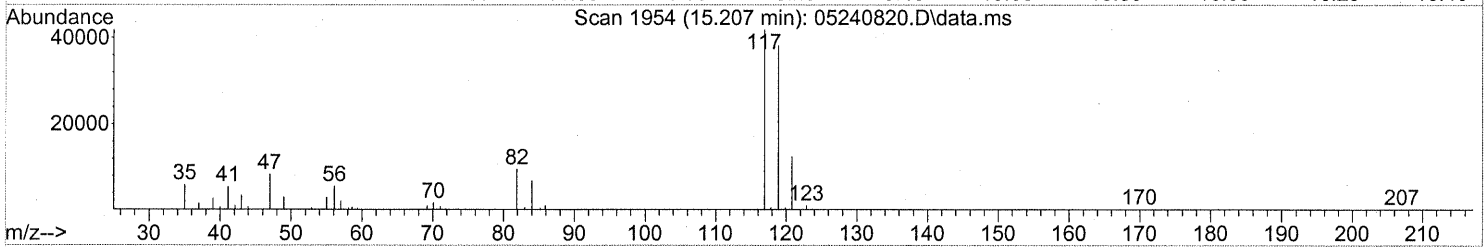
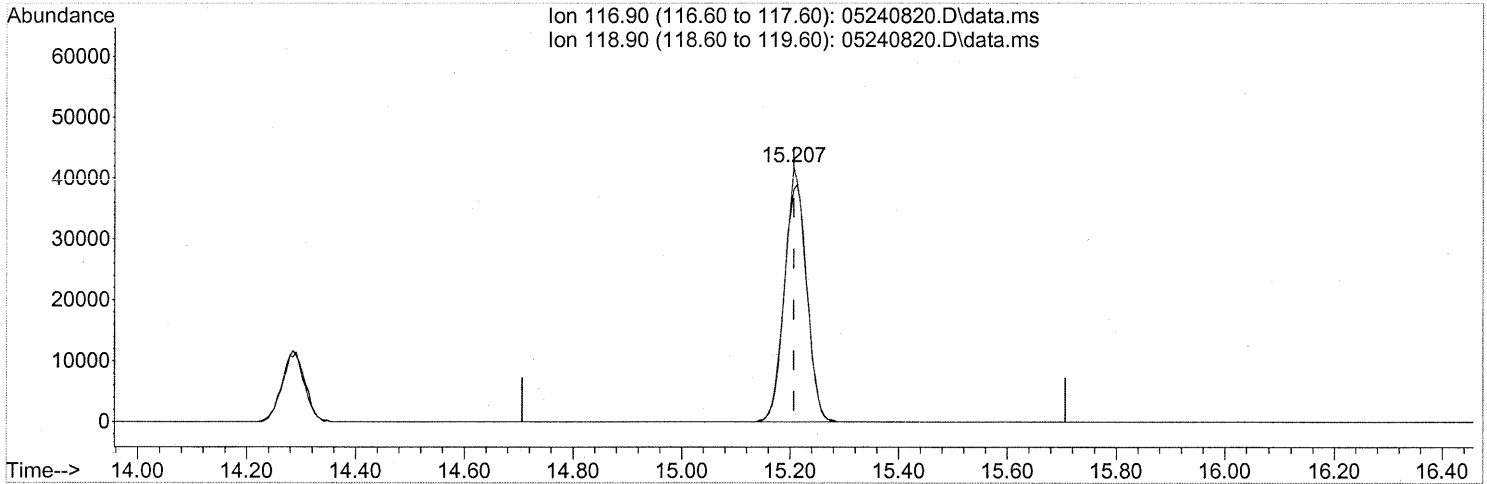
(41) Benzene (T)  
 14.979min (-0.000) 2.93ng  
 response 366227

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(42) Carbon Tetrachloride (T)

15.207min (-0.000) 2.42ng

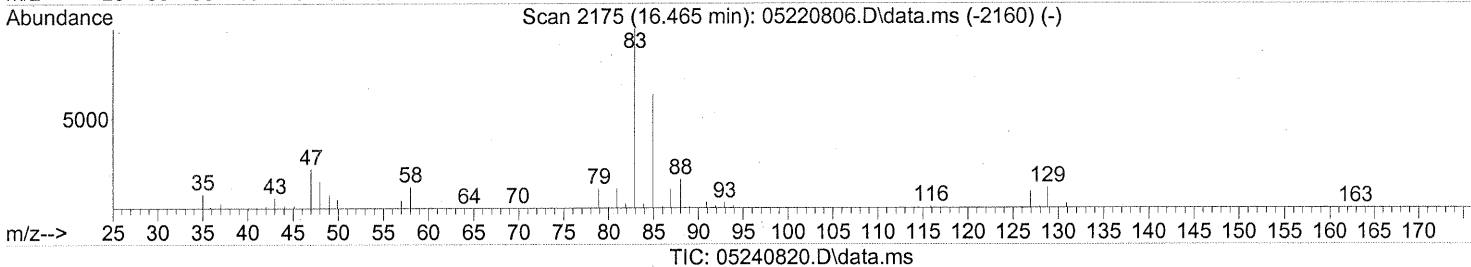
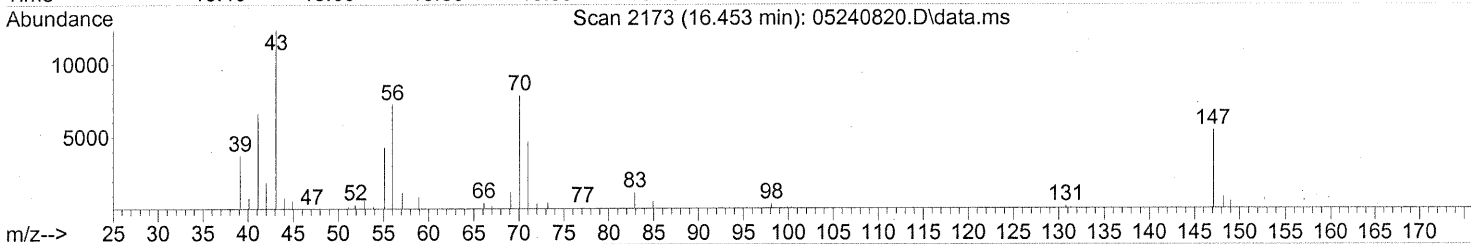
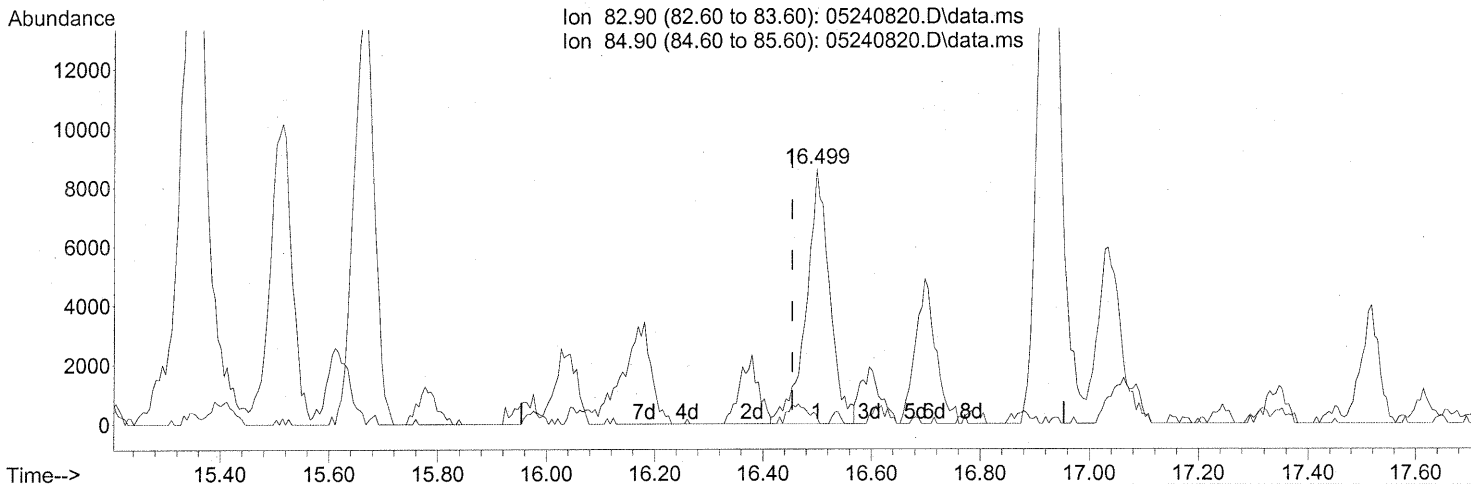
response 116242

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	97.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 8:14 pm  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

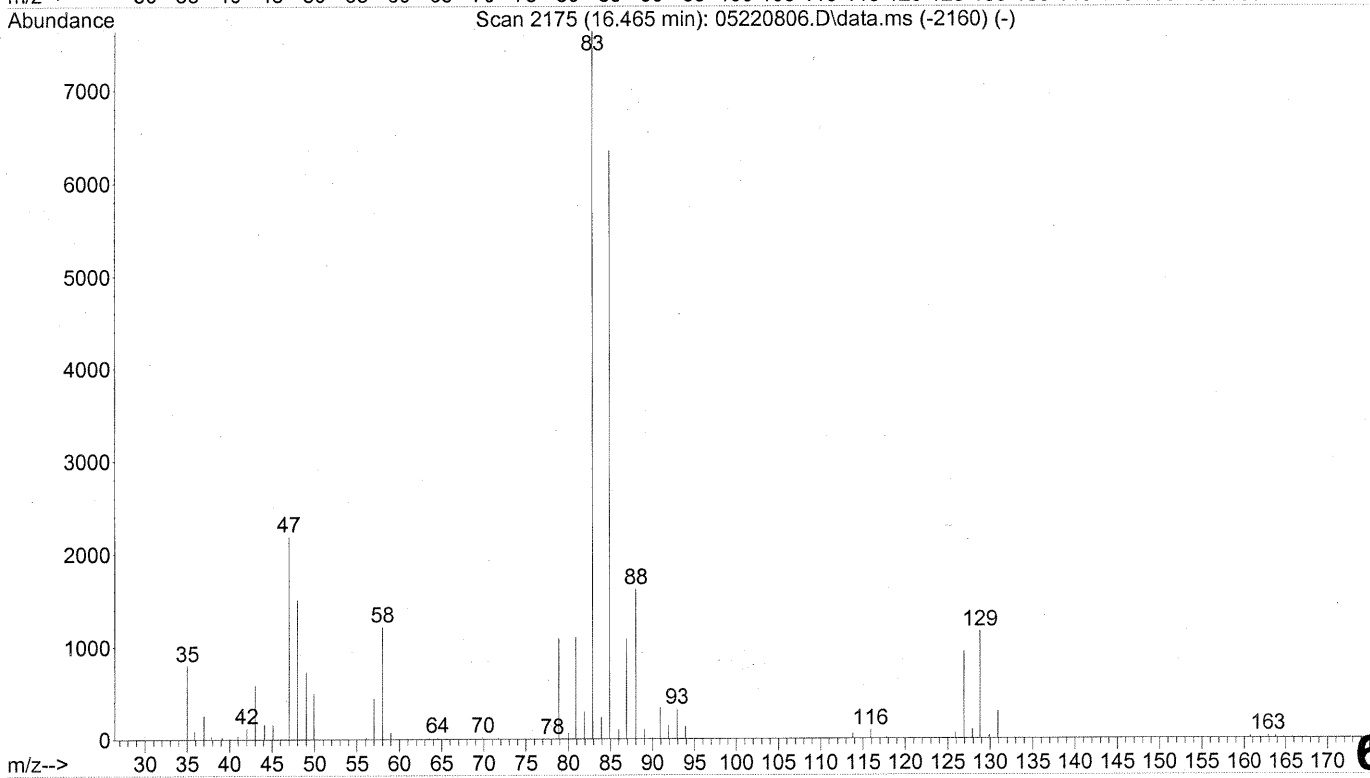
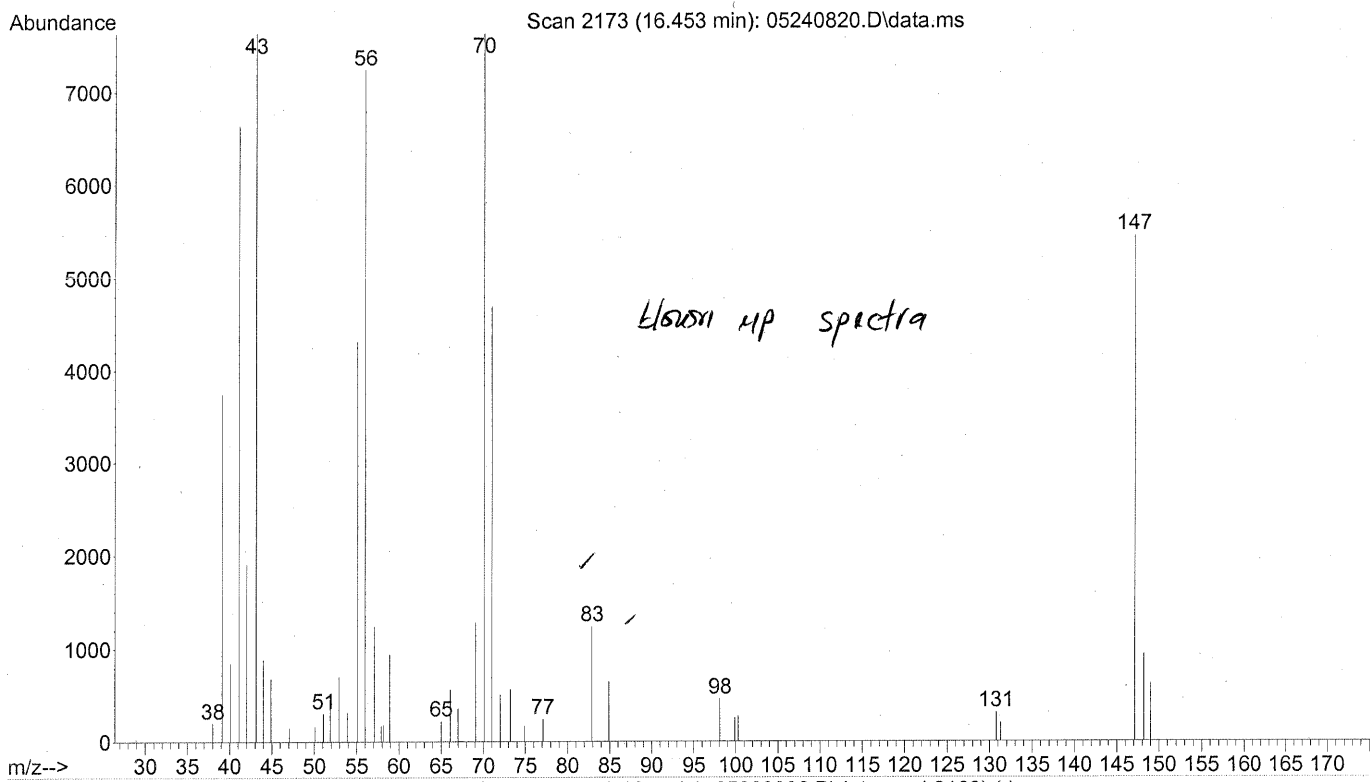
16.499min (+0.045) 0.61ng

response 25862

*su blown up spectra*

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

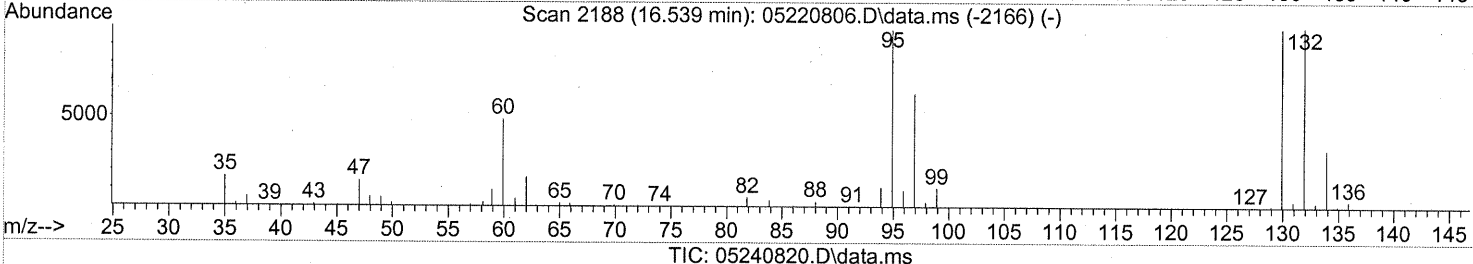
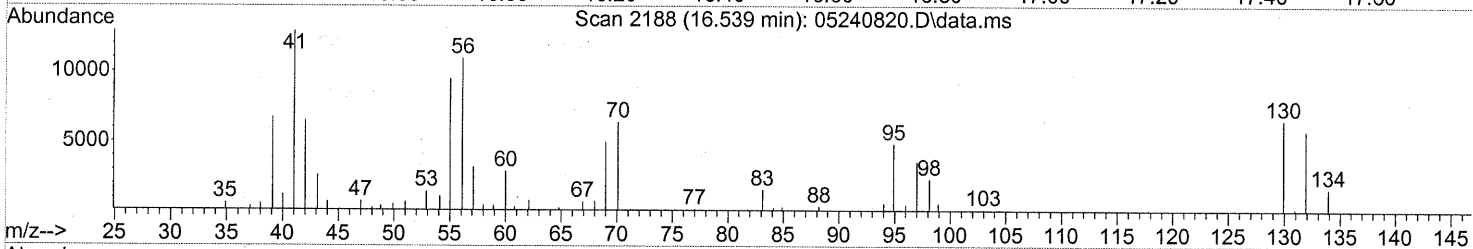
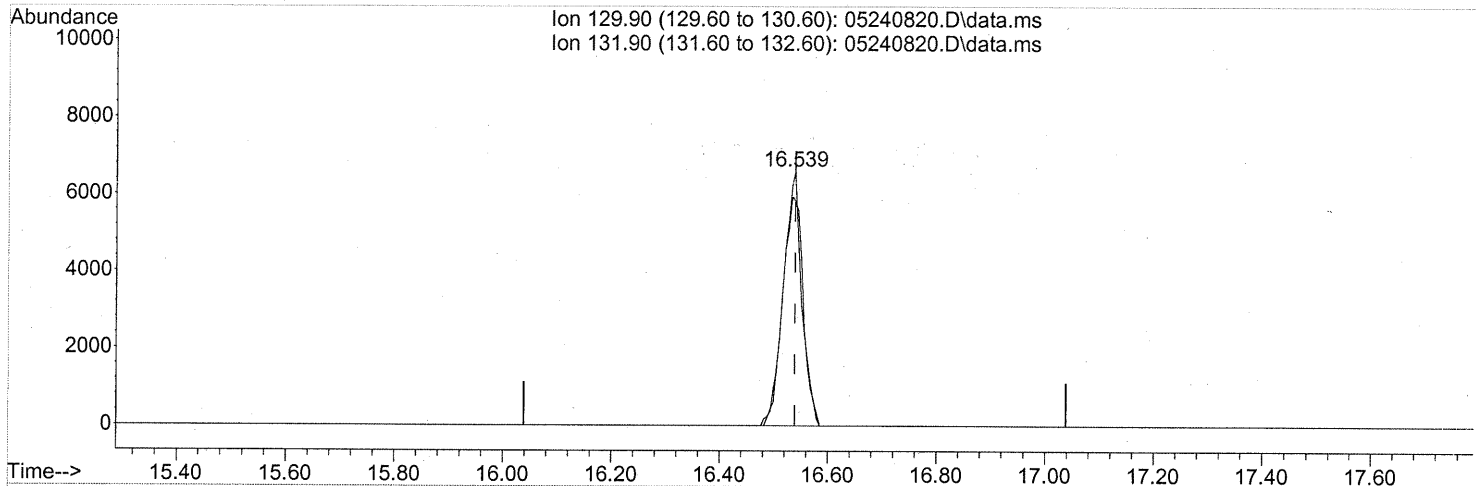
File : J:\MS13\DATA\2008\_05\24\05240820.D  
Operator : WA  
Acquired : 24 May 2008 8:14 pm using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801442-013 (1000ml)  
Misc Info : ENSR SG85B-05 (-3.0, 3.5)  
Vial Number: 17



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



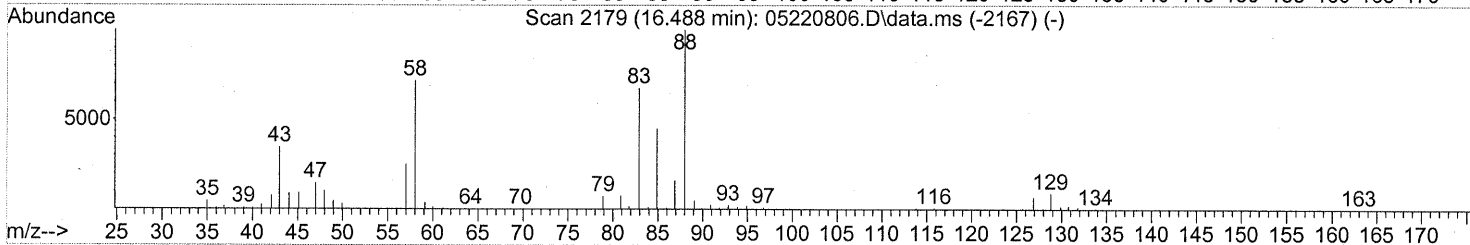
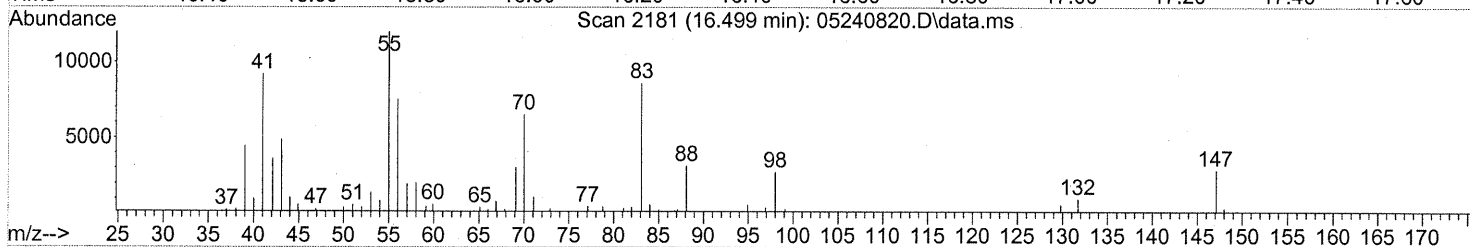
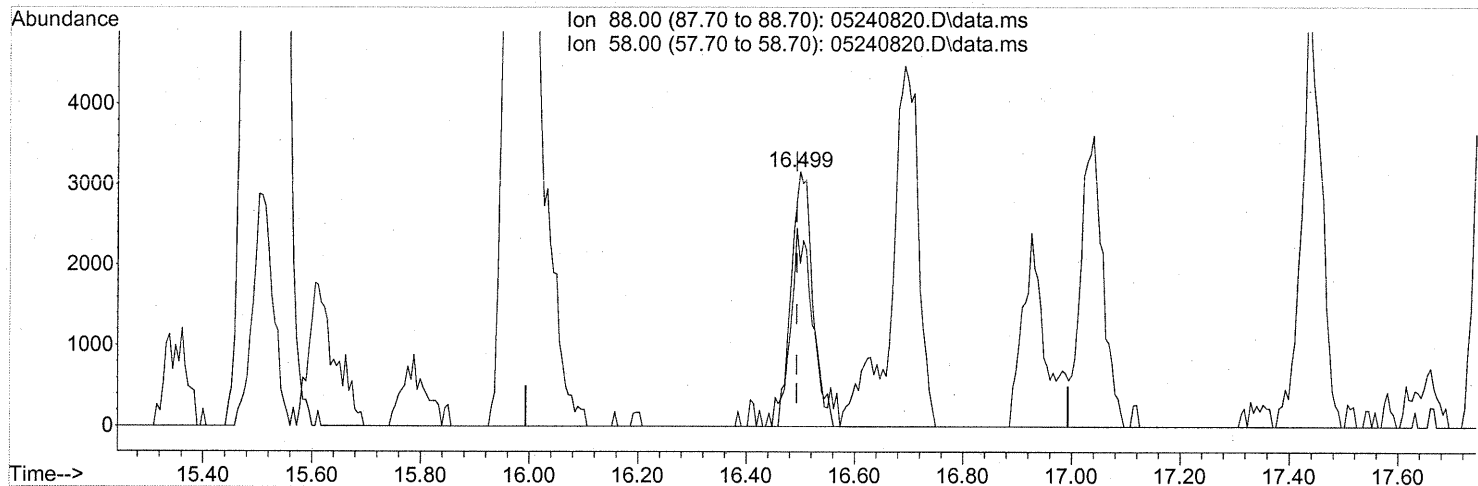
(47) Trichloroethene (T)  
 16.539min (-0.000) 0.40ng  
 response 15488

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	101.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)

16.499min (+0.006) 0.37ng

response 8660

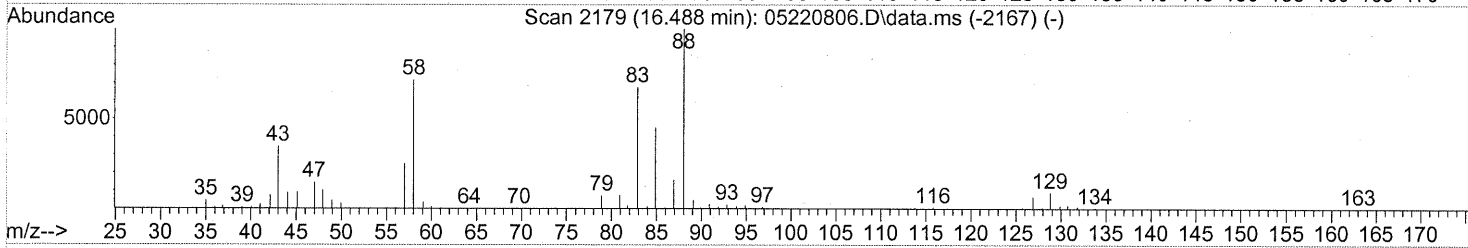
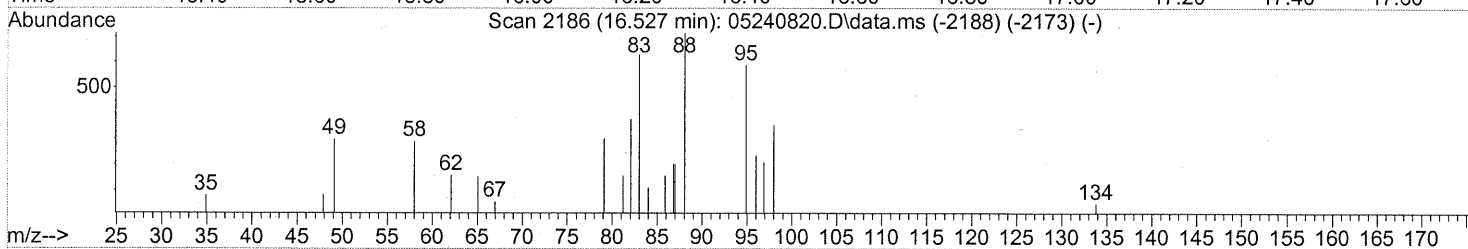
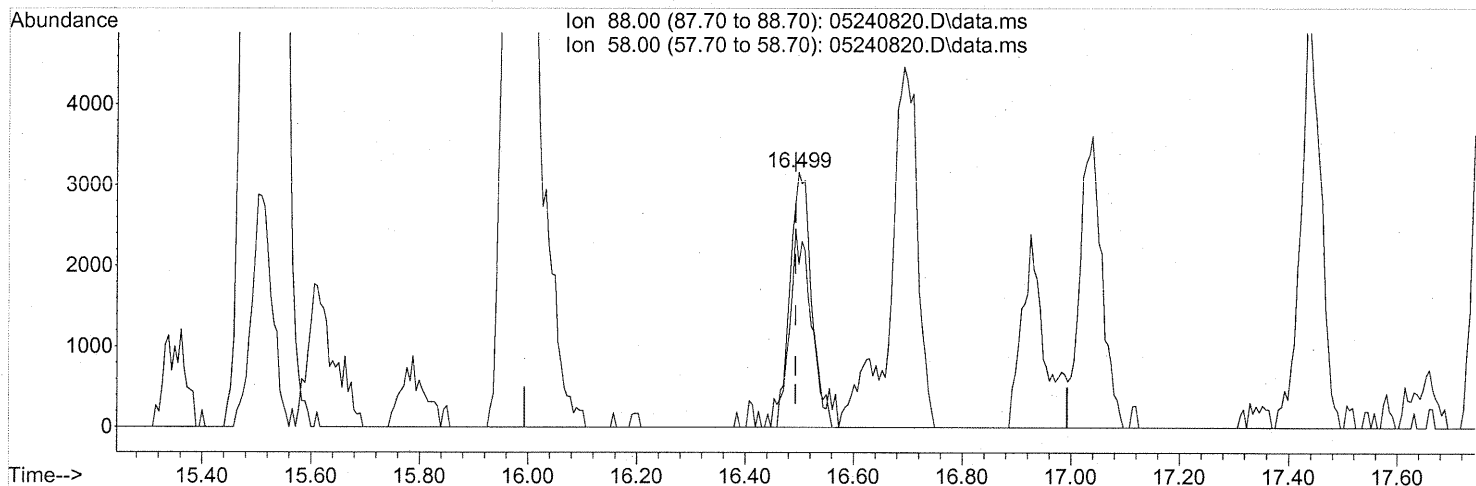
*before*

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	79.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801422-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 09:05:25 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)  
 16.499min (+0.006) 0.37ng  
 response 8660

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	79.99
0.00	0.00	0.00
0.00	0.00	0.00

*after substr*

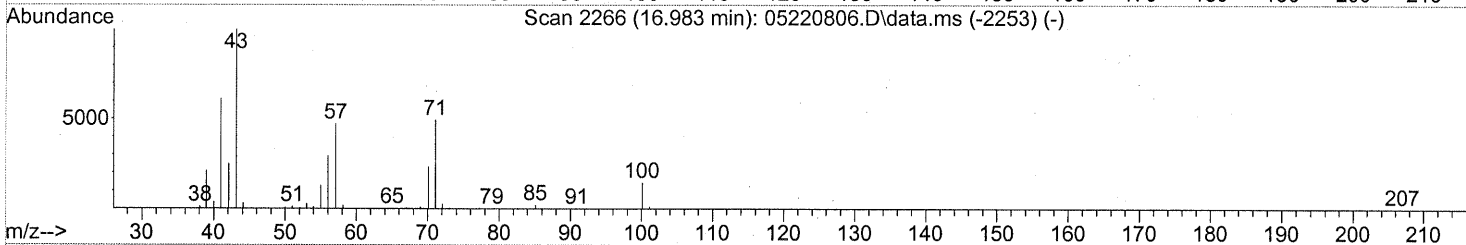
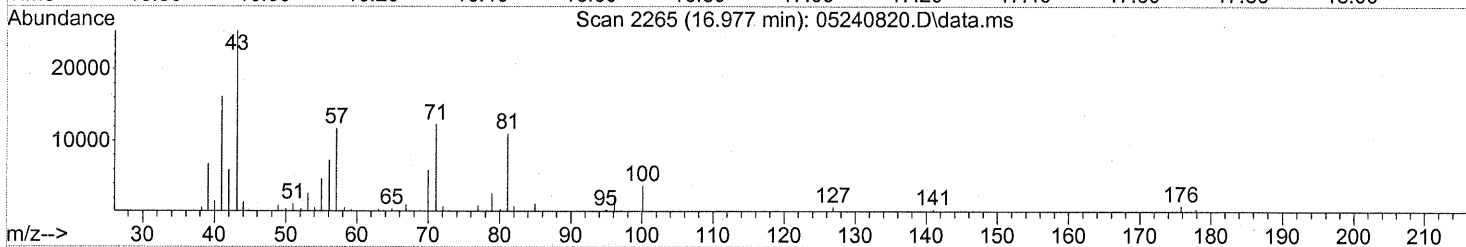
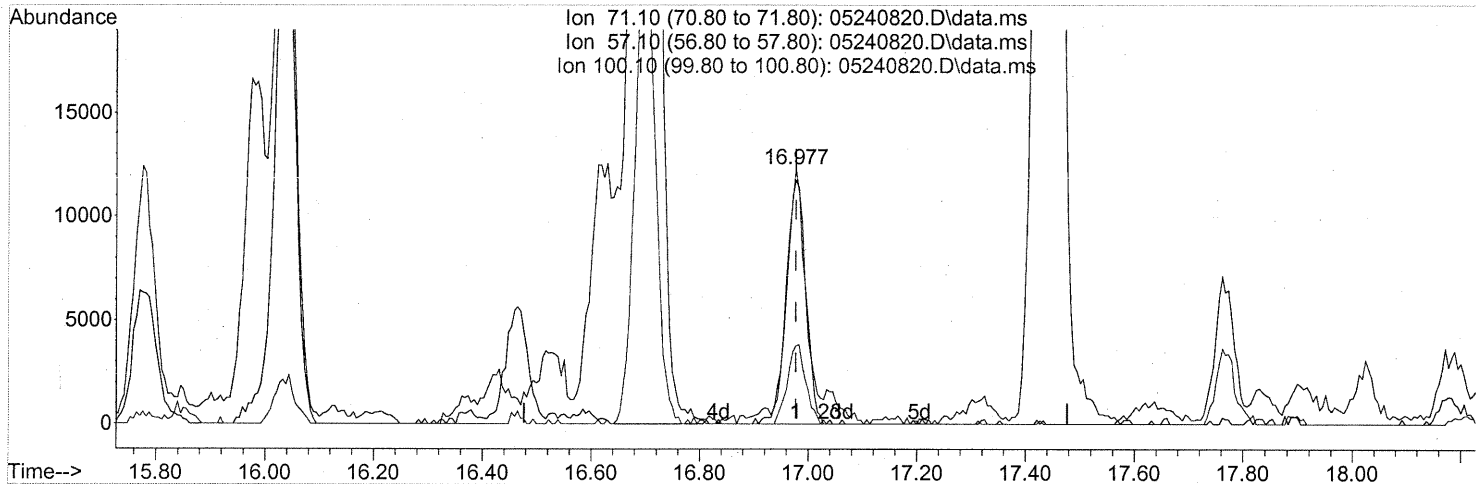
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(51) n-Heptane (T)  
 16.977min (-0.000) 0.89ng  
 response 29549

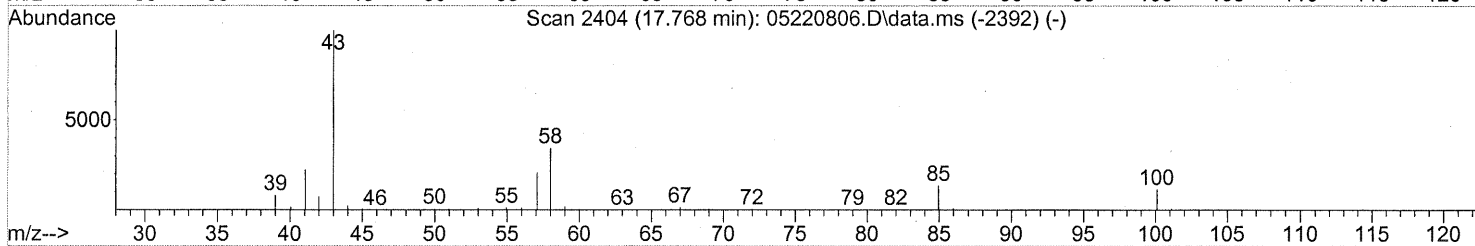
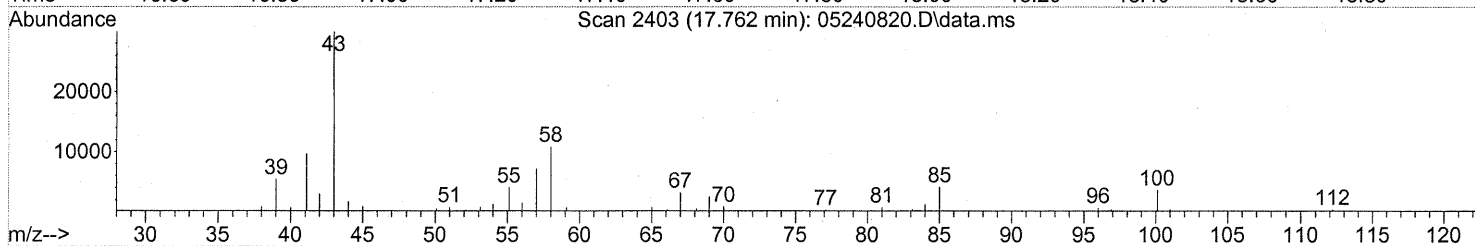
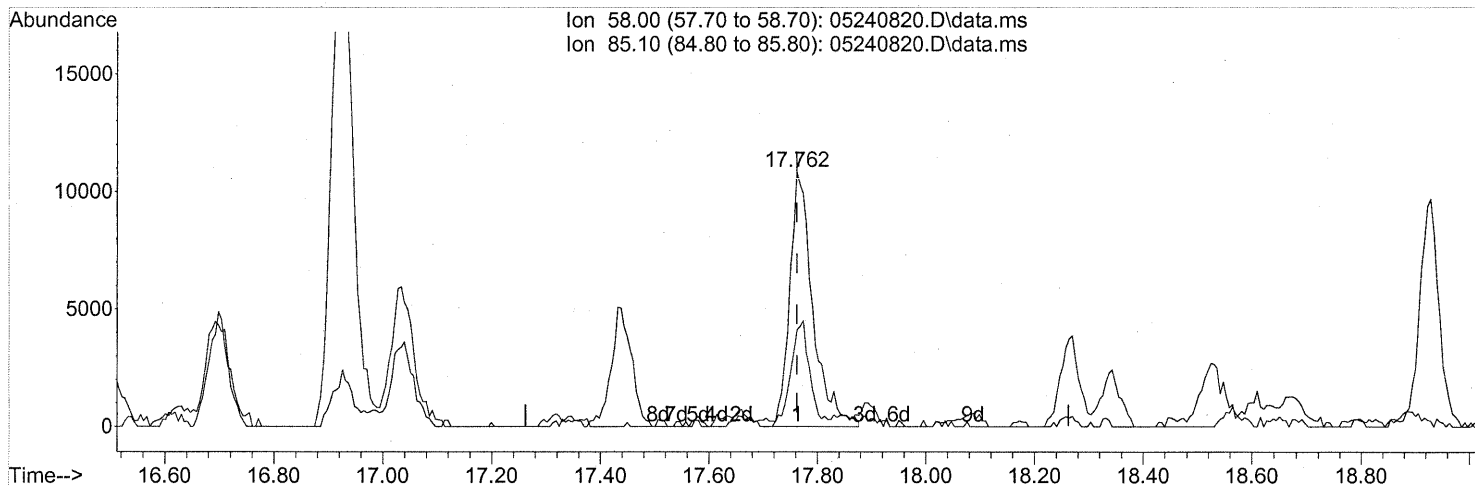
Ion	Exp%	Act%
71.10	100	100
57.10	124.90	94.15#
100.10	30.10	30.39
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(53) 4-Methyl-2-pentanone (T)

17.762min (-0.000) 0.96ng

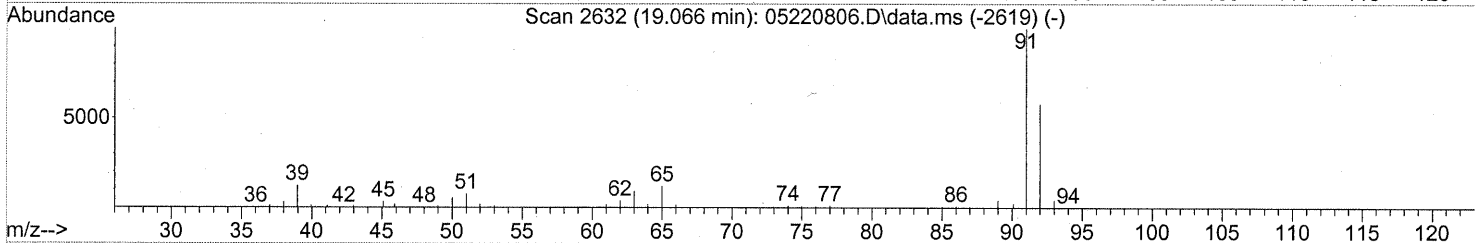
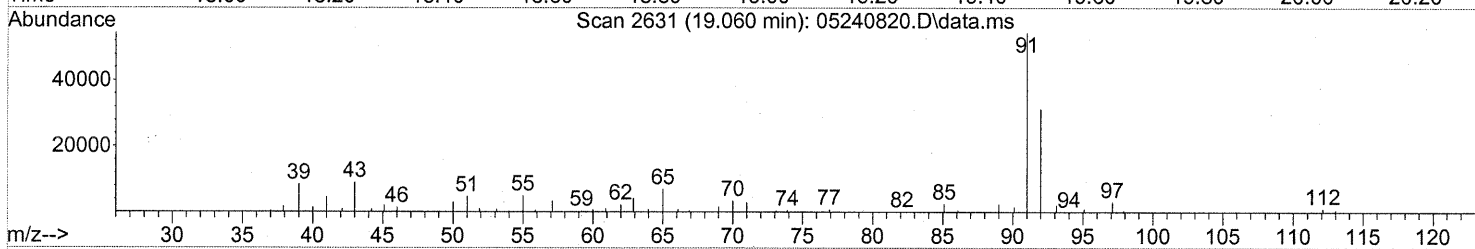
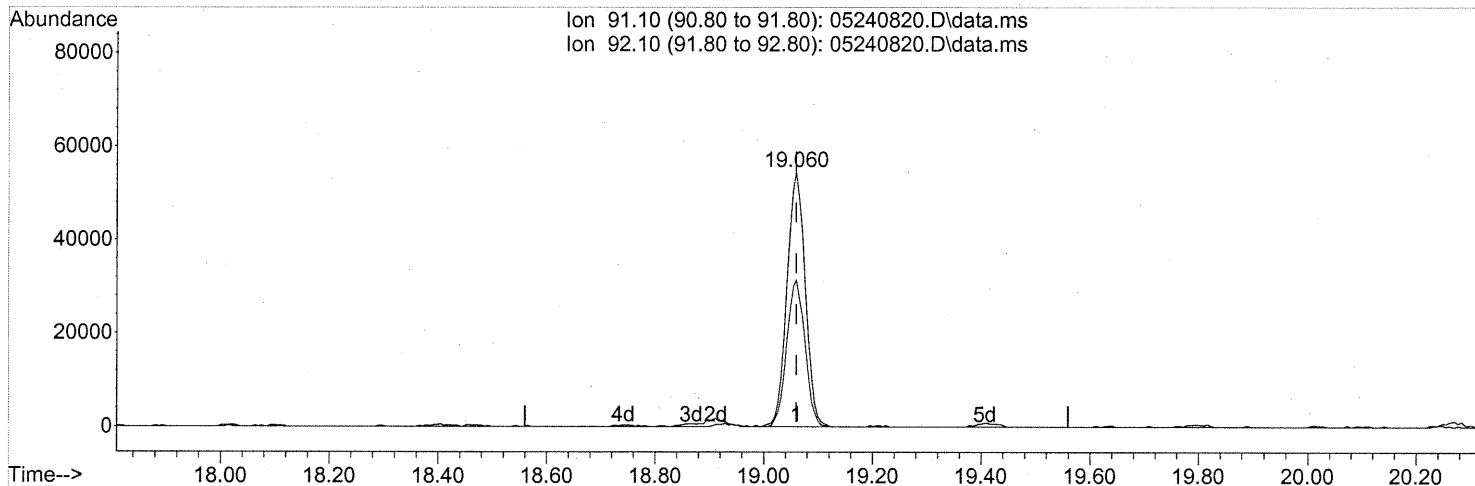
response 31987

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	34.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 0.93ng

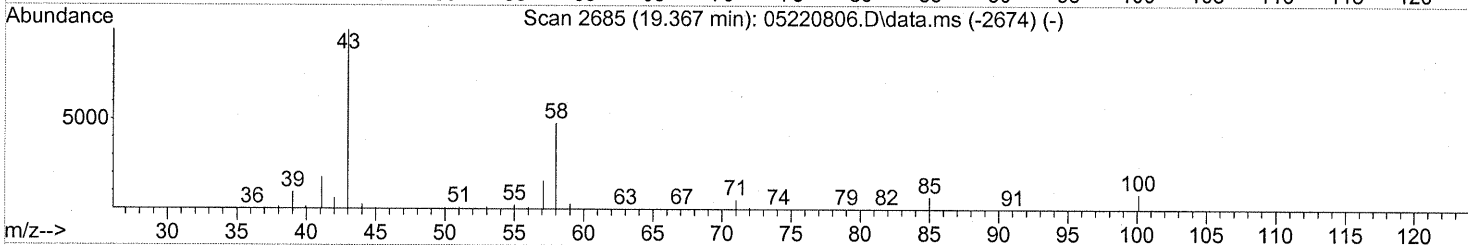
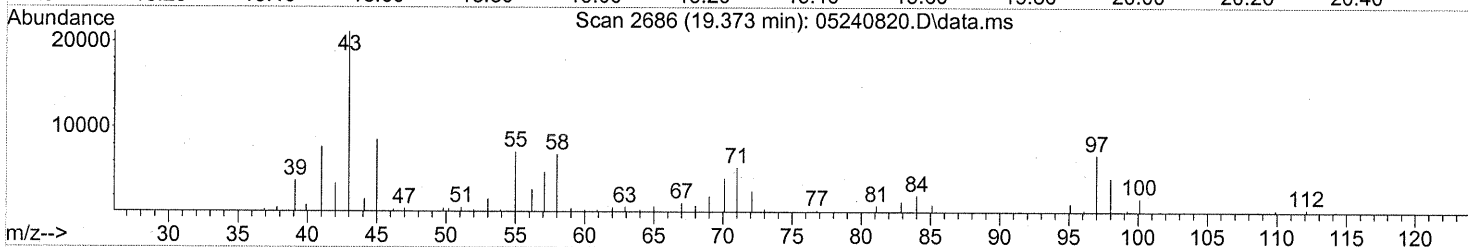
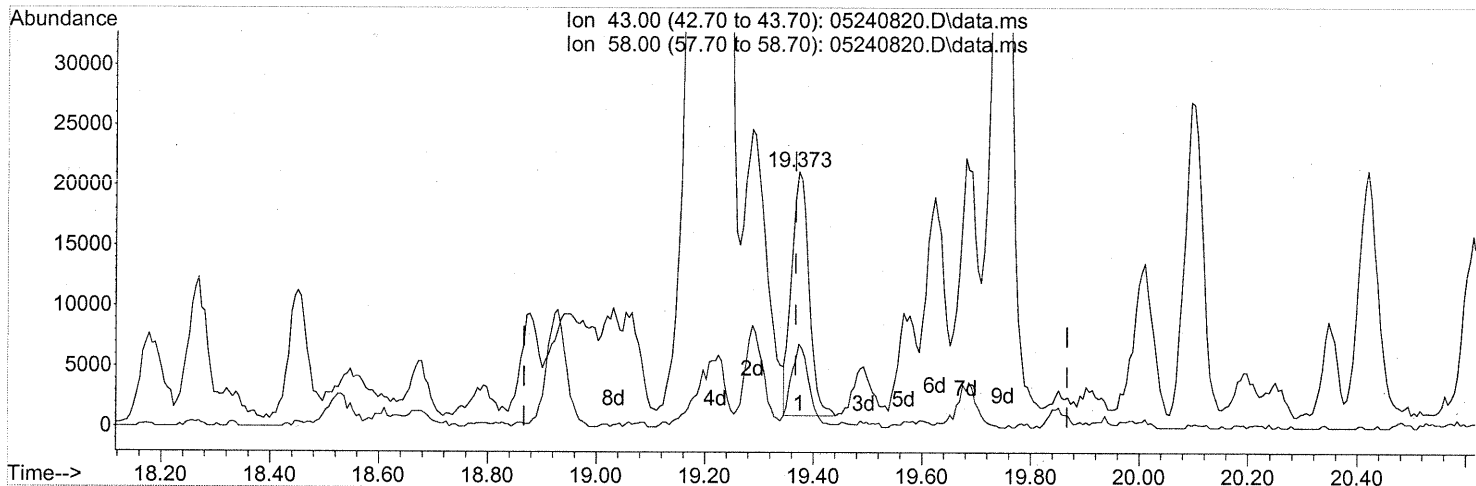
response 127566

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

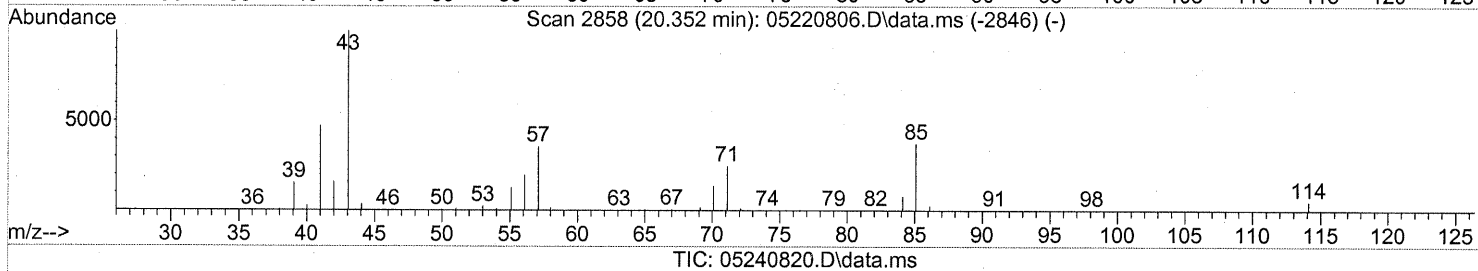
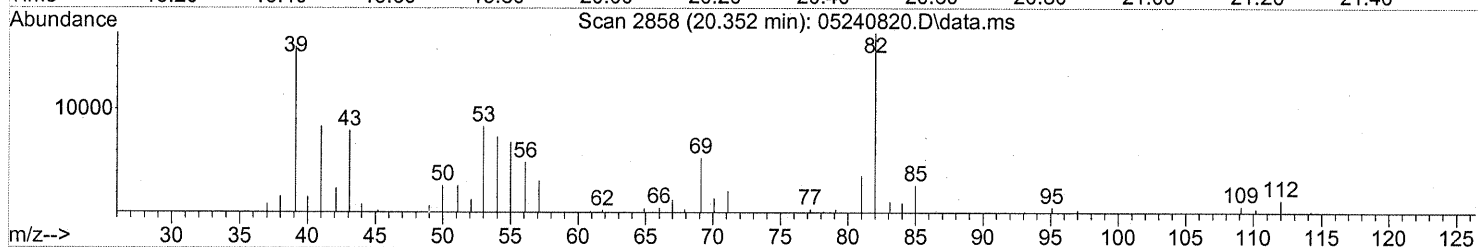
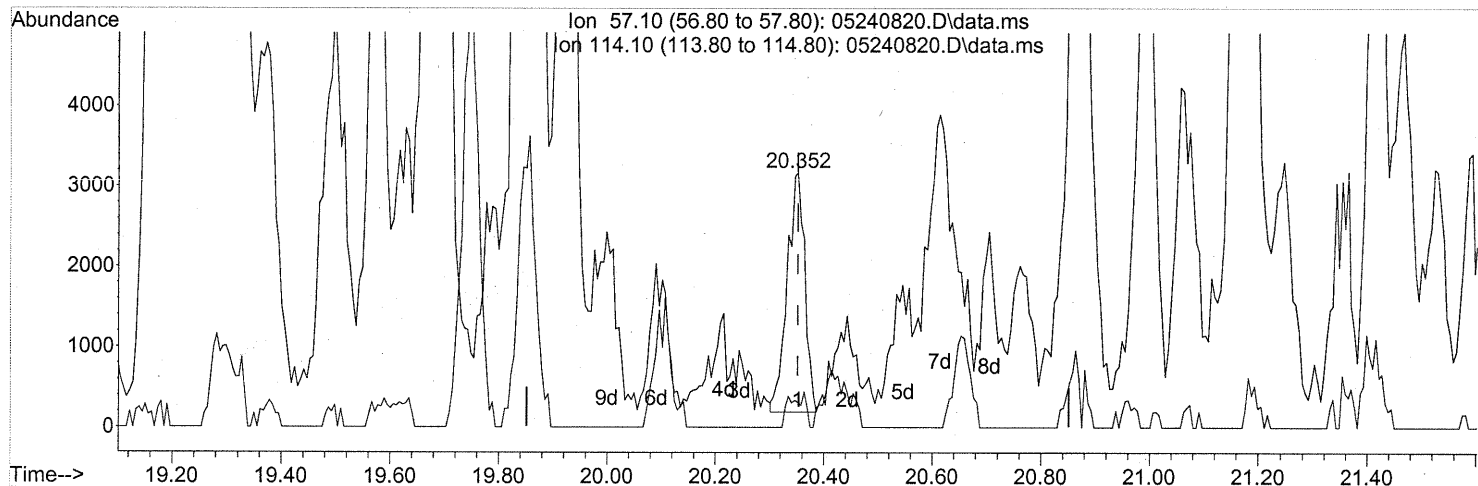
(59) 2-Hexanone (T)  
 19.373min (+0.006) 0.47ng  
 response 44997

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	35.57#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



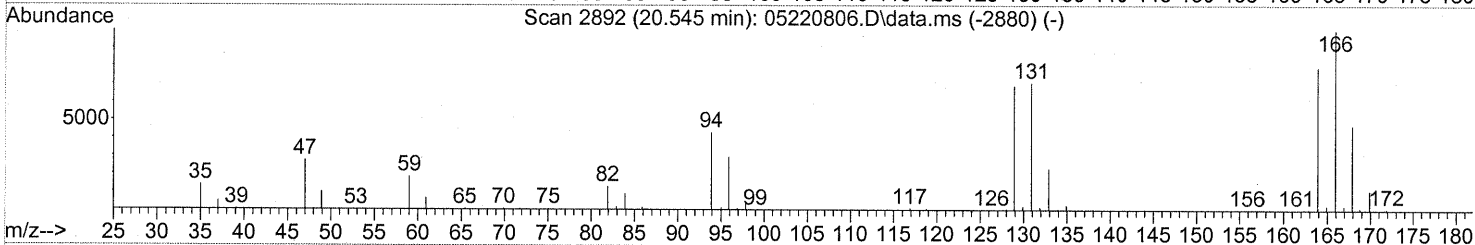
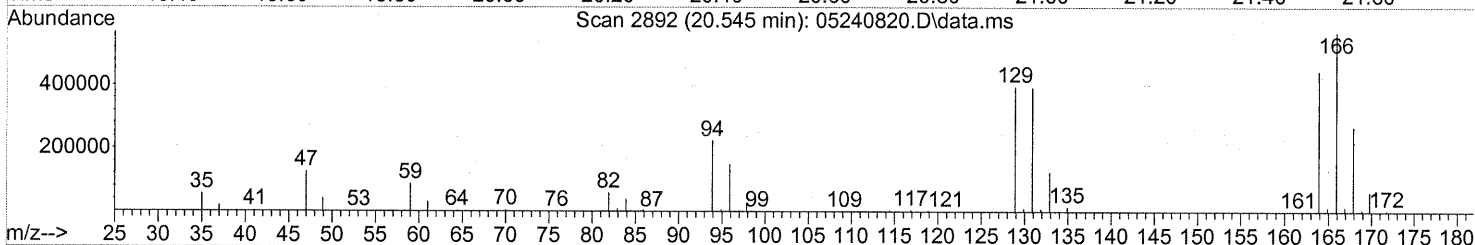
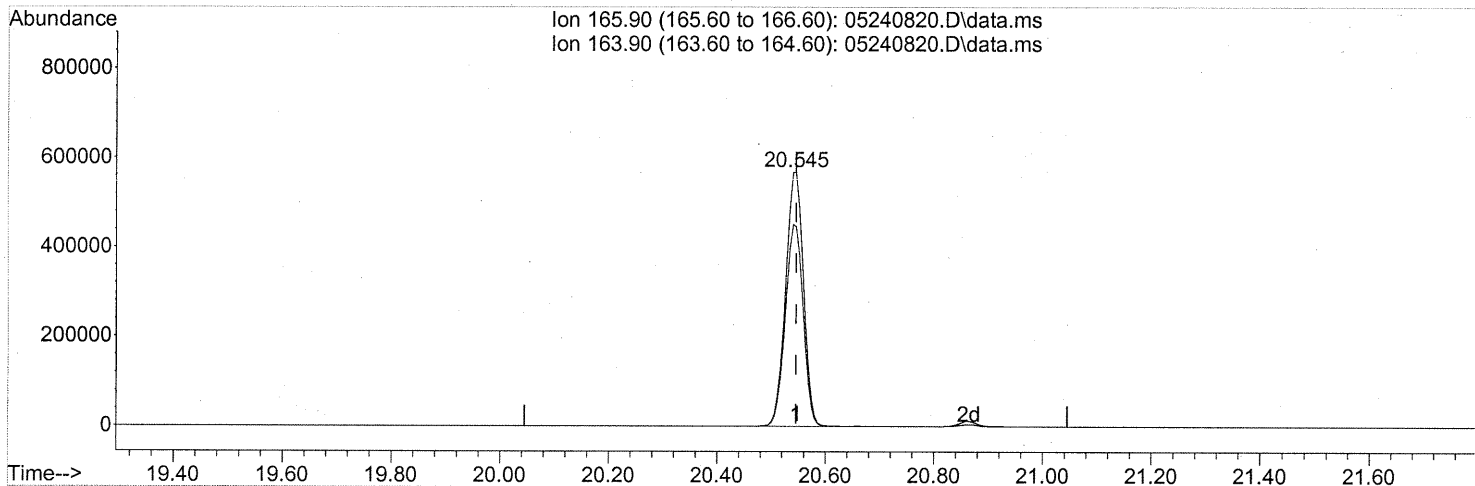
(63) n-Octane (T)  
 20.352min (-0.000) 0.22ng  
 response 6651

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	13.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(64) Tetrachloroethene (T)

20.545min (-0.000) 31.53ng

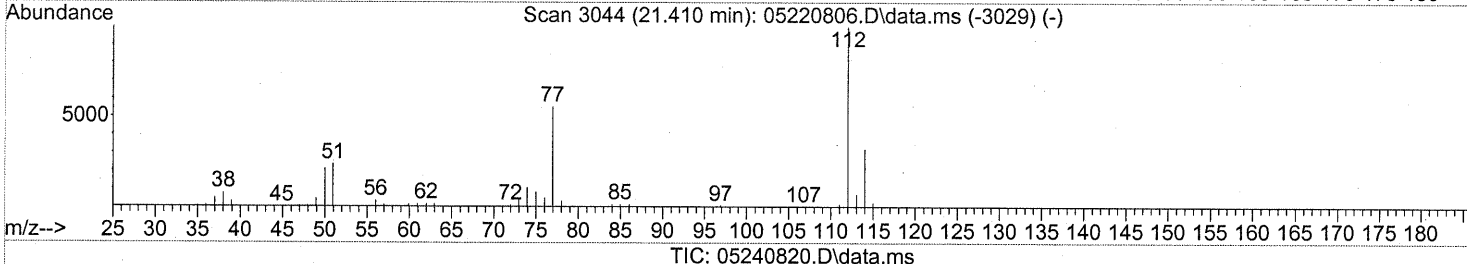
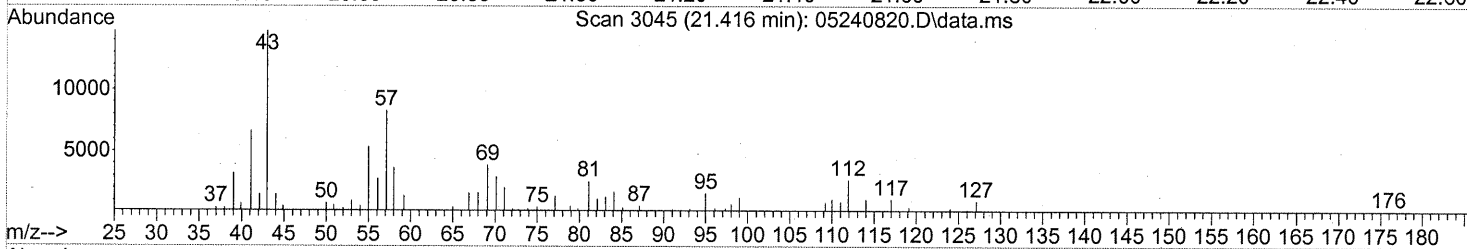
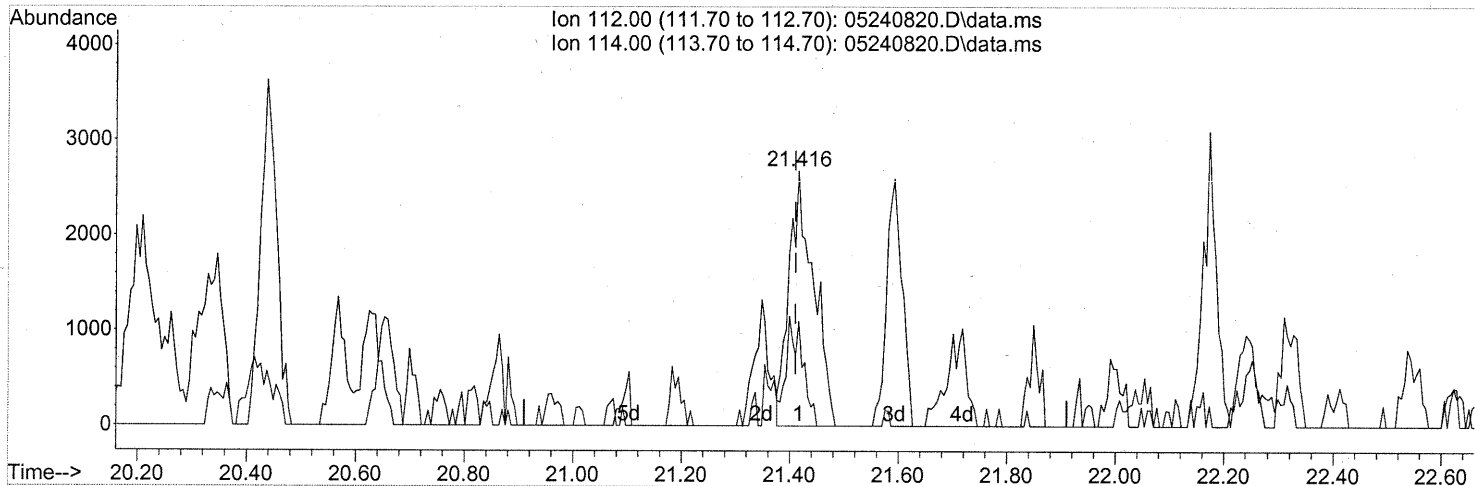
response 1284198

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



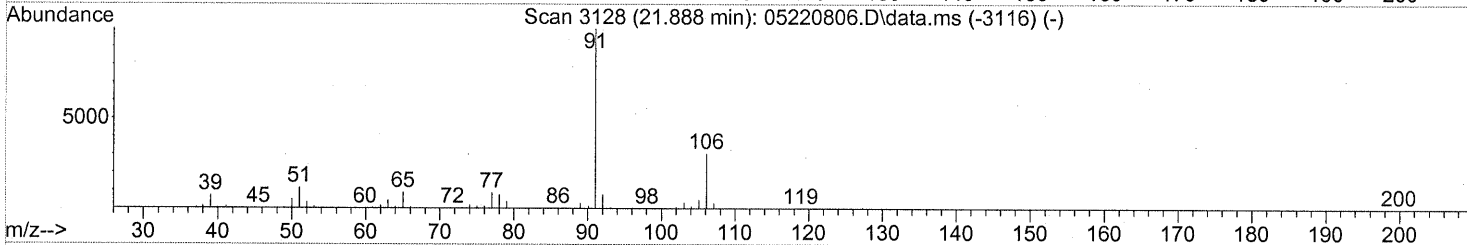
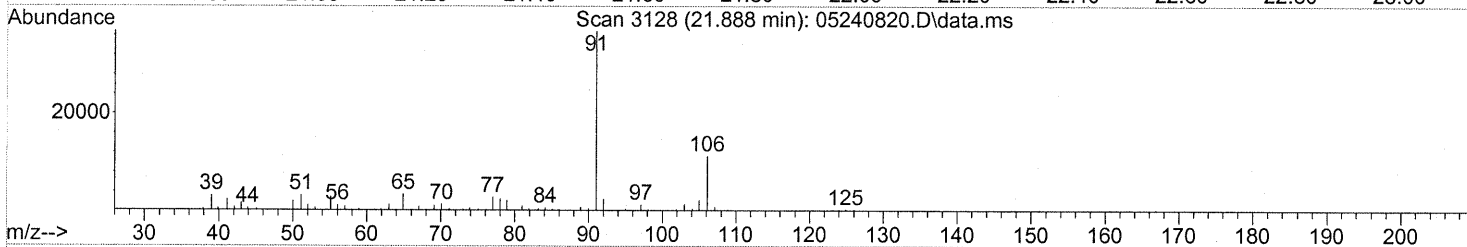
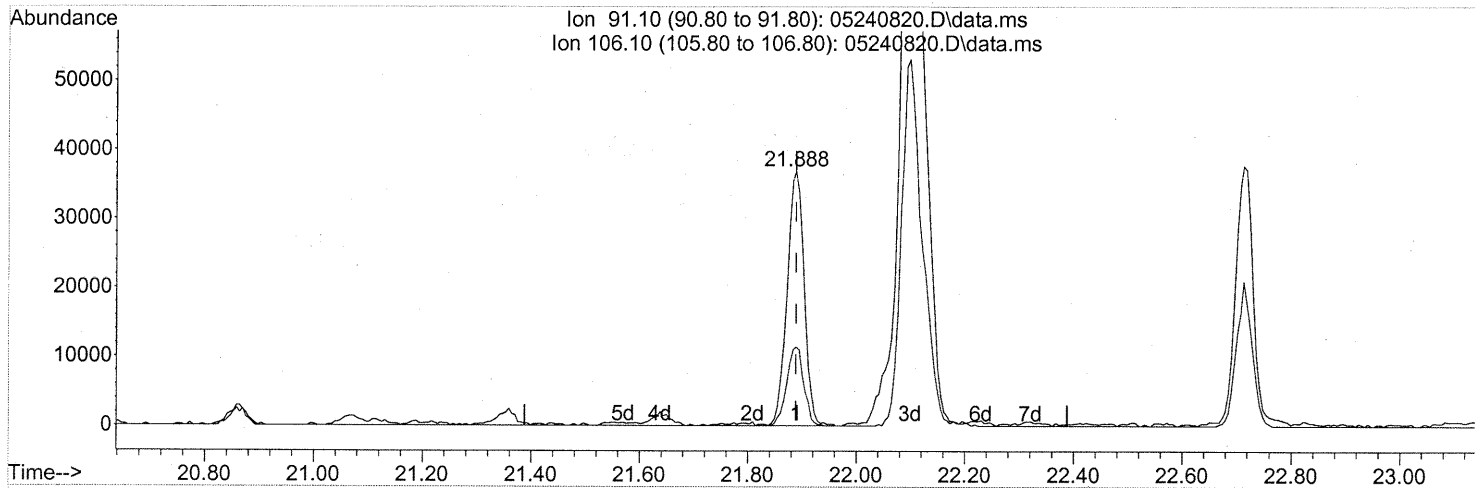
(65) Chlorobenzene (T)  
 21.416min (+0.006) 0.09ng  
 response 8357

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	27.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

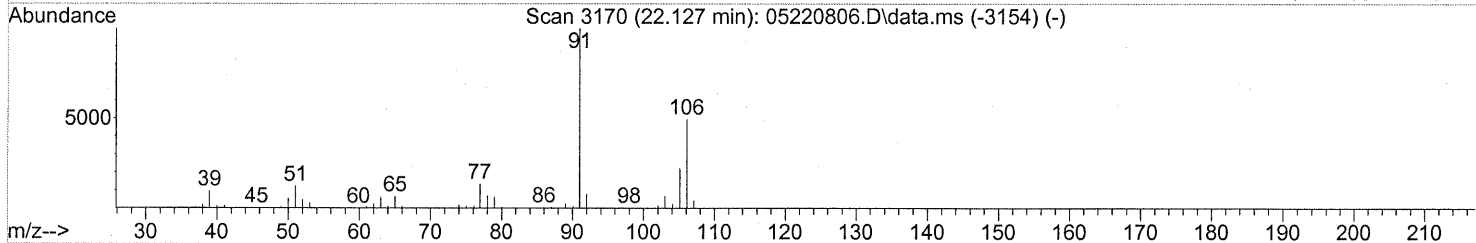
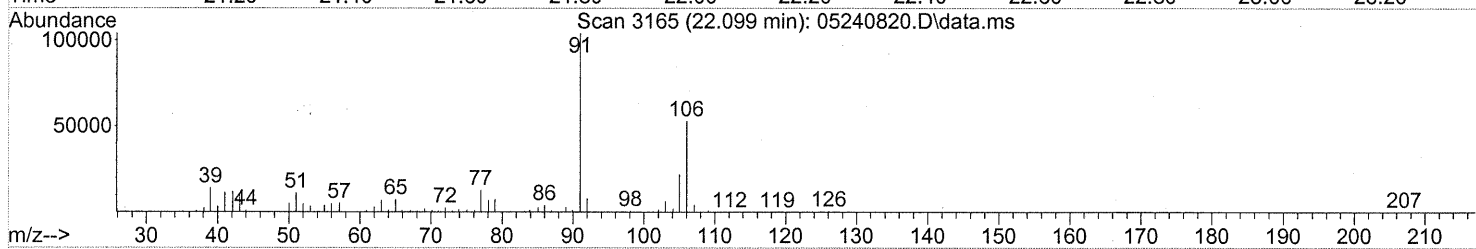
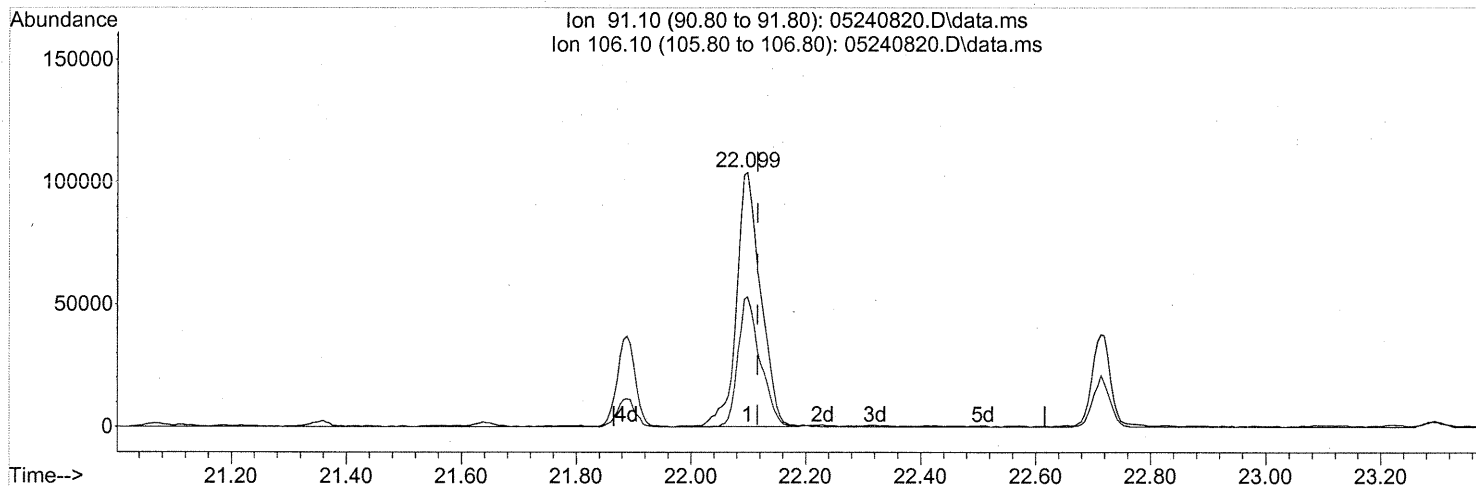
(66) Ethylbenzene (T)  
 21.888min (-0.000) 0.51ng  
 response 80461

Ion	Exp%	Act%
91.10	100	100
106.10	34.10	30.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

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

22.099min (-0.017) 2.87ng

response 303031

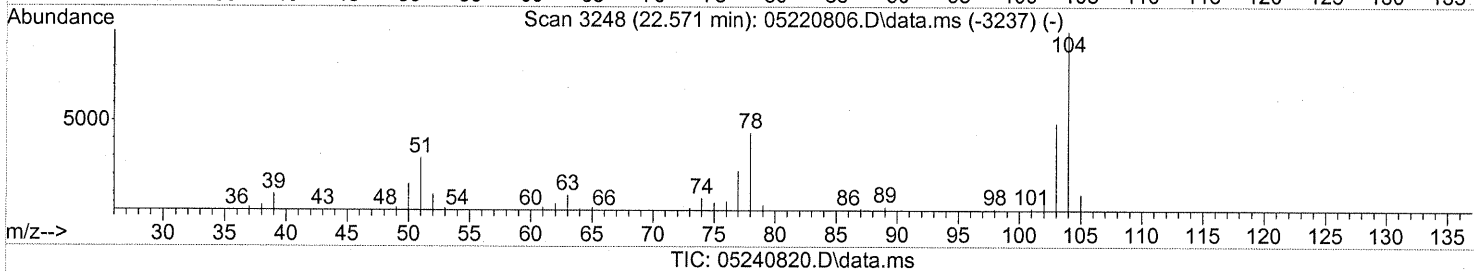
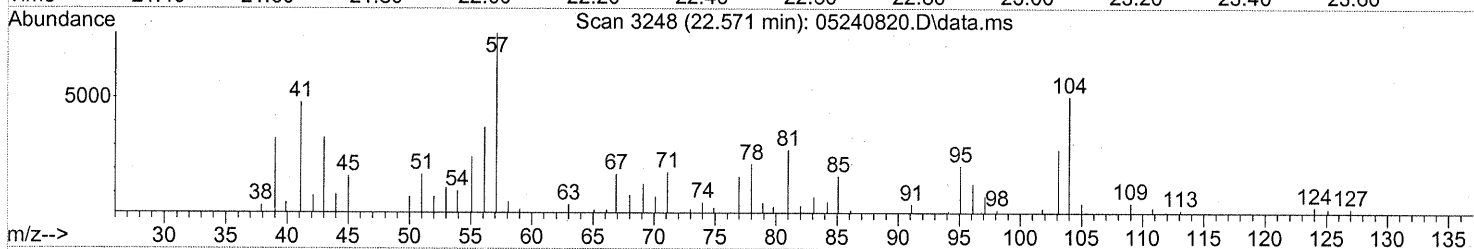
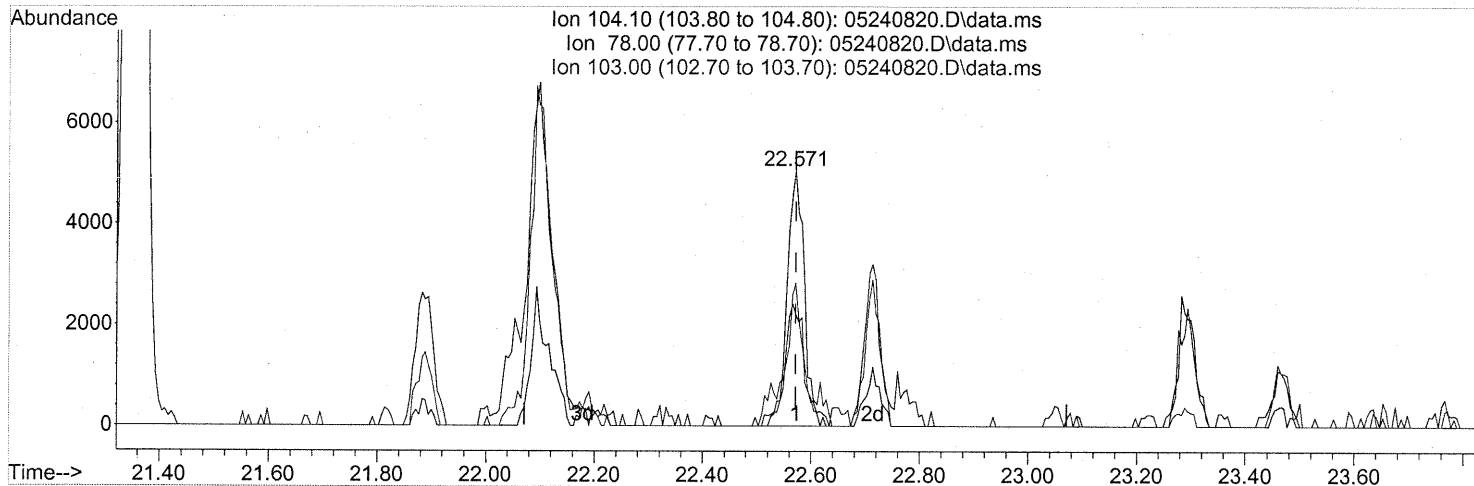
Ion	Exp%	Act%
91.10	100	100
106.10	54.60	47.21
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



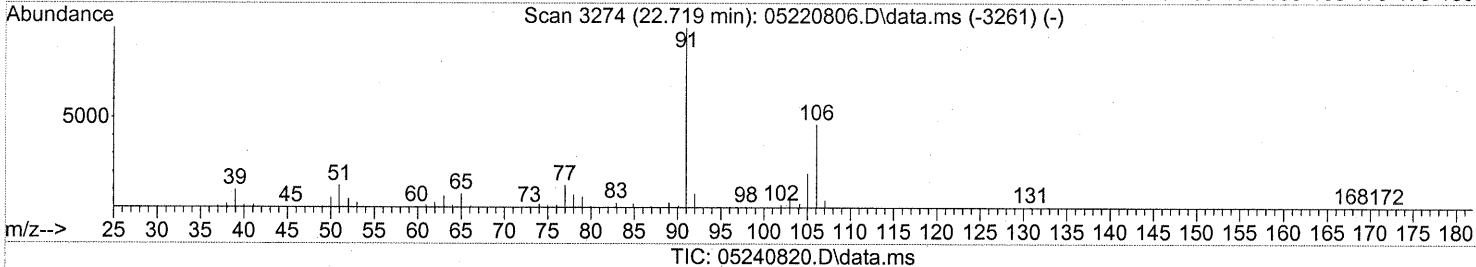
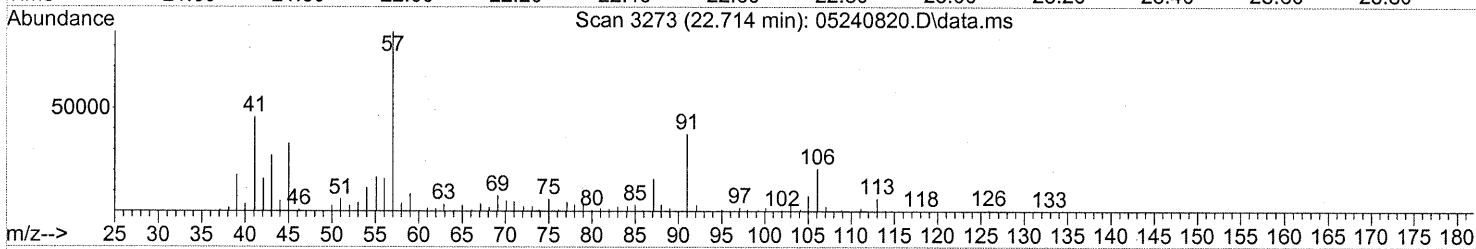
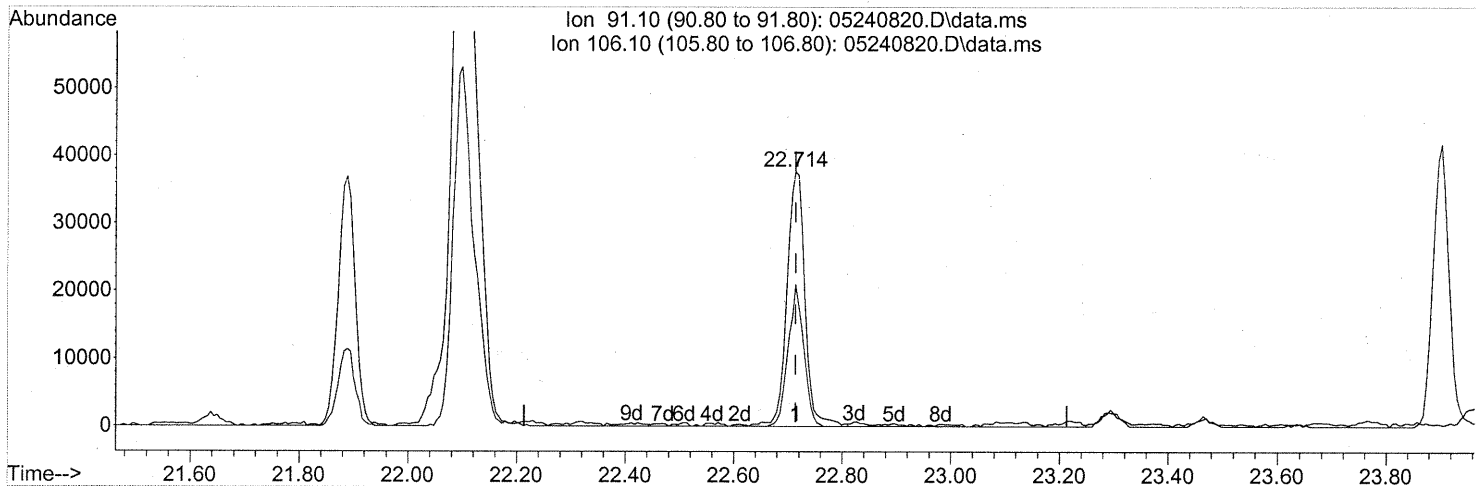
(69) Styrene (T)  
 22.571min (-0.000) 0.12ng  
 response 11018

Ion	Exp%	Act%
104.10	100	100
78.00	39.40	56.32
103.00	47.10	41.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



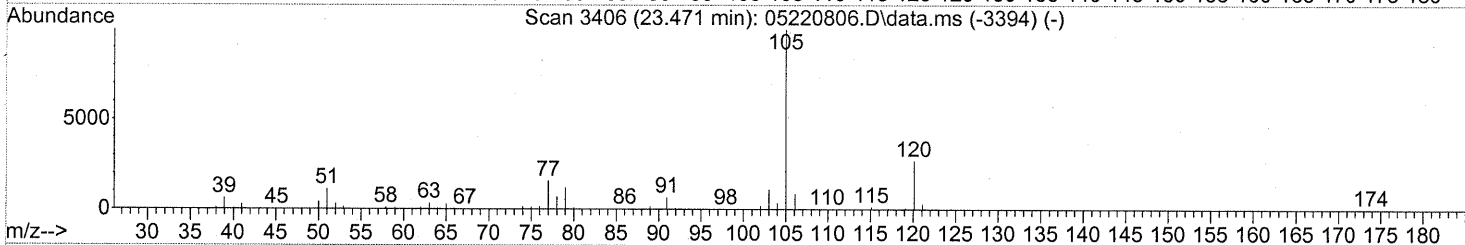
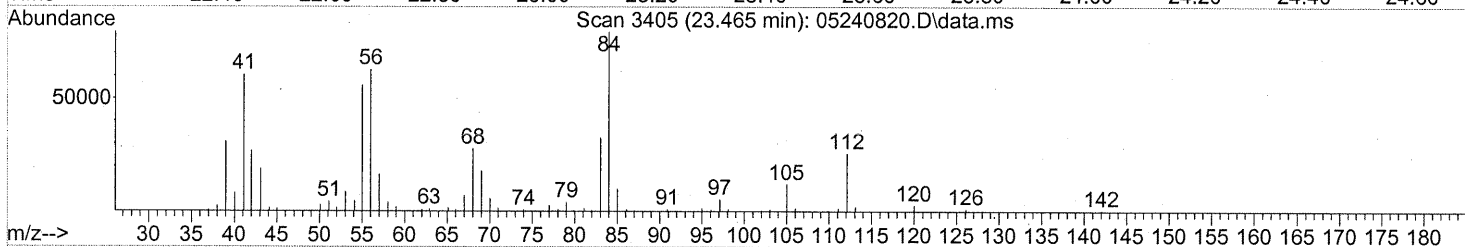
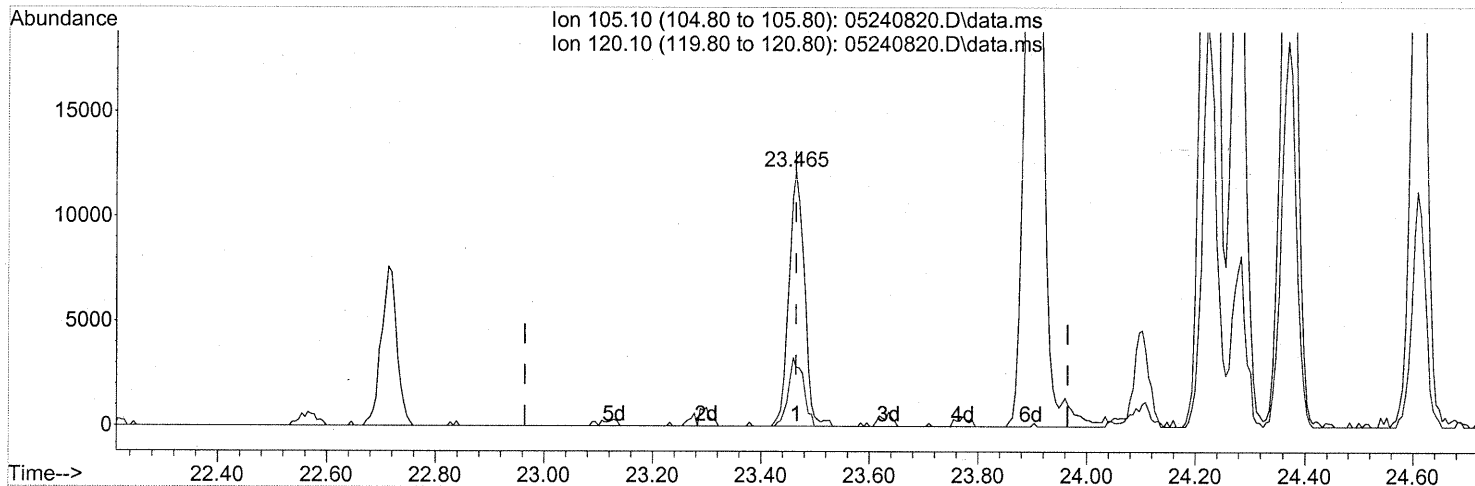
(70) o-Xylene (T)  
 22.714min (-0.000) 0.76ng  
 response 86090

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	48.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

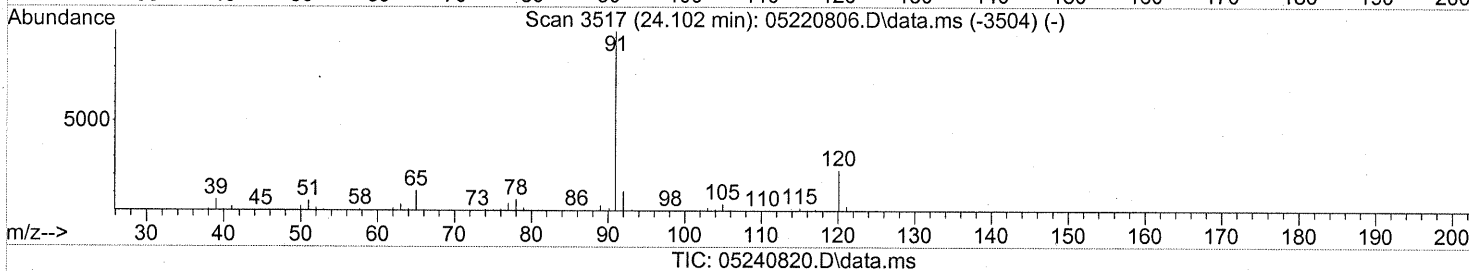
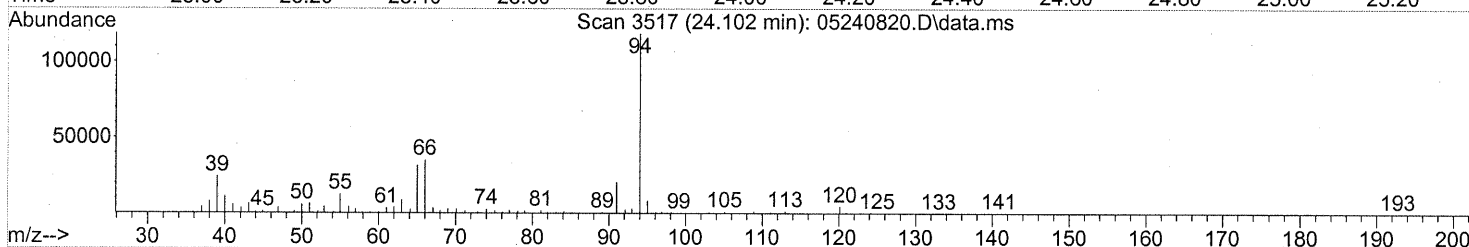
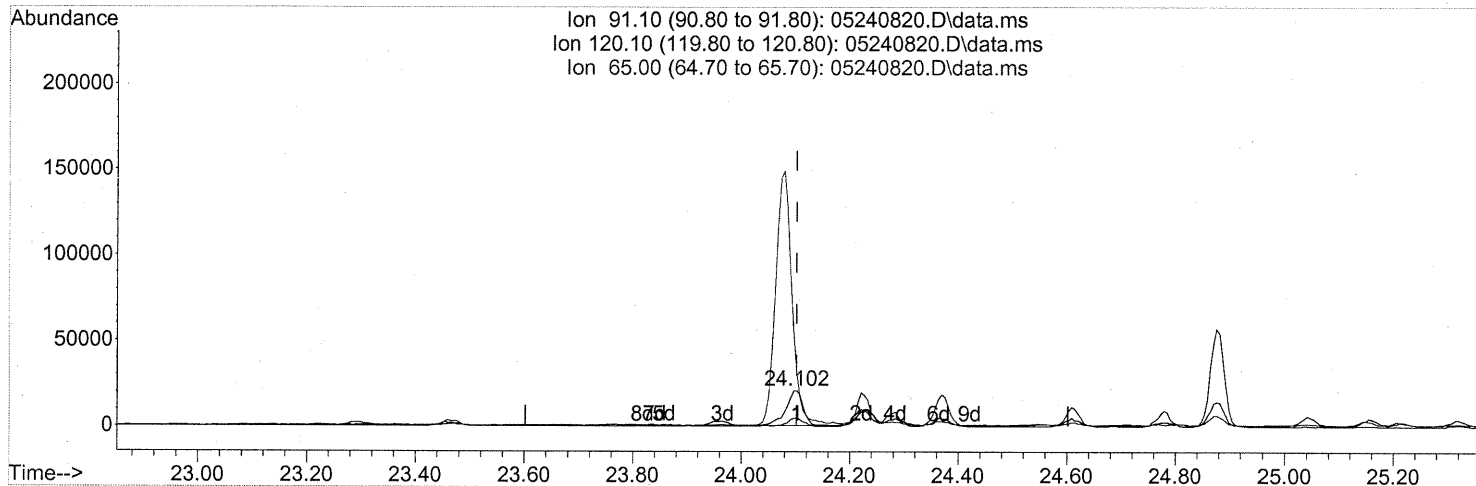
(74) Cumene (T)  
 23.465min (-0.000) 0.16ng  
 response 24064

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	26.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

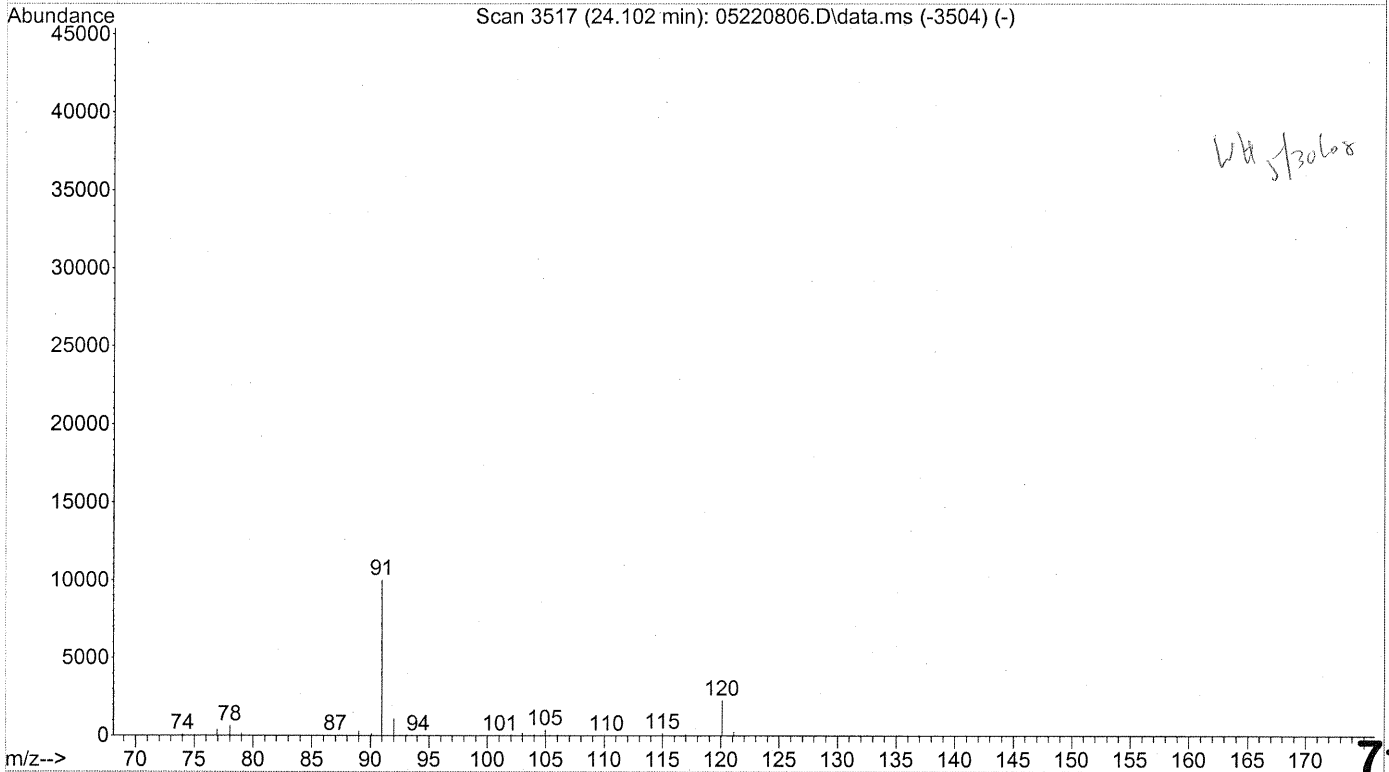
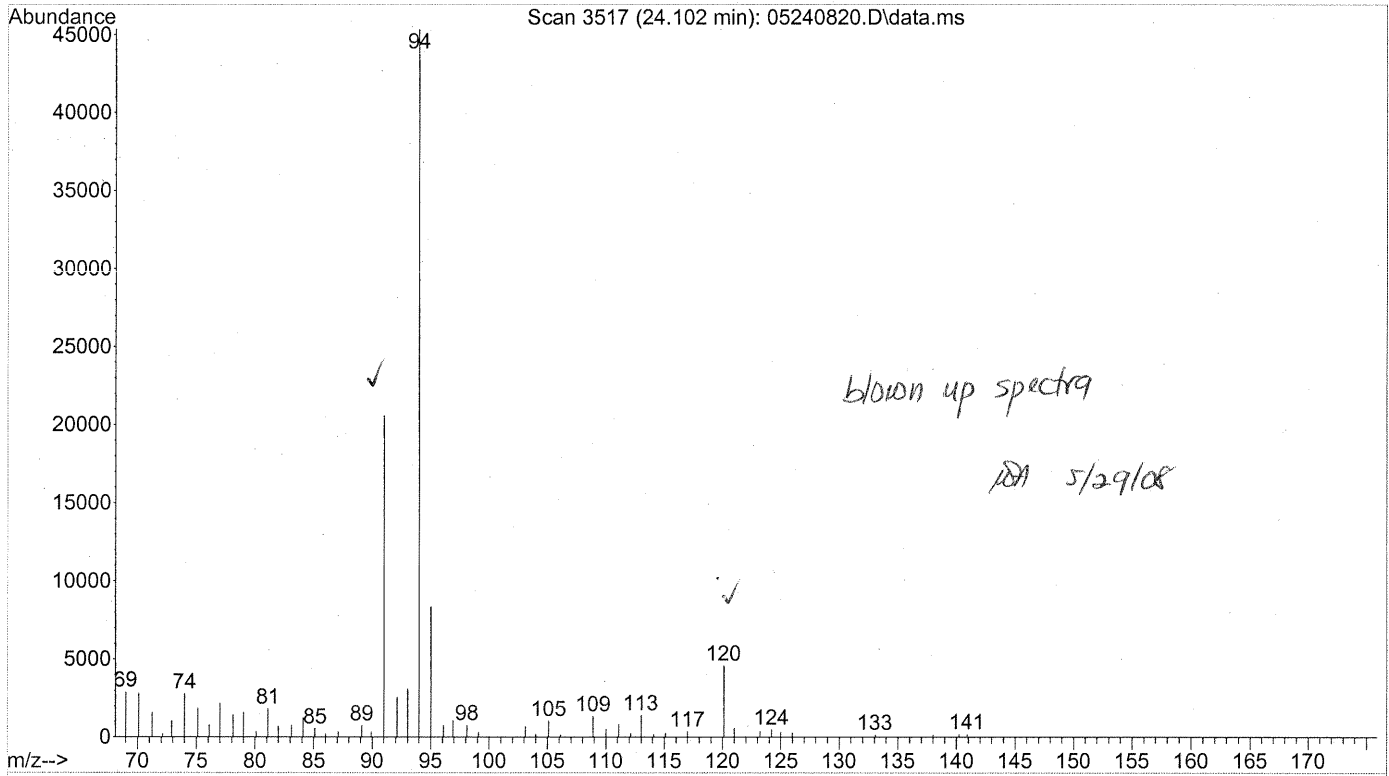
24.102min (-0.000) 0.23ng

response 45333

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	19.35
65.00	11.40	0.00
0.00	0.00	0.00

*see blown-up spectra*

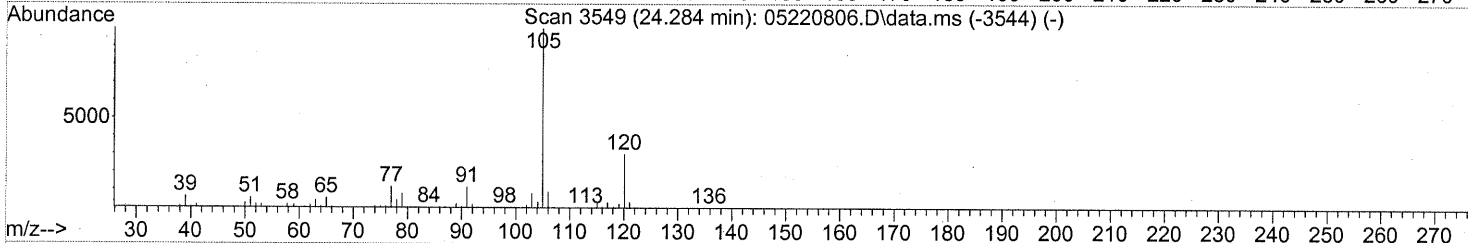
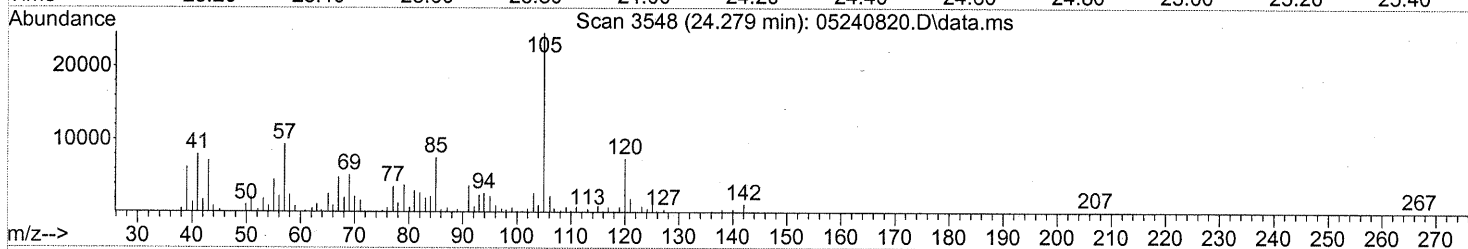
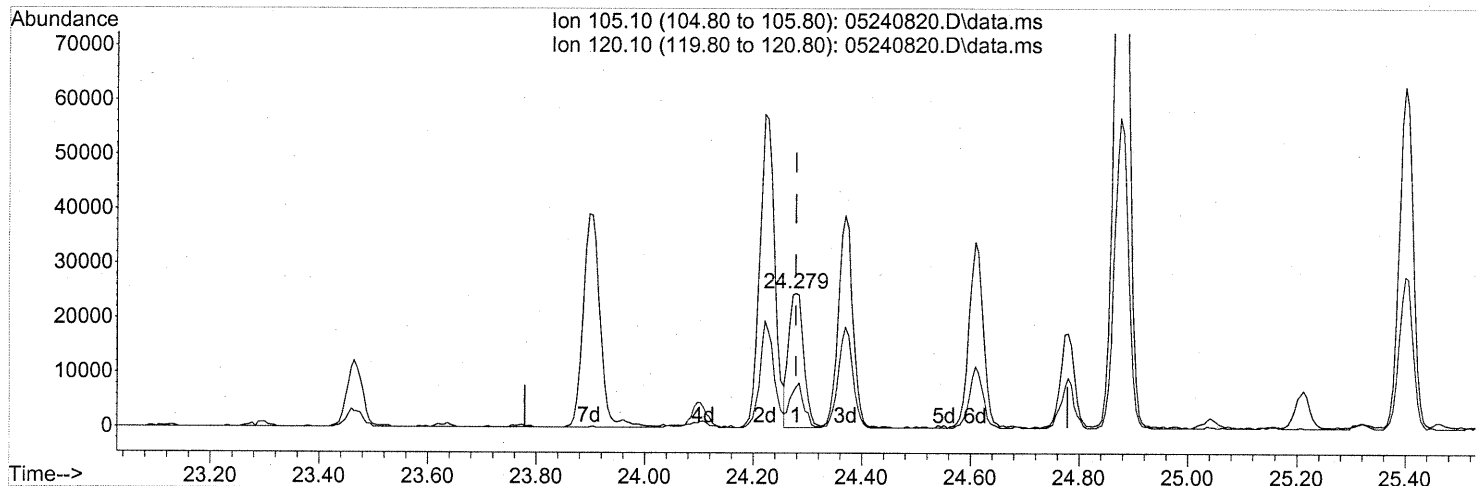
File : J:\MS13\DATA\2008\_05\24\05240820.D  
Operator : WA  
Acquired : 24 May 2008 20:14 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-013 (1000ml)  
Misc Info : ENSR SG85B-05 (-3.0, 3.5)  
Vial Number: 17



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

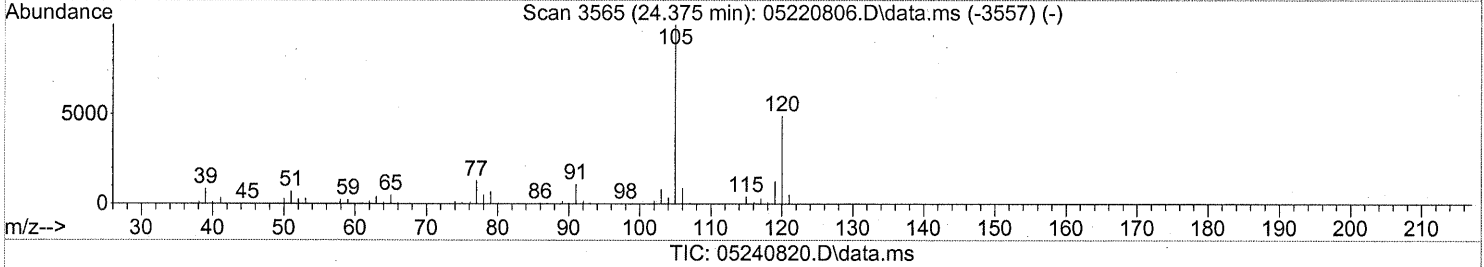
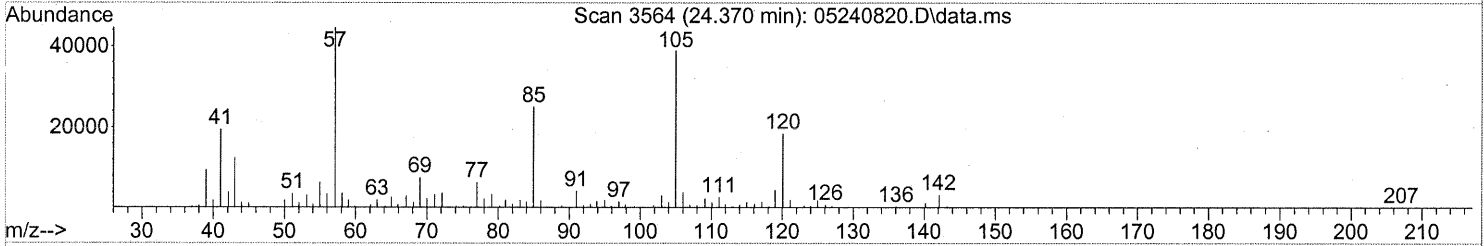
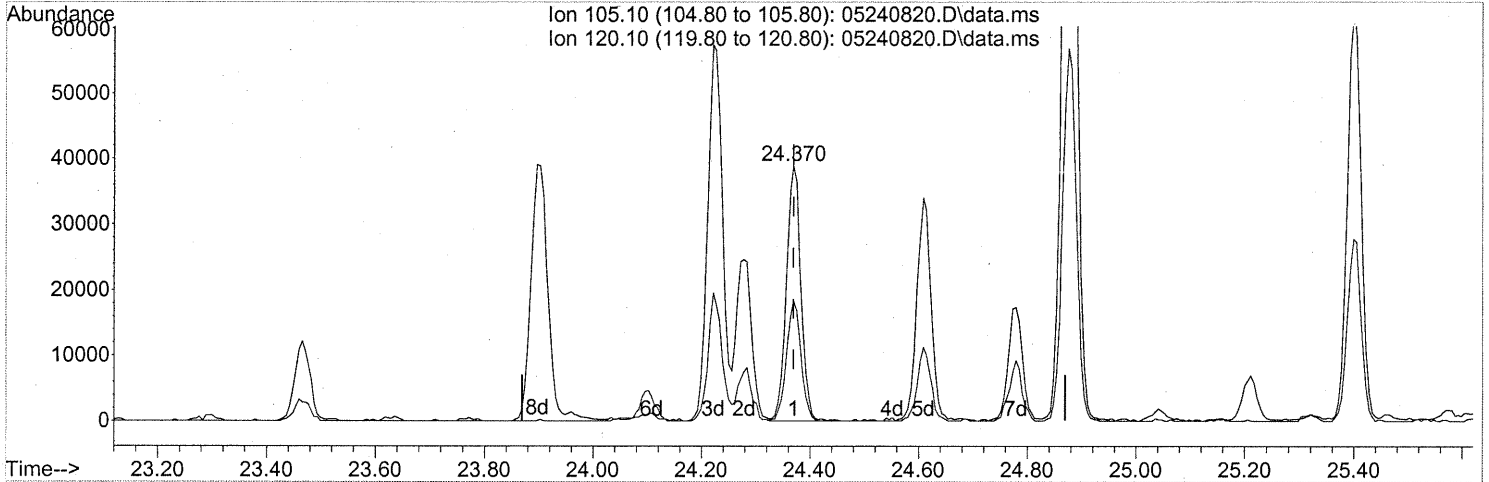
(78) 4-Ethyltoluene (T)  
 24.279min (-0.000) 0.31ng  
 response 47377

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	29.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.370min (-0.000) 0.53ng

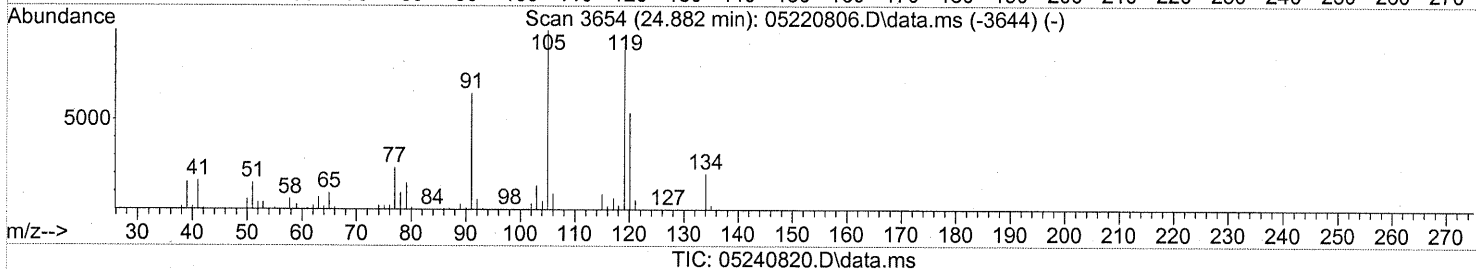
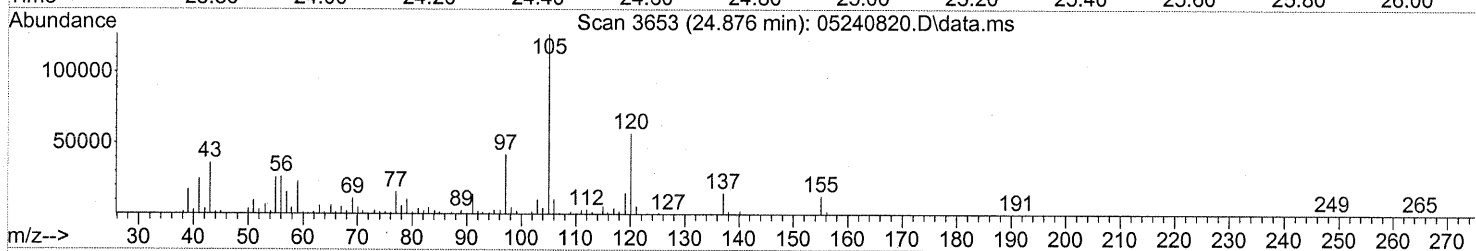
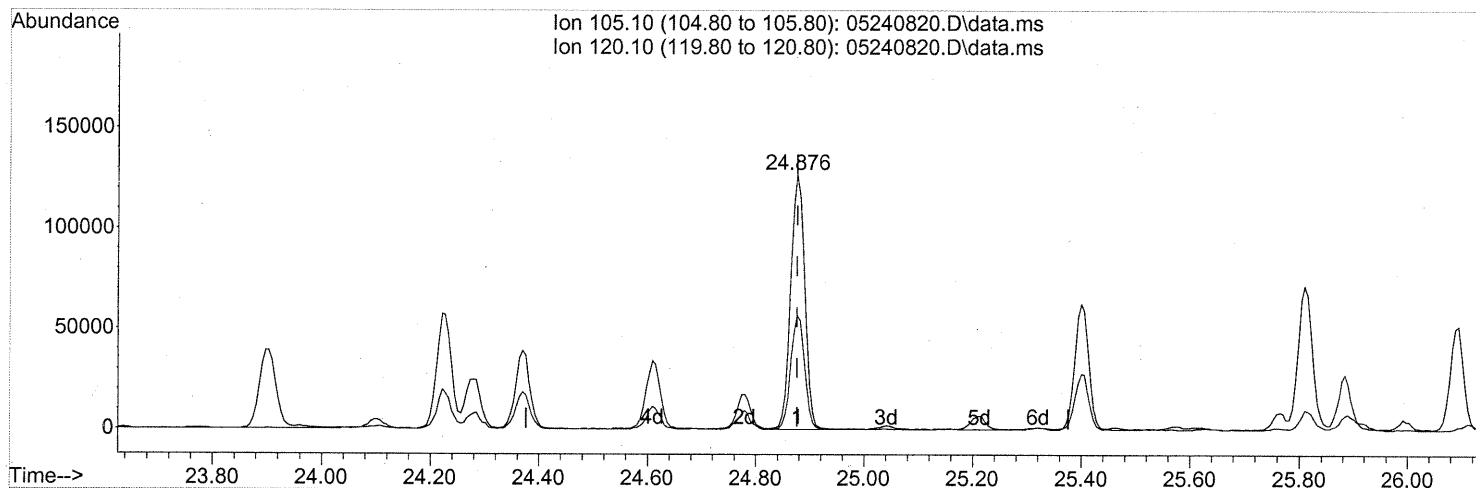
response 71703

Ion	Exp%	Act%
105.10	100	100
120.10	49.40	47.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.876min (-0.000) 1.66ng

response 229884

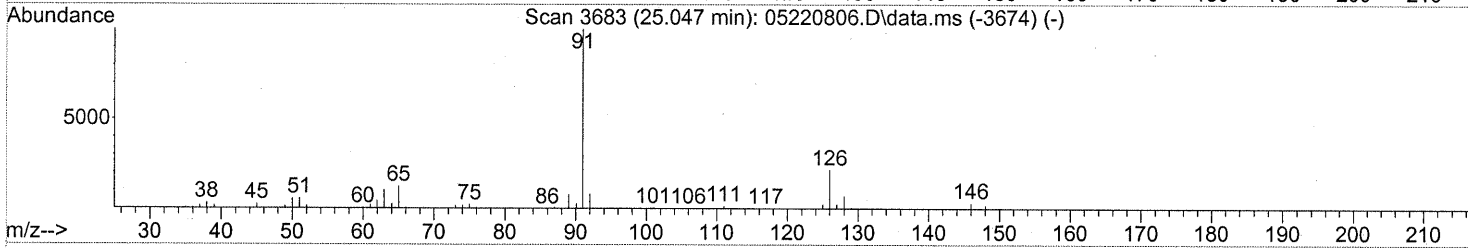
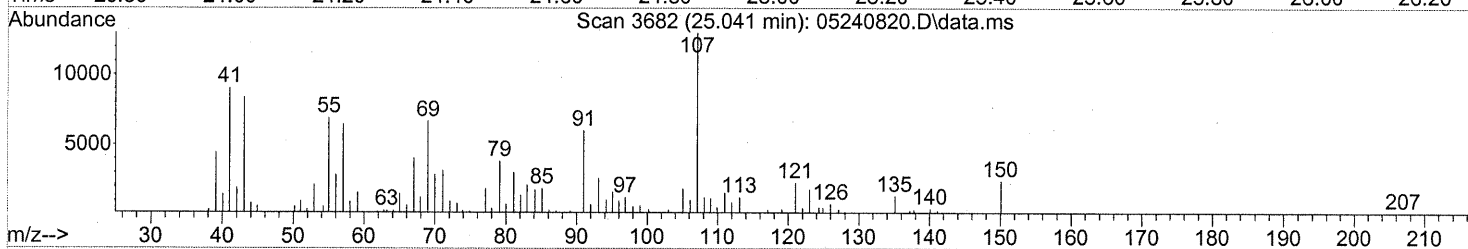
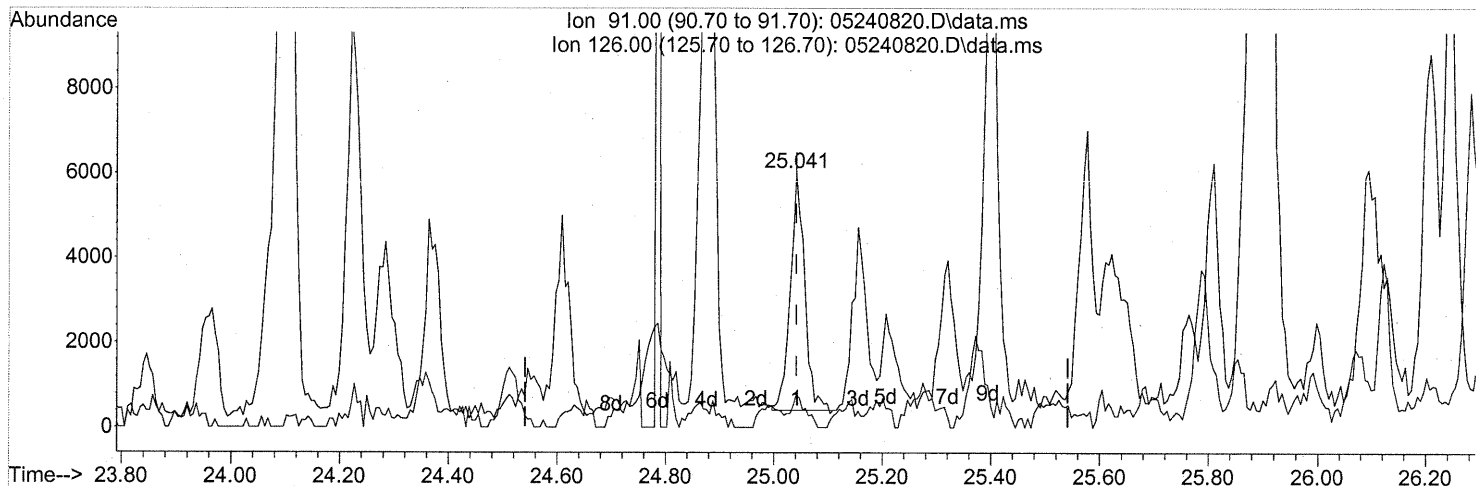
Ion	Exp%	Act%
105.10	100	100
120.10	54.40	43.91
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



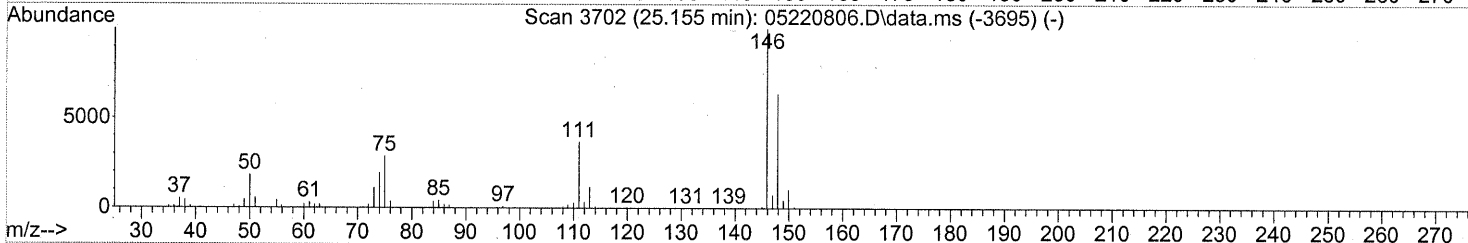
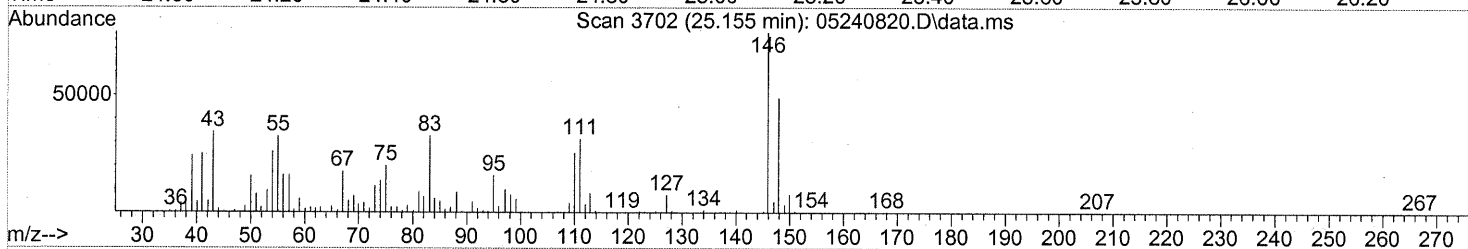
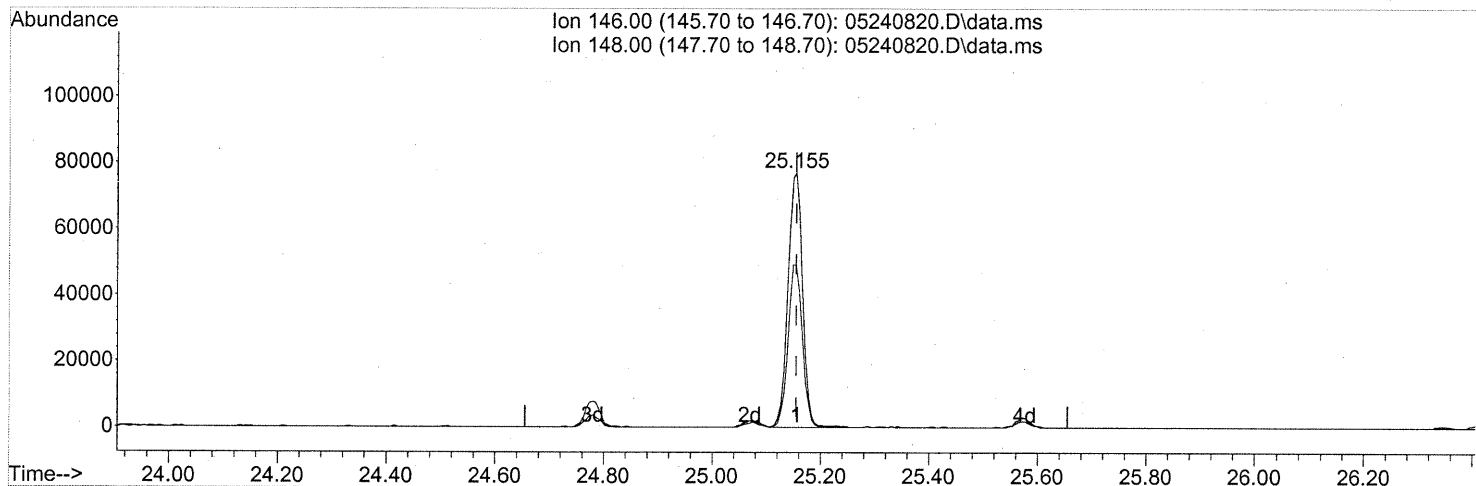
(84) Benzyl Chloride (T)  
 25.041min (-0.000) 0.11ng  
 response 10273

Ion	Exp%	Act%
91.00	100	100
126.00	22.50	11.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 1.71ng

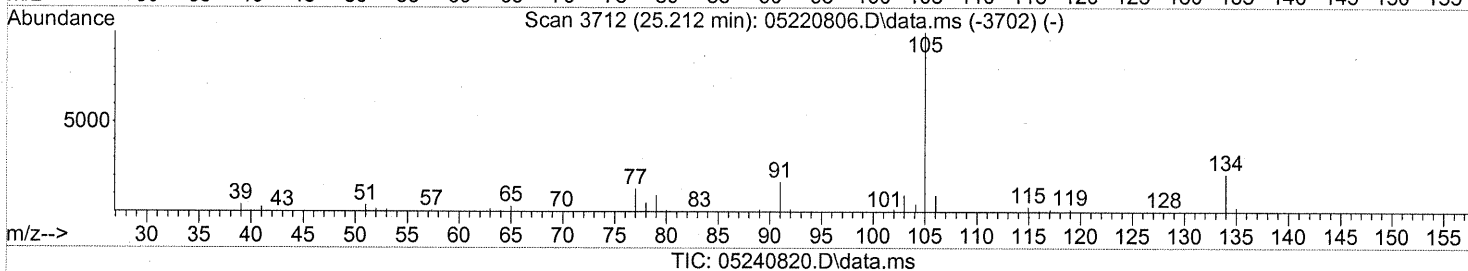
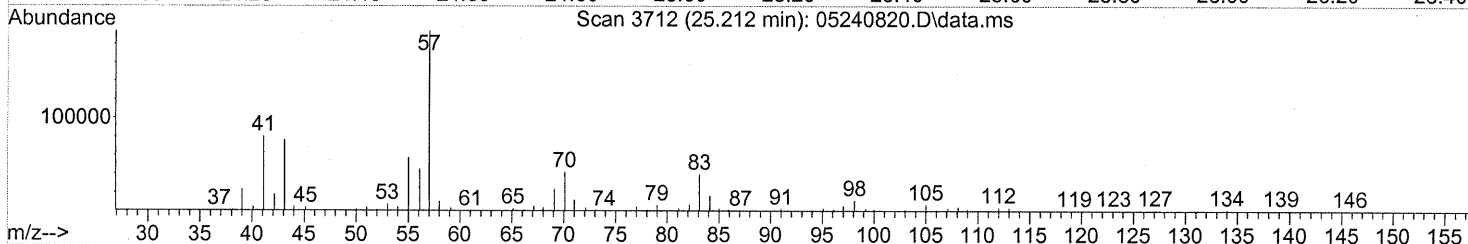
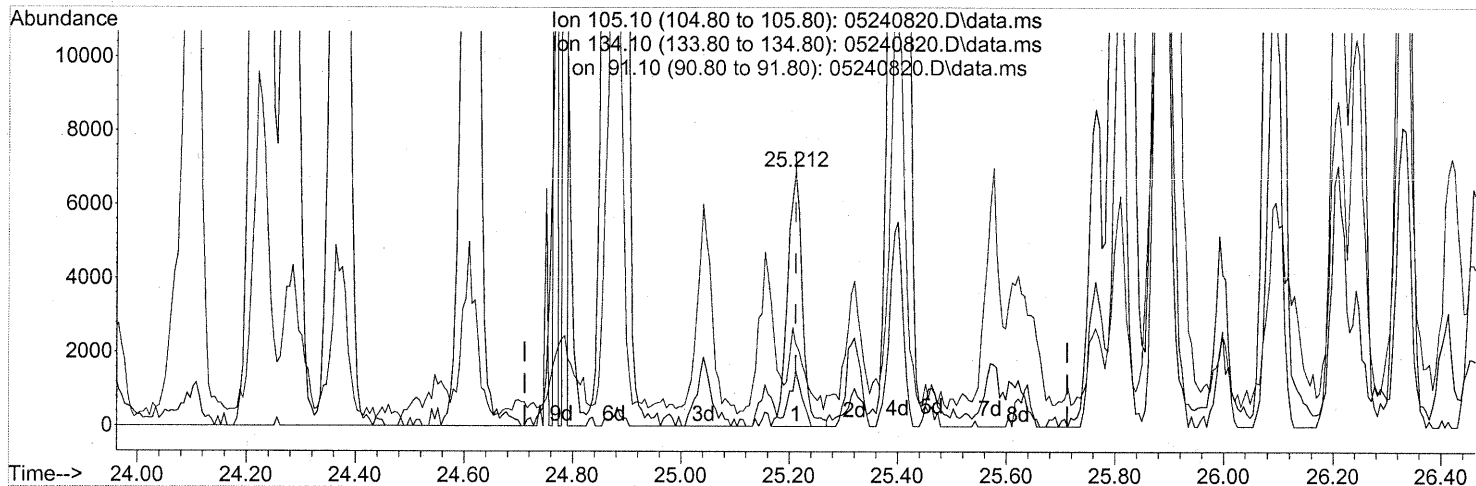
response 143693

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(87) sec-Butylbenzene (T)

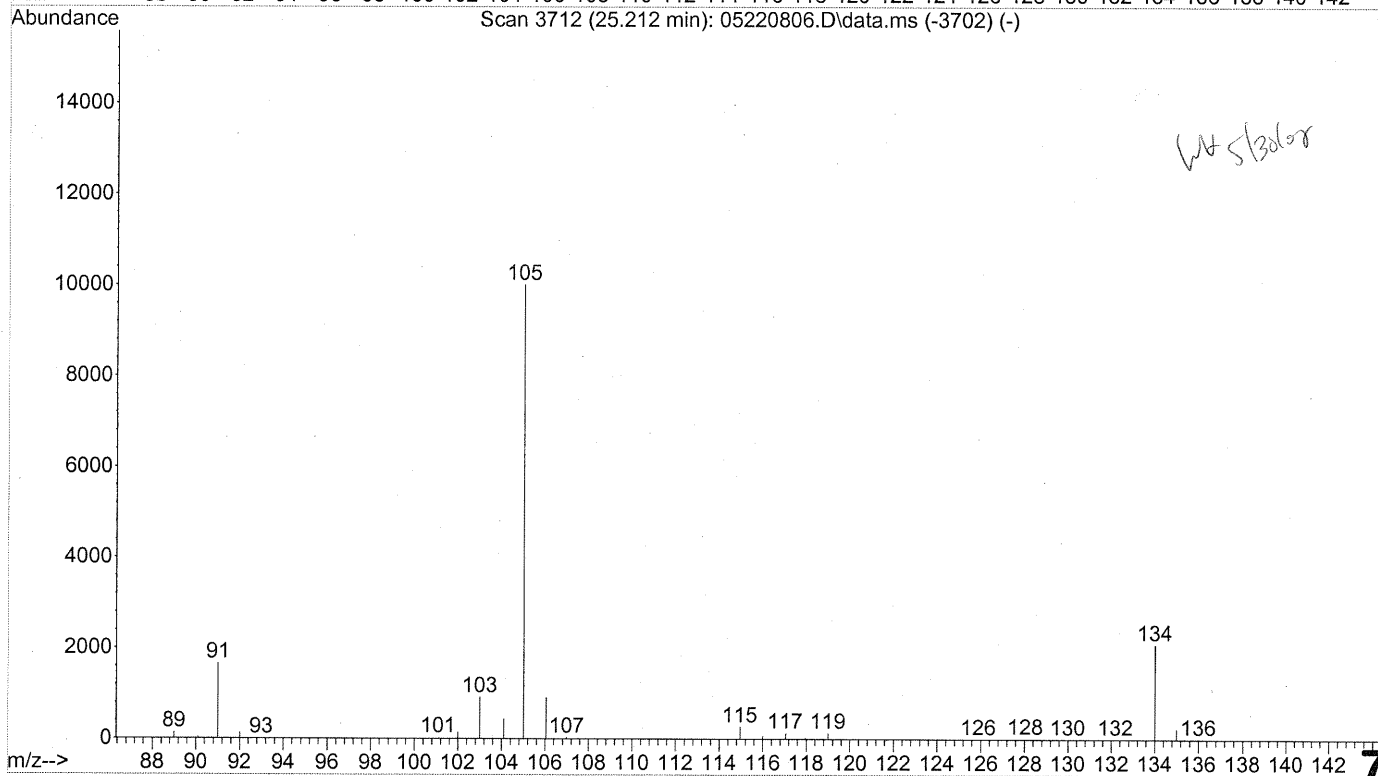
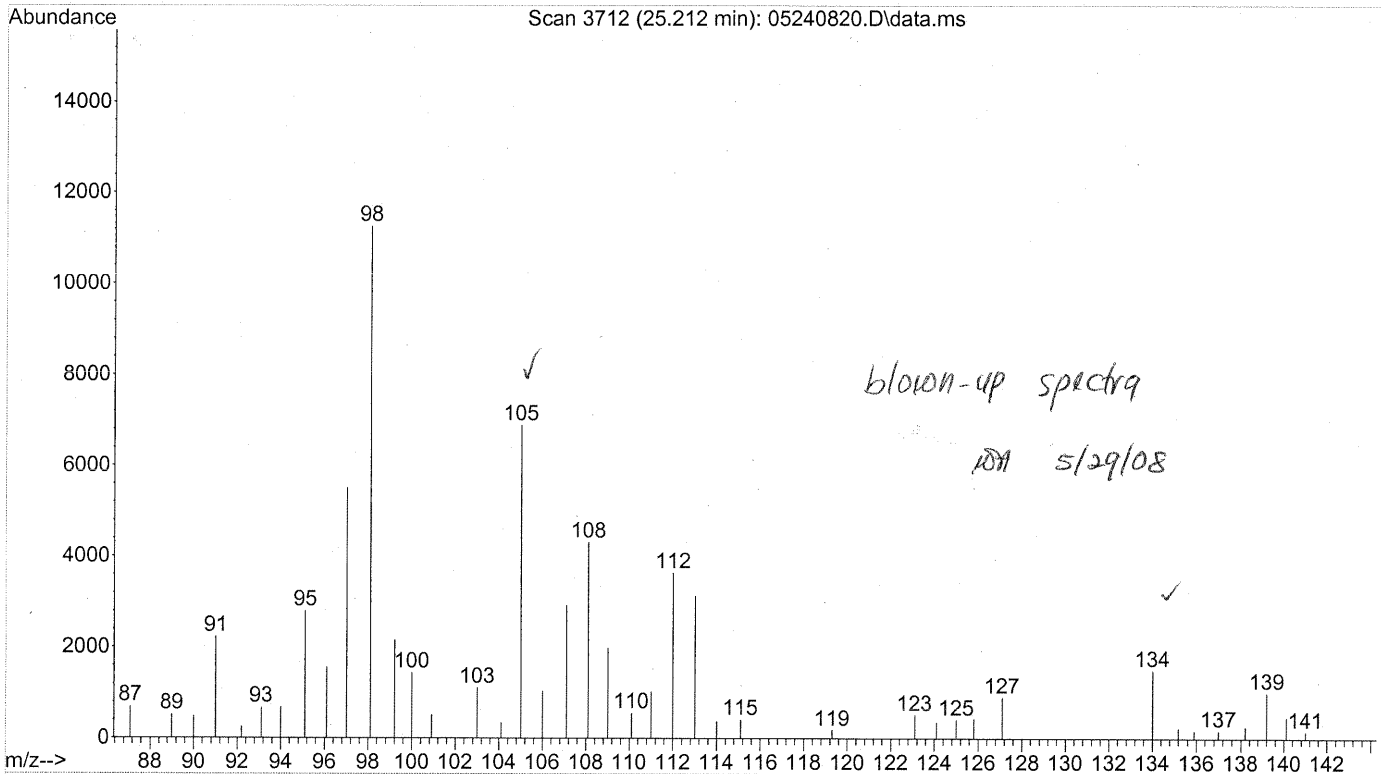
25.212min (-0.000) 0.07ng

response 12975

*see blow-up*

Ion	Exp%	Act%
105.10	100	100
134.10	20.90	18.22
91.10	14.60	31.65
0.00	0.00	0.00

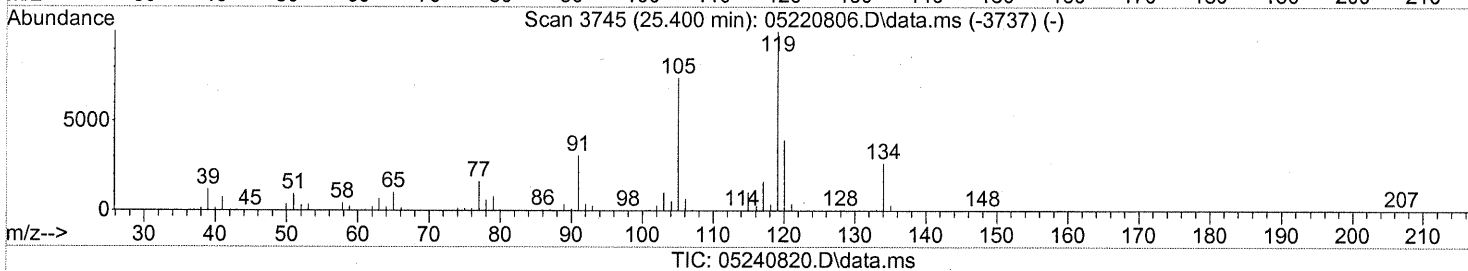
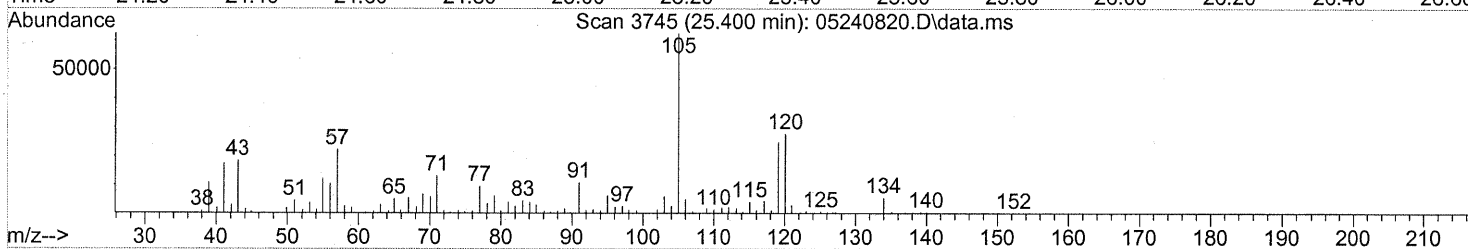
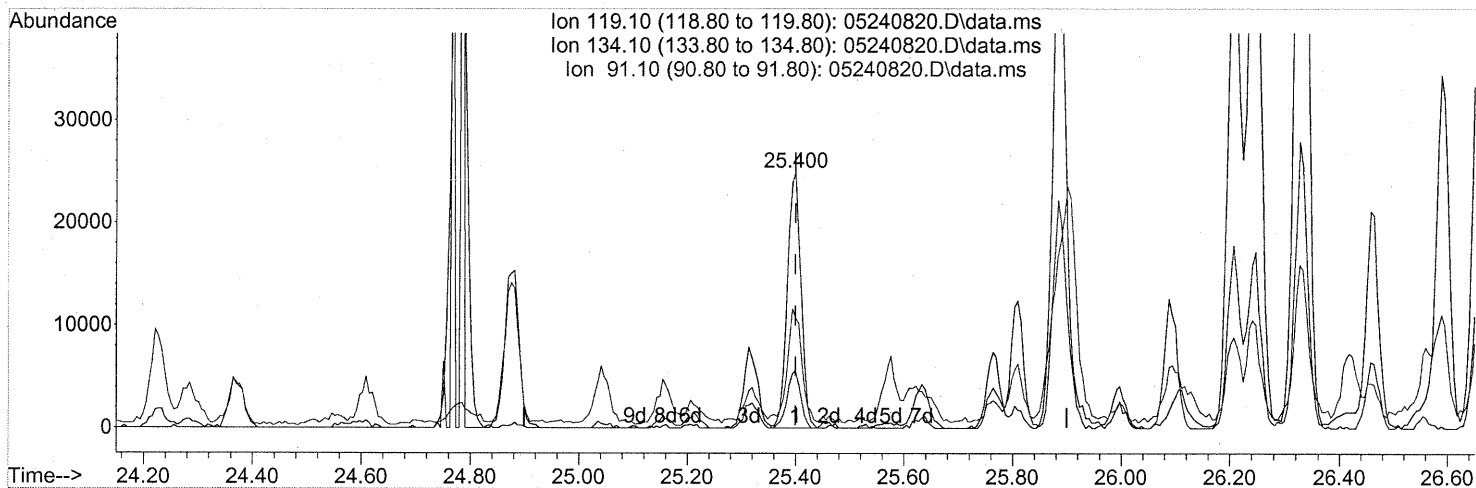
File : J:\MS13\DATA\2008\_05\24\05240820.D  
Operator : WA  
Acquired : 24 May 2008 20:14 using AcqMethod TO15.M  
Instrument : GCMS13  
Sample Name: P0801422-013 (1000ml)  
Misc Info : ENSR SG85B-05 (-3.0, 3.5)  
Vial Number: 17



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

25.400min (-0.000) 0.30ng

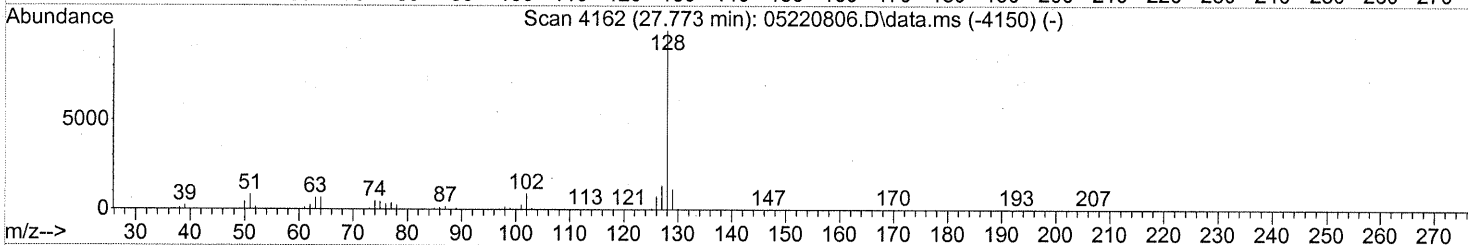
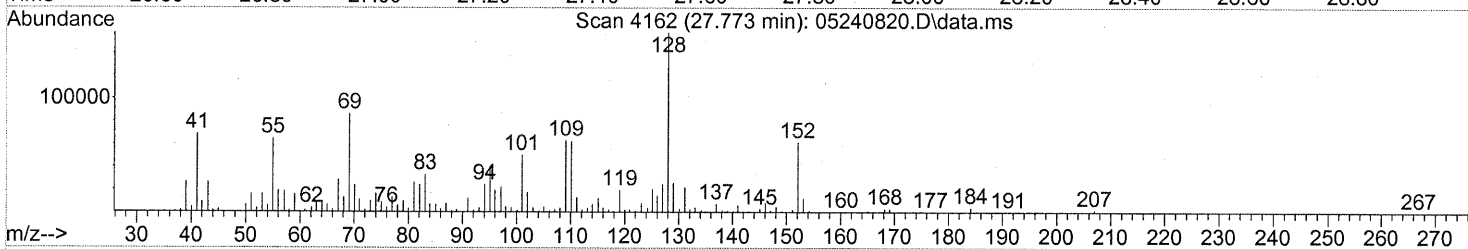
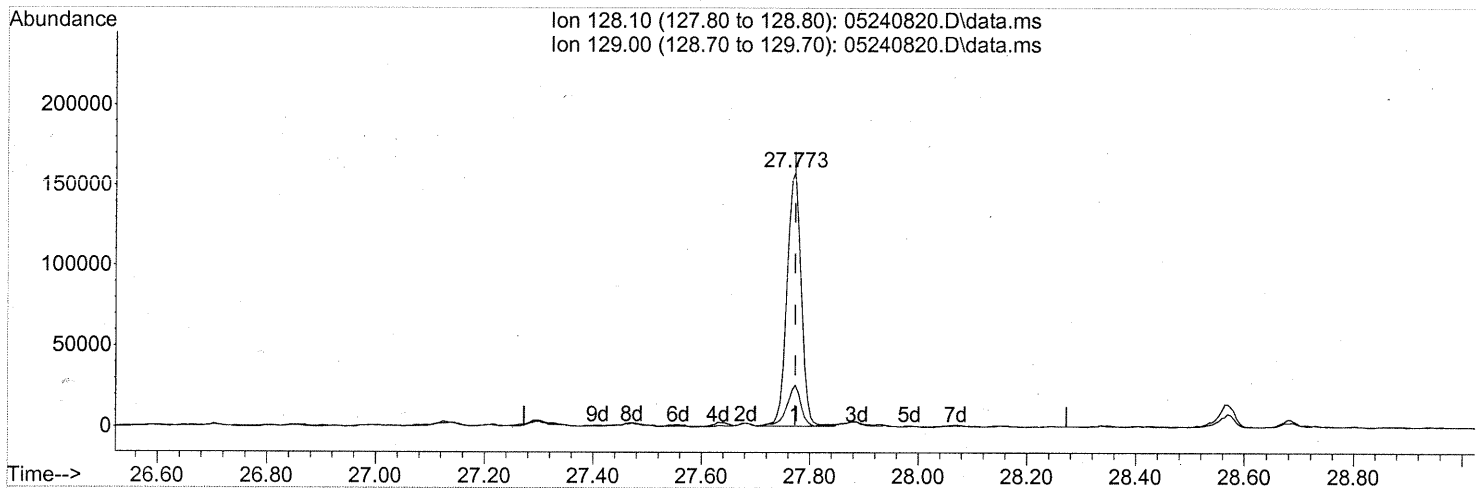
response 43158

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	22.02
91.10	27.10	46.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

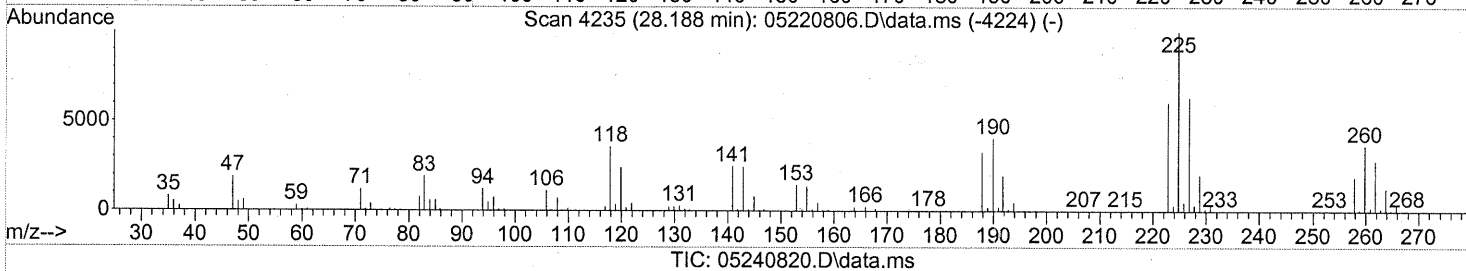
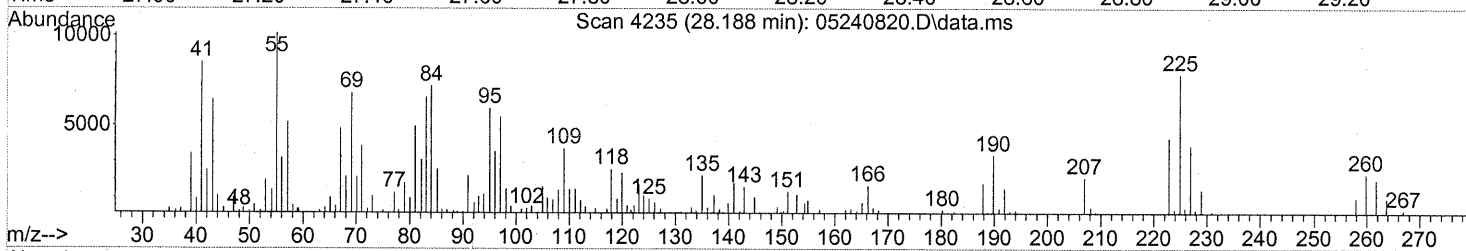
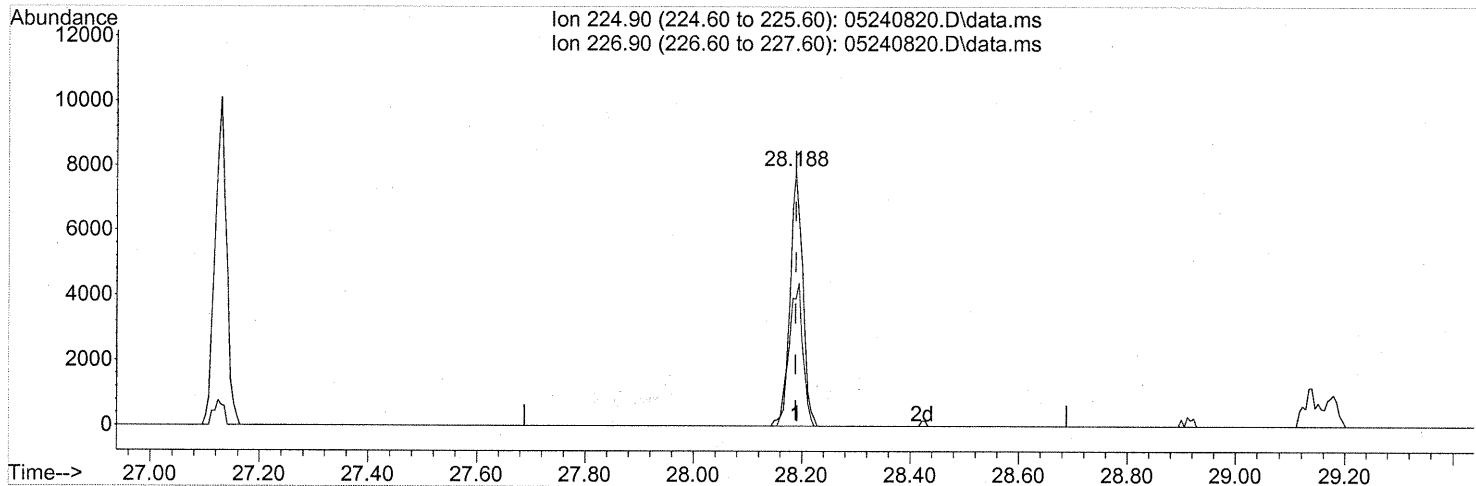
(95) Naphthalene (T)  
 27.773min (-0.000) 1.58ng  
 response 288104

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	16.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:52:27 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

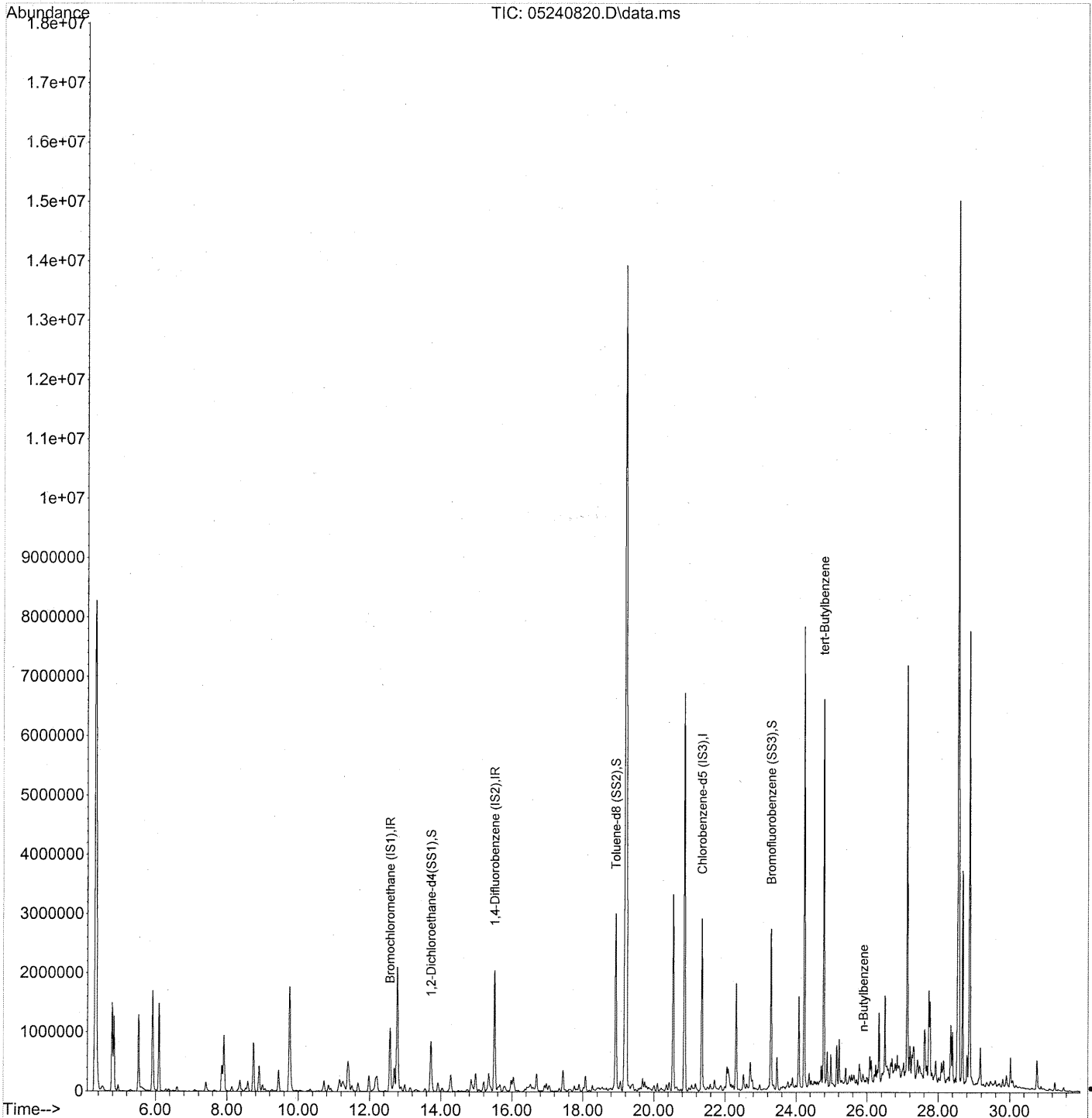
28.188min (-0.000) 0.32ng

response 12796

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	59.07
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:37:16 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



722



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:37:16 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

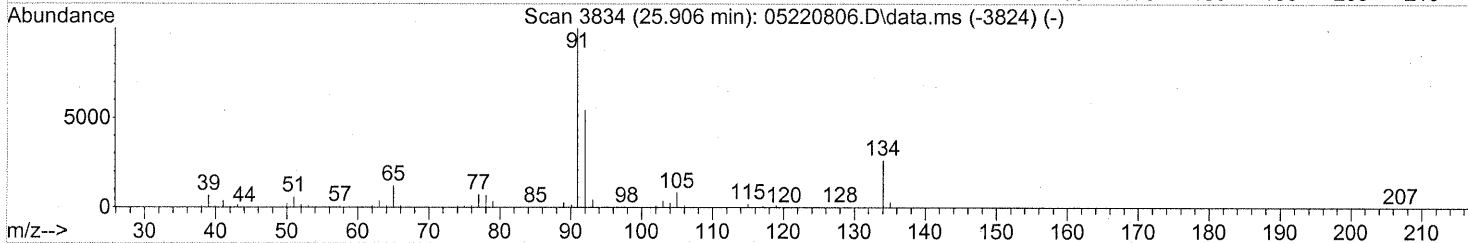
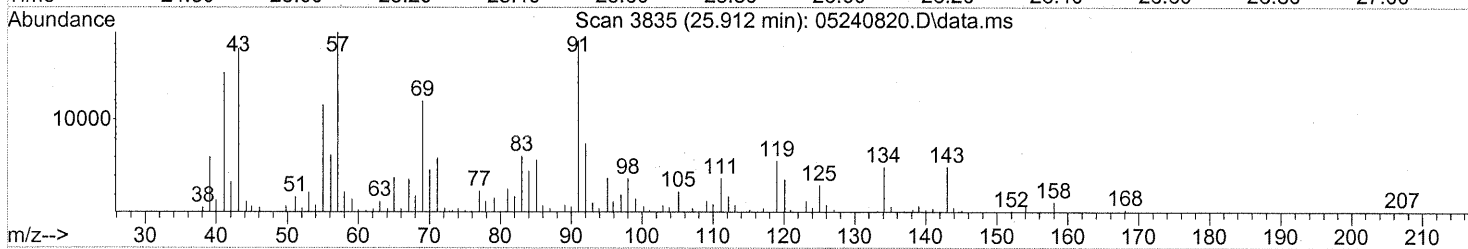
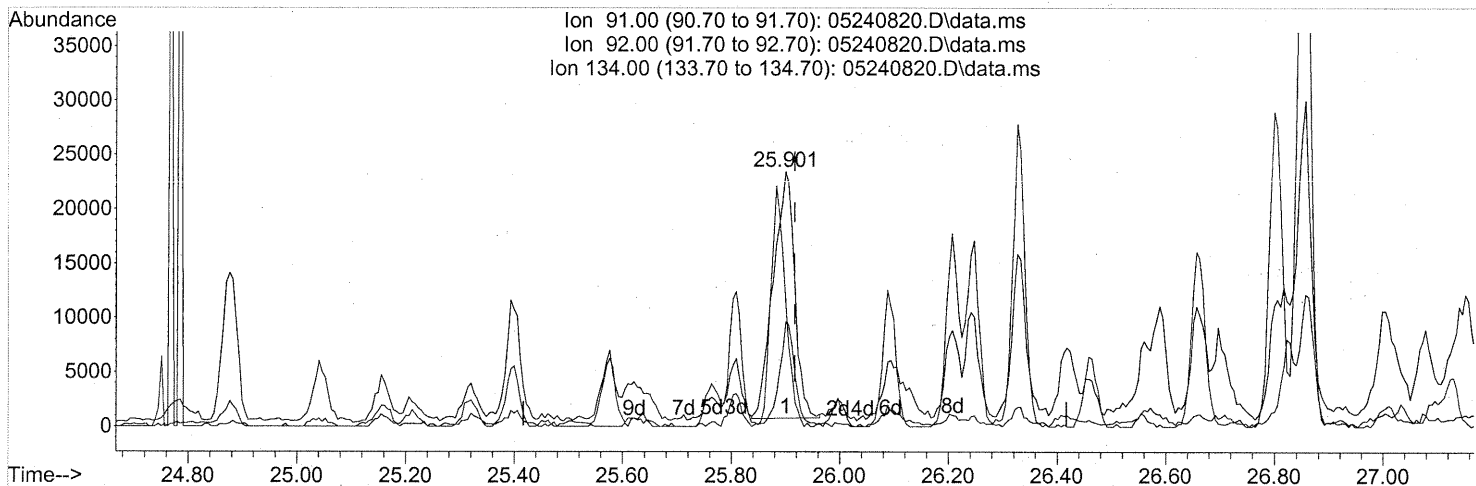
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	561245	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2384740	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1127495	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	887049	22.810	ng	-0.03
Spiked Amount	25.000					Recovery = 91.24%
5) Toluene-d8 (SS2)	18.93	98	2481133	24.503	ng	-0.01
Spiked Amount	25.000					Recovery = 98.00%
6) Bromofluorobenzene (SS3)	23.29	174	1049844	25.496	ng	0.00
Spiked Amount	25.000					Recovery = 102.00%
Target Compounds						
7) tert-Butylbenzene	24.78	119	120374	<del>0.909</del> ng		QR 94
8) n-Butylbenzene	<u>25.90</u>	91	62214	<u>0.425</u> ng		# 53

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240820.D  
 Acq On : 24 May 2008 20:14  
 Operator : WA  
 Sample : P0801442-013 (1000ml)  
 Misc : ENSR SG85B-05 (-3.0, 3.5)  
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: May 25 20:37:16 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



TIC: 05240820.D\data.ms

(8) n-Butylbenzene

25.901min (-0.017) 0.42ng

response 62214

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	31.13#
134.00	28.80	67.12#
0.00	0.00	0.00

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00693

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.0	ND	4.0	0.40	
74-87-3	Chloromethane	ND	4.0	2.0	ND	1.9	0.97	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	20	2.0	ND	2.9	0.29	
75-01-4	Vinyl Chloride	ND	4.0	2.0	ND	1.6	0.78	
74-83-9	Bromomethane	ND	4.0	2.0	ND	1.0	0.52	
75-00-3	Chloroethane	ND	4.0	2.0	ND	1.5	0.76	
64-17-5	<b>Ethanol</b>	<b>3.8</b>	200	2.0	<b>2.0</b>	110	1.1	<b>J</b>
67-64-1	<b>Acetone</b>	<b>14</b>	200	2.9	<b>5.9</b>	84	1.2	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	4.0	2.0	ND	0.71	0.36	
107-13-1	Acrylonitrile	ND	20	2.8	ND	9.2	1.3	
75-35-4	1,1-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	20	3.0	ND	6.6	0.98	
75-09-2	<b>Methylene Chloride</b>	<b>2.4</b>	20	2.0	<b>0.69</b>	5.8	0.58	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	4.0	2.0	ND	1.3	0.64	
76-13-1	Trichlorotrifluoroethane	ND	4.0	2.2	ND	0.52	0.29	
75-15-0	<b>Carbon Disulfide</b>	<b>11</b>	20	4.8	<b>3.4</b>	6.4	1.5	<b>J</b>
156-60-5	trans-1,2-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
75-34-3	1,1-Dichloroethane	ND	4.0	2.0	ND	0.99	0.49	
1634-04-4	Methyl tert-Butyl Ether	ND	4.0	2.0	ND	1.1	0.55	
108-05-4	Vinyl Acetate	ND	200	6.4	ND	57	1.8	
78-93-3	2-Butanone (MEK)	ND	20	2.0	ND	6.8	0.68	
156-59-2	cis-1,2-Dichloroethene	ND	4.0	2.0	ND	1.0	0.50	
108-20-3	Diisopropyl Ether	ND	20	2.4	ND	4.8	0.56	
67-66-3	<b>Chloroform</b>	<b>4,700</b>	4.0	2.4	<b>960</b>	0.82	0.48	

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: RC      Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00693

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.0	ND	4.8	0.49	
107-06-2	1,2-Dichloroethane	ND	4.0	2.0	ND	0.99	0.49	
71-55-6	<b>1,1,1-Trichloroethane</b>	<b>14</b>	4.0	2.0	<b>2.6</b>	0.73	0.37	
71-43-2	<b>Benzene</b>	<b>2.0</b>	4.0	2.0	<b>0.64</b>	1.3	0.63	<b>J</b>
56-23-5	<b>Carbon Tetrachloride</b>	<b>7.6</b>	4.0	2.0	<b>1.2</b>	0.64	0.32	
994-05-8	tert-Amyl Methyl Ether	ND	20	2.0	ND	4.8	0.48	
78-87-5	1,2-Dichloropropane	ND	4.0	2.0	ND	0.87	0.43	
75-27-4	<b>Bromodichloromethane</b>	<b>5.1</b>	4.0	2.0	<b>0.76</b>	0.60	0.30	
79-01-6	<b>Trichloroethene</b>	<b>140</b>	4.0	2.0	<b>26</b>	0.74	0.37	
123-91-1	1,4-Dioxane	ND	20	2.4	ND	5.6	0.68	
80-62-6	Methyl Methacrylate	ND	20	3.0	ND	4.9	0.73	
142-82-5	n-Heptane	ND	20	2.6	ND	4.9	0.62	
10061-01-5	cis-1,3-Dichloropropene	ND	20	2.1	ND	4.4	0.46	
108-10-1	4-Methyl-2-pentanone	ND	20	2.2	ND	4.9	0.55	
10061-02-6	trans-1,3-Dichloropropene	ND	20	2.5	ND	4.4	0.56	
79-00-5	1,1,2-Trichloroethane	ND	4.0	2.0	ND	0.73	0.37	
108-88-3	<b>Toluene</b>	<b>23</b>	20	2.0	<b>6.2</b>	5.3	0.53	
591-78-6	2-Hexanone	ND	20	3.0	ND	4.9	0.74	
124-48-1	Dibromochloromethane	ND	4.0	2.7	ND	0.47	0.32	
106-93-4	1,2-Dibromoethane	ND	4.0	2.2	ND	0.52	0.28	
111-65-9	n-Octane	ND	20	2.0	ND	4.3	0.43	
127-18-4	<b>Tetrachloroethene</b>	<b>2,300</b>	4.0	2.0	<b>330</b>	0.59	0.30	
108-90-7	Chlorobenzene	ND	4.0	2.0	ND	0.87	0.44	

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: RES

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	20	2.5	ND	4.6	0.57	
179601-23-1	m,p-Xylenes	ND	20	5.2	ND	4.6	1.2	
75-25-2	Bromoform	ND	20	3.0	ND	1.9	0.29	
100-42-5	Styrene	ND	20	3.0	ND	4.7	0.71	
95-47-6	o-Xylene	ND	20	2.5	ND	4.6	0.58	
79-34-5	1,1,2,2-Tetrachloroethane	ND	4.0	2.6	ND	0.58	0.37	
98-82-8	Cumene	ND	20	2.2	ND	4.1	0.46	
103-65-1	n-Propylbenzene	ND	20	2.1	ND	4.1	0.42	
622-96-8	4-Ethyltoluene	ND	20	2.3	ND	4.1	0.46	
108-67-8	1,3,5-Trimethylbenzene	ND	20	2.4	ND	4.1	0.49	
98-83-9	alpha-Methylstyrene	ND	20	2.9	ND	4.1	0.60	
95-63-6	1,2,4-Trimethylbenzene	ND	20	2.8	ND	4.1	0.56	
100-44-7	Benzyl Chloride	ND	4.0	3.4	ND	0.77	0.66	
541-73-1	1,3-Dichlorobenzene	ND	4.0	2.5	ND	0.67	0.41	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>2.5</b>	4.0	2.2	<b>0.41</b>	0.67	0.37	<b>J</b>
135-98-8	sec-Butylbenzene	ND	20	2.3	ND	3.6	0.42	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	20	2.6	ND	3.6	0.47	
95-50-1	1,2-Dichlorobenzene	ND	4.0	2.6	ND	0.67	0.44	
96-12-8	1,2-Dibromo-3-chloropropane	ND	20	3.0	ND	2.1	0.31	
120-82-1	1,2,4-Trichlorobenzene	ND	4.0	3.0	ND	0.54	0.41	
91-20-3	Naphthalene	ND	8.0	3.0	ND	1.5	0.56	
87-68-3	<b>Hexachlorobutadiene</b>	<b>460</b>	4.0	3.6	<b>43</b>	0.38	0.34	
98-06-6	tert-Butylbenzene	ND	8.0	2.0	ND	1.5	0.36	
104-51-8	n-Butylbenzene	ND	8.0	2.0	ND	1.5	0.36	

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

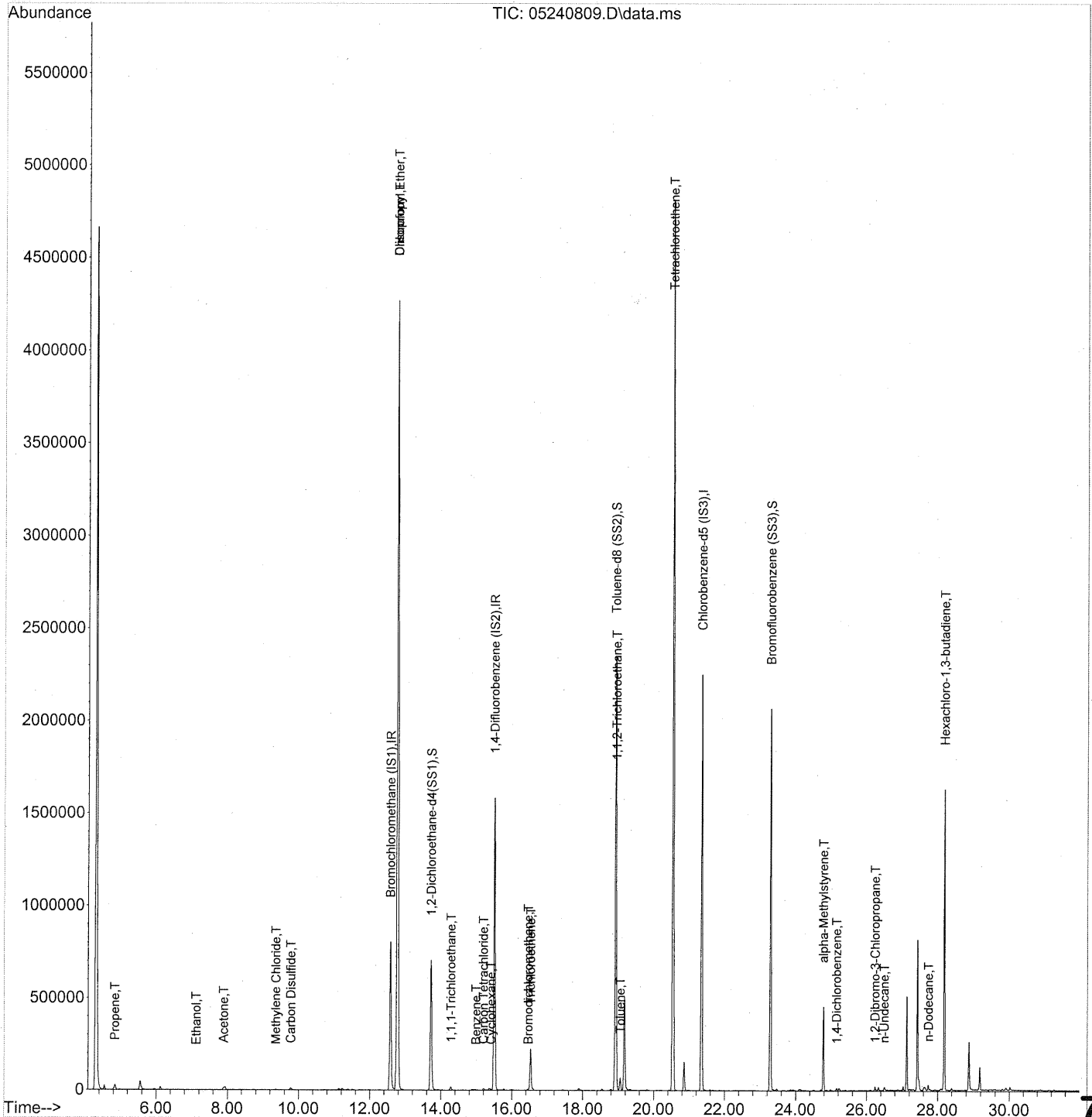
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

Verified By: Re      Date: 6/2/08      **727**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



728

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	408720	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1810368	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	852322	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	722748	25.521	ng	0.00
Spiked Amount	25.000		Recovery	=	102.08%	✓
57) Toluene-d8 (SS2)	18.92	98	1932261	25.243	ng	0.00
Spiked Amount	25.000		Recovery	=	100.96%	✓
73) Bromofluorobenzene (SS3)	23.29	174	764507	24.560	ng	0.00
Spiked Amount	25.000		Recovery	=	98.24%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	4717	0.146	ng	# 1
3) Dichlorodifluoromethane	4.99	85	2843	N.D.	✓	
4) Chloromethane	5.32	50	99	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	6.52	94	54	N.D.	✓	
9) Chloroethane	6.85	64	137	N.D.	✓	
10) Ethanol	7.13	45	2062	0.096	ng	# 62
11) Acetonitrile	7.47	41	2255	N.D.	✓	
12) Acrolein	7.66	56	572	N.D.	✓	
13) Acetone	7.89	58	7771	0.353	ng	# 43
14) Trichlorofluoromethane	8.15	101	935	N.D.	✓	
15) Isopropanol	8.35	45	2830	N.D.	✓	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	9.16	96	467	N.D.	✓	
18) tert-Butanol	9.29	59	1534	N.D.	✓	
19) Methylene Chloride	9.36	84	1483	0.060	ng	# 53
20) Allyl Chloride	9.44	41	52	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	116	N.D.	✓	
22) Carbon Disulfide	9.78	76	24788	0.266	ng	98
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	11.09	63	100	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	11.71	72	775	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	456049	23.176	ng NR	# 1
30) Ethyl Acetate	12.79	61	102	N.D.	✓	
31) n-Hexane	12.69	57	546	N.D.	✓	

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	4374930	117.384	ng	99
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.77	62	52	N.D.	✓	
38) 1,1,1-Trichloroethane	14.29	97	14778	0.358	ng	97
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.87	56	946	N.D.		
41) Benzene	14.99	78	4879	0.051	ng	71
42) Carbon Tetrachloride	15.20	117	6893	0.189	ng	97
43) Cyclohexane	15.41	84	2335	0.063	ng	# 44
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	✓	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	✓	
46) Bromodichloromethane	16.46	83	4068	0.127	ng	99
47) Trichloroethene	16.53	130	99591	3.425	ng	97
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	16.62	57	1309	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	18.94	97	171384	<del>7.317</del> ng	NR#	8
58) Toluene	19.06	91	61058	0.587	ng	97
59) 2-Hexanone	19.37	43	208	N.D.	✓	
60) Dibromochloromethane	19.61	129	249	N.D.	✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	✓	
62) Butyl Acetate	20.20	43	64	N.D.		
63) n-Octane	20.53	57	77	N.D.	✓	
64) Tetrachloroethene	20.55	166	1743323	56.622	ng	99
65) Chlorobenzene	21.42	112	1020	N.D.	✓	
66) Ethylbenzene	21.89	91	589	N.D.	✓	
67) m- & p-Xylene	22.12	91	883	N.D.	✓	
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	0.00	104	0	N.D.	✓	
70) o-Xylene	22.72	91	411	N.D.	✓	
71) n-Nonane	22.97	43	170	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.68	83	55	N.D.	✓	
74) Cumene	23.46	105	672	N.D.	✓	
75) alpha-Pinene	23.97	93	228	N.D.		
76) n-Propylbenzene	24.12	91	520	N.D.	✓	
77) 3-Ethyltoluene	24.24	105	739	N.D.		
78) 4-Ethyltoluene	24.30	105	496	N.D.	✓	
79) 1,3,5-Trimethylbenzene	24.37	105	226	N.D.	✓	



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

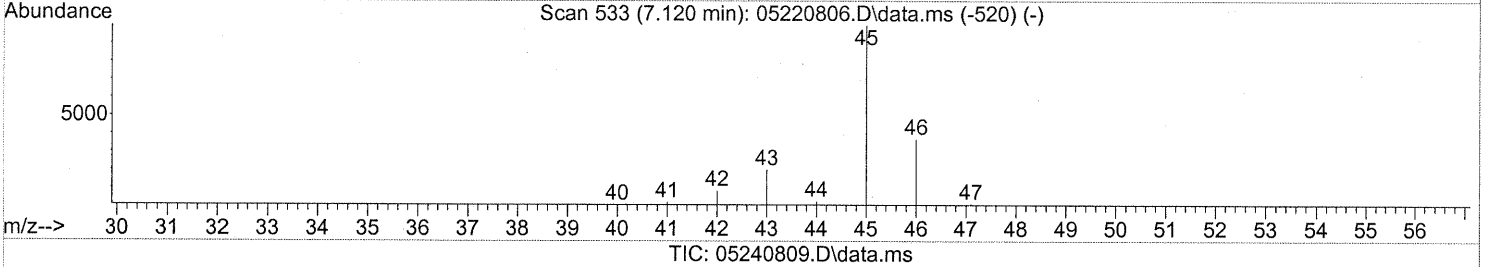
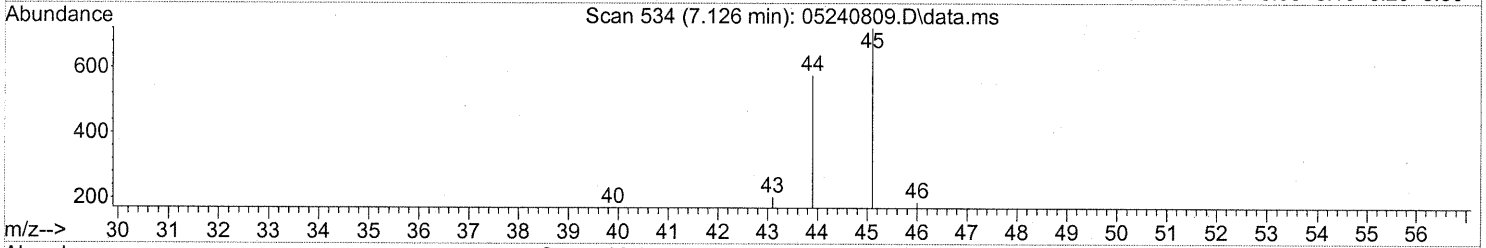
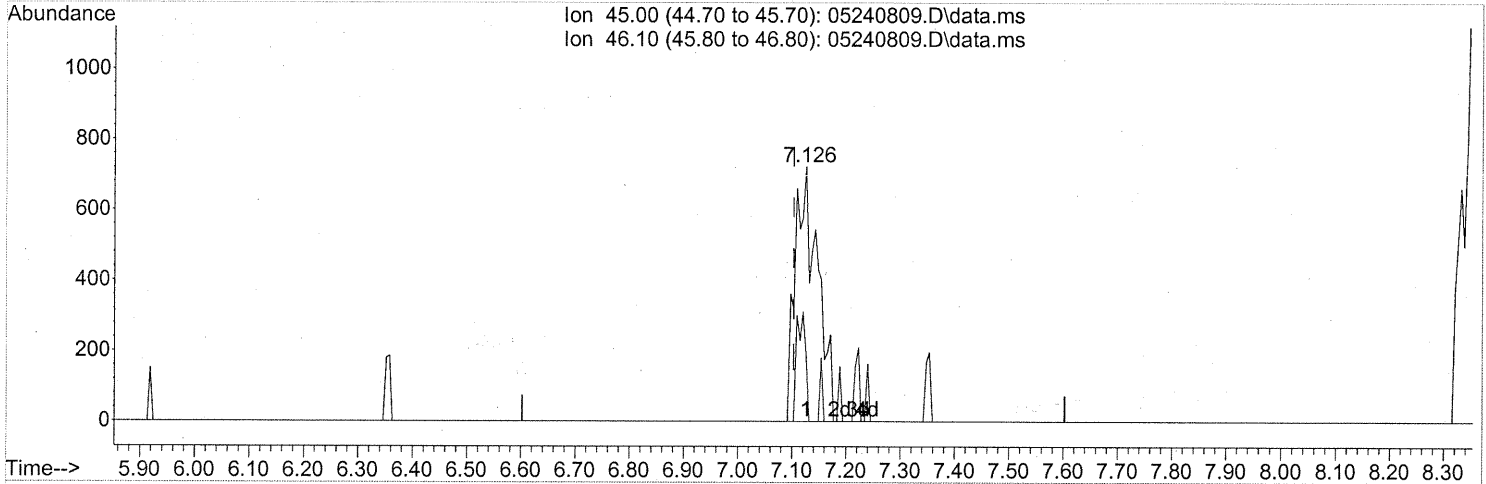
Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
80) alpha-Methylstyrene	24.78	118	5018	<del>0.090</del> ng <i>NR#</i>	4
81) 2-Ethyltoluene	24.62	105	316	N.D.	
82) 1,2,4-Trimethylbenzene	24.89	105	1709	N.D. ✓	
83) n-Decane	24.99	57	2368	N.D.	
84) Benzyl Chloride	25.04	91	325	N.D. ✓	
85) 1,3-Dichlorobenzene	25.08	146	57	N.D. ✓	
86) 1,4-Dichlorobenzene	<u>25.16</u>	146	3949	<u>0.062</u> ng	89
87) sec-Butylbenzene	25.41	105	811	N.D. ✓	
88) p-Isopropyltoluene	25.41	119	278	N.D. ✓	
89) 1,2,3-Trimethylbenzene	25.41	105	811	N.D.	
90) 1,2-Dichlorobenzene	25.57	146	58	N.D. ✓	
91) d-Limonene	25.57	68	737	N.D.	
92) 1,2-Dibromo-3-Chloropr...	26.24	157	2117	<del>0.110</del> ng <i>NR#</i>	46
93) n-Undecane	26.50	57	7246	0.120 ng	86
94) 1,2,4-Trichlorobenzene	27.63	180	58	N.D. ✓	
95) Naphthalene	27.77	128	4083	N.D. ✓	
96) n-Dodecane	27.74	57	9840	0.164 ng	92
97) Hexachloro-1,3-butadiene	<u>28.19</u>	225	345502	<u>11.413</u> ng	98

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



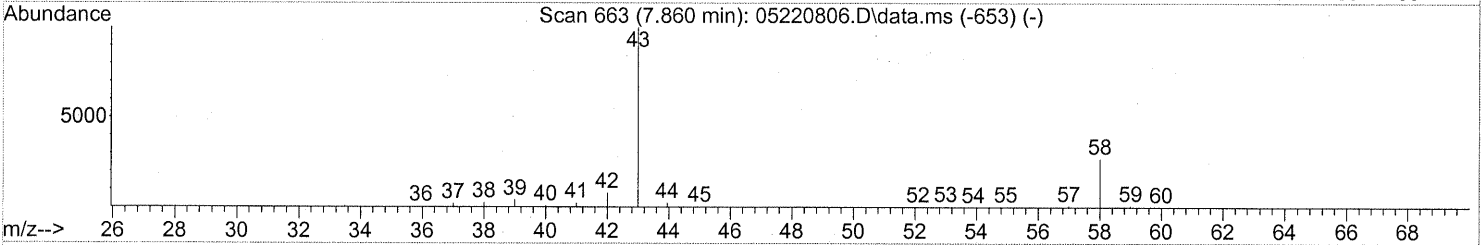
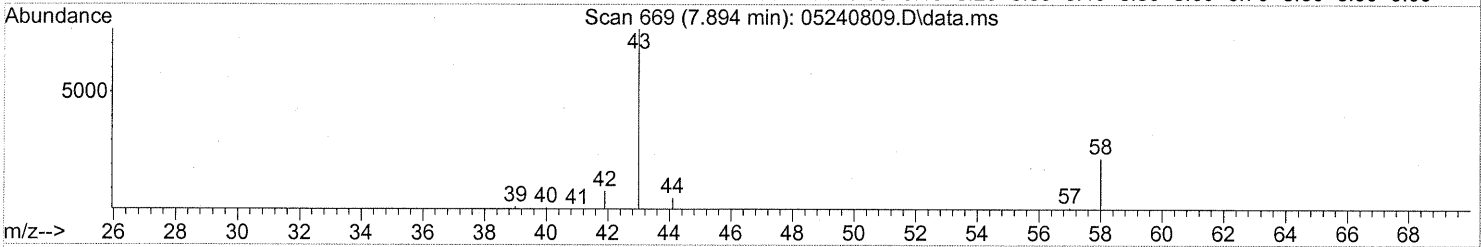
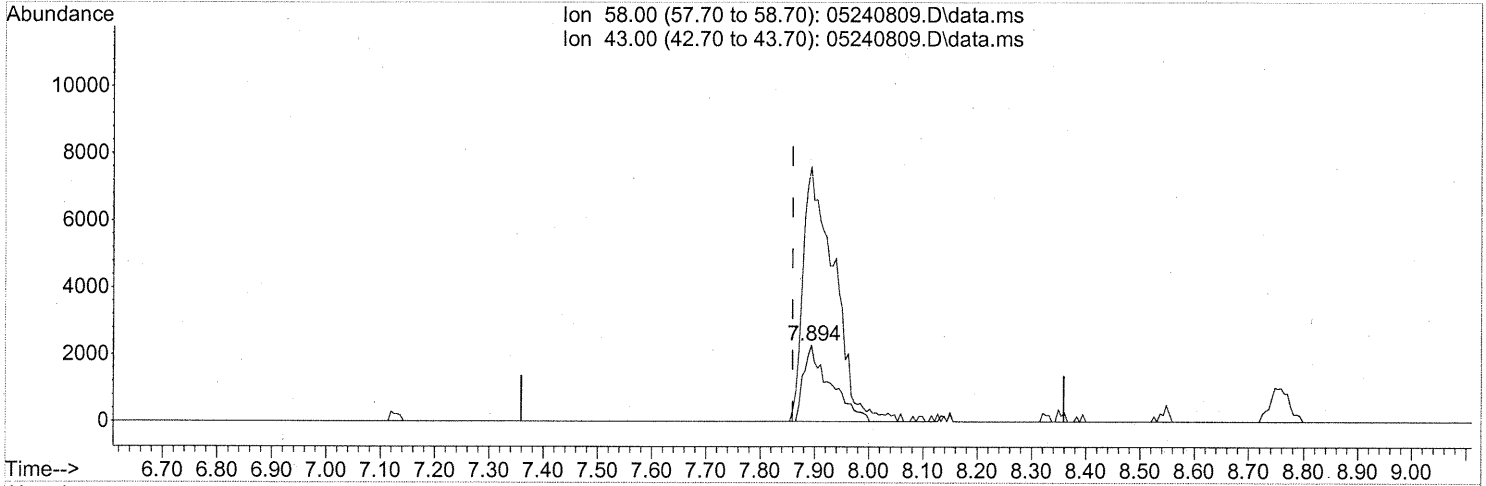
(10) Ethanol (T)  
 7.126min (+0.023) 0.10ng  
 response 2062

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	17.02#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
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 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(13) Acetone (T)

7.894min (+0.034) 0.35ng

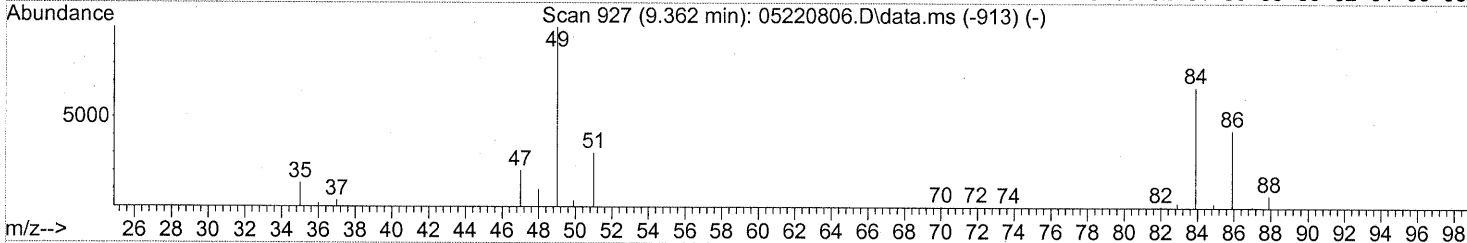
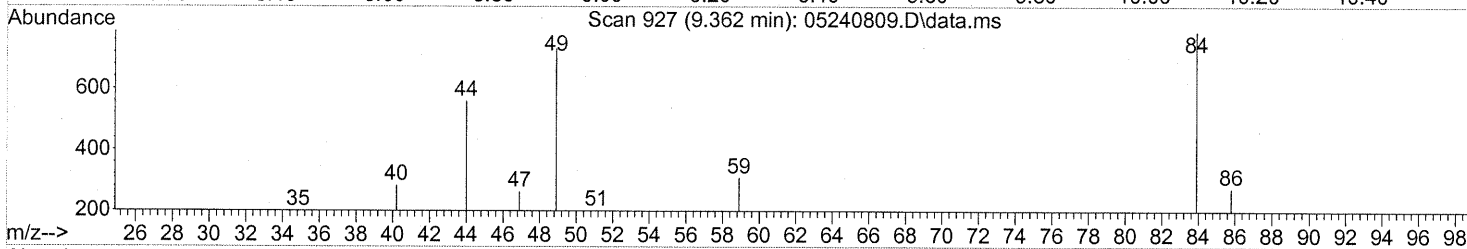
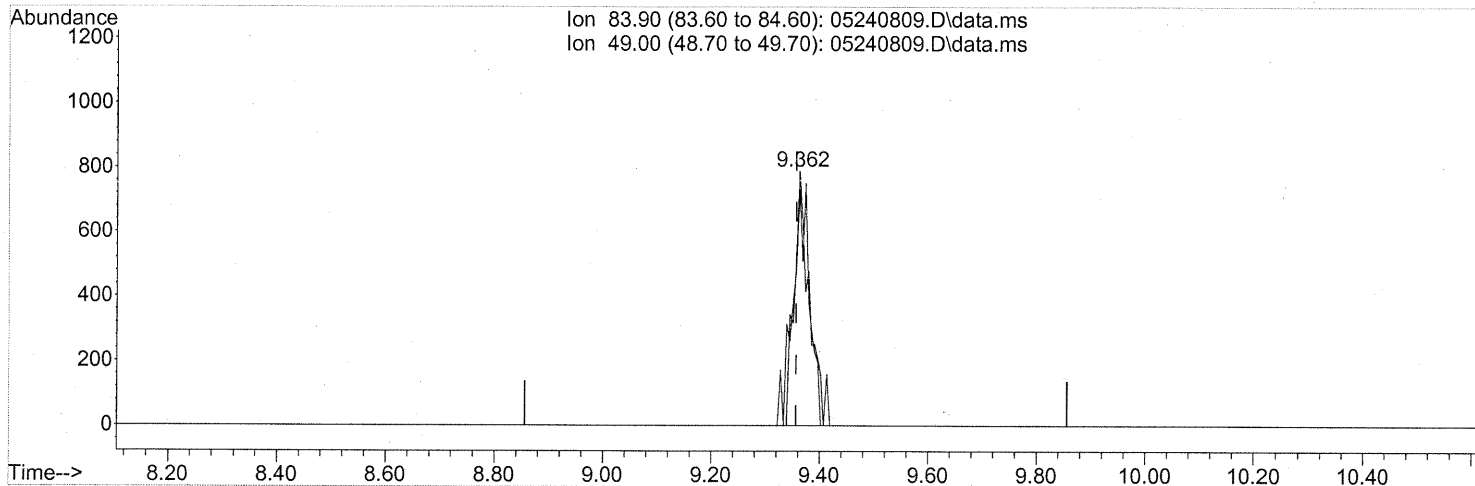
response 7771

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	390.58#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
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Quant Time: May 24 17:51:15 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
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 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(19) Methylene Chloride (T)

9.362min (+0.006) 0.06ng

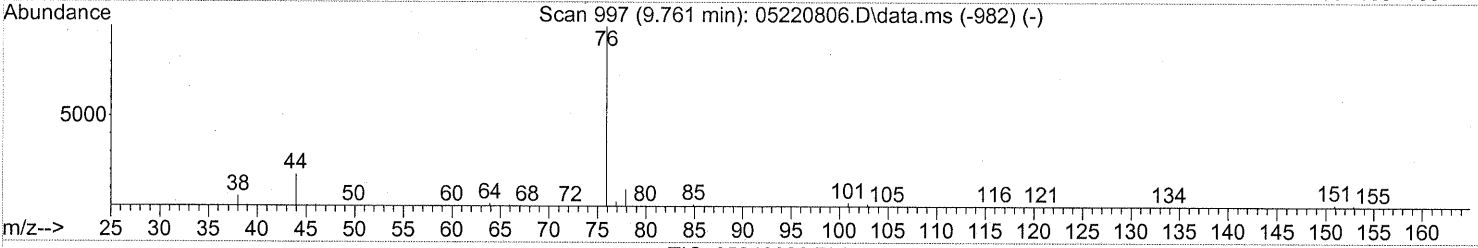
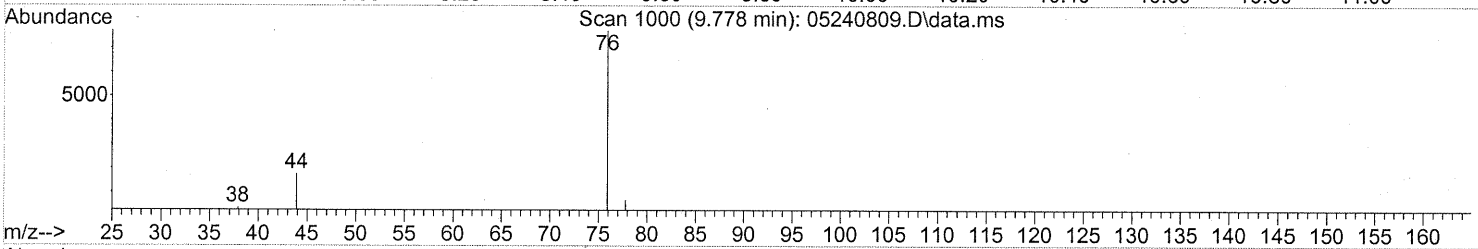
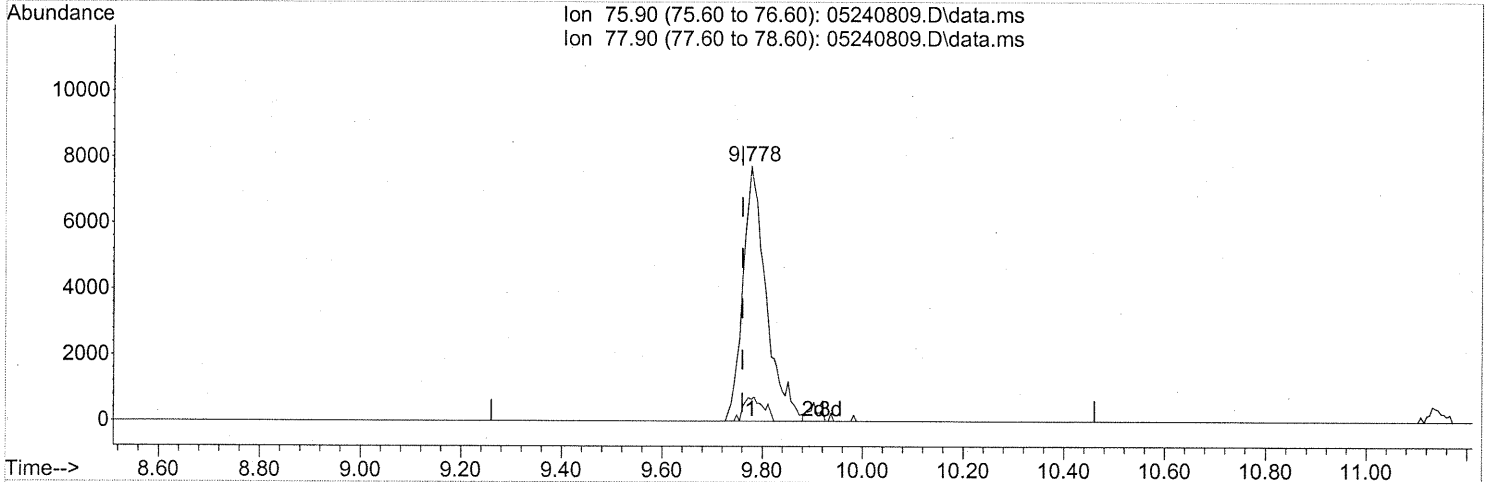
response 1483

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	108.16#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240809.D  
Acq On : 24 May 2008 12:35  
Operator : WA  
Sample : P0801442-014 (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240809.D\data.ms

(22) Carbon Disulfide (T)

9.778min (+0.017) 0.27ng

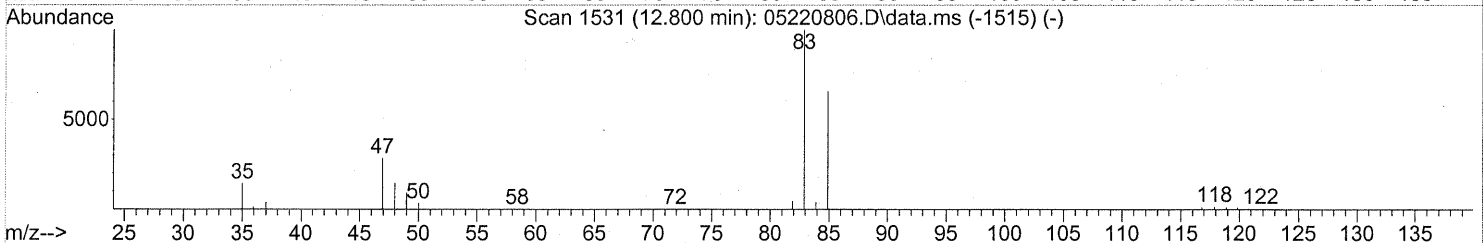
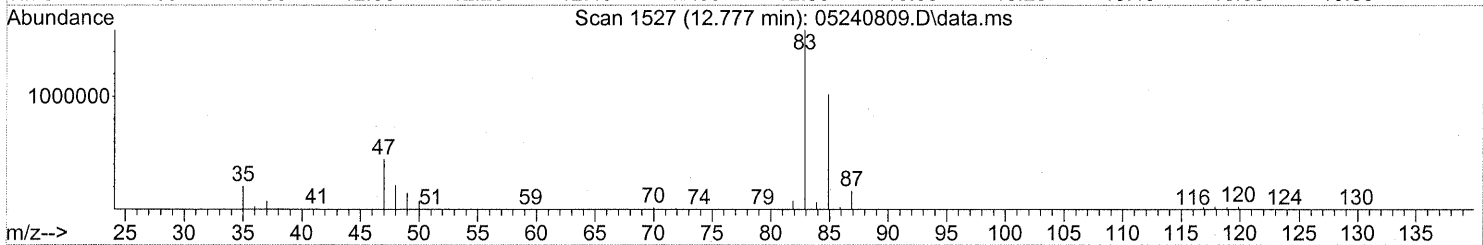
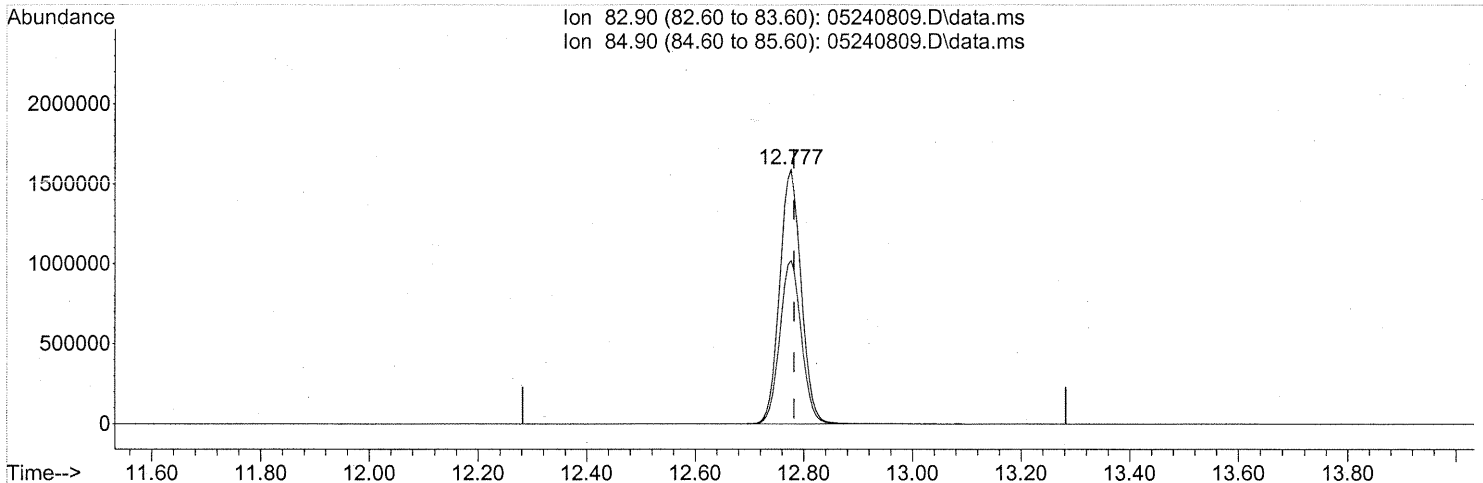
response 24788

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
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 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(32) Chloroform (T)

12.777min (-0.006) 117.38ng

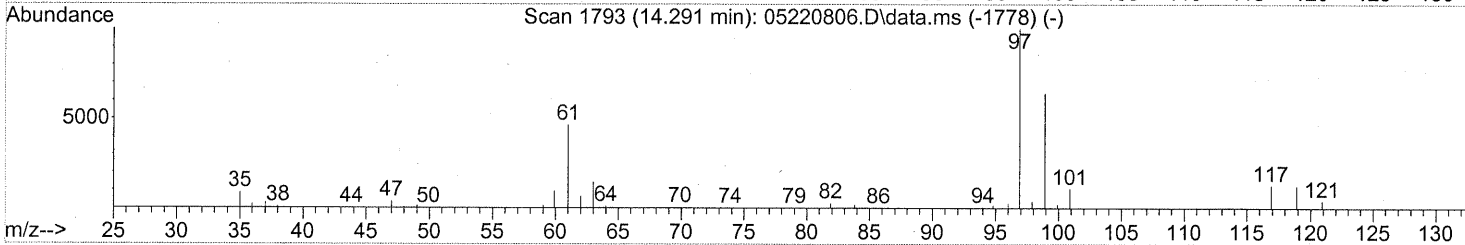
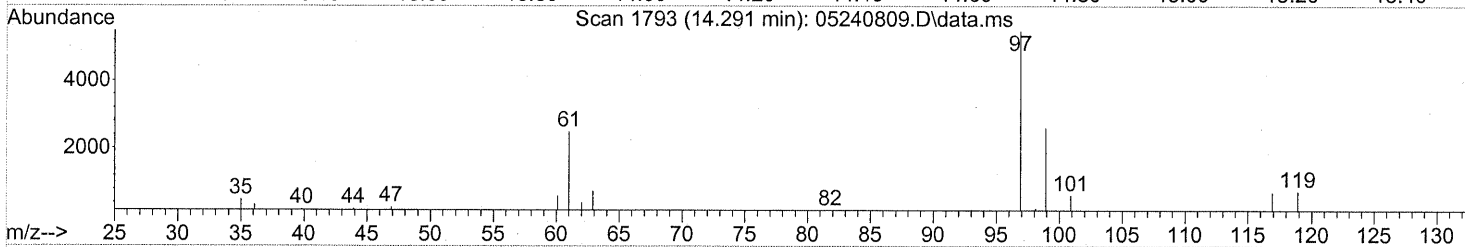
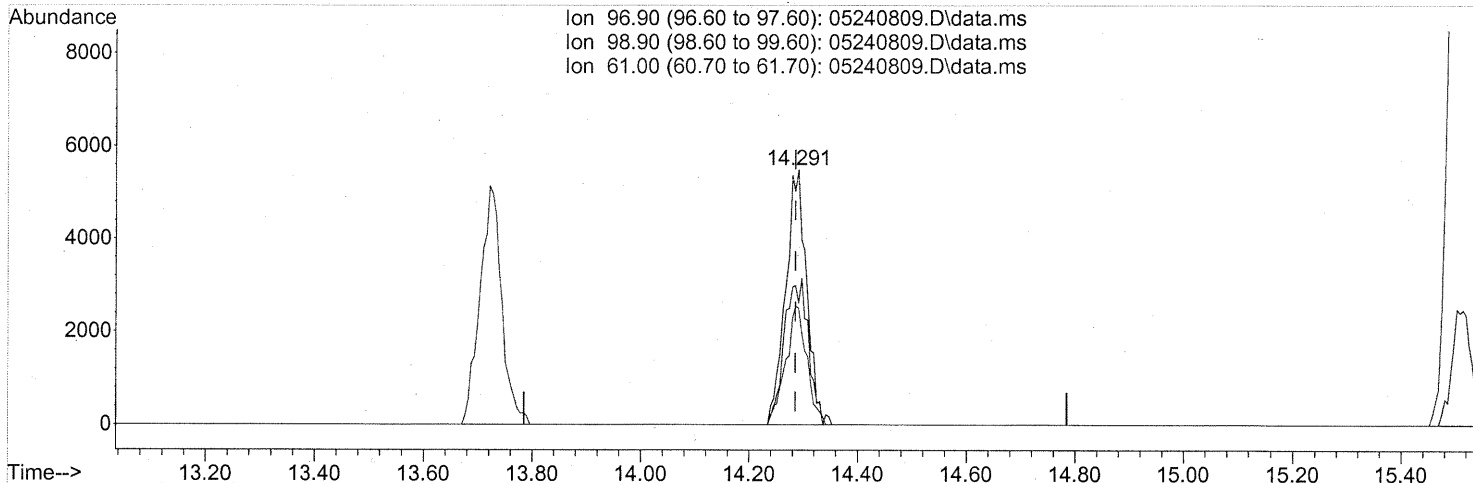
response 4374930

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
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 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(38) 1,1,1-Trichloroethane (T)

14.291min (+0.006) 0.36ng

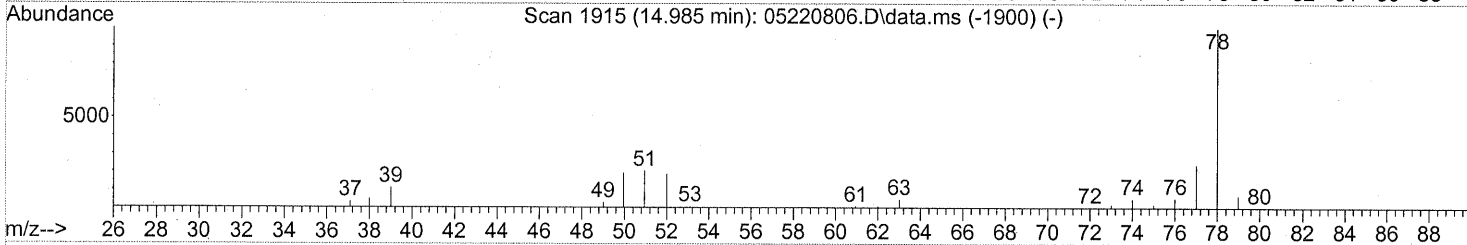
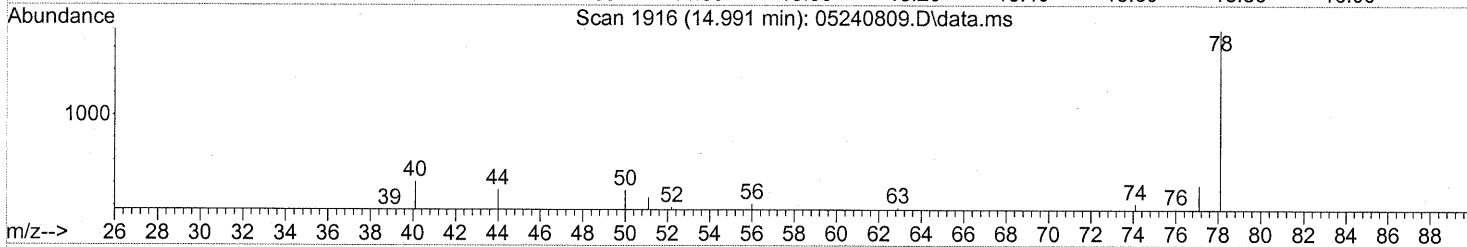
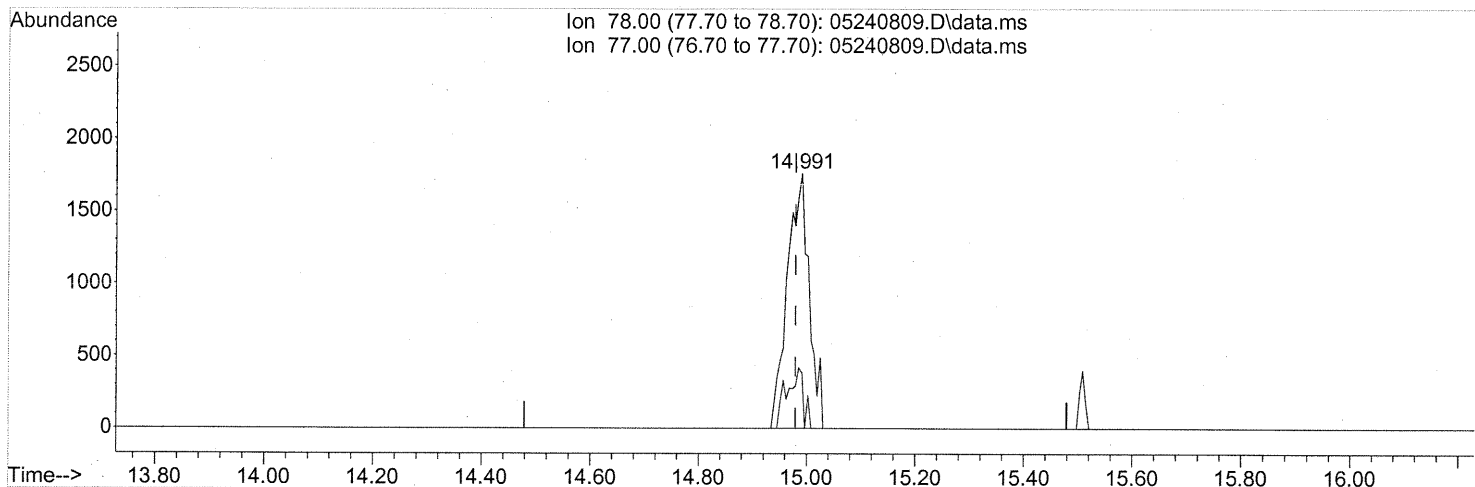
response 14778

Ion	Exp%	Act%
96.90	100	100
98.90	63.40	64.20
61.00	50.50	46.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(41) Benzene (T)  
 14.991min (+0.011) 0.05ng  
 response 4879

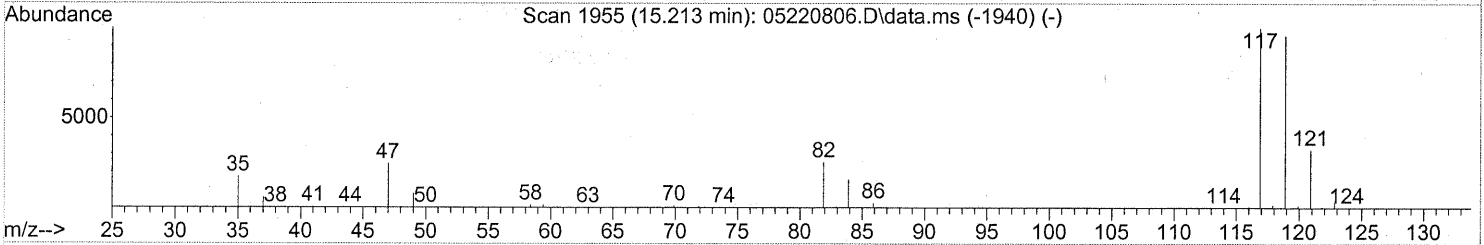
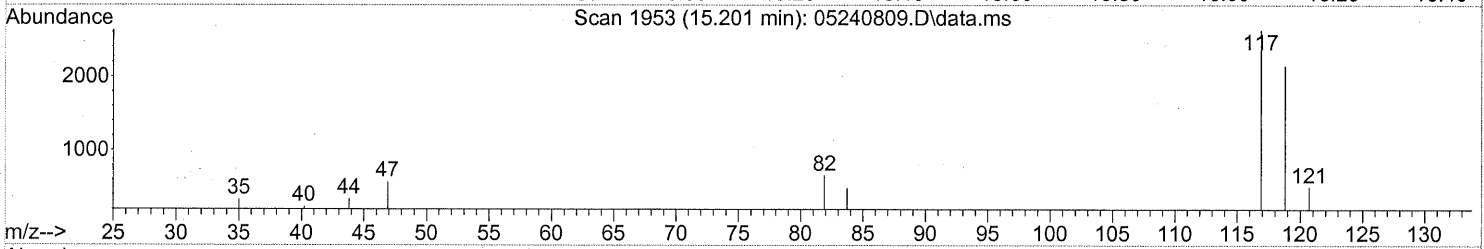
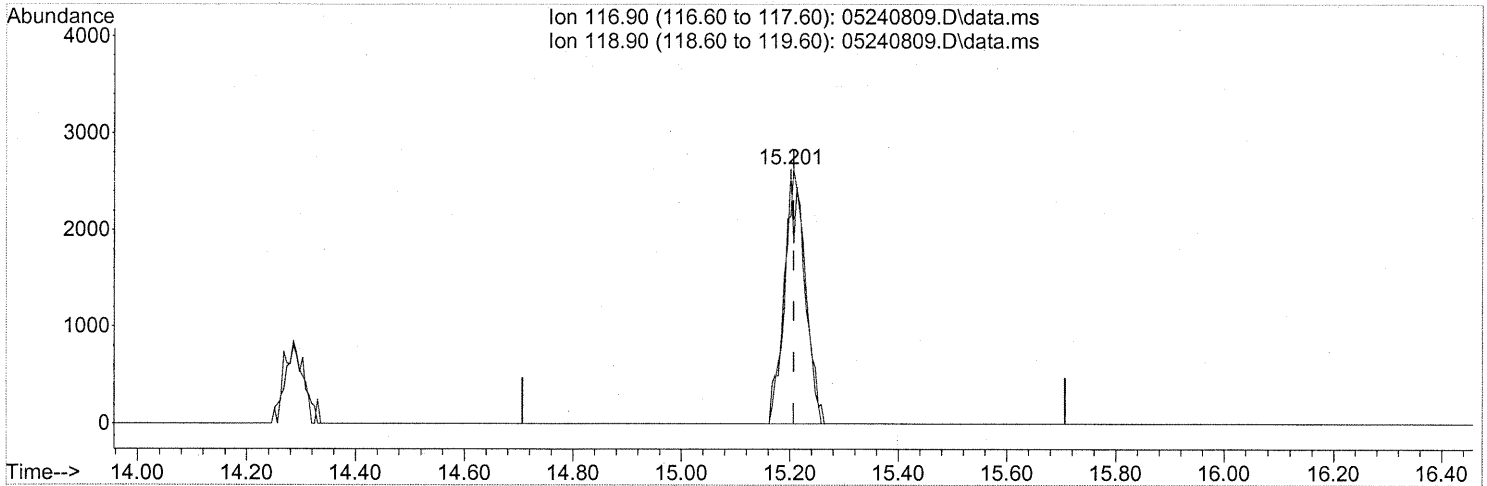
Ion	Exp%	Act%
78.00	100	100
77.00	23.50	9.16
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

15.201min (-0.006) 0.19ng

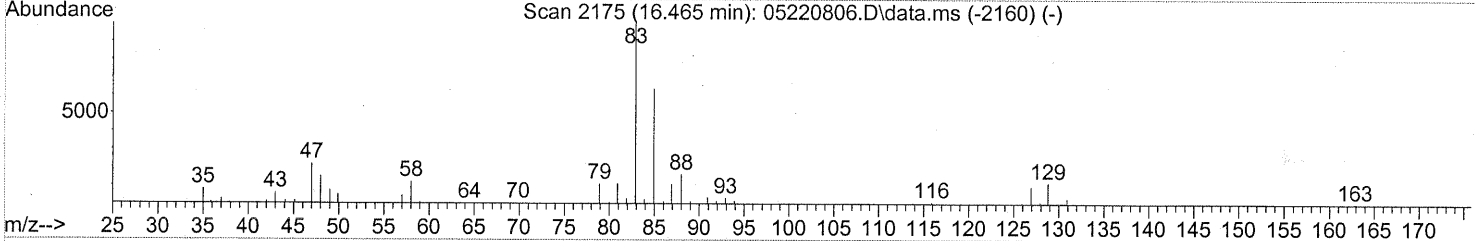
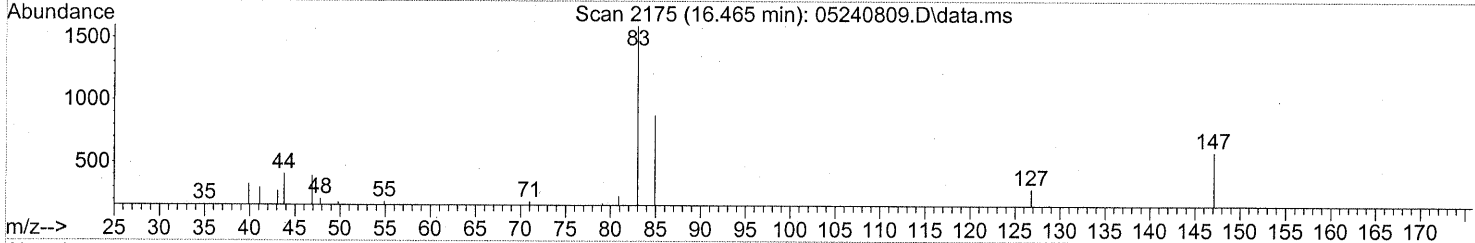
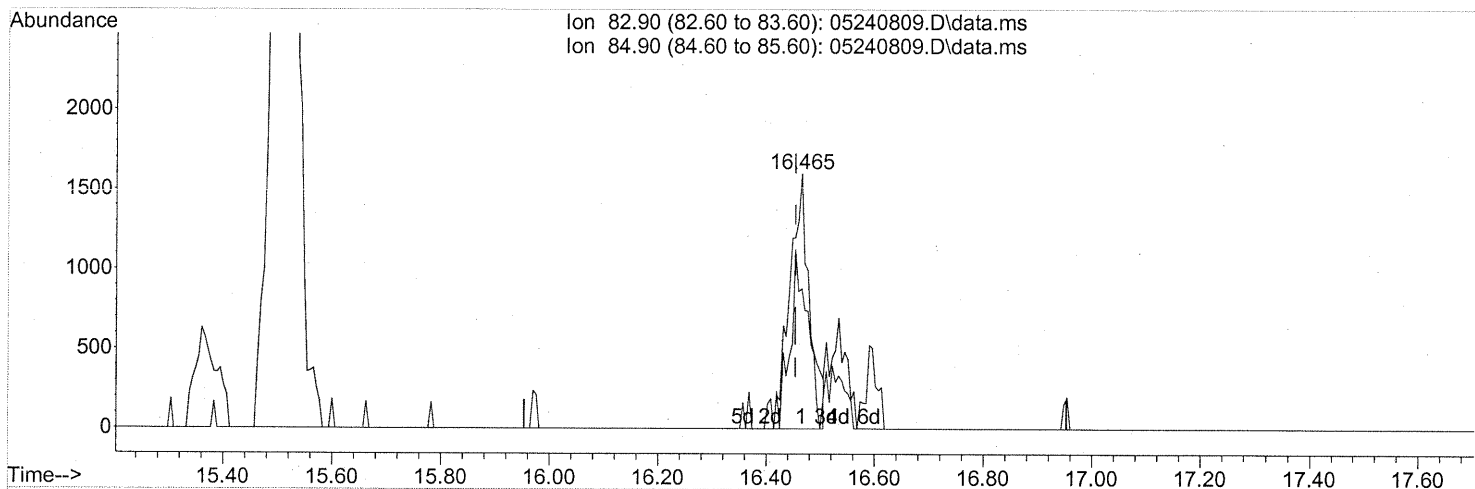
response 6893

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	99.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.465min (+0.011) 0.13ng

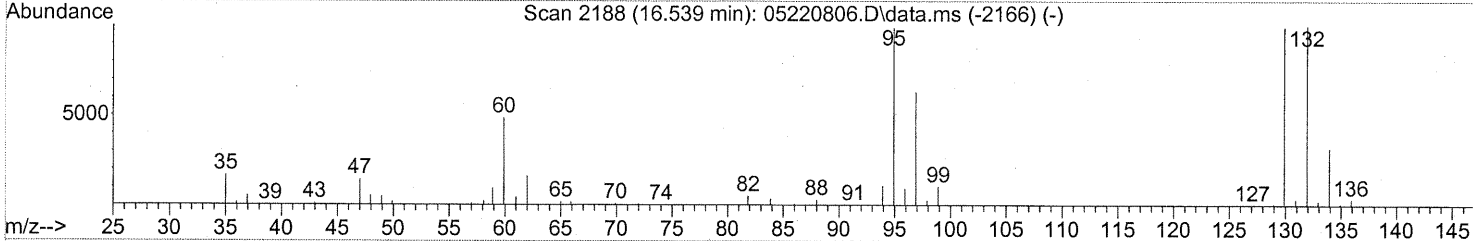
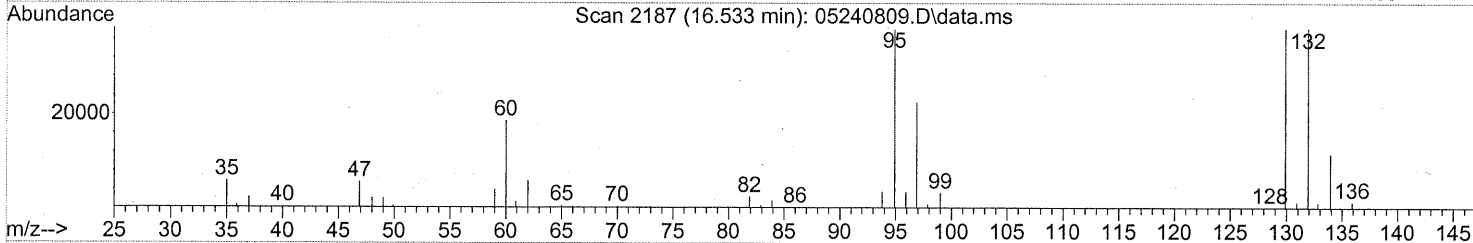
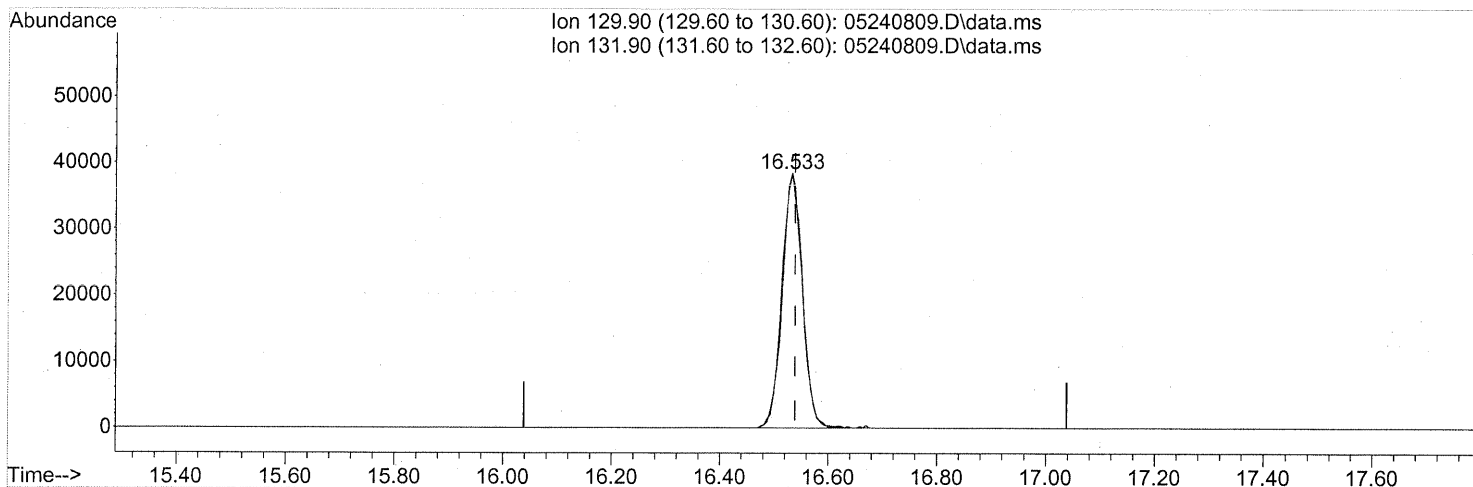
response 4068

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	63.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240809.D\data.ms

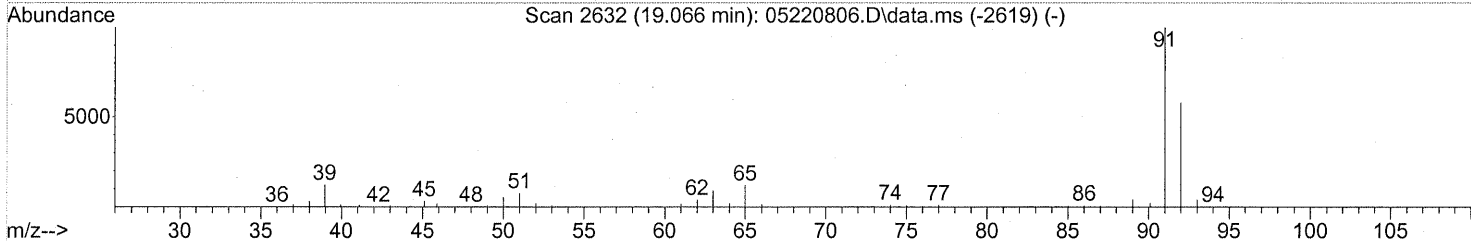
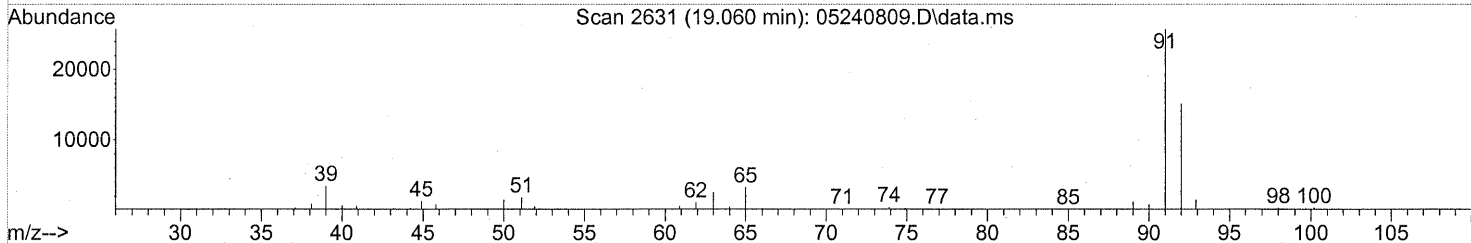
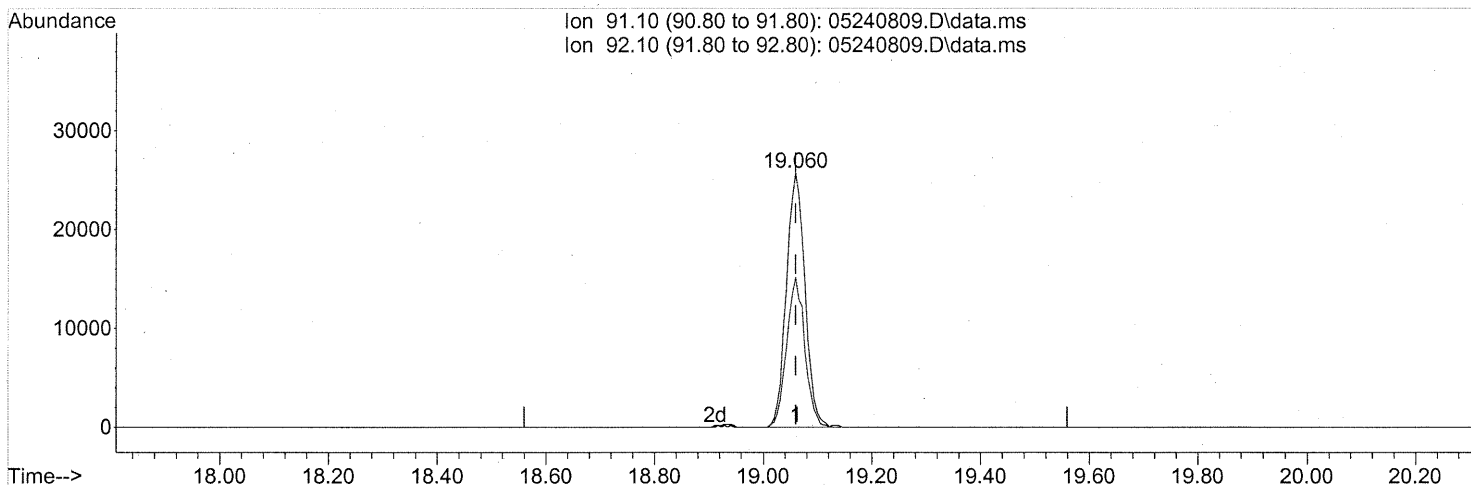
(47) Trichloroethene (T)  
 16.533min (-0.006) 3.42ng  
 response 99591

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	98.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
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 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 0.59ng

response 61058

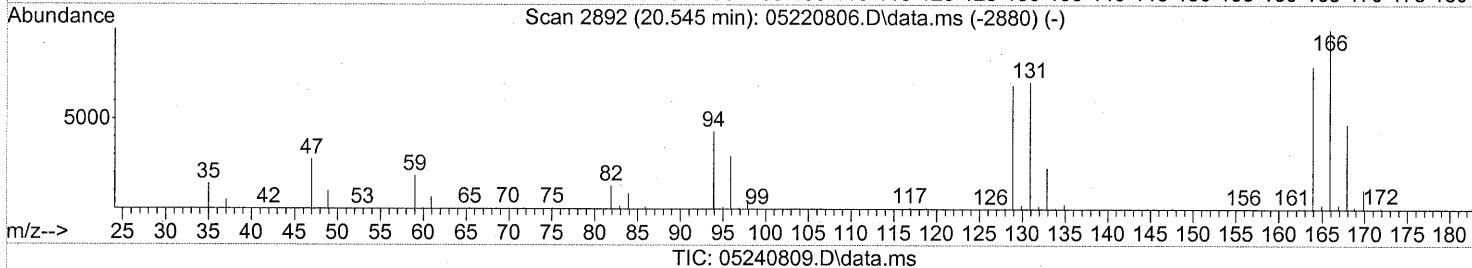
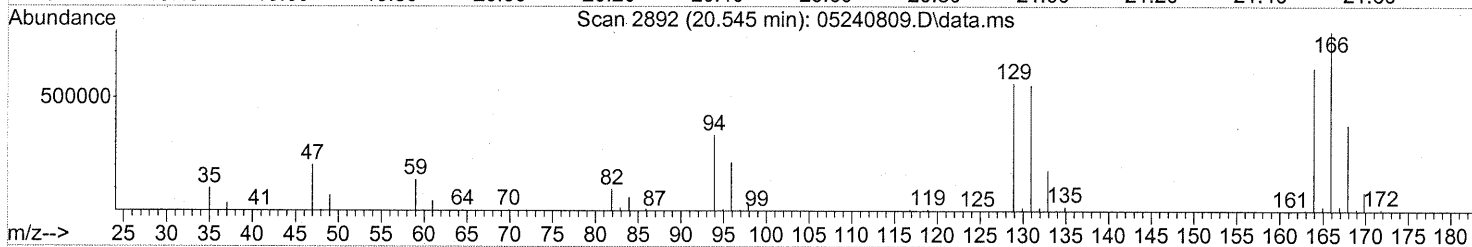
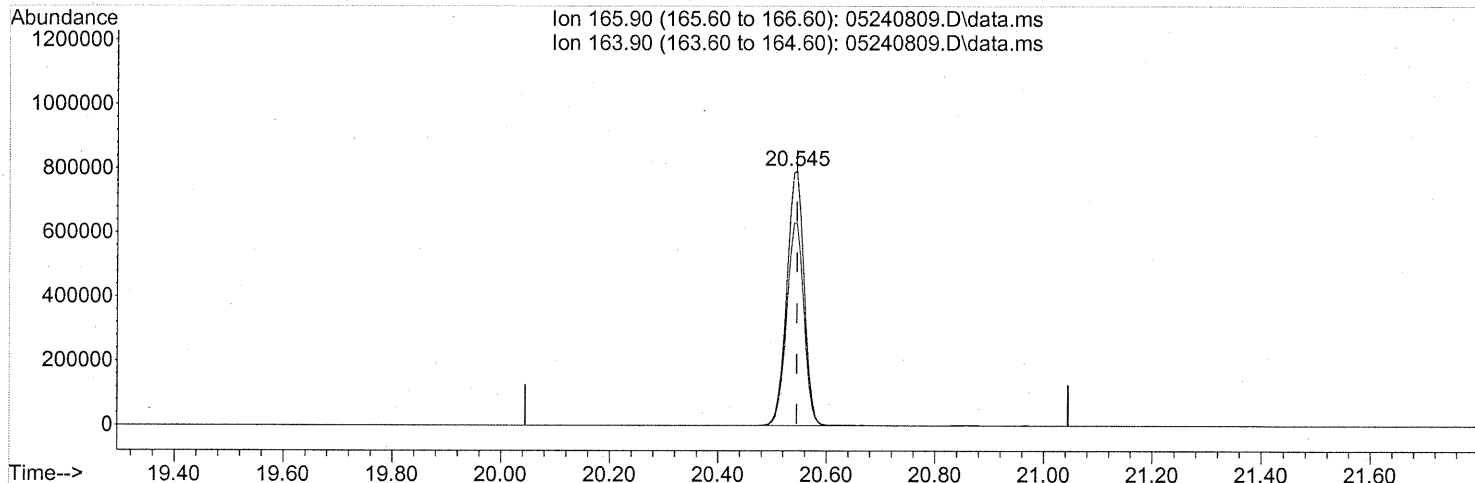
Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.51
0.00	0.00	0.00
0.00	0.00	0.00

742

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240809.D  
Acq On : 24 May 2008 12:35  
Operator : WA  
Sample : P0801442-014 (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.545min (-0.000) 56.62ng

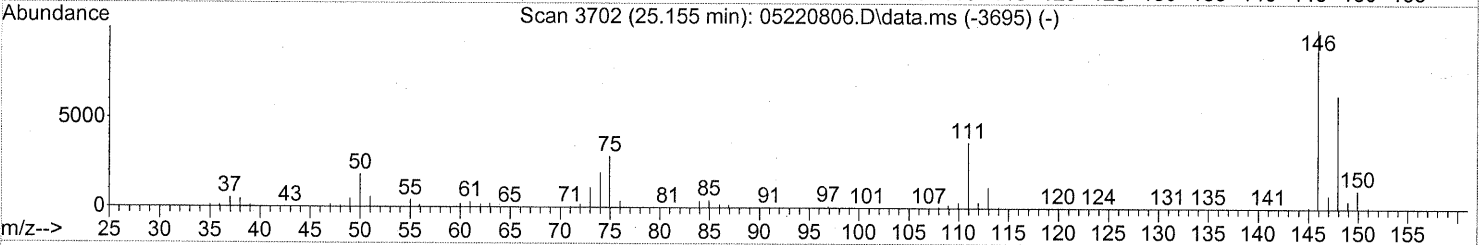
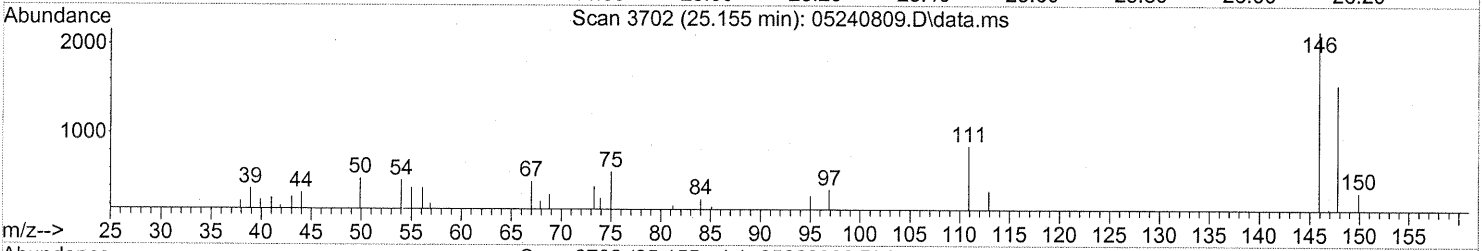
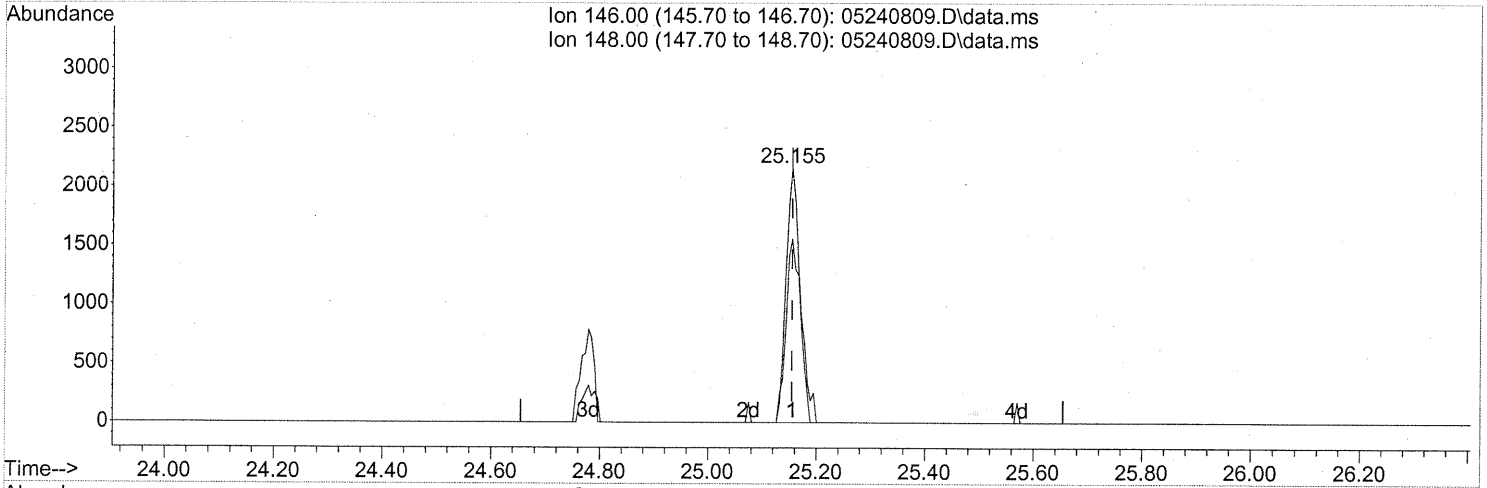
response 1743323

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
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 Response via : Initial Calibration



TIC: 05240809.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (-0.000) 0.06ng

response 3949

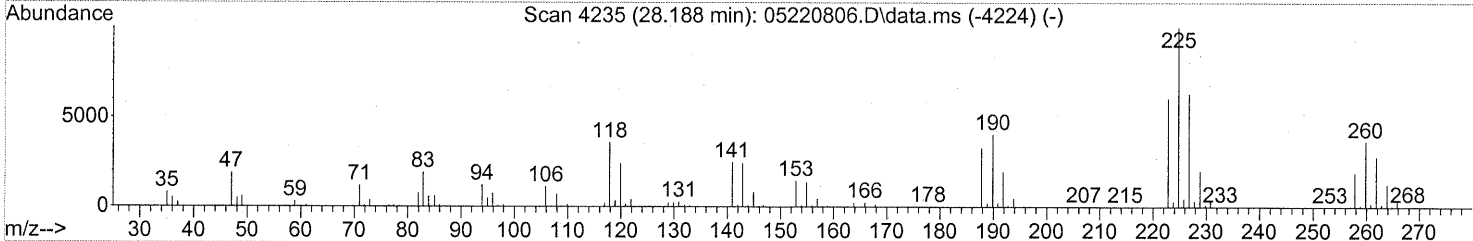
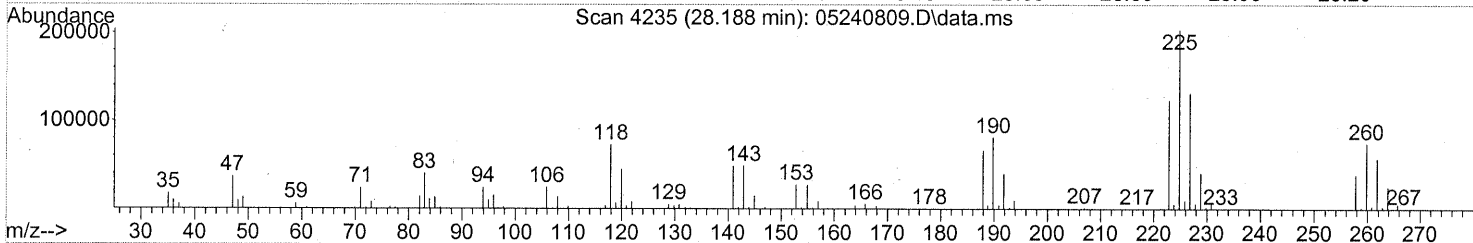
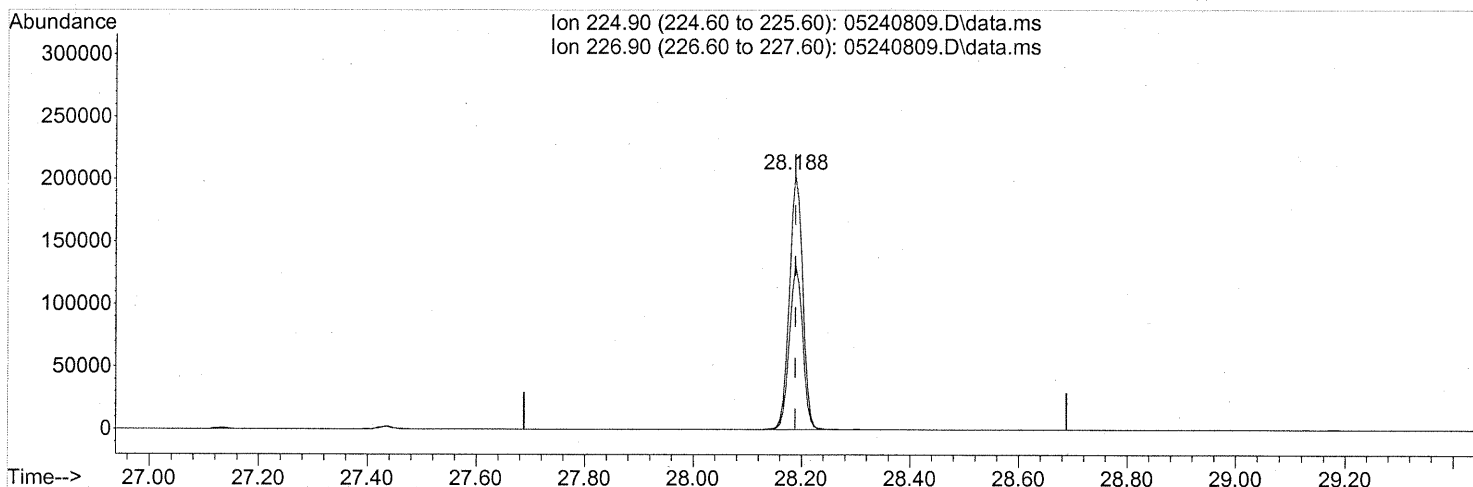
Ion	Exp%	Act%
146.00	100	100
148.00	64.20	72.80
0.00	0.00	0.00
0.00	0.00	0.00

744

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 24 17:51:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

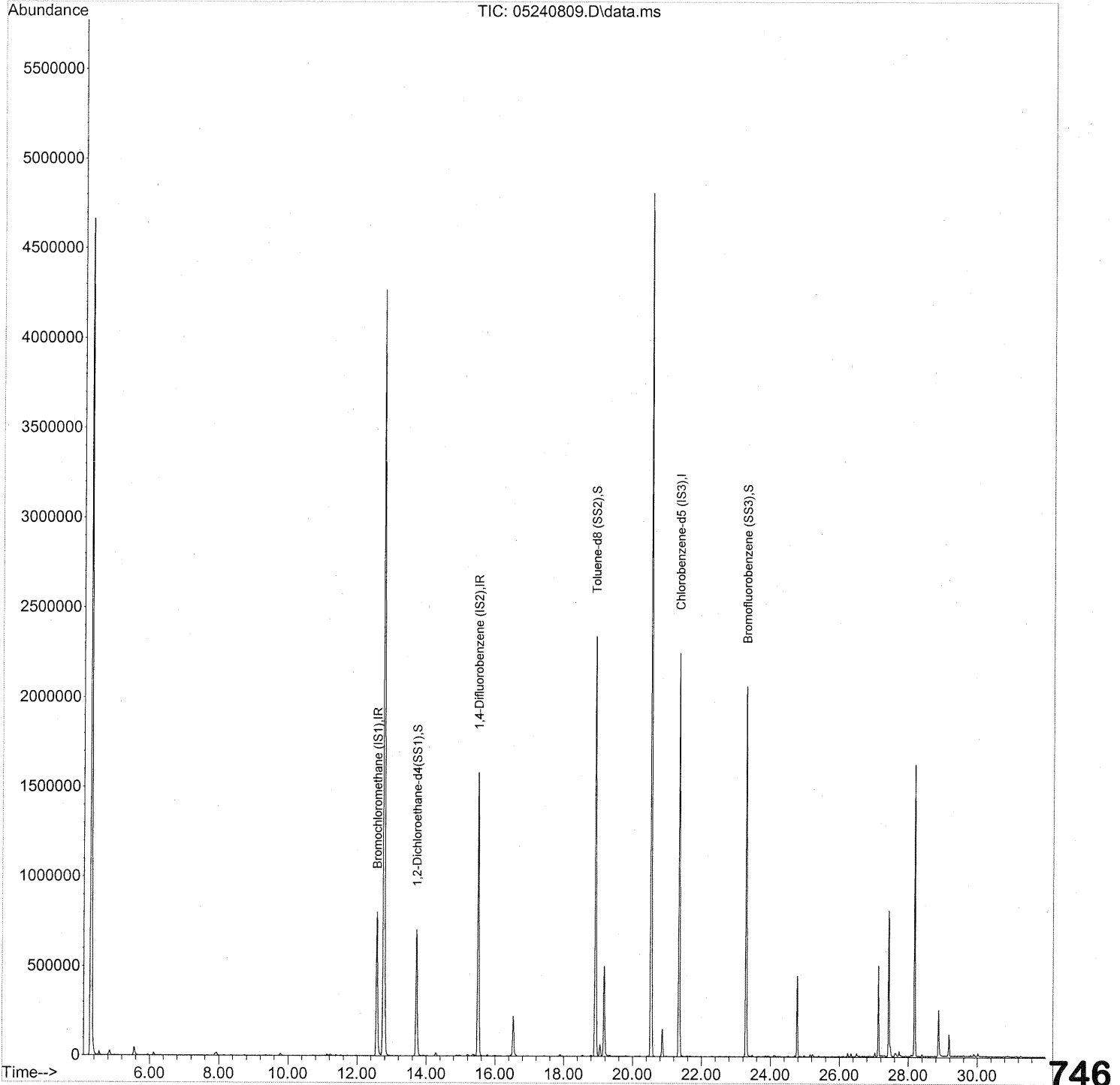
28.188min (-0.000) 11.41ng

response 345502

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	63.99
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240809.D  
Acq On : 24 May 2008 12:35  
Operator : WA  
Sample : P0801442-014 (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 25 20:36:26 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration





Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240809.D  
 Acq On : 24 May 2008 12:35  
 Operator : WA  
 Sample : P0801442-014 (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 25 20:36:26 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)	
1) Bromochloromethane (IS1)	12.58	130	408720	25.000	ng	-0.02	
3) 1,4-Difluorobenzene (IS2)	15.51	114	1810368	25.000	ng	-0.02	
4) Chlorobenzene-d5 (IS3)	21.35	82	852322	25.000	ng	0.00	
System Monitoring Compounds							
2) 1,2-Dichloroethane-d4(...)	13.72	65	722748	25.521	ng	-0.03	
Spiked Amount	25.000						Recovery = 102.08%
5) Toluene-d8 (SS2)	18.92	98	1932261	25.243	ng	-0.02	
Spiked Amount	25.000						Recovery = 100.96%
6) Bromofluorobenzene (SS3)	23.29	174	764507	24.560	ng	0.00	
Spiked Amount	25.000						Recovery = 98.24%
Target Compounds							
7) tert-Butylbenzene	24.88	119	53	N.D.			Qvalue
8) n-Butylbenzene	25.91	91	461	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:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Wida Ang  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: SC00640

Date Collected: 5/15/08  
 Date Received: 5/16/08  
 Date Analyzed: 5/24/08  
 Volume(s) Analyzed: 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.19	0.40	0.38	0.038	
74-87-3	Chloromethane	0.26	0.37	0.19	0.13	0.18	0.090	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	1.9	0.19	ND	0.27	0.027	
75-01-4	Vinyl Chloride	ND	0.37	0.19	ND	0.15	0.073	
74-83-9	Bromomethane	ND	0.37	0.19	ND	0.096	0.048	
75-00-3	Chloroethane	ND	0.37	0.19	ND	0.14	0.071	
64-17-5	Ethanol	6.9	19	0.19	3.7	9.9	0.099	J
67-64-1	Acetone	7.9	19	0.27	3.3	7.8	0.11	J, B
75-69-4	Trichlorofluoromethane	1.1	0.37	0.19	0.19	0.066	0.033	
107-13-1	Acrylonitrile	ND	1.9	0.26	ND	0.86	0.12	
75-35-4	1,1-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.67	1.9	0.28	0.22	0.61	0.091	J
75-09-2	Methylene Chloride	0.34	1.9	0.19	0.097	0.54	0.054	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.37	0.19	ND	0.12	0.059	
76-13-1	Trichlorotrifluoroethane	0.51	0.37	0.21	0.066	0.049	0.027	
75-15-0	Carbon Disulfide	3.2	1.9	0.45	1.0	0.60	0.14	
156-60-5	trans-1,2-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
75-34-3	1,1-Dichloroethane	ND	0.37	0.19	ND	0.092	0.046	
1634-04-4	Methyl tert-Butyl Ether	ND	0.37	0.19	ND	0.10	0.052	
108-05-4	Vinyl Acetate	1.5	19	0.60	0.43	5.3	0.17	J
78-93-3	2-Butanone (MEK)	6.8	1.9	0.19	2.3	0.63	0.063	
156-59-2	cis-1,2-Dichloroethene	ND	0.37	0.19	ND	0.094	0.047	
108-20-3	Diisopropyl Ether	ND	1.9	0.22	ND	0.45	0.053	
67-66-3	Chloroform	1.5	0.37	0.22	0.31	0.076	0.045	

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: Re      Date: 6/2/08      **748**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00640

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.19	ND	0.45	0.045	
107-06-2	1,2-Dichloroethane	ND	0.37	0.19	ND	0.092	0.046	
71-55-6	1,1,1-Trichloroethane	ND	0.37	0.19	ND	0.068	0.034	
71-43-2	<b>Benzene</b>	<b>3.6</b>	0.37	0.19	<b>1.1</b>	0.12	0.058	
56-23-5	<b>Carbon Tetrachloride</b>	<b>0.40</b>	0.37	0.19	<b>0.064</b>	0.059	0.030	
994-05-8	tert-Amyl Methyl Ether	ND	1.9	0.19	ND	0.45	0.045	
78-87-5	1,2-Dichloropropane	ND	0.37	0.19	ND	0.081	0.040	
75-27-4	Bromodichloromethane	ND	0.37	0.19	ND	0.056	0.028	
79-01-6	<b>Trichloroethene</b>	<b>0.40</b>	0.37	0.19	<b>0.075</b>	0.069	0.035	
123-91-1	1,4-Dioxane	ND	1.9	0.23	ND	0.52	0.063	
80-62-6	Methyl Methacrylate	ND	1.9	0.28	ND	0.45	0.068	
142-82-5	n-Heptane	ND	1.9	0.24	ND	0.45	0.058	
10061-01-5	cis-1,3-Dichloropropene	ND	1.9	0.19	ND	0.41	0.043	
108-10-1	4-Methyl-2-pentanone	ND	1.9	0.21	ND	0.45	0.051	
10061-02-6	trans-1,3-Dichloropropene	ND	1.9	0.23	ND	0.41	0.052	
79-00-5	1,1,2-Trichloroethane	ND	0.37	0.19	ND	0.068	0.034	
108-88-3	<b>Toluene</b>	<b>1.7</b>	1.9	0.19	<b>0.44</b>	0.49	0.049	<b>J</b>
591-78-6	<b>2-Hexanone</b>	<b>0.55</b>	1.9	0.28	<b>0.14</b>	0.45	0.069	<b>J</b>
124-48-1	Dibromochloromethane	ND	0.37	0.25	ND	0.044	0.030	
106-93-4	1,2-Dibromoethane	ND	0.37	0.20	ND	0.048	0.026	
111-65-9	<b>n-Octane</b>	<b>0.31</b>	1.9	0.19	<b>0.065</b>	0.40	0.040	<b>J</b>
127-18-4	<b>Tetrachloroethene</b>	<b>3.9</b>	0.37	0.19	<b>0.58</b>	0.055	0.027	
108-90-7	Chlorobenzene	ND	0.37	0.19	ND	0.081	0.041	

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:** SG94B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-015

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00640

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.50 Liter(s)

Initial Pressure (psig): -4.9      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.86

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	1.9	0.23	ND	0.43	0.053	
179601-23-1	<b>m,p-Xylenes</b>	<b>0.51</b>	1.9	0.48	<b>0.12</b>	0.43	0.11	<b>J</b>
75-25-2	Bromoform	ND	1.9	0.28	ND	0.18	0.027	
100-42-5	Styrene	ND	1.9	0.28	ND	0.44	0.066	
95-47-6	<b>o-Xylene</b>	<b>0.23</b>	1.9	0.23	<b>0.054</b>	0.43	0.054	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.37	0.24	ND	0.054	0.035	
98-82-8	Cumene	ND	1.9	0.21	ND	0.38	0.042	
103-65-1	n-Propylbenzene	ND	1.9	0.19	ND	0.38	0.039	
622-96-8	4-Ethyltoluene	ND	1.9	0.21	ND	0.38	0.043	
108-67-8	1,3,5-Trimethylbenzene	ND	1.9	0.22	ND	0.38	0.045	
98-83-9	alpha-Methylstyrene	ND	1.9	0.27	ND	0.38	0.056	
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>0.35</b>	1.9	0.26	<b>0.071</b>	0.38	0.052	<b>J</b>
100-44-7	Benzyl Chloride	ND	0.37	0.32	ND	0.072	0.062	
541-73-1	1,3-Dichlorobenzene	ND	0.37	0.23	ND	0.062	0.038	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>2.7</b>	0.37	0.21	<b>0.45</b>	0.062	0.035	
135-98-8	sec-Butylbenzene	ND	1.9	0.22	ND	0.34	0.039	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	1.9	0.24	ND	0.34	0.044	
95-50-1	1,2-Dichlorobenzene	ND	0.37	0.25	ND	0.062	0.041	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.9	0.28	ND	0.19	0.029	
120-82-1	1,2,4-Trichlorobenzene	ND	0.37	0.28	ND	0.050	0.038	
91-20-3	<b>Naphthalene</b>	<b>2.6</b>	0.74	0.28	<b>0.50</b>	0.14	0.053	
87-68-3	Hexachlorobutadiene	ND	0.37	0.33	ND	0.035	0.031	
98-06-6	tert-Butylbenzene	ND	0.74	0.19	ND	0.14	0.034	
104-51-8	n-Butylbenzene	ND	0.74	0.19	ND	0.14	0.034	

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.

