

LABORATORY REPORT

May 30, 2008

Robert Kennedy ENSR 2 Technology Park Drive Westford, MA 01886

RE: Phase B Soil Gas / 04020-023-4311

Dear Robert:

Enclosed are the results of the samples submitted to our laboratory on May 12, 2008. For your reference, these analyses have been assigned our service request number P0801385.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains **655** pages.

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

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

Respectfully submitted,

Columbia Analytical Services, Inc.

Leey M Horius

Kelly Horiuchi Project Manager

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Client:

ENSR

CAS Project No:

P0801385

Project:

Phase B Soil Gas / 04020-023-4311

CASE NARRATIVE

The samples were received intact under chain of custody on May 12, 2008 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Helium Analysis

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

Volatile Organic Compound Analysis

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

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

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.

ENSR

Client:

Project: Phase B Soil Gas 04020-023-4311

Detailed Sample Information

Folder: P0801385

Order #	8616	8616		8616	8616	8616	
FC ID	OA00019	OA00088		OA00082	OA00085	OA00035	
Order#	8616	8616	8616	8616	8616	8616	8616
Cont ID	SC00546	SC00560	SC00781	SC00470	SC00970	SC00938	SC00289
Pi <u>2</u> Pi <u>2</u> (Hg) (psig) Pf <u>2</u>							
Pf1	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Pi1 (psig)	-5.6	-3.7	-3.4	-5.3	-3.0	-3.3	-3.1
Pi1 (Hg)	-11.5	-7.6	-7.0	-10.8	-6.1	-6.7	-6.3
Container Type	6.0 L-Summa Canister Source						
CAS Sample ID Client Sample ID Container Type	SG64B-05	SG41B-20	SG41B-20D	SG43B-05	SG38B-20	SG40B-05	SG40B-05D
CAS Sample ID	P0801385-001.01	P0801385-002.01	P0801385-003.01	P0801385-004.01	P0801385-005.01	P0801385-006.01	P0801385-007.01

Miscellaneous Items - received

AVG00229 AVG00046 AVG00217 OA00087 AVG00129 AVG00182



Air - Chain of Custody Record & Analytical Service Request

Page of

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

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

e.g. Actual Preservative or specific instructions Project Requirements (MRLs, QAPP) Comments CAS Project No. POSO 1385 Cooler / Blank Temperature The Times Analysis Method and/or Analytes CAS Contact Kelly HOVIVEIN Time: Date: EDD Units: MUHJAH 51-11 Received by: (Signature) W + Courted K EDD required Yes / No Sample Volume <u>ا</u> レ 2 <u>د</u> 0 <u>د</u> 7 5200970 0A00085 Canister ID Flow Controller (Bar Code + AC, SC, etc.) FC #) 2800040 0400088 0190035 5000 Av 00019 5000470 OR00082 5000781 CA00088 95000 BP10025 Received by: (Signature) Received by: (Signature) Phase Bsuil Gas 04020-023-4311 Scooled Tier III - (Data Validation Package) 10% Surcharge _______ Tier V - (client specified) ______ P.O. # / Billing Information THN STONE Sample Type (Air/Tube/ Solid) Sampler (Print & Sign) Date - 1/0 /08 Time: 1200 至 Ŧ Time: Project Number 至 至 美 产 Project Name Time Collected 1171 80/19/2 211-0 A-10,8 19/10/08/08/20 5/10/08/09/53 5/9/08/1830 216/18/19/12 0-67 5/10/06/1091 5111801013 Date: Date Collected Phone Pax 9775 805:388.3577 Company Name & Address (Reporting Information) 1220 Avenida Acaso Camarillo, CA 93012 Laboratory ID Number 10.76 3.70 (2) 56 Email Address for Result Reporting Project Manager
MIKE MACK Report Tier Levels - please select Tier 1 - (Results/Default if not specified) 5641B-20D 5943B-05 5938B-20 56,40B-05D 59418-20 Relinquished by: (Signature) Relinquished by: (Signature) 39-8104 ps Relinquished by: (Signature) 29048-05 Fier II - (Results + QC) TNSP. Client Sample ID

Columbia Analytical Services, Inc. Sample Acceptance Check Form

Client:	ENSR		зашри	e Acceptance		Work order:	P0801385			
Project:	Phase B Soil O	Gas / 04020-023-4311			•					
Sample(s) received on:	5/12/2008			Date opened:	5/12/2008	by:	MZAN	10RA	
Note: This	form is used for al	l samples received by CAS	5. The use of this f	orm for custody s	seals is strictly m	eant to indicate prese	ence/absence and	not as an	indication	n of
compliance	or nonconformity.	Thermal preservation and	lpH will only be e	valuated either at	the request of th	e client and/or as rec	quired by the metl	nod/SOP. <u>Yes</u>	<u>No</u>	<u>N/A</u>
1	Were sample	containers properly i	narked with cli	ent sample ID	?			\times		
2	Container(s) s	supplied by CAS?						X		
3	Did sample co	ontainers arrive in go	od condition?					X		
4	Were chain-o	f-custody papers used	l and filled out	?				X		
5	Did sample co	ontainer labels and/o	r tags agree wit	th custody pap	ers?			\times		
6	Was sample v	volume received adeq	uate for analysi	s?				X		
7	Are samples v	vithin specified holding	ng times?					X		
8	Was proper te	emperature (thermal)	preservation) o	f cooler at rec	eipt adhered to	0?				X
	C	ooler Temperature		°C Blank 7	Temperature		°C			
9	Was a trip bla	ank received?					-		\times	
	Trip blank s	upplied by CAS: Seri	al #		-TB		_			
10	Were custody	seals on outside of co	ooler/Box?		_		-		\times	
	Location of	seal(s)?					Sealing Lid?			\times
	Were signat	ure and date included	?				-			X
	Were seals i									X
	Were custody	seals on outside of sa	mple container	?					\times	
	Location of	seal(s)?					Sealing Lid?			X
	Were signate	ure and date included	?							X
	Were seals i	ntact?								X
11	Do containers	have appropriate pre	servation, acco	ording to meth	nod/SOP or Cl	lient specified in	formation?		· 🔲	X
	Is there a clie	nt indication that the s	submitted samp	les are pH p	reserved?					X
		ials checked for prese	-							X
		nt/method/SOP requir			amnle nH and	if necessary alt	er it?			$\overline{\mathbf{x}}$
12	Tubes:	Are the tubes cap	•		ampre pri una	<u>ir necessar y</u> ure	ci ii.			\boxtimes
12	T ub cs.	Do they contain n	•							\boxtimes
13	Badges:	Are the badges p		and intact?						\boxtimes
13	Dauges.	Are dual bed bad	1 2 11		v canned and	intact?				$\overline{\mathbf{X}}$
Lab S	Sample ID	Container	Required	Received		VOA Headspace		ot / Presi		l
		Description	pH *	pH	pH	(Presence/Absence)		Commer	its	
P0801385		6.0 L Source Can								
P0801385		6.0 L Source Can								
P0801385 P0801385		6.0 L Source Can								
P0801385		6.0 L Source Can 6.0 L Source Can								
P0801385		6.0 L Source Can								
P0801385		6.0 L Source Can								

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

RESULTS OF ANALYSIS Page 1 of 1

Client:

ENSR

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Helium

Test Code:

EPA 3C Modified

Instrument ID:

HP5890 II/GC8/TCD

Analyst:

Zheng Wang/Wade Henton/Chris Cornett

Sampling Media: Test Notes:

6.0 L Summa Canister(s)

Date(s) Collected: 5/9 - 5/10/08 Date Received: 5/12/08

Date Analyzed: 5/12/08

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SG64B-05	P0801385-001	1.00	2.00	60	50	
SG41B-20	P0801385-002	1.00	1.65	ND	41	
SG41B-20D	P0801385-003	1.00	1.61	ND	40	
SG43B-05	P0801385-004	1.00	1.94	ND	49	
SG38B-20	P0801385-005	1.00	1.56	ND	39	
SG40B-05	P0801385-006	1.00	1.60	ND	40	
SG40B-05D	P0801385-007	1.00	1.57	ND	39	
Method Blank	P080512-MB	1.00	1.00	ND	25	

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

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

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG64B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Date Collected: 5/9/08

CAS Sample ID: P0801385-001

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Canister Dilution Factor: 2.00

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	1.0	0.10	0.44	0.20	0.020	
74-87-3	Chloromethane	ND	0.20	0.10	ND	0.097	0.048	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.11	1.0	0.10	0.015	0.14	0.014	J
75-01-4	Vinyl Chloride	ND	0.20	0.10	ND	0.078	0.039	
74-83-9	Bromomethane	ND	0.20	0.10	ND	0.052	0.026	
75-00-3	Chloroethane	ND	0.20	0.10	ND	0.076	0.038	The street of th
64-17-5	Ethanol	4.4	10	0.10	2.3	5.3	0.053	J
67-64-1	Acetone	23	10	0.15	9.5	4.2	0.061	В
75-69-4	Trichlorofluoromethane	1.3	0.20	0.10	0.23	0.036	0.018	
107-13-1	Acrylonitrile	ND	1.0	0.14	ND	0.46	0.065	
75-35-4	1,1-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.88	1.0	0.15	0.29	0.33	0.049	J
75-09-2	Methylene Chloride	0.15	1.0	0.10	0.044	0.29	0.029	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.20	0.10	ND	0.064	0.032	
76-13-1	Trichlorotrifluoroethane	0.57	0.20	0.11	0.074	0.026	0.015	
75-15-0	Carbon Disulfide	58	1.0	0.24	19	0.32	0.077	to the second se
156-60-5	trans-1,2-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
75-34-3	1,1-Dichloroethane	ND	0.20	0.10	ND	0.049	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.20	0.10	ND	0.055	0.028	
108-05-4	Vinyl Acetate	7.1	10	0.32	2.0	2.8	0.091	J
78-93-3	2-Butanone (MEK)	12	1.0	0.10	4.1	0.34	0.034	demandado harakera da recurso da como do como de como
156-59-2	cis-1,2-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
108-20-3	Diisopropyl Ether	ND	1.0	0.12	ND	0.24	0.028	
67-66-3	Chloroform	7.2	0.20	0.12	1.5	0.041	0.024	

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

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

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

B = Analyte was found in the method blank.

Verified By: <u>U4</u>

P0801385_TO15_0805281357_SS.xls - Sample

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG64B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-001

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Canister Dilution Factor: 2.00

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	0.10	ND	0.24	0.024	
107-06-2	1,2-Dichloroethane	ND	0.20	0.10	ND	0.049	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.10	ND	0.037	0.018	
71-43-2	Benzene	5.8	0.20	0.10	1.8	0.063	0.031	
56-23-5	Carbon Tetrachloride	10	0.20	0.10	1.6	0.032	0.016	
994-05-8	tert-Amyl Methyl Ether	ND	1.0	0.10	ND	0.24	0.024	
78-87-5	1,2-Dichloropropane	ND	0.20	0.10	ND	0.043	0.022	
75-27-4	Bromodichloromethane	2.9	0.20	0.10	0.43	0.030	0.015	
79-01-6	Trichloroethene	0.31	0.20	0.10	0.058	0.037	0.019	
123-91-1	1,4-Dioxane	0.19	1.0	0.12	0.053	0.28	0.034	J
80-62-6	Methyl Methacrylate	ND	1.0	0.15	ND	0.24	0.037	
142-82-5	n-Heptane	0.40	1.0	0.13	0.099	0.24	0.031	\mathbf{J}
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.10	ND	0.22	0.023	
108-10-1	4-Methyl-2-pentanone	2.9	1.0	0.11	0.71	0.24	0.027	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.13	, ND	0.22	0.028	
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.10	ND	0.037	0.018	
108-88-3	Toluene	15	1.0	0.10	4.1	0.27	0.027	
591-78-6	2-Hexanone	1.8	1.0	0.15	0.44	0.24	0.037	
124-48-1	Dibromochloromethane	0.22	0.20	0.14	0.026	0.023	0.016	
106-93-4	1,2-Dibromoethane	ND	0.20	0.11	ND	0.026	0.014	
111-65-9	n-Octane	0.64	1.0	0.10	0.14	0.21	0.021	J
127-18-4	Tetrachloroethene	1.6	0,20	0.10	0.23	0.030	0.015	
108-90-7	Chlorobenzene	ND	0.20	0.10	ND	0.043	0.022	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:

CH

P0801385_TO15_0805281357_SS.xls - Sample

TO15SCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

Client Sample ID: SG64B-05

CAS Project ID: P0801385

Date Collected: 5/9/08

Date Received: 5/12/08

Date Analyzed: 5/12/08

CAS Sample ID: P0801385-001

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Analyst:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Canister Dilution Factor: 2.00

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	3.5	1.0	0.12	0.81	0.23	0.029	
179601-23-1	m,p-Xylenes	16	1.0	0.26	3.8	0.23	0.060	
75-25-2	Bromoform	ND	1.0	0.15	ND	0.097	0.015	
100-42-5	Styrene	0.26	1.0	0.15	0.060	0.23	0.036	J
95-47-6	o-Xylene	5.0	1.0	0.13	1.1	0.23	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.13	ND	0.029	0.019	
98-82-8	Cumene	0.25	1.0	0.11	0.051	0.20	0.023	J
103-65-1	n-Propylbenzene	0.79	1.0	0.10	0.16	0.20	0.021	J
622-96-8	4-Ethyltoluene	1.3	1.0	0.11	0.27	0.20	0.023	
108-67-8	1,3,5-Trimethylbenzene	1.5	1.0	0.12	0.31	0.20	0.024	
98-83-9	alpha-Methylstyrene	ND	1.0	0.15	ND	0.21	0.030	
95-63-6	1,2,4-Trimethylbenzene	3.8	1.0	0.14	0.78	0.20	0.028	
100-44-7	Benzyl Chloride	ND	0.20	0.17	ND	0.039	0.033	
541-73-1	1,3-Dichlorobenzene	ND	0.20	0.12	ND	0.033	0.021	
106-46-7	1,4-Dichlorobenzene	29	0.20	0.11	4.8	0.033	0.019	
135-98-8	sec-Butylbenzene	0.12	1.0	0.12	0.021	0.18	0.021	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.45	1.0	0.13	0.083	0.18	0.024	J
95-50-1	1,2-Dichlorobenzene	ND	0.20	0.13	ND	0.033	0.022	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	0.15	ND	0.10	0.016	
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.15	ND	0.027	0.020	
91-20-3	Naphthalene	0.98	0.40	0.15	0.19	0.076	0.028	
87-68-3	Hexachlorobutadiene	ND	0.20	0.18	ND	0.019	0.017	
98-06-6	tert-Butylbenzene	ND	0.40	0.10	ND	0.073	0.018	
104-51-8	n-Butylbenzene	0.58	0.40	0.10	0.11	0.073	0.018	····

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

Verified By:____

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG41B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-002

Test Code:

EPA TO-15

Instrument ID:

Analyst:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo

6.0 L Summa Canister

Date Collected: 5/9/08 Date Received: 5/12/08

Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s)

0.10 Liter(s)

Test Notes: Container ID:

Sampling Media:

SC00560

Initial Pressure (psig):

-3.7

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.65

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.83	0.083	0.47	0.17	0.017	
74-87-3	Chloromethane	ND	0.17	0.083	ND	0.080	0.040	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.097	0.83	0.083	0.014	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.17	0.083	ND	0.065	0.032	
74-83-9	Bromomethane	0.10	0.17	0.083	0.026	0.043	0.021	J
75-00-3	Chloroethane	0.094	0.17	0.083	0.036	0.063	0.031	J
64-17-5	Ethanol	5.0	8.3	0.083	2.7	4.4	0.044	J
67-64-1	Acetone	25	8.3	0.12	10	3.5	0.051	В
75-69-4	Trichlorofluoromethane	5.9	0.17	0.083	1.1	0.029	0.015	
107-13-1	Acrylonitrile	0.25	0.83	0.12	0.12	0.38	0.053	J
75-35-4	1,1-Dichloroethene	6.7	0.17	0.083	1.7	0.042	0.021	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.68	0.83	0.12	0.22	0.27	0.040	J
75-09-2	Methylene Chloride	1.0	0.83	0.083	0.30	0.24	0.024	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.17	0.083	ND	0.053	0.026	
76-13-1	Trichlorotrifluoroethane	0.57	0.17	0.092	0.074	0.022	0.012	
75-15-0	Carbon Disulfide	13	0.83	0.20	4.1	0.27	0.064	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	0.083	ND	0.042	0.021	
75-34-3	1,1-Dichloroethane	0.71	0.17	0.083	0.18	0.041	0.020	
1634-04-4	Methyl tert-Butyl Ether	0.27	0.17	0.083	0.075	0.046	0.023	
108-05-4	Vinyl Acetate	2.3	8.3	0.26	0.64	2.3	0.075	J, M
78-93-3	2-Butanone (MEK)	26	0.83	0.083	8.7	0.28	0.028	
156-59-2	cis-1,2-Dichloroethene	0.15	0.17	0.083	0.037	0.042	0.021	J
108-20-3	Diisopropyl Ether	ND	0.83	0.097	ND	0.20	0.023	
67-66-3	Chloroform	140	0.17	0.097	28	0.034	0.020	

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

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

Verified By: _____

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

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

B = Analyte was found in the method blank.

RESULTS OF ANALYSIS Page 2 of 3

ENSR Client:

CAS Project ID: P0801385 Client Sample ID: SG41B-20 Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Sample ID: P0801385-002

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

0.10 Liter(s)

SC00560

Initial Pressure (psig):

Final Pressure (psig):

-3.7

3.5

Canister Dilution Factor: 1.65

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
	-	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.83	0.084	ND	0.20	0.020	
107-06-2	1,2-Dichloroethane	0.10	0.17	0.083	0.025	0.041	0.020	J
71-55-6	1,1,1-Trichloroethane	ND	0.17	0.083	ND	0.030	0.015	
71-43-2	Benzene	35	0.17	0.083	11	0.052	0.026	
56-23-5	Carbon Tetrachloride	2.3	0.17	0.083	0.37	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.83	0.083	ND	0.20	0.020	
78-87-5	1,2-Dichloropropane	0.25	0.17	0.083	0.054	0.036	0.018	
75-27-4	Bromodichloromethane	3.4	0.17	0.083	0.51	0.025	0.012	
79-01-6	Trichloroethene	4.4	0.17	0.083	0.83	0.031	0.015	
123-91-1	1,4-Dioxane	ND	0.83	0.10	ND	0.23	0.028	
80-62-6	Methyl Methacrylate	0.18	0.83	0.12	0.044	0.20	0.030	J
142-82-5	n-Heptane	19	0.83	0.11	4.7	0.20	0.026	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	0.086	ND	0.18	0.019	
108-10-1	4-Methyl-2-pentanone	12	0.83	0.092	2.9	0.20	0.023	
10061-02-6	trans-1,3-Dichloropropene	ND	0.83	0.10	ND	0.18	0.023	months of all the balls beautiful and the state of the st
79-00-5	1,1,2-Trichloroethane	ND	0.17	0.083	ND	0.030	0.015	
108-88-3	Toluene	240	0.83	0.083	64	0.22	0.022	
591-78-6	2-Hexanone	ND	0.83	0.13	ND	0.20	0.031	
124-48-1	Dibromochloromethane	ND	0.17	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.17	0.089	ND	0.021	0.012	
111-65-9	n-Octane	53	0.83	0.083	11	0.18	0.018	
127-18-4	Tetrachloroethene	15	0.17	0.083	2.2	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.17	0.084	ND .	0.036	0.018	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

> Verified By: C64-TO15SCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client: ENSR

Client Sample ID: SG41B-20

CAS Project ID: P0801385 CAS Sample ID: P0801385-002

Date Collected: 5/9/08

Date Received: 5/12/08

Date Analyzed: 5/12/08

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Analyst:

Rusty Bravo

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Initial Pressure (psig):

6.0 L Summa Canister

Test Notes:

Container ID:

Sampling Media:

SC00560

-3.7

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Canister Dilution Factor: 1.65

1.00 Liter(s) 0.10 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	90	0.83	0.10	21	0.19	0.024	
179601-23-1	m,p-Xylenes	420	0.83	0.21	98	0.19	0.049	
75-25-2	Bromoform	ND	0.83	0.13	ND	0.080	0.012	
100-42-5	Styrene	1.7	0.83	0.13	0.41	0.19	0.029	
95-47-6	o-Xylene	110	0.83	0.10	25	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	0.11	ND	0.024	0.015	
98-82-8	Cumene	3.8	0.83	0.092	0.78	0.17	0.019	
103-65-1	n-Propylbenzene	8.8	0.83	0.086	1.8	0.17	0.017	
622-96-8	4-Ethyltoluene	14	0.83	0.094	2.9	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	16	0.83	0.099	3.2	0.17	0.020	
98-83-9	alpha-Methylstyrene	0.63	0.83	0.12	0.13	0.17	0.025	J
95-63-6	1,2,4-Trimethylbenzene	31	0.83	0.11	6.3	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.17	0.14	ND	0.032	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.17	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	31	0.17	0.092	5.2	0.027	0.015	
135-98-8	sec-Butylbenzene	0.91	0.83	0.096	0.17	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	5.7	0.83	0.11	1.0	0.15	0.020	
95-50-1	1,2-Dichlorobenzene	0.11	0.17	0.11	0.018	0.027	0.018	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.83	0.13	ND	0.085	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.17	0.13	ND.	0.022	0.017	
91-20-3	Naphthalene	5.9	0.33	0.12	1.1	0.063	0.023	
87-68-3	Hexachlorobutadiene	ND	0.17	0.15	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.083	ND	0.060	0.015	
104-51-8	n-Butylbenzene	2.7	0.33	0.083	0.50	0.060	0.015	

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

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

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

Verified By: Cat-TOISSCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG41B-20D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-003

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Analyst:

Rusty Bravo

1.00 Liter(s)

Test Notes:

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

0.10 Liter(s)

Container ID:

SC00781

Initial Pressure (psig):

Final Pressure (psig): -3.4

3.5

Canister Dilution Factor: 1.61

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.81	0.081	0.45	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.081	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.089	0.81	0.081	0.013	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.16	0.081	ND	0.063	0.032	
74-83-9	Bromomethane	ND	0.16	0.081	ND	0.041	0.021	
75-00-3	Chloroethane	ND	0.16	0.081	ND	0.061	0.031	collision (described to a first finally collisions) bloods () (1)
64-17-5	Ethanol	7.6	8.1	0.081	4.1	4.3	0.043	J
67-64-1	Acetone	26	8.1	0.12	11	3.4	0.049	В
75-69-4	Trichlorofluoromethane	5.4	0.16	0.081	0.97	0.029	0.014	
107-13-1	Acrylonitrile	0.31	0.81	0.11	0.14	0.37	0.052	J
75-35-4	1,1-Dichloroethene	5.4	0.16	0.081	1.4	0.041	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.67	0.81	0.12	0.22	0.27	0.039	\mathbf{J}
75-09-2	Methylene Chloride	1.2	0.81	0.081	0.34	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND .	0.16	0.081	ND	0.051	0.026	
76-13-1	Trichlorotrifluoroethane	0.53	0.16	0.090	0.069	0.021	0.012	
75-15-0	Carbon Disulfide	15	0.81	0.19	4.7	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-34-3	1,1-Dichloroethane	0.56	0.16	0.081	0.14	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	0.30	0.16	0.081	0.082	0.045	0.022	
108-05-4	Vinyl Acetate	2.8	8.1	0.26	0.81	2.3	0.073	J, M
78-93-3	2-Butanone (MEK)	28	0.81	0.081	9.3	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	0.093	0.16	0.081	0.024	0.041	0.020	J
108-20-3	Diisopropyl Ether	ND	0.81	0.095	ND	0.19	0.023	
67-66-3	Chloroform	110	0.16	0.095	23	0.033	0.019	

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

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

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

B = Analyte was found in the method blank.

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

Verified By: CUL TO15SCAN.XLT - Tronox - Henderson - PageNo.

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG41B-20D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Date Collected: 5/9/08

CAS Sample ID: P0801385-003

Test Code:

EPA TO-15

Instrument ID:

Analyst: Sampling Media:

6.0 L Summa Canister

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Rusty Bravo

Date Received: 5/12/08 Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s)

0.10 Liter(s)

Test Notes:

Container ID:

SC00781

Initial Pressure (psig):

-3.4

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.61

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.81	0.082	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	0.14	0.16	0.081	0.035	0.040	0.020	J
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
71-43-2	Benzene	24	0.16	0.081	7.5	0.050	0.025	
56-23-5	Carbon Tetrachloride	2.0	0.16	0.081	0.32	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.81	0.081	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	0.23	0.16	0.081	0.050	0.035	0.017	
75-27-4	Bromodichloromethane	2.8	0.16	0.081	0.42	0.024	0.012	
79-01-6	Trichloroethene	3.6	0.16	0.081	0.66	0.030	0.015	
123-91-1	1,4-Dioxane	0.14	0.81	0.098	0.038	0.22	0.027	J.
80-62-6	Methyl Methacrylate	0.36	0.81	0.12	0.087	0.20	0.030	J
142-82-5	n-Heptane	10	0.81	0.10	2.5	0.20	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	0.084	ND	0.18	0.018	
108-10-1	4-Methyl-2-pentanone	14	0.81	0.090	3.4	0.20	0.022	
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
108-88-3	Toluene	230	0.81	0.081	62	0.21	0.021	
591-78-6	2-Hexanone	3.9	0.81	0.12	0.96	0.20	0.030	
124-48-1	Dibromochloromethane	0.12	0.16	0.11	0.014	0.019	0.013	J
106-93-4	1,2-Dibromoethane	ND	0.16	0.087	ND	0.021	0.011	
111-65-9	n-Octane	30	0.81	0.081	6.4	0.17	0.017	
127-18-4	Tetrachloroethene	13	0.16	0.081	2.0	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.082	ND	0.035	0.018	****

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385 CAS Sample ID: P0801385-003

Client Sample ID: SG41B-20D

Client Project ID: Phase B Soil Gas / 04020-023-4311

Date Collected: 5/9/08

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

0.10 Liter(s)

Container ID:

SC00781

Initial Pressure (psig):

-3.4

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.61

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	μg/m³	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	87	0.81	0.10	20	0.19	0.023	
179601-23-1	m,p-Xylenes	350	0.81	0.21	80	0.19	0.048	
75-25-2	Bromoform	ND	0.81	0.12	ND	0.078	0.012	
100-42-5	Styrene	1.9	0.81	0.12	0.44	0.19	0.029	
95-47-6	o-Xylene	120	0.81	0.10	27	0.19	0.023	VIII.
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	3.7	0.81	0.090	0.74	0.16	0.018	
103-65-1	n-Propylbenzene	9.7	0.81	0.084	2.0	0.16	0.017	
622-96-8	4-Ethyltoluene	17	0.81	0.092	3.4	0.16	0.019	
108-67-8	1,3,5-Trimethylbenzene	19	0.81	0.097	3.8	0.16	0.020	
98-83-9	alpha-Methylstyrene	0.53	0.81	0.12	0.11	0.17	0.024	J
95-63-6	1,2,4-Trimethylbenzene	39	0.81	0.11	7.9	0.16	0.023	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	35	0.16	0.090	5.8	0.027	0.015	
135-98-8	sec-Butylbenzene	0.93	0.81	0.093	0.17	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	6.9	0.81	0.10	1.3	0.15	0.019	
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	0.12	ND	0.083	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.016	
91-20-3	Naphthalene	7.0	0.32	0.12	1.3	0.061	0.023	Address of contract on the contract of the con
87-68-3	Hexachlorobutadiene	ND	0.16	0.14	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	
104-51-8	n-Butylbenzene	3.0	0.32	0.081	0.55	0.059	0.015	

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

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

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

TO15SCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.94

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.97	0.097	0.45	0.20	0.020	
74-87-3	Chloromethane	ND	0.19	0.097	ND	0.094	0.047	
76-14-2	1,2-Dichloro-1,1,2,2-	0.11	0.97	0.097	0.016	0.14	0.014	J
77.01.4	tetrafluoroethane (CFC 114)	NID	0.10	0.007	ND	0.076	0.038	
75-01-4	Vinyl Chloride	ND	0.19	0.097		0.076	0.038	
74-83-9	Bromomethane	ND	0.19	0.097	ND			
75-00-3	Chloroethane	0.17	0.19	0.097	0.065	0.074	0.037	J
64-17-5	Ethanol	3.1	9.7	0.097	1.6	5.2	0.052	J
67-64-1	Acetone	34	9.7	0.14	14	4.1	0.060	B, M
75-69-4	Trichlorofluoromethane	3.1	0.19	0.097	0.55	0.035	0.017	
107-13-1	Acrylonitrile	0.15	0.97	0.14	0.070	0.45	0.063	J
75-35-4	1,1-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.28	0.97	0.14	0.091	0.32	0.047	J
75-09-2	Methylene Chloride	ND	0.97	0.097	ND	0.28	0.028	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.19	0.097	ND	0.062	0.031	
76-13-1	Trichlorotrifluoroethane	0.46	0.19	0.11	0.060	0.025	0.014	
75-15-0	Carbon Disulfide	1.3	0.97	0.23	0.41	0.31	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
75-34-3	1,1-Dichloroethane	ND	0.19	0.097	ND	0.048	0.024	
1634-04-4	Methyl tert-Butyl Ether	ND	0.19	0.097	ND	0.054	0.027	
108-05-4	Vinyl Acetate	2.5	9.7	0.31	0.70	2.8	0.088	J, M
78-93-3	2-Butanone (MEK)	13	0.97	0.097	4.3	0.33	0.033	
156-59-2	cis-1,2-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
108-20-3	Diisopropyl Ether	ND	0.97	0.11	ND	0.23	0.027	
67-66-3	Chloroform	130	0.19	0.11	26	0.040	0.023	

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

Verified By: Cot	Date:	5/28/08
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MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

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

B = Analyte was found in the method blank.

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

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Test Code:

EPA TO-15

CAS Sample ID: P0801385-004

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID:

Date Analyzed: 5/12/08

Analyst: Sampling Media: Rusty Bravo 6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.94

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.97	0.099	ND	0.23	0.024	
107-06-2	1,2-Dichloroethane	ND	0.19	0.097	ND	0.048	0.024	
71-55-6	1,1,1-Trichloroethane	ND	0.19	0.097	ND	0.036	0.018	
71-43-2	Benzene	6.8	0.19	0.097	2.1	0.061	0.030	
56-23-5	Carbon Tetrachloride	4.9	0.19	0.097	0.78	0.031	0.015	
994-05-8	tert-Amyl Methyl Ether	ND	0.97	0.097	ND	0.23	0.023	
78-87-5	1,2-Dichloropropane	ND	0.19	0.097	ND	0.042	0.021	
75-27-4	Bromodichloromethane	0.54	0.19	0.097	0.080	0.029	0.014	
79-01-6	Trichloroethene	0.29	0.19	0.097	0.054	0.036	0.018	
123-91-1	1,4-Dioxane	ND	0.97	0.12	ND	0.27	0.033	
80-62-6	Methyl Methacrylate	ND	0.97	0.15	ND	0.24	0.036	
142-82-5	n-Heptane	0.34	0.97	0.12	0.082	0.24	0.030	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.97	0.10	ND	0.21	0.022	
108-10-1	4-Methyl-2-pentanone	2.7	0.97	0.11	0.65	0.24	0.027	
10061-02-6	trans-1,3-Dichloropropene	ND	0.97	0.12	ND	0.21	0.027	
79-00-5	1,1,2-Trichloroethane	ND	0.19	0.097	ND	0.036	0.018	
108-88-3	Toluene	13	0.97	0.097	3.4	0.26	0.026	
591-78-6	2-Hexanone	1.2	0.97	0.15	0.29	0.24	0.036	
124-48-1	Dibromochloromethane	ND	0.19	0.13	ND	0.023	0.015	
106-93-4	1,2-Dibromoethane	ND	0.19	0.10	ND	0.025	0.014	
111-65-9	n-Octane	1.0	0.97	0.097	0.21	0.21	0.021	
127-18-4	Tetrachloroethene	180	0.19	0.097	27	0.029	0.014	
108-90-7	Chlorobenzene	ND	0.19	0.099	ND	0.042	0.021	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

TOISSCAN.XLT - Tronox - Henderson - PageNo.:

P0801385 TO15 0805281357_SS.xls - Sample (4)

RESULTS OF ANALYSIS

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Client:

ENSR

CAS Project ID: P0801385

Date Collected: 5/10/08

Date Received: 5/12/08

Client Sample ID: SG43B-05

CAS Sample ID: P0801385-004

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID: Analyst:

Rusty Bravo

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

6.0 L Summa Canister

Date Analyzed: 5/12/08 Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

Sampling Media:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.94

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	8.0	0.97	0.12	1.8	0.22	0.028	
179601-23-1	m,p-Xylenes	40	0.97	0.25	9.1	0.22	0.058	
75-25-2	Bromoform	ND	0.97	0.15	ND	0.094	0.014	
100-42-5	Styrene	0.28	0.97	0.15	0.065	0.23	0.035	J
95-47-6	o-Xylene	14	0.97	0.12	3.3	0.22	0.028	endalekkinendonion omoren er endalekkinendonion er
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.19	0.12	ND	0.028	0.018	
98-82-8	Cumene	0.47	0.97	0.11	0.096	0.20	0.022	J
103-65-1	n-Propylbenzene	0.56	0.97	0.10	0.11	0.20	0.021	J
622-96-8	4-Ethyltoluene	0.93	0.97	0.11	0.19	0.20	0.023	J
108-67-8	1,3,5-Trimethylbenzene	0.97	0.97	0.12	0.20	0.20	0.024	J
98-83-9	alpha-Methylstyrene	ND	0.97	0.14	ND	0.20	0.029	
95-63-6	1,2,4-Trimethylbenzene	2.3	0.97	0.13	0.47	0.20	0.027	
100-44-7	Benzyl Chloride	ND	0.19	0.17	ND	0.037	0.032	
541-73-1	1,3-Dichlorobenzene	ND	0.19	0.12	ND	0.032	0.020	
106-46-7	1,4-Dichlorobenzene	4.5	0.19	0.11	0.74	0.032	0.018	
135-98-8	sec-Butylbenzene	ND	0.97	0.11	ND	0.18	0.021	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.29	0.97	0.13	0.052	0.18	0.023	J
95-50-1	1,2-Dichlorobenzene	ND	0.19	0.13	ND	0.032	0.021	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.97	0.15	ND	0.10	0.015	
120-82-1	1,2,4-Trichlorobenzene	ND	0.19	0.15	ND	0.026	0.020	
91-20-3	Naphthalene	2.0	0.39	0.14	0.38	0.074	0.027	
87-68-3	Hexachlorobutadiene	ND	0.19	0.17	ND	0.018	0.016	
98-06-6	tert-Butylbenzene	ND	0.39	0.097	ND	0.071	0.018	
104-51-8	n-Butylbenzene	0.43	0.39	0.097	0.078	0.071	0.018	

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

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

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

Date: TOISSCAN, XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG38B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-005

Test Code:

EPA TO-15

Instrument ID:

Rusty Bravo

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Date Analyzed: 5/12/08

Date Collected: 5/10/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Analyst:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.56

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${\sf ppbV}$	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.78	0.078	0.44	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.078	ND	0.076	0.038	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.10	0.78	0.078	0.014	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.078	ND	0.061	0.031	
74-83-9	Bromomethane	ND	0.16	0.078	ND	0.040	0.020	
75-00-3	Chloroethane	ND	0.16	0.078	ND	0.059	0.030	
64-17-5	Ethanol	2.1	7.8	0.078	1.1	4.1	0.041	J
67-64-1	Acetone	14	7.8	0.11	5.8	3.3	0.048	В
75-69-4	Trichlorofluoromethane	1.2	0.16	0.078	0.22	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.78	0.11	ND	0.36	0.050	MATERIAL IN CONTROL OF THE CONTROL O
75-35-4	1,1-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.26	0.78	0.12	0.085	0.26	0.038	J
75-09-2	Methylene Chloride	0.10	0.78	0.078	0.030	0.22	0.022	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.078	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.60	0.16	0.087	0.078	0.020	0.011	
75-15-0	Carbon Disulfide	1.5	0.78	0.19	0.47	0.25	0.060	Y
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-34-3	1,1-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.078	ND	0.043	0.022	
108-05-4	Vinyl Acetate	0.73	7.8	0.25	0.21	2.2	0.071	J, M
78-93-3	2-Butanone (MEK)	14	0.78	0.078	4.7	0.26	0.026	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
108-20-3	Diisopropyl Ether	ND	0.78	0.092	ND	0.19	0.022	
67-66-3	Chloroform	75	0.16	0.092	15	0.032	0.019	

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

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

Verified By:____ Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo.

