

## LABORATORY REPORT

October 1, 2009

Brian Baker  
Environmental Health & Engineering, Inc.  
117 Fourth Avenue  
Needham, MA 02494

**RE: 16512**

Dear Brian:

Enclosed are the results of the samples submitted to our laboratory on September 3, 2009. For your reference, these analyses have been assigned our service request number P0903114.

All analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com). Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 320 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; TX Commission of Environmental Quality, NELAP ID T104704413-08-TX. 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.**



Kate Aguilera  
Project Manager

Client: Environmental Health & Engineering, Inc.  
Project: 16512

CAS Project No: P0903114

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### CASE NARRATIVE

The samples were received intact under chain of custody on September 3, 2009 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.

#### 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.

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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: Environmental Health & Engineering, Incorporated  
 Project: 16512

Folder: P0903114

Detailed Sample Information

CAS Sample ID	Client Sample ID	Container Type	Pi1 (Hg)	Pi1 (psig)	Pf1 (Hg)	Pi2 (Hg)	Pf2 (psig)	Cont ID	Order #	FC ID	Bottle Order #
P0903114-001.01	104895	6.0 L-Summa Canister Ambient	-28.4	-13.9	3.5			AC01636	14340		
P0903114-002.01	104896	6.0 L-Summa Canister Ambient		0.4	3.5			AC01668	14340		
P0903114-003.01	104897	6.0 L-Summa Canister Ambient		0.2	3.5			AC01662	14340		
P0903114-004.01	104898	6.0 L-Summa Canister Ambient		0.4	3.5			AC00568	14340		
P0903114-005.01	104899	6.0 L-Summa Canister Ambient		0.1	3.5			AC01498	14340		
P0903114-006.01	104900	6.0 L-Summa Canister Ambient	-0.6	-0.3	3.5			AC01244	14340		

Miscellaneous Items - received

- AVG00157
- FC00649
- AVG00881
- FC00605
- AVG01125
- FC00415
- FC00287
- AVG01048
- AVG01096
- FC00516
- FC00583
- AVG00990





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

Client: Environmental Health & Engineering, Inc.

Work order: P0903114

Project: Project # 16512 / 16512

Sample(s) received on: 9/3/2009

Date opened: 9/3/2009

by: ADAVID

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

- |  | Yes                                 | No                                  | N/A                                 |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were <b>sample containers</b> properly marked with client sample ID?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 2 Container(s) <b>supplied by CAS</b> ?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 3 Did <b>sample containers</b> arrive in good condition?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 4 Was a <b>chain-of-custody</b> provided?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 5 Was the <b>chain-of-custody</b> properly completed?  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| 6 Did <b>sample container labels</b> and/or tags agree with custody papers?                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 7 Was <b>sample volume</b> received adequate for analysis?   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 8 Are samples within specified holding times?  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 9 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  |                                     |                                     |                                     |
| 10 Was a <b>trip blank</b> received?   | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
| Trip blank supplied by CAS: _____  |                                     |                                     |                                     |
| 11 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"/> |
| 12 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"/> |
| 13 <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"/> |
| 14 <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
P0903114-001.01	6.0 L Ambient Can					
P0903114-002.01	6.0 L Ambient Can					
P0903114-003.01	6.0 L Ambient Can					
P0903114-004.01	6.0 L Ambient Can					
P0903114-005.01	6.0 L Ambient Can					
P0903114-006.01	6.0 L Ambient Can					

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

Missing time collected \_\_\_\_\_

\*Required pH: Phenols/COD/NH3/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12); Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12); RSK - MEEPP, HCL (pH<2); RSK - CO2, (pH 5-8); Sulfur (pH>4)

## RESULTS OF VOLATILE ORGANIC ANALYSIS

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 1 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104895  
**Client Project ID:** 16512

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Liliana Marghitoiu  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: AC01636

CAS Project ID: P0903114  
 CAS Sample ID: P0903114-001

Date Collected: 9/2/09  
 Date Received: 9/3/09  
 Date Analyzed: 9/9/09  
 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>	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	<b>Propene</b>	<b>0.63</b>	0.50	<b>0.37</b>	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.10	ND	0.048	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.10	ND	0.039	
106-99-0	1,3-Butadiene	ND	0.10	ND	0.045	
74-83-9	Bromomethane	ND	0.10	ND	0.026	
75-00-3	Chloroethane	ND	0.10	ND	0.038	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	<b>Acrolein</b>	<b>1.2</b>	0.50	<b>0.53</b>	0.22	
67-64-1	<b>Acetone</b>	<b>16</b>	5.0	<b>6.8</b>	2.1	<b>M1</b>
75-69-4	Trichlorofluoromethane	ND	0.10	ND	0.018	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	0.50	ND	0.20	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.10	ND	0.025	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	ND	0.032	
76-13-1	Trichlorotrifluoroethane	ND	0.10	ND	0.013	
75-15-0	Carbon Disulfide	ND	0.50	ND	0.16	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	ND	0.025	
75-34-3	1,1-Dichloroethane	ND	0.10	ND	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	ND	0.028	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	<b>2-Butanone (MEK)</b>	<b>2.9</b>	0.50	<b>1.0</b>	0.17	

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.

M1 = Matrix interference due to coelution with a non-target compound; results may be biased high.

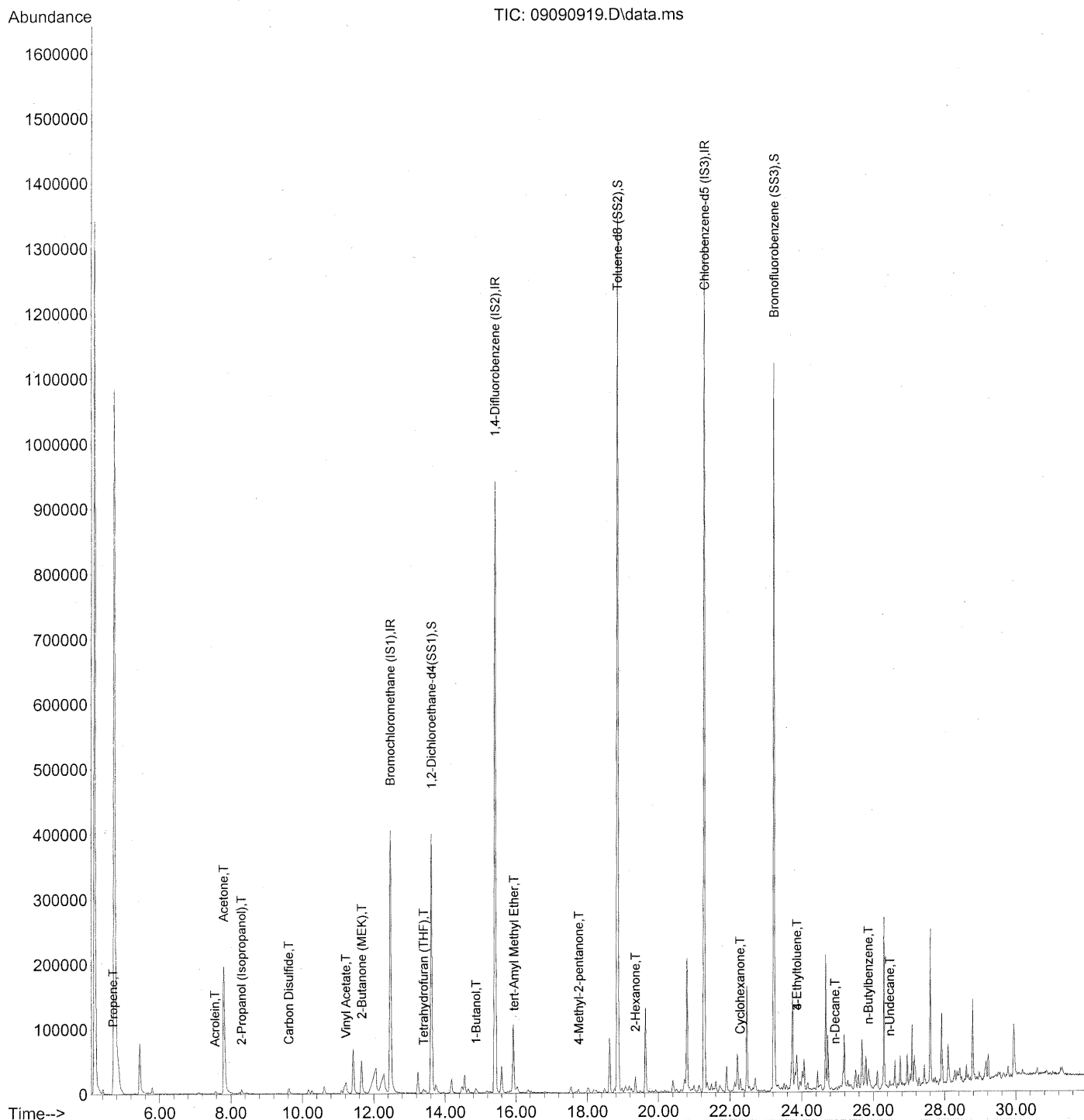
Verified By: \_\_\_\_\_ Date: 9/17/09 **7**





Data Path : J:\MS13\DATA\2009\_09\09\  
Data File : 09090919.D  
Acq On : 9 Sep 2009 10:10 pm  
Operator : LM/CC  
Sample : P0903114-001 (1000ml)  
Misc : EH&E 104895 ✓  
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 15 12:18:20 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Fri Aug 28 06:02:46 2009  
Response via : Initial Calibration



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*11/9/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	212549	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1070589	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	21.28	82	537925	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	415003	24.639	ng	-0.03
Spiked Amount	25.000		Recovery	= 98.56%		
57) Toluene-d8 (SS2)	18.84	98	1168737	24.311	ng	-0.02
Spiked Amount	25.000		Recovery	= 97.24%		
73) Bromofluorobenzene (SS3)	23.23	174	356781	25.787	ng	-0.01
Spiked Amount	25.000		Recovery	= 103.16%		

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.69	42	9748	0.634	ng	99
3) Dichlorodifluoromethan...	0.00	85	0	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) 1,2-Dichloro-1,1,2,2-t...	0.00	135	0	N.D.		
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.86	54	88	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	6.67	64	436	N.D.		
10) Ethanol	7.19	45	428	N.D.		
11) Acetonitrile	7.41	41	210	N.D.		
12) Acrolein	7.55	56	8822	1.212	ng	91
13) Acetone	7.80	58	159188	16.146	ng	M# 48
14) Trichlorofluoromethane	0.00	101	0	N.D.		
15) 2-Propanol (Isopropanol)	8.30	45	16200m	0.494	ng	
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	0.00	59	0	N.D.		
19) Methylene Chloride	9.26	84	98	N.D.		
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.		
21) Trichlorotrifluoroethane	0.00	151	0	N.D.		
22) Carbon Disulfide	9.62	76	18833	0.423	ng	93
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	11.22	86	3526	1.427	ng	# 43
27) 2-Butanone (MEK)	11.66	72	23397	2.938	ng	99
28) cis-1,2-Dichloroethene	12.27	61	99	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.		

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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	0.00	83	0	N.D.		
34) Tetrahydrofuran (THF)	13.40	72	1918	<del>0.222</del> ng	#	83
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	14.87	56	5345	0.401 ng	#	19
41) Benzene	14.87	78	537	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	15.25	84	101	N.D.		
44) tert-Amyl Methyl Ether	15.94	73	3624	0.097 ng	#	46
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.05	83	411	N.D.		
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) 2,2,4-Trimethylpentane...	16.53	57	180	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	17.76	58	1582	<del>0.138</del> ng		96
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	d	
58) Toluene	<del>18.98</del>	91	2064	N.D.		
59) 2-Hexanone	<u>19.35</u>	43	22889	<u>0.723</u> ng		100
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.21	43	93	N.D.		
63) n-Octane	20.26	57	104	N.D.		
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	21.28	112	102	N.D.		
66) Ethylbenzene	21.81	91	214	N.D.		
67) m- & p-Xylenes	22.06	91	99	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.50	104	495	N.D.		
70) o-Xylene	22.65	91	301	N.D.		
71) n-Nonane	22.91	43	806	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.60	83	188	N.D.		
74) Cumene	23.23	105	373	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	0.00	91	0	N.D.		
77) 3-Ethyltoluene	23.86	105	19416	0.338 ng	#	44
78) 4-Ethyltoluene	23.86	105	19416	<del>0.343</del> ng	#	46
79) 1,3,5-Trimethylbenzene	24.73	105	436	N.D.		



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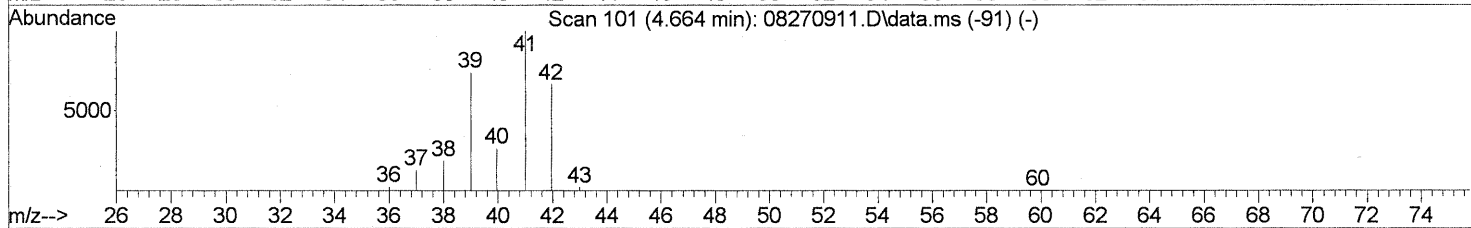
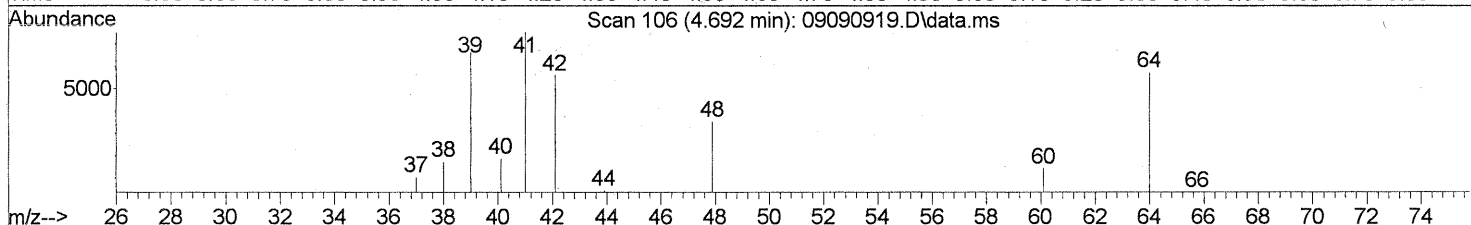
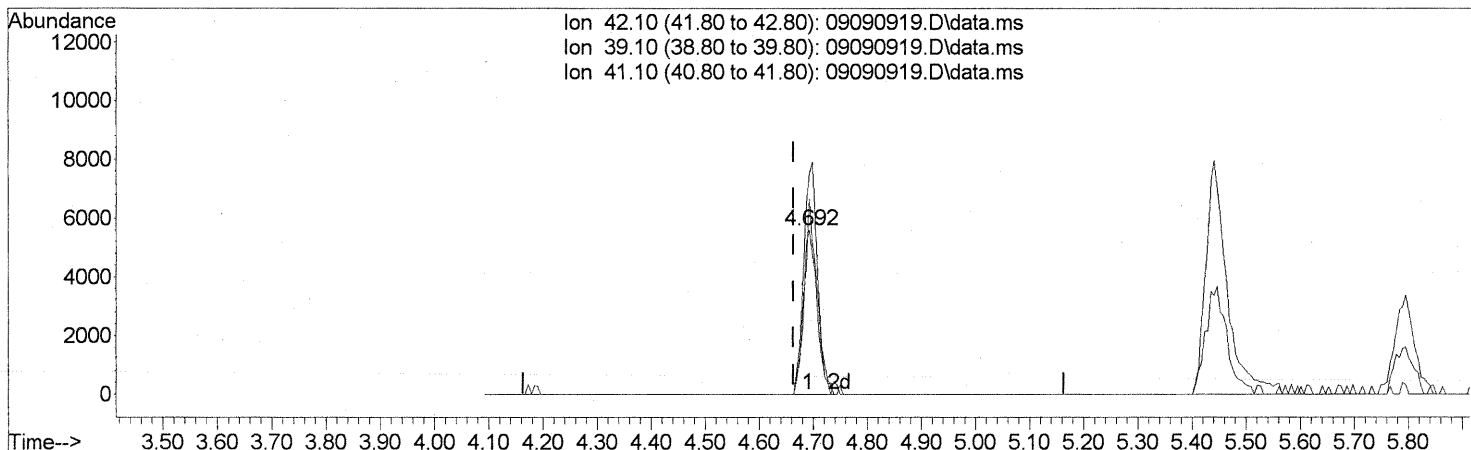
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.73	118	1103	N.D.		
81) 2-Ethyltoluene	24.73	105	436	N.D.		
82) 1,2,4-Trimethylbenzene	24.82	105	246	N.D.		
83) n-Decane	24.93	57	1916	0.067 ng	#	47
84) Benzyl Chloride	24.99	91	234	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.		
86) 1,4-Dichlorobenzene	0.00	146	0	N.D.		
87) sec-Butylbenzene	25.36	105	201	N.D.		
88) 4-Isopropyltoluene (p-...	25.34	119	185	N.D.		
89) 1,2,3-Trimethylbenzene	25.36	105	201	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	25.47	68	88	N.D.		
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.46	57	2194	0.074 ng	#	12
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.73	128	1416	N.D.		
96) n-Dodecane	27.68	57	1591	N.D.		
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.29	55	11173	0.560 ng		95
99) tert-Butylbenzene	24.73	119	1824	N.D.		
100) n-Butylbenzene	25.86	91	15365	0.287 ng	#	42

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
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 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
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 Response via : Initial Calibration



TIC: 09090919.D\data.ms

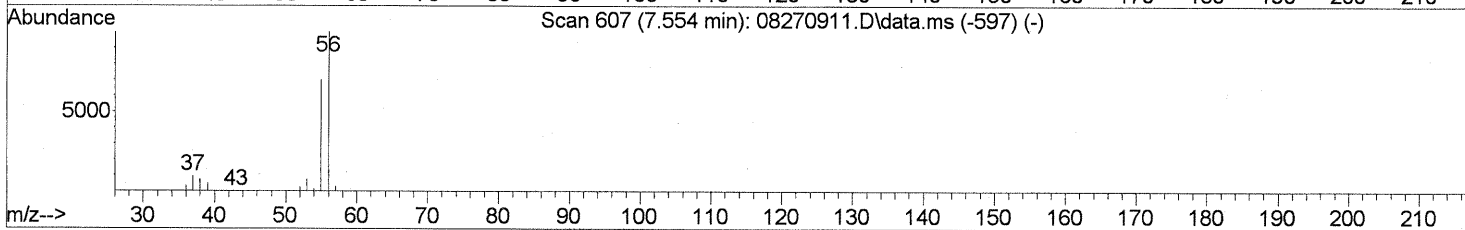
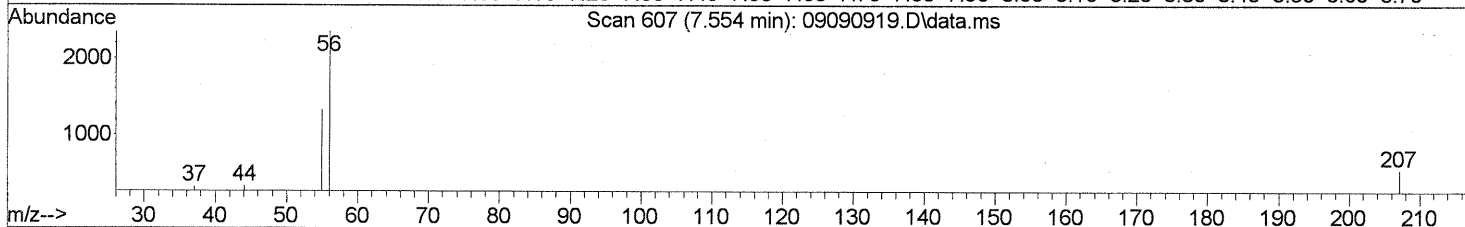
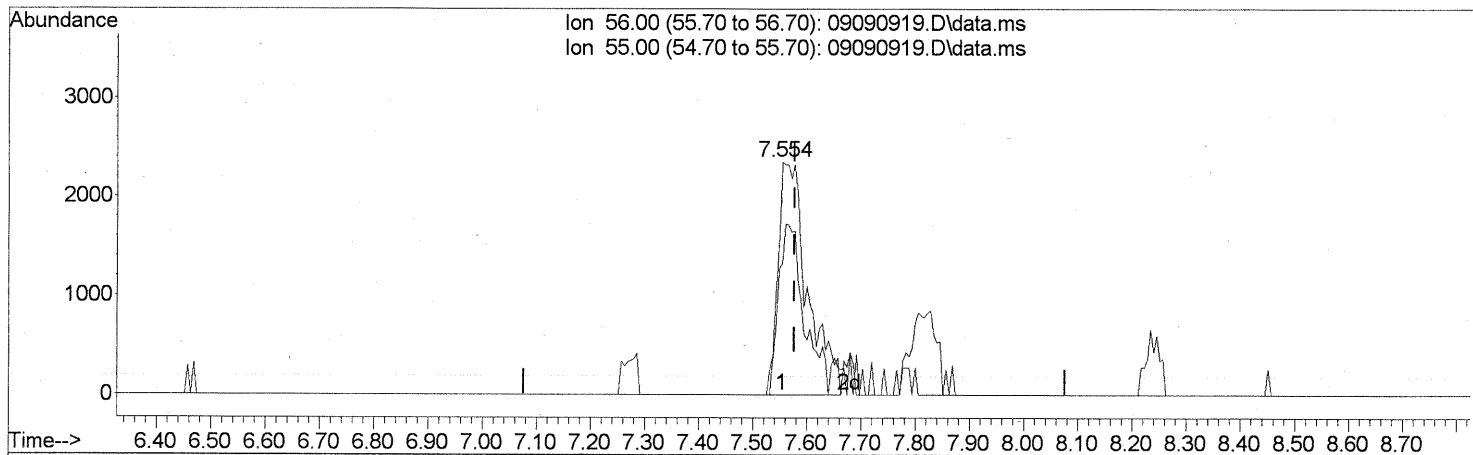
(2) Propene (T)  
 4.692min (+0.029) 0.63ng  
 response 9748

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	108.96
41.10	149.80	147.45
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

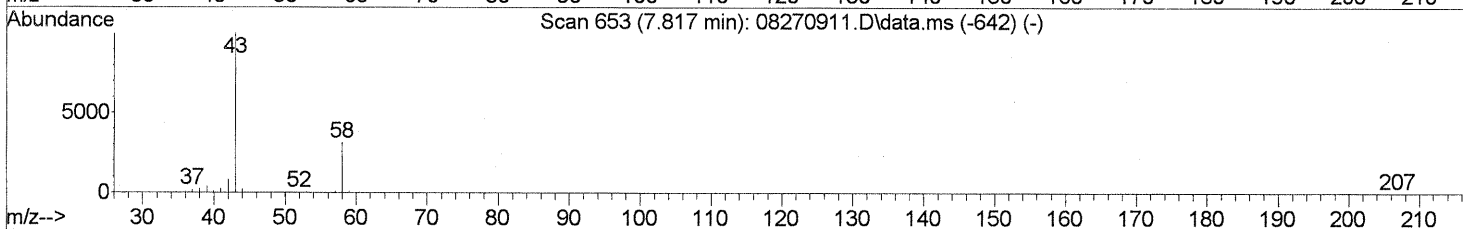
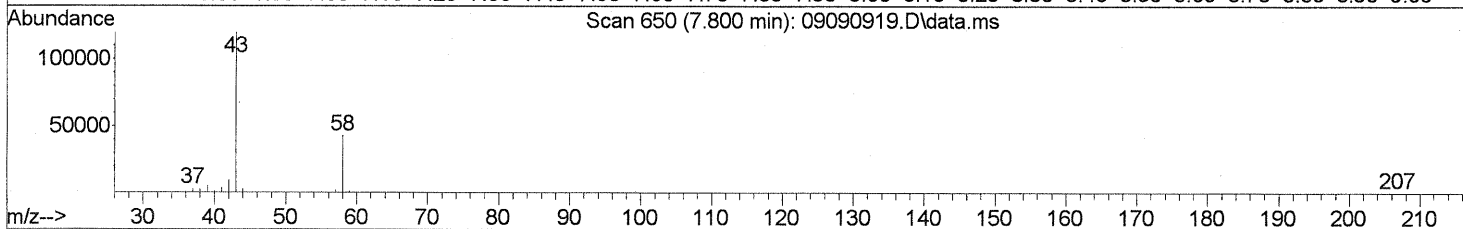
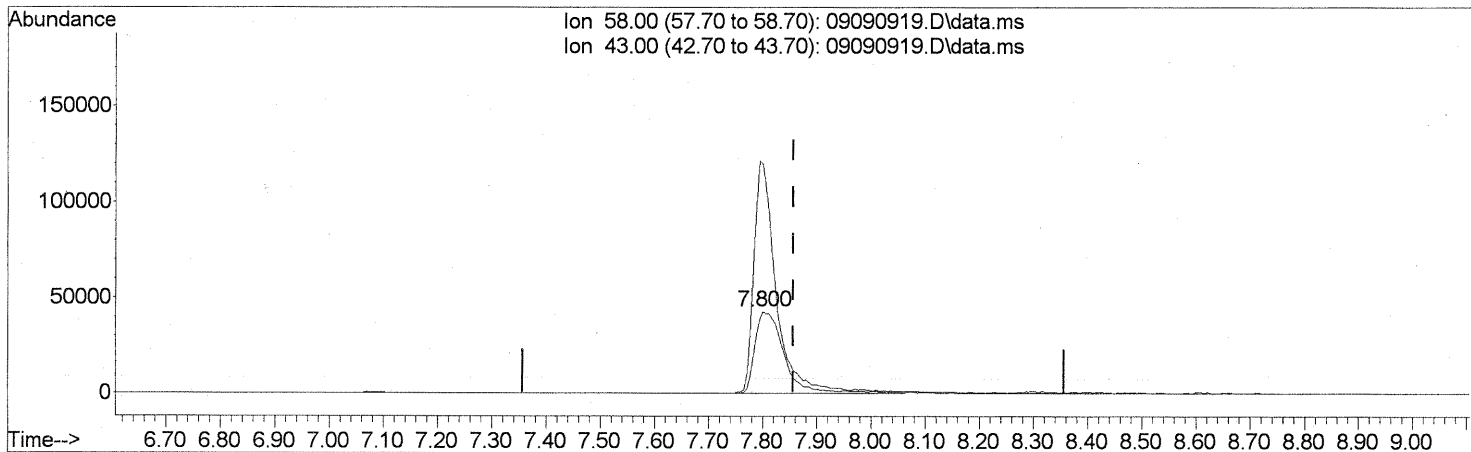
(12) Acrolein (T)  
 7.554min (-0.023) 1.21ng  
 response 8822

Ion	Exp%	Act%
56.00	100	100
55.00	71.10	63.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

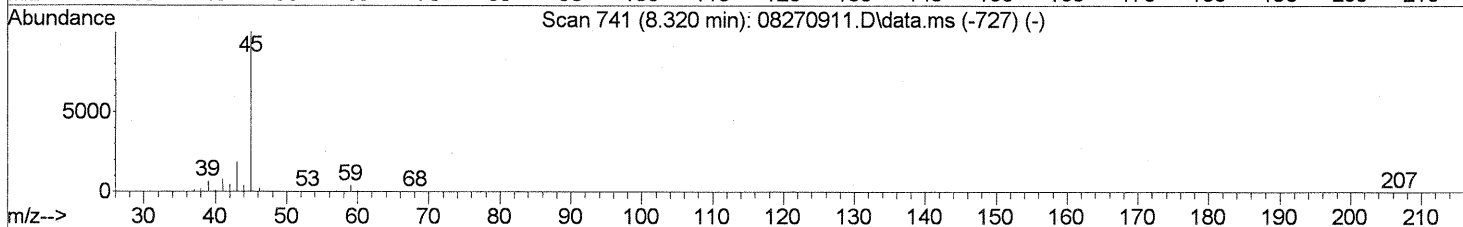
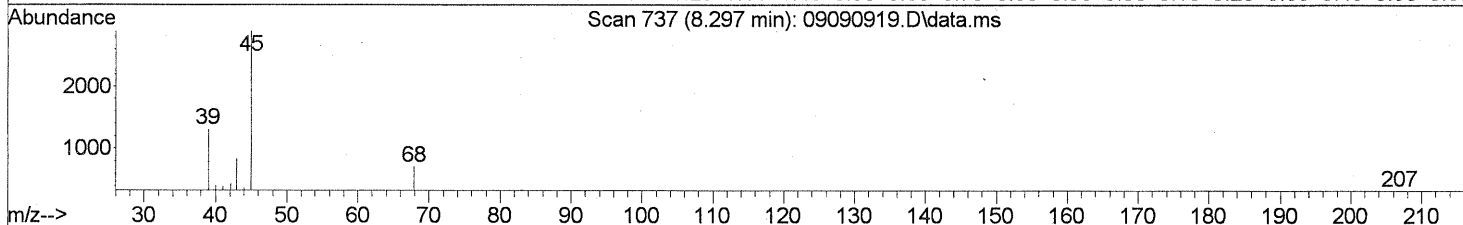
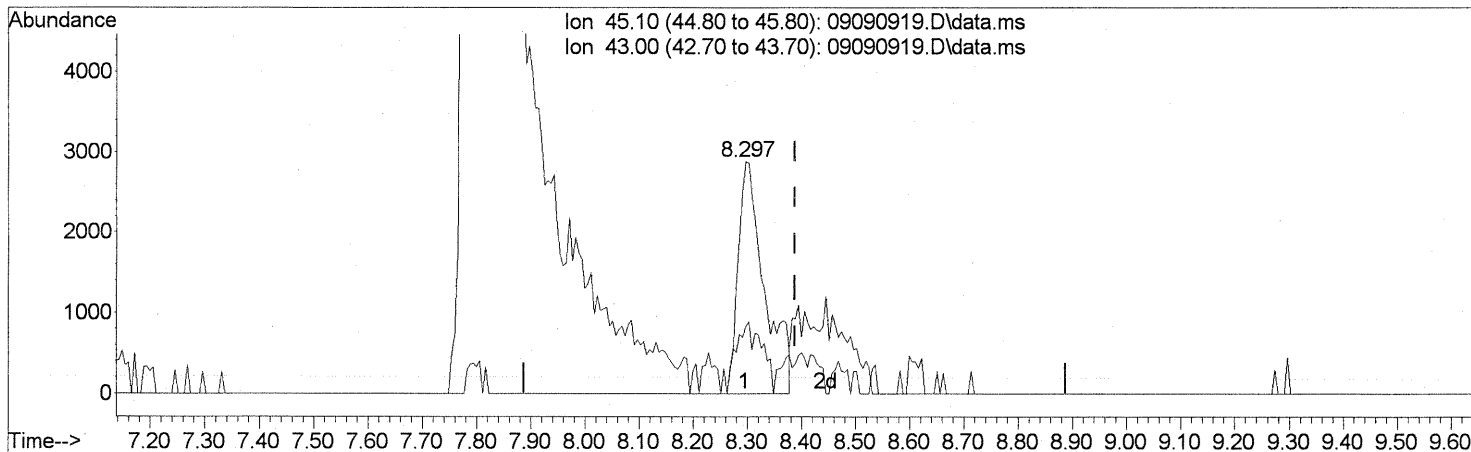
(13) Acetone (T)  
 7.800min (-0.057) 16.15ng  
 response 159188

Ion	Exp%	Act%
58.00	100	100
43.00	331.30	223.03#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.297min (-0.091) 0.29ng

*SP*

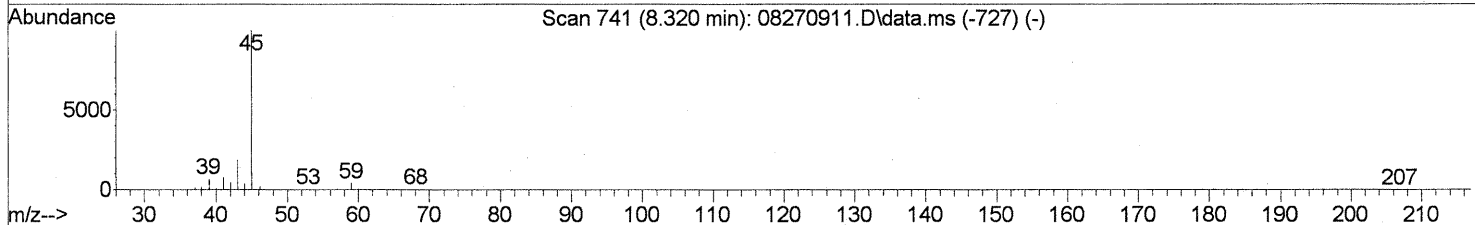
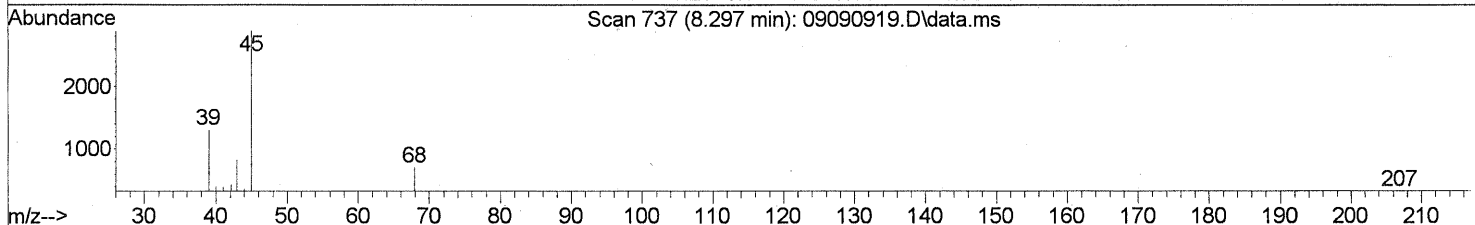
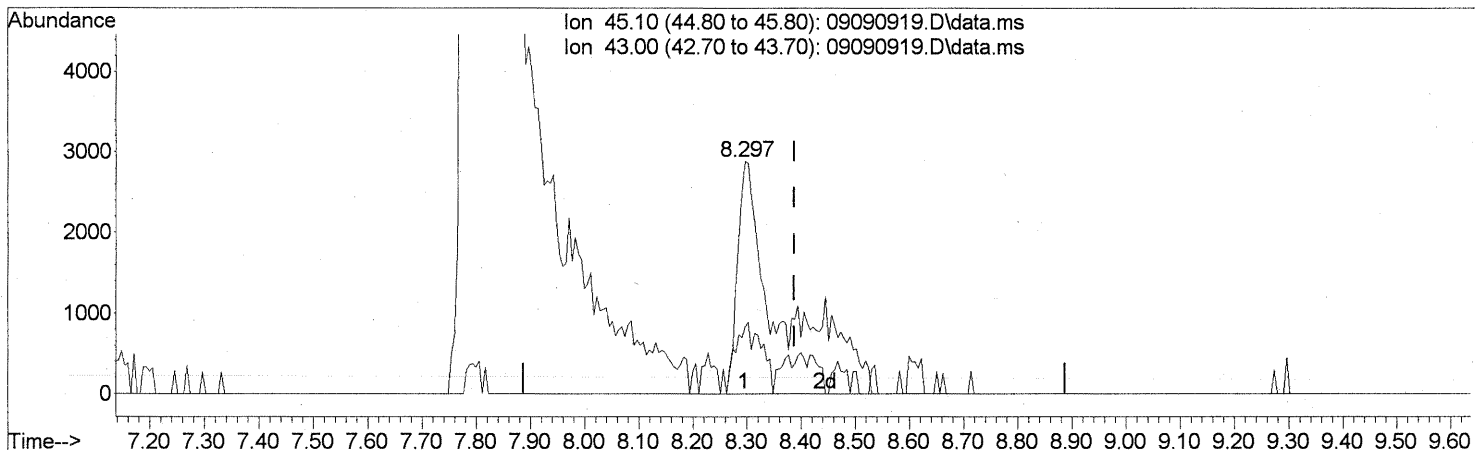
response 9613

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	31.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

(15) 2-Propanol (Isopropanol) (T)  
 8.297min (-0.091) 0.49ng m  
 response 16200

*LMRL* *SP>IC*  
*m 9/15/09*

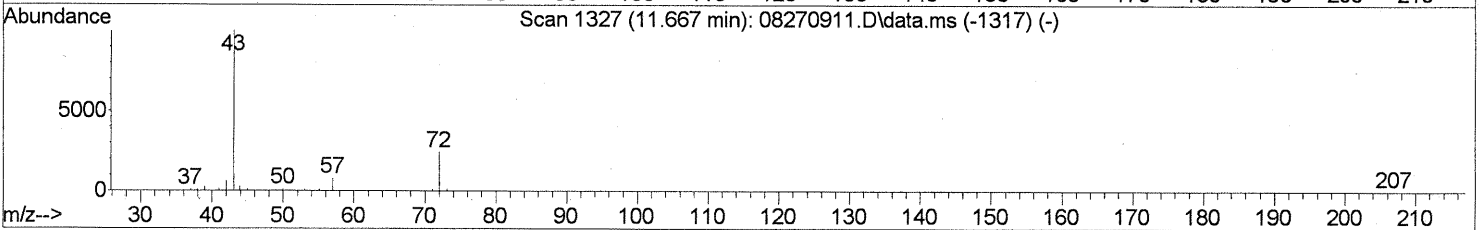
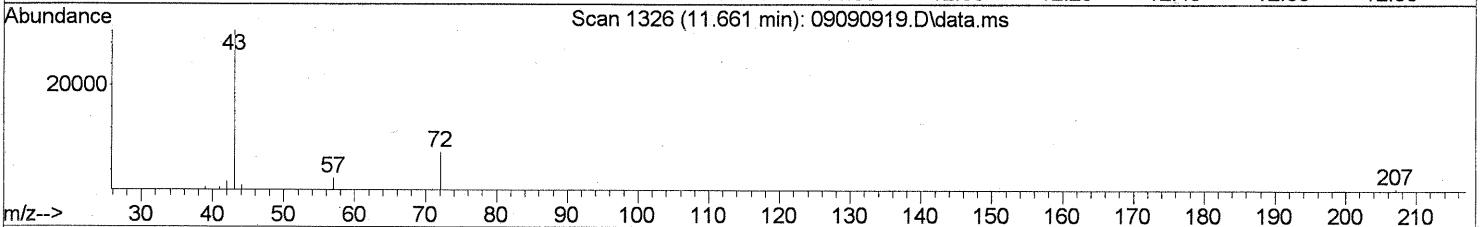
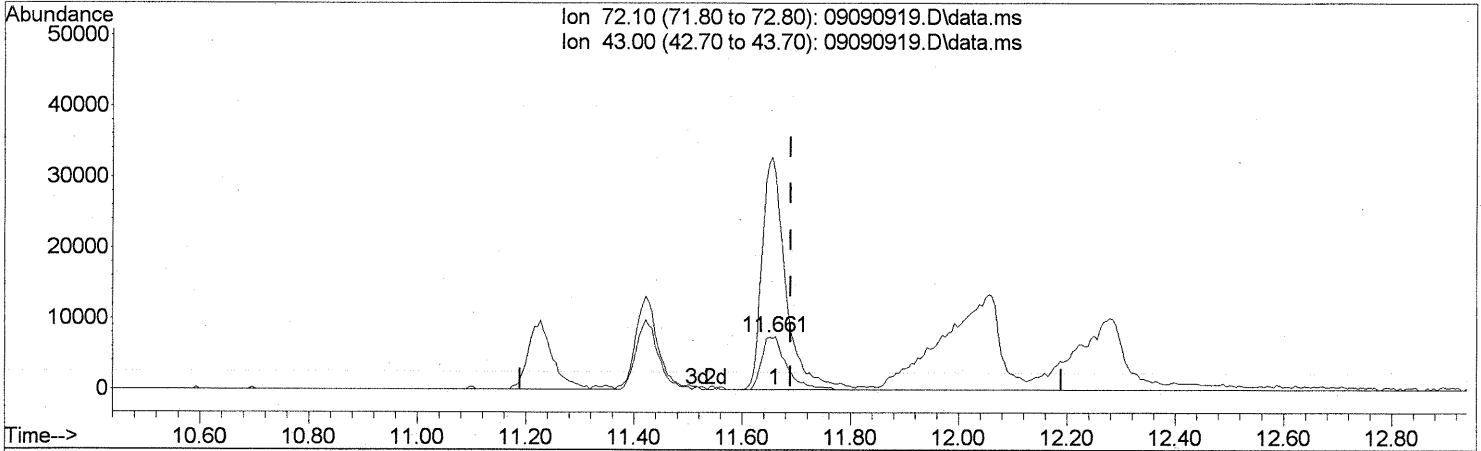
Ion	Exp%	Act%
45.10	100	100
43.00	18.70	18.75
0.00	0.00	0.00
0.00	0.00	0.00

*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

(27) 2-Butanone (MEK) (T)

11.661min (-0.029) 2.94ng

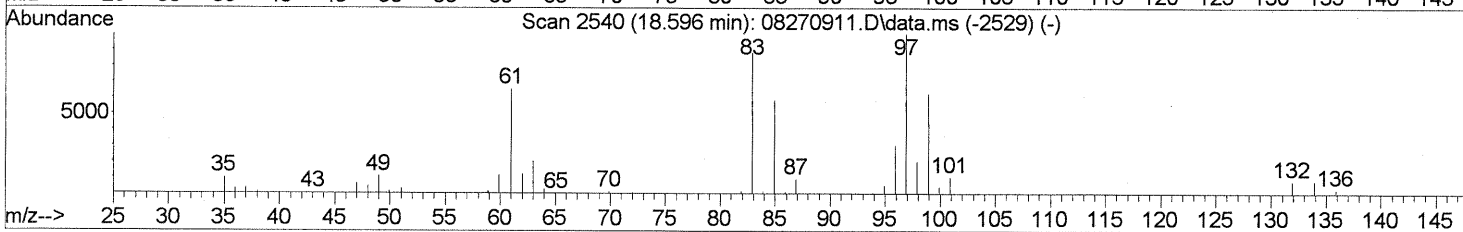
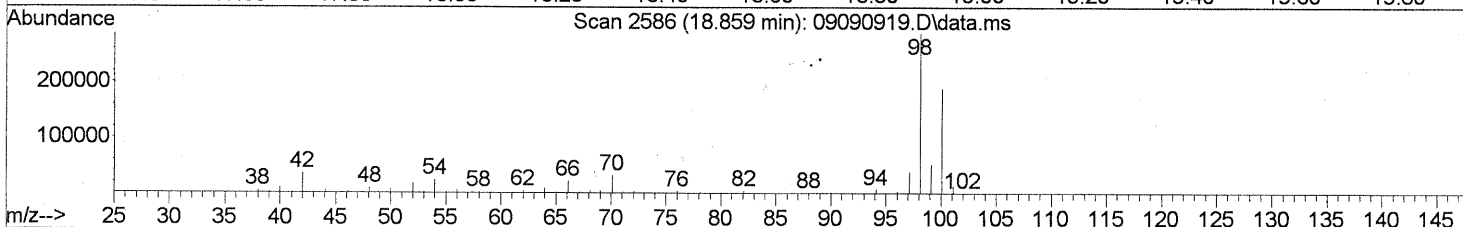
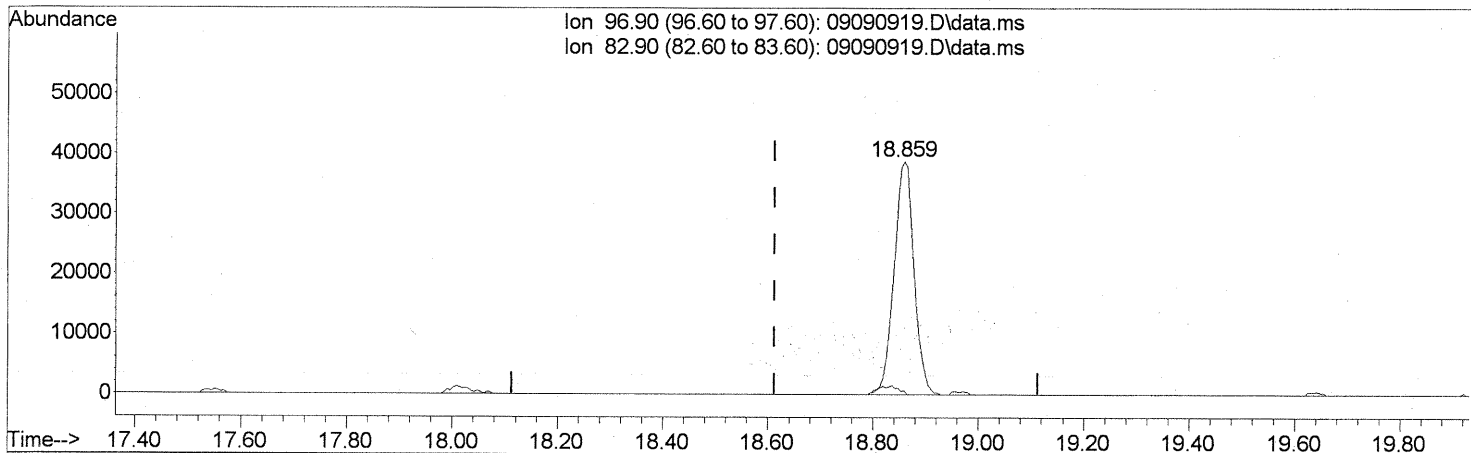
response 23397

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	426.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.859min (+0.246) 8.68ng

response 101787

Ion	Exp%	Act%
96.90	100	100
82.90	87.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

FP  
 10/15/09

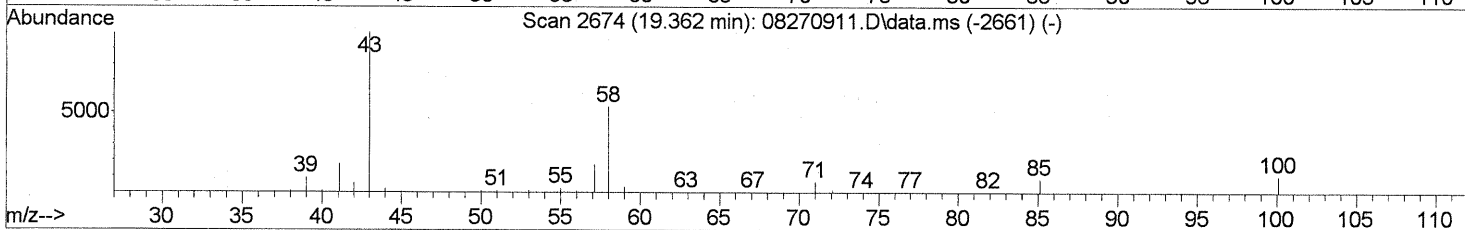
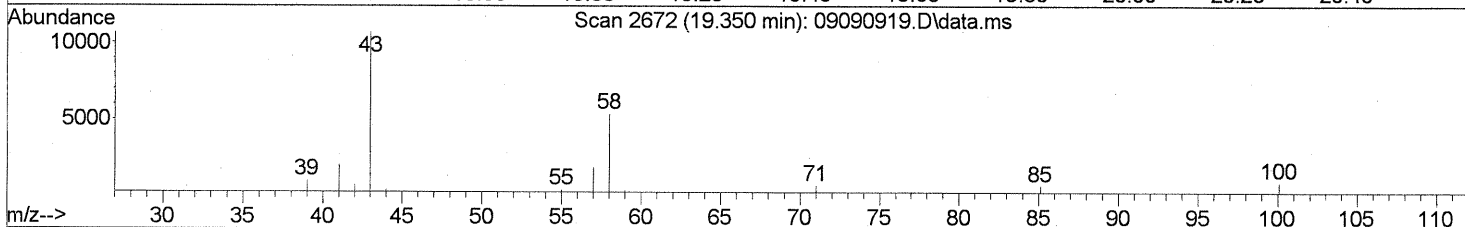
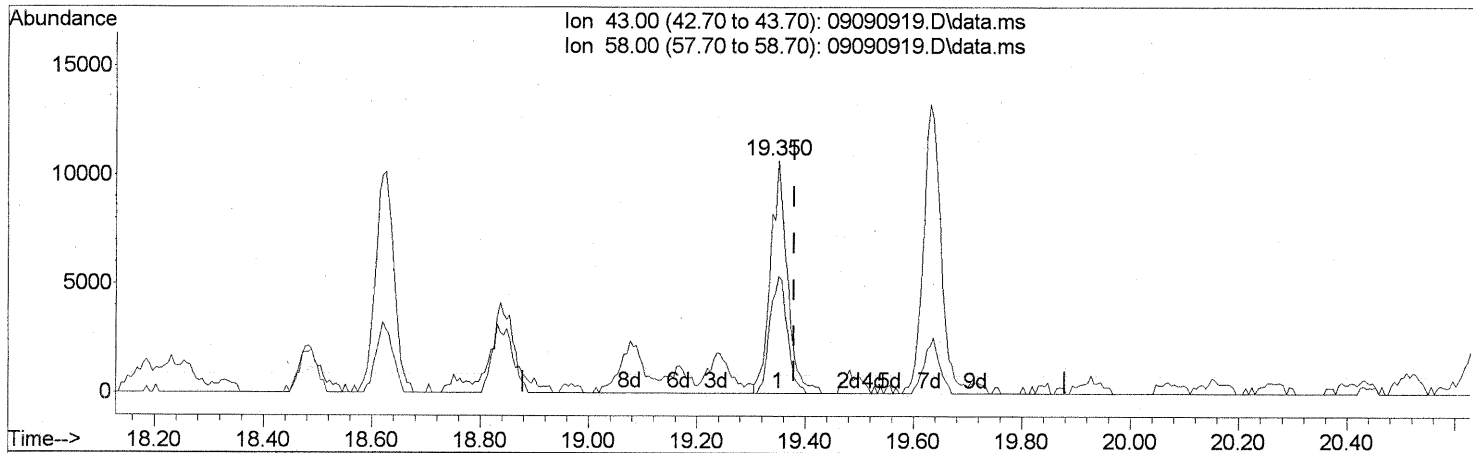
9/16/09



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090919.D  
 Acq On : 9 Sep 2009 22:10  
 Operator : LM/CC  
 Sample : P0903114-001 (1000ml)  
 Misc : EH&E 104895  
 ALS Vial : 9 Sample Multiplier: 1

Quant Time: Sep 10 08:30:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090919.D\data.ms

(59) 2-Hexanone (T)  
 19.350min (-0.029) 0.72ng  
 response 22889

Ion	Exp%	Act%
43.00	100	100
58.00	51.70	51.84
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104896  
**Client Project ID:** 16512  
  
**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Liliana Marghitoiu  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** AC01668

**CAS Project ID:** P0903114  
**CAS Sample ID:** P0903114-002

**Date Collected:** 9/2/09  
**Date Received:** 9/3/09  
**Date Analyzed:** 9/9/09  
**Volume(s) Analyzed:** 1.00 Liter(s)

**Initial Pressure (psig):** 0.4      **Final Pressure (psig):** 3.5

**Canister Dilution Factor:** 1.21

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.12	ND	0.031	
141-78-6	Ethyl Acetate	8.8	0.61	2.4	0.17	
110-54-3	n-Hexane	14	0.61	3.9	0.17	
67-66-3	Chloroform	0.85	0.12	0.17	0.025	
109-99-9	Tetrahydrofuran (THF)	1.0	0.61	0.34	0.21	
107-06-2	1,2-Dichloroethane	2.3	0.12	0.57	0.030	
71-55-6	1,1,1-Trichloroethane	1.3	0.12	0.24	0.022	
71-43-2	Benzene	0.54	0.12	0.17	0.038	
56-23-5	Carbon Tetrachloride	0.77	0.12	0.12	0.019	
110-82-7	Cyclohexane	2.7	0.61	0.80	0.18	
78-87-5	1,2-Dichloropropane	ND	0.12	ND	0.026	
75-27-4	Bromodichloromethane	0.13	0.12	0.020	0.018	
79-01-6	Trichloroethene	ND	0.12	ND	0.023	
123-91-1	1,4-Dioxane	ND	0.61	ND	0.17	
80-62-6	Methyl Methacrylate	ND	0.61	ND	0.15	
142-82-5	n-Heptane	1.1	0.61	0.27	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.61	ND	0.13	
108-10-1	4-Methyl-2-pentanone	0.61	0.61	0.15	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.61	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	28	0.61	7.3	0.16	
591-78-6	2-Hexanone	1.8	0.61	0.44	0.15	
124-48-1	Dibromochloromethane	ND	0.12	ND	0.014	
106-93-4	1,2-Dibromoethane	ND	0.12	ND	0.016	
123-86-4	n-Butyl Acetate	2.4	0.61	0.50	0.13	

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: \_\_\_\_\_

Date: \_\_\_\_\_

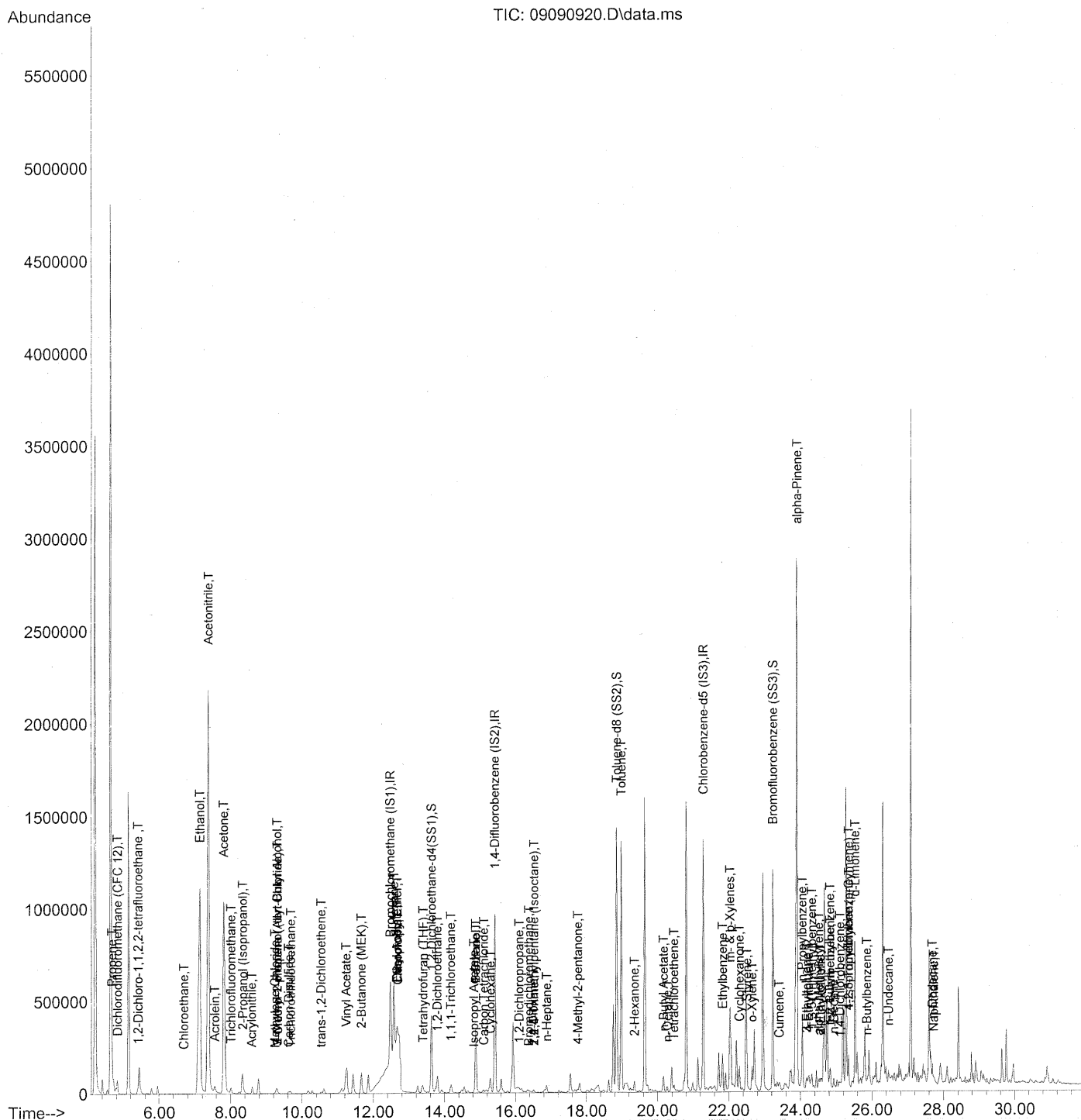
9/17/09

**23**



Data Path : J:\MS13\DATA\2009\_09\09\  
Data File : 09090920.D  
Acq On : 9 Sep 2009 10:51 pm  
Operator : LM/CC  
Sample : P0903114-002 (1000ml)  
Misc : EH&E 104896  
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 15 16:10:00 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Fri Aug 28 06:02:46 2009  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 10:51 pm  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 15 16:10:00 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*179/15/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	220023	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1112728	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	562782	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.63	65	429097	24.610	ng	-0.02
Spiked Amount	25.000			Recovery =	98.44%	✓
57) Toluene-d8 (SS2)	18.85	98	1219839	24.253	ng	-0.01
Spiked Amount	25.000			Recovery =	97.00%	✓
73) Bromofluorobenzene (SS3)	23.23	174	381641	26.365	ng	-0.01
Spiked Amount	25.000			Recovery =	105.44%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	<u>4.67</u>	42	33304m	<u>2.093 ng</u>		
3) Dichlorodifluoromethan...	<u>4.82</u>	85	65922	<u>2.366 ng</u>		100
4) Chloromethane	0.00	50	0	N.D.	d	
5) 1,2-Dichloro-1,1,2,2-t...	5.40	135	953	<u>0.083 ng</u>	#	43
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.87	54	523	N.D.		
8) Bromomethane	6.36	94	309	N.D.		
9) Chloroethane	<u>6.69</u>	64	539	<u>0.056 ng</u>	#	42
10) Ethanol	<u>7.14</u>	45	2826210	<u>286.377 ng</u>		99
11) Acetonitrile	<u>7.38</u>	41	3942077	<u>143.809 ng</u>	F	100
12) Acrolein	<u>7.55</u>	56	42734	<u>5.671 ng</u>		98
13) Acetone	<u>7.81</u>	58	718933	<u>70.442 ng</u>		88
14) Trichlorofluoromethane	<u>8.01</u>	101	28836	<u>1.174 ng</u>		96
15) 2-Propanol (Isopropanol)	<u>8.33</u>	45	236607	<u>6.973 ng</u>		100
16) Acrylonitrile	8.58	53	1659	<u>0.098 ng</u>	#	33
17) 1,1-Dichloroethene	9.04	96	265	N.D.		
18) 2-Methyl-2-Propanol (t...	9.30	59	10732	0.316	ng #	73
19) Methylene Chloride	9.24	84	4007	<u>0.310 ng</u>		99
20) 3-Chloro-1-propene (Al...	9.31	41	3284	<u>0.163 ng</u>	FP #	41
21) Trichlorotrifluoroethane	<u>9.68</u>	151	5318	<u>0.547 ng</u>		98
22) Carbon Disulfide	<u>9.62</u>	76	27615	<u>0.600 ng</u>		95
23) trans-1,2-Dichloroethene	10.53	61	1057	<u>0.057 ng</u>	#	19
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	11.18	73	101	N.D.		
26) Vinyl Acetate	<u>11.23</u>	86	24525	<u>9.589 ng</u>	#	69
27) 2-Butanone (MEK)	<u>11.66</u>	72	51343	<u>6.228 ng</u>		98
28) cis-1,2-Dichloroethene	12.18	61	397	N.D.		
29) Diisopropyl Ether	12.67	87	1502	0.125	ng #	1
30) Ethyl Acetate	<u>12.66</u>	61	32215	<u>7.272 ng</u>	#	60
31) n-Hexane	<u>12.58</u>	57	251135	<u>11.380 ng</u>		98

*TT FP 179/16/09*

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 10:51 pm  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 15 16:10:00 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	15217	0.700	ng	97
34) Tetrahydrofuran (THF)	13.39	72	7494	0.838	ng #	1
35) Ethyl tert-Butyl Ether	13.44	87	108	N.D.		
36) 1,2-Dichloroethane	13.79	62	34533	1.892	ng	100
38) 1,1,1-Trichloroethane	14.17	97	22693	1.103	ng	96
39) Isopropyl Acetate	14.82	61	1584	0.187	ng #	1
40) 1-Butanol	14.87	56	277224	20.016	ng #	42
41) Benzene	14.87	78	23360	0.447	ng	94
42) Carbon Tetrachloride	15.10	117	11187	0.637	ng	96
43) Cyclohexane	15.29	84	43801	2.272	ng	87
44) tert-Amyl Methyl Ether	15.85	73	189	N.D.		
45) 1,2-Dichloropropane	16.09	63	1031	0.080	ng #	70
46) Bromodichloromethane	16.36	83	1862	0.108	ng	99
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.50	88	646	0.064	ng #	22
49) 2,2,4-Trimethylpentane...	16.52	57	9994	0.168	ng #	59
50) Methyl Methacrylate	16.76	100	89	N.D.		
51) n-Heptane	16.87	71	12435	0.917	ng	96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.75	58	6016m	0.504	ng	
54) trans-1,3-Dichloropropene	18.41	75	116	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.	d	
58) Toluene	18.98	91	1236905	22.834	ng	99
59) 2-Hexanone	19.35	43	48789	1.474	ng	91
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.16	43	74696	1.967	ng	95
63) n-Octane	20.26	57	6956	0.558	ng	99
64) Tetrachloroethene	20.46	166	10307	0.751	ng	100
65) Chlorobenzene	21.34	112	577	N.D.		
66) Ethylbenzene	21.82	91	176129	2.843	ng	99
67) m- & p-Xylenes	22.03	91	462994	9.386	ng	98
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.50	104	85563	2.356	ng	97
70) o-Xylene	22.65	91	82115	1.657	ng	100
71) n-Nonane	0.00	43	0	N.D.	d	
72) 1,1,2,2-Tetrachloroethane	22.62	83	1091	N.D.		
74) Cumene	23.41	105	7651	0.122	ng	88
75) alpha-Pinene	23.90	93	1368465	42.013	ng	93
76) n-Propylbenzene	24.05	91	18281	0.229	ng #	1
77) 3-Ethyltoluene	24.17	105	21381	0.356	ng	97
78) 4-Ethyltoluene	24.22	105	11168	0.188	ng	98
79) 1,3,5-Trimethylbenzene	24.31	105	9642	0.195	ng	98

27

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 10:51 pm  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 15 16:10:00 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	7422	0.286	ng	# 70
81) 2-Ethyltoluene	24.55	105	10700	0.174	ng	99
82) 1,2,4-Trimethylbenzene	24.82	105	32679	0.649	ng	89
83) n-Decane	24.93	57	22313	0.742	ng	93
84) Benzyl Chloride	25.06	91	665	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
86) 1,4-Dichlorobenzene	25.10	146	4362	0.154	ng	97
87) sec-Butylbenzene	25.15	105	3380	N.D.		
88) 4-Isopropyltoluene (p-...	25.35	119	80793	1.303	ng	99
89) 1,2,3-Trimethylbenzene	25.35	105	14796	0.280	ng	# 45
90) 1,2-Dichlorobenzene	25.52	146	93	N.D.		
91) d-Limonene	25.53	68	201576	10.024	ng	80
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.46	57	23693	0.759	ng	# 69
94) 1,2,4-Trichlorobenzene	27.58	180	374	N.D.		
95) Naphthalene	27.72	128	23967	<del>0.344</del>	ng	92
96) n-Dodecane	27.69	57	32579	0.915	ng	98
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.29	55	71669	3.431	ng	95
99) tert-Butylbenzene	24.82	119	4578	0.094	ng	# 56
100) n-Butylbenzene	25.86	91	13268	0.237	ng	# 55

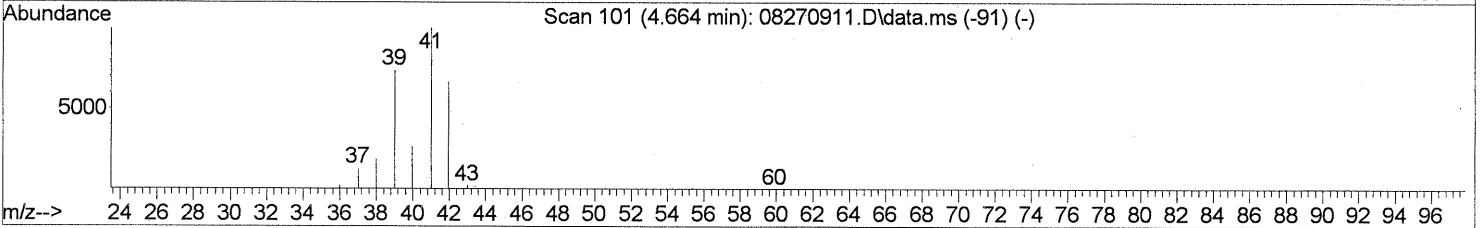
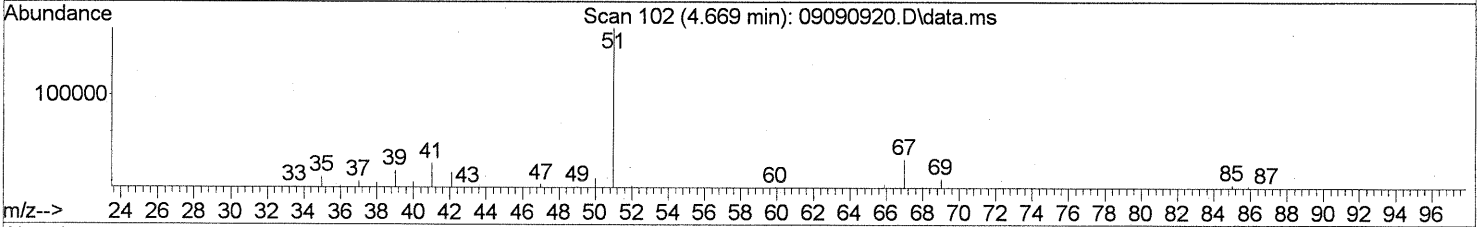
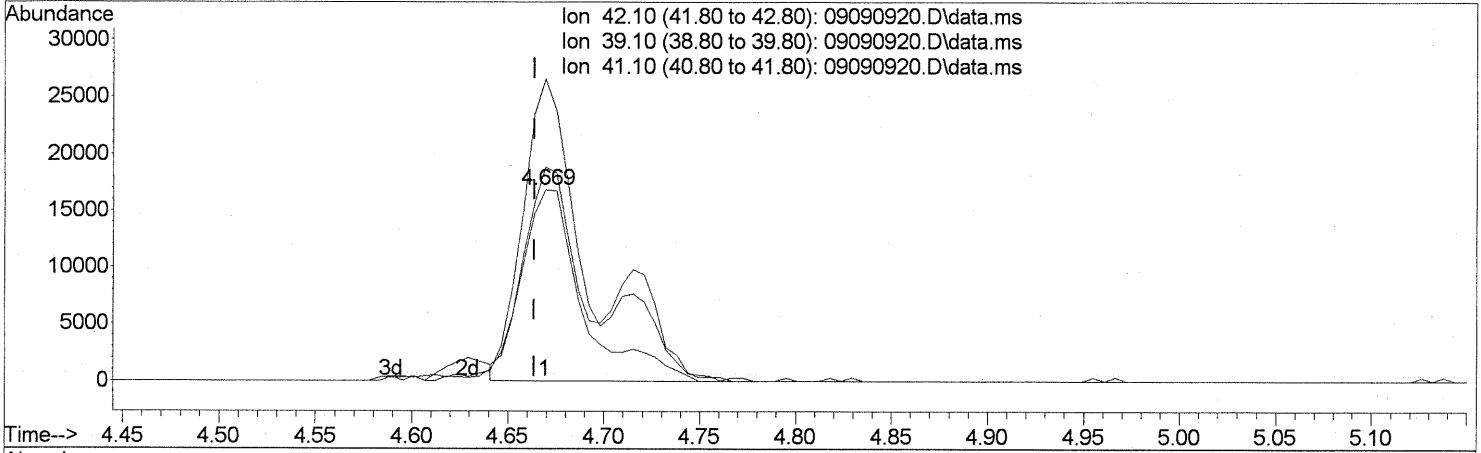
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(2) Propene (T)  
 4.669min (+0.006) 2.32ng  
 response 36908  

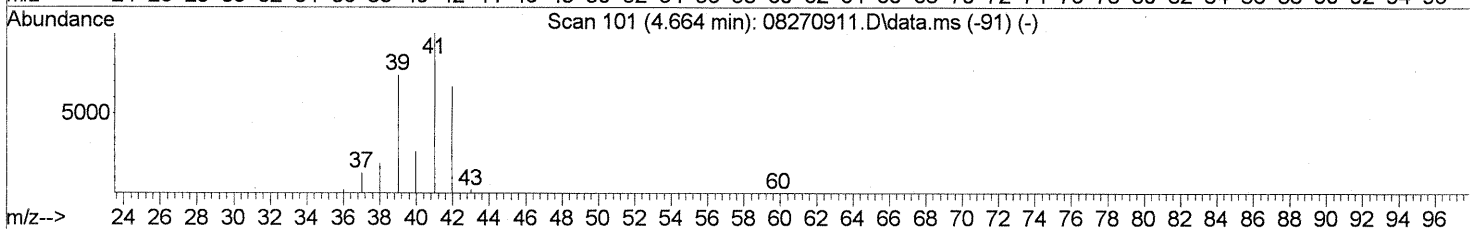
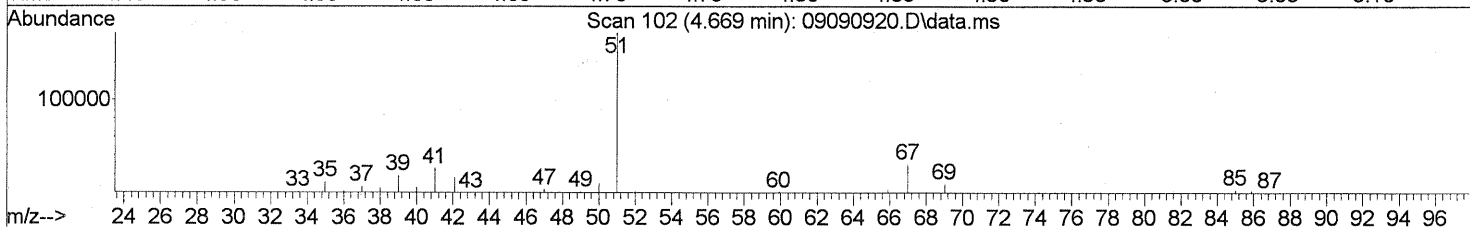
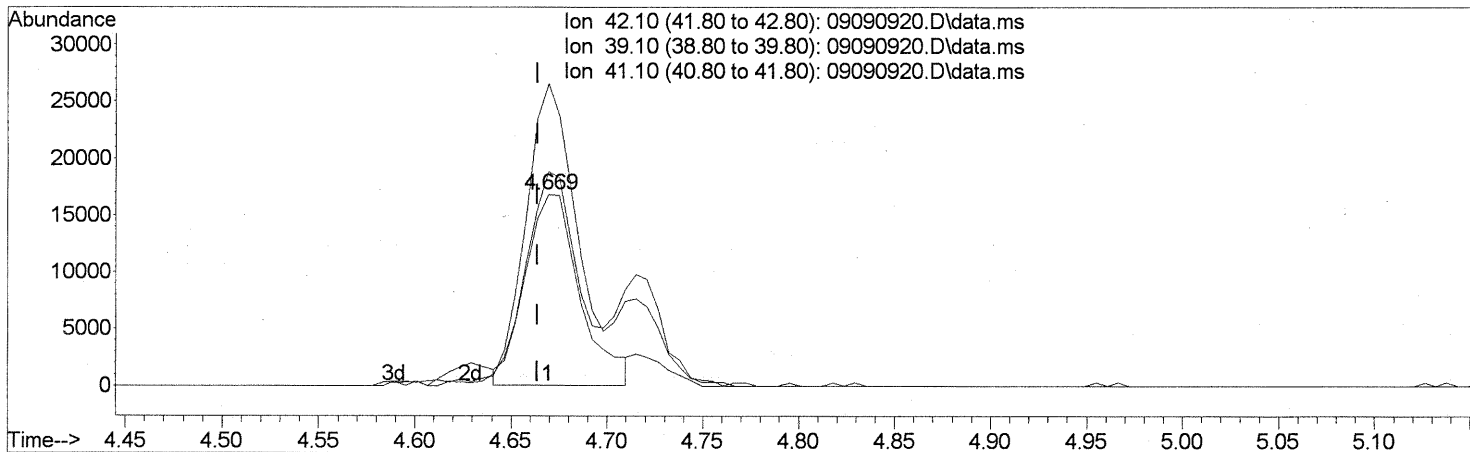
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	98.11
41.10	149.80	137.76
0.00	0.00	0.00

SM

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(2) Propene (T)  
 4.669min (+0.006) 2.09ng m  
 response 33304

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	108.73
41.10	149.80	152.66
0.00	0.00	0.00

SH → IC

m9/15/09

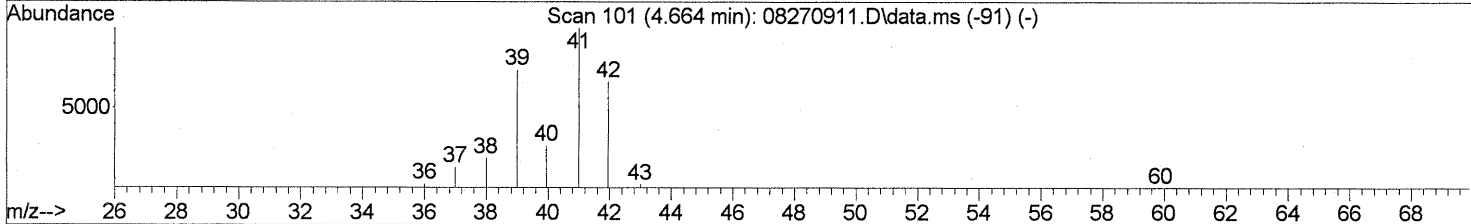
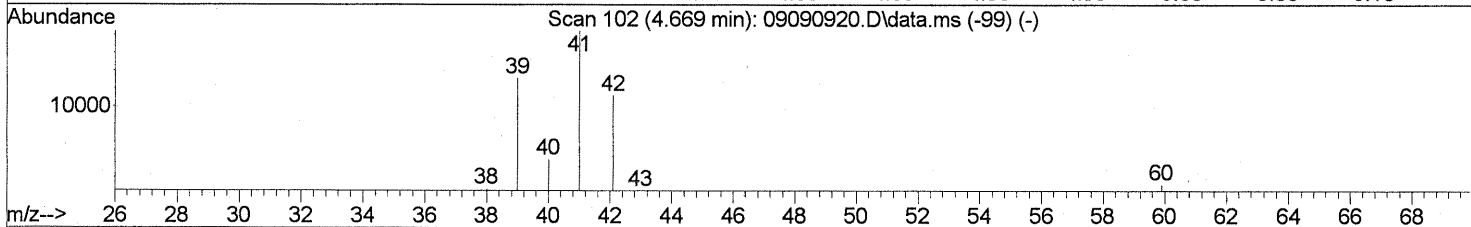
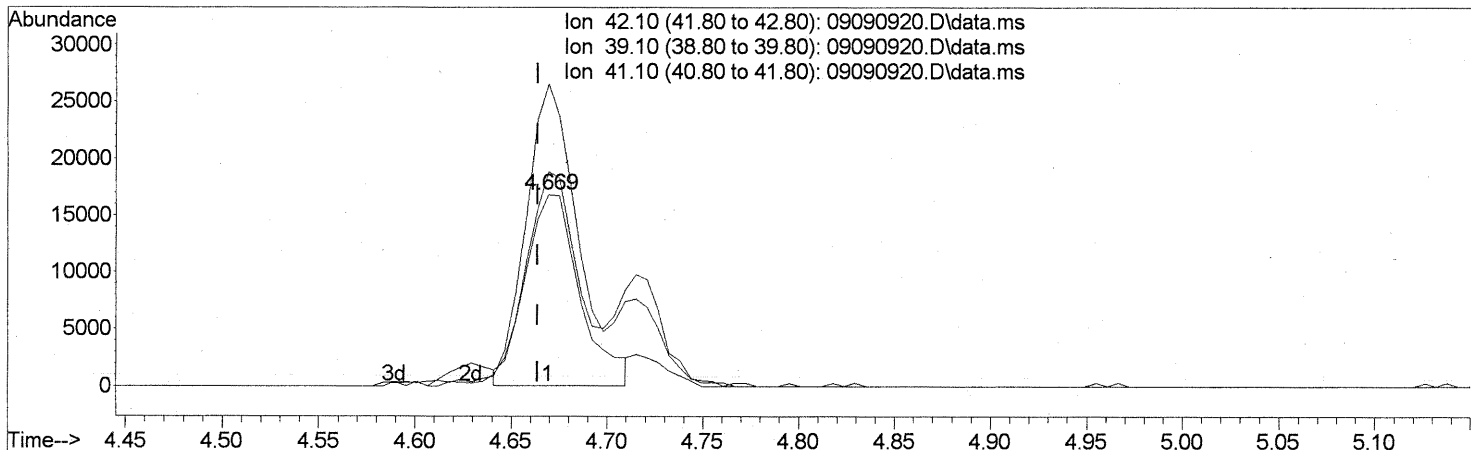
Before subdr.

9/16/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(2) Propene (T)  
 4.669min (+0.006) 2.09ng m  
 response 33304

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	108.73
41.10	149.80	152.66
0.00	0.00	0.00

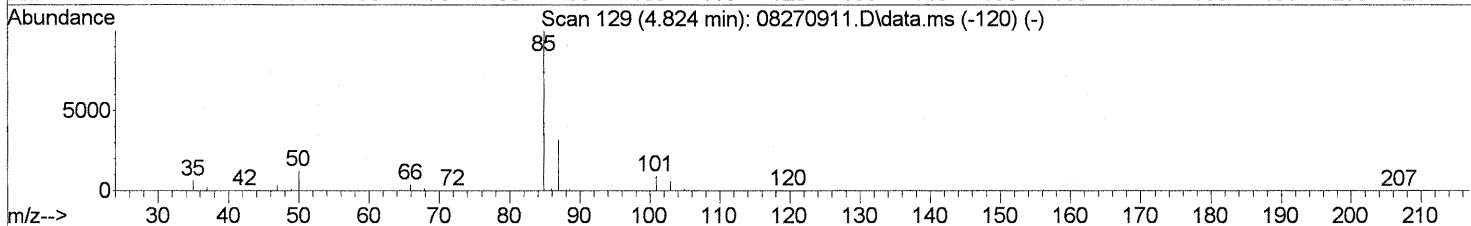
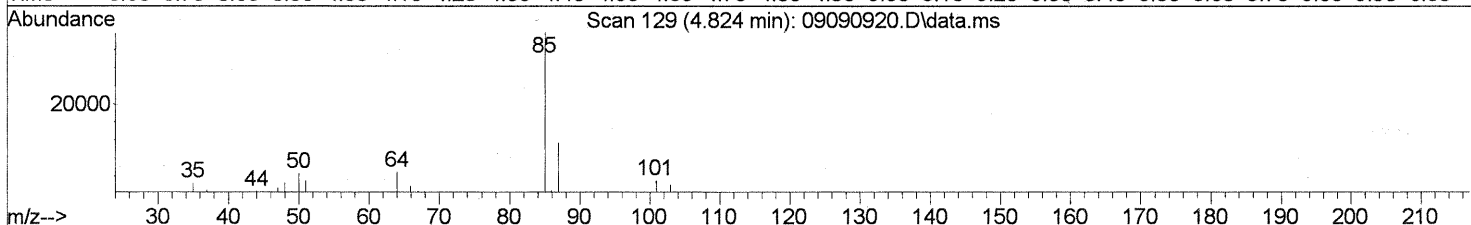
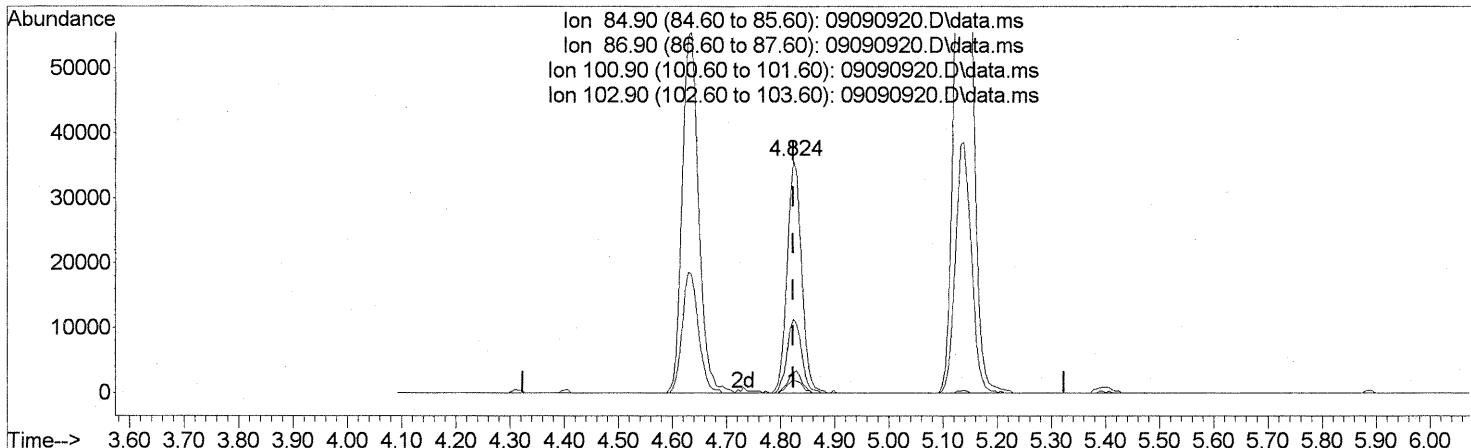
*SH -> IC  
 After subtr -  
 on 9/15/09*

*E = 9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.824min (-0.000) 2.37ng

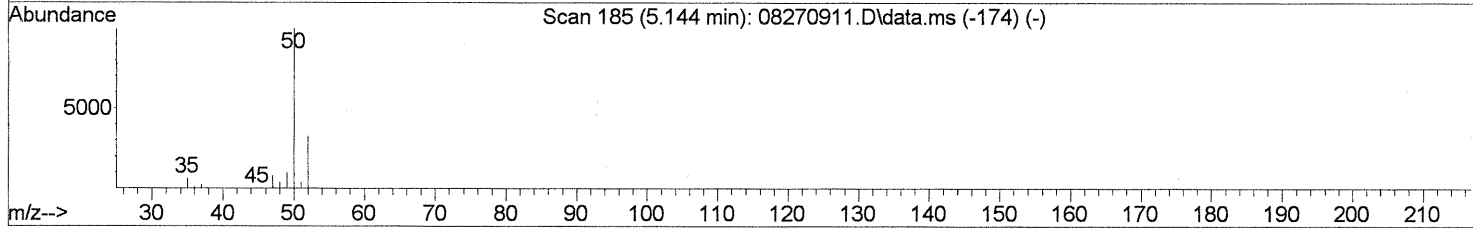
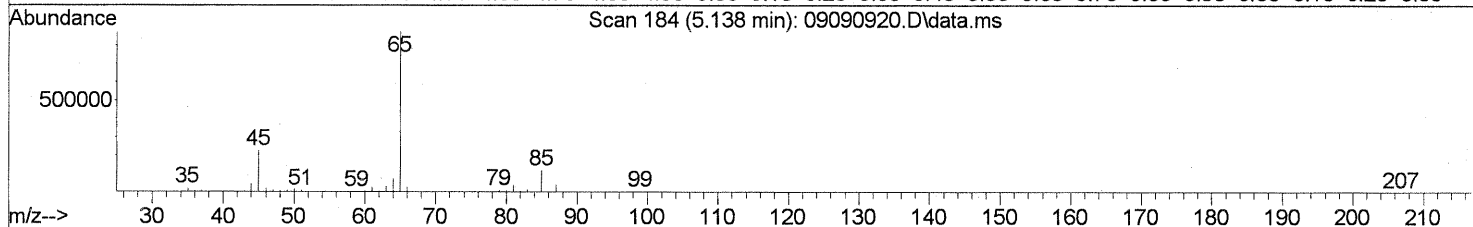
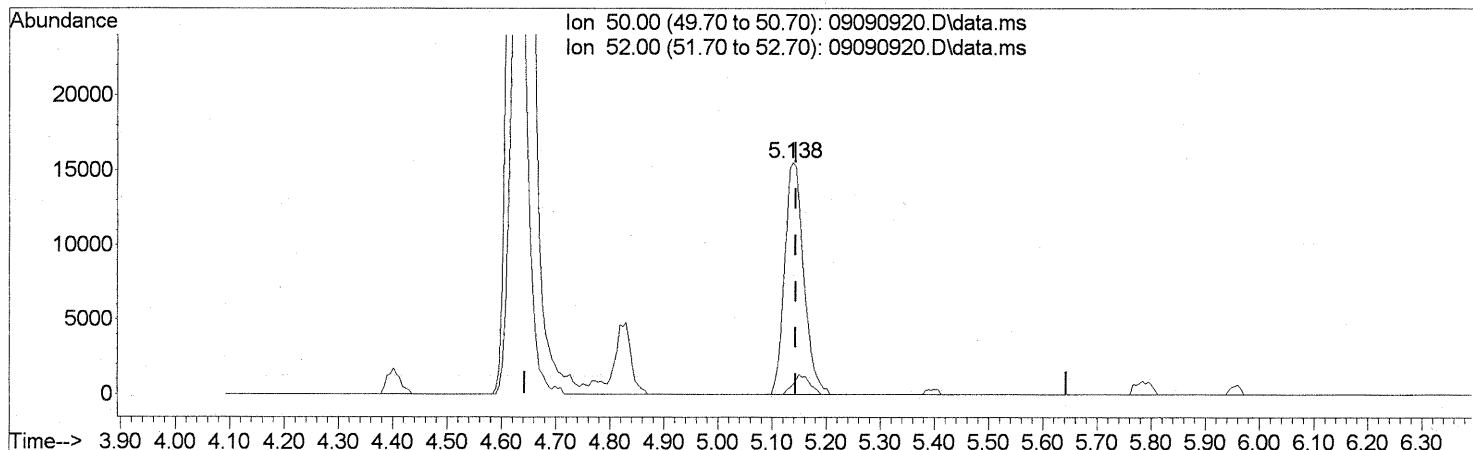
response 65922

Ion	Exp%	Act%
84.90	100	100
86.90	32.00	32.07
100.90	8.80	8.98
102.90	5.60	5.58

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(4) Chloromethane (T)  
 5.138min (-0.006) 2.03ng  
 response 38006

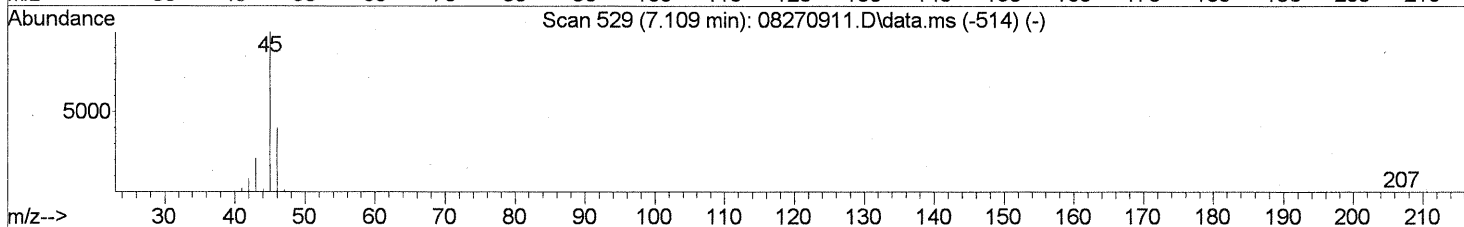
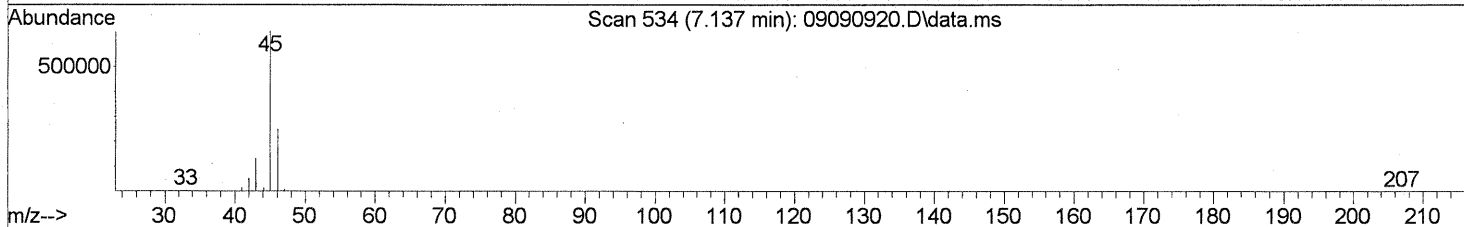
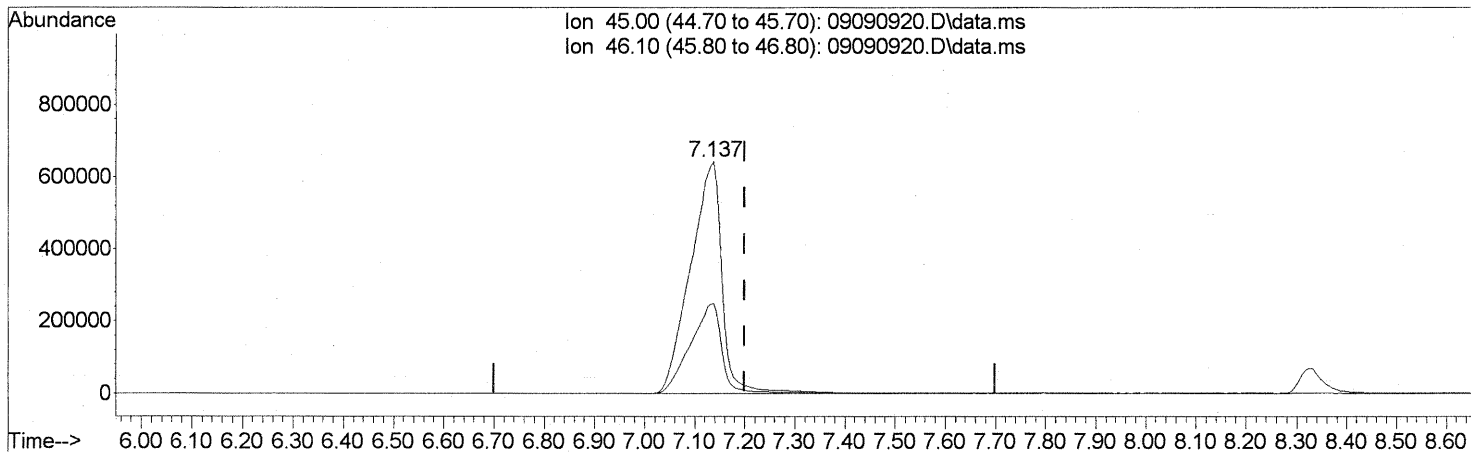
Ion	Exp%	Act%
50.00	100	100
52.00	31.60	7.33#
0.00	0.00	0.00
0.00	0.00	0.00

*FD*  
*179/11/09*  
*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

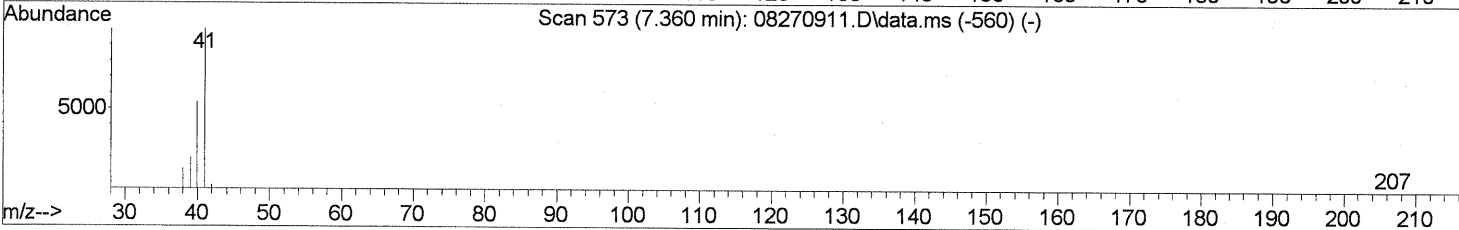
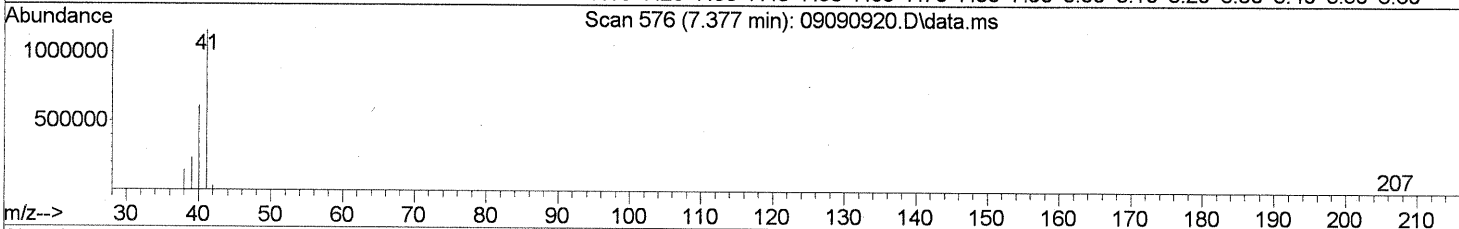
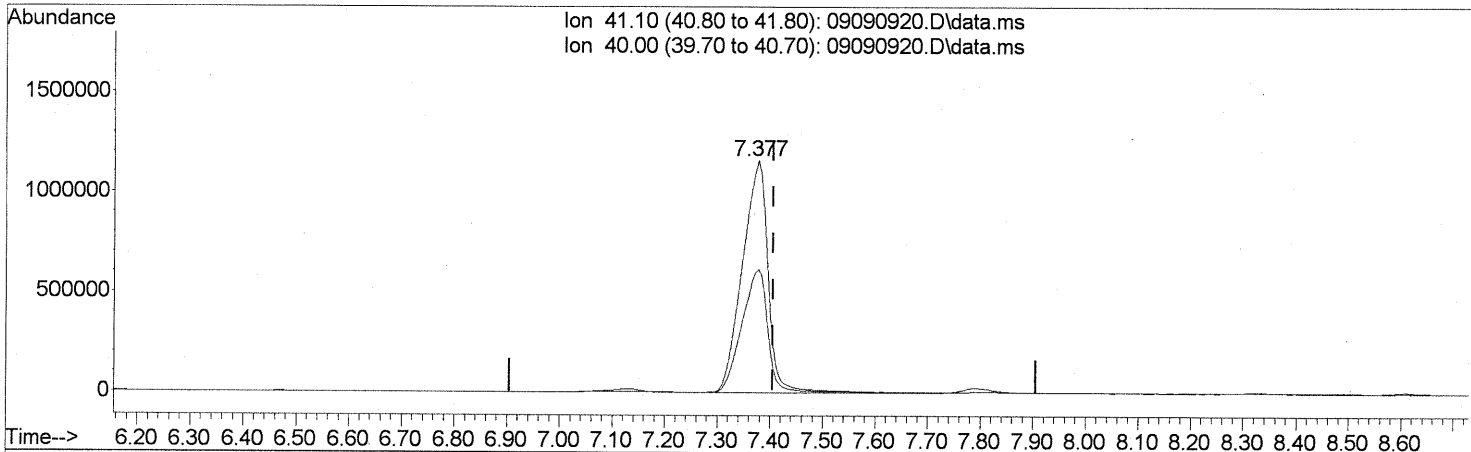
(10) Ethanol (T)  
 7.137min (-0.063) 286.38ng  
 response 2826210

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	38.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

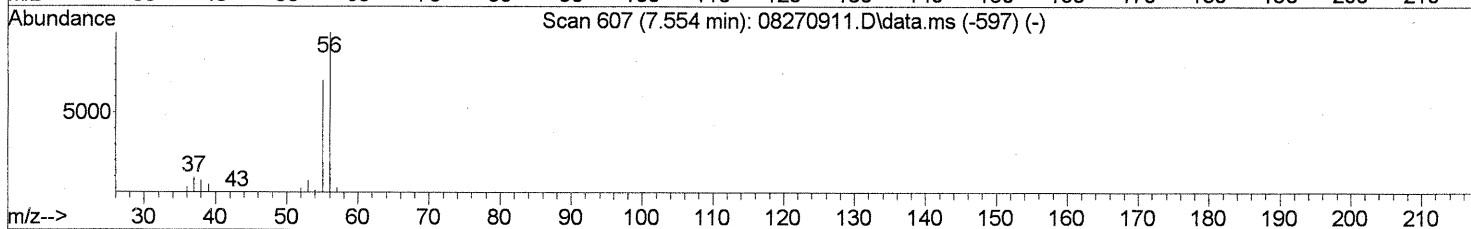
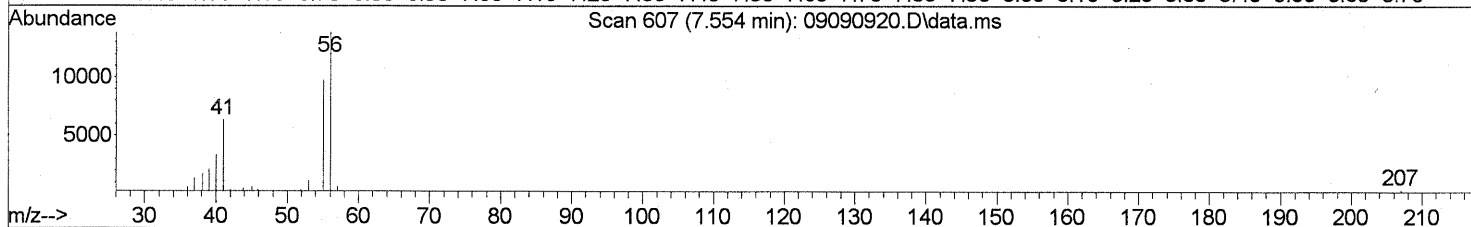
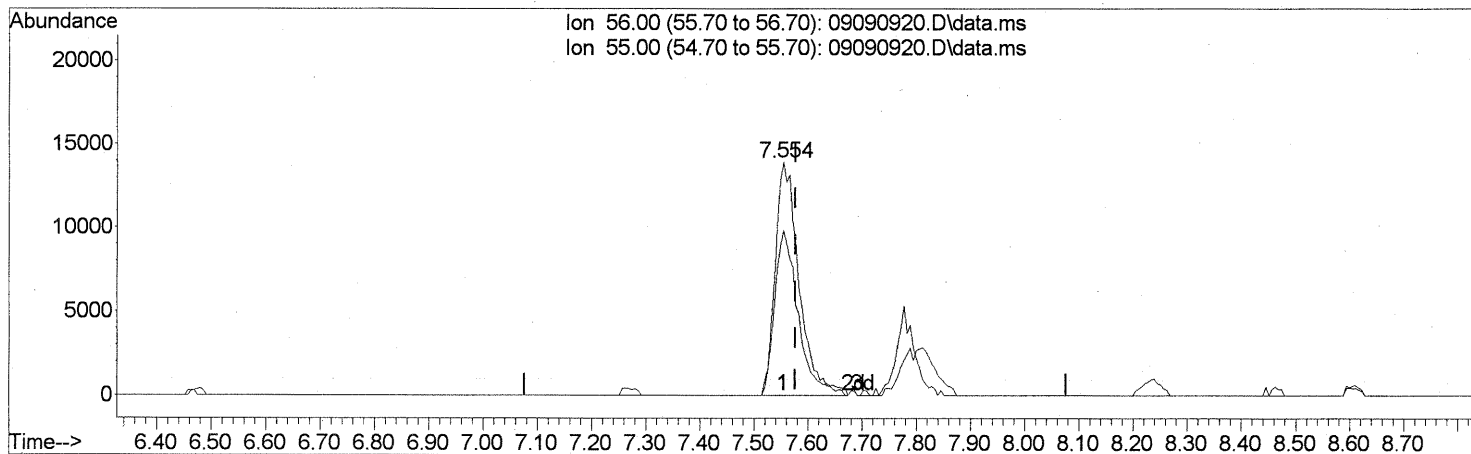
(11) Acetonitrile (T)  
 7.377min (-0.029) 143.81ng  
 response 3942077

Ion	Exp%	Act%
41.10	100	100
40.00	53.70	53.63
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(12) Acrolein (T)  
 7.554min (-0.023) 5.67ng  
 response 42734

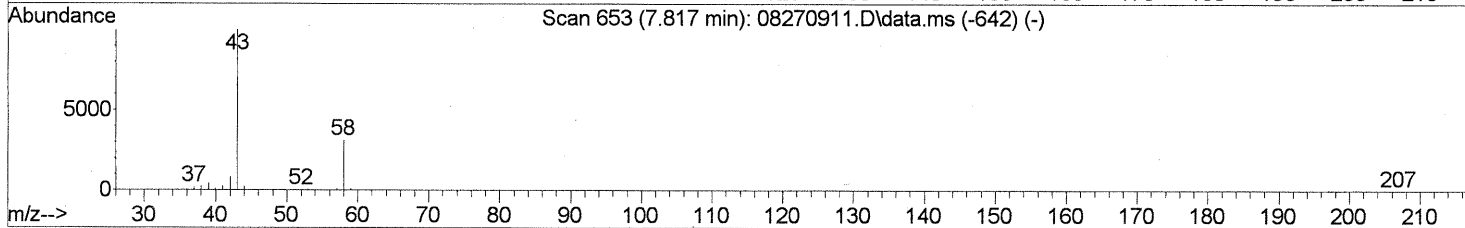
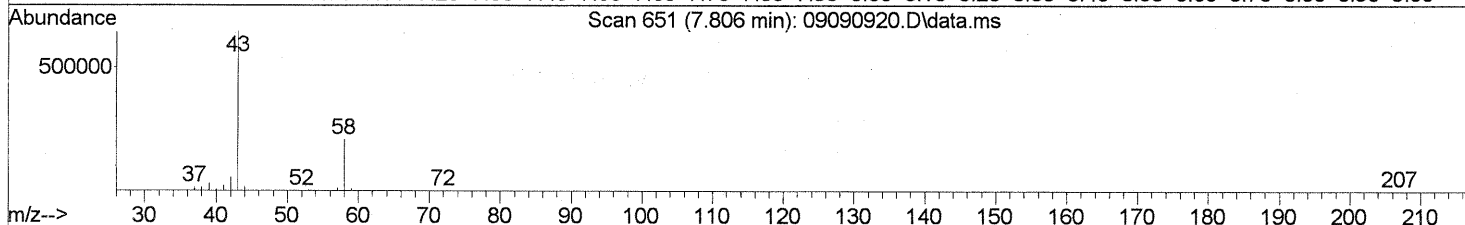
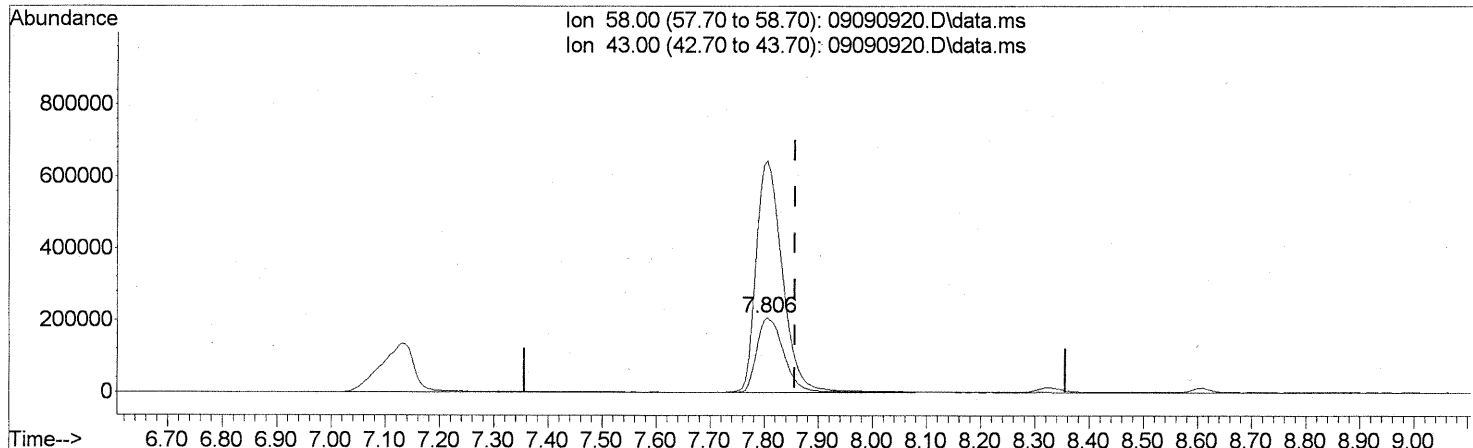
Ion	Exp%	Act%
56.00	100	100
55.00	71.10	69.28
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

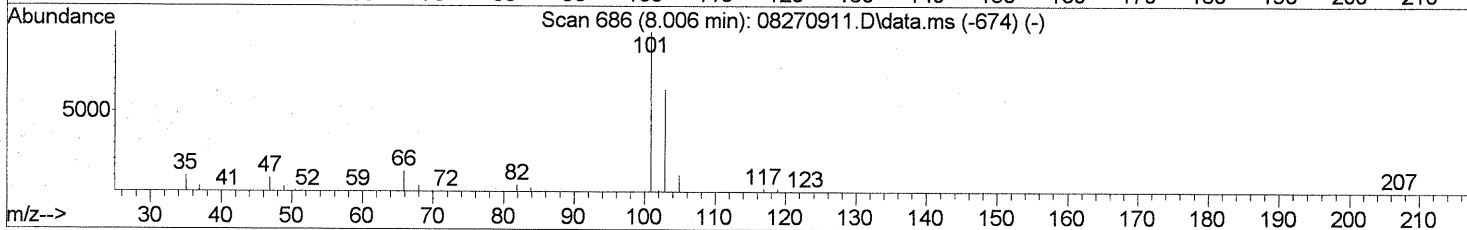
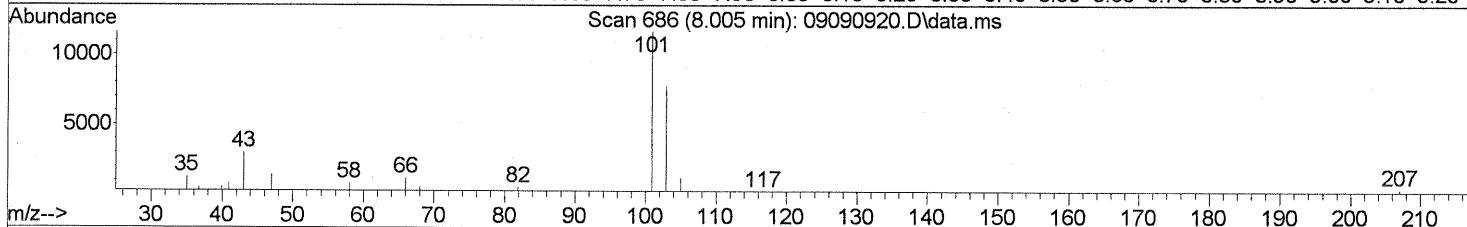
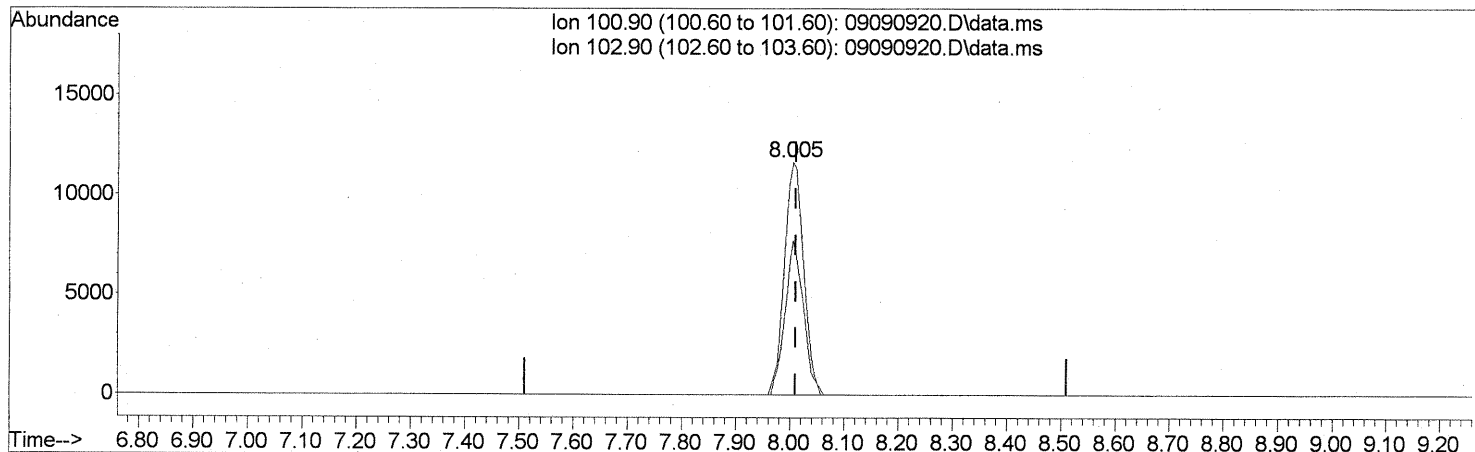
(13) Acetone (T)  
 7.806min (-0.051) 70.44ng  
 response 718933

Ion	Exp%	Act%
58.00	100	100
43.00	331.30	305.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(14) Trichlorofluoromethane (T)

8.005min (-0.006) 1.17ng

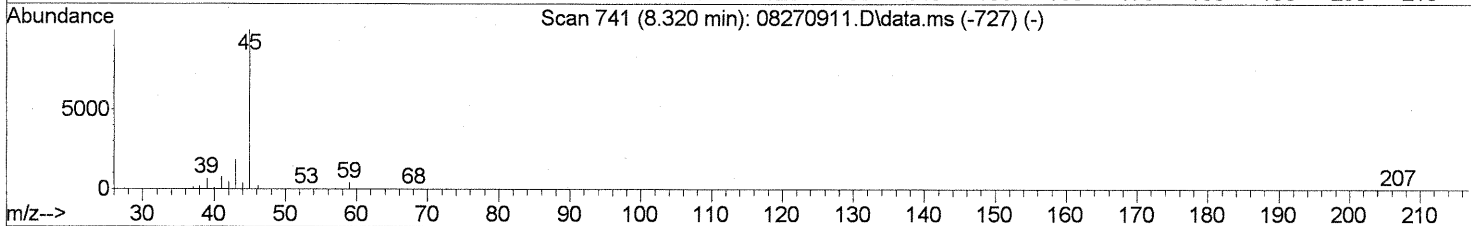
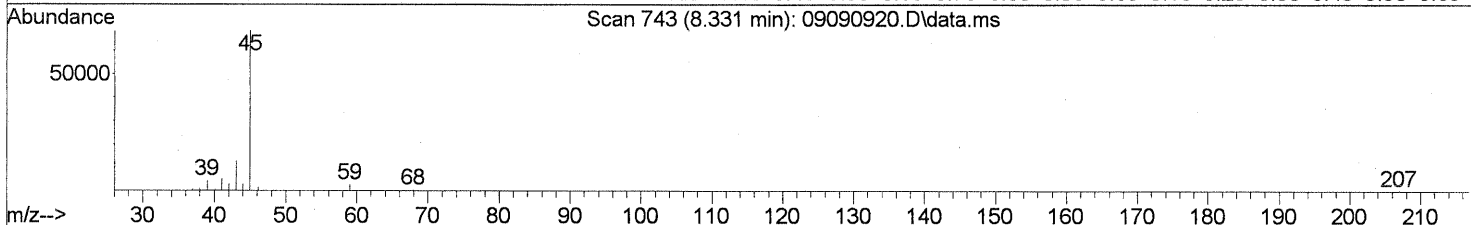
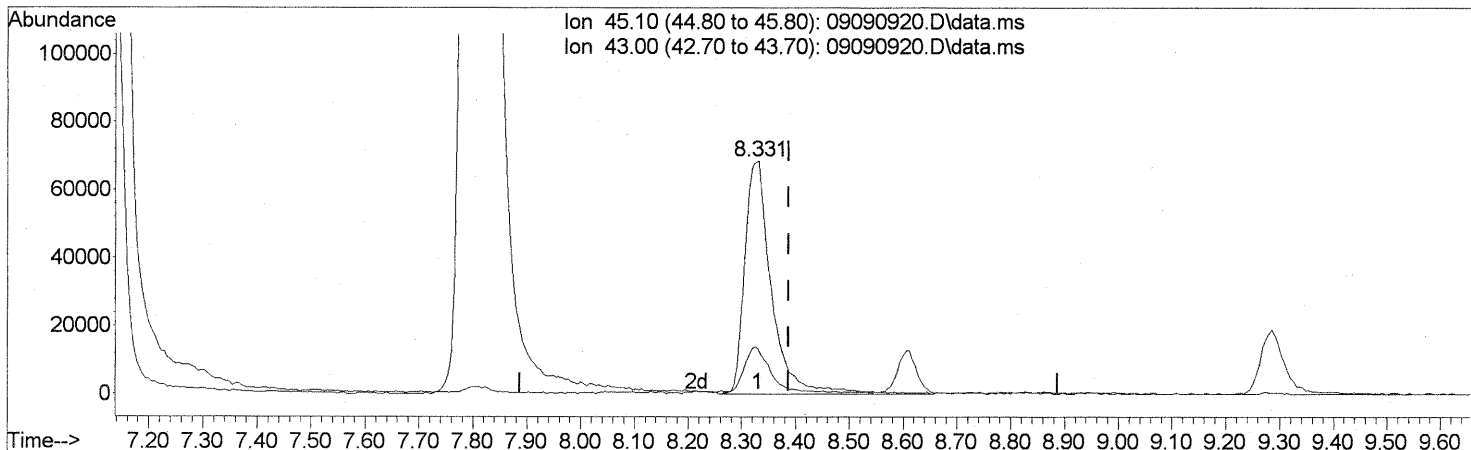
response 28836

Ion	Exp%	Act%
100.90	100	100
102.90	66.10	62.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.331min (-0.057) 6.97ng

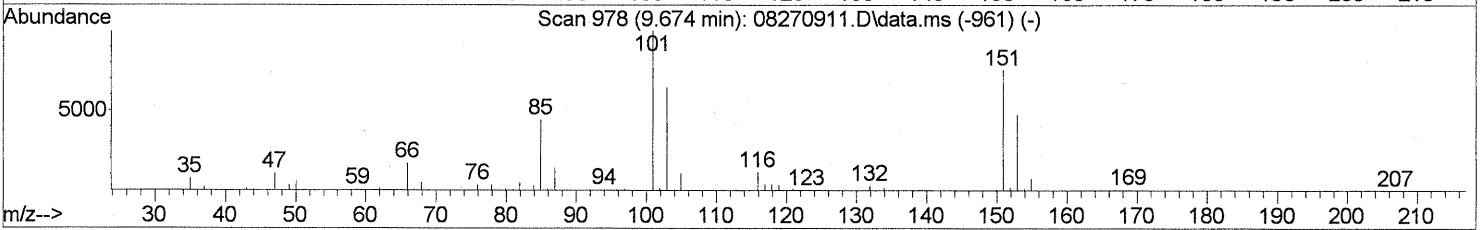
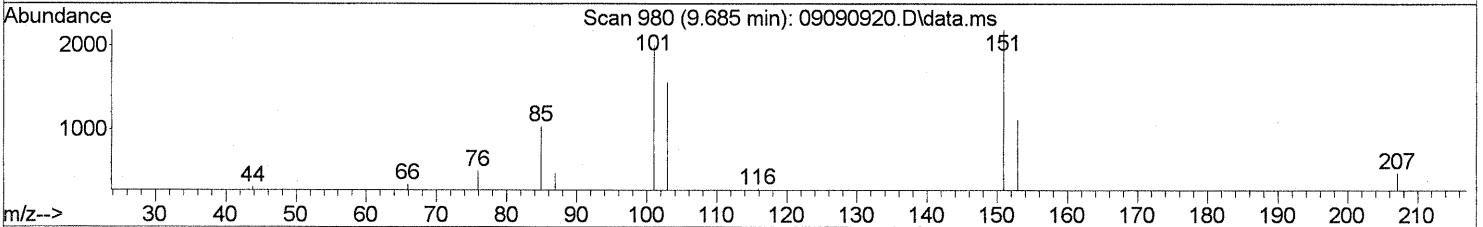
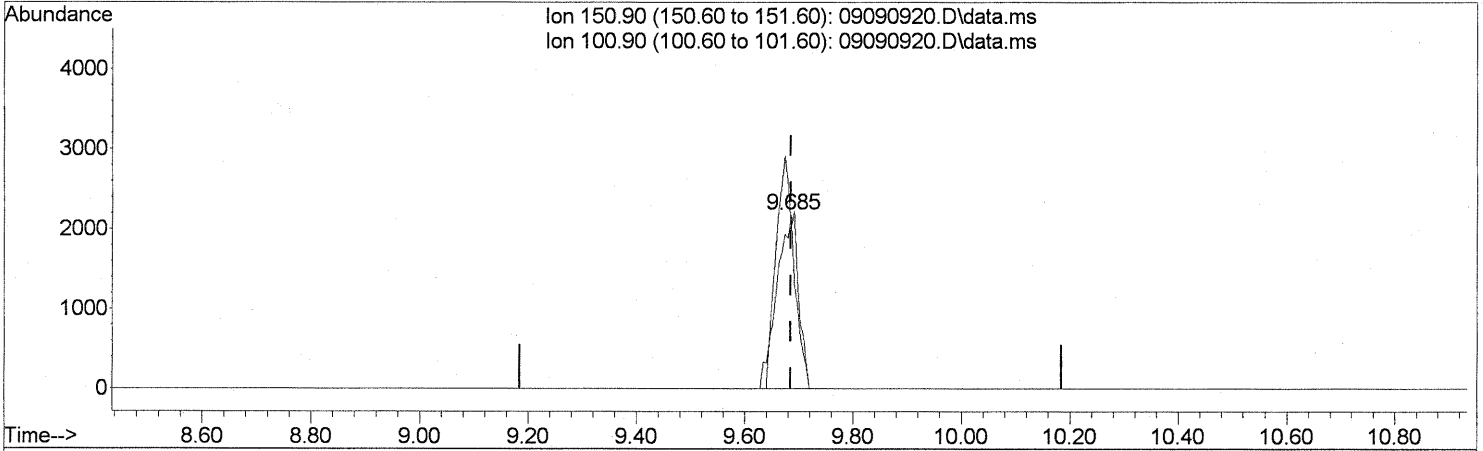
response 236607

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	18.52
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(21) Trichlorotrifluoroethane (T)

9.685min (-0.000) 0.55ng

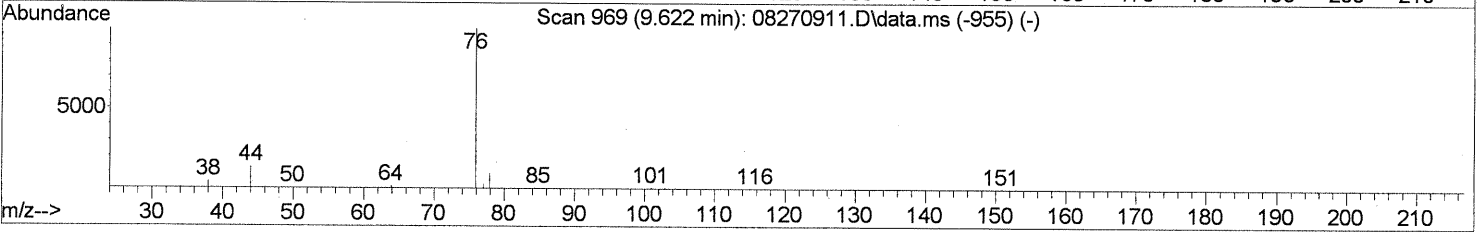
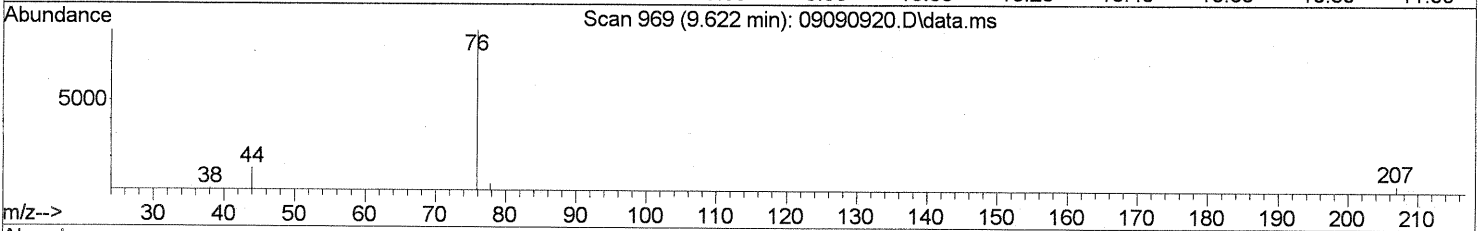
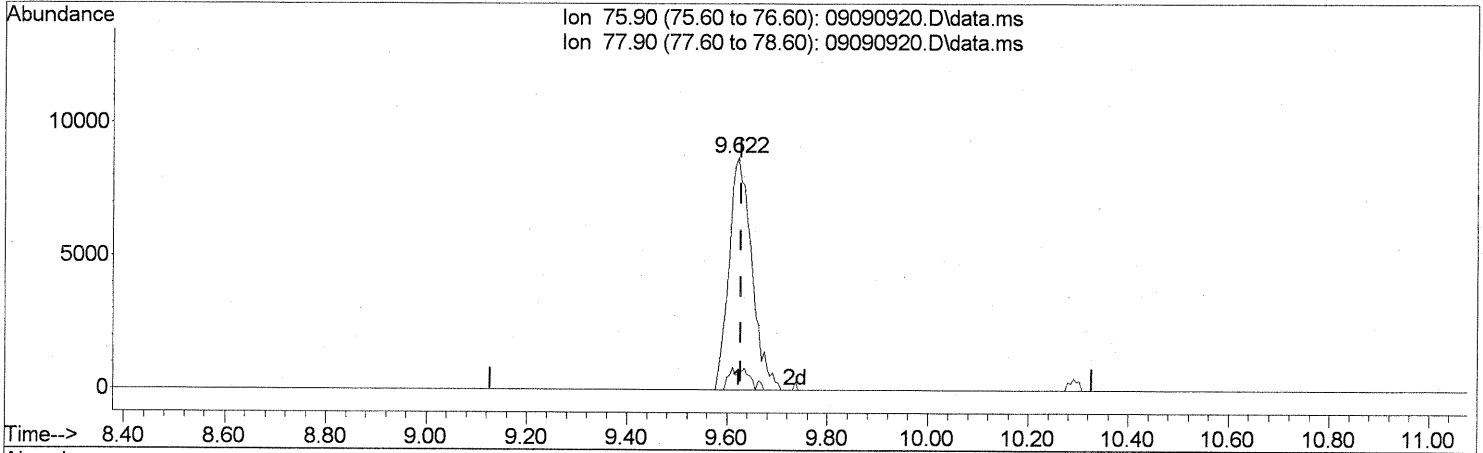
response 5318

Ion	Exp%	Act%
150.90	100	100
100.90	138.30	140.17
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(22) Carbon Disulfide (T)

9.622min (-0.006) 0.60ng

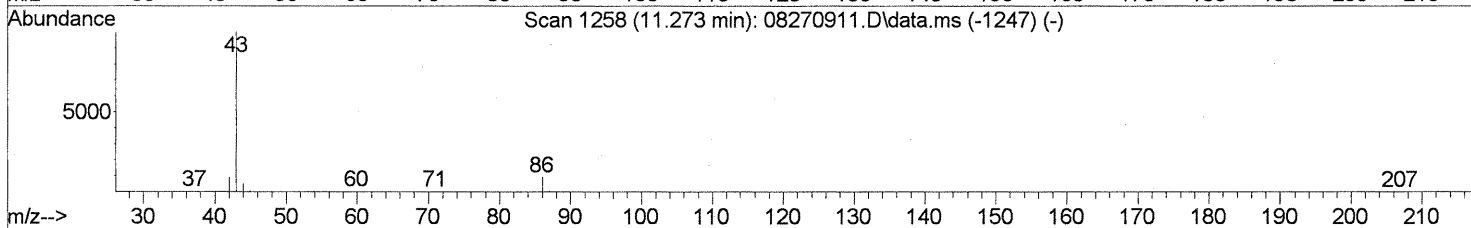
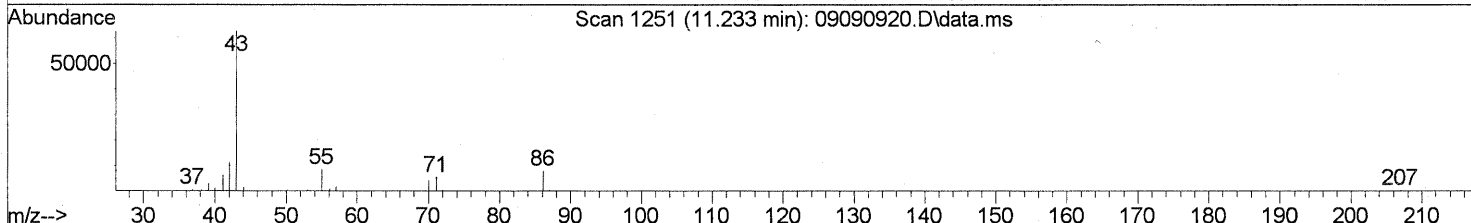
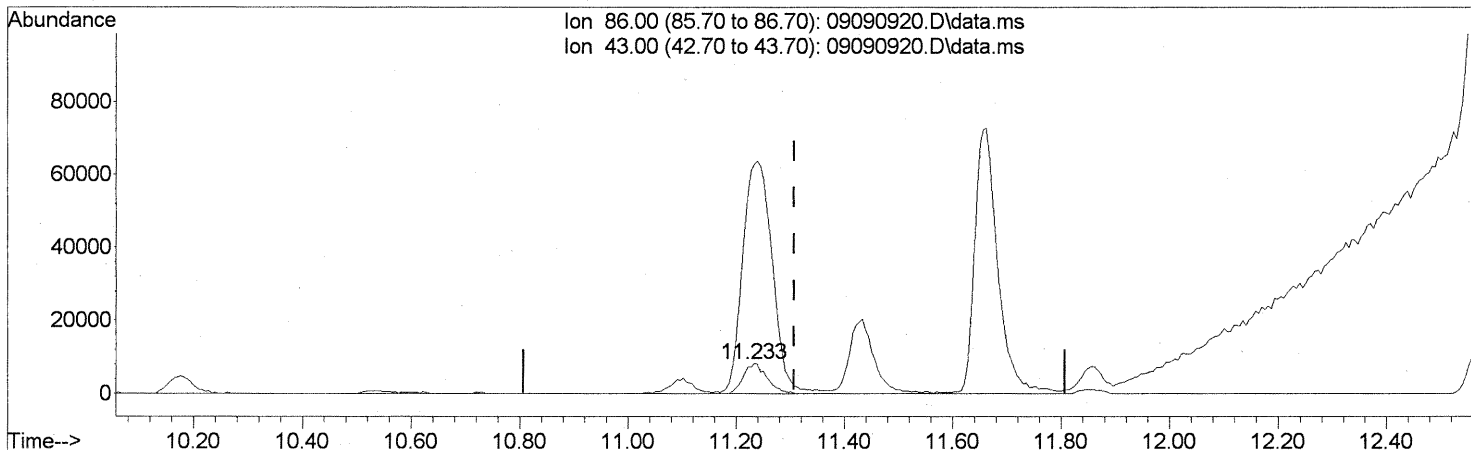
response 27615

Ion	Exp%	Act%
75.90	100	100
77.90	9.40	7.42
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(26) Vinyl Acetate (T)  
 11.233min (-0.074) 9.59ng  
 response 24525

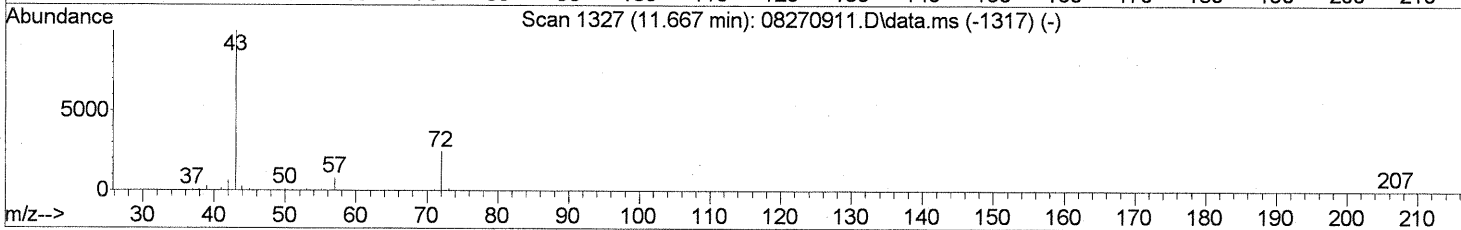
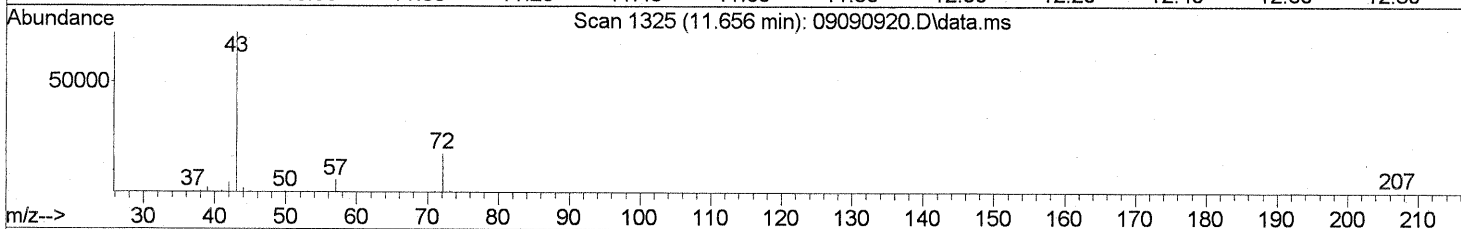
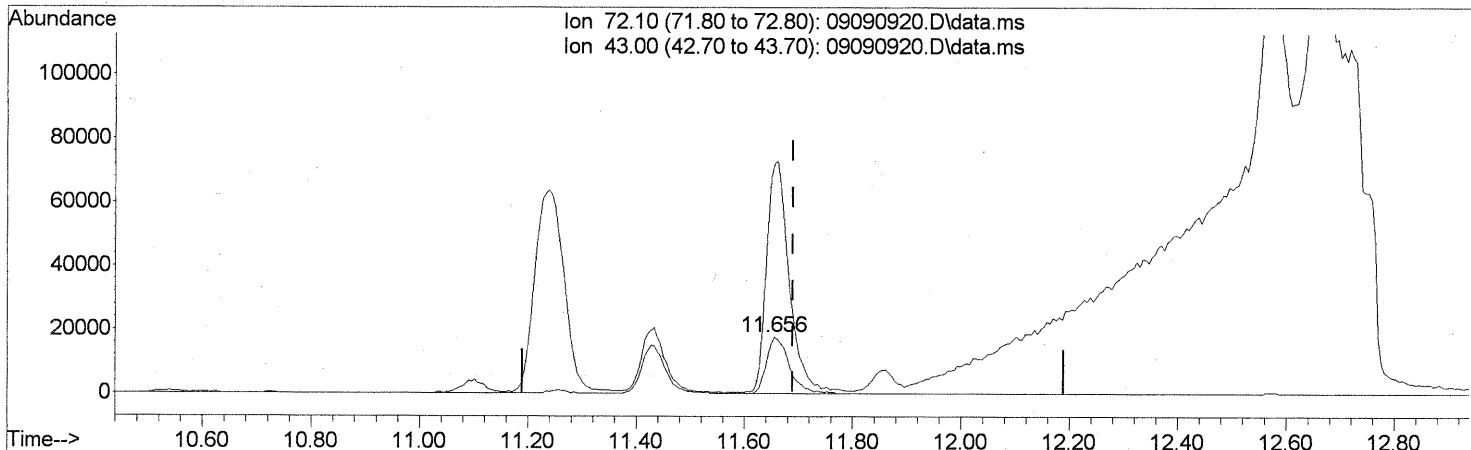
Ion	Exp%	Act%
86.00	100	100
43.00	1118.60	968.57#
0.00	0.00	0.00
0.00	0.00	0.00

*M* *FP*  
*11/9/15/09*  
*E. 9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(27) 2-Butanone (MEK) (T)

11.656min (-0.034) 6.23ng

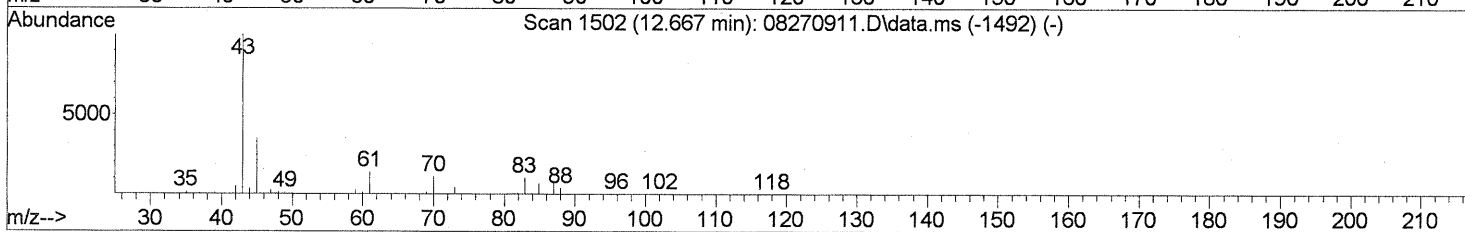
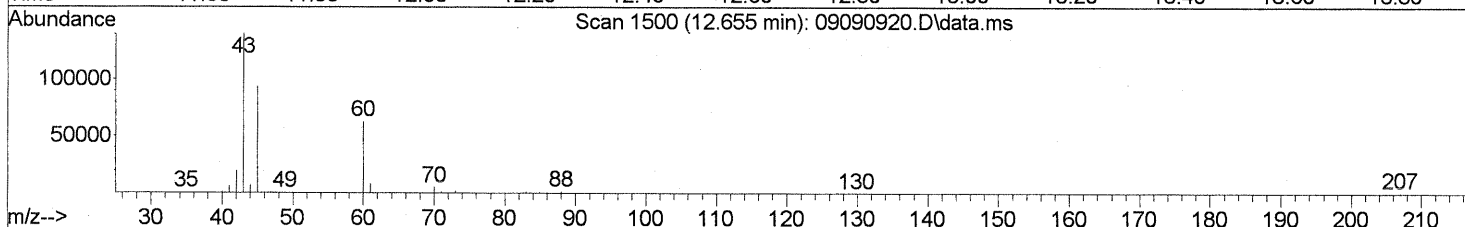
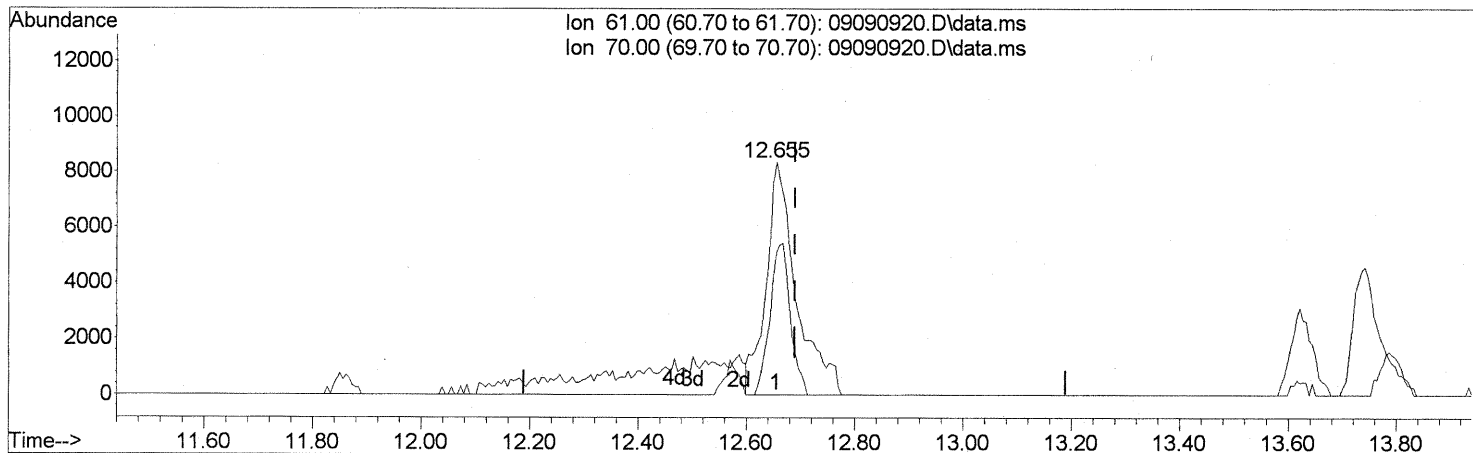
response 51343

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	419.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(30) Ethyl Acetate (T)  
 12.655min (-0.034) 7.27ng  
 response 32215

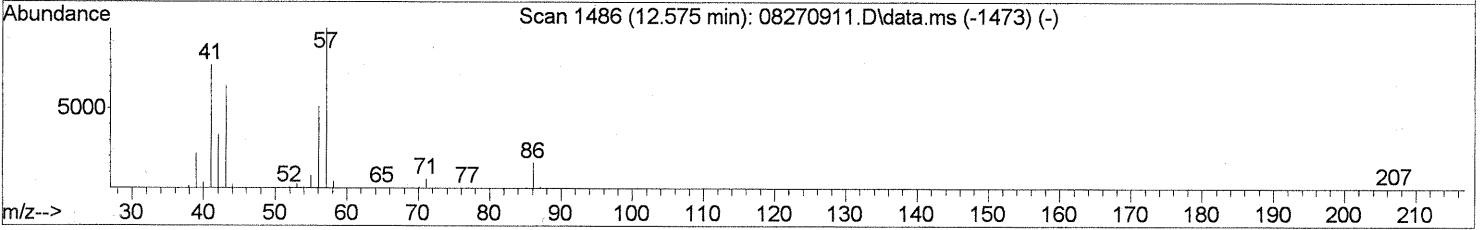
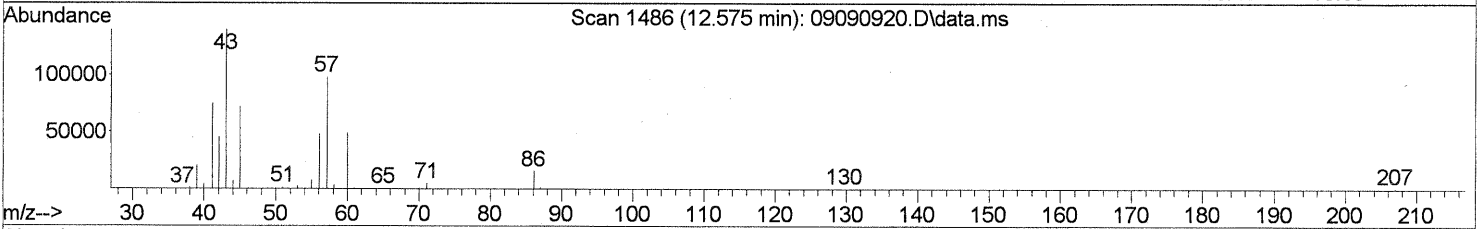
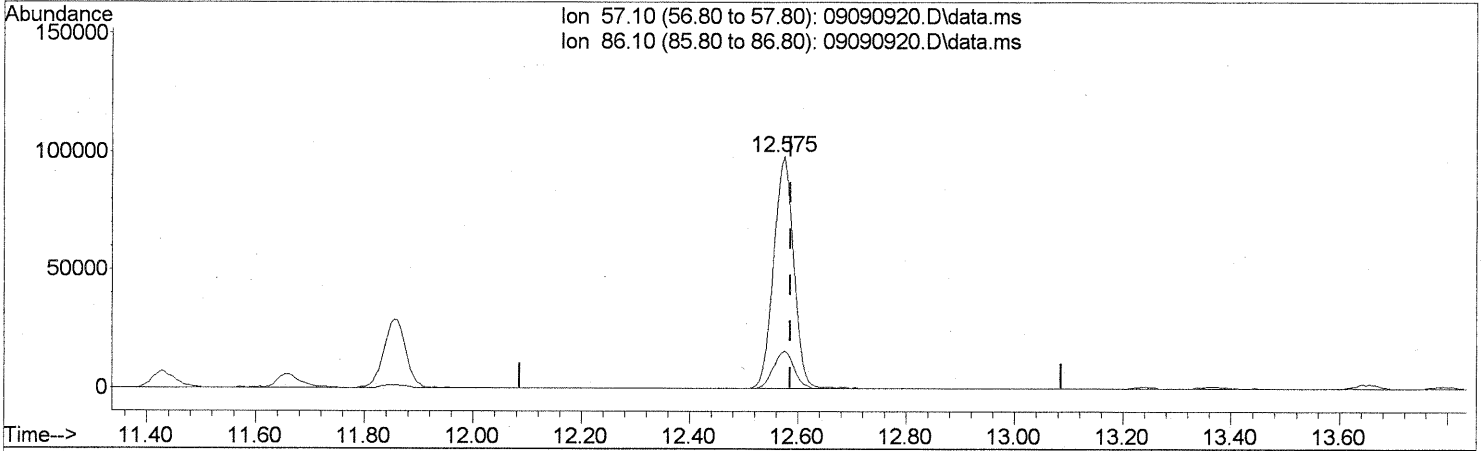
Ion	Exp%	Act%
61.00	100	100
70.00	78.70	43.50#
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

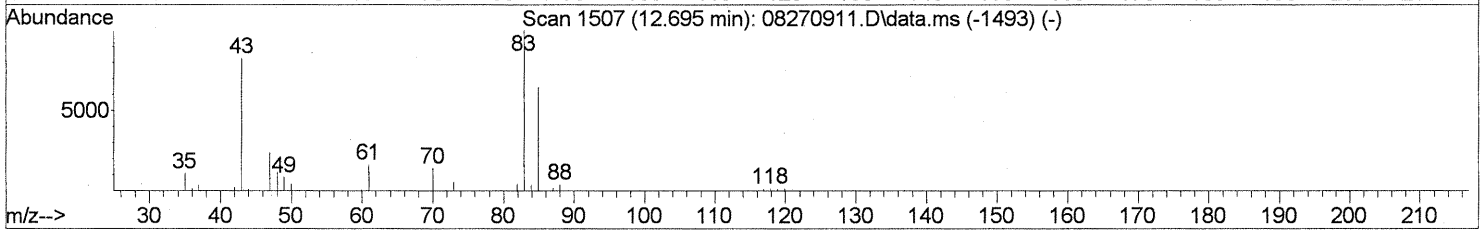
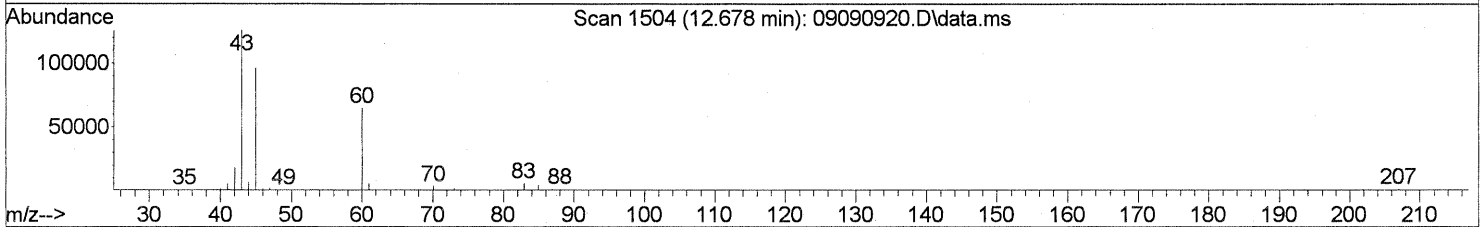
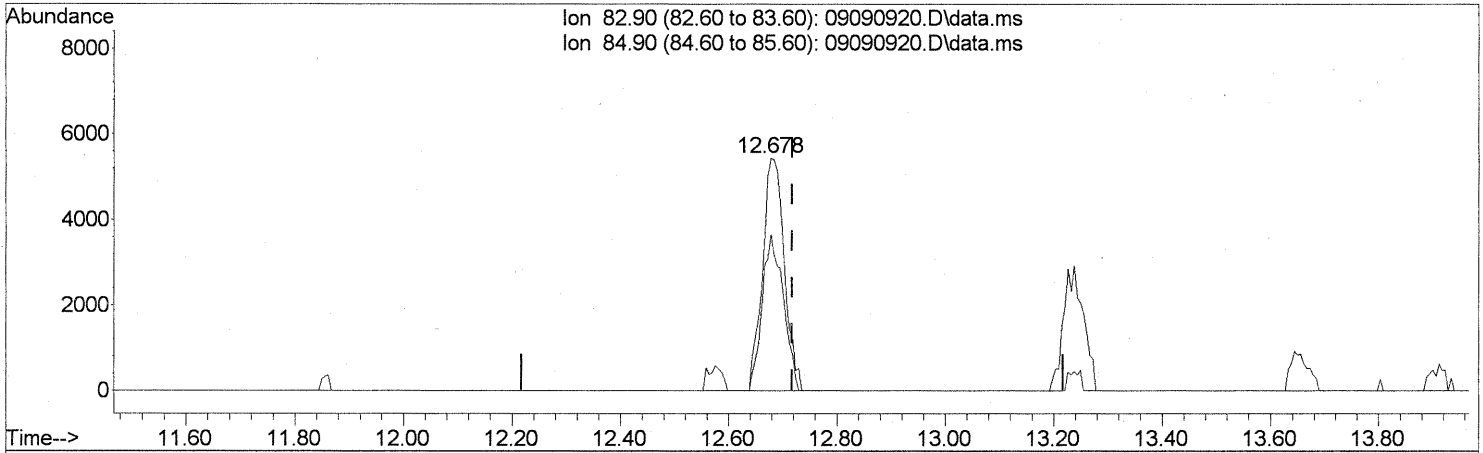
(31) n-Hexane (T)  
 12.575min (-0.011) 11.38ng  
 response 251135