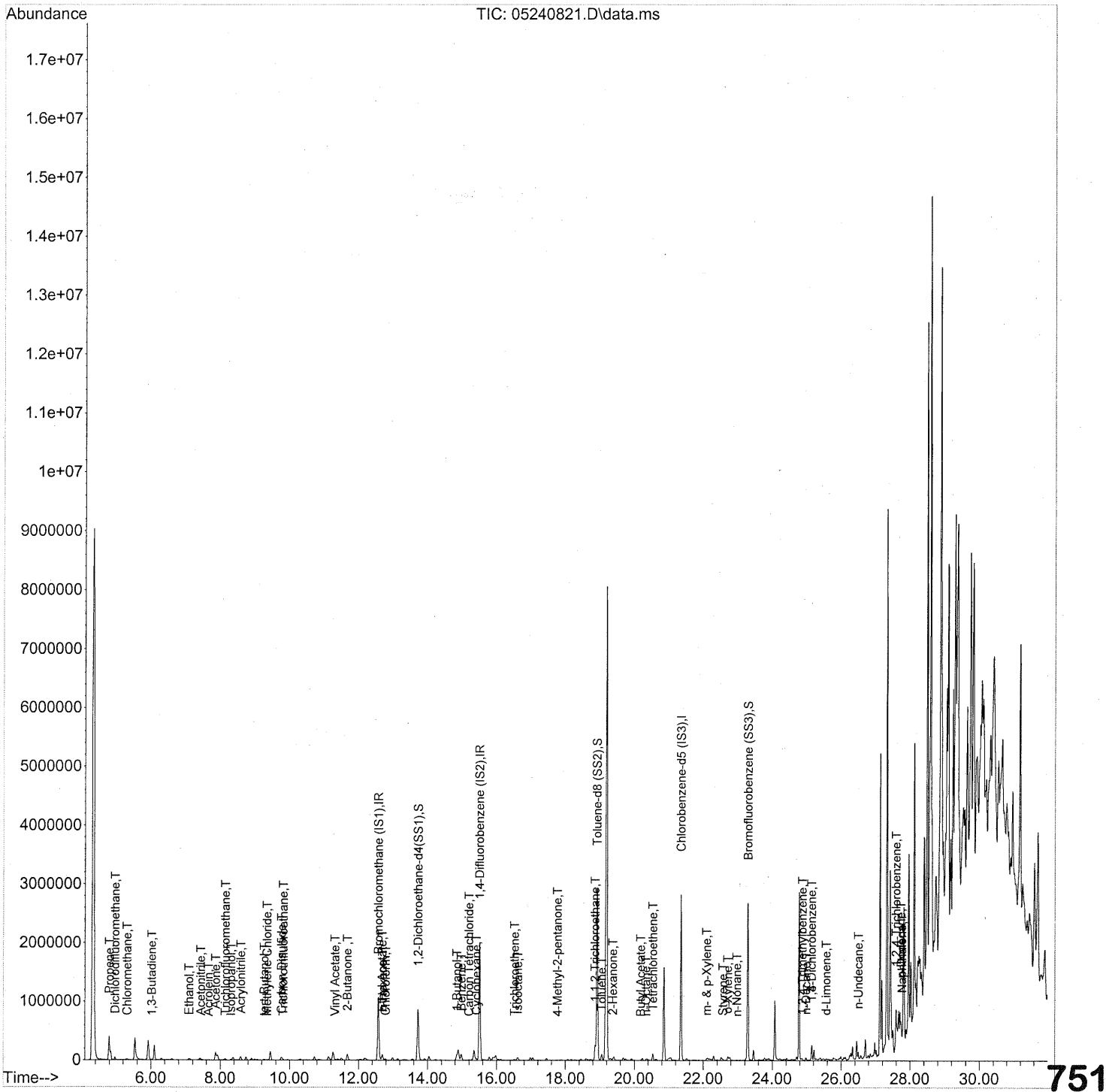
Verified By:     RC    

Date:     6/24/08    

**750**

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801442-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



751

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	564641	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2380094	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1098161	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)	Recovery
33) 1,2-Dichloroethane-d4(...)	13.72	65	890784	22.768	ng	0.00	91.08%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	18.92	98	2476898	25.114	ng	0.00	100.44%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	23.29	174	1026405	25.592	ng	0.00	102.36%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	202100	4.532	ng	# 81
3) Dichlorodifluoromethane	4.96	85	44123	0.537	ng	99
4) Chloromethane	5.32	50	3799	0.071	ng	# 41
5) Freon 114	5.53	135	1044	N.D.		✓
6) Vinyl Chloride	0.00	62	0	N.D.		✓
7) 1,3-Butadiene	6.02	54	2278	0.058	ng	# 34
8) Bromomethane	6.49	94	1128	N.D.		✓
9) Chloroethane	6.81	64	158	N.D.		✓
10) Ethanol	7.10	45	54882m	1.849	ng	
11) Acetonitrile	7.43	41	26275	0.306	ng	95
12) Acrolein	7.66	56	5112	0.241	ng	78
13) Acetone	7.87	58	64589	2.125	ng	# 25
14) Trichlorofluoromethane	8.14	101	20110	0.285	ng	97
15) Isopropanol	8.32	45	29336	0.303	ng	96
16) Acrylonitrile	8.59	53	6388	0.138	ng	NR# 27
17) 1,1-Dichloroethene	9.16	96	1089	N.D.		✓
18) tert-Butanol	9.27	59	14845m	0.180	ng	
19) Methylene Chloride	9.36	84	3107	0.091	ng	84
20) Allyl Chloride	9.55	41	1593	N.D.		
21) Trichlorotrifluoroethane	9.81	151	4372	0.136	ng	85
22) Carbon Disulfide	9.77	76	109730	0.851	ng	98
23) trans-1,2-Dichloroethene	10.74	61	208	N.D.		✓
24) 1,1-Dichloroethane	11.26	63	812	N.D.		✓
25) Methyl tert-Butyl Ether	11.19	73	131	N.D.		✓
26) Vinyl Acetate	11.32	86	2276	0.405	ng	# 1
27) 2-Butanone	11.68	72	40751	1.837	ng	# 84
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		✓
29) Diisopropyl Ether	12.70	87	220	N.D.		✓
30) Ethyl Acetate	12.69	61	10882	0.909	ng	82
31) n-Hexane	12.70	57	28765	0.476	ng	88

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5/29/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	Qion	Response	Conc	Units	Dev(Min)
32) Chloroform	12.79	83	20763	0.403 ng		100
34) Tetrahydrofuran	13.38	72	802	N.D.		
35) Ethyl tert-Butyl Ether	13.47	87	93	N.D. ✓		
36) 1,2-Dichloroethane	13.90	62	56	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	542	N.D. ✓		
39) Isopropyl Acetate	14.90	61	229	N.D.		
40) 1-Butanol	14.85	56	94665	2.894 ng	#	4
41) Benzene	14.98	78	119969	0.963 ng		100
42) Carbon Tetrachloride	15.20	117	5206	0.108 ng		93
43) Cyclohexane	15.41	84	9994	0.206 ng	#	1
44) tert-Amyl Methyl Ether	15.86	73	760	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	83	N.D. ✓		
46) Bromodichloromethane	16.48	83	252	N.D. ✓		
47) Trichloroethene	16.53	130	4144	0.108 ng		98
48) 1,4-Dioxane	16.50	88	309	N.D. ✓		
49) Isooctane	16.62	57	58344	0.408 ng		84
50) Methyl Methacrylate	16.62	100	138	N.D. ✓		
51) n-Heptane	16.98	71	1415	N.D. ✓		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D. ✓		
53) 4-Methyl-2-pentanone	17.77	58	1675	0.051 ng	<MDL	71
54) trans-1,3-Dichloropropene	18.63	75	52	N.D. ✓		
55) 1,1,2-Trichloroethane	18.87	97	3496	0.114 ng	NR#	32
58) Toluene	19.06	91	60272	0.450 ng		97
59) 2-Hexanone	19.38	43	13735	0.149 ng	#	45
60) Dibromochloromethane	0.00	129	0	N.D. ✓		
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.19	43	5926	0.063 ng		92
63) n-Octane	20.34	57	2418	0.082 ng	#	73
64) Tetrachloroethene	20.54	166	41661	1.050 ng		100
65) Chlorobenzene	21.40	112	894	N.D. ✓		
66) Ethylbenzene	21.88	91	7251	N.D. ✓		
67) m- & p-Xylene	22.10	91	14038	0.137 ng		88
68) Bromoform	0.00	173	0	N.D. ✓		
69) Styrene	22.57	104	6000	0.065 ng	<MDL	82
70) o-Xylene	22.71	91	6985	0.063 ng		84
71) n-Nonane	22.98	43	4518	0.057 ng		81
72) 1,1,2,2-Tetrachloroethane	22.67	83	67	N.D. ✓		
74) Cumene	23.46	105	1554	N.D. ✓		
75) alpha-Pinene	23.95	93	2016	N.D.		
76) n-Propylbenzene	24.10	91	3112	N.D. ✓		
77) 3-Ethyltoluene	24.22	105	6980	N.D.		
78) 4-Ethyltoluene	24.28	105	3323	N.D. ✓		
79) 1,3,5-Trimethylbenzene	24.37	105	3804	N.D. ✓		

753

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	3007	N.D.	✓	
81) 2-Ethyltoluene	24.61	105	4267	N.D.		
82) 1,2,4-Trimethylbenzene	24.88	105	12626	0.094	ng	82
83) n-Decane	24.98	57	17292	0.233	ng #	70
84) Benzyl Chloride	25.04	91	906	N.D.	✓	
85) 1,3-Dichlorobenzene	25.15	146	59664	0.707	ng NR	97
86) 1,4-Dichlorobenzene	25.15	146	59664	0.730	ng	98
87) sec-Butylbenzene	25.21	105	843	N.D.	✓	
88) p-Isopropyltoluene	25.40	119	3297	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.40	105	4671	N.D.		
90) 1,2-Dichlorobenzene	25.58	146	312	N.D.	✓	
91) d-Limonene	25.57	68	5623	0.105	ng	80
92) 1,2-Dibromo-3-Chloropr...	26.51	157	112	N.D.	✓	
93) n-Undecane	26.50	57	43310	0.558	ng #	69
94) 1,2,4-Trichlorobenzene	27.60	180	17302	0.295	ng NR #	13
95) Naphthalene	27.77	128	125019	0.703	ng	97
96) n-Dodecane	27.74	57	93770	1.214	ng	78
97) Hexachloro-1,3-butadiene	28.19	225	496	N.D.		

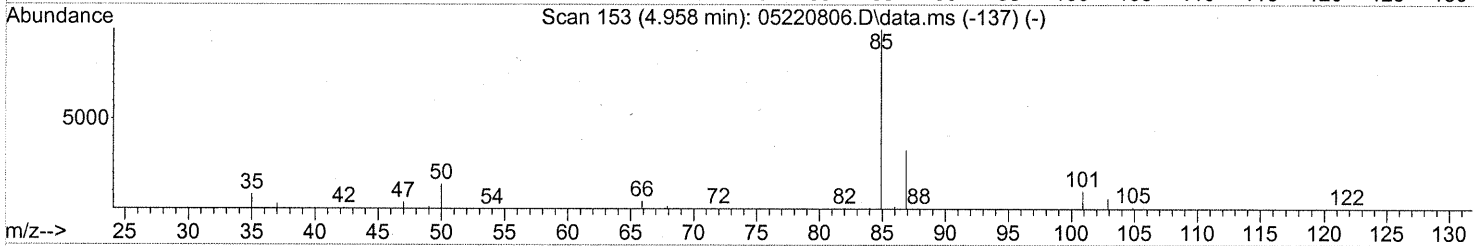
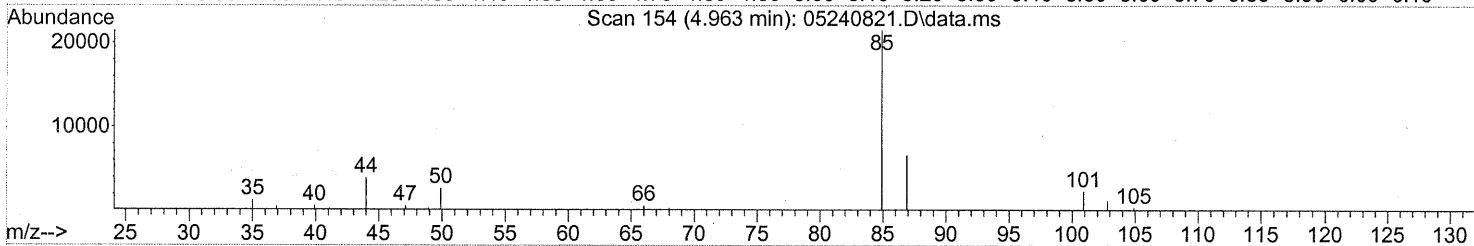
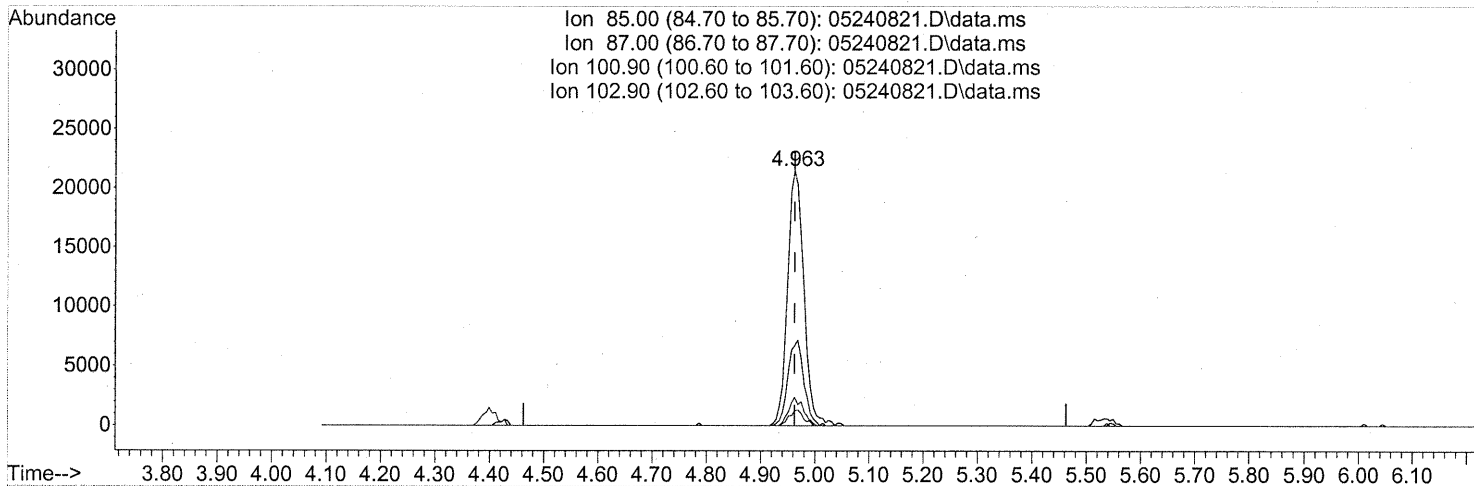
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.963min (-0.000) 0.54ng

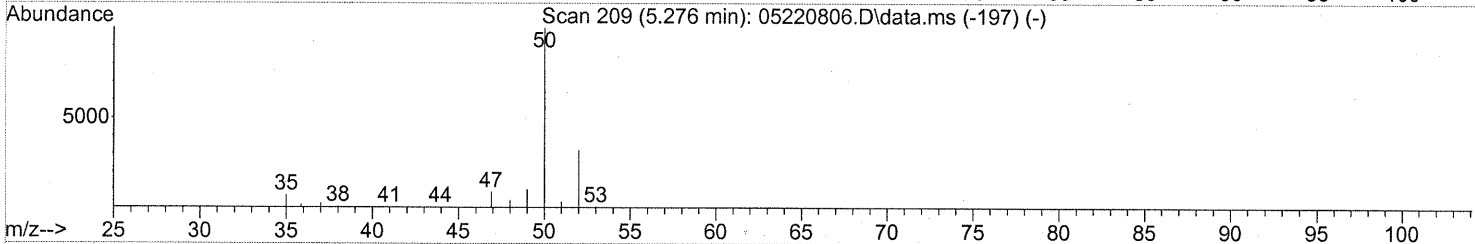
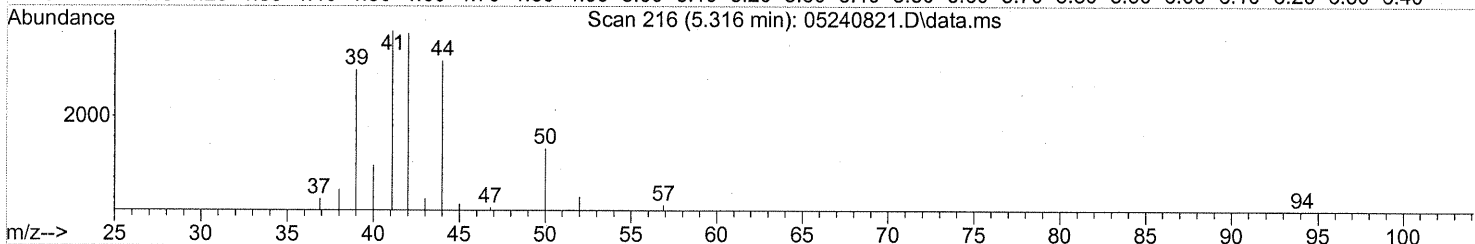
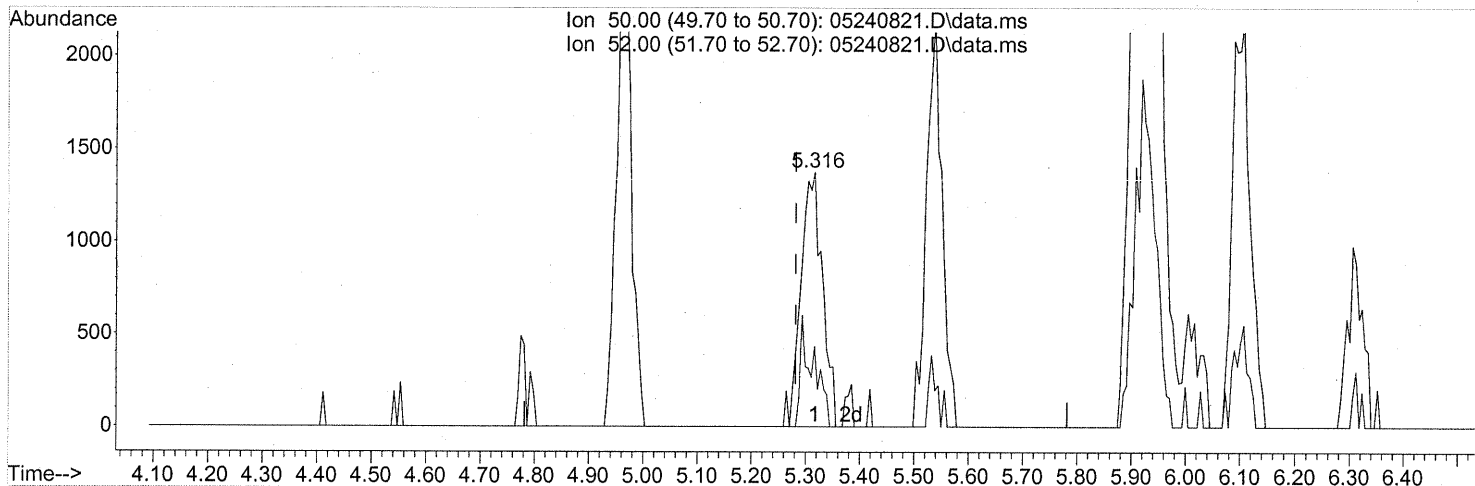
response 44123

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	32.64
100.90	9.30	9.54
102.90	6.00	5.39

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(4) Chloromethane (T)

5.316min (+0.034) 0.07ng

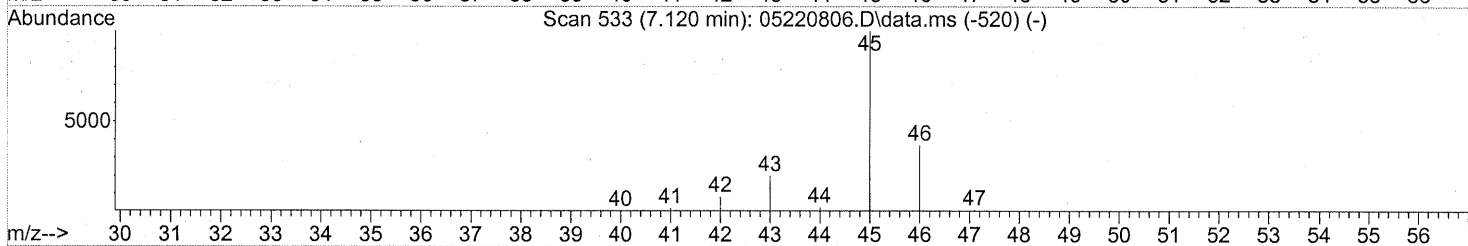
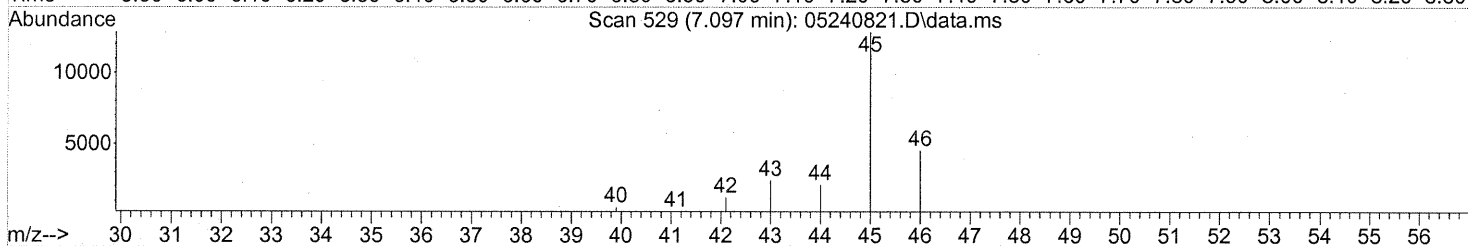
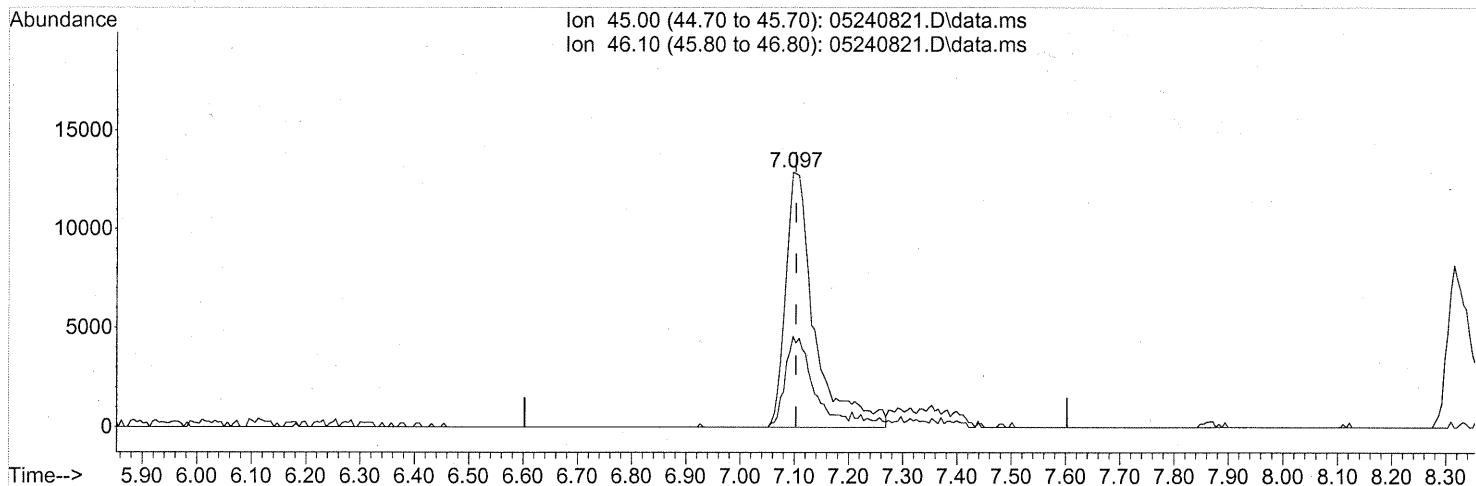
response 3799

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801422-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 09:05:40 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240821.D\data.ms

(10) Ethanol (T)

7.097min (-0.006) 1.60ng

response 47377

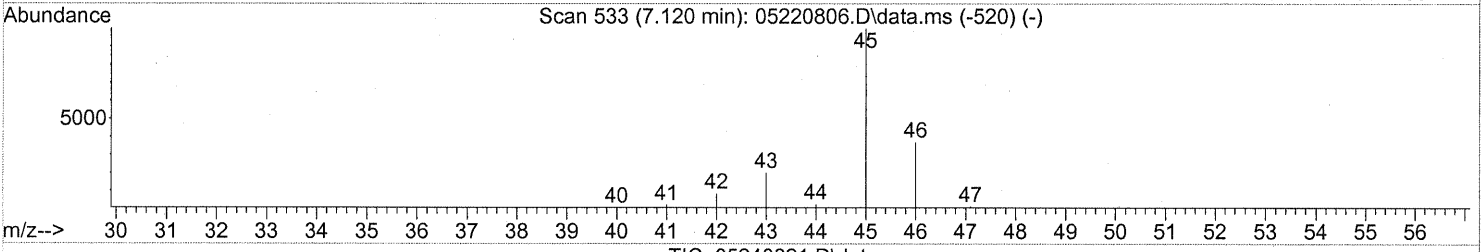
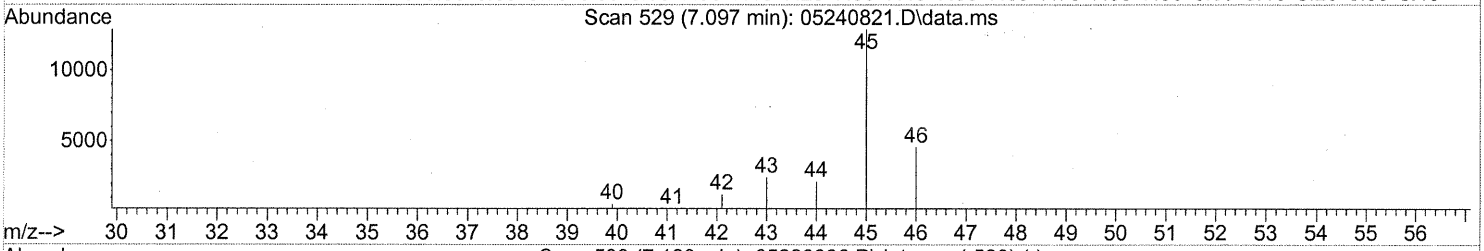
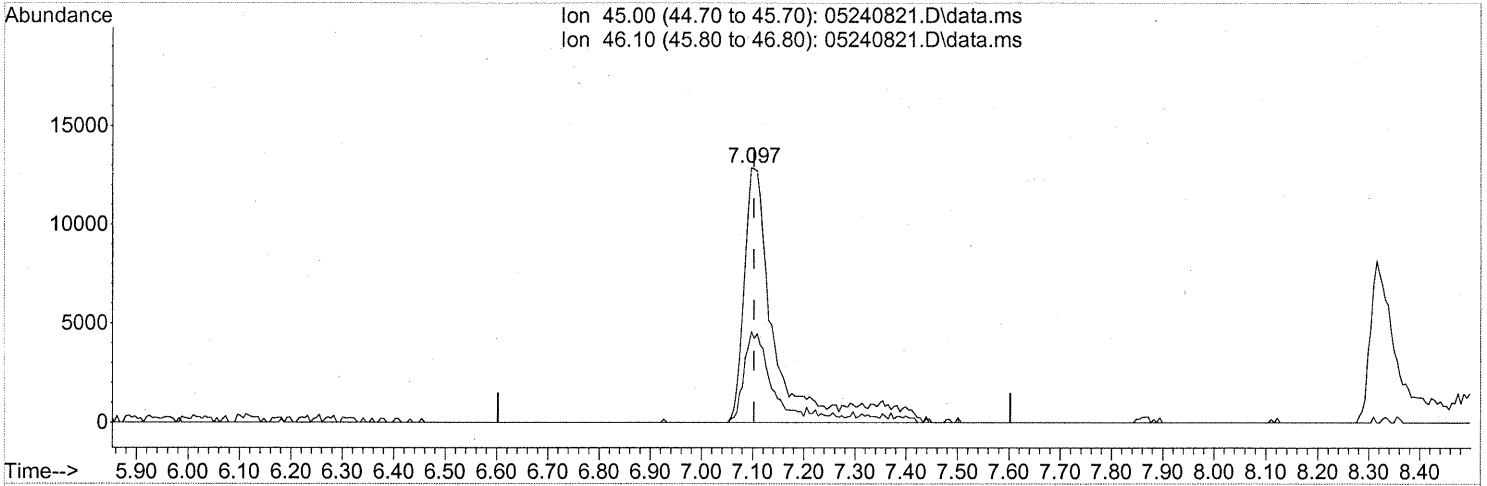
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.006) 1.85ng m  
 response 54882

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	29.36
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

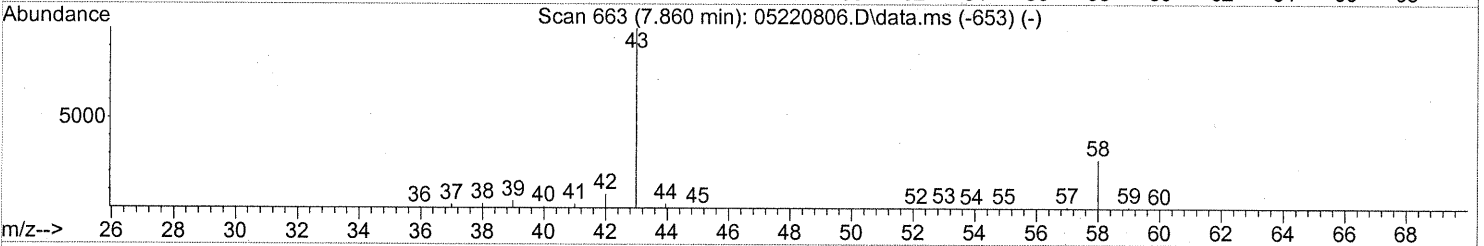
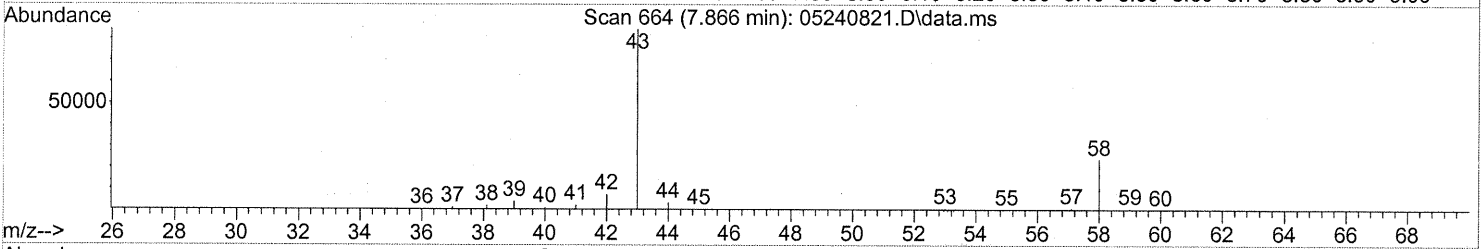
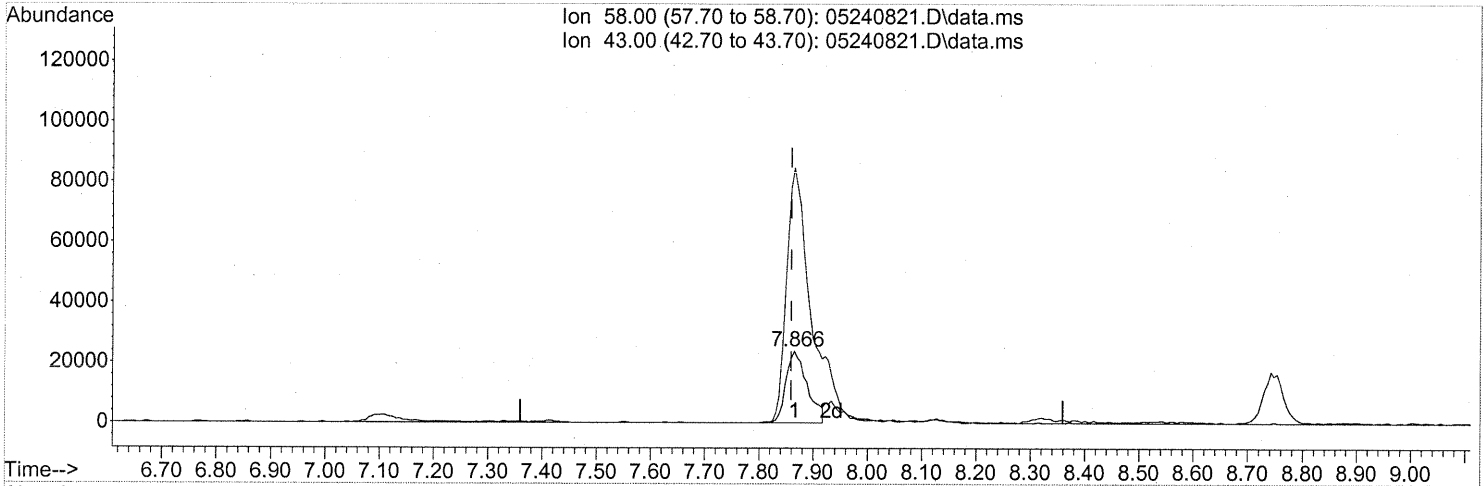
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801442-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240821.D\data.ms

(13) Acetone (T)

7.866min (+0.006) 2.12ng

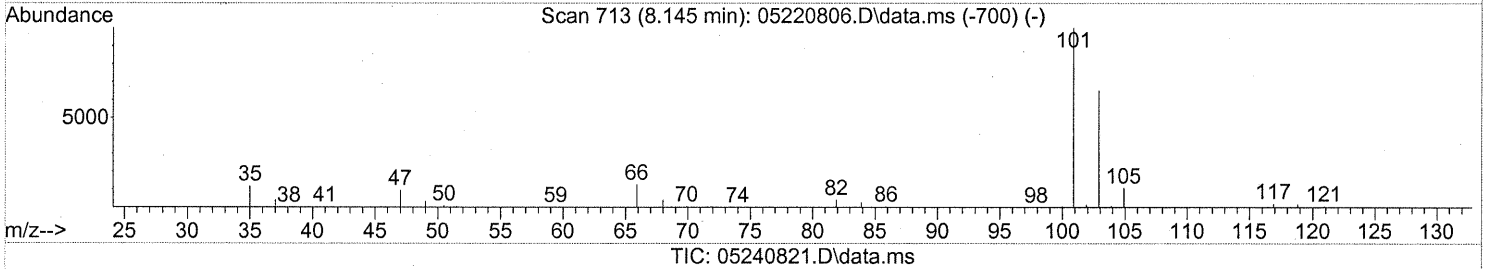
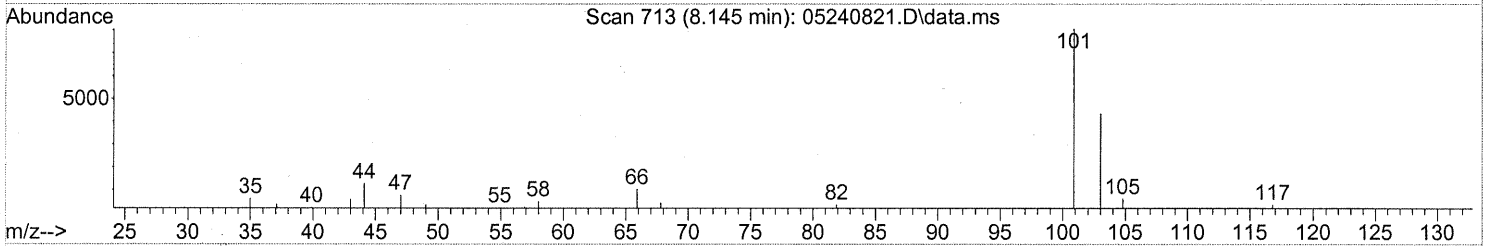
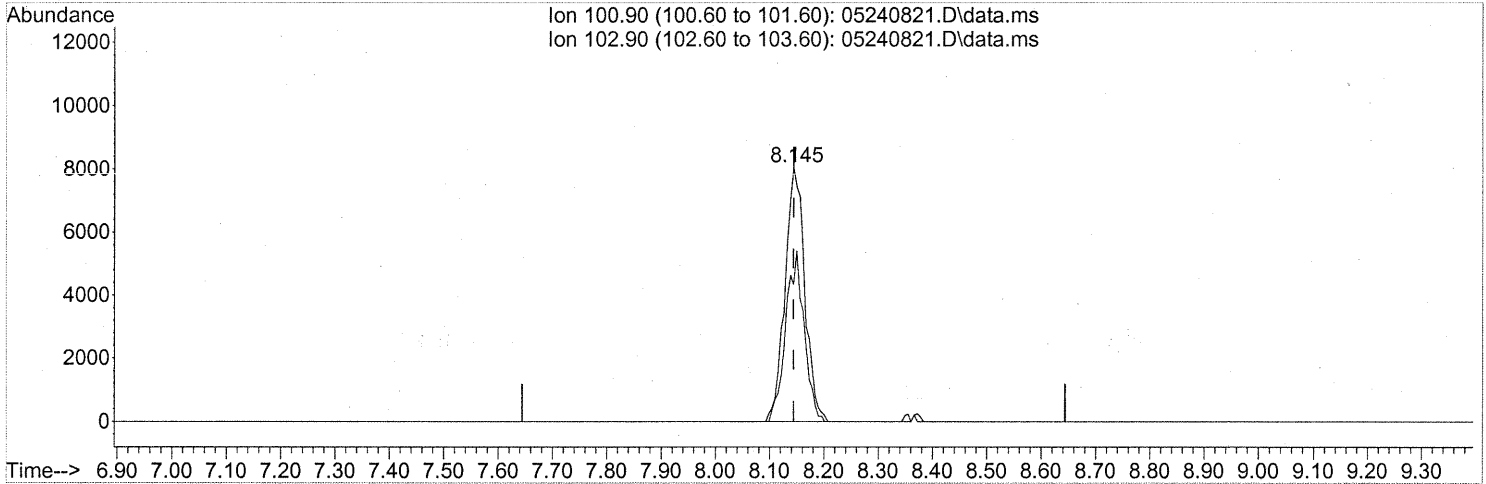
response 64589

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	423.90#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.145min (-0.000) 0.29ng

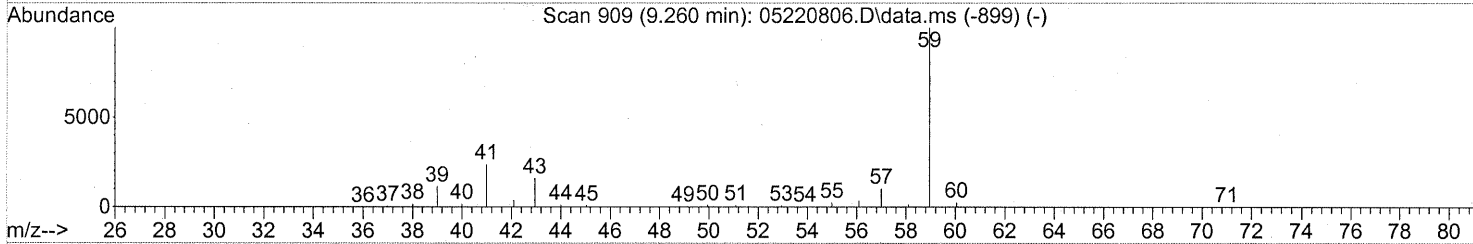
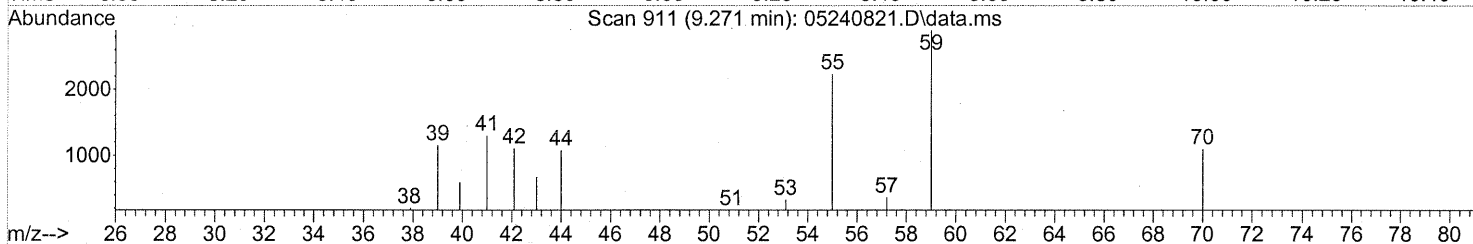
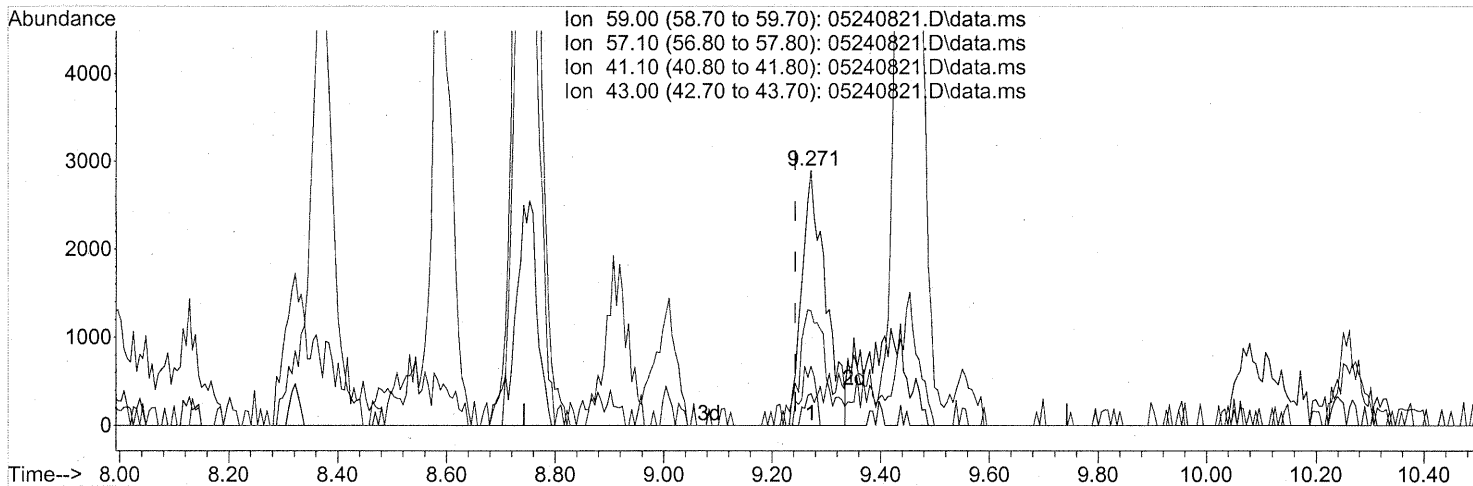
response 20110

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	62.53
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801422-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 09:05:40 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.271min (+0.028) 0.11ng  
 response 8767  

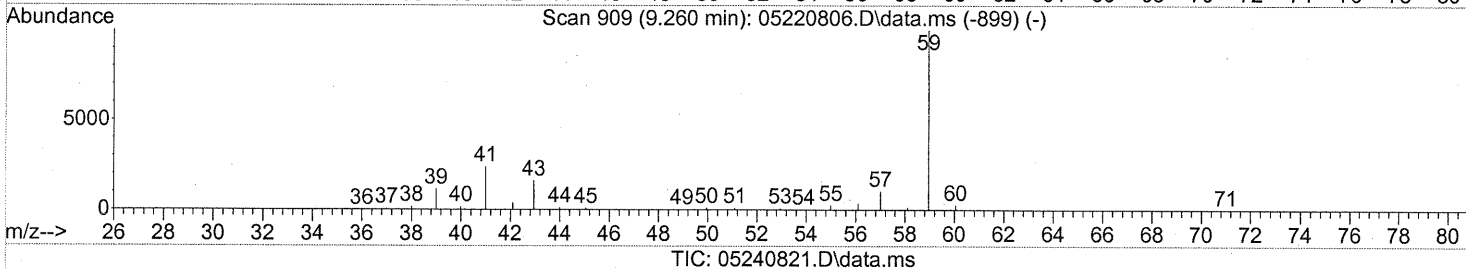
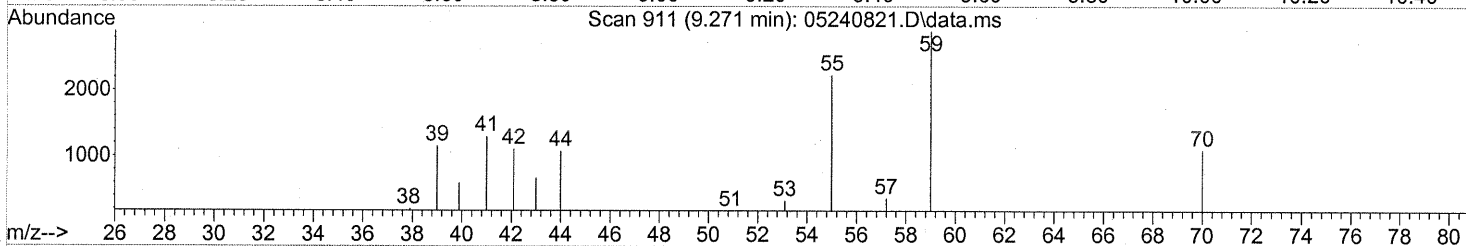
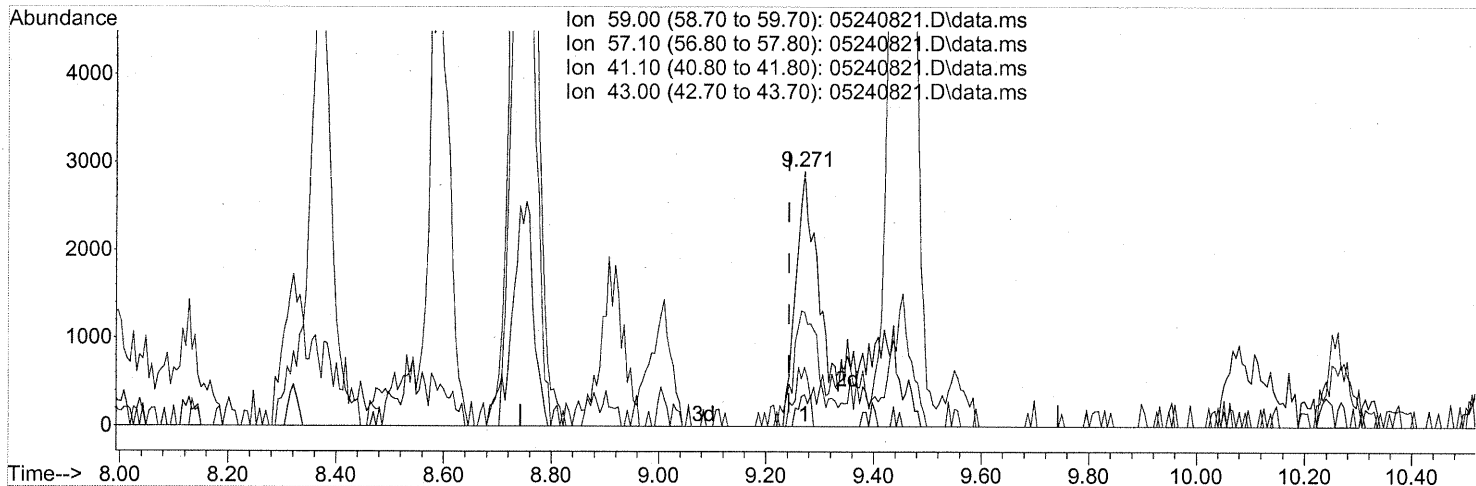
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	6.63
41.10	20.10	52.69#
43.00	12.30	16.55

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.271min (+0.028) 0.18ng m  
 response 14845

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	3.91
41.10	20.10	31.11
43.00	12.30	9.77

*int. whole peaks*

*WA 5/29/08*

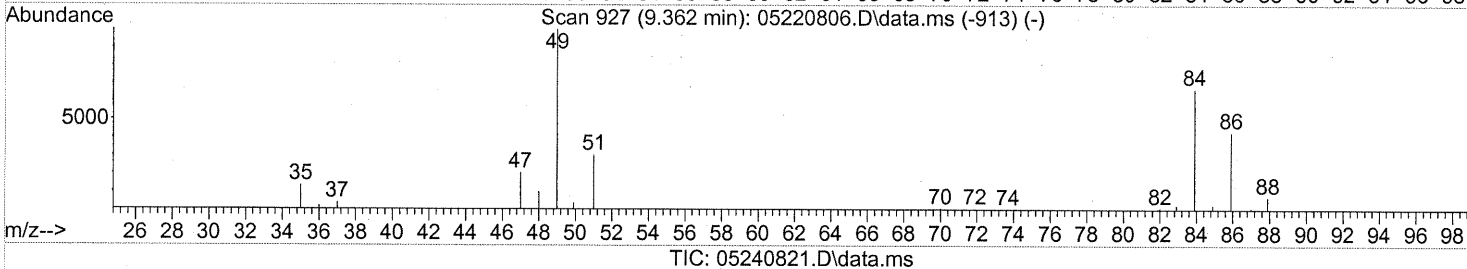
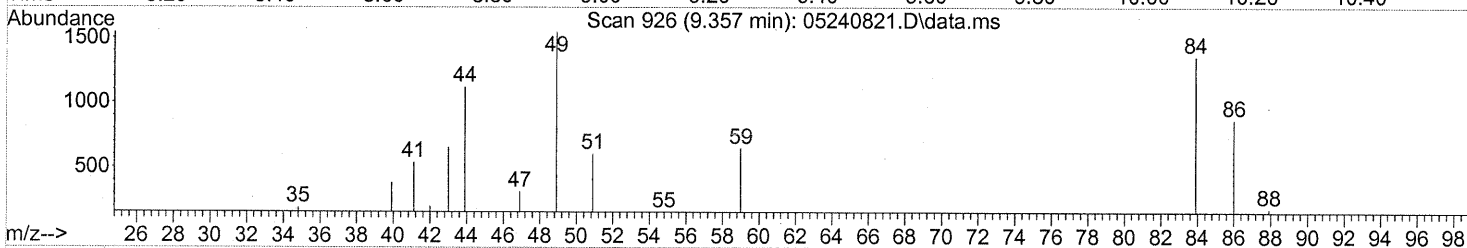
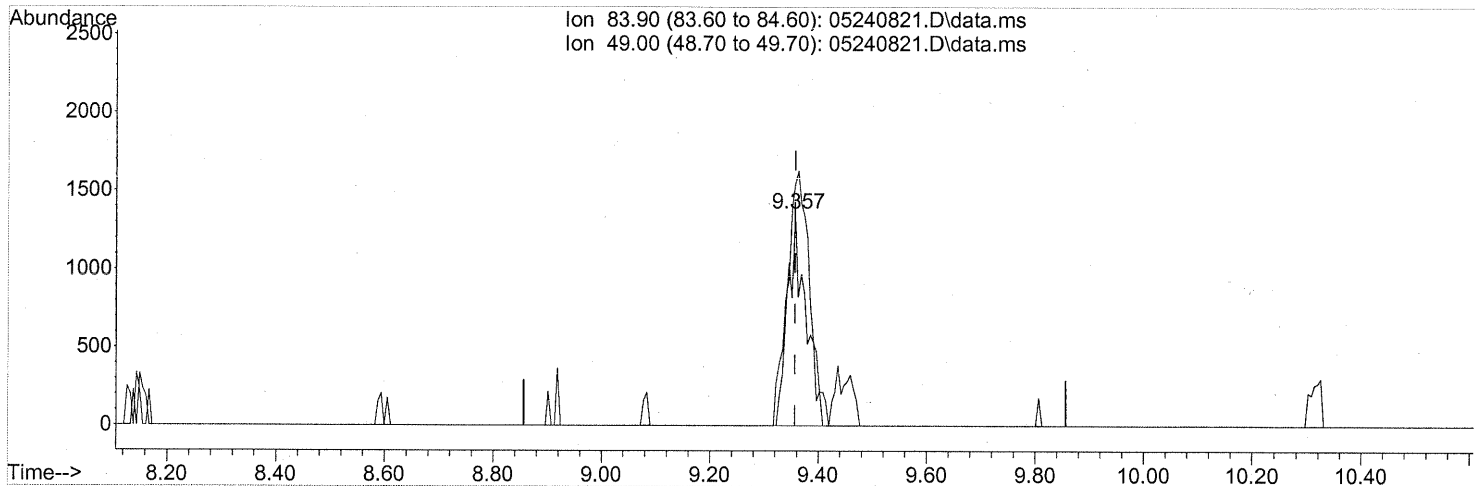
*WA 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(19) Methylene Chloride (T)

9.357min (-0.000) 0.09ng

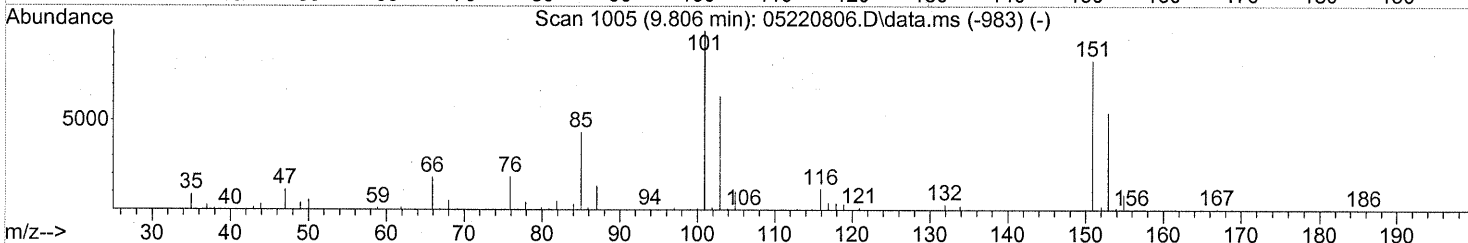
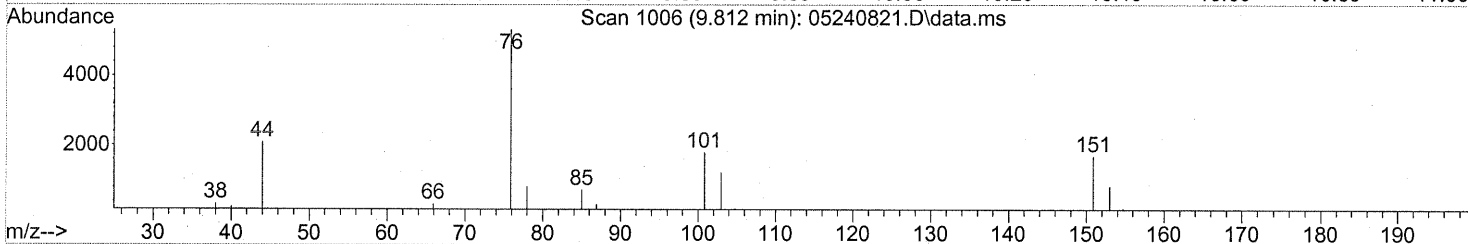
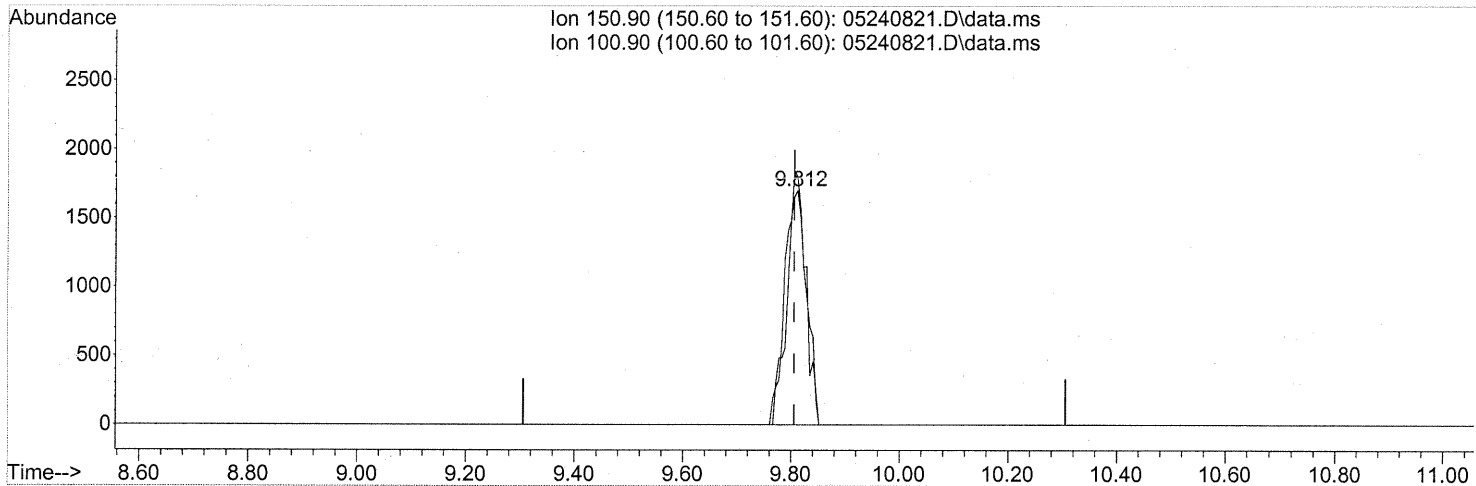
response 3107

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	151.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.14ng

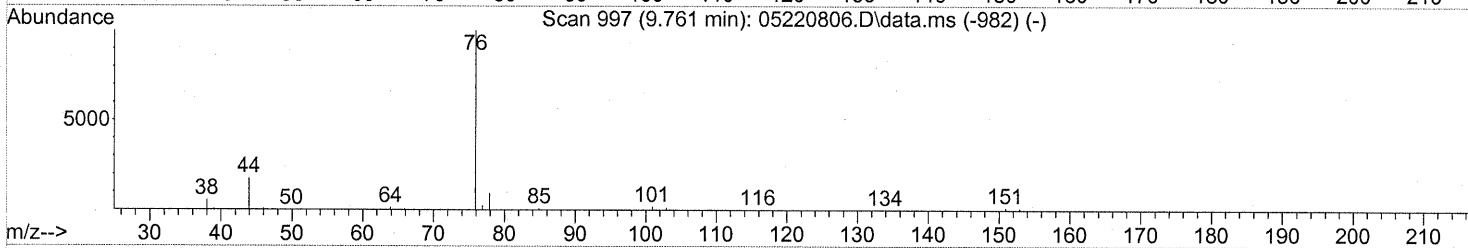
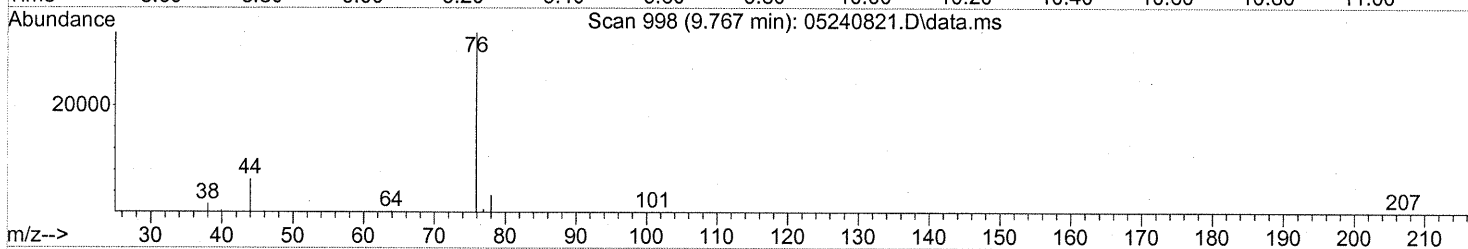
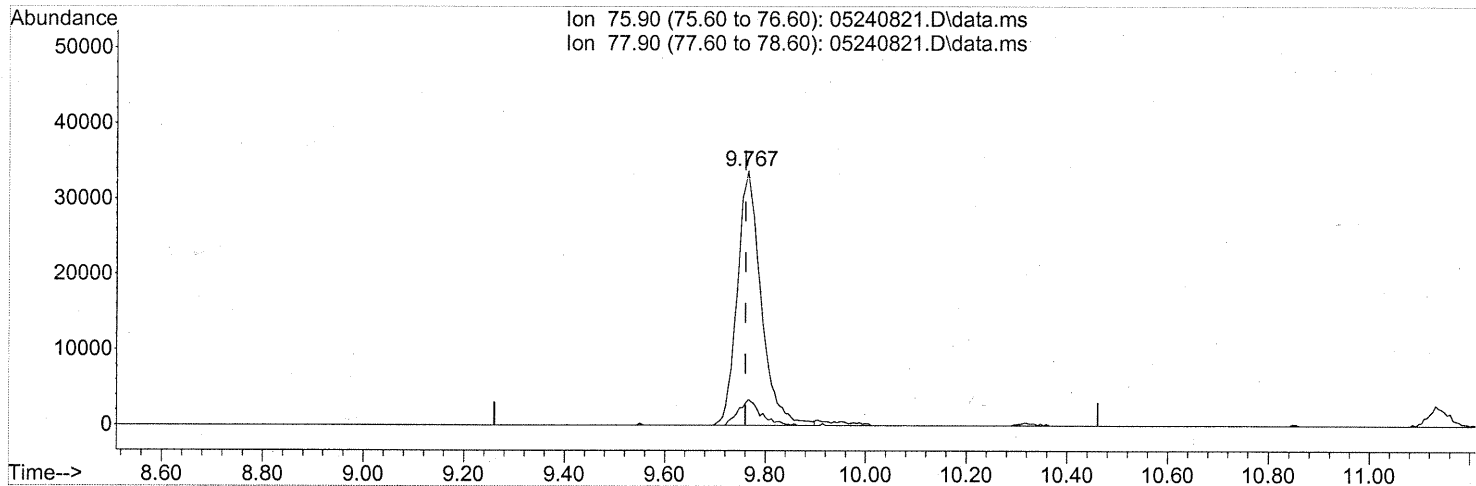
response 4372

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	109.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801442-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240821.D\data.ms

(22) Carbon Disulfide (T)

9.767min (+0.006) 0.85ng

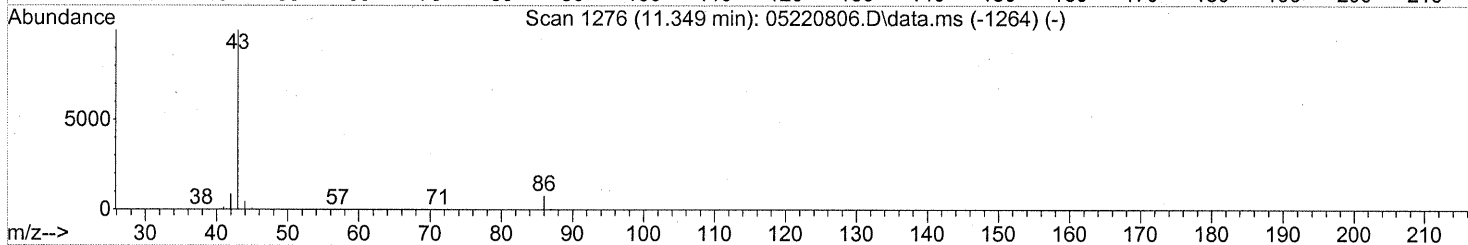
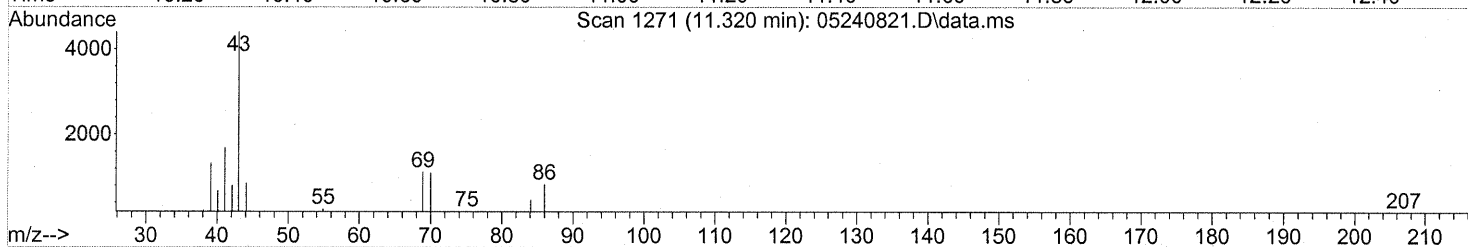
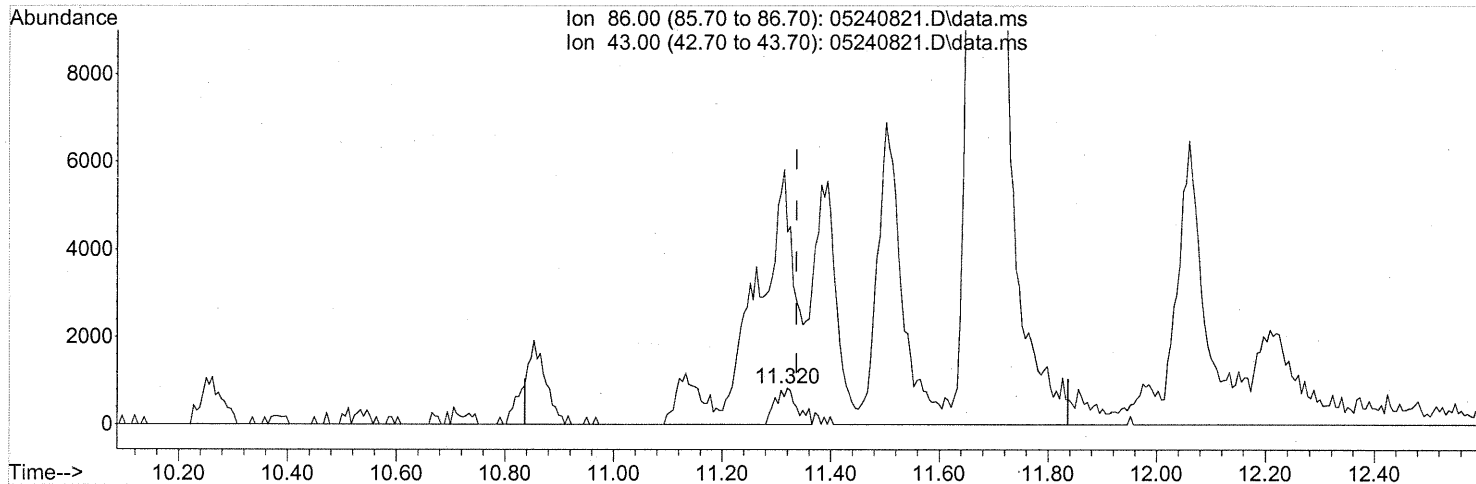
response 109730

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(26) Vinyl Acetate (T)

11.320min (-0.017) 0.41ng

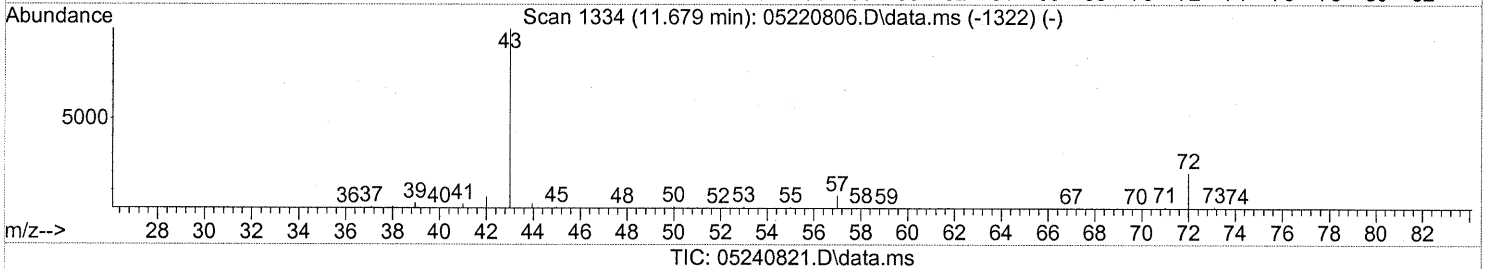
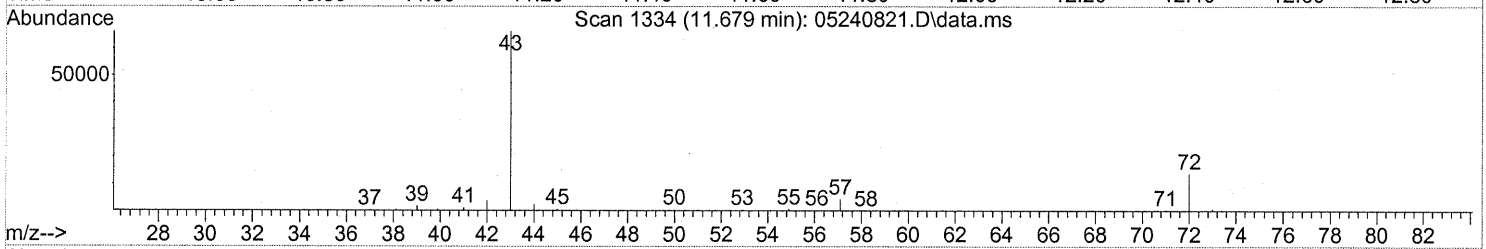
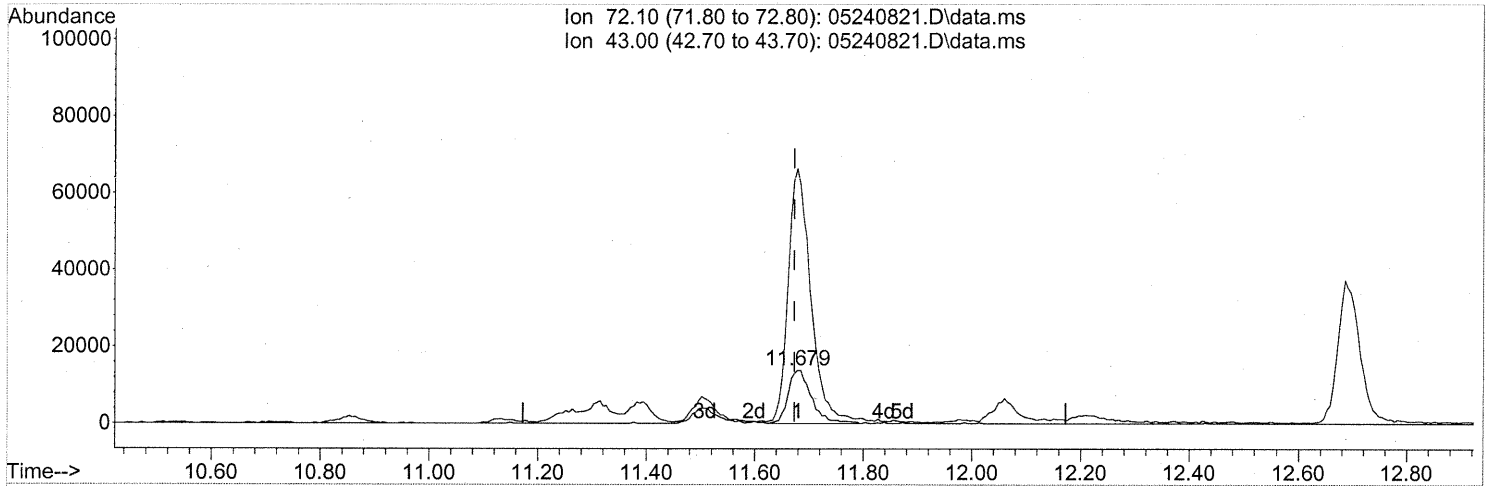
response 2276

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	642.49#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



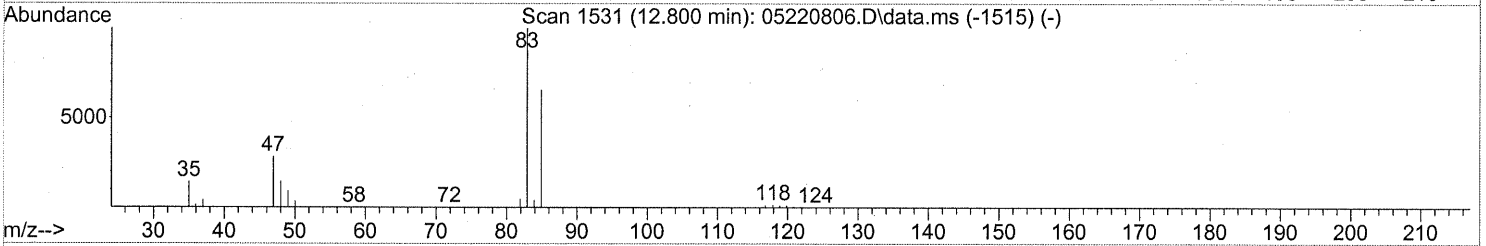
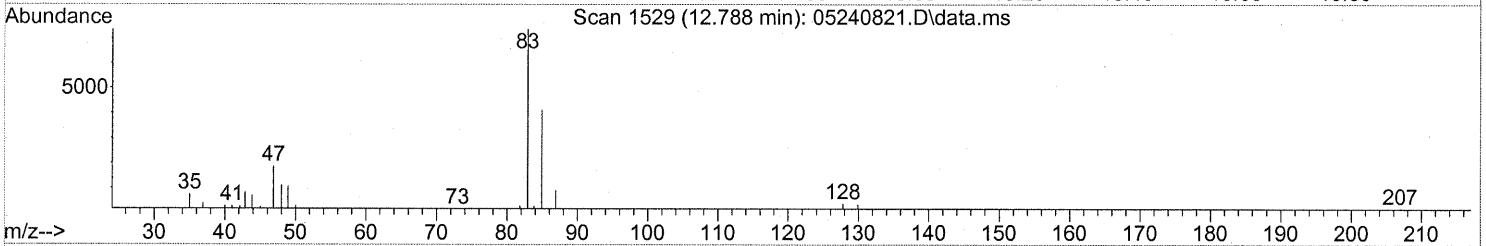
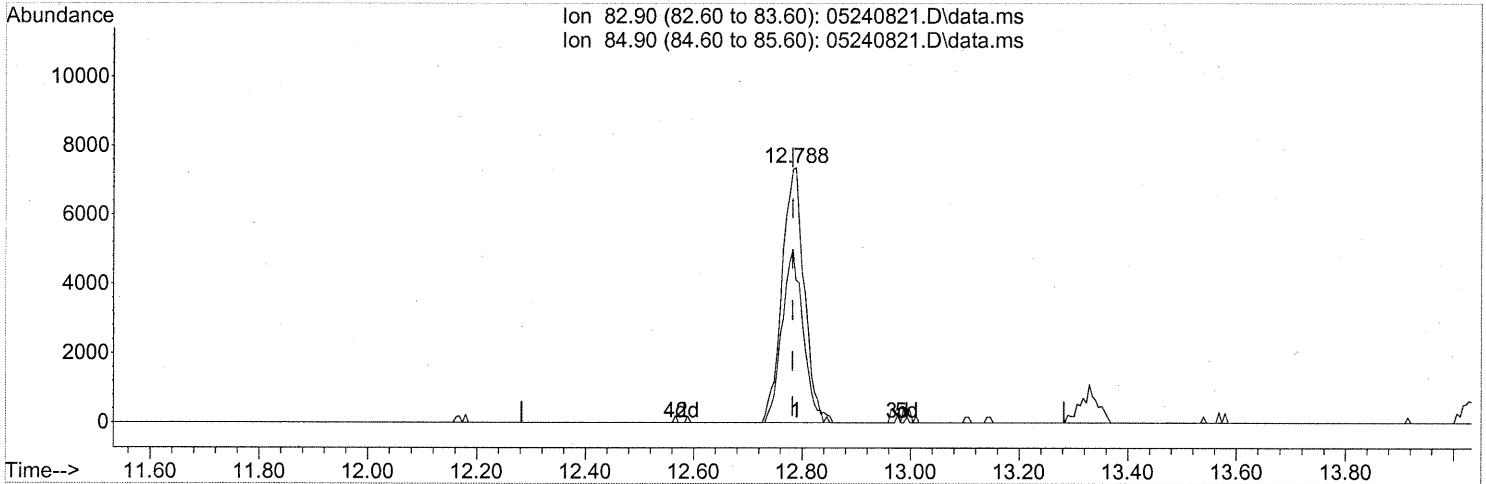
(27) 2-Butanone (T)  
 11.679min (+0.006) 1.84ng  
 response 40751

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	462.65#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

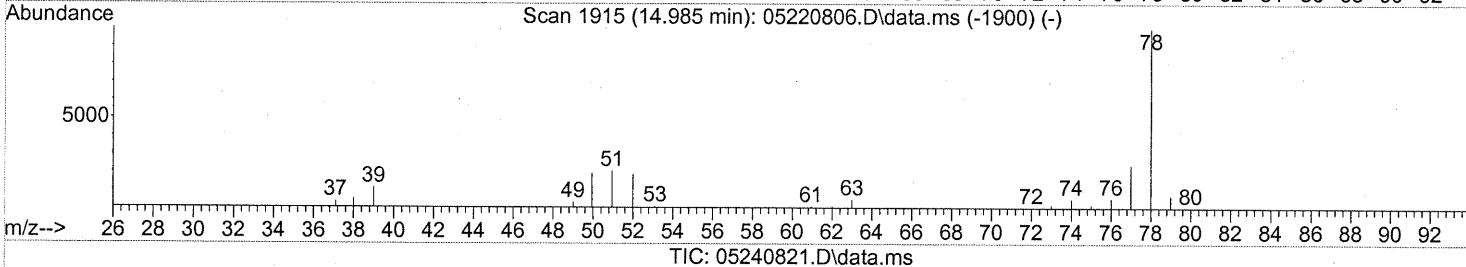
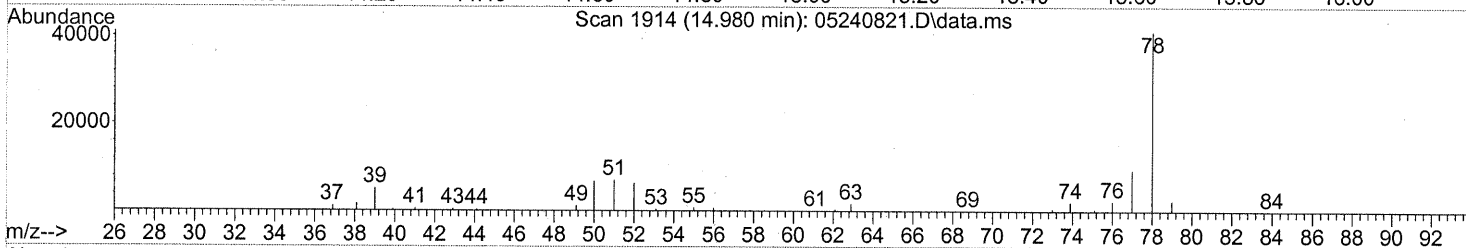
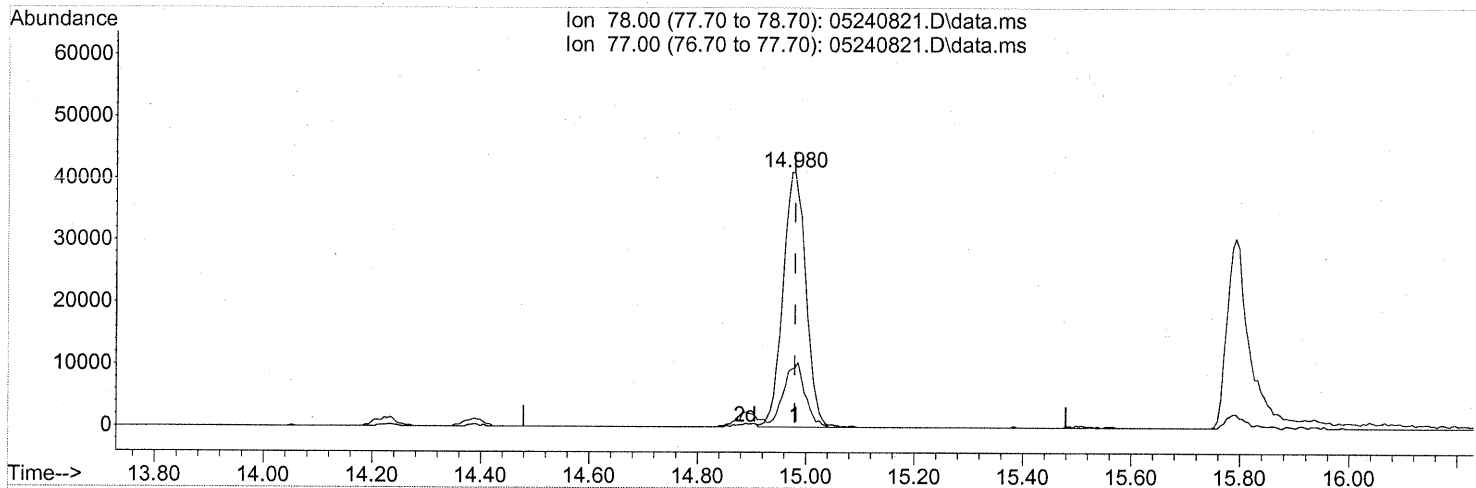
(32) Chloroform (T)  
 12.788min (+0.006) 0.40ng  
 response 20763

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



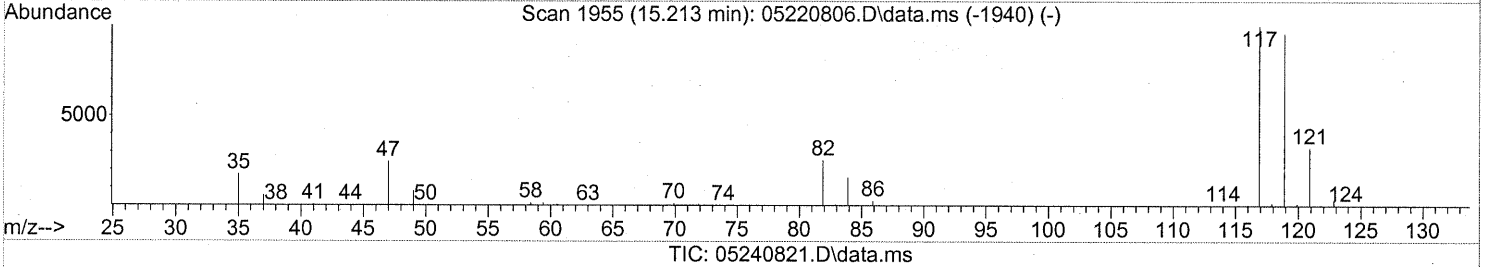
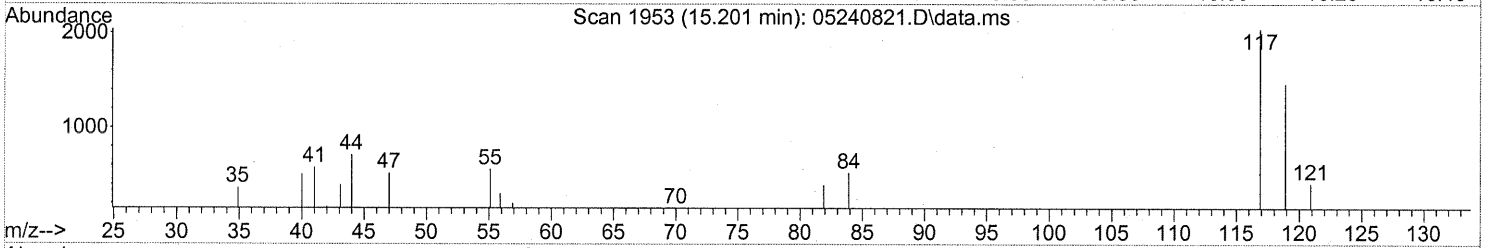
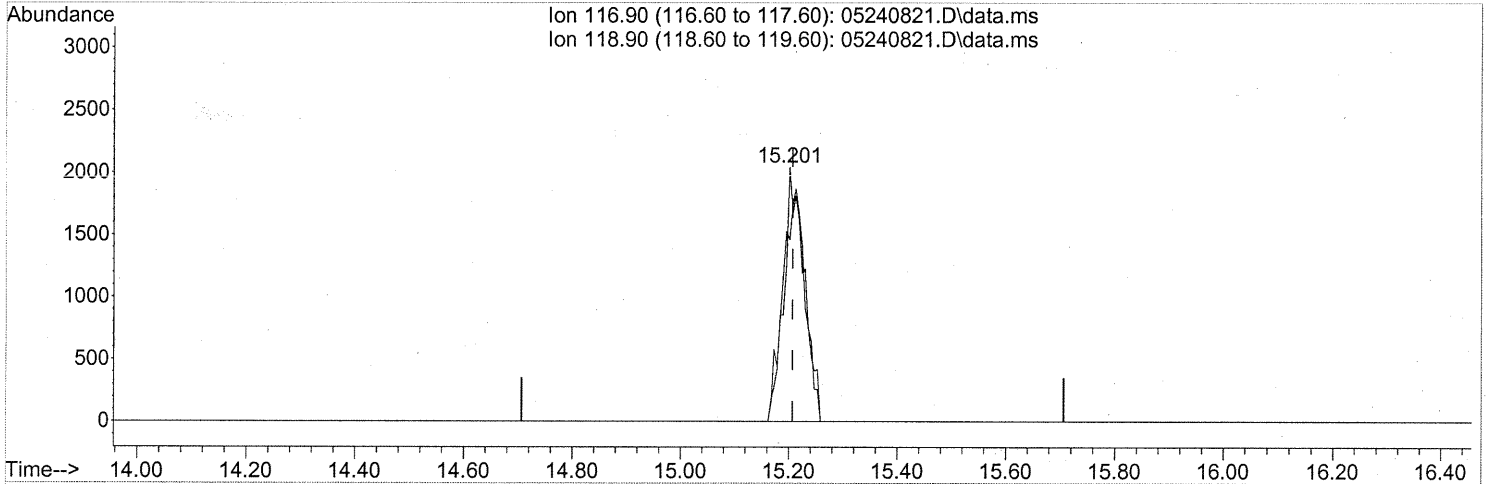
(41) Benzene (T)  
 14.980min (-0.000) 0.96ng  
 response 119969

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

15.201min (-0.006) 0.11ng

response 5206

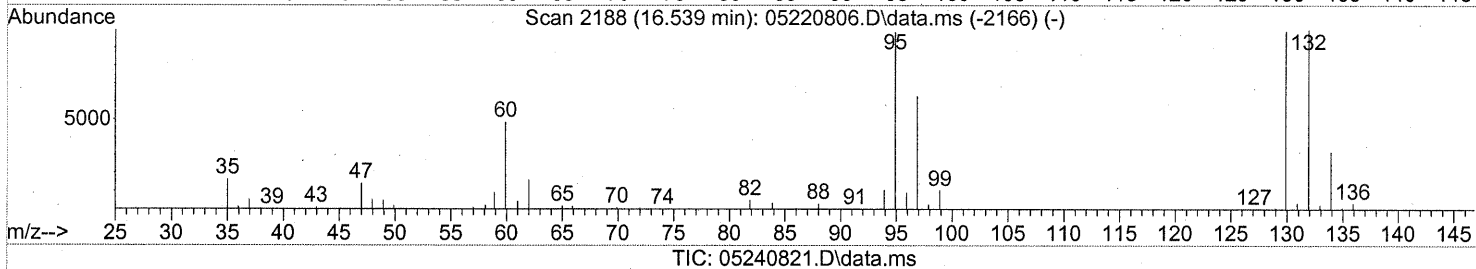
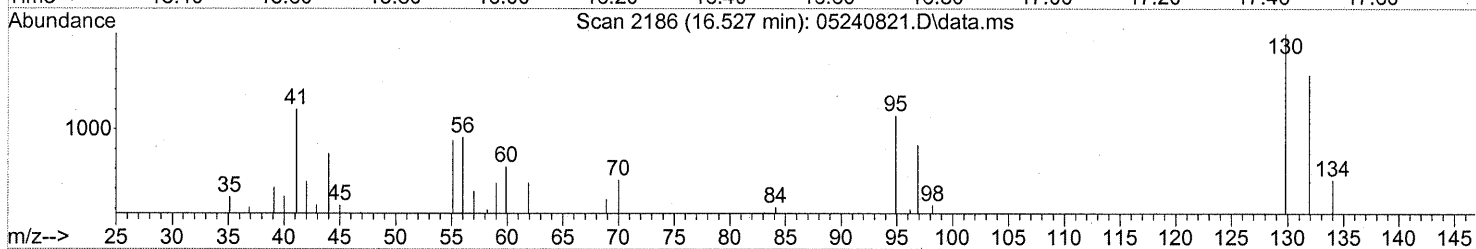
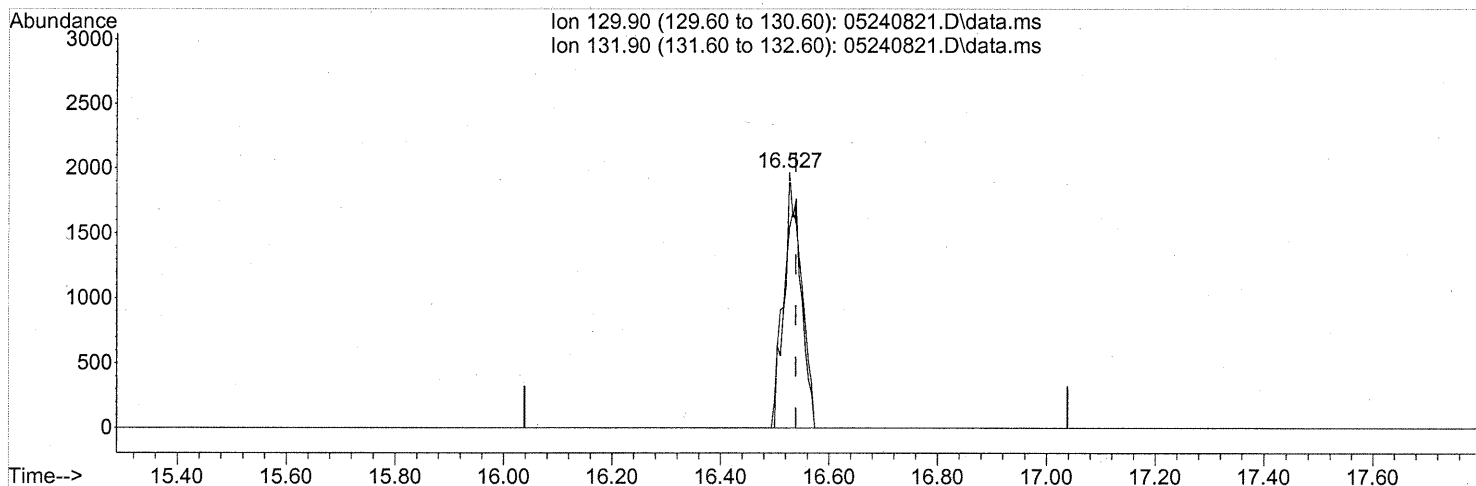
Ion	Exp%	Act%
116.90	100	100
118.90	96.60	103.73
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(47) Trichloroethene (T)  
 16.527min (-0.011) 0.11ng  
 response 4144

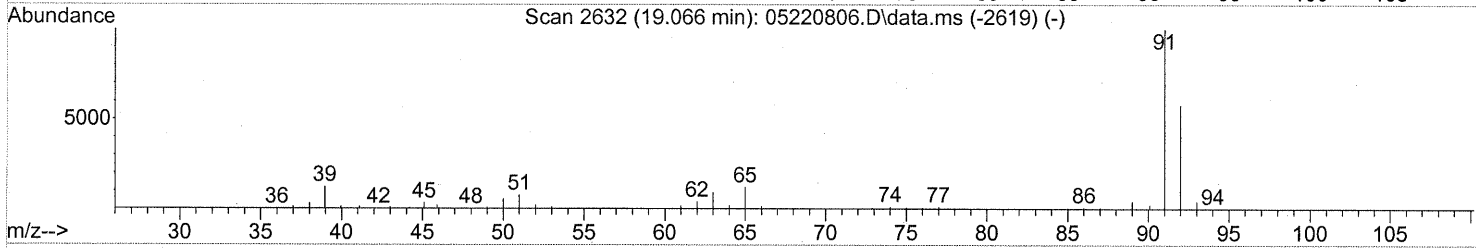
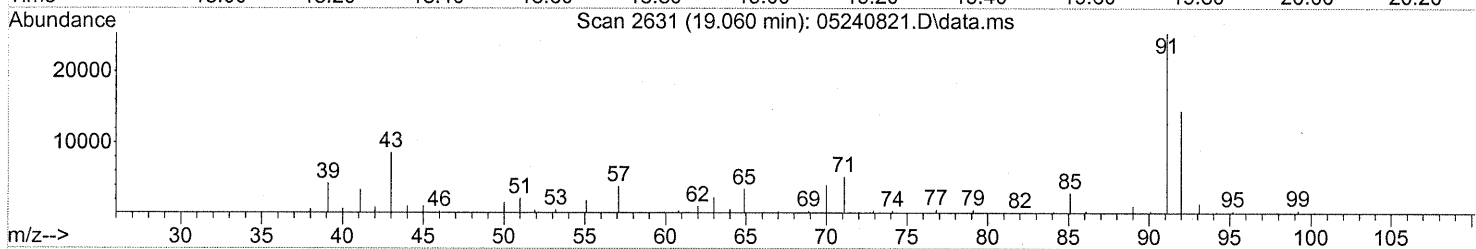
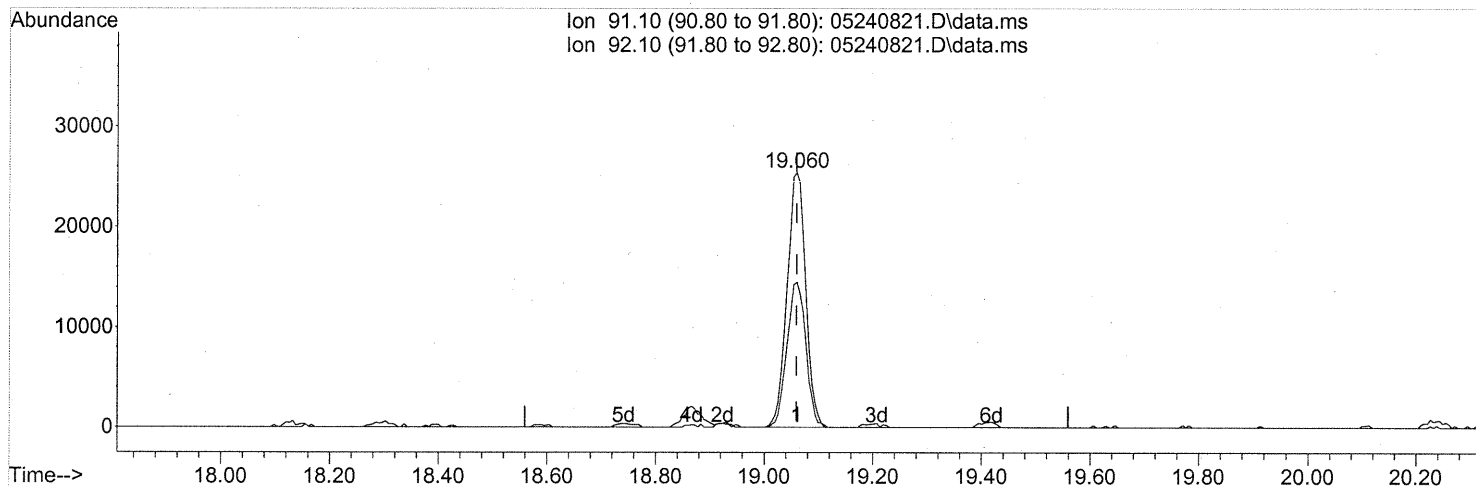
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	103.33
0.00	0.00	0.00
0.00	0.00	0.00

771

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(58) Toluene (T)

19.060min (0.000) 0.45ng

response 60272

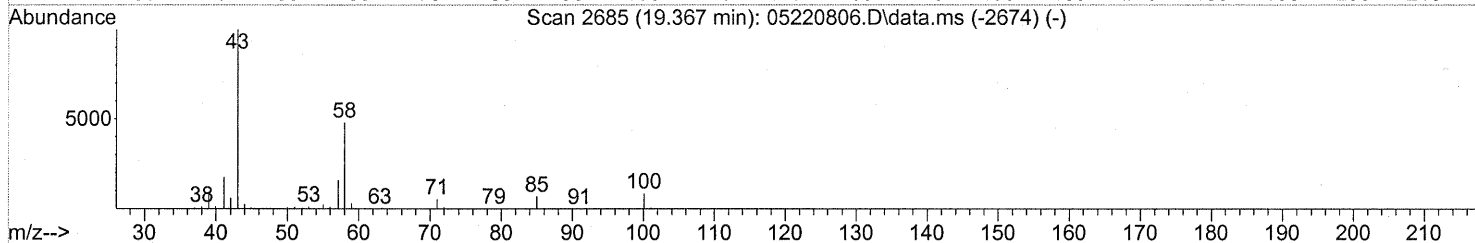
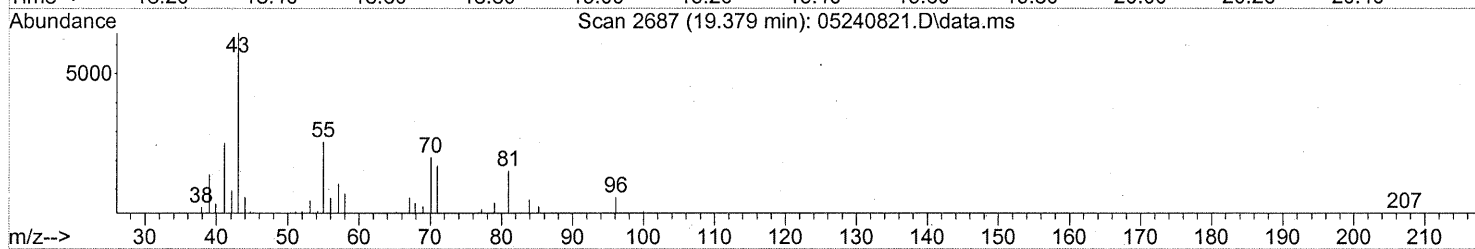
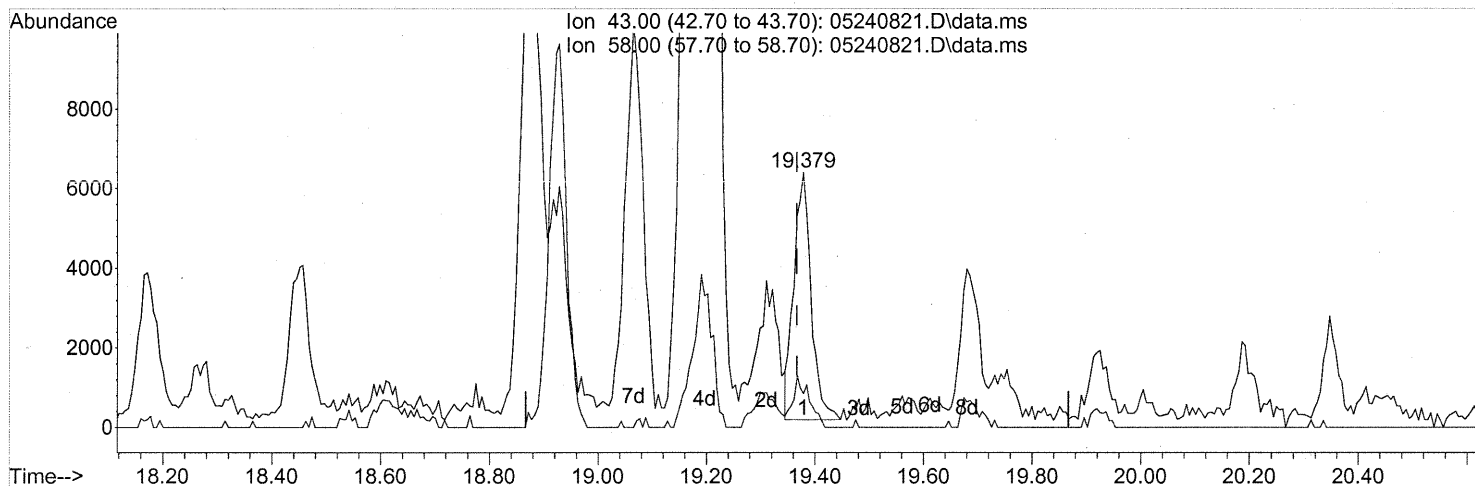
Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.77
0.00	0.00	0.00
0.00	0.00	0.00

772

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

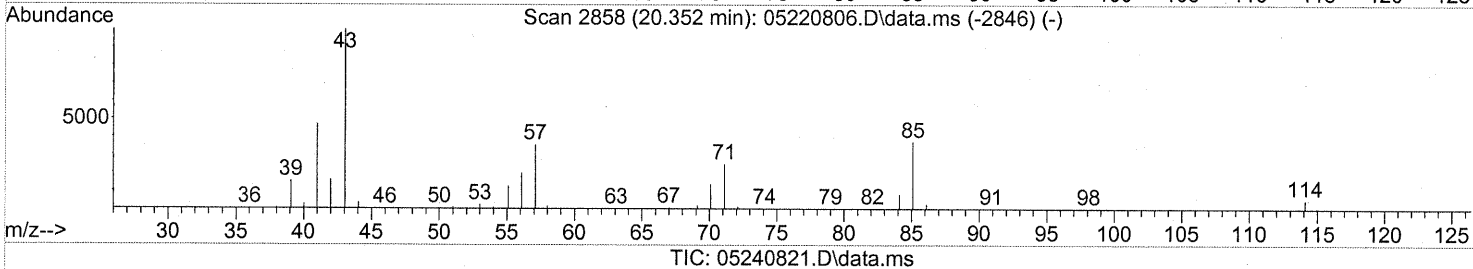
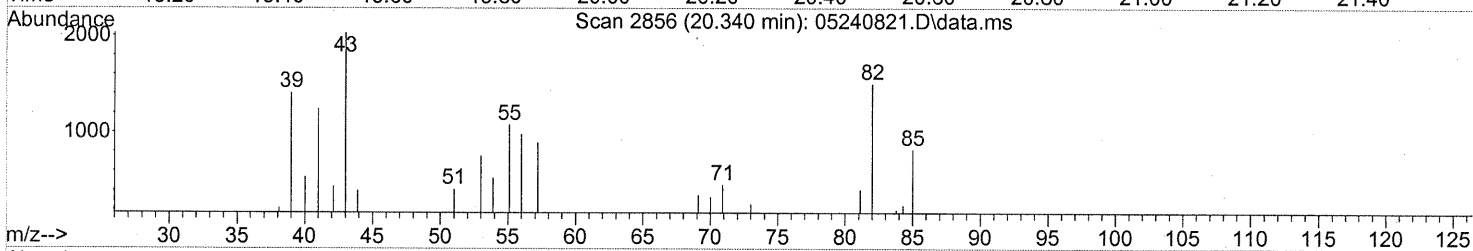
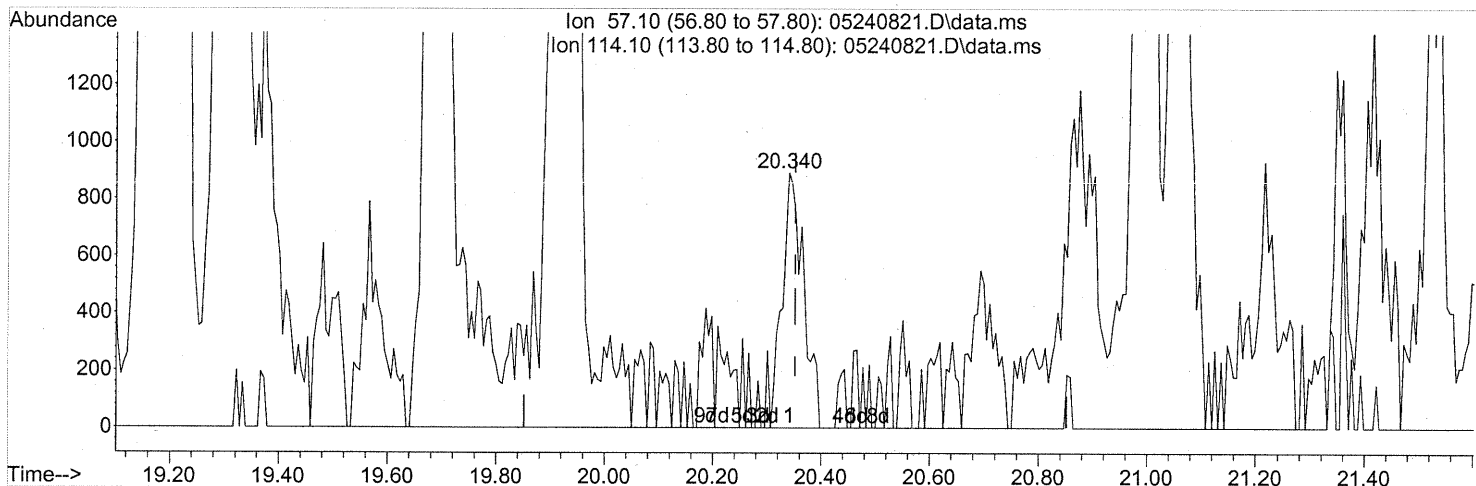
(59) 2-Hexanone (T)  
 19.379min (+0.011) 0.15ng  
 response 13735

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	19.59#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



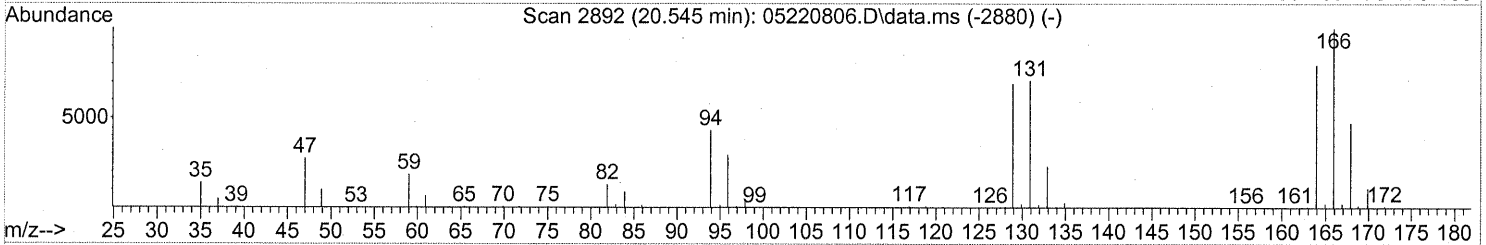
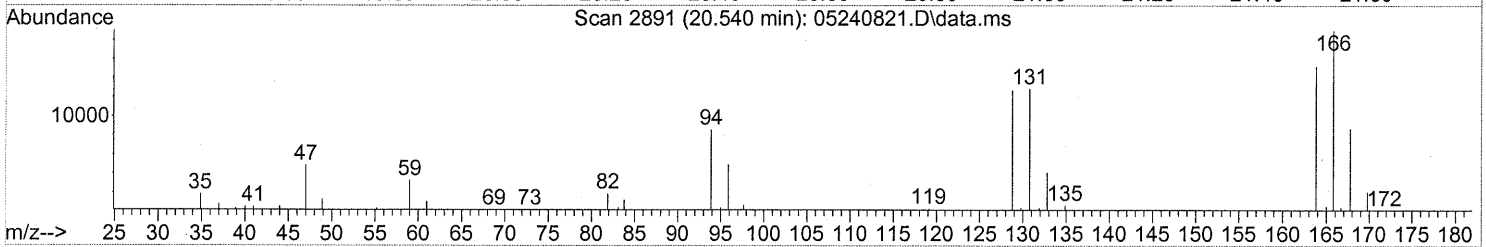
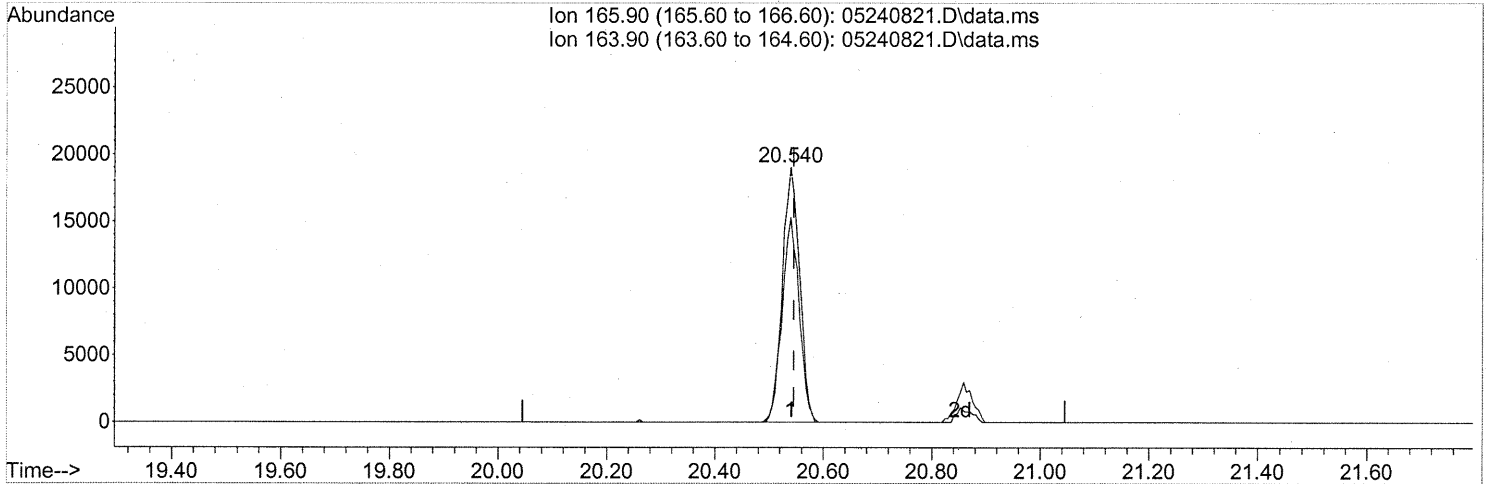
(63) n-Octane (T)  
 20.340min (-0.011) 0.08ng  
 response 2418

Ion	Exp%	Act%
57.10	100	100
114.10	10.20	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 1.05ng

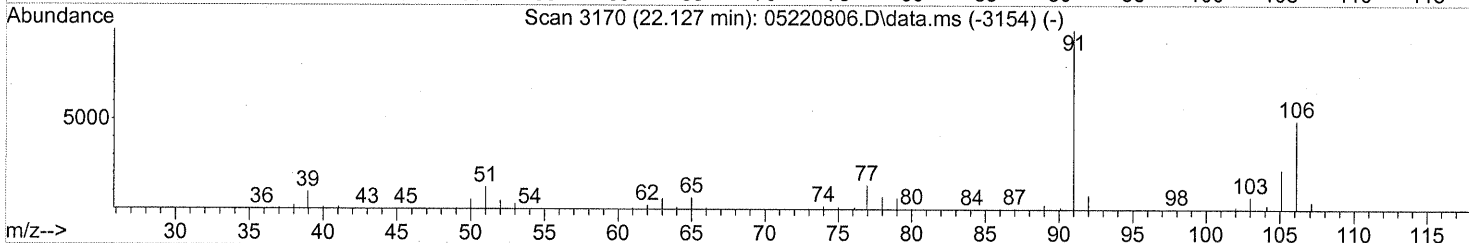
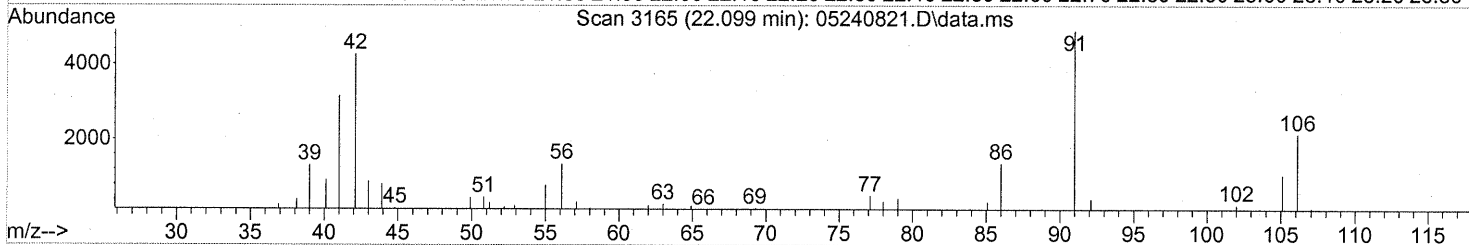
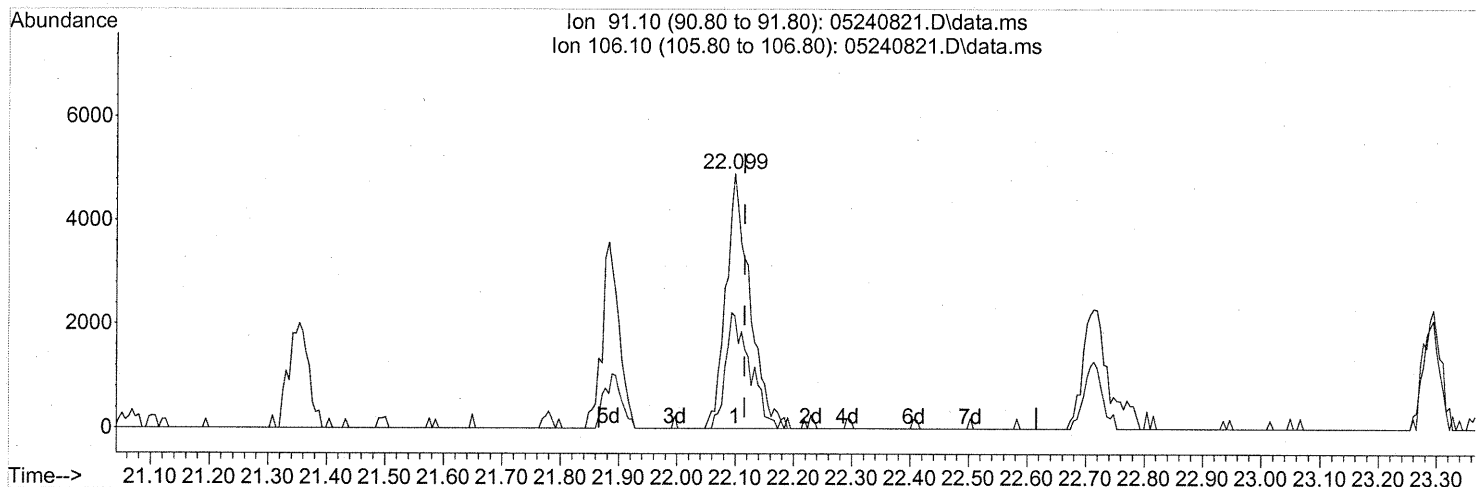
response 41661

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	78.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

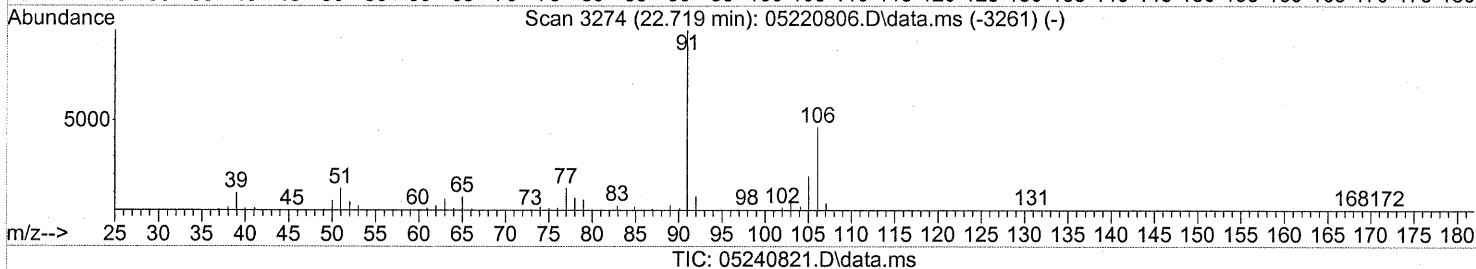
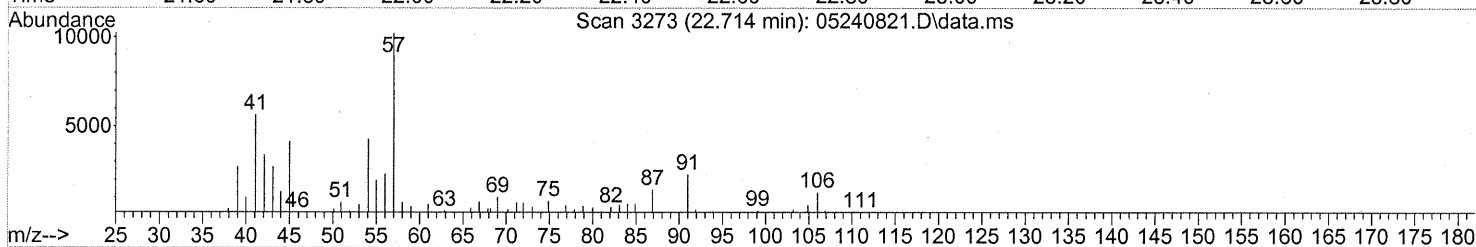
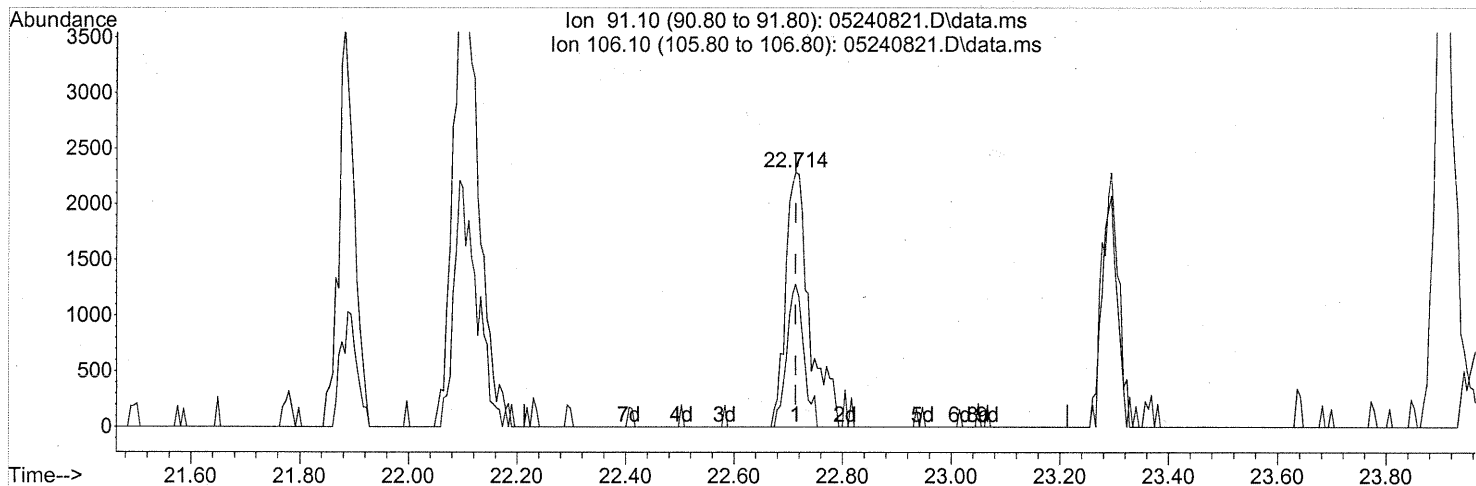
(67) m- & p-Xylene (T)  
 22.099min (-0.017) 0.14ng  
 response 14038

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	45.64
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(70) o-Xylene (T)  
 22.714min (-0.000) 0.06ng  
 response 6985

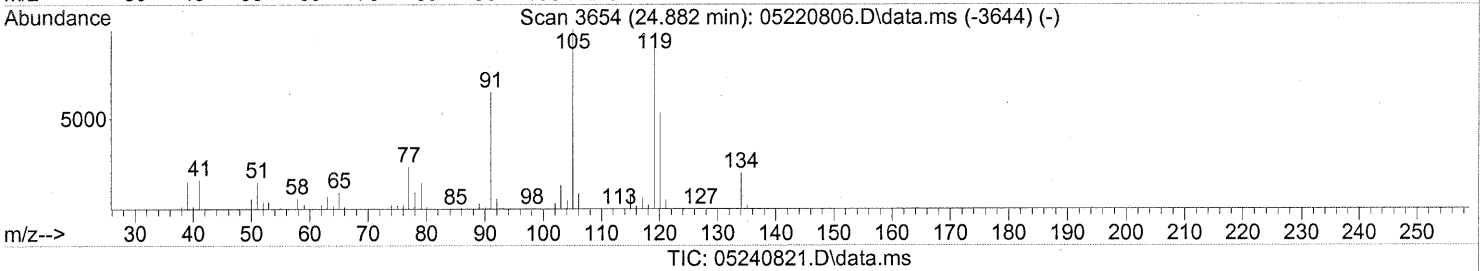
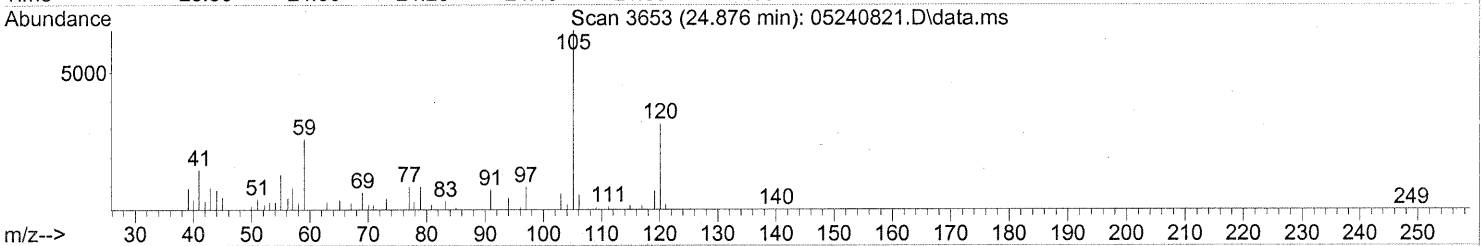
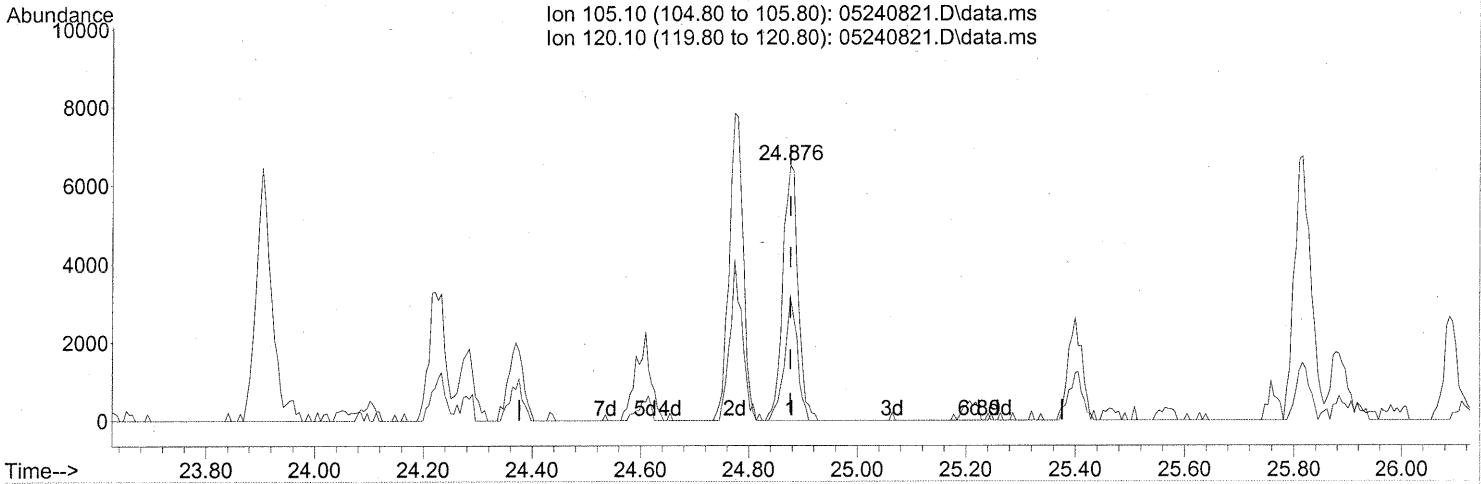
Ion	Exp%	Act%
91.10	100	100
106.10	50.50	39.61
0.00	0.00	0.00
0.00	0.00	0.00

777

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 8:54 pm  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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

24.876min (-0.000) 0.09ng

response 12626

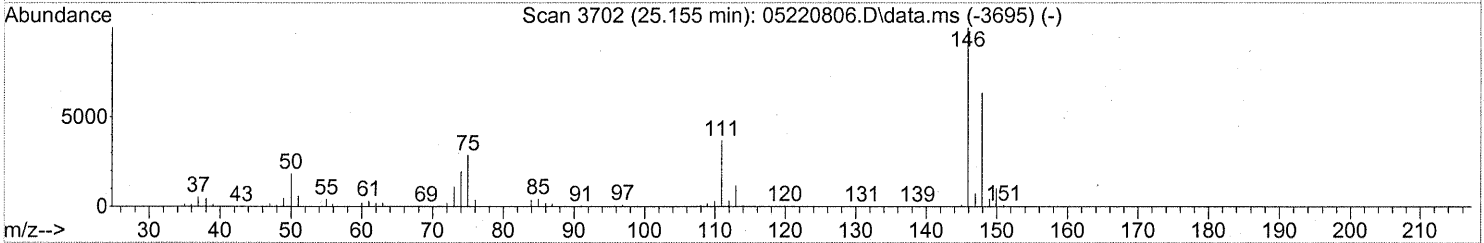
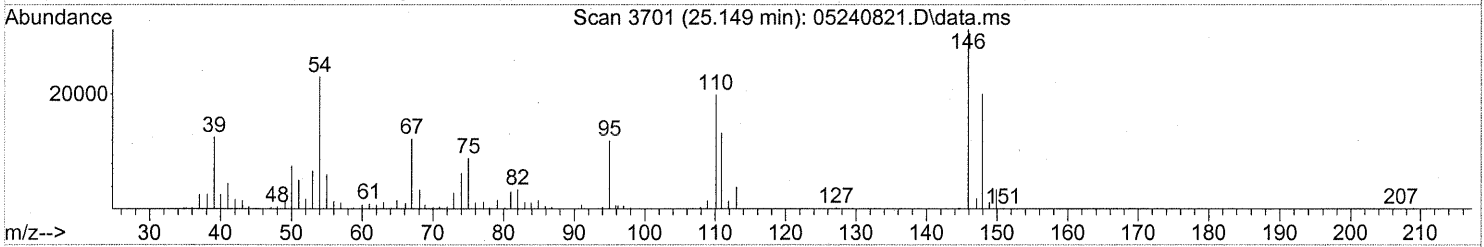
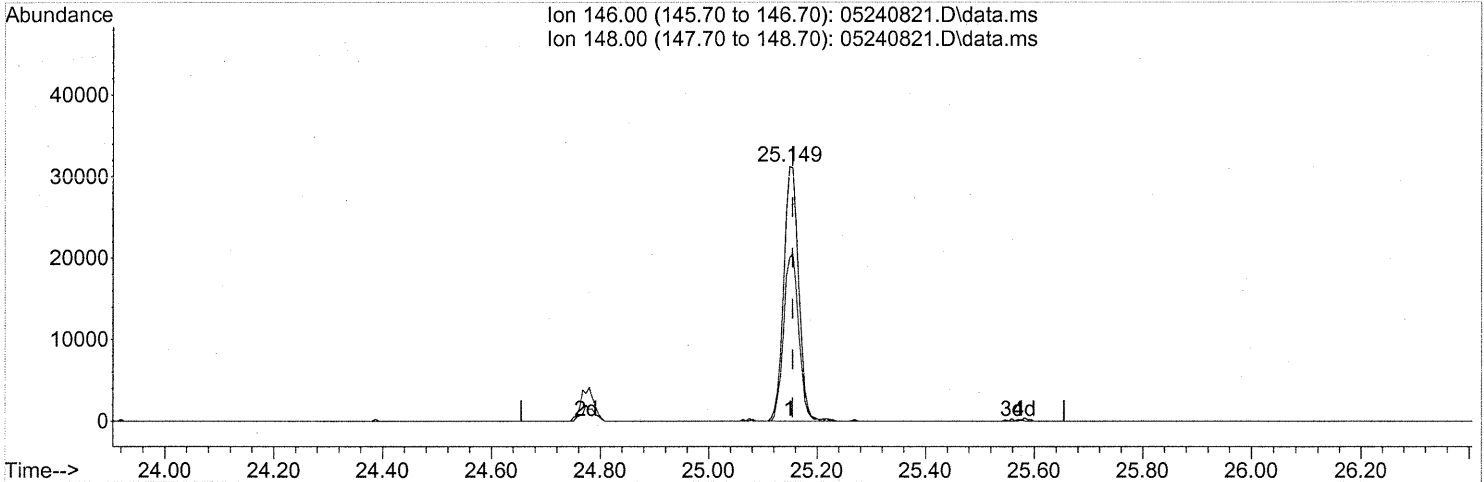
Ion	Exp%	Act%
105.10	100	100
120.10	54.40	41.61
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240821.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.149min (-0.006) 0.73ng

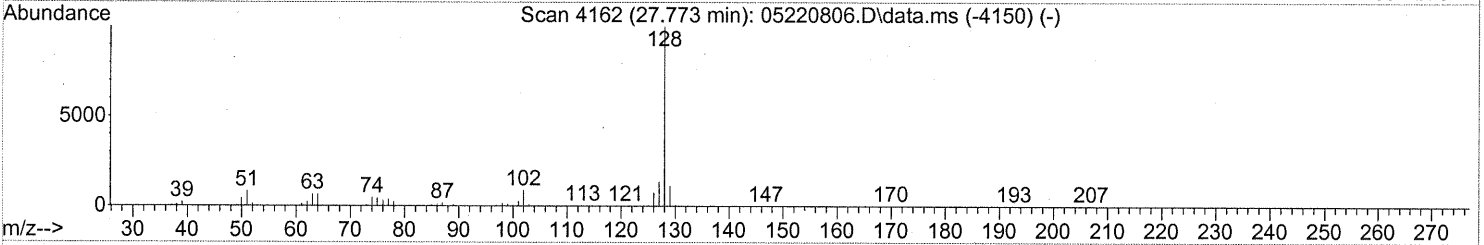
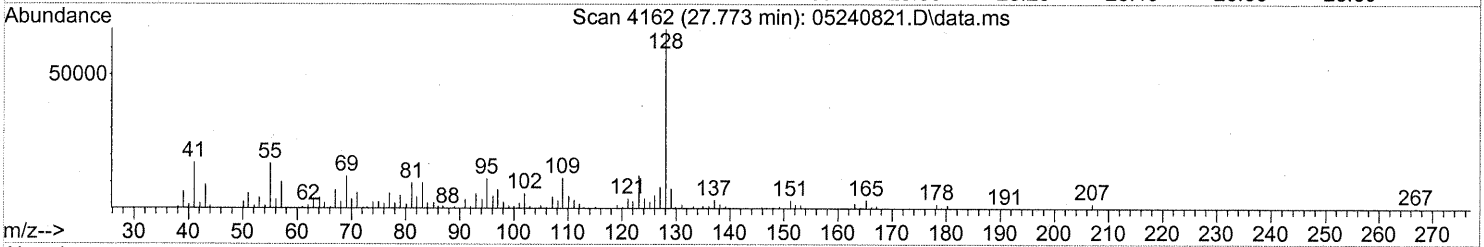
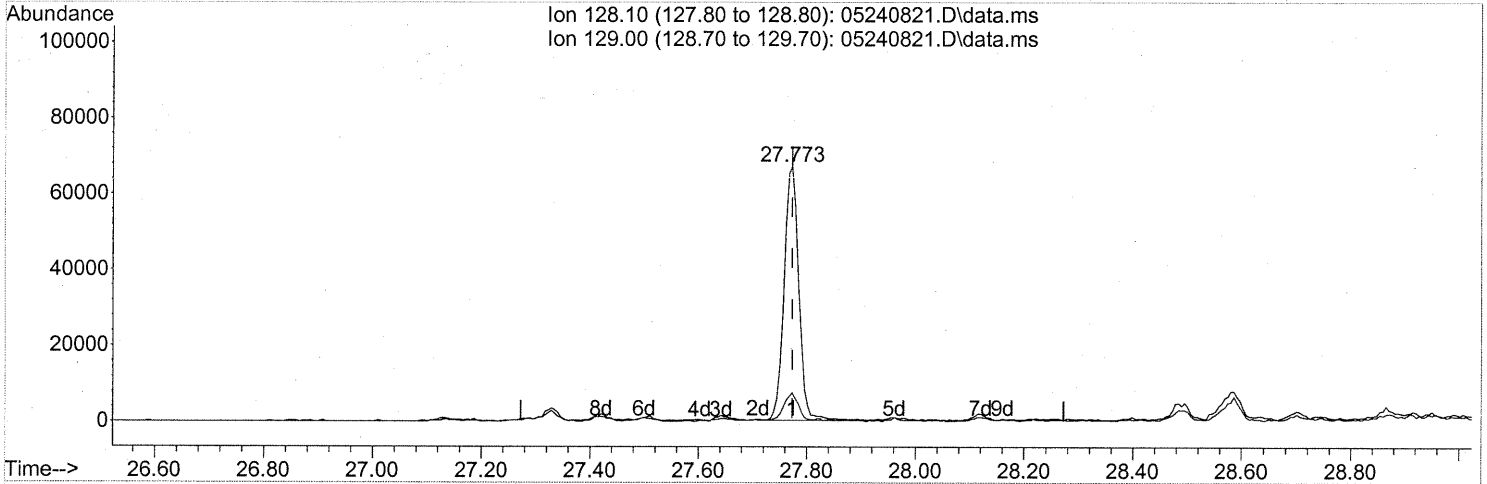
response 59664

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	65.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801442-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 21:14:34 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240821.D\data.ms

(95) Naphthalene (T)

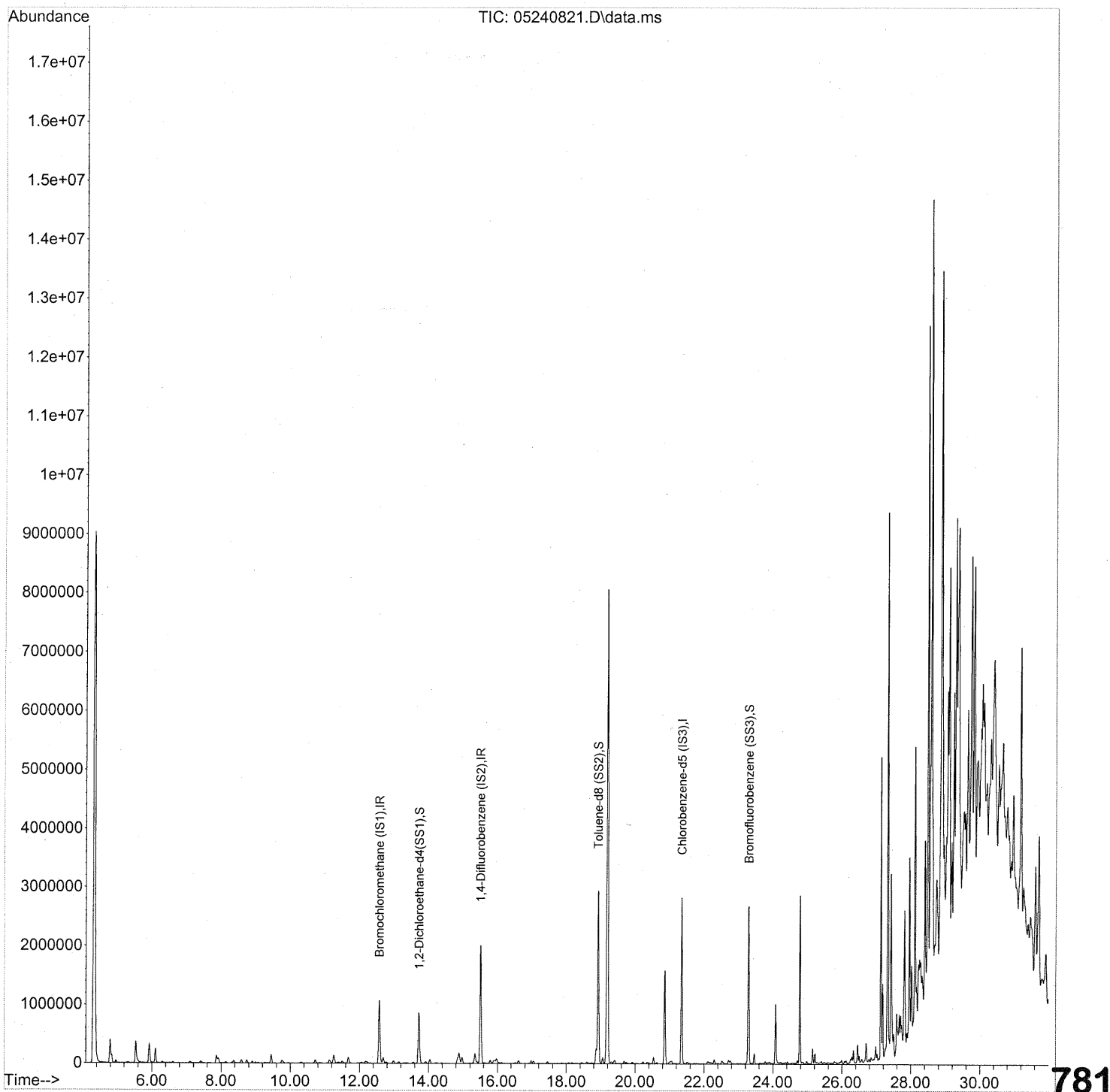
27.773min (-0.000) 0.70ng

response 125019

Ion	Exp%	Act%
128.10	100	100
129.00	11.60	10.64
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240821.D  
Acq On : 24 May 2008 20:54  
Operator : WA  
Sample : P0801442-015 (500ml)  
Misc : ENSR SG94B-05 (-4.9, 3.5)  
ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 20:37:22 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240821.D  
 Acq On : 24 May 2008 20:54  
 Operator : WA  
 Sample : P0801442-015 (500ml)  
 Misc : ENSR SG94B-05 (-4.9, 3.5)  
 ALS Vial : 18 Sample Multiplier: 1

Quant Time: May 25 20:37:22 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	564641	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2380094	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1098161	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	890784	22.768	ng	-0.03
Spiked Amount	25.000		Recovery	=	91.08%	
5) Toluene-d8 (SS2)	18.92	98	2476898	25.114	ng	-0.02
Spiked Amount	25.000		Recovery	=	100.44%	
6) Bromofluorobenzene (SS3)	23.29	174	1026405	25.592	ng	0.00
Spiked Amount	25.000		Recovery	=	102.36%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	1563	N.D.		Qvalue
8) n-Butylbenzene	25.91	91	5315	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:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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)	2.0	2.0	0.20	0.40	0.39	0.039	
74-87-3	Chloromethane	0.30	0.39	0.20	0.15	0.19	0.094	J
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	2.0	0.20	ND	0.28	0.028	
75-01-4	Vinyl Chloride	ND	0.39	0.20	ND	0.15	0.076	
74-83-9	Bromomethane	ND	0.39	0.20	ND	0.10	0.050	
75-00-3	Chloroethane	0.41	0.39	0.20	0.16	0.15	0.074	
64-17-5	Ethanol	4.4	20	0.20	2.3	10	0.10	J
67-64-1	Acetone	13	20	0.28	5.5	8.2	0.12	J, B
75-69-4	Trichlorofluoromethane	1.1	0.39	0.20	0.19	0.069	0.035	
107-13-1	Acrylonitrile	ND	2.0	0.27	ND	0.90	0.13	
75-35-4	1,1-Dichloroethene	8.9	0.39	0.20	2.2	0.098	0.049	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	1.0	2.0	0.29	0.33	0.64	0.095	J
75-09-2	Methylene Chloride	1.6	2.0	0.20	0.47	0.56	0.056	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.39	0.20	ND	0.12	0.062	
76-13-1	Trichlorotrifluoroethane	0.50	0.39	0.22	0.065	0.051	0.029	
75-15-0	Carbon Disulfide	1.8	2.0	0.47	0.57	0.63	0.15	J
156-60-5	trans-1,2-Dichloroethene	ND	0.39	0.20	ND	0.098	0.049	
75-34-3	1,1-Dichloroethane	0.40	0.39	0.20	0.099	0.096	0.048	
1634-04-4	Methyl tert-Butyl Ether	ND	0.39	0.20	ND	0.11	0.054	
108-05-4	Vinyl Acetate	0.92	20	0.62	0.26	5.5	0.18	J
78-93-3	2-Butanone (MEK)	5.8	2.0	0.20	2.0	0.66	0.066	
156-59-2	cis-1,2-Dichloroethene	ND	0.39	0.20	ND	0.098	0.049	
108-20-3	Diisopropyl Ether	ND	2.0	0.23	ND	0.47	0.055	
67-66-3	Chloroform	1,700	0.39	0.23	340	0.080	0.047	

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B = Analyte was found in the method blank.

Verified By: RG

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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	2.0	0.20	ND	0.47	0.048	
107-06-2	1,2-Dichloroethane	ND	0.39	0.20	ND	0.096	0.048	
71-55-6	1,1,1-Trichloroethane	ND	0.39	0.20	ND	0.072	0.036	
71-43-2	<b>Benzene</b>	<b>2.2</b>	0.39	0.20	<b>0.68</b>	0.12	0.061	
56-23-5	<b>Carbon Tetrachloride</b>	<b>6.6</b>	0.39	0.20	<b>1.1</b>	0.062	0.031	
994-05-8	tert-Amyl Methyl Ether	ND	2.0	0.20	ND	0.47	0.047	
78-87-5	<b>1,2-Dichloropropane</b>	<b>0.22</b>	0.39	0.20	<b>0.048</b>	0.084	0.042	<b>J</b>
75-27-4	<b>Bromodichloromethane</b>	<b>7.4</b>	0.39	0.20	<b>1.1</b>	0.058	0.029	
79-01-6	<b>Trichloroethene</b>	<b>4.2</b>	0.39	0.20	<b>0.78</b>	0.073	0.036	
123-91-1	1,4-Dioxane	ND	2.0	0.24	ND	0.54	0.066	
80-62-6	Methyl Methacrylate	ND	2.0	0.29	ND	0.48	0.071	
142-82-5	n-Heptane	ND	2.0	0.25	ND	0.48	0.061	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.20	ND	0.43	0.045	
108-10-1	<b>4-Methyl-2-pentanone</b>	<b>0.27</b>	2.0	0.22	<b>0.067</b>	0.48	0.053	<b>J</b>
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.25	ND	0.43	0.054	
79-00-5	1,1,2-Trichloroethane	ND	0.39	0.20	ND	0.072	0.036	
108-88-3	<b>Toluene</b>	<b>8.6</b>	2.0	0.20	<b>2.3</b>	0.52	0.052	
591-78-6	<b>2-Hexanone</b>	<b>0.37</b>	2.0	0.30	<b>0.090</b>	0.48	0.072	<b>J</b>
124-48-1	<b>Dibromochloromethane</b>	<b>1.1</b>	0.39	0.27	<b>0.13</b>	0.046	0.031	
106-93-4	1,2-Dibromoethane	ND	0.39	0.21	ND	0.051	0.027	
111-65-9	n-Octane	ND	2.0	0.20	ND	0.42	0.042	
127-18-4	<b>Tetrachloroethene</b>	<b>17</b>	0.39	0.20	<b>2.5</b>	0.058	0.029	
108-90-7	<b>Chlorobenzene</b>	<b>1.3</b>	0.39	0.20	<b>0.29</b>	0.085	0.043	

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

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Verified By: Re      Date: 6/2/08      **784**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG95B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-016

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00671

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.40 Liter(s)  
 0.10 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	0.97	2.0	0.24	0.22	0.45	0.056	J
179601-23-1	m,p-Xylenes	5.7	2.0	0.51	1.3	0.45	0.12	
75-25-2	Bromoform	ND	2.0	0.30	ND	0.19	0.029	
100-42-5	Styrene	0.32	2.0	0.30	0.076	0.46	0.070	J
95-47-6	o-Xylene	1.9	2.0	0.25	0.45	0.45	0.057	J
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.39	0.25	ND	0.057	0.036	
98-82-8	Cumene	0.39	2.0	0.22	0.079	0.40	0.044	J
103-65-1	n-Propylbenzene	0.32	2.0	0.20	0.064	0.40	0.041	J
622-96-8	4-Ethyltoluene	0.54	2.0	0.22	0.11	0.40	0.045	J, B
108-67-8	1,3,5-Trimethylbenzene	0.65	2.0	0.23	0.13	0.40	0.048	J
98-83-9	alpha-Methylstyrene	ND	2.0	0.28	ND	0.40	0.059	
95-63-6	1,2,4-Trimethylbenzene	2.2	2.0	0.27	0.44	0.40	0.055	
100-44-7	Benzyl Chloride	ND	0.39	0.34	ND	0.075	0.065	
541-73-1	1,3-Dichlorobenzene	82	0.39	0.24	14	0.065	0.040	
106-46-7	1,4-Dichlorobenzene	24	0.39	0.22	4.1	0.065	0.036	
135-98-8	sec-Butylbenzene	0.45	2.0	0.23	0.082	0.36	0.041	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.49	2.0	0.25	0.089	0.36	0.046	J
95-50-1	1,2-Dichlorobenzene	52	0.39	0.26	8.7	0.065	0.043	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	0.30	ND	0.20	0.031	
120-82-1	1,2,4-Trichlorobenzene	240	0.39	0.30	32	0.053	0.040	
91-20-3	Naphthalene	2.7	0.78	0.29	0.52	0.15	0.055	
87-68-3	Hexachlorobutadiene	3.9	0.39	0.35	0.37	0.037	0.033	
98-06-6	tert-Butylbenzene	ND	0.78	0.20	ND	0.14	0.036	
104-51-8	n-Butylbenzene	0.57	0.78	0.20	0.10	0.14	0.036	J

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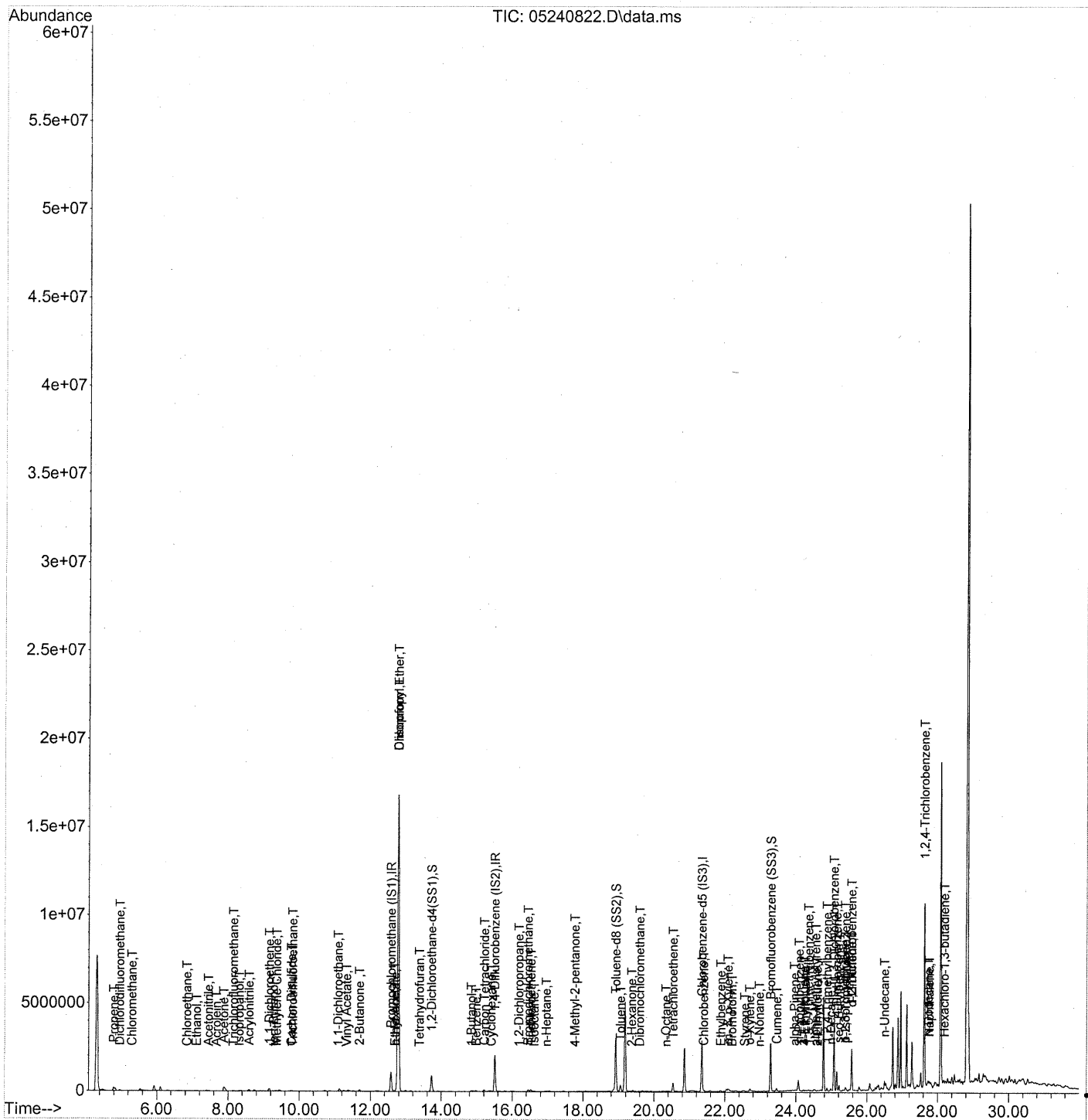
Verified By: RG

Date: 6/2/08

**785**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	575733	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2414649	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1124167	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	894939	22.434	ng	0.00	
Spiked Amount	25.000		Recovery	=	89.72%		✓
57) Toluene-d8 (SS2)	18.93	98	2539617	25.154	ng	0.00	
Spiked Amount	25.000		Recovery	=	100.60%		✓
73) Bromofluorobenzene (SS3)	23.29	174	1051514	25.612	ng	0.00	
Spiked Amount	25.000		Recovery	=	102.44%		✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	105713	2.325	ng	# 70
3) Dichlorodifluoromethane	4.97	85	42599	0.508	ng	98
4) Chloromethane	5.30	50	4243	0.078	ng	87
5) Freon 114	5.56	135	1069	N.D.	✓	
6) Vinyl Chloride	5.75	62	92	N.D.	✓	
7) 1,3-Butadiene	6.02	54	1601	N.D.		
8) Bromomethane	6.51	94	1211	N.D.	✓	
9) Chloroethane	6.85	64	2698	0.105	ng	# 45
10) Ethanol	7.11	45	34329m	1.134	ng	
11) Acetonitrile	7.45	41	22802	0.260	ng	86
12) Acrolein	7.67	56	3632	0.168	ng	94
13) Acetone	7.88	58	103433m	3.337	ng	
14) Trichlorofluoromethane	8.15	101	19555	0.272	ng	98
15) Isopropanol	8.32	45	45117	0.456	ng	86
16) Acrylonitrile	8.60	53	6864	0.145	ng	NR # 24
17) 1,1-Dichloroethene	9.16	96	72286	2.285	ng	# 75
18) tert-Butanol	9.28	59	21606m	0.257	ng	
19) Methylene Chloride	9.37	84	14441	0.417	ng	# 75
20) Allyl Chloride	9.53	41	1009	N.D.	✓	
21) Trichlorotrifluoroethane	9.81	151	4158	0.127	ng	90
22) Carbon Disulfide	9.78	76	60146	0.458	ng	97
23) trans-1,2-Dichloroethene	10.81	61	55	N.D.	✓	
24) 1,1-Dichloroethane	11.09	63	6189	0.103	ng	91
25) Methyl tert-Butyl Ether	11.23	73	3113	N.D.	✓	
26) Vinyl Acetate	11.33	86	1356	0.237	ng	# 1
27) 2-Butanone	11.69	72	33629	1.487	ng	# 88
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	2168276	78.227	ng	NR # 1
30) Ethyl Acetate	12.69	61	2715	0.222	ng	78
31) n-Hexane	12.70	57	25468	0.413	ng	# 71

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*WA 5/29/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	18571453	<del>353.743</del> ng	su dil	95
34) Tetrahydrofuran	13.39	72	1132	0.052	ng #	22
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.89	62	212	N.D.	✓	
38) 1,1,1-Trichloroethane	14.29	97	1289	N.D.	✓	
39) Isopropyl Acetate	14.96	61	59	N.D.		
40) 1-Butanol	14.85	56	39604	1.193	ng	99
41) Benzene	14.99	78	70175	0.555	ng	96
42) Carbon Tetrachloride	15.22	117	82726	1.699	ng	100
43) Cyclohexane	15.41	84	11616	0.236	ng	85
44) tert-Amyl Methyl Ether	15.85	73	56	N.D.	✓	
45) 1,2-Dichloropropane	16.19	63	1935	0.057	ng	97
46) Bromodichloromethane	16.45	83	81084	1.897	ng	100
47) Trichloroethene	16.53	130	41475	1.069	ng	97
48) 1,4-Dioxane	16.52	88	149	N.D.	✓	
49) Isooctane	16.62	57	40028	0.276	ng	64
50) Methyl Methacrylate	16.74	100	55	N.D.	✓	
51) n-Heptane	16.97	71	1712	0.051	ng	83
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.	✓	
53) 4-Methyl-2-pentanone	17.77	58	2361	0.070	ng #	39
54) trans-1,3-Dichloropropene	18.43	75	269	N.D.	✓	
55) 1,1,2-Trichloroethane	18.67	97	684	N.D.	✓	
58) Toluene	19.06	91	302488	2.204	ng	98
59) 2-Hexanone	19.37	43	8910	0.094	ng	78
60) Dibromochloromethane	19.60	129	10372	0.280	ng	91
61) 1,2-Dibromoethane	19.93	107	245	N.D.	✓	
62) Butyl Acetate	20.19	43	2289	N.D.		
63) n-Octane	<del>20.34</del>	57	2162	0.071	ng UR	81
64) Tetrachloroethene	20.54	166	178222	4.389	ng	99
65) Chlorobenzene	21.40	112	31698	0.345	ng	100
66) Ethylbenzene	21.89	91	39235	0.249	ng	98
67) m- & p-Xylene	22.09	91	154883	1.471	ng	88
68) Bromoform	22.21	173	1407	0.051	ng	78
69) Styrene	22.57	104	7830	0.083	ng	85
70) o-Xylene	22.71	91	56319	0.496	ng	93
71) n-Nonane	22.98	43	5519	0.068	ng #	77
72) 1,1,2,2-Tetrachloroethane	22.70	83	1247	N.D.	✓	
74) Cumene	23.46	105	15067m	0.100	ng	
75) alpha-Pinene	23.97	93	8867	0.113	ng	67
76) n-Propylbenzene	24.10	91	15620	0.081	ng #	88
77) 3-Ethyltoluene	24.23	105	43597	0.271	ng	94
78) 4-Ethyltoluene	24.27	105	20890	0.139	ng	99
79) 1,3,5-Trimethylbenzene	24.36	105	22665	0.167	ng	92

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.56	118	5060	<del>0.069</del>	ng	94
81) 2-Ethyltoluene	24.60	105	20744	0.127	ng	91
82) 1,2,4-Trimethylbenzene	24.88	105	77295	0.560	ng	89
83) n-Decane	24.98	57	43076	0.567	ng	74
84) Benzyl Chloride	25.04	91	3490	N.D.	✓	
85) 1,3-Dichlorobenzene	25.07	146	1817537	21.050	ng	100
86) 1,4-Dichlorobenzene	25.16	146	525451	6.278	ng	99
87) sec-Butylbenzene	25.21	105	20310	0.115	ng	91
88) p-Isopropyltoluene	25.40	119	18215	0.125	ng	# 39
89) 1,2,3-Trimethylbenzene	25.40	105	62797	0.465	ng	89
90) 1,2-Dichlorobenzene	25.57	146	1101025	13.445	ng	99
91) d-Limonene	25.58	68	19374	0.352	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	296	N.D.	✓	
93) n-Undecane	26.50	57	170970	2.150	ng	# 70
94) 1,2,4-Trichlorobenzene	27.63	180	3705685	61.784	ng	96
95) Naphthalene	27.77	128	126324	0.694	ng	93
96) n-Dodecane	27.74	57	118970	1.504	ng	87
97) Hexachloro-1,3-butadiene	28.19	225	39936	1.000	ng	97

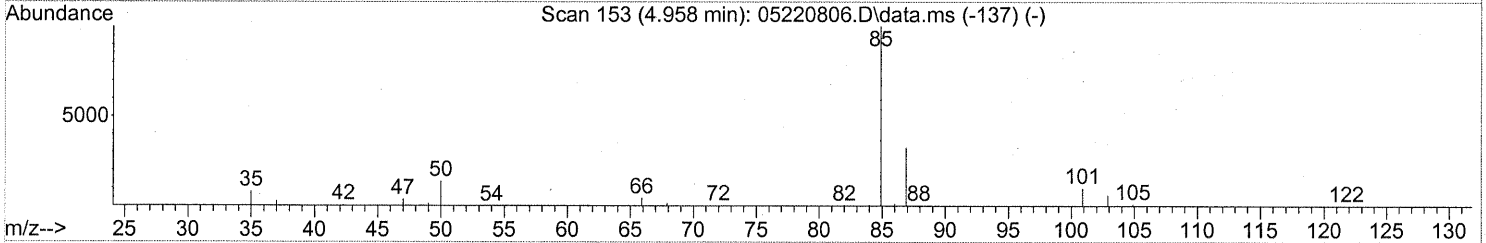
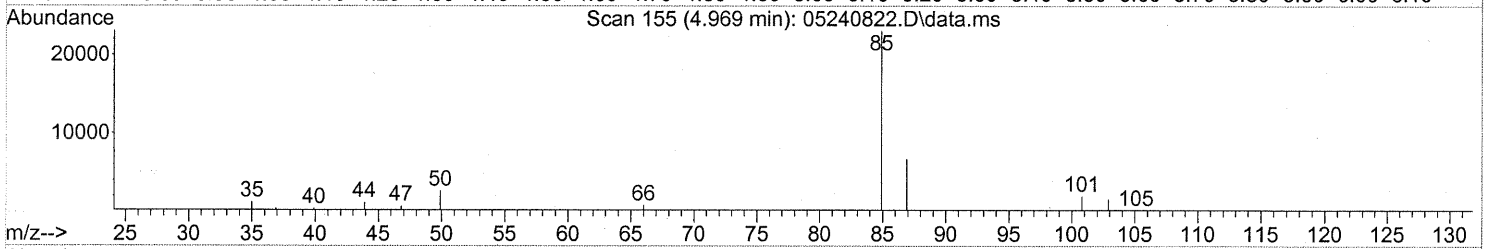
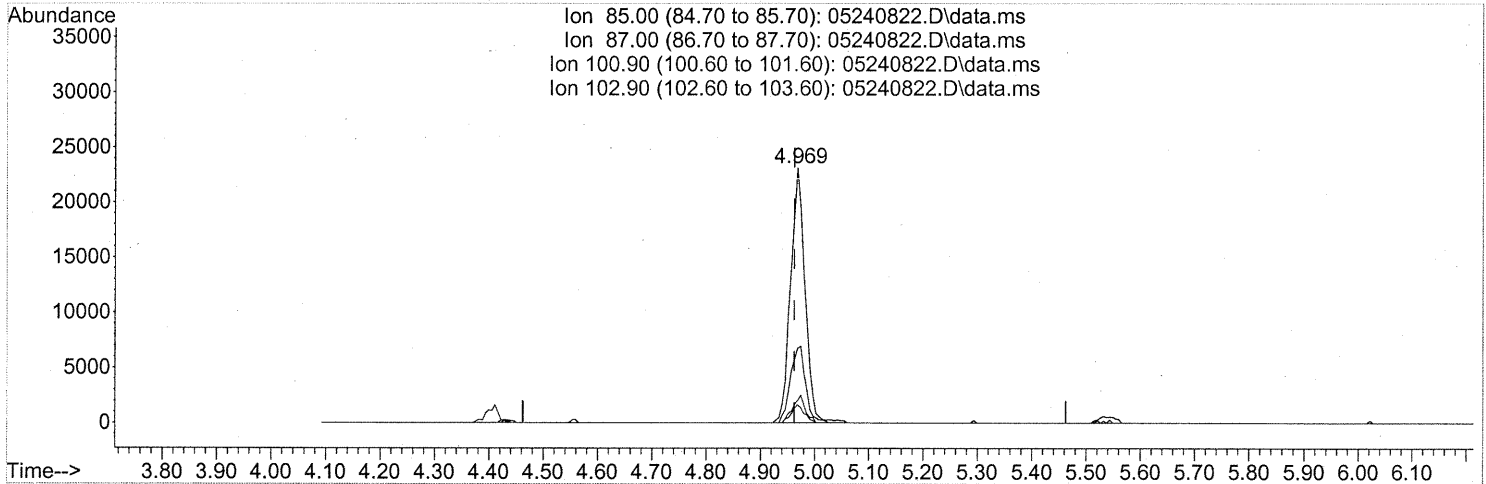
(#) = qualifier out of range (m) = manual integration (+) = signals summed

*WA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(3) Dichlorodifluoromethane (T)

4.969min (+0.006) 0.51ng

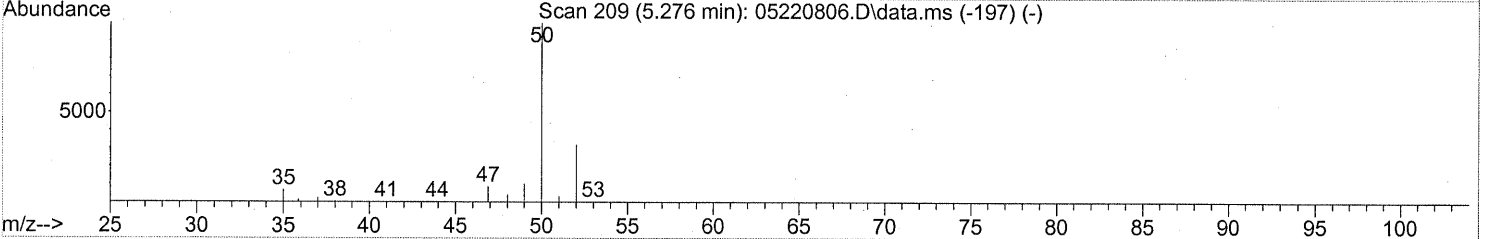
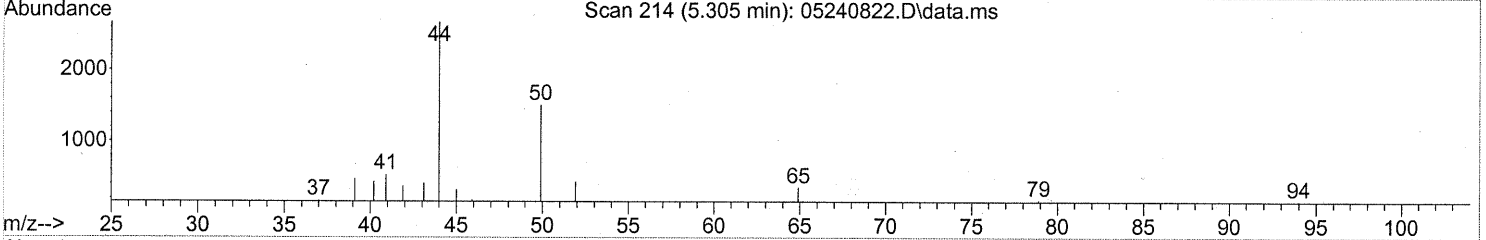
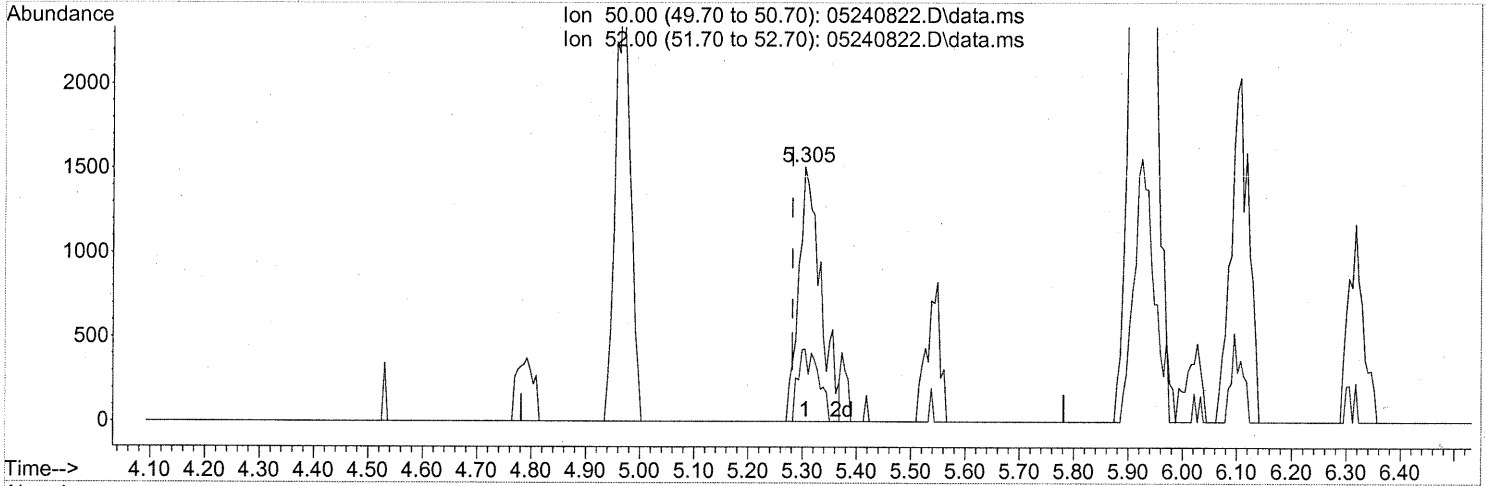
response 42599

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.24
100.90	9.30	9.41
102.90	6.00	6.31

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(4) Chloromethane (T)

5.305min (+0.023) 0.08ng

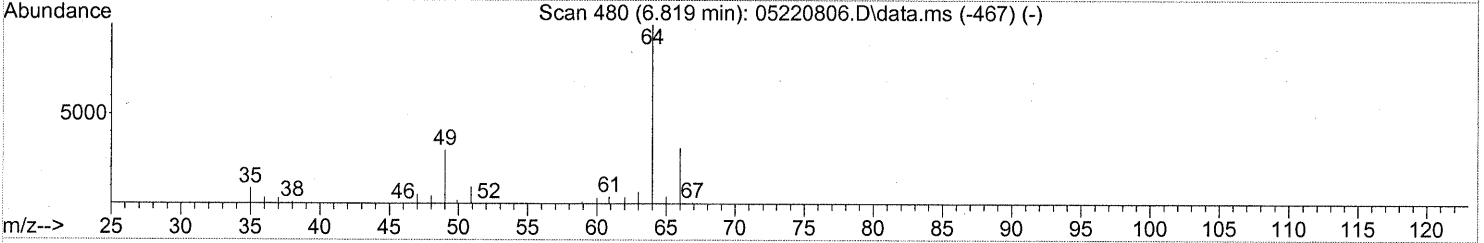
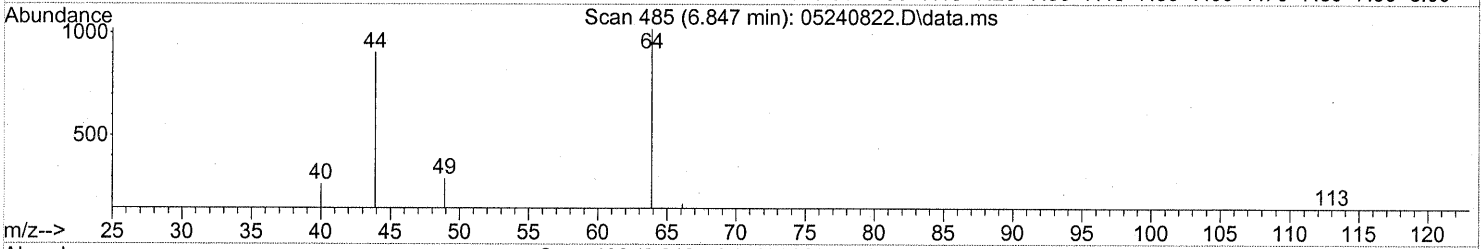
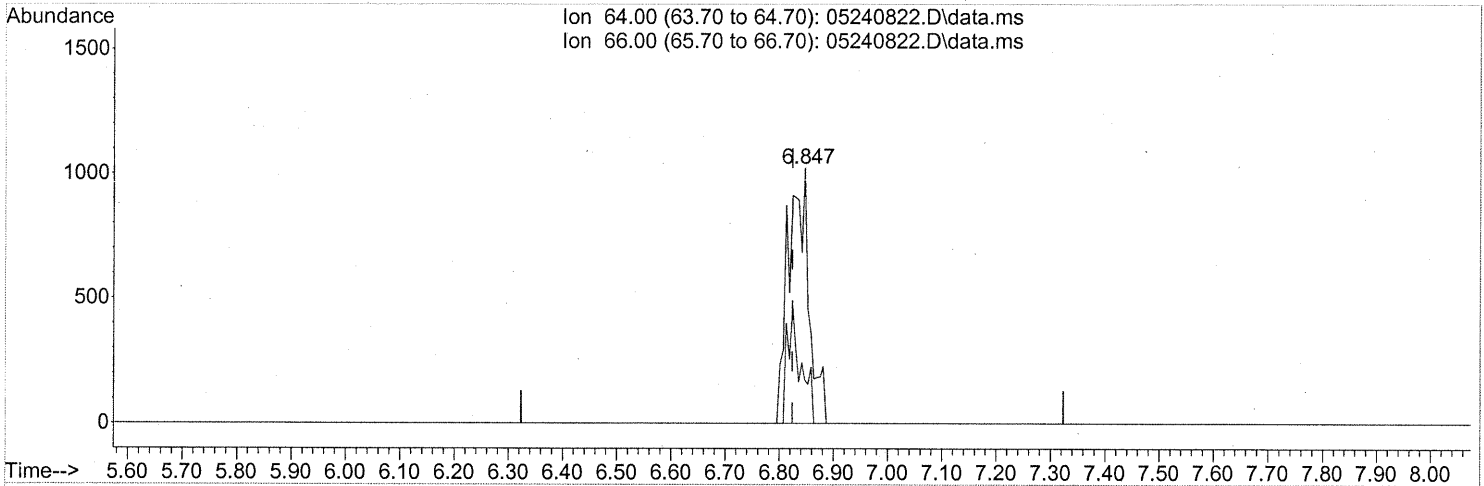
response 4243

Ion	Exp%	Act%
50.00	100	100
52.00	33.70	26.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

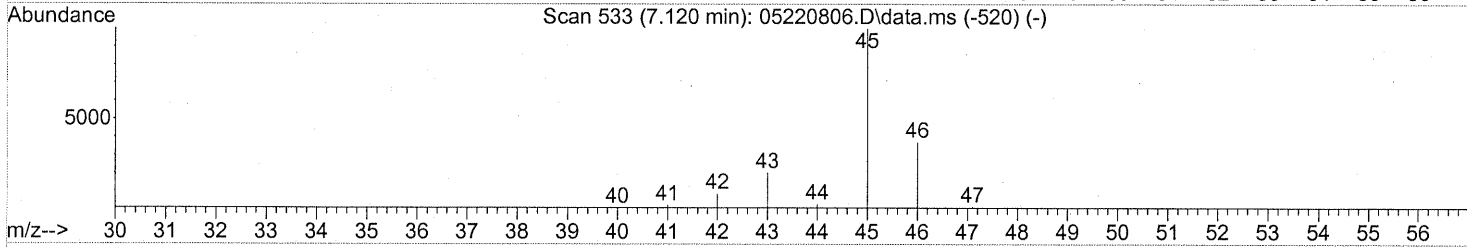
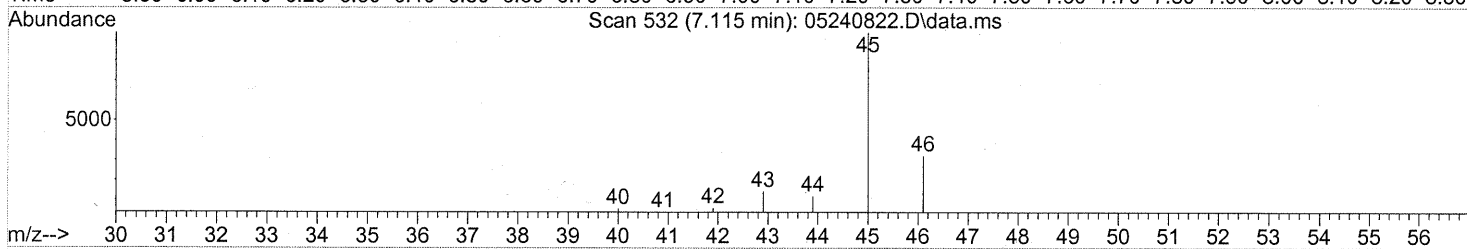
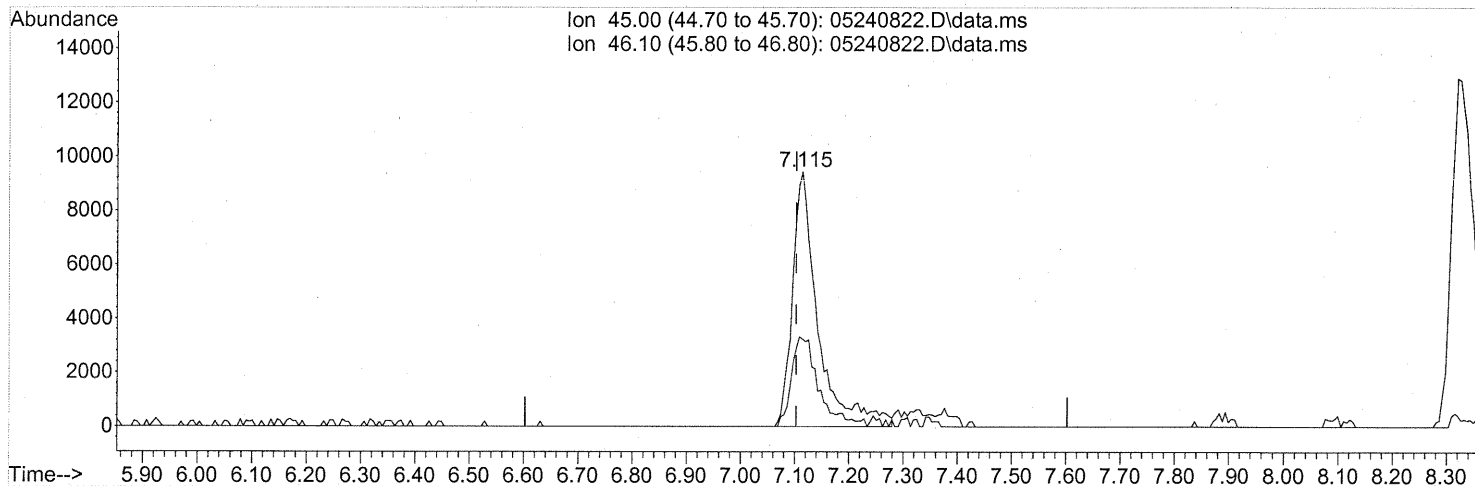
(9) Chloroethane (T)  
 6.847min (+0.023) 0.10ng  
 response 2698

Ion	Exp%	Act%
64.00	100	100
66.00	29.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801422-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 09:05:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.115min (+0.011) 1.02ng

response 30770

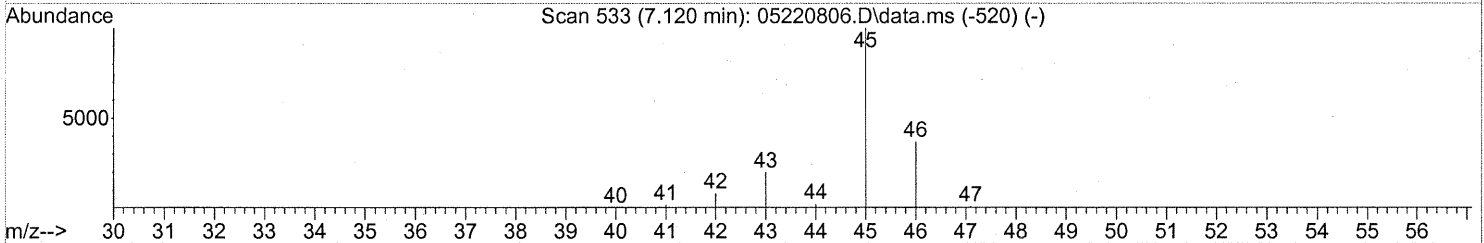
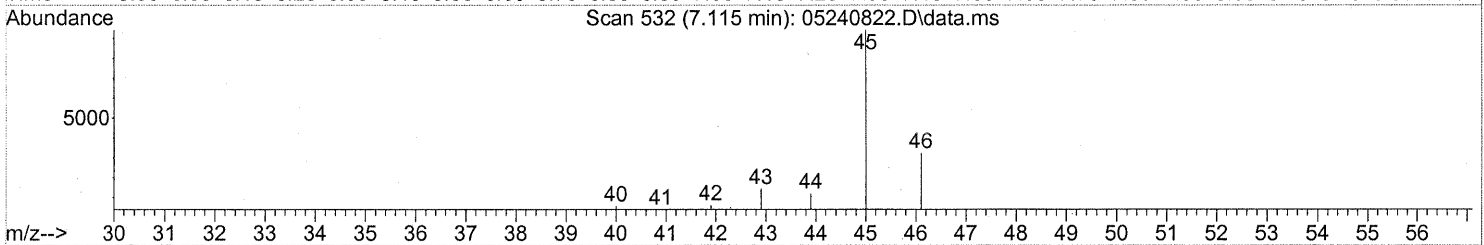
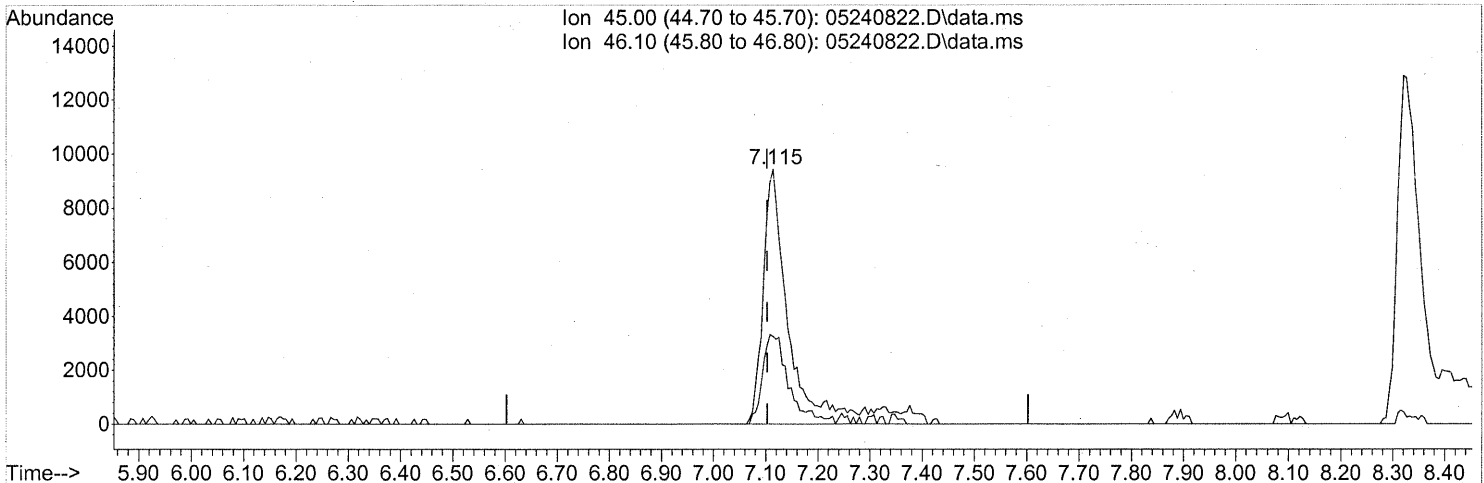
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.55
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(10) Ethanol (T)

7.115min (+0.011) 1.13ng m

response 34329

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	33.66
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*pot 5/29/08*

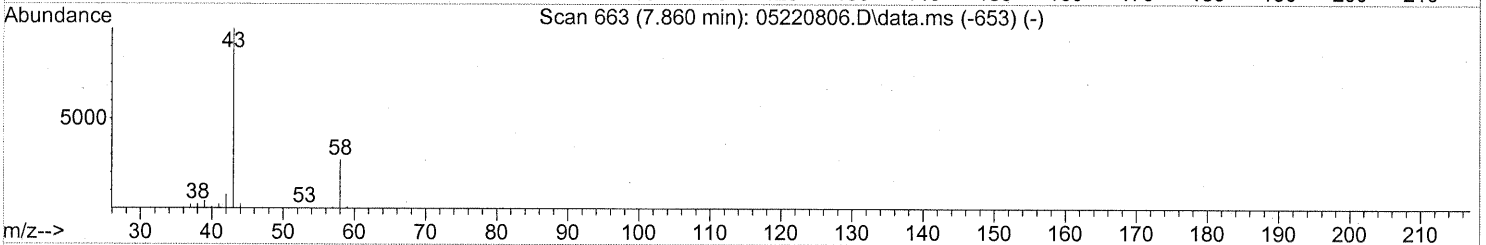
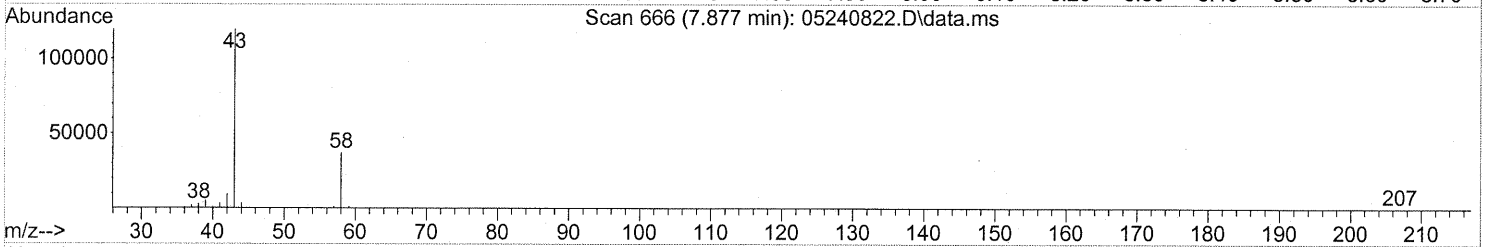
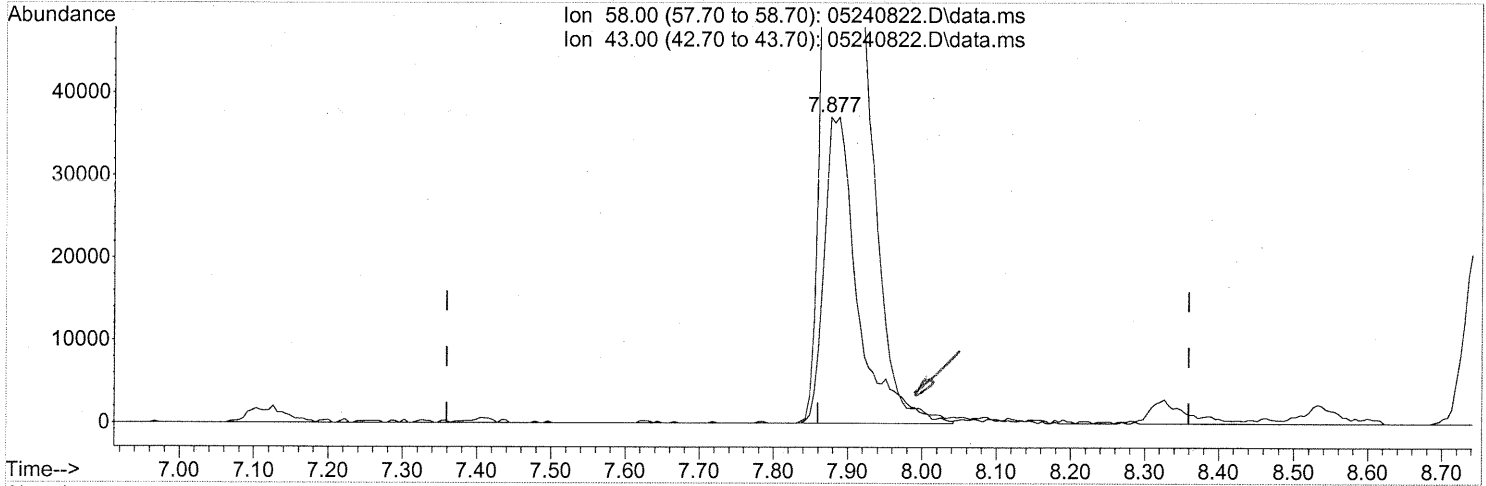
*W 5/30/08*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801422-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 09:05:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(13) Acetone (T)

7.877min (+0.017) 3.74ng

response 116046

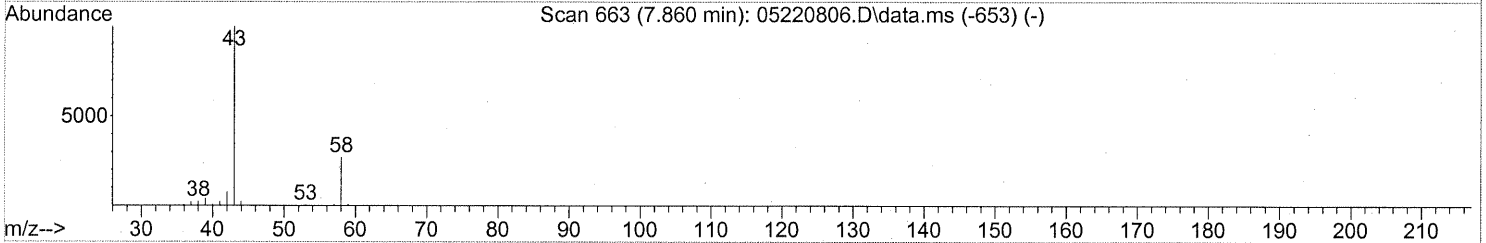
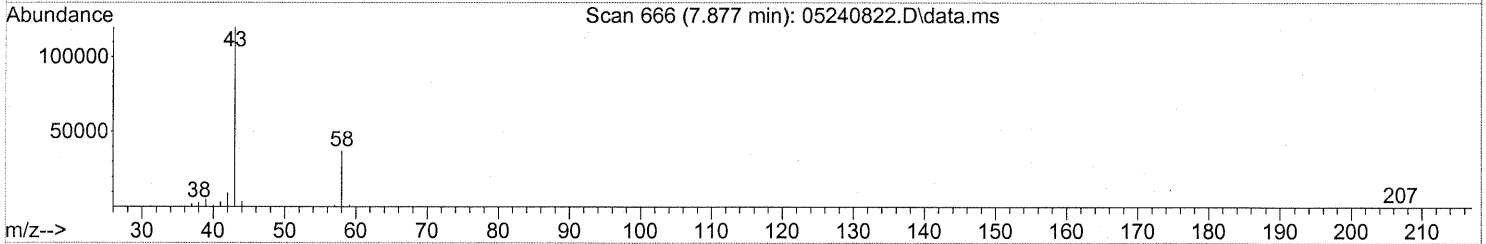
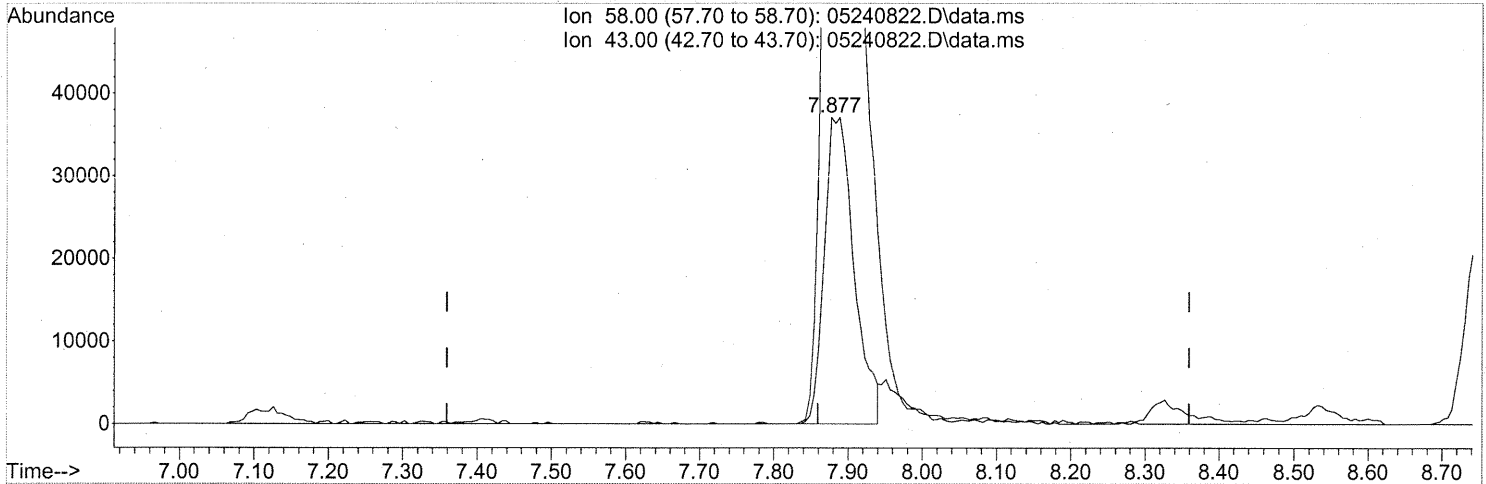
*interf-shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	361.89#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801422-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 09:05:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.877min (+0.017) 3.34ng m  
 response 103433

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	406.02#
0.00	0.00	0.00
0.00	0.00	0.00

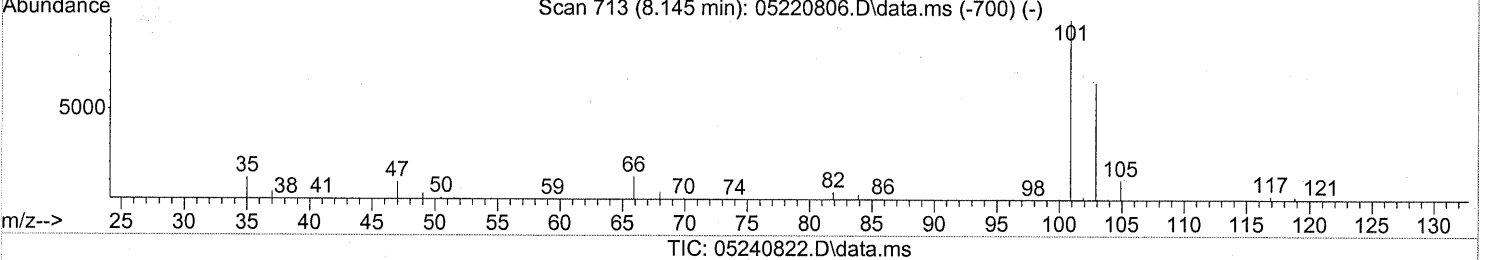
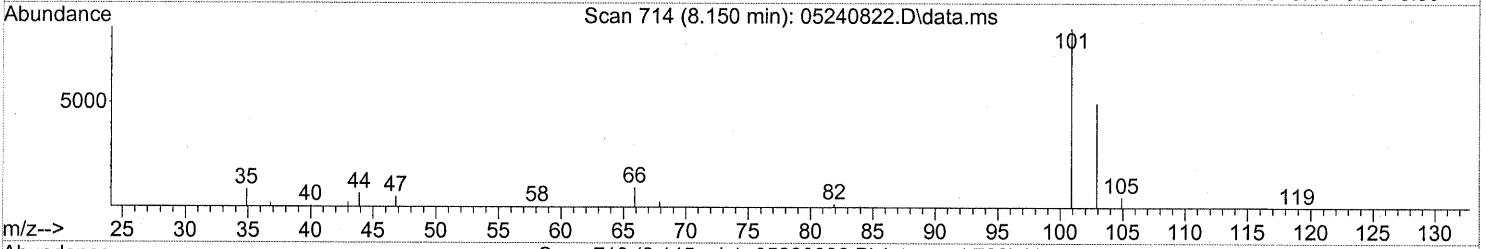
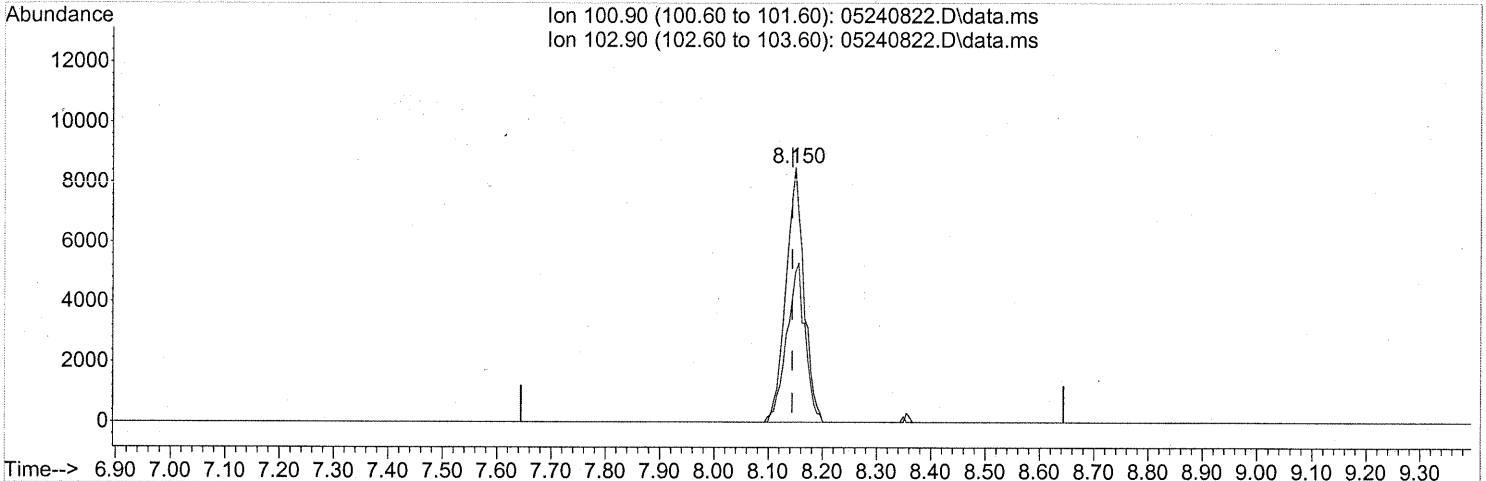
*no shoulder*  
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(14) Trichlorofluoromethane (T)

8.150min (+0.006) 0.27ng

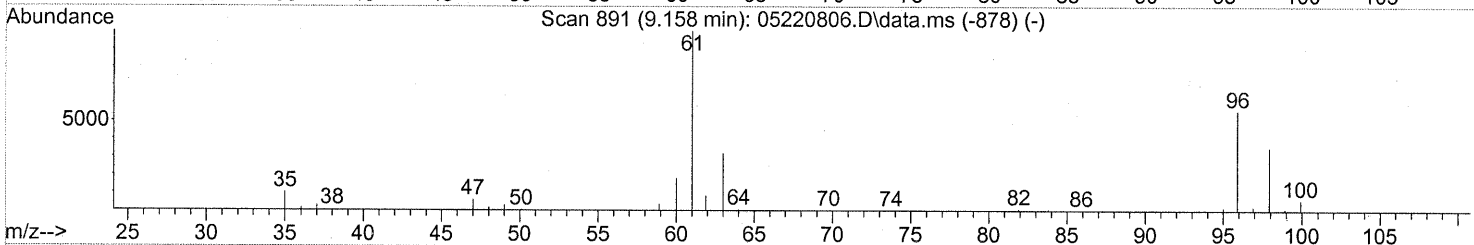
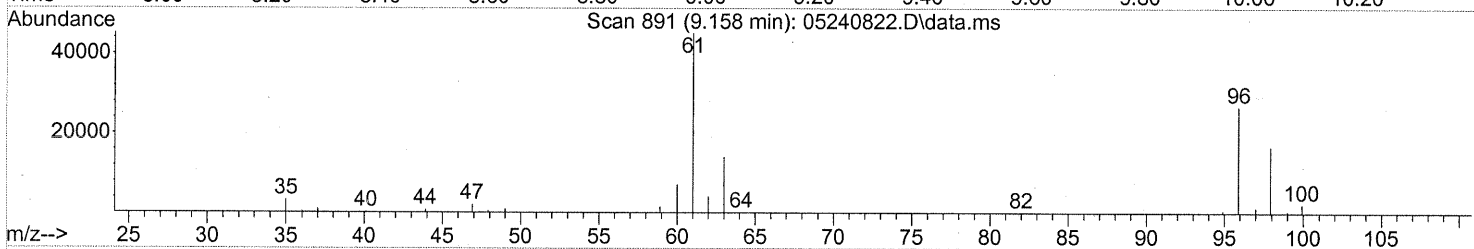
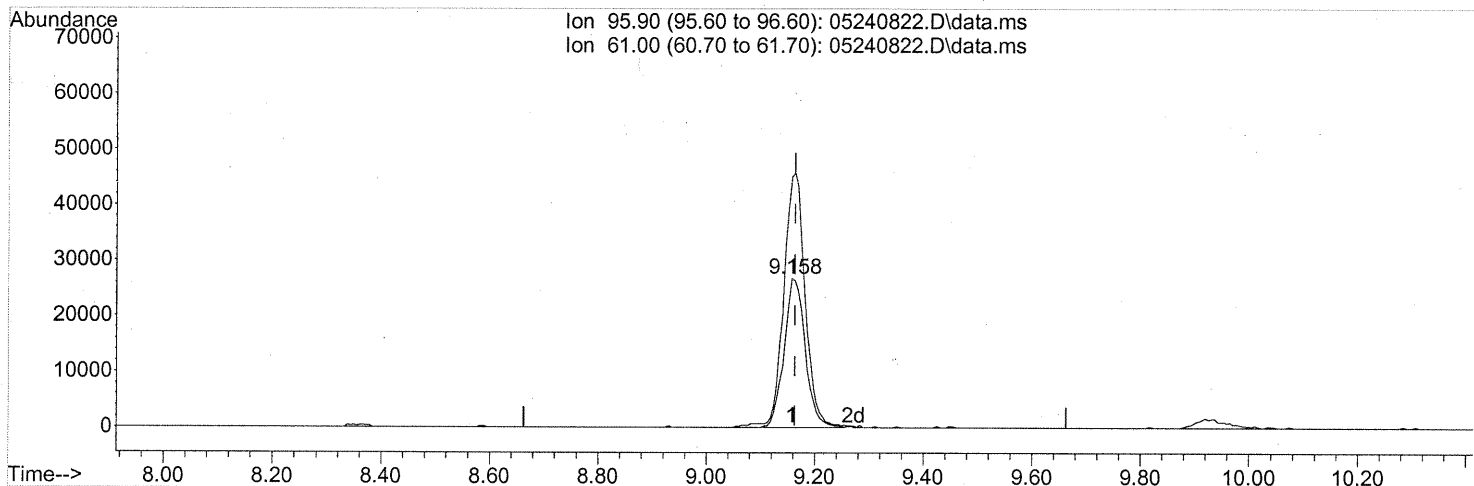
response 19555

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	63.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(17) 1,1-Dichloroethene (T)

9.158min (-0.006) 2.29ng

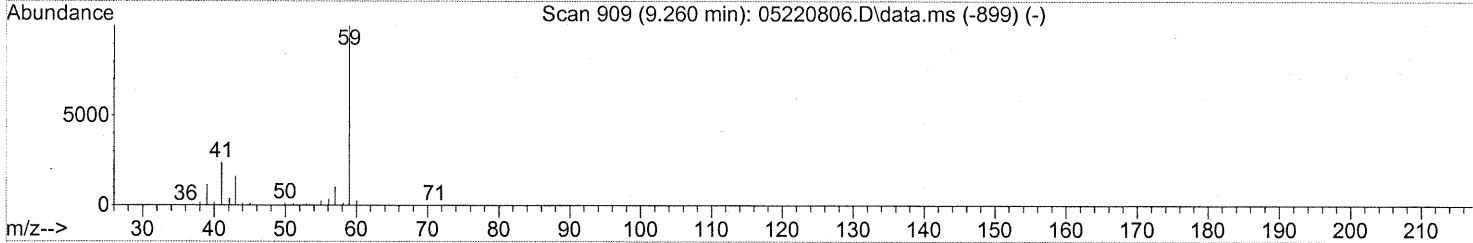
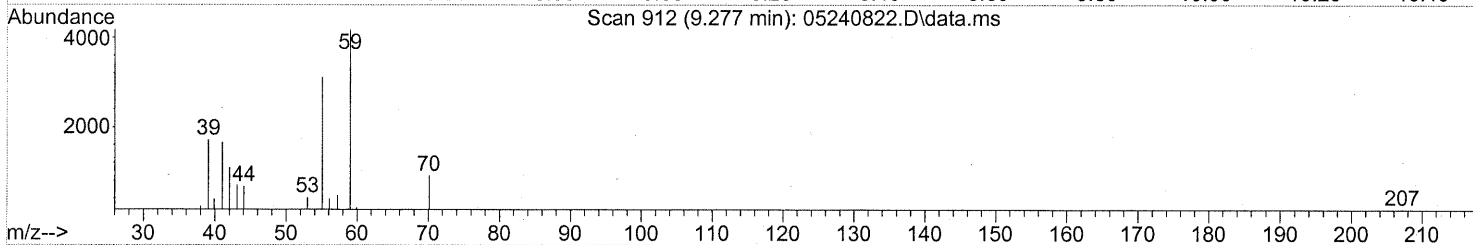
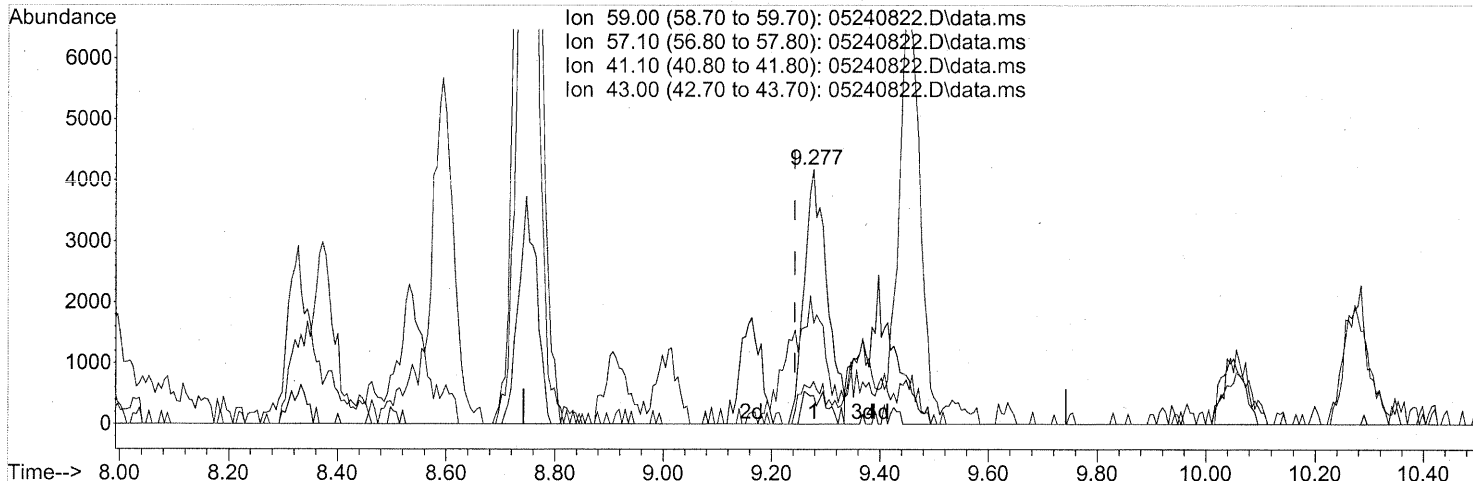
response 72286

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	171.44#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801422-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 09:05:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(18) tert-Butanol (T)

9.277min (+0.034) 0.15ng

response 12218

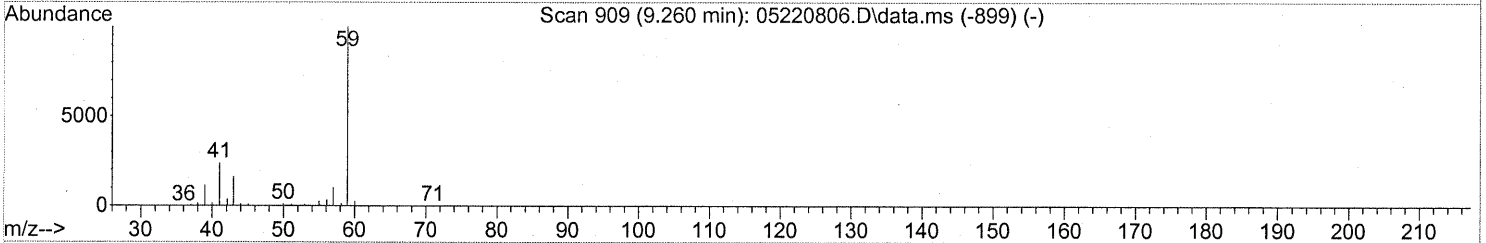
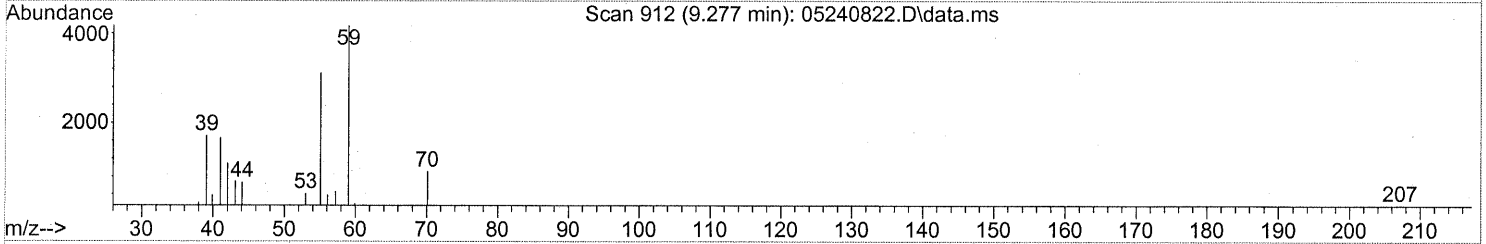
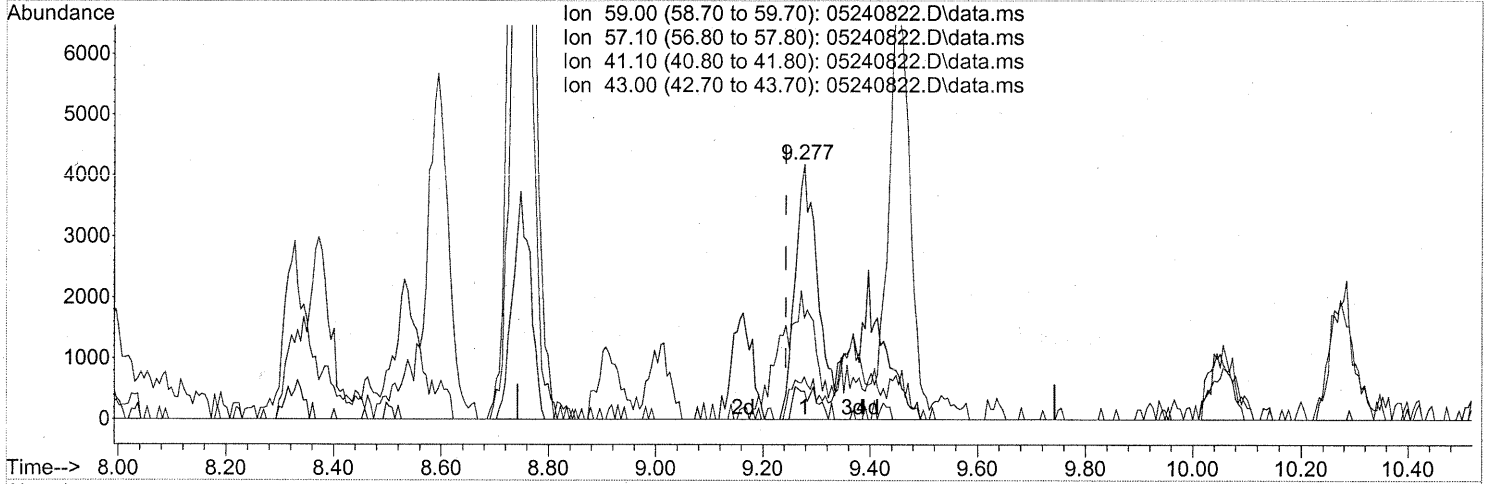
*split peaks*

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	12.33
41.10	20.10	78.52#
43.00	12.30	19.91

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 9.277min (+0.034) 0.26ng m  
 response 21606

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	6.97
41.10	20.10	44.40#
43.00	12.30	11.26

*int. whole peaks*

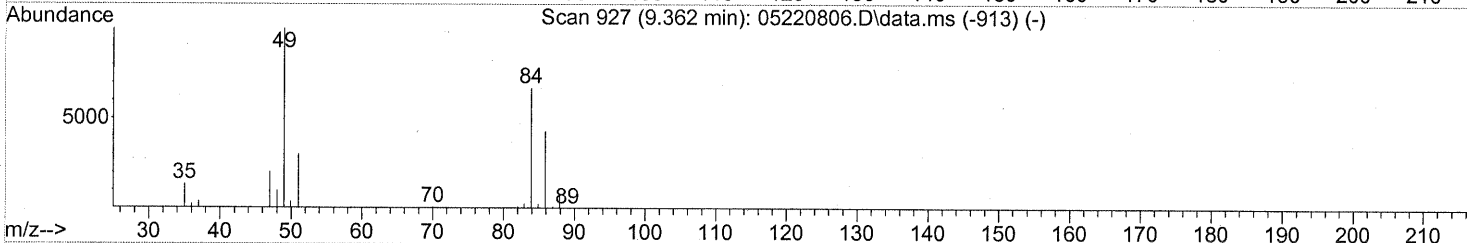
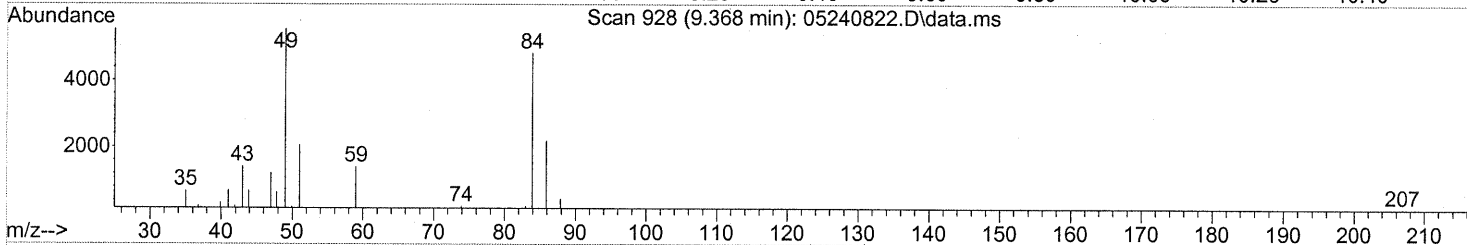
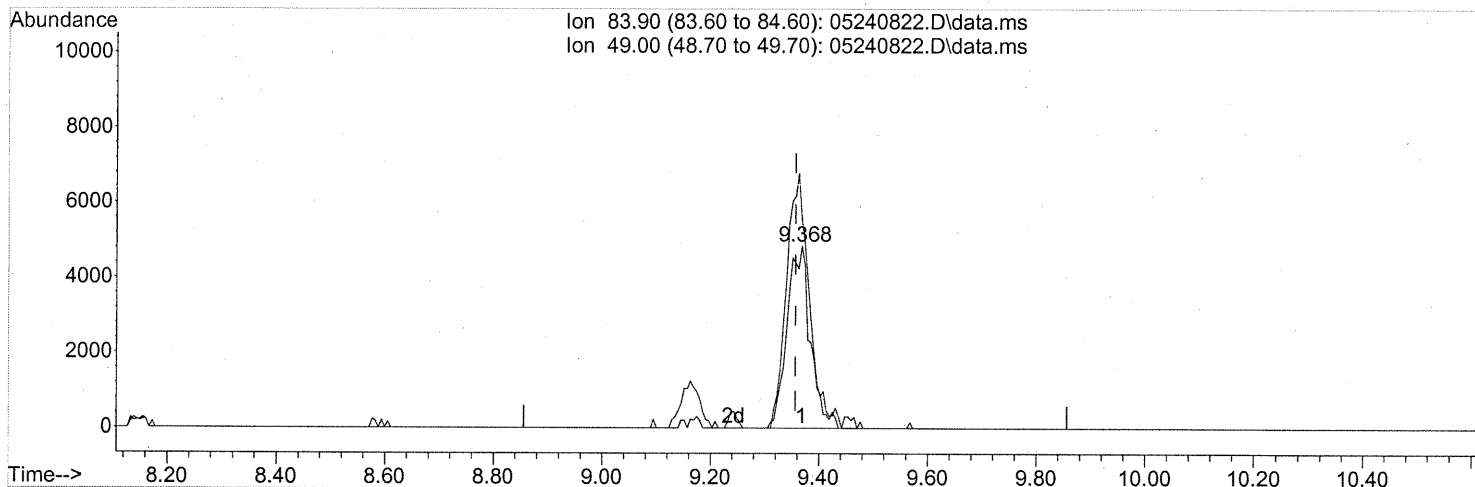
*WA 5/29/08*

*WAS/306*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(19) Methylene Chloride (T)