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

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

B = Analyte was found in the method blank.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG38B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-005

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.56

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${\sf ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.78	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
71-43-2	Benzene	3.4	0.16	0.078	1.1	0.049	0.024	
56-23-5	Carbon Tetrachloride	7.8	0.16	0.078	1.2	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.78	0.078	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	ND	0.16	0.078	ND	0.034	0.017	
75-27-4	Bromodichloromethane	1.3	0.16	0.078	0.19	0.023	0.012	
79-01-6	Trichloroethene	0.17	0.16	0.078	0.031	0.029	0.015	
123-91-1	1,4-Dioxane	ND	0.78	0.095	ND	0.22	0.026	
80-62-6	Methyl Methacrylate	ND	0.78	0.12	ND	0.19	0.029	
142-82-5	n-Heptane	0.18	0.78	0.10	0.044	0.19	0.024	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	0.081	ND	0.17	0.018	
108-10-1	4-Methyl-2-pentanone	1.8	0.78	0.087	0.44	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	0.098	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
108-88-3	Toluene	3.8	0.78	0.078	1.0	0.21	0.021	
591-78-6	2-Hexanone	0.55	0.78	0.12	0.14	0.19	0.029	J
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND .	0.018	0.012	
106-93-4	1,2-Dibromoethane	ND -	0.16	0.084	ND	0.020	0.011	
111-65-9	n-Octane	0.41	0.78	0.078	0.089	0.17	0.017	J
127-18-4	Tetrachloroethene	4.3	0.16	0.078	0.63	0.023	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.080	ND	0.034	0.017	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

> Date: TOISSCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client:

ENSR

CAS Project ID: P0801385

Date Collected: 5/10/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Client Sample ID: SG38B-20

CAS Sample ID: P0801385-005

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID: Analyst:

Sampling Media:

Rusty Bravo

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

6.0 L Summa Canister

Test Notes:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Canister Dilution Factor: 1.56

1.00 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	$\mu g/m^3$	μg/m³	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	0.93	0.78	0.097	0.21	0.18	0.022	
179601-23-1	m,p-Xylenes	4.1	0.78	0.20	0.95	0.18	0.047	
75-25-2	Bromoform	ND	0.78	0.12	ND	0.075	0.011	
100-42-5	Styrene	0.25	0.78	0.12	0.058	0.18	0.028	J
95-47-6	o-Xylene	1.4	0.78	0.098	0.32	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.090	0.78	0.087	0.018	0.16	0.018	J
103-65-1	n-Propylbenzene	0.24	0.78	0.081	0.050	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.41	0.78	0.089	0.084	0.16	0.018	\mathbf{J}
108-67-8	1,3,5-Trimethylbenzene	0.42	0.78	0.094	0.085	0.16	0.019	J
98-83-9	alpha-Methylstyrene	0.22	0.78	0.11	0.046	0.16	0.024	J
95-63-6	1,2,4-Trimethylbenzene	1.5	0.78	0.11	0.31	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.13	ND	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.097	ND	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	4.1	0.16	0.087	0.68	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.78	0.090	ND	0.14	0.016	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.20	0.78	0.10	0.037	0.14	0.018	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	0.19	0.16	0.12	0.025	0.021	0.016	
91-20-3	Naphthalene	2.3	0.31	0.12	0.43	0.060	0.022	office decreases and the second control of the second
87-68-3	Hexachlorobutadiene	ND	0.16	0.14	ND	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.078	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.29	0.31	0.078	0.053	0.057	0.014	J

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG40B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Sampling Media:

Test Notes:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00938

Initial Pressure (psig):

-3.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.60

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.80	0.080	0.46	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.080	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2-	0.099	0.80	0.080	0.014	0.11	0.011	J
	tetrafluoroethane (CFC 114)) ID	0.16	0.000		0.062	0.021	
75-01-4	Vinyl Chloride	ND	0.16	0.080	ND	0.063	0.031	<u>.</u>
74-83-9	Bromomethane	0.093	0.16	0.080	0.024	0.041	0.021	J
75-00-3	Chloroethane	0.54	0.16	0.080	0.20	0.061	0.030	
64-17-5	Ethanol	2.5	8.0	0.080	1.4	4.2	0.042	J
67-64-1	Acetone	19	8.0	0.12	8.1	3.4	0.049	В
75-69-4	Trichlorofluoromethane	1.5	0.16	0.080	0.26	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.80	0.11	ND	0.37	0.052	
75-35-4	1,1-Dichloroethene	0.48	0.16	0.080	0.12	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.50	0.80	0.12	0.16	0.26	0.039	J
75-09-2	Methylene Chloride	0.96	0.80	0.080	0.28	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	5.5	0.16	0.080	1.8	0.051	0.026	
76-13-1	Trichlorotrifluoroethane	0.51	0.16	0.090	0.067	0.021	0.012	
75-15-0	Carbon Disulfide	0.92	0.80	0.19	0.30	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.080	ND	0.040	0.020	
75-34-3	1,1-Dichloroethane	0.56	0.16	0.080	0.14	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.080	ND	0.044	0.022	
108-05-4	Vinyl Acetate	2.9	8.0	0.26	0.81	2.3	0.073	J, M
78-93-3	2-Butanone (MEK)	5.8	0.80	0.080	2.0	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.080	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.80	0.094	ND	0.19	0.023	
67-66-3	Chloroform	5,000	0.16	0.094	1,000	0.033	0.019	·····

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

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

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

B = Analyte was found in the method blank.

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

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG40B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Date Analyzed: 5/12/08

Analyst: Sampling Media: Rusty Bravo

1.00 Liter(s)

Test Notes:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00938

Initial Pressure (psig):

-3.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.60

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
	-	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.80	0.082	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	ND	0.16	0.080	ND	0.040	0.020	
71-55-6	1,1,1-Trichloroethane	2.6	0.16	0.080	0.47	0.029	0.015	
71-43-2	Benzene	4.2	0.16	0.080	1.3	0.050	0.025	
56-23-5	Carbon Tetrachloride	26	0.16	0.080	4.1	0.025	0.013	Management and the contract of
994-05-8	tert-Amyl Methyl Ether	ND	0.80	0.080	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	1.3	0.16	0.080	0.28	0.035	0.017	
75-27-4	Bromodichloromethane	6.3	0.16	0.080	0.94	0.024	0.012	
79-01-6	Trichloroethene	3.3	0.16	0.080	0.61	0.030	0.015	
123-91-1	1,4-Dioxane	ND	0.80	0.098	ND	0.22	0.027	
80-62-6	Methyl Methacrylate	ND	0.80	0.12	ND	0.20	0.029	
142-82-5	n-Heptane	0.58	0.80	0.10	0.14	0.20	0.025	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	0.083	ND	0.18	0.018	
108-10-1	4-Methyl-2-pentanone	1.3	0.80	0.090	0.33	0.20	0.022	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.080	ND	0.029	0.015	
108-88-3	Toluene	7.0	0.80	0.080	1.9	0.21	0.021	
591-78-6	2-Hexanone	1.6	0.80	0.12	0.40	0.20	0.030	
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.086	ND	0.021	0.011	
111-65-9	n-Octane	1.1	0.80	0.080	0.23	0.17	0.017	
127-18-4	Tetrachloroethene	40	0.16	0.080	6.0	0.024	0.012	
108-90-7	Chlorobenzene	0.44	0.16	0.082	0.096	0.035	0.018	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

> Verified By: Date: TO15SCAN:XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG40B-05

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo 6.0 L Summa Canister Date Collected: 5/10/08 Date Received: 5/12/08 Date Analyzed: 5/12/08

Analyst: Sampling Media:

Volume(s) Analyzed:

1.00 Liter(s) 0.025 Liter(s)

Test Notes:

Container ID:

SC00938

Initial Pressure (psig):

-3.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.60

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${\sf ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	2.6	0.80	0.099	0.60	0.18	0.023	
179601-23-1	m,p-Xylenes	12	0.80	0.21	2.7	0.18	0.048	
75-25-2	Bromoform	ND	0.80	0.12	ND	0.077	0.012	
100-42-5	Styrene	0.15	0.80	0.12	0.034	0.19	0.029	J
95-47-6	o-Xylene	3.6	0.80	0.10	0.82	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.14	0.80	0.090	0.028	0.16	0.018	J
103-65-1	n-Propylbenzene	0.48	0.80	0.083	0.098	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.70	0.80	0.091	0.14	0.16	0.019	\mathbf{J}
108-67-8	1,3,5-Trimethylbenzene	0.66	0.80	0.096	0.13	0.16	0.020	J
98-83-9	alpha-Methylstyrene	ND	0.80	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	1.8	0.80	0.11	0.37	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.099	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	81	0.16	0.090	13	0.027	0.015	
135-98-8	sec-Butylbenzene	ND	0.80	0.093	ND	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.37	0.80	0.10	0.067	0.15	0.019	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND .	0.80	0.12	ND	0.083	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.016	
91-20-3	Naphthalene	3.2	0.32	0.12	0.61	0.061	0.023	
87-68-3	Hexachlorobutadiene	3.6	0.16	0.14	0.33	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.080	ND	0.058	0.015	
104-51-8	n-Butylbenzene	0.53	0.32	0.080	0.097	0.058	0.015	

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

> Date: 5/18/08
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RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG40B-05D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-007

Test Code: Instrument ID:

Analyst:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Test Notes:

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00289

Initial Pressure (psig):

-3.1

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.57

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.79	0.079	0.44	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.079	ND	0.076	0.038	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.12	0.79	0.079	0.017	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.079	ND	0.061	0.031	
74-83-9	Bromomethane	0.080	0.16	0.079	0.021	0.040	0.020	J
75-00-3	Chloroethane	0.59	0.16	0.079	0.22	0.060	0.030	
64-17-5	Ethanol	5.3	7.9	0.079	2.8	4.2	0.042	J
67-64-1	Acetone	13	7.9	0.11	5.5	3.3	0.048	В
75-69-4	Trichlorofluoromethane	1.5	0.16	0.079	0.26	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.79	0.11	ND	0.36	0.051	
75-35-4	1,1-Dichloroethene	0.48	0.16	0.079	0.12	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.29	0.79	0.12	0.096	0.26	0.038	J
75-09-2	Methylene Chloride	1.0	0.79	0.079	0.30	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.079	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.61	0.16	0.088	0.080	0.020	0.011	
75-15-0	Carbon Disulfide	1.0	0.79	0.19	0.32	0.25	0.061	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
75-34-3	1,1-Dichloroethane	0.58	0.16	0.079	0.14	0.039	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.079	ND	0.044	0.022	
108-05-4	Vinyl Acetate	1.8	7.9	0.25	0.50	2.2	0.071	J, M
78-93-3	2-Butanone (MEK)	4.9	0.79	0.079	1.7	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.79	0.093	ND	0.19	0.022	
67-66-3	Chloroform	5,000	0.16	0.093	1,000	0.032	0.019	

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

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

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

B = Analyte was found in the method blank.

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

RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG40B-05D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-007

Date Collected: 5/10/08

Date Received: 5/12/08

Test Code:

Analyst:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Sampling Media:

Rusty Bravo

6.0 L Summa Canister

Date Analyzed: 5/12/08 Volume(s) Analyzed:

1.00 Liter(s) 0.025 Liter(s)

Test Notes: Container ID:

SC00289

Initial Pressure (psig):

-3.1

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.57

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	$\mu g/m^3$	$\mu g/m^3$	${\sf ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.79	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	0.080	0.16	0.079	0.020	0.039	0.019	J
71-55-6	1,1,1-Trichloroethane	2.6	0.16	0.079	0.48	0.029	0.014	
71-43-2	Benzene	3.1	0.16	0.079	0.97	0.049	0.025	
56-23-5	Carbon Tetrachloride	26	0.16	0.079	4.1	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.79	0.079	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	0.27	0.16	0.079	0.057	0.034	0.017	
75-27-4	Bromodichloromethane	6.1	0.16	0.079	0.91	0.023	0.012	
79-01-6	Trichloroethene	3.3	0.16	0.079	0.62	0.029	0.015	
123-91-1	1,4-Dioxane	ND	0.79	0.096	ND	0.22	0.027	
80-62-6	Methyl Methacrylate	ND	0.79	0.12	ND	0.19	0.029	
142-82-5	n-Heptane	0.61	0.79	0.10	0.15	0.19	0.025	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	0.082	ND	0.17	0.018	
108-10-1	4-Methyl-2-pentanone	1.3	0.79	0.088	0.31	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	0.099	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.079	ND	0.029	0.014	
108-88-3	Toluene	6.9	0.79	0.079	1.8	0.21	0.021	
591-78-6	2-Hexanone	1.5	0.79	0.12	0.37	0.19	0.029	
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.018	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.085	ND	0.020	0.011	
111-65-9	n-Octane	1.0	0.79	0.079	0.22	0.17	0.017	
127-18-4	Tetrachloroethene	38	0.16	0.079	5.6	0.023	0.012	
108-90-7	Chlorobenzene	0.44	0.16	0.080	0.097	0.034	0.017	·

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

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method. J = The analyte was positively identified below the method reporting limit; the associated numerical value is considered estimated.

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RESULTS OF ANALYSIS

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Client:

ENSR

CAS Project ID: P0801385

Date Collected: 5/10/08

Date Received: 5/12/08

Date Analyzed: 5/12/08

Client Sample ID: SG40B-05D

CAS Sample ID: P0801385-007

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Sampling Media: Rusty Bravo

6.0 L Summa Canister

Test Notes:

Container ID:

SC00289

Initial Pressure (psig):

-3.1

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Canister Dilution Factor: 1.57

1.00 Liter(s)

0.025 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	2.8	0.79	0.097	0.64	0.18	0.022	
179601-23-1	m,p-Xylenes	12	0.79	0.20	2.8	0.18	0.047	
75-25-2	Bromoform	ND	0.79	0.12	ND	0.076	0.012	
100-42-5	Styrene	0.21	0.79	0.12	0.049	0.18	0.028	J
95-47-6	o-Xylene	3.7	0.79	0.099	0.84	0.18	0.023	h Palaciotis de management and a company
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.14	0.79	0.088	0.027	0.16	0.018	J
103-65-1	n-Propylbenzene	0.59	0.79	0.082	0.12	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.76	0.79	0.089	0.15	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.67	0.79	0.094	0.14	0.16	0.019	J
98-83-9	alpha-Methylstyrene	ND	0.79	0.11	ND	0.16	0.024	
95-63-6	1,2,4-Trimethylbenzene	1.8	0.79	0.11	0.36	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	0.12	0.16	0.097	0.020	0.026	0.016	J
106-46-7	1,4-Dichlorobenzene	33	0.16	0.088	5.5	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.79	0.091	ND	0.14	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.35	0.79	0.10	0.064	0.14	0.019	\mathbf{J}
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.021	0.016	
91-20-3	Naphthalene	2.6	0.31	0.12	0.49	0.060	0.022	
87-68-3	Hexachlorobutadiene	3.7	0.16	0.14	0.35	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.079	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.28	0.31	0.079	0.051	0.057	0.014	J

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

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

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

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Client:

ENSR

Client Sample ID: Method Blank

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385 CAS Sample ID: P080512-MB

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media: Test Notes:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
	•	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	\mathbf{ppbV}	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	Ethanol	ND	5.0	0.050	ND	2.7	0.027	
67-64-1	Acetone	0.31	5.0	0.073	0.13	2.1	0.031	J
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND .	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	Chloroform	ND	0.10	0.059	ND	0.020	0.012	

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

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

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

Verified By: Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF ANALYSIS Page 2 of 3

Client:

ENSR

Client Sample ID: Method Blank

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385 CAS Sample ID: P080512-MB

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media: Test Notes:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s)

Canister Dilution Factor: 1.00

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

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

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

Verified By:	Cap	Date:	5/28/08
		TO15SCAN.XLT - Tronox	- Henderson - PageNo.

RESULTS OF ANALYSIS Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Date Collected: NA

Date Received: NA

Date Analyzed: 5/12/08

Client Sample ID: Method Blank

CAS Sample ID: P080512-MB

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

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

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

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

Verified By:_	Cht	Date:	5/28/08
		TO15SCAN.XLT - Trong	ox - Henderson - PageNo.:

SURROGATE SPIKE RECOVERY RESULTS Page 1 of 1

Client:

ENSR

Client Project ID:

Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister(s)

Date(s) Received: 5/12/08 Date(s) Analyzed: 5/12/08

Date(s) Collected: 5/9 - 5/10/08

Test Notes:

		1,2-Dichloroethane-d4		Toluene-d8		Bromofluo		
Client Sample ID	CAS Sample ID	%	Acceptance	0/0	Acceptance	0/0	Acceptance	Data
		Recovered	Limits	Recovered	Limits	Recovered	Limits	Qualifier
Method Blank	P080512-MB	90	70-130	105	70-130	100	70-130	
Lab Control Sample	P080512-LCS	86	70-130	100	70-130	100	70-130	
SG64B-05	P0801385-001	87	70-130	101	70-130	99	70-130	
SG41B-20	P0801385-002	89	70-130	93	70-130	103	70-130	
SG41B-20D	P0801385-003	88	70-130	98	70-130	103	70-130	
SG43B-05	P0801385-004	87	70-130	101	70-130	100	70-130	
SG43B-05	P0801385-004DUP	86	70-130	101	70-130	102	70-130	
SG38B-20	P0801385-005	88	70-130	100	70-130	99	70-130	
SG40B-05	P0801385-006	81	70-130	100	70-130	101	70-130	
SG40B-05D	P0801385-007	80	70-130	97	70-130	101	70-130	

LABORATORY CONTROL SAMPLE SUMMARY Page 1 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media: Test Notes:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

NA Liter(s)

					CAS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
		ng	ng		Limits	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	22.3	87	69-117	
74-87-3	Chloromethane	24.5	19.1	78	53-131	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	26.0	23.4	90	58-133	
75-01-4	Vinyl Chloride	24.8	20.9	84	61-127	
74-83-9	Bromomethane	25.0	23.8	95	67-124	
75-00-3	Chloroethane	25.0	23.9	96	69-123	
64-17-5	Ethanol	23.8	19.8	83	56-137	
67-64-1	Acetone	26.8	25.5	95	63-116	
75-69-4	Trichlorofluoromethane	26.3	24.1	92	71-120	
107-13-1	Acrylonitrile	25.5	24.9	98	74-129	
75-35-4	1,1-Dichloroethene	27.8	25.9	93	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	25.2	98	35-141	
75-09-2	Methylene Chloride	27.8	23.6	85	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	29.4	110	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	25.0	90	63-129	
75-15-0	Carbon Disulfide	25.0	22.5	90	72-122	
156-60-5	trans-1,2-Dichloroethene	26.5	23.7	89	74-118	
75-34-3	1,1-Dichloroethane	26.8	23.7	88	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	23.7	88	72-119	
108-05-4	Vinyl Acetate	25.3	29.8	118	32-163	
78-93-3	2-Butanone (MEK)	27.0	26.4	98	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	23.3	86	74-117	
108-20-3	Diisopropyl Ether	26.3	23.0	87	70-131	
67-66-3	Chloroform	29.8	27.0	. 91	72-113	

Verified By: Date: 5/28/08 TO15SCAN.XLT - Tronox - Henderson - PageNo.:

LABORATORY CONTROL SAMPLE SUMMARY Page 2 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Test Notes:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Collected: NA

Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

NA Liter(s)

					CAS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
		ng	ng		Limits	Qualifier
637-92-3	Ethyl tert-Butyl Ether	26.0	24.2	93	74-123	
107-06-2	1,2-Dichloroethane	26.3	21.8	83	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	25.2	94	78-114	
71-43-2	Benzene	27.0	24.6	91	73-111	
56-23-5	Carbon Tetrachloride	26.0	26.0	100	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	25.1	97	81-118	
78-87-5	1,2-Dichloropropane	26.5	23.4	88	78-117	
75-27-4	Bromodichloromethane	27.8	25.8	93	77-120	
79-01-6	Trichloroethene	27.3	25.9	95	80-116	
123-91-1	1,4-Dioxane	27.5	27.1	99	79-122	
80-62-6	Methyl Methacrylate	25.8	26.1	101	79-128	
142-82-5	n-Heptane	26.8	23.8	89	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	25.1	100	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	23.6	86	7.8-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	28.8	103	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	24.3	92	80-117	
108-88-3	Toluene	26.5	25.6	97	76-116	
591-78-6	2-Hexanone	26.3	24.0	91	69-131	
124-48-1	Dibromochloromethane	27.0	29.0	107	80-128	3
106-93-4	1,2-Dibromoethane	26.3	28.5	108	79-122	
111-65-9	n-Octane	26.0	25.1	97	78-122	
127-18-4	Tetrachloroethene	26.0	26.0	100	77-118	
108-90-7	Chlorobenzene	26.5	26.6	100	78-117	

Verified By:__ Date: TO15SCAN.XLT - Tronox - Henderson - PageNo.:

LABORATORY CONTROL SAMPLE SUMMARY Page 3 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Date Collected: NA

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

98-06-6

104-51-8

Rusty Bravo

6.0 L Summa Canister

Date Received: NA Date Analyzed: 5/12/08

Volume(s) Analyzed:

NA Liter(s)

Sampling Media: Test Notes:

CAS Spike Amount Result % Recovery Acceptance Data CAS# Compound Qualifier Limits ng ng 79-116 26.3 26.7 102 100-41-4 Ethylbenzene 80-117 m,p-Xylenes 62.5 62.9 101 179601-23-1 77-128 31.3 37.8 121 Bromoform 75-25-2 26.3 27.2 103 80-124 100-42-5 Styrene 29.8 29.4 99 80-116 95-47-6 o-Xylene 30.0 101 79-120 29.8 79-34-5 1,1,2,2-Tetrachloroethane 28.1 104 81-119 27.0 98-82-8 Cumene n-Propylbenzene 26.3 27.4 104 82-120 103-65-1 26.5 27.1 102 80-119 4-Ethyltoluene 622-96-8 1,3,5-Trimethylbenzene 26.0 26.5 102 80-120 108-67-8 25.5 26.2 103 54-146 98-83-9 alpha-Methylstyrene 25.7 99 80-122 26.0 95-63-6 1,2,4-Trimethylbenzene 25.8 30.2 117 85-131 Benzyl Chloride 100-44-7 25.5 25.3 99 81-117 541-73-1 1,3-Dichlorobenzene 106-46-7 1,4-Dichlorobenzene 26.3 26.4 100 81-119 27.2 26.8 101 80-124 sec-Butvlbenzene 135-98-8 29.6 103 78-124 99-87-6 4-Isopropyltoluene (p-Cymene) 28.8 25.8 24.4 95 81-122 1,2-Dichlorobenzene 95-50-1 30.9 91-136 25.8 120 1,2-Dibromo-3-chloropropane 96-12-8 1,2,4-Trichlorobenzene 26.0 27.9 107 75-138 120-82-1 76-143 26.3 27.9 106 91-20-3 Naphthalene 102 72-128 26.3 26.9 87-68-3 Hexachlorobutadiene

26.3

26.8

25.6

27.3

97

102

70-130

70-130

tert-Butylbenzene

n-Butylbenzene

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Analyst:

Container ID:

SC00470

Initial Pressure (psig): -5.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.94

			Dupli	cate				
Compound	Sample	Result	Sample	Result	Average	% RPD	RPD	Data
	$\mu g/m^3$	ppbV	$\mu g/m^3$	ppbV	$\mu g/m^3$		Limit	Qualifier
Dichlorodifluoromethane (CFC 12)	2.24	0.453	2.24	0.453	2.24	0	25	
Chloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.111	0.0158	0.0989	0.0142	0.10495	12	25	J
Vinyl Chloride	ND	ND	ND	ND	-	-	25	
Bromomethane	ND	ND	ND	ND	-	-	25	
Chloroethane	0.171	0.0647	0.178	0.0677	0.1745	4	25	J
Ethanol	3.06	1.62	2.52	1.34	2.79	19	25	$^{\prime}$ J
Acetone	33.7	14.2	33.1	13.9	33.4	2	25	B, M
Trichlorofluoromethane	3.07	0.547	3.12	0.556	3.095	2	25	
Acrylonitrile	0.151	0.0698	0.144	0.0662	0.1475	5	25	J
1,1-Dichloroethene	ND	ND	ND	ND	-	=	25	
2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.275	0.0909	0.277	0.0916	0.276	0.7	25	J
Methylene Chloride	ND	ND	0.144	0.0413	-	-	25	J
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	- '	25	
Trichlorotrifluoroethane	0.462	0.0603	0.541	0.0707	0.5015	16	25	
Carbon Disulfide	1.28	0.412	1.22	0.393	1.25	5	25	
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25	
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25	
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	_	25	
Vinyl Acetate	2.47	0.701	2.07	0.589	2.27	18	. 25	J, M
2-Butanone (MEK)	12.6	4.28	12.2	4.15	12.4	3	25	
cis-1,2-Dichloroethene	ND	ND	ND	ND	· <u>-</u>	-	25	
Diisopropyl Ether	ND ND	ND	ND	ND	-	· _	25	
Chloroform	129	26.4	127	25.9	128	2	25	

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

Verified By:	Colo	Date:	5/18/08
		TOISSCAN VIT Tropov	Henderson PaueNo

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

B = Analyte was found in the method blank.

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

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code:

EPA TO-15

Date Collected: 5/10/08

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Analyst:

Rusty Bravo

Volume(s) Analyzed:

Date Analyzed: 5/12/08

1.00 Liter(s)

Sampling Media: Test Notes:

6.0 L Summa Canister

SC00470

Container ID:

Initial Pressure (psig):

-5.3

Final Pressure (psig): 3.5

Dunlicate

Canister Dilution Factor: 1.94

	Dupicate									
Compound	Sample Result		Sample Result		Average	% RPD	RPD	Data		
	$\mu g/m^3$	ppbV	$\mu g/m^3$	${f ppbV}$	$\mu g/m^3$		Limit	Qualifier		
Ethyl tert-Butyl Ether	ND	ND	ND	ND	+	-	25			
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25			
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25			
Benzene	6.82	2.14	6.71	2.10	6.765	2	25			
Carbon Tetrachloride	4.92	0.782	4.42	0.703	4.67	11	25			
tert-Amyl Methyl Ether	ND	ND	ND	ND	-	-	25			
1,2-Dichloropropane	ND	ND	ND	ND	-	-	25			
Bromodichloromethane	0.535	0.0800	0.502	0.0750	0.5185	6	25			
Trichloroethene	0.291	0.0542	0.301	0.0560	0.296	3	25			
1,4-Dioxane	ND	ND	ND	ND		-	25			
Methyl Methacrylate	ND	ND	ND	ND	-	-	25			
n-Heptane	0.336	0.0819	0.343	0.0838	0.3395	2	25	${f J}$		
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	-	25			
4-Methyl-2-pentanone	2.68	0.654	2.57	0.628	2.625	4	25			
trans-1,3-Dichloropropene	ND	ND	ND	ND	· -	-	25			
1,1,2-Trichloroethane	ND	ND	ND	ND	-		25			
Toluene	12.7	3.38	12.6	3.33	12.65	0.8	25			
2-Hexanone	1.18	0.289	1.19	0.291	1.185	0.8	25			
Dibromochloromethane	ND	ND	ND	ND	-	- '	25			
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25			
n-Octane	1.00	0.214	0.945	0.202	0.9725	6	25	J		
Tetrachloroethene	184	27.2	185	27.3	184.5	0.5	25			
Chlorobenzene	ND	. ND	ND	ND	-		25			

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

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

Verified By:__ Date: 5/28/08 TO15SCAN.XLT - Tronox - Henderson - PageNo.:

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LABORATORY DUPLICATE SUMMARY RESULTS

Page 3 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

Sampling Media:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig): 3.5

Duplicate

Canister Dilution Factor: 1.94

Compound Sample Result Sample Result Average % RPD RPD	Data
$\mu g/m^3$ ppbV $\mu g/m^3$ ppbV $\mu g/m^3$ Limit	Qualifier
Ethylbenzene 8.02 1.85 8.00 1.84 8.01 0.2 25	
m,p-Xylenes 39.7 9.14 40.0 9.22 39.85 0.8 25	
Bromoform ND ND ND 25	
Styrene 0.277 0.0652 0.274 0.0643 0.2755 1 25	J
o-Xylene 14.5 3.34 14.5 3.33 14.5 0 25	
1,1,2,2-Tetrachloroethane ND ND ND 25	
Cumene 0.473 0.0963 0.475 0.0967 0.474 0.4 25	J
n-Propylbenzene 0.559 0.114 0.598 0.122 0.5785 7 25	J
4-Ethyltoluene 0.929 0.189 0.890 0.181 0.9095 4 25	J
1,3,5-Trimethylbenzene 0.966 0.197 0.943 0.192 0.9545 2 25	J
alpha-Methylstyrene ND ND ND 25	
1,2,4-Trimethylbenzene 2.32 0.471 2.34 0.476 2.33 0.9 25	
Benzyl Chloride ND ND ND 25	
1,3-Dichlorobenzene ND ND ND 25	
1,4-Dichlorobenzene 4.45 0.741 4.44 0.738 4.445 0.2 25	
sec-Butylbenzene ND ND ND 25	
4-Isopropyltoluene (p-Cymene) 0.287 0.0523 0.285 0.0520 0.286 0.7 25	J
1,2-Dichlorobenzene ND ND ND 25	
1,2-Dibromo-3-chloropropane ND ND ND 25	
1,2,4-Trichlorobenzene ND ND ND 25	
Naphthalene 2.00 0.382 1.90 0.362 1.95 5 25	
Hexachlorobutadiene ND ND ND 25	
tert-Butylbenzene ND ND ND 25	
n-Butylbenzene 0.427 0.0778 0.386 0.0704 0.4065 10 25	J

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

Verified By:_	Cos	Date:	5 (28)08
	T	OLSCOAN VITE. Tropics	Handarson Davable

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

RESULTS OF ANALYSIS Page 1 of 1

Client:

ENSR

CAS Project ID: P0801385

Client Project ID: Phase B Soil Gas / 04020-023-4311

Internal Standard Area and RT Summary

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Lab File ID: 05120802.D

Analyst:

Rusty Bravo

Date Analyzed:

5/12/08

Sampling Media:

6.0 L Summa Canister(s)

Time Analyzed: 09:52

Test Notes:

		IS1 (BCM)	***************************************	IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	297636	12.59	1318074	15.51	617112	21.35
	Upper Limit	416690	12.92	1845304	15.84	863957	21.68
	Lower Limit	178582	12.26	790844	15.18	370267	21.02
	Client Sample ID						
01	Method Blank	301500	12.58	1324198	15.51	603978	21.35
02	SG41B-20	313097	12.58	1366600	15.51	725160	21.36
03	SG41B-20D	365729	12.58	1580836	15.51	777638	21.36
04	SG43B-05	379812	12.58	1672734	15.51	784338	21.35
05	SG38B-20	381052	12.58	1683477	15.51	806379	21.36
06	SG43B-05 (Lab Duplicate)	387049	12.58	1687482	15.51	794370	21.36
07	SG40B-05	387191	12.60	1580750	15.52	772774	21.35
08	Lab Control Sample	406558	12.59	1737318	15.52	827975	21.35
09	SG40B-05D	402064	12.59	1591654	15.52	796246	21.35
10	SG64B-05	390537	12.58	1711192	15.51	819519	21.35
11	SG41B-20 (Dilution)	389340	12.58	1701903	15.51	801622	21.35
12	SG41B-20D (Dilution)	385677	12.58	1660460	15.51	773422	21.35
13	SG40B-05 (Dilution)	383903	12.58	1663601	15.51	762697	21.35
14	SG40B-05D (Dilution)	347681	12.58	1528388	15.51	718463	21.35
.15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

TO15SCAN.XLT - Tronox - Henderson - PageNo.:

RESULTS OF HELIUM ANALYSIS

RESULTS OF ANALYSIS Page 1 of 1

Client:

ENSR

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Helium

Test Code:

EPA 3C Modified

Instrument ID:

HP5890 II/GC8/TCD

Analyst:

Zheng Wang/Wade Henton/Chris Cornett

Sampling Media:

6.0 L Summa Canister(s)

Date(s) Collected: 5/9 - 5/10/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Test Notes:

Client Sample ID	CAS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
SG64B-05	P0801385-001	1.00	2.00	60	50	
SG41B-20	P0801385-002	1.00	1.65	ND	41	
SG41B-20D	P0801385-003	1.00	1.61	ND	40	
SG43B-05	P0801385-004	1.00	1.94	ND	49	
SG38B-20	P0801385-005	1.00	1.56	ND	39	
SG40B-05	P0801385-006	1.00	1.60	ND	40	
SG40B-05D	P0801385-007	1.00	1.57	ND	39	
Method Blank	P080512-MB	1.00	1.00	ND.	25	

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

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

Verified By: 3C_HE.XLT - Page No.:

RESULTS OF VOLATILE ORGANIC ANALYSIS

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG64B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-001

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08 Date Received: 5/12/08

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Analyst:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Canister Dilution Factor: 2.00

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	1.0	0.10	0.44	0.20	0.020	
74-87-3	Chloromethane	ND	0.20	0.10	ND	0.097	0.048	
76-14-2	1,2-Dichloro-1,1,2,2-	0.11	1.0	0.10	0.015	0.14	0.014	J
70 14 2	tetrafluoroethane (CFC 114)	0.11	1.0	0.10	0.013	0.14	0.014	J
75-01-4	Vinyl Chloride	ND	0.20	0.10	ND	0.078	0.039	
74-83-9	Bromomethane	ND	0.20	0.10	ND	0.052	0.026	
75-00-3	Chloroethane	ND	0.20	0.10	ND	0.076	0.038	
64-17-5	Ethanol	4.4	10	0.10	2.3	5.3	0.053	J
67-64-1	Acetone	23	10	0.15	9.5	4.2	0.061	В
75-69-4	Trichlorofluoromethane	1.3	0.20	0.10	0.23	0.036	0.018	
107-13-1	Acrylonitrile	ND	1.0	0.14	ND	0.46	0.065	
75-35-4	1,1-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.88	1.0	0.15	0.29	0.33	0.049	J
75-09-2	Methylene Chloride	0.15	1.0	0.10	0.044	0.29	0.029	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.20	0.10	ND	0.064	0.032	
76-13-1	Trichlorotrifluoroethane	0.57	0.20	0.11	0.074	0.026	0.015	
75-15-0	Carbon Disulfide	58	1.0	0.24	19	0.32	0.077	The second control of the second of the seco
156-60-5	trans-1,2-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
75-34-3	1,1-Dichloroethane	ND	0.20	0.10	ND	0.049	0.025	
1634-04-4	Methyl tert-Butyl Ether	ND	0.20	0.10	ND	0.055	0.028	
108-05-4	Vinyl Acetate	7.1	10	0.32	2.0	2.8	0.091	J
78-93-3	2-Butanone (MEK)	12	1.0	0.10	4.1	0.34	0.034	
156-59-2	cis-1,2-Dichloroethene	ND	0.20	0.10	ND	0.050	0.025	
108-20-3	Diisopropyl Ether	ND	1.0	0.12	ND	0.24	0.028	
67-66-3	Chloroform	7.2	0.20	0.12	1.5	0.041	0.024	

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

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

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

B = Analyte was found in the method blank.