Ion	Exp%	Act%
57.10	100	100
86.10	15.40	16.27
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(32) Chloroform (T)  
 12.678min (-0.040) 0.70ng  
 response 15217

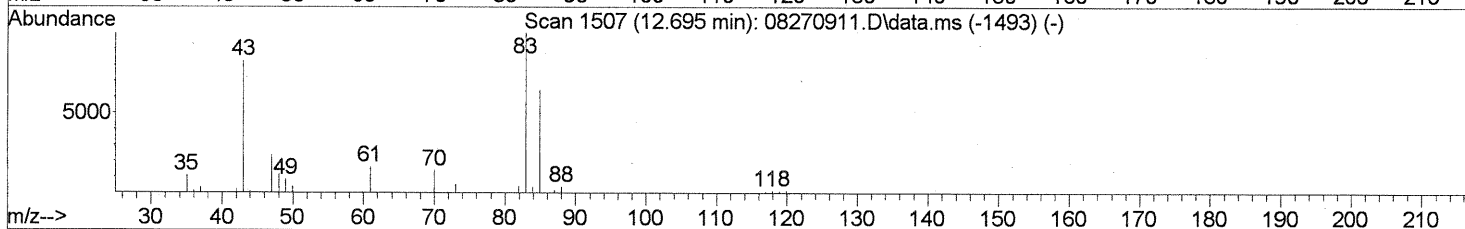
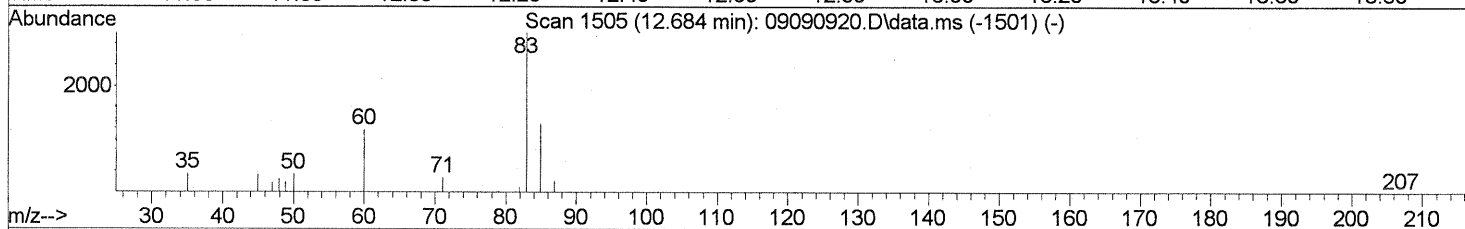
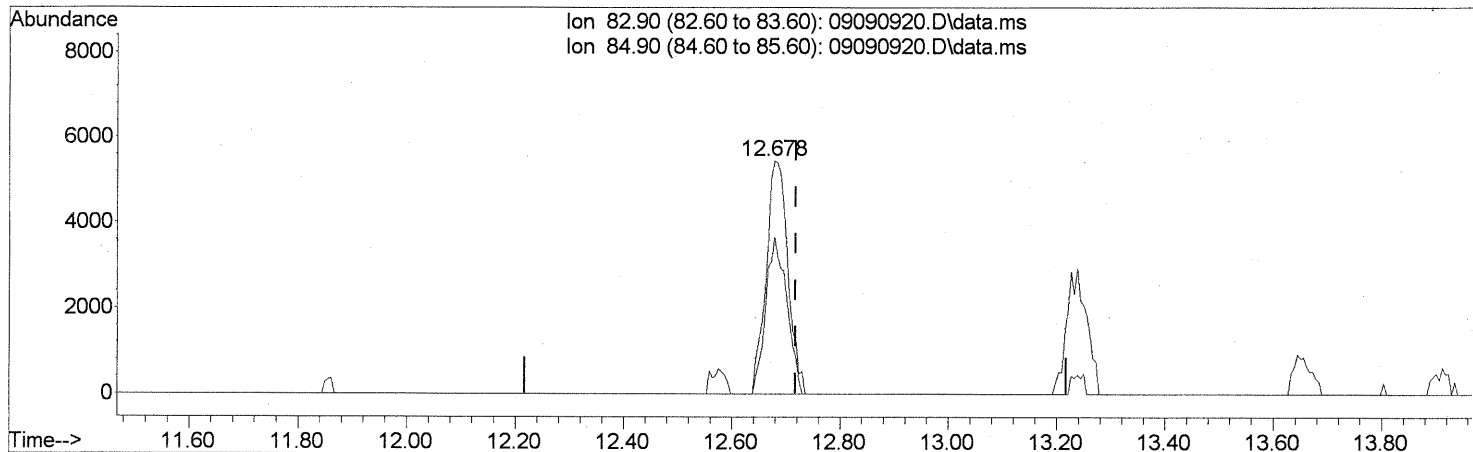
Ion	Exp%	Act%
82.90	100	100
84.90	62.60	65.12
0.00	0.00	0.00
0.00	0.00	0.00

*Before submit.*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(32) Chloroform (T)  
 12.678min (-0.040) 0.70ng  
 response 15217

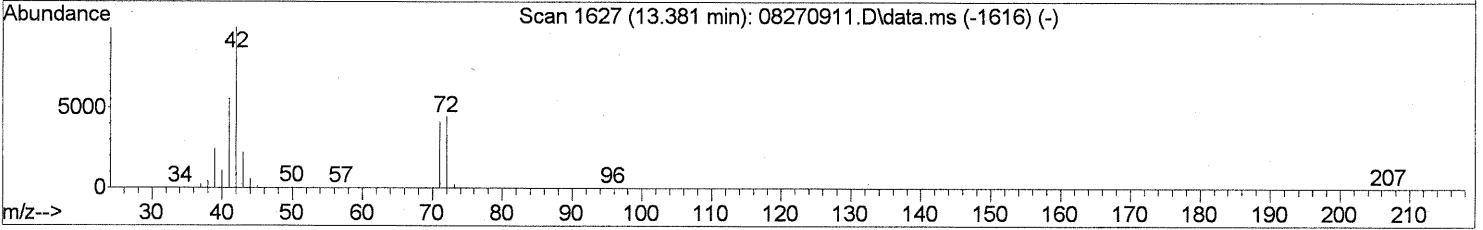
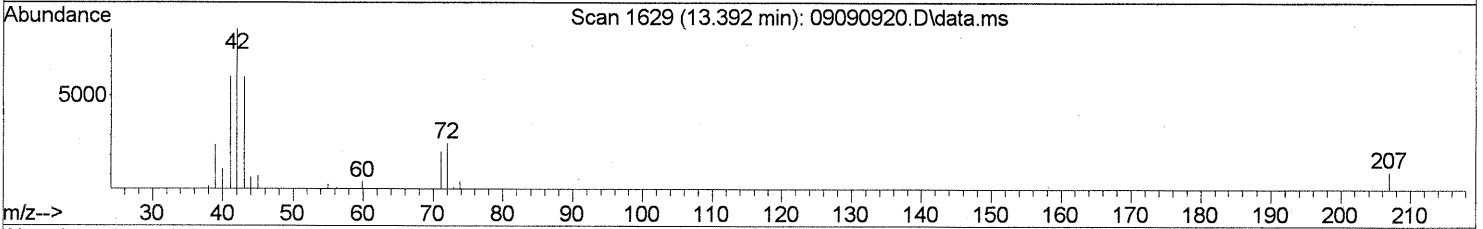
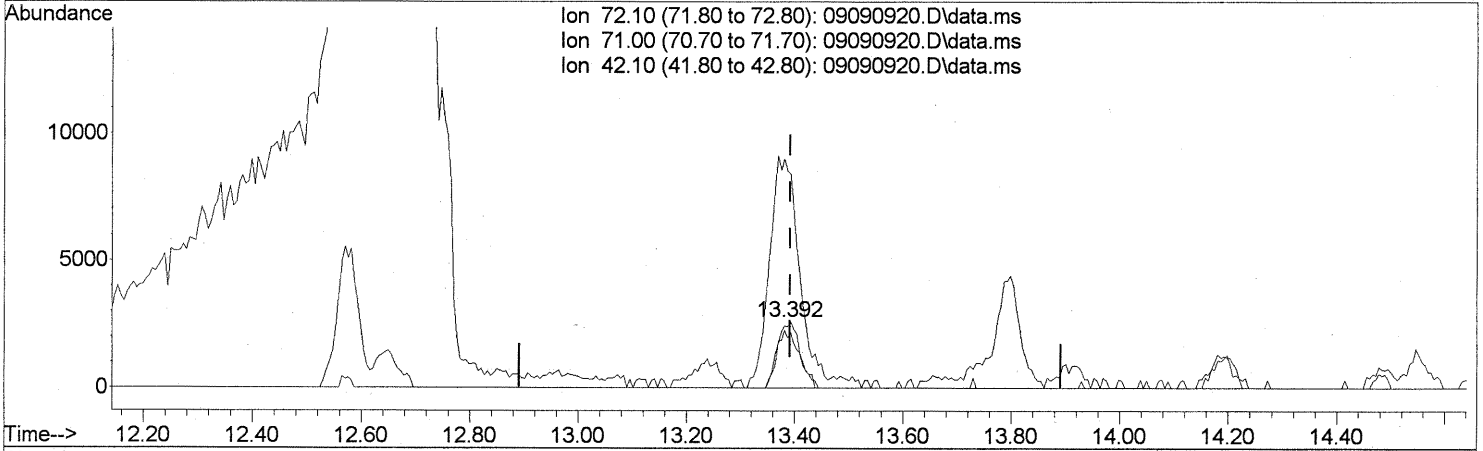
Ion	Exp%	Act%
82.90	100	100
84.90	62.60	65.12
0.00	0.00	0.00
0.00	0.00	0.00

*After subdn.*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(34) Tetrahydrofuran (THF) (T)

13.392min (+0.000) 0.84ng

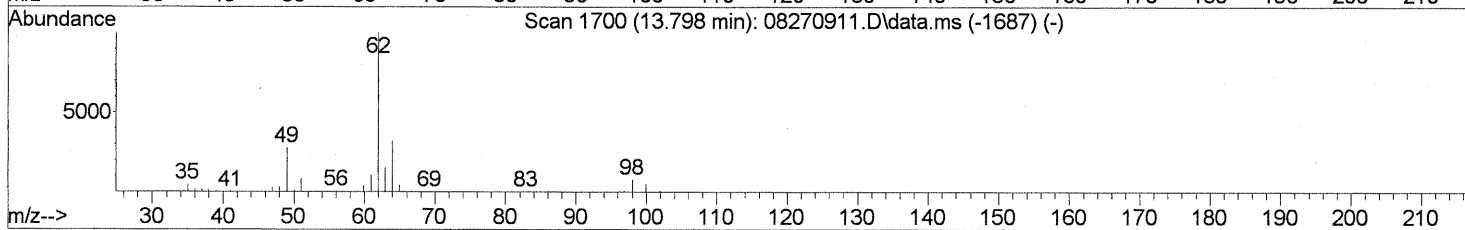
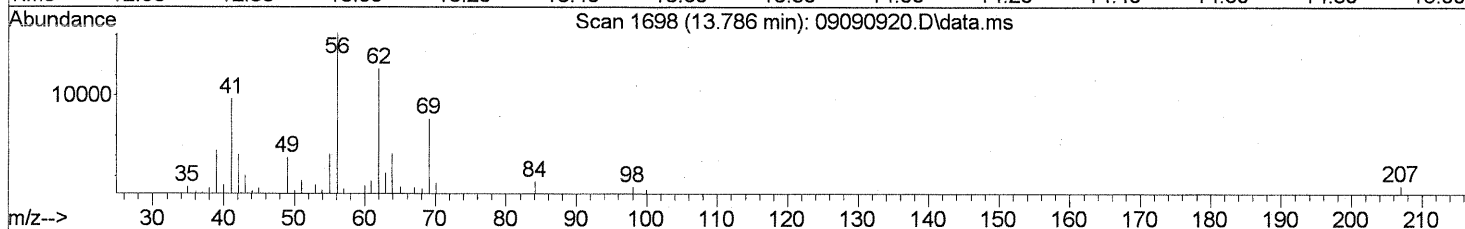
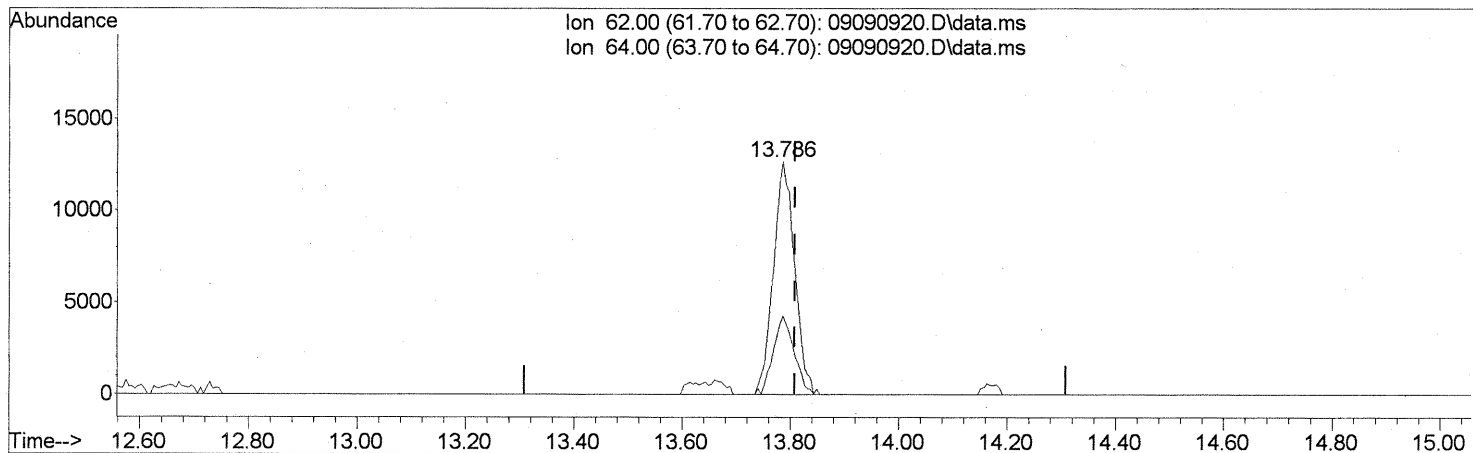
response 7494

Ion	Exp%	Act%
72.10	100	100
71.00	92.50	0.00#
42.10	254.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(36) 1,2-Dichloroethane (T)

13.786min (-0.023) 1.89ng

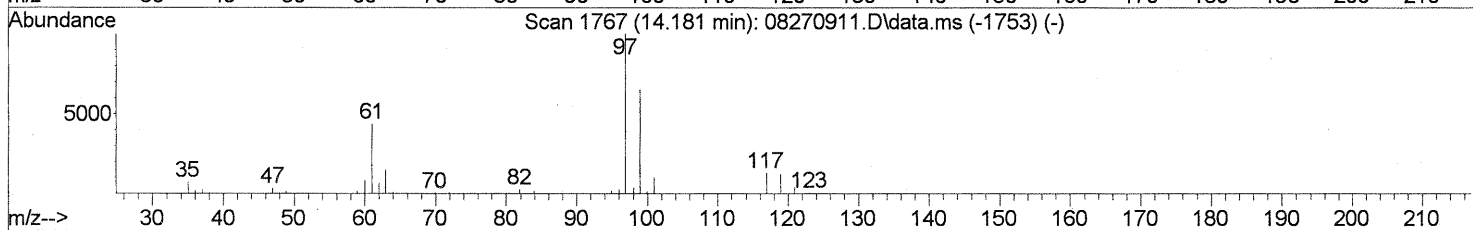
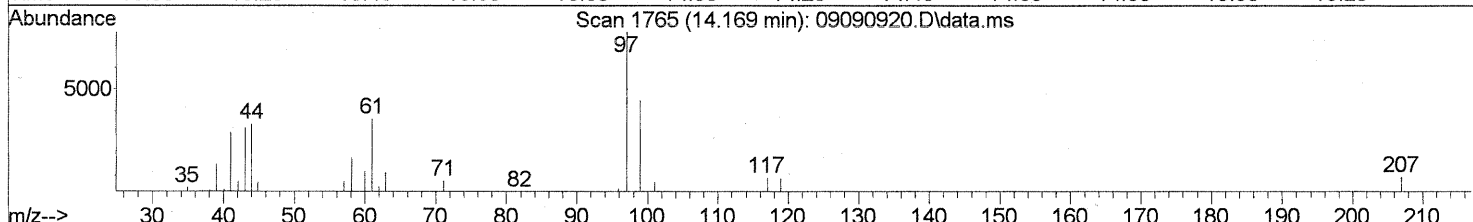
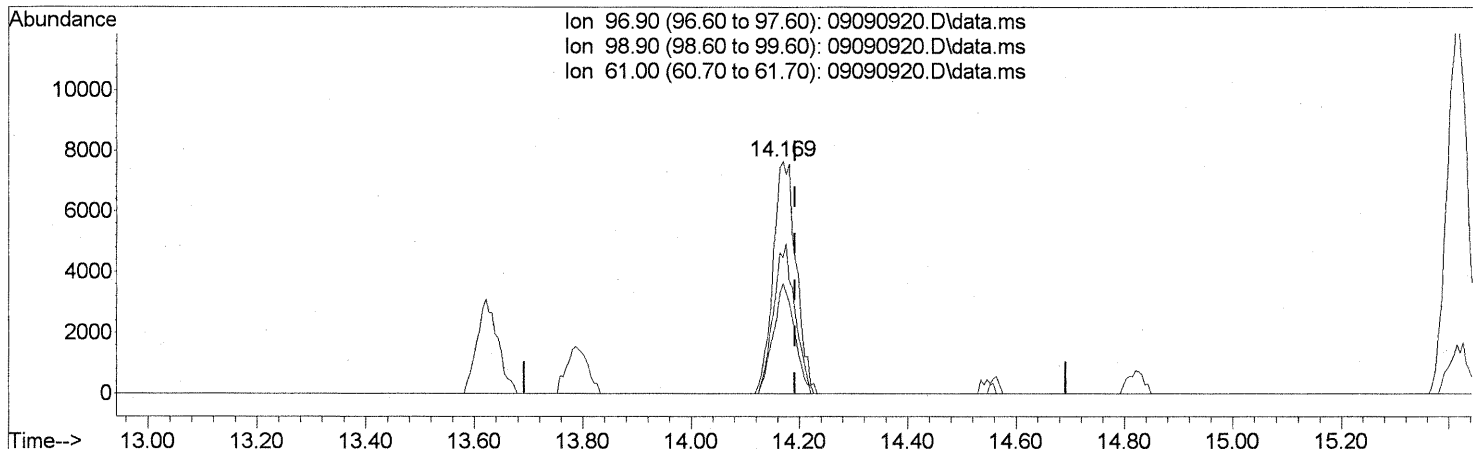
response 34533

Ion	Exp%	Act%
62.00	100	100
64.00	33.10	32.97
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

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

14.169min (-0.023) 1.10ng

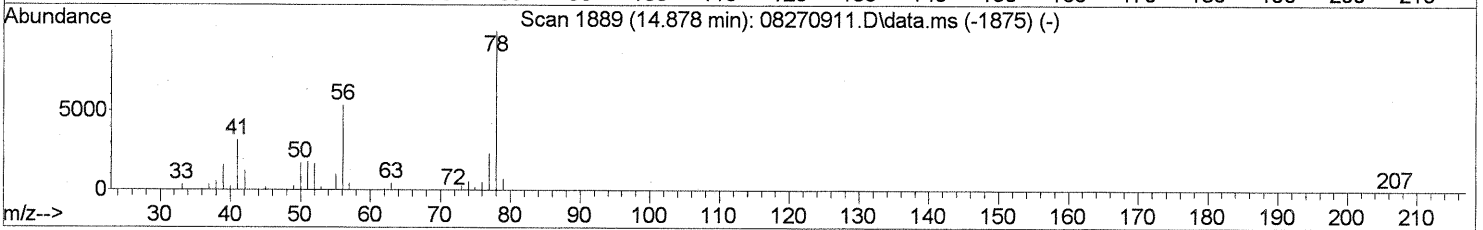
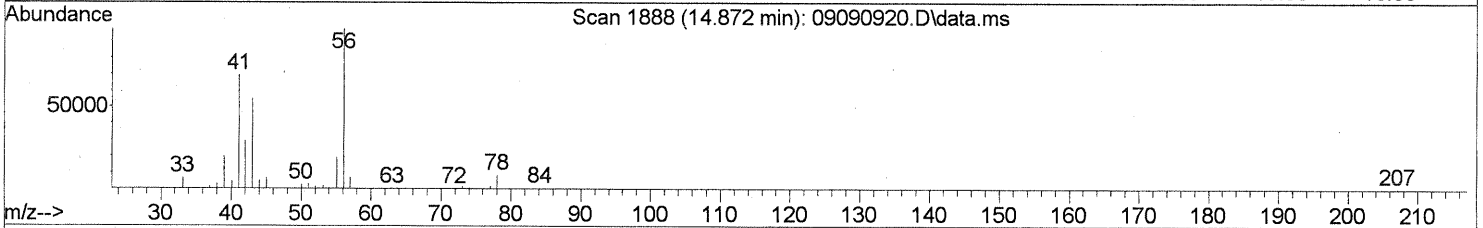
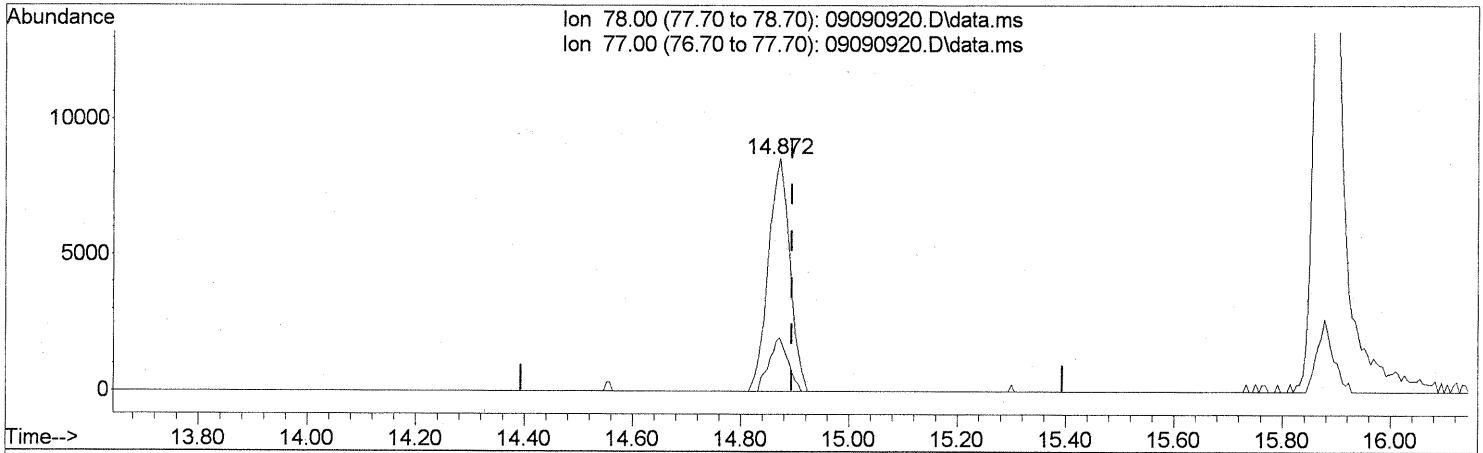
response 22693

Ion	Exp%	Act%
96.90	100	100
98.90	63.10	59.80
61.00	46.50	43.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



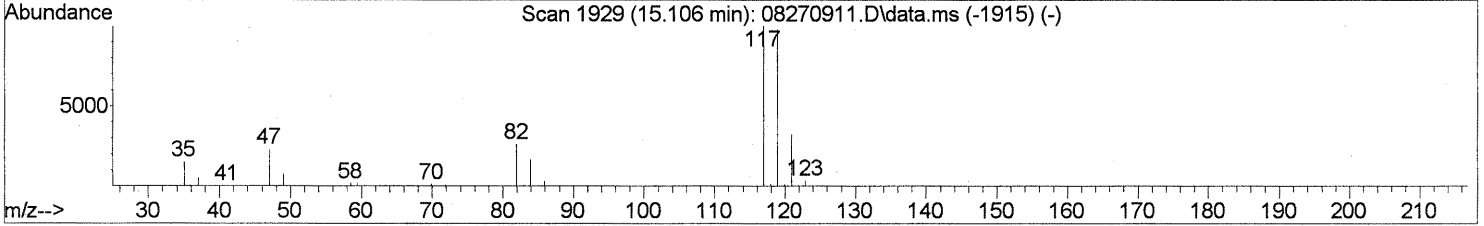
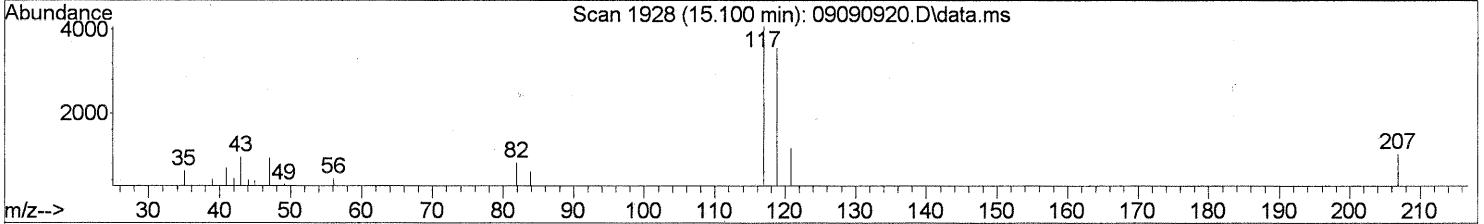
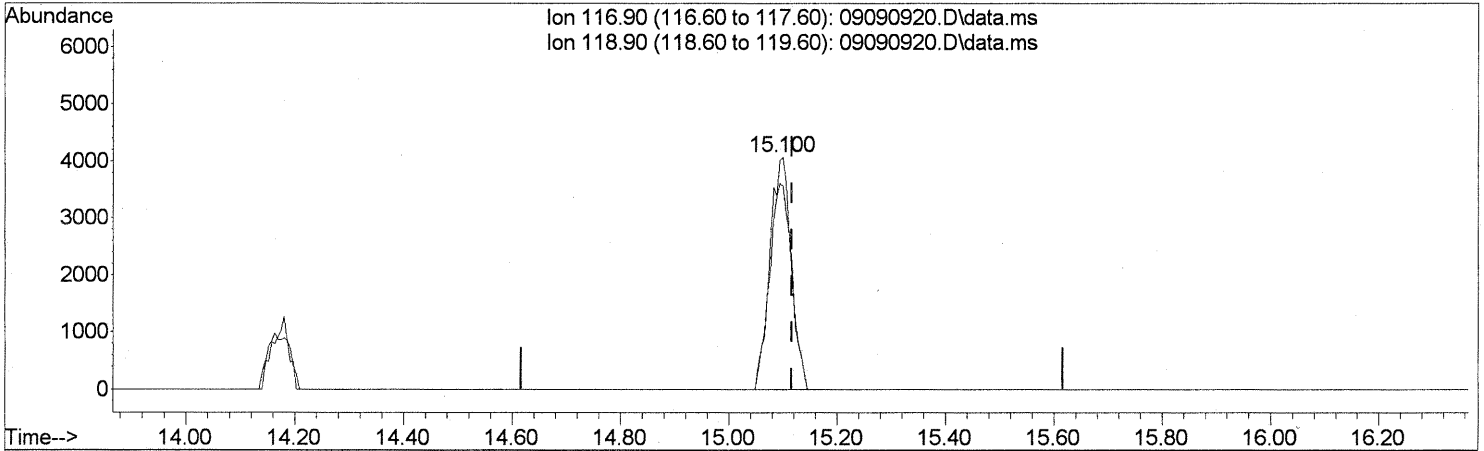
TIC: 09090920.D\data.ms

(41) Benzene (T)		
14.872min (-0.023) 0.45ng		
response 23360		
Ion	Exp%	Act%
78.00	100	100
77.00	23.20	20.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(42) Carbon Tetrachloride (T)  
 15.100min (-0.017) 0.64ng  
 response 11187

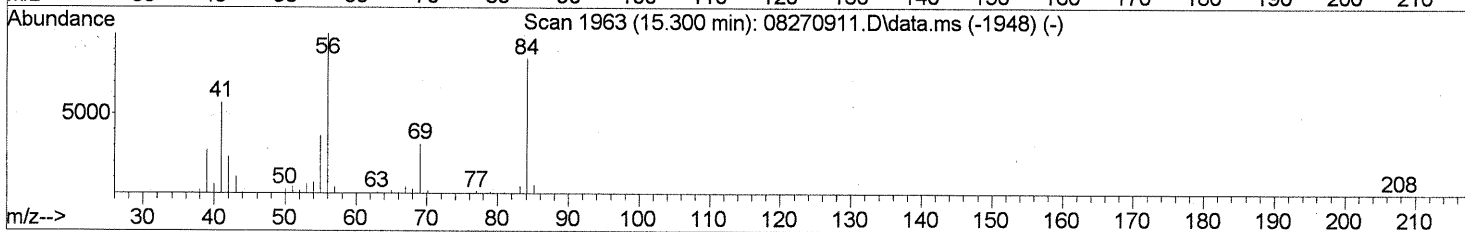
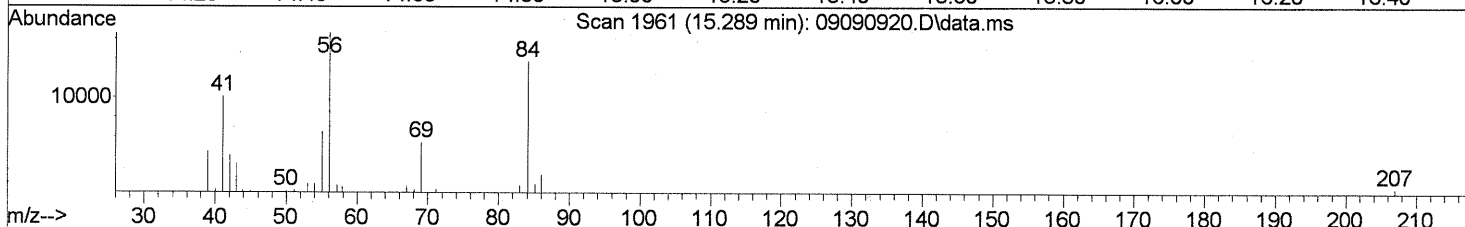
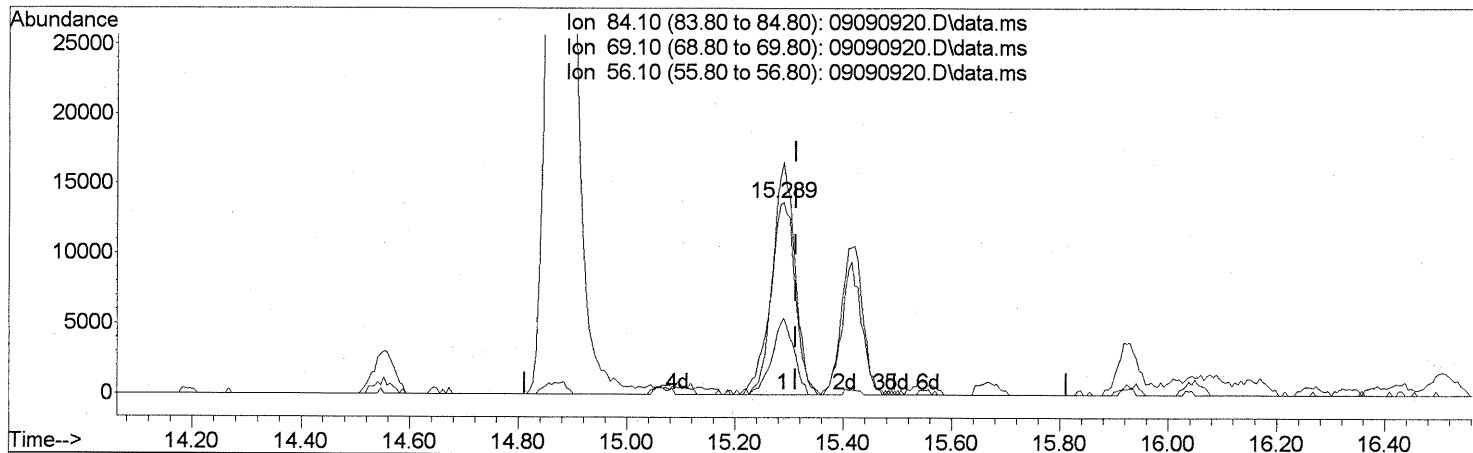
Ion	Exp%	Act%
116.90	100	100
118.90	96.20	91.87
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

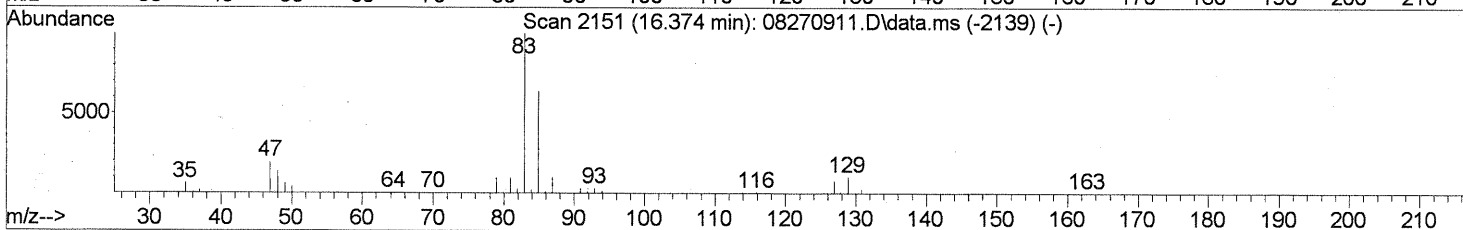
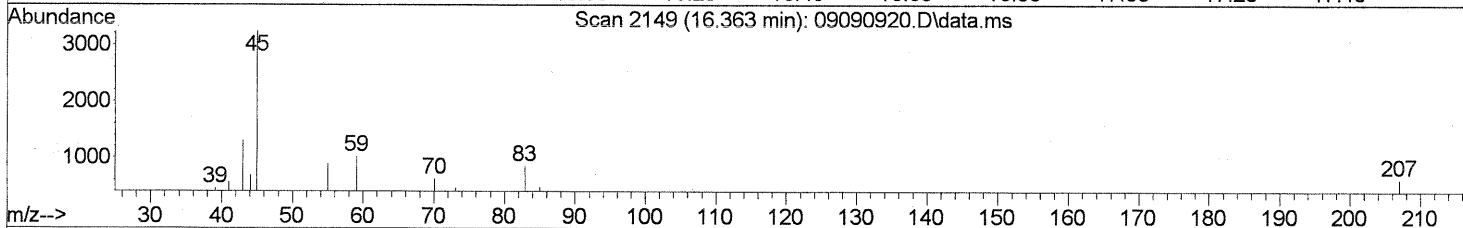
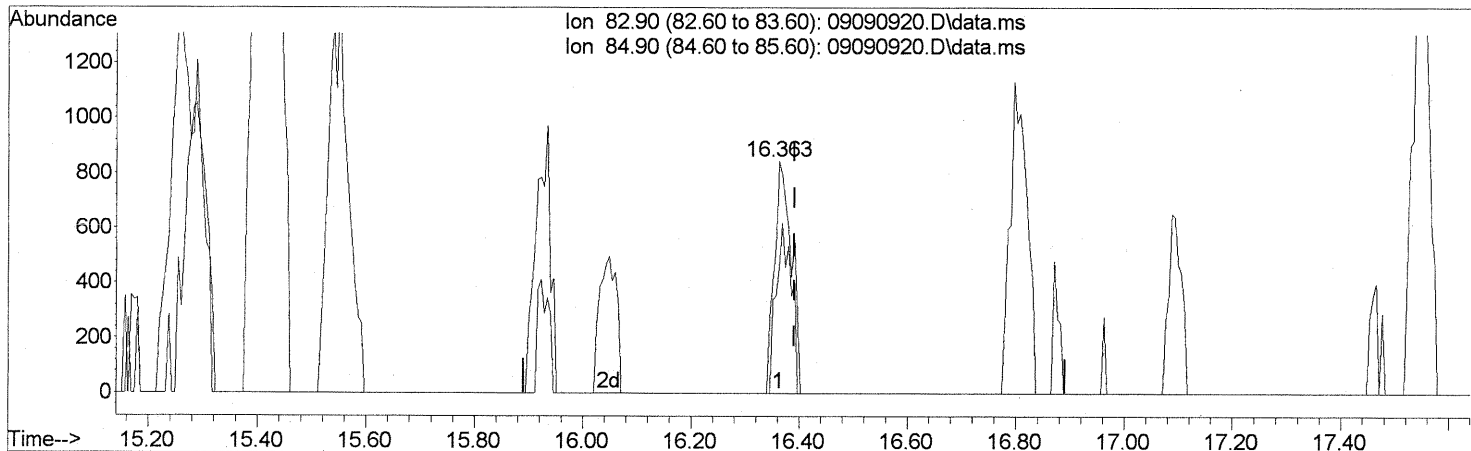
(43) Cyclohexane (T)  
 15.289min (-0.023) 2.27ng  
 response 43801

Ion	Exp%	Act%
84.10	100	100
69.10	38.90	34.28
56.10	124.50	107.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(46) Bromodichloromethane (T)

16.363min (-0.029) 0.11ng

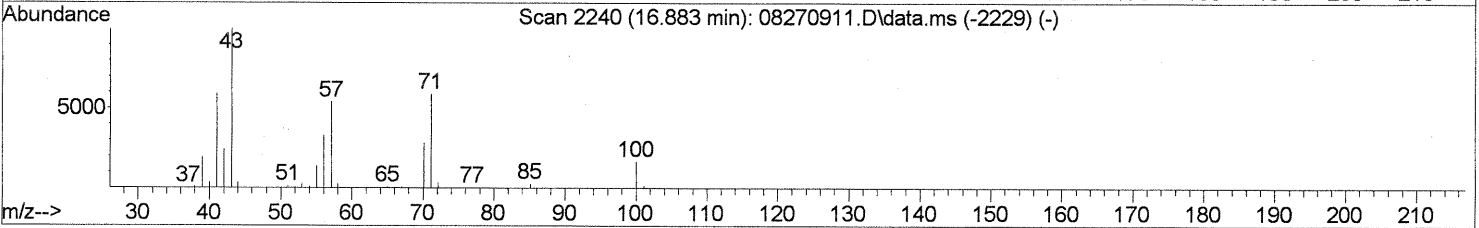
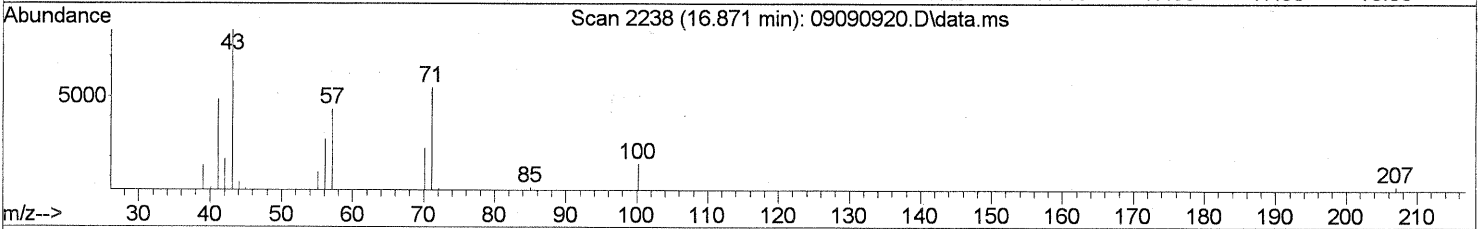
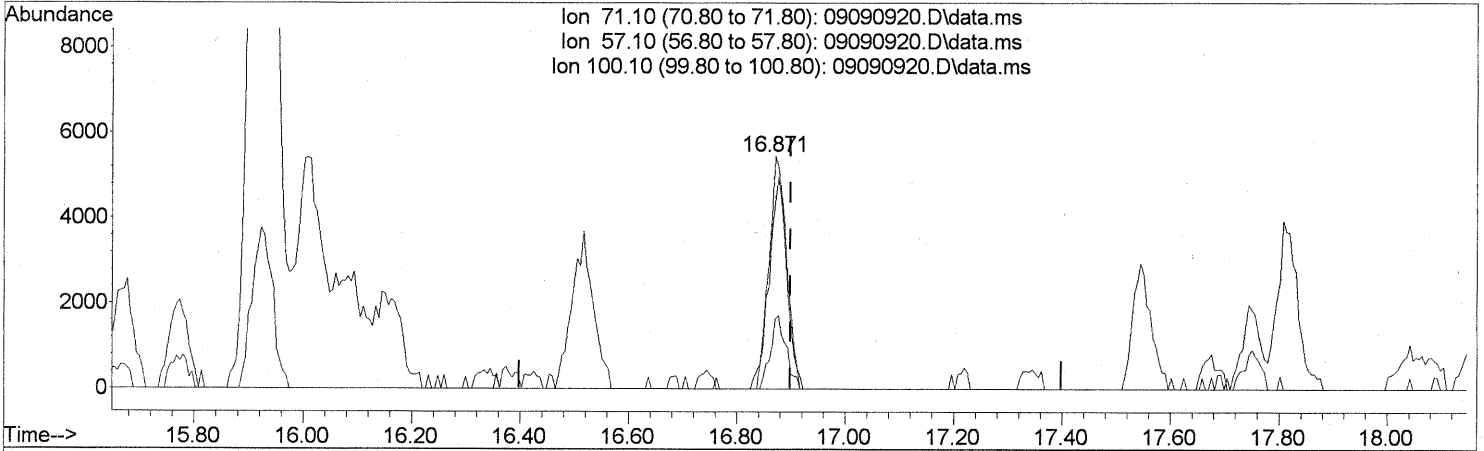
response 1862

Ion	Exp%	Act%
82.90	100	100
84.90	64.50	64.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

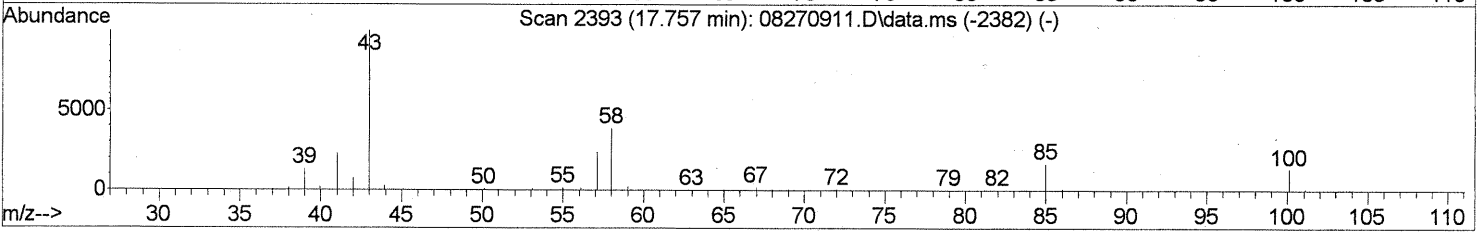
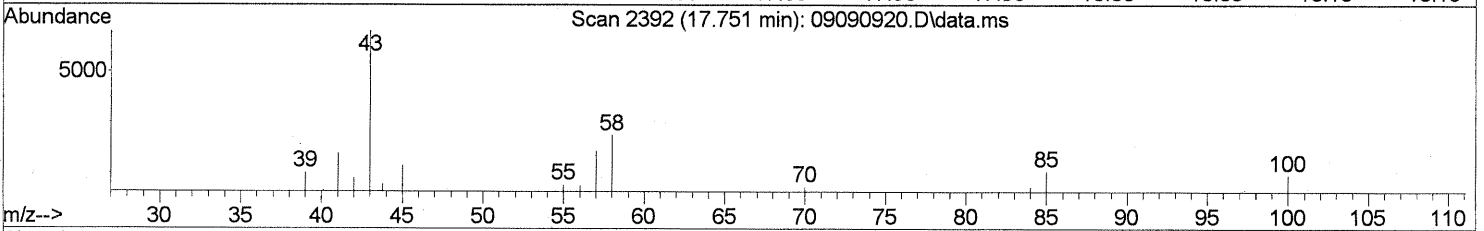
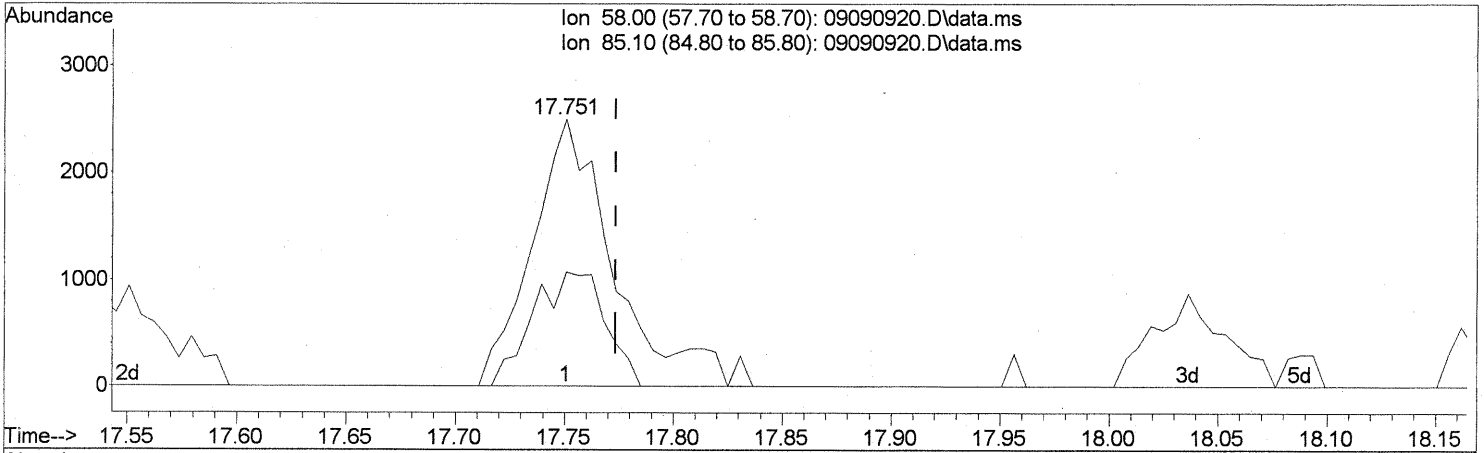
(51) n-Heptane (T)  
 16.871min (-0.029) 0.92ng  
 response 12435

Ion	Exp%	Act%
71.10	100	100
57.10	89.80	91.51
100.10	22.00	27.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

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

17.751min (-0.023) 0.55ng

response 6577

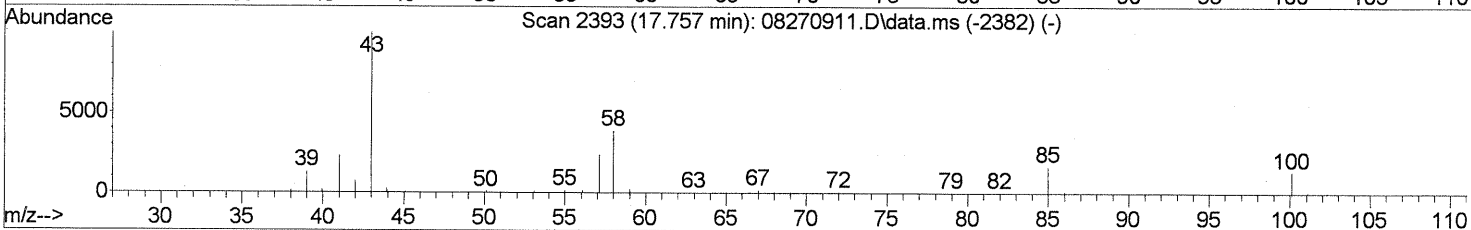
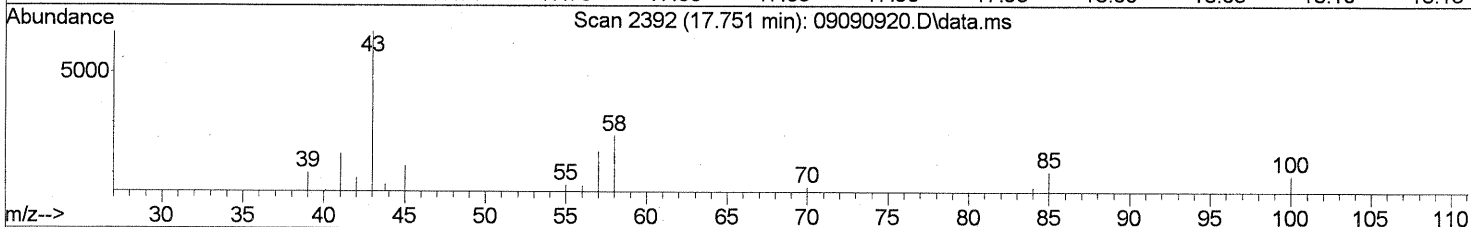
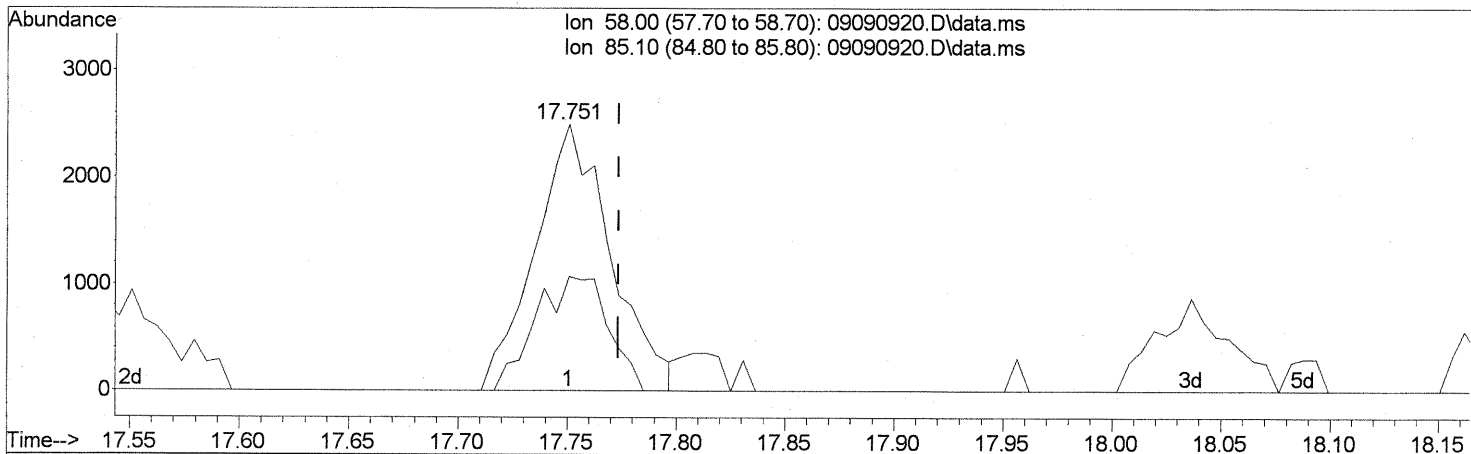
PP

Ion	Exp%	Act%
58.00	100	100
85.10	42.40	37.78
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

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

17.751min (-0.023) 0.50ng m

response 6016

Ion	Exp%	Act%
58.00	100	100
85.10	42.40	41.31
0.00	0.00	0.00
0.00	0.00	0.00

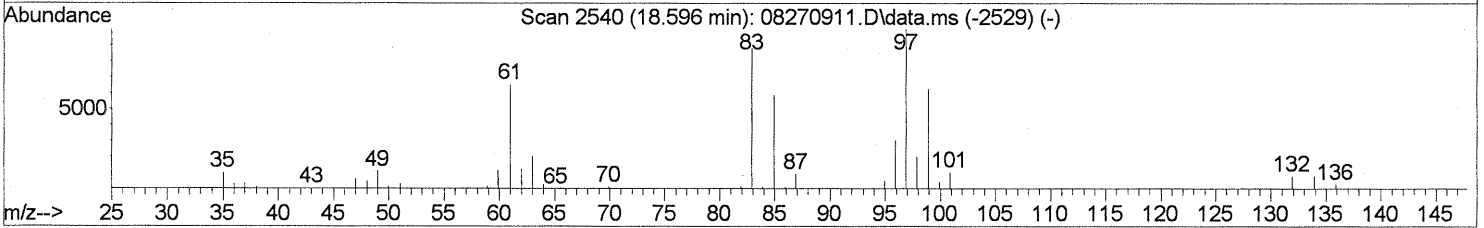
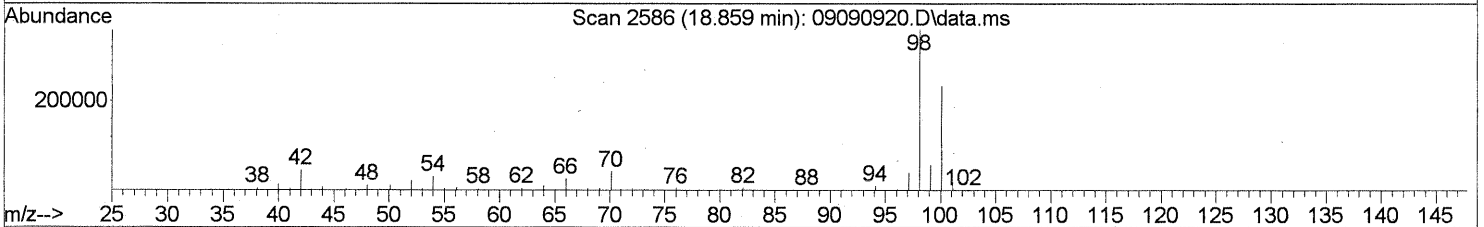
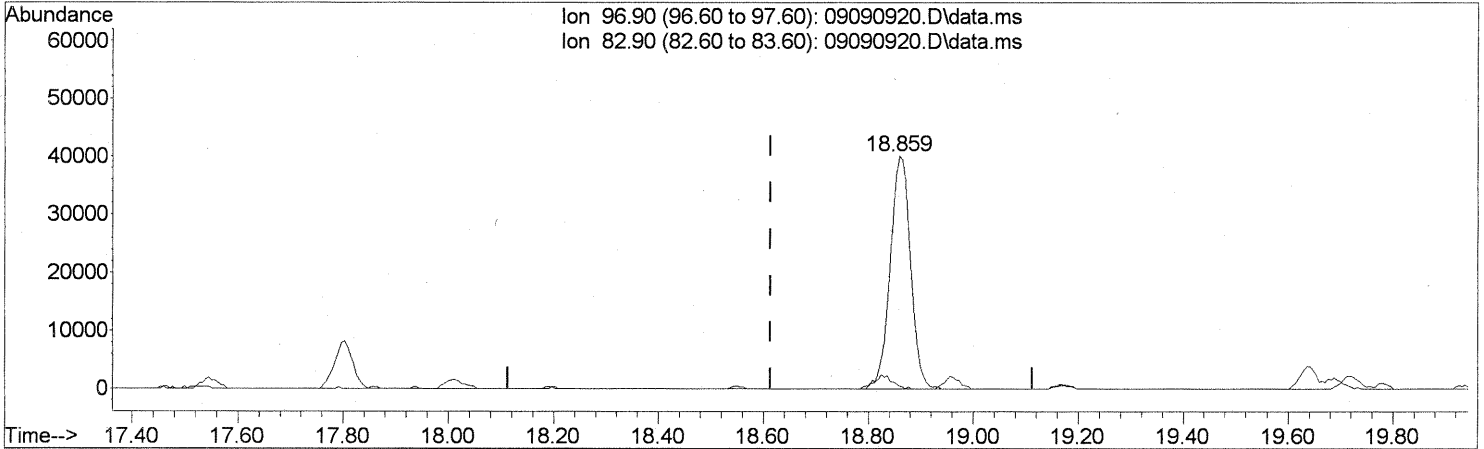
*PT-DIC*  
*179115/09*

*E-9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(55) 1,1,2-Trichloroethane (T)  
 18.859min (+0.246) 8.90ng  
 response 108472

Ion	Exp%	Act%
96.90	100	100
82.90	87.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

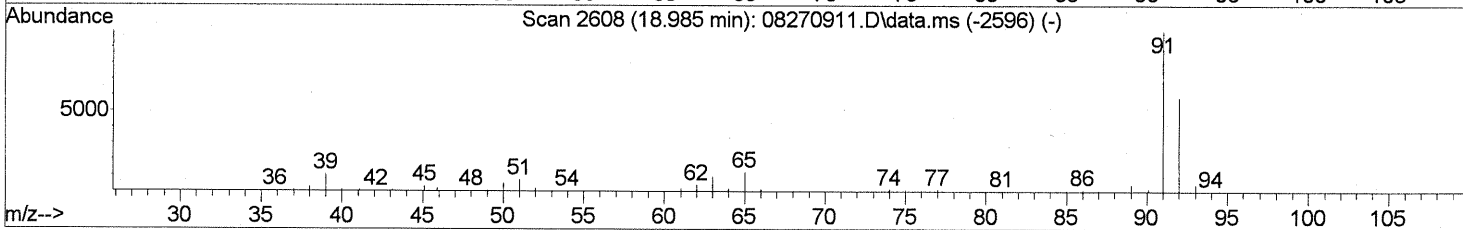
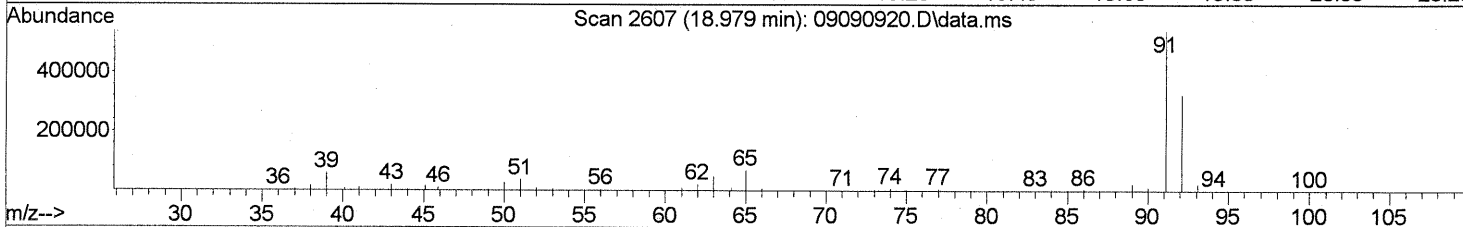
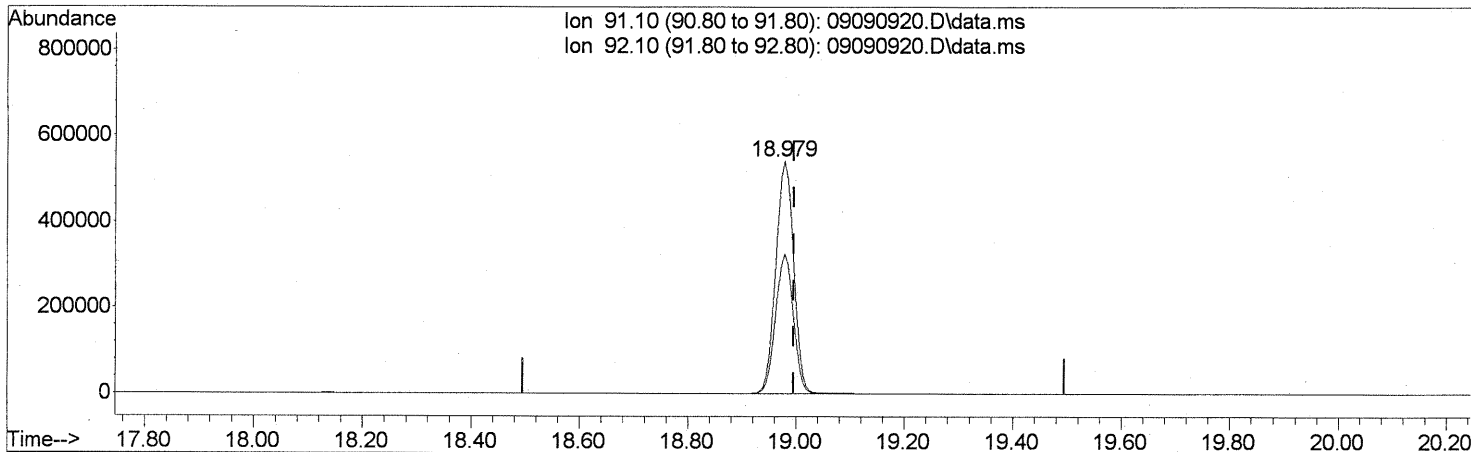
*FP*  
*LM 9/15/09*

*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

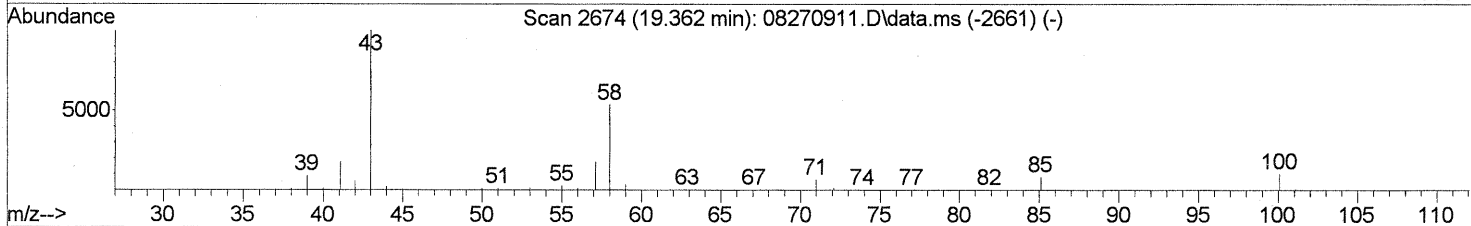
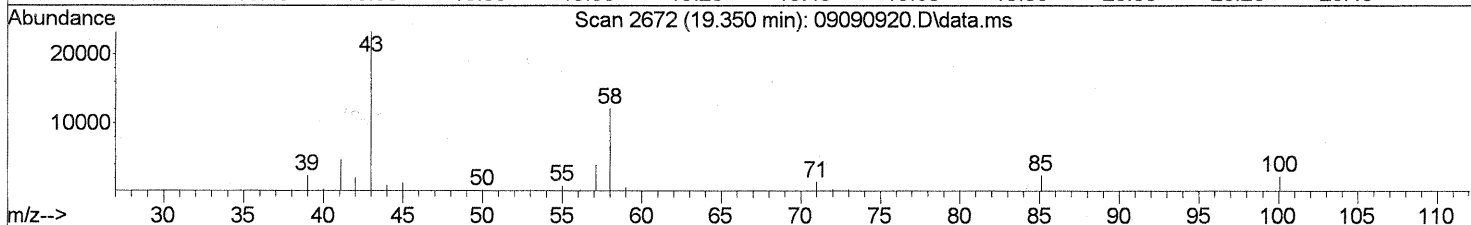
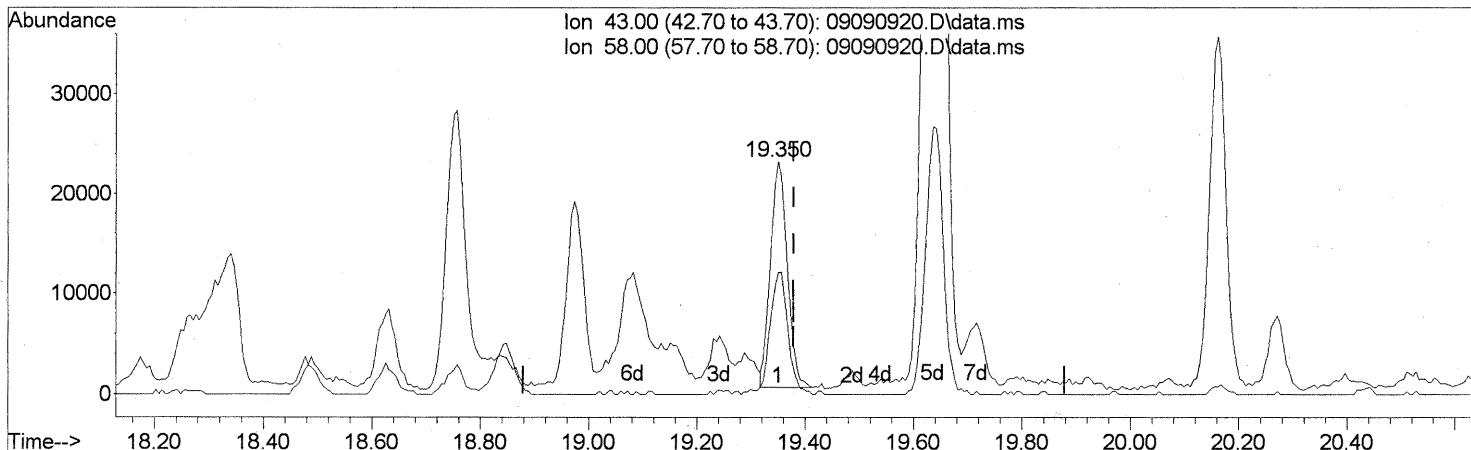
(58) Toluene (T)  
 18.979min (-0.017) 22.83ng  
 response 1236905

Ion	Exp%	Act%
91.10	100	100
92.10	58.80	59.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(59) 2-Hexanone (T)  
 19.350min (-0.029) 1.47ng  
 response 48789

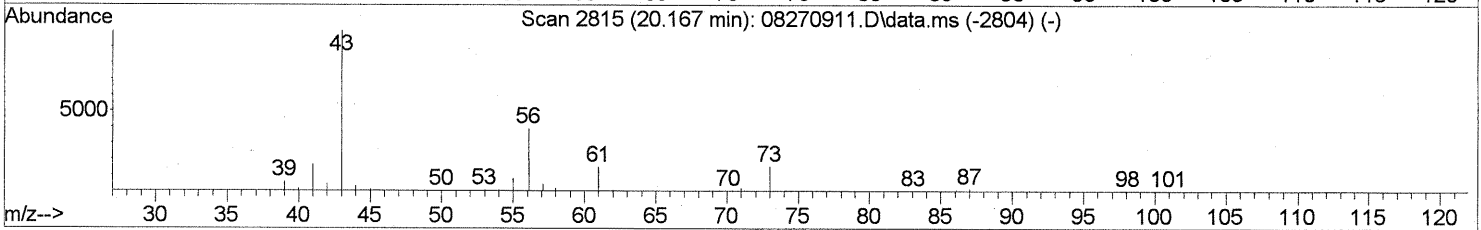
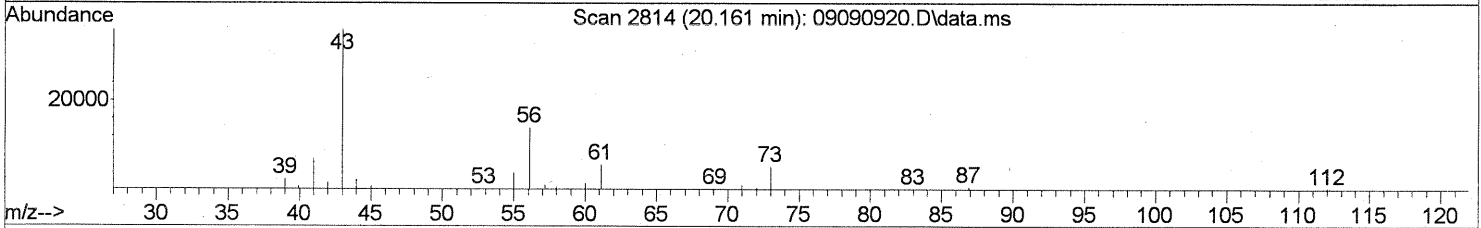
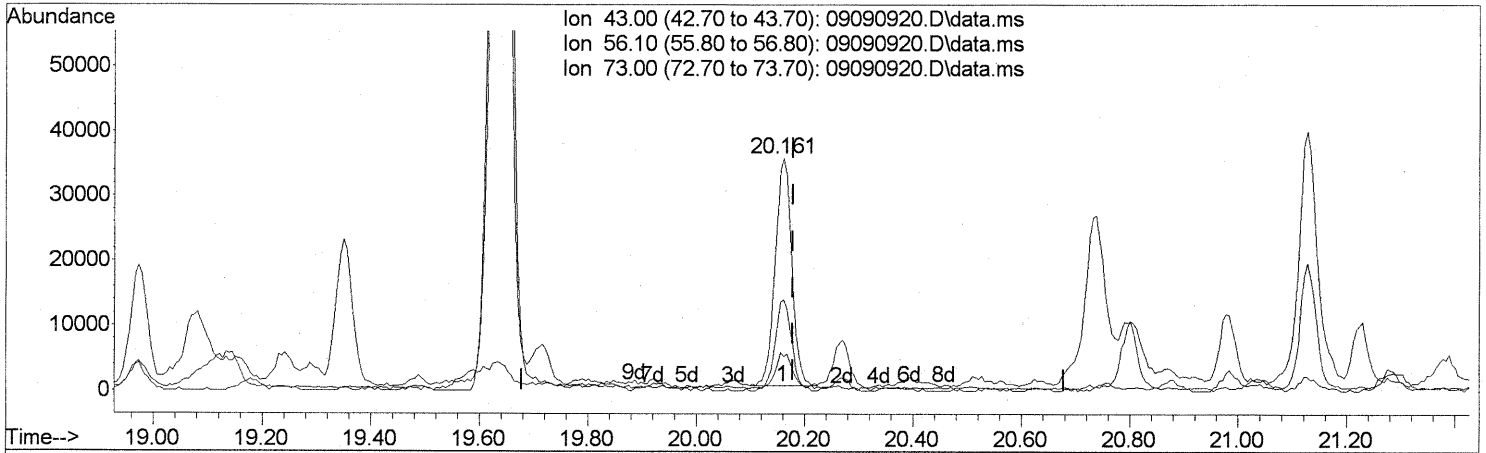
Ion	Exp%	Act%
43.00	100	100
58.00	51.70	57.75
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

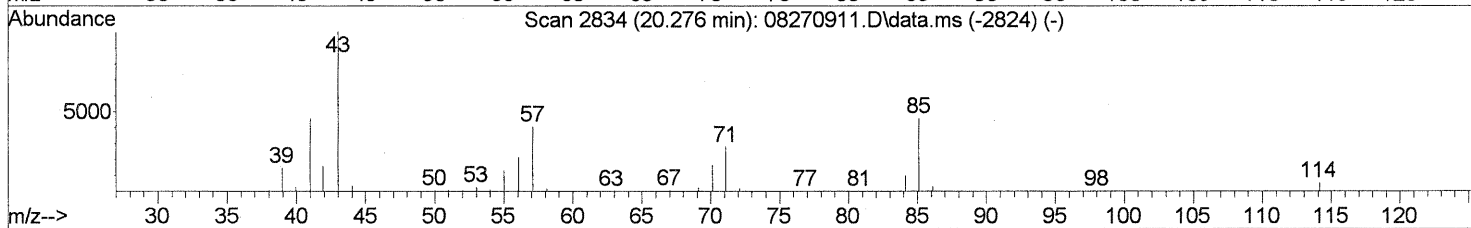
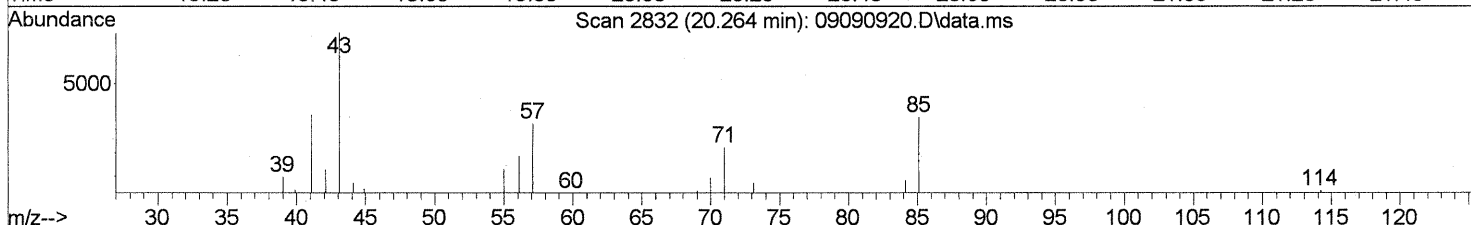
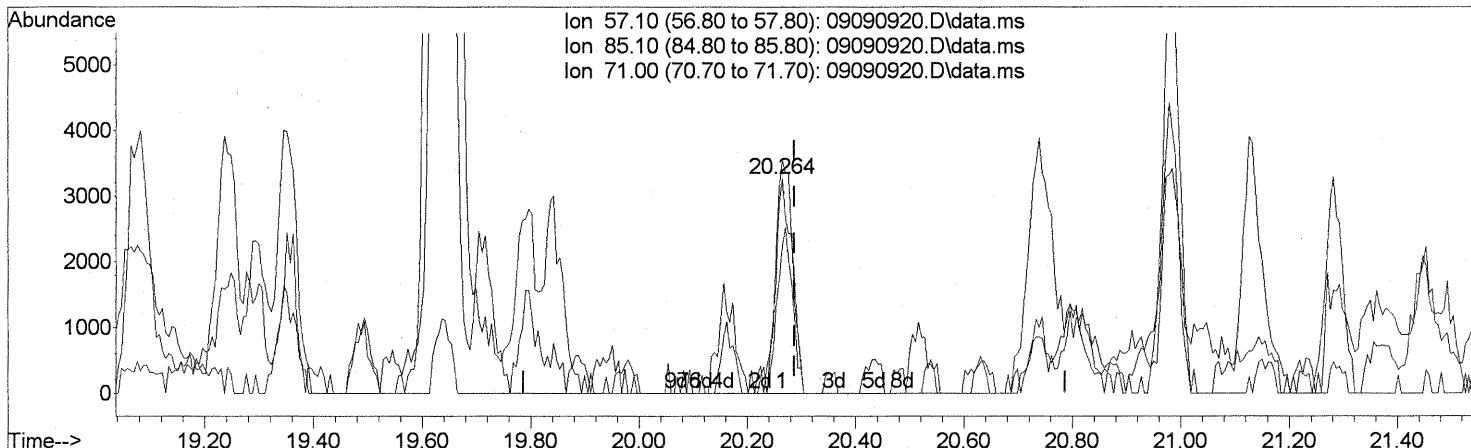
(62) n-Butyl Acetate (T)  
 20.161min (-0.017) 1.97ng  
 response 74696

Ion	Exp%	Act%
43.00	100	100
56.10	39.50	39.62
73.00	14.30	21.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

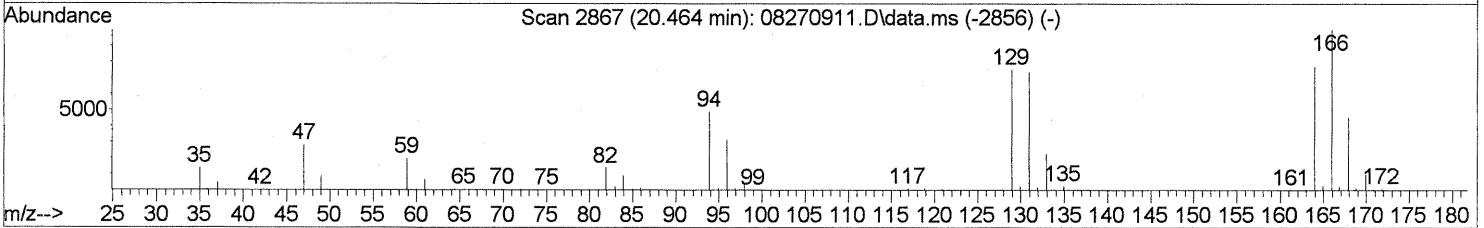
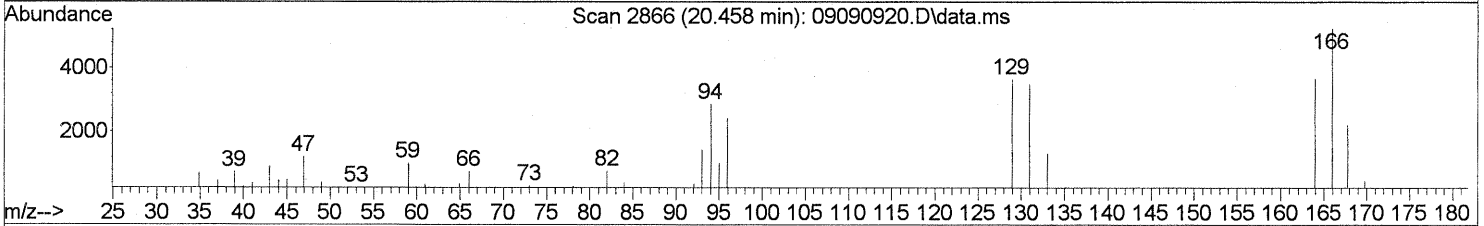
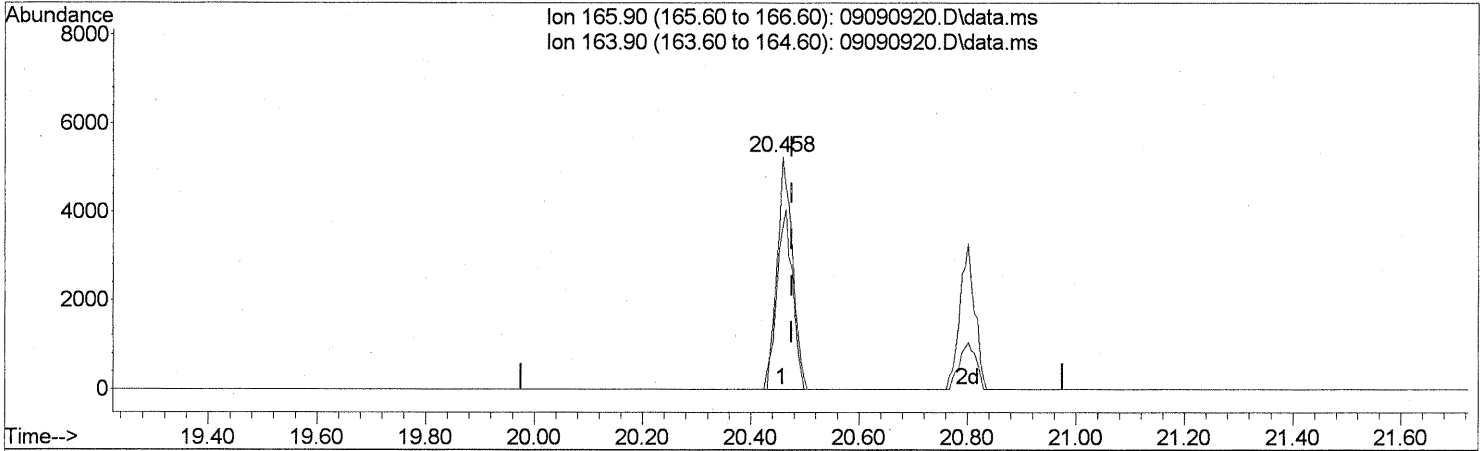
(63) n-Octane (T)  
 20.264min (-0.023) 0.56ng  
 response 6956

Ion	Exp%	Act%
57.10	100	100
85.10	113.70	114.36
71.00	69.10	70.99
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

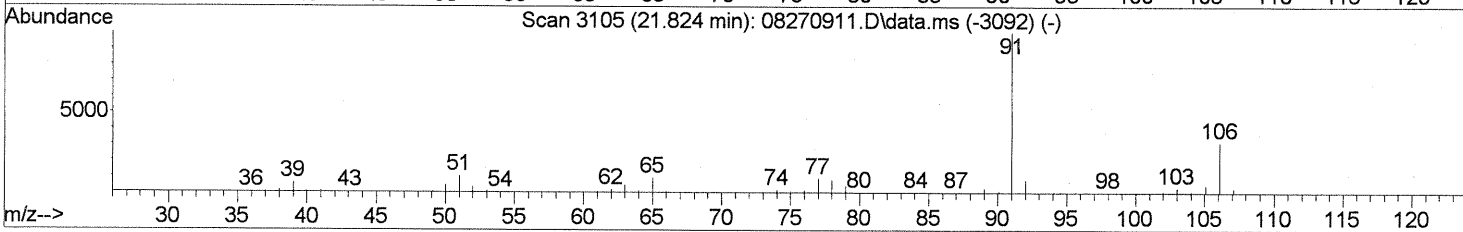
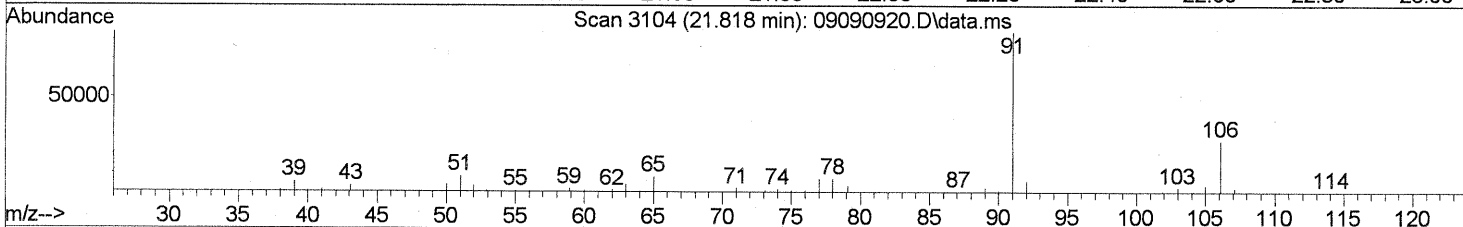
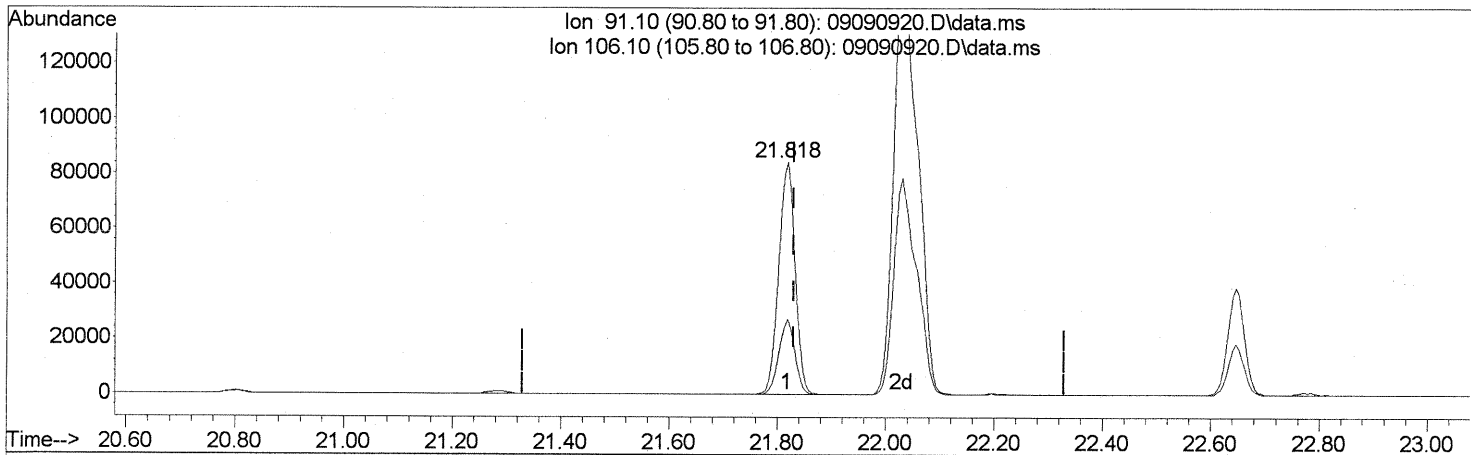
(64) Tetrachloroethene (T)  
 20.458min (-0.017) 0.75ng  
 response 10307

Ion	Exp%	Act%
165.90	100	100
163.90	78.80	79.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

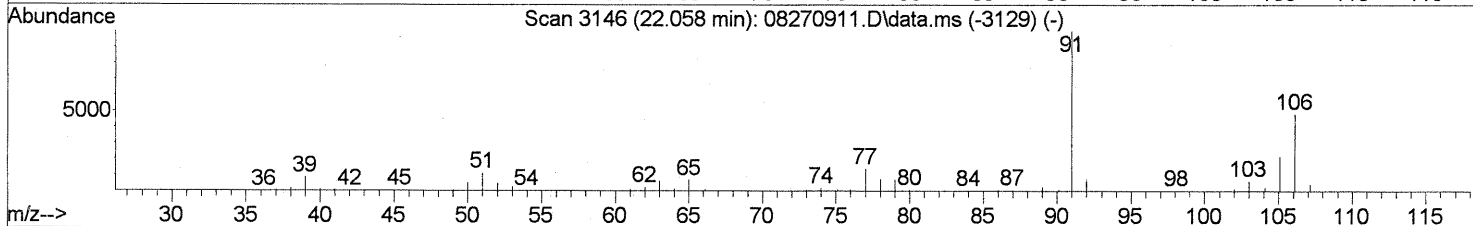
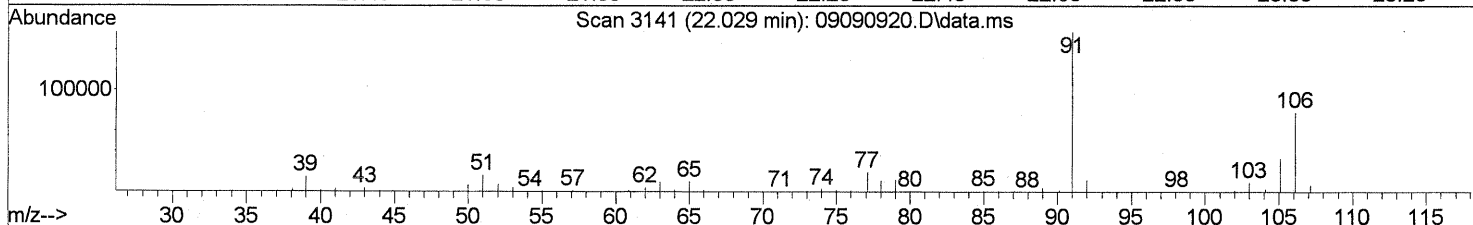
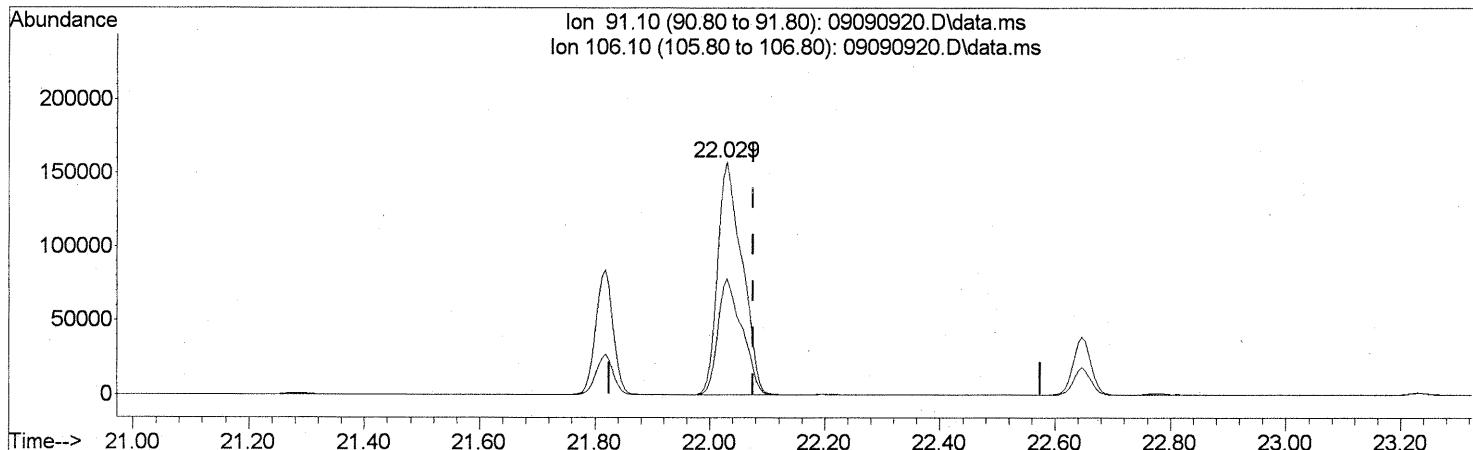
(66) Ethylbenzene (T)  
 21.818min (-0.011) 2.84ng  
 response 176129

Ion	Exp%	Act%
91.10	100	100
106.10	31.00	31.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

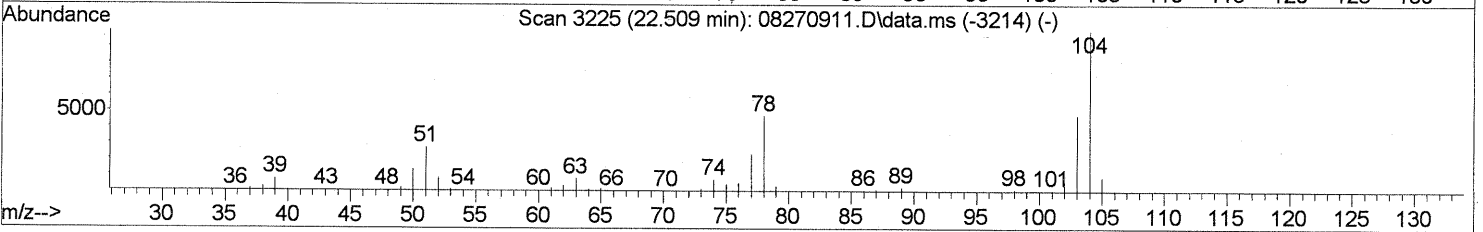
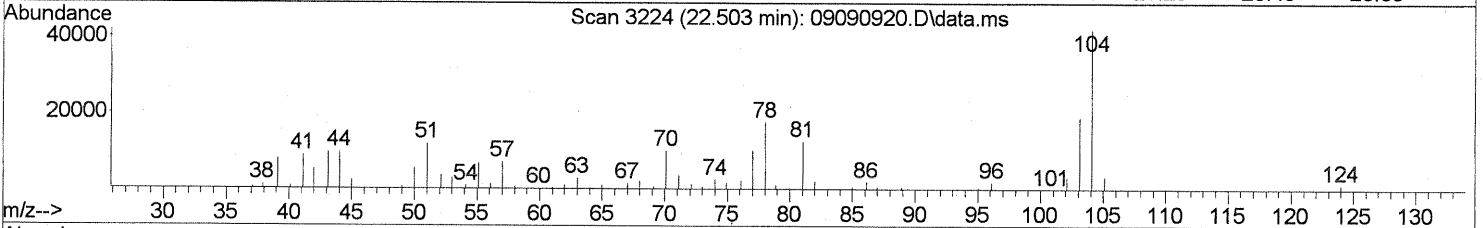
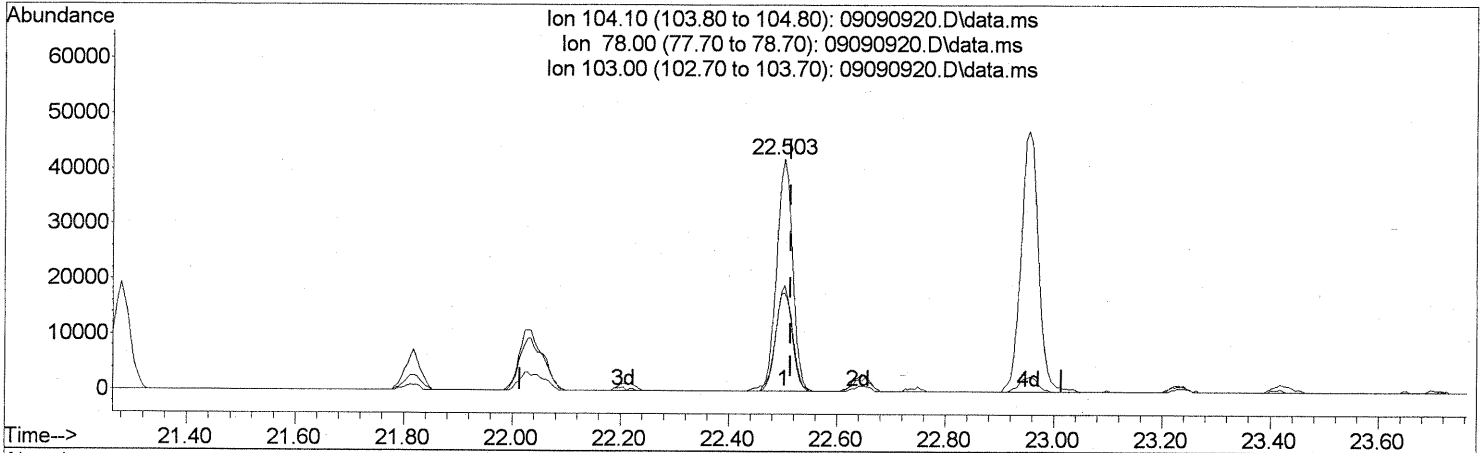
(67) m- & p-Xylenes (T)  
 22.029min (-0.046) 9.39ng  
 response 462994

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	49.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

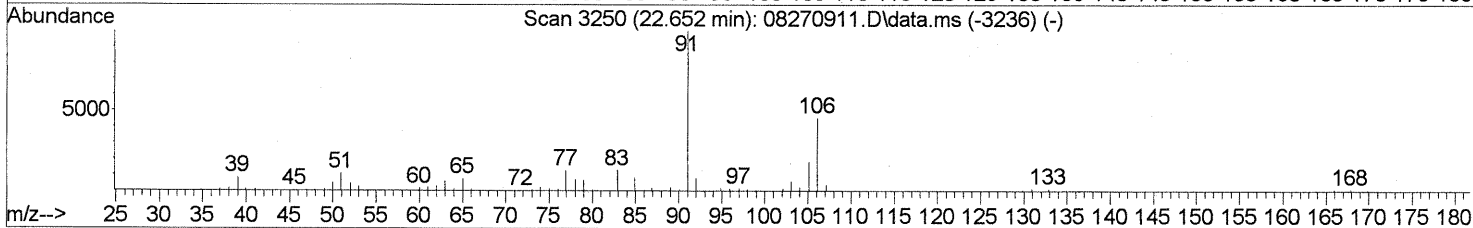
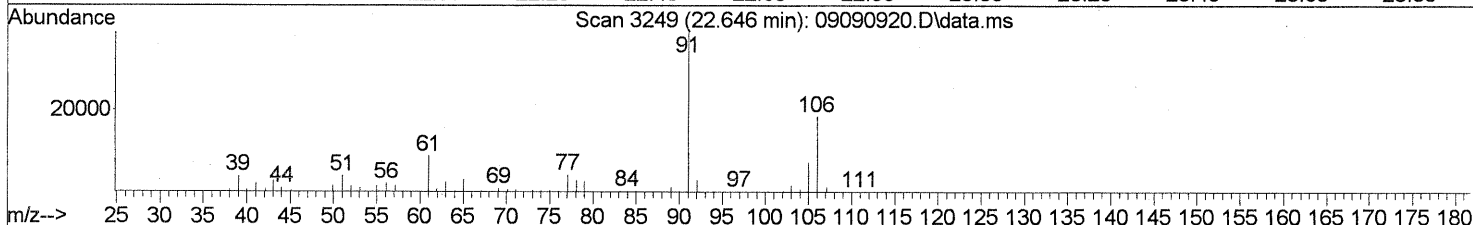
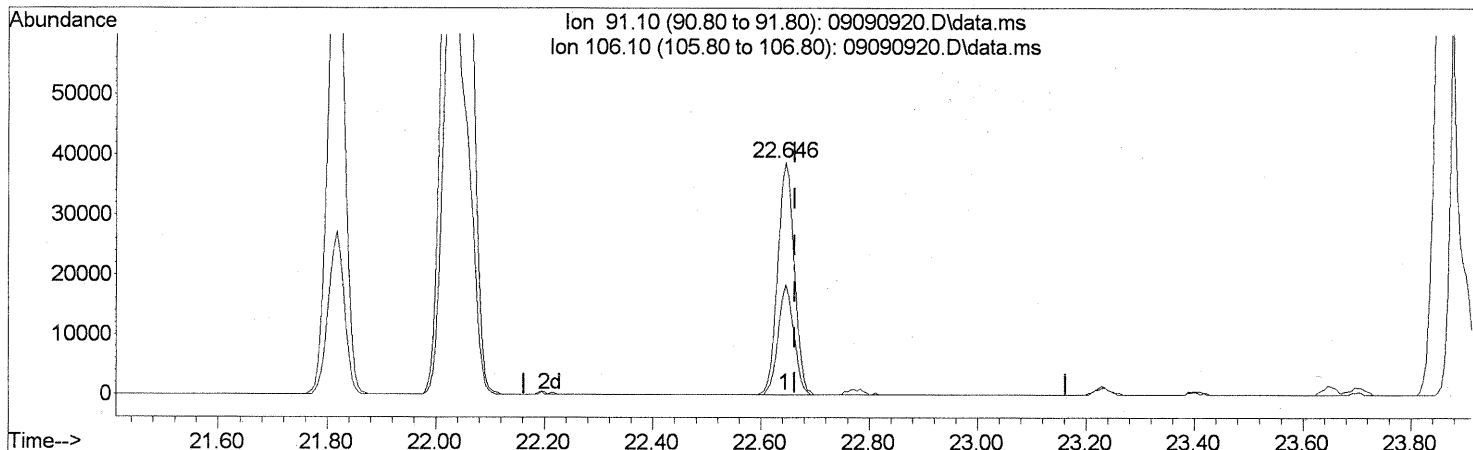
(69) Styrene (T)  
 22.503min (-0.011) 2.36ng  
 response 85563

Ion	Exp%	Act%
104.10	100	100
78.00	47.20	44.51
103.00	47.00	48.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

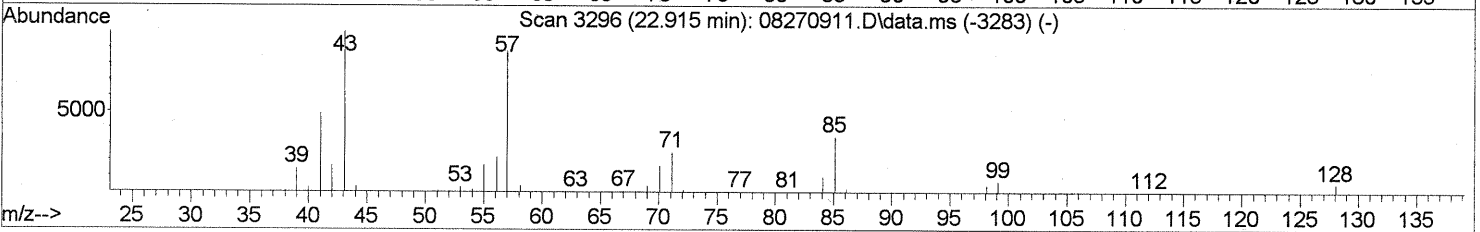
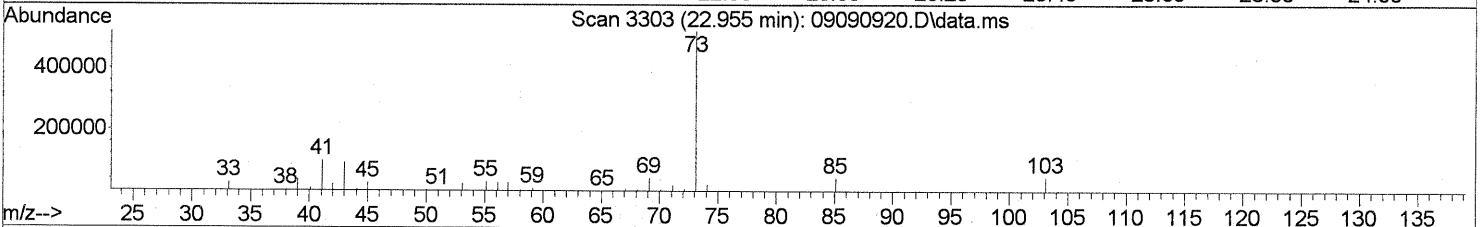
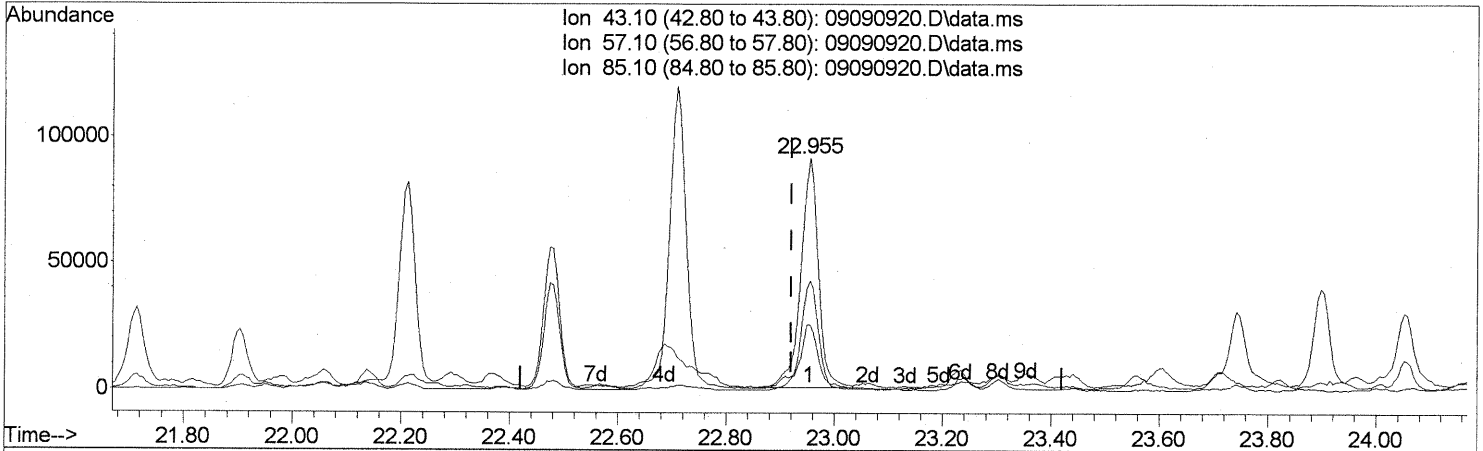
(70) o-Xylene (T)  
 22.646min (-0.017) 1.66ng  
 response 82115

Ion	Exp%	Act%
91.10	100	100
106.10	44.90	44.86
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(71) n-Nonane (T)  
 22.955min (+0.034) 6.92ng  
 response 206115

Ion	Exp%	Act%
43.10	100	100
57.10	85.90	31.55#
85.10	32.20	48.09
0.00	0.00	0.00

FP

LM 9/15/09

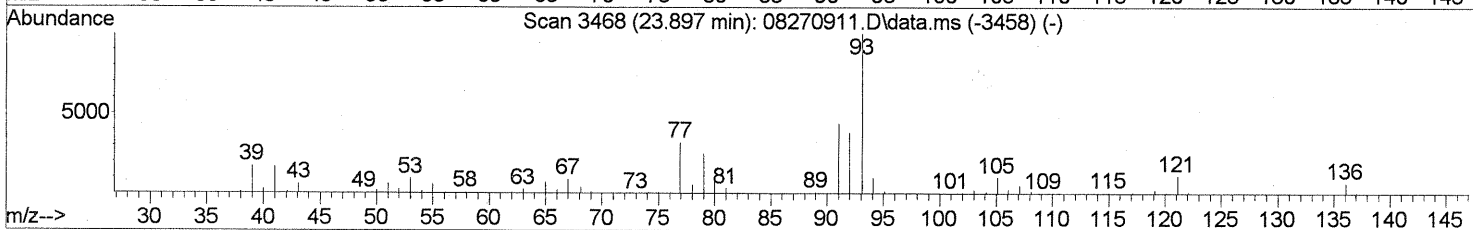
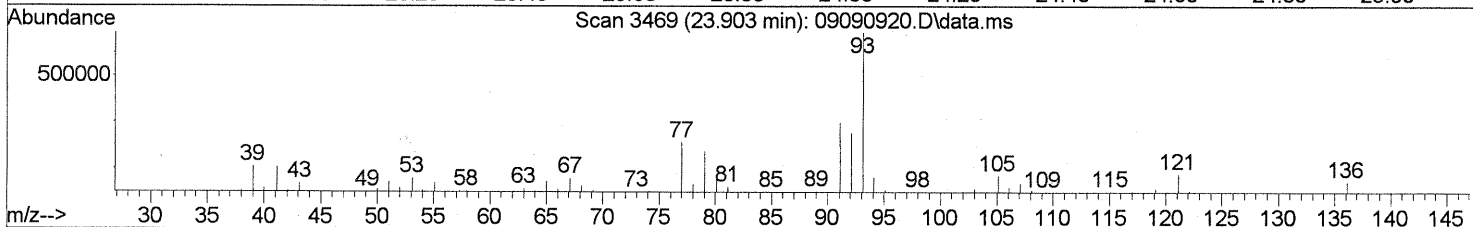
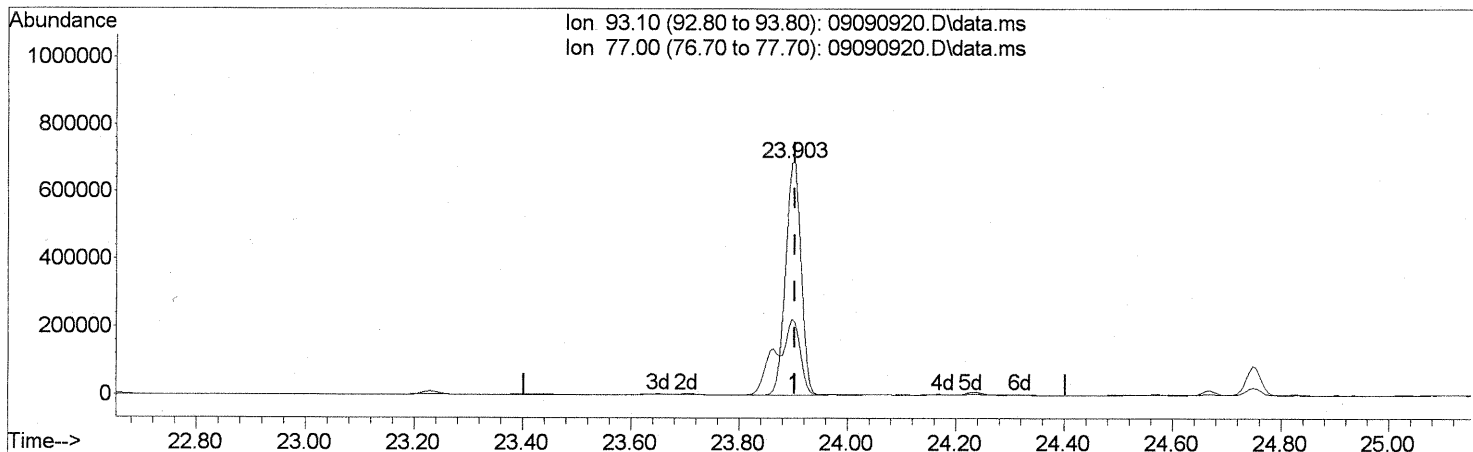
*LM 9/16/09*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

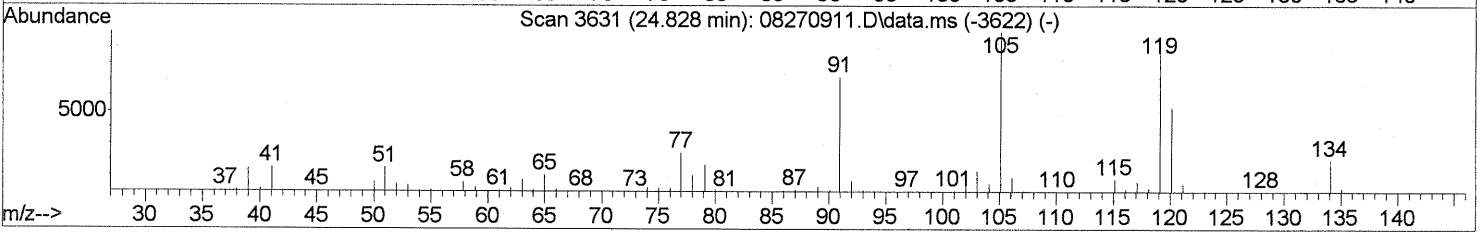
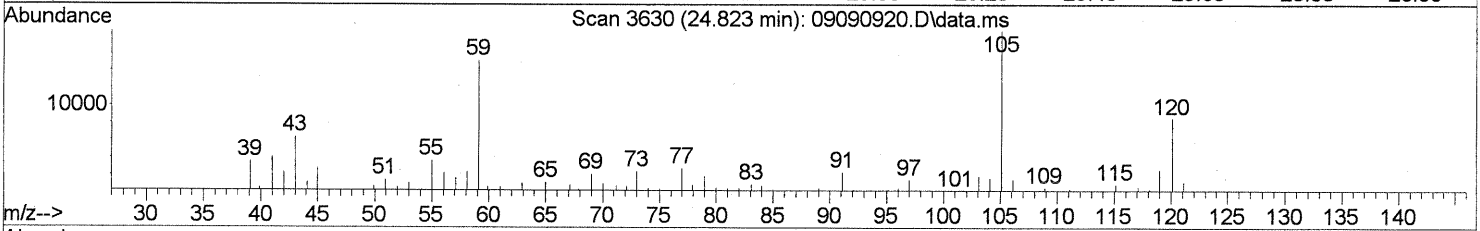
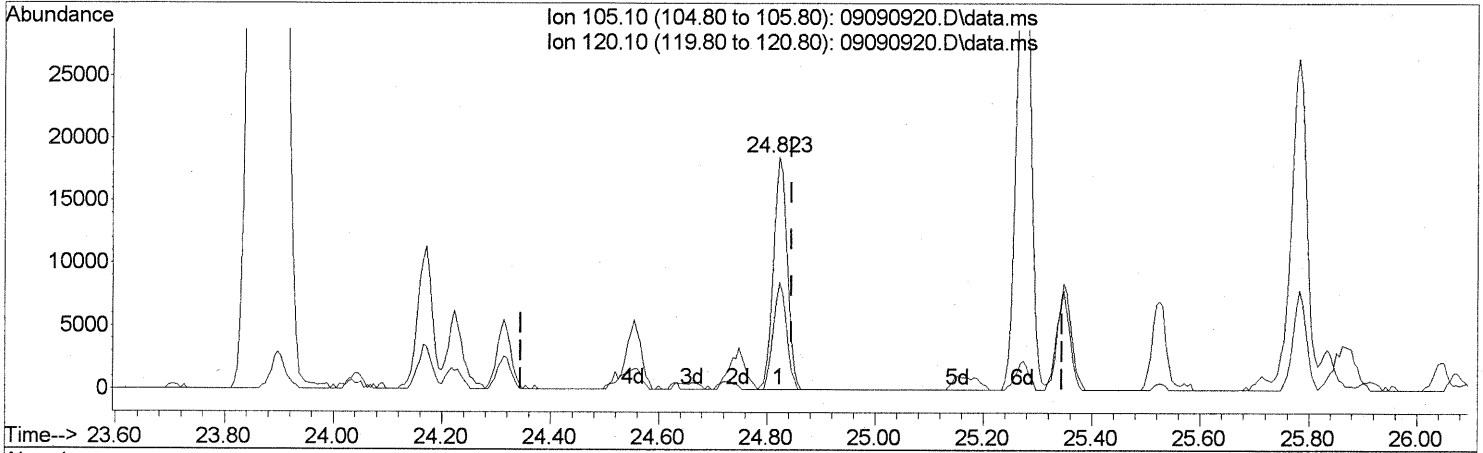
(75) alpha-Pinene (T)  
 23.903min (-0.000) 42.01ng  
 response 1368465

Ion	Exp%	Act%
93.10	100	100
77.00	33.10	29.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

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

24.823min (-0.023) 0.65ng

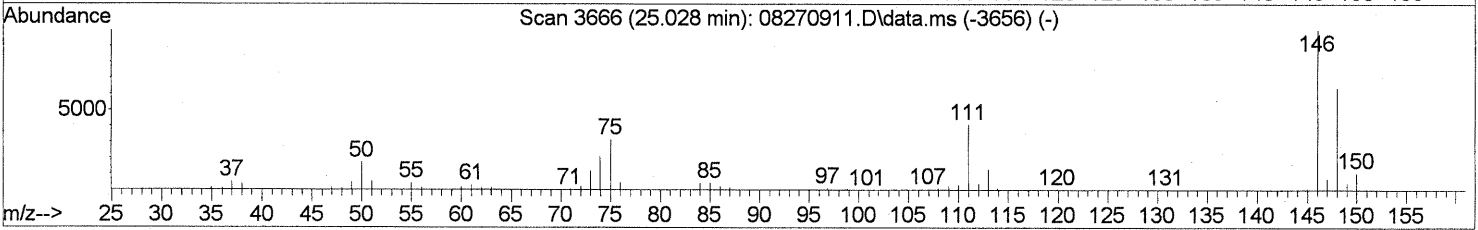
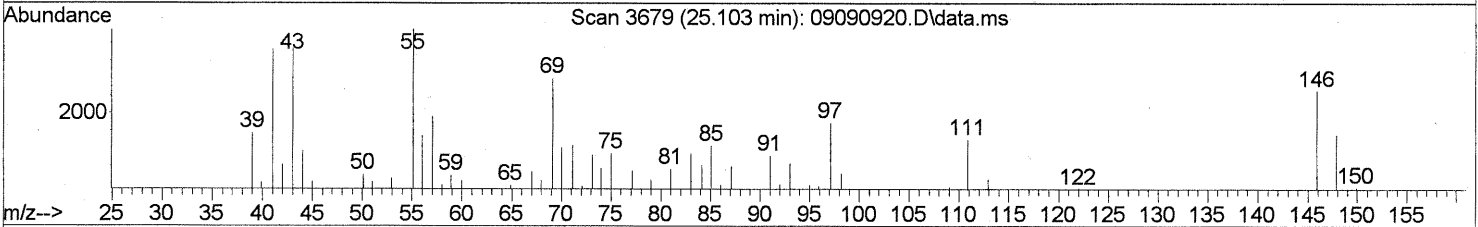
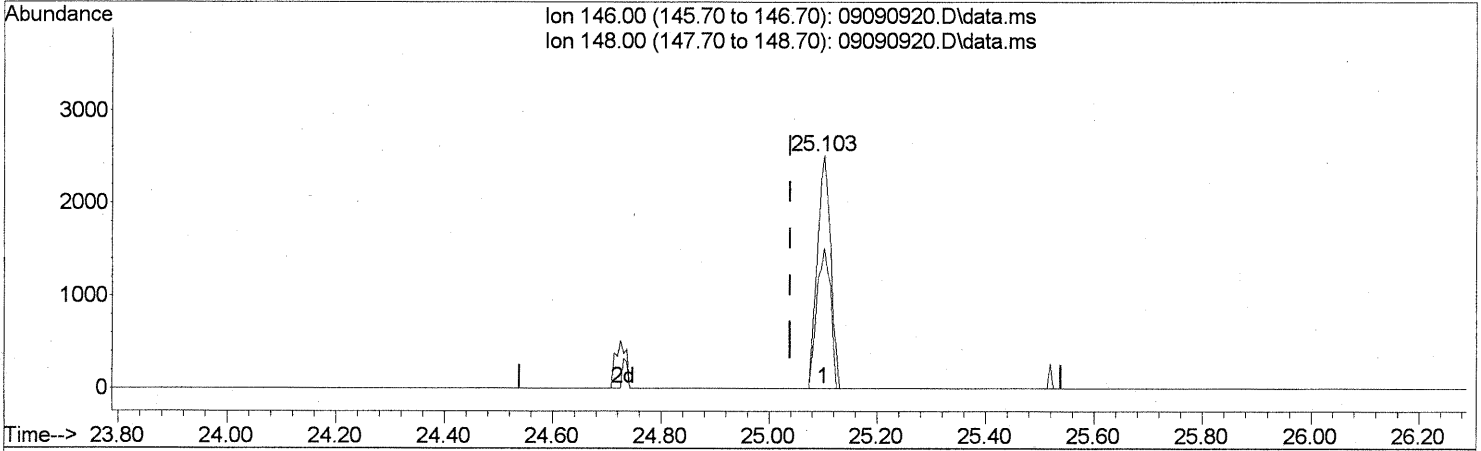
response 32679

Ion	Exp%	Act%
105.10	100	100
120.10	52.00	44.29
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(85) 1,3-Dichlorobenzene (T)  
 25.103min (+0.063) 0.16ng  
 response 4362

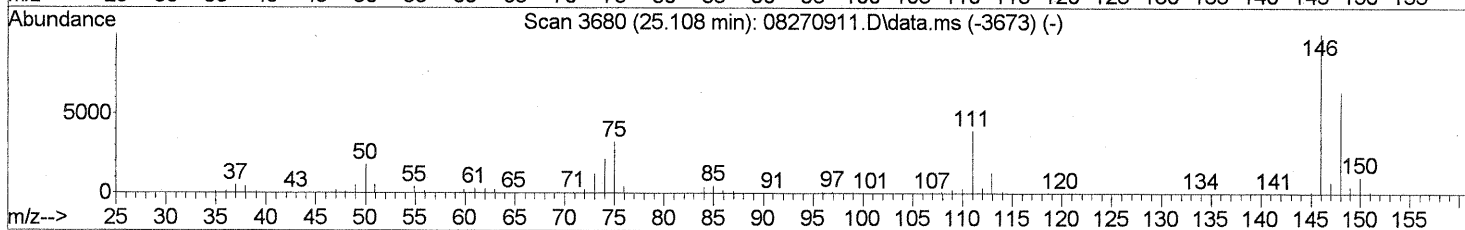
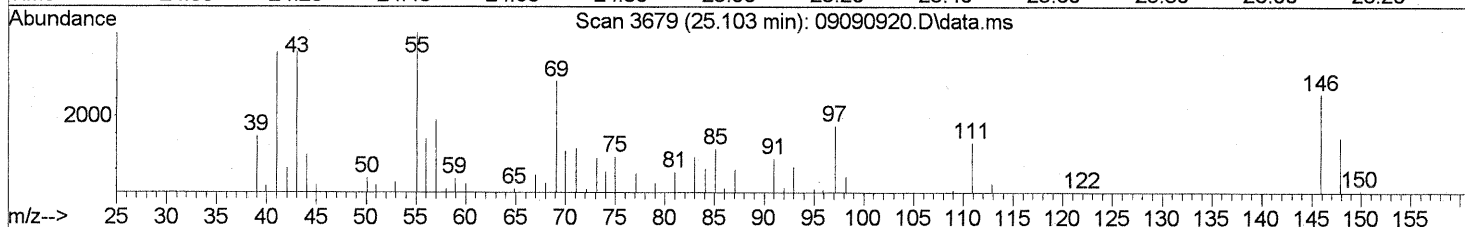
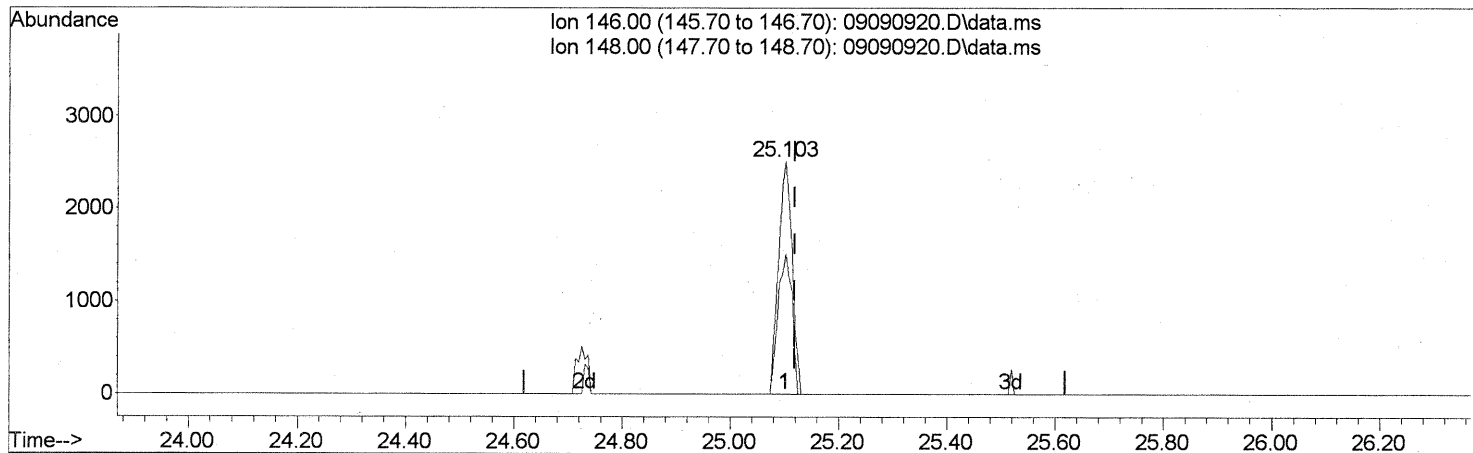
Ion	Exp%	Act%
146.00	100	100
148.00	64.00	61.46
0.00	0.00	0.00
0.00	0.00	0.00

FP  
 m 9/15/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(86) 1,4-Dichlorobenzene (T)

25.103min (-0.017) 0.15ng

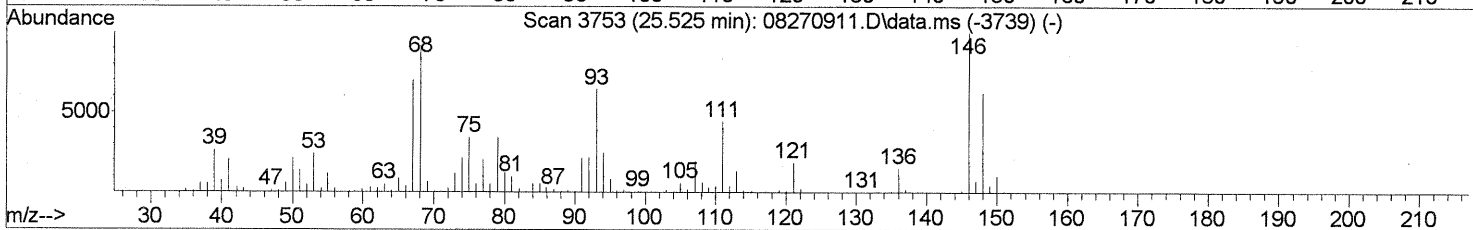
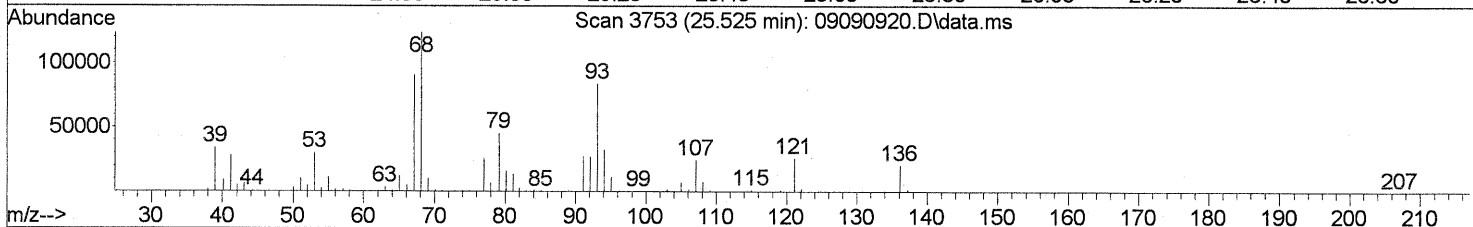
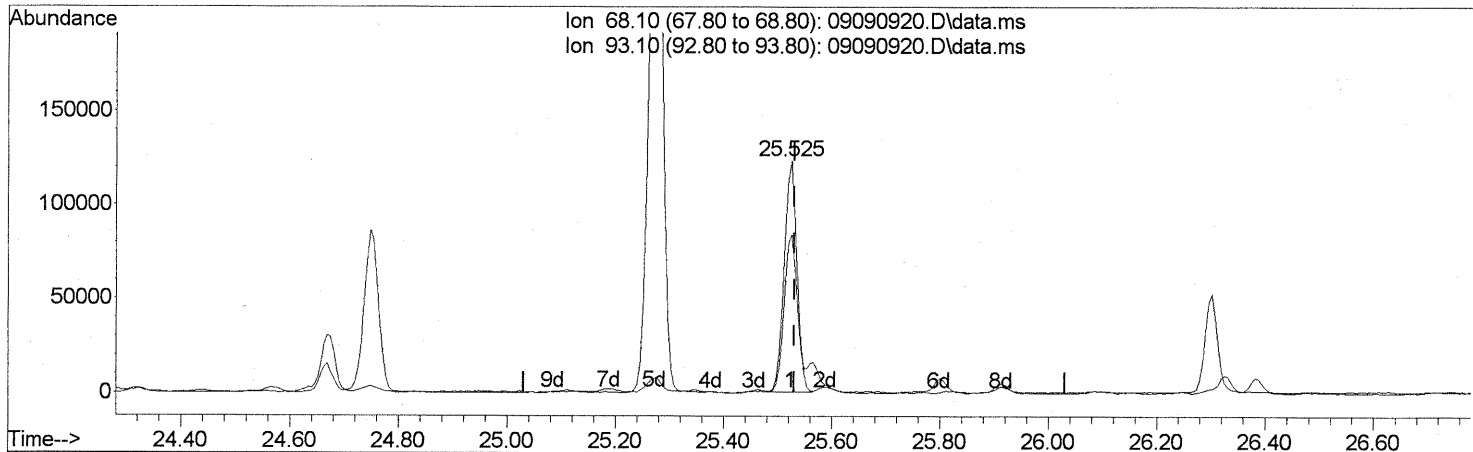
response 4362

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	61.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090920.D  
 Acq On : 9 Sep 2009 22:51  
 Operator : LM/CC  
 Sample : P0903114-002 (1000ml)  
 Misc : EH&E 104896  
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 10 08:30:22 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090920.D\data.ms

(91) d-Limonene (T)  
 25.525min (-0.006) 10.02ng  
 response 201576

Ion	Exp%	Act%
68.10	100	100
93.10	69.80	86.20
0.00	0.00	0.00
0.00	0.00	0.00



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104897  
**Client Project ID:** 16512  
**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Liliana Marghitoiu  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** AC01662

**CAS Project ID:** P0903114  
**CAS Sample ID:** P0903114-003

**Date Collected:** 9/2/09  
**Date Received:** 9/3/09  
**Date Analyzed:** 9/9/09  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): 0.2      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.12	ND	0.031	
141-78-6	Ethyl Acetate	6.0	0.61	1.7	0.17	
110-54-3	n-Hexane	12	0.61	3.5	0.17	
67-66-3	Chloroform	0.78	0.12	0.16	0.025	
109-99-9	Tetrahydrofuran (THF)	0.94	0.61	0.32	0.21	
107-06-2	1,2-Dichloroethane	2.2	0.12	0.55	0.030	
71-55-6	1,1,1-Trichloroethane	1.4	0.12	0.25	0.022	
71-43-2	Benzene	0.49	0.12	0.15	0.038	
56-23-5	Carbon Tetrachloride	0.69	0.12	0.11	0.019	
110-82-7	Cyclohexane	2.1	0.61	0.62	0.18	
78-87-5	1,2-Dichloropropane	ND	0.12	ND	0.026	
75-27-4	Bromodichloromethane	0.12	0.12	0.018	0.018	
79-01-6	Trichloroethene	ND	0.12	ND	0.023	
123-91-1	1,4-Dioxane	ND	0.61	ND	0.17	
80-62-6	Methyl Methacrylate	ND	0.61	ND	0.15	
142-82-5	n-Heptane	1.0	0.61	0.25	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.61	ND	0.13	
108-10-1	4-Methyl-2-pentanone	ND	0.61	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.61	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	25	0.61	6.5	0.16	
591-78-6	2-Hexanone	0.91	0.61	0.22	0.15	
124-48-1	Dibromochloromethane	ND	0.12	ND	0.014	
106-93-4	1,2-Dibromoethane	ND	0.12	ND	0.016	
123-86-4	n-Butyl Acetate	2.2	0.61	0.46	0.13	

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: \_\_\_\_\_

Date: \_\_\_\_\_

9/17/09

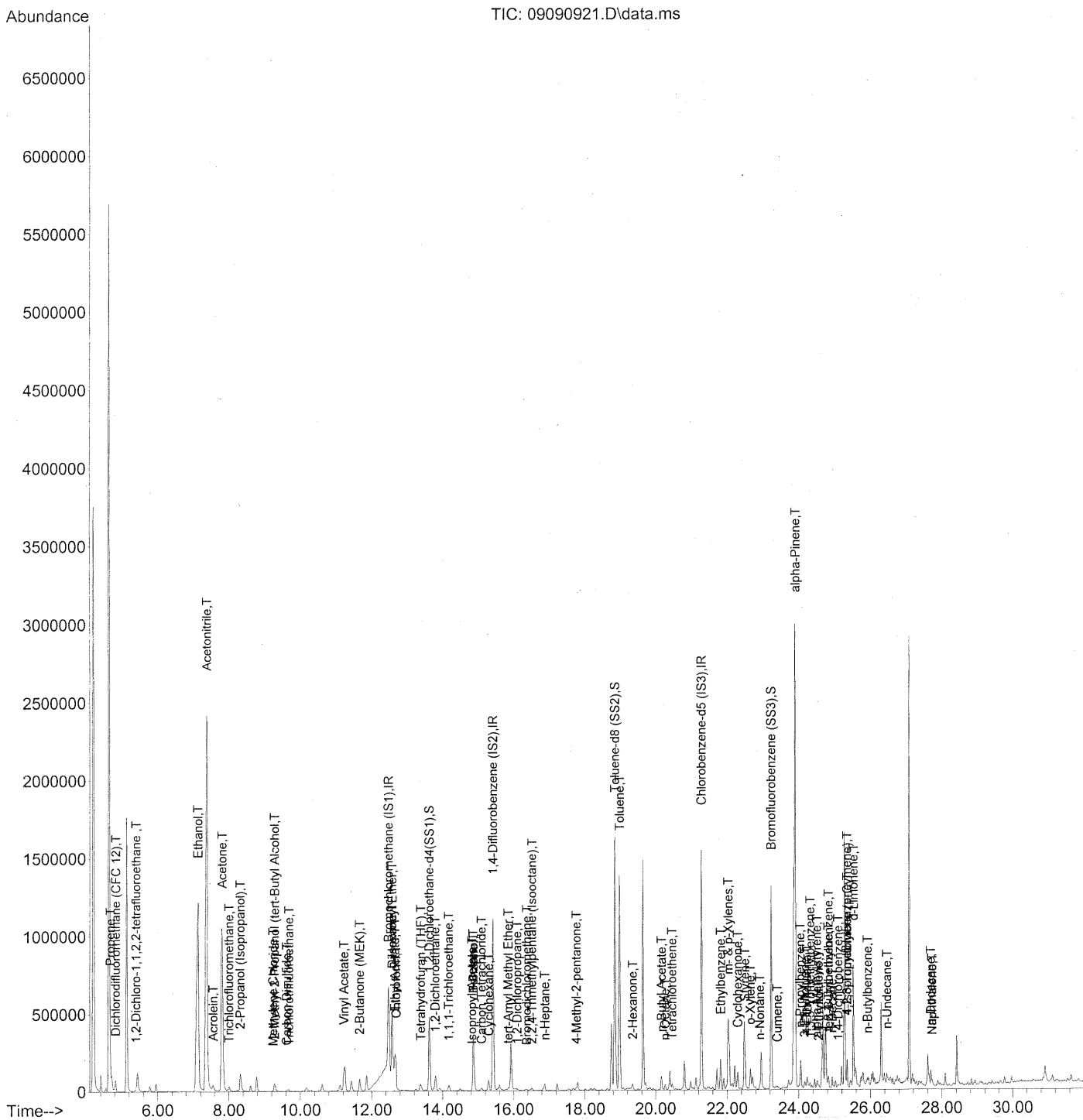
**75**





Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 11:34 pm  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 15 14:49:27 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 11:34 pm  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
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Quant Time: Sep 15 14:49:27 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

11/15/09

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	253461	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1265167	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	640597	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	482576	24.026	ng	-0.03
Spiked Amount	25.000		Recovery	= 96.12%		
57) Toluene-d8 (SS2)	18.85	98	1393895	24.348	ng	-0.01
Spiked Amount	25.000		Recovery	= 97.40%		
73) Bromofluorobenzene (SS3)	23.23	174	426348	25.876	ng	0.00
Spiked Amount	25.000		Recovery	= 103.52%		

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.66	42	33926m	1.850	ng	
3) Dichlorodifluoromethan...	4.82	85	69688	2.171	ng	99
4) Chloromethane	0.00	50	0	N.D.	d	
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	963	0.073	ng	# 43
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.87	54	306	N.D.		
8) Bromomethane	6.35	94	387	N.D.		
9) Chloroethane	6.68	64	394	N.D.		
10) Ethanol	7.13	45	2954720	259.900	ng	99
11) Acetonitrile	7.38	41	4438122	140.546	ng	# 100
12) Acrolein	7.56	56	39743	4.578	ng	97
13) Acetone	7.81	58	737613	62.737	ng	93
14) Trichlorofluoromethane	8.01	101	30065	1.063	ng	100
15) 2-Propanol (Isopropanol)	8.32	45	241043	6.167	ng	99
16) Acrylonitrile	8.59	53	847	N.D.		
17) 1,1-Dichloroethene	9.05	96	585	N.D.		
18) 2-Methyl-2-Propanol (t...	9.28	59	16017	0.409	ng	# 1
19) Methylene Chloride	9.23	84	4431	0.297	ng	91
20) 3-Chloro-1-propene (Al...	9.39	41	91	N.D.		
21) Trichlorotrifluoroethane	9.68	151	5771	0.515	ng	91
22) Carbon Disulfide	9.62	76	28549	0.538	ng	99
23) trans-1,2-Dichloroethene	10.54	61	1004	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	11.18	73	88	N.D.		
26) Vinyl Acetate	11.23	86	32473	11.021	ng	# 59
27) 2-Butanone (MEK)	11.66	72	35576	3.746	ng	99
28) cis-1,2-Dichloroethene	12.24	61	912	N.D.		
29) Diisopropyl Ether	12.58	87	2784	0.201	ng	# 1
30) Ethyl Acetate	12.66	61	25160	4.930	ng	82
31) n-Hexane	12.58	57	257641	10.134	ng	98

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Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 11:34 pm  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 15 14:49:27 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.69	83	16031	0.640	ng	99
34) Tetrahydrofuran (THF)	13.38	72	7899	0.767	ng #	10
35) Ethyl tert-Butyl Ether	13.44	87	87	N.D.		
36) 1,2-Dichloroethane	13.79	62	38640	1.838	ng	97
38) 1,1,1-Trichloroethane	14.17	97	26648	1.139	ng	97
39) Isopropyl Acetate	14.82	61	1247	0.130	ng #	1
40) 1-Butanol	14.86	56	278907	17.711	ng #	42
41) Benzene	14.87	78	24024	0.404	ng	99
42) Carbon Tetrachloride	15.09	117	11287	0.565	ng	100
43) Cyclohexane	15.29	84	38138	1.740	ng	95
44) tert-Amyl Methyl Ether	15.84	73	13162	0.299	ng #	63
45) 1,2-Dichloropropane	16.09	63	812	0.055	ng	99
46) Bromodichloromethane	16.37	83	1980	0.101	ng	82
47) Trichloroethene	0.00	130	0	N.D.		
48) 1,4-Dioxane	16.52	88	526	N.D.		
49) 2,2,4-Trimethylpentane...	16.52	57	11085	0.164	ng #	56
50) Methyl Methacrylate	16.77	100	92	N.D.		
51) n-Heptane	16.88	71	12923	0.838	ng	95
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.76	58	4462	0.328	ng	98
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	18.98	91	1239013	20.094	ng	99
59) 2-Hexanone	19.35	43	28232	0.749	ng	99
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.16	43	76790	1.776	ng	95
63) n-Octane	20.26	57	6926	0.488	ng	95
64) Tetrachloroethene	20.46	166	10507	0.673	ng	99
65) Chlorobenzene	21.35	112	874	N.D.		
66) Ethylbenzene	21.82	91	177176	2.512	ng	100
67) m- & p-Xylenes	22.03	91	468010	8.336	ng	99
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.50	104	89092	2.155	ng	98
70) o-Xylene	22.65	91	81566	1.446	ng	100
71) n-Nonane	22.91	43	10848m	0.320	ng	
72) 1,1,2,2-Tetrachloroethane	22.64	83	495	N.D.		
74) Cumene	23.40	105	6298	0.088	ng	99
75) alpha-Pinene	23.90	93	1406365	37.932	ng #	42
76) n-Propylbenzene	24.04	91	9951	0.110	ng #	1
77) 3-Ethyltoluene	24.17	105	21339	0.312	ng	95
78) 4-Ethyltoluene	24.22	105	11618	0.172	ng	93
79) 1,3,5-Trimethylbenzene	24.31	105	9679	0.172	ng	97

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Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 11:34 pm  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 15 14:49:27 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

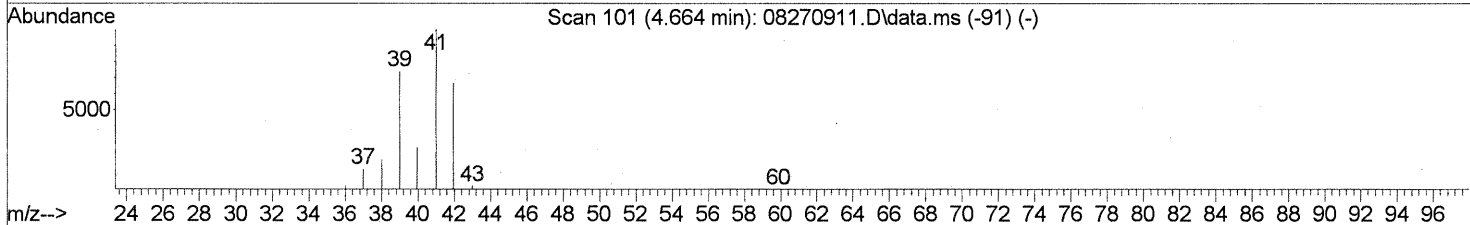
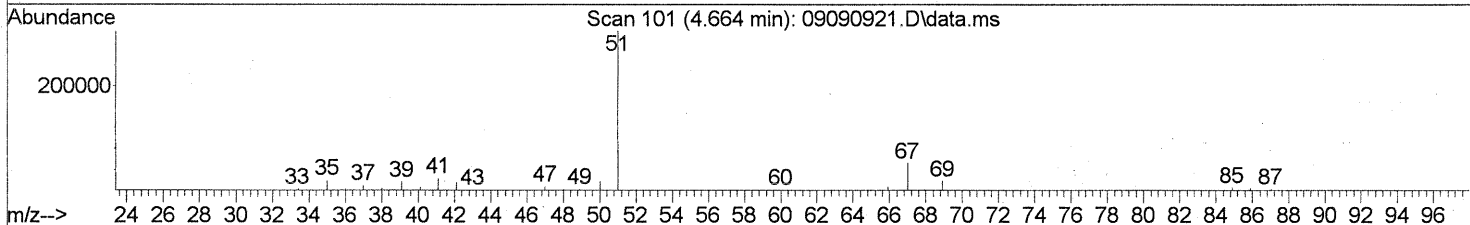
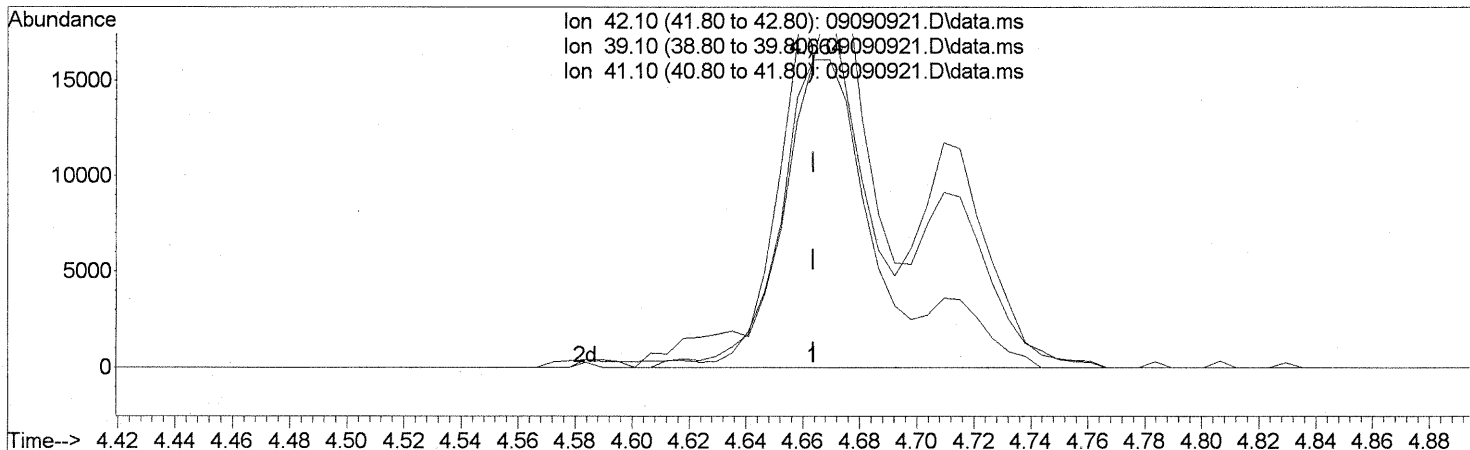
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.50	118	7985	0.271	ng	# 76
81) 2-Ethyltoluene	24.55	105	12053	0.172	ng	90
82) 1,2,4-Trimethylbenzene	24.82	105	32728	0.571	ng	92
83) n-Decane	24.93	57	29738	0.869	ng	96
84) Benzyl Chloride	25.03	91	848	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
86) 1,4-Dichlorobenzene	25.10	146	3848	0.119	ng	100
87) sec-Butylbenzene	25.15	105	3116	N.D.		
88) 4-Isopropyltoluene (p-...	25.35	119	83677	1.185	ng	96
89) 1,2,3-Trimethylbenzene	25.35	105	14778	0.246	ng	# 51
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	d	
91) d-Limonene	25.53	68	200644	8.766	ng	83
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.46	57	42500	1.196	ng	99
94) 1,2,4-Trichlorobenzene	27.58	180	266	N.D.		
95) Naphthalene	27.72	128	22715	<del>0.287</del>	ng	99
96) n-Dodecane	27.69	57	33557	0.828	ng	95
97) Hexachlorobutadiene	0.00	225	0	N.D.	✓	
98) Cyclohexanone	22.29	55	63706	2.680	ng	96
99) tert-Butylbenzene	24.82	119	4119	0.074	ng	# 56
100) n-Butylbenzene	25.91	91	4749	0.074	ng	# 74

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(2) Propene (T)  
 4.664min (-0.000) 2.15ng  
 response 39348

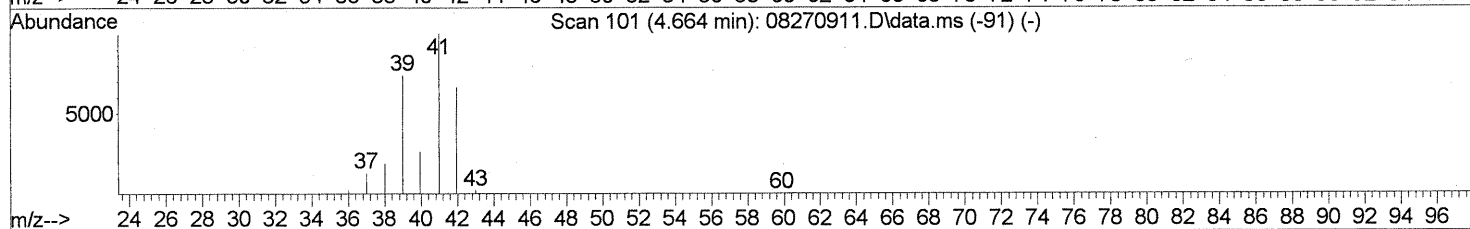
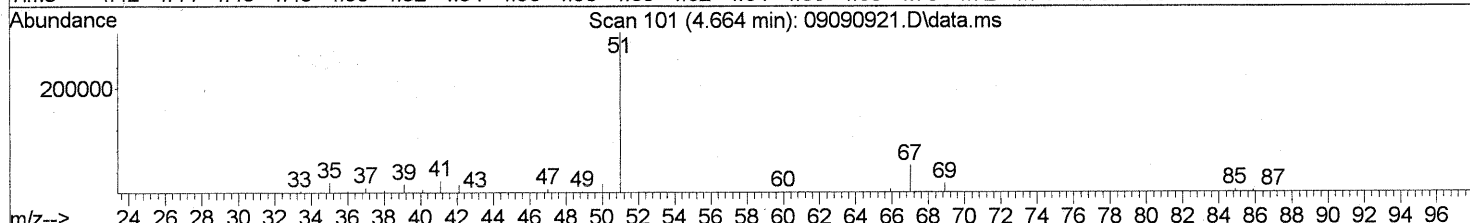
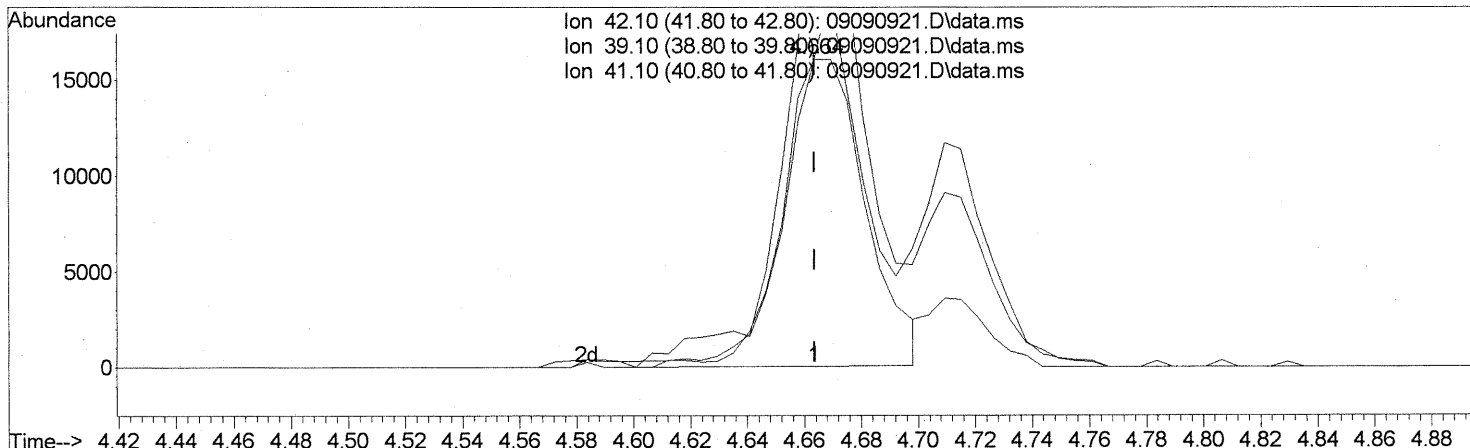
S #