9.368min (+0.011) 0.42ng

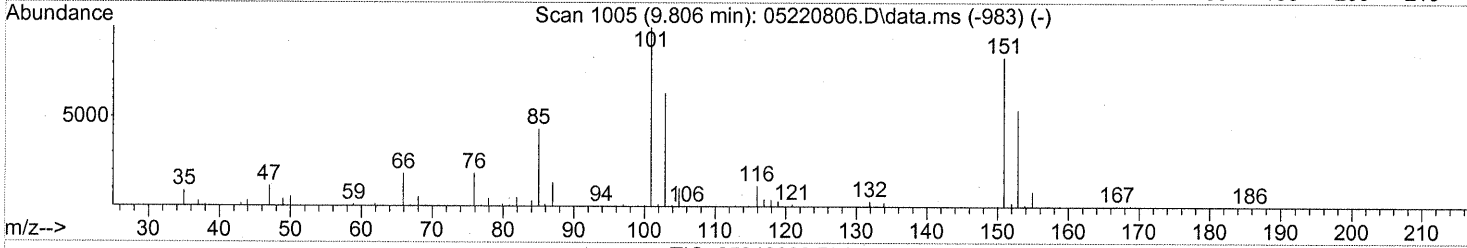
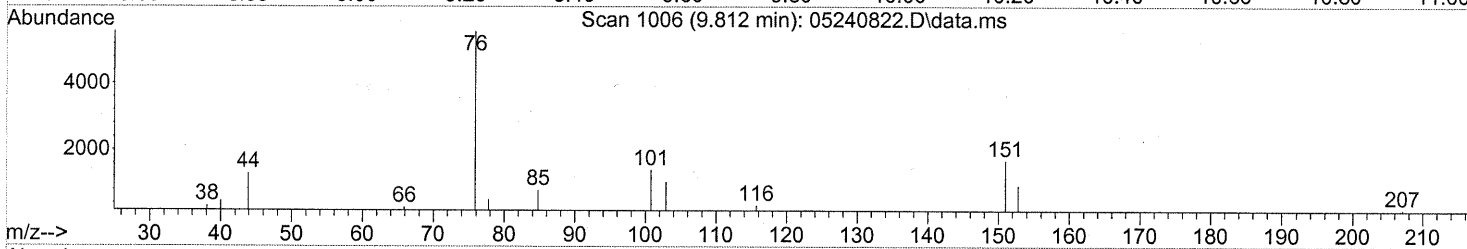
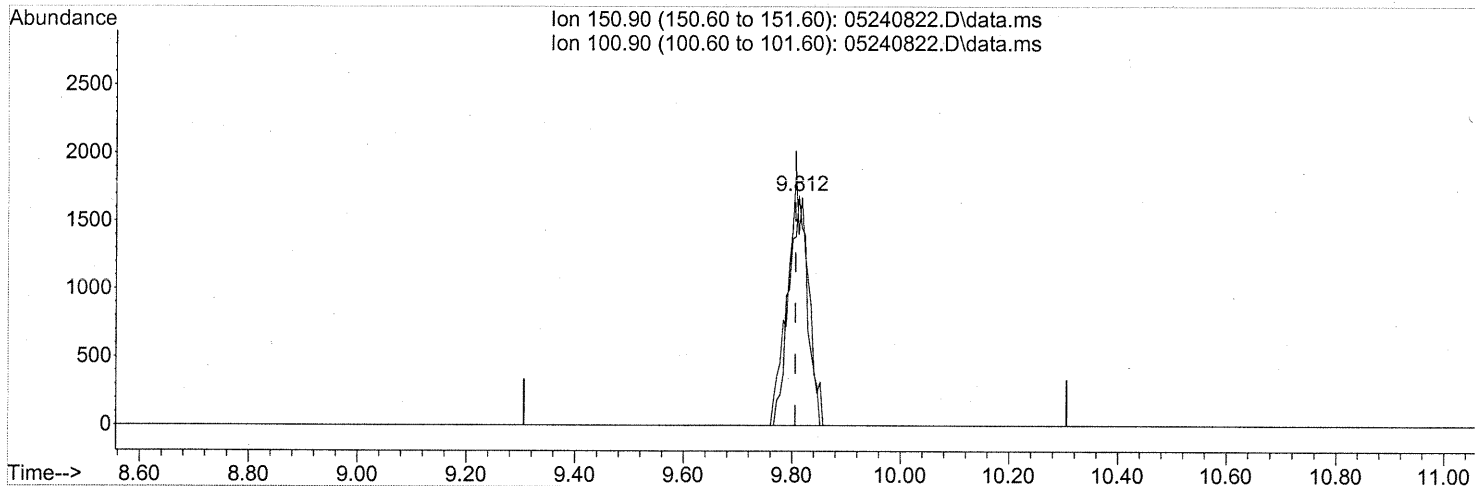
response 14441

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	137.62#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.812min (+0.006) 0.13ng

response 4158

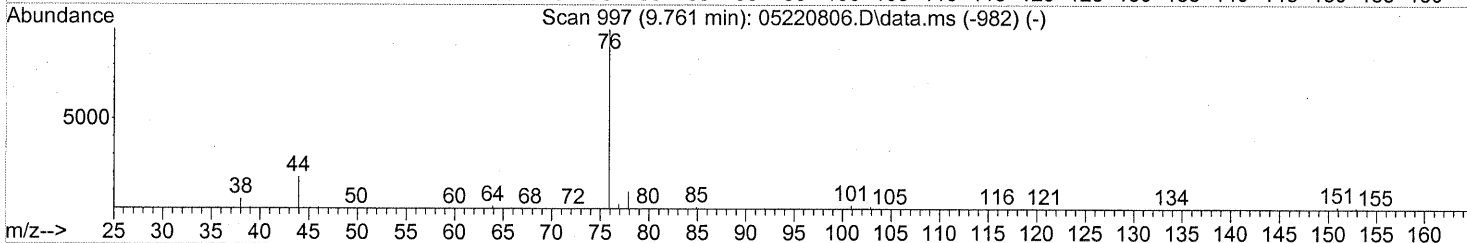
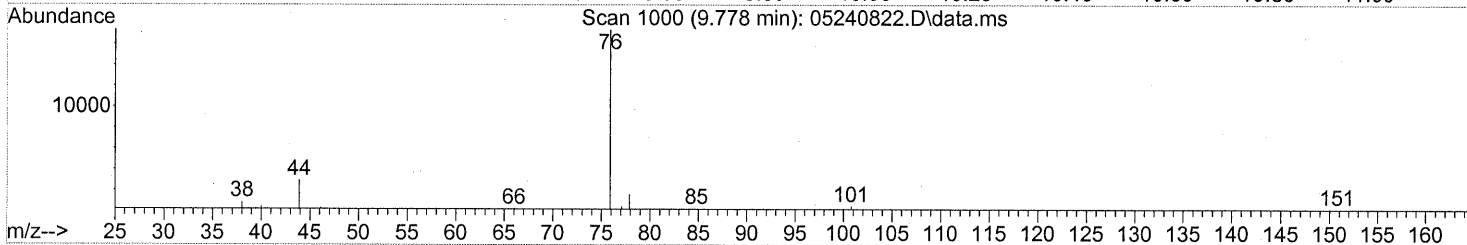
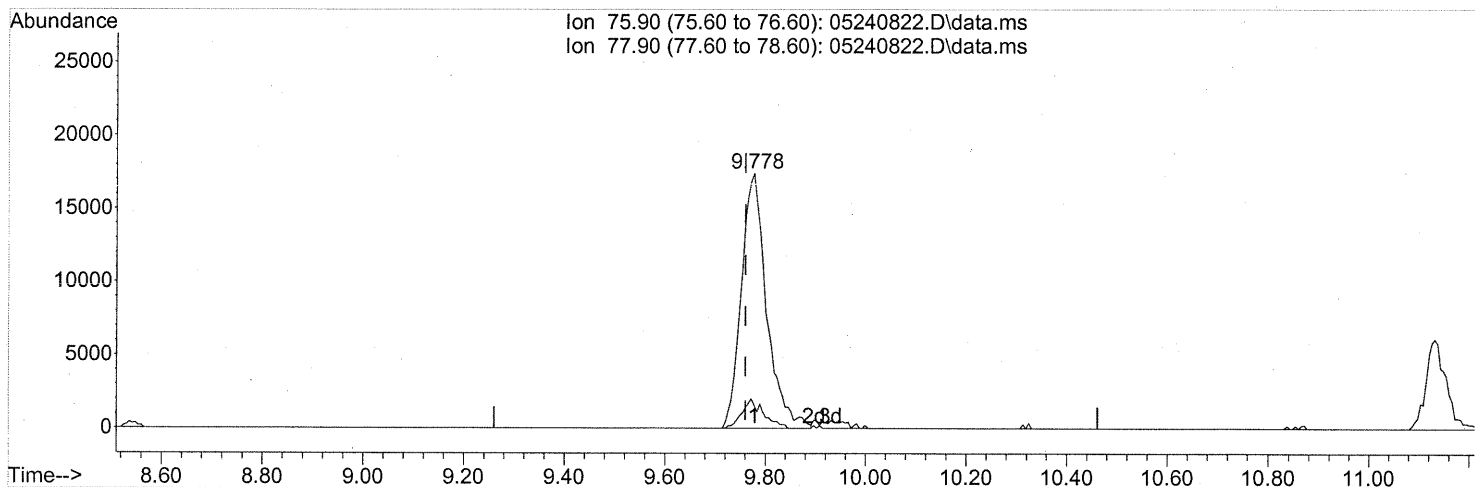
Ion	Exp%	Act%
150.90	100	100
100.90	126.50	114.55
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(22) Carbon Disulfide (T)

9.778min (+0.017) 0.46ng

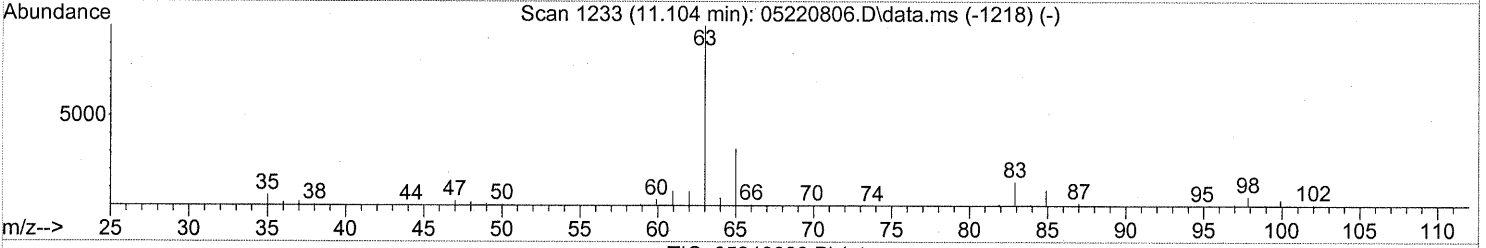
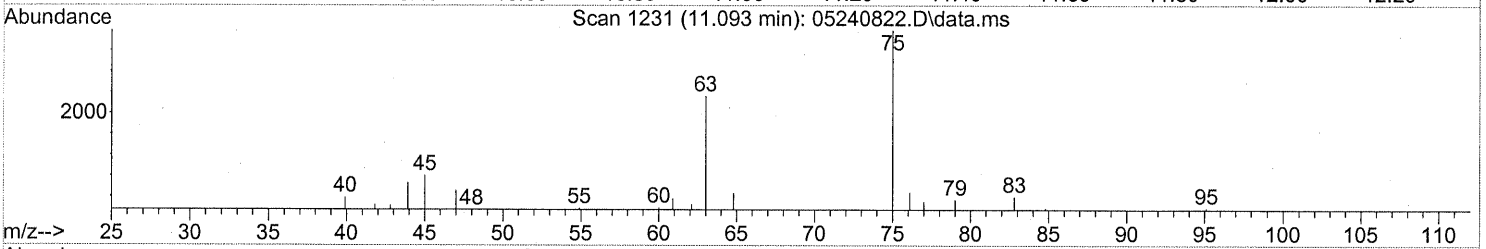
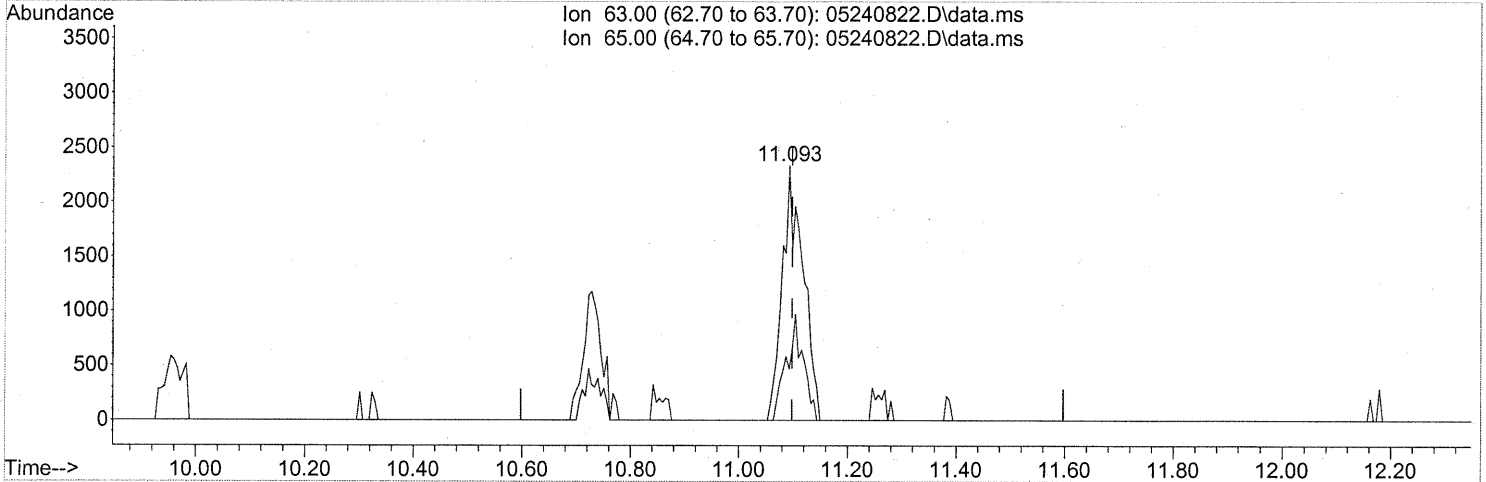
response 60146

Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.093min (-0.006) 0.10ng

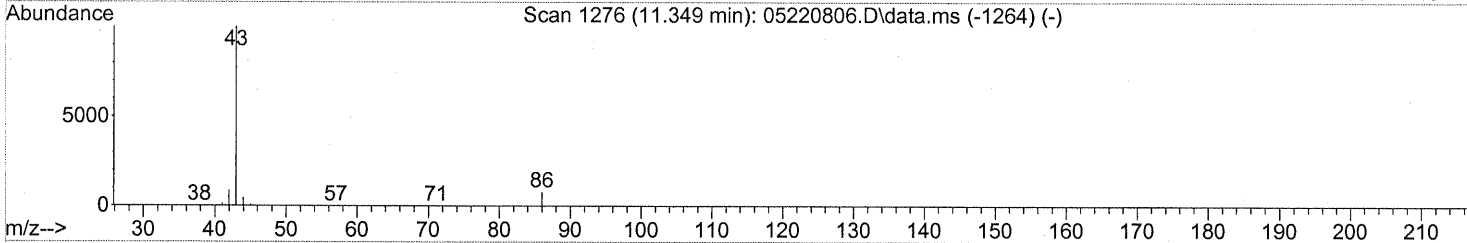
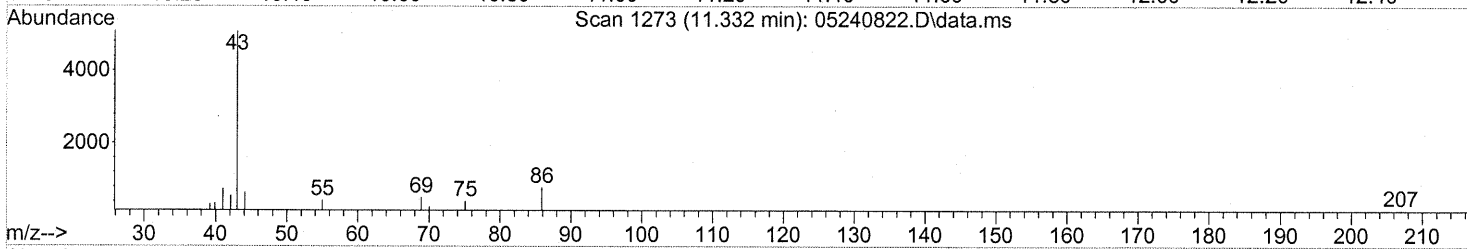
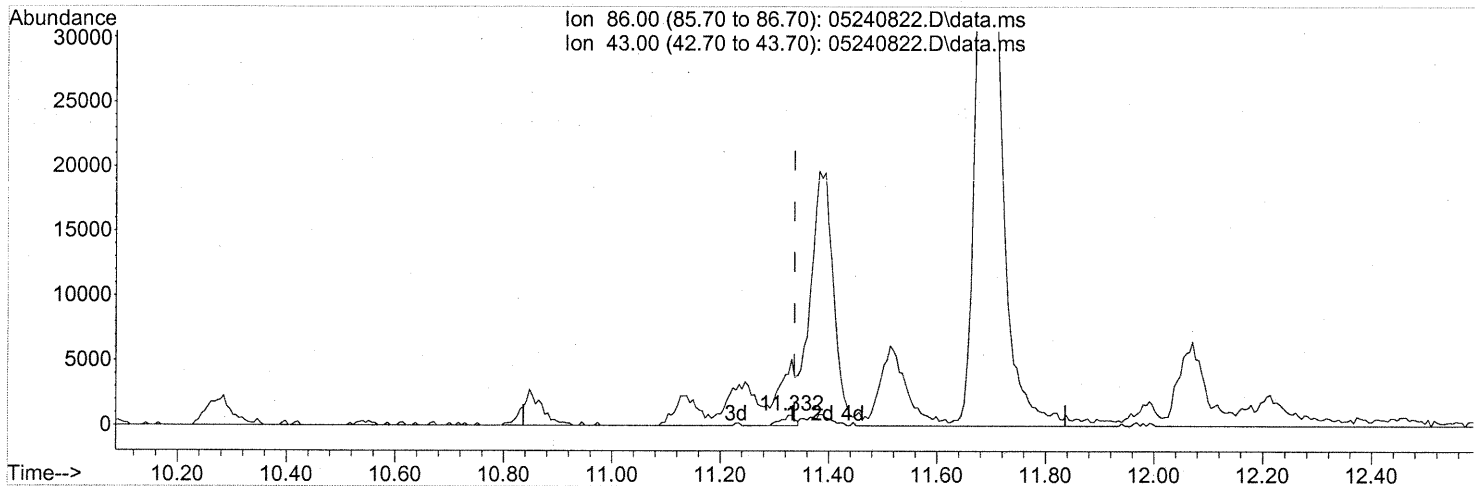
response 6189

Ion	Exp%	Act%
63.00	100	100
65.00	29.10	33.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(26) Vinyl Acetate (T)

11.332min (-0.005) 0.24ng

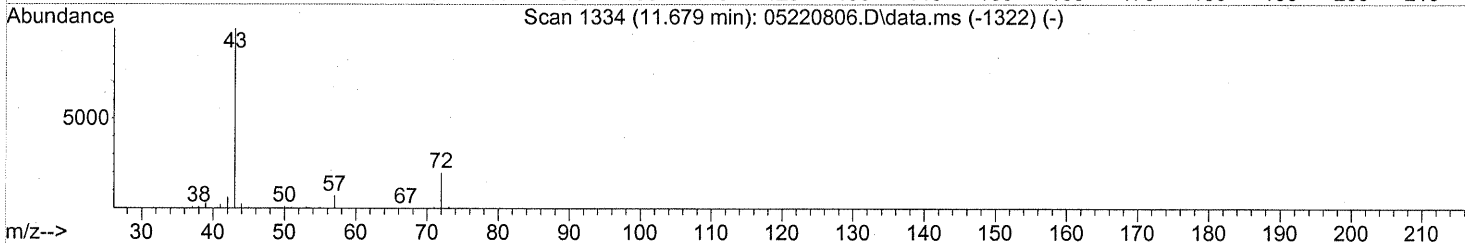
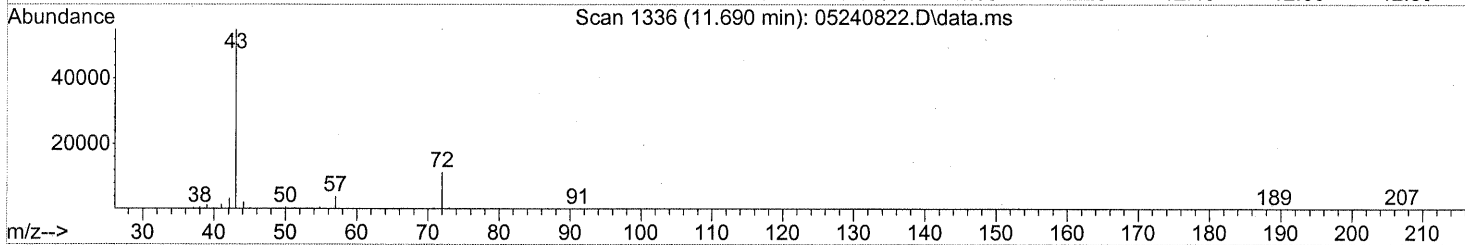
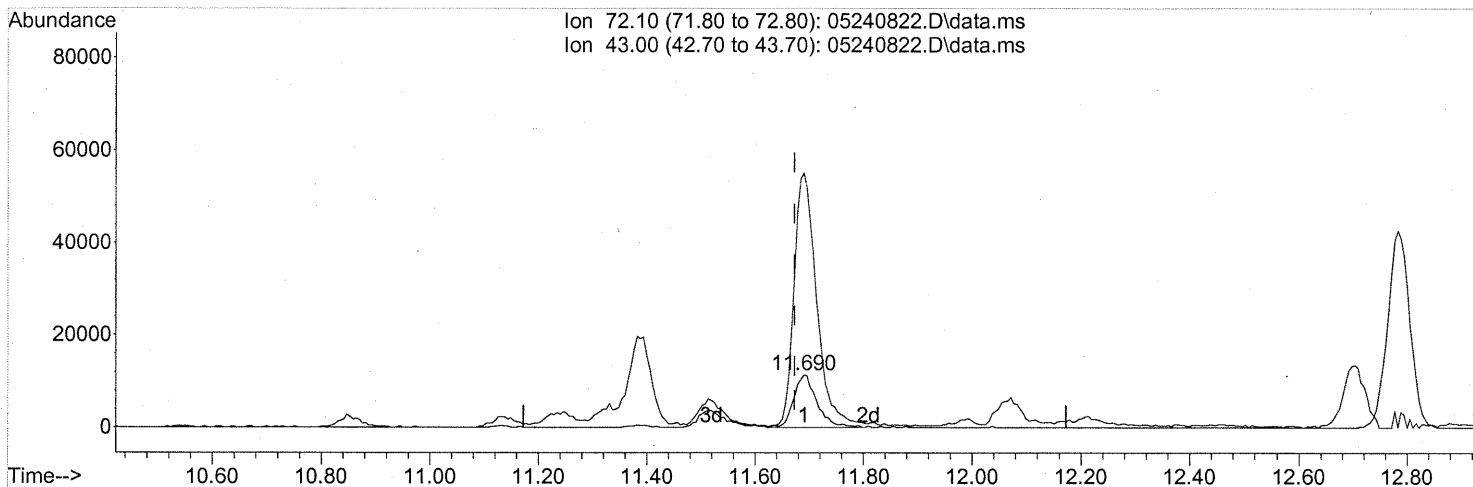
response 1356

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	723.89#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(27) 2-Butanone (T)

11.690min (+0.017) 1.49ng

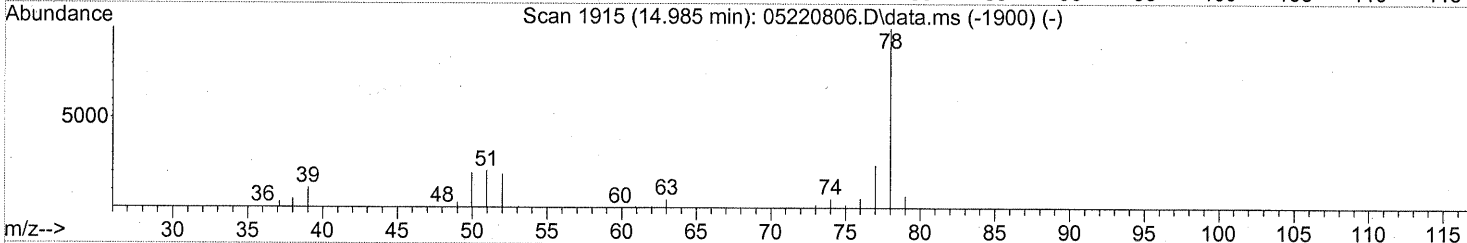
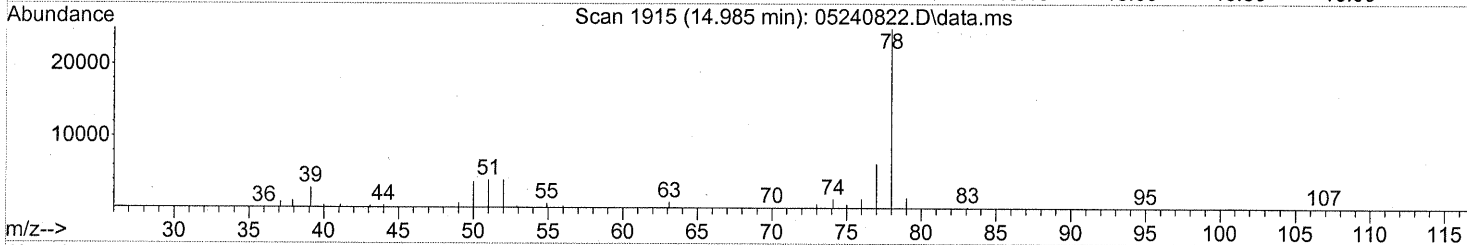
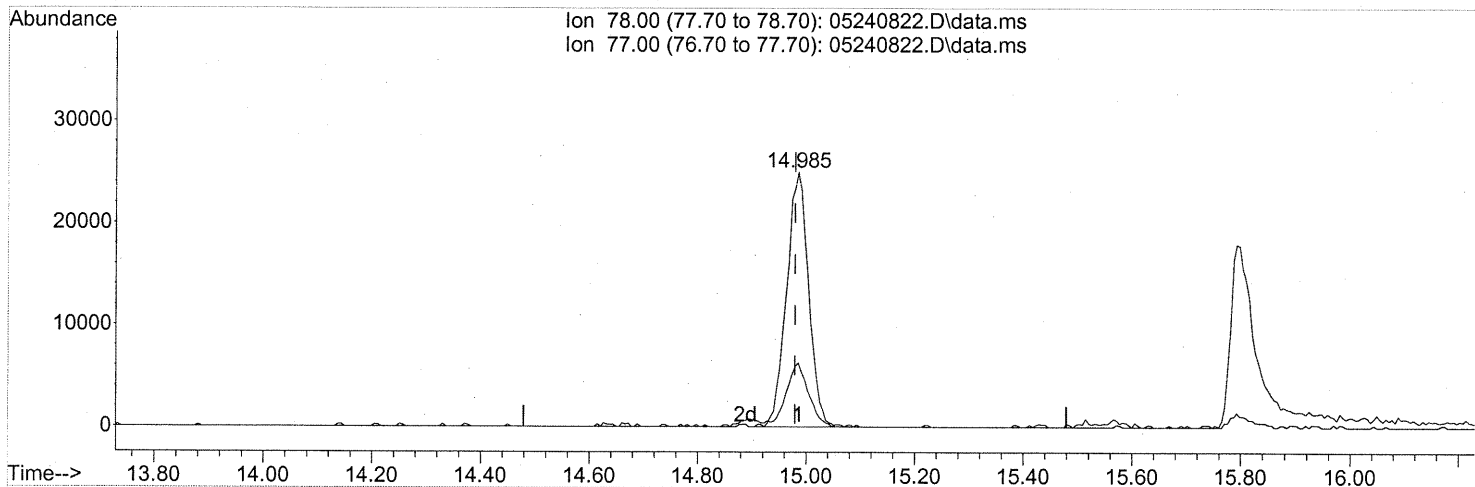
response 33629

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	474.57#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(41) Benzene (T)  
 14.985min (+0.006) 0.56ng  
 response 70175

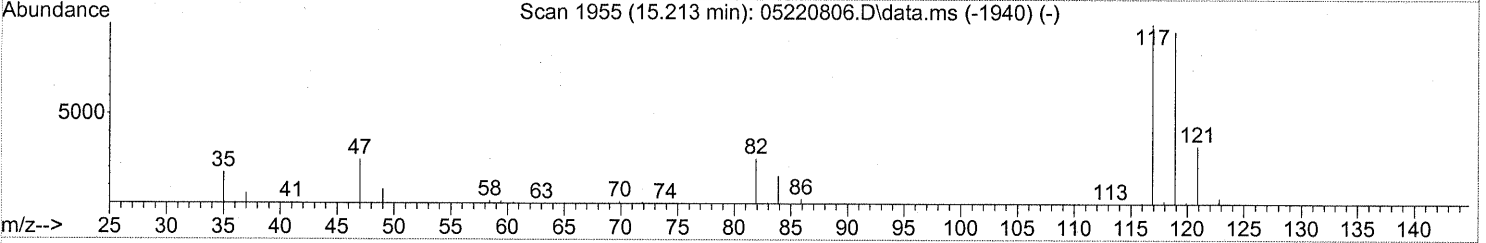
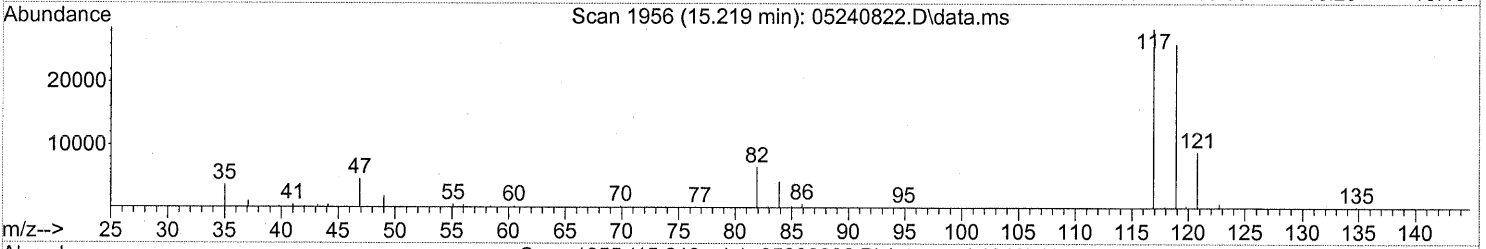
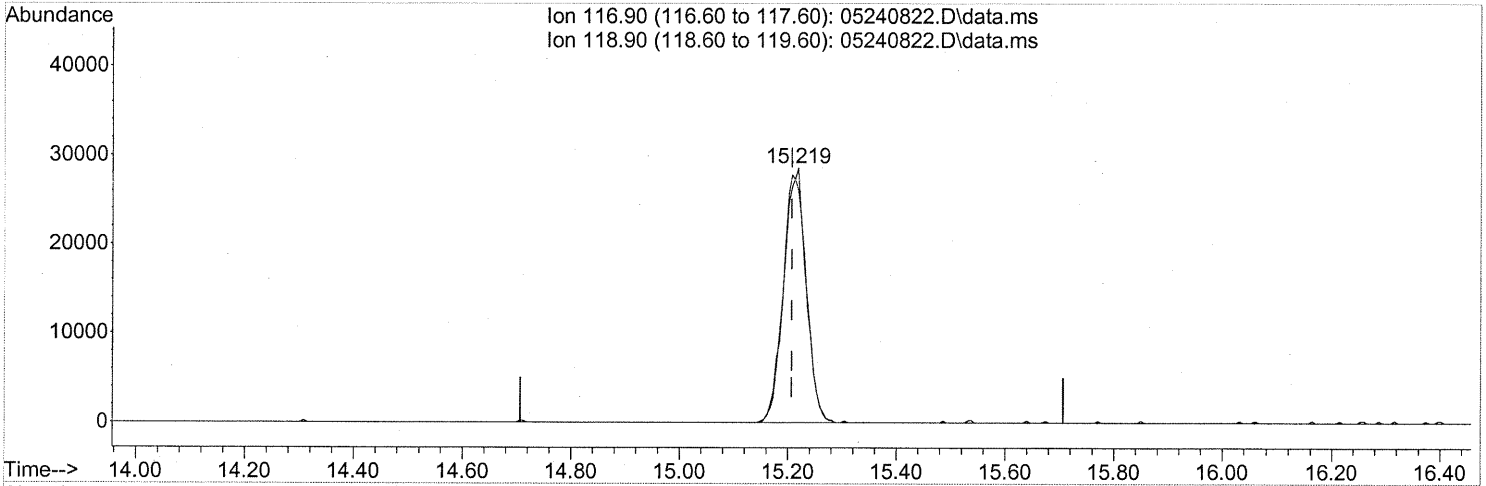
Ion	Exp%	Act%
78.00	100	100
77.00	23.50	25.50
0.00	0.00	0.00
0.00	0.00	0.00

807

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240822.D  
Acq On : 24 May 2008 21:35  
Operator : WA  
Sample : P0801442-016 (400ml)  
Misc : ENSR SG95B-05 (-3.0, 3.5)  
ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240822.D\data.ms

(42) Carbon Tetrachloride (T)

15.219min (+0.011) 1.70ng

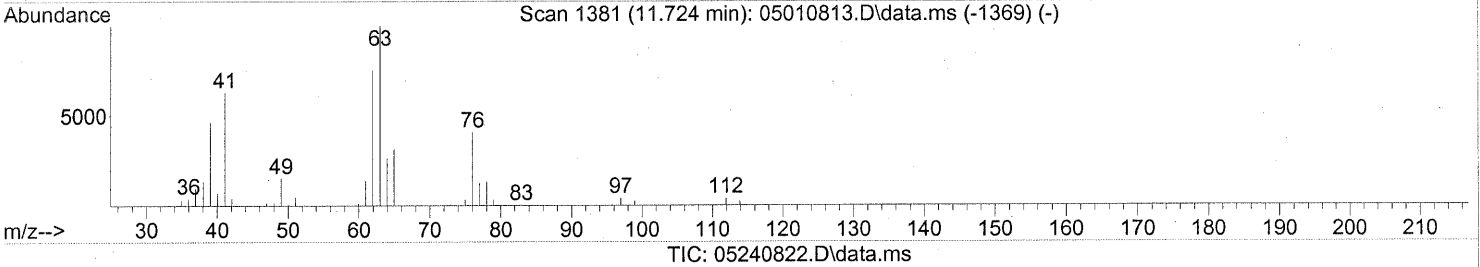
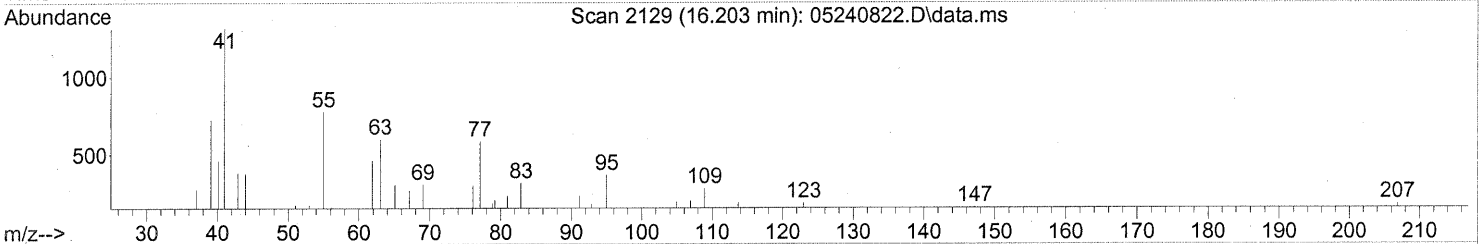
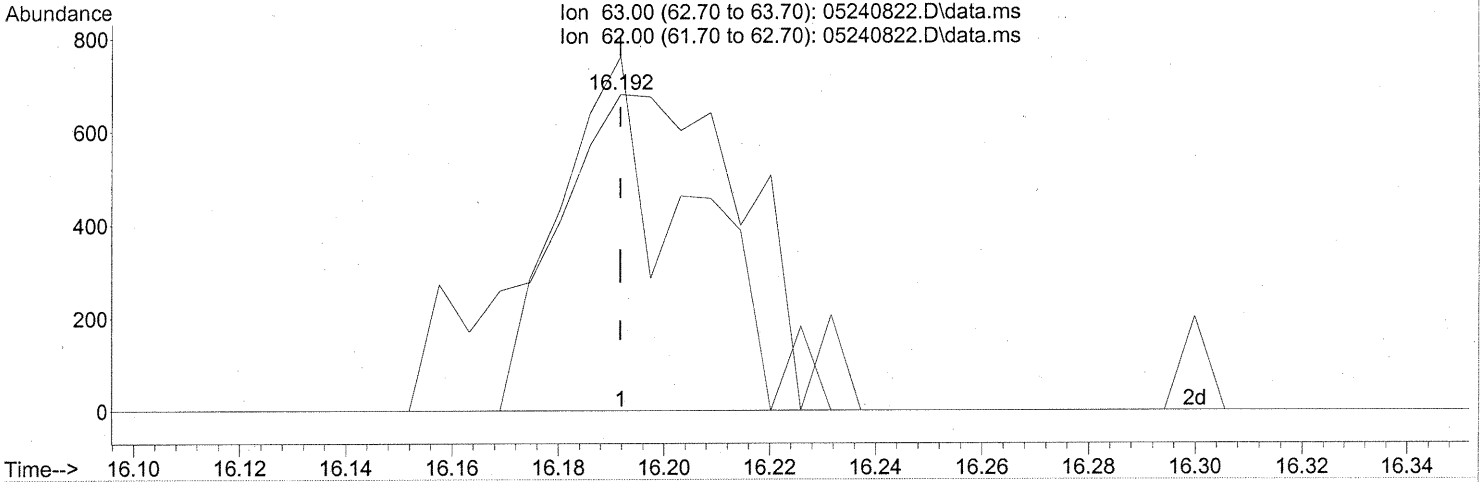
response 82726

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	97.02
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 9:35 pm  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(45) 1,2-Dichloropropane (T)

16.192min (+0.000) 0.06ng

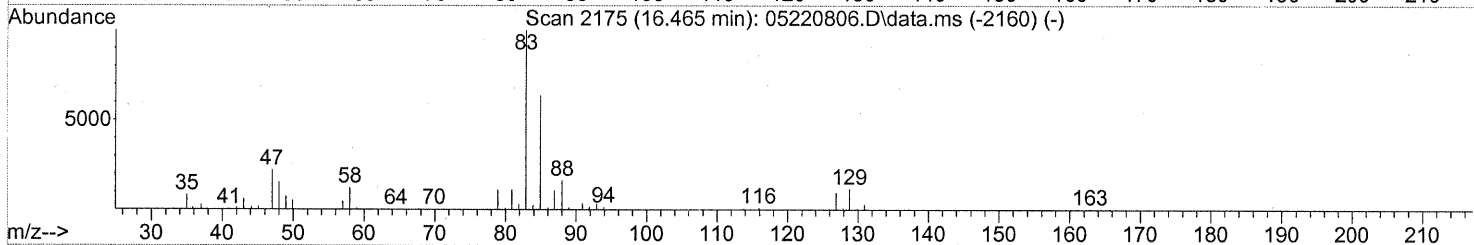
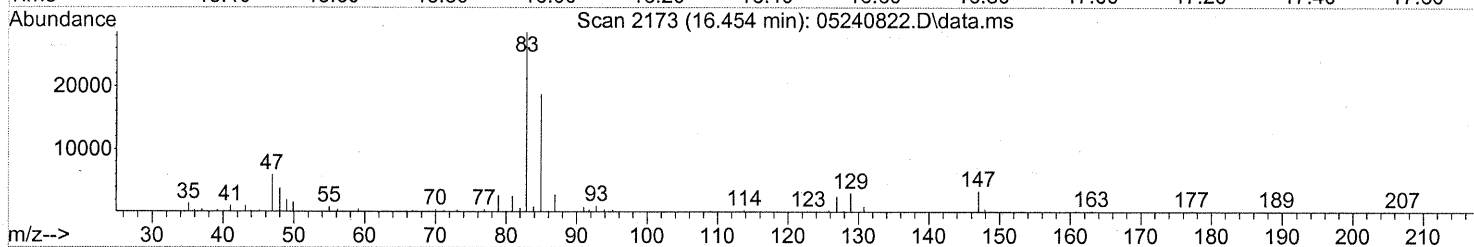
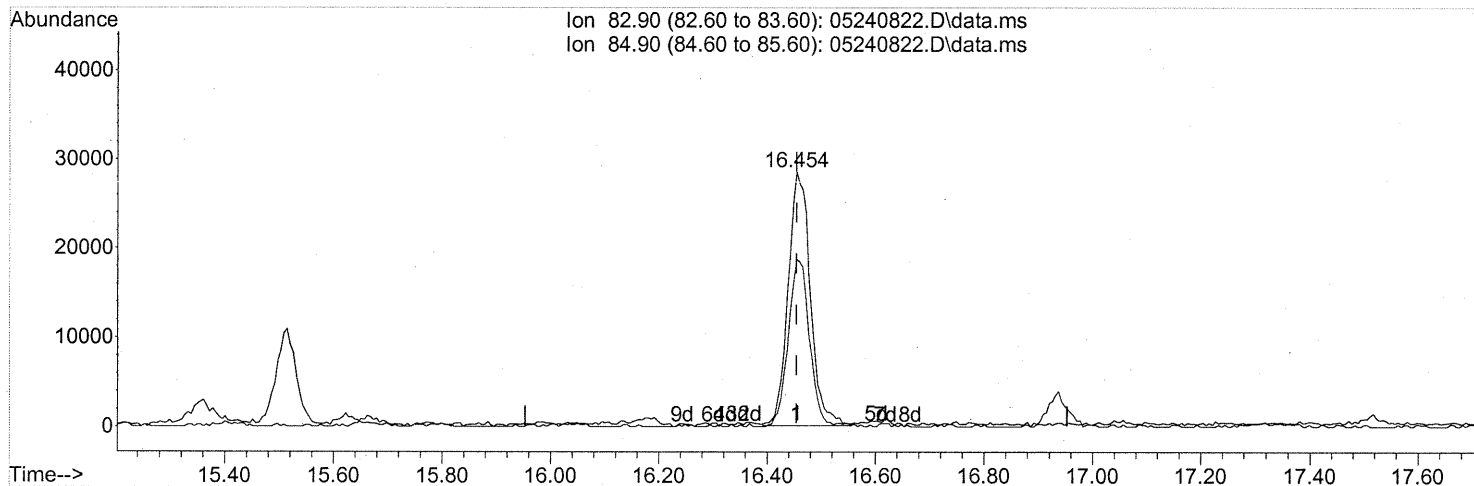
response 1935

Ion	Exp%	Act%
63.00	100	100
62.00	71.30	68.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(46) Bromodichloromethane (T)

16.454min (+0.000) 1.90ng

response 81084

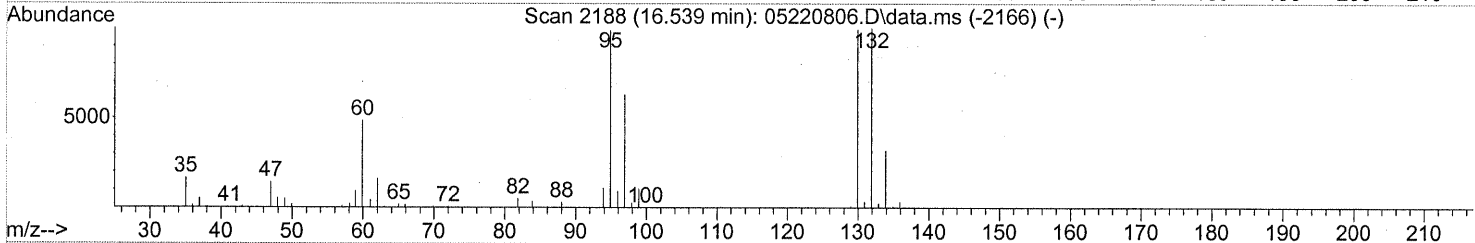
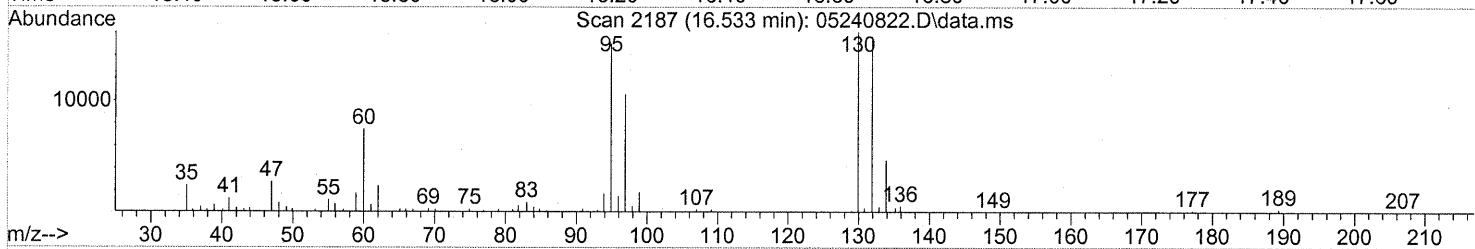
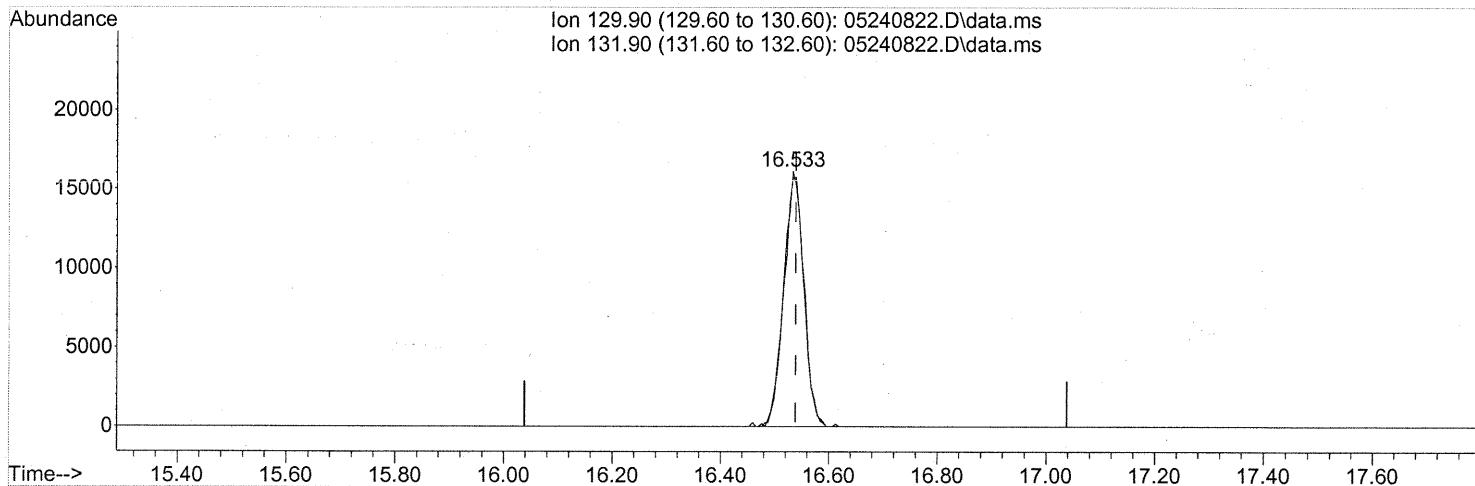
Ion	Exp%	Act%
82.90	100	100
84.90	63.70	63.33
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(47) Trichloroethene (T)

16.533min (-0.006) 1.07ng

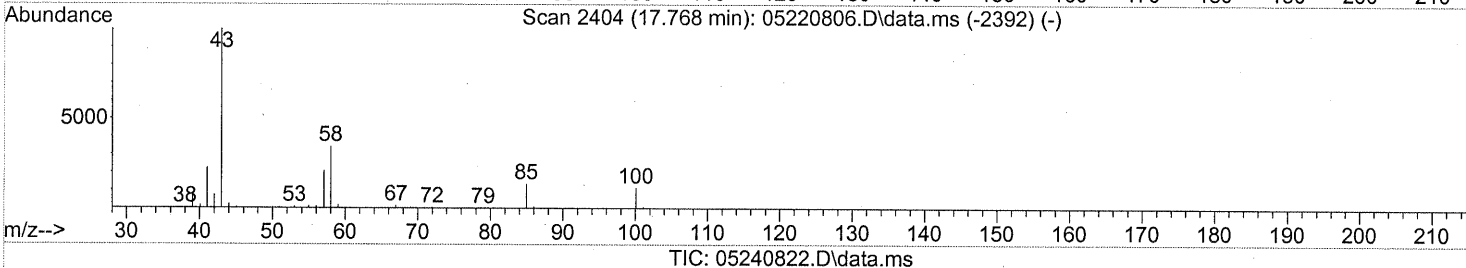
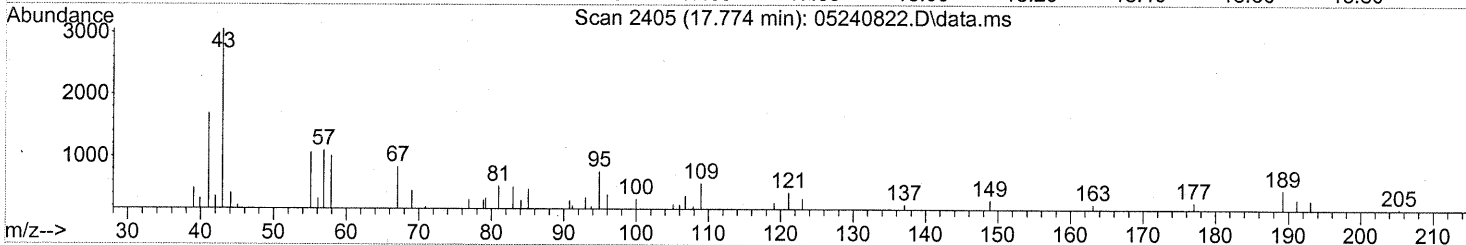
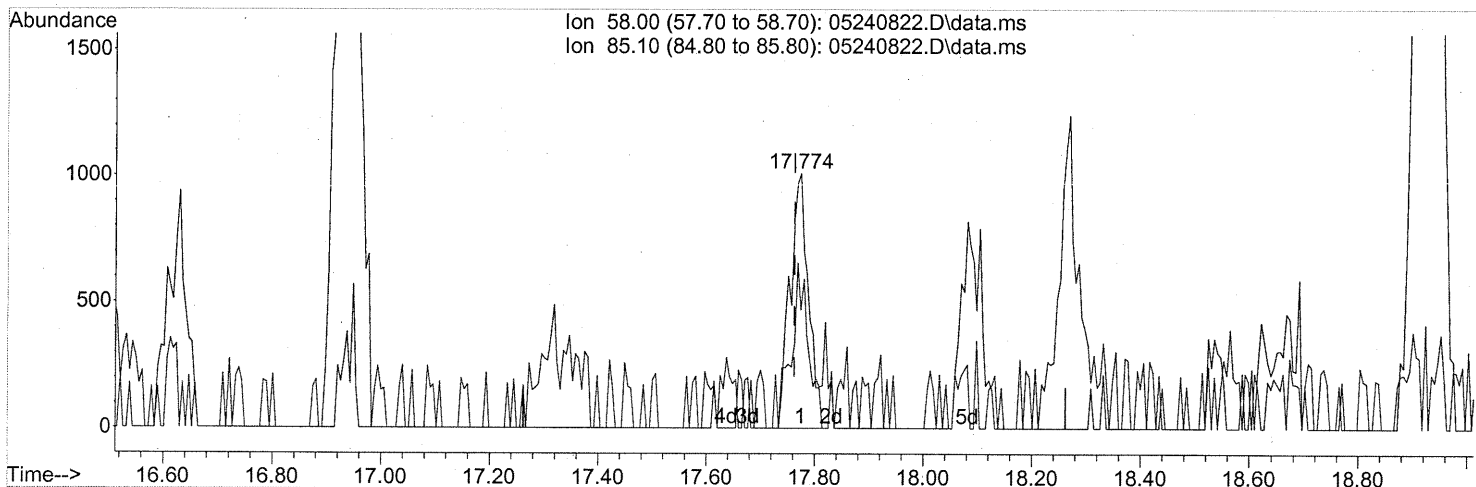
response 41475

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	98.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(53) 4-Methyl-2-pentanone (T)

17.774min (+0.011) 0.07ng

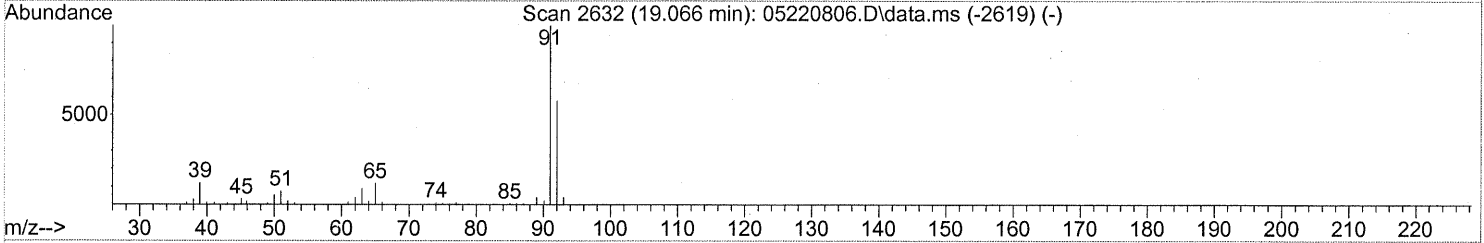
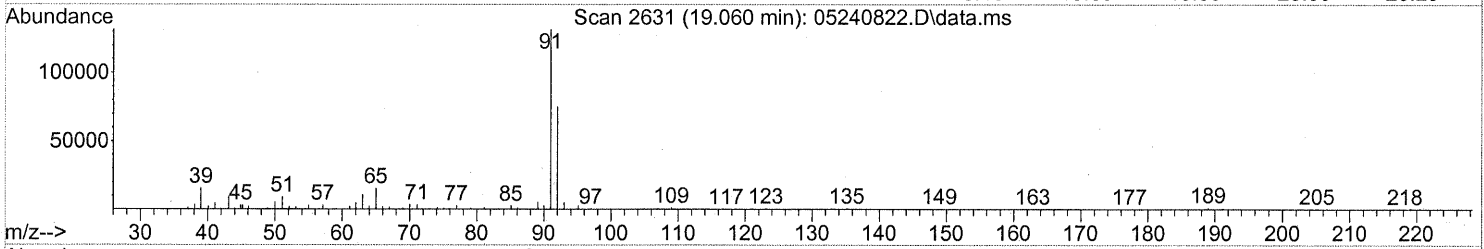
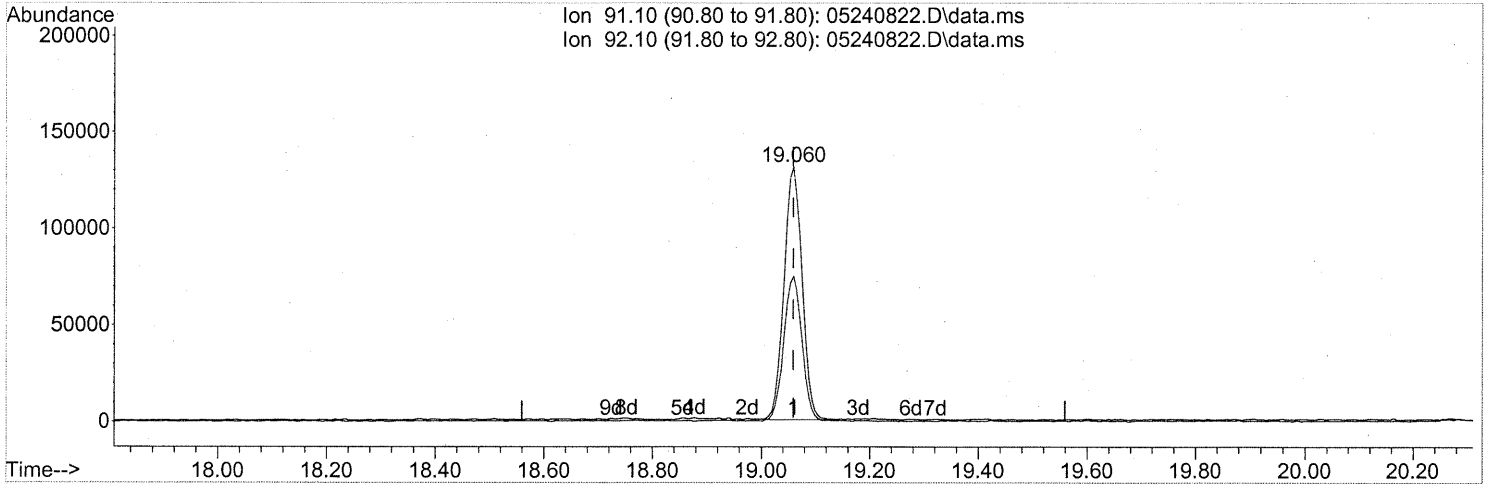
response 2361

Ion	Exp%	Act%
58.00	100	100
85.10	30.10	63.45#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(58) Toluene (T)

19.060min (+0.000) 2.20ng

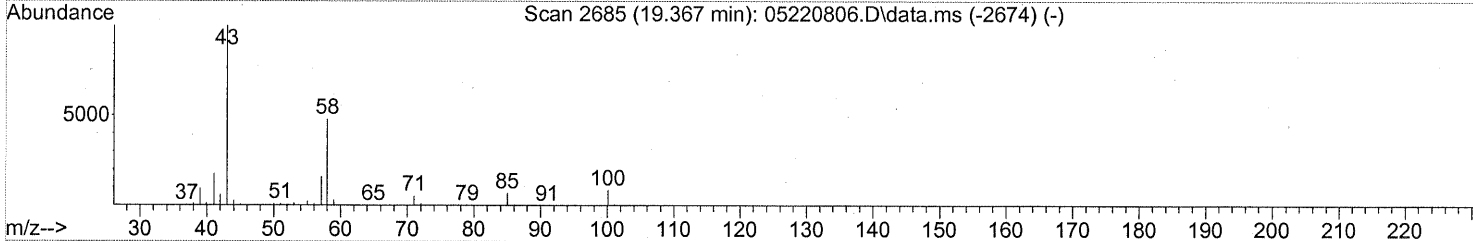
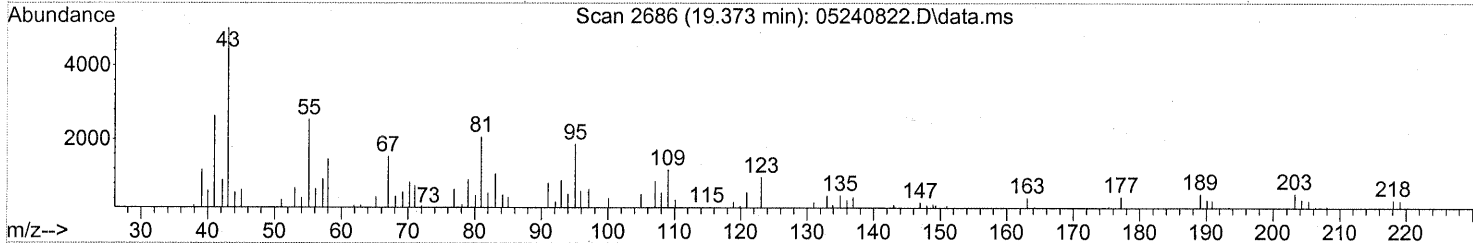
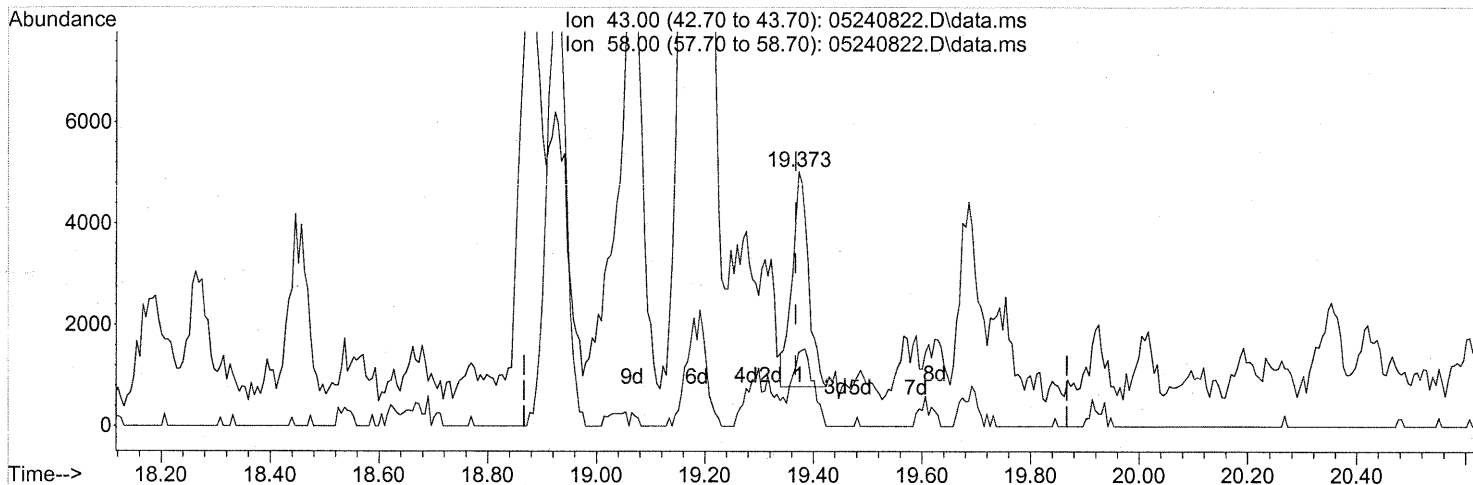
response 302488

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	58.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

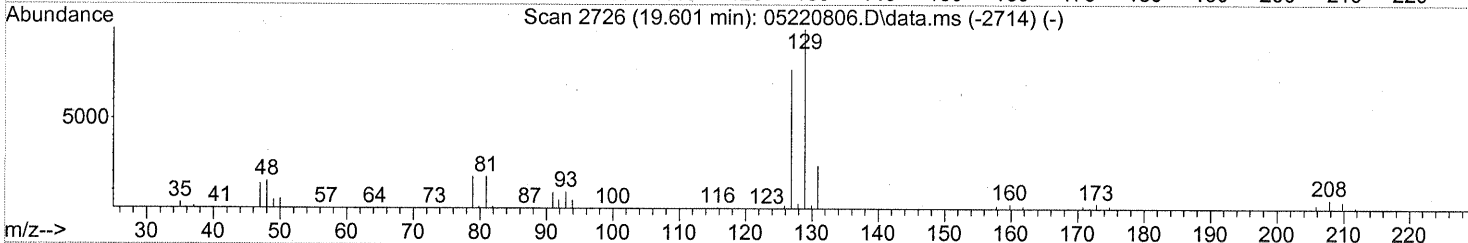
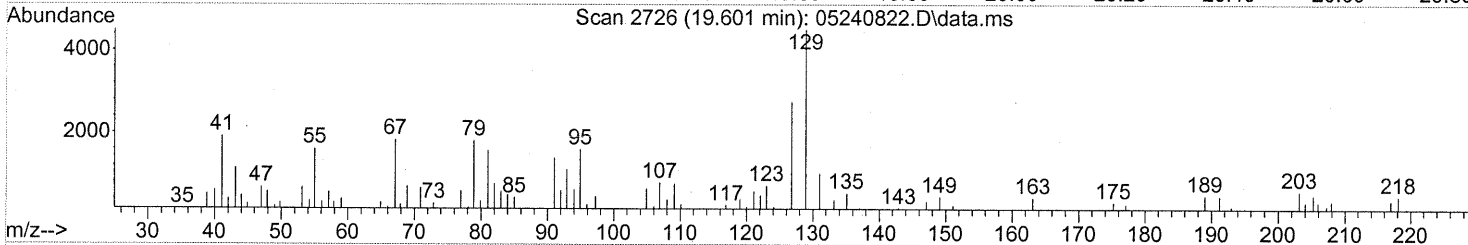
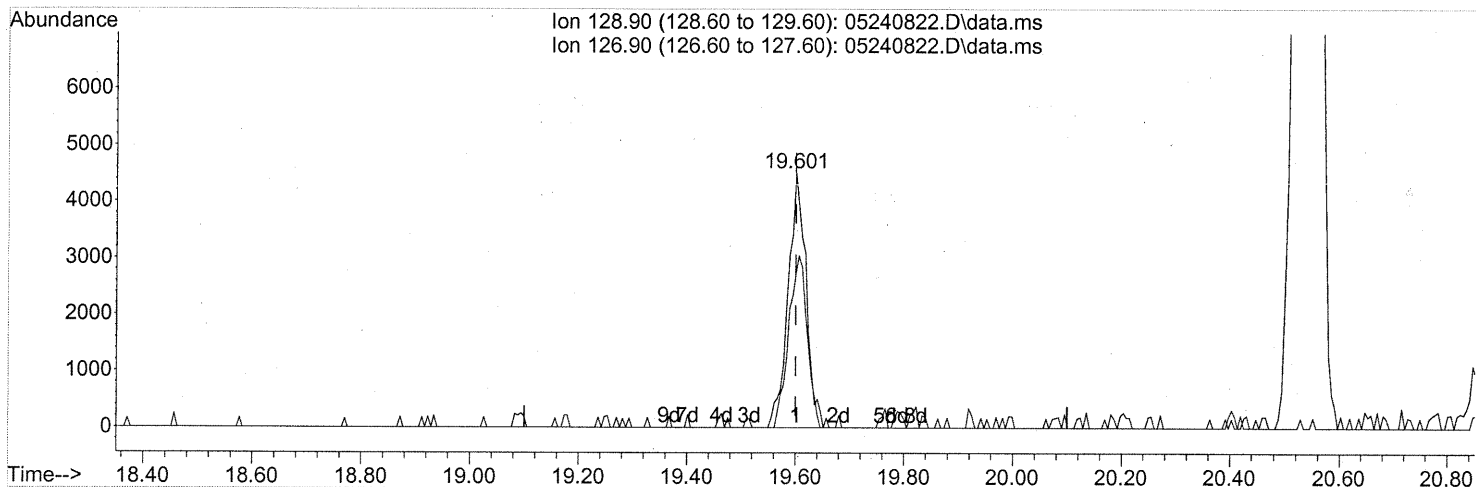
(59) 2-Hexanone (T)  
 19.373min (+0.006) 0.09ng  
 response 8910

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	44.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(60) Dibromochloromethane (T)

19.601min (0.000) 0.28ng

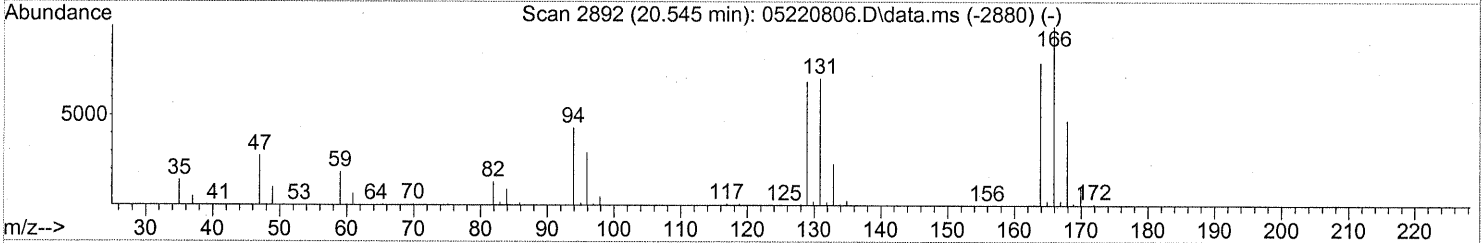
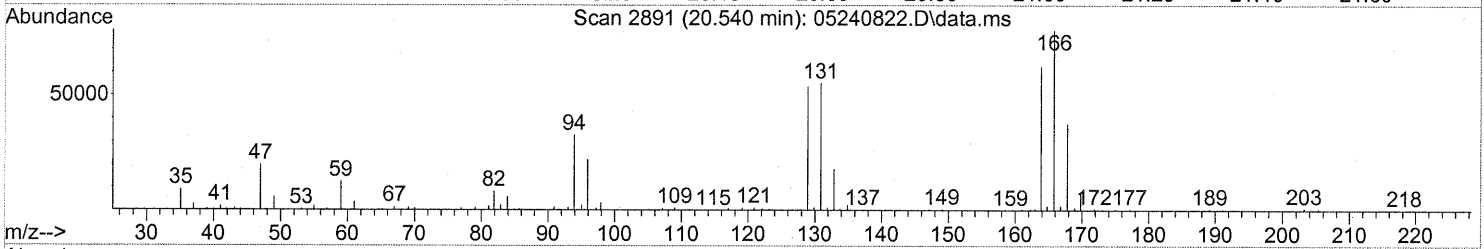
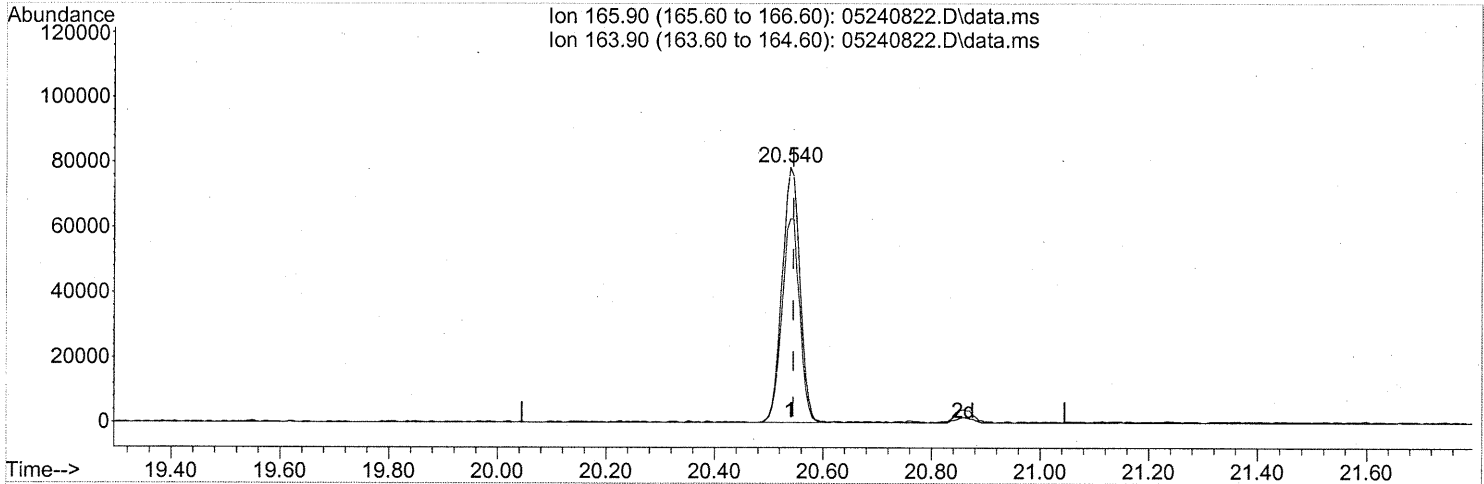
response 10372

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	69.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(64) Tetrachloroethene (T)

20.540min (-0.006) 4.39ng

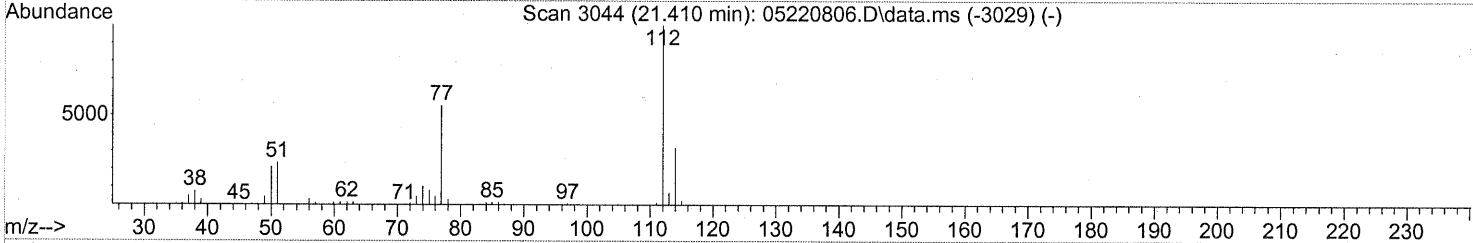
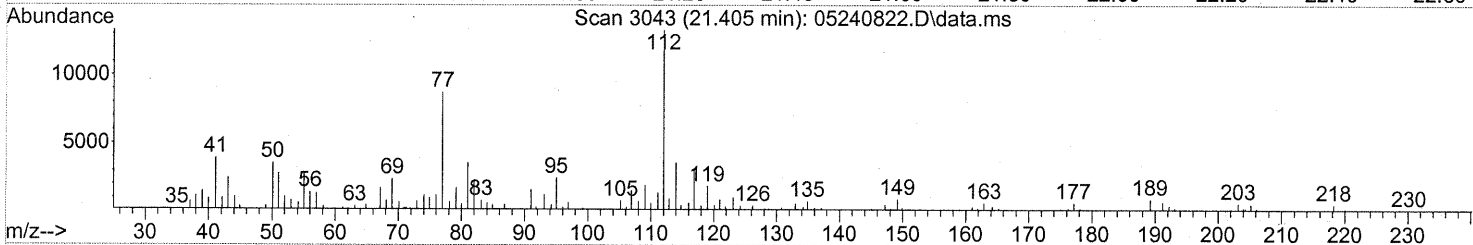
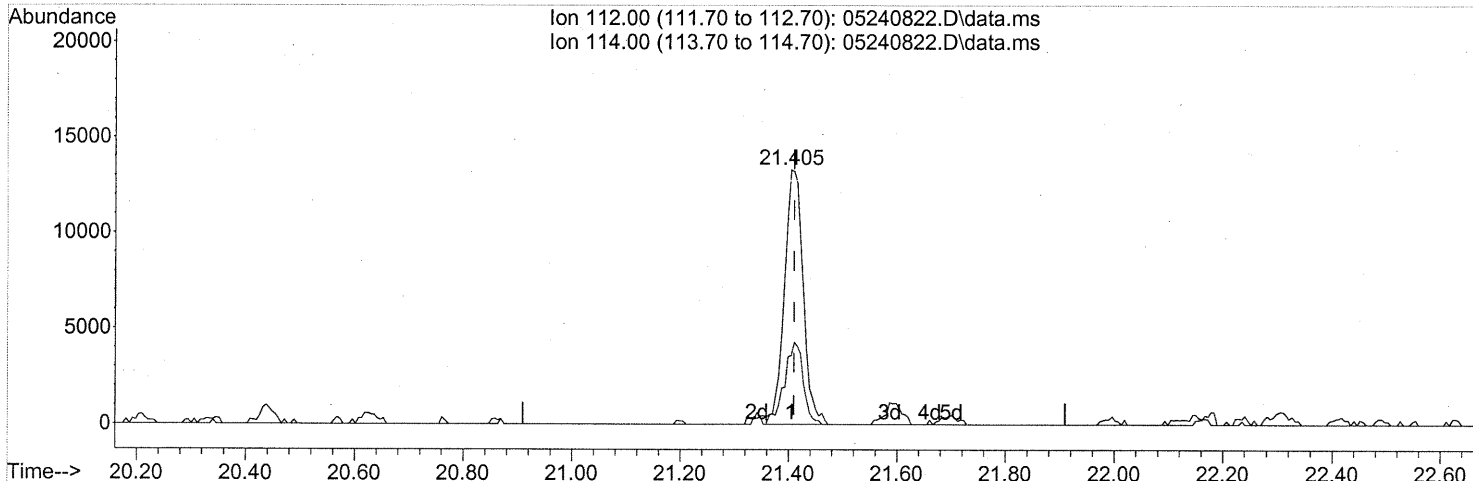
response 178222

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

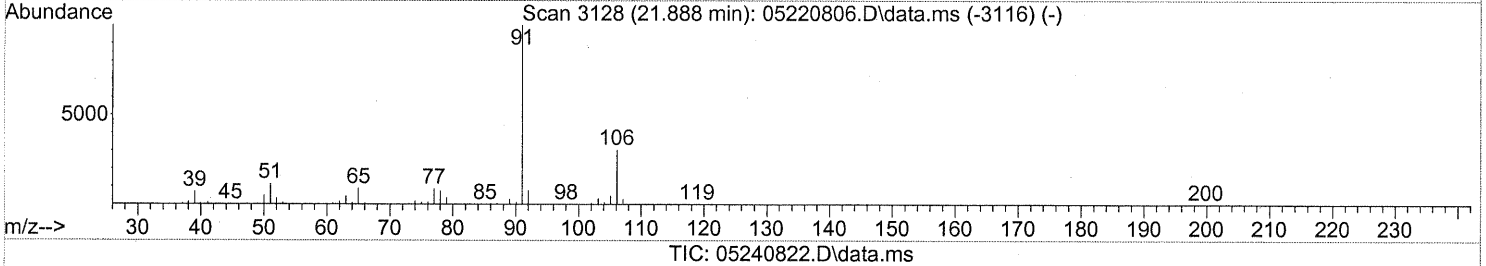
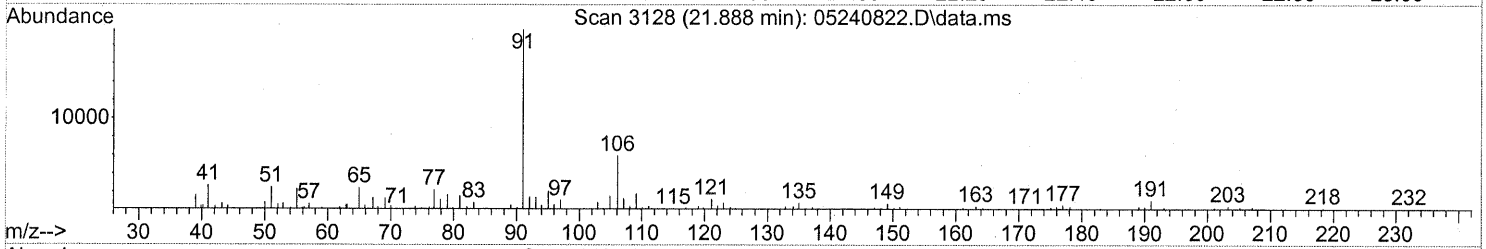
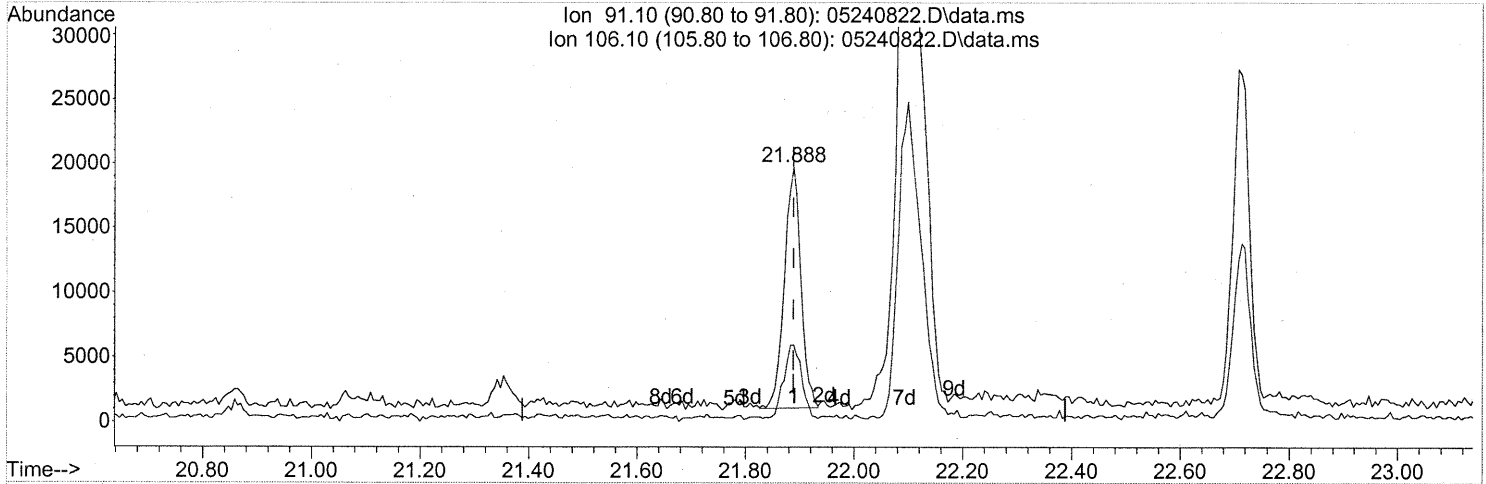
(65) Chlorobenzene (T)  
 21.405min (-0.006) 0.34ng  
 response 31698

Ion	Exp%	Act%
112.00	100	100
114.00	32.40	32.32
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(66) Ethylbenzene (T)

21.888min (0.000) 0.25ng

response 39235

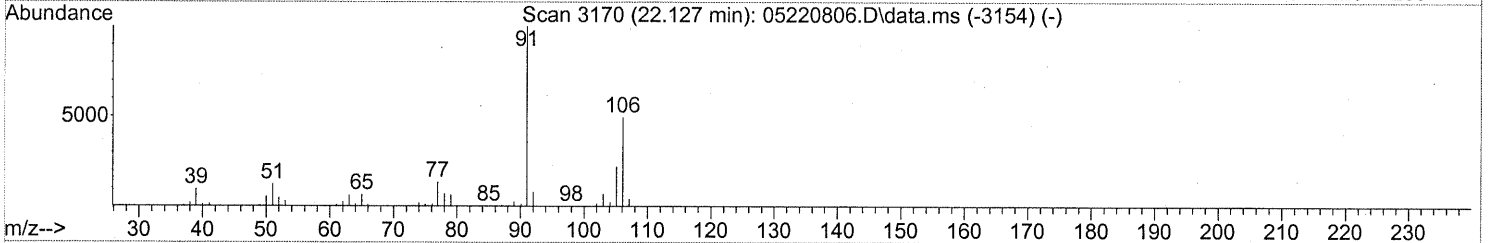
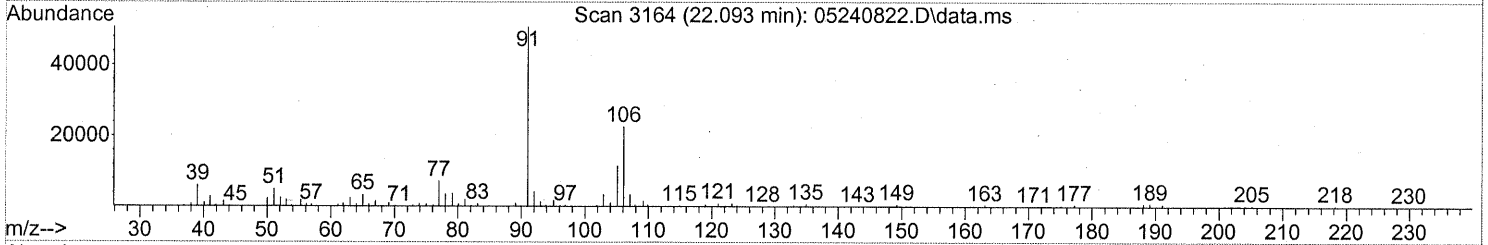
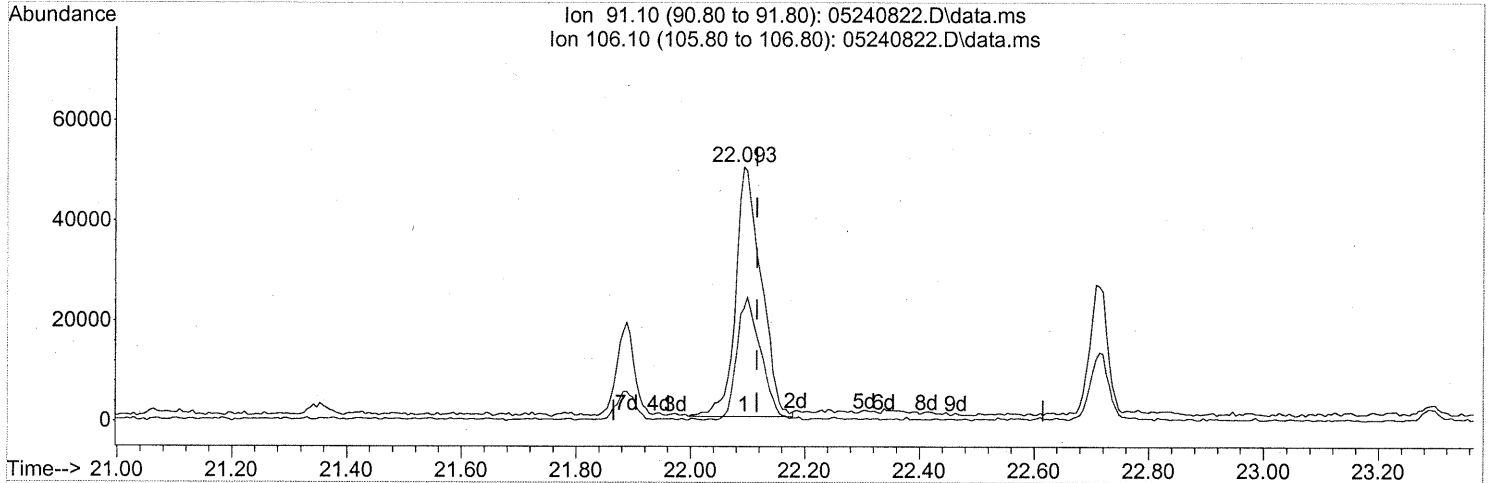
Ion	Exp%	Act%
91.10	100	100
106.10	34.10	32.94
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

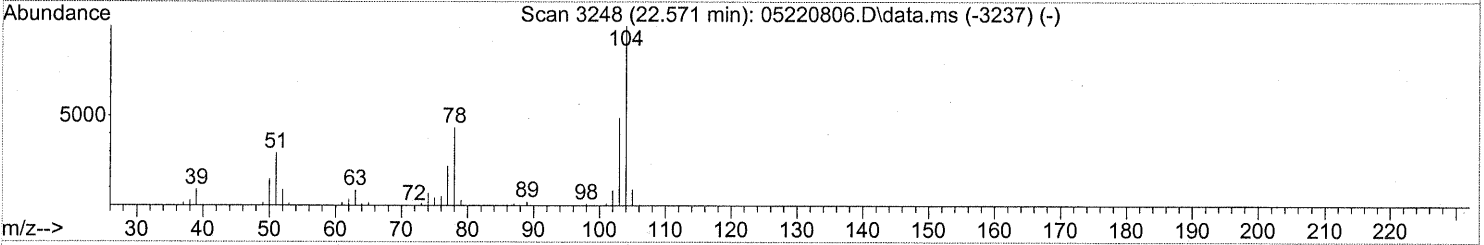
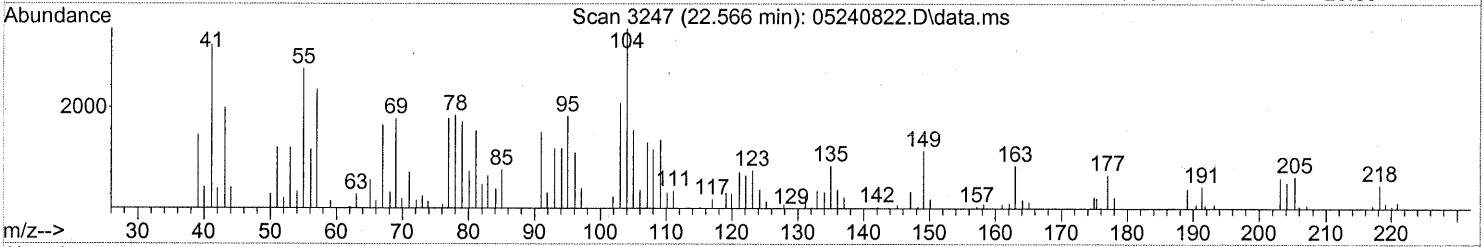
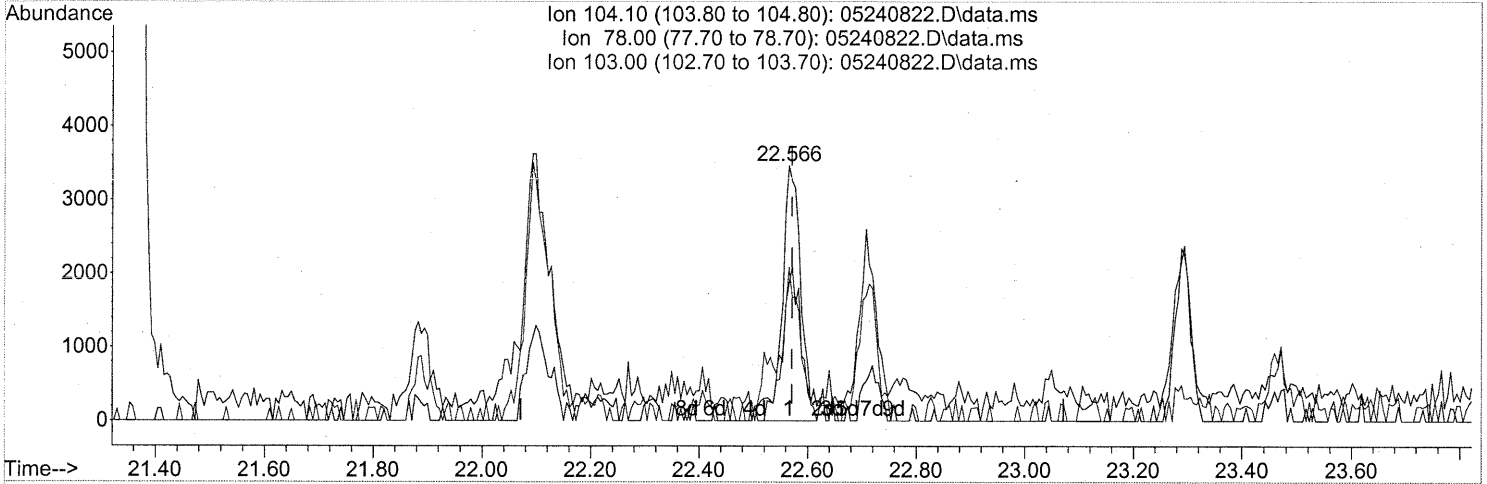
(67) m- & p-Xylene (T)  
 22.093min (-0.023) 1.47ng  
 response 154883

Ion	Exp%	Act%
91.10	100	100
106.10	54.60	46.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

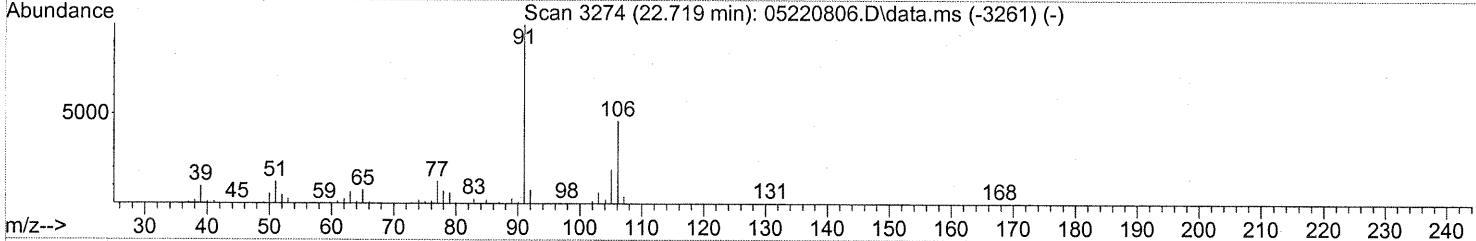
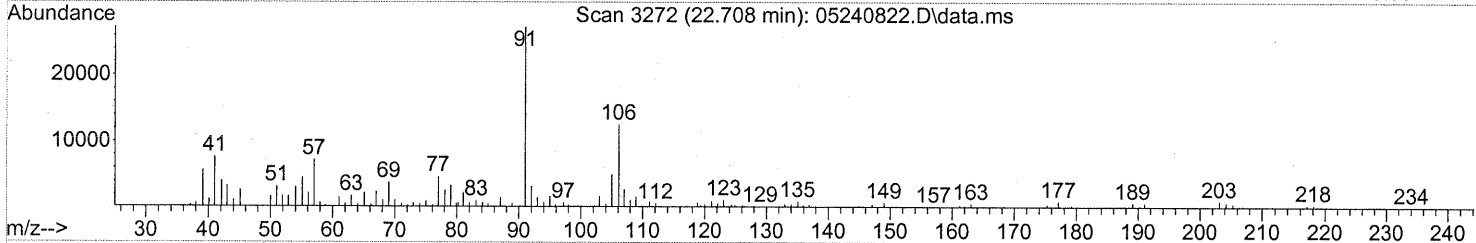
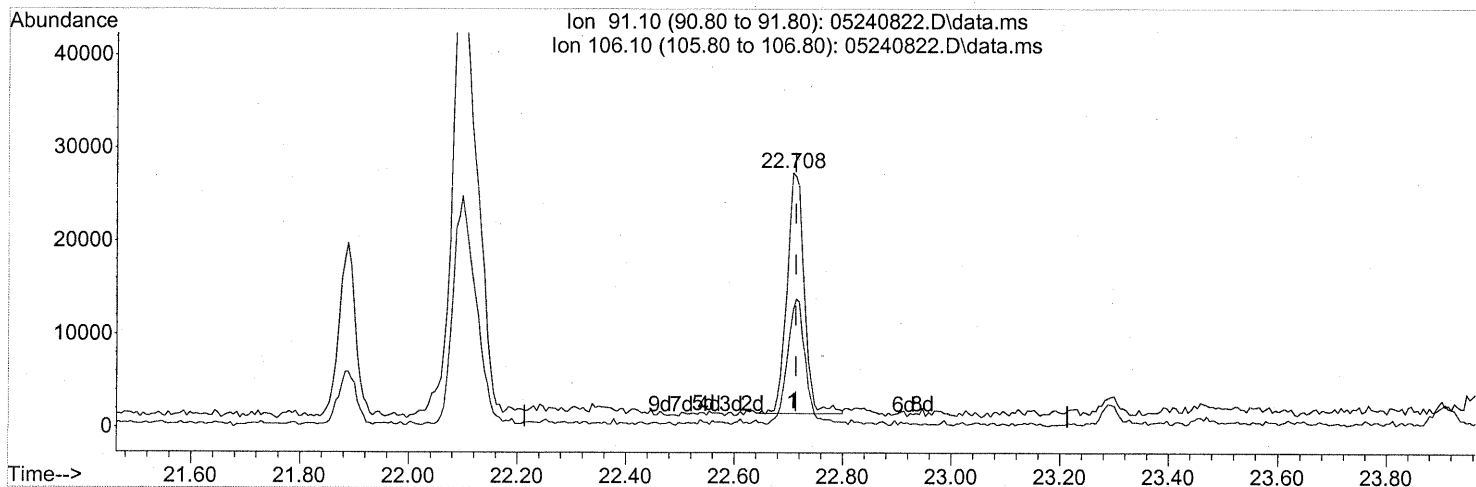
(69) Styrene (T)  
 22.566min (-0.006) 0.08ng  
 response 7830

Ion	Exp%	Act%
104.10	100	100
78.00	39.40	46.78
103.00	47.10	59.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

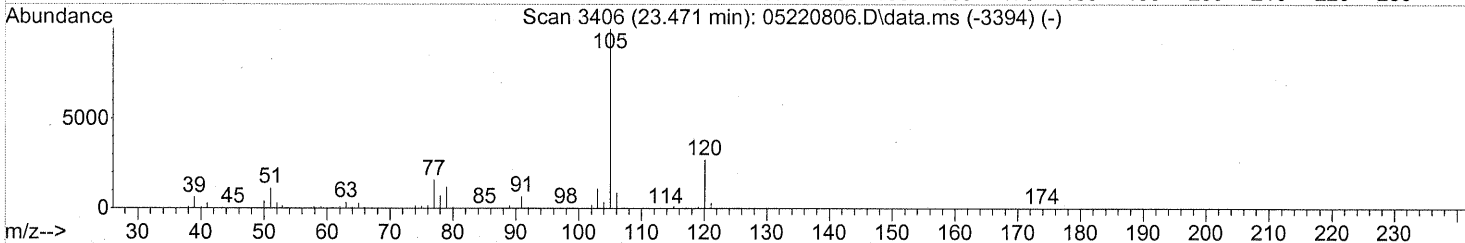
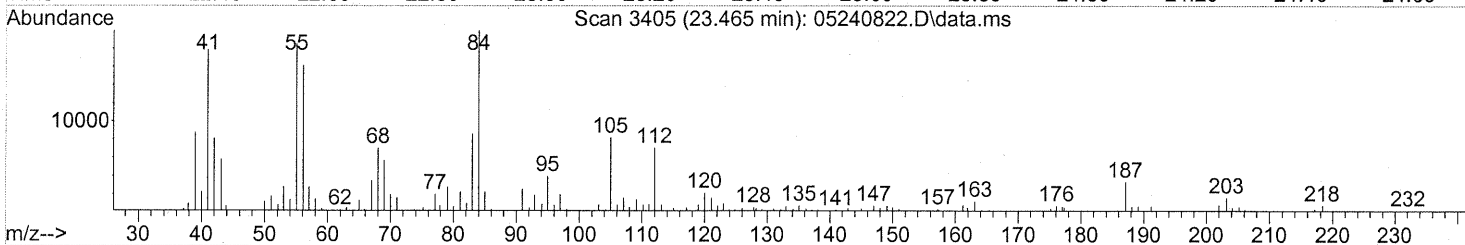
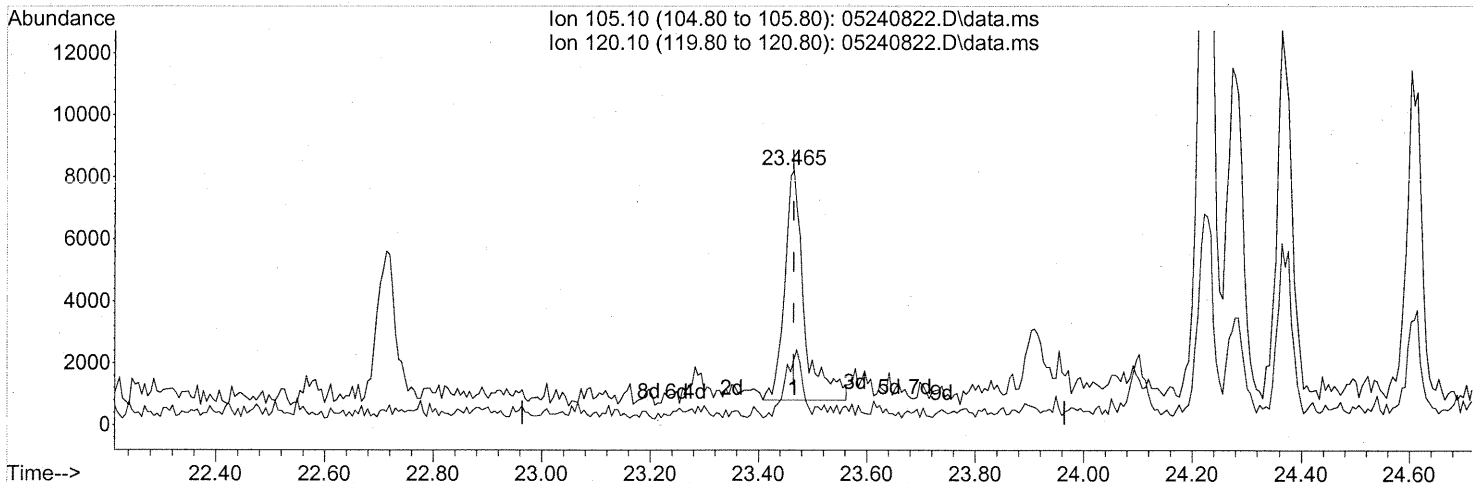
(70) o-Xylene (T)  
 22.708min (-0.006) 0.50ng  
 response 56319

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	55.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801422-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 09:05:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(74) Cumene (T)

23.465min (0.000) 0.12ng

response 18695

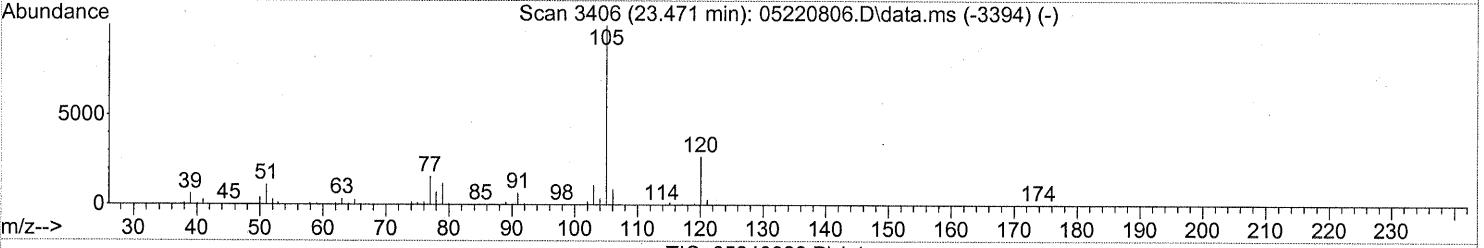
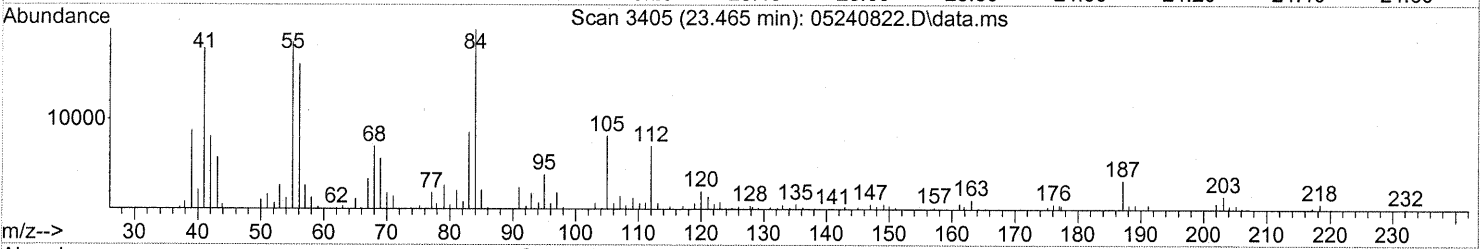
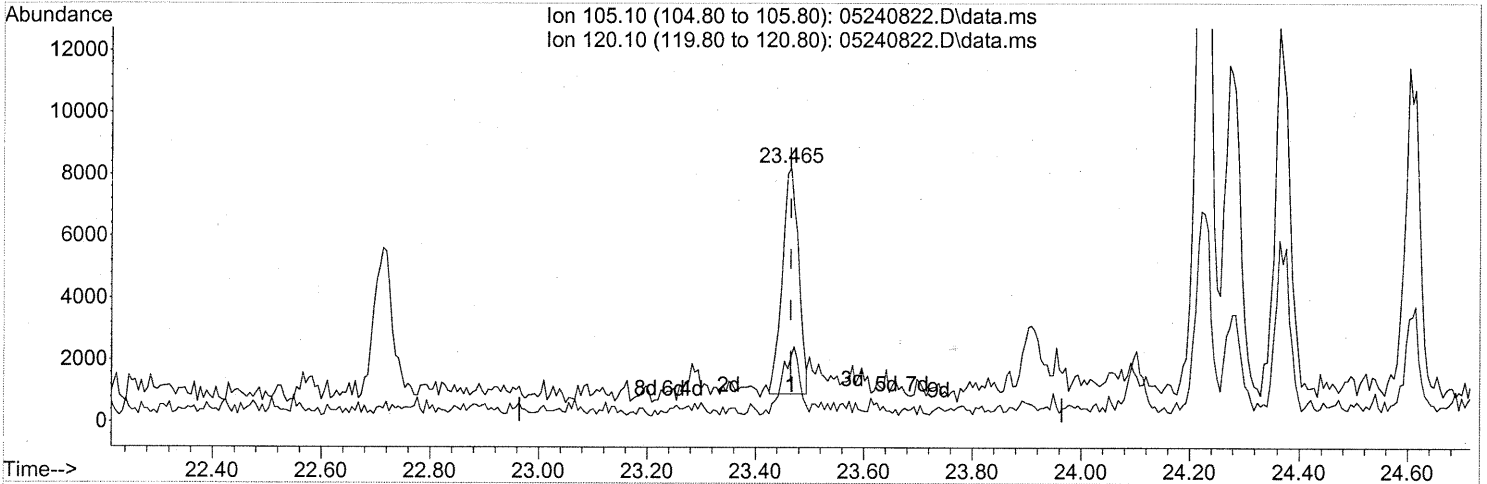
*extra tailing*

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	25.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(74) Cumene (T)

23.465min (0.000) 0.10ng m

response 15067

Ion	Exp%	Act%
105.10	100	100
120.10	26.30	31.63
0.00	0.00	0.00
0.00	0.00	0.00

*corr. baseline*

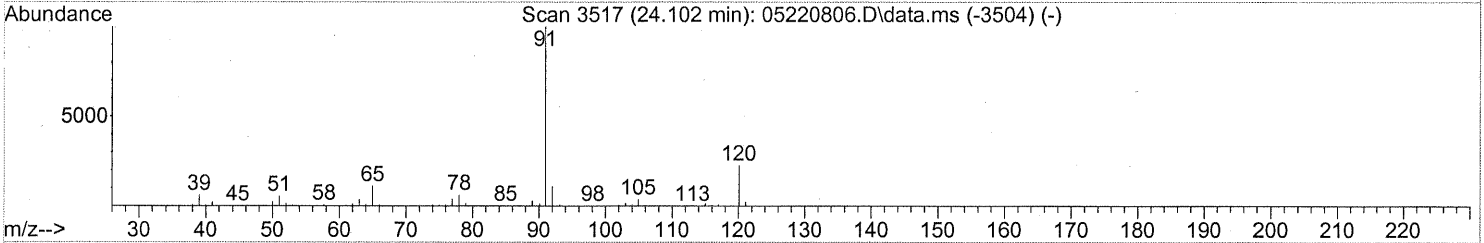
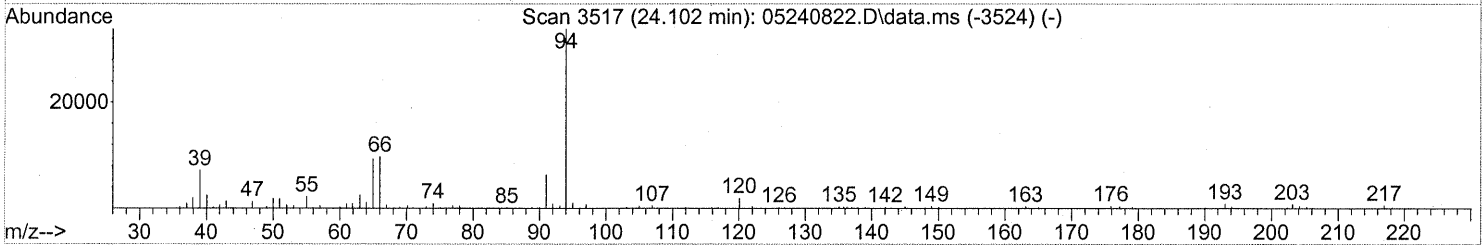
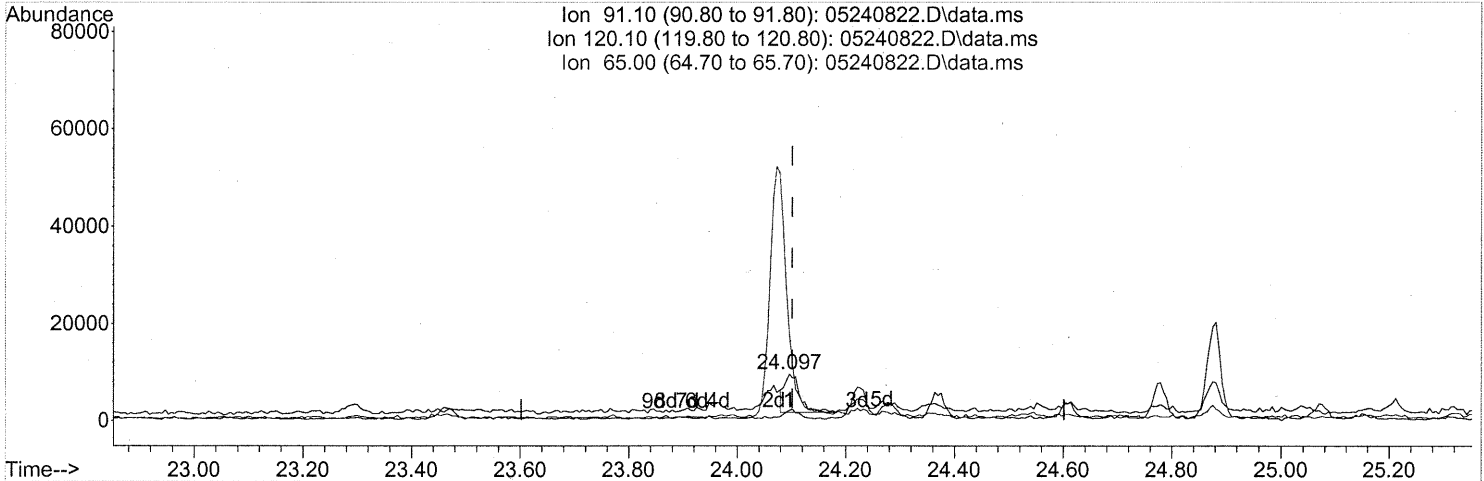
*WAS/30606*

*RA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(76) n-Propylbenzene (T)

24.097min (-0.006) 0.08ng

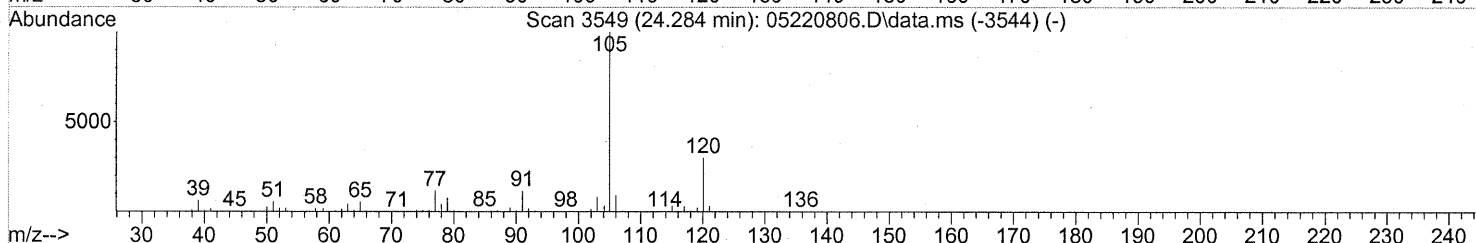
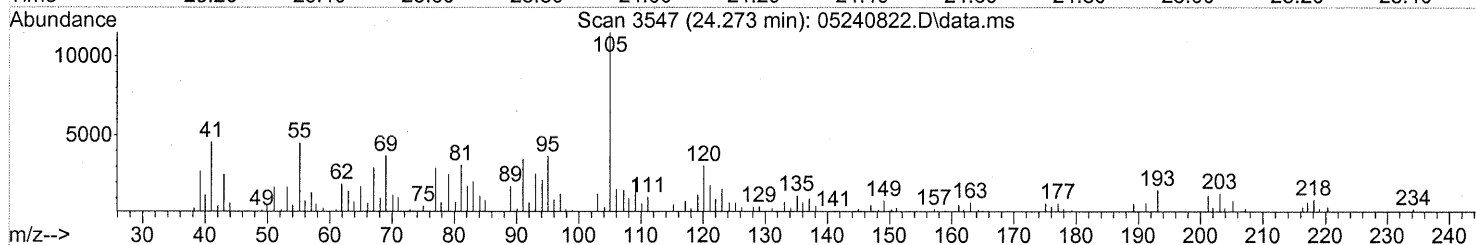
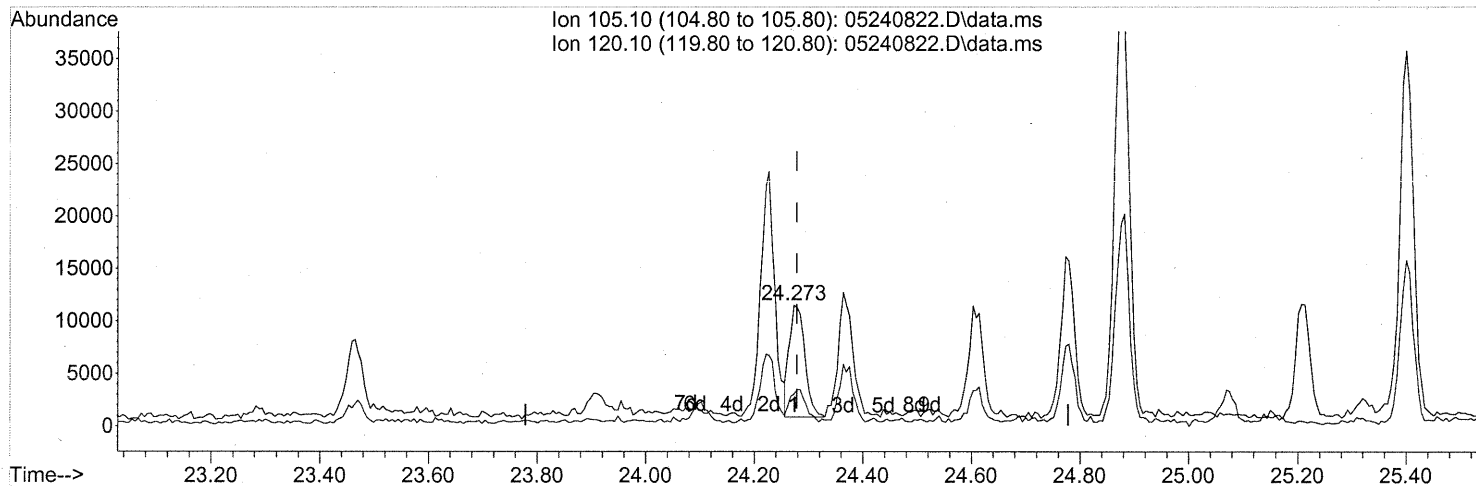
response 15620

Ion	Exp%	Act%
91.10	100	100
120.10	23.40	25.30
65.00	11.40	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(78) 4-Ethyltoluene (T)

24.273min (-0.006) 0.14ng

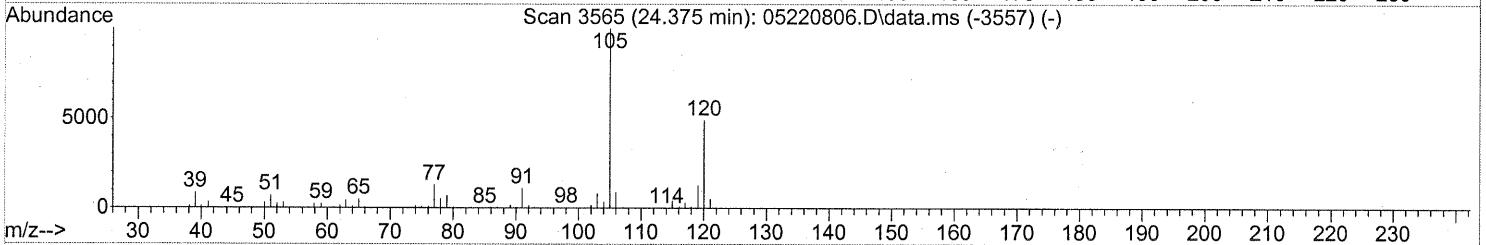
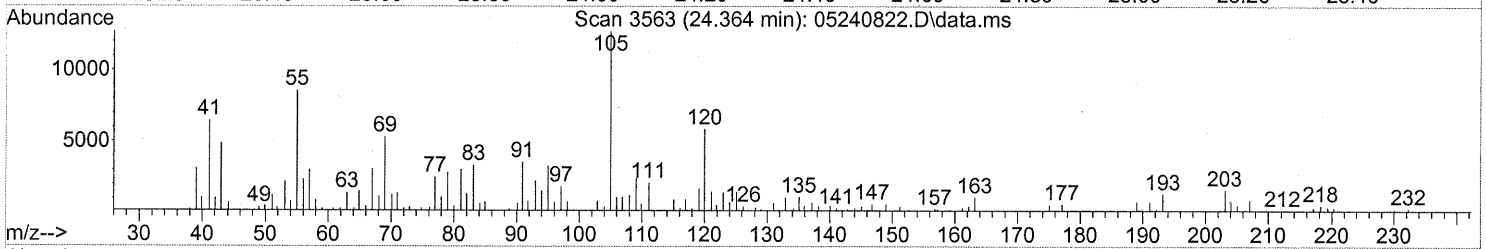
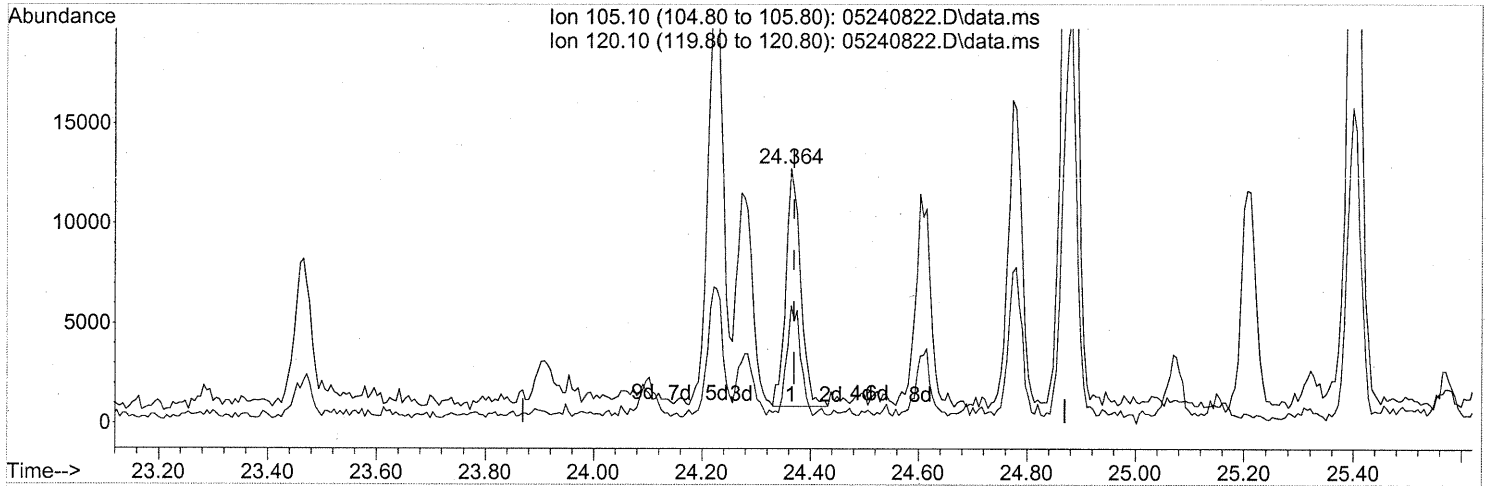
response 20890

Ion	Exp%	Act%
105.10	100	100
120.10	30.40	29.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

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

24.364min (-0.006) 0.17ng

response 22665

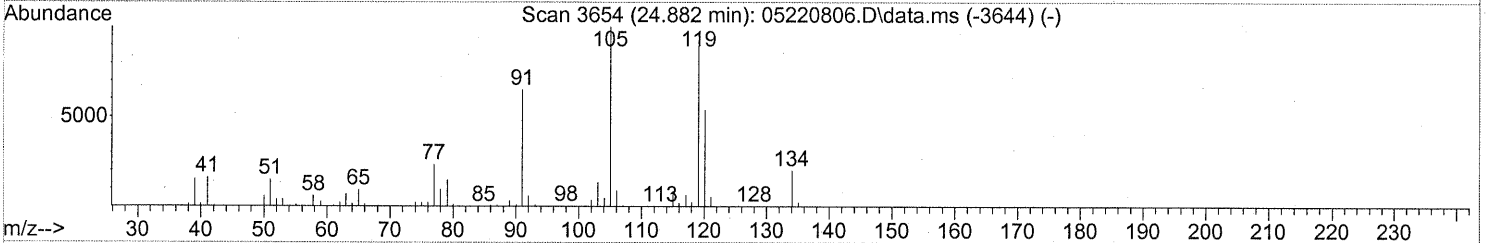
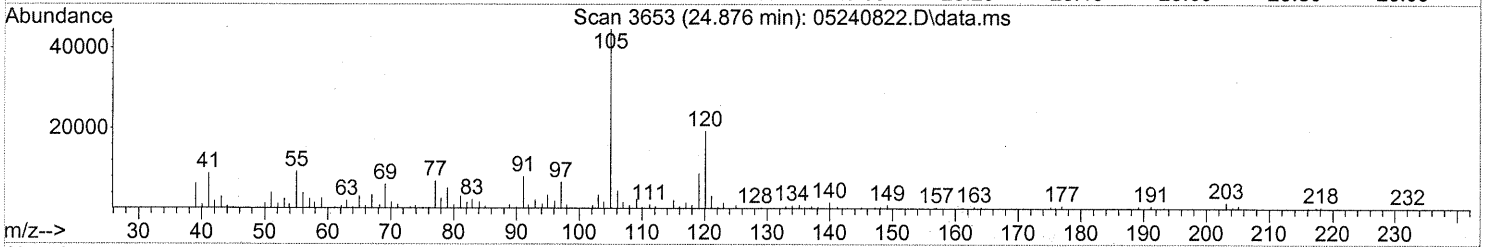
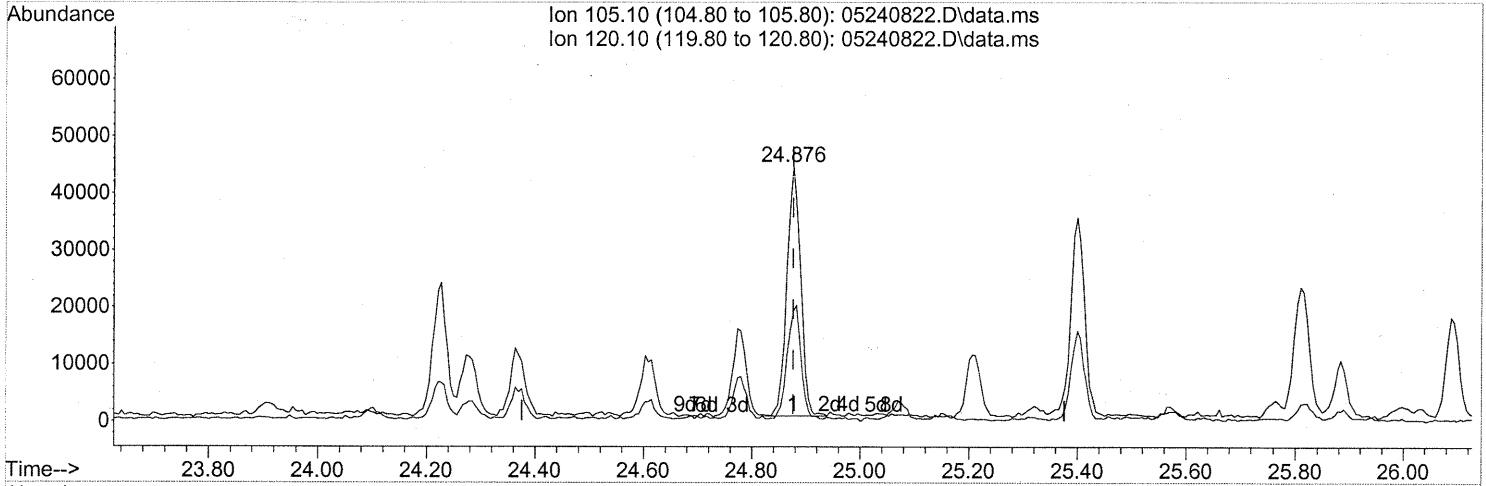
Ion	Exp%	Act%
105.10	100	100
120.10	49.40	43.87
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

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

24.876min (0.000) 0.56ng

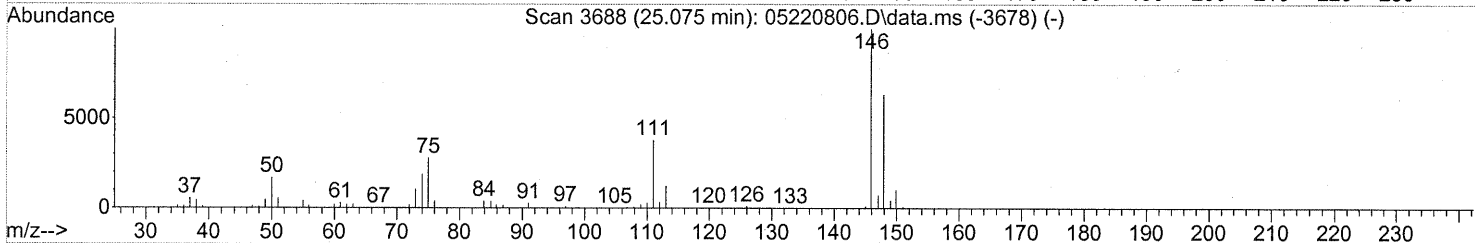
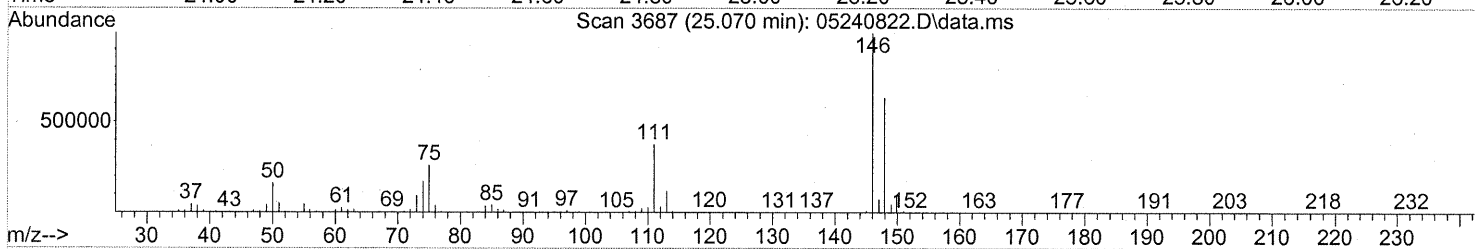
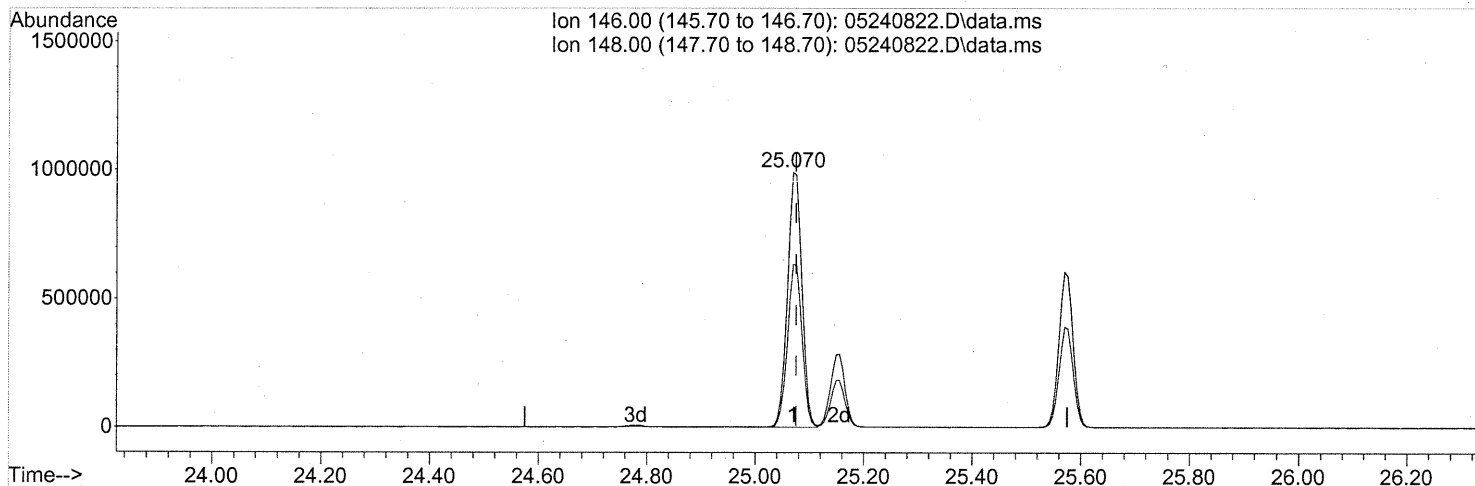
response 77295

Ion	Exp%	Act%
105.10	100	100
120.10	54.40	46.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(85) 1,3-Dichlorobenzene (T)

25.070min (-0.006) 21.05ng

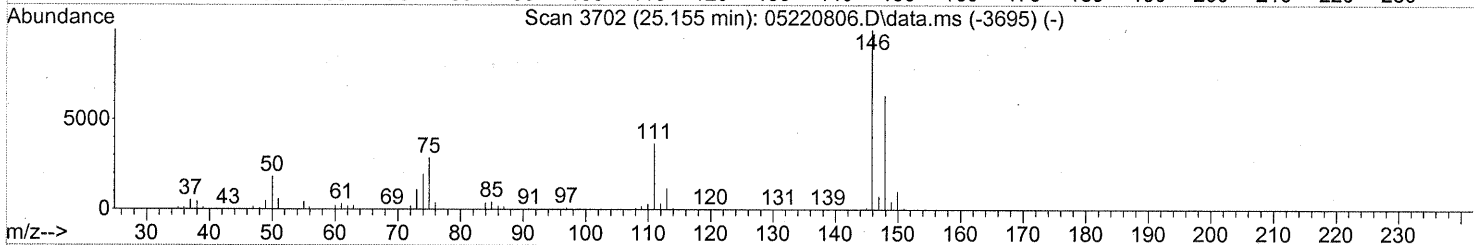
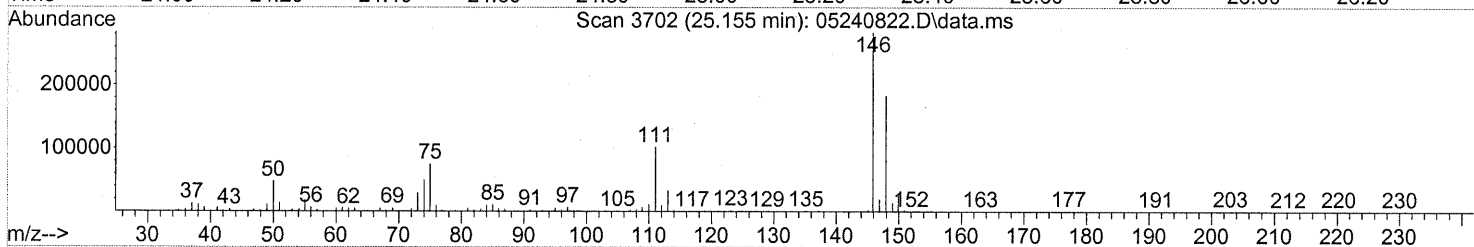
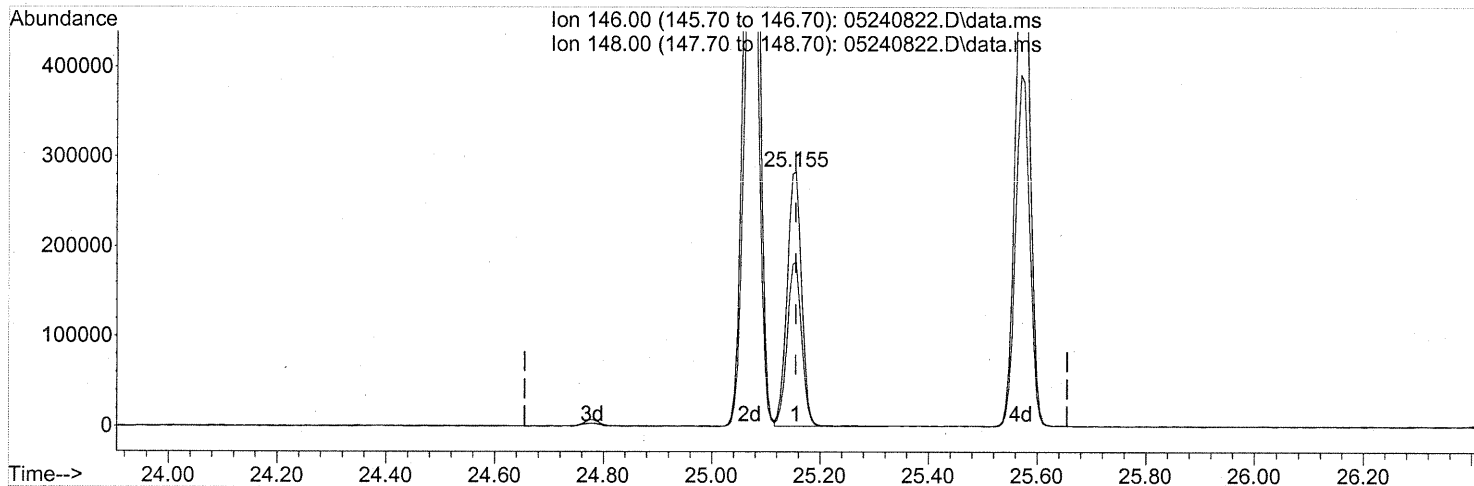
response 1817537

Ion	Exp%	Act%
146.00	100	100
148.00	64.00	64.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.155min (+0.000) 6.28ng

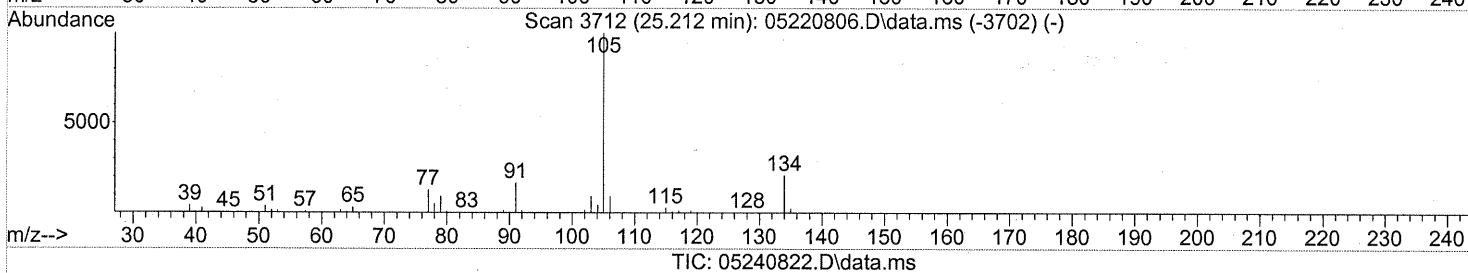
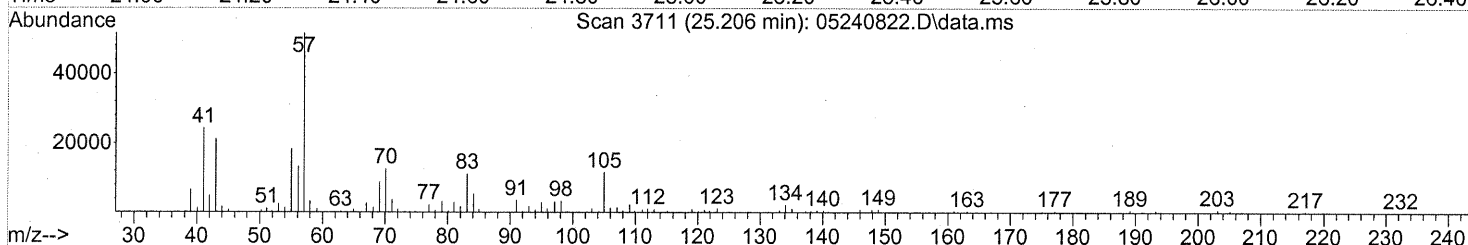
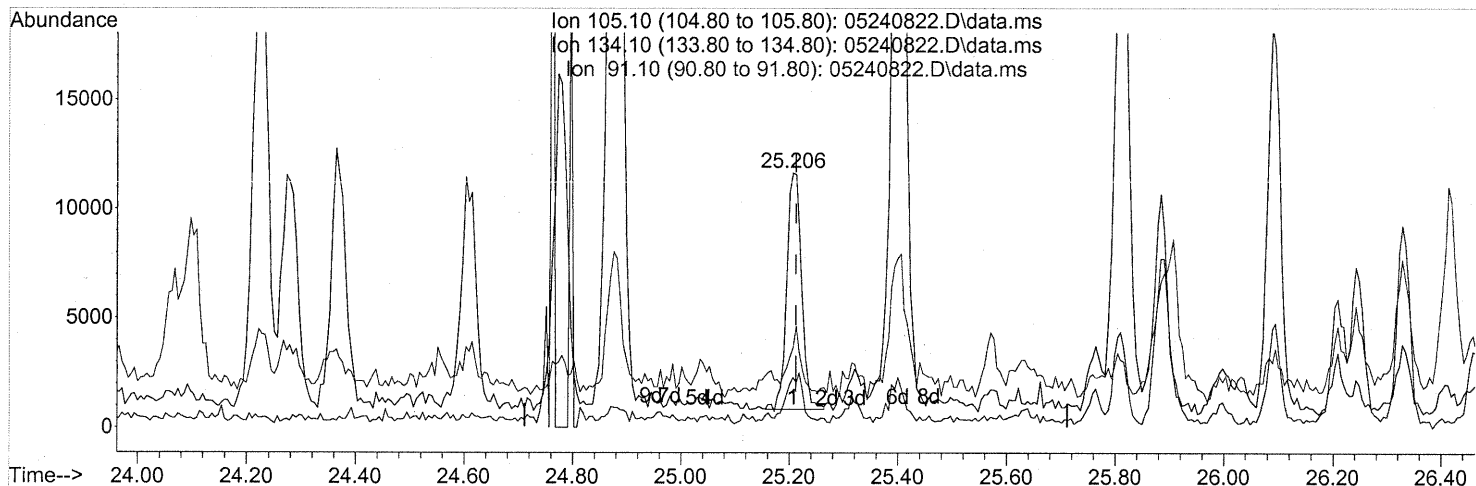
response 525451

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	63.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(87) sec-Butylbenzene (T)

25.206min (-0.006) 0.12ng

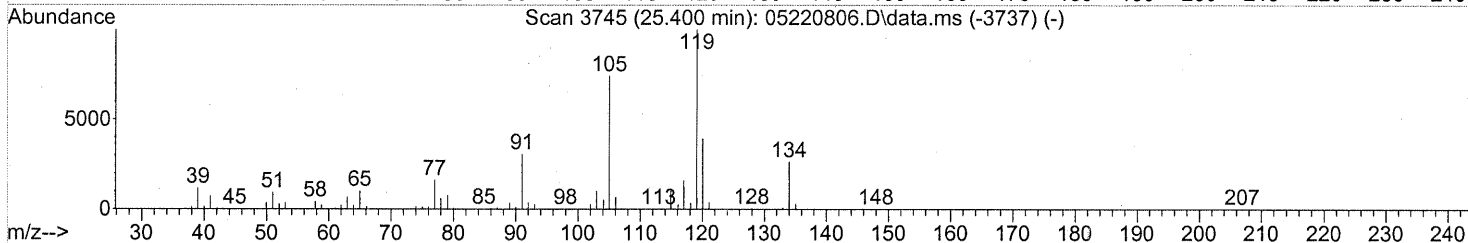
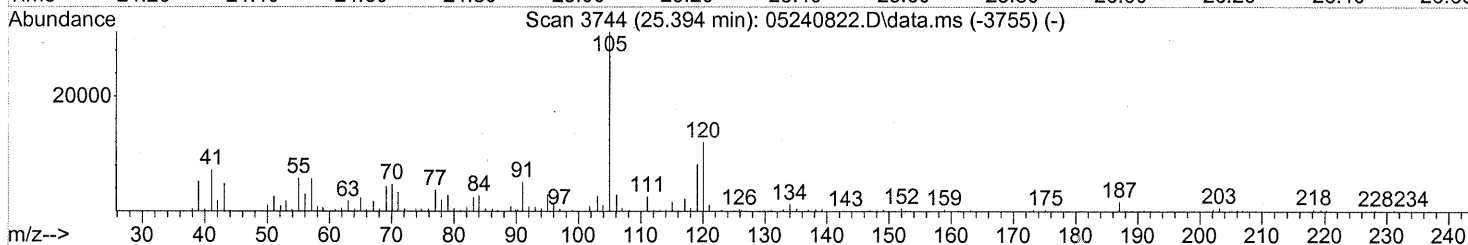
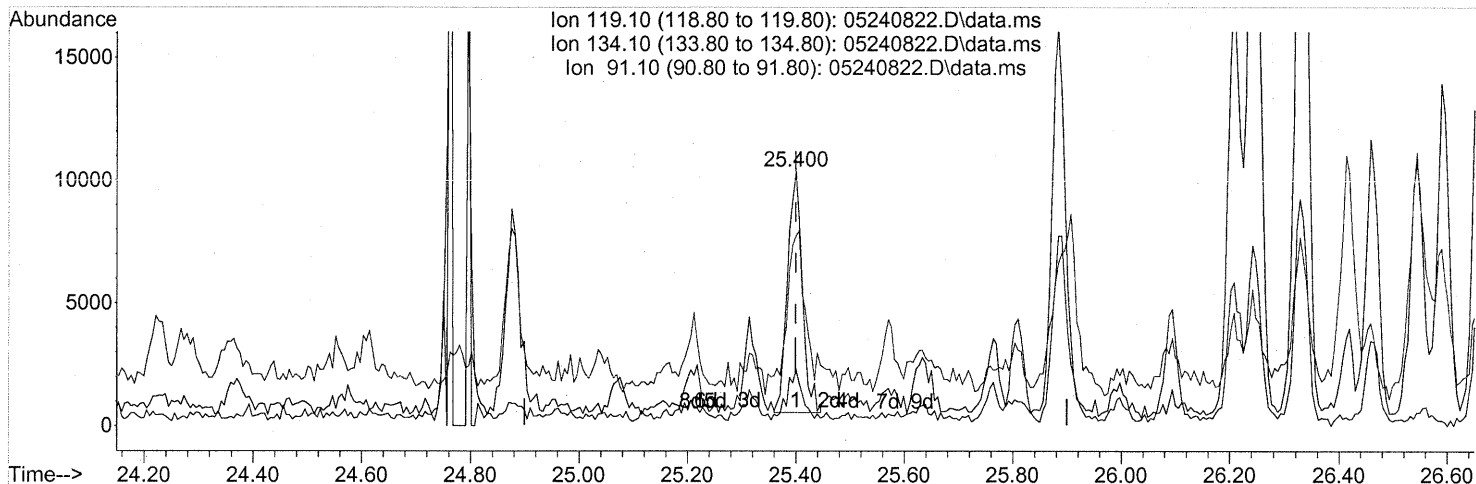
response 20310

Ion	Exp%	Act%
105.10	100	100
134.10	20.90	23.77
91.10	14.60	20.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(88) p-Isopropyltoluene (T)

25.400min (+0.000) 0.13ng

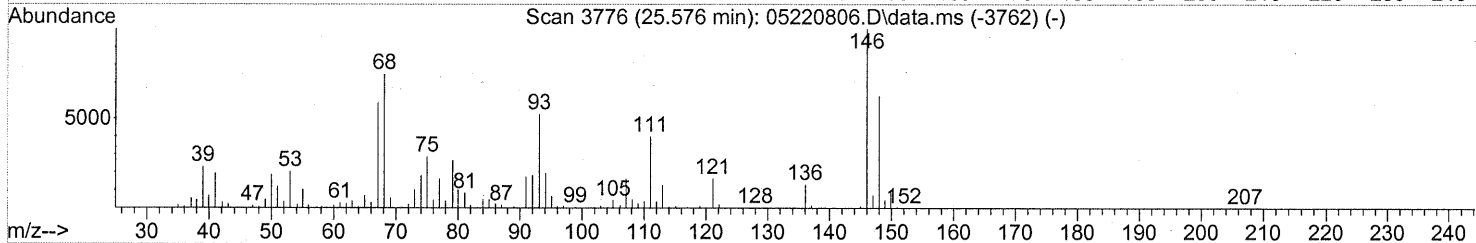
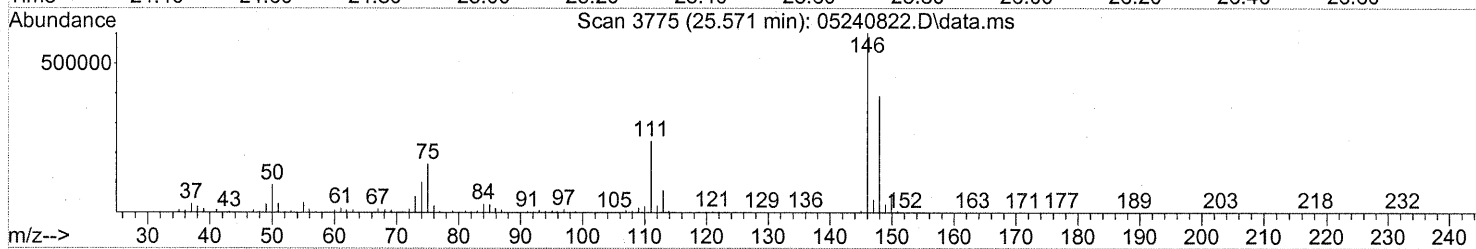
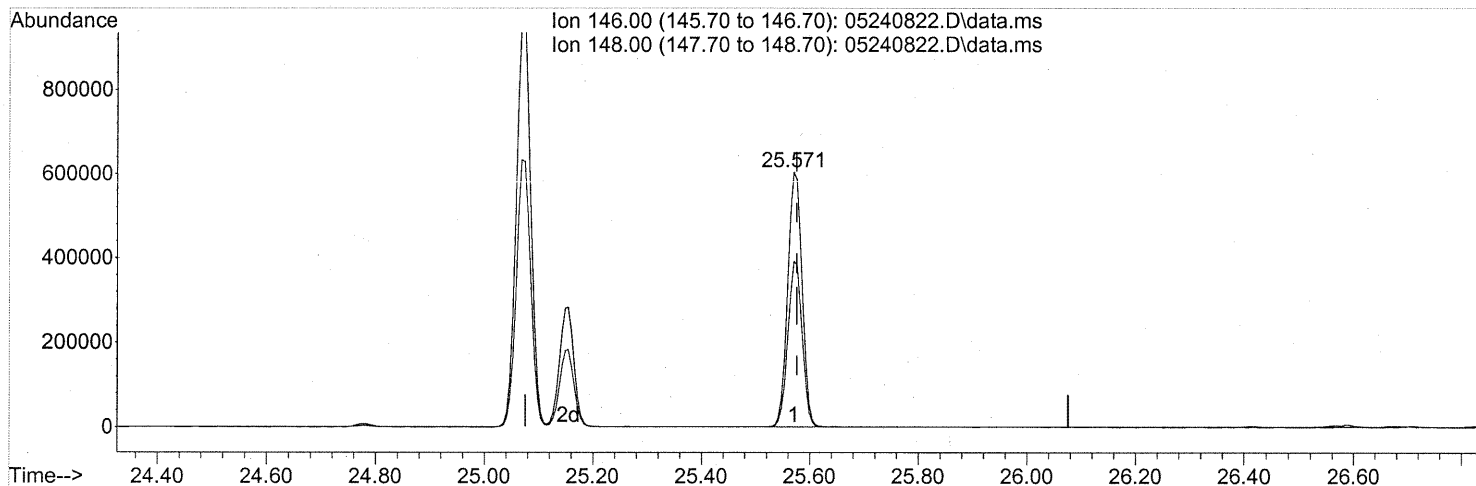
response 18215

Ion	Exp%	Act%
119.10	100	100
134.10	27.20	22.14
91.10	27.10	85.11#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240822.D\data.ms

(90) 1,2-Dichlorobenzene (T)

25.571min (-0.006) 13.45ng

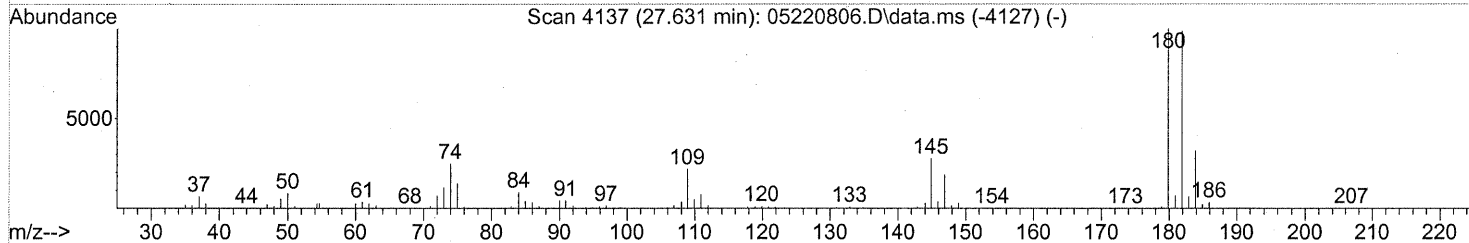
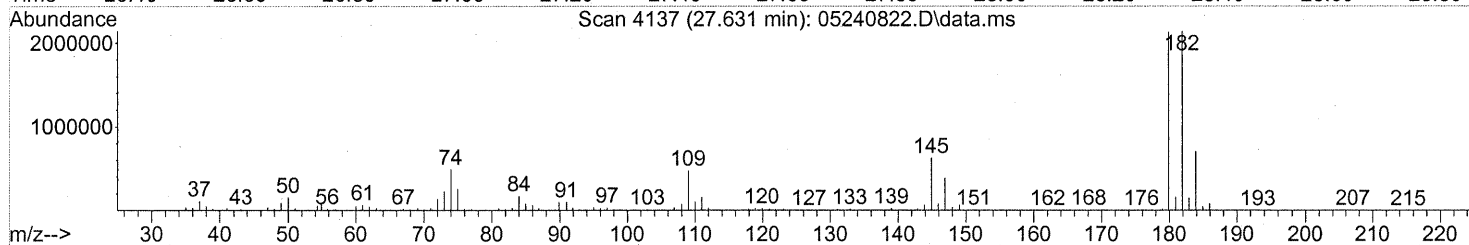
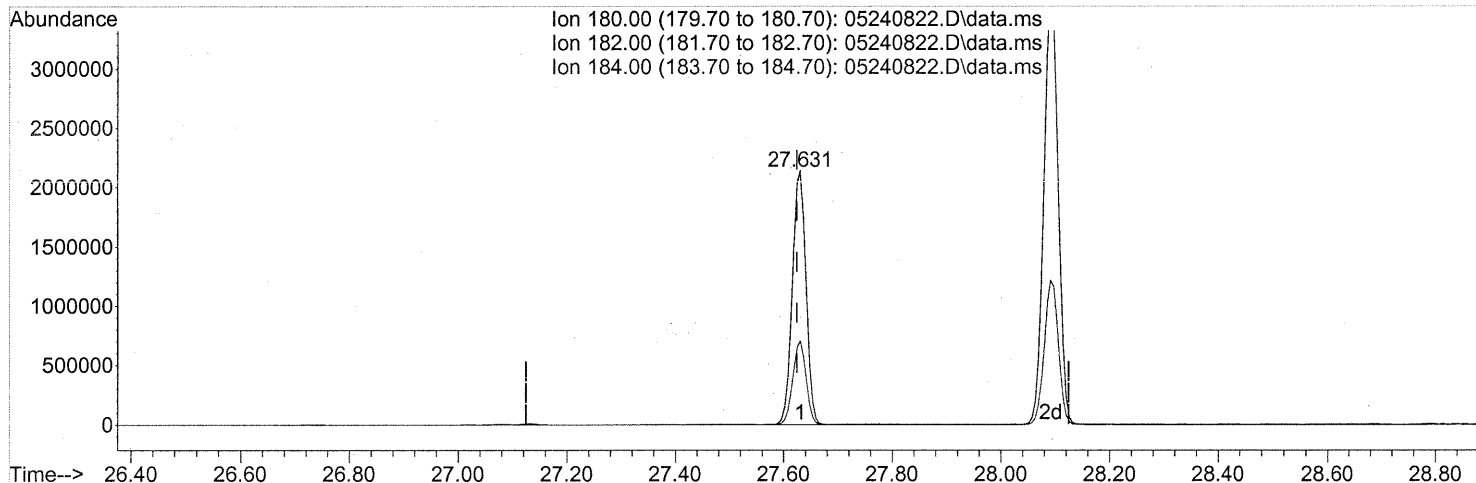
response 1101025

Ion	Exp%	Act%
146.00	100	100
148.00	63.40	64.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(94) 1,2,4-Trichlorobenzene (T)

27.631min (+0.006) 61.78ng

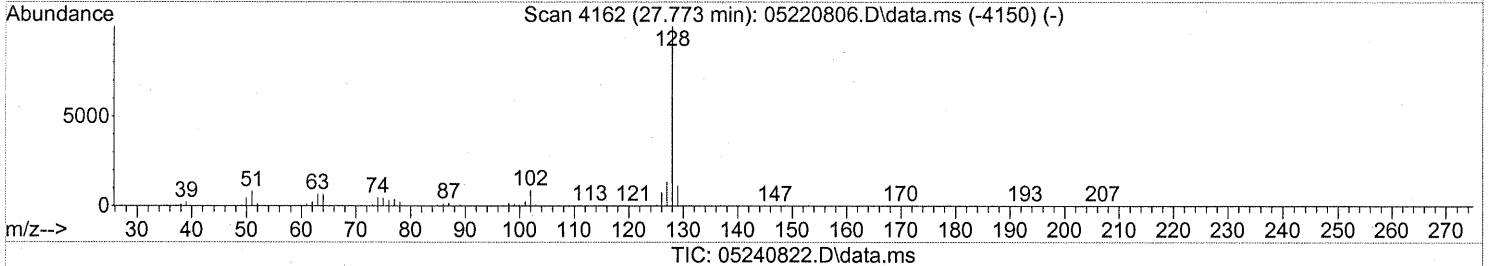
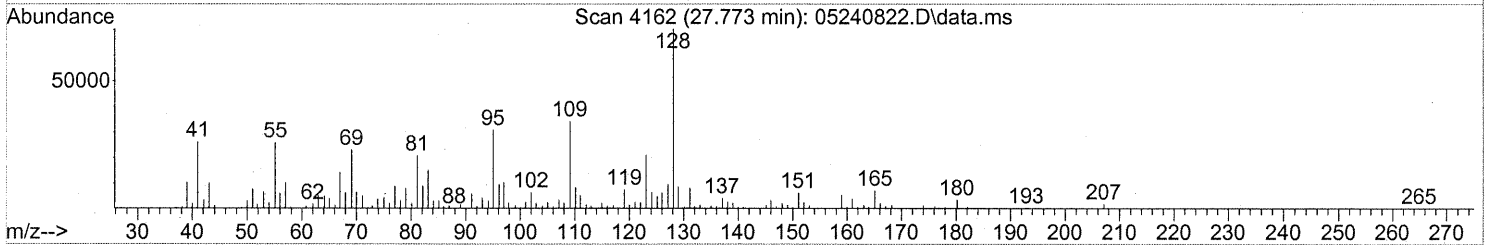
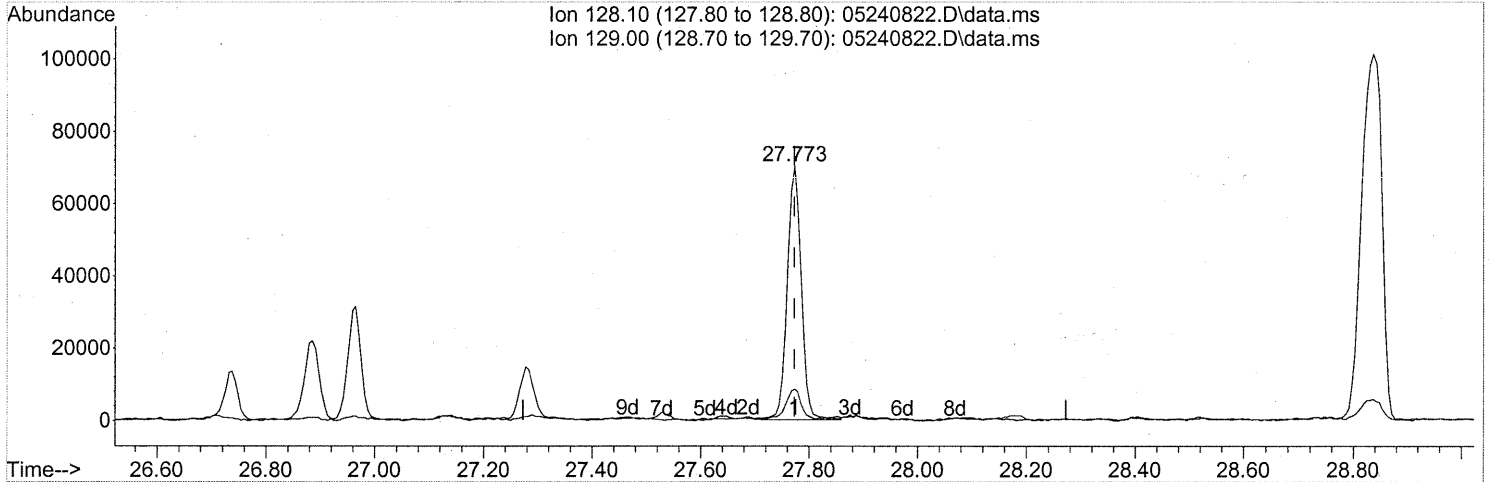
response 3705685

Ion	Exp%	Act%
180.00	100	100
182.00	95.20	99.60
184.00	30.30	32.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(95) Naphthalene (T)

27.773min (0.000) 0.69ng

response 126324

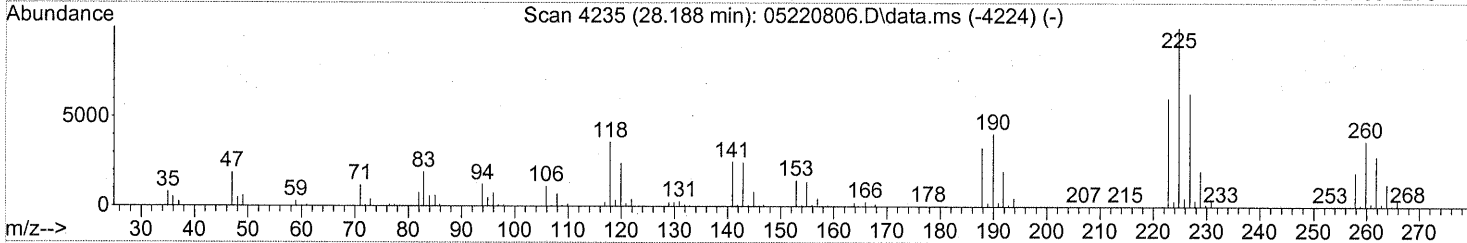
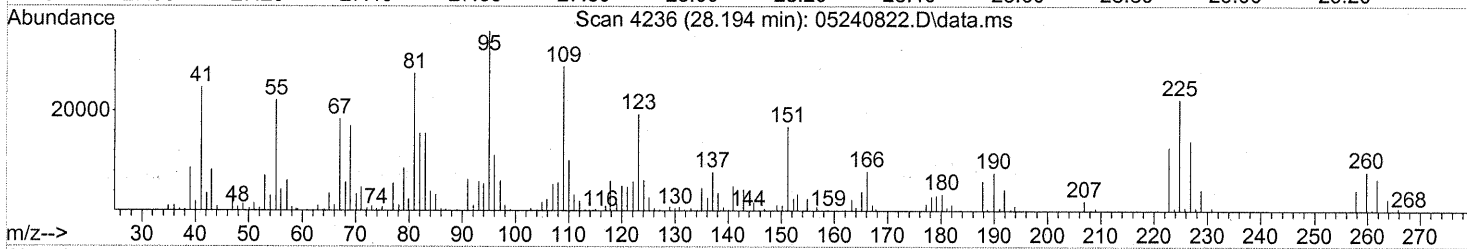
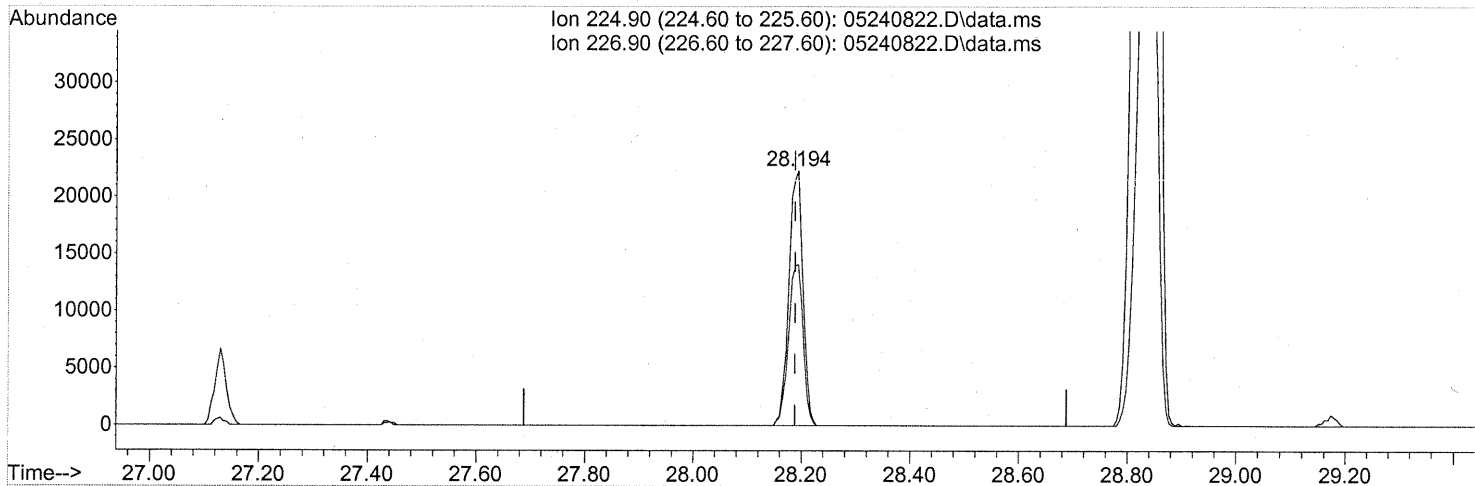
Ion	Exp%	Act%
128.10	100	100
129.00	11.60	14.47
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 21:30:15 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

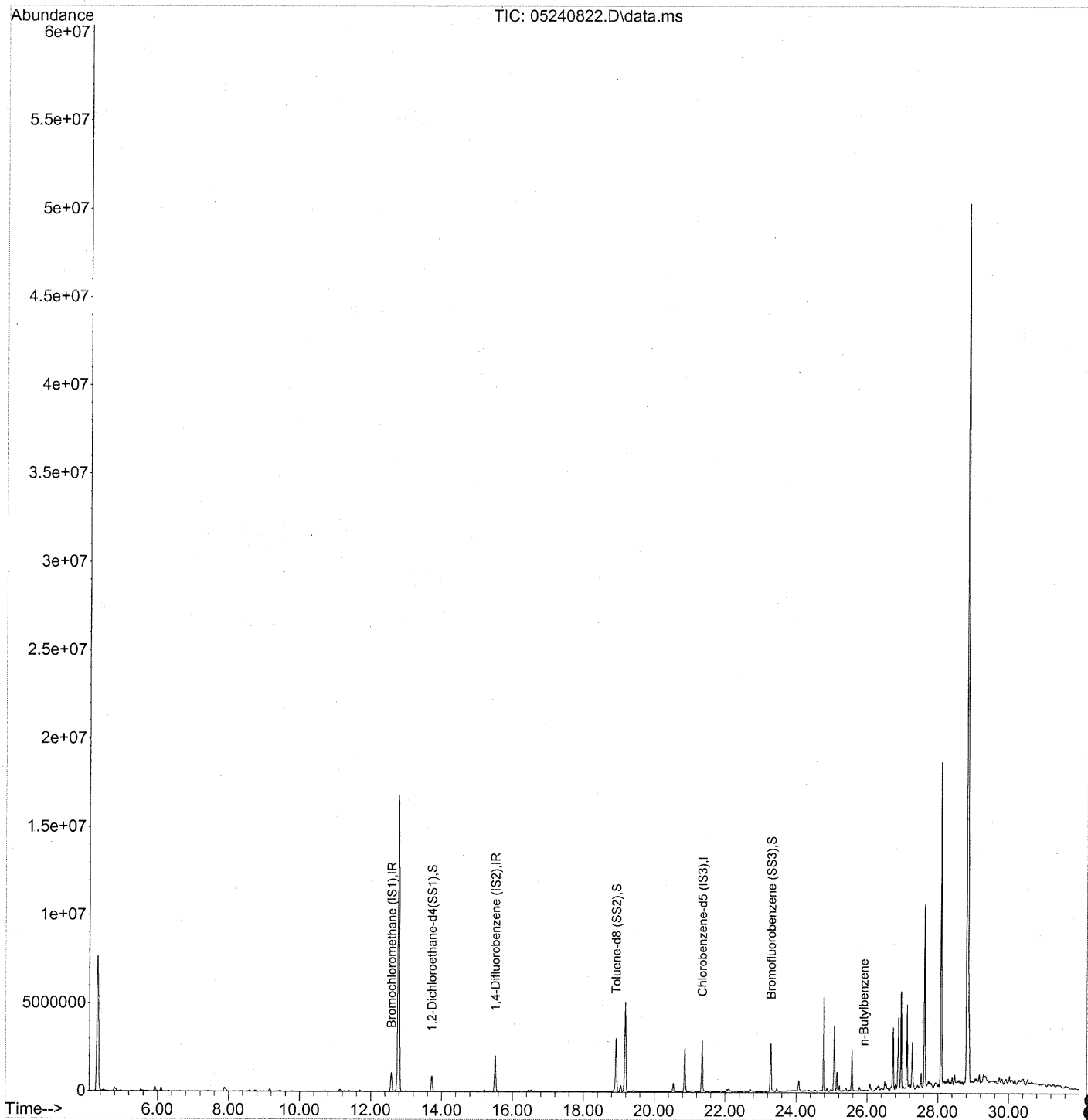
28.194min (+0.006) 1.00ng

response 39936

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	65.34
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240822.D  
Acq On : 24 May 2008 21:35  
Operator : WA  
Sample : P0801442-016 (400ml)  
Misc : ENSR SG959B-05 (-3.0, 3.5)  
ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 20:37:25 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



836

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG959B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 20:37:25 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	575733	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2414649	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1124167	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	894939	22.434	ng	-0.02
Spiked Amount	25.000		Recovery	=	89.72%	
5) Toluene-d8 (SS2)	18.93	98	2539617	25.154	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.60%	
6) Bromofluorobenzene (SS3)	23.29	174	1051514	25.612	ng	0.00
Spiked Amount	25.000		Recovery	=	102.44%	
Target Compounds						
7) tert-Butylbenzene	25.16	119	1569	N.D.		Qvalue
8) n-Butylbenzene	25.91	91	21254	0.146 ng	#	64

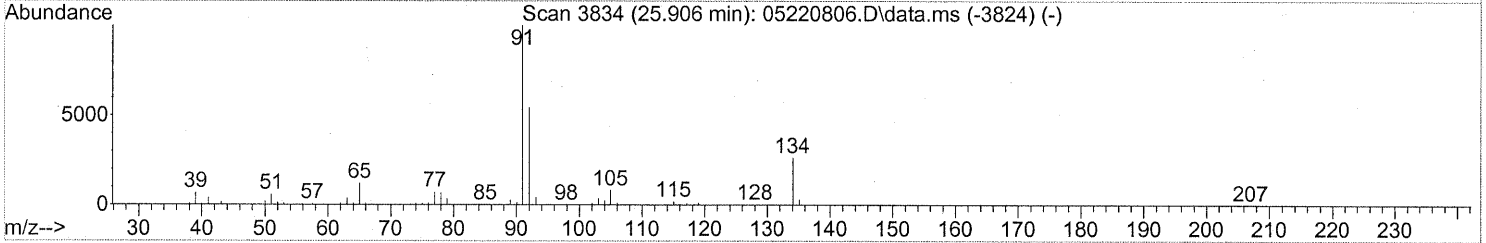
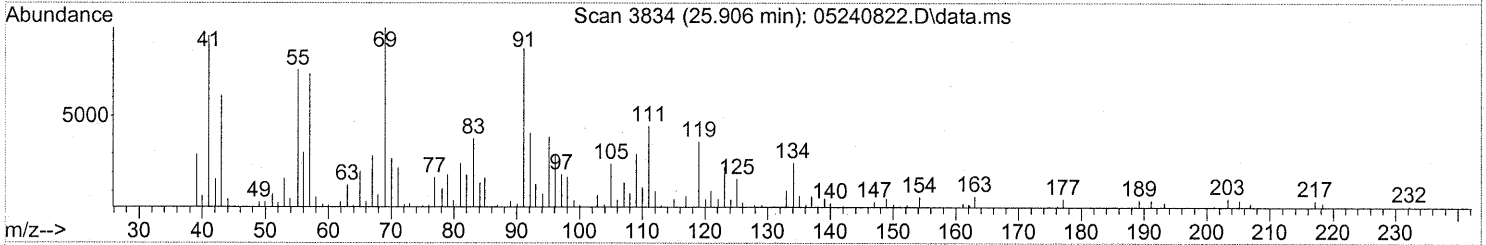
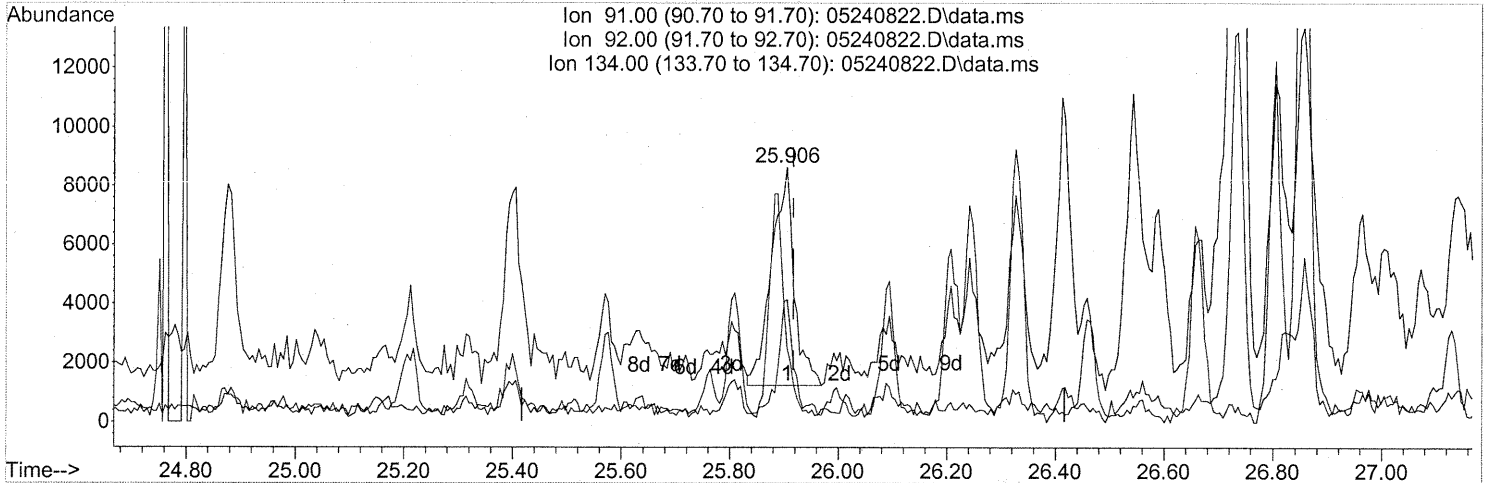
(#) = qualifier out of range (m) = manual integration (+) = signals summed

*DA 5/29/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240822.D  
 Acq On : 24 May 2008 21:35  
 Operator : WA  
 Sample : P0801442-016 (400ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: May 25 20:37:25 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



(8) n-Butylbenzene

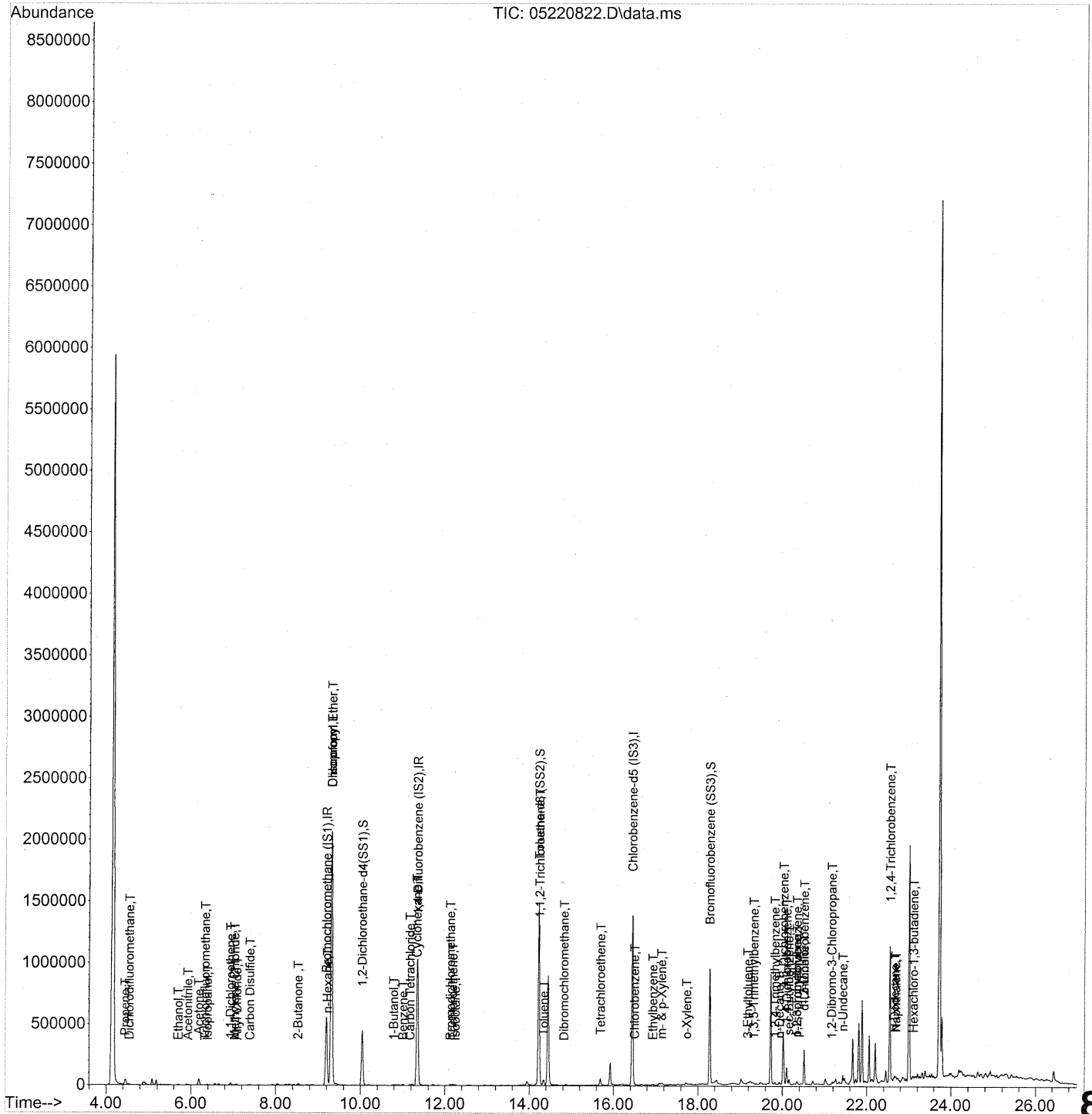
25.906min (-0.011) 0.15ng

response 21254

Ion	Exp%	Act%
91.00	100	100
92.00	55.70	36.46#
134.00	28.80	0.00#
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220822.D  
 Acq On : 22 May 2008 22:41  
 Operator : WA  
 Sample : P0801442-016 Dil (100ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 23 06:37:15 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



839

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220822.D  
 Acq On : 22 May 2008 22:41  
 Operator : WA  
 Sample : P0801442-016 Dil (100ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 23 06:37:15 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	261506	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1145449	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	456223	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	403371	21.874	ng	-0.05	87.48%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.23	98	1168122	26.004	ng	-0.02	104.00%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.28	174	327228	27.990	ng	-0.01	111.96%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	15934	0.609	ng	87
3) Dichlorodifluoromethane	4.55	85	3829	0.124	ng	# 93
4) Chloromethane	4.74	50	1481	N.D.		
5) Freon 114	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.09	54	635	N.D.		
8) Bromomethane	5.43	94	96	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	5.70	45	4006	0.223	ng	95
11) Acetonitrile	5.93	41	5048	0.108	ng	# 65
12) Acrolein	6.07	56	374	N.D.		
13) Acetone	6.19	58	16873	0.977	ng	91
14) Trichlorofluoromethane	6.33	101	1629	0.064	ng	78
15) Isopropanol	6.39	45	8404	0.150	ng	88
16) Acrylonitrile	6.61	53	95	N.D.		
17) 1,1-Dichloroethene	6.93	96	6171	0.493	ng	# 75
18) tert-Butanol	6.97	59	2210	N.D.		
19) Methylene Chloride	7.03	84	1833	0.134	ng	# 21
20) Allyl Chloride	7.08	41	2543	0.089	ng	# 45
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	7.40	76	7093	0.138	ng	88
23) trans-1,2-Dichloroethene	8.05	61	192	N.D.		
24) 1,1-Dichloroethane	8.17	63	115	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	2911	0.327	ng	# 1
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	9.32	87	226671	20.007	ng	# 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	9.22	57	3353	0.090	ng	# 65

840

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220822.D  
 Acq On : 22 May 2008 22:41  
 Operator : WA  
 Sample : P0801442-016 Dil (100ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 23 06:37:15 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	2080034	106.669	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	10.79	56	4874	0.225	ng	91
41) Benzene	11.01	78	7883	0.140	ng	96
42) Carbon Tetrachloride	11.18	117	3838	0.231	ng	93
43) Cyclohexane	11.33	84	2181	0.098	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	7593	0.455	ng	96
47) Trichloroethene	12.19	130	4666	0.302	ng	96
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	12.26	57	6014	0.064	ng	# 8
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	100633	7.385	ng	# 6
58) Toluene	14.35	91	35193	0.639	ng	96
59) 2-Hexanone	14.58	43	2602	N.D.		
60) Dibromochloromethane	14.83	129	866	0.060	ng	# 67
61) 1,2-Dibromoethane	15.18	107	202	N.D.		
62) Butyl Acetate	15.34	43	297	N.D.		
63) n-Octane	15.47	57	109	N.D.		
64) Tetrachloroethene	15.69	166	19084	1.403	ng	94
65) Chlorobenzene	16.50	112	3525	0.097	ng	91
66) Ethylbenzene	16.94	91	5089	0.081	ng	91
67) m- & p-Xylene	17.14	91	16468	0.400	ng	89
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	17.59	104	824	N.D.		
70) o-Xylene	17.74	91	7540	0.172	ng	93
71) n-Nonane	17.97	43	1225	N.D.		
72) 1,1,2,2-Tetrachloroethane	17.73	83	208	N.D.		
74) Cumene	18.45	105	2509	N.D.		
75) alpha-Pinene	18.94	93	1423	N.D.		
76) n-Propylbenzene	19.06	91	2008	N.D.		
77) 3-Ethyltoluene	19.18	105	5221	0.079	ng	73
78) 4-Ethyltoluene	19.24	105	2864	N.D.		
79) 1,3,5-Trimethylbenzene	19.33	105	4864	0.091	ng	93

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Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220822.D  
 Acq On : 22 May 2008 22:41  
 Operator : WA  
 Sample : P0801442-016 Dil (100ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 23 06:37:15 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	652	N.D.		
81) 2-Ethyltoluene	19.56	105	2857	N.D.		
82) 1,2,4-Trimethylbenzene	19.82	105	12948	0.236	ng	88
83) n-Decane	19.93	57	6145	0.141	ng	84
84) Benzyl Chloride	20.01	91	440	N.D.		
85) 1,3-Dichlorobenzene	20.02	146	215199	6.744	ng	99
86) 1,4-Dichlorobenzene	20.10	146	62117	2.038	ng	100
87) sec-Butylbenzene	20.15	105	5715	0.080	ng	93
88) p-Isopropyltoluene	20.34	119	3609	0.059	ng	# 62
89) 1,2,3-Trimethylbenzene	20.34	105	8688	0.162	ng	94
90) 1,2-Dichlorobenzene	20.52	146	130924	4.424	ng	99
91) d-Limonene	20.52	68	2250	0.113	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.17	157	485	0.052	ng	# 1
93) n-Undecane	21.43	57	28538	0.623	ng	81
94) 1,2,4-Trichlorobenzene	22.55	184	103393	20.085	ng	# 86
95) Naphthalene	22.69	128	16185	0.208	ng	94
96) n-Dodecane	22.66	57	18538	0.415	ng	81
97) Hexachloro-1,3-butadiene	23.11	225	2761	0.359	ng	90

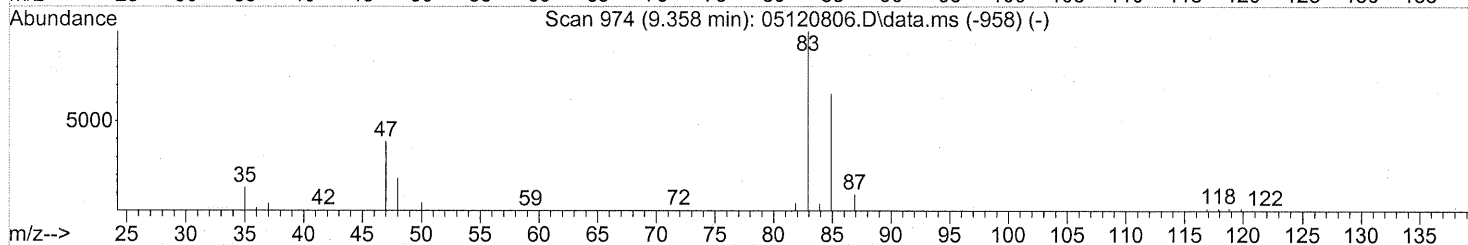
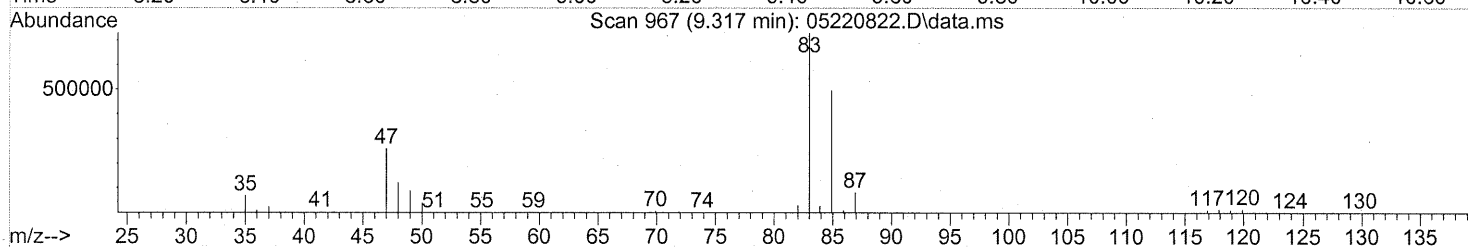
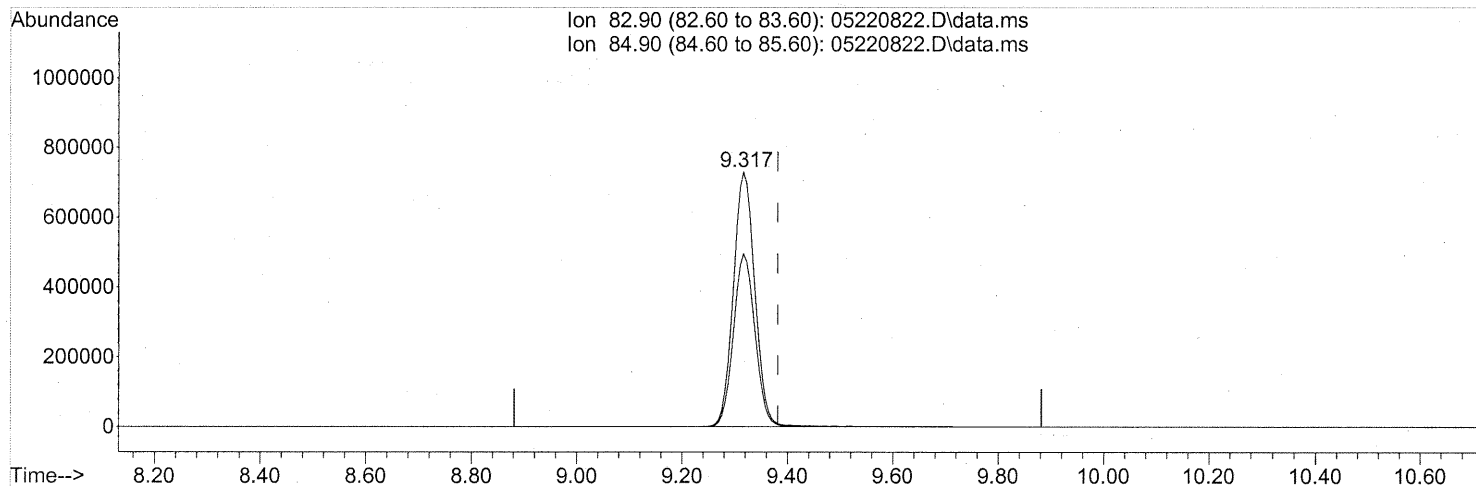
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220822.D  
 Acq On : 22 May 2008 22:41  
 Operator : WA  
 Sample : P0801442-016 Dil (100ml)  
 Misc : ENSR SG95B-05 (-3.0, 3.5)  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 23 06:37:15 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05220822.D\data.ms

(32) Chloroform (T)  
 9.317min (-0.066) 106.67ng  
 response 2080034

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.87
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:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00634

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 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)	ND	160	16	ND	32	3.2	
74-87-3	Chloromethane	ND	32	16	ND	15	7.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	160	16	ND	23	2.3	
75-01-4	Vinyl Chloride	ND	32	16	ND	12	6.2	
74-83-9	Bromomethane	ND	32	16	ND	8.1	4.1	
75-00-3	Chloroethane	ND	32	16	ND	12	6.0	
64-17-5	Ethanol	ND	1,600	16	ND	840	8.4	
67-64-1	<b>Acetone</b>	<b>44</b>	1,600	23	<b>19</b>	670	9.7	<b>J, B</b>
75-69-4	Trichlorofluoromethane	ND	32	16	ND	5.6	2.8	
107-13-1	Acrylonitrile	ND	160	22	ND	73	10	
75-35-4	<b>1,1-Dichloroethene</b>	<b>44</b>	32	16	<b>11</b>	8.0	4.0	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	160	23	ND	52	7.7	
75-09-2	<b>Methylene Chloride</b>	<b>27</b>	160	16	<b>7.8</b>	45	4.5	<b>J</b>
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	32	16	ND	10	5.0	
76-13-1	Trichlorotrifluoroethane	ND	32	18	ND	4.1	2.3	
75-15-0	Carbon Disulfide	ND	160	38	ND	51	12	
156-60-5	trans-1,2-Dichloroethene	ND	32	16	ND	8.0	4.0	
75-34-3	1,1-Dichloroethane	ND	32	16	ND	7.8	3.9	
1634-04-4	Methyl tert-Butyl Ether	ND	32	16	ND	8.8	4.4	
108-05-4	Vinyl Acetate	ND	1,600	51	ND	450	14	
78-93-3	2-Butanone (MEK)	ND	160	16	ND	54	5.4	
156-59-2	cis-1,2-Dichloroethene	ND	32	16	ND	8.0	4.0	
108-20-3	Diisopropyl Ether	ND	160	19	ND	38	4.5	
67-66-3	<b>Chloroform</b>	<b>130,000</b>	32	19	<b>28,000</b>	6.5	3.8	

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.

B = Analyte was found in the method blank.

Verified By: RC      Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00634

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 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	160	16	ND	38	3.9	
107-06-2	1,2-Dichloroethane	ND	32	16	ND	7.8	3.9	
71-55-6	1,1,1-Trichloroethane	ND	32	16	ND	5.8	2.9	
71-43-2	Benzene	ND	32	16	ND	9.9	4.9	
56-23-5	<b>Carbon Tetrachloride</b>	<b>40</b>	32	16	<b>6.3</b>	5.0	2.5	
994-05-8	tert-Amyl Methyl Ether	ND	160	16	ND	38	3.8	
78-87-5	1,2-Dichloropropane	ND	32	16	ND	6.8	3.4	
75-27-4	<b>Bromodichloromethane</b>	<b>200</b>	32	16	<b>30</b>	4.7	2.4	
79-01-6	<b>Trichloroethene</b>	<b>28</b>	32	16	<b>5.2</b>	5.9	2.9	<b>J</b>
123-91-1	1,4-Dioxane	ND	160	19	ND	44	5.4	
80-62-6	Methyl Methacrylate	ND	160	24	ND	39	5.8	
142-82-5	n-Heptane	ND	160	20	ND	39	4.9	
10061-01-5	cis-1,3-Dichloropropene	ND	160	16	ND	35	3.6	
108-10-1	4-Methyl-2-pentanone	ND	160	18	ND	39	4.3	
10061-02-6	trans-1,3-Dichloropropene	ND	160	20	ND	35	4.4	
79-00-5	1,1,2-Trichloroethane	ND	32	16	ND	5.8	2.9	
108-88-3	Toluene	ND	160	16	ND	42	4.2	
591-78-6	2-Hexanone	ND	160	24	ND	39	5.9	
124-48-1	<b>Dibromochloromethane</b>	<b>160</b>	32	21	<b>19</b>	3.7	2.5	
106-93-4	1,2-Dibromoethane	ND	32	17	ND	4.1	2.2	
111-65-9	n-Octane	ND	160	16	ND	34	3.4	
127-18-4	<b>Tetrachloroethene</b>	<b>95</b>	32	16	<b>14</b>	4.7	2.3	
108-90-7	Chlorobenzene	ND	32	16	ND	6.9	3.5	

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: RG      Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG89B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-017

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00634

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.0050 Liter(s)  
 0.0010 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	ND	160	20	ND	36	4.5	
179601-23-1	m,p-Xylenes	ND	160	41	ND	36	9.5	
75-25-2	<b>Bromoform</b>	<b>140</b>	160	24	<b>14</b>	15	2.3	<b>J</b>
100-42-5	Styrene	ND	160	24	ND	37	5.6	
95-47-6	<b>o-Xylene</b>	<b>37</b>	160	20	<b>8.6</b>	36	4.6	<b>J</b>
79-34-5	1,1,2,2-Tetrachloroethane	ND	32	20	ND	4.6	2.9	
98-82-8	Cumene	ND	160	18	ND	32	3.6	
103-65-1	n-Propylbenzene	ND	160	16	ND	32	3.3	
622-96-8	4-Ethyltoluene	ND	160	18	ND	32	3.7	
108-67-8	1,3,5-Trimethylbenzene	ND	160	19	ND	32	3.9	
98-83-9	alpha-Methylstyrene	ND	160	23	ND	33	4.8	
95-63-6	1,2,4-Trimethylbenzene	ND	160	22	ND	32	4.4	
100-44-7	Benzyl Chloride	ND	32	27	ND	6.1	5.3	
541-73-1	1,3-Dichlorobenzene	ND	32	20	ND	5.3	3.3	
106-46-7	1,4-Dichlorobenzene	ND	32	18	ND	5.3	2.9	
135-98-8	sec-Butylbenzene	ND	160	18	ND	29	3.3	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	160	21	ND	29	3.7	
95-50-1	1,2-Dichlorobenzene	ND	32	21	ND	5.3	3.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	160	24	ND	16	2.5	
120-82-1	1,2,4-Trichlorobenzene	ND	32	24	ND	4.3	3.2	
91-20-3	Naphthalene	ND	63	23	ND	12	4.5	
87-68-3	Hexachlorobutadiene	ND	32	28	ND	3.0	2.7	
98-06-6	tert-Butylbenzene	ND	63	16	ND	12	2.9	
104-51-8	n-Butylbenzene	ND	63	16	ND	12	2.9	

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.

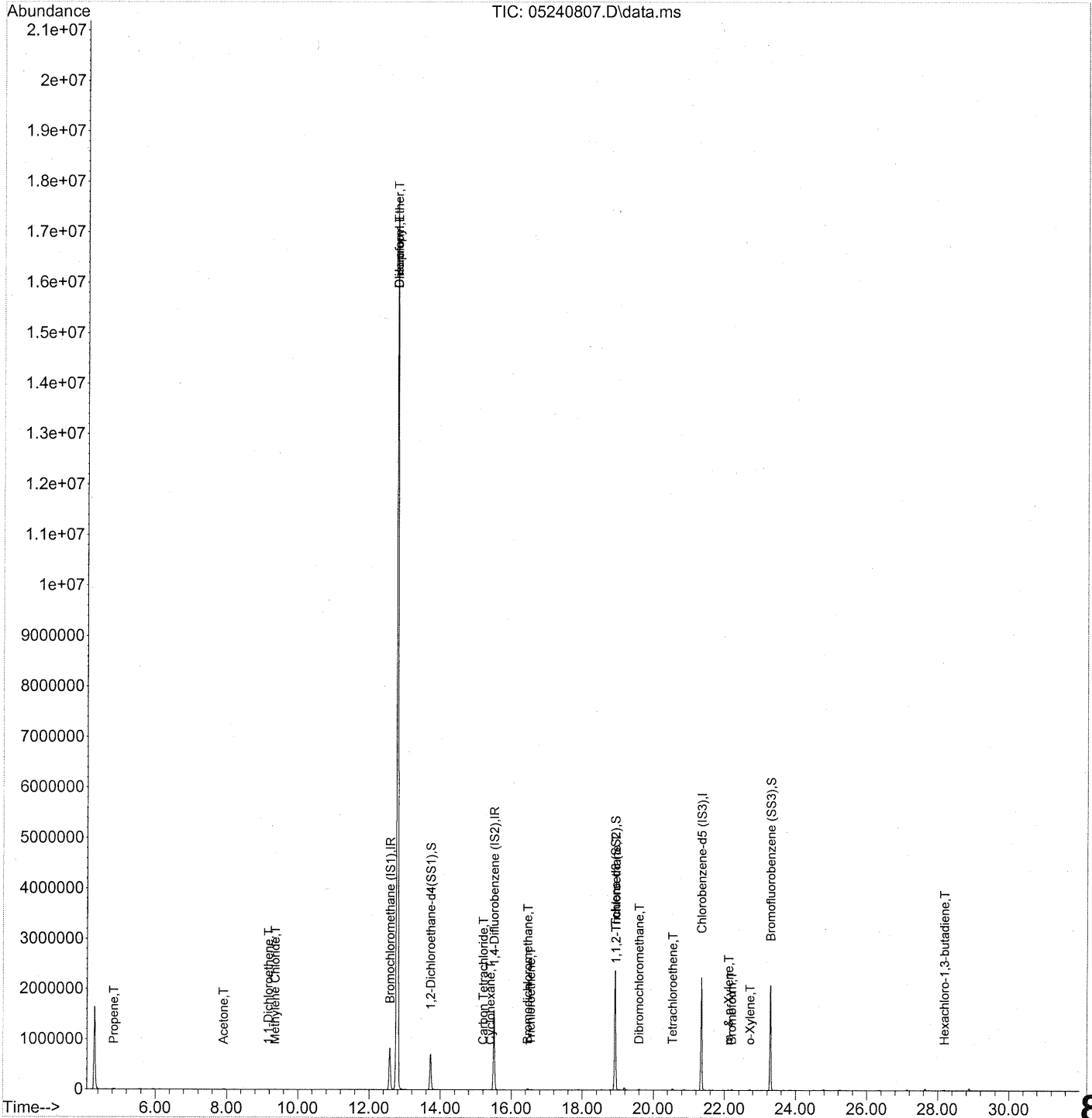
J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:     Rer          Date:     6/2/08    

**846**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



847

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	432946	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1838073	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	864159	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4(...)	13.72	65	717340	23.912	ng	0.00
Spiked Amount				25.000		
				Recovery =		95.64%
57) Toluene-d8 (SS2)	18.93	98	1947988	25.100	ng	0.00
Spiked Amount				25.000		
				Recovery =		100.40%
73) Bromofluorobenzene (SS3)	23.29	174	769167	24.372	ng	0.00
Spiked Amount				25.000		
				Recovery =		97.48%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	4992	0.146	ng	# 69
3) Dichlorodifluoromethane	4.99	85	721	N.D.	✓	
4) Chloromethane	5.34	50	54	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	7.13	45	84	N.D.	✓	
11) Acetonitrile	7.47	41	418	N.D.		
12) Acrolein	7.69	56	70	N.D.		
13) Acetone	7.91	58	3271m	0.140	ng	
14) Trichlorofluoromethane	8.16	101	194	N.D.	✓	
15) Isopropanol	8.41	45	52	N.D.	✓ NOT	
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	9.17	96	3326	0.140	ng	# 74
18) tert-Butanol	9.35	59	393	N.D.	✓	
19) Methylene Chloride	9.36	84	2227	0.086	ng	88
20) Allyl Chloride	9.48	41	121	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	9.77	76	1859	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	11.56	72	105	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.79	87	2144680	102.894	ng NR	# 1
30) Ethyl Acetate	12.74	61	59	N.D.		
31) n-Hexane	12.70	57	638	N.D.		

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SL27/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	18247924	<del>462.214</del>	ng <i>see dil</i>	95
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. ✓		
36) 1,2-Dichloroethane	13.89	62	56	N.D. ✓		
38) 1,1,1-Trichloroethane	14.29	97	57	N.D. ✓		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.92	56	52	N.D.		
41) Benzene	14.99	78	2379	N.D. ✓		
42) Carbon Tetrachloride	15.21	117	4620	0.125 ng		94
43) Cyclohexane	15.41	84	1944	0.052 ng	#	62
44) tert-Amyl Methyl Ether	0.00	73	0	N.D. ✓		
45) 1,2-Dichloropropane	16.20	63	54	N.D. ✓		
46) Bromodichloromethane	16.46	83	20692	0.636 ng		100
47) Trichloroethene	16.54	130	2622	0.089 ng		92
48) 1,4-Dioxane	0.00	88	0	N.D. ✓		
49) Isooctane	16.61	57	72	N.D.		
50) Methyl Methacrylate	16.91	100	71	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	18.94	97	171255	<del>7.201</del> ng	NR#	7
58) Toluene	19.07	91	4453	N.D. ✓		
59) 2-Hexanone	19.30	43	284	N.D. ✓		
60) Dibromochloromethane	19.59	129	14403	0.505 ng		97
61) 1,2-Dibromoethane	0.00	107	0	N.D. ✓		
62) Butyl Acetate	20.34	43	167	N.D.		
63) n-Octane	20.09	57	55	N.D. ✓		
64) Tetrachloroethene	20.55	166	9374	0.300 ng		96
65) Chlorobenzene	21.42	112	594	N.D. ✓		
66) Ethylbenzene	21.89	91	656	N.D. ✓		
67) m- & p-Xylene	22.12	91	6996	<del>0.086</del> ng		92
68) Bromoform	22.21	173	9485	0.447 ng		99
69) Styrene	22.72	104	60	N.D. ✓		
70) o-Xylene	22.72	91	10341	0.118 ng		89
71) n-Nonane	22.98	43	320	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.70	83	67	N.D. ✓		
74) Cumene	23.48	105	923	N.D. ✓		
75) alpha-Pinene	24.40	93	73	N.D.		
76) n-Propylbenzene	24.11	91	681	N.D. ✓		
77) 3-Ethyltoluene	24.21	105	682	N.D.		
78) 4-Ethyltoluene	24.28	105	446	N.D. ✓		
79) 1,3,5-Trimethylbenzene	24.38	105	1320	N.D. ✓		

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.80	118	192	N.D.	✓	
81) 2-Ethyltoluene	24.61	105	1512	N.D.		
82) 1,2,4-Trimethylbenzene	24.89	105	2569	N.D.	✓	
83) n-Decane	24.99	57	77	N.D.		
84) Benzyl Chloride	25.05	91	104	N.D.	✓	
85) 1,3-Dichlorobenzene	25.09	146	754	N.D.	✓	
86) 1,4-Dichlorobenzene	25.15	146	1397	N.D.	✓	
87) sec-Butylbenzene	25.22	105	514	N.D.	✓	
88) p-Isopropyltoluene	25.42	119	960	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.41	105	3565	N.D.		
90) 1,2-Dichlorobenzene	25.58	146	530	N.D.	✓	
91) d-Limonene	25.60	68	52	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	26.51	57	581	N.D.		
94) 1,2,4-Trichlorobenzene	27.64	180	432	N.D.	✓	
95) Naphthalene	27.79	128	2283	N.D.	✓	
96) n-Dodecane	27.74	57	354	N.D.		
97) Hexachloro-1,3-butadiene	28.19	225	1932	<del>0.063 ng</del>		95

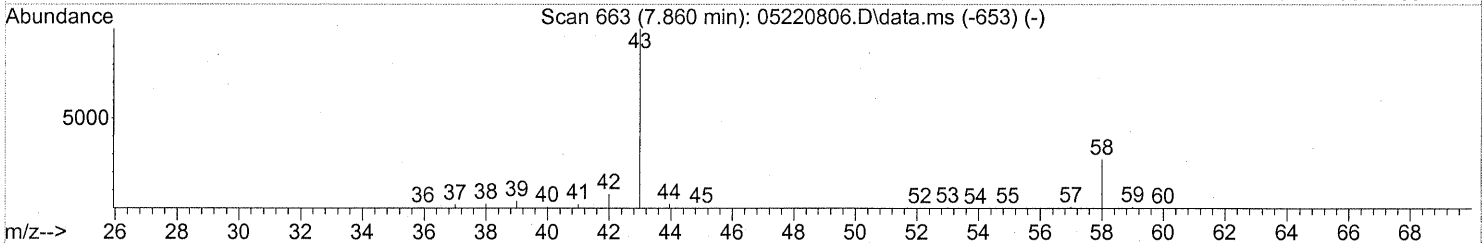
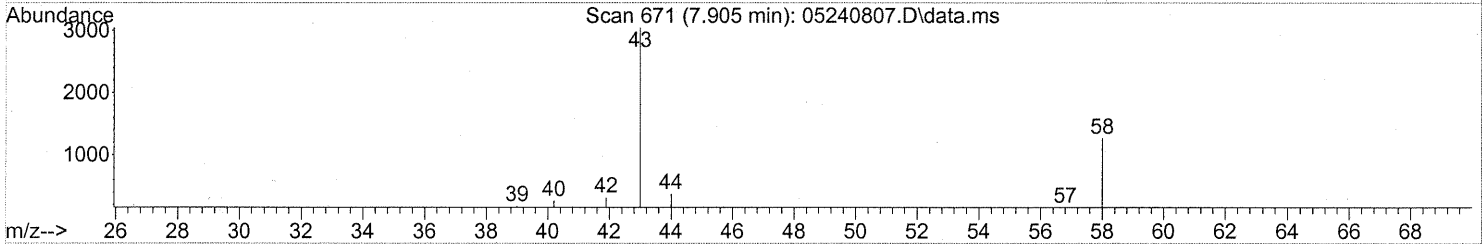
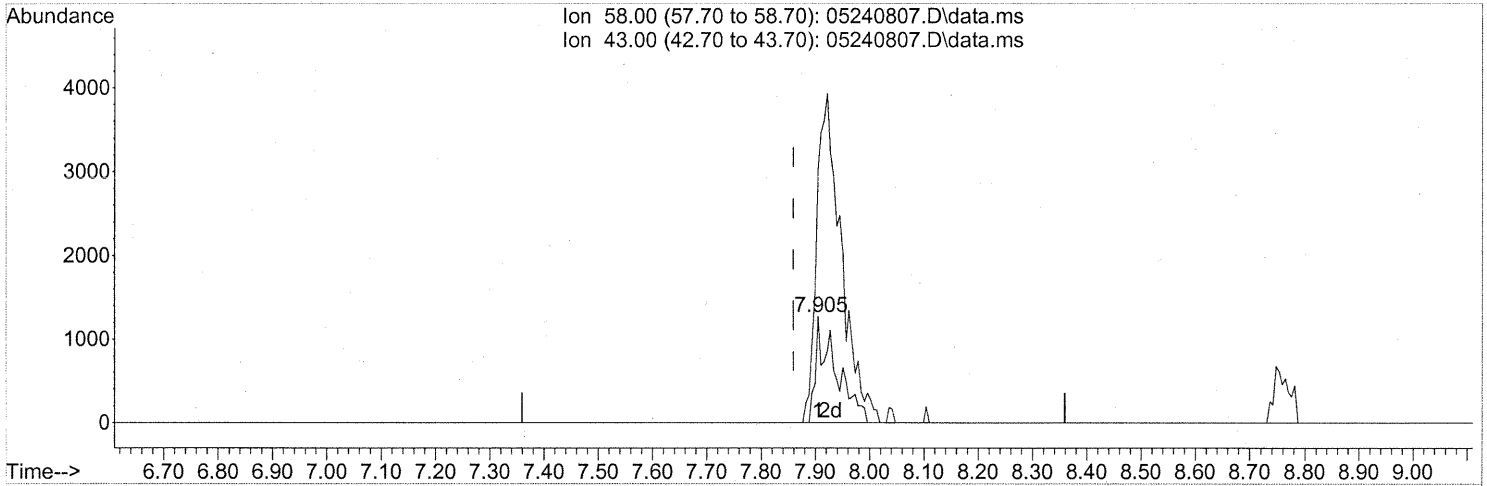
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Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(13) Acetone (T)  
 7.905min (+0.045) 0.14ng m  
 response 3271

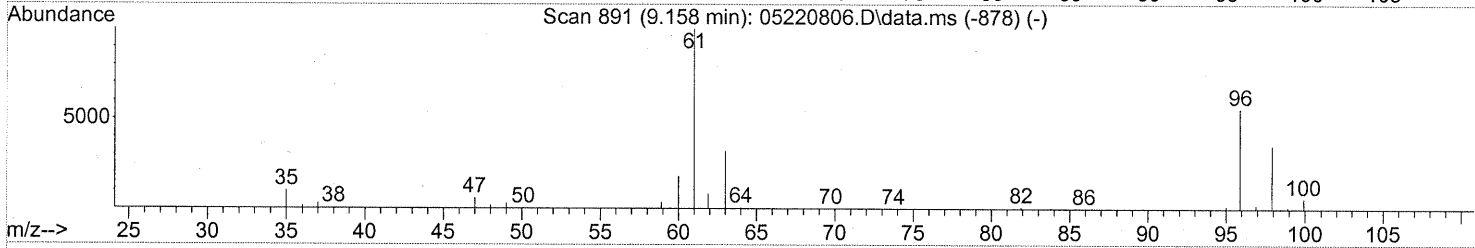
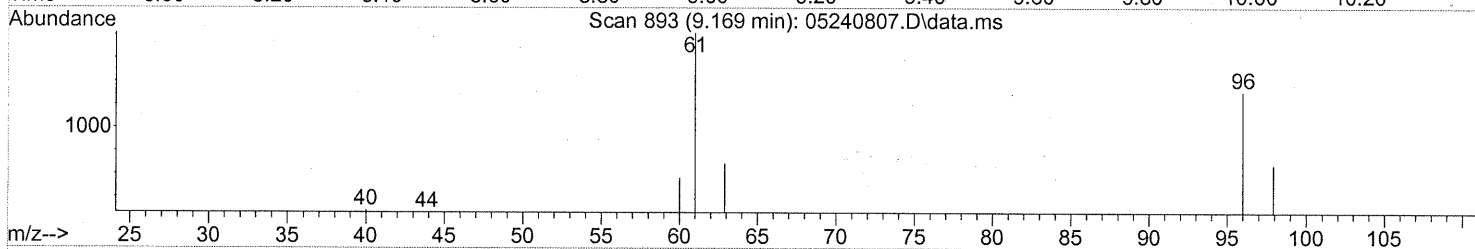
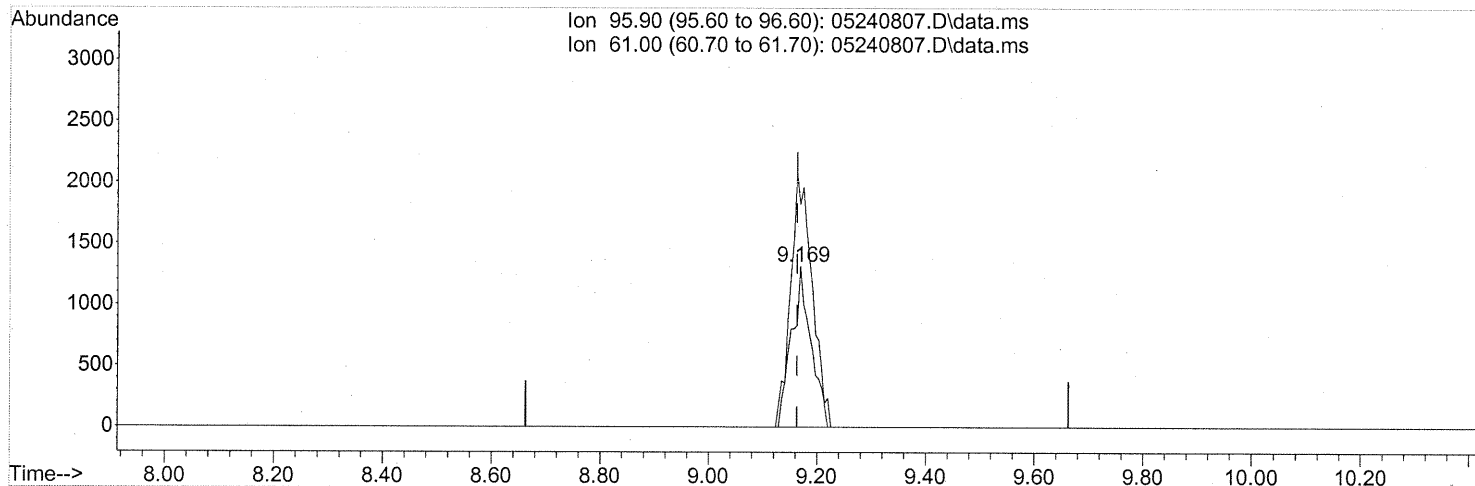
Ion	Exp%	Act%
58.00	100	100
43.00	283.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*no previous*  
*WA 5/30/08*

Quantitation Report (Qedit)

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 Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.169min (+0.006) 0.14ng

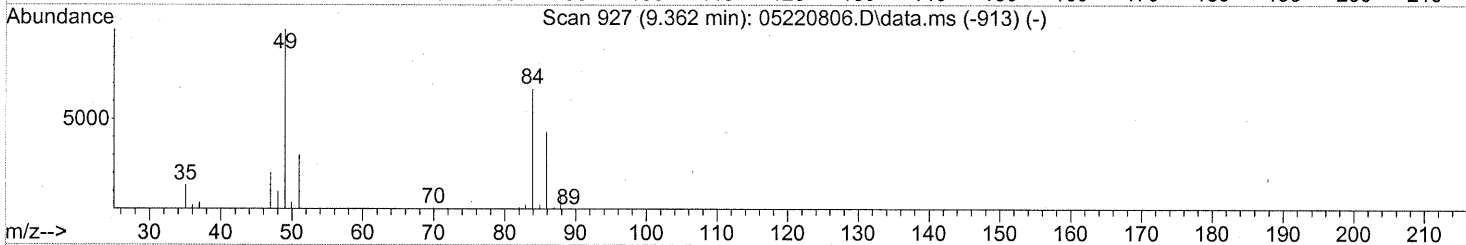
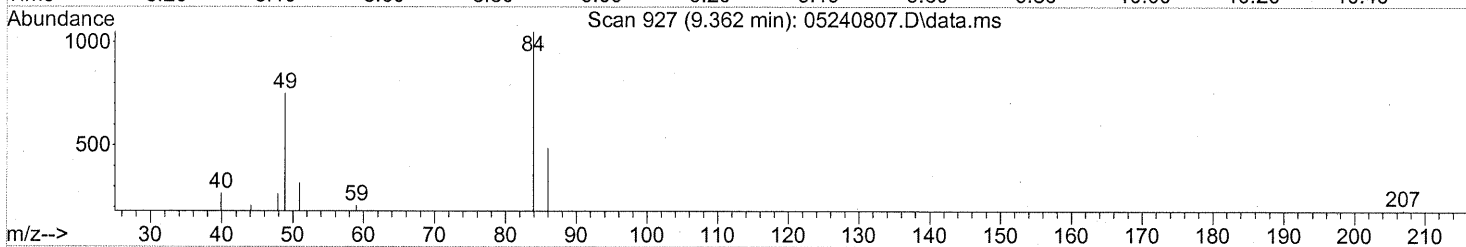
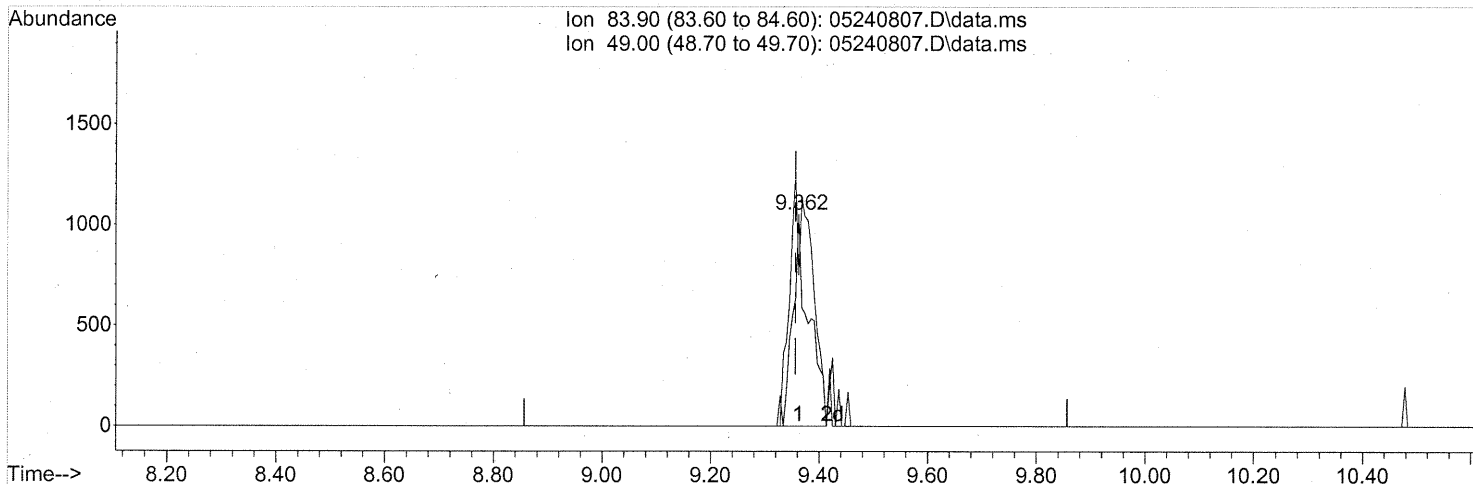
response 3326

Ion	Exp%	Act%
95.90	100	100
61.00	210.00	170.08#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240807.D\data.ms

(19) Methylene Chloride (T)

9.362min (+0.006) 0.09ng

response 2227

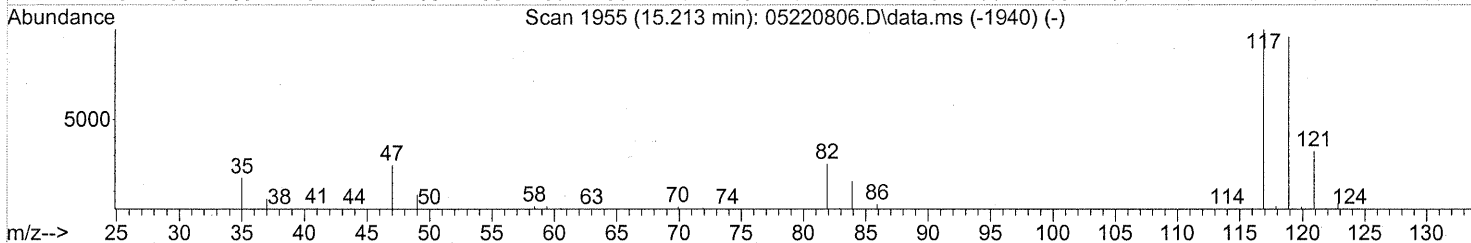
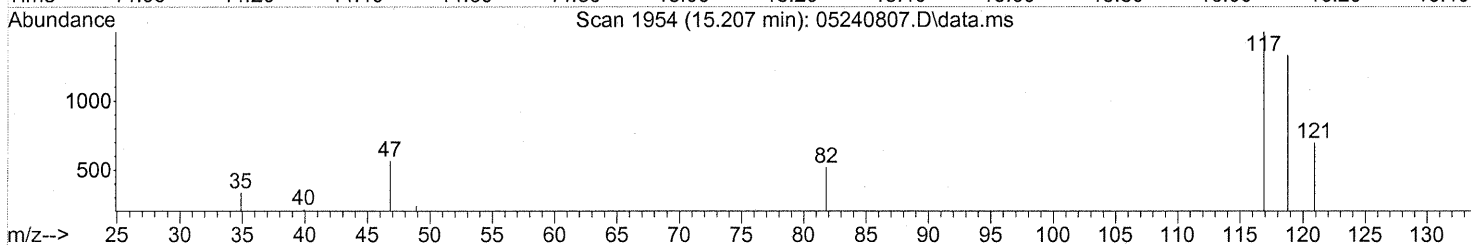
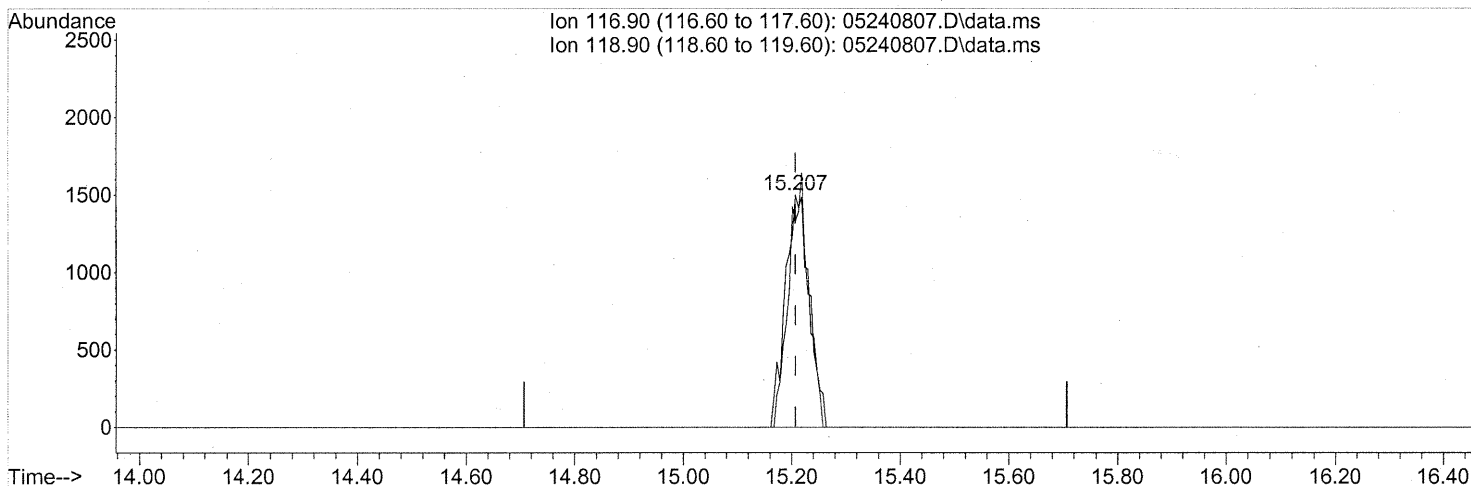
Ion	Exp%	Act%
83.90	100	100
49.00	172.90	156.04
0.00	0.00	0.00
0.00	0.00	0.00

853

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
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Quant Time: May 24 13:01:13 2008  
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 Response via : Initial Calibration



TIC: 05240807.D\data.ms

(42) Carbon Tetrachloride (T)

15.207min (-0.000) 0.12ng

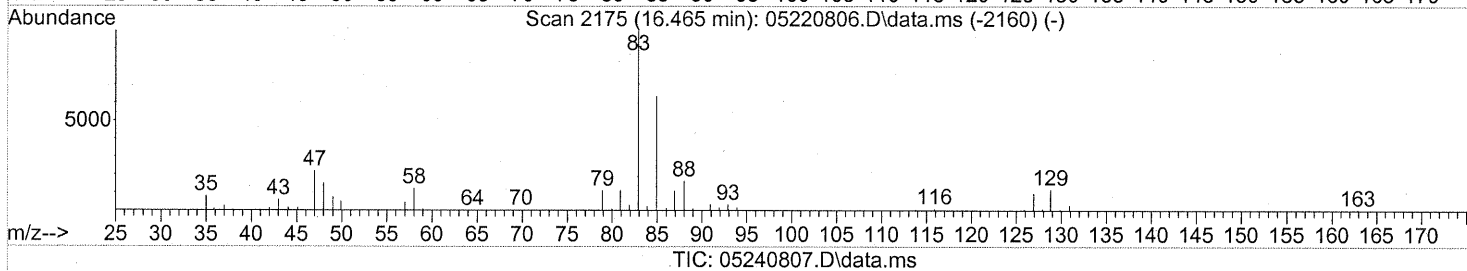
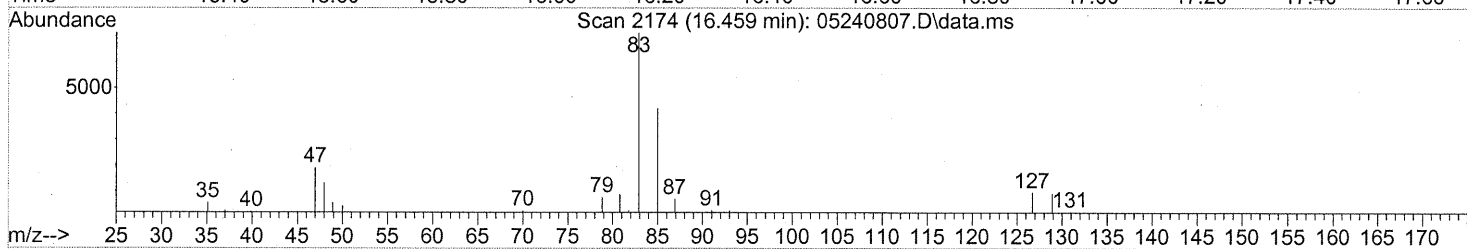
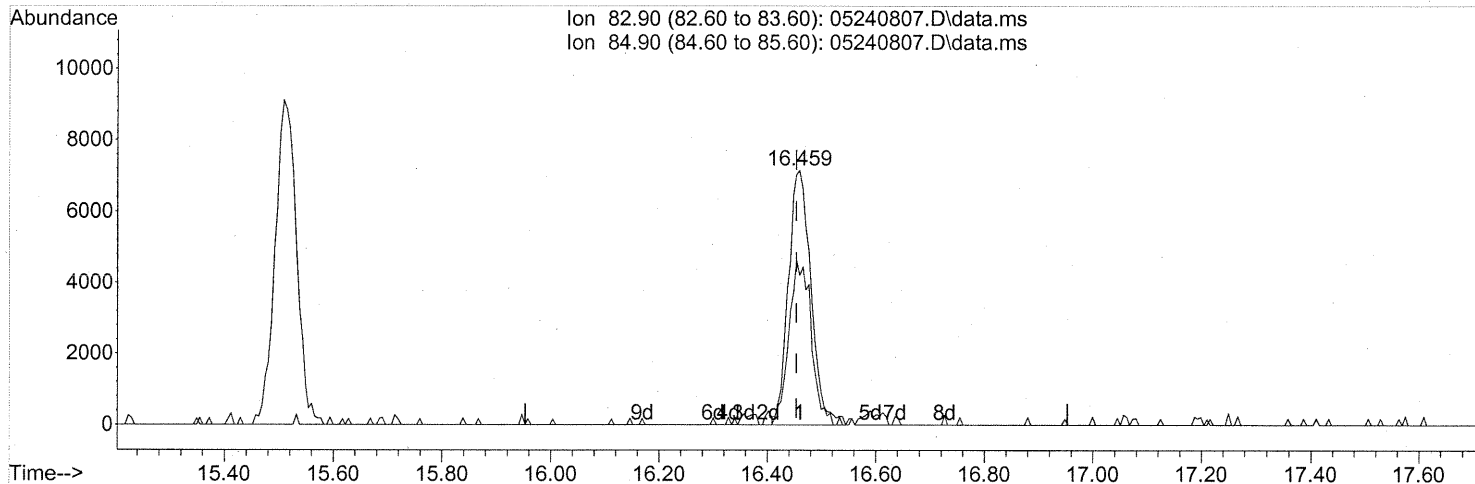
response 4620

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	90.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.459min (+0.006) 0.64ng

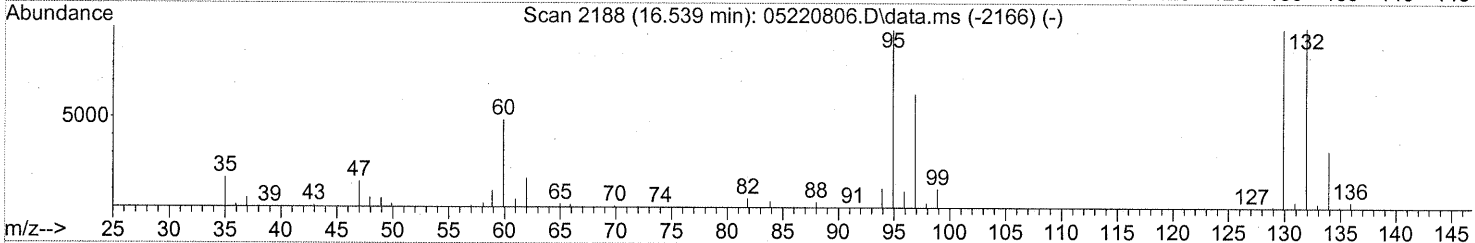
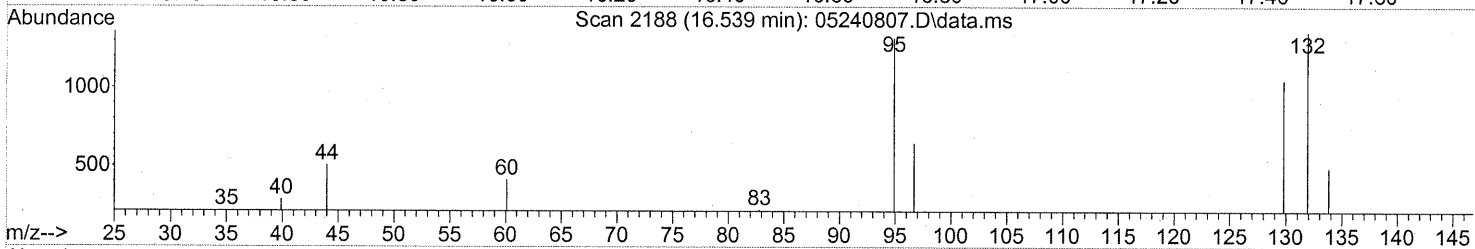
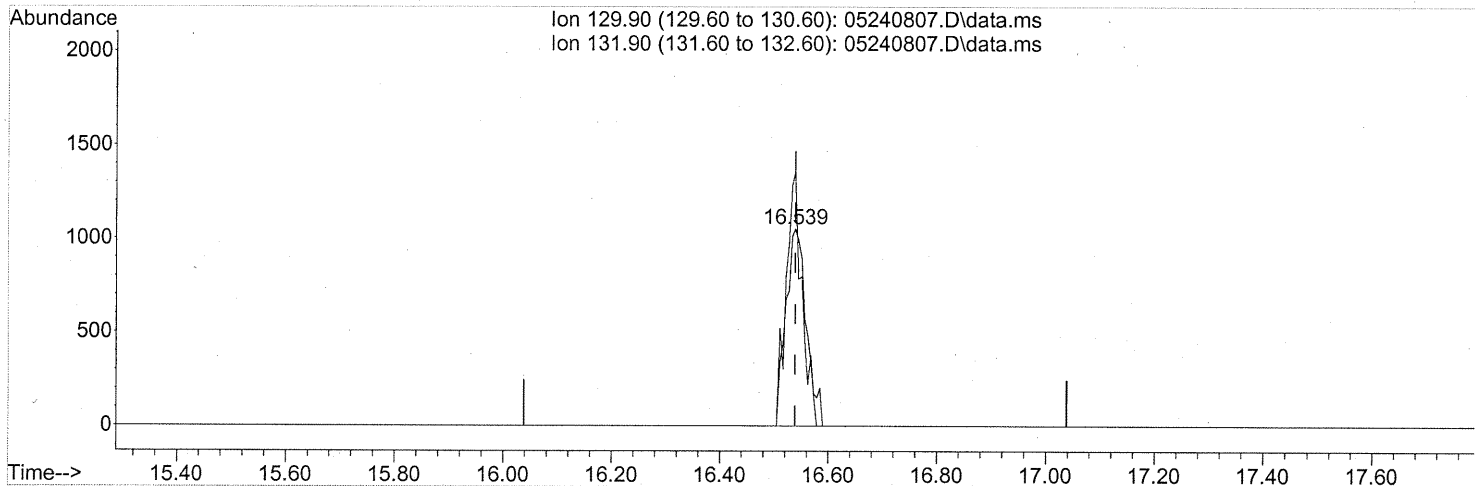
response 20692

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	63.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240807.D  
Acq On : 24 May 2008 11:13  
Operator : WA  
Sample : P0801442-017 (5.0ml)  
Misc : ENSR SG89B-05 (-3.2, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240807.D\data.ms

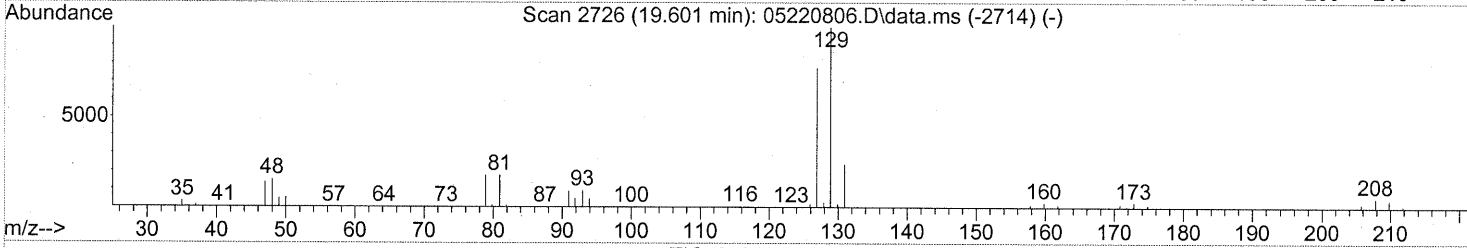
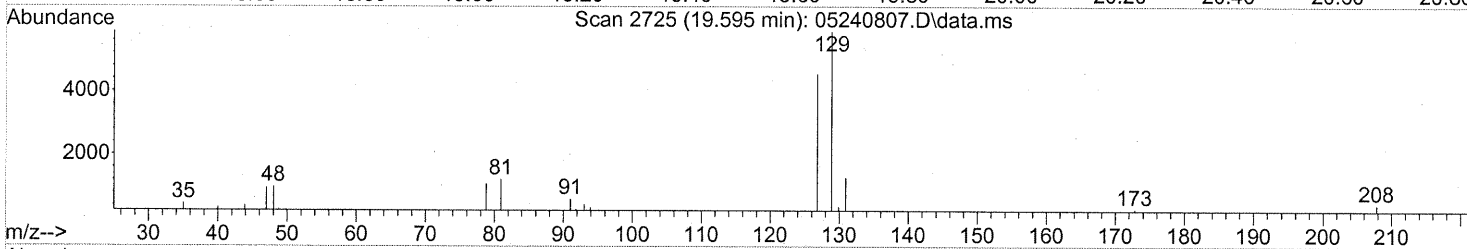
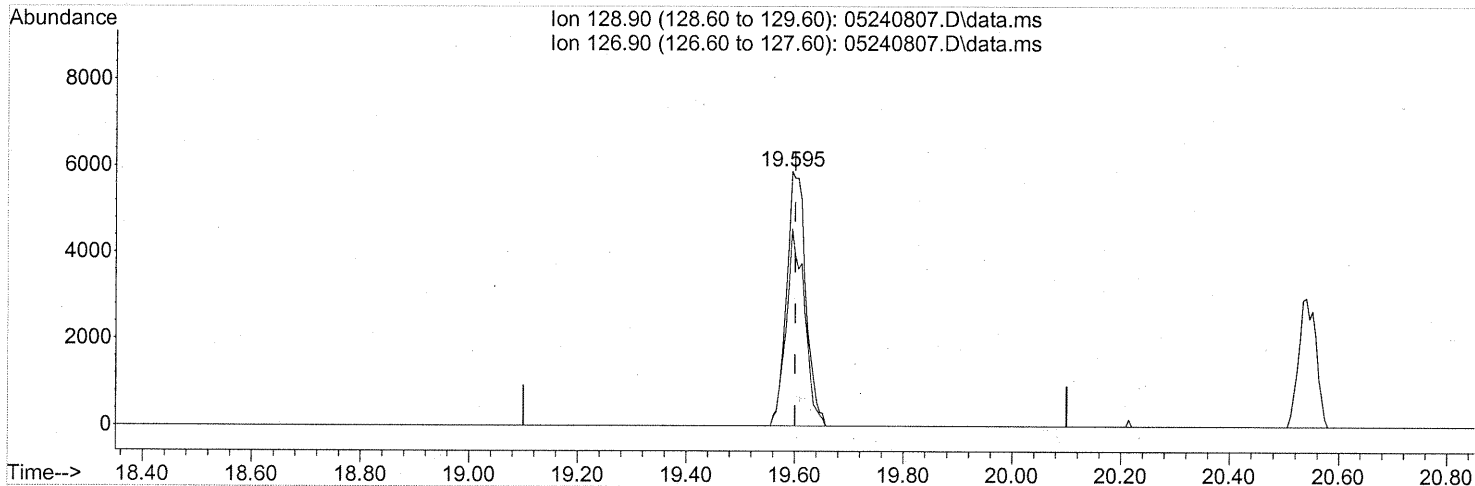
(47) Trichloroethene (T)  
16.539min (-0.000) 0.09ng  
response 2622

Ion	Exp%	Act%
129.90	100	100
131.90	101.20	109.42
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240807.D\data.ms

(60) Dibromochloromethane (T)

19.595min (-0.006) 0.51ng

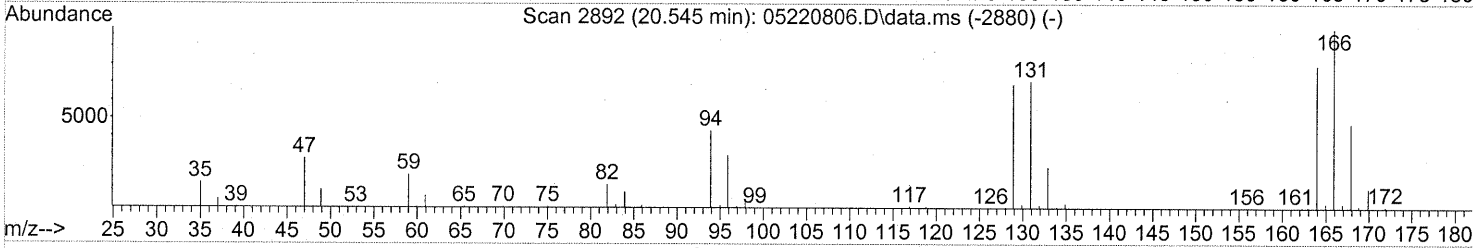
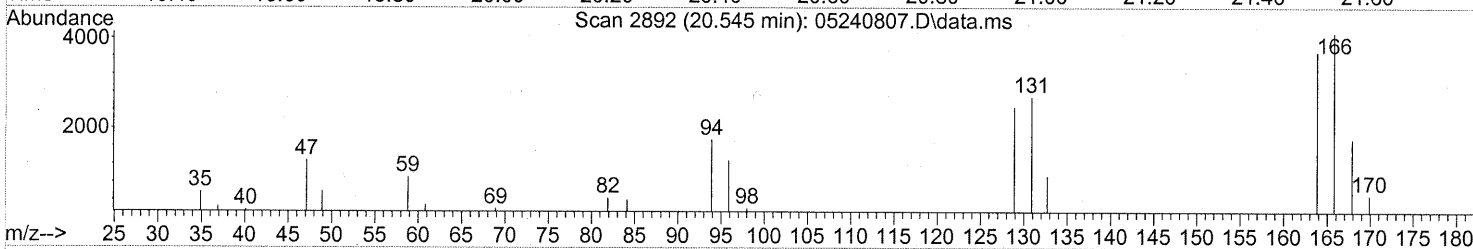
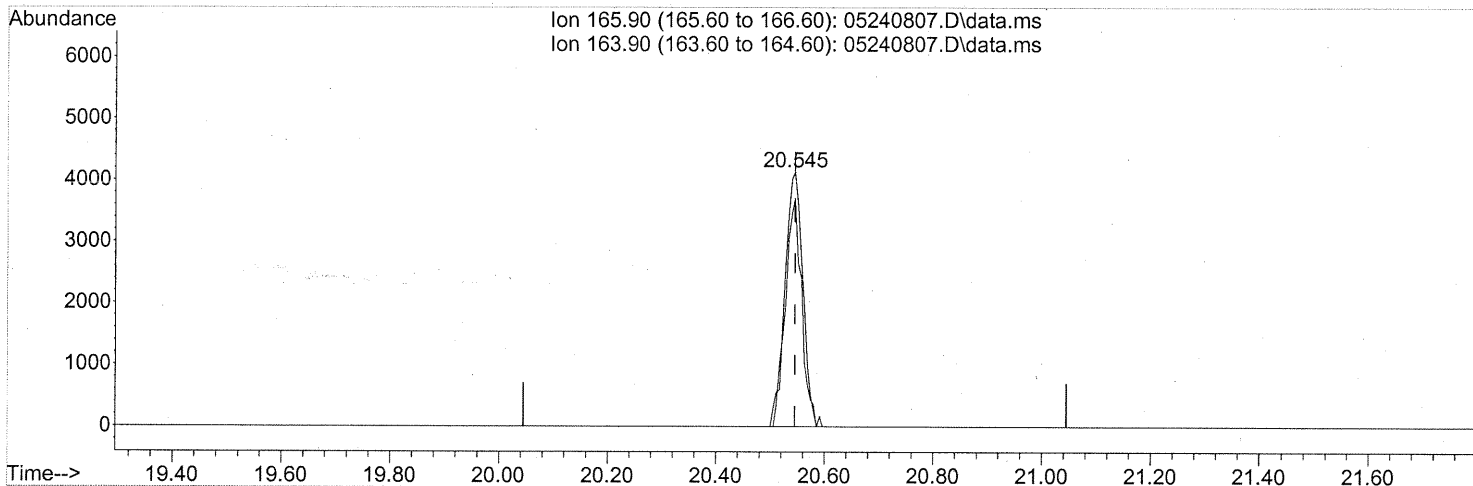
response 14403

Ion	Exp%	Act%
128.90	100	100
126.90	76.90	73.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240807.D  
Acq On : 24 May 2008 11:13  
Operator : WA  
Sample : P0801442-017 (5.0ml)  
Misc : ENSR SG89B-05 (-3.2, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.545min (-0.000) 0.30ng

response 9374

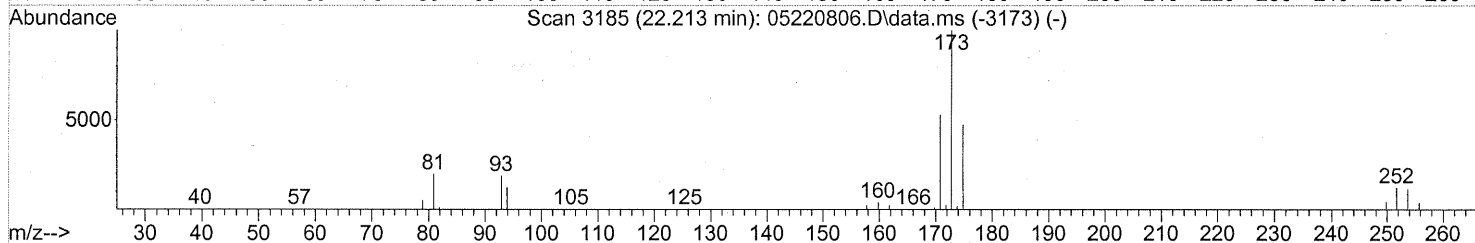
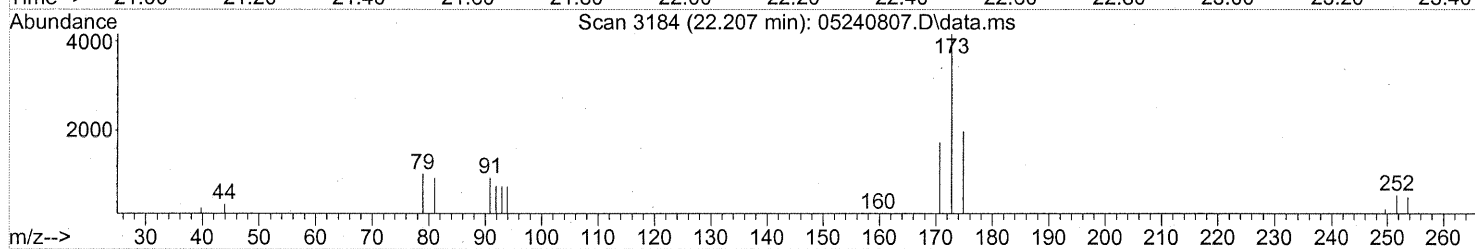
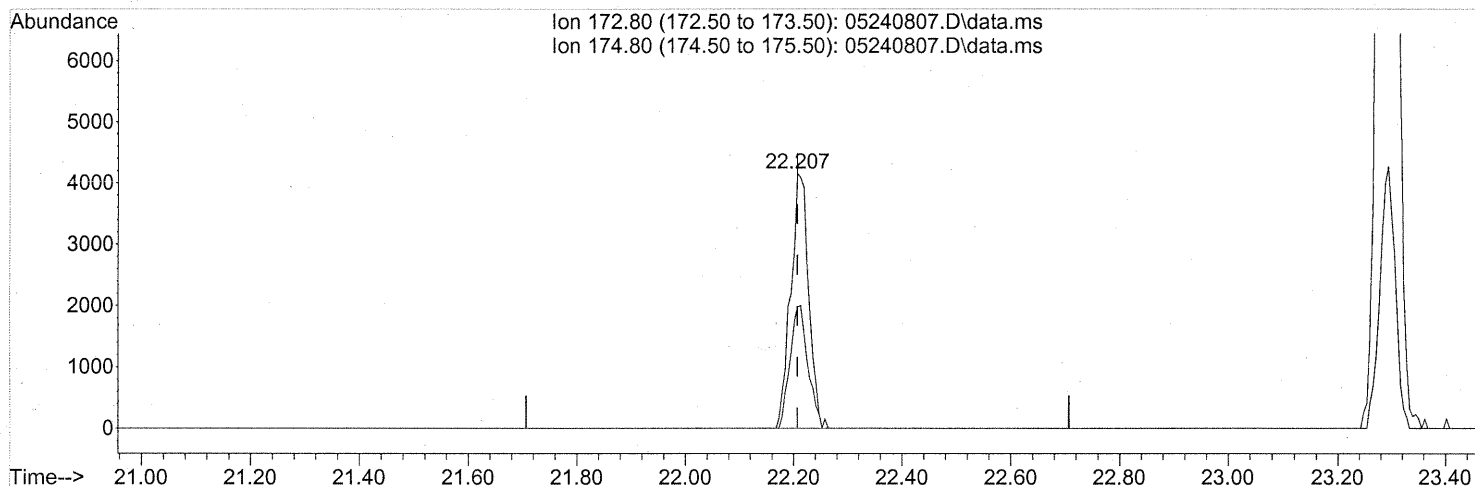
Ion	Exp%	Act%
165.90	100	100
163.90	78.70	82.13
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240807.D\data.ms

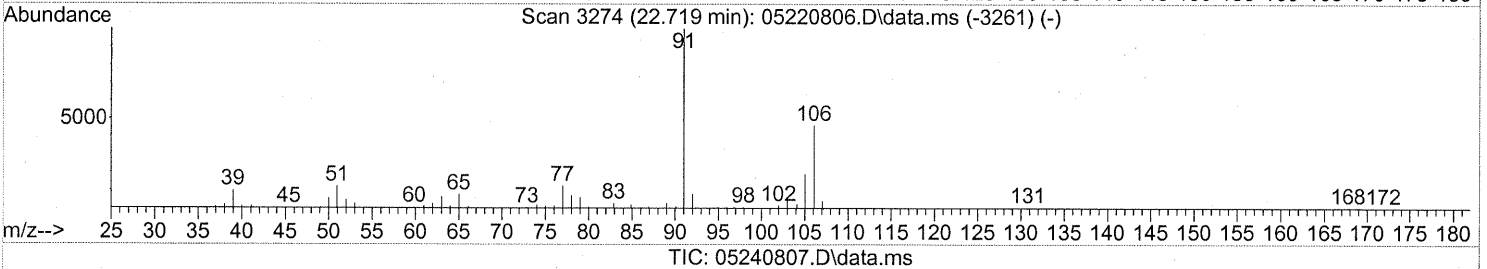
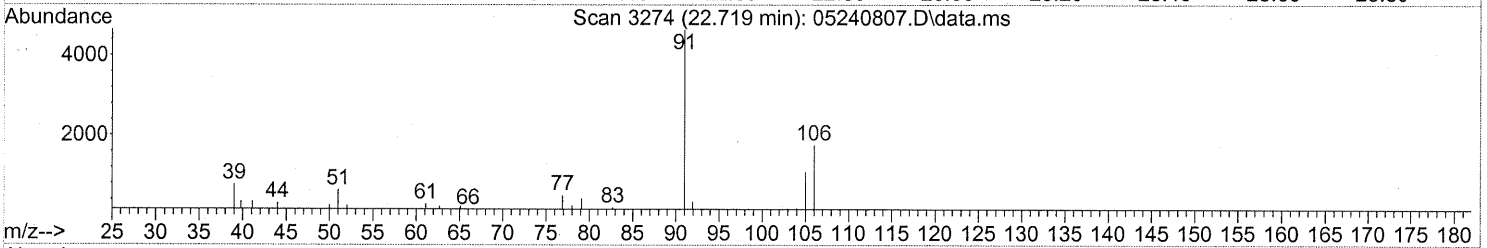
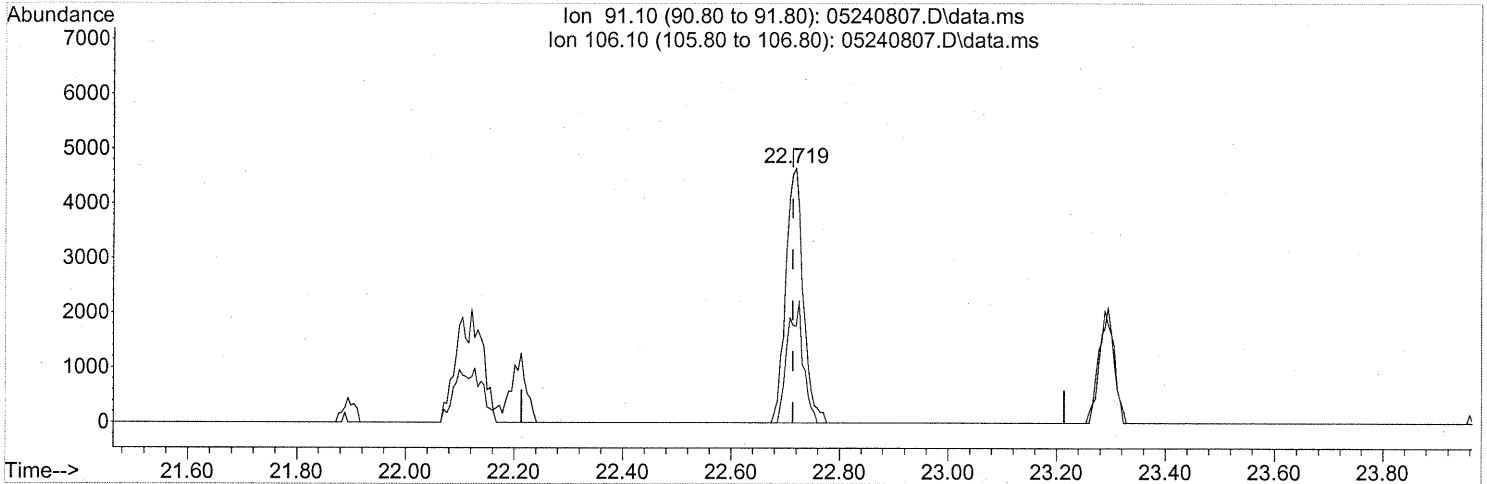
(68) Bromoform (T)  
 22.207min (-0.000) 0.45ng  
 response 9485

Ion	Exp%	Act%
172.80	100	100
174.80	49.40	48.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 13:01:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

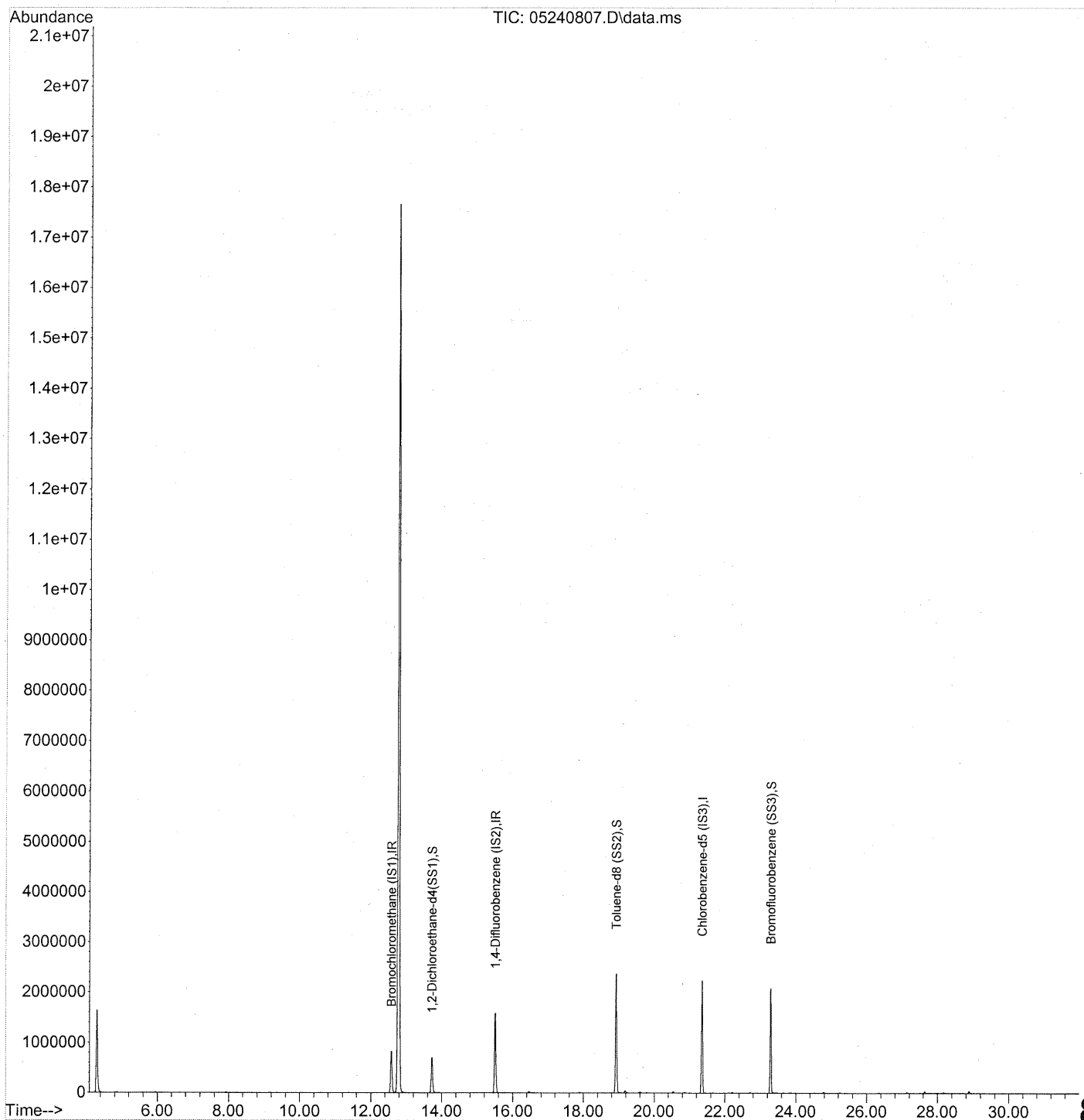


(70) o-Xylene (T)  
 22.719min (+0.006) 0.12ng  
 response 10341

Ion	Exp%	Act%
91.10	100	100
106.10	50.50	42.79
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240807.D  
Acq On : 24 May 2008 11:13  
Operator : WA  
Sample : P0801442-017 (5.0ml)  
Misc : ENSR SG89B-05 (-3.2, 3.5)  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:17 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240807.D  
 Acq On : 24 May 2008 11:13  
 Operator : WA  
 Sample : P0801442-017 (5.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:36:17 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

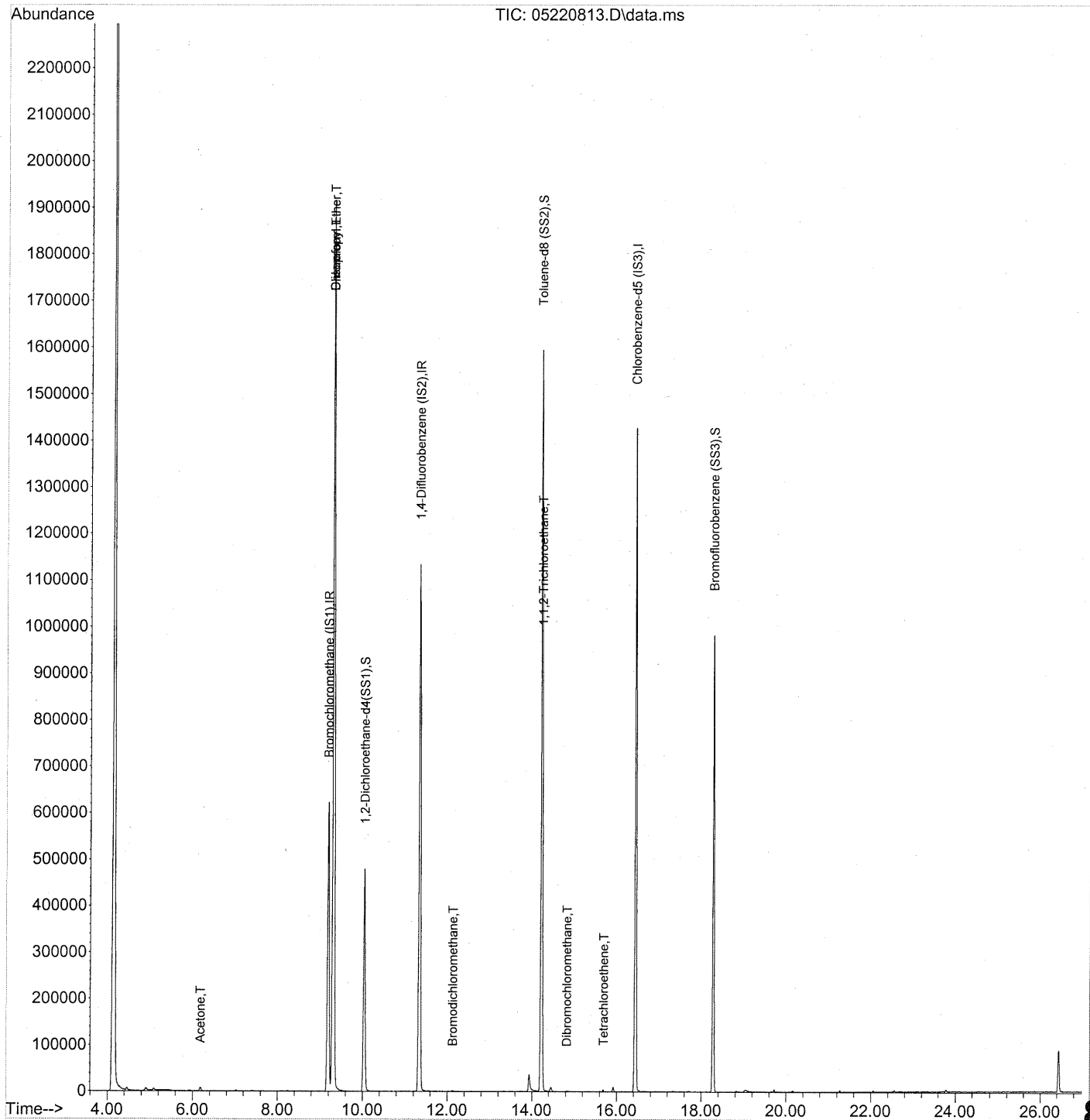
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	432946	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1838073	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	864159	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	717340	23.912	ng	-0.03
Spiked Amount	25.000					Recovery = 95.64%
5) Toluene-d8 (SS2)	18.93	98	1947988	25.100	ng	-0.01
Spiked Amount	25.000					Recovery = 100.40%
6) Bromofluorobenzene (SS3)	23.29	174	769167	24.372	ng	0.00
Spiked Amount	25.000					Recovery = 97.48%
Target Compounds						
7) tert-Butylbenzene	24.89	119	513		N.D.	Qvalue
8) n-Butylbenzene	25.92	91	268		N.D.	