Verified By:_	CH-	Date:	5/28/	08
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RESULTS OF ANALYSIS

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Client:

ENSR

Client Sample ID: SG64B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-001

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Canister Dilution Factor: 2.00

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	1.0	0.10	ND	0.24	0.024	
107-06-2	1,2-Dichloroethane	ND	0.20	0.10	ND	0.049	0.025	
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.10	ND	0.037	0.018	
71-43-2	Benzene	5.8	0.20	0.10	1.8	0.063	0.031	
56-23-5	Carbon Tetrachloride	10	0.20	0.10	1.6	0.032	0.016	
994-05-8	tert-Amyl Methyl Ether	ND	1.0	0.10	ND	0.24	0.024	
78-87-5	1,2-Dichloropropane	ND	0.20	0.10	ND	0.043	0.022	
75-27-4	Bromodichloromethane	2.9	0.20	0.10	0.43	0.030	0.015	
79-01-6	Trichloroethene	0.31	0.20	0.10	0.058	0.037	0.019	
123-91-1	1,4-Dioxane	0.19	1.0	0.12	0.053	0.28	0.034	J
80-62-6	Methyl Methacrylate	ND	1.0	0.15	ND	0.24	0.037	
142-82-5	n-Heptane	0.40	1.0	0.13	0.099	0.24	0.031	\mathbf{J}
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.10	ND	0.22	0.023	
108-10-1	4-Methyl-2-pentanone	2.9	1.0	0.11	0.71	0.24	0.027	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.13	ND	0.22	0.028	
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.10	ND	0.037	0.018	
108-88-3	Toluene	15	1.0	0.10	4.1	0.27	0.027	
591-78-6	2-Hexanone	1.8	1.0	0.15	0.44	0.24	0.037	
124-48-1	Dibromochloromethane	0.22	0.20	0.14	0.026	0.023	0.016	
106-93-4	1,2-Dibromoethane	ND	0.20	0.11	ND	0.026	0.014	
111-65-9	n-Octane	0.64	1.0	0.10	0.14	0.21	0.021	J
127-18-4	Tetrachloroethene	1.6	0.20	0.10	0.23	0.030	0.015	
108-90-7	Chlorobenzene	ND	0.20	0.10	ND	0.043	0.022	

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

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

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

Verified By: Date: TO15SCAN.XLT - Tronox - Henderson - PageNo.:

P0801385_TO15_0805281357_SS.xls - Sample

RESULTS OF ANALYSIS

Page 3 of 3

Client:ENSRCAS Project ID: P0801385Client Sample ID:SG64B-05CAS Sample ID: P0801385-001

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

6.0 L Summa Canister

Sampling Media: Test Notes:

Container ID:

SC00546

Initial Pressure (psig):

-5.6

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Date Collected: 5/9/08

Date Received: 5/12/08

Date Analyzed: 5/12/08

Canister Dilution Factor: 2.00

1.00 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	3.5	1.0	0.12	0.81	0.23	0.029	
179601-23-1	m,p-Xylenes	16	1.0	0.26	3.8	0.23	0.060	
75-25-2	Bromoform	ND	1.0	0.15	ND	0.097	0.015	
100-42-5	Styrene	0.26	1.0	0.15	0.060	0.23	0.036	J
95-47-6	o-Xylene	5.0	1.0	0.13	1.1	0.23	0.029	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.13	ND	0.029	0.019	to a Challenge pathod Videor Consent a consensus on a consensus or an ar-
98-82-8	Cumene	0.25	1.0	0.11	0.051	0.20	0.023	J
103-65-1	n-Propylbenzene	0.79	1.0	0.10	0.16	0.20	0.021	\mathbf{J}
622-96-8	4-Ethyltoluene	1.3	1.0	0.11	0.27	0.20	0.023	
108-67-8	1,3,5-Trimethylbenzene	1.5	1.0	0.12	0.31	0.20	0.024	
98-83-9	alpha-Methylstyrene	ND	1.0	0.15	ND	0.21	0.030	
95-63-6	1,2,4-Trimethylbenzene	3.8	1.0	0.14	0.78	0.20	0.028	
100-44-7	Benzyl Chloride	ND	0.20	0.17	ND	0.039	0.033	
541-73-1	1,3-Dichlorobenzene	ND	0.20	0.12	ND	0.033	0.021	
106-46-7	1,4-Dichlorobenzene	29	0.20	0.11	4.8	0.033	0.019	
135-98-8	sec-Butylbenzene	0.12	1.0	0.12	0.021	0.18	0.021	J
99-87-6	4-Isopropyltoluene (p-Cymene)	0.45	1.0	0.13	0.083	0.18	0.024	J
95-50-1	1,2-Dichlorobenzene	ND	0.20	0.13	ND	0.033	0.022	
96-12-8	1,2-Dibromo-3-chloropropane	ND	1.0	0.15	ND	0.10	0.016	
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.15	ND	0.027	0.020	
91-20-3	Naphthalene	0.98	0.40	0.15	0.19	0.076	0.028	
87-68-3	Hexachlorobutadiene	ND	0.20	0.18	ND	0.019	0.017	
98-06-6	tert-Butylbenzene	ND	0.40	0.10	ND	0.073	0.018	
104-51-8	n-Butylbenzene	0.58	0.40	0.10	0.11	0.073	0.018	

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

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

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

Verified By:	CH	Date:	5/28/08
		TO15SCAN.XLT - Tronox - H	enderson - PageNo.:

Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

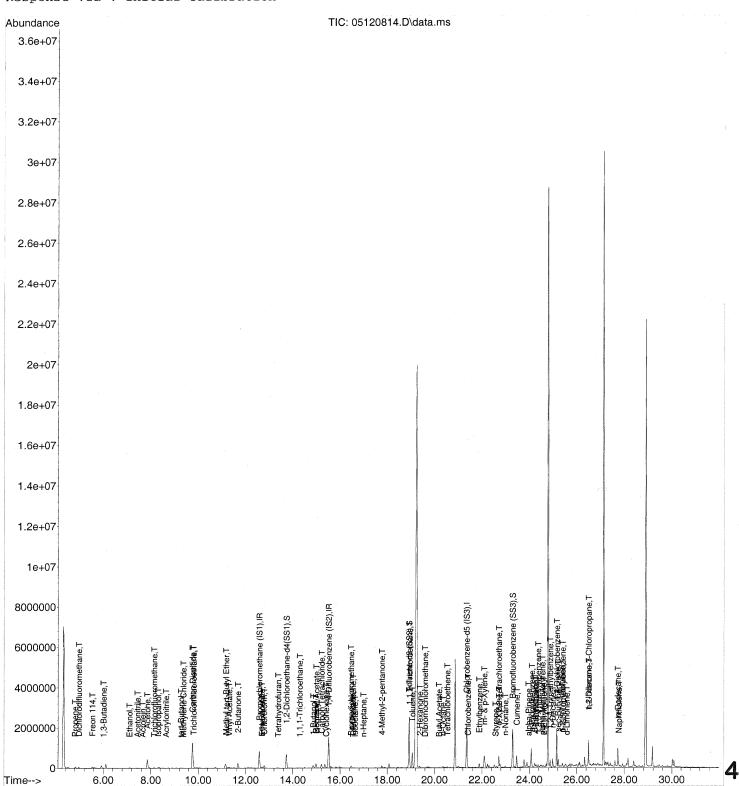
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)

Misc : ENSR SG64B-05 (-5.6, 3.5)

ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008 Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Ui	nits	Dev(1	Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	130 114 82	390537 1711192 819519	25.000 n 25.000 n 25.000 n	ng	-0	.03 .02 .00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000	18.92	65 98	677959 Recov 1846857 Recov	25.143 mery =	86. ng 100.	60% -0 56%	.02
73) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	174	627969 Recov	24.842 mery =		36%	.00
Target Compounds 2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane	4.80 4.97 5.26 5.54 0.00 6.01 6.49	42 85 50 135 62 54 94	22651 63729 53 1567 0 1822 398	0.701 1 1.081 1 N.D. 0.054 1 N.D. 0.051 1 N.D.	ng ng	Qva: #	1ue 85 98 76
9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol	6.81 7.10 7.44 7.66 7.85 8.14 8.31	64 45 41 56 58 101 45	569 48097m 26066 5771 244474 30356 99795	N.D. 2.182 1 0.450 1 0.370 1 11.309 1 0.656 1 1.364 1	ng ng ng	#	94 89 70 95 97
16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide	8.64 9.15 9.27 9.37 9.55 9.81 9.76	53 96 59 84 41 151 76	1789 235 26666m 1890 576 5625 2677761	0.053 I N.D. 0.439 I 0.076 I N.D. 0.284 I 29.082 I	ng ng	#	94 99
23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether 26) Vinyl Acetate 27) 2-Butanone 28) cis-1,2-Dichloroethene	10.73 11.13 11.18 11.30 11.67 12.12	61 63 73 86 72 61	650 239 4363 15184 90851 250	N.D. N.D. 0.061 1 3.535 1 5.993 1 N.D.	ng Ne	_# # #	49 9 87
29) Diisopropyl Ether 30) Ethyl Acetate 31) n-Hexane 32) Chloroform 34) Tetrahydrofuran 35) Ethyl tert-Butyl Ether	12.68 12.69 12.70 12.78 13.37 13.47 13.75	87 61 57 83 72 87 62	114 8482 12602 131878 3678 56 98	N.D. 0.898 1 0.257 1 3.617 1 0.243 1 N.D. N.D.	ng ng	#	87 88 100 69
36) 1,2-Dichloroethane 38) 1,1,1-Trichloroethane 39) Isopropyl Acetate 40) 1-Butanol 41) Benzene	13.73 14.29 14.99 14.86 14.98	97 61 56 78	1546 1958 122800 262229	0.043 i 0.126 i 5.258 i 2.889 i 4.990 i	ng ng	#	83 1 83 98 100
42) Carbon Tetrachloride 43) Cyclohexane 44) tert-Amyl Methyl Ether 45) 1,2-Dichloropropane 46) Bromodichloromethane	15.41 15.87 16.19 16.46	84 73 63 83	149806 7326 797 124 43973	0.218 i N.D. N.D. 1.425 i	ng	#	98

Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration

Internal Standards	R.T. QIon	Response	e Conc Units	Dev(Min)
47) Trichloroethene	16.54 130	3483	0.156 ng	88
48) 1,4-Dioxane	16.52 88	1543	0.096 ng	# 4
49) Isooctane	16.62 57	9039	0.084 ng	91
50) Methyl Methacrylate	16.72 100	256	N.D.	
51) n-Heptane	16.98 71	5089	(0.202 ng)	# 79
52) cis-1,3-Dichloropropene	0.00 75	0	N.D.	
53) 4-Methyl-2-pentanone	(17.77) 58	36194	1.458 ng	83
54) trans-1,3-Dichloropropend	e 18.45 75	81	N.D	
55) 1,1,2-Trichloroethane	18.94 97	165716	-7.581 ng W	»# 9
58) Toluene	19.06 91	704600	7.634 ng	97
59) 2-Hexanone	19.37 43	61837	0.899 ng	82
60) Dibromochloromethane	19.60 129	2489	0.112 ng	98
61) 1,2-Dibromoethane	19.75 107	77	N.D.	78
62) Butyl Acetate	20.19 43	4654	0.068 ng	78 91
63) n-Octane	20.35 57	6976	0.322 ng 0.781 ng	97
64) Tetrachloroethene	20.54 166	18058 2620	0.781 ng	86
65) Chlorobenzene	21.40 112 21.89 91	181381	1.760 ng	93
66) Ethylbenzene	22.10 91	561016	8.144 ng	90
67) m- & p-Xylene 68) Bromoform	0.00 173	0	N.D.	30
68) Bromoform 69) Styrene	22.57 104	7604	0.128 ng	90
70) o-Xylene	22.71 91	183957	2.481 ng	91
71) n-Nonane	22.98 43	36918	0.622 ng	# 78
72) 1,1,2,2-Tetrachloroethan		2098	0.059 ng MA	# 1
74) Cumene	23.46 105	11783	0.125 ng	100
75) alpha-Pinene	23.96 93	11886	0.238 ng	# 46
76) n-Propylbenzene	24.10 91	49768	(0.395 ng)	# 87
77) 3-Ethyltoluene	24.23 105	129787	1.266 ng	97
78) 4-Ethyltoluene	24.28 105	62477	.0.662 ng	93
79) 1,3,5-Trimethylbenzene	24.37 105	64406	0.768 ng	96
80) alpha-Methylstyrene	24.55 118	1802	0.041 ng	# 44
81) 2-Ethyltoluene	24.61 105	46344	0.450 ng H	
82) 1,2,4-Trimethylbenzene	24.88 105	182133	1.922 ng	84
83) n-Decane	24.98 57	151078	2.883 ng	82
84) Benzyl Chloride	25.06 91	1146	N.D.	
85) 1,3-Dichlorobenzene	25.07 146	1687	N.D.	99
86) 1,4-Dichlorobenzene	25.16 146	700977	14.280 ng	# 55
87) sec-Butylbenzene	(25.21) 105 25.40 110	6448	0.038 ng	# 70
88) p-Isopropyltoluene	25.40 119 25.40 105	22032 50296	0.540 ng	90
89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene	25.16 146	700977	The same of the sa	12 100
90) 1,2-Dichlorobenzene 91) d-Limonene	25.57 68	12500	0.291 ng	86
		1700	0.122 ngNe	
92) 1,2-Dibromo-3-Chloropr 93) n-Undecane	26.50 57	439997	7.998 ng	72
94) 1,2,4-Trichlorobenzene	27.63 180	435	N.D.	. –
95) Naphthalene	(27.77) 128	51089	0.488 ng	94
96) n-Dodecane	27.73 57	289991	5.196 ng	86
97) Hexachloro-1,3-butadiene	0.00 225	0	N.D	

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

UM5/27/08

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

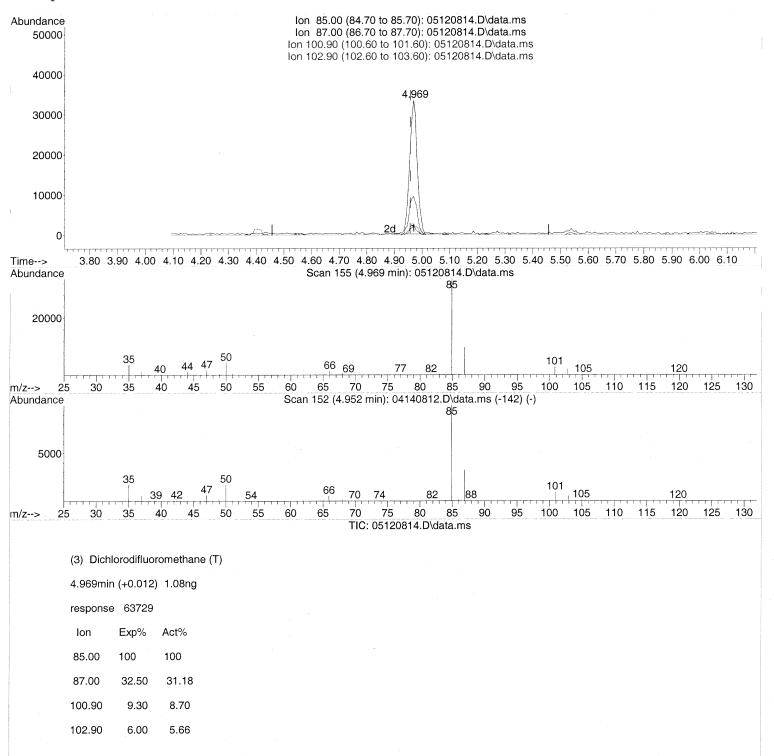
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120814.D

: 12 May 2008 Acq On

: RTB Operator

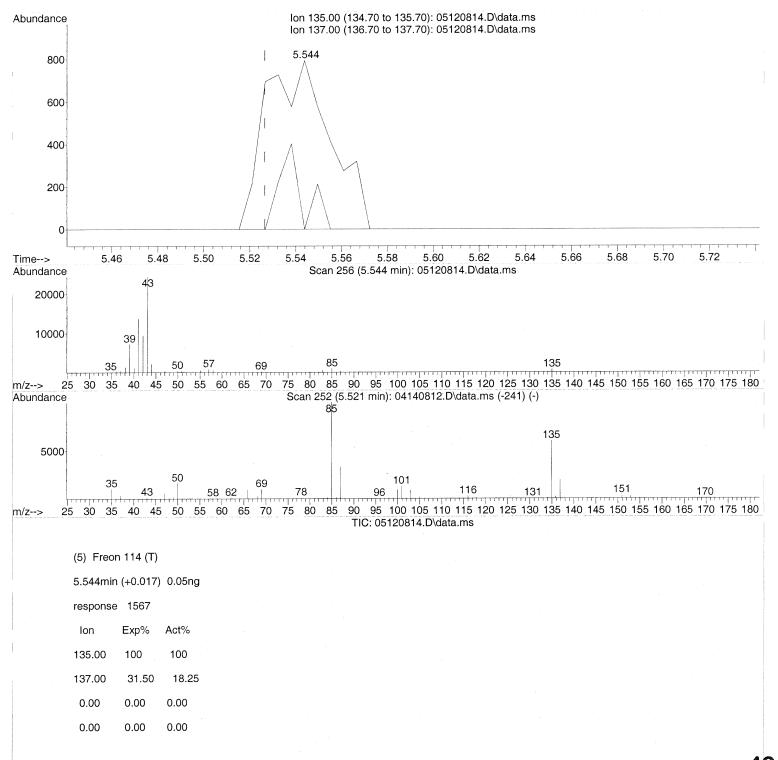
: P0801385-001 (1000mL) Sample : ENSR SG64B-05 (-5.6, 3.5) Misc ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



File :J:\MS13\DATA\2008_05\12\05120814.D

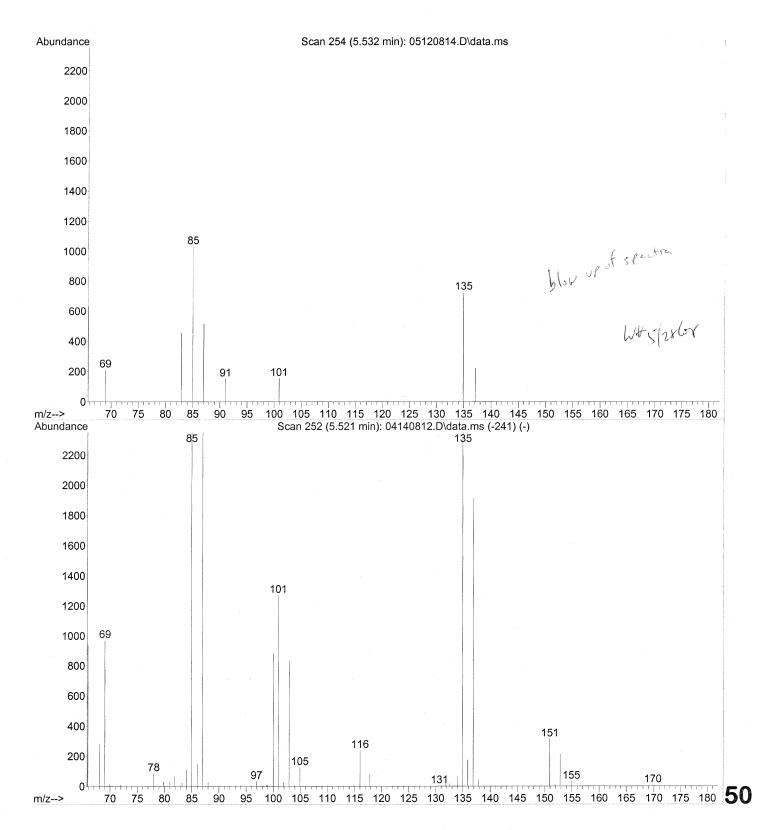
Operator : RTB

Acquired: 12 May 2008 8:27 pm using AcqMethod TO15.M

Instrument : GCMS13

Sample Name: P0801385-001 (1000mL)
Misc Info : ENSR SG64B-05 (-5.6, 3.5)

Vial Number: 1



Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

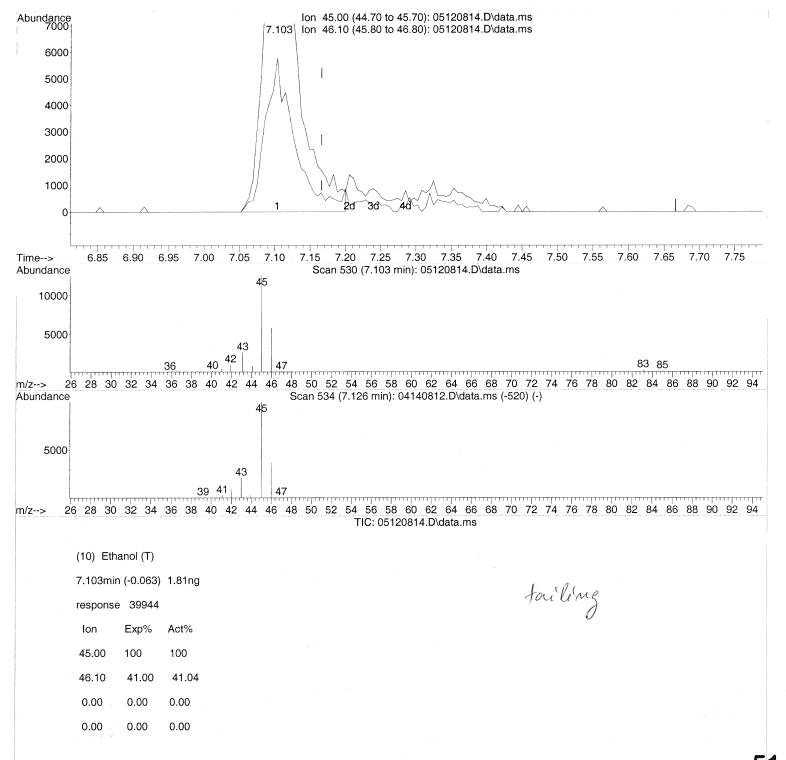
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120814.D
                          20:27
          : 12 May 2008
Acq On
Operator
          : RTB
          : P0801385-001 (1000mL)
Sample
Misc
ALS Vial
```

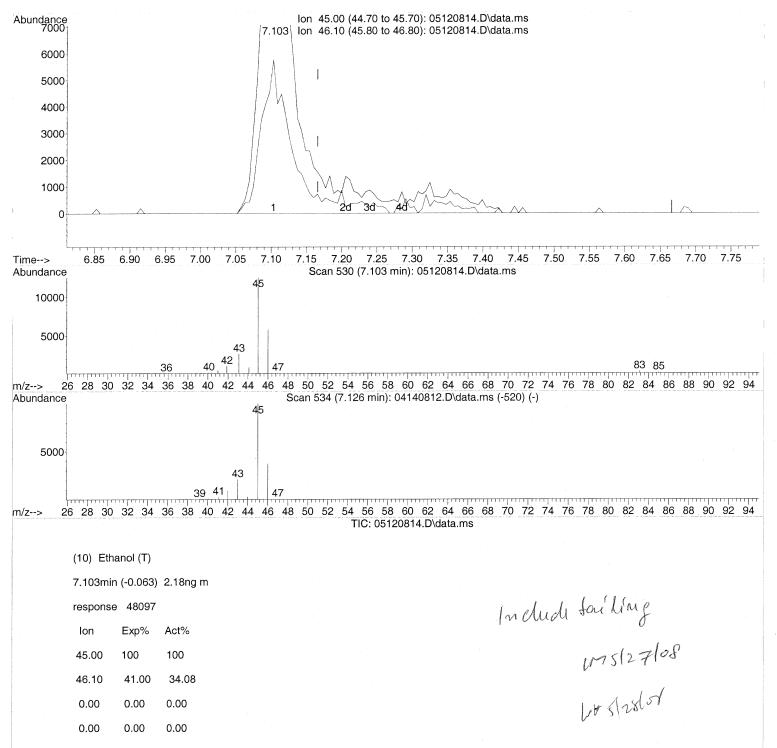
: ENSR SG64B-05 (-5.6, 3.5) Sample Multiplier: 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120814.D

: 12 May 2008 20:27 Acq On

Operator : RTB

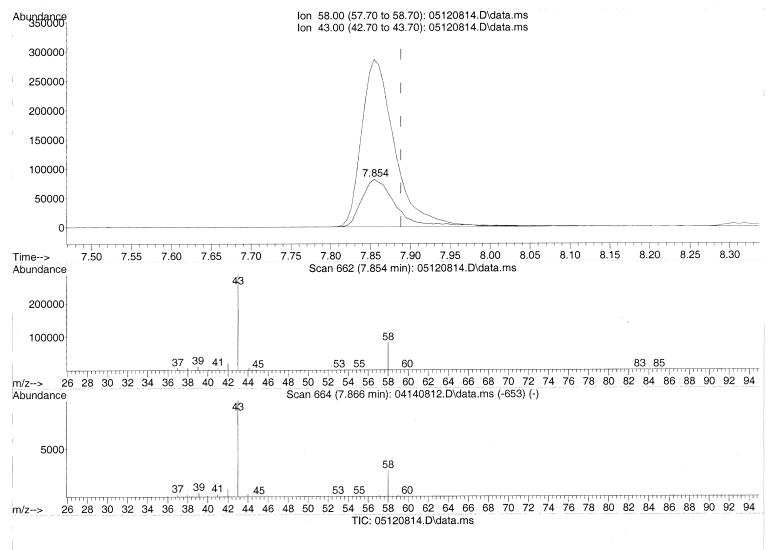
: P0801385-001 (1000mL) Sample : ENSR SG64B-05 (-5.6, 3.5) Misc Sample Multiplier: 1 ALS Vial : 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



(13) Acetone (T)

7.854min (-0.034) 11.31ng

response 244474

Ion Exp% Act% 58.00 100 100 340.70# 43.00 283.10 0.00 0.00 0.00 0.00 0.00 0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008

: RTB Operator

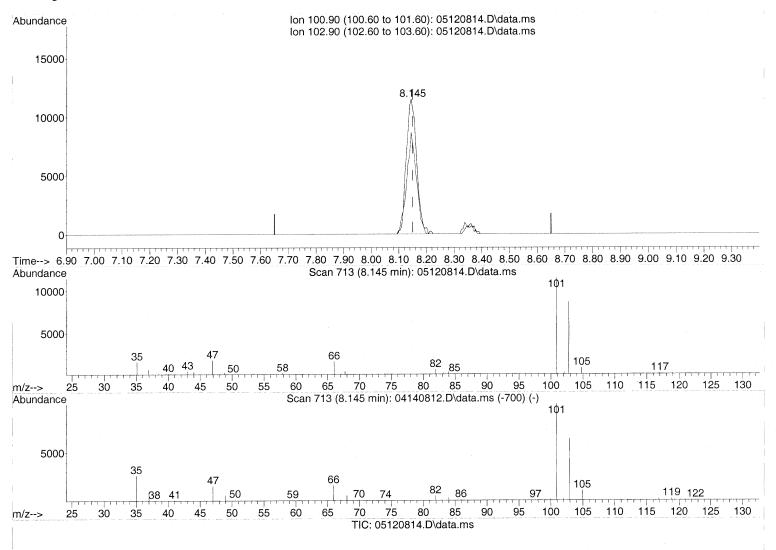
: P0801385-001 (1000mL) Sample : ENSR SG64B-05 (-5.6, 3.5) Misc ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:17:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



(14) Trichlorofluoromethane (T)

8.145min (-0.005) 0.66ng

response 30356

Ion Exp% Act% 100.90 100 100 102.90 64.80 68.77 0.00 0.00 0.00 0.00 0.00 0.00

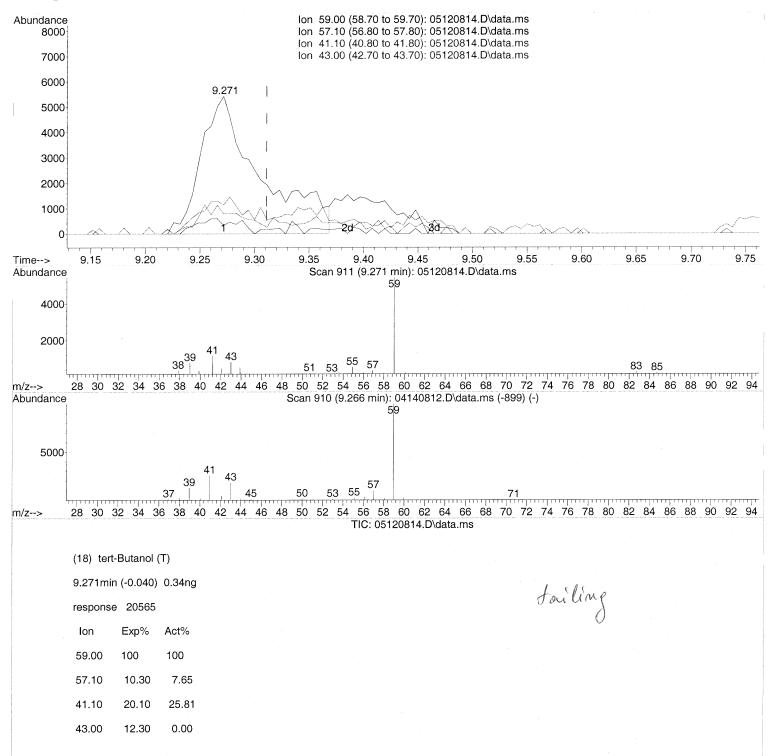
```
Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120814.D
          : 12 May 2008 20:27
Acq On
Operator
          : RTB
          : P0801385-001 (1000mL)
Sample
          : ENSR SG64B-05 (-5.6, 3.5)
Misc
                Sample Multiplier: 1
ALS Vial
```

Quant Time: May 27 15:51:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



```
Quar

Data Path: J:\MS13\DATA\2008_05\12\
Data File: 05120814.D

Acq On: 12 May 2008 20:27

Operator: RTB

Sample: P0801385-001 (1000mL)

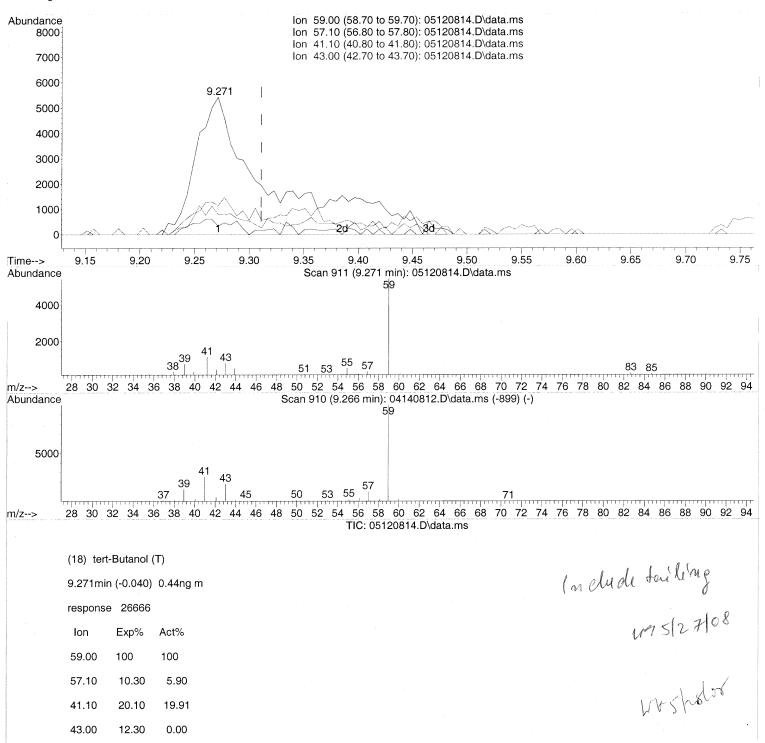
Misc: ENSR SG64B-05 (-5.6, 3.5)

ALS Vial: 1 Sample Multiplier: 1
```

Quant Time: May 27 15:51:23 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

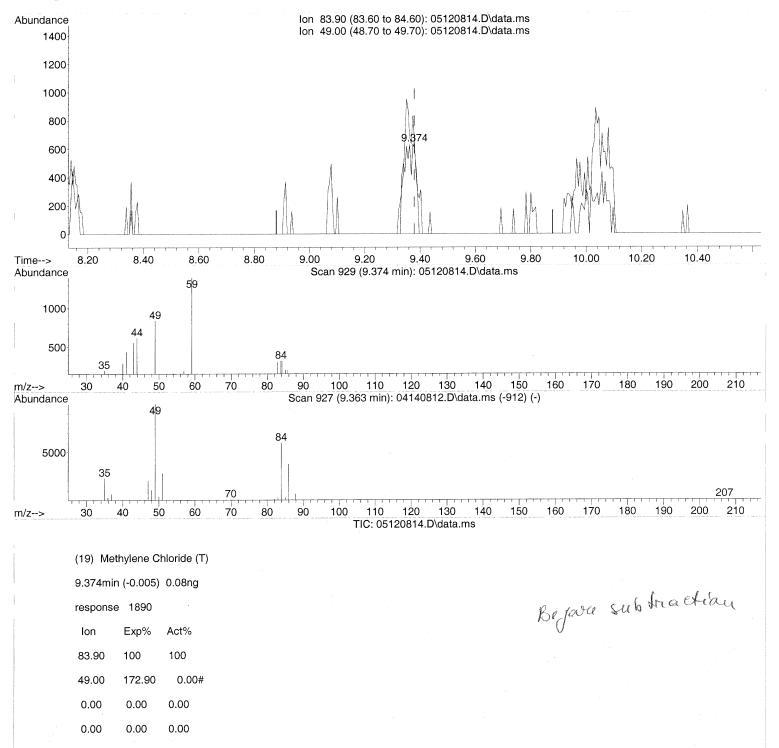
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

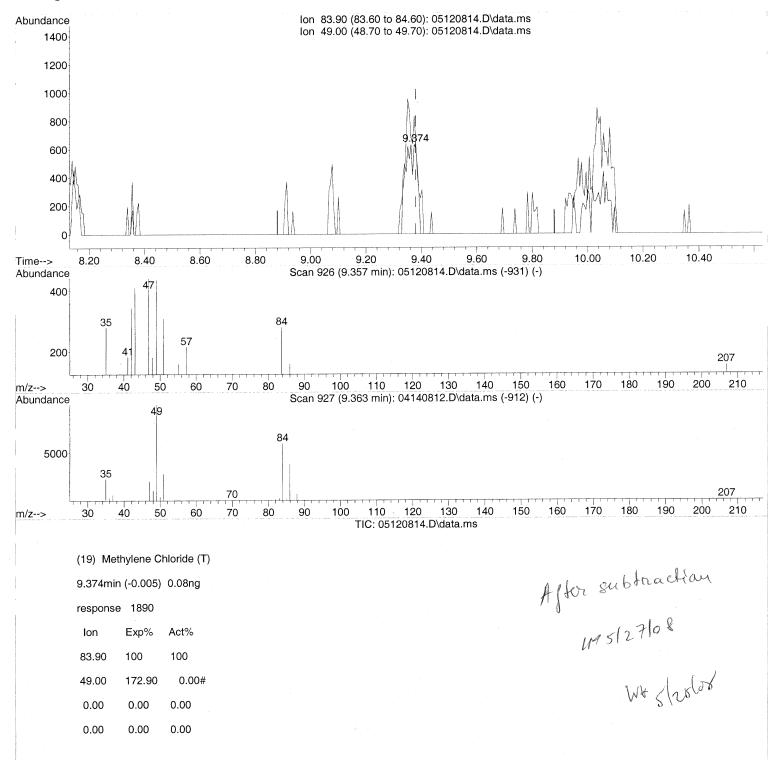
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
Data File: 05120814.D
          : 12 May 2008
                         20:27
Acq On
         : RTB
Operator
          : P0801385-001 (1000mL)
Sample
ALS Vial
```

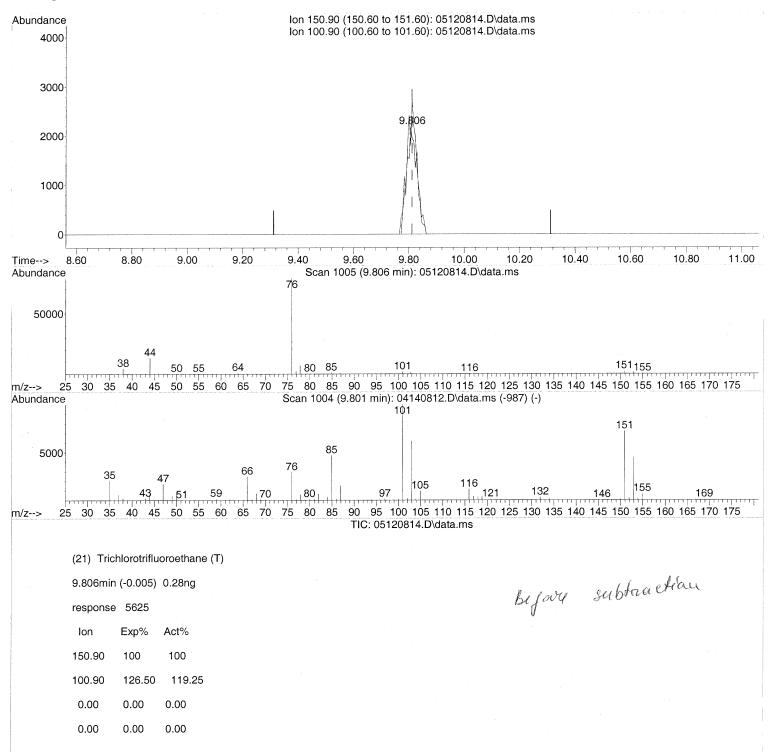
: ENSR SG64B-05 (-5.6, 3.5)

Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008 Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
  Data File : 05120814.D
                : 12 May 2008
                                   20:27
  Acq On
  Operator
               : RTB
                : P0801385-001 (1000mL)
   Sample
                : ENSR SG64B-05 (-5.6, 3.5)
  Misc
                       Sample Multiplier: 1
  ALS Vial
  Quant Time: May 27 15:51:23 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
  Quant Title
                   : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  QLast Update: Tue Apr 15 06:47:20 2008
  Response via: Initial Calibration
                                             Ion 150.90 (150.60 to 151.60): 05120814.D\data.ms
Abundance
                                             Ion 100.90 (100.60 to 101.60): 05120814.D\data.ms
    4000
    3000
                                                               9.806
    2000
    1000
                                    9.20
                                                               9.80
                                                                        10.00
                                                                                 10.20
                                                                                          10.40
                                                                                                   10.60
                                                                                                            10.80
                                                                                                                     11.00
Time-->
        8.60
                  8.80
                           9.00
                                             9.40
                                                      9.60
Abundance
                                            Scan 1005 (9.806 min): 05120814.D\data.ms (-1000) (-)
                                                                                                   151
    2000
                                                               101
    1000
                                                   85
               35
                                       68
                                                                                                      155
                             55
                       47
                                                                         116
                  40
       25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175
m/z-->
Abundance
                                            Scan 1004 (9.801 min): 04140812.D\data.ms (-987) (-)
                                                                                                   151
                                                   85
    5000
                                             76
                                     66
               35
                       47
                                                                 105
                                                                         116
                                                                                                      155
                                                                                     132
                     43
                                59
                                        70
                                               80
                                                            97
                                                                             121
                                                                                               146
                                                      90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175
m/z-->
       25 30 35 40 45 50 55 60 65 70
                                            75 80 85
                                                       TIC: 05120814.D\data.ms
         (21) Trichlorotrifluoroethane (T)
                                                                                    After subtraction

MS127108

MS(18606)
         9.806min (-0.005) 0.28ng
         response 5625
          Ion
                 Exp%
                        Act%
         150.90
                  100
                         100
          100.90
                  126.50
                         119.25
          0.00
                         0.00
                  0.00
          0.00
                  0.00
                        0.00
```

```
Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120814.D
Acq On : 12 May 2008 20:27
```

Operator : RTB

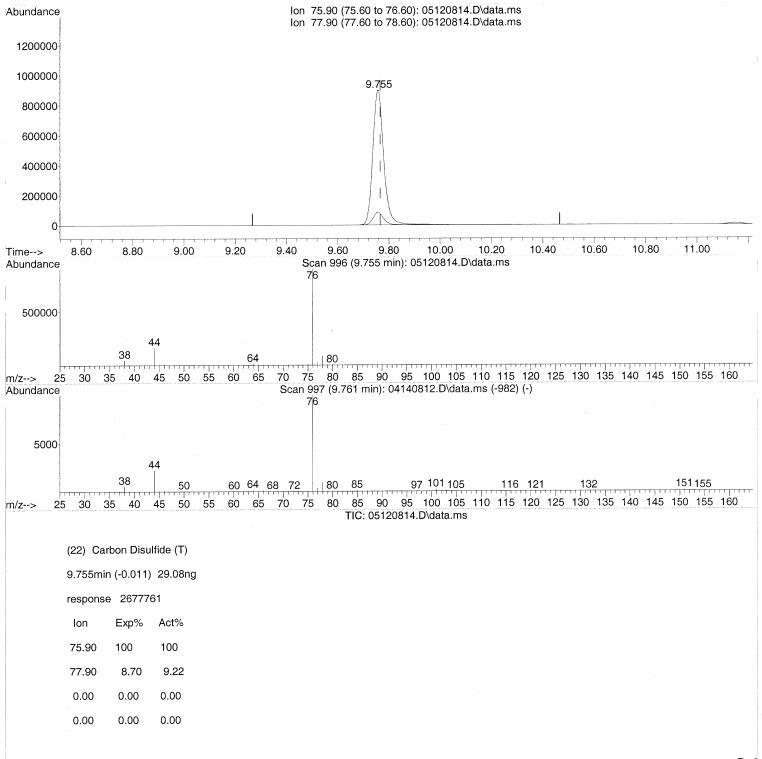
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

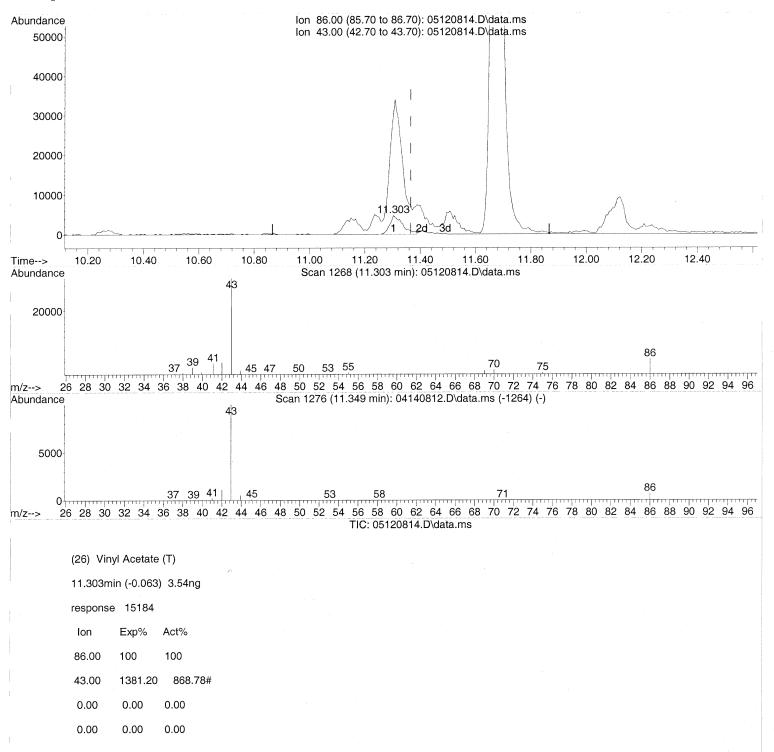
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
  Data File : 05120814.D
               : 12 May 2008 20:27
  Acq On
  Operator
               : RTB
               : P0801385-001 (1000mL)
  Sample
  Misc
               : ENSR SG64B-05 (-5.6, 3.5)
                       Sample Multiplier: 1
  ALS Vial
  Quant Time: May 27 15:51:23 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
                   : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  Quant Title
  QLast Update: Tue Apr 15 06:47:20 2008
  Response via: Initial Calibration
                                              Ion 72.10 (71.80 to 72.80): 05120814.D\data.ms
Abundance
                                              Ion 43.00 (42.70 to 43.70): 05120814.D\data.ms
  200000
  150000
  100000
   50000
                                                             11.673
                                                                                                                12.80
                                                                                     12.20
                                                                                              12.40
                                                                                                       12.60
Time-->
             10.60
                      10.80
                               11.00
                                        11.20
                                                 11.40
                                                          11.60
                                                                   11.80
                                                                            12.00
                                               Scan 1333 (11.673 min): 05120814.D\data.ms
Abundance
                   43
  100000
                                      72
                            57
                       50
          30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190
m/z-->
                                           Scan 1335 (11.684 min): 04140812.D\data.ms (-1322) (-)
Abundance
                   43
    5000
                            57
               38
                       50
                                  67
          30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180 185 190
m/z-->
                                                       TIC: 05120814.D\data.ms
         (27) 2-Butanone (T)
         11.673min (-0.028) 5.99ng
         response 90851
                 Exp%
                        Act%
          lon
          72.10
                 100
                        100
          43.00
                 506.80
                         470.16#
          0.00
                 0.00
                        0.00
```

0.00

0.00

0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

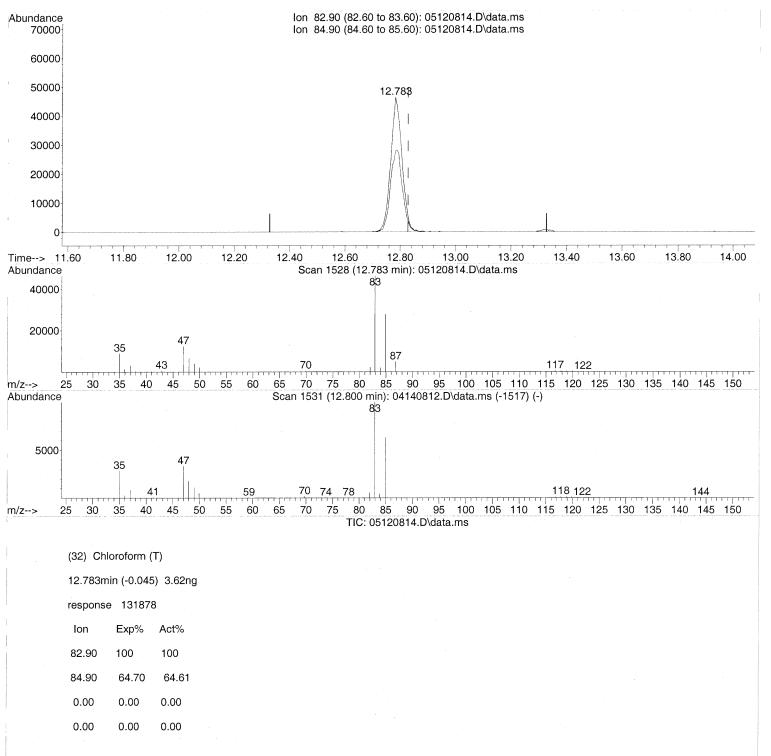
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:51:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Quan

Data Path: J:\MS13\DATA\2008_05\12\
Data File: 05120814.D

Acq On: 12 May 2008 20:27

Operator: RTB

Sample: P0801385-001 (1000mL)

Misc: ENSR SG64B-05 (-5.6, 3.5)

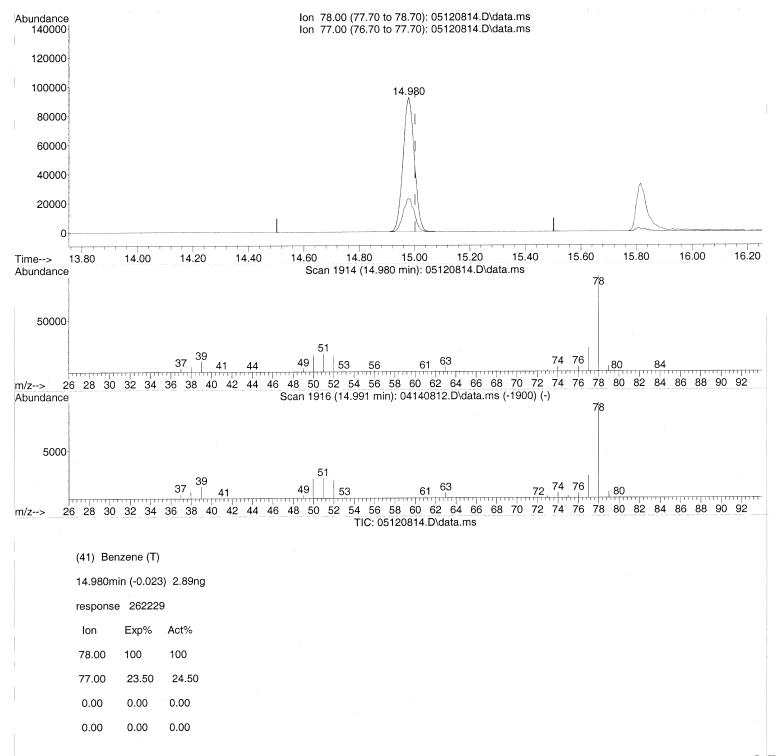
ALS Vial: 1 Sample Multiplier: 1
```

Quant Time: May 27 15:53:18 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

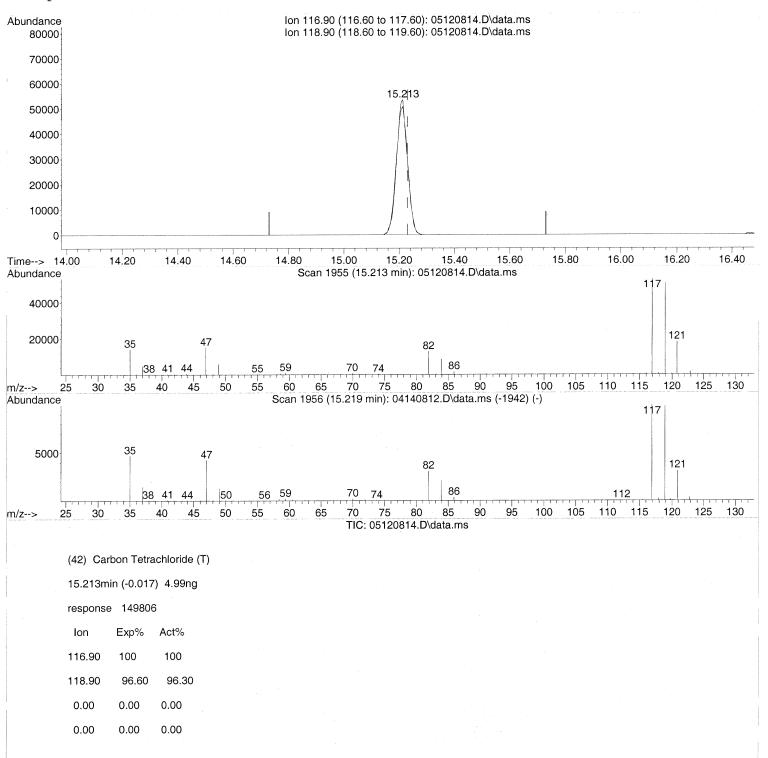
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

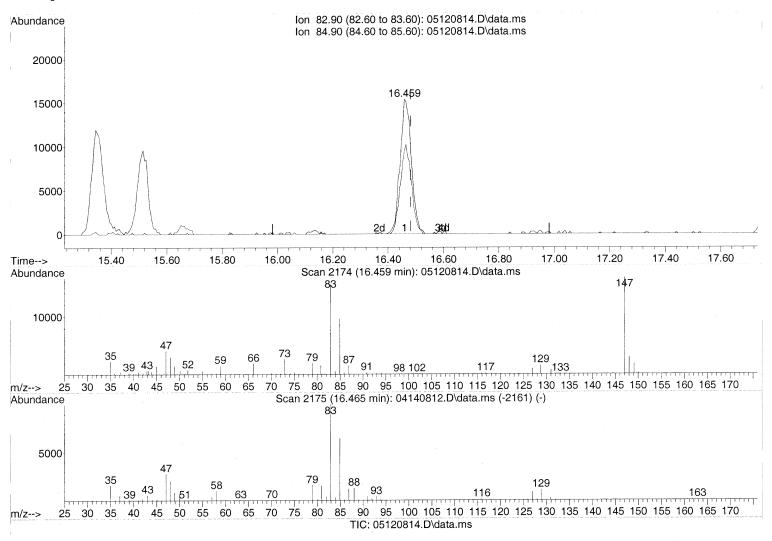
Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

 \tilde{Q} uant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(46) Bromodichloromethane (T)

16.459min (-0.023) 1.42ng

response 43973

 Ion
 Exp%
 Act%

 82.90
 100
 100

 84.90
 63.70
 65.05

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

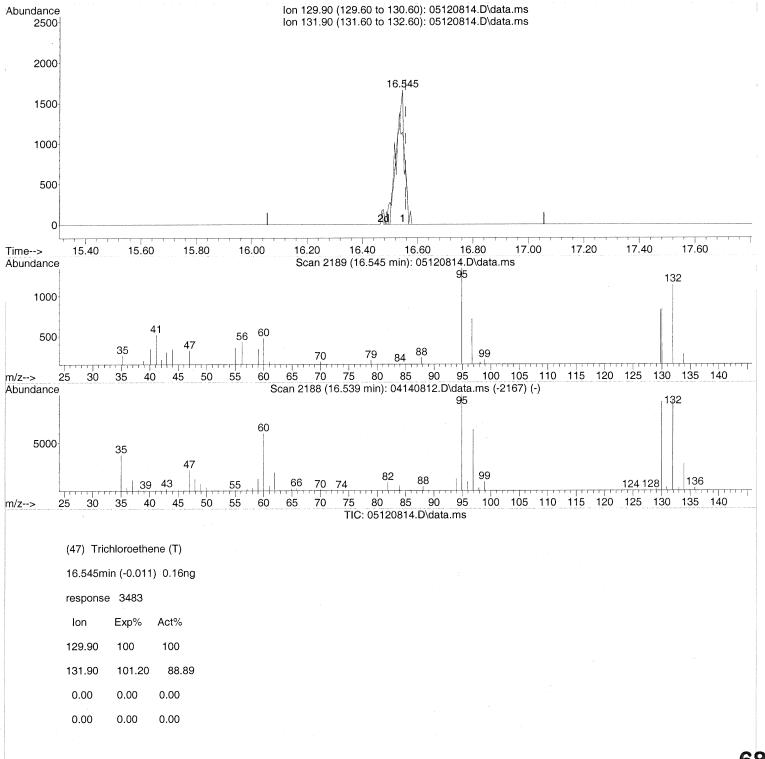
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

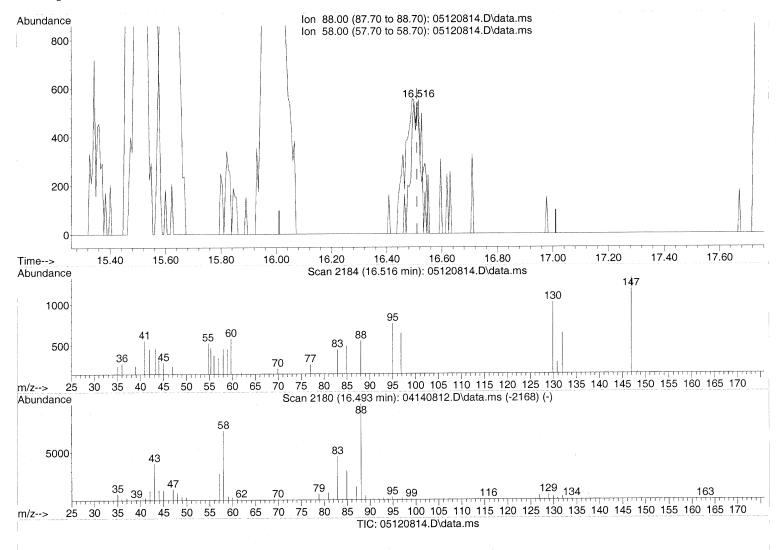
Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(48) 1,4-Dioxane (T)

16.516min (+0.006) 0.10ng

response 1543

 Ion
 Exp%
 Act%

 88.00
 100
 100

 58.00
 90.10
 0.00#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Before subtraction

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

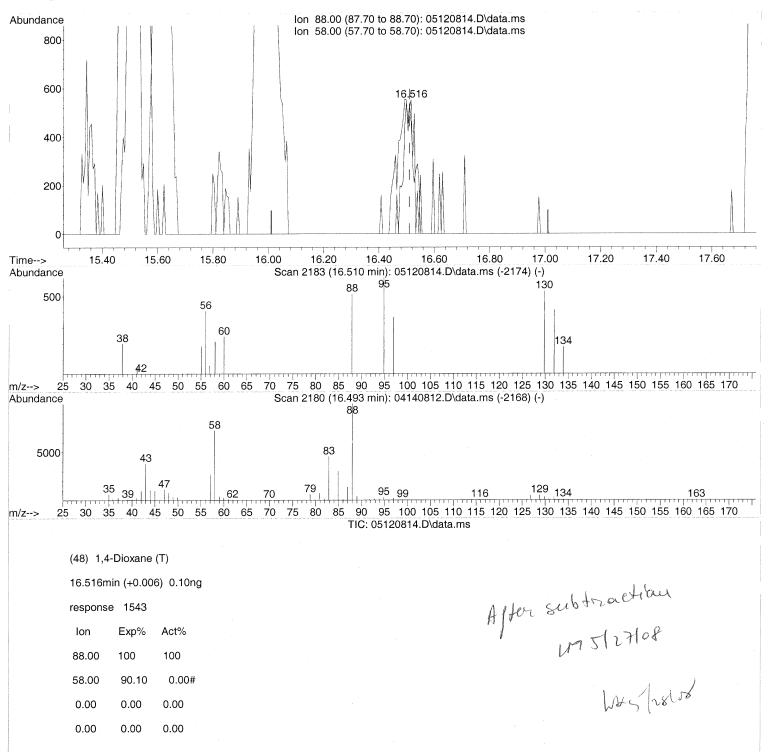
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

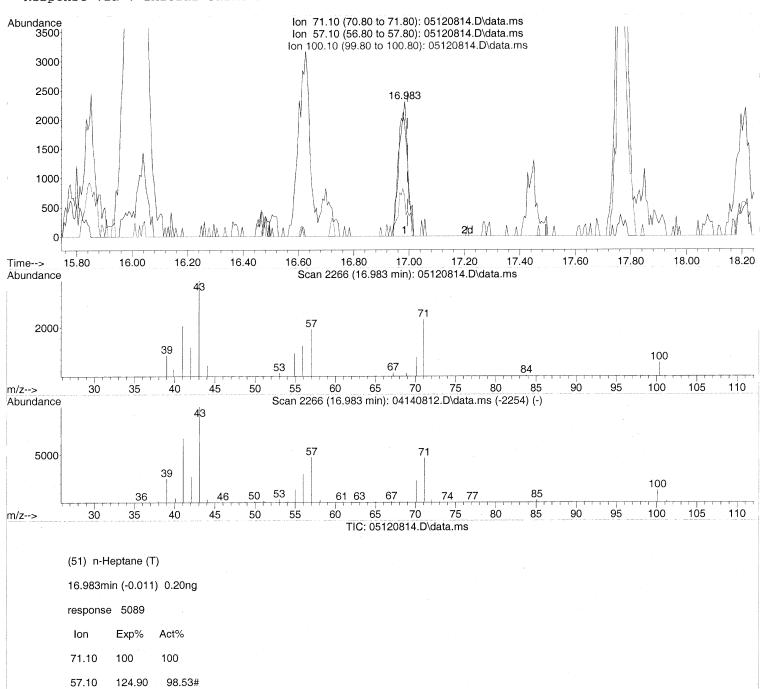
Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



30.10

0.00

36.61

0.00

100.10

0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

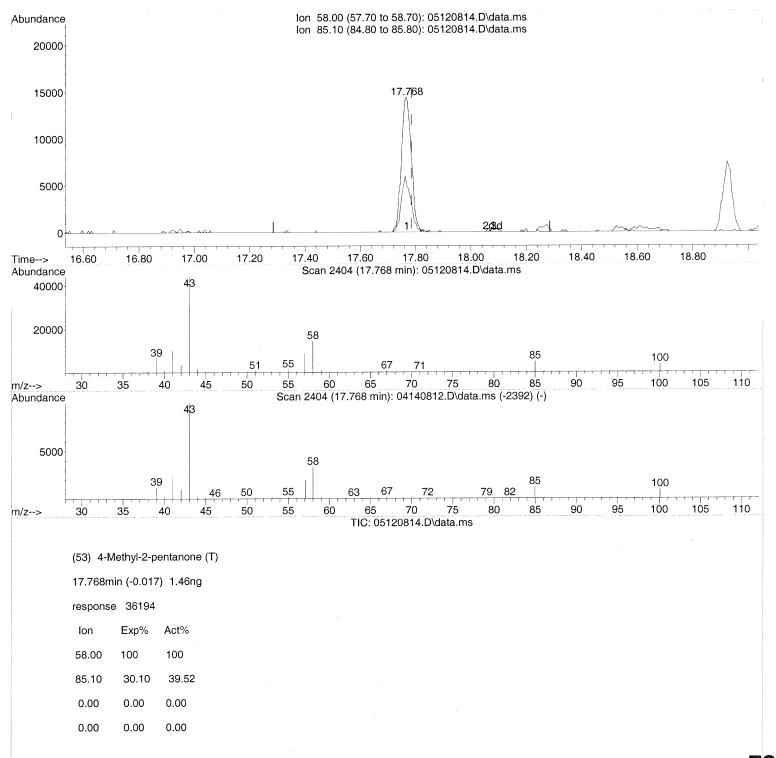
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

: 12 May 2008 20:27 Acq On

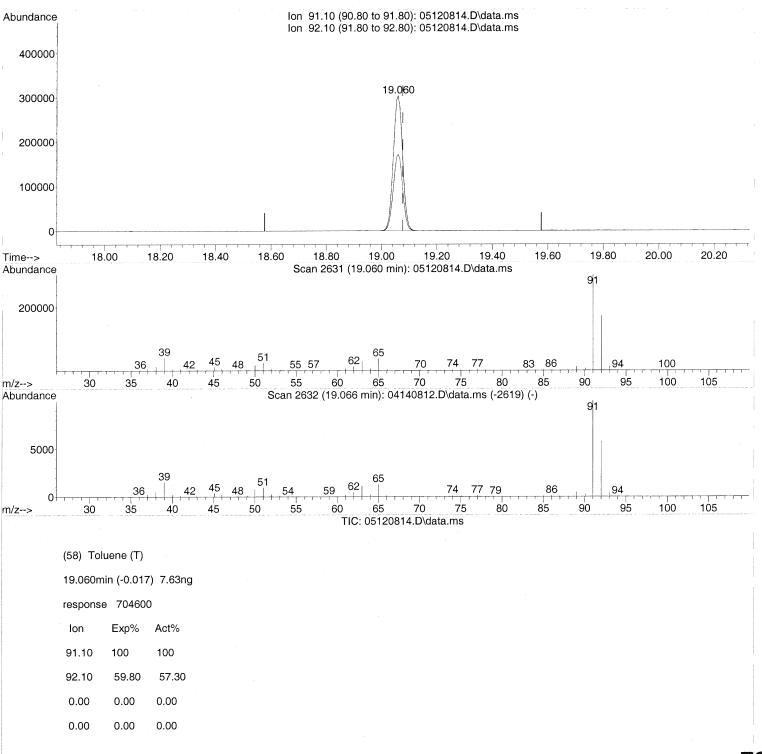
Operator : RTB

Sample : P0801385-001 (1000mL) : ENSR SG64B-05 (-5.6, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 15:53:18 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

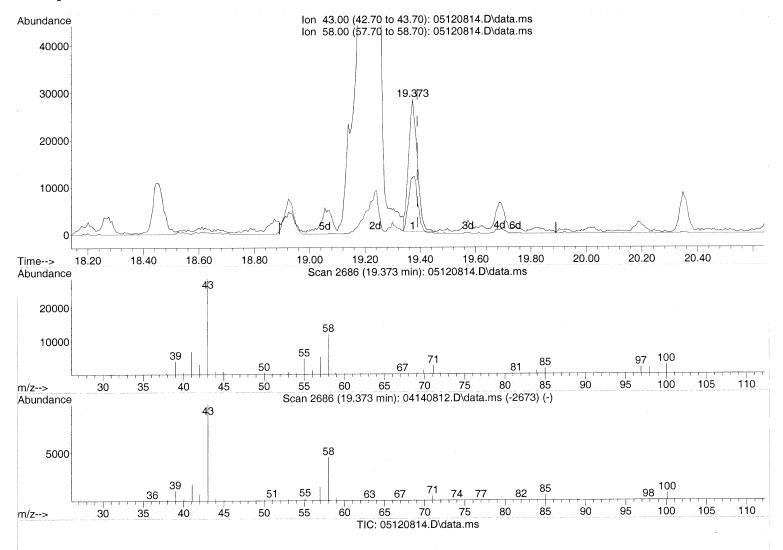
Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(59) 2-Hexanone (T)

19.373min (-0.017) 0.90ng

response 61837

Ion	Exp%	Act%
43.00	100	100
58.00	61.70	47.53
0.00	0.00	0.00
0.00	0.00	0.00

74

Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

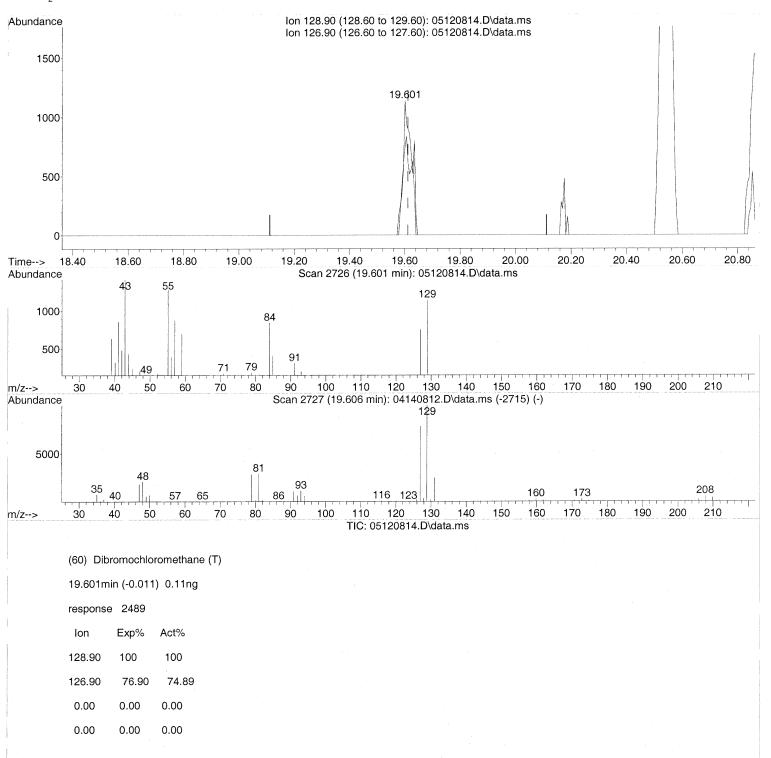
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

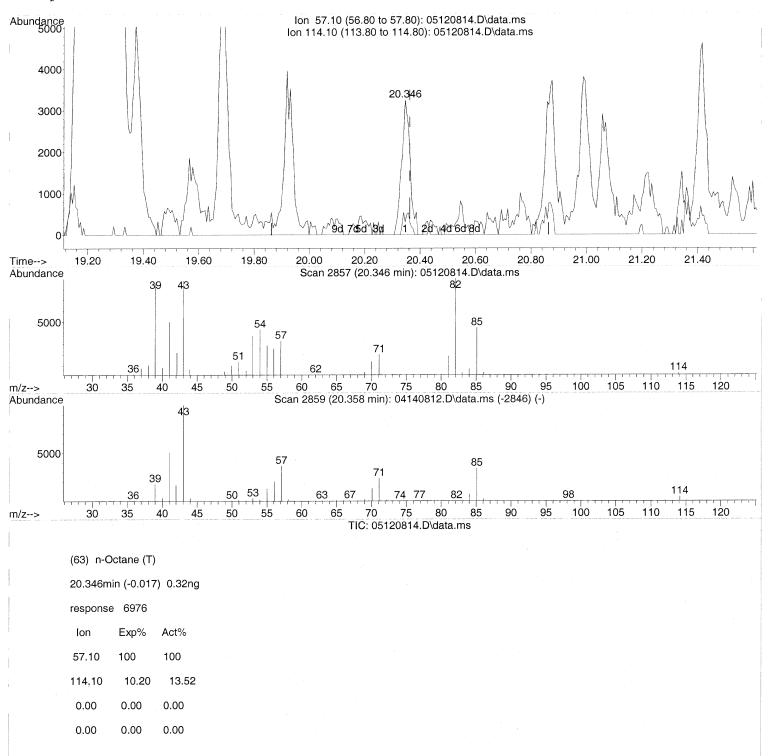
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

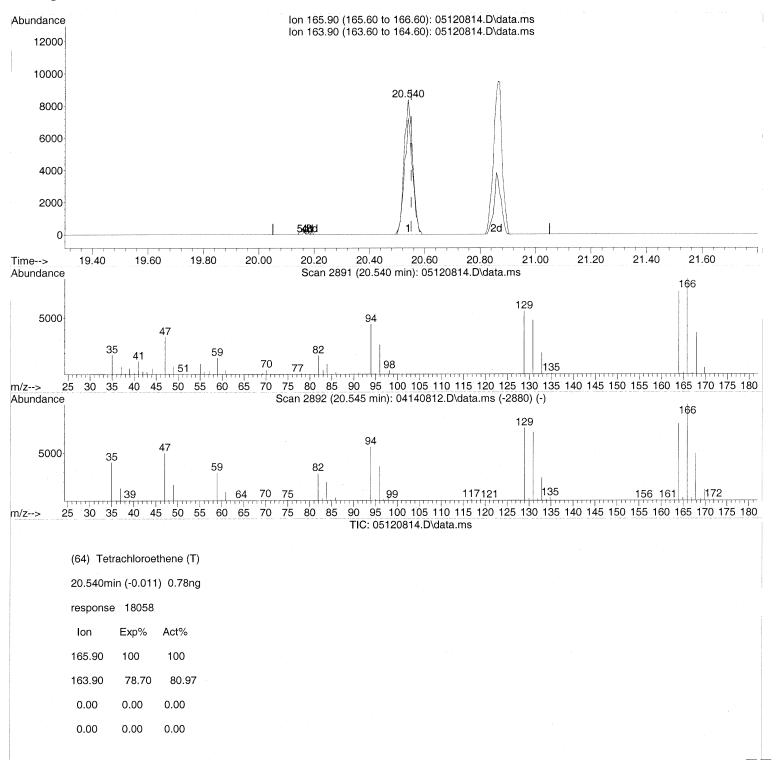
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

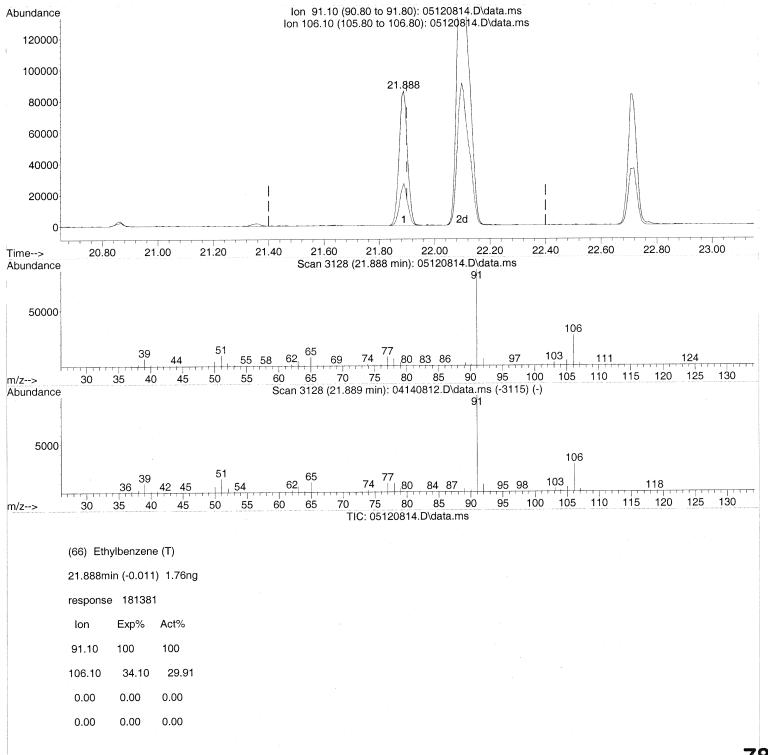
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

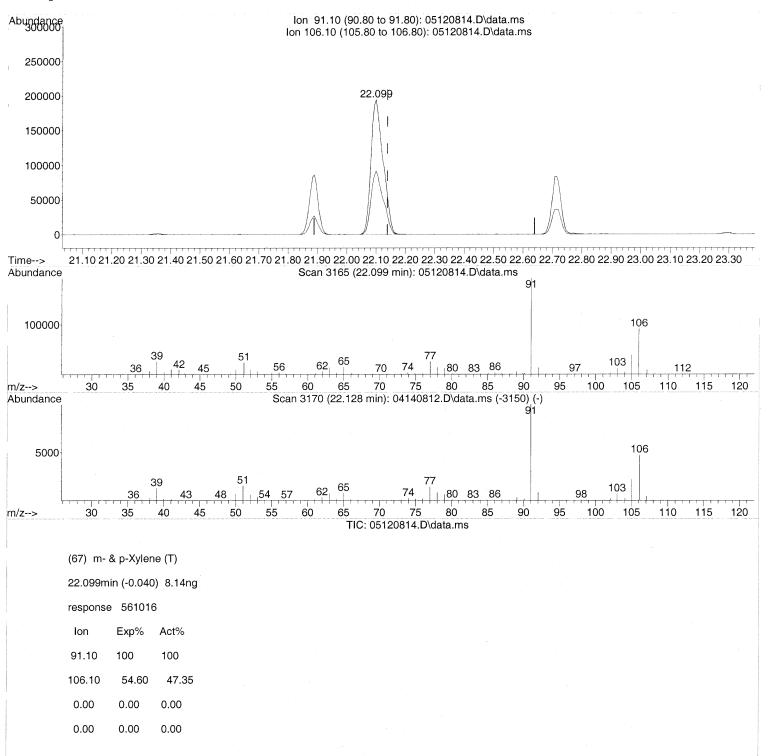