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	87.22#
41.10	149.80	119.83#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(2) Propene (T)  
 4.664min (-0.000) 1.85ng m  
 response 33926

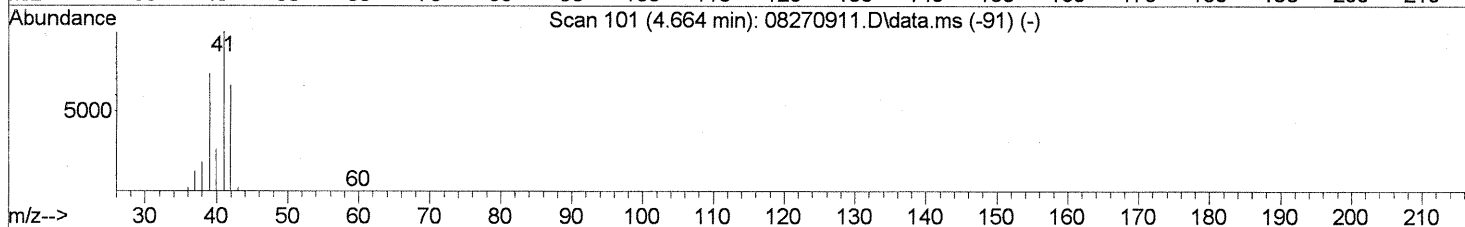
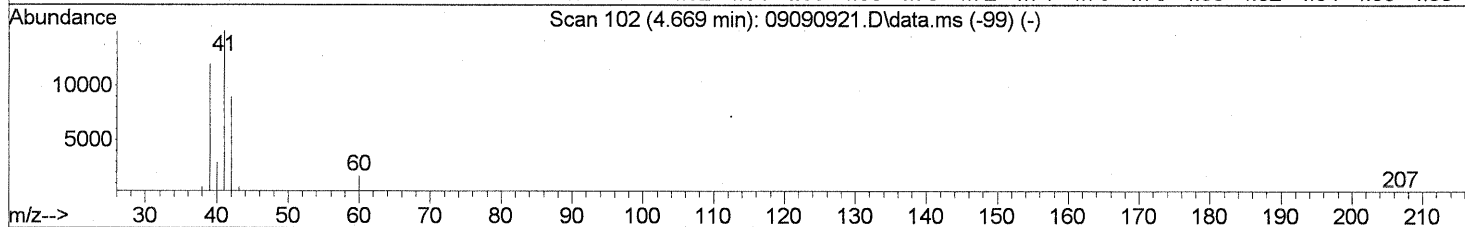
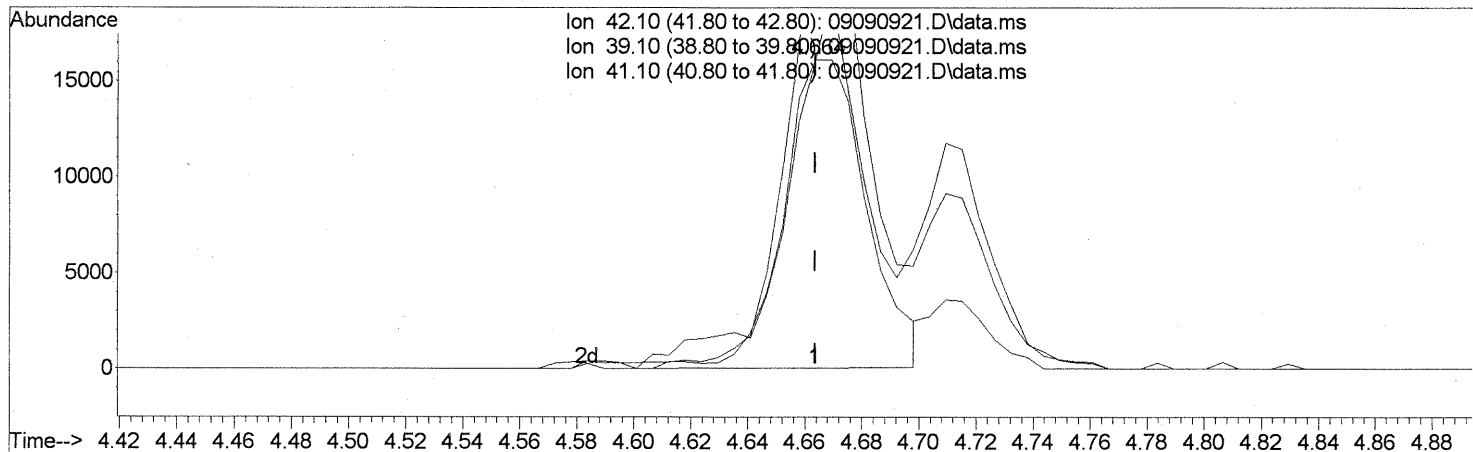
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	101.16
41.10	149.80	138.98
0.00	0.00	0.00

*SH → IC  
 11/15/09  
 Before subds.  
 E = 9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(2) Propene (T)  
 4.664min (-0.000) 1.85ng m  
 response 33926

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	101.16
41.10	149.80	138.98
0.00	0.00	0.00

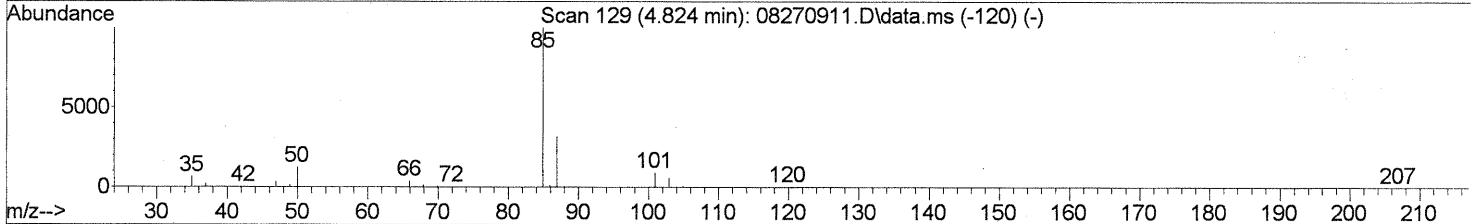
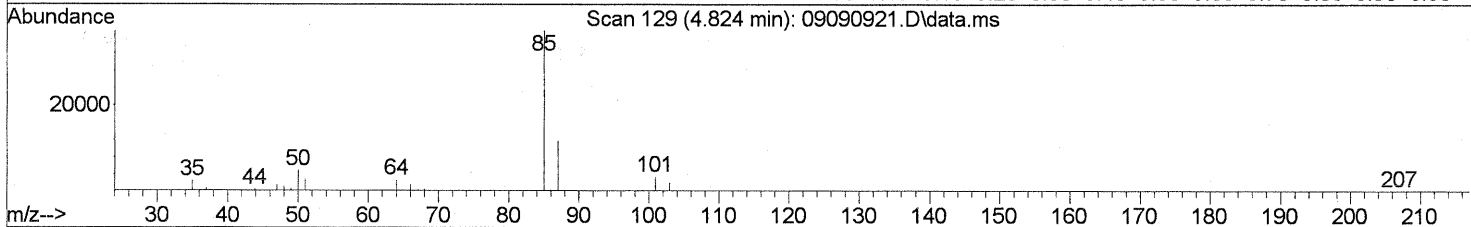
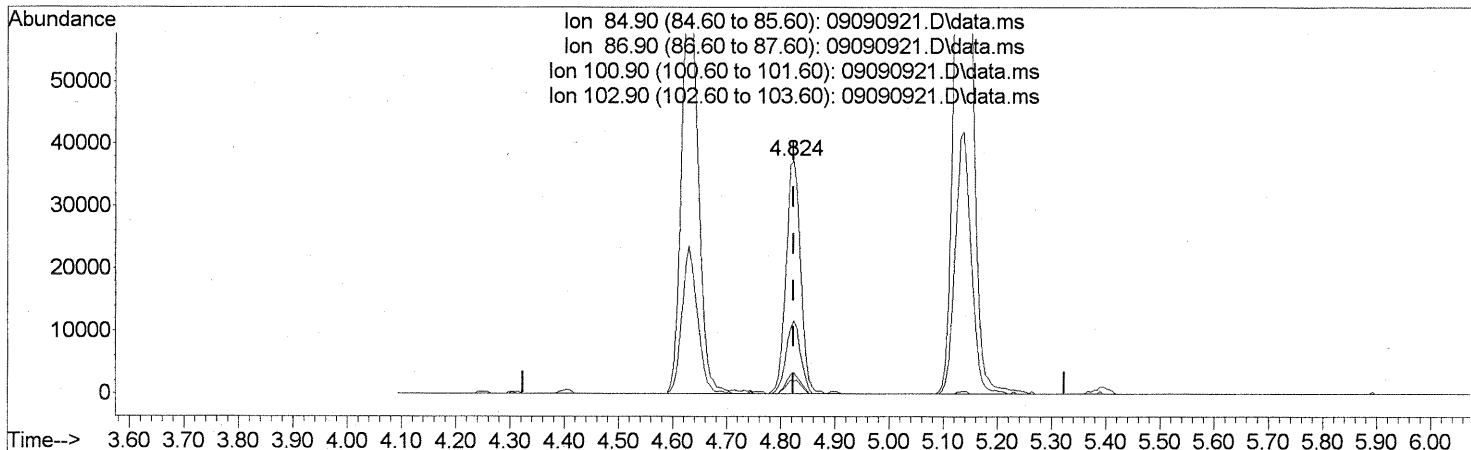
*SH -> 1e*  
*11/15/09*  
*After subtr.*

*E. J. 1/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.824min (-0.000) 2.17ng  
 response 69688

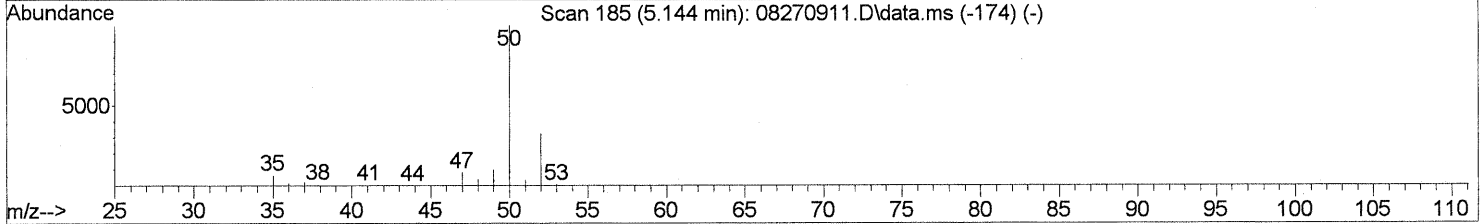
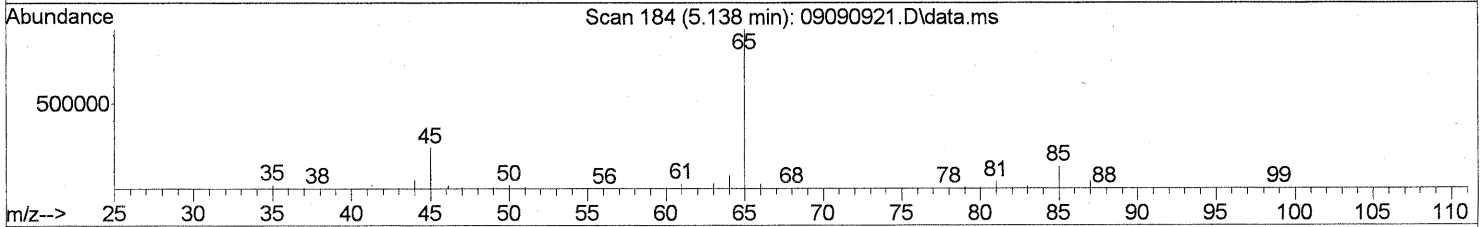
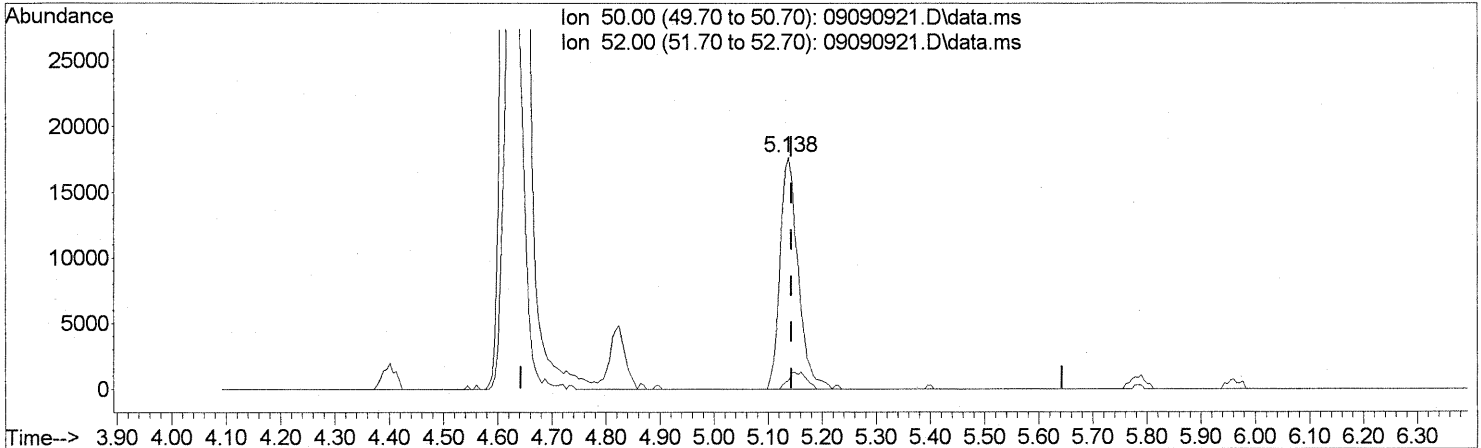
Ion	Exp%	Act%
84.90	100	100
86.90	32.00	31.10
100.90	8.80	8.40
102.90	5.60	5.85



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(4) Chloromethane (T)  
 5.138min (-0.006) 1.89ng  
 response 40841

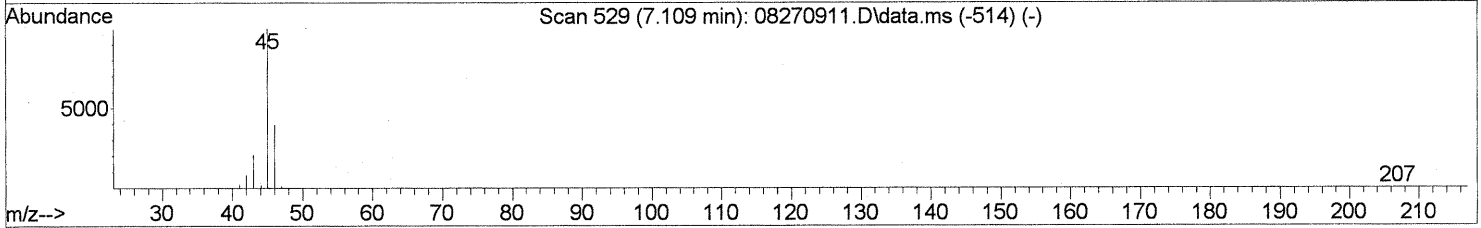
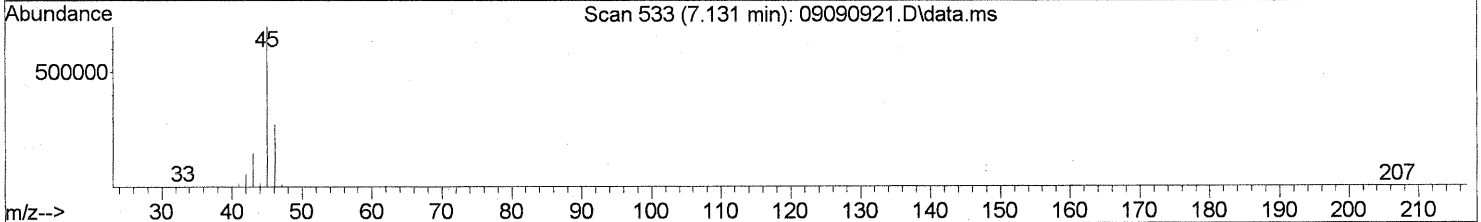
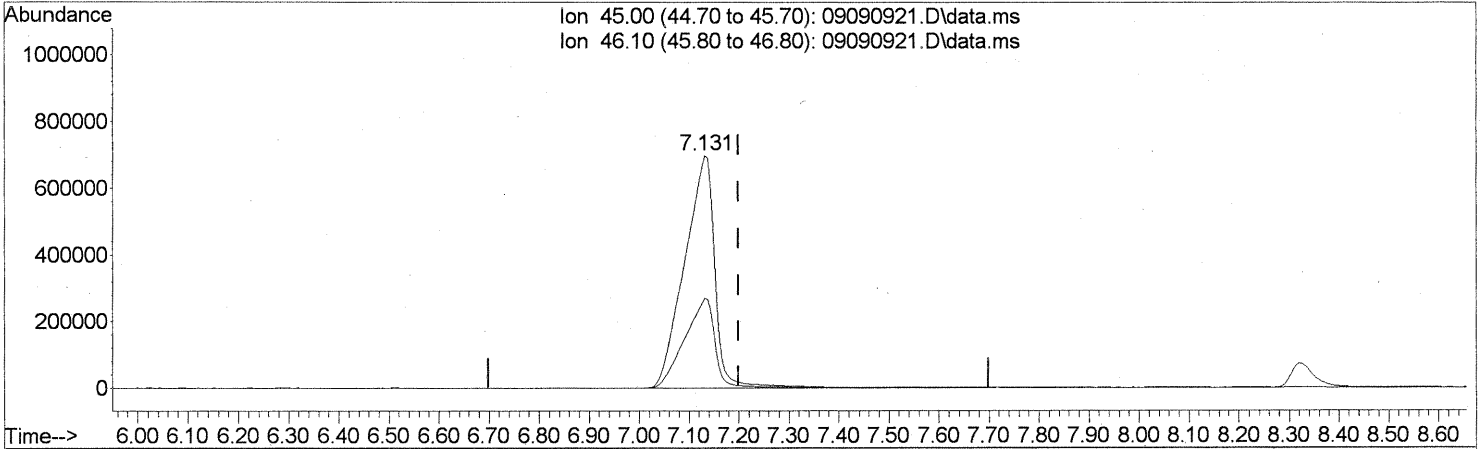
Ion	Exp%	Act%
50.00	100	100
52.00	31.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*11/9/10/09*  
*11/9/10/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

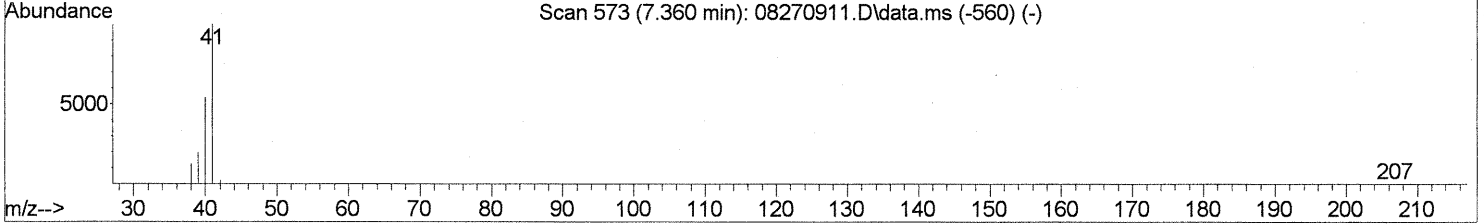
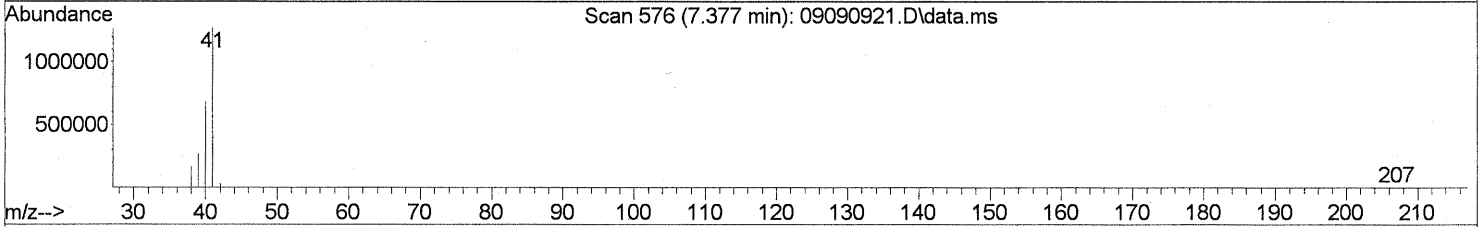
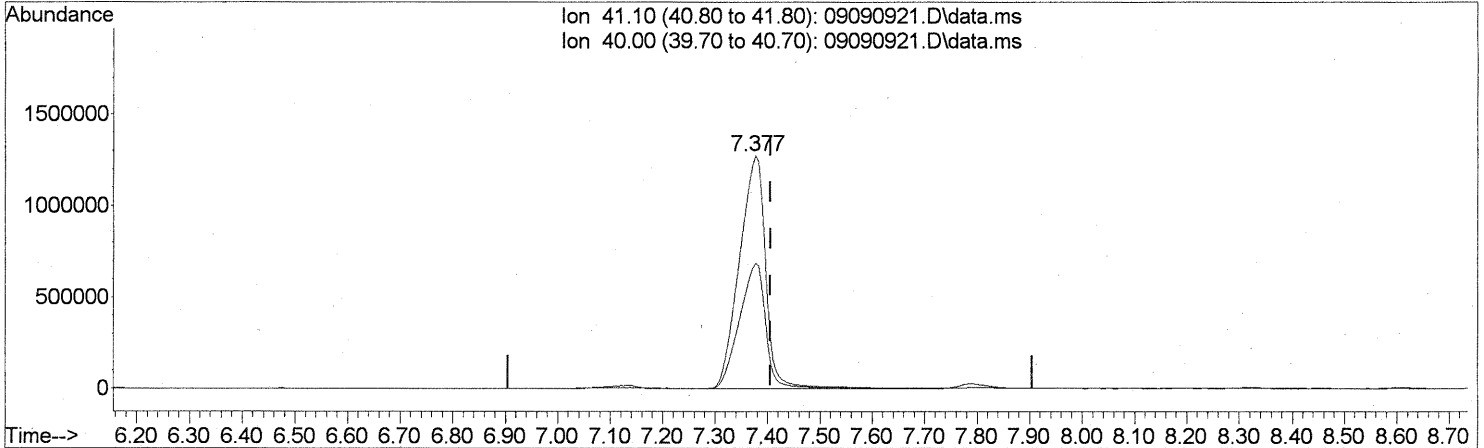
(10) Ethanol (T)  
 7.131min (-0.069) 259.90ng  
 response 2954720

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	38.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(11) Acetonitrile (T)

7.377min (-0.029) 140.55ng

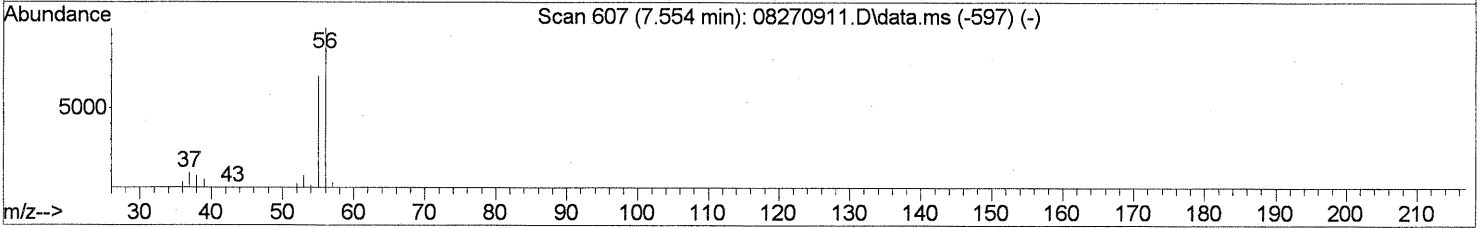
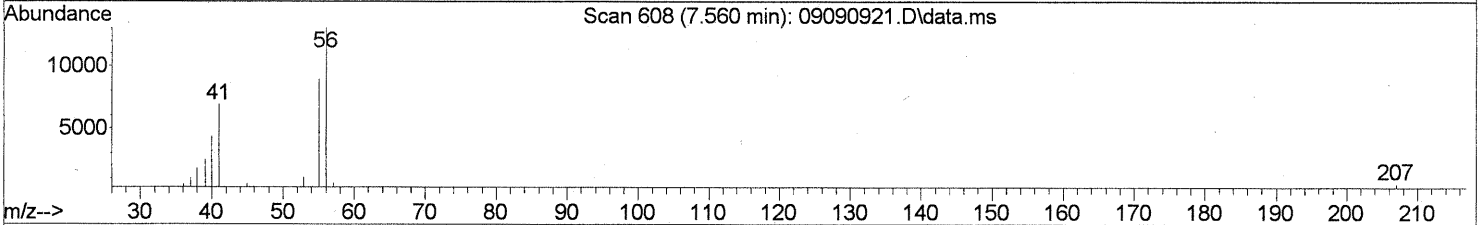
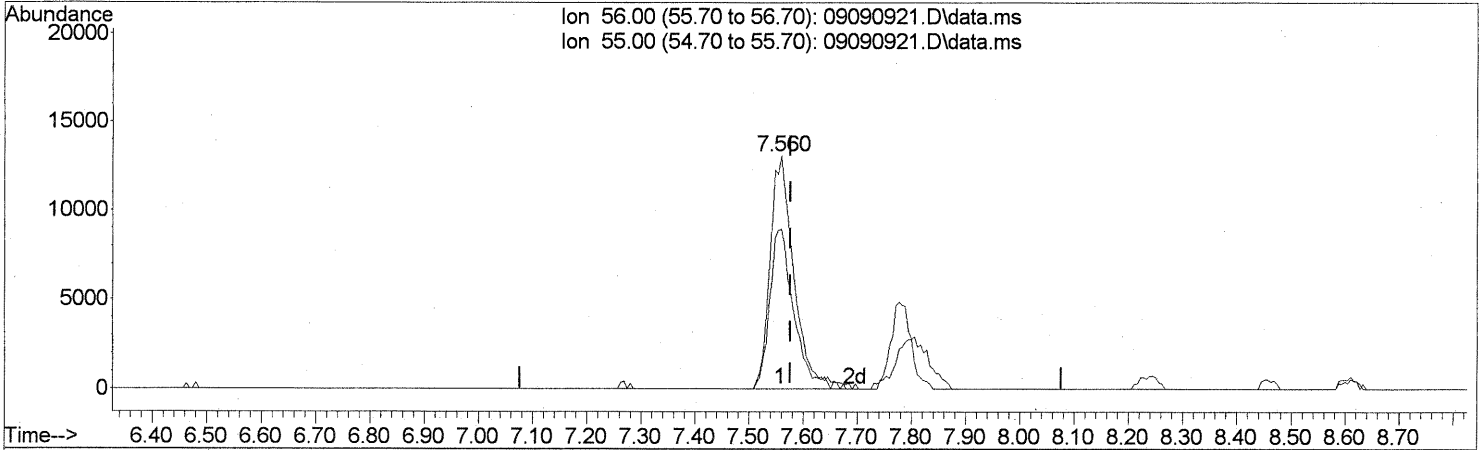
response 4438122

Ion	Exp%	Act%
41.10	100	100
40.00	53.70	53.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

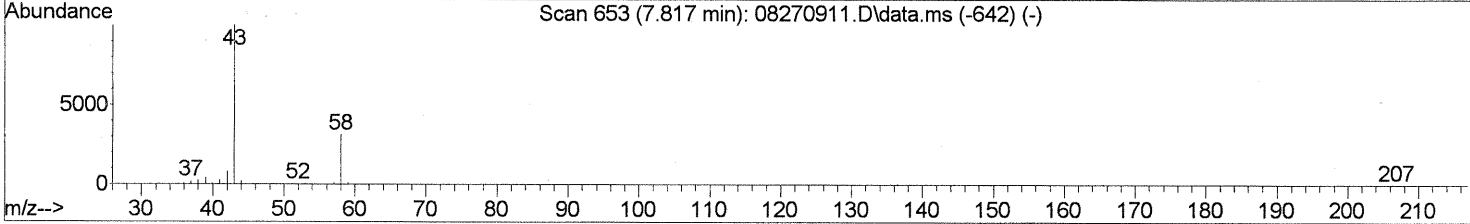
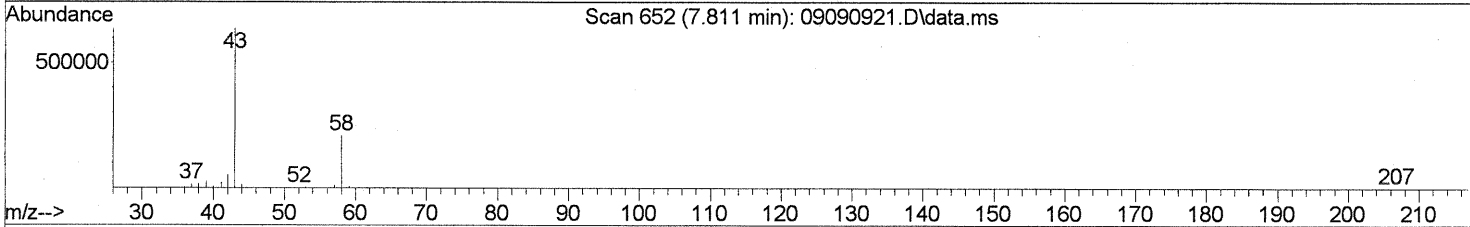
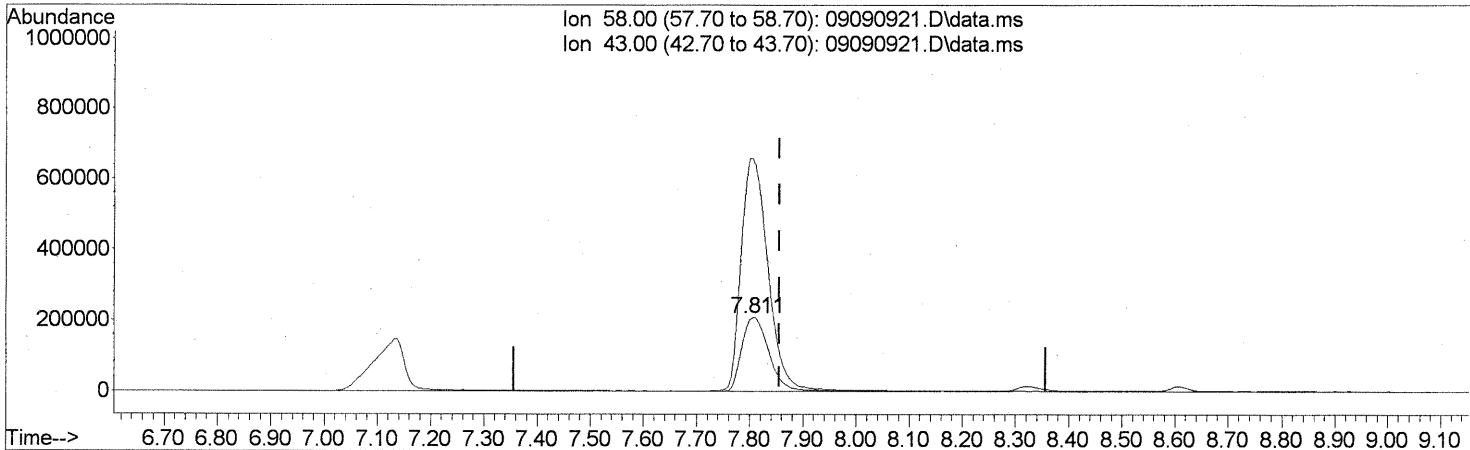
(12) Acrolein (T)  
 7.560min (-0.017) 4.58ng  
 response 39743

Ion	Exp%	Act%
56.00	100	100
55.00	71.10	68.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

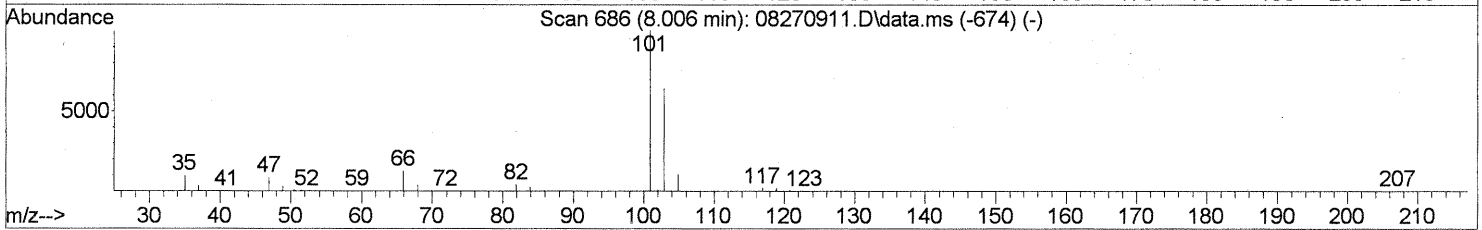
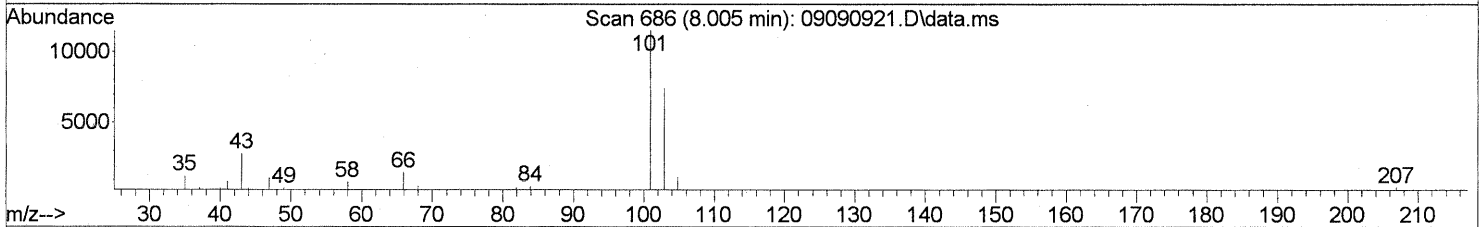
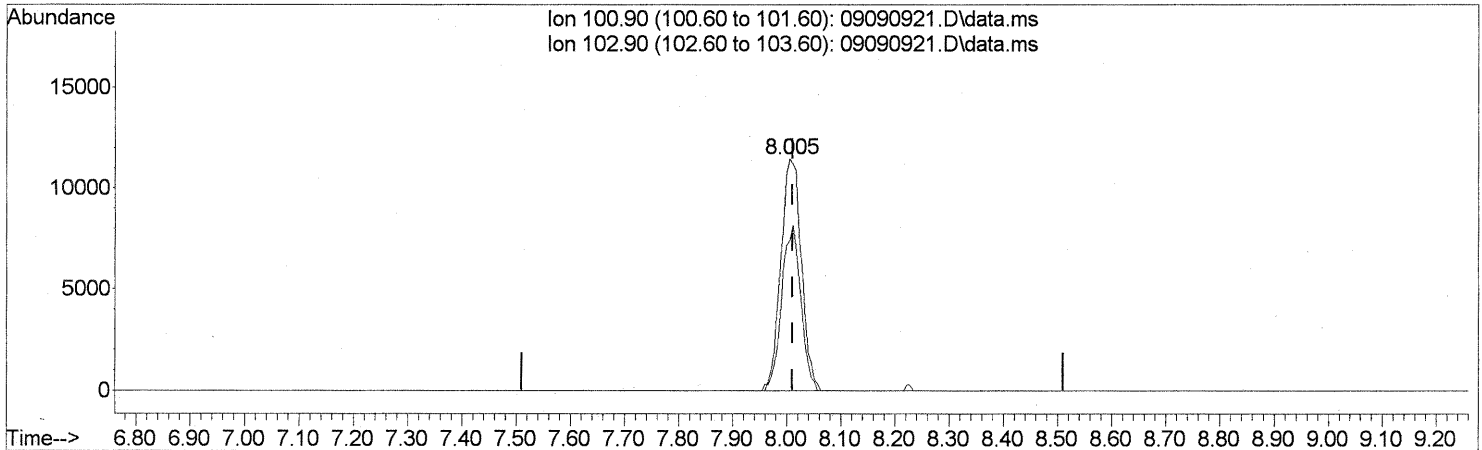
(13) Acetone (T)  
 7.811min (-0.046) 62.74ng  
 response 737613

Ion	Exp%	Act%
58.00	100	100
43.00	331.30	315.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(14) Trichlorofluoromethane (T)

8.005min (-0.006) 1.06ng

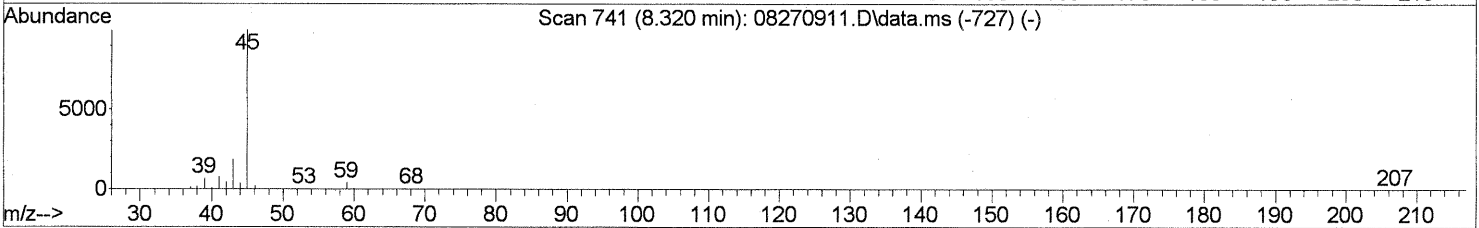
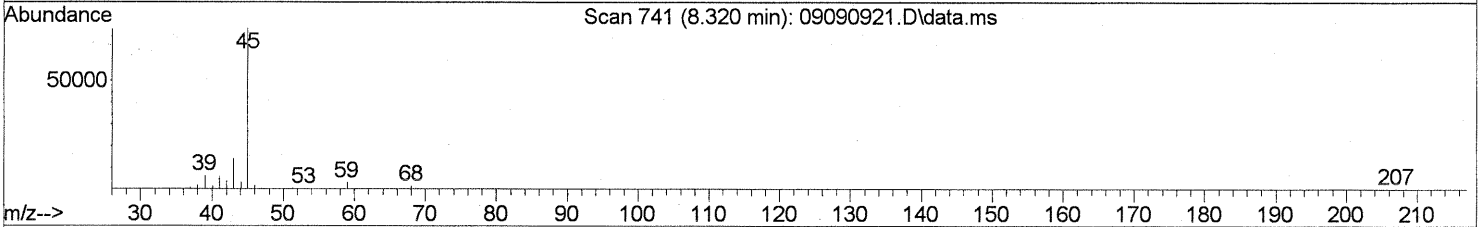
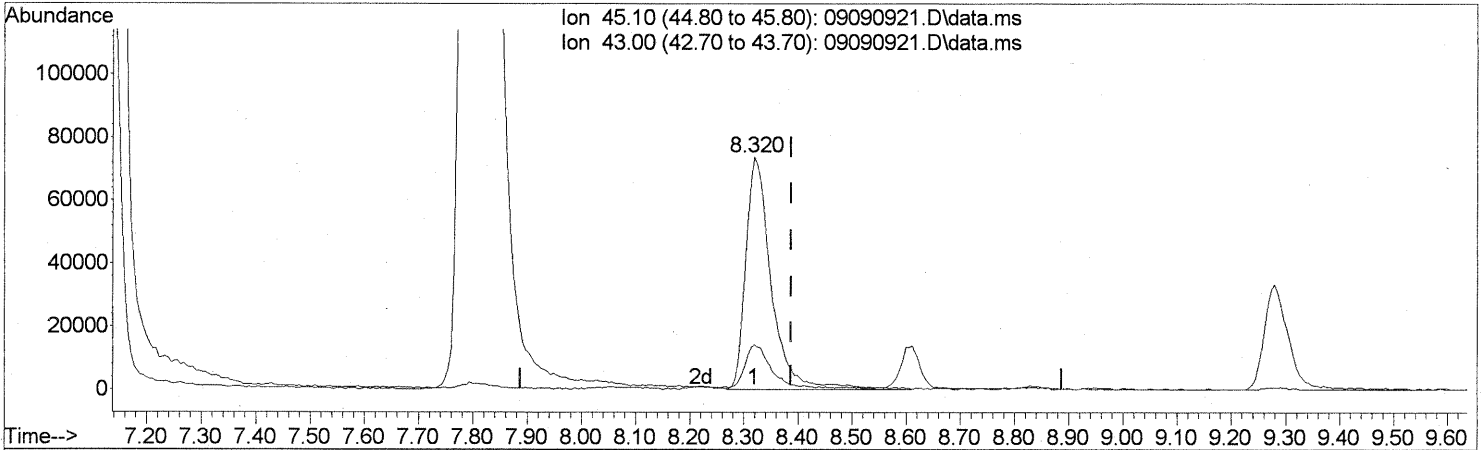
response 30065

Ion	Exp%	Act%
100.90	100	100
102.90	66.10	66.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.320min (-0.068) 6.17ng

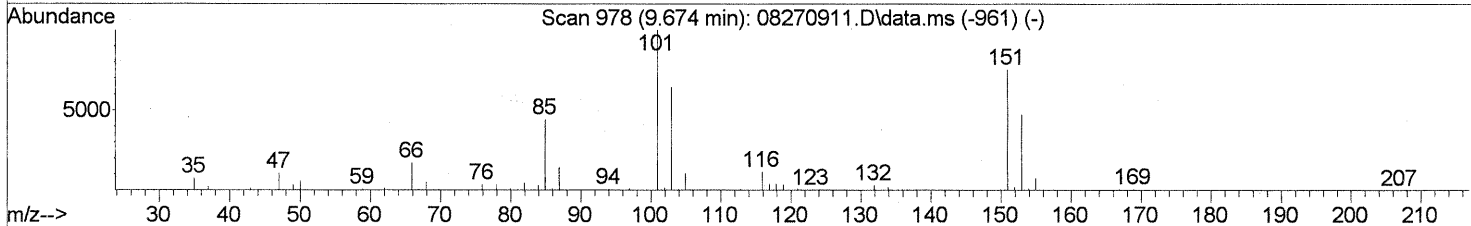
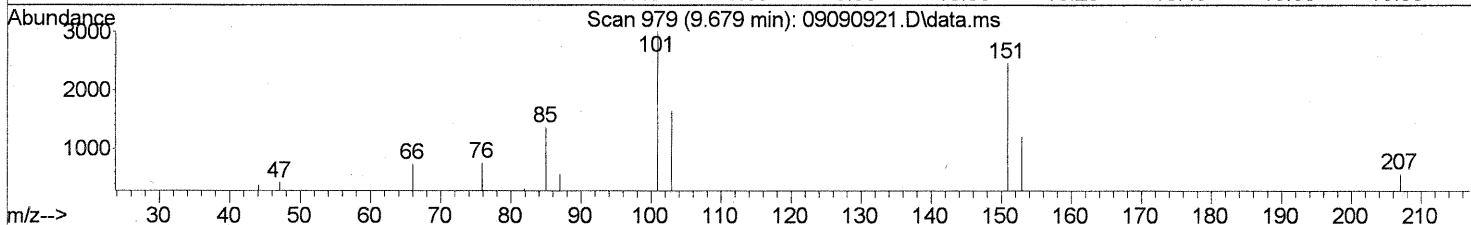
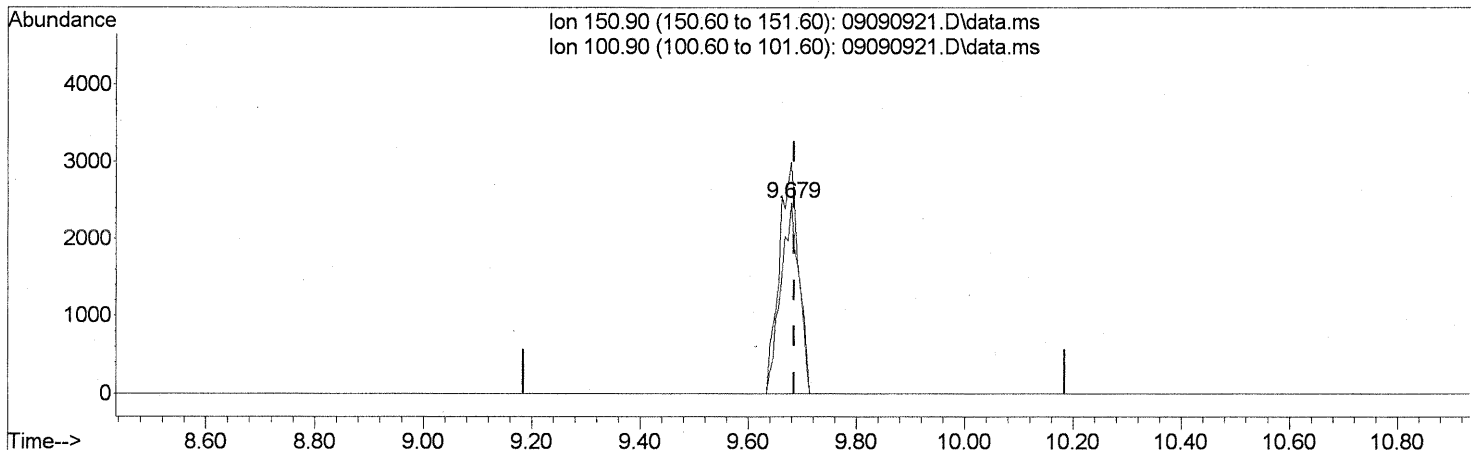
response 241043

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	19.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(21) Trichlorotrifluoroethane (T)  
 9.679min (-0.006) 0.52ng  
 response 5771

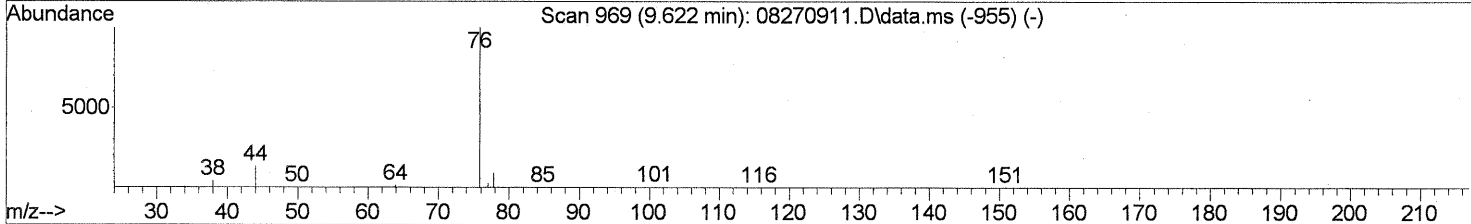
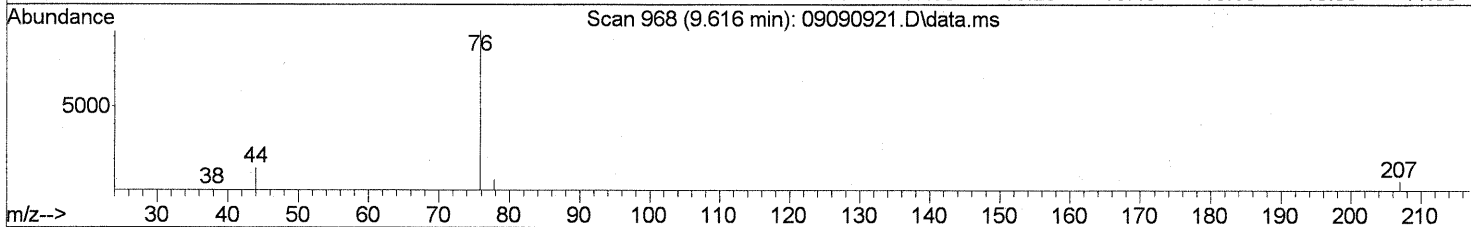
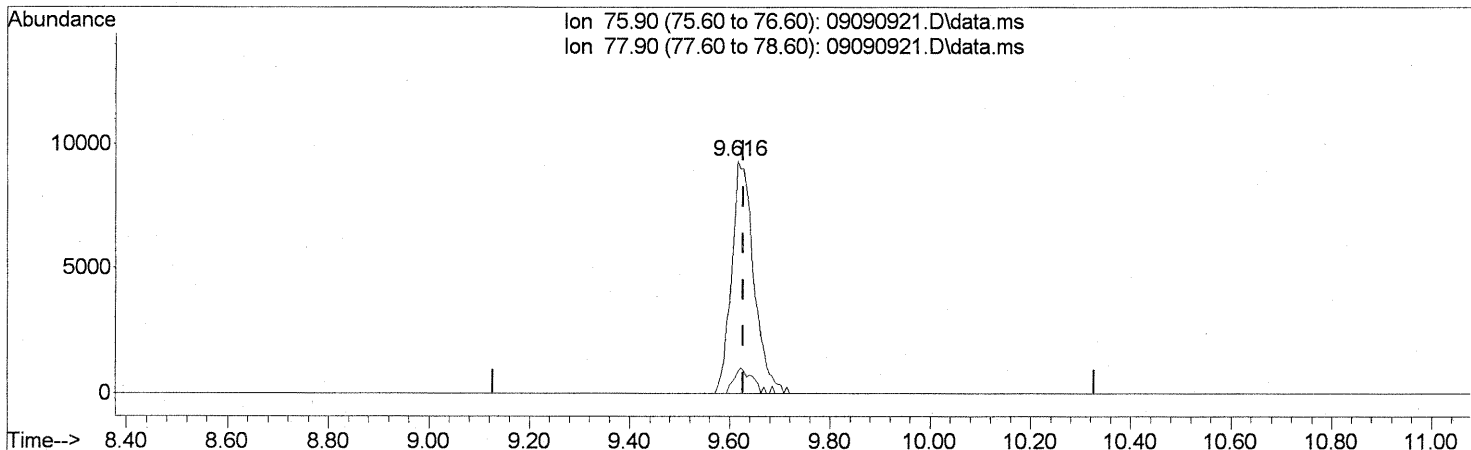
Ion	Exp%	Act%
150.90	100	100
100.90	138.30	127.88
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

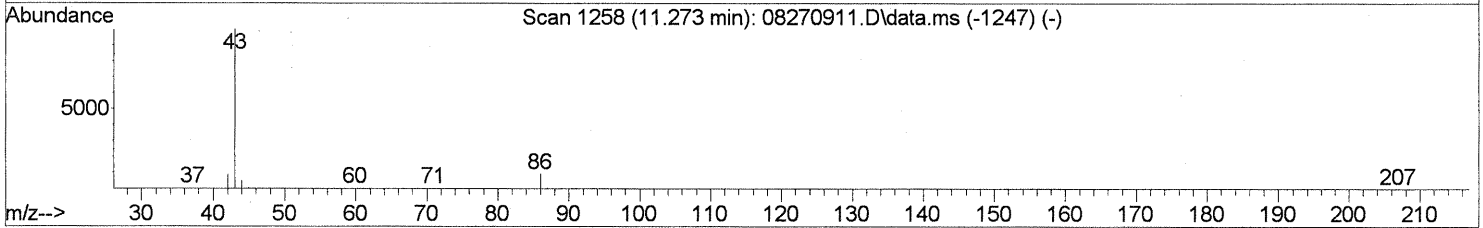
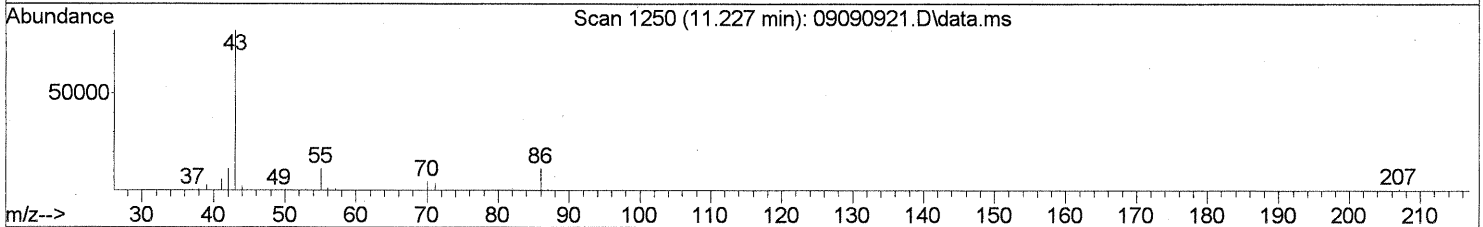
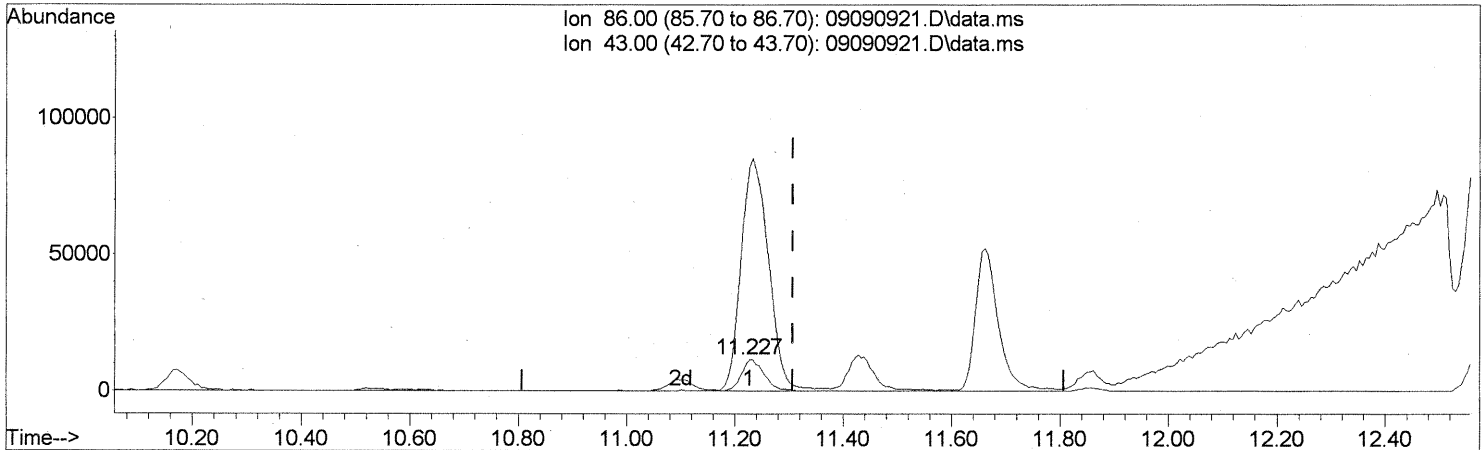
(22) Carbon Disulfide (T)  
 9.616min (-0.011) 0.54ng  
 response 28549

Ion	Exp%	Act%
75.90	100	100
77.90	9.40	8.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
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TIC: 09090921.D\data.ms

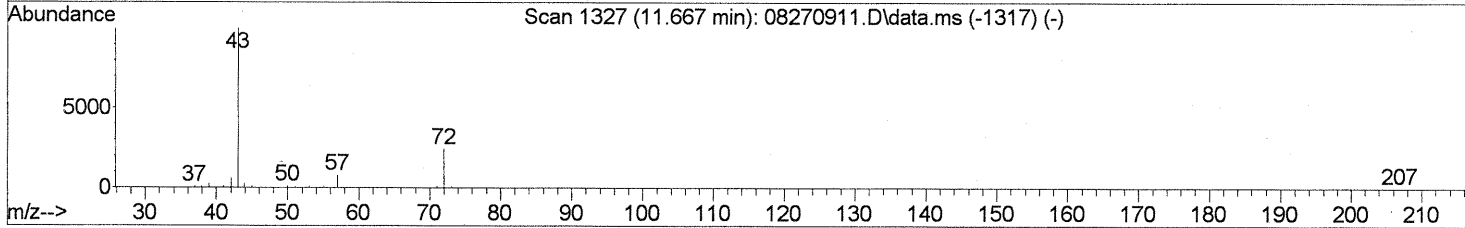
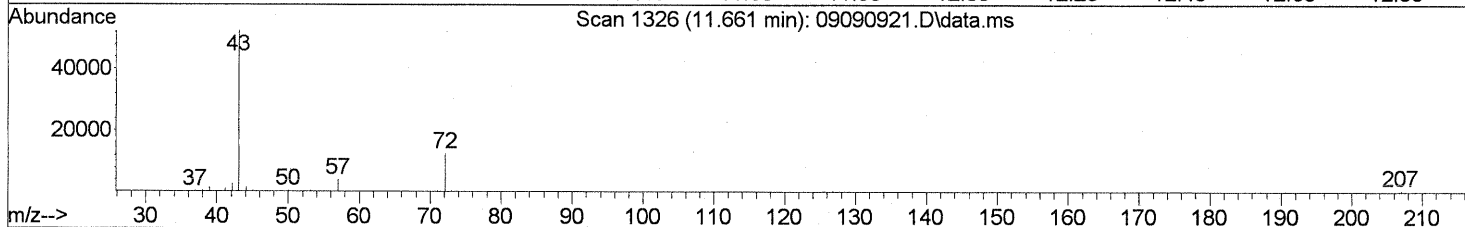
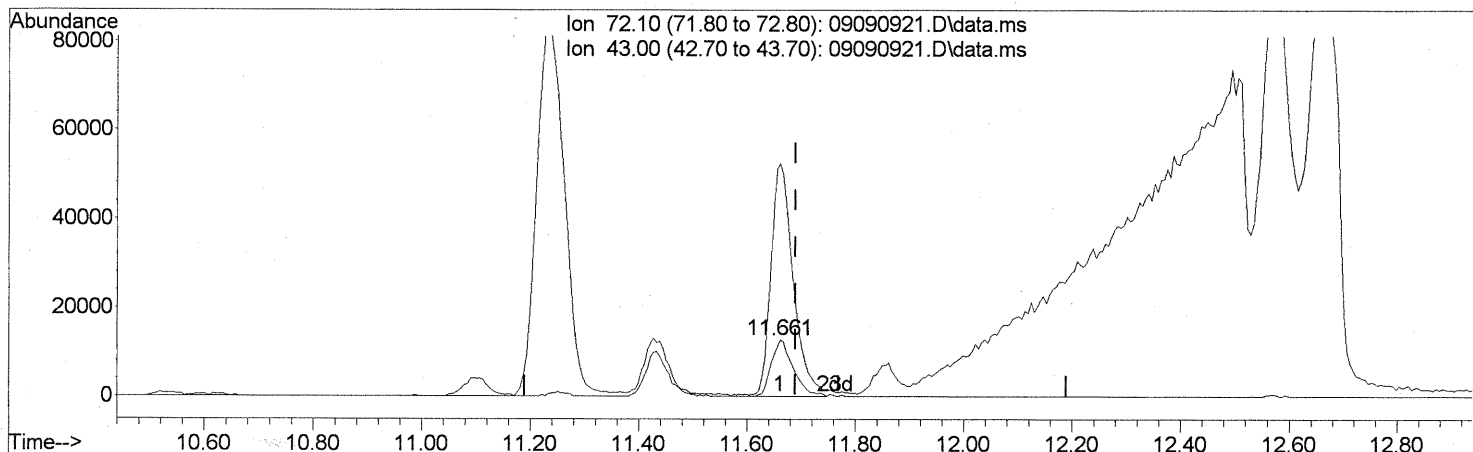
(26) Vinyl Acetate (T)  
 11.227min (-0.080) 11.02ng  
 response 32473

Ion	Exp%	Act%
86.00	100	100
43.00	1118.60	919.52#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
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 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(27) 2-Butanone (MEK) (T)

11.661min (-0.029) 3.75ng

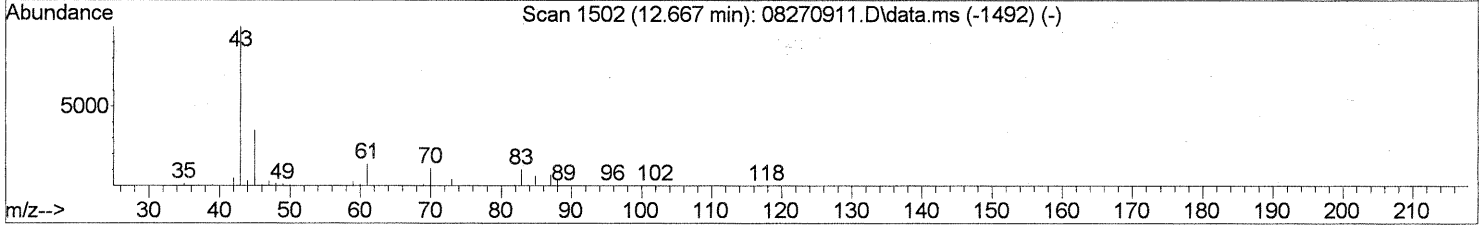
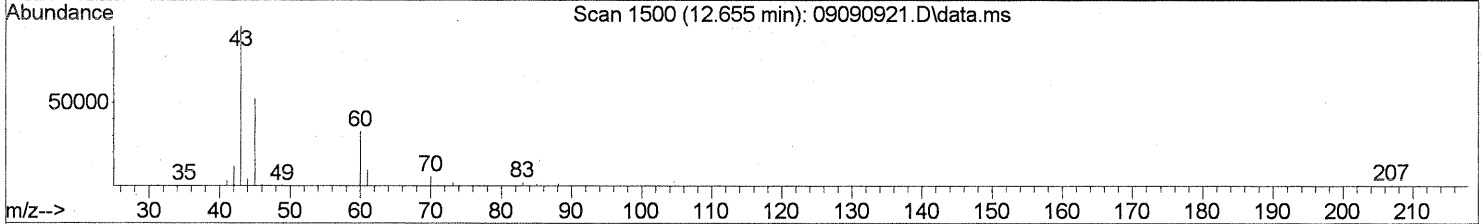
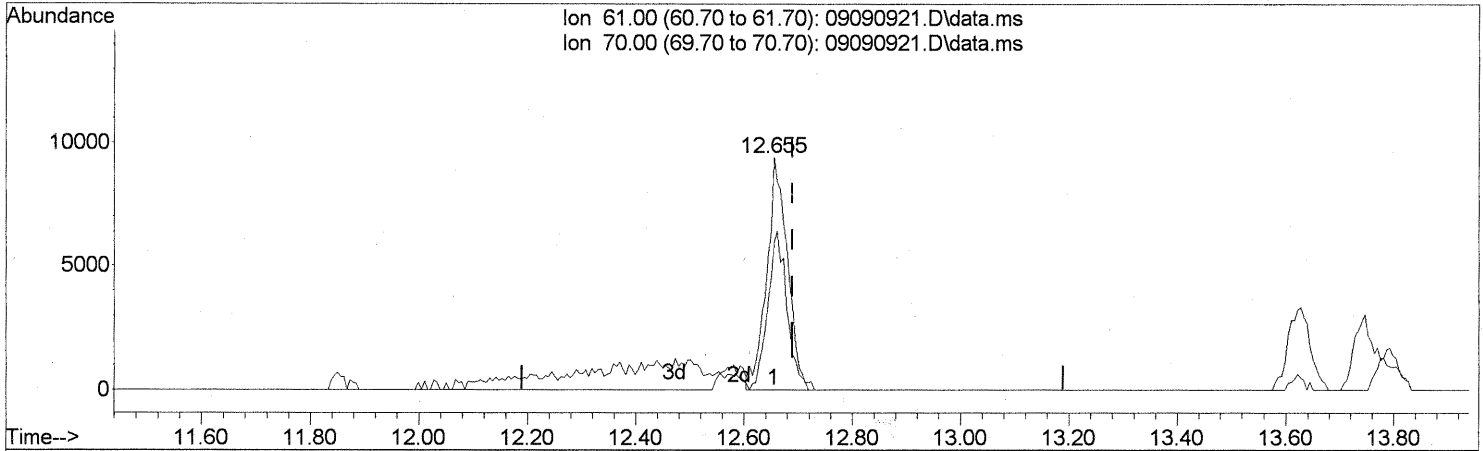
response 35576

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	422.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

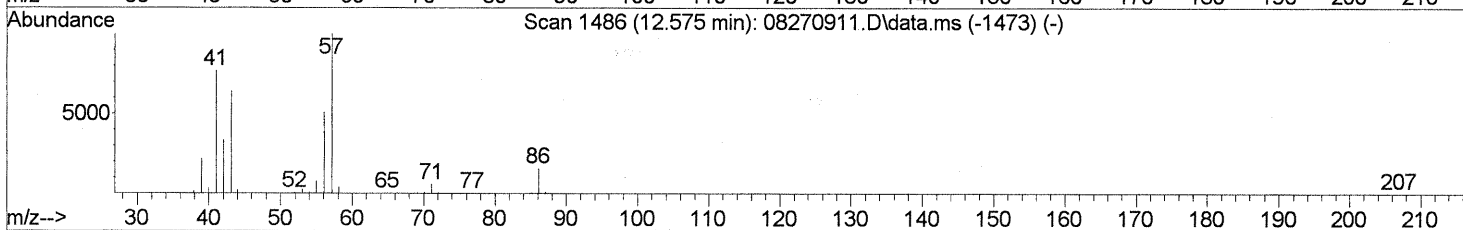
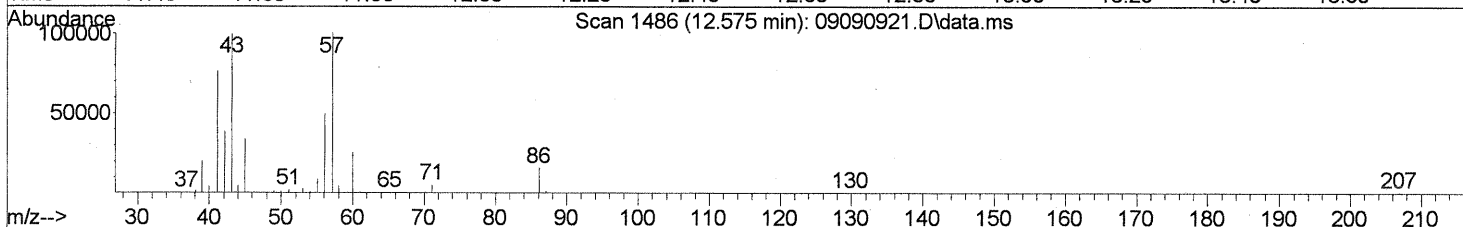
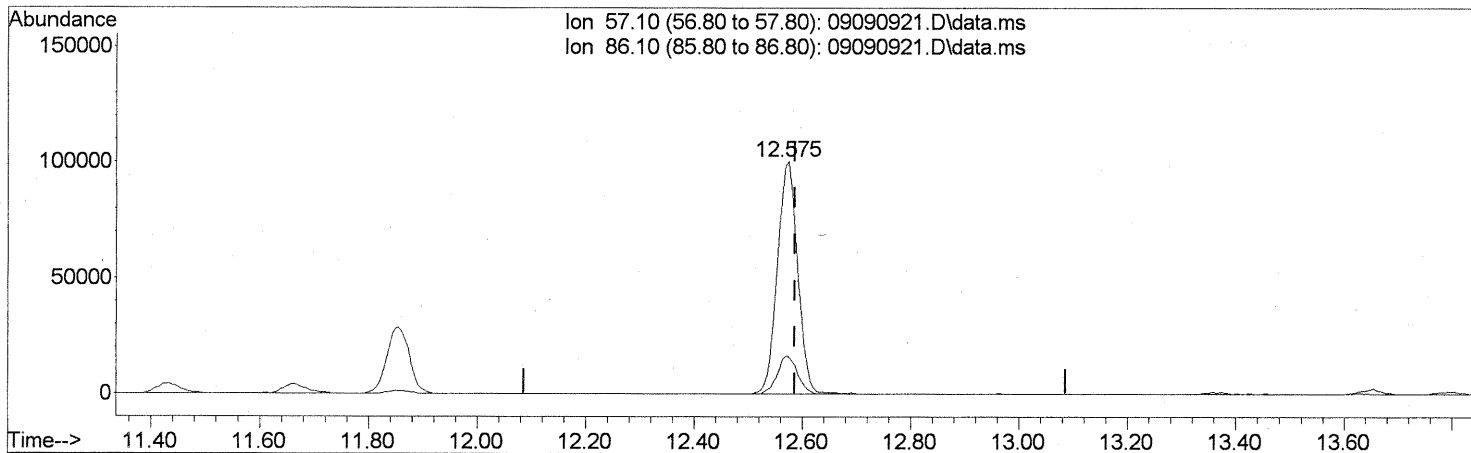
(30) Ethyl Acetate (T)  
 12.655min (-0.034) 4.93ng  
 response 25160

Ion	Exp%	Act%
61.00	100	100
70.00	78.70	62.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

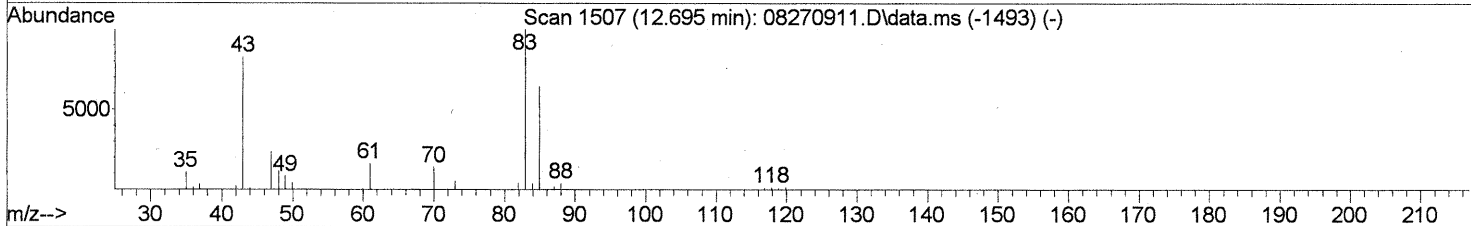
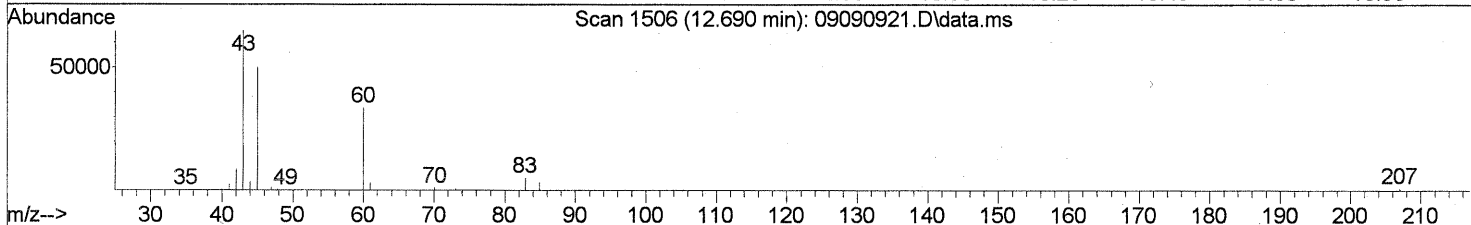
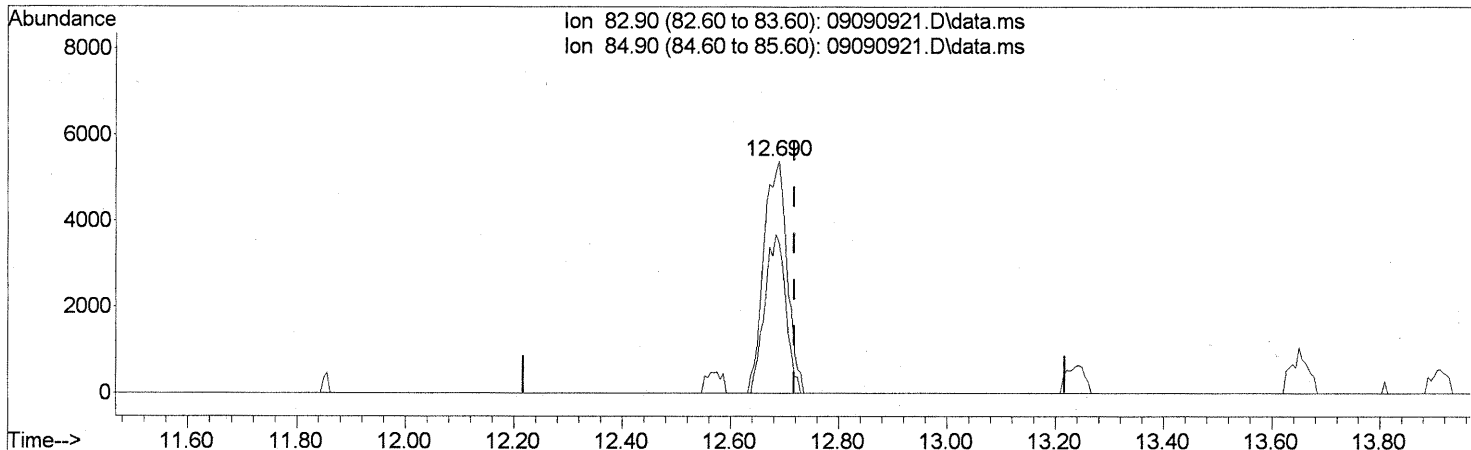
(31) n-Hexane (T)  
 12.575min (-0.011) 10.13ng  
 response 257641

Ion	Exp%	Act%
57.10	100	100
86.10	15.40	16.14
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(32) Chloroform (T)  
 12.690min (-0.029) 0.64ng  
 response 16031

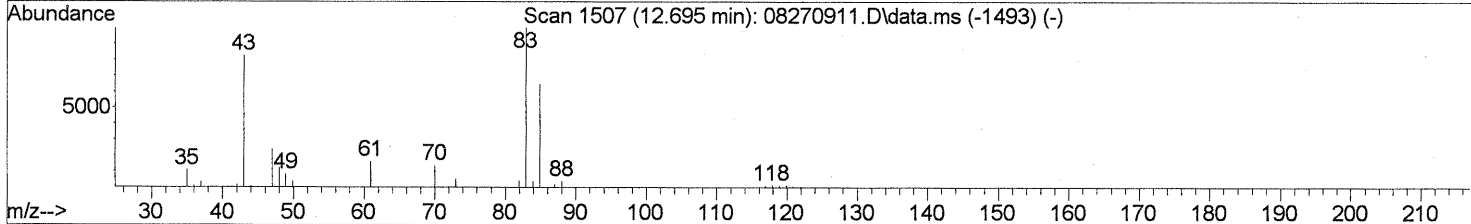
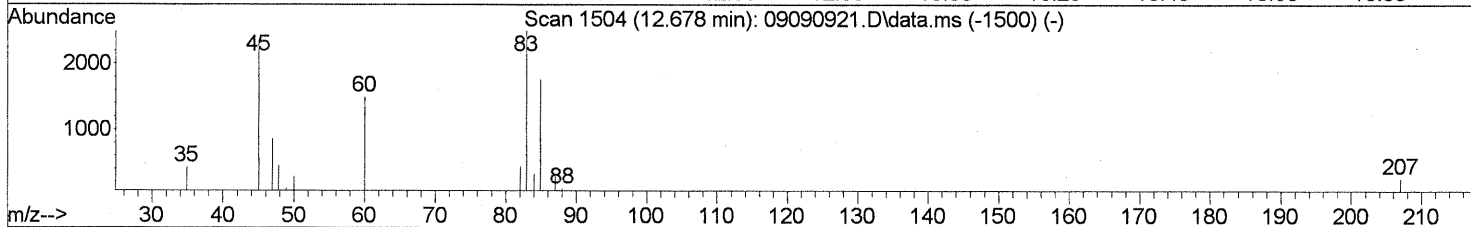
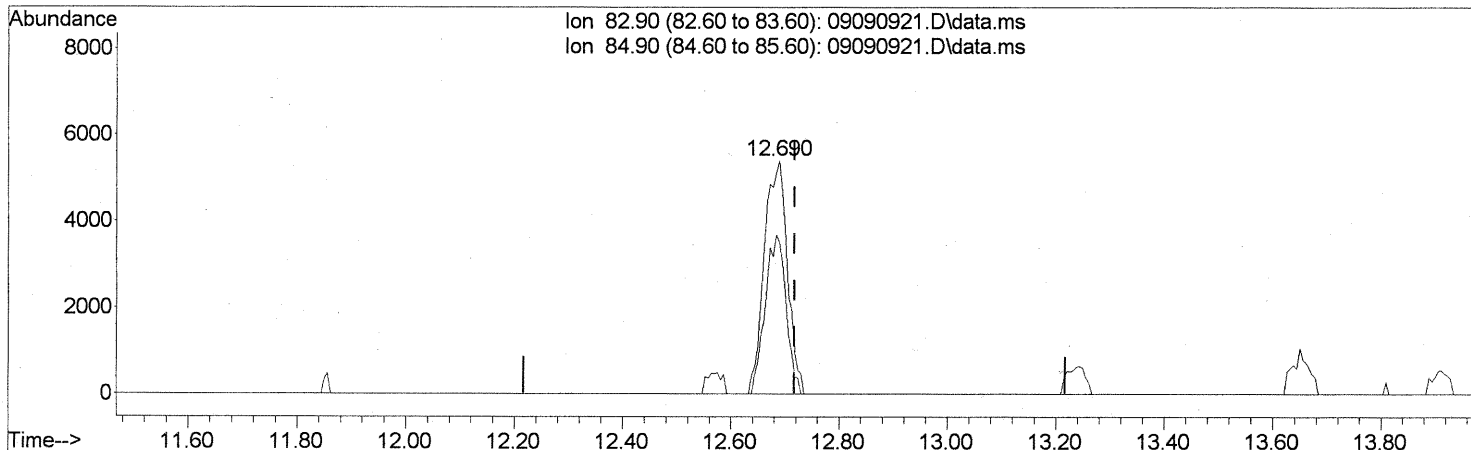
Ion	Exp%	Act%
82.90	100	100
84.90	62.60	61.78
0.00	0.00	0.00
0.00	0.00	0.00

*before subtr.*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(32) Chloroform (T)  
 12.690min (-0.029) 0.64ng  
 response 16031

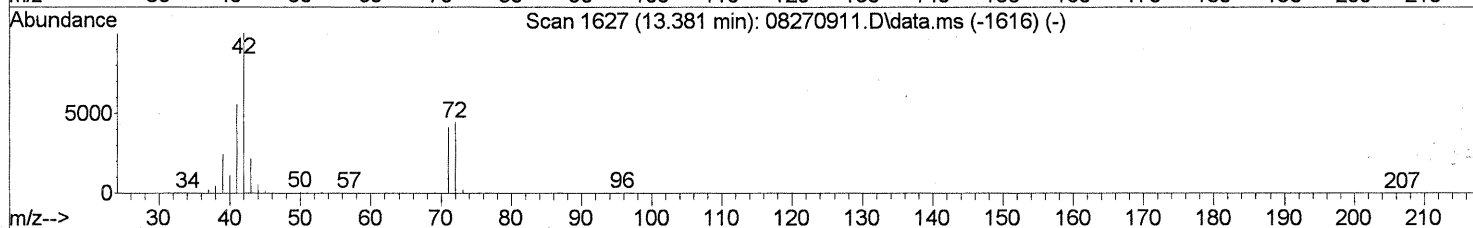
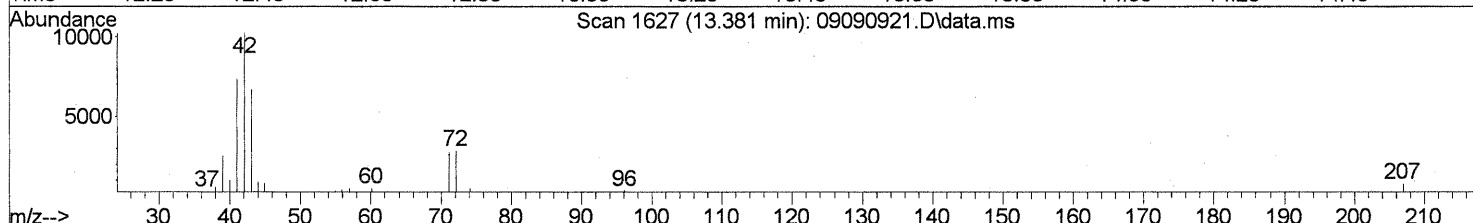
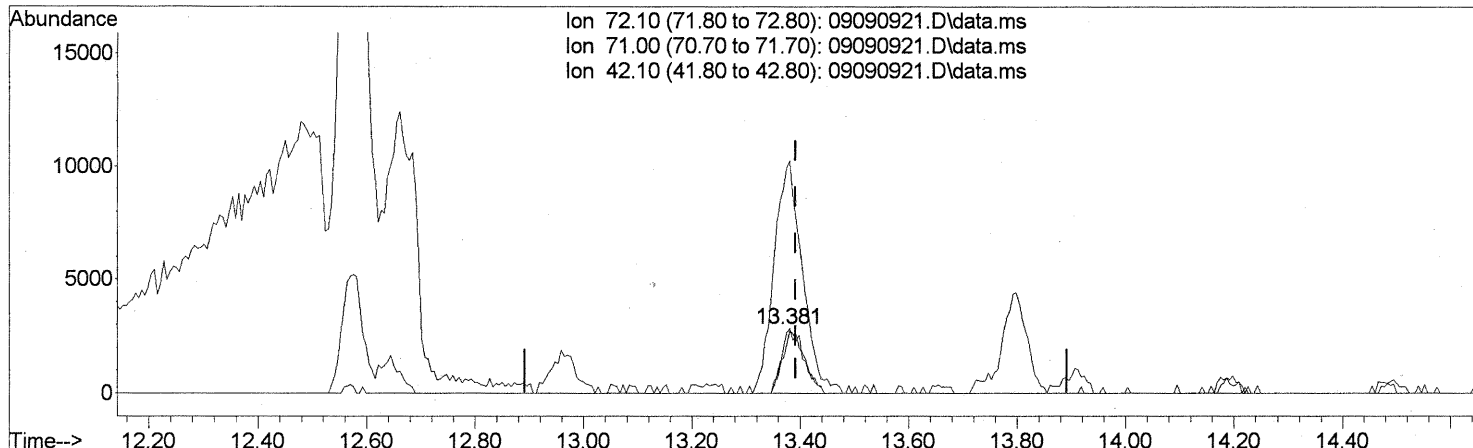
Ion	Exp%	Act%
82.90	100	100
84.90	62.60	61.78
0.00	0.00	0.00
0.00	0.00	0.00

*After subtract*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(34) Tetrahydrofuran (THF) (T)

13.381min (-0.011) 0.77ng

response 7899

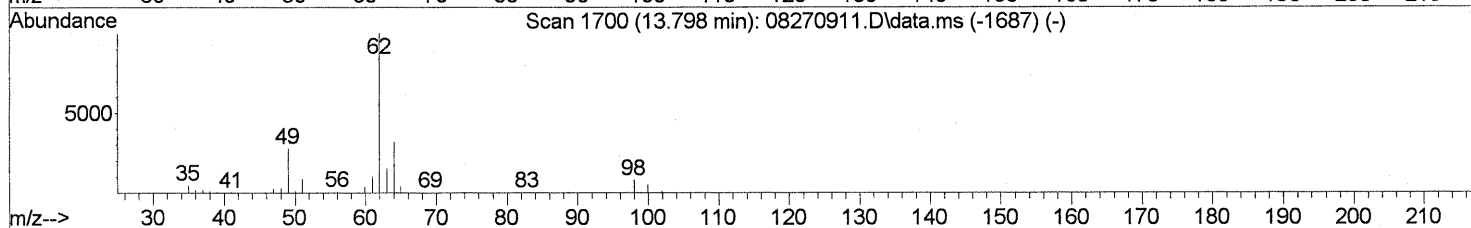
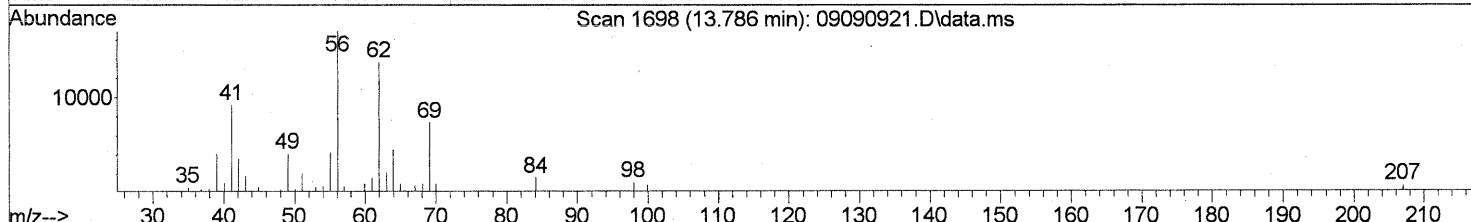
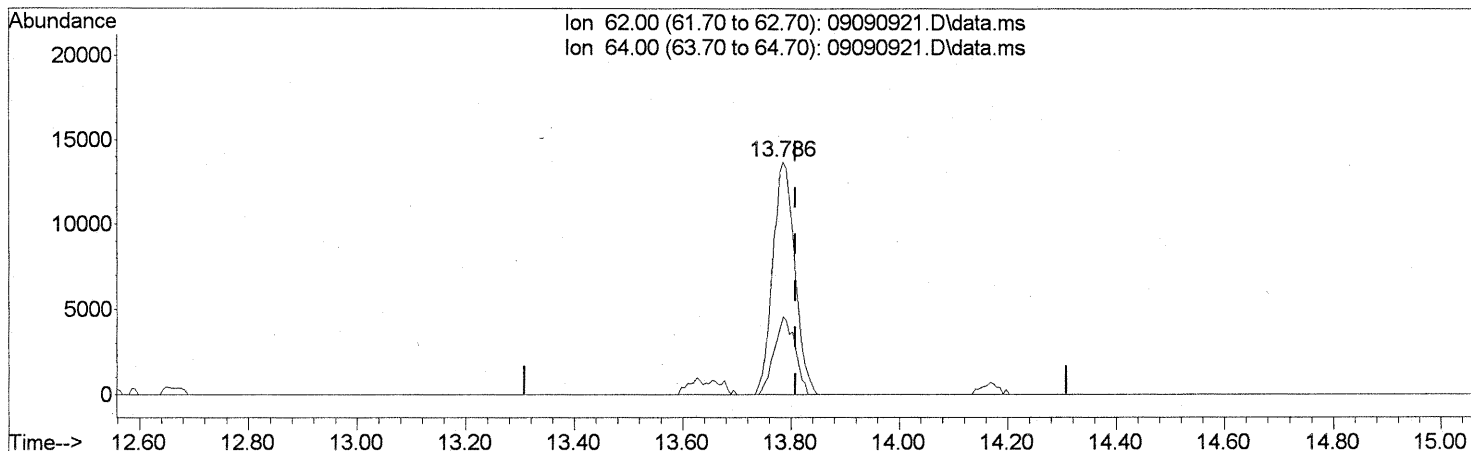
Ion	Exp%	Act%
72.10	100	100
71.00	92.50	96.49
42.10	254.10	468.86#
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

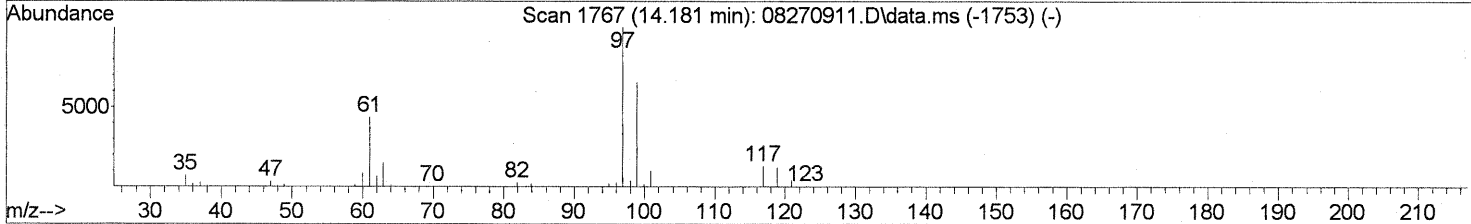
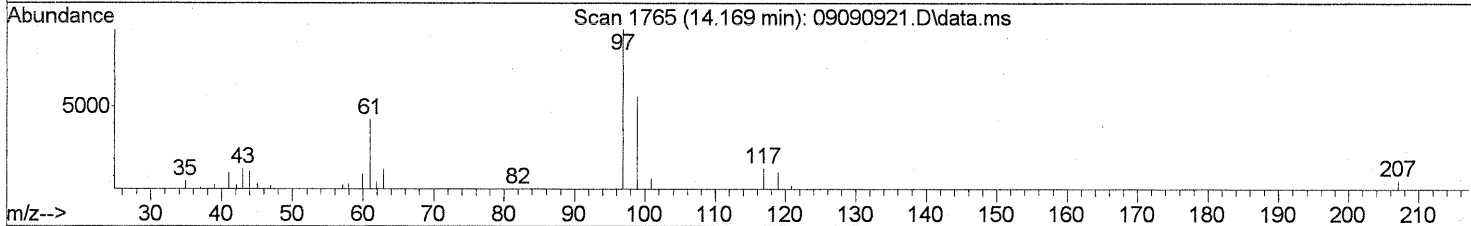
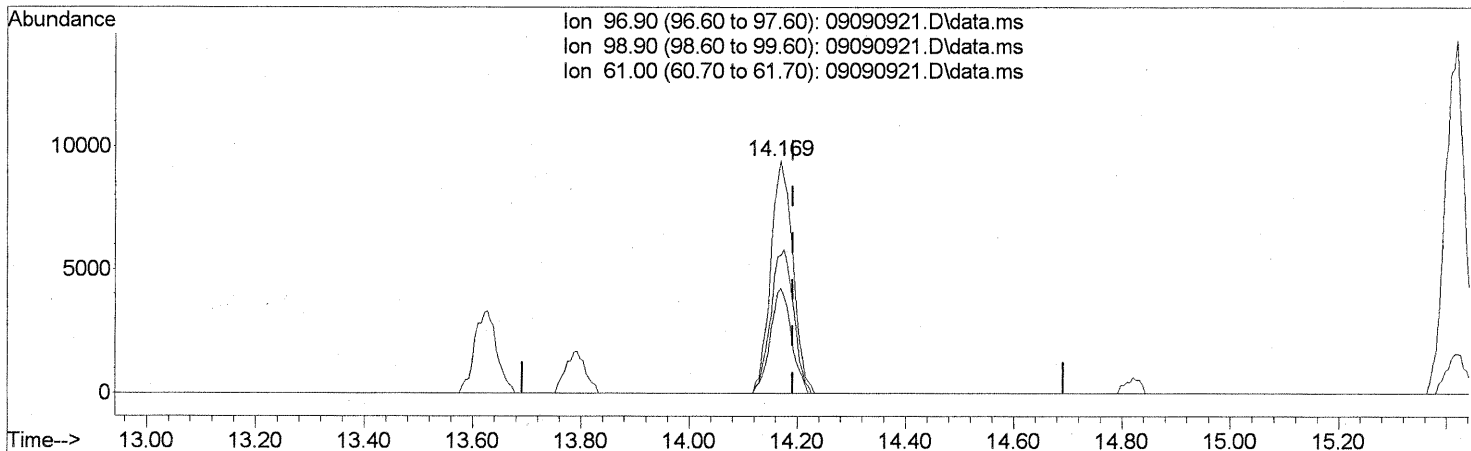
(36) 1,2-Dichloroethane (T)  
 13.786min (-0.023) 1.84ng  
 response 38640

Ion	Exp%	Act%
62.00	100	100
64.00	33.10	31.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 15 14:49:27 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

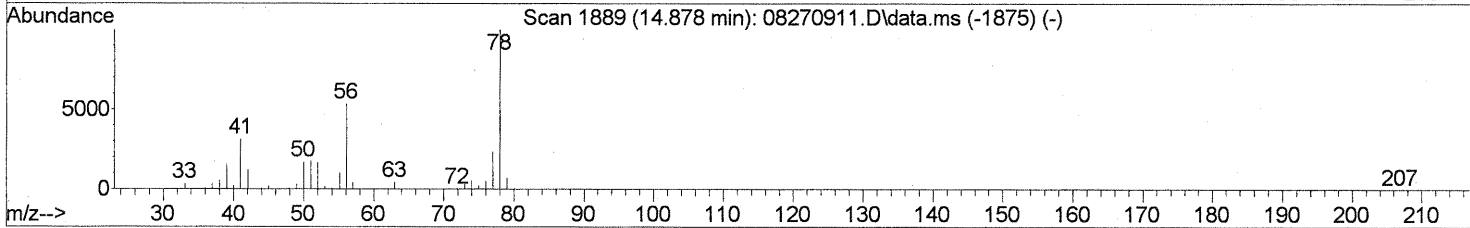
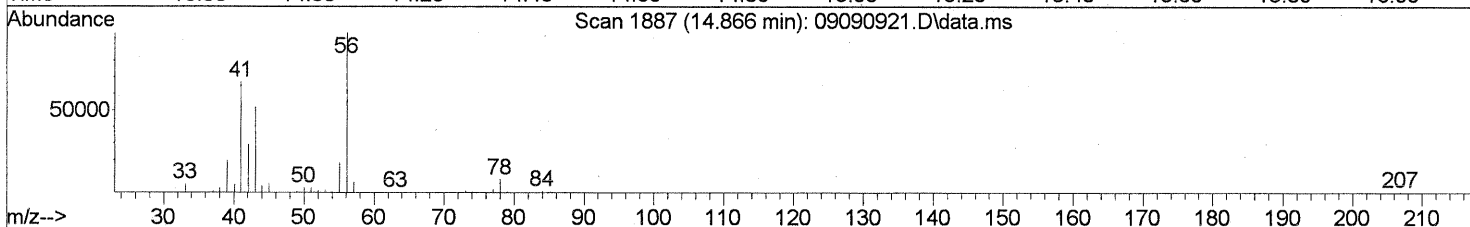
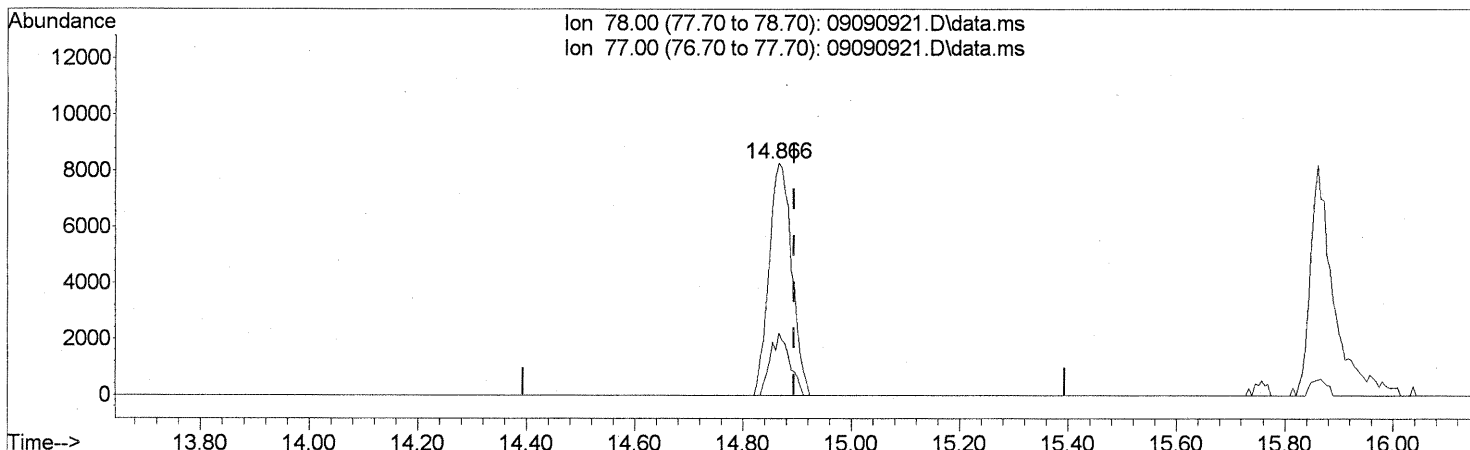
(38) 1,1,1-Trichloroethane (T)  
 14.169min (-0.023) 1.14ng  
 response 26648

Ion	Exp%	Act%
96.90	100	100
98.90	63.10	63.79
61.00	46.50	43.08
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

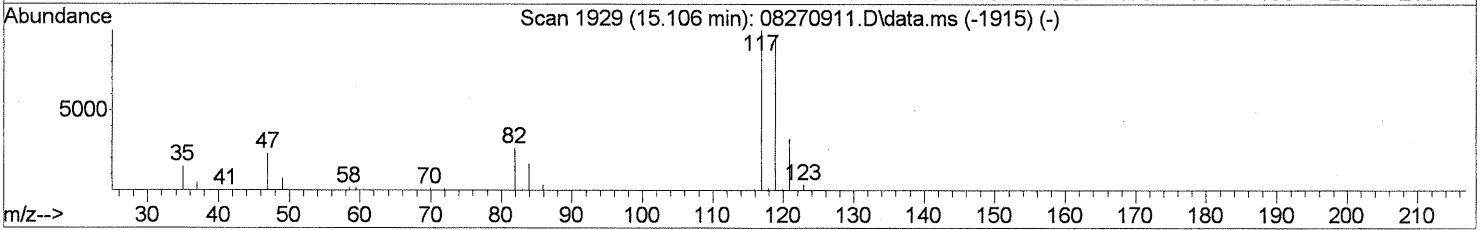
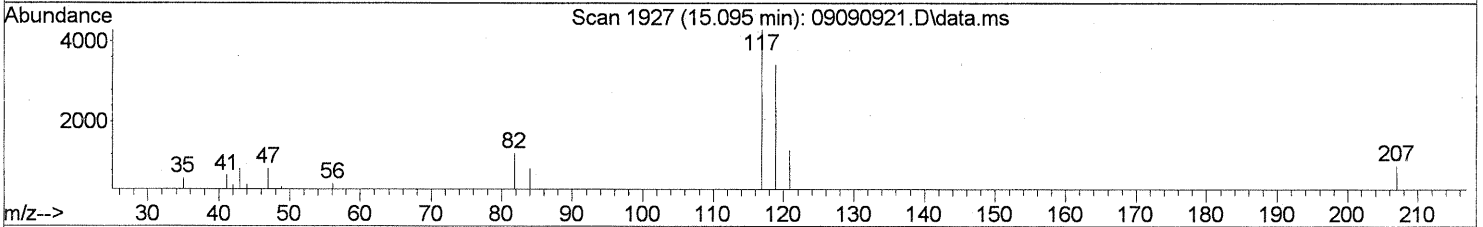
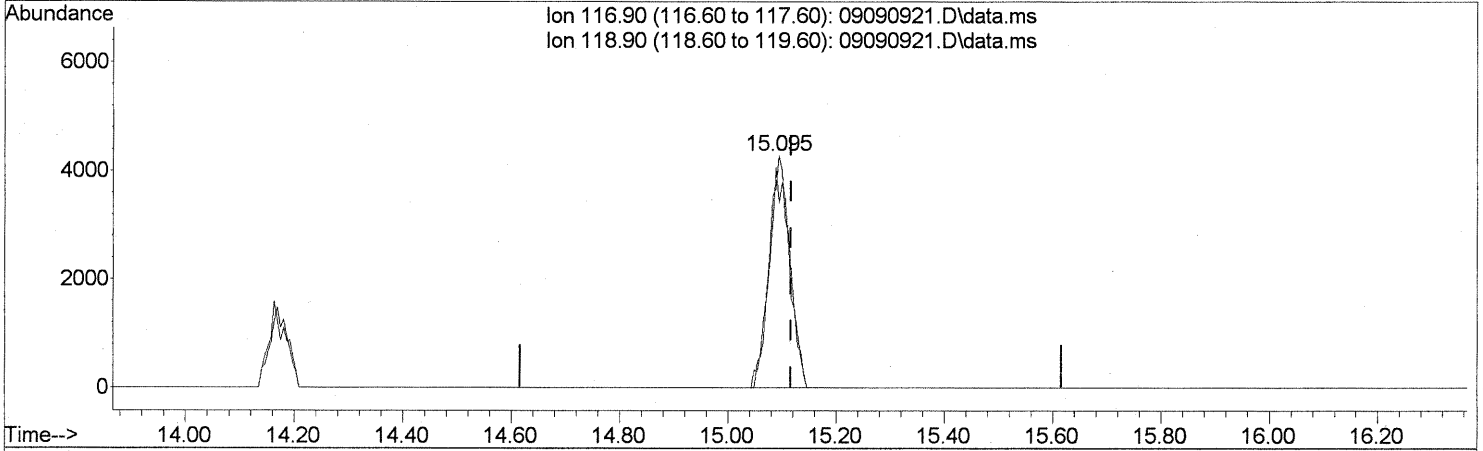
(41) Benzene (T)  
 14.866min (-0.029) 0.40ng  
 response 24024

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	22.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(42) Carbon Tetrachloride (T)

15.095min (-0.023) 0.57ng

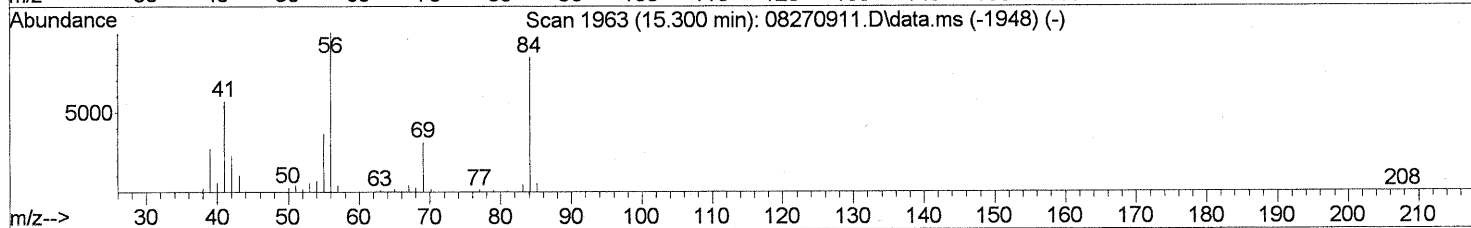
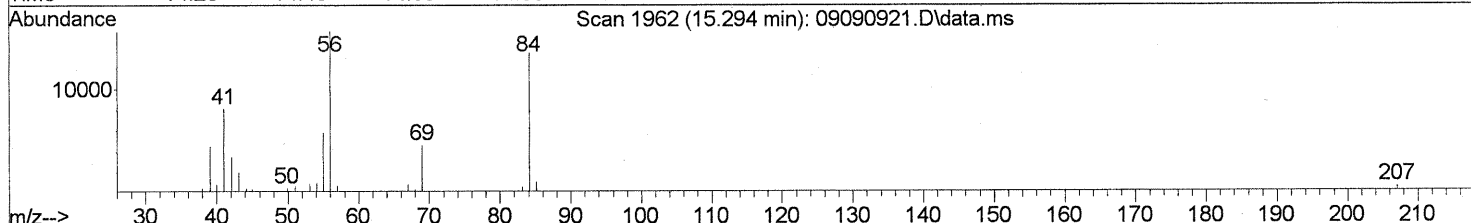
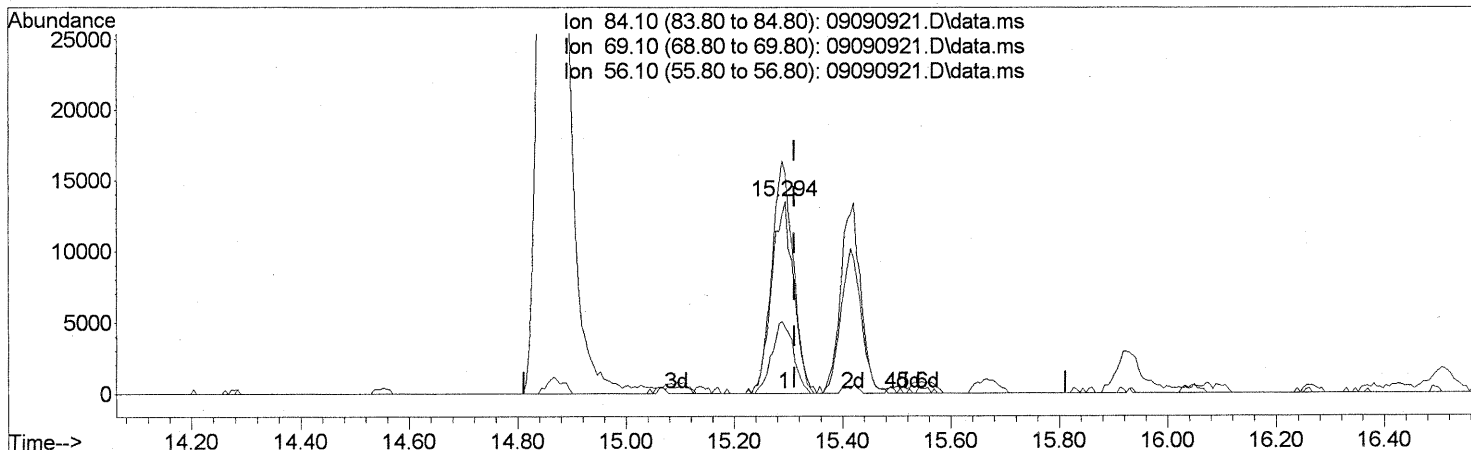
response 11287

Ion	Exp%	Act%
116.90	100	100
118.90	96.20	96.22
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

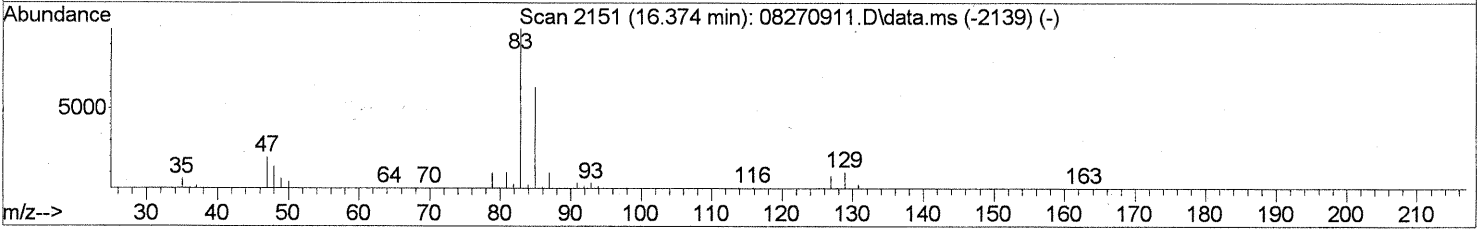
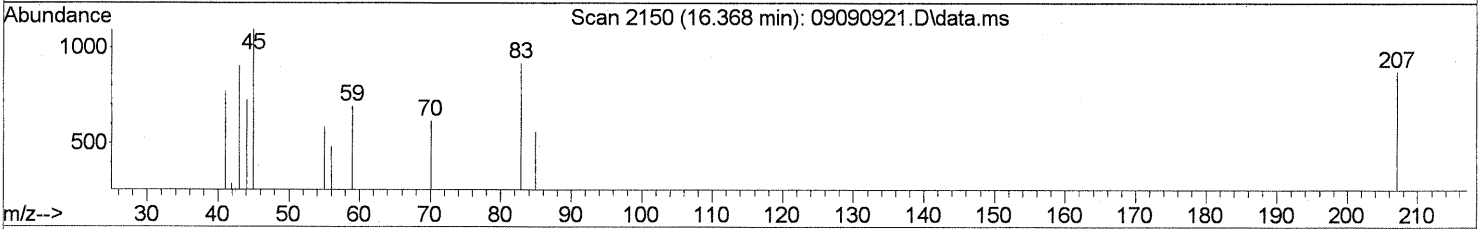
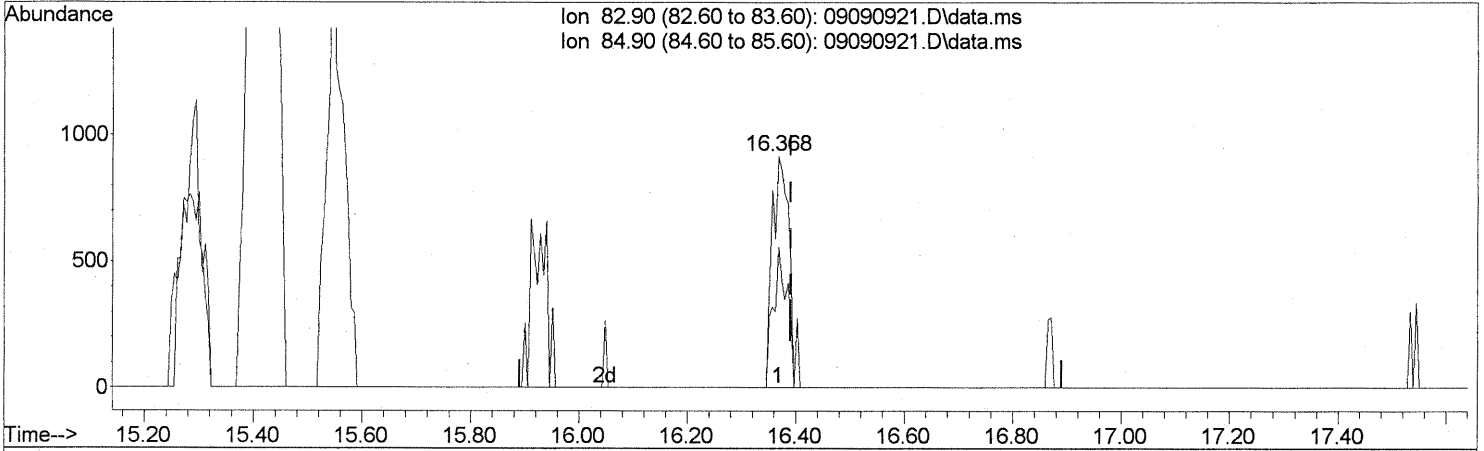
(43) Cyclohexane (T)  
 15.294min (-0.017) 1.74ng  
 response 38138

Ion	Exp%	Act%
84.10	100	100
69.10	38.90	36.59
56.10	124.50	118.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(46) Bromodichloromethane (T)

16.368min (-0.023) 0.10ng

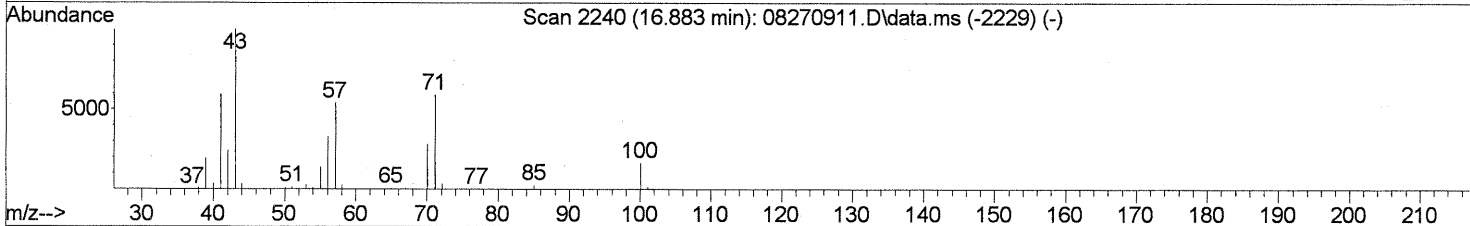
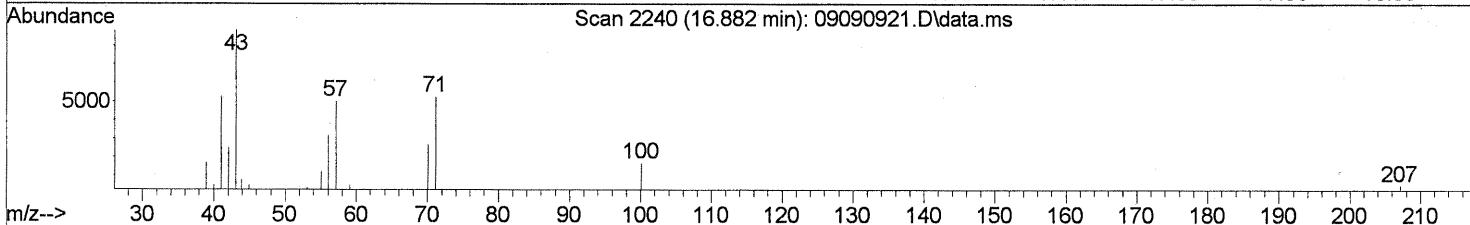
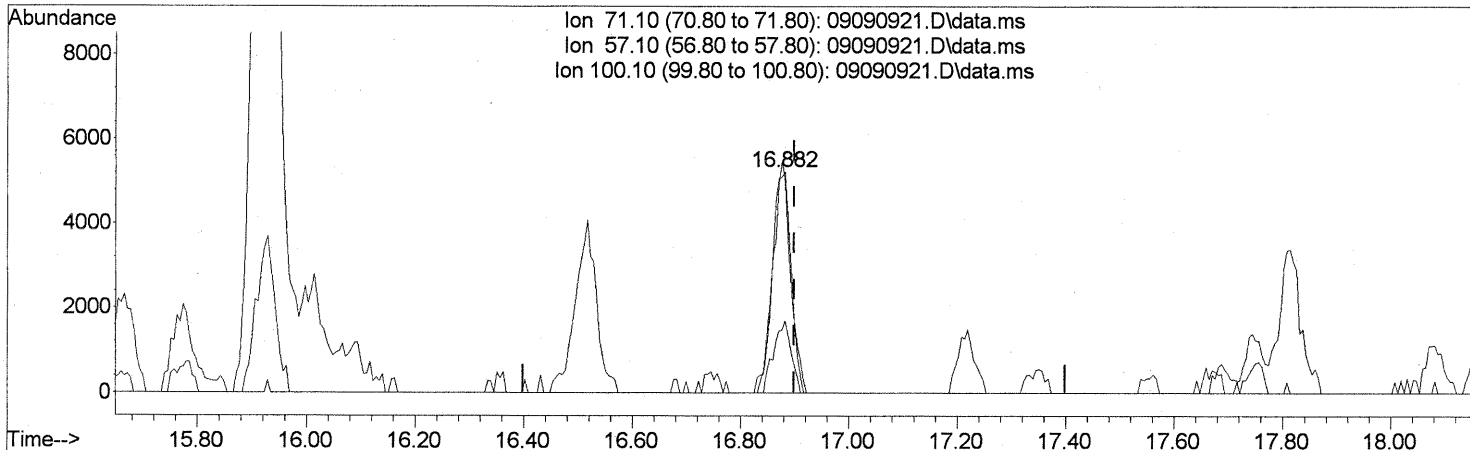
response 1980

Ion	Exp%	Act%
82.90	100	100
84.90	64.50	50.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

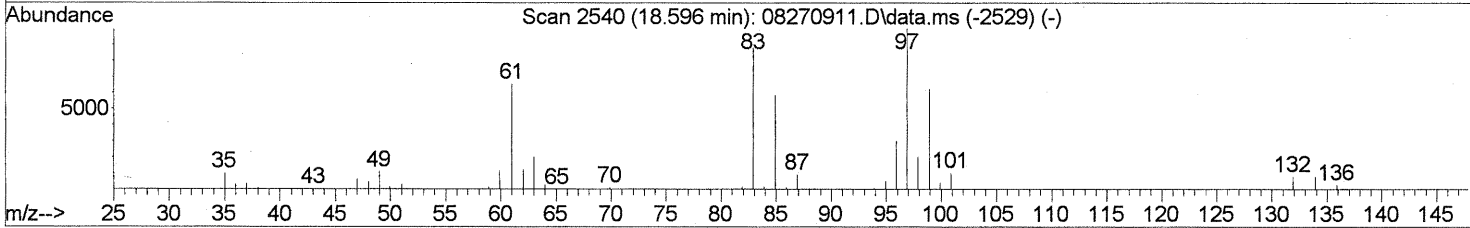
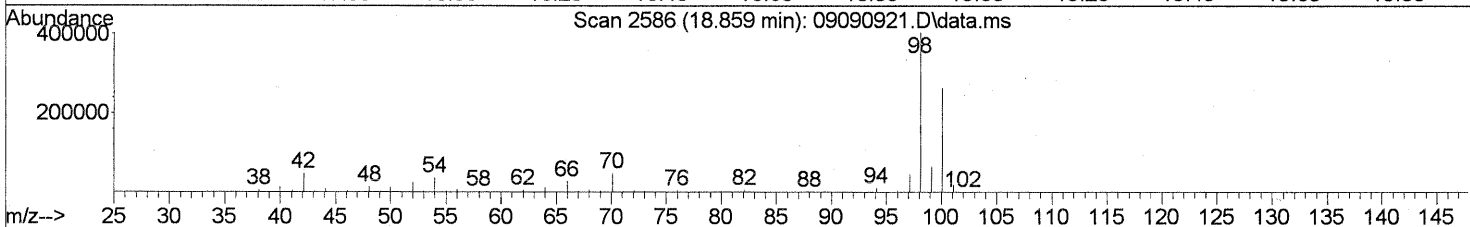
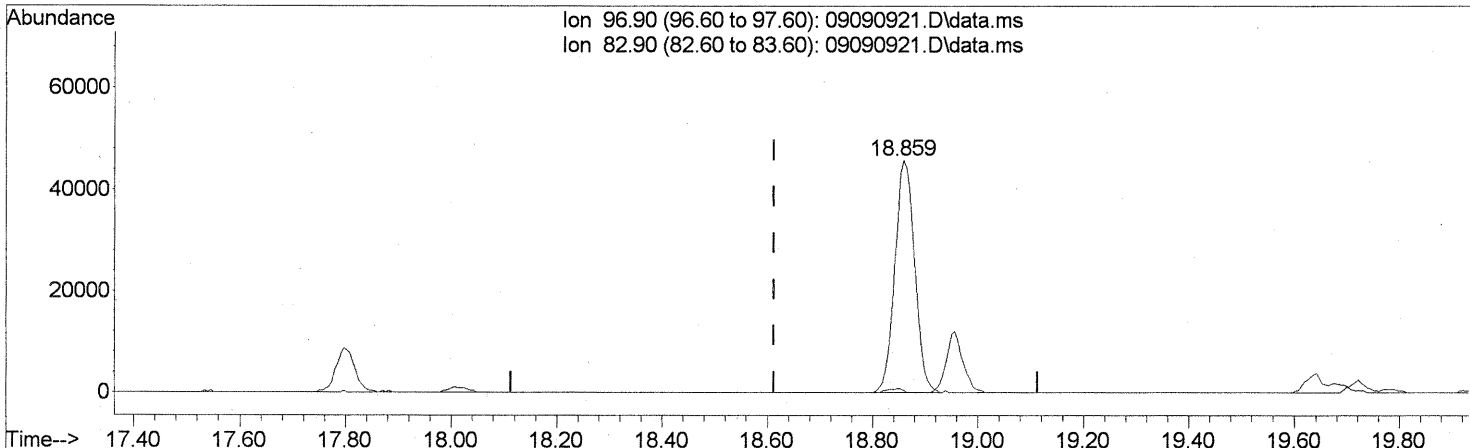
(51) n-Heptane (T)  
 16.882min (-0.017) 0.84ng  
 response 12923

Ion	Exp%	Act%
71.10	100	100
57.10	89.80	92.54
100.10	22.00	29.33
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(55) 1,1,2-Trichloroethane (T)

18.859min (+0.246) 8.67ng

response 120192

Ion	Exp%	Act%
96.90	100	100
82.90	87.70	1.21#
0.00	0.00	0.00
0.00	0.00	0.00

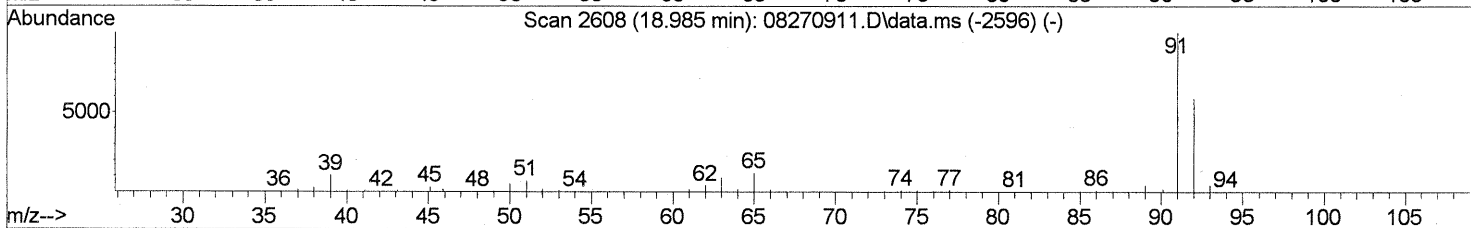
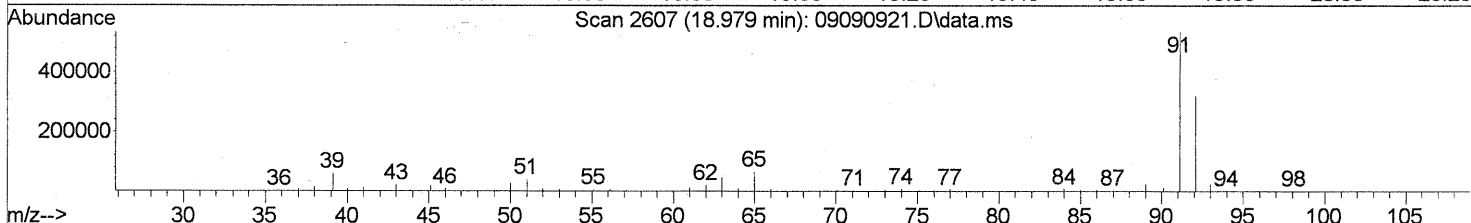
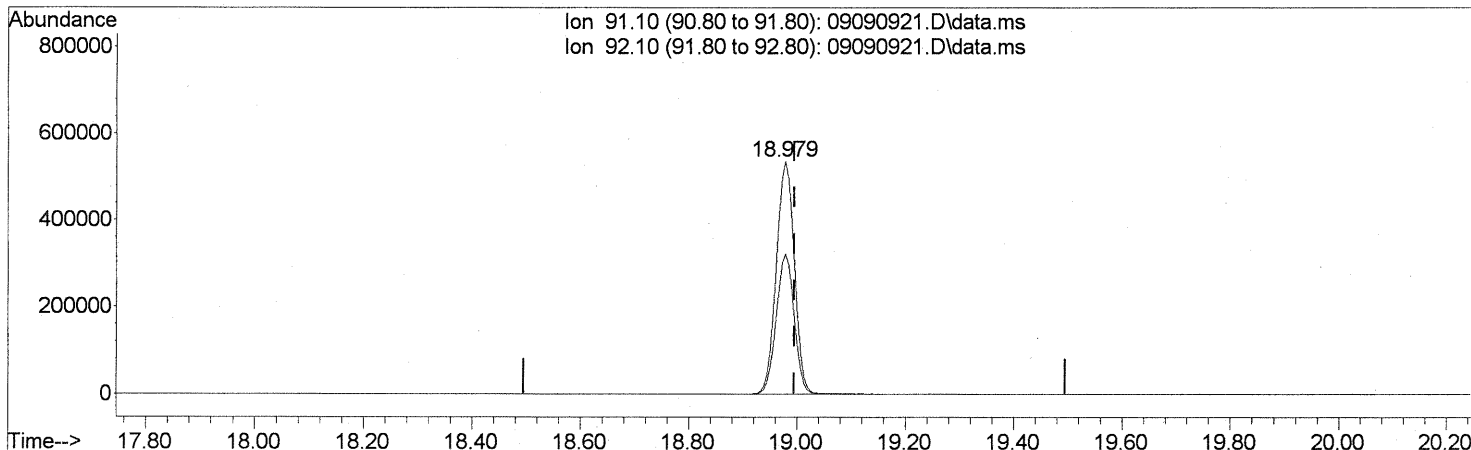
*FP*  
*179115/09*  
*E-9116/09*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

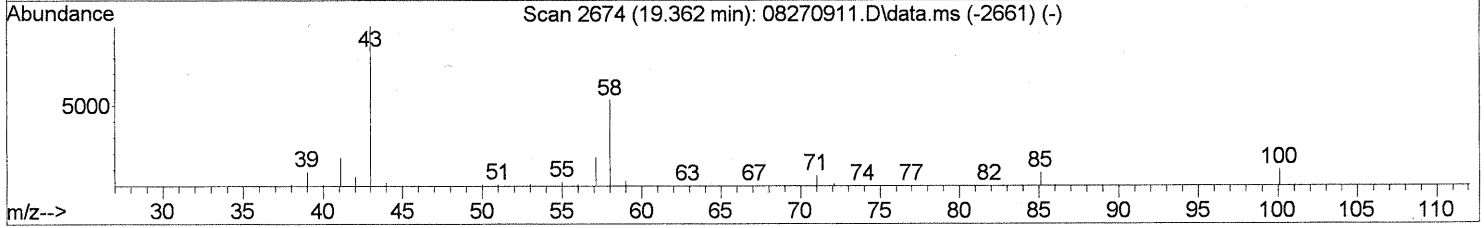
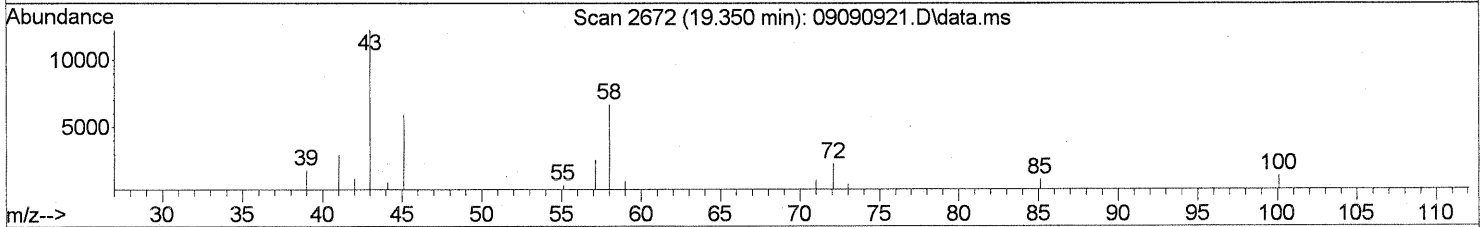
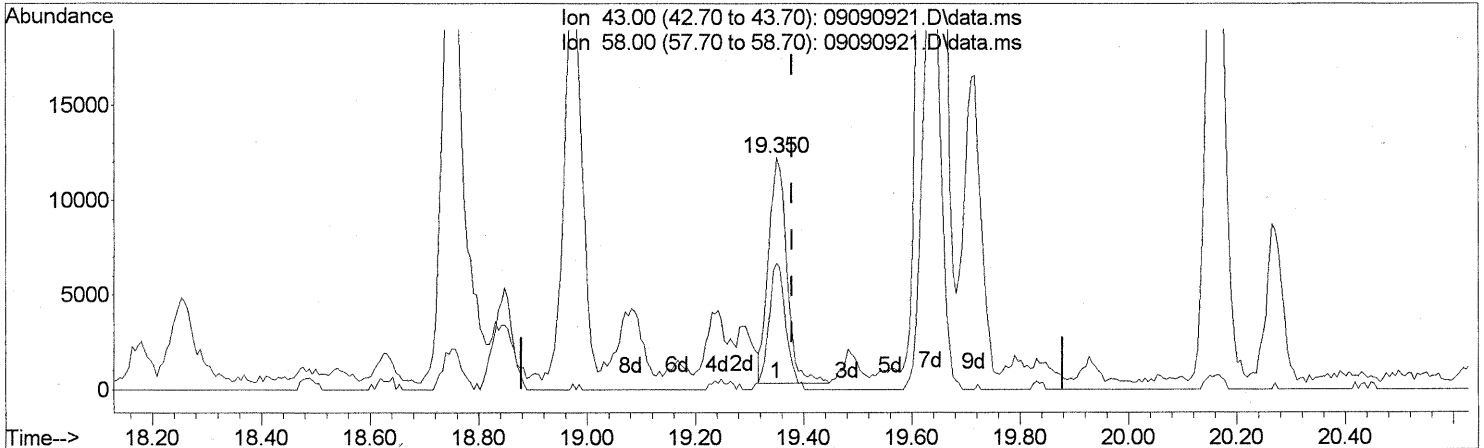
(58) Toluene (T)  
 18.979min (-0.017) 20.09ng  
 response 1239013

Ion	Exp%	Act%
91.10	100	100
92.10	58.80	59.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

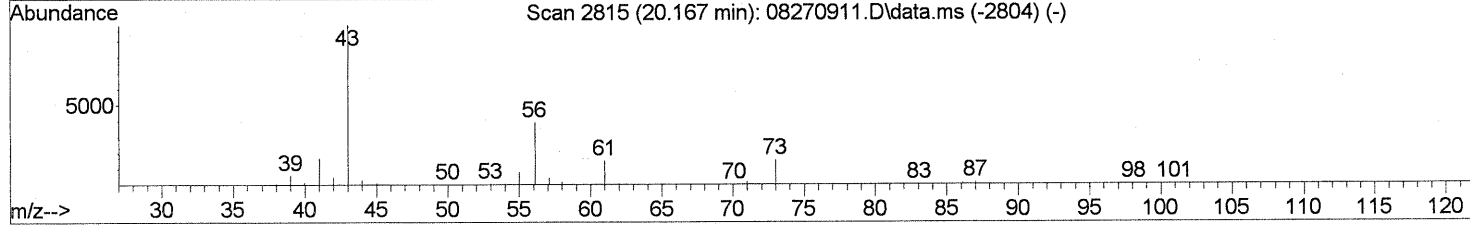
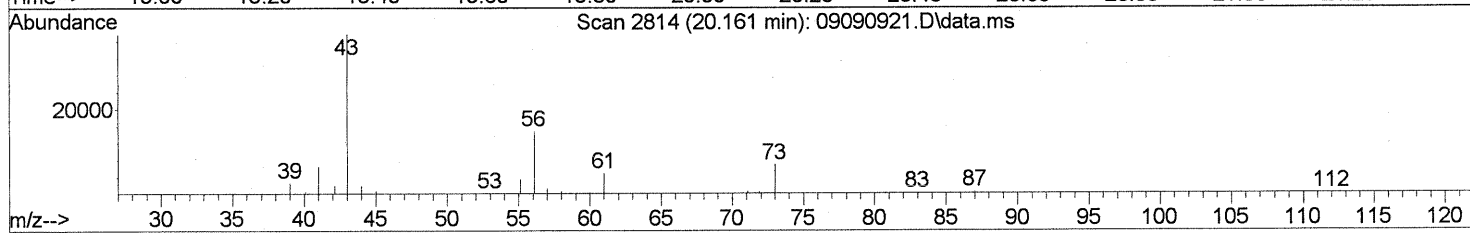
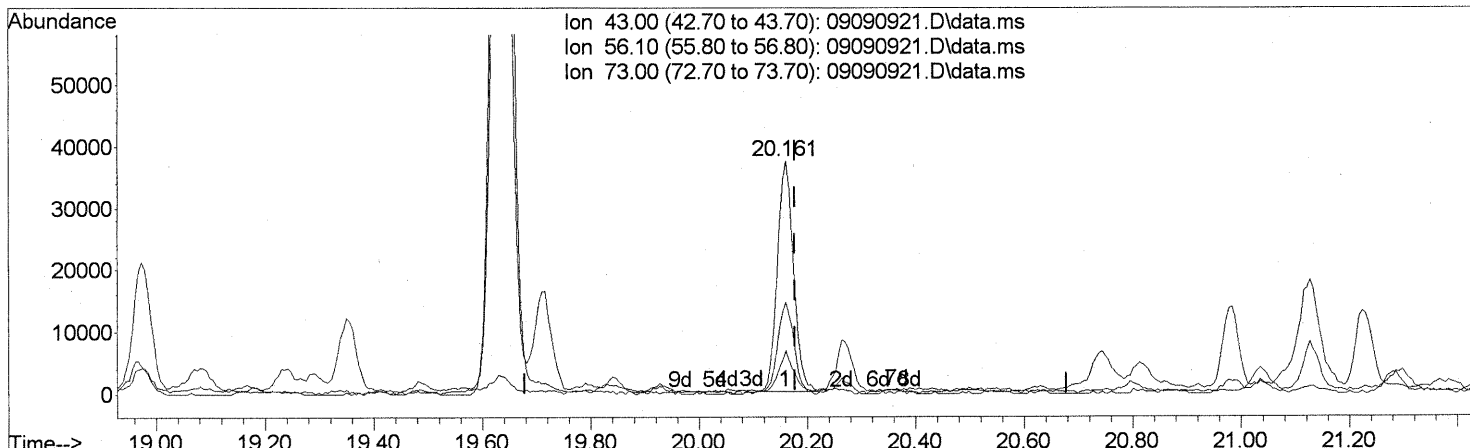
(59) 2-Hexanone (T)  
 19.350min (-0.029) 0.75ng  
 response 28232

Ion	Exp%	Act%
43.00	100	100
58.00	51.70	52.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

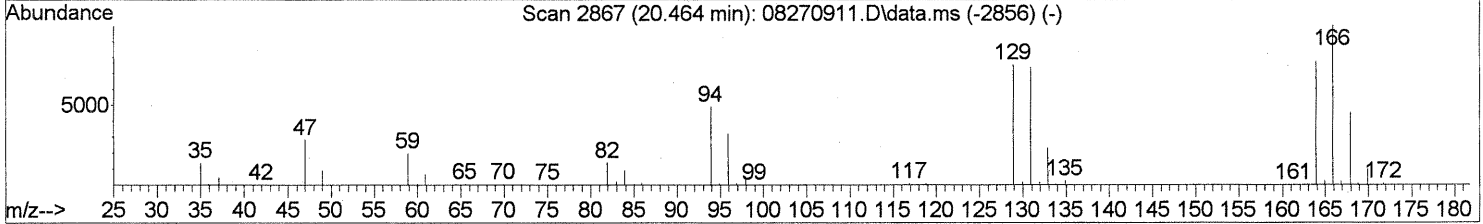
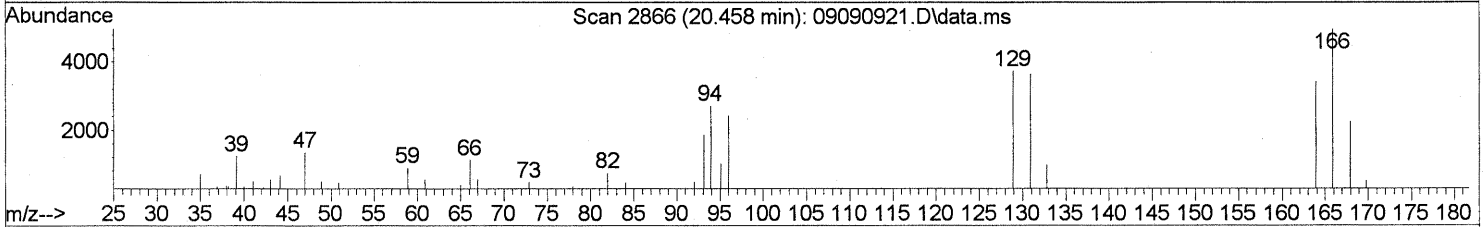
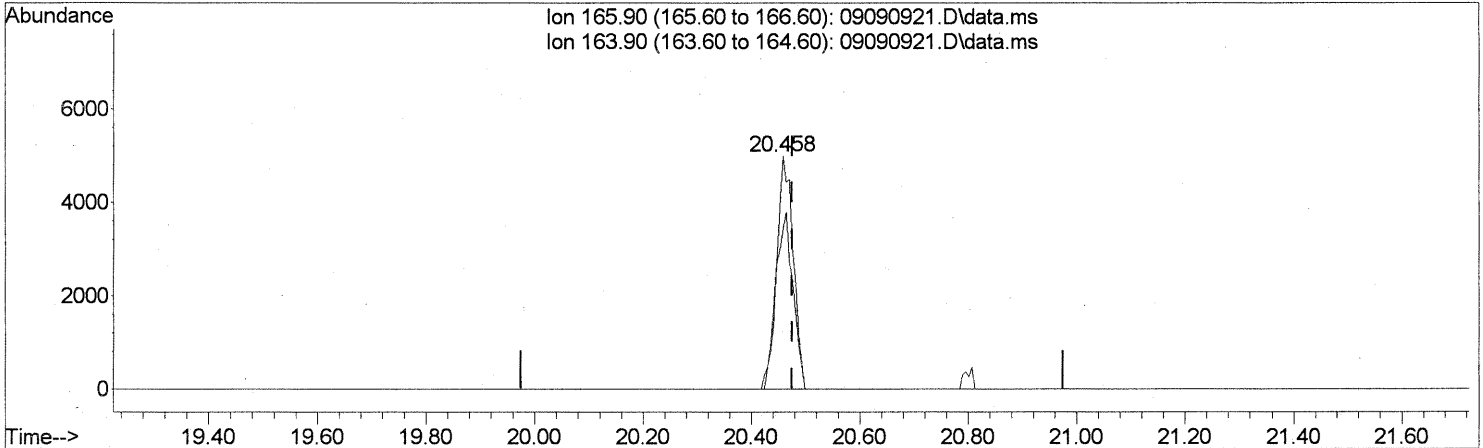
(62) n-Butyl Acetate (T)  
 20.161min (-0.017) 1.78ng  
 response 76790

Ion	Exp%	Act%
43.00	100	100
56.10	39.50	40.83
73.00	14.30	19.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

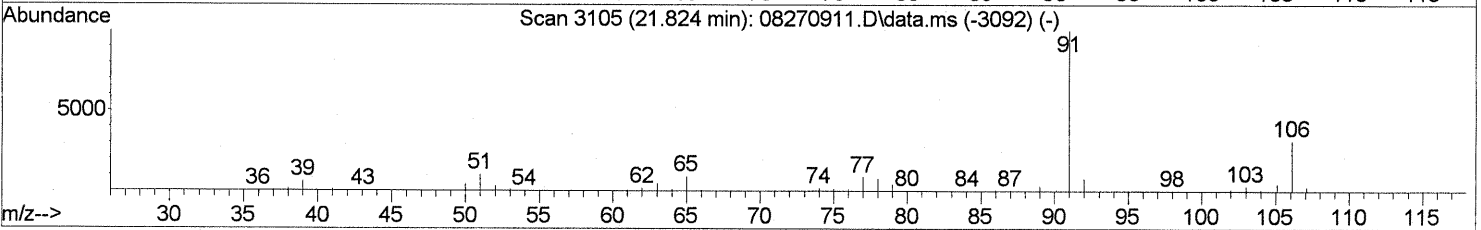
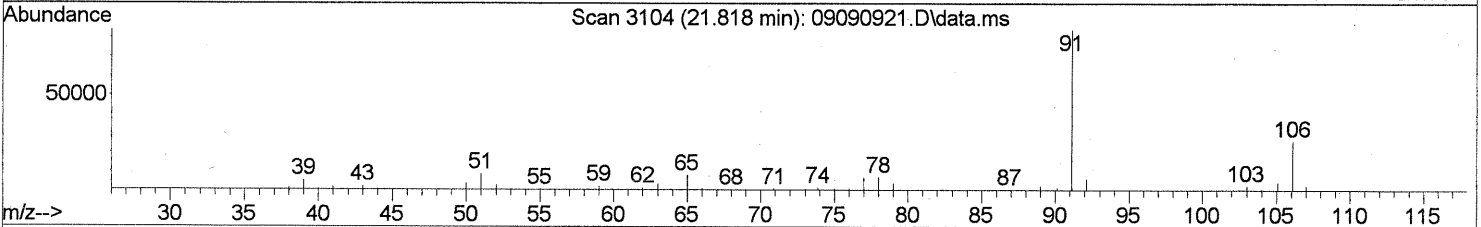
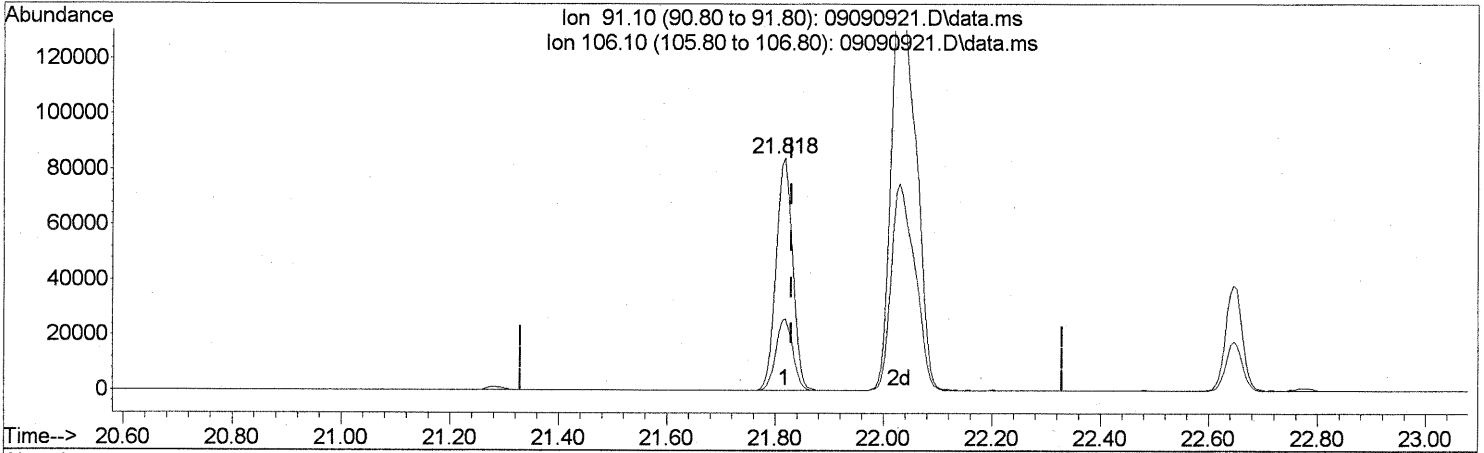
(64) Tetrachloroethene (T)  
 20.458min (-0.017) 0.67ng  
 response 10507

Ion	Exp%	Act%
165.90	100	100
163.90	78.80	78.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

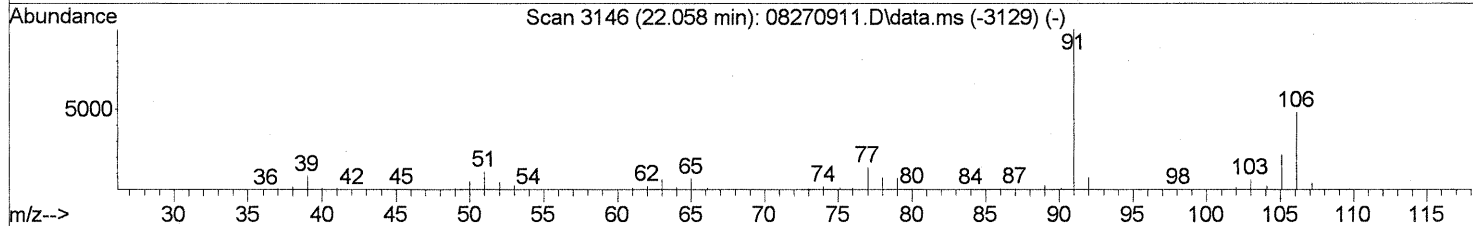
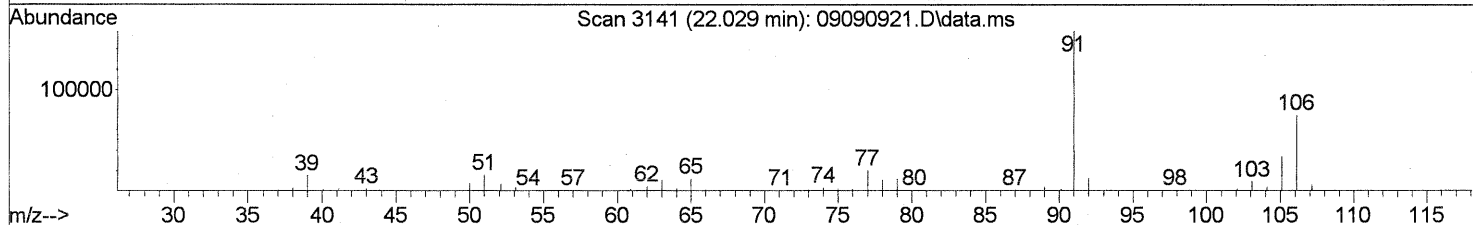
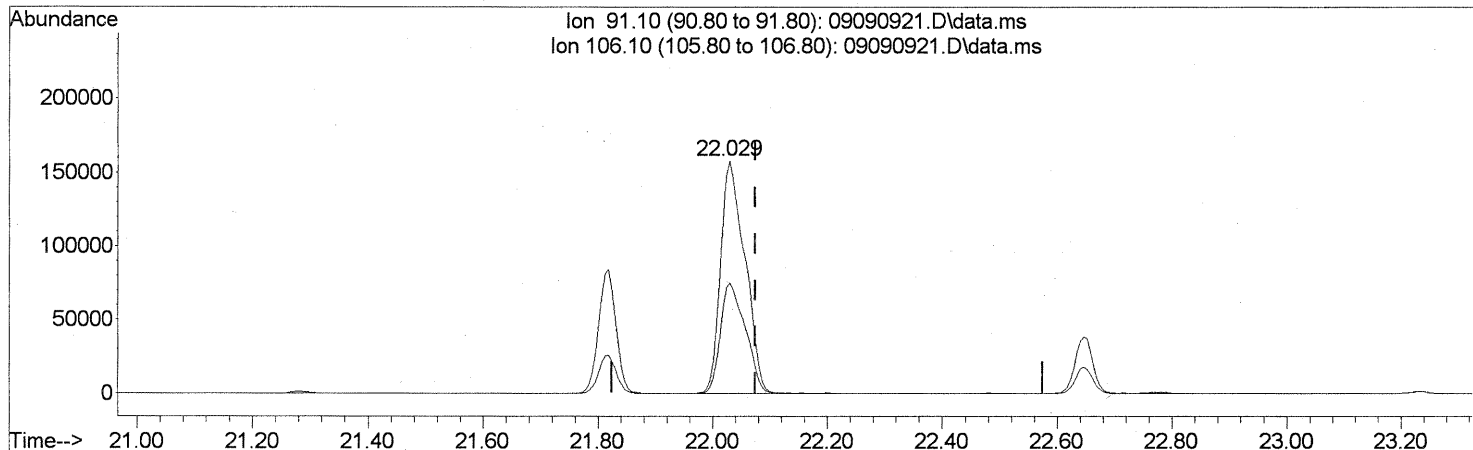
(66) Ethylbenzene (T)  
 21.818min (-0.011) 2.51ng  
 response 177176