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

*WA 5/29/08*

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220813.D  
 Acq On : 22 May 2008 15:59  
 Operator : WA  
 Sample : P0801442-017 Dil (1.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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\22\  
 Data File : 05220813.D  
 Acq On : 22 May 2008 15:59  
 Operator : WA  
 Sample : P0801442-017 Dil (1.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	295772	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1263184	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	484027	25.000	ng	-0.02

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)	Recovery
33) 1,2-Dichloroethane-d4 (...)	10.04	65	437648	20.983	ng	-0.05	83.92%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.22	98	1261577	26.471	ng	-0.02	105.88%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.28	174	349159	28.150	ng	-0.01	112.60%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1261	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	5.39	94	96	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	0.00	45	0	N.D.		
11) Acetonitrile	5.95	41	2417	N.D.		
12) Acrolein	6.06	56	295	N.D.		
13) Acetone	6.18	58	3559	0.182	ng	# 79
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	6.94	96	93	N.D.		
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.03	84	718	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	1752	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	9.31	87	209551	16.353	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\22\  
 Data File : 05220813.D  
 Acq On : 22 May 2008 15:59  
 Operator : WA  
 Sample : P0801442-017 Dil (1.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	9.31	83	1883389	85.395	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	758	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.33	84	468	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	1510	0.082	ng	88
47) Trichloroethene	12.18	130	91	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	106676	7.098	ng	# 7
58) Toluene	14.34	91	569	N.D.		
59) 2-Hexanone	14.58	43	91	N.D.		
60) Dibromochloromethane	14.83	129	1153	0.076	ng	85
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.69	166	1617	0.112	ng	87
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	17.14	91	366	N.D.		
67) m- & p-Xylene	17.17	91	89	N.D.		
68) Bromoform	17.26	173	297	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	17.72	91	679	N.D.		
71) n-Nonane	18.29	43	102	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	18.28	105	97	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	247	N.D.		
78) 4-Ethyltoluene	18.89	105	247	N.D.		
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.		

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Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220813.D  
 Acq On : 22 May 2008 15:59  
 Operator : WA  
 Sample : P0801442-017 Dil (1.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	0.00	118	0		N.D.	
81) 2-Ethyltoluene	19.82	105	102		N.D.	
82) 1,2,4-Trimethylbenzene	19.82	105	102		N.D.	
83) n-Decane	20.17	57	1656		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	19.82	105	102		N.D.	
88) p-Isopropyltoluene	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	0.00	105	0		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	21.27	57	1104		N.D.	
94) 1,2,4-Trichlorobenzene	0.00	184	0		N.D.	
95) Naphthalene	22.70	128	577		N.D.	
96) n-Dodecane	22.56	57	944		N.D.	
97) Hexachloro-1,3-butadiene	0.00	225	0		N.D.	

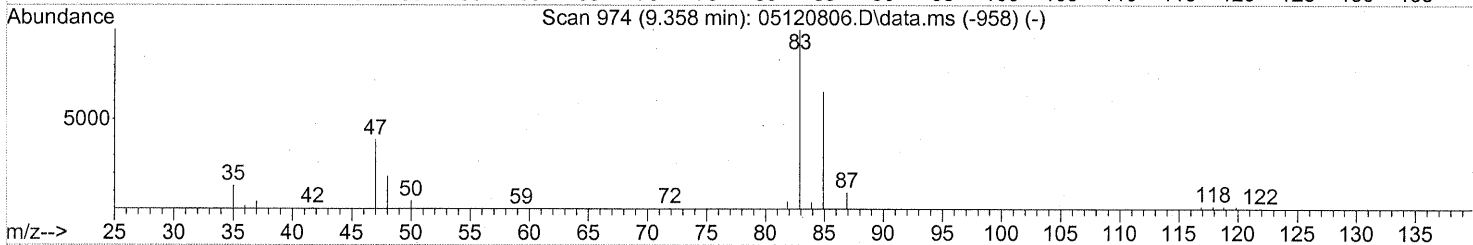
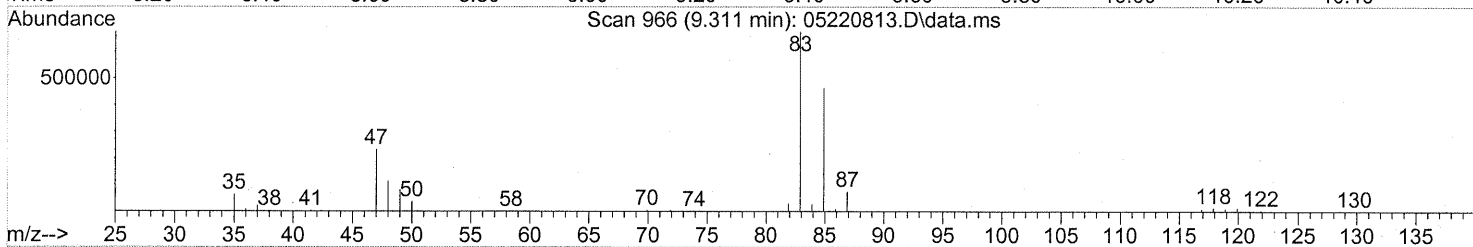
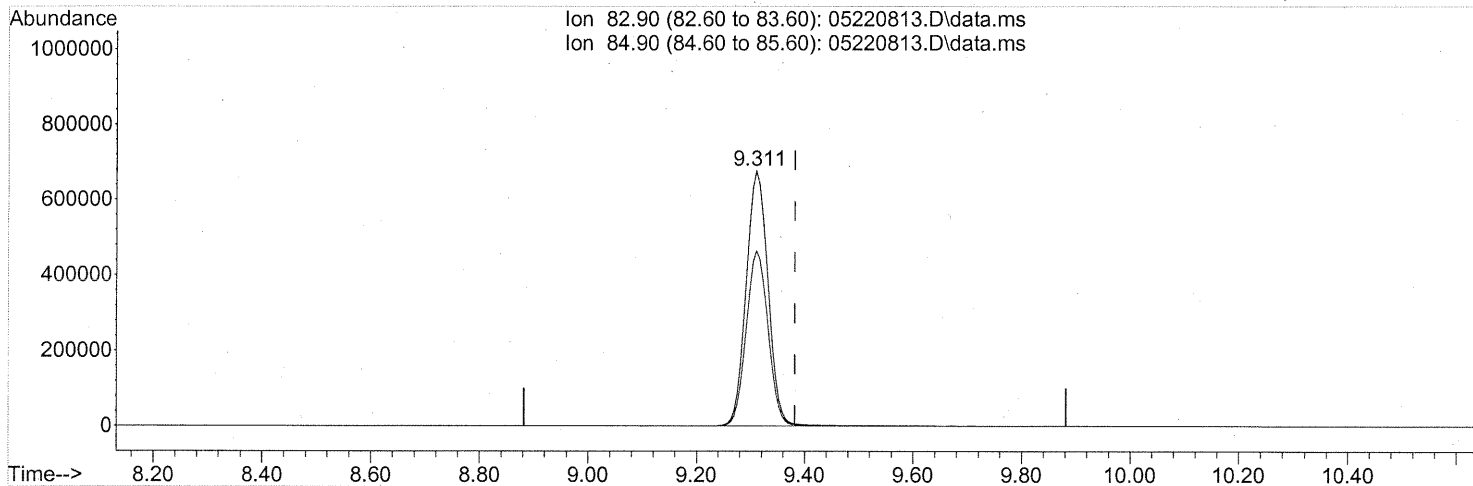
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220813.D  
 Acq On : 22 May 2008 15:59  
 Operator : WA  
 Sample : P0801442-017 Dil (1.0ml)  
 Misc : ENSR SG89B-05 (-3.2, 3.5)  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:38:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05220813.D\data.ms

(32) Chloroform (T)  
 9.311min (-0.071) 85.39ng  
 response 1883389

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	68.61
0.00	0.00	0.00
0.00	0.00	0.00

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**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.1	0.42	2.2	0.22	J
74-87-3	Chloromethane	2.4	2.2	1.1	1.1	1.1	0.53	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	11	1.1	ND	1.6	0.16	
75-01-4	Vinyl Chloride	ND	2.2	1.1	ND	0.86	0.43	
74-83-9	Bromomethane	ND	2.2	1.1	ND	0.56	0.28	
75-00-3	Chloroethane	ND	2.2	1.1	ND	0.83	0.41	
64-17-5	Ethanol	61	110	1.1	32	58	0.58	J
67-64-1	Acetone	19	110	1.6	8.0	46	0.67	J, B
75-69-4	Trichlorofluoromethane	1.3	2.2	1.1	0.23	0.39	0.19	J
107-13-1	Acrylonitrile	ND	11	1.5	ND	5.0	0.71	
75-35-4	1,1-Dichloroethene	17	2.2	1.1	4.3	0.55	0.28	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	11	1.6	ND	3.6	0.53	
75-09-2	Methylene Chloride	1.9	11	1.1	0.54	3.1	0.31	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	2.2	1.1	ND	0.70	0.35	
76-13-1	Trichlorotrifluoroethane	ND	2.2	1.2	ND	0.29	0.16	
75-15-0	Carbon Disulfide	4.3	11	2.6	1.4	3.5	0.84	J
156-60-5	trans-1,2-Dichloroethene	ND	2.2	1.1	ND	0.55	0.28	
75-34-3	1,1-Dichloroethane	ND	2.2	1.1	ND	0.54	0.27	
1634-04-4	Methyl tert-Butyl Ether	ND	2.2	1.1	ND	0.61	0.30	
108-05-4	Vinyl Acetate	ND	110	3.5	ND	31	0.99	
78-93-3	2-Butanone (MEK)	3.5	11	1.1	1.2	3.7	0.37	J
156-59-2	cis-1,2-Dichloroethene	ND	2.2	1.1	ND	0.55	0.28	
108-20-3	Diisopropyl Ether	ND	11	1.3	ND	2.6	0.31	
67-66-3	Chloroform	11,000	2.2	1.3	2,200	0.45	0.26	

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:     *Re*    

Date:     6/2/08    

**868**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.1	ND	2.6	0.27	
107-06-2	1,2-Dichloroethane	ND	2.2	1.1	ND	0.54	0.27	
71-55-6	1,1,1-Trichloroethane	ND	2.2	1.1	ND	0.40	0.20	
71-43-2	<b>Benzene</b>	<b>2.8</b>	2.2	1.1	<b>0.88</b>	0.68	0.34	
56-23-5	<b>Carbon Tetrachloride</b>	<b>19</b>	2.2	1.1	<b>3.0</b>	0.35	0.17	
994-05-8	tert-Amyl Methyl Ether	ND	11	1.1	ND	2.6	0.26	
78-87-5	1,2-Dichloropropane	ND	2.2	1.1	ND	0.47	0.24	
75-27-4	<b>Bromodichloromethane</b>	<b>4.0</b>	2.2	1.1	<b>0.59</b>	0.33	0.16	
79-01-6	<b>Trichloroethene</b>	<b>180</b>	2.2	1.1	<b>33</b>	0.41	0.20	
123-91-1	1,4-Dioxane	ND	11	1.3	ND	3.0	0.37	
80-62-6	Methyl Methacrylate	ND	11	1.6	ND	2.7	0.40	
142-82-5	n-Heptane	ND	11	1.4	ND	2.7	0.34	
10061-01-5	cis-1,3-Dichloropropene	ND	11	1.1	ND	2.4	0.25	
108-10-1	4-Methyl-2-pentanone	ND	11	1.2	ND	2.7	0.30	
10061-02-6	trans-1,3-Dichloropropene	ND	11	1.4	ND	2.4	0.30	
79-00-5	1,1,2-Trichloroethane	ND	2.2	1.1	ND	0.40	0.20	
108-88-3	<b>Toluene</b>	<b>2.9</b>	11	1.1	<b>0.78</b>	2.9	0.29	<b>J</b>
591-78-6	2-Hexanone	ND	11	1.7	ND	2.7	0.41	
124-48-1	Dibromochloromethane	ND	2.2	1.5	ND	0.26	0.17	
106-93-4	1,2-Dibromoethane	ND	2.2	1.2	ND	0.28	0.15	
111-65-9	n-Octane	ND	11	1.1	ND	2.3	0.23	
127-18-4	<b>Tetrachloroethene</b>	<b>15</b>	2.2	1.1	<b>2.2</b>	0.32	0.16	
108-90-7	Chlorobenzene	ND	2.2	1.1	ND	0.48	0.24	

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:     Rw          Date:     6/2/08          **869**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG75B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-018

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Tekmar AUTOCAN/Agilent 5975Cinert/6890N/MS16  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00575

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/22/08 & 5/24/08  
**Volume(s) Analyzed:** 0.075 Liter(s)  
 0.015 Liter(s)

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

Canister Dilution Factor: 1.64

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	11	1.4	ND	2.5	0.31	
179601-23-1	m,p-Xylenes	ND	11	2.8	ND	2.5	0.65	
75-25-2	Bromoform	ND	11	1.7	ND	1.1	0.16	
100-42-5	Styrene	ND	11	1.7	ND	2.6	0.39	
95-47-6	o-Xylene	ND	11	1.4	ND	2.5	0.32	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.2	1.4	ND	0.32	0.20	
98-82-8	Cumene	ND	11	1.2	ND	2.2	0.25	
103-65-1	n-Propylbenzene	ND	11	1.1	ND	2.2	0.23	
622-96-8	4-Ethyltoluene	ND	11	1.2	ND	2.2	0.25	
108-67-8	1,3,5-Trimethylbenzene	ND	11	1.3	ND	2.2	0.27	
98-83-9	alpha-Methylstyrene	ND	11	1.6	ND	2.3	0.33	
95-63-6	1,2,4-Trimethylbenzene	ND	11	1.5	ND	2.2	0.31	
100-44-7	Benzyl Chloride	ND	2.2	1.9	ND	0.42	0.36	
541-73-1	1,3-Dichlorobenzene	ND	2.2	1.4	ND	0.36	0.23	
106-46-7	1,4-Dichlorobenzene	ND	2.2	1.2	ND	0.36	0.20	
135-98-8	sec-Butylbenzene	ND	11	1.3	ND	2.0	0.23	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	11	1.4	ND	2.0	0.26	
95-50-1	1,2-Dichlorobenzene	ND	2.2	1.4	ND	0.36	0.24	
96-12-8	1,2-Dibromo-3-chloropropane	ND	11	1.7	ND	1.1	0.17	
120-82-1	1,2,4-Trichlorobenzene	ND	2.2	1.7	ND	0.29	0.22	
91-20-3	Naphthalene	ND	4.4	1.6	ND	0.83	0.31	
87-68-3	Hexachlorobutadiene	ND	2.2	2.0	ND	0.21	0.18	
98-06-6	tert-Butylbenzene	ND	4.4	1.1	ND	0.80	0.20	
104-51-8	n-Butylbenzene	ND	4.4	1.1	ND	0.80	0.20	

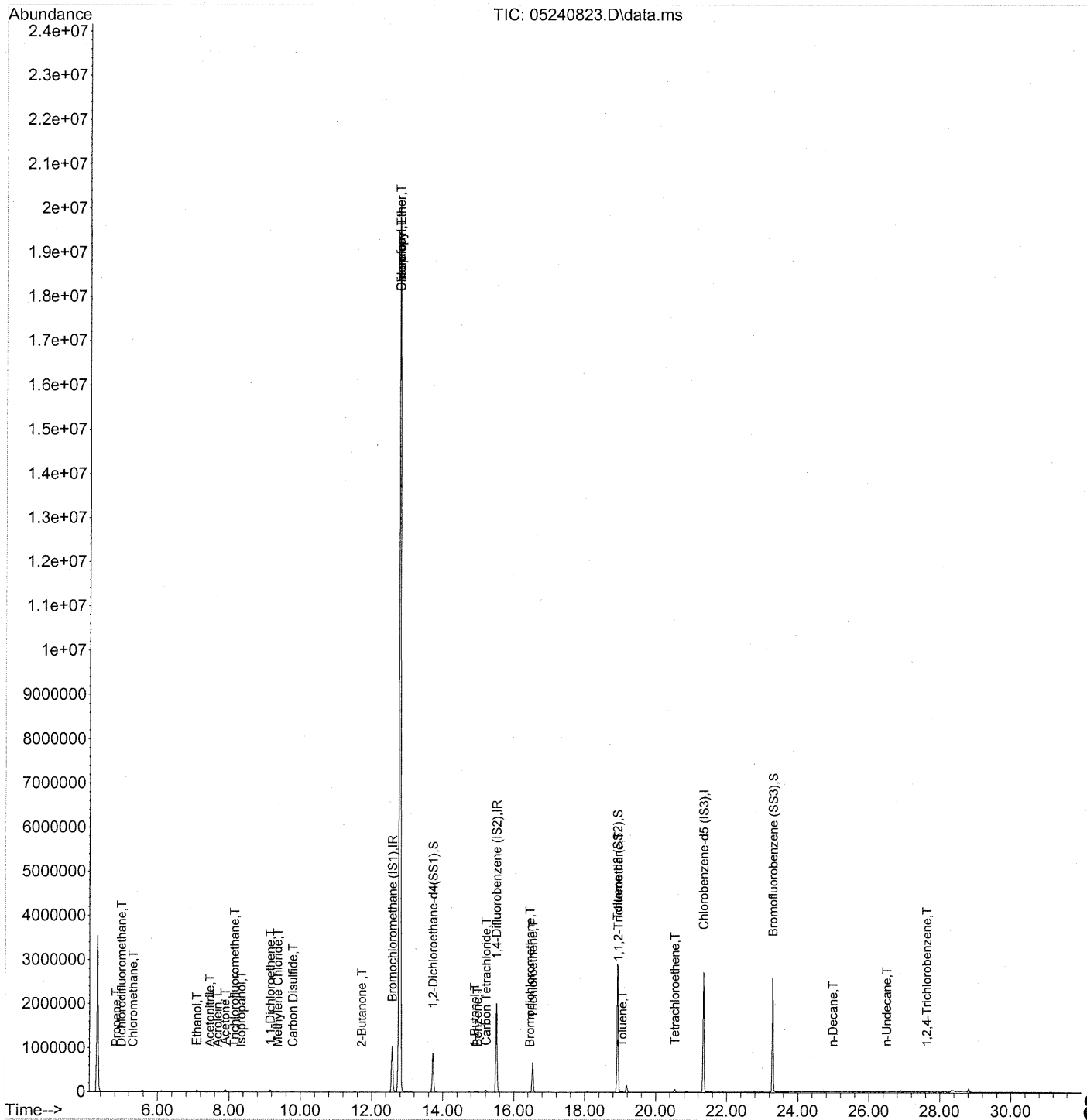
ND = Compound was analyzed for, but not detected above the laboratory detection limit.

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

Verified By:     *Re*          Date:     6/2/08          **870**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



871

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	558421	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	2357400	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1070709	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	884174	22.851	ng	0.00
Spiked Amount	25.000		Recovery	=	91.40%	✓
57) Toluene-d8 (SS2)	18.92	98	2454457	25.525	ng	0.00
Spiked Amount	25.000		Recovery	=	102.08%	✓
73) Bromofluorobenzene (SS3)	23.29	174	993968	25.419	ng	0.00
Spiked Amount	25.000		Recovery	=	101.68%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	4567	0.104	ng	# 71
3) Dichlorodifluoromethane	4.99	85	7661	0.094	ng	98
4) Chloromethane	5.32	50	5673	0.108	ng	89
5) Freon 114	5.55	135	147	N.D.	✓	
6) Vinyl Chloride	5.77	62	68	N.D.	✓	
7) 1,3-Butadiene	6.05	54	67	N.D.	✓	
8) Bromomethane	6.51	94	81	N.D.	✓	
9) Chloroethane	0.00	64	0	N.D.	✓	
10) Ethanol	7.10	45	82195m	2.799	ng	
11) Acetonitrile	7.46	41	4885	0.058	ng	# 26
12) Acrolein	7.68	56	1950	0.093	ng	# 75
13) Acetone	7.89	58	26131m	0.869	ng	
14) Trichlorofluoromethane	8.16	101	4034	0.058	ng	91
15) Isopropanol	8.35	45	5733	0.060	ng	99
16) Acrylonitrile	8.71	53	56	N.D.	✓	
17) 1,1-Dichloroethene	9.16	96	23957	0.781	ng	# 73
18) tert-Butanol	9.16	59	1270	N.D.	✓	
19) Methylene Chloride	9.37	84	2894	0.086	ng	# 71
20) Allyl Chloride	9.46	41	390	N.D.	✓	
21) Trichlorotrifluoroethane	9.79	151	304	N.D.	✓	
22) Carbon Disulfide	9.78	76	25300	0.198	ng	97
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	11.10	63	1636	N.D.	✓	
25) Methyl tert-Butyl Ether	11.23	73	2062	N.D.	✓	
26) Vinyl Acetate	0.00	86	0	N.D.	✓	
27) 2-Butanone	11.72	72	3523	0.161	ng	# 86
28) cis-1,2-Dichloroethene	12.34	61	128	N.D.		
29) Diisopropyl Ether	12.79	87	2700264	100.440	ng	NR# 1
30) Ethyl Acetate	12.74	61	56	N.D.		
31) n-Hexane	12.70	57	763	N.D.		

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.79	83	22361207	<del>439.134</del> ng	see dil	93
34) Tetrahydrofuran	13.44	72	55	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.91	62	61	N.D.	✓	
38) 1,1,1-Trichloroethane	14.29	97	76	N.D.	✓	
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.90	56	4855	0.150	ng	98
41) Benzene	14.98	78	15864	0.129	ng	99
42) Carbon Tetrachloride	15.22	117	40835	0.859	ng	97
43) Cyclohexane	15.42	84	401	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	✓	
45) 1,2-Dichloropropane	16.19	63	585	N.D.	✓	
46) Bromodichloromethane	16.46	83	7556	0.181	ng	88
47) Trichloroethene	16.53	130	306544	8.096	ng	99
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	16.62	57	1599	N.D.		
50) Methyl Methacrylate	16.53	100	545	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	18.94	97	212509	<del>6.967</del> ng	NR#	9
58) Toluene	19.06	91	17504	0.134	ng	96
59) 2-Hexanone	19.39	43	791	N.D.	✓	
60) Dibromochloromethane	19.61	129	1029	N.D.	✓	
61) 1,2-Dibromoethane	19.95	107	779	N.D.	✓	
62) Butyl Acetate	20.19	43	418	N.D.		
63) n-Octane	20.35	57	155	N.D.	✓	
64) Tetrachloroethene	20.55	166	26131	0.676	ng	99
65) Chlorobenzene	21.43	112	55	N.D.	✓	
66) Ethylbenzene	21.88	91	1981	N.D.	✓	
67) m- & p-Xylene	22.10	91	1096	N.D.	✓	
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	22.58	104	76	N.D.	✓	
70) o-Xylene	22.71	91	618	N.D.	✓	
71) n-Nonane	22.98	43	1184	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.67	83	292	N.D.	✓	
74) Cumene	23.46	105	688	N.D.	✓	
75) alpha-Pinene	23.94	93	1655	N.D.		
76) n-Propylbenzene	24.11	91	832	N.D.	✓	
77) 3-Ethyltoluene	24.23	105	335	N.D.		
78) 4-Ethyltoluene	24.30	105	571	N.D.	✓	
79) 1,3,5-Trimethylbenzene	24.38	105	462	N.D.	✓	

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.59	118	157	N.D.	✓	
81) 2-Ethyltoluene	24.62	105	419	N.D.	✓	
82) 1,2,4-Trimethylbenzene	24.88	105	964	N.D.	✓	
83) n-Decane	24.98	57	3960	0.055	ng	81
84) Benzyl Chloride	25.08	91	530	N.D.	✓	
85) 1,3-Dichlorobenzene	25.07	146	1368	N.D.	✓	
86) 1,4-Dichlorobenzene	25.15	146	2012	N.D.	✓	
87) sec-Butylbenzene	25.22	105	281	N.D.	✓	
88) p-Isopropyltoluene	25.39	119	232	N.D.	✓	
89) 1,2,3-Trimethylbenzene	25.41	105	633	N.D.	✓	
90) 1,2-Dichlorobenzene	25.58	146	888	N.D.	✓	
91) d-Limonene	25.58	68	326	N.D.	✓	
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.	✓	
93) n-Undecane	26.50	57	5601	0.074	ng	# 73
94) 1,2,4-Trichlorobenzene	27.63	180	4102	<del>0.072</del>	ng	# 79
95) Naphthalene	27.78	128	8113	N.D.	✓	
96) n-Dodecane	27.74	57	2522	N.D.	✓	
97) Hexachloro-1,3-butadiene	28.32	225	326	N.D.	✓	

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

*WA* 5/29/08

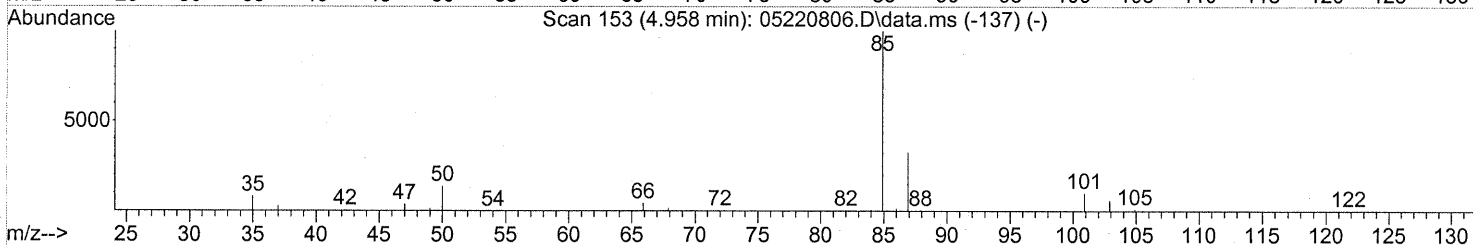
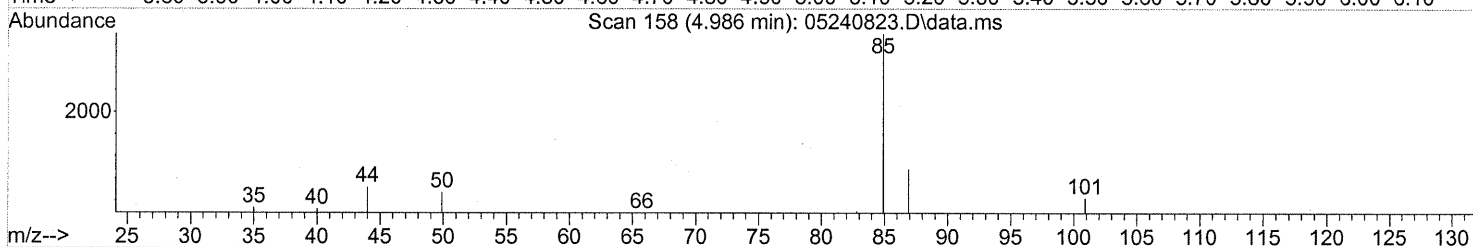
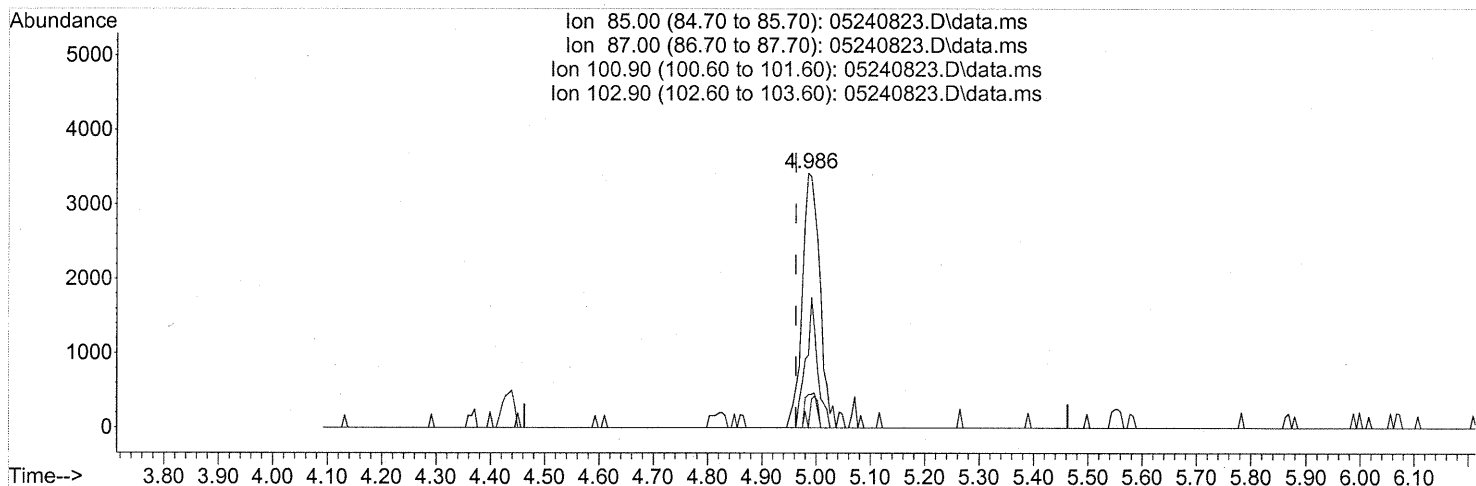
**874**



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(3) Dichlorodifluoromethane (T)

4.986min (+0.023) 0.09ng

response 7661

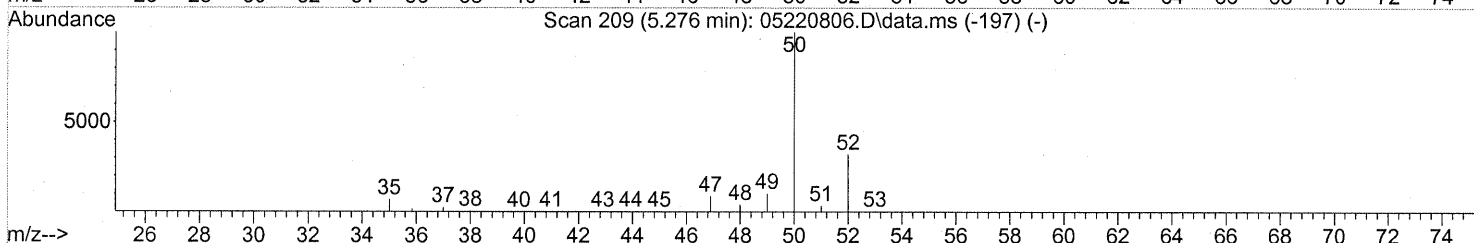
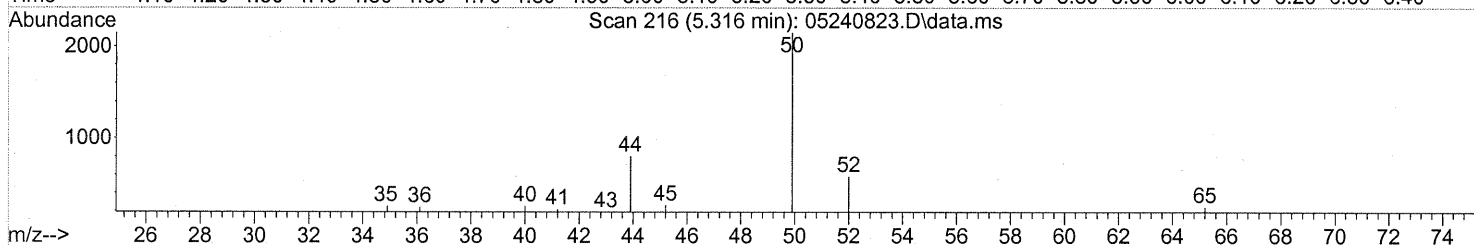
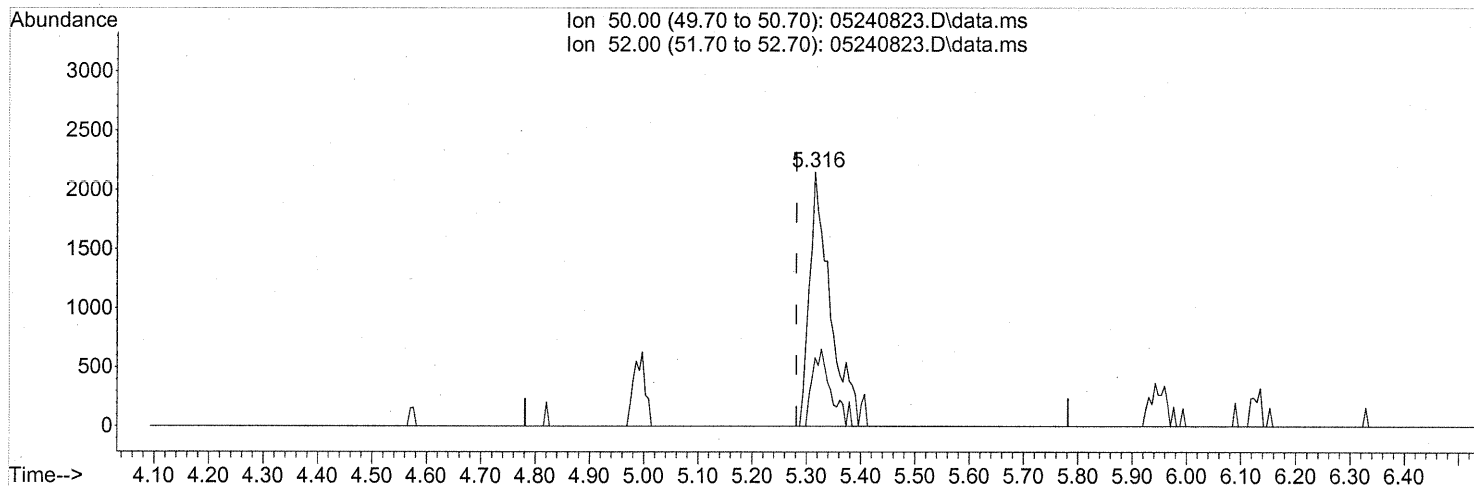
Ion	Exp%	Act%
85.00	100	100
87.00	32.50	34.11
100.90	9.30	8.86
102.90	6.00	6.13

875

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(4) Chloromethane (T)

5.316min (+0.034) 0.11ng

response 5673

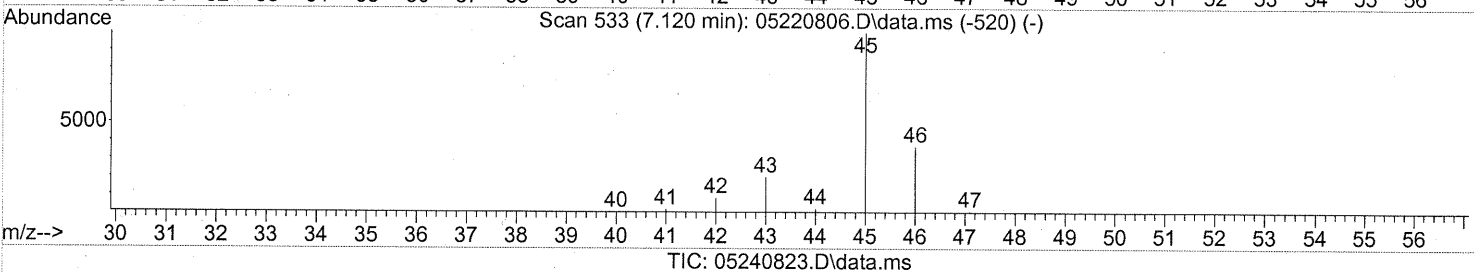
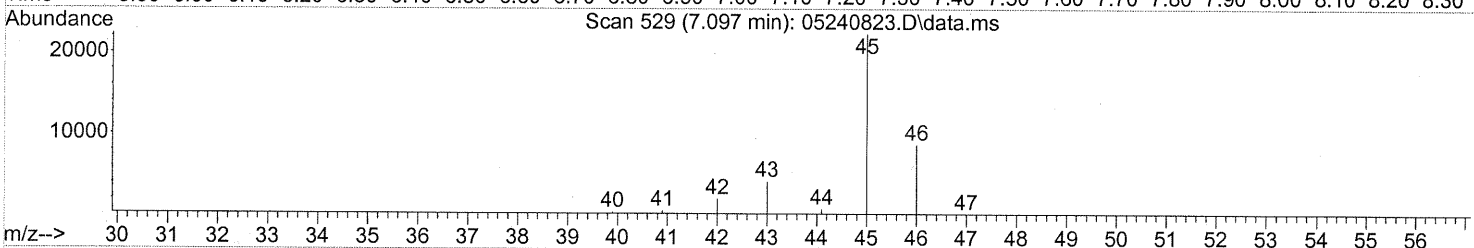
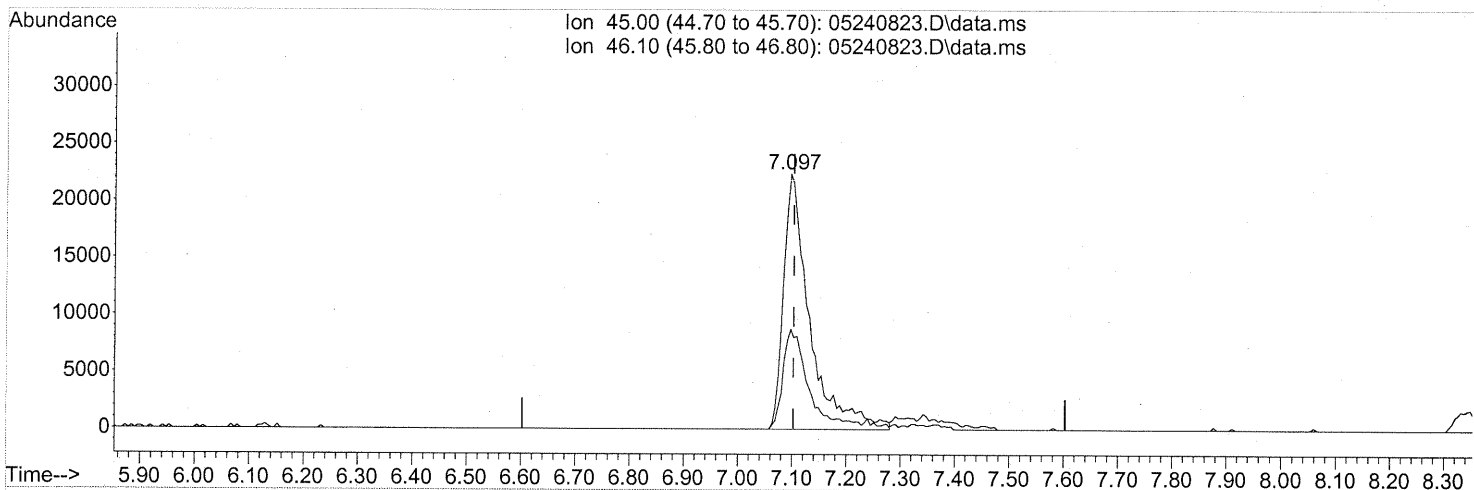
Ion	Exp%	Act%
50.00	100	100
52.00	33.70	27.55
0.00	0.00	0.00
0.00	0.00	0.00

876

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801422-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 09:06:13 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.006) 2.54ng

response 74626

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	38.35
0.00	0.00	0.00
0.00	0.00	0.00

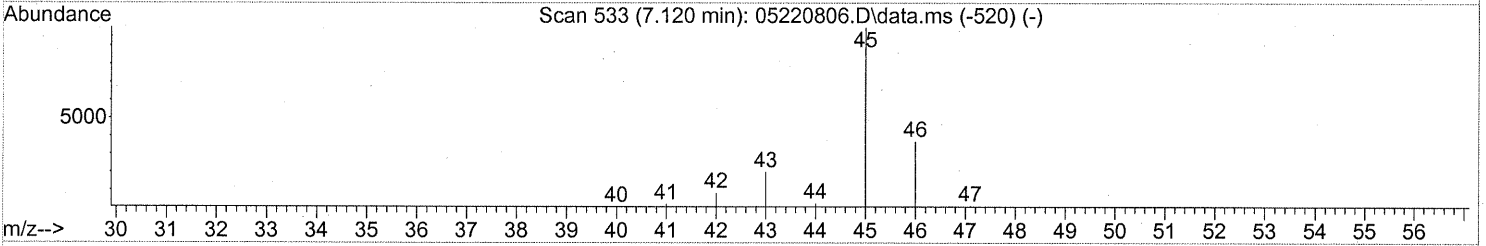
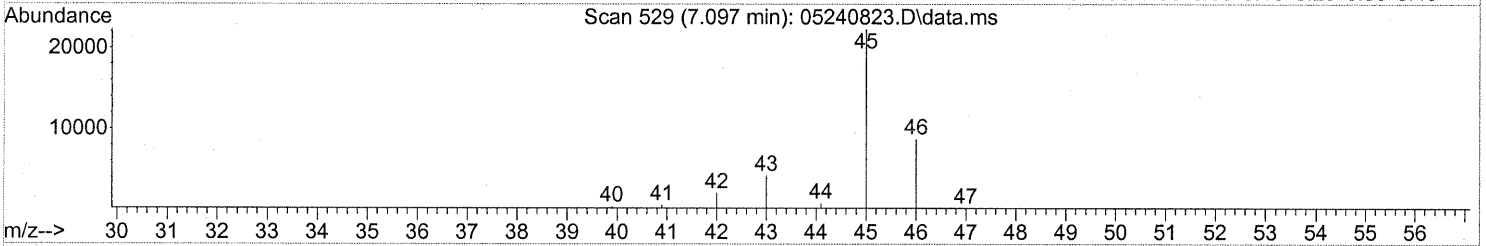
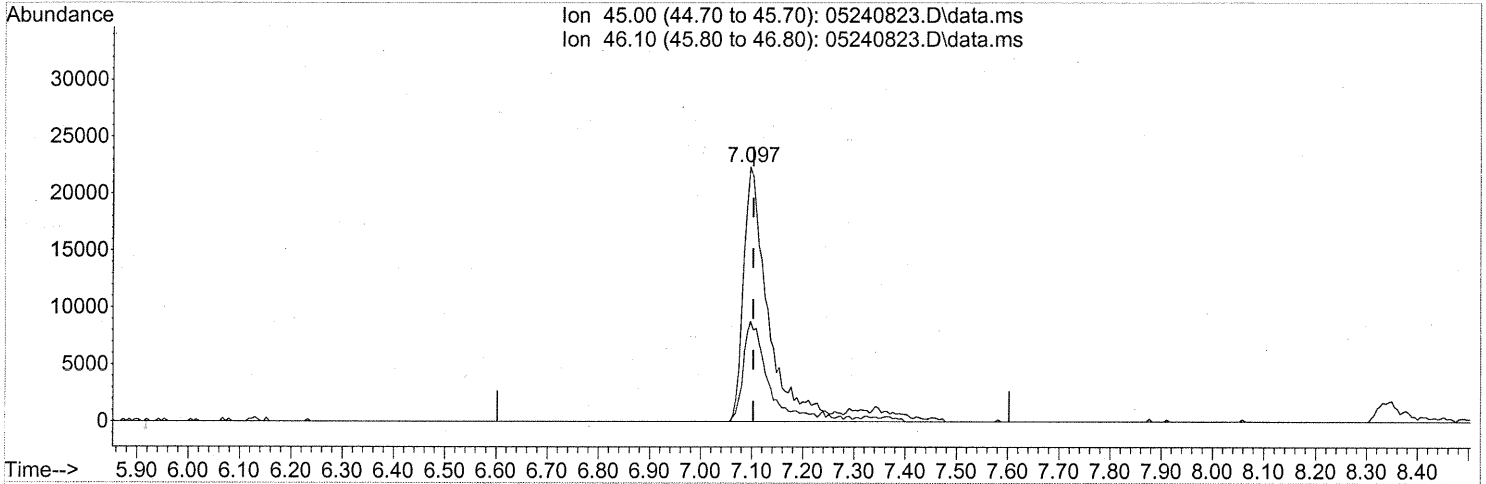
*split peaks*

877

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(10) Ethanol (T)  
 7.097min (-0.006) 2.80ng m  
 response 82195

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.82
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

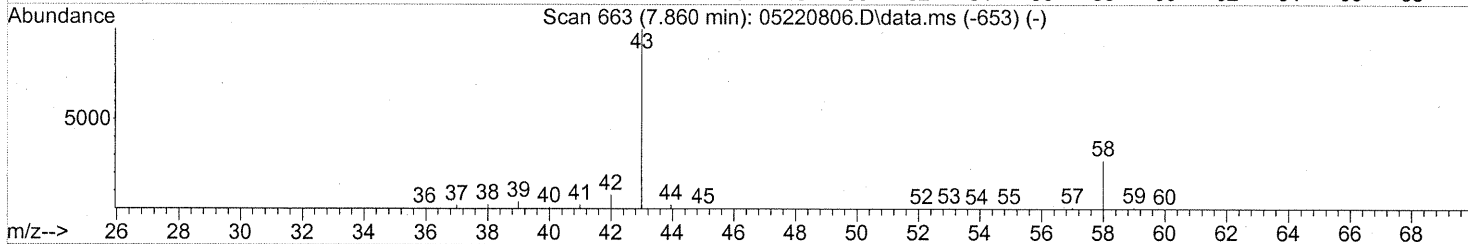
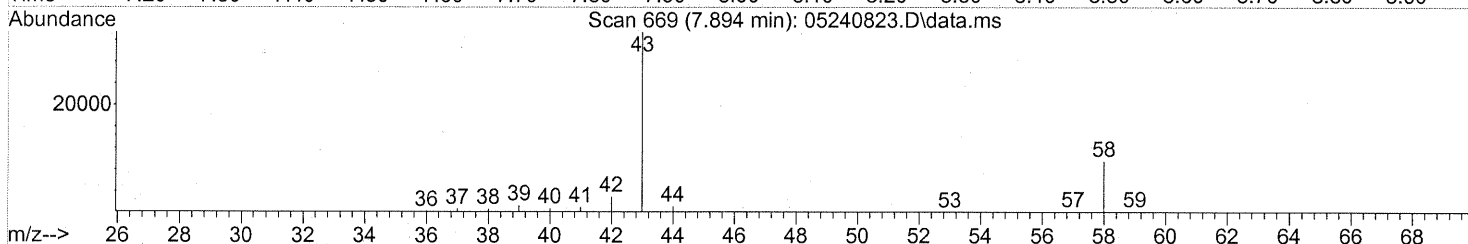
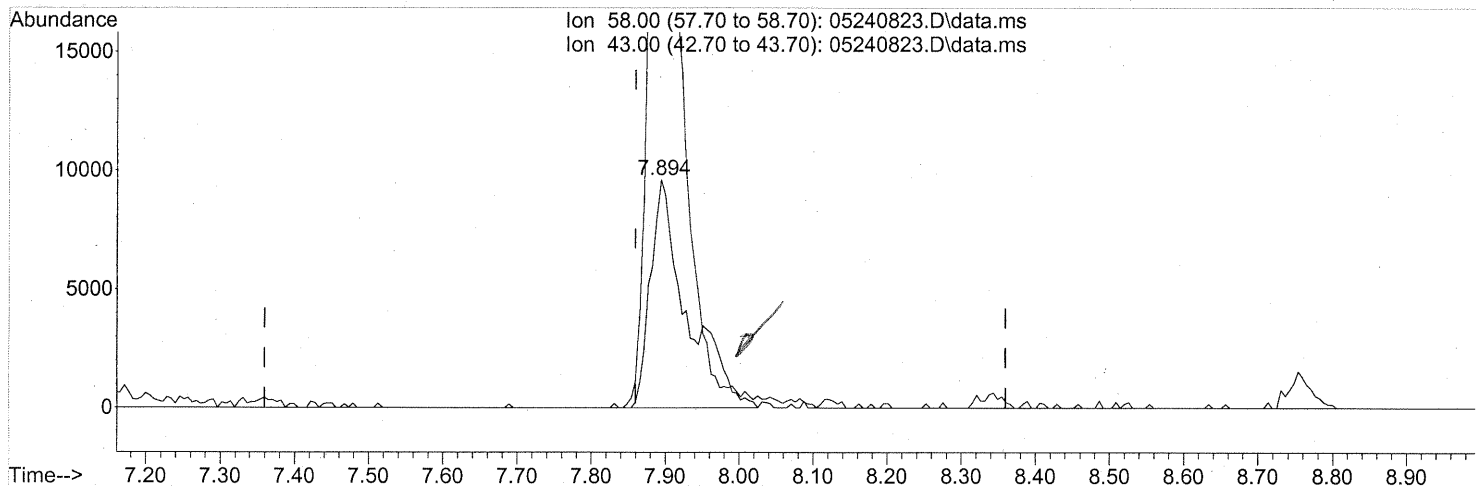
*WA 5/29/08*

*W05/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240823.D  
Acq On : 24 May 2008 22:16  
Operator : WA  
Sample : P0801422-018 (75ml)  
Misc : ENSR SG75B-05 (-3.6, 3.5)  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 09:06:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240823.D\data.ms

(13) Acetone (T)

7.894min (+0.034) 1.10ng

response 33034

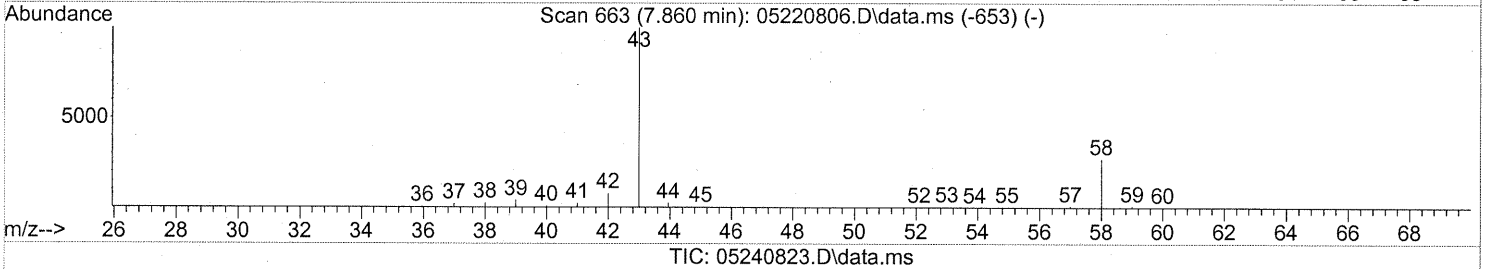
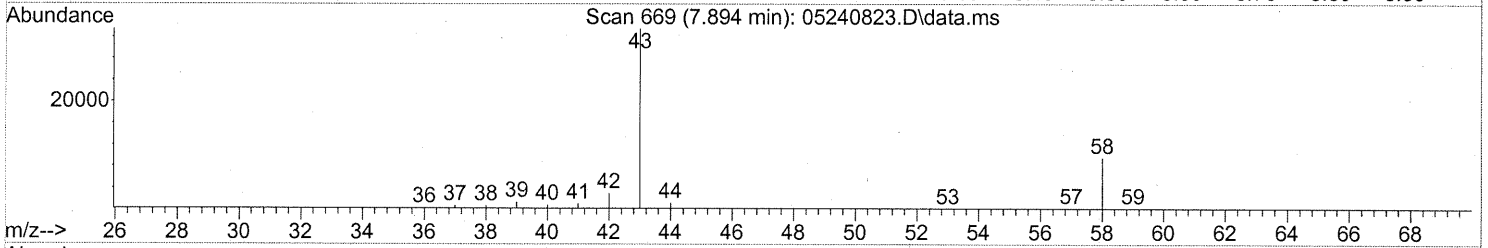
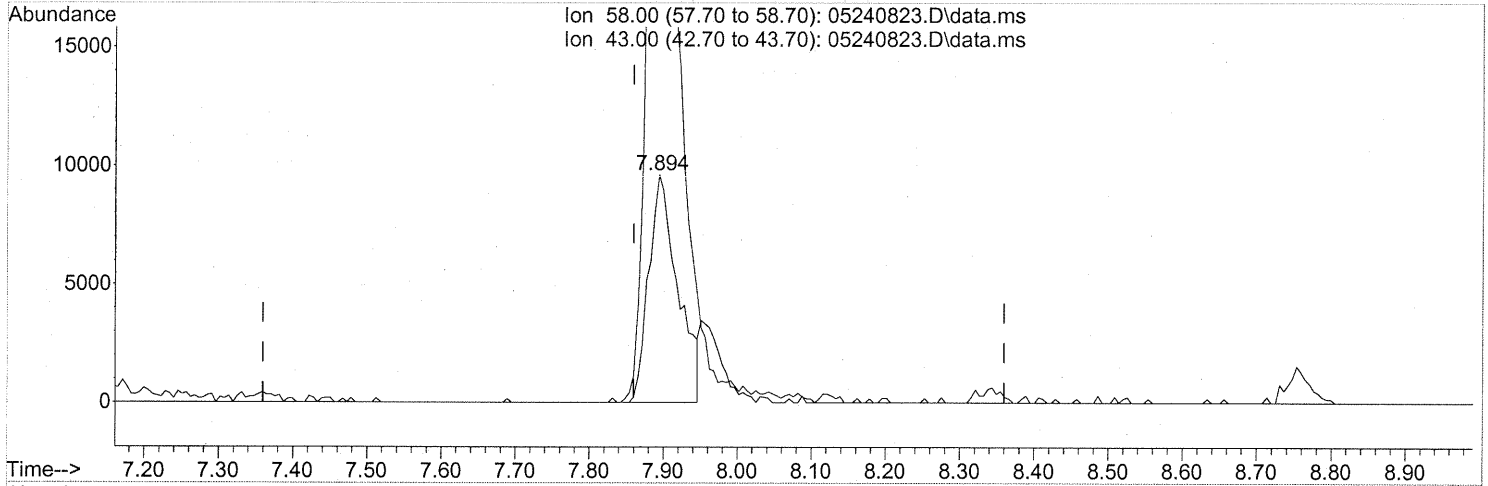
*interf. shoulder*

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	286.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240823.D  
Acq On : 24 May 2008 22:16  
Operator : WA  
Sample : P0801422-018 (75ml)  
Misc : ENSR SG75B-05 (-3.6, 3.5)  
ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 09:06:13 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(13) Acetone (T)  
7.894min (+0.034) 0.87ng m  
response 26131

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	362.76#
0.00	0.00	0.00
0.00	0.00	0.00

*no shoulder*

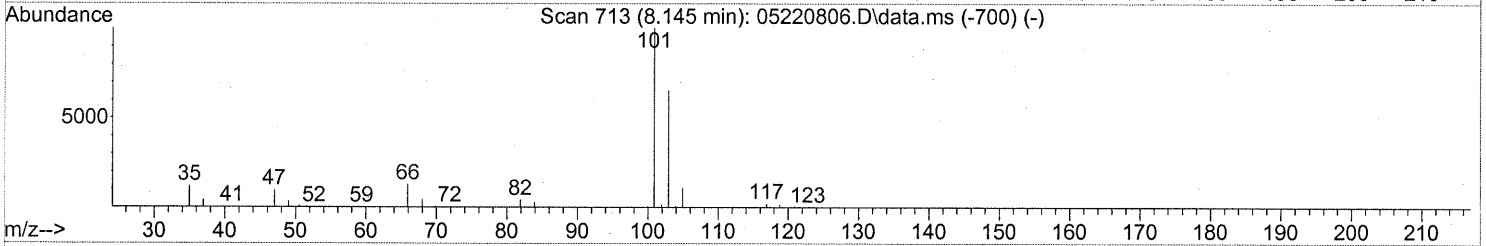
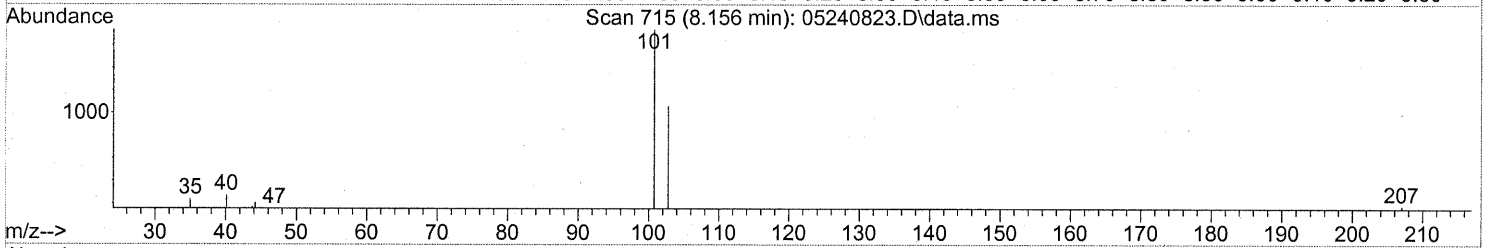
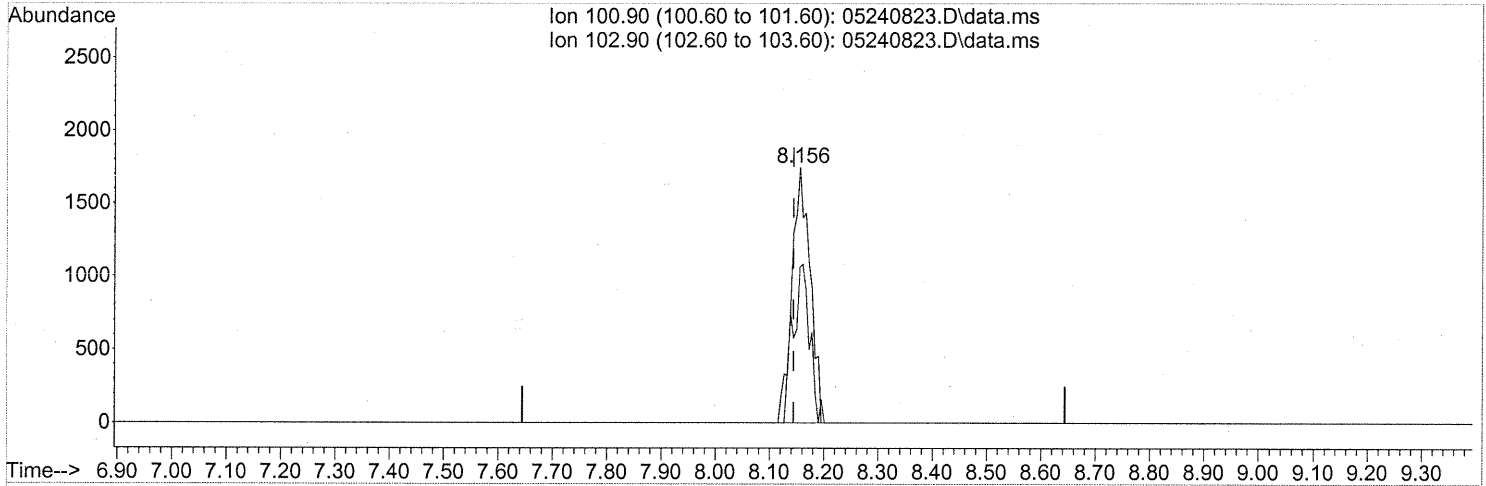
*WA 5/29/08*

*WA 5/30/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(14) Trichlorofluoromethane (T)

8.156min (+0.011) 0.06ng

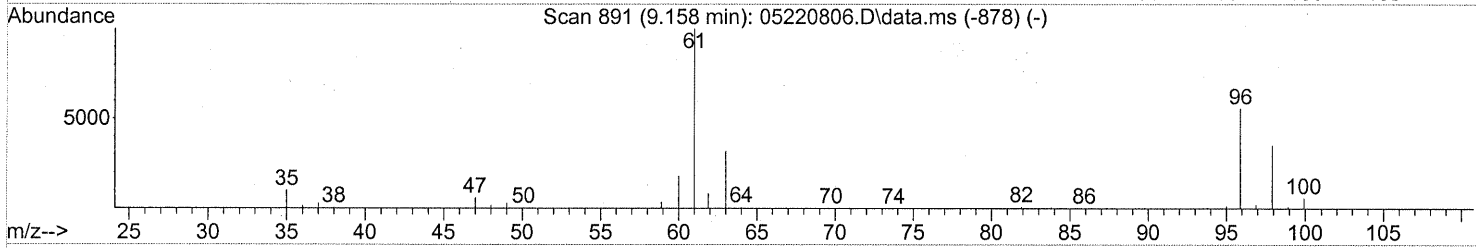
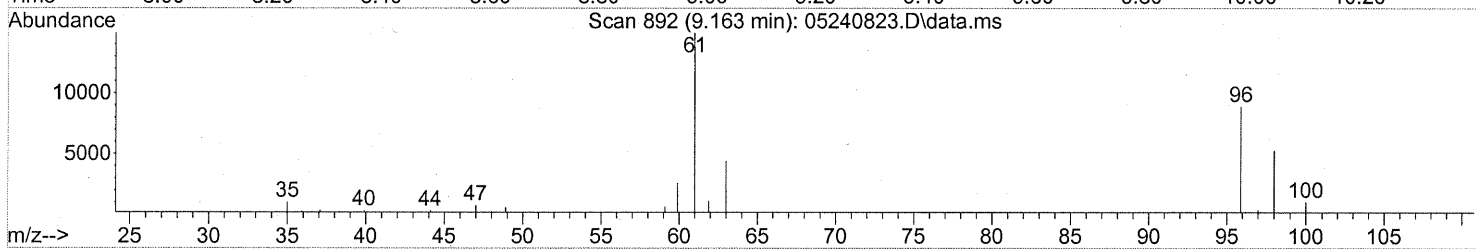
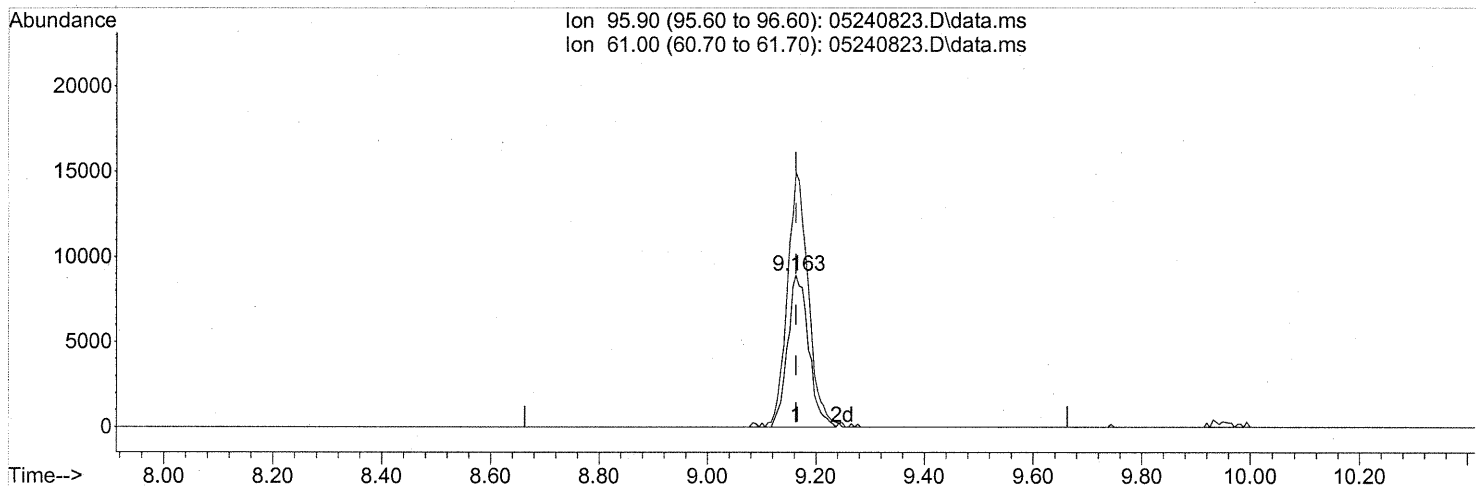
response 4034

Ion	Exp%	Act%
100.90	100	100
102.90	64.80	57.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(17) 1,1-Dichloroethene (T)

9.163min (-0.000) 0.78ng

response 23957

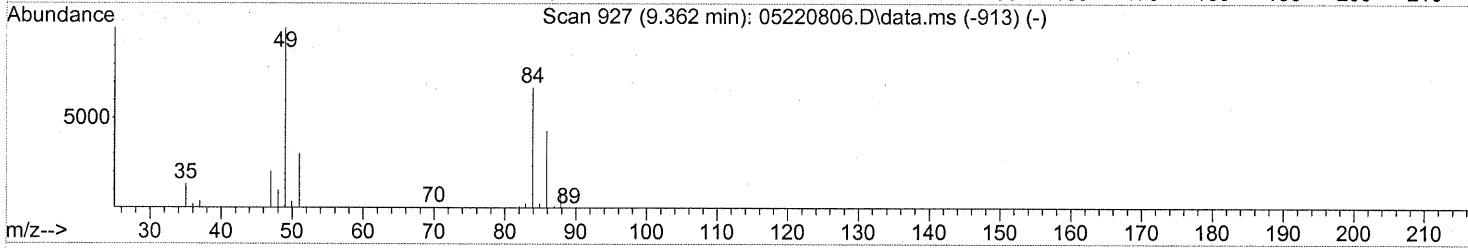
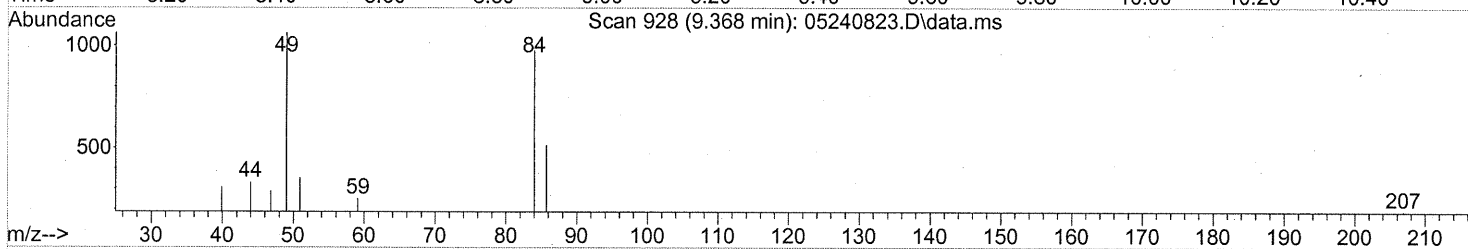
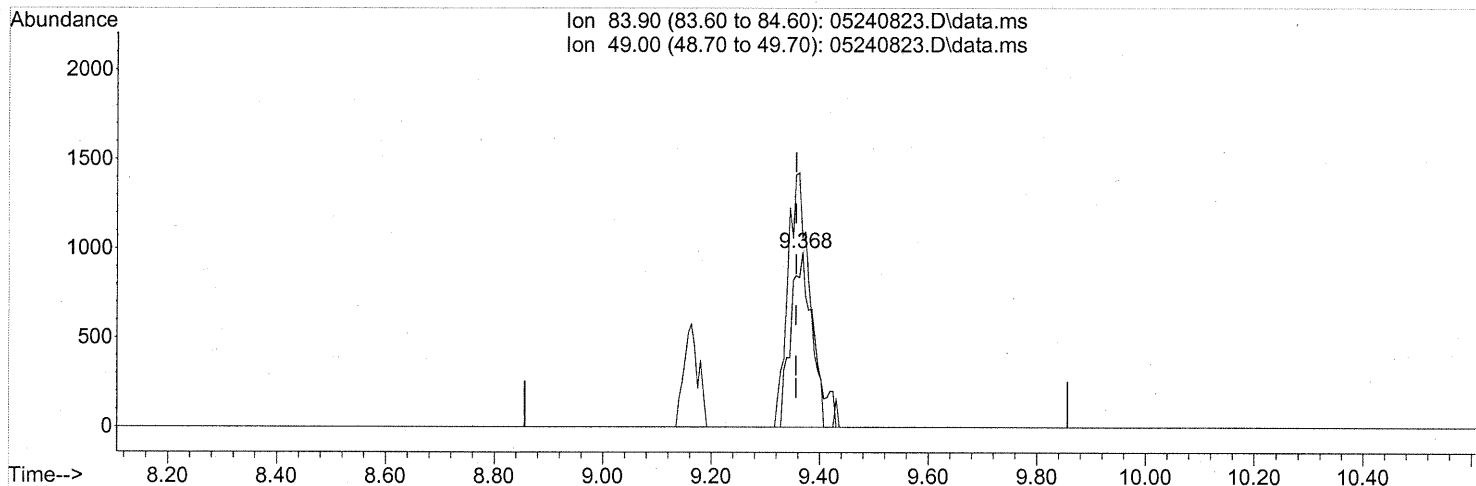
Ion	Exp%	Act%
95.90	100	100
61.00	210.00	167.41#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(19) Methylene Chloride (T)

9.368min (+0.011) 0.09ng

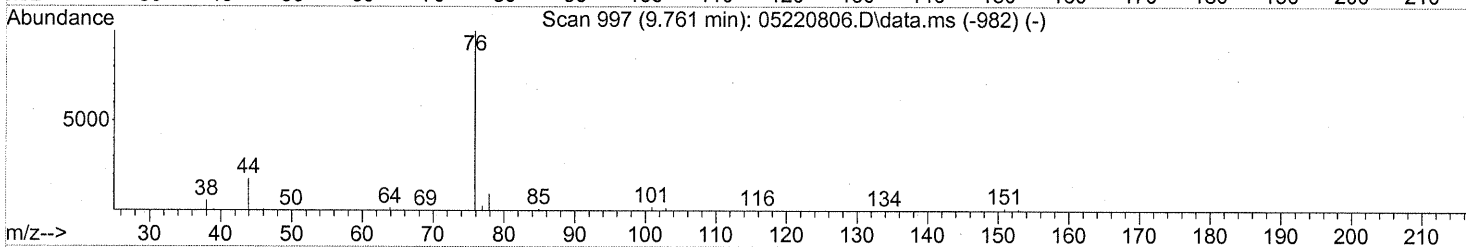
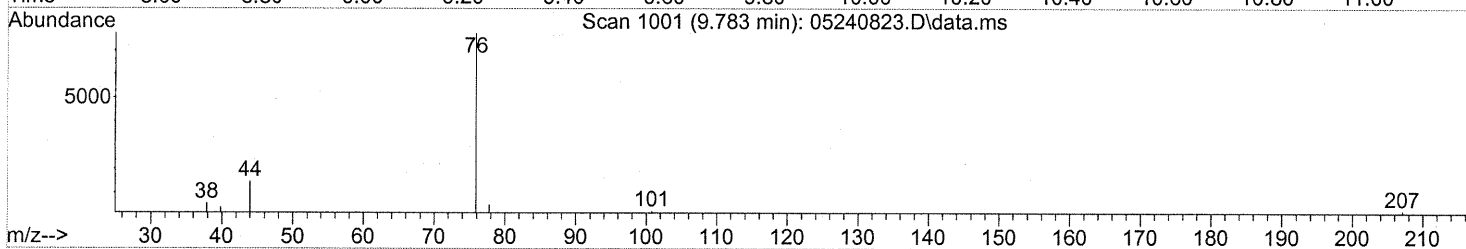
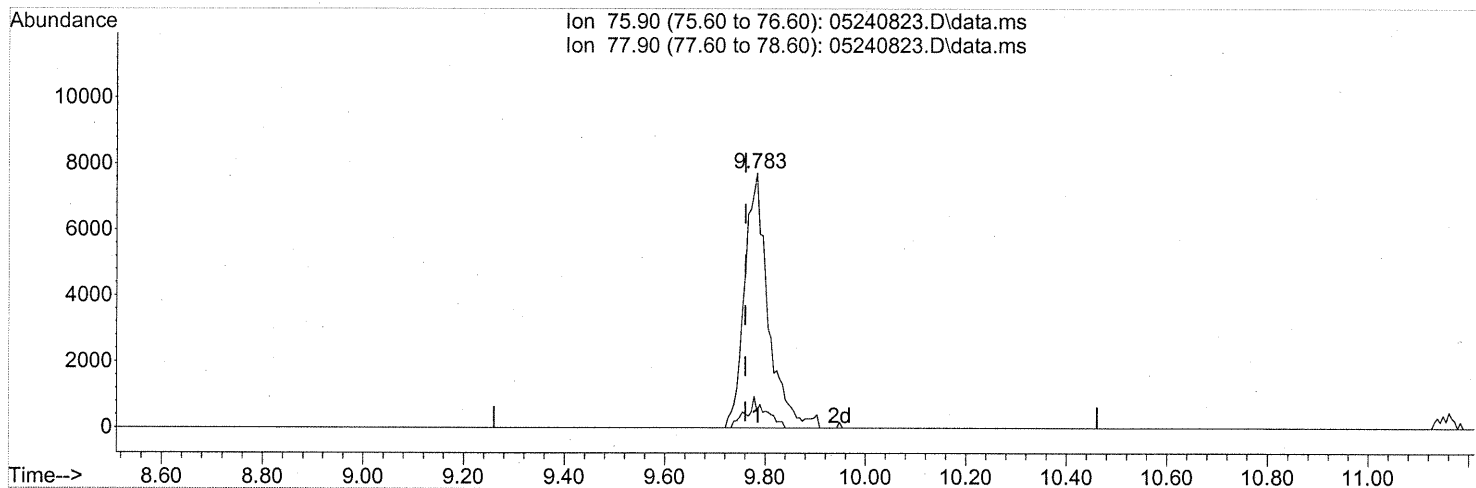
response 2894

Ion	Exp%	Act%
83.90	100	100
49.00	172.90	133.07#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(22) Carbon Disulfide (T)

9.783min (+0.023) 0.20ng

response 25300

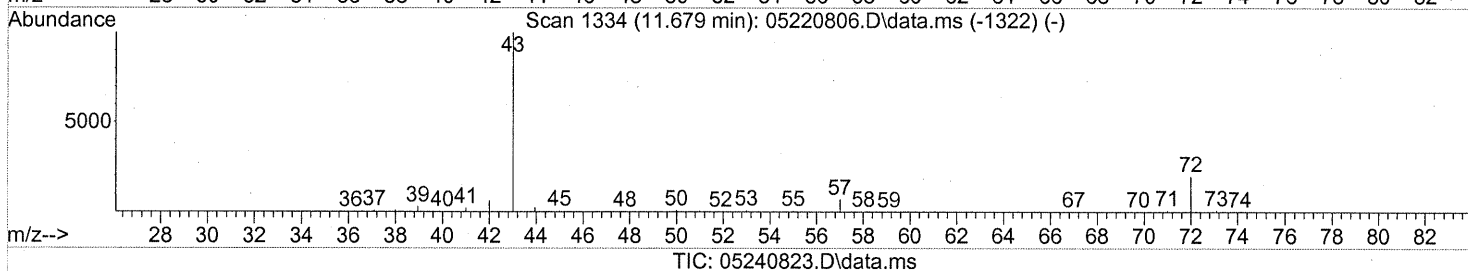
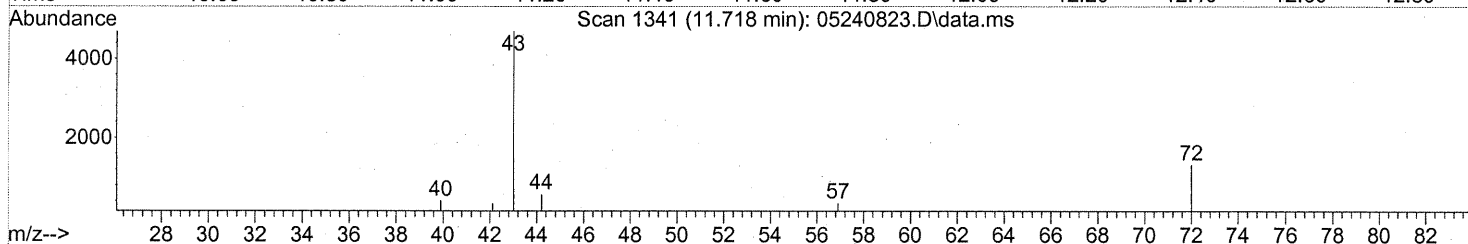
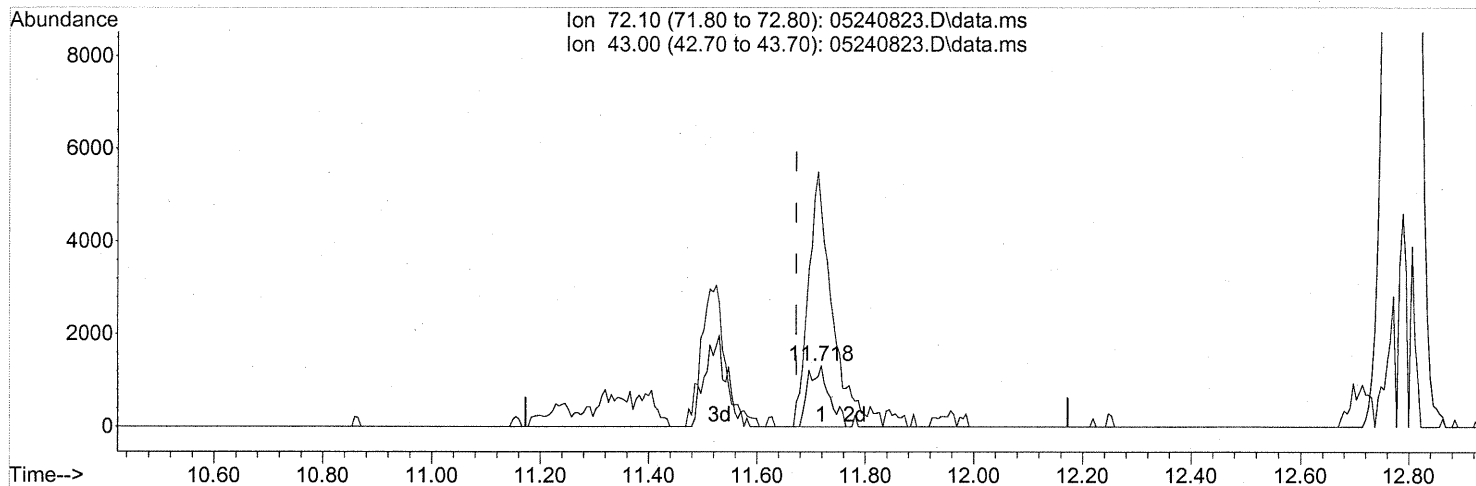
Ion	Exp%	Act%
75.90	100	100
77.90	8.70	9.88
0.00	0.00	0.00
0.00	0.00	0.00

884

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(27) 2-Butanone (T)

11.718min (+0.045) 0.16ng

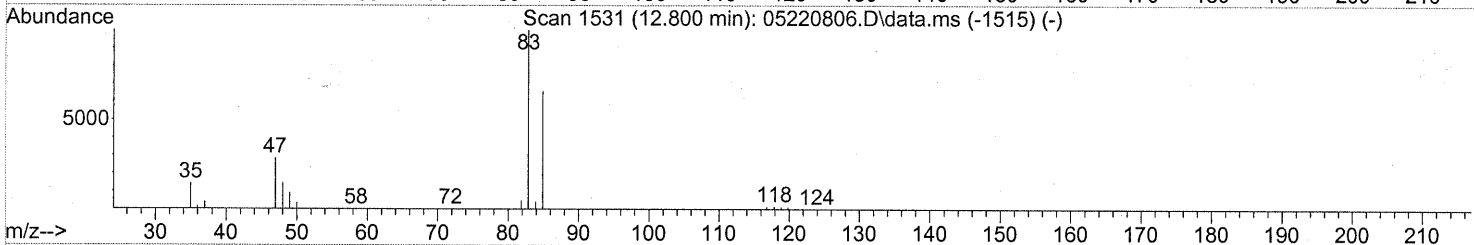
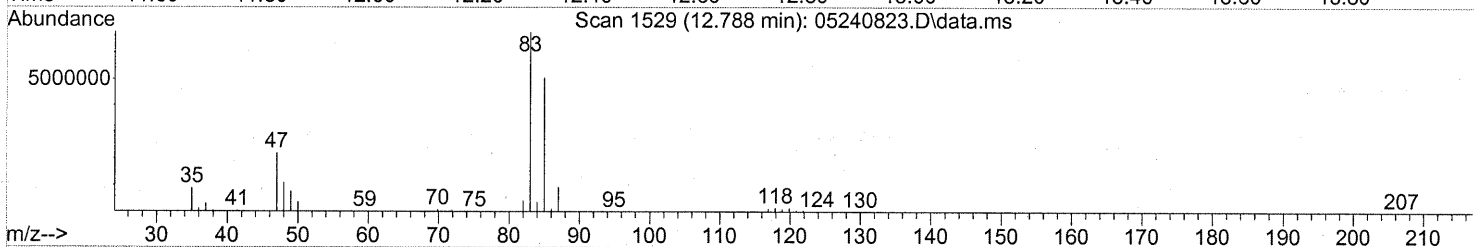
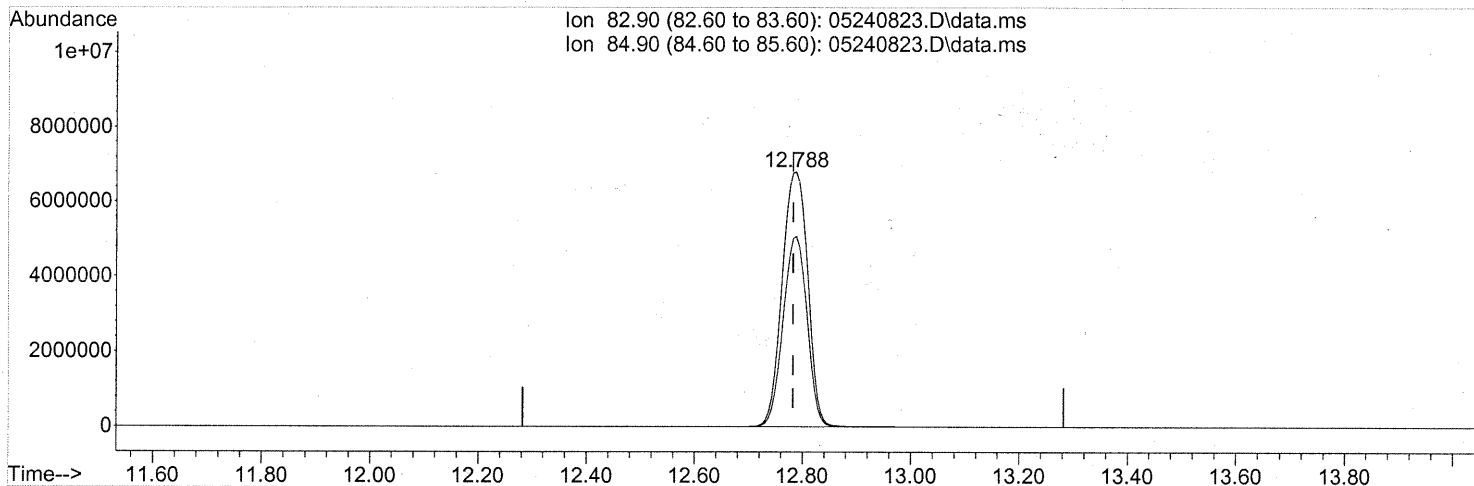
response 3523

Ion	Exp%	Act%
72.10	100	100
43.00	506.80	468.15#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(32) Chloroform (T)

12.788min (+0.006) 439.13ng

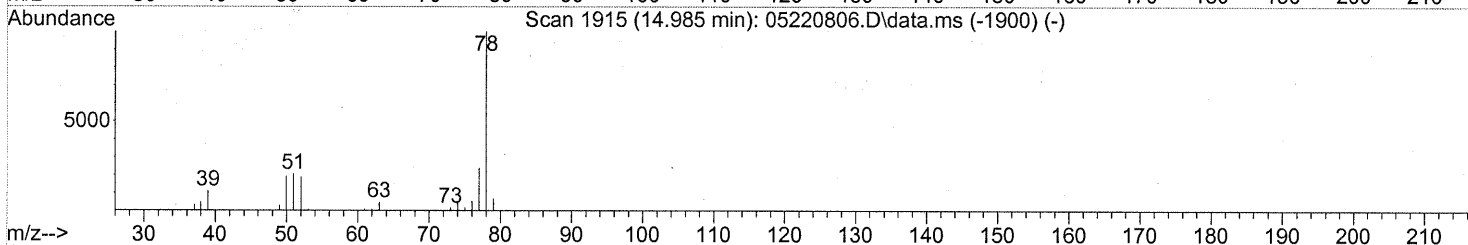
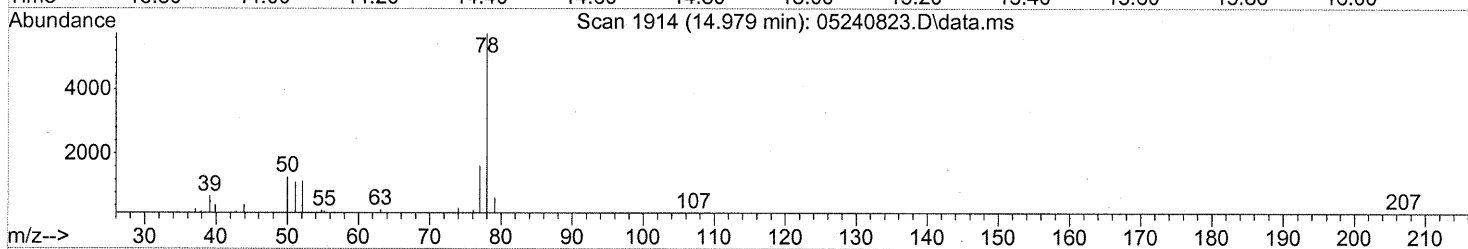
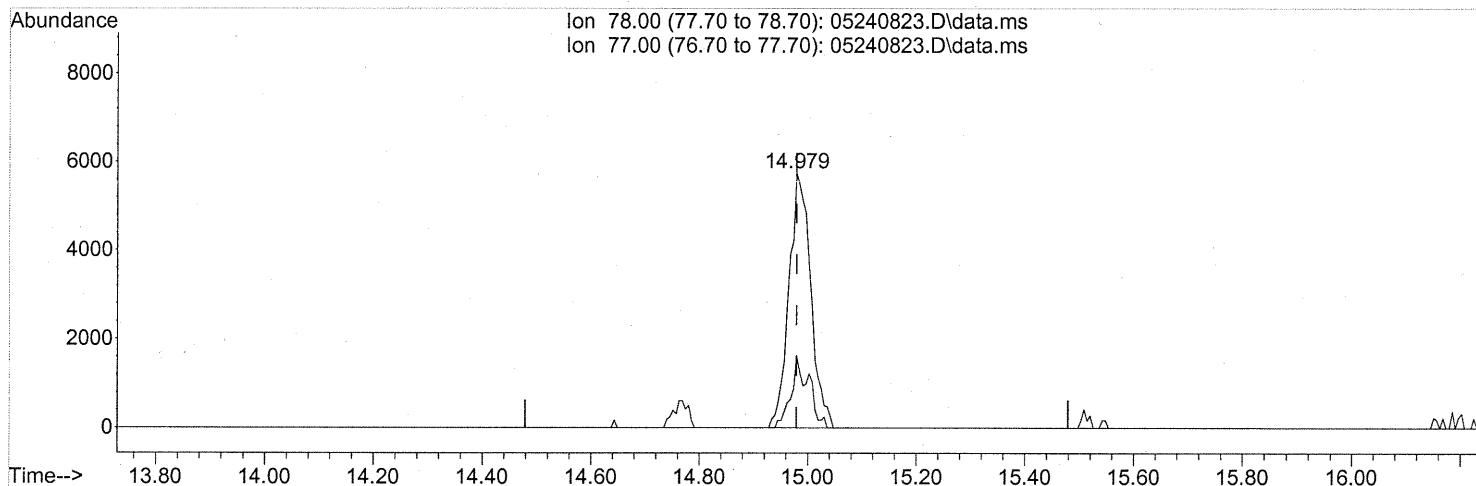
response 22361207

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	69.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

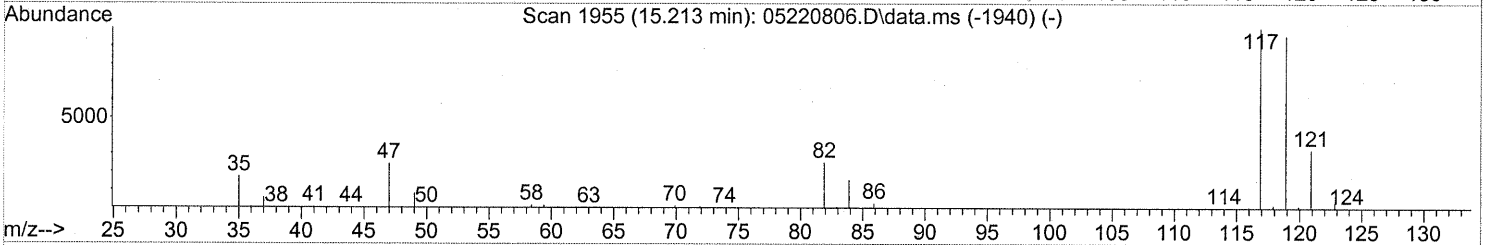
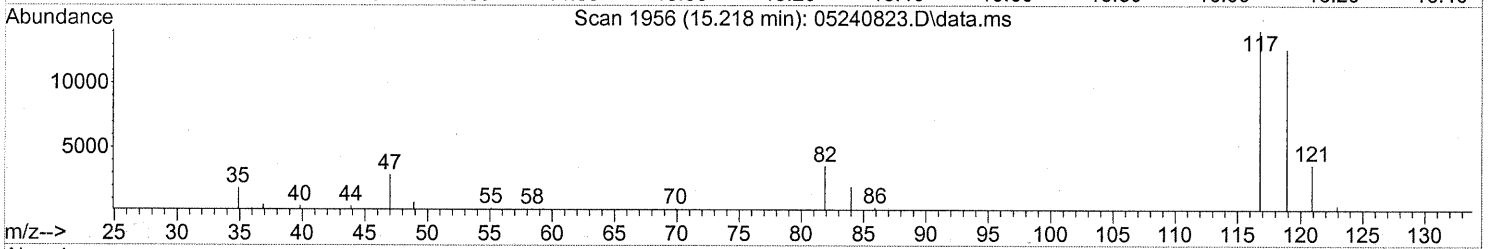
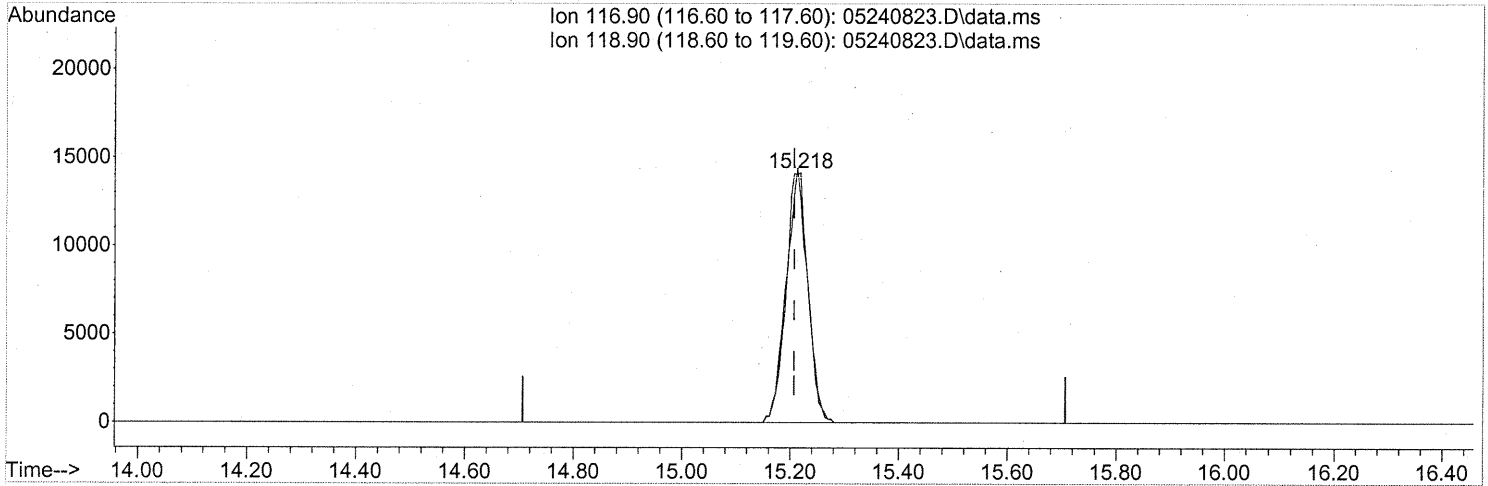
(41) Benzene (T)  
 14.979min (-0.000) 0.13ng  
 response 15864

Ion	Exp%	Act%
78.00	100	100
77.00	23.50	23.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(42) Carbon Tetrachloride (T)

15.218min (+0.011) 0.86ng

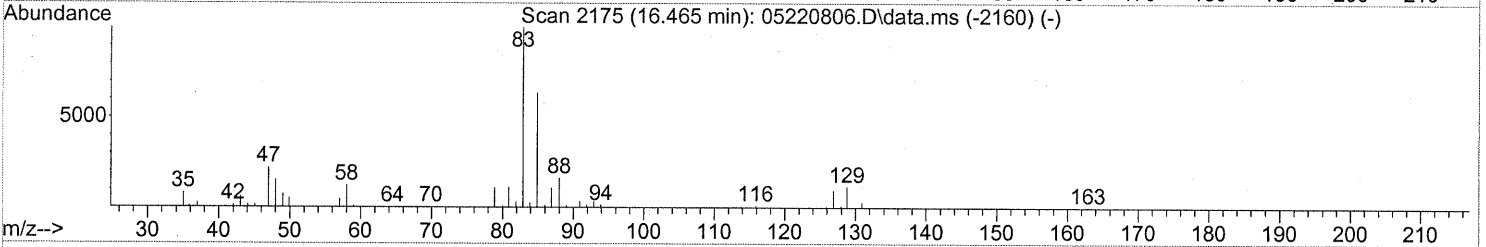
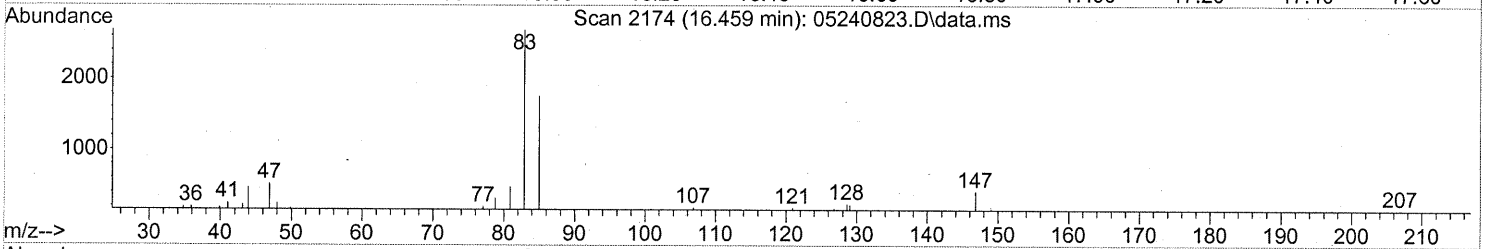
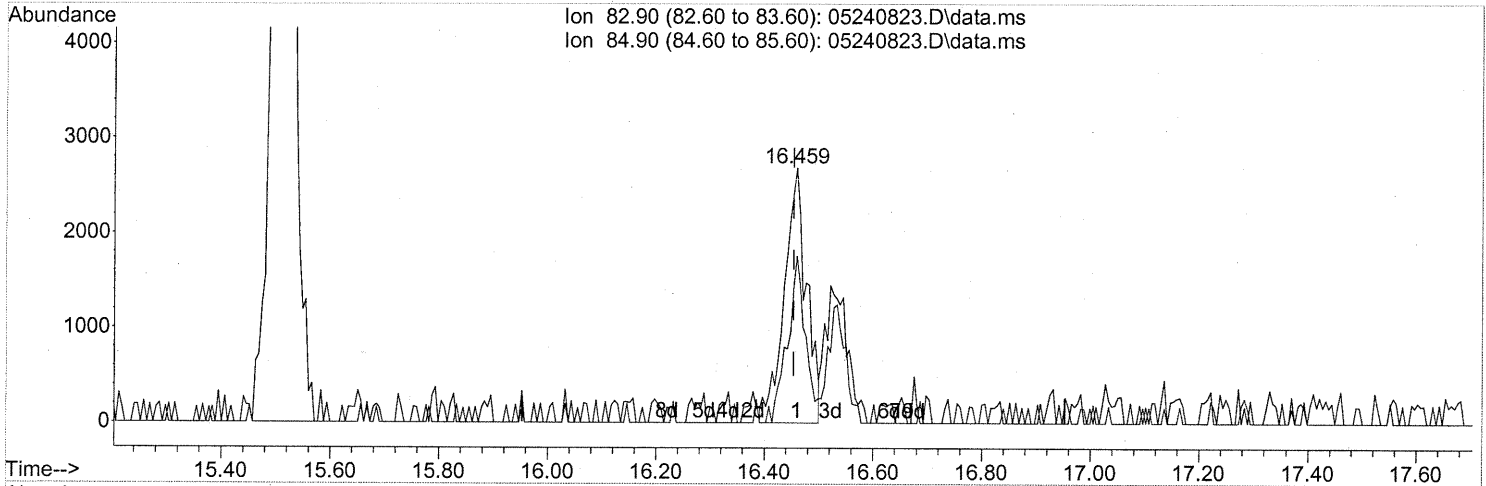
response 40835

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	93.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(46) Bromodichloromethane (T)

16.459min (+0.006) 0.18ng

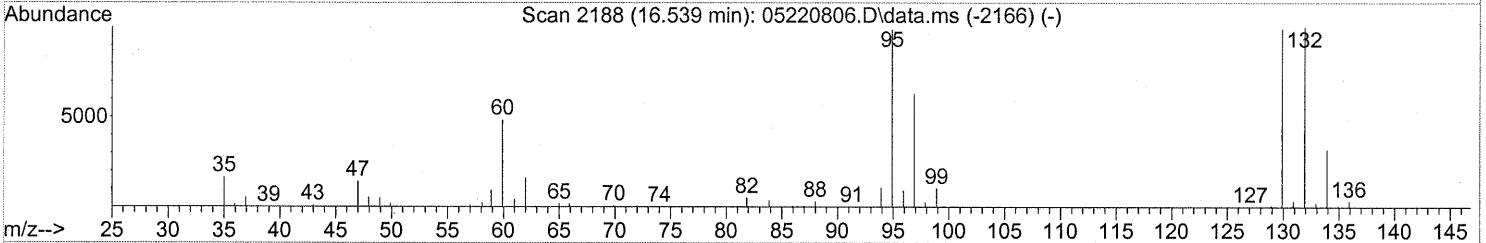
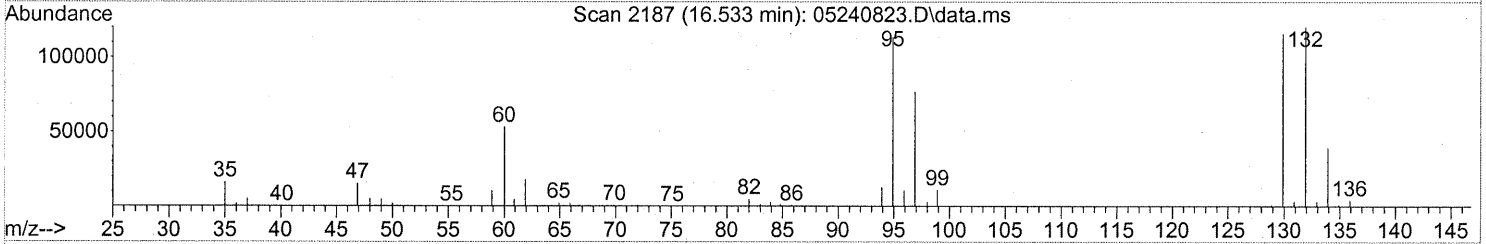
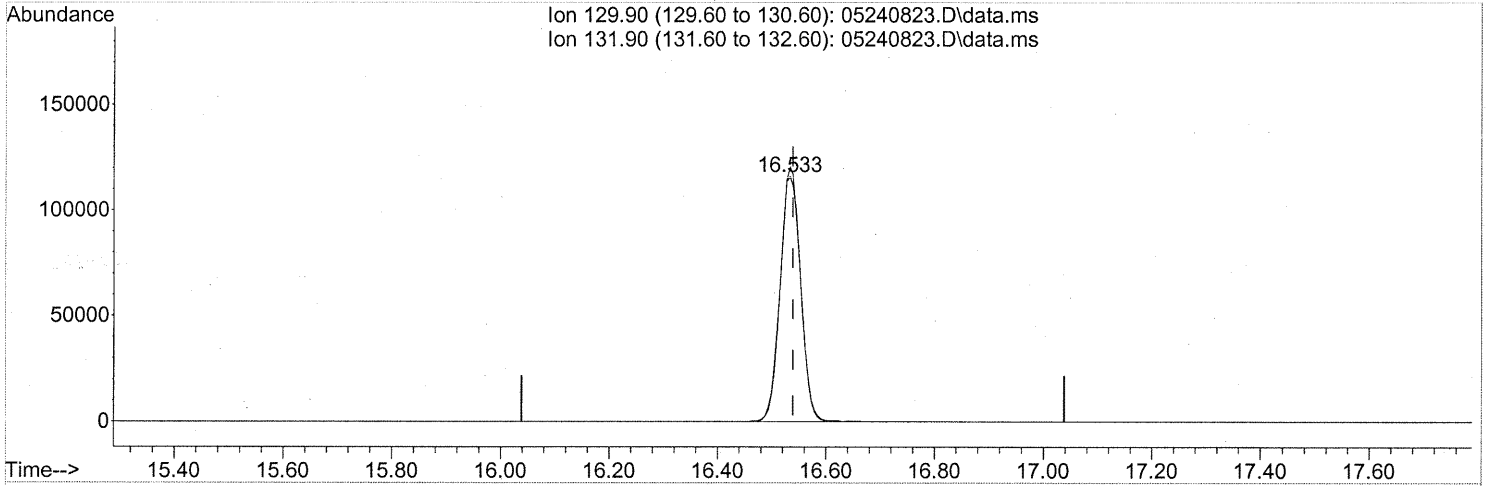
response 7556

Ion	Exp%	Act%
82.90	100	100
84.90	63.70	54.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(47) Trichloroethene (T)

16.533min (-0.006) 8.10ng

response 306544

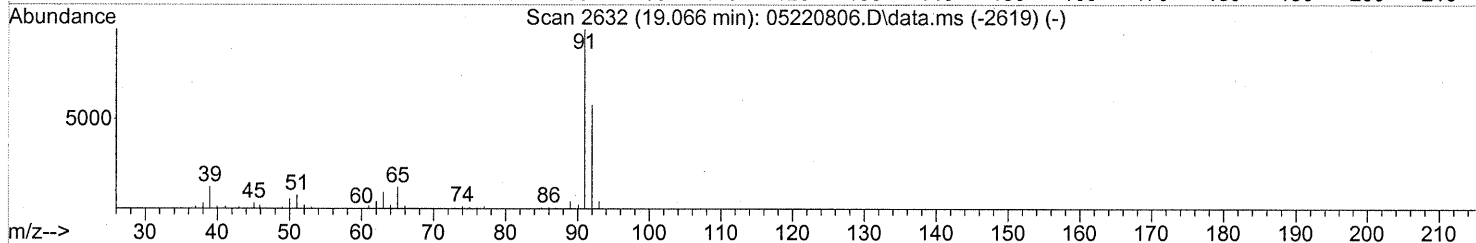
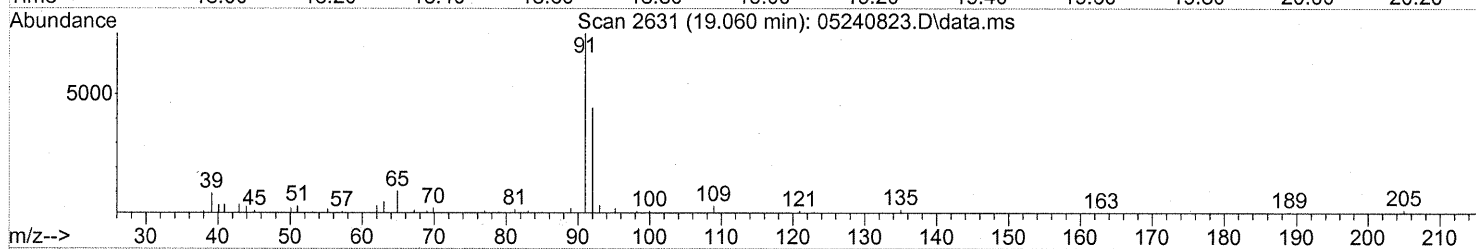
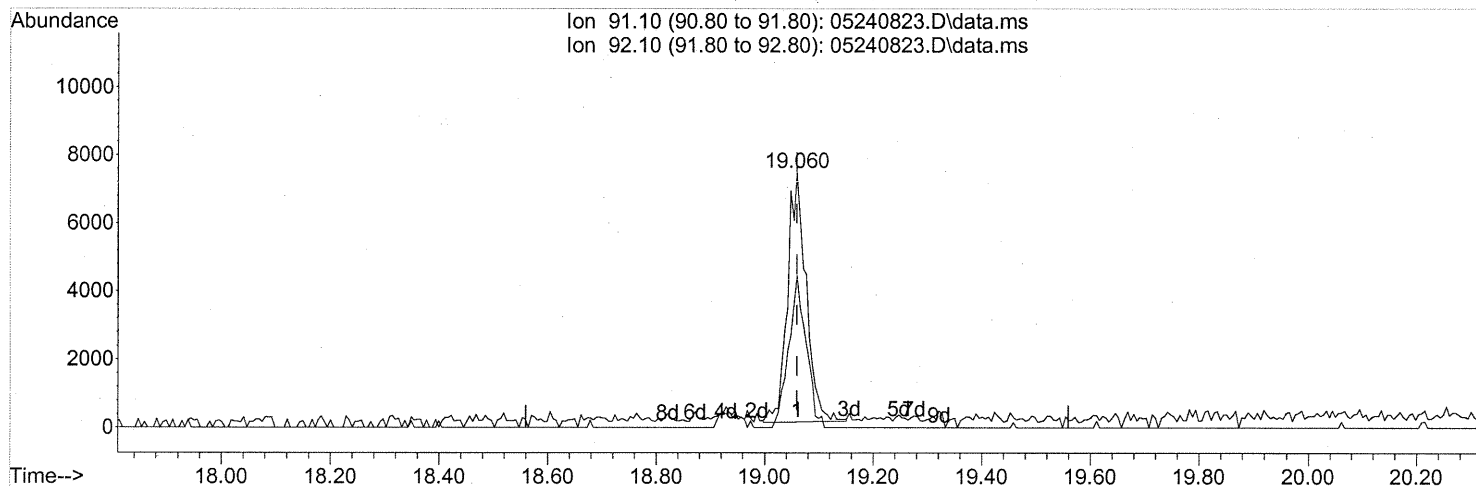
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	100.36
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(58) Toluene (T)

19.060min (-0.000) 0.13ng

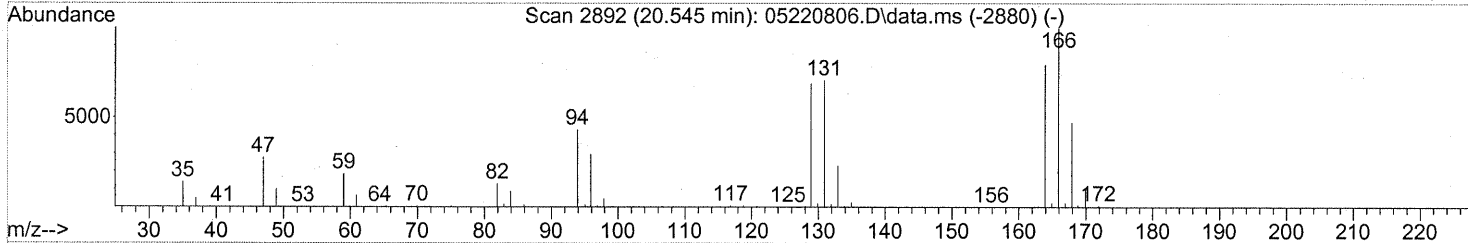
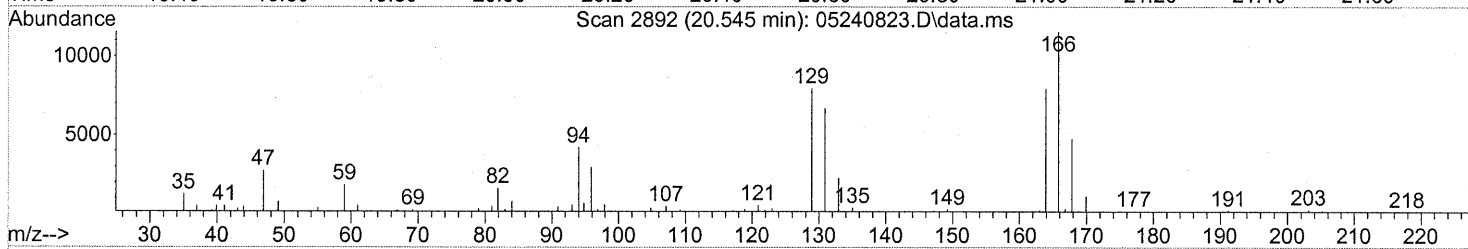
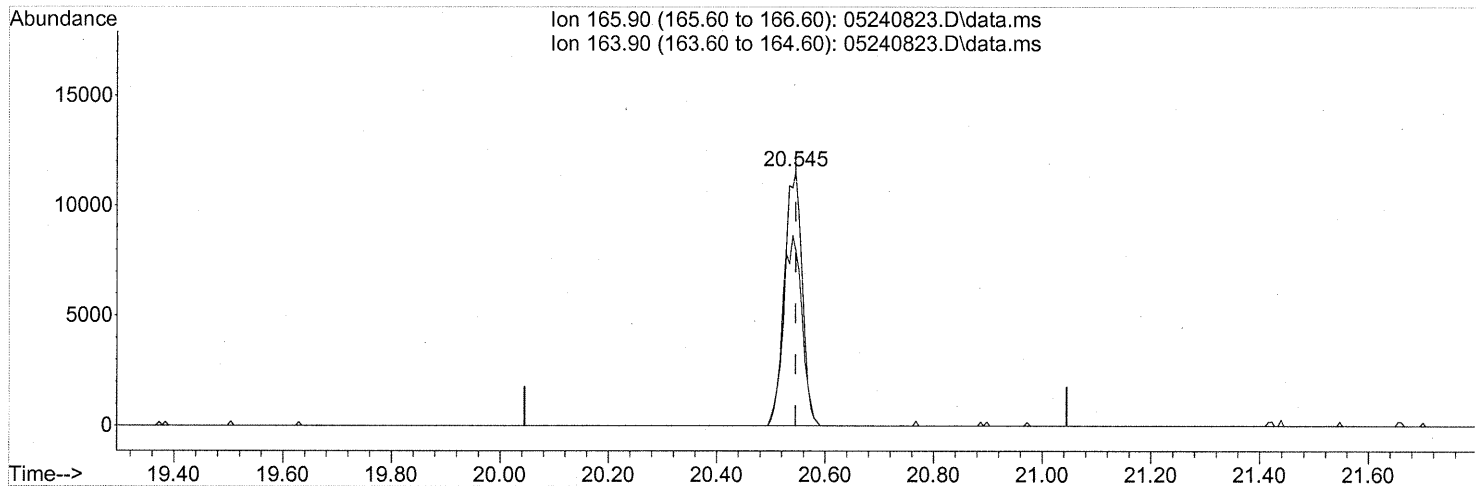
response 17504

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 21:39:54 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240823.D\data.ms

(64) Tetrachloroethene (T)

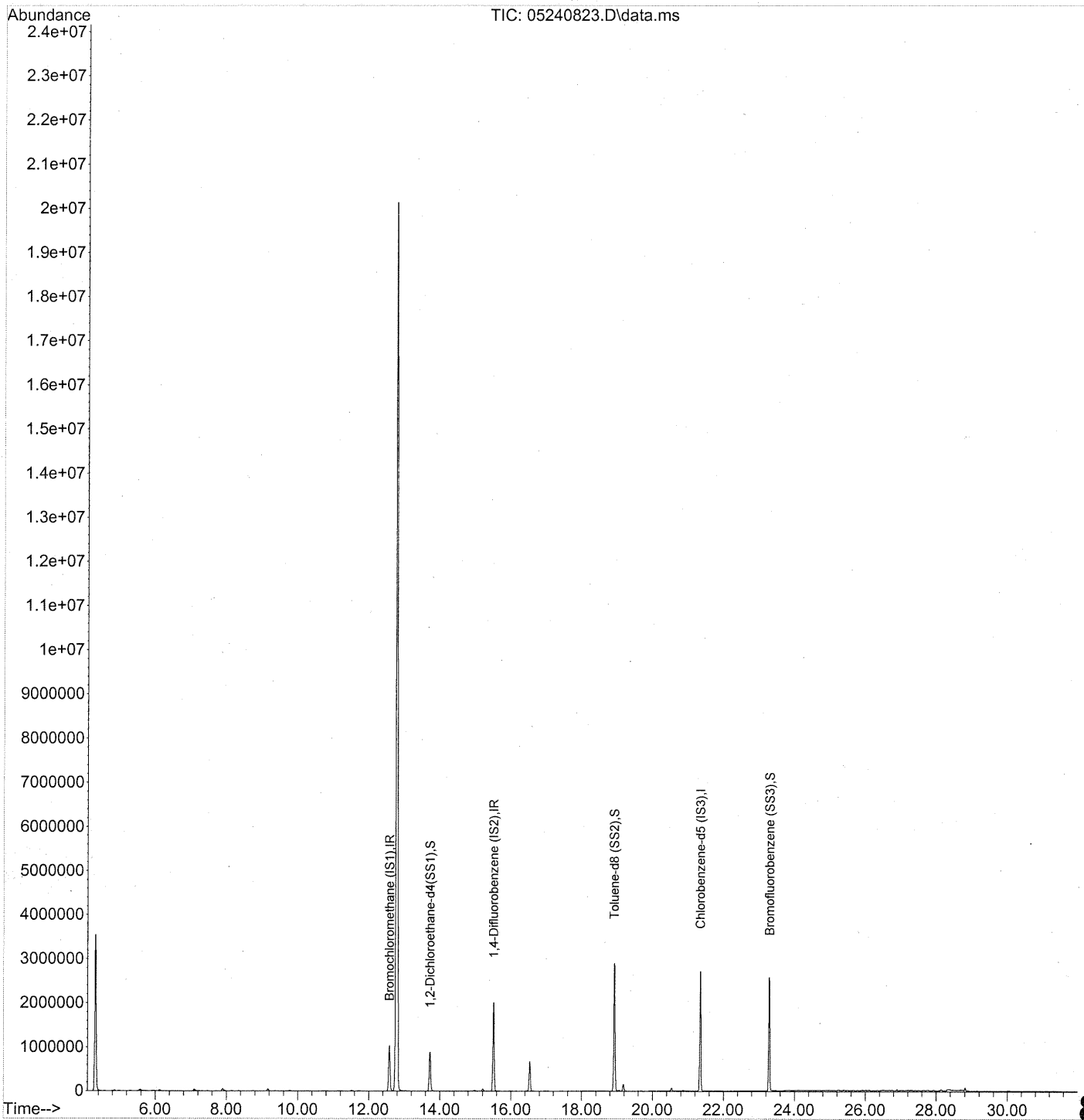
20.545min (-0.000) 0.68ng

response 26131

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	78.25
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: May 25 20:37:30 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240823.D  
 Acq On : 24 May 2008 22:16  
 Operator : WA  
 Sample : P0801442-018 (75ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 20 Sample Multiplier: 1

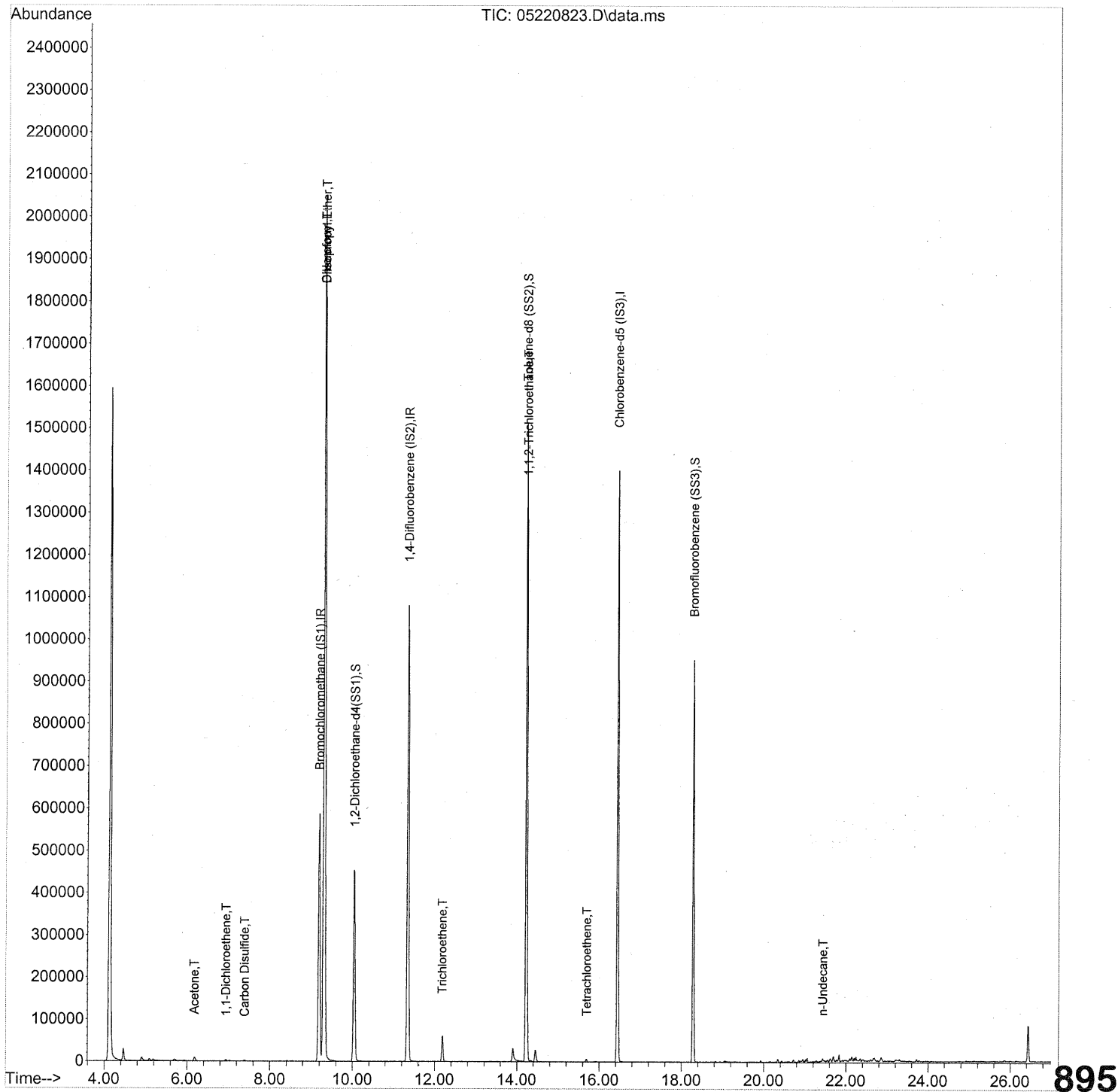
Quant Time: May 25 20:37:30 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	558421	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	2357400	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	1070709	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	884174	22.851	ng	-0.02
Spiked Amount	25.000		Recovery	=	91.40%	
5) Toluene-d8 (SS2)	18.92	98	2454457	25.525	ng	-0.02
Spiked Amount	25.000		Recovery	=	102.08%	
6) Bromofluorobenzene (SS3)	23.29	174	993968	25.419	ng	0.00
Spiked Amount	25.000		Recovery	=	101.68%	
Target Compounds						Qvalue
7) tert-Butylbenzene	24.88	119	660		N.D.	
8) n-Butylbenzene	25.95	91	922		N.D.	

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

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220823.D  
Acq On : 22 May 2008 23:18  
Operator : WA  
Sample : P0801442-018 Dil (15ml)  
Misc : ENSR SG75B-05 (-3.6, 3.5)  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 23 06:37:21 2008  
Quant Method : J:\MS16\METHODS\R16051208.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\22\  
 Data File : 05220823.D  
 Acq On : 22 May 2008 23:18  
 Operator : WA  
 Sample : P0801442-018 Dil (15ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 23 06:37:21 2008

Quant Method : J:\MS16\METHODS\R16051208.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	275771	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1188439	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	466565	25.000	ng	-0.01

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	421466	21.673	ng	-0.05	
Spiked Amount				25.000			
				Recovery	=	86.68%	✓
57) Toluene-d8 (SS2)	14.22	98	1208640	26.310	ng	-0.02	
Spiked Amount				25.000			
				Recovery	=	105.24%	✓
73) Bromofluorobenzene (SS3)	18.28	174	327401	27.384	ng	-0.01	
Spiked Amount				25.000			
				Recovery	=	109.52%	✓

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	441	N.D.		
3) Dichlorodifluoromethane	4.55	85	201	N.D.		
4) Chloromethane	4.74	50	791	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	5.77	45	105	N.D.		
11) Acetonitrile	5.94	41	1604	N.D.		
12) Acrolein	0.00	56	0	N.D.		
13) Acetone	6.18	58	5152	0.283	ng	# 56
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	6.94	96	1761	0.133	ng	96
18) tert-Butanol	0.00	59	0	N.D.		
19) Methylene Chloride	7.03	84	352	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	3703	0.068	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	221660	18.553	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\22\  
 Data File : 05220823.D  
 Acq On : 22 May 2008 23:18  
 Operator : WA  
 Sample : P0801442-018 Dil (15ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 23 06:37:21 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	9.31	83	2058578	100.108	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	1457	N.D.		
42) Carbon Tetrachloride	11.17	117	690	N.D.		
43) Cyclohexane	11.32	84	1145	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	12.14	83	124	N.D.		
47) Trichloroethene	12.19	130	28781	1.794	ng	99
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	103224	7.301	ng	# 7
58) Toluene	14.35	91	2158	N.D.		
59) 2-Hexanone	14.46	43	774	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	0.00	43	0	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	15.69	166	2511	0.181	ng	98
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	16.94	91	92	N.D.		
67) m- & p-Xylene	0.00	91	0	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	0.00	91	0	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	18.29	105	196	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	0.00	105	0	N.D.		
78) 4-Ethyltoluene	0.00	105	0	N.D.		
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.		

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220823.D  
 Acq On : 22 May 2008 23:18  
 Operator : WA  
 Sample : P0801442-018 Dil (15ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 23 06:37:21 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	0.00	118	0	N.D.		
81) 2-Ethyltoluene	0.00	105	0	N.D.		
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.		
83) n-Decane	19.92	57	1151	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	0.00	105	0	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	0.00	105	0	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	3260	0.070	ng	# 64
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.69	128	1976	N.D.		
96) n-Dodecane	22.66	57	1512	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

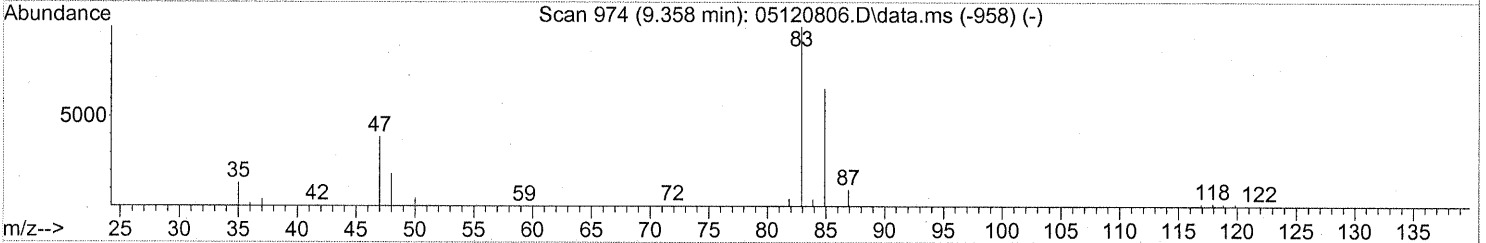
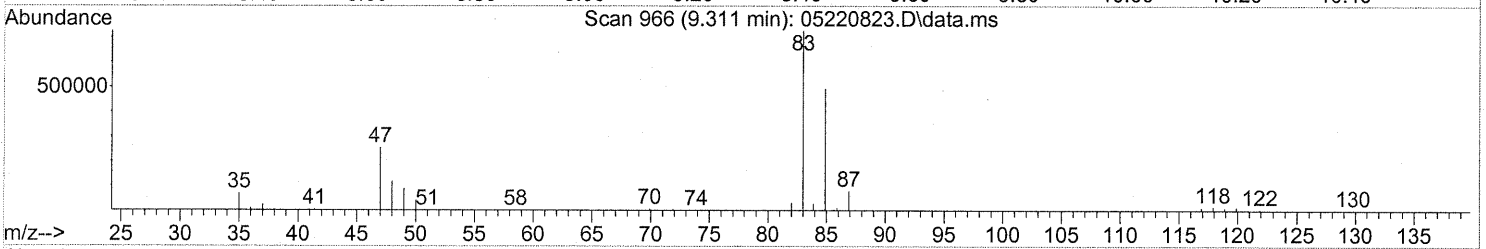
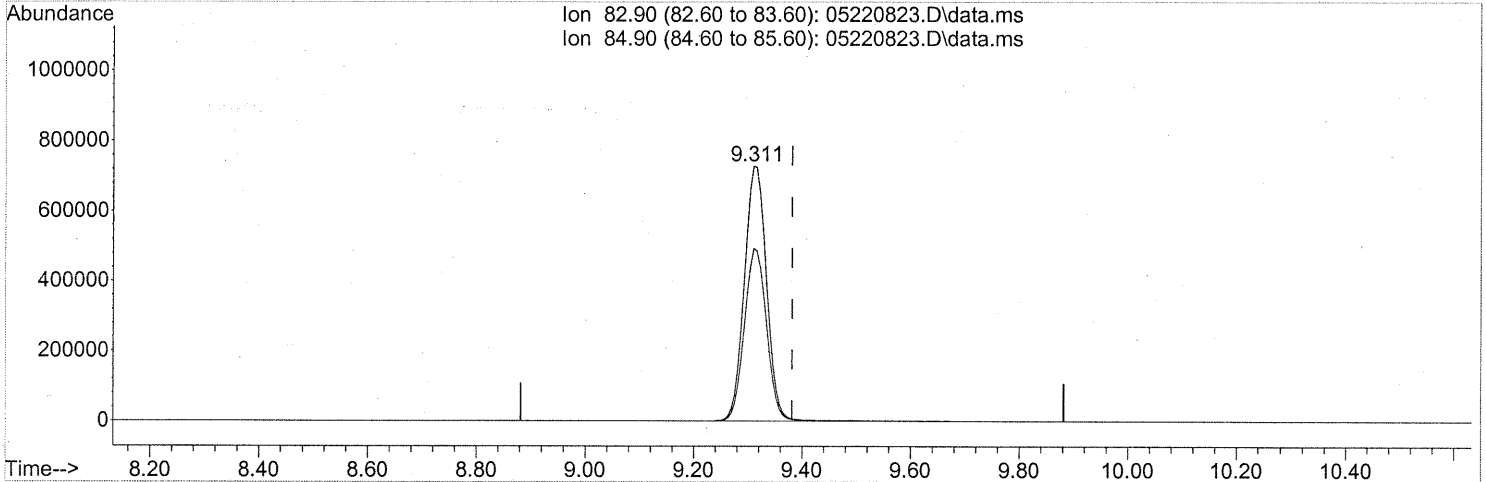
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220823.D  
 Acq On : 22 May 2008 23:18  
 Operator : WA  
 Sample : P0801442-018 Dil (15ml)  
 Misc : ENSR SG75B-05 (-3.6, 3.5)  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 23 06:37:21 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



TIC: 05220823.D\data.ms

(32) Chloroform (T)

9.311min (-0.071) 100.11ng

response 2058578

Ion	Exp%	Act%
82.90	100	100
84.90	64.60	67.61
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:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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>0.22</b>	5.0	0.073	<b>0.094</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
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	<b>V</b>
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	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.

V = The continuing calibration verification standard was outside (biased low) the specified limits for this compound.

Verified By: RC

Date: 5/21/08

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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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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: Re

Date: 6/2/08

**901**

**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	V
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	V
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	V

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.

V = The continuing calibration verification standard was outside (biased high) the specified limits for this compound.

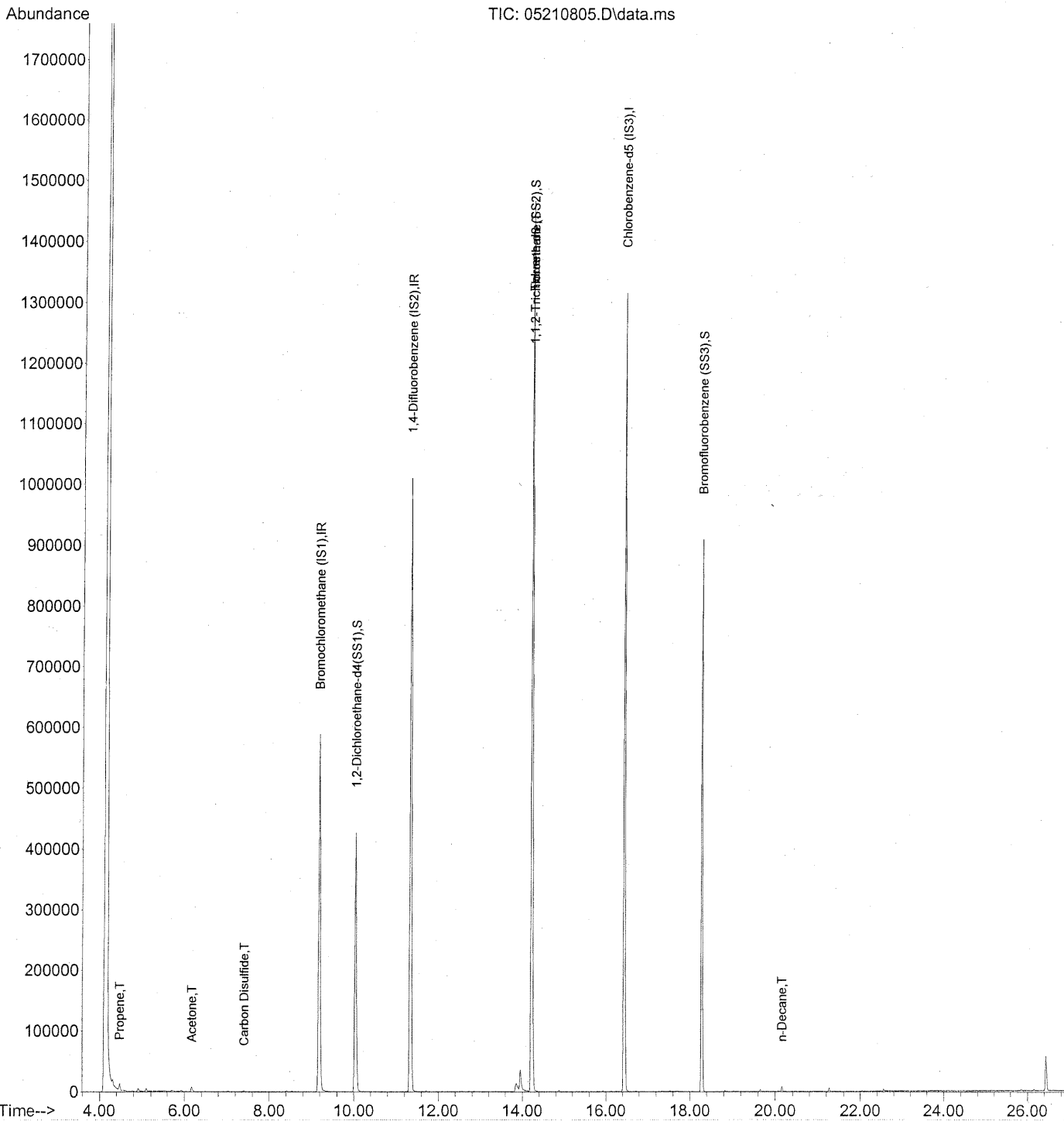
Verified By: Re

Date: 6/2/08

**902**

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210805.D  
 Acq On : 21 May 2008 10:37 am  
 Operator : WA  
 Sample : CAS CAN QC2 5/20/08 (1000ml) as MB  
 Misc : SC00699  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 21 11:22:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



903

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210805.D  
 Acq On : 21 May 2008 10:37 am  
 Operator : WA  
 Sample : CAS CAN QC2 5/20/08 (1000ml) as MB  
 Misc : SC00699  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 21 11:22:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	265459	25.000	ng	-0.07
37) 1,4-Difluorobenzene (IS2)	11.34	114	1108808	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	433704	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.04	65	394684	21.084	ng	-0.05
Spiked Amount				25.000		
				Recovery =		84.32%
57) Toluene-d8 (SS2)	14.22	98	1131942	26.507	ng	-0.02
Spiked Amount				25.000		
				Recovery =		106.04%
73) Bromofluorobenzene (SS3)	18.28	174	309545	27.852	ng	-0.01
Spiked Amount				25.000		
				Recovery =		111.40%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.47	42	1492	0.056	ng	# 17
3) Dichlorodifluoromethane	4.56	85	108	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	5.77	45	99	N.D.		
11) Acetonitrile	5.93	41	2352	N.D.		
12) Acrolein	6.05	56	117	N.D.		
13) Acetone	6.18	58	3906	0.223	ng	# 85
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	6.98	59	770	N.D.		
19) Methylene Chloride	7.04	84	423	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	2820	<del>0.054</del>	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	8.42	72	91	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.		

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210805.D  
 Acq On : 21 May 2008 10:37 am  
 Operator : WA  
 Sample : CAS CAN QC2 5/20/08 (1000ml) as MB  
 Misc : SC00699  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 21 11:22:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	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	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	0.00	78	0	N.D.	
42) Carbon Tetrachloride	0.00	117	0	N.D.	
43) Cyclohexane	11.33	84	244	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	14.23	97	95873	<del>7.268</del> ng UR#	7
58) Toluene	14.35	91	191	N.D.	
59) 2-Hexanone	14.87	43	245	N.D.	
60) Dibromochloromethane	0.00	129	0	N.D.	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	
62) Butyl Acetate	0.00	43	0	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	0.00	91	0	N.D.	
67) m- & p-Xylene	0.00	91	0	N.D.	
68) Bromoform	0.00	173	0	N.D.	
69) Styrene	0.00	104	0	N.D.	
70) o-Xylene	0.00	91	0	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	96	N.D.	
75) alpha-Pinene	0.00	93	0	N.D.	
76) n-Propylbenzene	0.00	91	0	N.D.	
77) 3-Ethyltoluene	18.88	105	358	N.D.	
78) 4-Ethyltoluene	18.88	105	358	N.D.	
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.	

WA 5/30/08

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210805.D  
 Acq On : 21 May 2008 10:37 am  
 Operator : WA  
 Sample : CAS CAN QC2 5/20/08 (1000ml) as MB  
 Misc : SC00699  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 21 11:22:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	0.00	118	0	N.D.		
81) 2-Ethyltoluene	0.00	105	0	N.D.		
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.		
83) n-Decane	20.16	57	4656	<del>0.112</del> ng	#	41
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	0.00	105	0	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	0.00	105	0	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	21.27	57	1286	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	376	N.D.		
96) n-Dodecane	22.55	57	568	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

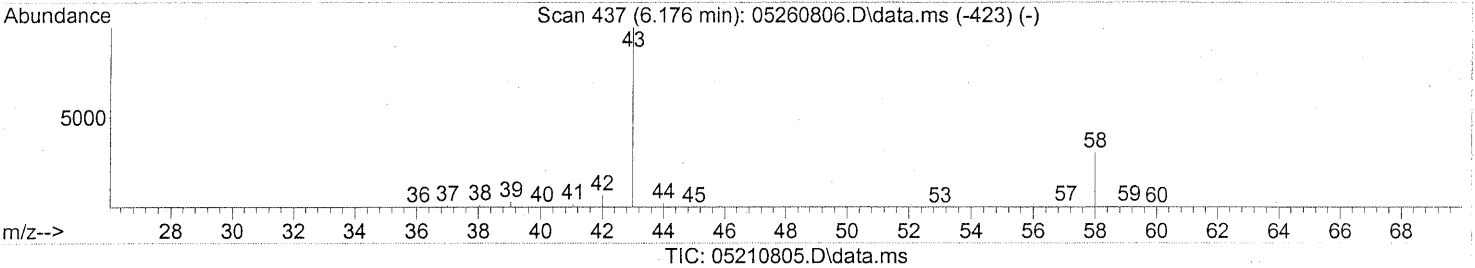
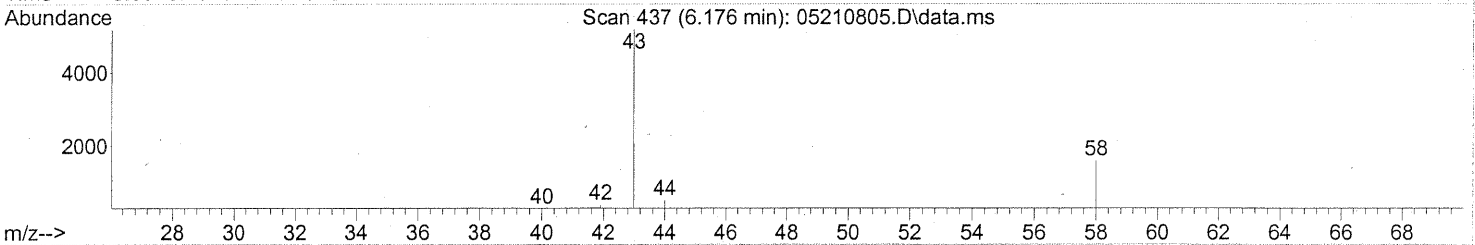
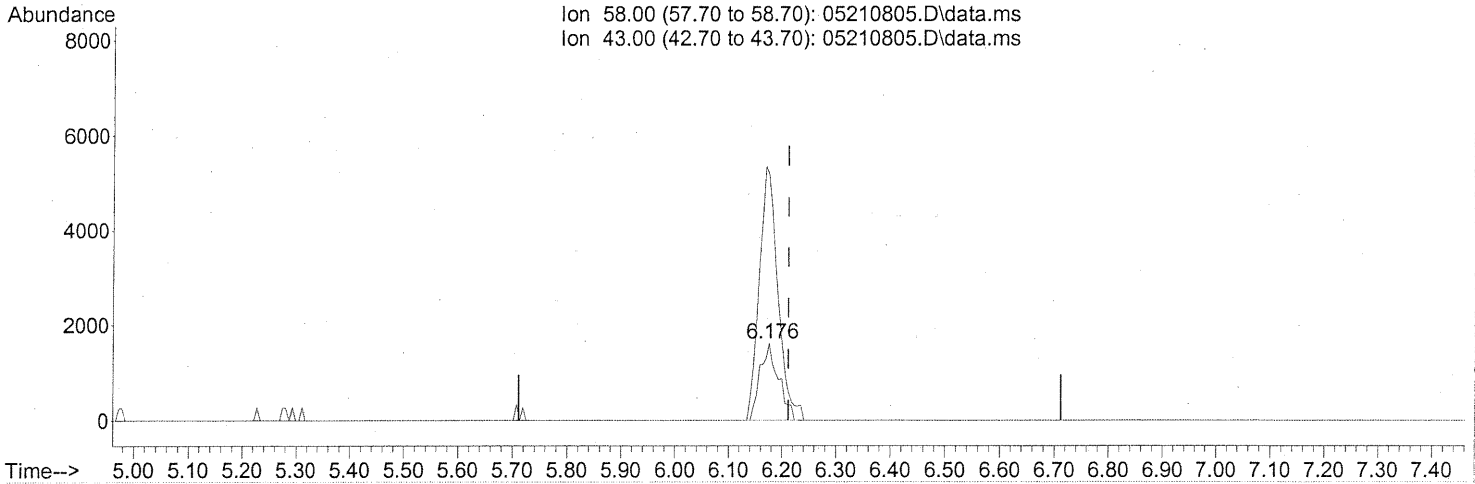
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
Data File : 05210805.D  
Acq On : 21 May 2008 10:37 am  
Operator : WA  
Sample : CAS CAN QC2 5/20/08 (1000ml) as MB  
Misc : SC00699  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 21 11:22:39 2008  
Quant Method : J:\MS16\METHODS\R16051208.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



(13) Acetone (T)

6.176min (-0.036) 0.22ng

response 3906

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	334.46#
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:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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>0.11</b>	5.0	0.050	<b>0.061</b>	2.7	0.027	<b>J</b>
67-64-1	<b>Acetone</b>	<b>0.56</b>	5.0	0.073	<b>0.24</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	<b>L, V</b>
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	<b>2-Butanone (MEK)</b>	<b>0.089</b>	0.50	0.050	<b>0.030</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.

V = The continuing calibration verification standard was outside (biased low) the specified limits for this compound.

L = Laboratory control sample recovery outside the specified limits, results may be biased low.

Verified By: Re

Date: 6/2/08

**908**

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	L
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.

L = Laboratory control sample recovery outside the specified limits, results may be biased low.

Verified By: RG

Date: 6/2/08

**909**

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	V

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.

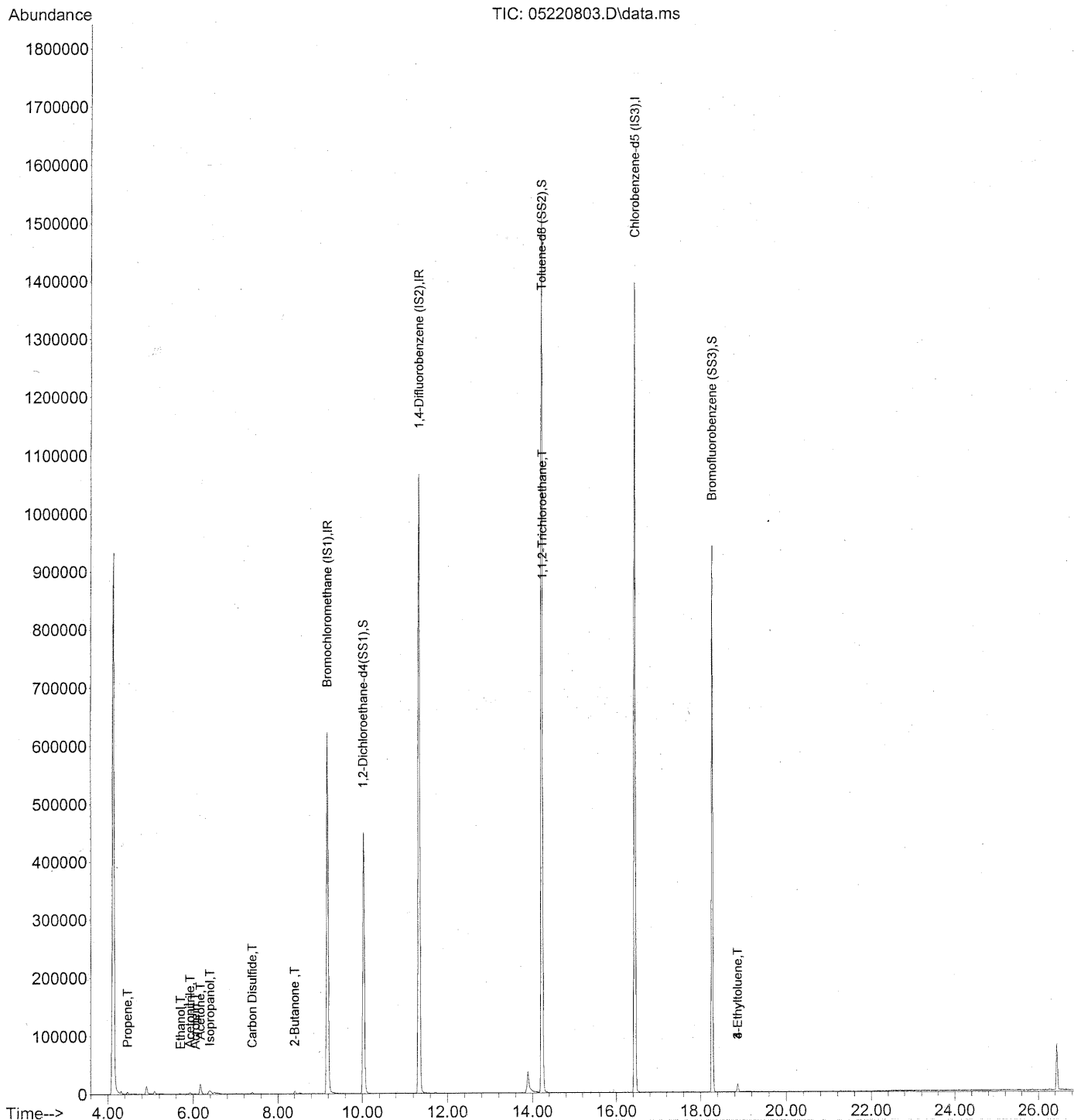
V = The continuing calibration verification standard was outside (biased high) the specified limits for this compound.

Verified By: Re Date: 6/2/08

**910**

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 8:28 am  
Operator : WA  
Sample : TO-15 Method Blank (1000ml)  
Misc : S20-05120801  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
Quant Method : J:\MS16\METHODS\R16051208.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



911

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 8:28 am  
 Operator : WA  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-05120801  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008

Quant Method : J:\MS16\METHODS\R16051208.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	291099	25.000	ng	-0.07
37) 1,4-Difluorobenzene (IS2)	11.34	114	1200703	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	463958	25.000	ng	-0.02

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.03	65	421964	20.556	ng	-0.06
Spiked Amount	25.000		Recovery	=	82.24%	✓
57) Toluene-d8 (SS2)	14.22	98	1210764	26.504	ng	-0.02
Spiked Amount	25.000		Recovery	=	106.00%	✓
73) Bromofluorobenzene (SS3)	18.28	174	331347	27.870	ng	-0.01
Spiked Amount	25.000		Recovery	=	111.48%	✓

#### Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	1535	0.053	ng	93
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	5.71	45	2274	0.114	ng	70
11) Acetonitrile	5.93	41	4689	0.090	ng	# 62
12) Acrolein	6.05	56	841	0.059	ng	88
13) Acetone	6.17	58	10779	0.560	ng	# 62
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	6.40	45	20271	0.325	ng	92
16) Acrylonitrile	6.61	53	93	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	7.02	59	92	N.D.		
19) Methylene Chloride	7.02	84	91	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	5038	0.088	ng	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	8.41	72	885	0.089	ng	# 26
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.		

WA 6/2/08

yes

912

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 8:28 am  
 Operator : WA  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-05120801  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	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	0.00	97	0	N.D.		
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	10.80	56	97	N.D.		
41) Benzene	10.99	78	591	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	11.32	84	958	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	103988	<del>7.280</del> ng	NR#	6
58) Toluene	14.35	91	643	N.D.		
59) 2-Hexanone	0.00	43	0	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	0.00	43	0	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	90	N.D.		
67) m- & p-Xylene	17.14	91	190	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	0.00	91	0	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	332	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	18.88	105	6963	<del>0.103</del> ng	#	44
78) 4-Ethyltoluene	18.88	105	6963	<del>0.113</del> ng	NR#	46
79) 1,3,5-Trimethylbenzene	0.00	105	0	N.D.		

913

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 8:28 am  
Operator : WA  
Sample : TO-15 Method Blank (1000ml)  
Misc : S20-05120801  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
Quant Method : J:\MS16\METHODS\R16051208.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	0.00	118	0	N.D.		
81) 2-Ethyltoluene	0.00	105	0	N.D.		
82) 1,2,4-Trimethylbenzene	0.00	105	0	N.D.		
83) n-Decane	20.16	57	322	N.D.		
84) Benzyl Chloride	0.00	91	0	N.D.		
85) 1,3-Dichlorobenzene	20.10	146	187	N.D.		
86) 1,4-Dichlorobenzene	20.10	146	187	N.D.		
87) sec-Butylbenzene	0.00	105	0	N.D.		
88) p-Isopropyltoluene	0.00	119	0	N.D.		
89) 1,2,3-Trimethylbenzene	0.00	105	0	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	271	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	184	0	N.D.		
95) Naphthalene	22.70	128	1355	N.D.		
96) n-Dodecane	0.00	57	0	N.D.		
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

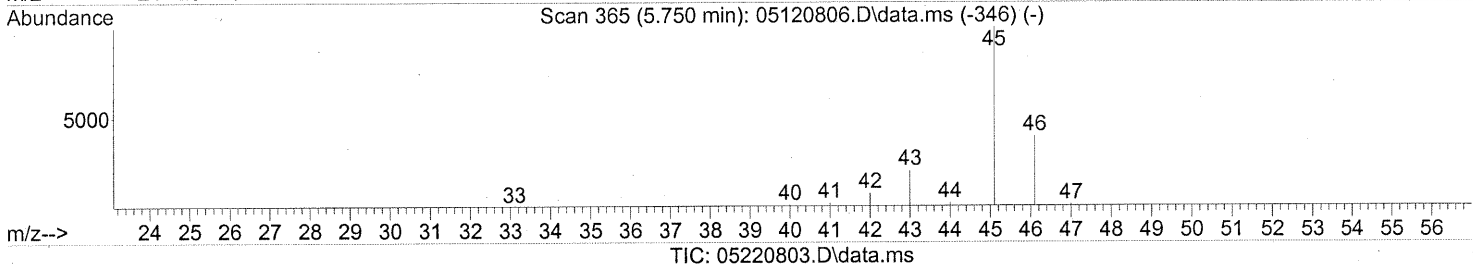
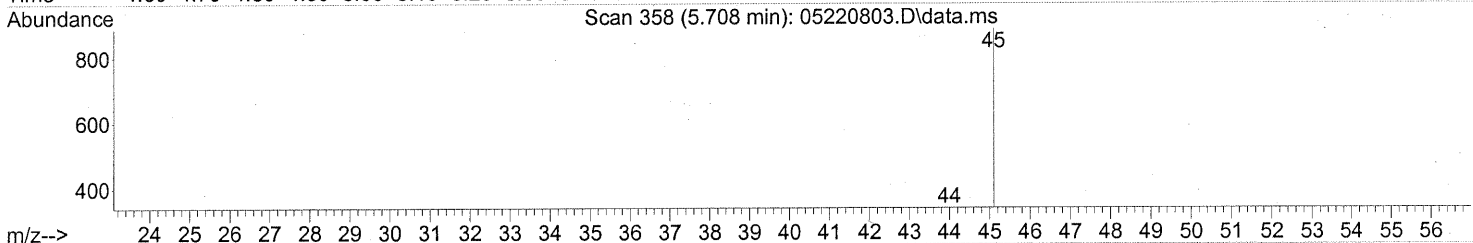
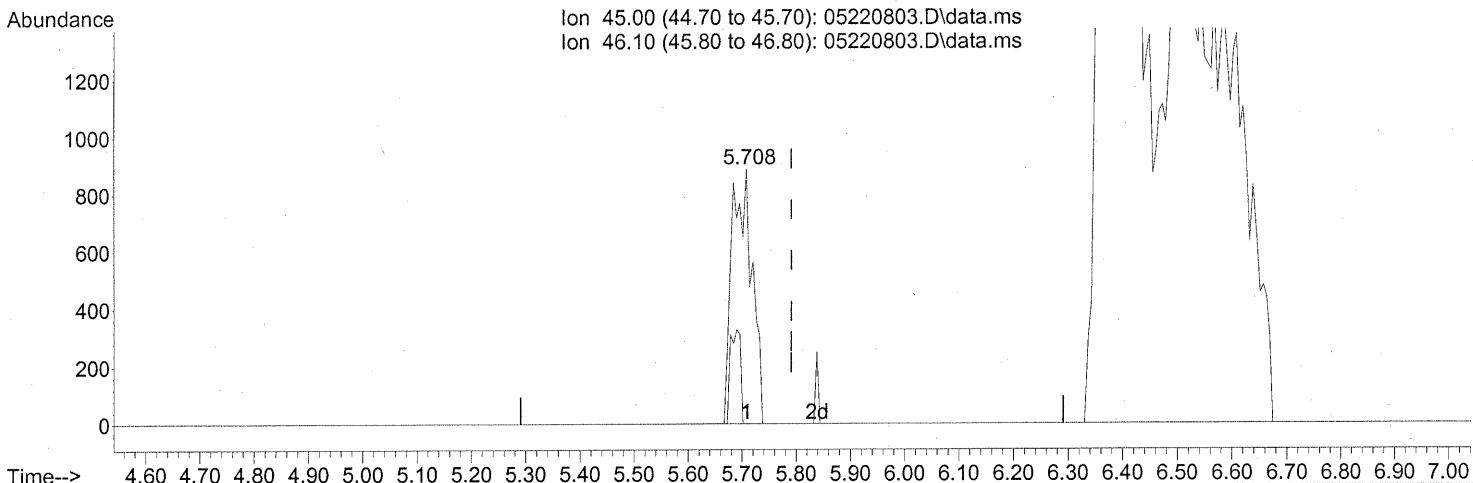
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 8:28 am  
 Operator : WA  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-05120801  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

5.708min (-0.083) 0.11ng

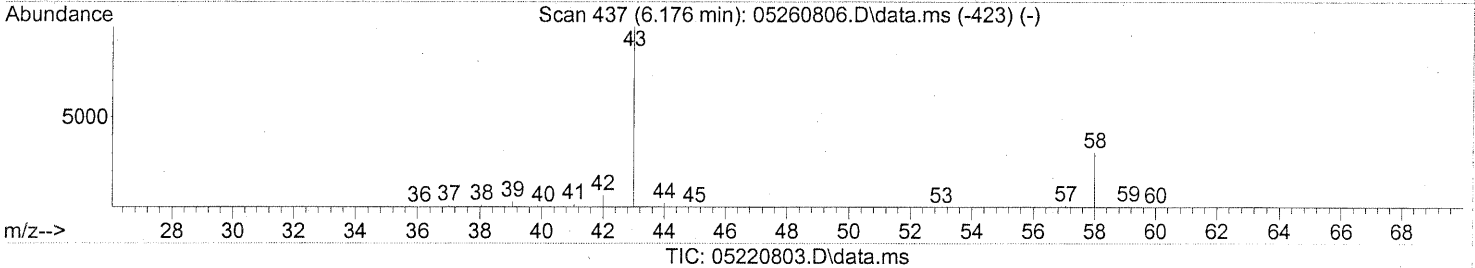
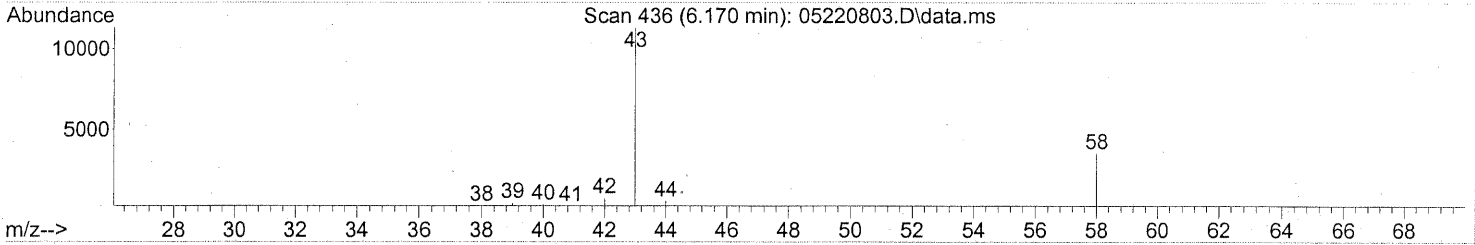
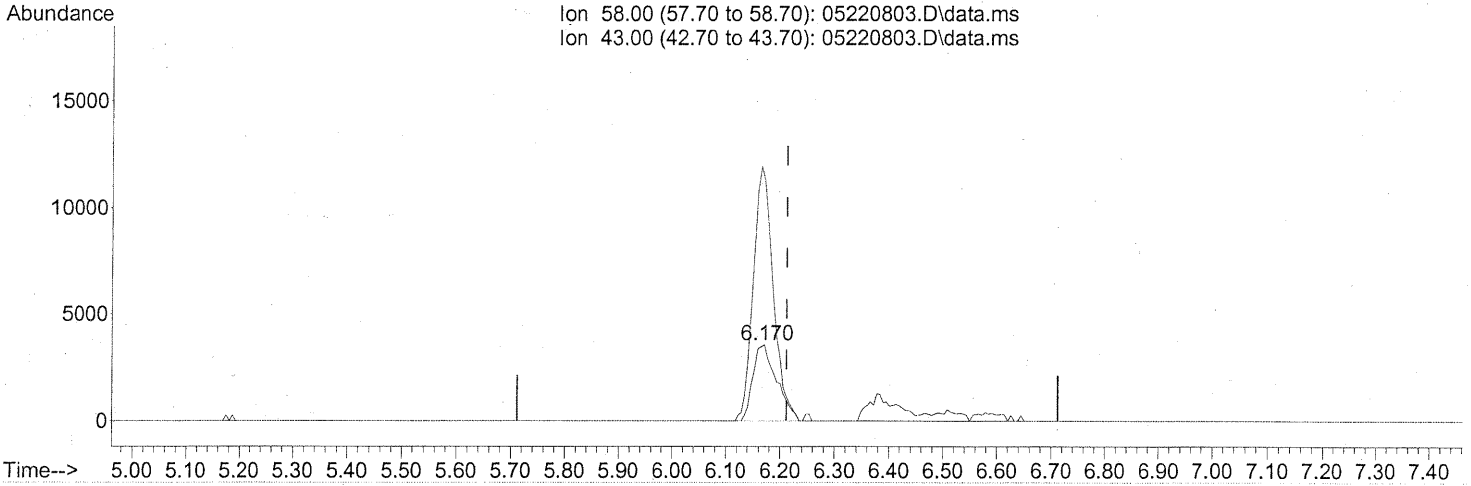
response 2274

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	19.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 8:28 am  
 Operator : WA  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-05120801  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



(13) Acetone (T)

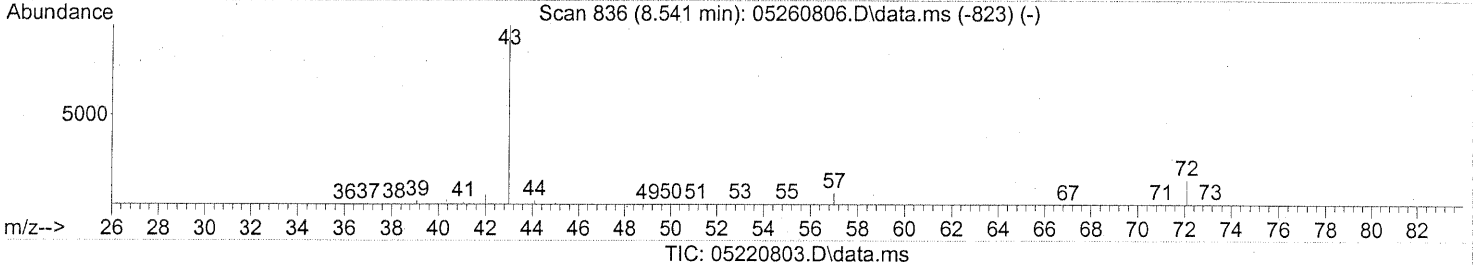
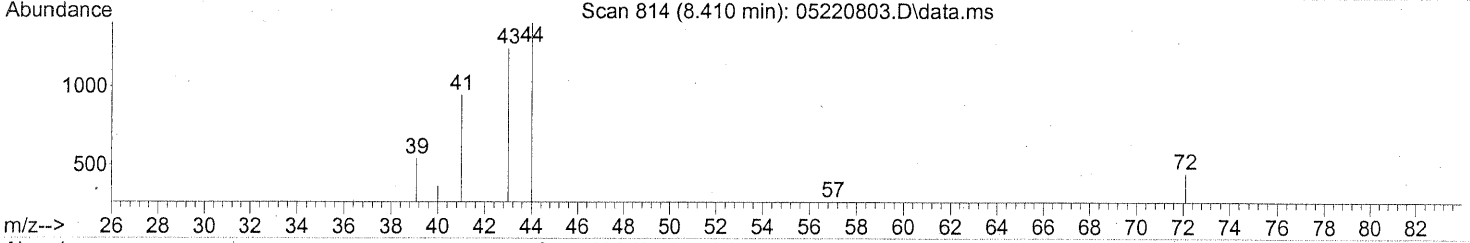
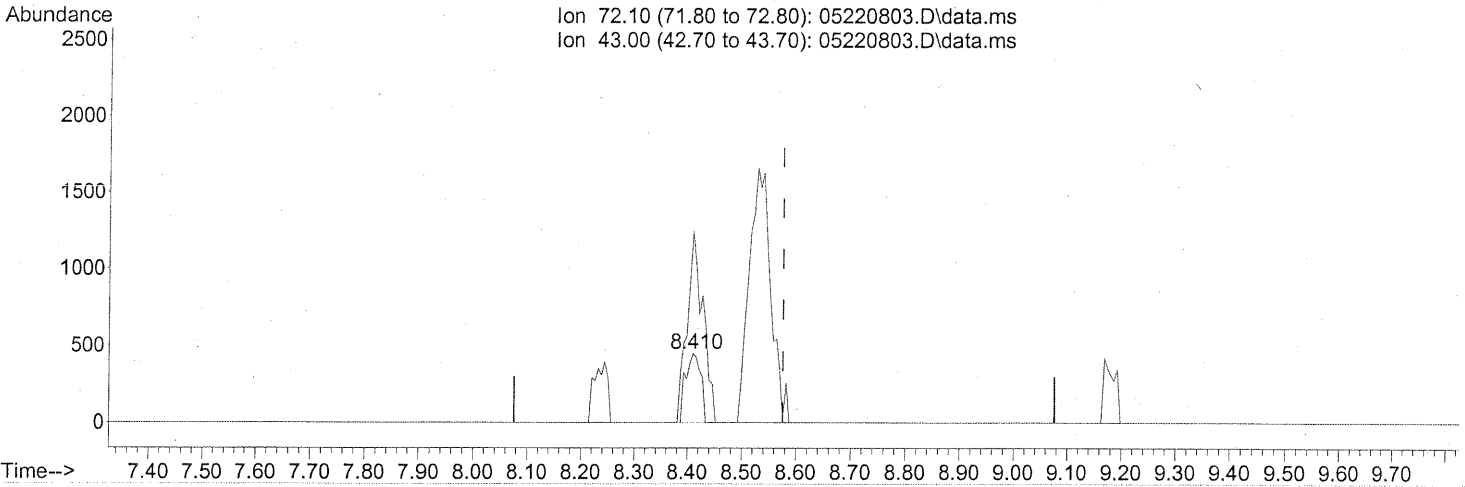
6.170min (-0.042) 0.56ng

response 10779

Ion	Exp%	Act%
58.00	100	100
43.00	368.40	282.20#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 8:28 am  
 Operator : WA  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-05120801  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 14:18:28 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



(27) 2-Butanone (T)

8.410min (-0.166) 0.09ng

response 885

Ion	Exp%	Act%
72.10	100	100
43.00	491.60	290.62#
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:** Method Blank  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P080524-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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>0.19</b>	5.0	0.073	<b>0.079</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	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
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	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: Re

Date: 6/2/08

**918**

**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: P0801442  
 CAS Sample ID: P080524-MB

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 1.00 Liter(s)

Canister Dilution Factor: 1.00

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	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: RC Date: 6/2/08

**919**

**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: P0801442  
 CAS Sample ID: P080524-MB

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/24/08  
 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.

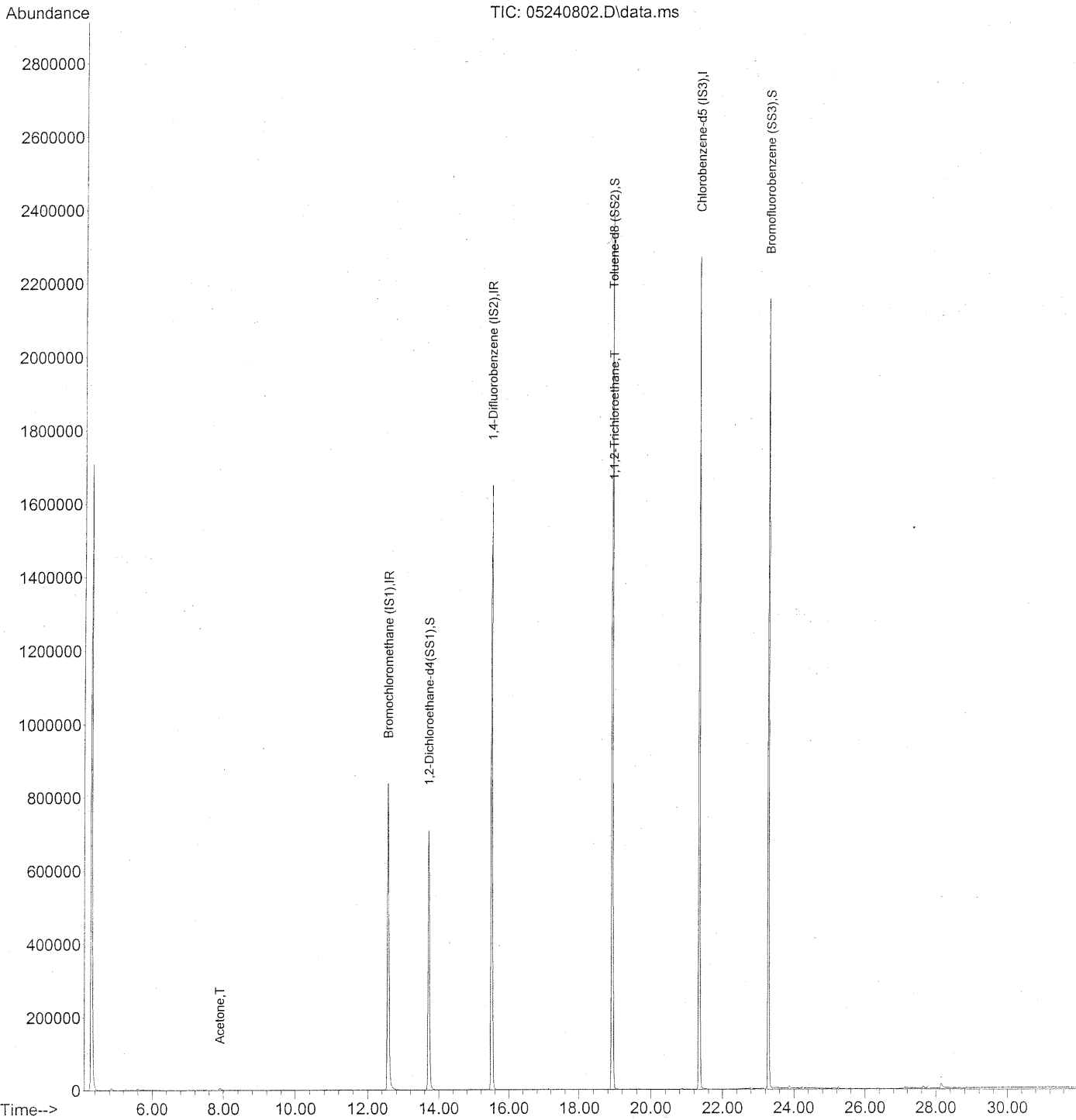
MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

Verified By: RC Date: 6/2/08

**920**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:16:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:16:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	443208	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1904075	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	885417	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	742053	24.163	ng	0.00	
Spiked Amount	25.000						Recovery = 96.64% ✓
57) Toluene-d8 (SS2)	18.92	98	2017787	25.375	ng	0.00	
Spiked Amount	25.000						Recovery = 101.48% ✓
73) Bromofluorobenzene (SS3)	23.29	174	802865	24.829	ng	0.00	
Spiked Amount	25.000						Recovery = 99.32% ✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.84	42	1995	N.D.		
3) Dichlorodifluoromethane	4.93	85	91	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	5.57	135	58	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	6.52	94	136	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	7.12	45	97	N.D.		
11) Acetonitrile	7.49	41	1938	N.D.		
12) Acrolein	7.69	56	417	N.D.		
13) Acetone	7.91	58	4482	0.188 ng	"J" #	66
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) Isopropanol	8.37	45	267	N.D.		
16) Acrylonitrile	8.68	53	58	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) tert-Butanol	9.37	59	138	N.D.		
19) Methylene Chloride	9.36	84	1196	N.D.		
20) Allyl Chloride	9.57	41	59	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	9.77	76	294	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	11.72	72	52	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.		



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:16:10 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 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	13.42	72	51		N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0		N.D.	
36) 1,2-Dichloroethane	13.76	62	64		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	14.92	56	725		N.D.	
41) Benzene	14.98	78	1413		N.D.	
42) Carbon Tetrachloride	0.00	117	0		N.D.	
43) Cyclohexane	15.51	84	1423		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	16.73	100	70		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	18.94	97	175405	7.120	ng UR #	8
58) Toluene	19.05	91	910		N.D.	
59) 2-Hexanone	19.39	43	65		N.D.	
60) Dibromochloromethane	0.00	129	0		N.D.	
61) 1,2-Dibromoethane	0.00	107	0		N.D.	
62) Butyl Acetate	20.22	43	61		N.D.	
63) n-Octane	0.00	57	0		N.D.	
64) Tetrachloroethene	0.00	166	0		N.D.	
65) Chlorobenzene	21.42	112	410		N.D.	
66) Ethylbenzene	21.89	91	604		N.D.	
67) m- & p-Xylene	22.12	91	619		N.D.	
68) Bromoform	0.00	173	0		N.D.	
69) Styrene	22.59	104	287		N.D.	
70) o-Xylene	22.72	91	661		N.D.	
71) n-Nonane	22.97	43	121		N.D.	
72) 1,1,2,2-Tetrachloroethane	0.00	83	0		N.D.	
74) Cumene	23.46	105	628		N.D.	
75) alpha-Pinene	23.87	93	57		N.D.	
76) n-Propylbenzene	24.10	91	1857		N.D.	
77) 3-Ethyltoluene	24.23	105	1424		N.D.	
78) 4-Ethyltoluene	24.28	105	445		N.D.	
79) 1,3,5-Trimethylbenzene	24.36	105	379		N.D.	

RT 5/24/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:16:10 2008

Quant Method : J:\MS13\METHODS\R13052208.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu May 22 11:37:04 2008

Response via : Initial Calibration

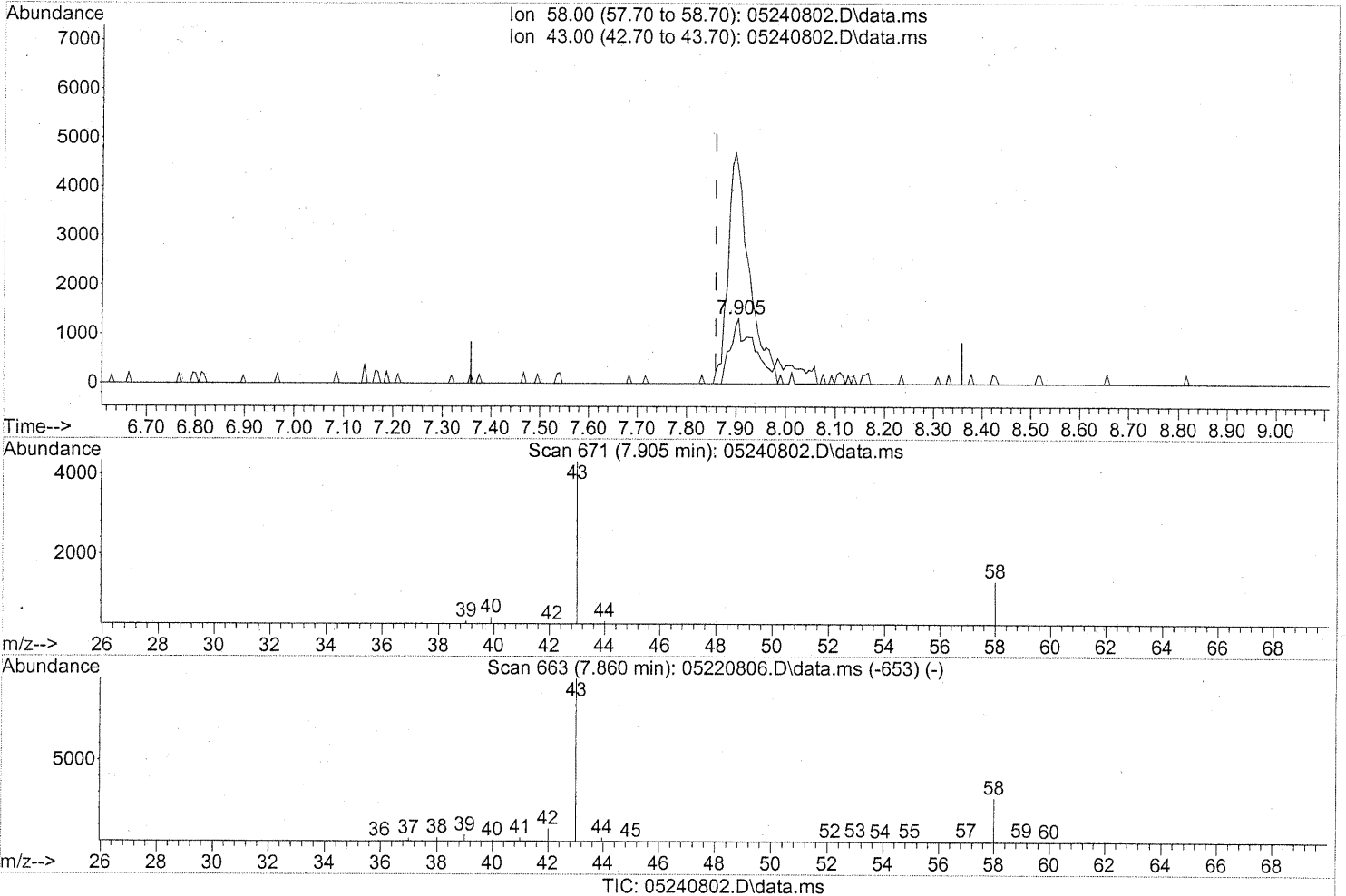
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	239		N.D.	
81) 2-Ethyltoluene	24.62	105	916		N.D.	
82) 1,2,4-Trimethylbenzene	24.89	105	1161		N.D.	
83) n-Decane	24.99	57	56		N.D.	
84) Benzyl Chloride	25.02	91	479		N.D.	
85) 1,3-Dichlorobenzene	25.08	146	1344		N.D.	
86) 1,4-Dichlorobenzene	25.17	146	1865		N.D.	
87) sec-Butylbenzene	25.21	105	222		N.D.	
88) p-Isopropyltoluene	25.42	119	408		N.D.	
89) 1,2,3-Trimethylbenzene	25.41	105	478		N.D.	
90) 1,2-Dichlorobenzene	25.58	146	551		N.D.	
91) d-Limonene	25.39	68	65		N.D.	
92) 1,2-Dibromo-3-Chloropr...	26.12	157	65		N.D.	
93) n-Undecane	26.50	57	175		N.D.	
94) 1,2,4-Trichlorobenzene	27.64	180	1968		N.D.	
95) Naphthalene	27.78	128	10487		N.D.	
96) n-Dodecane	27.74	57	626		N.D.	
97) Hexachloro-1,3-butadiene	28.19	225	113		N.D.	

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240802.D  
Acq On : 24 May 2008 7:42  
Operator : RTB  
Sample : TO-15 Method Blank (1.0L)  
Misc : S20-05160801  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:16:10 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



(13) Acetone (T)

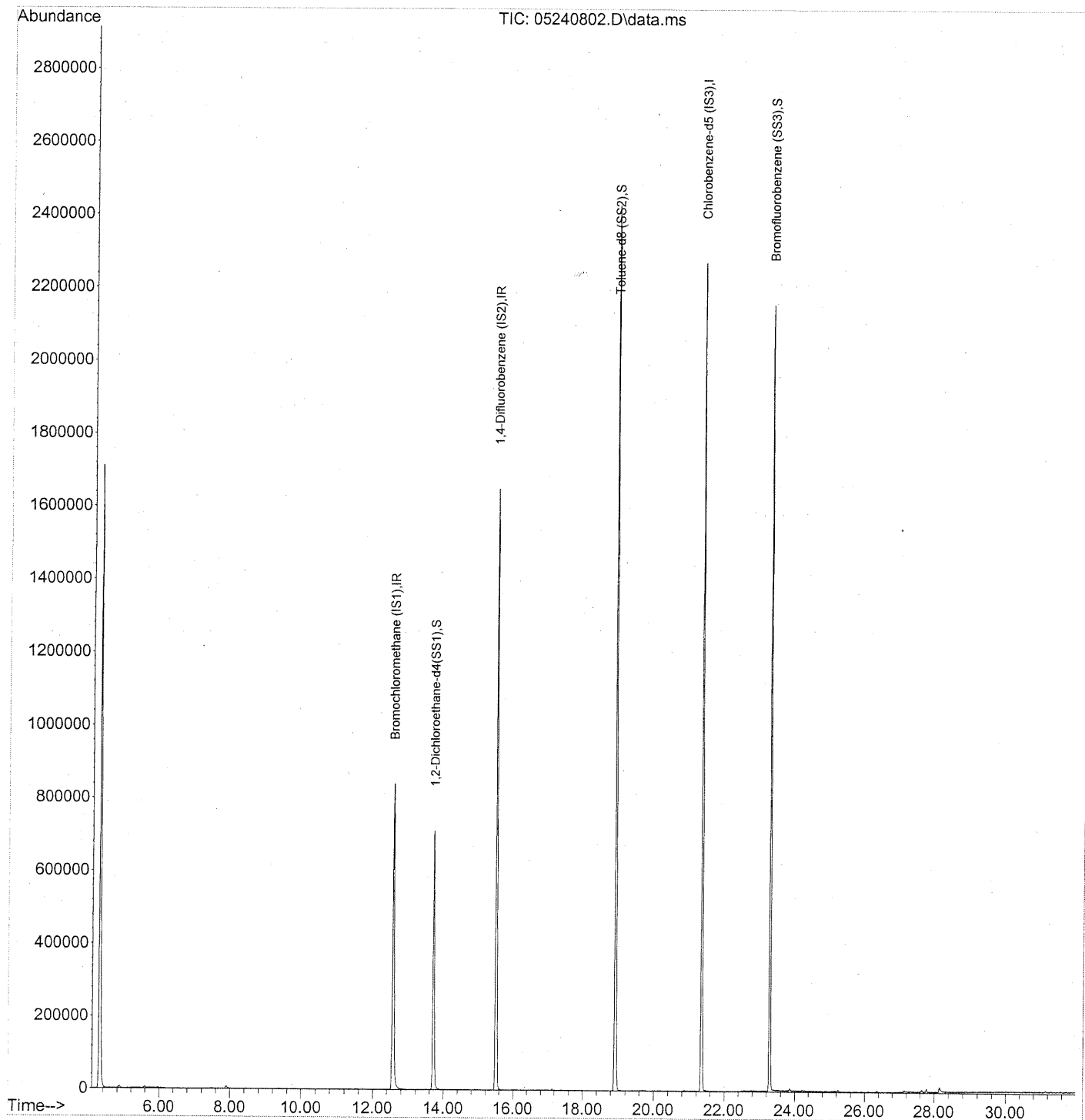
7.905min (+0.045) 0.19ng

response 4482

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	347.86#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:35:55 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240802.D  
 Acq On : 24 May 2008 7:42  
 Operator : RTB  
 Sample : TO-15 Method Blank (1.0L)  
 Misc : S20-05160801  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:35:55 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	443208	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1904075	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	885417	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	742053	24.163	ng	-0.03
Spiked Amount	25.000		Recovery	= 96.64%		
5) Toluene-d8 (SS2)	18.92	98	2017787	25.375	ng	-0.02
Spiked Amount	25.000		Recovery	= 101.48%		
6) Bromofluorobenzene (SS3)	23.29	174	802865	24.829	ng	0.00
Spiked Amount	25.000		Recovery	= 99.32%		
Target Compounds						
7) tert-Butylbenzene	24.91	119	318	N.D.		Qvalue
8) n-Butylbenzene	25.93	91	771	N.D.		

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

*RTB 5/26/08*

## 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: P0801442

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: 5/14 - 5/15/08  
 Date(s) Received: 5/16/08  
 Date(s) Analyzed: 5/21 - 5/24/08

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	P080521-MB	84	70-130	106	70-130	111	70-130	
Method Blank	P080522-MB	82	70-130	106	70-130	111	70-130	
Method Blank	P080524-MB	97	70-130	102	70-130	99	70-130	
Lab Control Sample	P080521-LCS	86	70-130	103	70-130	113	70-130	
Lab Control Sample	P080522-LCS	84	70-130	105	70-130	112	70-130	
Lab Control Sample	P080524-LCS	96	70-130	100	70-130	103	70-130	
SG73B-05	P0801442-001	97	70-130	97	70-130	100	70-130	
SG39B-05	P0801442-002	95	70-130	98	70-130	100	70-130	
SG37B-20	P0801442-003	93	70-130	96	70-130	100	70-130	
SG36B-20	P0801442-004	100	70-130	98	70-130	98	70-130	
SG44B-05	P0801442-005	92	70-130	99	70-130	103	70-130	
SG88B-05	P0801442-006	92	70-130	98	70-130	101	70-130	
SG72B-05	P0801442-007	89	70-130	98	70-130	102	70-130	
SG70B-05	P0801442-008	95	70-130	101	70-130	100	70-130	
SG71B-05	P0801442-009	96	70-130	100	70-130	99	70-130	
SG65B-05	P0801442-010	89	70-130	100	70-130	102	70-130	
SG65B-05D	P0801442-011	92	70-130	100	70-130	101	70-130	
SG84B-05	P0801442-012	91	70-130	100	70-130	100	70-130	
SG85B-05	P0801442-013	91	70-130	98	70-130	102	70-130	
SG35B-05	P0801442-014	102	70-130	101	70-130	98	70-130	
SG35B-05	P0801442-014DUP	101	70-130	101	70-130	99	70-130	
SG94B-05	P0801442-015	91	70-130	100	70-130	102	70-130	
SG95B-05	P0801442-016	90	70-130	101	70-130	102	70-130	
SG89B-05	P0801442-017	96	70-130	100	70-130	97	70-130	
SG75B-05	P0801442-018	91	70-130	102	70-130	102	70-130	

Verified By: RG Date: 6/2/08 **929**

**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: P0801442  
 CAS Sample ID: P080521-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:** 5/21/08  
**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	19.6	77	69-117	
74-87-3	Chloromethane	24.5	20.6	84	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	23.3	90	58-133	
75-01-4	Vinyl Chloride	24.8	18.2	73	61-127	
74-83-9	Bromomethane	25.0	19.6	78	67-124	
75-00-3	Chloroethane	25.0	20.5	82	69-123	
64-17-5	Ethanol	23.8	20.9	88	56-137	
67-64-1	Acetone	26.8	19.8	74	63-116	
75-69-4	Trichlorofluoromethane	26.3	22.1	84	71-120	
107-13-1	Acrylonitrile	25.5	22.5	88	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.7	85	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	19.5	76	35-141	
75-09-2	Methylene Chloride	27.8	21.0	76	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	20.6	77	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	27.0	97	63-129	
75-15-0	Carbon Disulfide	25.0	19.8	79	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	21.1	80	74-118	
75-34-3	1,1-Dichloroethane	26.8	20.3	76	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	20.8	78	72-119	
108-05-4	Vinyl Acetate	25.3	19.7	78	32-163	
78-93-3	2-Butanone (MEK)	27.0	21.9	81	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	21.5	80	74-117	
108-20-3	Diisopropyl Ether	26.3	21.7	83	70-131	
67-66-3	Chloroform	29.8	24.9	84	72-113	

Verified By: RC

Date: 6/2/08

**930**



**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	22.2	85	74-123	
107-06-2	1,2-Dichloroethane	26.3	20.5	78	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	22.7	85	78-114	
71-43-2	Benzene	27.0	21.0	78	73-111	
56-23-5	Carbon Tetrachloride	26.0	25.6	98	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	21.2	82	81-118	
78-87-5	1,2-Dichloropropane	26.5	21.7	82	78-117	
75-27-4	Bromodichloromethane	27.8	23.8	86	77-120	
79-01-6	Trichloroethene	27.3	25.6	94	80-116	
123-91-1	1,4-Dioxane	27.5	24.1	88	79-122	
80-62-6	Methyl Methacrylate	25.8	25.3	98	79-128	
142-82-5	n-Heptane	26.8	22.1	82	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	20.6	82	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	21.9	80	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	23.2	83	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	22.9	87	80-117	
108-88-3	Toluene	26.5	24.0	91	76-116	
591-78-6	2-Hexanone	26.3	22.4	85	69-131	
124-48-1	Dibromochloromethane	27.0	28.4	105	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.1	99	79-122	
111-65-9	n-Octane	26.0	24.0	92	78-122	
127-18-4	Tetrachloroethene	26.0	27.8	107	77-118	
108-90-7	Chlorobenzene	26.5	25.9	98	78-117	

Verified By: Re Date: 6/2/08 **931**

**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: P0801442  
 CAS Sample ID: P080521-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: 5/21/08  
 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	24.2	92	79-116	
179601-23-1	m,p-Xylenes	62.5	57.7	92	80-117	
75-25-2	Bromoform	31.3	37.9	121	77-128	
100-42-5	Styrene	26.3	26.4	100	80-124	
95-47-6	o-Xylene	29.8	27.8	93	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	27.2	91	79-120	
98-82-8	Cumene	27.0	26.7	99	81-119	
103-65-1	n-Propylbenzene	26.3	24.6	94	82-120	
622-96-8	4-Ethyltoluene	26.5	26.8	101	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	25.7	99	80-120	
98-83-9	alpha-Methylstyrene	25.5	27.1	106	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.7	99	80-122	
100-44-7	Benzyl Chloride	25.8	25.0	97	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	27.0	106	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	28.3	108	81-119	
135-98-8	sec-Butylbenzene	26.8	26.6	99	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	30.0	104	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	27.1	105	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	29.7	115	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	31.1	120	75-138	
91-20-3	Naphthalene	26.3	28.4	108	76-143	
87-68-3	Hexachlorobutadiene	26.3	32.4	123	72-128	

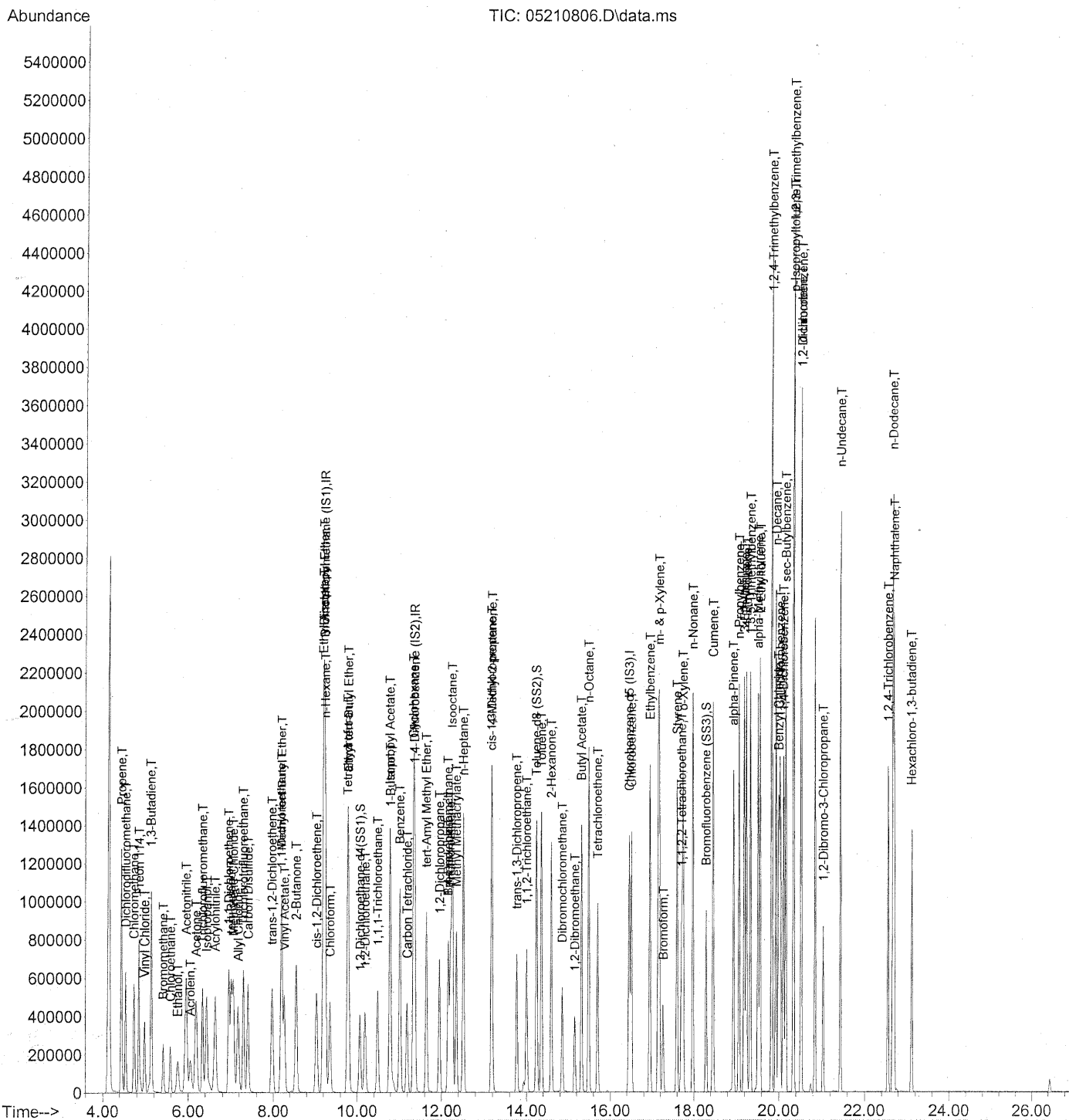
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Date: 6/2/08

**932**

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:55 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



933

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:55 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	271810	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1132838	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	16.45	82	456218	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	10.08	65	411681	21.478	ng	-0.02
Spiked Amount	25.000		Recovery	=	85.92%	
57) Toluene-d8 (SS2)	14.24	98	1155242	25.718	ng	-0.01
Spiked Amount	25.000		Recovery	=	102.88%	
73) Bromofluorobenzene (SS3)	18.29	174	328892	28.132	ng	0.00
Spiked Amount	25.000		Recovery	=	112.52%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	599361	22.052	ng	91
3) Dichlorodifluoromethane	4.54	85	628856	19.568	ng	98
4) Chloromethane	4.74	50	818992	20.613	ng	99
5) Freon 114	4.85	135	361002	23.296	ng	97
6) Vinyl Chloride	4.98	62	500198	18.233	ng	94
7) 1,3-Butadiene	5.13	54	610282	23.827	ng	90
8) Bromomethane	5.42	94	222027	19.641	ng	99
9) Chloroethane	5.59	64	256547	20.458	ng	96
10) Ethanol	5.76	45	390152m	20.877	ng	
11) Acetonitrile	5.95	41	1261730	26.002	ng	99
12) Acrolein	6.05	56	277180	20.830	ng	99
13) Acetone	6.19	58	355255	19.781	ng	90
14) Trichlorofluoromethane	6.34	101	588305	22.134	ng	100
15) Isopropanol	6.43	45	1200495m	20.617	ng	
16) Acrylonitrile	6.63	53	719060	22.512	ng	97
17) 1,1-Dichloroethene	6.95	96	308830	23.736	ng	89
18) tert-Butanol	7.01	59	1030635	19.462	ng	93
19) Methylene Chloride	7.06	84	297915	20.998	ng	# 30
20) Allyl Chloride	7.17	41	612395	20.597	ng	80
21) Trichlorotrifluoroethane	7.30	151	301175	26.964	ng	89
22) Carbon Disulfide	7.40	76	1062936	19.849	ng	100
23) trans-1,2-Dichloroethene	7.97	61	586826	21.092	ng	92
24) 1,1-Dichloroethane	8.19	63	643619	20.288	ng	94
25) Methyl tert-Butyl Ether	8.20	73	888656	20.838	ng	78
26) Vinyl Acetate	8.27	86	71857	19.723	ng	# 1
27) 2-Butanone	8.55	72	202579	21.894	ng	# 1
28) cis-1,2-Dichloroethene	9.04	61	550790	21.473	ng	93
29) Diisopropyl Ether	9.20	87	255511	21.698	ng	# 18
30) Ethyl Acetate	9.20	61	159326	23.280	ng	82
31) n-Hexane	9.25	57	838051	21.668	ng	91

934

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:55 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	9.36	83	505429	24.937	ng	95
34) Tetrahydrofuran	9.78	72	201397	21.717	ng	# 33
35) Ethyl tert-Butyl Ether	9.80	87	371386	22.234	ng	# 74
36) 1,2-Dichloroethane	10.19	62	497886	20.535	ng	96
38) 1,1,1-Trichloroethane	10.50	97	493593	22.658	ng	91
39) Isopropyl Acetate	10.79	61	252675	21.822	ng	# 49
40) 1-Butanol	10.80	56	450001	20.969	ng	94
41) Benzene	11.02	78	1168573	21.042	ng	99
42) Carbon Tetrachloride	11.20	117	420243	25.553	ng	98
43) Cyclohexane	11.34	84	460331	20.926	ng	# 44
44) tert-Amyl Methyl Ether	11.64	73	828034	21.173	ng	# 73
45) 1,2-Dichloropropane	11.95	63	374011	21.709	ng	96
46) Bromodichloromethane	12.16	83	393246	23.830	ng	93
47) Trichloroethene	12.21	130	391636	25.608	ng	99
48) 1,4-Dioxane	12.16	88	251387	24.096	ng	# 66
49) Isooctane	12.26	57	2054617	22.274	ng	95
50) Methyl Methacrylate	12.36	100	138954	25.338	ng	# 75
51) n-Heptane	12.52	71	312434	22.112	ng	# 51
52) cis-1,3-Dichloropropene	13.18	75	455787	20.579	ng	100
53) 4-Methyl-2-pentanone	13.19	58	442964	21.916	ng	83
54) trans-1,3-Dichloropropene	13.77	75	453202	23.166	ng	98
55) 1,1,2-Trichloroethane	14.00	97	308775	22.911	ng	91
58) Toluene	14.36	91	1321971	24.020	ng	99
59) 2-Hexanone	14.59	43	1303470	22.398	ng	94
60) Dibromochloromethane	14.85	129	407336	28.357	ng	100
61) 1,2-Dibromoethane	15.15	107	370661	26.100	ng	99
62) Butyl Acetate	15.31	43	1454095	24.489	ng	94
63) n-Octane	15.49	57	423082	24.020	ng	93
64) Tetrachloroethene	15.70	166	378358	27.816	ng	99
65) Chlorobenzene	16.50	112	944510	25.932	ng	100
66) Ethylbenzene	16.95	91	1522174	24.247	ng	93
67) m- & p-Xylene	17.17	91	2374821	57.736	ng	92
68) Bromoform	17.26	173	294252	37.881	ng	100
69) Styrene	17.60	104	1005068	26.365	ng	94
70) o-Xylene	17.74	91	1217686	27.761	ng	93
71) n-Nonane	17.97	43	1177419	24.304	ng	89
72) 1,1,2,2-Tetrachloroethane	17.70	83	526251	27.232	ng	93
74) Cumene	18.45	105	1633300	26.654	ng	95
75) alpha-Pinene	18.93	93	766622	25.605	ng	94
76) n-Propylbenzene	19.07	91	1888878	24.581	ng	93
77) 3-Ethyltoluene	19.19	105	1661289	25.032	ng	95
78) 4-Ethyltoluene	19.25	105	1617167	26.759	ng	94
79) 1,3,5-Trimethylbenzene	19.34	105	1369869	25.746	ng	91

935

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

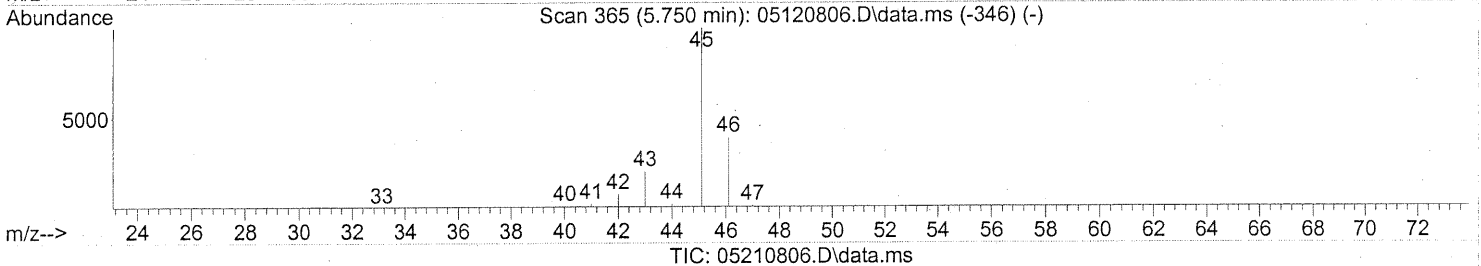
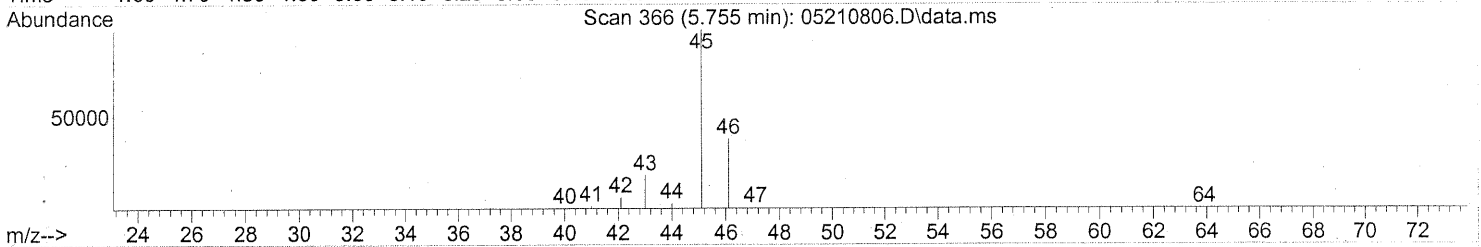
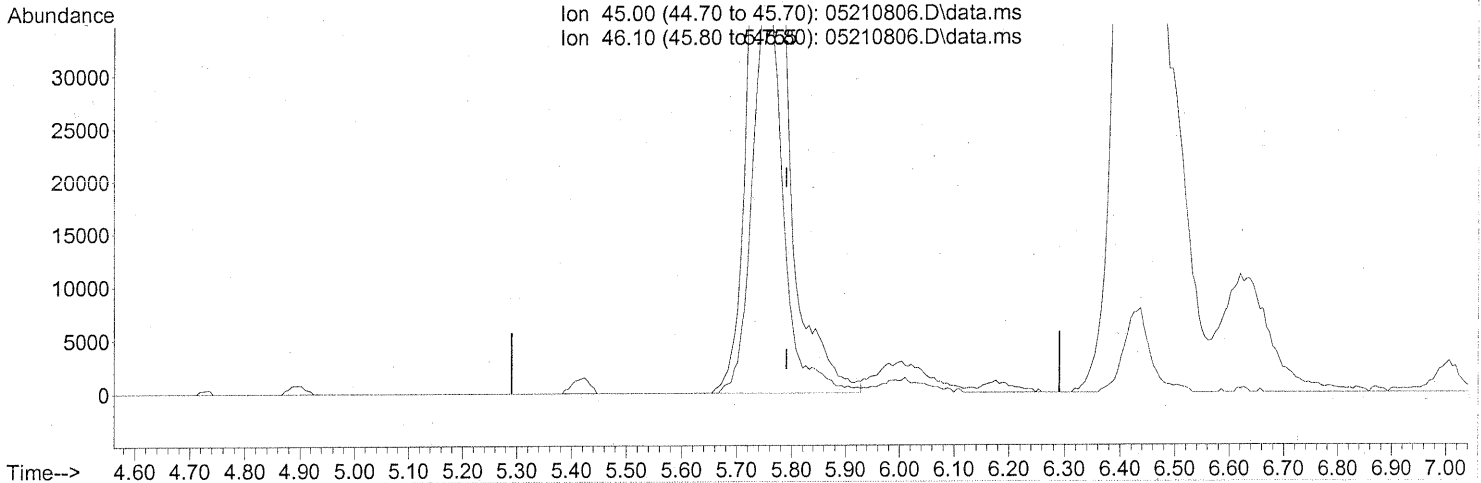
Quant Time: May 21 11:43:55 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:47:38 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	782887	27.119	ng	98
81) 2-Ethyltoluene	19.57	105	1636705	24.856	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	1410950	25.663	ng	91
83) n-Decane	19.94	57	1088324	24.974	ng	79
84) Benzyl Chloride	19.99	91	1146154	25.015	ng	90
85) 1,3-Dichlorobenzene	20.03	146	863044	27.049	ng	99
86) 1,4-Dichlorobenzene	20.11	146	863540	28.335	ng	99
87) sec-Butylbenzene	20.16	105	1904599	26.591	ng	95
88) p-Isopropyltoluene	20.34	119	1827860	30.049	ng	94
89) 1,2,3-Trimethylbenzene	20.35	105	1484656	27.731	ng	89
90) 1,2-Dichlorobenzene	20.52	146	801696	27.091	ng	99
91) d-Limonene	20.52	68	459441	23.163	ng	89
92) 1,2-Dibromo-3-Chloropr...	21.04	157	277403	29.747	ng	88
93) n-Undecane	21.43	57	1176968	25.682	ng	77
94) 1,2,4-Trichlorobenzene	22.55	184	160340	31.147	ng #	86
95) Naphthalene	22.70	128	2211113	28.421	ng	99
96) n-Dodecane	22.66	57	1171825	26.204	ng #	76
97) Hexachloro-1,3-butadiene	23.11	225	249686	32.442	ng	100

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

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:14 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

5.755min (-0.036) 19.83ng

response 370614

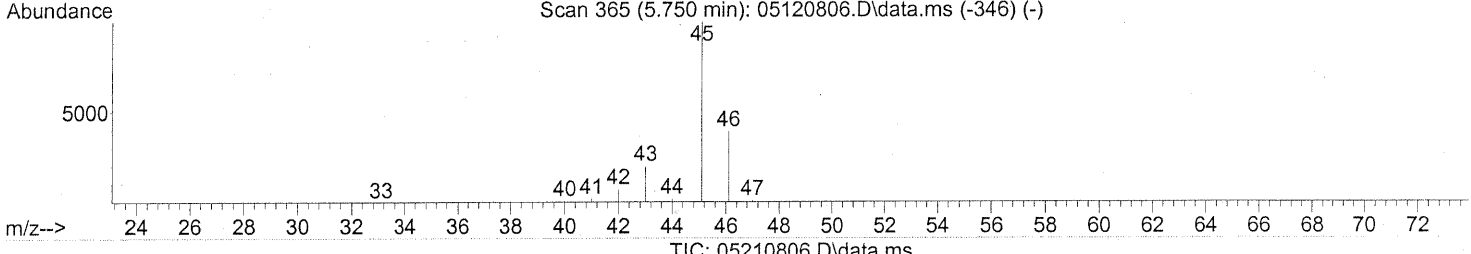
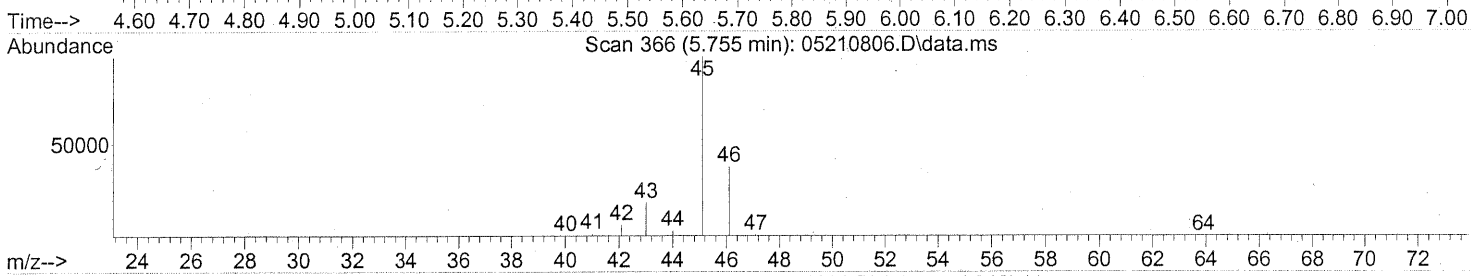
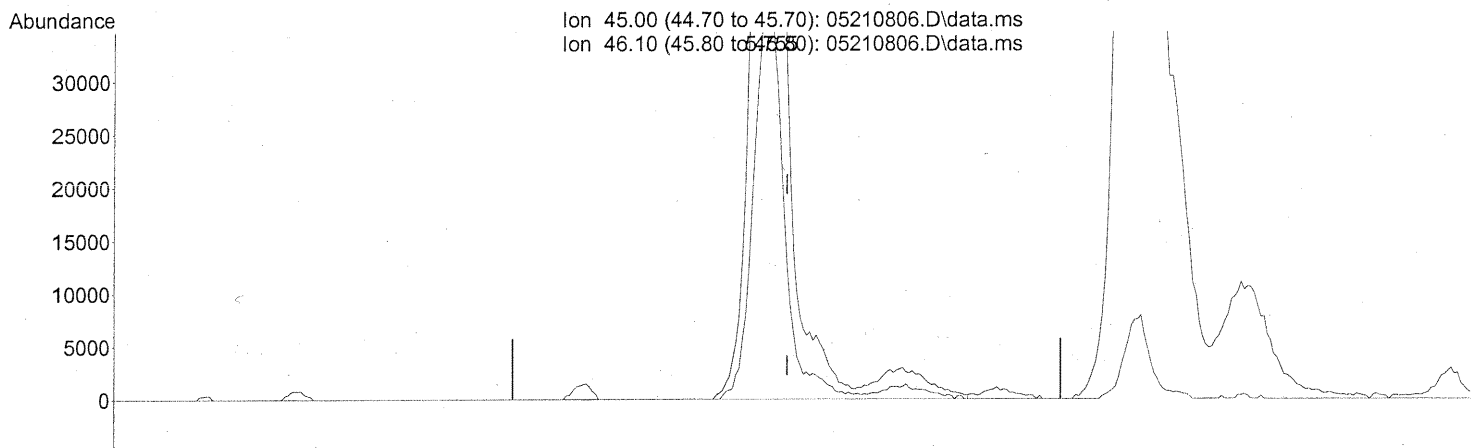
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.87
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
Data File : 05210806.D  
Acq On : 21 May 2008 11:14 am  
Operator : WA  
Sample : 25ng TO-15 LCS STD  
Misc : S20-05120801/S20-05050806  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:14 2008  
Quant Method : J:\MS16\METHODS\R16051208.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)  
5.755min (-0.036) 20.88ng m  
response 390152

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	37.88
0.00	0.00	0.00
0.00	0.00	0.00

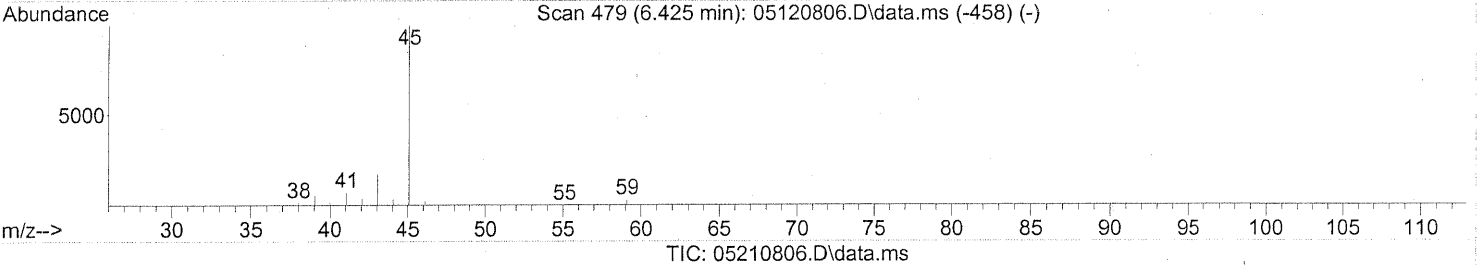
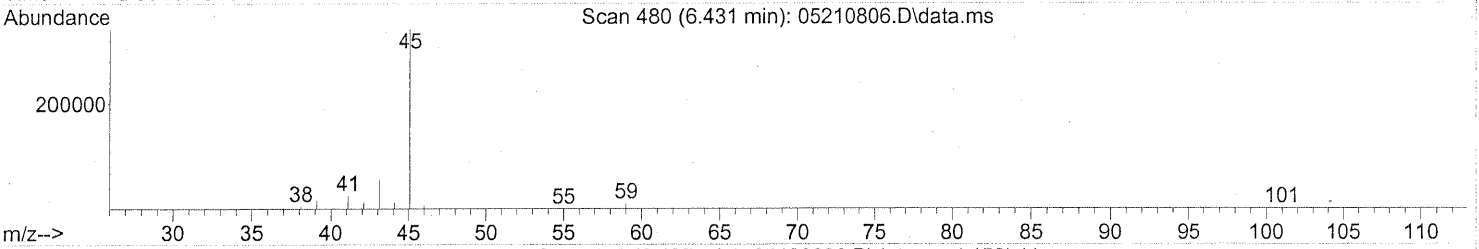
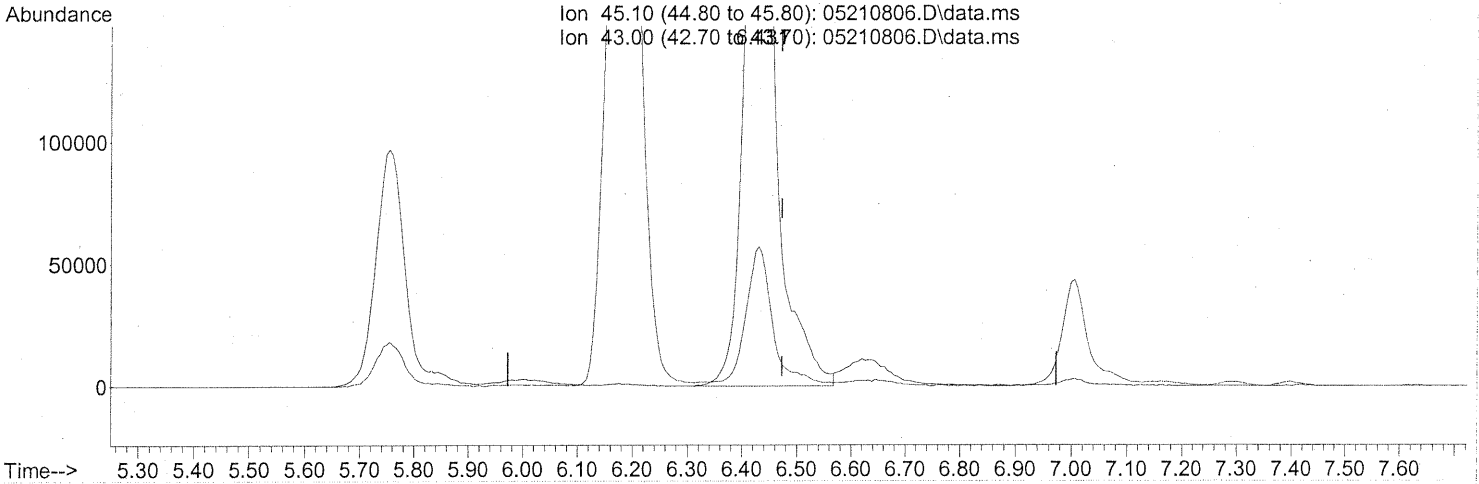
*int. whole peaks*  
*WA 5/21/08*  
*Em 5/22/08*



Quantitation Report (Qeait)

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:14 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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



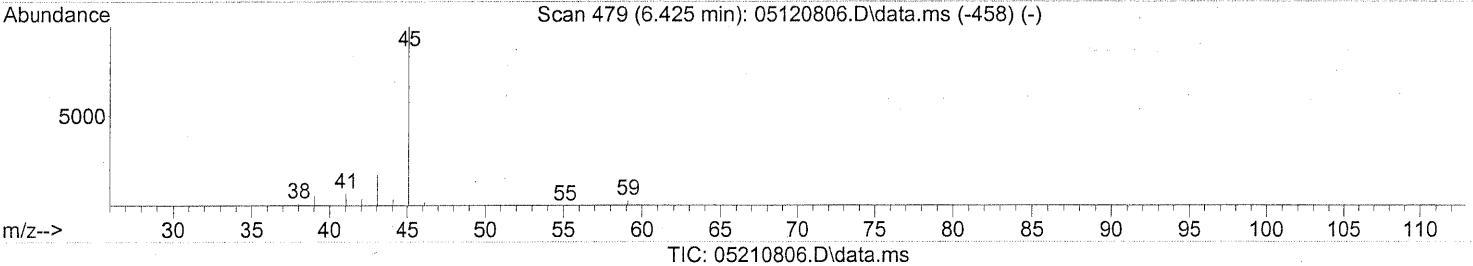
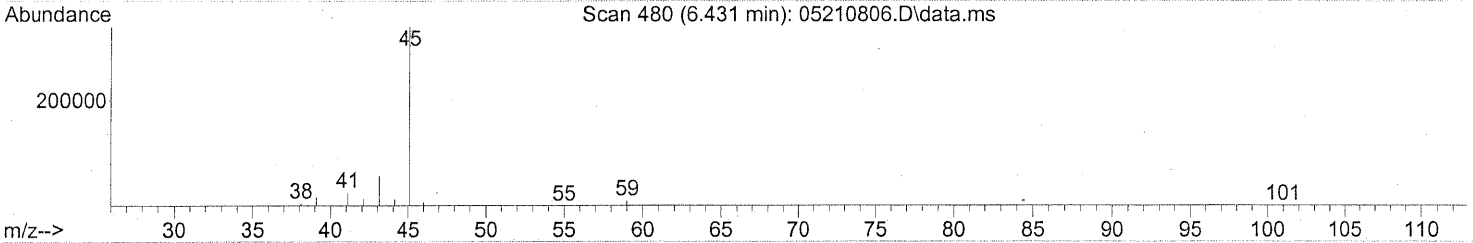
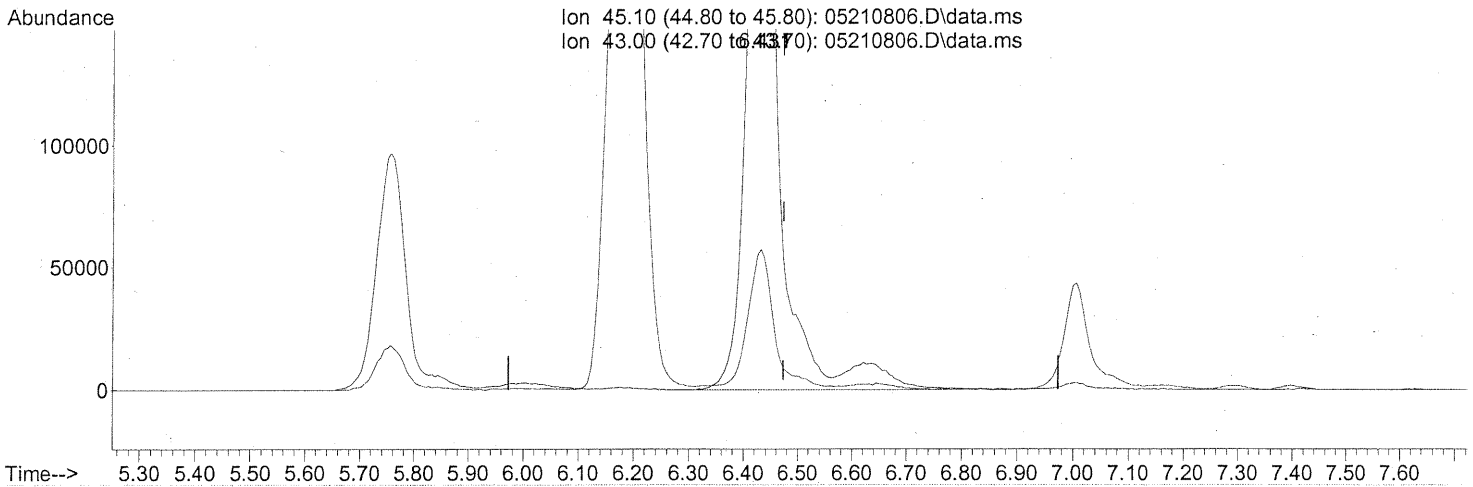
(15) Isopropanol (T)  
 6.431min (-0.042) 19.52ng  
 response 1136474

*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.72
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210806.D  
 Acq On : 21 May 2008 11:14 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 21 11:43:14 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

6.431min (-0.042) 20.62ng m

response 1200495

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	14.89
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*IDA 5/21/08*

*EM 5/22/08*

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	19.1	75	69-117	
74-87-3	Chloromethane	24.5	19.9	81	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	23.3	90	58-133	
75-01-4	Vinyl Chloride	24.8	18.1	73	61-127	
74-83-9	Bromomethane	25.0	20.4	82	67-124	
75-00-3	Chloroethane	25.0	20.3	81	69-123	
64-17-5	Ethanol	23.8	20.0	84	56-137	
67-64-1	Acetone	26.8	19.4	72	63-116	
75-69-4	Trichlorofluoromethane	26.3	22.0	84	71-120	
107-13-1	Acrylonitrile	25.5	21.9	86	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.4	84	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	19.1	74	35-141	
75-09-2	Methylene Chloride	27.8	20.4	73	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	19.7	74	75-127	L
76-13-1	Trichlorotrifluoroethane	27.8	26.6	96	63-129	
75-15-0	Carbon Disulfide	25.0	19.5	78	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	20.7	78	74-118	
75-34-3	1,1-Dichloroethane	26.8	19.8	74	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	20.3	76	72-119	
108-05-4	Vinyl Acetate	25.3	20.5	81	32-163	
78-93-3	2-Butanone (MEK)	27.0	21.5	80	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	20.9	77	74-117	
108-20-3	Diisopropyl Ether	26.3	21.5	82	70-131	
67-66-3	Chloroform	29.8	24.5	82	72-113	

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Verified By: RG

Date: 6/2/08

**941**

**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: P0801442  
 CAS Sample ID: P080522-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: 5/22/08  
 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	21.6	83	74-123	
107-06-2	1,2-Dichloroethane	26.3	19.9	76	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	22.4	84	78-114	
71-43-2	Benzene	27.0	20.7	77	73-111	
56-23-5	Carbon Tetrachloride	26.0	25.4	98	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	20.7	80	81-118	L
78-87-5	1,2-Dichloropropane	26.5	21.3	80	78-117	
75-27-4	Bromodichloromethane	27.8	23.5	85	77-120	
79-01-6	Trichloroethene	27.3	25.5	93	80-116	
123-91-1	1,4-Dioxane	27.5	23.7	86	79-122	
80-62-6	Methyl Methacrylate	25.8	25.0	97	79-128	
142-82-5	n-Heptane	26.8	21.5	80	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	20.3	81	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	21.4	78	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	22.8	81	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	22.5	86	80-117	
108-88-3	Toluene	26.5	24.5	92	76-116	
591-78-6	2-Hexanone	26.3	22.1	84	69-131	
124-48-1	Dibromochloromethane	27.0	28.9	107	80-128	
106-93-4	1,2-Dibromoethane	26.3	26.8	102	79-122	
111-65-9	n-Octane	26.0	24.3	93	78-122	
127-18-4	Tetrachloroethene	26.0	28.8	111	77-118	
108-90-7	Chlorobenzene	26.5	26.5	100	78-117	

L = Laboratory control sample recovery outside the specified limits, results may be biased high.