```
Quant Data Path: J:\MS13\DATA\2008_05\12\
Data File: 05120814.D
Acq On: 12 May 2008 20:27
Operator: RTB
Sample: P0801385-001 (1000mL)
Misc: ENSR SG64B-05 (-5.6, 3.5)
ALS Vial: 1 Sample Multiplier: 1
Quant Time: May 27 15:53:18 2008
```

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

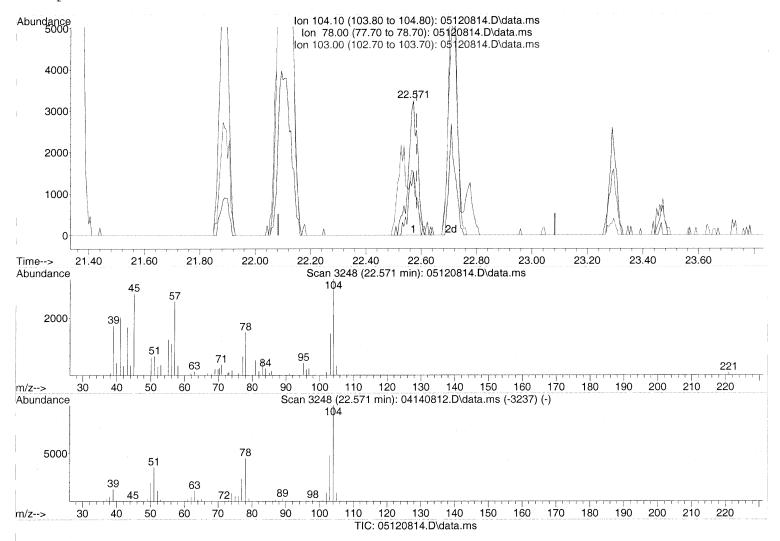
Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(69) Styrene (T)

22.571min (-0.011) 0.13ng

response 7604

 Ion
 Exp%
 Act%

 104.10
 100
 100

 78.00
 39.40
 41.86

 103.00
 47.10
 37.20

 0.00
 0.00
 0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

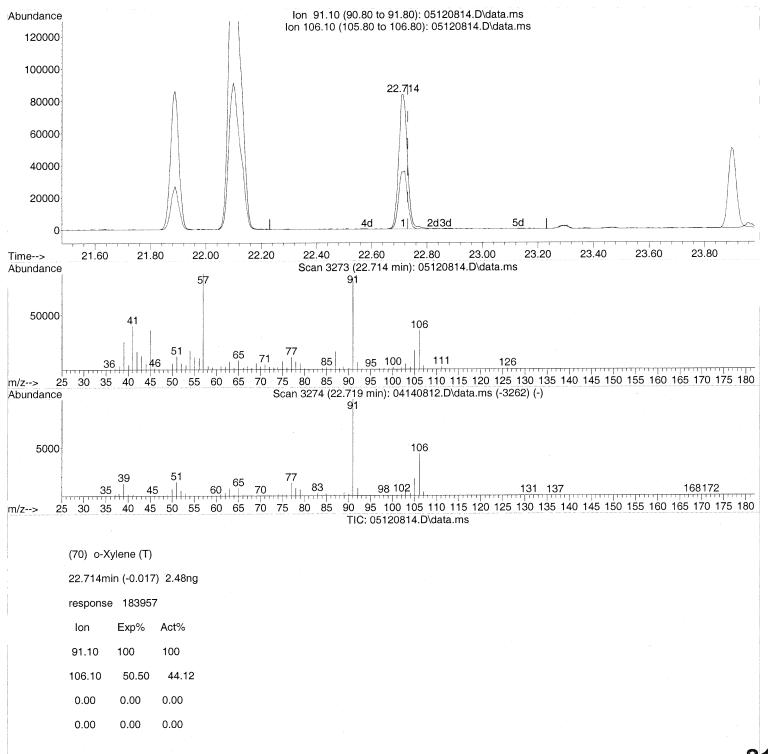
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

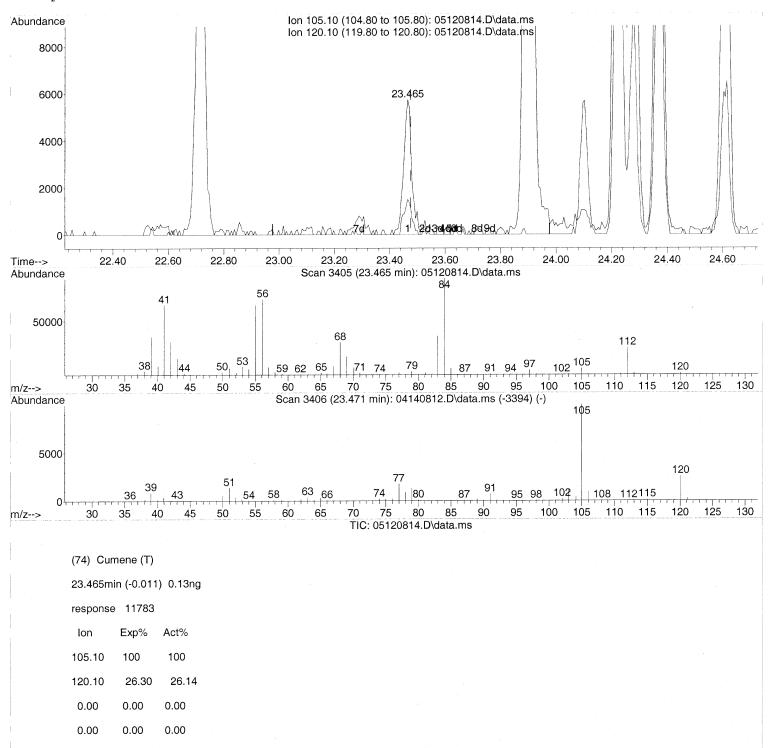
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
  Data File : 05120814.D
  Acq On
               : 12 May 2008
               : RTB
  Operator
               : P0801385-001 (1000mL)
  Sample
  Misc
               : ENSR SG64B-05 (-5.6, 3.5)
                      Sample Multiplier: 1
  ALS Vial
               : 1
  Quant Time: May 27 15:53:18 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
  Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  OLast Update: Tue Apr 15 06:47:20 2008
  Response via: Initial Calibration
Abundance
                                             Ion 91.10 (90.80 to 91.80): 05120814.D\data.ms
                                            Ion 120.10 (119.80 to 120.80): 05120814.D\data.ms
                                             Ion 65.00 (64.70 to 65.70): 05120814.D\data.ms
  120000
  100000
   80000
   60000
   40000
                                                             24.102
   20000
                                                9d 76d
                                                        3d
                                                                                   24.60
                                                                                            24.80
                                                                                                     25.00
                                                                                                              25.20
                              23.40
                                       23.60
                                                23.80
                                                        24.00
                                                                 24.20
                                                                          24.40
Time-->
            23.00
                     23.20
Abundance
                                              Scan 3517 (24.102 min): 05120814.D\data.ms
                                     94
   50000
                         65
             39
                    55
                                                 120
                47
                              77 84
                                          105
                                                      133
                                                                                193
                                                                                       207
                                                                                                                265
             40 50
                      60
                          70
                               80
                                    90
                                        100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270
m/z-->
         30
Abundance
                                          Scan 3517 (24.102 min): 04140812.D\data.ms (-3503) (-)
                                    91
    5000
                                                120
                  51
                              78
                                       98 105 113
                     58
                                       100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270
m/z-->
                  50
                      60
                          70
                               80
                                    90
             40
                                                      TIC: 05120814.D\data.ms
         (76) n-Propylbenzene (T)
                                                                     Be Java Subtra etian
         24.102min (-0.011) 0.40ng
         response 49768
                 Exp%
                        Act%
          Ion
          91.10
                 100
                        100
         120.10
                  23.40
                         21.32
          65.00
                 11.40
                         0.00
          0.00
                 0.00
                        0.00
```

```
Data Path : J:\MS13\DATA\2008_05\12\
  Data File: 05120814.D
  Acq On
               : 12 May 2008
                                  20:27
  Operator
              : RTB
               : P0801385-001 (1000mL)
  Sample
               : ENSR SG64B-05 (-5.6, 3.5)
  Misc
  ALS Vial
                       Sample Multiplier: 1
  Quant Time: May 27 15:53:18 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
  Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  OLast Update: Tue Apr 15 06:47:20 2008
  Response via: Initial Calibration
                                             Ion 91.10 (90.80 to 91.80): 05120814.D\data.ms
Abundance
                                            Ion 120.10 (119.80 to 120.80): 05120814.D\data.ms
                                             Ion 65.00 (64.70 to 65.70): 05120814.D\data.ms
  120000
  100000
   80000
   60000
   40000
                                                             24 102
   20000
                                                 9d 76d
                                                                                                     25.00
                                                                                                              25.20
            23.00
                     23.20
                              23.40
                                       23.60
                                                23.80
                                                         24.00
                                                                  24.20
                                                                           24.40
                                                                                    24.60
                                                                                             24.80
Time-->
                                          Scan 3517 (24.102 min): 05120814.D\data.ms (-3510) (-)
Abundance
                                     91
   20000
   10000
                                                 120
                              78
                                       98 105
                44
                                                                                                                 265
                      59
                                                                                       207
                                                                                                          249
                                        100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270
m/z-->
         30
              40
                  50
                           70
                               80
                                    90
                                          Scan 3517 (24.102 min): 04140812.D\data.ms (-3503) (-)
Abundance
                                     91
    5000
                                                 120
             39
                              78
                   51
                      58
                                       98 105 113
                           70
                               80
                                    90
                                       100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270
m/z-->
              40
                  50
                                                      TIC: 05120814.D\data.ms
         (76) n-Propylbenzene (T)
                                                                  After subtraction
was 5/27/08
         24.102min (-0.011) 0.40ng
         response 49768
          Ion
                 Exp%
                        Act%
          91.10
                 100
                        100
         120.10
                  23.40
                         21.32
          65.00
                  11.40
                         0.00
          0.00
                 0.00
                        0.00
```

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

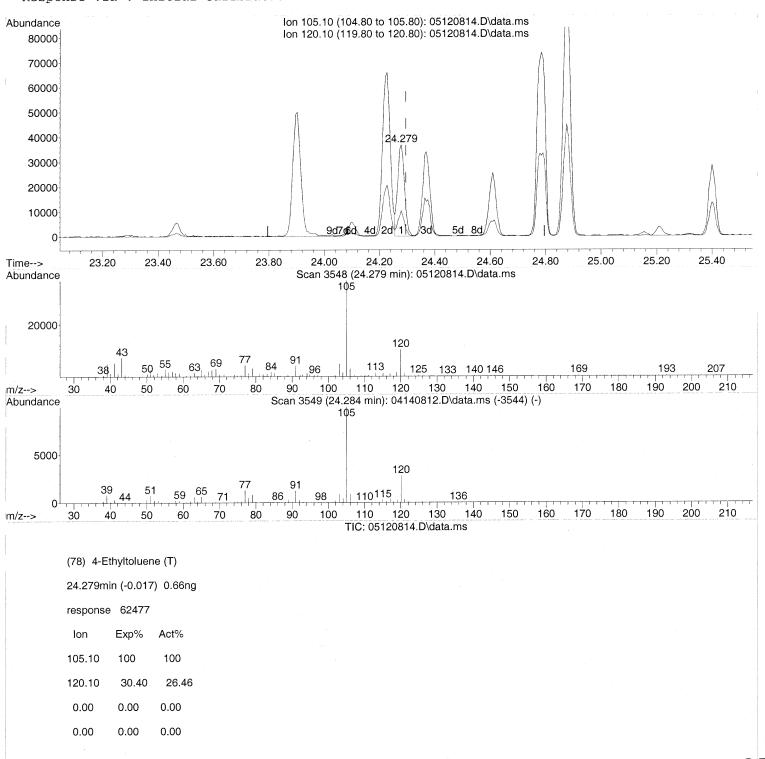
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

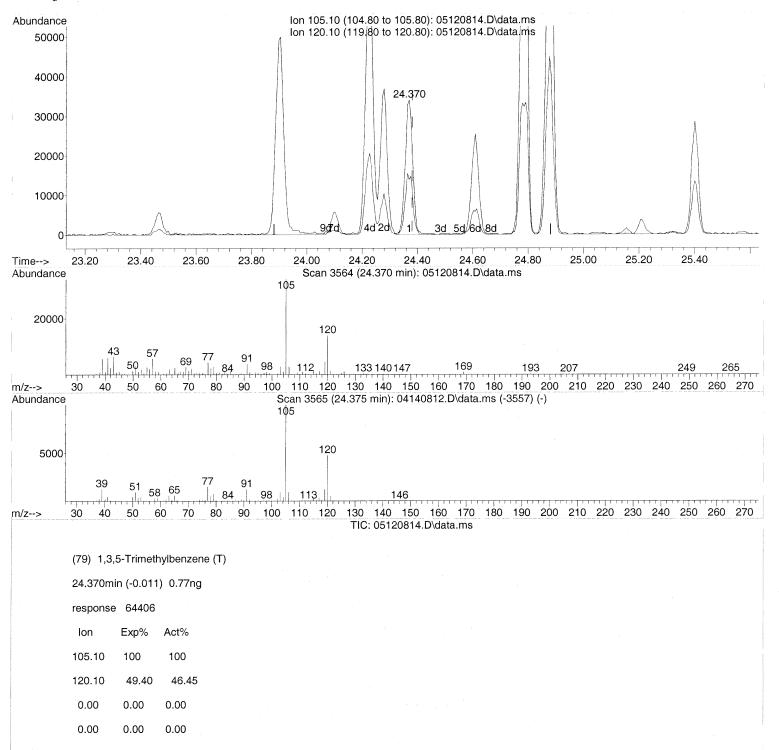
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Quan

Data Path: J:\MS13\DATA\2008_05\12\
Data File: 05120814.D

Acq On: 12 May 2008 20:27

Operator: RTB
Sample: P0801385-001 (1000mL)

Misc: ENSR SG64B-05 (-5.6, 3.5)

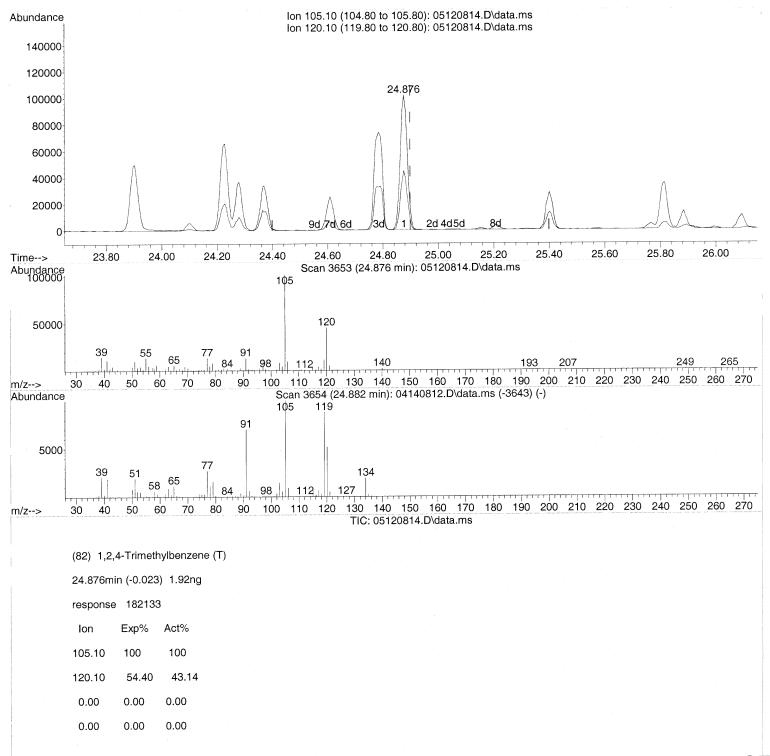
ALS Vial: 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008
```

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

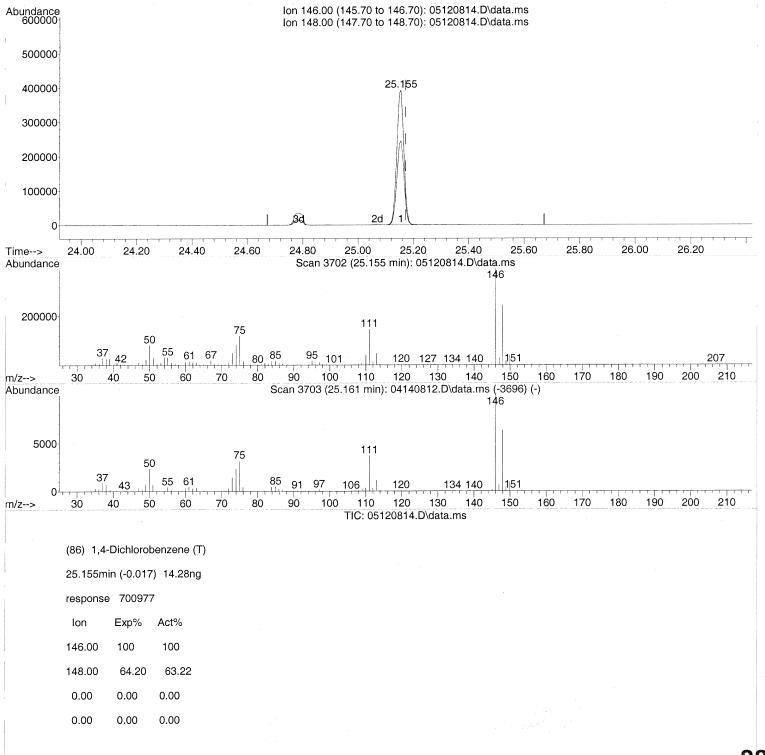
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

OLast Update: Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

: P0801385-001 (1000mL) Sample : ENSR SG64B-05 (-5.6, 3.5) Misc Sample Multiplier: 1 ALS Vial : 1

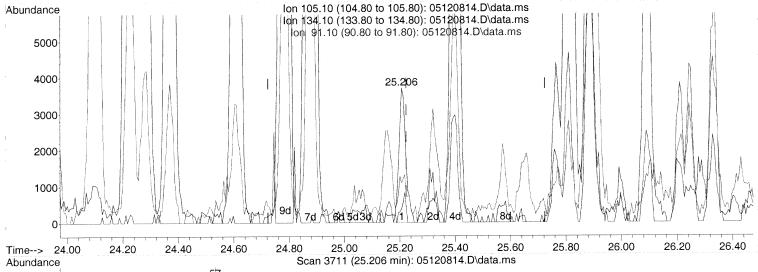
Quant Time: May 27 15:53:18 2008

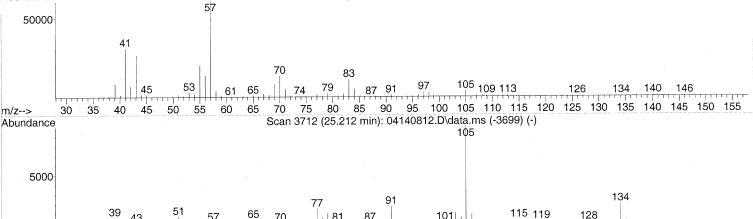
Quant Method : J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Ouant Title

OLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration





87

TIC: 05120814.D\data.ms

85

101

70

70 75 80

65

57

81

(87) sec-Butylbenzene (T)

40

43

45

50 55 60

25.206min (-0.017) 0.06ng

response 6448

m/z-->

Ion Exp% Act% 105.10 100 100 20.90 14.59 134.10 91.10 14.60 51.50# 0.00 0.00 0.00

Before subtraction

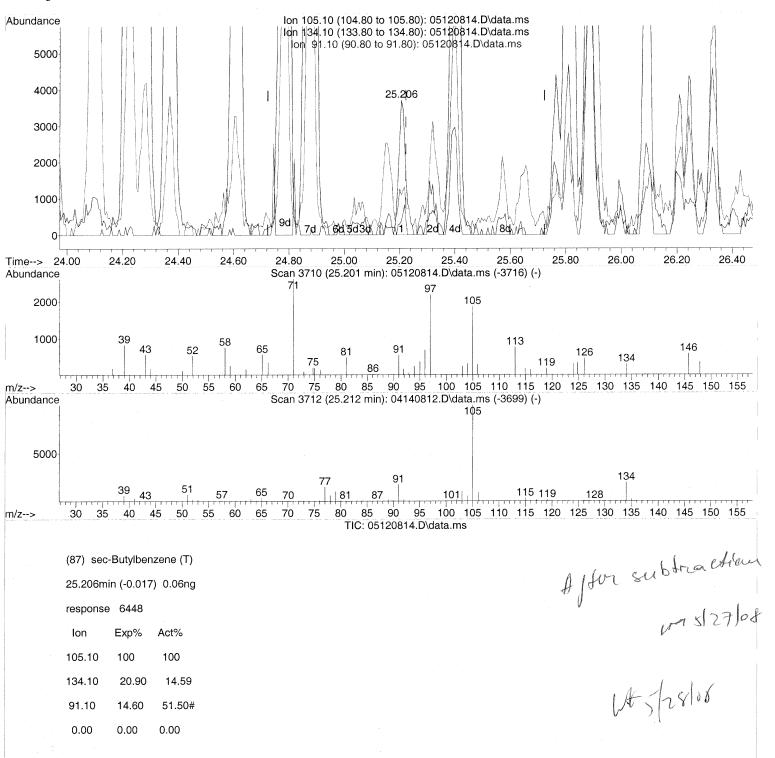
90 95 100 105 110 115 120 125 130 135 140 145 150 155