Ion	Exp%	Act%
91.10	100	100
106.10	31.00	31.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

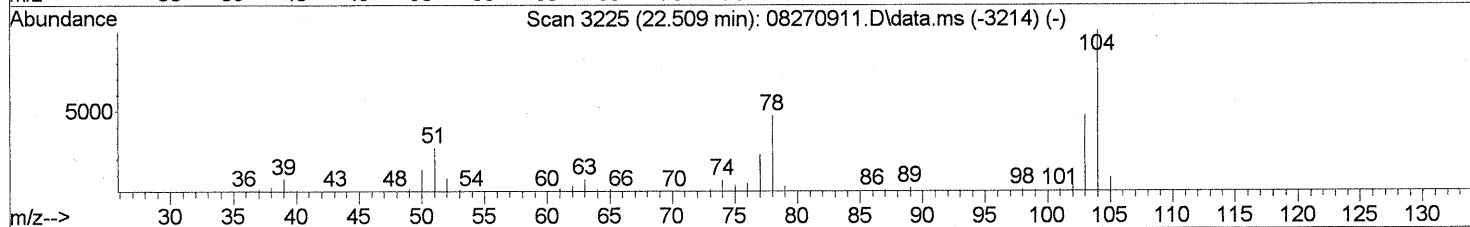
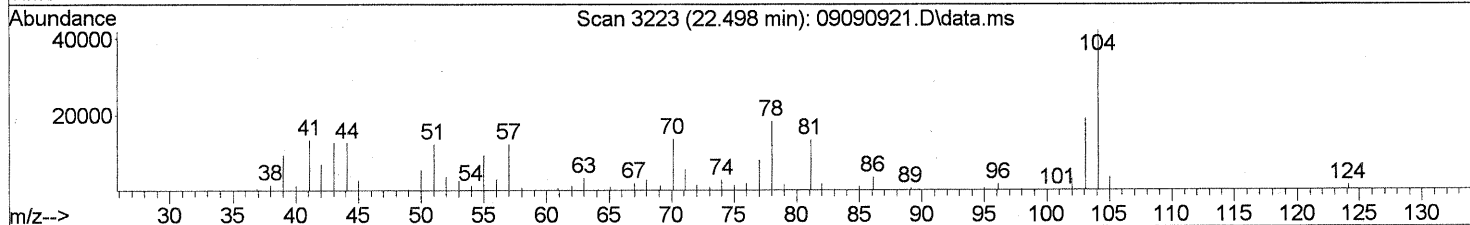
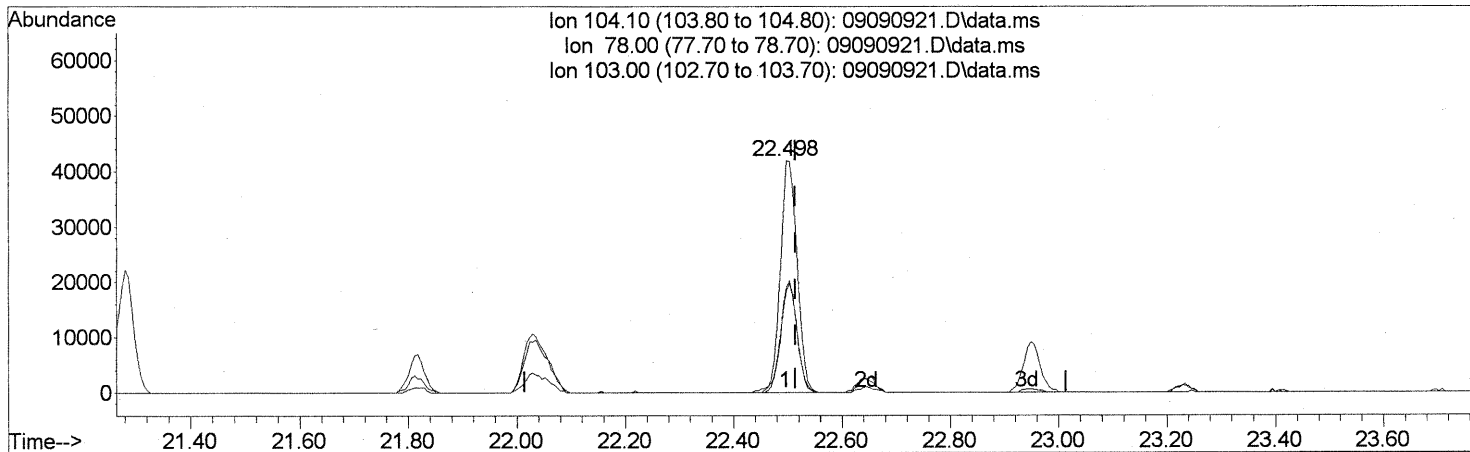
(67) m- & p-Xylenes (T)  
 22.029min (-0.046) 8.34ng  
 response 468010

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	48.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

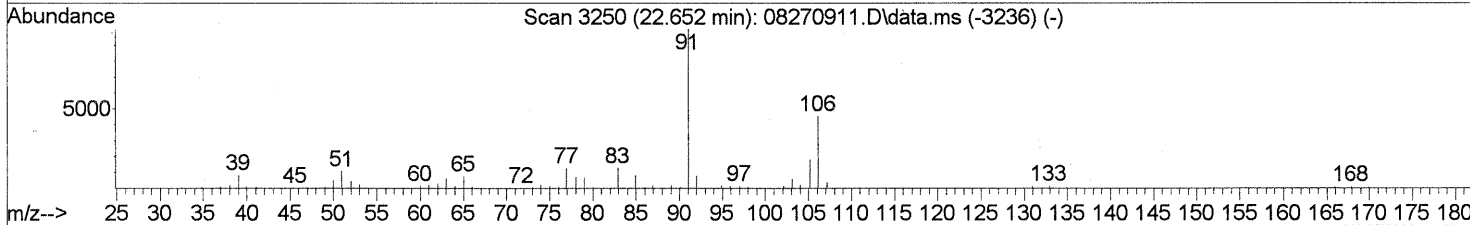
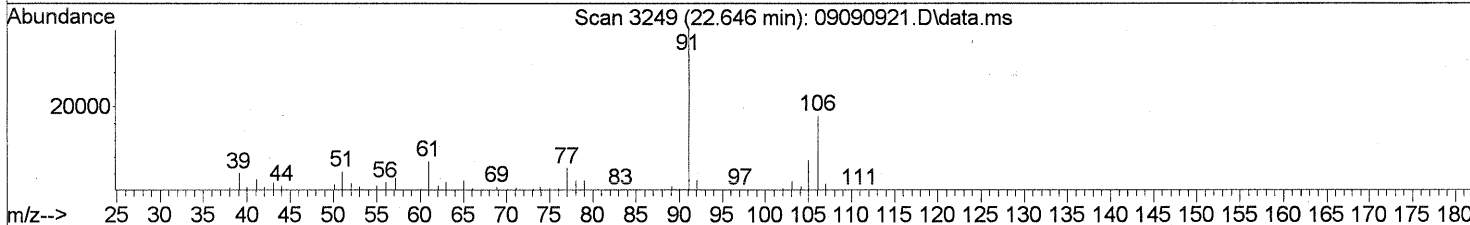
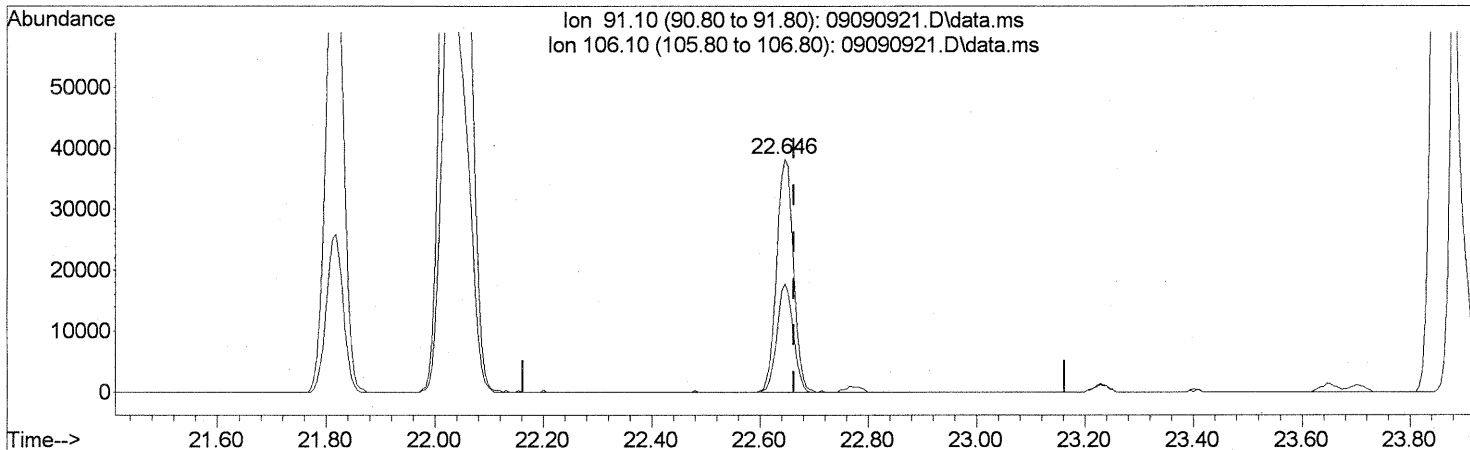
(69) Styrene (T)  
 22.498min (-0.017) 2.16ng  
 response 89092

Ion	Exp%	Act%
104.10	100	100
78.00	47.20	45.73
103.00	47.00	47.63
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
Data File : 09090921.D  
Acq On : 9 Sep 2009 23:34  
Operator : LM/CC  
Sample : P0903114-003 (1000ml)  
Misc : EH&E 104897  
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Fri Aug 28 06:02:46 2009  
Response via : Initial Calibration



TIC: 09090921.D\data.ms

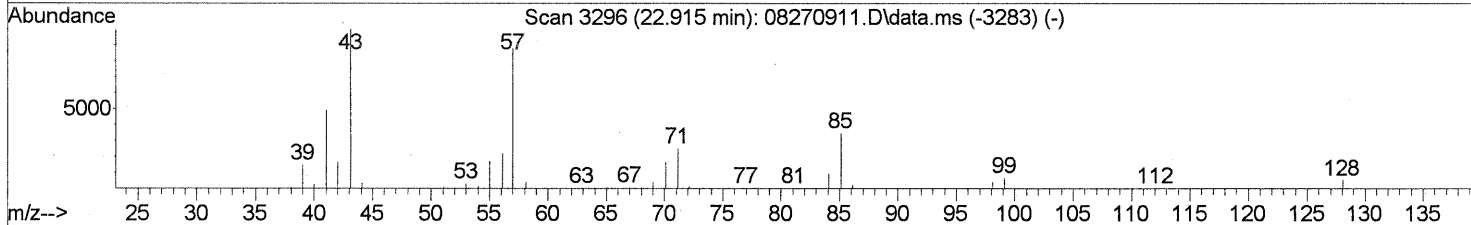
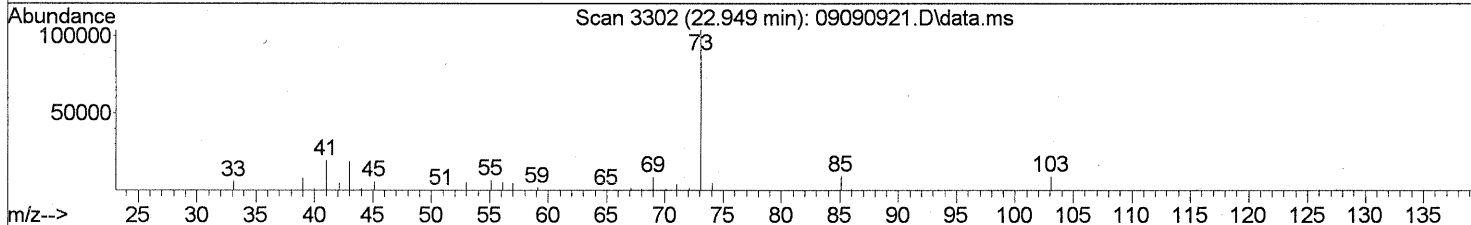
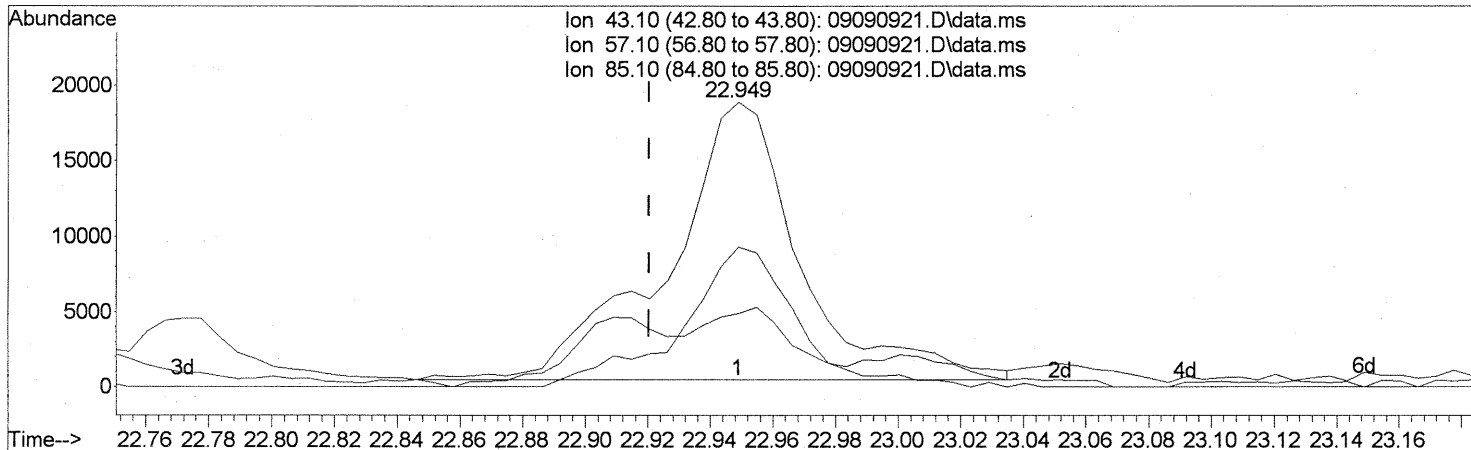
(70) o-Xylene (T)		
22.646min (-0.017) 1.45ng		
response 81566		
Ion	Exp%	Act%
91.10	100	100
106.10	44.90	45.13
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(71) n-Nonane (T)  
 22.949min (+0.029) 1.61ng  
 response 54727

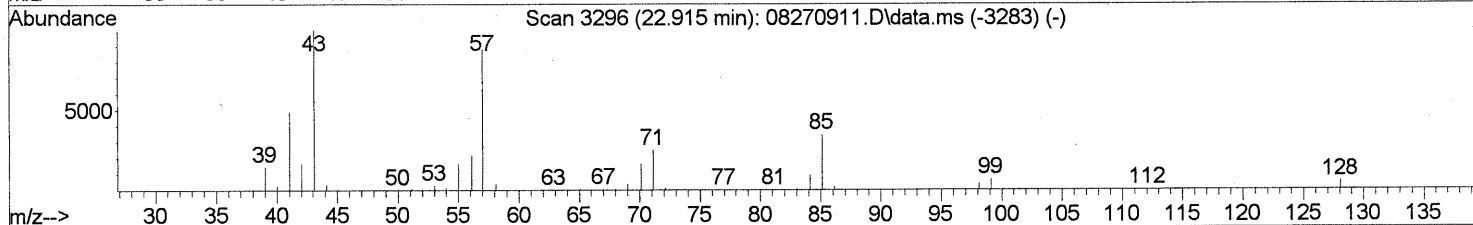
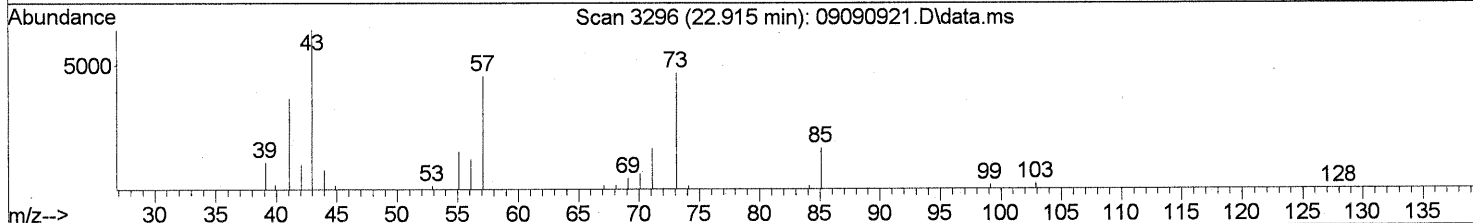
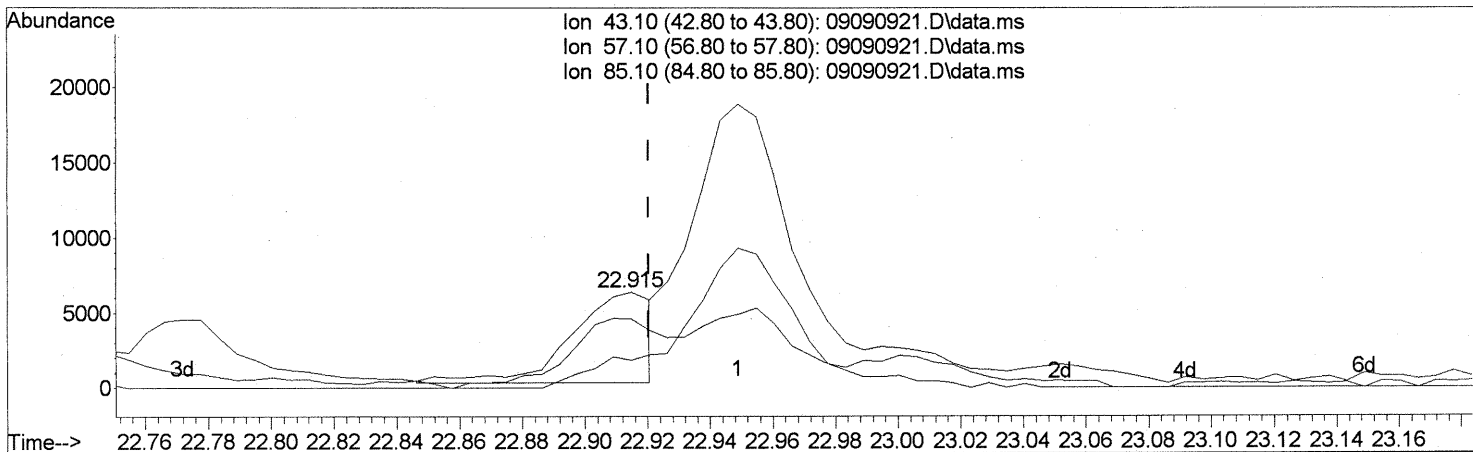
Ion	Exp%	Act%
43.10	100	100
57.10	85.90	29.22#
85.10	32.20	43.10
0.00	0.00	0.00

SH

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(71) n-Nonane (T)  
 22.915min (-0.006) 0.32ng m  
 response 10848

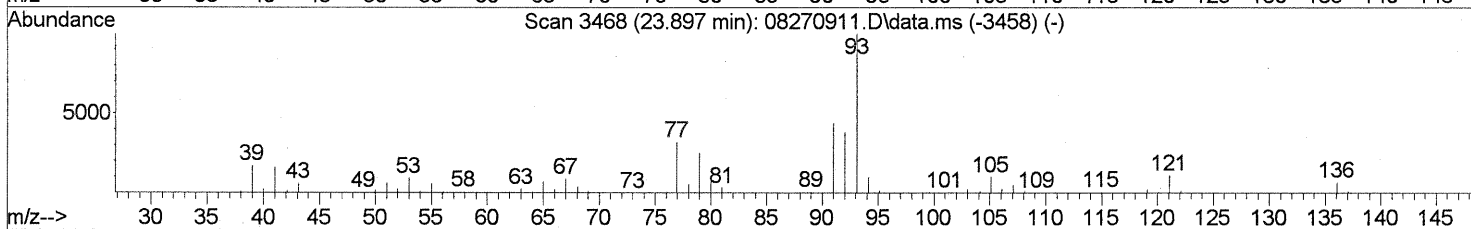
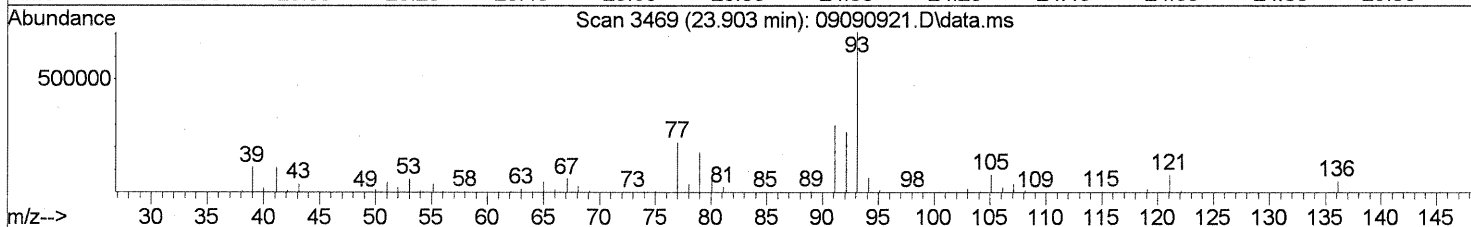
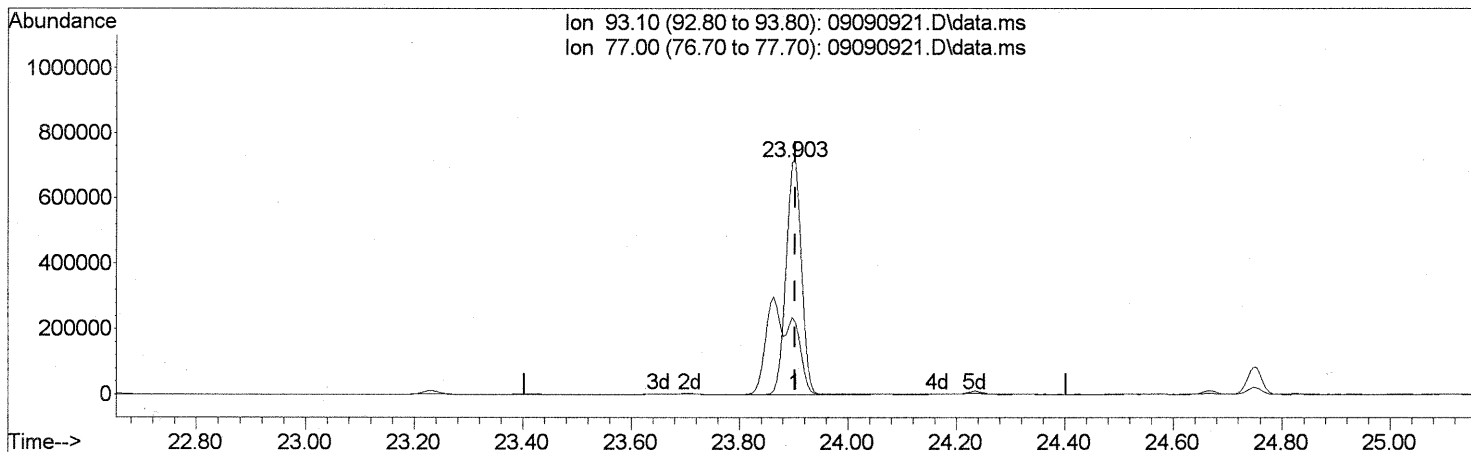
Ion	Exp%	Act%
43.10	100	100
57.10	85.90	147.39#
85.10	32.20	217.46#
0.00	0.00	0.00

*CMRL*      *SH → IC*  
*m9/15/09*  
*E = 9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

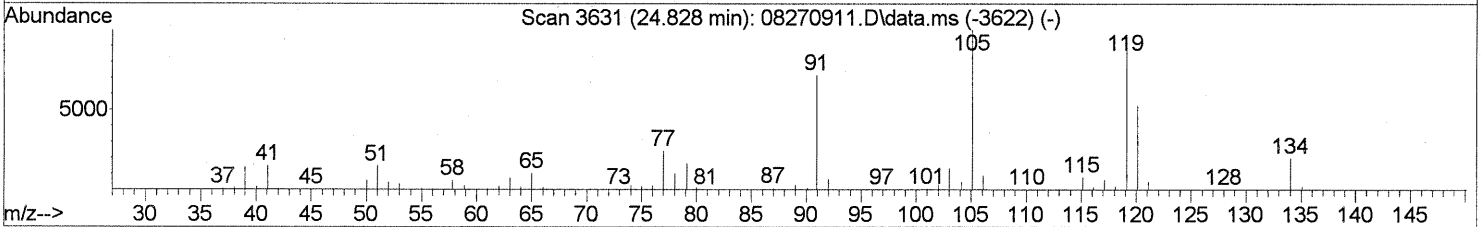
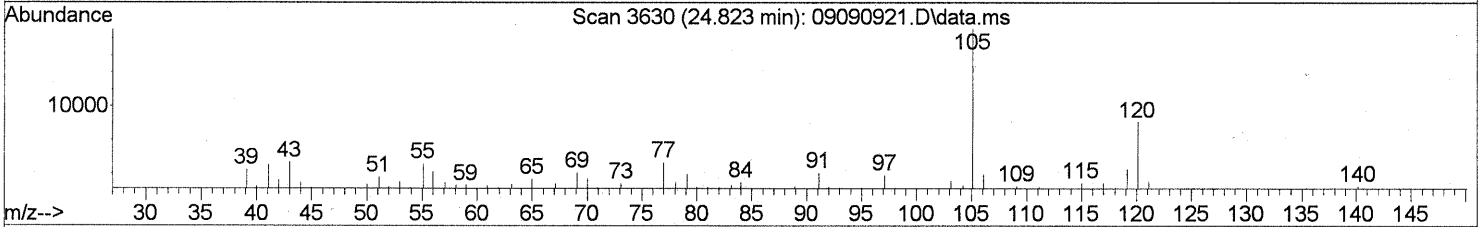
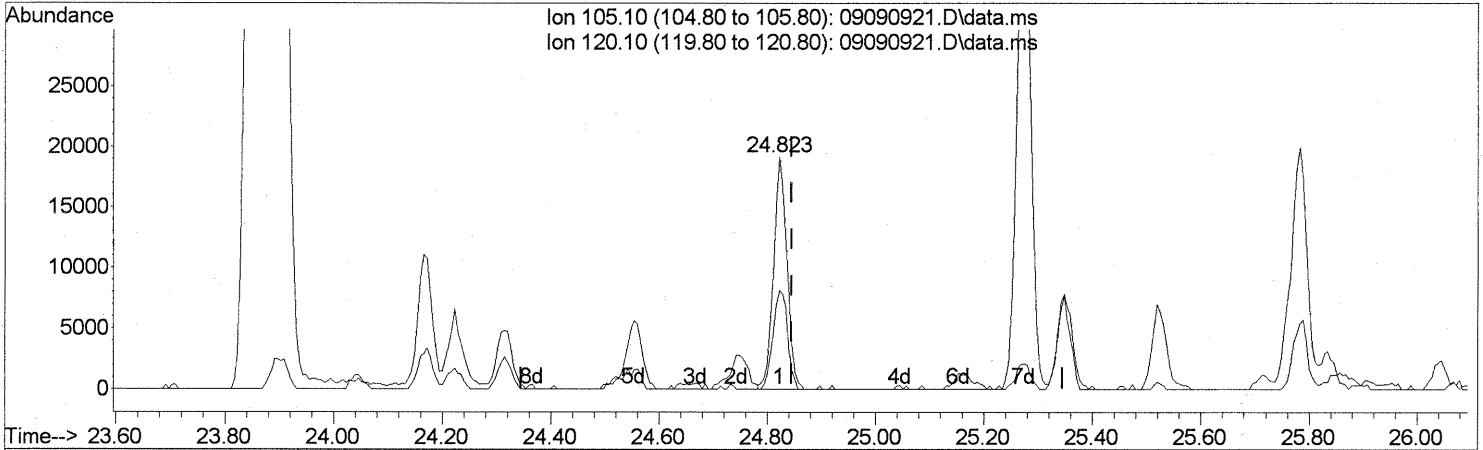
(75) alpha-Pinene (T)  
 23.903min (-0.000) 37.93ng  
 response 1406365

Ion	Exp%	Act%
93.10	100	100
77.00	33.10	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

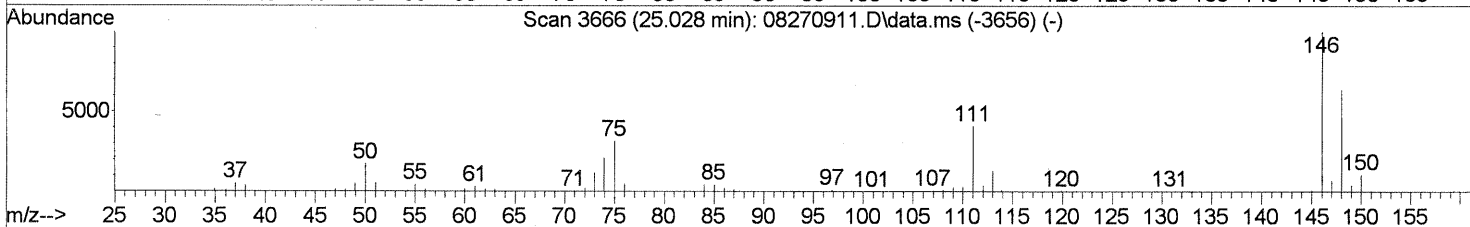
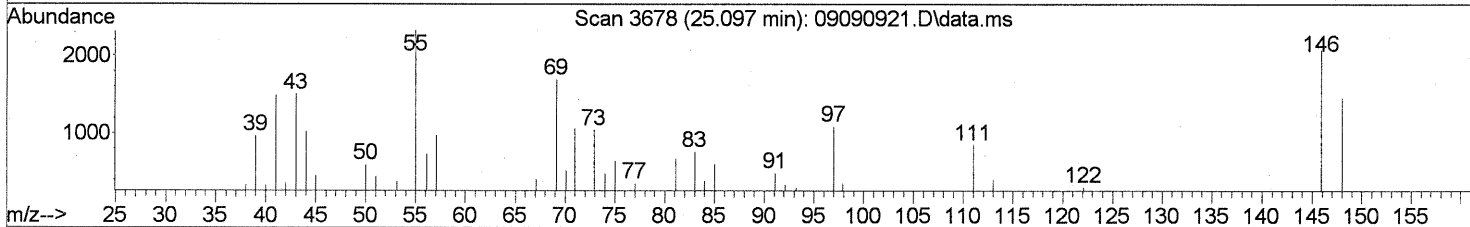
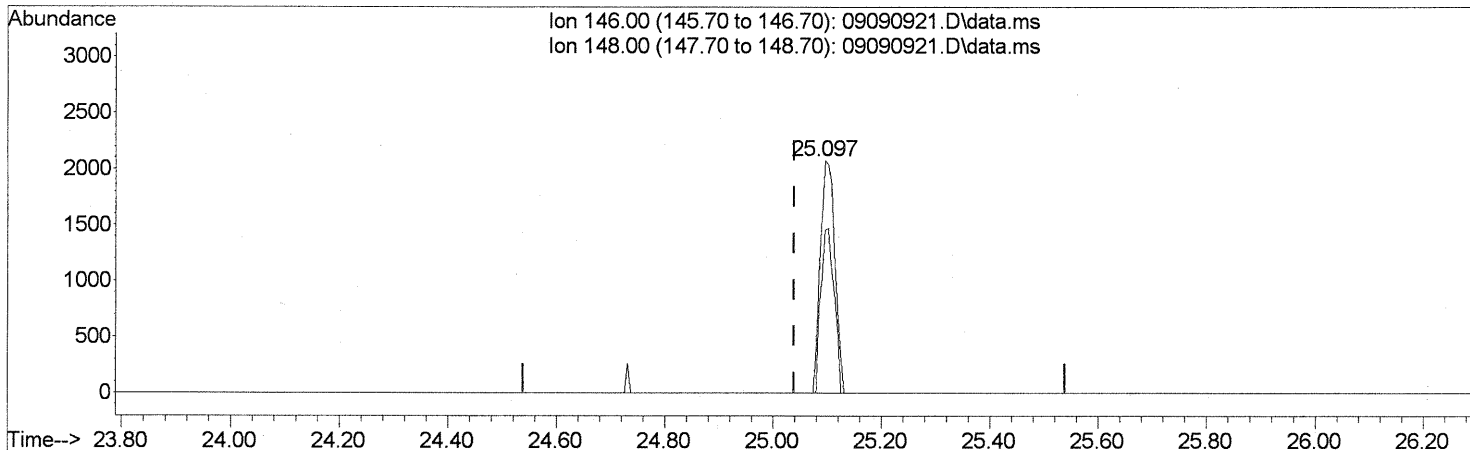
(82) 1,2,4-Trimethylbenzene (T)  
 24.823min (-0.023) 0.57ng  
 response 32728

Ion	Exp%	Act%
105.10	100	100
120.10	52.00	46.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(85) 1,3-Dichlorobenzene (T)  
 25.097min (+0.057) 0.12ng  
 response 3848

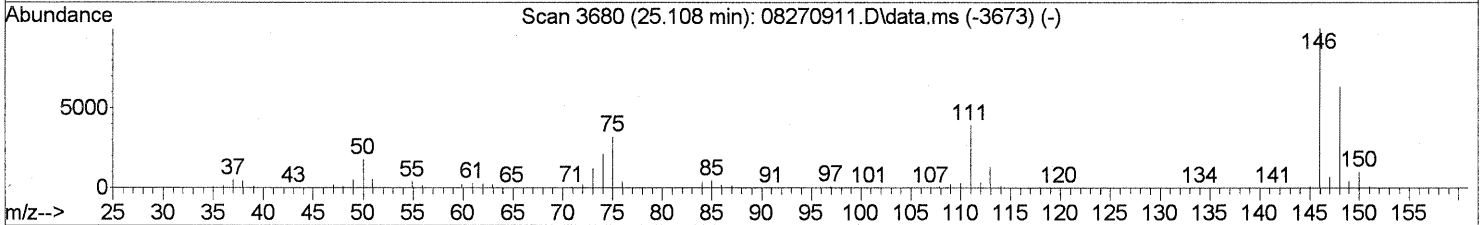
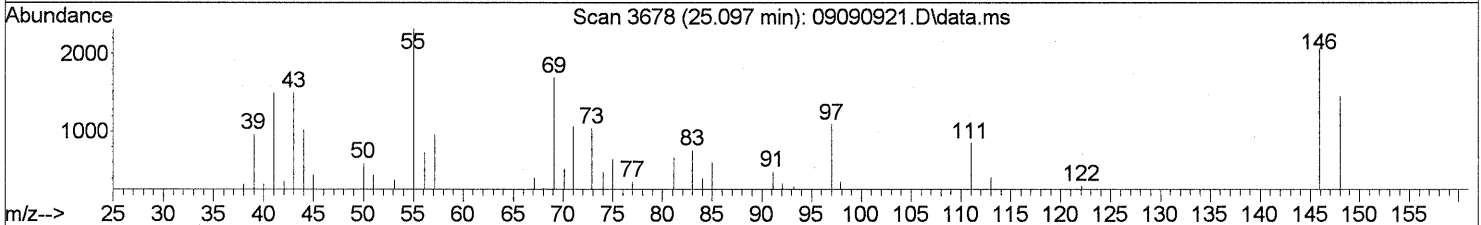
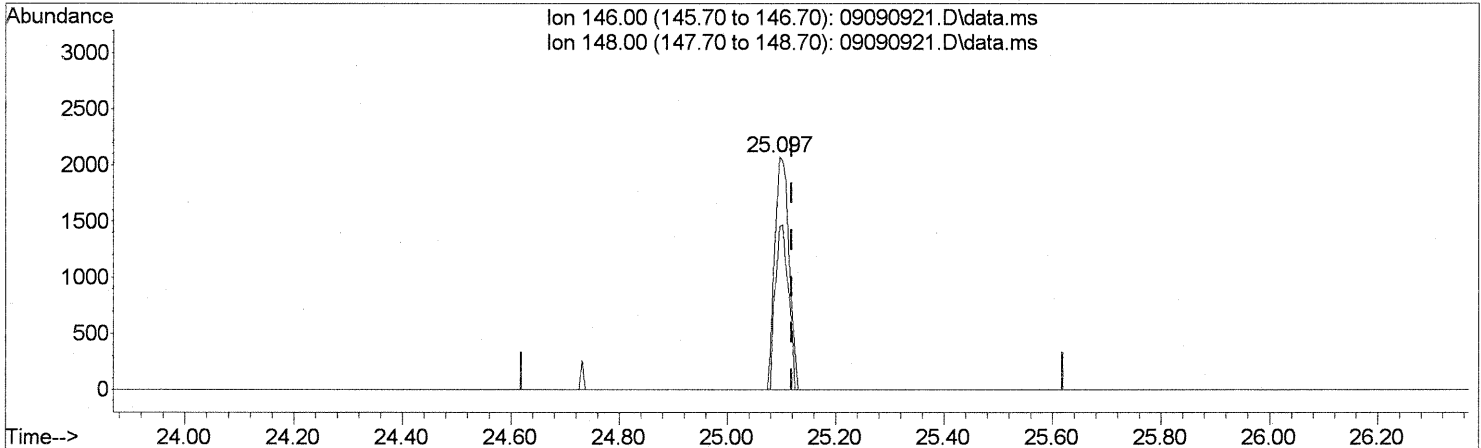
Ion	Exp%	Act%
146.00	100	100
148.00	64.00	64.50
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*LM 9/15/09*  
*E=9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

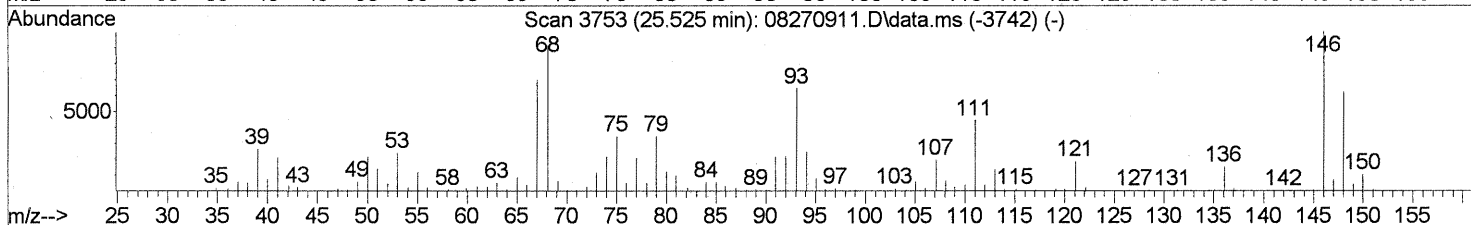
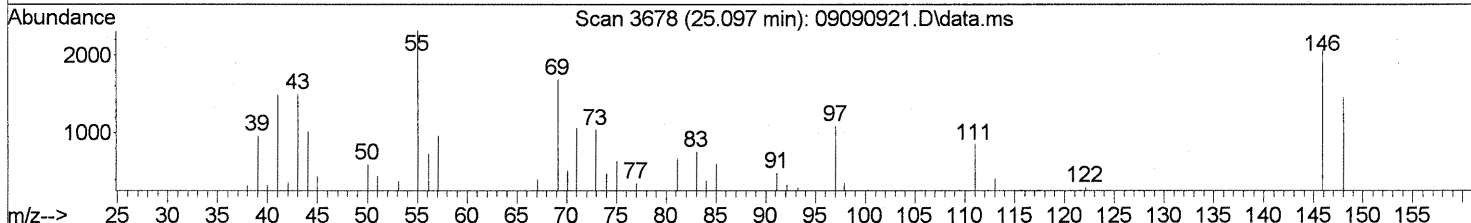
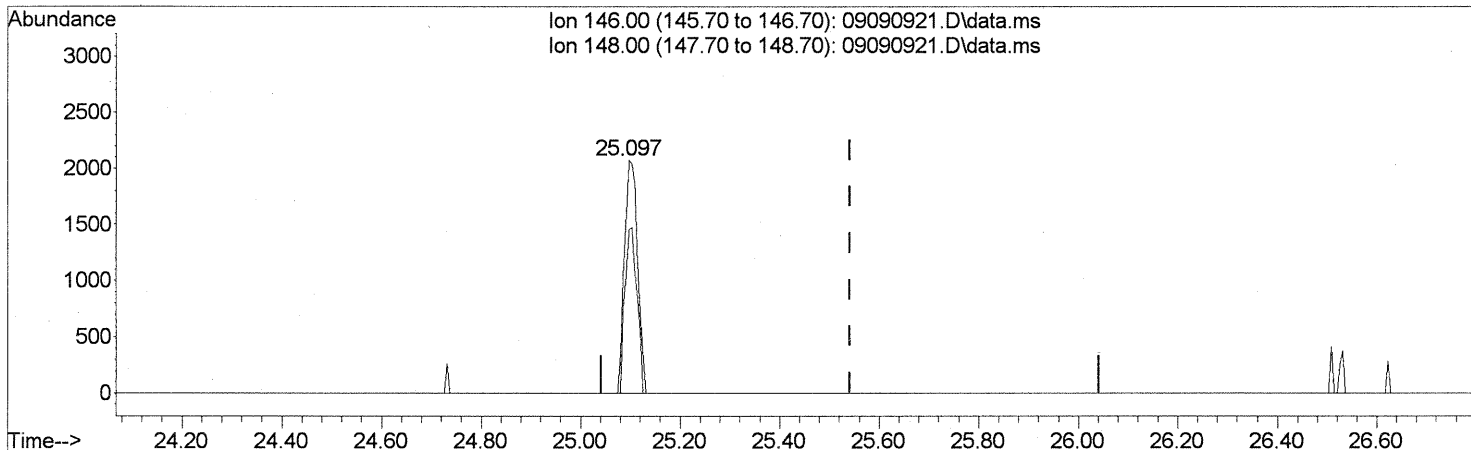
(86) 1,4-Dichlorobenzene (T)  
 25.097min (-0.023) 0.12ng  
 response 3848

ion	Exp%	Act%
146.00	100	100
148.00	64.20	64.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(90) 1,2-Dichlorobenzene (T)  
 25.097min (-0.446) 0.13ng  
 response 3848

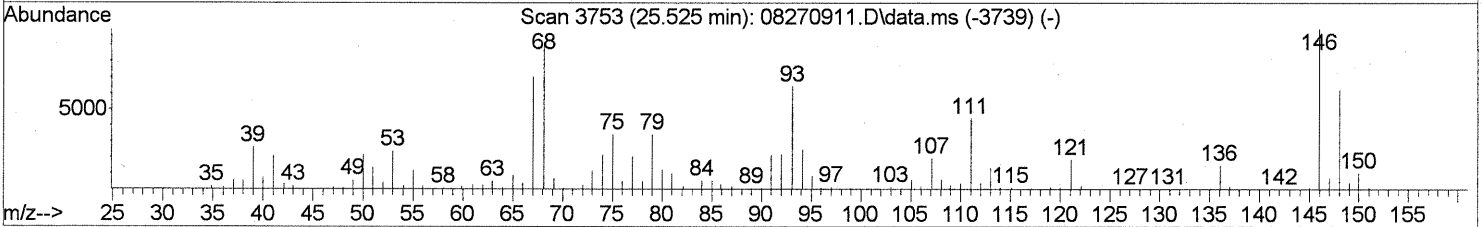
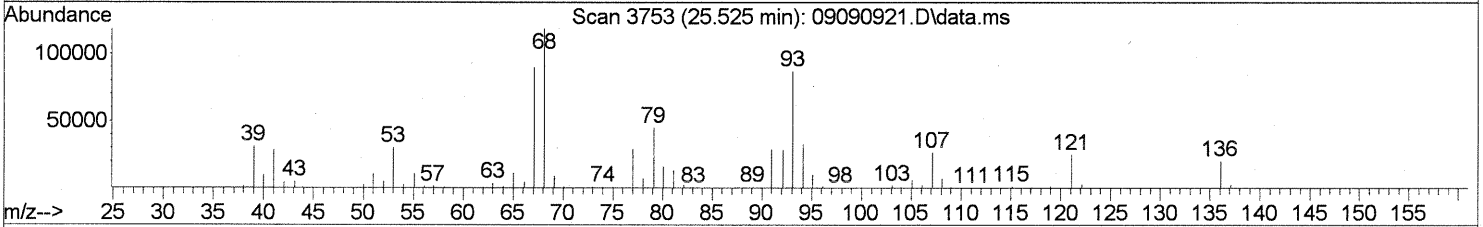
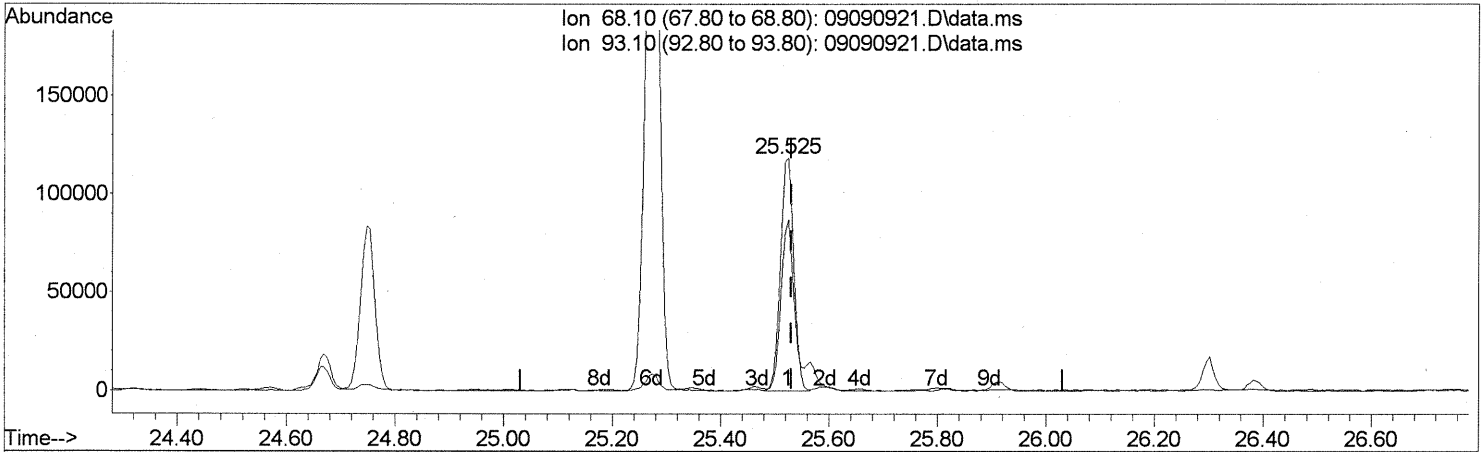
Ion	Exp%	Act%
146.00	100	100
148.00	62.80	64.50
0.00	0.00	0.00
0.00	0.00	0.00

*EP*  
*11/15/09*  
*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090921.D  
 Acq On : 9 Sep 2009 23:34  
 Operator : LM/CC  
 Sample : P0903114-003 (1000ml)  
 Misc : EH&E 104897  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Sep 10 08:30:26 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090921.D\data.ms

(91) d-Limonene (T)  
 25.525min (-0.006) 8.77ng  
 response 200644

Ion	Exp%	Act%
68.10	100	100
93.10	69.80	83.68
0.00	0.00	0.00
0.00	0.00	0.00





**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104898  
**Client Project ID:** 16512  
**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Liliana Marghitoiu  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** AC00568

**CAS Project ID:** P0903114  
**CAS Sample ID:** P0903114-004

**Date Collected:** 9/2/09  
**Date Received:** 9/3/09  
**Date Analyzed:** 9/10/09  
**Volume(s) Analyzed:** 1.00 Liter(s)

**Initial Pressure (psig):** 0.4      **Final Pressure (psig):** 3.5

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.12	ND	0.031	
141-78-6	Ethyl Acetate	5.0	0.61	1.4	0.17	
110-54-3	n-Hexane	15	0.61	4.2	0.17	
67-66-3	Chloroform	0.92	0.12	0.19	0.025	
109-99-9	Tetrahydrofuran (THF)	1.0	0.61	0.35	0.21	
107-06-2	1,2-Dichloroethane	1.7	0.12	0.42	0.030	
71-55-6	1,1,1-Trichloroethane	0.65	0.12	0.12	0.022	
71-43-2	Benzene	0.37	0.12	0.12	0.038	
56-23-5	Carbon Tetrachloride	0.65	0.12	0.10	0.019	
110-82-7	Cyclohexane	2.4	0.61	0.71	0.18	
78-87-5	1,2-Dichloropropane	ND	0.12	ND	0.026	
75-27-4	Bromodichloromethane	0.17	0.12	0.025	0.018	
79-01-6	Trichloroethene	ND	0.12	ND	0.023	
123-91-1	1,4-Dioxane	ND	0.61	ND	0.17	
80-62-6	Methyl Methacrylate	ND	0.61	ND	0.15	
142-82-5	n-Heptane	0.89	0.61	0.22	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.61	ND	0.13	
108-10-1	4-Methyl-2-pentanone	ND	0.61	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.61	ND	0.13	
79-00-5	1,1,2-Trichloroethane	ND	0.12	ND	0.022	
108-88-3	Toluene	30	0.61	8.0	0.16	
591-78-6	2-Hexanone	1.1	0.61	0.27	0.15	
124-48-1	Dibromochloromethane	ND	0.12	ND	0.014	
106-93-4	1,2-Dibromoethane	ND	0.12	ND	0.016	
123-86-4	n-Butyl Acetate	2.0	0.61	0.42	0.13	

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: \_\_\_\_\_

Date: \_\_\_\_\_

9/17/09 **126**

**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104898  
**Client Project ID:** 16512

Test Code: EPA TO-15  
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
Analyst: Liliana Marghitoiu  
Sampling Media: 6.0 L Summa Canister  
Test Notes:  
Container ID: AC00568

CAS Project ID: P0903114  
CAS Sample ID: P0903114-004

Date Collected: 9/2/09  
Date Received: 9/3/09  
Date Analyzed: 9/10/09  
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.4      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.21

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	<b>n-Octane</b>	<b>0.63</b>	0.61	<b>0.14</b>	0.13	
127-18-4	<b>Tetrachloroethene</b>	<b>0.97</b>	0.12	<b>0.14</b>	0.018	
108-90-7	Chlorobenzene	ND	0.12	ND	0.026	
100-41-4	<b>Ethylbenzene</b>	<b>2.6</b>	0.61	<b>0.61</b>	0.14	
179601-23-1	<b>m,p-Xylenes</b>	<b>8.4</b>	0.61	<b>1.9</b>	0.14	
75-25-2	Bromoform	ND	0.61	ND	0.059	
100-42-5	<b>Styrene</b>	<b>2.7</b>	0.61	<b>0.64</b>	0.14	
95-47-6	<b>o-Xylene</b>	<b>1.5</b>	0.61	<b>0.36</b>	0.14	
111-84-2	n-Nonane	ND	0.61	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.12	ND	0.018	
98-82-8	Cumene	ND	0.61	ND	0.12	
80-56-8	<b>alpha-Pinene</b>	<b>57</b>	0.61	<b>10</b>	0.11	
103-65-1	n-Propylbenzene	ND	0.61	ND	0.12	
622-96-8	4-Ethyltoluene	ND	0.61	ND	0.12	
108-67-8	1,3,5-Trimethylbenzene	ND	0.61	ND	0.12	
95-63-6	<b>1,2,4-Trimethylbenzene</b>	<b>0.84</b>	0.61	<b>0.17</b>	0.12	
100-44-7	Benzyl Chloride	ND	0.12	ND	0.023	
541-73-1	1,3-Dichlorobenzene	ND	0.12	ND	0.020	
106-46-7	<b>1,4-Dichlorobenzene</b>	<b>0.14</b>	0.12	<b>0.023</b>	0.020	
95-50-1	1,2-Dichlorobenzene	ND	0.12	ND	0.020	
5989-27-5	<b>d-Limonene</b>	<b>13</b>	0.61	<b>2.4</b>	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.61	ND	0.063	
120-82-1	1,2,4-Trichlorobenzene	ND	0.61	ND	0.082	
91-20-3	Naphthalene	ND	0.61	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.61	ND	0.057	

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.

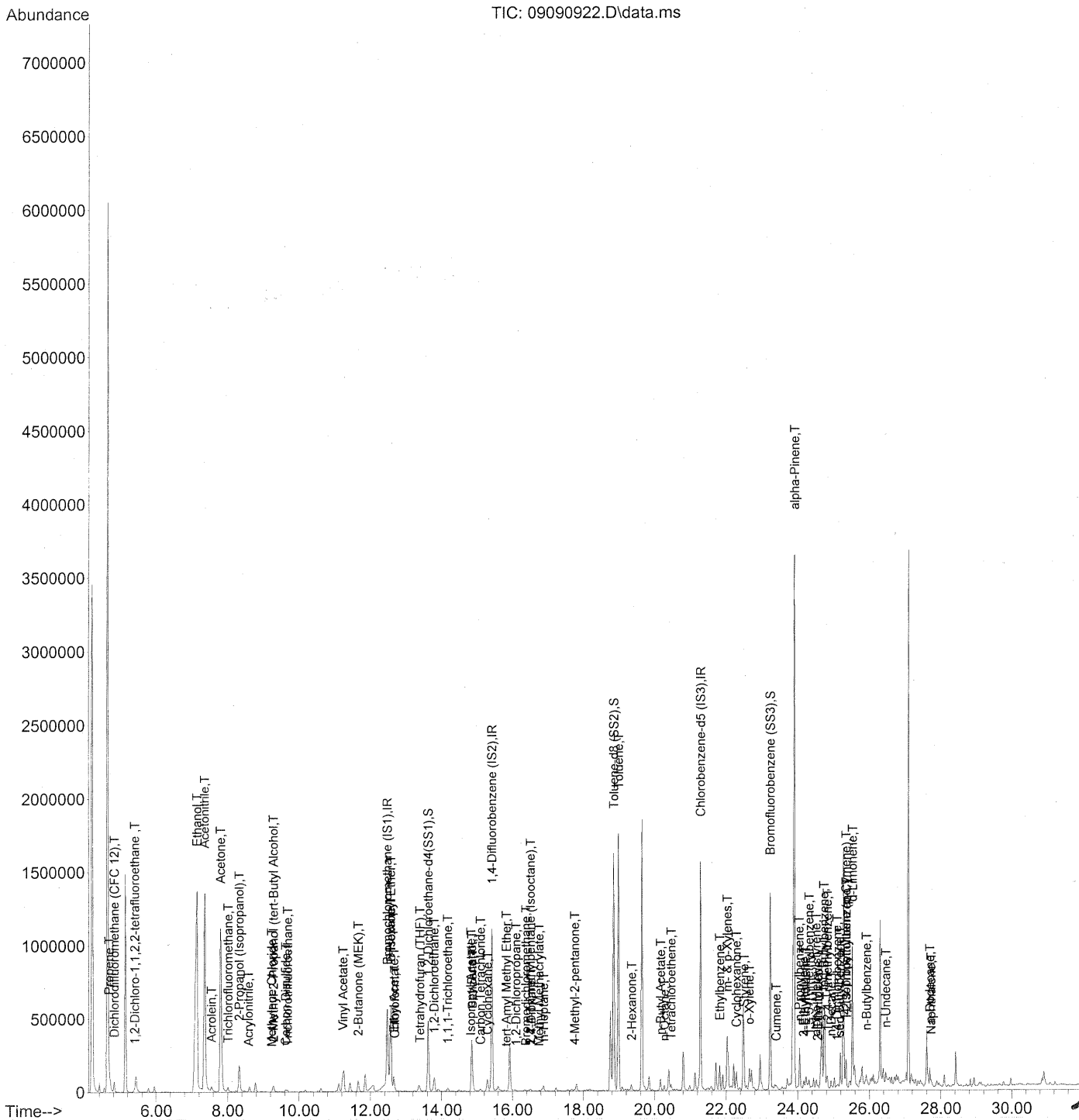
Verified By: \_\_\_\_\_

Date: 9/17/09

**127**

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 12:16 am  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 15 14:49:10 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



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11/17/09

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	256319	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1285646	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	638798	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	487774	24.014	ng	-0.03
Spiked Amount	25.000		Recovery	= 96.04%		
57) Toluene-d8 (SS2)	18.85	98	1404656	24.605	ng	-0.01
Spiked Amount	25.000		Recovery	= 98.40%		
73) Bromofluorobenzene (SS3)	23.23	174	433189	26.365	ng	0.00
Spiked Amount	25.000		Recovery	= 105.44%		

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.66	42	37003m	1.996	ng	
3) Dichlorodifluoromethan...	4.82	85	71329	2.197	ng	99
4) Chloromethane	0.00	50	0	N.D.	d	
5) 1,2-Dichloro-1,1,2,2-t...	5.40	135	1109	0.083	ng	# 58
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.78	54	94	N.D.		
8) Bromomethane	6.35	94	319	N.D.		
9) Chloroethane	6.67	64	93	N.D.		
10) Ethanol	7.14	45	3540994	307.997	ng	99
11) Acetonitrile	7.35	41	2274923	71.239	ng	100
12) Acrolein	7.55	56	40689	4.635	ng	97
13) Acetone	7.79	58	695989	58.537	ng	94
14) Trichlorofluoromethane	8.01	101	30904	1.080	ng	98
15) 2-Propanol (Isopropanol)	8.32	45	376225	9.518	ng	98
16) Acrylonitrile	8.58	53	1852	0.094	ng	# 25
17) 1,1-Dichloroethene	8.85	96	130	N.D.		
18) 2-Methyl-2-Propanol (t...	9.28	59	13784	0.348	ng	# 1
19) Methylene Chloride	9.23	84	4144	0.275	ng	87
20) 3-Chloro-1-propene (Al...	0.00	41	0	N.D.	d	
21) Trichlorotrifluoroethane	9.67	151	5869	0.518	ng	94
22) Carbon Disulfide	9.62	76	33343	0.621	ng	100
23) trans-1,2-Dichloroethene	10.52	61	232	N.D.		
24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	11.16	73	88	N.D.		
26) Vinyl Acetate	11.23	86	23824	7.996	ng	# 84
27) 2-Butanone (MEK)	11.66	72	34987	3.643	ng	95
28) cis-1,2-Dichloroethene	12.08	61	512	N.D.		
29) Diisopropyl Ether	12.57	87	3025	0.216	ng	# 1
30) Ethyl Acetate	12.66	61	21267	4.121	ng	98
31) n-Hexane	12.57	57	317795	12.361	ng	100

FP 11/15/09

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 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	19340	0.763	ng	99
34) Tetrahydrofuran (THF)	13.39	72	8794	0.844	ng	# 25
35) Ethyl tert-Butyl Ether	13.44	87	93	N.D.		
36) 1,2-Dichloroethane	13.79	62	29756	1.399	ng	98
38) 1,1,1-Trichloroethane	14.17	97	12737	0.536	ng	96
39) Isopropyl Acetate	14.82	61	1328	0.136	ng	# 1
40) 1-Butanol	14.85	56	305672	19.102	ng	# 41
41) Benzene	14.87	78	18578	0.307	ng	99
42) Carbon Tetrachloride	15.09	117	10973	0.541	ng	97
43) Cyclohexane	15.29	84	45072	2.023	ng	99
44) tert-Amyl Methyl Ether	15.83	73	3421	0.076	ng	# 60
45) 1,2-Dichloropropane	16.09	63	857	0.057	ng	82
46) Bromodichloromethane	16.37	83	2741	0.138	ng	98
47) Trichloroethene	16.43	130	211	N.D.		
48) 1,4-Dioxane	16.52	88	957	0.082	ng	94
49) 2,2,4-Trimethylpentane...	16.51	57	9509	0.138	ng	# 50
50) Methyl Methacrylate	16.75	100	345	0.062	ng	# 1
51) n-Heptane	16.88	71	11534	0.736	ng	96
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.75	58	4376	0.317	ng	83
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D. d		
58) Toluene	18.98	91	1531357	24.905	ng	99
59) 2-Hexanone	19.35	43	33888	0.902	ng	92
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.16	43	70608	1.638	ng	91
63) n-Octane	20.27	57	7404	0.523	ng	93
64) Tetrachloroethene	20.46	166	12491	0.802	ng	97
65) Chlorobenzene	21.34	112	612	N.D.		
66) Ethylbenzene	21.82	91	153912	2.189	ng	99
67) m- & p-Xylenes	22.03	91	388752	6.943	ng	100
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.50	104	93513	2.268	ng	97
70) o-Xylene	22.65	91	71698	1.275	ng	100
71) n-Nonane	0.00	43	0	N.D. d		
72) 1,1,2,2-Tetrachloroethane	22.65	83	760	N.D. ✓		
74) Cumene	23.40	105	7315	0.103	ng	96
75) alpha-Pinene	23.90	93	1747682	47.270	ng	94
76) n-Propylbenzene	24.04	91	10612	0.117	ng	# 1
77) 3-Ethyltoluene	24.17	105	23911	0.351	ng	99
78) 4-Ethyltoluene	24.22	105	13537	0.201	ng	92
79) 1,3,5-Trimethylbenzene	24.31	105	11667	0.208	ng	92

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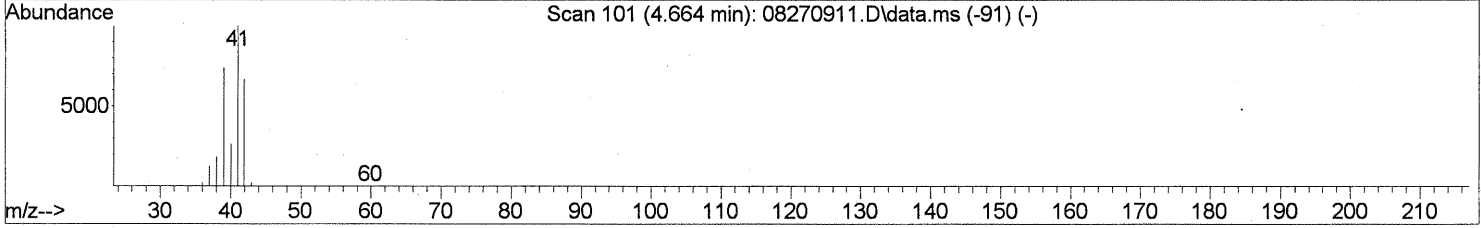
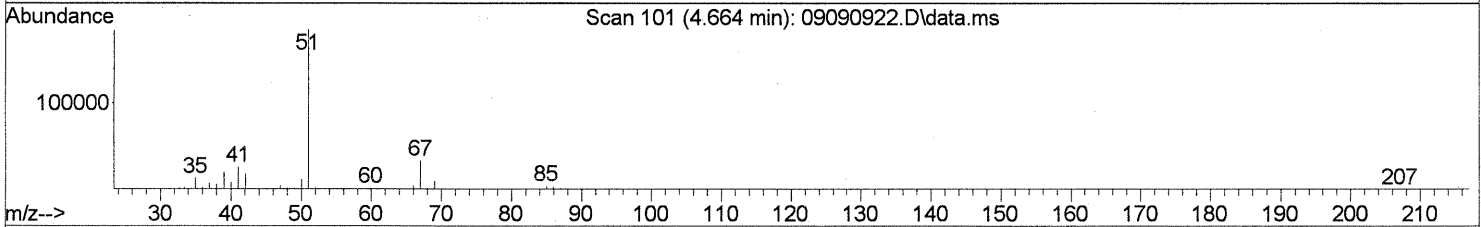
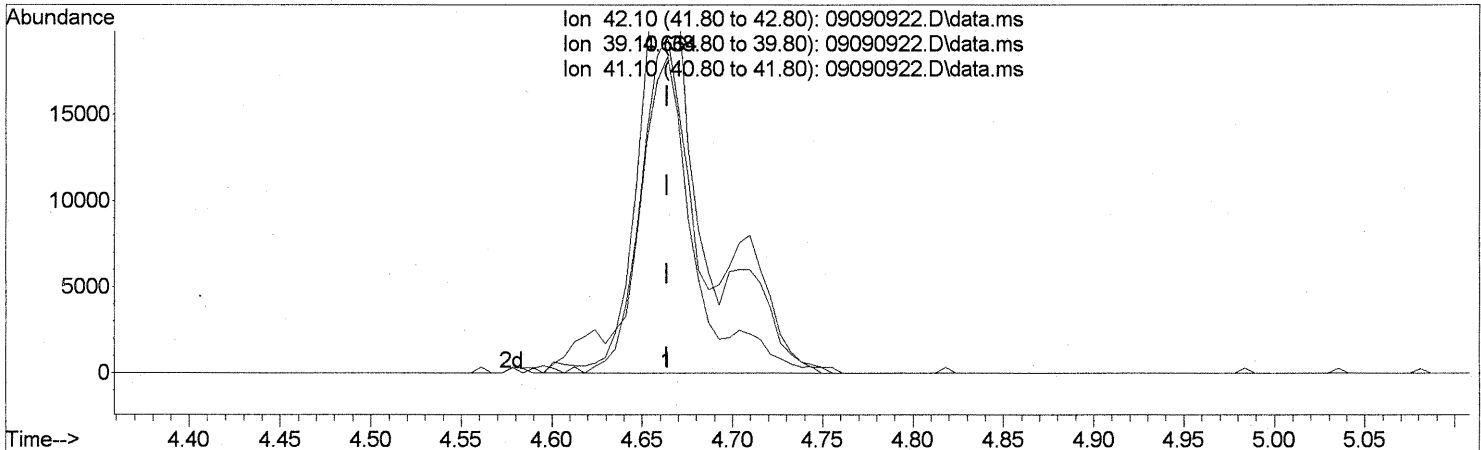
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.51	118	11057	0.376	ng	80
81) 2-Ethyltoluene	24.55	105	12495	0.179	ng	90
82) 1,2,4-Trimethylbenzene	24.82	105	39876	0.697	ng	87
83) n-Decane	24.93	57	22317	0.654	ng	94
84) Benzyl Chloride	25.06	91	987	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
86) 1,4-Dichlorobenzene	25.10	146	3737	0.116	ng	97
87) sec-Butylbenzene	25.17	105	4668	0.060	ng	# 66
88) 4-Isopropyltoluene (p-...	25.35	119	93230	1.324	ng	96
89) 1,2,3-Trimethylbenzene	25.35	105	18071	0.302	ng	# 56
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.	d	
91) d-Limonene	25.53	68	250210	10.962	ng	82
92) 1,2-Dibromo-3-Chloropr...	26.45	157	95	N.D.		
93) n-Undecane	26.46	57	40401	1.140	ng	95
94) 1,2,4-Trichlorobenzene	27.59	180	193	N.D.		
95) Naphthalene	27.72	128	29525	0.374	ng	97
96) n-Dodecane	27.69	57	40716	1.008	ng	95
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.29	55	71124	3.000	ng	94
99) tert-Butylbenzene	24.73	119	8069	0.146	ng	97
100) n-Butylbenzene	25.91	91	6911	0.109	ng	# 65

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
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 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(2) Propene (T)

4.664min (+0.000) 2.18ng

*SH*

response 40364

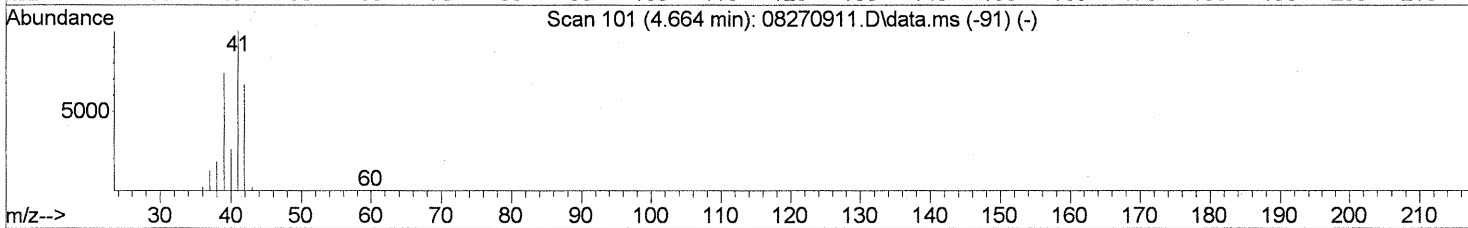
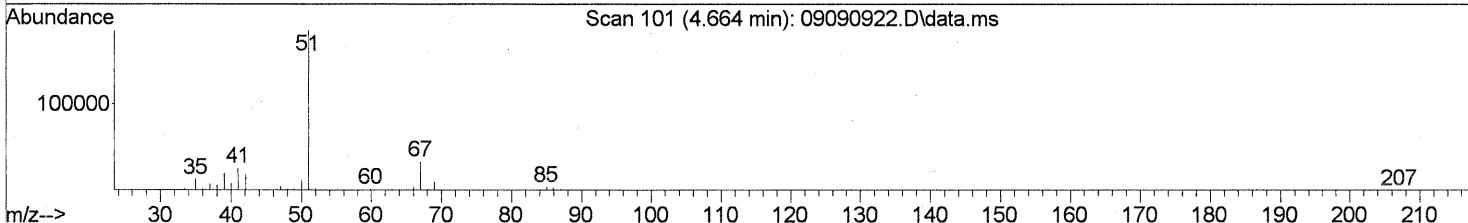
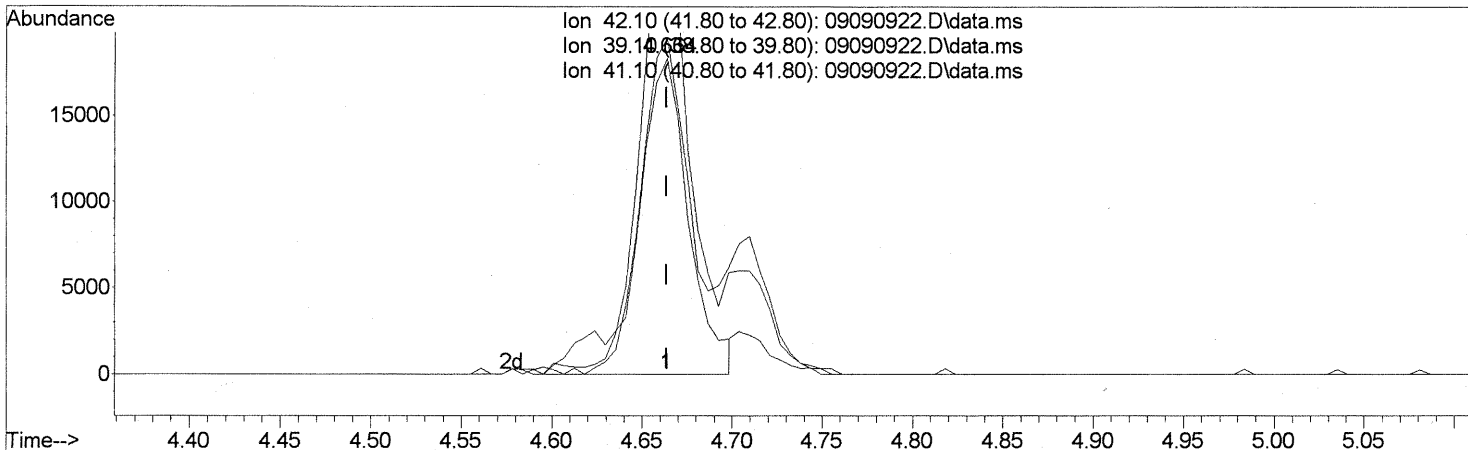
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	92.95
41.10	149.80	120.67#
0.00	0.00	0.00



Quantitation Report (Qedit)

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TIC: 09090922.D\data.ms

(2) Propene (T)  
 4.664min (+0.000) 2.00ng m  
 response 37003

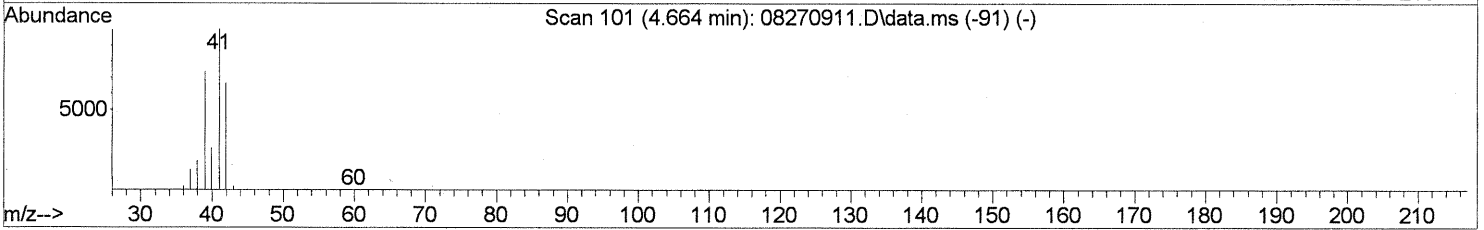
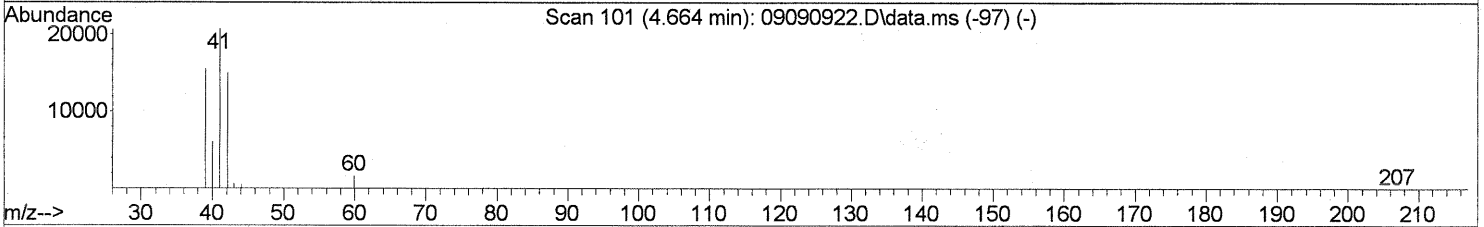
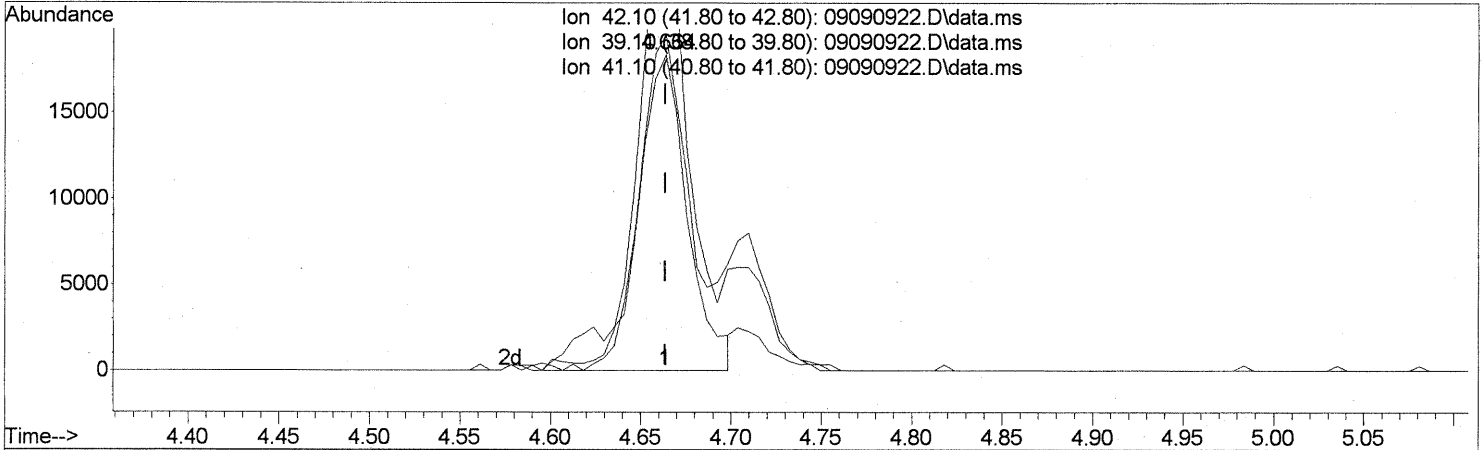
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	101.40
41.10	149.80	131.63
0.00	0.00	0.00

*SA → IC*  
*11/9/15/09*  
*before submit.*  
*11/9/16/09*

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TIC: 09090922.D\data.ms

(2) Propene (T)  
 4.664min (+0.000) 2.00ng m  
 response 37003

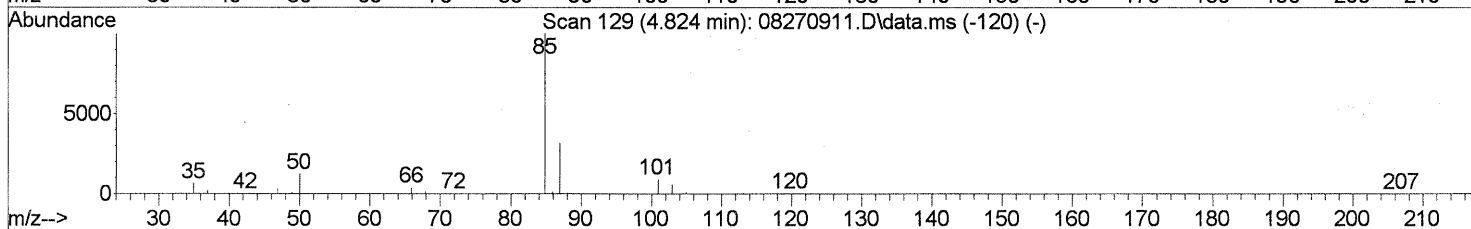
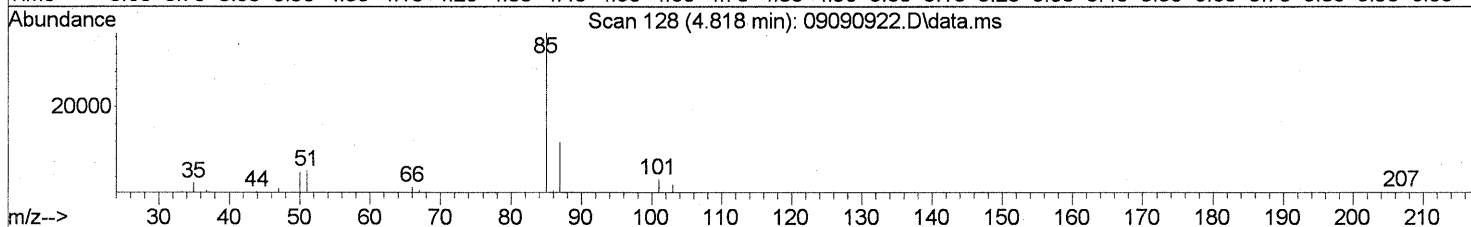
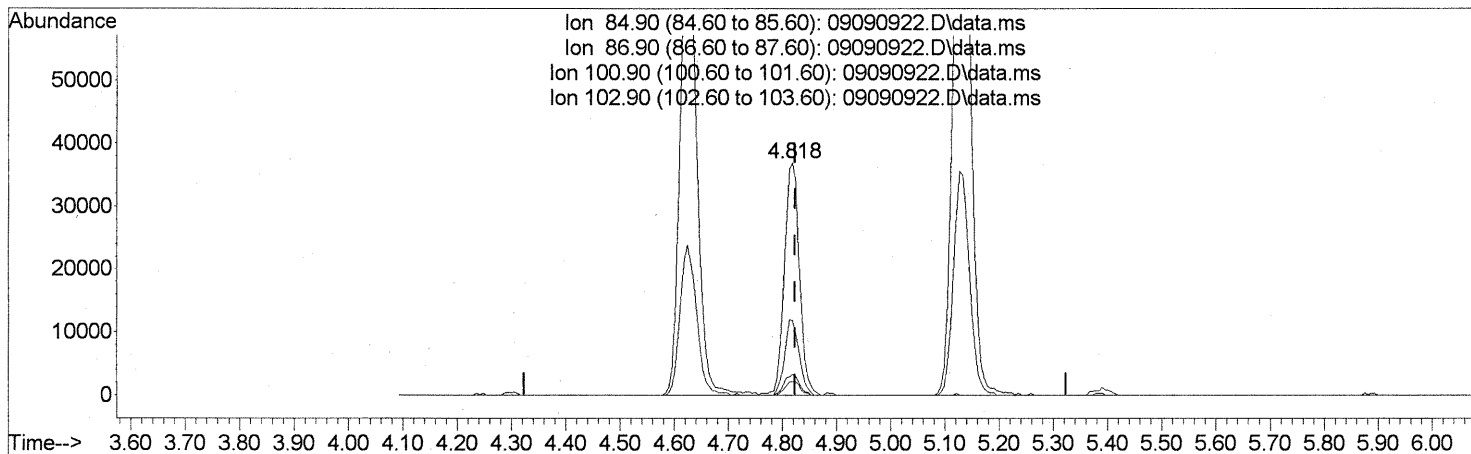
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	101.40
41.10	149.80	131.63
0.00	0.00	0.00

*SH → IC*  
*LM 9/15/09*  
*after subtr.*  
*LM 9/16/09*

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TIC: 09090922.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.818min (-0.006) 2.20ng

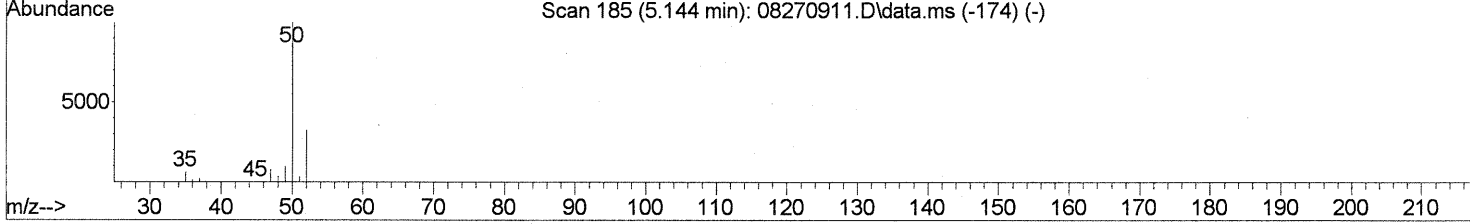
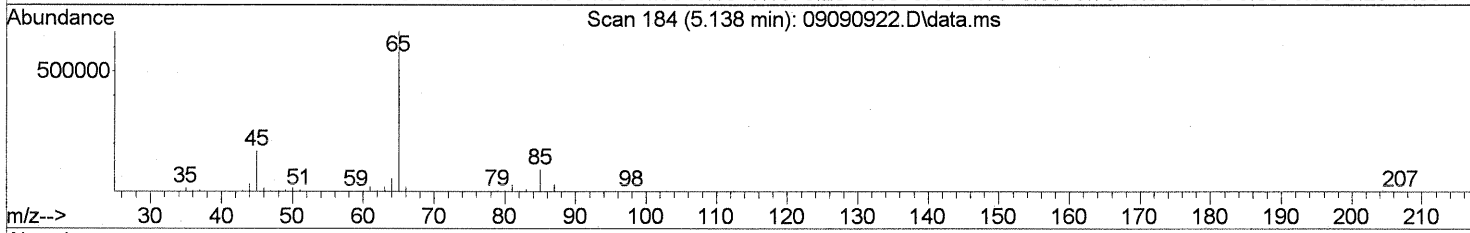
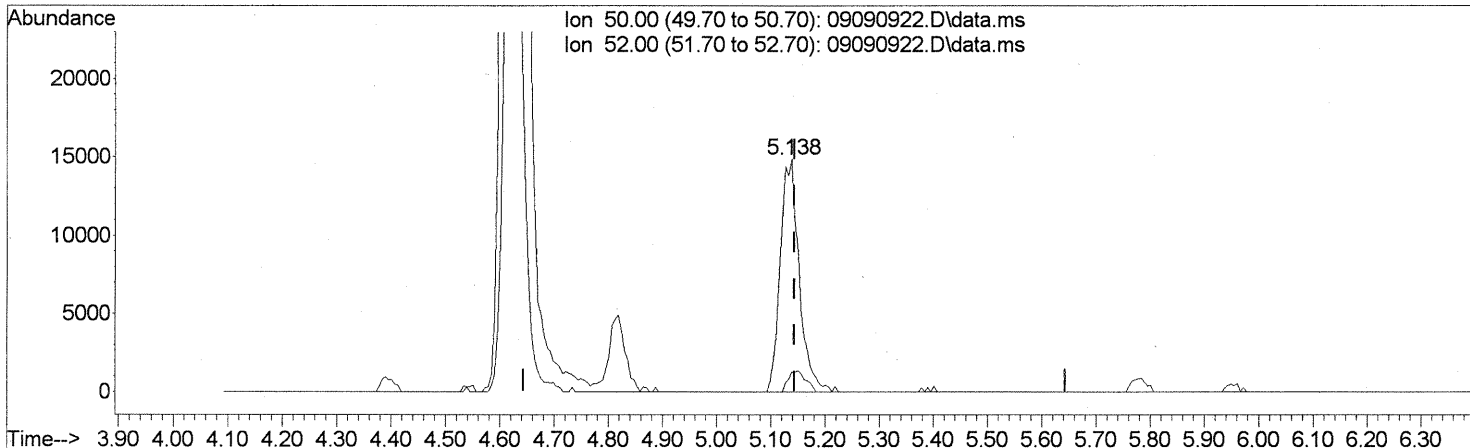
response 71329

Ion	Exp%	Act%
84.90	100	100
86.90	32.00	31.08
100.90	8.80	8.85
102.90	5.60	5.72

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TIC: 09090922.D\data.ms

(4) Chloromethane (T)  
 5.138min (-0.006) 1.65ng  
 response 35948

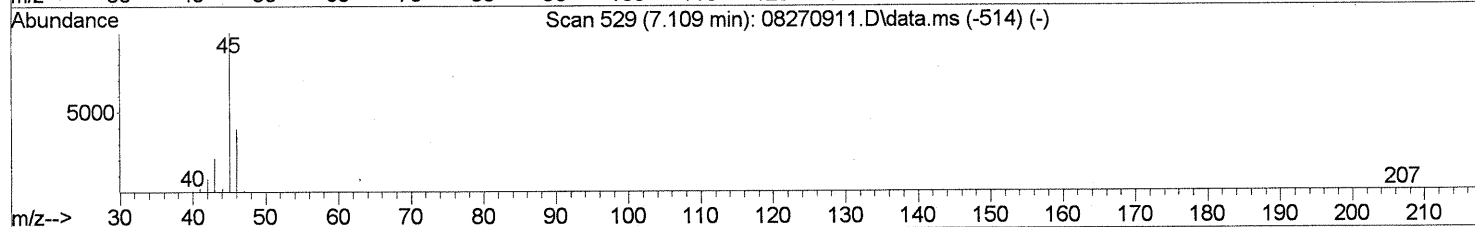
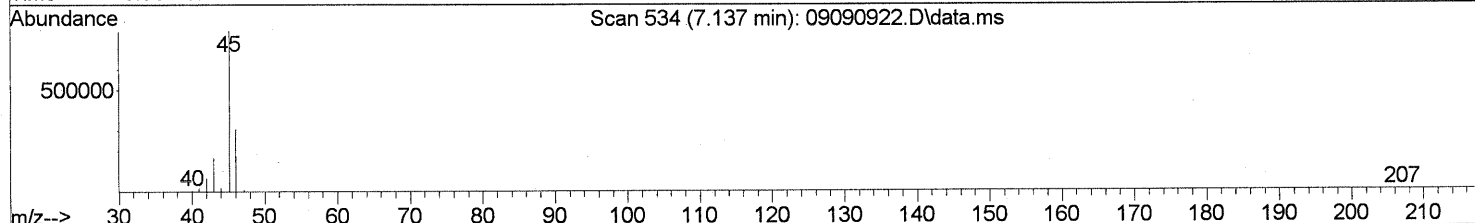
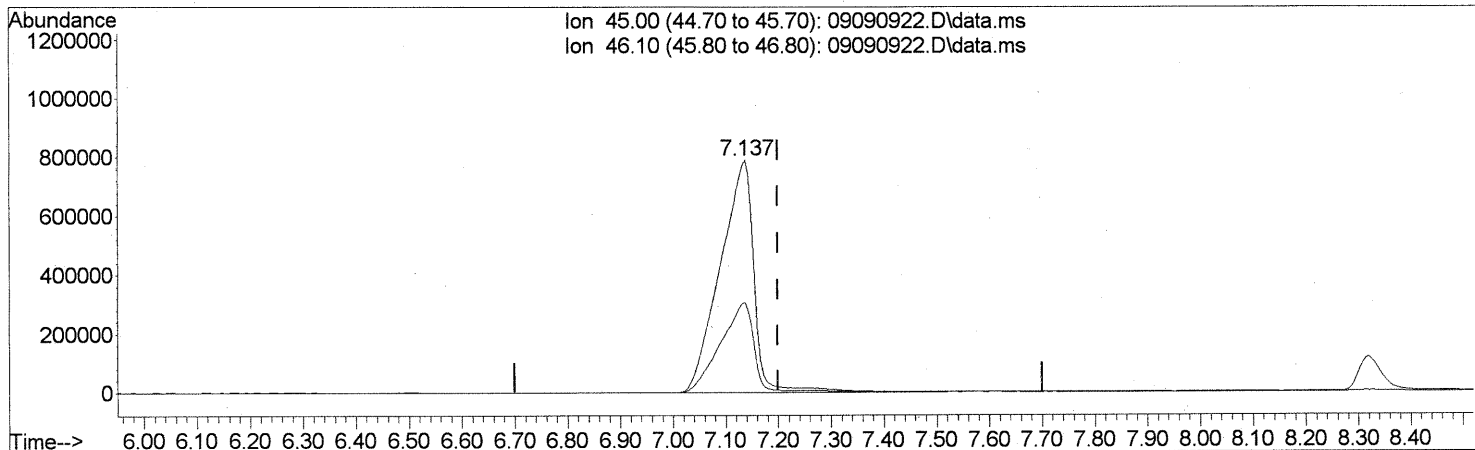
Ion	Exp%	Act%
50.00	100	100
52.00	31.60	8.28#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*179115/09*  
*E. 9/10/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

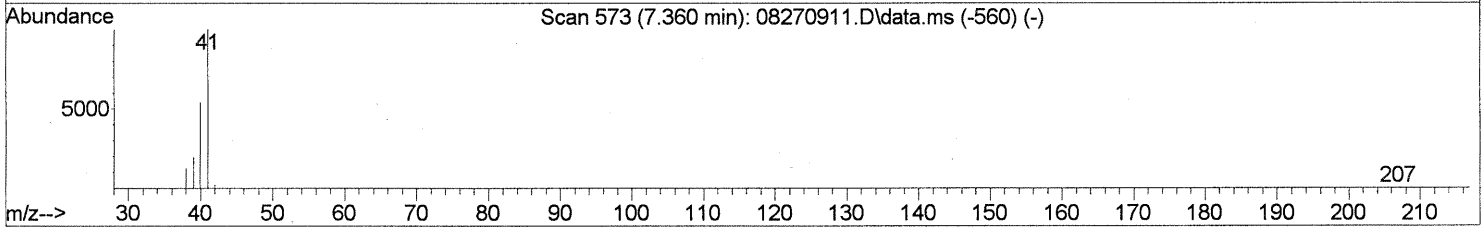
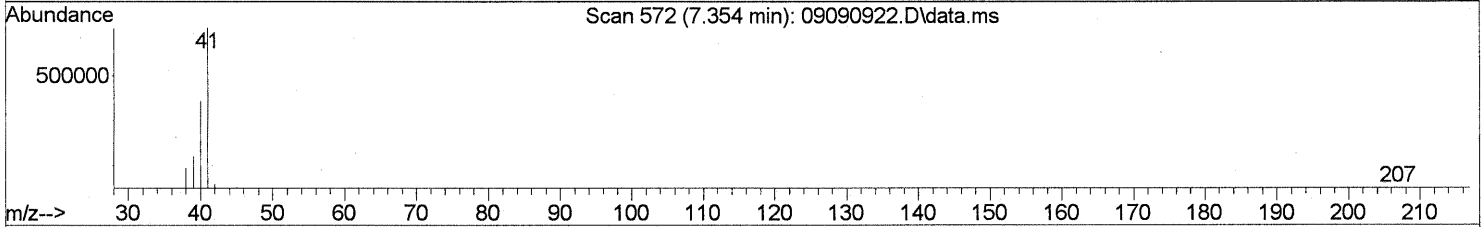
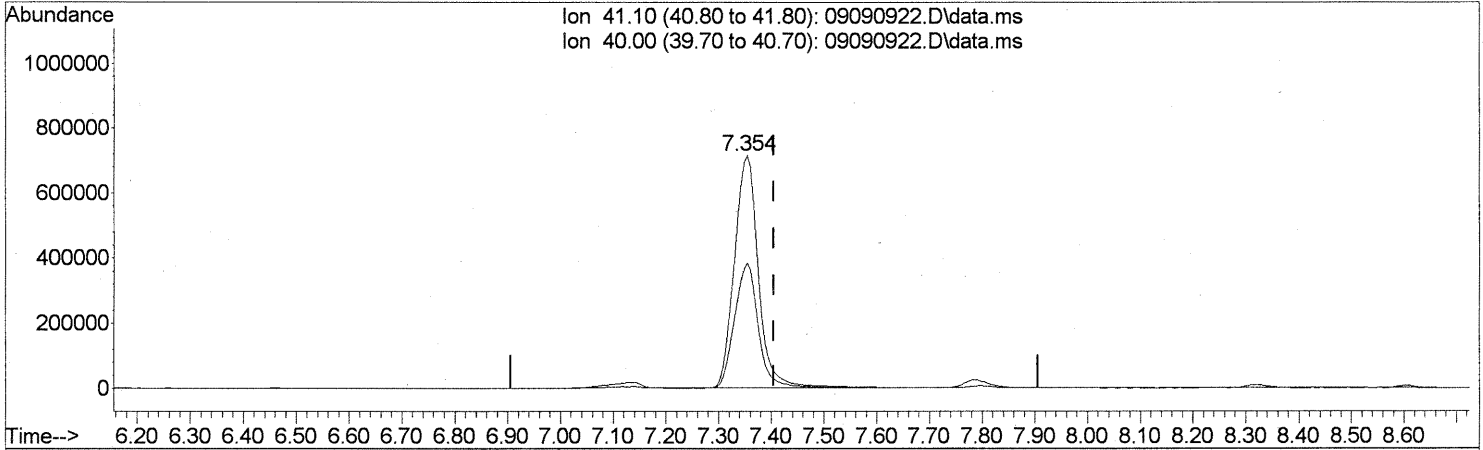
(10) Ethanol (T)  
 7.137min (-0.063) 308.00ng  
 response 3540994

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	38.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

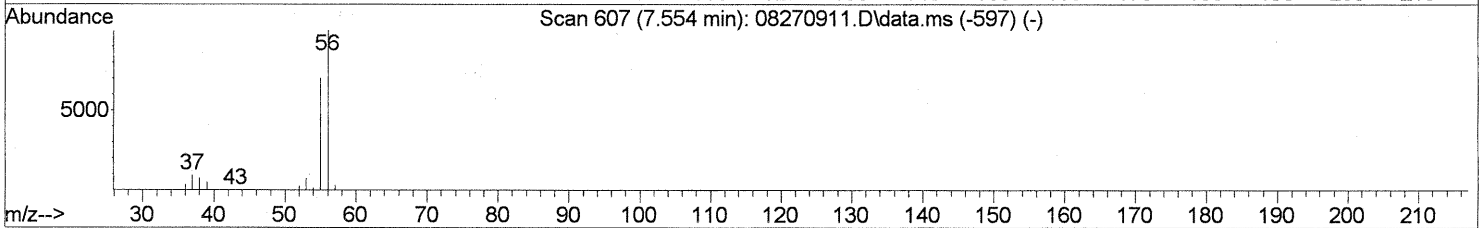
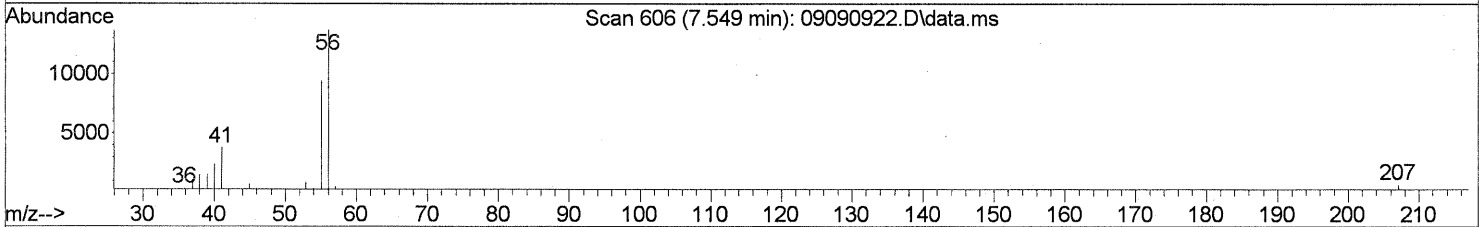
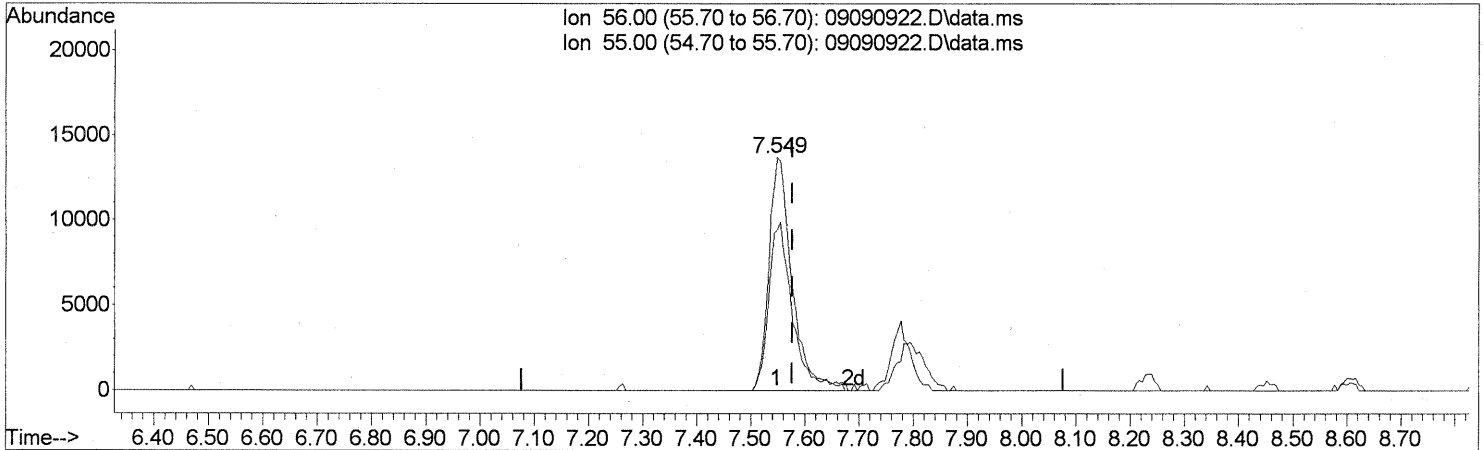
(11) Acetonitrile (T)  
 7.354min (-0.052) 71.24ng  
 response 2274923

Ion	Exp%	Act%
41.10	100	100
40.00	53.70	53.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

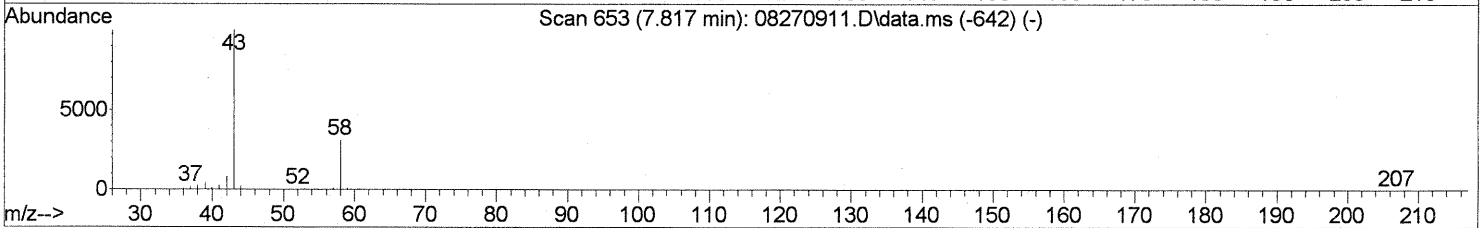
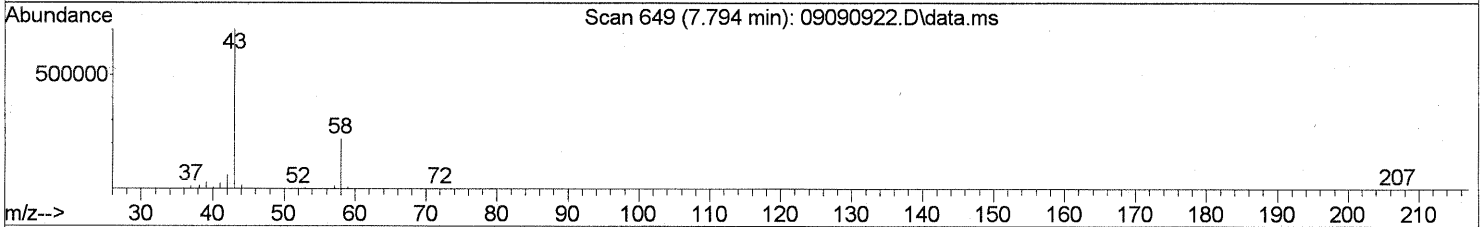
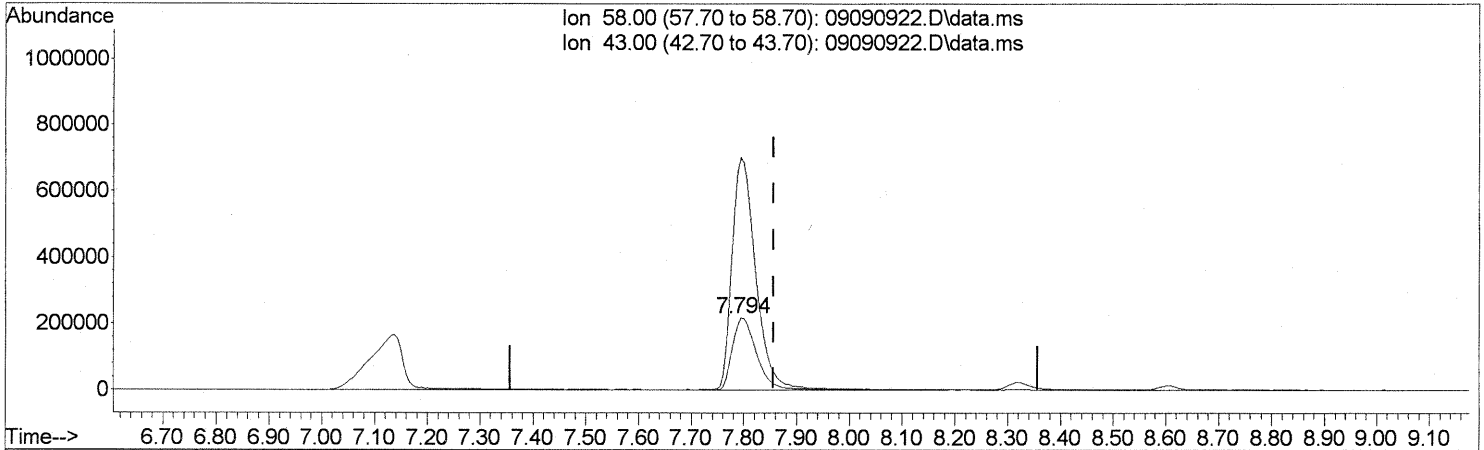
(12) Acrolein (T)  
 7.549min (-0.028) 4.64ng  
 response 40689

Ion	Exp%	Act%
56.00	100	100
55.00	71.10	73.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(13) Acetone (T)  
 7.794min (-0.063) 58.54ng  
 response 695989

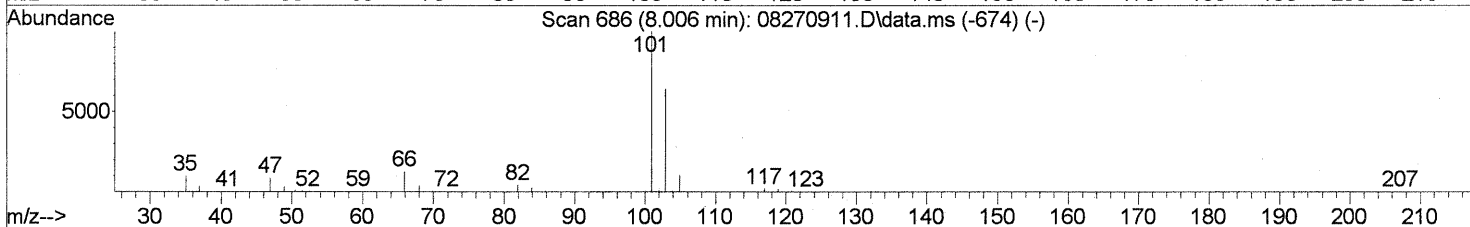
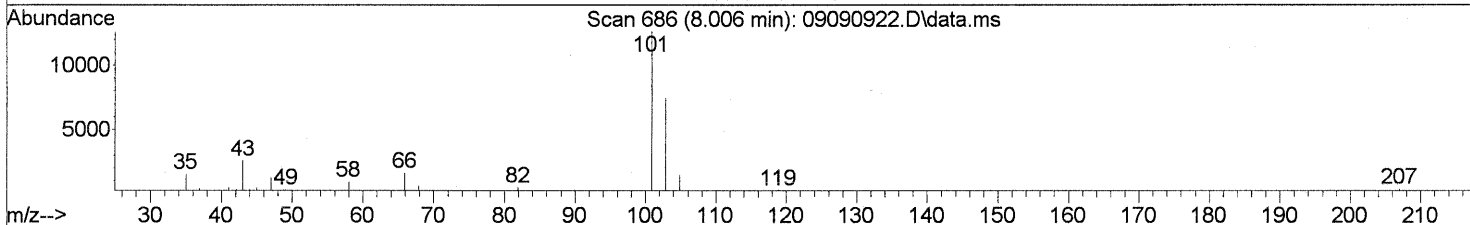
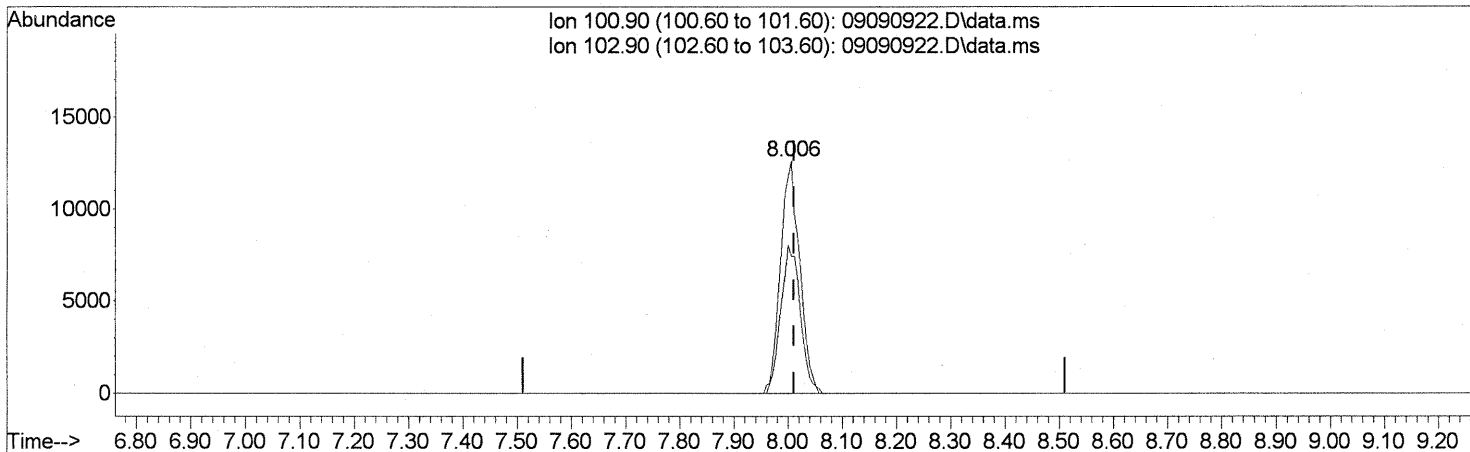
Ion	Exp%	Act%
58.00	100	100
43.00	331.30	318.96
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

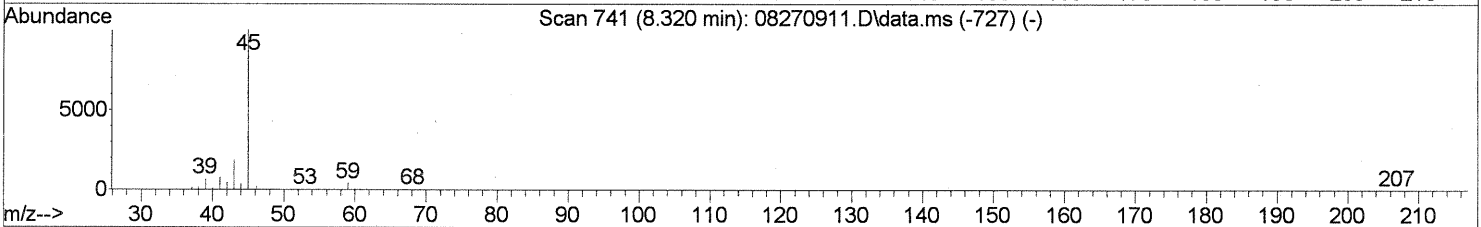
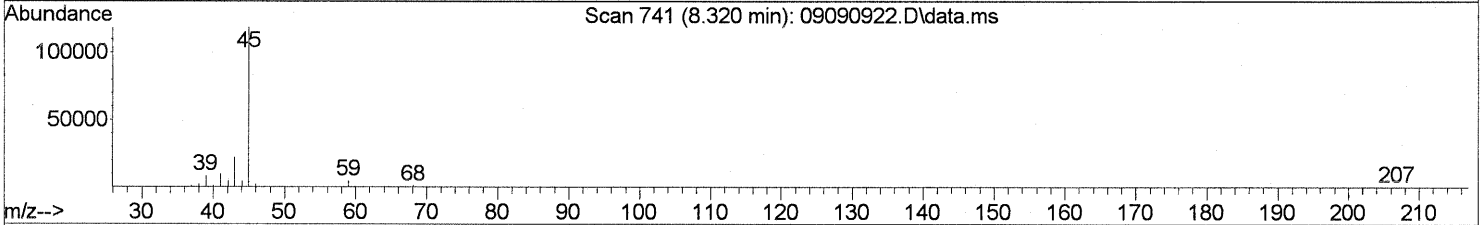
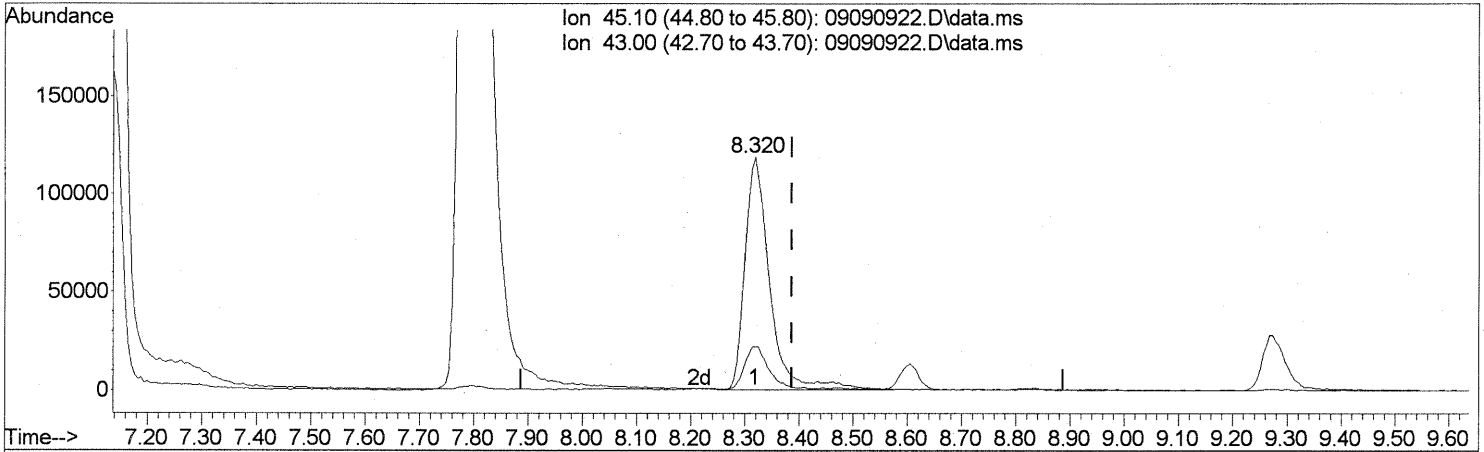
(14) Trichlorofluoromethane (T)  
 8.006min (-0.006) 1.08ng  
 response 30904

Ion	Exp%	Act%
100.90	100	100
102.90	66.10	64.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.320min (-0.068) 9.52ng

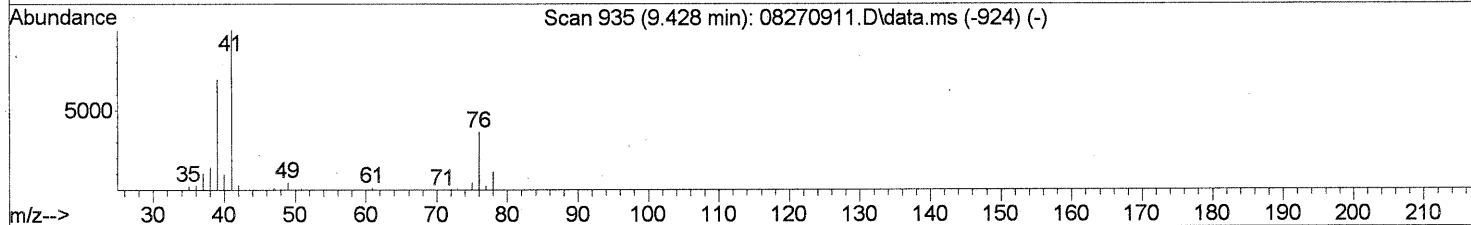
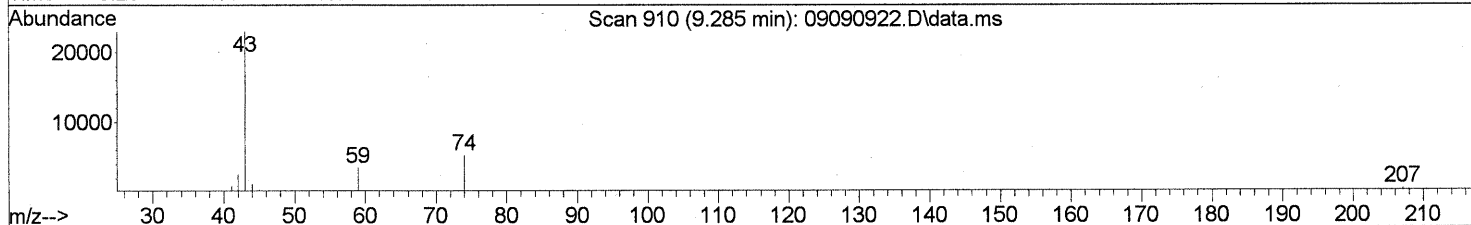
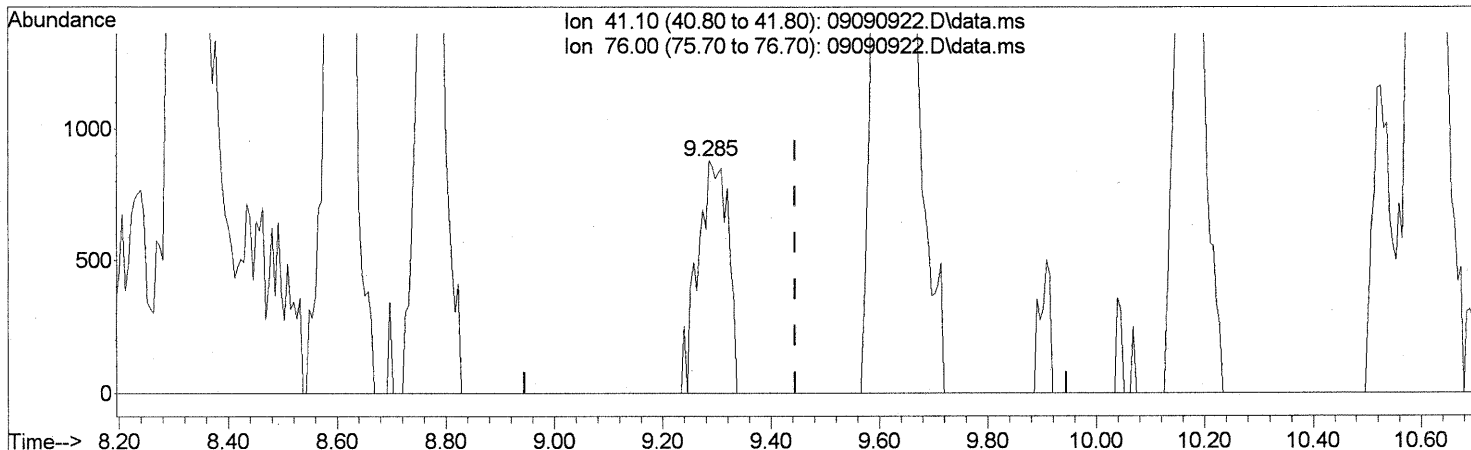
response 376225

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	18.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(20) 3-Chloro-1-propene (Allyl Chloride) (T)  
 9.285min (-0.160) 0.14ng  
 response 3397

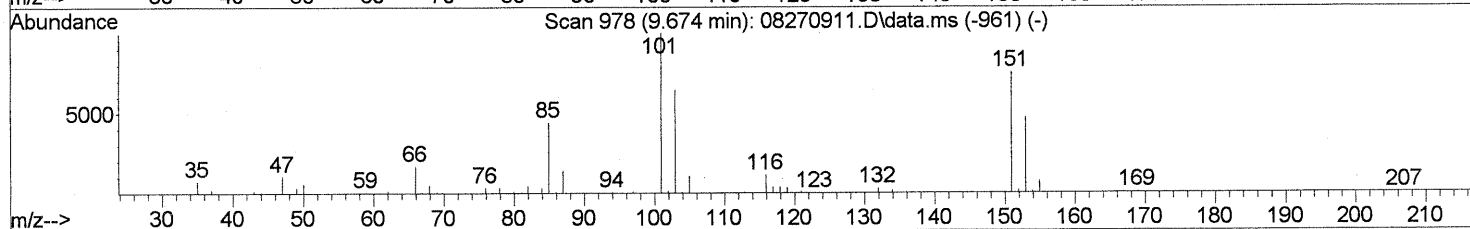
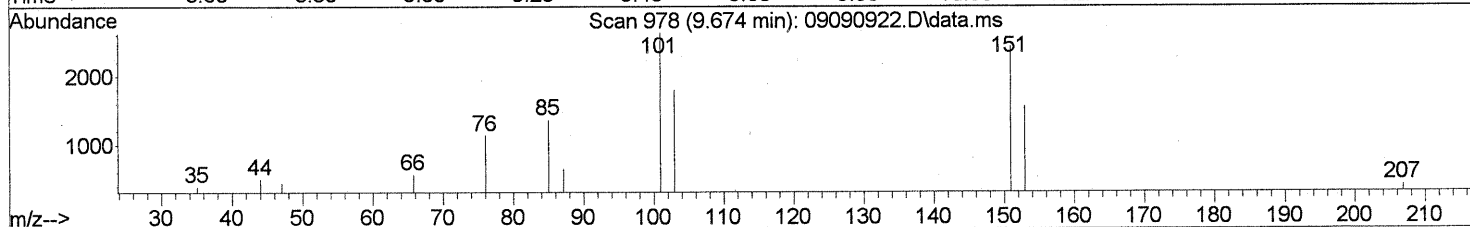
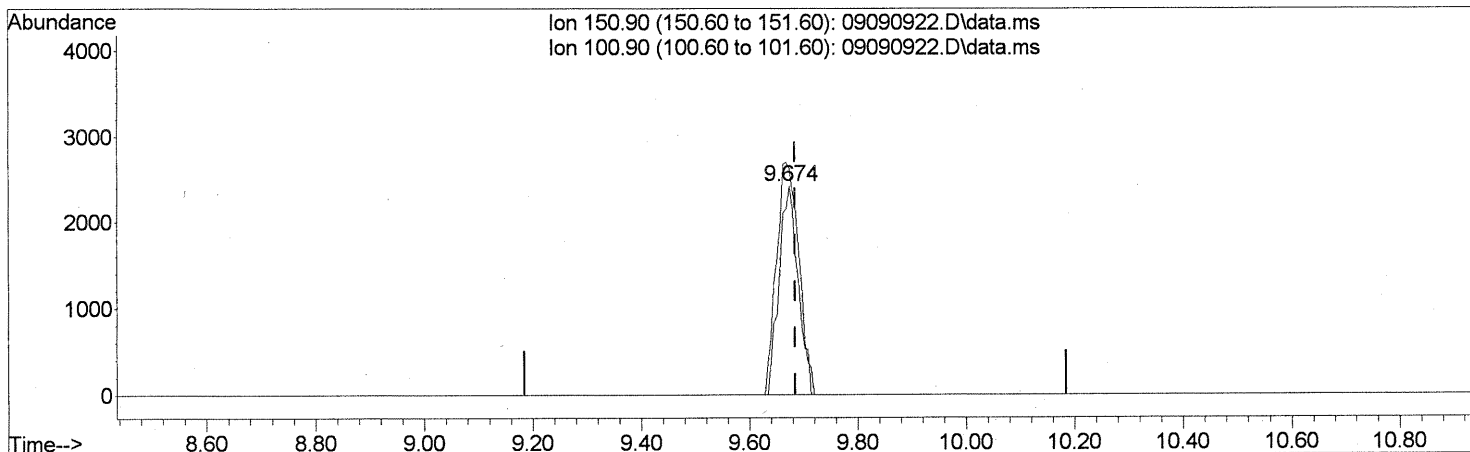
Ion	Exp%	Act%
41.10	100	100
76.00	33.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

FD  
 09/15/09  
 9/16/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

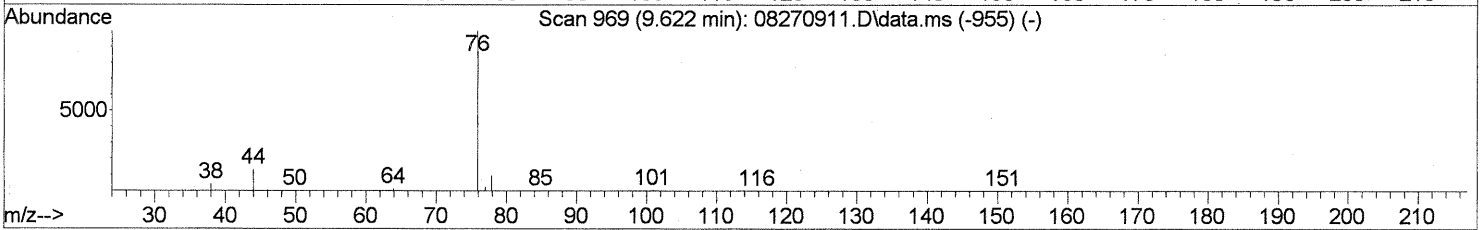
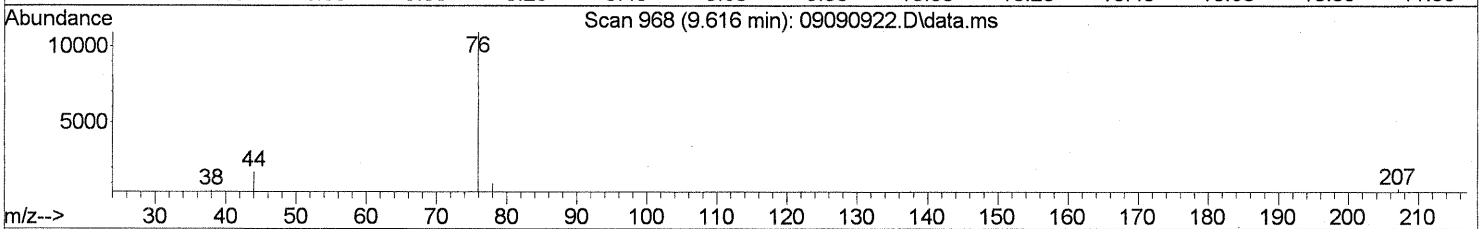
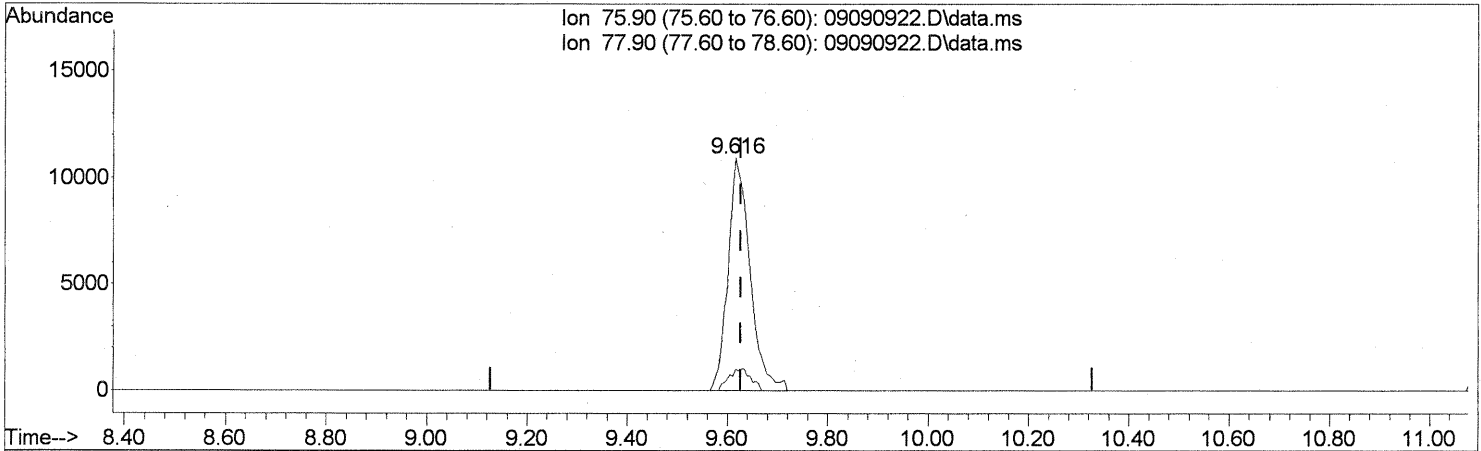
(21) Trichlorotrifluoroethane (T)  
 9.674min (-0.011) 0.52ng  
 response 5869

Ion	Exp%	Act%
150.90	100	100
100.90	138.30	131.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

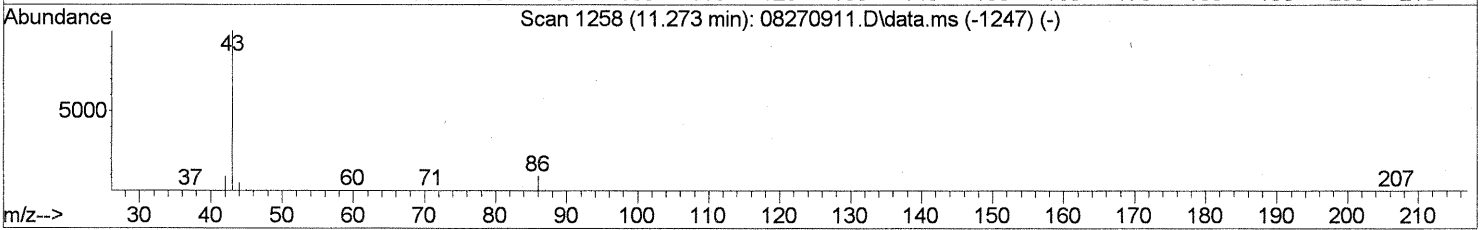
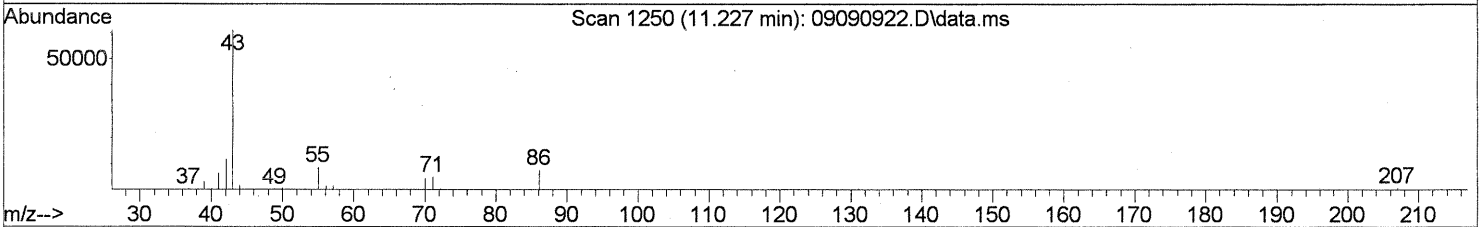
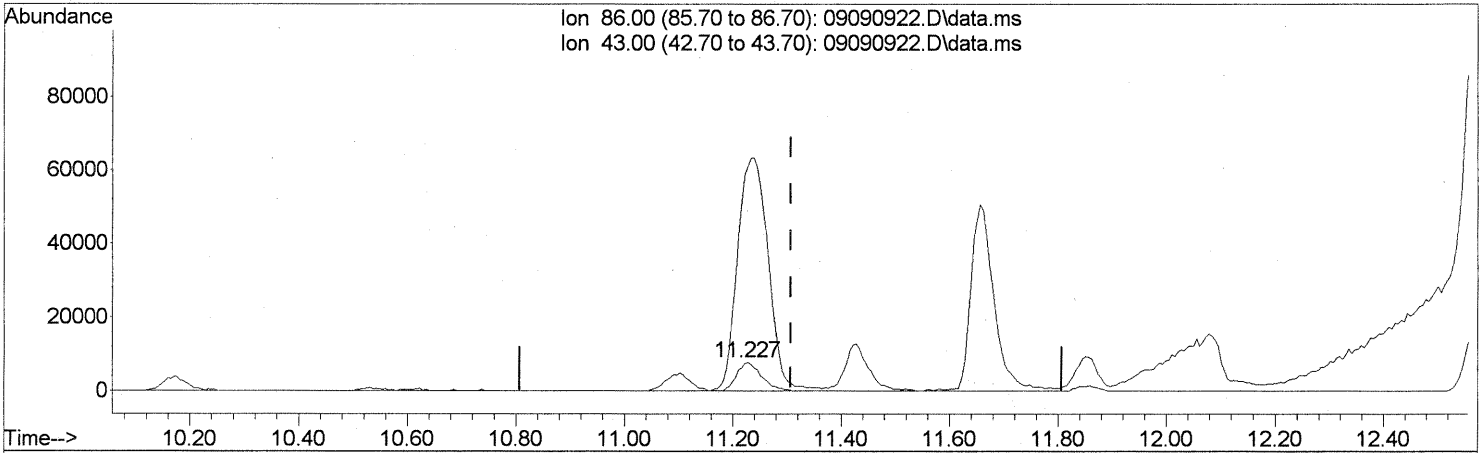
(22) Carbon Disulfide (T)  
 9.616min (-0.011) 0.62ng  
 response 33343

Ion	Exp%	Act%
75.90	100	100
77.90	9.40	9.25
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(26) Vinyl Acetate (T)  
 11.227min (-0.080) 8.00ng  
 response 23824

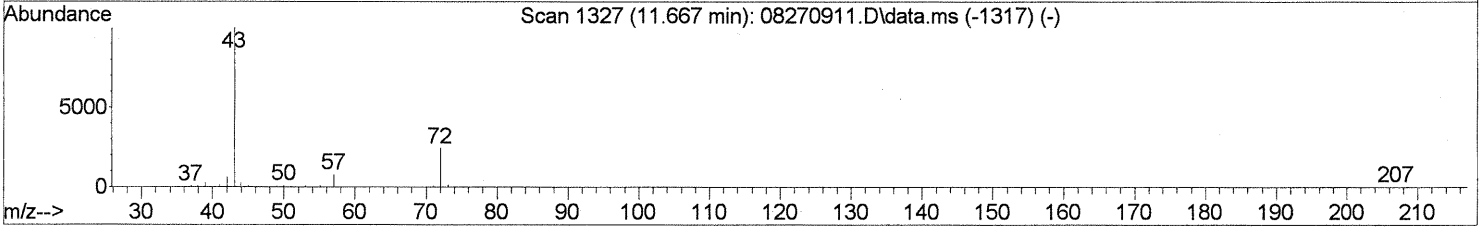
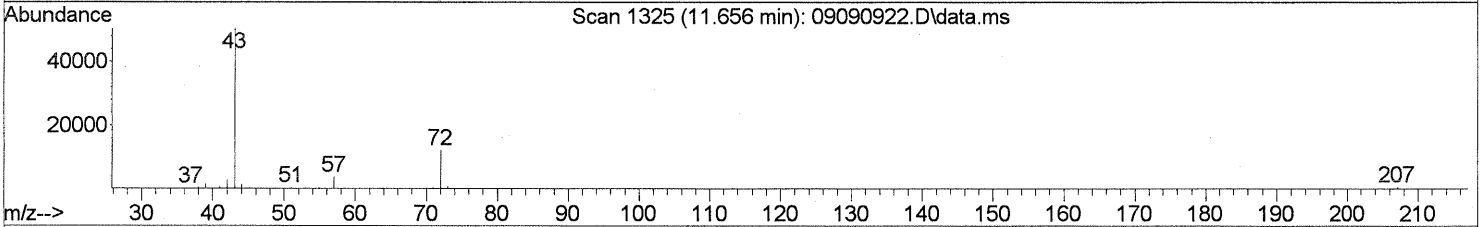
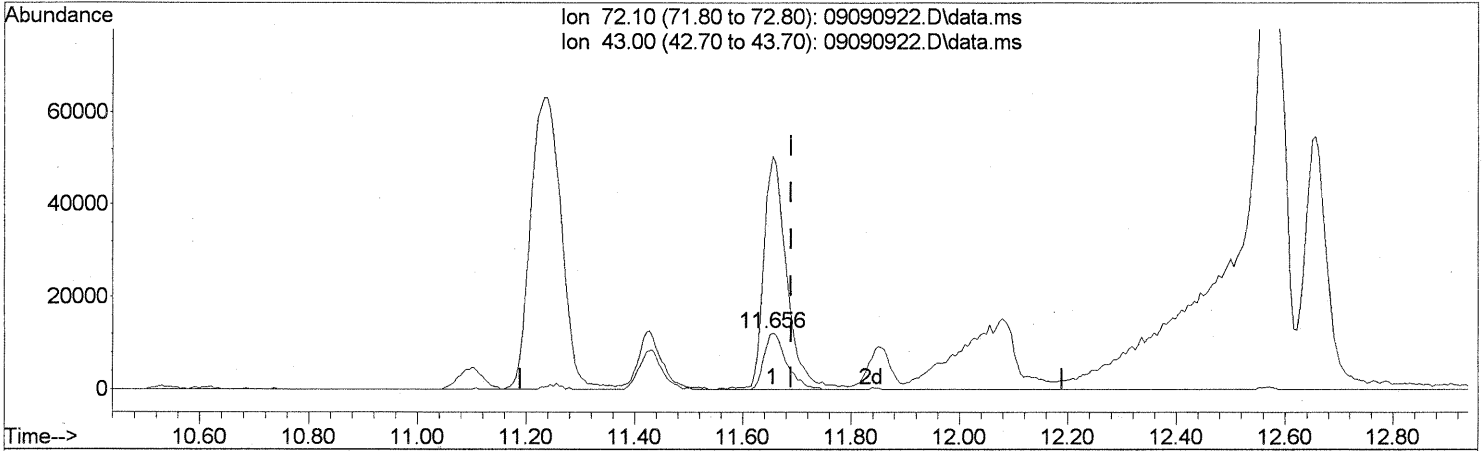
Ion	Exp%	Act%
86.00	100	100
43.00	1118.60	1042.79#
0.00	0.00	0.00
0.00	0.00	0.00

*Handwritten notes:* A, FP, 10/9/15/09, 9/16/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

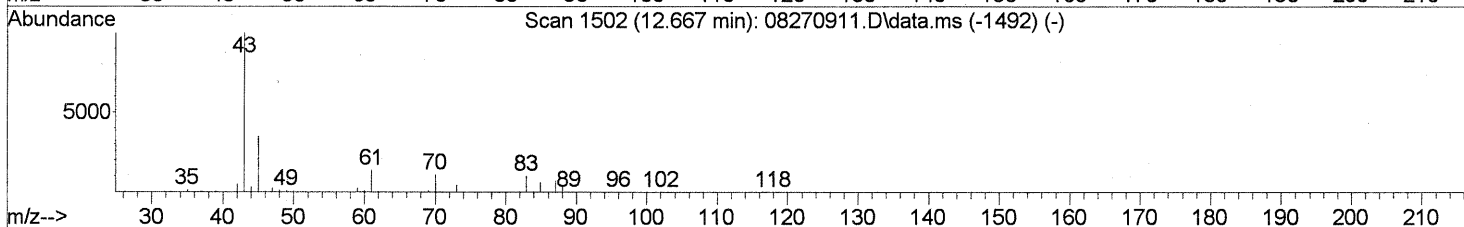
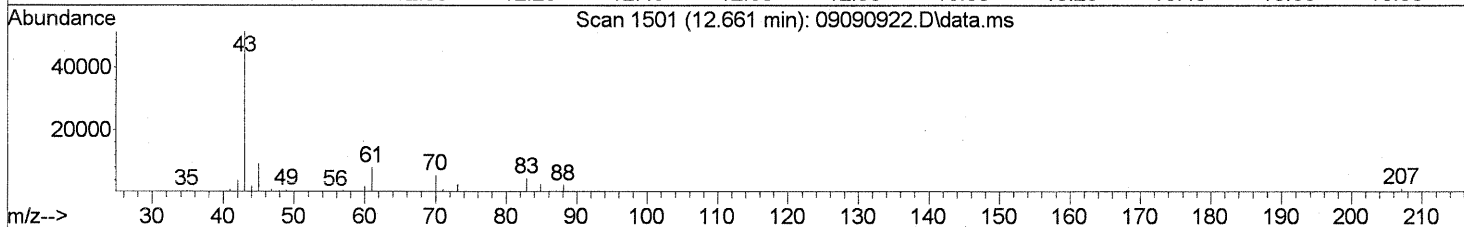
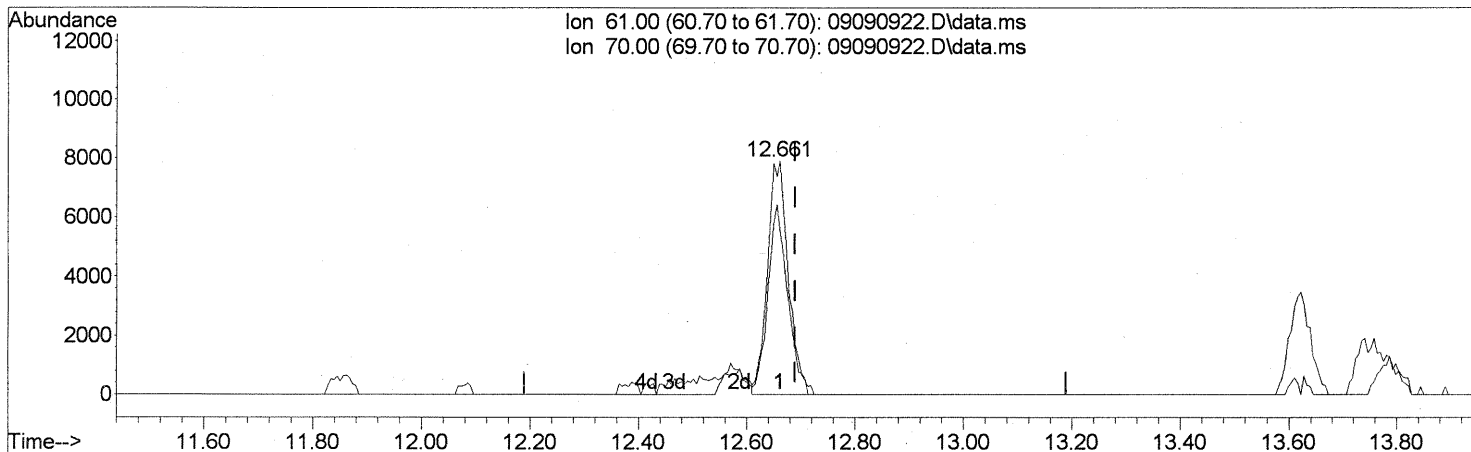
(27) 2-Butanone (MEK) (T)  
 11.656min (-0.034) 3.64ng  
 response 34987

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	413.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(30) Ethyl Acetate (T)  
 12.661min (-0.028) 4.12ng  
 response 21267

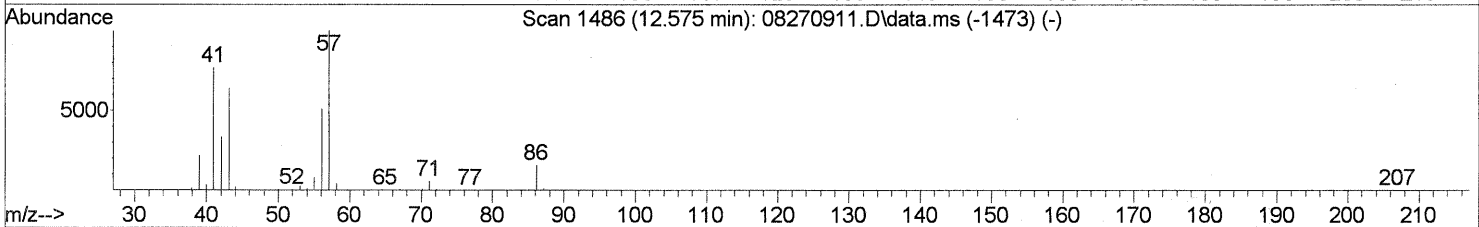
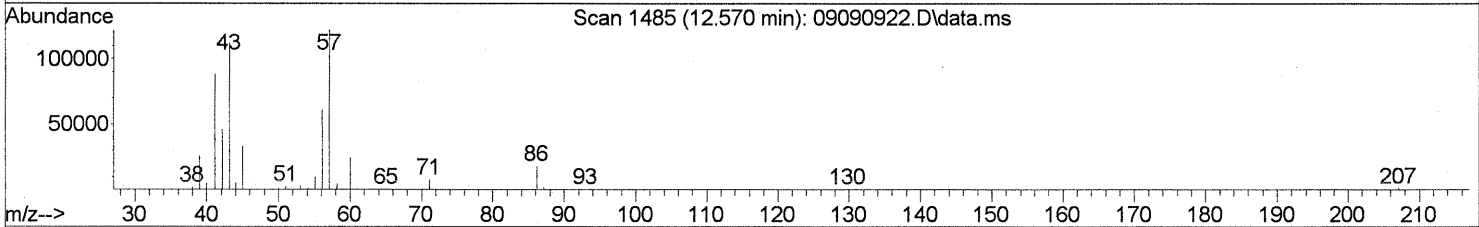
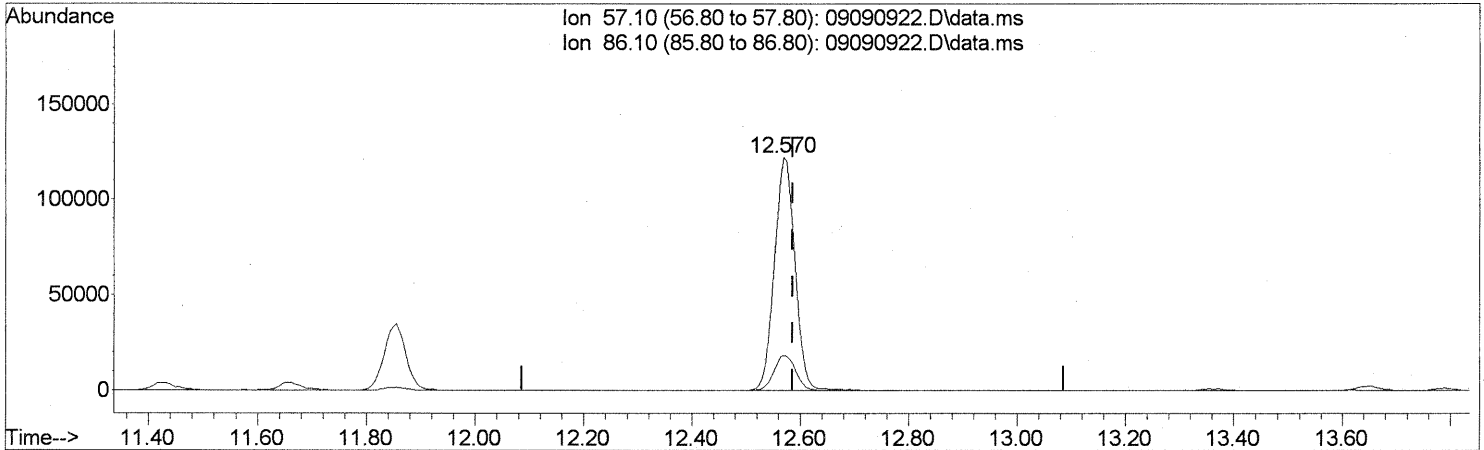
Ion	Exp%	Act%
61.00	100	100
70.00	78.70	76.83
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
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Quant Time: Sep 10 08:30:30 2009  
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TIC: 09090922.D\data.ms