Verified By: Re Date: 6/2/08

**942**

**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: P0801442  
 CAS Sample ID: P080522-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:

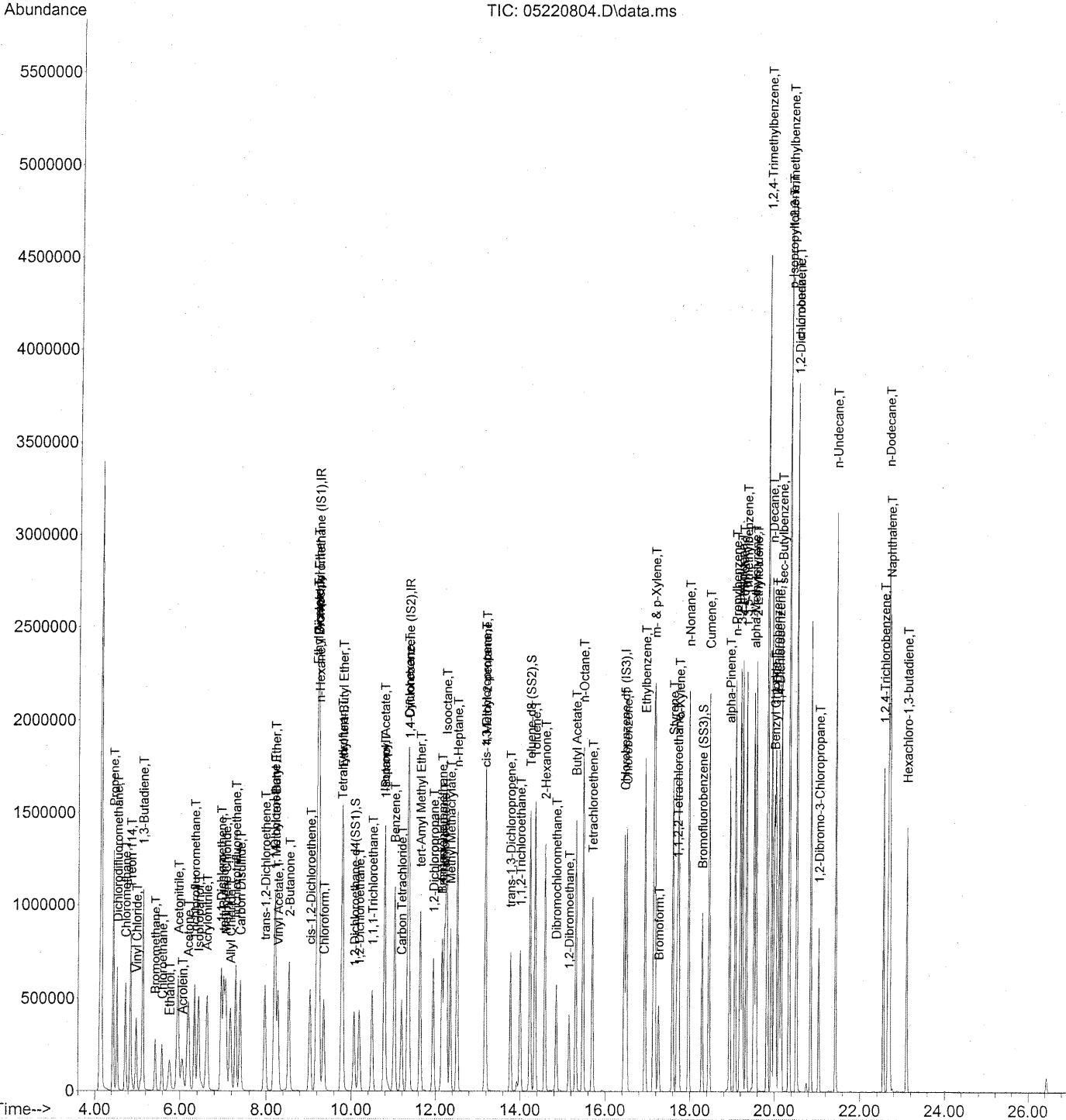
Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/22/08  
 Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount ng	Result ng	% Recovery	CAS	Data Qualifier
					Acceptance Limits	
100-41-4	Ethylbenzene	26.3	24.6	94	79-116	
179601-23-1	m,p-Xylenes	62.5	58.6	94	80-117	
75-25-2	Bromoform	31.3	38.7	124	77-128	
100-42-5	Styrene	26.3	26.7	102	80-124	
95-47-6	o-Xylene	29.8	28.0	94	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	27.2	91	79-120	
98-82-8	Cumene	27.0	27.0	100	81-119	
103-65-1	n-Propylbenzene	26.3	24.8	94	82-120	
622-96-8	4-Ethyltoluene	26.5	26.9	102	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	26.1	100	80-120	
98-83-9	alpha-Methylstyrene	25.5	27.5	108	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.8	99	80-122	
100-44-7	Benzyl Chloride	25.8	25.1	97	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	27.5	108	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	28.8	110	81-119	
135-98-8	sec-Butylbenzene	26.8	26.8	100	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	30.3	105	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	27.3	106	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	30.0	116	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	31.1	120	75-138	
91-20-3	Naphthalene	26.3	28.2	107	76-143	
87-68-3	Hexachlorobutadiene	26.3	32.8	125	72-128	

Verified By: Per Date: 6/2/08 **943**

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220804.D  
Acq On : 22 May 2008 9:20 am  
Operator : WA  
Sample : 25ng TO-15 LCS STD  
Misc : S20-05120801/S20-05050806  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:46 2008  
Quant Method : J:\MS16\METHODS\R16051208.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



944

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 9:20 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	292129	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	11.36	114	1211752	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	471175	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.07	65	430176	20.882	ng	-0.02
Spiked Amount	25.000		Recovery	=	83.52%	
57) Toluene-d8 (SS2)	14.24	98	1221882	26.338	ng	-0.01
Spiked Amount	25.000		Recovery	=	105.36%	
73) Bromofluorobenzene (SS3)	18.29	174	336783	27.893	ng	0.00
Spiked Amount	25.000		Recovery	=	111.56%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	601275	20.584	ng	93
3) Dichlorodifluoromethane	4.53	85	661353	19.148	ng	98
4) Chloromethane	4.73	50	849424	19.892	ng	99
5) Freon 114	4.85	135	388485	23.325	ng	97
6) Vinyl Chloride	4.98	62	533661	18.100	ng	95
7) 1,3-Butadiene	5.13	54	632891	22.991	ng	88
8) Bromomethane	5.41	94	248248	20.433	ng	99
9) Chloroethane	5.58	64	274245	20.349	ng	95
10) Ethanol	5.76	45	401946m	20.012	ng	
11) Acetonitrile	5.95	41	1288803	24.713	ng	99
12) Acrolein	6.05	56	287536	20.105	ng	96
13) Acetone	6.18	58	374862	19.421	ng	# 84
14) Trichlorofluoromethane	6.33	101	628122	21.989	ng	99
15) Isopropanol	6.43	45	1230136m	19.657	ng	
16) Acrylonitrile	6.63	53	751292	21.886	ng	97
17) 1,1-Dichloroethene	6.95	96	326640	23.359	ng	91
18) tert-Butanol	7.00	59	1086884	19.097	ng	94
19) Methylene Chloride	7.05	84	310478	20.361	ng	# 33
20) Allyl Chloride	7.17	41	629503	19.700	ng	81
21) Trichlorotrifluoroethane	7.29	151	319499	26.615	ng	89
22) Carbon Disulfide	7.40	76	1122593	19.505	ng	100
23) trans-1,2-Dichloroethene	7.97	61	618432	20.681	ng	92
24) 1,1-Dichloroethane	8.19	63	673990	19.768	ng	94
25) Methyl tert-Butyl Ether	8.20	73	931283	20.318	ng	78
26) Vinyl Acetate	8.27	86	80148	20.469	ng	# 1
27) 2-Butanone	8.55	72	213304	21.450	ng	# 8
28) cis-1,2-Dichloroethene	9.04	61	575165	20.864	ng	93
29) Diisopropyl Ether	9.20	87	271551	21.456	ng	# 29
30) Ethyl Acetate	9.19	61	168494	22.908	ng	83
31) n-Hexane	9.24	57	882132	21.221	ng	92

945

WA 5/22/08

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 9:20 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:46 2008

Quant Method : J:\MS16\METHODS\R16051208.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	534412	24.533	ng	96
34) Tetrahydrofuran	9.77	72	211647	21.235	ng	# 40
35) Ethyl tert-Butyl Ether	9.79	87	388635	21.649	ng	# 73
36) 1,2-Dichloroethane	10.19	62	519635	19.941	ng	96
38) 1,1,1-Trichloroethane	10.50	97	521931	22.399	ng	93
39) Isopropyl Acetate	10.78	61	268994	21.718	ng	# 58
40) 1-Butanol	10.79	56	477606	20.806	ng	99
41) Benzene	11.02	78	1230002	20.705	ng	99
42) Carbon Tetrachloride	11.19	117	447159	25.419	ng	99
43) Cyclohexane	11.34	84	483997	20.569	ng	# 45
44) tert-Amyl Methyl Ether	11.63	73	865825	20.697	ng	74
45) 1,2-Dichloropropane	11.95	63	393336	21.343	ng	96
46) Bromodichloromethane	12.15	83	414488	23.481	ng	93
47) Trichloroethene	12.21	130	417781	25.539	ng	99
48) 1,4-Dioxane	12.15	88	264944	23.741	ng	# 66
49) Isooctane	12.26	57	2132100	21.608	ng	94
50) Methyl Methacrylate	12.35	100	146813	25.028	ng	# 75
51) n-Heptane	12.52	71	324691	21.483	ng	# 50
52) cis-1,3-Dichloropropene	13.17	75	481111	20.308	ng	100
53) 4-Methyl-2-pentanone	13.19	58	461809	21.360	ng	83
54) trans-1,3-Dichloropropene	13.77	75	477543	22.820	ng	98
55) 1,1,2-Trichloroethane	14.00	97	324214	22.489	ng	92
58) Toluene	14.35	91	1392749	24.502	ng	98
59) 2-Hexanone	14.59	43	1325678	22.056	ng	96
60) Dibromochloromethane	14.85	129	428112	28.858	ng	100
61) 1,2-Dibromoethane	15.15	107	392478	26.759	ng	99
62) Butyl Acetate	15.31	43	1480541	24.143	ng	94
63) n-Octane	15.48	57	442700	24.336	ng	94
64) Tetrachloroethene	15.70	166	403955	28.755	ng	99
65) Chlorobenzene	16.50	112	995375	26.461	ng	99
66) Ethylbenzene	16.94	91	1598140	24.649	ng	93
67) m- & p-Xylene	17.16	91	2490852	58.635	ng	92
68) Bromoform	17.26	173	310731	38.732	ng	100
69) Styrene	17.60	104	1052201	26.725	ng	95
70) o-Xylene	17.74	91	1269331	28.020	ng	93
71) n-Nonane	17.97	43	1188080	23.745	ng	91
72) 1,1,2,2-Tetrachloroethane	17.70	83	542574	27.186	ng	93
74) Cumene	18.45	105	1710846	27.033	ng	95
75) alpha-Pinene	18.93	93	797269	25.783	ng	94
76) n-Propylbenzene	19.07	91	1966751	24.782	ng	93
77) 3-Ethyltoluene	19.19	105	1748839	25.514	ng	95
78) 4-Ethyltoluene	19.24	105	1677225	26.872	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	1432922	26.076	ng	91

946



Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 9:20 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:46 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

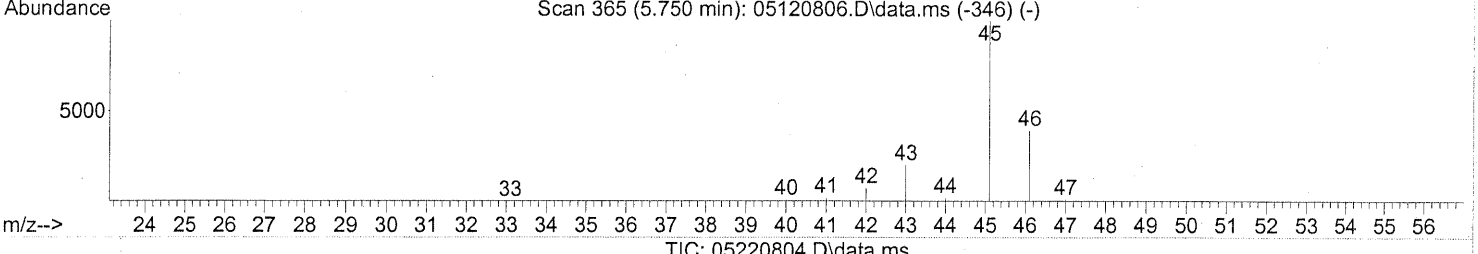
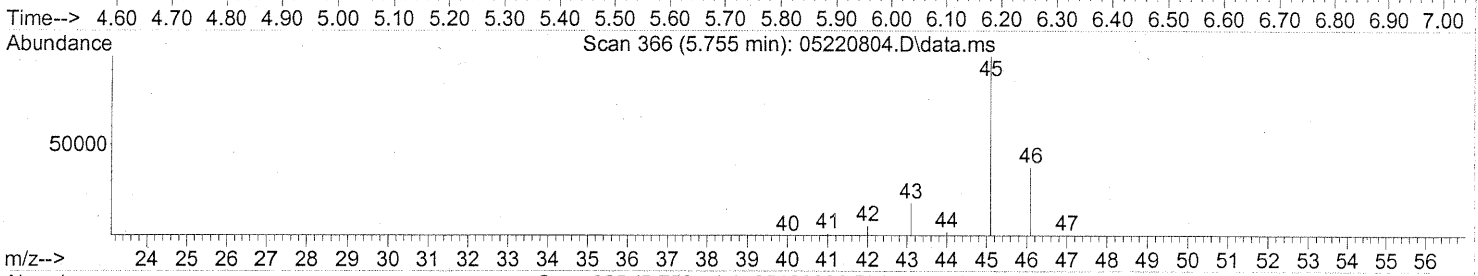
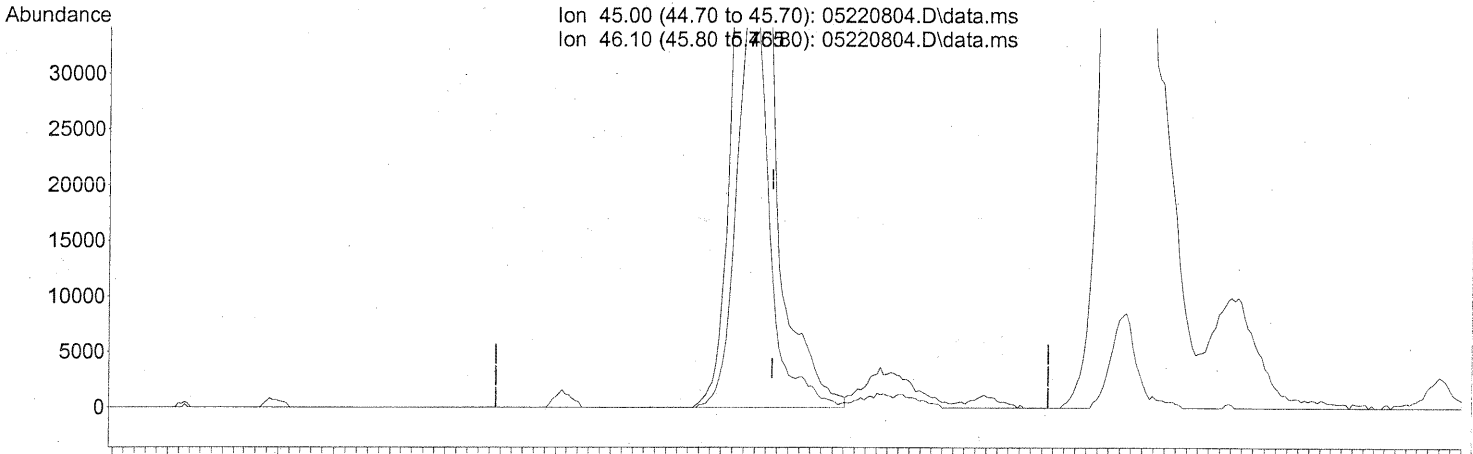
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	818735	27.460	ng	98
81) 2-Ethyltoluene	19.57	105	1706358	25.091	ng	93
82) 1,2,4-Trimethylbenzene	19.83	105	1465746	25.813	ng	91
83) n-Decane	19.93	57	1119088	24.865	ng	79
84) Benzyl Chloride	19.99	91	1185576	25.054	ng	90
85) 1,3-Dichlorobenzene	20.02	146	905258	27.471	ng	100
86) 1,4-Dichlorobenzene	20.10	146	905845	28.779	ng	99
87) sec-Butylbenzene	20.16	105	1978794	26.750	ng	96
88) p-Isopropyltoluene	20.34	119	1901358	30.265	ng	94
89) 1,2,3-Trimethylbenzene	20.35	105	1548757	28.010	ng	89
90) 1,2-Dichlorobenzene	20.52	146	833029	27.257	ng	100
91) d-Limonene	20.52	68	472562	23.068	ng	89
92) 1,2-Dibromo-3-Chloropr...	21.04	157	289342	30.042	ng	86
93) n-Undecane	21.43	57	1205991	25.480	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	165257	31.083	ng	# 85
95) Naphthalene	22.70	128	2268630	28.235	ng	99
96) n-Dodecane	22.66	57	1189214	25.749	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	260390	32.758	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 9:20 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:07 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)  
 5.755min (-0.036) 18.92ng  
 response 379981

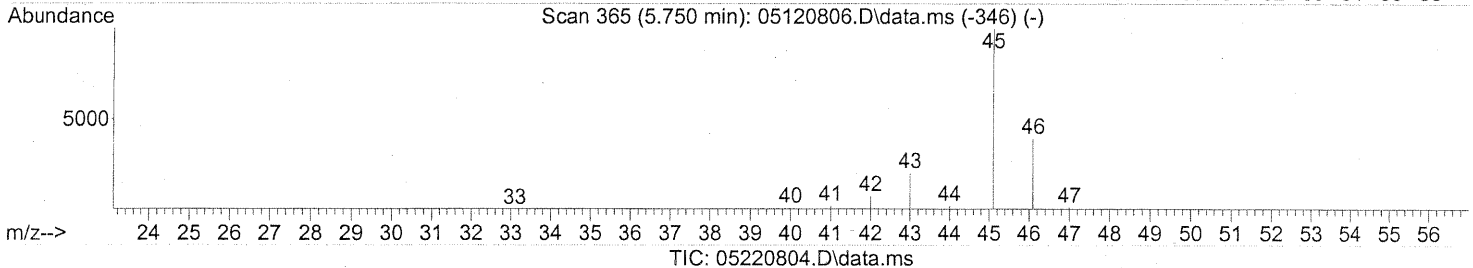
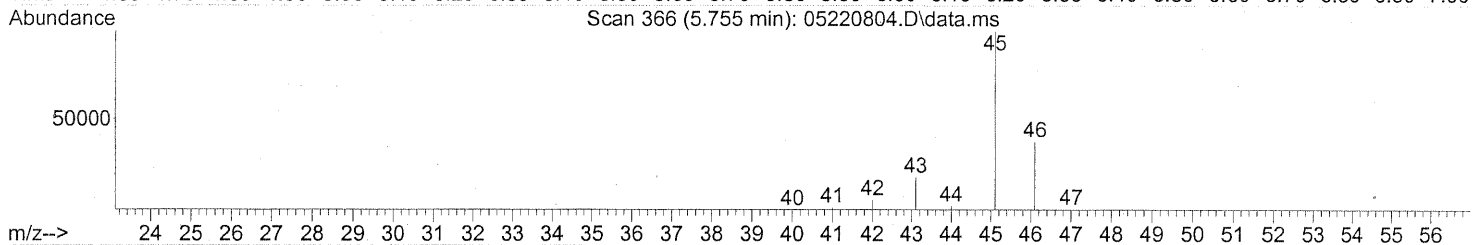
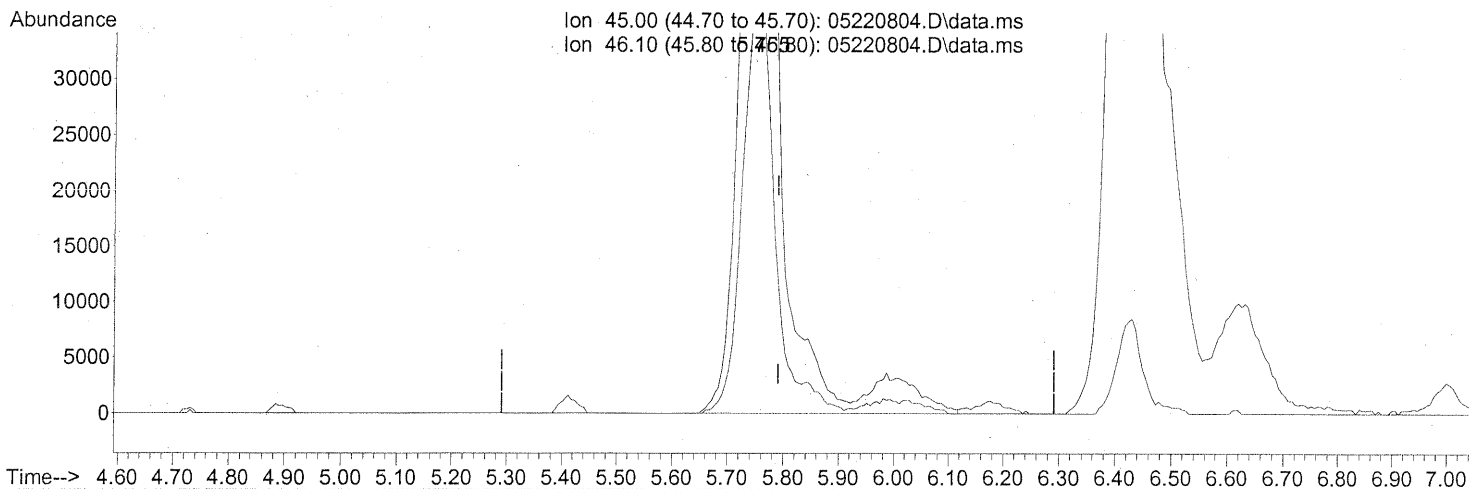
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.04
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 9:20 am  
 Operator : WA  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-05120801/S20-05050806  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:07 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)  
 5.755min (-0.036) 20.01ng m  
 response 401946

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	37.86
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

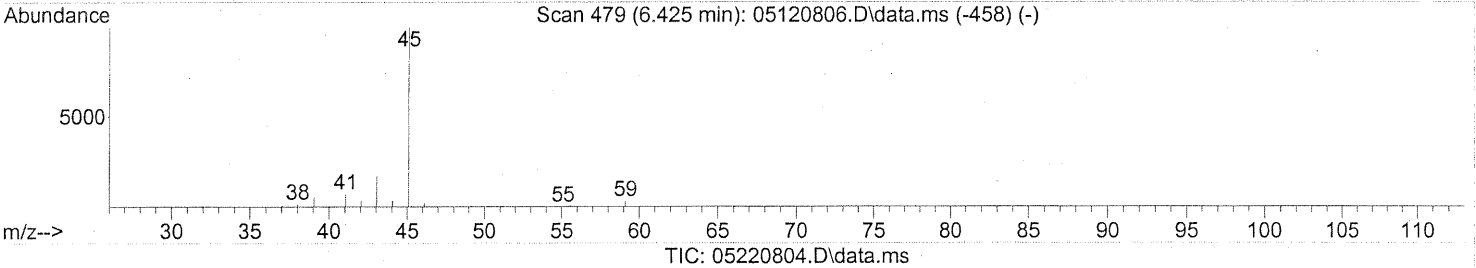
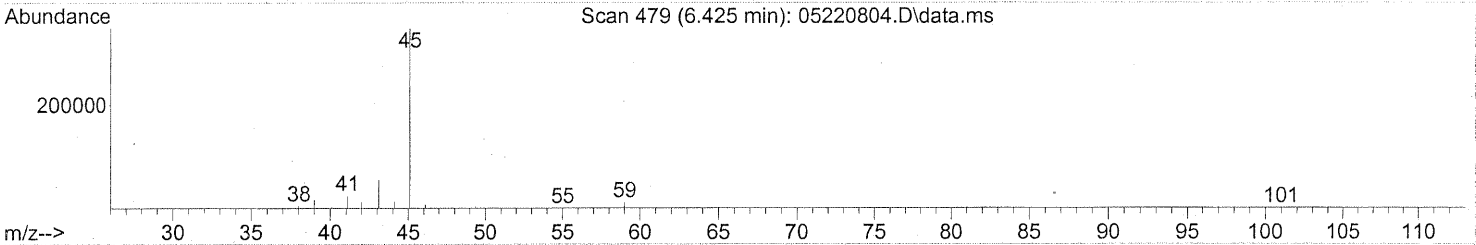
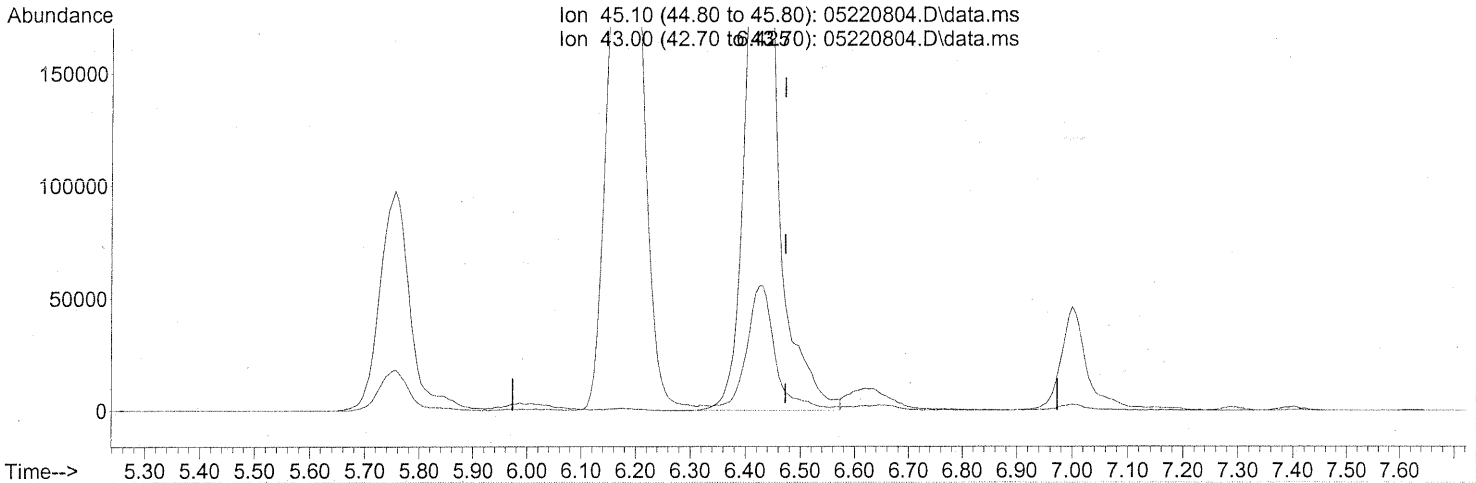
*DA 5/22/08*

*Cam 5/22/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220804.D  
Acq On : 22 May 2008 9:20 am  
Operator : WA  
Sample : 25ng TO-15 LCS STD  
Misc : S20-05120801/S20-05050806  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:07 2008  
Quant Method : J:\MS16\METHODS\R16051208.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)  
6.425min (-0.048) 18.81ng

response 1177300

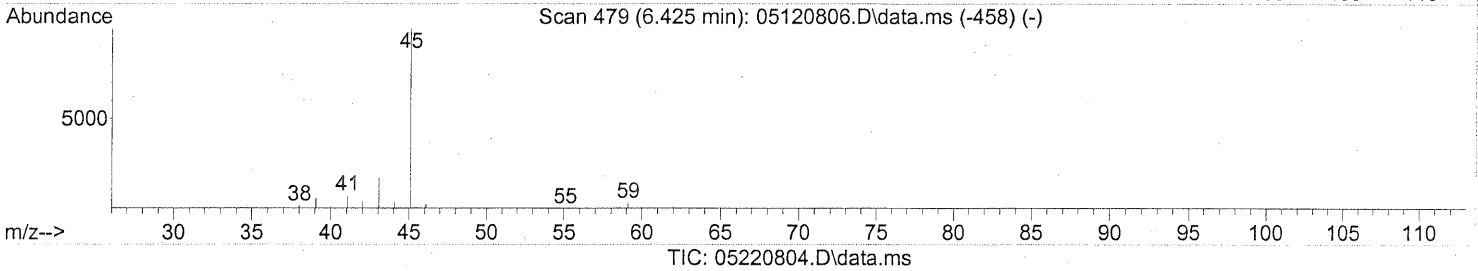
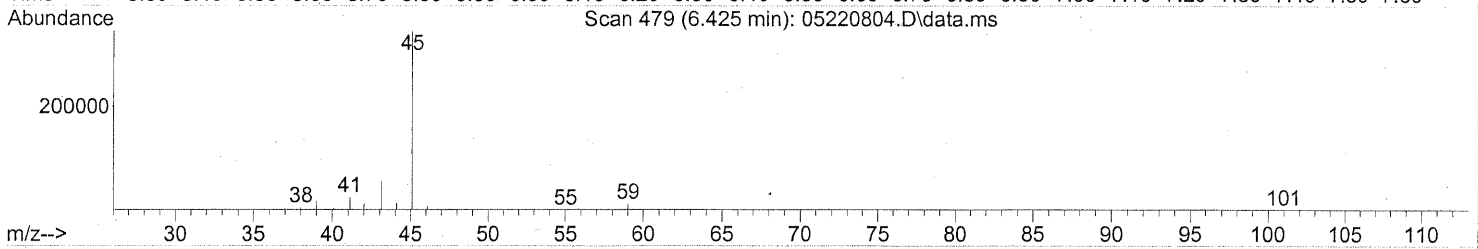
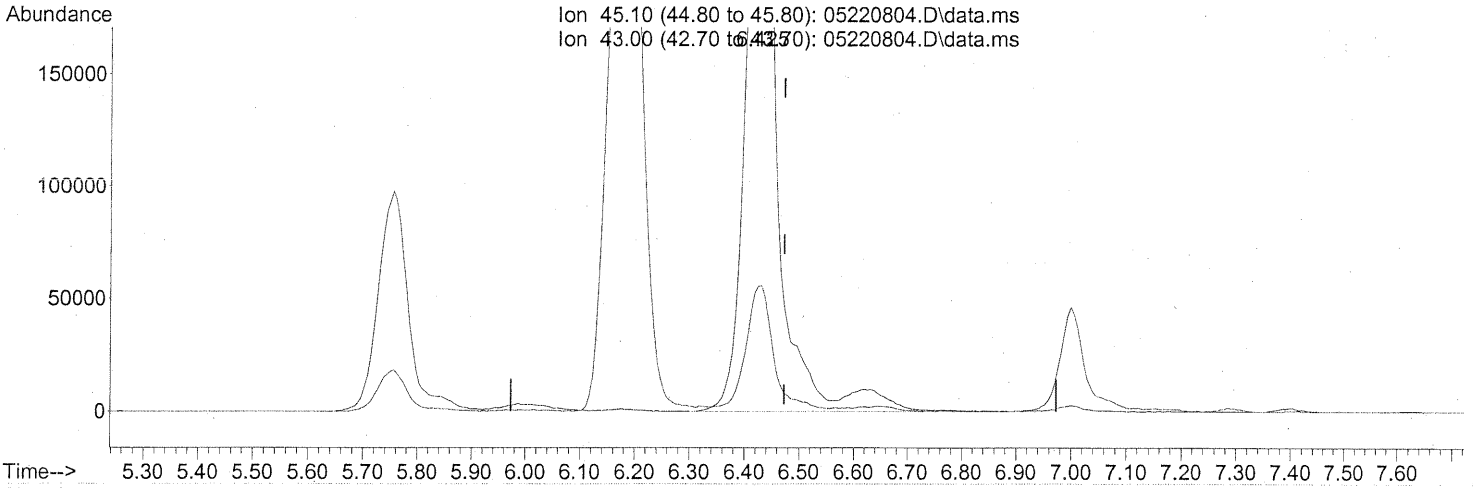
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.42
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
Data File : 05220804.D  
Acq On : 22 May 2008 9:20 am  
Operator : WA  
Sample : 25ng TO-15 LCS STD  
Misc : S20-05120801/S20-05050806  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 22 14:43:07 2008  
Quant Method : J:\MS16\METHODS\R16051208.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)

6.425min (-0.048) 19.66ng m

response 1230136

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.67
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*WA 5/22/08*

*Sam 5/22/08*

**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: P0801442  
 CAS Sample ID: P080524-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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	20.2	79	69-117	
74-87-3	Chloromethane	24.5	18.3	75	53-131	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	26.0	21.4	82	58-133	
75-01-4	Vinyl Chloride	24.8	21.1	85	61-127	
74-83-9	Bromomethane	25.0	21.8	87	67-124	
75-00-3	Chloroethane	25.0	21.7	87	69-123	
64-17-5	Ethanol	23.8	18.3	77	56-137	
67-64-1	Acetone	26.8	22.9	85	63-116	
75-69-4	Trichlorofluoromethane	26.3	21.9	83	71-120	
107-13-1	Acrylonitrile	25.5	23.0	90	74-129	
75-35-4	1,1-Dichloroethene	27.8	23.8	86	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	23.2	90	35-141	
75-09-2	Methylene Chloride	27.8	22.6	81	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	29.0	108	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	23.2	83	63-129	
75-15-0	Carbon Disulfide	25.0	20.7	83	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	23.6	89	74-118	
75-34-3	1,1-Dichloroethane	26.8	23.2	87	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	23.1	86	72-119	
108-05-4	Vinyl Acetate	25.3	29.2	115	32-163	
78-93-3	2-Butanone (MEK)	27.0	23.7	88	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	23.1	86	74-117	
108-20-3	Diisopropyl Ether	26.3	22.8	87	70-131	
67-66-3	Chloroform	29.8	26.2	88	72-113	

Verified By: RC

Date: 6/2/08

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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: P0801442  
 CAS Sample ID: P080524-LCS

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Rusty Bravo  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 5/24/08  
**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	22.9	88	74-123	
107-06-2	1,2-Dichloroethane	26.3	22.2	84	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	23.0	86	78-114	
71-43-2	Benzene	27.0	23.2	86	73-111	
56-23-5	Carbon Tetrachloride	26.0	23.6	91	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	23.3	90	81-118	
78-87-5	1,2-Dichloropropane	26.5	23.2	88	78-117	
75-27-4	Bromodichloromethane	27.8	25.4	91	77-120	
79-01-6	Trichloroethene	27.3	21.8	80	80-116	
123-91-1	1,4-Dioxane	27.5	23.9	87	79-122	
80-62-6	Methyl Methacrylate	25.8	23.7	92	79-128	
142-82-5	n-Heptane	26.8	23.8	89	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	23.5	94	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	22.7	83	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	27.2	97	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	23.3	89	80-117	
108-88-3	Toluene	26.5	23.2	88	76-116	
591-78-6	2-Hexanone	26.3	21.6	82	69-131	
124-48-1	Dibromochloromethane	27.0	25.4	94	80-128	
106-93-4	1,2-Dibromoethane	26.3	23.8	90	79-122	
111-65-9	n-Octane	26.0	23.7	91	78-122	
127-18-4	Tetrachloroethene	26.0	22.6	87	77-118	
108-90-7	Chlorobenzene	26.5	23.1	87	78-117	

Verified By: RG

Date: 6/2/08

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**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: P0801442  
 CAS Sample ID: P080524-LCS

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:

Date Collected: NA  
 Date Received: NA  
 Date Analyzed: 5/24/08  
 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	23.4	89	79-116	
179601-23-1	m,p-Xylenes	62.5	55.8	89	80-117	
75-25-2	Bromoform	31.3	31.8	102	77-128	
100-42-5	Styrene	26.3	23.7	90	80-124	
95-47-6	o-Xylene	29.8	26.5	89	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	29.5	99	79-120	
98-82-8	Cumene	27.0	24.4	90	81-119	
103-65-1	n-Propylbenzene	26.3	24.3	92	82-120	
622-96-8	4-Ethyltoluene	26.5	24.2	91	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	23.2	89	80-120	
98-83-9	alpha-Methylstyrene	25.5	20.9	82	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	24.0	92	80-122	
100-44-7	Benzyl Chloride	25.8	29.0	112	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	23.5	92	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	24.1	92	81-119	
135-98-8	sec-Butylbenzene	26.8	24.7	92	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	28.0	97	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	23.6	91	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	24.2	93	75-138	
91-20-3	Naphthalene	26.3	23.6	90	76-143	
87-68-3	Hexachlorobutadiene	26.3	24.1	92	72-128	
98-06-6	tert-Butylbenzene	26.3	24.4	93	70-130	
104-51-8	n-Butylbenzene	26.8	25.1	94	70-130	

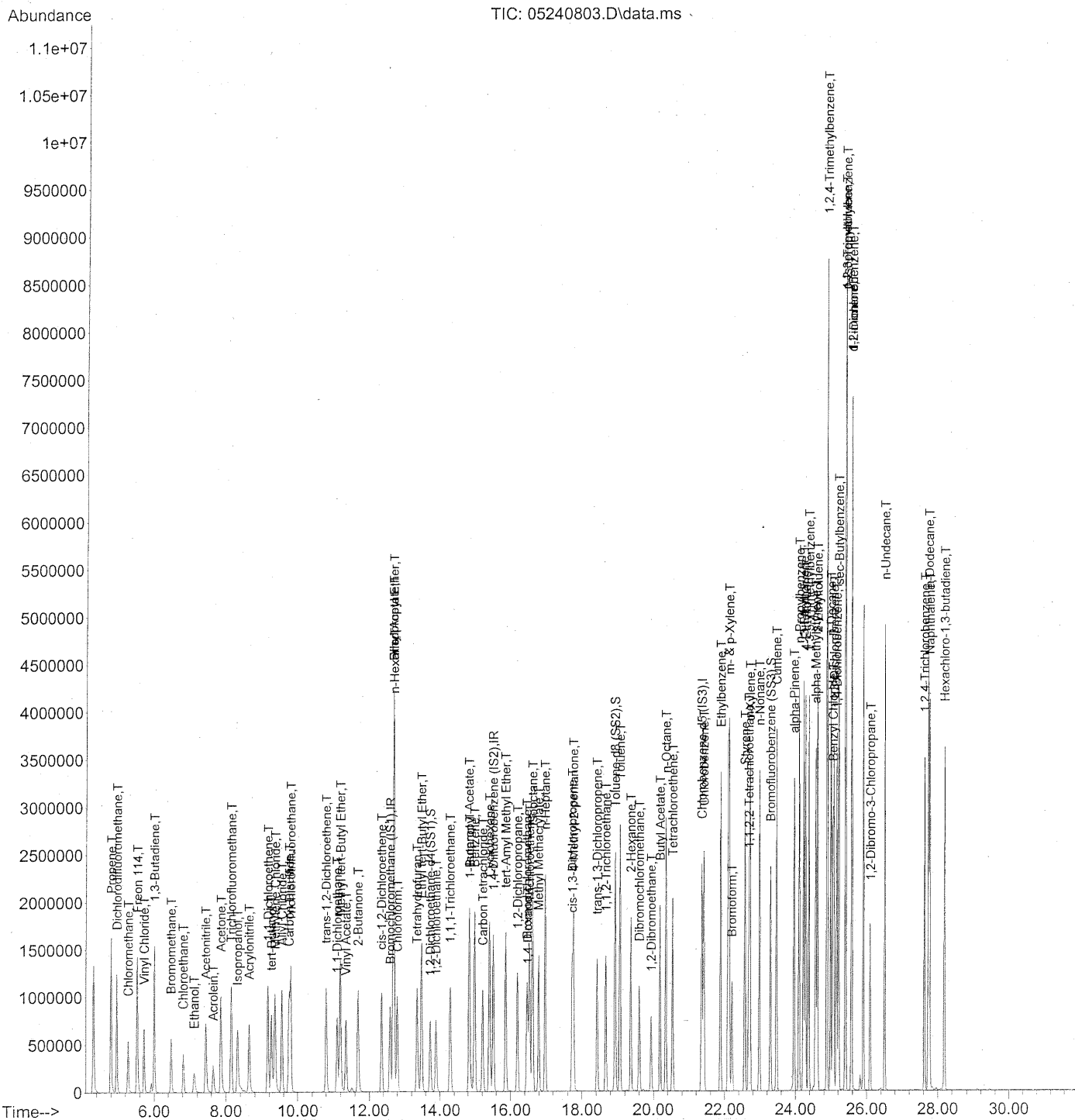
Verified By: RC Date: 6/2/08

**954**



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:59 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:59 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.59	130	459665	25.000	ng	0.01
37) 1,4-Difluorobenzene (IS2)	15.52	114	1955735	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	929197	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.73	65	761312	23.903	ng	0.00
Spiked Amount	25.000		Recovery	=	95.60%	
57) Toluene-d8 (SS2)	18.93	98	2082613	24.956	ng	0.00
Spiked Amount	25.000		Recovery	=	99.84%	
73) Bromofluorobenzene (SS3)	23.29	174	876143	25.818	ng	0.00
Spiked Amount	25.000		Recovery	=	103.28%	

Target Compounds

						Qvalue
2) Propene	4.79	42	764273	21.052	ng	89
3) Dichlorodifluoromethane	4.96	85	1351527	20.198	ng	100
4) Chloromethane	5.28	50	791569	18.268	ng	97
5) Freon 114	5.53	135	704940	21.416	ng	99
6) Vinyl Chloride	5.72	62	913764	21.077	ng	96
7) 1,3-Butadiene	6.00	54	856431	26.557	ng	# 78
8) Bromomethane	6.48	94	527431	21.845	ng	99
9) Chloroethane	6.82	64	447767	21.742	ng	96
10) Ethanol	7.11	45	442261m	18.299	ng	
11) Acetonitrile	7.43	41	1273619	18.223	ng	96
12) Acrolein	7.64	56	365942	21.196	ng	99
13) Acetone	7.86	58	567178	22.921	ng	# 64
14) Trichlorofluoromethane	8.14	101	1255730	21.873	ng	99
15) Isopropanol	8.32	45	1521907	19.285	ng	94
16) Acrylonitrile	8.64	53	867151	23.015	ng	97
17) 1,1-Dichloroethene	9.16	96	600845	23.792	ng	# 79
18) tert-Butanol	9.26	59	1554255	23.154	ng	91
19) Methylene Chloride	9.36	84	624713	22.590	ng	# 81
20) Allyl Chloride	9.55	41	1068545	28.958	ng	99
21) Trichlorotrifluoroethane	9.81	151	604969	23.172	ng	93
22) Carbon Disulfide	9.76	76	2170880	20.687	ng	97
23) trans-1,2-Dichloroethene	10.80	61	964459	23.578	ng	85
24) 1,1-Dichloroethane	11.10	63	1113250	23.200	ng	95
25) Methyl tert-Butyl Ether	11.19	73	1845924	23.069	ng	86
26) Vinyl Acetate	11.35	86	133409	29.172	ng	# 88
27) 2-Butanone	11.68	72	428173	23.708	ng	# 92
28) cis-1,2-Dichloroethene	12.35	61	903449	23.109	ng	83
29) Diisopropyl Ether	12.69	87	503605	22.757	ng	# 86
30) Ethyl Acetate	12.69	61	253334	25.985	ng	81
31) n-Hexane	12.70	57	1157427	23.528	ng	89

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MS 5/24/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:59 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.80	83	1098752	26.213	ng	99
34) Tetrahydrofuran	13.35	72	384722	22.282	ng	94
35) Ethyl tert-Butyl Ether	13.48	87	709428	22.892	ng #	75
36) 1,2-Dichloroethane	13.89	62	900994	22.249	ng	98
38) 1,1,1-Trichloroethane	14.29	97	1025801	23.031	ng	97
39) Isopropyl Acetate	14.83	61	414160	24.793	ng #	53
40) 1-Butanol	14.84	56	468728	17.436	ng #	49
41) Benzene	14.99	78	2374678	23.190	ng	100
42) Carbon Tetrachloride	15.22	117	929244	23.563	ng	99
43) Cyclohexane	15.41	84	913648	22.936	ng #	76
44) tert-Amyl Methyl Ether	15.87	73	1712508	23.312	ng	94
45) 1,2-Dichloropropane	16.20	63	635232	23.184	ng	99
46) Bromodichloromethane	16.46	83	879095	25.397	ng	99
47) Trichloroethene	16.54	130	685221	21.813	ng	100
48) 1,4-Dioxane	16.49	88	461646	23.902	ng	81
49) Isooctane	16.62	57	2732811	23.276	ng	81
50) Methyl Methacrylate	16.79	100	242311	23.679	ng #	86
51) n-Heptane	16.98	71	646609	23.764	ng #	80
52) cis-1,3-Dichloropropene	17.73	75	957220	23.516	ng	99
53) 4-Methyl-2-pentanone	17.77	58	617461	22.711	ng	78
54) trans-1,3-Dichloropropene	18.43	75	954282	27.176	ng	99
55) 1,1,2-Trichloroethane	18.67	97	588860	23.270	ng	97
58) Toluene	19.07	91	2628623	23.173	ng	98
59) 2-Hexanone	19.37	43	1691031	21.634	ng	83
60) Dibromochloromethane	19.60	129	776755	25.352	ng	99
61) 1,2-Dibromoethane	19.94	107	706775	23.803	ng	100
62) Butyl Acetate	20.19	43	1889152	23.812	ng	87
63) n-Octane	20.35	57	594141	23.683	ng	90
64) Tetrachloroethene	20.55	166	758495	22.597	ng	100
65) Chlorobenzene	21.41	112	1758259	23.120	ng	99
66) Ethylbenzene	21.89	91	3047800	23.432	ng	95
67) m- & p-Xylene	22.13	91	4857633	55.832	ng	92
68) Bromoform	22.21	173	725813	31.835	ng	99
69) Styrene	22.57	104	1840679	23.667	ng	97
70) o-Xylene	22.72	91	2485529	26.465	ng	93
71) n-Nonane	22.98	43	1573242	23.591	ng #	84
72) 1,1,2,2-Tetrachloroethane	22.69	83	1154673	29.499	ng	97
74) Cumene	23.46	105	3048144	24.372	ng	99
75) alpha-Pinene	23.96	93	1512571	23.390	ng	97
76) n-Propylbenzene	24.10	91	3861617	24.266	ng	98
77) 3-Ethyltoluene	24.23	105	3150317	23.665	ng	100
78) 4-Ethyltoluene	24.28	105	3005606	24.218	ng	100
79) 1,3,5-Trimethylbenzene	24.38	105	2598321	23.175	ng	99

**957**

*RTB* 5/24/08

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:59 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

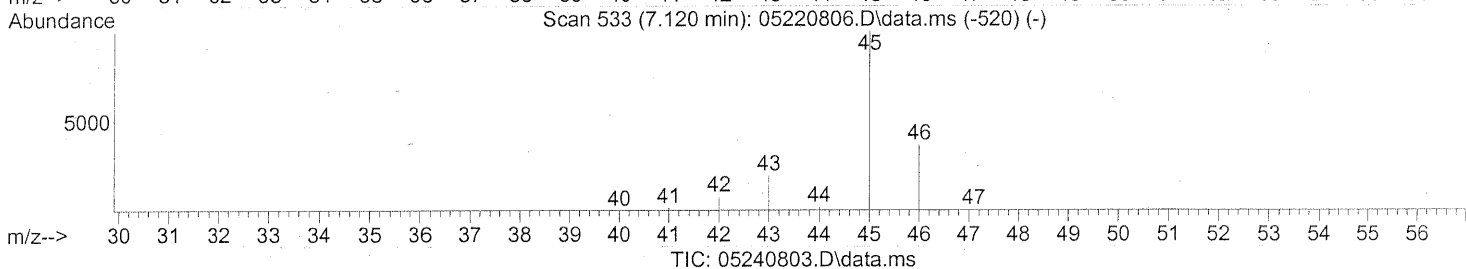
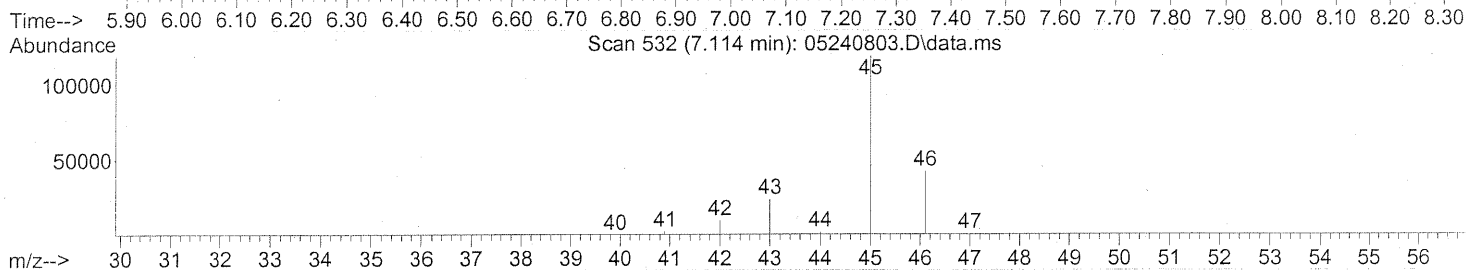
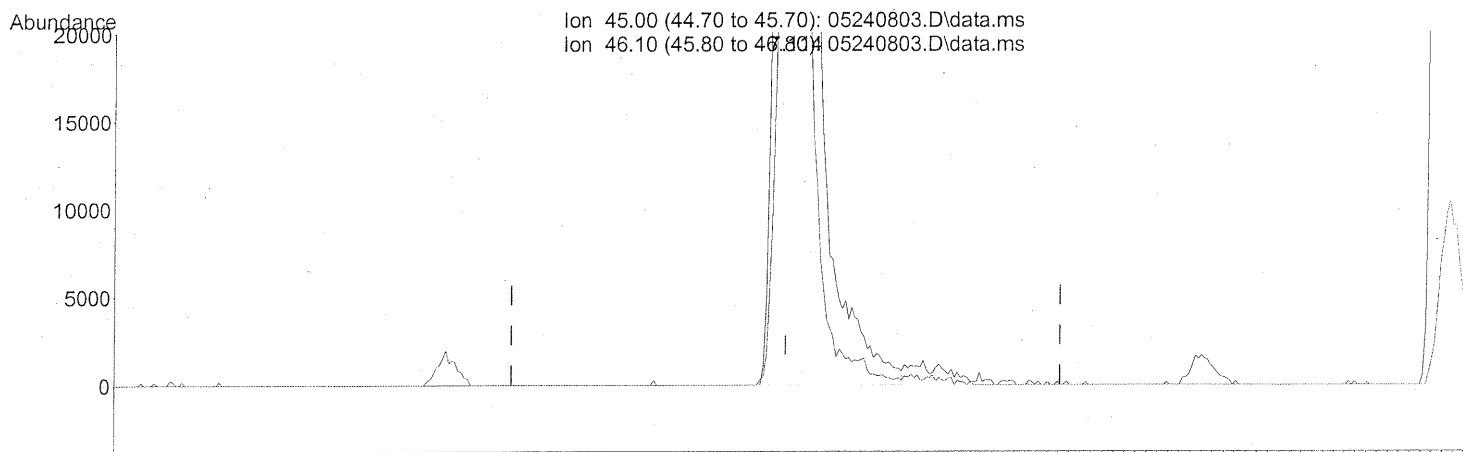
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	1269536	20.914	ng	98
81) 2-Ethyltoluene	24.61	105	3118215	23.113	ng	100
82) 1,2,4-Trimethylbenzene	24.88	105	2734676	23.957	ng	100
83) n-Decane	24.98	57	1560356	24.844	ng	86
84) Benzyl Chloride	25.05	91	2219646	28.979	ng	98
85) 1,3-Dichlorobenzene	25.08	146	1675075	23.471	ng	99
86) 1,4-Dichlorobenzene	25.15	146	1670624	24.147	ng	99
87) sec-Butylbenzene	25.21	105	3598377	24.664	ng	98
88) p-Isopropyltoluene	25.40	119	3365362	28.022	ng	95
89) 1,2,3-Trimethylbenzene	25.41	105	2931617	26.247	ng	100
90) 1,2-Dichlorobenzene	25.58	146	1597527	23.602	ng	99
91) d-Limonene	25.58	68	934174	20.542	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	576599	27.449	ng	94
93) n-Undecane	26.50	57	1628612	24.777	ng	84
94) 1,2,4-Trichlorobenzene	27.62	180	1201814	24.242	ng	95
95) Naphthalene	27.77	128	3551344	23.588	ng	99
96) n-Dodecane	27.74	57	1572939	24.062	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	794356	24.070	ng	100

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

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:32 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.114min (+0.011) 18.00ng

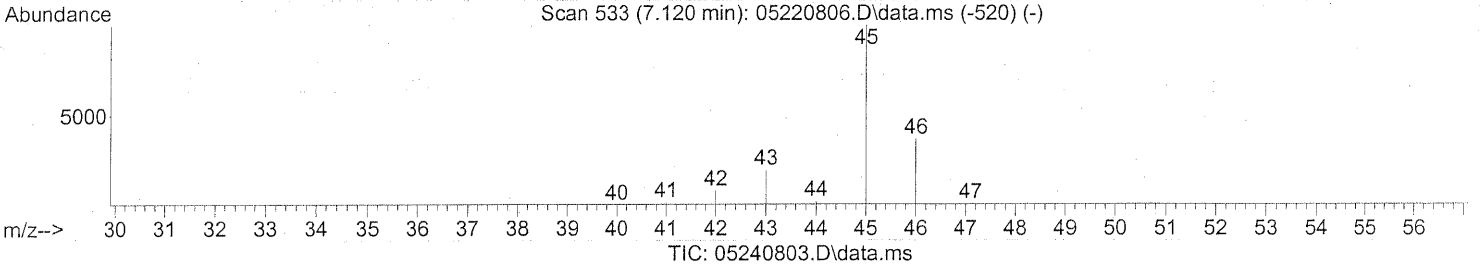
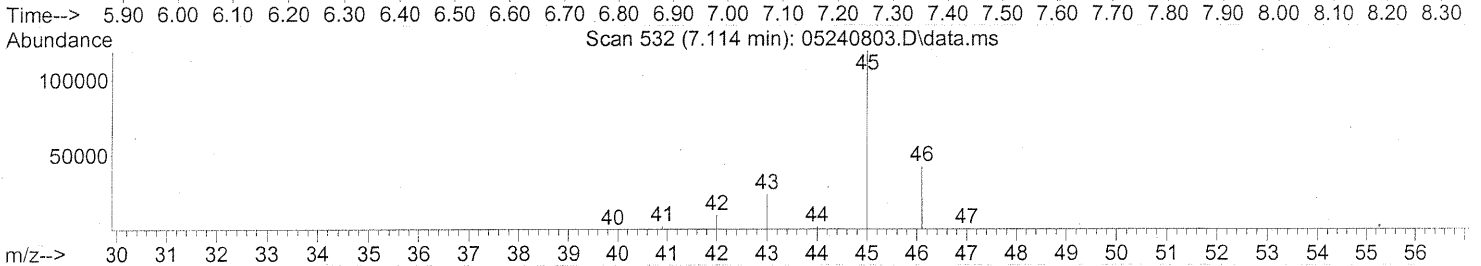
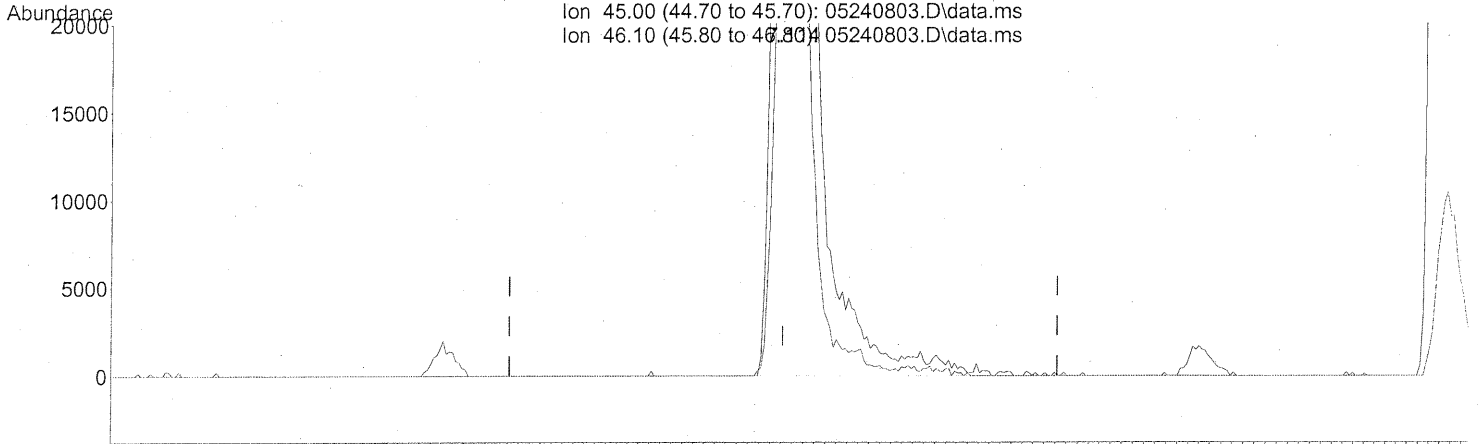
response 435050

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.70
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240803.D  
 Acq On : 24 May 2008 8:23  
 Operator : RTB  
 Sample : 25ng TO-15 LCS  
 Misc : S20-05160801/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 24 09:28:32 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.114min (+0.011) 18.30ng m

response 442261

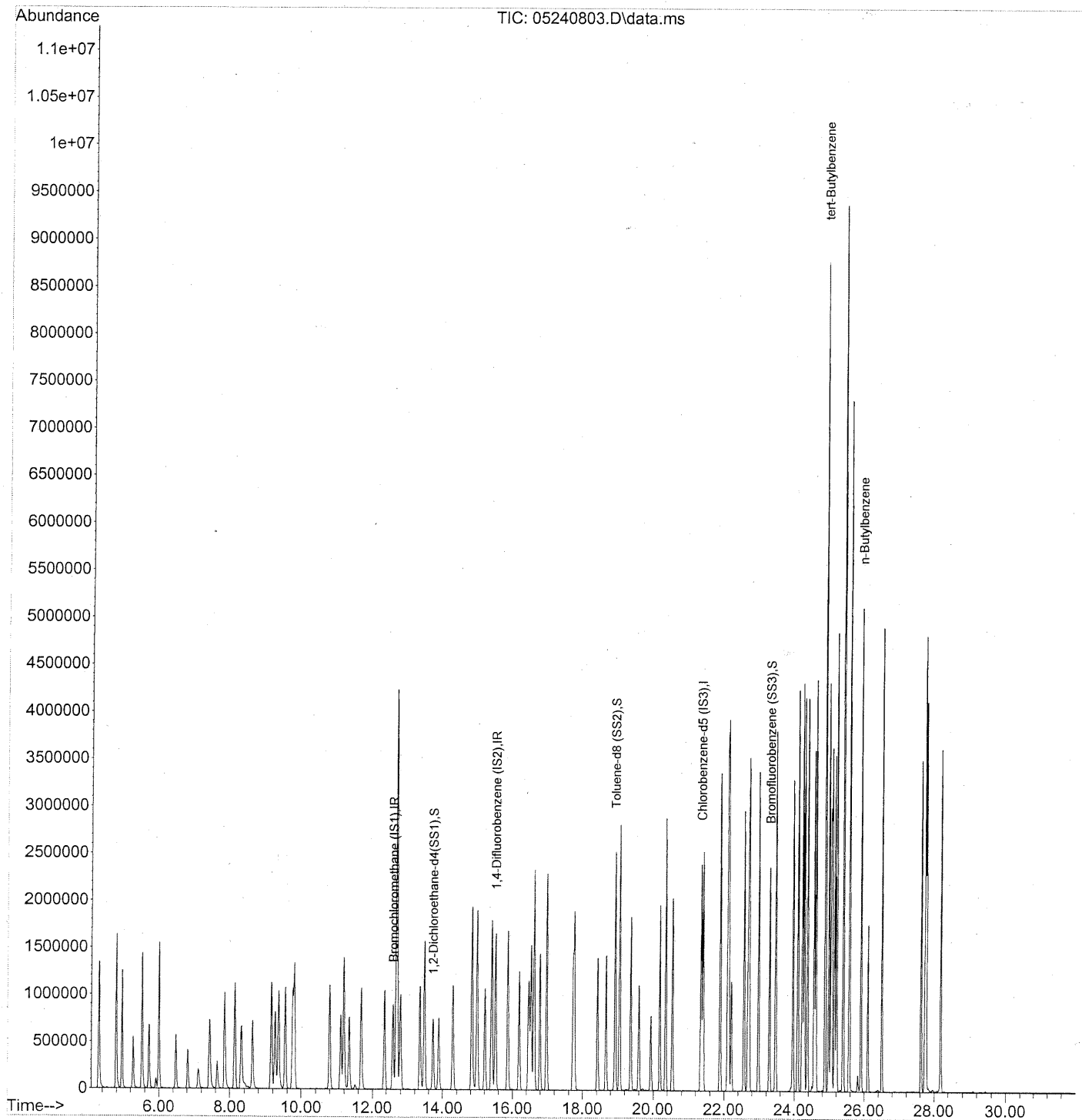
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.09
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

*RT 5/24/08*  
*LM 5/30/08*

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240803.D  
Acq On : 24 May 2008 8:23  
Operator : RTB  
Sample : 25ng TO-15 LCS  
Misc : S20-05160801/S20-04290803  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:36:00 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



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Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240803.D  
Acq On : 24 May 2008 8:23  
Operator : RTB  
Sample : 25ng TO-15 LCS  
Misc : S20-05160801/S20-04290803  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:36:00 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.59	130	459665	25.000	ng	0.00
3) 1,4-Difluorobenzene (IS2)	15.52	114	1955735	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	21.35	82	929197	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	13.73	65	761312	23.903	ng	-0.02
Spiked Amount	25.000		Recovery	=	95.60%	
5) Toluene-d8 (SS2)	18.93	98	2082613	24.956	ng	-0.01
Spiked Amount	25.000		Recovery	=	99.84%	
6) Bromofluorobenzene (SS3)	23.29	174	876143	25.818	ng	0.00
Spiked Amount	25.000		Recovery	=	103.28%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	2664902	24.423	ng	Qvalue 99
8) n-Butylbenzene	25.91	91	3022217	25.045	ng	98

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

IDA 5/26/08



**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	2.24	0.453	-	-	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	
<b>Ethanol</b>	3.84	2.04	3.76	2.00	3.8	<b>2</b>	25	<b>J</b>
<b>Acetone</b>	14.1	5.95	13.1	5.51	13.6	<b>7</b>	25	<b>J, B</b>
Trichlorofluoromethane	ND	ND	ND	ND	-	-	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	
Methylene Chloride	2.40	0.691	ND	ND	-	-	25	<b>J</b>
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25	
Trichlorotrifluoroethane	ND	ND	ND	ND	-	-	25	
<b>Carbon Disulfide</b>	10.6	3.42	10.9	3.51	10.75	<b>3</b>	25	<b>J</b>
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25	
Vinyl Acetate	ND	ND	ND	ND	-	-	25	
2-Butanone (MEK)	ND	ND	ND	ND	-	-	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
Diisopropyl Ether	ND	ND	ND	ND	-	-	25	
<b>Chloroform</b>	4,700	962	4,670	956	4685	<b>0.6</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: RG

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	
<b>1,1,1-Trichloroethane</b>	14.3	2.63	15.0	2.74	14.65	<b>5</b>	25	
Benzene	2.04	0.639	ND	ND	-	-	25	<b>J</b>
<b>Carbon Tetrachloride</b>	7.56	1.20	7.40	1.18	7.48	<b>2</b>	25	
tert-Amyl Methyl Ether	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25	
<b>Bromodichloromethane</b>	5.08	0.759	4.32	0.645	4.7	<b>16</b>	25	
<b>Trichloroethene</b>	137	25.5	137	25.4	137	<b>0</b>	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>	23.5	6.23	23.8	6.33	23.65	<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	
n-Octane	ND	ND	ND	ND	-	-	25	
<b>Tetrachloroethene</b>	2,260	334	2,240	331	2250	<b>0.9</b>	25	
Chlorobenzene	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: Res

Date: 6/2/08

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**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

**Client:** ENSR  
**Client Sample ID:** SG35B-05  
**Client Project ID:** Soil Gas Sampling / 04020-023-4311

CAS Project ID: P0801442  
 CAS Sample ID: P0801442-014DUP

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Wida Ang  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** SC00693

**Date Collected:** 5/15/08  
**Date Received:** 5/16/08  
**Date Analyzed:** 5/24/08  
**Volume(s) Analyzed:** 0.040 Liter(s)

Initial Pressure (psig): -3.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.60

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	ND	ND	ND	ND	-	-	25	
m,p-Xylenes	ND	ND	ND	ND	-	-	25	
Bromoform	ND	ND	ND	ND	-	-	25	
Styrene	ND	ND	ND	ND	-	-	25	
o-Xylene	ND	ND	ND	ND	-	-	25	
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	ND	ND	ND	ND	-	-	25	
alpha-Methylstyrene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	ND	ND	ND	ND	-	-	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
<b>1,4-Dichlorobenzene</b>	2.48	0.413	2.48	0.413	2.48	<b>0</b>	25	<b>J</b>
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	
<b>Hexachlorobutadiene</b>	457	42.8	461	43.2	459	<b>0.9</b>	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.

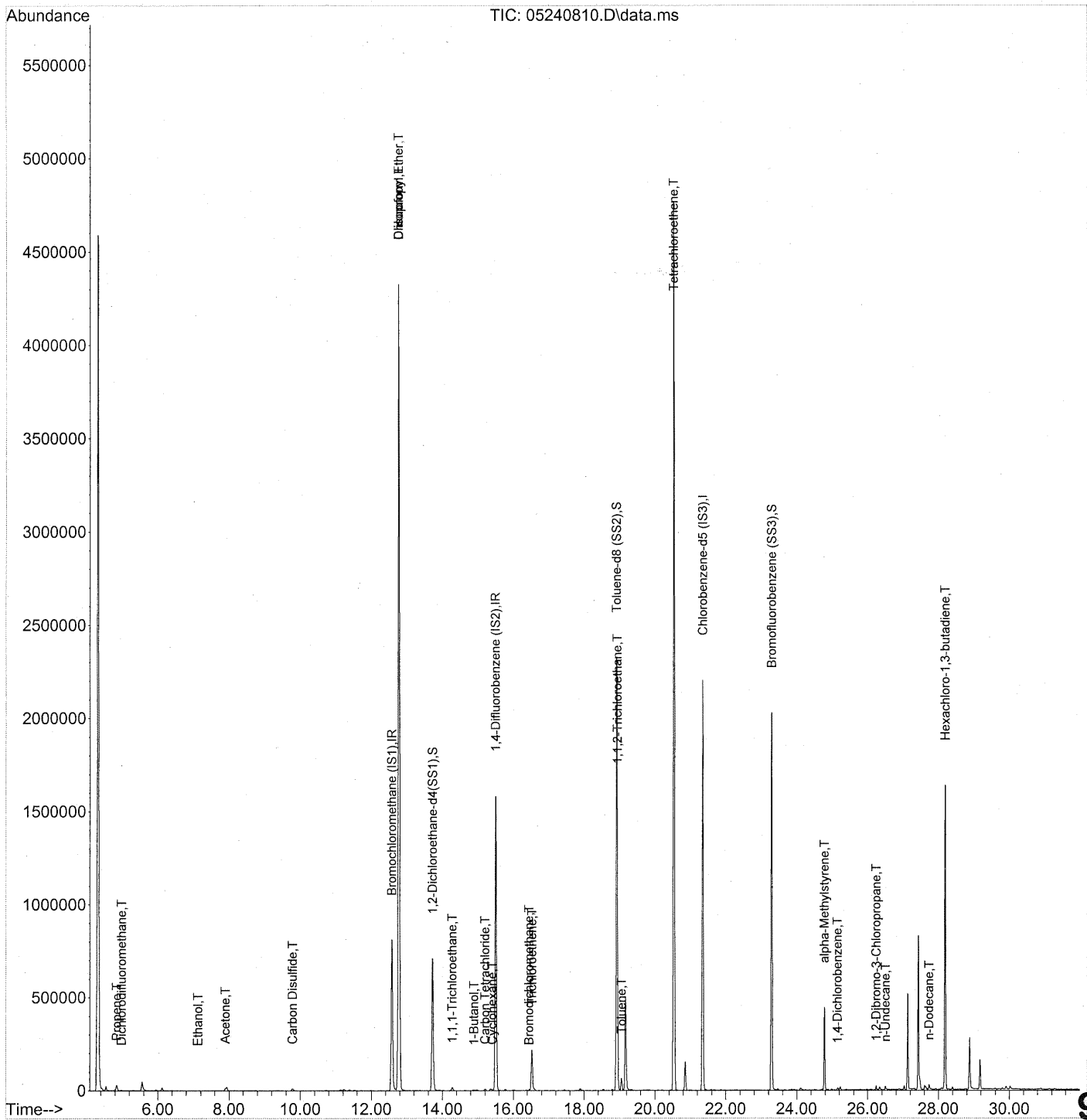
Verified By: Ro

Date: 6/2/08

**965**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	413362	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.51	114	1798004	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	843834	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
33) 1,2-Dichloroethane-d4(...)	13.72	65	725857	25.343	ng	0.00
Spiked Amount				25.000		
				Recovery	=	101.36%
57) Toluene-d8 (SS2)	18.92	98	1914098	25.257	ng	0.00
Spiked Amount				25.000		
				Recovery	=	101.04%
73) Bromofluorobenzene (SS3)	23.29	174	762405	24.739	ng	0.00
Spiked Amount				25.000		
				Recovery	=	98.96%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.85	42	5013	0.154	ng	# 1
3) Dichlorodifluoromethane	4.99	85	3342	0.056	ng	86
4) Chloromethane	5.32	50	228	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	6.85	64	196	N.D.	✓	
10) Ethanol	7.12	45	2049	0.094	ng	# 65
11) Acetonitrile	7.46	41	1246	N.D.		
12) Acrolein	7.69	56	753	N.D.	✓	
13) Acetone	7.89	58	7281	0.327	ng	# 34
14) Trichlorofluoromethane	8.16	101	2214	N.D.	✓	
15) Isopropanol	8.34	45	2625	N.D.		
16) Acrylonitrile	0.00	53	0	N.D.	✓	
17) 1,1-Dichloroethene	9.19	96	482	N.D.	✓	
18) tert-Butanol	9.28	59	569	N.D.	✓	
19) Methylene Chloride	9.37	84	1237	N.D.	✓	
20) Allyl Chloride	9.38	41	130	N.D.	✓	
21) Trichlorotrifluoroethane	0.00	151	0	N.D.	✓	
22) Carbon Disulfide	9.78	76	25807	0.273	ng	100
23) trans-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
24) 1,1-Dichloroethane	11.09	63	546	N.D.	✓	
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.	✓	
26) Vinyl Acetate	11.38	86	52	N.D.	✓	
27) 2-Butanone	11.74	72	768	N.D.	✓	
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	✓	
29) Diisopropyl Ether	12.78	87	460009	23.115	ng	NR # 1
30) Ethyl Acetate	0.00	61	0	N.D.		
31) n-Hexane	12.70	57	326	N.D.		

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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	4398904	116.702	ng	100
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	✓	
36) 1,2-Dichloroethane	13.73	62	401	N.D.	✓	
38) 1,1,1-Trichloroethane	14.28	97	15334	0.374	ng	94
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.89	56	5115	0.207	ng	94
41) Benzene	14.99	78	4529	N.D.	✓	
42) Carbon Tetrachloride	15.21	117	6715	0.185	ng	99
43) Cyclohexane	15.41	84	2039	0.056	ng	# 85
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	✓	
45) 1,2-Dichloropropane	15.98	63	58	N.D.	✓	
46) Bromodichloromethane	16.45	83	3437	0.108	ng	90
47) Trichloroethene	16.53	130	98697	3.417	ng	98
48) 1,4-Dioxane	0.00	88	0	N.D.	✓	
49) Isooctane	16.61	57	1005	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	18.94	97	168103	<del>7.226</del>	ng NR#	7
58) Toluene	19.06	91	61375	0.596	ng	98
59) 2-Hexanone	19.36	43	168	N.D.	✓	
60) Dibromochloromethane	19.59	129	379	N.D.	✓	
61) 1,2-Dibromoethane	0.00	107	0	N.D.	✓	
62) Butyl Acetate	20.22	43	67	N.D.		
63) n-Octane	20.53	57	123	N.D.	✓	
64) Tetrachloroethene	20.54	166	1709737	56.090	ng	99
65) Chlorobenzene	21.41	112	853	N.D.	✓	
66) Ethylbenzene	21.89	91	664	N.D.	✓	
67) m- & p-Xylene	22.10	91	1030	N.D.	✓	
68) Bromoform	0.00	173	0	N.D.	✓	
69) Styrene	0.00	104	0	N.D.	✓	
70) o-Xylene	22.71	91	350	N.D.	✓	
71) n-Nonane	22.98	43	466	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.62	83	57	N.D.	✓	
74) Cumene	23.46	105	685	N.D.	✓	
75) alpha-Pinene	23.95	93	77	N.D.		
76) n-Propylbenzene	24.10	91	693	N.D.	✓	
77) 3-Ethyltoluene	24.23	105	668	N.D.		
78) 4-Ethyltoluene	24.28	105	301	N.D.	✓	
79) 1,3,5-Trimethylbenzene	24.37	105	442	N.D.	✓	

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

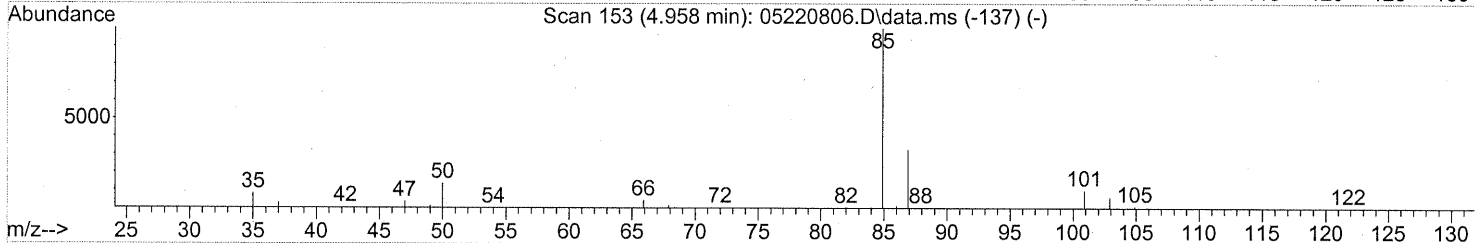
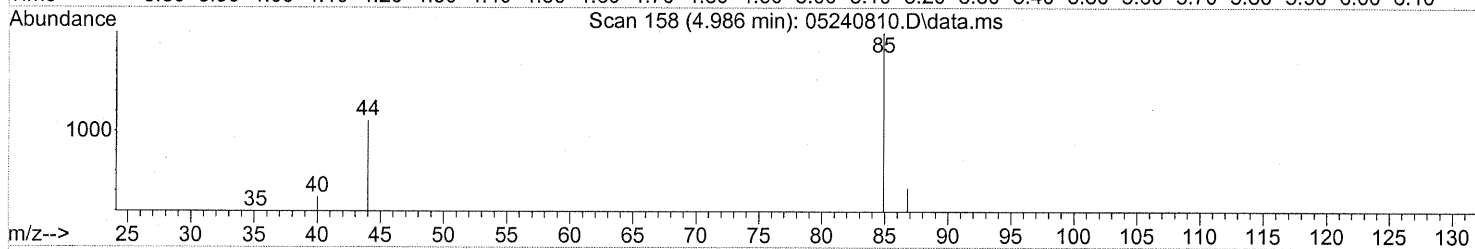
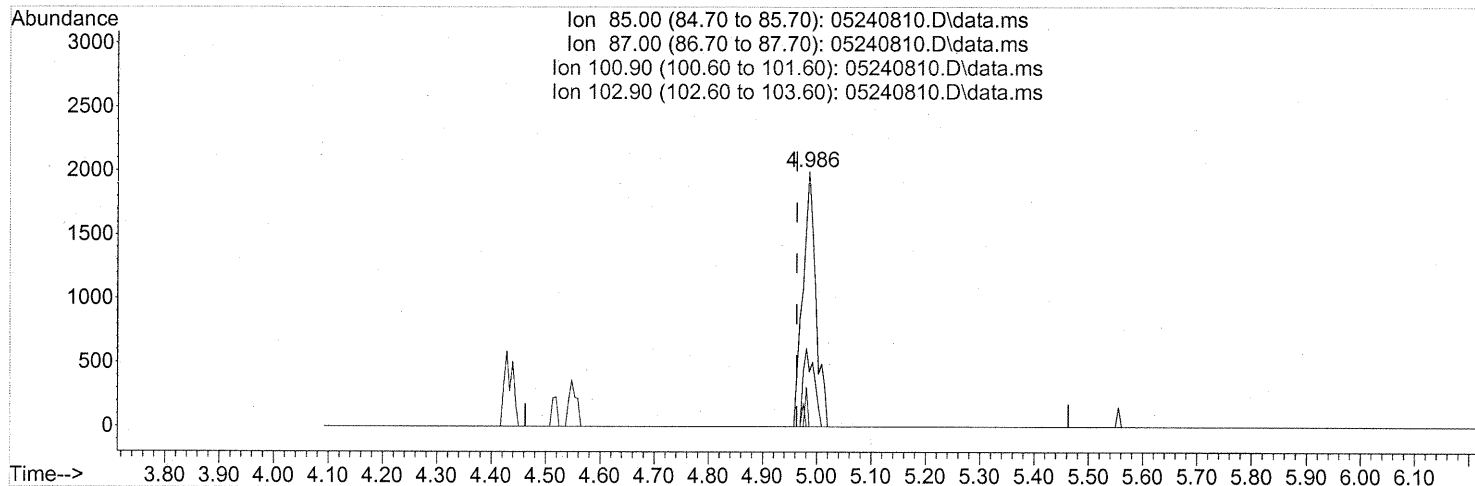
Internal Standards	R.T.	QIon	Response	Conc Units	Dev (Min)
80) alpha-Methylstyrene	24.78	118	4972	<del>0.090 ng</del> NR#	2
81) 2-Ethyltoluene	24.61	105	343	N.D.	
82) 1,2,4-Trimethylbenzene	24.88	105	1436	N.D. ✓	
83) n-Decane	24.98	57	1918	N.D.	
84) Benzyl Chloride	25.06	91	53	N.D. ✓	
85) 1,3-Dichlorobenzene	25.09	146	173	N.D. ✓	
86) 1,4-Dichlorobenzene	25.15	146	3898	0.062 ng	93
87) sec-Butylbenzene	25.41	105	588	N.D. ✓	
88) p-Isopropyltoluene	25.40	119	477	N.D. ✓	
89) 1,2,3-Trimethylbenzene	25.41	105	588	N.D. ✓	
90) 1,2-Dichlorobenzene	25.59	146	51	N.D. ✓	
91) d-Limonene	25.57	68	683	N.D.	
92) 1,2-Dibromo-3-Chloropr...	26.24	157	2221	<del>0.116 ng</del> NR#	27
93) n-Undecane	26.50	57	6905	0.116 ng	82
94) 1,2,4-Trichlorobenzene	27.64	180	164	N.D. ✓	
95) Naphthalene	27.78	128	4023	N.D. ✓	
96) n-Dodecane	27.73	57	8380	0.141 ng	84
97) Hexachloro-1,3-butadiene	28.19	225	345300	11.522 ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(3) Dichlorodifluoromethane (T)

4.986min (+0.023) 0.06ng

response 3342

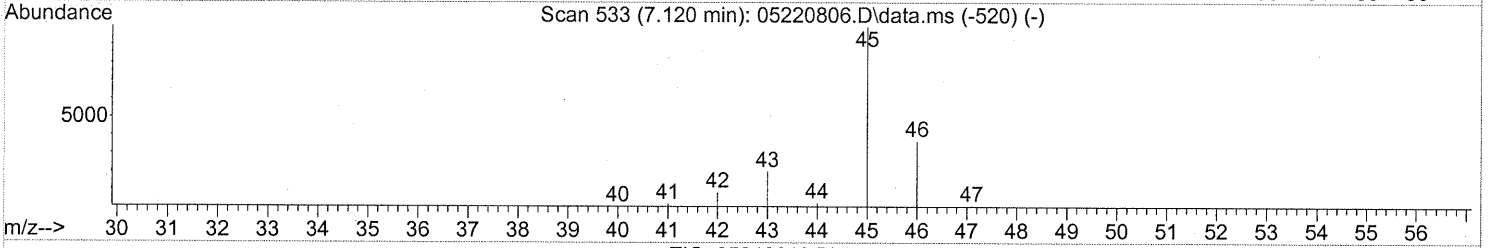
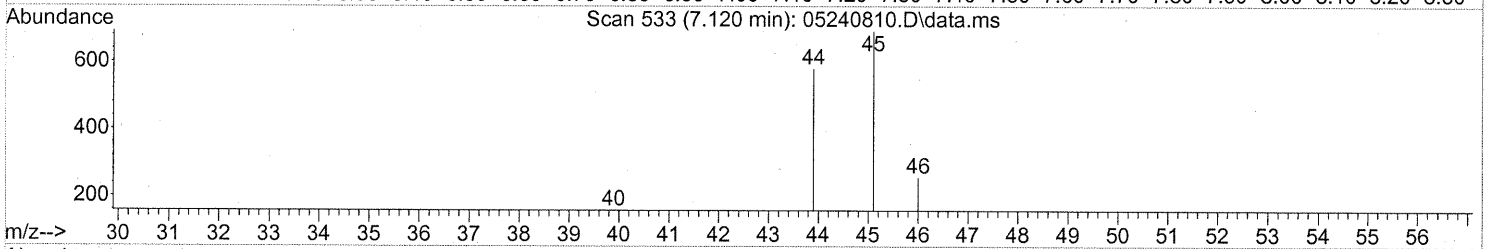
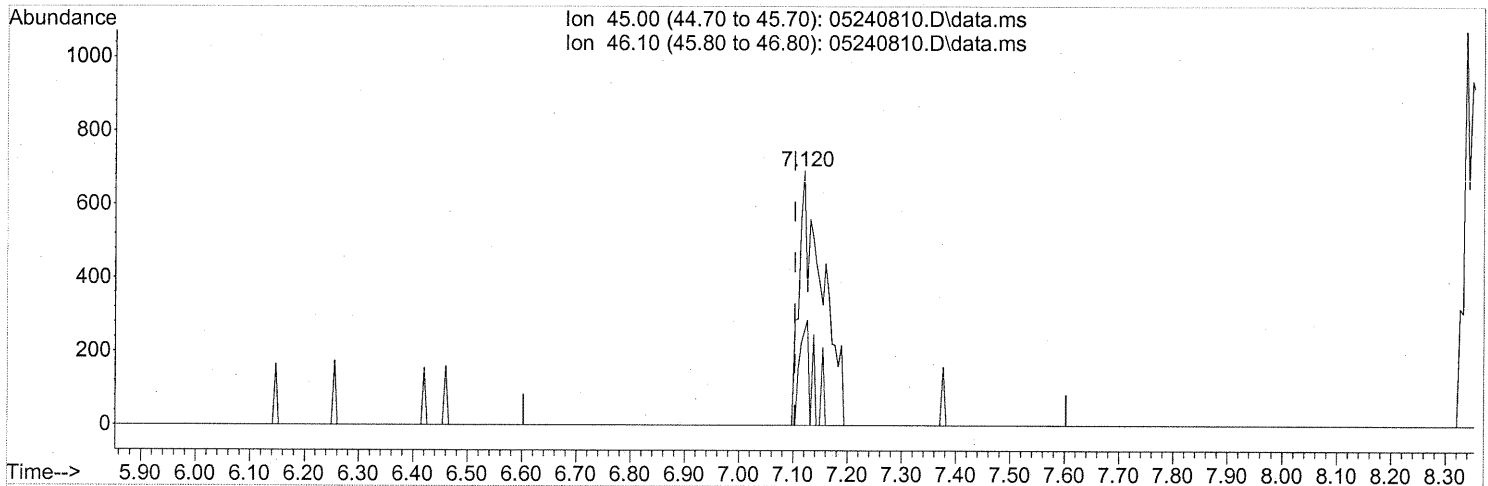
Ion	Exp%	Act%
85.00	100	100
87.00	32.50	25.01
100.90	9.30	3.08
102.90	6.00	1.83



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240810.D  
Acq On : 24 May 2008 13:15  
Operator : WA  
Sample : P0801442-014 Dup (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240810.D\data.ms

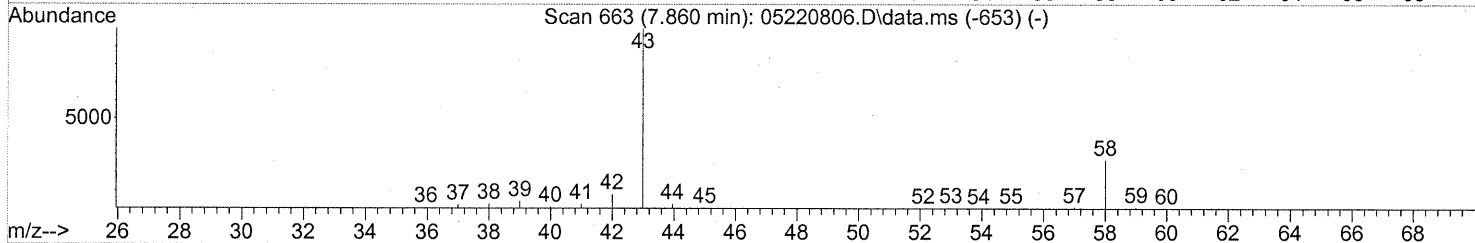
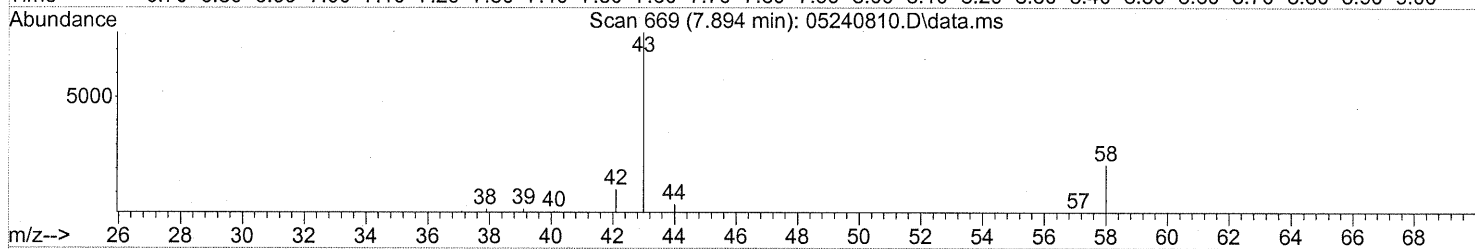
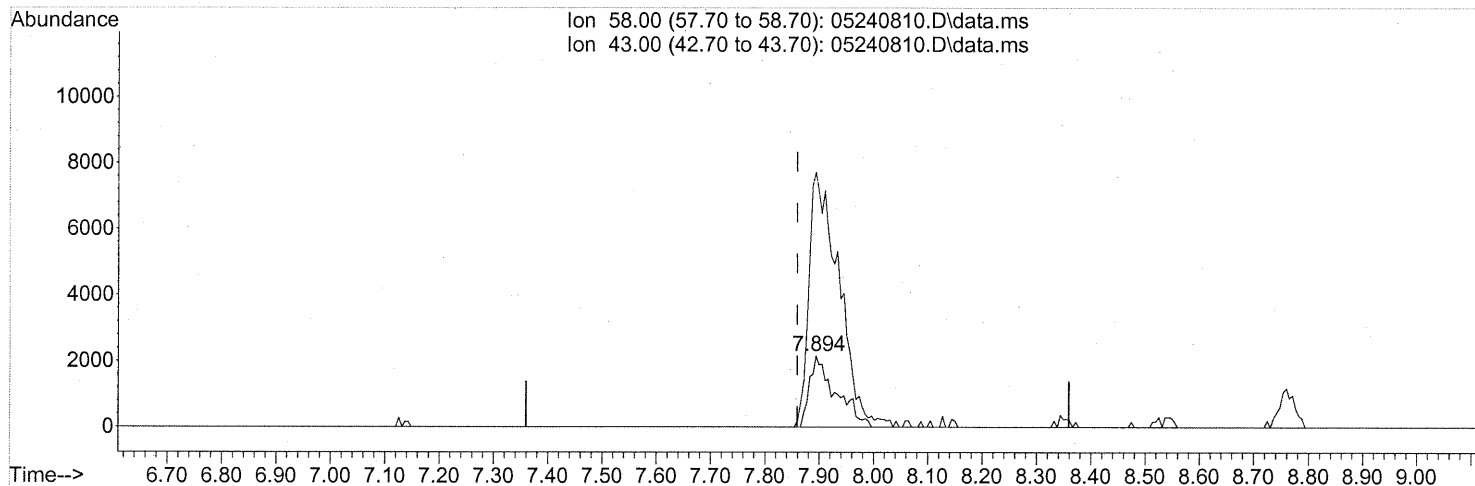
(10) Ethanol (T)  
7.120min (+0.017) 0.09ng  
response 2049

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	19.28#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

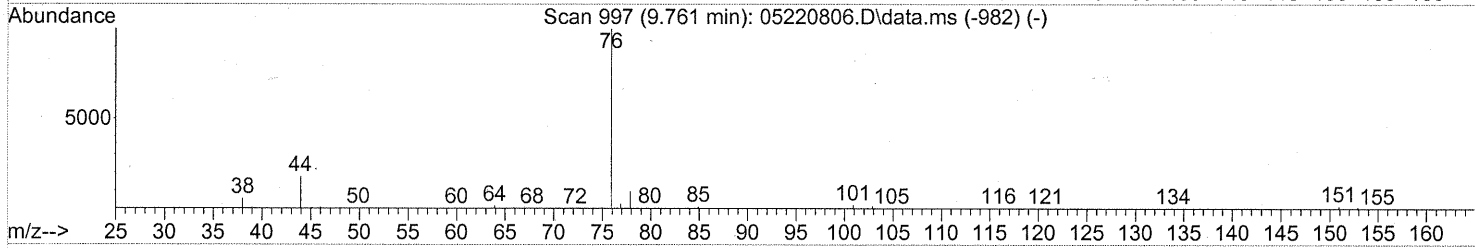
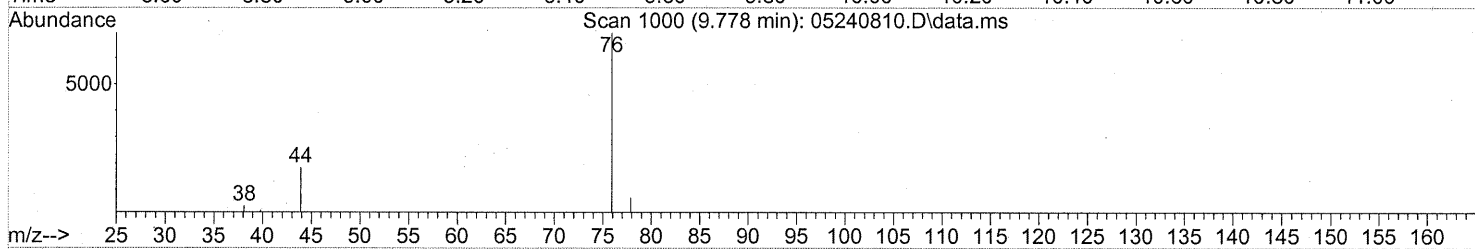
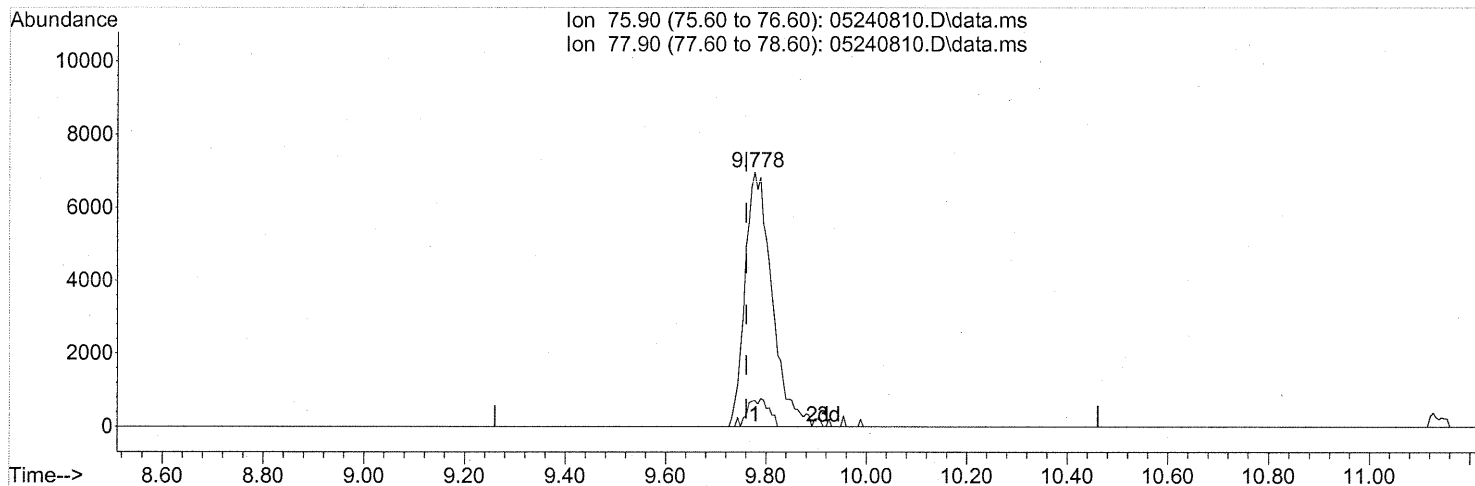
(13) Acetone (T)  
 7.894min (+0.034) 0.33ng  
 response 7281

Ion	Exp%	Act%
58.00	100	100
43.00	283.10	407.80#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(22) Carbon Disulfide (T)

9.778min (+0.017) 0.27ng

response 25807

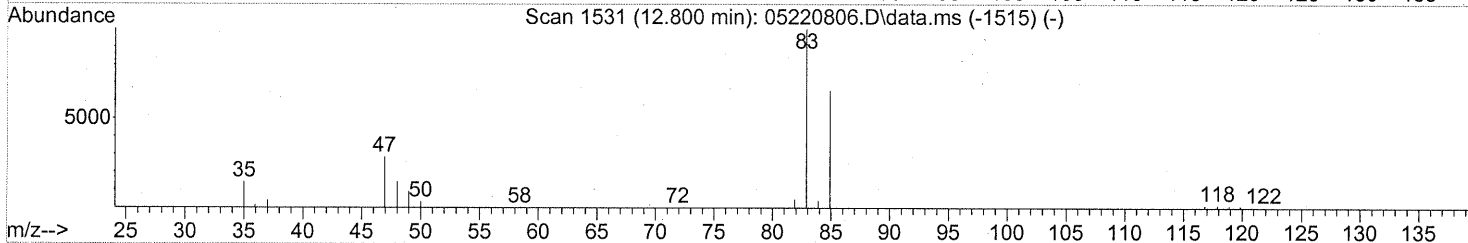
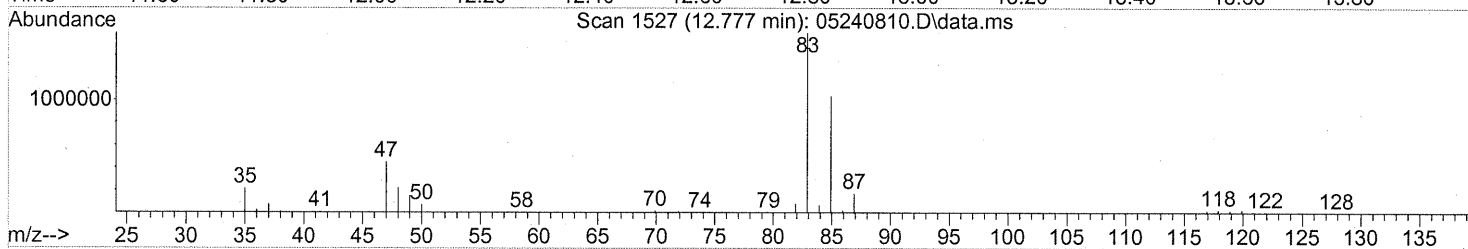
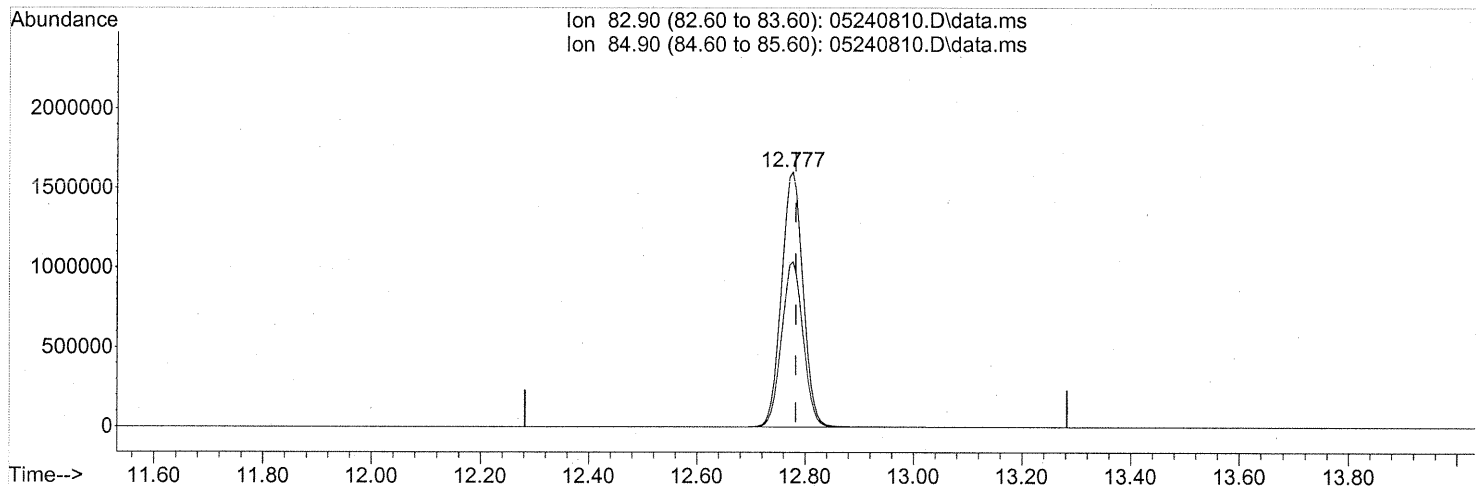
Ion	Exp%	Act%
75.90	100	100
77.90	8.70	8.61
0.00	0.00	0.00
0.00	0.00	0.00

973

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(32) Chloroform (T)

12.777min (-0.006) 116.70ng

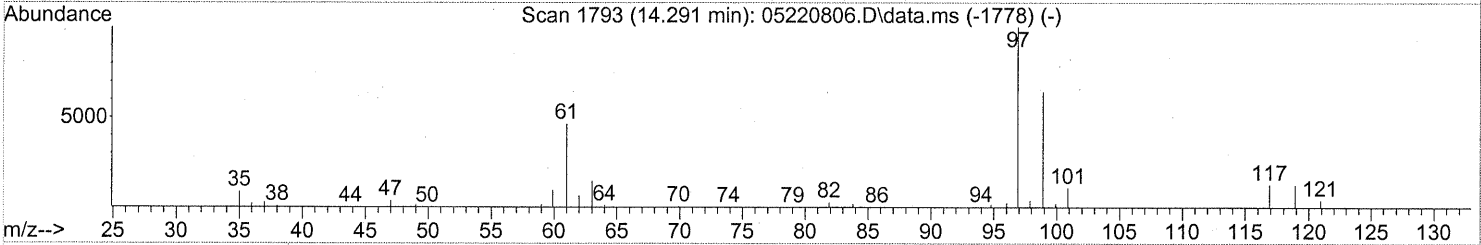
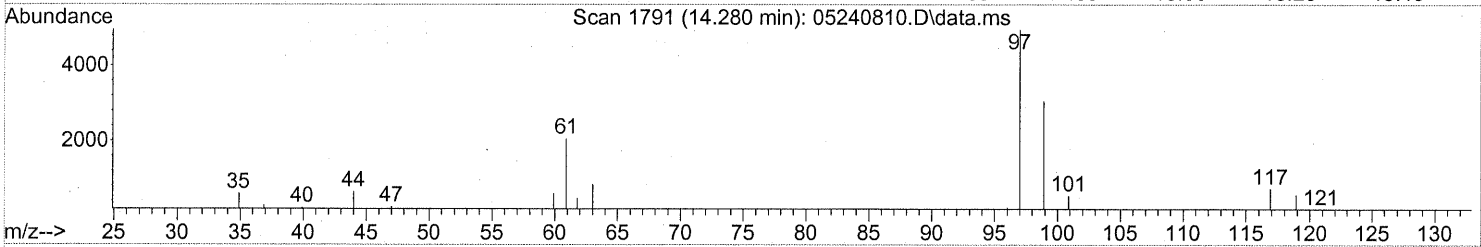
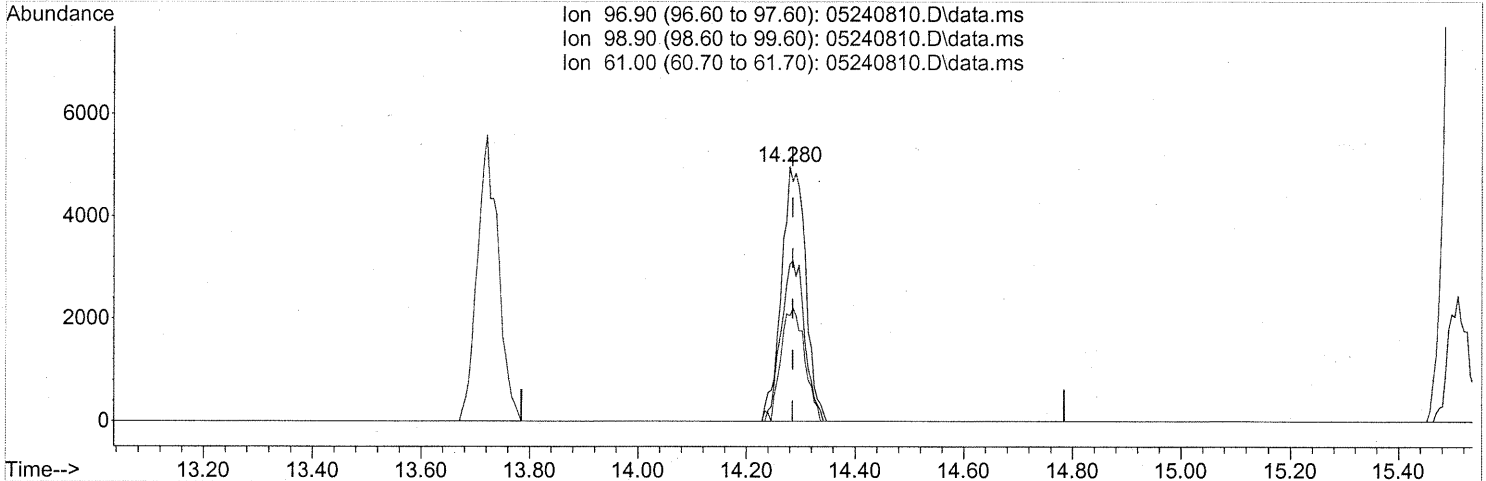
response 4398904

Ion	Exp%	Act%
82.90	100	100
84.90	64.70	64.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(38) 1,1,1-Trichloroethane (T)

14.280min (-0.006) 0.37ng

response 15334

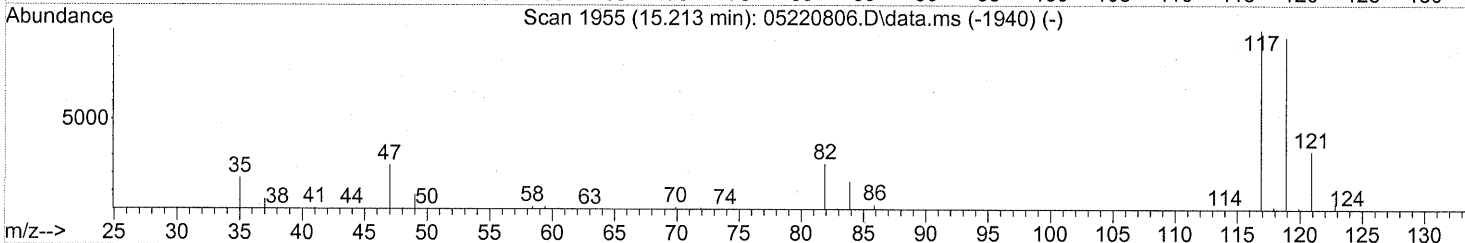
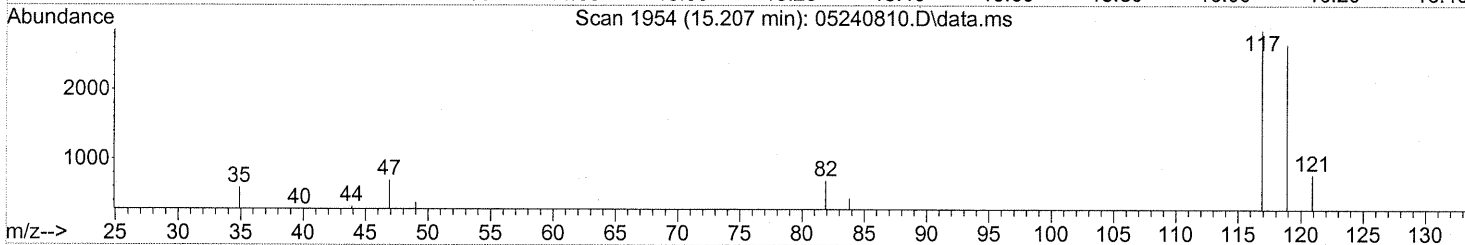
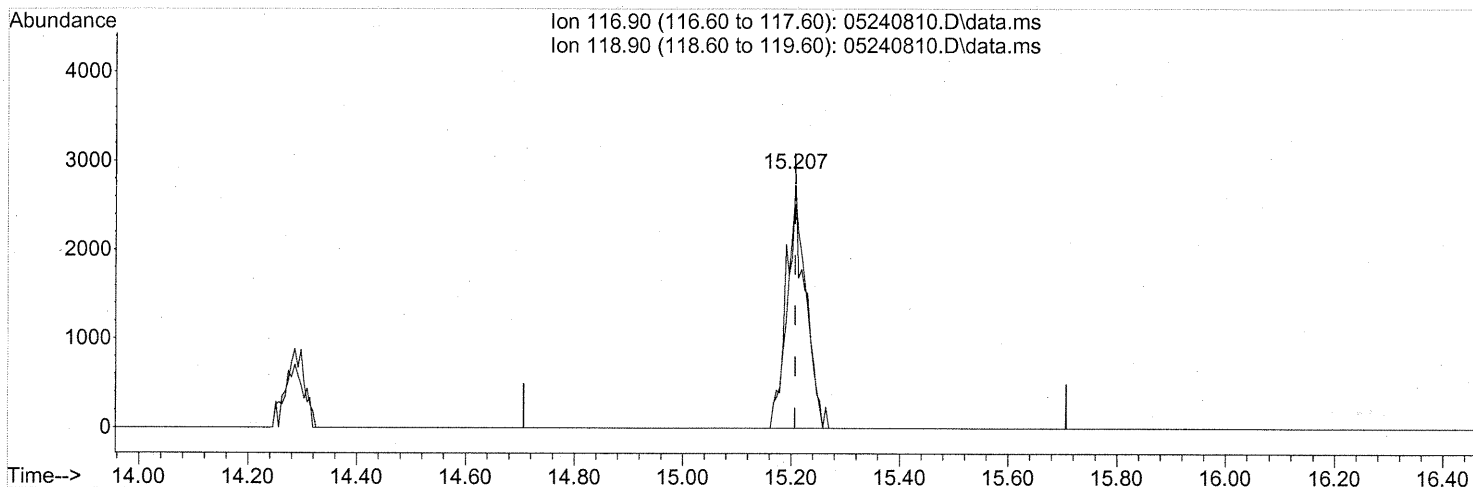
Ion	Exp%	Act%
96.90	100	100
98.90	63.40	61.48
61.00	50.50	43.99
0.00	0.00	0.00

975

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(42) Carbon Tetrachloride (T)

15.207min (+0.000) 0.19ng

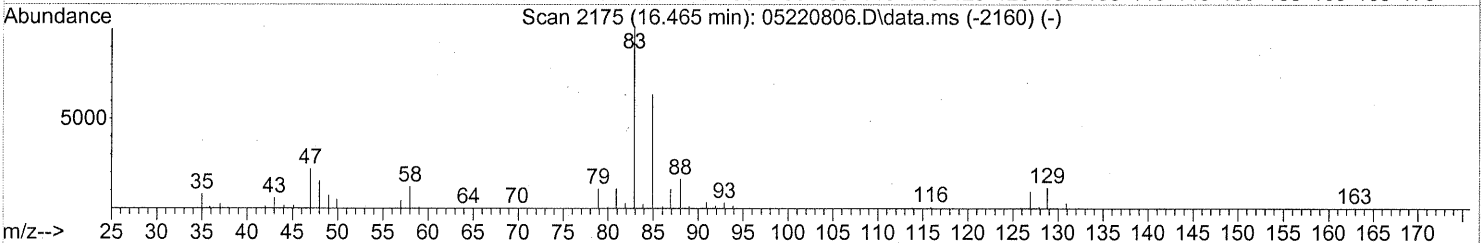
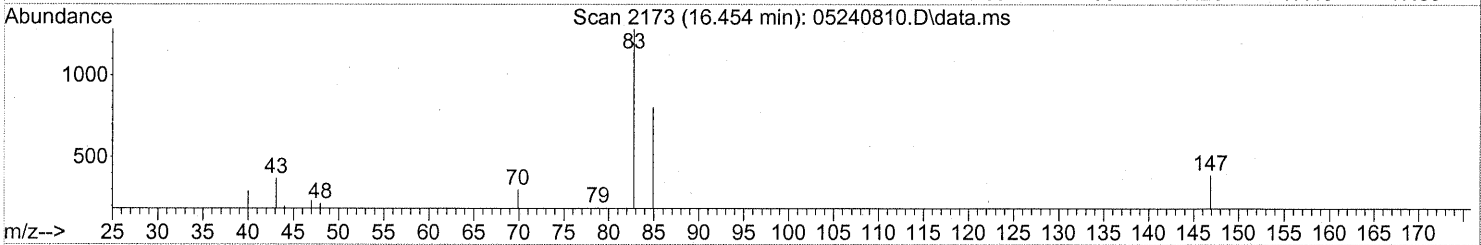
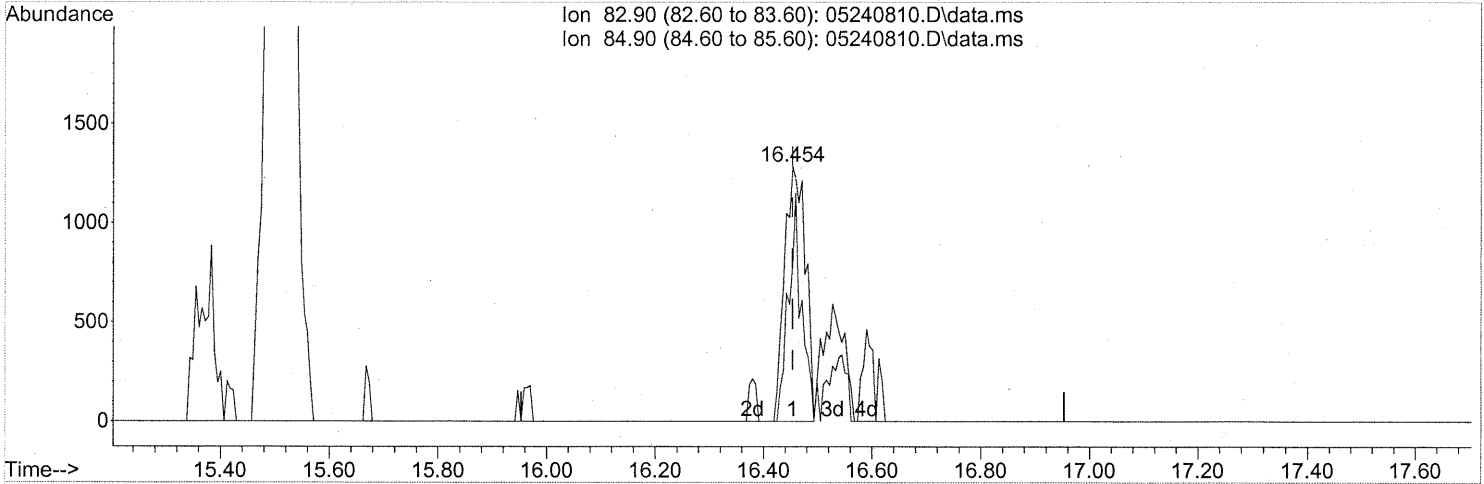
response 6715

Ion	Exp%	Act%
116.90	100	100
118.90	96.60	97.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(46) Bromodichloromethane (T)

16.454min (+0.000) 0.11ng

response 3437

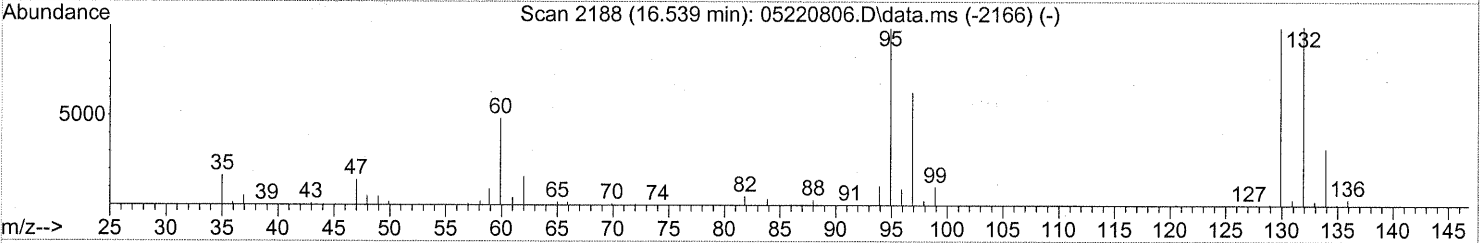
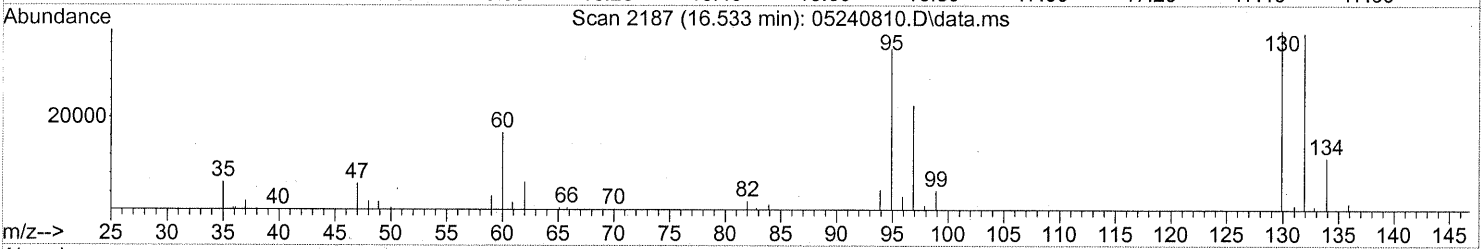
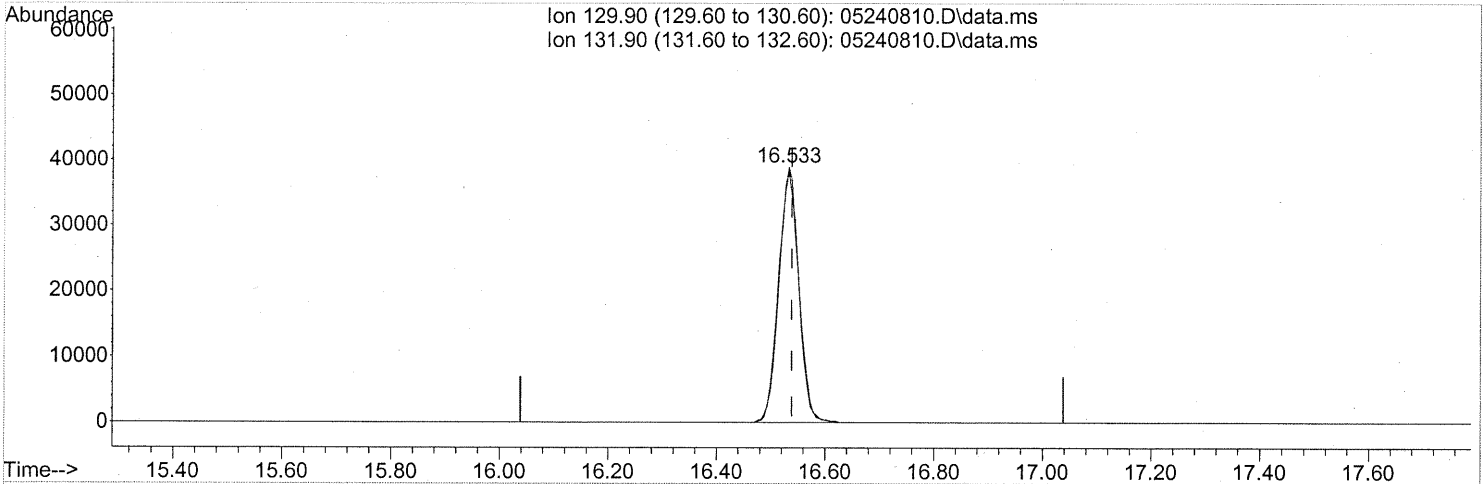
Ion	Exp%	Act%
82.90	100	100
84.90	63.70	56.10
0.00	0.00	0.00
0.00	0.00	0.00

977

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(47) Trichloroethene (T)  
 16.533min (-0.006) 3.42ng  
 response 98697

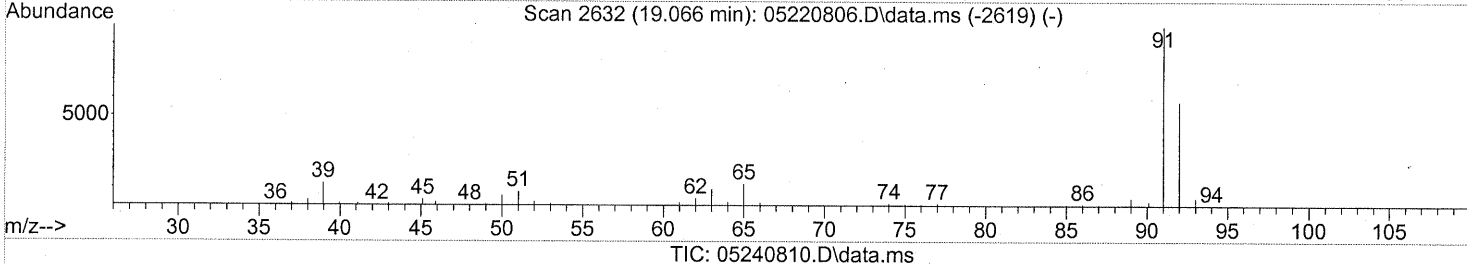
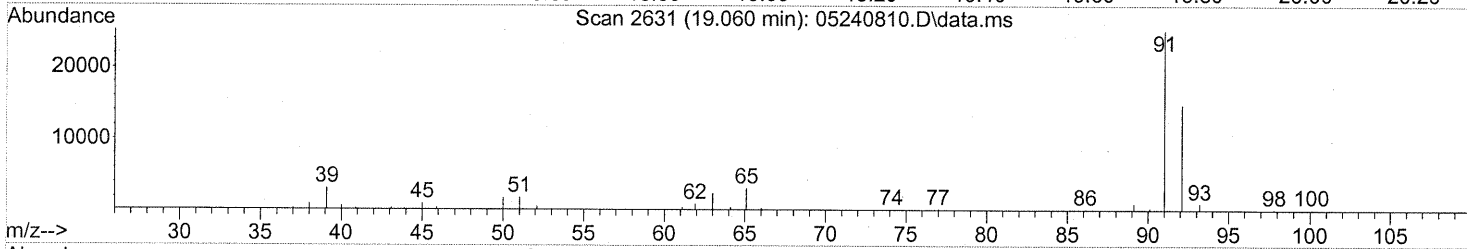
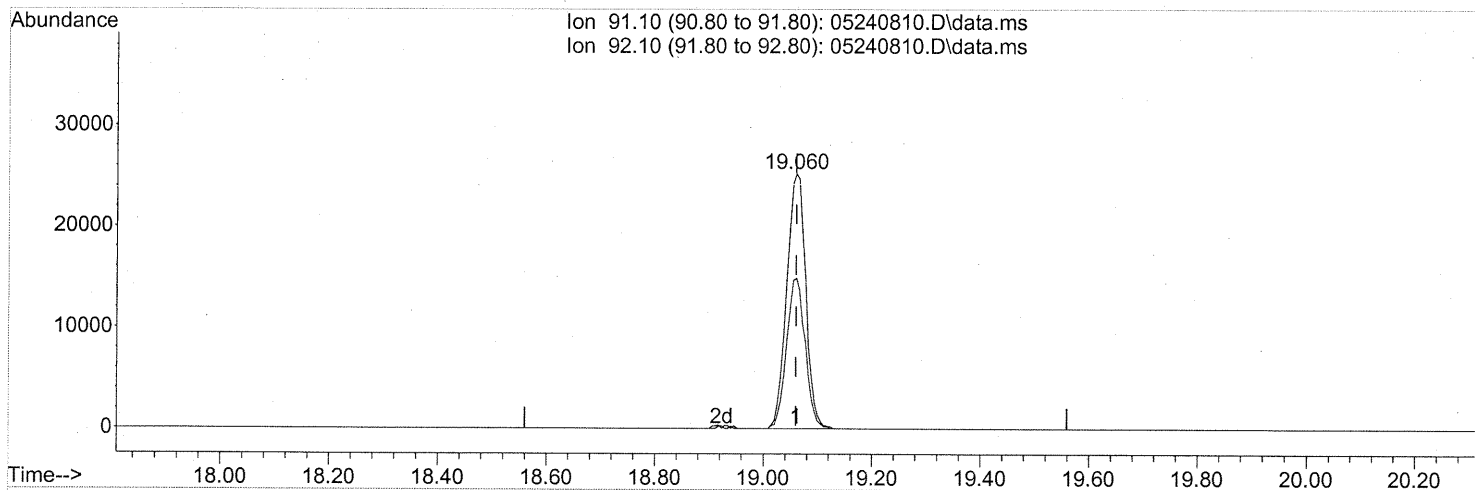
Ion	Exp%	Act%
129.90	100	100
131.90	101.20	99.30
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240810.D  
Acq On : 24 May 2008 13:15  
Operator : WA  
Sample : P0801442-014 Dup (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



TIC: 05240810.D\data.ms

(58) Toluene (T)

19.060min (+0.000) 0.60ng

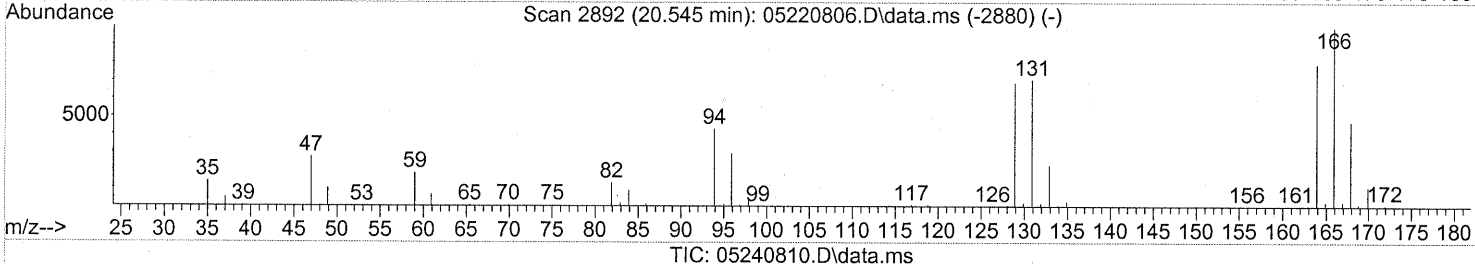
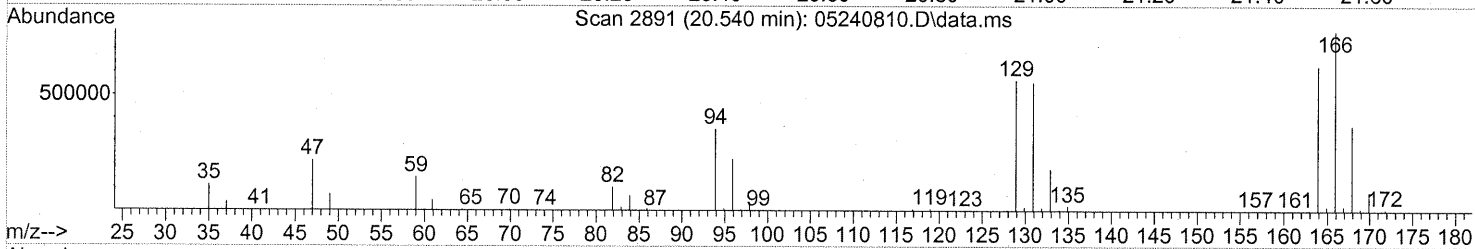
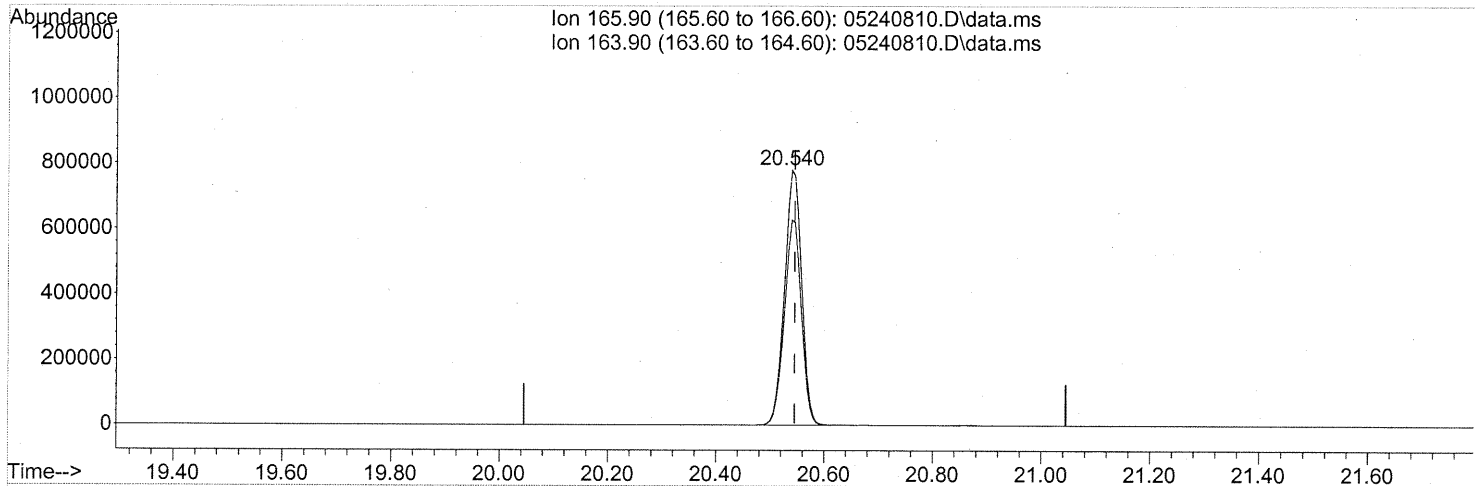
response 61375

Ion	Exp%	Act%
91.10	100	100
92.10	59.80	57.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(64) Tetrachloroethene (T)

20.540min (-0.006) 56.09ng

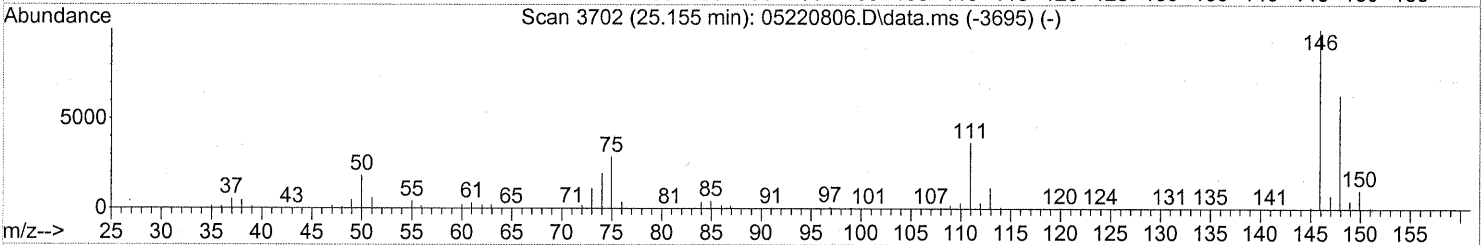
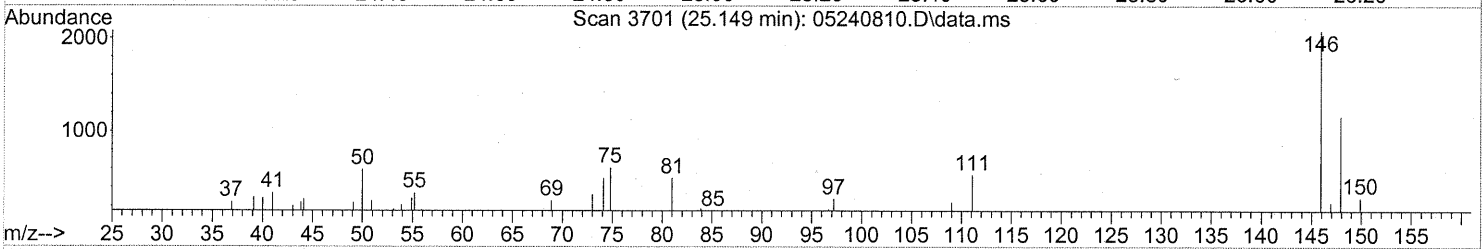
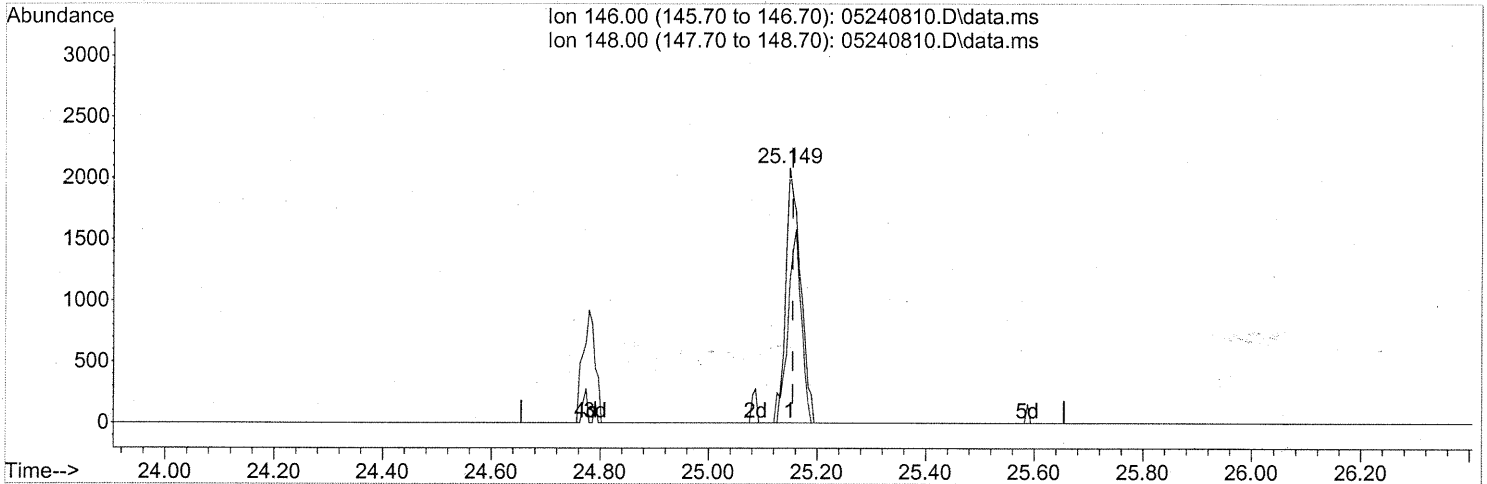
response 1709737

Ion	Exp%	Act%
165.90	100	100
163.90	78.70	79.93
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



TIC: 05240810.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.149min (-0.006) 0.06ng

response 3898

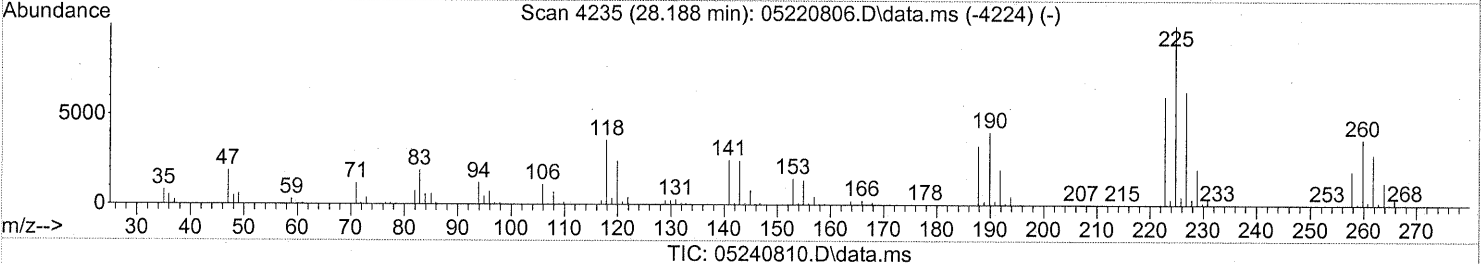
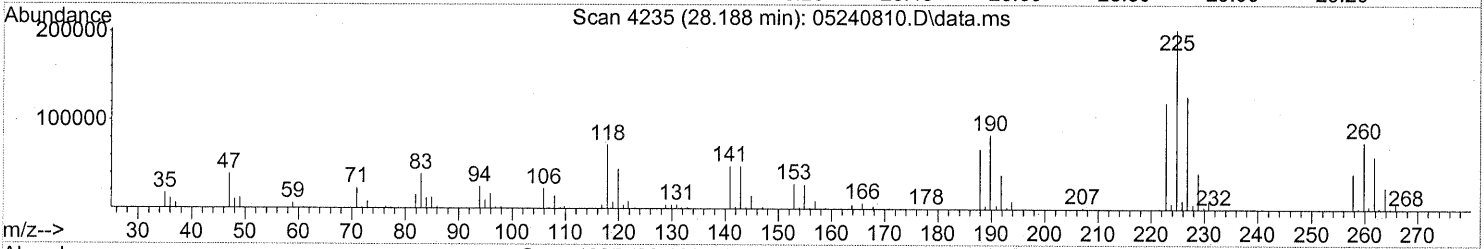
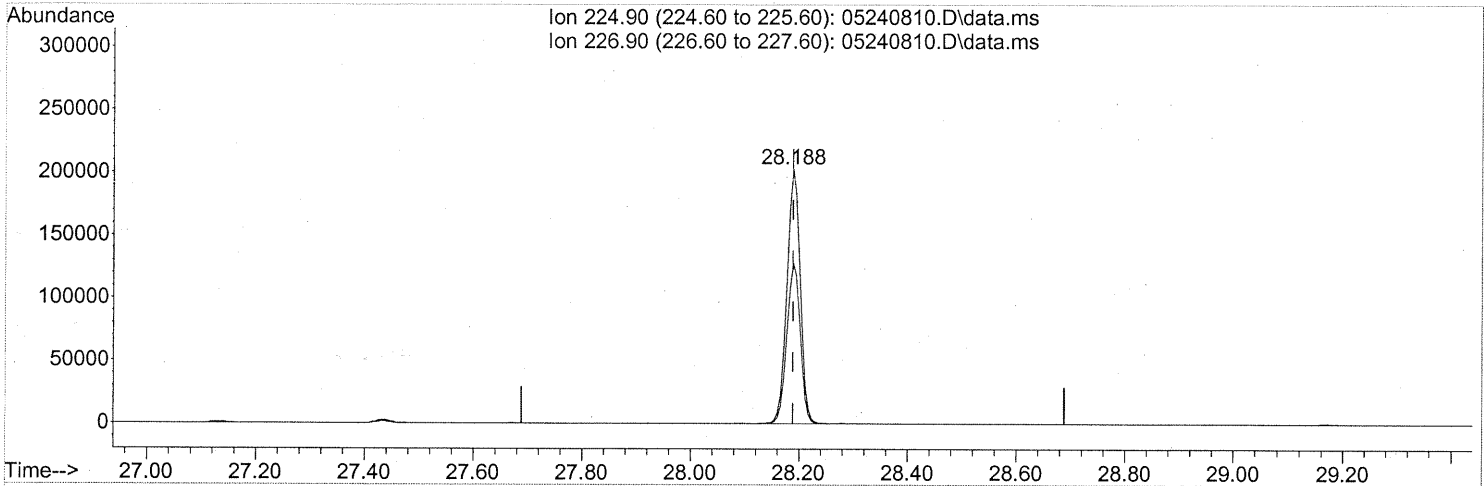
Ion	Exp%	Act%
146.00	100	100
148.00	64.20	69.98
0.00	0.00	0.00
0.00	0.00	0.00

981

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 24 17:51:39 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(97) Hexachloro-1,3-butadiene (T)

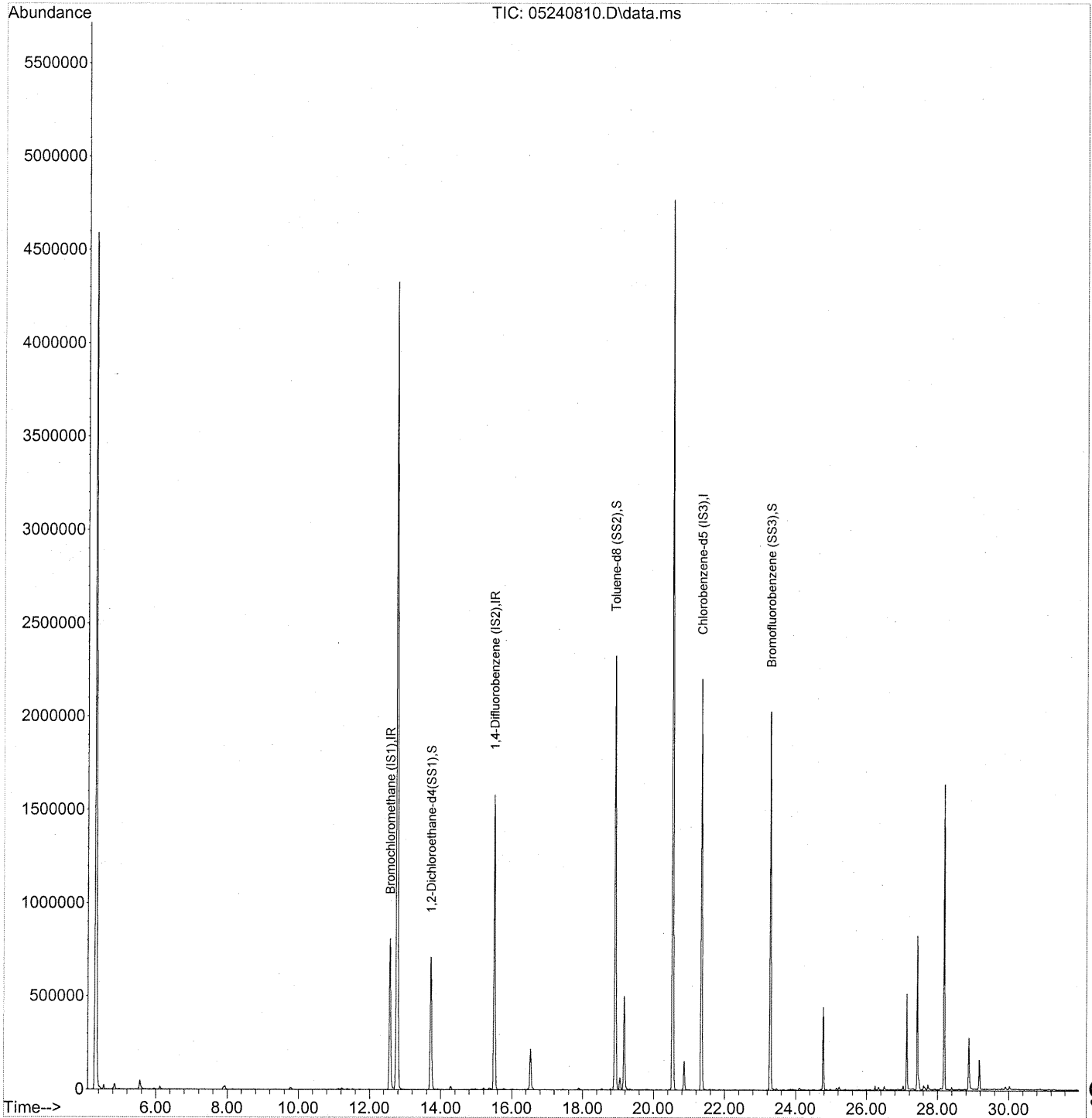
28.188min (+0.000) 11.52ng

response 345300

Ion	Exp%	Act%
224.90	100	100
226.90	62.80	63.56
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240810.D  
Acq On : 24 May 2008 13:15  
Operator : WA  
Sample : P0801442-014 Dup (40ml)  
Misc : ENSR SG35B-05 (-3.3, 3.5)  
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 25 20:36:31 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



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Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240810.D  
 Acq On : 24 May 2008 13:15  
 Operator : WA  
 Sample : P0801442-014 Dup (40ml)  
 Misc : ENSR SG35B-05 (-3.3, 3.5)  
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 25 20:36:31 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	413362	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1798004	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	843834	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	725857	25.343	ng	-0.03
Spiked Amount	25.000					Recovery = 101.36%
5) Toluene-d8 (SS2)	18.92	98	1914098	25.257	ng	-0.02
Spiked Amount	25.000					Recovery = 101.04%
6) Bromofluorobenzene (SS3)	23.29	174	762405	24.739	ng	0.00
Spiked Amount	25.000					Recovery = 98.96%
Target Compounds						
7) tert-Butylbenzene	24.88	119	101		N.D.	Qvalue
8) n-Butylbenzene	25.92	91	461		N.D.	

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

**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: P0801442

**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: 05210801.D  
 Date Analyzed: 5/21/08  
 Time Analyzed: 07:03

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	280453	9.20	1159366	11.35	455765	16.45
<b>Upper Limit</b>	392634	9.53	1623112	11.68	638071	16.78
<b>Lower Limit</b>	168272	8.87	695620	11.02	273459	16.12

Client Sample ID		IS1 (BCM)	IS2 (DFB)	IS3 (CBZ)
		AREA #	RT #	AREA #
01	Method Blank	265459	9.19	1108808
02	Lab Control Sample	271810	9.23	1132838
03	SG70B-05 (Dilution)	278945	9.19	1159225
04	SG71B-05 (Dilution)	261196	9.20	1111432
05				
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: RC Date: 6/2/08

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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: P0801442

**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: 05220801.D  
 Date Analyzed: 5/22/08  
 Time Analyzed: 06:45

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)						
	AREA	#	RT	#	AREA	#	RT	#			
<b>24 Hour Standard</b>	290078		9.20		1224526		11.36		472512		16.45
<b>Upper Limit</b>	406109		9.53		1714336		11.69		661517		16.78
<b>Lower Limit</b>	174047		8.87		734716		11.03		283507		16.12

**Client Sample ID**

Client Sample ID	IS1 (BCM) AREA	IS1 (BCM) #	IS1 (BCM) RT	IS1 (BCM) #	IS2 (DFB) AREA	IS2 (DFB) #	IS2 (DFB) RT	IS2 (DFB) #	IS3 (CBZ) AREA	IS3 (CBZ) #	IS3 (CBZ) RT	IS3 (CBZ) #
01	Method Blank	291099	9.19		1200703	11.34	463958		16.44			
02	Lab Control Sample	292129	9.22		1211752	11.36	471175		16.45			
03	SG36B-20 (Dilution)	294338	9.19		1253056	11.34	484420		16.45			
04	SG89B-05 (Dilution)	295772	9.19		1263184	11.34	484027		16.44			
05	SG72B-05 (Dilution)	291546	9.20		1227593	11.35	479960		16.45			
06	SG84B-05 (Dilution)	250673	9.20		1092477	11.34	424798		16.45			
07	SG95B-05 (Dilution)	261506	9.20		1145449	11.35	456223		16.45			
08	SG75B-05 (Dilution)	275771	9.19		1188439	11.34	466565		16.45			
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: RC Date: 6/2/08

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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: P0801442

**Internal Standard Area and RT Summary**

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Rusty Bravo  
 Sampling Media: 6.0 L Summa Canister(s)  
 Test Notes:

Lab File ID: 05240801.D  
 Date Analyzed: 5/24/08  
 Time Analyzed: 06:59

	IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
<b>24 Hour Standard</b>	448388	12.59	1911390	15.52	908326	21.35
<b>Upper Limit</b>	627743	12.92	2675946	15.85	1271656	21.68
<b>Lower Limit</b>	269033	12.26	1146834	15.19	544996	21.02

**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	443208	12.58	1904075	15.51	885417	21.35
02 Lab Control Sample	459665	12.59	1955735	15.52	929197	21.35
03 SG70B-05	463631	12.58	1946379	15.51	904087	21.35
04 SG71B-05	444409	12.58	1882384	15.51	881998	21.35
05 SG36B-20	441193	12.58	1908057	15.51	909547	21.35
06 SG89B-05	432946	12.58	1838073	15.51	864159	21.35
07 SG35B-05	408720	12.58	1810368	15.51	852322	21.35
08 SG35B-05 (Lab Duplicate)	413362	12.58	1798004	15.51	843834	21.35
09 SG73B-05	405189	12.58	1793020	15.51	871340	21.35
10 SG39B-05	483630	12.58	2073700	15.51	990343	21.35
11 SG37B-20	502403	12.58	2138148	15.51	1047220	21.35
12 SG44B-05	528796	12.58	2294376	15.51	1068545	21.35
13 SG88B-05	542028	12.58	2318224	15.51	1105781	21.35
14 SG72B-05	585660	12.58	2449883	15.51	1168878	21.35
15 SG65B-05	604273	12.58	2567002	15.51	1175375	21.35
16 SG65B-05D	564336	12.58	2463090	15.51	1128628	21.35
17 SG84B-05	579106	12.58	2412558	15.51	1107058	21.35
18 SG85B-05	561245	12.58	2384740	15.51	1127495	21.35
19 SG94B-05	564641	12.58	2380094	15.51	1098161	21.35
20 SG95B-05	575733	12.58	2414649	15.51	1124167	21.35
21 SG75B-05	558421	12.58	2357400	15.51	1070709	21.35

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: RC

Date: 6/2/08

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## INITIAL CALIBRATION STANDARDS

Method Path : J:\MS16\METHODS\  
Method File : R16051208.M  
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
Last Update : Mon May 12 20:47:38 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05120802.D 0.5 =05120803.D 1.0 =05120804.D 5.0 =05120805.D  
25 =05120806.D 50 =05120807.D 100 =05120808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	AVG	%RSD
1) IR Bromochloromethane (I									
2) Propene	3.054	2.570	2.387	2.398	2.209	2.297	2.583	2.500	11.18
3) Dichlorodifluoromet	3.443	3.217	3.064	2.926	2.811	2.661	2.569	2.956	10.48
4) Chloromethane	4.882	4.306	3.991	3.445	3.604	3.290	2.063	3.654	24.36
5) Freon 114	1.579	1.538	1.450	1.375	1.347	1.356	1.333	1.425	6.94
6) Vinyl Chloride	2.913	2.583	2.647	2.558	2.438	2.315	2.208	2.523	9.17
7) 1,3-Butadiene	2.705	2.474	2.254	2.285	2.316	2.264	2.193	2.356	7.51
8) Bromomethane	1.199	1.147	1.093	0.984	0.983	0.949	0.923	1.040	10.24
9) Chloroethane	1.176	1.284	1.229	1.127	1.132	1.099	1.027	1.153	7.38
10) Ethanol		1.765	1.928	1.797	1.626	1.597	1.600	1.719	7.78
11) Acetonitrile		5.112	4.755	4.500	4.228	4.098	4.085	4.463	9.18
12) Acrolein		1.420	1.318	1.175	1.187	1.130	1.114	1.224	9.81
13) Acetone		2.212	1.992	1.616	1.461	1.340	1.290	1.652	22.59
14) Trichlorofluorometh	2.509	2.562	2.531	2.432	2.403	2.344	2.330	2.445	3.75
15) Isopropanol		6.318	6.158	5.346	5.873	4.906	3.533	5.356	19.33
16) Acrylonitrile		2.990	3.079	3.036	2.874	2.917	2.851	2.938	3.38
17) 1,1-Dichloroethene		1.272	1.256	1.207	1.186	1.165	1.144	1.197	4.27
18) tert-Butanol		5.530	5.034	4.924	4.719	4.739	4.579	4.871	6.92
19) Methylene Chloride		1.853	1.353	1.266	1.211	1.170	1.145	1.305	19.42
20) Allyl Chloride		3.299	2.942	2.687	2.466	2.547	2.551	2.735	10.69
21) Trichlorotrifluoroe	0.999	1.098	1.027	1.015	1.016	1.006	1.030	1.027	3.22
22) Carbon Disulfide		5.441	5.109	4.795	4.838	4.683	4.687	4.925	6.02
23) trans-1,2-Dichloroe	2.751	2.669	2.640	2.564	2.496	2.409	2.383	2.559	5.36
24) 1,1-Dichloroethane	3.294	3.109	3.009	2.849	2.821	2.709	2.634	2.918	7.97
25) Methyl tert-Butyl E	4.262	4.034	3.993	3.941	3.844	3.724	3.659	3.922	5.19
26) Vinyl Acetate		0.327	0.326	0.350	0.343	0.331	0.333	0.335	2.86
27) 2-Butanone		0.785	0.883	0.914	0.874	0.851	0.818	0.851	5.09
28) cis-1,2-Dichloroeth	2.553	2.466	2.409	2.359	2.305	2.229	2.192	2.359	5.45
29) Diisopropyl Ether	1.055	1.130	1.099	1.109	1.094	1.064	1.032	1.083	3.15
30) Ethyl Acetate		0.630	0.628	0.636	0.645	0.624	0.614	0.629	1.68
31) n-Hexane		4.108	3.702	3.497	3.435	3.424	3.360	3.376	7.54

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5/13/08

Method Path : J:\MS16\METHODS\  
Method File : R16051208.M  
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
Last Update : Mon May 12 20:47:38 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05120802.D 0.5 =05120803.D 1.0 =05120804.D 5.0 =05120805.D  
25 =05120806.D 50 =05120807.D 100 =05120808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD
32) T Chloroform	1.891	2.078	1.924	1.874	1.827	1.753	1.703	1.864	6.56
33) S 1,2-Dichloroethane-	1.795	1.810	1.832	1.822	1.748	1.692	1.642	1.763	4.11
34) T Tetrahydrofuran		0.894	0.872	0.852	0.857	0.838	0.805	0.853	3.57
35) T Ethyl tert-Butyl Et	1.411	1.592	1.548	1.606	1.555	1.536	1.507	1.536	4.20
36) T 1,2-Dichloroethane	2.562	2.322	2.335	2.222	2.145	2.046	1.980	2.230	8.85
37) IR 1,4-Difluorobenzene (									
38) T 1,1,1-Trichloroetha	0.519	0.531	0.481	0.473	0.468	0.452	0.441	0.481	6.90
39) T Isopropyl Acetate	0.200	0.280	0.255	0.257	0.270	0.266	0.260	0.256	10.19
40) T 1-Butanol	0.419	0.466	0.460	0.472	0.501	0.497	0.500	0.474	6.28
41) T Benzene	1.571	1.283	1.216	1.150	1.140	1.115	1.105	1.226	13.42
42) T Carbon Tetrachlorid	0.235	0.338	0.351	0.375	0.423	0.413	0.405	0.363	17.84
43) T Cyclohexane	0.644	0.509	0.482	0.449	0.449	0.435	0.429	0.485	15.55
44) T tert-Amyl Methyl Et	0.867	0.906	0.854	0.856	0.876	0.847	0.835	0.863	2.67
45) T 1,2-Dichloropropane	0.383	0.411	0.386	0.375	0.379	0.366	0.361	0.380	4.25
46) T Bromodichloromethan	0.365	0.374	0.362	0.370	0.376	0.358	0.346	0.364	2.84
47) T Trichloroethene	0.382	0.354	0.329	0.317	0.327	0.327	0.328	0.337	6.73
48) T 1,4-Dioxane	0.228	0.236	0.227	0.234	0.235	0.228	0.226	0.230	1.82
49) T Isooctane	2.114	2.126	2.018	1.986	2.013	1.996	1.997	2.036	2.89
50) T Methyl Methacrylate		0.115	0.113	0.120	0.127	0.126	0.126	0.121	5.16
51) T n-Heptane	0.301	0.336	0.311	0.313	0.316	0.307	0.298	0.312	3.95
52) T cis-1,3-Dichloropro	0.521	0.489	0.469	0.488	0.502	0.483	0.470	0.489	3.69
53) T 4-Methyl-2-pentanon	0.447	0.445	0.438	0.441	0.458	0.448	0.445	0.446	1.42
54) T trans-1,3-Dichlorop	0.391	0.435	0.438	0.439	0.454	0.436	0.428	0.432	4.55
55) T 1,1,2-Trichloroetha	0.317	0.324	0.299	0.292	0.288	0.282	0.281	0.297	5.71
56) I Chlorobenzene-d5 (IS3									
57) S Toluene-d8 (SS2)	2.489	2.486	2.454	2.463	2.447	2.445	2.447	2.462	0.75
58) T Toluene	3.597	3.092	2.922	2.824	2.865	2.884	2.926	3.016	8.95
59) T 2-Hexanone	3.670	3.243	3.054	3.111	3.131	3.071	3.043	3.189	6.98
60) T Dibromochloromethan	0.775	0.774	0.746	0.771	0.807	0.810	0.826	0.787	3.56
61) T 1,2-Dibromoethane	0.773	0.779	0.780	0.767	0.781	0.781	0.786	0.778	0.79

Method Path : J:\MS16\METHODS\  
Method File : R16051208.M  
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
Last Update : Mon May 12 20:47:38 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05120802.D 0.5 =05120803.D 1.0 =05120804.D 5.0 =05120805.D  
25 =05120806.D 50 =05120807.D 100 =05120808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	AVG	%RSD
62) T Butyl Acetate	3.376	3.199	3.112	3.194	3.335	3.284	3.277	3.254	2.80
63) T n-Octane	0.965	0.969	0.952	0.934	0.980	0.977	0.981	0.965	1.76
64) T Tetrachloroethene	0.869	0.735	0.722	0.698	0.708	0.727	0.758	0.745	7.77
65) T Chlorobenzene	2.196	2.032	1.961	1.896	1.933	1.952	2.001	1.996	4.95
66) T Ethylbenzene	3.809	3.482	3.291	3.268	3.378	3.392	3.461	3.440	5.26
67) T m- & p-Xylene	2.382	2.300	2.186	2.156	2.223	2.239	2.292	2.254	3.40
68) T Bromoform	0.357	0.392	0.410	0.416	0.457	0.466	0.482	0.426	10.55
69) T Styrene	2.187	1.983	1.941	2.014	2.124	2.153	2.222	2.089	5.22
70) T o-Xylene	2.493	2.458	2.360	2.336	2.381	2.375	2.422	2.404	2.34
71) T n-Nonane	2.651	2.708	2.583	2.599	2.715	2.684	2.644	2.655	1.93
72) T 1,1,2,2-Tetrachloro	1.018	1.091	1.059	1.048	1.074	1.059	1.063	1.059	2.15
73) S Bromofluorobenzene	0.629	0.630	0.620	0.635	0.647	0.655	0.668	0.641	2.65
74) T Cumene	3.271	3.459	3.241	3.206	3.397	3.410	3.521	3.358	3.55
75) T alpha-Pinene	1.478	1.651	1.578	1.609	1.707	1.713	1.748	1.641	5.71
76) T n-Propylbenzene	4.415	4.246	4.042	4.016	4.221	4.225	4.311	4.211	3.35
77) T 3-Ethyltoluene	3.638	3.597	3.470	3.422	3.672	3.767	3.892	3.637	4.47
78) T 4-Ethyltoluene	3.311	3.344	3.178	3.206	3.354	3.323	3.466	3.312	2.91
79) T 1,3,5-Trimethylbenz	3.040	2.883	2.831	2.775	2.910	2.925	3.046	2.916	3.45
80) T alpha-Methylstyrene	1.360	1.476	1.421	1.574	1.715	1.729	1.798	1.582	10.71
81) T 2-Ethyltoluene	3.625	3.620	3.421	3.438	3.655	3.688	3.811	3.608	3.83
82) T 1,2,4-Trimethylbenz	3.161	2.902	2.862	2.841	3.079	3.107	3.137	3.013	4.60
83) T n-Decane	2.220	2.415	2.262	2.346	2.482	2.475	2.517	2.388	4.82
84) T Benzyl Chloride	2.371	2.407	2.383	2.460	2.633	2.625	2.696	2.511	5.44
85) T 1,3-Dichlorobenzene	1.906	1.764	1.650	1.631	1.714	1.757	1.819	1.748	5.46
86) T 1,4-Dichlorobenzene	1.660	1.673	1.631	1.573	1.676	1.700	1.779	1.670	3.78
87) T sec-Butylbenzene	3.922	3.870	3.672	3.742	4.023	4.051	4.195	3.925	4.64
88) T p-Isopropyltoluene	3.112	3.184	3.120	3.170	3.557	3.593	3.598	3.333	7.04
89) T 1,2,3-Trimethylbenz	2.779	2.914	2.754	2.803	3.071	3.090	3.127	2.934	5.47
90) T 1,2-Dichlorobenzene	1.599	1.622	1.574	1.544	1.664	1.666	1.682	1.622	3.21
91) T d-Limonene	0.952	1.041	1.004	1.083	1.204	1.175	1.149	1.087	8.61
92) T 1,2-Dibromo-3-Chlor	0.398	0.481	0.493	0.506	0.558	0.563	0.580	0.511	12.32
93) T n-Undecane	2.217	2.390	2.354	2.474	2.704	2.714	2.727	2.511	8.16

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Method Path : J:\MS16\METHODS\  
Method File : R16051208.M  
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
Last Update : Mon May 12 20:47:38 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05120802.D 0.5 =05120803.D 1.0 =05120804.D 5.0 =05120805.D  
25 =05120806.D 50 =05120807.D 100 =05120808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	AVG	%RSD
94) T 1,2,4-Trichlorobenz	0.280	0.252	0.250	0.277	0.298	0.301	0.316	0.282	8.81
95) T Naphthalene	3.960	4.136	3.935	4.047	4.490	4.533	4.741	4.263	7.51
96) T n-Dodecane	1.938	2.372	2.335	2.396	2.684	2.705	2.723	2.451	11.54
97) T Hexachloro-1,3-buta	0.365	0.440	0.399	0.407	0.432	0.441	0.468	0.422	7.99

(#) = Out of Range

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: **S20-05020810**  
 20ng/L Std. ID: **S20-05020808**  
 200ng/L Std. ID: **S20-05020804**

Dilution Factors:                      5                      50                      250

Compounds	Source Std. mg/m <sup>3</sup>	Primary Working Standards			Working STD Conc.(ng/L): Injection (L): ICAL Points:	ICAL Concentrations (Primary Source)						
		200ng/L	20ng/L	4ng/L		4	20	20	20	200	200	200
		0.025	0.025	0.050		0.25	0.125	0.25	0.50	1ng	5ng	25ng
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	

*ADP 5/13/08*

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: S20-05020810  
 20ng/L Std. ID: S20-05020808  
 200ng/L Std. ID: S20-05020804

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			0.025	0.025	0.05	0.25	0.125	0.25	0.50
		Primary Working Standards				ICAL Points:	0.1ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Bromoform	1.31	262	26.2	5.24		0.131	0.655	1.31	6.55	32.8	65.5	131	
Styrene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108	
o-Xylene	1.22	244	24.4	4.88		0.122	0.610	1.22	6.10	30.5	61.0	122	
n-Nonane	1.03	206	20.6	4.12		0.103	0.515	1.03	5.15	25.8	51.5	103	
1,1,2,2-Tetrachloroethane	1.23	246	24.6	4.92		0.123	0.615	1.23	6.15	30.8	61.5	123	
Cumene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108	
alpha-Pinene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106	
n-Propylbenzene	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105	
3-Ethyltoluene	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102	
4-Ethyltoluene	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111	
1,3,5-Trimethylbenzene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108	
alpha-Methylstyrene	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102	
2-Ethyltoluene	0.990	198	19.8	3.96		0.099	0.495	0.990	4.95	24.8	49.5	99.0	
1,2,4-Trimethylbenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110	
n-Decane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104	
Benzyl Chloride	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107	
1,3-Dichlorobenzene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106	
1,4-Dichlorobenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110	
sec-Butylbenzene	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107	
p-Isopropyltoluene	1.180	236	23.6	4.72		0.118	0.590	1.18	5.90	29.5	59.0	118	
1,2,3-Trimethylbenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110	
1,2-Dichlorobenzene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108	
d-Limonene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106	
1,2-Dibromo-3-chloropropane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104	
n-Undecane	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105	
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48		0.112	0.560	1.12	5.60	28.0	56.0	112	
Naphthalene	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105	
n-Dodecane	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106	
Hexachloro-1,3-butadiene	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111	

\*Enter Information in the Solid Shaded Areas ONLY.

DA 5/13/08



Method Path : J:\MS16\METHODS\  
 Method File : R16051208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Mon May 12 20:47:38 2008  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS16\DATA\2008_05\12a\05120802.D
2	0.5	1	25	J:\MS16\DATA\2008_05\12a\05120803.D
3	1.0	1	25	J:\MS16\DATA\2008_05\12a\05120804.D
4	5.0	5	25	J:\MS16\DATA\2008_05\12a\05120805.D
5	25	27	25	J:\MS16\DATA\2008_05\12a\05120806.D
6	50	54	25	J:\MS16\DATA\2008_05\12a\05120807.D
7	100	108	25	J:\MS16\DATA\2008_05\12a\05120808.D

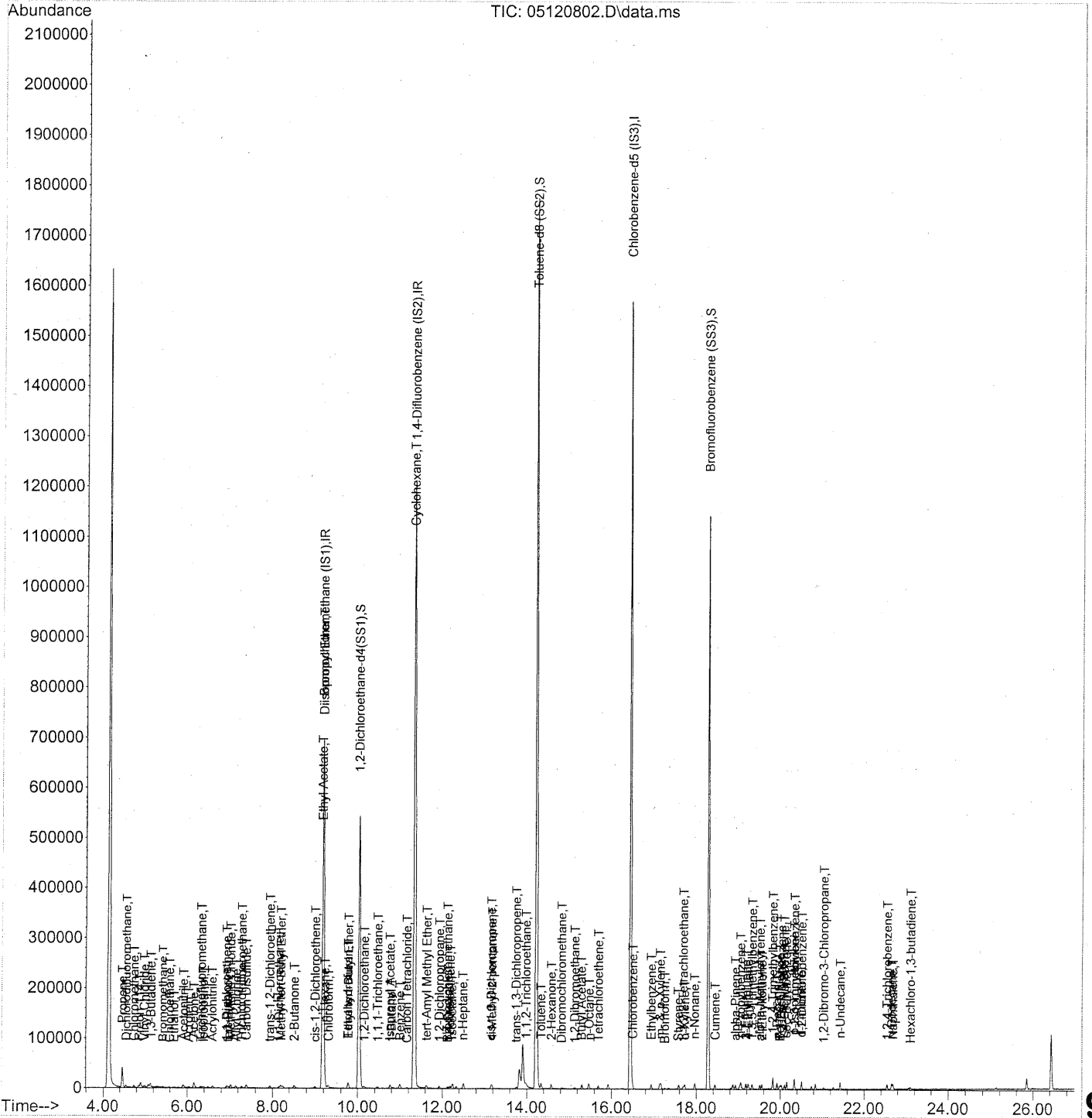
#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	May 12 19:56 2008	May 12 19:38 2008	12 May 2008 16:21
2	0.5	May 12 19:57 2008	May 12 19:45 2008	12 May 2008 16:59
3	1.0	May 12 19:57 2008	May 12 19:50 2008	12 May 2008 17:37
4	5.0	May 12 19:58 2008	May 12 19:52 2008	12 May 2008 18:17
5	25	May 12 19:59 2008	May 12 19:54 2008	12 May 2008 18:55
6	50	May 12 20:47 2008	May 12 20:44 2008	12 May 2008 19:34
7	100	May 12 20:47 2008	May 12 20:46 2008	12 May 2008 20:12

R16051208.M Tue May 13 07:21:23 2008

*ADT 5/13/08*

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:38:08 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



996

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:38:08 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	285336	25.000	ng	-0.07
37) 1,4-Difluorobenzene (IS2)	11.34	114	1239850	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	531351	25.000	ng	-0.02

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.03	65	512141	30.463	ng	-0.06
Spiked Amount	25.000		Recovery	=	121.84%	
57) Toluene-d8 (SS2)	14.22	98	1322290	25.432	ng	-0.02
Spiked Amount	25.000		Recovery	=	101.72%	
73) Bromofluorobenzene (SS3)	18.28	174	334014	17.231	ng	-0.01
Spiked Amount	25.000		Recovery	=	68.92%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.46	42	3765	0.137	ng	94
3) Dichlorodifluoromethane	4.55	85	4087	0.122	ng	# 93
4) Chloromethane	4.74	50	5683	0.137	ng	88
5) Freon 114	4.87	135	1928	0.103	ng	89
6) Vinyl Chloride	4.99	62	3424	0.127	ng	88
7) 1,3-Butadiene	5.13	54	3365	0.144	ng	94
8) Bromomethane	5.42	94	1437	0.121	ng	95
9) Chloroethane	5.58	64	1409	0.109	ng	# 58
10) Ethanol	5.69	45	1630	0.085	ng	# 50
11) Acetonitrile	5.92	41	8332	0.152	ng	75
12) Acrolein	6.03	56	2106	0.143	ng	99
13) Acetone	6.16	58	5370	0.281	ng	# 76
14) Trichlorofluoromethane	6.33	101	2978	0.102	ng	98
15) Isopropanol	6.38	45	8630m	0.136	ng	
16) Acrylonitrile	6.59	53	3447	0.100	ng	92
17) 1,1-Dichloroethene	6.93	96	1640	0.111	ng	# 79
18) tert-Butanol	6.96	59	6438m	0.119	ng	
19) Methylene Chloride	7.02	84	2369	0.148	ng	# 22
20) Allyl Chloride	7.15	41	3954	0.136	ng	# 60
21) Trichlorotrifluoroethane	7.28	151	1300	0.088	ng	85
22) Carbon Disulfide	7.39	76	8469	0.138	ng	94
23) trans-1,2-Dichloroethene	7.94	61	3454	0.120	ng	81
24) 1,1-Dichloroethane	8.15	63	4173	0.128	ng	86
25) Methyl tert-Butyl Ether	8.20	73	5400	0.125	ng	85
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	8.52	72	1004	0.103	ng	# 1
28) cis-1,2-Dichloroethene	9.00	61	3234	0.123	ng	83
29) Diisopropyl Ether	9.19	87	1240	0.098	ng	# 1
30) Ethyl Acetate	9.17	61	594	0.089	ng	96
31) n-Hexane	9.23	57	5251	0.132	ng	69

997

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:38:08 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	2784	0.129	ng	95
34) Tetrahydrofuran	9.77	72	554	0.060	ng	# 1
35) Ethyl tert-Butyl Ether	9.78	87	1691	0.094	ng	# 39
36) 1,2-Dichloroethane	10.16	62	3217	0.134	ng	68
38) 1,1,1-Trichloroethane	10.47	97	2832	0.115	ng	89
39) Isopropyl Acetate	10.77	61	1001	0.082	ng	# 1
40) 1-Butanol	10.80	56	1890m	0.083	ng	
41) Benzene	11.01	78	8568	0.140	ng	95
42) Carbon Tetrachloride	11.16	117	1247	0.060	ng	94
43) Cyclohexane	11.33	84	3547	0.142	ng	# 1
44) tert-Amyl Methyl Ether	11.63	73	4473	0.105	ng	# 68
45) 1,2-Dichloropropane	11.93	63	2069	0.112	ng	85
46) Bromodichloromethane	12.13	83	2079	0.116	ng	95
47) Trichloroethene	12.19	130	2161	0.107	ng	81
48) 1,4-Dioxane	12.15	88	1298	0.110	ng	89
49) Isooctane	12.24	57	10903	0.108	ng	99
50) Methyl Methacrylate	12.35	100	310	N.D.		
51) n-Heptane	12.49	71	1659	0.109	ng	# 46
52) cis-1,3-Dichloropropene	13.16	75	2686	0.114	ng	82
53) 4-Methyl-2-pentanone	13.19	58	2330	0.109	ng	# 49
54) trans-1,3-Dichloropropene	13.76	75	2249	0.111	ng	89
55) 1,1,2-Trichloroethane	13.99	97	1711	0.109	ng	95
58) Toluene	14.34	91	8410	0.123	ng	99
59) 2-Hexanone	14.59	43	7957	0.128	ng	94
60) Dibromochloromethane	14.83	129	1828	0.095	ng	96
61) 1,2-Dibromoethane	15.14	107	1790	0.097	ng	90
62) Butyl Acetate	15.30	43	7534	0.118	ng	97
63) n-Octane	15.48	57	2132	0.104	ng	# 66
64) Tetrachloroethene	15.69	166	2014	0.102	ng	81
65) Chlorobenzene	16.50	112	5135	0.105	ng	91
66) Ethylbenzene	16.94	91	8743	0.113	ng	100
67) m- & p-Xylene	17.15	91	13063	0.260	ng	98
68) Bromoform	17.25	173	993	0.089	ng	77
69) Styrene	17.58	104	5019	0.103	ng	94
70) o-Xylene	17.73	91	6464	0.119	ng	99
71) n-Nonane	17.96	43	5803	0.109	ng	91
72) 1,1,2,2-Tetrachloroethane	17.69	83	2660	0.120	ng	79
74) Cumene	18.45	105	7509	0.095	ng	94
75) alpha-Pinene	18.93	93	3330	0.088	ng	91
76) n-Propylbenzene	19.06	91	9853	0.105	ng	# 75
77) 3-Ethyltoluene	19.18	105	7886	0.092	ng	96
78) 4-Ethyltoluene	19.24	105	7812	0.097	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	6978	0.101	ng	96

998

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:38:08 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

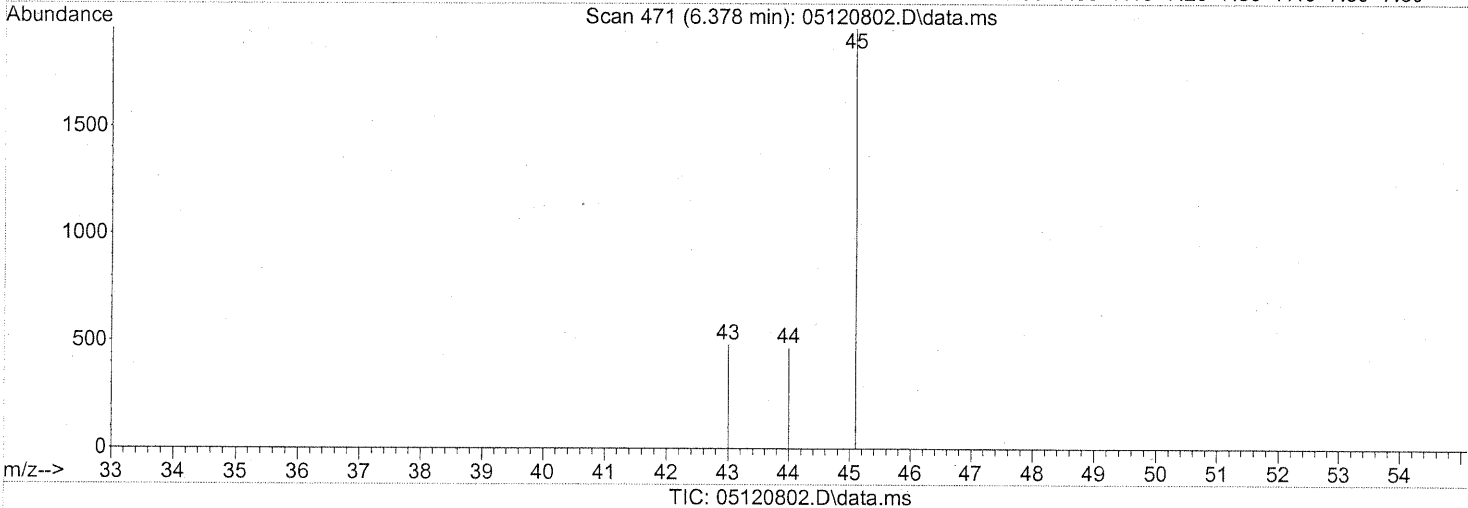
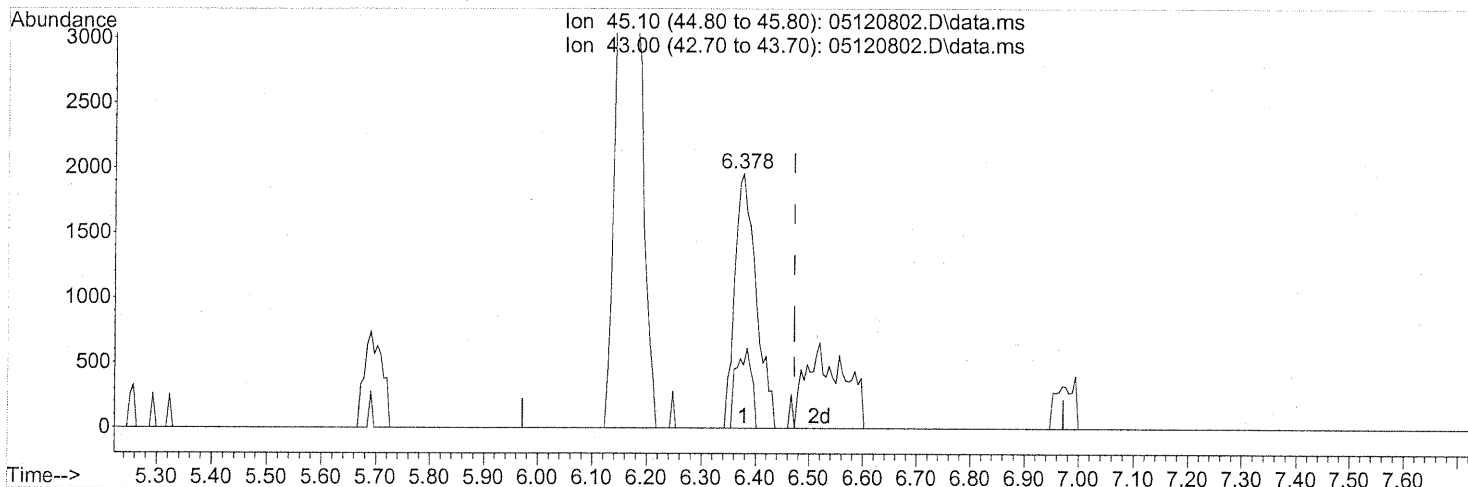
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	2949	0.075	ng	92
81) 2-Ethyltoluene	19.56	105	7628	0.089	ng	99
82) 1,2,4-Trimethylbenzene	19.82	105	7390	0.106	ng	94
83) n-Decane	19.92	57	4907	0.096	ng	80
84) Benzyl Chloride	20.00	91	5392	0.099	ng	98
85) 1,3-Dichlorobenzene	20.02	146	4293	0.095	ng	97
86) 1,4-Dichlorobenzene	20.10	146	3881	0.090	ng	91
87) sec-Butylbenzene	20.15	105	8920	0.096	ng	96
88) p-Isopropyltoluene	20.34	119	7805	0.097	ng	95
89) 1,2,3-Trimethylbenzene	20.34	105	6497	0.095	ng	88
90) 1,2-Dichlorobenzene	20.52	146	3671	0.089	ng	99
91) d-Limonene	20.51	68	2145	0.096	ng	94
92) 1,2-Dibromo-3-Chloropr...	21.04	157	879	0.067	ng	# 60
93) n-Undecane	21.44	57	4948	0.092	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	667	0.088	ng	# 76
95) Naphthalene	22.69	128	8838	0.083	ng	98
96) n-Dodecane	22.66	57	4366	0.087	ng	80
97) Hexachloro-1,3-butadiene	23.11	225	862	0.071	ng	85

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.378min (-0.095) 0.08ng  
 response 5375

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	22.08
0.00	0.00	0.00
0.00	0.00	0.00

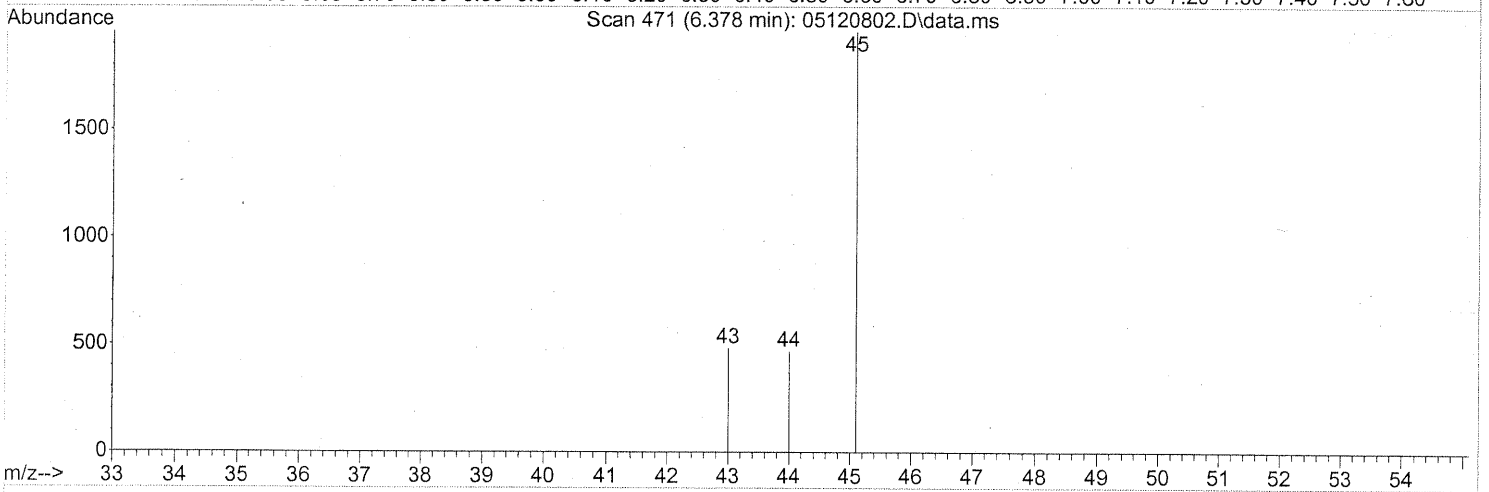
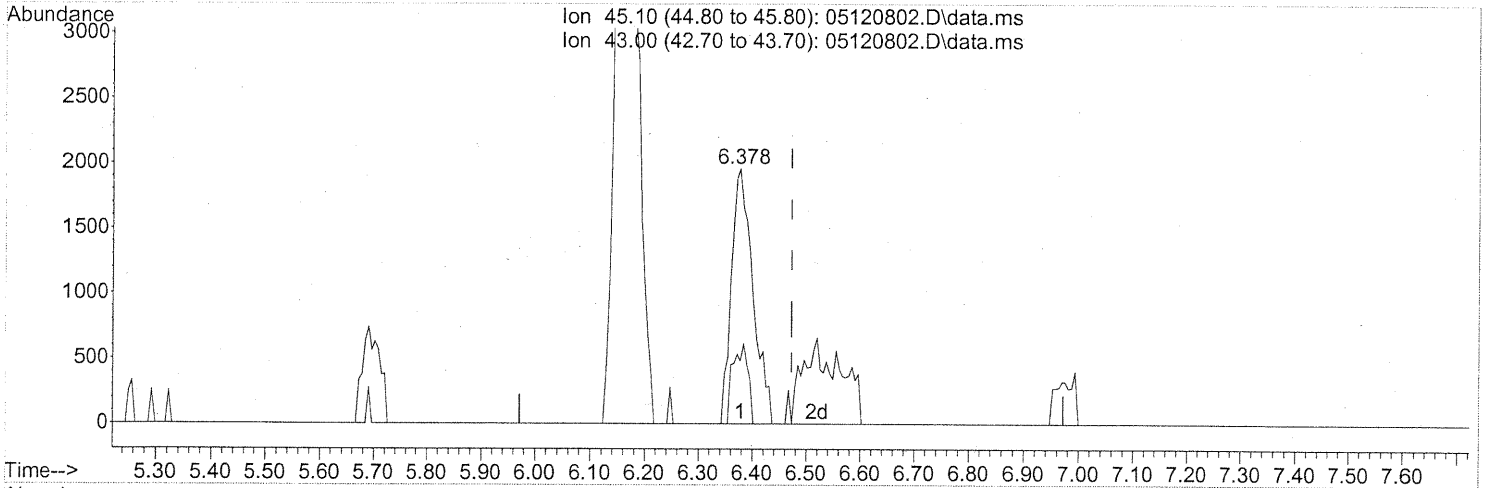
*split peaks*

1000

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.378min (-0.095) 0.14ng m  
 response 8630

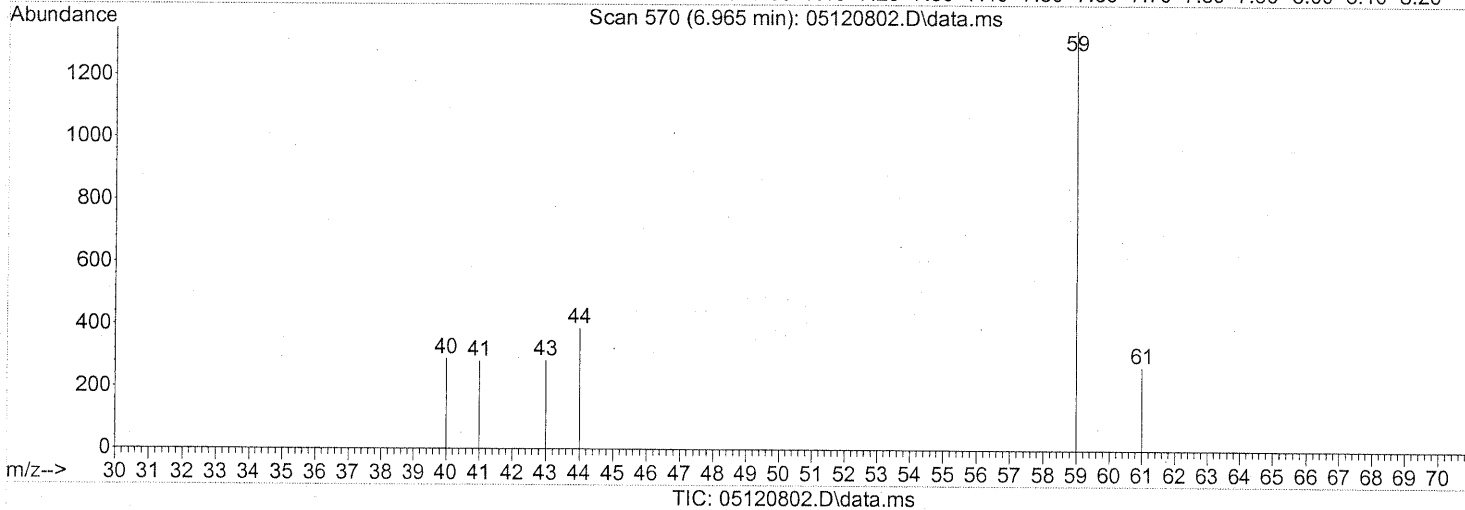
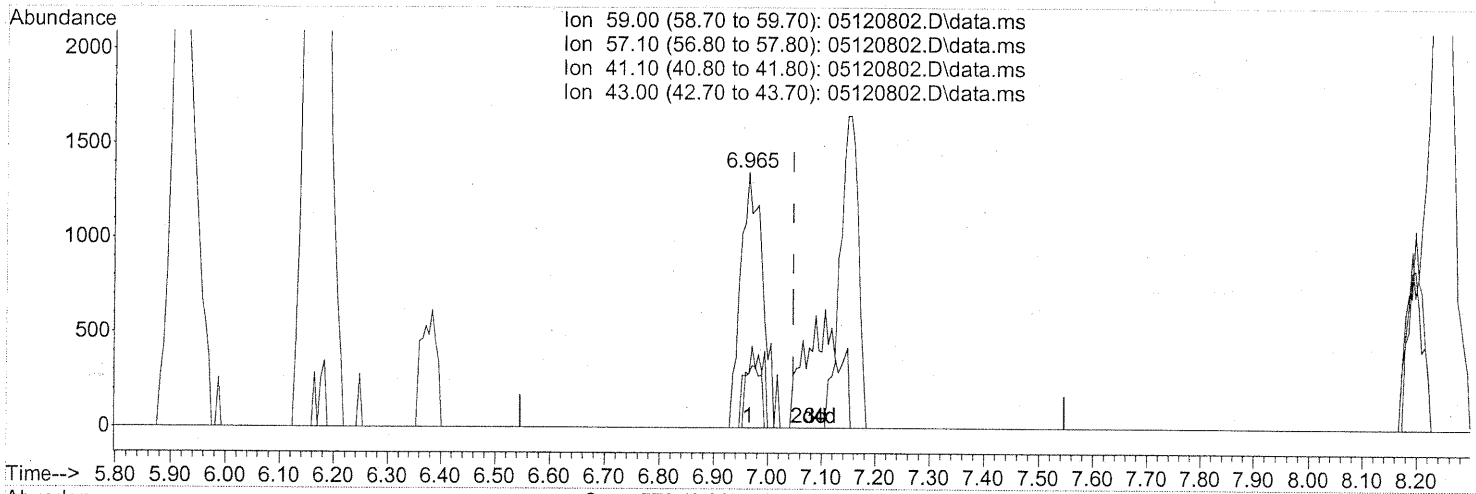
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	13.75
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*WA 5/13/08*  
*em 5/13/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120802.D  
Acq On : 12 May 2008 16:21  
Operator : WA  
Sample : 0.1ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020810  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 06 17:02:30 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

6.965min (-0.083) 0.07ng

response 3849

*split peaks*

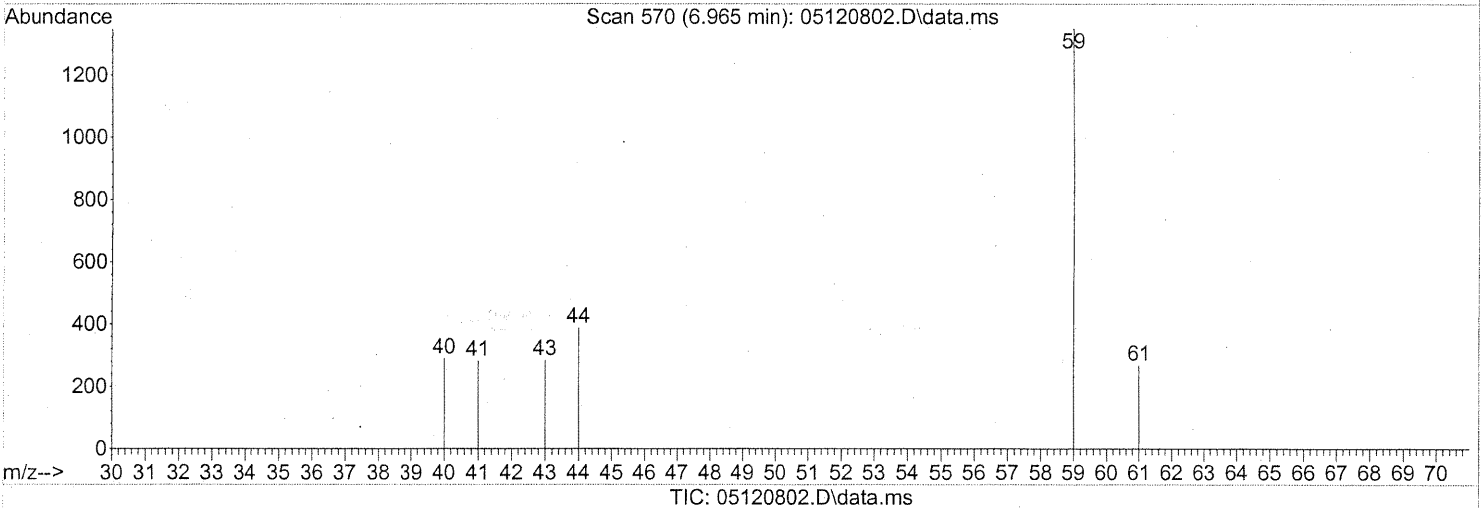
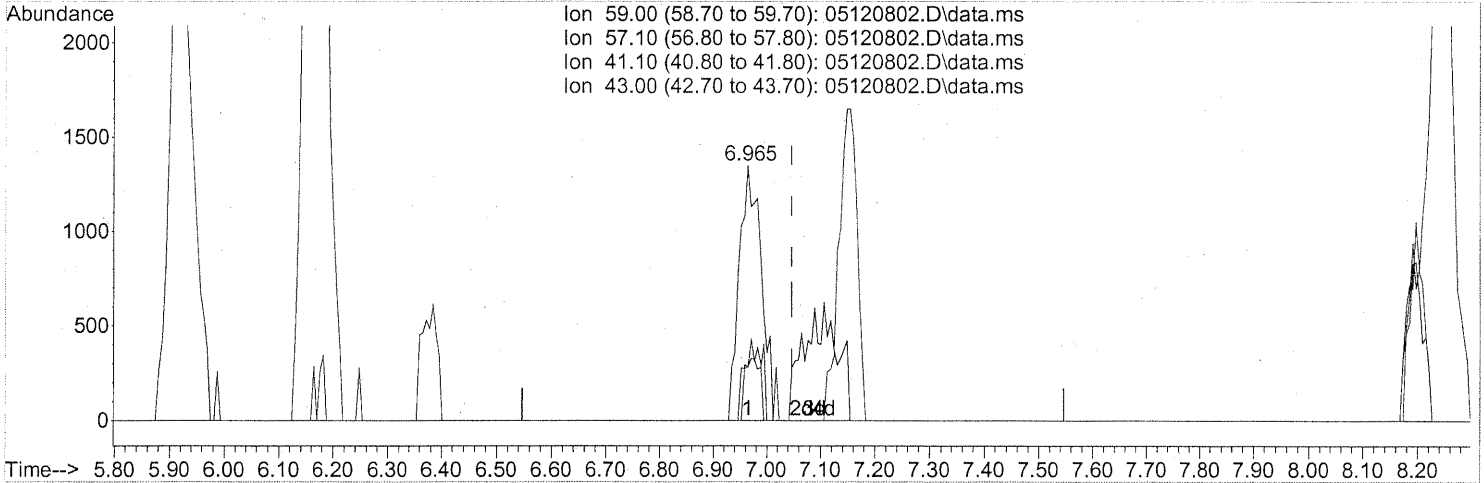
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	18.45
43.00	17.20	0.00



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120802.D  
Acq On : 12 May 2008 16:21  
Operator : WA  
Sample : 0.1ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020810  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 06 17:02:30 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
6.965min (-0.083) 0.12ng m  
response 6438

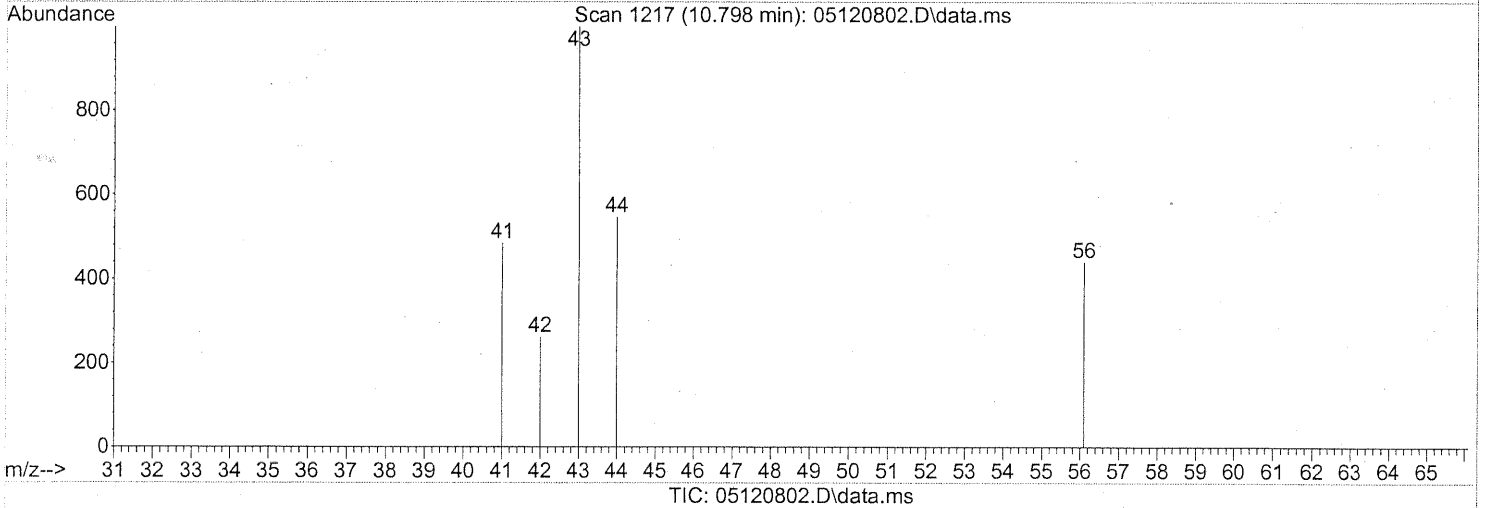
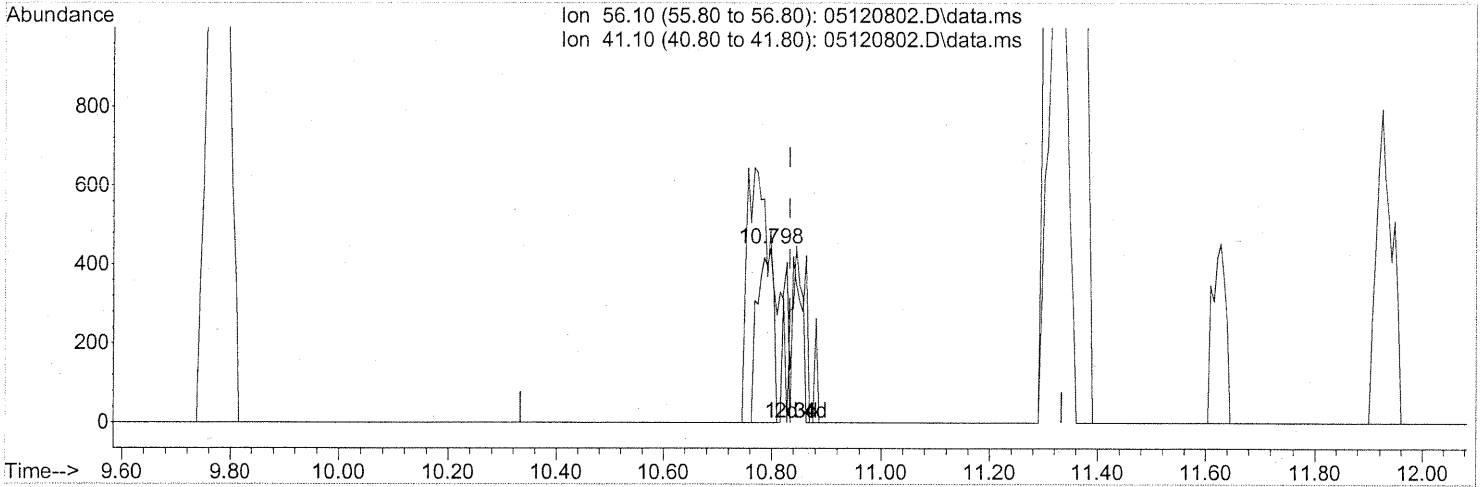
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	0.00
41.10	21.90	11.03
43.00	17.20	0.00

*int. whole peaks*  
*DA 5/13/08*  
*em 5/13/08*

1003

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(40) 1-Butanol (T)  
 10.798min (-0.035) 0.04ng

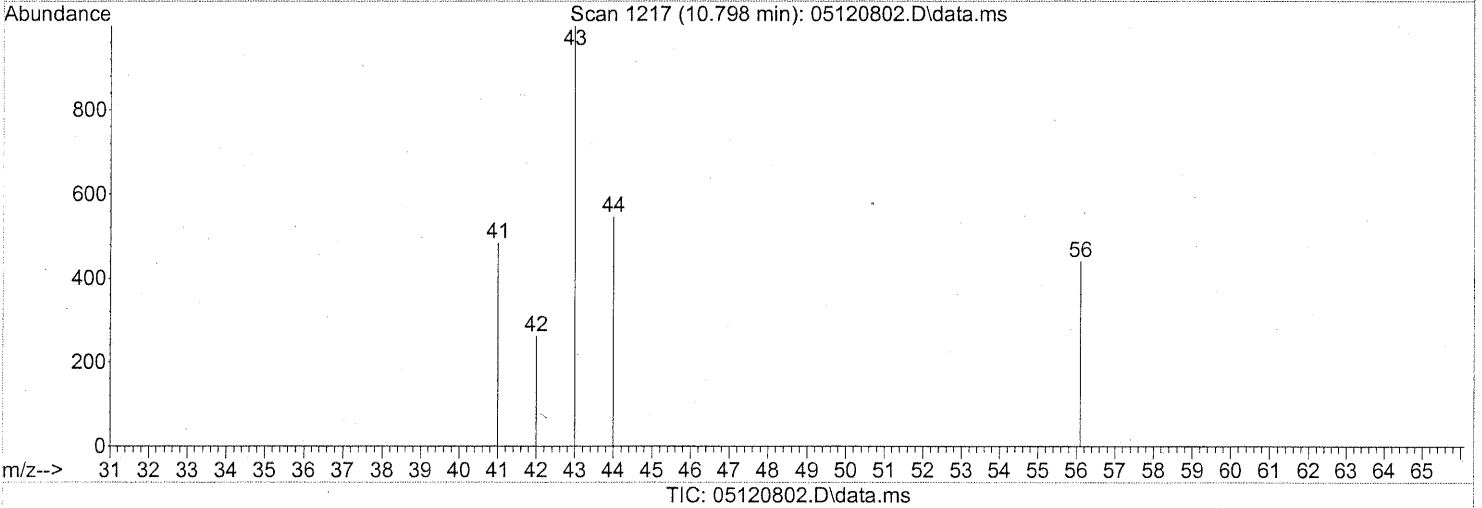
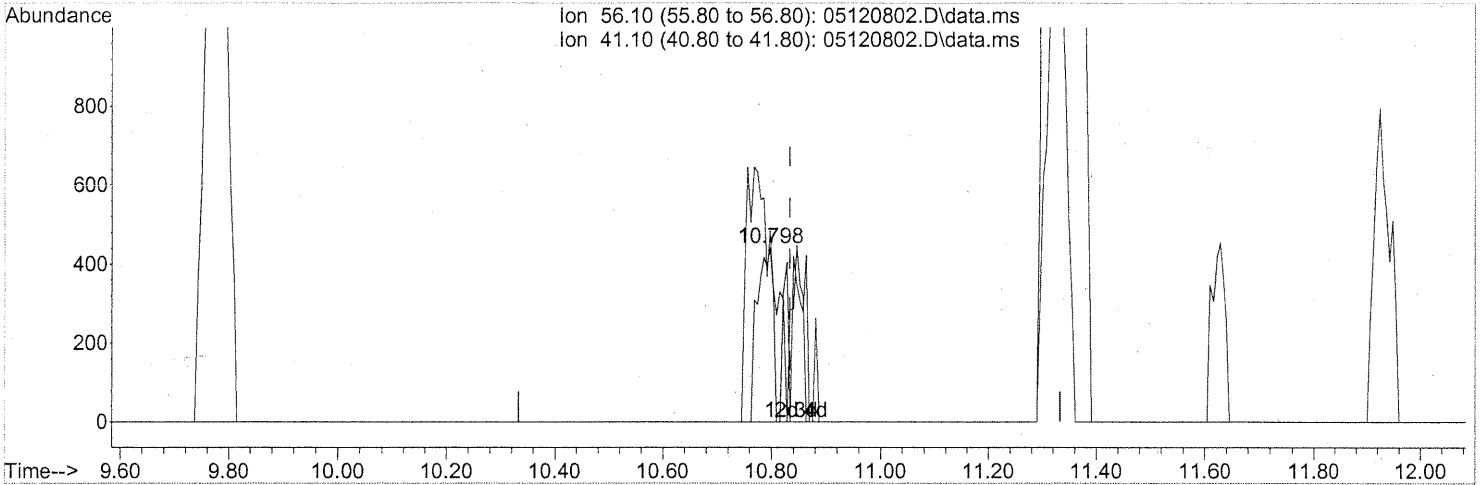
response 907

Ion	Exp%	Act%
56.10	100	100
41.10	111.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120802.D  
 Acq On : 12 May 2008 16:21  
 Operator : WA  
 Sample : 0.1ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020810  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 12 19:30:27 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(40) 1-Butanol (T)

10.798min (-0.035) 0.08ng m

response 1890

Ion	Exp%	Act%
56.10	100	100
41.10	111.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*IDA 5/13/08*

*em 5/13/08*



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	278931	25.000	ng	-0.07
37) 1,4-Difluorobenzene (IS2)	11.34	114	1198154	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.44	82	520799	25.000	ng	-0.02

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.04	65	504988	30.727	ng	-0.05
Spiked Amount	25.000		Recovery	=	122.92%	
57) Toluene-d8 (SS2)	14.22	98	1294564	25.403	ng	-0.02
Spiked Amount	25.000		Recovery	=	101.60%	
73) Bromofluorobenzene (SS3)	18.28	174	328222	17.275	ng	-0.01
Spiked Amount	25.000		Recovery	=	69.12%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	15487	0.577	ng	95
3) Dichlorodifluoromethane	4.54	85	18665	0.571	ng	97
4) Chloromethane	4.73	50	24502	0.605	ng	95
5) Freon 114	4.85	135	9179	0.501	ng	91
6) Vinyl Chloride	4.97	62	14844	0.565	ng	100
7) 1,3-Butadiene	5.12	54	15044	0.656	ng	96
8) Bromomethane	5.41	94	6721	0.578	ng	94
9) Chloroethane	5.58	64	7523	0.598	ng	88
10) Ethanol	5.68	45	8961m	0.477	ng	
11) Acetonitrile	5.92	41	27949	0.522	ng	95
12) Acrolein	6.03	56	7605	0.529	ng	94
13) Acetone	6.15	58	13699	0.734	ng	88
14) Trichlorofluoromethane	6.32	101	14865	0.523	ng	95
15) Isopropanol	6.36	45	36301m	0.586	ng	
16) Acrylonitrile	6.59	53	17349	0.513	ng	94
17) 1,1-Dichloroethene	6.93	96	7920	0.550	ng	# 80
18) tert-Butanol	6.95	59	28643m	0.541	ng	
19) Methylene Chloride	7.02	84	8452	0.541	ng	# 28
20) Allyl Chloride	7.15	41	17233	0.608	ng	78
21) Trichlorotrifluoroethane	7.28	151	6985	0.483	ng	90
22) Carbon Disulfide	7.39	76	30354	0.507	ng	99
23) trans-1,2-Dichloroethene	7.94	61	16381	0.584	ng	90
24) 1,1-Dichloroethane	8.15	63	19250	0.606	ng	94
25) Methyl tert-Butyl Ether	8.19	73	24982	0.590	ng	81
26) Vinyl Acetate	8.24	86	1790	0.745	ng	# 1
27) 2-Butanone	8.52	72	5519	0.578	ng	# 1
28) cis-1,2-Dichloroethene	9.00	61	15273	0.593	ng	87
29) Diisopropyl Ether	9.19	87	6492	0.522	ng	# 1
30) Ethyl Acetate	9.17	61	4463	0.684	ng	77
31) n-Hexane	9.23	57	23131	0.593	ng	91

1007

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.31	83	14954	0.709	ng	98
34) Tetrahydrofuran	9.77	72	5537	0.617	ng	# 44
35) Ethyl tert-Butyl Ether	9.78	87	9323	0.530	ng	# 64
36) 1,2-Dichloroethane	10.16	62	14247	0.609	ng	96
38) 1,1,1-Trichloroethane	10.47	97	13985	0.587	ng	91
39) Isopropyl Acetate	10.76	61	6788	0.574	ng	# 63
40) 1-Butanol	10.77	56	10168	0.460	ng	# 74
41) Benzene	11.00	78	33821	0.571	ng	100
42) Carbon Tetrachloride	11.17	117	8674	0.433	ng	100
43) Cyclohexane	11.33	84	13552	0.562	ng	# 1
44) tert-Amyl Methyl Ether	11.62	73	22576	0.549	ng	# 74
45) 1,2-Dichloropropane	11.93	63	10734	0.600	ng	99
46) Bromodichloromethane	12.13	83	10305	0.593	ng	89
47) Trichloroethene	12.19	130	9661	0.497	ng	95
48) 1,4-Dioxane	12.14	88	6494	0.570	ng	# 68
49) Isooctane	12.24	57	52990	0.545	ng	100
50) Methyl Methacrylate	12.33	100	2920	0.445	ng	95
51) n-Heptane	12.51	71	8935	0.606	ng	# 60
52) cis-1,3-Dichloropropene	13.16	75	12178	0.535	ng	99
53) 4-Methyl-2-pentanone	13.18	58	11201	0.544	ng	75
54) trans-1,3-Dichloropropene	13.76	75	12096	0.617	ng	100
55) 1,1,2-Trichloroethane	13.99	97	8465	0.557	ng	92
58) Toluene	14.34	91	35430	0.530	ng	98
59) 2-Hexanone	14.58	43	34452	0.567	ng	92
60) Dibromochloromethane	14.83	129	8952	0.475	ng	98
61) 1,2-Dibromoethane	15.14	107	8849	0.487	ng	98
62) Butyl Acetate	15.31	43	34988	0.560	ng	97
63) n-Octane	15.47	57	10494	0.521	ng	89
64) Tetrachloroethene	15.69	166	8348	0.431	ng	94
65) Chlorobenzene	16.49	112	23282	0.485	ng	97
66) Ethylbenzene	16.94	91	39170	0.518	ng	99
67) m- & p-Xylene	17.16	91	61802	1.254	ng	97
68) Bromoform	17.25	173	5347	0.487	ng	97
69) Styrene	17.58	104	22312	0.469	ng	98
70) o-Xylene	17.73	91	31234	0.589	ng	98
71) n-Nonane	17.96	43	29053	0.559	ng	89
72) 1,1,2,2-Tetrachloroethane	17.70	83	13980	0.643	ng	92
74) Cumene	18.45	105	38914	0.502	ng	98
75) alpha-Pinene	18.93	93	18234	0.490	ng	98
76) n-Propylbenzene	19.06	91	46442	0.505	ng	91
77) 3-Ethyltoluene	19.18	105	38216	0.456	ng	97
78) 4-Ethyltoluene	19.24	105	38663	0.492	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	32433	0.477	ng	95

1008

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

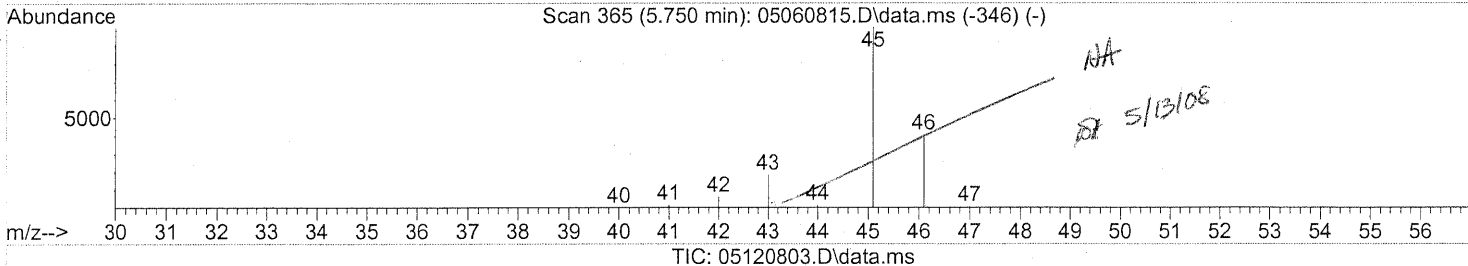
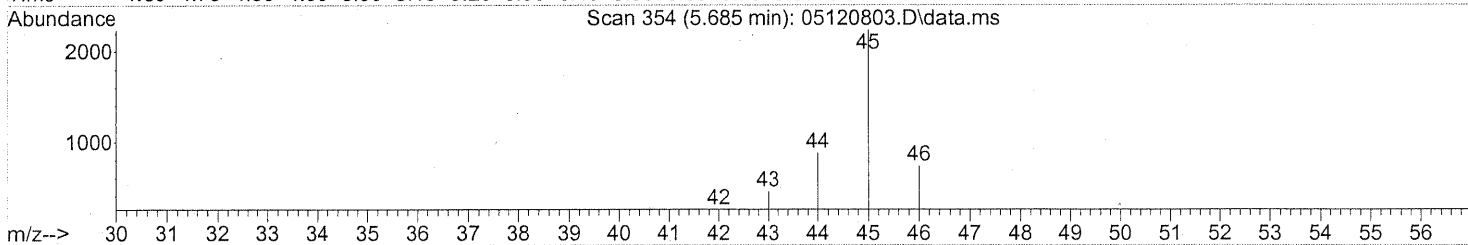
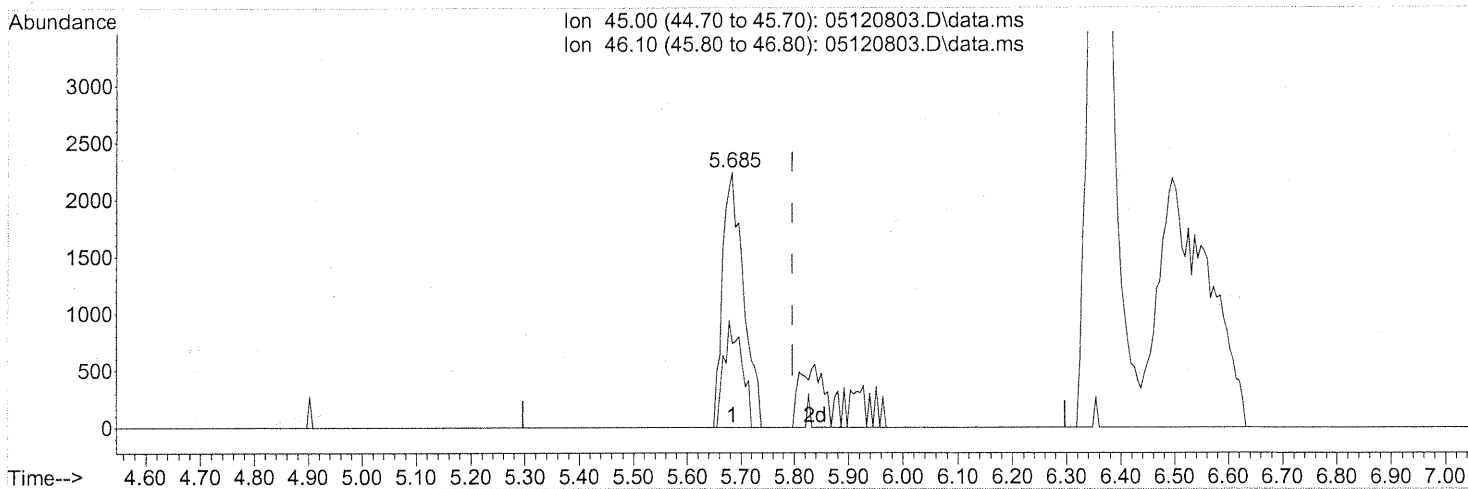
Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.51	118	15677	0.407	ng	91
81) 2-Ethyltoluene	19.56	105	37326	0.446	ng	98
82) 1,2,4-Trimethylbenzene	19.83	105	33251	0.486	ng	98
83) n-Decane	19.92	57	26164	0.520	ng	80
84) Benzyl Chloride	19.99	91	26826	0.503	ng	96
85) 1,3-Dichlorobenzene	20.02	146	19475	0.441	ng	98
86) 1,4-Dichlorobenzene	20.10	146	19169	0.452	ng	99
87) sec-Butylbenzene	20.16	105	43131	0.476	ng	97
88) p-Isopropyltoluene	20.34	119	39136	0.498	ng	100
89) 1,2,3-Trimethylbenzene	20.34	105	33385	0.498	ng	96
90) 1,2-Dichlorobenzene	20.52	146	18242	0.449	ng	98
91) d-Limonene	20.51	68	11499	0.522	ng	98
92) 1,2-Dibromo-3-Chloropr...	21.04	157	5206	0.405	ng	# 75
93) n-Undecane	21.43	57	26141	0.498	ng	80
94) 1,2,4-Trichlorobenzene	22.55	184	2944	0.398	ng	# 66
95) Naphthalene	22.69	128	45233	0.431	ng	99
96) n-Dodecane	22.66	57	26190	0.532	ng	79
97) Hexachloro-1,3-butadiene	23.11	225	5085	0.430	ng	90

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

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:43:12 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.685min (-0.113) 0.32ng

response 6084

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	35.16
0.00	0.00	0.00
0.00	0.00	0.00

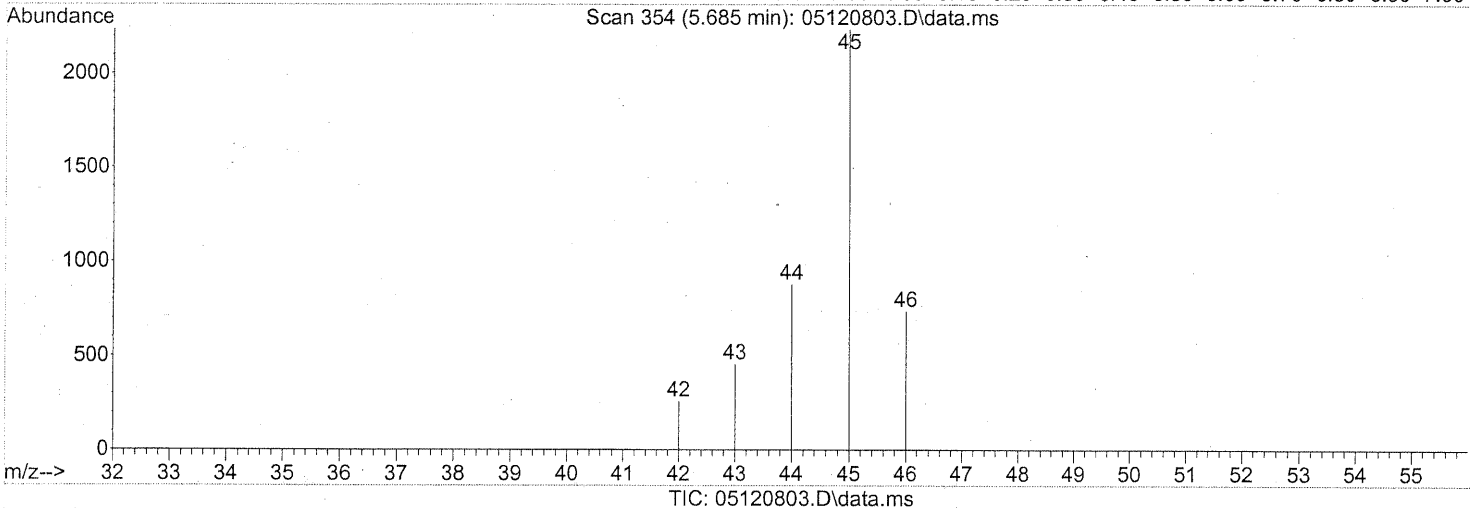
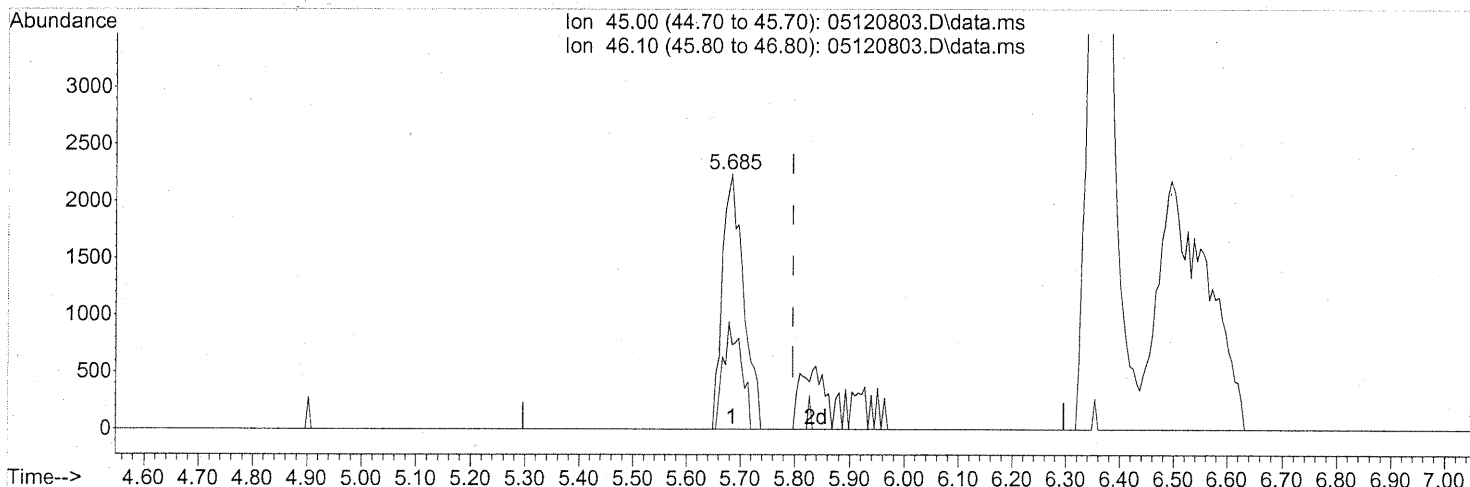
*split peaks*



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.685min (-0.113) 0.48ng m  
 response 8961

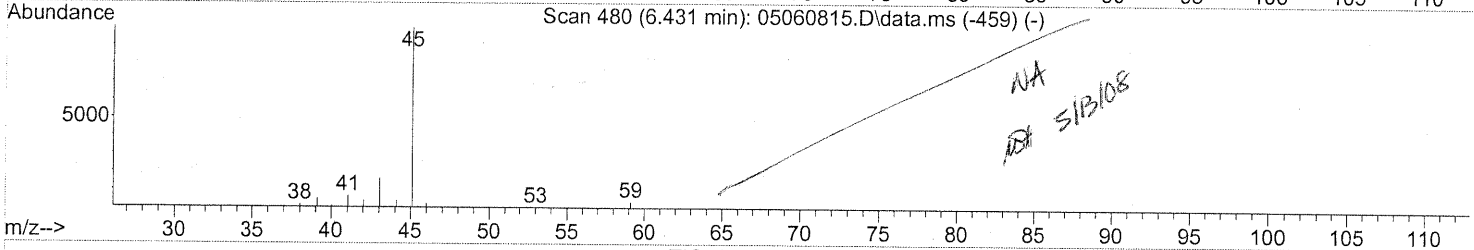
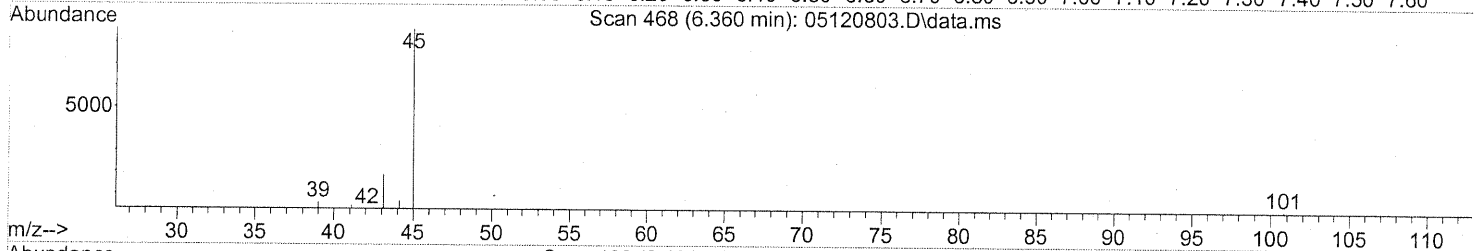
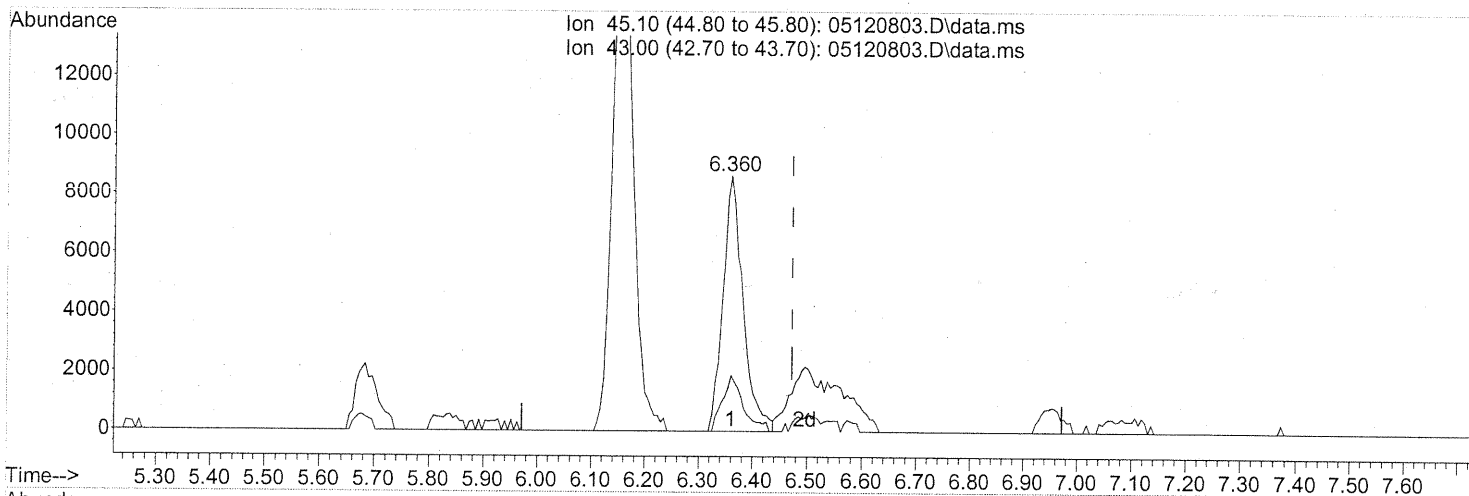
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	23.87
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*WA 5/13/08*  
*Em 5/13/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120803.D  
Acq On : 12 May 2008 16:59  
Operator : WA  
Sample : 0.5ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020808  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:43:12 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue May 06 17:02:30 2008  
Response via : Initial Calibration