```
Data Path : J:\MS13\DATA\2008_05\12\
Data File: 05120814.D
Acq On
          : 12 May 2008
                          20:27
Operator
          : RTB
          : P0801385-001 (1000mL)
Sample
          : ENSR SG64B-05 (-5.6, 3.5)
Misc
                Sample Multiplier: 1
ALS Vial
```

Quant Time: May 27 15:53:18 2008

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Ouant Title QLast Update: Tue Apr 15 06:47:20 2008

Ouant Method: J:\MS13\METHODS\R13041408.M



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 20:27

Operator : RTB

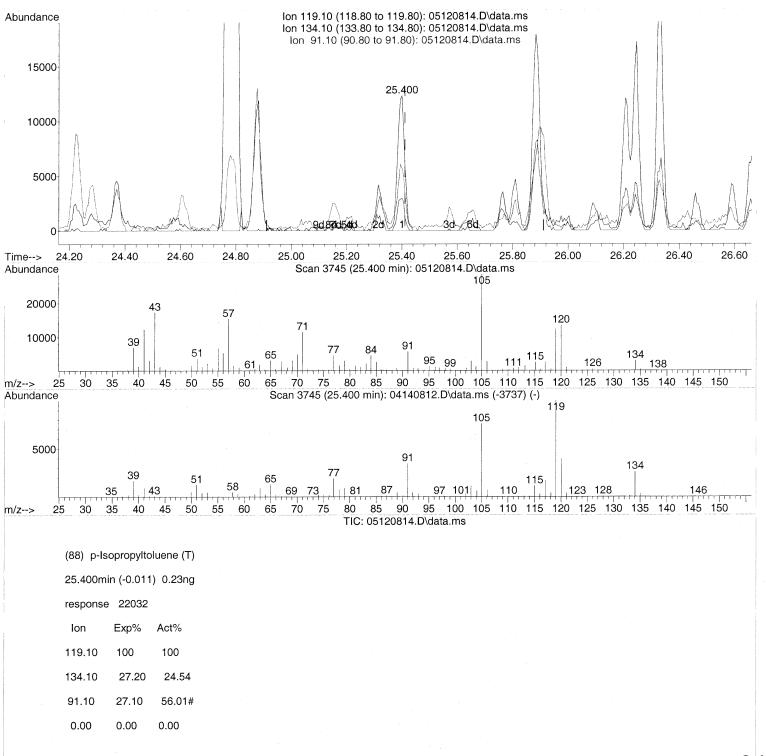
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acg On : 12 May 2008 20:27

Operator : RTB

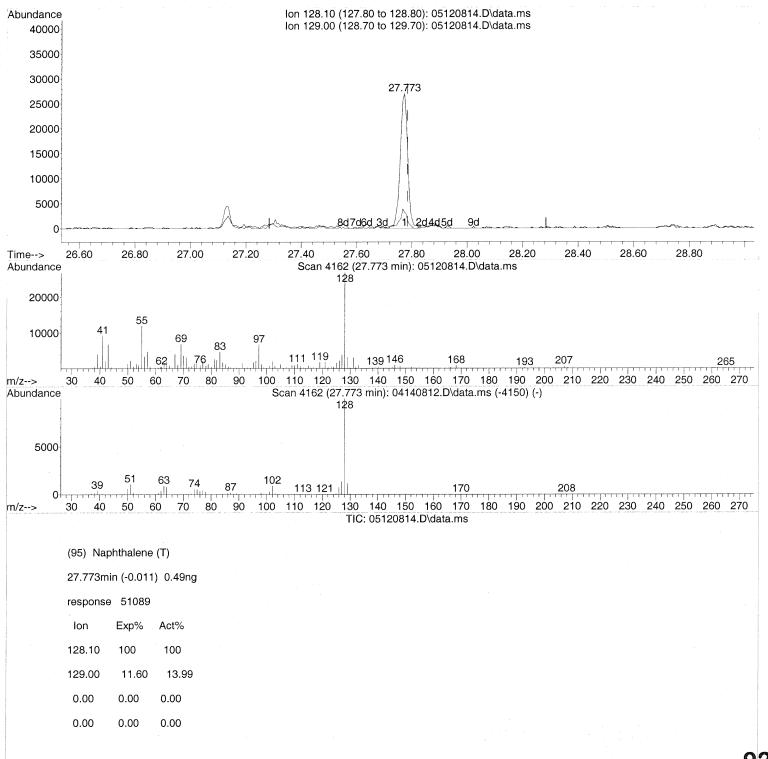
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:53:18 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

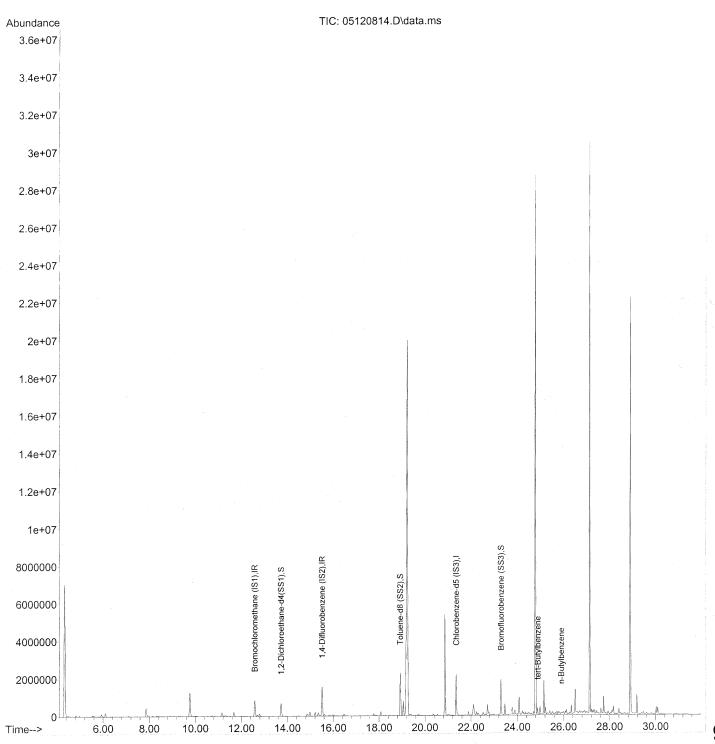
Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:44:44 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120814.D

: 12 May 2008 20:27 Acq On

Operator : RTB

Sample : P0801385-001 (1000mL) : ENSR SG64B-05 (-5.6, 3.5) Misc ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 27 15:44:44 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	130 114 82	390537 1711192 819519	25.000 25.000 25.000	ng	-0.03 -0.02 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.73 18.92 23.29	98	1846857 Recove 627969	ery = 25.143 ery =	86 ng 100 ng	.60% -0.01 .56% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88	119 > 91	21215 28138	0 .236 0.291	ng NA	Qvalue # 54 # 56

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

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120814.D

Acq On : 12 May 2008 20:27

Operator : RTB

Sample : P0801385-001 (1000mL)
Misc : ENSR SG64B-05 (-5.6, 3.5)
ALS Vial : 1 Sample Multiplier: 1

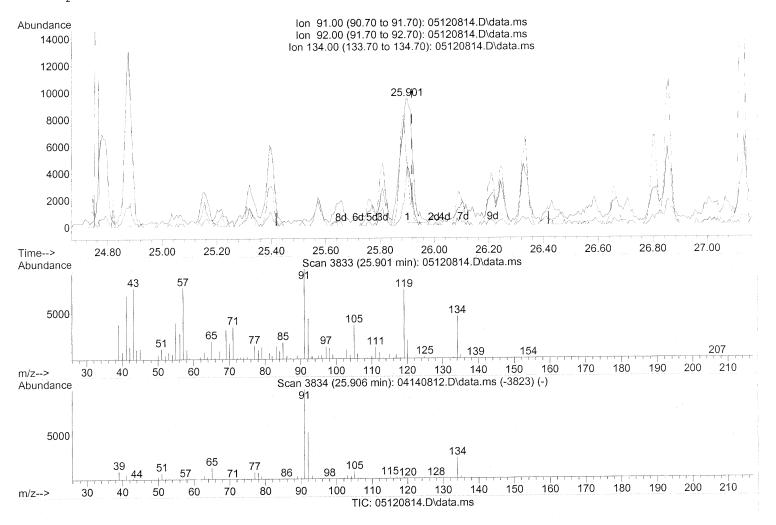
Quant Time: May 27 15:44:44 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.901min (-0.017) 0.29ng

response 28138

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 29.94#

 134.00
 28.80
 60.61#

 0.00
 0.00
 0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG41B-20

Instrument ID:

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385 CAS Sample ID: P0801385-002

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo

Date Collected: 5/9/08 Date Received: 5/12/08 Date Analyzed: 5/12/08

Analyst: Sampling Media:

Test Code:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s) 0.10 Liter(s)

Test Notes:

Container ID:

SC00560

Initial Pressure (psig):

-3.7

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.65

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.83	0.083	0.47	0.17	0.017	
74-87-3	Chloromethane	ND	0.17	0.083	ND	0.080	0.040	
76-14-2	1,2-Dichloro-1,1,2,2-	0.097	0.83	0.083	0.014	0.12	0.012	J
/0-14-2	tetrafluoroethane (CFC 114)	0.097	0.03	0.003	0.014	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.17	0.083	ND	0.065	0.032	
74-83-9	Bromomethane	0.10	0.17	0.083	0.026	0.043	0.021	J
75-00-3	Chloroethane	0.094	0.17	0.083	0.036	0.063	0.031	\mathbf{J}
64-17-5	Ethanol	5.0	8.3	0.083	2.7	4.4	0.044	J
67-64-1	Acetone	25	8.3	0.12	10	3.5	0.051	В
75-69-4	Trichlorofluoromethane	5.9	0.17	0.083	1.1	0.029	0.015	
107-13-1	Acrylonitrile	0.25	0.83	0.12	0.12	0.38	0.053	J
75-35-4	1,1-Dichloroethene	6.7	0.17	0.083	1.7	0.042	0.021	
75-65-0	2-Methyl-2-Propanol	0.68	0.83	0.12	0.22	0.27	0.040	J
75-05-0	(tert-Butyl Alcohol)	0.00	0.03					o o
75-09-2	Methylene Chloride	1.0	0.83	0.083	0.30	0.24	0.024	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.17	0.083	ND	0.053	0.026	
76-13-1	Trichlorotrifluoroethane	0.57	0.17	0.092	0.074	0.022	0.012	
75-15-0	Carbon Disulfide	13	0.83	0.20	4.1	0.27	0.064	
156-60-5	trans-1,2-Dichloroethene	ND	0.17	0.083	ND	0.042	0.021	
75-34-3	1,1-Dichloroethane	0.71	0.17	0.083	0.18	0.041	0.020	
1634-04-4	Methyl tert-Butyl Ether	0.27	0.17	0.083	0.075	0.046	0.023	
108-05-4	Vinyl Acetate	2.3	8.3	0.26	0.64	2.3	0.075	J, M
78-93-3	2-Butanone (MEK)	26	0.83	0.083	8.7	0.28	0.028	
156-59-2	cis-1,2-Dichloroethene	0.15	0.17	0.083	0.037	0.042	0.021	J
108-20-3	Diisopropyl Ether	ND	0.83	0.097	ND	0.20	0.023	
67-66-3	Chloroform	140	0.17	0.097	28	0.034	0.020	

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

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

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

B = Analyte was found in the method blank.

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

Verified By: LAX

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG41B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385 CAS Sample ID: P0801385-002

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Instrument ID: Analyst:

Test Code:

Rusty Bravo

1.00 Liter(s)

Sampling Media:

Test Notes:

6.0 L Summa Canister

Volume(s) Analyzed:

0.10 Liter(s)

Container ID:

SC00560

Initial Pressure (psig):

-3.7

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.65

CAS#	Compound	Result μg/m³	MRL μg/m³	MDL μg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.83	0.084	ND	0.20	0.020	
107-06-2	1,2-Dichloroethane	0.10	0.17	0.083	0.025	0.041	0.020	J
71-55-6	1,1,1-Trichloroethane	ND	0.17	0.083	ND	0.030	0.015	
71-43-2	Benzene	35	0.17	0.083	11	0.052	0.026	
56-23-5	Carbon Tetrachloride	2.3	0.17	0.083	0.37	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.83	0.083	ND	0.20	0.020	W. Controlled Management
78-87-5	1,2-Dichloropropane	0.25	0.17	0.083	0.054	0.036	0.018	
75-27-4	Bromodichloromethane	3.4	0.17	0.083	0.51	0.025	0.012	
79-01-6	Trichloroethene	4.4	0.17	0.083	0.83	0.031	0.015	
123-91-1	1,4-Dioxane	ND	0.83	0.10	ND	0.23	0.028	
80-62-6	Methyl Methacrylate	0.18	0.83	0.12	0.044	0.20	0.030	J
142-82-5	n-Heptane	19	0.83	0.11	4.7	0.20	0.026	
10061-01-5	cis-1,3-Dichloropropene	ND	0.83	0.086	ND	0.18	0.019	
108-10-1	4-Methyl-2-pentanone	12	0.83	0.092	2.9	0.20	0.023	
10061-02-6	trans-1,3-Dichloropropene	ND	0.83	0.10	ND	0.18	0.023	
79-00-5	1,1,2-Trichloroethane	ND	0.17	0.083	ND	0.030	0.015	
108-88-3	Toluene	240	0.83	0.083	64	0.22	0.022	
591-78-6	2-Hexanone	ND	0.83	0.13	ND	0.20	0.031	
124-48-1	Dibromochloromethane	ND	0.17	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.17	0.089	ND	0.021	0.012	
111-65-9	n-Octane	53	0.83	0.083	11	0.18	0.018	
127-18-4	Tetrachloroethene	15	0.17	0.083	2.2	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.17	0.084	ND	0.036	0.018	

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

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

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

Date: 5/18/08
TO15SCAN.XLT - Tronox - Henderson - PageNo.: 97 Verified By: CH

P0801385_TO15_0805281357_SS.xls - Sample (2)

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Client Sample ID: SG41B-20

CAS Sample ID: P0801385-002

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Analyst:

Rusty Bravo

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Sampling Media: Test Notes:

6.0 L Summa Canister

Date Collected: 5/9/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s) 0.10 Liter(s)

Container ID:

SC00560

Initial Pressure (psig):

-3.7

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.65

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	90	0.83	0.10	21	0.19	0.024	
179601-23-1	m,p-Xylenes	420	0.83	0.21	98	0.19	0.049	
75-25-2	Bromoform	ND	0.83	0.13	ND	0.080	0.012	
100-42-5	Styrene	1.7	0.83	0.13	0.41	0.19	0.029	
95-47-6	o-Xylene	110	0.83	0.10	25	0.19	0.024	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.17	0.11	ND	0.024	0.015	
98-82-8	Cumene	3.8	0.83	0.092	0.78	0.17	0.019	
103-65-1	n-Propylbenzene	8.8	0.83	0.086	1.8	0.17	0.017	
622-96-8	4-Ethyltoluene	14	0.83	0.094	2.9	0.17	0.019	
108-67-8	1,3,5-Trimethylbenzene	16	0.83	0.099	3.2	0.17	0.020	
98-83-9	alpha-Methylstyrene	0.63	0.83	0.12	0.13	0.17	0.025	J
95-63-6	1,2,4-Trimethylbenzene	31	0.83	0.11	6.3	0.17	0.023	
100-44-7	Benzyl Chloride	ND	0.17	0.14	ND	0.032	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.17	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	31	0.17	0.092	5.2	0.027	0.015	
135-98-8	sec-Butylbenzene	0.91	0.83	0.096	0.17	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	5.7	0.83	0.11	1.0	0.15	0.020	
95-50-1	1,2-Dichlorobenzene	0.11	0.17	0.11	0.018	0.027	0.018	J
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.83	0.13	ND	0.085	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.17	0.13	ND	0.022	0.017	
91-20-3	Naphthalene	5.9	0.33	0.12	1.1	0.063	0.023	
87-68-3	Hexachlorobutadiene	ND	0.17	0.15	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.33	0.083	ND	0.060	0.015	
104-51-8	n-Butylbenzene	2.7	0.33	0.083	0.50	0.060	0.015	

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

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

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

Verified By: _____ Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo.:

98

Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

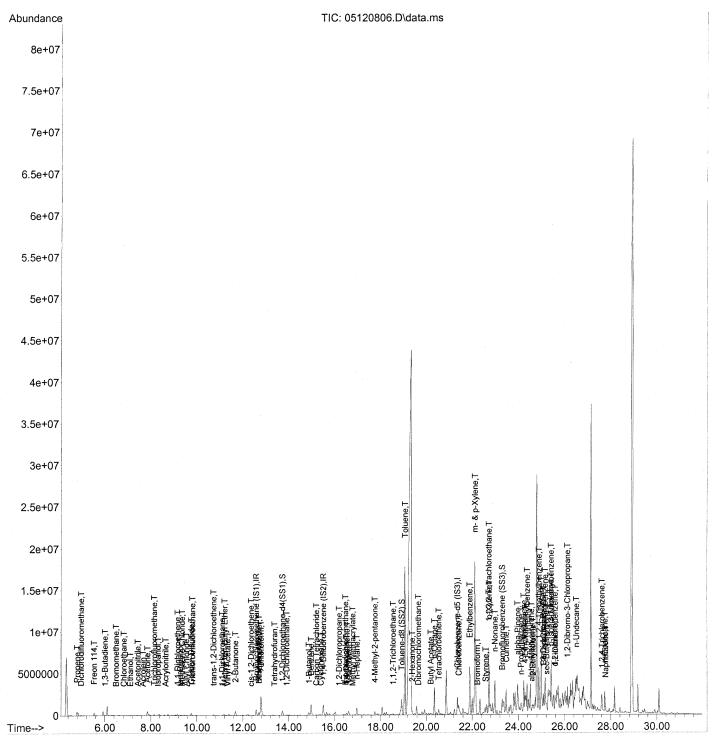
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)		130	313097	25.000 ng	-0.03
37) 1,4-Difluorobenzene (IS2)		114	1366600	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.36	82	725160	25.000 ng	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(13.73	65	558110	22.227 ng	-0.02
Spiked Amount 25.000			Recov		.92%
57) Toluene-d8 (SS2)	18.93	98	1514770	23.305 ng	0.00
Spiked Amount 25.000	00.00	2 17 4	Recov		.24%
73) Bromofluorobenzene (SS3)	23.30	174	574914	25.703 ng	0.00
Spiked Amount 25.000			Recov	ery = 102	.80%
Target Compounds					Qvalue
2) Propene	4.79	42	252991	9.762 ng	# 88
 Dichlorodifluoromethane 	4.97	85	65822	/1.393 ng	98
4) Chloromethane	5.26	50	117	N.D.	
5) Freon 114	(5.53)		1372	$\int 0.059 \text{ ng}$	# 54
6) Vinyl Chloride	5.76	62	55	N.D.	
7) 1,3-Butadiene	6.00	54	23335	0.821 ng	# 74
8) Bromomethane	6.48		1070	0.061 ng	88
9) Chloroethane	6.82	64	865 54059m	(0.057 ng)	# 58
10) Ethanol	7.10	45 41	54059III 51515	(3.059 ng) 1.109 ng	97
11) Acetonitrile 12) Acrolein	7.43	56	4818	0.386 ng	82
13) Acetone	(7.85)	58	259611	(14.979 ng)	# 49
14) Trichlorofluoromethane	8.14	101	132920	(3.581 ng)	97
15) Isopropanol	8.32	45	90129	1.537 ng	94
16) Acrylonitrile	8.64	53	4075m	(0.152 ng)	
17) 1,1-Dichloroethene	9.16		70133	(4.056 ng)	# 86
18) tert-Butanol	9.27	59	19996	/0.411 ng)	# 23
19) Methylene Chloride	9.36		12364	(0.621 ng)	83
20) Allyl Chloride	9.54	41	7966	0.299 ng NA	
21) Trichlorotrifluoroethane	9.81	151	5438	0.343 ng	97
22) Carbon Disulfide	9.76	76	572898	(7.761 ng)	99
23) trans-1,2-Dichloroethene	<10.73	61	1776	0.059 ng	24
24) 1,1-Dichloroethane	11.10	63	15076	(0.430 ng)	92
25) Methyl tert-Butyl Ether	11.21	73 0.6	9456 4720	(0.164 ng) (1.371 ng)	95 (# 1
26) Vinyl Acetate	11.33	86 72	189824	15.618 ng	95
27) 2-Butanone 28) cis-1,2-Dichloroethene	12.36	61	2493	/0.088 ng	74
29) Diisopropyl Ether	12.70	87	2067	0.130 ng N	
30) Ethyl Acetate	12.69		4883	(0.644 ng)	# 30
31) n-Hexane	12.70	57	201928	(5.128 ng)	93100
				And the state of t	100

Data File : 05120806.D

: 12 May 2008 2:08 pm Acq On

Operator : RTB

Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3 7 : ENSR SG41B-20 (-3.7, 3.5) ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Inte	rnal Standards	R.T.	QIon	n Respons	e Conc Units	Dev((Min)
 32)	Chloroform	12.79	83	2456956	84.048 ng]		99
34)	Tetrahydrofuran	13.37	72	7611	0.626 ng	#	82
35)	Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36)	1,2-Dichloroethane	13.90	62	1794	(0.062 ng)	#	63
38)	1,1,1-Trichloroethane	14.30	97	850	N.D.		
39)	Isopropyl Acetate	14.85	61	304	N.D.		
40)	1-Butanol	14.88	56	286365	15.353 ng		88
41)	Benzene	14.98	78	1534570	(21.167 ng)		99
42)	Carbon Tetrachloride	15.21	117	34100	(1.422 ng)		94
43)	Cyclohexane	15.40	84	16676	0.622 ng	#	65
44)	tert-Amyl Methyl Ether	15.88	73	147	N.D.		
45)	1,2-Dichloropropane	16.20	63	3149	0.152 ng		92
	Bromodichloromethane	16.48	83	50845	2.063 ng		92
47)	Trichloroethene	16.54	130	48017	(2.692 ng)	· ·	96
48)	1,4-Dioxane	(16.51)	88	1145	$(0.089 \text{ ng})^{NI}$	#	4
49)	Isooctane	16.62	57	547655	6.380 ng		69
	Methyl Methacrylate	16.79	100	726	0.110 ng	#	1
	n-Heptane	16.98	71	233239		#	80
	cis-1,3-Dichloropropene	17.72	75	54	N.D.		0.17
53)	4-Methyl-2-pentanone	17.72	58	140787	(7.100 ng)		87
	trans-1,3-Dichloropropene		75	229	N.D. ✓		0.7
55)	1,1,2-Trichloroethane	18.55	97	4659	172 070 ng NR		97
58)	Toluene	19.07		14052866	172.078 ng 3		97
59)	2-Hexanone	19.39	43	260330	4.280 ng NR 0.056 ng	#	31 47
	Dibromochloromethane	19.65 19.96	129 107	1103 87	N.D.	#	4 /
61) 62)	1,2-Dibromoethane Butyl Acetate	20.19	43	60969		#	11
	n-Octane	20.19	57	610885	31.915 ng	11	94
64)	Tetrachloroethene	20.55	166	188339	9.211 ng		100
	Chlorobenzene	21.41	112	30975	0.612 ng MA		76
	Ethylbenzene	21.89	91	4950755 (54.293 ng		93
	m- & p-Xylene	22.12		15700643	257 575 pg (83	CD y	93
	Bromoform	22.22	173	746	NEE Ma	111	100
69)	Styrene	(22.58)	104	55304	(1.051 ng) ~	Iedeq Mstre	88
	o-Xylene	22.72)	91	4344921	66.236 ng	W-13178	92
	n-Nonane	22.99	43	1864084	35.485 ng	#	79
	1,1,2,2-Tetrachloroethane	22.72	83	31929	-1.020 ng NR		1
	Cumene	(23.47)	105	192375	(2.312 ng)		100
	alpha-Pinene	23.97	93	1377336	31.141 ng		94
	n-Propylbenzene	24.10	91	591232	(5.309 ng)	#	76
	3-Ethyltoluene	<24.23		1759872	(19.396 ng) M		98
	4-Ethyltoluene	(24.28>		726511	8.696 ng		97
79)	1,3,5-Trimethylbenzene	(24.38)	105	716313	9.654 ng		96101
		/			The state of the s		

Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

Sample : P0801385-002 (1000mL) : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc Units I	Dev(Min)
80) alpha-Methylstyrene	24.56	118	14880	(0.379 ng) #	‡ 1
81) 2-Ethyltoluene	24.61	105	497281	5.452 ng	98
82) 1,2,4-Trimethylbenzene	24.88	105	1563413	18.647 ng	86
83) n-Decane	24.99	57	2722455	58.717 ng	73
84) Benzyl Chloride	25.09	91	5714	0.100 ng	98
85) 1,3-Dichlorobenzene	25.08	146	2365	-0.052 ng < no	
86) 1,4-Dichlorobenzene	(25.15)	146	823639	(18.962 ng)	99
87) sec-Butylbenzene	25.21	105	54301	(0.552 ng)	93
88) p-Isopropyltoluene	(25.40)	119	296181	(3.450 ng)	86
89) 1,2,3-Trimethylbenzene	25.41		311321	3.776 ng	94
90) 1,2-Dichlorobenzene	(25.58)	146	3111	(0.067 ng)	93
91) d-Limonene	25.58	68	332074	8.735 ng	98
92) 1,2-Dibromo-3-Chloropr	26.12	157	593	0.048 ng	
93) n-Undecane	26.50	57	4458171	91.585 ng #	-
94) 1,2,4-Trichlorobenzene	27.62	180	2139	0.074 ng	86
95) Naphthalene	(27.7)	128	328772	3.547 ng	99
96) n-Dodecane	27.74	57	745922	15.103 ng	87
97) Hexachloro-1,3-butadiene	28.20	225	151	N.D.	

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

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Data File: 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

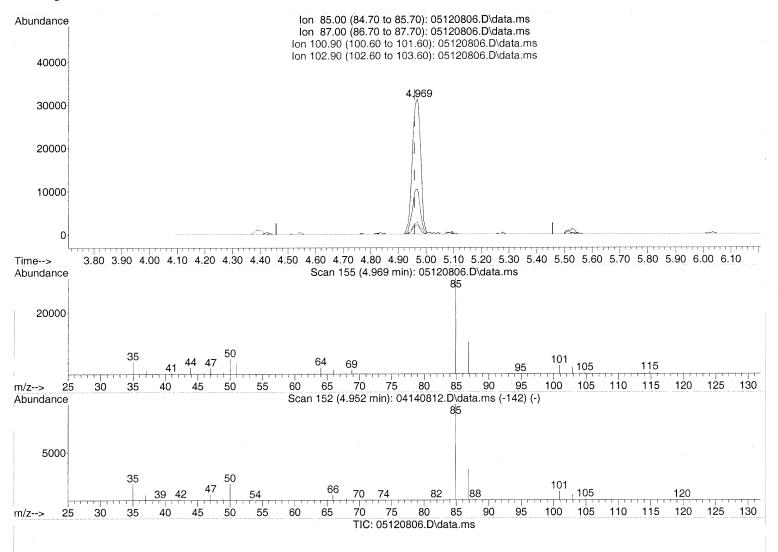
Quant Time: May 12 14:47:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(3) Dichlorodifluoromethane (T)

4.969min (+0.011) 1.39ng

response 65822

Ion	Exp%	Act%
85.00	100	100
87.00	32.50	31.58
100.90	9.30	8.36
102.90	6.00	5.78

103

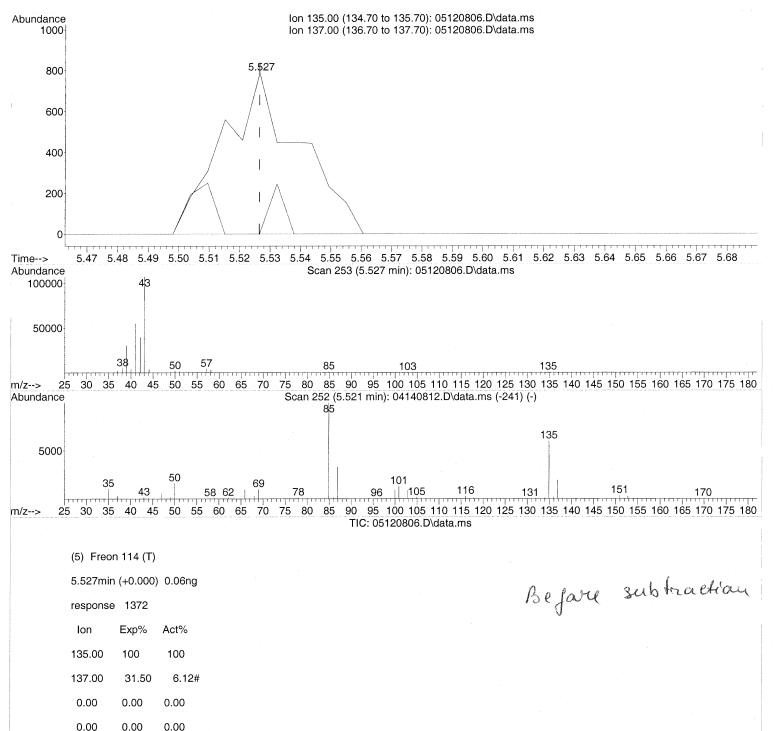
```
Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120806.D
Acq On
          : 12 May 2008 14:08
          : RTB
Operator
          : P0801385-002 (1000mL)
Sample
          : ENSR SG41B-20 (-3.7, 3.5)
Misc
ALS Vial
          : 2
                Sample Multiplier: 1
Quant Time: May 12 14:47:24 2008
```

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



0.00

0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
  Data File : 05120806.D
               : 12 May 2008 14:08
  Acq On
  Operator
               : RTB
               : P0801385-002 (1000mL)
  Sample
               : ENSR SG41B-20 (-3.7, 3.5)
  Misc
                       Sample Multiplier: 1
  ALS Vial
  Quant Time: May 12 14:47:24 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
  Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  QLast Update: Tue Apr 15 06:47:20 2008
  Response via: Initial Calibration
                                            Ion 135.00 (134.70 to 135.70): 05120806.D\data.ms
Abundance
                                            Ion 137.00 (136.70 to 137.70): 05120806.D\data.ms
    1000
                                      5.$27
     800
     600
     400
     200
          5.47 5.48 5.49 5.50 5.51 5.52 5.53 5.54 5.55 5.56 5.57 5.58 5.59 5.60 5.61 5.62 5.63 5.64 5.65 5.66 5.67 5.68
Time-->
                                            Scan 253 (5.527 min): 05120806.D\data.ms (-256) (-)
Abundance
                                                  85
    1000
     500
                             56
                          52
                                                                                     135
                                                              103
       25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180
Abundance
                                            Scan 252 (5.521 min): 04140812.D\data.ms (-241) (-)
                                                                                     135
    5000
                                                             101
              35
                    43
                              58 62
                                             78
                                                               105
                                                                                  131
                                                         96
             35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 125 130 135 140 145 150 155 160 165 170 175 180
m/z-->
                                                      TIC: 05120806.D\data.ms
         (5) Freon 114 (T)
                                                                               After subtraction

MS127108

Was 12864
         5.527min (+0.000) 0.06ng
         response 1372
          Ion
                 Exp%
                        Act%
                 100
                         100
         135.00
         137.00
                  31.50
                          6.12#
          0.00
                        0.00
                 0.00
          0.00
                 0.00
                        0.00
```

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 14:08

Operator : RTB

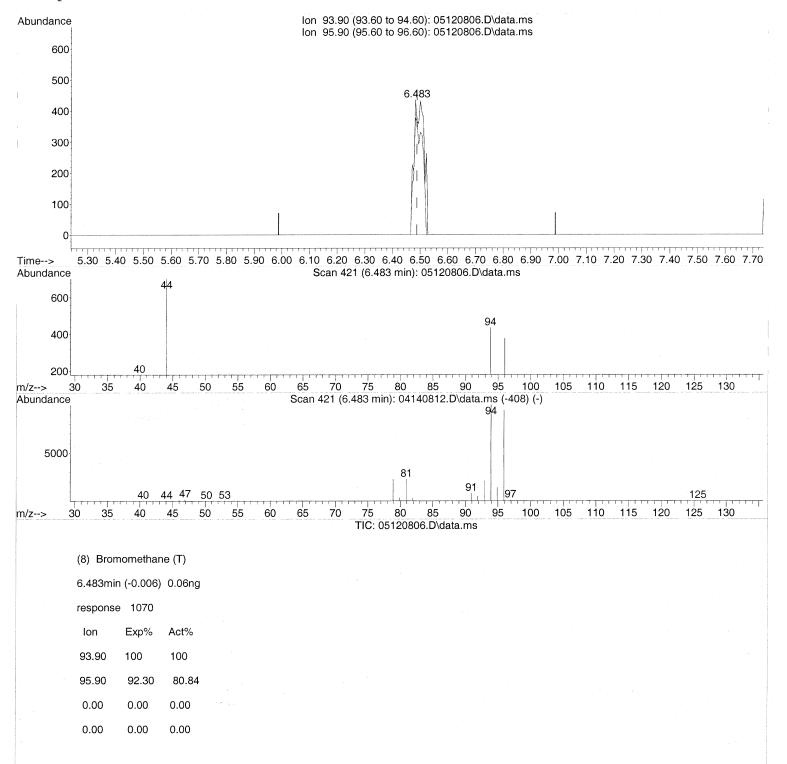
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 14:47:24 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

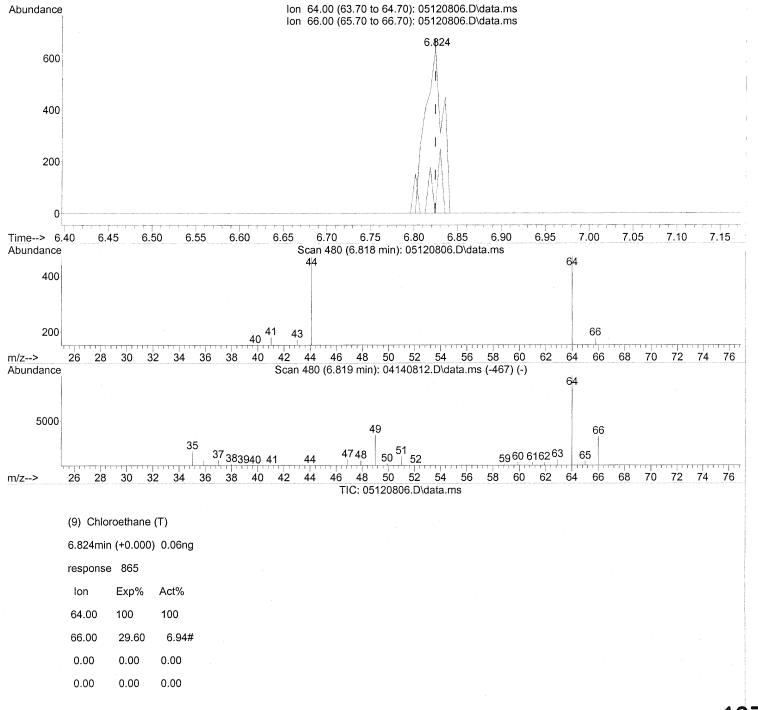
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

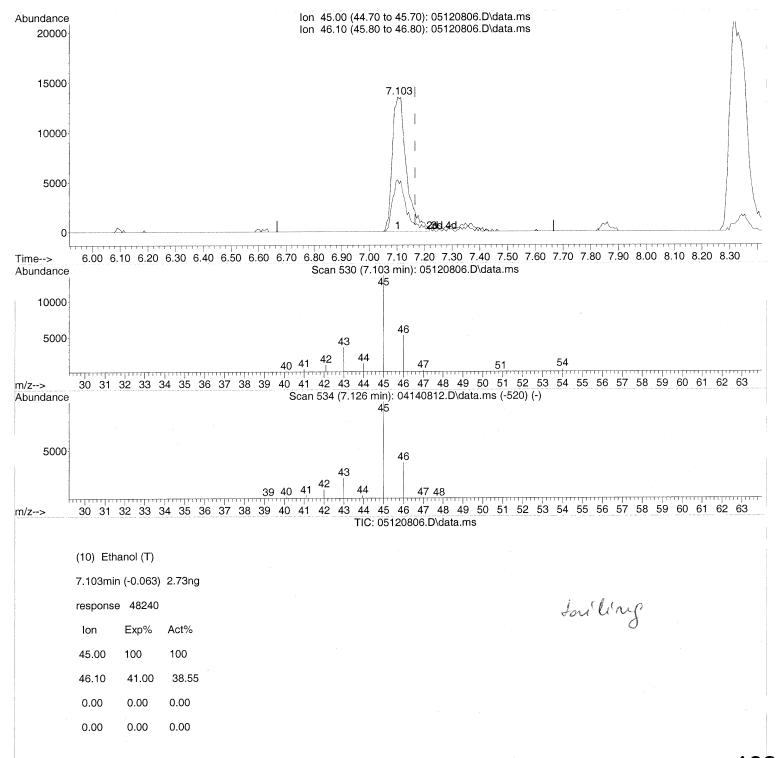


```
Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120806.D
Acq On
          : 12 May 2008 14:08
Operator
          : RTB
Sample
          : P0801385-002 (1000mL)
          : ENSR SG41B-20 (-3.7, 3.5)
Misc
                Sample Multiplier: 1
ALS Vial
Ouant Time: May 27 16:47:39 2008
```

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Quantitation Report (Qedit)
  Data Path : J:\MS13\DATA\2008_05\12\
  Data File: 05120806.D
               : 12 May 2008 14:08
  Acq On
               : RTB
  Operator
               : P0801385-002 (1000mL)
  Sample
               : ENSR SG41B-20 (-3.7, 3.5)
  Misc
                      Sample Multiplier: 1
  ALS Vial
  Ouant Time: May 27 16:47:39 2008
  Quant Method: J:\MS13\METHODS\R13041408.M
  Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  QLast Update : Tue Apr 15 06:47:20 2008
  Response via : Initial Calibration
                                            Ion 45.00 (44.70 to 45.70): 05120806.D\data.ms
Abundance
                                            Ion 46.10 (45.80 to 46.80): 05120806.D\data.ms
   20000
   15000
                                                         7.103
   10000
    5000
          6.00 6.10 6.20 6.30 6.40 6.50 6.60 6.70 6.80 6.90 7.00 7.10 7.20 7.30 7.40 7.50 7.60 7.70 7.80 7.90 8.00 8.10 8.20 8.30
Time-->
Abundance
                                              Scan 530 (7.103 min): 05120806.D\data.ms
   10000
                                                           46
    5000
                                                                          51
         30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
m/z-->
                                          Scan 534 (7.126 min): 04140812.D\data.ms (-520) (-)
Abundance
    5000
                                                           46
                                      39 40 41
         30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63
m/z-->
                                                    TIC: 05120806.D\data.ms
         (10) Ethanol (T)
                                                                       metude tailing
un stætlof
         7.103min (-0.063) 3.06ng m
         response 54059
          Ion
                 Exp%
                       Act%
         45.00
                 100
                        100
         46.10
                 41.00
                        34.40
          0.00
                 0.00
                       0.00
          0.00
                 0.00
                       0.00
```

```
Data Path : J:\MS13\DATA\2008_05\12\
```

: 12 May 2008 14:08 Acq On

Operator : RTB

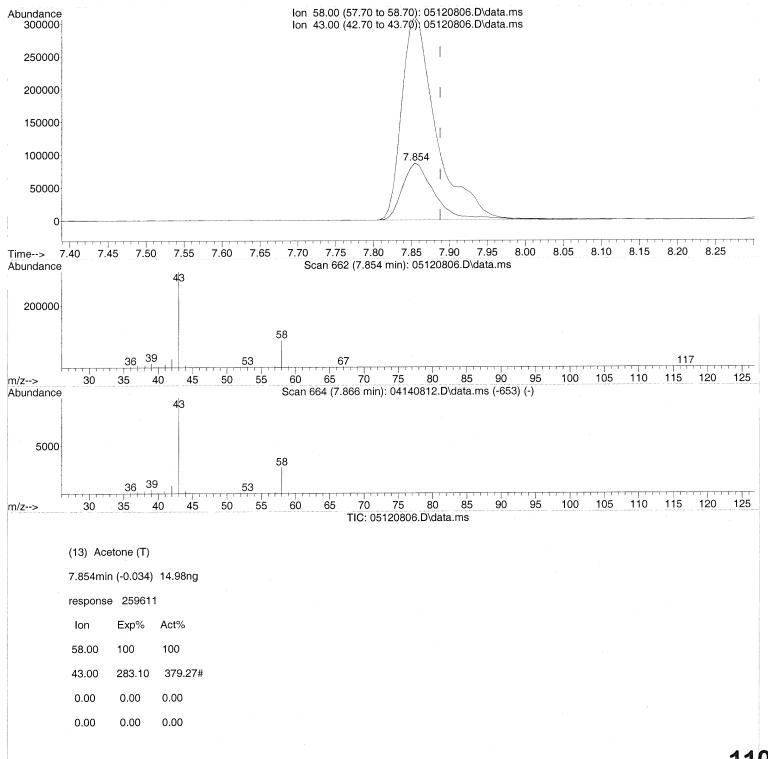
: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 12 14:47:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



```
Quantitation Report (Qedit)
  Data Path : J:\MS13\DATA\2008_05\12\
  Data File : 05120806.D
               : 12 May 2008
  Acq On
  Operator
               : RTB
                : P0801385-002 (1000mL)
  Sample
                : ENSR SG41B-20 (-3.7, 3.5)
  Misc
                       Sample Multiplier: 1
  ALS Vial
  Quant Time: May 12 14:47:24 2008
  Quant Method : J:\MS13\METHODS\R13041408.M
                   : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
  Quant Title
  QLast Update : Tue Apr 15 06:47:20 2008
  Response via : Initial Calibration
                                             Ion 100.90 (100.60 to 101.60): 05120806.D\data.ms
Abundance
80000
                                             Ion 102.90 (102.60 to 103.60): 05120806.D\data.ms
   70000
   60000
                                                               8.144
   50000
   40000
   30000
   20000
   10000
Time--> 6.90 7.00 7.10 7.20 7.30 7.40 7.50 7.60 7.70 7.80 7.90 8.00 8.10 8.20 8.30 8.40 8.50 8.60 8.70 8.80 8.90 9.00 9.10 9.20 9.30
                                                Scan 713 (8.144 min): 05120806.D\data.ms
Abundance
                                                                                        101
   40000
   20000
                   35
                                                    66
                                                                                            105
                                                                                                           119
                            43
                                   50
                                           58
                                                        70
                                                                        86
                                                                                      98
                                                                        85
                                                                                       100
                                                                                                            120
                                                                                                                 125
                                                                                                                      130
                             45
                                   50
                                        55
                                             60
                                                   65
                                                        70
                                                             75
                                                                  80
                                                                             90
                                                                                  95
                                                                                           105
                                                                                                 110
                                                                                                      115
         25
              30
                   35
                        40
m/z-->
                                             Scan 713 (8.145 min): 04140812.D\data.ms (-700) (-)
Abundance
                                                                                        101
    5000
                   35
                                                    66
                                                                                            105
                                                                    82
                                                                                                           119 122
                                   50
                                                        70
                                                                        86
                                                                                     97
                      38
                                             59
                                                                                                            120
                                                                                                                 125
                                                                                                                      130
                                                             75
                                                                        85
                                                                                       100
                                                                                            105
m/z-->
         25
              30
                   35
                              45
                                   50
                                        55
                                             60
                                                   65
                                                        70
                                                                  80
                                                                             90
                                                                                  95
                                                                                                 110
                                                                                                      115
                                                        TIC: 05120806.D\data.ms
          (14) Trichlorofluoromethane (T)
          8.144min (-0.006) 3.58ng
          response 132920
           lon
                  Exp%
                         Act%
                  100
          100.90
                          100
```

64.80

0.00

0.00

62.79

0.00

0.00

102.90

0.00

0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

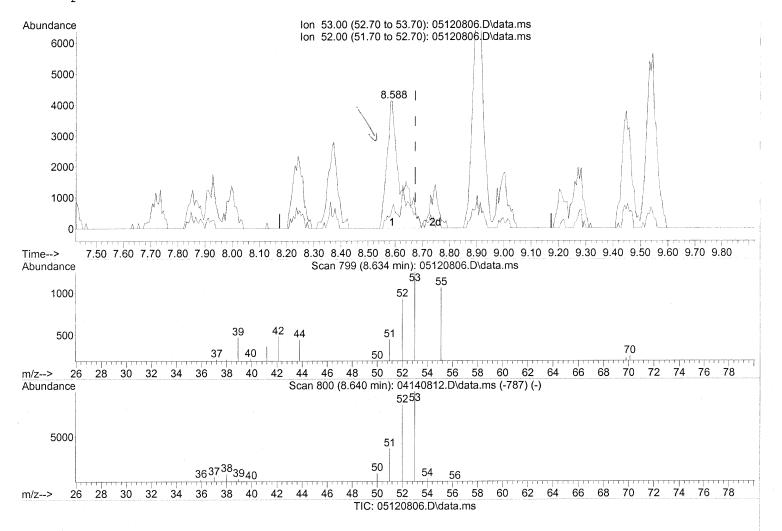
Quant Time: May 27 16:49:02 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(16) Acrylonitrile (T)

8.588min (-0.085) 0.52ng

response 13919

 Ion
 Exp%
 Act%

 53.00
 100
 100

 52.00
 82.50
 11.71#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

extra cul

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120806.D

Acq On : 12 May 2008

: RTB Operator

Sample : P0801385-002 (1000mL) ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial : 2 Sample Multiplier: 1

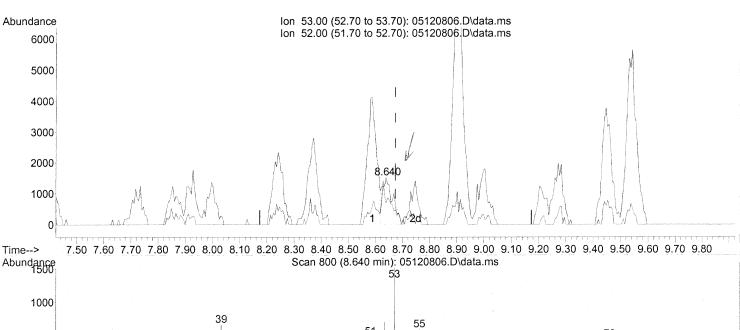
Quant Time: May 27 16:49:02 2008

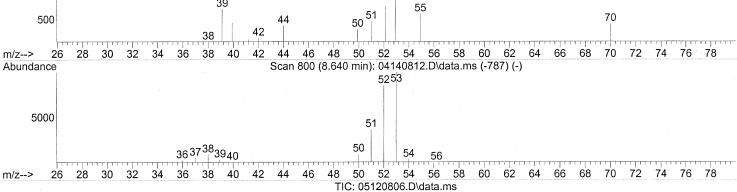
Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration





(16) Acrylonitrile (T)

8.640min (-0.034) 0.15ng m

response 4075

Act% Ion Exp% 53.00 100 100 52.00 82.50 40.00# 0.00 0.00 0.00 0.00 0.00 0.00

removed extra peak

UV 5/18/08

M5/28/08

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 14:08

Operator : RTB

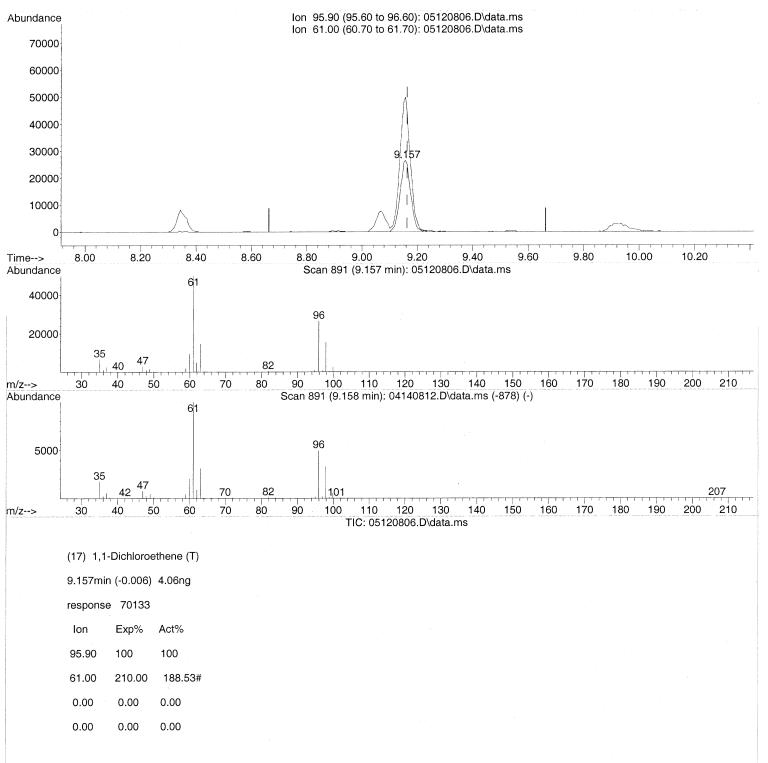
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

: 12 May 2008 14:08 Acq On

: RTB Operator

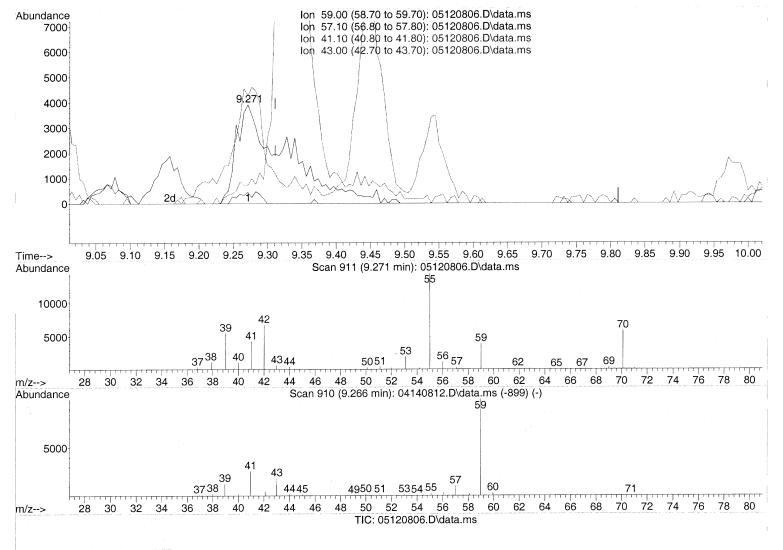
: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

 $\rm \widetilde{Q}uant\ Title$: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(18) tert-Butanol (T)

9.271min (-0.040) 0.41ng

response 19996

Act% lon Exp% 100 100 59.00 57.10 10.30 5.04 41.10 20.10 82.96# 43.00 12.30 0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 14:08

Operator : RTB

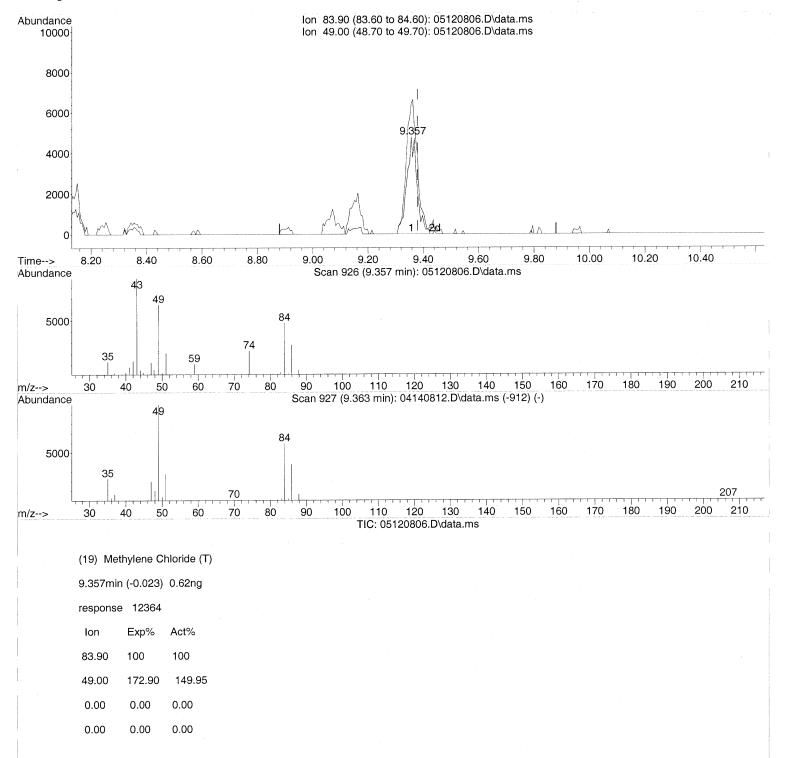
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr $15^-06:47:20~2008$



Data File: 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

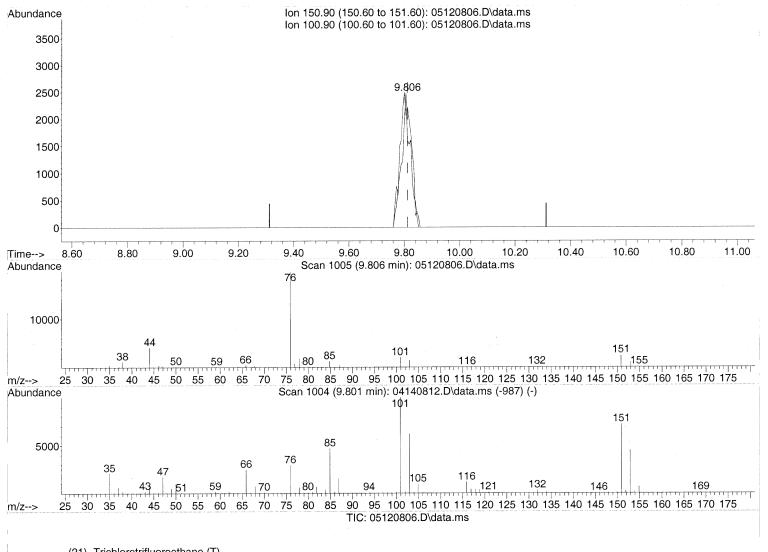
Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.806min (-0.006) 0.34ng

response 5438

 Ion
 Exp%
 Act%

 150.90
 100
 100

 100.90
 126.50
 129.39

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Before subtraction