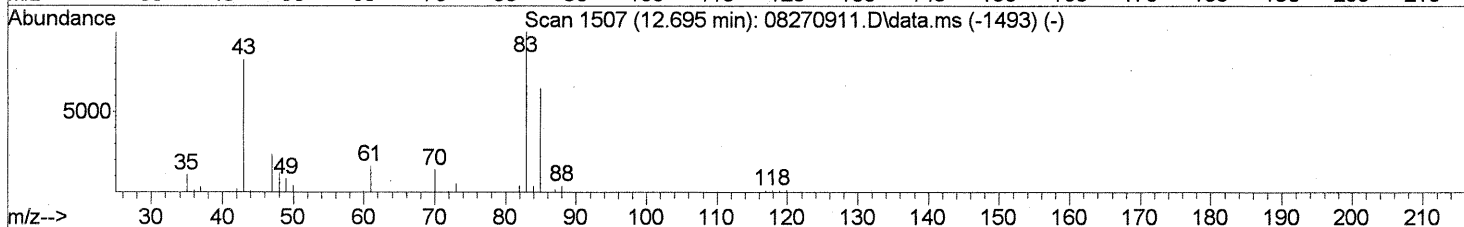
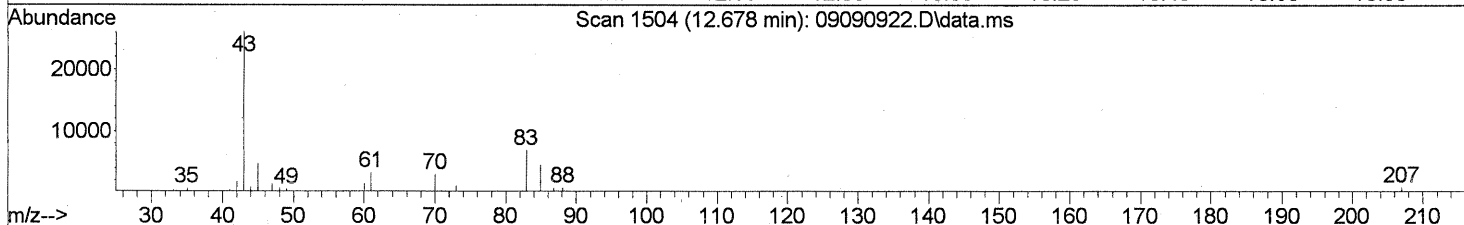
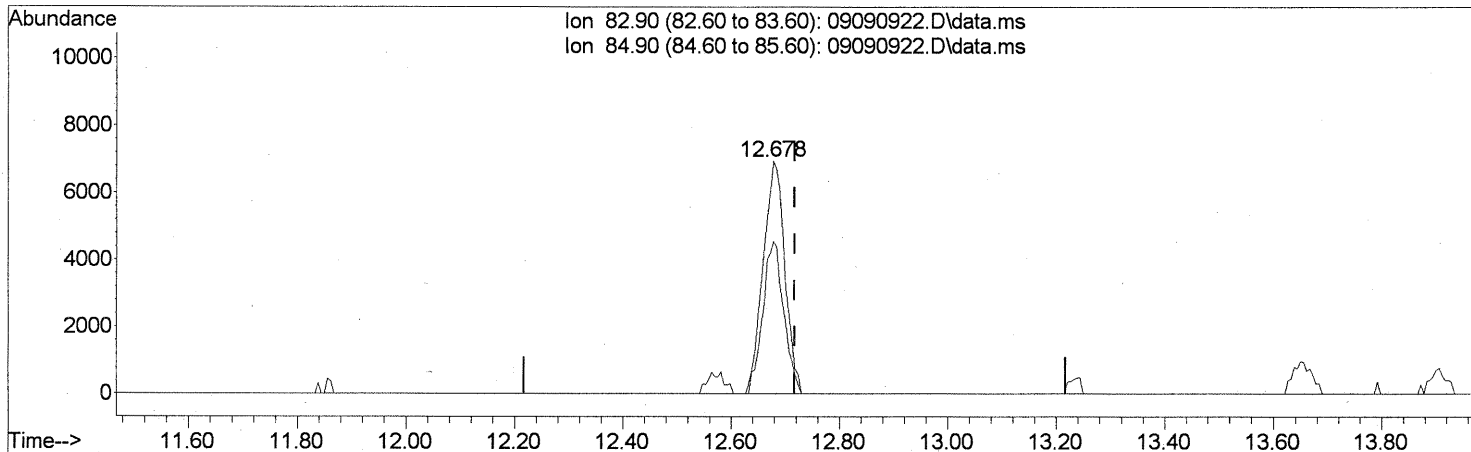
(31) n-Hexane (T)  
 12.570min (-0.017) 12.36ng  
 response 317795

Ion	Exp%	Act%
57.10	100	100
86.10	15.40	15.55
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
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Quant Time: Sep 10 08:30:30 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

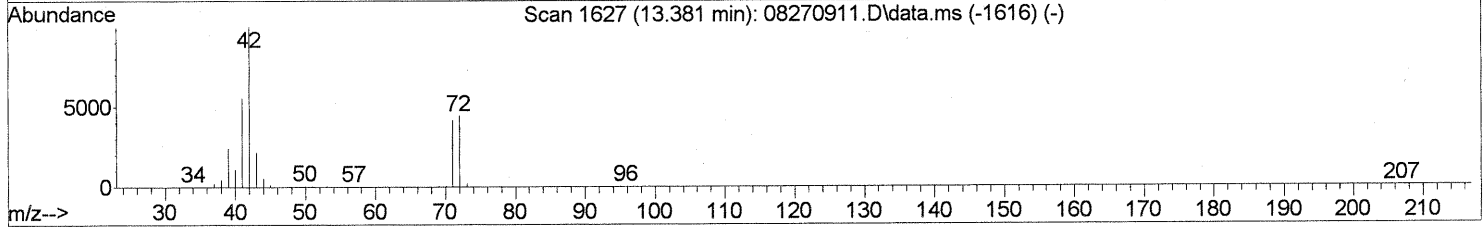
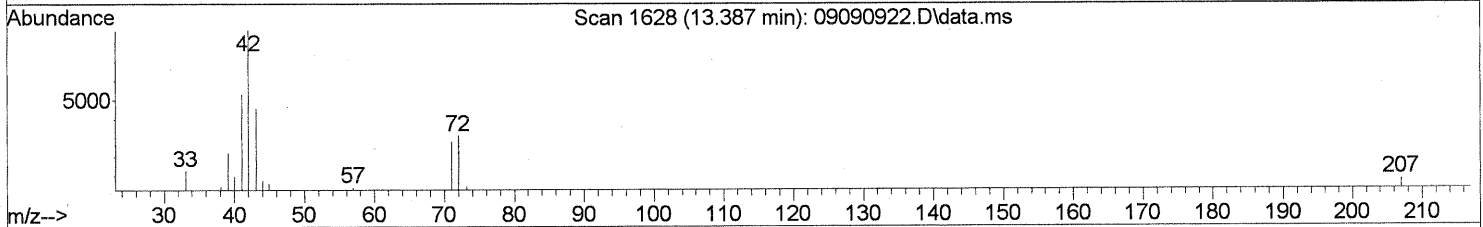
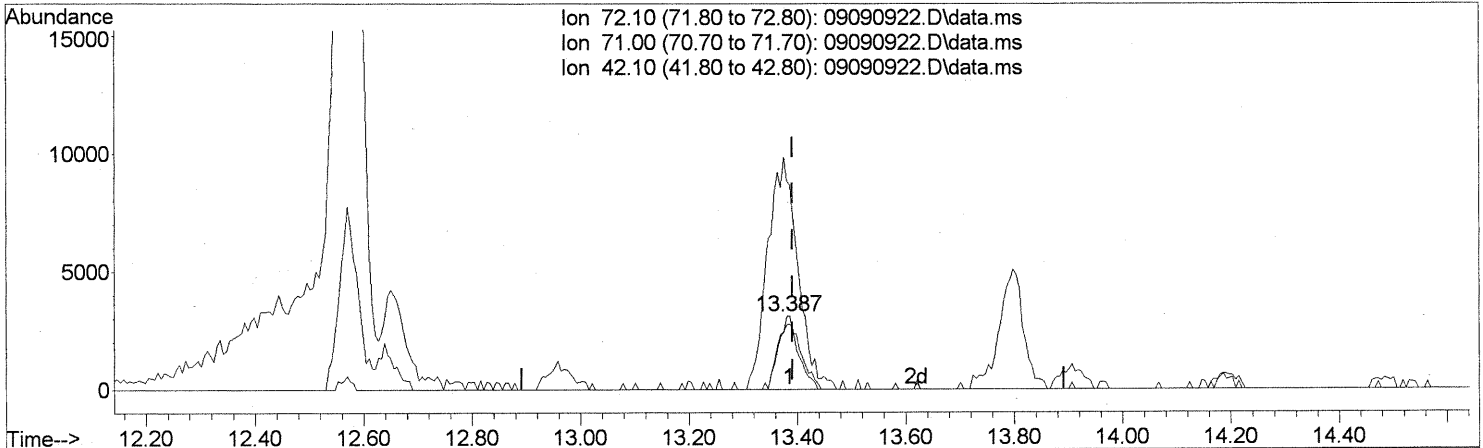
(32) Chloroform (T)  
 12.678min (-0.040) 0.76ng  
 response 19340

Ion	Exp%	Act%
82.90	100	100
84.90	62.60	63.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
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Quant Time: Sep 10 08:30:30 2009  
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 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

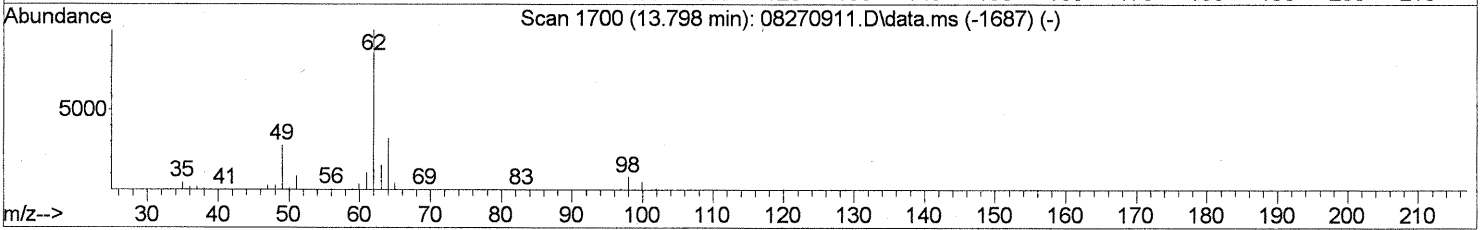
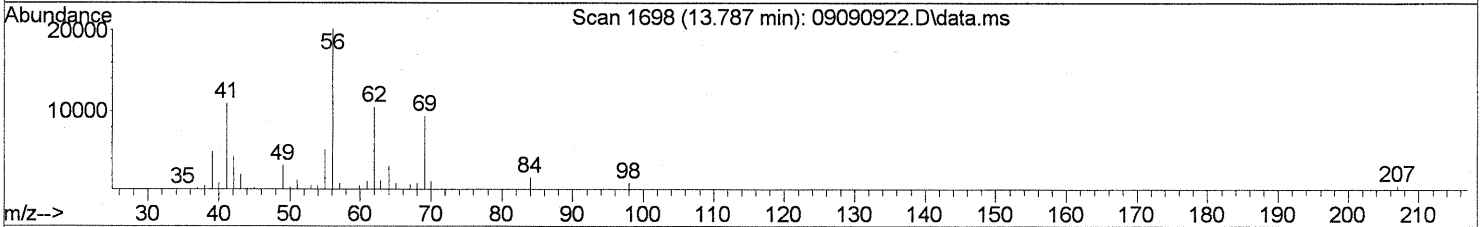
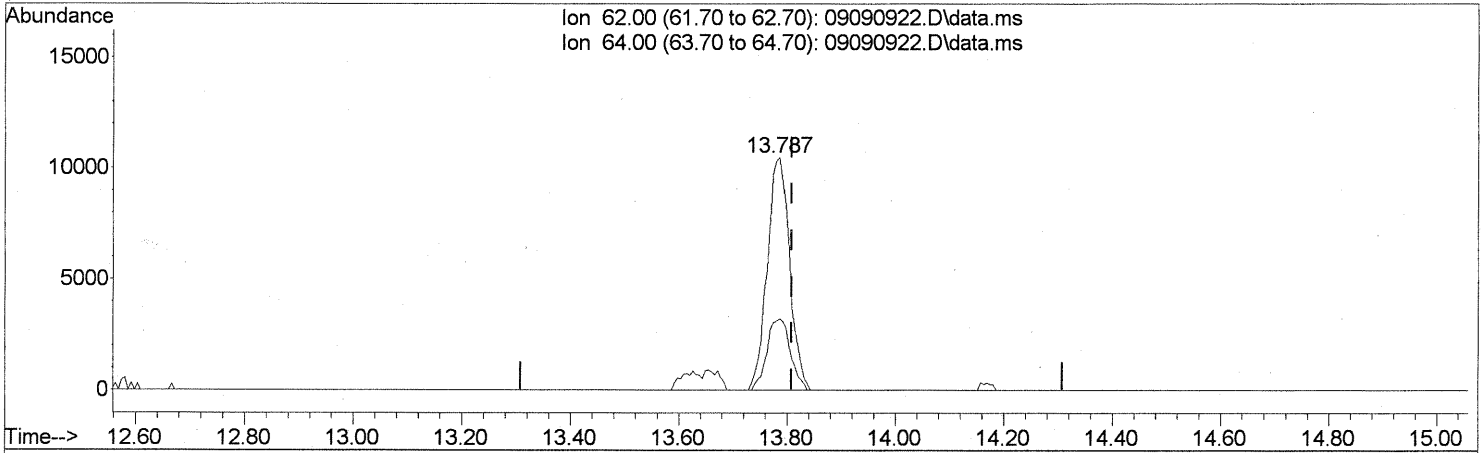
(34) Tetrahydrofuran (THF) (T)  
 13.387min (-0.005) 0.84ng  
 response 8794

Ion	Exp%	Act%
72.10	100	100
71.00	92.50	86.64
42.10	254.10	430.38#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(36) 1,2-Dichloroethane (T)

13.787min (-0.023) 1.40ng

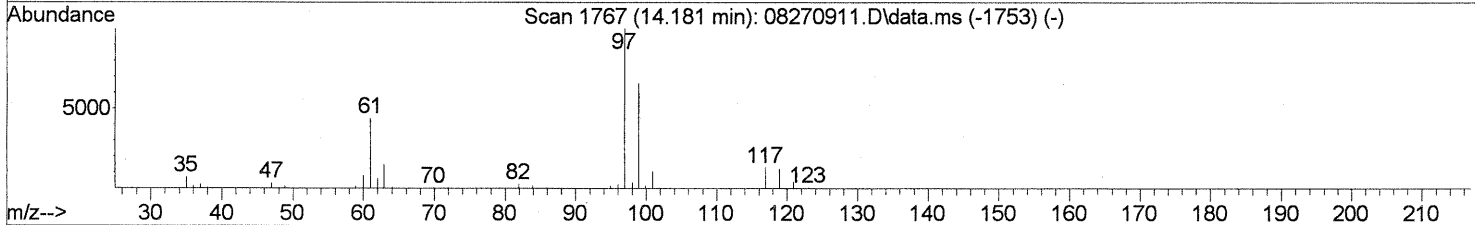
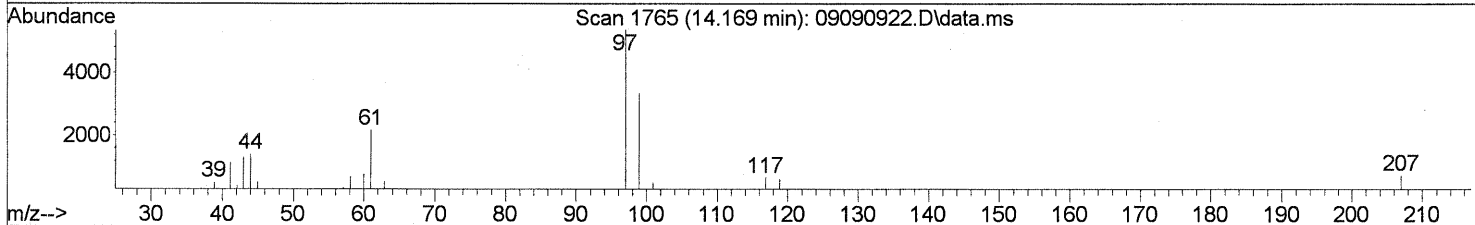
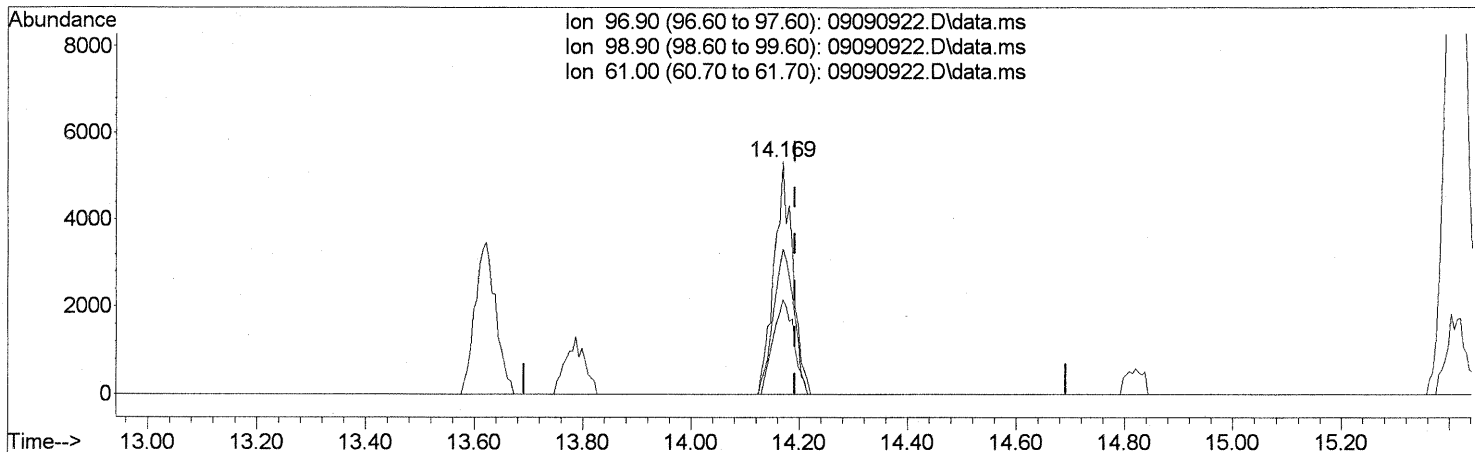
response 29756

Ion	Exp%	Act%
62.00	100	100
64.00	33.10	32.05
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

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

14.169min (-0.023) 0.54ng

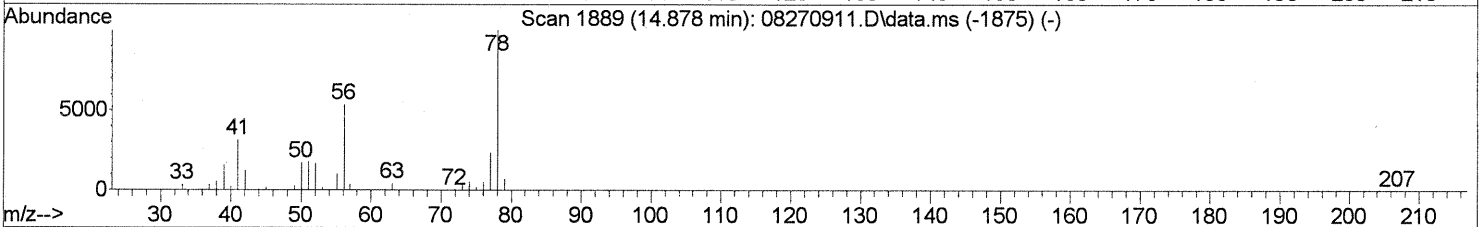
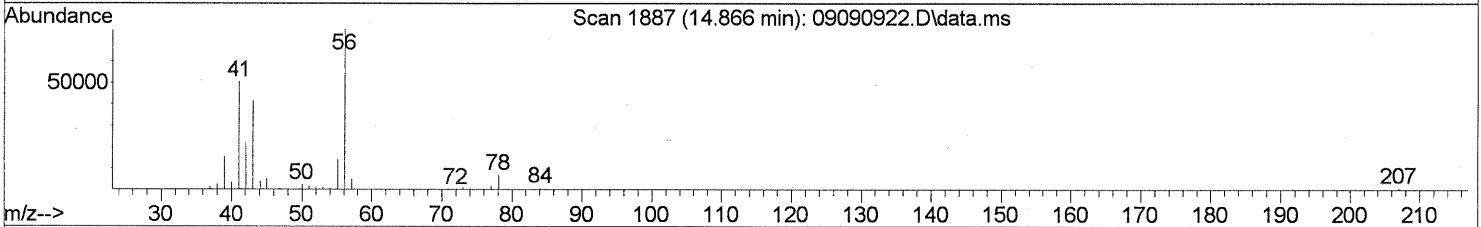
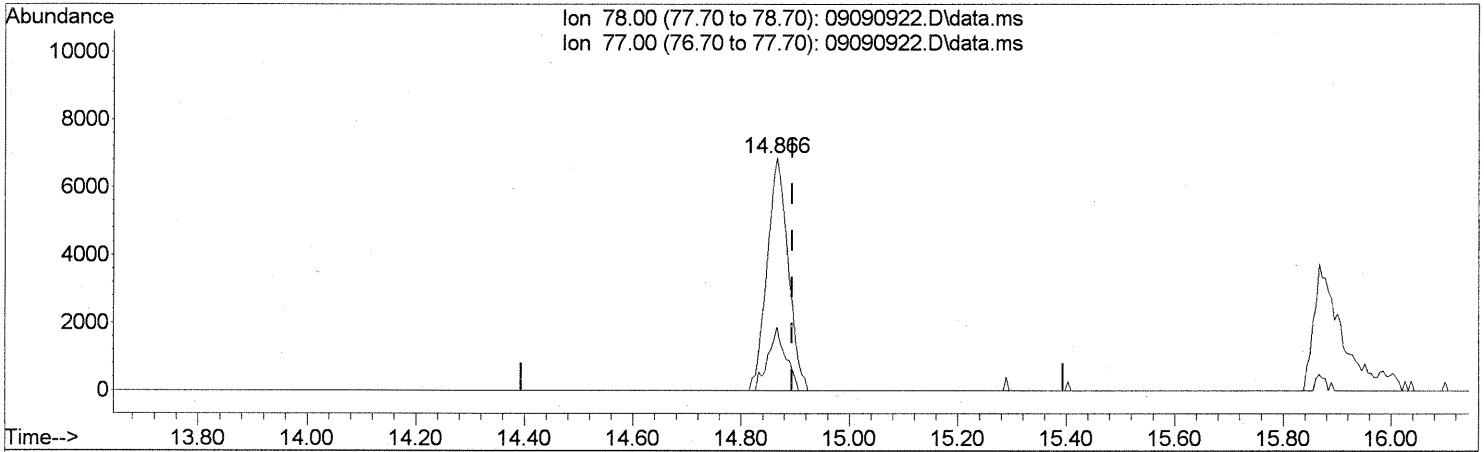
response 12737

Ion	Exp%	Act%
96.90	100	100
98.90	63.10	67.71
61.00	46.50	45.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

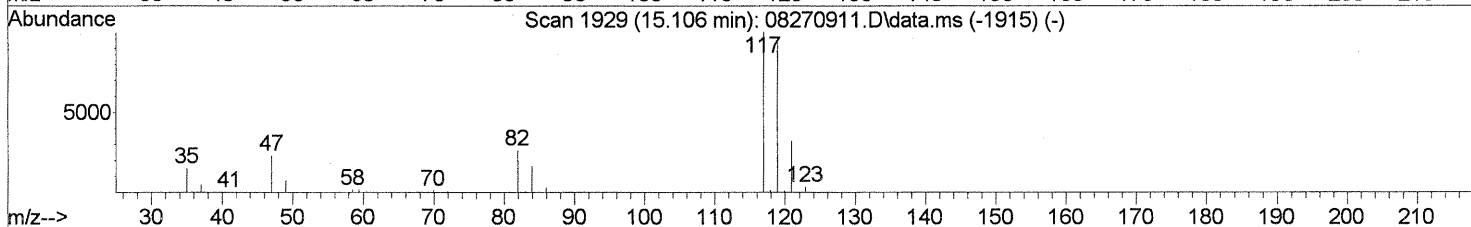
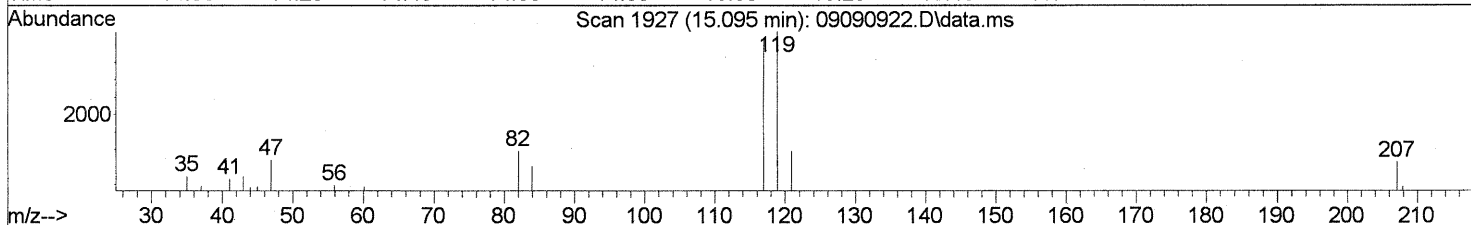
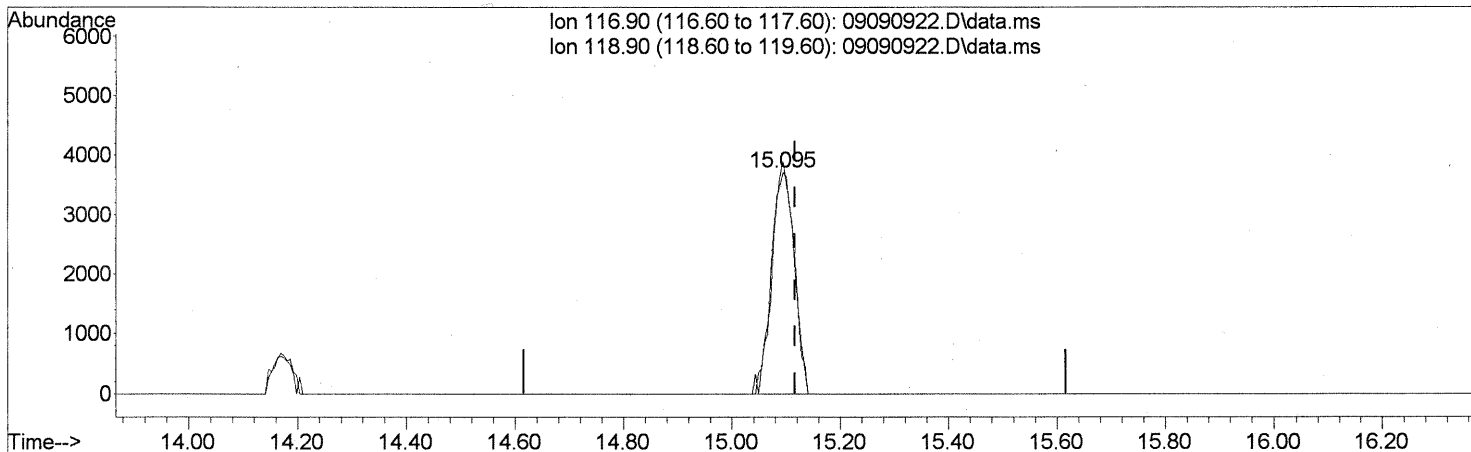
(41) Benzene (T)  
 14.866min (-0.028) 0.31ng  
 response 18578

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	22.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(42) Carbon Tetrachloride (T)

15.095min (-0.023) 0.54ng

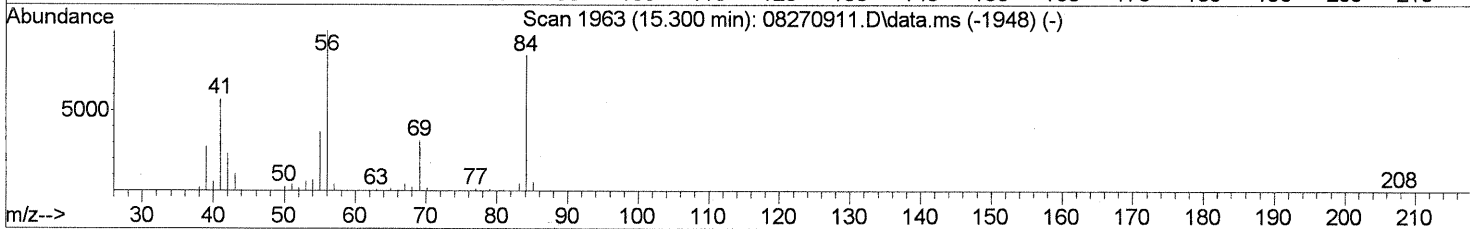
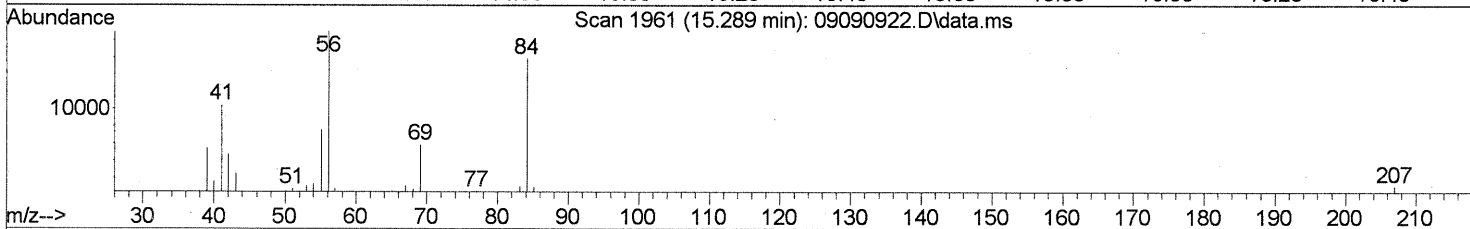
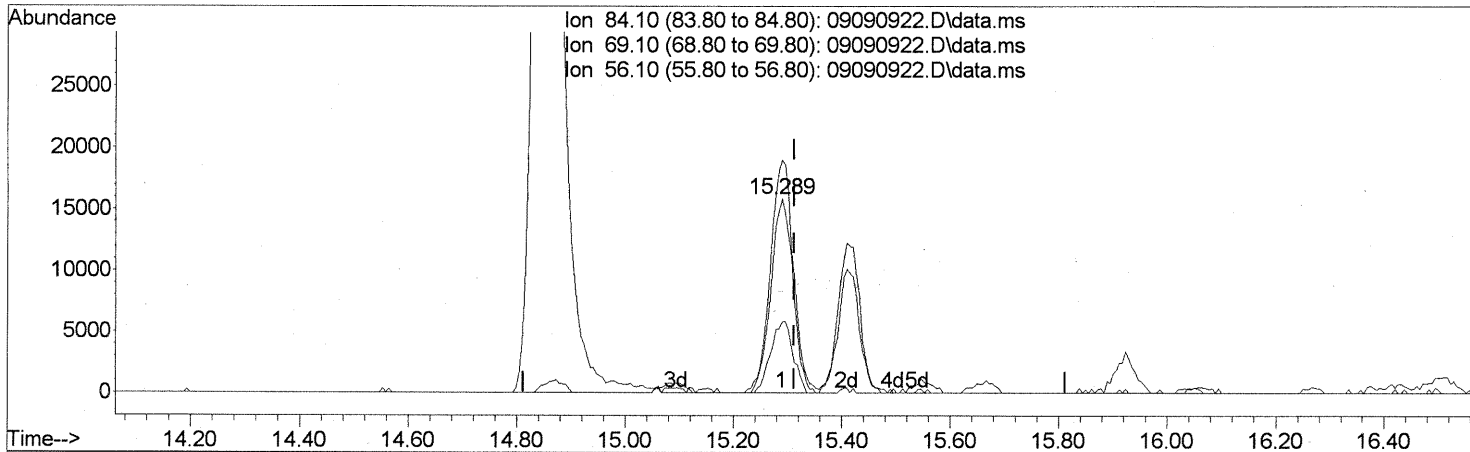
response 10973

Ion	Exp%	Act%
116.90	100	100
118.90	96.20	98.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(43) Cyclohexane (T)  
 15.289min (-0.023) 2.02ng  
 response 45072

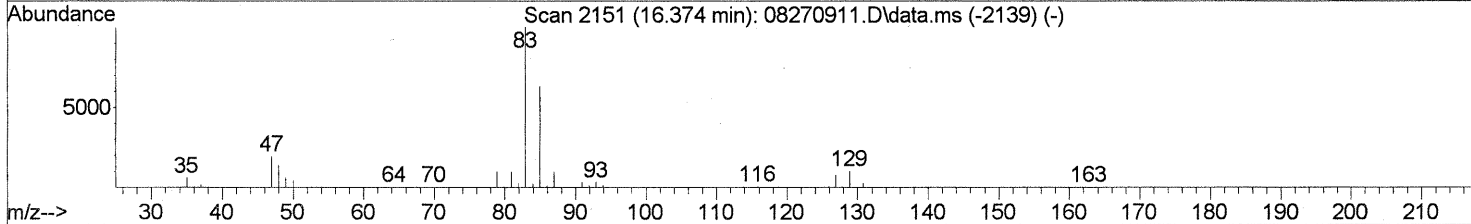
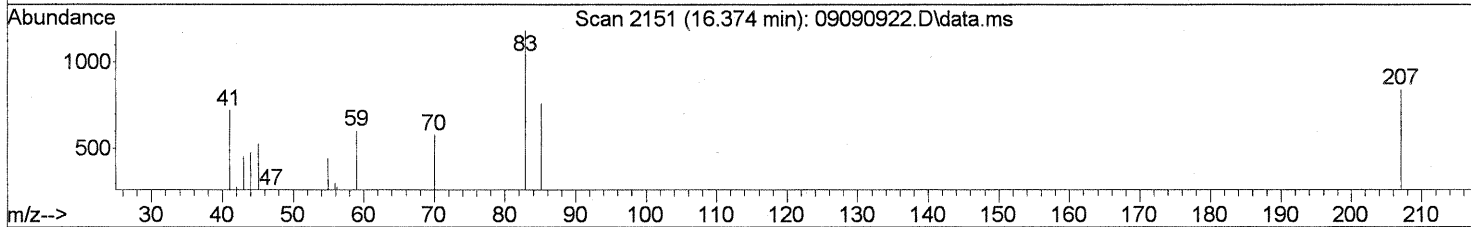
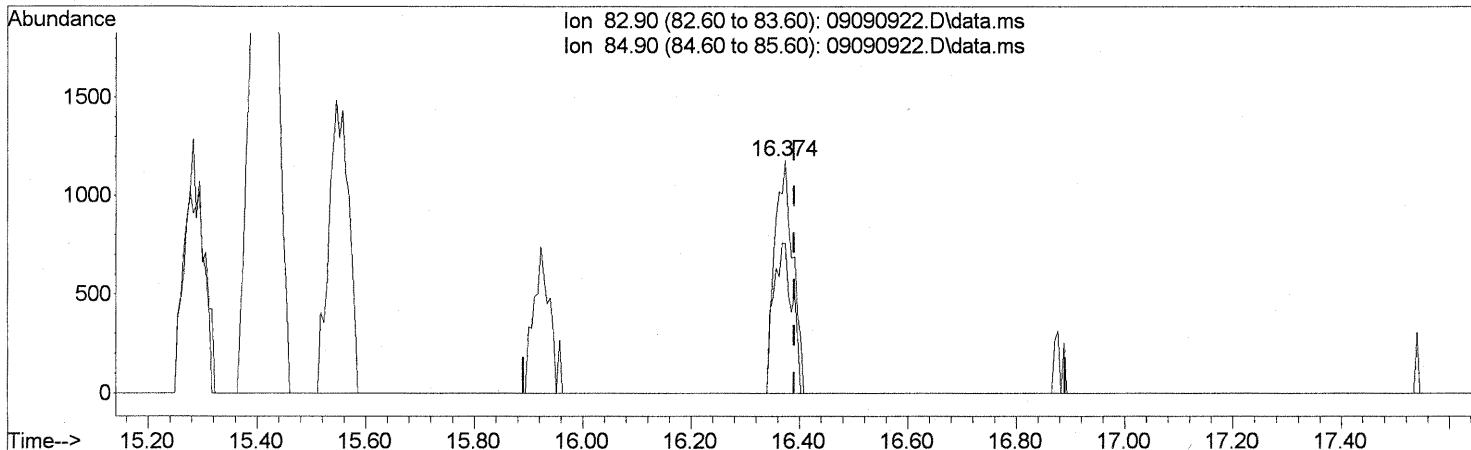
Ion	Exp%	Act%
84.10	100	100
69.10	38.90	37.23
56.10	124.50	124.83
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

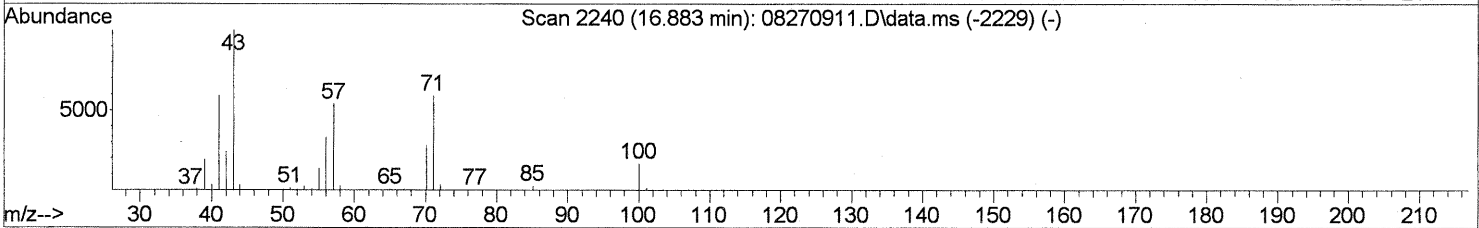
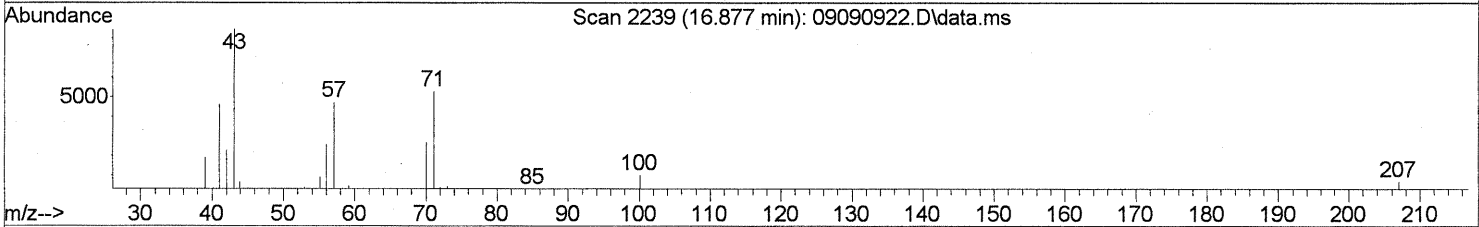
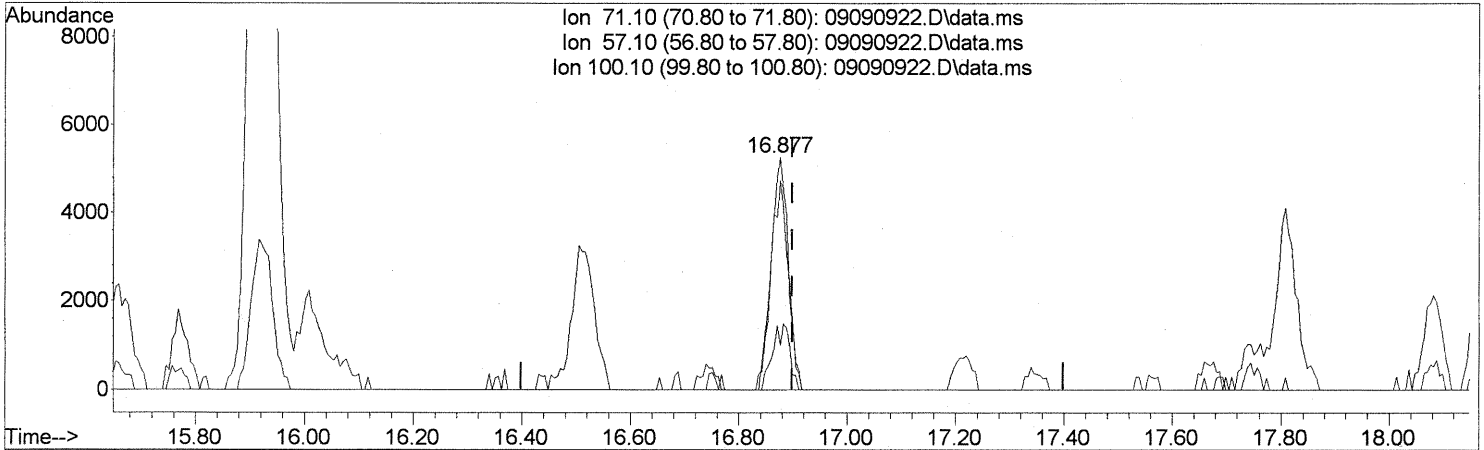
(46) Bromodichloromethane (T)  
 16.374min (-0.017) 0.14ng  
 response 2741

Ion	Exp%	Act%
82.90	100	100
84.90	64.50	66.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

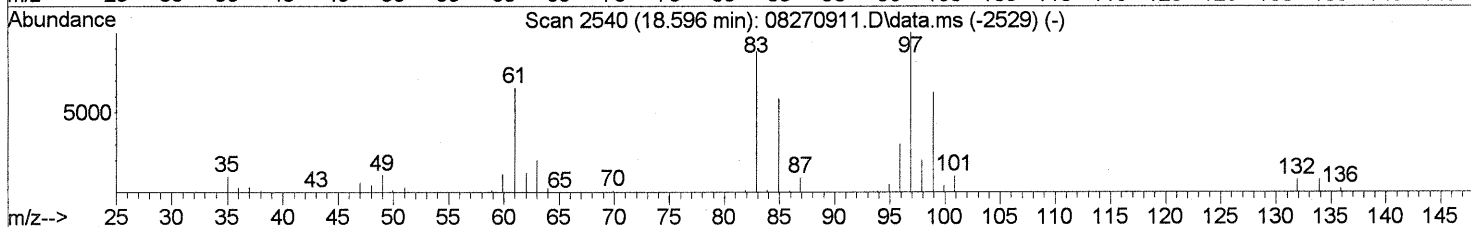
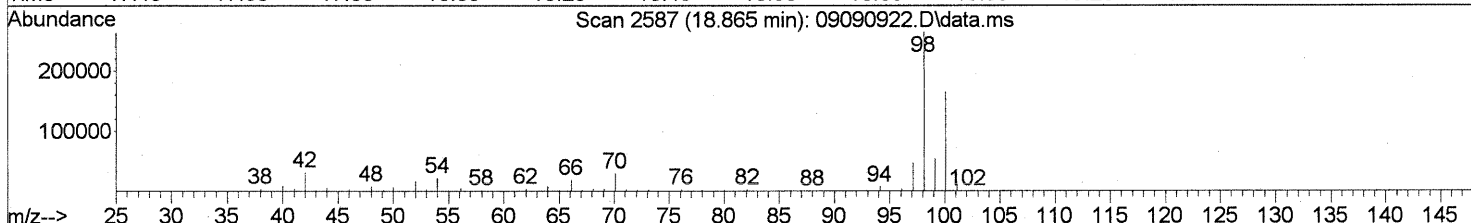
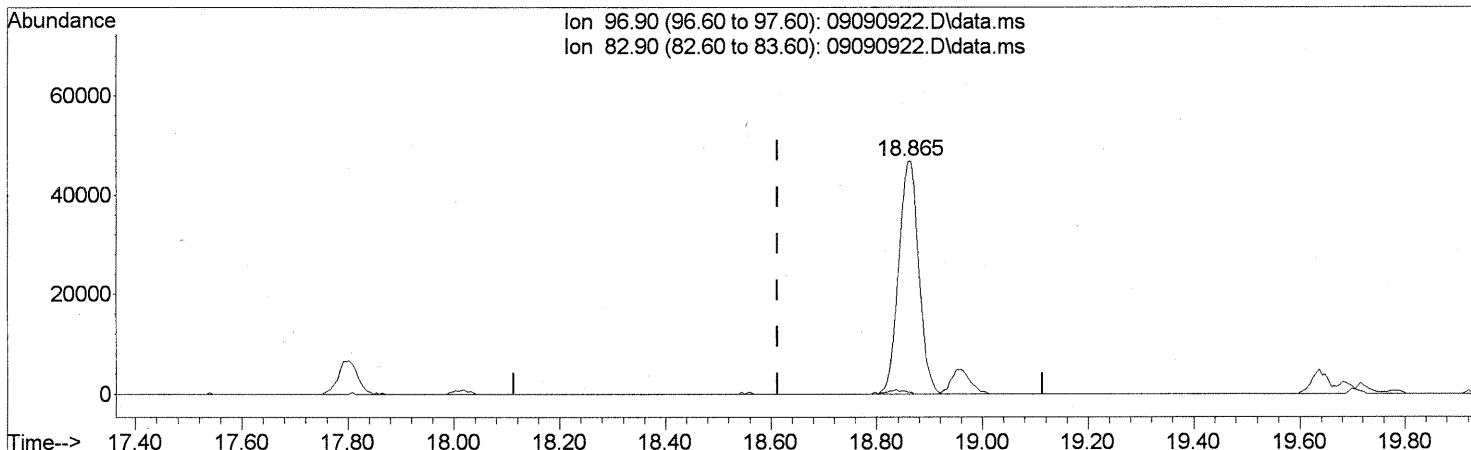
(51) n-Heptane (T)  
 16.877min (-0.023) 0.74ng  
 response 11534

Ion	Exp%	Act%
71.10	100	100
57.10	89.80	91.73
100.10	22.00	28.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(55) 1,1,2-Trichloroethane (T)  
 18.865min (+0.251) 8.75ng  
 response 123158

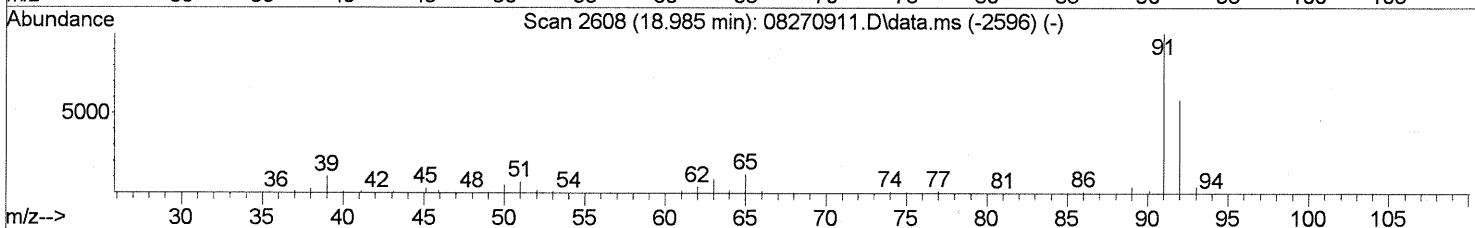
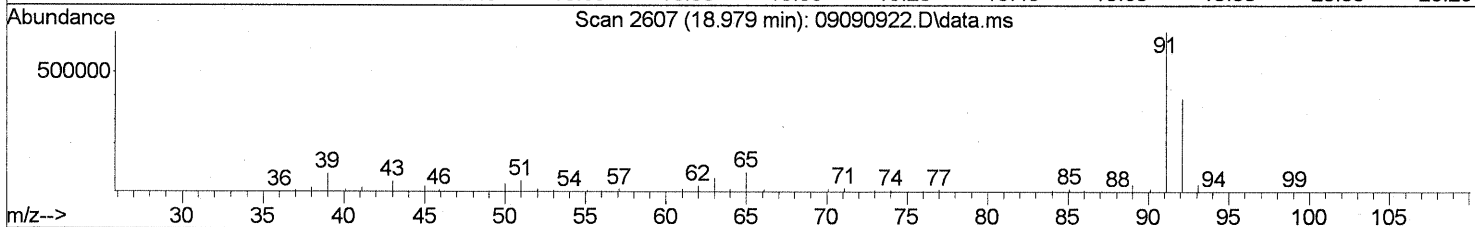
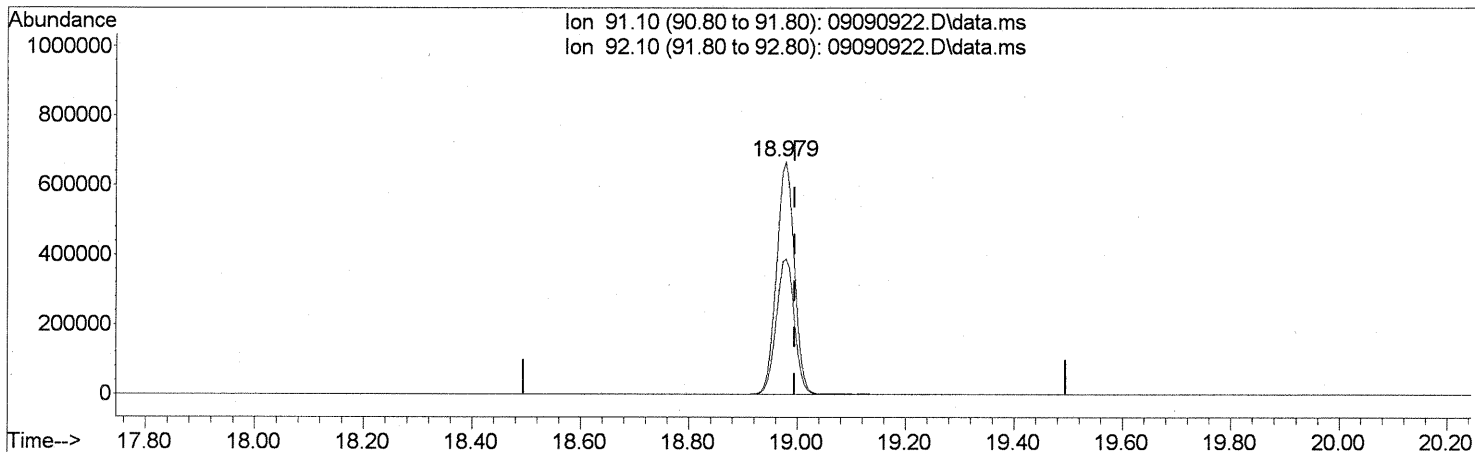
Ion	Exp%	Act%
96.90	100	100
82.90	87.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*12/9/15/09*  
*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

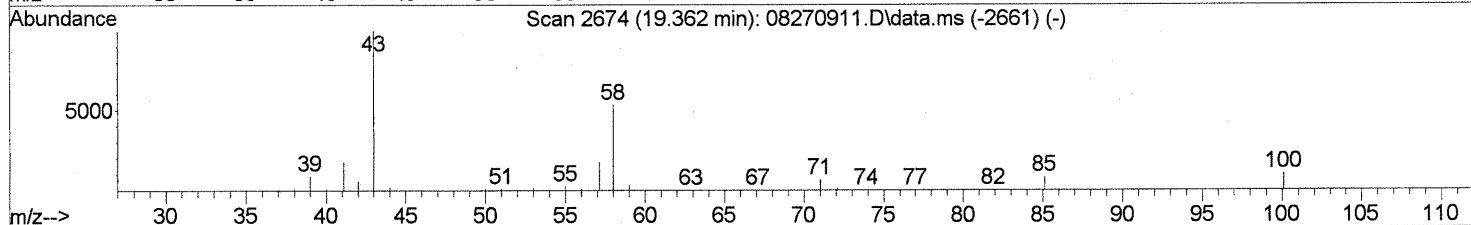
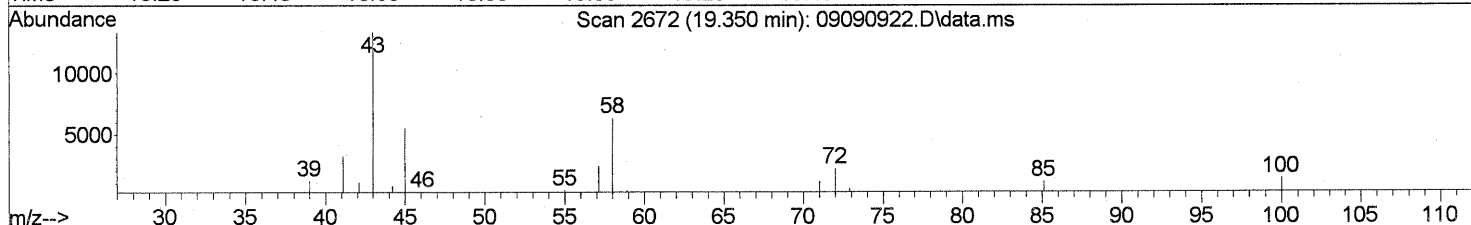
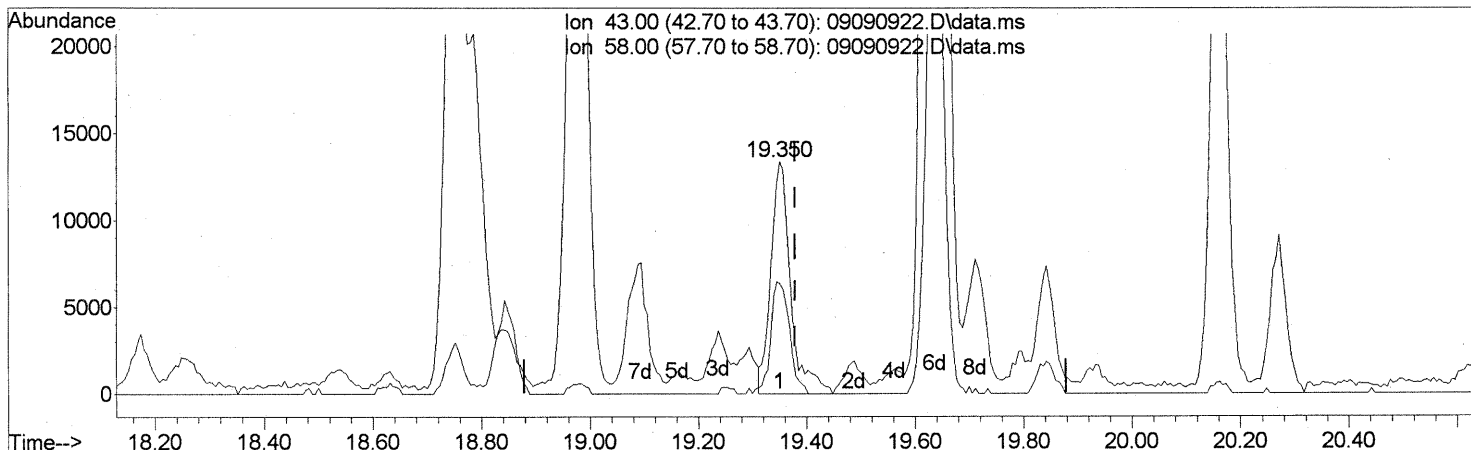
(58) Toluene (T)  
 18.979min (-0.017) 24.91ng  
 response 1531357

Ion	Exp%	Act%
91.10	100	100
92.10	58.80	59.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

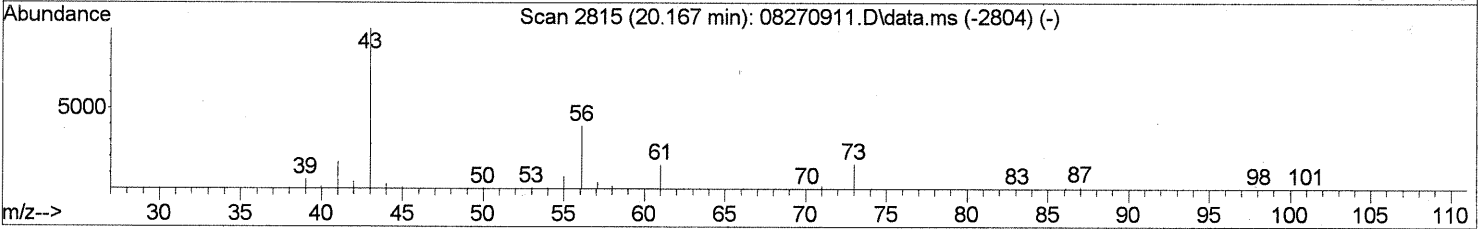
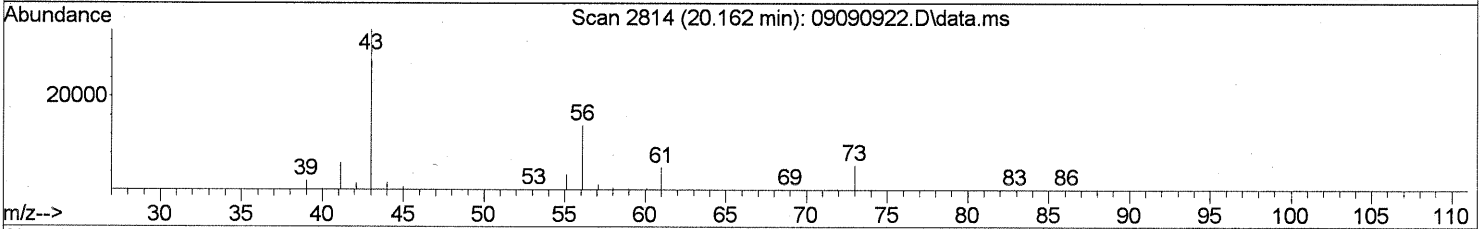
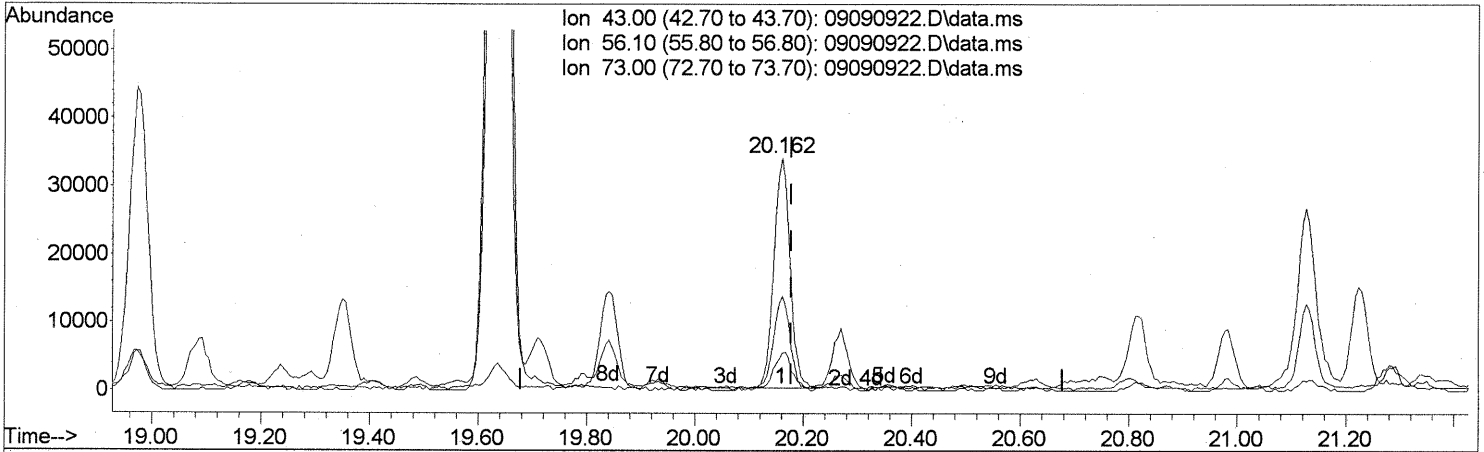
(59) 2-Hexanone (T)  
 19.350min (-0.028) 0.90ng  
 response 33888

Ion	Exp%	Act%
43.00	100	100
58.00	51.70	46.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

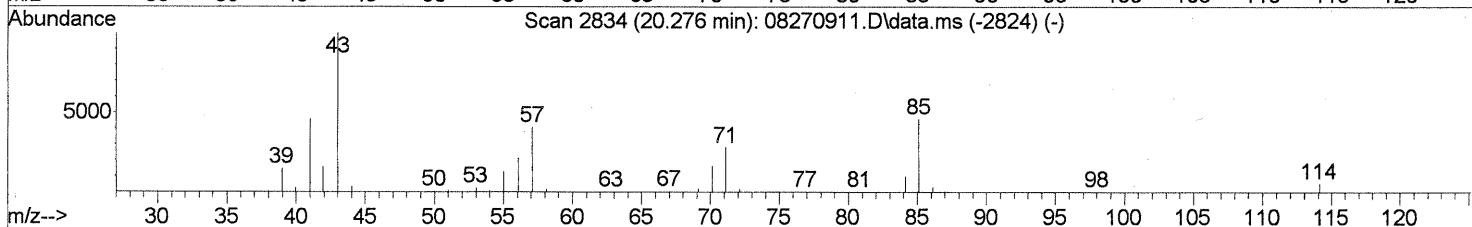
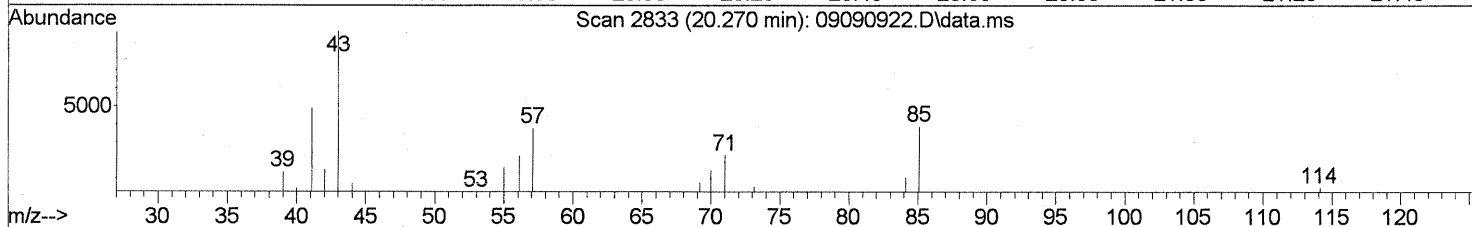
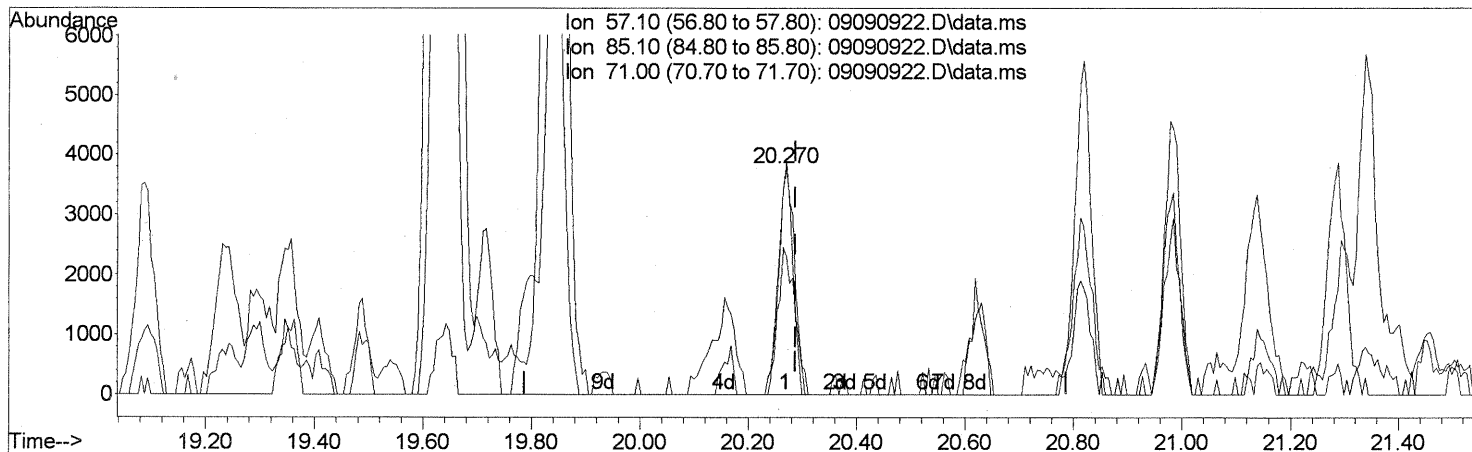
(62) n-Butyl Acetate (T)  
 20.162min (-0.017) 1.64ng  
 response 70608

Ion	Exp%	Act%
43.00	100	100
56.10	39.50	43.45
73.00	14.30	21.48
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

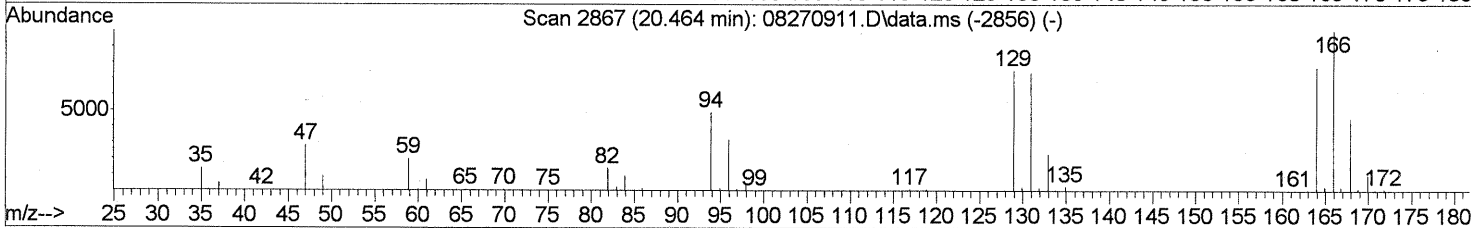
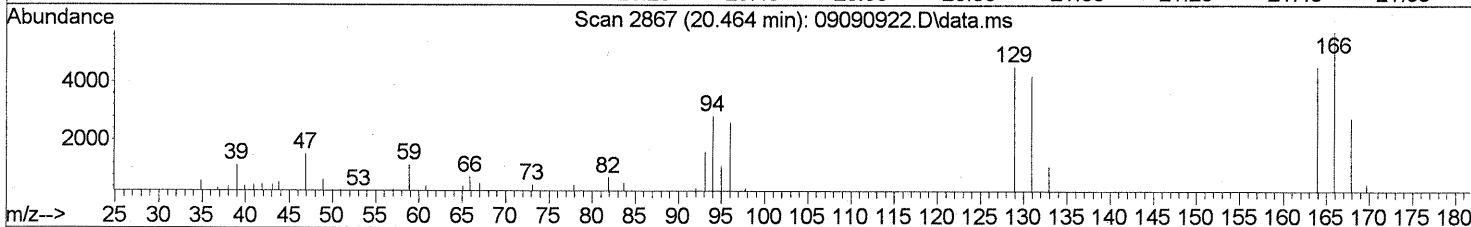
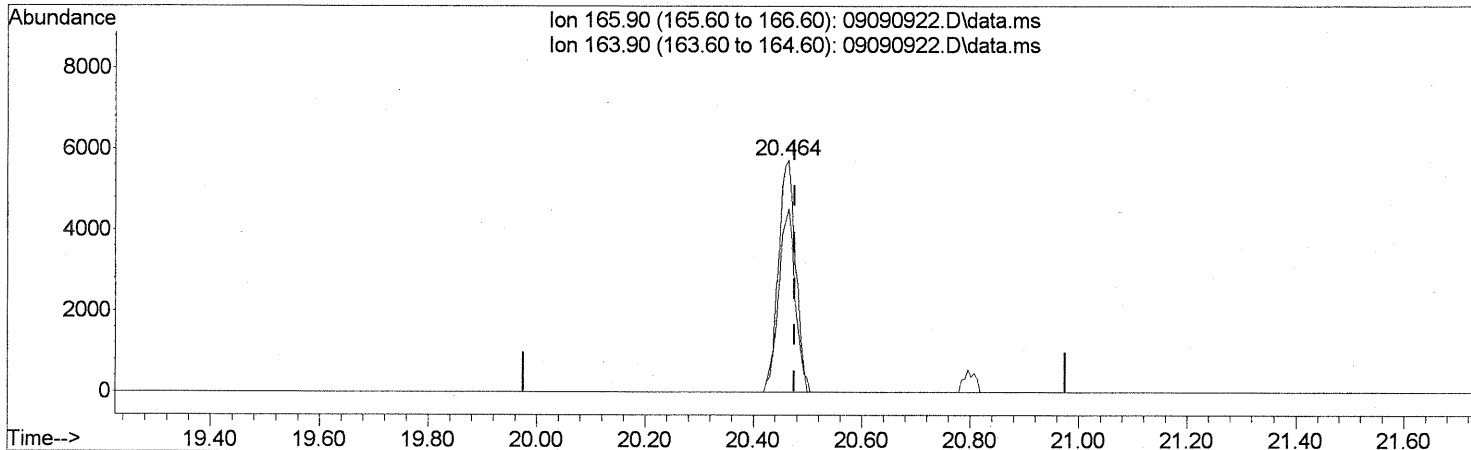
(63) n-Octane (T)  
 20.270min (-0.017) 0.52ng  
 response 7404

Ion	Exp%	Act%
57.10	100	100
85.10	113.70	102.39
71.00	69.10	67.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(64) Tetrachloroethene (T)

20.464min (-0.011) 0.80ng

response 12491

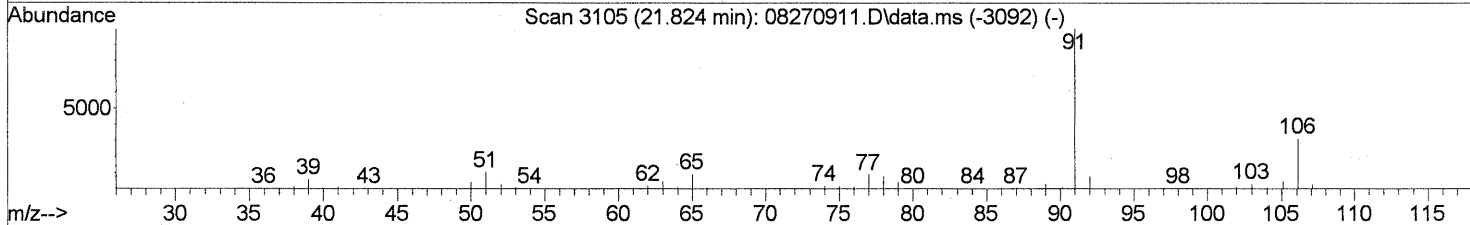
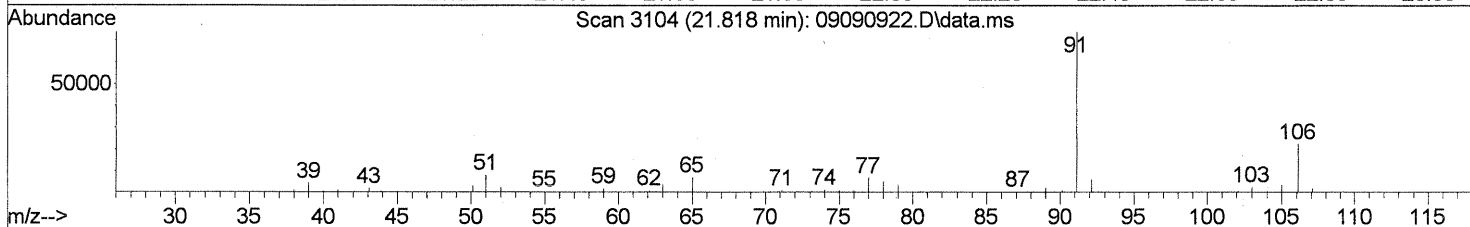
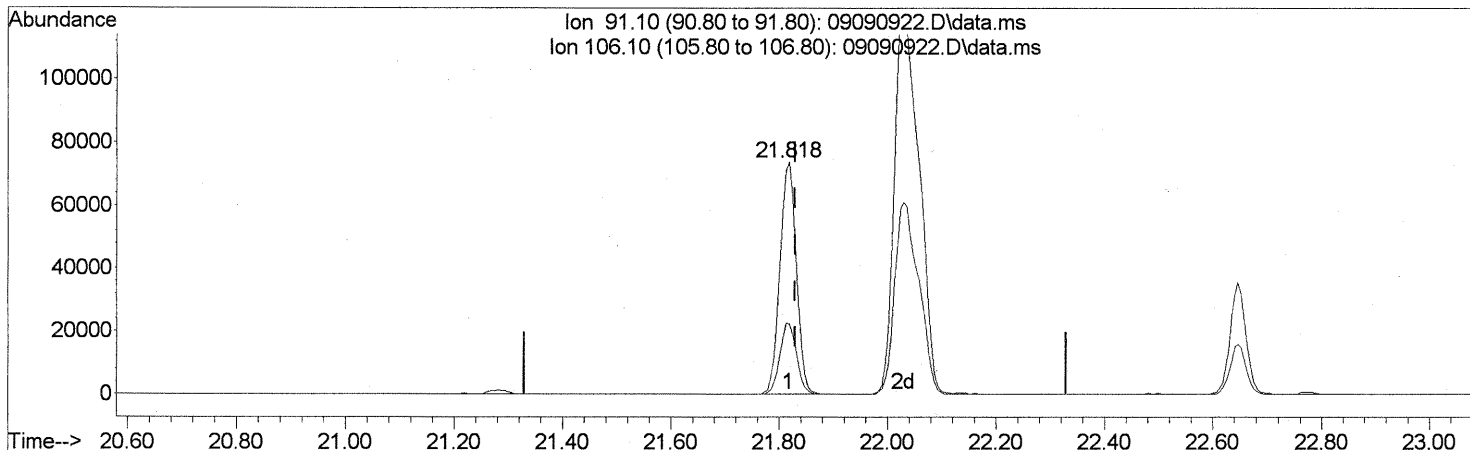
Ion	Exp%	Act%
165.90	100	100
163.90	78.80	76.17
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

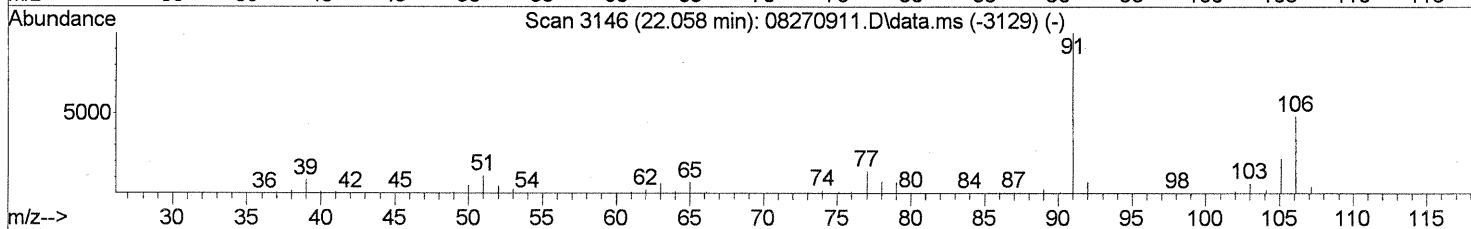
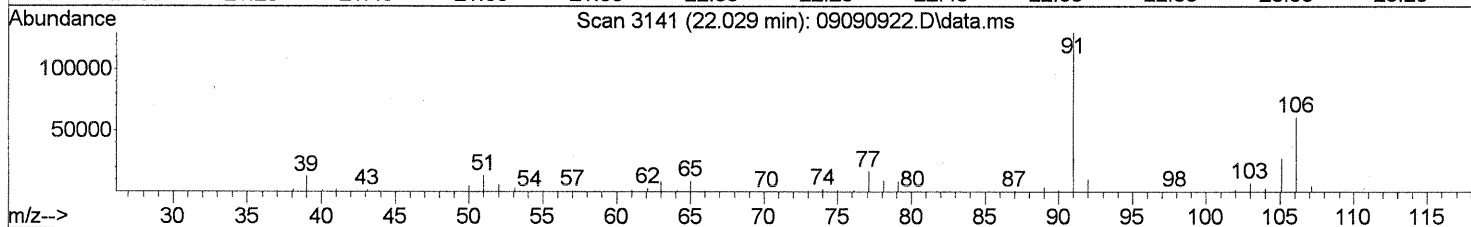
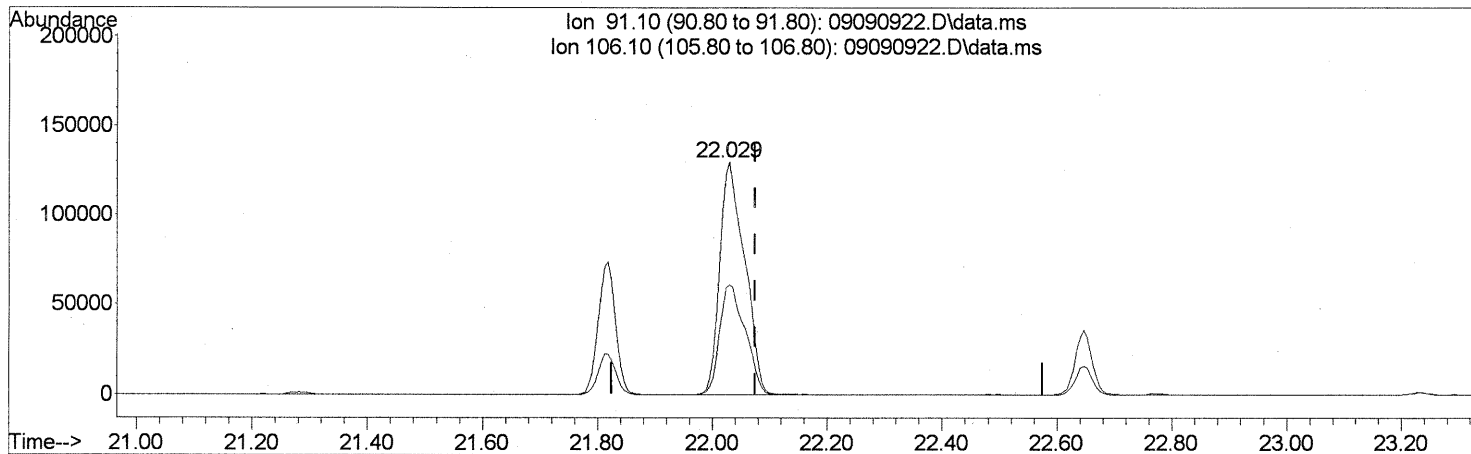
(66) Ethylbenzene (T)  
 21.818min (-0.011) 2.19ng  
 response 153912

Ion	Exp%	Act%
91.10	100	100
106.10	31.00	30.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

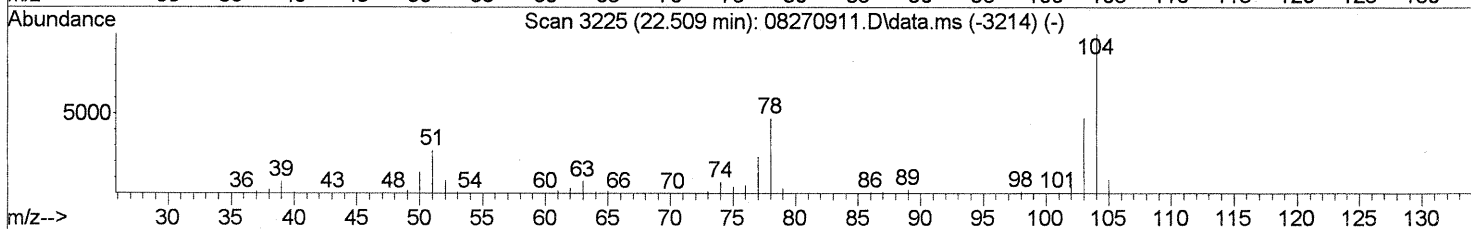
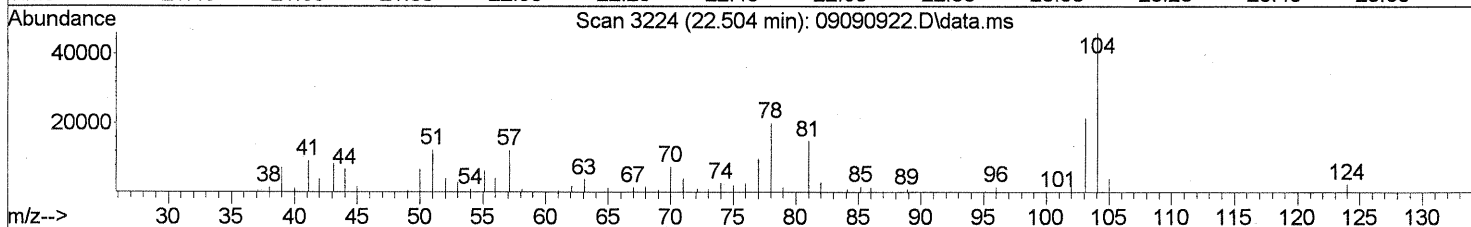
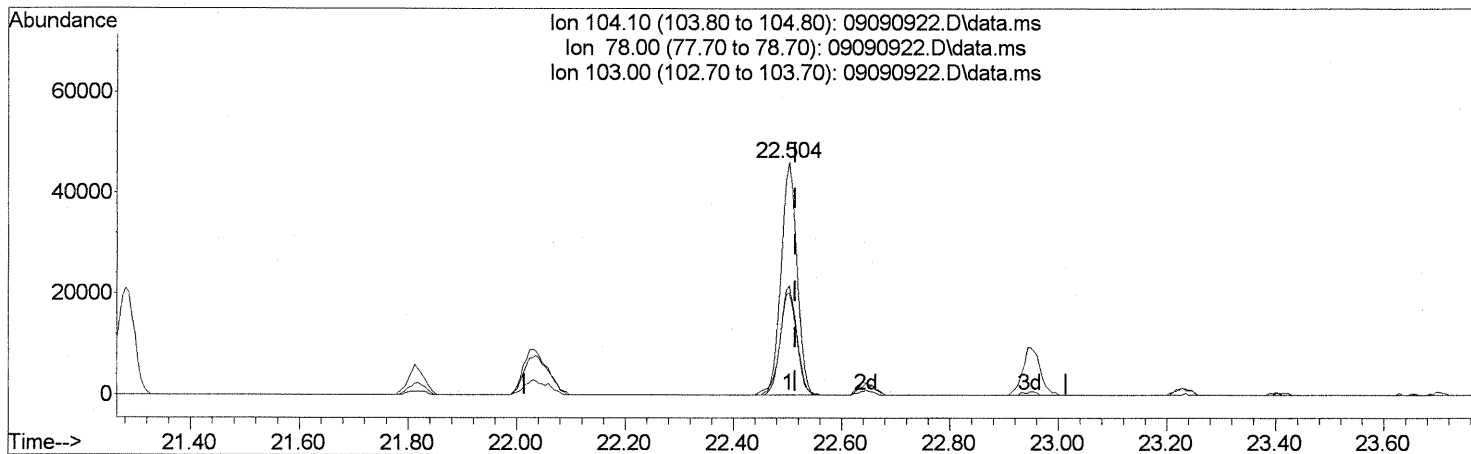
(67) m- & p-Xylenes (T)  
 22.029min (-0.046) 6.94ng  
 response 388752

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	48.26
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

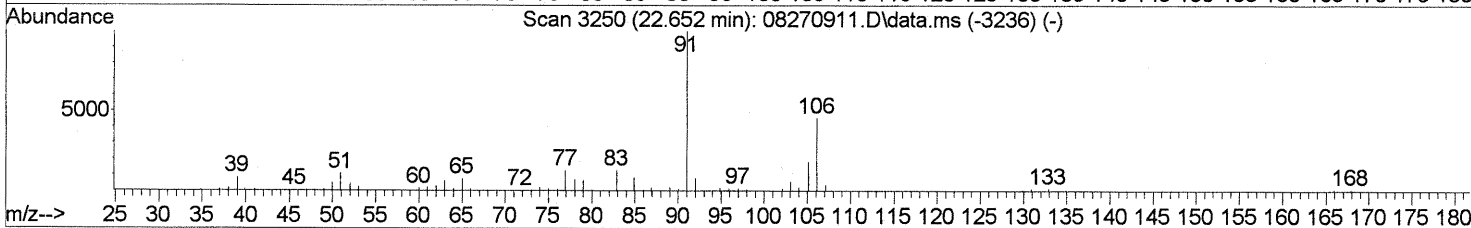
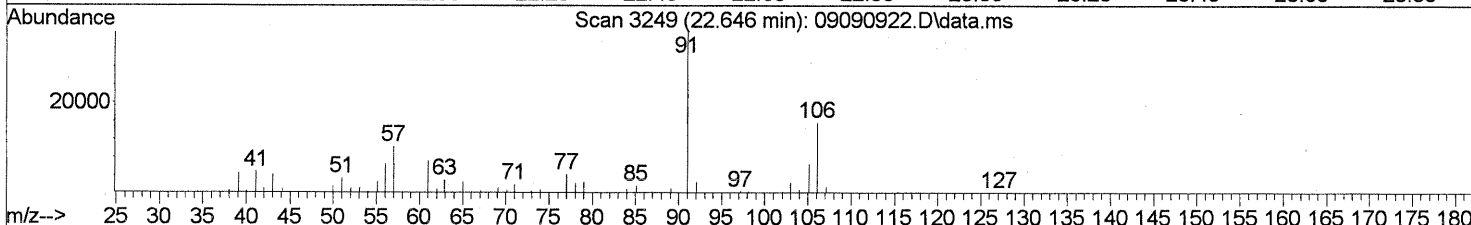
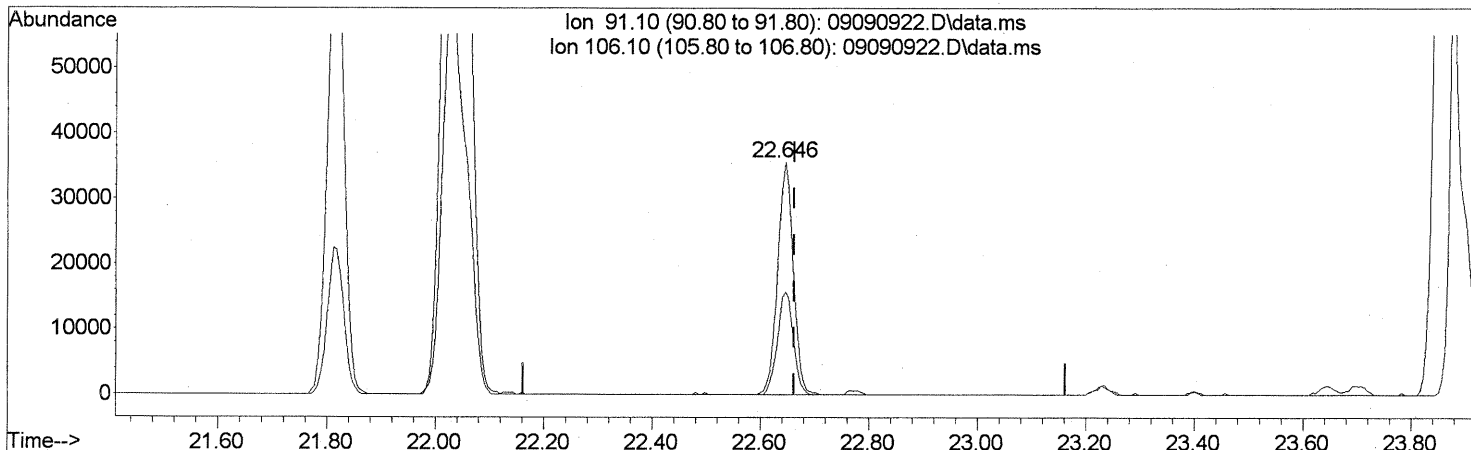
(69) Styrene (T)  
 22.504min (-0.011) 2.27ng  
 response 93513

Ion	Exp%	Act%
104.10	100	100
78.00	47.20	45.48
103.00	47.00	49.15
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



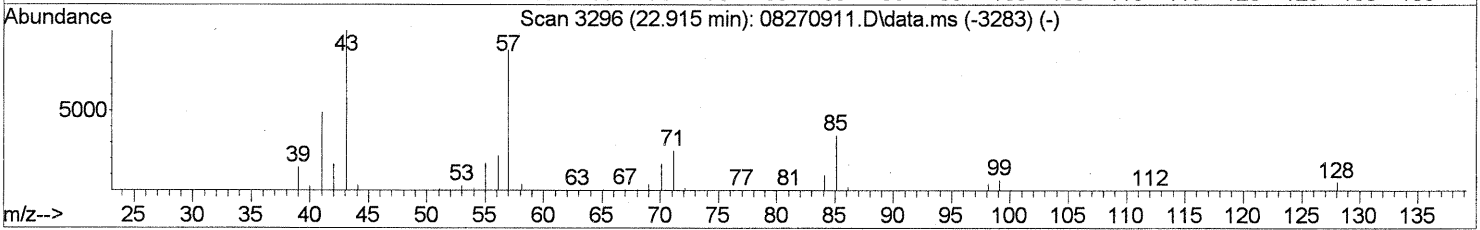
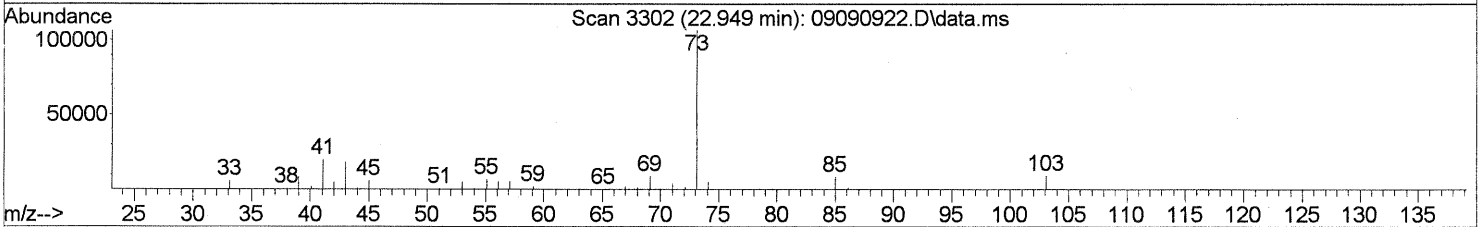
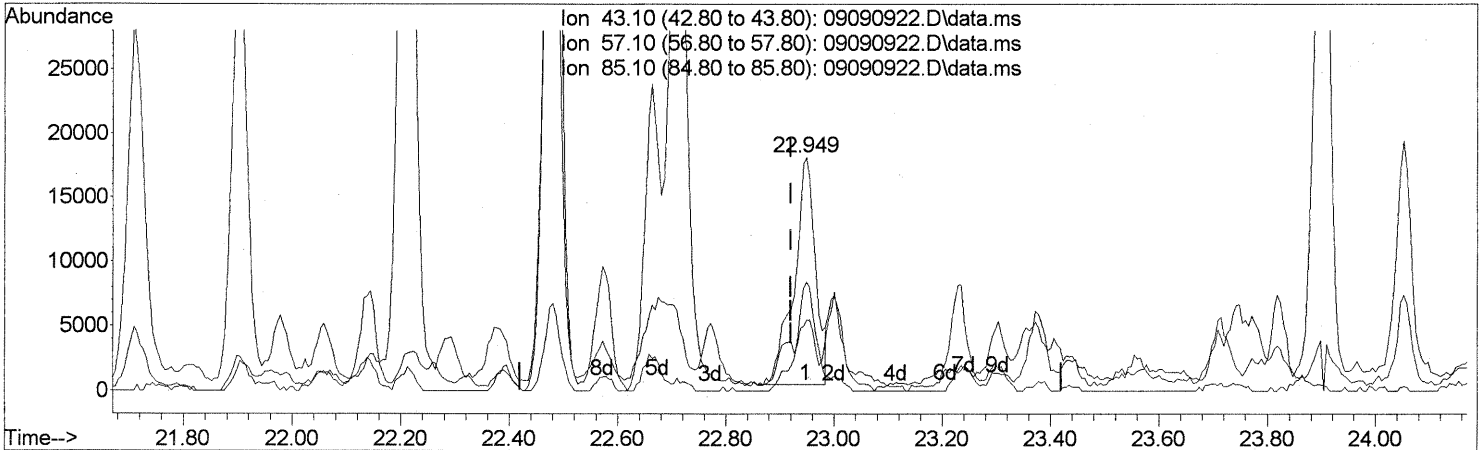
TIC: 09090922.D\data.ms

(70) o-Xylene (T)		
22.646min (-0.017) 1.27ng		
response 71698		
Ion	Exp%	Act%
91.10	100	100
106.10	44.90	44.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(71) n-Nonane (T)  
 22.949min (+0.029) 1.44ng  
 response 48719

Ion	Exp%	Act%
43.10	100	100
57.10	85.90	19.19#
85.10	32.20	47.81
0.00	0.00	0.00

FP

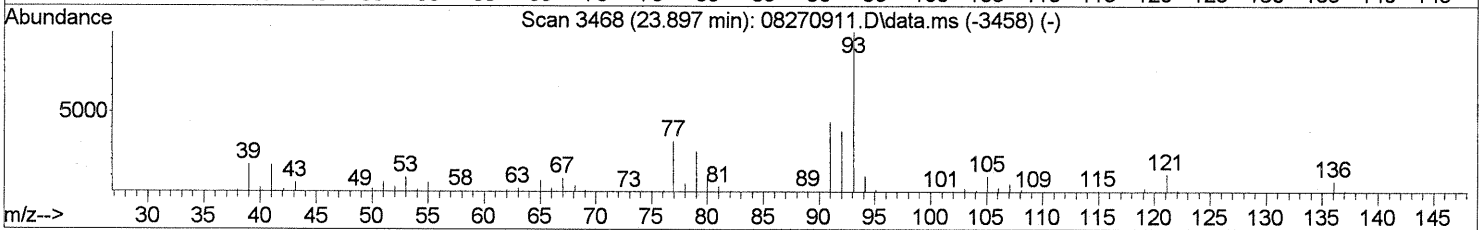
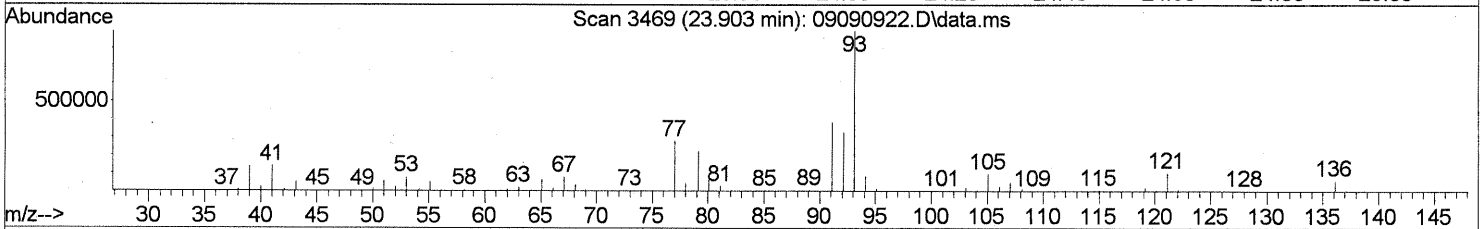
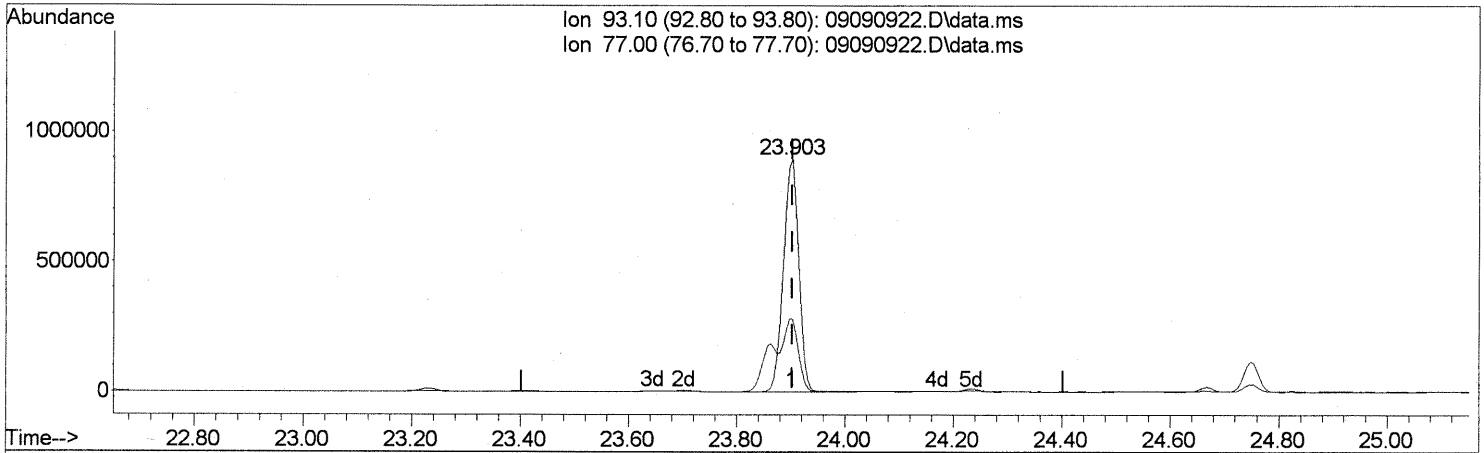
M 9/15/09

E. 9/16/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

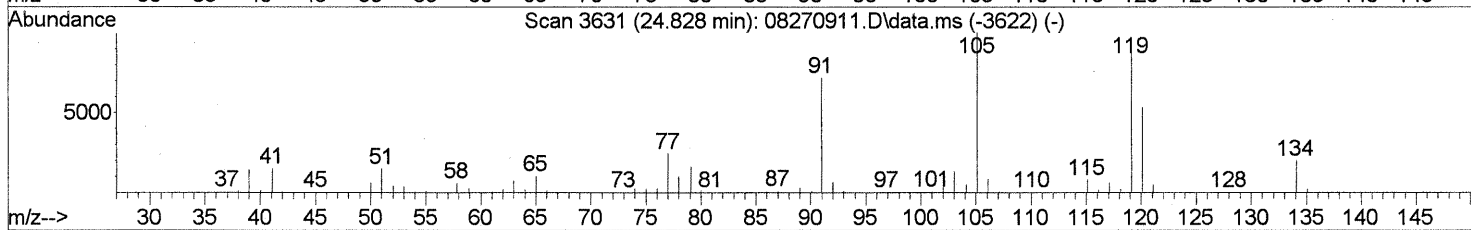
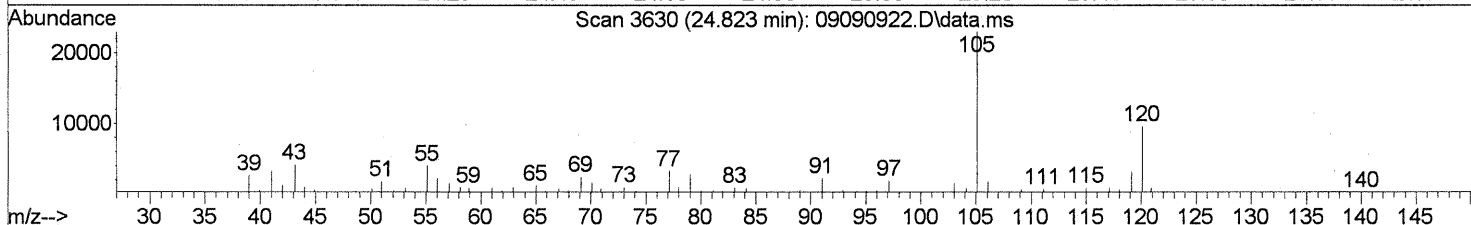
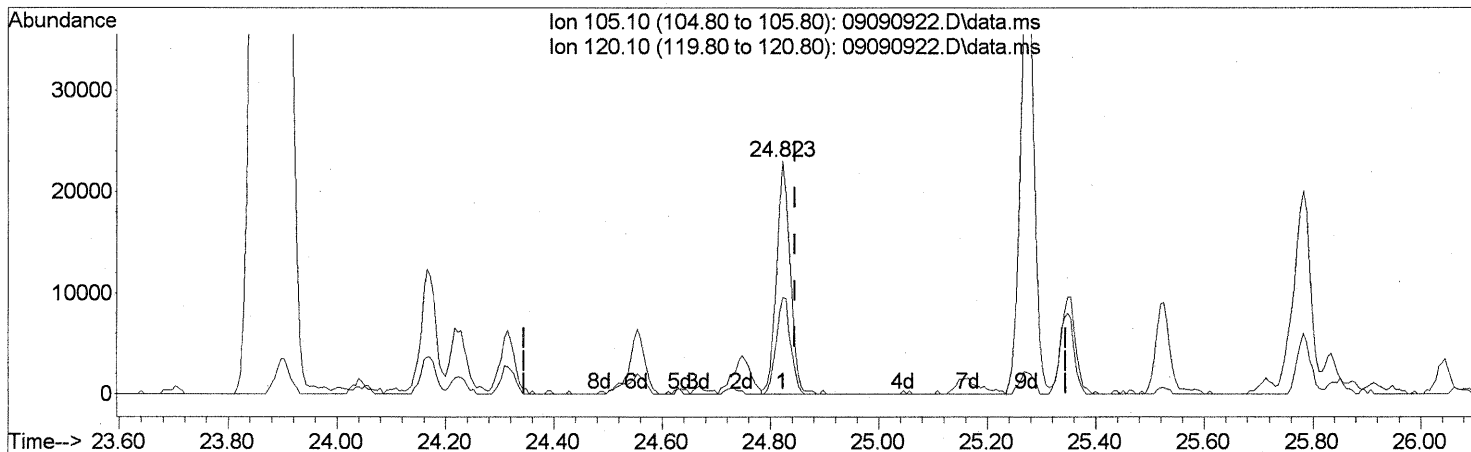
(75) alpha-Pinene (T)  
 23.903min (+0.000) 47.27ng  
 response 1747682

Ion	Exp%	Act%
93.10	100	100
77.00	33.10	29.54
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

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

24.823min (-0.023) 0.70ng

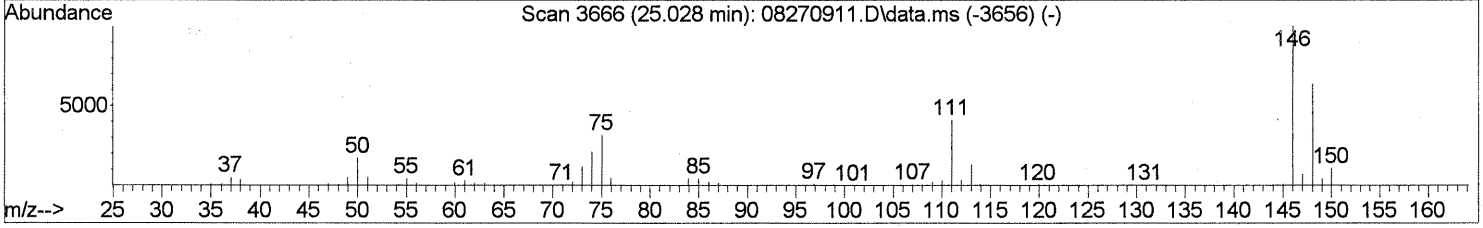
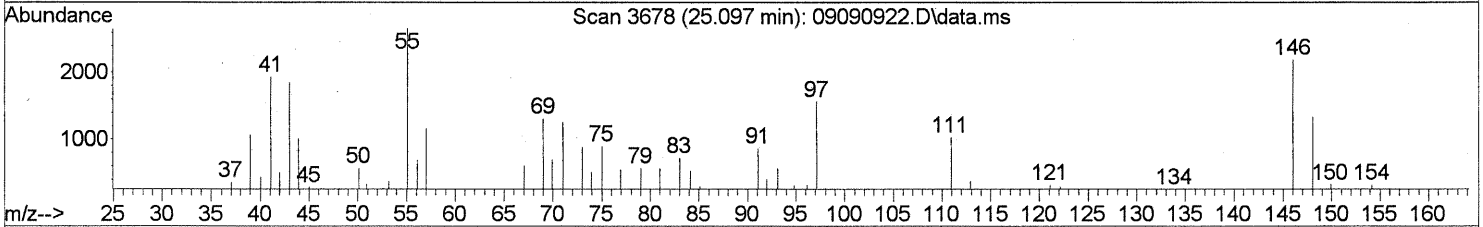
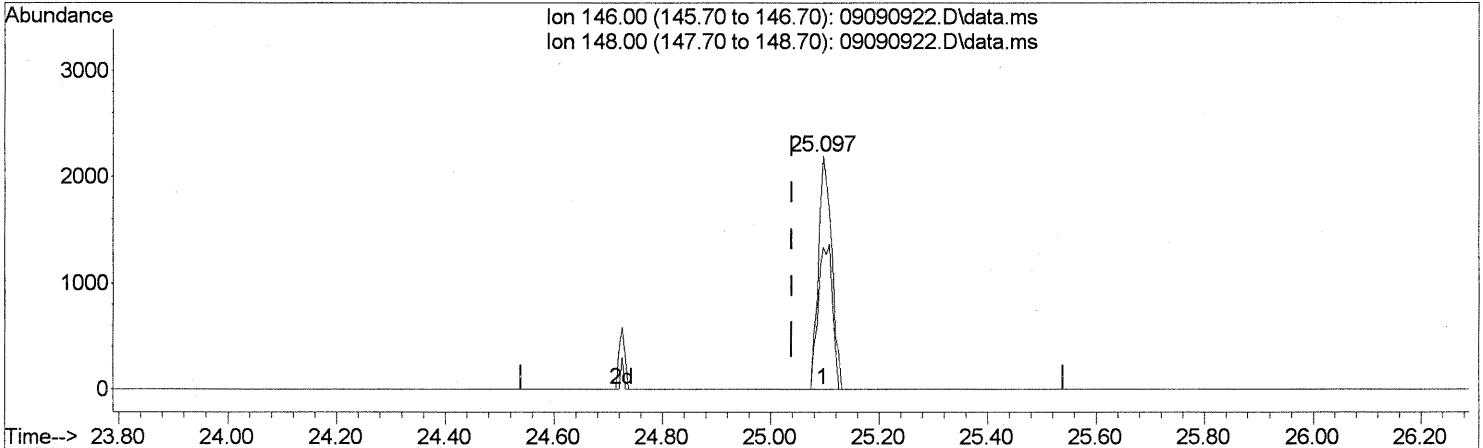
response 39876

Ion	Exp%	Act%
105.10	100	100
120.10	52.00	43.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(85) 1,3-Dichlorobenzene (T)  
 25.097min (+0.057) 0.12ng  
 response 3737

Ion	Exp%	Act%
146.00	100	100
148.00	64.00	66.52
0.00	0.00	0.00
0.00	0.00	0.00

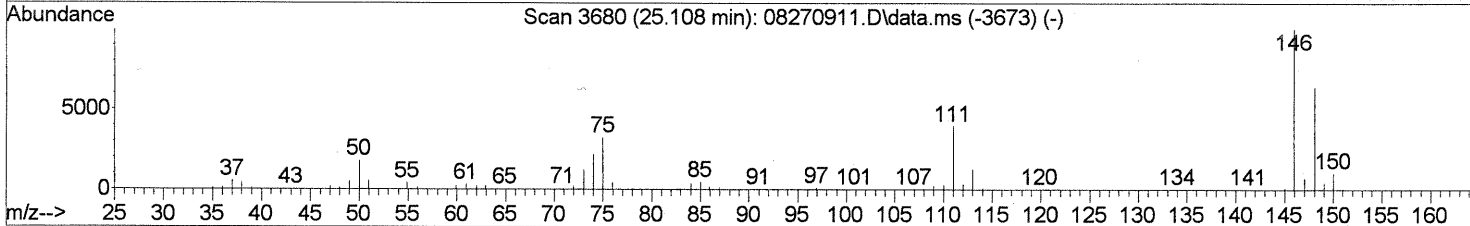
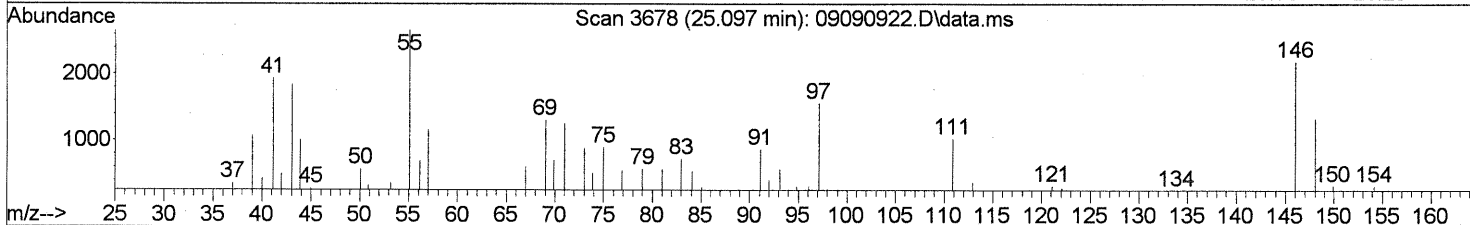
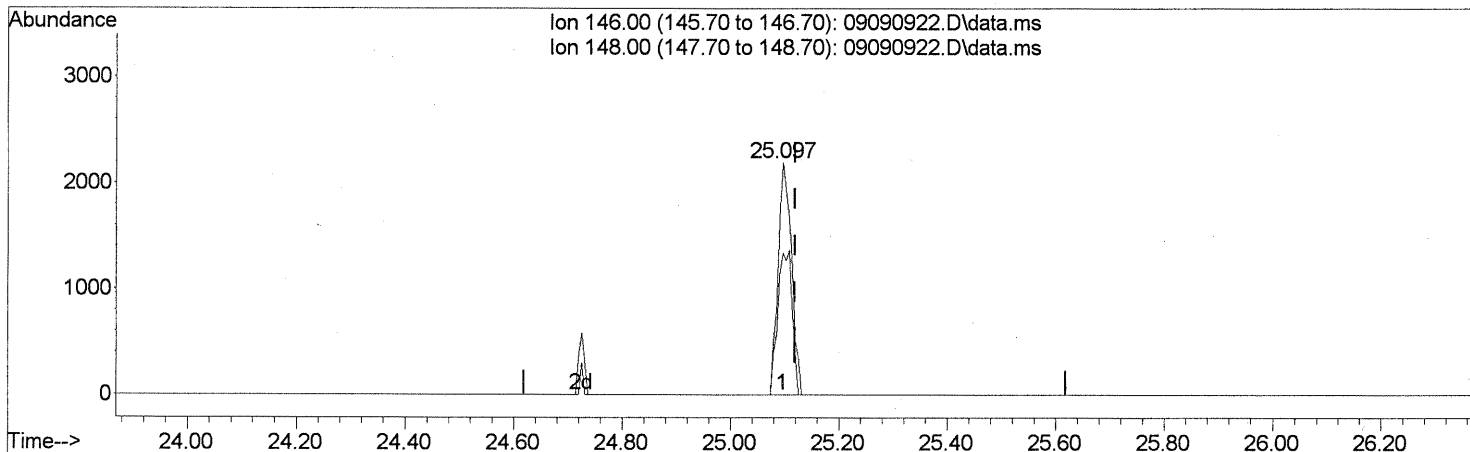
*FP*  
*11/9/15/09*  
*E-9/16/09*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

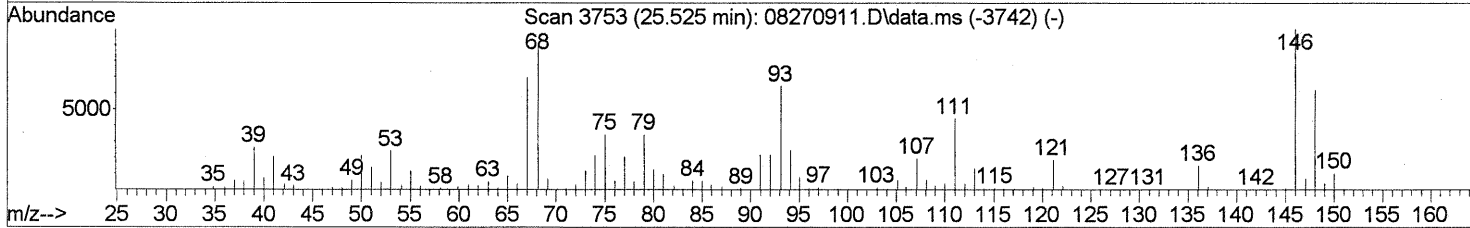
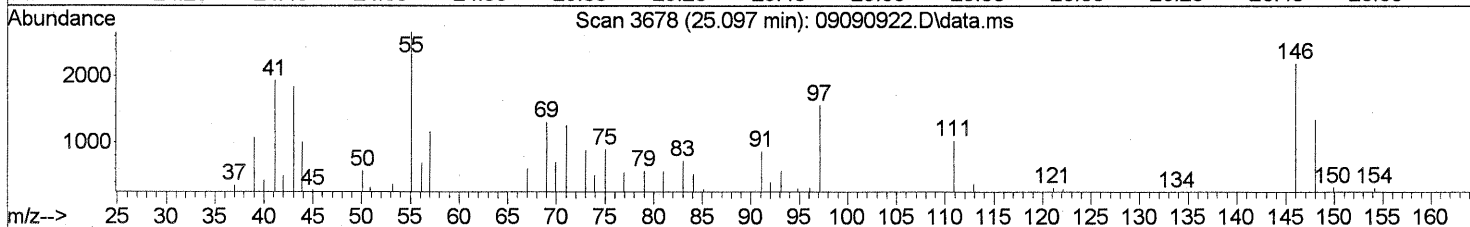
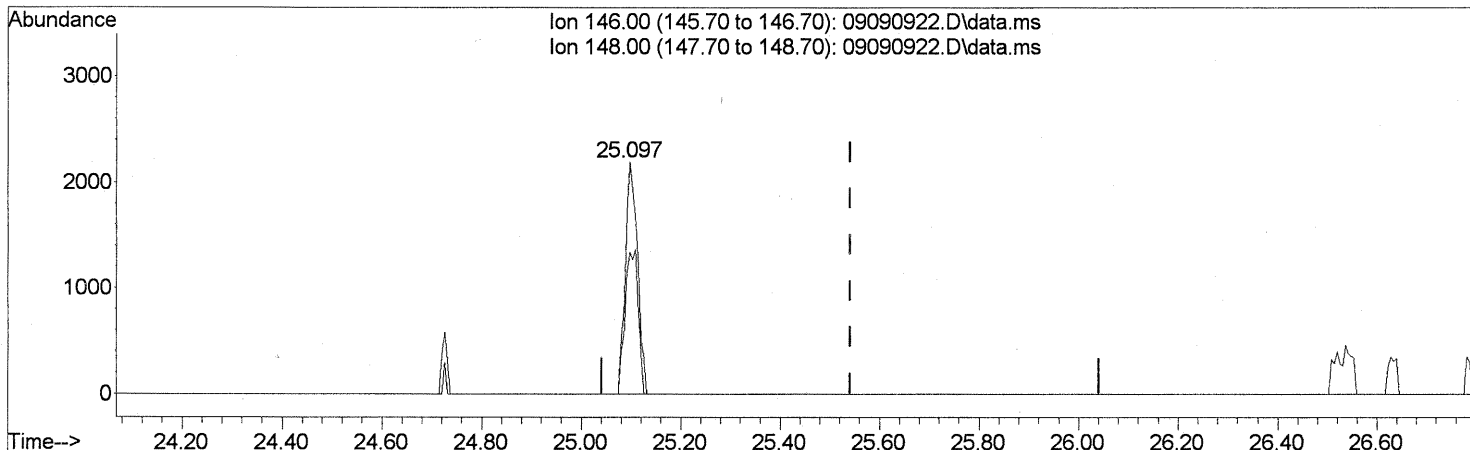
(86) 1,4-Dichlorobenzene (T)  
 25.097min (-0.023) 0.12ng  
 response 3737

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	66.52
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(90) 1,2-Dichlorobenzene (T)  
 25.097min (-0.445) 0.13ng  
 response 3737

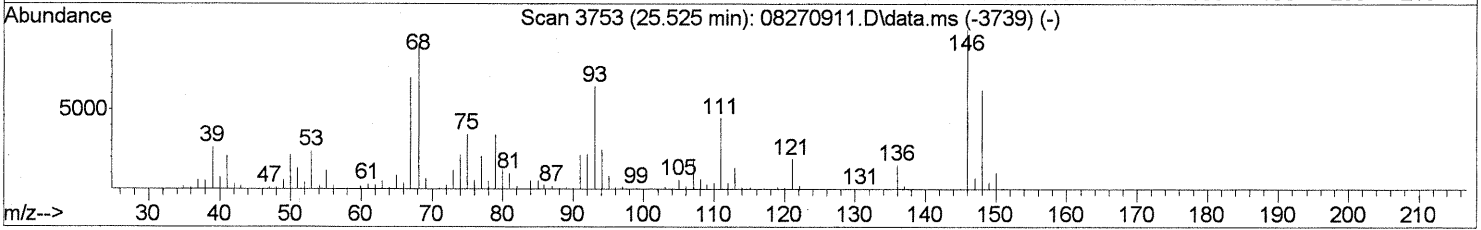
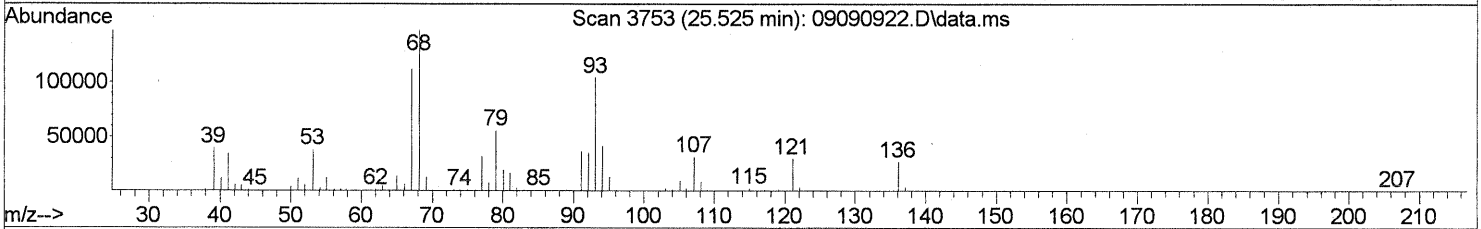
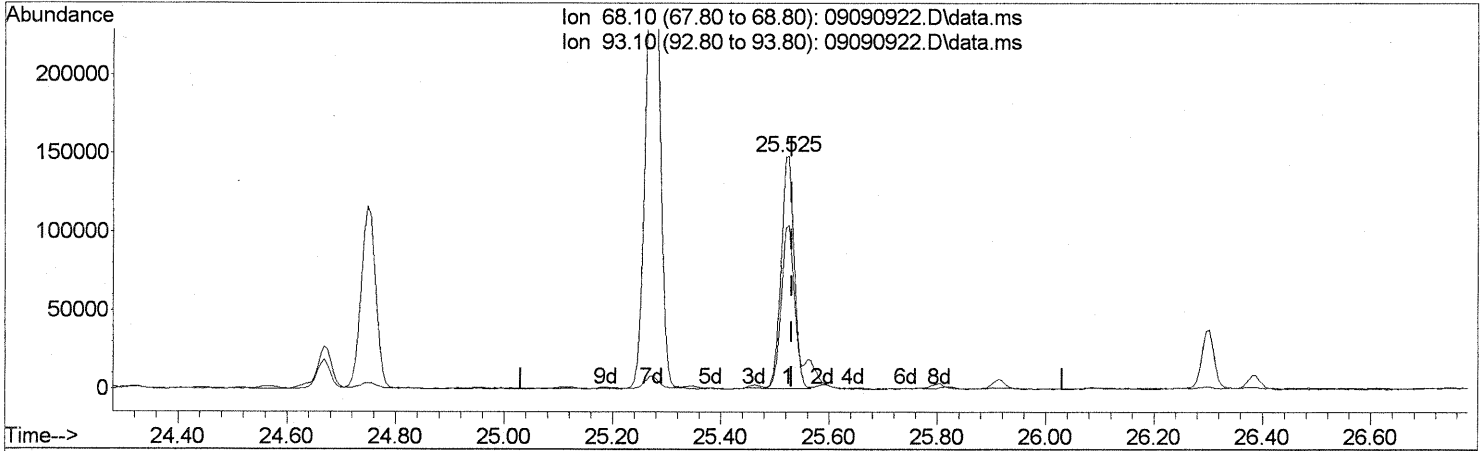
Ion	Exp%	Act%
146.00	100	100
148.00	62.80	66.52
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*11/15/09*  
*E-9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090922.D  
 Acq On : 10 Sep 2009 00:16  
 Operator : LM/CC  
 Sample : P0903114-004 (1000ml)  
 Misc : EH&E 104898  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Sep 10 08:30:30 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090922.D\data.ms

(91) d-Limonene (T)  
 25.525min (-0.006) 10.96ng  
 response 250210

Ion	Exp%	Act%
68.10	100	100
93.10	69.80	84.29
0.00	0.00	0.00
0.00	0.00	0.00





**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104899  
**Client Project ID:** 16512

Test Code: EPA TO-15  
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
 Analyst: Liliana Marghitoiu  
 Sampling Media: 6.0 L Summa Canister  
 Test Notes:  
 Container ID: AC01498

CAS Project ID: P0903114  
 CAS Sample ID: P0903114-005

Date Collected: 9/2/09  
 Date Received: 9/3/09  
 Date Analyzed: 9/10/09  
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.1      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.62	ND	0.13	
127-18-4	<b>Tetrachloroethene</b>	<b>0.68</b>	0.12	<b>0.10</b>	0.018	
108-90-7	Chlorobenzene	ND	0.12	ND	0.027	
100-41-4	<b>Ethylbenzene</b>	<b>1.3</b>	0.62	<b>0.30</b>	0.14	
179601-23-1	<b>m,p-Xylenes</b>	<b>4.2</b>	0.62	<b>0.97</b>	0.14	
75-25-2	Bromoform	ND	0.62	ND	0.060	
100-42-5	<b>Styrene</b>	<b>2.4</b>	0.62	<b>0.56</b>	0.14	
95-47-6	<b>o-Xylene</b>	<b>0.89</b>	0.62	<b>0.20</b>	0.14	
111-84-2	n-Nonane	ND	0.62	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.12	ND	0.018	
98-82-8	Cumene	ND	0.62	ND	0.13	
80-56-8	<b>alpha-Pinene</b>	<b>37</b>	0.62	<b>6.6</b>	0.11	
103-65-1	n-Propylbenzene	ND	0.62	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.62	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.62	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.62	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.12	ND	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.12	ND	0.020	
106-46-7	1,4-Dichlorobenzene	ND	0.12	ND	0.020	
95-50-1	1,2-Dichlorobenzene	ND	0.12	ND	0.020	
5989-27-5	<b>d-Limonene</b>	<b>6.3</b>	0.62	<b>1.1</b>	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.62	ND	0.064	
120-82-1	1,2,4-Trichlorobenzene	ND	0.62	ND	0.083	
91-20-3	Naphthalene	ND	0.62	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.62	ND	0.058	

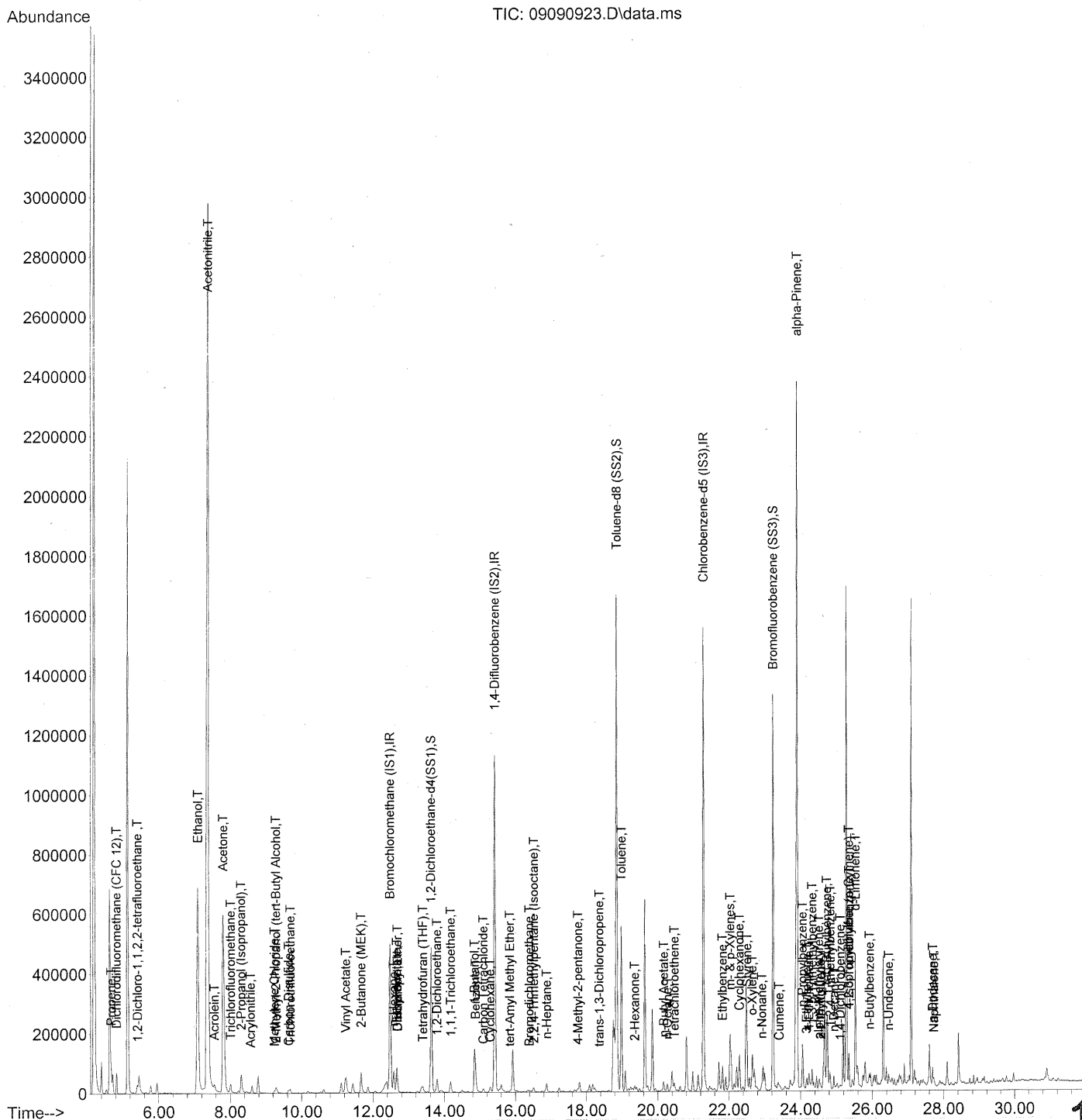
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

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

Verified By: \_\_\_\_\_ Date: 9/17/09 **178**

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 12:58 am  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 15 14:45:41 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 12:58 am  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 15 14:45:41 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

179/15/09

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	255483	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1286687	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	638280	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	490371	24.221	ng	-0.03
Spiked Amount	25.000			Recovery	=	96.88%
57) Toluene-d8 (SS2)	18.85	98	1417357	24.847	ng	-0.01
Spiked Amount	25.000			Recovery	=	99.40%
73) Bromofluorobenzene (SS3)	23.23	174	426960	26.007	ng	0.00
Spiked Amount	25.000			Recovery	=	104.04%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.67	42	16935	0.916	ng	97
3) Dichlorodifluoromethan...	4.82	85	70489	2.179	ng	99
4) Chloromethane	0.00	50	0	N.D.	d	
5) 1,2-Dichloro-1,1,2,2-t...	5.41	135	1172	0.088	ng	# 56
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	5.87	54	311	N.D.		
8) Bromomethane	0.00	94	0	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	7.09	45	1459675	127.378	ng	99
11) Acetonitrile	7.38	41	5657598	177.746	ng	99
12) Acrolein	7.55	56	20825	2.380	ng	100
13) Acetone	7.81	58	393019	33.164	ng	97
14) Trichlorofluoromethane	8.01	101	30413	1.066	ng	99
15) 2-Propanol (Isopropanol)	8.30	45	124305	3.155	ng	97
16) Acrylonitrile	8.57	53	2266	0.116	ng	# 43
17) 1,1-Dichloroethene	9.03	96	435	N.D.		
18) 2-Methyl-2-Propanol (t...	9.28	59	8349	0.212	ng	# 1
19) Methylene Chloride	9.23	84	4755	0.316	ng	97
20) 3-Chloro-1-propene (Al...	9.40	41	93	N.D.		
21) Trichlorotrifluoroethane	9.68	151	5584	0.494	ng	94
22) Carbon Disulfide	9.63	76	22059	0.412	ng	94
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	11.23	86	9676	3.258	ng	# 77
27) 2-Butanone (MEK)	11.66	72	31211	3.260	ng	96
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.		
29) Diisopropyl Ether	12.68	87	1645	0.118	ng	# 1
30) Ethyl Acetate	12.66	61	18149	3.528	ng	98
31) n-Hexane	12.57	57	45074	1.759	ng	100

180



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 12:58 am  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 15 14:45:41 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	11961	0.474	ng	90
34) Tetrahydrofuran (THF)	13.39	72	7002	0.674	ng #	61
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	13.79	62	29970	1.414	ng	97
38) 1,1,1-Trichloroethane	14.17	97	30252	1.272	ng	95
39) Isopropyl Acetate	14.87	61	124	N.D.		
40) 1-Butanol	14.84	56	134010	8.368	ng #	39
41) Benzene	14.87	78	26888	0.445	ng	96
42) Carbon Tetrachloride	15.09	117	8875	0.437	ng	99
43) Cyclohexane	15.28	84	9504	0.426	ng	99
44) tert-Amyl Methyl Ether	15.84	73	2418	0.054	ng #	50
45) 1,2-Dichloropropane	16.11	63	215	N.D.		
46) Bromodichloromethane	16.39	83	2147	0.108	ng #	18
47) Trichloroethene	16.44	130	204	N.D.		
48) 1,4-Dioxane	16.52	88	242	N.D.		
49) 2,2,4-Trimethylpentane...	16.52	57	13969	0.203	ng	72
50) Methyl Methacrylate	16.76	100	90	N.D.		
51) n-Heptane	16.88	71	8396	0.536	ng	93
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.76	58	2752	0.199	ng	92
54) trans-1,3-Dichloropropene	18.36	75	1206	0.052	ng #	57
55) 1,1,2-Trichloroethane	0.00	97	0	N.D.		
58) Toluene	18.98	91	236859	3.855	ng	98
59) 2-Hexanone	19.35	43	15348m	0.409	ng	
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	19.85	107	298	N.D.		
62) n-Butyl Acetate	20.16	43	25810	0.599	ng	76
63) n-Octane	20.26	57	5020	0.355	ng	92
64) Tetrachloroethene	20.46	166	8577	0.551	ng	97
65) Chlorobenzene	21.34	112	859	N.D.		
66) Ethylbenzene	21.81	91	74096	1.054	ng	100
67) m- & p-Xylenes	22.03	91	191683	3.426	ng	99
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.50	104	79331	1.926	ng	98
70) o-Xylene	22.65	91	40619	0.723	ng	99
71) n-Nonane	22.92	43	8404	0.249	ng #	49
72) 1,1,2,2-Tetrachloroethane	22.63	83	126	N.D.		
74) Cumene	23.40	105	4074	0.057	ng	94
75) alpha-Pinene	23.90	93	1109472	30.033	ng	98
76) n-Propylbenzene	24.05	91	10115	0.112	ng #	80
77) 3-Ethyltoluene	24.17	105	17791	0.261	ng	98
78) 4-Ethyltoluene	24.22	105	9551	0.142	ng	94
79) 1,3,5-Trimethylbenzene	24.31	105	7361	0.132	ng	90

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Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
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 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 15 14:45:41 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

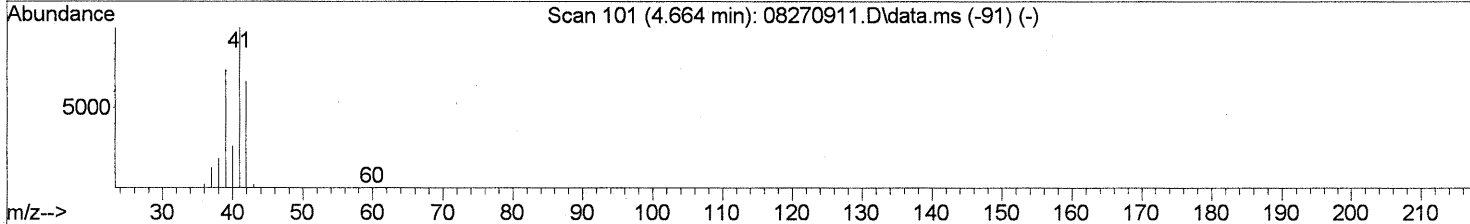
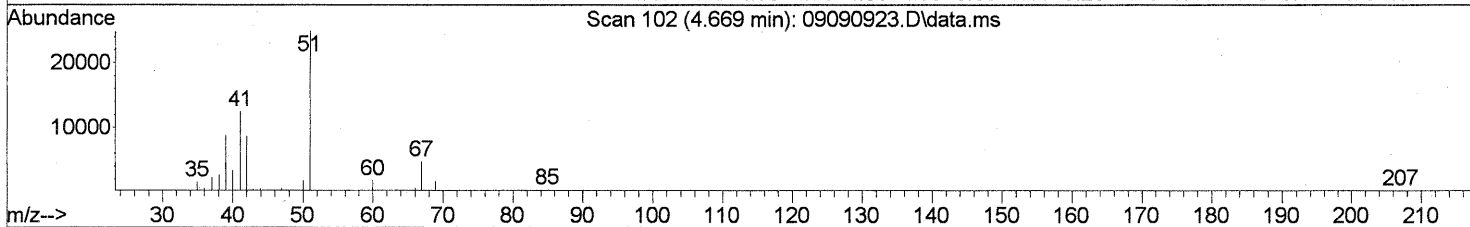
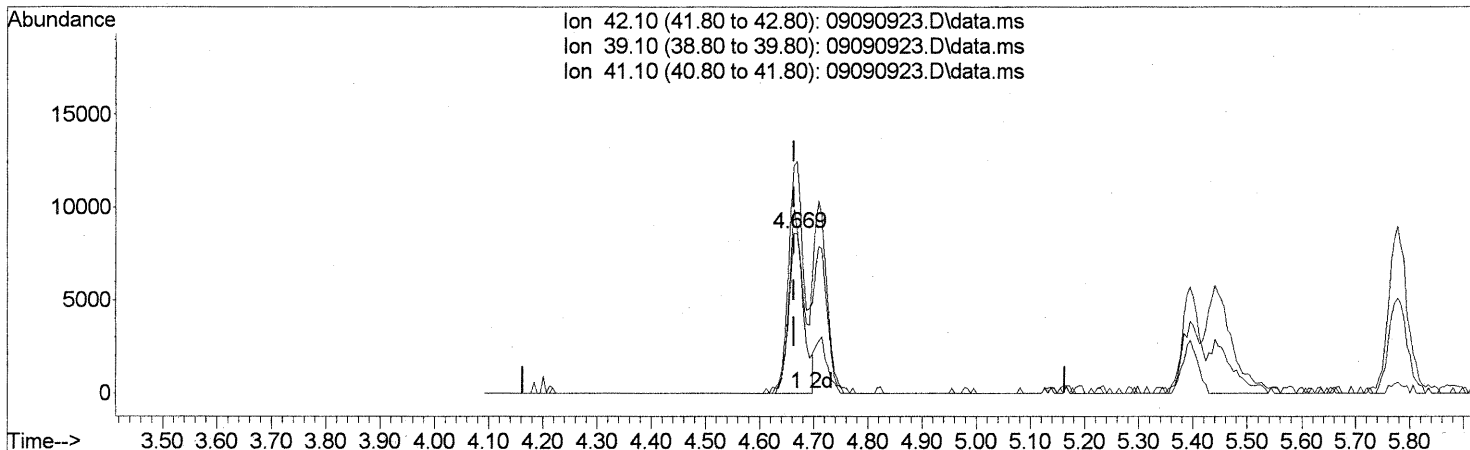
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.50	118	4094	0.139	ng	# 67
81) 2-Ethyltoluene	24.55	105	8195	0.117	ng	86
82) 1,2,4-Trimethylbenzene	24.82	105	23745	<del>0.416</del>	ng	87
83) n-Decane	24.93	57	17896	0.525	ng	80
84) Benzyl Chloride	25.00	91	2324	N.D.		
85) 1,3-Dichlorobenzene	25.02	146	665	N.D.		
86) 1,4-Dichlorobenzene	25.10	146	2641	0.082	ng	88
87) sec-Butylbenzene	25.16	105	2110	N.D.		
88) 4-Isopropyltoluene (p-...	25.34	119	56698	0.806	ng	99
89) 1,2,3-Trimethylbenzene	25.35	105	10532	0.176	ng	# 57
90) 1,2-Dichlorobenzene	25.52	146	91	N.D.		
91) d-Limonene	25.52	68	117190	5.138	ng	# 75
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.45	57	14152	0.400	ng	72
94) 1,2,4-Trichlorobenzene	27.58	180	840	N.D.		
95) Naphthalene	27.72	128	19200	<del>0.243</del>	ng	99
96) n-Dodecane	27.69	57	20042	0.497	ng	90
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.29	55	72447	3.058	ng	94
99) tert-Butylbenzene	24.73	119	4097	0.074	ng	92
100) n-Butylbenzene	25.91	91	4011	0.063	ng	# 65

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
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 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

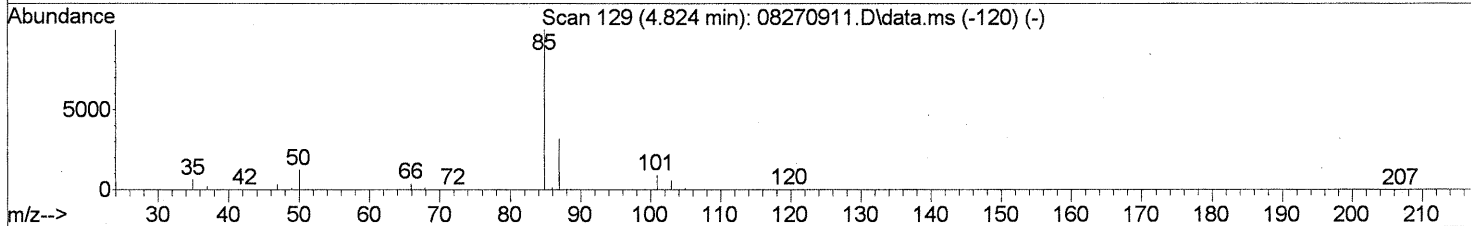
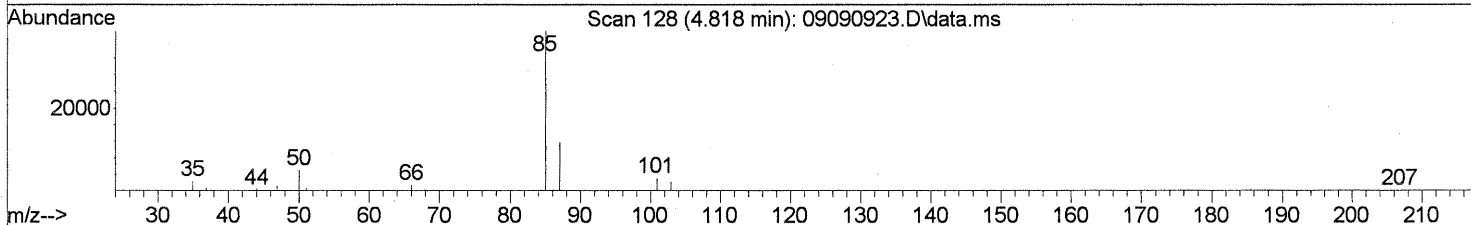
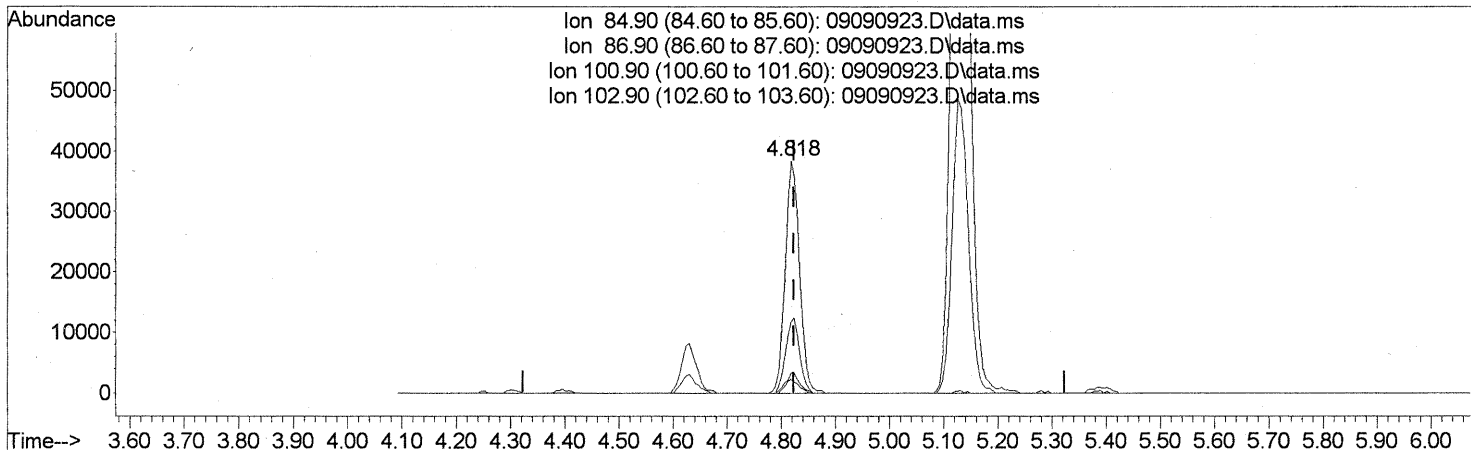
(2) Propene (T)  
 4.669min (+0.006) 0.92ng  
 response 16935

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	107.61
41.10	149.80	144.56
0.00	0.00	0.00

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Data Path : J:\MS13\DATA\2009\_09\09\  
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TIC: 09090923.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.818min (-0.006) 2.18ng

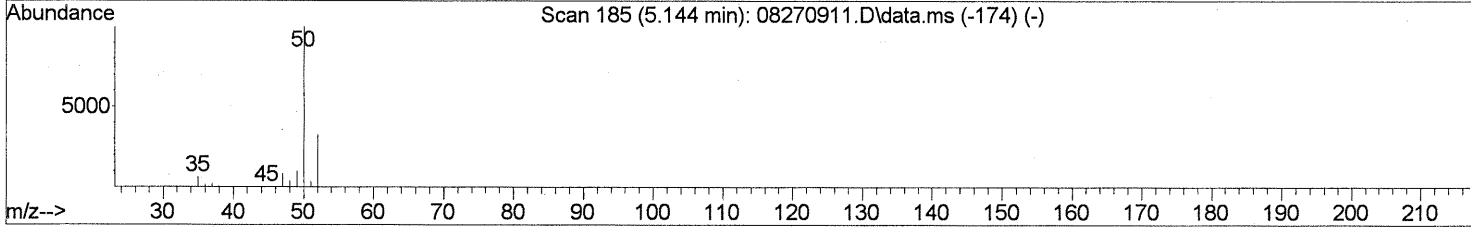
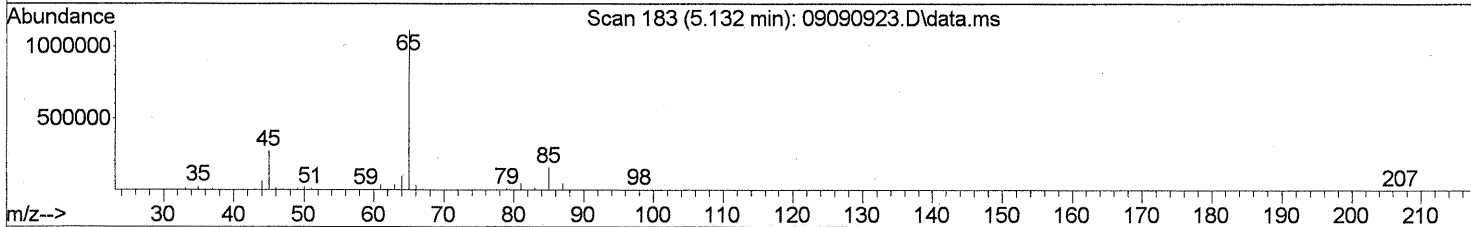
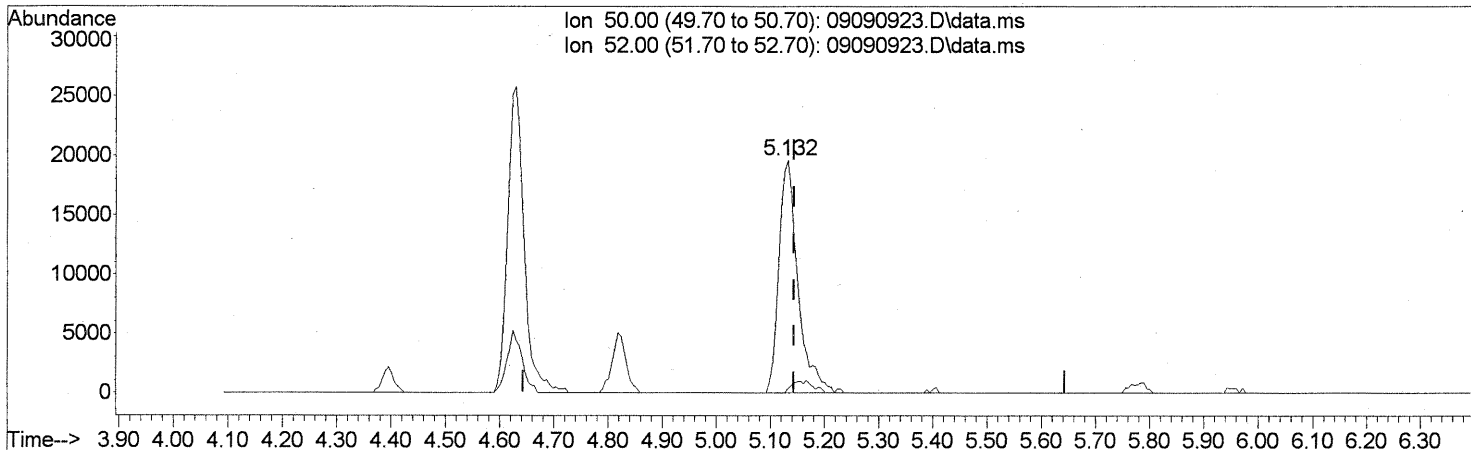
response 70489