TIC: 05120803.D\data.ms

(15) Isopropanol (T)  
6.360min (-0.113) 0.36ng  
response 22321

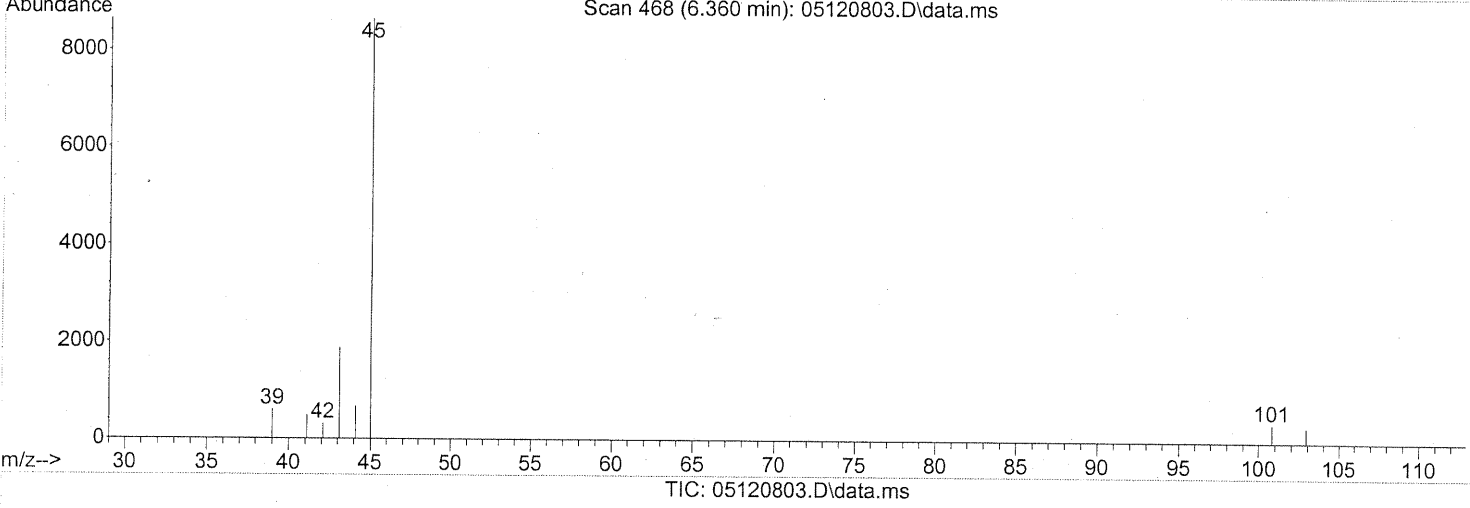
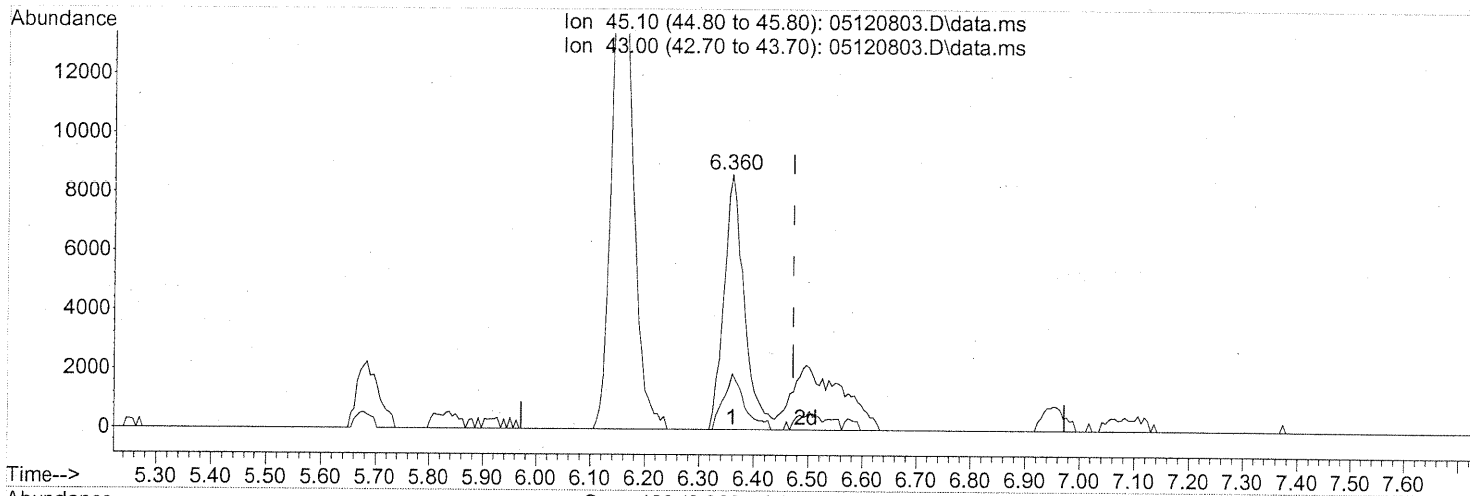
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	22.63
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.360min (-0.113) 0.59ng m  
 response 36301

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	13.91
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*id 5/13/08*

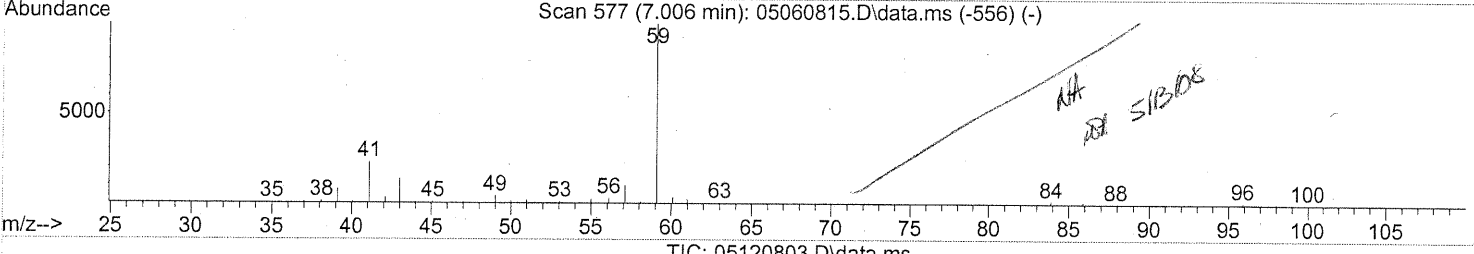
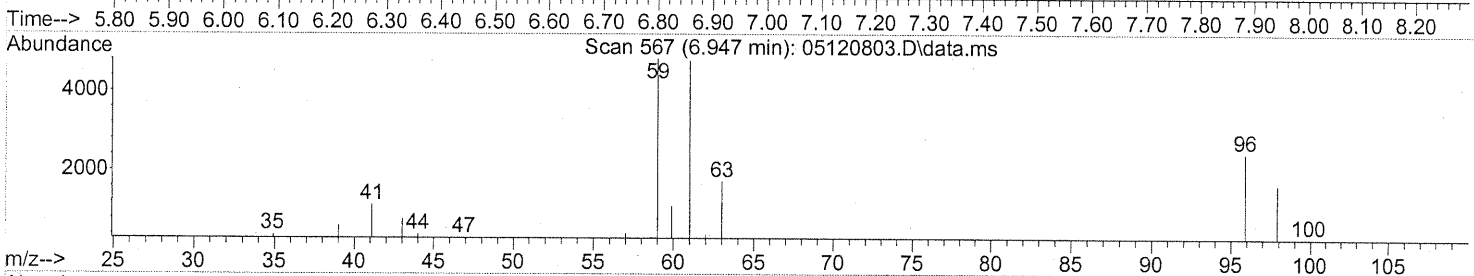
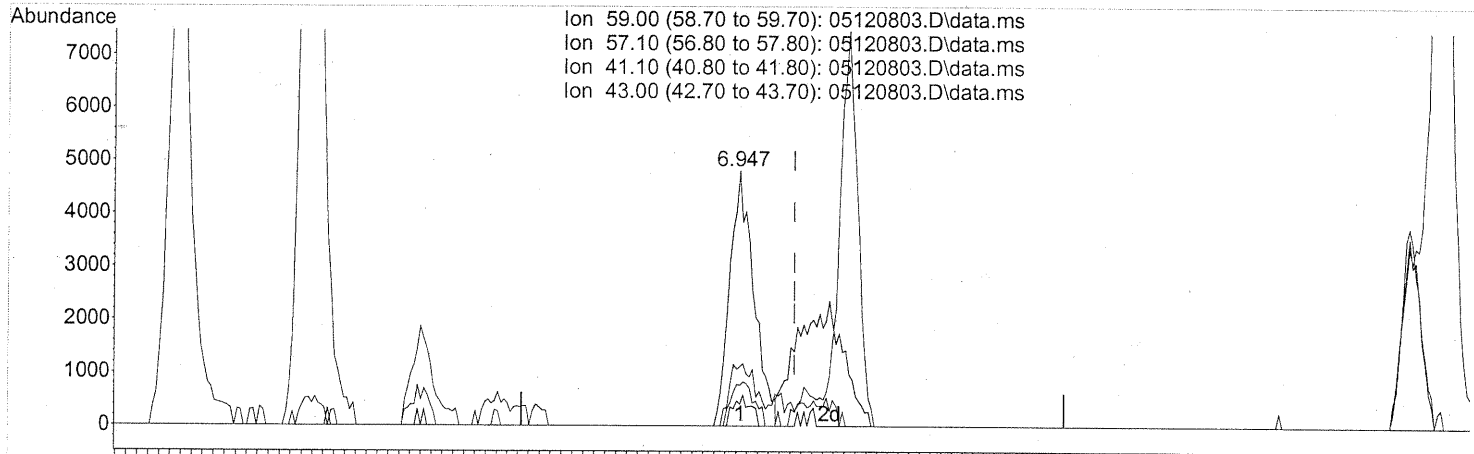
*com 5/13/08*

1013

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:43:12 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.947min (-0.101) 0.28ng

response 14746

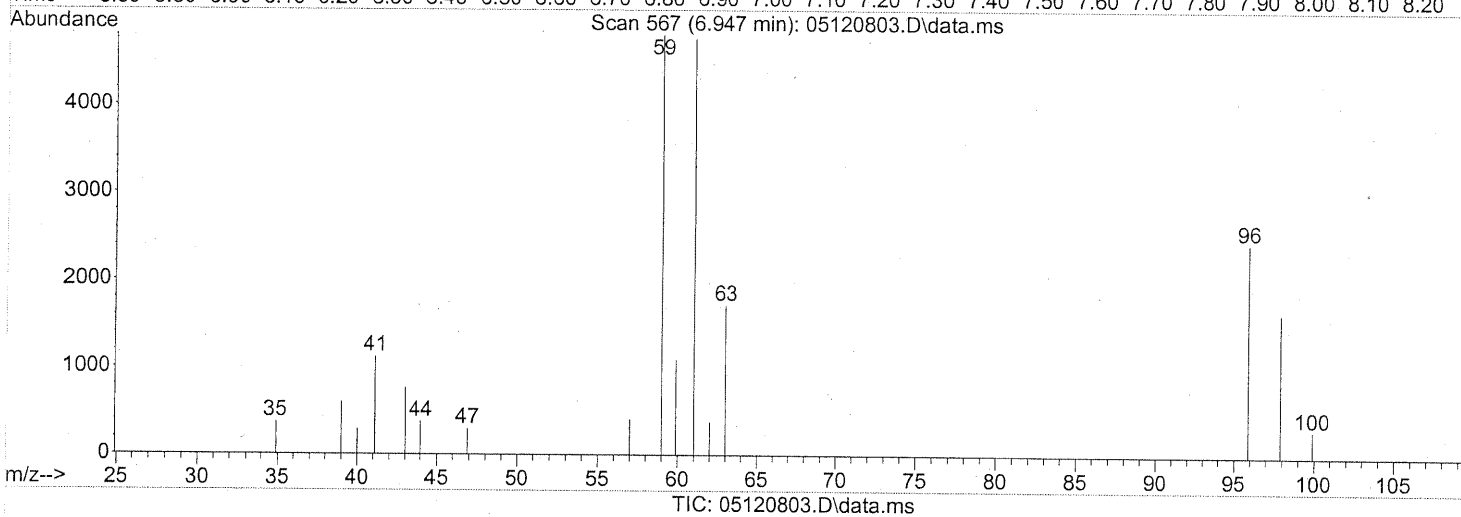
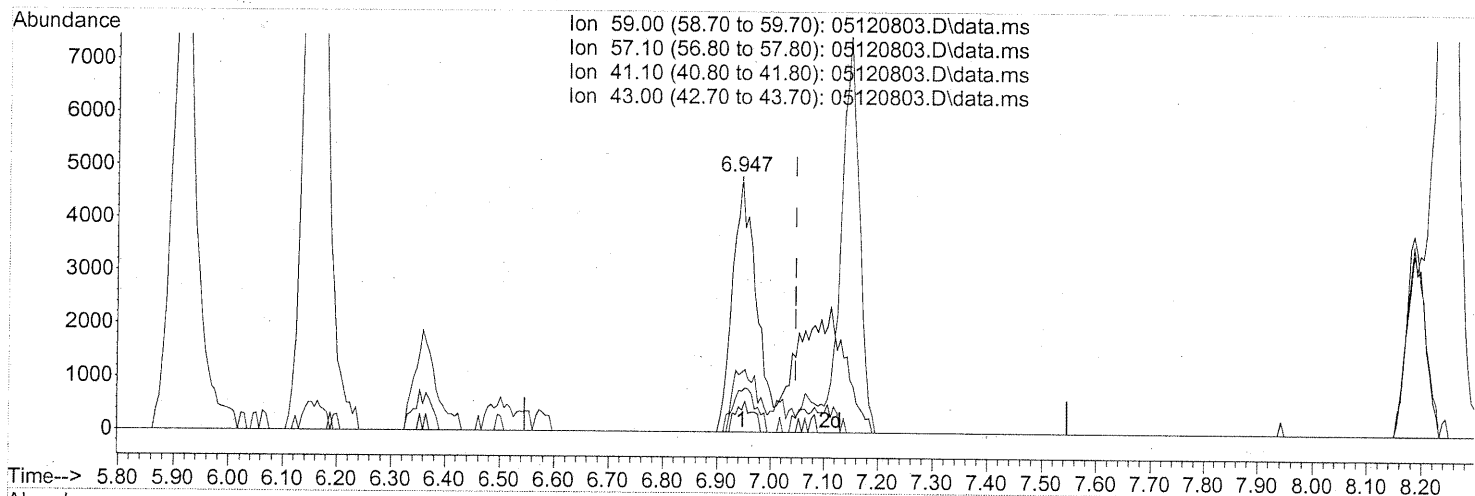
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	8.61
41.10	21.90	28.23
43.00	17.20	16.47

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120803.D  
 Acq On : 12 May 2008 16:59  
 Operator : WA  
 Sample : 0.5ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:45:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 6.947min (-0.101) 0.54ng m  
 response 28643

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	4.43
41.10	21.90	14.53
43.00	17.20	8.48

*int. whole peaks*  
*WA 5/13/08*  
*em 5/13/08*

1015



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:50:45 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.19	130	272724	25.000	ng	-0.06
37) 1,4-Difluorobenzene (IS2)	11.34	114	1191702	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	520439	25.000	ng	-0.01

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4 (...)	10.04	65	499695	31.097	ng	-0.05
Spiked Amount	25.000		Recovery	=	124.40%	
57) Toluene-d8 (SS2)	14.22	98	1277020	25.076	ng	-0.02
Spiked Amount	25.000		Recovery	=	100.32%	
73) Bromofluorobenzene (SS3)	18.28	174	322796	17.001	ng	-0.01
Spiked Amount	25.000		Recovery	=	68.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	28120	1.071	ng	98
3) Dichlorodifluoromethane	4.54	85	34763	1.088	ng	97
4) Chloromethane	4.73	50	44403	1.121	ng	97
5) Freon 114	4.85	135	16923	0.945	ng	97
6) Vinyl Chloride	4.97	62	29743	1.157	ng	94
7) 1,3-Butadiene	5.12	54	26800	1.196	ng	98
8) Bromomethane	5.41	94	12517	1.100	ng	96
9) Chloroethane	5.58	64	14079	1.144	ng	96
10) Ethanol	5.69	45	19135m	1.041	ng	
11) Acetonitrile	5.92	41	50836	0.971	ng	91
12) Acrolein	6.03	56	13802	0.982	ng	100
13) Acetone	6.15	58	24119	1.321	ng	88
14) Trichlorofluoromethane	6.32	101	28712	1.033	ng	98
15) Isopropanol	6.37	45	69188m	1.142	ng	
16) Acrylonitrile	6.59	53	33455	1.011	ng	94
17) 1,1-Dichloroethene	6.93	96	14880	1.057	ng	# 75
18) tert-Butanol	6.95	59	54795m	1.058	ng	
19) Methylene Chloride	7.03	84	15465	1.013	ng	# 30
20) Allyl Chloride	7.15	41	30782	1.111	ng	78
21) Trichlorotrifluoroethane	7.29	151	12770	0.904	ng	91
22) Carbon Disulfide	7.39	76	55729	0.952	ng	100
23) trans-1,2-Dichloroethene	7.94	61	31675	1.155	ng	86
24) 1,1-Dichloroethane	8.16	63	36430	1.172	ng	93
25) Methyl tert-Butyl Ether	8.19	73	48353	1.168	ng	84
26) Vinyl Acetate	8.24	86	3482	1.483	ng	# 1
27) 2-Butanone	8.52	72	11165	1.196	ng	# 7
28) cis-1,2-Dichloroethene	9.00	61	29174	1.158	ng	86
29) Diisopropyl Ether	9.18	87	12344	1.016	ng	# 1
30) Ethyl Acetate	9.17	61	8698	1.364	ng	89
31) n-Hexane	9.23	57	42725	1.120	ng	91

1017

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:50:45 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.32	83	27070	1.312	ng	96
34) Tetrahydrofuran	9.76	72	10564	1.204	ng #	42
35) Ethyl tert-Butyl Ether	9.77	87	17728	1.031	ng #	62
36) 1,2-Dichloroethane	10.17	62	28016	1.225	ng	95
38) 1,1,1-Trichloroethane	10.47	97	25247	1.065	ng	88
39) Isopropyl Acetate	10.77	61	12281	1.045	ng #	49
40) 1-Butanol	10.77	56	19934	0.907	ng	83
41) Benzene	11.00	78	63754	1.083	ng	100
42) Carbon Tetrachloride	11.17	117	17914	0.898	ng	97
43) Cyclohexane	11.33	84	25502	1.064	ng #	1
44) tert-Amyl Methyl Ether	11.62	73	42350	1.036	ng #	74
45) 1,2-Dichloropropane	11.94	63	20068	1.128	ng	97
46) Bromodichloromethane	12.13	83	19852	1.149	ng	95
47) Trichloroethene	12.20	130	17859	0.923	ng	99
48) 1,4-Dioxane	12.14	88	12418	1.095	ng #	59
49) Isooctane	12.24	57	100038	1.035	ng	100
50) Methyl Methacrylate	12.34	100	5687	0.871	ng	100
51) n-Heptane	12.51	71	16432	1.121	ng #	56
52) cis-1,3-Dichloropropene	13.16	75	23271	1.027	ng	100
53) 4-Methyl-2-pentanone	13.17	58	21906	1.069	ng	80
54) trans-1,3-Dichloropropene	13.76	75	24234	1.243	ng	97
55) 1,1,2-Trichloroethane	13.99	97	15541	1.027	ng	96
58) Toluene	14.34	91	66921	1.002	ng	99
59) 2-Hexanone	14.59	43	64856	1.067	ng	93
60) Dibromochloromethane	14.83	129	17239	0.916	ng	95
61) 1,2-Dibromoethane	15.14	107	17710	0.976	ng	100
62) Butyl Acetate	15.31	43	68021	1.090	ng	96
63) n-Octane	15.47	57	20608	1.025	ng	88
64) Tetrachloroethene	15.69	166	16384	0.846	ng	99
65) Chlorobenzene	16.49	112	44911	0.936	ng	99
66) Ethylbenzene	16.94	91	73993	0.980	ng	97
67) m- & p-Xylene	17.16	91	117409	2.383	ng	98
68) Bromoform	17.25	173	11169	1.019	ng	97
69) Styrene	17.58	104	43630	0.917	ng	97
70) o-Xylene	17.73	91	59950	1.131	ng	99
71) n-Nonane	17.96	43	55379	1.066	ng	89
72) 1,1,2,2-Tetrachloroethane	17.70	83	27113	1.247	ng	96
74) Cumene	18.45	105	72871	0.940	ng	100
75) alpha-Pinene	18.93	93	34829	0.936	ng	100
76) n-Propylbenzene	19.06	91	88359	0.962	ng	93
77) 3-Ethyltoluene	19.18	105	73681	0.880	ng	98
78) 4-Ethyltoluene	19.24	105	73442	0.935	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	63644	0.937	ng	96

1018



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:50:45 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

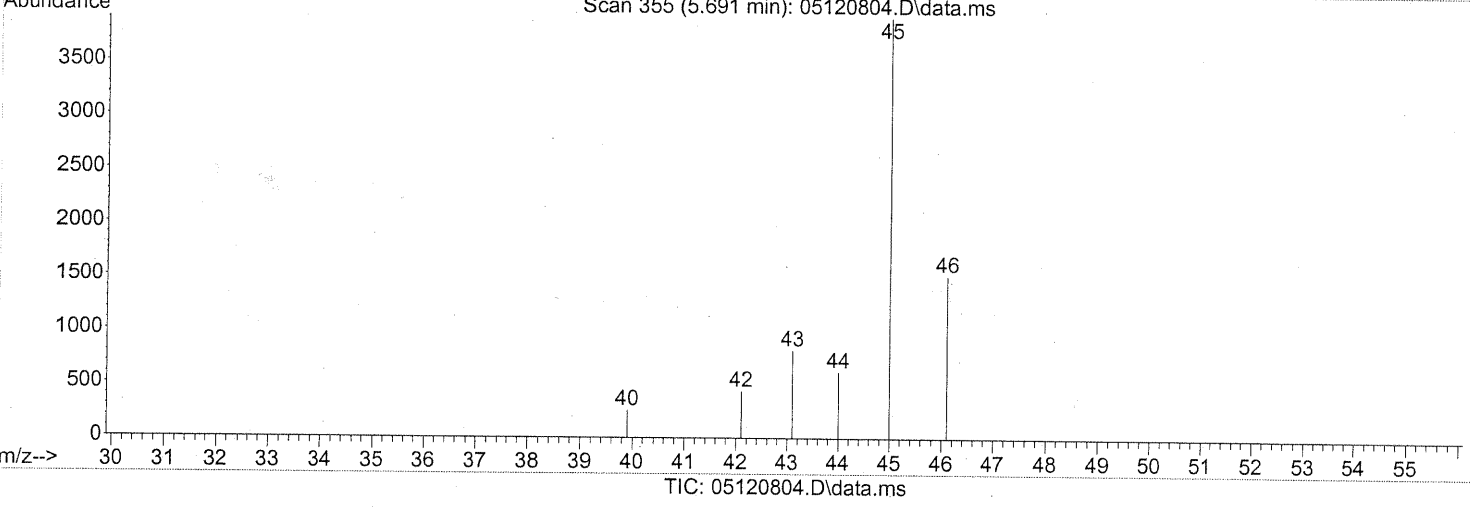
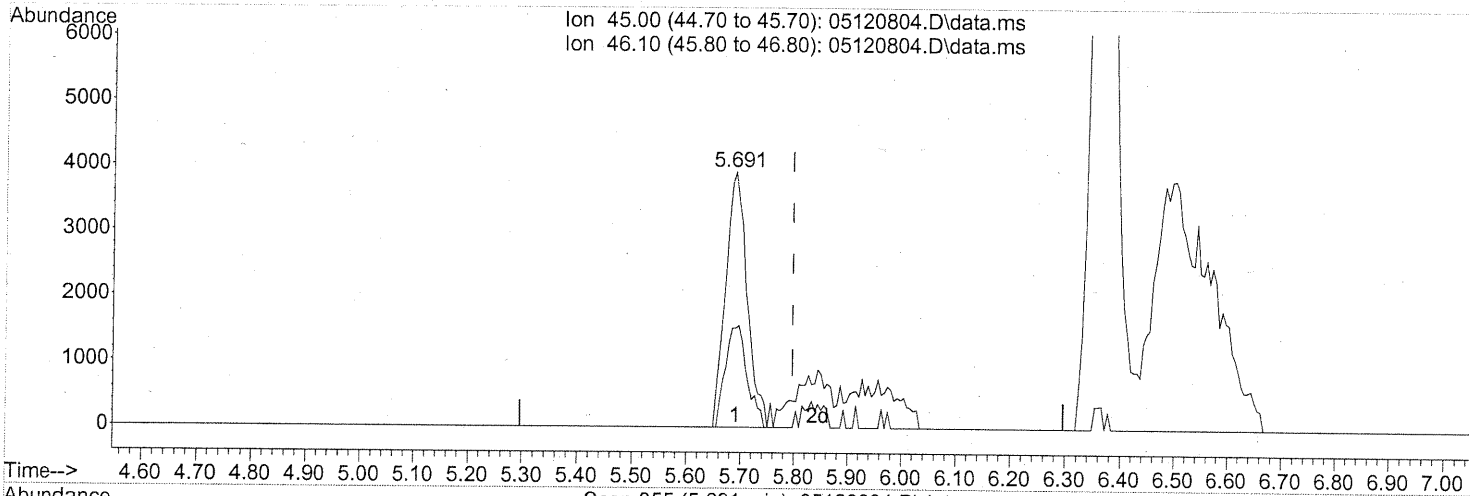
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	30184	0.785	ng	95
81) 2-Ethyltoluene	19.56	105	70501	0.843	ng	95
82) 1,2,4-Trimethylbenzene	19.82	105	65548	0.958	ng	97
83) n-Decane	19.92	57	48977	0.975	ng	81
84) Benzyl Chloride	19.99	91	53077	0.995	ng	96
85) 1,3-Dichlorobenzene	20.02	146	36401	0.824	ng	99
86) 1,4-Dichlorobenzene	20.10	146	37339	0.881	ng	100
87) sec-Butylbenzene	20.16	105	81793	0.903	ng	98
88) p-Isopropyltoluene	20.34	119	76635	0.977	ng	98
89) 1,2,3-Trimethylbenzene	20.34	105	63056	0.941	ng	92
90) 1,2-Dichlorobenzene	20.52	146	35397	0.871	ng	98
91) d-Limonene	20.51	68	22147	1.007	ng	95
92) 1,2-Dibromo-3-Chloropr...	21.03	157	10663	0.829	ng	# 81
93) n-Undecane	21.44	57	51445	0.980	ng	80
94) 1,2,4-Trichlorobenzene	22.55	184	5830	0.788	ng	# 74
95) Naphthalene	22.69	128	86011	0.820	ng	100
96) n-Dodecane	22.66	57	51525	1.048	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	9231	0.782	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.691min (-0.107) 0.59ng

response 10757

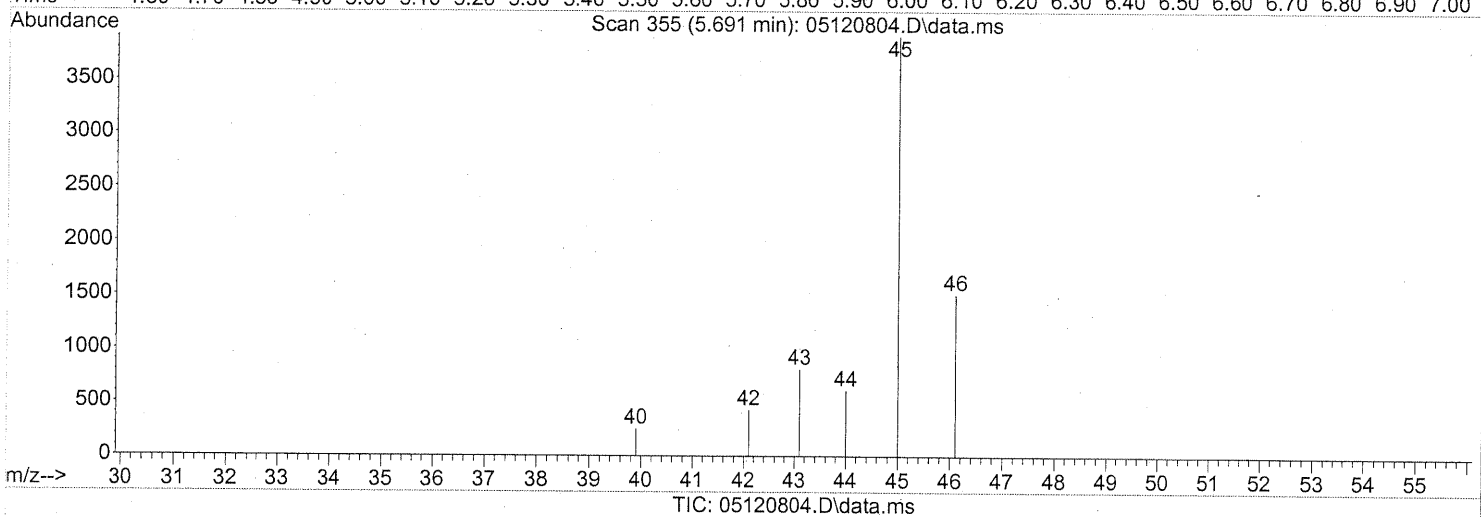
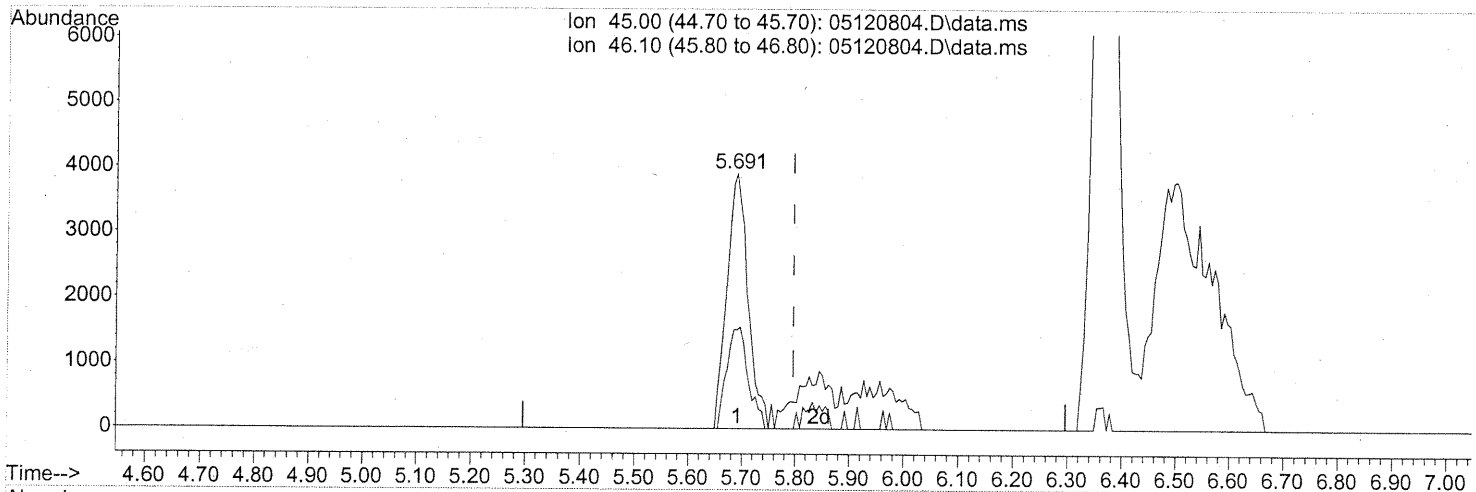
*split plates*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.47
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.691min (-0.107) 1.04ng m  
 response 19135

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	22.75
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*10/1 5/13/08*

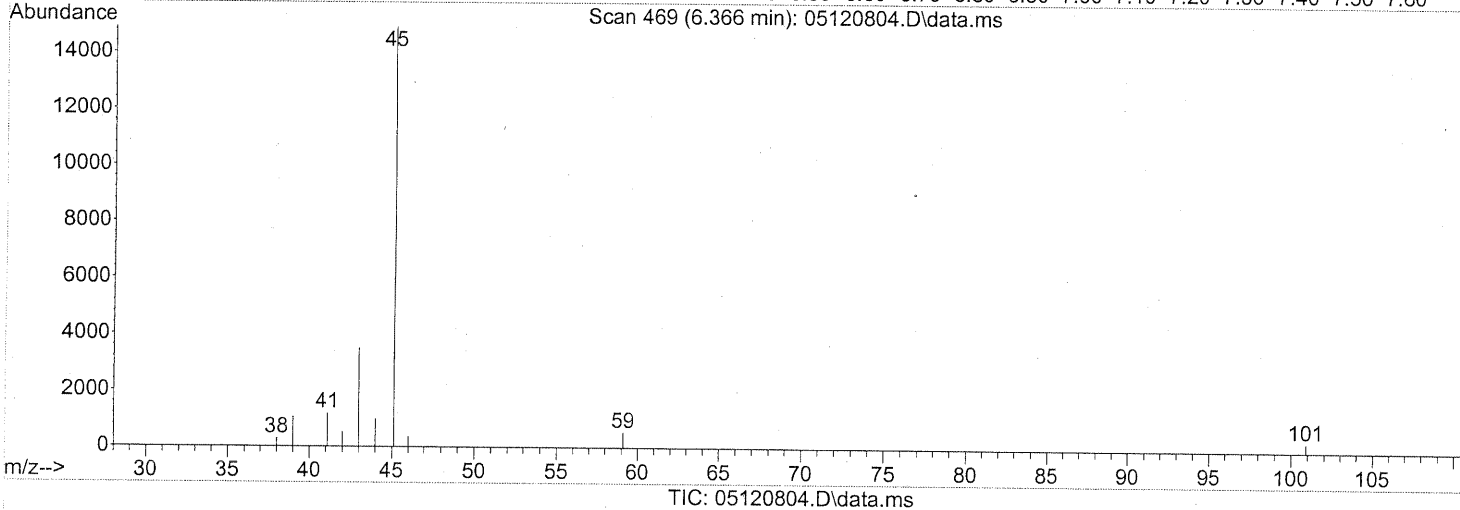
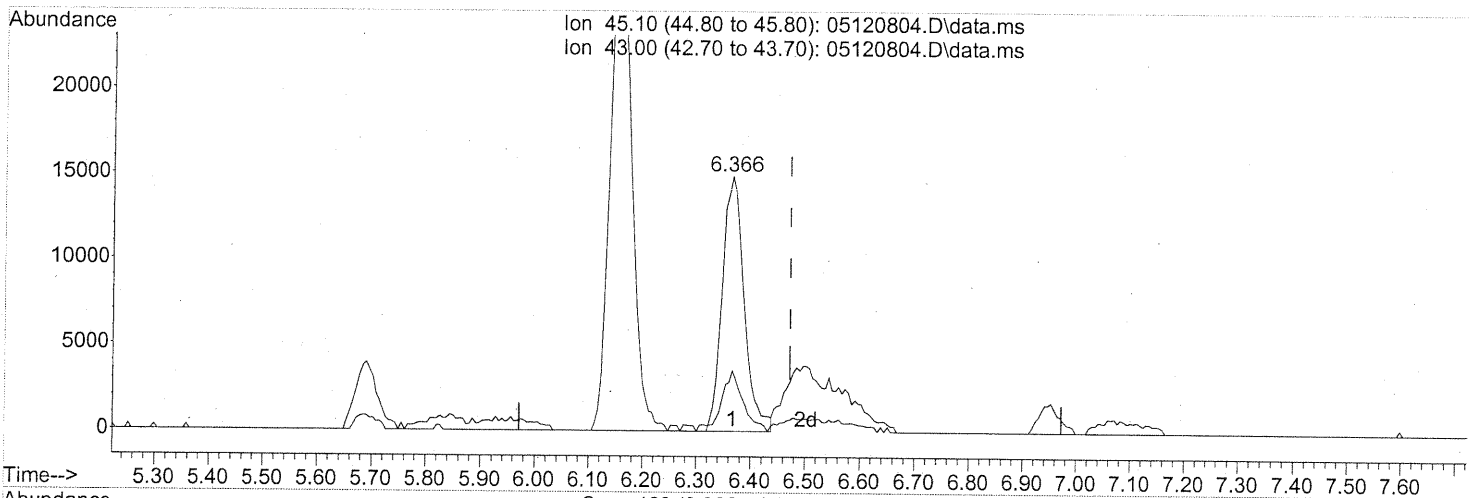
*Em 5/13/08*

1021

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.366min (-0.107) 0.68ng  
 response 41339

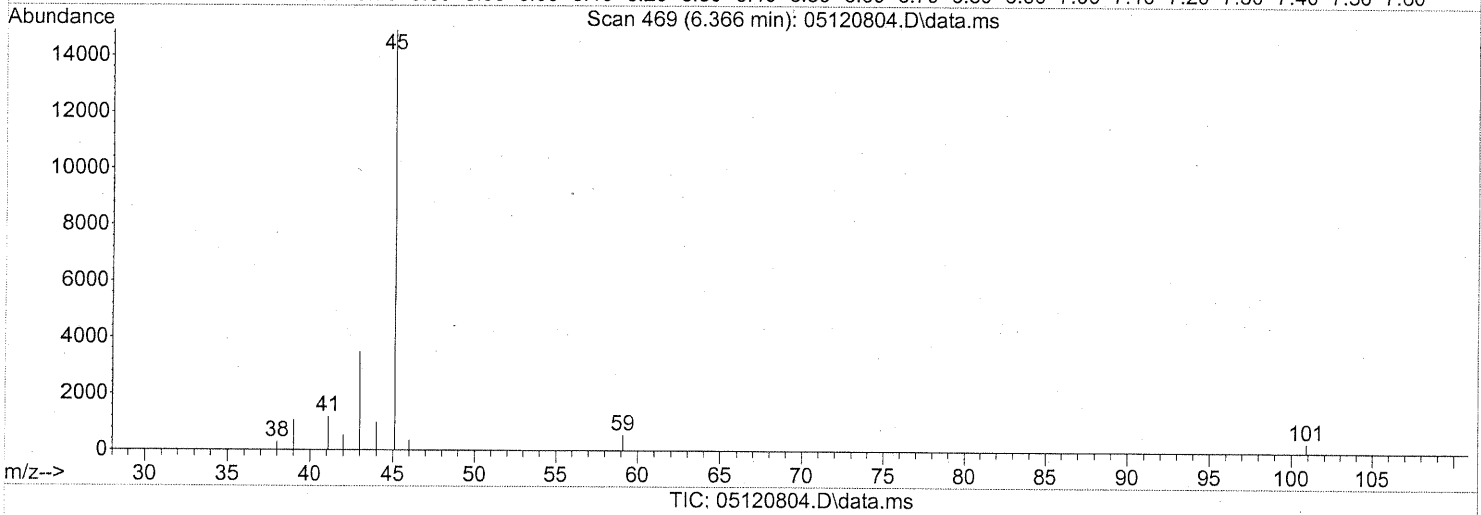
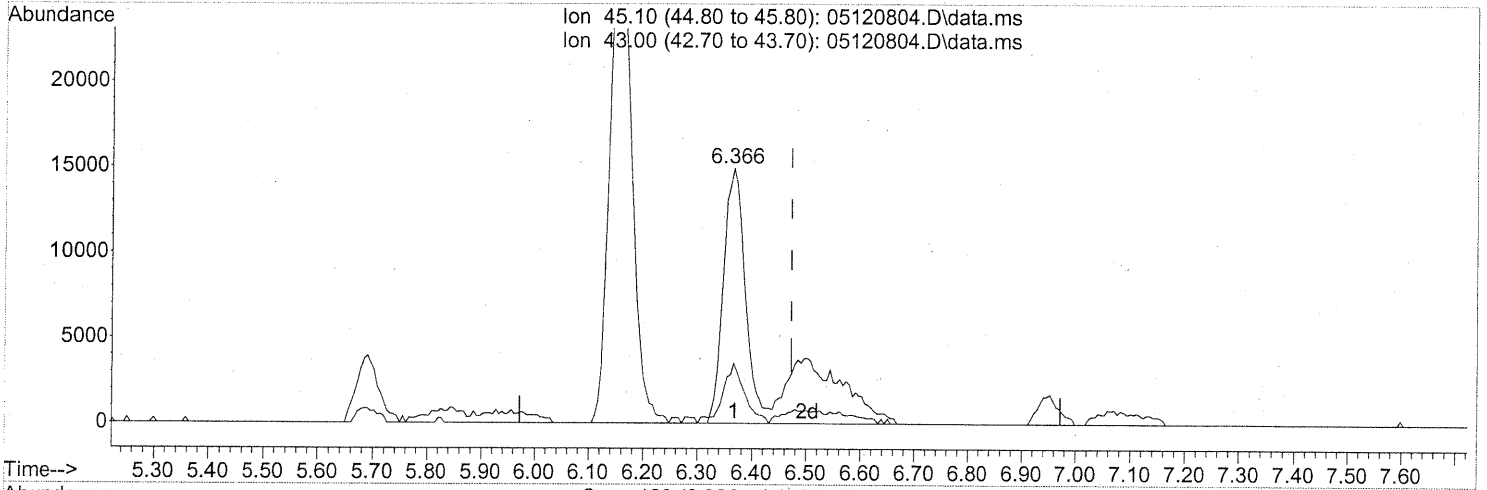
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	22.29
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.366min (-0.107) 1.14ng m  
 response 69188

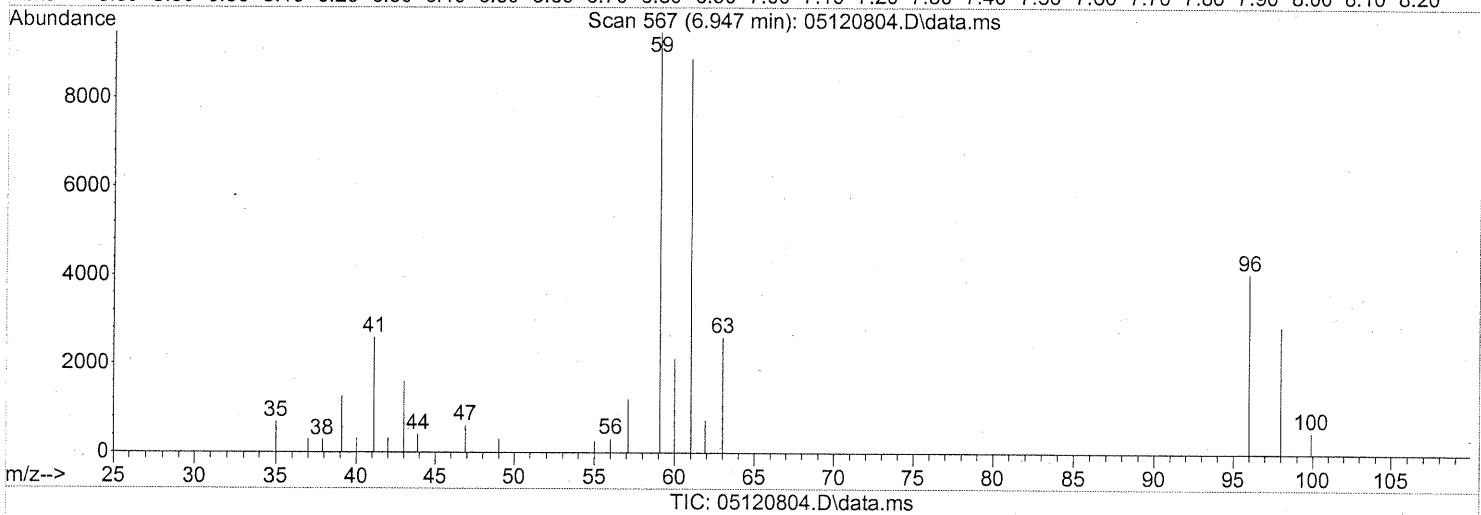
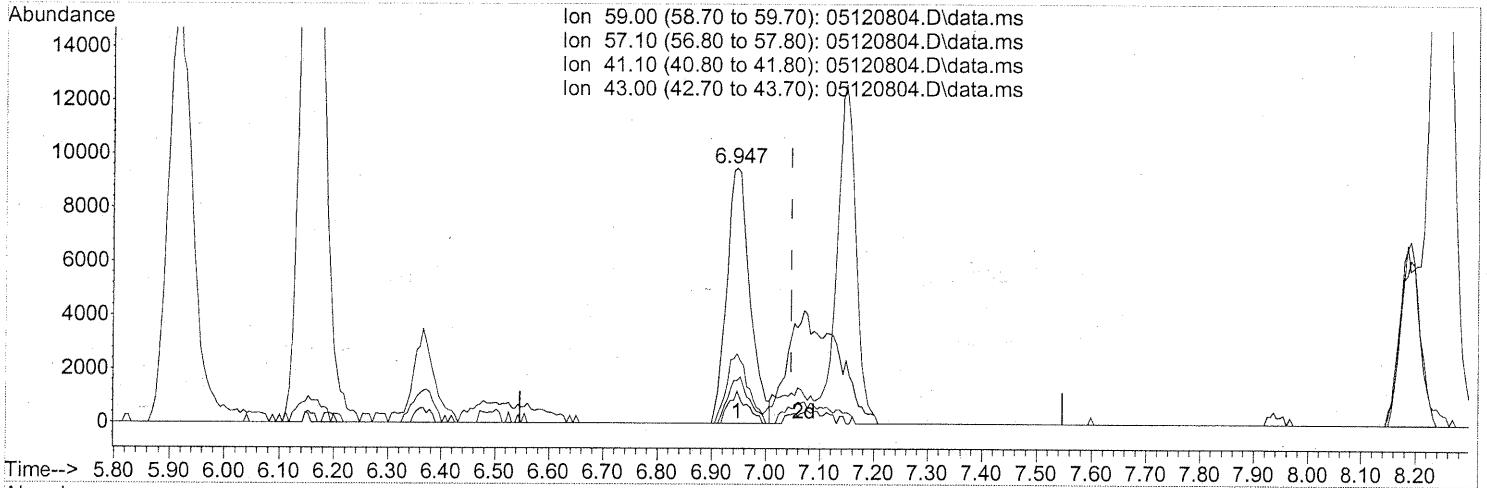
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	13.32
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*DA 5/13/08*  
*Em 5/13/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



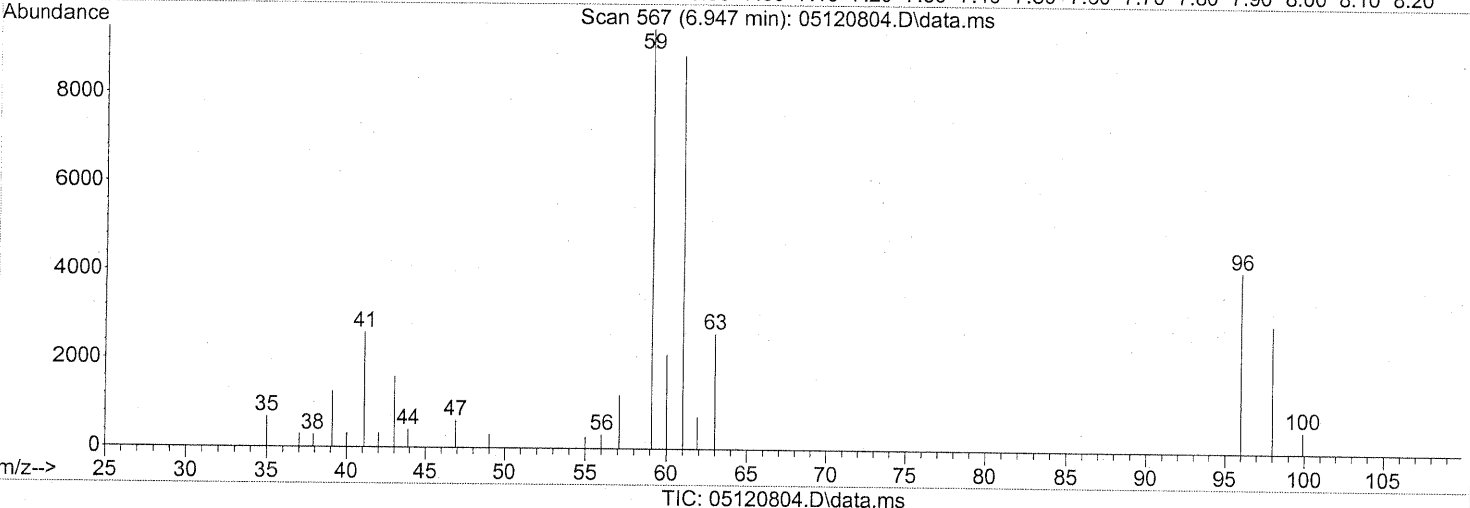
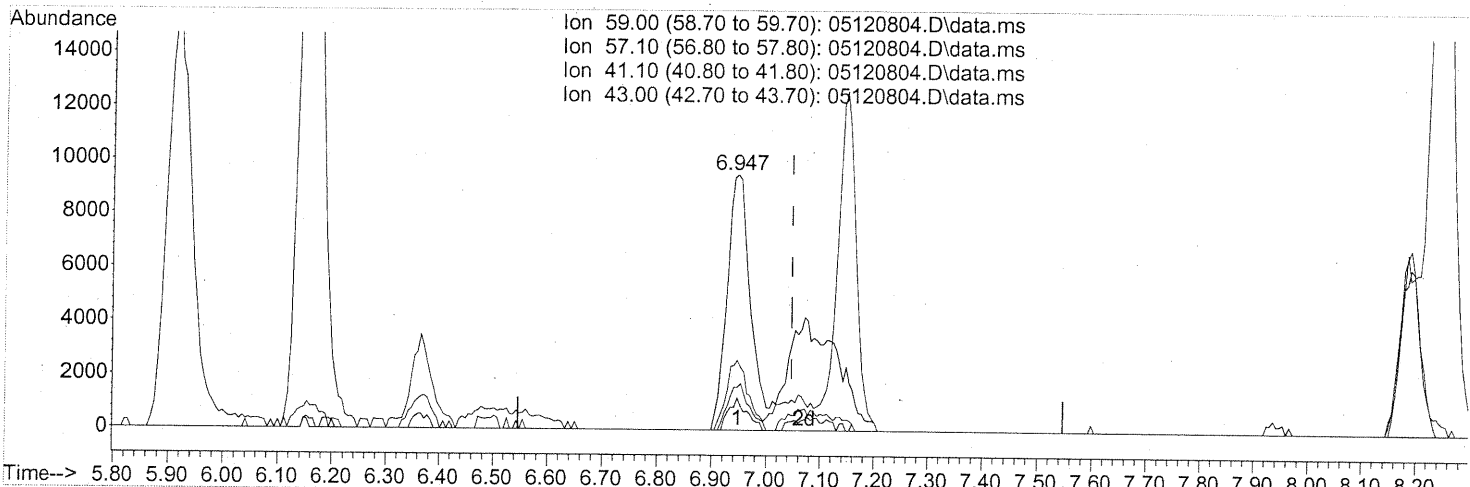
(18) tert-Butanol (T)  
 6.947min (-0.101) 0.54ng  
 response 28143

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.85
41.10	21.90	25.62
43.00	17.20	16.44

*split peaks*

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120804.D  
 Acq On : 12 May 2008 17:37  
 Operator : WA  
 Sample : 1.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:49:34 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)  
 6.947min (-0.101) 1.06ng m  
 response 54795

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	5.06
41.10	21.90	13.16
43.00	17.20	8.45

*int. whole peaks*  
*WA 5/13/08*  
*Em 5/13/08*





Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:52:48 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.20	130	271241	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1184085	25.000	ng	-0.04
56) Chlorobenzene-d5 (IS3)	16.45	82	517507	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.05	65	494129	30.919	ng	-0.04
Spiked Amount	25.000		Recovery =		123.68%	
57) Toluene-d8 (SS2)	14.23	98	1274859	25.176	ng	-0.02
Spiked Amount	25.000		Recovery =		100.72%	
73) Bromofluorobenzene (SS3)	18.28	174	328484	17.399	ng	-0.01
Spiked Amount	25.000		Recovery =		69.60%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	140519	5.382	ng	96
3) Dichlorodifluoromethane	4.53	85	165062	5.194	ng	98
4) Chloromethane	4.72	50	190623	4.839	ng	98
5) Freon 114	4.85	135	79788	4.478	ng	98
6) Vinyl Chloride	4.97	62	142923	5.589	ng	95
7) 1,3-Butadiene	5.12	54	135120	6.063	ng	95
8) Bromomethane	5.41	94	56035	4.953	ng	99
9) Chloroethane	5.57	64	64169	5.243	ng	95
10) Ethanol	5.70	45	88714m	4.855	ng	
11) Acetonitrile	5.92	41	239252	4.593	ng	98
12) Acrolein	6.03	56	61177	4.378	ng	99
13) Acetone	6.16	58	97322	5.359	ng	97
14) Trichlorofluoromethane	6.32	101	137237	4.962	ng	97
15) Isopropanol	6.38	45	298706m	4.959	ng	
16) Acrylonitrile	6.60	53	157462	4.785	ng	99
17) 1,1-Dichloroethene	6.93	96	72728	5.192	ng	# 78
18) tert-Butanol	6.96	59	261098m	5.069	ng	
19) Methylene Chloride	7.03	84	73608	4.848	ng	# 32
20) Allyl Chloride	7.15	41	140481	5.098	ng	79
21) Trichlorotrifluoroethane	7.28	151	62747	4.464	ng	96
22) Carbon Disulfide	7.39	76	260133	4.469	ng	99
23) trans-1,2-Dichloroethene	7.94	61	153016	5.611	ng	85
24) 1,1-Dichloroethane	8.16	63	171572	5.552	ng	95
25) Methyl tert-Butyl Ether	8.19	73	237285	5.761	ng	82
26) Vinyl Acetate	8.25	86	18616	7.970	ng	# 1
27) 2-Butanone	8.52	72	53112	5.719	ng	# 4
28) cis-1,2-Dichloroethene	9.01	61	142060	5.672	ng	86
29) Diisopropyl Ether	9.19	87	61951	5.126	ng	# 5
30) Ethyl Acetate	9.18	61	43841	6.912	ng	85
31) n-Hexane	9.23	57	208699	5.500	ng	9

1027

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:52:48 2008

Quant Method : J:\MS16\METHODS\R16051208.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue May 06 17:02:30 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.33	83	131120	6.390	ng	96
34) Tetrahydrofuran	9.77	72	51276	5.878	ng	# 40
35) Ethyl tert-Butyl Ether	9.79	87	91489	5.349	ng	# 70
36) 1,2-Dichloroethane	10.18	62	132568	5.828	ng	98
38) 1,1,1-Trichloroethane	10.48	97	123272	5.234	ng	89
39) Isopropyl Acetate	10.77	61	61451	5.261	ng	# 49
40) 1-Butanol	10.78	56	101629	4.654	ng	87
41) Benzene	11.01	78	299551	5.121	ng	100
42) Carbon Tetrachloride	11.18	117	94978	4.792	ng	98
43) Cyclohexane	11.33	84	118085	4.959	ng	# 22
44) tert-Amyl Methyl Ether	11.63	73	210824	5.189	ng	# 75
45) 1,2-Dichloropropane	11.94	63	96843	5.476	ng	97
46) Bromodichloromethane	12.14	83	100636	5.863	ng	94
47) Trichloroethene	12.20	130	85527	4.449	ng	97
48) 1,4-Dioxane	12.14	88	63595	5.644	ng	# 66
49) Isooctane	12.24	57	489009	5.093	ng	100
50) Methyl Methacrylate	12.34	100	30050	4.631	ng	99
51) n-Heptane	12.51	71	82333	5.654	ng	# 58
52) cis-1,3-Dichloropropene	13.17	75	120080	5.334	ng	98
53) 4-Methyl-2-pentanone	13.18	58	109644	5.387	ng	82
54) trans-1,3-Dichloropropene	13.76	75	120604	6.226	ng	98
55) 1,1,2-Trichloroethane	13.99	97	75407	5.017	ng	95
58) Toluene	14.35	91	321557	4.844	ng	99
59) 2-Hexanone	14.58	43	328454	5.436	ng	92
60) Dibromochloromethane	14.84	129	88632	4.737	ng	99
61) 1,2-Dibromoethane	15.14	107	86576	4.796	ng	97
62) Butyl Acetate	15.31	43	347071	5.594	ng	96
63) n-Octane	15.47	57	100573	5.029	ng	91
64) Tetrachloroethene	15.69	166	78748	4.089	ng	98
65) Chlorobenzene	16.50	112	215852	4.524	ng	100
66) Ethylbenzene	16.94	91	365270	4.865	ng	96
67) m- & p-Xylene	17.16	91	575778	11.753	ng	96
68) Bromoform	17.26	173	56388	5.173	ng	100
69) Styrene	17.59	104	225122	4.759	ng	97
70) o-Xylene	17.73	91	294991	5.599	ng	97
71) n-Nonane	17.96	43	277032	5.362	ng	90
72) 1,1,2,2-Tetrachloroethane	17.70	83	133466	6.175	ng	95
74) Cumene	18.45	105	358374	4.649	ng	97
75) alpha-Pinene	18.93	93	176507	4.769	ng	99
76) n-Propylbenzene	19.06	91	436440	4.780	ng	95
77) 3-Ethyltoluene	19.19	105	361276	4.340	ng	97
78) 4-Ethyltoluene	19.24	105	368271	4.715	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	310196	4.591	ng	96

1028

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:52:48 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

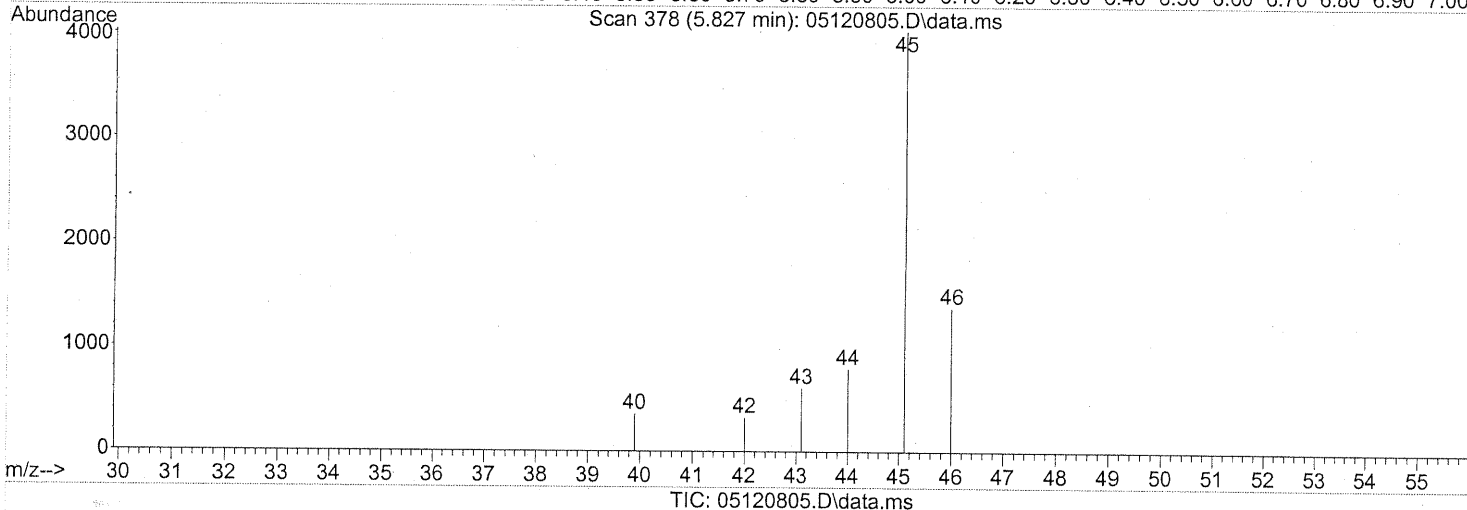
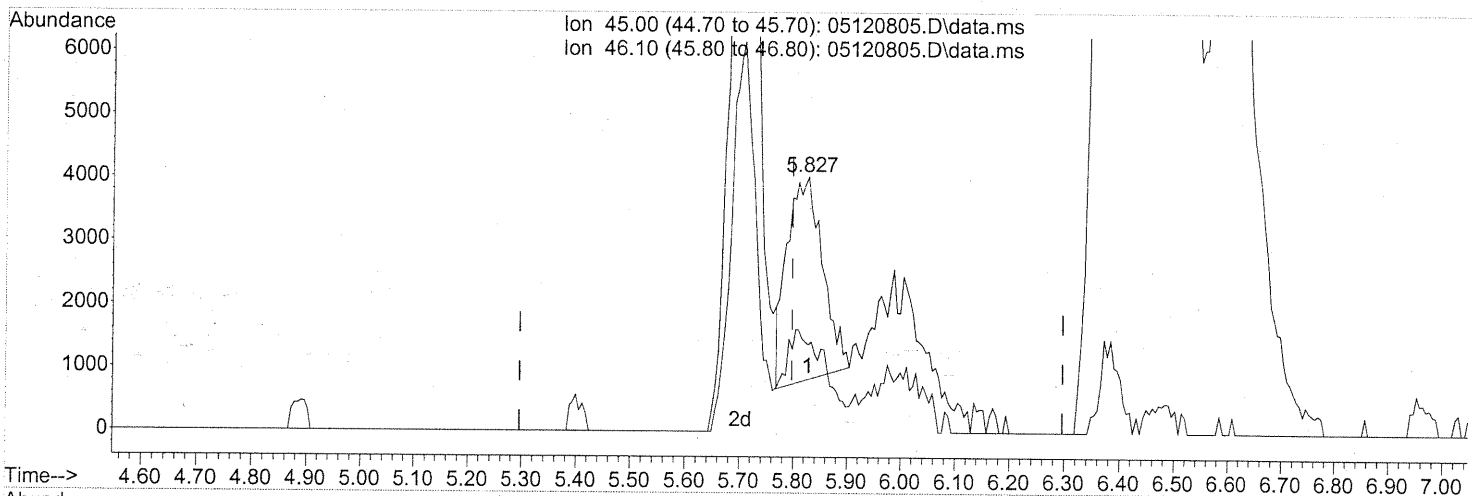
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.52	118	166182	4.345	ng	99
81) 2-Ethyltoluene	19.56	105	352282	4.235	ng	95
82) 1,2,4-Trimethylbenzene	19.83	105	323449	4.756	ng	94
83) n-Decane	19.92	57	252493	5.055	ng	81
84) Benzyl Chloride	19.99	91	272433	5.138	ng	95
85) 1,3-Dichlorobenzene	20.02	146	178889	4.072	ng	100
86) 1,4-Dichlorobenzene	20.10	146	179042	4.250	ng	98
87) sec-Butylbenzene	20.16	105	414365	4.599	ng	98
88) p-Isopropyltoluene	20.34	119	387130	4.962	ng	97
89) 1,2,3-Trimethylbenzene	20.34	105	319103	4.788	ng	92
90) 1,2-Dichlorobenzene	20.52	146	172538	4.272	ng	99
91) d-Limonene	20.51	68	118857	5.435	ng	96
92) 1,2-Dibromo-3-Chloropr...	21.04	157	54425	4.258	ng	# 81
93) n-Undecane	21.44	57	268851	5.150	ng	80
94) 1,2,4-Trichlorobenzene	22.54	184	32122	4.367	ng	# 83
95) Naphthalene	22.69	128	439780	4.215	ng	99
96) n-Dodecane	22.66	57	262818	5.376	ng	79
97) Hexachloro-1,3-butadiene	23.11	225	46786	3.984	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.827min (+0.030) 0.81ng  
 response 14818

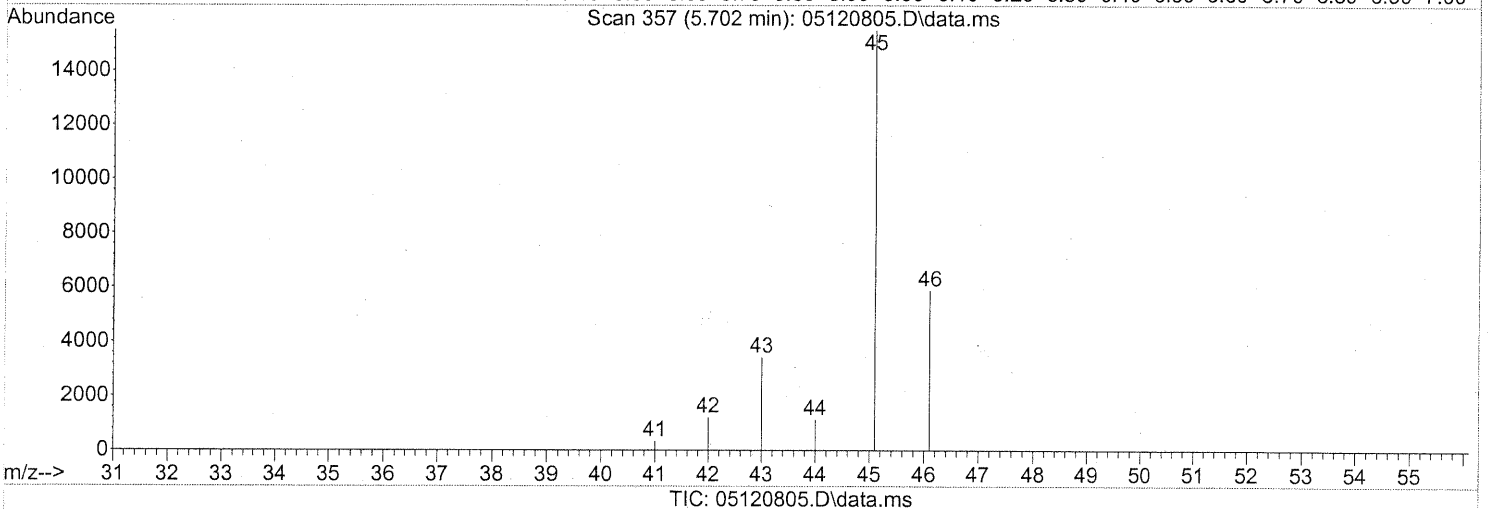
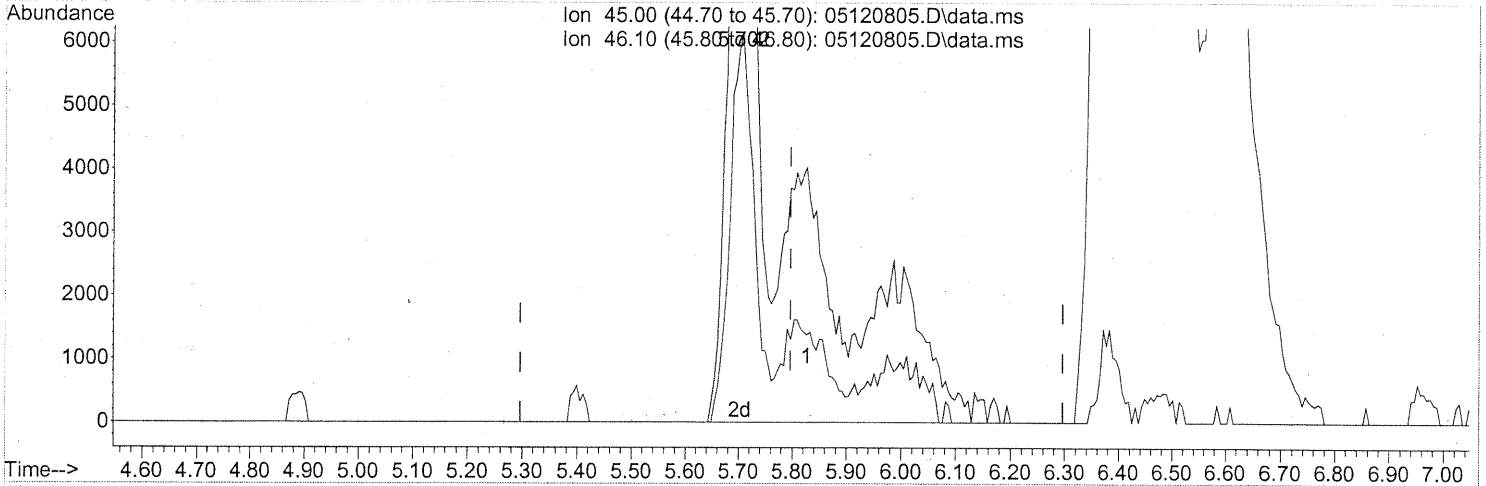
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	57.86#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.702min (-0.095) 4.85ng m

response 88714

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	9.66#
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*DA 5/13/08*

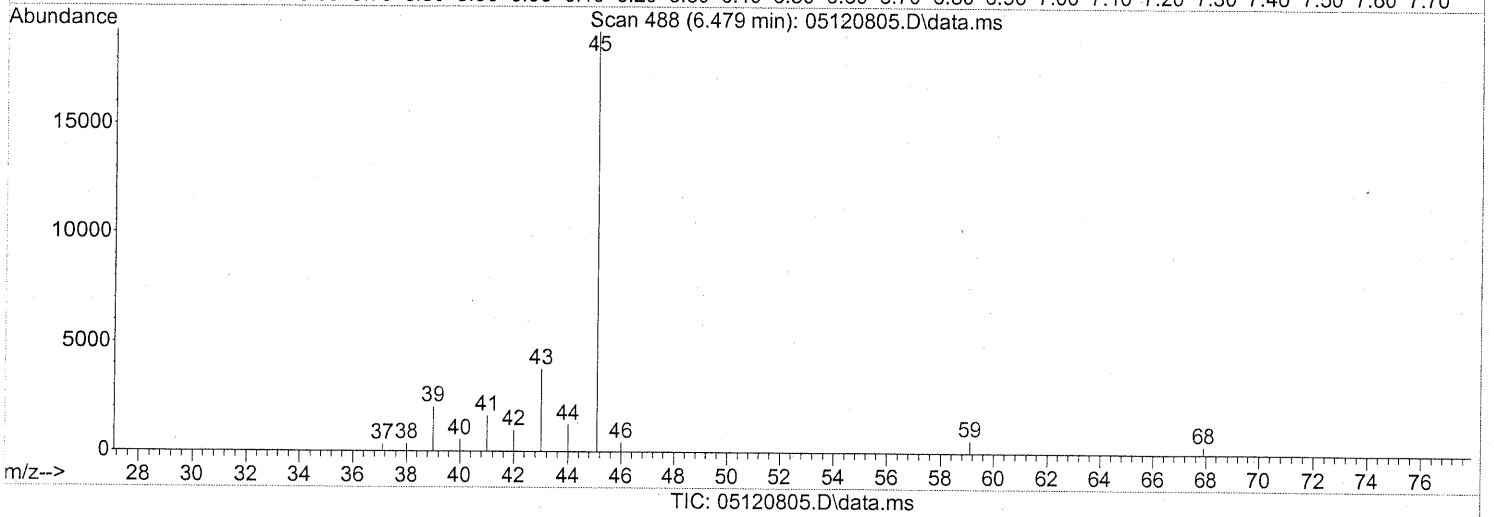
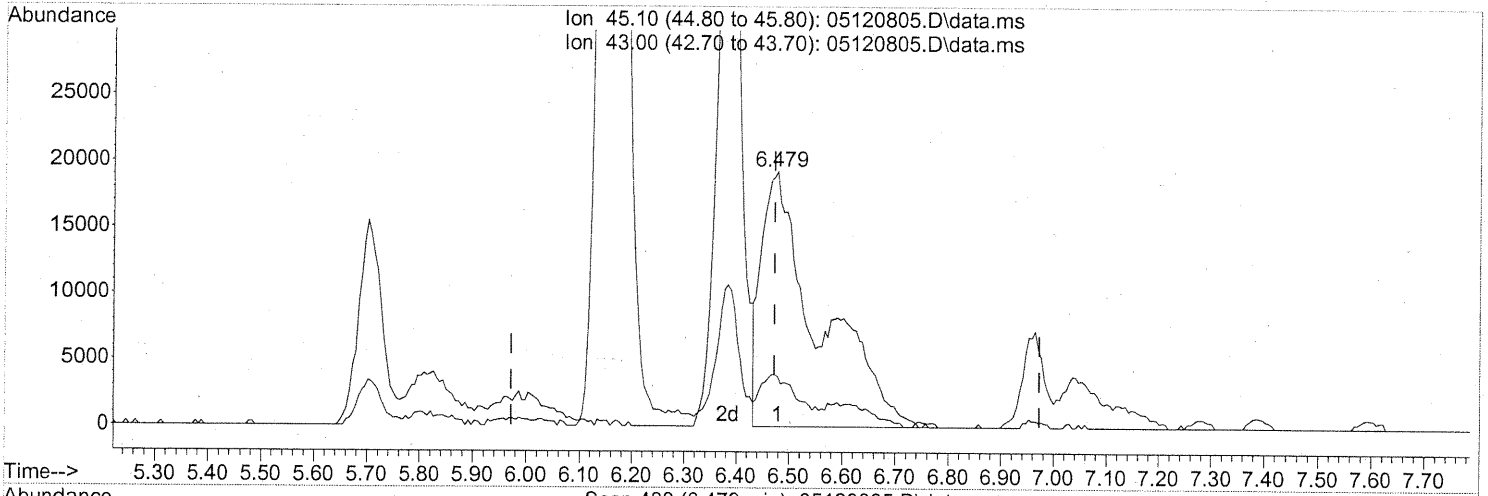
*Em 5/13/08*

**1031**

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.479min (+0.006) 2.41ng

response 145075

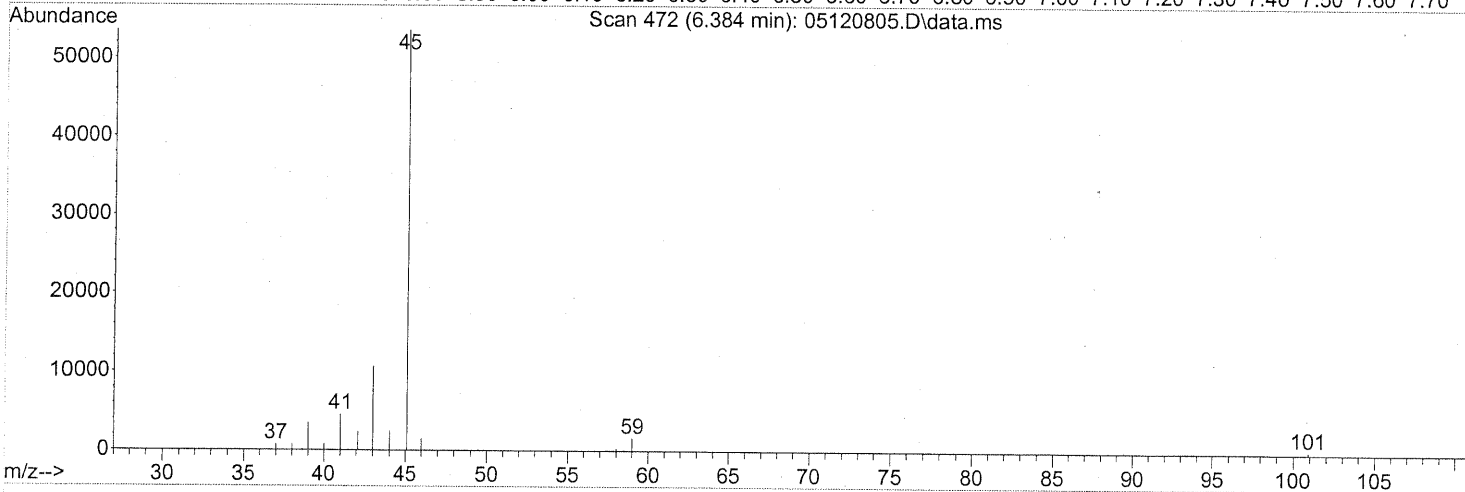
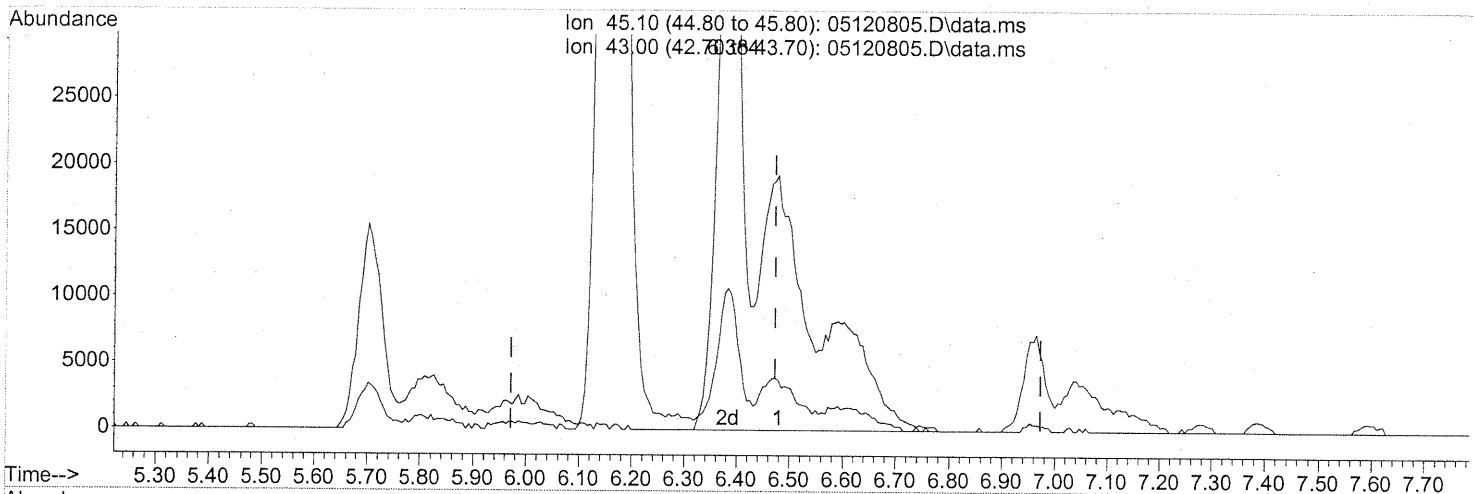
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	14.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.384min (-0.089) 4.96ng m  
 response 298706

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	6.90
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole plates*

*DA 5/13/08*

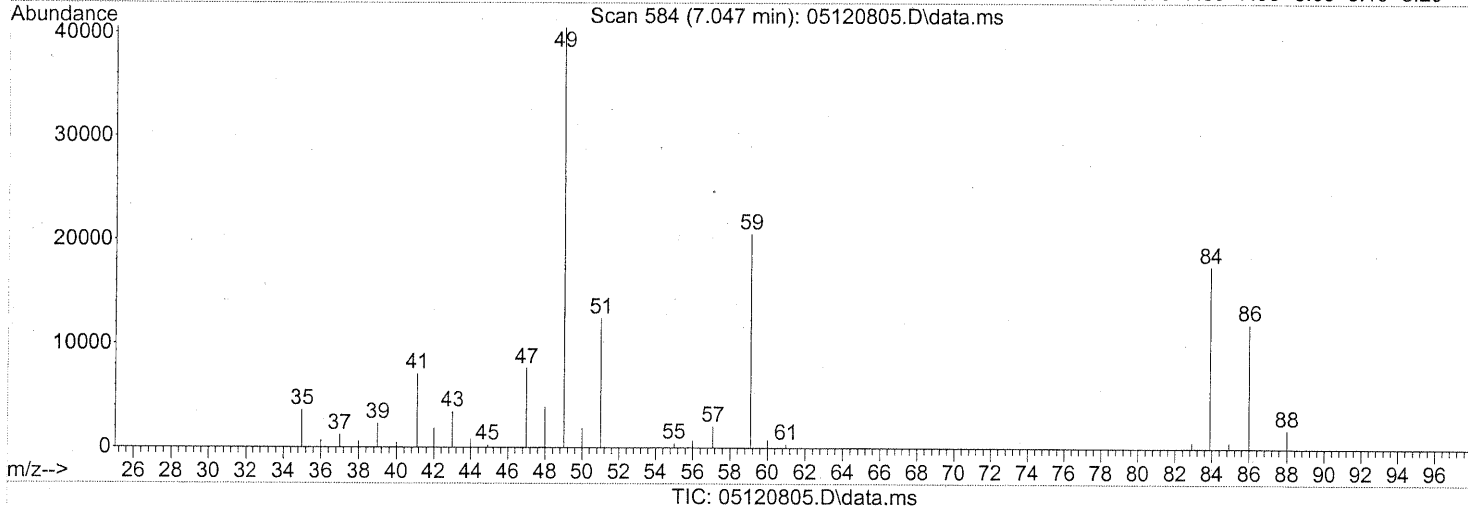
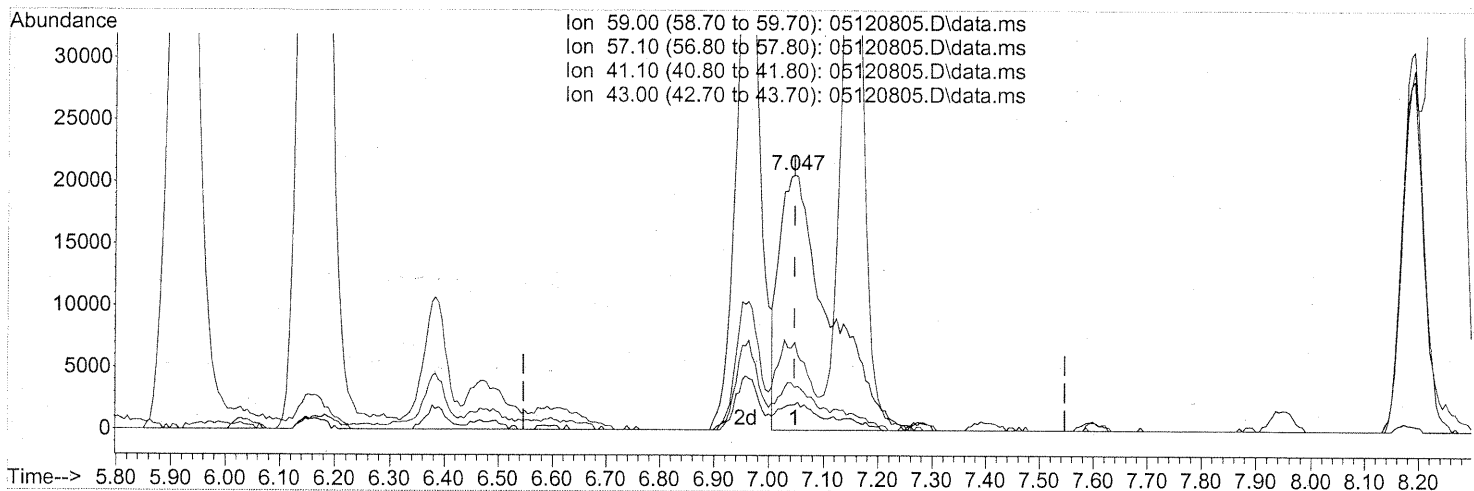
*em 5/13/08*

**1033**

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

7.047min (0.000) 2.53ng

response 130559

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	10.46
41.10	21.90	0.00#
43.00	17.20	0.00

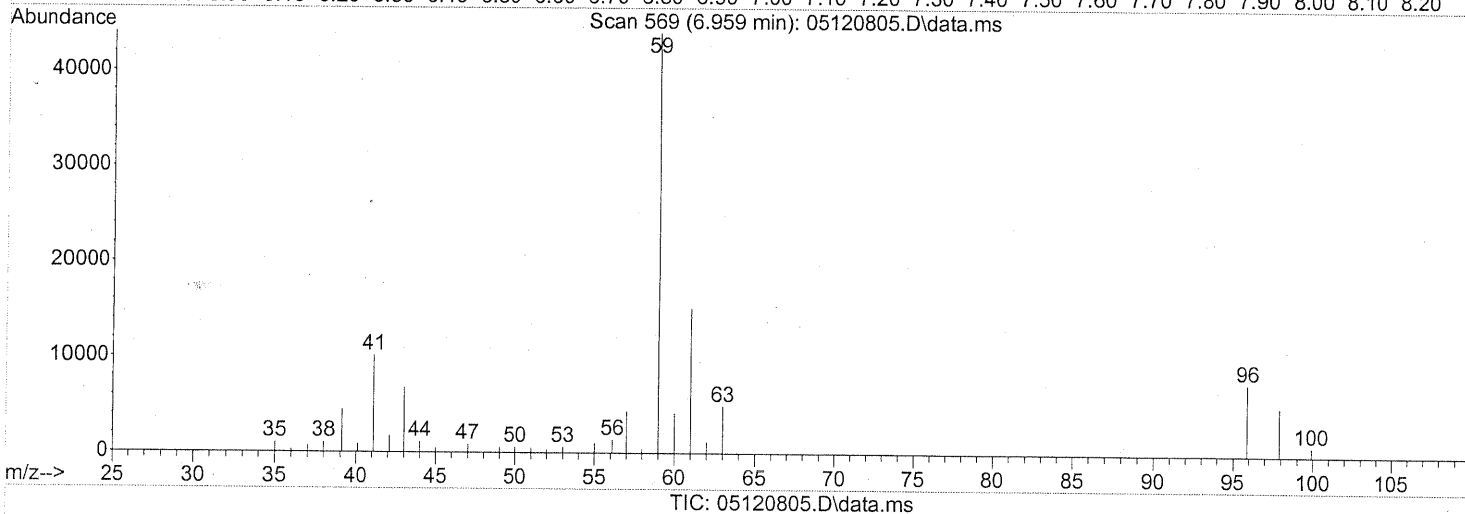
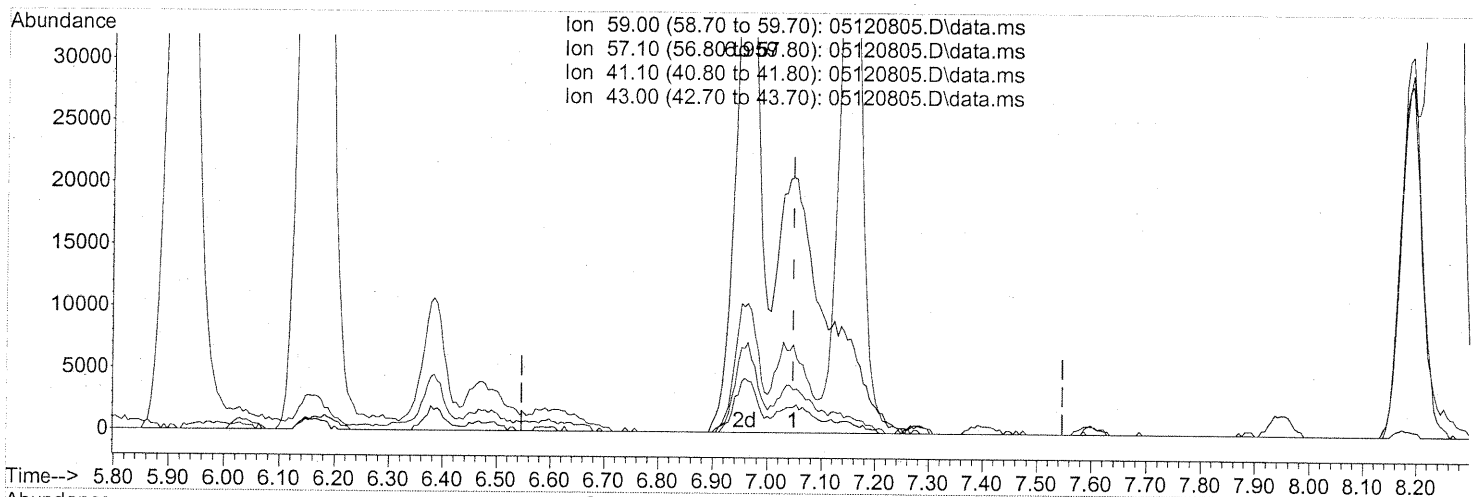
*split peaks*

1034



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120805.D  
 Acq On : 12 May 2008 18:17  
 Operator : WA  
 Sample : 5.0ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020808  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:51:31 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(18) tert-Butanol (T)

6.959min (-0.089) 5.07ng m

response 261098

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	5.23
41.10	21.90	0.00#
43.00	17.20	0.00

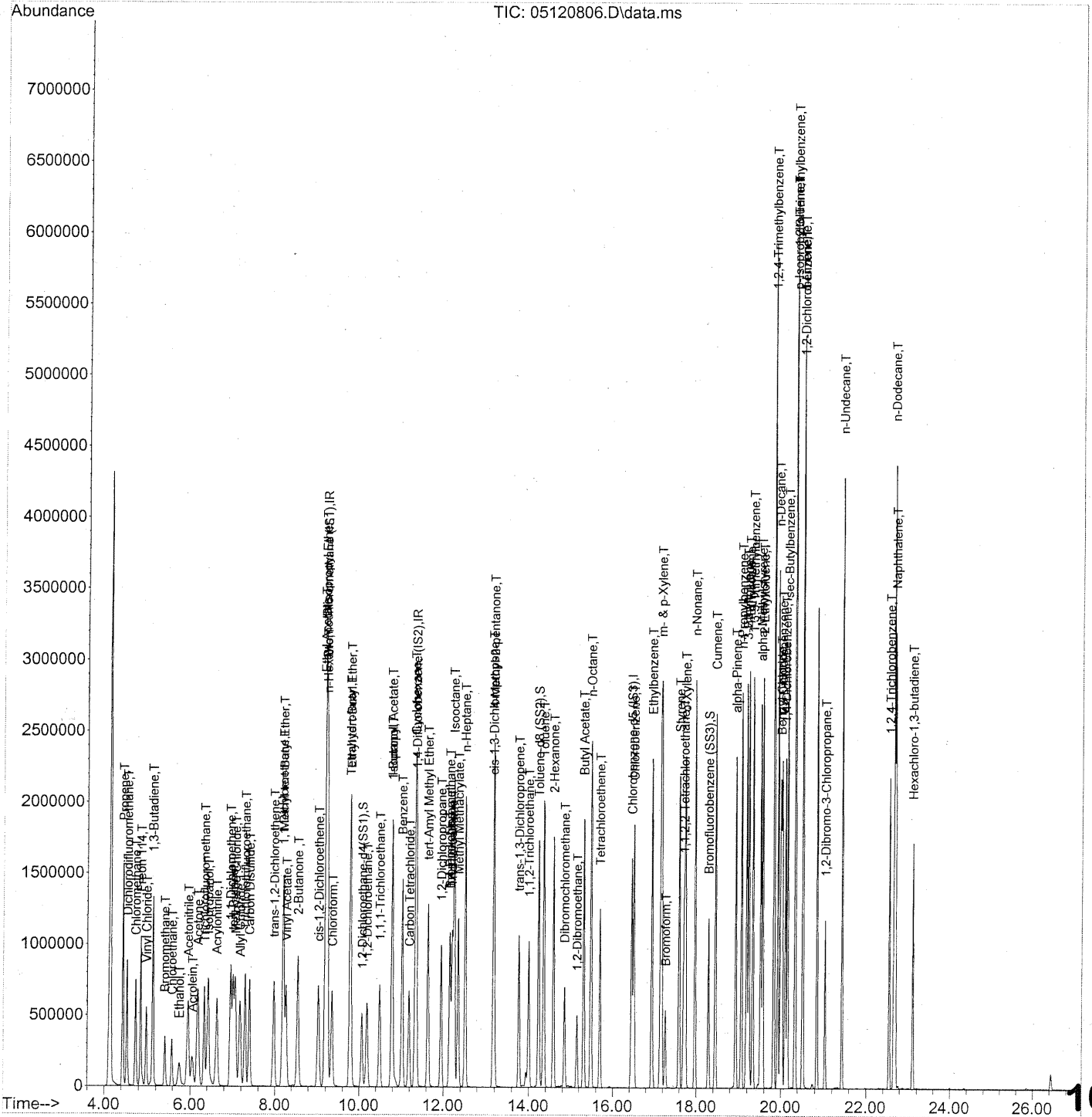
*int. whole peaks*

*IDA 5/13/08*

*Em 5/13/08*

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:54:11 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



1036

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:54:11 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	291392	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1248987	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	547223	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.07	65	509241	29.661	ng	-0.02
Spiked Amount	25.000		Recovery	=	118.64%	
57) Toluene-d8 (SS2)	14.24	98	1338842	25.003	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.00%	
73) Bromofluorobenzene (SS3)	18.29	174	354294	17.747	ng	0.00
Spiked Amount	25.000		Recovery	=	71.00%	

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.43	42	695278	24.788	ng	96
3) Dichlorodifluoromethane	4.53	85	851776	24.947	ng	99
4) Chloromethane	4.73	50	1071284	25.312	ng	100
5) Freon 114	4.85	135	420876	21.989	ng	97
6) Vinyl Chloride	4.98	62	733097	26.687	ng	95
7) 1,3-Butadiene	5.13	54	736971	30.783	ng	94
8) Bromomethane	5.41	94	301186	24.780	ng	99
9) Chloroethane	5.58	64	346967	26.390	ng	97
10) Ethanol	5.75	45	432190m	22.016	ng	
11) Acetonitrile	5.95	41	1207453	21.578	ng	100
12) Acrolein	6.05	56	332078	22.122	ng	100
13) Acetone	6.18	58	473439	24.267	ng	96
14) Trichlorofluoromethane	6.34	101	728374	24.515	ng	100
15) Isopropanol	6.43	45	1766044	27.292	ng	99
16) Acrylonitrile	6.63	53	860234	24.333	ng	98
17) 1,1-Dichloroethene	6.95	96	384324	25.541	ng	# 78
18) tert-Butanol	7.01	59	1408437	25.452	ng	97
19) Methylene Chloride	7.06	84	381703	23.401	ng	# 34
20) Allyl Chloride	7.17	41	780710	26.370	ng	82
21) Trichlorotrifluoroethane	7.30	151	337453	22.346	ng	99
22) Carbon Disulfide	7.40	76	1409785	22.545	ng	100
23) trans-1,2-Dichloroethene	7.97	61	800111	27.311	ng	87
24) 1,1-Dichloroethane	8.19	63	914168	27.534	ng	95
25) Methyl tert-Butyl Ether	8.20	73	1245479	28.147	ng	80
26) Vinyl Acetate	8.27	86	97975	39.043	ng	# 1
27) 2-Butanone	8.55	72	277640	27.830	ng	# 11
28) cis-1,2-Dichloroethene	9.04	61	747038	27.764	ng	87
29) Diisopropyl Ether	9.20	87	328978	25.336	ng	# 1
30) Ethyl Acetate	9.19	61	239009	35.075	ng	84
31) n-Hexane	9.24	57	1117351	27.410	ng	9

1037

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:54:11 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.36	83	687802	31.203	ng	97
34) Tetrahydrofuran	9.78	72	277708	29.635	ng #	43
35) Ethyl tert-Butyl Ether	9.80	87	476573	25.934	ng #	65
36) 1,2-Dichloroethane	10.19	62	687399	28.129	ng	96
38) 1,1,1-Trichloroethane	10.50	97	643391	25.897	ng	89
39) Isopropyl Acetate	10.79	61	341606	27.724	ng #	52
40) 1-Butanol	10.79	56	571227	24.797	ng	92
41) Benzene	11.02	78	1565791	25.376	ng	100
42) Carbon Tetrachloride	11.20	117	566543	27.100	ng	99
43) Cyclohexane	11.34	84	623037	24.806	ng #	46
44) tert-Amyl Methyl Ether	11.64	73	1137687	26.549	ng #	76
45) 1,2-Dichloropropane	11.95	63	516711	27.701	ng	97
46) Bromodichloromethane	12.16	83	540539	29.853	ng	94
47) Trichloroethene	12.21	130	465596	22.960	ng	100
48) 1,4-Dioxane	12.16	88	337736	28.417	ng #	64
49) Isooctane	12.26	57	2615414	25.825	ng	99
50) Methyl Methacrylate	12.36	100	168390	24.600	ng	98
51) n-Heptane	12.52	71	438899	28.573	ng #	57
52) cis-1,3-Dichloropropene	13.17	75	651879	27.454	ng	99
53) 4-Methyl-2-pentanone	13.19	58	601386	28.010	ng	82
54) trans-1,3-Dichloropropene	13.77	75	658213	32.213	ng	99
55) 1,1,2-Trichloroethane	14.00	97	392814	24.774	ng	96
58) Toluene	14.35	91	1724592	24.570	ng	99
59) 2-Hexanone	14.59	43	1747423	27.351	ng	94
60) Dibromochloromethane	14.85	129	490941	24.812	ng	100
61) 1,2-Dibromoethane	15.15	107	466528	24.442	ng	99
62) Butyl Acetate	15.31	43	1919680	29.260	ng	96
63) n-Octane	15.49	57	557623	26.369	ng	90
64) Tetrachloroethene	15.70	166	423016	20.774	ng	98
65) Chlorobenzene	16.50	112	1163418	23.058	ng	100
66) Ethylbenzene	16.94	91	1996582	25.148	ng	97
67) m- & p-Xylene	17.16	91	3138663	60.590	ng	95
68) Bromoform	17.26	173	328336	28.485	ng	99
69) Styrene	17.60	104	1255035	25.088	ng	98
70) o-Xylene	17.74	91	1589752	28.536	ng	96
71) n-Nonane	17.97	43	1533015	28.060	ng	90
72) 1,1,2,2-Tetrachloroethane	17.70	83	724174	31.686	ng	94
74) Cumene	18.45	105	2007408	24.626	ng	96
75) alpha-Pinene	18.93	93	990124	25.298	ng	98
76) n-Propylbenzene	19.07	91	2429699	25.167	ng	95
77) 3-Ethyltoluene	19.19	105	2049783	23.287	ng	97
78) 4-Ethyltoluene	19.24	105	2040835	24.711	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	1720052	24.077	ng	9

1038

5/13/08

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:54:11 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration

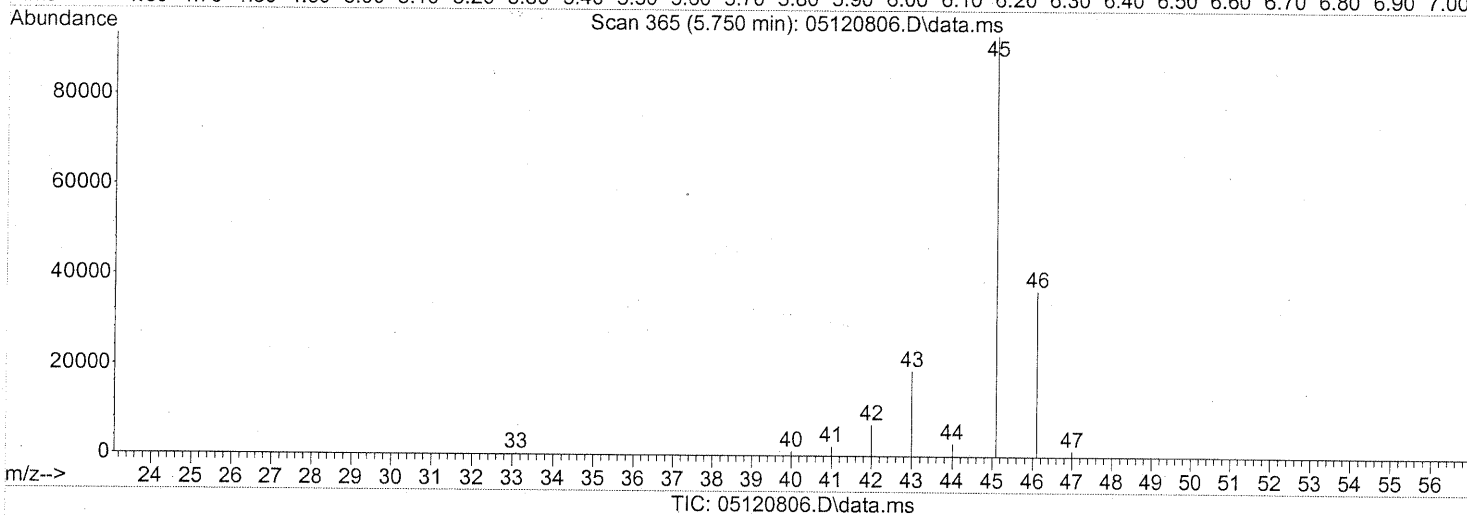
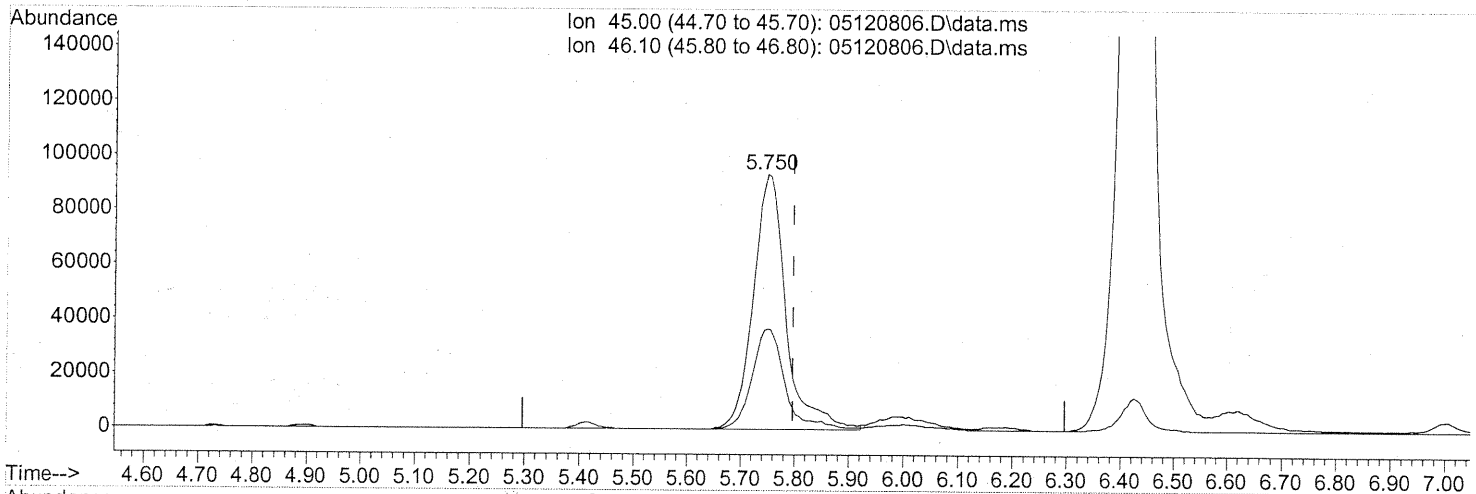
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	957244	23.670	ng	99
81) 2-Ethyltoluene	19.57	105	1984097	22.557	ng	95
82) 1,2,4-Trimethylbenzene	19.83	105	1853441	25.775	ng	94
83) n-Decane	19.93	57	1412285	26.738	ng	80
84) Benzyl Chloride	19.99	91	1544670	27.552	ng	94
85) 1,3-Dichlorobenzene	20.02	146	994406	21.408	ng	100
86) 1,4-Dichlorobenzene	20.11	146	1008629	22.640	ng	99
87) sec-Butylbenzene	20.16	105	2360096	24.773	ng	98
88) p-Isopropyltoluene	20.34	119	2296744	27.840	ng	96
89) 1,2,3-Trimethylbenzene	20.35	105	1848769	26.236	ng	90
90) 1,2-Dichlorobenzene	20.52	146	983506	23.028	ng	100
91) d-Limonene	20.52	68	698239	30.194	ng	98
92) 1,2-Dibromo-3-Chloropr...	21.04	157	317591	23.496	ng	# 88
93) n-Undecane	21.43	57	1556577	28.200	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	182377	23.449	ng	# 86
95) Naphthalene	22.69	128	2584825	23.431	ng	99
96) n-Dodecane	22.66	57	1557137	30.121	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	262742	21.157	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:53:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.750min (-0.047) 20.08ng  
 response 394190

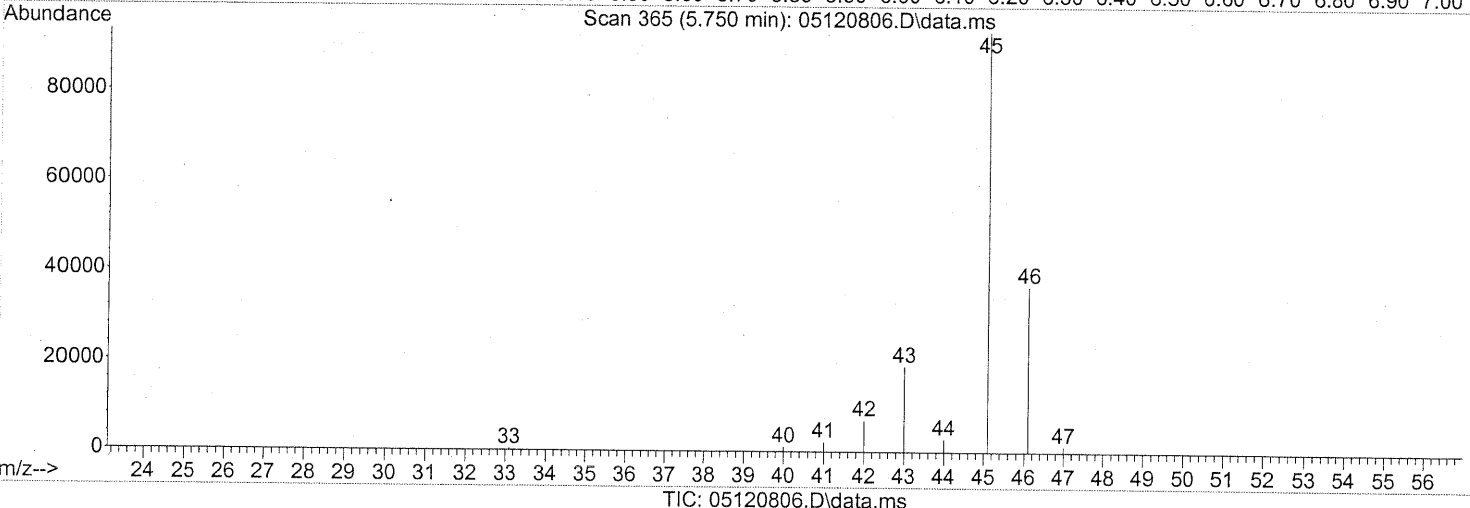
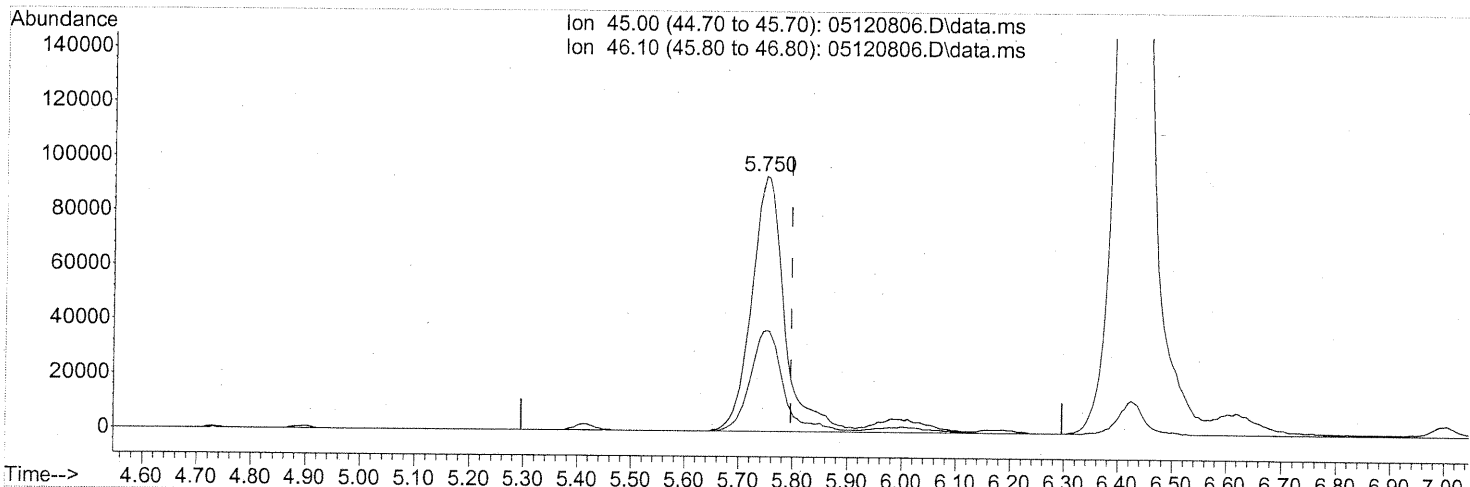
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.60
0.00	0.00	0.00
0.00	0.00	0.00

1040

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120806.D  
 Acq On : 12 May 2008 18:55  
 Operator : WA  
 Sample : 25ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 19:53:39 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue May 06 17:02:30 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

5.750min (-0.047) 22.02ng m

response 432190

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	36.12
0.00	0.00	0.00
0.00	0.00	0.00

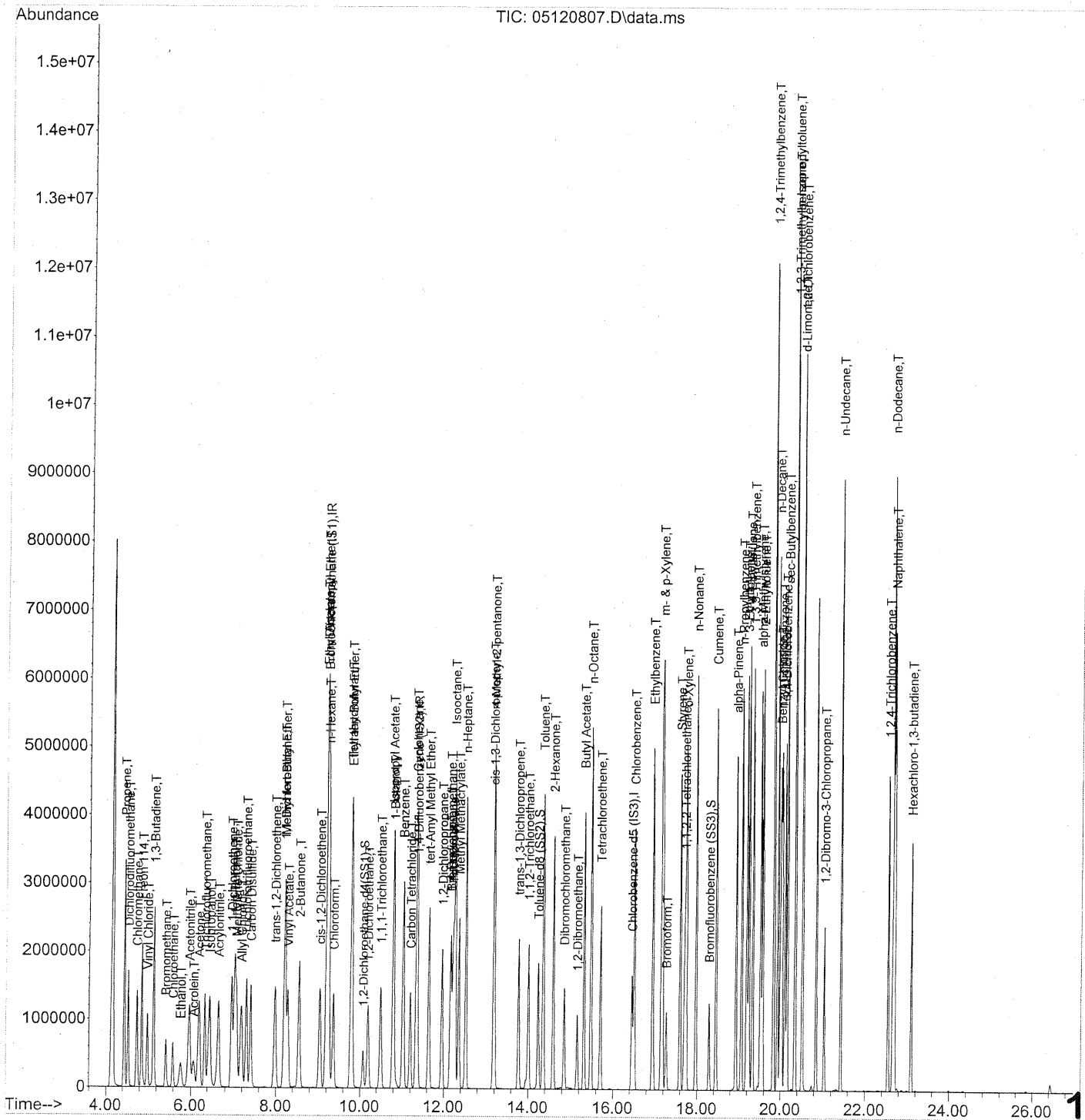
*int. whole peak*

*WA 5/13/08*

*com 5/13/08*

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:44:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



1042



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:44:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	321015	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	11.37	114	1380197	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	16.45	82	592404	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.08	65	543109	24.746	ng	0.01
Spiked Amount	25.000		Recovery	=	99.00%	
57) Toluene-d8 (SS2)	14.24	98	1448626	24.838	ng	0.00
Spiked Amount	25.000		Recovery	=	99.36%	
73) Bromofluorobenzene (SS3)	18.29	174	387860	22.845	ng	0.00
Spiked Amount	25.000		Recovery	=	91.40%	

Target Compounds

						Qvalue
2) Propene	4.44	42	1592427	51.114	ng	96
3) Dichlorodifluoromethane	4.53	85	1776540	46.786	ng	99
4) Chloromethane	4.74	50	2154689	46.409	ng	100
5) Freon 114	4.85	135	931219	49.517	ng	97
6) Vinyl Chloride	4.99	62	1531104	48.127	ng	95
7) 1,3-Butadiene	5.13	54	1584051	53.875	ng	92
8) Bromomethane	5.42	94	640068	47.923	ng	99
9) Chloroethane	5.60	64	740582	51.535	ng	96
10) Ethanol	5.77	45	933140m	42.949	ng	
11) Acetonitrile	5.96	41	2578256	41.392	ng	100
12) Acrolein	6.06	56	696441	40.676	ng	98
13) Acetone	6.19	58	954652	36.683	ng	95
14) Trichlorofluoromethane	6.34	101	1565158	49.388	ng	99
15) Isopropanol	6.45	45	3244165m	44.569	ng	
16) Acrylonitrile	6.64	53	1848683	48.856	ng	98
17) 1,1-Dichloroethene	6.95	96	829929	53.265	ng	# 82
18) tert-Butanol	7.02	59	2998390	48.450	ng	96
19) Methylene Chloride	7.07	84	823299	49.014	ng	# 36
20) Allyl Chloride	7.18	41	1719603	49.859	ng	82
21) Trichlorotrifluoroethane	7.30	151	736603	53.317	ng	100
22) Carbon Disulfide	7.41	76	3006479	44.504	ng	100
23) trans-1,2-Dichloroethene	7.98	61	1701593	52.176	ng	87
24) 1,1-Dichloroethane	8.20	63	1930438	52.252	ng	95
25) Methyl tert-Butyl Ether	8.21	73	2653655	53.039	ng	79
26) Vinyl Acetate	8.29	86	208367	50.781	ng	# 1
27) 2-Butanone	8.56	72	597766	55.022	ng	# 15
28) cis-1,2-Dichloroethene	9.05	61	1588227	52.834	ng	89
29) Diisopropyl Ether	9.21	87	703292	50.629	ng	# 1
30) Ethyl Acetate	9.20	61	508806	67.631	ng	85
31) n-Hexane	9.25	57	2415916	53.697	ng	91

1043

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:44:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.37	83	1451904	60.814	ng	96
34) Tetrahydrofuran	9.79	72	596903	59.396	ng	# 44
35) Ethyl tert-Butyl Ether	9.80	87	1035569	52.258	ng	# 66
36) 1,2-Dichloroethane	10.20	62	1444653	51.155	ng	96
38) 1,1,1-Trichloroethane	10.50	97	1372449	51.302	ng	91
39) Isopropyl Acetate	10.79	61	740779	53.276	ng	# 56
40) 1-Butanol	10.81	56	1248293	48.153	ng	94
41) Benzene	11.03	78	3385674	50.212	ng	100
42) Carbon Tetrachloride	11.20	117	1219483	58.791	ng	99
43) Cyclohexane	11.35	84	1334191	49.861	ng	# 47
44) tert-Amyl Methyl Ether	11.65	73	2431993	51.454	ng	76
45) 1,2-Dichloropropane	11.96	63	1102663	53.111	ng	97
46) Bromodichloromethane	12.16	83	1135880	56.707	ng	93
47) Trichloroethene	12.21	130	1027784	53.679	ng	100
48) 1,4-Dioxane	12.16	88	722431	56.823	ng	# 63
49) Isooctane	12.26	57	5729430	51.642	ng	97
50) Methyl Methacrylate	12.36	100	368431	57.804	ng	95
51) n-Heptane	12.52	71	941617	55.473	ng	# 57
52) cis-1,3-Dichloropropene	13.18	75	1387276	52.029	ng	100
53) 4-Methyl-2-pentanone	13.20	58	1299660	53.641	ng	82
54) trans-1,3-Dichloropropene	13.78	75	1397494	59.126	ng	99
55) 1,1,2-Trichloroethane	14.01	97	847114	51.054	ng	96
58) Toluene	14.36	91	3758371	52.745	ng	99
59) 2-Hexanone	14.60	43	3711529	51.035	ng	95
60) Dibromochloromethane	14.86	129	1065655	55.857	ng	99
61) 1,2-Dibromoethane	15.16	107	1008887	54.135	ng	99
62) Butyl Acetate	15.32	43	4085896	55.190	ng	95
63) n-Octane	15.49	57	1203286	53.689	ng	91
64) Tetrachloroethene	15.70	166	939424	51.233	ng	98
65) Chlorobenzene	16.51	112	2543641	53.148	ng	100
66) Ethylbenzene	16.95	91	4340898	53.425	ng	96
67) m- & p-Xylene	17.17	91	6843346	129.040	ng	94
68) Bromoform	17.27	173	723530	68.913	ng	100
69) Styrene	17.60	104	2754559	55.089	ng	96
70) o-Xylene	17.74	91	3432889	60.558	ng	95
71) n-Nonane	17.97	43	3275786	54.421	ng	90
72) 1,1,2,2-Tetrachloroethane	17.71	83	1543697	62.782	ng	94
74) Cumene	18.45	105	4363437	54.555	ng	96
75) alpha-Pinene	18.94	93	2151168	55.466	ng	96
76) n-Propylbenzene	19.07	91	5255861	53.061	ng	95
77) 3-Ethyltoluene	19.20	105	4552651	52.545	ng	97
78) 4-Ethyltoluene	19.25	105	4370249	55.455	ng	96
79) 1,3,5-Trimethylbenzene	19.34	105	3742334	53.776	ng	96

1044

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:44:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

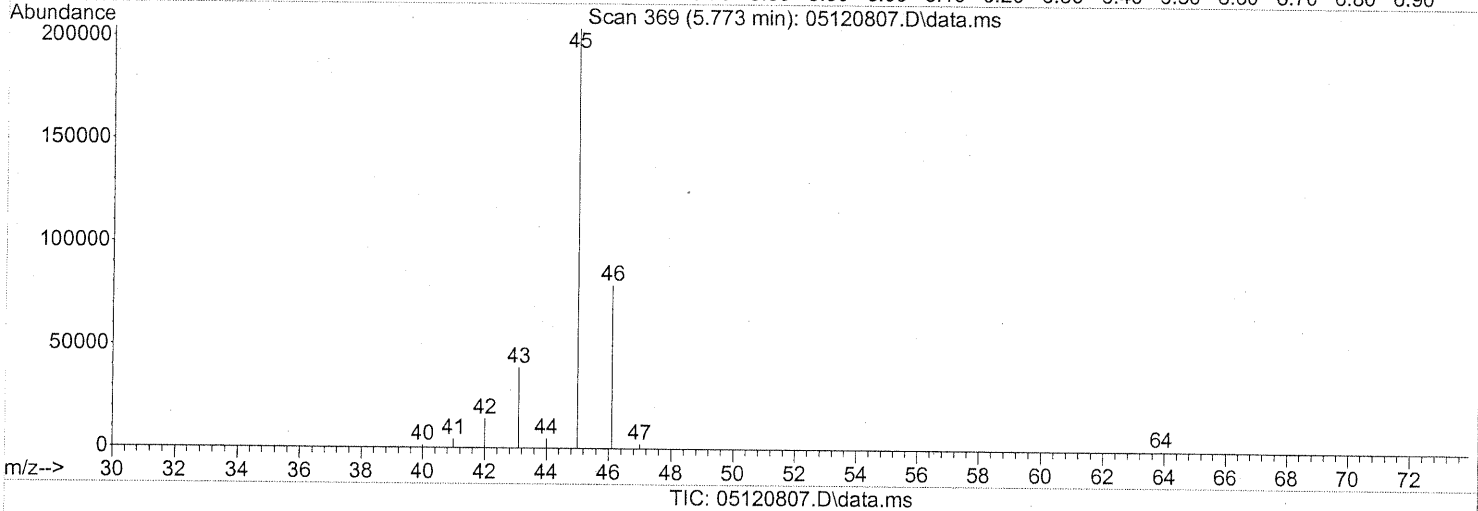
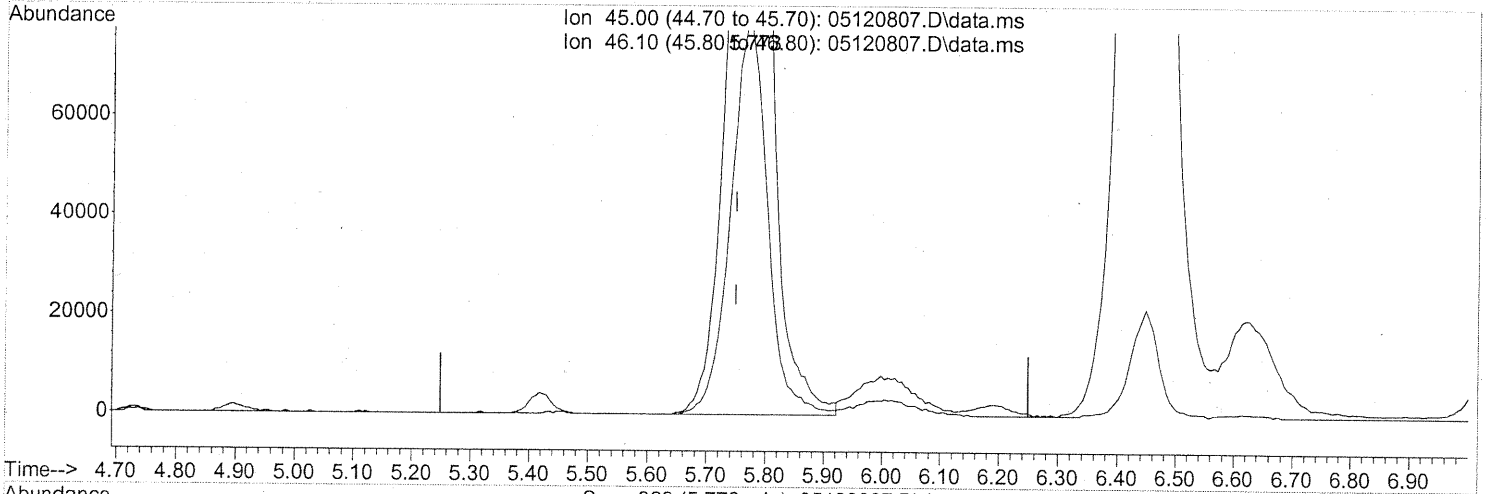
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	2089286	54.729	ng	99
81) 2-Ethyltoluene	19.57	105	4325793	50.300	ng	95
82) 1,2,4-Trimethylbenzene	19.84	105	4049476	56.958	ng	93
83) n-Decane	19.94	57	3049147	55.344	ng	79
84) Benzyl Chloride	20.00	91	3327907	56.420	ng	94
85) 1,3-Dichlorobenzene	20.03	146	2206352	52.074	ng	100
86) 1,4-Dichlorobenzene	20.11	146	2215194	54.664	ng	99
87) sec-Butylbenzene	20.16	105	5135963	55.131	ng	97
88) p-Isopropyltoluene	20.34	119	5022994	63.459	ng	95
89) 1,2,3-Trimethylbenzene	20.35	105	4026681	58.084	ng	90
90) 1,2-Dichlorobenzene	20.52	146	2132395	54.775	ng	100
91) d-Limonene	20.52	68	1475923	59.202	ng	97
92) 1,2-Dibromo-3-Chloropr...	21.04	157	693764	55.365	ng	92
93) n-Undecane	21.43	57	3375881	58.558	ng	78
94) 1,2,4-Trichlorobenzene	22.55	184	399779	57.881	ng	# 84
95) Naphthalene	22.70	128	5639820	54.873	ng	99
96) n-Dodecane	22.66	57	3397713	61.342	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	579385	55.123	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120807.D  
Acq On : 12 May 2008 19:34  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020804  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:43:03 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 19:59:09 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.773min (+0.024) 40.42ng  
response 878176

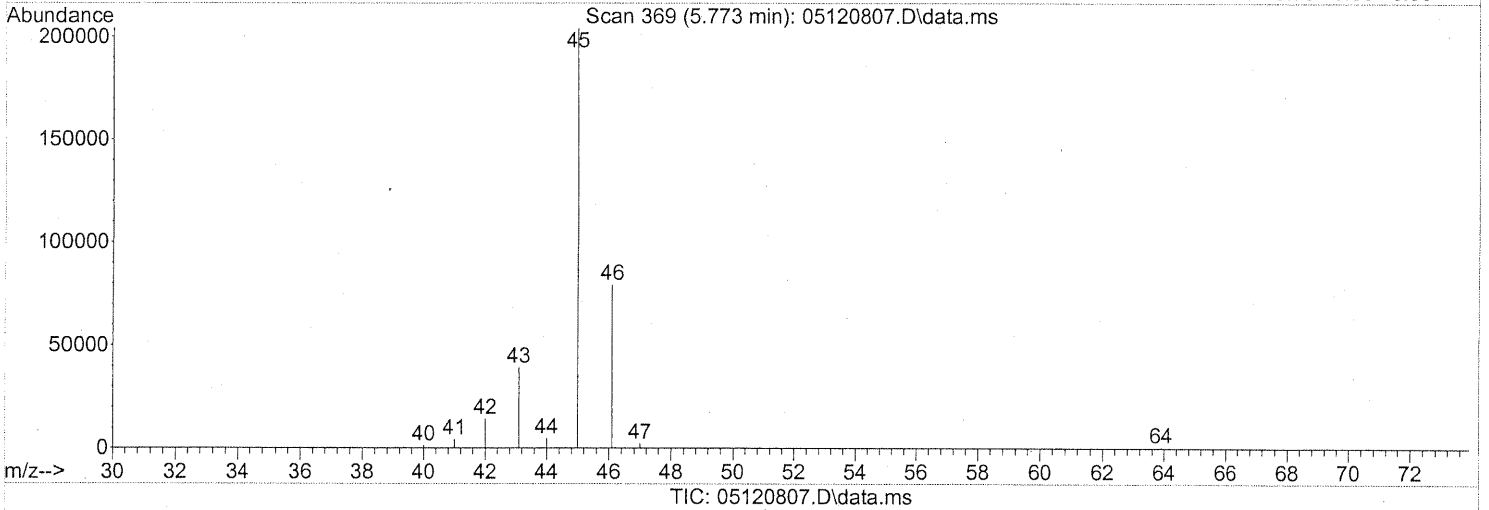
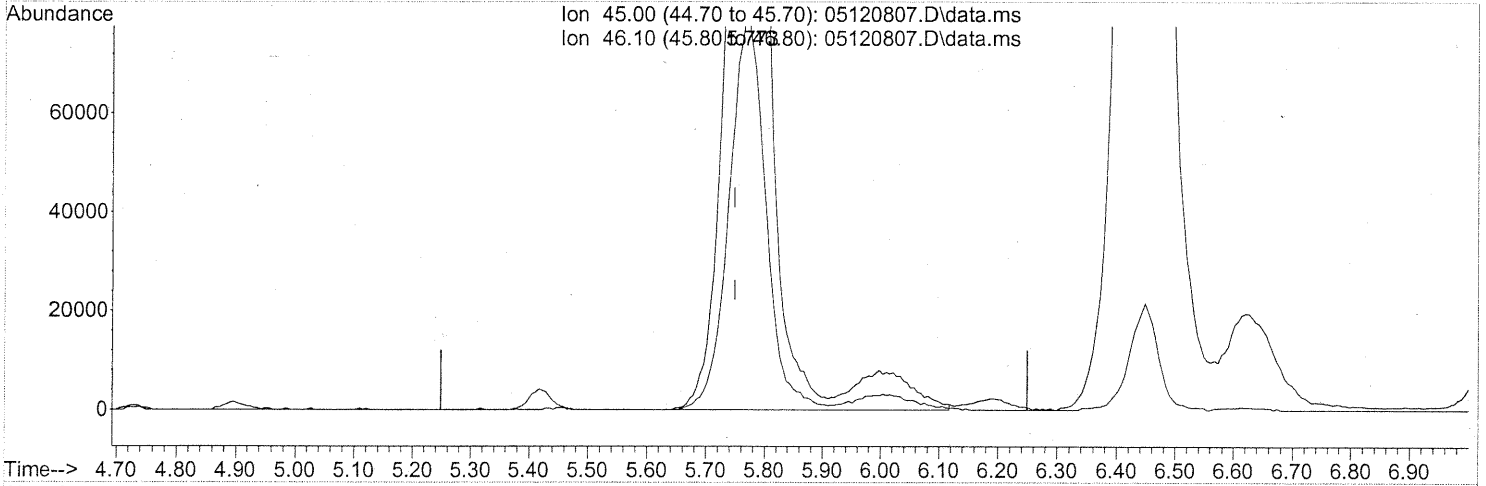
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120807.D  
Acq On : 12 May 2008 19:34  
Operator : WA  
Sample : 50ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020804  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:43:03 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 19:59:09 2008  
Response via : Initial Calibration



(10) Ethanol (T)  
5.773min (+0.024) 42.95ng m  
response 933140

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	36.98
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*DA 5/13/08*

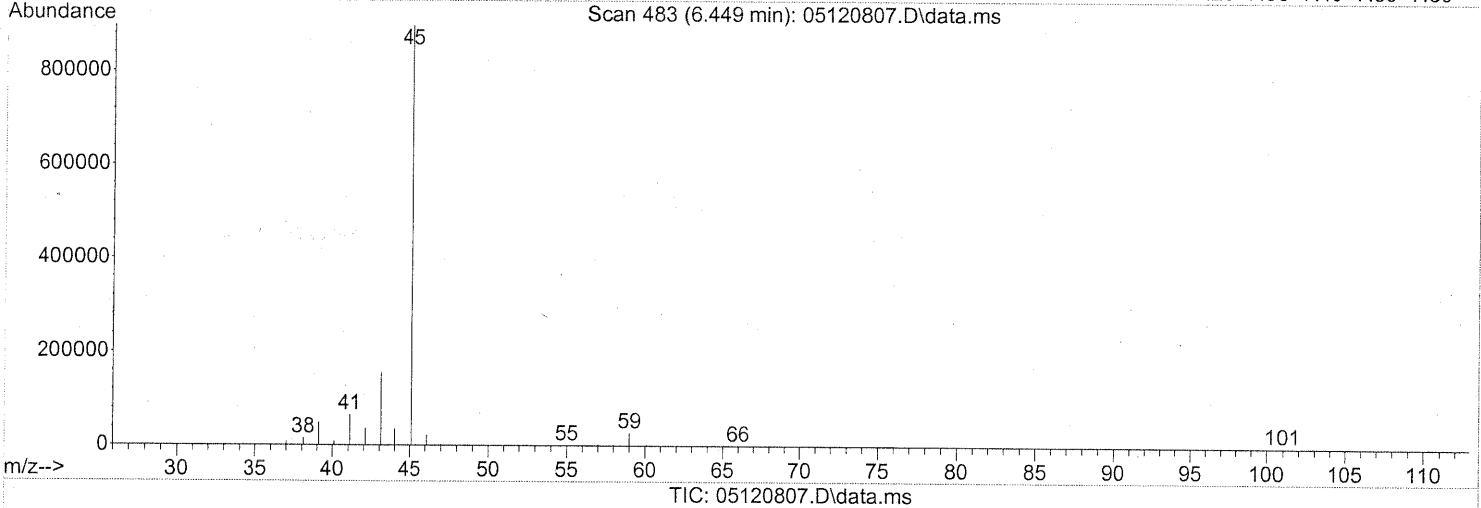
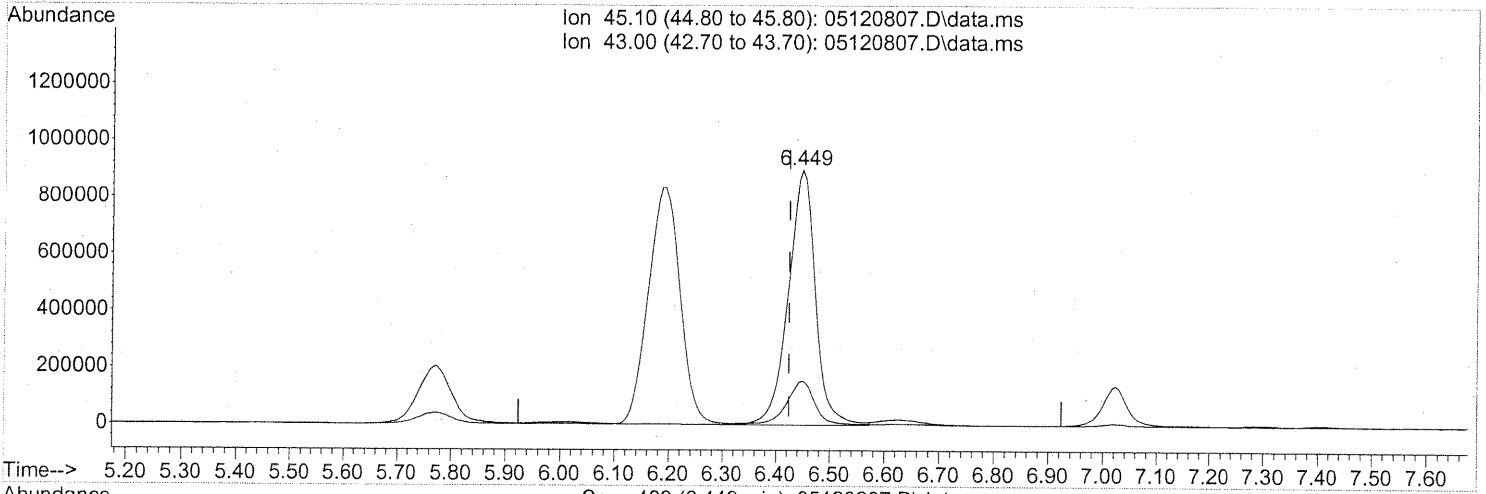
*Cam 5/13/08*

1047

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:43:03 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.449min (+0.024) 43.15ng  
 response 3140681

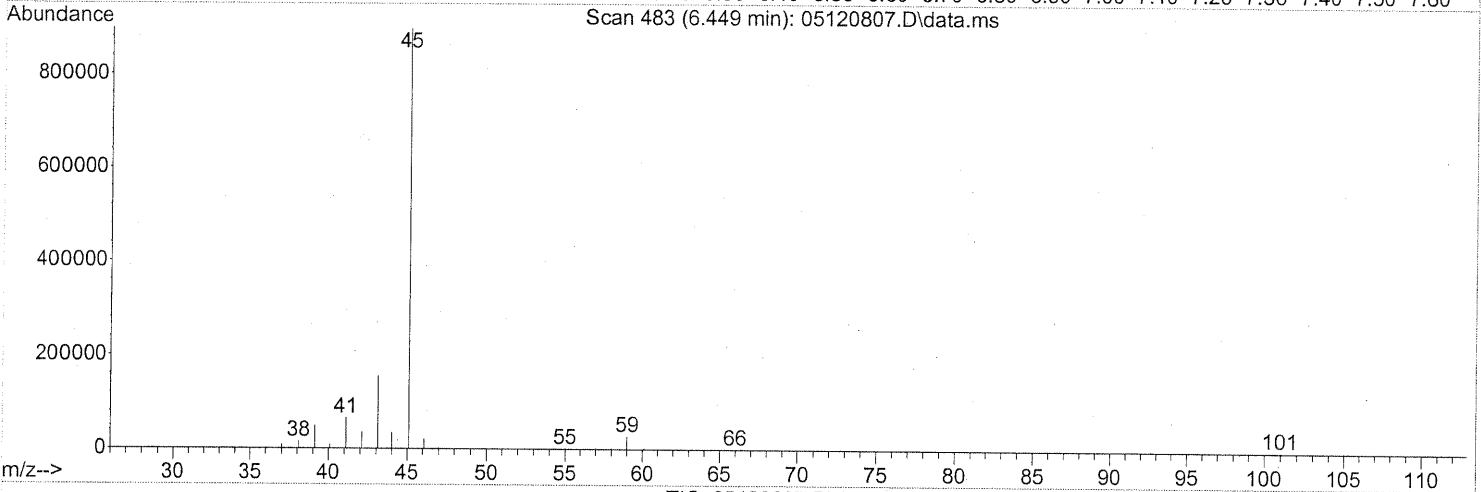
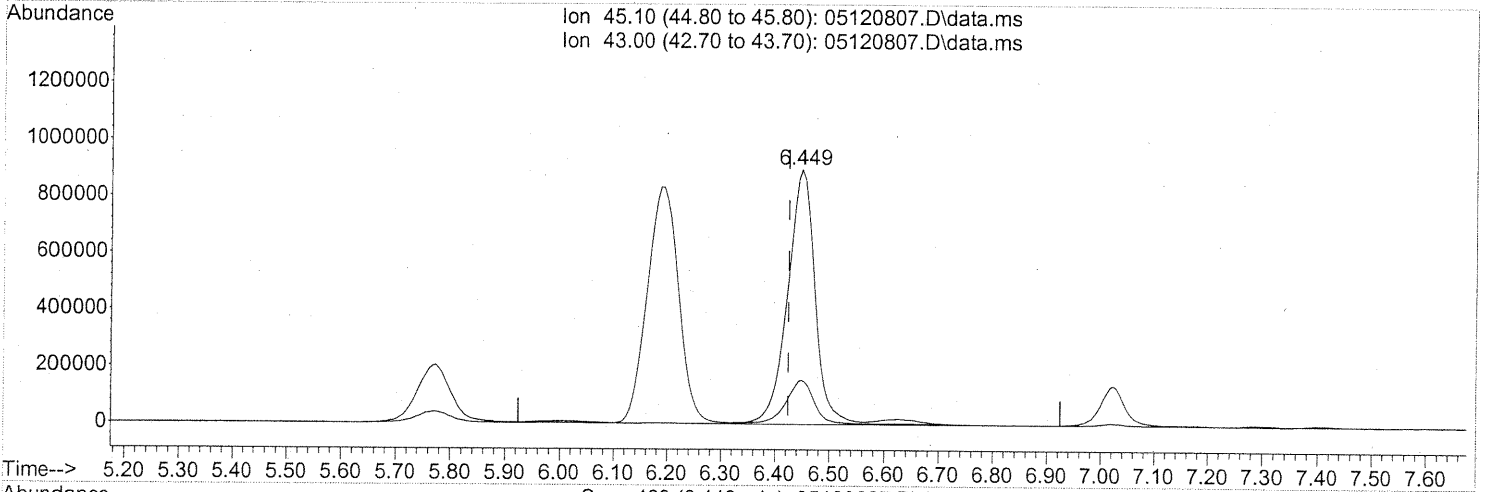
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	18.28
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120807.D  
 Acq On : 12 May 2008 19:34  
 Operator : WA  
 Sample : 50ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:43:03 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 6.449min (+0.024) 44.57ng m  
 response 3244165

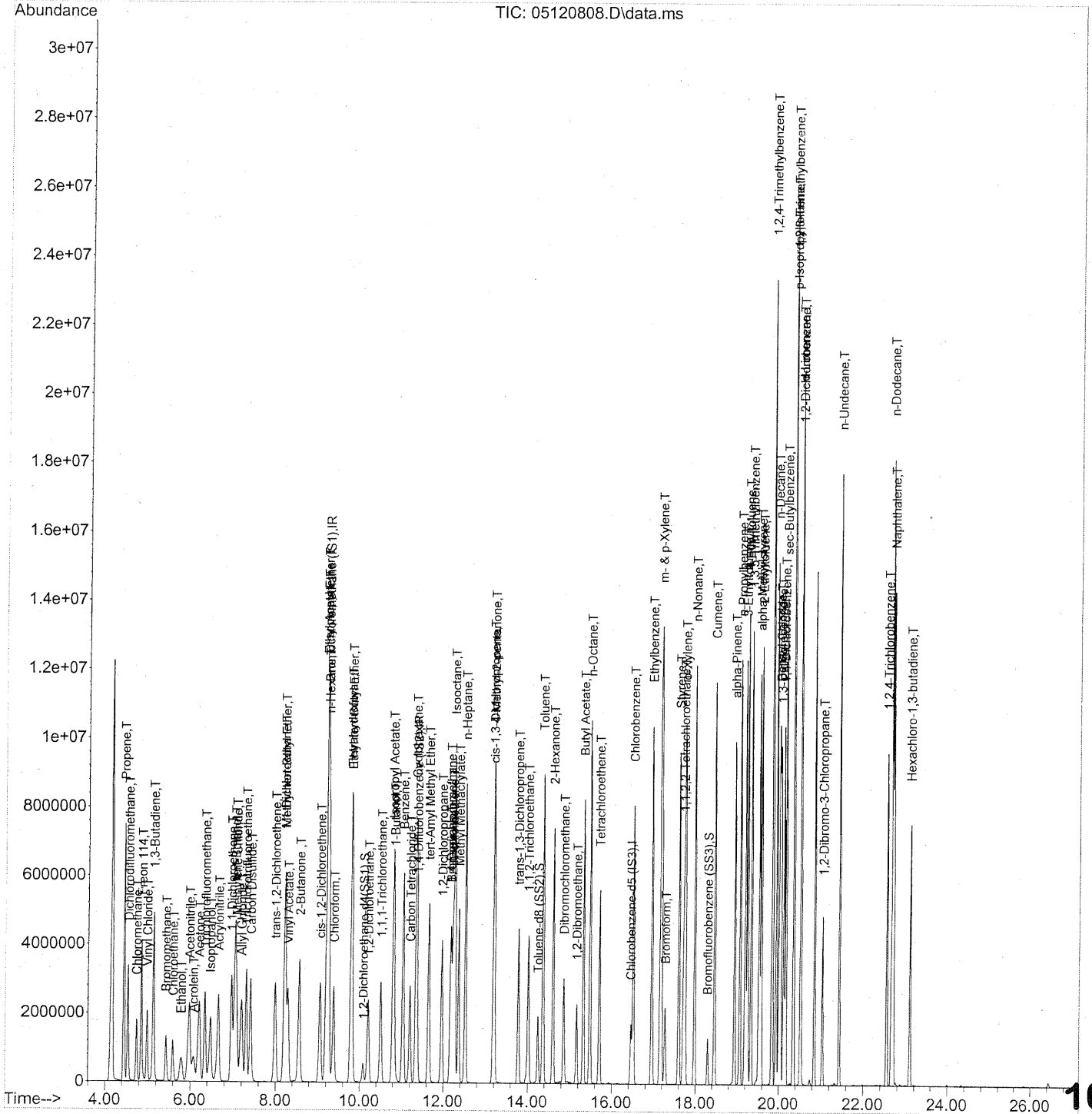
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.70
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*  
*IDA 5/13/08*  
*Em 5/13/08*

1049

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:46:09 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



1050



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:46:09 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	9.25	130	341457	25.000	ng	0.02
37) 1,4-Difluorobenzene (IS2)	11.38	114	1474367	25.000	ng	0.01
56) Chlorobenzene-d5 (IS3)	16.46	82	626994	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.09	65	560643	24.016	ng	0.02
Spiked Amount	25.000					
				Recovery	=	96.08%
57) Toluene-d8 (SS2)	14.25	98	1534528	24.859	ng	0.01
Spiked Amount	25.000					
				Recovery	=	99.44%
73) Bromofluorobenzene (SS3)	18.29	174	419141	23.326	ng	0.00
Spiked Amount	25.000					
				Recovery	=	93.32%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.45	42	3810462	114.986	ng	95
3) Dichlorodifluoromethane	4.55	85	3649099	90.347	ng	99
4) Chloromethane	4.74	50	2873884	58.193	ng	100
5) Freon 114	4.86	135	1948767	97.421	ng	97
6) Vinyl Chloride	4.99	62	3106582	91.803	ng	95
7) 1,3-Butadiene	5.14	54	3264471	104.381	ng	90
8) Bromomethane	5.43	94	1323880	93.187	ng	99
9) Chloroethane	5.60	64	1473466	96.396	ng	96
10) Ethanol	5.79	45	1988471m	86.044	ng	
11) Acetonitrile	5.98	41	5467206	82.516	ng	99
12) Acrolein	6.08	56	1460396	80.188	ng	97
13) Acetone	6.21	58	1955342	70.637	ng	92
14) Trichlorofluoromethane	6.35	101	3310237	98.199	ng	99
15) Isopropanol	6.47	45	4970817m	64.202	ng	
16) Acrylonitrile	6.66	53	3885559	96.537	ng	98
17) 1,1-Dichloroethene	6.96	96	1769289	106.756	ng	# 83
18) tert-Butanol	7.05	59	6366599	96.717	ng	96
19) Methylene Chloride	7.08	84	1739024	97.332	ng	# 34
20) Allyl Chloride	7.20	41	3799795	103.578	ng	82
21) Trichlorotrifluoroethane	7.31	151	1604087	109.156	ng	98
22) Carbon Disulfide	7.41	76	6401191	89.082	ng	100
23) trans-1,2-Dichloroethene	7.99	61	3580521	103.217	ng	88
24) 1,1-Dichloroethane	8.21	63	3993791	101.630	ng	94
25) Methyl tert-Butyl Ether	8.22	73	5547604	104.243	ng	77
26) Vinyl Acetate	8.29	86	445721	102.123	ng	# 1
27) 2-Butanone	8.58	72	1252064	108.348	ng	# 17
28) cis-1,2-Dichloroethene	9.06	61	3323953	103.955	ng	89
29) Diisopropyl Ether	9.22	87	1452200	98.283	ng	# 1
30) Ethyl Acetate	9.22	61	1064742	133.053	ng	84
31) n-Hexane	9.26	57	5165118	107.930	ng	91

1051

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:46:09 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.38	83	3000982	118.173	ng	96
34) Tetrahydrofuran	9.80	72	1220345	114.162	ng	# 41
35) Ethyl tert-Butyl Ether	9.81	87	2160859	102.515	ng	# 63
36) 1,2-Dichloroethane	10.21	62	2974350	99.016	ng	96
38) 1,1,1-Trichloroethane	10.51	97	2857691	99.997	ng	91
39) Isopropyl Acetate	10.80	61	1551331	104.443	ng	# 56
40) 1-Butanol	10.83	56	2685947	96.993	ng	98
41) Benzene	11.04	78	7168607	99.524	ng	99
42) Carbon Tetrachloride	11.21	117	2556890	115.394	ng	99
43) Cyclohexane	11.36	84	2809116	98.276	ng	# 47
44) tert-Amyl Methyl Ether	11.65	73	5121899	101.444	ng	77
45) 1,2-Dichloropropane	11.97	63	2321006	104.654	ng	97
46) Bromodichloromethane	12.17	83	2344283	109.559	ng	93
47) Trichloroethene	12.23	130	2202212	107.670	ng	100
48) 1,4-Dioxane	12.17	88	1533279	112.899	ng	# 62
49) Isooctane	12.27	57	12248329	103.349	ng	95
50) Methyl Methacrylate	12.37	100	786463	115.509	ng	91
51) n-Heptane	12.53	71	1953319	107.725	ng	# 53
52) cis-1,3-Dichloropropene	13.19	75	2882575	101.205	ng	100
53) 4-Methyl-2-pentanone	13.21	58	2755779	106.475	ng	81
54) trans-1,3-Dichloropropene	13.78	75	2927991	115.967	ng	98
55) 1,1,2-Trichloroethane	14.02	97	1803758	101.766	ng	95
58) Toluene	14.37	91	8073536	107.053	ng	99
59) 2-Hexanone	14.61	43	7784477	101.135	ng	96
60) Dibromochloromethane	14.86	129	2300231	113.917	ng	100
61) 1,2-Dibromoethane	15.17	107	2148027	108.901	ng	99
62) Butyl Acetate	15.33	43	8628640	110.122	ng	95
63) n-Octane	15.50	57	2557999	107.837	ng	91
64) Tetrachloroethene	15.71	166	2071246	106.727	ng	99
65) Chlorobenzene	16.52	112	5520718	108.988	ng	99
66) Ethylbenzene	16.96	91	9373842	109.003	ng	96
67) m- & p-Xylene	17.18	91	14829123	264.195	ng	95
68) Bromoform	17.28	173	1584323	142.575	ng	100
69) Styrene	17.61	104	6019293	113.740	ng	95
70) o-Xylene	17.75	91	7410409	123.513	ng	95
71) n-Nonane	17.98	43	6830538	107.216	ng	92
72) 1,1,2,2-Tetrachloroethane	17.72	83	3279947	126.036	ng	94
74) Cumene	18.46	105	9537403	112.665	ng	97
75) alpha-Pinene	18.94	93	4647718	113.226	ng	95
76) n-Propylbenzene	19.08	91	11353348	108.296	ng	95
77) 3-Ethyltoluene	19.20	105	9955524	108.564	ng	97
78) 4-Ethyltoluene	19.25	105	9649372	115.689	ng	97
79) 1,3,5-Trimethylbenzene	19.34	105	8250332	112.015	ng	97

1052

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

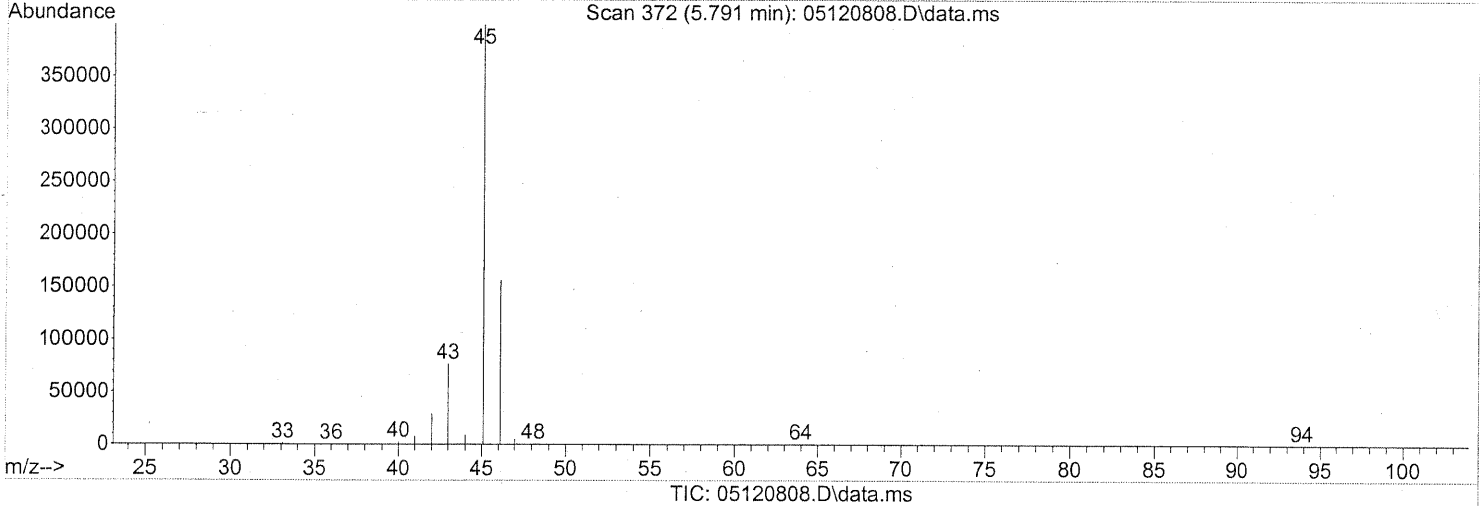
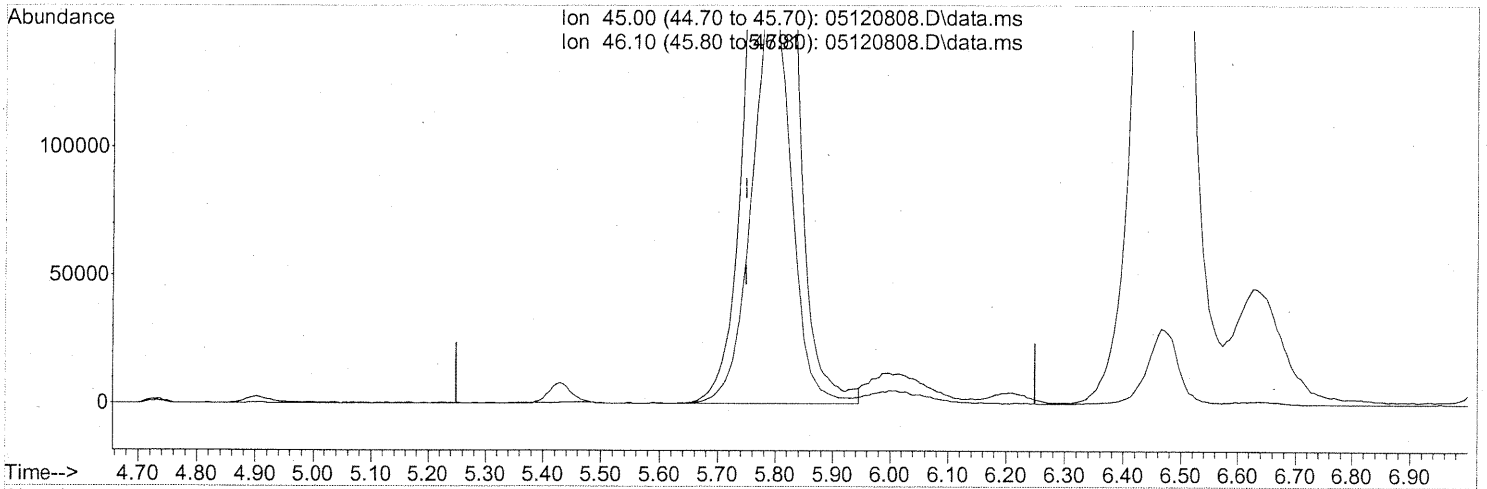
Quant Time: May 12 20:46:09 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.53	118	4600600	113.865	ng	99
81) 2-Ethyltoluene	19.58	105	9463228	103.968	ng	95
82) 1,2,4-Trimethylbenzene	19.85	105	8654690	115.016	ng	94
83) n-Decane	19.94	57	6564253	112.573	ng	78
84) Benzyl Chloride	20.01	91	7235809	115.904	ng	93
85) 1,3-Dichlorobenzene	20.04	146	4834605	107.810	ng	100
86) 1,4-Dichlorobenzene	20.11	146	4907451	114.419	ng	99
87) sec-Butylbenzene	20.17	105	11256761	114.168	ng	97
88) p-Isopropyltoluene	20.36	119	10647178	127.093	ng	95
89) 1,2,3-Trimethylbenzene	20.36	105	8625379	117.556	ng	91
90) 1,2-Dichlorobenzene	20.53	146	4555576	110.563	ng	99
91) d-Limonene	20.52	68	3054873	115.776	ng	96
92) 1,2-Dibromo-3-Chloropr...	21.05	157	1511955	114.003	ng	94
93) n-Undecane	21.44	57	7181007	117.691	ng	77
94) 1,2,4-Trichlorobenzene	22.56	184	887882	121.458	ng	# 85
95) Naphthalene	22.70	128	12485791	114.779	ng	99
96) n-Dodecane	22.67	57	7240156	123.503	ng	76
97) Hexachloro-1,3-butadiene	23.11	225	1302962	117.126	ng	100

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

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:45:05 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.791min (+0.042) 82.36ng  
 response 1903385

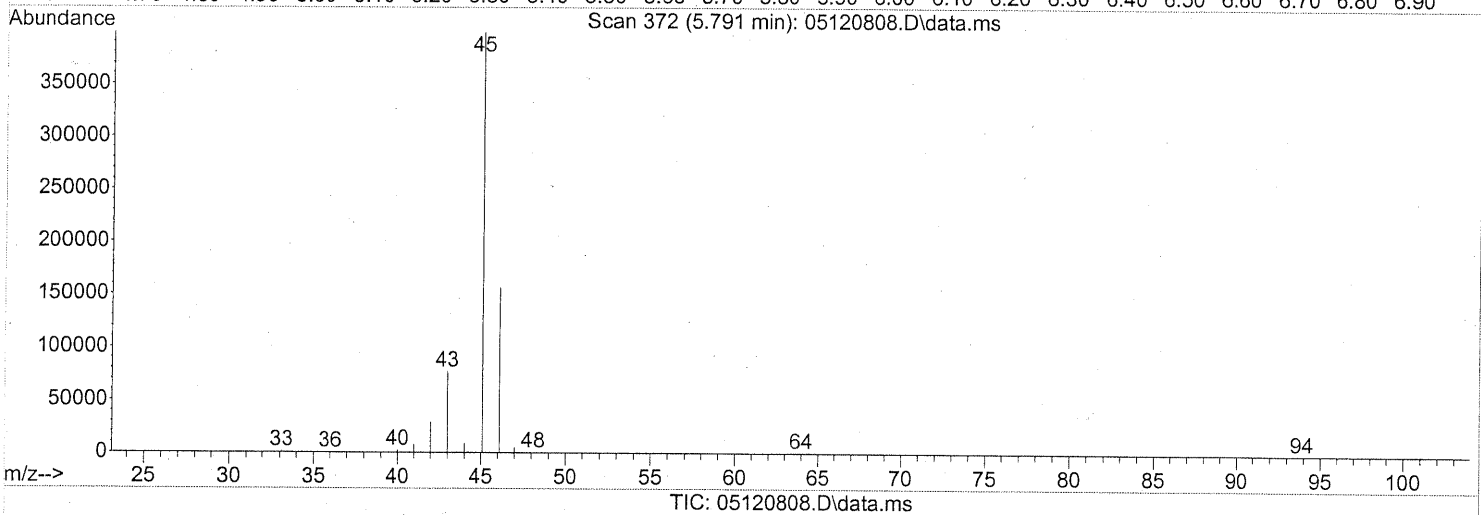
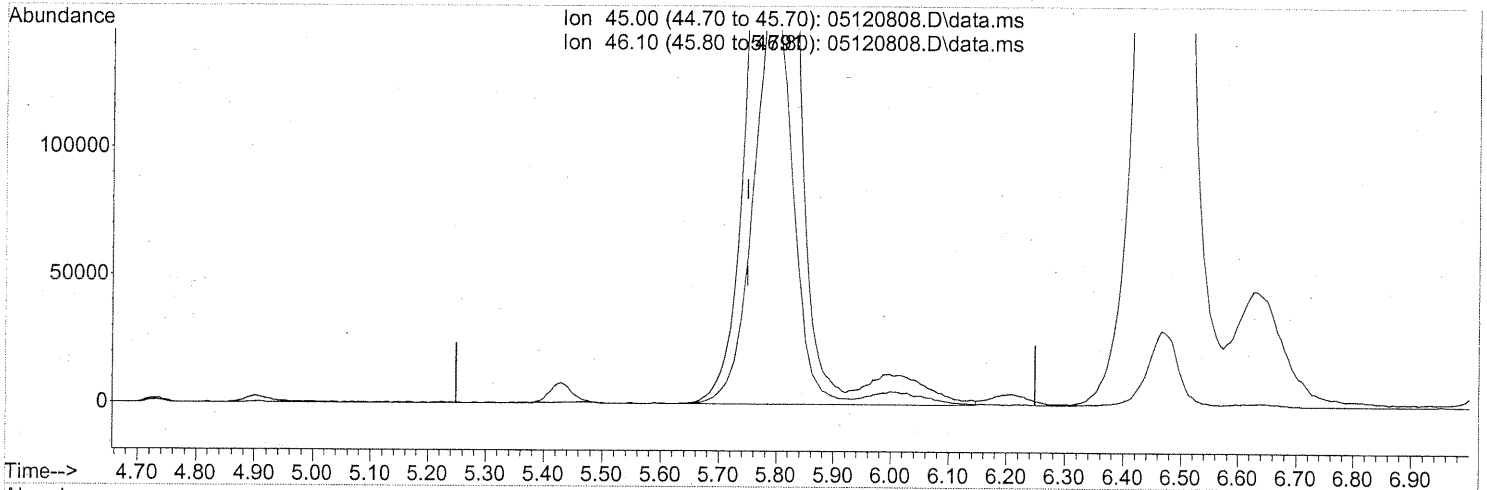
*split peaks*

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:45:05 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.791min (+0.042) 86.04ng m  
 response 1988471

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	38.00
0.00	0.00	0.00
0.00	0.00	0.00

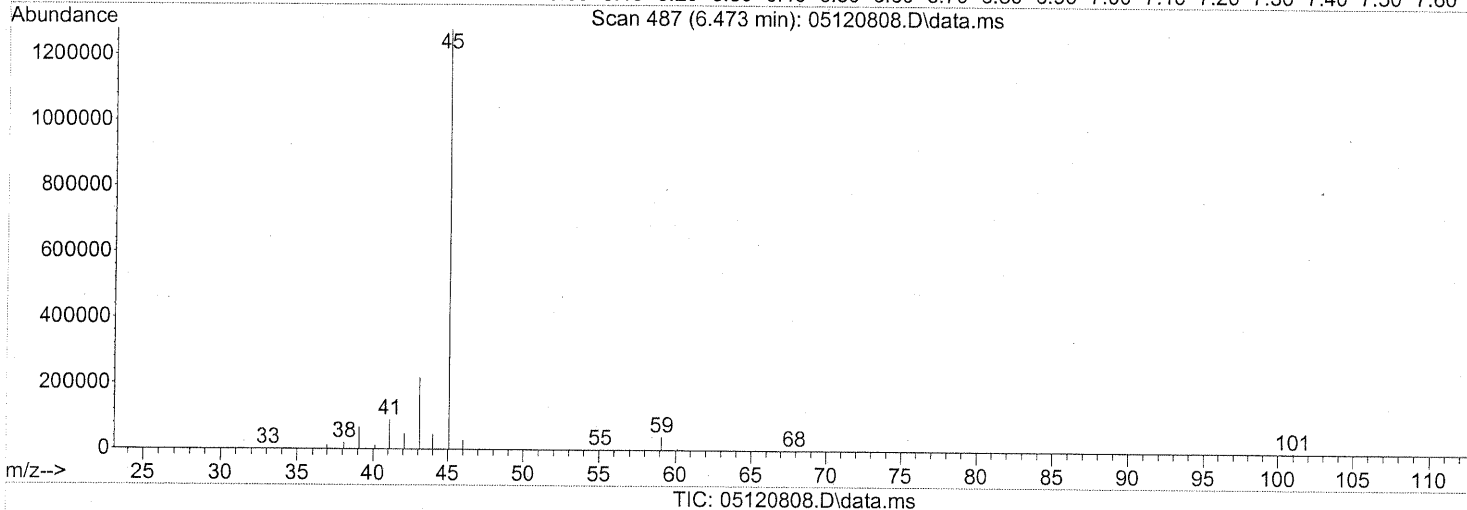
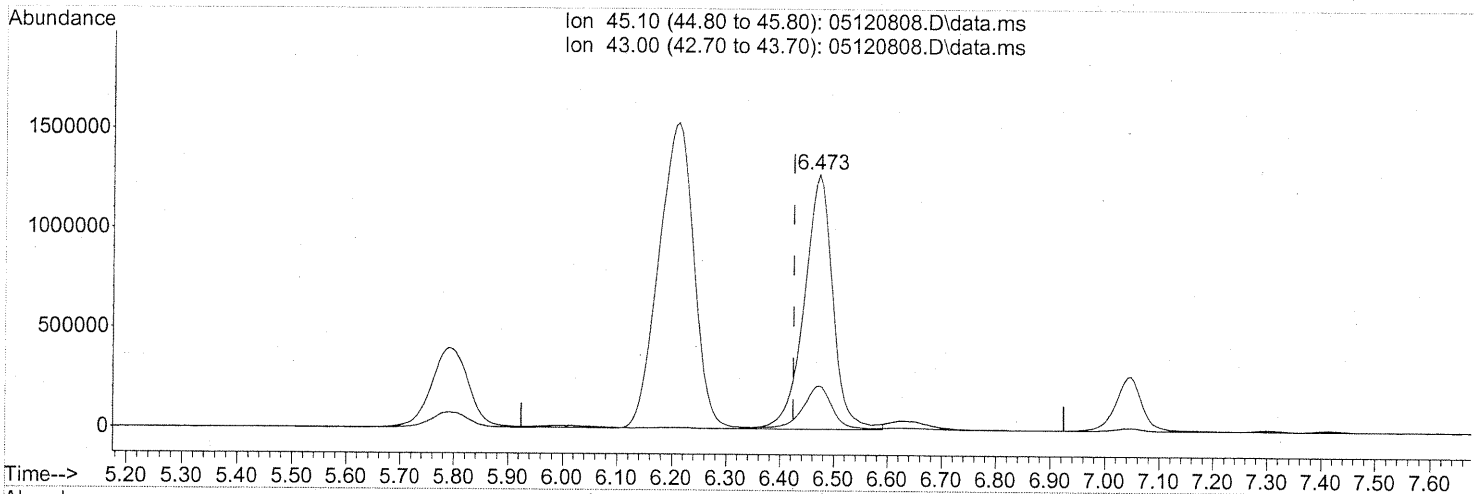
*int. whole peaks*  
*DA 5/13/08*  
*Em 5/13/08*

1055

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120808.D  
Acq On : 12 May 2008 20:12  
Operator : WA  
Sample : 100ng TO-15 ICAL STD  
Misc : S20-05120801/S20-05020804  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:45:05 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 19:59:09 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
6.473min (+0.048) 61.18ng  
response 4736917

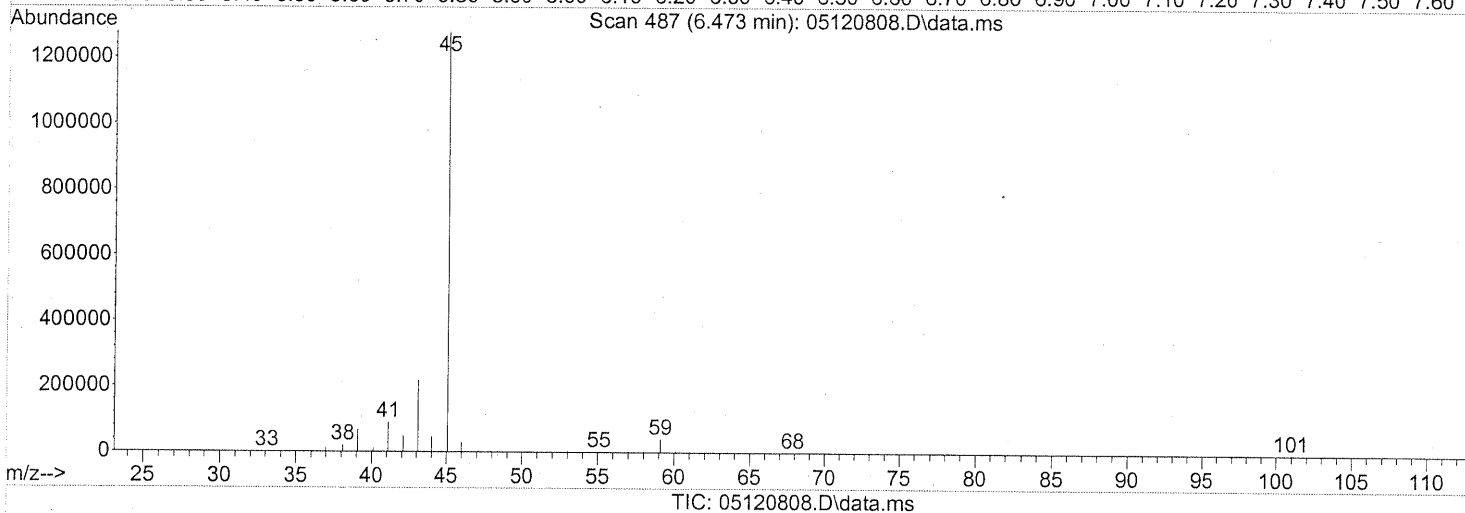
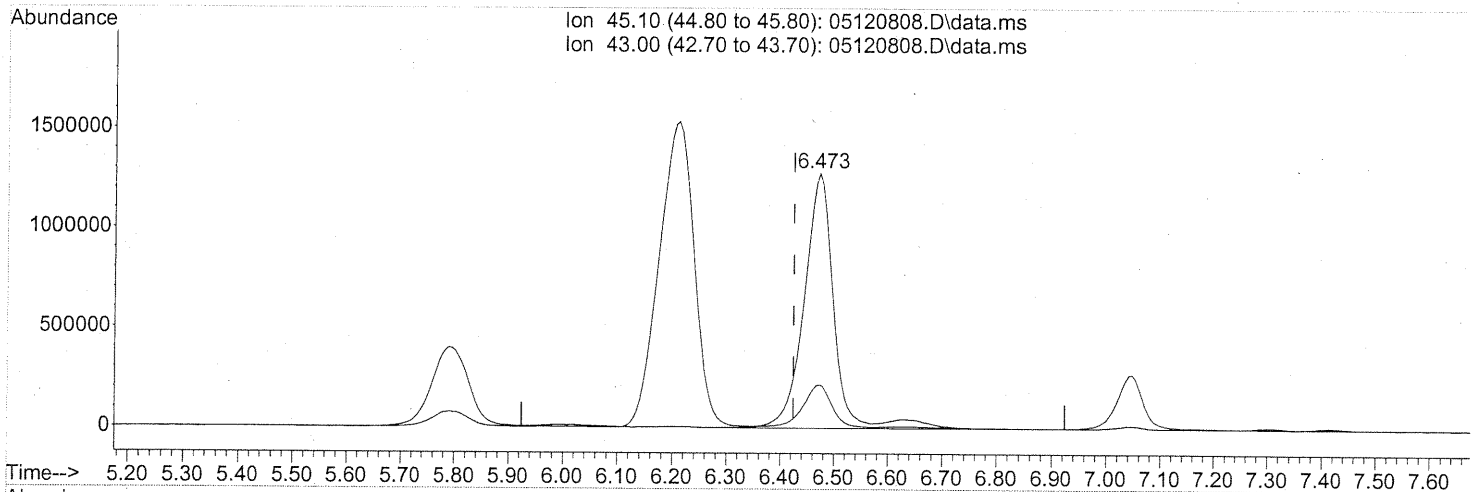
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	18.47
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120808.D  
 Acq On : 12 May 2008 20:12  
 Operator : WA  
 Sample : 100ng TO-15 ICAL STD  
 Misc : S20-05120801/S20-05020804  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 12 20:45:05 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 19:59:09 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

6.473min (+0.048) 64.20ng m

response 4970817

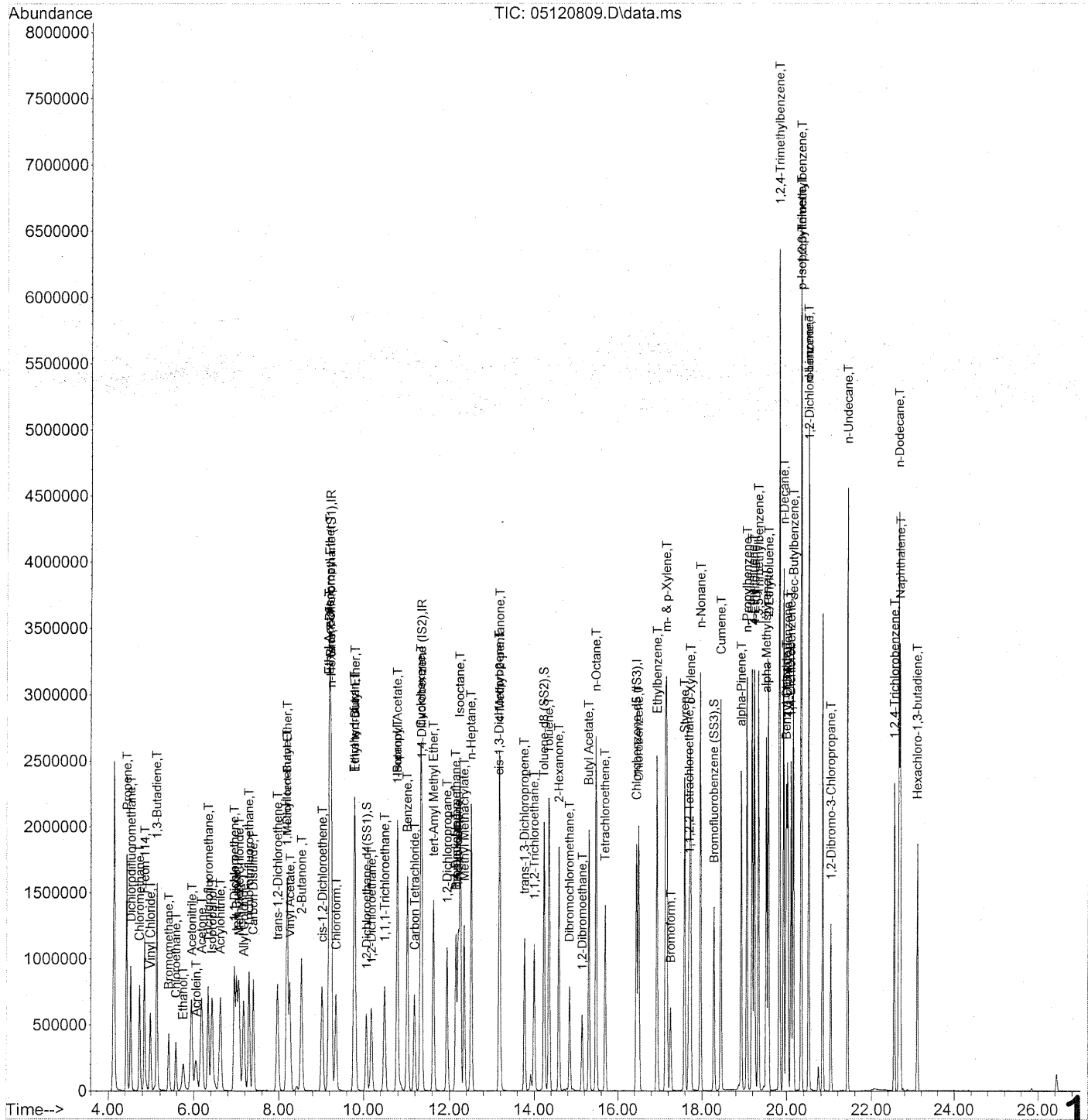
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.60
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peak*  
*WA 5/13/08*  
*em 5/13/08*

1057

Data Path : J:\MS16\DATA\2008\_05\12a\  
Data File : 05120809.D  
Acq On : 12 May 2008 20:50  
Operator : WA  
Sample : 25ng TO-15 ICV STD  
Misc : S20-05120801/S20-05050804  
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:33:29 2008  
Quant Method : J:\MS16\METHODS\R16051208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Mon May 12 20:57:17 2008  
Response via : Initial Calibration



1058



Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:33:29 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	9.23	130	359421	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	11.37	114	1526634	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	16.45	82	643954	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)	Recovery
33) 1,2-Dichloroethane-d4 (...)	10.07	65	573007	22.608	ng	-0.02	90.44%
Spiked Amount				25.000			
57) Toluene-d8 (SS2)	14.23	98	1603235	25.286	ng	-0.01	101.16%
Spiked Amount				25.000			
73) Bromofluorobenzene (SS3)	18.29	174	431997	26.179	ng	0.00	104.72%
Spiked Amount				25.000			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	832470	23.163	ng	95
3) Dichlorodifluoromethane	4.53	85	919304	21.633	ng	99
4) Chloromethane	4.73	50	1142893	21.754	ng	100
5) Freon 114	4.85	135	495935	24.202	ng	97
6) Vinyl Chloride	4.98	62	785129	21.644	ng	95
7) 1,3-Butadiene	5.13	54	894664	26.416	ng	90
8) Bromomethane	5.41	94	382886	25.614	ng	99
9) Chloroethane	5.58	64	400885	24.176	ng	96
10) Ethanol	5.75	45	521089m	21.087	ng	
11) Acetonitrile	5.95	41	1428516	22.263	ng	99
12) Acrolein	6.06	56	390726	22.205	ng	98
13) Acetone	6.18	58	511481	21.538	ng	90
14) Trichlorofluoromethane	6.34	101	854602	24.316	ng	99
15) Isopropanol	6.42	45	1686254m	21.901	ng	
16) Acrylonitrile	6.63	53	1005844	23.815	ng	98
17) 1,1-Dichloroethene	6.95	96	453917	26.383	ng	87
18) tert-Butanol	7.00	59	1585489	22.642	ng	96
19) Methylene Chloride	7.06	84	447279	23.841	ng	# 44
20) Allyl Chloride	7.17	41	931832	23.702	ng	83
21) Trichlorotrifluoroethane	7.30	151	406387	27.514	ng	97
22) Carbon Disulfide	7.40	76	1614424	22.799	ng	100
23) trans-1,2-Dichloroethene	7.97	61	892592	24.261	ng	89
24) 1,1-Dichloroethane	8.19	63	994167	23.699	ng	95
25) Methyl tert-Butyl Ether	8.20	73	1403860	24.895	ng	80
26) Vinyl Acetate	8.27	86	120884	25.092	ng	# 1
27) 2-Butanone	8.55	72	315741	25.806	ng	# 24
28) cis-1,2-Dichloroethene	9.04	61	833321	24.569	ng	90
29) Diisopropyl Ether	9.20	87	391024	25.111	ng	# 30
30) Ethyl Acetate	9.19	61	249631	27.585	ng	86
31) n-Hexane	9.24	57	1254291	24.525	ng	91059

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:33:29 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	9.36	83	761301	28.405	ng	95
34) Tetrahydrofuran	9.78	72	311324	25.388	ng	# 50
35) Ethyl tert-Butyl Ether	9.80	87	555733	25.161	ng	# 69
36) 1,2-Dichloroethane	10.19	62	745517	23.253	ng	96
38) 1,1,1-Trichloroethane	10.50	97	726361	24.743	ng	91
39) Isopropyl Acetate	10.79	61	395753	25.362	ng	# 64
40) 1-Butanol	10.79	56	606731	20.980	ng	93
41) Benzene	11.02	78	1803745	24.101	ng	100
42) Carbon Tetrachloride	11.20	117	637206	28.751	ng	99
43) Cyclohexane	11.34	84	707848	23.878	ng	# 49
44) tert-Amyl Methyl Ether	11.64	73	1316324	24.976	ng	78
45) 1,2-Dichloropropane	11.95	63	580044	24.983	ng	97
46) Bromodichloromethane	12.16	83	596221	26.810	ng	93
47) Trichloroethene	12.21	130	544713	26.430	ng	99
48) 1,4-Dioxane	12.16	88	376745	26.796	ng	# 67
49) Isooctane	12.26	57	3038611	24.444	ng	96
50) Methyl Methacrylate	12.36	100	196570	26.599	ng	89
51) n-Heptane	12.52	71	489149	25.688	ng	# 58
52) cis-1,3-Dichloropropene	13.17	75	725987	24.323	ng	100
53) 4-Methyl-2-pentanone	13.19	58	649344	23.839	ng	83
54) trans-1,3-Dichloropropene	13.77	75	730534	27.710	ng	98
55) 1,1,2-Trichloroethane	14.00	97	448638	24.701	ng	95
58) Toluene	14.35	91	1961425	25.249	ng	99
59) 2-Hexanone	14.59	43	1792634	21.823	ng	97
60) Dibromochloromethane	14.85	129	563947	27.814	ng	100
61) 1,2-Dibromoethane	15.15	107	529801	26.429	ng	99
62) Butyl Acetate	15.31	43	1996076	23.817	ng	95
63) n-Octane	15.49	57	632348	25.434	ng	92
64) Tetrachloroethene	15.70	166	500257	26.055	ng	98
65) Chlorobenzene	16.50	112	1336159	25.990	ng	99
66) Ethylbenzene	16.95	91	2252218	25.417	ng	95
67) m- & p-Xylene	17.16	91	3505247	60.375	ng	95
68) Bromoform	17.26	173	390456	35.611	ng	100
69) Styrene	17.59	104	1403319	26.080	ng	97
70) o-Xylene	17.74	91	1776925	28.700	ng	95
71) n-Nonane	17.97	43	1679791	24.565	ng	92
72) 1,1,2,2-Tetrachloroethane	17.70	83	799744	29.320	ng	94
74) Cumene	18.45	105	2321182	26.836	ng	96
75) alpha-Pinene	18.93	93	1085388	25.683	ng	97
76) n-Propylbenzene	19.07	91	2755913	25.408	ng	94
77) 3-Ethyltoluene	19.19	105	2351341	25.100	ng	96
78) 4-Ethyltoluene	19.24	105	2249188	26.367	ng	96
79) 1,3,5-Trimethylbenzene	19.33	105	1910258	25.435	ng	95

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Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:33:29 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration

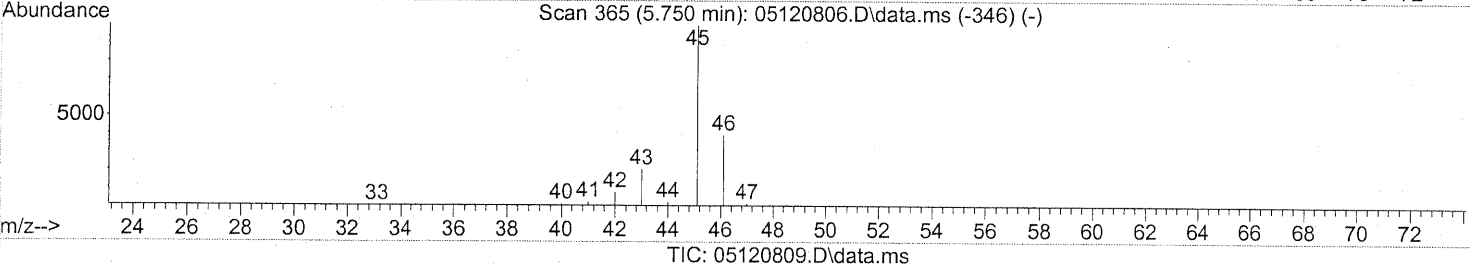
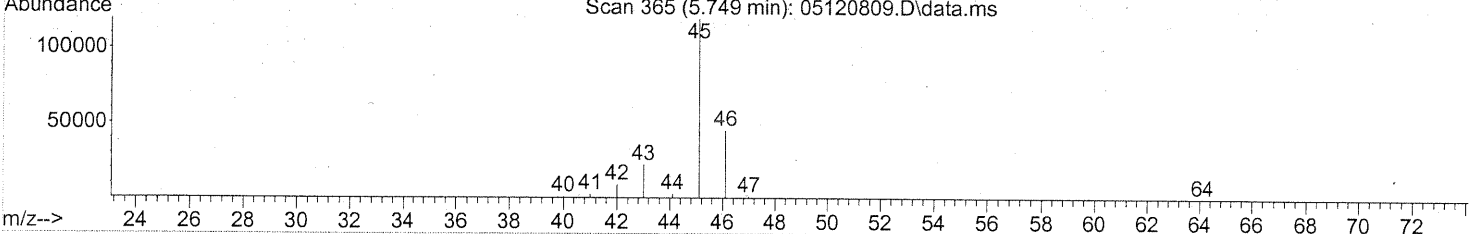
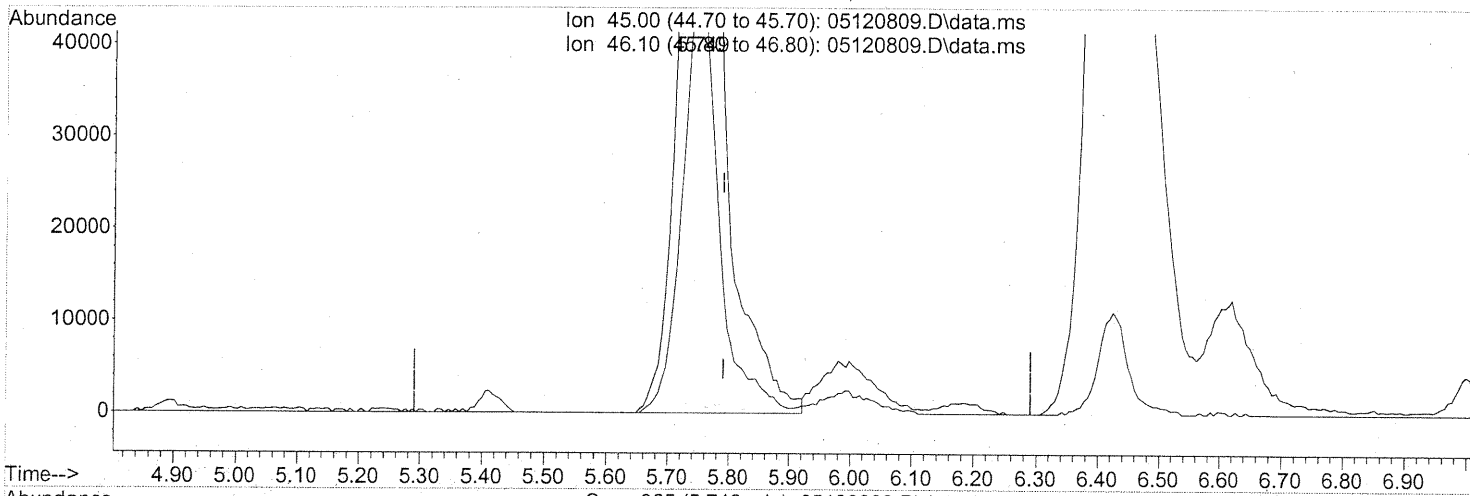
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	19.51	118	949258	23.296	ng	99
81) 2-Ethyltoluene	19.57	105	2277634	24.506	ng	94
82) 1,2,4-Trimethylbenzene	19.83	105	1984836	25.576	ng	92
83) n-Decane	19.93	57	1579821	25.684	ng	80
84) Benzyl Chloride	19.99	91	1687149	26.088	ng	93
85) 1,3-Dichlorobenzene	20.02	146	1126091	25.004	ng	100
86) 1,4-Dichlorobenzene	20.10	146	1133732	26.355	ng	99
87) sec-Butylbenzene	20.16	105	2648591	26.198	ng	97
88) p-Isopropyltoluene	20.34	119	2533506	29.508	ng	95
89) 1,2,3-Trimethylbenzene	20.35	105	2096429	27.742	ng	90
90) 1,2-Dichlorobenzene	20.52	146	1069985	25.616	ng	100
91) d-Limonene	20.52	68	624816	22.317	ng	97
92) 1,2-Dibromo-3-Chloropr...	21.04	157	360138	27.360	ng	93
93) n-Undecane	21.43	57	1682568	26.011	ng	80
94) 1,2,4-Trichlorobenzene	22.55	184	200483	27.591	ng	# 87
95) Naphthalene	22.69	128	2810509	25.594	ng	99
96) n-Dodecane	22.66	57	1596402	25.291	ng	79
97) Hexachloro-1,3-butadiene	23.11	225	298877	27.512	ng	100

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:32:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 5.749min (-0.042) 19.67ng  
 response 486094

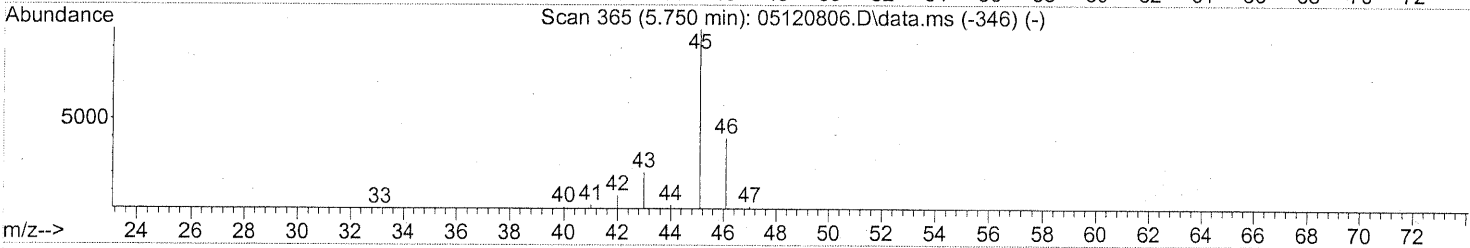
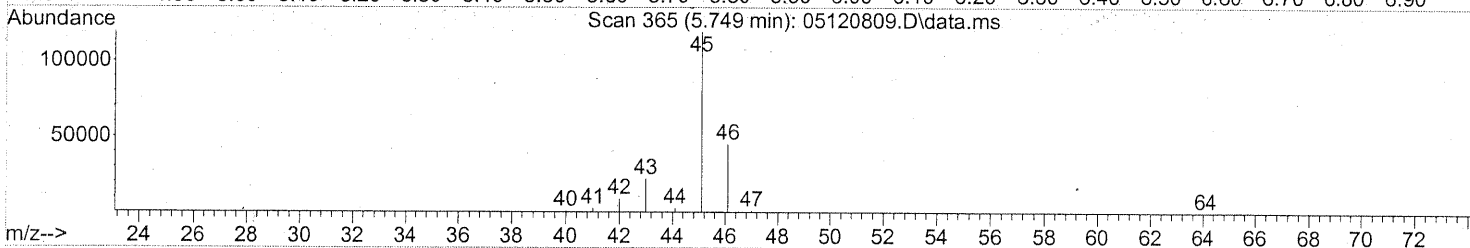
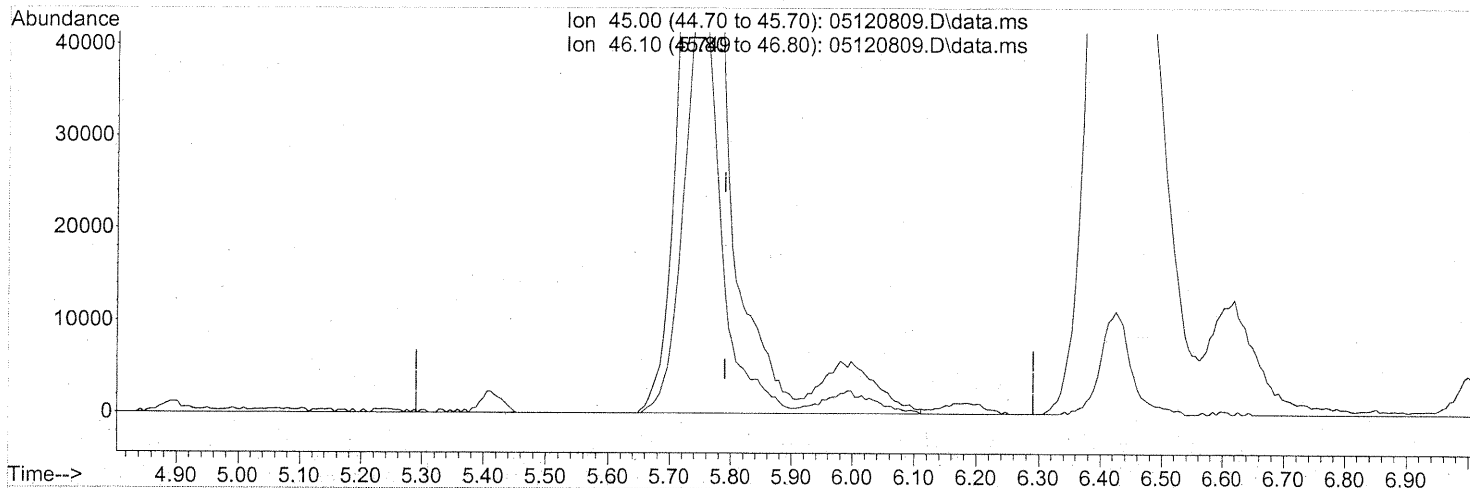
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.19
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:32:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration



TIC: 05120809.D\data.ms

(10) Ethanol (T)  
 5.749min (-0.042) 21.09ng m  
 response 521089

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	36.55
0.00	0.00	0.00
0.00	0.00	0.00

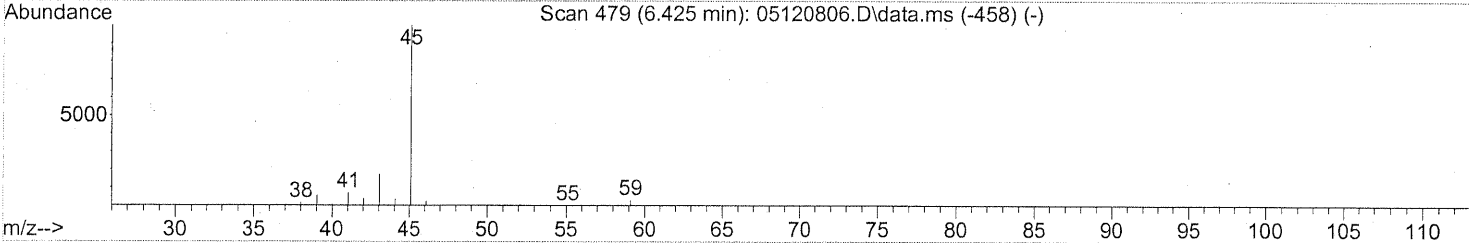
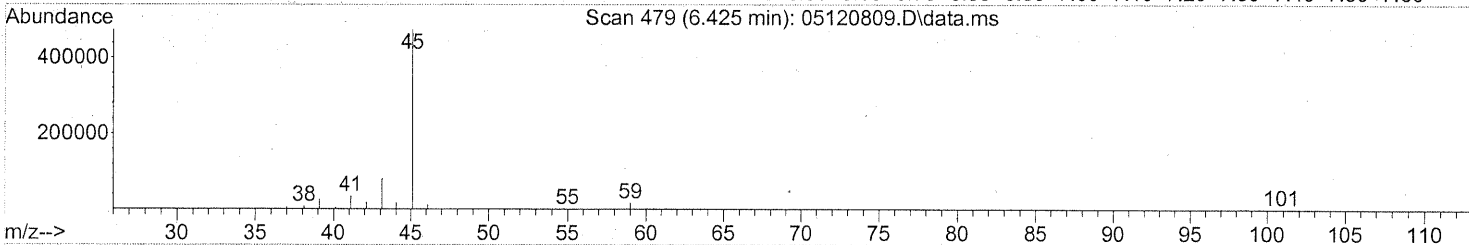
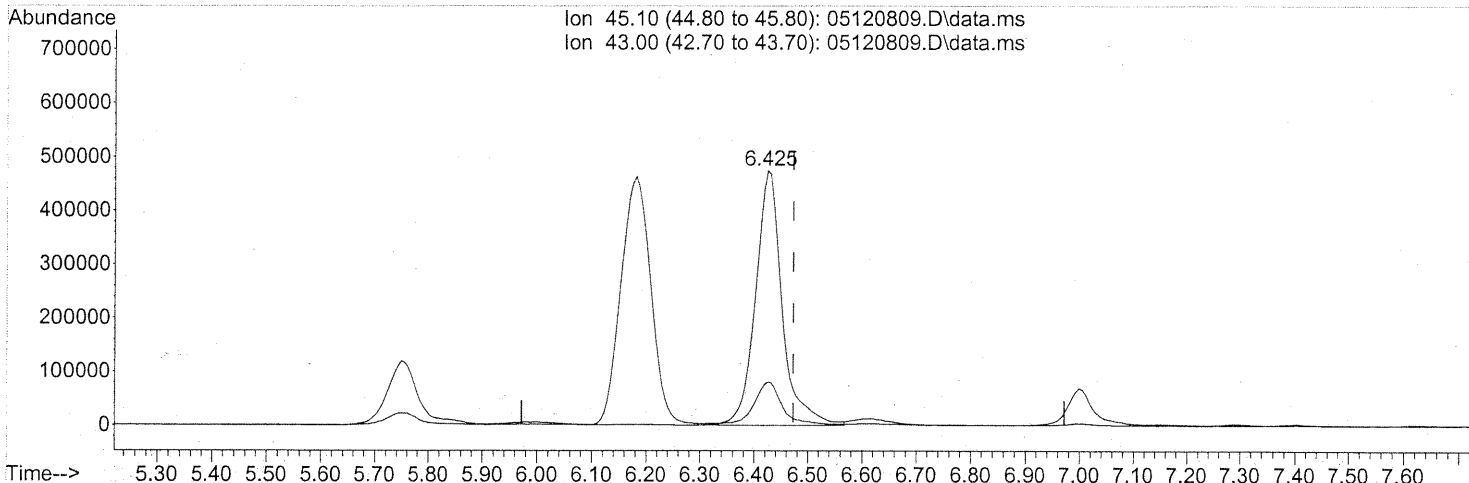
*int. whole peaks*  
*at 5/13/08*  
*em 5/13/08*

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Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:32:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration



TIC: 05120809.D\data.ms

(15) Isopropanol (T)  
 6.425min (-0.048) 21.15ng  
 response 1628544

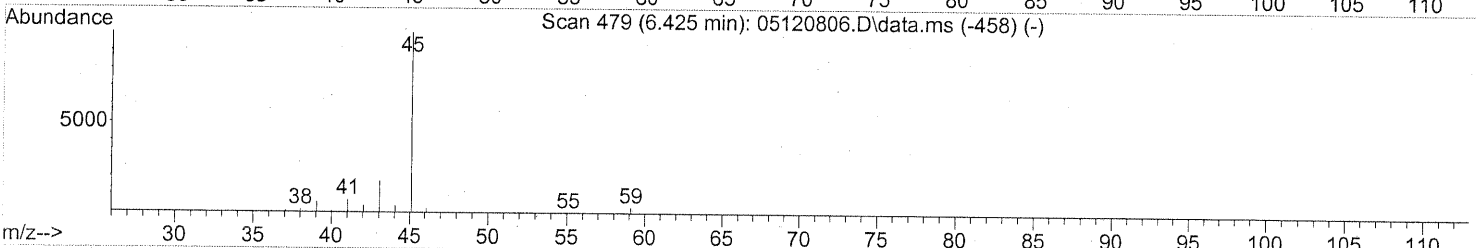
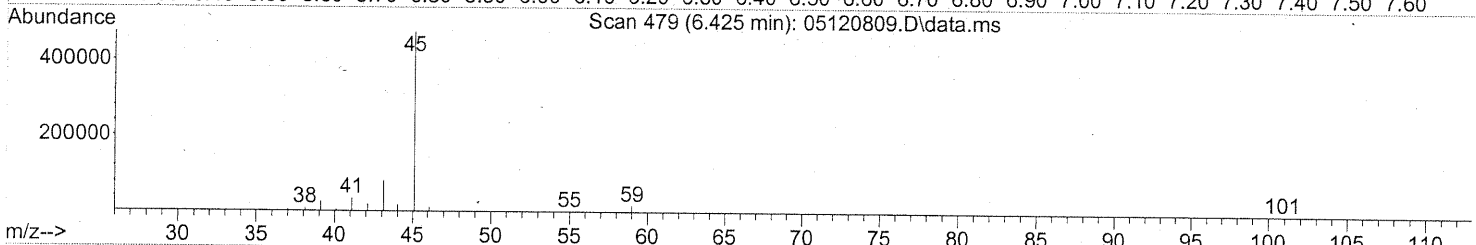
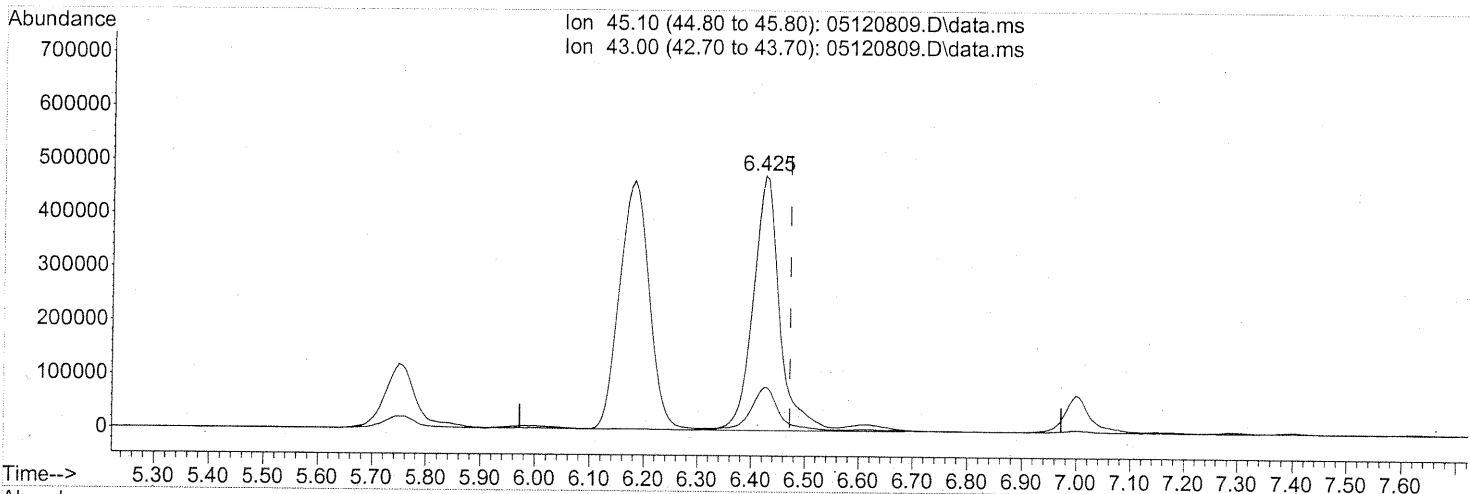
*split peaks*

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	17.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120809.D  
 Acq On : 12 May 2008 20:50  
 Operator : WA  
 Sample : 25ng TO-15 ICV STD  
 Misc : S20-05120801/S20-05050804  
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 21:32:00 2008  
 Quant Method : J:\MS16\METHODS\R16051208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Mon May 12 20:57:17 2008  
 Response via : Initial Calibration



TIC: 05120809.D\data.ms

(15) Isopropanol (T)  
 6.425min (-0.048) 21.90ng m  
 response 1686254

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	16.98
0.00	0.00	0.00
0.00	0.00	0.00

*int. whole peaks*

*DA 5/13/08*

*Em 5/13/08*

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**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 05120809.D  
 Data File Path: J:\MS16\DATA\2008\_05\12a\  
 Operator: WA  
 Date Acquired: 5/12/08 20:50  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV STD  
 Misc Info: S20-05120801/S20-05050804  
 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>
2)	Propene	4.44	23.16	26.3	88.1	70	130	*
3)	Dichlorodifluoromethane	4.53	21.63	25.5	84.8	70	130	*
4)	Chloromethane	4.73	21.75	24.5	88.8	70	130	*
5)	Freon 114	4.85	24.20	26.0	93.1	70	130	*
6)	Vinyl Chloride	4.98	21.64	24.8	87.3	70	130	*
7)	1,3-Butadiene	5.13	26.42	30.0	88.1	70	130	*
8)	Bromomethane	5.41	25.61	25.0	102.5	70	130	*
9)	Chloroethane	5.58	24.18	25.0	96.7	70	130	*
10)	Ethanol	5.75	21.09	23.8	88.6	70	130	*
11)	Acetonitrile	5.95	22.26	25.3	88.0	70	130	*
12)	Acrolein	6.06	22.21	24.8	89.5	70	130	*
13)	Acetone	6.18	21.54	26.8	80.4	70	130	*
14)	Trichlorofluoromethane	6.34	24.32	26.3	92.5	70	130	*
15)	Isopropanol	6.42	21.90	25.8	84.9	70	130	*
16)	Acrylonitrile	6.63	23.81	25.5	93.4	70	130	*
17)	1,1-Dichloroethene	6.95	26.38	27.8	94.9	70	130	*
18)	tert-Butanol	7.00	22.64	25.8	87.8	70	130	*
19)	Methylene Chloride	7.06	23.84	27.8	85.8	70	130	*
20)	Allyl Chloride	7.17	23.70	26.8	88.4	70	130	*
21)	Trichlorotrifluoroethane	7.30	27.51	27.8	99.0	70	130	*
22)	Carbon Disulfide	7.40	22.80	25.0	91.2	70	130	*
23)	trans-1,2-Dichloroethene	7.97	24.26	26.5	91.6	70	130	*
24)	1,1-Dichloroethane	8.19	23.70	26.8	88.4	70	130	*
25)	Methyl tert-Butyl Ether	8.20	24.89	26.8	92.9	70	130	*
26)	Vinyl Acetate	8.27	25.09	25.3	99.2	70	130	*
27)	2-Butanone	8.55	25.81	27.0	95.6	70	130	*
28)	cis-1,2-Dichloroethene	9.04	24.57	27.0	91.0	70	130	*
29)	Diisopropyl Ether	9.20	25.11	26.3	95.5	70	130	*
30)	Ethyl Acetate	9.19	27.58	29.3	94.1	70	130	*
31)	n-Hexane	9.24	24.52	27.0	90.8	70	130	*
32)	Chloroform	9.36	28.41	29.8	95.3	70	130	*
34)	Tetrahydrofuran	9.78	25.39	26.8	94.7	70	130	*
35)	Ethyl tert-Butyl Ether	9.80	25.16	26.0	96.8	70	130	*
36)	1,2-Dichloroethane	10.19	23.25	26.3	88.4	70	130	*
38)	1,1,1-Trichloroethane	10.50	24.74	26.8	92.3	70	130	*
39)	Isopropyl Acetate	10.79	25.36	25.5	99.5	70	130	*

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INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 05120809.D  
 Data File Path: J:\MS16\DATA\2008\_05\12a\  
 Operator: WA  
 Date Acquired: 5/12/08 20:50  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV STD  
 Misc Info: S20-05120801/S20-05050804  
 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>
40)	1-Butanol	10.79	20.98	24.8	84.6	70	130	*
41)	Benzene	11.02	24.10	27.0	89.3	70	130	*
42)	Carbon Tetrachloride	11.20	28.75	26.0	110.6	70	130	*
43)	Cyclohexane	11.34	23.88	26.8	89.1	70	130	*
44)	tert-Amyl Methyl Ether	11.64	24.98	26.0	96.1	70	130	*
45)	1,2-Dichloropropane	11.95	24.98	26.5	94.3	70	130	*
46)	Bromodichloromethane	12.16	26.81	27.8	96.4	70	130	*
47)	Trichloroethene	12.21	26.43	27.3	96.8	70	130	*
48)	1,4-Dioxane	12.16	26.80	27.5	97.4	70	130	*
49)	Isooctane	12.26	24.44	26.3	92.9	70	130	*
50)	Methyl Methacrylate	12.36	26.60	25.8	103.1	70	130	*
51)	n-Heptane	12.52	25.69	26.8	95.9	70	130	*
52)	cis-1,3-Dichloropropene	13.17	24.32	25.0	97.3	70	130	*
53)	4-Methyl-2-pentanone	13.19	23.84	27.5	86.7	70	130	*
54)	trans-1,3-Dichloropropene	13.77	27.71	28.0	99.0	70	130	*
55)	1,1,2-Trichloroethane	14.00	24.70	26.3	93.9	70	130	*
58)	Toluene	14.35	25.25	26.5	95.3	70	130	*
59)	2-Hexanone	14.59	21.82	26.3	83.0	70	130	*
60)	Dibromochloromethane	14.85	27.81	27.0	103.0	70	130	*
61)	1,2-Dibromoethane	15.15	26.43	26.3	100.5	70	130	*
62)	Butyl Acetate	15.31	23.82	26.3	90.6	70	130	*
63)	n-Octane	15.49	25.43	26.0	97.8	70	130	*
64)	Tetrachloroethene	15.70	26.06	26.0	100.2	70	130	*
65)	Chlorobenzene	16.50	25.99	26.5	98.1	70	130	*
66)	Ethylbenzene	16.95	25.42	26.3	96.6	70	130	*
67)	m- & p-Xylene	17.16	60.37	62.5	96.6	70	130	*
68)	Bromoform	17.26	35.61	31.3	113.8	70	130	*
69)	Styrene	17.59	26.08	26.3	99.2	70	130	*
70)	o-Xylene	17.74	28.70	29.8	96.3	70	130	*
71)	n-Nonane	17.97	24.56	26.0	94.5	70	130	*
72)	1,1,2,2-Tetrachloroethane	17.70	29.32	29.8	98.4	70	130	*
74)	Cumene	18.45	26.84	27.0	99.4	70	130	*
75)	alpha-Pinene	18.93	25.68	26.3	97.7	70	130	*
76)	n-Propylbenzene	19.07	25.41	26.3	96.6	70	130	*
77)	3-Ethyltoluene	19.19	25.10	25.5	98.4	70	130	*

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**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: **05120809.D**  
 Data File Path: **J:\MS16\DATA\2008\_05\12a\**  
 Operator: **WA**  
 Date Acquired: **5/12/08 20:50**  
 Acq. Method File: **TO15.M**  
 Sample Name: **25ng TO-15 ICV STD**  
 Misc Info: **S20-05120801/S20-05050804**  
 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>26.37</b>	<b>26.5</b>	<b>99.5</b>	<b>70</b>	<b>130</b>	*
79)	<b>1,3,5-Trimethylbenzene</b>	<b>19.33</b>	<b>25.44</b>	<b>26.0</b>	<b>97.8</b>	<b>70</b>	<b>130</b>	*
80)	alpha-Methylstyrene	19.51	23.30	25.5	91.4	70	130	*
81)	2-Ethyltoluene	19.57	24.51	24.8	98.8	70	130	*
82)	<b>1,2,4-Trimethylbenzene</b>	<b>19.83</b>	<b>25.58</b>	<b>26.0</b>	<b>98.4</b>	<b>70</b>	<b>130</b>	*
83)	n-Decane	19.93	25.68	26.3	97.7	70	130	*
84)	<b>Benzyl Chloride</b>	<b>19.99</b>	<b>26.09</b>	<b>25.8</b>	<b>101.1</b>	<b>70</b>	<b>130</b>	*
85)	<b>1,3-Dichlorobenzene</b>	<b>20.02</b>	<b>25.00</b>	<b>25.5</b>	<b>98.1</b>	<b>70</b>	<b>130</b>	*
86)	<b>1,4-Dichlorobenzene</b>	<b>20.10</b>	<b>26.36</b>	<b>26.3</b>	<b>100.2</b>	<b>70</b>	<b>130</b>	*
87)	sec-Butylbenzene	20.16	26.20	26.8	97.8	70	130	*
88)	p-Isopropyltoluene	20.34	29.51	28.8	102.5	70	130	*
89)	1,2,3-Trimethylbenzene	20.35	27.74	28.5	97.3	70	130	*
90)	<b>1,2-Dichlorobenzene</b>	<b>20.52</b>	<b>25.62</b>	<b>25.8</b>	<b>99.3</b>	<b>70</b>	<b>130</b>	*
91)	d-Limonene	20.52	22.32	26.0	85.8	70	130	*
92)	<b>1,2-Dibromo-3-Chloropropane</b>	<b>21.04</b>	<b>27.36</b>	<b>25.8</b>	<b>106.0</b>	<b>70</b>	<b>130</b>	*
93)	n-Undecane	21.43	26.01	26.5	98.2	70	130	*
94)	<b>1,2,4-Trichlorobenzene</b>	<b>22.55</b>	<b>27.59</b>	<b>26.0</b>	<b>106.1</b>	<b>70</b>	<b>130</b>	*
95)	<b>Naphthalene</b>	<b>22.69</b>	<b>25.59</b>	<b>26.3</b>	<b>97.3</b>	<b>70</b>	<b>130</b>	*
96)	n-Dodecane	22.66	25.29	26.5	95.4	70	130	*
97)	<b>Hexachloro-1,3-butadiene</b>	<b>23.11</b>	<b>27.51</b>	<b>26.3</b>	<b>104.6</b>	<b>70</b>	<b>130</b>	*

**Bold = 67 Compound List**

Method Path : J:\MS13\METHODS\  
 Method File : R13052208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu May 22 11:20:46 2008  
 Response Via : Initial Calibration

Calibration Files

0.1 =05220802.D 0.5 =05220803.D 1.0 =05220804.D 5.0 =05220805.D  
 25 =05220806.D 50 =05220807.D 100 =05220808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD
1) IR Bromochloromethane (I									
2) Propene	2.996	2.142	1.885	1.694	1.693	1.735	1.676	1.974	24.32
3) Dichlorodifluoromet	4.403	4.247	3.956	3.401	3.313	3.156	2.998	3.639	15.31
4) Chloromethane	2.957	3.067	2.796	2.018	2.332	2.045	1.281	2.357	26.99
5) Freon 114	2.153	2.139	1.885	1.633	1.610	1.556	1.557	1.790	14.92
6) Vinyl Chloride	2.718	2.689	2.542	2.163	2.207	2.119	2.068	2.358	11.93
7) 1,3-Butadiene	1.659	1.954	1.730	1.666	1.787	1.769	1.713	1.754	5.72
8) Bromomethane	1.626	1.472	1.337	1.161	1.224	1.203	1.169	1.313	13.46
9) Chloroethane	1.226	1.327	1.162	1.041	1.050	1.032	1.003	1.120	10.85
10) Ethanol	1.635	1.517	1.362	1.140	1.191	1.186	1.170	1.314	14.85
11) Acetonitrile	6.122	4.022	3.645	3.315	3.213	3.203	3.086	3.801	28.24
12) Acrolein	0.968	1.081	0.964	0.844	0.914	0.909	0.893	0.939	8.07
13) Acetone	1.963	1.497	1.180	1.172	1.172	1.146	1.118	1.346	24.71
14) Trichlorofluorometh	3.673	3.687	3.177	2.901	2.908	2.808	2.702	3.122	13.04
15) Isopropanol	5.776	5.067	4.561	3.546	4.053	3.658	3.384	4.292	20.66
16) Acrylonitrile	1.923	2.234	2.145	1.930	2.079	2.050	1.983	2.049	5.60
17) 1,1-Dichloroethene	1.512	1.582	1.406	1.279	1.305	1.283	1.247	1.373	9.48
18) tert-Butanol	4.223	4.305	3.973	3.489	3.769	3.668	2.128	3.651	20.07
19) Methylene Chloride	1.910	1.686	1.599	1.344	1.368	1.329	1.293	1.504	15.50
20) Allyl Chloride	1.466	1.992	1.865	1.947	2.252	2.275	2.251	2.007	14.50
21) Trichlorotrifluoroe	1.781	1.592	1.471	1.292	1.301	1.276	1.227	1.420	14.40
22) Carbon Disulfide	7.391	6.305	5.692	5.153	5.306	5.151	4.955	5.707	15.23
23) trans-1,2-Dichloroe	2.502	2.491	2.233	2.074	2.138	2.086	2.050	2.225	8.75
24) 1,1-Dichloroethane	2.778	3.083	2.737	2.443	2.471	2.415	2.342	2.610	10.19
25) Methyl tert-Butyl E	4.983	4.864	4.518	4.093	4.135	4.014	3.857	4.352	10.10
26) Vinyl Acetate			0.163	0.208	0.285	0.290	0.298	0.249	24.15
27) 2-Butanone	1.137	1.125	0.977	0.900	0.951	0.923	0.862	0.982	11.00
28) cis-1,2-Dichloroeth	2.376	2.444	2.222	1.960	2.018	1.960	1.904	2.126	10.33
29) Diisopropyl Ether	1.432	1.325	1.184	1.109	1.151	1.136	1.089	1.204	10.55
30) Ethyl Acetate	0.496	0.589	0.542	0.495	0.531	0.538	0.521	0.530	6.03
31) n-Hexane	3.007	2.923	2.684	2.497	2.603	2.562	2.454	2.676	7.93

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Method Path : J:\MS13\METHODS\  
 Method File : R13052208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu May 22 11:20:46 2008  
 Response Via : Initial Calibration

Calibration Files

0.1 =05220802.D 0.5 =05220803.D 1.0 =05220804.D 5.0 =05220805.D  
 25 =05220806.D 50 =05220807.D 100 =05220808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD	
32) T Chloroform	2.691	2.730	2.328	2.094	2.109	2.037	1.968	2.280	13.80	
33) S 1,2-Dichloroethane	1.794	1.789	1.787	1.711	1.716	1.686	1.643	1.732	3.40	
34) T Tetrahydrofuran	1.021	1.099	0.975	0.873	0.917	0.866	0.821	0.939	10.44	
35) T Ethyl tert-Butyl Et	1.797	1.942	1.697	1.574	1.637	1.594	1.558	1.686	8.30	
36) T 1,2-Dichloroethane	2.524	2.601	2.310	2.054	2.082	1.969	1.877	2.202	12.72	
-----ISTD-----										
37) IR 1,4-Difluorobenzene (	0.651	0.628	0.604	0.535	0.535	0.522	0.511	0.569	9.96	
38) T 1,1,1-Trichloroetha	0.187	0.233	0.196	0.205	0.227	0.225	0.221	0.214	8.22	
39) T Isopropyl Acetate	0.277	0.375	0.316	0.325	0.370	0.375	0.367	0.344	11.13	
40) T 1-Butanol	1.560	1.436	1.299	1.209	1.254	1.224	1.181	1.309	10.62	
41) T Benzene	0.497	0.547	0.505	0.483	0.507	0.498	0.491	0.504	4.12	
42) T Carbon Tetrachlorid	0.567	0.593	0.522	0.468	0.478	0.468	0.468	0.509	10.32	
43) T Cyclohexane	1.002	1.053	0.908	0.885	0.923	0.910	0.891	0.939	6.77	
44) T tert-Amyl Methyl Et	0.363	0.416	0.357	0.321	0.336	0.330	0.329	0.350	9.41	
45) T 1,2-Dichloropropane	0.439	0.509	0.447	0.421	0.433	0.428	0.420	0.442	7.00	
46) T Bromodichloromethan	0.530	0.487	0.406	0.352	0.352	0.341	0.344	0.402	19.24	
47) T Trichloroethene	0.276	0.274	0.245	0.229	0.237	0.234	0.233	0.247	8.06	
48) T 1,4-Dioxane	1.679	1.676	1.522	1.389	1.455	1.415	1.368	1.501	8.71	
49) T Isooctane	0.122	0.144	0.120	0.125	0.137	0.134	0.133	0.131	6.68	
50) T Methyl Methacrylate	0.343	0.392	0.351	0.330	0.347	0.337	0.335	0.348	5.94	
51) T n-Heptane	0.487	0.576	0.503	0.497	0.534	0.527	0.518	0.520	5.69	
52) T cis-1,3-Dichloropro	0.341	0.373	0.338	0.330	0.354	0.350	0.346	0.348	3.98	
53) T 4-Methyl-2-pentanone	0.405	0.443	0.423	0.435	0.483	0.480	0.474	0.449	6.78	
54) T trans-1,3-Dichlorop	0.341	0.367	0.322	0.306	0.315	0.308	0.307	0.323	6.97	
55) T 1,1,2-Trichloroetha	-----ISTD-----									
56) I Chlorobenzene-d5 (IS3	2.281	2.276	2.255	2.249	2.226	2.198	2.231	2.245	1.31	
57) S Toluene-d8 (SS2)	3.463	3.565	3.084	2.836	2.899	2.799	2.718	3.052	11.02	
58) T Toluene	1.912	2.227	2.158	2.079	2.193	2.120	2.032	2.103	5.10	
59) T 2-Hexanone	0.768	0.914	0.816	0.790	0.839	0.817	0.826	0.824	5.59	
60) T Dibromochloromethan	0.797	0.908	0.827	0.763	0.777	0.757	0.764	0.799	6.75	
61) T 1,2-Dibromoethane	-----ISTD-----									

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Method Path : J:\MS13\METHODS\  
 Method File : R13052208.M  
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 Last Update : Thu May 22 11:20:46 2008  
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Calibration Files  
 0.1 =05220802.D 0.5 =05220803.D 1.0 =05220804.D 5.0 =05220805.D  
 25 =05220806.D 50 =05220807.D 100 =05220808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	AVG	%RSD
62) T Butyl Acetate	1.835	2.349	2.145	2.075	2.250	2.180	2.107	2.135	7.54
63) T n-Octane	0.690	0.724	0.697	0.630	0.668	0.658	0.658	0.675	4.61
64) T Tetrachloroethene	1.085	1.019	0.880	0.821	0.845	0.823	0.850	0.903	11.64
65) T Chlorobenzene	2.246	2.309	2.117	1.922	1.949	1.899	1.880	2.046	8.66
66) T Ethylbenzene	3.745	3.906	3.547	3.348	3.482	3.344	3.125	3.500	7.51
67) T m- & p-Xylene	2.410	2.681	2.348	2.213	2.355	2.268	2.110	2.341	7.71
68) T Bromoform	0.579	0.613	0.562	0.598	0.655	0.639	0.648	0.613	5.82
69) T Styrene	2.121	2.195	2.060	2.004	2.140	2.085	2.043	2.092	3.08
70) T o-Xylene	2.664	2.842	2.526	2.396	2.503	2.421	2.337	2.527	6.91
71) T n-Nonane	1.672	2.020	1.792	1.739	1.842	1.775	1.720	1.794	6.32
72) T 1,1,2,2-Tetrachloro	0.868	1.052	1.008	1.065	1.132	1.118	1.129	1.053	8.89
73) S Bromofluorobenzene	0.879	0.895	0.904	0.922	0.931	0.923	0.937	0.913	2.31
74) T Cumene	3.579	3.802	3.406	3.191	3.337	3.227	3.014	3.365	7.78
75) T alpha-Pinene	1.711	1.882	1.729	1.649	1.760	1.737	1.710	1.740	4.10
76) T n-Propylbenzene	4.479	4.773	4.364	4.149	4.410	4.159	3.638	4.282	8.26
77) T 3-Ethyltoluene	3.439	4.011	3.499	3.424	3.723	3.619	3.356	3.582	6.34
78) T 4-Ethyltoluene	3.313	3.625	3.464	3.345	3.467	3.254	2.904	3.339	6.82
79) T 1,3,5-Trimethylbenz	3.271	3.262	2.995	2.895	3.052	2.926	2.715	3.017	6.64
80) T alpha-Methylstyrene	1.492	1.654	1.560	1.590	1.761	1.707	1.668	1.633	5.63
81) T 2-Ethyltoluene	3.480	3.971	3.697	3.585	3.795	3.604	3.275	3.630	6.15
82) T 1,2,4-Trimethylbenz	2.969	3.317	3.051	2.998	3.261	3.129	2.774	3.071	6.00
83) T n-Decane	1.469	1.883	1.664	1.676	1.805	1.722	1.610	1.690	7.92
84) T Benzyl Chloride	1.352	1.768	1.759	2.062	2.524	2.527	2.433	2.061	22.15
85) T 1,3-Dichlorobenzene	1.803	2.130	1.917	1.862	1.975	1.911	1.843	1.920	5.64
86) T 1,4-Dichlorobenzene	1.816	1.998	1.870	1.813	1.915	1.840	1.778	1.861	4.01
87) T sec-Butylbenzene	3.801	4.526	3.960	3.887	4.095	3.871	3.337	3.925	9.05
88) T p-Isopropyltoluene	2.977	3.482	3.289	3.207	3.536	3.341	2.786	3.231	8.33
89) T 1,2,3-Trimethylbenz	2.738	3.261	2.991	2.972	3.228	3.108	2.737	3.005	7.06
90) T 1,2-Dichlorobenzene	1.726	2.007	1.837	1.791	1.907	1.829	1.651	1.821	6.39
91) T d-Limonene	1.100	1.225	1.189	1.192	1.343	1.306	1.210	1.224	6.56
92) T 1,2-Dibromo-3-Chlor	0.385	0.514	0.509	0.578	0.658	0.651	0.661	0.565	18.20
93) T n-Undecane	1.496	1.930	1.742	1.747	1.891	1.846	1.727	1.768	8.14

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Method Path : J:\MS13\METHODS\  
Method File : R13052208.M  
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
Last Update : Thu May 22 11:20:46 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05220802.D	0.5 =05220803.D	1.0 =05220804.D	5.0 =05220805.D
25 =05220806.D	50 =05220807.D	100 =05220808.D	

Compound	0.1	0.5	1.0	5.0	25	50	100	AVG	%RSD
94) T 1,2,4-Trichlorobenz	1.301	1.433	1.284	1.255	1.354	1.350	1.360	1.334	4.44
95) T Naphthalene	3.935	4.205	4.040	3.994	4.350	4.182	3.650	4.051	5.59
96) T n-Dodecane	1.445	1.924	1.703	1.694	1.896	1.875	1.775	1.759	9.45
97) T Hexachloro-1,3-buta	0.850	0.960	0.856	0.844	0.884	0.894	0.928	0.888	4.87

(#) = Out of Range

*05/22/08*

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**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: **S20-05210809**  
 20ng/L Std. ID: **S20-05210806**  
 200ng/L Std. ID: **S20-05210804**

Compounds	Source Std. mg/m <sup>3</sup>	Dilution Factors:			Working STD Conc.(ng/L): Injection (L): ICAL Points:	ICAL Concentrations (Primary Source)						
		5	50	250		4	20	20	20	200	200	200
		200ng/L	20ng/L	4ng/L		0.025	0.025	0.050	0.25	0.125	0.25	0.50
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	

*R 05/22/08*

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: S20-05210809  
 20ng/L Std. ID: S20-05210806  
 200ng/L Std. ID: S20-05210804

Compounds	Source Std. mg/m <sup>3</sup>	Dilution Factors:			Working STD Conc.(ng/L): Injection (L): ICAL Points:	ICAL Concentrations (Primary Source)						
		5	50	250		4	20	20	20	200	200	200
		200ng/L	20ng/L	4ng/L		0.025	0.025	0.05	0.25	0.125	0.25	0.50
Bromoform	1.31	262	26.2	5.24		0.131	0.655	1.31	6.55	32.8	65.5	131
Styrene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
o-Xylene	1.22	244	24.4	4.88		0.122	0.610	1.22	6.10	30.5	61.0	122
n-Nonane	1.03	206	20.6	4.12		0.103	0.515	1.03	5.15	25.8	51.5	103
1,1,2,2-Tetrachloroethane	1.23	246	24.6	4.92		0.123	0.615	1.23	6.15	30.8	61.5	123
Cumene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
alpha-Pinene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106
n-Propylbenzene	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
3-Ethyltoluene	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102
4-Ethyltoluene	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111
1,3,5-Trimethylbenzene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
alpha-Methylstyrene	1.02	204	20.4	4.08		0.102	0.510	1.02	5.10	25.5	51.0	102
2-Ethyltoluene	0.990	198	19.8	3.96		0.099	0.495	0.990	4.95	24.8	49.5	99.0
1,2,4-Trimethylbenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
n-Decane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
Benzyl Chloride	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107
1,3-Dichlorobenzene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106
1,4-Dichlorobenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
sec-Butylbenzene	1.07	214	21.4	4.28		0.107	0.535	1.07	5.35	26.8	53.5	107
p-Isopropyltoluene	1.180	236	23.6	4.72		0.118	0.590	1.18	5.90	29.5	59.0	118
1,2,3-Trimethylbenzene	1.10	220	22.0	4.40		0.110	0.550	1.10	5.50	27.5	55.0	110
1,2-Dichlorobenzene	1.08	216	21.6	4.32		0.108	0.540	1.08	5.40	27.0	54.0	108
d-Limonene	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106
1,2-Dibromo-3-chloropropane	1.04	208	20.8	4.16		0.104	0.520	1.04	5.20	26.0	52.0	104
n-Undecane	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48		0.112	0.560	1.12	5.60	28.0	56.0	112
Naphthalene	1.05	210	21.0	4.20		0.105	0.525	1.05	5.25	26.3	52.5	105
n-Dodecane	1.06	212	21.2	4.24		0.106	0.530	1.06	5.30	26.5	53.0	106
Hexachloro-1,3-butadiene	1.11	222	22.2	4.44		0.111	0.555	1.11	5.55	27.8	55.5	111

\*Enter Information in the Solid Shaded Areas ONLY.