```
Data Path : J:\MS13\DATA\2008_05\12\
Data File: 05120806.D
          : 12 May 2008
Acq On
Operator
          : RTB
Sample
          : P0801385-002 (1000mL)
Misc
ALS Vial
Quant Time: May 27 16:28:24 2008
Ouant Title
Response via: Initial Calibration
 3500
 3000
 2500
 2000
 1500
 1000
```

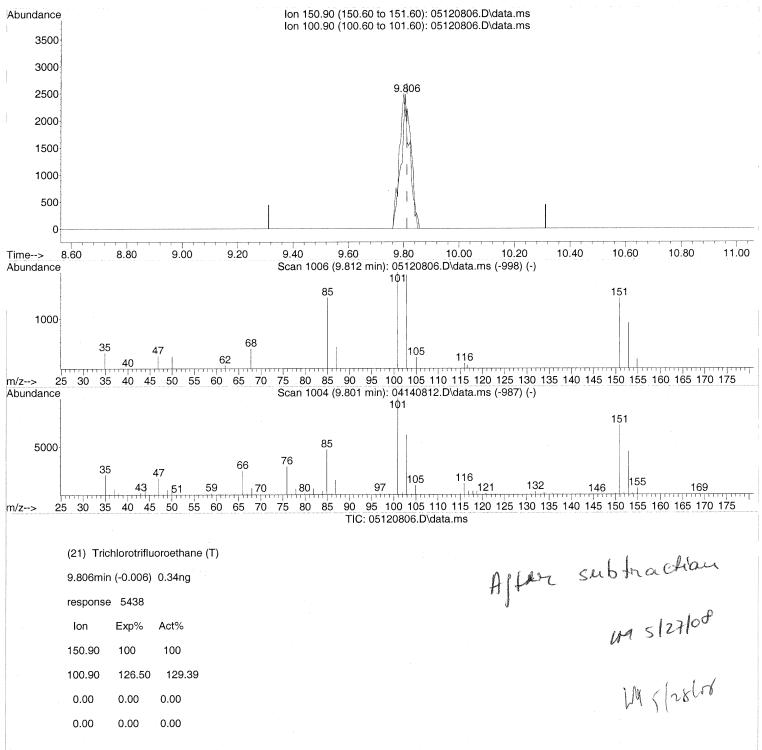
: ENSR SG41B-20 (-3.7, 3.5)

Sample Multiplier: 1

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Acq On : 12 May 2008 14:08

Operator : RTB

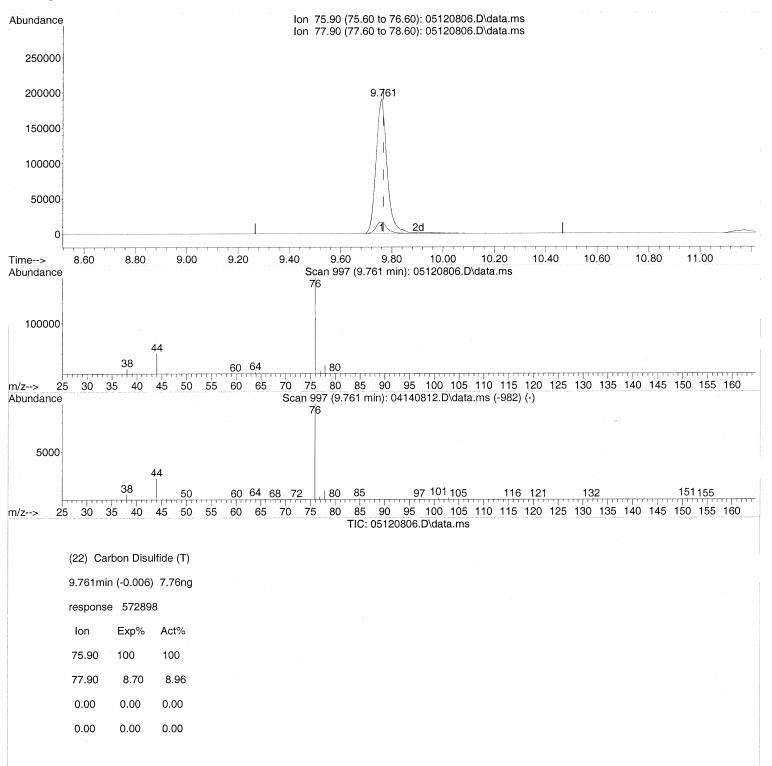
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
```

: 12 May 2008 14:08 Acq On

Operator : RTB

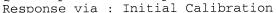
P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

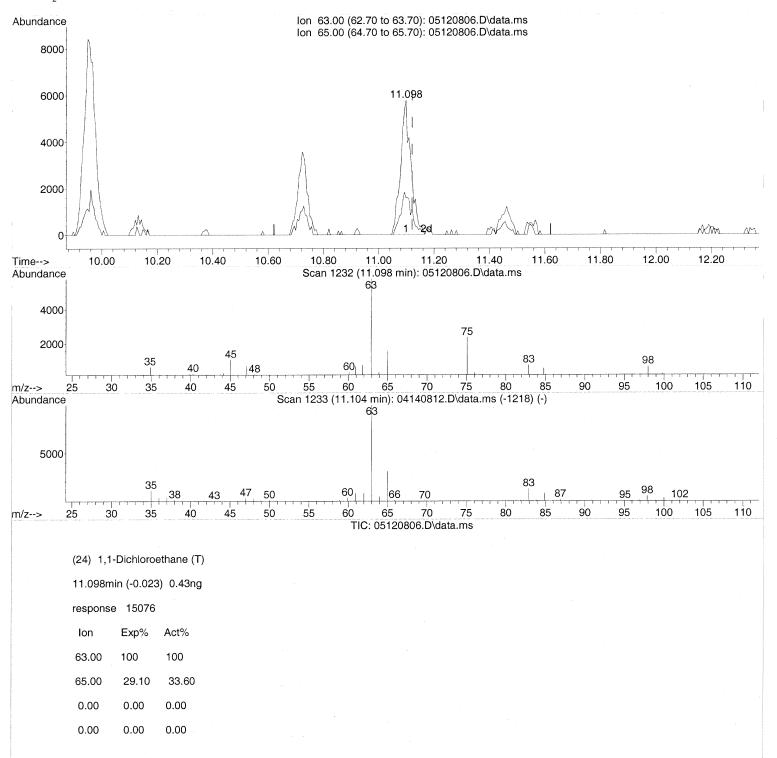
Quant Time: May 27 16:28:24 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration





Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

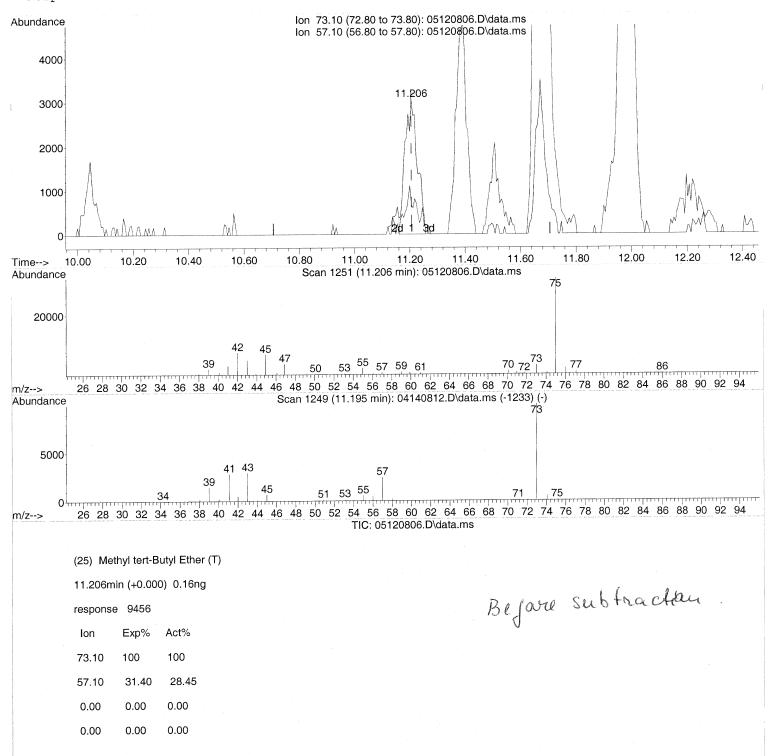
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

: RTB Operator

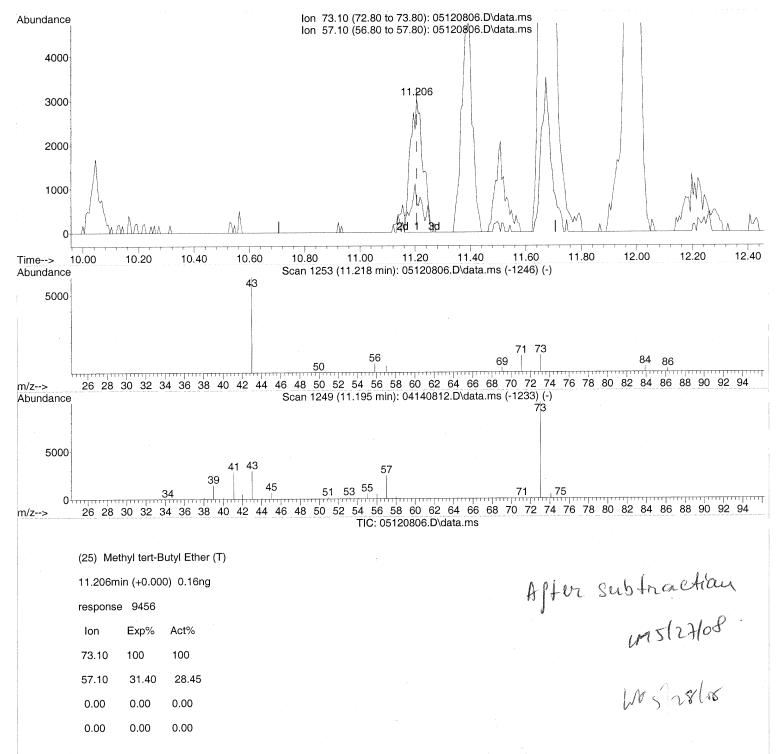
: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:28:24 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

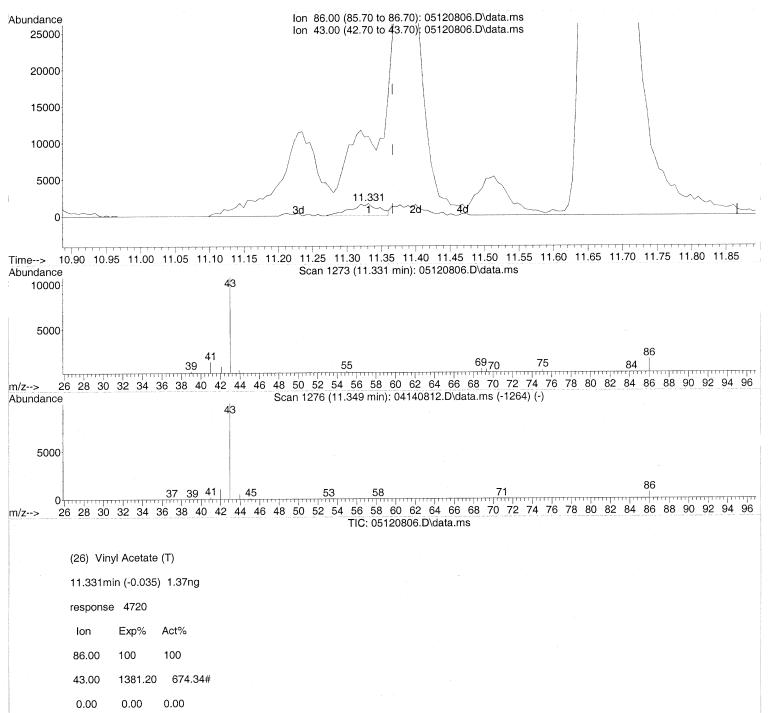


```
Data Path : J:\MS13\DATA\2008_05\12\
Data File: 05120806.D
          : 12 May 2008 14:08
Acq On
         : RTB
Operator
          : P0801385-002 (1000mL)
Sample
          : ENSR SG41B-20 (-3.7, 3.5)
Misc
                Sample Multiplier: 1
ALS Vial
```

Quant Time: May 27 16:28:24 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