Ion	Exp%	Act%
84.90	100	100
86.90	32.00	31.31
100.90	8.80	8.36
102.90	5.60	5.36

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

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TIC: 09090923.D\data.ms

(4) Chloromethane (T)  
 5.132min (-0.012) 2.19ng  
 response 47600

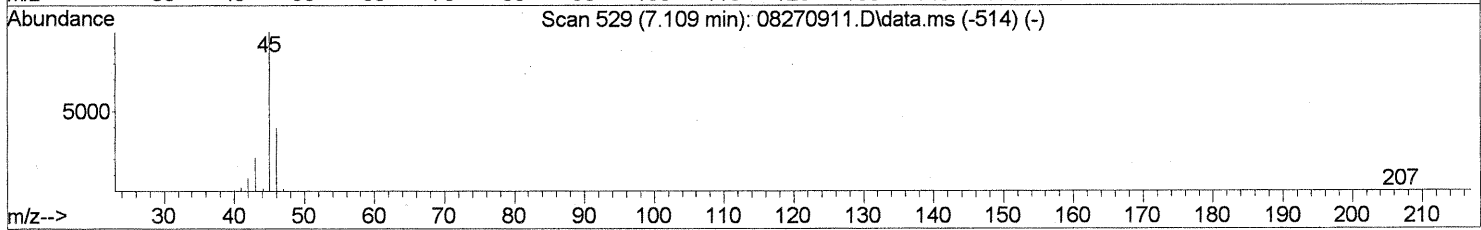
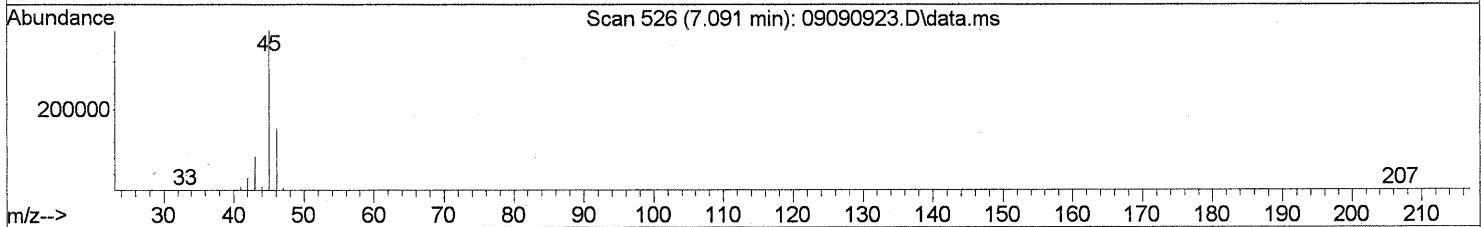
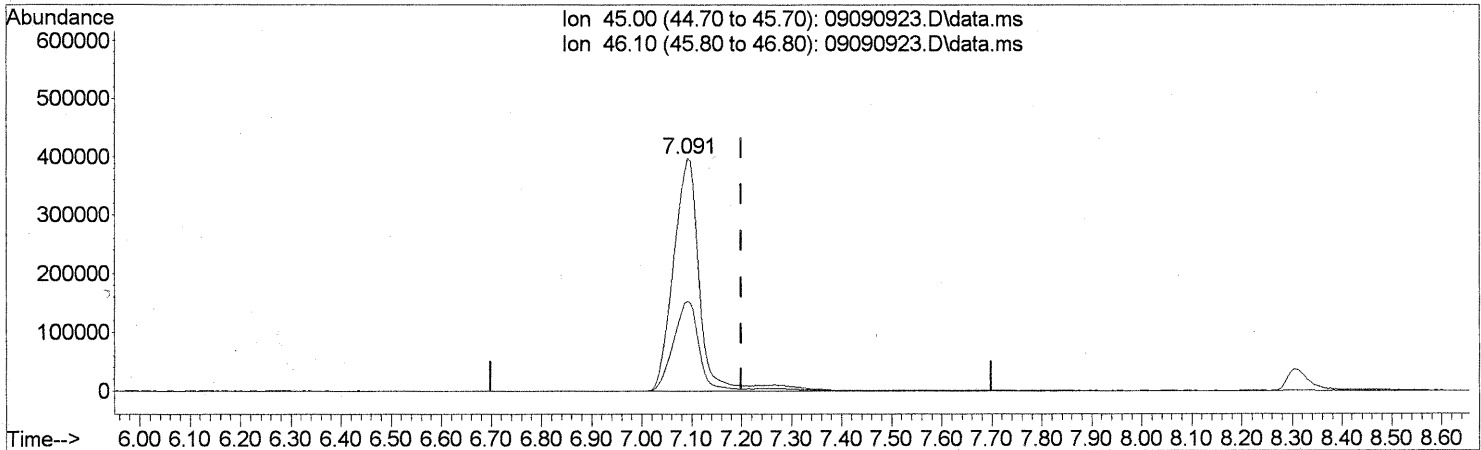
Ion	Exp%	Act%
50.00	100	100
52.00	31.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*11/15/09*  
*9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
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TIC: 09090923.D\data.ms

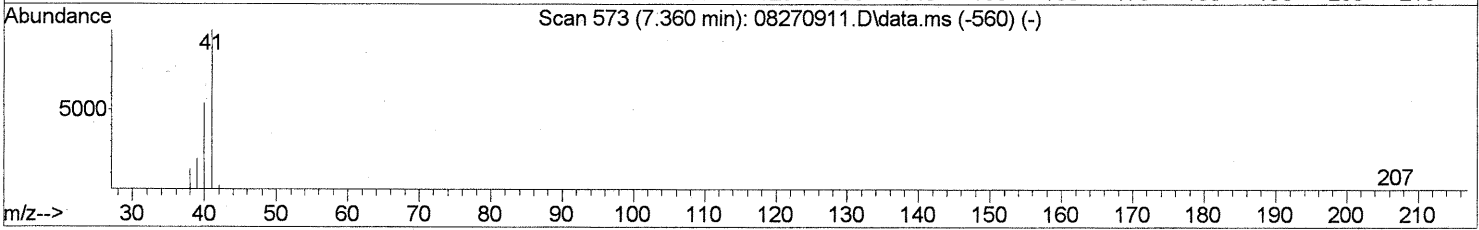
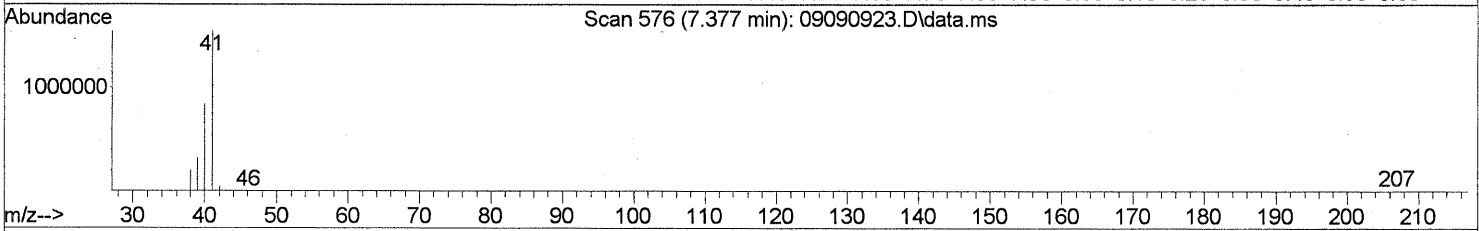
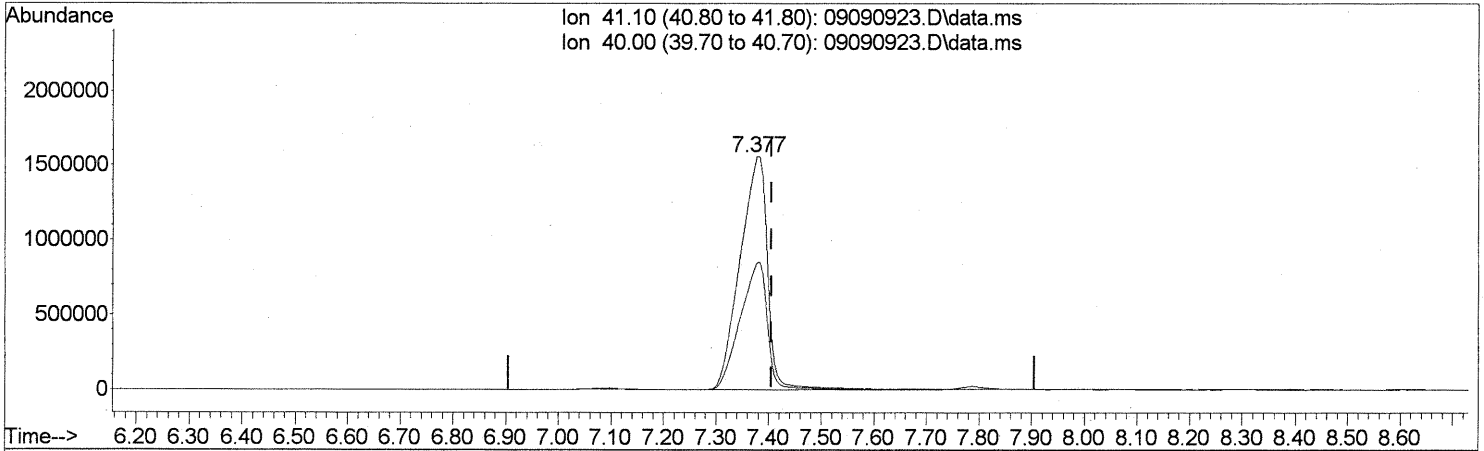
(10) Ethanol (T)  
 7.091min (-0.109) 127.38ng  
 response 1459675

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	38.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
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Quant Time: Sep 10 08:30:34 2009  
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 QLast Update : Fri Aug 28 06:02:46 2009  
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TIC: 09090923.D\data.ms

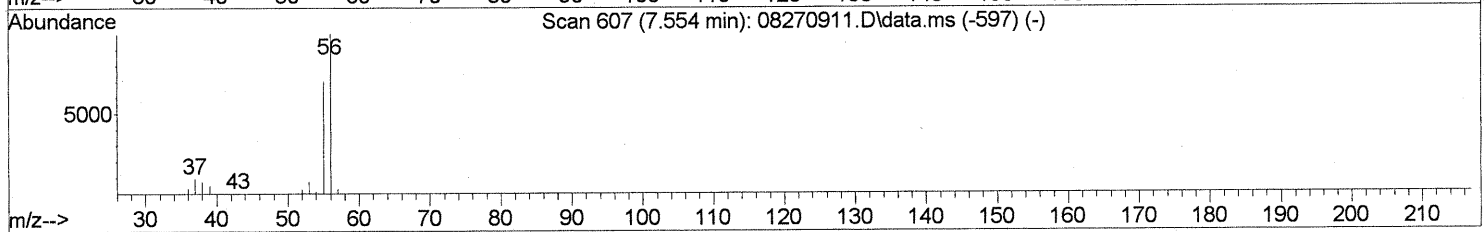
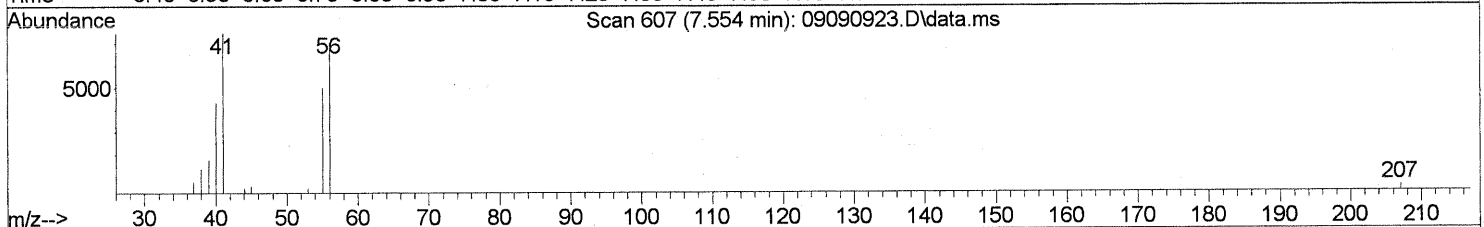
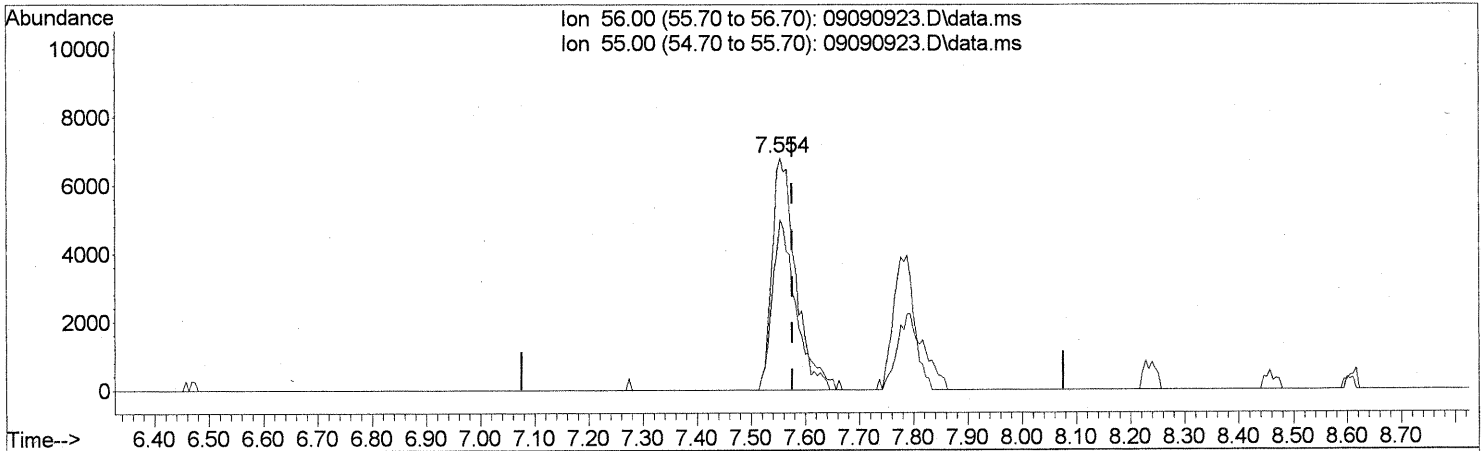
(11) Acetonitrile (T)  
 7.377min (-0.029) 177.75ng  
 response 5657598

Ion	Exp%	Act%
41.10	100	100
40.00	53.70	54.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
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TIC: 09090923.D\data.ms

(12) Acrolein (T)  
 7.554min (-0.023) 2.38ng  
 response 20825

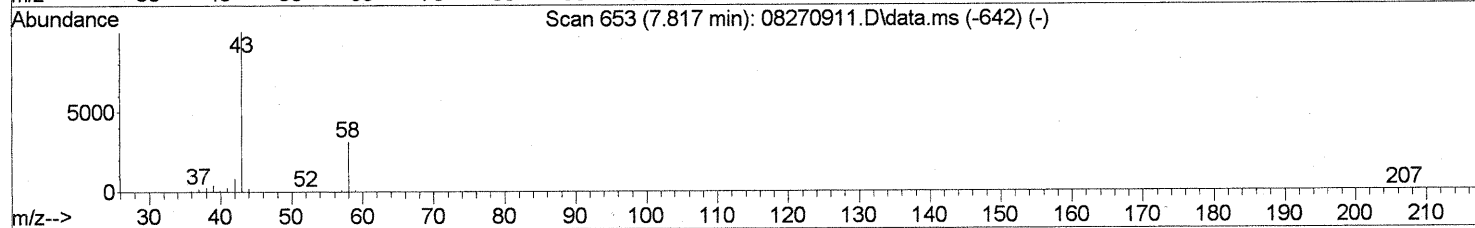
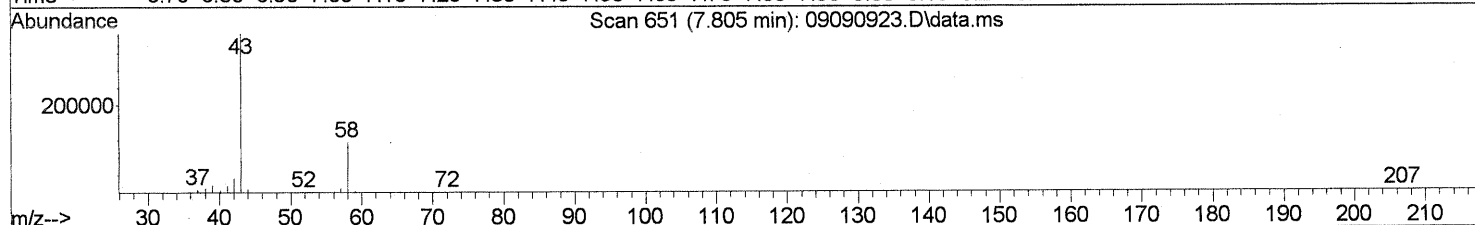
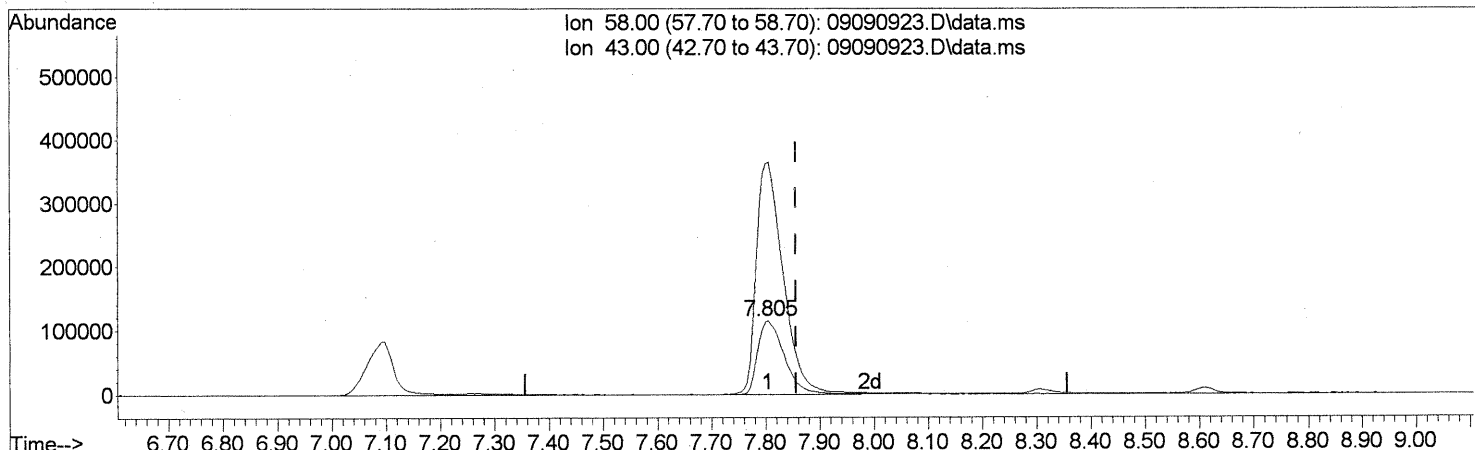
Ion	Exp%	Act%
56.00	100	100
55.00	71.10	71.22
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

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Quant Time: Sep 10 08:30:34 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

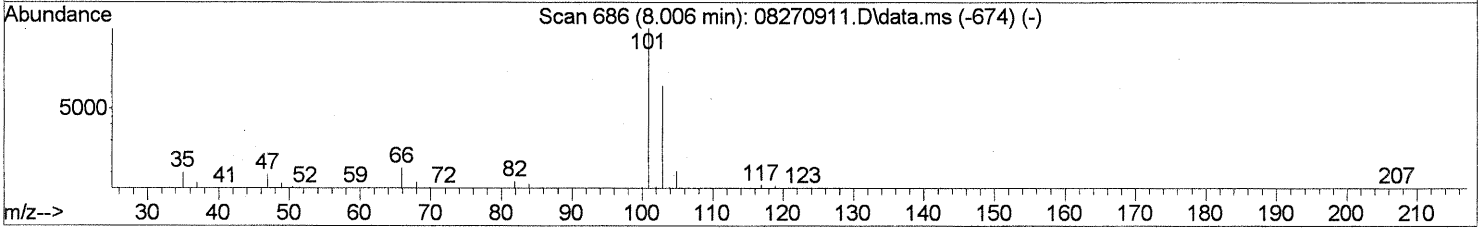
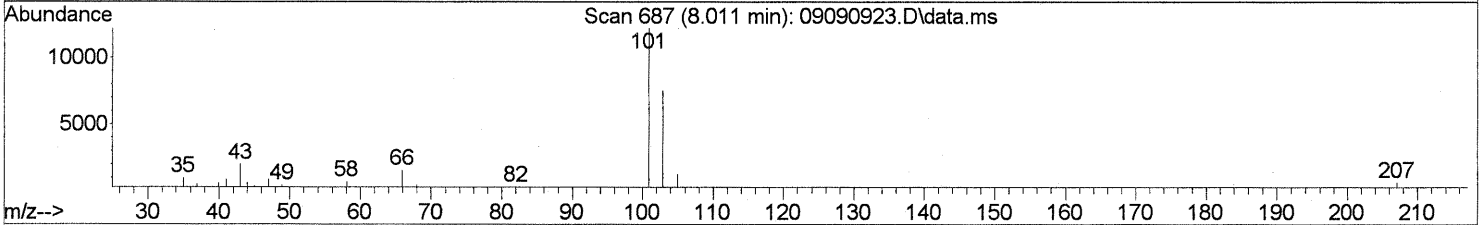
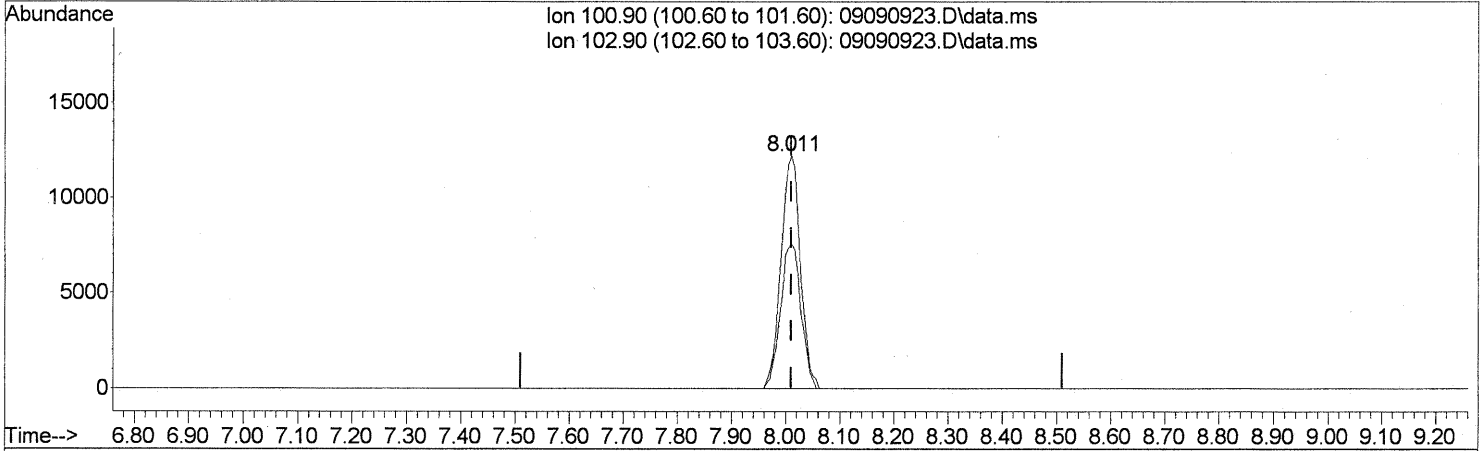
(13) Acetone (T)  
 7.805min (-0.052) 33.16ng  
 response 393019

Ion	Exp%	Act%
58.00	100	100
43.00	331.30	324.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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TIC: 09090923.D\data.ms

(14) Trichlorofluoromethane (T)

8.011min (-0.000) 1.07ng

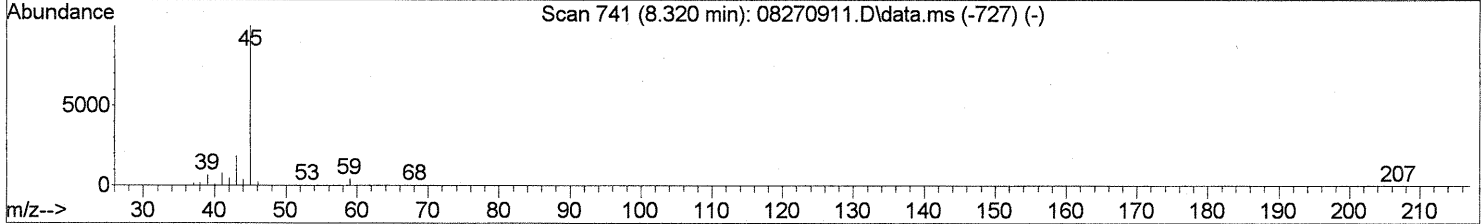
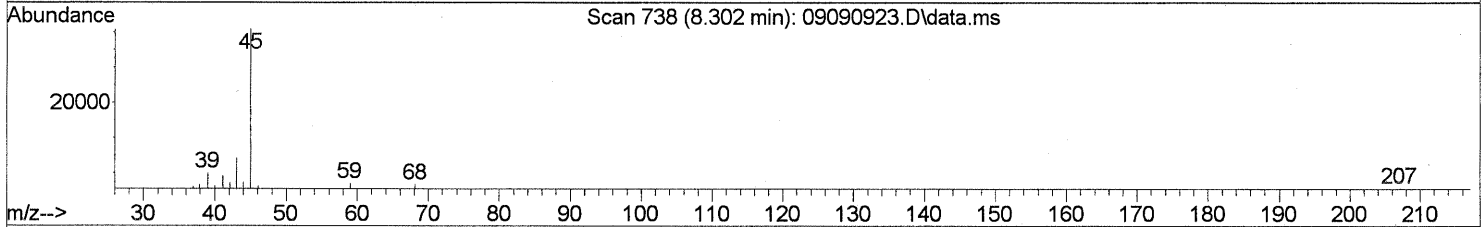
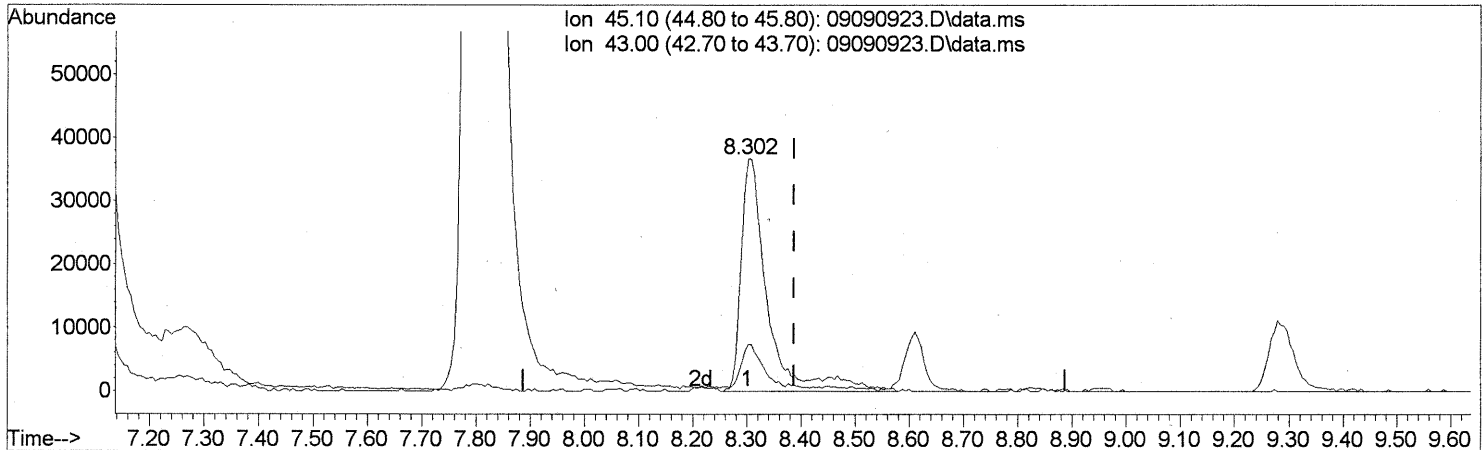
response 30413

Ion	Exp%	Act%
100.90	100	100
102.90	66.10	65.24
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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TIC: 09090923.D\data.ms

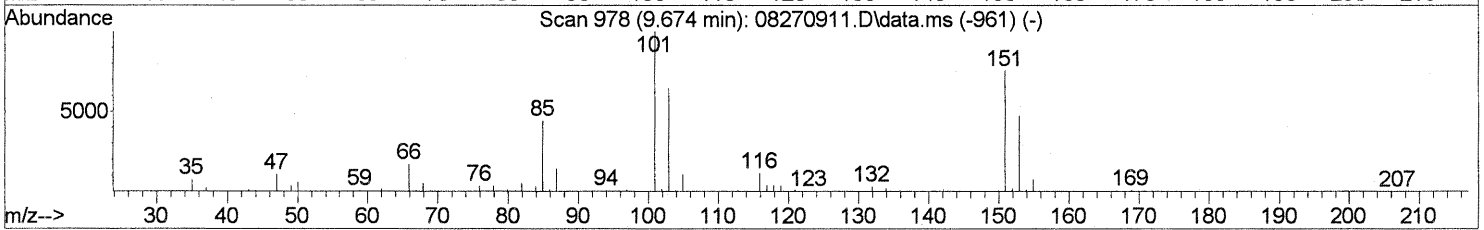
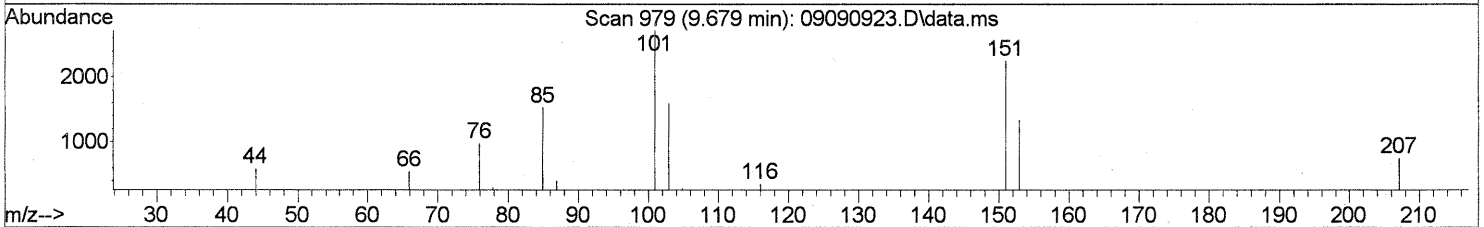
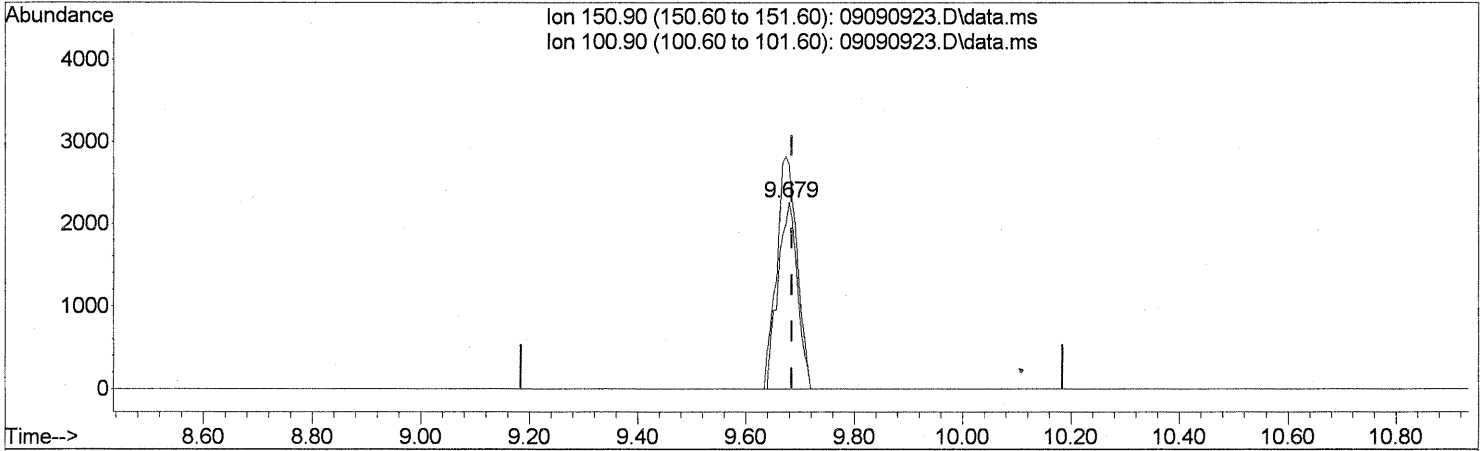
(15) 2-Propanol (Isopropanol) (T)  
 8.302min (-0.086) 3.16ng  
 response 124305

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	17.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
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TIC: 09090923.D\data.ms

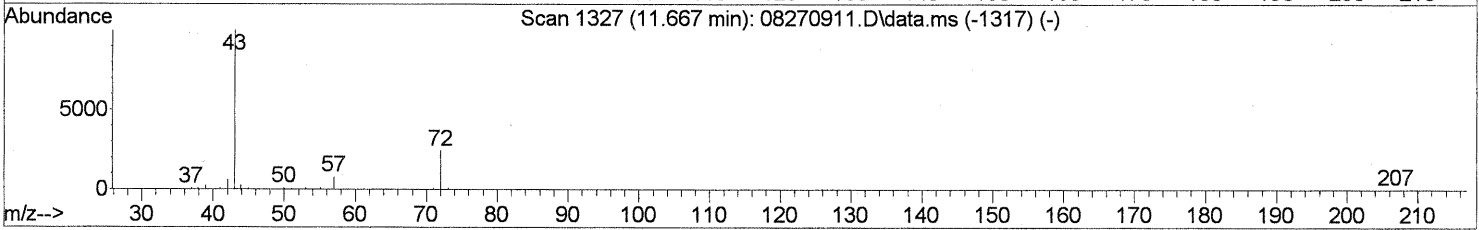
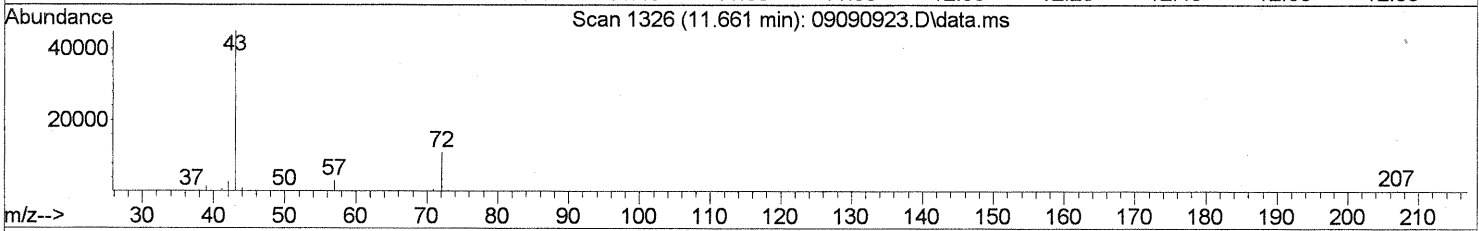
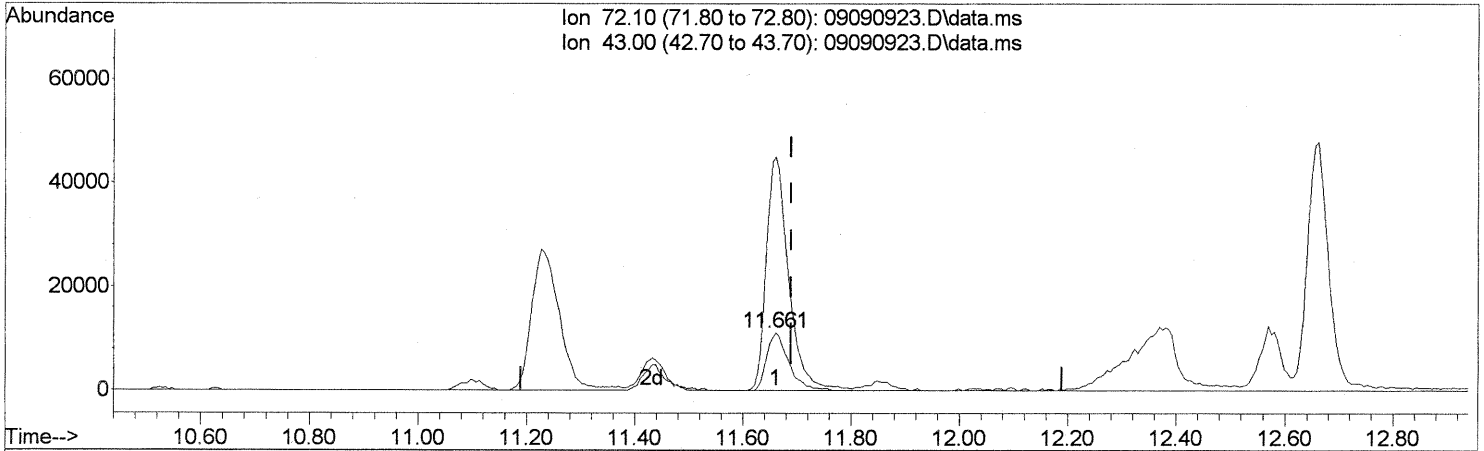
(21) Trichlorotrifluoroethane (T)  
 9.679min (-0.006) 0.49ng  
 response 5584

Ion	Exp%	Act%
150.90	100	100
100.90	138.30	131.20
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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 Response via : Initial Calibration



TIC: 09090923.D\data.ms

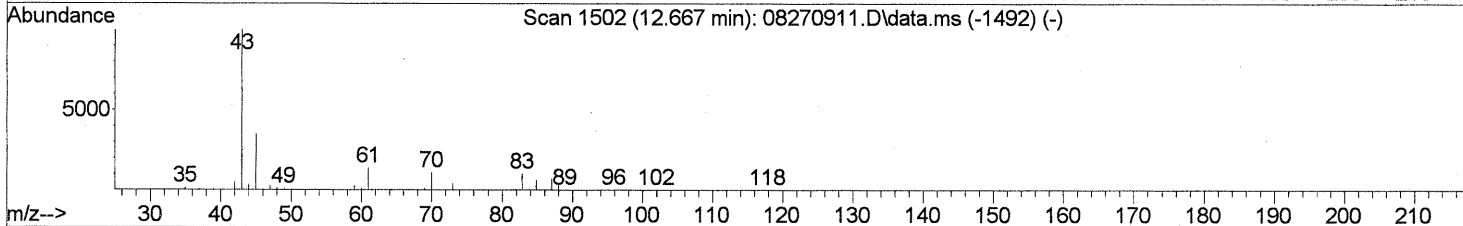
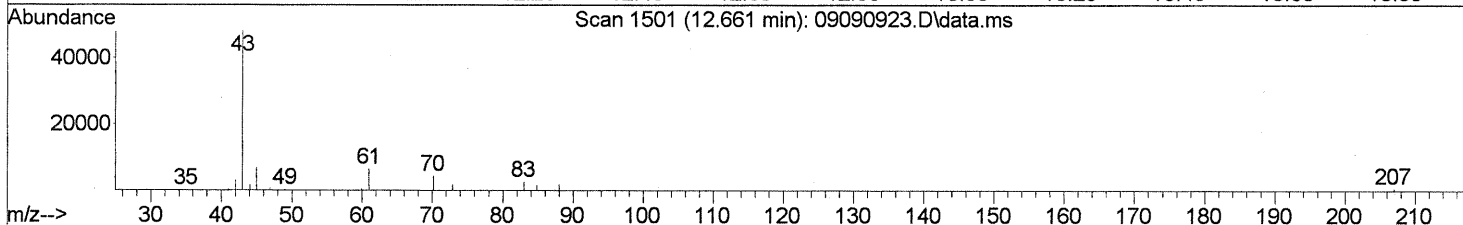
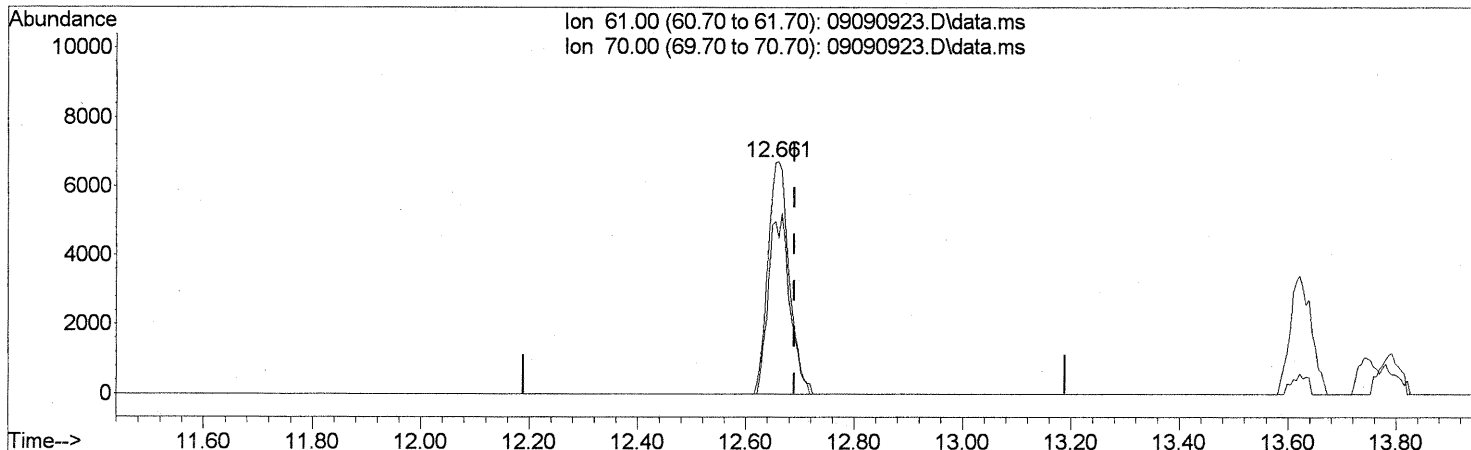
(27) 2-Butanone (MEK) (T)  
 11.661min (-0.029) 3.26ng  
 response 31211

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	413.74
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

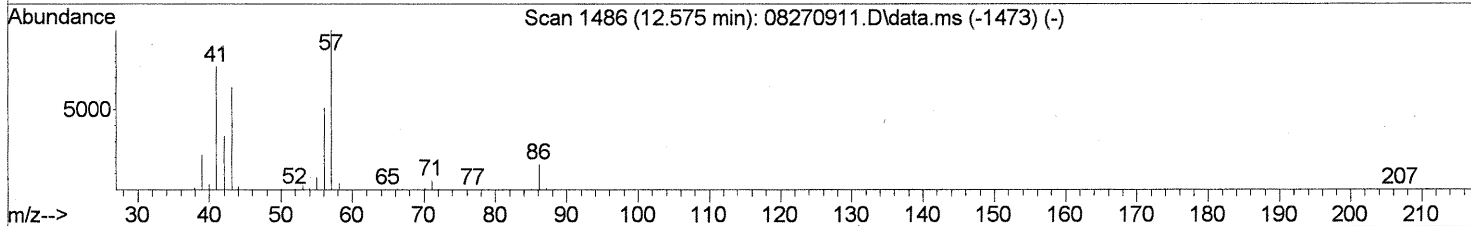
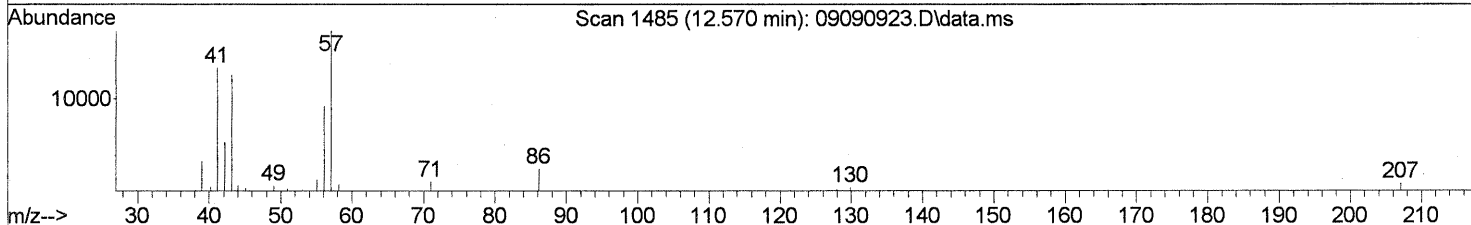
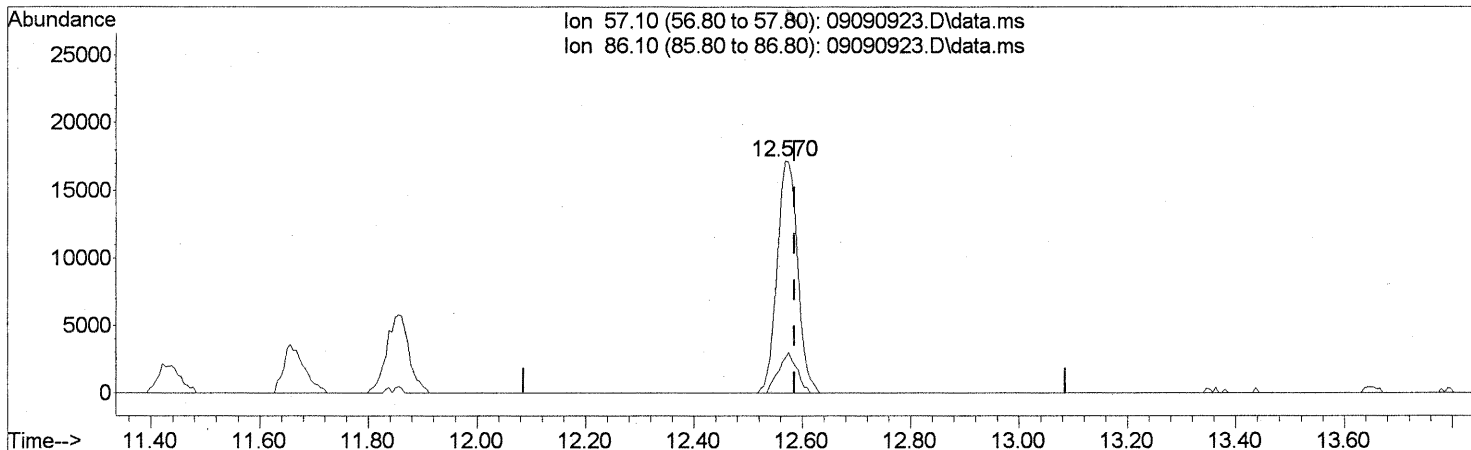
(30) Ethyl Acetate (T)  
 12.661min (-0.029) 3.53ng  
 response 18149

Ion	Exp%	Act%
61.00	100	100
70.00	78.70	77.37
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

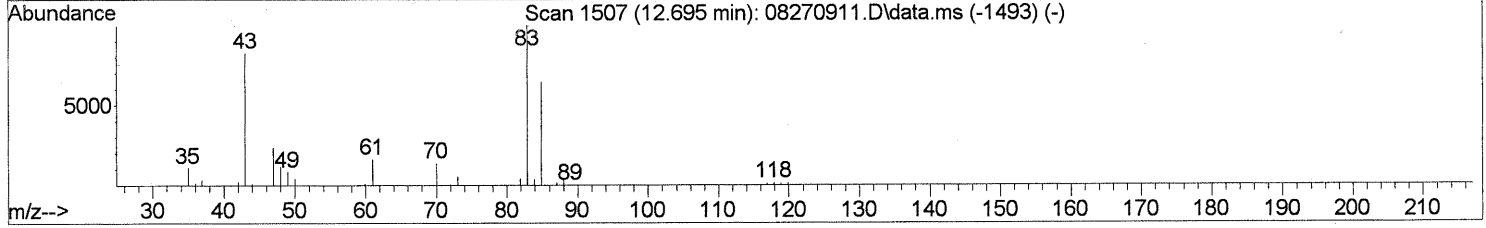
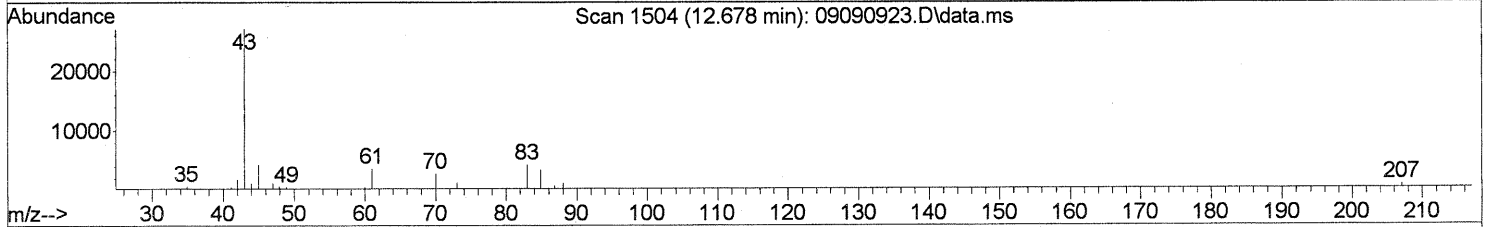
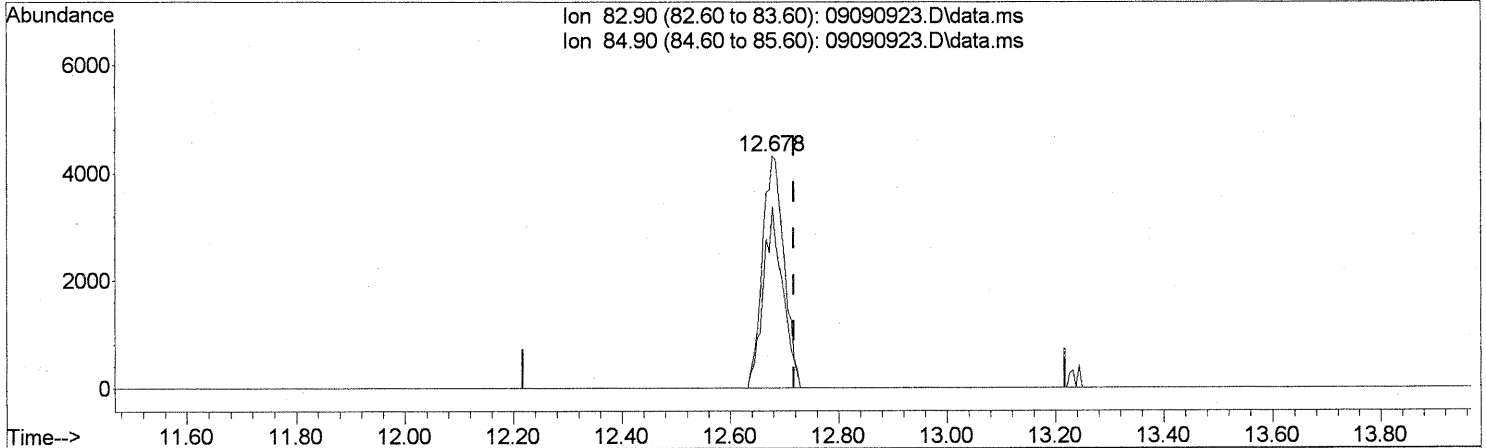
(31) n-Hexane (T)  
 12.570min (-0.017) 1.76ng  
 response 45074

Ion	Exp%	Act%
57.10	100	100
86.10	15.40	15.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(32) Chloroform (T)  
 12.678min (-0.040) 0.47ng  
 response 11961

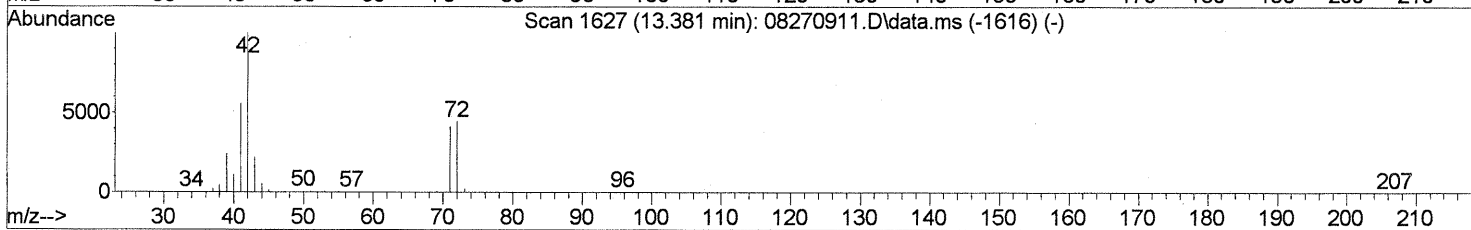
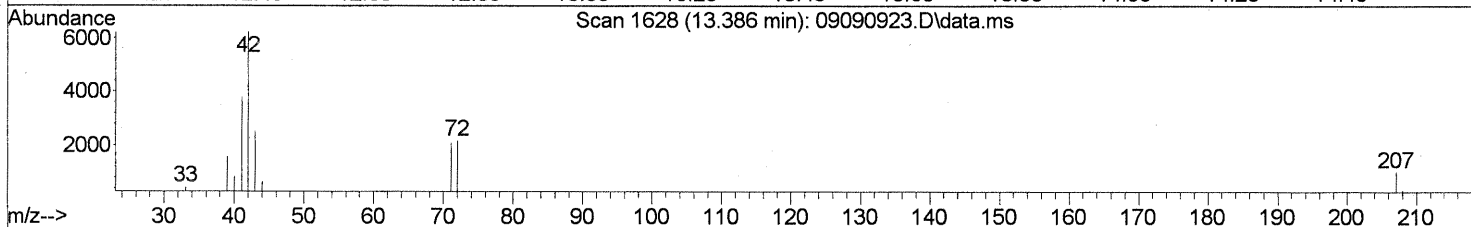
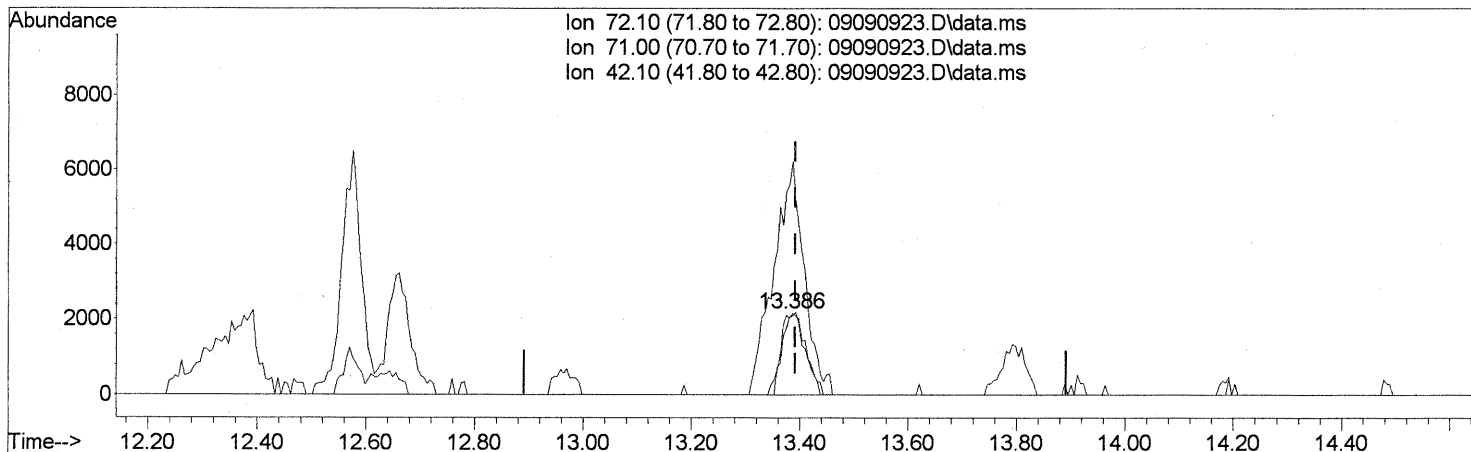
Ion	Exp%	Act%
82.90	100	100
84.90	62.60	70.60
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(34) Tetrahydrofuran (THF) (T)

13.386min (-0.006) 0.67ng

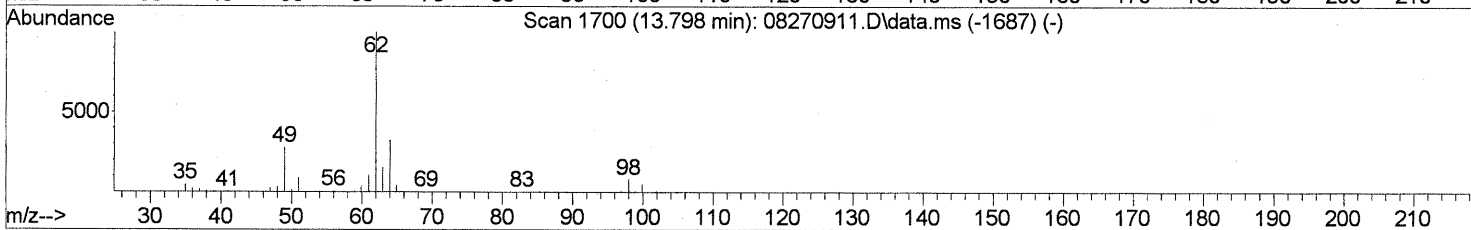
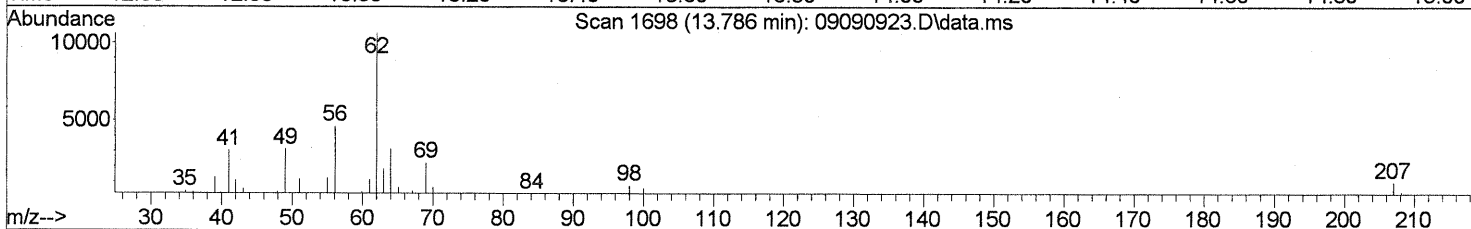
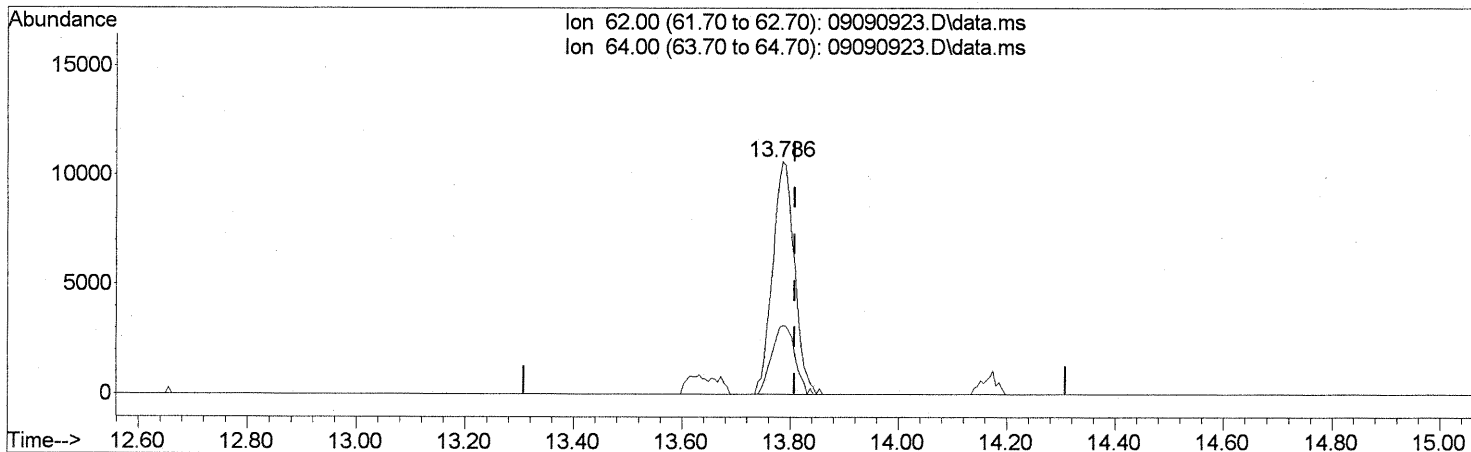
response 7002

Ion	Exp%	Act%
72.10	100	100
71.00	92.50	88.75
42.10	254.10	346.36#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(36) 1,2-Dichloroethane (T)

13.786min (-0.023) 1.41ng

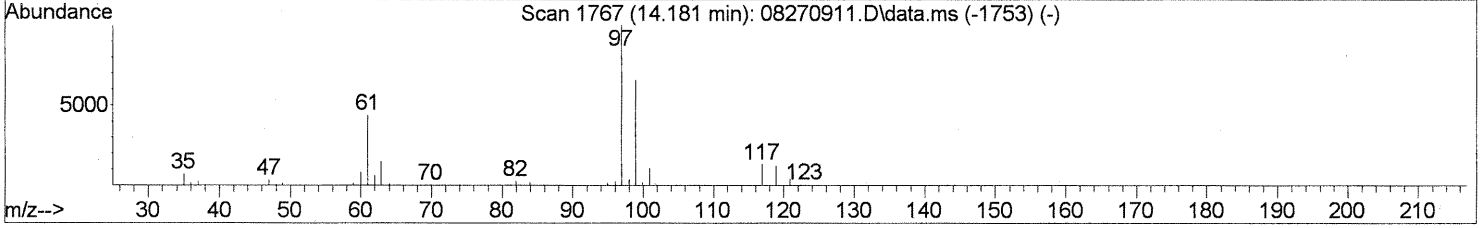
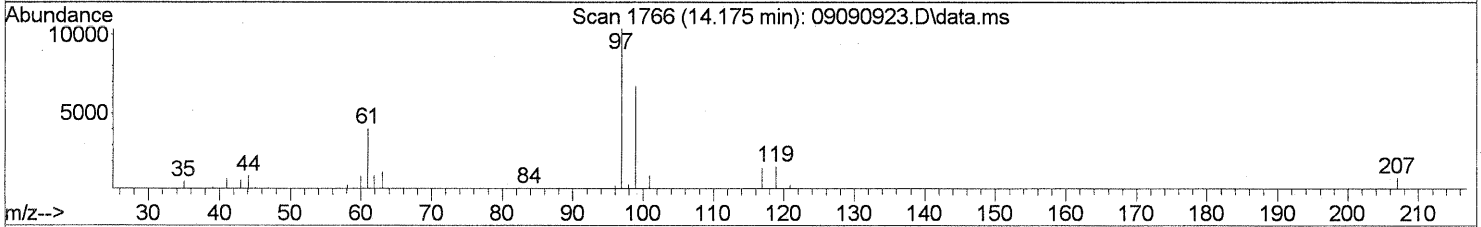
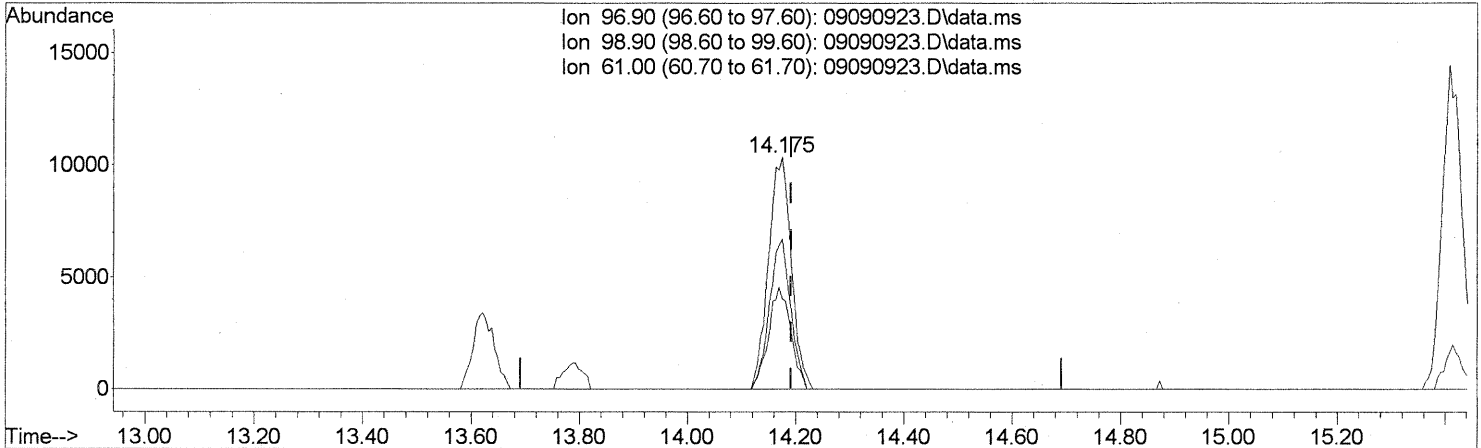
response 29970

Ion	Exp%	Act%
62.00	100	100
64.00	33.10	31.23
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 15 14:45:41 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

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

14.175min (-0.017) 1.27ng

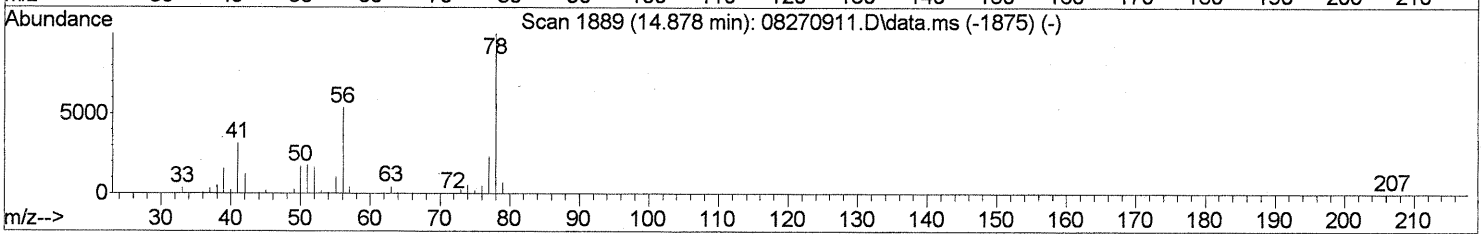
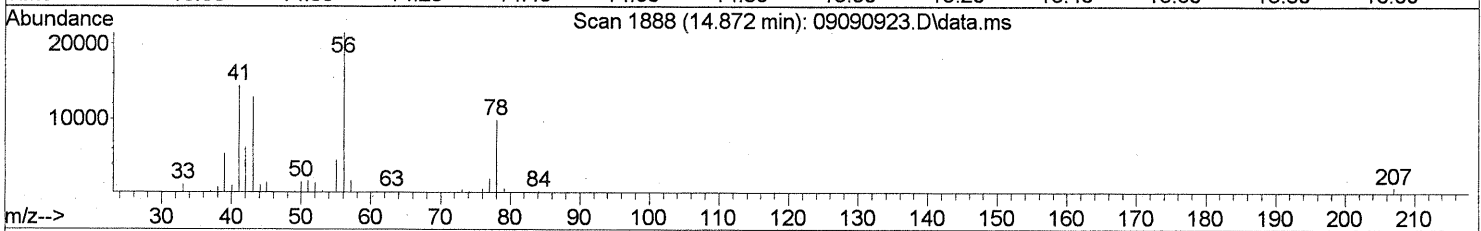
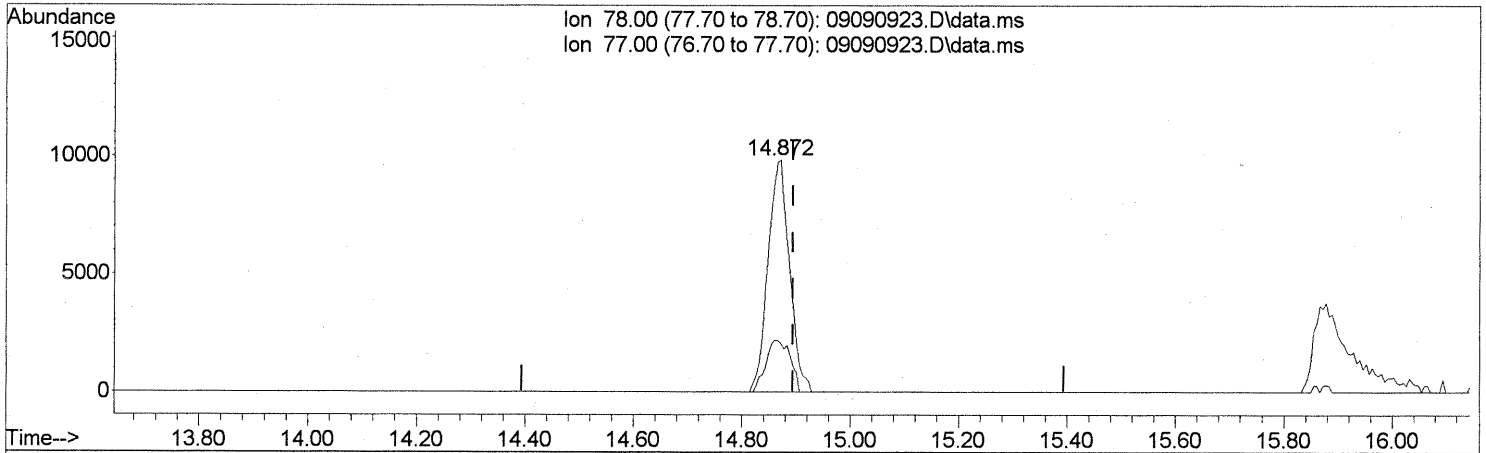
response 30252

Ion	Exp%	Act%
96.90	100	100
98.90	63.10	60.11
61.00	46.50	42.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

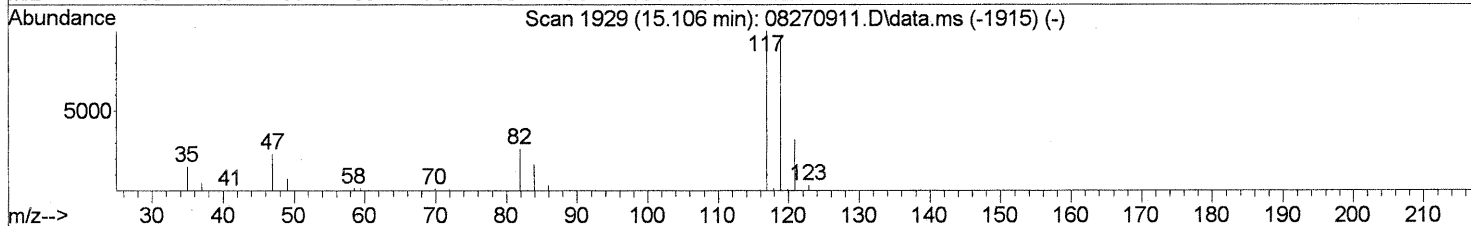
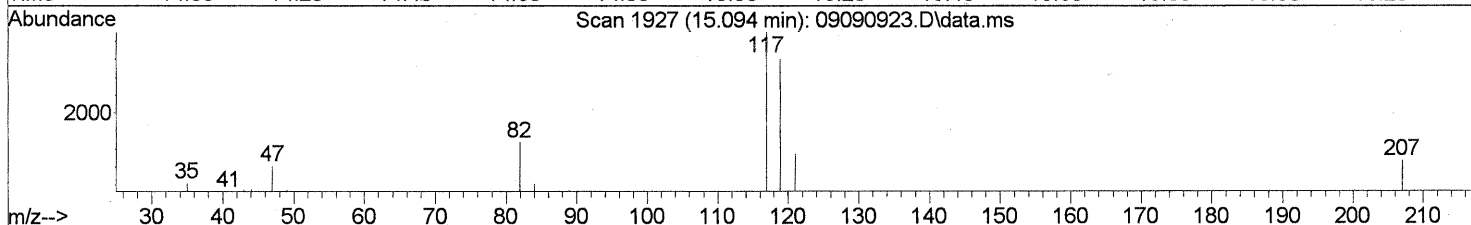
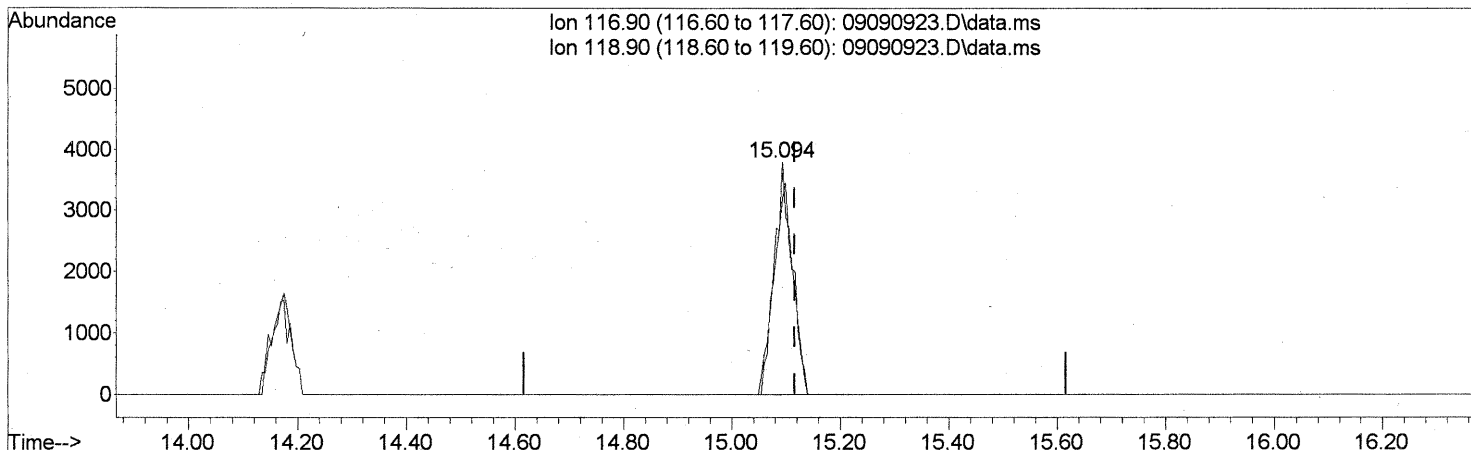
(41) Benzene (T)  
 14.872min (-0.023) 0.44ng  
 response 26888

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	25.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

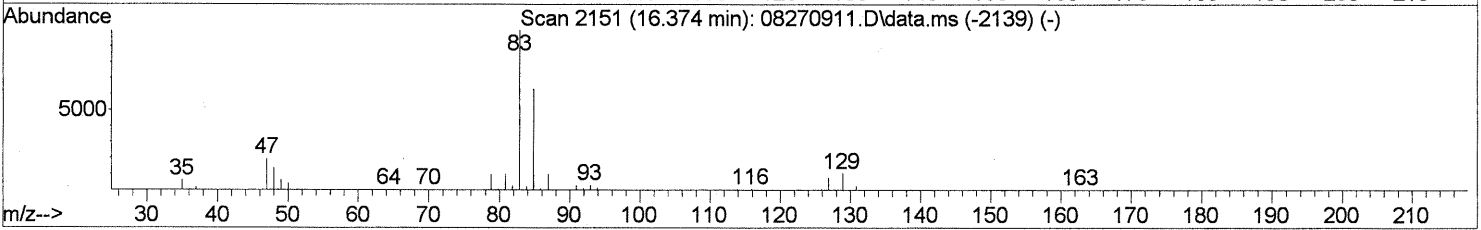
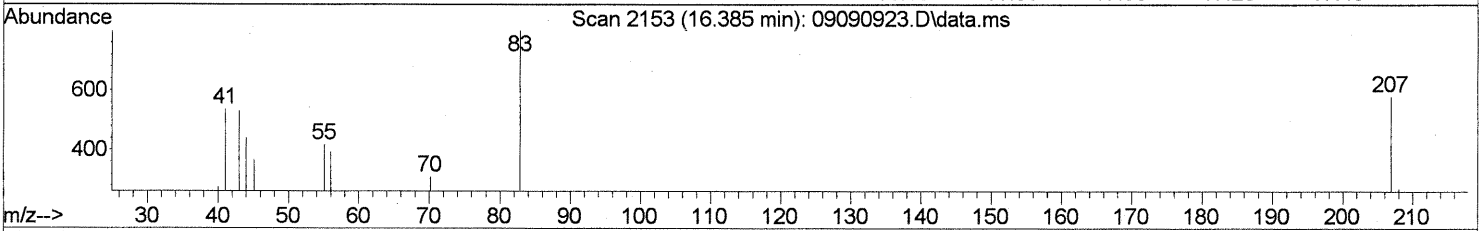
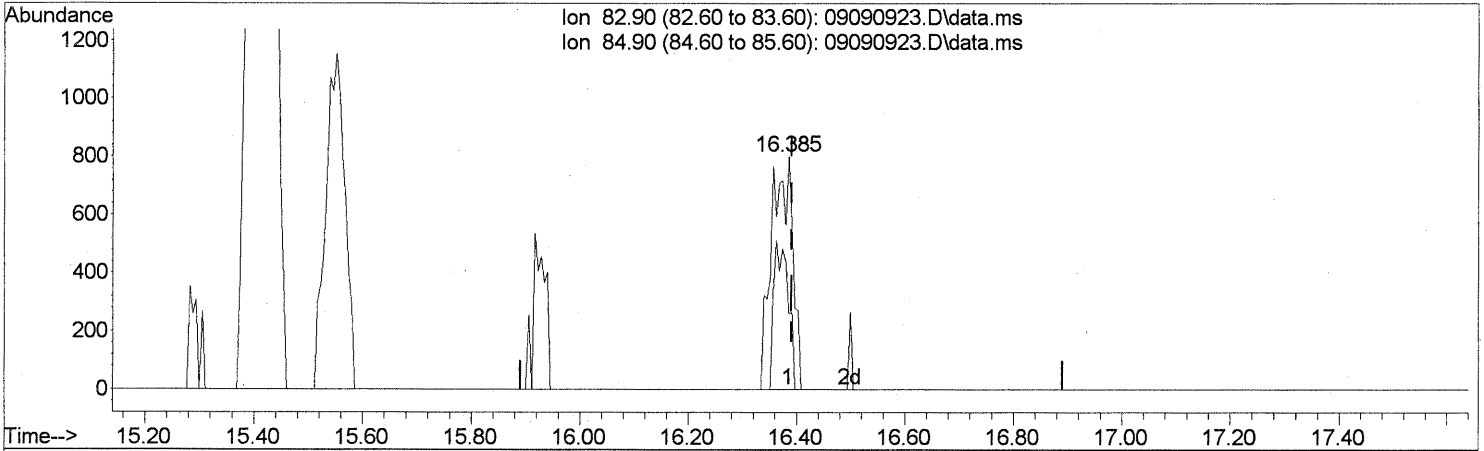
(42) Carbon Tetrachloride (T)  
 15.094min (-0.023) 0.44ng  
 response 8875

Ion	Exp%	Act%
116.90	100	100
118.90	96.20	95.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

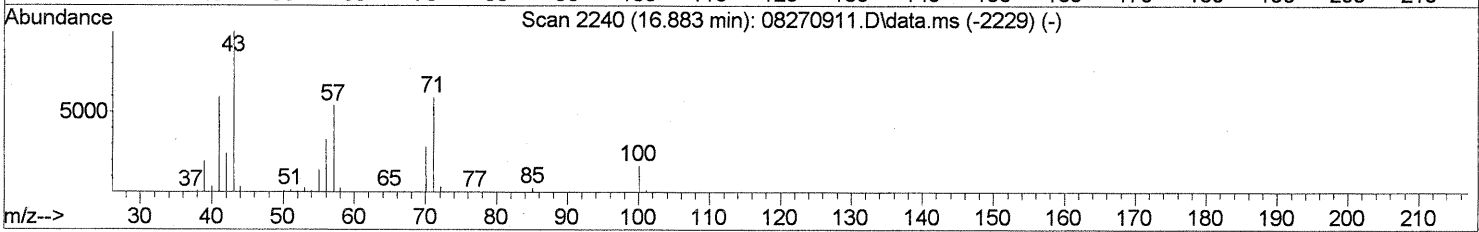
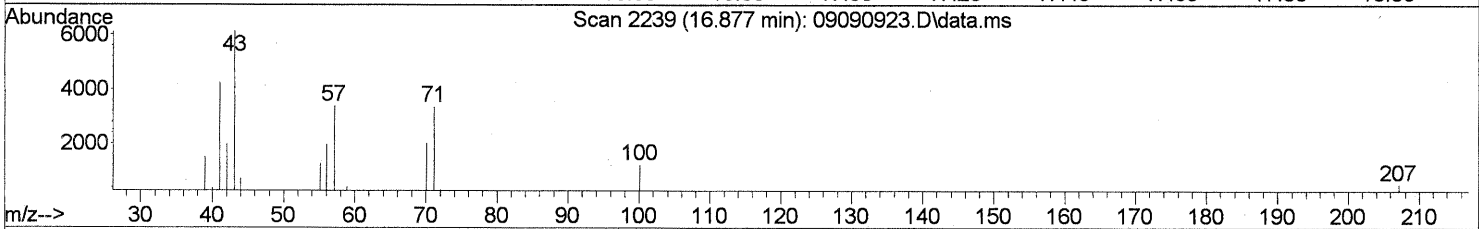
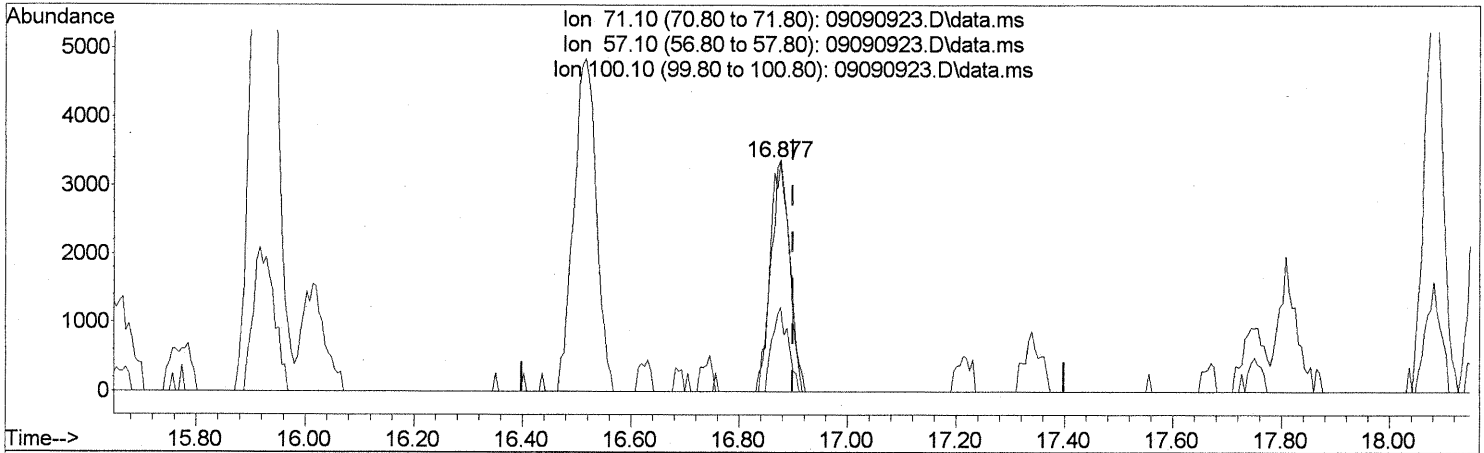
(46) Bromodichloromethane (T)  
 16.385min (-0.006) 0.11ng  
 response 2147

Ion	Exp%	Act%
82.90	100	100
84.90	64.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

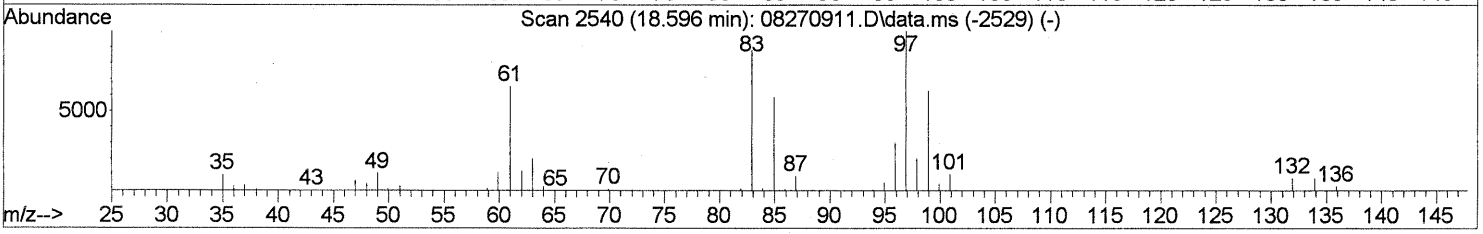
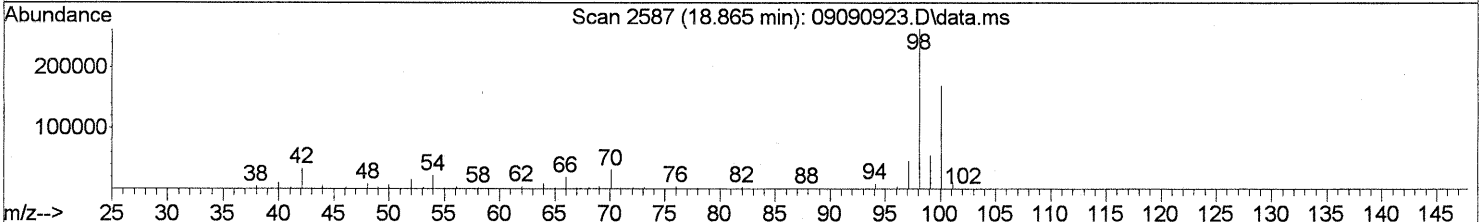
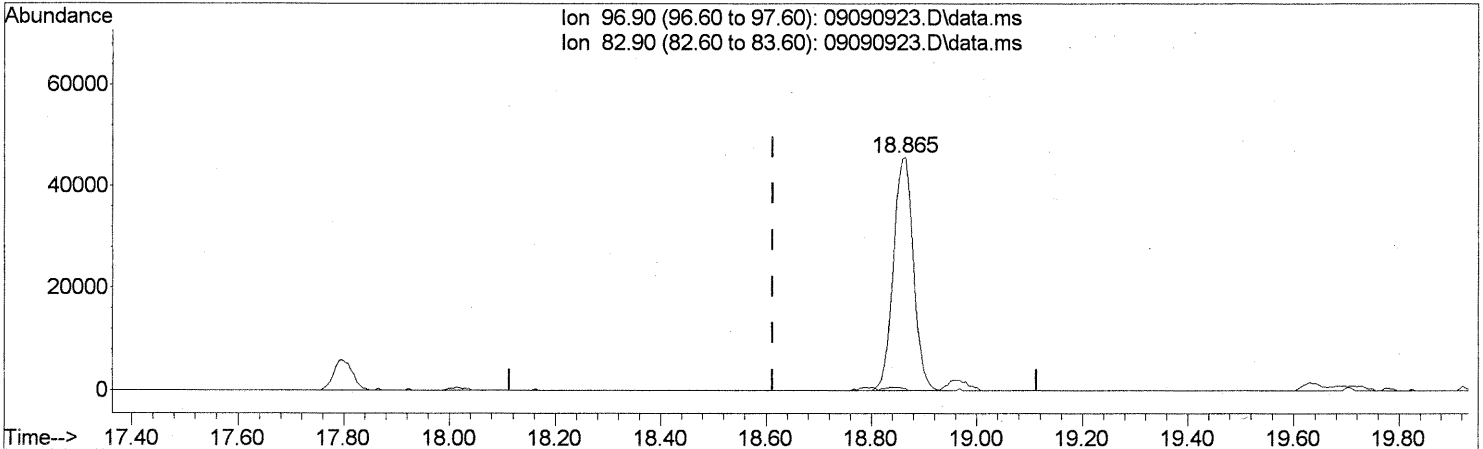
(51) n-Heptane (T)  
 16.877min (-0.023) 0.54ng  
 response 8396

Ion	Exp%	Act%
71.10	100	100
57.10	89.80	94.43
100.10	22.00	29.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(55) 1,1,2-Trichloroethane (T)  
 18.865min (+0.251) 8.52ng  
 response 120108

Ion	Exp%	Act%
96.90	100	100
82.90	87.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*mm 9/15/09*

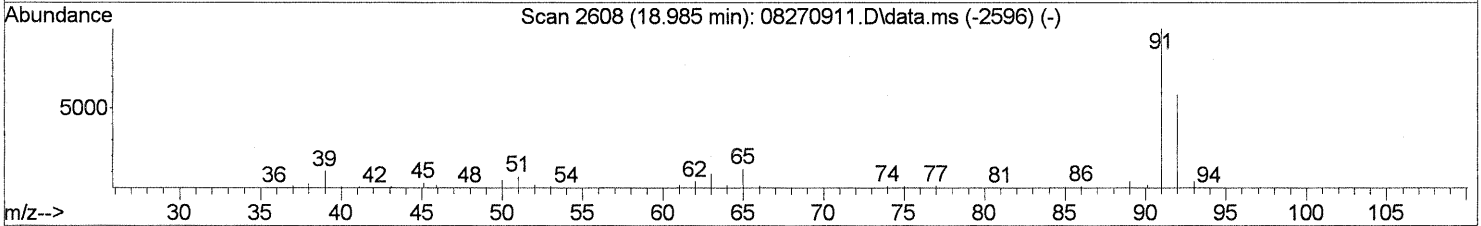
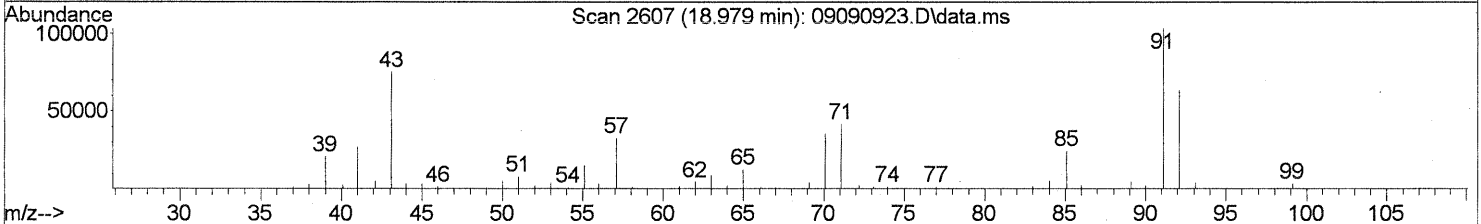
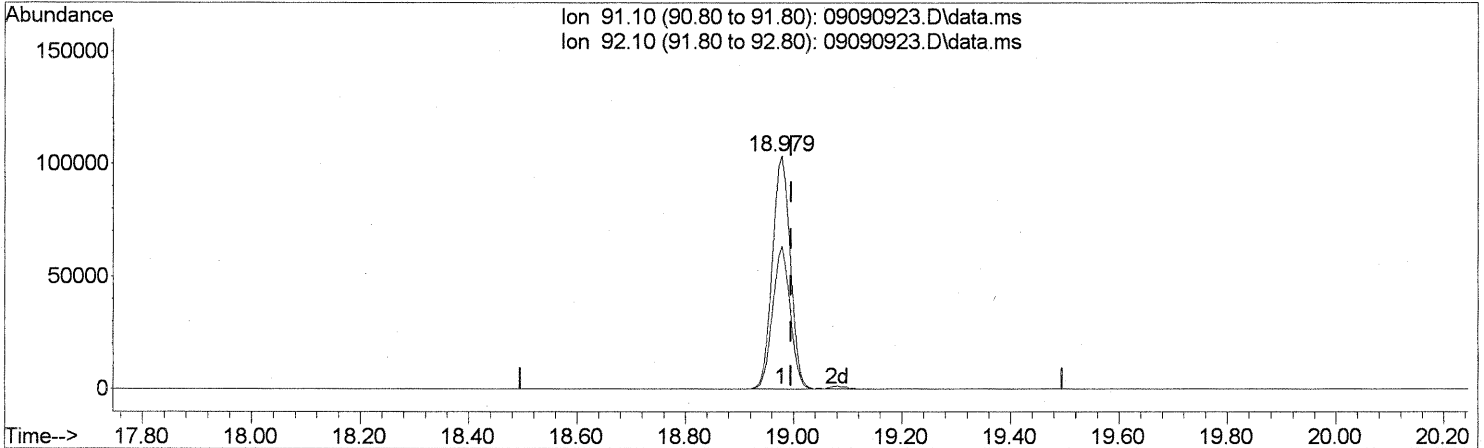
*E. 9/16/09*



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

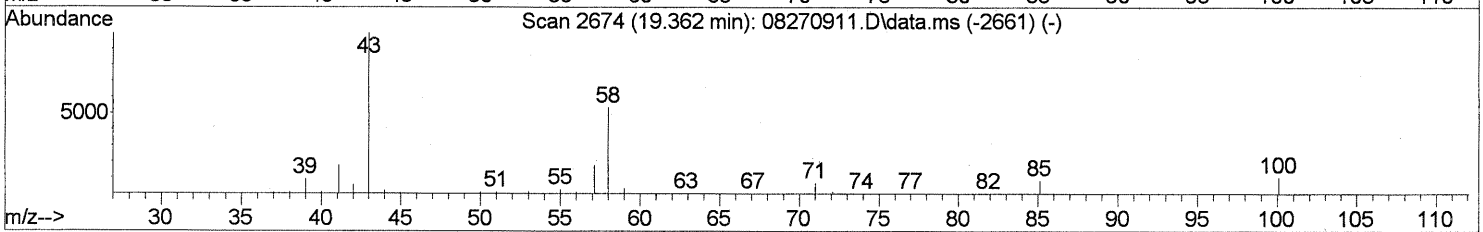
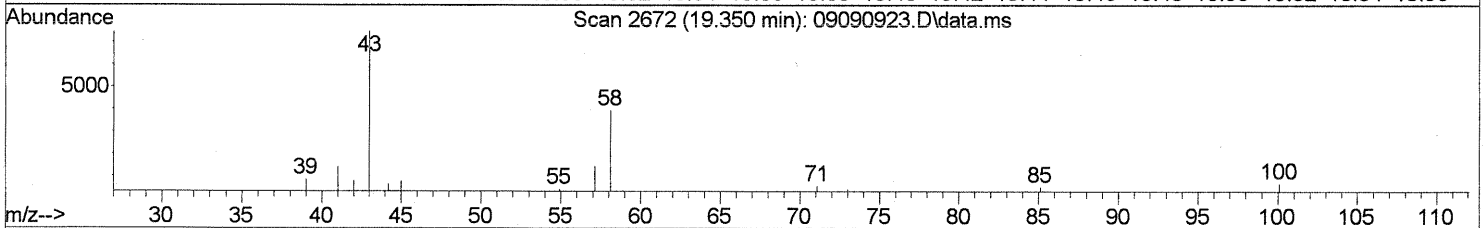
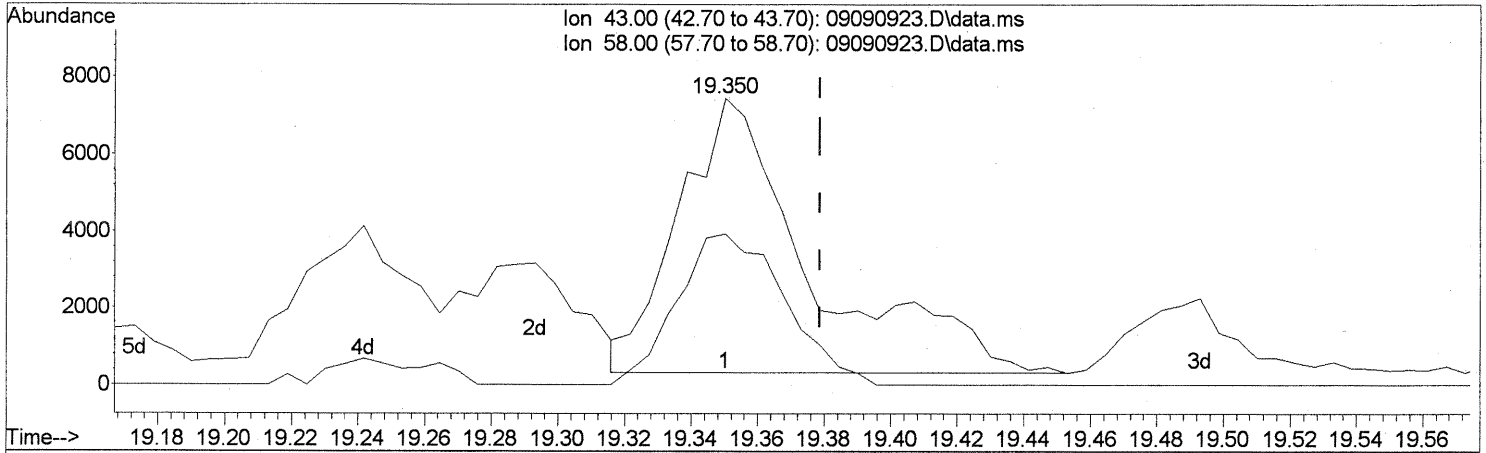
(58) Toluene (T)  
 18.979min (-0.017) 3.86ng  
 response 236859

Ion	Exp%	Act%
91.10	100	100
92.10	58.80	60.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(59) 2-Hexanone (T)  
 19.350min (-0.029) 0.53ng  
 response 19715

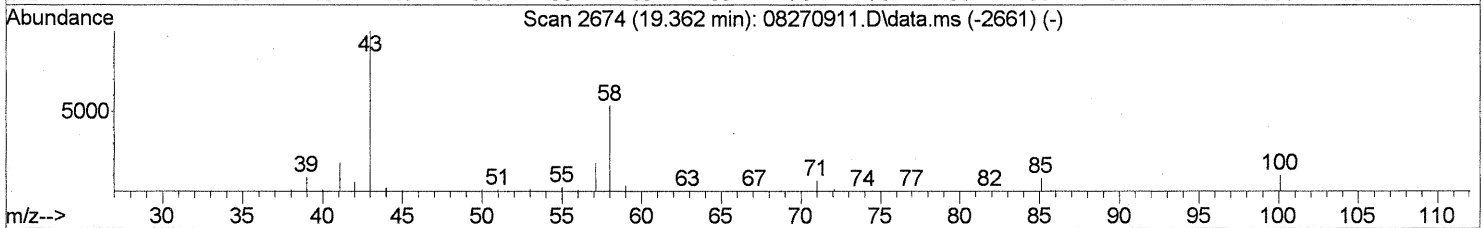
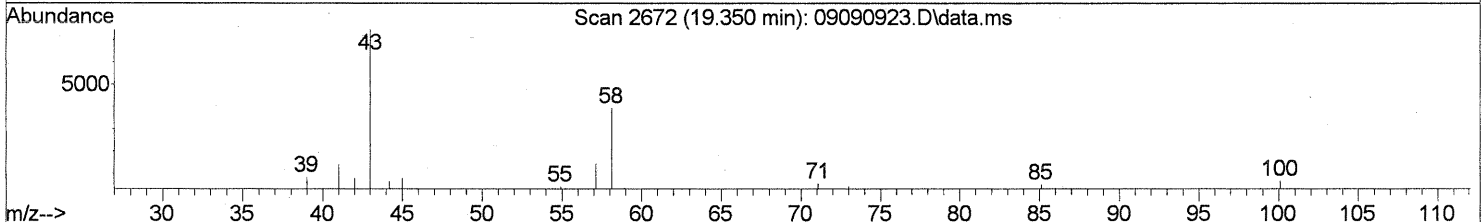
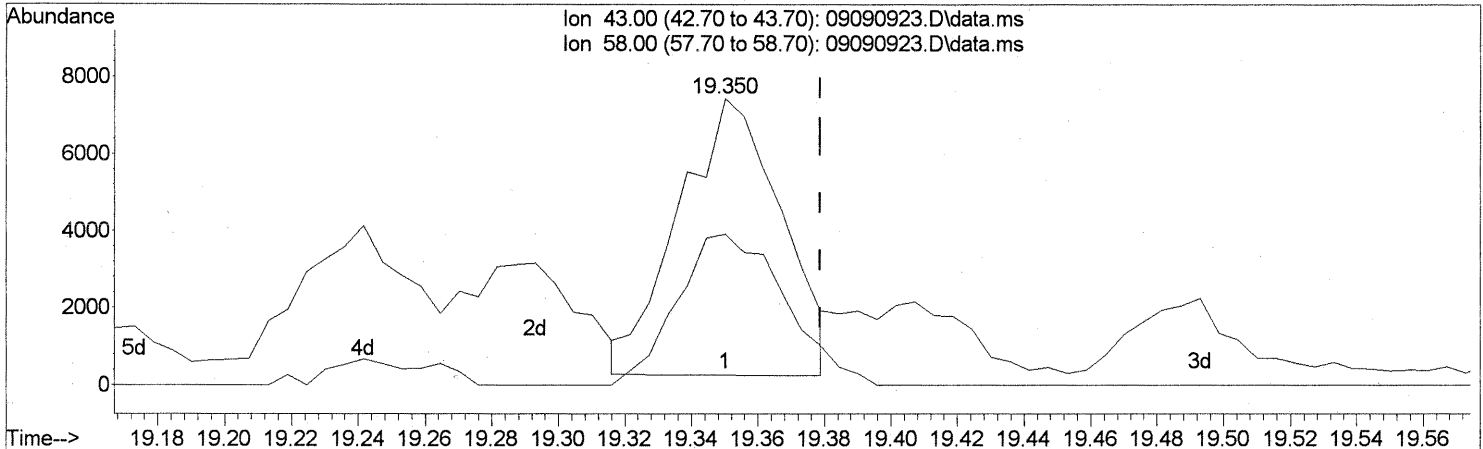
Ion	Exp%	Act%
43.00	100	100
58.00	51.70	44.81
0.00	0.00	0.00
0.00	0.00	0.00

*PT*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

(59) 2-Hexanone (T)  
 19.350min (-0.029) 0.41ng m  
 response 15348

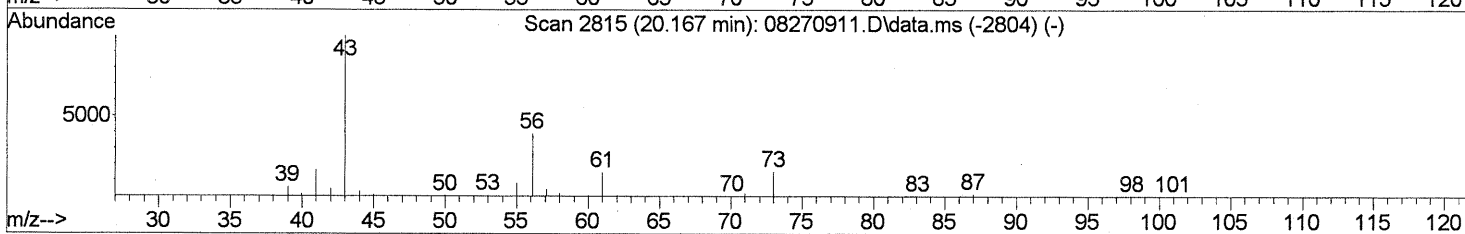
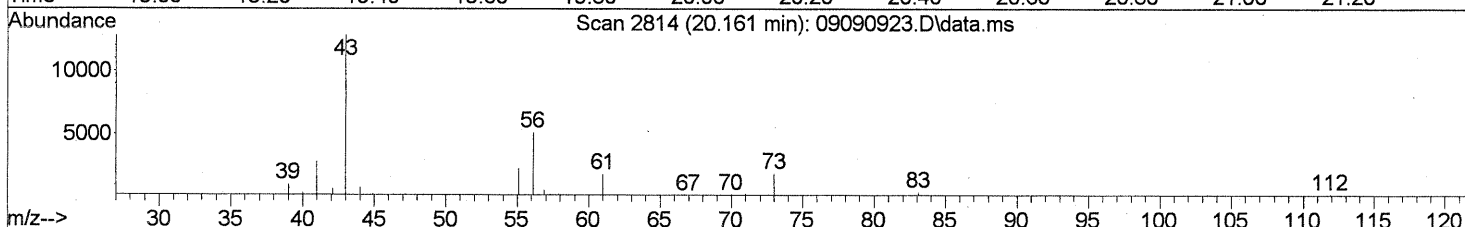
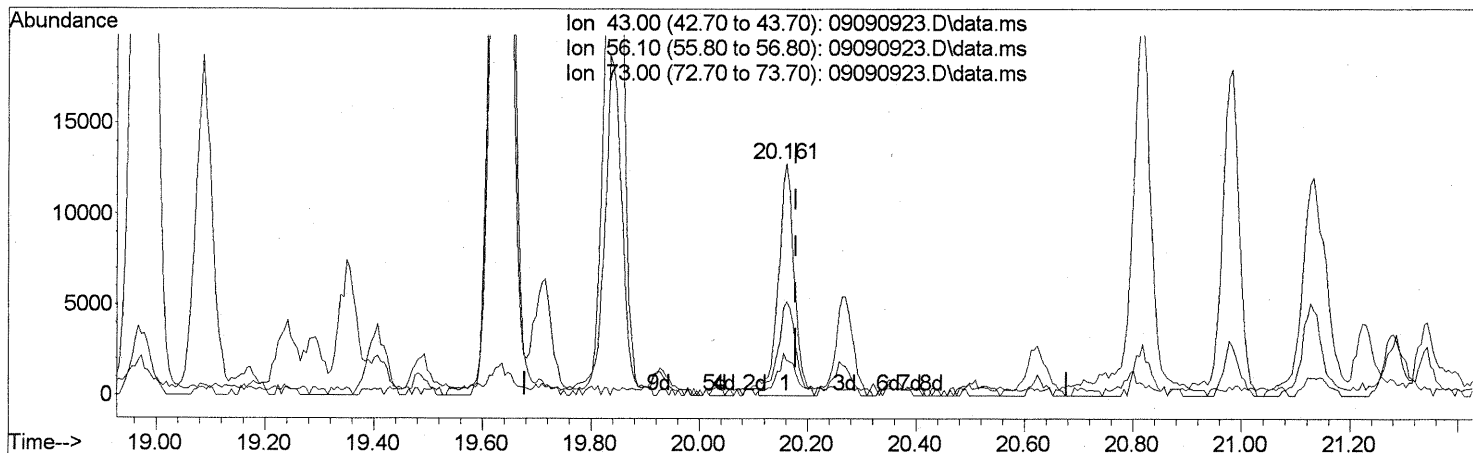
Ion	Exp%	Act%
43.00	100	100
58.00	51.70	57.56
0.00	0.00	0.00
0.00	0.00	0.00

*PT -> TIC*  
*LM 9/15/09*  
*E-9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

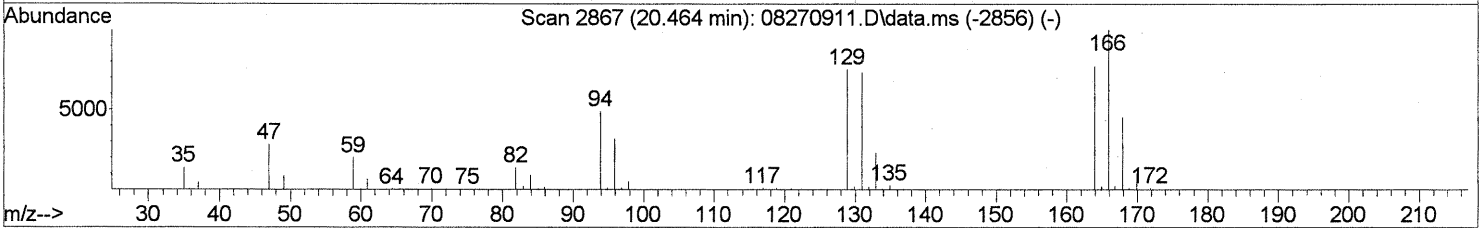
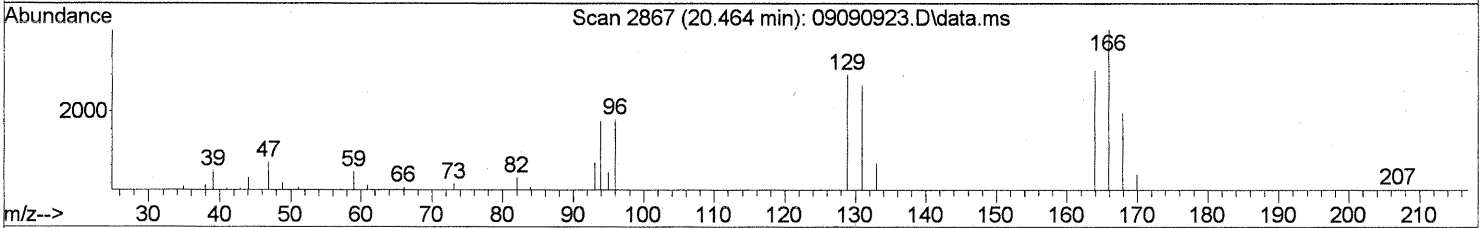
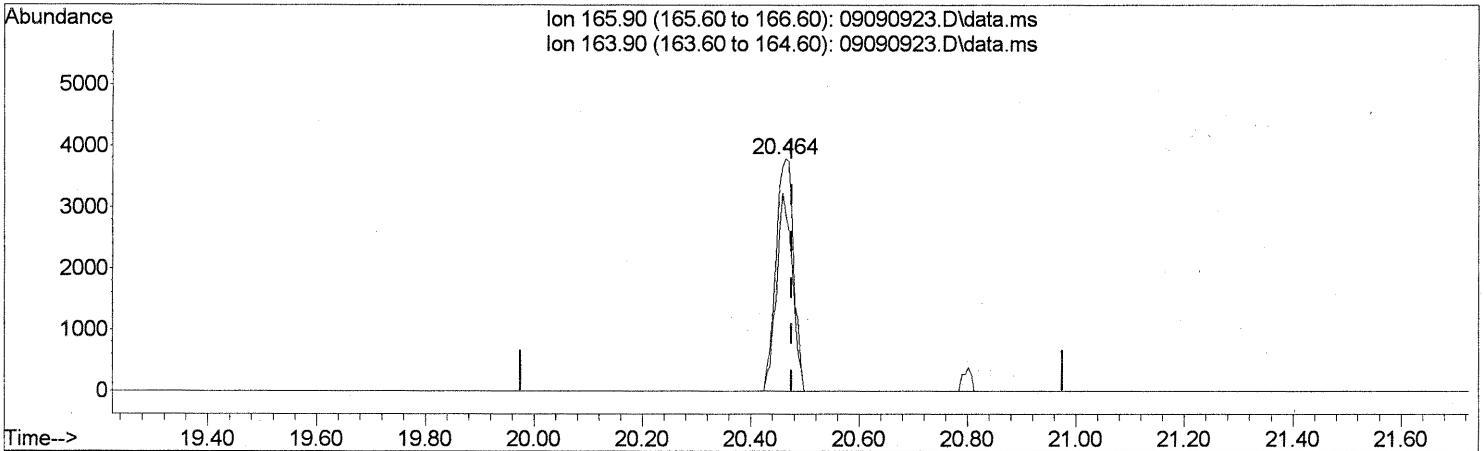
(62) n-Butyl Acetate (T)  
 20.161min (-0.017) 0.60ng  
 response 25810

Ion	Exp%	Act%
43.00	100	100
56.10	39.50	49.93
73.00	14.30	32.60
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

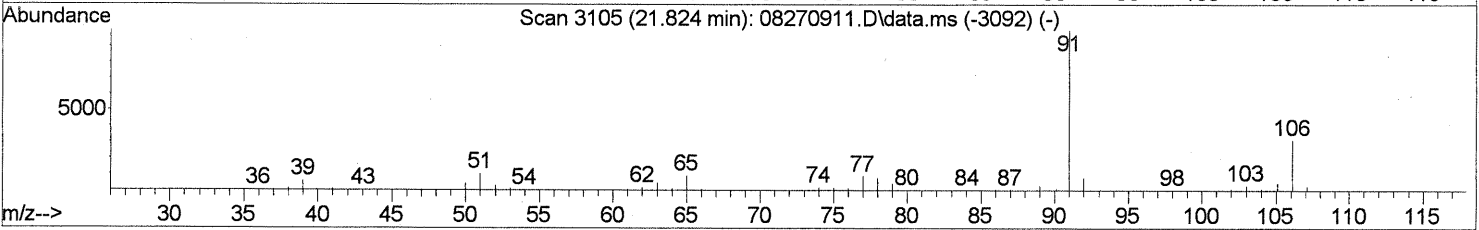
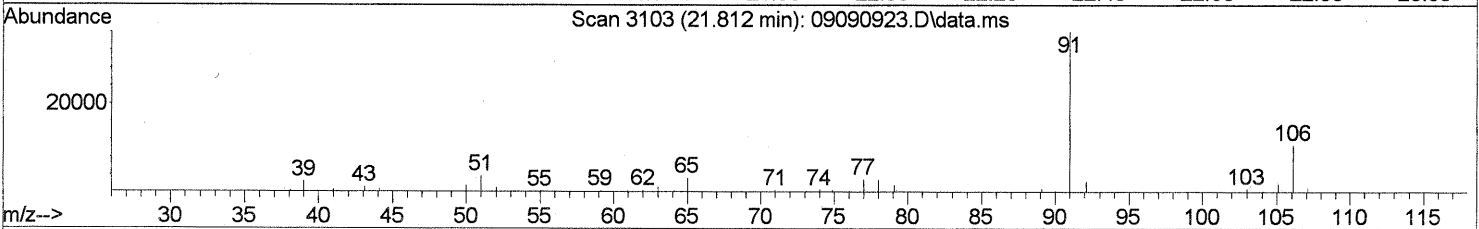
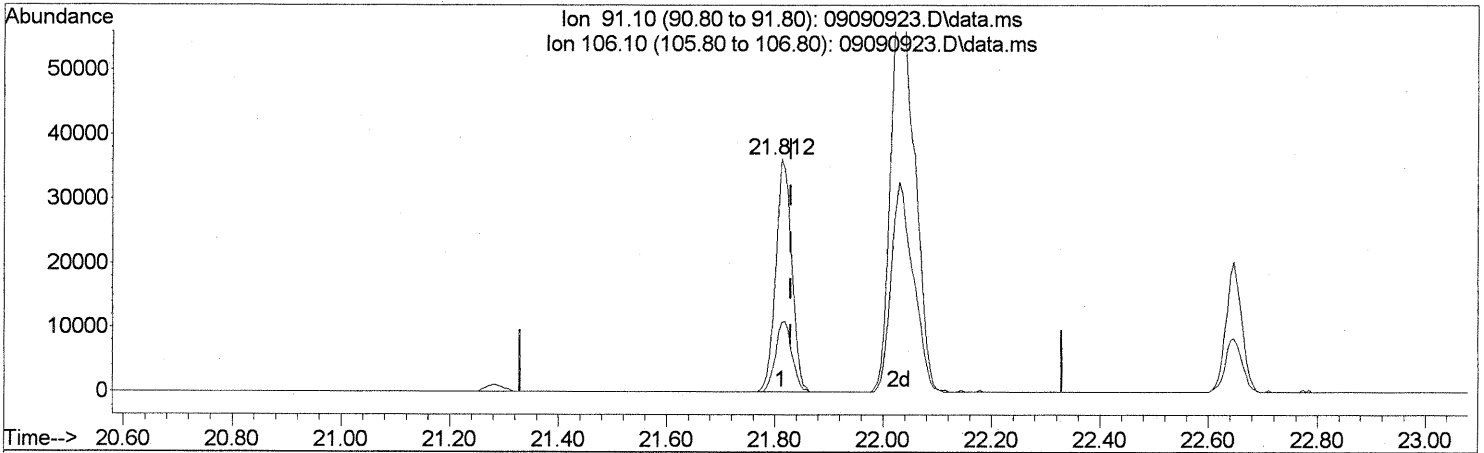
(64) Tetrachloroethene (T)  
 20.464min (-0.012) 0.55ng  
 response 8577

Ion	Exp%	Act%
165.90	100	100
163.90	78.80	75.95
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

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TIC: 09090923.D\data.ms

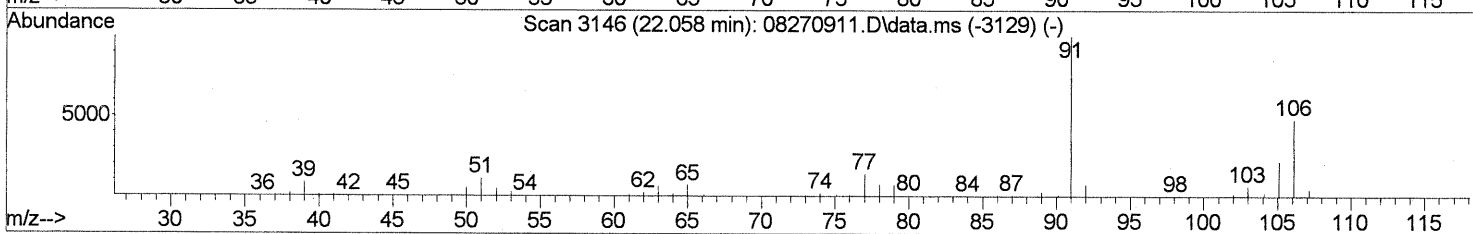
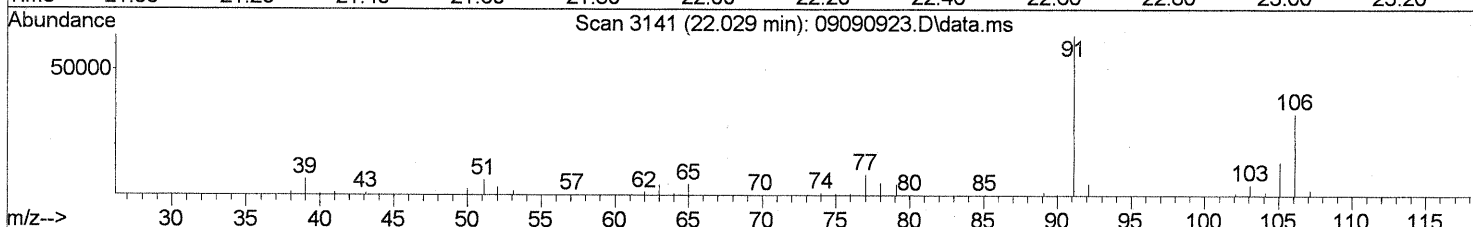
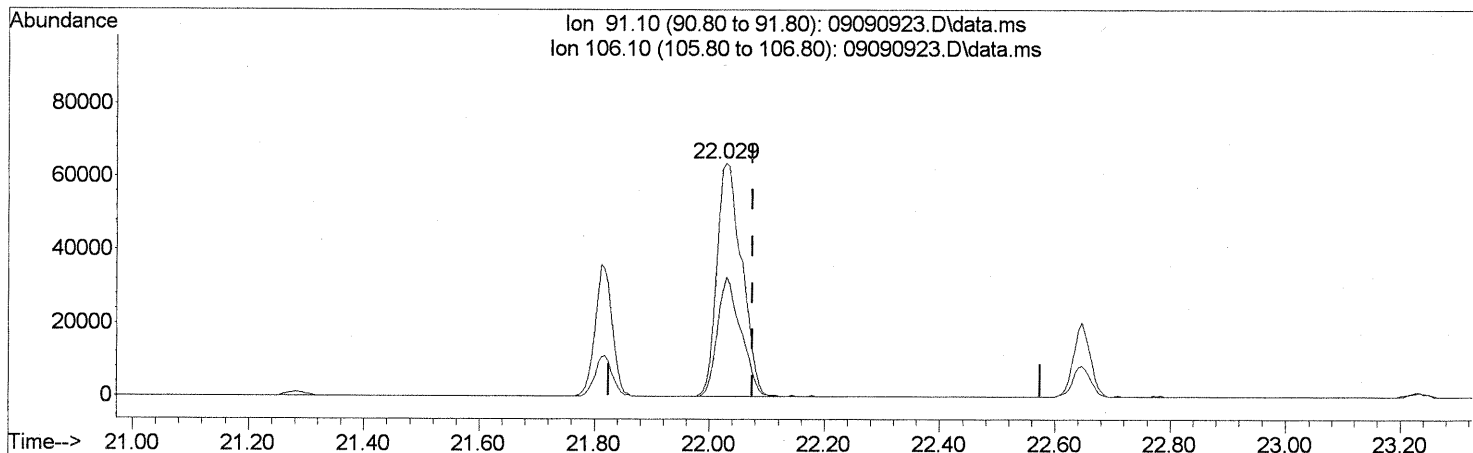
(66) Ethylbenzene (T)  
 21.812min (-0.017) 1.05ng  
 response 74096

Ion	Exp%	Act%
91.10	100	100
106.10	31.00	31.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090923.D\data.ms

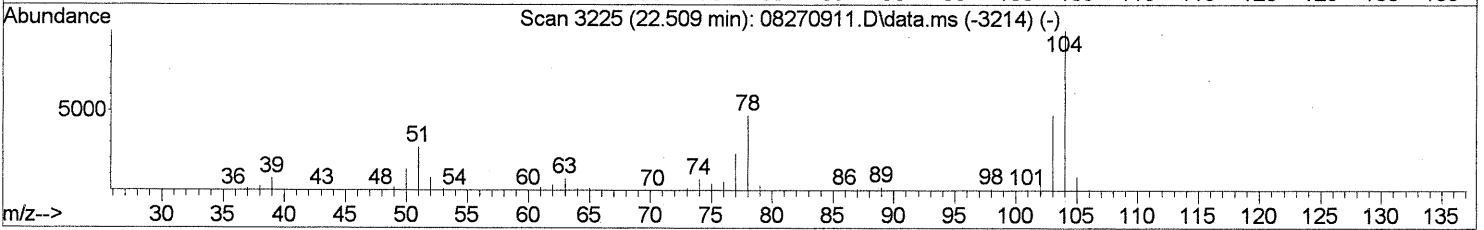
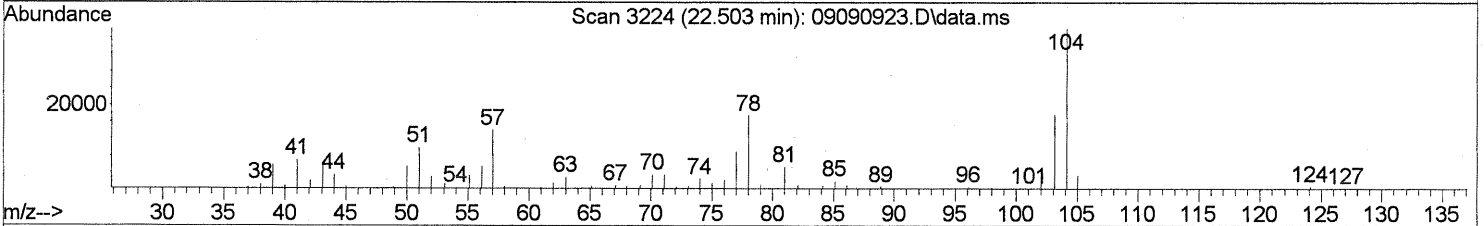
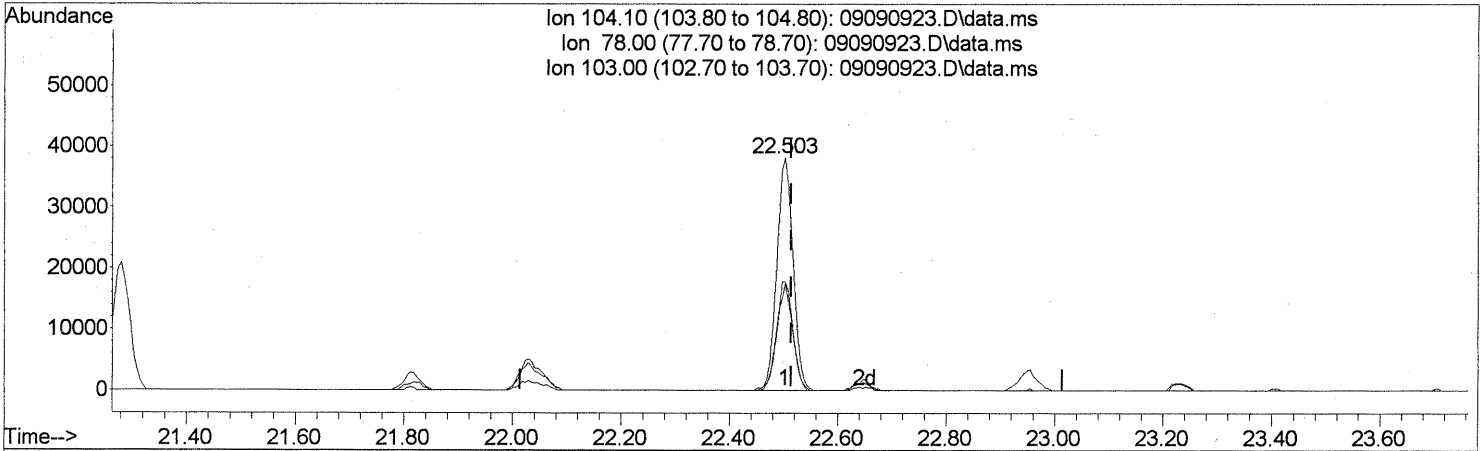
(67) m- & p-Xylenes (T)  
 22.029min (-0.046) 3.43ng  
 response 191683

Ion	Exp%	Act%
91.10	100	100
106.10	48.00	48.39
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
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 ALS Vial : 13 Sample Multiplier: 1

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 QLast Update : Fri Aug 28 06:02:46 2009  
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TIC: 09090923.D\data.ms

(69) Styrene (T)  
 22.503min (-0.012) 1.93ng  
 response 79331

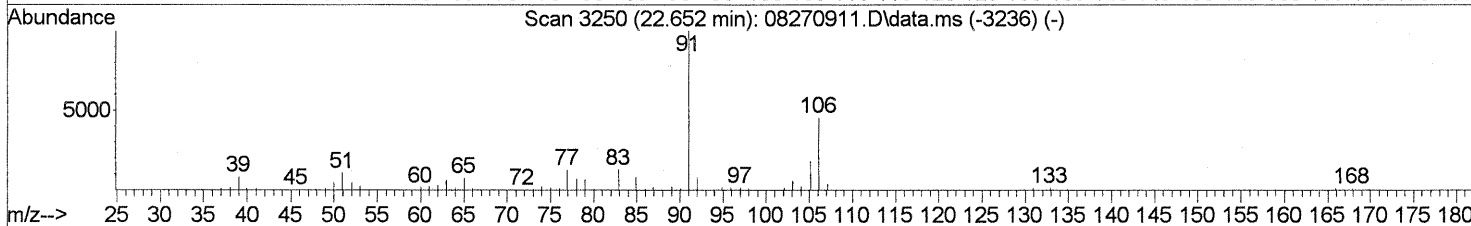
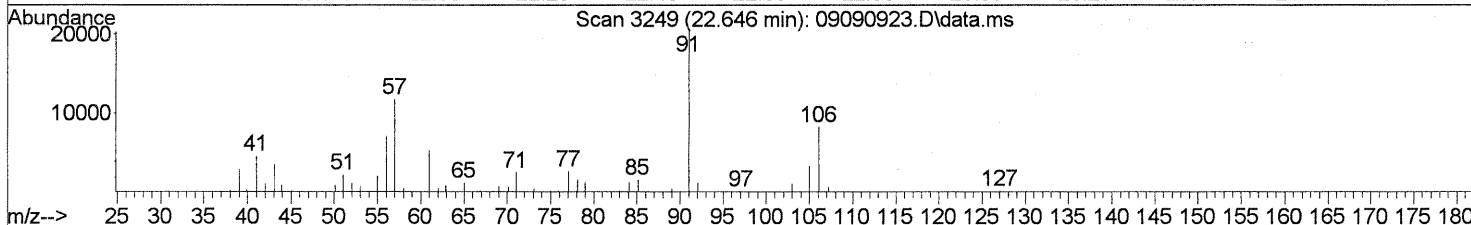
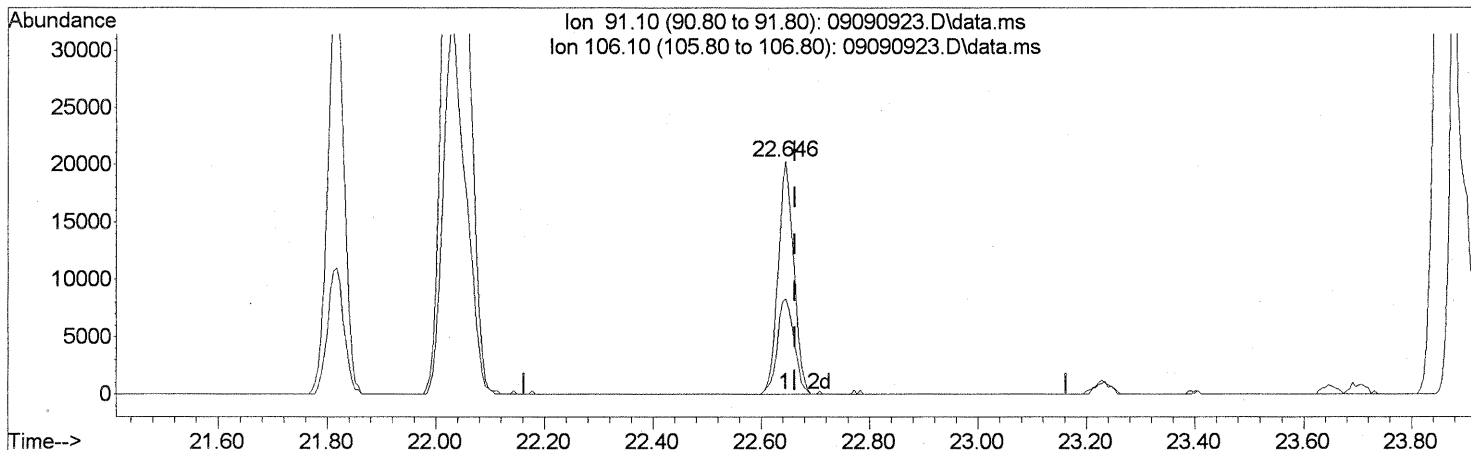
Ion	Exp%	Act%
104.10	100	100
78.00	47.20	44.89
103.00	47.00	47.12
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



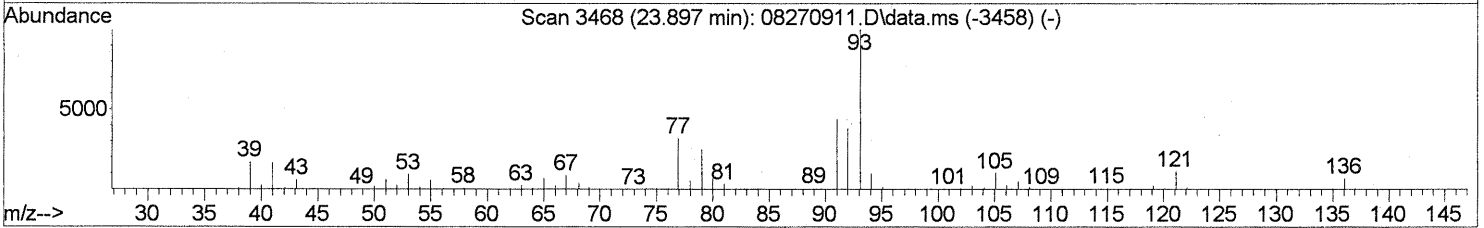
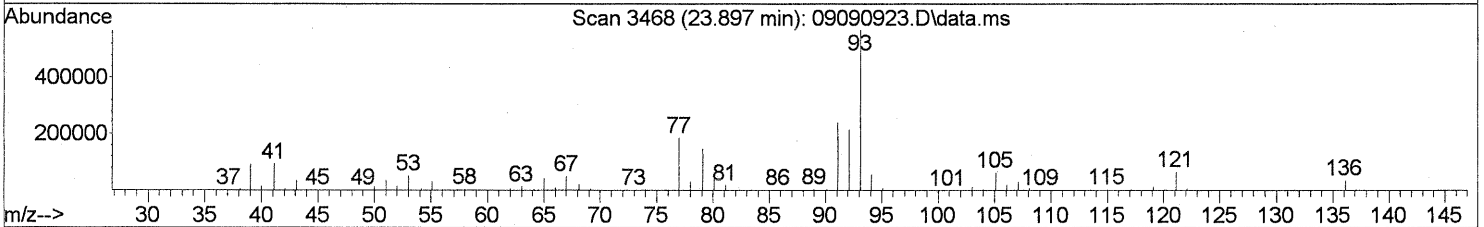
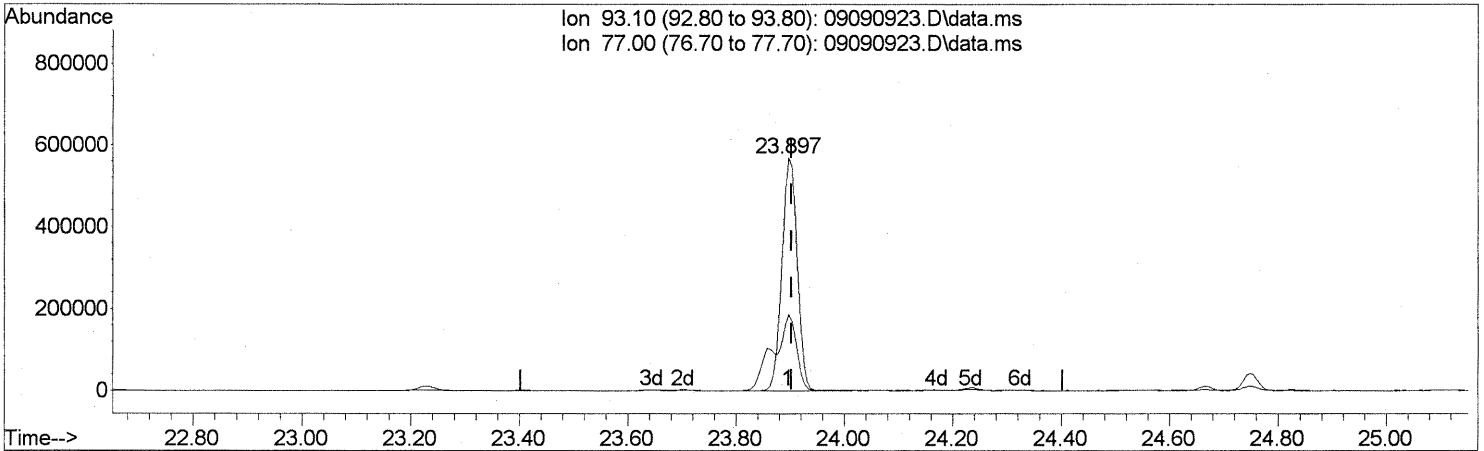
TIC: 09090923.D\data.ms

(70) o-Xylene (T)		
22.646min (-0.017)	0.72ng	
response	40619	
Ion	Exp%	Act%
91.10	100	100
106.10	44.90	44.28
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
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TIC: 09090923.D\data.ms

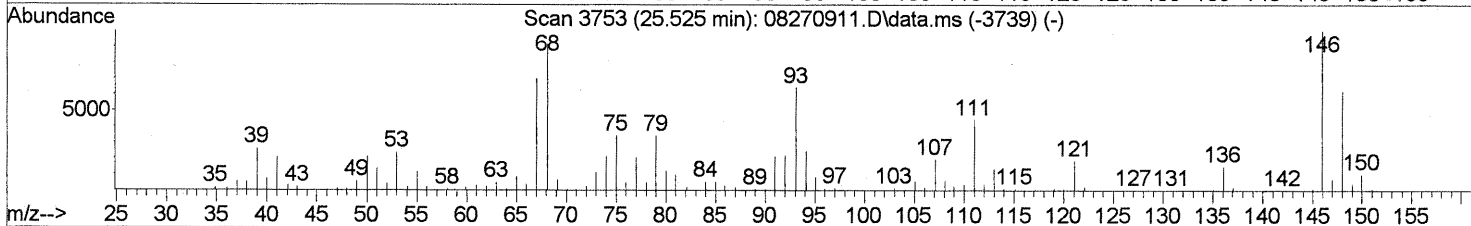
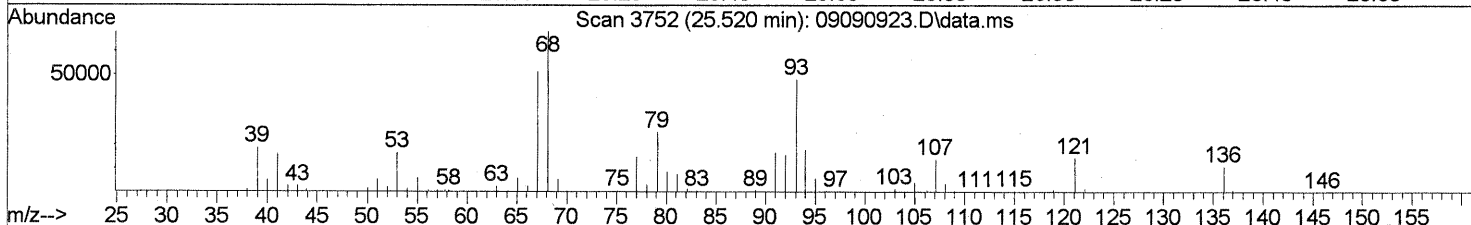
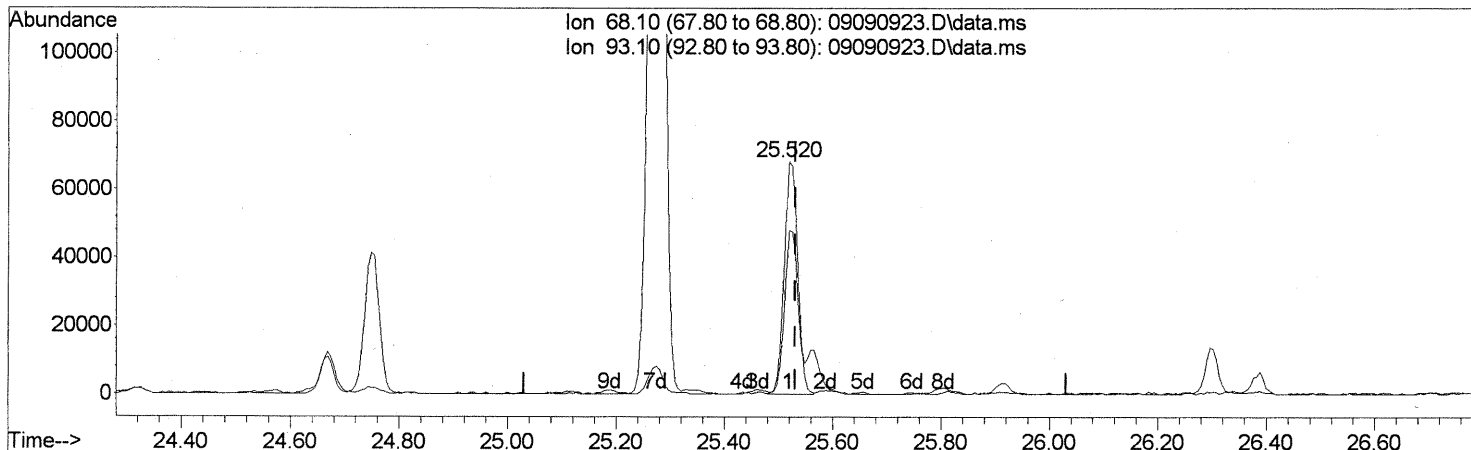
(75) alpha-Pinene (T)  
 23.897min (-0.006) 30.03ng  
 response 1109472

Ion	Exp%	Act%
93.10	100	100
77.00	33.10	32.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090923.D  
 Acq On : 10 Sep 2009 00:58  
 Operator : LM/CC  
 Sample : P0903114-005 (1000ml)  
 Misc : EH&E 104899  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Sep 10 08:30:34 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
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TIC: 09090923.D\data.ms

(91) d-Limonene (T)  
 25.520min (-0.012) 5.14ng  
 response 117190

Ion	Exp%	Act%
68.10	100	100
93.10	69.80	90.09#
0.00	0.00	0.00
0.00	0.00	0.00





**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 3 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** 104900  
**Client Project ID:** 16512

CAS Project ID: P0903114  
 CAS Sample ID: P0903114-006

**Test Code:** EPA TO-15  
**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13  
**Analyst:** Liliana Marghitoiu  
**Sampling Media:** 6.0 L Summa Canister  
**Test Notes:**  
**Container ID:** AC01244

**Date Collected:** 9/2/09  
**Date Received:** 9/3/09  
**Date Analyzed:** 9/10/09  
**Volume(s) Analyzed:** 1.00 Liter(s)

Initial Pressure (psig): -0.3      Final Pressure (psig): 3.5

Canister Dilution Factor: 1.26

CAS #	Compound	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.63	ND	0.13	
127-18-4	Tetrachloroethene	ND	0.13	ND	0.019	
108-90-7	Chlorobenzene	ND	0.13	ND	0.027	
100-41-4	Ethylbenzene	ND	0.63	ND	0.15	
179601-23-1	m,p-Xylenes	ND	0.63	ND	0.15	
75-25-2	Bromoform	ND	0.63	ND	0.061	
100-42-5	Styrene	ND	0.63	ND	0.15	
95-47-6	o-Xylene	ND	0.63	ND	0.15	
111-84-2	n-Nonane	ND	0.63	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.13	ND	0.018	
98-82-8	Cumene	ND	0.63	ND	0.13	
80-56-8	alpha-Pinene	ND	0.63	ND	0.11	
103-65-1	n-Propylbenzene	ND	0.63	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.63	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.63	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.63	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.13	ND	0.024	
541-73-1	1,3-Dichlorobenzene	ND	0.13	ND	0.021	
106-46-7	1,4-Dichlorobenzene	ND	0.13	ND	0.021	
95-50-1	1,2-Dichlorobenzene	ND	0.13	ND	0.021	
5989-27-5	d-Limonene	ND	0.63	ND	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.63	ND	0.065	
120-82-1	1,2,4-Trichlorobenzene	ND	0.63	ND	0.085	
91-20-3	Naphthalene	ND	0.63	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.63	ND	0.059	

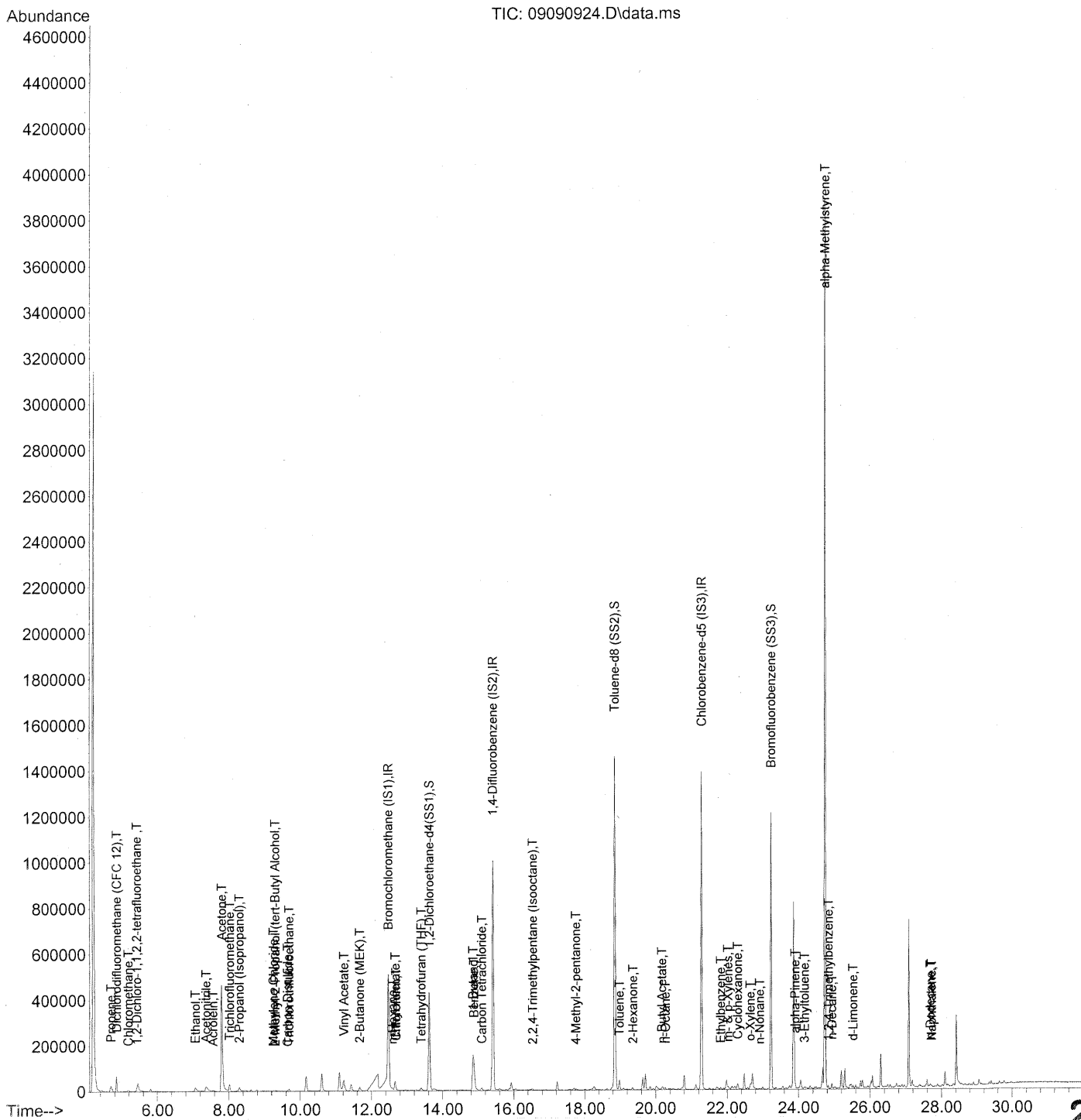
ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

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

Verified By: \_\_\_\_\_ Date: 9/17/09 **218**

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40 am  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 15 14:55:28 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40 am  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
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*10/9/15/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	229943	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1160356	25.000	ng	-0.03
56) Chlorobenzene-d5 (IS3)	21.28	82	581544	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	443561	24.342	ng	-0.03
Spiked Amount	25.000			Recovery =		97.36%
57) Toluene-d8 (SS2)	18.84	98	1263816	24.317	ng	-0.02
Spiked Amount	25.000			Recovery =		97.28%
73) Bromofluorobenzene (SS3)	23.23	174	393644	26.317	ng	-0.01
Spiked Amount	25.000			Recovery =		105.28%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.69	42	9741m	0.586	ng	
3) Dichlorodifluoromethan...	4.85	85	68672	2.358	ng	99
4) Chloromethane	5.18	50	6837	0.349	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	5.42	135	1112	0.092	ng	# 58
6) Vinyl Chloride	0.00	62	0	N.D.		
7) 1,3-Butadiene	0.00	54	0	N.D.		
8) Bromomethane	6.38	94	91	N.D.		
9) Chloroethane	0.00	64	0	N.D.		
10) Ethanol	7.06	45	51334	4.977	ng	82
11) Acetonitrile	7.36	41	63502	2.217	ng	99
12) Acrolein	7.55	56	5915	0.751	ng	95
13) Acetone	7.79	58	282836	26.517	ng	# 84
14) Trichlorofluoromethane	8.02	101	29084	1.133	ng	99
15) 2-Propanol (Isopropanol)	8.29	45	51996	1.466	ng	72
16) Acrylonitrile	0.00	53	0	N.D.		
17) 1,1-Dichloroethene	0.00	96	0	N.D.		
18) 2-Methyl-2-Propanol (t...	9.29	59	1969	0.055	ng	# 1
19) Methylene Chloride	9.25	84	1901	0.141	ng	94
20) 3-Chloro-1-propene (Al...	9.33	41	423	N.D.		
21) Trichlorotrifluoroethane	9.68	151	5446	0.536	ng	93
22) Carbon Disulfide	9.64	76	2484	0.052	ng	# 74
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	11.10	73	1215	N.D.		
26) Vinyl Acetate	11.22	86	11215	4.196	ng	# 29
27) 2-Butanone (MEK)	11.67	72	8073	0.937	ng	96
28) cis-1,2-Dichloroethene	12.27	61	97	N.D.		
29) Diisopropyl Ether	0.00	87	0	N.D.		
30) Ethyl Acetate	12.66	61	9477	2.047	ng	93
31) n-Hexane	12.58	57	2379	0.103	ng	79



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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

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	1463	<del>0.064</del> ng		99
34) Tetrahydrofuran (THF)	13.39	72	3637	<del>0.389</del> ng	#	78
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	13.79	62	452	N.D.		
38) 1,1,1-Trichloroethane	14.18	97	343	N.D.		
39) Isopropyl Acetate	14.93	61	308	N.D.		
40) 1-Butanol	14.85	56	180358	12.488 ng	#	41
41) Benzene	14.87	78	8899	0.163 ng		97
42) Carbon Tetrachloride	15.09	117	8769	0.479 ng		97
43) Cyclohexane	15.28	84	340	N.D.		
44) tert-Amyl Methyl Ether	15.93	73	1784	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) 2,2,4-Trimethylpentane...	16.52	57	7644	0.123 ng		87
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane	16.87	71	458	N.D.		
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.75	58	1449	0.116 ng	#	66
54) trans-1,3-Dichloropropene	0.00	75	0	N.D.		
55) 1,1,2-Trichloroethane	0.00	97	0	N.D. d		
58) Toluene	18.97	91	21470	0.384 ng		98
59) 2-Hexanone	19.36	43	6876	0.201 ng	#	68
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.17	43	6378	0.163 ng		72
63) n-Octane	20.27	57	1464	0.114 ng	#	73
64) Tetrachloroethene	0.00	166	0	N.D.		
65) Chlorobenzene	0.00	112	0	N.D.		
66) Ethylbenzene	21.82	91	4120	0.064 ng		98
67) m- & p-Xylenes	22.02	91	9806	0.192 ng		95
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.51	104	1591	N.D.		
70) o-Xylene	22.65	91	4511	0.088 ng		92
71) n-Nonane	22.91	43	4337	0.141 ng	#	56
72) 1,1,2,2-Tetrachloroethane	22.63	83	86	N.D.		
74) Cumene	0.00	105	0	N.D. d		
75) alpha-Pinene	23.90	93	8829	0.262 ng	#	42
76) n-Propylbenzene	24.05	91	2278	N.D.		
77) 3-Ethyltoluene	24.17	105	5000	0.081 ng		81
78) 4-Ethyltoluene	24.22	105	2241	N.D.		
79) 1,3,5-Trimethylbenzene	24.31	105	1737	N.D.		