*Post 12/08*



Method Path : J:\MS13\METHODS\  
 Method File : R13052208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu May 22 11:20:46 2008  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
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2	0.5	1	25	J:\MS13\DATA\2008_05\22\05220803.D
3	1.0	1	25	J:\MS13\DATA\2008_05\22\05220804.D
4	5.0	5	25	J:\MS13\DATA\2008_05\22\05220805.D
5	25	27	25	J:\MS13\DATA\2008_05\22\05220806.D
6	50	54	25	J:\MS13\DATA\2008_05\22\05220807.D
7	100	108	25	J:\MS13\DATA\2008_05\22\05220808.D

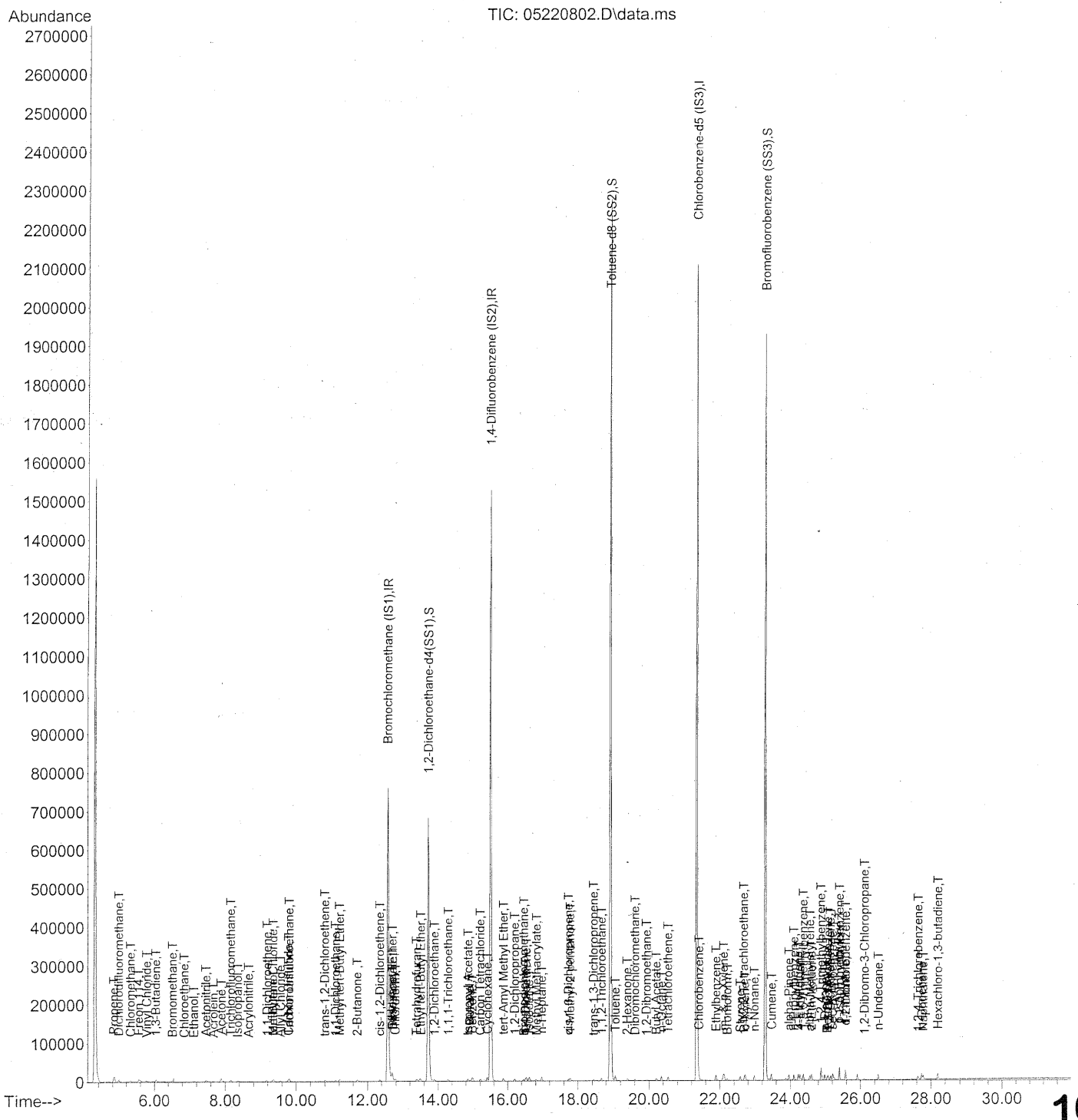
#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	May 22 11:12 2008	May 22 10:30 2008	22 May 2008 3:56 am
2	0.5	May 22 11:12 2008	May 22 11:00 2008	22 May 2008 4:37 am
3	1.0	May 22 11:13 2008	May 22 11:05 2008	22 May 2008 5:18 am
4	5.0	May 22 11:13 2008	May 22 11:07 2008	22 May 2008 5:58 am
5	25	May 22 11:12 2008	May 22 11:09 2008	22 May 2008 6:39 am
6	50	May 22 11:18 2008	May 22 11:18 2008	22 May 2008 7:20 am
7	100	May 22 11:20 2008	May 22 11:19 2008	22 May 2008 8:01 am

R13052208.M Thu May 22 11:36:36 2008

*7/05/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:30:28 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



1076

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:30:28 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	391084	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.51	114	1729052	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.35	82	807664	25.000	ng	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(...)	13.72	65	701754	22.375	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.48%	✓
57) Toluene-d8 (SS2)	18.92	98	1842585	25.453	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.80%	✓
73) Bromofluorobenzene (SS3)	23.29	174	709723	28.489	ng	0.00
Spiked Amount	25.000		Recovery	=	113.96%	✓

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.83	42	5061	0.156	ng	# 48
3) Dichlorodifluoromethane	4.99	85	7164	0.121	ng	95
4) Chloromethane	5.32	50	4719	0.096	ng	98
5) Freon 114	5.55	135	3603	0.125	ng	90
6) Vinyl Chloride	5.78	62	4379	0.095	ng	98
7) 1,3-Butadiene	6.04	54	2828	0.080	ng	# 64
8) Bromomethane	6.52	94	2671	0.121	ng	91
9) Chloroethane	6.85	64	2013	0.106	ng	89
10) Ethanol	7.13	45	2327	0.105	ng	69
11) Acetonitrile	7.46	41	9386m	0.162	ng	
12) Acrolein	7.67	56	1454	0.093	ng	88
13) Acetone	7.89	58	5705	0.264	ng	88
14) Trichlorofluoromethane	8.16	101	5976	0.129	ng	93
15) Isopropanol	8.36	45	9307m	0.127	ng	
16) Acrylonitrile	8.66	53	3038m	0.090	ng	
17) 1,1-Dichloroethene	9.18	96	2673	0.124	ng	# 83
18) tert-Butanol	9.35	59	6738m	0.111	ng	
19) Methylene Chloride	9.36	84	3346	0.135	ng	94
20) Allyl Chloride	9.56	41	2408	0.072	ng	# 62
21) Trichlorotrifluoroethane	9.81	151	3176m	0.160	ng	
22) Carbon Disulfide	9.78	76	11562	0.125	ng	99
23) trans-1,2-Dichloroethene	10.80	61	4305	0.114	ng	83
24) 1,1-Dichloroethane	11.10	63	4824	0.110	ng	79
25) Methyl tert-Butyl Ether	11.21	73	8652	0.120	ng	79
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	11.71	72	1992	0.131	ng	95
28) cis-1,2-Dichloroethene	12.34	61	4126	0.116	ng	75
29) Diisopropyl Ether	12.70	87	2307	0.116	ng	# 69
30) Ethyl Acetate	12.71	61	986m	0.104	ng	
31) n-Hexane	12.70	57	5268	0.107	ng	99

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:30:28 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	5431	0.149	ng	92
34) Tetrahydrofuran	13.39	72	1773	0.117	ng #	84
35) Ethyl tert-Butyl Ether	13.50	87	2951	0.113	ng #	71
36) 1,2-Dichloroethane	13.89	62	4343	0.120	ng	90
38) 1,1,1-Trichloroethane	14.29	97	4950	0.137	ng	88
39) Isopropyl Acetate	14.86	61	1308	0.083	ng #	10
40) 1-Butanol	14.91	56	1741	0.074	ng	96
41) Benzene	14.98	78	11869	0.129	ng	95
42) Carbon Tetrachloride	15.21	117	3678	0.121	ng	99
43) Cyclohexane	15.42	84	4351	0.128	ng #	76
44) tert-Amyl Methyl Ether	15.88	73	7209	0.110	ng	95
45) 1,2-Dichloropropane	16.20	63	2736	0.104	ng	97
46) Bromodichloromethane	16.46	83	3490	0.112	ng	89
47) Trichloroethene	16.53	130	4177	0.185	ng	94
48) 1,4-Dioxane	16.51	88	2194m	0.135	ng	
49) Isooctane	16.61	57	12078	0.111	ng	80
50) Methyl Methacrylate	16.82	100	897m	0.108	ng	
51) n-Heptane	16.98	71	2634	0.104	ng #	82
52) cis-1,3-Dichloropropene	17.73	75	3506	0.098	ng	91
53) 4-Methyl-2-pentanone	17.78	58	2473	0.099	ng	88
54) trans-1,3-Dichloropropene	18.44	75	3250	0.105	ng	90
55) 1,1,2-Trichloroethane	18.67	97	2567	0.116	ng	87
58) Toluene	19.06	91	12306	0.135	ng	98
59) 2-Hexanone	19.38	43	6301	0.093	ng	79
60) Dibromochloromethane	19.61	129	2754	0.126	ng	80
61) 1,2-Dibromoethane	19.93	107	2806	0.131	ng	92
62) Butyl Acetate	20.20	43	6226	0.092	ng	86
63) n-Octane	20.35	57	2319	0.109	ng	83
64) Tetrachloroethene	20.53	166	3819	0.168	ng	82
65) Chlorobenzene	21.41	112	7983	0.142	ng	95
66) Ethylbenzene	21.89	91	13068	0.129	ng	92
67) m- & p-Xylene	22.10	91	20087	0.296	ng	91
68) Bromoform	22.21	173	2452	0.163	ng	90
69) Styrene	22.58	104	7400	0.126	ng	96
70) o-Xylene	22.71	91	10499	0.144	ng	85
71) n-Nonane	22.98	43	5563	0.095	ng	90
72) 1,1,2,2-Tetrachloroethane	22.68	83	3449	0.099	ng	85
74) Cumene	23.47	105	12486	0.135	ng	99
75) alpha-Pinene	23.96	93	5861	0.119	ng	76
76) n-Propylbenzene	24.10	91	15192	0.122	ng	97
77) 3-Ethyltoluene	24.23	105	11331	0.112	ng	99
78) 4-Ethyltoluene	24.28	105	11881	0.128	ng	98
79) 1,3,5-Trimethylbenzene	24.37	105	11413	0.138	ng	96

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*Handwritten signature*  
 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:30:28 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

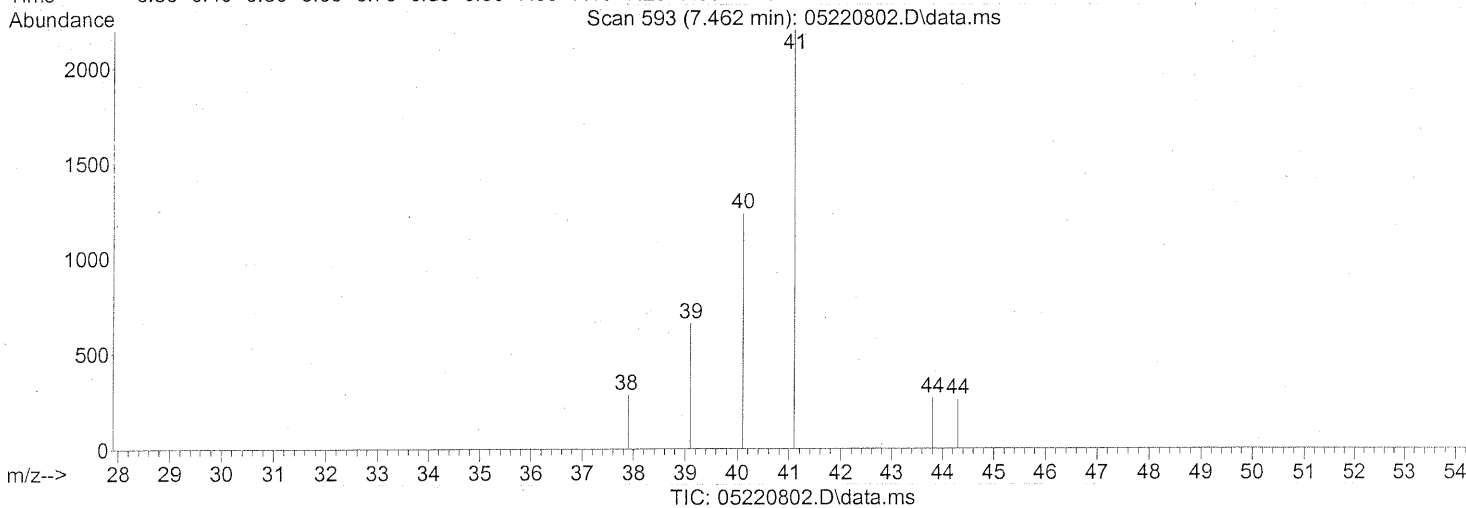
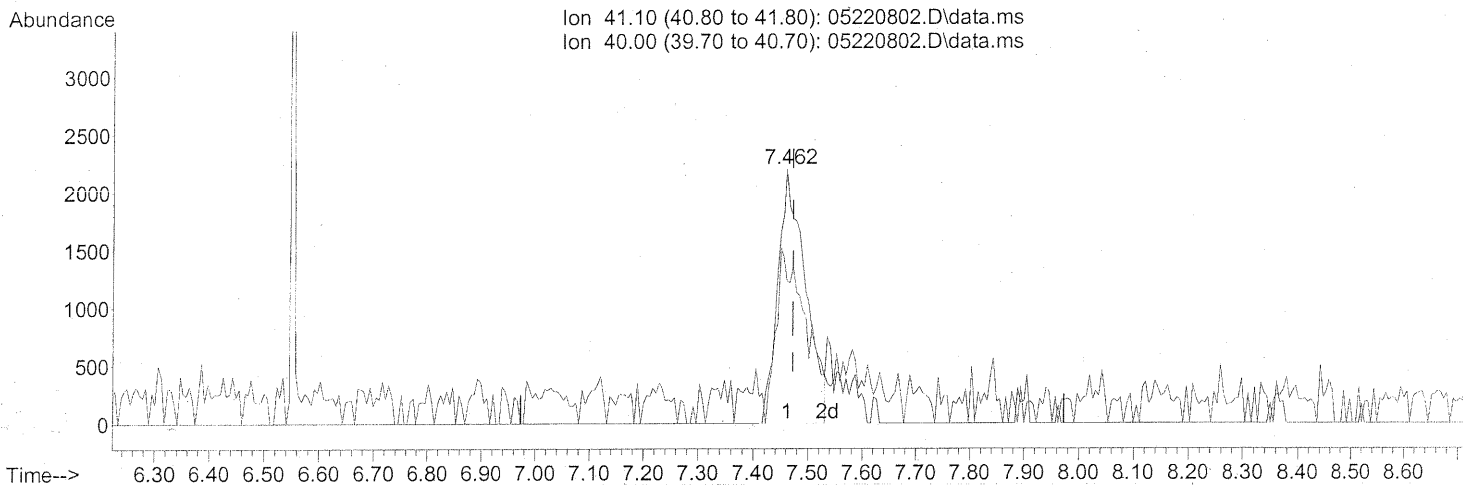
Internal Standards	R.T.	QI on	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.56	118	4915	0.112	ng	97
81) 2-Ethyltoluene	24.61	105	11131	0.110	ng	87
82) 1,2,4-Trimethylbenzene	24.88	105	10550	0.113	ng	98
83) n-Decane	24.98	57	4936	0.096	ng	78
84) Benzyl Chloride	25.05	91	4673	0.073	ng	85
85) 1,3-Dichlorobenzene	25.08	146	6174	0.122	ng	98
86) 1,4-Dichlorobenzene	25.15	146	6453	0.133	ng	98
87) sec-Butylbenzene	25.21	105	13141	0.120	ng	99
88) p-Isopropyltoluene	25.40	119	11350	0.119	ng	89
89) 1,2,3-Trimethylbenzene	25.41	105	9730	0.106	ng	99
90) 1,2-Dichlorobenzene	25.58	146	6021	0.116	ng	97
91) d-Limonene	25.58	68	3768	0.089	ng	86
92) 1,2-Dibromo-3-Chloropr...	26.11	157	1294	0.094	ng #	79
93) n-Undecane	26.50	57	5074	0.094	ng	82
94) 1,2,4-Trichlorobenzene	27.64	180	4707	0.147	ng	98
95) Naphthalene	27.78	128	13348	0.129	ng	90
96) n-Dodecane	27.74	57	4947	0.090	ng	78
97) Hexachloro-1,3-butadiene	28.19	225	3048	0.147	ng	89

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

*5/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



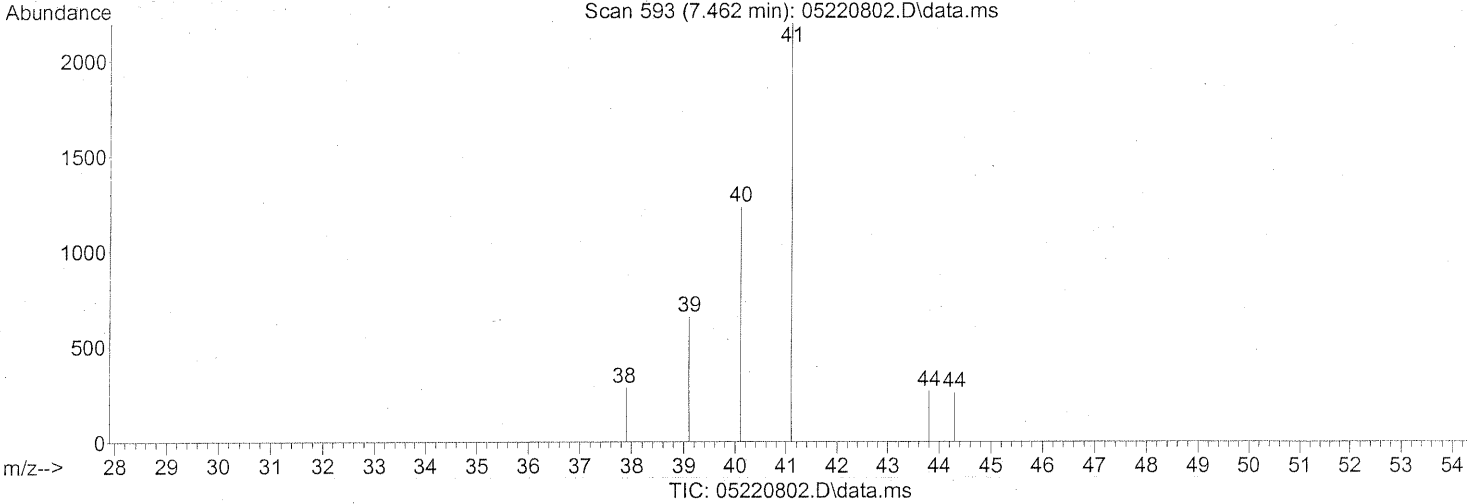
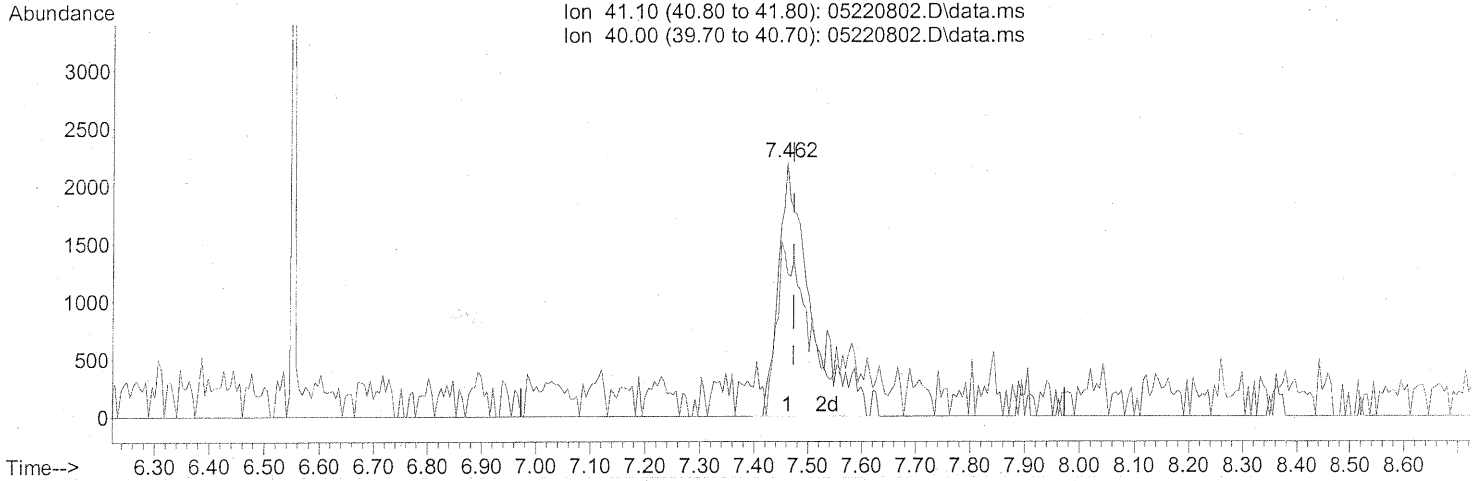
(11) Acetonitrile (T)  
 7.462min (-0.011) 0.13ng  
 response 7728

Ion	Exp%	Act%
41.10	100	100
40.00	51.40	76.95#
0.00	0.00	0.00
0.00	0.00	0.00

TAILING

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



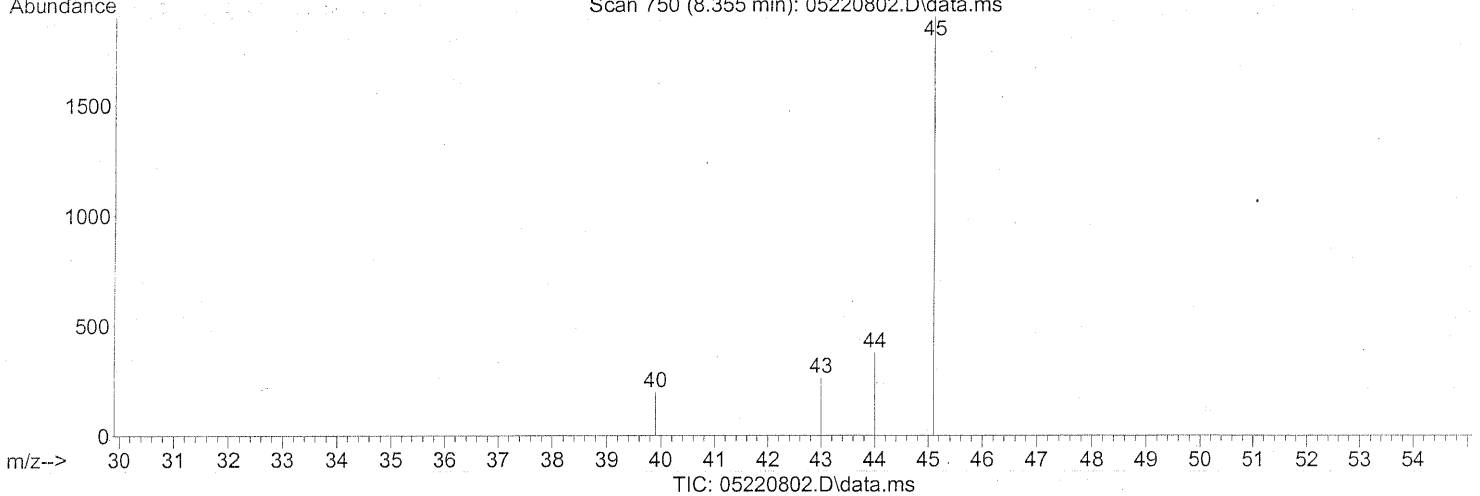
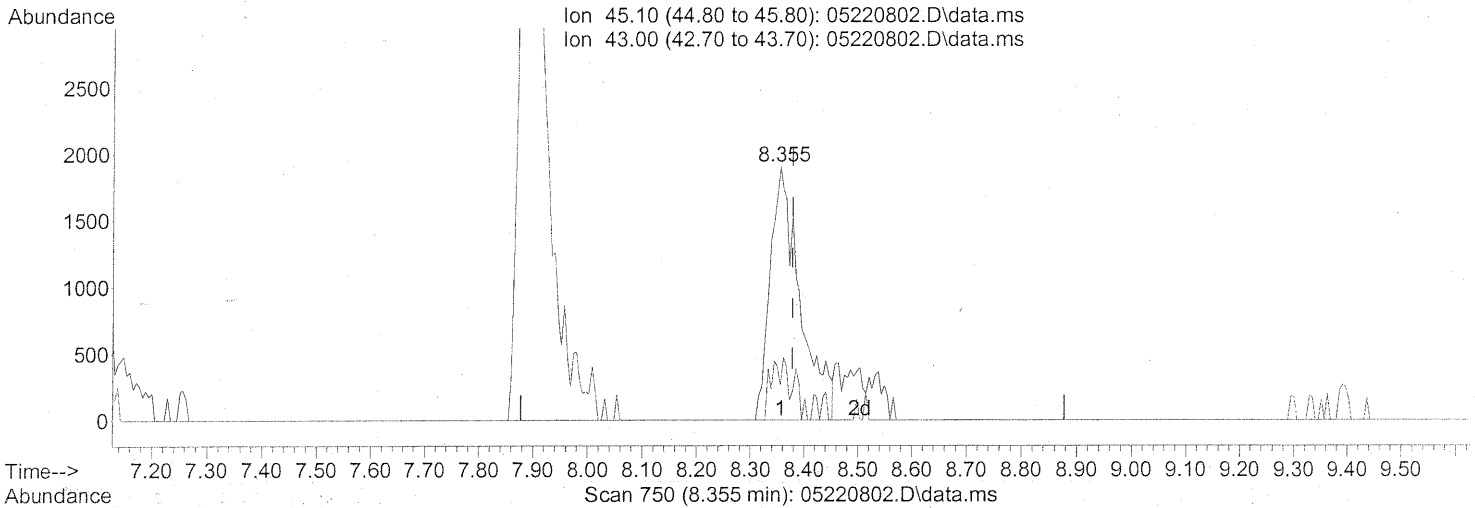
(11) Acetonitrile (T)  
 7.462min (-0.011) 0.16ng m  
 response 9386

Ion	Exp%	Act%
41.10	100	100
40.00	51.40	63.36
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
 P 5/22/08  
 Con 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



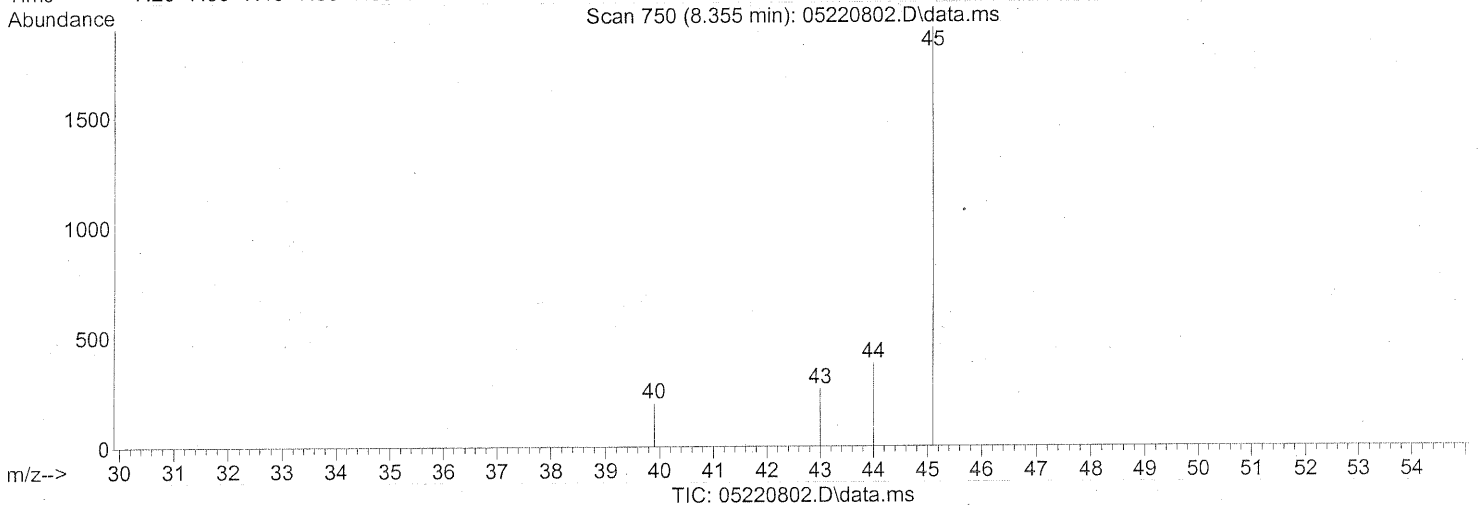
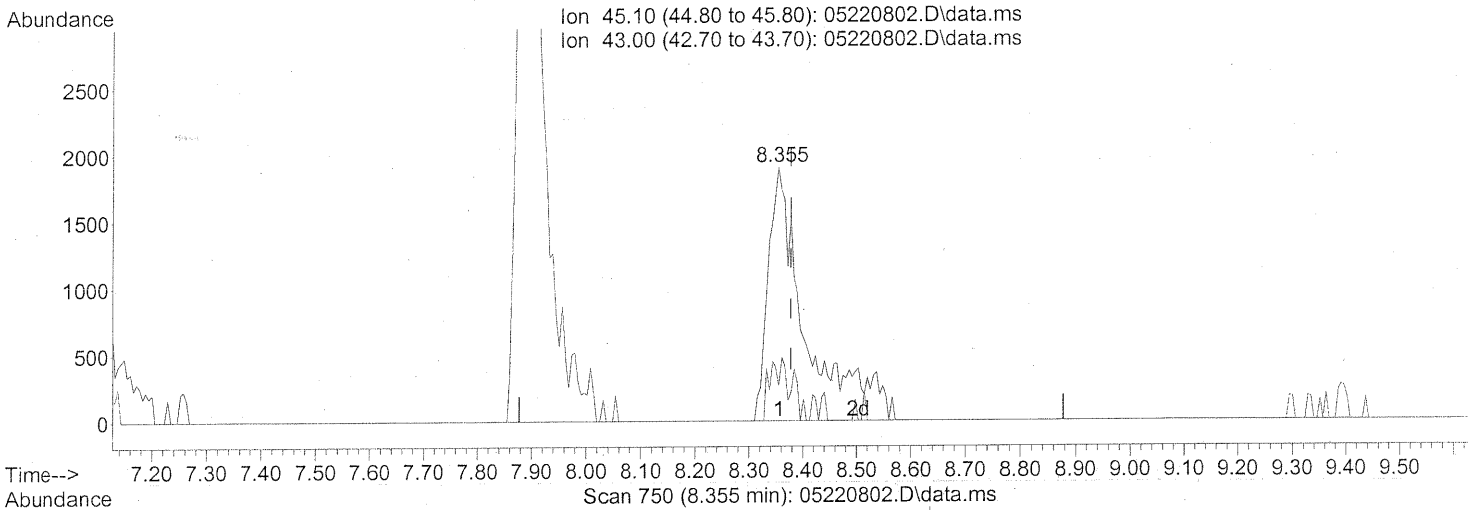
(15) Isopropanol (T)  
8.355min (-0.023) 0.10ng  
response 7356  
Ion Exp% Act%  
45.10 100 100  
43.00 16.90 12.83  
0.00 0.00 0.00  
0.00 0.00 0.00

TAILING



Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

8.355min (-0.023) 0.13ng m

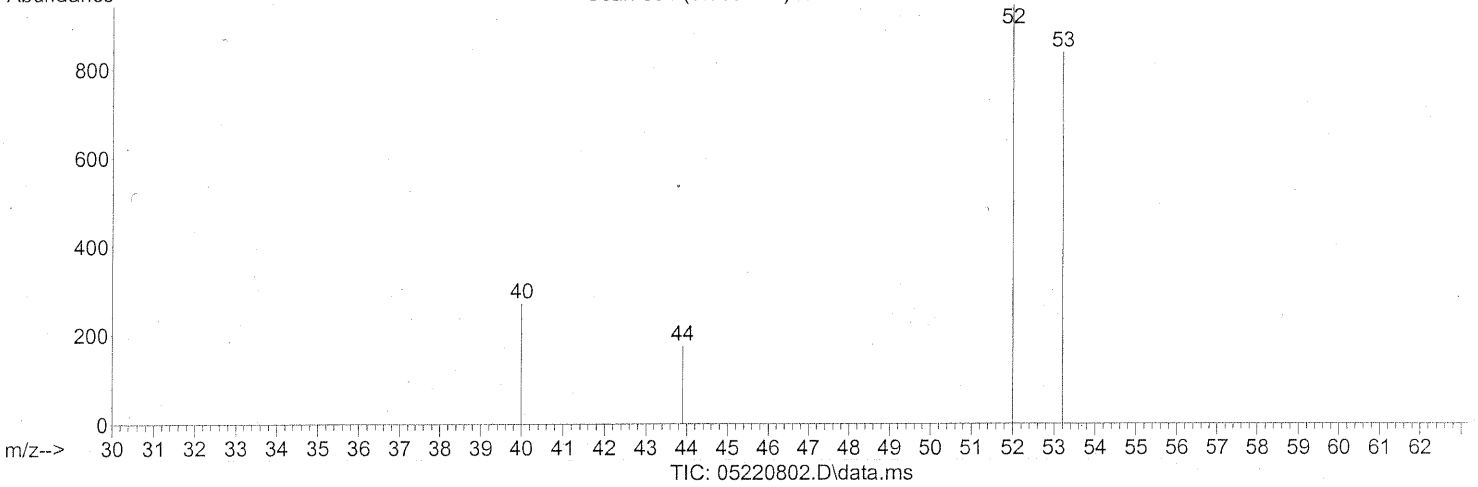
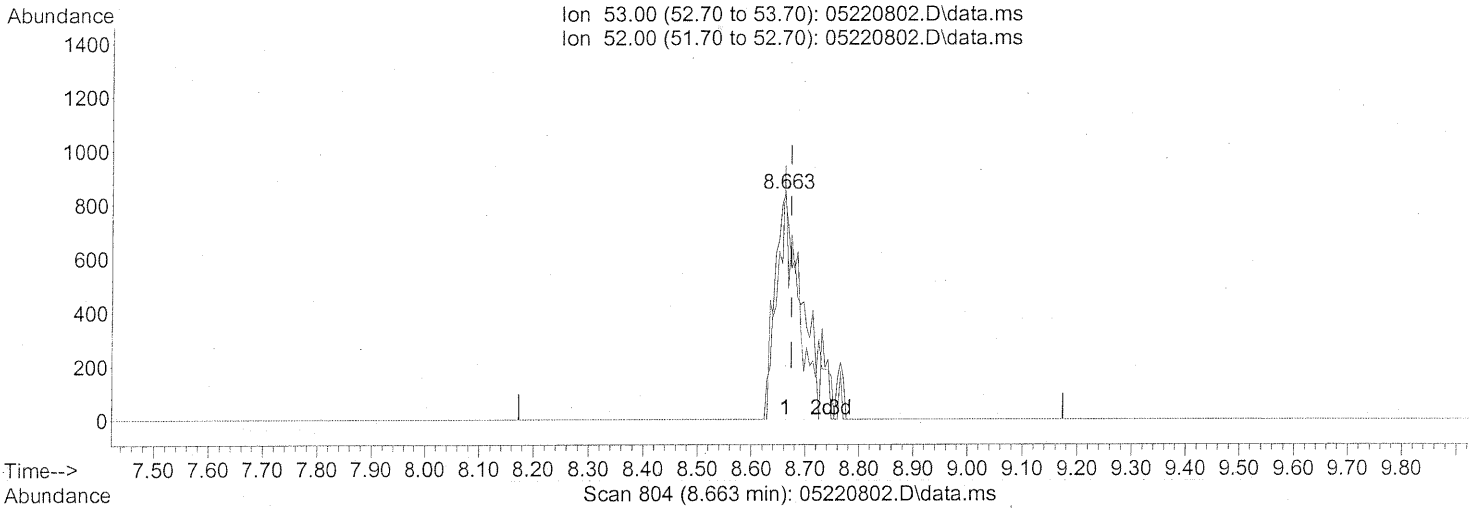
response 9307

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	10.14
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
8/05/22/08  
8m 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



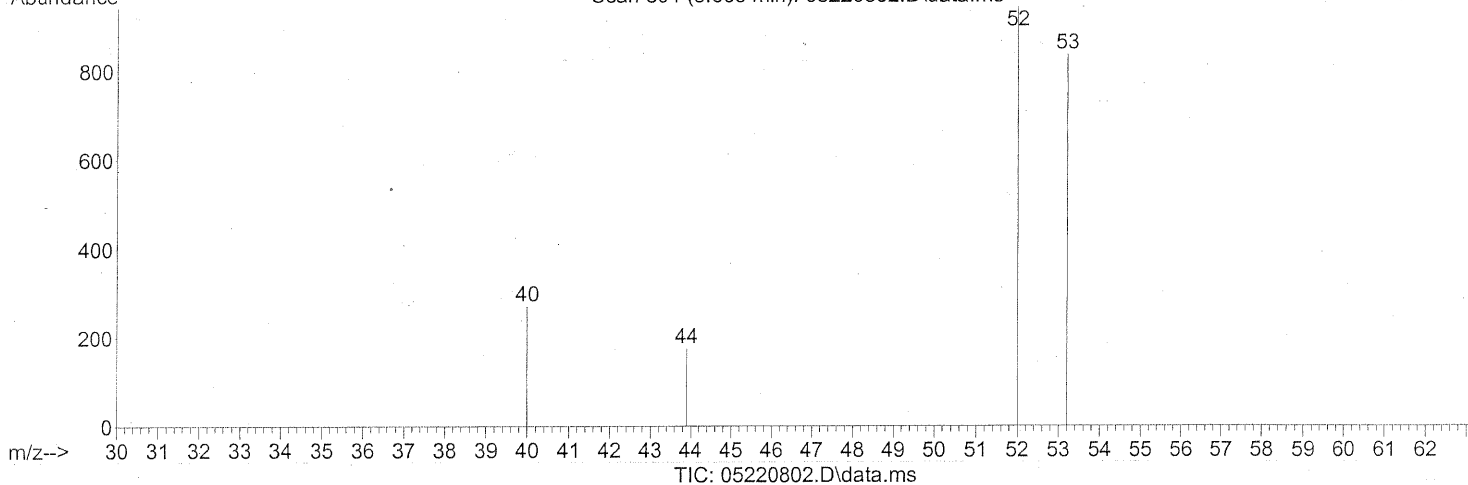
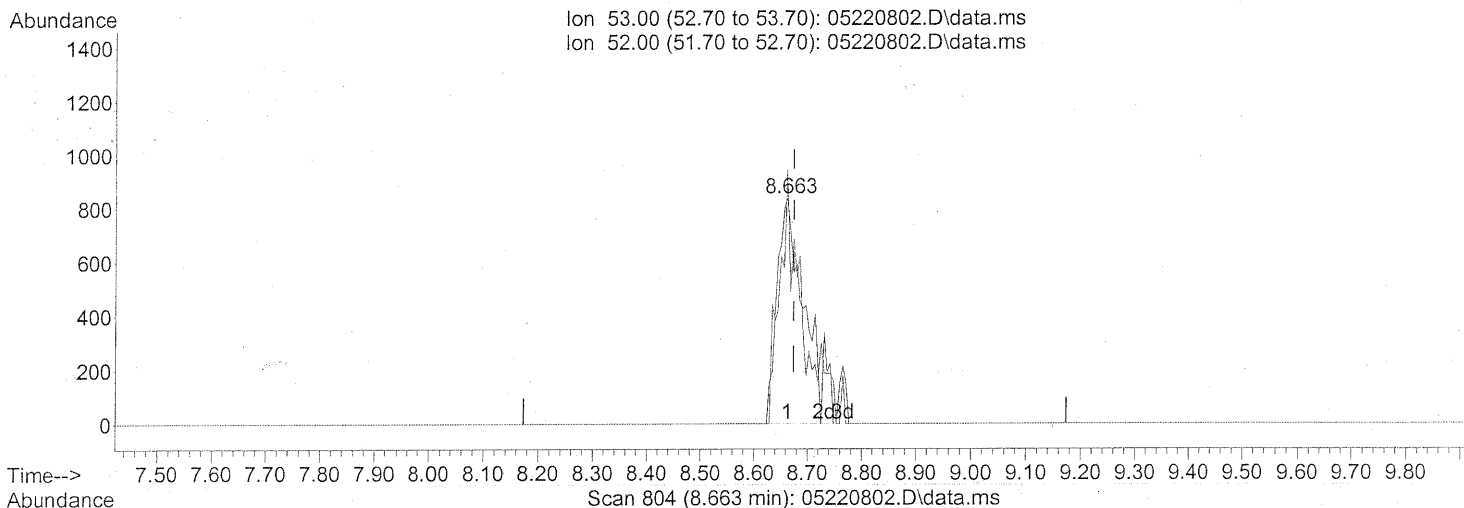
(16) Acrylonitrile (T)  
8.663min (-0.011) 0.08ng  
response 2779

TAILING

Ion	Exp%	Act%
53.00	100	100
52.00	82.50	87.08
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(16) Acrylonitrile (T)

8.663min (-0.011) 0.09ng m

response 3038

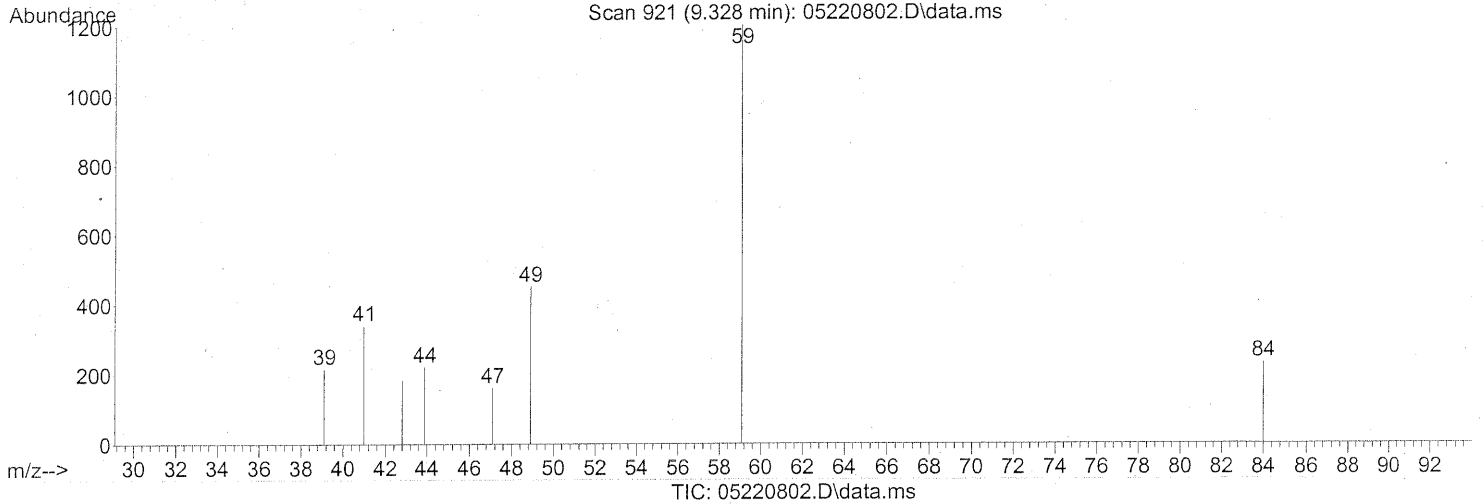
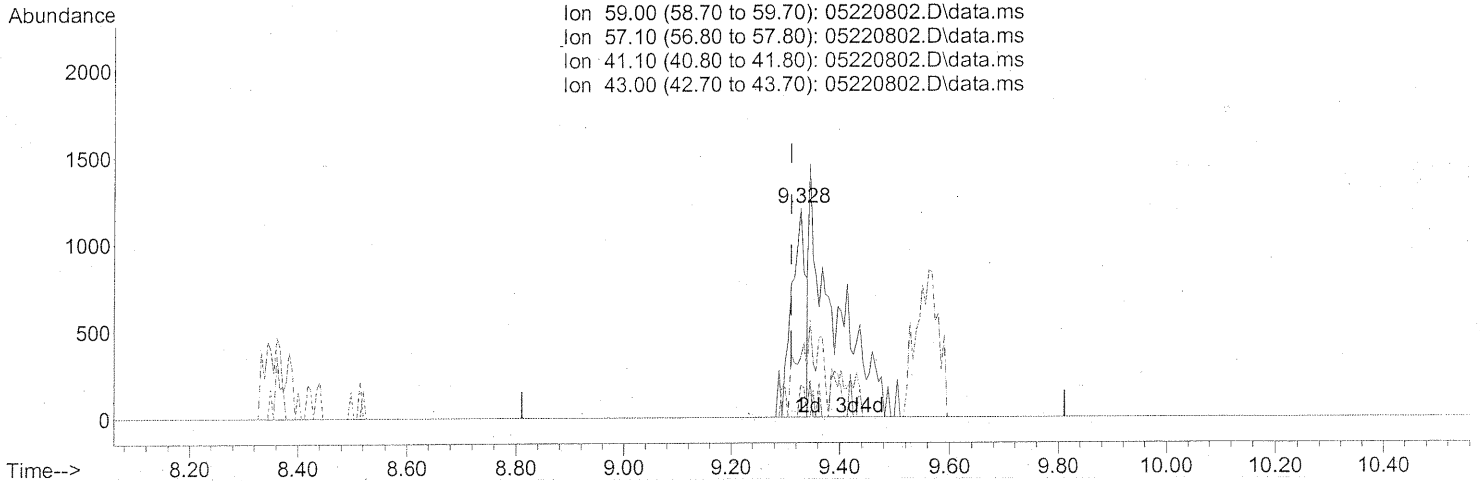
Ion	Exp%	Act%
53.00	100	100
52.00	82.50	79.66
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
E 05/22/08  
om 5/22/08

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)

9.328min (+0.017) 0.04ng

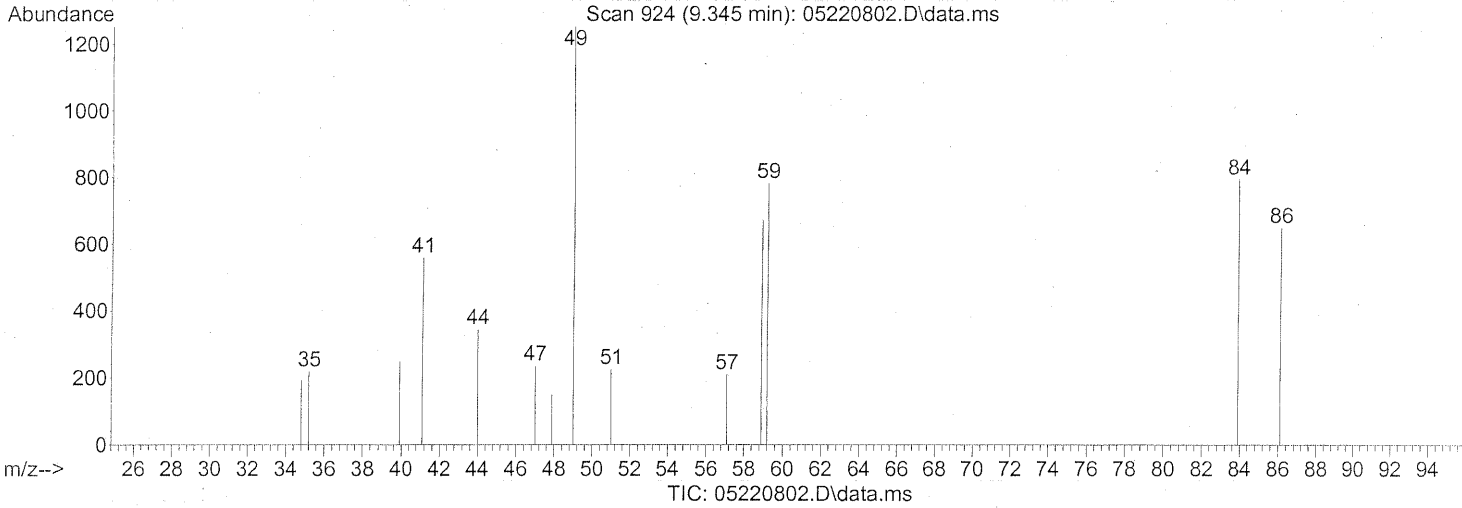
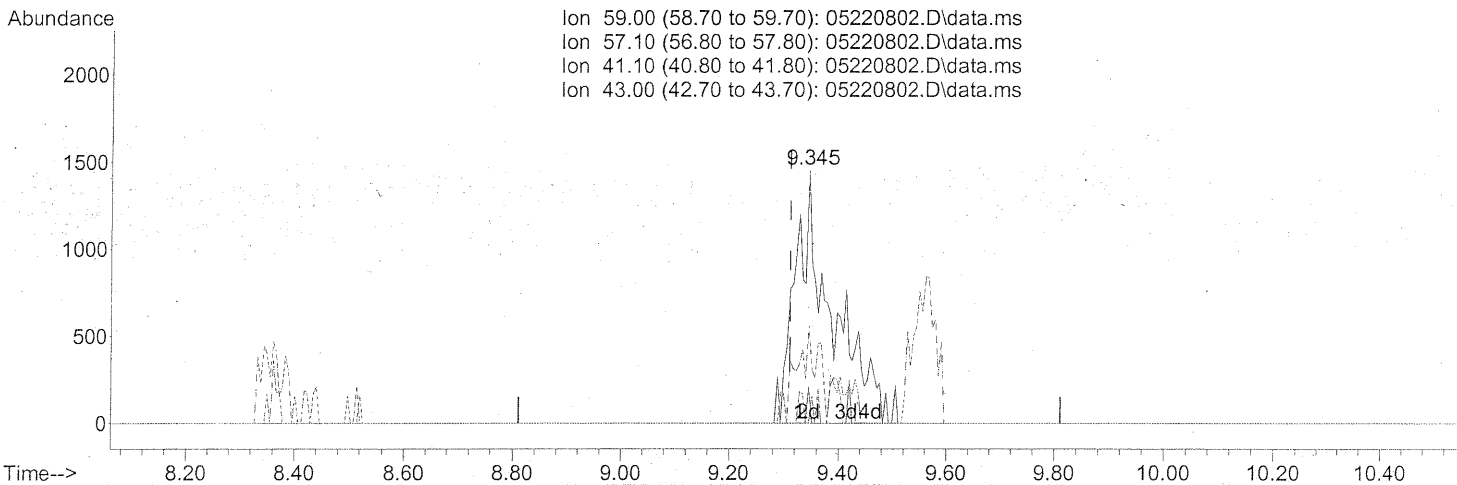
response 2180

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	0.00
41.10	20.10	31.33
43.00	12.30	5.55

SPLIT PEAK

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
9.345min (+0.034) 0.11ng m  
response 6738

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	0.00
41.10	20.10	10.14
43.00	12.30	1.80

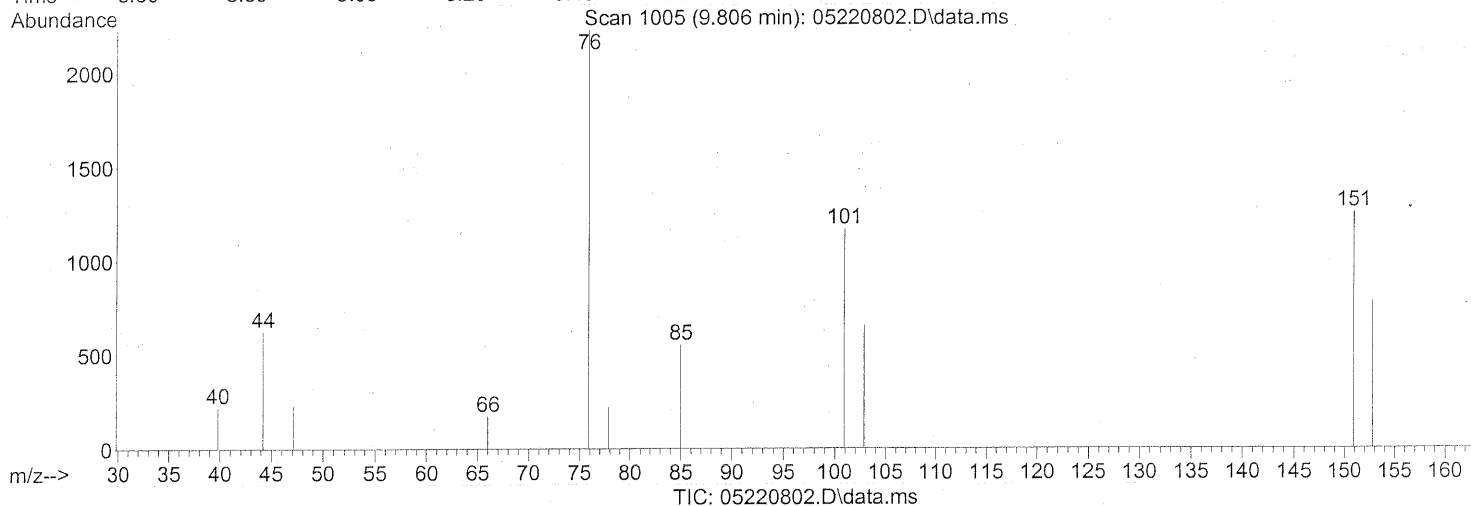
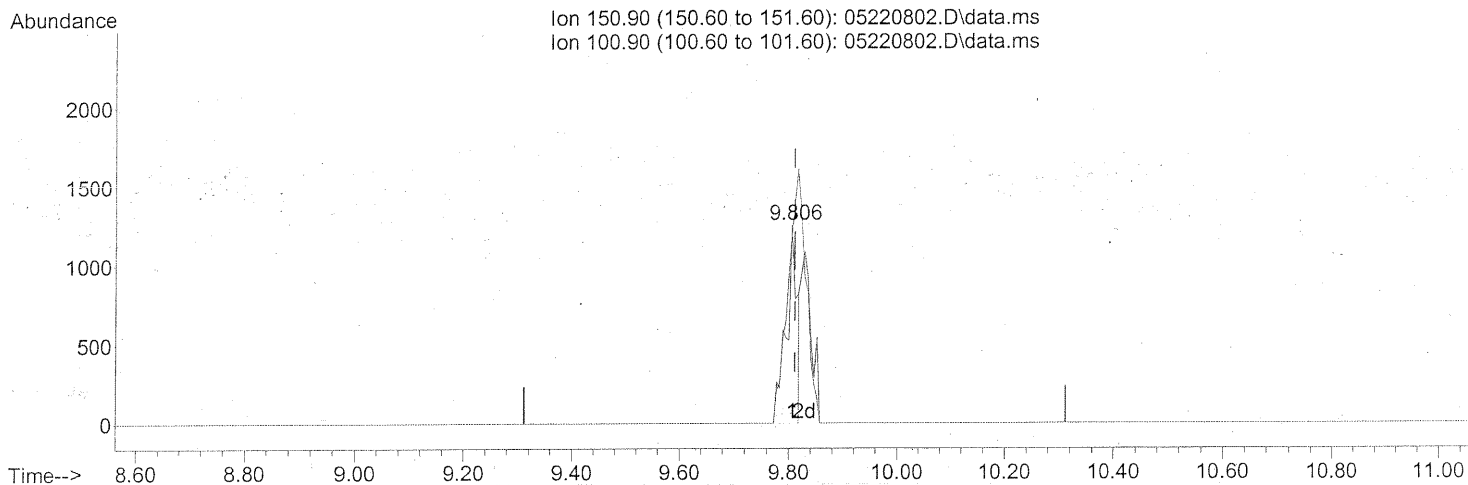
INT. THE WHOLE PEAK

4/05/22/08

RTM 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.806min (-0.005) 0.09ng

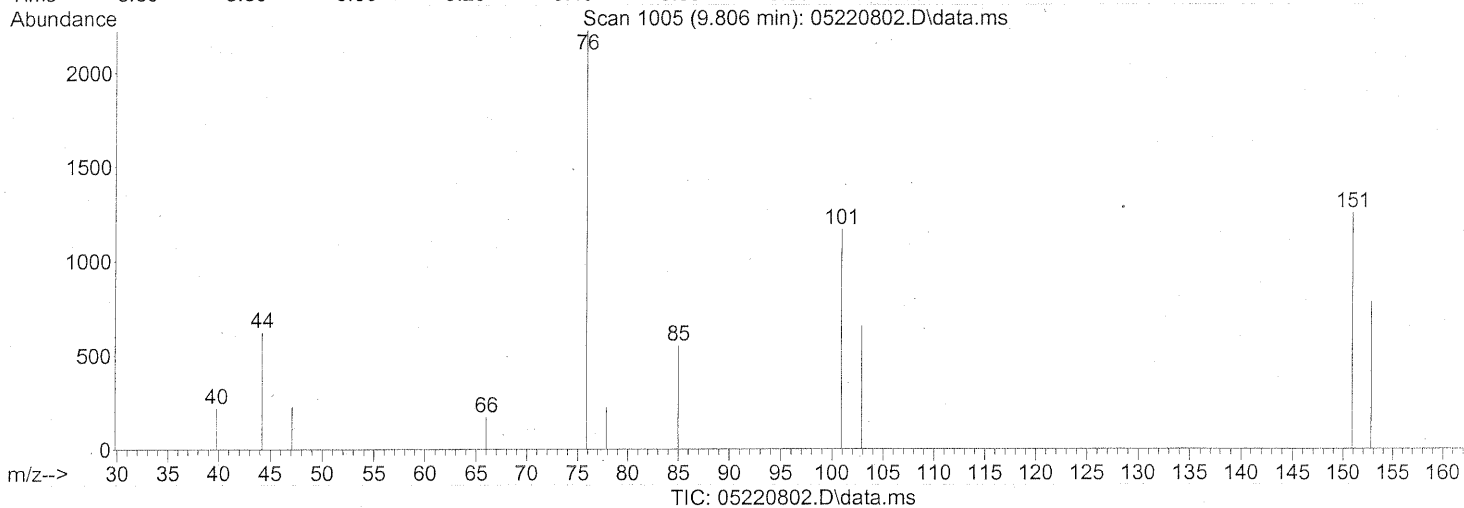
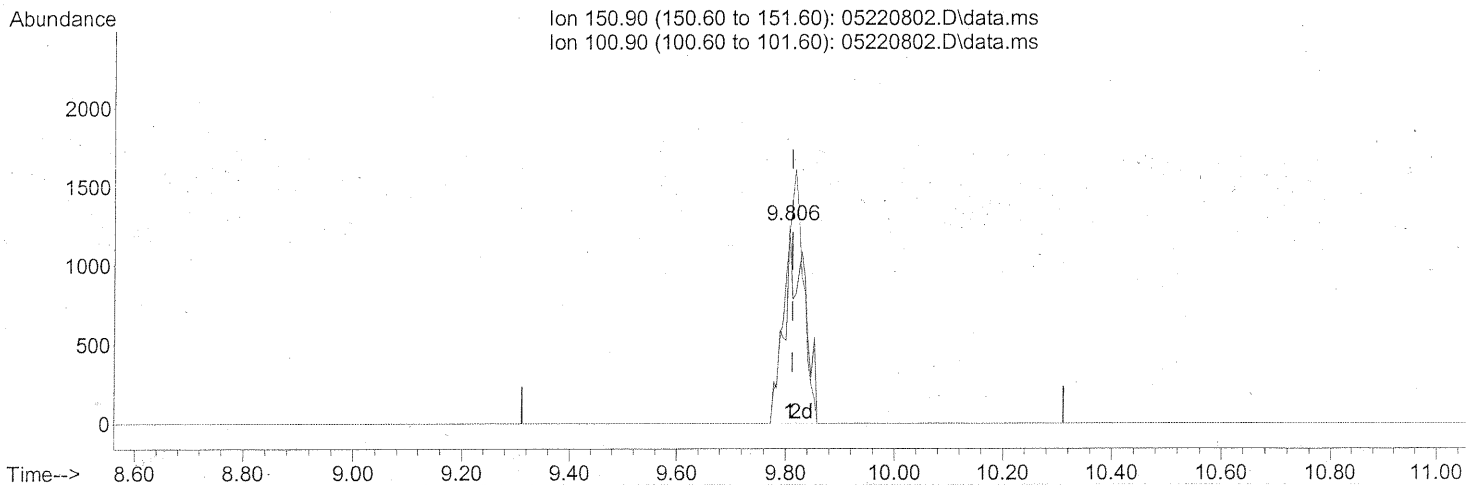
response 1705

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

SPLIT PEAK

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.806min (-0.005) 0.16ng m

response 3176

Ion	Exp%	Act%
150.90	100	100
100.90	126.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

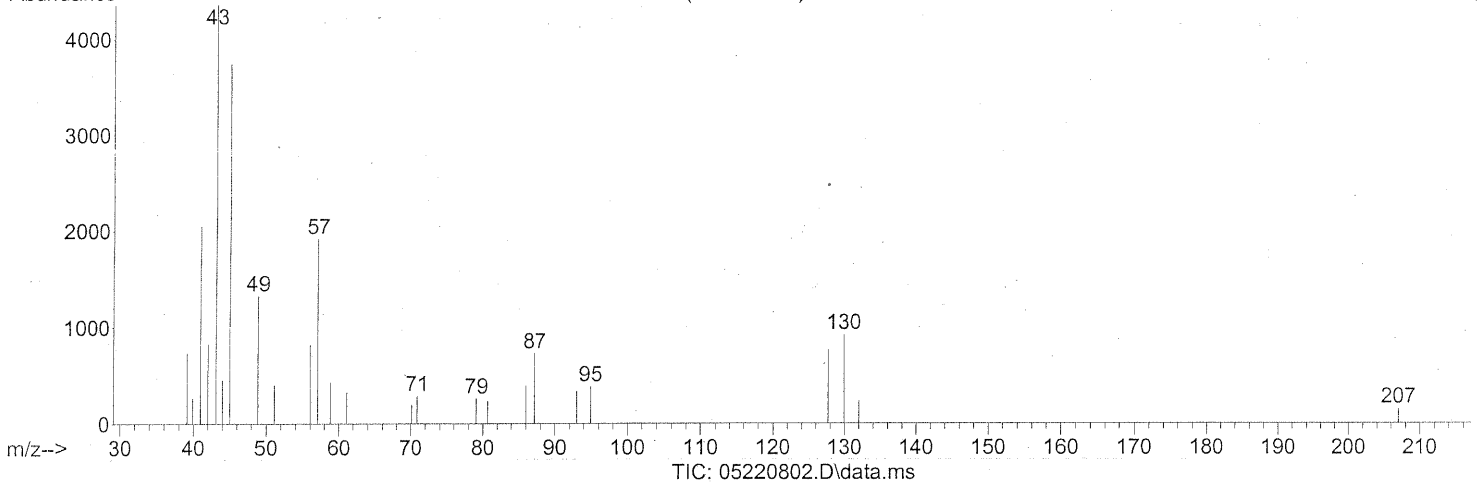
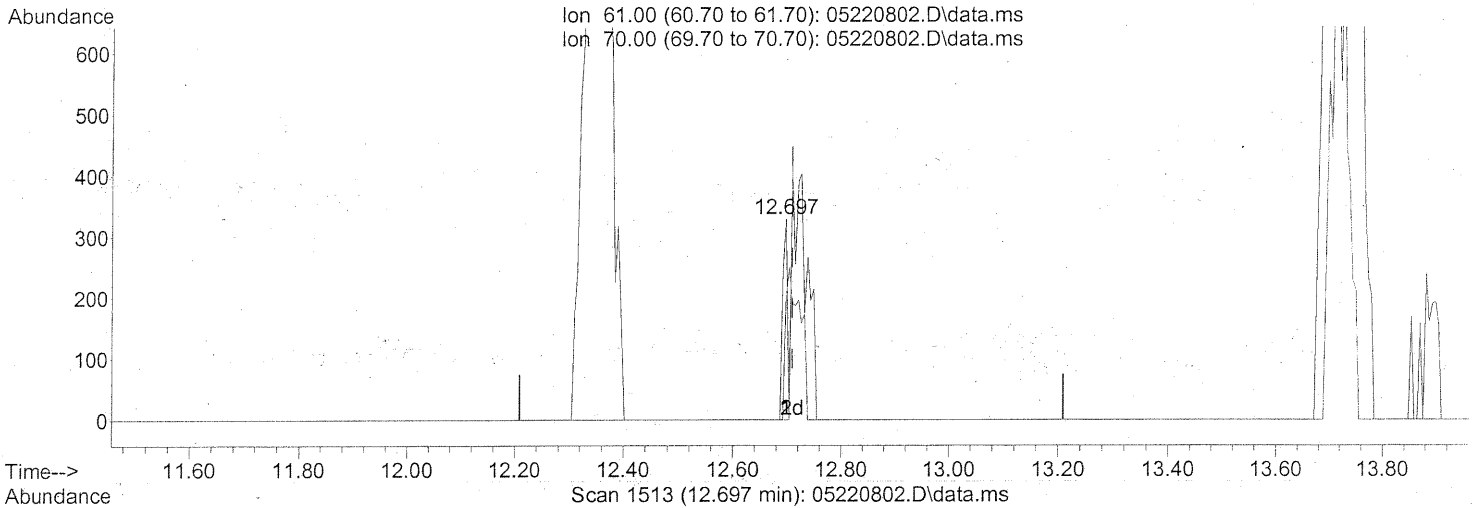
INT. THE WHOLE PEAK

05/22/08

Em 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(30) Ethyl Acetate (T)  
12.697min (-0.012) 0.02ng  
response 195

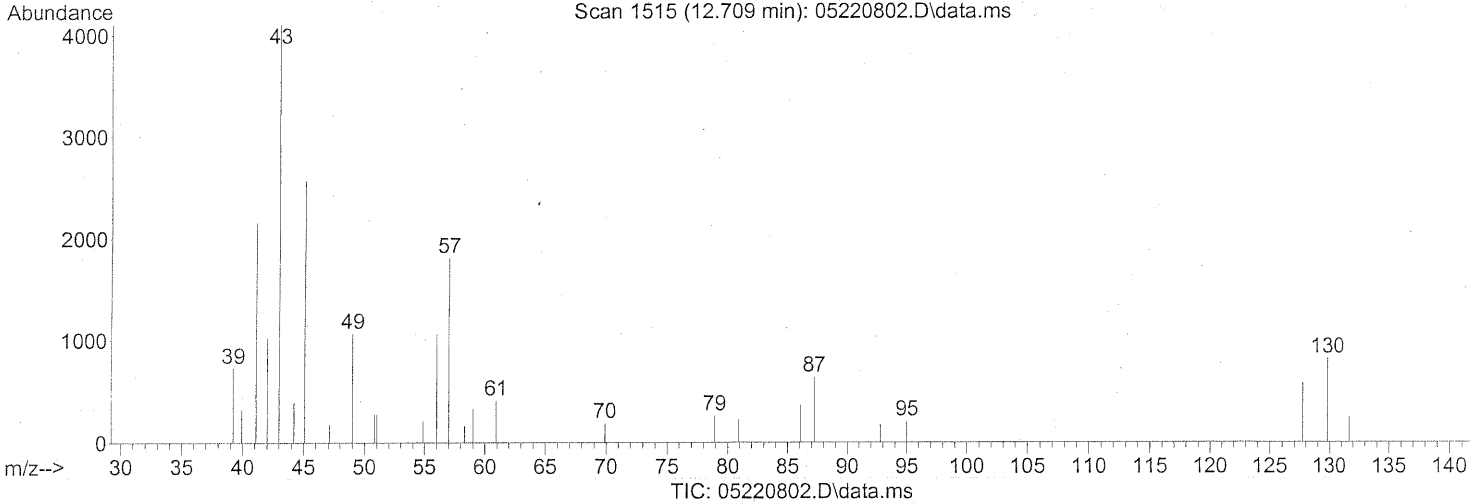
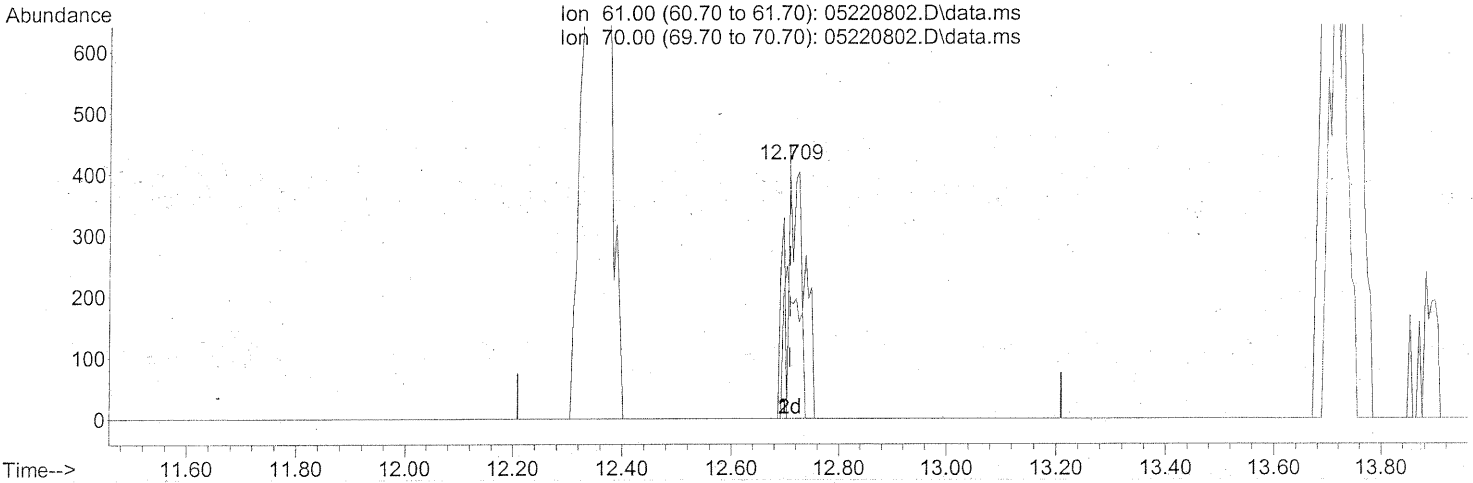
SPLIT PEAK

Ion	Exp%	Act%
61.00	100	100
70.00	58.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00



Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(30) Ethyl Acetate (T)  
12.709min (-0.000) 0.10ng m  
response 986

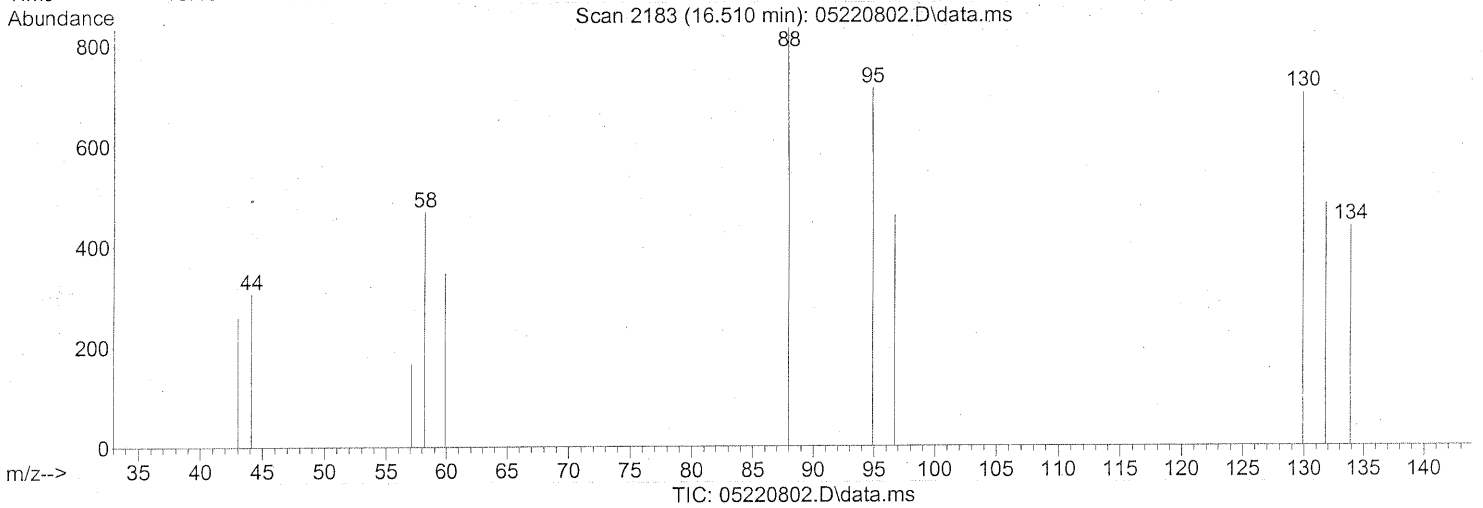
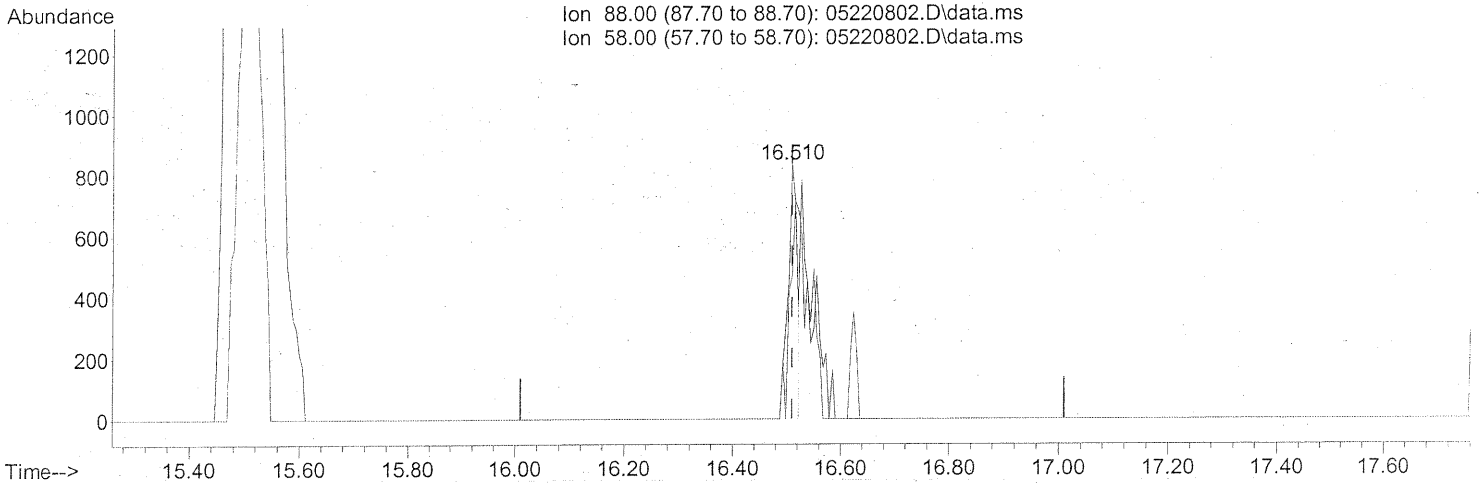
Ion	Exp%	Act%
61.00	100	100
70.00	58.30	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

INT. THE WHOLE PEAK  
5/22/08  
Em 5/22/08

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(48) 1,4-Dioxane (T)

16.510min (+0.000) 0.06ng

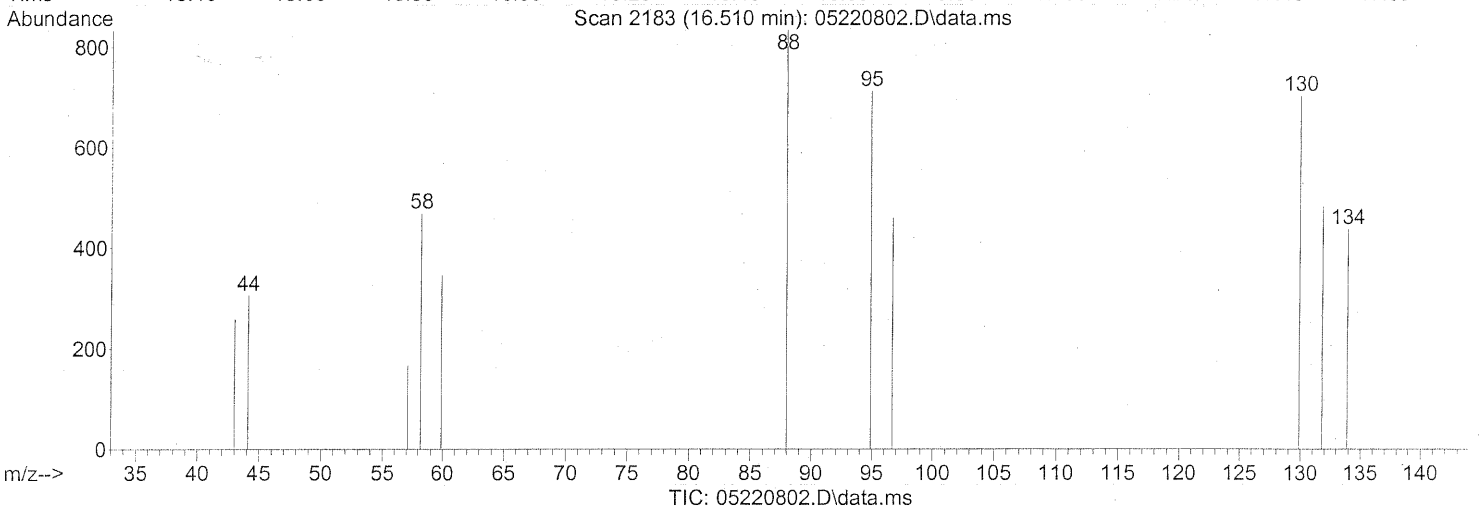
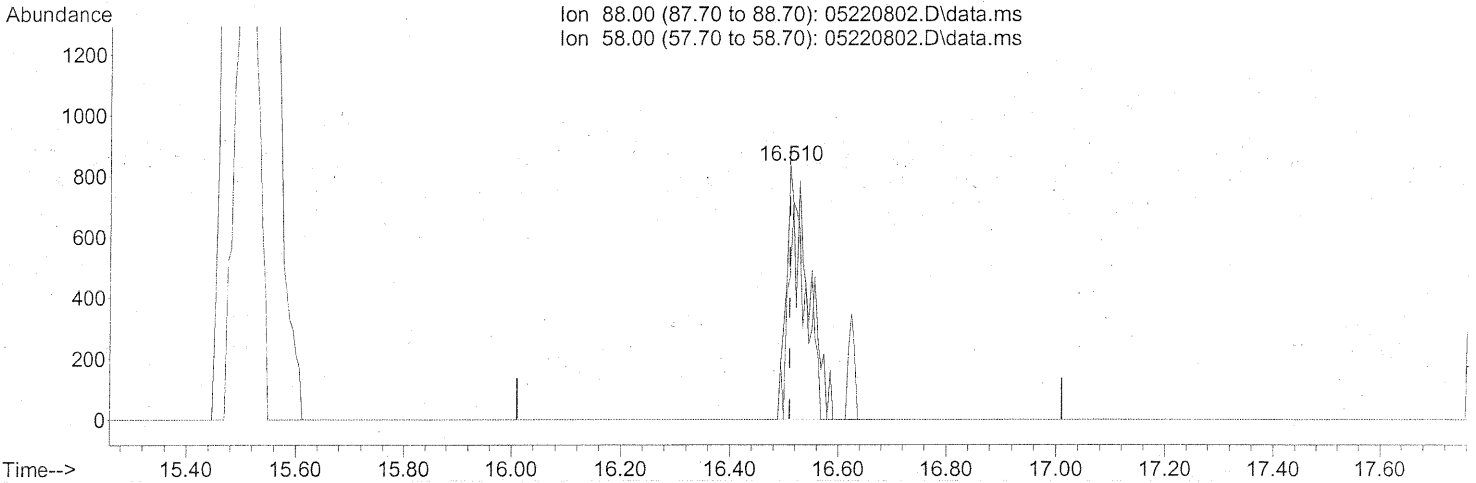
response 974

SPLIT PEAK

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	180.70#
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56 am  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(48) 1,4-Dioxane (T)

16.510min (+0.000) 0.14ng m

response 2194

Ion	Exp%	Act%
88.00	100	100
58.00	90.10	80.22
0.00	0.00	0.00
0.00	0.00	0.00

INT. THE WHOLE PEAK

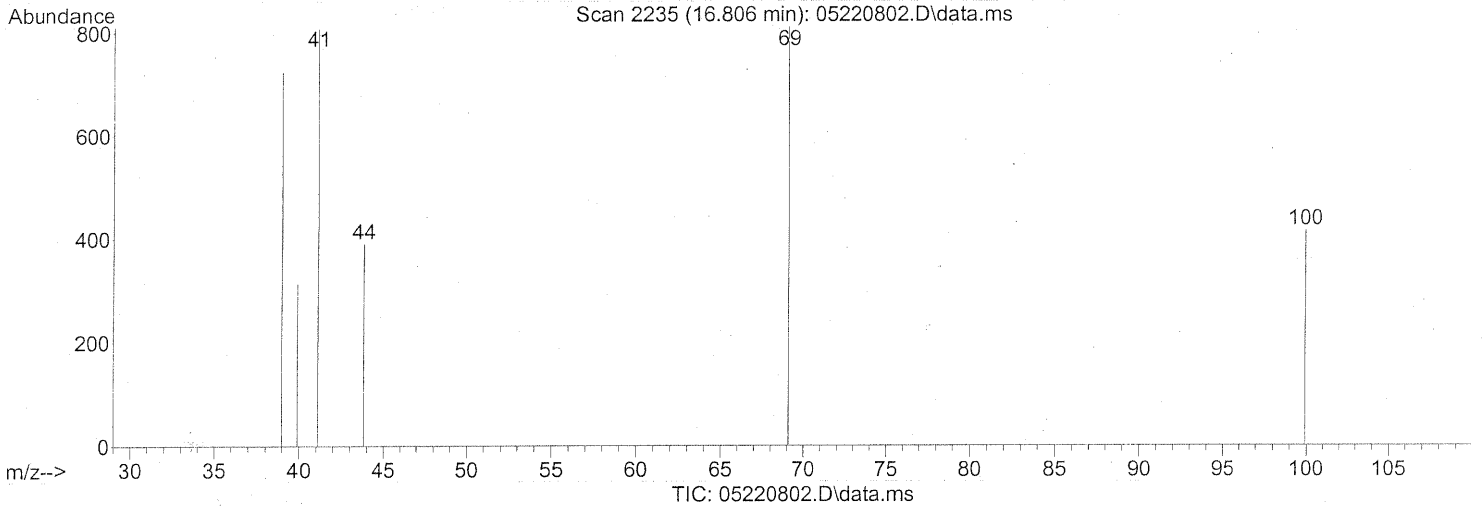
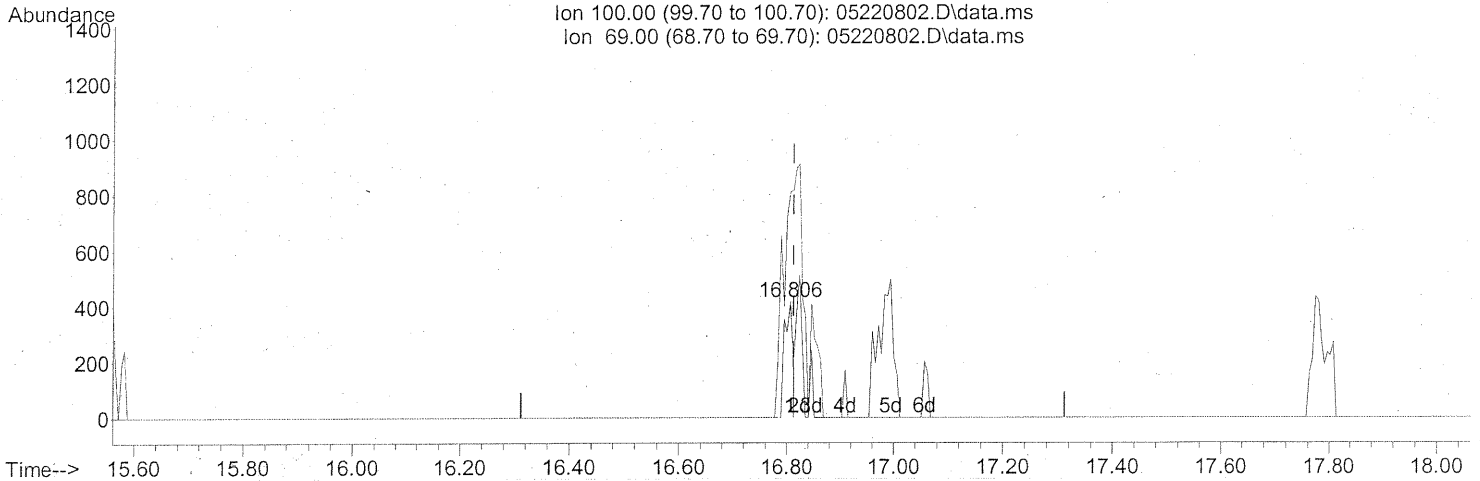
F 05/22/08

Em 5/22/08

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(50) Methyl Methacrylate (T)

16.806min (-0.006) 0.05ng

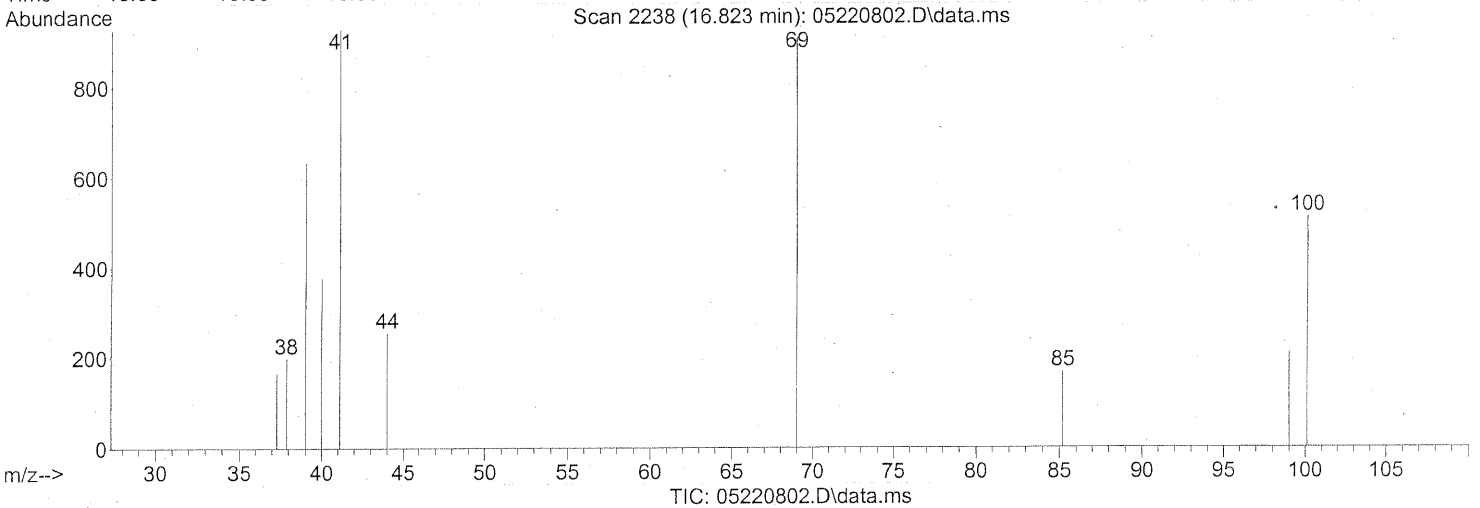
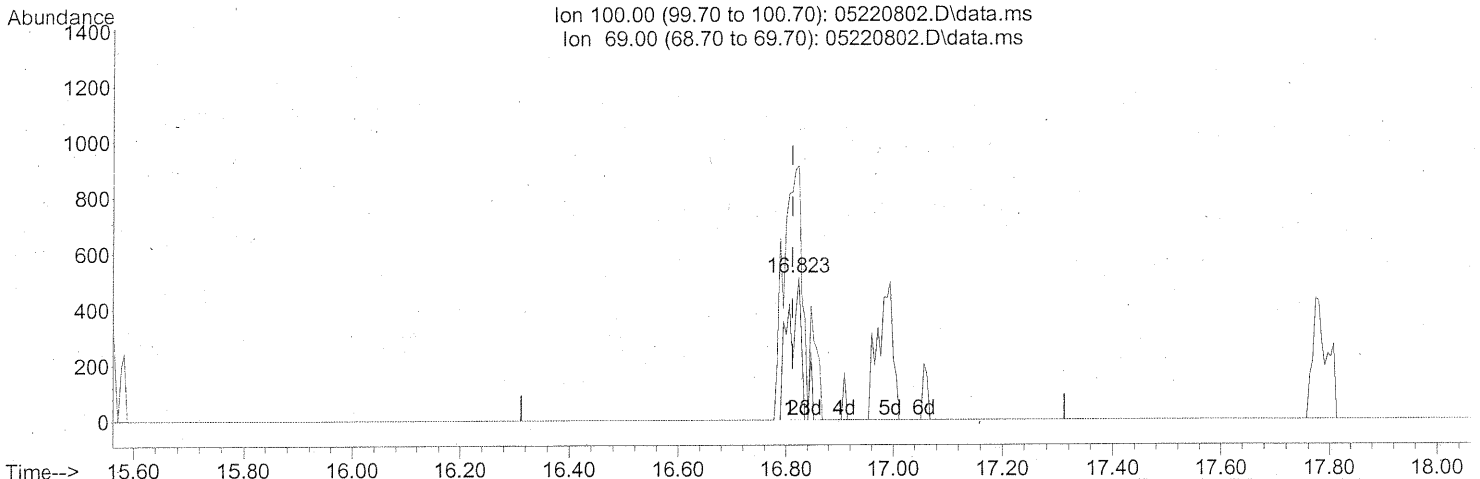
response 431

Ion	Exp%	Act%
100.00	100	100
69.00	259.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

SPLIT PEAK

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220802.D  
Acq On : 22 May 2008 3:56 am  
Operator : RTB  
Sample : 0.1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210809  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 22 10:24:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(50) Methyl Methacrylate (T)

16.823min (+0.011) 0.11ng m

response 897

Ion	Exp%	Act%
100.00	100	100
69.00	259.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

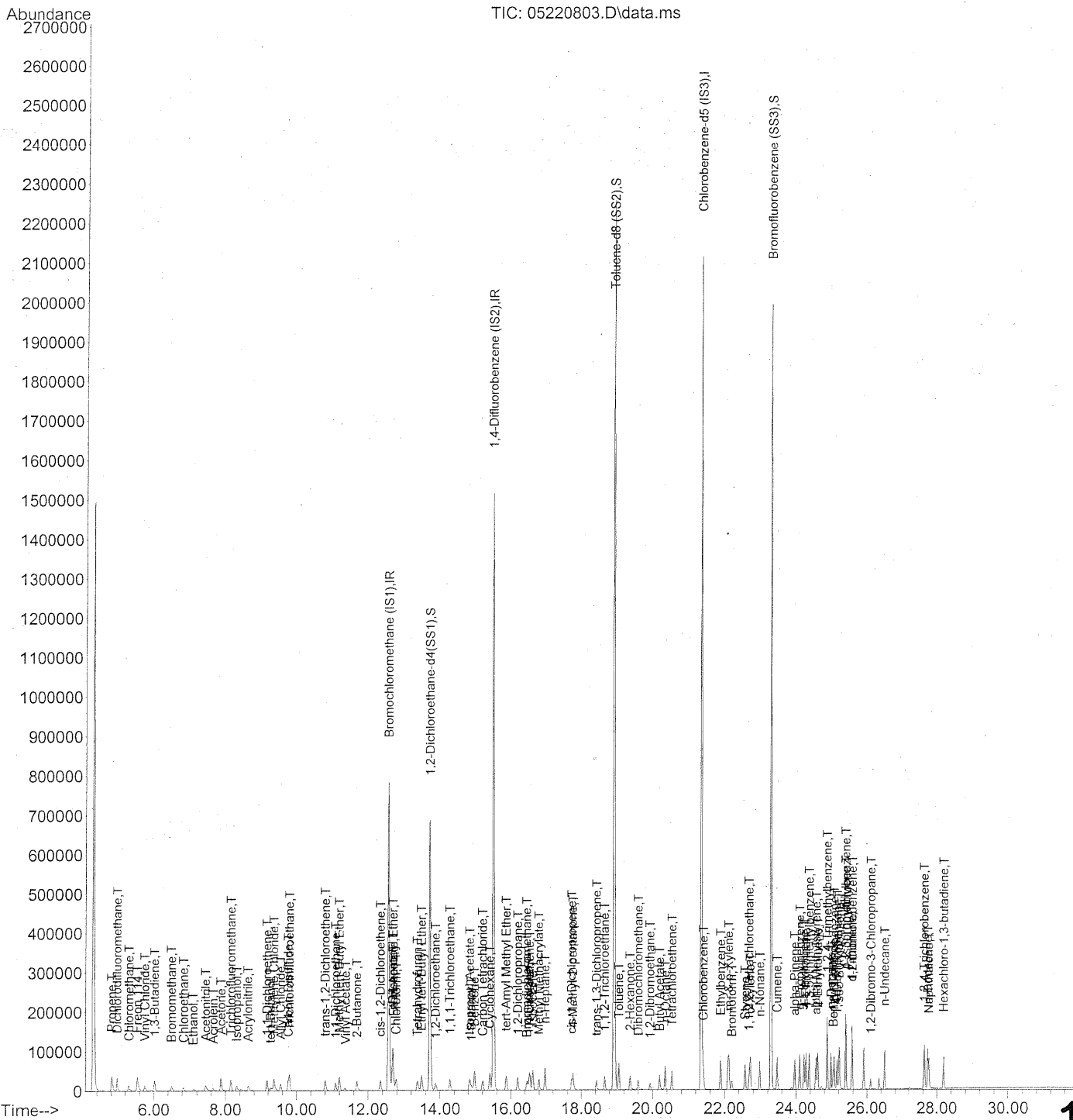
INT. THE WHOLE PEAK

Post 22/08

Em 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37 am  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:00:36 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



1096

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37 am  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:00:36 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	390197	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.51	114	1721246	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.35	82	802715	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.72	65	697916	22.303	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.20%	✓
57) Toluene-d8 (SS2)	18.92	98	1826728	25.389	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.56%	✓
73) Bromofluorobenzene (SS3)	23.29	174	718304	29.011	ng	0.00
Spiked Amount	25.000		Recovery	=	116.04%	✓

Target Compounds

						Qvalue
2) Propene	4.82	42	18055	0.559	ng	# 78
3) Dichlorodifluoromethane	4.97	85	34472	0.585	ng	97
4) Chloromethane	5.30	50	24413	0.496	ng	99
5) Freon 114	5.54	135	17859	0.619	ng	97
6) Vinyl Chloride	5.74	62	21616	0.472	ng	96
7) 1,3-Butadiene	6.02	54	16619	0.469	ng	# 71
8) Bromomethane	6.49	94	12058	0.548	ng	100
9) Chloroethane	6.84	64	10877	0.573	ng	99
10) Ethanol	7.10	45	10775m	0.489	ng	
11) Acetonitrile	7.45	41	30763	0.531	ng	96
12) Acrolein	7.66	56	8102	0.521	ng	97
13) Acetone	7.88	58	17001	0.787	ng	# 67
14) Trichlorofluoromethane	8.16	101	29926	0.647	ng	99
15) Isopropanol	8.32	45	40731m	0.557	ng	
16) Acrylonitrile	8.63	53	17611	0.525	ng	89
17) 1,1-Dichloroethene	9.17	96	13954	0.648	ng	# 79
18) tert-Butanol	9.27	59	34271m	0.565	ng	
19) Methylene Chloride	9.36	84	14738	0.594	ng	90
20) Allyl Chloride	9.56	41	16325	0.492	ng	98
21) Trichlorotrifluoroethane	9.81	151	14162	0.716	ng	99
22) Carbon Disulfide	9.77	76	49203	0.535	ng	95
23) trans-1,2-Dichloroethene	10.80	61	21380	0.569	ng	86
24) 1,1-Dichloroethane	11.10	63	26702	0.611	ng	96
25) Methyl tert-Butyl Ether	11.20	73	42133	0.587	ng	86
26) Vinyl Acetate	11.37	86	988m	0.230	ng	
27) 2-Butanone	11.70	72	9835	0.649	ng	# 89
28) cis-1,2-Dichloroethene	12.35	61	21172	0.598	ng	81
29) Diisopropyl Ether	12.69	87	10651	0.536	ng	# 87
30) Ethyl Acetate	12.71	61	5838	0.618	ng	85
31) n-Hexane	12.70	57	25549	0.521	ng	87

1097

*P 05/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37 am  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:00:36 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.78	83	27481	0.754	ng	97
34) Tetrahydrofuran	13.37	72	9521	0.628	ng	# 89
35) Ethyl tert-Butyl Ether	13.48	87	15911	0.608	ng	# 72
36) 1,2-Dichloroethane	13.89	62	22331	0.619	ng	100
38) 1,1,1-Trichloroethane	14.29	97	23788	0.663	ng	95
39) Isopropyl Acetate	14.84	61	8114	0.518	ng	# 36
40) 1-Butanol	14.89	56	11751m	0.500	ng	
41) Benzene	14.98	78	54381	0.596	ng	98
42) Carbon Tetrachloride	15.21	117	20160	0.668	ng	95
43) Cyclohexane	15.41	84	22659	0.671	ng	# 71
44) tert-Amyl Methyl Ether	15.87	73	37701	0.580	ng	94
45) 1,2-Dichloropropane	16.20	63	15628	0.597	ng	99
46) Bromodichloromethane	16.45	83	20164	0.649	ng	99
47) Trichloroethene	16.53	130	19130	0.852	ng	94
48) 1,4-Dioxane	16.51	88	10866	0.672	ng	# 76
49) Isooctane	16.62	57	60007	0.555	ng	78
50) Methyl Methacrylate	16.80	100	5270	0.636	ng	100
51) n-Heptane	16.98	71	14968	0.592	ng	# 78
52) cis-1,3-Dichloropropene	17.73	75	20622	0.580	ng	96
53) 4-Methyl-2-pentanone	17.77	58	13493	0.540	ng	74
54) trans-1,3-Dichloropropene	18.43	75	17672	0.575	ng	100
55) 1,1,2-Trichloroethane	18.67	97	13754	0.625	ng	97
58) Toluene	19.06	91	62960	0.696	ng	98
59) 2-Hexanone	19.37	43	36470	0.542	ng	82
60) Dibromochloromethane	19.60	129	16288	0.747	ng	99
61) 1,2-Dibromoethane	19.93	107	15889	0.748	ng	96
62) Butyl Acetate	20.19	43	39596	0.588	ng	87
63) n-Octane	20.35	57	12094	0.571	ng	80
64) Tetrachloroethene	20.54	166	17828	0.788	ng	98
65) Chlorobenzene	21.41	112	40785	0.728	ng	100
66) Ethylbenzene	21.89	91	67717	0.671	ng	96
67) m- & p-Xylene	22.12	91	111056	1.646	ng	88
68) Bromoform	22.21	173	12902	0.866	ng	100
69) Styrene	22.57	104	38052	0.653	ng	97
70) o-Xylene	22.71	91	55660	0.767	ng	93
71) n-Nonane	22.98	43	33403	0.574	ng	# 81
72) 1,1,2,2-Tetrachloroethane	22.68	83	20778	0.600	ng	99
74) Cumene	23.46	105	65915	0.716	ng	100
75) alpha-Pinene	23.96	93	32023	0.654	ng	84
76) n-Propylbenzene	24.10	91	80452	0.653	ng	98
77) 3-Ethyltoluene	24.22	105	65688	0.654	ng	97
78) 4-Ethyltoluene	24.28	105	64603	0.699	ng	100
79) 1,3,5-Trimethylbenzene	24.37	105	56551	0.689	ng	97

1098

05/22/08



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37 am  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:00:36 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	27093	0.623	ng	92
81) 2-Ethyltoluene	24.61	105	63115	0.625	ng	99
82) 1,2,4-Trimethylbenzene	24.88	105	58569	0.631	ng	98
83) n-Decane	24.98	57	31433	0.612	ng	88
84) Benzyl Chloride	25.05	91	30371	0.480	ng	96
85) 1,3-Dichlorobenzene	25.07	146	36248	0.721	ng	97
86) 1,4-Dichlorobenzene	25.16	146	35281	0.734	ng	99
87) sec-Butylbenzene	25.21	105	77751	0.714	ng	97
88) p-Isopropyltoluene	25.40	119	65970	0.694	ng	95
89) 1,2,3-Trimethylbenzene	25.40	105	57591	0.631	ng	98
90) 1,2-Dichlorobenzene	25.58	146	34802	0.676	ng	100
91) d-Limonene	25.57	68	20842	0.495	ng	90
92) 1,2-Dibromo-3-Chloropr...	26.11	157	8581	0.629	ng	# 80
93) n-Undecane	26.50	57	32540	0.604	ng	86
94) 1,2,4-Trichlorobenzene	27.63	180	25769	0.807	ng	97
95) Naphthalene	27.77	128	70883	0.691	ng	97
96) n-Dodecane	27.74	57	32740	0.599	ng	87
97) Hexachloro-1,3-butadiene	28.19	225	17105	0.832	ng	98

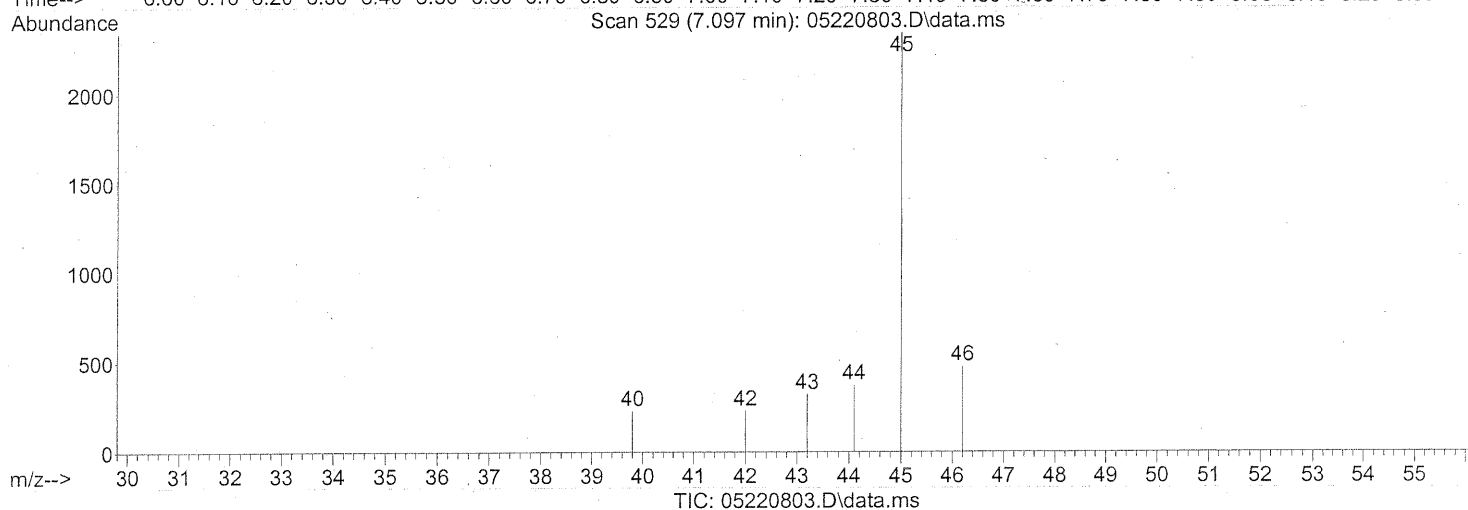
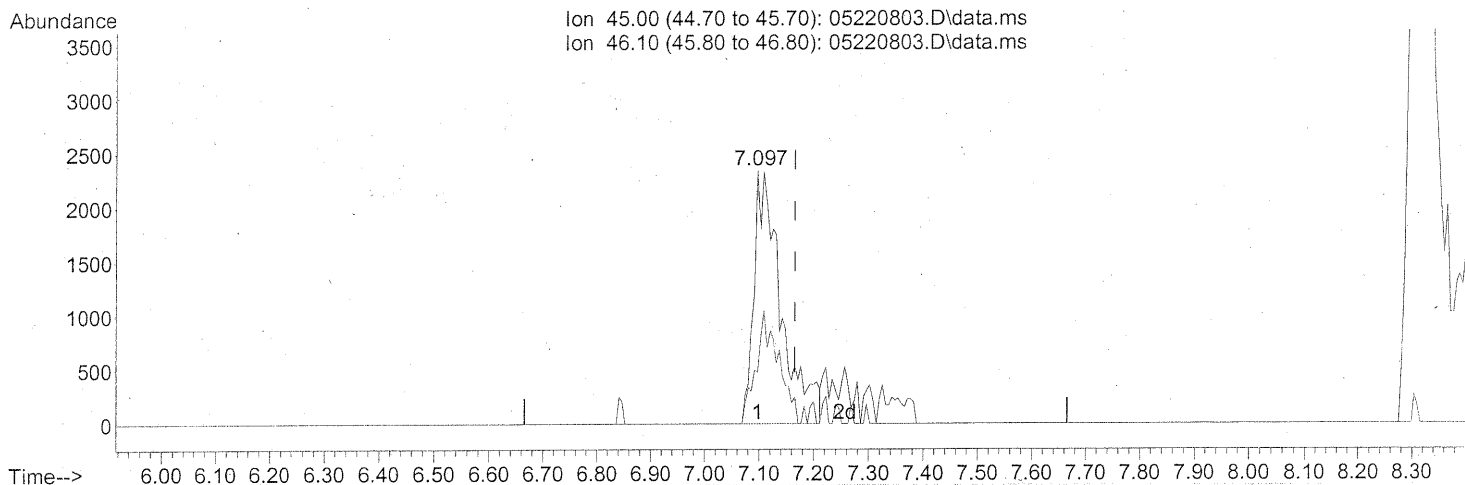
(#) = qualifier out of range (m) = manual integration (+) = signals summed

*05/22/08*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.069) 0.37ng

response 8070

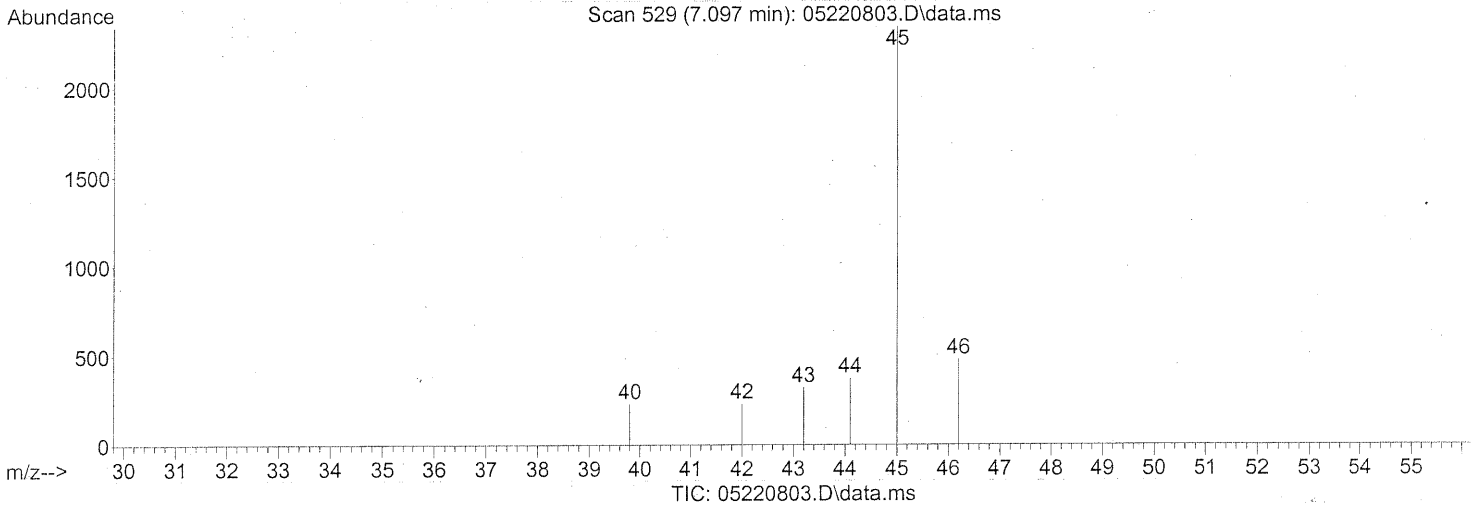
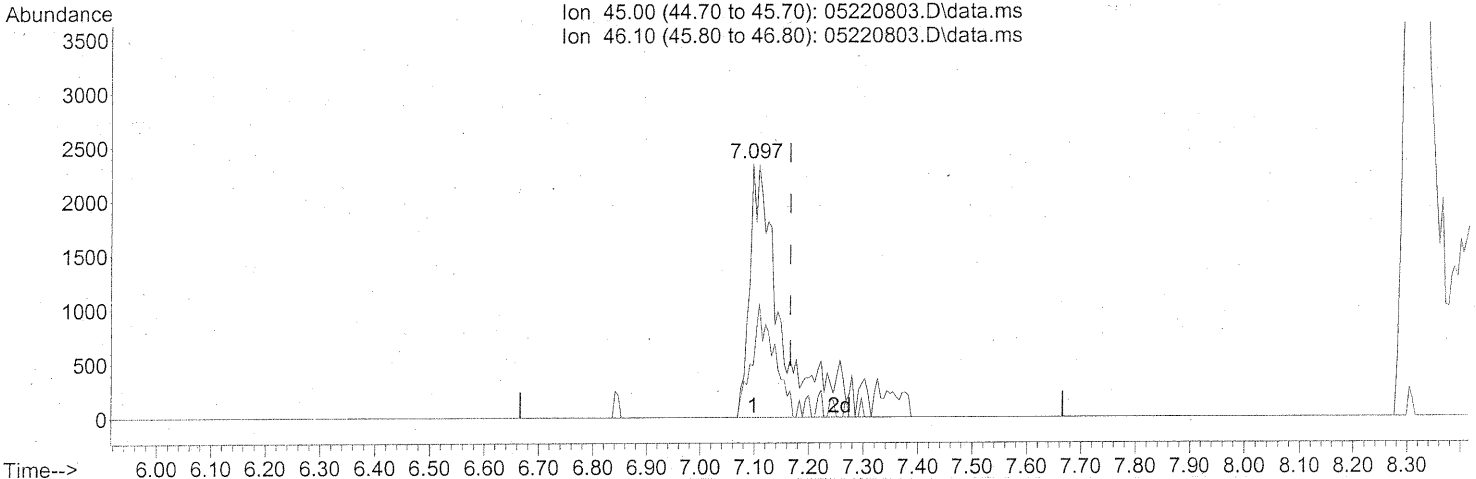
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.37
0.00	0.00	0.00
0.00	0.00	0.00

TAILING

Quantitation Report (Qealt)

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37 am  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.069) 0.49ng m

response 10775

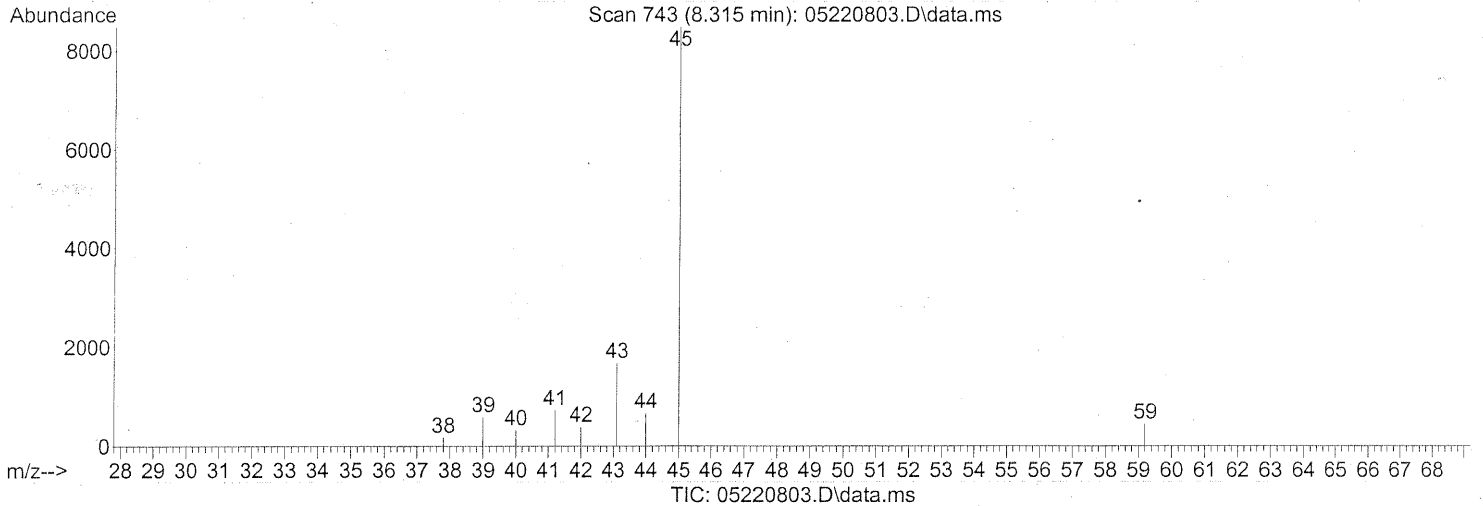
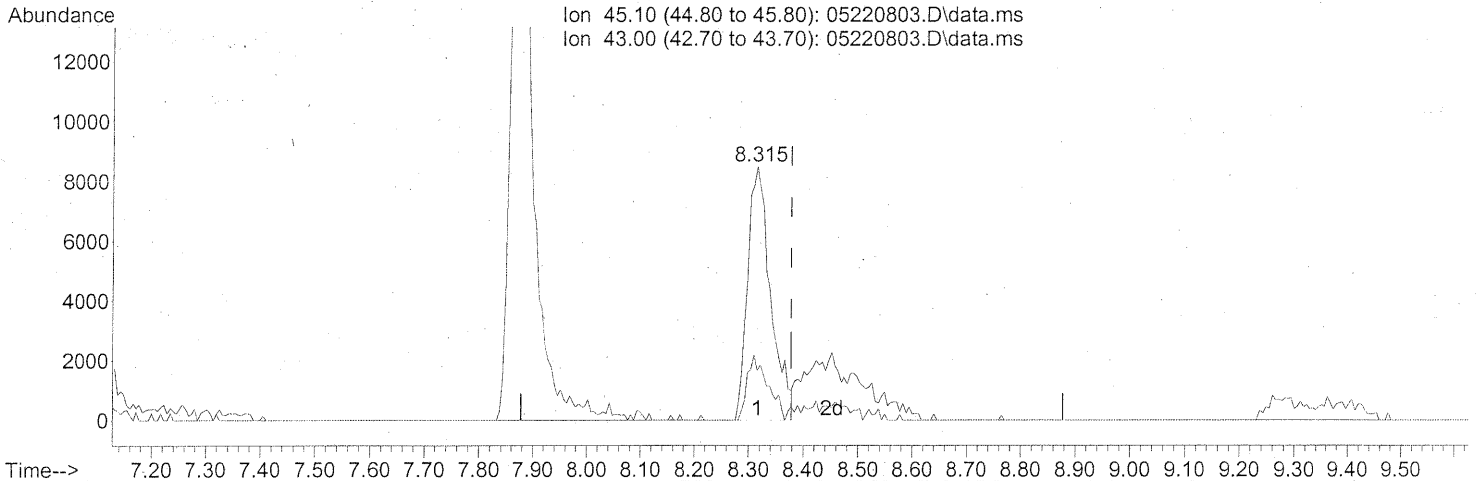
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	27.99
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
 P 05/22/08  
 em 5/22/08

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(15) Isopropanol (T)

8.315min (-0.062) 0.34ng

response 24572

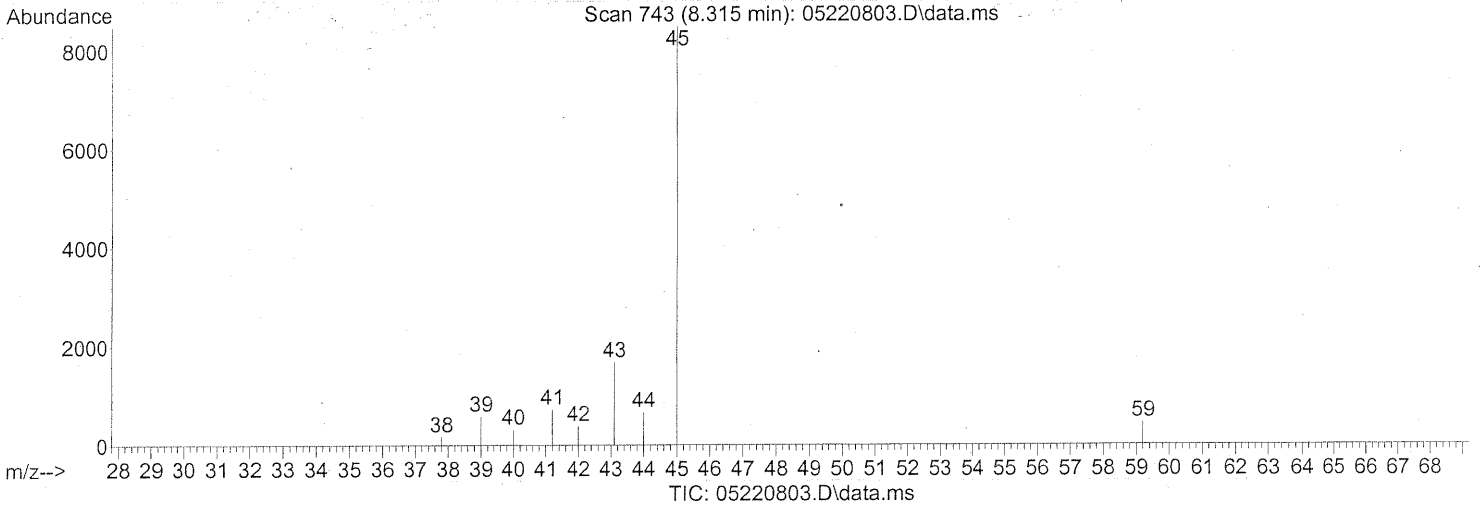
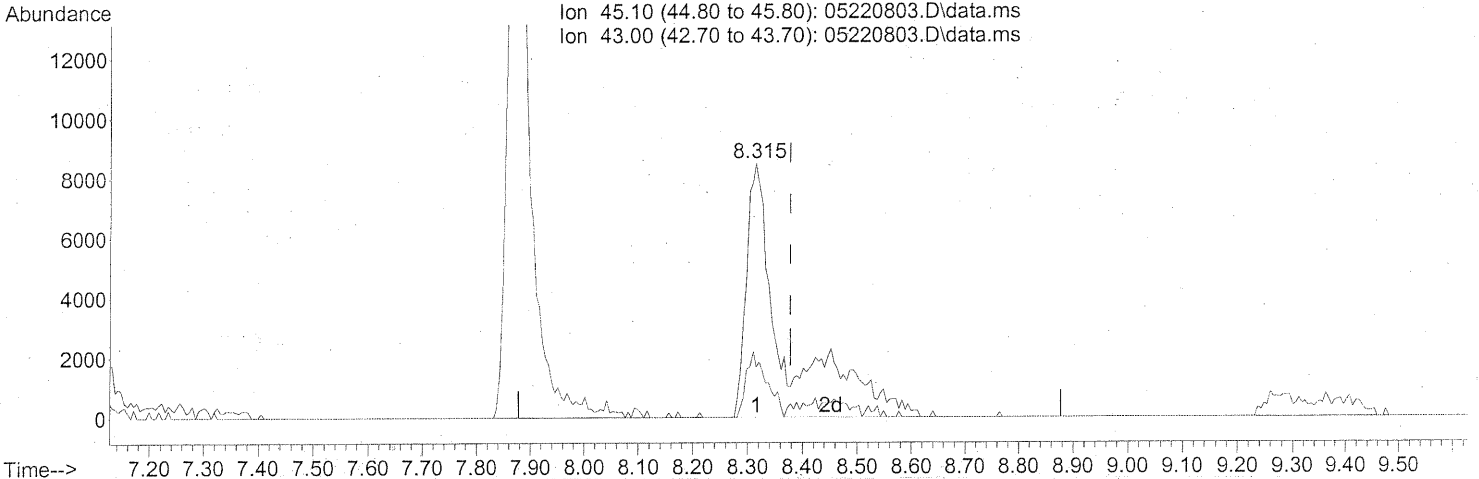
Ion	Exp%	Act%
45.10	100	100
43.00	16.90	22.92
0.00	0.00	0.00
0.00	0.00	0.00

SPLIT PEAK

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
8.315min (-0.062) 0.56ng m  
response 40731

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	13.83
0.00	0.00	0.00
0.00	0.00	0.00

INT. THE WHOLE PEAK

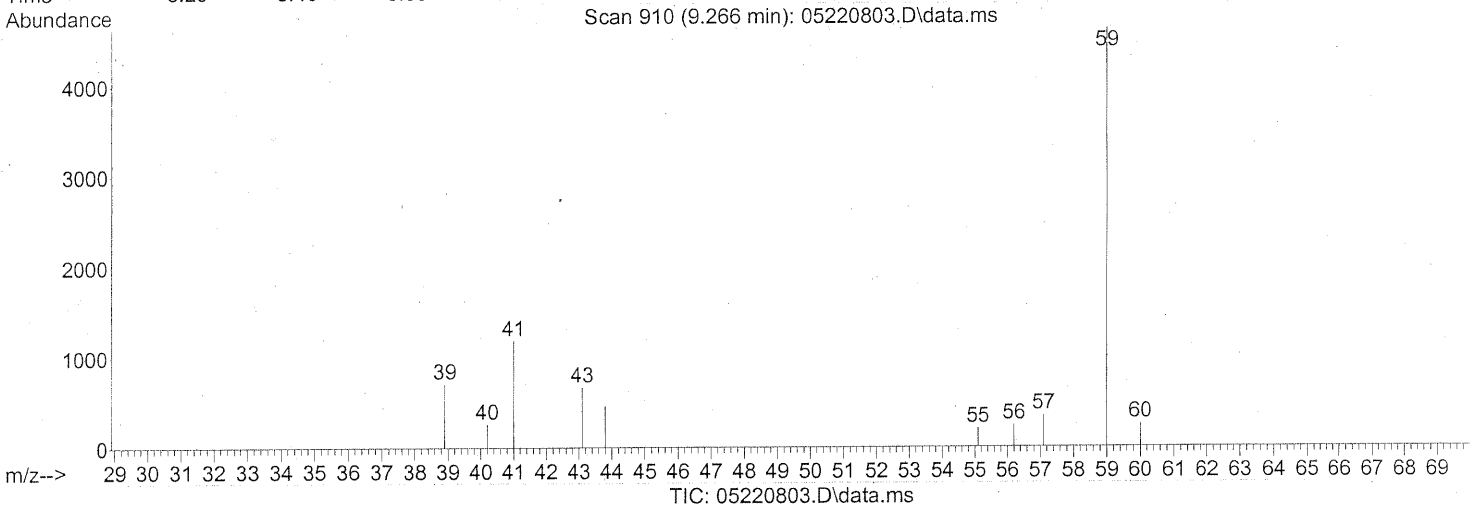
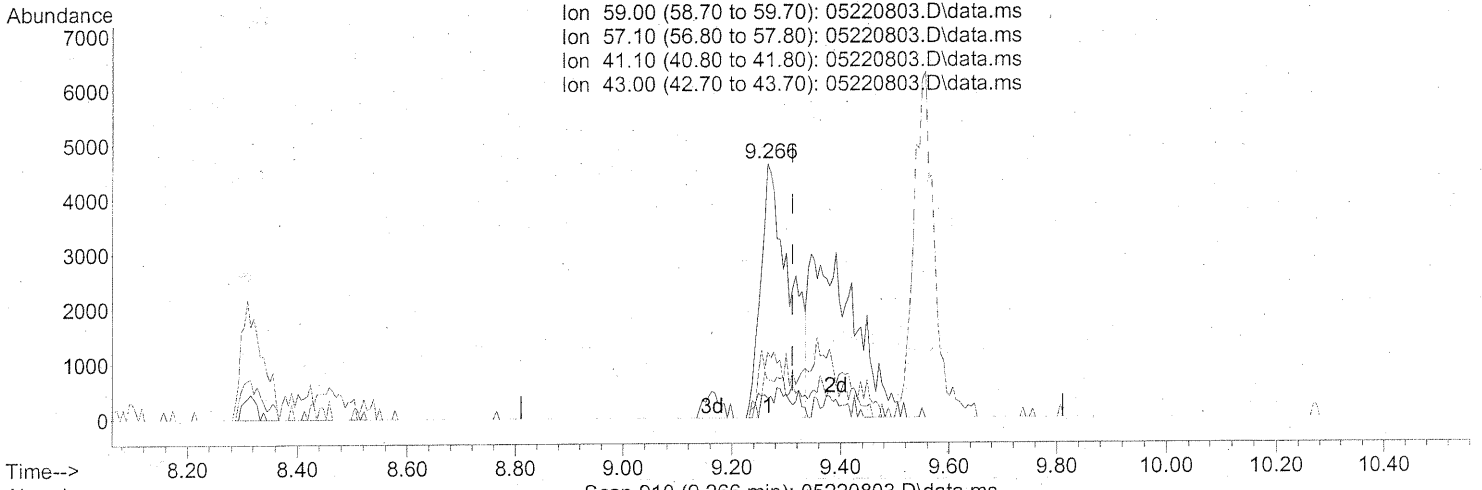
5/22/08

em 5/22/08

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
9.266min (-0.045) 0.28ng  
response 16829

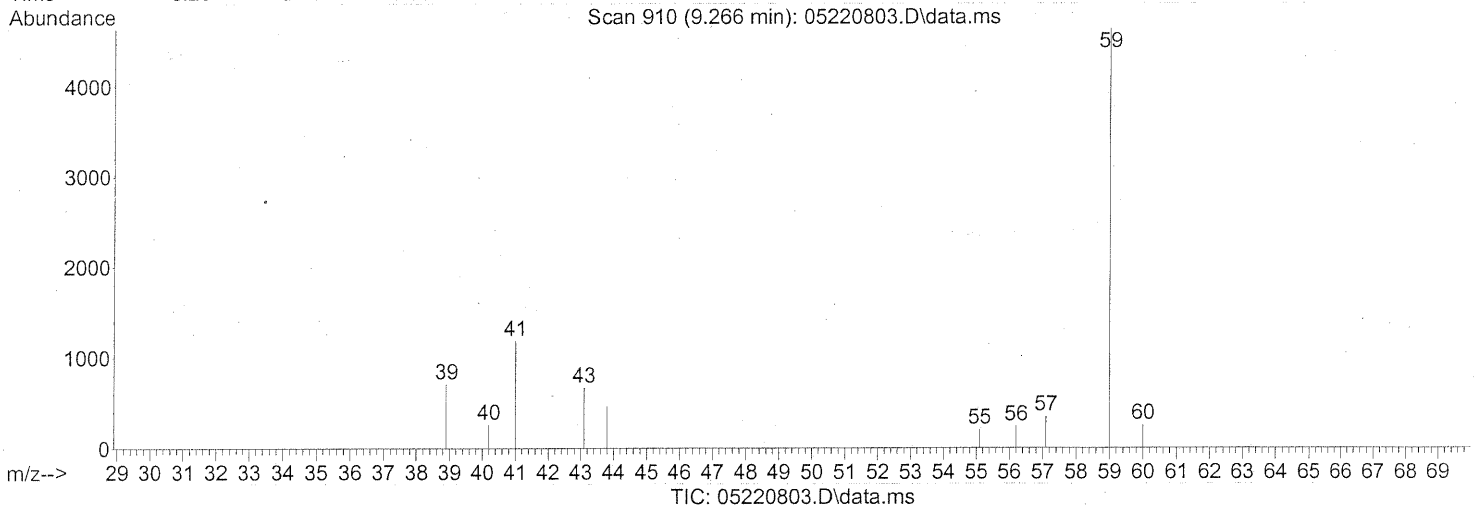
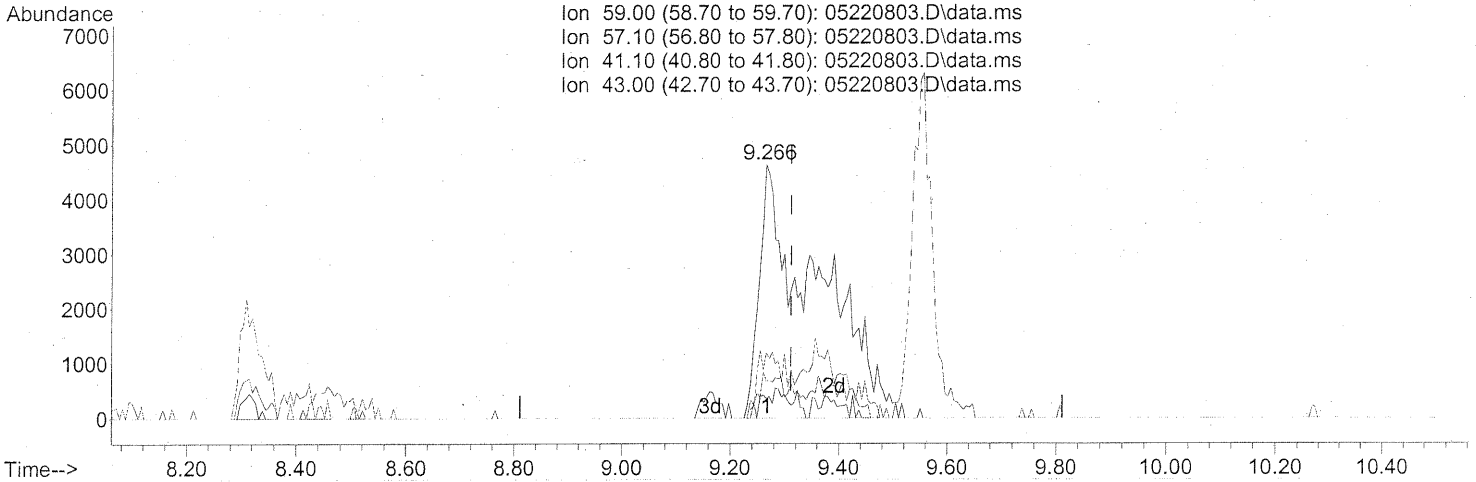
SPLIT PEAK

Ion	Exp%	Act%
59.00	100	100
57.10	10.30	4.27
41.10	20.10	27.48
43.00	12.30	14.64

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(18) tert-Butanol (T)  
9.266min (-0.045) 0.57ng m  
response 34271

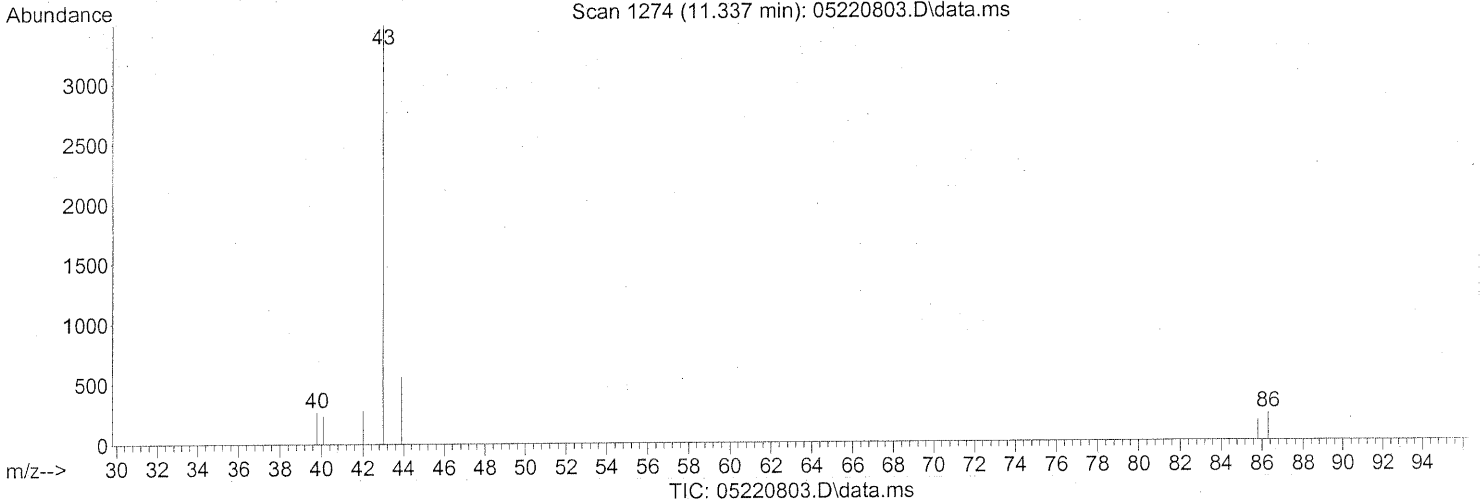
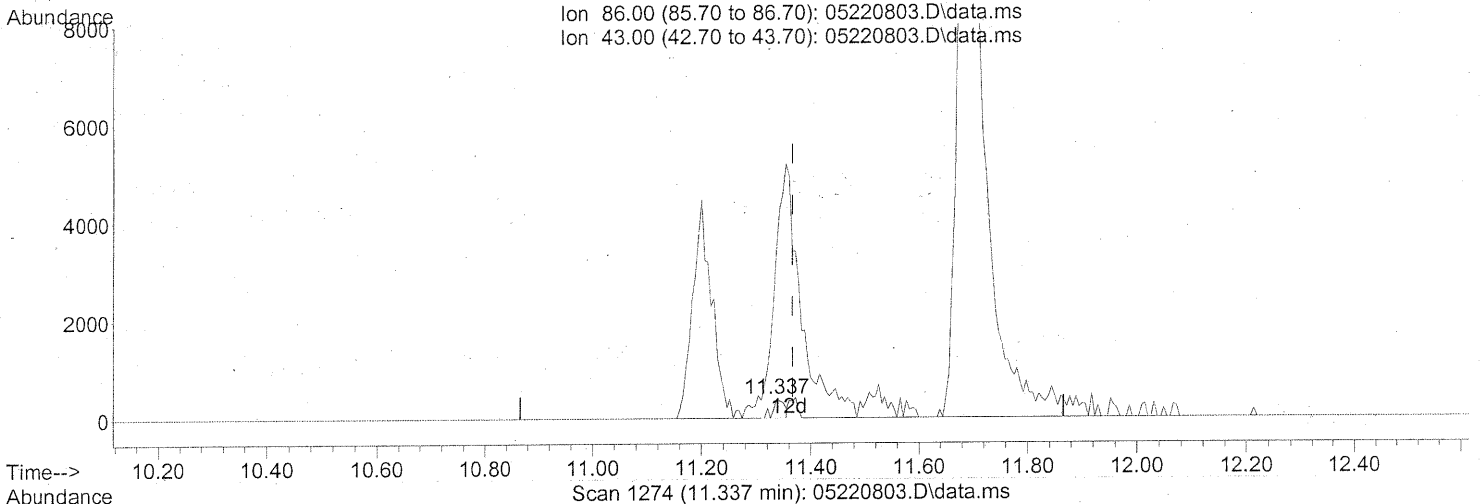
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	2.10
41.10	20.10	13.49
43.00	12.30	7.19

INT: THE WHOLE PEAK  
5/22/08  
em 5/22/08

Quantitation Report (Qual)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.337min (-0.029) 0.13ng

response 550

Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

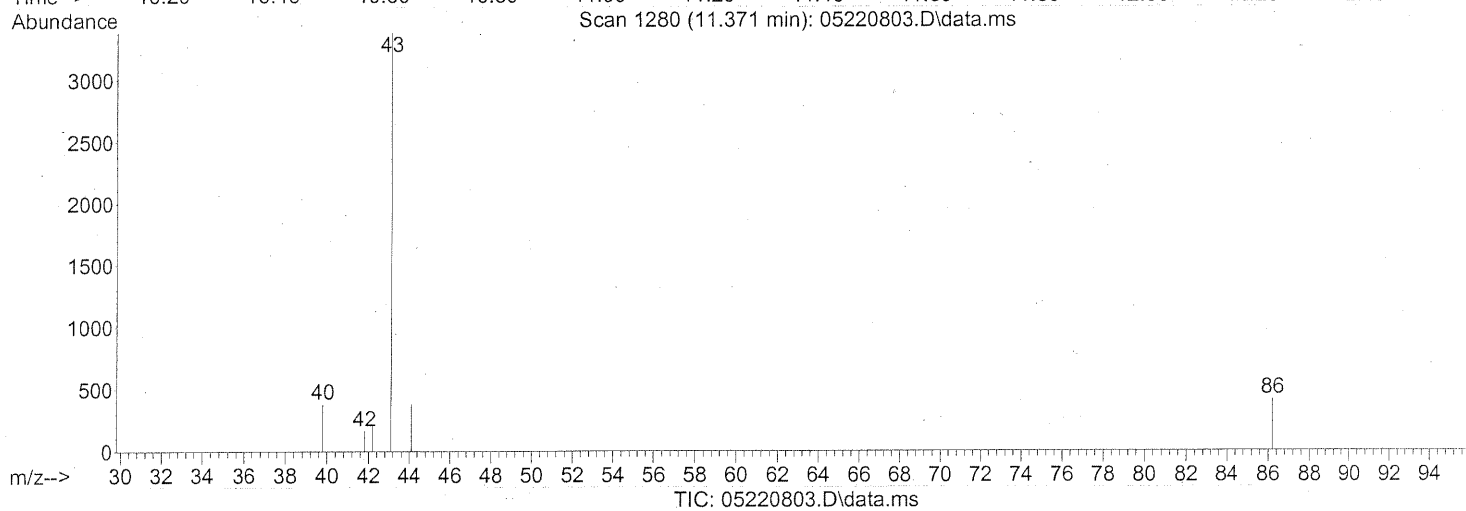
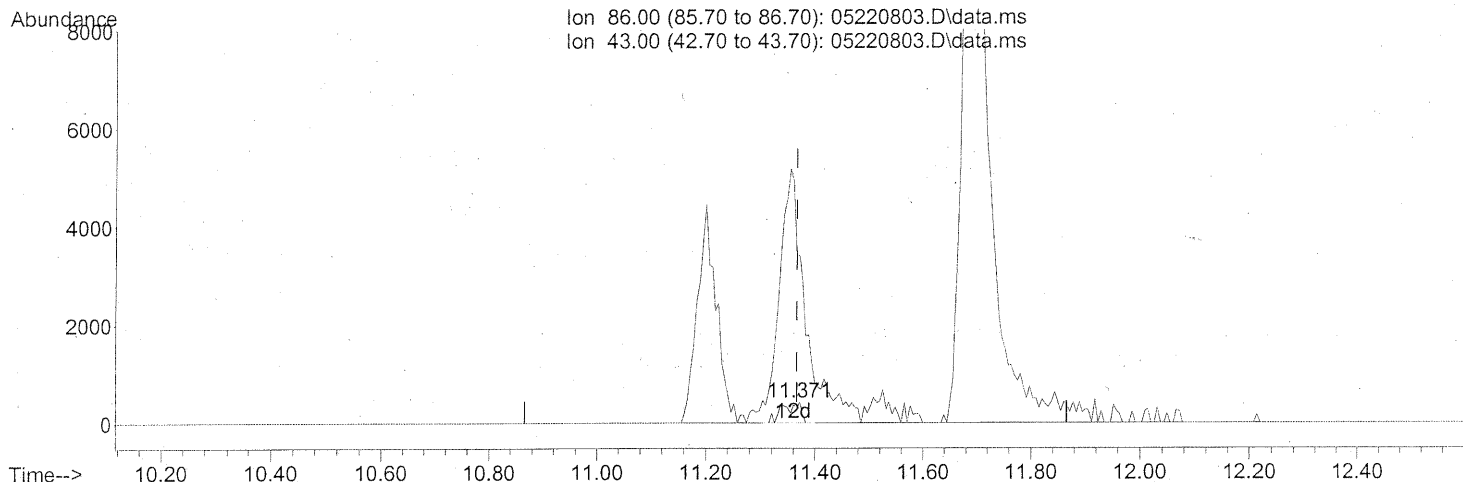
SPLIT PEAK



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(26) Vinyl Acetate (T)  
11.371min (+0.005) 0.23ng m

response 988

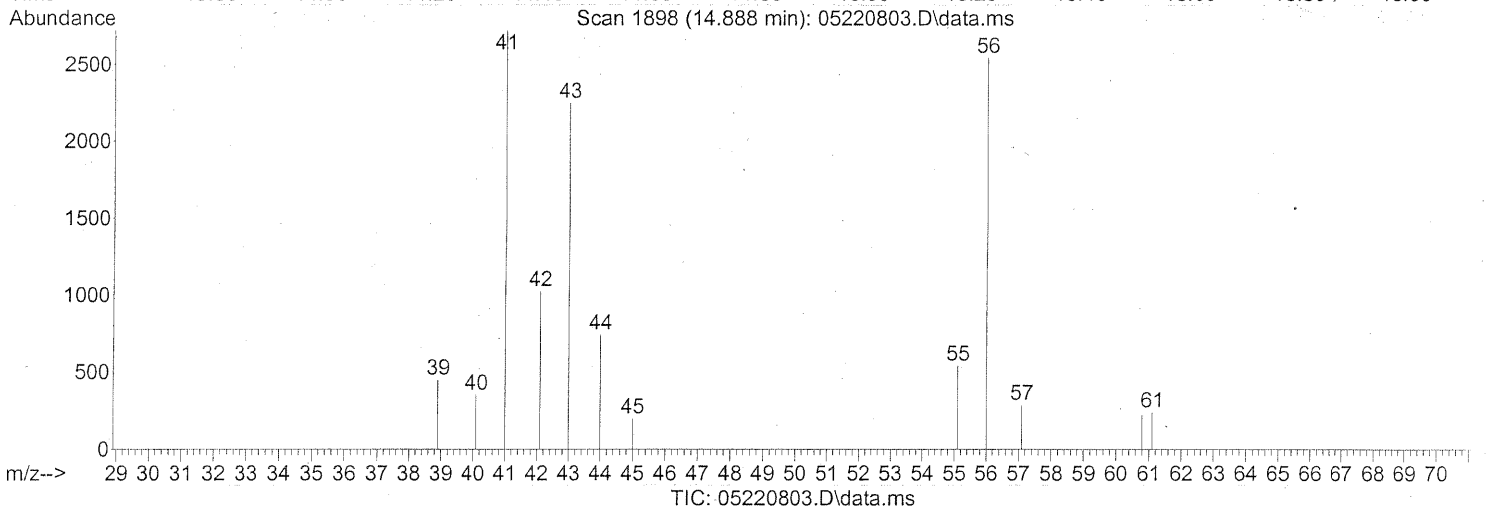
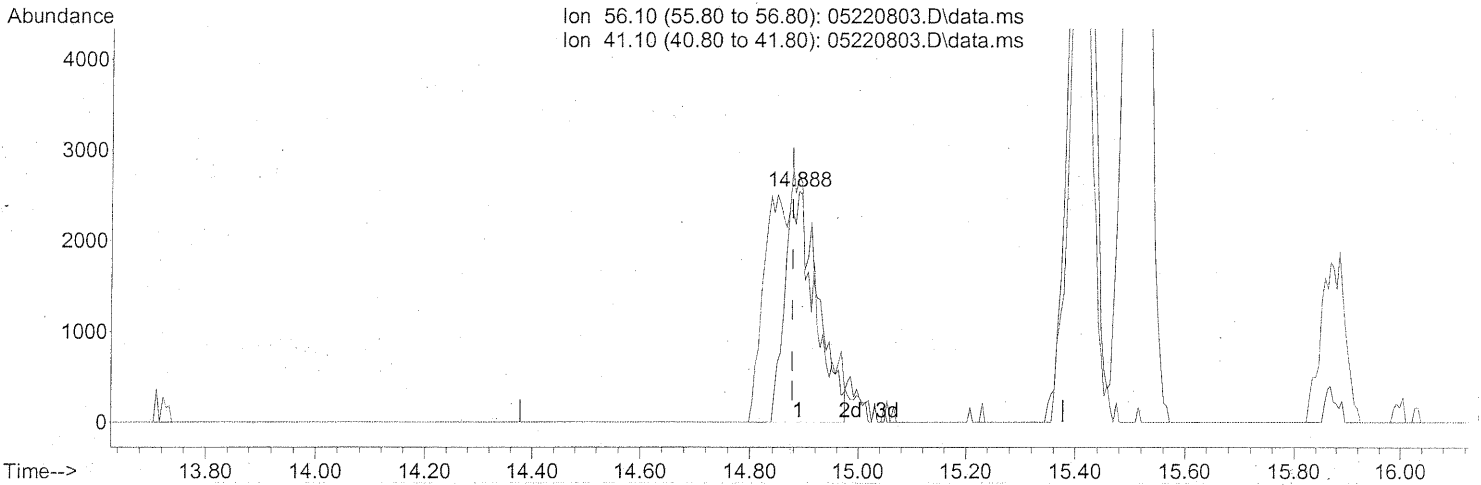
Ion	Exp%	Act%
86.00	100	100
43.00	1381.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

INT. THE WHOLE PEAK

*RTB*  
*5/22/08*  
*EM 5/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(40) 1-Butanol (T)

14.888min (+0.011) 0.46ng

response 10817

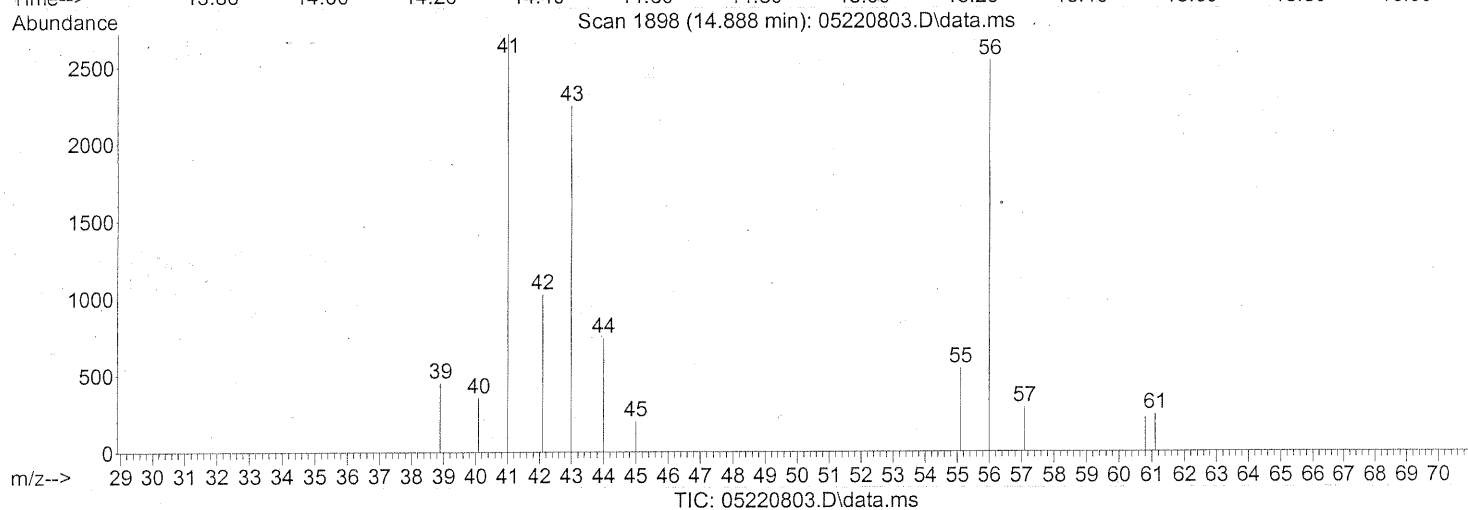
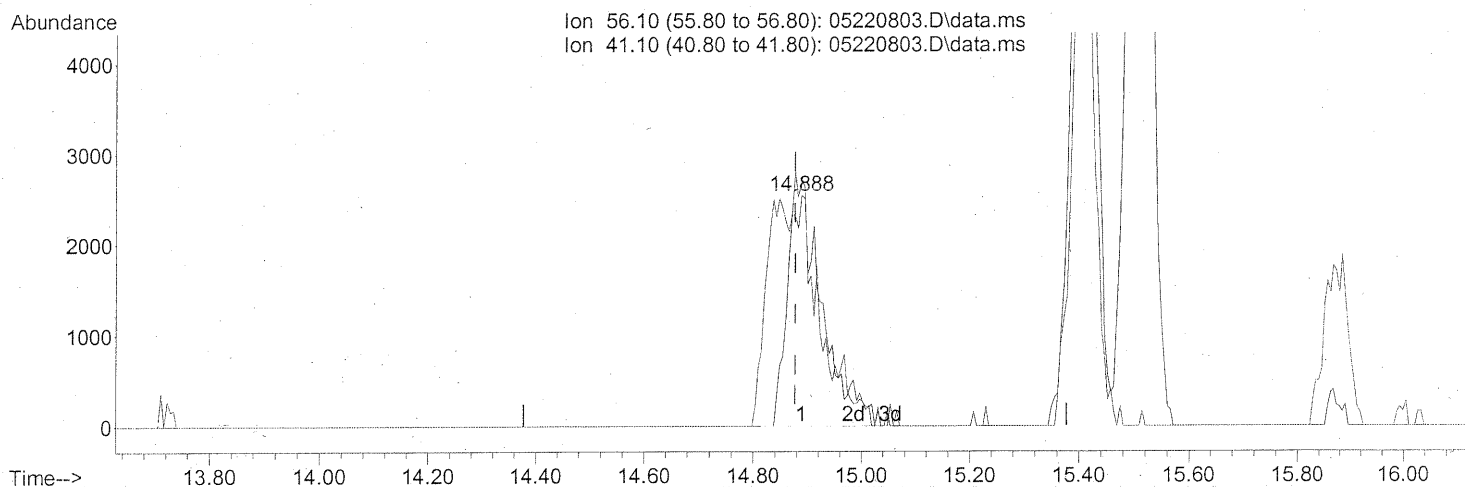
TAILING

Ion	Exp%	Act%
56.10	100	100
41.10	92.00	155.68#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220803.D  
Acq On : 22 May 2008 4:37 am  
Operator : RTB  
Sample : 0.5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 10:56:59 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



(40) 1-Butanol (T)  
14.888min (+0.011) 0.50ng m  
response 11751

Ion	Exp%	Act%
56.10	100	100
41.10	92.00	143.31#
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
Post 5/22/08  
Em 5/22/08



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:05:26 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	387850	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.51	114	1717781	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.35	82	808909	25.000	ng	-0.01

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.72	65	693031	22.281	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.12%	✓
57) Toluene-d8 (SS2)	18.92	98	1824190	25.160	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.64%	✓
73) Bromofluorobenzene (SS3)	23.29	174	731633	29.323	ng	0.00
Spiked Amount	25.000		Recovery	=	117.28%	✓

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	31590	0.984	ng	# 80
3) Dichlorodifluoromethane	4.97	85	63836	1.091	ng	98
4) Chloromethane	5.29	50	44241	0.905	ng	98
5) Freon 114	5.54	135	31291	1.092	ng	100
6) Vinyl Chloride	5.74	62	40614	0.892	ng	97
7) 1,3-Butadiene	6.02	54	29257	0.831	ng	# 75
8) Bromomethane	6.50	94	21776	0.996	ng	100
9) Chloroethane	6.83	64	18933	1.004	ng	94
10) Ethanol	7.10	45	19222m	0.878	ng	
11) Acetonitrile	7.44	41	55423	0.963	ng	96
12) Acrolein	7.65	56	14360	0.928	ng	96
13) Acetone	7.87	58	25772	1.200	ng	# 61
14) Trichlorofluoromethane	8.16	101	51253	1.115	ng	98
15) Isopropanol	8.31	45	72885m	1.003	ng	
16) Acrylonitrile	8.64	53	33618	1.009	ng	90
17) 1,1-Dichloroethene	9.16	96	24647	1.151	ng	# 81
18) tert-Butanol	9.25	59	62875	1.043	ng	92
19) Methylene Chloride	9.36	84	27777	1.126	ng	# 78
20) Allyl Chloride	9.55	41	30378	0.922	ng	94
21) Trichlorotrifluoroethane	9.82	151	26014	1.324	ng	94
22) Carbon Disulfide	9.78	76	88300	0.966	ng	96
23) trans-1,2-Dichloroethene	10.80	61	38110	1.021	ng	79
24) 1,1-Dichloroethane	11.09	63	47132	1.085	ng	97
25) Methyl tert-Butyl Ether	11.20	73	77796	1.090	ng	85
26) Vinyl Acetate	11.35	86	2478	0.581	ng	# 93
27) 2-Butanone	11.69	72	16980	1.128	ng	99
28) cis-1,2-Dichloroethene	12.35	61	38263	1.088	ng	86
29) Diisopropyl Ether	12.69	87	18913	0.957	ng	# 84
30) Ethyl Acetate	12.69	61	10672	1.137	ng	79
31) n-Hexane	12.71	57	46629	0.956	ng	91

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:05:26 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	46595	1.287	ng	100
34) Tetrahydrofuran	13.35	72	16796	1.115	ng #	92
35) Ethyl tert-Butyl Ether	13.48	87	27643	1.063	ng #	77
36) 1,2-Dichloroethane	13.89	62	39420	1.099	ng	98
38) 1,1,1-Trichloroethane	14.29	97	45629	1.275	ng	95
39) Isopropyl Acetate	14.84	61	13612	0.871	ng #	22
40) 1-Butanol	14.87	56	19777	0.844	ng #	36
41) Benzene	14.97	78	98158	1.077	ng	99
42) Carbon Tetrachloride	15.21	117	37159	1.233	ng	99
43) Cyclohexane	15.41	84	39849	1.182	ng #	75
44) tert-Amyl Methyl Ether	15.87	73	64909	1.001	ng	94
45) 1,2-Dichloropropane	16.20	63	26711	1.023	ng	97
46) Bromodichloromethane	16.45	83	35298	1.139	ng	97
47) Trichloroethene	16.53	130	31767	1.417	ng	100
48) 1,4-Dioxane	16.50	88	19341	1.199	ng #	77
49) Isooctane	16.62	57	108788	1.008	ng	79
50) Methyl Methacrylate	16.80	100	8739	1.056	ng #	82
51) n-Heptane	16.98	71	26789	1.061	ng #	83
52) cis-1,3-Dichloropropene	17.72	75	35922	1.012	ng	100
53) 4-Methyl-2-pentanone	17.77	58	24393	0.979	ng	78
54) trans-1,3-Dichloropropene	18.43	75	33739	1.100	ng	98
55) 1,1,2-Trichloroethane	18.67	97	24090	1.098	ng	93
58) Toluene	19.06	91	109766	1.205	ng	97
59) 2-Hexanone	19.37	43	71227	1.050	ng	79
60) Dibromochloromethane	19.60	129	29309	1.334	ng	97
61) 1,2-Dibromoethane	19.93	107	29150	1.361	ng	99
62) Butyl Acetate	20.19	43	72888	1.074	ng	86
63) n-Octane	20.35	57	23440	1.098	ng	89
64) Tetrachloroethene	20.54	166	31031	1.361	ng	98
65) Chlorobenzene	21.40	112	75334	1.335	ng	98
66) Ethylbenzene	21.89	91	123937	1.218	ng	95
67) m- & p-Xylene	22.11	91	196019	2.883	ng	90
68) Bromoform	22.21	173	23803	1.585	ng	98
69) Styrene	22.57	104	71994	1.227	ng	97
70) o-Xylene	22.71	91	99714	1.363	ng	92
71) n-Nonane	22.98	43	59725	1.019	ng #	81
72) 1,1,2,2-Tetrachloroethane	22.68	83	40131	1.149	ng	95
74) Cumene	23.46	105	119013	1.282	ng	98
75) alpha-Pinene	23.96	93	59293	1.202	ng	94
76) n-Propylbenzene	24.10	91	148255	1.193	ng	98
77) 3-Ethyltoluene	24.23	105	115484	1.141	ng	100
78) 4-Ethyltoluene	24.28	105	124428	1.335	ng	98
79) 1,3,5-Trimethylbenzene	24.37	105	104662	1.265	ng	98

1112

8/05/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:05:26 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

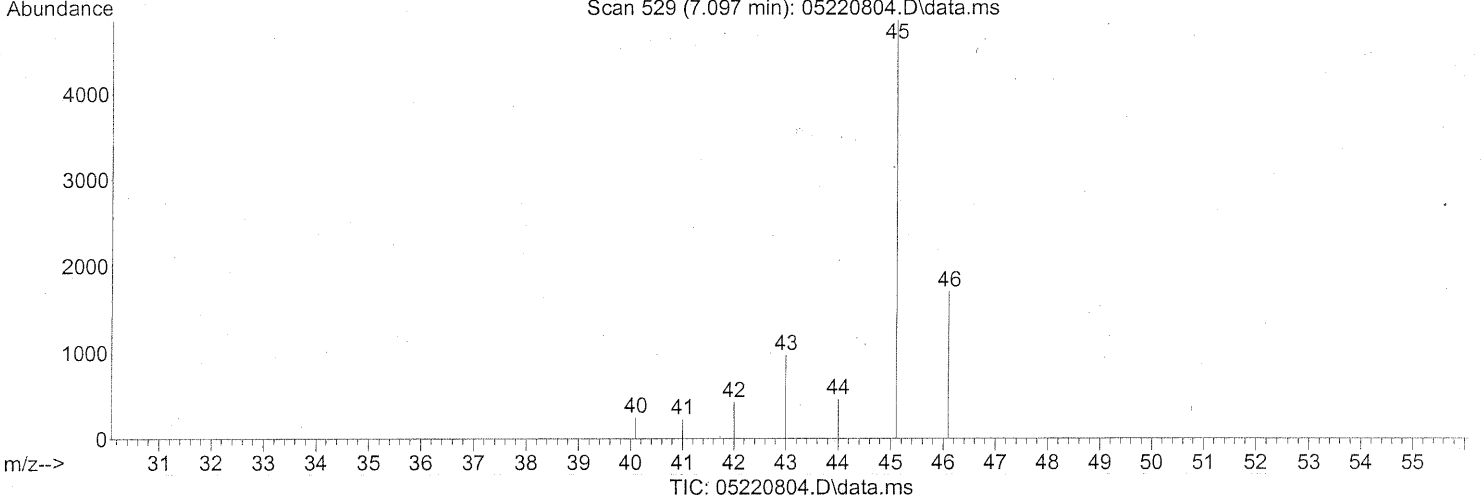
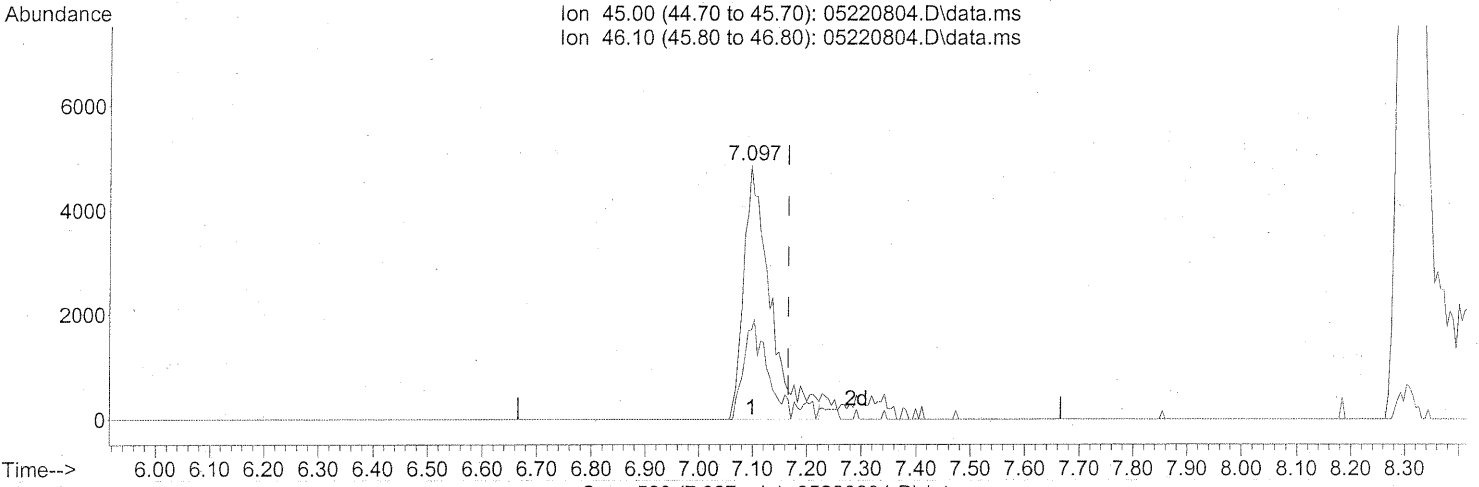
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.56	118	51478	1.174	ng	95
81) 2-Ethyltoluene	24.61	105	118434	1.164	ng	98
82) 1,2,4-Trimethylbenzene	24.88	105	108583	1.161	ng	99
83) n-Decane	24.98	57	55990	1.083	ng	86
84) Benzyl Chloride	25.05	91	60901	0.955	ng	93
85) 1,3-Dichlorobenzene	25.08	146	65743	1.298	ng	96
86) 1,4-Dichlorobenzene	25.15	146	66572	1.374	ng	99
87) sec-Butylbenzene	25.21	105	137114	1.249	ng	97
88) p-Isopropyltoluene	25.39	119	125564	1.311	ng	94
89) 1,2,3-Trimethylbenzene	25.40	105	106454	1.157	ng	97
90) 1,2-Dichlorobenzene	25.57	146	64179	1.237	ng	99
91) d-Limonene	25.57	68	40763	0.961	ng	98
92) 1,2-Dibromo-3-Chloropr...	26.11	157	17133	1.246	ng	# 85
93) n-Undecane	26.50	57	59190	1.090	ng	86
94) 1,2,4-Trichlorobenzene	27.63	180	46517	1.446	ng	97
95) Naphthalene	27.77	128	137258	1.327	ng	97
96) n-Dodecane	27.74	57	58398	1.060	ng	82
97) Hexachloro-1,3-butadiene	28.19	225	30742	1.484	ng	99

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

*Post 22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:02:41 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.069) 0.76ng

response 16650

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	34.31
0.00	0.00	0.00
0.00	0.00	0.00

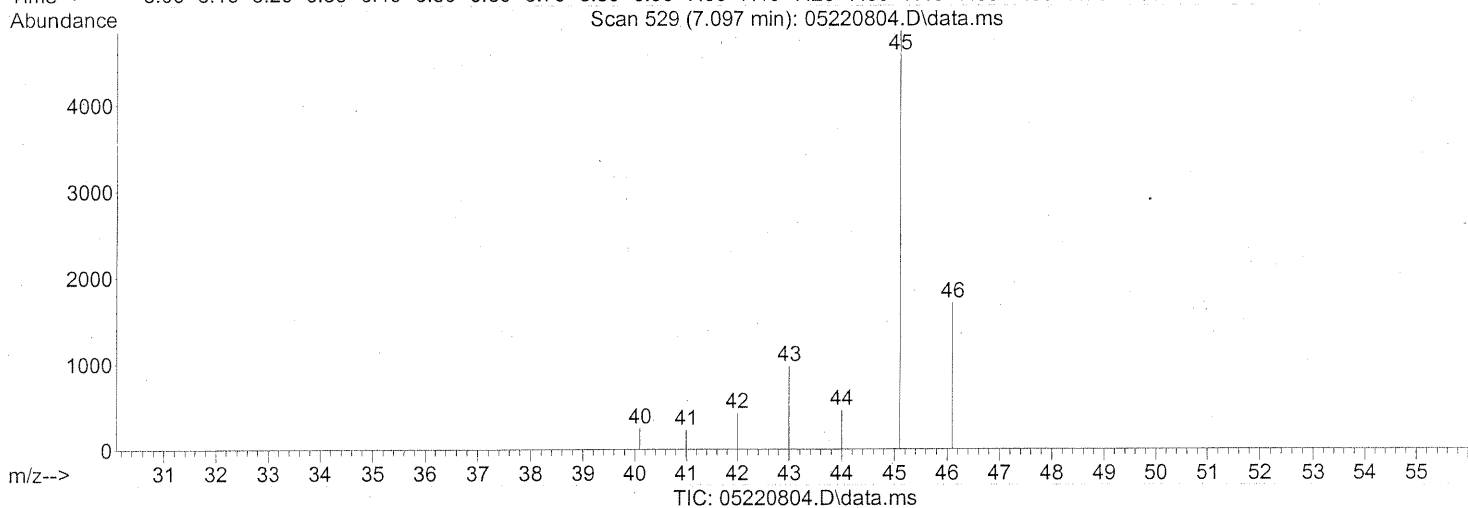
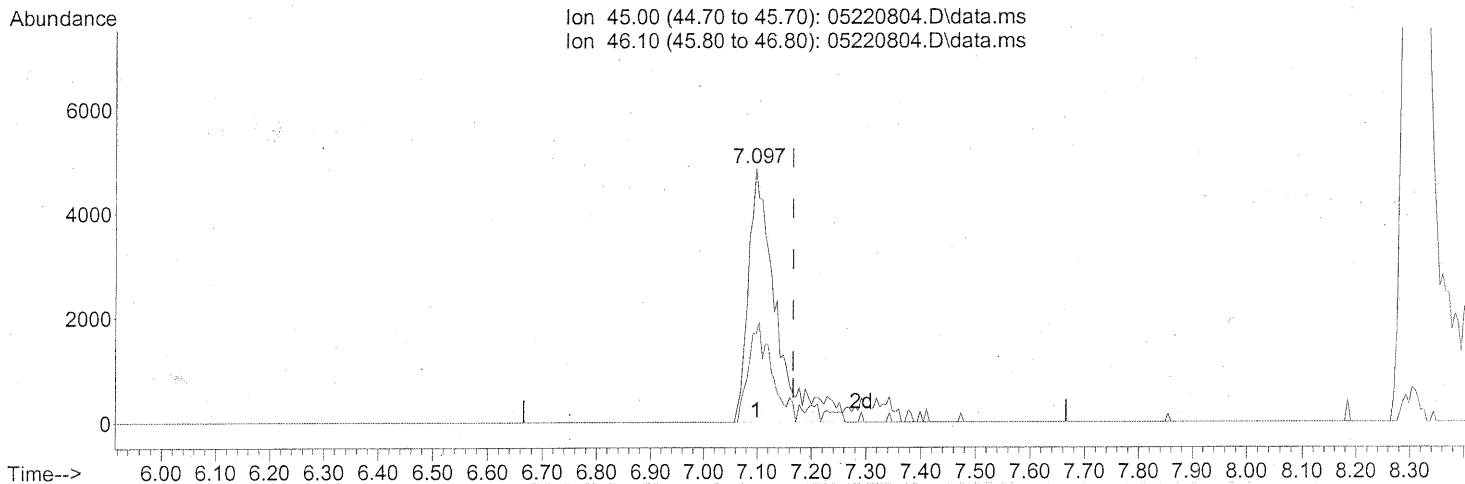
TAILING



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:02:41 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.097min (-0.069) 0.88ng m  
 response 19222

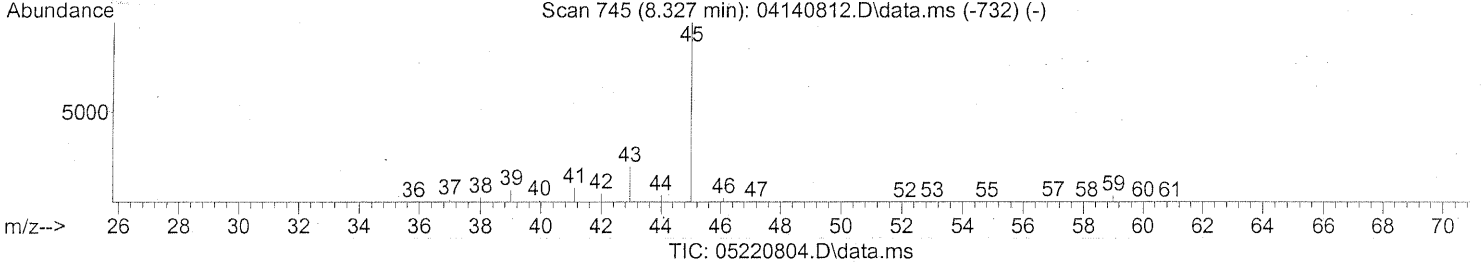
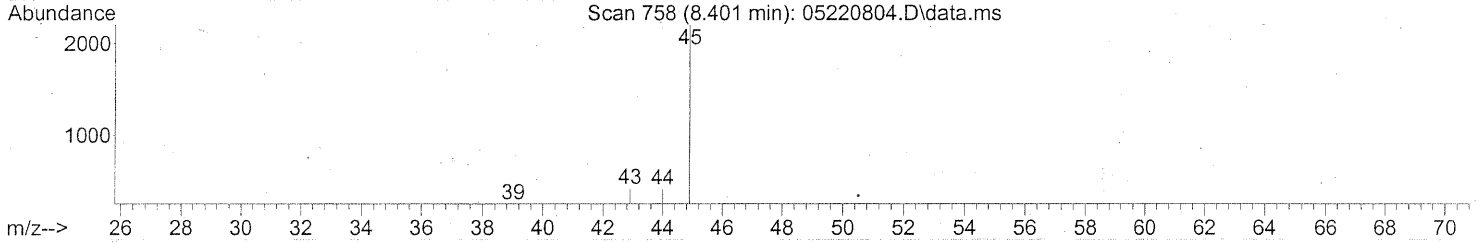
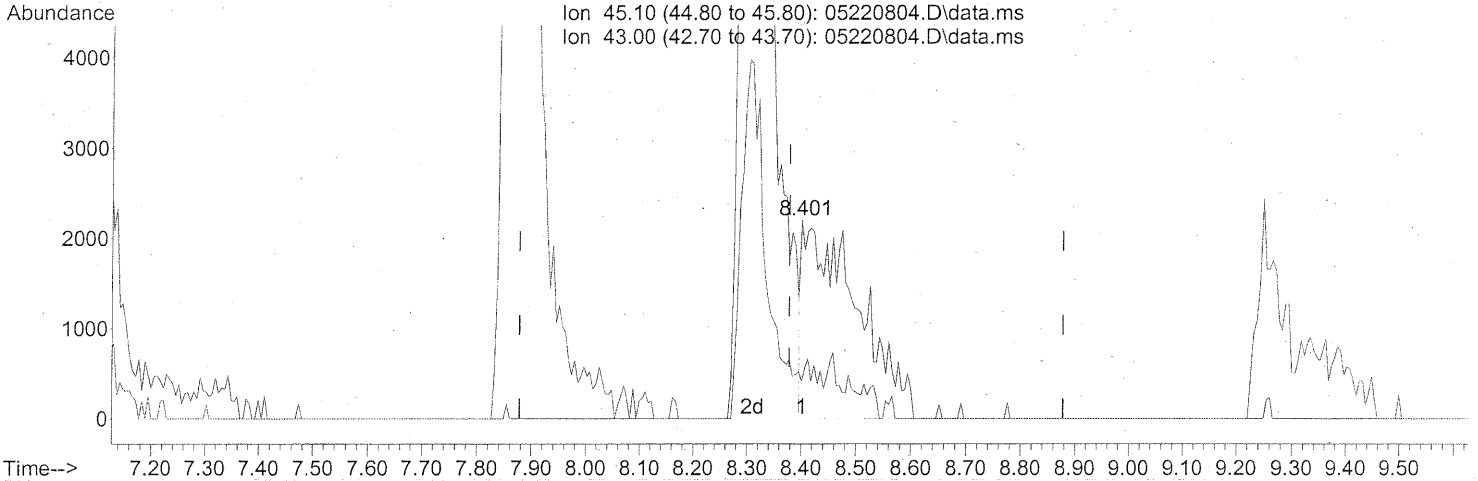
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	29.72
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
 P 05/22/08  
 em 5/22/08

Quantitation Report (Qealt)

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18 am  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:02:41 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)

8.401min (+0.023) 0.21ng

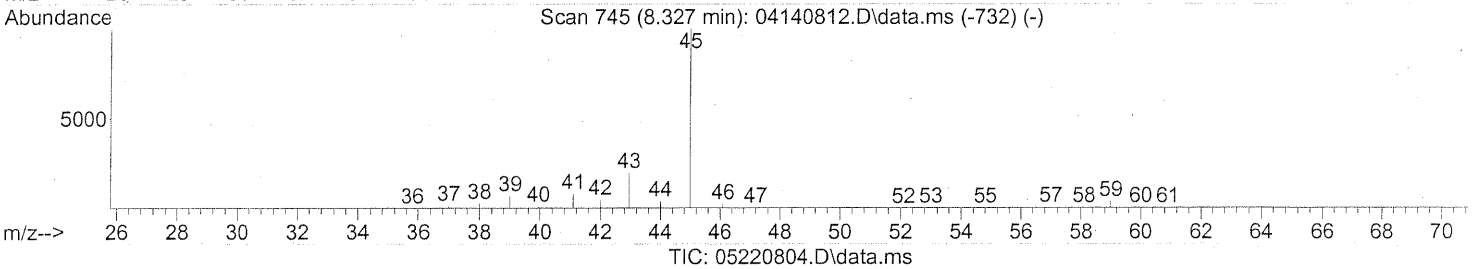
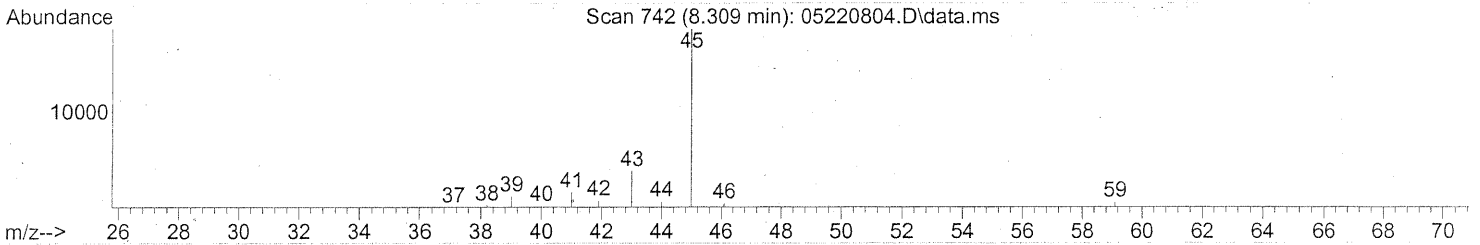
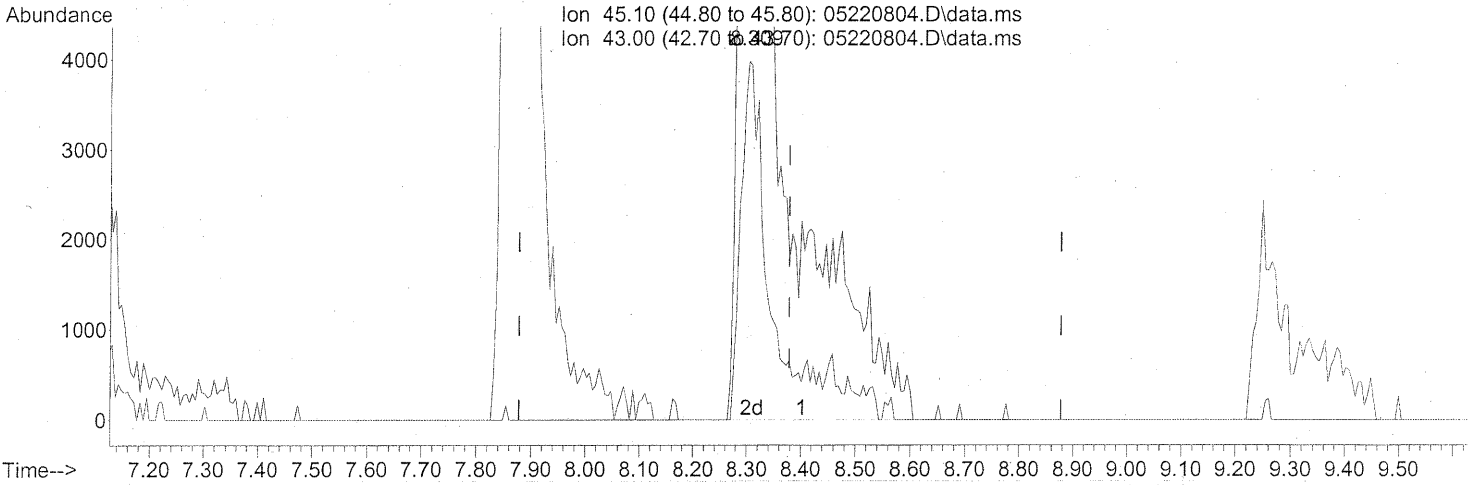
response 15270

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	5.21
0.00	0.00	0.00
0.00	0.00	0.00

SPLIT PEAK

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220804.D  
Acq On : 22 May 2008 5:18 am  
Operator : RTB  
Sample : 1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:02:41 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



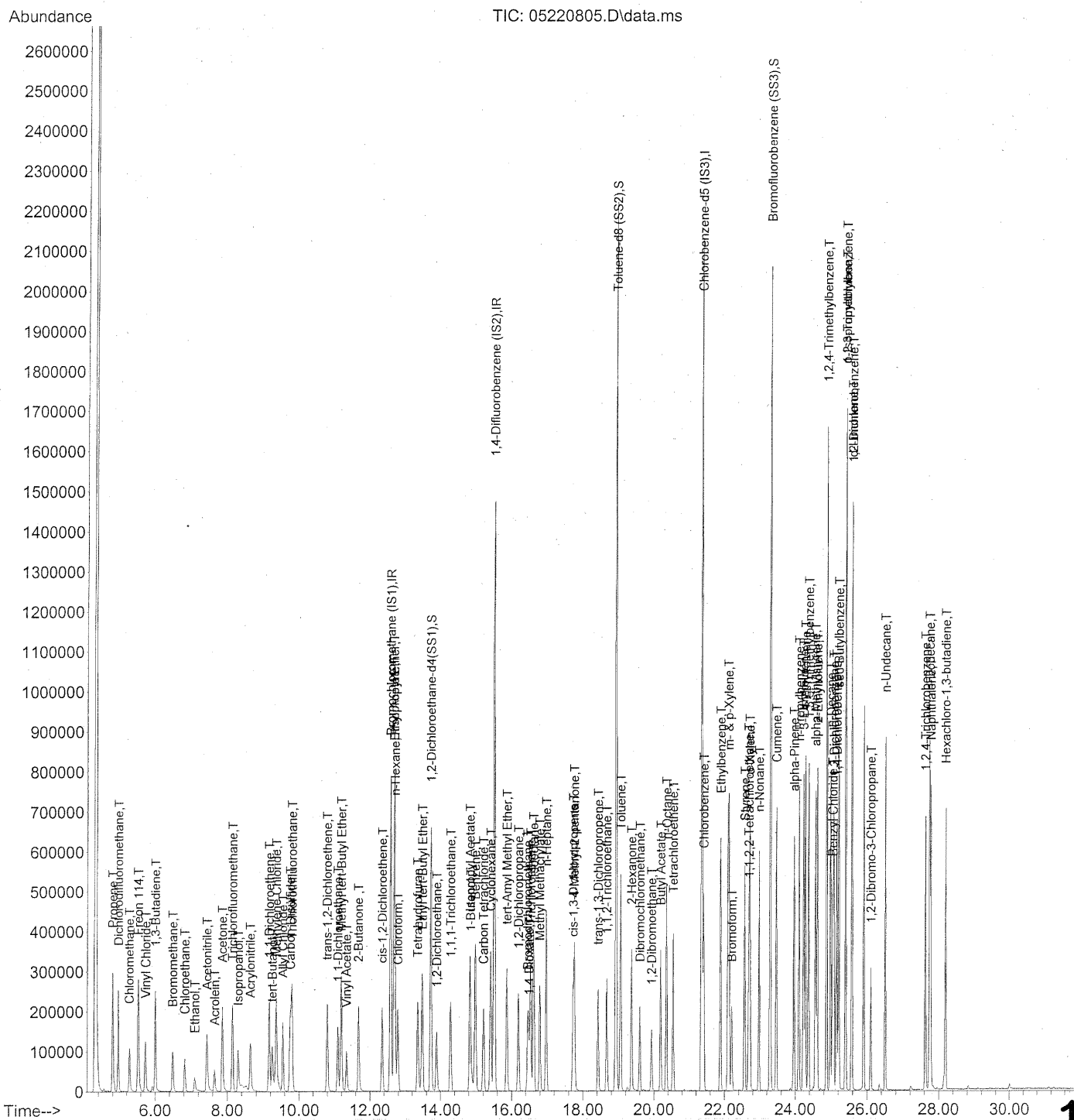
(15) Isopropanol (T)  
8.309min (-0.068) 1.00ng m  
response 72885

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	1.09
0.00	0.00	0.00
0.00	0.00	0.00

INT. THE WHOLE PEAK  
5/22/08  
em 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220805.D  
Acq On : 22 May 2008 5:58 am  
Operator : RTB  
Sample : 5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:40 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



1118

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220805.D  
 Acq On : 22 May 2008 5:58 am  
 Operator : RTB  
 Sample : 5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:40 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	392159	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	15.51	114	1692913	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.35	82	804687	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.73	65	670984	21.335	ng	-0.02
Spiked Amount	25.000		Recovery	=	85.36%	✓
57) Toluene-d8 (SS2)	18.93	98	1810051	25.096	ng	0.00
Spiked Amount	25.000		Recovery	=	100.40%	✓
73) Bromofluorobenzene (SS3)	23.29	174	741734	29.884	ng	0.00
Spiked Amount	25.000		Recovery	=	119.52%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.80	42	143507	4.421	ng	87
3) Dichlorodifluoromethane	4.96	85	277418	4.688	ng	99
4) Chloromethane	5.28	50	161479	3.265	ng	96
5) Freon 114	5.53	135	137052	4.730	ng	100
6) Vinyl Chloride	5.73	62	174777	3.797	ng	96
7) 1,3-Butadiene	6.00	54	142395	4.001	ng	# 77
8) Bromomethane	6.49	94	95601	4.327	ng	99
9) Chloroethane	6.82	64	85760	4.498	ng	94
10) Ethanol	7.10	45	81383m	3.677	ng	
11) Acetonitrile	7.43	41	254835	4.381	ng	96
12) Acrolein	7.65	56	63562	4.064	ng	98
13) Acetone	7.86	58	102750	4.733	ng	# 56
14) Trichlorofluoromethane	8.14	101	236616	5.089	ng	97
15) Isopropanol	8.30	45	286440	3.899	ng	97
16) Acrylonitrile	8.63	53	152877	4.539	ng	99
17) 1,1-Dichloroethene	9.16	96	113381	5.236	ng	# 77
18) tert-Butanol	9.24	59	279157	4.582	ng	92
19) Methylene Chloride	9.36	84	118026	4.733	ng	84
20) Allyl Chloride	9.54	41	160353	4.813	ng	97
21) Trichlorotrifluoroethane	9.81	151	115537	5.816	ng	94
22) Carbon Disulfide	9.76	76	404136	4.371	ng	97
23) trans-1,2-Dichloroethene	10.79	61	178894	4.740	ng	83
24) 1,1-Dichloroethane	11.10	63	212706	4.842	ng	95
25) Methyl tert-Butyl Ether	11.19	73	356345	4.939	ng	86
26) Vinyl Acetate	11.34	86	15989	3.707	ng	# 92
27) 2-Butanone	11.67	72	79090	5.195	ng	98
28) cis-1,2-Dichloroethene	12.34	61	170613	4.797	ng	85
29) Diisopropyl Ether	12.68	87	89599	4.483	ng	# 88
30) Ethyl Acetate	12.68	61	49302	5.195	ng	81
31) n-Hexane	12.70	57	219324	4.447	ng	89

1119

Pos/22/04

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220805.D  
 Acq On : 22 May 2008 5:58 am  
 Operator : RTB  
 Sample : 5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:40 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.78	83	211901	5.787	ng	97
34) Tetrahydrofuran	13.35	72	76042	4.994	ng	95
35) Ethyl tert-Butyl Ether	13.48	87	129652	4.932	ng #	75
36) 1,2-Dichloroethane	13.89	62	177196	4.886	ng	98
38) 1,1,1-Trichloroethane	14.29	97	199328	5.651	ng	97
39) Isopropyl Acetate	14.83	61	69941	4.543	ng #	33
40) 1-Butanol	14.84	56	100264	4.339	ng #	54
41) Benzene	14.98	78	450320	5.014	ng	99
42) Carbon Tetrachloride	15.21	117	174878	5.888	ng	98
43) Cyclohexane	15.41	84	176057	5.299	ng #	75
44) tert-Amyl Methyl Ether	15.87	73	311528	4.875	ng	94
45) 1,2-Dichloropropane	16.19	63	118558	4.607	ng	96
46) Bromodichloromethane	16.45	83	164042	5.372	ng	99
47) Trichloroethene	16.54	130	135766	6.144	ng	98
48) 1,4-Dioxane	16.49	88	89293	5.616	ng	81
49) Isooctane	16.62	57	489147	4.600	ng	77
50) Methyl Methacrylate	16.79	100	44906	5.506	ng	90
51) n-Heptane	16.98	71	124058	4.986	ng #	79
52) cis-1,3-Dichloropropene	17.73	75	175145	5.006	ng	97
53) 4-Methyl-2-pentanone	17.76	58	117483	4.783	ng	80
54) trans-1,3-Dichloropropene	18.43	75	170691	5.647	ng	100
55) 1,1,2-Trichloroethane	18.67	97	112834	5.217	ng	99
58) Toluene	19.06	91	502050	5.540	ng	97
59) 2-Hexanone	19.37	43	341240	5.055	ng	80
60) Dibromochloromethane	19.60	129	141184	6.460	ng	99
61) 1,2-Dibromoethane	19.93	107	133769	6.278	ng	100
62) Butyl Acetate	20.19	43	350603	5.194	ng	85
63) n-Octane	20.35	57	105392	4.962	ng	90
64) Tetrachloroethene	20.55	166	144016	6.347	ng	99
65) Chlorobenzene	21.41	112	340277	6.062	ng	100
66) Ethylbenzene	21.89	91	581871	5.751	ng	94
67) m- & p-Xylene	22.12	91	919031	13.587	ng	91
68) Bromoform	22.21	173	126010	8.433	ng	99
69) Styrene	22.57	104	348304	5.967	ng	98
70) o-Xylene	22.71	91	470480	6.463	ng	93
71) n-Nonane	22.98	43	288186	4.944	ng #	82
72) 1,1,2,2-Tetrachloroethane	22.69	83	210731	6.066	ng	97
74) Cumene	23.46	105	554593	6.006	ng	100
75) alpha-Pinene	23.96	93	281388	5.733	ng	93
76) n-Propylbenzene	24.10	91	701092	5.673	ng	97
77) 3-Ethyltoluene	24.23	105	562110	5.583	ng	98
78) 4-Ethyltoluene	24.28	105	597609	6.446	ng	99
79) 1,3,5-Trimethylbenzene	24.37	105	503181	6.111	ng	98

1120

5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220805.D  
Acq On : 22 May 2008 5:58 am  
Operator : RTB  
Sample : 5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:40 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	261042	5.987	ng	98
81) 2-Ethyltoluene	24.61	105	571215	5.644	ng	99
82) 1,2,4-Trimethylbenzene	24.88	105	530732	5.705	ng	98
83) n-Decane	24.98	57	280459	5.451	ng	86
84) Benzyl Chloride	25.04	91	355075	5.599	ng	97
85) 1,3-Dichlorobenzene	25.08	146	317586	6.305	ng	100
86) 1,4-Dichlorobenzene	25.16	146	320921	6.658	ng	100
87) sec-Butylbenzene	25.21	105	669348	6.128	ng	98
88) p-Isopropyltoluene	25.40	119	609096	6.394	ng	94
89) 1,2,3-Trimethylbenzene	25.40	105	526166	5.751	ng	98
90) 1,2-Dichlorobenzene	25.58	146	311311	6.031	ng	100
91) d-Limonene	25.57	68	203342	4.820	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.10	157	96726	7.073	ng	88
93) n-Undecane	26.50	57	295284	5.467	ng	85
94) 1,2,4-Trichlorobenzene	27.63	180	226237	7.072	ng	96
95) Naphthalene	27.77	128	674861	6.561	ng	98
96) n-Dodecane	27.74	57	288982	5.273	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	150775	7.319	ng	100

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

*7/05/22/08*

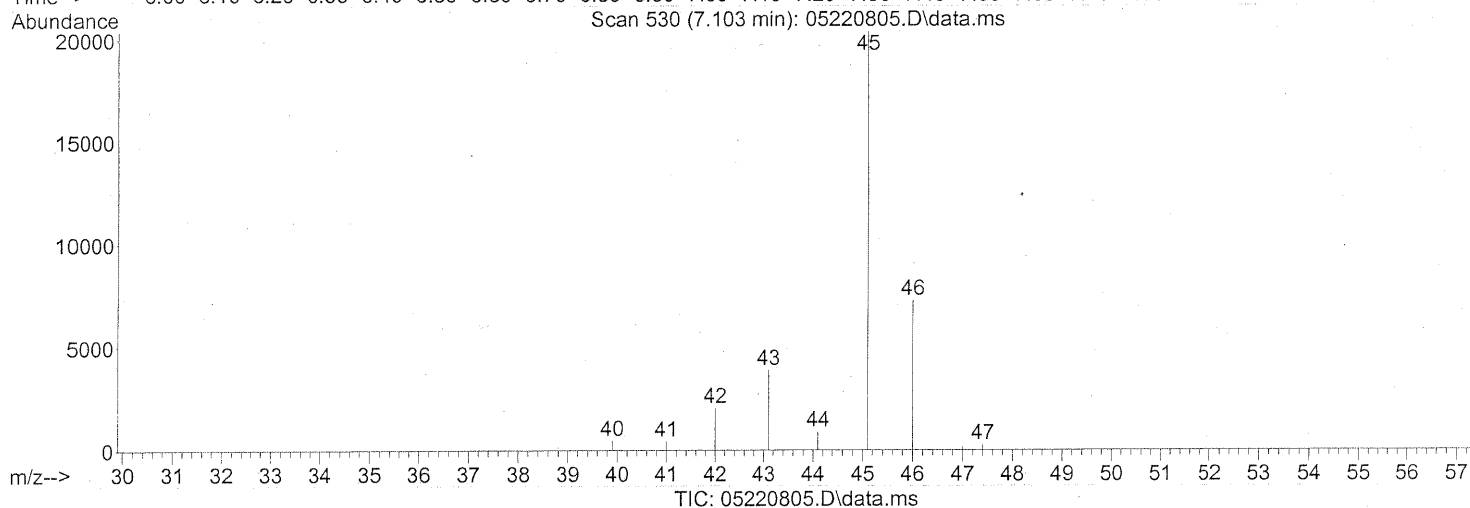
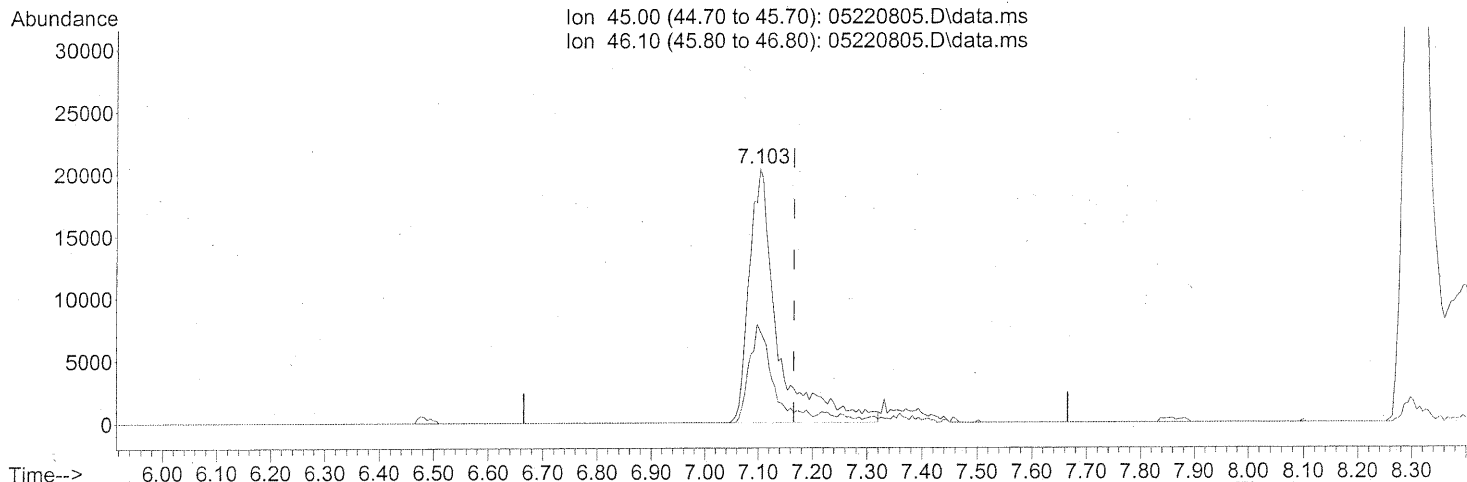
**1121**

Page: 3

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220805.D  
 Acq On : 22 May 2008 5:58 am  
 Operator : RTB  
 Sample : 5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:22 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



(10) Ethanol (T)

7.103min (-0.063) 3.40ng

response 75261

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	32.13
0.00	0.00	0.00
0.00	0.00	0.00

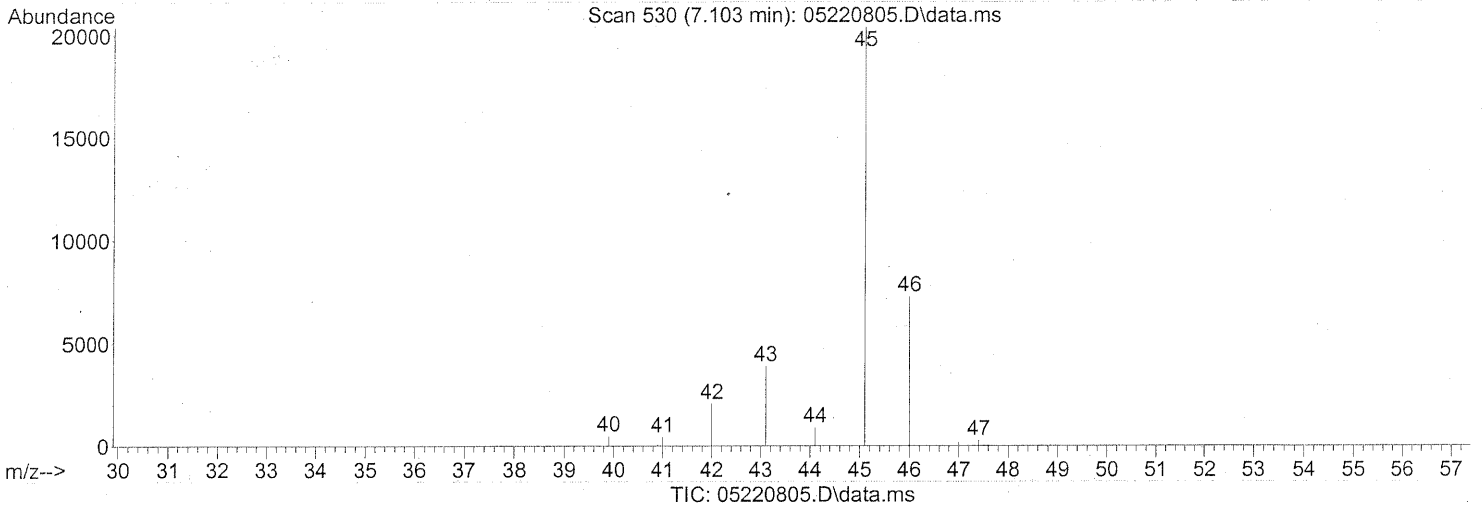
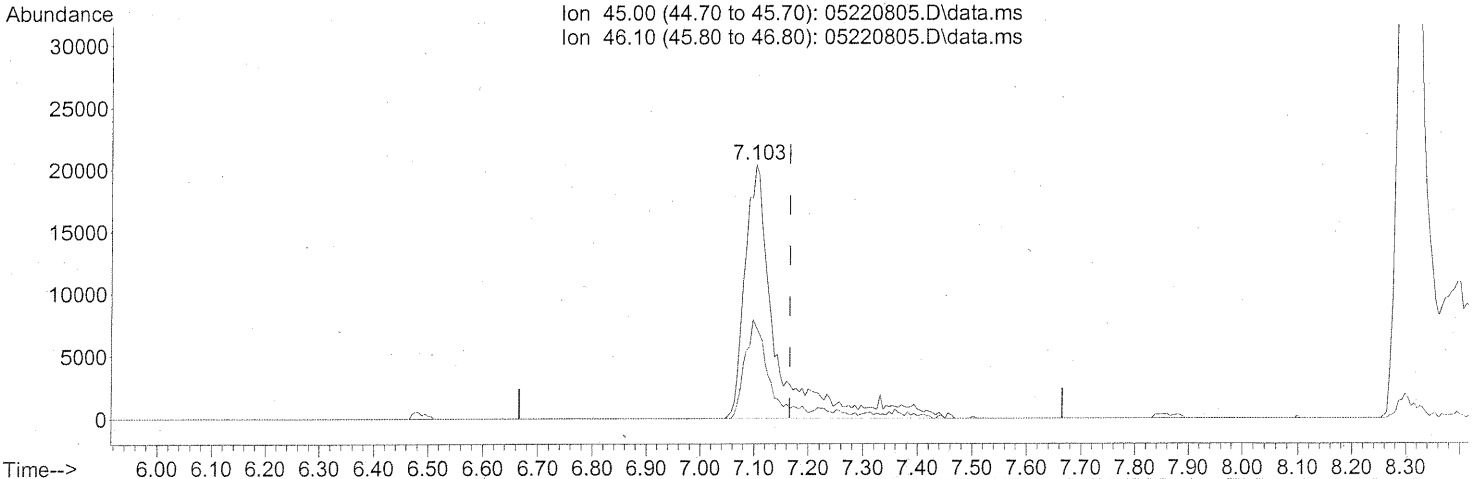
TAILING



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220805.D  
Acq On : 22 May 2008 5:58 am  
Operator : RTB  
Sample : 5ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:07:22 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Tue Apr 15 06:47:20 2008  
Response via : Initial Calibration



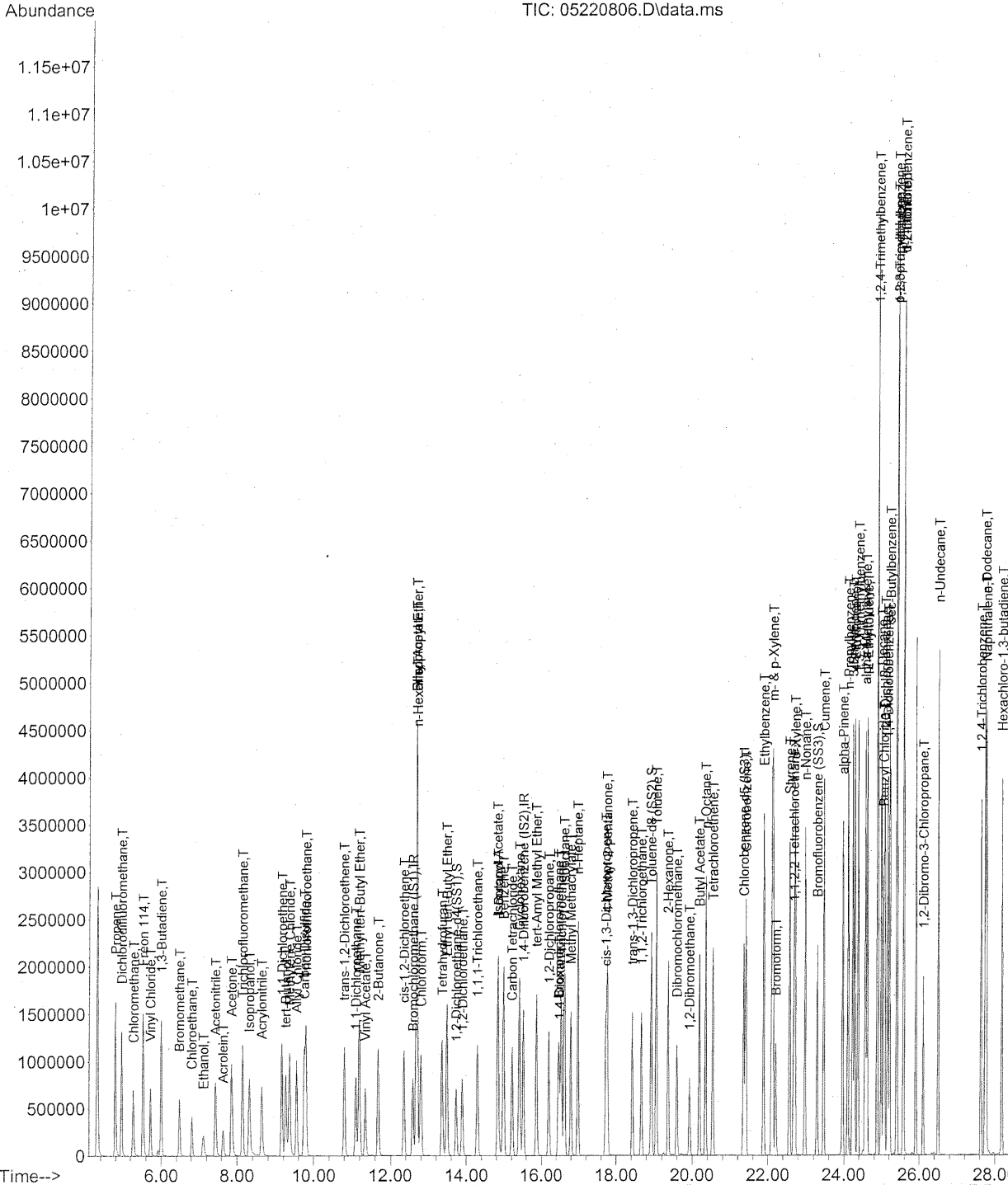
(10) Ethanol (T)  
7.103min (-0.063) 3.68ng m  
response 81383

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	29.71
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING  
8/05/22/08  
Em 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:09:18 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:09:18 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.59	130	416973	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)	15.52	114	1789357	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.35	82	864655	25.000	ng	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
33) 1,2-Dichloroethane-d4(...)	13.73	65	715546	21.398	ng	-0.02
Spiked Amount			Recovery =	25.000		85.60% ✓
57) Toluene-d8 (SS2)	18.93	98	1925065	24.839	ng	0.00
Spiked Amount			Recovery =	25.000		99.36% ✓
73) Bromofluorobenzene (SS3)	23.29	174	804956	30.182	ng	0.00
Spiked Amount			Recovery =	25.000		120.72% ✓

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	762505	22.094	ng	88
3) Dichlorodifluoromethane	4.96	85	1436855	22.837	ng	100
4) Chloromethane	5.28	50	991714	18.861	ng	97
5) Freon 114	5.52	135	719512	23.356	ng	99
6) Vinyl Chloride	5.72	62	949617	19.405	ng	96
7) 1,3-Butadiene	6.00	54	813723	21.504	ng	# 77
8) Bromomethane	6.48	94	536830	22.849	ng	99
9) Chloroethane	6.82	64	460399	22.709	ng	96
10) Ethanol	7.12	45	452905	19.243	ng	96
11) Acetonitrile	7.43	41	1312976	21.227	ng	96
12) Acrolein	7.64	56	365766	21.992	ng	99
13) Acetone	7.86	58	543405	23.543	ng	# 59
14) Trichlorofluoromethane	8.14	101	1261154	25.511	ng	100
15) Isopropanol	8.32	45	1744228	22.331	ng	95
16) Acrylonitrile	8.64	53	877116	24.490	ng	98
17) 1,1-Dichloroethene	9.16	96	615935	26.749	ng	# 81
18) tert-Butanol	9.26	59	1602928	24.744	ng	90
19) Methylene Chloride	9.36	84	639063	24.103	ng	84
20) Allyl Chloride	9.55	41	987824	27.887	ng	99
21) Trichlorotrifluoroethane	9.81	151	618296	29.270	ng	96
22) Carbon Disulfide	9.76	76	2212349	22.504	ng	96
23) trans-1,2-Dichloroethene	10.80	61	980658	24.435	ng	84
24) 1,1-Dichloroethane	11.10	63	1145632	24.528	ng	95
25) Methyl tert-Butyl Ether	11.19	73	1917321	24.994	ng	86
26) Vinyl Acetate	11.35	86	116272	25.354	ng	# 96
27) 2-Butanone	11.68	72	443899	27.424	ng	97
28) cis-1,2-Dichloroethene	12.36	61	935518	24.736	ng	84
29) Diisopropyl Ether	12.69	87	495247	23.302	ng	# 88
30) Ethyl Acetate	12.69	61	281602	27.909	ng	79
31) n-Hexane	12.70	57	1215561	23.179	ng	90

1125

5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:09:18 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.80	83	1136032	29.181	ng	100
34) Tetrahydrofuran	13.36	72	425202	26.263	ng	94
35) Ethyl tert-Butyl Ether	13.48	87	718287	25.700	ng	# 76
36) 1,2-Dichloroethane	13.90	62	955069	24.770	ng	98
38) 1,1,1-Trichloroethane	14.29	97	1053711	28.261	ng	97
39) Isopropyl Acetate	14.83	61	411835	25.310	ng	# 42
40) 1-Butanol	14.84	56	603998	24.731	ng	# 59
41) Benzene	14.99	78	2468333	26.003	ng	99
42) Carbon Tetrachloride	15.21	117	972741	30.984	ng	99
43) Cyclohexane	15.41	84	951654	27.102	ng	# 75
44) tert-Amyl Methyl Ether	15.87	73	1717895	25.432	ng	93
45) 1,2-Dichloropropane	16.20	63	656264	24.125	ng	98
46) Bromodichloromethane	16.46	83	892908	27.666	ng	99
47) Trichloroethene	16.54	130	717464	30.721	ng	100
48) 1,4-Dioxane	16.49	88	488486	29.064	ng	81
49) Isooctane	16.62	57	2708375	24.098	ng	79
50) Methyl Methacrylate	16.79	100	259495	30.103	ng	89
51) n-Heptane	16.98	71	690272	26.248	ng	# 79
52) cis-1,3-Dichloropropene	17.73	75	994088	26.881	ng	99
53) 4-Methyl-2-pentanone	17.77	58	666973	25.688	ng	80
54) trans-1,3-Dichloropropene	18.43	75	1001703	31.356	ng	100
55) 1,1,2-Trichloroethane	18.67	97	615078	26.907	ng	98
58) Toluene	19.07	91	2757560	28.319	ng	98
59) 2-Hexanone	19.37	43	1934323	26.668	ng	82
60) Dibromochloromethane	19.60	129	806828	34.355	ng	99
61) 1,2-Dibromoethane	19.93	107	733584	32.043	ng	100
62) Butyl Acetate	20.19	43	2047043	28.223	ng	86
63) n-Octane	20.35	57	600585	26.315	ng	90
64) Tetrachloroethene	20.55	166	798091	32.735	ng	99
65) Chlorobenzene	21.41	112	1853589	30.734	ng	100
66) Ethylbenzene	21.89	91	3251306	29.903	ng	94
67) m- & p-Xylene	22.13	91	5254327	72.293	ng	92
68) Bromoform	22.21	173	742658	46.253	ng	99
69) Styrene	22.57	104	1998118	31.854	ng	97
70) o-Xylene	22.72	91	2640019	33.753	ng	93
71) n-Nonane	22.98	43	1643415	26.237	ng	# 82
72) 1,1,2,2-Tetrachloroethane	22.69	83	1205766	32.301	ng	97
74) Cumene	23.47	105	3116293	31.410	ng	100
75) alpha-Pinene	23.97	93	1613330	30.592	ng	95
76) n-Propylbenzene	24.10	91	4011480	30.210	ng	98
77) 3-Ethyltoluene	24.23	105	3283639	30.351	ng	99
78) 4-Ethyltoluene	24.28	105	3333214	33.460	ng	99
79) 1,3,5-Trimethylbenzene	24.38	105	2850246	32.216	ng	99

1126

7/05/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:09:18 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Tue Apr 15 06:47:20 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	1552921	33.146	ng	98
81) 2-Ethyltoluene	24.61	105	3255355	29.932	ng	100
82) 1,2,4-Trimethylbenzene	24.88	105	3101955	31.029	ng	99
83) n-Decane	24.99	57	1623112	29.359	ng	86
84) Benzyl Chloride	25.05	91	2339844	34.336	ng	98
85) 1,3-Dichlorobenzene	25.08	146	1810597	33.455	ng	100
86) 1,4-Dichlorobenzene	25.16	146	1821585	35.171	ng	99
87) sec-Butylbenzene	25.21	105	3795451	32.337	ng	98
88) p-Isopropyltoluene	25.40	119	3608029	35.250	ng	95
89) 1,2,3-Trimethylbenzene	25.41	105	3070241	31.230	ng	99
90) 1,2-Dichlorobenzene	25.58	146	1780747	32.105	ng	99
91) d-Limonene	25.58	68	1230457	27.146	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	591373	40.245	ng	91
93) n-Undecane	26.50	57	1720154	29.636	ng	85
94) 1,2,4-Trichlorobenzene	27.63	180	1310788	38.132	ng	96
95) Naphthalene	27.77	128	3956580	35.798	ng	99
96) n-Dodecane	27.74	57	1737723	29.508	ng	83
97) Hexachloro-1,3-butadiene	28.19	225	850097	38.402	ng	100

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

*Pos/22/08*



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20 am  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:18:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:13:27 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	454188	25.000	ng	0.01
37) 1,4-Difluorobenzene (IS2)	15.53	114	1924432	25.000	ng	0.01
56) Chlorobenzene-d5 (IS3)	21.36	82	936145	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.74	65	765682	23.208	ng	0.01
Spiked Amount	25.000		Recovery	=	92.84%	✓
57) Toluene-d8 (SS2)	18.93	98	2057293	24.538	ng	0.00
Spiked Amount	25.000		Recovery	=	98.16%	✓
73) Bromofluorobenzene (SS3)	23.29	174	864419	26.619	ng	0.00
Spiked Amount	25.000		Recovery	=	106.48%	✓

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	1702217	45.626	ng	90
3) Dichlorodifluoromethane	4.95	85	2981591	43.773	ng	100
4) Chloromethane	5.27	50	1894393	39.547	ng	97
5) Freon 114	5.52	135	1511964	44.647	ng	99
6) Vinyl Chloride	5.71	62	1982331	42.843	ng	96
7) 1,3-Butadiene	5.99	54	1751847	50.034	ng	# 78
8) Bromomethane	6.48	94	1147873	45.701	ng	99
9) Chloroethane	6.81	64	984146	46.080	ng	95
10) Ethanol	7.14	45	980730	40.554	ng	95
11) Acetonitrile	7.44	41	2851538	40.927	ng	97
12) Acrolein	7.65	56	792345	45.513	ng	99
13) Acetone	7.87	58	1155032	38.351	ng	# 62
14) Trichlorofluoromethane	8.14	101	2653036	46.367	ng	100
15) Isopropanol	8.34	45	3422080m	42.083	ng	
16) Acrylonitrile	8.65	53	1880949	49.196	ng	99
17) 1,1-Dichloroethene	9.16	96	1316988	52.309	ng	# 79
18) tert-Butanol	9.28	59	3398574	47.307	ng	91
19) Methylene Chloride	9.37	84	1352050	48.646	ng	83
20) Allyl Chloride	9.55	41	2169612	57.961	ng	99
21) Trichlorotrifluoroethane	9.81	151	1321714	51.616	ng	95
22) Carbon Disulfide	9.76	76	4679422	43.497	ng	96
23) trans-1,2-Dichloroethene	10.80	61	2084796	49.585	ng	85
24) 1,1-Dichloroethane	11.11	63	2435183	49.685	ng	95
25) Methyl tert-Butyl Ether	11.19	73	4047308	49.630	ng	86
26) Vinyl Acetate	11.35	86	257899	61.046	ng	# 96
27) 2-Butanone	11.69	72	939216	51.447	ng	94
28) cis-1,2-Dichloroethene	12.36	61	1976621	49.333	ng	85
29) Diisopropyl Ether	12.69	87	1062905	45.266	ng	# 90
30) Ethyl Acetate	12.70	61	620656	58.156	ng	79
31) n-Hexane	12.70	57	2606180	48.376	ng	90

1129

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20 am  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:18:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:13:27 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.81	83	2387290	56.390	ng	100
34) Tetrahydrofuran	13.36	72	873088	49.555	ng	93
35) Ethyl tert-Butyl Ether	13.49	87	1519912	49.016	ng	# 76
36) 1,2-Dichloroethane	13.90	62	1967827	47.558	ng	98
38) 1,1,1-Trichloroethane	14.30	97	2208142	50.337	ng	97
39) Isopropyl Acetate	14.84	61	873634	52.133	ng	# 45
40) 1-Butanol	14.86	56	1313131	50.723	ng	# 64
41) Benzene	14.99	78	5181804	50.503	ng	99
42) Carbon Tetrachloride	15.22	117	2050221	53.356	ng	99
43) Cyclohexane	15.42	84	1998084	50.165	ng	# 76
44) tert-Amyl Methyl Ether	15.87	73	3643868	49.255	ng	94
45) 1,2-Dichloropropane	16.20	63	1384060	49.886	ng	99
46) Bromodichloromethane	16.47	83	1894467	54.264	ng	100
47) Trichloroethene	16.54	130	1496111	48.844	ng	100
48) 1,4-Dioxane	16.50	88	1034911	53.471	ng	81
49) Isooctane	16.63	57	5664489	47.276	ng	79
50) Methyl Methacrylate	16.81	100	547862	55.294	ng	89
51) n-Heptane	16.99	71	1437618	52.152	ng	# 80
52) cis-1,3-Dichloropropene	17.73	75	2107625	51.402	ng	99
53) 4-Methyl-2-pentanone	17.77	58	1415573	51.262	ng	81
54) trans-1,3-Dichloropropene	18.43	75	2143285	60.836	ng	100
55) 1,1,2-Trichloroethane	18.67	97	1292274	51.574	ng	98
58) Toluene	19.07	91	5764092	50.193	ng	99
59) 2-Hexanone	19.38	43	4048530	50.407	ng	83
60) Dibromochloromethane	19.61	129	1698069	56.848	ng	98
61) 1,2-Dibromoethane	19.94	107	1545522	53.027	ng	100
62) Butyl Acetate	20.19	43	4286534	52.669	ng	87
63) n-Octane	20.36	57	1281368	49.489	ng	90
64) Tetrachloroethene	20.55	166	1678655	51.147	ng	99
65) Chlorobenzene	21.42	112	3910630	51.780	ng	100
66) Ethylbenzene	21.89	91	6762491	51.250	ng	95
67) m- & p-Xylene	22.13	91	10953492	121.782	ng	93
68) Bromoform	22.21	173	1568481	71.574	ng	99
69) Styrene	22.58	104	4217026	54.221	ng	97
70) o-Xylene	22.72	91	5530335	57.451	ng	94
71) n-Nonane	22.99	43	3423415	49.404	ng	# 83
72) 1,1,2,2-Tetrachloroethane	22.69	83	2573642	63.796	ng	98
74) Cumene	23.47	105	6524352	51.467	ng	98
75) alpha-Pinene	23.97	93	3448151	52.529	ng	96
76) n-Propylbenzene	24.11	91	8176336	50.385	ng	99
77) 3-Ethyltoluene	24.23	105	6910758	51.365	ng	100
78) 4-Ethyltoluene	24.28	105	6763625	53.268	ng	99
79) 1,3,5-Trimethylbenzene	24.38	105	5917484	51.578	ng	100

1130

*Pos/22/08*



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20 am  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:18:20 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:13:27 2008  
 Response via : Initial Calibration

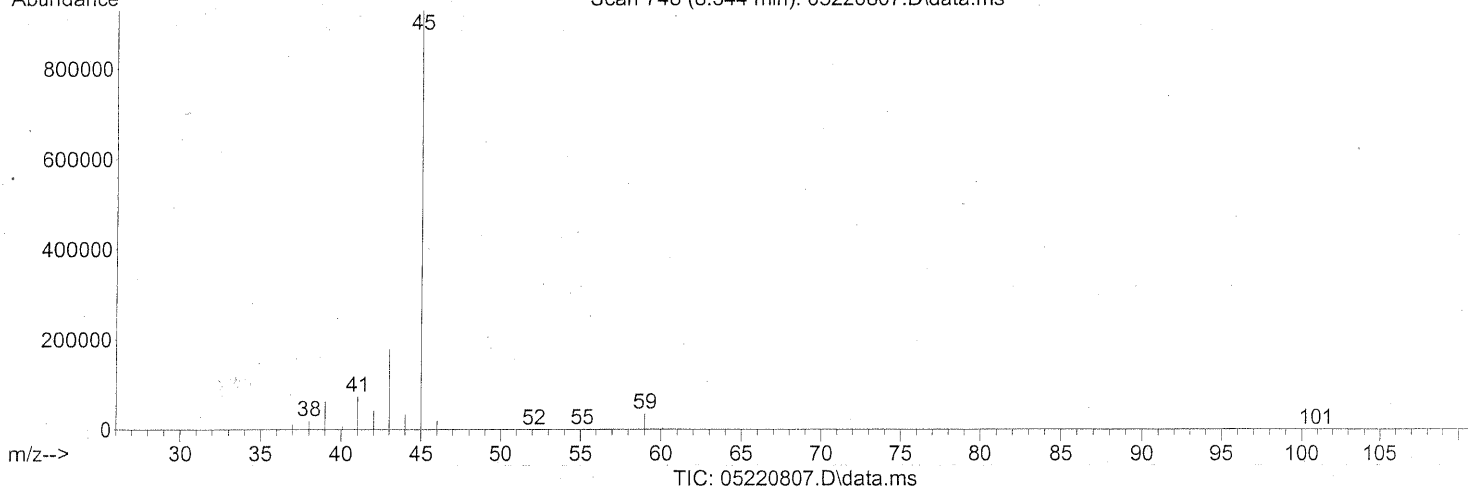
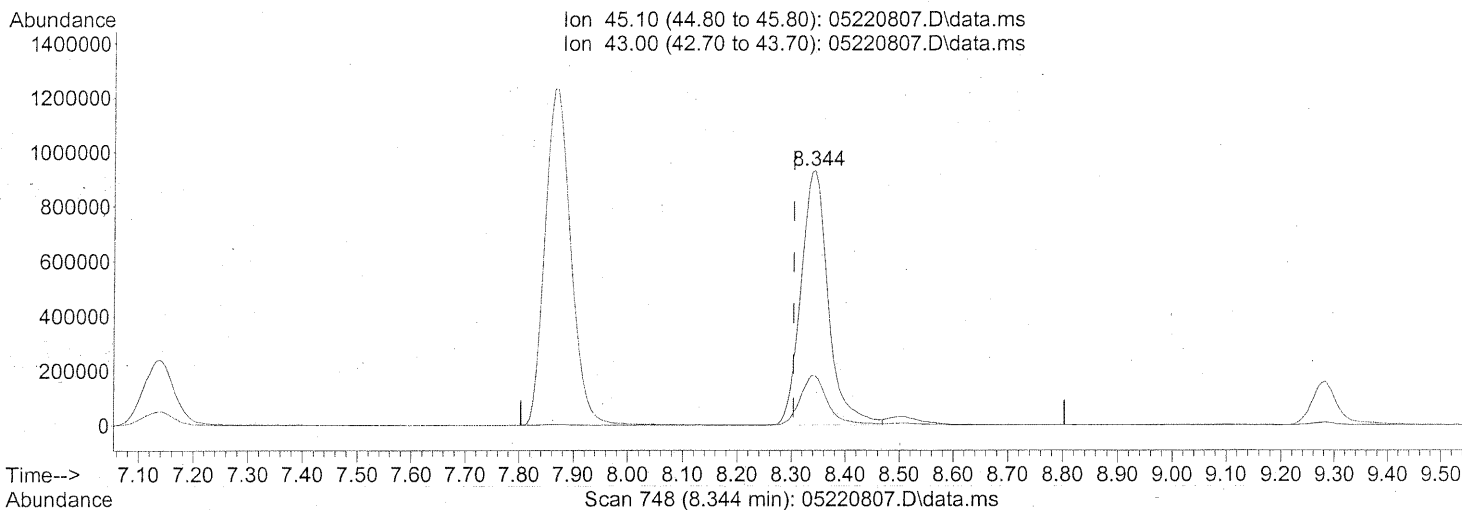
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.57	118	3260246	53.476	ng	97
81) 2-Ethyltoluene	24.62	105	6680322	48.849	ng	99
82) 1,2,4-Trimethylbenzene	24.89	105	6443274	51.595	ng	100
83) n-Decane	24.99	57	3353219	51.063	ng	85
84) Benzyl Chloride	25.05	91	5061948	64.084	ng	99
85) 1,3-Dichlorobenzene	25.08	146	3792345	52.804	ng	100
86) 1,4-Dichlorobenzene	25.16	146	3789076	54.907	ng	100
87) sec-Butylbenzene	25.22	105	7755102	52.228	ng	97
88) p-Isopropyltoluene	25.41	119	7381347	56.902	ng	94
89) 1,2,3-Trimethylbenzene	25.41	105	6401281	52.335	ng	100
90) 1,2-Dichlorobenzene	25.58	146	3698897	50.240	ng	99
91) d-Limonene	25.58	68	2592765	49.784	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	1267680	64.225	ng	93
93) n-Undecane	26.50	57	3628478	52.700	ng	84
94) 1,2,4-Trichlorobenzene	27.63	180	2831281	57.870	ng	95
95) Naphthalene	27.78	128	8221504	54.942	ng	100
96) n-Dodecane	27.74	57	3720630	54.418	ng	82
97) Hexachloro-1,3-butadiene	28.19	225	1857176	56.635	ng	99

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

*RTB/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20 am  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:13:44 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:13:27 2008  
 Response via : Initial Calibration



(15) Isopropanol (T)  
 8.344min (+0.040) 40.42ng  
 response 3286841

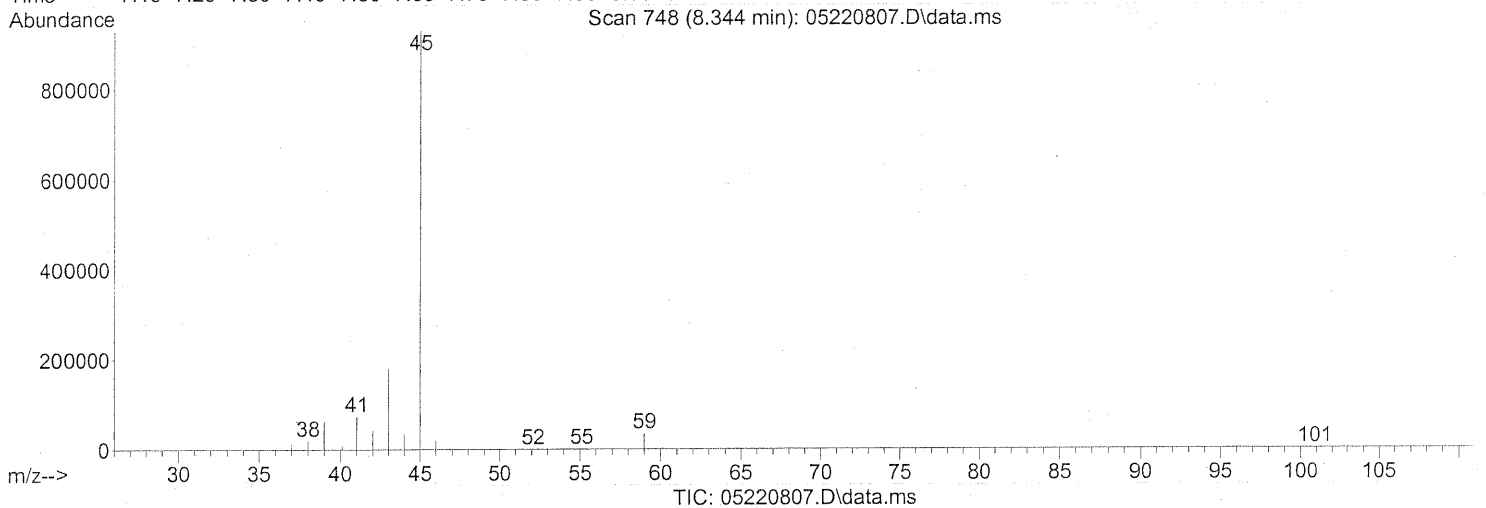
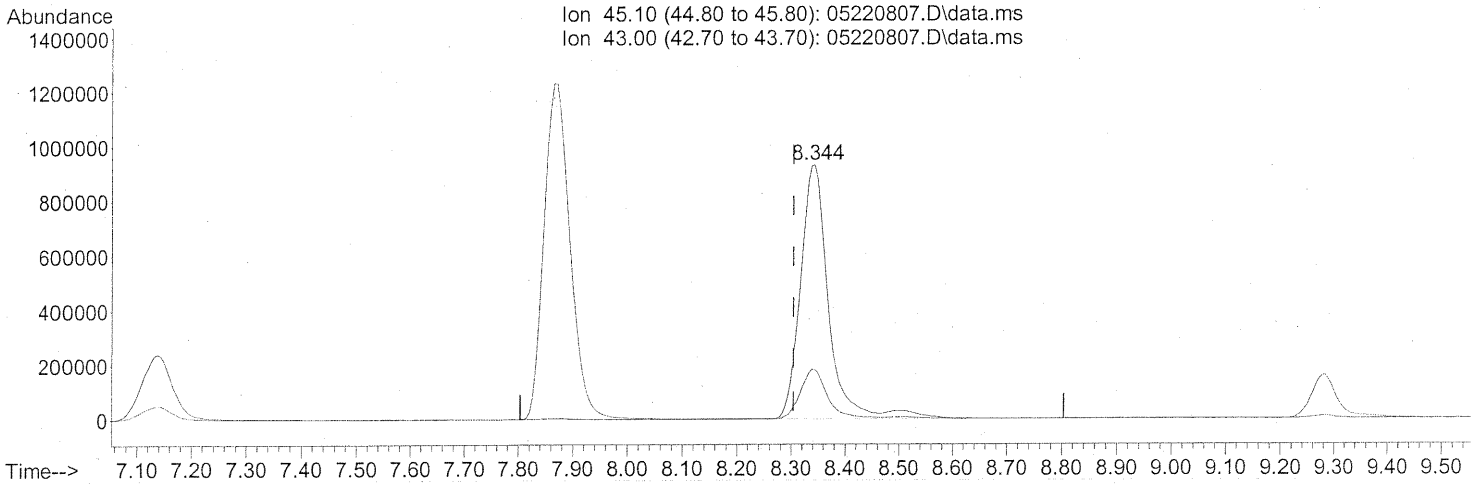
TAILING

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	19.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220807.D  
Acq On : 22 May 2008 7:20 am  
Operator : RTB  
Sample : 50ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210804  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:13:44 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:13:27 2008  
Response via : Initial Calibration



(15) Isopropanol (T)  
8.344min (+0.040) 42.08ng m  
response 3422080

Ion	Exp%	Act%
45.10	100	100
43.00	16.90	18.48
0.00	0.00	0.00
0.00	0.00	0.00

ADDED TAILING

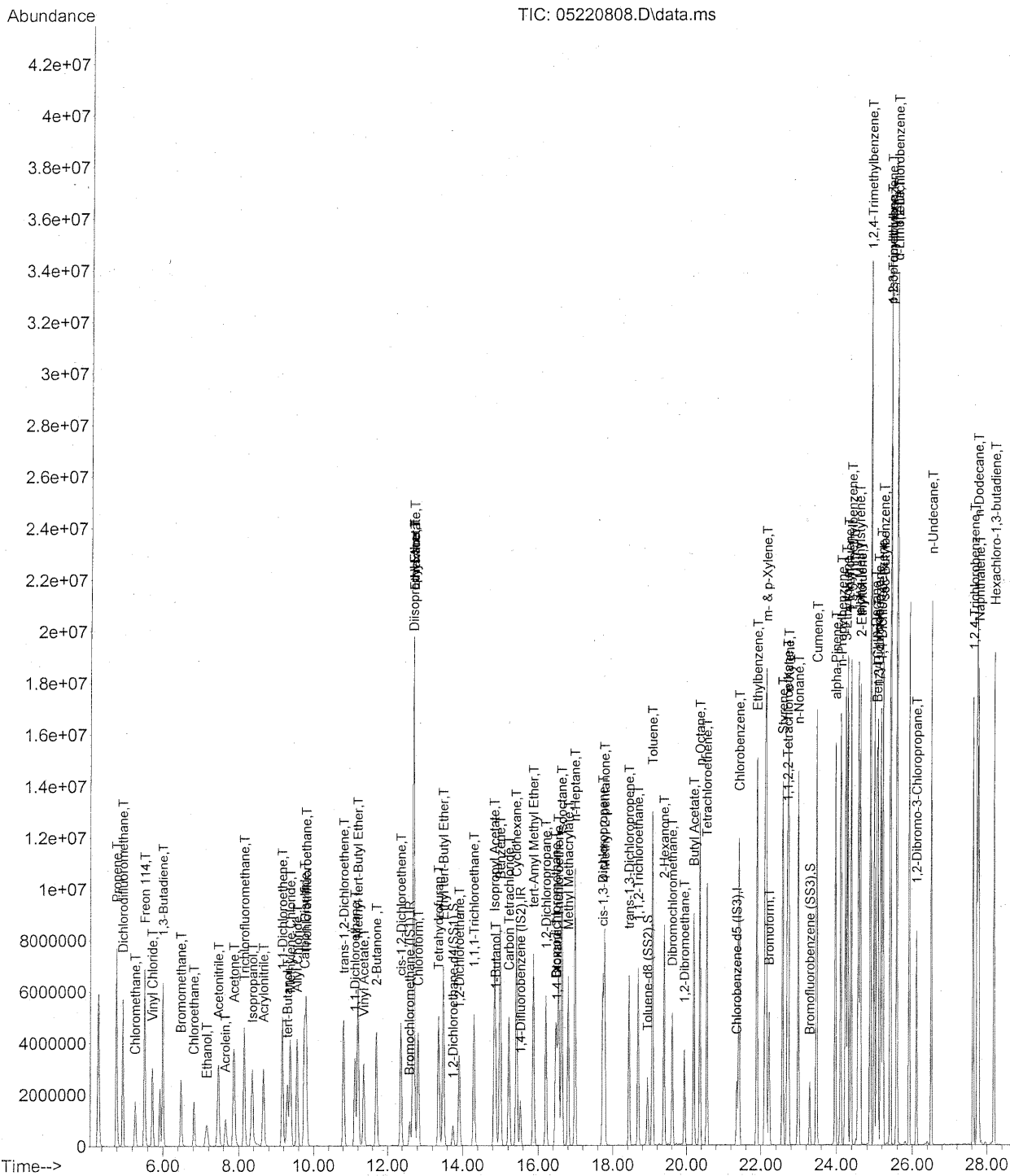
5/22/08

RTB 5/22/08

1133

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220808.D  
Acq On : 22 May 2008 8:01 am  
Operator : RTB  
Sample : 100ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210804  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:19:11 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:18:59 2008  
Response via : Initial Calibration



1134

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220808.D  
 Acq On : 22 May 2008 8:01 am  
 Operator : RTB  
 Sample : 100ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:19:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:18:59 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.60	130	499844	25.000	ng	0.02
37) 1,4-Difluorobenzene (IS2)	15.53	114	2090195	25.000	ng	0.02
56) Chlorobenzene-d5 (IS3)	21.36	82	998042	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.75	65	821224	23.131	ng	0.02
Spiked Amount	25.000		Recovery	=	92.52%	✓
57) Toluene-d8 (SS2)	18.94	98	2226768	24.907	ng	0.01
Spiked Amount	25.000		Recovery	=	99.64%	✓
73) Bromofluorobenzene (SS3)	23.30	174	935196	26.328	ng	0.00
Spiked Amount	25.000		Recovery	=	105.32%	✓

Target Compounds

						Qvalue
2) Propene	4.79	42	3618365	89.313	ng	91
3) Dichlorodifluoromethane	4.95	85	6233410	83.923	ng	99
4) Chloromethane	5.27	50	2613249	51.906	ng	97
5) Freon 114	5.52	135	3331516	90.532	ng	99
6) Vinyl Chloride	5.72	62	4258812	86.338	ng	95
7) 1,3-Butadiene	6.00	54	3733563	100.640	ng	# 78
8) Bromomethane	6.48	94	2454975	90.476	ng	99
9) Chloroethane	6.82	64	2104947	90.683	ng	95
10) Ethanol	7.15	45	2128819	80.341	ng	95
11) Acetonitrile	7.47	41	6047148	78.947	ng	96
12) Acrolein	7.65	56	1713269	90.046	ng	99
13) Acetone	7.88	58	2480814	75.471	ng	# 69
14) Trichlorofluoromethane	8.15	101	5619271	89.141	ng	100
15) Isopropanol	8.37	45	6968359	79.132	ng	95
16) Acrylonitrile	8.66	53	4003929	96.055	ng	98
17) 1,1-Dichloroethene	9.16	96	2816711	101.627	ng	# 78
18) tert-Butanol	9.30	59	4339050	55.424	ng	90
19) Methylene Chloride	9.37	84	2894936	95.058	ng	# 82
20) Allyl Chloride	9.56	41	4725704	115.661	ng	99
21) Trichlorotrifluoroethane	9.81	151	2795872	98.032	ng	95
22) Carbon Disulfide	9.77	76	9906306	84.782	ng	95
23) trans-1,2-Dichloroethene	10.81	61	4508123	98.826	ng	84
24) 1,1-Dichloroethane	11.12	63	5197608	97.423	ng	95
25) Methyl tert-Butyl Ether	11.20	73	8560648	96.251	ng	87
26) Vinyl Acetate	11.36	86	584588	126.385	ng	# 86
27) 2-Butanone	11.70	72	1930849	96.606	ng	# 90
28) cis-1,2-Dichloroethene	12.37	61	4225200	97.160	ng	83
29) Diisopropyl Ether	12.70	87	2241936	88.201	ng	# 87
30) Ethyl Acetate	12.71	61	1322393	115.760	ng	79
31) n-Hexane	12.71	57	5495351	95.245	ng	90

1135

*Handwritten signature*  
 5/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220808.D  
 Acq On : 22 May 2008 8:01 am  
 Operator : RTB  
 Sample : 100ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:19:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:18:59 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.82	83	5076347	109.731	ng	100
34) Tetrahydrofuran	13.36	72	1822782	95.305	ng	93
35) Ethyl tert-Butyl Ether	13.49	87	3270454	95.746	ng	# 74
36) 1,2-Dichloroethane	13.91	62	4127321	91.824	ng	97
38) 1,1,1-Trichloroethane	14.30	97	4698078	98.102	ng	96
39) Isopropyl Acetate	14.85	61	1868872	102.984	ng	# 54
40) 1-Butanol	14.88	56	2791756	97.697	ng	# 66
41) Benzene	15.00	78	10862072	97.961	ng	98
42) Carbon Tetrachloride	15.22	117	4396527	104.214	ng	99
43) Cyclohexane	15.42	84	4341704	100.544	ng	# 76
44) tert-Amyl Methyl Ether	15.88	73	7750761	97.021	ng	94
45) 1,2-Dichloropropane	16.21	63	2995074	100.524	ng	99
46) Bromodichloromethane	16.48	83	4038109	107.117	ng	100
47) Trichloroethene	16.55	130	3275567	97.388	ng	99
48) 1,4-Dioxane	16.51	88	2240784	106.812	ng	82
49) Isooctane	16.64	57	11898201	92.431	ng	80
50) Methyl Methacrylate	16.81	100	1175755	107.816	ng	90
51) n-Heptane	16.99	71	3110452	104.634	ng	# 80
52) cis-1,3-Dichloropropene	17.74	75	4505013	101.650	ng	100
53) 4-Methyl-2-pentanone	17.79	58	3035968	102.112	ng	80
54) trans-1,3-Dichloropropene	18.44	75	4596030	120.483	ng	99
55) 1,1,2-Trichloroethane	18.68	97	2798170	102.528	ng	97
58) Toluene	19.07	91	11935621	97.032	ng	99
59) 2-Hexanone	19.39	43	8273154	97.077	ng	85
60) Dibromochloromethane	19.61	129	3659026	112.467	ng	98
61) 1,2-Dibromoethane	19.94	107	3324092	105.186	ng	100
62) Butyl Acetate	20.20	43	8830378	102.235	ng	88
63) n-Octane	20.36	57	2732318	99.278	ng	91
64) Tetrachloroethene	20.55	166	3697436	103.310	ng	100
65) Chlorobenzene	21.42	112	8257282	101.037	ng	98
66) Ethylbenzene	21.90	91	13475481	95.315	ng	100
67) m- & p-Xylene	22.14	91	21735890	226.751	ng	97
68) Bromoform	22.22	173	3386774	140.735	ng	100
69) Styrene	22.58	104	8806510	104.763	ng	95
70) o-Xylene	22.73	91	11379968	110.493	ng	97
71) n-Nonane	22.99	43	7073437	96.240	ng	# 84
72) 1,1,2,2-Tetrachloroethane	22.70	83	5546058	129.023	ng	98
74) Cumene	23.48	105	12994730	95.422	ng	94
75) alpha-Pinene	23.97	93	7235722	102.454	ng	96
76) n-Propylbenzene	24.11	91	15249075	87.865	ng	95
77) 3-Ethyltoluene	24.24	105	13665128	94.255	ng	96
78) 4-Ethyltoluene	24.30	105	12869382	94.572	ng	94
79) 1,3,5-Trimethylbenzene	24.38	105	11704517	95.061	ng	96

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7/05/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220808.D  
 Acq On : 22 May 2008 8:01 am  
 Operator : RTB  
 Sample : 100ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 22 11:19:11 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:18:59 2008  
 Response via : Initial Calibration

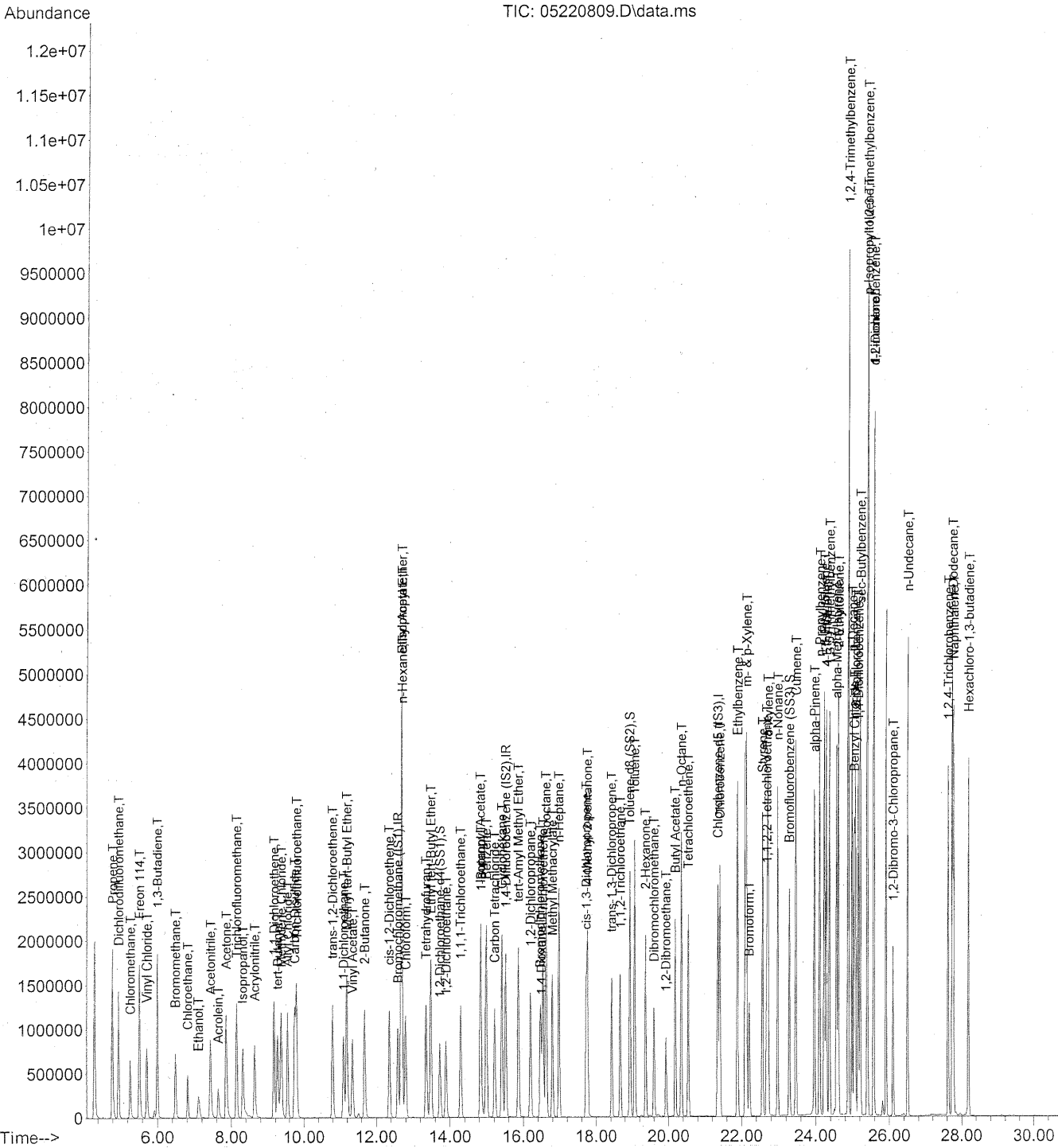
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.57	118	6793283	102.591	ng	97
81) 2-Ethyltoluene	24.63	105	12944985	87.872	ng	95
82) 1,2,4-Trimethylbenzene	24.90	105	12183750	93.691	ng	98
83) n-Decane	25.00	57	6684949	95.503	ng	84
84) Benzyl Chloride	25.06	91	10394950	122.582	ng	98
85) 1,3-Dichlorobenzene	25.09	146	7799683	99.904	ng	99
86) 1,4-Dichlorobenzene	25.17	146	7808346	103.898	ng	98
87) sec-Butylbenzene	25.22	105	14254088	89.336	ng	92
88) p-Isopropyltoluene	25.41	119	13122108	97.057	ng	90
89) 1,2,3-Trimethylbenzene	25.42	105	12020170	94.382	ng	98
90) 1,2-Dichlorobenzene	25.59	146	7117955	91.406	ng	98
91) d-Limonene	25.58	68	5122339	94.899	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.11	157	2745855	125.009	ng	96
93) n-Undecane	26.51	57	7238505	98.491	ng	82
94) 1,2,4-Trichlorobenzene	27.64	180	6082208	113.506	ng	94
95) Naphthalene	27.78	128	15301122	93.920	ng	95
96) n-Dodecane	27.74	57	7513203	102.717	ng	80
97) Hexachloro-1,3-butadiene	28.19	225	4111380	114.428	ng	99

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

7/05/22/18

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220809.D  
Acq On : 22 May 2008 8:41 am  
Operator : RTB  
Sample : 25ng TO-15 ICV Standard  
Misc : S20-04300802/S20-04290803  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 11:36:49 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:20:46 2008  
Response via : Initial Calibration





Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220809.D  
 Acq On : 22 May 2008 8:41 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICV Standard  
 Misc : S20-04300802/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 11:36:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:20:46 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	526986	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.52	114	2202027	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	1025095	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	856754	23.463	ng	0.00
Spiked Amount	25.000		Recovery	=	93.84%	✓
57) Toluene-d8 (SS2)	18.93	98	2305788	25.046	ng	0.00
Spiked Amount	25.000		Recovery	=	100.20%	✓
73) Bromofluorobenzene (SS3)	23.29	174	957507	25.576	ng	0.00
Spiked Amount	25.000		Recovery	=	102.32%	✓

Target Compounds

						Qvalue
2) Propene	4.79	42	904492	21.732	ng	89
3) Dichlorodifluoromethane	4.96	85	1592833	20.763	ng	100
4) Chloromethane	5.28	50	951593	19.156	ng	97
5) Freon 114	5.52	135	846788	22.439	ng	99
6) Vinyl Chloride	5.72	62	1083652	21.802	ng	96
7) 1,3-Butadiene	5.99	54	1063896	28.776	ng	# 80
8) Bromomethane	6.48	94	657228	23.743	ng	99
9) Chloroethane	6.82	64	546673	23.153	ng	96
10) Ethanol	7.11	45	522833	18.869	ng	95
11) Acetonitrile	7.43	41	1535229	19.160	ng	99
12) Acrolein	7.64	56	448122	22.640	ng	99
13) Acetone	7.86	58	679311	23.946	ng	# 70
14) Trichlorofluoromethane	8.14	101	1461864	22.211	ng	100
15) Isopropanol	8.32	45	1791646	19.802	ng	97
16) Acrylonitrile	8.64	53	1021254	23.643	ng	98
17) 1,1-Dichloroethene	9.16	96	711330	24.569	ng	# 77
18) tert-Butanol	9.26	59	1820081	23.651	ng	91
19) Methylene Chloride	9.36	84	731536	23.074	ng	# 80
20) Allyl Chloride	9.55	41	1238821	29.284	ng	100
21) Trichlorotrifluoroethane	9.81	151	704259	23.529	ng	94
22) Carbon Disulfide	9.76	76	2534413	21.066	ng	97
23) trans-1,2-Dichloroethene	10.80	61	1111763	23.707	ng	83
24) 1,1-Dichloroethane	11.10	63	1307596	23.769	ng	96
25) Methyl tert-Butyl Ether	11.19	73	2142908	23.359	ng	86
26) Vinyl Acetate	11.35	86	160863	30.682	ng	# 80
27) 2-Butanone	11.68	72	493795	23.849	ng	# 91
28) cis-1,2-Dichloroethene	12.35	61	1043381	23.279	ng	82
29) Diisopropyl Ether	12.69	87	574546	22.646	ng	# 84
30) Ethyl Acetate	12.69	61	296591	26.536	ng	80
31) n-Hexane	12.70	57	1330931	23.599	ng	89

1139

7/05/22/08

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220809.D  
 Acq On : 22 May 2008 8:41 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICV Standard  
 Misc : S20-04300802/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 11:36:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:20:46 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.80	83	1256429	26.146	ng	100
34) Tetrahydrofuran	13.35	72	462519	23.366	ng #	90
35) Ethyl tert-Butyl Ether	13.48	87	827620	23.294	ng #	75
36) 1,2-Dichloroethane	13.90	62	1024639	22.070	ng	98
38) 1,1,1-Trichloroethane	14.29	97	1172977	23.390	ng	96
39) Isopropyl Acetate	14.83	61	470529	25.017	ng #	55
40) 1-Butanol	14.84	56	553333	18.281	ng #	52
41) Benzene	14.99	78	2737421	23.742	ng	99
42) Carbon Tetrachloride	15.21	117	1070287	24.104	ng	100
43) Cyclohexane	15.41	84	1063631	23.714	ng #	75
44) tert-Amyl Methyl Ether	15.87	73	1966905	23.781	ng	94
45) 1,2-Dichloropropane	16.20	63	731352	23.707	ng	99
46) Bromodichloromethane	16.46	83	1003739	25.754	ng	99
47) Trichloroethene	16.54	130	779244	22.032	ng	100
48) 1,4-Dioxane	16.49	88	532567	24.490	ng	80
49) Isooctane	16.62	57	3122023	23.617	ng	81
50) Methyl Methacrylate	16.80	100	280468	24.343	ng #	89
51) n-Heptane	16.98	71	738106	24.093	ng #	80
52) cis-1,3-Dichloropropene	17.73	75	1093368	23.856	ng	98
53) 4-Methyl-2-pentanone	17.77	58	704061	22.999	ng	79
54) trans-1,3-Dichloropropene	18.43	75	1097339	27.755	ng	99
55) 1,1,2-Trichloroethane	18.67	97	675092	23.694	ng	97
58) Toluene	19.07	91	2956298	23.623	ng	98
59) 2-Hexanone	19.37	43	1910790	22.159	ng	83
60) Dibromochloromethane	19.60	129	870561	25.756	ng	99
61) 1,2-Dibromoethane	19.93	107	797380	24.343	ng	100
62) Butyl Acetate	20.19	43	2128474	24.318	ng	87
63) n-Octane	20.35	57	663984	23.991	ng	89
64) Tetrachloroethene	20.55	166	849341	22.937	ng	99
65) Chlorobenzene	21.41	112	1988254	23.699	ng	100
66) Ethylbenzene	21.89	91	3424846	23.867	ng	94
67) m- & p-Xylene	22.13	91	5432092	56.594	ng	92
68) Bromoform	22.21	173	811353	32.258	ng	99
69) Styrene	22.57	104	2078402	24.224	ng	98
70) o-Xylene	22.72	91	2764174	26.678	ng	94
71) n-Nonane	22.98	43	1755676	23.864	ng #	84
72) 1,1,2,2-Tetrachloroethane	22.69	83	1287414	29.813	ng	97
74) Cumene	23.47	105	3407138	24.694	ng	99
75) alpha-Pinene	23.97	93	1694437	23.751	ng	96
76) n-Propylbenzene	24.10	91	4256280	24.244	ng	99
77) 3-Ethyltoluene	24.23	105	3497532	23.816	ng	99
78) 4-Ethyltoluene	24.28	105	3310164	24.177	ng	100
79) 1,3,5-Trimethylbenzene	24.37	105	2875327	23.246	ng	100

1140

*Pos/22/08*

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220809.D  
 Acq On : 22 May 2008 8:41 am  
 Operator : RTB  
 Sample : 25ng TO-15 ICV Standard  
 Misc : S20-04300802/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 22 11:36:49 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:20:46 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	1446859	21.606	ng	98
81) 2-Ethyltoluene	24.61	105	3432797	23.065	ng	100
82) 1,2,4-Trimethylbenzene	24.88	105	3024740	24.019	ng	100
83) n-Decane	24.98	57	1706800	24.634	ng	85
84) Benzyl Chloride	25.05	91	2488736	29.453	ng	98
85) 1,3-Dichlorobenzene	25.08	146	1830636	23.251	ng	100
86) 1,4-Dichlorobenzene	25.16	146	1844553	24.167	ng	99
87) sec-Butylbenzene	25.21	105	3958133	24.591	ng	98
88) p-Isopropyltoluene	25.40	119	3670414	27.703	ng	95
89) 1,2,3-Trimethylbenzene	25.41	105	3191482	25.901	ng	100
90) 1,2-Dichlorobenzene	25.58	146	1756962	23.529	ng	100
91) d-Limonene	25.58	68	1053273	20.994	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	635829	27.437	ng	94
93) n-Undecane	26.50	57	1797042	24.782	ng	84
94) 1,2,4-Trichlorobenzene	27.63	180	1355653	24.787	ng	96
95) Naphthalene	27.77	128	4000200	24.083	ng	99
96) n-Dodecane	27.74	57	1741563	24.150	ng	82
97) Hexachloro-1,3-butadiene	28.19	225	871677	23.942	ng	99

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

*705/22/08*

**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 05220809.D  
 Data File Path: J:\MS13\DATA\2008\_05\22\  
 Operator: RTB  
 Date Acquired: 5/22/08 8:41  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV Standard  
 Misc Info: S20-04300802/S20-04290803  
 Instrument Name: GCMS13

#	Name Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
2)	Propene	4.79	21.73	26.3	82.6	70	130	*
3)	Dichlorodifluoromethane	4.96	20.76	25.5	81.4	70	130	*
4)	Chloromethane	5.28	19.16	24.5	78.2	70	130	*
5)	Freon 114	5.52	22.44	26.0	86.3	70	130	*
6)	Vinyl Chloride	5.72	21.80	24.8	87.9	70	130	*
7)	1,3-Butadiene	5.99	28.78	30.0	95.9	70	130	*
8)	Bromomethane	6.48	23.74	25.0	95.0	70	130	*
9)	Chloroethane	6.82	23.15	25.0	92.6	70	130	*
10)	Ethanol	7.11	18.87	23.8	79.3	70	130	*
11)	Acetonitrile	7.43	19.16	25.3	75.7	70	130	*
12)	Acrolein	7.64	22.64	24.8	91.3	70	130	*
13)	Acetone	7.86	23.95	26.8	89.4	70	130	*
14)	Trichlorofluoromethane	8.14	22.21	26.3	84.5	70	130	*
15)	Isopropanol	8.32	19.80	25.8	76.8	70	130	*
16)	Acrylonitrile	8.64	23.64	25.5	92.7	70	130	*
17)	1,1-Dichloroethene	9.16	24.57	27.8	88.4	70	130	*
18)	tert-Butanol	9.26	23.65	25.8	91.7	70	130	*
19)	Methylene Chloride	9.36	23.07	27.8	83.0	70	130	*
20)	Allyl Chloride	9.55	29.28	26.8	109.3	70	130	*
21)	Trichlorotrifluoroethane	9.81	23.53	27.8	84.6	70	130	*
22)	Carbon Disulfide	9.76	21.07	25.0	84.3	70	130	*
23)	trans-1,2-Dichloroethene	10.80	23.71	26.5	89.5	70	130	*
24)	1,1-Dichloroethane	11.10	23.77	26.8	88.7	70	130	*
25)	Methyl tert-Butyl Ether	11.19	23.36	26.8	87.2	70	130	*
26)	Vinyl Acetate	11.35	30.68	25.3	121.3	70	130	*
27)	2-Butanone	11.68	23.85	27.0	88.3	70	130	*
28)	cis-1,2-Dichloroethene	12.35	23.28	27.0	86.2	70	130	*
29)	Diisopropyl Ether	12.69	22.65	26.3	86.1	70	130	*
30)	Ethyl Acetate	12.69	26.54	29.3	90.6	70	130	*
31)	n-Hexane	12.70	23.60	27.0	87.4	70	130	*
32)	Chloroform	12.80	26.15	29.8	87.7	70	130	*
34)	Tetrahydrofuran	13.35	23.37	26.8	87.2	70	130	*
35)	Ethyl tert-Butyl Ether	13.48	23.29	26.0	89.6	70	130	*
36)	1,2-Dichloroethane	13.90	22.07	26.3	83.9	70	130	*
38)	1,1,1-Trichloroethane	14.29	23.39	26.8	87.3	70	130	*
39)	Isopropyl Acetate	14.83	25.02	25.5	98.1	70	130	*

*Post 5/22/08*

INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 05220809.D  
 Data File Path: J:\MS13\DATA\2008\_05\22\  
 Operator: RTB  
 Date Acquired: 5/22/08 8:41  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV Standard  
 Misc Info: S20-04300802/S20-04290803  
 Instrument Name: GCMS13

#	Name Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
40)	1-Butanol	14.84	18.28	24.8	73.7	70	130	*
41)	Benzene	14.99	23.74	27.0	87.9	70	130	*
42)	Carbon Tetrachloride	15.21	24.10	26.0	92.7	70	130	*
43)	Cyclohexane	15.41	23.71	26.8	88.5	70	130	*
44)	tert-Amyl Methyl Ether	15.87	23.78	26.0	91.5	70	130	*
45)	1,2-Dichloropropane	16.20	23.71	26.5	89.5	70	130	*
46)	Bromodichloromethane	16.46	25.75	27.8	92.6	70	130	*
47)	Trichloroethene	16.54	22.03	27.3	80.7	70	130	*
48)	1,4-Dioxane	16.49	24.49	27.5	89.1	70	130	*
49)	Isooctane	16.62	23.62	26.3	89.8	70	130	*
50)	Methyl Methacrylate	16.80	24.34	25.8	94.4	70	130	*
51)	n-Heptane	16.98	24.09	26.8	89.9	70	130	*
52)	cis-1,3-Dichloropropene	17.73	23.86	25.0	95.4	70	130	*
53)	4-Methyl-2-pentanone	17.77	23.00	27.5	83.6	70	130	*
54)	trans-1,3-Dichloropropene	18.43	27.75	28.0	99.1	70	130	*
55)	1,1,2-Trichloroethane	18.67	23.69	26.3	90.1	70	130	*
58)	Toluene	19.07	23.62	26.5	89.1	70	130	*
59)	2-Hexanone	19.37	22.16	26.3	84.3	70	130	*
60)	Dibromochloromethane	19.60	25.76	27.0	95.4	70	130	*
61)	1,2-Dibromoethane	19.93	24.34	26.3	92.6	70	130	*
62)	Butyl Acetate	20.19	24.32	26.3	92.5	70	130	*
63)	n-Octane	20.35	23.99	26.0	92.3	70	130	*
64)	Tetrachloroethene	20.55	22.94	26.0	88.2	70	130	*
65)	Chlorobenzene	21.41	23.70	26.5	89.4	70	130	*
66)	Ethylbenzene	21.89	23.87	26.3	90.8	70	130	*
67)	m- & p-Xylene	22.13	56.59	62.5	90.6	70	130	*
68)	Bromoform	22.21	32.26	31.3	103.1	70	130	*
69)	Styrene	22.57	24.22	26.3	92.1	70	130	*
70)	o-Xylene	22.72	26.68	29.8	89.5	70	130	*
71)	n-Nonane	22.98	23.86	26.0	91.8	70	130	*
72)	1,1,2,2-Tetrachloroethane	22.69	29.81	29.8	100.0	70	130	*
74)	Cumene	23.47	24.69	27.0	91.5	70	130	*
75)	alpha-Pinene	23.97	23.75	26.3	90.3	70	130	*
76)	n-Propylbenzene	24.10	24.24	26.3	92.2	70	130	*
77)	3-Ethyltoluene	24.23	23.82	25.5	93.4	70	130	*

*Post 22/08*

**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 05220809.D  
 Data File Path: J:\MS13\DATA\2008\_05\22\  
 Operator: RTB  
 Date Acquired: 5/22/08 8:41  
 Acq. Method File: TO15.M  
 Sample Name: 25ng TO-15 ICV Standard  
 Misc Info: S20-04300802/S20-04290803  
 Instrument Name: GCMS13

#	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>24.28</b>	<b>24.18</b>	<b>26.5</b>	<b>91.2</b>	70	130	*
79)	<b>1,3,5-Trimethylbenzene</b>	<b>24.37</b>	<b>23.25</b>	<b>26.0</b>	<b>89.4</b>	70	130	*
80)	alpha-Methylstyrene	24.56	21.61	25.5	84.7	70	130	*
81)	2-Ethyltoluene	24.61	23.06	24.8	93.0	70	130	*
82)	<b>1,2,4-Trimethylbenzene</b>	<b>24.88</b>	<b>24.02</b>	<b>26.0</b>	<b>92.4</b>	70	130	*
83)	n-Decane	24.98	24.63	26.3	93.7	70	130	*
84)	<b>Benzyl Chloride</b>	<b>25.05</b>	<b>29.45</b>	<b>25.8</b>	<b>114.2</b>	70	130	*
85)	<b>1,3-Dichlorobenzene</b>	<b>25.08</b>	<b>23.25</b>	<b>25.5</b>	<b>91.2</b>	70	130	*
86)	<b>1,4-Dichlorobenzene</b>	<b>25.16</b>	<b>24.17</b>	<b>26.3</b>	<b>91.9</b>	70	130	*
87)	sec-Butylbenzene	25.21	24.59	26.8	91.8	70	130	*
88)	p-Isopropyltoluene	25.40	27.70	28.8	96.2	70	130	*
89)	1,2,3-Trimethylbenzene	25.41	25.90	28.5	90.9	70	130	*
90)	<b>1,2-Dichlorobenzene</b>	<b>25.58</b>	<b>23.53</b>	<b>25.8</b>	<b>91.2</b>	70	130	*
91)	d-Limonene	25.58	20.99	26.0	80.7	70	130	*
92)	<b>1,2-Dibromo-3-Chloropropane</b>	<b>26.11</b>	<b>27.44</b>	<b>25.8</b>	<b>106.3</b>	70	130	*
93)	n-Undecane	26.50	24.78	26.5	93.5	70	130	*
94)	<b>1,2,4-Trichlorobenzene</b>	<b>27.63</b>	<b>24.79</b>	<b>26.0</b>	<b>95.3</b>	70	130	*
95)	<b>Naphthalene</b>	<b>27.77</b>	<b>24.08</b>	<b>26.3</b>	<b>91.6</b>	70	130	*
96)	n-Dodecane	27.74	24.15	26.5	91.1	70	130	*
97)	<b>Hexachloro-1,3-butadiene</b>	<b>28.19</b>	<b>23.94</b>	<b>26.3</b>	<b>91.0</b>	70	130	*

Bold = 67 Compound List

*Foster*  
5/22/08

Method Path : J:\MS13\METHODS\  
Method File : S13052208.M  
Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
Last Update : Sun May 25 20:31:38 2008  
Response Via : Initial Calibration

Calibration Files

0.1 =05220802.D 0.5 =05220803.D 1.0 =05220804.D 5.0 =05220805.D  
25 =05220806.D 50 =05220807.D 100 =05220808.D

Compound	0.1	0.5	1.0	5.0	25	50	100	Avg	%RSD
1) IR Bromochloromethane (I									
2) S 1,2-Dichloroethane-	1.794	1.789	1.787	1.711	1.716	1.686	1.643	1.732	3.40
3) IR 1,4-Difluorobenzene (									
4) I Chlorobenzene-d5 (IS3									
5) S Toluene-d8 (SS2)	2.281	2.276	2.255	2.249	2.226	2.198	2.231	2.245	1.31
6) S Bromofluorobenzene	0.879	0.895	0.904	0.922	0.931	0.923	0.937	0.913	2.31
7) tert-Butylbenzene	2.735	3.218	2.885	2.855	3.140	3.024	2.693	2.936	6.77
8) n-Butylbenzene	2.864	3.570	3.351	3.289	3.496	3.275	2.882	3.247	8.53

(#) = Out of Range

1145

RA 5/26/08

Method Path : J:\MS13\METHODS\  
 Method File : S13052208.M  
 Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 Last Update : Sun May 25 20:32:30 2008  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS13\DATA\2008_05\22\05220802.D
2	0.5	1	25	J:\MS13\DATA\2008_05\22\05220803.D
3	1.0	1	25	J:\MS13\DATA\2008_05\22\05220804.D
4	5.0	5	25	J:\MS13\DATA\2008_05\22\05220805.D
5	25	26	25	J:\MS13\DATA\2008_05\22\05220806.D
6	50	52	25	J:\MS13\DATA\2008_05\22\05220807.D
7	100	104	25	J:\MS13\DATA\2008_05\22\05220808.D

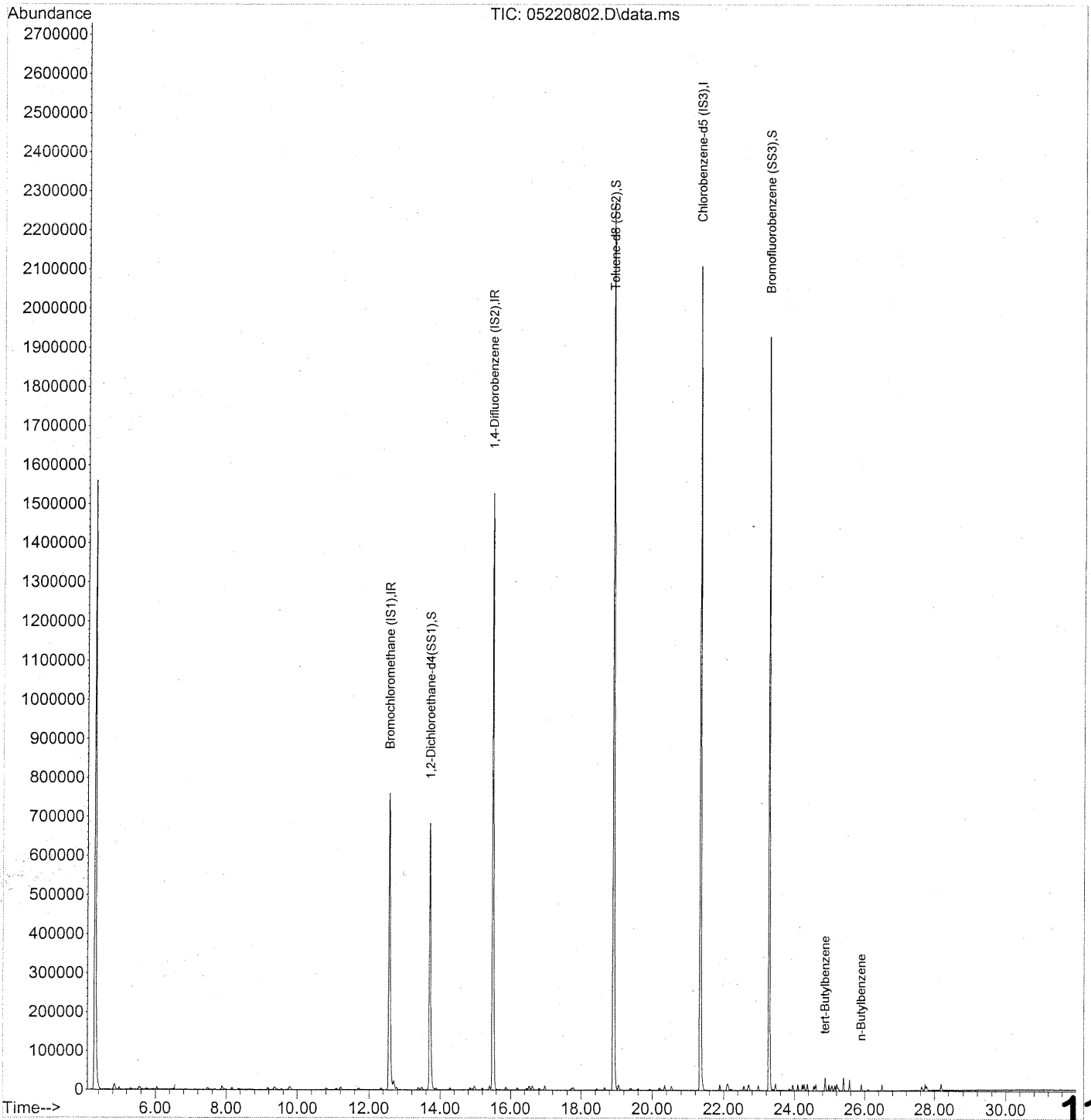
#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	May 25 20:26 2008	May 25 20:25 2008	22 May 2008 3:56
2	0.5	May 25 20:27 2008	May 25 20:25 2008	22 May 2008 4:37
3	1.0	May 25 20:28 2008	May 25 20:25 2008	22 May 2008 5:18
4	5.0	May 25 20:29 2008	May 25 20:25 2008	22 May 2008 5:58
5	25	May 25 20:30 2008	May 25 20:25 2008	22 May 2008 6:39
6	50	May 25 20:31 2008	May 25 20:25 2008	22 May 2008 7:20
7	100	May 25 20:31 2008	May 25 20:25 2008	22 May 2008 8:01

S13052208.M Sun May 25 20:42:55 2008



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 25 20:25:01 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



1147

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220802.D  
 Acq On : 22 May 2008 3:56  
 Operator : RTB  
 Sample : 0.1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210809  
 ALS Vial : 15 Sample Multiplier: 1

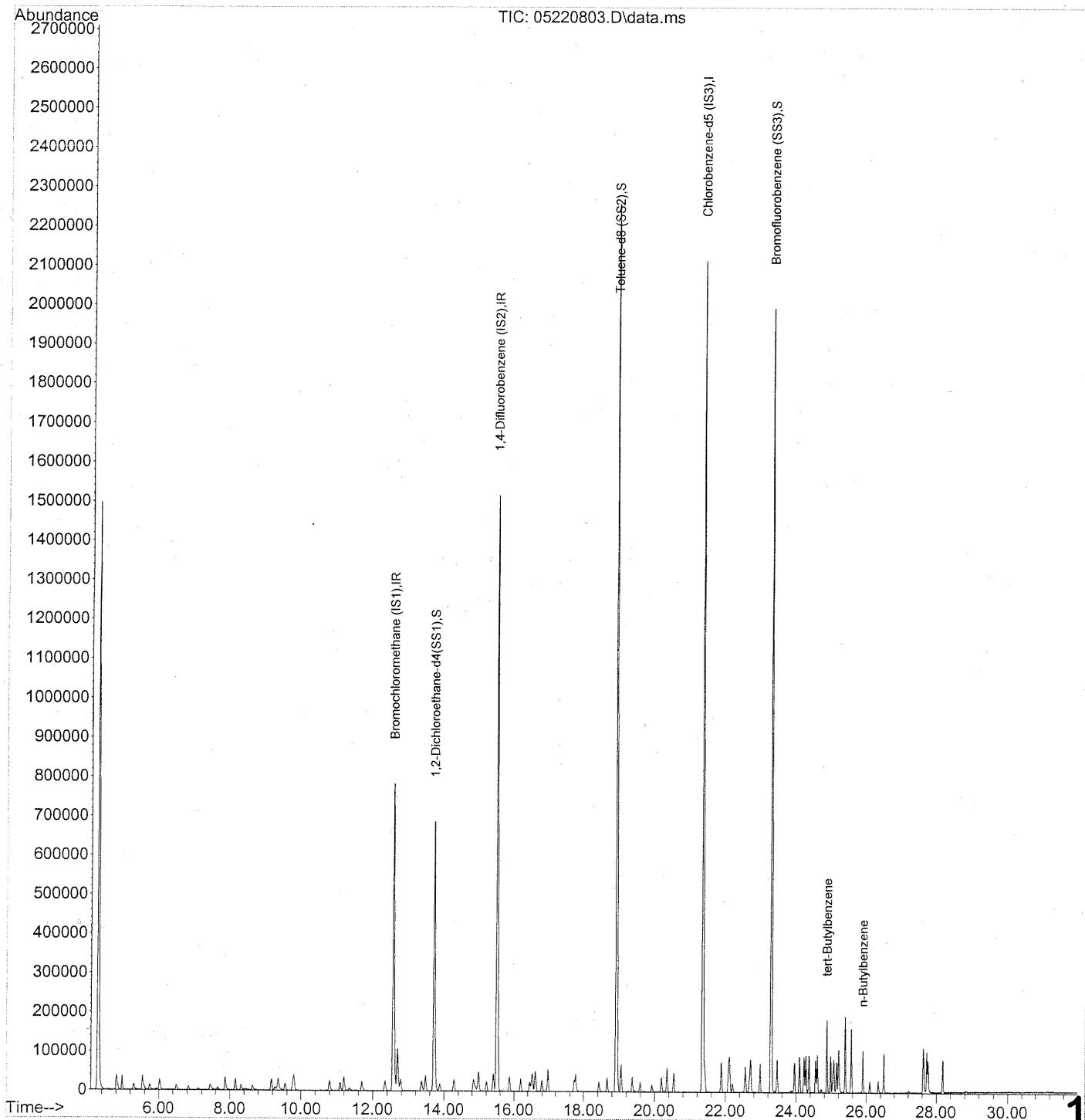
Quant Time: May 25 20:25:01 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	391084	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	15.51	114	1729052	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	807664	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	13.72	65	701754	22.375	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.48%	
5) Toluene-d8 (SS2)	18.92	98	1842585	25.453	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.80%	
6) Bromofluorobenzene (SS3)	23.29	174	709723	28.489	ng	0.00
Spiked Amount	25.000		Recovery	=	113.96%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	9190	0.104	ng	99
8) n-Butylbenzene	25.91	91	9900	0.104	ng	98

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

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:04 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220803.D  
 Acq On : 22 May 2008 4:37  
 Operator : RTB  
 Sample : 0.5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

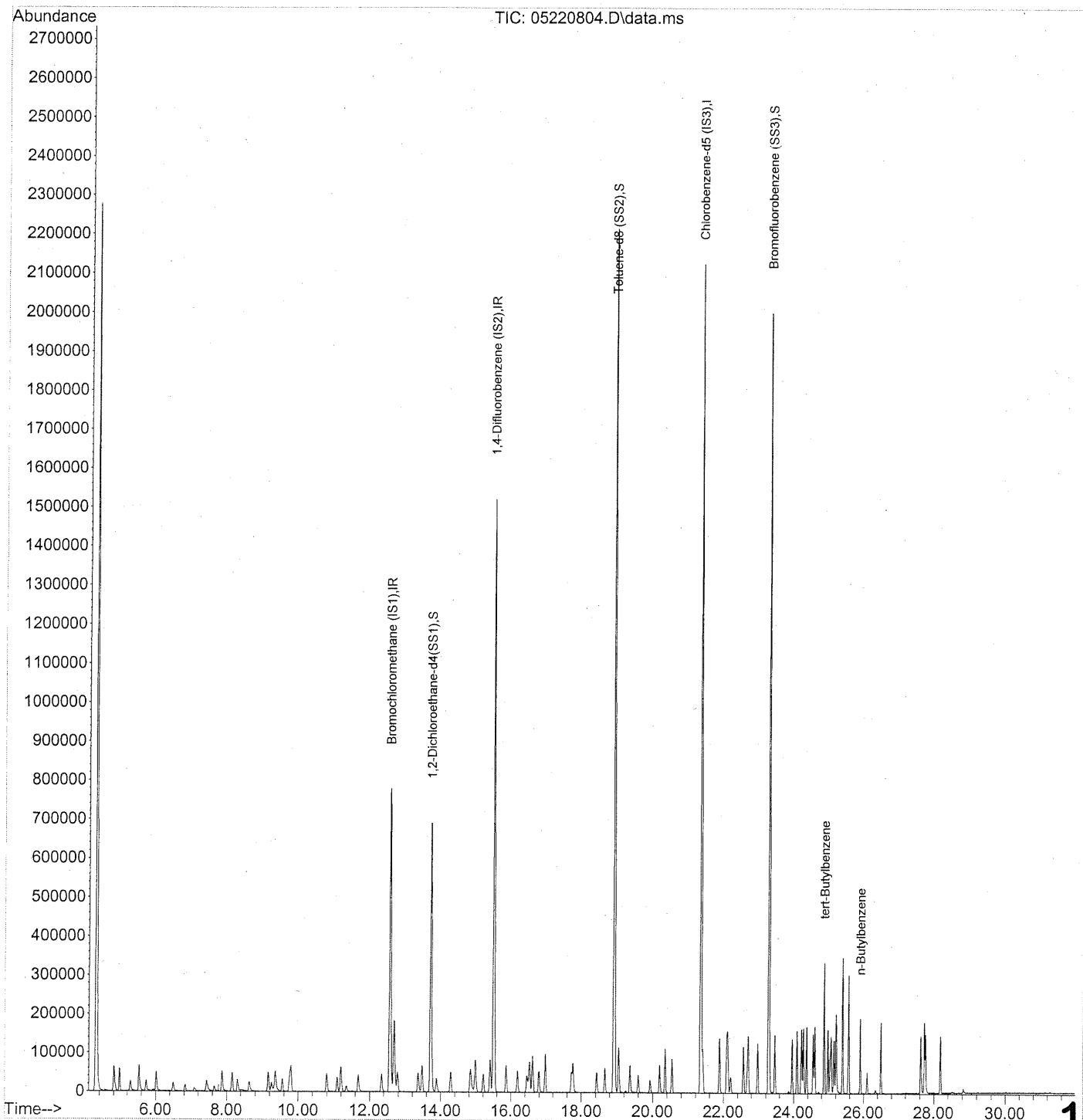
Quant Time: May 25 20:25:04 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	390197	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	15.51	114	1721246	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	802715	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	697916	22.303	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.20%	
5) Toluene-d8 (SS2)	18.92	98	1826728	25.389	ng	-0.01
Spiked Amount	25.000		Recovery	=	101.56%	
6) Bromofluorobenzene (SS3)	23.29	174	718304	29.011	ng	0.00
Spiked Amount	25.000		Recovery	=	116.04%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	53731	0.611	ng	100
8) n-Butylbenzene	25.91	91	61321	0.647	ng	98

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

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220804.D  
 Acq On : 22 May 2008 5:18  
 Operator : RTB  
 Sample : 1ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:09 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



1151

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220804.D  
Acq On : 22 May 2008 5:18  
Operator : RTB  
Sample : 1ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210806  
ALS Vial : 4 Sample Multiplier: 1

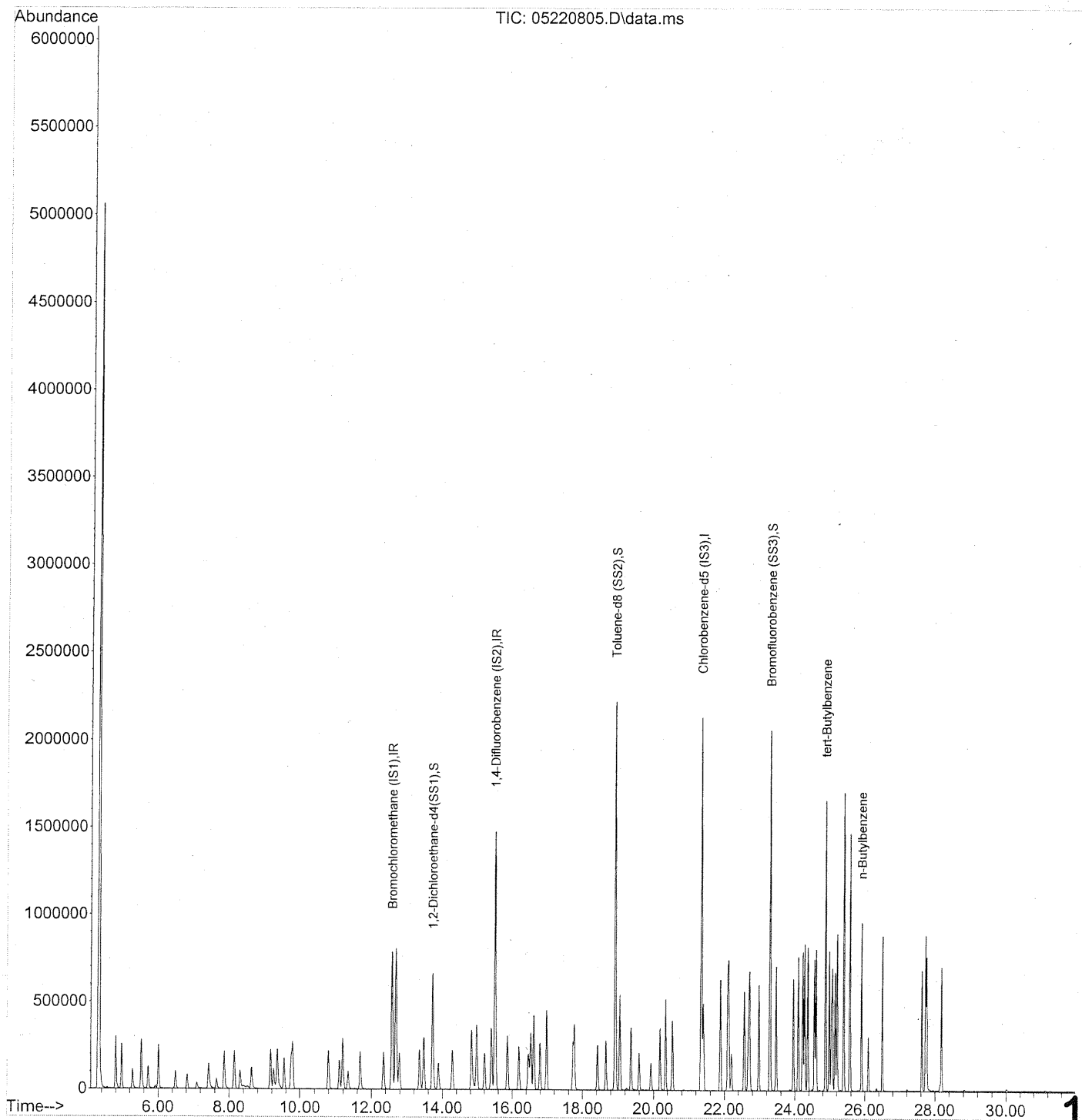
Quant Time: May 25 20:25:09 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Mon Apr 28 10:06:00 2008  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	387850	25.000	ng	-0.03
3) 1,4-Difluorobenzene (IS2)	15.51	114	1717781	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	808909	25.000	ng	-0.01
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.72	65	693031	22.281	ng	-0.03
Spiked Amount	25.000		Recovery	=	89.12%	
5) Toluene-d8 (SS2)	18.92	98	1824190	25.160	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.64%	
6) Bromofluorobenzene (SS3)	23.29	174	731633	29.323	ng	0.00
Spiked Amount	25.000		Recovery	=	117.28%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	97077	1.096	ng	Qvalue 100
8) n-Butylbenzene	25.91	91	116000	1.214	ng	96

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

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220805.D  
 Acq On : 22 May 2008 5:58  
 Operator : RTB  
 Sample : 5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:14 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



1153

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220805.D  
 Acq On : 22 May 2008 5:58  
 Operator : RTB  
 Sample : 5ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210806  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:14 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

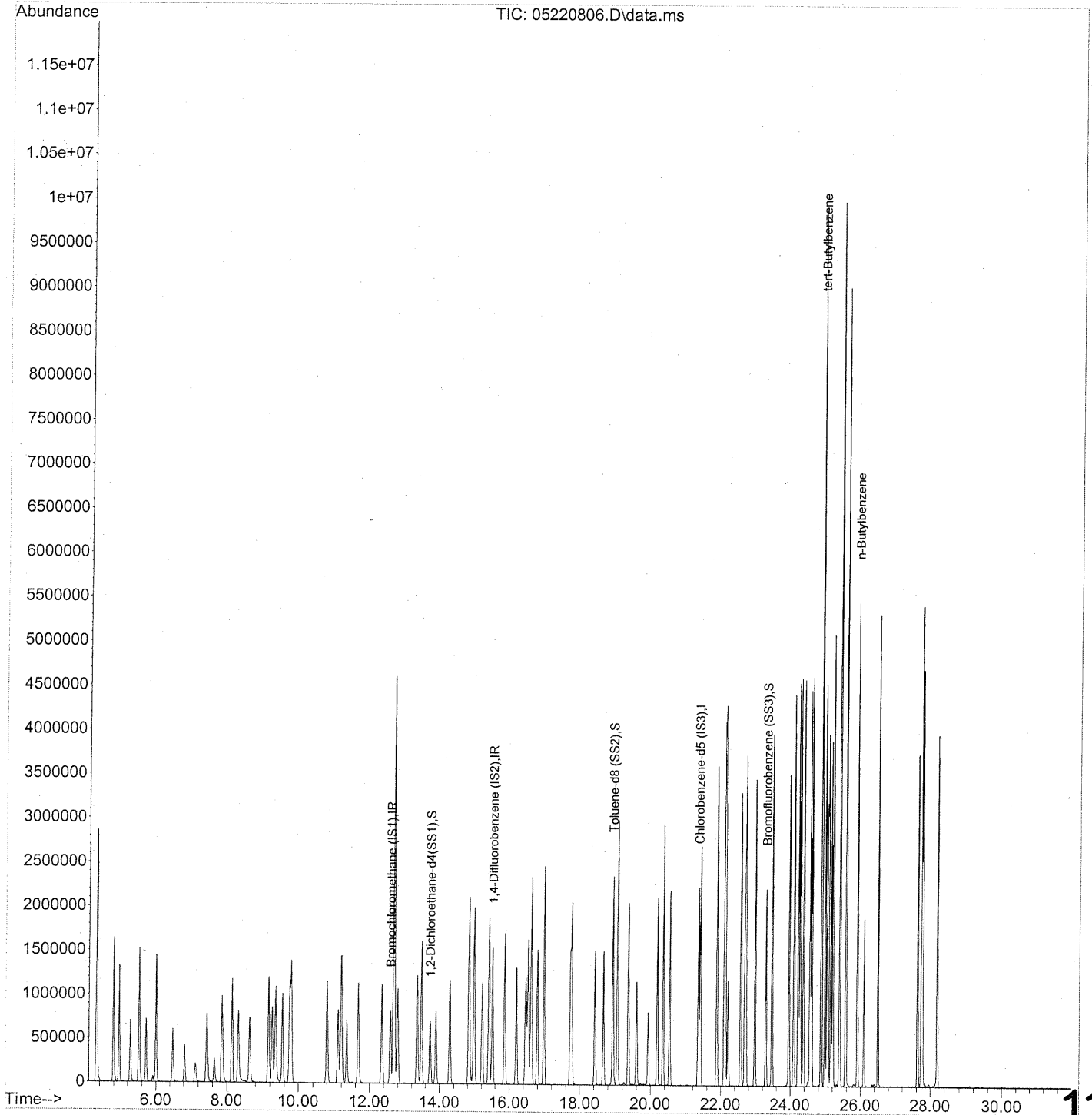
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.58	130	392159	25.000	ng	-0.02
3) 1,4-Difluorobenzene (IS2)	15.51	114	1692913	25.000	ng	-0.02
4) Chlorobenzene-d5 (IS3)	21.35	82	804687	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	670984	21.335	ng	-0.02
Spiked Amount	25.000		Recovery	=	85.36%	
5) Toluene-d8 (SS2)	18.93	98	1810051	25.096	ng	0.00
Spiked Amount	25.000		Recovery	=	100.40%	
6) Bromofluorobenzene (SS3)	23.29	174	741734	29.884	ng	0.00
Spiked Amount	25.000		Recovery	=	119.52%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	477896	5.424	ng	99
8) n-Butylbenzene	25.91	91	566409	5.958	ng	96

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



Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:18 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



1155

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220806.D  
 Acq On : 22 May 2008 6:39  
 Operator : RTB  
 Sample : 25ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

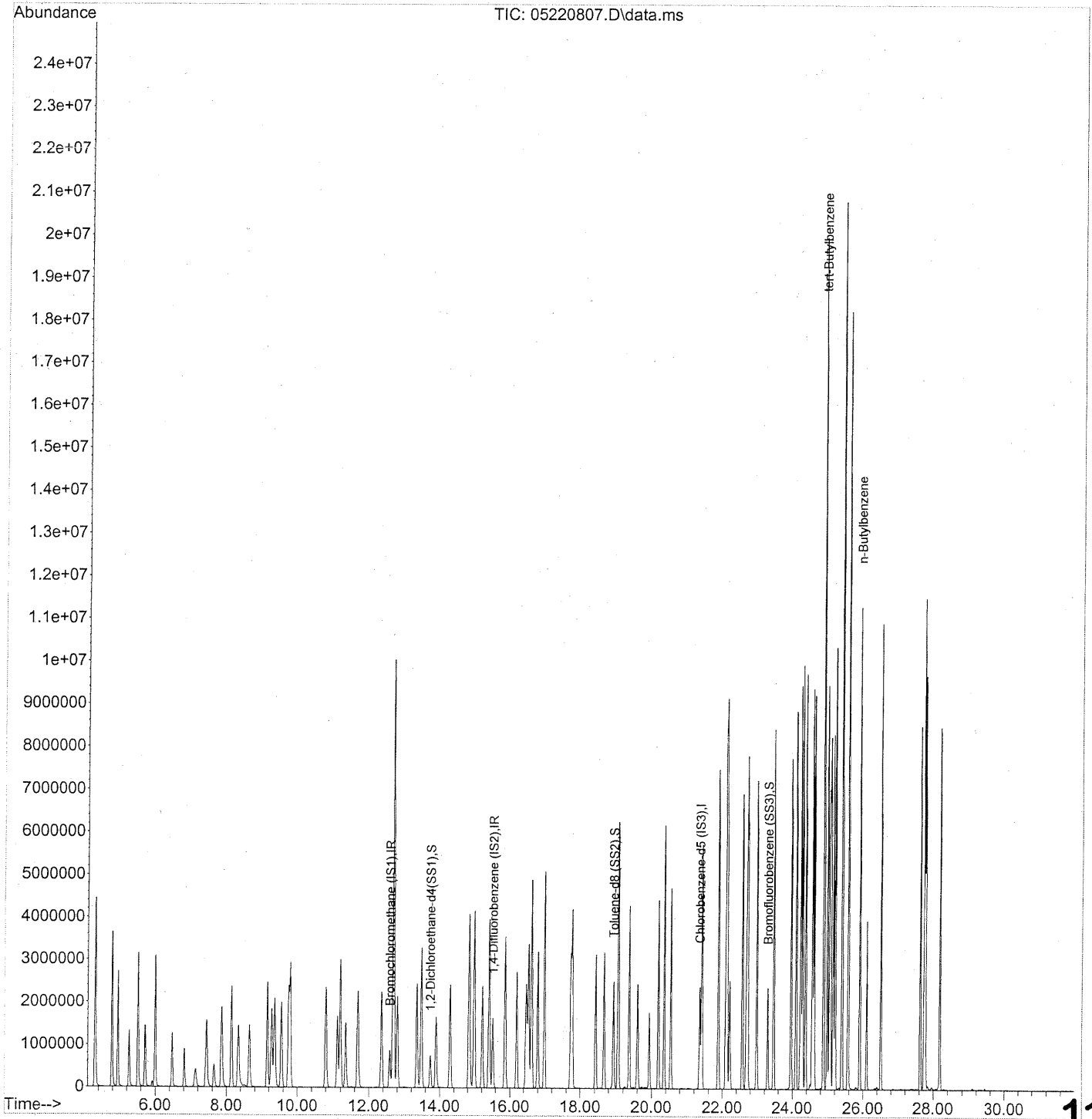
Quant Time: May 25 20:25:18 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	416973	25.000	ng	-0.01
3) 1,4-Difluorobenzene (IS2)	15.52	114	1789357	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	21.35	82	864655	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	715546	21.398	ng	-0.02
Spiked Amount	25.000		Recovery	=	85.60%	
5) Toluene-d8 (SS2)	18.93	98	1925065	24.839	ng	0.00
Spiked Amount	25.000		Recovery	=	99.36%	
6) Bromofluorobenzene (SS3)	23.29	174	804956	30.182	ng	0.00
Spiked Amount	25.000		Recovery	=	120.72%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	2823383	29.820	ng	99
8) n-Butylbenzene	25.91	91	3240519	31.722	ng	97

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

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:22 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration



1157

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220807.D  
 Acq On : 22 May 2008 7:20  
 Operator : RTB  
 Sample : 50ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

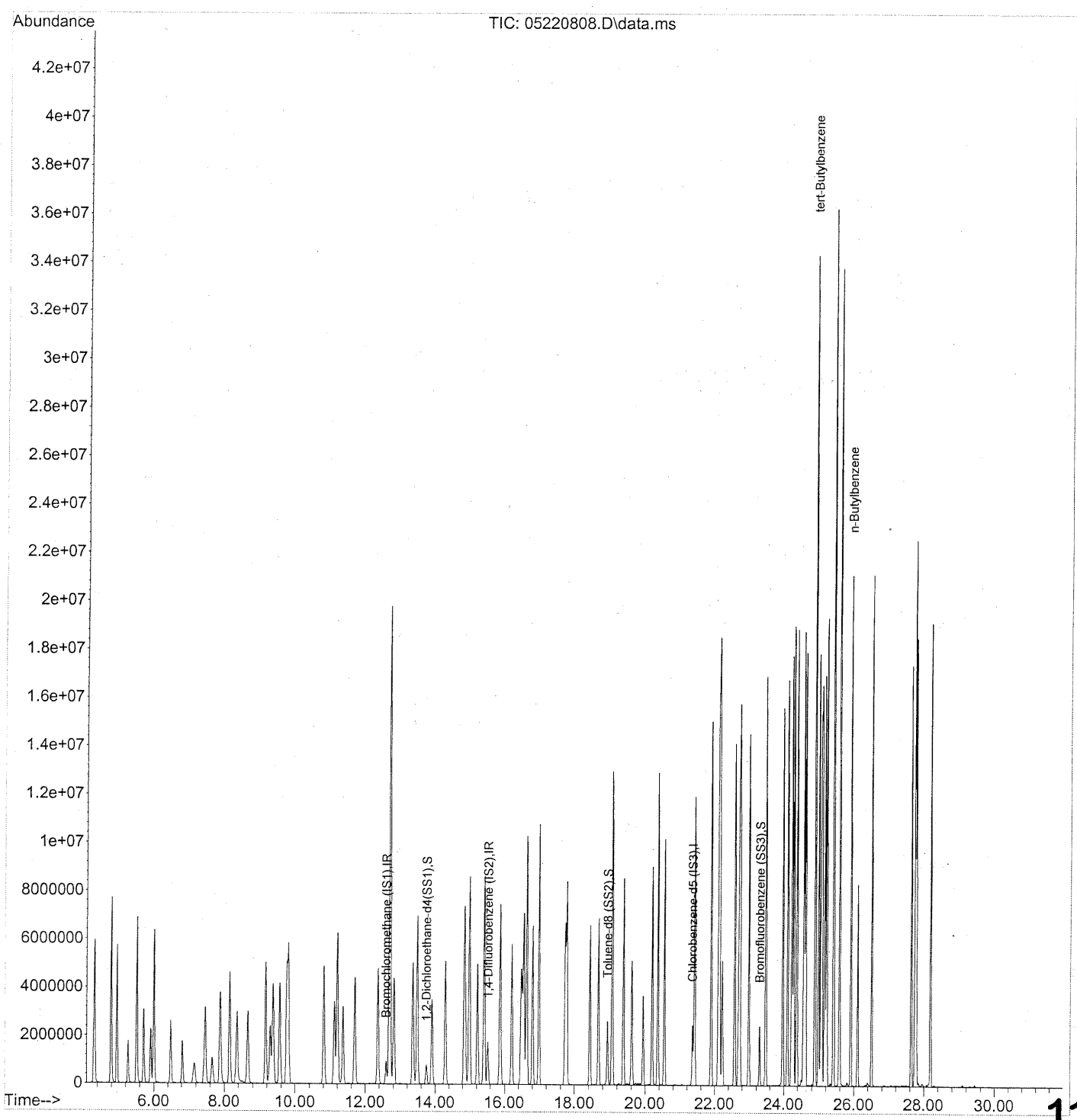
Quant Time: May 25 20:25:22 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	454188	25.000	ng	-0.01
3) 1,4-Difluorobenzene (IS2)	15.53	114	1924432	25.000	ng	0.00
4) Chlorobenzene-d5 (IS3)	21.36	82	936145	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	13.74	65	765682	21.021	ng	-0.01
Spiked Amount	25.000		Recovery	=	84.08%	
5) Toluene-d8 (SS2)	18.93	98	2057293	24.518	ng	0.00
Spiked Amount	25.000		Recovery	=	98.08%	
6) Bromofluorobenzene (SS3)	23.29	174	864419	29.936	ng	0.00
Spiked Amount	25.000		Recovery	=	119.76%	
Target Compounds						
7) tert-Butylbenzene	24.89	119	5887817	57.437	ng	99
8) n-Butylbenzene	25.91	91	6561385	59.326	ng	99

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

Data Path : J:\MS13\DATA\2008\_05\22\  
Data File : 05220808.D  
Acq On : 22 May 2008 8:01  
Operator : RTB  
Sample : 100ng TO-15 ICAL Standard  
Misc : S20-04300802/S20-05210804  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:25:27 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Mon Apr 28 10:06:00 2008  
Response via : Initial Calibration



1159

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220808.D  
 Acq On : 22 May 2008 8:01  
 Operator : RTB  
 Sample : 100ng TO-15 ICAL Standard  
 Misc : S20-04300802/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

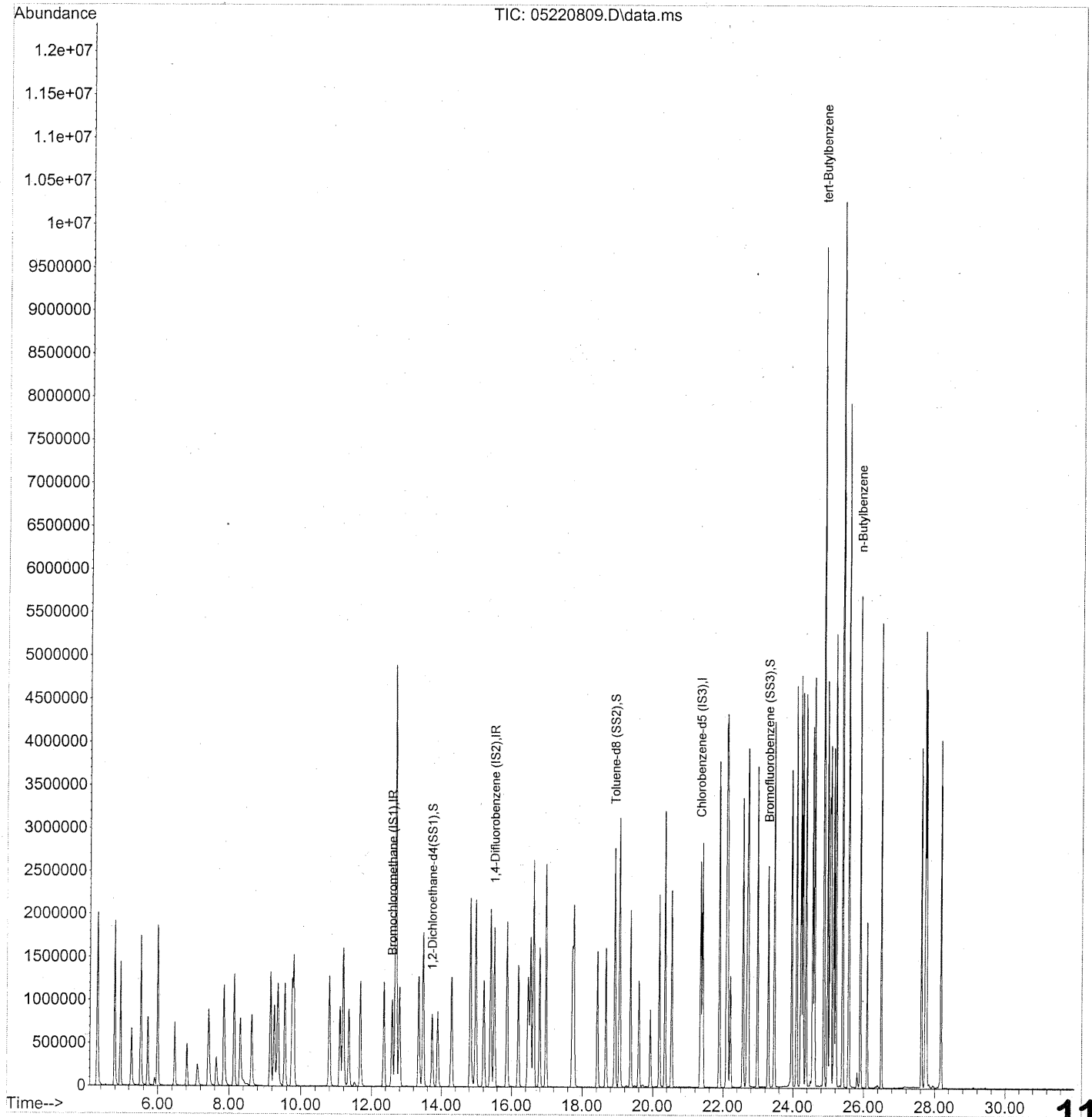
Quant Time: May 25 20:25:27 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Mon Apr 28 10:06:00 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.60	130	499844	25.000	ng	0.00
3) 1,4-Difluorobenzene (IS2)	15.53	114	2090195	25.000	ng	0.00
4) Chlorobenzene-d5 (IS3)	21.36	82	998042	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.75	65	821224	20.487	ng	0.00
Spiked Amount	25.000		Recovery	=	81.96%	
5) Toluene-d8 (SS2)	18.94	98	2226768	24.892	ng	0.00
Spiked Amount	25.000		Recovery	=	99.56%	
6) Bromofluorobenzene (SS3)	23.30	174	935196	30.378	ng	0.00
Spiked Amount	25.000		Recovery	=	121.52%	
Target Compounds						
7) tert-Butylbenzene	24.89	119	11182254	102.320	ng	Qvalue 98
8) n-Butylbenzene	25.92	91	12309412	104.395	ng	95

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

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220809.D  
 Acq On : 22 May 2008 8:41  
 Operator : RTB  
 Sample : 25ng TO-15 ICV Standard  
 Misc : S20-04300802/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:33:14 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration



1161

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220809.D  
 Acq On : 22 May 2008 8:41  
 Operator : RTB  
 Sample : 25ng TO-15 ICV Standard  
 Misc : S20-04300802/S20-04290803  
 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 25 20:33:14 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	526986	25.000	ng	-0.01
3) 1,4-Difluorobenzene (IS2)	15.52	114	2202027	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	21.35	82	1025095	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4 (...)	13.73	65	856754	23.463	ng	-0.02
Spiked Amount	25.000		Recovery	=	93.84%	
5) Toluene-d8 (SS2)	18.93	98	2305788	25.046	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.20%	
6) Bromofluorobenzene (SS3)	23.29	174	957507	25.576	ng	0.00
Spiked Amount	25.000		Recovery	=	102.32%	
Target Compounds						
7) tert-Butylbenzene	24.88	119	2937403	24.402	ng	98
8) n-Butylbenzene	25.91	91	3302624	24.809	ng	98

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



INITIAL CALIBRATION VERIFICATION CHECK SHEET

Data File Name: 05220809.D  
Data File Path: J:\MS13\DATA\2008\_05\22\  
Operator: RTB  
Date Acquired: 5/22/08 8:41  
Acq. Method File: TO15.M  
Sample Name: 25ng TO-15 ICV Standard  
Misc Info: S20-04300802/S20-04290803  
Instrument Name: GCMS13

#	<u>Name</u> <u>Compound</u>	<u>Ret.</u> <u>Time</u>	<u>Amt.</u> <u>(ng)</u>	<u>Spike</u> <u>Amt.(ng)</u>	<u>%</u> <u>Rec.</u>	<u>Lower</u> <u>Limit</u>	<u>Upper</u> <u>Limit</u>	* OR <u>Fail</u>
7)	tert-Butylbenzene	24.88	24.40	26.3	92.8	70	130	*
8)	n-Butylbenzene	25.91	24.81	26.8	92.6	70	130	*

*RTB* 5/26/08

CONTINUING CALIBRATION STANDARDS

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

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	103	-0.05
2	T Propene	2.500	2.265	9.4	98	0.00
3	T Dichlorodifluoromethane	2.956	2.699	8.7	95	0.00
4	T Chloromethane	3.654	3.768	-3.1	113	-0.01
5	T Freon 114	1.425	1.535	-7.7	115	-0.01
6	T Vinyl Chloride	2.523	2.214	12.2	89	-0.02
7	T 1,3-Butadiene	2.356	2.154	8.6	97	-0.02
8	T Bromomethane	1.040	0.973	6.4	102	-0.02
9	T Chloroethane	1.153	1.126	2.3	103	-0.02
10	T Ethanol	1.719	1.645	4.3	95	-0.08
11	T Acetonitrile	4.463	4.373	2.0	100	-0.06
12	T Acrolein	1.224	1.238	-1.1	109	-0.04
13	T Acetone	1.652	1.541	6.7	99	-0.05
14	T Trichlorofluoromethane	2.445	2.386	2.4	101	-0.02
15	T Isopropanol	5.356	5.565	-3.9	108	-0.08
16	T Acrylonitrile	2.938	2.972	-1.2	107	-0.07
17	T 1,1-Dichloroethene	1.197	1.217	-1.7	106	-0.03
18	T tert-Butanol	4.871	4.132	15.2	91	-0.08
19	T Methylene Chloride	1.305	1.186	9.1	101	-0.05
20	T Allyl Chloride	2.735	2.311	15.5	97	-0.04
21	T Trichlorotrifluoroethane	1.027	1.204	-17.2	123	-0.02
22	T Carbon Disulfide	4.925	4.685	4.9	101	-0.03
23	T trans-1,2-Dichloroethene	2.559	2.308	9.8	93	-0.04
24	T 1,1-Dichloroethane	2.918	2.618	10.3	95	-0.05
25	T Methyl tert-Butyl Ether	3.922	3.426	12.6	90	-0.04
26	T Vinyl Acetate	0.335	0.228	31.9#	67	-0.04
27	T 2-Butanone	0.851	0.777	8.7	92	-0.05
28	T cis-1,2-Dichloroethene	2.359	2.148	8.9	94	-0.05
29	T Diisopropyl Ether	1.083	1.086	-0.3	101	-0.03
30	T Ethyl Acetate	0.629	0.572	9.1	93	-0.04
31	T n-Hexane	3.557	3.309	7.0	100	-0.03
32	T Chloroform	1.864	1.717	7.9	95	-0.05
33	S 1,2-Dichloroethane-d4 (SS1)	1.763	1.486	15.7	84	-0.04
34	T Tetrahydrofuran	0.853	0.769	9.8	93	-0.03
35	T Ethyl tert-Butyl Ether	1.536	1.491	2.9	96	-0.04
36	T 1,2-Dichloroethane	2.230	2.007	10.0	93	-0.04
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	98	-0.03
38	T 1,1,1-Trichloroethane	0.481	0.469	2.5	97	-0.04

1165

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

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	0.256	0.247	3.5	94	-0.03
40 T	1-Butanol	0.474	0.410	13.5	85	-0.05
41 T	Benzene	1.226	1.139	7.1	97	-0.04
42 T	Carbon Tetrachloride	0.363	0.375	-3.3	98	-0.03
43 T	Cyclohexane	0.485	0.444	8.5	97	-0.02
44 T	tert-Amyl Methyl Ether	0.863	0.776	10.1	89	-0.03
45 T	1,2-Dichloropropane	0.380	0.360	5.3	94	-0.03
46 T	Bromodichloromethane	0.364	0.358	1.6	95	-0.04
47 T	Trichloroethene	0.337	0.374	-11.0	116	-0.04
48 T	1,4-Dioxane	0.230	0.231	-0.4	97	-0.04
49 T	Isooctane	2.036	2.019	0.8	100	-0.03
50 T	Methyl Methacrylate	0.121	0.133	-9.9	108	-0.04
51 T	n-Heptane	0.312	0.299	4.2	94	-0.03
52 T	cis-1,3-Dichloropropene	0.489	0.447	8.6	90	-0.03
53 T	4-Methyl-2-pentanone	0.446	0.426	4.5	95	-0.03
54 T	trans-1,3-Dichloropropene	0.432	0.375	13.2	84	-0.02
55 T	1,1,2-Trichloroethane	0.297	0.302	-1.7	101	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	88	-0.01
57 S	Toluene-d8 (SS2)	2.462	2.573	-4.5	92	-0.02
58 T	Toluene	3.016	3.265	-8.3	102	-0.02
59 T	2-Hexanone	3.189	3.248	-1.9	92	-0.04
60 T	Dibromochloromethane	0.787	0.934	-18.7	107	-0.02
61 T	1,2-Dibromoethane	0.778	0.888	-14.1	102	-0.02
62 T	Butyl Acetate	3.254	3.355	-3.1	93	-0.02
63 T	n-Octane	0.965	1.052	-9.0	99	-0.02
64 T	Tetrachloroethene	0.745	0.947	-27.1	119	-0.02
65 T	Chlorobenzene	1.996	2.326	-16.5	108	-0.02
66 T	Ethylbenzene	3.440	3.714	-8.0	100	-0.02
67 T	m- & p-Xylene	2.254	2.468	-9.5	101	-0.04
68 T	Bromoform	0.426	0.546	-28.2	116	-0.02
69 T	Styrene	2.089	2.432	-16.4	106	-0.02
70 T	o-Xylene	2.404	2.651	-10.3	100	-0.02
71 T	n-Nonane	2.655	2.960	-11.5	100	-0.01
72 T	1,1,2,2-Tetrachloroethane	1.059	1.115	-5.3	94	-0.02
73 S	Bromofluorobenzene (SS3)	0.641	0.731	-14.0	101	-0.01
74 T	Cumene	3.358	3.894	-16.0	107	-0.01
75 T	alpha-Pinene	1.641	1.883	-14.7	103	0.00
76 T	n-Propylbenzene	4.211	4.666	-10.8	102	-0.01

1166

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

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	3.637	4.235	-16.4	109	-0.01
78 T	4-Ethyltoluene	3.312	3.913	-18.1	107	-0.01
79 T	1,3,5-Trimethylbenzene	2.916	3.349	-14.8	106	-0.01
80 T	alpha-Methylstyrene	1.582	2.027	-28.1	113	-0.02
81 T	2-Ethyltoluene	3.608	4.247	-17.7	109	-0.02
82 T	1,2,4-Trimethylbenzene	3.013	3.371	-11.9	105	-0.02
83 T	n-Decane	2.388	2.630	-10.1	99	-0.01
84 T	Benzyl Chloride	2.511	2.635	-4.9	94	-0.02
85 T	1,3-Dichlorobenzene	1.748	2.139	-22.4	116	-0.02
86 T	1,4-Dichlorobenzene	1.670	2.072	-24.1	116	-0.01
87 T	sec-Butylbenzene	3.925	4.624	-17.8	109	-0.01
88 T	p-Isopropyltoluene	3.333	4.031	-20.9	112	-0.02
89 T	1,2,3-Trimethylbenzene	2.934	3.410	-16.2	107	-0.02
90 T	1,2-Dichlorobenzene	1.622	2.008	-23.8	115	-0.02
91 T	d-Limonene	1.087	1.168	-7.5	95	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.511	0.665	-30.1#	116	-0.01
93 T	n-Undecane	2.511	2.783	-10.8	99	0.00
94 T	1,2,4-Trichlorobenzene	0.282	0.400	-41.8#	127	0.00
95 T	Naphthalene	4.263	5.280	-23.9	115	-0.01
96 T	n-Dodecane	2.451	2.716	-10.8	100	0.00
97 T	Hexachloro-1,3-butadiene	0.422	0.566	-34.1#	122	0.00

(#) = Out of Range

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

1167



Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	280453	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.35	114	1159366	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	16.45	82	455765	25.000	ng	-0.01

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	10.05	65	416652	21.068	ng	-0.04
Spiked Amount	25.000		Recovery	=	84.28%	
57) Toluene-d8 (SS2)	14.23	98	1172458	26.127	ng	-0.02
Spiked Amount	25.000		Recovery	=	104.52%	
73) Bromofluorobenzene (SS3)	18.28	174	333301	28.538	ng	-0.01
Spiked Amount	25.000		Recovery	=	114.16%	

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	137185	4.892	ng	92
3) Dichlorodifluoromethane	4.54	85	157439	4.748	ng	98
4) Chloromethane	4.73	50	215550	5.258	ng	99
5) Freon 114	4.85	135	92132	5.762	ng	97
6) Vinyl Chloride	4.97	62	127890	4.518	ng	94
7) 1,3-Butadiene	5.12	54	131705	4.984	ng	89
8) Bromomethane	5.41	94	57307	4.913	ng	100
9) Chloroethane	5.58	64	66307	5.125	ng	95
10) Ethanol	5.71	45	83984m	4.355	ng	
11) Acetonitrile	5.92	41	240356	4.801	ng	100
12) Acrolein	6.03	56	66688	4.857	ng	99
13) Acetone	6.16	58	95921	5.177	ng	# 86
14) Trichlorofluoromethane	6.32	101	139161	5.074	ng	98
15) Isopropanol	6.39	45	321516m	5.352	ng	
16) Acrylonitrile	6.60	53	168360	5.109	ng	96
17) 1,1-Dichloroethene	6.93	96	77150	5.747	ng	93
18) tert-Butanol	6.97	59	236415m	4.327	ng	
19) Methylene Chloride	7.03	84	74496	5.089	ng	# 32
20) Allyl Chloride	7.15	41	136122	4.437	ng	79
21) Trichlorotrifluoroethane	7.28	151	76998	6.681	ng	88
22) Carbon Disulfide	7.39	76	262770	4.756	ng	100
23) trans-1,2-Dichloroethene	7.95	61	142391	4.960	ng	93
24) 1,1-Dichloroethane	8.17	63	163001	4.980	ng	95
25) Methyl tert-Butyl Ether	8.19	73	213294	4.847	ng	79
26) Vinyl Acetate	8.26	86	12534	3.334	ng	# 1
27) 2-Butanone	8.52	72	48835	5.115	ng	# 1
28) cis-1,2-Dichloroethene	9.01	61	133730	5.053	ng	92
29) Diisopropyl Ether	9.19	87	62720	5.162	ng	# 18
30) Ethyl Acetate	9.17	61	40781	5.775	ng	84
31) n-Hexane	9.23	57	207903	5.210	ng	91169

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008

Quant Method : J:\MS16\METHODS\R16051208.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	124232	5.940	ng	94
34) Tetrahydrofuran	9.77	72	47899	5.006	ng	# 32
35) Ethyl tert-Butyl Ether	9.78	87	87786	5.094	ng	# 75
36) 1,2-Dichloroethane	10.17	62	123825	4.950	ng	97
38) 1,1,1-Trichloroethane	10.48	97	119705	5.369	ng	91
39) Isopropyl Acetate	10.77	61	57784	4.876	ng	# 55
40) 1-Butanol	10.77	56	86430	3.935	ng	83
41) Benzene	11.01	78	290398	5.109	ng	99
42) Carbon Tetrachloride	11.18	117	93084	5.531	ng	100
43) Cyclohexane	11.33	84	114158	5.071	ng	# 26
44) tert-Amyl Methyl Ether	11.62	73	187226	4.678	ng	# 71
45) 1,2-Dichloropropane	11.94	63	91068	5.165	ng	96
46) Bromodichloromethane	12.14	83	95378	5.647	ng	94
47) Trichloroethene	12.19	130	98964	6.323	ng	99
48) 1,4-Dioxane	12.14	88	61623	5.771	ng	# 71
49) Isooctane	12.24	57	486784	5.156	ng	96
50) Methyl Methacrylate	12.34	100	32599	5.808	ng	# 77
51) n-Heptane	12.50	71	76994	5.324	ng	# 51
52) cis-1,3-Dichloropropene	13.16	75	107815	4.756	ng	99
53) 4-Methyl-2-pentanone	13.18	58	103672	5.012	ng	83
54) trans-1,3-Dichloropropene	13.76	75	100930	5.041	ng	98
55) 1,1,2-Trichloroethane	13.99	97	76369	5.537	ng	93
58) Toluene	14.35	91	327386	5.954	ng	98
59) 2-Hexanone	14.58	43	301986	5.194	ng	93
60) Dibromochloromethane	14.84	129	94464	6.583	ng	100
61) 1,2-Dibromoethane	15.14	107	88235	6.219	ng	99
62) Butyl Acetate	15.31	43	321093	5.413	ng	95
63) n-Octane	15.47	57	99712	5.667	ng	95
64) Tetrachloroethene	15.69	166	94085	6.924	ng	100
65) Chlorobenzene	16.50	112	233243	6.410	ng	99
66) Ethylbenzene	16.94	91	365641	5.830	ng	93
67) m- & p-Xylene	17.14	91	580461	14.126	ng	91
68) Bromoform	17.26	173	65232	8.406	ng	99
69) Styrene	17.59	104	239447	6.287	ng	94
70) o-Xylene	17.73	91	294818	6.728	ng	93
71) n-Nonane	17.97	43	277890	5.742	ng	89
72) 1,1,2,2-Tetrachloroethane	17.70	83	125062	6.478	ng	92
74) Cumene	18.45	105	383349	6.262	ng	95
75) alpha-Pinene	18.93	93	181970	6.084	ng	94
76) n-Propylbenzene	19.06	91	446583	5.817	ng	92
77) 3-Ethyltoluene	19.19	105	393752	5.939	ng	94
78) 4-Ethyltoluene	19.24	105	395887	6.557	ng	94
79) 1,3,5-Trimethylbenzene	19.33	105	329684	6.202	ng	9170



Data Path : J:\MS16\DATA\2008\_05\21\  
Data File : 05210801.D  
Acq On : 21 May 2008 7:03 am  
Operator : WA  
Sample : 5ng TO-15 CCV  
Misc : S20-05120801/S20-05020801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 08:16:32 2008  
Quant Method : J:\MS16\METHODS\R16051208.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	188462	6.535	ng	96
81) 2-Ethyltoluene	19.56	105	383262	5.826	ng	92
82) 1,2,4-Trimethylbenzene	19.83	105	338012	6.154	ng	91
83) n-Decane	19.93	57	249321	5.727	ng	79
84) Benzyl Chloride	19.99	91	257038	5.616	ng	90
85) 1,3-Dichlorobenzene	20.02	146	206676	6.484	ng	100
86) 1,4-Dichlorobenzene	20.10	146	207783	6.825	ng	99
87) sec-Butylbenzene	20.15	105	450953	6.302	ng	96
88) p-Isopropyltoluene	20.34	119	433627	7.136	ng	94
89) 1,2,3-Trimethylbenzene	20.34	105	341958	6.394	ng	87
90) 1,2-Dichlorobenzene	20.52	146	197666	6.686	ng	100
91) d-Limonene	20.52	68	112841	5.695	ng	88
92) 1,2-Dibromo-3-Chloropr...	21.04	157	63067	6.770	ng	90
93) n-Undecane	21.43	57	266387	5.818	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	40849	7.943	ng	# 85
95) Naphthalene	22.69	128	505327	6.502	ng	99
96) n-Dodecane	22.66	57	262439	5.874	ng	77
97) Hexachloro-1,3-butadiene	23.11	225	57242	7.445	ng	98

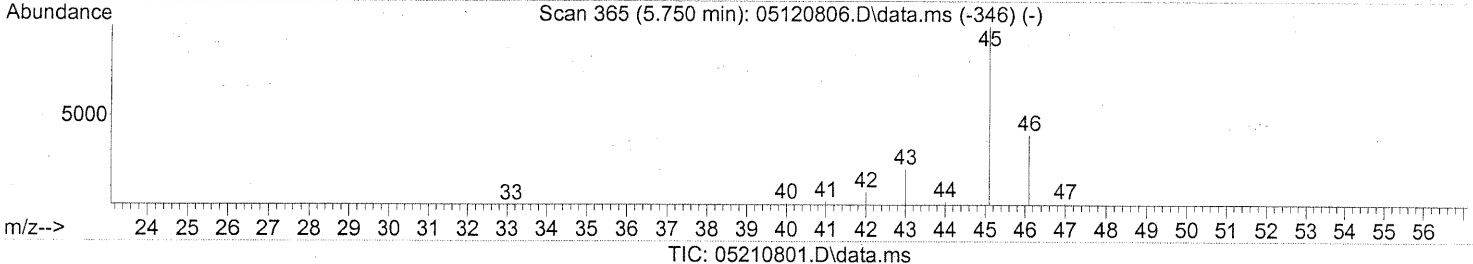
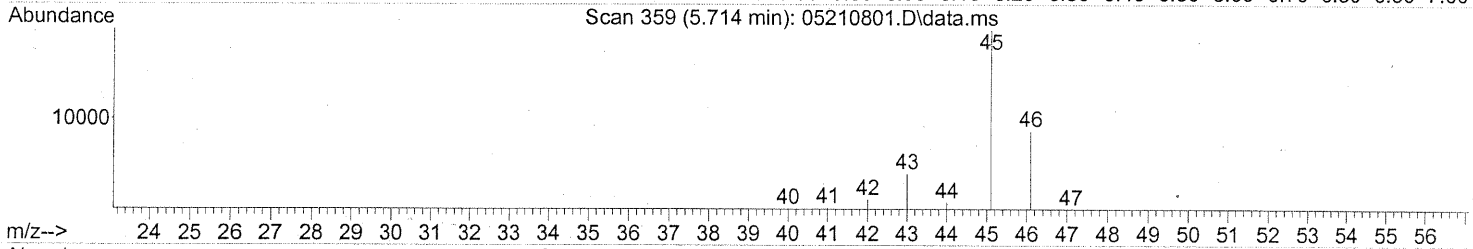
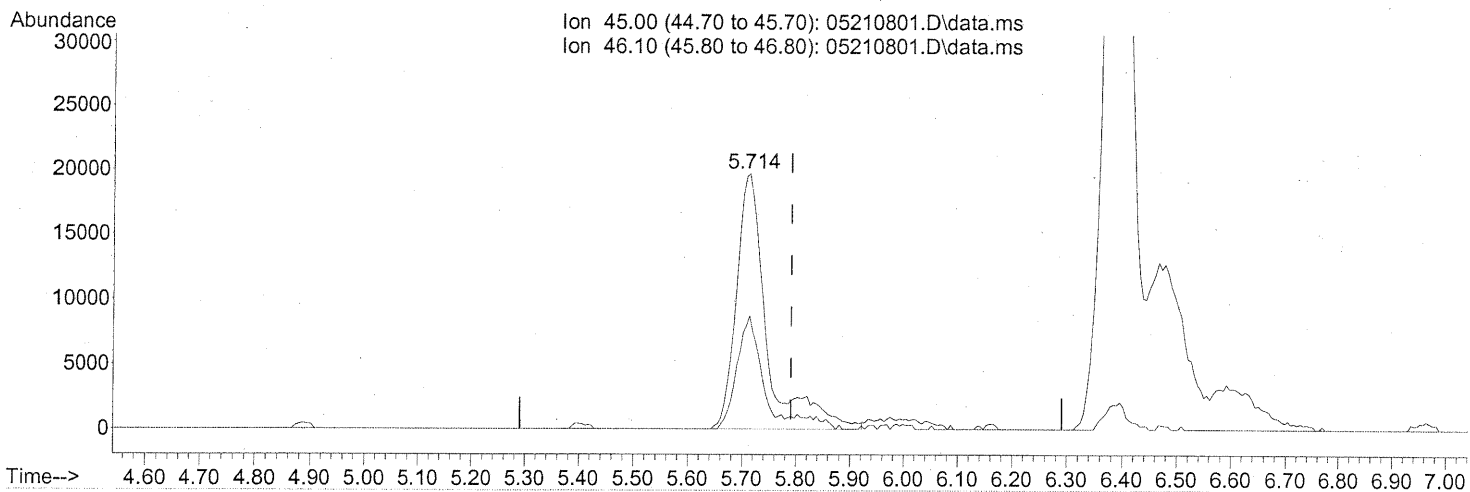
(#) = qualifier out of range (m) = manual integration (+) = signals summed

**1171**

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

5.714min (-0.077) 4.05ng

response 78001

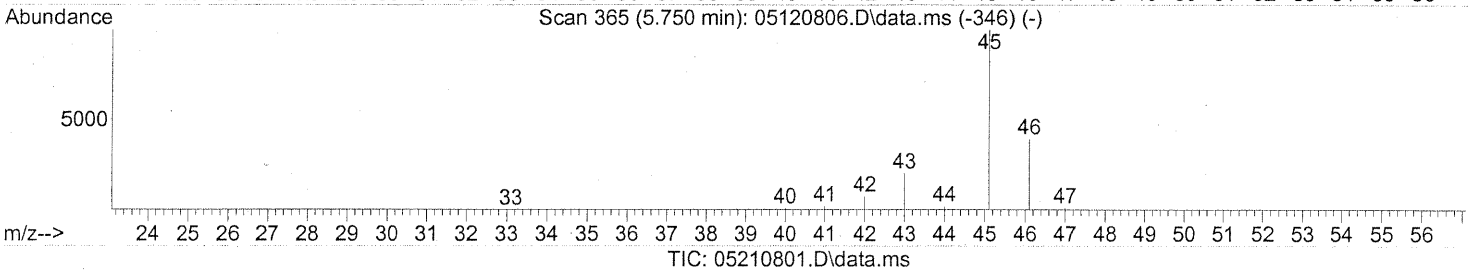
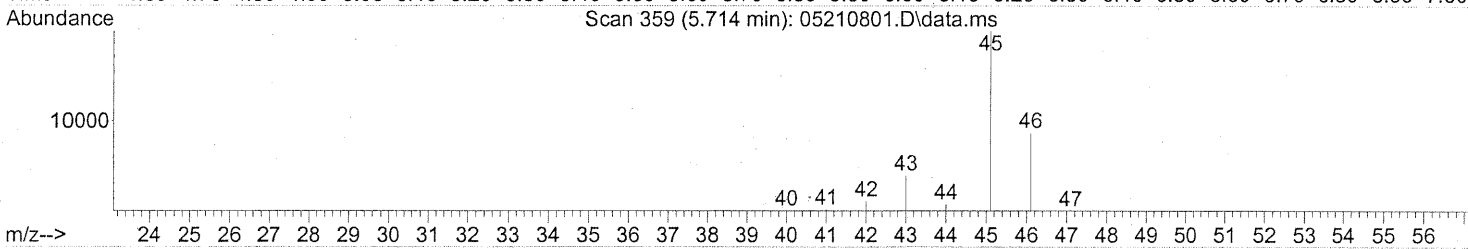
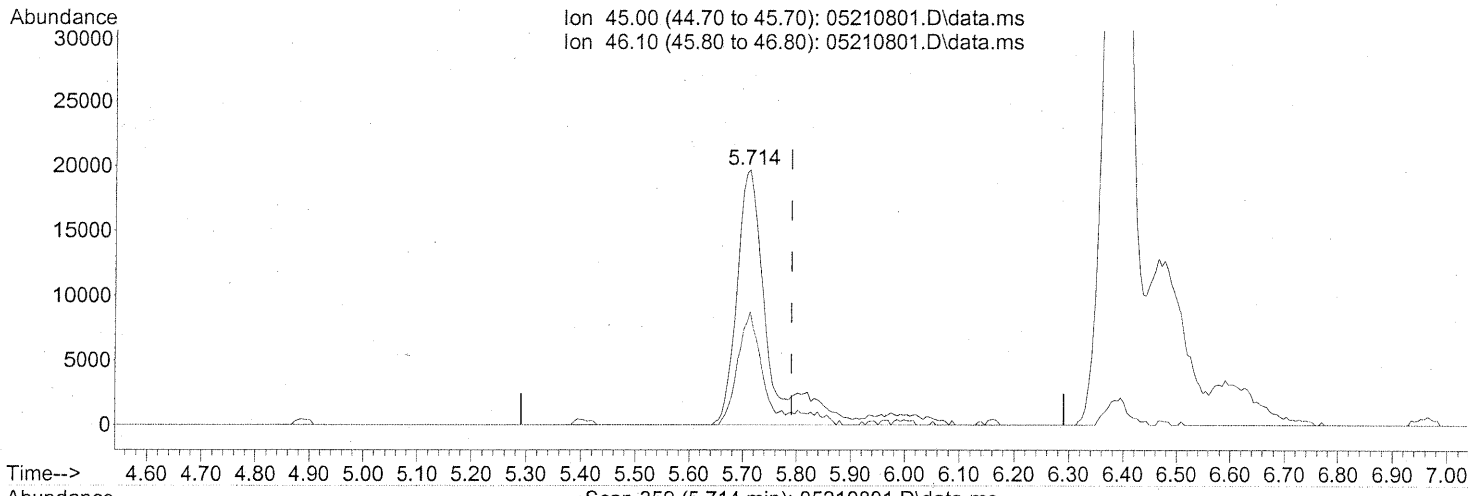
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	40.30
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
Data File : 05210801.D  
Acq On : 21 May 2008 7:03 am  
Operator : WA  
Sample : 5ng TO-15 CCV  
Misc : S20-05120801/S20-05020801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
Quant Method : J:\MS16\METHODS\R16051208.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)

5.714min (-0.077) 4.36ng m

response 83984

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	37.42
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

*WA 5/21/08*

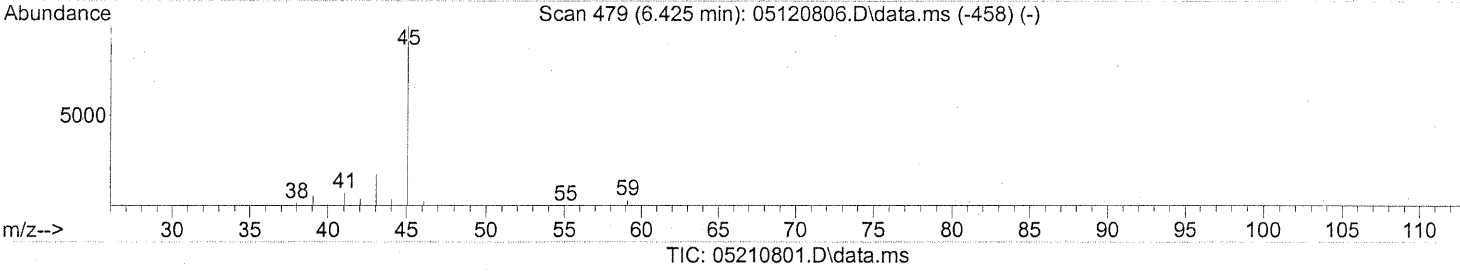
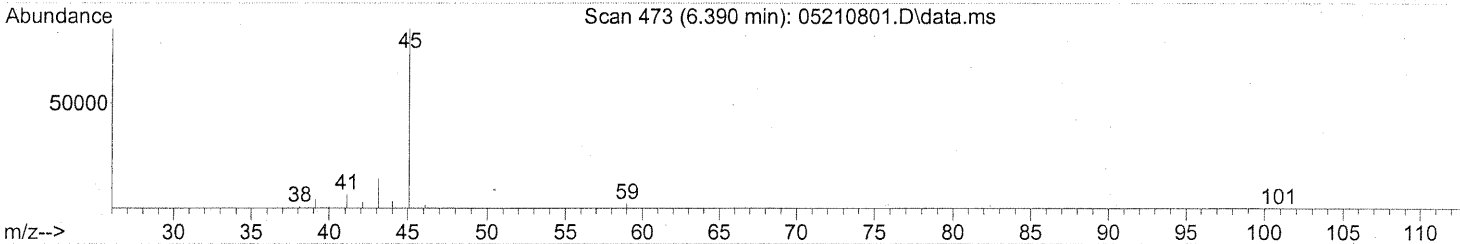
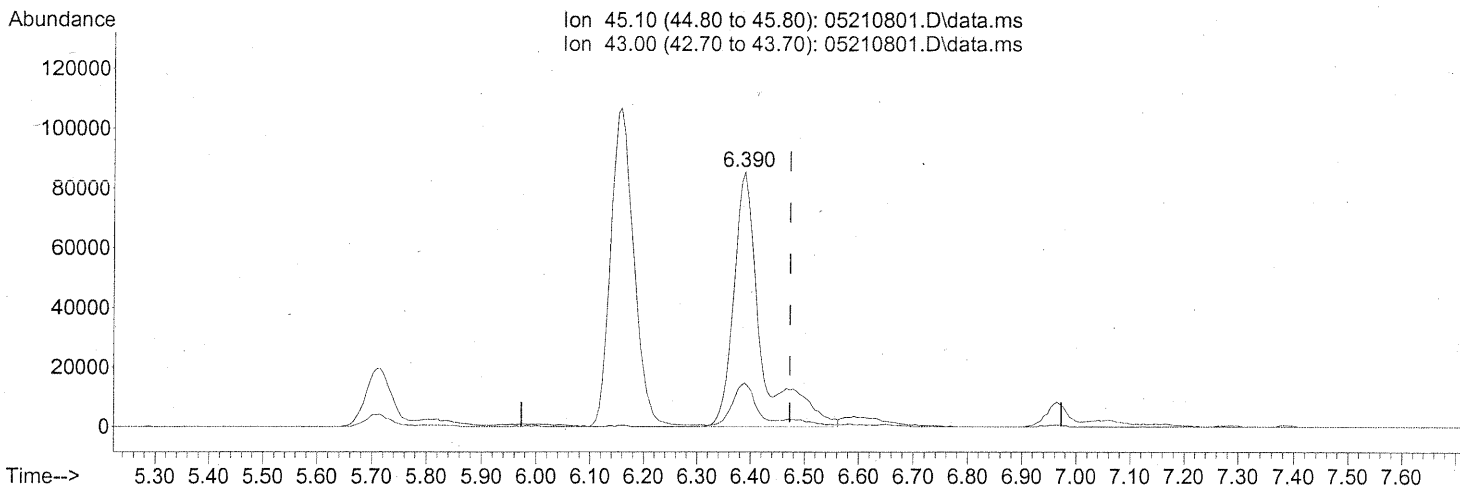
*EM 5/22/08*

1173

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
Data File : 05210801.D  
Acq On : 21 May 2008 7:03 am  
Operator : WA  
Sample : 5ng TO-15 CCV  
Misc : S20-05120801/S20-05020801  
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
Quant Method : J:\MS16\METHODS\R16051208.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)  
6.390min (-0.083) 5.03ng  
response 302265

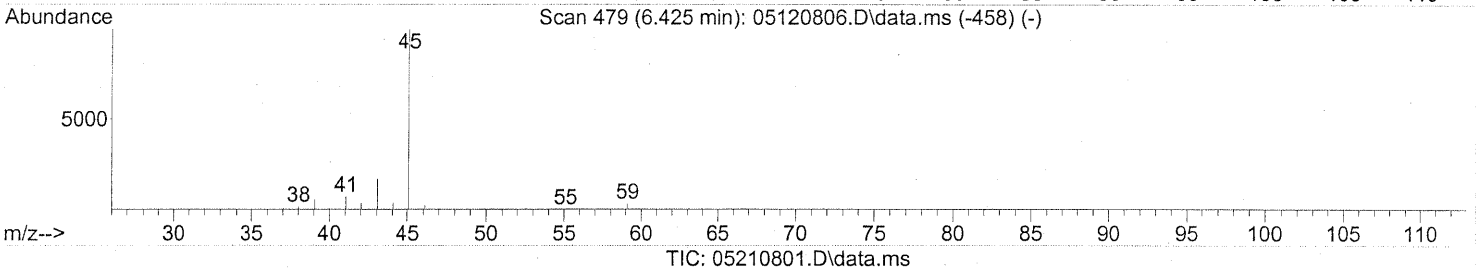
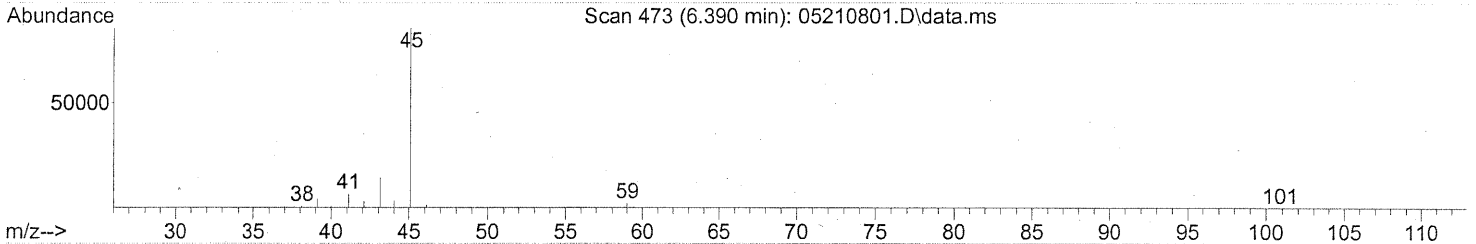
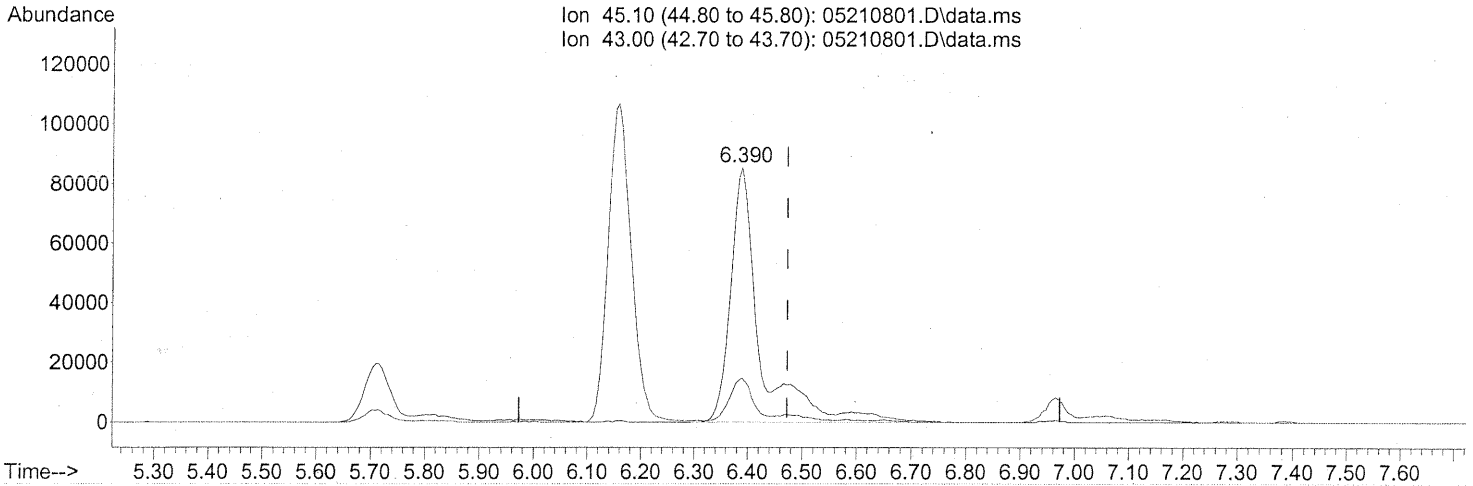
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	15.49
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

6.390min (-0.083) 5.35ng m

response 321516

Ion	Exp%	Act%
45.10	100	100
43.00	19.40	14.56
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

*DA 5/21/08*

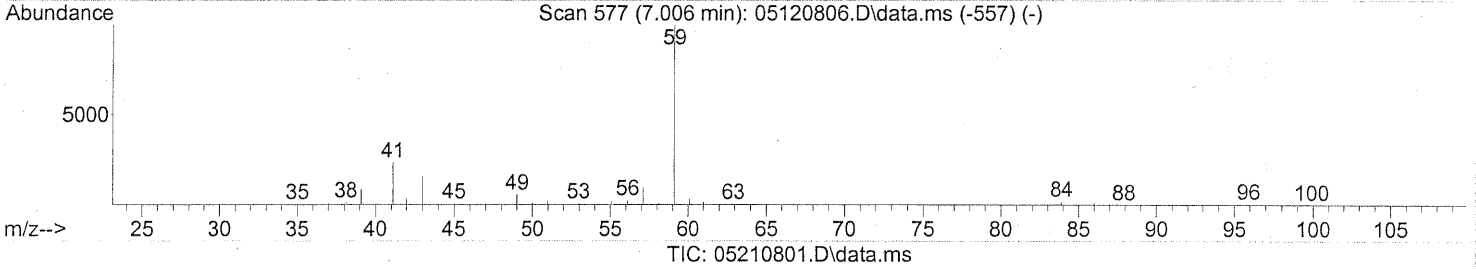
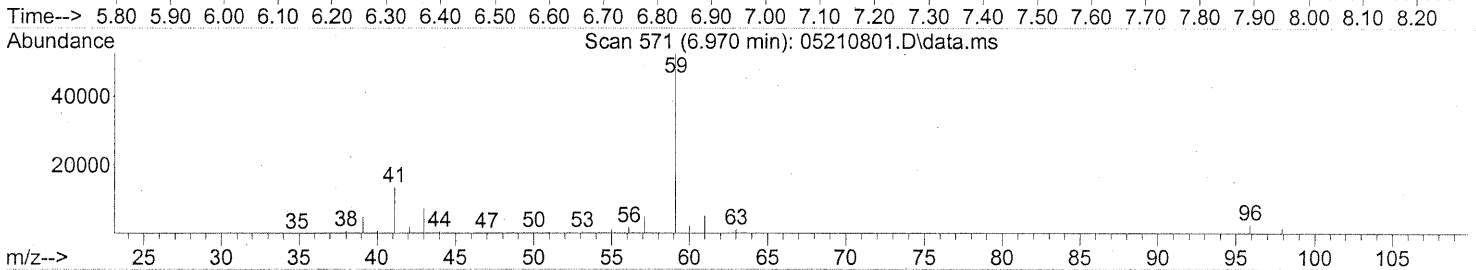
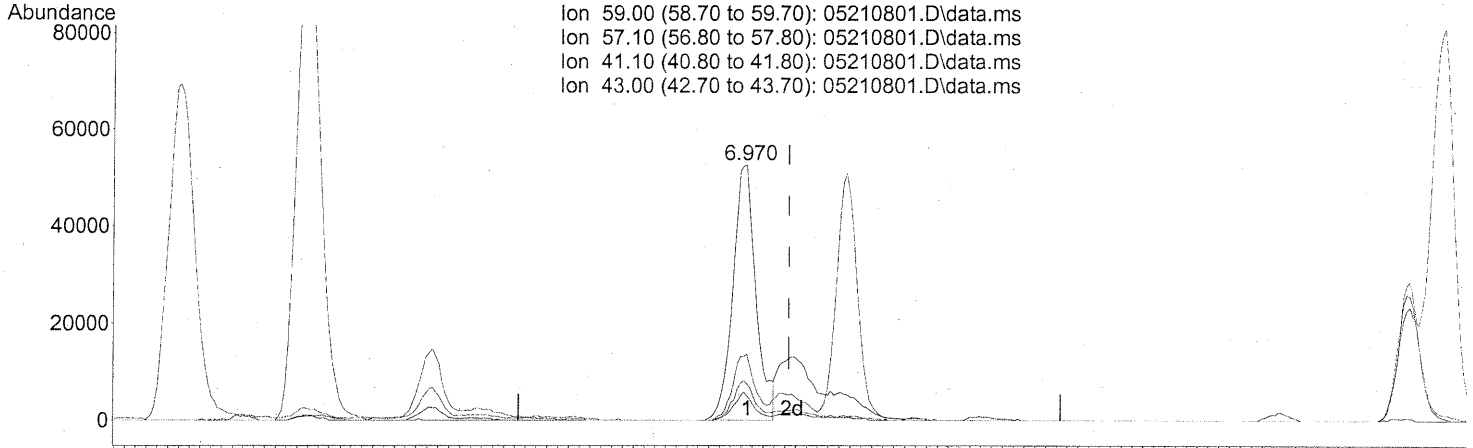
*Em 5/22/08*

1175

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

6.970min (-0.077) 2.83ng

response 154599

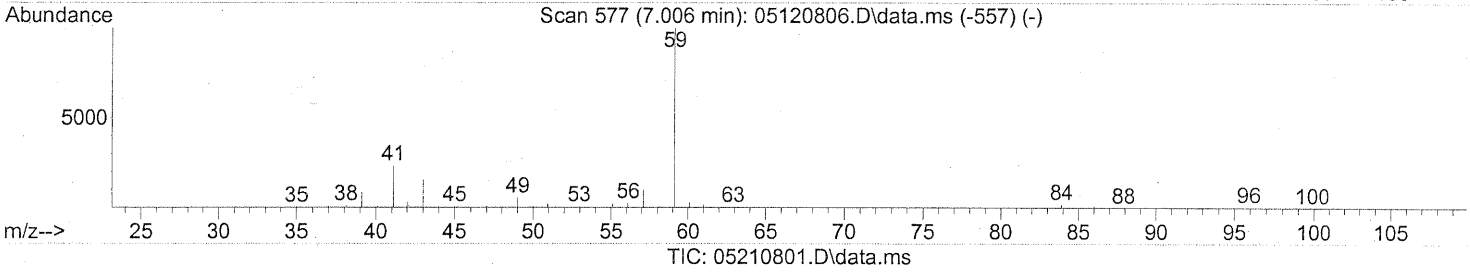
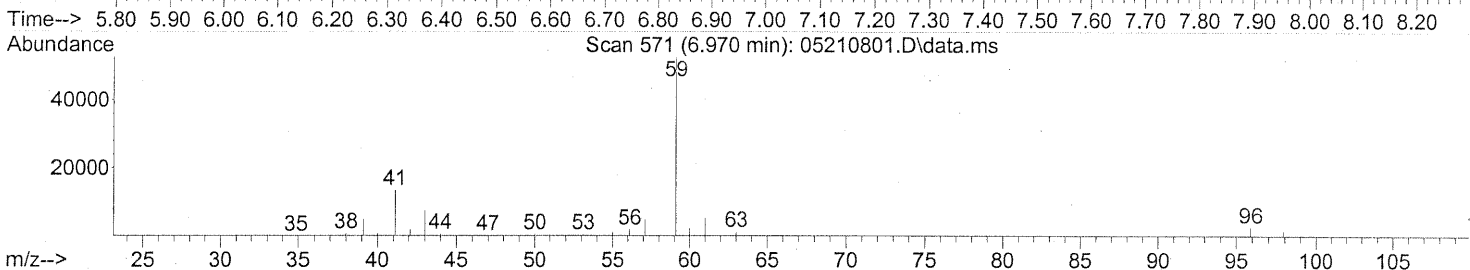
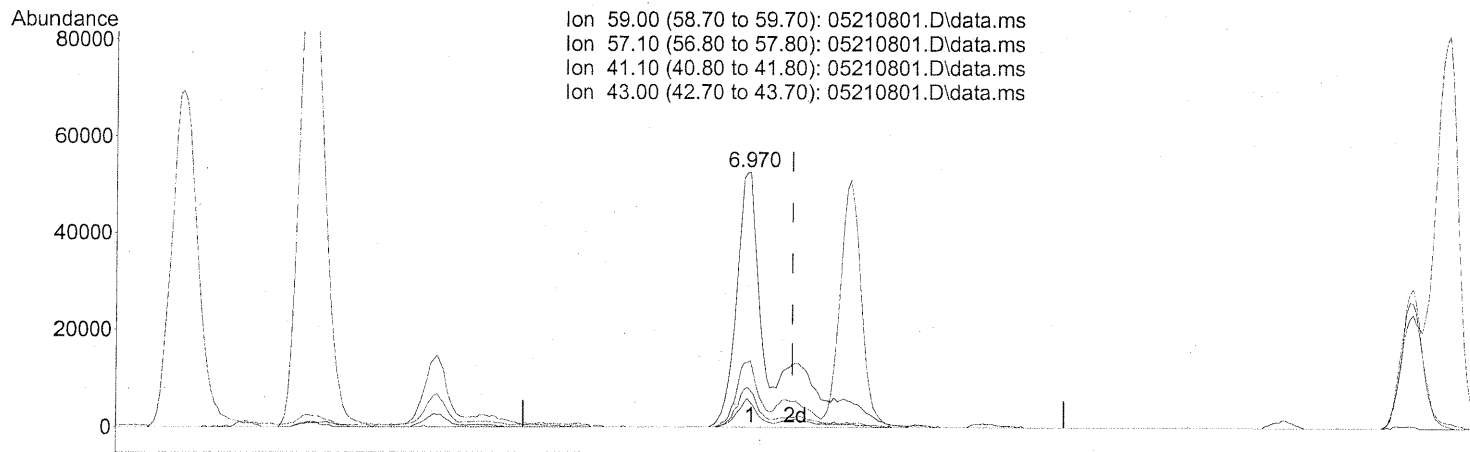
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.96
41.10	21.90	25.26
43.00	17.20	24.10

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 07:43:35 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

6.970min (-0.077) 4.33ng m

response 236415

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	6.51
41.10	21.90	16.52
43.00	17.20	15.76

*int. whole peaks*

*IDA 5/21/08*

*Cam 5/22/08*

1177

Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

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	107	-0.05
2	T Propene	2.500	2.061	17.6	92	0.00
3	T Dichlorodifluoromethane	2.956	2.577	12.8	94	-0.01
4	T Chloromethane	3.654	3.515	3.8	109	-0.01
5	T Freon 114	1.425	1.458	-2.3	113	-0.01
6	T Vinyl Chloride	2.523	2.067	18.1	86	-0.02
7	T 1,3-Butadiene	2.356	1.833	22.2	86	-0.02
8	T Bromomethane	1.040	1.065	-2.4	116	-0.02
9	T Chloroethane	1.153	1.062	7.9	101	-0.02
10	T Ethanol	1.719	1.615	6.1	96	-0.08
11	T Acetonitrile	4.463	4.348	2.6	103	-0.06
12	T Acrolein	1.224	1.228	-0.3	112	-0.04
13	T Acetone	1.652	1.457	11.8	96	-0.05
14	T Trichlorofluoromethane	2.445	2.254	7.8	99	-0.02
15	T Isopropanol	5.356	5.212	2.7	104	-0.09
16	T Acrylonitrile	2.938	2.810	4.4	105	-0.07
17	T 1,1-Dichloroethene	1.197	1.143	4.5	103	-0.03
18	T tert-Butanol	4.871	3.933	19.3	89	-0.08
19	T Methylene Chloride	1.305	1.128	13.6	100	-0.04
20	T Allyl Chloride	2.735	1.859	32.0#	81	-0.04
21	T Trichlorotrifluoroethane	1.027	1.134	-10.4	119	-0.02
22	T Carbon Disulfide	4.925	4.630	6.0	103	-0.02
23	T trans-1,2-Dichloroethene	2.559	2.180	14.8	91	-0.04
24	T 1,1-Dichloroethane	2.918	2.500	14.3	94	-0.05
25	T Methyl tert-Butyl Ether	3.922	3.204	18.3	87	-0.03
26	T Vinyl Acetate	0.335	0.261	22.1	80	-0.04
27	T 2-Butanone	0.851	0.743	12.7	91	-0.05
28	T cis-1,2-Dichloroethene	2.359	2.067	12.4	94	-0.05
29	T Diisopropyl Ether	1.083	1.008	6.9	97	-0.03
30	T Ethyl Acetate	0.629	0.553	12.1	93	-0.04
31	T n-Hexane	3.557	3.187	10.4	99	-0.02
32	T Chloroform	1.864	1.647	11.6	94	-0.05
33	S 1,2-Dichloroethane-d4 (SS1)	1.763	1.488	15.6	87	-0.04
34	T Tetrahydrofuran	0.853	0.736	13.7	92	-0.03
35	T Ethyl tert-Butyl Ether	1.536	1.390	9.5	93	-0.03
36	T 1,2-Dichloroethane	2.230	1.899	14.8	91	-0.04
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	103	-0.02
38	T 1,1,1-Trichloroethane	0.481	0.446	7.3	97	-0.04

1178



Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

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	0.256	0.234	8.6	94	-0.04
40 T	1-Butanol	0.474	0.424	10.5	93	-0.05
41 T	Benzene	1.226	1.053	14.1	95	-0.03
42 T	Carbon Tetrachloride	0.363	0.346	4.7	96	-0.03
43 T	Cyclohexane	0.485	0.422	13.0	97	-0.02
44 T	tert-Amyl Methyl Ether	0.863	0.712	17.5	86	-0.02
45 T	1,2-Dichloropropane	0.380	0.337	11.3	93	-0.03
46 T	Bromodichloromethane	0.364	0.334	8.2	94	-0.04
47 T	Trichloroethene	0.337	0.354	-5.0	116	-0.03
48 T	1,4-Dioxane	0.230	0.216	6.1	96	-0.03
49 T	Isooctane	2.036	1.869	8.2	97	-0.02
50 T	Methyl Methacrylate	0.121	0.127	-5.0	110	-0.03
51 T	n-Heptane	0.312	0.279	10.6	92	-0.02
52 T	cis-1,3-Dichloropropene	0.489	0.412	15.7	87	-0.02
53 T	4-Methyl-2-pentanone	0.446	0.403	9.6	95	-0.02
54 T	trans-1,3-Dichloropropene	0.432	0.351	18.8	83	-0.02
55 T	1,1,2-Trichloroethane	0.297	0.285	4.0	101	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	91	-0.01
57 S	Toluene-d8 (SS2)	2.462	2.587	-5.1	96	-0.02
58 T	Toluene	3.016	3.120	-3.4	101	-0.02
59 T	2-Hexanone	3.189	3.063	4.0	90	-0.03
60 T	Dibromochloromethane	0.787	0.894	-13.6	106	-0.02
61 T	1,2-Dibromoethane	0.778	0.864	-11.1	103	-0.02
62 T	Butyl Acetate	3.254	3.217	1.1	92	-0.02
63 T	n-Octane	0.965	0.996	-3.2	97	-0.02
64 T	Tetrachloroethene	0.745	0.906	-21.6	119	-0.02
65 T	Chlorobenzene	1.996	2.249	-12.7	108	-0.02
66 T	Ethylbenzene	3.440	3.537	-2.8	99	-0.01
67 T	m- & p-Xylene	2.254	2.349	-4.2	99	-0.02
68 T	Bromoform	0.426	0.535	-25.6	117	-0.02
69 T	Styrene	2.089	2.294	-9.8	104	-0.02
70 T	o-Xylene	2.404	2.538	-5.6	99	-0.02
71 T	n-Nonane	2.655	2.712	-2.1	95	-0.01
72 T	1,1,2,2-Tetrachloroethane	1.059	1.071	-1.1	93	-0.02
73 S	Bromofluorobenzene (SS3)	0.641	0.719	-12.2	103	0.00
74 T	Cumene	3.358	3.702	-10.2	105	-0.01
75 T	alpha-Pinene	1.641	1.780	-8.5	101	0.00
76 T	n-Propylbenzene	4.211	4.433	-5.3	101	-0.01

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Evaluate Continuing Calibration Report

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min  
 Max. RRF Dev : 30% Max. Rel. Area : 200%

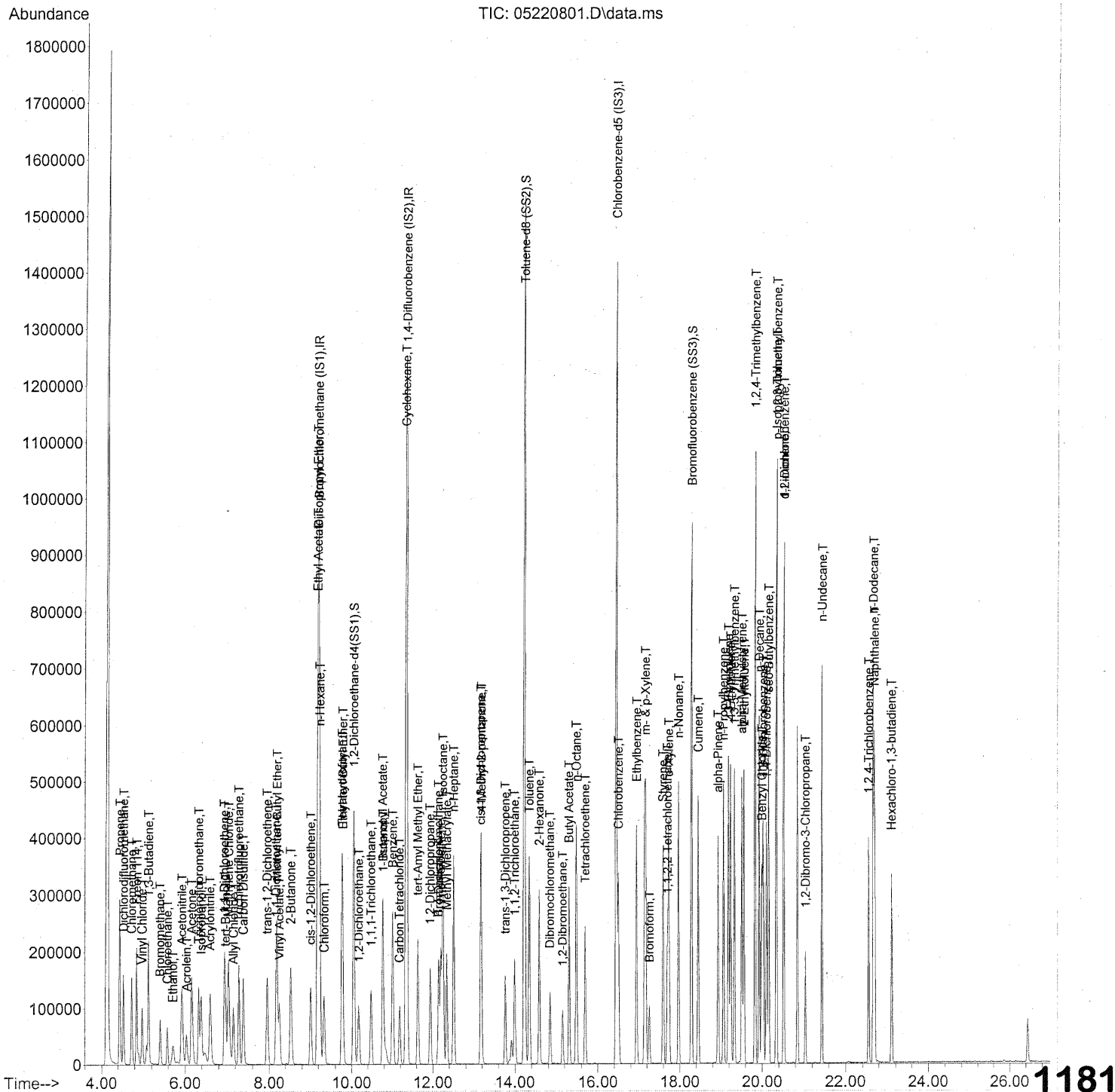
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77 T	3-Ethyltoluene	3.637	4.007	-10.2	107	-0.01
78 T	4-Ethyltoluene	3.312	3.748	-13.2	107	-0.01
79 T	1,3,5-Trimethylbenzene	2.916	3.225	-10.6	106	-0.01
80 T	alpha-Methylstyrene	1.582	1.925	-21.7	112	-0.02
81 T	2-Ethyltoluene	3.608	4.084	-13.2	108	-0.01
82 T	1,2,4-Trimethylbenzene	3.013	3.272	-8.6	105	-0.02
83 T	n-Decane	2.388	2.488	-4.2	97	-0.01
84 T	Benzyl Chloride	2.511	2.546	-1.4	94	-0.02
85 T	1,3-Dichlorobenzene	1.748	2.064	-18.1	116	-0.02
86 T	1,4-Dichlorobenzene	1.670	2.002	-19.9	116	-0.01
87 T	sec-Butylbenzene	3.925	4.415	-12.5	108	-0.01
88 T	p-Isopropyltoluene	3.333	3.802	-14.1	110	-0.02
89 T	1,2,3-Trimethylbenzene	2.934	3.235	-10.3	105	-0.02
90 T	1,2-Dichlorobenzene	1.622	1.946	-20.0	115	-0.02
91 T	d-Limonene	1.087	1.107	-1.8	93	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.511	0.637	-24.7	115	-0.01
93 T	n-Undecane	2.511	2.640	-5.1	97	0.00
94 T	1,2,4-Trichlorobenzene	0.282	0.355	-25.9	117	0.00
95 T	Naphthalene	4.263	5.108	-19.8	115	-0.01
96 T	n-Dodecane	2.451	2.642	-7.8	101	0.00
97 T	Hexachloro-1,3-butadiene	0.422	0.561	-32.9#	126	0.00

(#) = Out of Range

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

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	290078	25.000	ng	-0.05
37) 1,4-Difluorobenzene (IS2)	11.36	114	1224526	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	16.45	82	472512	25.000	ng	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
33) 1,2-Dichloroethane-d4 (...)	10.05	65	431634	21.101	ng	-0.04
Spiked Amount				25.000		
				Recovery	=	84.40%
57) Toluene-d8 (SS2)	14.23	98	1222346	26.273	ng	-0.02
Spiked Amount				25.000		
				Recovery	=	105.08%
73) Bromofluorobenzene (SS3)	18.29	174	339545	28.042	ng	0.00
Spiked Amount				25.000		
				Recovery	=	112.16%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.44	42	129132	4.452	ng	93
3) Dichlorodifluoromethane	4.53	85	155512	4.534	ng	98
4) Chloromethane	4.73	50	207974	4.905	ng	99
5) Freon 114	4.85	135	90496	5.472	ng	98
6) Vinyl Chloride	4.97	62	123508	4.219	ng	94
7) 1,3-Butadiene	5.12	54	115926	4.241	ng	# 86
8) Bromomethane	5.41	94	64848	5.375	ng	99
9) Chloroethane	5.58	64	64677	4.833	ng	95
10) Ethanol	5.71	45	85258m	4.275	ng	
11) Acetonitrile	5.92	41	247225	4.774	ng	99
12) Acrolein	6.03	56	68392	4.816	ng	99
13) Acetone	6.16	58	93847	4.897	ng	# 82
14) Trichlorofluoromethane	6.32	101	135985	4.794	ng	99
15) Isopropanol	6.38	45	311477m	5.012	ng	
16) Acrylonitrile	6.60	53	164648	4.830	ng	97
17) 1,1-Dichloroethene	6.93	96	74964	5.399	ng	93
18) tert-Butanol	6.96	59	232733m	4.118	ng	
19) Methylene Chloride	7.04	84	73301	4.841	ng	# 35
20) Allyl Chloride	7.15	41	113227	3.568	ng	79
21) Trichlorotrifluoroethane	7.28	151	74974	6.290	ng	89
22) Carbon Disulfide	7.39	76	268634	4.700	ng	100
23) trans-1,2-Dichloroethene	7.95	61	139120	4.685	ng	94
24) 1,1-Dichloroethane	8.17	63	160981	4.755	ng	95
25) Methyl tert-Butyl Ether	8.19	73	206305	4.533	ng	79
26) Vinyl Acetate	8.25	86	14856	3.821	ng	# 25
27) 2-Butanone	8.53	72	48283	4.890	ng	# 3
28) cis-1,2-Dichloroethene	9.01	61	133113	4.863	ng	92
29) Diisopropyl Ether	9.19	87	60261	4.795	ng	# 18
30) Ethyl Acetate	9.18	61	40746	5.579	ng	85
31) n-Hexane	9.23	57	207057	5.016	ng	92

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WA 5/22/08

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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	123283	5.700	ng	95
34) Tetrahydrofuran	9.77	72	47409	4.790	ng #	39
35) Ethyl tert-Butyl Ether	9.79	87	84689	4.751	ng #	75
36) 1,2-Dichloroethane	10.18	62	121163	4.683	ng	95
38) 1,1,1-Trichloroethane	10.48	97	120138	5.102	ng	93
39) Isopropyl Acetate	10.77	61	57970	4.632	ng #	58
40) 1-Butanol	10.78	56	94411	4.070	ng	93
41) Benzene	11.01	78	283741	4.727	ng	99
42) Carbon Tetrachloride	11.18	117	90738	5.104	ng	100
43) Cyclohexane	11.34	84	114781	4.827	ng #	29
44) tert-Amyl Methyl Ether	11.63	73	181340	4.290	ng #	72
45) 1,2-Dichloropropane	11.94	63	89873	4.826	ng	96
46) Bromodichloromethane	12.14	83	94125	5.277	ng	92
47) Trichloroethene	12.20	130	98928	5.984	ng	98
48) 1,4-Dioxane	12.14	88	60823	5.393	ng #	67
49) Isooctane	12.25	57	475933	4.773	ng	94
50) Methyl Methacrylate	12.35	100	33010	5.569	ng #	74
51) n-Heptane	12.51	71	75856	4.967	ng #	50
52) cis-1,3-Dichloropropene	13.17	75	104882	4.381	ng	100
53) 4-Methyl-2-pentanone	13.19	58	103647	4.744	ng	84
54) trans-1,3-Dichloropropene	13.77	75	99574	4.709	ng	98
55) 1,1,2-Trichloroethane	13.99	97	76083	5.223	ng	90
58) Toluene	14.35	91	324323	5.690	ng	98
59) 2-Hexanone	14.58	43	295244	4.898	ng	96
60) Dibromochloromethane	14.84	129	93818	6.306	ng	99
61) 1,2-Dibromoethane	15.15	107	89022	6.052	ng	99
62) Butyl Acetate	15.31	43	319211	5.191	ng	94
63) n-Octane	15.48	57	97889	5.366	ng	95
64) Tetrachloroethene	15.69	166	93354	6.626	ng	98
65) Chlorobenzene	16.50	112	233757	6.197	ng	99
66) Ethylbenzene	16.94	91	361025	5.552	ng	93
67) m- & p-Xylene	17.16	91	572722	13.444	ng	91
68) Bromoform	17.26	173	66178	8.226	ng	98
69) Styrene	17.59	104	234178	5.931	ng	94
70) o-Xylene	17.73	91	292623	6.441	ng	93
71) n-Nonane	17.97	43	263976	5.261	ng	91
72) 1,1,2,2-Tetrachloroethane	17.70	83	124548	6.223	ng	94
74) Cumene	18.45	105	377869	5.954	ng	93
75) alpha-Pinene	18.93	93	178352	5.751	ng	94
76) n-Propylbenzene	19.06	91	439879	5.527	ng	92
77) 3-Ethyltoluene	19.19	105	386261	5.619	ng	94
78) 4-Ethyltoluene	19.24	105	393155	6.281	ng	92
79) 1,3,5-Trimethylbenzene	19.33	105	329102	5.972	ng	91

1183

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:08:01 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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

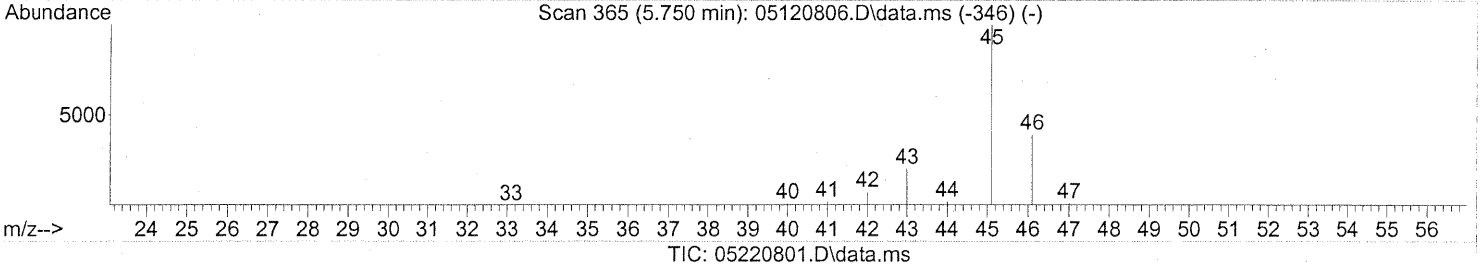
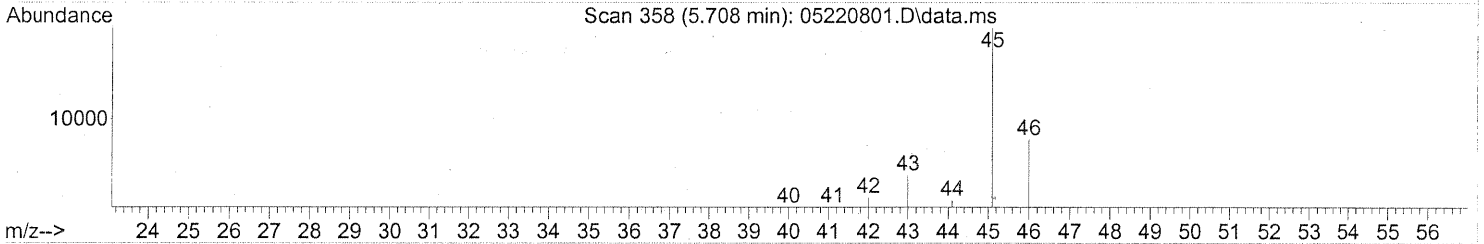
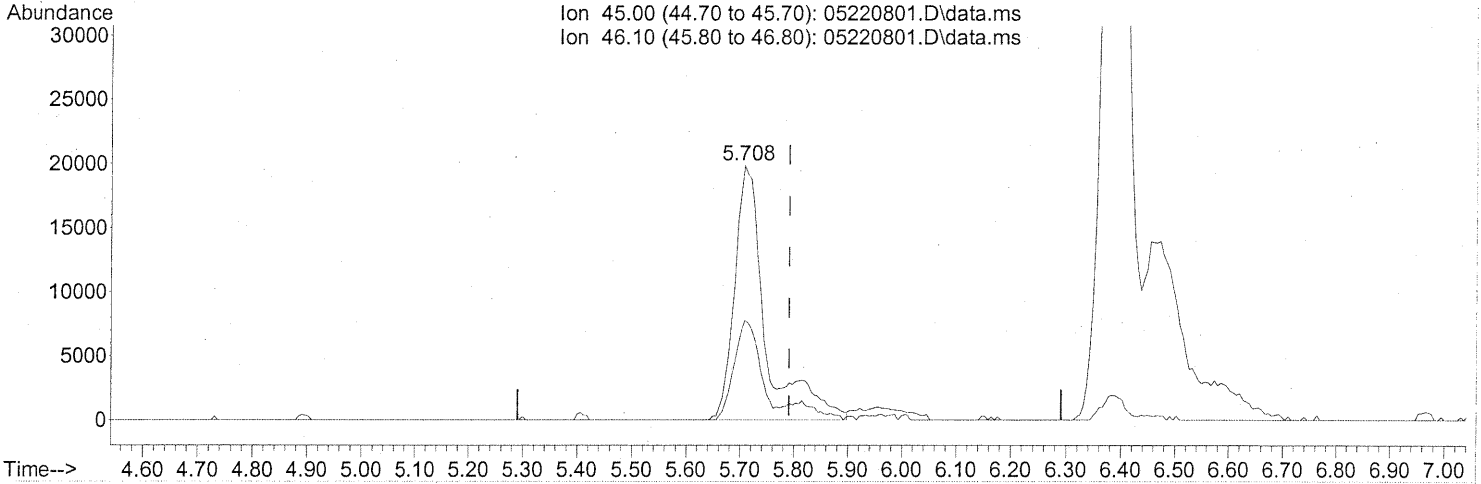
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	19.52	118	185518	6.205	ng	98
81) 2-Ethyltoluene	19.57	105	382055	5.602	ng	92
82) 1,2,4-Trimethylbenzene	19.83	105	340161	5.974	ng	91
83) n-Decane	19.93	57	244491	5.417	ng	81
84) Benzyl Chloride	20.00	91	257428	5.425	ng	89
85) 1,3-Dichlorobenzene	20.02	146	206799	6.258	ng	100
86) 1,4-Dichlorobenzene	20.10	146	208132	6.594	ng	98
87) sec-Butylbenzene	20.16	105	446484	6.019	ng	95
88) p-Isopropyltoluene	20.34	119	423921	6.729	ng	94
89) 1,2,3-Trimethylbenzene	20.34	105	336324	6.065	ng	88
90) 1,2-Dichlorobenzene	20.52	146	198636	6.481	ng	99
91) d-Limonene	20.52	68	110888	5.398	ng	90
92) 1,2-Dibromo-3-Chloropr...	21.04	157	62605	6.482	ng	87
93) n-Undecane	21.44	57	261969	5.519	ng	79
94) 1,2,4-Trichlorobenzene	22.55	184	37531	7.039	ng	# 86
95) Naphthalene	22.69	128	506851	6.290	ng	99
96) n-Dodecane	22.66	57	264637	5.714	ng	78
97) Hexachloro-1,3-butadiene	23.11	225	58845	7.382	ng	99

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

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

5.708min (-0.083) 3.96ng

response 78989

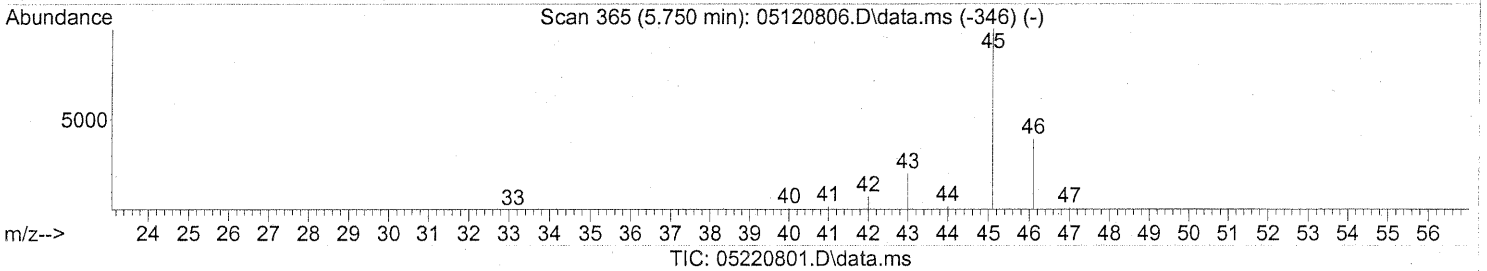
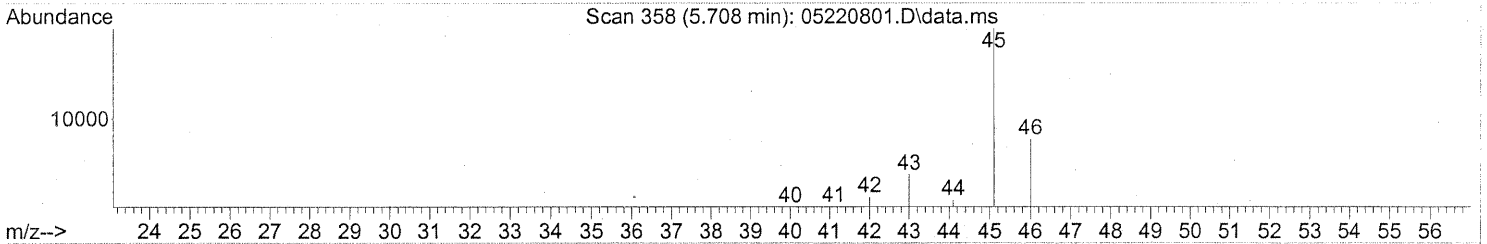
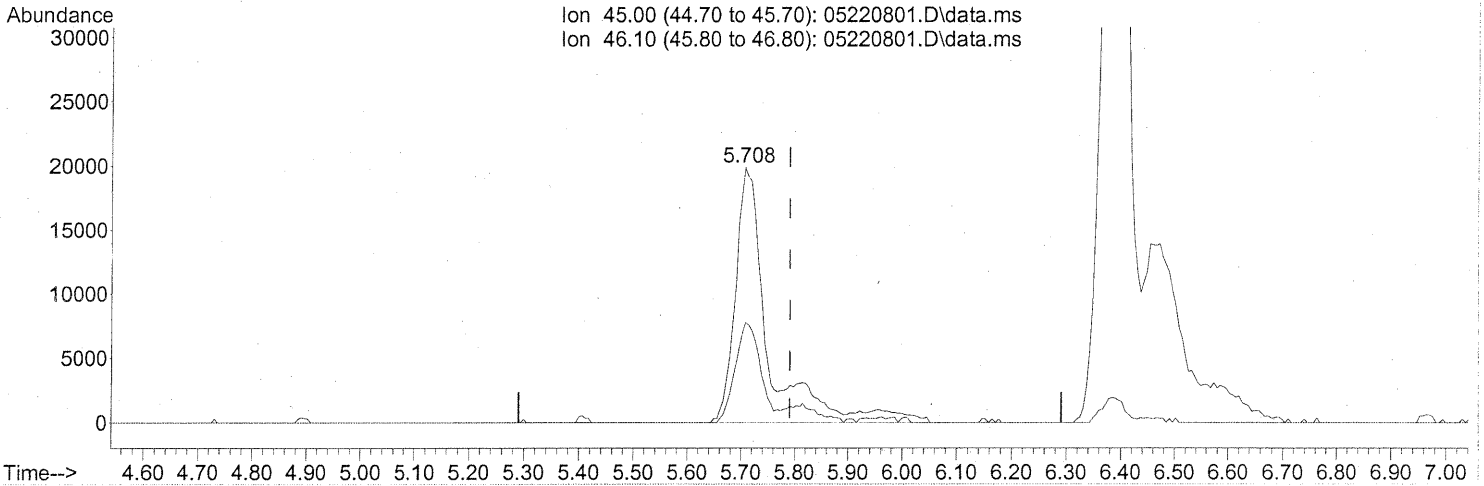
Ion	Exp%	Act%
45.00	100	100
46.10	37.00	39.83
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

5.708min (-0.083) 4.27ng m

response 85258

Ion	Exp%	Act%
45.00	100	100
46.10	37.00	36.90
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

*DA 5/22/08*

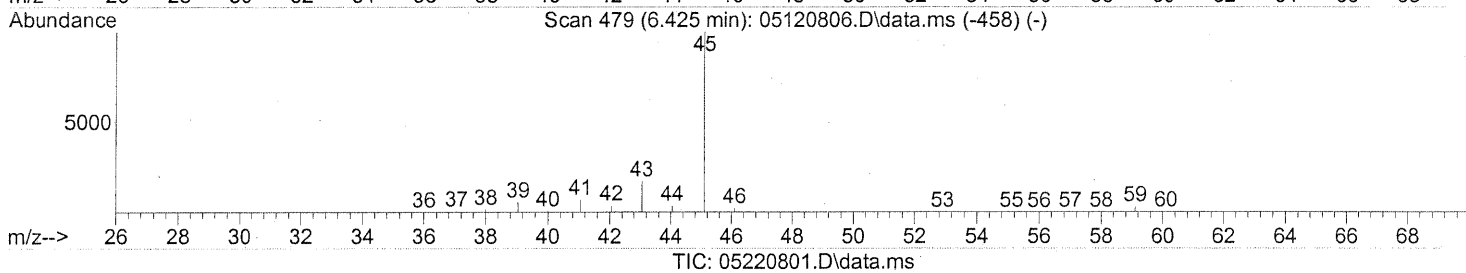
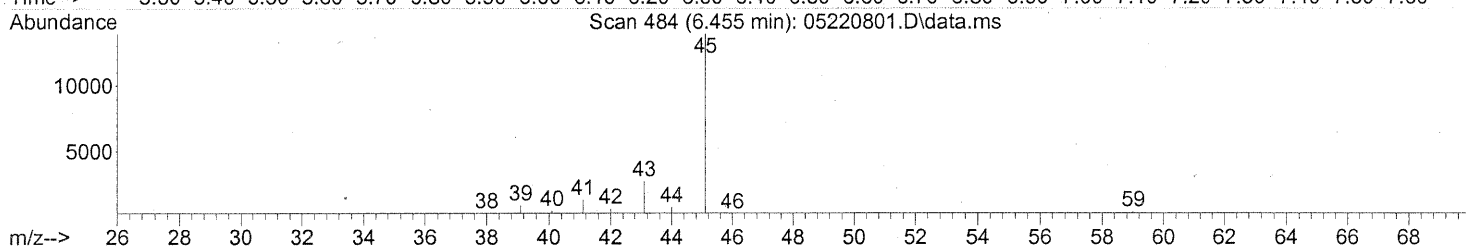
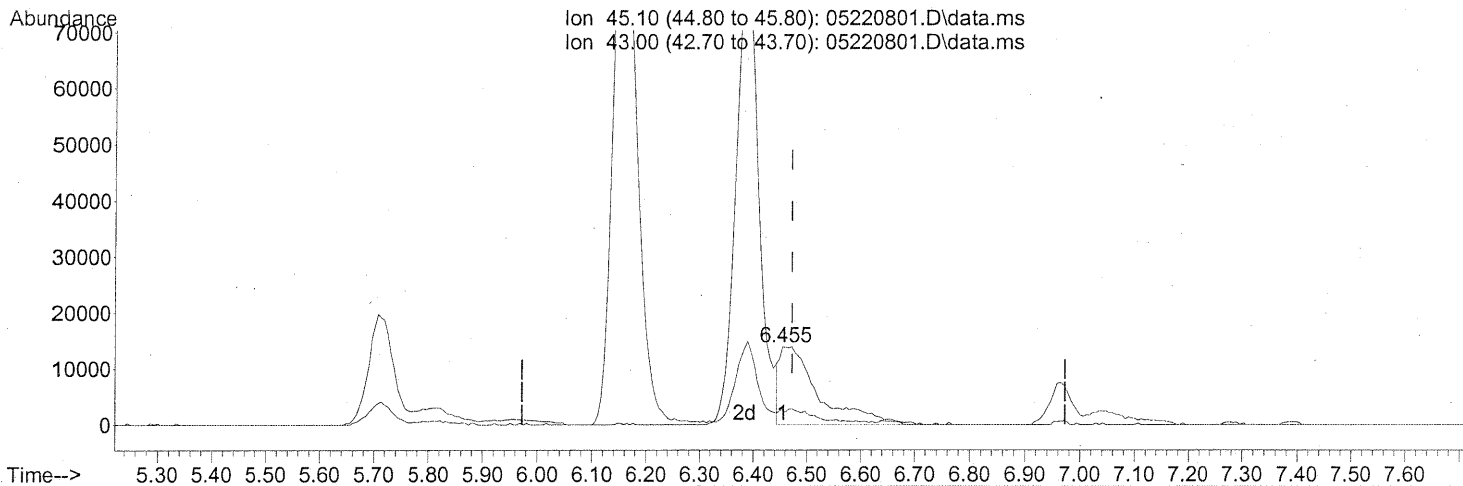
*com 5/22/08*



Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)  
 6.455min (-0.018) 1.15ng  
 response 71486

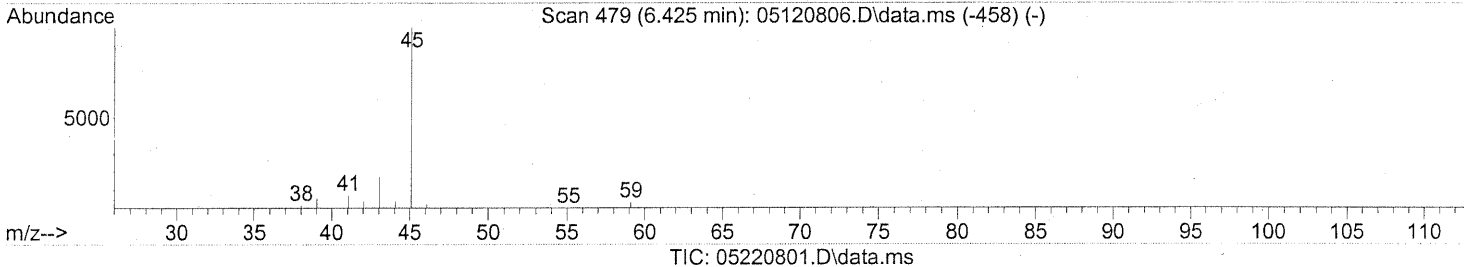
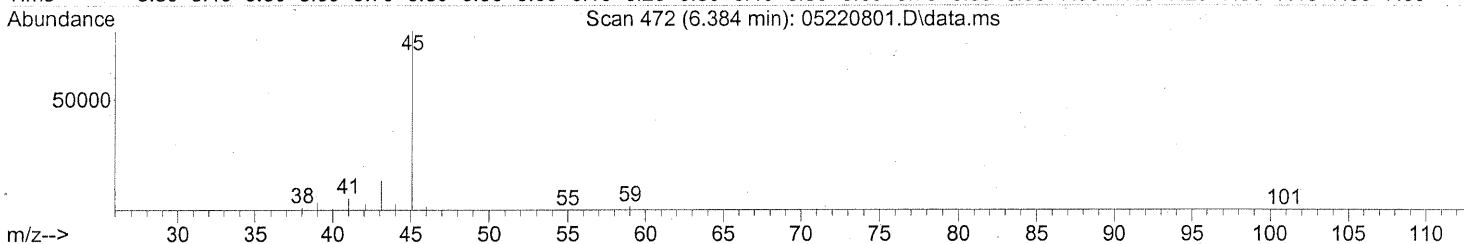
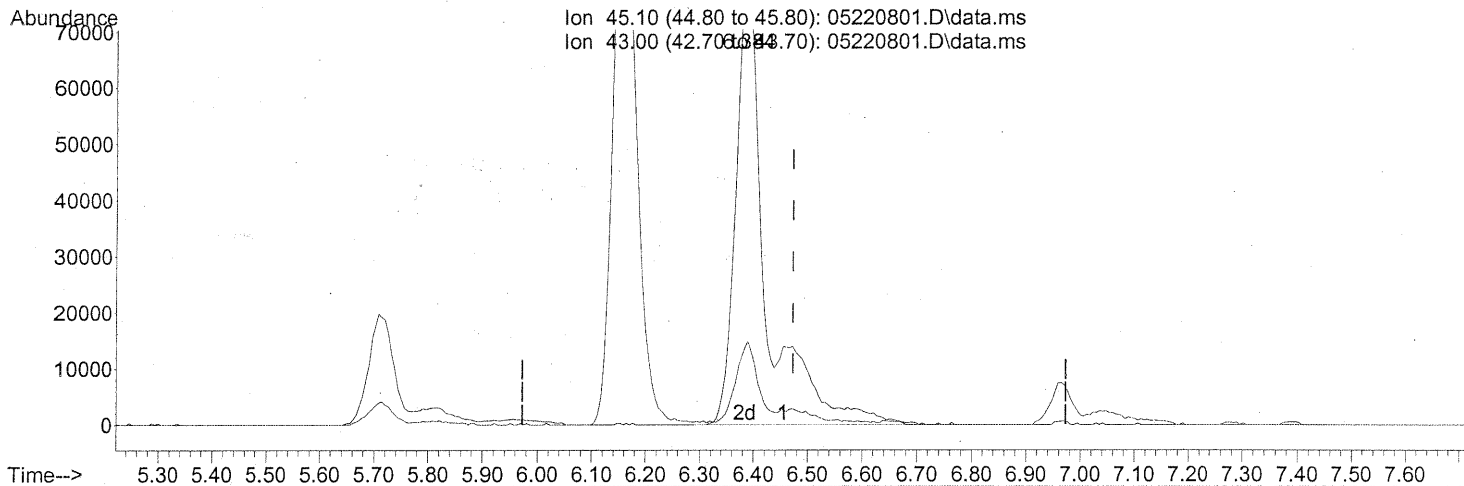
Ion	Exp%	Act%
45.10	100	100
43.00	19.40	0.00
0.00	0.00	0.00
0.00	0.00	0.00

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)  
 6.384min (-0.089) 5.01ng m  
 response 311477

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*

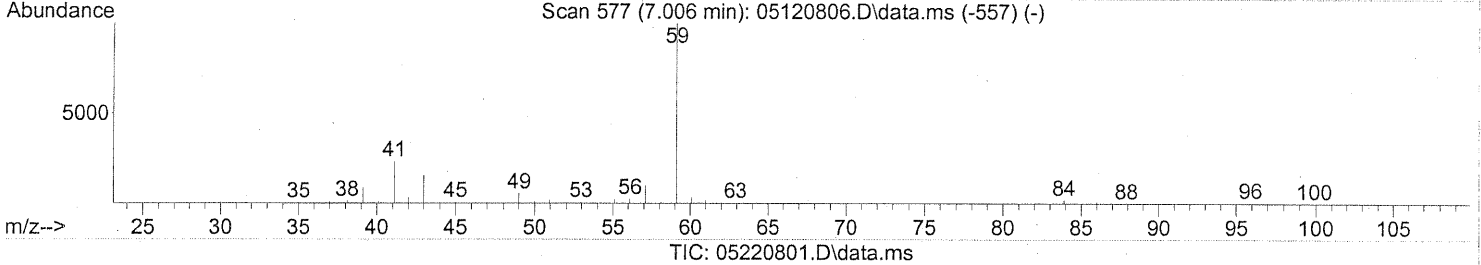
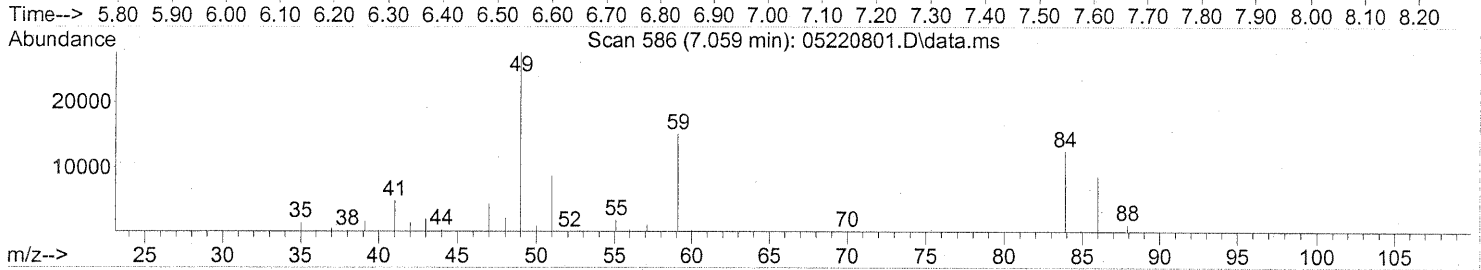
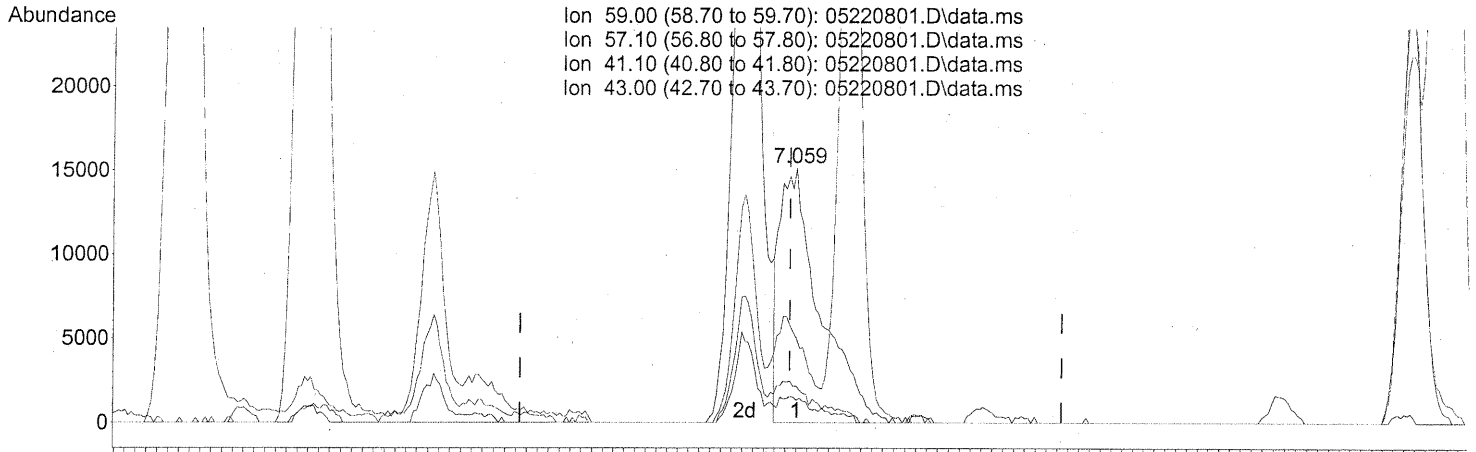
*DA 5/22/08*

*EM 5/22/08*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)  
 7.059min (+0.012) 1.37ng  
 response 77611

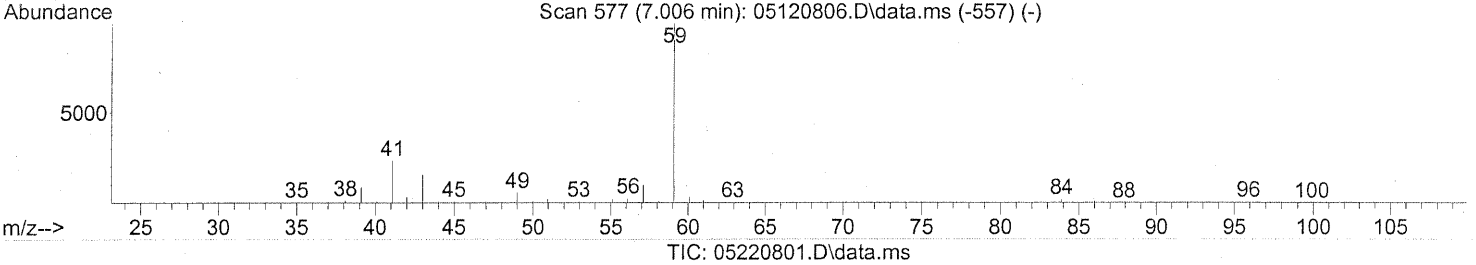
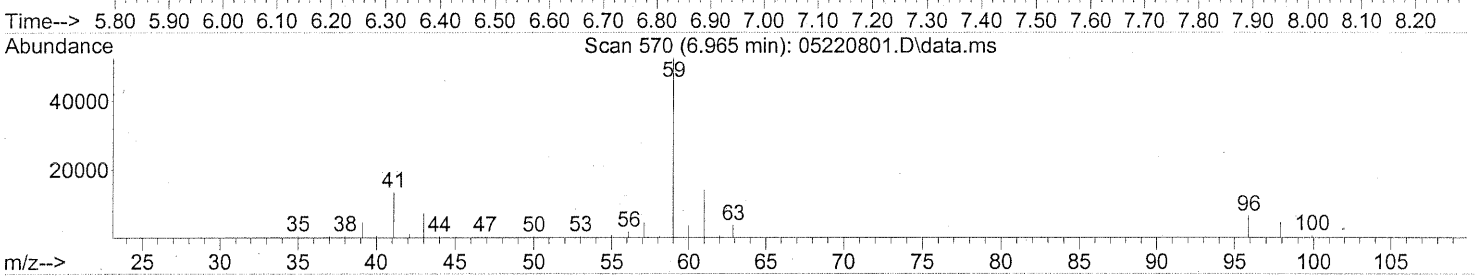
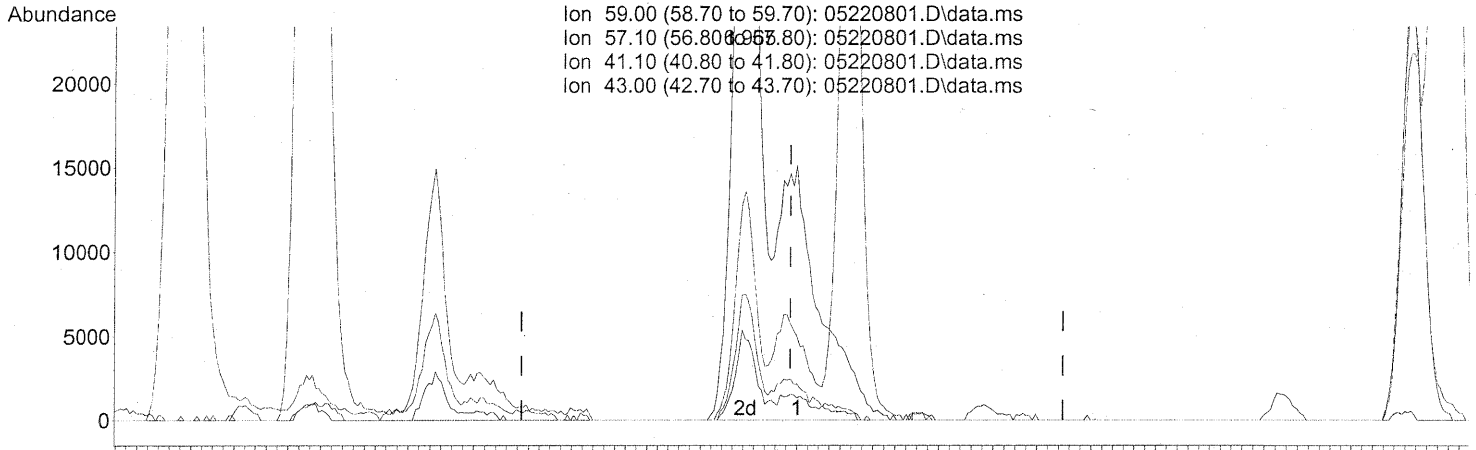
Ion	Exp%	Act%
59.00	100	100
57.10	10.00	9.80
41.10	21.90	0.00#
43.00	17.20	15.73

*split peaks*

Quantitation Report (Qedit)

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 14:06:57 2008  
 Quant Method : J:\MS16\METHODS\R16051208.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)

6.965min (-0.083) 4.12ng m

response 232733

Ion	Exp%	Act%
59.00	100	100
57.10	10.00	3.27
41.10	21.90	0.00#
43.00	17.20	5.24

*int. whole peaks*

*IDA 5/22/08*

*EM 5/22/08*

1190

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 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	108	0.00
2	T Propene	1.974	1.600	18.9	102	0.00
3	T Dichlorodifluoromethane	3.639	3.095	14.9	100	0.00
4	T Chloromethane	2.357	2.203	6.5	102	0.00
5	T Freon 114	1.790	1.531	14.5	102	0.00
6	T Vinyl Chloride	2.358	2.072	12.1	101	-0.01
7	T 1,3-Butadiene	1.754	1.543	12.0	93	0.00
8	T Bromomethane	1.313	1.157	11.9	102	0.00
9	T Chloroethane	1.120	1.007	10.1	103	0.00
10	T Ethanol	1.314	1.161	11.6	105	0.01
11	T Acetonitrile	3.801	3.141	17.4	105	0.00
12	T Acrolein	0.939	0.859	8.5	101	0.00
13	T Acetone	1.346	1.100	18.3	101	0.00
14	T Trichlorofluoromethane	3.122	2.794	10.5	103	0.00
15	T Isopropanol	4.292	3.881	9.6	103	0.02
16	T Acrylonitrile	2.049	2.007	2.0	104	0.00
17	T 1,1-Dichloroethene	1.373	1.262	8.1	104	0.00
18	T tert-Butanol	3.651	3.552	2.7	101	0.02
19	T Methylene Chloride	1.504	1.332	11.4	105	0.00
20	T Allyl Chloride	2.007	2.191	-9.2	105	0.00
21	T Trichlorotrifluoroethane	1.420	1.278	10.0	106	0.00
22	T Carbon Disulfide	5.707	5.111	10.4	104	0.00
23	T trans-1,2-Dichloroethene	2.225	2.096	5.8	105	0.00
24	T 1,1-Dichloroethane	2.610	2.402	8.0	105	0.00
25	T Methyl tert-Butyl Ether	4.352	3.987	8.4	104	0.00
26	T Vinyl Acetate	0.249	0.278	-11.6	105	0.00
27	T 2-Butanone	0.982	0.908	7.5	103	0.00
28	T cis-1,2-Dichloroethene	2.126	1.940	8.7	103	0.00
29	T Diisopropyl Ether	1.204	1.104	8.3	103	0.00
30	T Ethyl Acetate	0.530	0.520	1.9	105	0.00
31	T n-Hexane	2.676	2.493	6.8	103	0.00
32	T Chloroform	2.280	2.043	10.4	104	0.02
33	S 1,2-Dichloroethane-d4 (SS1)	1.732	1.660	4.2	104	0.00
34	T Tetrahydrofuran	0.939	0.878	6.5	103	0.00
35	T Ethyl tert-Butyl Ether	1.686	1.553	7.9	102	0.00
36	T 1,2-Dichloroethane	2.202	1.976	10.3	102	0.00
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	107	0.00
38	T 1,1,1-Trichloroethane	0.569	0.523	8.1	104	0.00

1191

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 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	0.214	0.218	-1.9	102	0.00
40 T	1-Butanol	0.344	0.355	-3.2	102	0.00
41 T	Benzene	1.309	1.205	7.9	103	0.00
42 T	Carbon Tetrachloride	0.504	0.487	3.4	103	0.01
43 T	Cyclohexane	0.509	0.466	8.4	104	0.00
44 T	tert-Amyl Methyl Ether	0.939	0.888	5.4	103	0.00
45 T	1,2-Dichloropropane	0.350	0.326	6.9	104	0.00
46 T	Bromodichloromethane	0.442	0.421	4.8	104	0.01
47 T	Trichloroethene	0.402	0.345	14.2	105	0.00
48 T	1,4-Dioxane	0.247	0.233	5.7	105	0.00
49 T	Isooctane	1.501	1.404	6.5	103	0.00
50 T	Methyl Methacrylate	0.131	0.132	-0.8	103	0.00
51 T	n-Heptane	0.348	0.333	4.3	103	0.00
52 T	cis-1,3-Dichloropropene	0.520	0.511	1.7	102	0.00
53 T	4-Methyl-2-pentanone	0.348	0.342	1.7	103	0.00
54 T	trans-1,3-Dichloropropene	0.449	0.460	-2.4	102	0.00
55 T	1,1,2-Trichloroethane	0.323	0.303	6.2	103	0.00
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	105	0.00
57 S	Toluene-d8 (SS2)	2.245	2.209	1.6	104	0.00
58 T	Toluene	3.052	2.828	7.3	102	0.00
59 T	2-Hexanone	2.103	2.107	-0.2	101	0.00
60 T	Dibromochloromethane	0.824	0.831	-0.8	104	0.00
61 T	1,2-Dibromoethane	0.799	0.768	3.9	104	0.00
62 T	Butyl Acetate	2.135	2.163	-1.3	101	0.00
63 T	n-Octane	0.675	0.653	3.3	103	0.00
64 T	Tetrachloroethene	0.903	0.826	8.5	103	0.00
65 T	Chlorobenzene	2.046	1.922	6.1	104	0.00
66 T	Ethylbenzene	3.500	3.388	3.2	102	0.00
67 T	m- & p-Xylene	2.341	2.279	2.6	102	0.00
68 T	Bromoform	0.613	0.642	-4.7	103	0.00
69 T	Styrene	2.092	2.071	1.0	102	0.00
70 T	o-Xylene	2.527	2.429	3.9	102	0.00
71 T	n-Nonane	1.794	1.756	2.1	100	0.00
72 T	1,1,2,2-Tetrachloroethane	1.053	1.106	-5.0	103	0.00
73 S	Bromofluorobenzene (SS3)	0.913	0.936	-2.5	106	0.00
74 T	Cumene	3.365	3.239	3.7	102	0.00
75 T	alpha-Pinene	1.740	1.703	2.1	102	0.00
76 T	n-Propylbenzene	4.282	4.230	1.2	101	0.00

1192

DA 5/24/08

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 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%

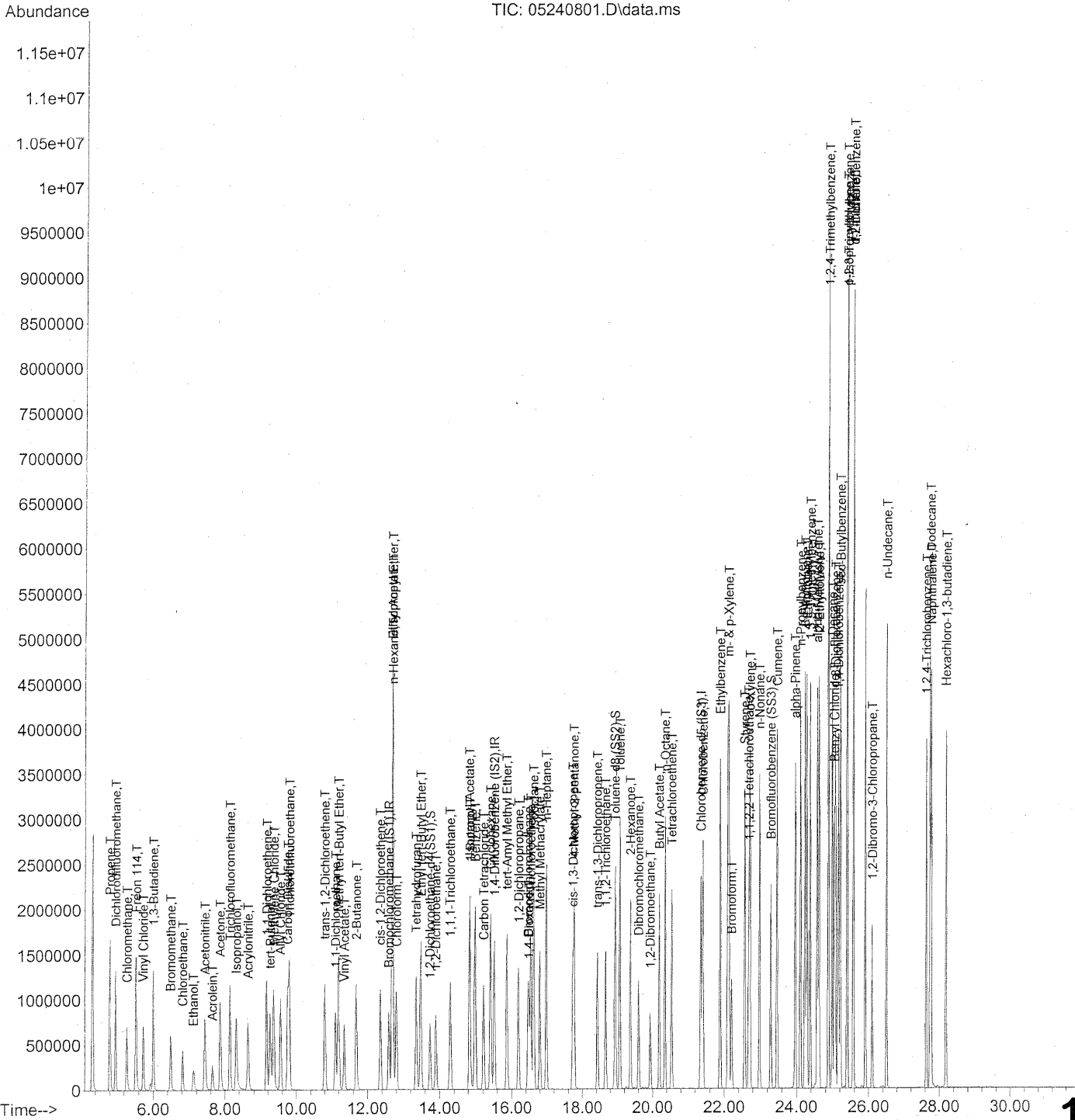
	Compound	AvgRF	CCRF	%Dev	Area%	Dev (min)
77 T	3-Ethyltoluene	3.582	3.607	-0.7	102	0.00
78 T	4-Ethyltoluene	3.339	3.293	1.4	100	0.00
79 T	1,3,5-Trimethylbenzene	3.017	2.932	2.8	101	0.00
80 T	alpha-Methylstyrene	1.633	1.672	-2.4	100	0.00
81 T	2-Ethyltoluene	3.630	3.614	0.4	100	0.00
82 T	1,2,4-Trimethylbenzene	3.071	3.082	-0.4	99	0.00
83 T	n-Decane	1.690	1.703	-0.8	99	0.00
84 T	Benzyl Chloride	2.061	2.390	-16.0	99	0.00
85 T	1,3-Dichlorobenzene	1.920	1.890	1.6	100	0.00
86 T	1,4-Dichlorobenzene	1.861	1.838	1.2	101	0.00
87 T	sec-Butylbenzene	3.925	3.926	-0.0	101	0.00
88 T	p-Isopropyltoluene	3.231	3.368	-4.2	100	0.00
89 T	1,2,3-Trimethylbenzene	3.005	3.059	-1.8	100	0.00
90 T	1,2-Dichlorobenzene	1.821	1.824	-0.2	100	0.00
91 T	d-Limonene	1.224	1.268	-3.6	99	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.565	0.629	-11.3	100	0.00
93 T	n-Undecane	1.768	1.792	-1.4	100	0.00
94 T	1,2,4-Trichlorobenzene	1.334	1.311	1.7	102	0.00
95 T	Naphthalene	4.051	4.152	-2.5	100	0.00
96 T	n-Dodecane	1.759	1.792	-1.9	99	0.00
97 T	Hexachloro-1,3-butadiene	0.888	0.855	3.7	102	0.00

(#) = Out of Range

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

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240801.D  
Acq On : 24 May 2008 6:59  
Operator : RTB  
Sample : 25ng TO-15 CCV Standard  
Misc : S20-05160801/S20-05210804  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
Quant Method : J:\MS13\METHODS\R13052208.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu May 22 11:37:04 2008  
Response via : Initial Calibration



1194



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008

Quant Method : J:\MS13\METHODS\R13052208.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu May 22 11:37:04 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	448388	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.52	114	1911390	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.35	82	908326	25.000	ng	0.00

#### System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.73	65	744461	23.962	ng	0.00
Spiked Amount	25.000		Recovery	=	95.84%	
57) Toluene-d8 (SS2)	18.93	98	2006594	24.598	ng	0.00
Spiked Amount	25.000		Recovery	=	98.40%	
73) Bromofluorobenzene (SS3)	23.29	174	850414	25.636	ng	0.00
Spiked Amount	25.000		Recovery	=	102.56%	

#### Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.79	42	775000	21.884	ng	89
3) Dichlorodifluoromethane	4.96	85	1443137	22.109	ng	99
4) Chloromethane	5.28	50	1007552	23.838	ng	97
5) Freon 114	5.53	135	736012	22.922	ng	99
6) Vinyl Chloride	5.72	62	958661	22.668	ng	96
7) 1,3-Butadiene	6.00	54	755319	24.011	ng	# 78
8) Bromomethane	6.48	94	545923	23.180	ng	98
9) Chloroethane	6.82	64	474807	23.635	ng	95
10) Ethanol	7.11	45	474680m	20.135	ng	
11) Acetonitrile	7.43	41	1380433	20.248	ng	96
12) Acrolein	7.64	56	369670	21.950	ng	98
13) Acetone	7.86	58	548370	22.719	ng	# 59
14) Trichlorofluoromethane	8.14	101	1302813	23.264	ng	100
15) Isopropanol	8.32	45	1795925	23.329	ng	95
16) Acrylonitrile	8.64	53	910488	24.773	ng	98
17) 1,1-Dichloroethene	9.16	96	640338	25.994	ng	# 80
18) tert-Butanol	9.26	59	1624655	24.812	ng	94
19) Methylene Chloride	9.36	84	668993	24.800	ng	# 81
20) Allyl Chloride	9.54	41	1033646	28.717	ng	99
21) Trichlorotrifluoroethane	9.81	151	653143	25.646	ng	94
22) Carbon Disulfide	9.76	76	2291901	22.389	ng	96
23) trans-1,2-Dichloroethene	10.80	61	1033867	25.910	ng	85
24) 1,1-Dichloroethane	11.10	63	1197521	25.583	ng	95
25) Methyl tert-Butyl Ether	11.19	73	1987752	25.466	ng	86
26) Vinyl Acetate	11.34	86	121969	27.342	ng	# 87
27) 2-Butanone	11.68	72	456137	25.892	ng	95
28) cis-1,2-Dichloroethene	12.35	61	967113	25.360	ng	83
29) Diisopropyl Ether	12.69	87	510680	23.657	ng	# 89
30) Ethyl Acetate	12.69	61	296494	31.177	ng	80
31) n-Hexane	12.70	57	1251997	26.090	ng	88

**1195**

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.80	83	1183268	28.940	ng	100
34) Tetrahydrofuran	13.35	72	437720	25.990	ng	94
35) Ethyl tert-Butyl Ether	13.48	87	732750	24.239	ng	# 76
36) 1,2-Dichloroethane	13.89	62	974424	24.667	ng	98
38) 1,1,1-Trichloroethane	14.29	97	1099443	25.257	ng	96
39) Isopropyl Acetate	14.83	61	420724	25.770	ng	# 43
40) 1-Butanol	14.84	56	618884	23.556	ng	# 62
41) Benzene	14.99	78	2534542	25.325	ng	99
42) Carbon Tetrachloride	15.22	117	998364	25.903	ng	99
43) Cyclohexane	15.41	84	989738	25.422	ng	# 75
44) tert-Amyl Methyl Ether	15.87	73	1764413	24.576	ng	94
45) 1,2-Dichloropropane	16.20	63	681017	25.432	ng	99
46) Bromodichloromethane	16.46	83	926681	27.393	ng	100
47) Trichloroethene	16.54	130	750724	24.453	ng	99
48) 1,4-Dioxane	16.49	88	513515	27.204	ng	80
49) Isooctane	16.62	57	2791587	24.329	ng	80
50) Methyl Methacrylate	16.80	100	266950	26.693	ng	89
51) n-Heptane	16.98	71	707931	26.621	ng	# 80
52) cis-1,3-Dichloropropene	17.73	75	1015464	25.525	ng	98
53) 4-Methyl-2-pentanone	17.77	58	687525	25.874	ng	80
54) trans-1,3-Dichloropropene	18.43	75	1020600	29.739	ng	100
55) 1,1,2-Trichloroethane	18.67	97	632559	25.577	ng	97
58) Toluene	19.07	91	2825935	25.485	ng	98
59) 2-Hexanone	19.37	43	1952301	25.551	ng	83
60) Dibromochloromethane	19.60	129	839648	28.035	ng	99
61) 1,2-Dibromoethane	19.93	107	761584	26.239	ng	100
62) Butyl Acetate	20.19	43	2066839	26.650	ng	86
63) n-Octane	20.35	57	617086	25.163	ng	89
64) Tetrachloroethene	20.55	166	819456	24.974	ng	100
65) Chlorobenzene	21.41	112	1920539	25.834	ng	99
66) Ethylbenzene	21.89	91	3323590	26.139	ng	94
67) m- & p-Xylene	22.12	91	5340260	62.790	ng	92
68) Bromoform	22.21	173	765541	34.349	ng	98
69) Styrene	22.57	104	2032108	26.729	ng	97
70) o-Xylene	22.72	91	2692182	29.324	ng	94
71) n-Nonane	22.98	43	1646255	25.253	ng	# 83
72) 1,1,2,2-Tetrachloroethane	22.69	83	1237691	32.346	ng	97
74) Cumene	23.47	105	3177554	25.991	ng	99
75) alpha-Pinene	23.96	93	1639241	25.931	ng	96
76) n-Propylbenzene	24.10	91	4041904	25.983	ng	98
77) 3-Ethyltoluene	24.23	105	3341752	25.680	ng	99
78) 4-Ethyltoluene	24.28	105	3326226	27.417	ng	100
79) 1,3,5-Trimethylbenzene	24.38	105	2875882	26.240	ng	99

1196

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:57 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration

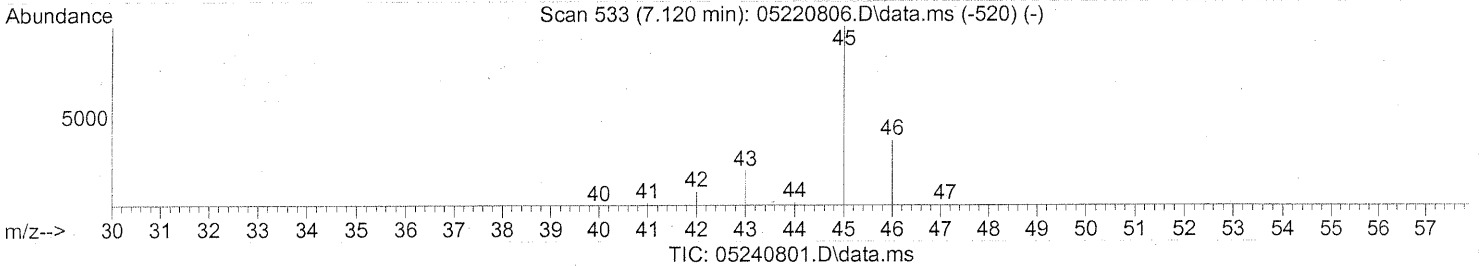
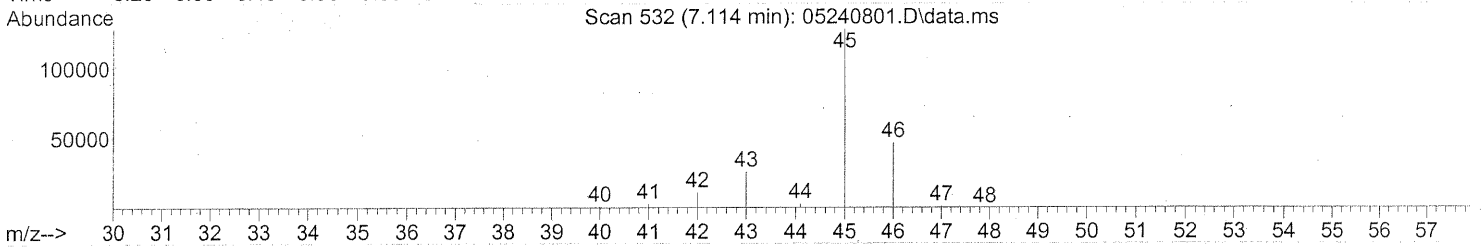
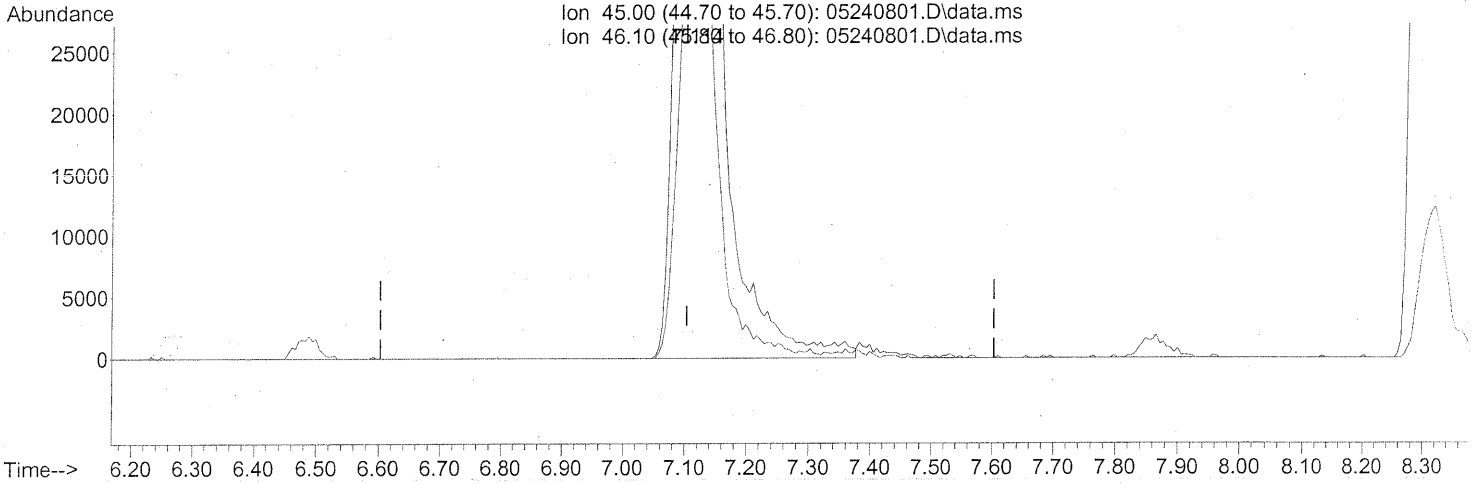
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.56	118	1549280	26.109	ng	97
81) 2-Ethyltoluene	24.61	105	3256812	24.695	ng	100
82) 1,2,4-Trimethylbenzene	24.88	105	3079695	27.599	ng	99
83) n-Decane	24.99	57	1609226	26.211	ng	85
84) Benzyl Chloride	25.05	91	2326748	31.075	ng	98
85) 1,3-Dichlorobenzene	25.08	146	1819420	26.080	ng	100
86) 1,4-Dichlorobenzene	25.16	146	1836924	27.161	ng	100
87) sec-Butylbenzene	25.21	105	3823150	26.806	ng	98
88) p-Isopropyltoluene	25.40	119	3610270	30.752	ng	96
89) 1,2,3-Trimethylbenzene	25.41	105	3056606	27.995	ng	100
90) 1,2-Dichlorobenzene	25.58	146	1789296	27.043	ng	99
91) d-Limonene	25.58	68	1221227	27.471	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.11	157	594083	28.932	ng	93
93) n-Undecane	26.50	57	1712452	26.651	ng	84
94) 1,2,4-Trichlorobenzene	27.63	180	1333354	27.513	ng	95
95) Naphthalene	27.77	128	3967440	26.957	ng	99
96) n-Dodecane	27.74	57	1725244	26.999	ng	82
97) Hexachloro-1,3-butadiene	28.19	225	863387	26.763	ng	98

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:26 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 7.114min (+0.011) 19.97ng  
 response 470799

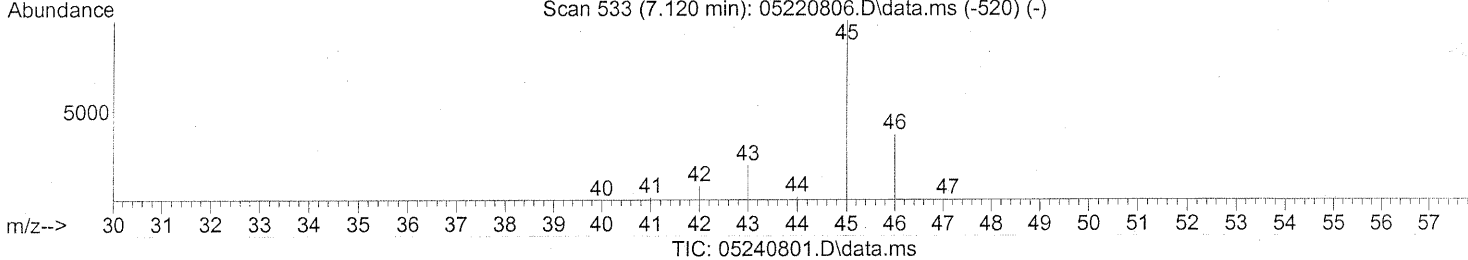
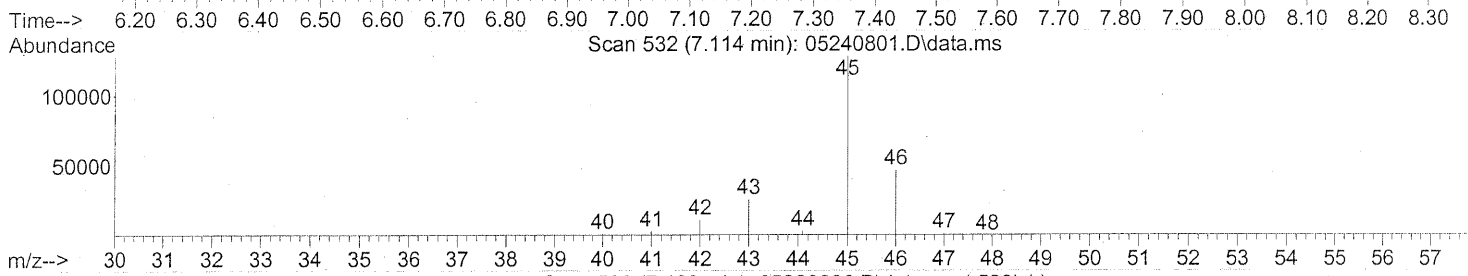
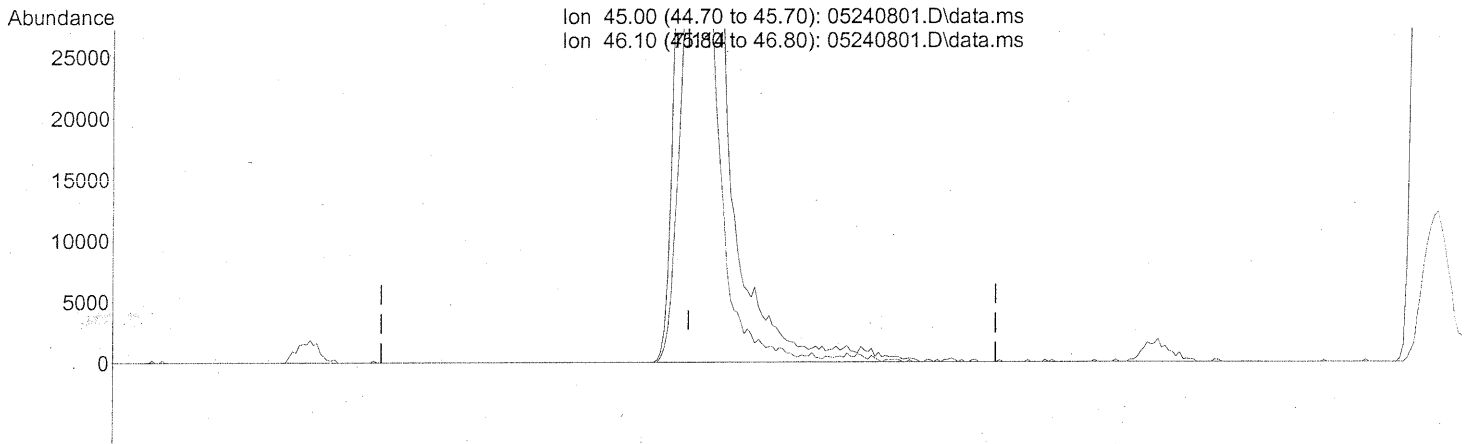
Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.16
0.00	0.00	0.00
0.00	0.00	0.00

*tailing*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 24 08:13:26 2008  
 Quant Method : J:\MS13\METHODS\R13052208.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu May 22 11:37:04 2008  
 Response via : Initial Calibration



(10) Ethanol (T)  
 7.114min (+0.011) 20.13ng m  
 response 474680

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	36.86
0.00	0.00	0.00
0.00	0.00	0.00

*added tailing*

*RT 5/24/08*

*IM 5/30/08*

1199

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:35:50 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 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	108	-0.01
2 S	1,2-Dichloroethane-d4 (SS1)	1.732	1.660	4.2	104	-0.02
3 IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	107	-0.01
4 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	105	0.00
5 S	Toluene-d8 (SS2)	2.245	2.209	1.6	104	-0.01
6 S	Bromofluorobenzene (SS3)	0.913	0.936	-2.5	106	0.00
7	tert-Butylbenzene	2.936	2.986	-1.7	100	-0.01
8	n-Butylbenzene	3.247	3.307	-1.8	99	-0.01

(#) = Out of Range

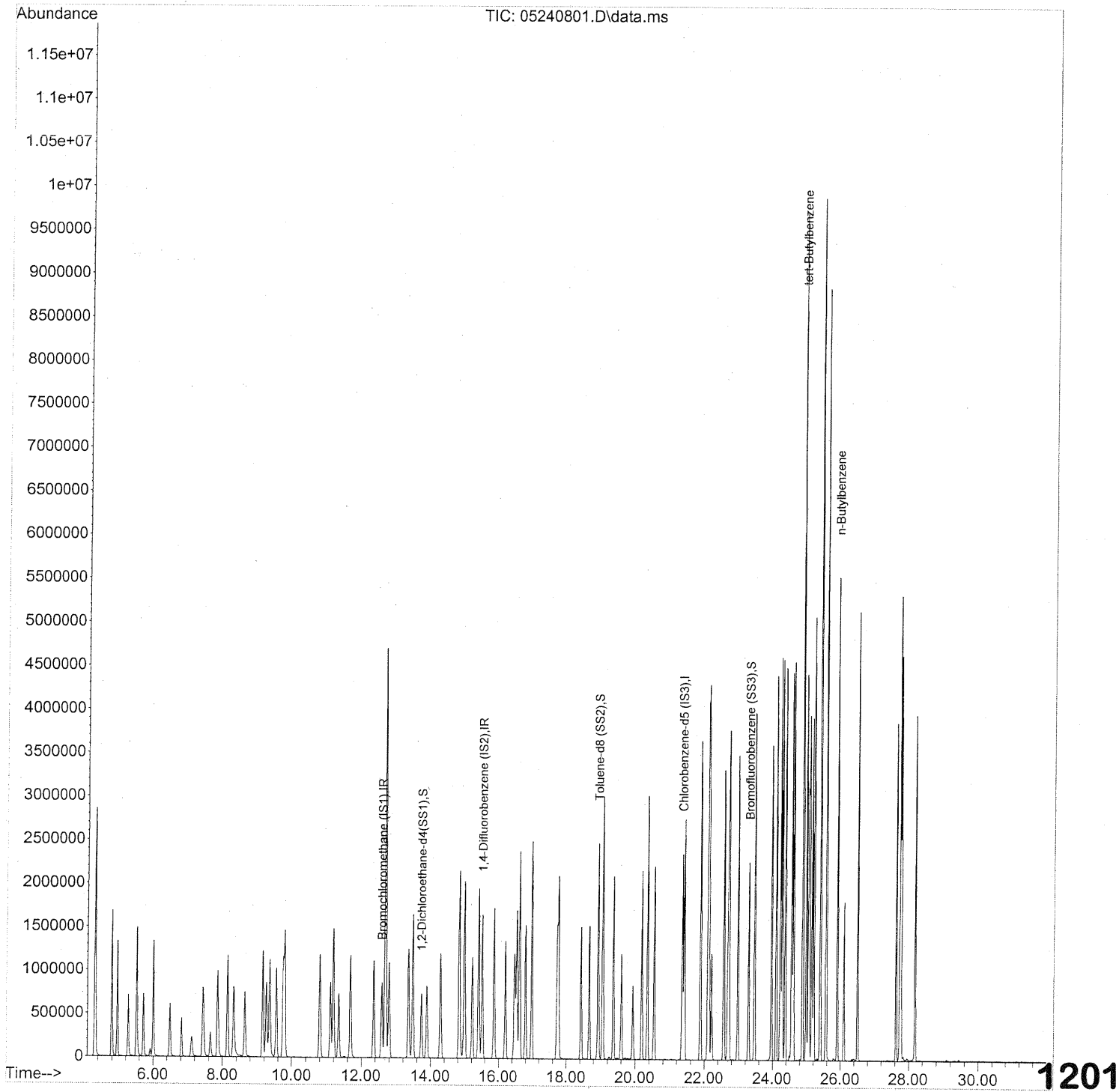
SPCC's out = 0 CCC's out = 0

1200

*RT* 5/26/08

Data Path : J:\MS13\DATA\2008\_05\24\  
Data File : 05240801.D  
Acq On : 24 May 2008 6:59  
Operator : RTB  
Sample : 25ng TO-15 CCV Standard  
Misc : S20-05160801/S20-05210804  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:35:50 2008  
Quant Method : J:\MS13\METHODS\S13052208.M  
Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
QLast Update : Sun May 25 20:32:30 2008  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 25 20:35:50 2008  
 Quant Method : J:\MS13\METHODS\S13052208.M  
 Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD  
 QLast Update : Sun May 25 20:32:30 2008  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	448388	25.000	ng	-0.01
3) 1,4-Difluorobenzene (IS2)	15.52	114	1911390	25.000	ng	-0.01
4) Chlorobenzene-d5 (IS3)	21.35	82	908326	25.000	ng	0.00
System Monitoring Compounds						
2) 1,2-Dichloroethane-d4(...)	13.73	65	744461	23.962	ng	-0.02
Spiked Amount	25.000					Recovery = 95.84%
5) Toluene-d8 (SS2)	18.93	98	2006594	24.598	ng	-0.01
Spiked Amount	25.000					Recovery = 98.40%
6) Bromofluorobenzene (SS3)	23.29	174	850414	25.636	ng	0.00
Spiked Amount	25.000					Recovery = 102.56%
Target Compounds						
7) tert-Butylbenzene	24.88	119	2820813	26.446	ng	Qvalue 99
8) n-Butylbenzene	25.91	91	3220206	27.299	ng	98

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

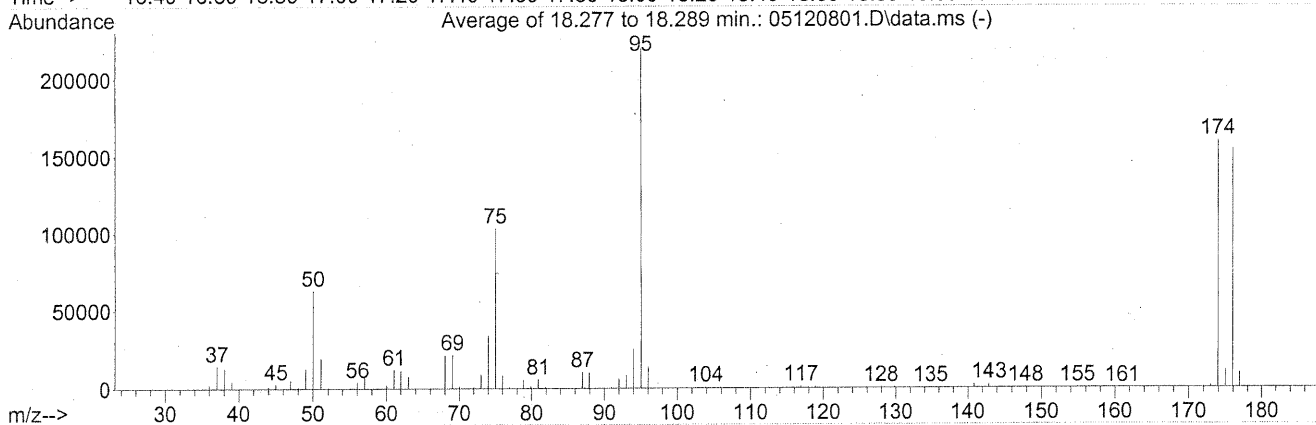
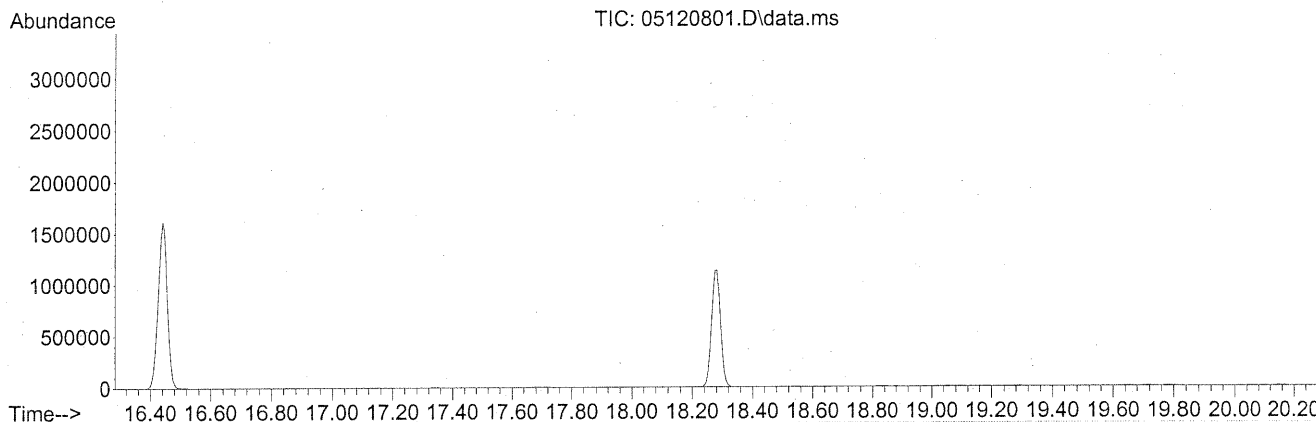


## BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS16\DATA\2008\_05\12a\  
 Data File : 05120801.D  
 Acq On : 12 May 2008 3:44 pm  
 Operator : WA  
 Sample : 25ng BFB STD  
 Misc : S20-04290801  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16051208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Tue May 06 17:02:30 2008



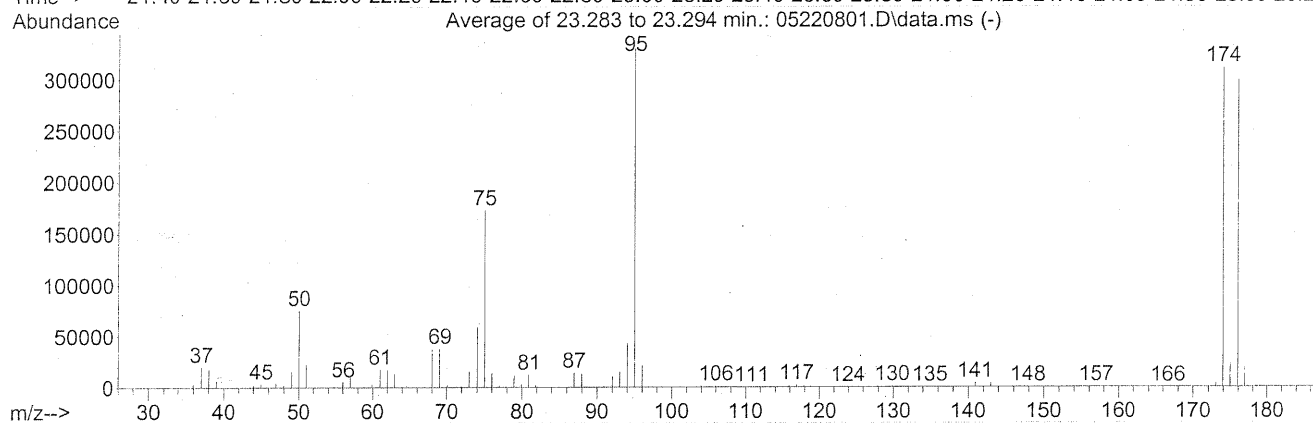
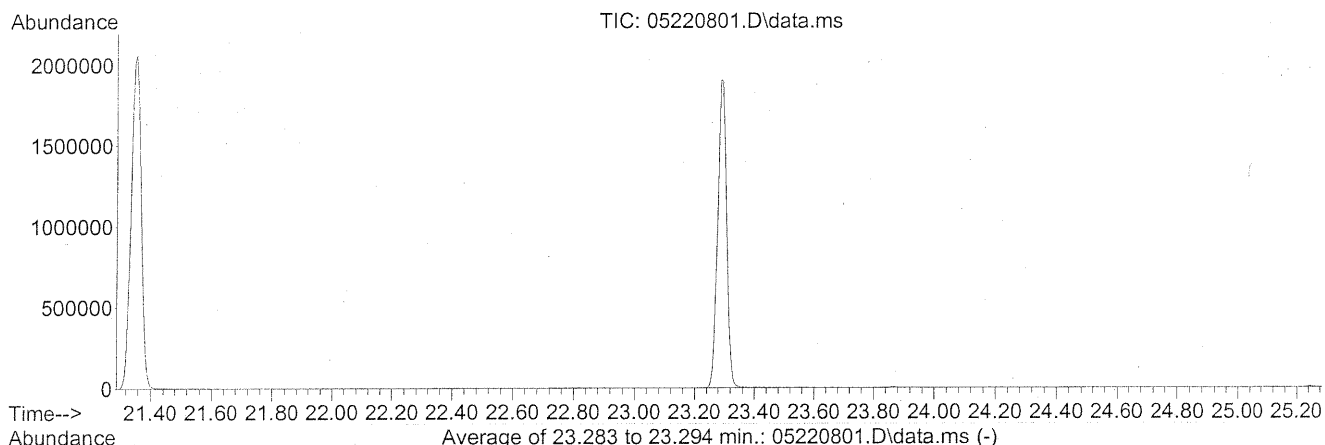
AutoFind: Scans 2479, 2480, 2481; Background Corrected with Scan 2469

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	28.8	63275	PASS
75	95	30	66	47.2	103656	PASS
95	95	100	100	100.0	219499	PASS
96	95	5	9	6.3	13778	PASS
173	174	0.00	2	0.9	1456	PASS
174	95	50	120	72.8	159744	PASS
175	174	4	9	7.2	11432	PASS
176	174	93	101	96.6	154325	PASS
177	176	5	9	6.4	9807	PASS

Data Path : J:\MS13\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 3:15 am  
 Operator : RTB  
 Sample : BFB Tune Standard (200mL)  
 Misc : S20-04300802  
 ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13052208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu May 22 11:37:04 2008



AutoFind: Scans 3373, 3374, 3375; Background Corrected with Scan 3363

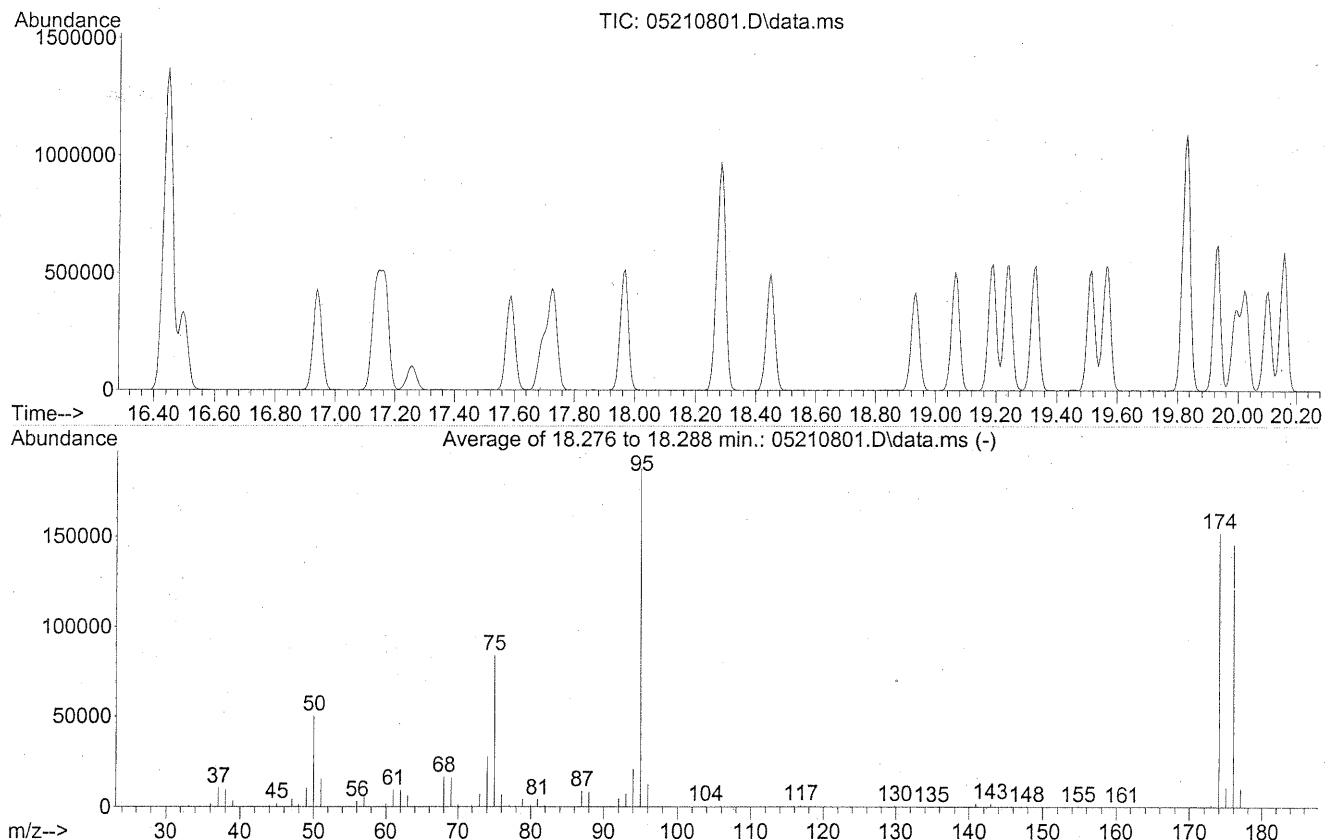
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.9	75640	PASS
75	95	30	66	52.4	172992	PASS
95	95	100	100	100.0	330048	PASS
96	95	5	9	6.6	21824	PASS
173	174	0.00	2	1.3	4088	PASS
174	95	50	120	94.4	311659	PASS
175	174	4	9	7.6	23637	PASS
176	174	93	101	96.0	299328	PASS
177	176	5	9	6.5	19533	PASS

*Handwritten signature:* 7/05/22/08

Data Path : J:\MS16\DATA\2008\_05\21\  
 Data File : 05210801.D  
 Acq On : 21 May 2008 7:03 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05020801  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16051208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Mon May 12 20:47:38 2008



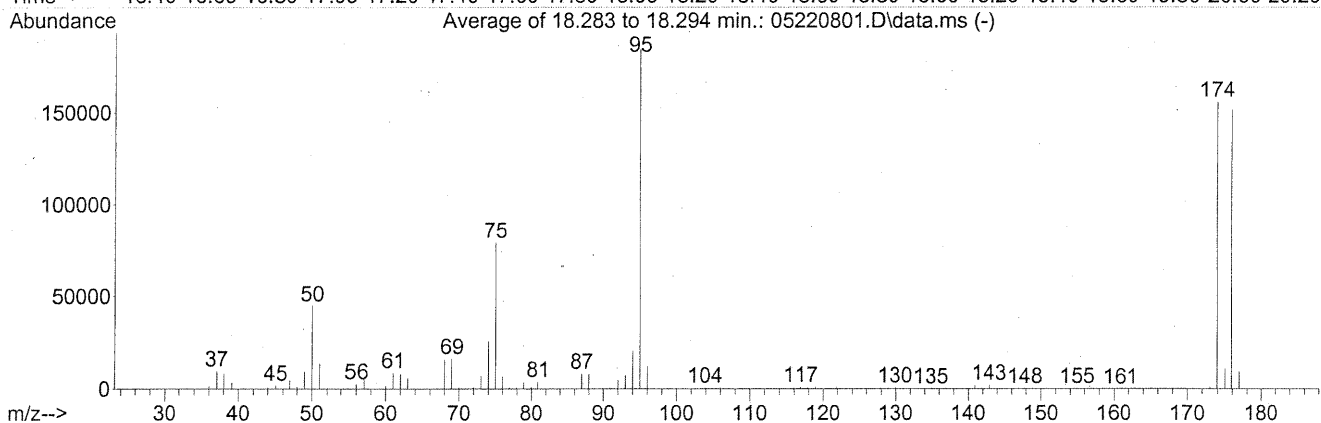
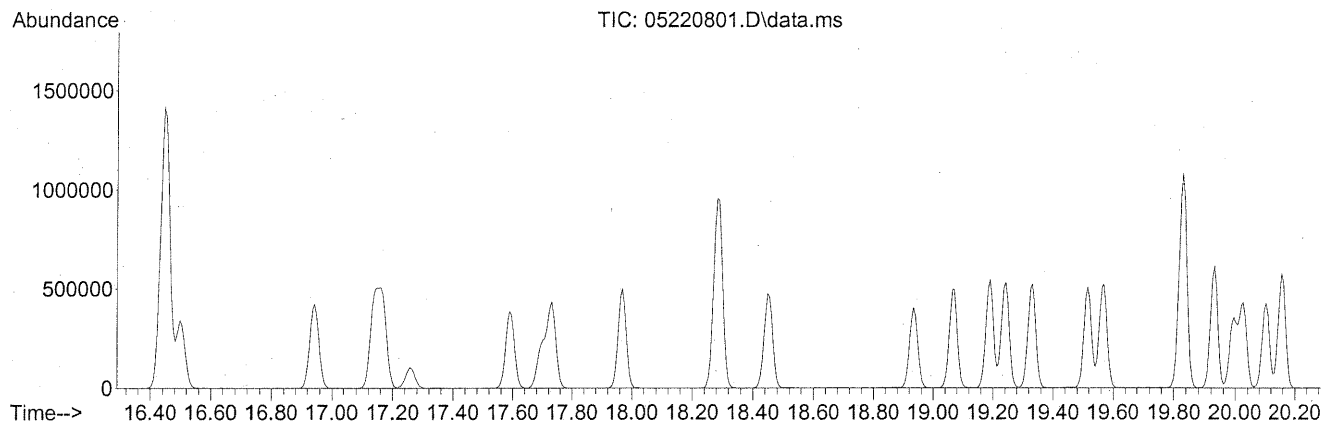
AutoFind: Scans 2479, 2480, 2481; Background Corrected with Scan 2470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	26.9	50493	PASS
75	95	30	66	44.9	84248	PASS
95	95	100	100	100.0	187776	PASS
96	95	5	9	6.6	12406	PASS
173	174	0.00	2	0.8	1290	PASS
174	95	50	120	81.2	152384	PASS
175	174	4	9	7.1	10768	PASS
176	174	93	101	95.9	146069	PASS
177	176	5	9	6.9	10132	PASS

Data Path : J:\MS16\DATA\2008\_05\22\  
 Data File : 05220801.D  
 Acq On : 22 May 2008 6:45 am  
 Operator : WA  
 Sample : 5ng TO-15 CCV  
 Misc : S20-05120801/S20-05210802  
 ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS16\METHODS\R16051208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Mon May 12 20:47:38 2008



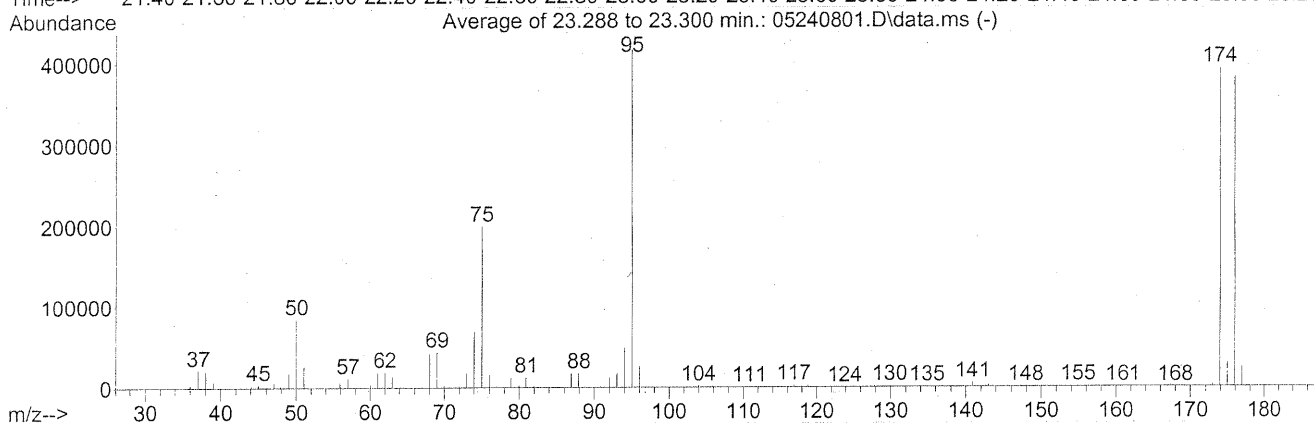
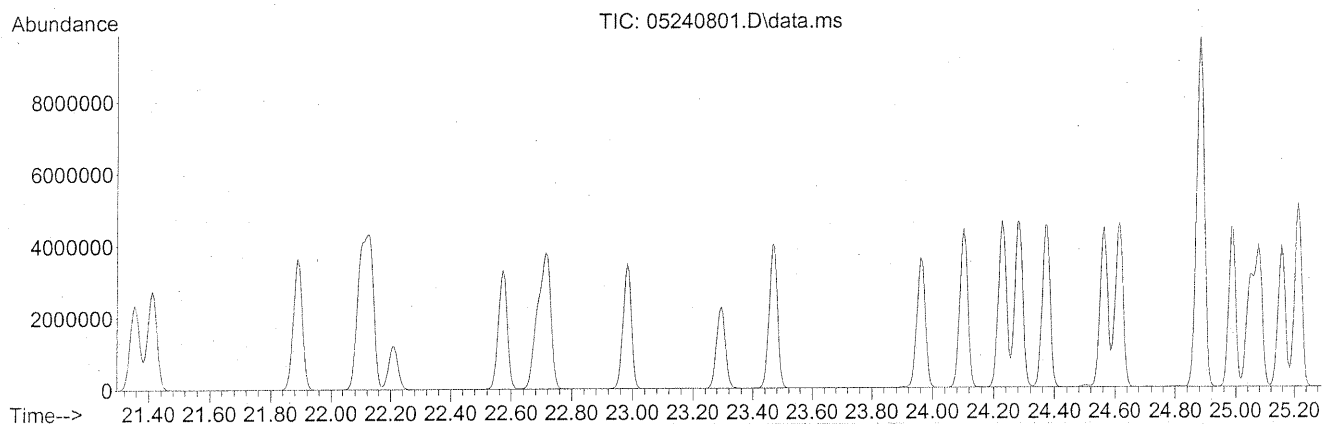
AutoFind: Scans 2480, 2481, 2482; Background Corrected with Scan 2470

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	24.4	44936	PASS
75	95	30	66	43.1	79501	PASS
95	95	100	100	100.0	184384	PASS
96	95	5	9	6.6	12187	PASS
173	174	0.00	2	0.8	1258	PASS
174	95	50	120	84.6	155989	PASS
175	174	4	9	7.0	10940	PASS
176	174	93	101	97.2	151552	PASS
177	176	5	9	6.3	9493	PASS

Data Path : J:\MS13\DATA\2008\_05\24\  
 Data File : 05240801.D  
 Acq On : 24 May 2008 6:59  
 Operator : RTB  
 Sample : 25ng TO-15 CCV Standard  
 Misc : S20-05160801/S20-05210804  
 ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13052208.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu May 22 11:37:04 2008



AutoFind: Scans 3374, 3375, 3376; Background Corrected with Scan 3363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.5	85288	PASS
75	95	30	66	48.0	199915	PASS
95	95	100	100	100.0	416853	PASS
96	95	5	9	6.3	26181	PASS
173	174	0.00	2	1.1	4400	PASS
174	95	50	120	94.3	392939	PASS
175	174	4	9	7.4	29075	PASS
176	174	93	101	97.3	382443	PASS
177	176	5	9	6.4	24547	PASS

## RUN LOGS

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	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
11	05/10/08 14:23	05100811.D	blank	S20-04290801	WA	1	
12	05/10/08 15:06	05100812.D	P0801346-001 (1000ml)	[REDACTED]	WA	3	
13	05/10/08 15:49	05100813.D	P0801346-002 (750ml)	[REDACTED]	WA	7	
14	05/10/08 16:32	05100814.D	P0801346-003 (1000ml)	[REDACTED]	WA	8	
15	05/10/08 17:15	05100815.D	P0801346-004 (1000ml)	[REDACTED]	WA	9	
16	05/10/08 17:58	05100816.D	P0801346-005 (1000ml)	[REDACTED]	WA	10	
17	05/10/08 18:36	05100817.D	P0801346-005 Dil (100ml)	[REDACTED]	WA	10	
18	05/10/08 19:19	05100818.D	P0801346-006 (1000ml)	[REDACTED]	WA	11	
19	05/10/08 20:02	05100819.D	P0801346-007 (1000ml)	[REDACTED]	WA	12	
20	05/10/08 20:40	05100820.D	lcsd	S20-04290801/S20-05050804	WA	2	
21	05/10/08 21:18	05100821.D	0.5ng RL Check	S20-04290801/S20-05020807	WA	14	Pass
22	05/10/08 21:56	05100822.D	0.5ng RL Check (TO-15/MTCN)	S20-04290801/S20-05020808/S20-04110801	WA	1	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/12/08 6:33	05120801.D	Blank	S20-04290801	WA	1	
2	05/12/08 7:11	05120802.D	5ng TO-15 STD	S20-04290801/S20-05020807	WA	14	Pass, VA biased high
3	05/12/08 8:10	05120803.D	CAS CAN QC Batch# 1056A (1000ml)	AC01486	WA	5	Pass
4	05/12/08 8:53	05120804.D	CAS CAN QC (1000ml)	AC00511	WA	6	↓
5	05/12/08 9:40	05120805.D	0.1ng TO-15 STD	S20-05020810	WA	15	
6	05/12/08 10:18	05120806.D	5ng STD Check	S20-05020804	WA	1	
7	05/12/08 11:09	05120807.D	xxxxxx	new IS/Surr S20-05120801	WA	16	
8	05/12/08 11:47	05120808.D	0.5ng std check	S20-05120801/S20-05020808	WA	1	
9	05/12/08 13:17	05120809.D	0.5ng std check	S20-05120801/S20-05020807	WA	14	
10	05/12/08 14:19	05120810.D	0.5ng std check	S20-05120801/S20-05020807 after rplcd, glassw	WA	14	
11	05/12/08 14:56	05120811.D	0.5ng std check	S20-05120801/S20-05020807 after rplcd, glassw	WA	14	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/12/08 15:44	05120801.D	25ng BFB STD	S20-05120801	WA	1	Pass
2	05/12/08 16:21	05120802.D	0.1ng TO-15 ICAL STD	S20-05120801/S20-05020810	WA	15	Saved as R16051208.M Cal. Ranges 0.1ng-1000ng Except: EtOH, ACN, Acrolein, IPA, VA, EA, Acetone, He- Methacrylate 0.5ng-1000ng
3	05/12/08 16:59	05120803.D	0.5ng TO-15 ICAL STD	S20-05120801/S20-05020808	WA	B	
4	05/12/08 17:37	05120804.D	1.0ng TO-15 ICAL STD	S20-05120801/S20-05020808	WA	B	
5	05/12/08 18:17	05120805.D	5.0ng TO-15 ICAL STD	S20-05120801/S20-05020808	WA	B	
6	05/12/08 18:55	05120806.D	25ng TO-15 ICAL STD	S20-05120801/S20-05020804	WA	C	
7	05/12/08 19:34	05120807.D	50ng TO-15 ICAL STD	S20-05120801/S20-05020804	WA	C	
8	05/12/08 20:12	05120808.D	100ng TO-15 ICAL STD	S20-05120801/S20-05020804	WA	C	
9	05/12/08 20:50	05120809.D	25ng TO-15 ICV STD	S20-05120801/S20-05050804	WA	2	
10	05/12/08 22:09	05120810.D	Blank	S20-05120801	WA	1	
11	05/12/08 22:47	05120811.D	5.0ng check	S20-05120801/S20-05020807	WA	14	
12	05/12/08 23:25	05120812.D	25ng TO-15 CCV STD	S20-05120801/S20-05020804	WA	1	
13	05/13/08 0:03	05120813.D	0.5ng RL Check	S20-05120801/S20-05020810	WA	15	
14	05/13/08 0:58	05120814.D	TO-15 Method Blank (1000ml)	S20-05120801	WA	1	
15	05/13/08 1:36	05120815.D	25ng TO-15 LCS STD	S20-05120801/S20-05050804	WA	2	
16	05/13/08 2:14	05120816.D	25ng TO-15 LCSD STD	S20-05120801/S20-05050804	WA	2	

1210



3-CP (b. high)

	DATE/TIME	FILENAME	SAMPLE ID	MISC. INFO	AS POS	INIT	COMMENT
15	05/21/08 8:29	05200815.D	S20-04250805 (125mL)	Test	13	RB	
16	05/21/08 9:10	05200816.D	S20-05020806 (125mL)	Test	15	RB	
17	05/21/08 9:50	05200817.D	S20-04250804 (250mL)	Test	14	RB	
18	05/21/08 15:19	05200818.D	S20-05210804 (125mL)	Test	C	RB	
19	05/21/08 16:03	05200819.D	S20-05210806 (250mL)	Test	B	RB	
20	05/21/08 16:59	05200820.D	S20-05210809 (25mL)	Test	15	RB	
21	05/21/08 21:15	05200821.D	Blank (100mL)	Test	4	RB	
22	05/21/08 22:00	05200822.D	Blank (100mL)	Test	4	RB	
23	05/22/08 2:38	05200823.D	Blank (100mL)	Test	4	RB	

1	05/22/08 3:16	05220801.D	BFB Tune Standard (200mL)	S20-04300802	4	RB	
2	05/22/08 3:56	05220802.D	0.1ng TO-15 ICAL Standard	S20-04300802/S20-05210809	15	RB	ICAL: good for everything
3	05/22/08 4:37	05220803.D	0.5ng TO-15 ICAL Standard	S20-04300802/S20-05210806	B	RB	
4	05/22/08 5:18	05220804.D	1ng TO-15 ICAL Standard	S20-04300802/S20-05210806	B	RB	
5	05/22/08 5:58	05220805.D	5ng TO-15 ICAL Standard	S20-04300802/S20-05210806	B	RB	
6	05/22/08 6:39	05220806.D	25ng TO-15 ICAL Standard	S20-04300802/S20-05210804	C	RB	
7	05/22/08 7:20	05220807.D	50ng TO-15 ICAL Standard	S20-04300802/S20-05210804	C	RB	
8	05/22/08 8:01	05220808.D	100ng TO-15 ICAL Standard	S20-04300802/S20-05210804	C	RB	
9	05/22/08 8:41	05220809.D	25ng TO-15 ICV Standard	S20-04300802/S20-04290803	16	RB	- Passed
10	05/22/08 12:13	05220810.D	TO-15 Method Blank (1.0L)	S20-04300802	4	RB	- Passed
11	05/22/08 13:41	05220811.D	P0801459-004 (1000mL)	██████████ (-3.5, 1.0)	1	RB	
12	05/22/08 14:23	05220812.D	P0801459-006 (1000mL)	██████████ (-3.6, 1.0)	2	RB	
13	05/22/08 15:05	05220813.D	P0801459-008 (1000mL)	██████████ (-3.7, 1.0)	3	RB	
14	05/22/08 15:46	05220814.D	P0801459-010 (1000mL)	██████████ (-4.5, 1.2)	5	RB	
15	05/22/08 16:29	05220815.D	P0801459-023 (100mL)	██████████ (-3.1, 1.1)	6	RB	
16	05/22/08 17:19	05220816.D	P0801459-023 DUP (100mL)	██████████ (-3.1, 1.1)	6	RB	- Passed
17	05/22/08 20:00	05220817.D	P0801459-011 (1000mL)	██████████ (-2.7, 1.2)	7	RB	
18	05/22/08 20:40	05220818.D	P0801459-012 (400mL)	██████████ (-2.7, 10.0)	8	RB	
19	05/22/08 21:23	05220819.D	P0801459-013 (1000mL)	██████████ (-2.7, 3.1)	9	RB	
20	05/22/08 22:04	05220820.D	P0801459-014 (1000mL)	██████████ (-4.1, 1.0)	10	RB	
21	05/22/08 22:46	05220821.D	P0801459-015 (1000mL)	██████████ (-3.4, 1.0)	11	RB	
22	05/22/08 23:29	05220822.D	P0801459-016 (1000mL)	██████████ (-3.5, 1.4)	12	RB	
23	05/23/08 0:12	05220823.D	P0801459-017 (1000mL)	██████████ (-3.2, 1.0)	13	RB	
24	05/23/08 0:54	05220824.D	P0801459-018 (1000mL)	██████████ (-3.2, 1.0)	14	RB	
25	05/23/08 1:35	05220825.D	P0801459-019 (400mL)	██████████ (-2.7, 10.1)	15	RB	
26	05/23/08 2:16	05220826.D	P0801459-004 DIL (50mL)	██████████ (-3.5, 1.0)	1	RB	
27	05/23/08 3:01	05220827.D	Blank (100mL)	Test	4	RB	
28	05/23/08 7:08	05220828.D	Blank (100mL)	Test	4	RB	
29	05/23/08 7:45	05220829.D	S20-05210806 (250mL)	Test	B	RB	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/20/08 5:07	05200801.D	5ng TO-15 CCV	S20-05120801/S20-05020808	WA	1	Pass
2	05/20/08 6:28	05200802.D	.5ng RL Check.	S20-05120801/S20-05020808	WA	1	
3	05/20/08 7:14	05200803.D	TO-15 Method Blank (1000ml)	S20-05120801	WA	1	Pass
4	05/20/08 7:51	05200804.D	25ng TO-15 LCS	S20-05120801/S20-05050806	WA	2	Pass
5	05/20/08 8:29	05200805.D	25ng TO-15 LCSD	S20-05120801/S20-05050806	WA	2	Pass
6	05/20/08 9:26	05200806.D	P0801390-009 (500ml)		WA	3	
7	05/20/08 10:04	05200807.D	P0801390-011 (500ml)		WA	5	
8	05/20/08 10:41	05200808.D	P0801390-012 (500ml)		WA	6	
9	05/20/08 11:19	05200809.D	P0801390-014 Dil (100ml)		WA	7	
10	05/20/08 12:02	05200810.D	P0801390-018 (1000ml)		WA	8	
11	05/20/08 12:45	05200811.D	P0801390-019 (1000ml)		WA	9	
12	05/20/08 13:30	05200812.D	P0801390-020 (1000ml)		WA	10	
13	05/20/08 14:07	05200813.D	P0801390-012 (250ml)		WA	6	
14	05/20/08 15:02	05200814.D	Blank		WA	1	
15	05/20/08 15:45	05200815.D	P0801478-001 (1000ml)		WA	15	
16	05/20/08 16:28	05200816.D	P0801478-001 Dup (1000ml)		WA	15	Pass
17	05/20/08 17:11	05200817.D	P0801478-002 (1000ml)		WA	16	
18	05/20/08 17:54	05200818.D	P0801478-003 (1000ml)		WA	3	
19	05/20/08 18:37	05200819.D	P0801478-004 (1000ml)		WA	4	
20	05/20/08 19:20	05200820.D	P0801478-005 (1000ml)		WA	5	
21	05/20/08 20:03	05200821.D	P0801390-021 (1000ml)		WA	11	
22	05/20/08 20:46	05200822.D	P0801390-022 (1000ml)		WA	12	
23	05/20/08 21:29	05200823.D	P0801390-023 (1000ml)		WA	13	
24	05/20/08 22:13	05200824.D	P0801390-024 (1000ml)		WA	14	
25	05/20/08 22:50	05200825.D	P0801390-012 (100ml)		WA	15	
26	05/20/08 23:28	05200826.D	P0801390-012 (200ml)		WA	16	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/21/08 7:03	05210801.D	5ng TO-15 CCV	S20-05120801/S20-05020801	WA	1	Pass
2	05/21/08 7:41	05210802.D	.1ng RL Check.	S20-05120801/S20-05020810	WA	1	
3	05/21/08 9:11	05210803.D	CAS QC CAN/FC (1000ml)	AC01356/FC00553	WA	3	Pass
4	05/21/08 9:54	05210804.D	CAS QC CAN/FC (1000ml)	AC01476/FC00564	WA	4	Pass
5	05/21/08 10:37	05210805.D	CAS CAN QC2 5/20/08 (1000ml)	SC00699	WA	5	Pass
6	05/21/08 11:14	05210806.D	25ng TO-15 LCS STD	S20-05120801/S20-05050806	WA	2	
7	05/21/08 12:04	05210807.D	P0801442-008 (4.0ml)	ENSR SG70B-05 (-3.3, 3.5)	WA	1	case file
8	05/21/08 12:42	05210808.D	P0801442-008 (1.2ml)	ENSR SG70B-05 (-3.3, 3.5)	WA	1	
9	05/21/08 13:25	05210809.D	CAS QC CAN/FC (1000ml)	AC01222/FC00683	WA	3	Pass
10	05/21/08 14:08	05210810.D	CAS CAN QC Batch# 1133 (1000ml)	SC00795	WA	4	Pass
11	05/21/08 14:45	05210811.D	P0801442-009 (1.0ml)	ENSR SG71B-05 (-3.4, 3.5)	WA	1	
12	05/21/08 15:23	05210812.D	P0801442-008 Dup (1.2ml)	ENSR SG70B-05 (-3.3, 3.5)	WA	1	Pass
13	05/21/08 16:17	05210813.D	P0801442-003 (20ml)	ENSR SG39B-20 (-3.5, 3.6)	WA	7	
14	05/21/08 16:55	05210814.D	P0801442-004 (25ml)	ENSR SG36B-20 (-3.0, 3.5)	WA	8	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
15	05/21/08 17:43	05210815.D	P0801442-001 (500ml)	ENSR SG73B-05 (-3.4, 3.6)	WA	5	
16	05/21/08 18:21	05210816.D	P0801442-002 (150ml)	ENSR SG39B-05 (-3.5, 3.6)	WA	6	Pass
17	05/21/08 18:58	05210817.D	P0801442-005 (70ml)	ENSR SG44B-05 (-3.3, 3.8)	WA	3	
18	05/21/08 19:44	05210818.D	P0801442-006 (250ml)	ENSR SG88B-05 (-3.7, 3.7)	WA	4	
19	05/21/08 20:22	05210819.D	P0801442-003 (500ml)	ENSR SG39B-20 (-3.5, 3.6)	WA	7	
20	05/21/08 21:00	05210820.D	S20-05210802 check	25ml	WA	1	
21	05/21/08 21:51	05210821.D	CAS QC CAN/FC (1000ml)	AC00934/FC00649	WA	9	Pass
22	05/21/08 22:34	05210822.D	CAS QC CAN/FC (1000ml)	AC01338/FC00536	WA	10	Pass
23	05/21/08 23:17	05210823.D	CAS QC CAN/FC (1000ml)	AC01472/FC00306	WA	11	Pass
24	05/22/08 0:01	05210824.D	CAS QC CAN/FC (1000ml)	AC01196/FC00614	WA	12	Pass
25	05/22/08 0:44	05210825.D	CAS QC CAN/FC (1000ml)	AC00970/FC00583	WA	13	Pass
26	05/22/08 1:27	05210826.D	CAS QC CAN/FC (1000ml)	AC01396/FC00421	WA	14	Pass
27	05/22/08 2:10	05210827.D	CAS QC CAN/FC (1000ml)	AC00282/FC00343	WA	15	Pass
28	05/22/08 2:53	05210828.D	CAS QC CAN/FC (1000ml)	AC01251/FC00670	WA	16	Pass
29	05/22/08 3:36	05210829.D	CAS QC CAN/FC (1000ml)	AC00934/FC00649	WA	9	Pass
30	05/22/08 4:14	05210830.D	P0801442-001 (100ml)	ENSR SG73B-05 (-3.4, 3.6)	WA	5	
31	05/22/08 4:51	05210831.D	P0801442-002 (450ml)	ENSR SG39B-05 (-3.5, 3.6)	WA	6	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	05/22/08 6:45	05220801.D	5ng TO-15 CCV	S20-05120801/S20-05210802	WA	1	Pass, except <i>Allyl chloride, HClD</i>
2	05/22/08 7:25	05220802.D	.5ng RL Check	S20-05120801/S20-05020810	WA	1	
3	05/22/08 8:28	05220803.D	TO-15 Method Blank (1000ml)	S20-05120801	WA	16	Pass
4	05/22/08 9:20	05220804.D	25ng TO-15 LCS STD	S20-05120801/S20-05050806	WA	2	Pass, except <i>Allyl Cl &amp; TAME</i>
5	05/22/08 9:58	05220805.D	P0801442-004 Dil (5.0ml)	ENSR SG36B-20 (-3.0, 3.5)	WA	1	<i>ISO19 sample</i>
6	05/22/08 10:35	05220806.D	P0801442-005 (500ml)	ENSR SG44B-05 (-3.3, 3.8)	WA	3	
7	05/22/08 11:25	05220807.D	P0801442-004 Dil (5.0ml)	ENSR SG36B-20 (-3.0, 3.5)	WA	1	
8	05/22/08 12:08	05220808.D	P0801517-001 (100ml)	[REDACTED]	WA	9	
9	05/22/08 12:46	05220809.D	P0801517-002 (100ml)	[REDACTED]	WA	10	
10	05/22/08 13:24	05220810.D	P0801517-001 Dup (100ml)	[REDACTED]	WA	9	Pass
11	05/22/08 14:08	05220811.D	P0801442-002 (300ml)	ENSR SG39B-20 (-3.5, 3.6)	WA	6	
12	05/22/08 15:11	05220812.D	P0801517-003 (100ml)	[REDACTED]	WA	9	
13	05/22/08 15:59	05220813.D	P0801442-017 (1.0ml)	ENSR SG89B-05 (-3.2, 3.5)	WA	1	
14	05/22/08 17:16	05220814.D	STD Check 0.1ng	[REDACTED]	WA	16	
15	05/22/08 17:55	05220815.D	P0801442-007 (250ml)	ENSR SG72B-05 (-3.2, 3.5)	WA	3	
16	05/22/08 18:33	05220816.D	P0801442-010 (500ml)	ENSR SG65B-05 (-2.3, 3.5)	WA	4	
17	05/22/08 19:10	05220817.D	P0801442-011 (500ml)	ENSR SG65B-05D (-2.2, 3.5)	WA	8	<i>Case file, IS - failed</i>
18	05/22/08 19:48	05220818.D	P0801442-012 (40ml)	ENSR SG84B-05 (-2.8, 3.5)	WA	9	
19	05/22/08 20:36	05220819.D	P0801442-013 (500ml)	ENSR SG85B-05 (-3.0, 3.5)	WA	10	<i>Case file, IS - failed</i>
20	05/22/08 21:14	05220820.D	P0801442-014 (40ml)	ENSR SG35B-05 (-3.3, 3.5)	WA	11	
21	05/22/08 22:03	05220821.D	P0801442-015 (500ml)	ENSR SG94B-05 (-4.9, 3.5)	WA	12	
22	05/22/08 22:41	05220822.D	P0801442-016 (100ml)	ENSR SG95B-05 (-3.0, 3.5)	WA	13	

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
23	05/22/08 23:18	05220823.D	P0801442-017 (15ml)	ENSR SG89B-05 (-3.2, 3.5)	WA	14	
24	05/23/08 0:06	05220824.D	P0801442-011 (500ml)	ENSR SG65B-05D (-2.2, 3.5)	WA	8	
25	05/23/08 0:44	05220825.D	blank		WA	1	
26	05/23/08 1:21	05220826.D	P0801442-013 (200ml)	ENSR SG85B-05 (-3.0, 3.5)	WA	10	
27	05/23/08 1:59	05220827.D	blank		WA	1	
28	05/23/08 2:37	05220828.D	MTCN std check	2.5ng	WA	18	

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	DATE/TIME	FILENAME	SAMPLE ID	MISC. INFO	AS FOS	INIT	COMMENT
8	05/23/08 13:32	05230808.D	P0801459-009 (1000mL)	[REDACTED]	6	RB	
9	05/23/08 14:15	05230809.D	P0801459-020 (1000mL)	[REDACTED]	1	RB	
10	05/23/08 14:58	05230810.D	P0801459-021 (1000mL)	[REDACTED]	8	RB	
11	05/23/08 15:39	05230811.D	P0801459-022 (1000mL)	[REDACTED]	9	RB	
12	05/23/08 16:24	05230812.D	P0801483-001 (100mL)	[REDACTED]	11	RB	
13	05/23/08 17:31	05230813.D	P0801483-002 (50mL)	[REDACTED]	12	RB	
14	05/23/08 18:19	05230814.D	P0801483-002 DUP (50mL)	[REDACTED]	12	RB	
15	05/23/08 19:37	05230815.D	P0801459-011 DIL (100mL)	[REDACTED]	7	RB	
16	05/23/08 20:18	05230816.D	P0801459-014 DIL (100mL)	[REDACTED]	10	RB	
17	05/23/08 20:59	05230817.D	P0801459-017 DIL (100mL)	[REDACTED]	13	RB	
18	05/23/08 21:39	05230818.D	P0801459-018 DIL (50mL)	[REDACTED]	14	RB	
19	05/23/08 22:20	05230819.D	P0801459-022 DIL (75mL)	[REDACTED]	9	RB	
20	05/23/08 23:00	05230820.D	P0801483-003 (100mL)	[REDACTED]	15	RB	
21	05/23/08 23:43	05230821.D	P0801483-004 (1000mL)	[REDACTED]	1	RB	
22	05/24/08 0:24	05230822.D	P0801483-005 (75mL)	[REDACTED]	2	RB	
23	05/24/08 1:05	05230823.D	P0801483-006 (75mL)	[REDACTED]	3	RB	
24	05/24/08 1:45	05230824.D	Screen/Test	1483-007 (25mL)	5	RB	
25	05/24/08 2:26	05230825.D	Screen/Test	1483-008 (25mL)	6	RB	
26	05/24/08 3:07	05230826.D	Screen/Test	1483-009 (25mL)	8	RB	
27	05/24/08 3:52	05230827.D	Blank (100mL)	Test	4	RB	
28	05/24/08 5:38	05230828.D	Blank (100mL)	Test	4	RB	
29	05/24/08 6:18	05230829.D	S20-05210806 (25mL)	Test	8	RB	

1	05/24/08 6:59	05240801.D	25ng TO-15 CCV Standard	S20-05160801/S20-05210804	C	RB	
2	05/24/08 7:42	05240802.D	TO-15 Method Blank (1.0L)	S20-05160801	4	RB	
3	05/24/08 8:23	05240803.D	25ng TO-15 LCS	S20-05160801/S20-04290803	16	RB	
4	05/24/08 9:04	05240804.D	P0801442-008 (5.0ml)	ENSR SG70B-05 (-3.3, 3.5)	4	WA	
5	05/24/08 9:45	05240805.D	P0801442-009 (5.0ml)	ENSR SG71B-05 (-3.4, 3.5)	4	WA	
6	05/24/08 10:31	05240806.D	P0801442-004 (50ml)	ENSR SG36B-20 (-3.0, 3.5)	5	WA	
7	05/24/08 11:13	05240807.D	P0801442-017 (5.0ml)	ENSR SG89B-05 (-3.2, 3.5)	4	WA	
8	05/24/08 12:35	05240809.D	P0801442-014 (40ml)	ENSR SG35B-05 (-3.3, 3.5)	4	WA	
9	05/24/08 13:15	05240810.D	P0801442-014 Dup (40ml)	ENSR SG35B-05 (-3.3, 3.5)	6	WA	
10	05/24/08 13:56	05240811.D	P0801442-001 (500ml)	ENSR SG73B-05 (-3.4, 3.6)	7	WA	
11	05/24/08 14:37	05240812.D	P0801442-002 (500ml)	ENSR SG39B-05 (-3.5, 3.6)	8	WA	
12	05/24/08 15:17	05240813.D	P0801442-003 (500ml)	ENSR SG37B-20 (-3.1, 3.6)	9	WA	
13	05/24/08 16:00	05240814.D	P0801442-005 (1000ml)	ENSR SG44B-05 (-3.3, 3.8)	10	WA	
14	05/24/08 16:42	05240815.D	P0801442-006 (1000ml)	ENSR SG88B-05 (-3.7, 3.7)	11	WA	
15	05/24/08 17:25	05240816.D	P0801442-007 (1000ml)	ENSR SG72B-05 (-3.2, 3.5)	12	WA	
16	05/24/08 18:08	05240817.D	P0801442-010 (1000ml)	ENSR SG65B-05 (-2.3, 3.5)	13	WA	
17	05/24/08 18:50	05240818.D	P0801442-011 (1000ml)	ENSR SG65B-05D (-2.2, 3.5)	14	WA	
18	05/24/08 19:31	05240819.D	P0801442-012 (200ml)	ENSR SG84B-05 (-2.8, 3.5)	15	WA	
19	05/24/08 20:14	05240820.D	P0801442-013 (1000ml)	ENSR SG85B-05 (-3.0, 3.5)	16	WA	
20	05/24/08 20:54	05240821.D	P0801442-015 (500ml)	ENSR SG94B-05 (-4.9, 3.5)	1	WA	
21	05/24/08 21:35	05240822.D	P0801442-016 (400ml)	ENSR SG95B-05 (-3.0, 3.5)	2	WA	
22	05/24/08 22:16	05240823.D	P0801442-018 (75ml)	ENSR SG75B-05 (-3.6, 3.5)	3	WA	
23	05/24/08 22:56	05240824.D	0.5ng RL check		20	WA	
24	05/26/08 8:46	05240825.D	S20-05210806 (250mL)	Test	4	WA	

	DATE/TIME
1	05/26/08 9:27
2	05/26/08 10:04
3	05/26/08 10:51
4	05/26/08 11:37
5	05/26/08 12:12
6	05/26/08 14:34
7	05/26/08 15:45
8	05/26/08 16:33
9	05/26/08 17:14
10	05/26/08 17:55
11	05/26/08 18:36
12	05/26/08 19:17
13	05/26/08 19:58
14	05/26/08 20:38
15	05/26/08 21:19
16	05/26/08 22:00
17	05/26/08 22:41
18	05/26/08 23:22
19	05/27/08 0:03
20	05/27/08 0:44
21	05/27/08 1:25
22	05/27/08 2:06
23	05/27/08 2:47
24	05/27/08 3:27
25	05/27/08 4:08
26	05/27/08 6:39
1	05/27/08 7:30
2	05/27/08 8:11
3	05/27/08 9:41
4	05/27/08 10:57
5	05/27/08 11:38
6	05/27/08 12:59
7	05/27/08 13:40
8	05/27/08 14:21
9	05/27/08 15:02
10	05/27/08 15:43
11	05/27/08 16:33
12	05/27/08 17:14
13	05/27/08 18:13
14	05/27/08 18:54
15	05/27/08 19:35
16	05/27/08 20:16
17	05/27/08 20:58
18	05/27/08 21:41
19	05/27/08 22:24

1215