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40 am  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 15 14:55:28 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

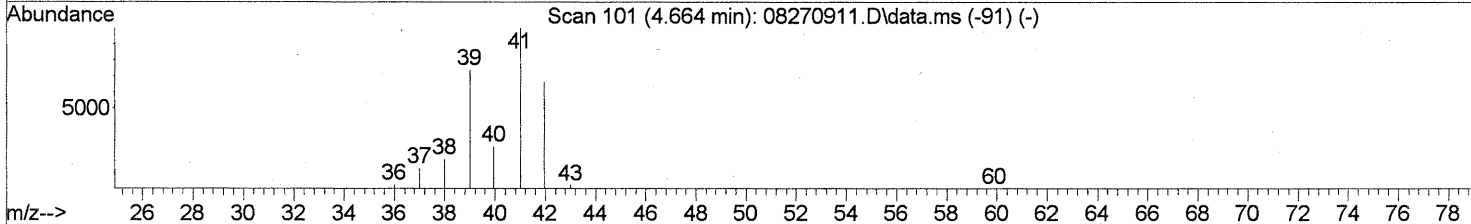
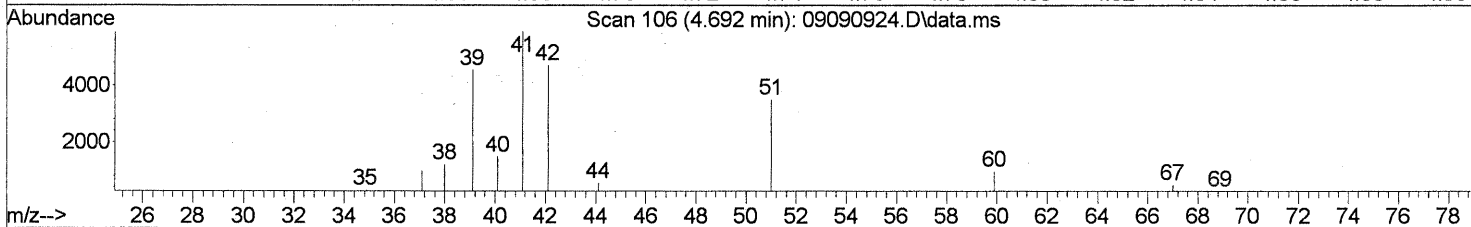
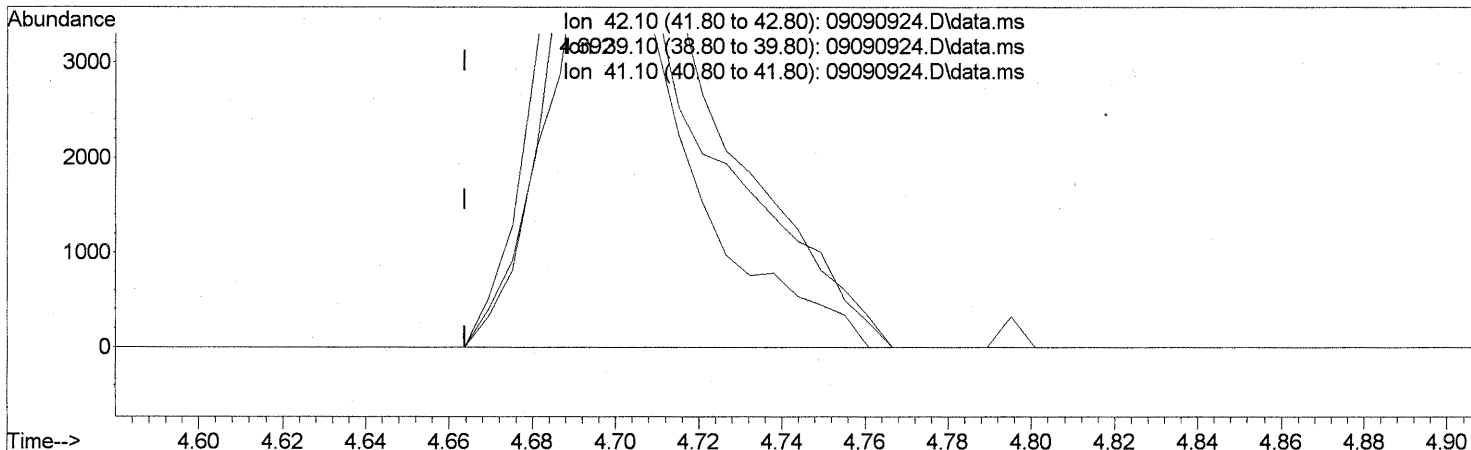
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.73	118	55754	2.082	ng	# 7
81) 2-Ethyltoluene	24.55	105	2127	N.D.		
82) 1,2,4-Trimethylbenzene	24.83	105	5271	<del>0.101</del>	ng	82
83) n-Decane	24.93	57	9129	0.294	ng	88
84) Benzyl Chloride	25.02	91	103	N.D.		
85) 1,3-Dichlorobenzene	0.00	146	0	N.D.	d	
86) 1,4-Dichlorobenzene	0.00	146	0	N.D.	d	
87) sec-Butylbenzene	25.19	105	1227	N.D.		
88) 4-Isopropyltoluene (p-...	25.35	119	1024	N.D.		
89) 1,2,3-Trimethylbenzene	25.35	105	1202	N.D.		
90) 1,2-Dichlorobenzene	0.00	146	0	N.D.		
91) d-Limonene	25.52	68	2995	<del>0.144</del>	ng	95
92) 1,2-Dibromo-3-Chloropr...	0.00	157	0	N.D.		
93) n-Undecane	26.45	57	767	N.D.		
94) 1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95) Naphthalene	27.72	128	4428	<del>0.062</del>	ng	90
96) n-Dodecane	27.69	57	7099	0.193	ng	# 73
97) Hexachlorobutadiene	0.00	225	0	N.D.		
98) Cyclohexanone	22.29	55	14834	0.687	ng	95
99) tert-Butylbenzene	24.82	119	471	N.D.		
100) n-Butylbenzene	25.85	91	1627	N.D.		

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(2) Propene (T)  
 4.692min (+0.029) 0.63ng  
 response 10461

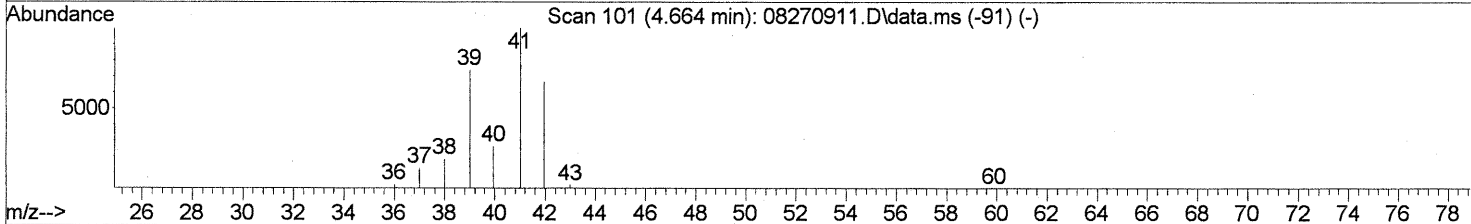
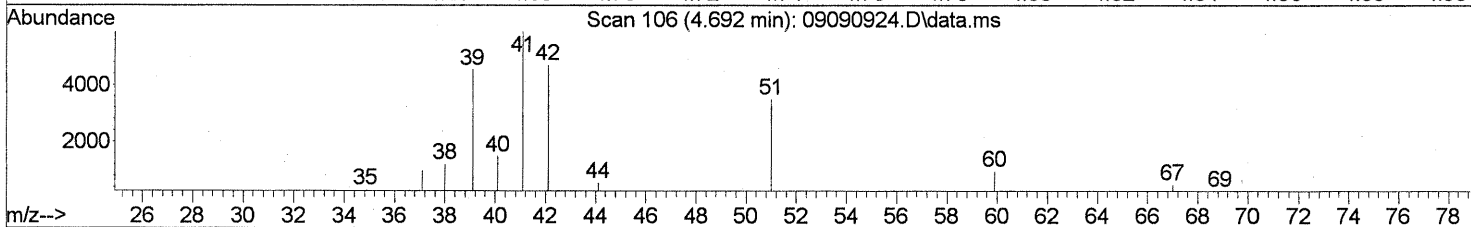
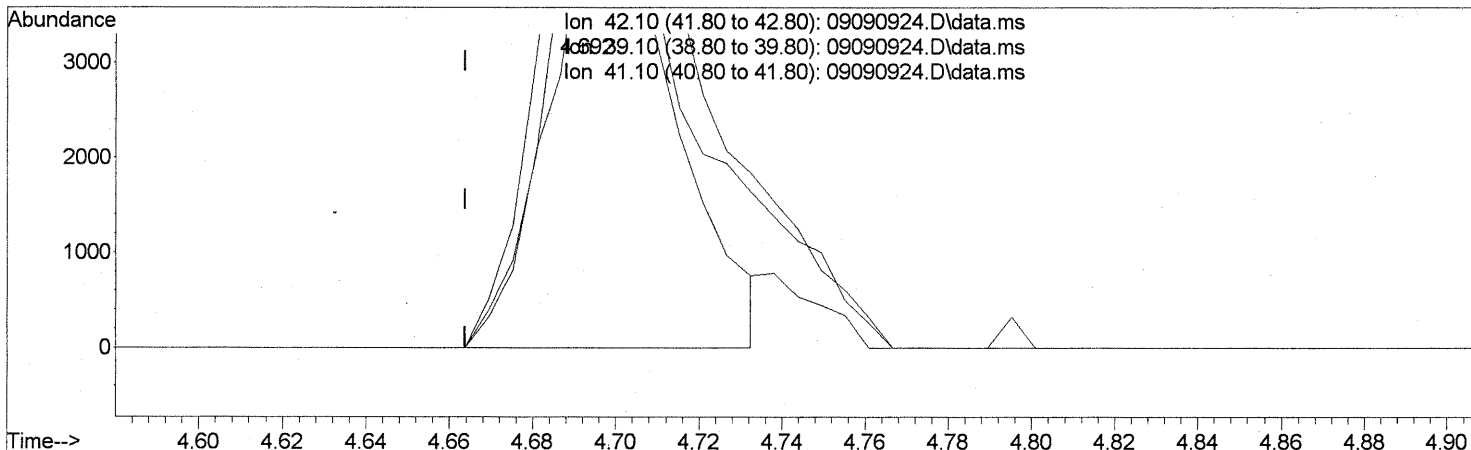
Ion	Exp%	Act%
42.10	100	100
39.10	109.70	123.24
41.10	149.80	160.58
0.00	0.00	0.00

SH

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(2) Propene (T)  
 4.692min (+0.029) 0.59ng m  
 response 9741

Ion	Exp%	Act%
42.10	100	100
39.10	109.70	132.35#
41.10	149.80	172.45#
0.00	0.00	0.00

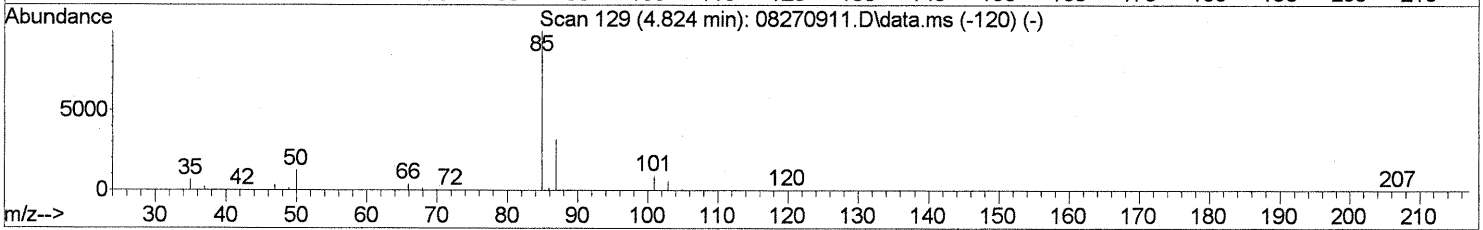
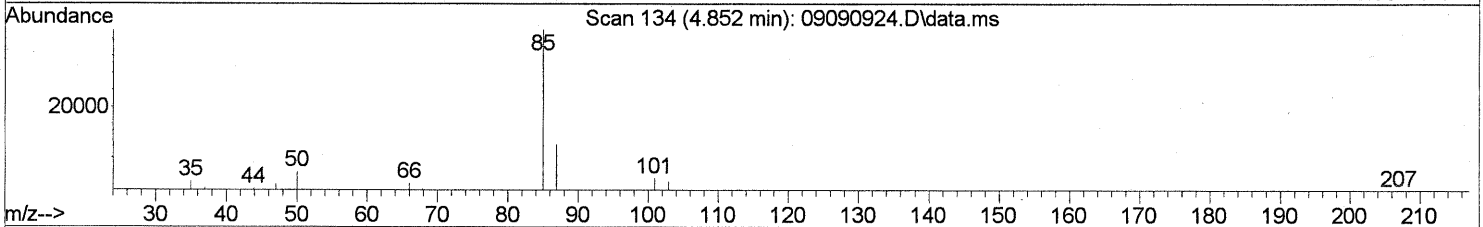
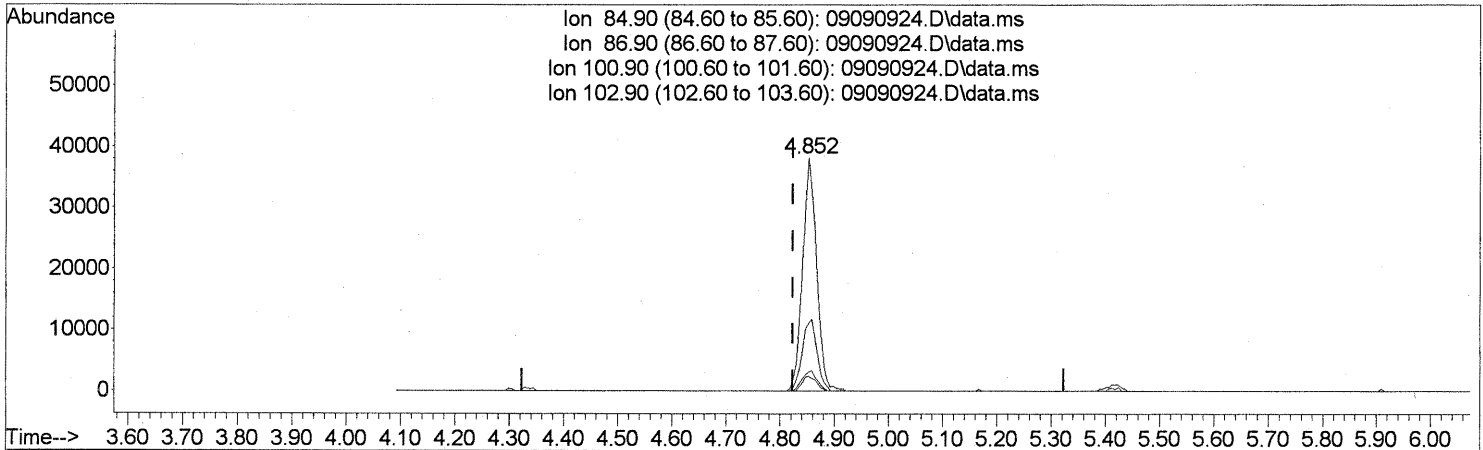
SH → IC  
 m 9/15/09

*[Handwritten signature]*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(3) Dichlorodifluoromethane (CFC 12) (T)

4.852min (+0.029) 2.36ng

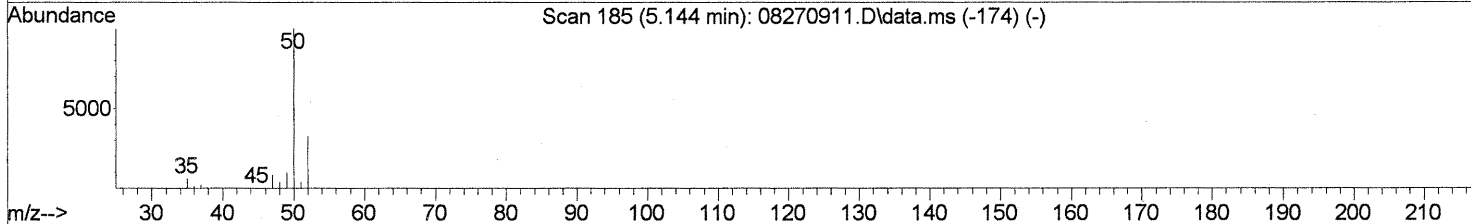
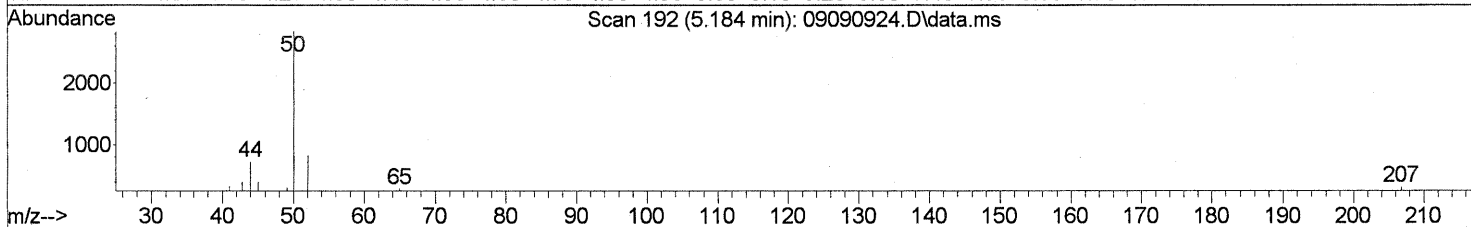
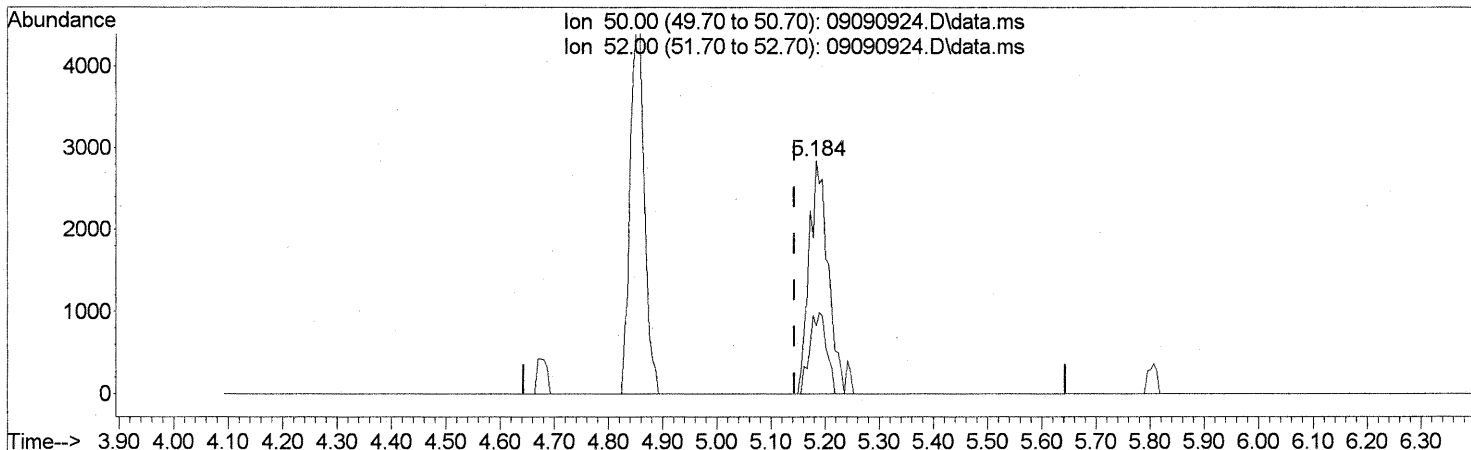
response 68672

Ion	Exp%	Act%
84.90	100	100
86.90	32.00	32.22
100.90	8.80	8.93
102.90	5.60	6.11

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

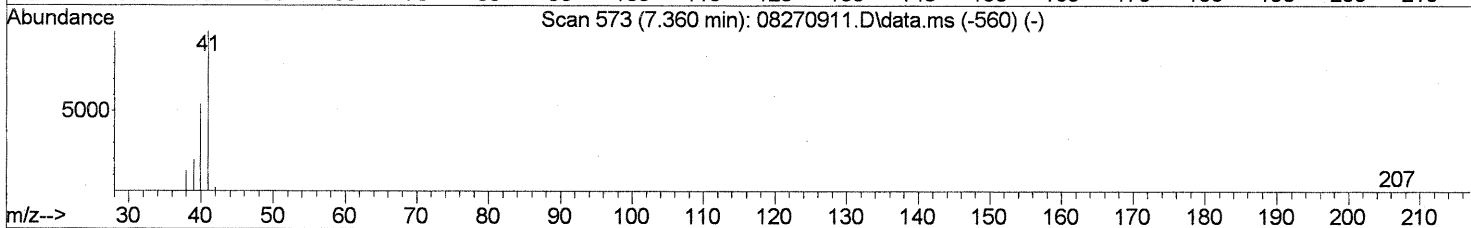
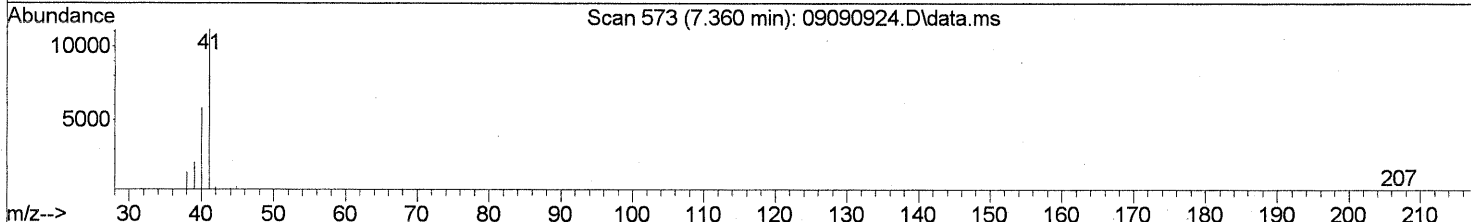
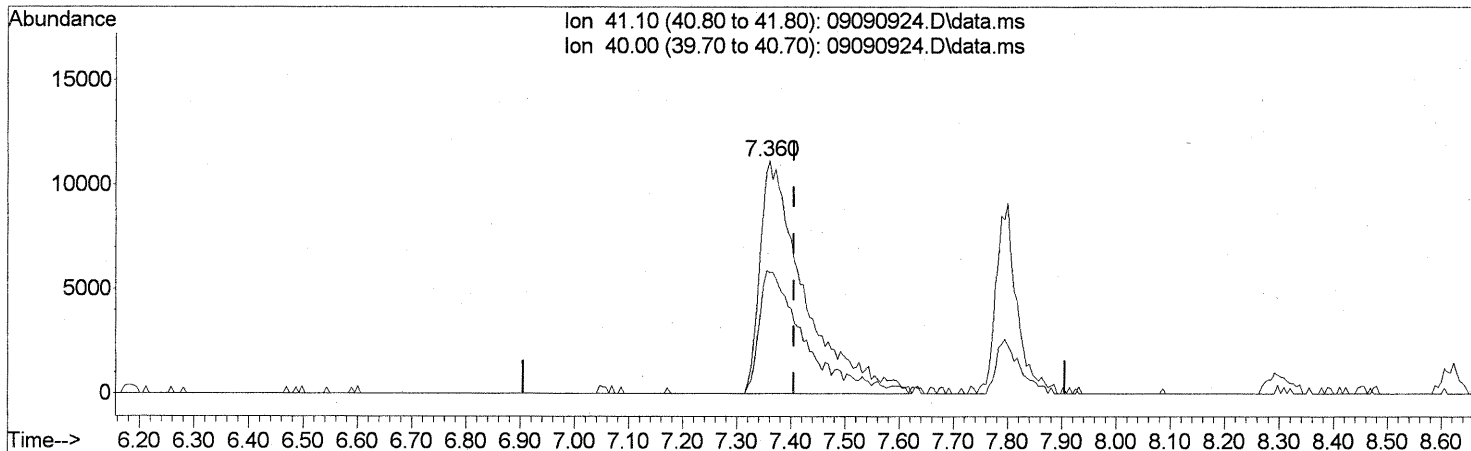
(4) Chloromethane (T)  
 5.184min (+0.040) 0.35ng  
 response 6837

Ion	Exp%	Act%
50.00	100	100
52.00	31.60	31.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

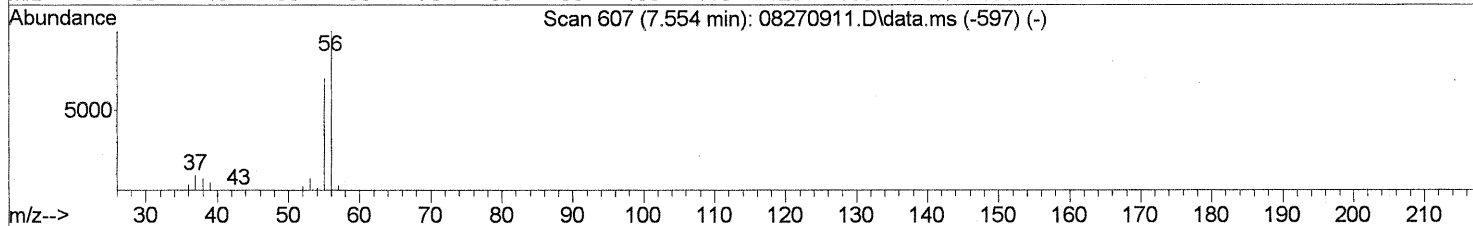
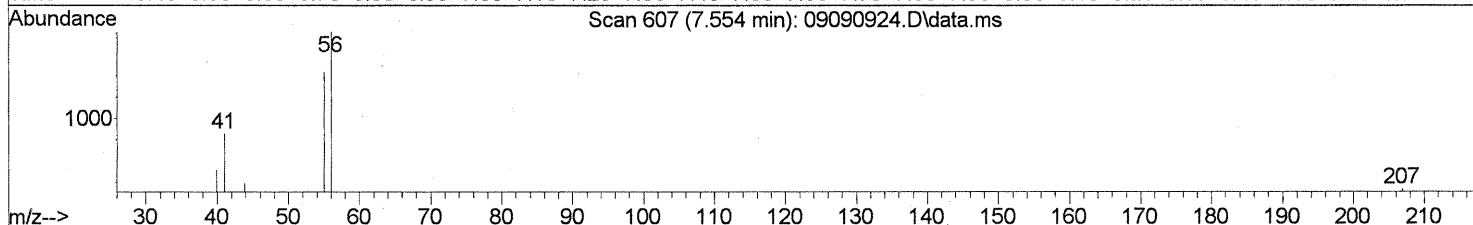
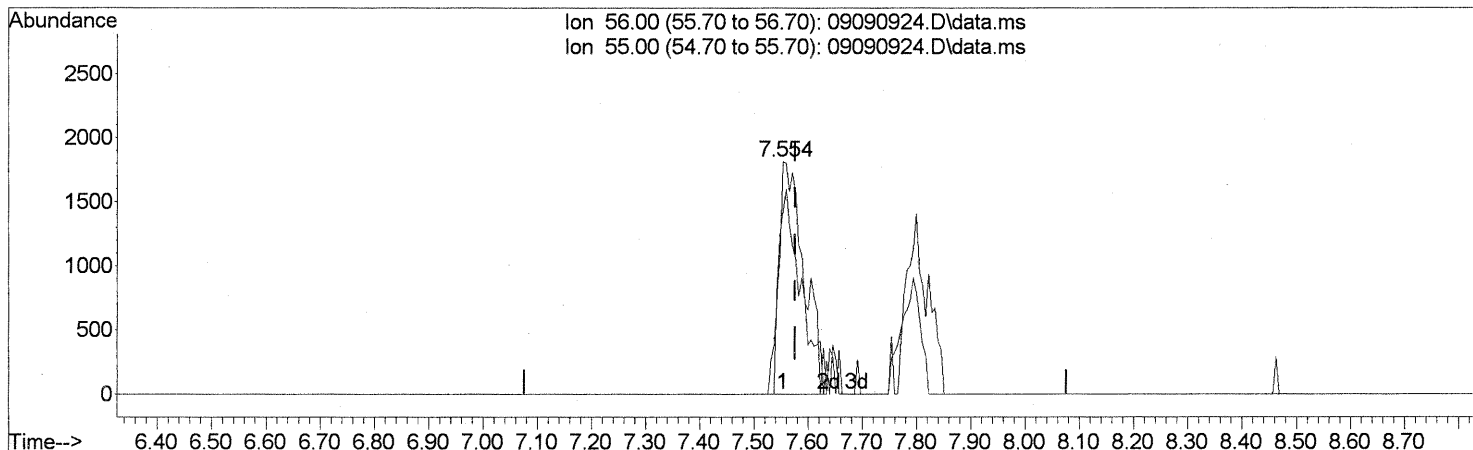
(11) Acetonitrile (T)  
 7.360min (-0.046) 2.22ng  
 response 63502

Ion	Exp%	Act%
41.10	100	100
40.00	53.70	54.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(12) Acrolein (T)  
 7.554min (-0.023) 0.75ng  
 response 5915

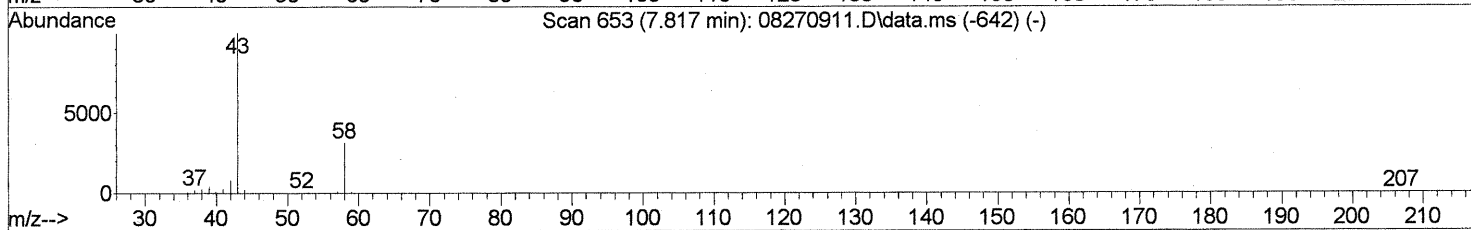
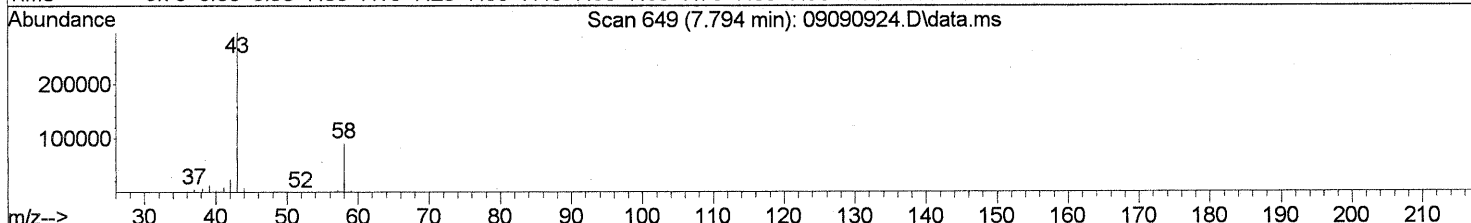
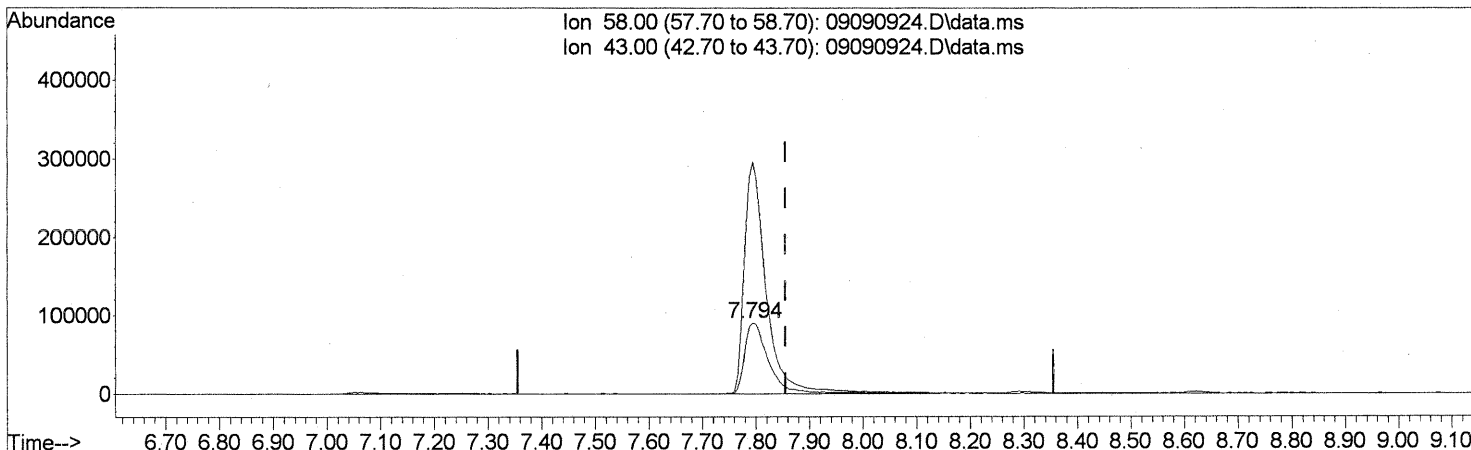
Ion	Exp%	Act%
56.00	100	100
55.00	71.10	75.23
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

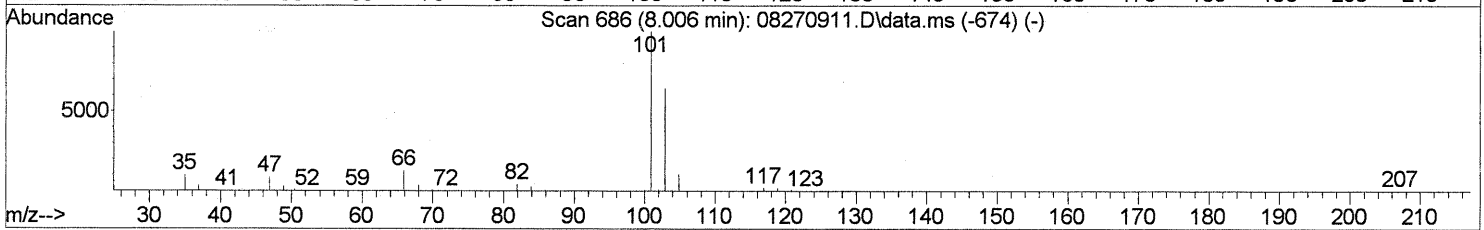
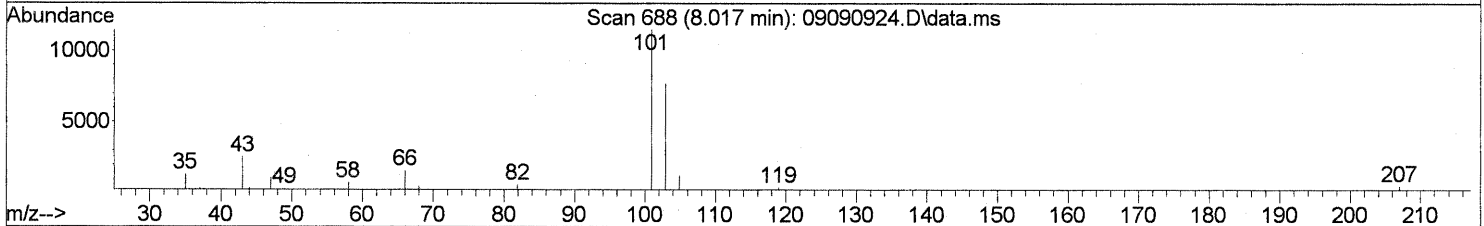
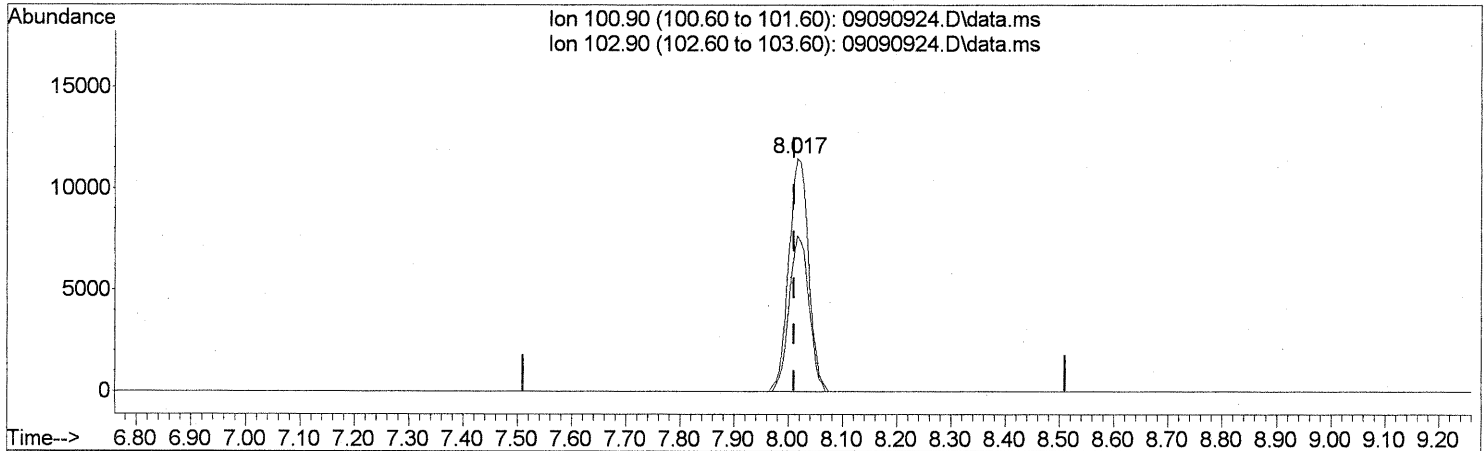
(13) Acetone (T)  
 7.794min (-0.063) 26.52ng  
 response 282836

Ion	Exp%	Act%
58.00	100	100
43.00	331.30	298.59#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(14) Trichlorofluoromethane (T)

8.017min (+0.006) 1.13ng

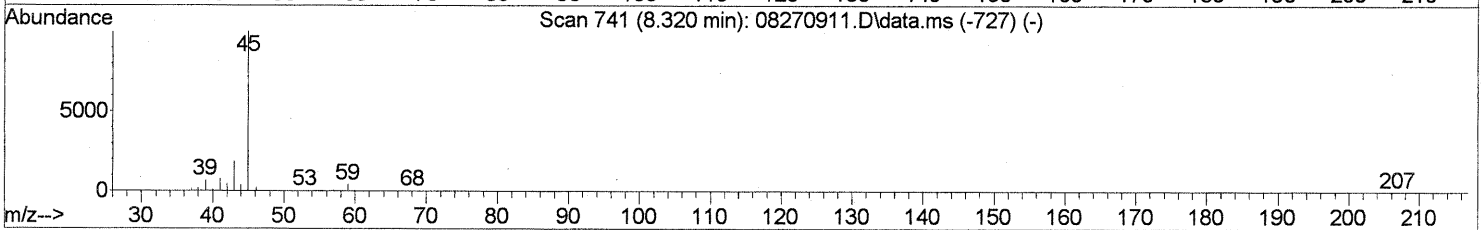
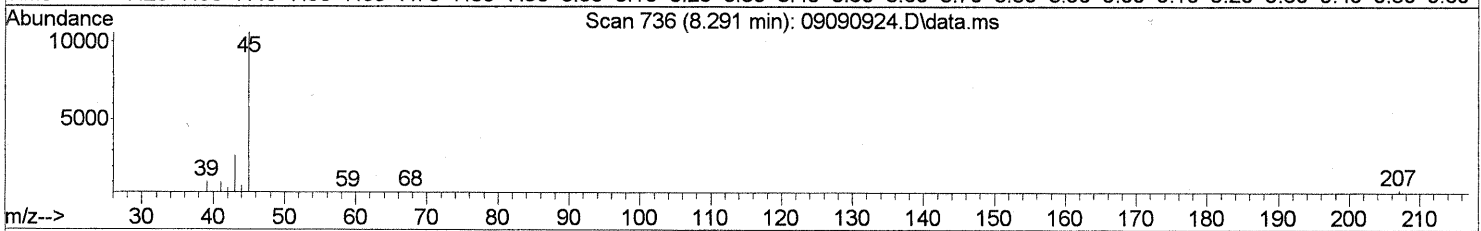
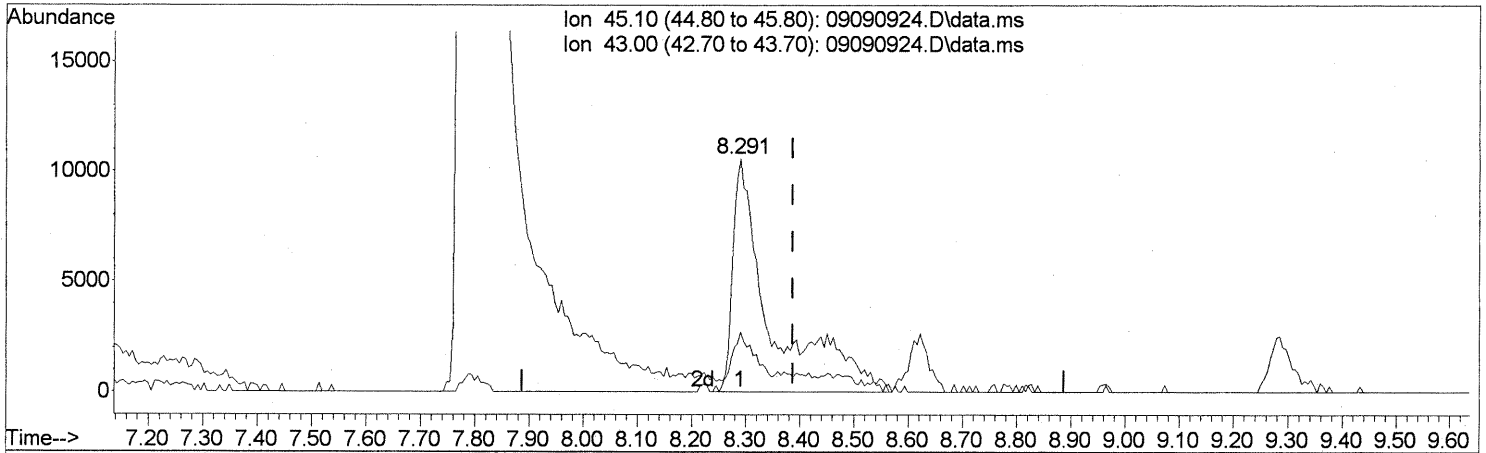
response 29084

Ion	Exp%	Act%
100.90	100	100
102.90	66.10	67.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(15) 2-Propanol (Isopropanol) (T)

8.291min (-0.097) 1.47ng

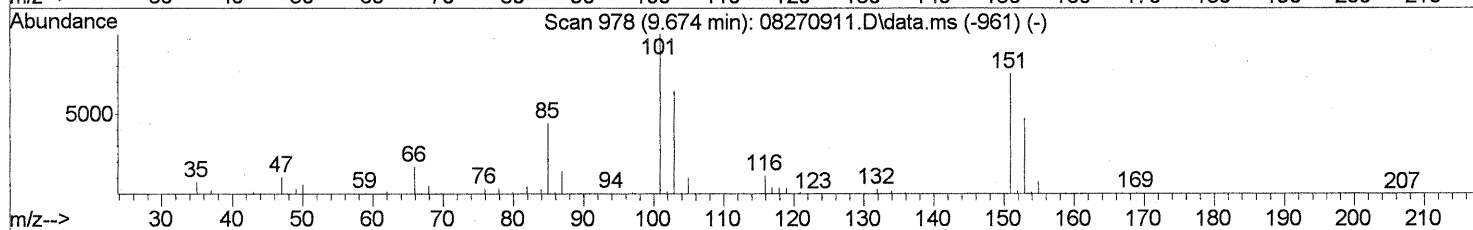
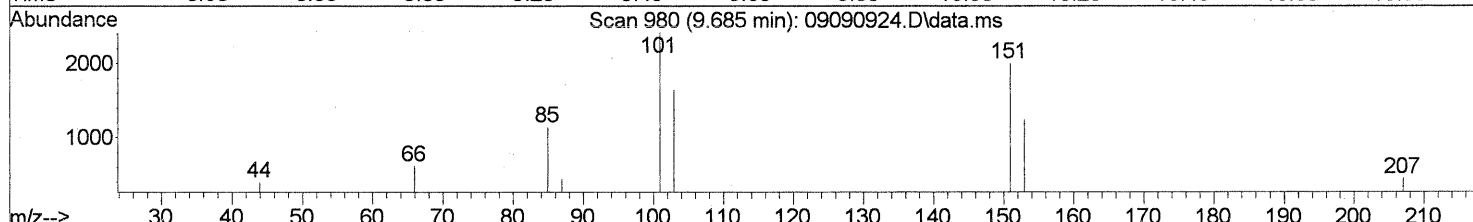
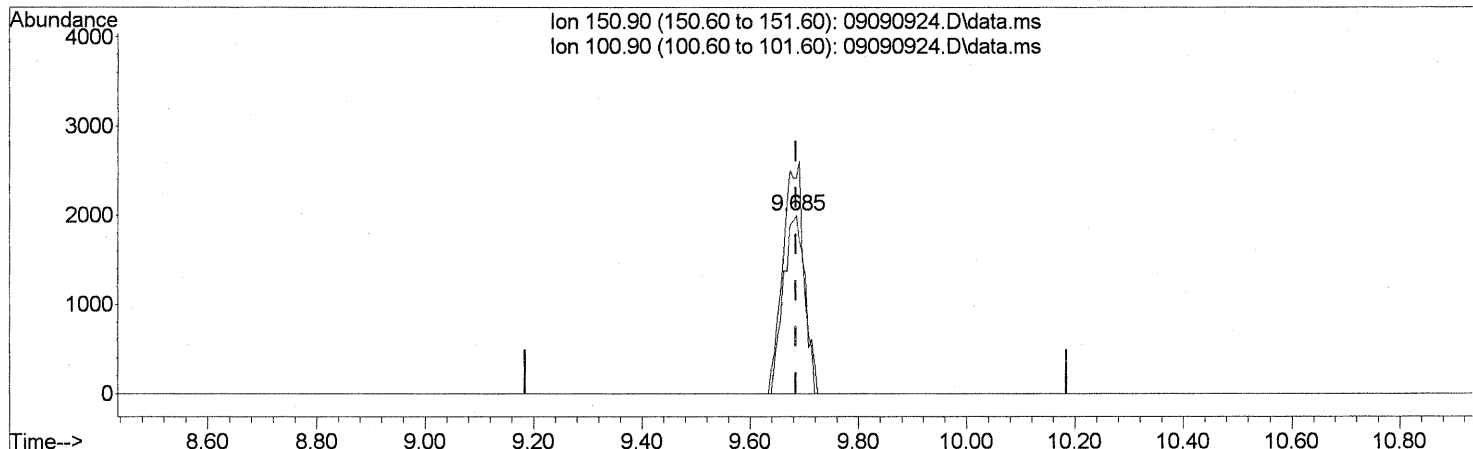
response 51996

Ion	Exp%	Act%
45.10	100	100
43.00	18.70	31.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

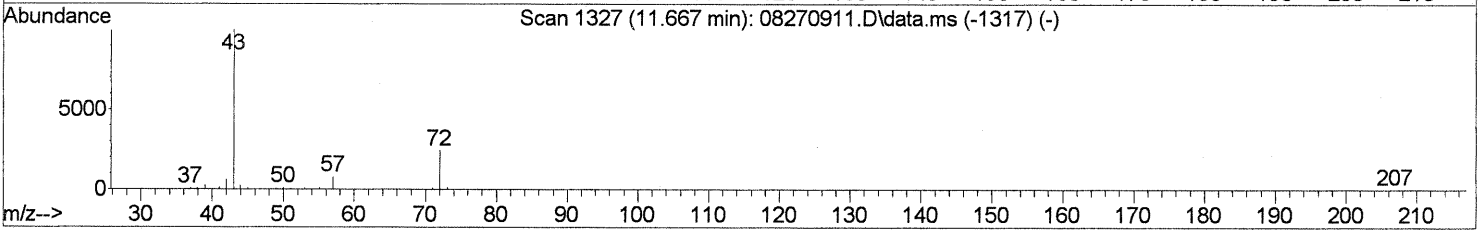
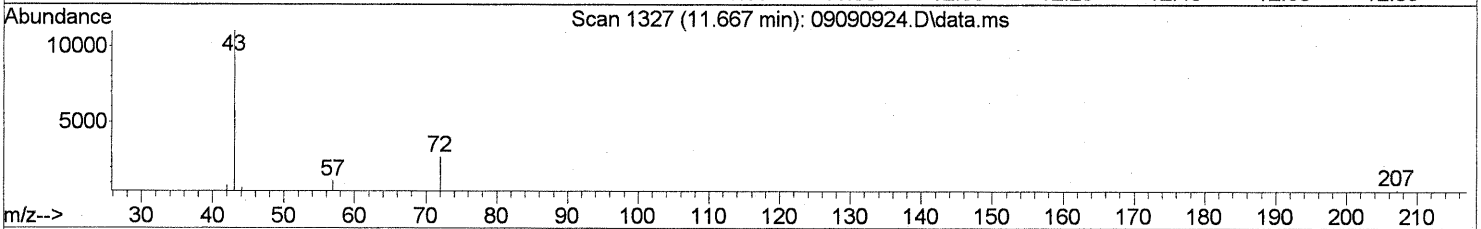
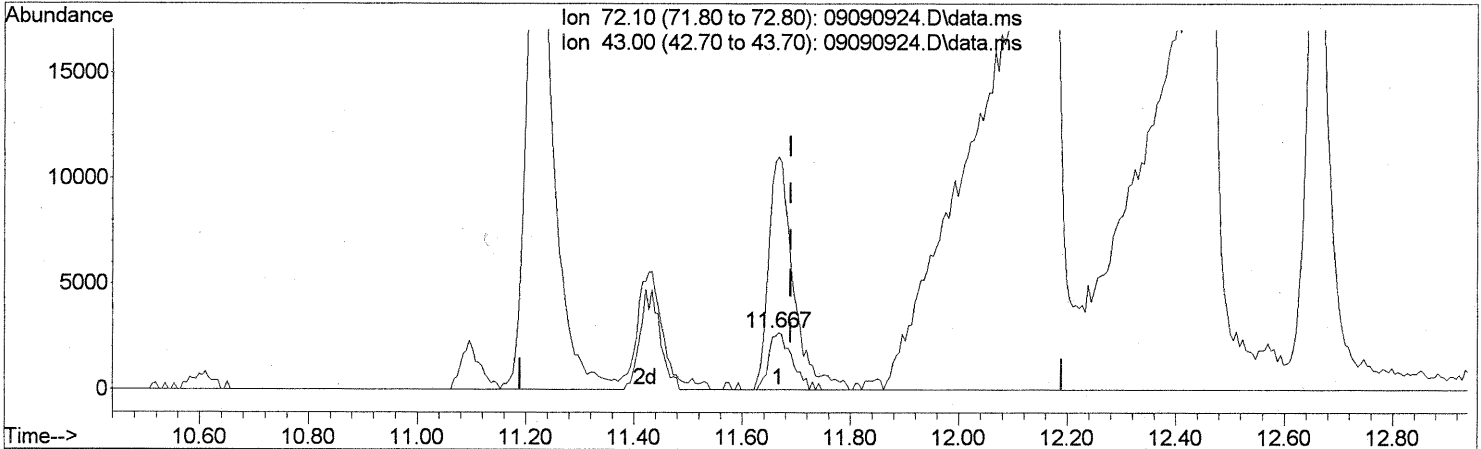
(21) Trichlorotrifluoroethane (T)  
 9.685min (0.000) 0.54ng  
 response 5446

Ion	Exp%	Act%
150.90	100	100
100.90	138.30	130.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(27) 2-Butanone (MEK) (T)

11.667min (-0.023) 0.94ng

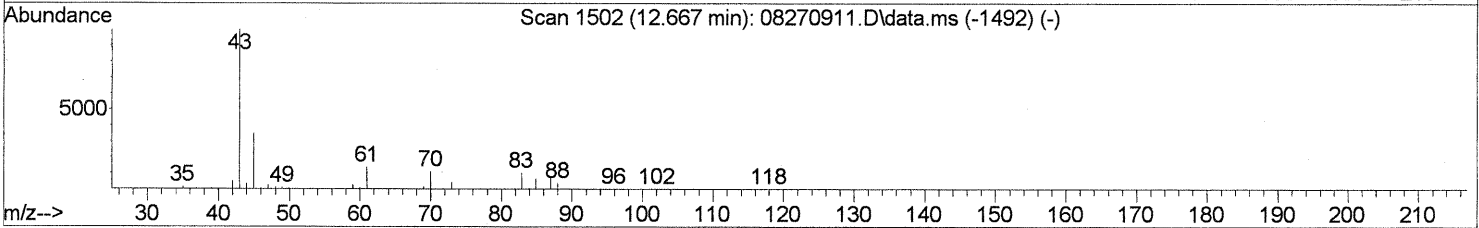
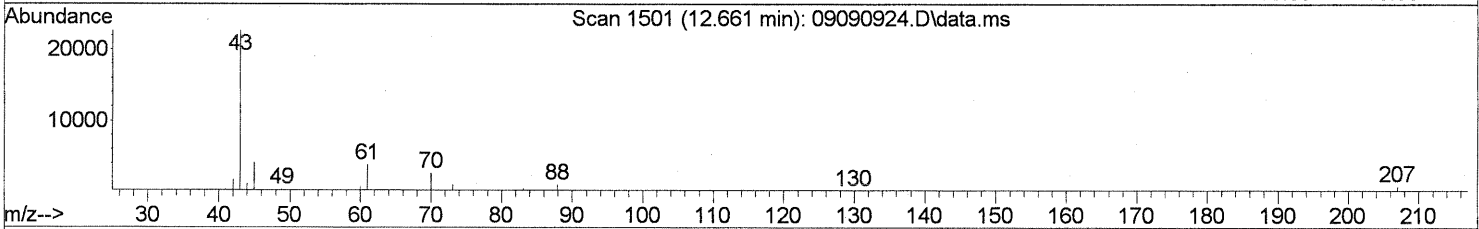
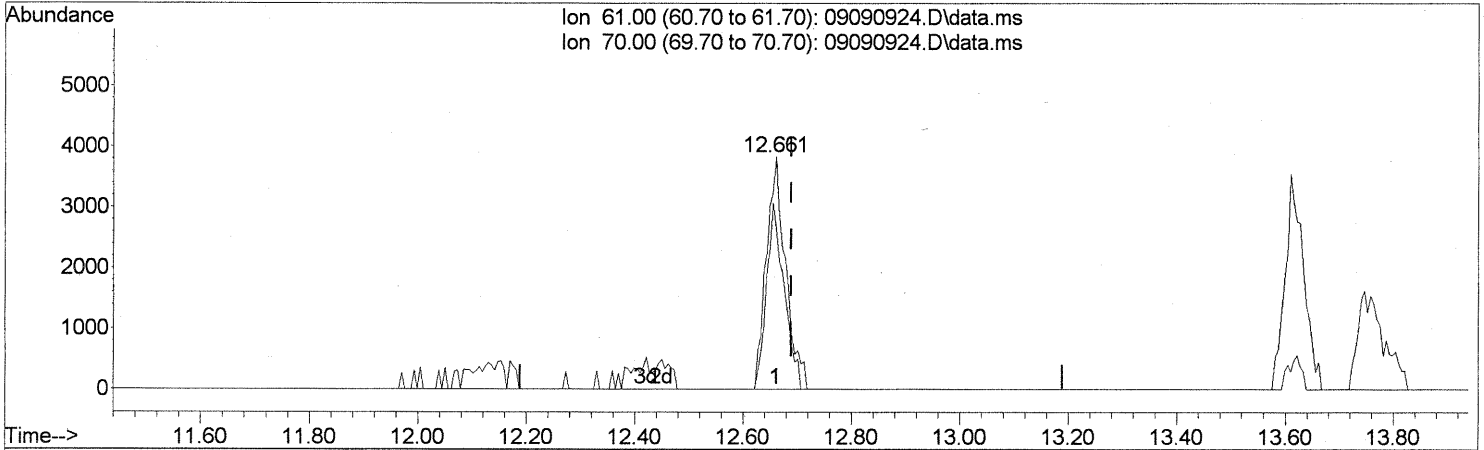
response 8073

Ion	Exp%	Act%
72.10	100	100
43.00	424.60	435.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

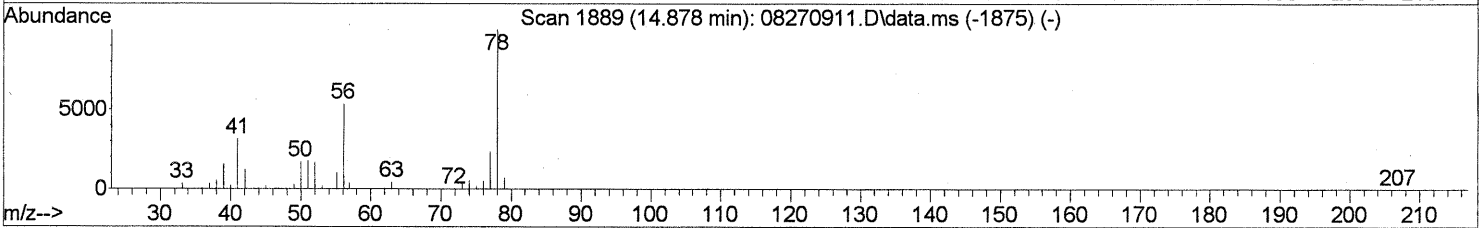
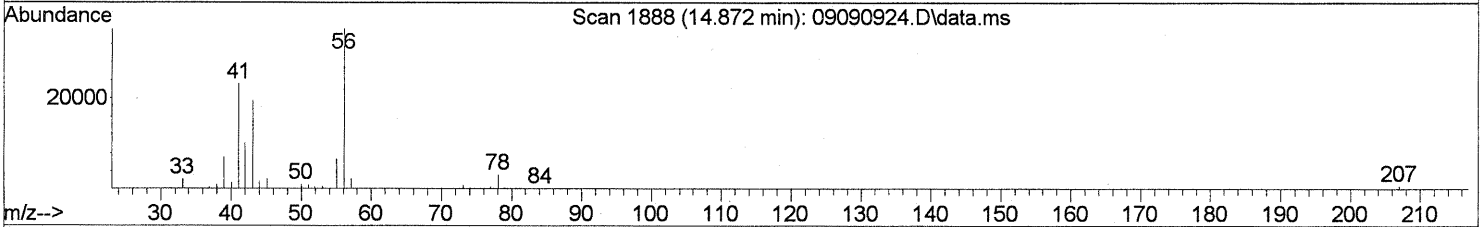
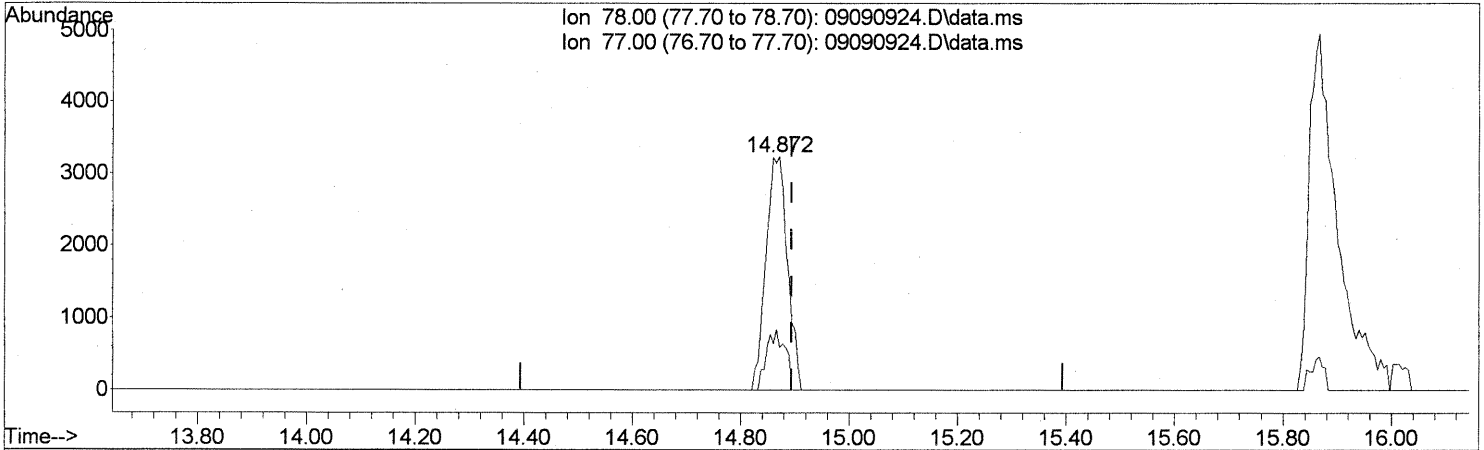
(30) Ethyl Acetate (T)  
 12.661min (-0.029) 2.05ng  
 response 9477

Ion	Exp%	Act%
61.00	100	100
70.00	78.70	72.83
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

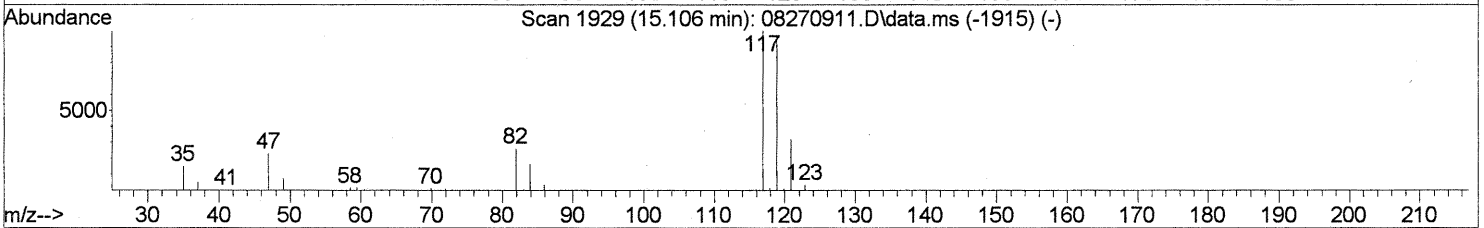
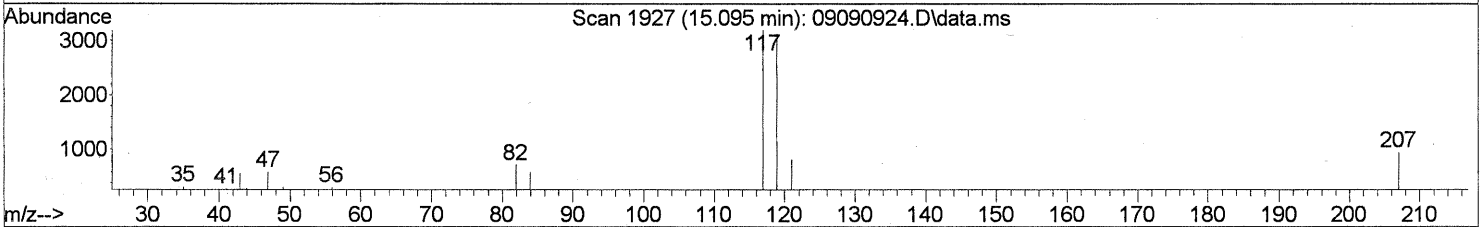
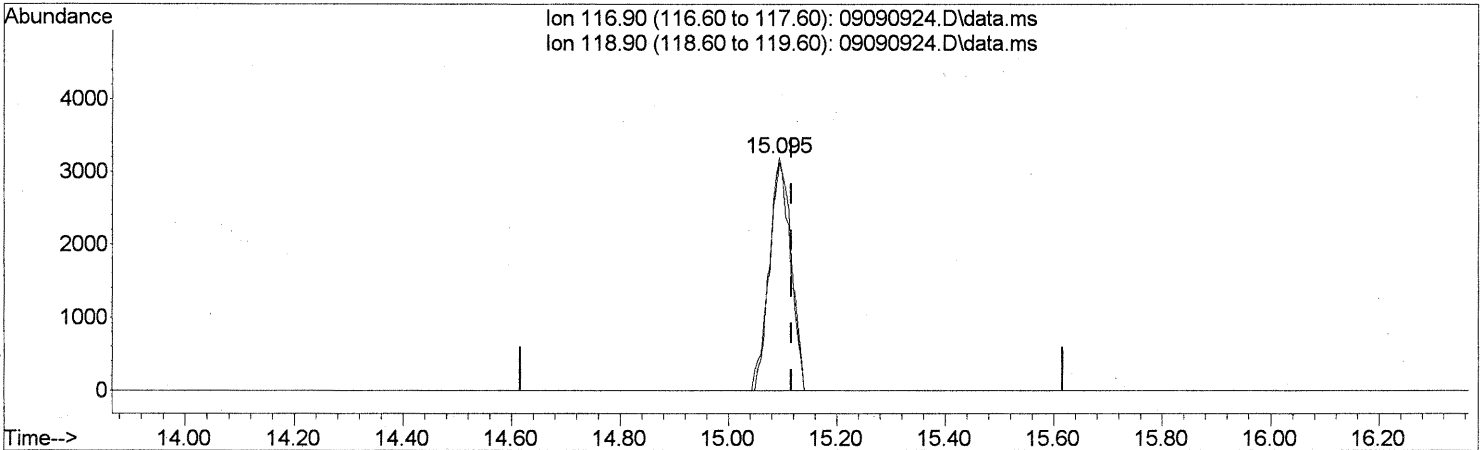
(41) Benzene (T)  
 14.872min (-0.023) 0.16ng  
 response 8899

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	21.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(42) Carbon Tetrachloride (T)

15.095min (-0.023) 0.48ng

response 8769

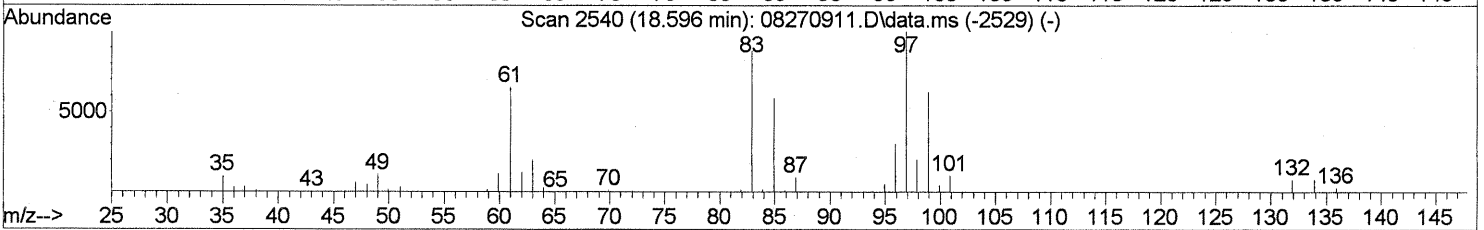
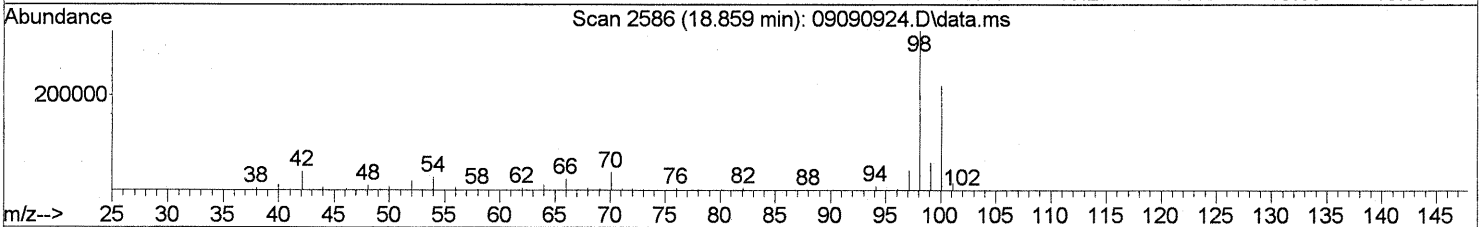
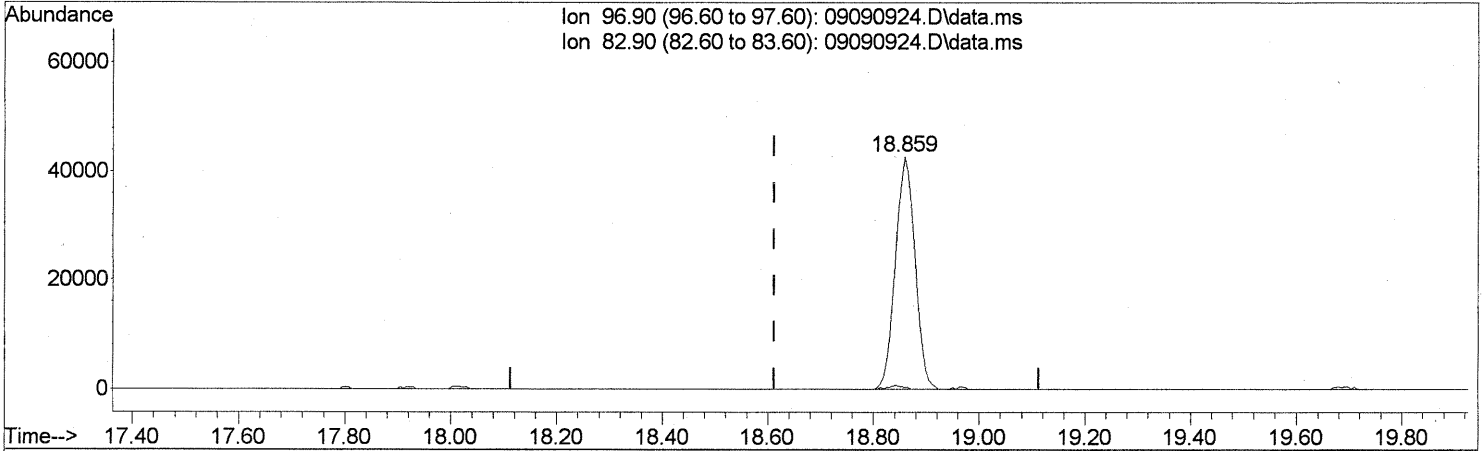
Ion	Exp%	Act%
116.90	100	100
118.90	96.20	99.01
0.00	0.00	0.00
0.00	0.00	0.00



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(55) 1,1,2-Trichloroethane (T)  
 18.859min (+0.246) 8.62ng  
 response 109543

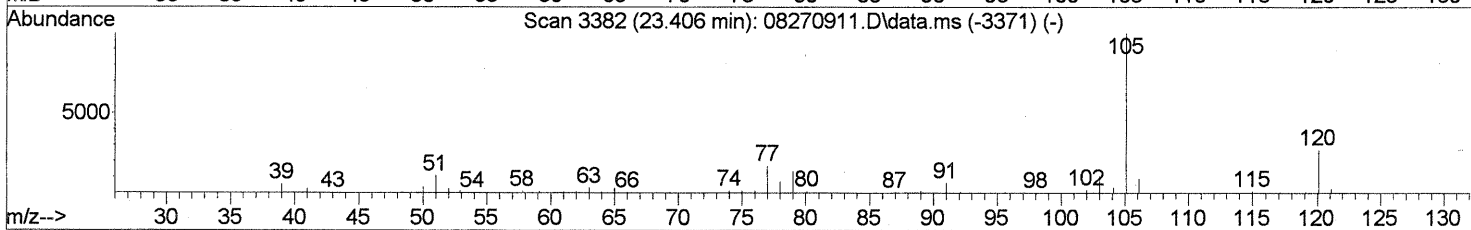
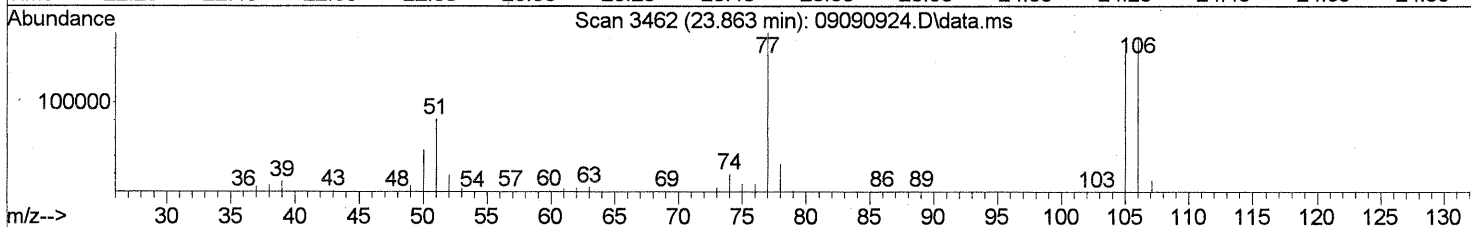
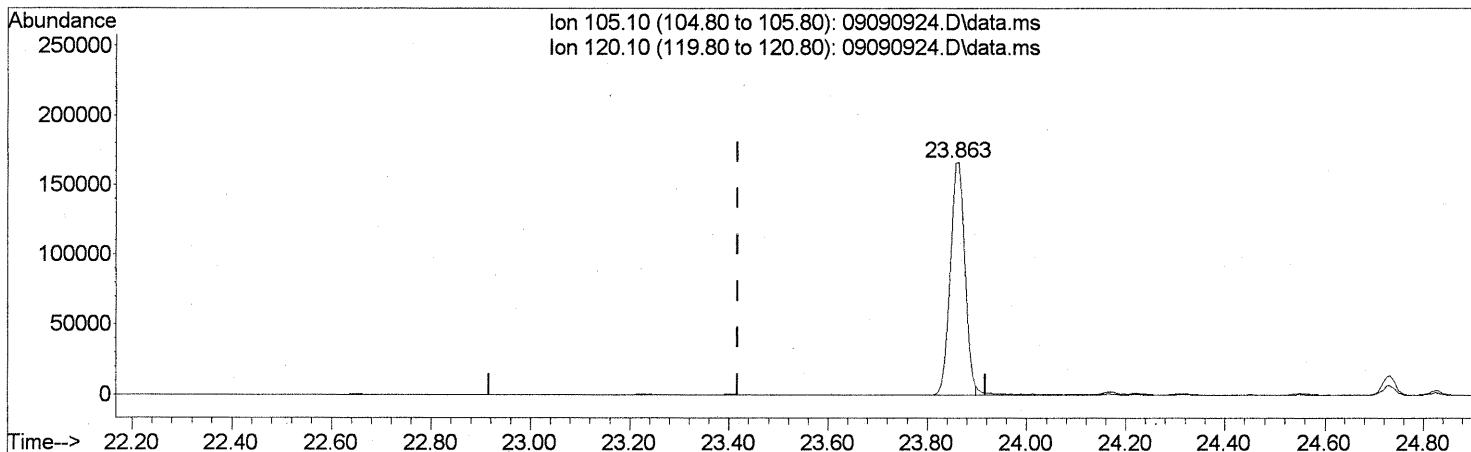
Ion	Exp%	Act%
96.90	100	100
82.90	87.70	1.16#
0.00	0.00	0.00
0.00	0.00	0.00

*PP*  
*09/15/09*  
*09/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(74) Cumene (T)  
 23.863min (+0.446) 5.20ng  
 response 337576

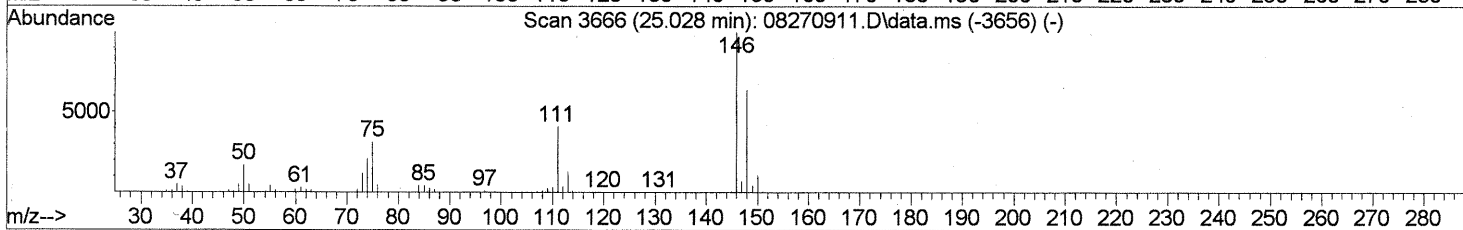
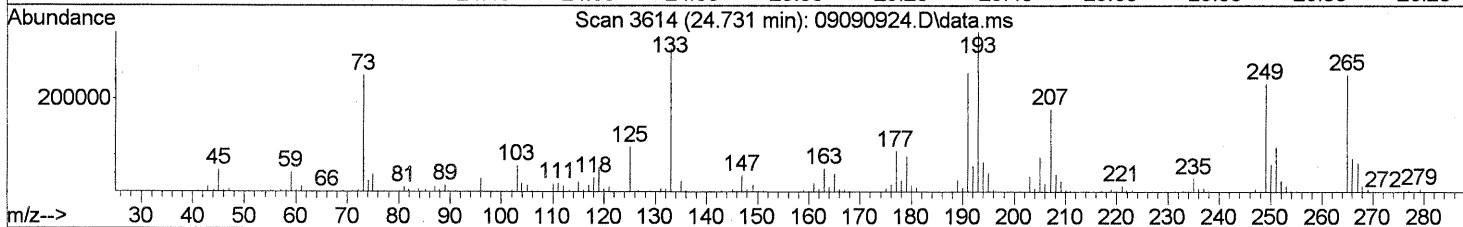
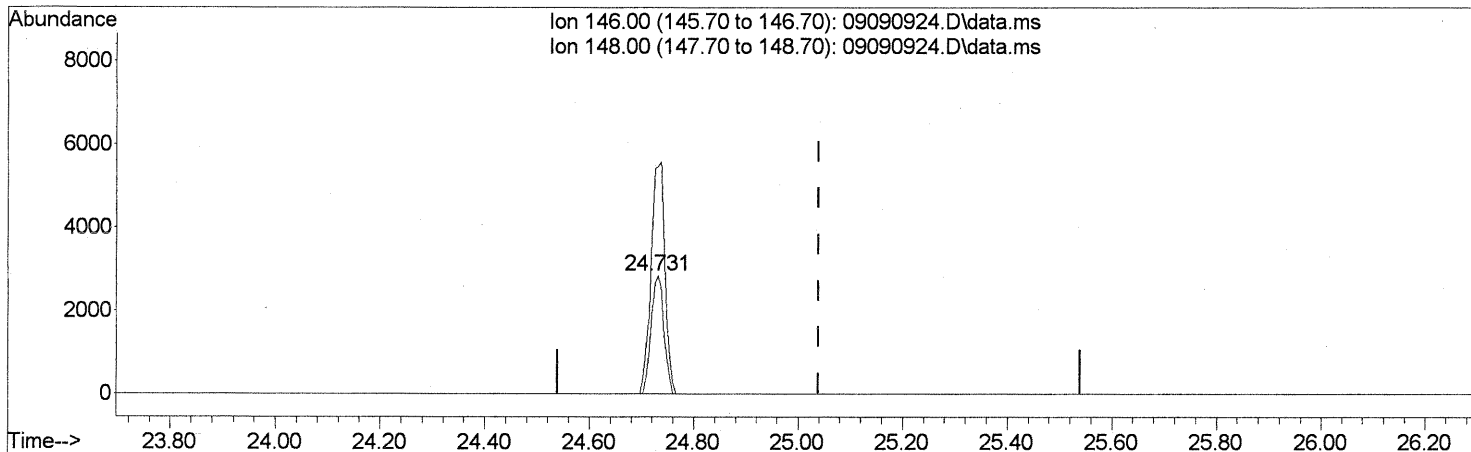
Ion	Exp%	Act%
105.10	100	100
120.10	25.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*9/16/09*  
*LM 9/16/09*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(85) 1,3-Dichlorobenzene (T)

24.731min (-0.308) 0.17ng

response 4793

Ion	Exp%	Act%
146.00	100	100
148.00	64.00	215.17#
0.00	0.00	0.00
0.00	0.00	0.00

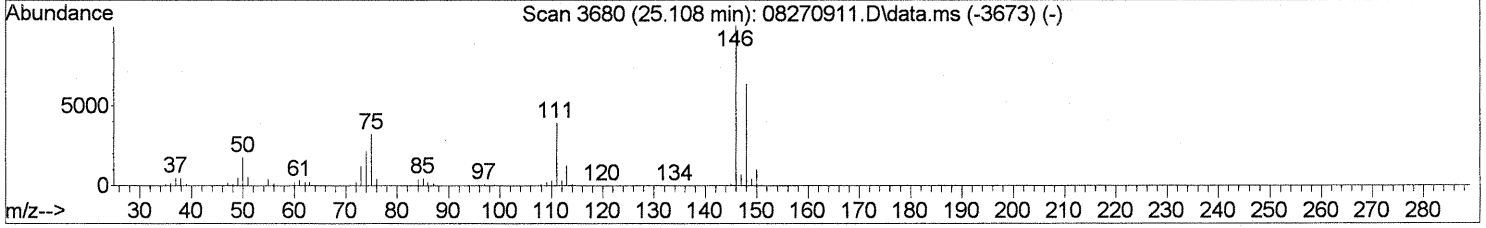
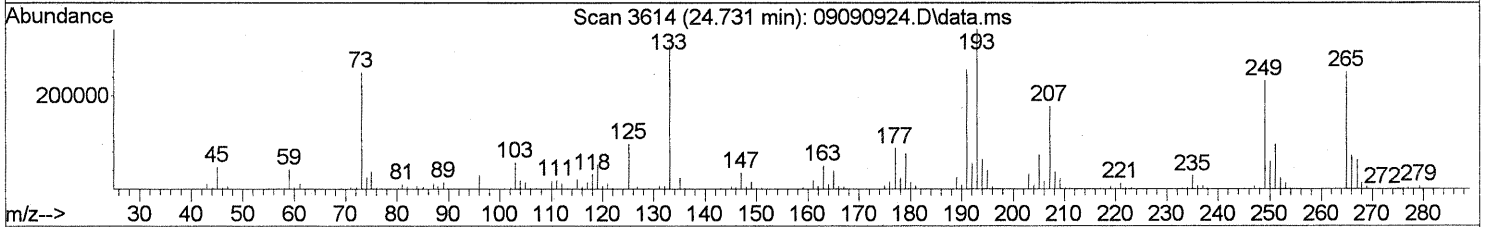
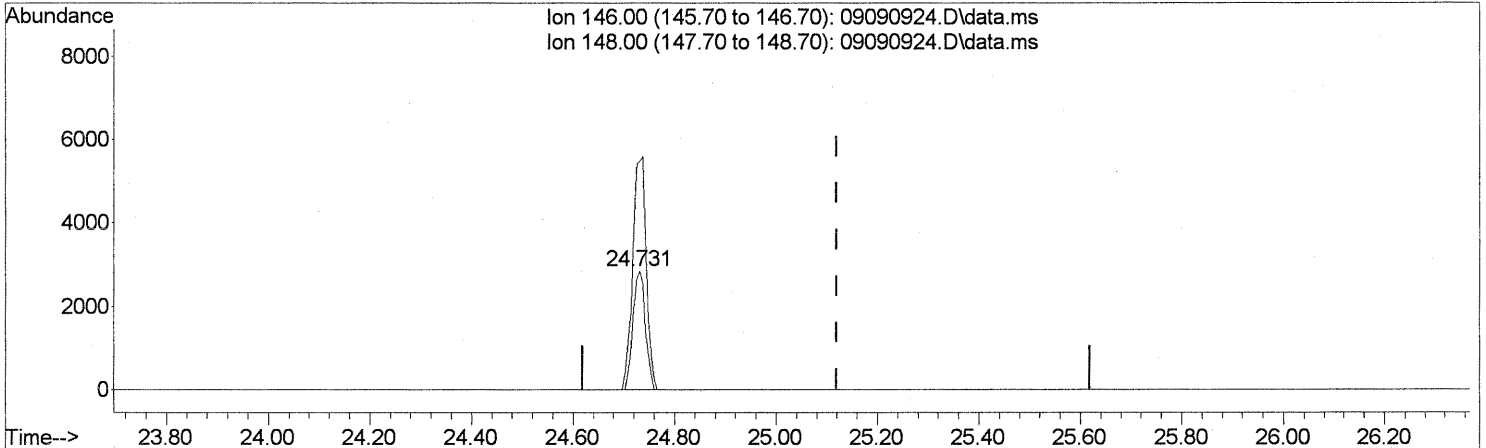
FP  
 11/15/09

LM 9/10/09

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090924.D  
 Acq On : 10 Sep 2009 1:40  
 Operator : LM/CC  
 Sample : P0903114-006 (1000ml)  
 Misc : EH&E 104900  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Sep 10 08:30:38 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



TIC: 09090924.D\data.ms

(86) 1,4-Dichlorobenzene (T)  
 24.731min (-0.388) 0.16ng  
 response 4793

Ion	Exp%	Act%
146.00	100	100
148.00	64.20	215.17#
0.00	0.00	0.00
0.00	0.00	0.00

*FP*  
*9/16/09*  
*17 9/16/09*



**COLUMBIA ANALYTICAL SERVICES, INC.**

RESULTS OF ANALYSIS

Page 2 of 3

**Client:** Environmental Health & Engineering, Inc.

**Client Sample ID:** Method Blank

**Client Project ID:** 16512

CAS Project ID: P0903114

CAS Sample ID: P090909-MB

**Test Code:** EPA TO-15

**Instrument ID:** Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

**Analyst:** Liliana Marghitoiu

**Sampling Media:** 6.0 L Summa Canister

**Test Notes:**

Date Collected: NA

Date Received: NA

Date Analyzed: 9/9/09

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>	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.10	ND	0.025	
141-78-6	Ethyl Acetate	ND	0.50	ND	0.14	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.10	ND	0.020	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.10	ND	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.10	ND	0.018	
71-43-2	Benzene	ND	0.10	ND	0.031	
56-23-5	Carbon Tetrachloride	ND	0.10	ND	0.016	
110-82-7	Cyclohexane	ND	0.50	ND	0.15	
78-87-5	1,2-Dichloropropane	ND	0.10	ND	0.022	
75-27-4	Bromodichloromethane	ND	0.10	ND	0.015	
79-01-6	Trichloroethene	ND	0.10	ND	0.019	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	0.50	ND	0.12	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.10	ND	0.018	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.10	ND	0.012	
106-93-4	1,2-Dibromoethane	ND	0.10	ND	0.013	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

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: \_\_\_\_\_

Date: 9/17/09

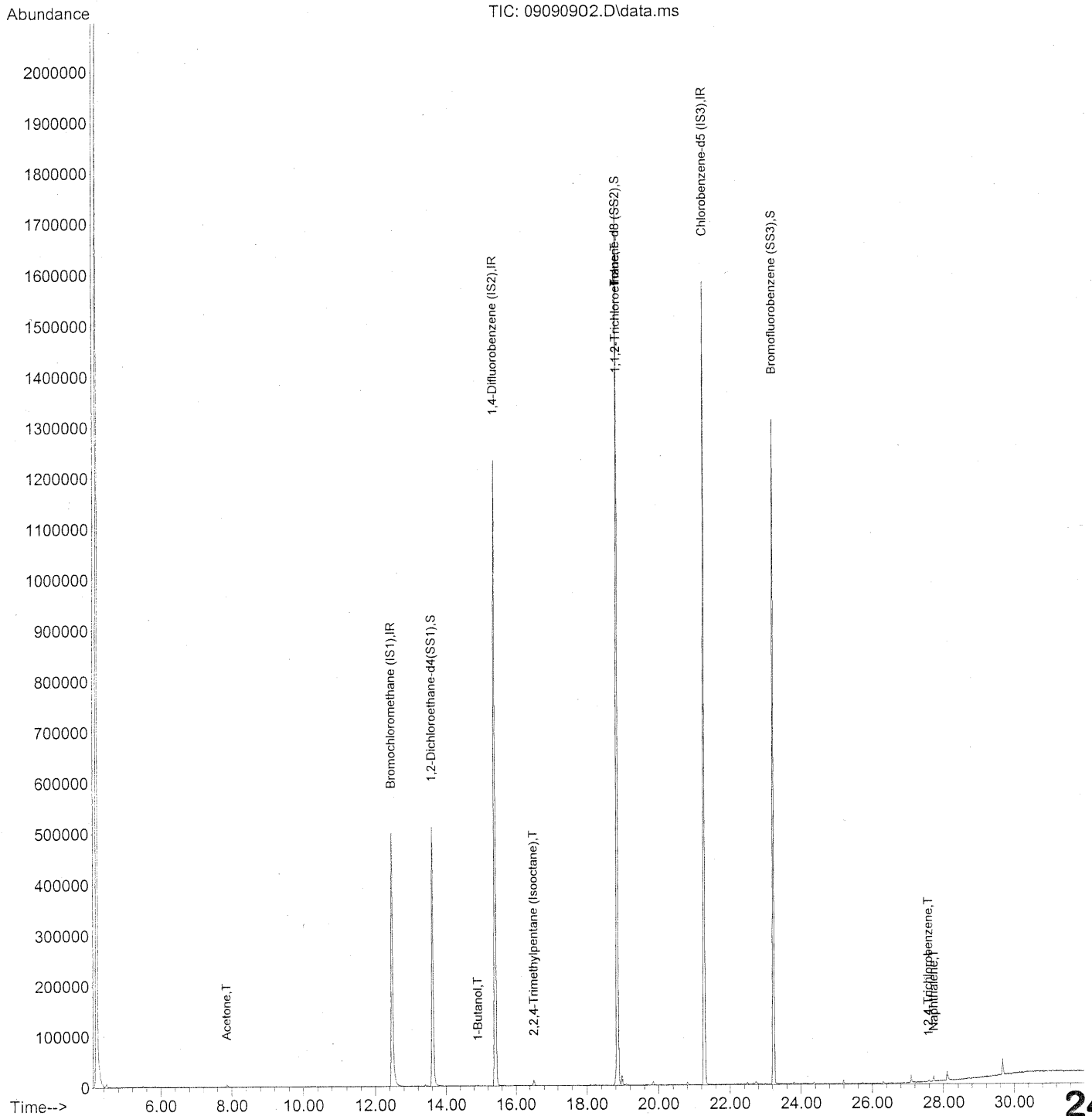
**242**



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009\_09\09\  
Data File : 09090902.D  
Acq On : 9 Sep 2009 10:02 am  
Operator : LM/CC  
Sample : TO-15 Method Blank (1000ml)  
Misc : S20-08140906  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:33:19 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Fri Aug 28 06:02:46 2009  
Response via : Initial Calibration





Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090902.D  
 Acq On : 9 Sep 2009 10:02 am  
 Operator : LM/CC  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-08140906  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:33:19 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*LM 9/10/09*  
*CC*  
*9-10-09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	282656	25.000	ng	-0.03
37) 1,4-Difluorobenzene (IS2)	15.41	114	1425495	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	680464	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	546160	24.383	ng	-0.03
Spiked Amount	25.000		Recovery	=	97.52%	✓
57) Toluene-d8 (SS2)	18.85	98	1530696	25.171	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.68%	✓
73) Bromofluorobenzene (SS3)	23.23	174	443300	25.328	ng	0.00
Spiked Amount	25.000		Recovery	=	101.32%	✓

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.73	42	507		N.D.	
3) Dichlorodifluoromethan...	0.00	85	0		N.D.	
4) Chloromethane	0.00	50	0		N.D.	
5) 1,2-Dichloro-1,1,2,2-t...	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	7.11	45	599		N.D.	
11) Acetonitrile	0.00	41	0		N.D.	
12) Acrolein	0.00	56	0		N.D.	
13) Acetone	7.86	58	3299	0.252	ng	93
14) Trichlorofluoromethane	0.00	101	0		N.D.	
15) 2-Propanol (Isopropanol)	8.36	45	343		N.D.	
16) Acrylonitrile	0.00	53	0		N.D.	
17) 1,1-Dichloroethene	0.00	96	0		N.D.	
18) 2-Methyl-2-Propanol (t...	0.00	59	0		N.D.	
19) Methylene Chloride	9.25	84	184		N.D.	
20) 3-Chloro-1-propene (Al...	0.00	41	0		N.D.	
21) Trichlorotrifluoroethane	0.00	151	0		N.D.	
22) Carbon Disulfide	0.00	76	0		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 (MEK)	0.00	72	0		N.D.	
28) cis-1,2-Dichloroethene	0.00	61	0		N.D.	
29) Diisopropyl Ether	0.00	87	0		N.D.	
30) Ethyl Acetate	0.00	61	0		N.D.	
31) n-Hexane	0.00	57	0		N.D.	

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090902.D  
 Acq On : 9 Sep 2009 10:02 am  
 Operator : LM/CC  
 Sample : TO-15 Method Blank (1000ml)  
 Misc : S20-08140906  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 10:33:19 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	0.00	83	0	N.D.		
34) Tetrahydrofuran (THF)	13.42	72	412	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	14.91	56	1179	0.066 ng	#	60
41) Benzene	14.87	78	852	N.D.		
42) Carbon Tetrachloride	0.00	117	0	N.D.		
43) Cyclohexane	15.40	84	810	N.D.		
44) tert-Amyl Methyl Ether	15.90	73	87	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) 2,2,4-Trimethylpentane...	16.52	57	13900	0.182 ng		95
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	18.86	97	133611	<del>8.557 ng</del>	#	6
58) Toluene	18.97	91	1119	N.D.		
59) 2-Hexanone	19.38	43	109	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) n-Butyl Acetate	20.23	43	88	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	21.82	91	105	N.D.		
67) m- & p-Xylenes	22.09	91	209	N.D.		
68) Bromoform	0.00	173	0	N.D.		
69) Styrene	22.51	104	90	N.D.		
70) o-Xylene	22.66	91	432	N.D.		
71) n-Nonane	23.01	43	258	N.D.		
72) 1,1,2,2-Tetrachloroethane	0.00	83	0	N.D.		
74) Cumene	23.43	105	629	N.D.		
75) alpha-Pinene	0.00	93	0	N.D.		
76) n-Propylbenzene	24.04	91	676	N.D.		
77) 3-Ethyltoluene	24.18	105	1206	N.D.		
78) 4-Ethyltoluene	24.23	105	1228	N.D.		
79) 1,3,5-Trimethylbenzene	24.33	105	1464	N.D.		

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090902.D  
 Acq On : 9 Sep 2009 10:02 am  
 Operator : LM/CC  
 Sample : TO-15 Method Blank (1000ml)  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 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	24.55	105	657		N.D.	
82) 1,2,4-Trimethylbenzene	24.83	105	723		N.D.	
83) n-Decane	24.97	57	134		N.D.	
84) Benzyl Chloride	25.01	91	2634		N.D.	
85) 1,3-Dichlorobenzene	25.03	146	222		N.D.	
86) 1,4-Dichlorobenzene	25.10	146	617		N.D.	
87) sec-Butylbenzene	25.35	105	226		N.D.	
88) 4-Isopropyltoluene (p-...	0.00	119	0		N.D.	
89) 1,2,3-Trimethylbenzene	25.35	105	226		N.D.	
90) 1,2-Dichlorobenzene	25.53	146	91		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	26.30	57	1443		N.D.	
94) 1,2,4-Trichlorobenzene	27.58	180	1218	0.056	ng	# 68
95) Naphthalene	27.73	128	12740	0.151	ng	95
96) n-Dodecane	27.62	57	915		N.D.	
97) Hexachlorobutadiene	28.15	225	414		N.D.	
98) Cyclohexanone	22.31	55	578		N.D.	
99) tert-Butylbenzene	24.51	119	93		N.D.	
100) n-Butylbenzene	25.86	91	470		N.D.	

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

QC SUMMARY FORMS







**COLUMBIA ANALYTICAL SERVICES, INC.**

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

**Client:** Environmental Health & Engineering, Inc.  
**Client Sample ID:** Lab Control Sample  
**Client Project ID:** 16512

CAS Project ID: P0903114  
 CAS Sample ID: P090909-LCS

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

**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 9/09/09  
**Volume(s) Analyzed:** NA Liter(s)

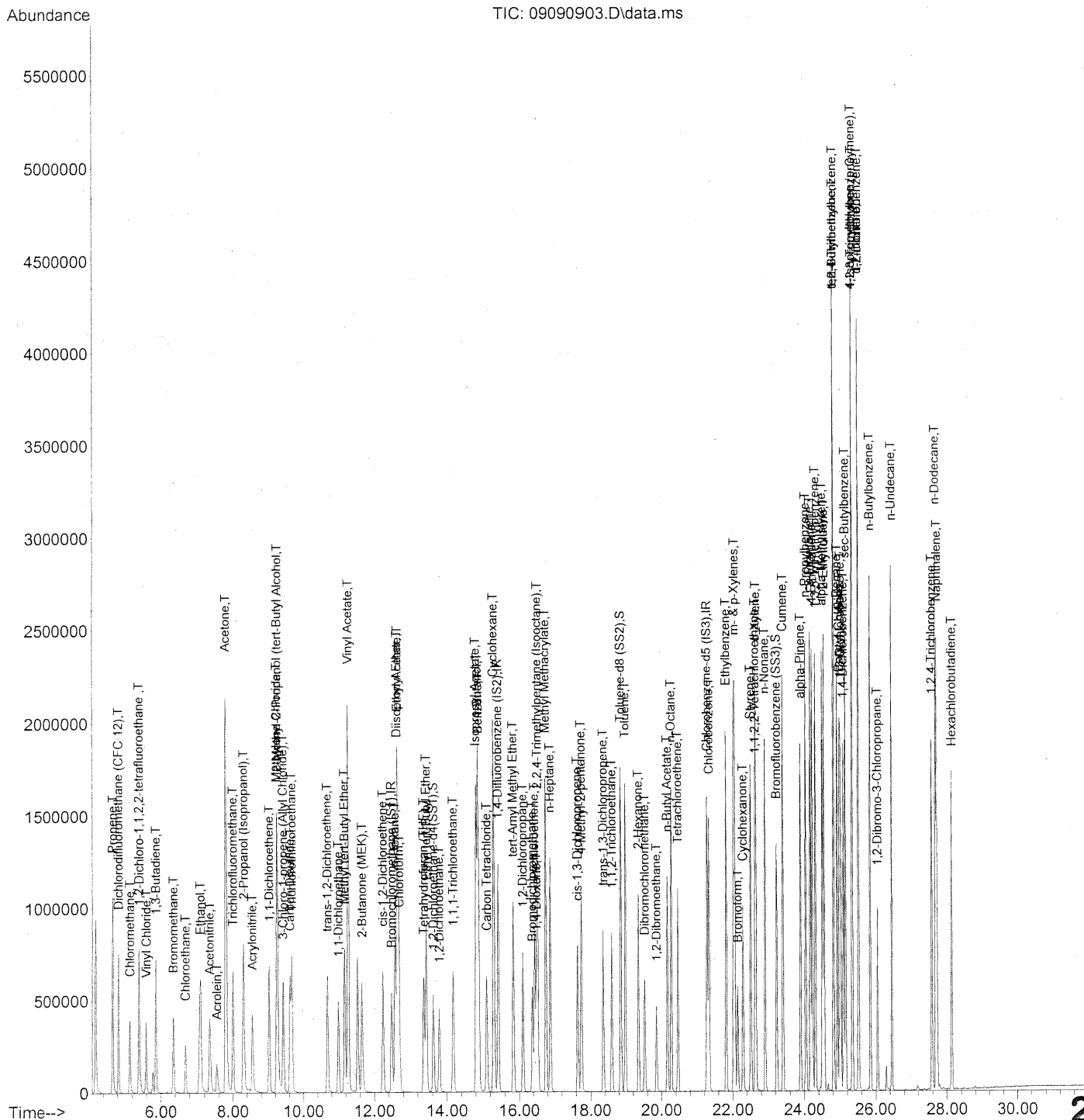
CAS #	Compound	Spike Amount	Result	% Recovery	CAS	Data Qualifier
		ng	ng		Acceptance Limits	
111-65-9	n-Octane	26.3	23.8	90	75-126	
127-18-4	Tetrachloroethene	25.3	24.0	95	72-125	
108-90-7	Chlorobenzene	26.5	24.7	93	74-121	
100-41-4	Ethylbenzene	26.3	24.2	92	76-120	
179601-23-1	m,p-Xylenes	51.5	47.5	92	75-120	
75-25-2	Bromoform	26.5	24.4	92	76-143	
100-42-5	Styrene	26.3	25.8	98	78-124	
95-47-6	o-Xylene	26.0	24.2	93	76-121	
111-84-2	n-Nonane	25.8	23.2	90	69-129	
79-34-5	1,1,2,2-Tetrachloroethane	27.0	24.1	89	77-126	
98-82-8	Cumene	25.3	23.7	94	78-125	
80-56-8	alpha-Pinene	24.8	23.1	93	78-125	
103-65-1	n-Propylbenzene	25.3	23.4	92	80-127	
622-96-8	4-Ethyltoluene	26.3	24.4	93	75-123	
108-67-8	1,3,5-Trimethylbenzene	26.5	25.4	96	76-124	
95-63-6	1,2,4-Trimethylbenzene	25.5	24.9	98	76-123	
100-44-7	Benzyl Chloride	26.8	24.2	90	80-137	
541-73-1	1,3-Dichlorobenzene	26.0	25.0	96	74-125	
106-46-7	1,4-Dichlorobenzene	26.3	24.8	94	74-126	
95-50-1	1,2-Dichlorobenzene	25.8	25.0	97	75-124	
5989-27-5	d-Limonene	26.5	26.3	99	66-129	
96-12-8	1,2-Dibromo-3-chloropropane	27.0	27.6	102	79-144	
120-82-1	1,2,4-Trichlorobenzene	27.3	27.6	101	70-139	
91-20-3	Naphthalene	25.0	25.1	100	69-141	
87-68-3	Hexachlorobutadiene	26.8	26.3	98	68-138	



Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090903.D  
 Acq On : 9 Sep 2009 10:44 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 11:15:44 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090903.D  
 Acq On : 9 Sep 2009 10:44 am  
 Operator : LM/CC  
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Quant Time: Sep 09 11:15:44 2009  
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 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*LM 9/10/09*  
*CC*  
*9-10-09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.48	130	278505	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	15.42	114	1413648	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.29	82	678781	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.63	65	541003	24.513	ng	-0.02
Spiked Amount	25.000		Recovery	=	98.04%	
57) Toluene-d8 (SS2)	18.85	98	1526279	25.160	ng	-0.01
Spiked Amount	25.000		Recovery	=	100.64%	
73) Bromofluorobenzene (SS3)	23.23	174	442593	25.351	ng	0.00
Spiked Amount	25.000		Recovery	=	101.40%	

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.67	42	463120	22.989	ng	100
3) Dichlorodifluoromethan...	4.83	85	761420	21.588	ng	99
4) Chloromethane	5.15	50	532675	22.467	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.40	135	339687	23.319	ng	100
6) Vinyl Chloride	5.59	62	499721	22.470	ng	100
7) 1,3-Butadiene	5.86	54	401618	24.215	ng	98
8) Bromomethane	6.35	94	360577	26.230	ng	98
9) Chloroethane	6.69	64	288935	23.732	ng	99
10) Ethanol	7.10	45	1438520	115.155	ng	99
11) Acetonitrile	7.35	41	756781	21.811	ng	98
12) Acrolein	7.55	56	236237	24.767	ng	99
13) Acetone	7.81	58	1418207	109.778	ng	95
14) Trichlorofluoromethane	8.01	101	709920	22.837	ng	98
15) 2-Propanol (Isopropanol)	8.31	45	1720522	40.060	ng	99
16) Acrylonitrile	8.55	53	538543	25.253	ng	98
17) 1,1-Dichloroethene	9.03	96	378826	25.121	ng	90
18) 2-Methyl-2-Propanol (t...	9.26	59	1939645	45.101	ng	99
19) Methylene Chloride	9.25	84	370886	22.635	ng	97
20) 3-Chloro-1-propene (Al...	9.42	41	620573	24.335	ng	96
21) Trichlorotrifluoroethane	9.67	151	321342	26.104	ng	94
22) Carbon Disulfide	9.62	76	1379388	23.661	ng	99
23) trans-1,2-Dichloroethene	10.68	61	572775	24.436	ng	93
24) 1,1-Dichloroethane	10.99	63	706537	24.100	ng	100
25) Methyl tert-Butyl Ether	11.16	73	1126310	24.322	ng	98
26) Vinyl Acetate	11.27	86	426467	131.728	ng	# 94
27) 2-Butanone (MEK)	11.66	72	275331	26.385	ng	92
28) cis-1,2-Dichloroethene	12.24	61	559706	25.105	ng	91
29) Diisopropyl Ether	12.64	87	393634	25.834	ng	# 43
30) Ethyl Acetate	12.66	61	283322	50.524	ng	97
31) n-Hexane	12.58	57	657367	23.533	ng	99

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090903.D  
 Acq On : 9 Sep 2009 10:44 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 11:15:44 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.70	83	660356	23.982	ng	97
34) Tetrahydrofuran (THF)	13.37	72	264259	23.351	ng	94
35) Ethyl tert-Butyl Ether	13.44	87	449302	24.035	ng	91
36) 1,2-Dichloroethane	13.79	62	539162	23.338	ng	99
38) 1,1,1-Trichloroethane	14.18	97	610174	23.349	ng	98
39) Isopropyl Acetate	14.81	61	516765	48.058	ng #	75
40) 1-Butanol	14.86	56	830833	47.218	ng #	1
41) Benzene	14.88	78	1513166	22.770	ng	99
42) Carbon Tetrachloride	15.11	117	548022	24.565	ng	100
43) Cyclohexane	15.30	84	1168874	47.724	ng	95
44) tert-Amyl Methyl Ether	15.84	73	1130867	22.975	ng	97
45) 1,2-Dichloropropane	16.11	63	396733	24.161	ng	97
46) Bromodichloromethane	16.37	83	524230	23.938	ng	99
47) Trichloroethene	16.44	130	400001	24.672	ng	99
48) 1,4-Dioxane	16.49	88	319557	25.020	ng	93
49) 2,2,4-Trimethylpentane...	16.52	57	1736316	22.959	ng	97
50) Methyl Methacrylate	16.76	100	328215	53.287	ng	91
51) n-Heptane	16.88	71	413350	23.998	ng	96
52) cis-1,3-Dichloropropene	17.65	75	626800	23.235	ng	100
53) 4-Methyl-2-pentanone	17.75	58	376019	24.775	ng	99
54) trans-1,3-Dichloropropene	18.36	75	654226	25.603	ng	100
55) 1,1,2-Trichloroethane	18.60	97	365970	23.634	ng	98
58) Toluene	18.98	91	1604228	24.553	ng	99
59) 2-Hexanone	19.35	43	946757	23.710	ng	97
60) Dibromochloromethane	19.53	129	434308	26.441	ng	100
61) 1,2-Dibromoethane	19.86	107	420339	24.497	ng	98
62) n-Butyl Acetate	20.16	43	1070149	23.361	ng	98
63) n-Octane	20.28	57	357350	23.767	ng	96
64) Tetrachloroethene	20.46	166	397654	24.037	ng	100
65) Chlorobenzene	21.34	112	1036639	24.734	ng	100
66) Ethylbenzene	21.82	91	1811391	24.239	ng	100
67) m- & p-Xylenes	22.06	91	2822962	47.450	ng	98
68) Bromoform	22.15	173	347430	24.429	ng	100
69) Styrene	22.51	104	1128305	25.757	ng	98
70) o-Xylene	22.65	91	1448156	24.234	ng	97
71) n-Nonane	22.91	43	833863	23.221	ng	96
72) 1,1,2,2-Tetrachloroethane	22.63	83	661038	24.128	ng	98
74) Cumene	23.41	105	1795902	23.712	ng	99
75) alpha-Pinene	23.90	93	907063	23.088	ng	97
76) n-Propylbenzene	24.05	91	2250894	23.396	ng	98
77) 3-Ethyltoluene	24.17	105	1816036	25.064	ng	99
78) 4-Ethyltoluene	24.23	105	1742555	24.369	ng	98
79) 1,3,5-Trimethylbenzene	24.32	105	1514728	25.449	ng	9

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Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090903.D  
 Acq On : 9 Sep 2009 10:44 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 LCS STD  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Sep 09 11:15:44 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	835090	26.716	ng	96
81) 2-Ethyltoluene	24.56	105	1791496	24.095	ng	100
82) 1,2,4-Trimethylbenzene	24.83	105	1512313	24.891	ng	99
83) n-Decane	24.93	57	875307	24.130	ng	97
84) Benzyl Chloride	25.00	91	1458623	24.249	ng	98
85) 1,3-Dichlorobenzene	25.02	146	821114	25.006	ng	100
86) 1,4-Dichlorobenzene	25.10	146	847498	24.782	ng	98
87) sec-Butylbenzene	25.16	105	2024604	24.396	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	1807964	24.170	ng	100
89) 1,2,3-Trimethylbenzene	25.35	105	1537169	24.138	ng	99
90) 1,2-Dichlorobenzene	25.53	146	766603	25.015	ng	99
91) d-Limonene	25.53	68	638627	26.331	ng	98
92) 1,2-Dibromo-3-Chloropr...	26.06	157	295640	27.572	ng	92
93) n-Undecane	26.46	57	950479	25.240	ng	98
94) 1,2,4-Trichlorobenzene	27.58	180	595249	27.577	ng	98
95) Naphthalene	27.73	128	2105748	25.078	ng	100
96) n-Dodecane	27.69	57	982058	22.878	ng	98
97) Hexachlorobutadiene	28.15	225	341058	26.280	ng	100
98) Cyclohexanone	22.29	55	545399	21.651	ng	95
99) tert-Butylbenzene	24.83	119	1446735	24.588	ng	99
100) n-Butylbenzene	25.86	91	1725240	25.498	ng	100

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

## INITIAL CALIBRATION STANDARDS

Response Factor Report GCMS13

Method : J:\MS13\METHODS\R13082709.M (RTE Integrator)  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Calibration Files

0.1 =08270906.D 0.2 =08270907.D 0.5 =08270908.D 1.0 =08270909.D 5.0 =08270910.D  
 25 =08270911.D 50 =08270912.D 100 =08270913.D

Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
-----ISTD-----										
1) IR Bromochloromethan										
2) T Propene	2.228	1.768	1.709	1.601	1.972	1.929	1.517	1.744	1.808	12.55
3) T Dichlorodifluorom	3.863	3.277	3.356	3.114	3.233	3.191	2.448	2.845	3.166	12.86
4) T Chloromethane	2.259	2.110	2.206	2.148	2.122	2.355	1.885	1.942	2.128	7.31
5) T 1,2-Dichloro-1,1,	1.431	1.358	1.272	1.297	1.345	1.383	1.097	1.277	1.308	7.73
6) T Vinyl Chloride	2.051	1.971	1.941	1.934	2.071	2.173	1.758	2.071	1.996	6.27
7) T 1,3-Butadiene	1.682	1.372	1.440	1.385	1.522	1.671	1.310	1.529	1.489	9.22
8) T Bromomethane	1.136	1.099	1.319	1.185	1.374	1.461	1.050	1.247	1.234	11.56
9) T Chloroethane	1.107	1.073	1.099	1.012	1.155	1.210	0.956	1.132	1.093	7.33
10) T Ethanol	1.132	1.170	1.171	1.069	1.162	1.228	0.959	1.079	1.121	7.46
11) T Acetonitrile	3.731	3.312	3.106	2.811	3.118	3.268	2.579	2.992	3.115	11.10
12) T Acrolein			0.782	0.792	0.892	0.983	0.784	0.904	0.856	9.69
13) T Acetone	1.540	1.354	1.207	1.077	1.126	1.152	0.876	0.945	1.160	18.42
14) T Trichlorofluorome	2.816	2.659	2.984	2.708	2.943	3.075	2.401	2.738	2.791	7.67
15) T 2-Propanol (Isopr		4.562	4.691	4.193	3.525	4.031	2.841	3.143	3.855	18.31
16) T Acrylonitrile	1.679	1.661	1.830	1.855	2.096	2.283	1.820	2.090	1.914	11.50
17) T 1,1-Dichloroethen	1.421	1.308	1.395	1.299	1.374	1.477	1.183	1.372	1.354	6.64
18) T 2-Methyl-2-Propan	4.111	3.917	3.922	3.742	4.000	4.357	2.975		3.860	11.26
19) T Methylene Chlorid	1.613	1.543	1.556	1.402	1.474	1.542	1.220	1.418	1.471	8.46
20) T 3-Chloro-1-propen	2.522	2.248	2.221	2.068	2.365	2.545	2.033	2.310	2.289	8.19
21) T Trichlorotrifluor	1.027	1.089	1.228	1.078	1.116	1.231	0.985	1.088	1.105	7.87
22) T Carbon Disulfide	5.517	5.028	5.376	5.032	5.437	5.803	4.554	5.118	5.233	7.31
23) T trans-1,2-Dichlor	1.970	1.770	2.149	2.072	2.273	2.449	1.946	2.204	2.104	10.07
24) T 1,1-Dichloroethan	2.902	2.459	2.655	2.507	2.698	2.900	2.319	2.614	2.632	7.77
25) T Methyl tert-Butyl	4.565	3.987	4.180	3.793	4.176	4.615	3.722	4.216	4.157	7.77
26) T Vinyl Acetate	0.281	0.271	0.307	0.277	0.301	0.350	0.265	0.273	0.291	9.72
27) T 2-Butanone (MEK)	1.034	0.821	0.921	0.891	1.025	1.124	0.885	0.793	0.937	12.17
28) T cis-1,2-Dichloroe	1.967	1.808	2.117	1.898	2.118	2.271	1.796	2.034	2.001	8.27
29) T Diisopropyl Ether	1.277	1.282	1.446	1.333	1.450	1.568	1.225	1.362	1.368	8.30

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(#) Out of Range ### Number of calibration levels exceeded format ###  
 R13082709.M Fri Aug 28 11:16:18 2009

MM 8/28/09  
 CC 8/28/09

Response Factor Report GCMS13

Method : J:\MS13\METHODS\R13082709.M (RTE Integrator)  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Calibration Files

0.1 =08270906.D 0.2 =08270907.D 0.5 =08270908.D 1.0 =08270909.D 5.0 =08270910.D  
 25 =08270911.D 50 =08270912.D 100 =08270913.D

Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
30) T Ethyl Acetate	0.448	0.403	0.525	0.494	0.567	0.608	0.467	0.515	0.503	13.03
31) T n-Hexane	2.821	2.572	2.527	2.400	2.518	2.688	2.123	2.411	2.508	8.31
32) T Chloroform	2.621	2.291	2.596	2.424	2.599	2.746	2.131	2.366	2.472	8.25
33) S 1,2-Dichloroethan	2.001	2.011	1.998	2.007	1.974	2.005	1.950	1.903	1.981	1.91
34) T Tetrahydrofuran (	1.586	1.658	1.745	1.622	1.714	1.875	1.503	1.720	1.678	13.53
35) T Ethyl tert-Butyl	2.363	1.999	2.075	1.989	2.111	2.276	1.787	1.991	2.074	6.72
36) T 1,2-Dichloroethan										8.71
37) IR 1,4-Difluorobenze										
38) T 1,1,1-Trichloroet	0.480	0.446	0.490	0.442	0.477	0.509	0.407	0.446	0.462	7.09
39) T Isopropyl Acetate	0.195	0.173	0.194	0.181	0.203	0.217	0.170	0.188	0.190	8.12
40) T 1-Butanol	0.346	0.331	0.296	0.270	0.311	0.349	0.278	0.309	0.311	9.41
41) T Benzene	1.365	1.233	1.256	1.121	1.199	1.222	0.957	1.049	1.175	10.90
42) T Carbon Tetrachlor	0.393	0.351	0.407	0.375	0.414	0.447	0.361	0.408	0.395	7.94
43) T Cyclohexane	0.460	0.428	0.451	0.413	0.447	0.477	0.376	0.412	0.433	7.42
44) T tert-Amyl Methyl	1.007	0.839	0.936	0.847	0.884	0.919	0.722	0.809	0.870	9.98
45) T 1,2-Dichloropropa	0.281	0.276	0.295	0.284	0.309	0.323	0.260	0.295	0.290	6.85
46) T Bromodichlorometh	0.398	0.337	0.396	0.363	0.412	0.443	0.354	0.396	0.387	8.87
47) T Trichloroethene	0.275	0.288	0.284	0.265	0.297	0.323	0.262	0.299	0.287	6.94
48) T 1,4-Dioxane	0.184	0.214	0.247	0.219	0.248	0.264	0.211	0.221	0.226	11.32
49) T 2,2,4-Trimethylpe	1.457	1.313	1.417	1.291	1.396	1.451	1.138	1.236	1.337	8.46
50) T Methyl Methacryla	0.100	0.092	0.106	0.103	0.120	0.130	0.105	0.116	0.109	11.14
51) T n-Heptane	0.288	0.283	0.326	0.302	0.326	0.340	0.271	0.301	0.305	7.92
52) T cis-1,3-Dichlorop	0.447	0.427	0.497	0.448	0.507	0.549	0.443	0.499	0.477	8.79
53) T 4-Methyl-2-pentan	0.263	0.241	0.264	0.255	0.286	0.311	0.248	0.279	0.268	8.46
54) T trans-1,3-Dichlor	0.410	0.423	0.459	0.422	0.486	0.522	0.419	0.473	0.452	8.83
55) T 1,1,2-Trichloroet	0.291	0.264	0.282	0.250	0.286	0.299	0.243	0.274	0.274	7.27
56) IR Chlorobenzene-d5										
57) S Toluene-d8 (SS2)	2.226	2.230	2.222	2.230	2.212	2.233	2.240	2.281	2.234	0.92

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(#) Out of Range ### Number of calibration levels exceeded format ###  
 R13082709.M Fri Aug 28 11:16:18 2009

Method : J:\MS13\METHODS\R13082709.M (RTE Integrator)  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Calibration Files

0.1 =08270906.D 0.2 =08270907.D 0.5 =08270908.D 1.0 =08270909.D 5.0 =08270910.D  
 25 =08270911.D 50 =08270912.D 100 =08270913.D

Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
58) T Toluene	2.610	2.363	2.446	2.293	2.488	2.606	2.090	2.354	2.406	7.15
59) T 2-Hexanone	1.630	1.345	1.430	1.385	1.501	1.658	1.320	1.497	1.471	8.51
60) T Dibromochlorometh	0.553	0.552	0.627	0.552	0.620	0.700	0.571	0.666	0.605	9.44
61) T 1,2-Dibromoethane	0.592	0.587	0.644	0.603	0.656	0.720	0.582	0.671	0.632	7.80
62) T n-Butyl Acetate	1.687	1.542	1.665	1.576	1.732	1.914	1.554	1.826	1.687	7.90
63) T n-Octane	0.626	0.513	0.579	0.531	0.562	0.598	0.478	0.542	0.554	8.61
64) T Tetrachloroethene	0.592	0.582	0.624	0.569	0.632	0.675	0.553	0.648	0.609	6.89
65) T Chlorobenzene	1.621	1.513	1.607	1.436	1.576	1.689	1.360	1.548	1.544	6.87
66) T Ethylbenzene	2.899	2.579	2.862	2.627	2.891	3.056	2.418	2.686	2.752	7.61
67) T m- & p-Xylenes	2.271	2.106	2.268	2.112	2.295	2.438	1.915	2.123	2.191	7.29
68) T Bromoform	0.492	0.457	0.478	0.478	0.541	0.620	0.515	0.610	0.524	11.78
69) T Styrene	1.632	1.460	1.546	1.485	1.715	1.865	1.499	1.706	1.613	8.77
70) T o-Xylene	2.198	2.015	2.279	2.160	2.341	2.481	1.953	2.181	2.201	7.71
71) T n-Nonane	1.410	1.318	1.387	1.274	1.384	1.428	1.123	1.258	1.323	7.72
72) T 1,1,2,2-Tetrachlo	1.015	0.938	1.067	0.934	1.062	1.136	0.904	1.017	1.009	7.87
73) S Bromofluorobenz	0.637	0.641	0.642	0.642	0.643	0.647	0.642	0.650	0.643	0.59
74) T Cumene	2.874	2.641	2.834	2.706	2.929	3.119	2.483	2.729	2.790	6.96
75) T alpha-Pinene	1.526	1.380	1.459	1.356	1.496	1.609	1.296	1.454	1.447	6.95
76) T n-Propylbenzene	3.766	3.311	3.648	3.441	3.793	3.970	3.101	3.318	3.543	8.37
77) T 3-Ethyltoluene	2.849	2.433	2.664	2.535	2.797	2.980	2.418	2.673	2.669	7.52
78) T 4-Ethyltoluene	2.815	2.470	2.714	2.522	2.799	2.947	2.302	2.499	2.634	8.26
79) T 1,3,5-Trimethylbe	2.236	2.054	2.162	2.148	2.315	2.470	1.966	2.186	2.192	7.05
80) T alpha-Methylstyre	0.955	0.981	1.127	1.071	1.260	1.400	1.133	1.282	1.151	13.37
81) T 2-Ethyltoluene	2.851	2.561	2.758	2.688	2.892	3.058	2.430	2.668	2.738	7.21
82) T 1,2,4-Trimethylbe	2.268	2.059	2.284	2.180	2.409	2.549	1.998	2.154	2.238	8.09
83) T n-Decane	1.368	1.216	1.412	1.358	1.437	1.477	1.154	1.267	1.336	8.47
84) T Benzyl Chloride	2.330	2.000	2.201	2.076	2.360	2.541	2.008	2.208	2.215	8.52
85) T 1,3-Dichlorobenze	1.322	1.095	1.217	1.161	1.231	1.342	1.086	1.220	1.209	7.75
86) T 1,4-Dichlorobenze	1.282	1.153	1.287	1.189	1.295	1.421	1.147	1.303	1.260	7.30
87) T sec-Butylbenzene	3.081	2.880	3.153	3.010	3.269	3.448	2.715	2.896	3.057	7.66



Response Factor Report GCMS13

Method : J:\MS13\METHODS\R13082709.M (RTE Integrator)  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Calibration Files

0.1 =08270906.D 0.2 =08270907.D 0.5 =08270908.D 1.0 =08270909.D 5.0 =08270910.D  
 25 =08270911.D 50 =08270912.D 100 =08270913.D

Compound	0.1	0.2	0.5	1.0	5.0	25	50	100	Avg	%RSD
88) T 4-Isopropyltoluen	2.670	2.592	2.879	2.705	3.020	3.160	2.464	2.549	2.755	8.82
89) T 1,2,3-Trimethylbe	2.424	2.299	2.431	2.277	2.495	2.594	2.045	2.198	2.345	7.51
90) T 1,2-Dichlorobenze	1.100	1.053	1.174	1.102	1.220	1.287	1.010	1.085	1.129	8.10
91) T d-Limonene	0.748	0.829	0.885	0.865	0.986	1.066	0.844	0.923	0.893	11.02
92) T 1,2-Dibromo-3-Chl	0.324	0.298	0.364	0.362	0.437	0.499	0.407	0.469	0.395	17.81
93) T n-Undecane	1.330	1.231	1.458	1.398	1.548	1.573	1.230	1.327	1.387	9.50
94) T 1,2,4-Trichlorobe	0.701	0.595	0.804	0.760	0.877	0.957	0.772	0.892	0.795	14.51
95) T Naphthalene	2.936	2.620	3.084	2.996	3.377	3.682	2.924	3.122	3.093	10.34
96) T n-Dodecane	1.462	1.440	1.731	1.633	1.792	1.746	1.375	1.469	1.581	10.31
97) T Hexachlorobutadie	0.458	0.435	0.473	0.453	0.508	0.534	0.445	0.518	0.478	7.80
98) T Cyclohexanone	1.009	0.855	0.876	0.835	0.946	1.067	0.855	0.979	0.928	9.17
99) T tert-Butylbenzene	2.140	2.013	2.273	2.146	2.325	2.453	1.922	2.065	2.167	8.06
100) T n-Butylbenzene	2.355	2.233	2.625	2.46	2.744	2.867	2.244	2.407	2.492	9.31

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: **S20-08240906**

20ng/L Std. ID: **S20-07310904**

200ng/L Std. ID: **S20-08240903**

Dilution Factors:

5                      50                      250

Compounds	Source Std. mg/m <sup>3</sup>	Primary Working Standards			Working STD Conc.(ng/L): Injection (L):	ICAL Concentrations (Primary Source)							
		200ng/L	20ng/L	4ng/L		4	4	20	20	20	200	200	200
		0.025	0.05	0.025		0.050	0.25	0.125	0.25	0.50			
					ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng	25ng	50ng	100ng
Propene	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Dichlorodifluoromethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Chloromethane	1.00	200	20.0	4.00		0.100	0.200	0.500	1.00	5.00	25.0	50.0	100
Freon-114	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Vinyl Chloride	1.01	202	20.2	4.04		0.101	0.202	0.505	1.01	5.05	25.3	50.5	101
1,3-Butadiene	1.20	240	24.0	4.80		0.120	0.240	0.600	1.20	6.00	30.0	60.0	120
Bromomethane	1.02	204	20.4	4.08		0.102	0.204	0.510	1.02	5.10	25.5	51.0	102
Chloroethane	1.01	202	20.2	4.04		0.101	0.202	0.505	1.01	5.05	25.3	50.5	101
Ethanol	5.20	1040	104	20.8		0.520	1.040	2.60	5.20	26.0	130	260	520
Acetonitrile	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Acrolein	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Acetone	5.50	1100	110	22.0		0.550	1.100	2.75	5.50	27.5	138	275	550
Trichlorofluoromethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Isopropanol	1.89	378	37.8	7.56		0.189	0.378	0.945	1.89	9.45	47.3	94.5	189
Acrylonitrile	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1-Dichloroethene	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
tert-Butanol	2.02	404	40.4	8.08		0.202	0.404	1.01	2.02	10.1	50.5	101	202
Methylene Chloride	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Allyl Chloride	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Trichlorotrifluoroethane	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Carbon Disulfide	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
trans-1,2-Dichloroethene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1-Dichloroethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Methyl tert-Butyl Ether	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Vinyl Acetate	5.02	1004	100	20.1		0.502	1.004	2.51	5.02	25.1	126	251	502
2-Butanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
cis-1,2-Dichloroethene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Diisopropyl Ether	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Ethyl Acetate	2.13	426	42.6	8.52		0.213	0.426	1.07	2.13	10.7	53.3	107	213
n-Hexane	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109
Chloroform	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Tetrahydrofuran	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Ethyl tert-Butyl Ether	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103
1,2-Dichloroethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,1,1-Trichloroethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Isopropyl Acetate	2.09	418	41.8	8.36		0.209	0.418	1.05	2.09	10.5	52.3	105	209
1-Butanol	2.07	414	41.4	8.28		0.207	0.414	1.04	2.07	10.4	51.8	104	207
Benzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
Carbon Tetrachloride	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Cyclohexane	2.15	430	43.0	8.60		0.215	0.430	1.08	2.15	10.8	53.8	108	215
tert-Amyl Methyl Ether	1.04	208	20.8	4.16		0.104	0.208	0.520	1.04	5.20	26.0	52.0	104
1,2-Dichloropropane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Bromodichloromethane	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Trichloroethene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
1,4-Dioxane	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Isooctane	1.04	208	20.8	4.16		0.104	0.208	0.520	1.04	5.20	26.0	52.0	104
Methyl Methacrylate	2.13	426	42.6	8.52		0.213	0.426	1.07	2.13	10.7	53.3	107	213
n-Heptane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
cis-1,3-Dichloropropene	0.99	198	19.8	3.96		0.099	0.198	0.495	0.990	4.95	24.8	49.5	99.0
4-Methyl-2-pentanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
trans-1,3-Dichloropropene	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
1,1,2-Trichloroethane	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105
Toluene	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
2-Hexanone	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
Dibromochloromethane	1.15	230	23.0	4.60		0.115	0.230	0.575	1.15	5.75	28.8	57.5	115
1,2-Dibromoethane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
n-Butyl Acetate	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110
n-Octane	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107
Tetrachloroethene	1.02	204	20.4	4.08		0.102	0.204	0.510	1.02	5.10	25.5	51.0	102
Chlorobenzene	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108
Ethylbenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106
m-&p-Xylene	2.08	416	41.6	8.32		0.208	0.416	1.04	2.08	10.4	52.0	104	208

*MM 8/28/09*

*CC 8/28/09*

**Primary Source Standards Concentrations  
(Working & Initial Calibration)**

4ng/L Std. ID: S20-08240906  
20ng/L Std. ID:

200ng/L Std. ID:  
Dilution Factors:

5      50      250

Compounds	Source Std. mg/m <sup>3</sup>	Primary Working Standards			Working STD Conc.(ng/L):	ICAL Concentrations (Primary Source)											
		200ng/L	20ng/L	4ng/L		4	4	20	20	20	200	200	200				
		Injection (L):	0.025	0.050		0.025	0.05	0.25	0.125	0.25	0.50	ICAL Points:	0.1ng	0.2ng	0.5ng	1ng	5ng
Bromoform	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103				
Styrene	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107				
o-Xylene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
n-Nonane	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
1,1,2,2-Tetrachloroethane	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107				
Cumene	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103				
alpha-Pinene	1.01	202	20.2	4.04		0.101	0.202	0.505	1.01	5.05	25.3	50.5	101				
n-Propylbenzene	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103				
3-Ethyltoluene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
4-Ethyltoluene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
1,3,5-Trimethylbenzene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
alpha-Methylstyrene	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107				
2-Ethyltoluene	1.05	210	21.0	4.20		0.105	0.210	0.525	1.05	5.25	26.3	52.5	105				
1,2,4-Trimethylbenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
n-Decane	1.08	216	21.6	4.32		0.108	0.216	0.540	1.08	5.40	27.0	54.0	108				
Benzyl Chloride	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110				
1,3-Dichlorobenzene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
1,4-Dichlorobenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
sec-Butylbenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
p-Isopropyltoluene	1.03	206	20.6	4.12		0.103	0.206	0.515	1.03	5.15	25.8	51.5	103				
1,2,3-Trimethylbenzene	1.07	214	21.4	4.28		0.107	0.214	0.535	1.07	5.35	26.8	53.5	107				
1,2-Dichlorobenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
d-Limonene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
chloropropane	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110				
n-Undecane	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48		0.112	0.224	0.560	1.12	5.60	28.0	56.0	112				
Naphthalene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
n-Dodecane	0.99	198	19.8	3.96		0.099	0.198	0.495	0.990	4.95	24.8	49.5	99.0				
Hexachloro-1,3-butadiene	1.10	220	22.0	4.40		0.110	0.220	0.550	1.10	5.50	27.5	55.0	110				
Methacrylonitrile	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
Cyclohexanone	0.98	196	19.6	3.92		0.098	0.196	0.490	0.980	4.90	24.5	49.0	98.0				
tert-Butylbenzene	1.06	212	21.2	4.24		0.106	0.212	0.530	1.06	5.30	26.5	53.0	106				
n-Butylbenzene	1.09	218	21.8	4.36		0.109	0.218	0.545	1.09	5.45	27.3	54.5	109				

\*Enter information in the Solid Shaded Areas ONLY.

*LM 8/3/09*

*CC  
8-31-09*

Calibration Status Report GCMS13

Method Path : J:\MS13\METHODS\  
 Method File : R13082709.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS13\DATA\2009_08\27\08270906.D
2	0.2	0	25	J:\MS13\DATA\2009_08\27\08270907.D
3	0.5	1	25	J:\MS13\DATA\2009_08\27\08270908.D
4	1.0	1	25	J:\MS13\DATA\2009_08\27\08270909.D
5	5.0	5	25	J:\MS13\DATA\2009_08\27\08270910.D
6	25	27	25	J:\MS13\DATA\2009_08\27\08270911.D
7	50	54	25	J:\MS13\DATA\2009_08\27\08270912.D
8	100	107	25	J:\MS13\DATA\2009_08\27\08270913.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Aug 28 05:59 2009	Aug 27 20:42 2009	27 Aug 2009 15:31
2	0.2	Aug 28 06:00 2009	Aug 27 20:45 2009	27 Aug 2009 16:11
3	0.5	Aug 28 06:00 2009	Aug 28 05:44 2009	27 Aug 2009 16:52
4	1.0	Aug 28 06:00 2009	Aug 28 05:46 2009	27 Aug 2009 17:32
5	5.0	Aug 28 06:01 2009	Aug 28 05:49 2009	27 Aug 2009 18:13
6	25	Aug 28 06:01 2009	Aug 28 05:51 2009	27 Aug 2009 18:53
7	50	Aug 28 06:01 2009	Aug 28 05:54 2009	27 Aug 2009 19:34
8	100	Aug 28 06:02 2009	Aug 28 05:57 2009	27 Aug 2009 20:14

R13082709.M Fri Aug 28 06:14:23 2009

*LM 8/28/09*  
*CC 8/28/09*



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270906.D  
 Acq On : 27 Aug 2009 15:31  
 Operator : WA/CC  
 Sample : 0.1ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:42:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*WA 8/28/09*  
*CC*  
*8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.47	130	345606	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)	15.41	114	1747755	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.28	82	850515	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	691489	23.020	ng	-0.01
Spiked Amount	25.000		Recovery	=	92.08%	✓
57) Toluene-d8 (SS2)	18.85	98	1893630	25.481	ng	0.00
Spiked Amount	25.000		Recovery	=	101.92%	✓
73) Bromofluorobenzene (SS3)	23.23	174	541883	27.650	ng	0.00
Spiked Amount	25.000		Recovery	=	110.60%	✓

Target Compounds

						Qvalue
2) Propene	4.72	42	3295	0.139	ng	98
3) Dichlorodifluoromethan...	4.88	85	5608	0.145	ng	# 88
4) Chloromethane	5.21	50	3123	0.120	ng	74
5) 1,2-Dichloro-1,1,2,2-t...	5.43	135	2097	0.133	ng	73
6) Vinyl Chloride	5.65	62	2864	0.114	ng	# 49
7) 1,3-Butadiene	5.92	54	2790	0.156	ng	90
8) Bromomethane	6.42	94	1602	0.105	ng	# 59
9) Chloroethane	6.72	64	1545	0.106	ng	76
10) Ethanol	7.10	45	8140	0.541	ng	# 66
11) Acetonitrile	7.42	41	5415	0.123	ng	# 25
12) Acrolein	7.59	56	602	0.053	ng	# 54
13) Acetone	7.85	58	11708	0.825	ng	95
14) Trichlorofluoromethane	8.05	101	4087	0.117	ng	98
15) 2-Propanol (Isopropanol)	8.34	45	14347	0.257	ng	80
16) Acrylonitrile	8.65	53	2460	0.096	ng	# 9
17) 1,1-Dichloroethene	9.05	96	2161	0.133	ng	# 84
18) 2-Methyl-2-Propanol (t...	9.29	59	11481m	0.232	ng	
19) Methylene Chloride	9.25	84	2386	0.125	ng	97
20) 3-Chloro-1-propene (Al...	9.43	41	3765	0.103	ng	84
21) Trichlorotrifluoroethane	9.68	151	1561	0.123	ng	# 1
22) Carbon Disulfide	9.66	76	8161	0.122	ng	84
23) trans-1,2-Dichloroethene	10.68	61	2887	0.100	ng	78
24) 1,1-Dichloroethane	10.98	63	4252	0.122	ng	89
25) Methyl tert-Butyl Ether	11.20	73	6878	0.128	ng	93
26) Vinyl Acetate	11.27	86	1953	0.677	ng	# 30
27) 2-Butanone (MEK)	11.70	72	1572	0.123	ng	# 87
28) cis-1,2-Dichloroethene	12.24	61	2964	0.111	ng	80
29) Diisopropyl Ether	12.66	87	1889	0.110	ng	# 6
30) Ethyl Acetate	12.69	61	1319	0.198	ng	97
31) n-Hexane	12.58	57	4251	0.125	ng	

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270906.D  
 Acq On : 27 Aug 2009 15:31  
 Operator : WA/CC  
 Sample : 0.1ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:42:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	3877	0.129	ng	93
34) Tetrahydrofuran (THF)	13.42	72	4140	0.303	ng #	86
35) Ethyl tert-Butyl Ether	13.46	87	2258	0.102	ng #	76
36) 1,2-Dichloroethane	13.78	62	3463	0.126	ng	87
38) 1,1,1-Trichloroethane	14.17	97	3520	0.119	ng	82
39) Isopropyl Acetate	14.83	61	2853	0.220	ng #	58
40) 1-Butanol	14.91	56	5004	0.221	ng #	39
41) Benzene	14.87	78	10112	0.132	ng	94
42) Carbon Tetrachloride	15.10	117	2971	0.121	ng	85
43) Cyclohexane	15.30	84	6910	0.246	ng	95
44) tert-Amyl Methyl Ether	15.86	73	7323	0.127	ng	94
45) 1,2-Dichloropropane	16.11	63	2060	0.107	ng	93
46) Bromodichloromethane	16.37	83	3004	0.119	ng	93
47) Trichloroethene	16.44	130	2040	0.118	ng	97
48) 1,4-Dioxane	16.52	88	1375	0.094	ng	79
49) 2,2,4-Trimethylpentane...	16.52	57	10591	0.117	ng	96
50) Methyl Methacrylate	16.76	100	1493	0.211	ng	93
51) n-Heptane	16.87	71	2136	0.104	ng	83
52) cis-1,3-Dichloropropene	17.65	75	3093	0.097	ng	99
53) 4-Methyl-2-pentanone	17.77	58	2022	0.109	ng	87
54) trans-1,3-Dichloropropene	18.36	75	3156	0.104	ng	91
55) 1,1,2-Trichloroethane	18.59	97	2137	0.127	ng	86
58) Toluene	18.98	91	9590	0.131	ng	98
59) 2-Hexanone	19.38	43	6099	0.126	ng	87
60) Dibromochloromethane	19.52	129	2164	0.125	ng	98
61) 1,2-Dibromoethane	19.86	107	2135	0.117	ng	97
62) n-Butyl Acetate	20.17	43	6315	0.110	ng #	82
63) n-Octane	20.26	57	2279	0.129	ng	94
64) Tetrachloroethene	20.47	166	2055	0.122	ng	96
65) Chlorobenzene	21.35	112	5957	0.132	ng	97
66) Ethylbenzene	21.82	91	10455	0.125	ng	100
67) m- & p-Xylenes	22.05	91	16072	0.238	ng	99
68) Bromoform	22.14	173	1723	0.120	ng	71
69) Styrene	22.51	104	5939	0.122	ng	95
70) o-Xylene	22.65	91	7925	0.117	ng	93
71) n-Nonane	22.91	43	5083	0.113	ng #	77
72) 1,1,2,2-Tetrachloroethane	22.62	83	3696	0.123	ng	98
74) Cumene	23.40	105	10070	0.118	ng	99
75) alpha-Pinene	23.90	93	5243	0.120	ng	80
76) n-Propylbenzene	24.05	91	13198	0.123	ng	94
77) 3-Ethyltoluene	24.17	105	10566	0.129	ng	98
78) 4-Ethyltoluene	24.22	105	10439	0.132	ng	99
79) 1,3,5-Trimethylbenzene	24.32	105	8293	0.124	ng	99

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270906.D  
 Acq On : 27 Aug 2009 15:31  
 Operator : WA/CC  
 Sample : 0.1ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:42:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.50	118	3476	0.097	ng	94
81) 2-Ethyltoluene	24.56	105	10184	0.124	ng	94
82) 1,2,4-Trimethylbenzene	24.82	105	8179	0.120	ng	97
83) n-Decane	24.93	57	5026	0.113	ng	95
84) Benzyl Chloride	25.00	91	8718	0.137	ng	96
85) 1,3-Dichlorobenzene	25.03	146	4903	0.142	ng	95
86) 1,4-Dichlorobenzene	25.10	146	4624	0.126	ng	96
87) sec-Butylbenzene	25.15	105	11109	0.121	ng	97
88) 4-Isopropyltoluene (p-...	25.35	119	9355	0.114	ng	96
89) 1,2,3-Trimethylbenzene	25.35	105	8824	0.127	ng	99
90) 1,2-Dichlorobenzene	25.53	146	3966	0.121	ng	94
91) d-Limonene	25.52	68	2775	0.096	ng	82
92) 1,2-Dibromo-3-Chloropr...	26.06	157	1212	0.108	ng	# 70
93) n-Undecane	26.46	57	4933	0.105	ng	95
94) 1,2,4-Trichlorobenzene	27.58	180	2671	0.119	ng	95
95) Naphthalene	27.73	128	10587	0.114	ng	98
96) n-Dodecane	27.69	57	4925	0.090	ng	94
97) Hexachlorobutadiene	28.14	225	1714	0.120	ng	88
98) Cyclohexanone	22.32	55	3365	0.111	ng	96
99) tert-Butylbenzene	24.83	119	7717	0.117	ng	96
100) n-Butylbenzene	25.86	91	8734	0.115	ng	99

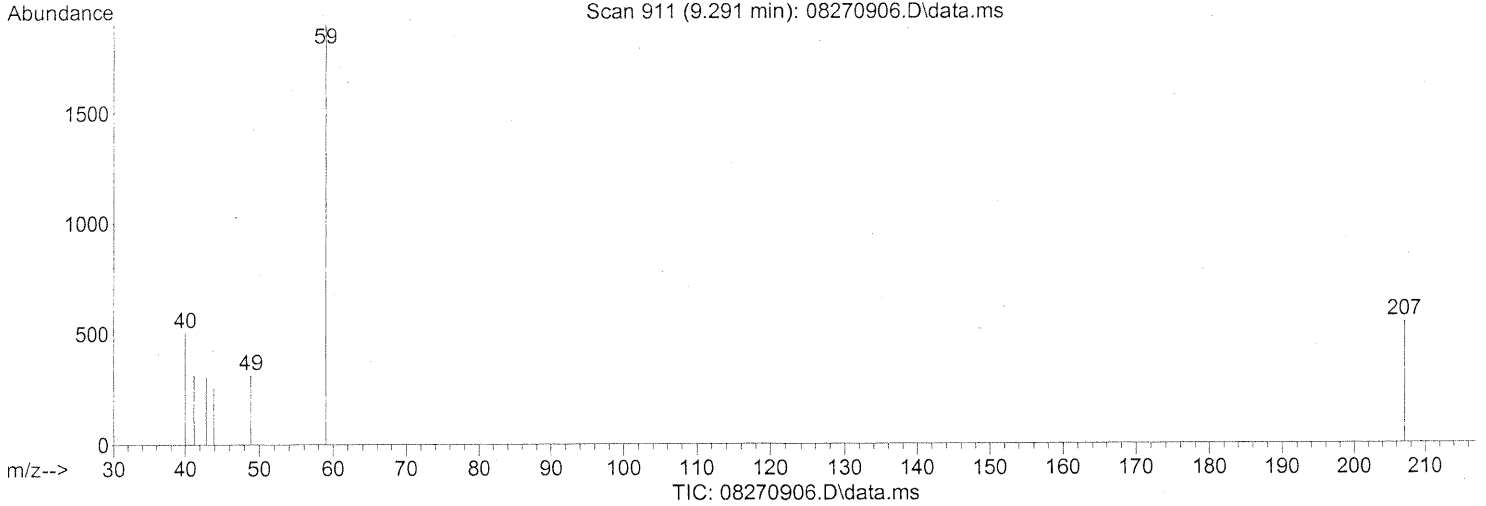
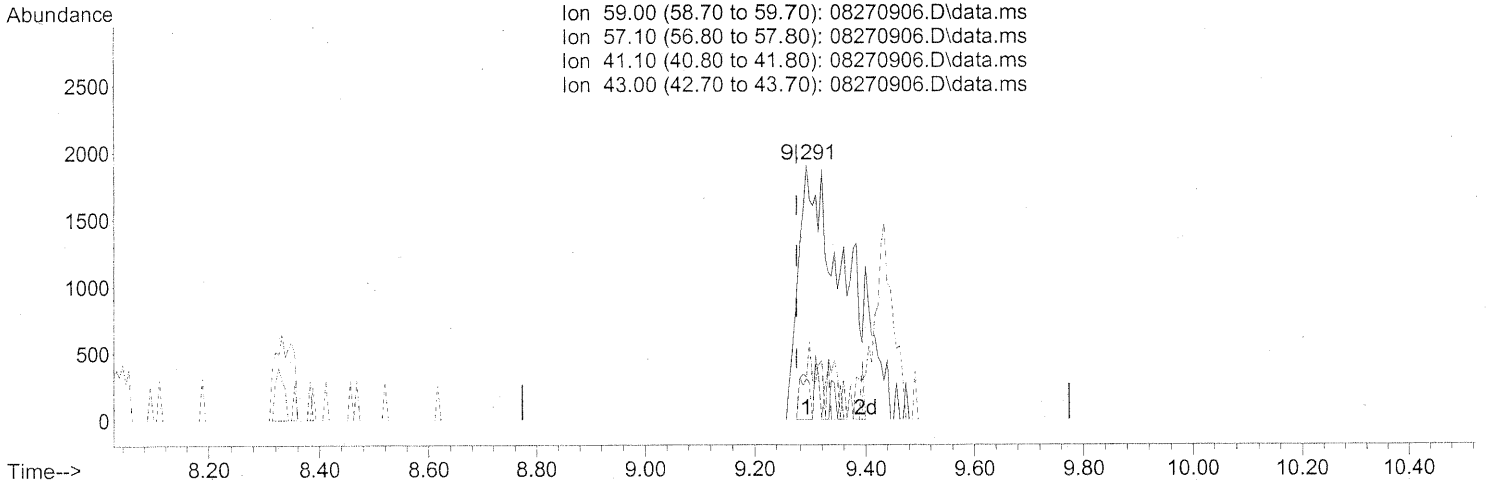
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_08\27\  
Data File : 08270906.D  
Acq On : 27 Aug 2009 15:31  
Operator : WA/CC  
Sample : 0.1ng TO-15 ICAL  
Misc : S20-08140906/S20-08240906  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:40:49 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu Aug 27 20:40:00 2009  
Response via : Initial Calibration



(18) 2-Methyl-2-Propanol (tert-Butyl Alcohol (T))

9.291min (+0.017) 0.20ng

response 9815

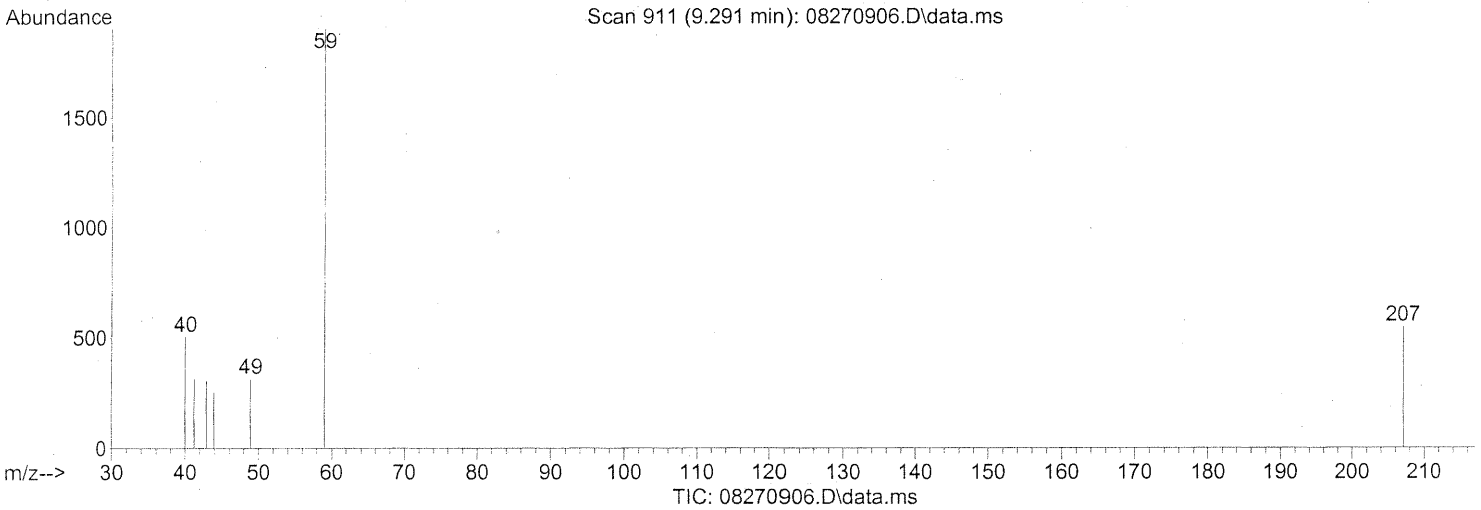
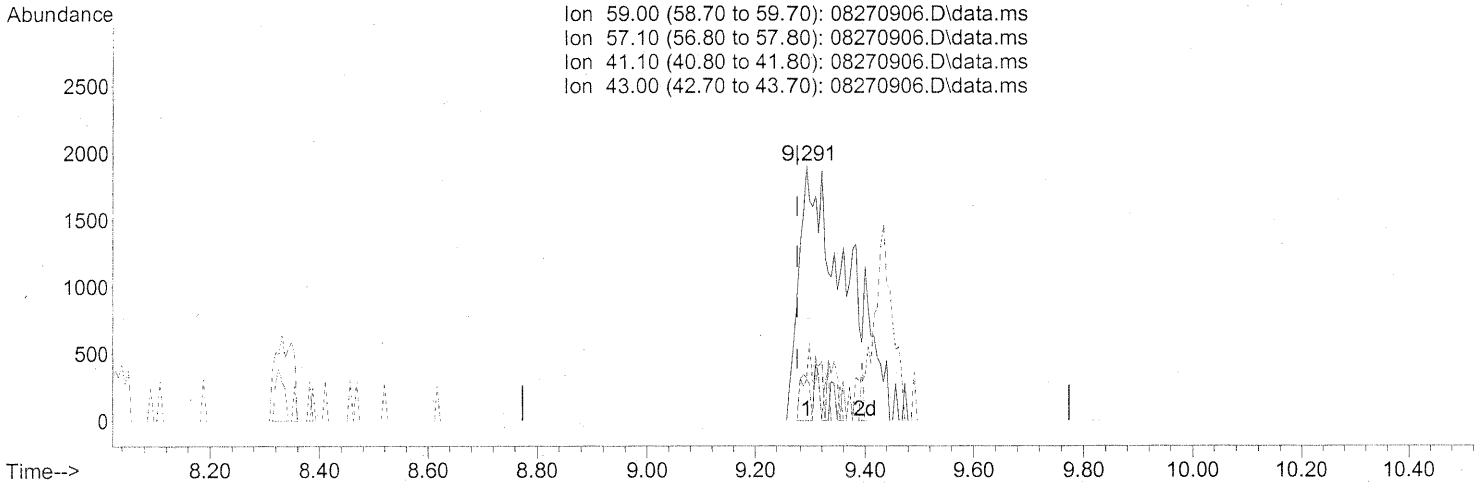
Ion	Exp%	Act%
59.00	100	100
57.10	10.20	2.84
41.10	20.40	10.37
43.00	14.90	2.64

*SP*

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_08\27\  
Data File : 08270906.D  
Acq On : 27 Aug 2009 15:31  
Operator : WA/CC  
Sample : 0.1ng TO-15 ICAL  
Misc : S20-08140906/S20-08240906  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:40:49 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu Aug 27 20:40:00 2009  
Response via : Initial Calibration



(18) 2-Methyl-2-Propanol (tert-Butyl Alcohol) (T)

9.291min (+0.017) 0.23ng m

response 11481

Ion	Exp%	Act%
59.00	100	100
57.10	10.20	2.43
41.10	20.40	8.87
43.00	14.90	2.26

SP → IC

WA 8/28/09

CC  
8/28/09

— R 8/31/09

270



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270907.D  
 Acq On : 27 Aug 2009 16:11  
 Operator : WA/CC  
 Sample : 0.2ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:45:29 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*WA 8/28/09*  
*CC 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.47	130	340975	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)	15.41	114	1701721	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.28	82	833637	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	685827	23.141	ng	-0.01
Spiked Amount	25.000		Recovery	=	92.56%	✓
57) Toluene-d8 (SS2)	18.85	98	1859118	25.523	ng	0.00
Spiked Amount	25.000		Recovery	=	102.08%	✓
73) Bromofluorobenzene (SS3)	23.23	174	534463	27.823	ng	0.00
Spiked Amount	25.000		Recovery	=	111.28%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.72	42	5160	0.221	ng	95
3) Dichlorodifluoromethan...	4.87	85	9386	0.245	ng	94
4) Chloromethane	5.20	50	5755	0.224	ng	93
5) 1,2-Dichloro-1,1,2,2-t...	5.43	135	3928	0.253	ng	90
6) Vinyl Chloride	5.64	62	5431	0.220	ng	91
7) 1,3-Butadiene	5.90	54	4492	0.254	ng	93
8) Bromomethane	6.39	94	3059	0.204	ng	82
9) Chloroethane	6.73	64	2955	0.206	ng	81
10) Ethanol	7.10	45	16601	1.119	ng	91
11) Acetonitrile	7.42	41	9487	0.218	ng	# 27
12) Acrolein	7.59	56	1475	0.131	ng	92
13) Acetone	7.84	58	20320	1.452	ng	88
14) Trichlorofluoromethane	8.03	101	7617	0.220	ng	100
15) 2-Propanol (Isopropanol)	8.32	45	23522	0.428	ng	83
16) Acrylonitrile	8.60	53	4804	0.190	ng	98
17) 1,1-Dichloroethene	9.05	96	3926	0.245	ng	# 84
18) 2-Methyl-2-Propanol (t...	9.29	59	21583	0.442	ng	89
19) Methylene Chloride	9.25	84	4504	0.240	ng	99
20) 3-Chloro-1-propene (Al...	9.43	41	6623	0.183	ng	87
21) Trichlorotrifluoroethane	9.70	151	3267	0.260	ng	94
22) Carbon Disulfide	9.64	76	14675	0.221	ng	89
23) trans-1,2-Dichloroethene	10.68	61	5119	0.180	ng	# 69
24) 1,1-Dichloroethane	10.98	63	7110	0.206	ng	96
25) Methyl tert-Butyl Ether	11.21	73	11856	0.224	ng	99
26) Vinyl Acetate	11.28	86	3710	1.303	ng	# 58
27) 2-Butanone (MEK)	11.71	72	2463	0.195	ng	# 47
28) cis-1,2-Dichloroethene	12.24	61	5377	0.203	ng	# 75
29) Diisopropyl Ether	12.65	87	3742	0.221	ng	# 19
30) Ethyl Acetate	12.68	61	2340	0.355	ng	87
31) n-Hexane	12.58	57	7647	0.227	ng	272

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270907.D  
 Acq On : 27 Aug 2009 16:11  
 Operator : WA/CC  
 Sample : 0.2ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 27 20:45:29 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	6687	0.226	ng	98
34) Tetrahydrofuran (THF)	13.40	72	5125	0.381	ng	98
35) Ethyl tert-Butyl Ether	13.46	87	4658	0.213	ng	95
36) 1,2-Dichloroethane	13.78	62	5779	0.213	ng	91
38) 1,1,1-Trichloroethane	14.17	97	6372	0.221	ng	98
39) Isopropyl Acetate	14.83	61	4936	0.391	ng	# 55
40) 1-Butanol	14.89	56	9325	0.422	ng	# 45
41) Benzene	14.87	78	17799	0.238	ng	98
42) Carbon Tetrachloride	15.09	117	5161	0.216	ng	96
43) Cyclohexane	15.29	84	12537	0.457	ng	95
44) tert-Amyl Methyl Ether	15.85	73	11885	0.212	ng	96
45) 1,2-Dichloropropane	16.10	63	3944	0.210	ng	91
46) Bromodichloromethane	16.37	83	4951	0.201	ng	100
47) Trichloroethene	16.44	130	4154	0.246	ng	97
48) 1,4-Dioxane	16.53	88	3119	0.218	ng	94
49) 2,2,4-Trimethylpentane...	16.52	57	18593	0.211	ng	99
50) Methyl Methacrylate	16.77	100	2677	0.389	ng	90
51) n-Heptane	16.88	71	4079	0.203	ng	96
52) cis-1,3-Dichloropropene	17.64	75	5760	0.185	ng	98
53) 4-Methyl-2-pentanone	17.76	58	3609	0.201	ng	99
54) trans-1,3-Dichloropropene	18.35	75	6333	0.214	ng	96
55) 1,1,2-Trichloroethane	18.59	97	3778	0.230	ng	92
58) Toluene	18.98	91	17023	0.238	ng	98
59) 2-Hexanone	19.37	43	9868	0.207	ng	99
60) Dibromochloromethane	19.53	129	4235	0.250	ng	95
61) 1,2-Dibromoethane	19.86	107	4153	0.231	ng	100
62) n-Butyl Acetate	20.17	43	11310	0.202	ng	89
63) n-Octane	20.26	57	3664	0.212	ng	97
64) Tetrachloroethene	20.46	166	3957	0.239	ng	96
65) Chlorobenzene	21.34	112	10897	0.246	ng	98
66) Ethylbenzene	21.82	91	18233	0.223	ng	97
67) m- & p-Xylenes	22.05	91	29210	0.441	ng	97
68) Bromoform	22.15	173	3138	0.223	ng	95
69) Styrene	22.51	104	10416	0.218	ng	98
70) o-Xylene	22.65	91	14247	0.215	ng	99
71) n-Nonane	22.91	43	9314	0.211	ng	93
72) 1,1,2,2-Tetrachloroethane	22.63	83	6695	0.227	ng	94
74) Cumene	23.40	105	18142	0.216	ng	99
75) alpha-Pinene	23.90	93	9293	0.216	ng	89
76) n-Propylbenzene	24.05	91	22743	0.216	ng	97
77) 3-Ethyltoluene	24.17	105	17686	0.221	ng	98
78) 4-Ethyltoluene	24.22	105	17956	0.231	ng	93
79) 1,3,5-Trimethylbenzene	24.31	105	14932	0.228	ng	96

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270907.D  
 Acq On : 27 Aug 2009 16:11  
 Operator : WA/CC  
 Sample : 0.2ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240906  
 ALS Vial : 14 Sample Multiplier: 1

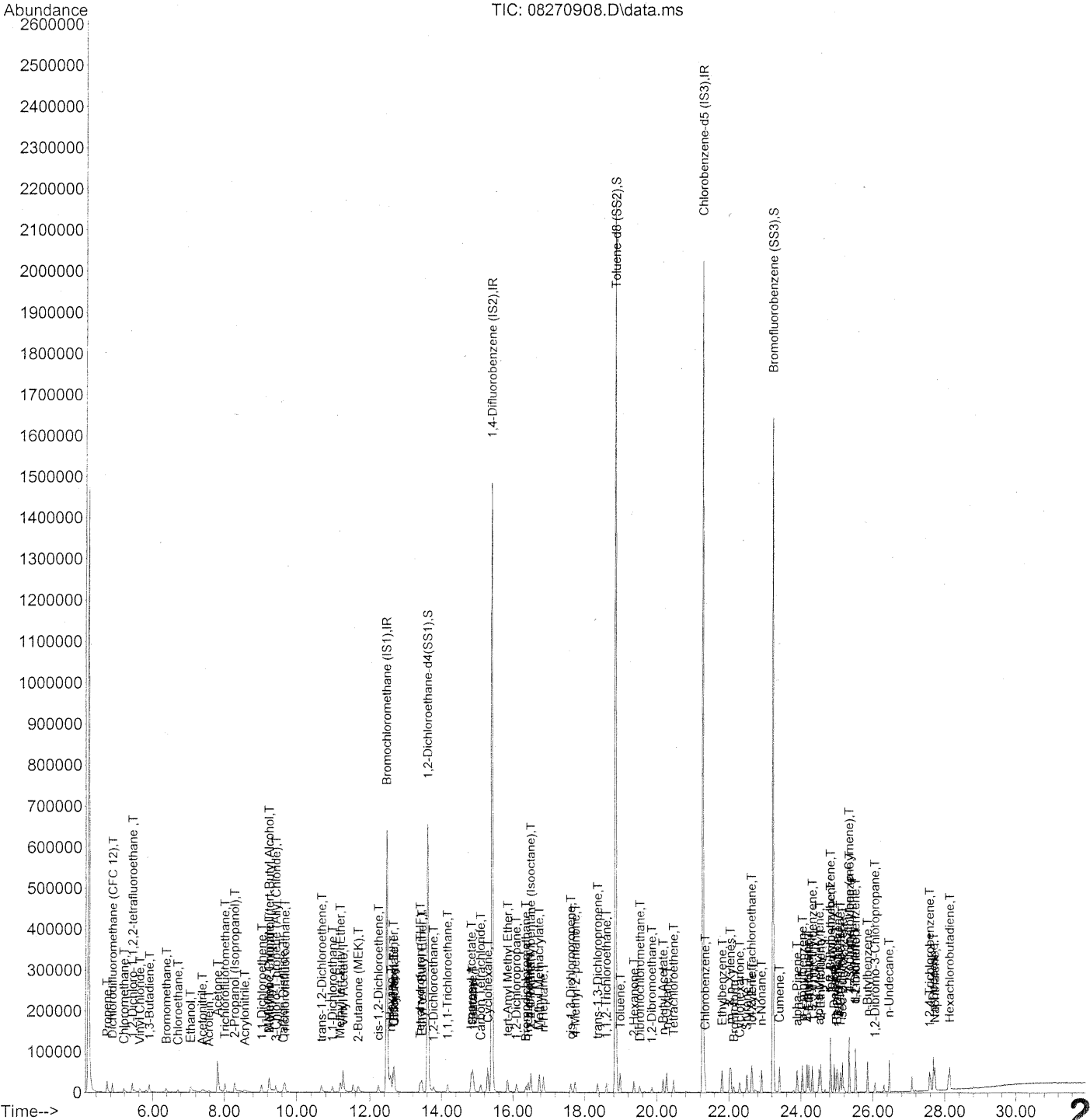
Quant Time: Aug 27 20:45:29 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.51	118	7003	0.200	ng	99
81) 2-Ethyltoluene	24.56	105	17935	0.222	ng	97
82) 1,2,4-Trimethylbenzene	24.82	105	14553	0.218	ng	100
83) n-Decane	24.93	57	8758	0.202	ng	94
84) Benzyl Chloride	25.00	91	14670	0.234	ng	96
85) 1,3-Dichlorobenzene	25.02	146	7963	0.236	ng	96
86) 1,4-Dichlorobenzene	25.10	146	8150	0.226	ng	93
87) sec-Butylbenzene	25.15	105	20362	0.226	ng	96
88) 4-Isopropyltoluene (p-...	25.35	119	17804	0.221	ng	95
89) 1,2,3-Trimethylbenzene	25.35	105	16408	0.241	ng	94
90) 1,2-Dichlorobenzene	25.53	146	7447	0.232	ng	99
91) d-Limonene	25.53	68	6028	0.212	ng	92
92) 1,2-Dibromo-3-Chloropr...	26.06	157	2189	0.199	ng	# 82
93) n-Undecane	26.45	57	8949	0.194	ng	98
94) 1,2,4-Trichlorobenzene	27.58	180	4448	0.202	ng	91
95) Naphthalene	27.73	128	18518	0.204	ng	98
96) n-Dodecane	27.69	57	9509	0.177	ng	97
97) Hexachlorobutadiene	28.14	225	3188	0.228	ng	99
98) Cyclohexanone	22.31	55	5589	0.188	ng	94
99) tert-Butylbenzene	24.82	119	14229	0.220	ng	97
100) n-Butylbenzene	25.86	91	16229	0.218	ng	98

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

Data Path : J:\MS13\DATA\2009\_08\27\  
Data File : 08270908.D  
Acq On : 27 Aug 2009 16:52  
Operator : WA/CC  
Sample : 0.5ng TO-15 ICAL  
Misc : S20-08140906/S20-07310904  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:44:03 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu Aug 27 20:40:00 2009  
Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270908.D  
 Acq On : 27 Aug 2009 16:52  
 Operator : WA/CC  
 Sample : 0.5ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:44:03 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*LM 8/28/09*  
*CC 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	345051	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	15.41	114	1706332	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.28	82	833135	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.61	65	689482	22.990	ng	-0.02
Spiked Amount	25.000		Recovery	=	91.96%	✓
57) Toluene-d8 (SS2)	18.85	98	1851026	25.427	ng	0.00
Spiked Amount	25.000		Recovery	=	101.72%	✓
73) Bromofluorobenzene (SS3)	23.23	174	534967	27.866	ng	0.00
Spiked Amount	25.000		Recovery	=	111.48%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.70	42	12619	0.533	ng	97
3) Dichlorodifluoromethan...	4.86	85	24316	0.628	ng	99
4) Chloromethane	5.18	50	15225	0.586	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.42	135	9302	0.592	ng	97
6) Vinyl Chloride	5.62	62	13528	0.542	ng	96
7) 1,3-Butadiene	5.90	54	11921	0.666	ng	94
8) Bromomethane	6.38	94	9283	0.610	ng	97
9) Chloroethane	6.71	64	7657	0.527	ng	98
10) Ethanol	7.06	45	42023m	2.800	ng	
11) Acetonitrile	7.39	41	22509	0.512	ng	98
12) Acrolein	7.58	56	5829	0.510	ng	89
13) Acetone	7.82	58	45815	3.235	ng	96
14) Trichlorofluoromethane	8.02	101	21625	0.618	ng	92
15) 2-Propanol (Isopropanol)	8.29	45	61189	1.100	ng	90
16) Acrylonitrile	8.57	53	13383	0.523	ng	91
17) 1,1-Dichloroethene	9.04	96	10592	0.652	ng	88
18) 2-Methyl-2-Propanol (t...	9.24	59	54672	1.107	ng	92
19) Methylene Chloride	9.24	84	11486	0.604	ng	94
20) 3-Chloro-1-propene (Al...	9.43	41	16557	0.452	ng	93
21) Trichlorotrifluoroethane	9.68	151	9319	0.733	ng	# 83
22) Carbon Disulfide	9.63	76	39699	0.592	ng	98
23) trans-1,2-Dichloroethene	10.68	61	15719	0.547	ng	90
24) 1,1-Dichloroethane	10.98	63	19419	0.557	ng	99
25) Methyl tert-Butyl Ether	11.19	73	31441	0.587	ng	99
26) Vinyl Acetate	11.27	86	10642	3.693	ng	# 86
27) 2-Butanone (MEK)	11.68	72	6992	0.547	ng	# 81
28) cis-1,2-Dichloroethene	12.23	61	15924	0.595	ng	93
29) Diisopropyl Ether	12.65	87	10676	0.624	ng	# 23
30) Ethyl Acetate	12.67	61	7755	1.164	ng	93
31) n-Hexane	12.58	57	19007	0.558	ng	276



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270908.D  
 Acq On : 27 Aug 2009 16:52  
 Operator : WA/CC  
 Sample : 0.5ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:44:03 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.68	83	19170	0.639	ng	99
34) Tetrahydrofuran (THF)	13.40	72	9447	0.693	ng	94
35) Ethyl tert-Butyl Ether	13.45	87	12406	0.560	ng	98
36) 1,2-Dichloroethane	13.78	62	15180	0.554	ng	100
38) 1,1,1-Trichloroethane	14.17	97	17572	0.607	ng	98
39) Isopropyl Acetate	14.83	61	13901	1.098	ng #	68
40) 1-Butanol	14.88	56	21001	0.948	ng #	1
41) Benzene	14.87	78	45429	0.606	ng	98
42) Carbon Tetrachloride	15.09	117	15004	0.628	ng	99
43) Cyclohexane	15.29	84	33280	1.211	ng	94
44) tert-Amyl Methyl Ether	15.85	73	33208	0.589	ng	97
45) 1,2-Dichloropropane	16.09	63	10583	0.562	ng	98
46) Bromodichloromethane	16.37	83	14579	0.590	ng	95
47) Trichloroethene	16.44	130	10279	0.607	ng	99
48) 1,4-Dioxane	16.51	88	9005	0.628	ng	98
49) 2,2,4-Trimethylpentane...	16.51	57	50304	0.569	ng	99
50) Methyl Methacrylate	16.76	100	7723	1.118	ng	98
51) n-Heptane	16.88	71	11807	0.586	ng	96
52) cis-1,3-Dichloropropene	17.65	75	16791	0.538	ng	99
53) 4-Methyl-2-pentanone	17.76	58	9904	0.549	ng	93
54) trans-1,3-Dichloropropene	18.36	75	17249	0.581	ng	98
55) 1,1,2-Trichloroethane	18.59	97	10107	0.614	ng	97
58) Toluene	18.98	91	44023	0.615	ng	97
59) 2-Hexanone	19.36	43	26209	0.551	ng	100
60) Dibromochloromethane	19.53	129	12008	0.709	ng	97
61) 1,2-Dibromoethane	19.86	107	11379	0.634	ng	96
62) n-Butyl Acetate	20.17	43	30526	0.544	ng	94
63) n-Octane	20.28	57	10325	0.597	ng	99
64) Tetrachloroethene	20.46	166	10600	0.640	ng	99
65) Chlorobenzene	21.34	112	28918	0.653	ng	100
66) Ethylbenzene	21.82	91	50554	0.618	ng	99
67) m- & p-Xylenes	22.04	91	78614	1.188	ng	99
68) Bromoform	22.14	173	8209	0.584	ng	99
69) Styrene	22.50	104	27564	0.576	ng	98
70) o-Xylene	22.65	91	40245	0.607	ng	99
71) n-Nonane	22.91	43	24499	0.556	ng	99
72) 1,1,2,2-Tetrachloroethane	22.63	83	19021	0.646	ng	96
74) Cumene	23.41	105	48639	0.580	ng	99
75) alpha-Pinene	23.90	93	24559	0.572	ng	99
76) n-Propylbenzene	24.05	91	62613	0.594	ng	98
77) 3-Ethyltoluene	24.17	105	48379	0.604	ng	100
78) 4-Ethyltoluene	24.23	105	49300	0.635	ng	98
79) 1,3,5-Trimethylbenzene	24.31	105	39271	0.600	ng	99

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270908.D  
 Acq On : 27 Aug 2009 16:52  
 Operator : WA/CC  
 Sample : 0.5ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:44:03 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

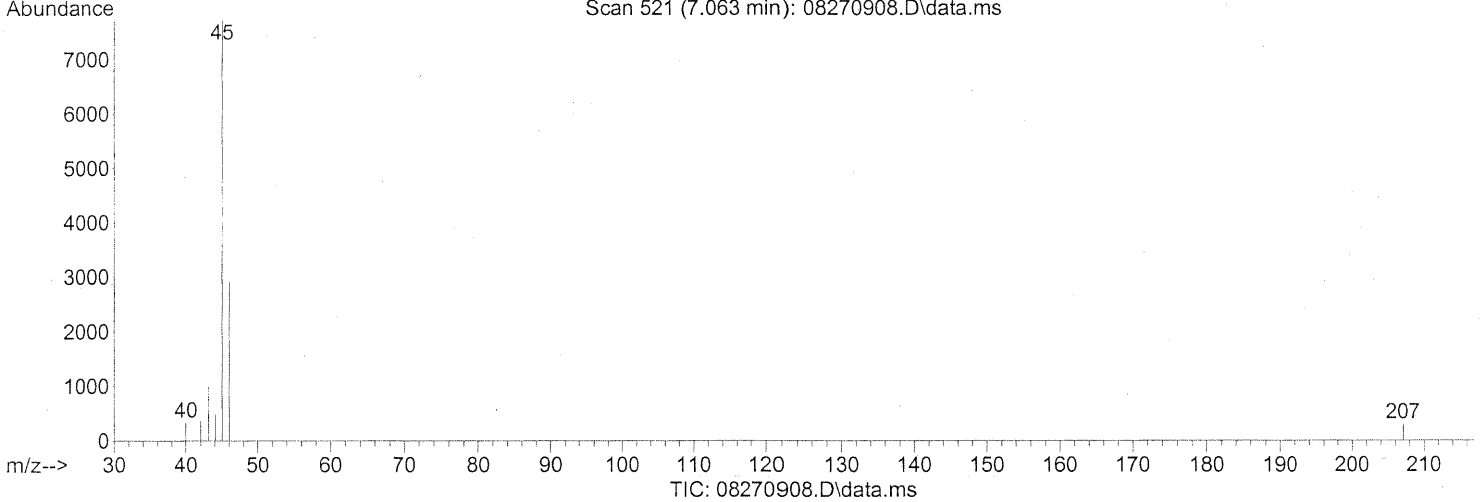
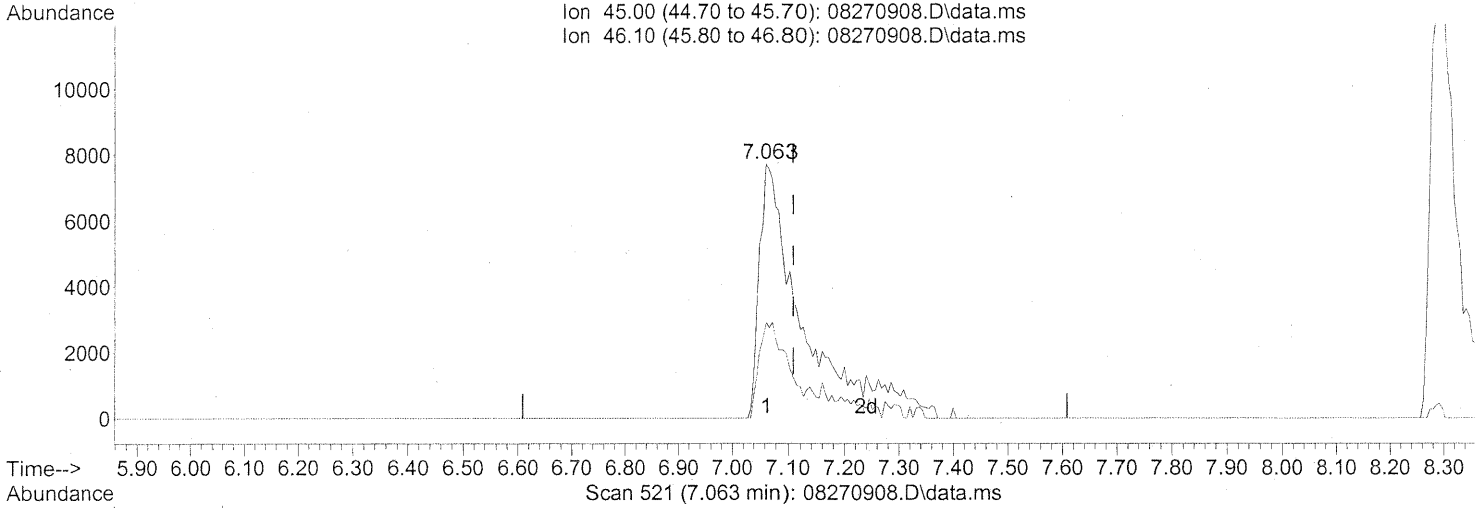
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	20092	0.573	ng	95
81) 2-Ethyltoluene	24.55	105	48257	0.598	ng	98
82) 1,2,4-Trimethylbenzene	24.82	105	40343	0.605	ng	95
83) n-Decane	24.93	57	25406	0.586	ng	99
84) Benzyl Chloride	25.00	91	40338	0.645	ng	96
85) 1,3-Dichlorobenzene	25.02	146	22095	0.654	ng	98
86) 1,4-Dichlorobenzene	25.10	146	22724	0.631	ng	94
87) sec-Butylbenzene	25.16	105	55697	0.618	ng	98
88) 4-Isopropyltoluene (p-...	25.35	119	49417	0.615	ng	97
89) 1,2,3-Trimethylbenzene	25.35	105	43348	0.638	ng	99
90) 1,2-Dichlorobenzene	25.52	146	20727	0.647	ng	100
91) d-Limonene	25.53	68	16073	0.566	ng	94
92) 1,2-Dibromo-3-Chloropr...	26.06	157	6665	0.605	ng	83
93) n-Undecane	26.45	57	26484	0.574	ng	98
94) 1,2,4-Trichlorobenzene	27.59	180	15009	0.682	ng	98
95) Naphthalene	27.73	128	54474	0.601	ng	98
96) n-Dodecane	27.69	57	28561	0.533	ng	99
97) Hexachlorobutadiene	28.14	225	8673	0.619	ng	98
98) Cyclohexanone	22.30	55	14301	0.482	ng	97
99) tert-Butylbenzene	24.82	119	40141	0.621	ng	100
100) n-Butylbenzene	25.86	91	47669	0.641	ng	98

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270908.D  
 Acq On : 27 Aug 2009 16:52  
 Operator : WA/CC  
 Sample : 0.5ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:43:23 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration



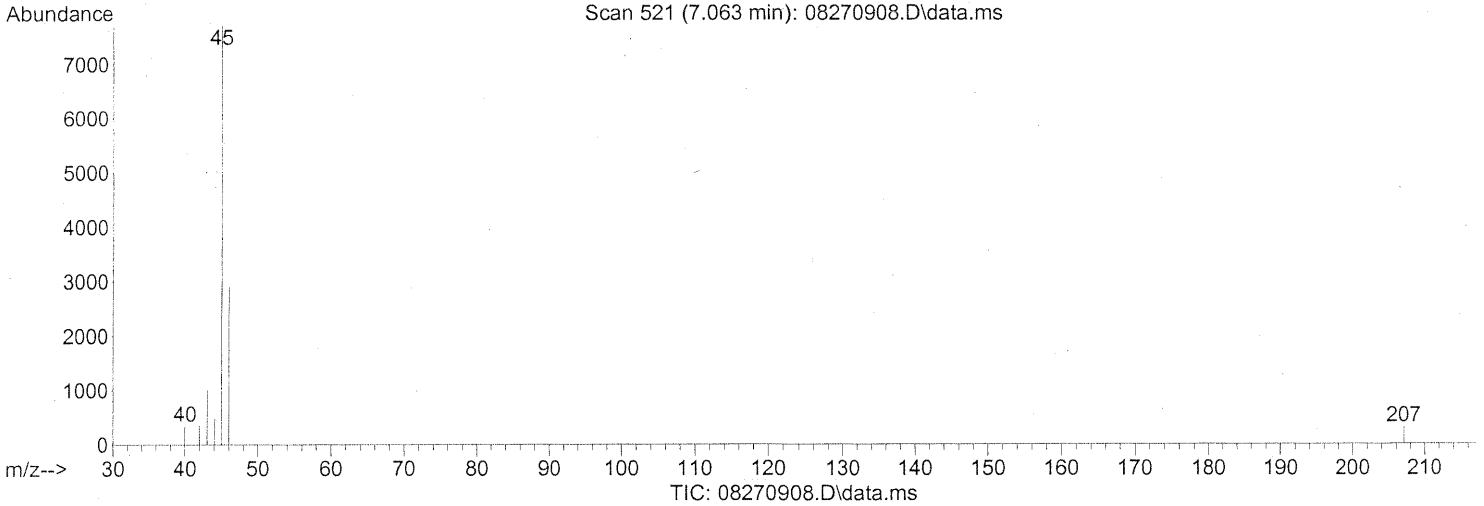
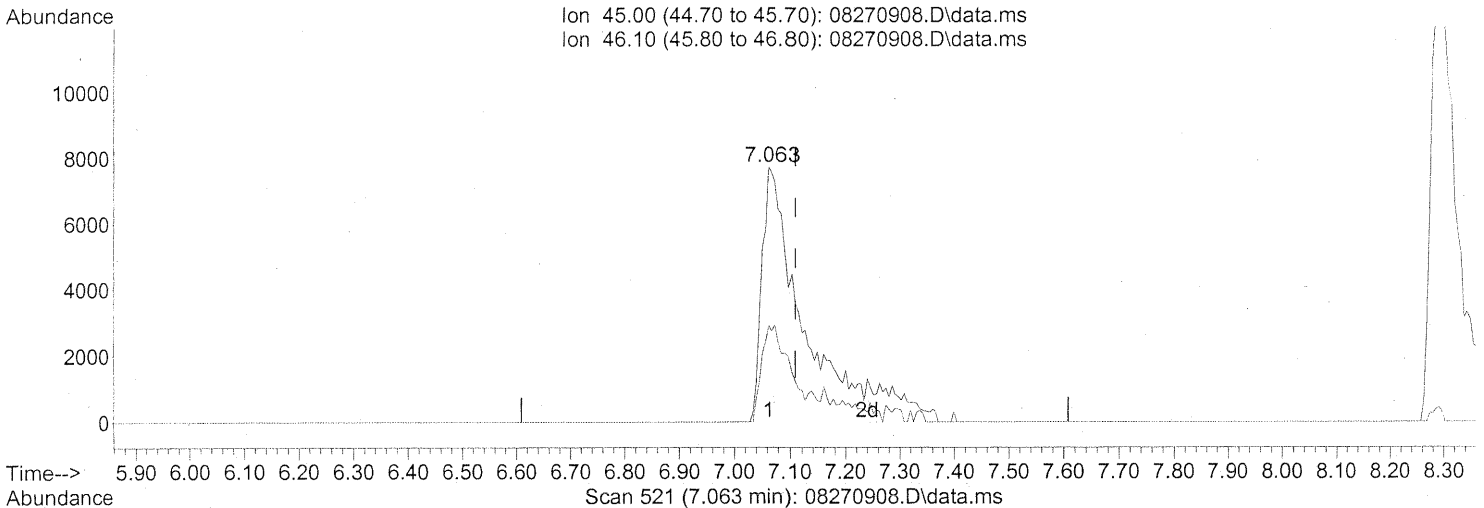
(10) Ethanol (T)  
 7.063min (-0.046) 2.42ng  
 response 36361

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	30.77
0.00	0.00	0.00
0.00	0.00	0.00

PT

Data Path : J:\MS13\DATA\2009\_08\27\  
Data File : 08270908.D  
Acq On : 27 Aug 2009 16:52  
Operator : WA/CC  
Sample : 0.5ng TO-15 ICAL  
Misc : S20-08140906/S20-07310904  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:43:23 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Thu Aug 27 20:40:00 2009  
Response via : Initial Calibration



(10) Ethanol (T)  
7.063min (-0.046) 2.80ng m  
response 42023

Ion	Exp%	Act%
45.00	100	100
46.10	38.20	26.62
0.00	0.00	0.00
0.00	0.00	0.00

*PT -> IC*  
*WA/CC 8/28/09*  
*CC*  
*8/28/09*  
*WA/CC 8/28/09*



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270909.D  
 Acq On : 27 Aug 2009 17:32  
 Operator : WA/CC  
 Sample : 1.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:46:43 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*WA 8/28/09  
 LC  
 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	338113	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	15.41	114	1695008	25.000	ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.28	82	819143	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.62	65	678685	23.094	ng	-0.02
Spiked Amount	25.000		Recovery	=	92.36%	
57) Toluene-d8 (SS2)	18.85	98	1826536	25.519	ng	0.00
Spiked Amount	25.000		Recovery	=	102.08%	
73) Bromofluorobenzene (SS3)	23.23	174	525776	27.855	ng	0.00
Spiked Amount	25.000		Recovery	=	111.44%	

Target Compounds

						Qvalue
2) Propene	4.69	42	23167	0.998	ng	98
3) Dichlorodifluoromethan...	4.85	85	44225	1.166	ng	100
4) Chloromethane	5.17	50	29046	1.140	ng	96
5) 1,2-Dichloro-1,1,2,2-t...	5.41	135	18594	1.207	ng	99
6) Vinyl Chloride	5.61	62	26423	1.079	ng	96
7) 1,3-Butadiene	5.89	54	22473	1.281	ng	100
8) Bromomethane	6.37	94	16348	1.097	ng	95
9) Chloroethane	6.70	64	13821	0.971	ng	96
10) Ethanol	7.06	45	75189	5.112	ng	99
11) Acetonitrile	7.38	41	39923	0.927	ng	98
12) Acrolein	7.57	56	11566	1.033	ng	86
13) Acetone	7.81	58	80124	5.774	ng	99
14) Trichlorofluoromethane	8.02	101	38449	1.121	ng	97
15) 2-Propanol (Isopropanol)	8.29	45	107175	1.965	ng	98
16) Acrylonitrile	8.55	53	26590	1.060	ng	96
17) 1,1-Dichloroethene	9.03	96	19322	1.214	ng	89
18) 2-Methyl-2-Propanol (t...	9.24	59	102219	2.112	ng	94
19) Methylene Chloride	9.24	84	20286	1.089	ng	96
20) 3-Chloro-1-propene (Al...	9.42	41	30207	0.841	ng	99
21) Trichlorotrifluoroethane	9.67	151	16030	1.286	ng	93
22) Carbon Disulfide	9.64	76	72815	1.108	ng	100
23) trans-1,2-Dichloroethene	10.67	61	29706	1.055	ng	91
24) 1,1-Dichloroethane	10.98	63	35945	1.052	ng	98
25) Methyl tert-Butyl Ether	11.19	73	55919	1.065	ng	99
26) Vinyl Acetate	11.26	86	18783	6.651	ng	# 68
27) 2-Butanone (MEK)	11.68	72	13258	1.058	ng	# 86
28) cis-1,2-Dichloroethene	12.23	61	27982	1.067	ng	87
29) Diisopropyl Ether	12.64	87	19284	1.150	ng	# 22
30) Ethyl Acetate	12.66	61	14245	2.182	ng	100
31) n-Hexane	12.58	57	35385	1.060	ng	282

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270909.D  
 Acq On : 27 Aug 2009 17:32  
 Operator : WA/CC  
 Sample : 1.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:46:43 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.67	83	35077	1.193	ng	98
34) Tetrahydrofuran (THF)	13.39	72	14938	1.118	ng	99
35) Ethyl tert-Butyl Ether	13.44	87	22600	1.042	ng	98
36) 1,2-Dichloroethane	13.79	62	28509	1.061	ng	98
38) 1,1,1-Trichloroethane	14.16	97	31494	1.095	ng	98
39) Isopropyl Acetate	14.83	61	25625	2.038	ng	# 68
40) 1-Butanol	14.88	56	37926	1.724	ng	# 1
41) Benzene	14.87	78	80573	1.081	ng	100
42) Carbon Tetrachloride	15.09	117	27461	1.156	ng	99
43) Cyclohexane	15.29	84	60257	2.208	ng	97
44) tert-Amyl Methyl Ether	15.85	73	59739	1.067	ng	97
45) 1,2-Dichloropropane	16.10	63	20251	1.082	ng	94
46) Bromodichloromethane	16.37	83	26601	1.083	ng	97
47) Trichloroethene	16.43	130	19053	1.134	ng	98
48) 1,4-Dioxane	16.51	88	15853	1.113	ng	88
49) 2,2,4-Trimethylpentane...	16.52	57	91059	1.037	ng	100
50) Methyl Methacrylate	16.76	100	14852	2.165	ng	99
51) n-Heptane	16.87	71	21673	1.084	ng	96
52) cis-1,3-Dichloropropene	17.64	75	30063	0.969	ng	97
53) 4-Methyl-2-pentanone	17.76	58	19029	1.062	ng	96
54) trans-1,3-Dichloropropene	18.35	75	31487	1.068	ng	99
55) 1,1,2-Trichloroethane	18.59	97	17826	1.089	ng	99
58) Toluene	18.98	91	81135	1.153	ng	100
59) 2-Hexanone	19.36	43	49906	1.067	ng	99
60) Dibromochloromethane	19.53	129	20786	1.249	ng	99
61) 1,2-Dibromoethane	19.86	107	20935	1.186	ng	99
62) n-Butyl Acetate	20.17	43	56818	1.031	ng	97
63) n-Octane	20.28	57	18601	1.094	ng	97
64) Tetrachloroethene	20.46	166	19016	1.168	ng	98
65) Chlorobenzene	21.34	112	50799	1.167	ng	99
66) Ethylbenzene	21.82	91	91245	1.135	ng	99
67) m- & p-Xylenes	22.05	91	143956	2.213	ng	98
68) Bromoform	22.14	173	16140	1.168	ng	99
69) Styrene	22.50	104	52062	1.107	ng	99
70) o-Xylene	22.65	91	75012	1.150	ng	98
71) n-Nonane	22.91	43	44250	1.021	ng	96
72) 1,1,2,2-Tetrachloroethane	22.63	83	32737	1.131	ng	92
74) Cumene	23.41	105	91337	1.109	ng	100
75) alpha-Pinene	23.90	93	44882	1.063	ng	99
76) n-Propylbenzene	24.04	91	116128	1.121	ng	99
77) 3-Ethyltoluene	24.17	105	90541	1.150	ng	99
78) 4-Ethyltoluene	24.22	105	90088	1.181	ng	96
79) 1,3,5-Trimethylbenzene	24.31	105	76723	1.192	ng	100

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270909.D  
 Acq On : 27 Aug 2009 17:32  
 Operator : WA/CC  
 Sample : 1.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:46:43 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	37555	1.090	ng	97
81) 2-Ethyltoluene	24.55	105	92466	1.165	ng	100
82) 1,2,4-Trimethylbenzene	24.82	105	75715	1.154	ng	98
83) n-Decane	24.93	57	48044	1.126	ng	99
84) Benzyl Chloride	24.99	91	74822	1.216	ng	99
85) 1,3-Dichlorobenzene	25.02	146	41470	1.249	ng	97
86) 1,4-Dichlorobenzene	25.10	146	41289	1.166	ng	99
87) sec-Butylbenzene	25.15	105	104559	1.180	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	91307	1.155	ng	98
89) 1,2,3-Trimethylbenzene	25.35	105	79842	1.194	ng	99
90) 1,2-Dichlorobenzene	25.53	146	38264	1.215	ng	99
91) d-Limonene	25.53	68	30898	1.107	ng	98
92) 1,2-Dibromo-3-Chloropr...	26.06	157	13048	1.205	ng	95
93) n-Undecane	26.46	57	49930	1.100	ng	98
94) 1,2,4-Trichlorobenzene	27.58	180	27886	1.288	ng	99
95) Naphthalene	27.73	128	104048	1.168	ng	99
96) n-Dodecane	27.69	57	52970	1.005	ng	98
97) Hexachlorobutadiene	28.14	225	16329	1.186	ng	97
98) Cyclohexanone	22.30	55	26821	0.920	ng	97
99) tert-Butylbenzene	24.82	119	74545	1.174	ng	98
100) n-Butylbenzene	25.86	91	87925	1.203	ng	99

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





Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270910.D  
 Acq On : 27 Aug 2009 18:13  
 Operator : WA/CC  
 Sample : 5.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:49:17 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

178/28/09  
 CC  
 8/28/09

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.47	130	285134	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)	15.41	114	1419665	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.28	82	696006	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.62	65	562841	22.711	ng	-0.01
Spiked Amount	25.000					
				Recovery =		90.84%
57) Toluene-d8 (SS2)	18.85	98	1539663	25.317	ng	0.00
Spiked Amount	25.000					
				Recovery =		101.28%
73) Bromofluorobenzene (SS3)	23.23	174	447453	27.900	ng	0.00
Spiked Amount	25.000					
				Recovery =		111.60%

## Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.67	42	120348	6.151	ng	97
3) Dichlorodifluoromethan...	4.84	85	193597	6.054	ng	100
4) Chloromethane	5.16	50	121026	5.633	ng	100
5) 1,2-Dichloro-1,1,2,2-t...	5.40	135	81300	6.257	ng	98
6) Vinyl Chloride	5.59	62	119297	5.779	ng	99
7) 1,3-Butadiene	5.87	54	104125	7.037	ng	98
8) Bromomethane	6.35	94	79946	6.362	ng	97
9) Chloroethane	6.69	64	66514	5.543	ng	100
10) Ethanol	7.06	45	344709	27.793	ng	100
11) Acetonitrile	7.35	41	186705	5.140	ng	98
12) Acrolein	7.55	56	54908	5.816	ng	99
13) Acetone	7.81	58	353050	30.169	ng	99
14) Trichlorofluoromethane	8.01	101	176237	6.095	ng	98
15) 2-Propanol (Isopropanol)	8.29	45	379930	8.262	ng	94
16) Acrylonitrile	8.54	53	126729	5.993	ng	97
17) 1,1-Dichloroethene	9.03	96	86179	6.419	ng	93
18) 2-Methyl-2-Propanol (t...	9.24	59	460734	11.287	ng	99
19) Methylene Chloride	9.23	84	89945	5.723	ng	94
20) 3-Chloro-1-propene (Al...	9.42	41	145675	4.808	ng	98
21) Trichlorotrifluoroethane	9.68	151	69998	6.658	ng	99
22) Carbon Disulfide	9.63	76	331741	5.987	ng	99
23) trans-1,2-Dichloroethene	10.67	61	137375	5.783	ng	93
24) 1,1-Dichloroethane	10.98	63	163088	5.661	ng	100
25) Methyl tert-Butyl Ether	11.18	73	259596	5.863	ng	98
26) Vinyl Acetate	11.27	86	86141	36.171	ng	# 92
27) 2-Butanone (MEK)	11.66	72	64271	6.083	ng	98
28) cis-1,2-Dichloroethene	12.23	61	131673	5.955	ng	92
29) Diisopropyl Ether	12.64	87	88485	6.258	ng	# 23
30) Ethyl Acetate	12.66	61	69155	12.564	ng	97
31) n-Hexane	12.58	57	156515	5.559	ng	100

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270910.D  
 Acq On : 27 Aug 2009 18:13  
 Operator : WA/CC  
 Sample : 5.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:49:17 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.68	83	158573	6.397	ng	98
34) Tetrahydrofuran (THF)	13.39	72	62284	5.530	ng	96
35) Ethyl tert-Butyl Ether	13.44	87	100668	5.503	ng	97
36) 1,2-Dichloroethane	13.79	62	127632	5.633	ng	98
38) 1,1,1-Trichloroethane	14.17	97	142224	5.906	ng	98
39) Isopropyl Acetate	14.82	61	120873	11.478	ng	# 72
40) 1-Butanol	14.86	56	183717	9.971	ng	# 1
41) Benzene	14.87	78	360870	5.782	ng	99
42) Carbon Tetrachloride	15.10	117	126837	6.376	ng	98
43) Cyclohexane	15.29	84	273998	11.985	ng	96
44) tert-Amyl Methyl Ether	15.84	73	261147	5.571	ng	99
45) 1,2-Dichloropropane	16.10	63	92071	5.873	ng	99
46) Bromodichloromethane	16.37	83	126412	6.146	ng	100
47) Trichloroethene	16.44	130	89343	6.346	ng	99
48) 1,4-Dioxane	16.50	88	75297	6.312	ng	92
49) 2,2,4-Trimethylpentane...	16.52	57	412337	5.608	ng	99
50) Methyl Methacrylate	16.76	100	72721	12.656	ng	97
51) n-Heptane	16.88	71	98223	5.864	ng	96
52) cis-1,3-Dichloropropene	17.65	75	142422	5.482	ng	100
53) 4-Methyl-2-pentanone	17.75	58	89269	5.951	ng	99
54) trans-1,3-Dichloropropene	18.36	75	151819	6.146	ng	99
55) 1,1,2-Trichloroethane	18.60	97	85346	6.228	ng	100
58) Toluene	18.98	91	374000	6.257	ng	100
59) 2-Hexanone	19.36	43	229766	5.781	ng	98
60) Dibromochloromethane	19.53	129	99312	7.023	ng	98
61) 1,2-Dibromoethane	19.86	107	96822	6.458	ng	100
62) n-Butyl Acetate	20.17	43	265155	5.660	ng	98
63) n-Octane	20.27	57	83701	5.793	ng	96
64) Tetrachloroethene	20.46	166	89713	6.486	ng	99
65) Chlorobenzene	21.34	112	236912	6.407	ng	99
66) Ethylbenzene	21.82	91	426544	6.243	ng	98
67) m- & p-Xylenes	22.05	91	664427	12.022	ng	100
68) Bromoform	22.14	173	77570	6.606	ng	99
69) Styrene	22.50	104	255399	6.393	ng	98
70) o-Xylene	22.65	91	345400	6.233	ng	99
71) n-Nonane	22.91	43	204226	5.547	ng	97
72) 1,1,2,2-Tetrachloroethane	22.63	83	158108	6.429	ng	98
74) Cumene	23.41	105	419995	6.000	ng	99
75) alpha-Pinene	23.90	93	210281	5.861	ng	99
76) n-Propylbenzene	24.04	91	543860	6.181	ng	99
77) 3-Ethyltoluene	24.17	105	424375	6.344	ng	98
78) 4-Ethyltoluene	24.22	105	424689	6.552	ng	100
79) 1,3,5-Trimethylbenzene	24.31	105	351291	6.426	ng	100

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270910.D  
 Acq On : 27 Aug 2009 18:13  
 Operator : WA/CC  
 Sample : 5.0ng TO-15 ICAL  
 Misc : S20-08140906/S20-07310904  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:49:17 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

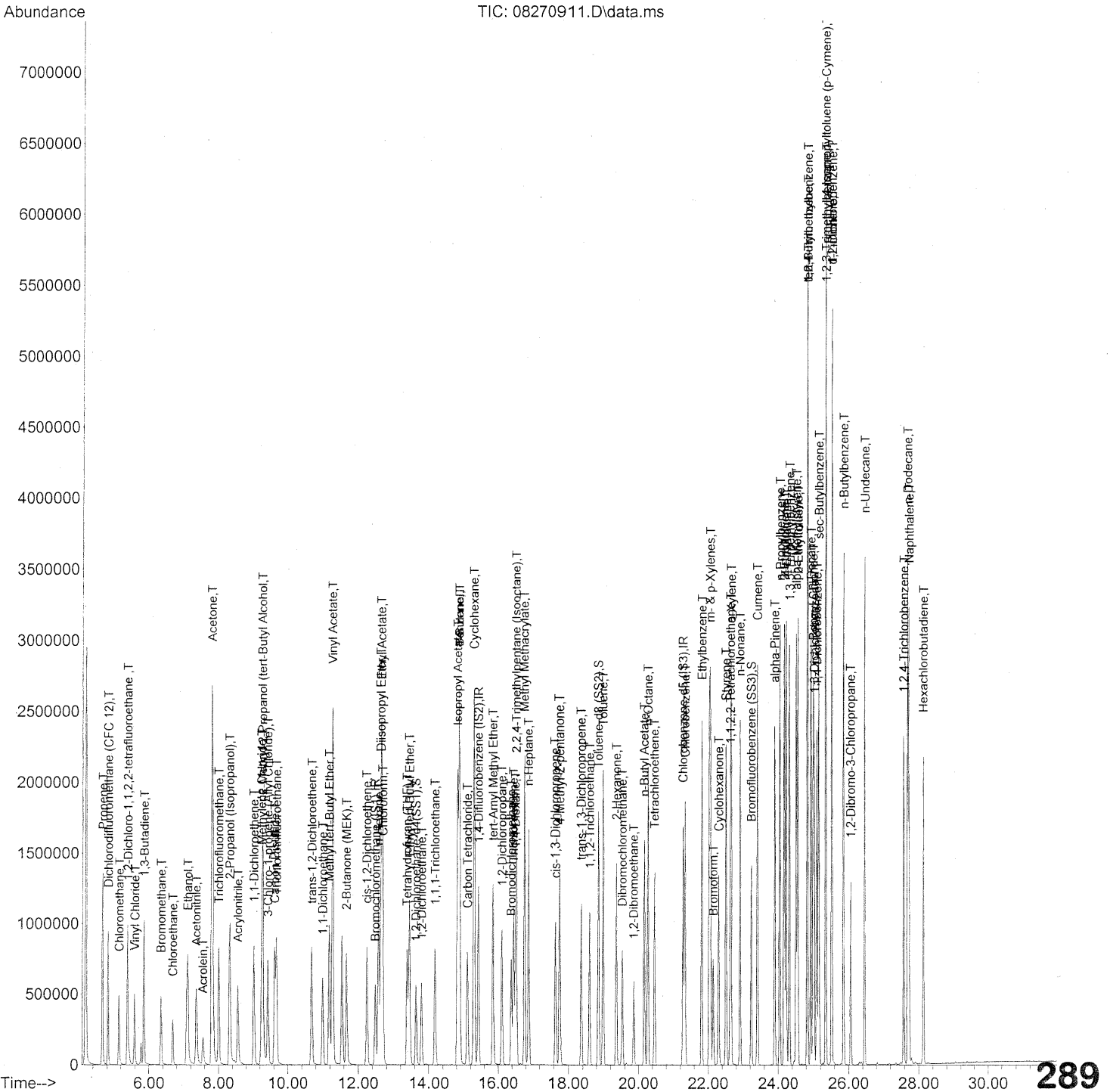
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	187722	6.414	ng	98
81) 2-Ethyltoluene	24.55	105	422733	6.266	ng	100
82) 1,2,4-Trimethylbenzene	24.83	105	355483	6.376	ng	98
83) n-Decane	24.93	57	216013	5.959	ng	97
84) Benzyl Chloride	24.99	91	361430	6.916	ng	100
85) 1,3-Dichlorobenzene	25.02	146	186769	6.619	ng	99
86) 1,4-Dichlorobenzene	25.10	146	191016	6.349	ng	100
87) sec-Butylbenzene	25.16	105	482316	6.404	ng	98
88) 4-Isopropyltoluene (p-...	25.35	119	433059	6.448	ng	99
89) 1,2,3-Trimethylbenzene	25.35	105	371622	6.543	ng	100
90) 1,2-Dichlorobenzene	25.53	146	179979	6.728	ng	99
91) d-Limonene	25.53	68	149598	6.310	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.06	157	66848	7.265	ng	97
93) n-Undecane	26.46	57	234884	6.091	ng	99
94) 1,2,4-Trichlorobenzene	27.58	180	136765	7.435	ng	99
95) Naphthalene	27.72	128	498226	6.580	ng	99
96) n-Dodecane	27.69	57	246891	5.511	ng	98
97) Hexachlorobutadiene	28.14	225	77742	6.645	ng	99
98) Cyclohexanone	22.30	55	129078	5.213	ng	97
99) tert-Butylbenzene	24.82	119	343094	6.358	ng	99
100) n-Butylbenzene	25.86	91	416303	6.704	ng	99

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

Quantitation Report (QT Reviewed)

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270911.D  
 Acq On : 27 Aug 2009 18:53  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:51:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270911.D  
 Acq On : 27 Aug 2009 18:53  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:51:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*17 8/28/09*  
*CC 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.48	130	284501	25.000	ng	0.00
37) 1,4-Difluorobenzene (IS2)	15.43	114	1447280	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.29	82	702211	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.63	65	570397	23.067	ng	0.00
Spiked Amount	25.000		Recovery	=	92.28%	
57) Toluene-d8 (SS2)	18.85	98	1567824	25.552	ng	0.00
Spiked Amount	25.000		Recovery	=	102.20%	
73) Bromofluorobenzene (SS3)	23.23	174	454480	28.088	ng	0.00
Spiked Amount	25.000		Recovery	=	112.36%	

## Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.66	42	588172	30.127	ng	99
3) Dichlorodifluoromethan...	4.82	85	955071	29.931	ng	99
4) Chloromethane	5.14	50	669890	31.246	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	417184	32.179	ng	99
6) Vinyl Chloride	5.59	62	625558	30.370	ng	98
7) 1,3-Butadiene	5.86	54	570533	38.645	ng	99
8) Bromomethane	6.35	94	424003	33.816	ng	97
9) Chloroethane	6.69	64	348508	29.110	ng	98
10) Ethanol	7.11	45	1816351	146.775	ng	99
11) Acetonitrile	7.36	41	978031	26.986	ng	99
12) Acrolein	7.55	56	301988	32.058	ng	99
13) Acetone	7.82	58	1809667	154.985	ng	97
14) Trichlorofluoromethane	8.01	101	920207	31.898	ng	97
15) 2-Propanol (Isopropanol)	8.32	45	2169597	47.283	ng	100
16) Acrylonitrile	8.55	53	688506	32.634	ng	98
17) 1,1-Dichloroethene	9.02	96	462130	34.499	ng	93
18) 2-Methyl-2-Propanol (t...	9.27	59	2503952	61.479	ng	99
19) Methylene Chloride	9.25	84	470180	29.985	ng	96
20) 3-Chloro-1-propene (Al...	9.43	41	781914	25.867	ng	98
21) Trichlorotrifluoroethane	9.67	151	385242	36.727	ng	96
22) Carbon Disulfide	9.62	76	1769730	32.011	ng	99
23) trans-1,2-Dichloroethene	10.68	61	738419	31.154	ng	94
24) 1,1-Dichloroethane	10.99	63	874410	30.422	ng	99
25) Methyl tert-Butyl Ether	11.18	73	1433827	32.454	ng	98
26) Vinyl Acetate	11.27	86	502228	211.357	ng	99
27) 2-Butanone (MEK)	11.67	72	351618	33.352	ng	96
28) cis-1,2-Dichloroethene	12.24	61	705526	31.978	ng	91
29) Diisopropyl Ether	12.64	87	478190	33.893	ng	# 21
30) Ethyl Acetate	12.67	61	368666	67.126	ng	98
31) n-Hexane	12.58	57	835198	29.727	ng	92

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270911.D  
 Acq On : 27 Aug 2009 18:53  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:51:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
32) Chloroform	12.70	83	837403	33.855	ng	97
34) Tetrahydrofuran (THF)	13.38	72	337216	30.007	ng	95
35) Ethyl tert-Butyl Ether	13.45	87	550620	30.168	ng	95
36) 1,2-Dichloroethane	13.80	62	686367	30.362	ng	99
38) 1,1,1-Trichloroethane	14.18	97	775212	31.576	ng	99
39) Isopropyl Acetate	14.83	61	655653	61.070	ng	# 74
40) 1-Butanol	14.88	56	1045668	55.670	ng	# 63
41) Benzene	14.88	78	1874167	29.454	ng	100
42) Carbon Tetrachloride	15.11	117	698778	34.456	ng	100
43) Cyclohexane	15.30	84	1485423	63.735	ng	95
44) tert-Amyl Methyl Ether	15.85	73	1383659	28.956	ng	98
45) 1,2-Dichloropropane	16.11	63	492324	30.807	ng	99
46) Bromodichloromethane	16.37	83	692441	33.022	ng	99
47) Trichloroethene	16.44	130	495591	34.531	ng	99
48) 1,4-Dioxane	16.50	88	409598	33.682	ng	93
49) 2,2,4-Trimethylpentane...	16.52	57	2183614	29.134	ng	99
50) Methyl Methacrylate	16.76	100	401830	68.598	ng	95
51) n-Heptane	16.88	71	521007	30.509	ng	97
52) cis-1,3-Dichloropropene	17.65	75	788158	29.758	ng	100
53) 4-Methyl-2-pentanone	17.76	58	495183	32.380	ng	99
54) trans-1,3-Dichloropropene	18.36	75	830905	32.995	ng	100
55) 1,1,2-Trichloroethane	18.60	97	455804	32.625	ng	99
58) Toluene	18.98	91	1976690	32.780	ng	100
59) 2-Hexanone	19.36	43	1280900	31.943	ng	97
60) Dibromochloromethane	19.53	129	565906	39.665	ng	100
61) 1,2-Dibromoethane	19.86	107	536115	35.443	ng	99
62) n-Butyl Acetate	20.17	43	1478795	31.288	ng	99
63) n-Octane	20.28	57	450511	30.902	ng	98
64) Tetrachloroethene	20.46	166	483543	34.652	ng	100
65) Chlorobenzene	21.34	112	1280692	34.328	ng	100
66) Ethylbenzene	21.82	91	2274865	33.001	ng	100
67) m- & p-Xylenes	22.06	91	3561506	63.869	ng	100
68) Bromoform	22.15	173	449129	37.913	ng	99
69) Styrene	22.51	104	1403684	34.827	ng	99
70) o-Xylene	22.65	91	1846441	33.026	ng	98
71) n-Nonane	22.91	43	1062700	28.607	ng	97
72) 1,1,2,2-Tetrachloroethane	22.63	83	855281	34.471	ng	99
74) Cumene	23.41	105	2260423	32.007	ng	98
75) alpha-Pinene	23.90	93	1143364	31.584	ng	99
76) n-Propylbenzene	24.05	91	2876713	32.403	ng	99
77) 3-Ethyltoluene	24.17	105	2284898	33.854	ng	99
78) 4-Ethyltoluene	24.23	105	2259500	34.550	ng	98
79) 1,3,5-Trimethylbenzene	24.32	105	1894001	34.339	ng	98

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270911.D  
 Acq On : 27 Aug 2009 18:53  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:51:53 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

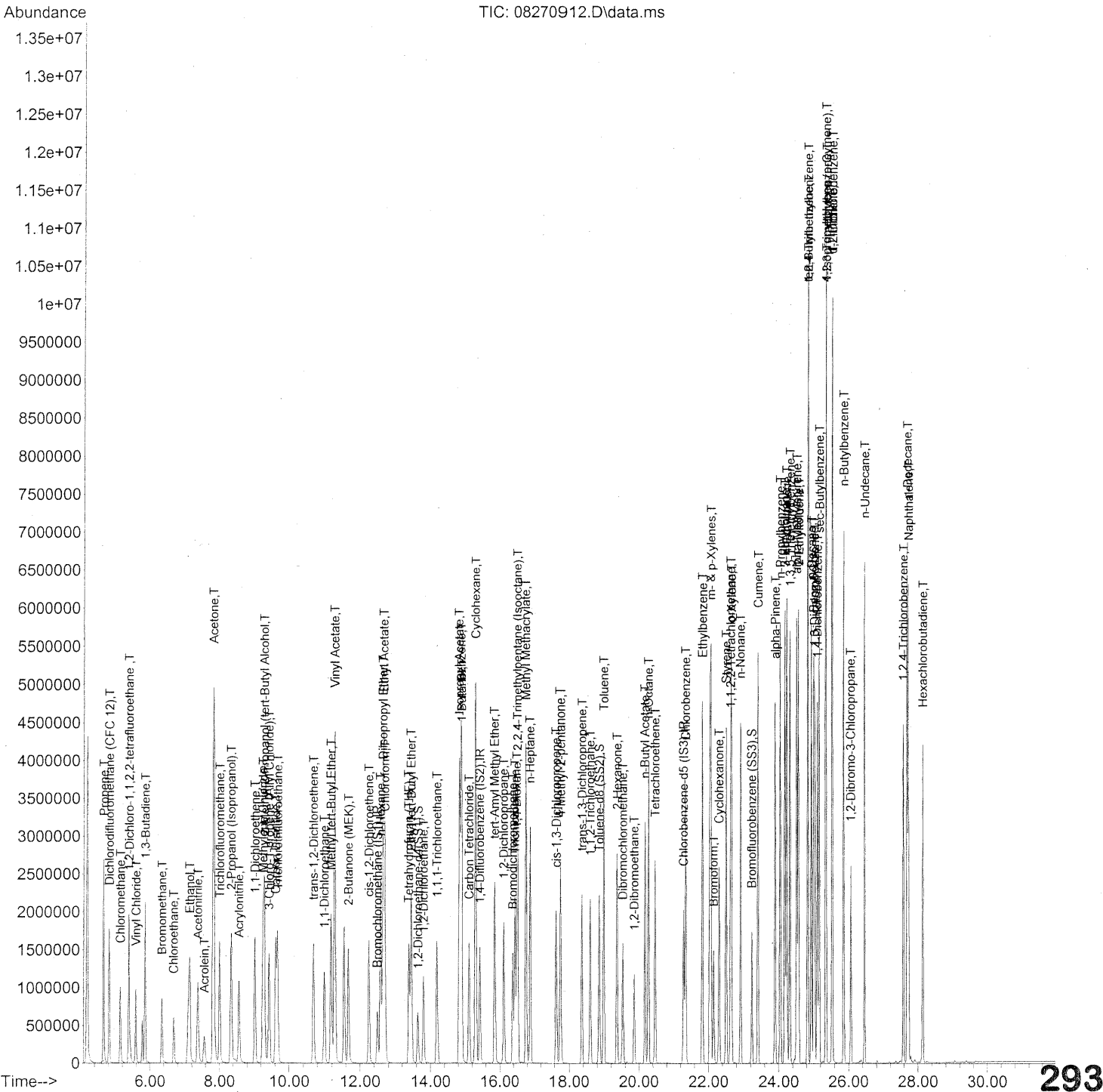
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	1054165	35.698	ng	99
81) 2-Ethyltoluene	24.56	105	2259196	33.194	ng	99
82) 1,2,4-Trimethylbenzene	24.83	105	1897450	33.733	ng	98
83) n-Decane	24.93	57	1120197	30.630	ng	97
84) Benzyl Chloride	25.00	91	1962770	37.225	ng	99
85) 1,3-Dichlorobenzene	25.03	146	1029308	36.157	ng	99
86) 1,4-Dichlorobenzene	25.11	146	1057372	34.835	ng	99
87) sec-Butylbenzene	25.16	105	2566383	33.774	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	2290126	33.799	ng	99
89) 1,2,3-Trimethylbenzene	25.35	105	1952841	34.080	ng	99
90) 1,2-Dichlorobenzene	25.53	146	957838	35.488	ng	99
91) d-Limonene	25.53	68	817753	34.188	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.06	157	385331	41.509	ng	93
93) n-Undecane	26.46	57	1206152	31.000	ng	98
94) 1,2,4-Trichlorobenzene	27.58	180	752993	40.576	ng	99
95) Naphthalene	27.73	128	2740834	35.879	ng	100
96) n-Dodecane	27.69	57	1216284	26.908	ng	98
97) Hexachlorobutadiene	28.14	225	412785	34.972	ng	99
98) Cyclohexanone	22.30	55	734000	29.379	ng	97
99) tert-Butylbenzene	24.83	119	1825773	33.538	ng	99
100) n-Butylbenzene	25.86	91	2198104	35.084	ng	99

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



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270912.D  
 Acq On : 27 Aug 2009 19:34  
 Operator : WA/CC  
 Sample : 50ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:54:59 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270912.D  
 Acq On : 27 Aug 2009 19:34  
 Operator : WA/CC  
 Sample : 50ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:54:59 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*WA 8/28/09*  
*CC 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.50	130	355771	25.000	ng	0.01
37) 1,4-Difluorobenzene (IS2)	15.43	114	1781908	25.000	ng	0.00
56) Chlorobenzene-d5 (IS3)	21.29	82	859804	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.64	65	693583	22.430	ng	0.01
Spiked Amount	25.000		Recovery	=	89.72%	
57) Toluene-d8 (SS2)	18.85	98	1926052	25.637	ng	0.00
Spiked Amount	25.000		Recovery	=	102.56%	
73) Bromofluorobenzene (SS3)	23.23	174	552218	27.873	ng	0.00
Spiked Amount	25.000		Recovery	=	111.48%	

Target Compounds

						Qvalue
2) Propene	4.66	42	1154843	47.303	ng	98
3) Dichlorodifluoromethan...	4.82	85	1829151	45.840	ng	99
4) Chloromethane	5.14	50	1341013	50.020	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	827543	51.045	ng	100
6) Vinyl Chloride	5.59	62	1263606	49.058	ng	99
7) 1,3-Butadiene	5.86	54	1118893	60.607	ng	98
8) Bromomethane	6.35	94	762302	48.617	ng	97
9) Chloroethane	6.69	64	687395	45.915	ng	99
10) Ethanol	7.14	45	3546941	229.202	ng	99
11) Acetonitrile	7.38	41	1926551	42.509	ng	99
12) Acrolein	7.57	56	602852	51.177	ng	98
13) Acetone	7.83	58	3428848	234.829	ng	95
14) Trichlorofluoromethane	8.01	101	1794190	49.734	ng	98
15) 2-Propanol (Isopropanol)	8.34	45	3820480	66.582	ng	100
16) Acrylonitrile	8.57	53	1373006	52.042	ng	98
17) 1,1-Dichloroethene	9.03	96	925646	55.259	ng	91
18) 2-Methyl-2-Propanol (t...	9.30	59	4275643	83.949	ng	99
19) Methylene Chloride	9.26	84	928469	47.349	ng	96
20) 3-Chloro-1-propene (Al...	9.43	41	1562507	41.336	ng	97
21) Trichlorotrifluoroethane	9.68	151	770821	58.765	ng	96
22) Carbon Disulfide	9.62	76	3467083	50.150	ng	99
23) trans-1,2-Dichloroethene	10.69	61	1467929	49.525	ng	93
24) 1,1-Dichloroethane	11.00	63	1749311	48.669	ng	99
25) Methyl tert-Butyl Ether	11.18	73	2886625	52.249	ng	98
26) Vinyl Acetate	11.29	86	946195	318.427	ng	# 92
27) 2-Butanone (MEK)	11.68	72	693027	52.566	ng	94
28) cis-1,2-Dichloroethene	12.26	61	1393226	50.498	ng	91
29) Diisopropyl Ether	12.65	87	932693	52.864	ng	# 21
30) Ethyl Acetate	12.68	61	711553	103.604	ng	98
31) n-Hexane	12.58	57	1646711	46.870	ng	98

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270912.D  
 Acq On : 27 Aug 2009 19:34  
 Operator : WA/CC  
 Sample : 50ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:54:59 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.70	83	1622626	52.459	ng	97
34) Tetrahydrofuran (THF)	13.38	72	655734	46.661	ng	95
35) Ethyl tert-Butyl Ether	13.46	87	1101754	48.271	ng	94
36) 1,2-Dichloroethane	13.80	62	1347810	47.678	ng	99
38) 1,1,1-Trichloroethane	14.19	97	1521512	50.336	ng	98
39) Isopropyl Acetate	14.83	61	1272599	96.274	ng	# 74
40) 1-Butanol	14.90	56	2061538	89.143	ng	67
41) Benzene	14.88	78	3615292	46.147	ng	100
42) Carbon Tetrachloride	15.11	117	1389295	55.640	ng	99
43) Cyclohexane	15.31	84	2895546	100.908	ng	95
44) tert-Amyl Methyl Ether	15.85	73	2676182	45.487	ng	98
45) 1,2-Dichloropropane	16.12	63	971117	49.355	ng	99
46) Bromodichloromethane	16.38	83	1360838	52.710	ng	100
47) Trichloroethene	16.45	130	991208	56.095	ng	98
48) 1,4-Dioxane	16.51	88	803541	53.668	ng	94
49) 2,2,4-Trimethylpentane...	16.53	57	4218183	45.711	ng	99
50) Methyl Methacrylate	16.77	100	798155	110.668	ng	93
51) n-Heptane	16.89	71	1023757	48.691	ng	97
52) cis-1,3-Dichloropropene	17.65	75	1562664	47.920	ng	100
53) 4-Methyl-2-pentanone	17.76	58	973944	51.726	ng	100
54) trans-1,3-Dichloropropene	18.36	75	1641324	52.936	ng	100
55) 1,1,2-Trichloroethane	18.60	97	908507	52.817	ng	100
58) Toluene	18.99	91	3881275	52.567	ng	99
59) 2-Hexanone	19.37	43	2497284	50.862	ng	97
60) Dibromochloromethane	19.53	129	1128262	64.586	ng	100
61) 1,2-Dibromoethane	19.86	107	1060533	57.262	ng	99
62) n-Butyl Acetate	20.17	43	2940183	50.805	ng	99
63) n-Octane	20.28	57	880352	49.319	ng	98
64) Tetrachloroethene	20.47	166	970560	56.805	ng	100
65) Chlorobenzene	21.34	112	2525081	55.277	ng	100
66) Ethylbenzene	21.82	91	4407676	52.222	ng	100
67) m- & p-Xylenes	22.06	91	6851193	100.345	ng	98
68) Bromoform	22.15	173	911971	62.873	ng	99
69) Styrene	22.51	104	2758753	55.902	ng	99
70) o-Xylene	22.66	91	3559961	52.004	ng	98
71) n-Nonane	22.91	43	2047046	45.004	ng	97
72) 1,1,2,2-Tetrachloroethane	22.64	83	1662923	54.738	ng	98
74) Cumene	23.41	105	4397891	50.859	ng	98
75) alpha-Pinene	23.90	93	2250302	50.768	ng	98
76) n-Propylbenzene	24.05	91	5492507	50.528	ng	99
77) 3-Ethyltoluene	24.18	105	4532255	54.843	ng	99
78) 4-Ethyltoluene	24.23	105	4315743	53.896	ng	98
79) 1,3,5-Trimethylbenzene	24.32	105	3684738	54.561	ng	98

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270912.D  
 Acq On : 27 Aug 2009 19:34  
 Operator : WA/CC  
 Sample : 50ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

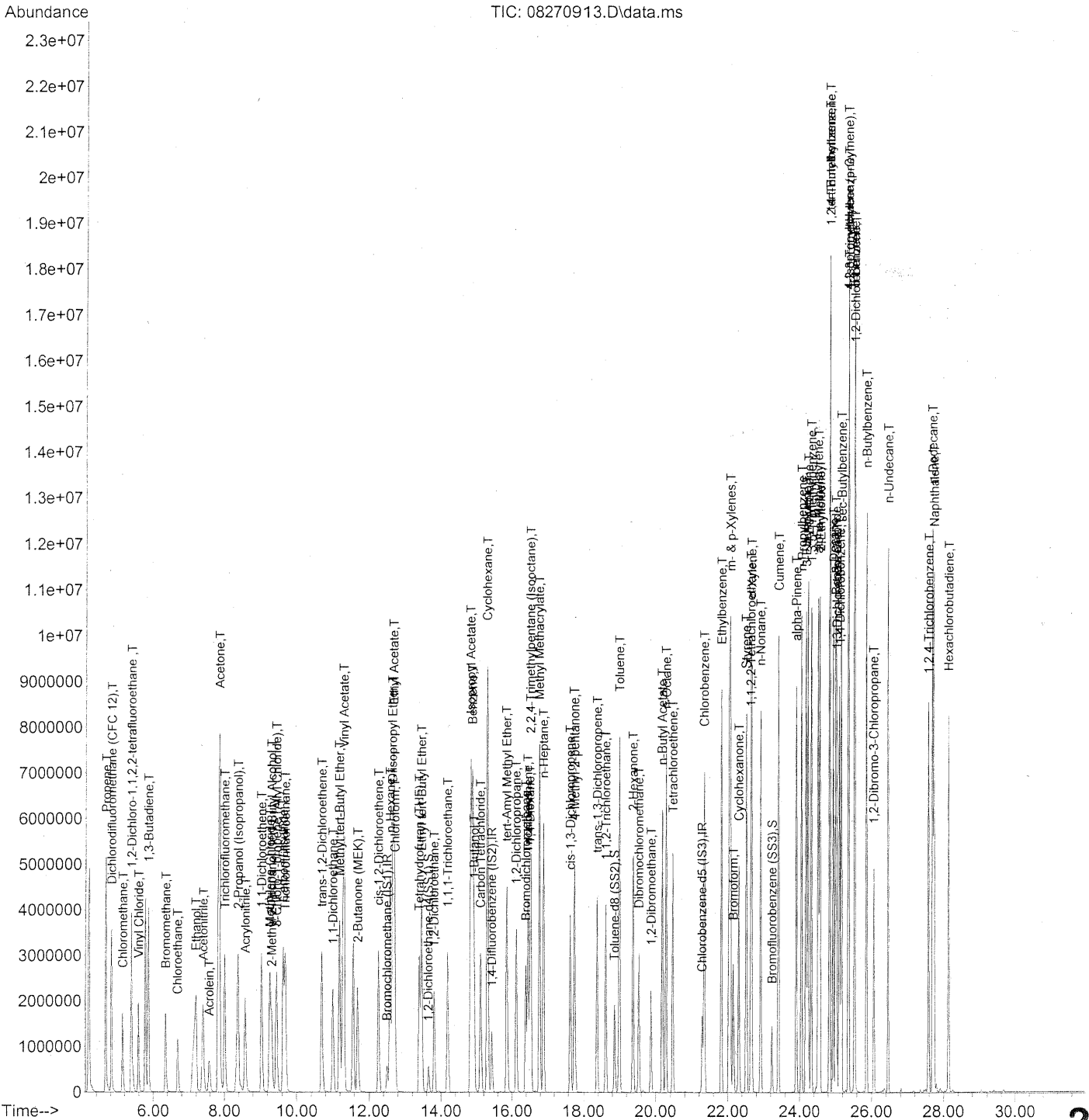
Quant Time: Aug 28 05:54:59 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	2084287	57.646	ng	97
81) 2-Ethyltoluene	24.57	105	4387733	52.651	ng	99
82) 1,2,4-Trimethylbenzene	24.83	105	3642429	52.887	ng	98
83) n-Decane	24.94	57	2143395	47.866	ng	97
84) Benzyl Chloride	25.01	91	3798215	58.832	ng	98
85) 1,3-Dichlorobenzene	25.03	146	2036482	58.425	ng	99
86) 1,4-Dichlorobenzene	25.11	146	2091516	56.275	ng	99
87) sec-Butylbenzene	25.17	105	4948380	53.186	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	4364256	52.604	ng	99
89) 1,2,3-Trimethylbenzene	25.36	105	3761867	53.617	ng	99
90) 1,2-Dichlorobenzene	25.53	146	1840676	55.698	ng	99
91) d-Limonene	25.53	68	1581281	53.991	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.06	157	769261	67.679	ng	92
93) n-Undecane	26.46	57	2305390	48.392	ng	98
94) 1,2,4-Trichlorobenzene	27.59	180	1487407	65.460	ng	99
95) Naphthalene	27.73	128	5330264	56.987	ng	99
96) n-Dodecane	27.70	57	2340297	42.285	ng	98
97) Hexachlorobutadiene	28.15	225	841080	58.197	ng	98
98) Cyclohexanone	22.30	55	1440848	47.101	ng	97
99) tert-Butylbenzene	24.83	119	3502642	52.547	ng	99
100) n-Butylbenzene	25.86	91	4206554	54.834	ng	99

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

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270913.D  
 Acq On : 27 Aug 2009 20:14  
 Operator : WA/CC  
 Sample : 100ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:57:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270913.D  
 Acq On : 27 Aug 2009 20:14  
 Operator : WA/CC  
 Sample : 100ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:57:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

*WA 8/28/09*  
*CC*  
*8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.50	130	311663	25.000	ng	0.02
37) 1,4-Difluorobenzene (IS2)	15.44	114	1553790	25.000	ng	0.01
56) Chlorobenzene-d5 (IS3)	21.29	82	732694	25.000	ng	0.00

## System Monitoring Compounds

33) 1,2-Dichloroethane-d4(...)	13.65	65	593115	21.895	ng	0.02
Spiked Amount	25.000			Recovery	=	87.60%
57) Toluene-d8 (SS2)	18.86	98	1671107	26.102	ng	0.01
Spiked Amount	25.000			Recovery	=	104.40%
73) Bromofluorobenzene (SS3)	23.24	174	475967	28.192	ng	0.00
Spiked Amount	25.000			Recovery	=	112.76%

## Target Compounds

						Qvalue
2) Propene	4.66	42	2326189	108.766	ng	97
3) Dichlorodifluoromethan...	4.82	85	3724697	106.555	ng	99
4) Chloromethane	5.14	50	2420894	103.079	ng	98
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	1687479	118.819	ng	100
6) Vinyl Chloride	5.59	62	2607530	115.561	ng	99
7) 1,3-Butadiene	5.86	54	2287066	141.415	ng	96
8) Bromomethane	6.35	94	1585108	115.400	ng	98
9) Chloroethane	6.69	64	1424960	108.651	ng	99
10) Ethanol	7.20	45	6995067	515.990	ng	99
11) Acetonitrile	7.41	41	3916806	98.656	ng	99
12) Acrolein	7.58	56	1217708	118.004	ng	99
13) Acetone	7.86	58	6477329	506.390	ng	90
14) Trichlorofluoromethane	8.01	101	3583787	113.401	ng	98
15) 2-Propanol (Isopropanol)	8.39	45	7406478	147.344	ng	99
16) Acrylonitrile	8.59	53	2762119	119.510	ng	98
17) 1,1-Dichloroethene	9.03	96	1882094	128.259	ng	90
18) 2-Methyl-2-Propanol (t...	9.31	59	2734607	61.291	ng	96
19) Methylene Chloride	9.27	84	1891533	110.115	ng	95
20) 3-Chloro-1-propene (Al...	9.45	41	3110625	93.937	ng	96
21) Trichlorotrifluoroethane	9.68	151	1491940	129.838	ng	96
22) Carbon Disulfide	9.63	76	6827544	112.735	ng	98
23) trans-1,2-Dichloroethene	10.70	61	2912051	112.152	ng	93
24) 1,1-Dichloroethane	11.00	63	3453731	109.687	ng	99
25) Methyl tert-Butyl Ether	11.19	73	5728923	118.372	ng	100
26) Vinyl Acetate	11.31	86	1706291	655.492	ng	# 83
27) 2-Butanone (MEK)	11.69	72	1087900	94.196	ng	95
28) cis-1,2-Dichloroethene	12.26	61	2763573	114.342	ng	92
29) Diisopropyl Ether	12.66	87	1816274	117.515	ng	# 20
30) Ethyl Acetate	12.69	61	1367245	227.249	ng	98
31) n-Hexane	12.59	57	3275520	106.426	ng	92

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270913.D  
 Acq On : 27 Aug 2009 20:14  
 Operator : WA/CC  
 Sample : 100ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:57:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.72	83	3156196	116.480	ng	97
34) Tetrahydrofuran (THF)	13.39	72	1286760	104.522	ng	95
35) Ethyl tert-Butyl Ether	13.46	87	2208988	110.480	ng	93
36) 1,2-Dichloroethane	13.81	62	2630401	106.218	ng	99
38) 1,1,1-Trichloroethane	14.19	97	2912642	110.506	ng	98
39) Isopropyl Acetate	14.84	61	2447890	212.375	ng #	77
40) 1-Butanol	14.93	56	3972016	196.969	ng #	1
41) Benzene	14.89	78	6912771	101.192	ng	99
42) Carbon Tetrachloride	15.12	117	2738691	125.785	ng	100
43) Cyclohexane	15.31	84	5510317	220.224	ng	96
44) tert-Amyl Methyl Ether	15.86	73	5226701	101.881	ng	98
45) 1,2-Dichloropropane	16.12	63	1925723	112.240	ng	99
46) Bromodichloromethane	16.39	83	2658280	118.081	ng	100
47) Trichloroethene	16.45	130	1969977	127.853	ng	99
48) 1,4-Dioxane	16.51	88	1471701	112.724	ng	92
49) 2,2,4-Trimethylpentane...	16.53	57	7987495	99.265	ng	99
50) Methyl Methacrylate	16.79	100	1531447	243.517	ng	92
51) n-Heptane	16.90	71	1983249	108.174	ng	97
52) cis-1,3-Dichloropropene	17.66	75	3069992	107.965	ng	99
53) 4-Methyl-2-pentanone	17.77	58	1907807	116.200	ng	99
54) trans-1,3-Dichloropropene	18.37	75	3237084	119.731	ng	100
55) 1,1,2-Trichloroethane	18.61	97	1791350	119.431	ng	100
58) Toluene	19.00	91	7452062	118.439	ng	98
59) 2-Hexanone	19.38	43	4826121	115.346	ng	97
60) Dibromochloromethane	19.54	129	2243667	150.717	ng	100
61) 1,2-Dibromoethane	19.88	107	2084762	132.093	ng	99
62) n-Butyl Acetate	20.18	43	5887161	119.376	ng	99
63) n-Octane	20.29	57	1700212	111.773	ng	98
64) Tetrachloroethene	20.48	166	1936105	132.976	ng	100
65) Chlorobenzene	21.35	112	4900652	125.893	ng	99
66) Ethylbenzene	21.83	91	8343663	116.005	ng	98
67) m- & p-Xylenes	22.08	91	12943022	222.454	ng	98
68) Bromoform	22.16	173	1840619	148.910	ng	100
69) Styrene	22.51	104	5350057	127.219	ng	99
70) o-Xylene	22.66	91	6776973	116.172	ng	98
71) n-Nonane	22.92	43	3907701	100.814	ng	97
72) 1,1,2,2-Tetrachloroethane	22.64	83	3188416	123.160	ng	98
74) Cumene	23.42	105	8239238	111.812	ng	97
75) alpha-Pinene	23.90	93	4304829	113.968	ng	99
76) n-Propylbenzene	24.05	91	10014810	108.114	ng	97
77) 3-Ethyltoluene	24.18	105	8539072	121.254	ng	97
78) 4-Ethyltoluene	24.24	105	7983793	116.999	ng	96
79) 1,3,5-Trimethylbenzene	24.33	105	6981938	121.318	ng	96

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270913.D  
 Acq On : 27 Aug 2009 20:14  
 Operator : WA/CC  
 Sample : 100ng TO-15 ICAL  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 28 05:57:18 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Thu Aug 27 20:40:00 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.52	118	4021141	130.507	ng	96
81) 2-Ethyltoluene	24.57	105	8211566	115.630	ng	97
82) 1,2,4-Trimethylbenzene	24.85	105	6692639	114.032	ng	99
83) n-Decane	24.94	57	4009152	105.064	ng	97
84) Benzyl Chloride	25.01	91	7118793	129.396	ng	97
85) 1,3-Dichlorobenzene	25.04	146	3898330	131.243	ng	100
86) 1,4-Dichlorobenzene	25.12	146	4048576	127.830	ng	100
87) sec-Butylbenzene	25.17	105	8997095	113.478	ng	96
88) 4-Isopropyltoluene (p-...	25.36	119	7694114	108.829	ng	97
89) 1,2,3-Trimethylbenzene	25.37	105	6891760	115.267	ng	100
90) 1,2-Dichlorobenzene	25.54	146	3370540	119.685	ng	99
91) d-Limonene	25.53	68	2947196	118.087	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.07	157	1512954	156.201	ng	91
93) n-Undecane	26.46	57	4239249	104.422	ng	98
94) 1,2,4-Trichlorobenzene	27.59	180	2929211	151.276	ng	99
95) Naphthalene	27.74	128	9699377	121.689	ng	97
96) n-Dodecane	27.70	57	4261114	90.347	ng	97
97) Hexachlorobutadiene	28.15	225	1670676	135.654	ng	100
98) Cyclohexanone	22.32	55	2812159	107.877	ng	96
99) tert-Butylbenzene	24.84	119	6415247	112.939	ng	100
100) n-Butylbenzene	25.87	91	7689787	117.629	ng	97

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





Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270914.D  
 Acq On : 27 Aug 2009 20:55  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICV  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 28 06:10:39 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*WA 8/28/09*  
*CC 8/28/09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.48	130	364302	25.000	ng	-0.02
37) 1,4-Difluorobenzene (IS2)	15.43	114	1834071	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.29	82	881559	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.63	65	703826	24.380	ng	-0.02
Spiked Amount	25.000		Recovery	=	97.52%	
57) Toluene-d8 (SS2)	18.85	98	1980062	25.133	ng	0.00
Spiked Amount	25.000		Recovery	=	100.52%	
73) Bromofluorobenzene (SS3)	23.23	174	574418	25.333	ng	0.00
Spiked Amount	25.000		Recovery	=	101.32%	

Target Compounds

						Qvalue
2) Propene	4.66	42	558232	21.184	ng	99
3) Dichlorodifluoromethan...	4.83	85	906131	19.640	ng	99
4) Chloromethane	5.14	50	696859	22.470	ng	99
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	416752	21.872	ng	100
6) Vinyl Chloride	5.59	62	636166	21.868	ng	99
7) 1,3-Butadiene	5.86	54	508308	23.430	ng	98
8) Bromomethane	6.35	94	454619	25.282	ng	98
9) Chloroethane	6.68	64	354543	22.263	ng	98
10) Ethanol	7.10	45	1896077	116.037	ng	100
11) Acetonitrile	7.36	41	972767	21.433	ng	98
12) Acrolein	7.55	56	304856	24.434	ng	98
13) Acetone	7.81	58	1814954	107.402	ng	96
14) Trichlorofluoromethane	8.01	101	892864	21.957	ng	98
15) 2-Propanol (Isopropanol)	8.31	45	2279239	40.571	ng	100
16) Acrylonitrile	8.55	53	688583	24.684	ng	98
17) 1,1-Dichloroethene	9.03	96	481988	24.435	ng	90
18) 2-Methyl-2-Propanol (t...	9.27	59	2577274	45.814	ng	99
19) Methylene Chloride	9.25	84	478398	22.320	ng	95
20) 3-Chloro-1-propene (Al...	9.42	41	801415	24.025	ng	97
21) Trichlorotrifluoroethane	9.67	151	407404	25.301	ng	94
22) Carbon Disulfide	9.62	76	1736171	22.767	ng	98
23) trans-1,2-Dichloroethene	10.68	61	727009	23.711	ng	92
24) 1,1-Dichloroethane	10.99	63	891842	23.256	ng	100
25) Methyl tert-Butyl Ether	11.18	73	1422449	23.483	ng	100
26) Vinyl Acetate	11.28	86	529835	125.114	ng	98
27) 2-Butanone (MEK)	11.67	72	350226	25.658	ng	96
28) cis-1,2-Dichloroethene	12.24	61	711709	24.405	ng	91
29) Diisopropyl Ether	12.64	87	487987	24.483	ng	# 20
30) Ethyl Acetate	12.67	61	362042	49.357	ng	95
31) n-Hexane	12.58	57	817863	22.383	ng	95

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Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270914.D  
 Acq On : 27 Aug 2009 20:55  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICV  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 28 06:10:39 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.70	83	845298	23.468	ng	97
34) Tetrahydrofuran (THF)	13.38	72	337115	22.773	ng	95
35) Ethyl tert-Butyl Ether	13.45	87	554493	22.676	ng	94
36) 1,2-Dichloroethane	13.80	62	691810	22.893	ng	99
38) 1,1,1-Trichloroethane	14.18	97	775866	22.884	ng	97
39) Isopropyl Acetate	14.83	61	661174	47.393	ng #	71
40) 1-Butanol	14.87	56	1067569	46.764	ng #	1
41) Benzene	14.88	78	1924768	22.324	ng	100
42) Carbon Tetrachloride	15.11	117	700366	24.197	ng	100
43) Cyclohexane	15.30	84	1466800	46.160	ng	95
44) tert-Amyl Methyl Ether	15.85	73	1394562	21.838	ng	98
45) 1,2-Dichloropropane	16.11	63	499496	23.446	ng	98
46) Bromodichloromethane	16.37	83	675550	23.777	ng	100
47) Trichloroethene	16.44	130	510996	24.294	ng	98
48) 1,4-Dioxane	16.50	88	408888	24.676	ng	94
49) 2,2,4-Trimethylpentane...	16.52	57	2191198	22.332	ng	99
50) Methyl Methacrylate	16.76	100	416978	52.179	ng	92
51) n-Heptane	16.88	71	517122	23.141	ng	97
52) cis-1,3-Dichloropropene	17.65	75	796707	22.763	ng	100
53) 4-Methyl-2-pentanone	17.76	58	485301	24.646	ng	99
54) trans-1,3-Dichloropropene	18.36	75	837725	25.269	ng	99
55) 1,1,2-Trichloroethane	18.60	97	460889	22.941	ng	99
58) Toluene	18.98	91	2023334	23.845	ng	99
59) 2-Hexanone	19.36	43	1243953	23.987	ng	97
60) Dibromochloromethane	19.53	129	554007	25.970	ng	99
61) 1,2-Dibromoethane	19.86	107	543305	24.380	ng	99
62) n-Butyl Acetate	20.17	43	1455122	24.458	ng	99
63) n-Octane	20.28	57	451615	23.127	ng	96
64) Tetrachloroethene	20.46	166	499063	23.228	ng	100
65) Chlorobenzene	21.34	112	1303802	23.953	ng	100
66) Ethylbenzene	21.82	91	2304825	23.748	ng	99
67) m- & p-Xylenes	22.06	91	3591413	46.481	ng	99
68) Bromoform	22.15	173	444206	24.049	ng	100
69) Styrene	22.51	104	1413368	24.843	ng	99
70) o-Xylene	22.65	91	1856316	23.919	ng	98
71) n-Nonane	22.91	43	1056471	22.652	ng	97
72) 1,1,2,2-Tetrachloroethane	22.63	83	854190	24.007	ng	97
74) Cumene	23.41	105	2272739	23.105	ng	99
75) alpha-Pinene	23.90	93	1136434	22.273	ng	99
76) n-Propylbenzene	24.05	91	2856293	22.859	ng	99
77) 3-Ethyltoluene	24.17	105	2281470	24.245	ng	99
78) 4-Ethyltoluene	24.23	105	2214131	23.841	ng	98
79) 1,3,5-Trimethylbenzene	24.32	105	1909328	24.700	ng	99

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270914.D  
 Acq On : 27 Aug 2009 20:55  
 Operator : WA/CC  
 Sample : 25ng TO-15 ICV  
 Misc : S20-08140906/S20-08240912  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 28 06:10:39 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene	24.51	118	1053314	25.946	ng	96
81) 2-Ethyltoluene	24.56	105	2253391	23.336	ng	99
82) 1,2,4-Trimethylbenzene	24.83	105	1903607	24.125	ng	98
83) n-Decane	24.93	57	1110988	23.583	ng	97
84) Benzyl Chloride	25.00	91	1882684	24.099	ng	98
85) 1,3-Dichlorobenzene	25.03	146	1042475	24.444	ng	99
86) 1,4-Dichlorobenzene	25.11	146	1061279	23.895	ng	99
87) sec-Butylbenzene	25.16	105	2551013	23.669	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	2281213	23.482	ng	100
89) 1,2,3-Trimethylbenzene	25.35	105	1936617	23.416	ng	99
90) 1,2-Dichlorobenzene	25.53	146	967026	24.296	ng	99
91) d-Limonene	25.53	68	801027	25.430	ng	99
92) 1,2-Dibromo-3-Chloropr...	26.06	157	379682	27.265	ng	92
93) n-Undecane	26.46	57	1199529	24.527	ng	98
94) 1,2,4-Trichlorobenzene	27.58	180	753771	26.888	ng	99
95) Naphthalene	27.73	128	2723374	24.973	ng	100
96) n-Dodecane	27.69	57	1252730	22.471	ng	97
97) Hexachlorobutadiene	28.15	225	422597	25.073	ng	100
98) Cyclohexanone	22.30	55	730222	22.320	ng	97
99) tert-Butylbenzene	24.83	119	1819030	23.804	ng	99
100) n-Butylbenzene	25.86	91	2158740	24.566	ng	100

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

**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 08270914.D

Acq. Method File: TO15.M

Data File Path: J:\MS13\DATA\2009\_08\27\

Name: 25ng TO-15 ICV

Operator: WA/CC

Misc Info: S20-08140906/S20-08240912

Date Acquired: 8/27/2009 20:55

Instrument Name: GCMS13

#	Compound	Ret. Time	Amt. (ng)	Spike Amt. (ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
2)	Propene	4.66	21.2	26.3	80.6	70	130	*
3)	Dichlorodifluoromethane (CFC)	4.83	19.6	26.0	75.4	70	130	*
4)	Chloromethane	5.14	22.5	25.0	90.0	70	130	*
5)	1,2-Dichloro-1,1,2,2-tetrafluoro	5.39	21.9	26.0	84.2	70	130	*
6)	Vinyl Chloride	5.59	21.9	25.3	86.6	70	130	*
7)	1,3-Butadiene	5.86	23.4	26.8	87.3	70	130	*
8)	Bromomethane	6.35	25.3	25.8	98.1	70	130	*
9)	Chloroethane	6.68	22.3	25.5	87.5	70	130	*
10)	Ethanol	7.10	116.0	130.0	89.2	70	130	*
11)	Acetonitrile	7.36	21.4	26.0	82.3	70	130	*
12)	Acrolein	7.55	24.4	26.3	92.8	70	130	*
13)	Acetone	7.81	107.4	132.0	81.4	70	130	*
14)	Trichlorofluoromethane	8.01	22.0	26.3	83.7	70	130	*
15)	2-Propanol (Isopropanol)	8.31	40.6	48.0	84.6	70	130	*
16)	Acrylonitrile	8.55	24.7	25.8	95.7	70	130	*
17)	1,1-Dichloroethene	9.03	24.4	27.5	88.7	70	130	*
18)	2-Methyl-2-Propanol (tert-Butyl Al	9.27	45.8	50.0	91.6	70	130	*
19)	Methylene Chloride	9.25	22.3	26.8	83.2	70	130	*
20)	3-Chloro-1-propene (Allyl Chlor	9.42	24.0	27.0	88.9	70	130	*
21)	Trichlorotrifluoroethane	9.67	25.3	27.5	92.0	70	130	*
22)	Carbon Disulfide	9.62	22.8	26.0	87.7	70	130	*
23)	trans-1,2-Dichloroethene	10.68	23.7	25.5	92.9	70	130	*
24)	1,1-Dichloroethane	10.99	23.3	26.5	87.9	70	130	*
25)	Methyl tert-Butyl Ether	11.18	23.5	26.3	89.4	70	130	*
26)	Vinyl Acetate	11.28	125.1	126.0	99.3	70	130	*
27)	2-Butanone (MEK)	11.67	25.7	26.8	95.9	70	130	*
28)	cis-1,2-Dichloroethene	12.24	24.4	27.0	90.4	70	130	*
29)	Diisopropyl Ether	12.64	24.5	26.5	92.5	70	130	*
30)	Ethyl Acetate	12.67	49.4	52.0	95.0	70	130	*
31)	n-Hexane	12.58	22.4	26.0	86.2	70	130	*
32)	Chloroform	12.70	23.5	27.5	85.5	70	130	*
34)	Tetrahydrofuran (THF)	13.38	22.8	26.5	86.0	70	130	*
35)	Ethyl tert-Butyl Ether	13.45	22.7	25.5	89.0	70	130	*
36)	1,2-Dichloroethane	13.80	22.9	26.3	87.1	70	130	*
38)	1,1,1-Trichloroethane	14.18	22.9	26.0	88.1	70	130	*
39)	Isopropyl Acetate	14.83	47.4	52.3	90.6	70	130	*
40)	1-Butanol	14.87	46.8	52.8	88.6	70	130	*
41)	Benzene	14.88	22.3	25.8	86.4	70	130	*
42)	Carbon Tetrachloride	15.11	24.2	26.3	92.0	70	130	*
43)	Cyclohexane	15.30	46.2	51.8	89.2	70	130	*
44)	tert-Amyl Methyl Ether	15.85	21.8	25.5	85.5	70	130	*
45)	1,2-Dichloropropane	16.11	23.4	26.0	90.0	70	130	*
46)	Bromodichloromethane	16.37	23.8	26.3	90.5	70	130	*
47)	Trichloroethene	16.44	24.3	25.8	94.2	70	130	*
48)	1,4-Dioxane	16.50	24.7	26.0	95.0	70	130	*
49)	2,2,4-Trimethylpentane (Isooctan	16.52	22.3	25.8	86.4	70	130	*
50)	Methyl Methacrylate	16.76	52.2	52.8	98.9	70	130	*

WA 8/28/09

CC  
8/28/09

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**INITIAL CALIBRATION VERIFICATION CHECK SHEET**

Data File Name: 08270914.D

Acq. Method File: TO15.M

Data File Path: J:\MS13\DATA\2009\_08\27\

Name: 25ng TO-15 ICV

Operator: WA/CC

Misc Info: S20-08140906/S20-08240912

Date Acquired: 8/27/2009 20:55

Instrument Name: GCMS13

#	Compound	Ret. Time	Amt. (ng)	Spike Amt.(ng)	% Rec.	Lower Limit	Upper Limit	* OR Fail
51)	n-Heptane	16.88	23.1	25.8	89.5	70	130	*
52)	cis-1,3-Dichloropropene	17.65	22.8	24.5	93.1	70	130	*
53)	4-Methyl-2-pentanone	17.76	24.6	26.8	91.8	70	130	*
54)	trans-1,3-Dichloropropene	18.36	25.3	27.0	93.7	70	130	*
55)	1,1,2-Trichloroethane	18.60	22.9	26.0	88.1	70	130	*
58)	Toluene	18.98	23.8	26.8	88.8	70	130	*
59)	2-Hexanone	19.36	24.0	27.0	88.9	70	130	*
60)	Dibromochloromethane	19.53	26.0	28.3	91.9	70	130	*
61)	1,2-Dibromoethane	19.86	24.4	26.3	92.8	70	130	*
62)	n-Butyl Acetate	20.17	24.5	27.5	89.1	70	130	*
63)	n-Octane	20.28	23.1	26.3	87.8	70	130	*
64)	Tetrachloroethene	20.46	23.2	25.3	91.7	70	130	*
65)	Chlorobenzene	21.34	24.0	26.5	90.6	70	130	*
66)	Ethylbenzene	21.82	23.7	26.3	90.1	70	130	*
67)	m- & p-Xylenes	22.06	46.5	51.5	90.3	70	130	*
68)	Bromoform	22.15	24.0	26.5	90.6	70	130	*
69)	Styrene	22.51	24.8	26.3	94.3	70	130	*
70)	o-Xylene	22.65	23.9	26.0	91.9	70	130	*
71)	n-Nonane	22.91	22.7	25.8	88.0	70	130	*
72)	1,1,2,2-Tetrachloroethane	22.63	24.0	27.0	88.9	70	130	*
74)	Cumene	23.41	23.1	25.3	91.3	70	130	*
75)	alpha-Pinene	23.90	22.3	24.8	89.9	70	130	*
76)	n-Propylbenzene	24.05	22.9	25.3	90.5	70	130	*
77)	3-Ethyltoluene	24.17	24.2	26.3	92.0	70	130	*
78)	4-Ethyltoluene	24.23	23.8	26.3	90.5	70	130	*
79)	1,3,5-Trimethylbenzene	24.32	24.7	26.5	93.2	70	130	*
80)	alpha-Methylstyrene	24.51	25.9	26.0	99.6	70	130	*
81)	2-Ethyltoluene	24.56	23.3	26.0	89.6	70	130	*
82)	1,2,4-Trimethylbenzene	24.83	24.1	25.5	94.5	70	130	*
83)	n-Decane	24.93	23.6	26.3	89.7	70	130	*
84)	Benzyl Chloride	25.00	24.1	26.8	89.9	70	130	*
85)	1,3-Dichlorobenzene	25.03	24.4	26.0	93.8	70	130	*
86)	1,4-Dichlorobenzene	25.11	23.9	26.3	90.9	70	130	*
87)	sec-Butylbenzene	25.16	23.7	25.8	91.9	70	130	*
88)	4-Isopropyltoluene (p-Cymene)	25.35	23.5	25.0	94.0	70	130	*
89)	1,2,3-Trimethylbenzene	25.35	23.4	26.0	90.0	70	130	*
90)	1,2-Dichlorobenzene	25.53	24.3	25.8	94.2	70	130	*
91)	d-Limonene	25.53	25.4	26.5	95.8	70	130	*
92)	1,2-Dibromo-3-Chloropropane	26.06	27.3	27.0	101.1	70	130	*
93)	n-Undecane	26.46	24.5	26.3	93.2	70	130	*
94)	1,2,4-Trichlorobenzene	27.58	26.9	27.3	98.5	70	130	*
95)	Naphthalene	27.73	25.0	25.0	100.0	70	130	*
96)	n-Dodecane	27.69	22.5	24.3	92.6	70	130	*
97)	Hexachlorobutadiene	28.15	25.1	26.8	93.7	70	130	*
98)	Cyclohexanone	22.30	22.3	24.8	89.9	70	130	*
99)	tert-Butylbenzene	24.83	23.8	26.5	89.8	70	130	*
100)	n-Butylbenzene	25.86	24.6	26.5	92.8	70	130	*

\* Denotes Passing Criterion

**306**

CONTINUING CALIBRATION STANDARDS

Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*unaided*  
*CC*  
*9-10-09*

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	101	-0.01
2	T Propene	1.808	1.613	10.8	85	0.00
3	T Dichlorodifluoromethane (CF	3.166	2.774	12.4	88	0.00
4	T Chloromethane	2.128	2.067	2.9	89	0.00
5	T 1,2-Dichloro-1,1,2,2-tetra	1.308	1.254	4.1	92	0.00
6	T Vinyl Chloride	1.996	1.909	4.4	89	0.00
7	T 1,3-Butadiene	1.489	1.461	1.9	89	0.00
8	T Bromomethane	1.234	1.320	-7.0	92	0.00
9	T Chloroethane	1.093	1.104	-1.0	92	0.00
10	T Ethanol	1.121	1.078	3.8	89	-0.09
11	T Acetonitrile	3.115	2.865	8.0	89	-0.05
12	T Acrolein	0.856	0.854	0.2	88	-0.02
13	T Acetone	1.160	1.024	11.7	90	-0.05
14	T Trichlorofluoromethane	2.791	2.740	1.8	90	0.00
15	T 2-Propanol (Isopropanol)	3.855	3.726	3.3	94	-0.07
16	T Acrylonitrile	1.914	2.020	-5.5	90	-0.03
17	T 1,1-Dichloroethene	1.354	1.343	0.8	92	0.00
18	T 2-Methyl-2-Propanol (tert-B	3.860	3.824	0.9	89	-0.05
19	T Methylene Chloride	1.471	1.360	7.5	89	-0.02
20	T 3-Chloro-1-propene (Allyl C	2.289	2.277	0.5	91	-0.02
21	T Trichlorotrifluoroethane	1.105	1.127	-2.0	93	-0.01
22	T Carbon Disulfide	5.233	5.124	2.1	89	0.00
23	T trans-1,2-Dichloroethene	2.104	2.182	-3.7	90	-0.01
24	T 1,1-Dichloroethane	2.632	2.573	2.2	90	-0.01
25	T Methyl tert-Butyl Ether	4.157	4.157	0.0	91	-0.02
26	T Vinyl Acetate	0.291	0.347	-19.2	100	-0.03
27	T 2-Butanone (MEK)	0.937	1.002	-6.9	90	-0.03
28	T cis-1,2-Dichloroethene	2.001	1.993	0.4	89	-0.02
29	T Diisopropyl Ether	1.368	1.425	-4.2	92	-0.02
30	T Ethyl Acetate	0.503	0.535	-6.4	89	-0.03
31	T n-Hexane	2.508	2.427	3.2	91	0.00
32	T Chloroform	2.472	2.377	3.8	88	-0.02
33	S 1,2-Dichloroethane-d4 (SS1)	1.981	1.919	3.1	97	-0.01
34	T Tetrahydrofuran (THF)	1.016	0.953	6.2	90	-0.02
35	T Ethyl tert-Butyl Ether	1.678	1.698	-1.2	92	-0.02
36	T 1,2-Dichloroethane	2.074	1.991	4.0	89	-0.01
37	IR 1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	99	-0.01
38	T 1,1,1-Trichloroethane	0.462	0.449	2.8	88	-0.01

**308**



Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 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	0.190	0.191	-0.5	88	-0.03
40 T	1-Butanol	0.311	0.315	-1.3	90	-0.07
41 T	Benzene	1.175	1.100	6.4	90	-0.02
42 T	Carbon Tetrachloride	0.395	0.396	-0.3	88	-0.01
43 T	Cyclohexane	0.433	0.435	-0.5	91	-0.01
44 T	tert-Amyl Methyl Ether	0.870	0.858	1.4	93	-0.02
45 T	1,2-Dichloropropane	0.290	0.291	-0.3	89	-0.01
46 T	Bromodichloromethane	0.387	0.385	0.5	86	-0.01
47 T	Trichloroethene	0.287	0.293	-2.1	90	-0.01
48 T	1,4-Dioxane	0.226	0.238	-5.3	90	-0.02
49 T	2,2,4-Trimethylpentane (Iso	1.337	1.308	2.2	90	-0.01
50 T	Methyl Methacrylate	0.109	0.122	-11.9	93	-0.03
51 T	n-Heptane	0.305	0.309	-1.3	91	-0.01
52 T	cis-1,3-Dichloropropene	0.477	0.490	-2.7	89	-0.01
53 T	4-Methyl-2-pentanone	0.268	0.275	-2.6	88	-0.02
54 T	trans-1,3-Dichloropropene	0.452	0.463	-2.4	88	-0.01
55 T	1,1,2-Trichloroethane	0.274	0.267	2.6	89	-0.02
56 IR	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	98	0.00
57 S	Toluene-d8 (SS2)	2.234	2.236	-0.1	99	0.00
58 T	Toluene	2.406	2.381	1.0	90	-0.01
59 T	2-Hexanone	1.471	1.454	1.2	86	-0.03
60 T	Dibromochloromethane	0.605	0.628	-3.8	88	0.00
61 T	1,2-Dibromoethane	0.632	0.640	-1.3	87	-0.01
62 T	n-Butyl Acetate	1.687	1.683	0.2	87	-0.01
63 T	n-Octane	0.554	0.545	1.6	90	-0.01
64 T	Tetrachloroethene	0.609	0.629	-3.3	92	0.00
65 T	Chlorobenzene	1.544	1.547	-0.2	90	0.00
66 T	Ethylbenzene	2.752	2.756	-0.1	89	0.00
67 T	m- & p-Xylenes	2.191	2.201	-0.5	89	-0.01
68 T	Bromoform	0.524	0.563	-7.4	89	-0.01
69 T	Styrene	1.613	1.703	-5.6	90	0.00
70 T	o-Xylene	2.201	2.217	-0.7	88	-0.01
71 T	n-Nonane	1.323	1.274	3.7	88	0.00
72 T	1,1,2,2-Tetrachloroethane	1.009	1.001	0.8	87	-0.01
73 S	Bromofluorobenzene (SS3)	0.643	0.653	-1.6	99	0.00
74 T	Cumene	2.790	2.852	-2.2	90	-0.01
75 T	alpha-Pinene	1.447	1.463	-1.1	89	0.00
76 T	n-Propylbenzene	3.543	3.576	-0.9	89	0.00

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Evaluate Continuing Calibration Report

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 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%

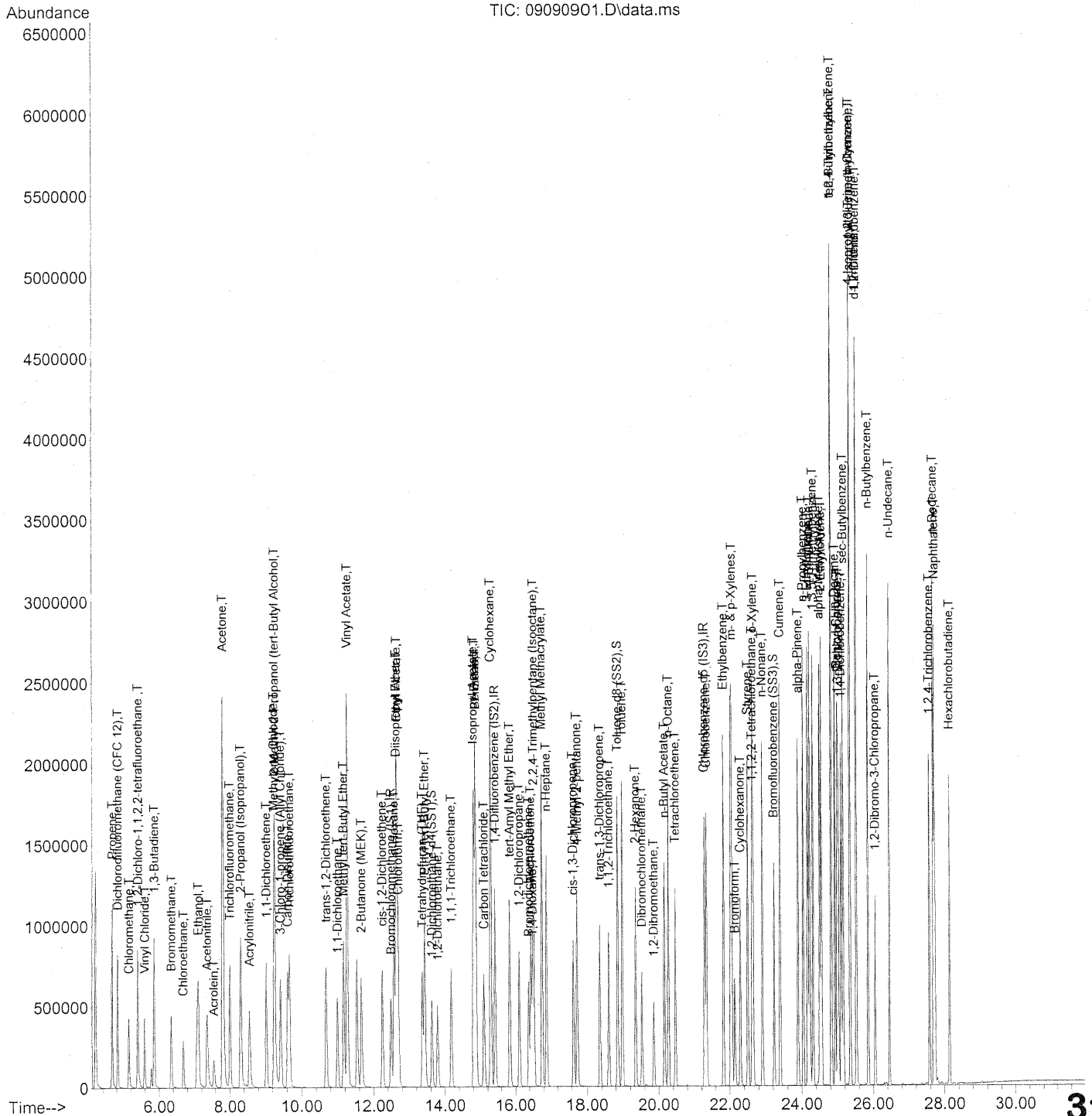
	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
77 T	3-Ethyltoluene	2.669	2.689	-0.7	89	0.00
78 T	4-Ethyltoluene	2.634	2.709	-2.8	90	-0.01
79 T	1,3,5-Trimethylbenzene	2.192	2.250	-2.6	90	0.00
80 T	alpha-Methylstyrene	1.151	1.268	-10.2	89	0.00
81 T	2-Ethyltoluene	2.738	2.785	-1.7	90	-0.01
82 T	1,2,4-Trimethylbenzene	2.238	2.308	-3.1	89	-0.01
83 T	n-Decane	1.336	1.320	1.2	88	0.00
84 T	Benzyl Chloride	2.215	2.239	-1.1	87	-0.01
85 T	1,3-Dichlorobenzene	1.209	1.232	-1.9	90	-0.01
86 T	1,4-Dichlorobenzene	1.260	1.302	-3.3	90	-0.01
87 T	sec-Butylbenzene	3.057	3.124	-2.2	89	0.00
88 T	4-Isopropyltoluene (p-Cymen)	2.755	2.873	-4.3	89	0.00
89 T	1,2,3-Trimethylbenzene	2.345	2.344	0.0	89	0.00
90 T	1,2-Dichlorobenzene	1.129	1.174	-4.0	90	-0.01
91 T	d-Limonene	0.893	0.956	-7.1	88	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.395	0.450	-13.9	89	0.00
93 T	n-Undecane	1.387	1.399	-0.9	88	0.00
94 T	1,2,4-Trichlorobenzene	0.795	0.872	-9.7	90	0.00
95 T	Naphthalene	3.093	3.310	-7.0	88	0.00
96 T	n-Dodecane	1.581	1.513	4.3	85	0.00
97 T	Hexachlorobutadiene	0.478	0.501	-4.8	92	0.00
98 T	Cyclohexanone	0.928	0.940	-1.3	87	-0.02
99 T	tert-Butylbenzene	2.167	2.242	-3.5	90	0.00
100 T	n-Butylbenzene	2.492	2.567	-3.0	88	0.00

(#) = Out of Range

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

Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration



Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

*LM 9/10/09*  
*CC*  
*9-10-09*

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Bromochloromethane (IS1)	12.49	130	288197	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)	15.43	114	1439254	25.000	ng	-0.01
56) Chlorobenzene-d5 (IS3)	21.29	82	691140	25.000	ng	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4 (...)	13.64	65	553022	24.215	ng	-0.01
Spiked Amount	25.000		Recovery	=	96.84%	✓
57) Toluene-d8 (SS2)	18.85	98	1545582	25.023	ng	0.00
Spiked Amount	25.000		Recovery	=	100.08%	✓
73) Bromofluorobenzene (SS3)	23.23	174	451195	25.381	ng	0.00
Spiked Amount	25.000		Recovery	=	101.52%	✓

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propene	4.67	42	498379	23.907	ng	99
3) Dichlorodifluoromethan...	4.83	85	840955	23.041	ng	99
4) Chloromethane	5.15	50	595588	24.276	ng	98
5) 1,2-Dichloro-1,1,2,2-t...	5.39	135	383139	25.418	ng	100
6) Vinyl Chloride	5.59	62	556887	24.198	ng	99
7) 1,3-Butadiene	5.86	54	505209	29.437	ng	98
8) Bromomethane	6.35	94	388084	27.282	ng	97
9) Chloroethane	6.69	64	321878	25.549	ng	97
10) Ethanol	7.11	45	1616108	125.021	ng	99
11) Acetonitrile	7.36	41	868509	24.189	ng	99
12) Acrolein	7.55	56	265799	26.929	ng	98
13) Acetone	7.81	58	1628270	121.800	ng	97
14) Trichlorofluoromethane	8.01	101	830572	25.819	ng	98
15) 2-Propanol (Isopropanol)	8.31	45	2031940	45.720	ng	100
16) Acrylonitrile	8.55	53	617051	27.961	ng	98
17) 1,1-Dichloroethene	9.03	96	425825	27.288	ng	90
18) 2-Methyl-2-Propanol (t...	9.26	59	2226382	50.028	ng	99
19) Methylene Chloride	9.24	84	420118	24.777	ng	96
20) 3-Chloro-1-propene (Al...	9.43	41	708795	26.860	ng	96
21) Trichlorotrifluoroethane	9.67	151	357307	28.050	ng	94
22) Carbon Disulfide	9.62	76	1583007	26.241	ng	98
23) trans-1,2-Dichloroethene	10.68	61	666512	27.479	ng	95
24) 1,1-Dichloroethane	10.99	63	785969	25.908	ng	100
25) Methyl tert-Butyl Ether	11.16	73	1308286	27.302	ng	98
26) Vinyl Acetate	11.27	86	503817	150.386	ng	# 95
27) 2-Butanone (MEK)	11.66	72	317726	29.424	ng	# 92
28) cis-1,2-Dichloroethene	12.24	61	627124	27.183	ng	92
29) Diisopropyl Ether	12.64	87	440112	27.913	ng	# 18
30) Ethyl Acetate	12.66	61	328920	56.683	ng	98
31) n-Hexane	12.58	57	763893	26.426	ng	98

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Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
 Quant Method : J:\MS13\METHODS\R13082709.M  
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 QLast Update : Fri Aug 28 06:02:46 2009  
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12.70	83	734491	25.777	ng	98
34) Tetrahydrofuran (THF)	13.37	72	302133	25.800	ng	95
35) Ethyl tert-Butyl Ether	13.44	87	505026	26.107	ng	92
36) 1,2-Dichloroethane	13.80	62	608239	25.442	ng	98
38) 1,1,1-Trichloroethane	14.18	97	679956	25.556	ng	98
39) Isopropyl Acetate	14.81	61	575609	52.578	ng	# 74
40) 1-Butanol	14.87	56	939751	52.458	ng	# 1
41) Benzene	14.88	78	1678127	24.803	ng	100
42) Carbon Tetrachloride	15.11	117	615890	27.116	ng	100
43) Cyclohexane	15.30	84	1347051	54.021	ng	95
44) tert-Amyl Methyl Ether	15.84	73	1283710	25.616	ng	97
45) 1,2-Dichloropropane	16.11	63	440119	26.326	ng	98
46) Bromodichloromethane	16.38	83	598392	26.839	ng	100
47) Trichloroethene	16.44	130	447020	27.082	ng	99
48) 1,4-Dioxane	16.49	88	366826	28.210	ng	93
49) 2,2,4-Trimethylpentane...	16.52	57	1958435	25.435	ng	98
50) Methyl Methacrylate	16.76	100	373486	59.558	ng	# 88
51) n-Heptane	16.89	71	472031	26.917	ng	96
52) cis-1,3-Dichloropropene	17.65	75	699051	25.452	ng	100
53) 4-Methyl-2-pentanone	17.75	58	435965	28.214	ng	98
54) trans-1,3-Dichloropropene	18.36	75	733429	28.192	ng	100
55) 1,1,2-Trichloroethane	18.60	97	404619	25.665	ng	100
58) Toluene	18.98	91	1777508	26.719	ng	99
59) 2-Hexanone	19.35	43	1105393	27.188	ng	96
60) Dibromochloromethane	19.53	129	499972	29.894	ng	99
61) 1,2-Dibromoethane	19.86	107	468692	26.826	ng	99
62) n-Butyl Acetate	20.17	43	1279782	27.437	ng	98
63) n-Octane	20.28	57	403648	26.366	ng	97
64) Tetrachloroethene	20.47	166	443489	26.328	ng	100
65) Chlorobenzene	21.34	112	1154581	27.055	ng	100
66) Ethylbenzene	21.82	91	2018774	26.532	ng	99
67) m- & p-Xylenes	22.06	91	3163525	52.224	ng	98
68) Bromoform	22.15	173	401771	27.745	ng	100
69) Styrene	22.51	104	1261600	28.285	ng	98
70) o-Xylene	22.65	91	1623956	26.690	ng	97
71) n-Nonane	22.91	43	933630	25.534	ng	96
72) 1,1,2,2-Tetrachloroethane	22.63	83	741462	26.580	ng	98
74) Cumene	23.41	105	2034109	26.377	ng	98
75) alpha-Pinene	23.90	93	1023198	25.579	ng	98
76) n-Propylbenzene	24.05	91	2550317	26.034	ng	99
77) 3-Ethyltoluene	24.18	105	2029286	27.506	ng	99
78) 4-Ethyltoluene	24.23	105	2044228	28.076	ng	98
79) 1,3,5-Trimethylbenzene	24.32	105	1697911	28.016	ng	98

Data Path : J:\MS13\DATA\2009\_09\09\  
Data File : 09090901.D  
Acq On : 9 Sep 2009 8:45 am  
Operator : LM/CC  
Sample : 25ng TO-15 CCV STD  
Misc : S20-08140906/S20-08240903  
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Sep 09 09:14:37 2009  
Quant Method : J:\MS13\METHODS\R13082709.M  
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
QLast Update : Fri Aug 28 06:02:46 2009  
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
80) alpha-Methylstyrene	24.51	118	939827	29.529	ng	96
81) 2-Ethyltoluene	24.56	105	2024796	26.746	ng	99
82) 1,2,4-Trimethylbenzene	24.83	105	1690781	27.331	ng	98
83) n-Decane	24.94	57	985234	26.675	ng	96
84) Benzyl Chloride	25.00	91	1702500	27.797	ng	98
85) 1,3-Dichlorobenzene	25.03	146	929670	27.805	ng	99
86) 1,4-Dichlorobenzene	25.11	146	953869	27.394	ng	100
87) sec-Butylbenzene	25.17	105	2288791	27.086	ng	99
88) 4-Isopropyltoluene (p-...	25.35	119	2049512	26.909	ng	100
89) 1,2,3-Trimethylbenzene	25.36	105	1736600	26.782	ng	99
90) 1,2-Dichlorobenzene	25.53	146	859726	27.552	ng	99
91) d-Limonene	25.53	68	721687	29.224	ng	100
92) 1,2-Dibromo-3-Chloropr...	26.06	157	342421	31.364	ng	91
93) n-Undecane	26.46	57	1055913	27.539	ng	98
94) 1,2,4-Trichlorobenzene	27.59	180	675108	30.717	ng	99
95) Naphthalene	27.73	128	2425116	28.365	ng	100
96) n-Dodecane	27.70	57	1037373	23.735	ng	97
97) Hexachlorobutadiene	28.15	225	380640	28.806	ng	99
98) Cyclohexanone	22.30	55	636890	24.830	ng	96
99) tert-Butylbenzene	24.83	119	1642873	27.423	ng	100
100) n-Butylbenzene	25.86	91	1937392	28.122	ng	99

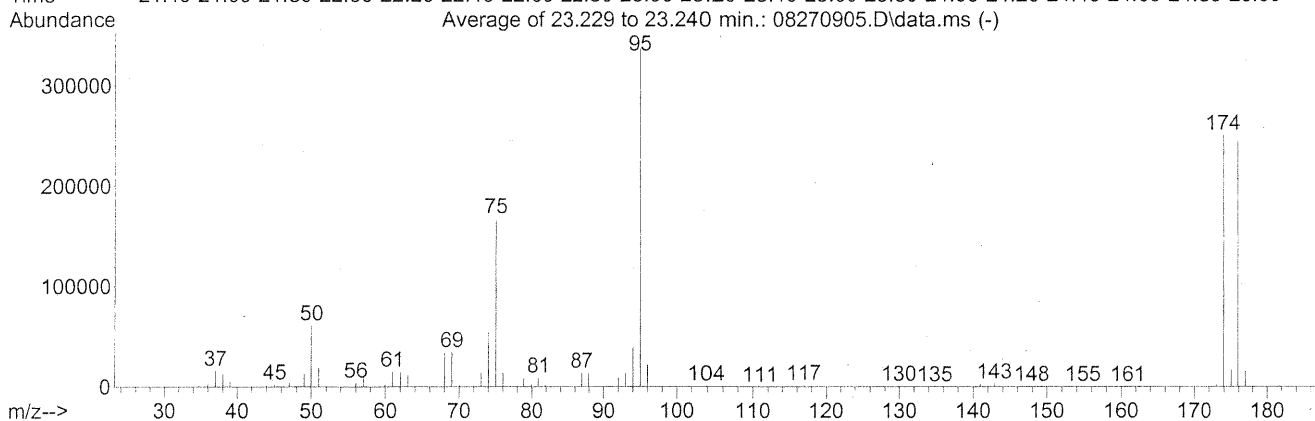
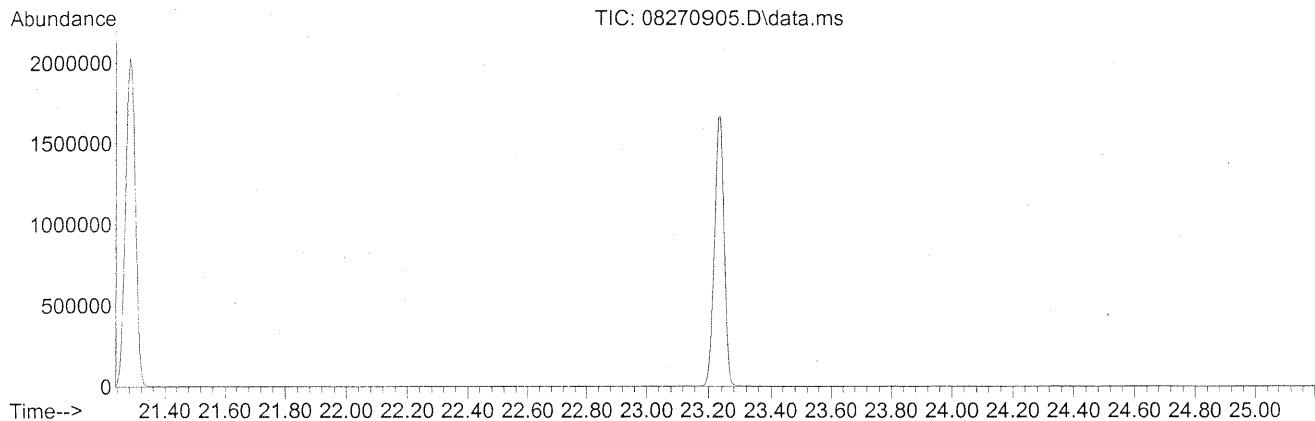
(#) = qualifier out of range (m) = manual integration (+) = signals summed

## BFB TUNING & MASS CALIBRATIONS

Data Path : J:\MS13\DATA\2009\_08\27\  
 Data File : 08270905.D  
 Acq On : 27 Aug 2009 14:50  
 Operator : WA/CC  
 Sample : 25ng BFB  
 Misc : S20-08140906  
 ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13082709.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Thu Aug 27 20:40:00 2009



AutoFind: Scans 3351, 3352, 3353; Background Corrected with Scan 3340

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.3	61821	PASS
75	95	30	66	49.9	168149	PASS
95	95	100	100	100.0	336960	PASS
96	95	5	9	6.5	21936	PASS
173	174	0.00	2	1.0	2440	PASS
174	95	50	120	74.4	250560	PASS
175	174	4	9	6.9	17332	PASS
176	174	93	101	97.7	244779	PASS
177	176	5	9	6.5	15927	PASS

*WA 8/28/09*  
*CC 8/28/09*

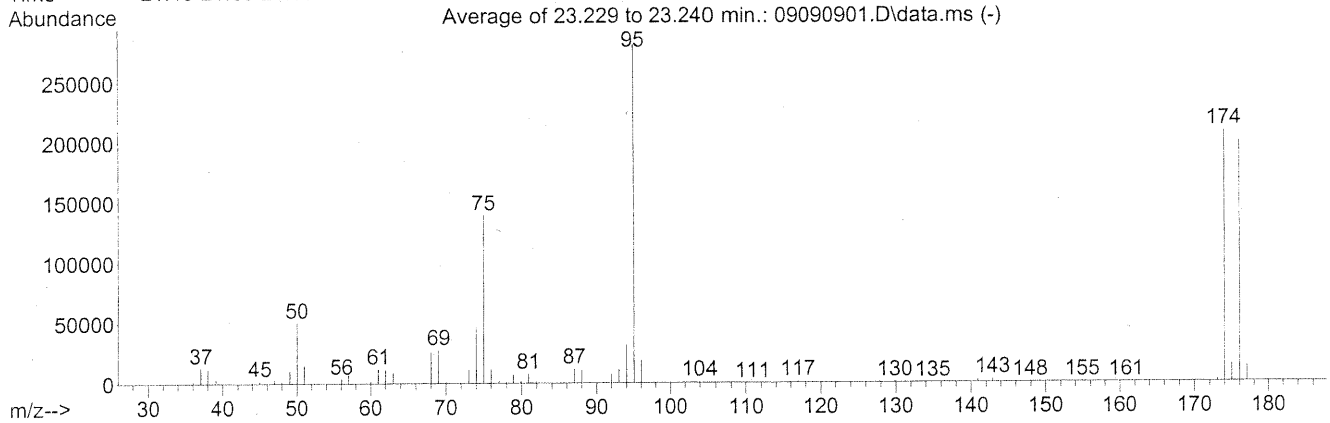
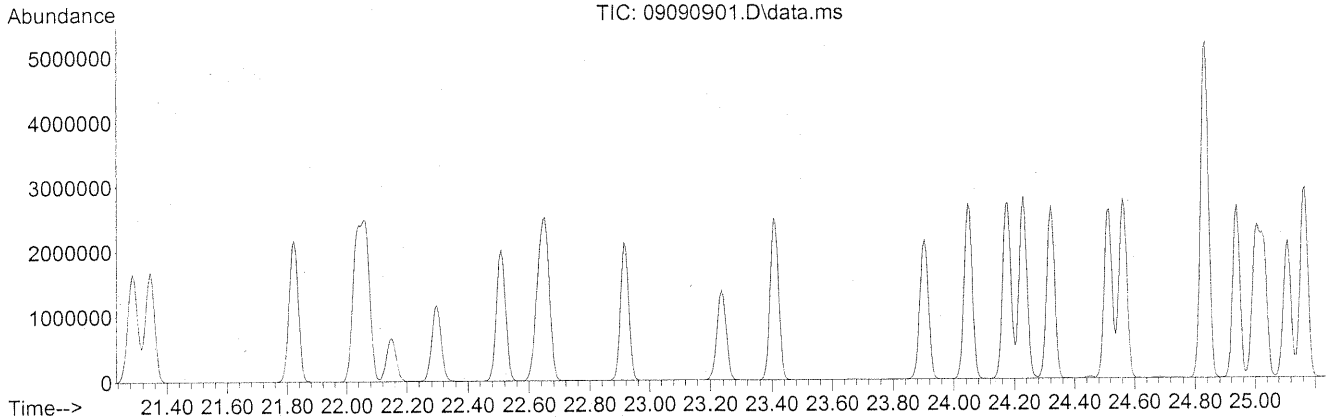


Data Path : J:\MS13\DATA\2009\_09\09\  
 Data File : 09090901.D  
 Acq On : 9 Sep 2009 8:45 am  
 Operator : LM/CC  
 Sample : 25ng TO-15 CCV STD  
 Misc : S20-08140906/S20-08240903  
 ALS Vial : 4 Sample Multiplier: 1

*lm 9/10/09*  
*CC*  
*9-10-09*

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13082709.M  
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)  
 Last Update : Fri Aug 28 06:02:46 2009



AutoFind: Scans 3351, 3352, 3353; Background Corrected with Scan 3341

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	18.1	50749	PASS
75	95	30	66	49.7	139648	PASS
95	95	100	100	100.0	280896	PASS
96	95	5	9	6.7	18920	PASS
173	174	0.00	2	1.0	2049	PASS
174	95	50	120	74.3	208661	PASS
175	174	4	9	7.1	14876	PASS
176	174	93	101	96.3	200896	PASS
177	176	5	9	6.6	13211	PASS

## RUN LOGS

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	08/26/09 10:15	08260902.D	5ng TO-15 CCV STD	S20-08140906/S20-07310904	WA/CC	9	Passed (EM=1424)
2	08/26/09 11:30	08260903.D	TO-15 Method Blank (1000ml)	S20-08140906	WA/CC	4	Passed
3	08/26/09 12:23	08260904.D	P0902949-001 dil (25mL)	[REDACTED]	WA/CC	7	
4	08/26/09 13:03	08260905.D	25ng TO-15 LCS STD	S20-08140906/S20-08240912	WA/CC	13	case file
5	08/26/09 13:43	08260906.D	P0902876-001 dil (200mL)	[REDACTED]	WA/CC	8	
6	08/26/09 14:42	08260907.D	P0902949-006 (0.25mL)	[REDACTED]	WA/CC	12	
7	08/26/09 15:22	08260908.D	System		WA/CC	16	
8	08/26/09 16:02	08260909.D	25ng TO-15 LCS STD	S20-08140906/S20-08240912	WA/CC	13	case file
9	08/26/09 16:43	08260910.D	P0902949-005 (20mL)	[REDACTED]	WA/CC	15	
10	08/26/09 17:25	08260911.D	P0902876-007 (1000mL)	[REDACTED]	WA/CC	1	
11	08/26/09 18:05	08260912.D	P0902949-005 dup (20mL)	[REDACTED]	WA/CC	15	Passed
12	08/26/09 18:47	08260913.D	P0902876-008 (1000mL)	[REDACTED]	WA/CC	2	
13	08/26/09 19:28	08260914.D	P0902876-009 (1000mL)	[REDACTED]	WA/CC	3	
14	08/26/09 20:09	08260915.D	P0902876-010 (1000mL)	[REDACTED]	WA/CC	5	
15	08/26/09 20:51	08260916.D	P0902876-011 (1000mL)	[REDACTED]	WA/CC	6	
16	08/26/09 21:32	08260917.D	System		WA/CC	16	
17	08/26/09 22:13	08260918.D	P0902876-004 dil (200mL)	[REDACTED]	WA/CC	12	
18	08/26/09 22:53	08260919.D	P0902876-005 dil (200mL)	[REDACTED]	WA/CC	14	
19	08/26/09 23:34	08260920.D	P0902949-001 (250mL)	[REDACTED]	WA/CC	7	
20	08/27/09 0:16	08260921.D	P0902949-003 (1000mL)	[REDACTED]	WA/CC	10	
21	08/27/09 0:58	08260922.D	P0902949-004 (1000mL)	[REDACTED]	WA/CC	11	
22	08/27/09 1:38	08260923.D	25ng TO-15 LCS STD	S20-08140906/S20-08240912	WA/CC	13	Passed
23	08/27/09 4:32	08260924.D	Blank		WA/CC	4	
24	08/27/09 6:39	08260925.D	P0902876-009 (1000mL)	[REDACTED]	WA/CC	3	
25	08/27/09 7:25	08260926.D	P0902949-002 (200mL)	[REDACTED]	WA/CC	8	AS 8/27

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	08/27/09 11:46	08270902.D	200ng/L STD Check	S20-08140906/S20-08240903	WA/CC	4	
2	08/27/09 13:01	08270903.D	4ng/L STD Check	S20-08140906/S20-08240906	WA/CC	14	
3	08/27/09 14:10	08270904.D	0.1ng STD Check (EM=1459)	S20-08140906/S20-08240906	WA/CC	14	
4	08/27/09 14:50	08270905.D	25ng BFB	S20-08140906	WA/CC	4	Passed
5	08/27/09 15:31	08270906.D	0.1ng TO-15 ICAL	S20-08140906/S20-08240906	WA/CC	14	ICAL OK all
6	08/27/09 16:11	08270907.D	0.2ng TO-15 ICAL	S20-08140906/S20-08240906	WA/CC	14	compounds
7	08/27/09 16:52	08270908.D	0.5ng TO-15 ICAL	S20-08140906/S20-07310904	WA/CC	4	0.1ng->100ng
8	08/27/09 17:32	08270909.D	1.0ng TO-15 ICAL	S20-08140906/S20-07310904	WA/CC	4	except: Acrolein,
9	08/27/09 18:13	08270910.D	5.0ng TO-15 ICAL	S20-08140906/S20-07310904	WA/CC	4	THF(0.5->100ng);
10	08/27/09 18:53	08270911.D	25ng TO-15 ICAL	S20-08140906/S20-08240903	WA/CC	4	IPA (0.2->100ng)
11	08/27/09 19:34	08270912.D	50ng TO-15 ICAL	S20-08140906/S20-08240903	WA/CC	4	TBA(0.1->50ng)
12	08/27/09 20:14	08270913.D	100ng TO-15 ICAL	S20-08140906/S20-08240903	WA/CC	4	
13	08/27/09 20:55	08270914.D	25ng TO-15 ICV	S20-08140906/S20-08240912	WA/CC	13	Passed all

AS 8/27

8	09/08/09 16:33	09080909.D	P0902973-003dup (3.5ml)	Shaw 11-CAA3-DVE 27-082509	LM/CC	4	Passed
9	09/08/09 17:15	09080910.D	P0902973-005 (8.0ml)	Shaw 11-CAA3-DVE 32-082509	LM/CC	4	
10	09/08/09 17:55	09080911.D	P0902973-006 (1.5ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
11	09/08/09 18:39	09080912.D	P0902973-007 (1.0ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
12	09/08/09 19:20	09080913.D	blank (100ml)	rinse	LM/CC	4	
13	09/08/09 20:02	09080914.D	P0903047-006 (1000ml)	Integrity TMP 602104	LM/CC	8	
14	09/08/09 20:43	09080915.D	P0903047-001 (1000ml)	Integrity AO 101	LM/CC	1	
15	09/08/09 21:25	09080916.D	P0903047-002 (1000ml)	Integrity AO 101	LM/CC	2	
16	09/08/09 22:07	09080917.D	P0903047-003 (1000ml)	Integrity AO 101	LM/CC	3	
17	09/08/09 22:49	09080918.D	P0903047-004 (1000ml)	Integrity AO 101	LM/CC	6	
18	09/08/09 23:31	09080919.D	P0903047-005 (1000ml)	Integrity AO 101	LM/CC	7	
19	09/09/09 0:13	09080920.D	P0903136-001 (1000ml)	Continental Outside Office 604150	LM/CC	9	
20	09/09/09 0:55	09080921.D	P0903136-002 (1000ml)	Continental Outside Office 604250	LM/CC	10	
21	09/09/09 1:37	09080922.D	P0903136-003 (1000ml)	Continental Outside Office 604300	LM/CC	11	
22	09/09/09 2:19	09080923.D	P0903081-001 (1000ml)	Integrity AO 101	LM/CC	12	
23	09/09/09 3:01	09080924.D	P0903081-002 (1000ml)	Integrity AO 101	LM/CC	13	

CL  
9-9-09

	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment
1	09/09/09 8:45	09090901.D	25ng TO-15 CCV STD	S20-08140906/S20-08240903	LM/CC	4	Passed
2	09/09/09 10:02	09090902.D	TO-15 Method Blank (1000ml)	S20-08140906	LM/CC	4	Passed
3	09/09/09 10:44	09090903.D	25ng TO-15 LCS STD	S20-08140906/S20-08240912	LM/CC	5	Passed
4	09/09/09 11:24	09090904.D	25ng TO-15 LCSD STD	S20-08140906/S20-08240912	LM/CC	5	Passed
5	09/09/09 12:17	09090905.D	P0902973-008 (4ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
6	09/09/09 12:59	09090906.D	P0902973-010 (1.25ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
7	09/09/09 13:39	09090907.D	P0902973-011 (2ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
8	09/09/09 14:20	09090908.D	P0902973-011dup (2ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	Passed
9	09/09/09 15:01	09090909.D	P0902973-012 (0.5ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
10	09/09/09 15:41	09090910.D	P0902973-013 (0.5ml)	Shaw 11-CAA3-DVE 31-082509	LM/CC	4	
11	09/09/09 16:22	09090911.D	P0902973-014 (2.5ml)	Shaw 11-CAA3-DVE 32-082509	LM/CC	4	
12	09/09/09 17:03	09090912.D	P0902973-015 (1.5ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	
13	09/09/09 18:04	09090913.D	P0902973-006 (1.5ml)	Shaw 11-CAA3-DVE 36-082509	LM/CC	4	case file
14	09/09/09 18:44	09090914.D	P0902973-009 (25ml)	Shaw 11-CAA3-DVE 46-082509	LM/CC	1	
15	09/09/09 19:24	09090915.D	P0903021-001dil (200ml)	EH&E 104276	LM/CC	2	
16	09/09/09 20:05	09090916.D	P0903021-003dil (200ml)	EH&E 104275	LM/CC	3	
17	09/09/09 20:46	09090917.D	P0903021-004dil (200ml)	EH&E 104273	LM/CC	6	
18	09/09/09 21:28	09090918.D	P0903022-005 (1000ml)	EH&E 104274	LM/CC	7	Case file
19	09/09/09 22:10	09090919.D	P0903114-001 (1000ml)	EH&E 104895	LM/CC	9	
20	09/09/09 22:51	09090920.D	P0903114-002 (1000ml)	EH&E 104896	LM/CC	10	
21	09/09/09 23:34	09090921.D	P0903114-003 (1000ml)	EH&E 104897	LM/CC	11	
22	09/10/09 0:16	09090922.D	P0903114-004 (1000ml)	EH&E 104898	LM/CC	12	
23	09/10/09 0:58	09090923.D	P0903114-005 (1000ml)	EH&E 104899	LM/CC	13	
24	09/10/09 1:40	09090924.D	P0903114-006 (1000ml)	EH&E 104900	LM/CC	14	
25	09/10/09 2:21	09090925.D	Blank		LM/CC	4	

Confirmation

Confirmation

Confirmation