0.00

0.00

0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

: 12 May 2008 14:08 Acq On

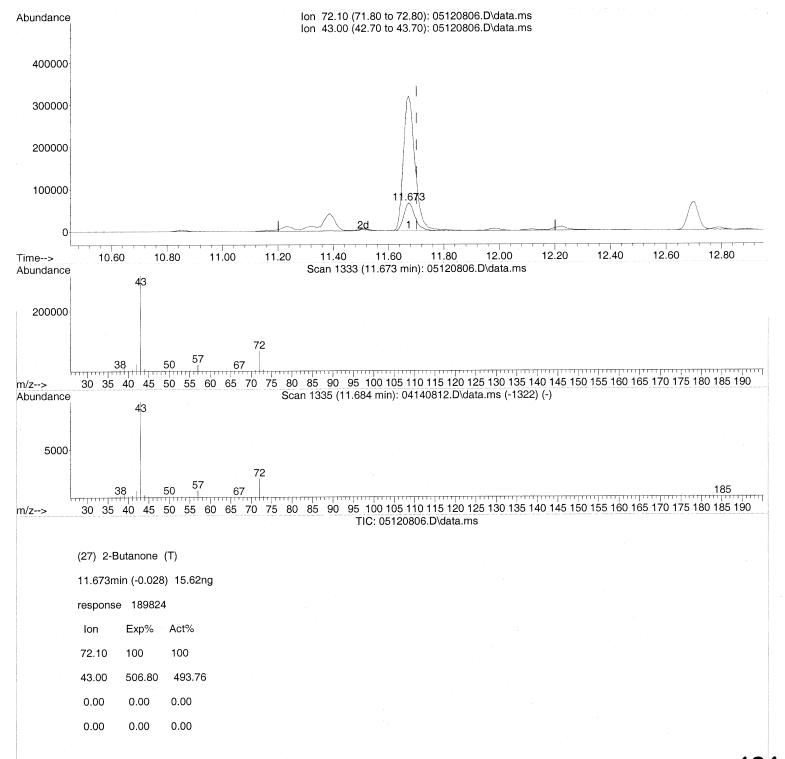
Operator : RTB

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



```
Data Path : J:\MS13\DATA\2008_05\12\
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Acq On : 12 May 2008 14:08

Operator : RTB

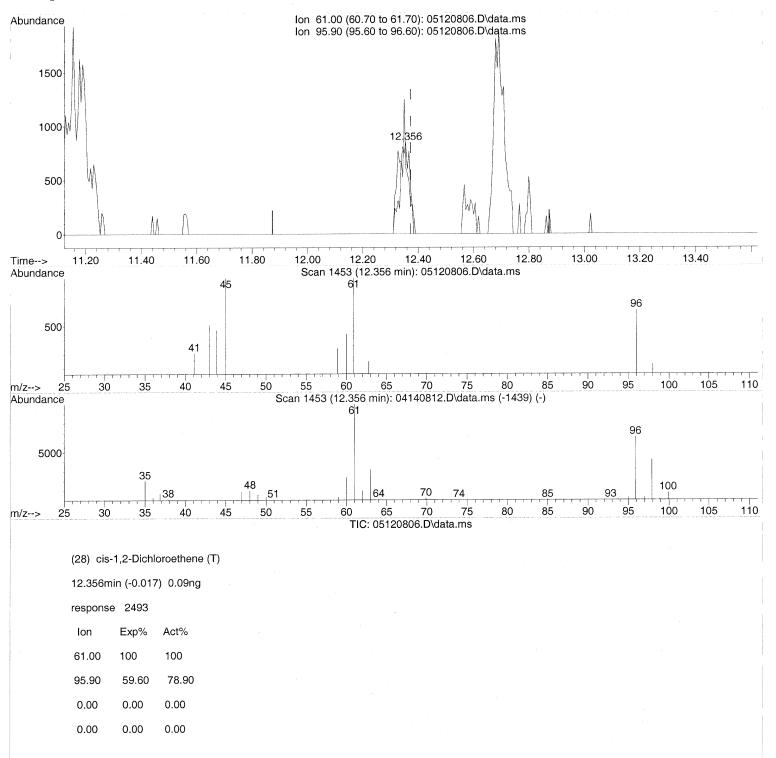
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:28:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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: 12 May 2008 14:08 Acq On

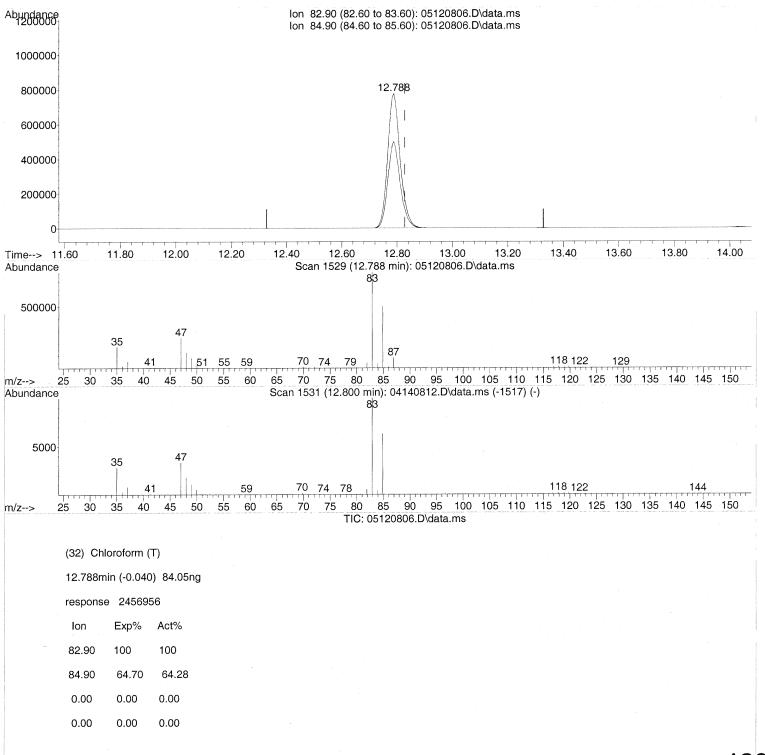
: RTB Operator

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

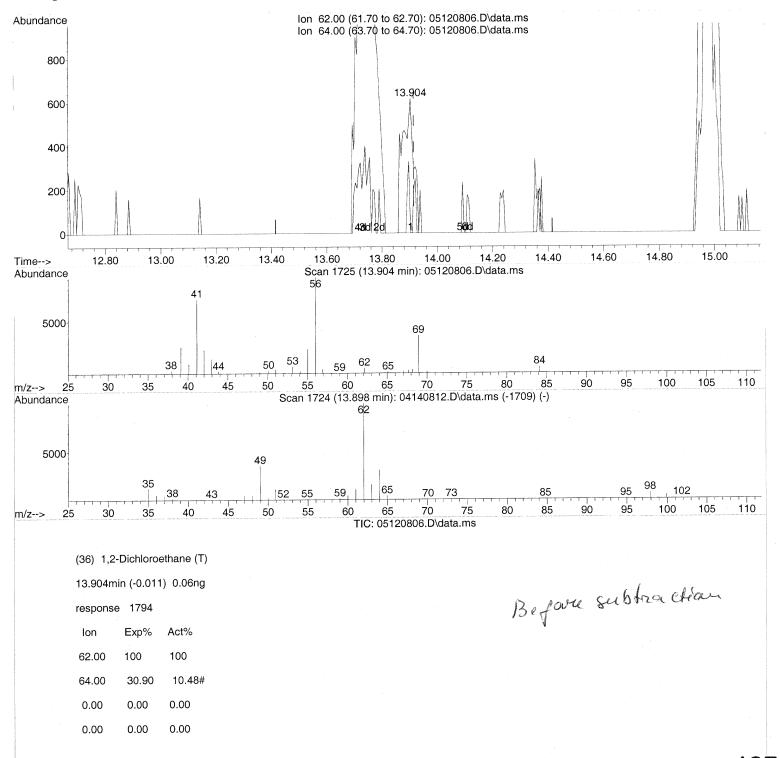
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

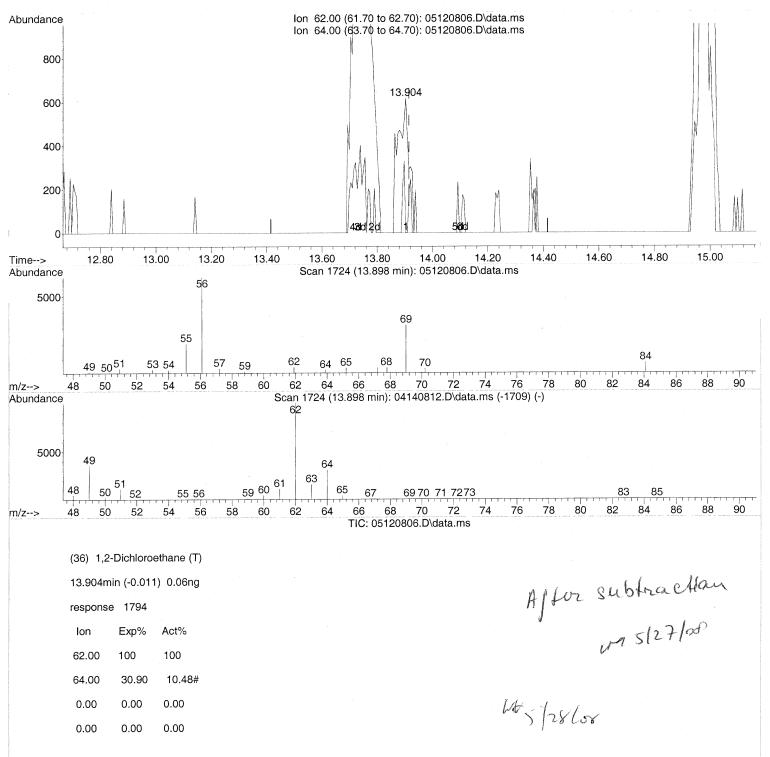
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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Acq On : 12 May 2008 14:08

Operator : RTB

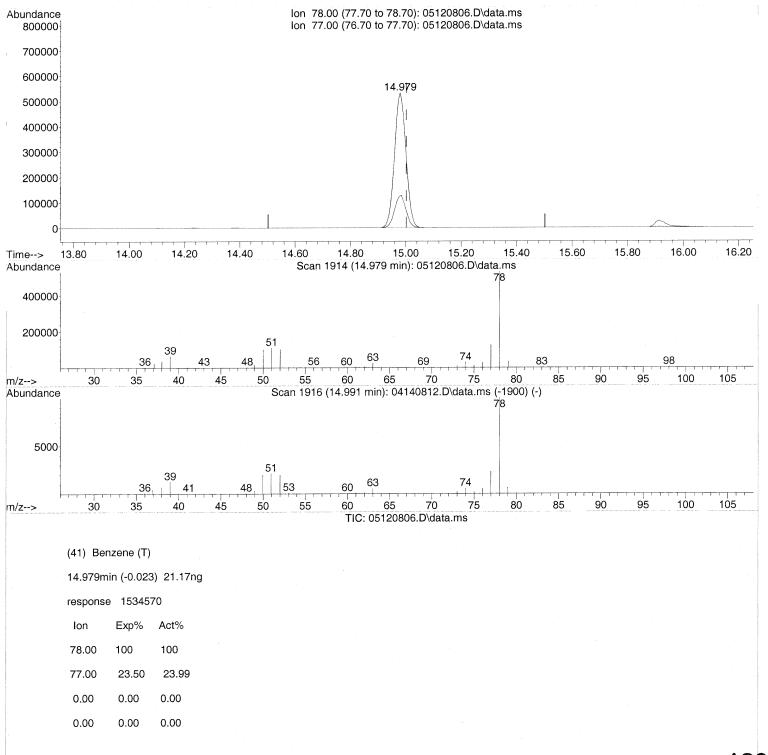
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

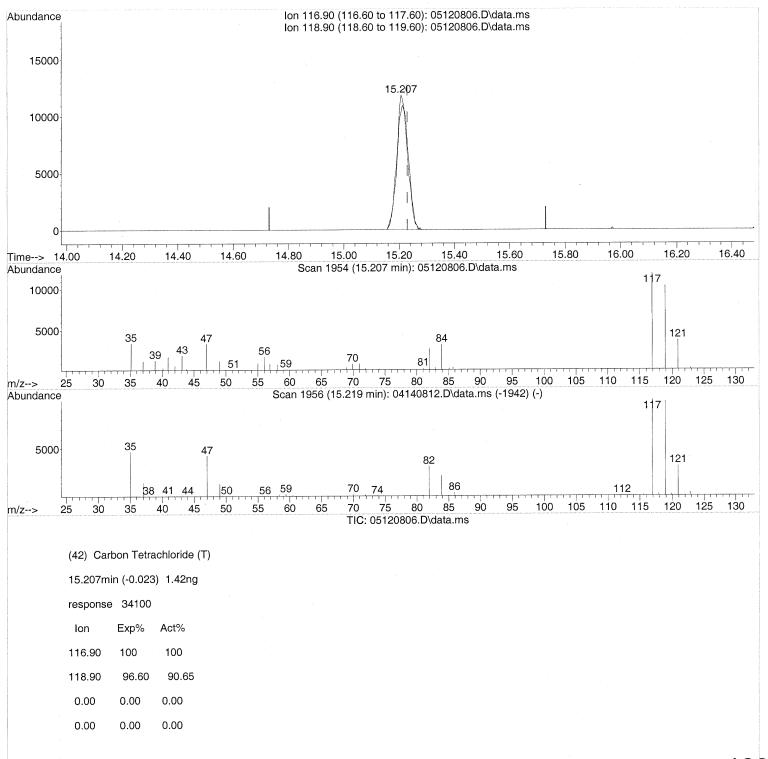
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 Acq On

Operator : RTB

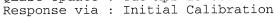
: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

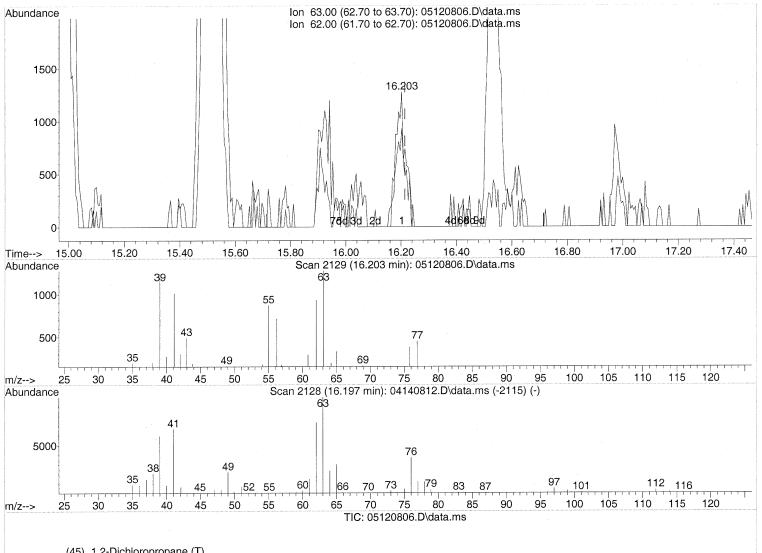
Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





(45) 1,2-Dichloropropane (T)

16.203min (-0.011) 0.15ng

response 3149

lon Exp% Act% 63.00 100 100 62.00 71.30 77.52 0.00 0.00 0.00 0.00 0.00 0.00

Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

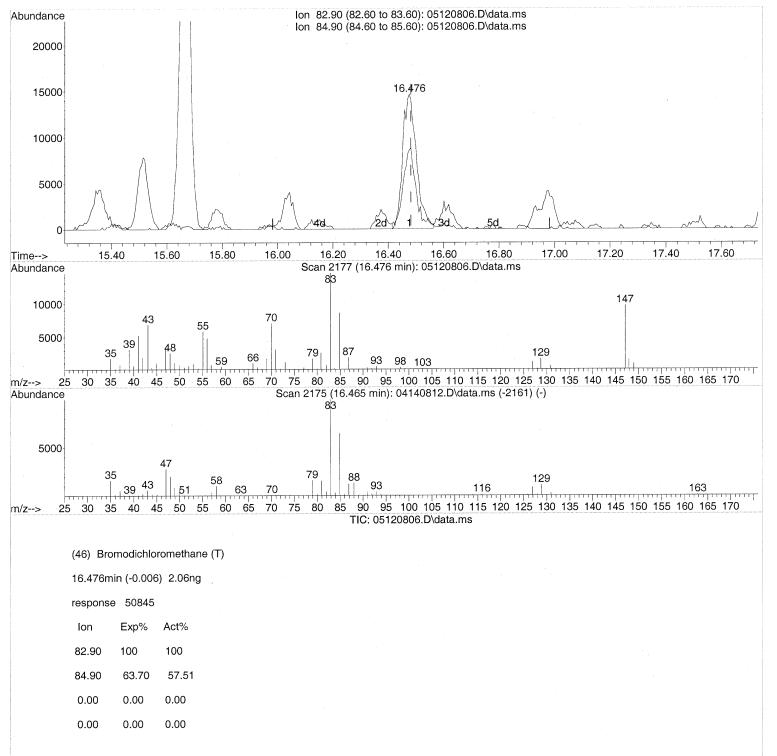
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

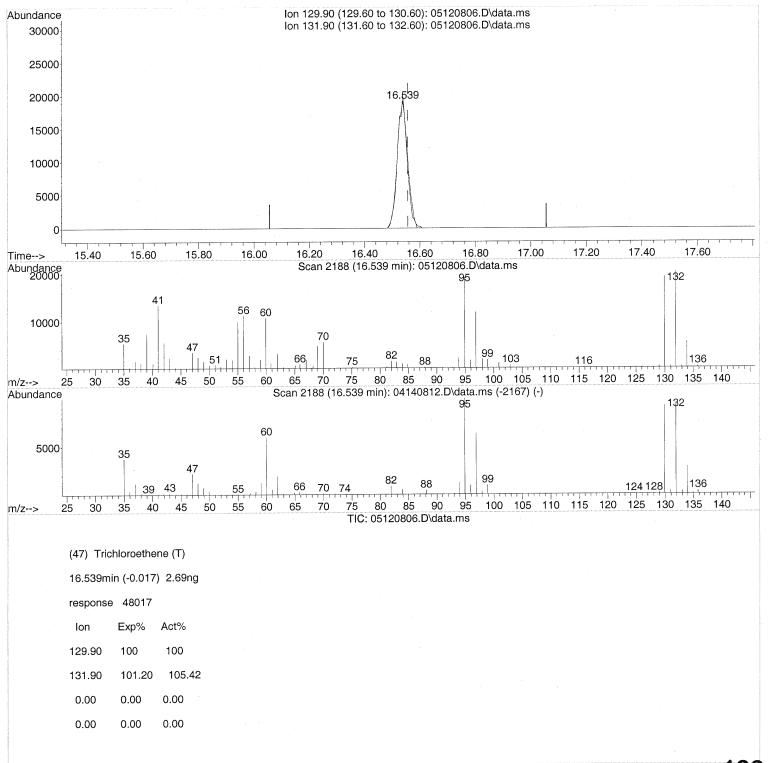
Operator : RTB

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:47:39 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

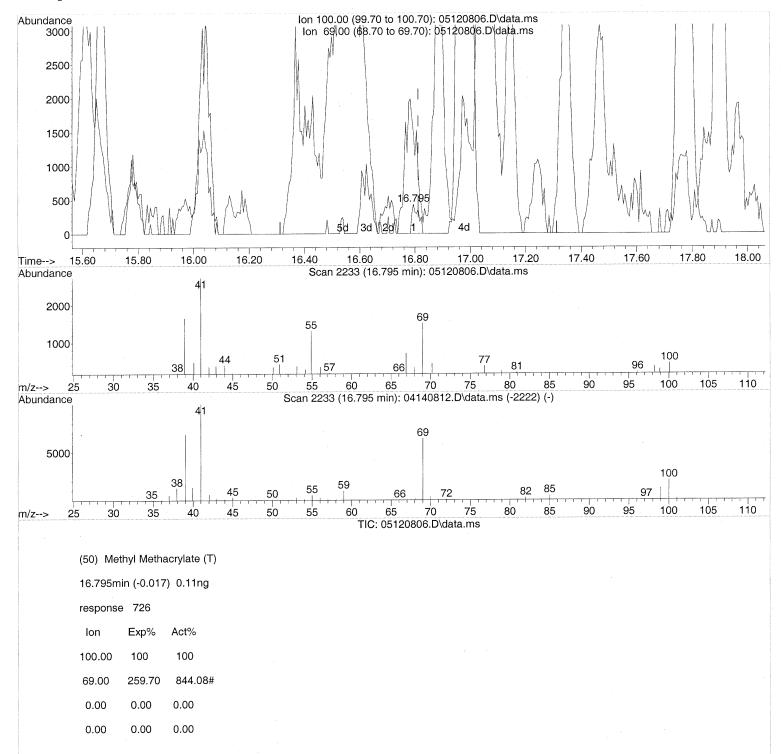
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

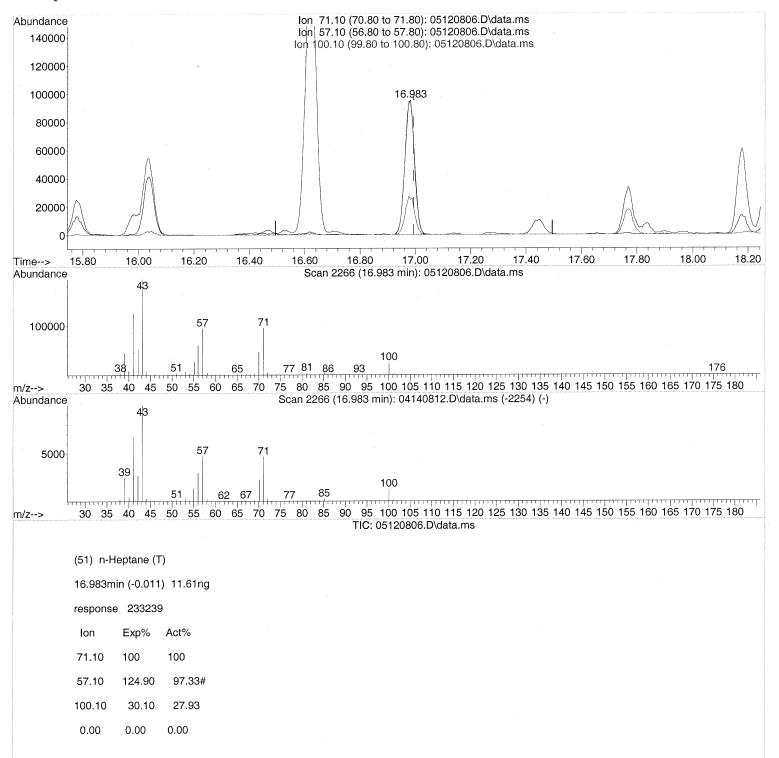
Operator : RTB

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

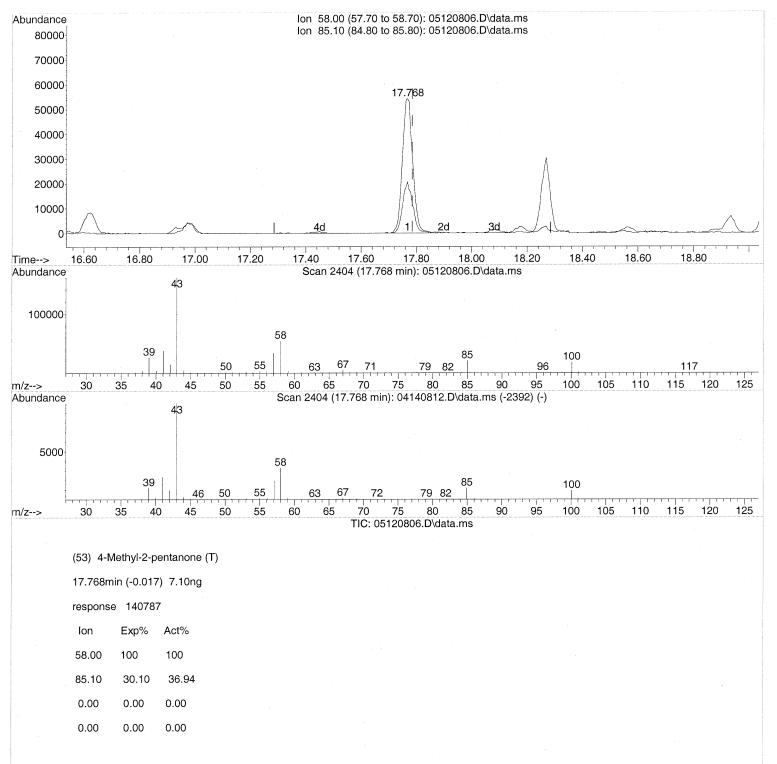
: RTB Operator

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Ouantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120806.D

Acq On : 12 May 2008 14:08

: RTB Operator

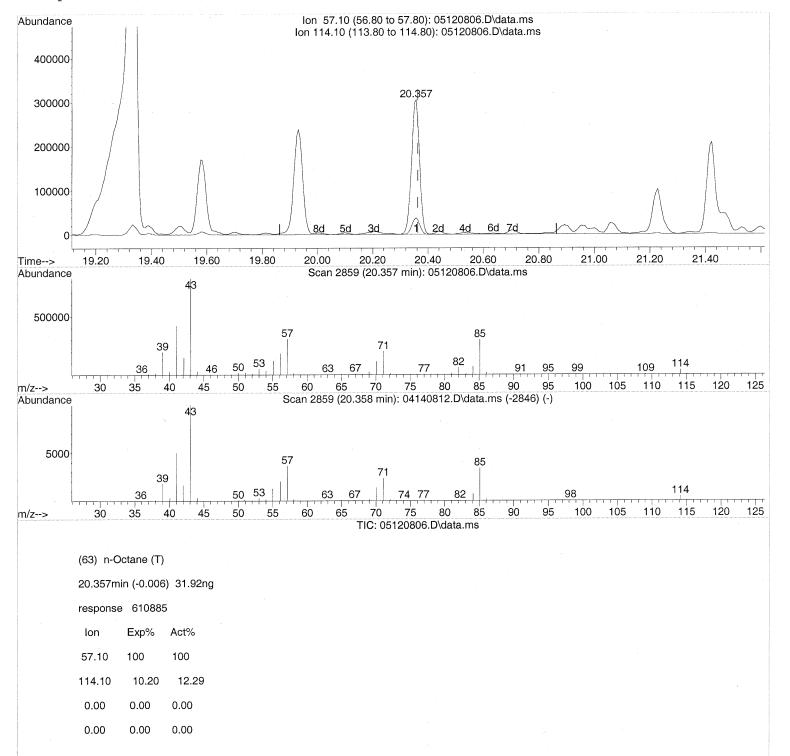
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Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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Acq On : 12 May 2008 14:08

Operator : RTB

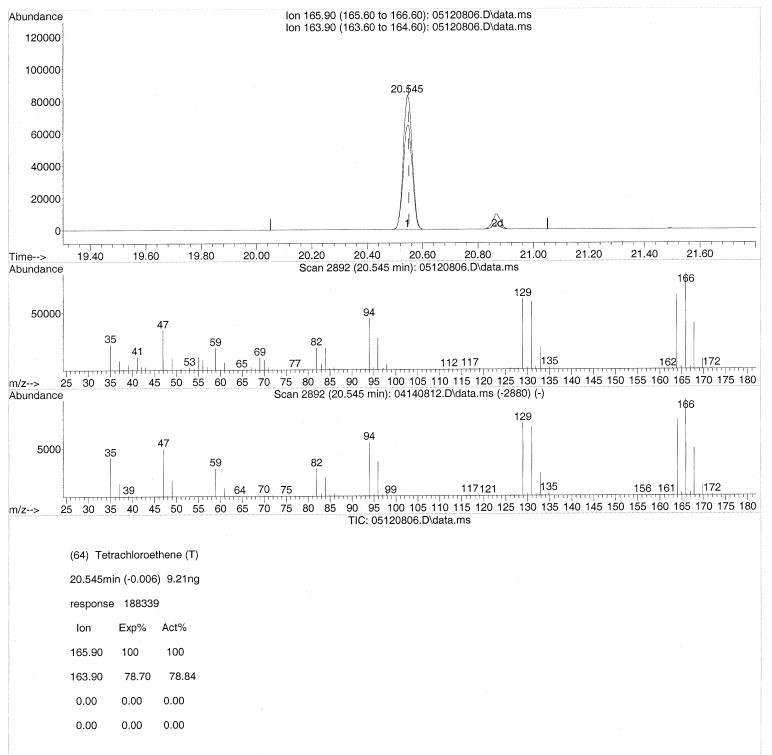
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Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

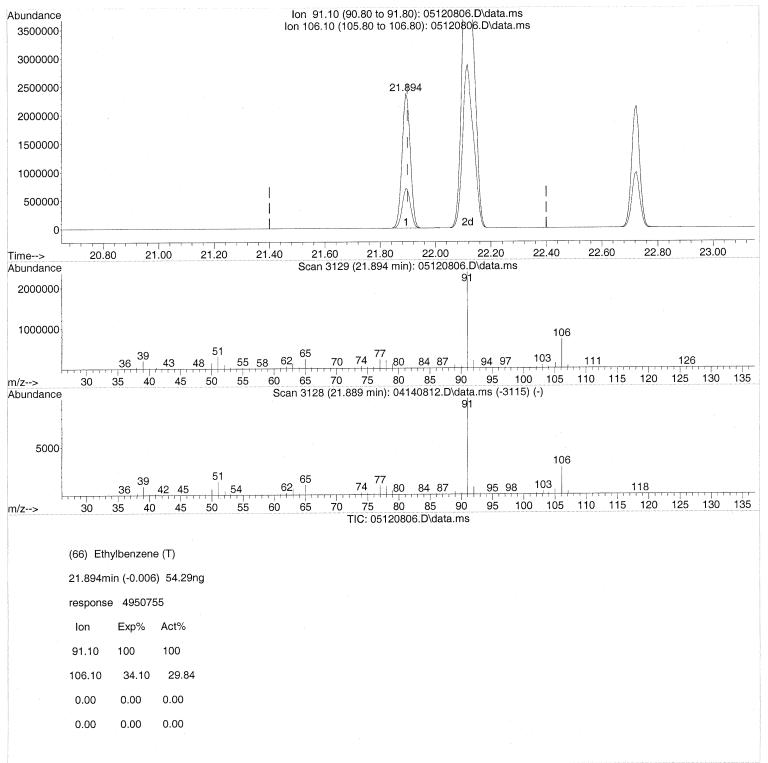
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: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



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Data Path : J:\MS13\DATA\2008_05\12\
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Acq On : 12 May 2008 14:08

Operator : RTB

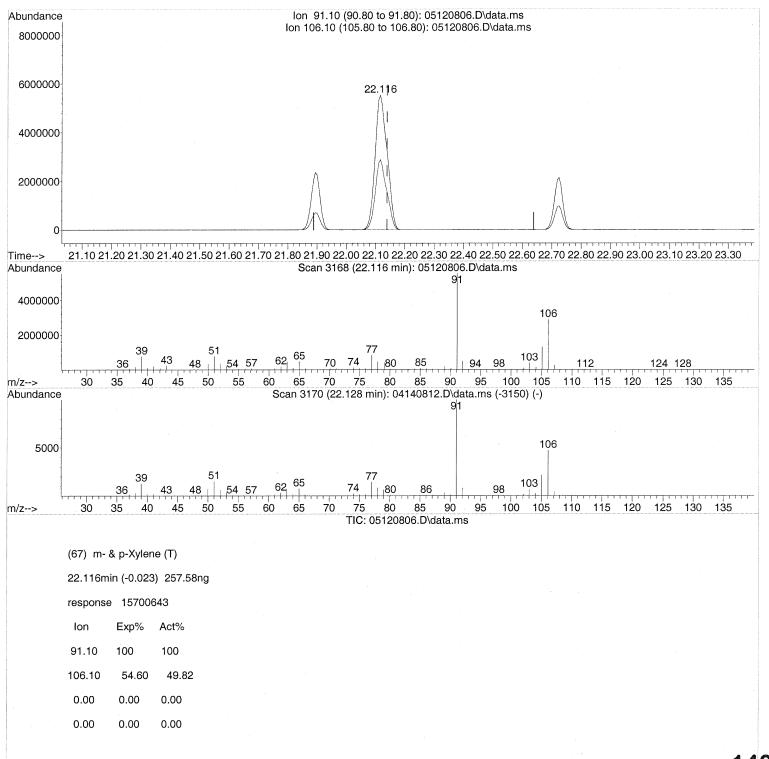
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Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 28 11:25:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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: 12 May 2008 14:08 Acq On

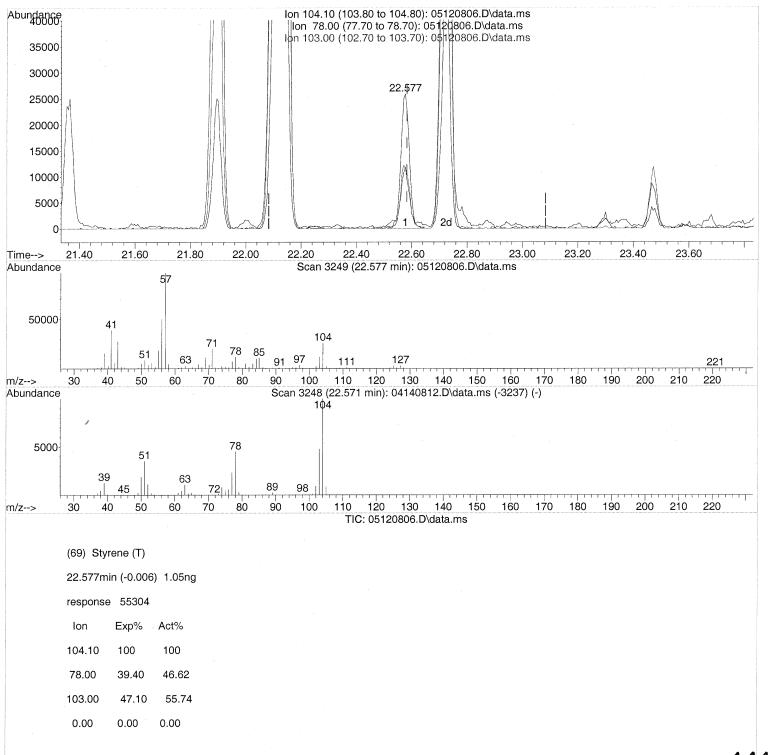
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: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

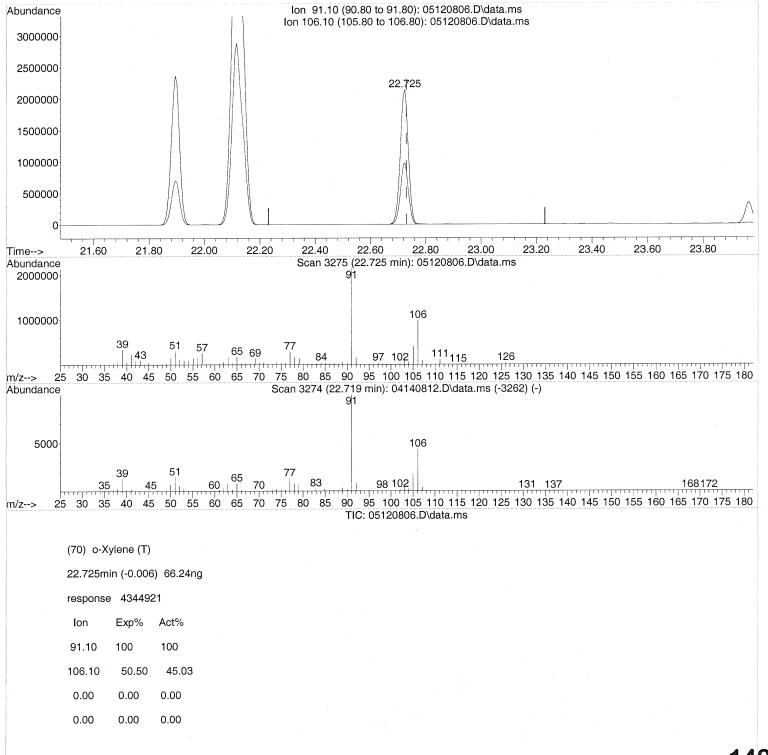
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: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120806.D

Acq On : 12 May 2008

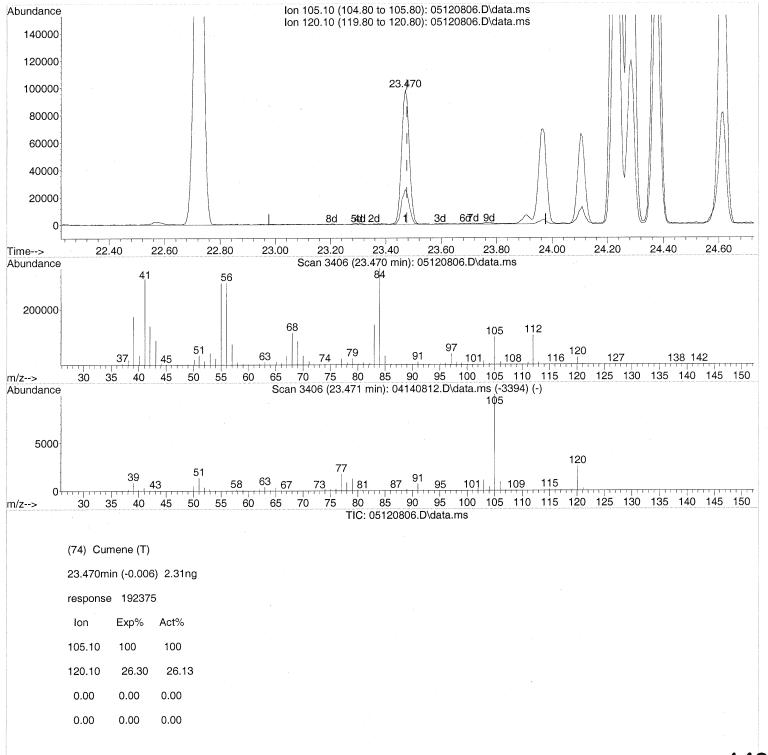
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: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

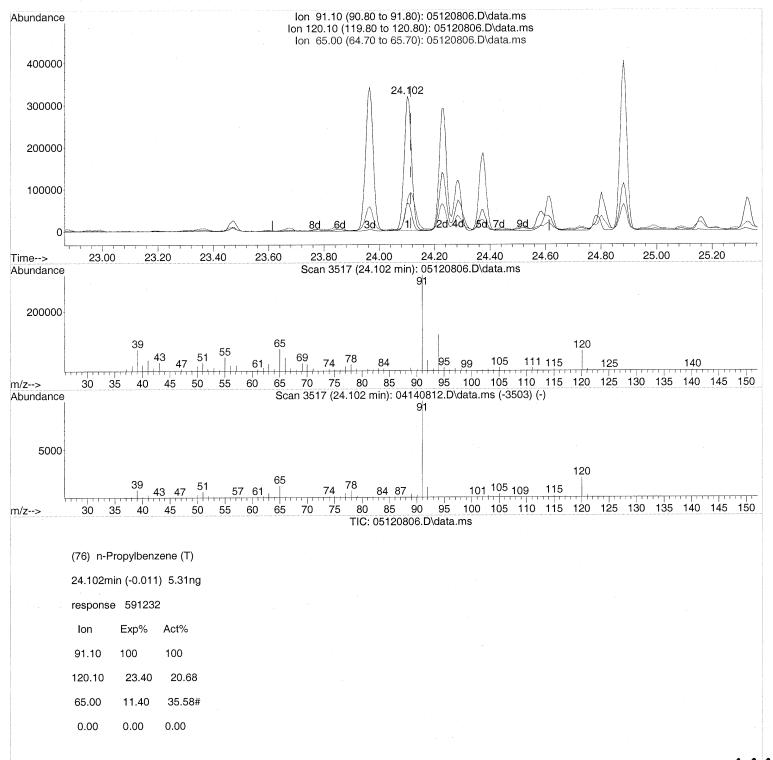
: RTB Operator

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

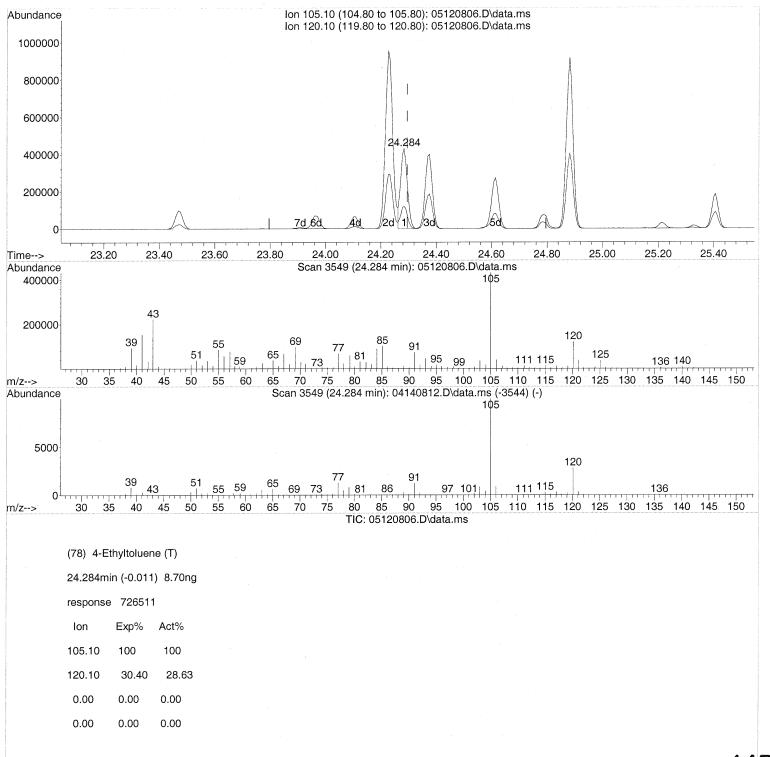
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

Operator : RTB

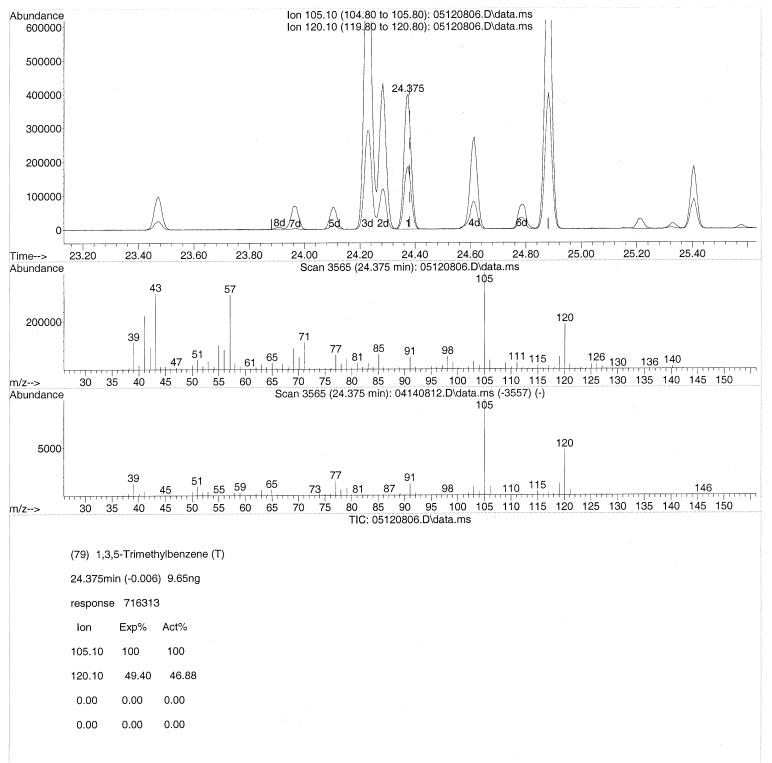
: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File : 05120806.D

Acq On : 12 May 2008

: RTB Operator

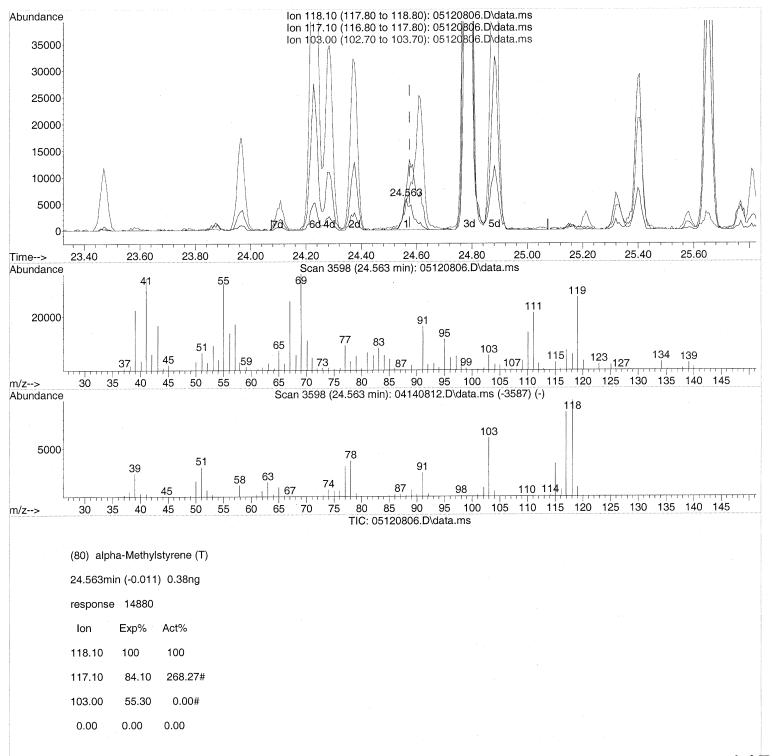
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Quant Time: May 27 16:47:39 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Ouantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

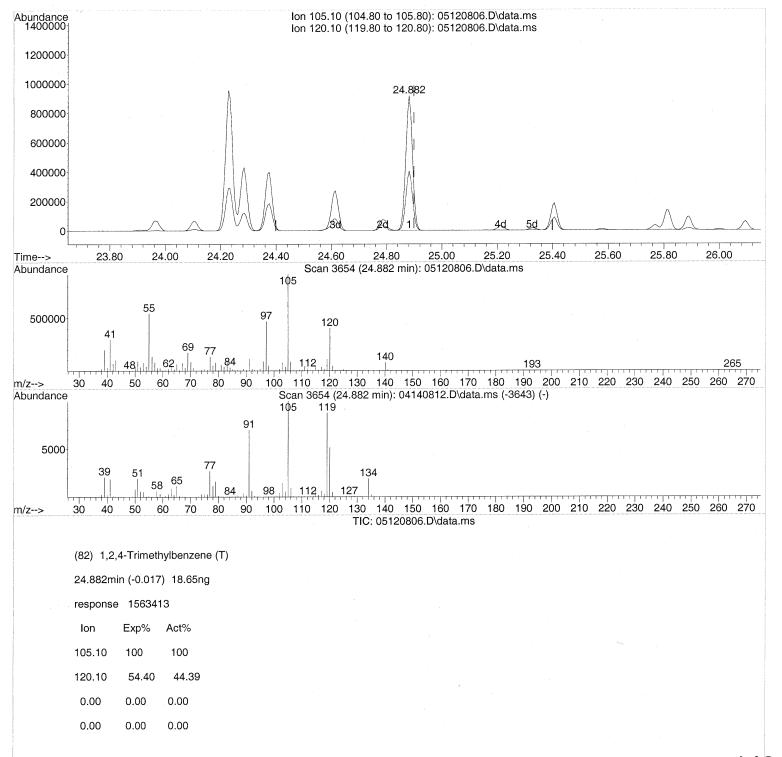
Sample : P0801385-002 (1000mL)
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ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

: RTB Operator

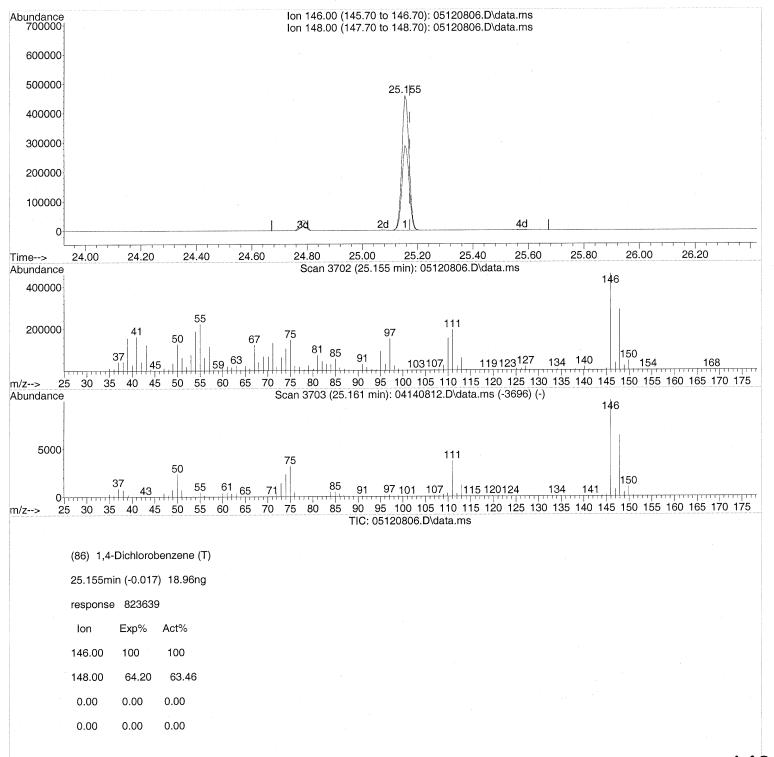
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Quant Time: May 27 16:47:39 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File: 05120806.D

: 12 May 2008 14:08 Acq On

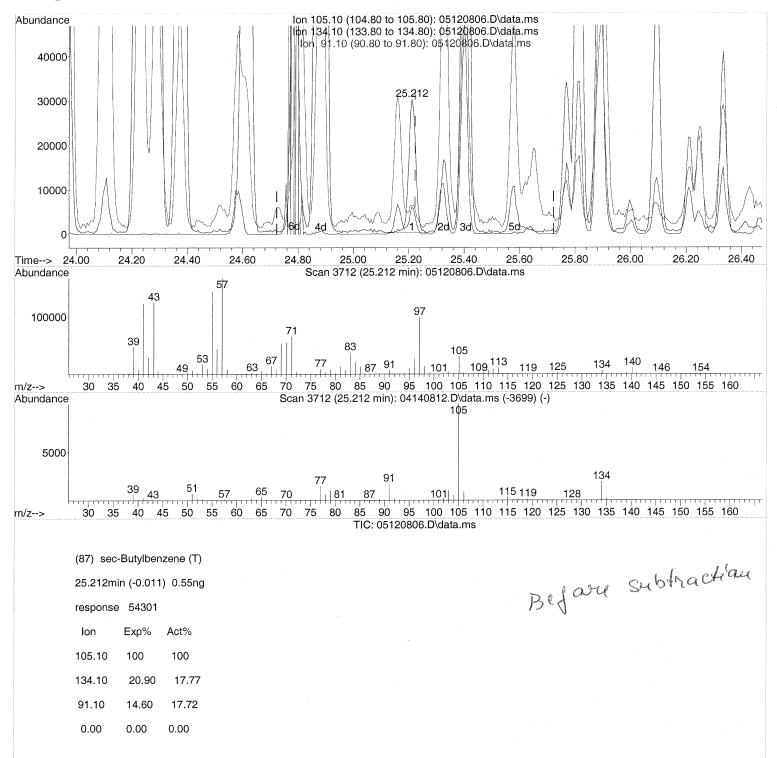
: RTB Operator

: P0801385-002 (1000mL) Sample : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

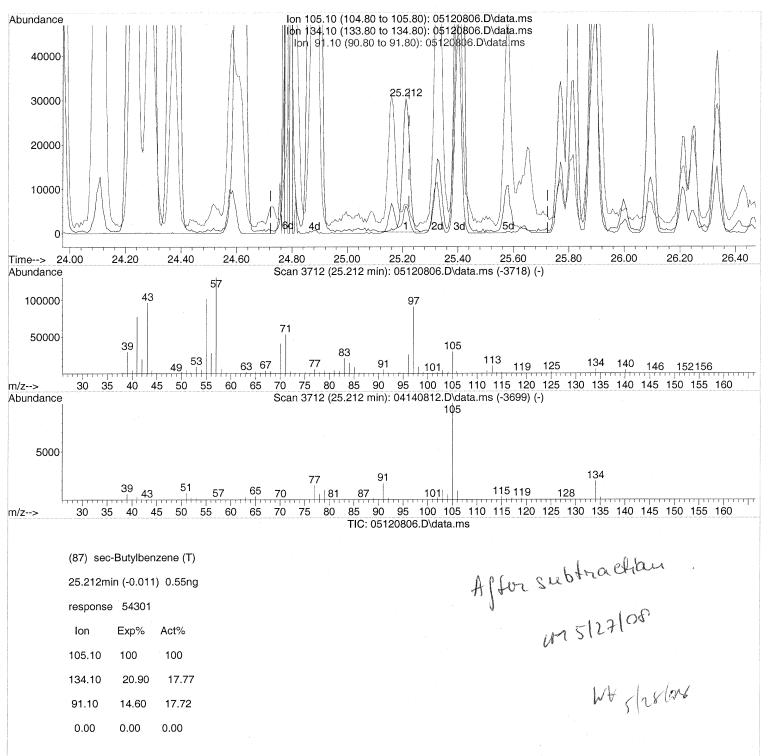
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Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120806.D

Acq On : 12 May 2008 14:08

Operator : RTB

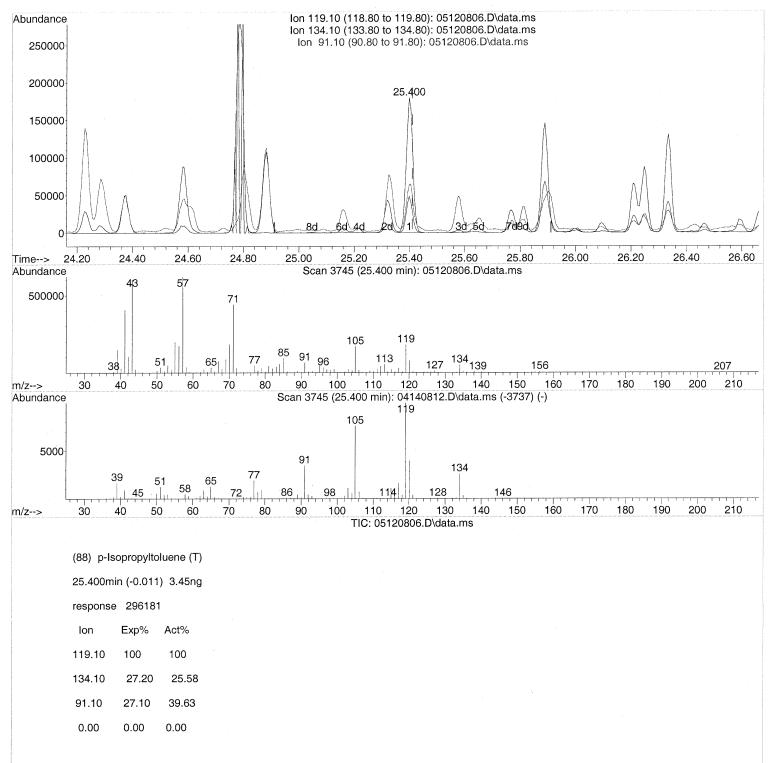
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120806.D

: 12 May 2008 14:08 Acq On

: RTB Operator

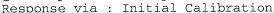
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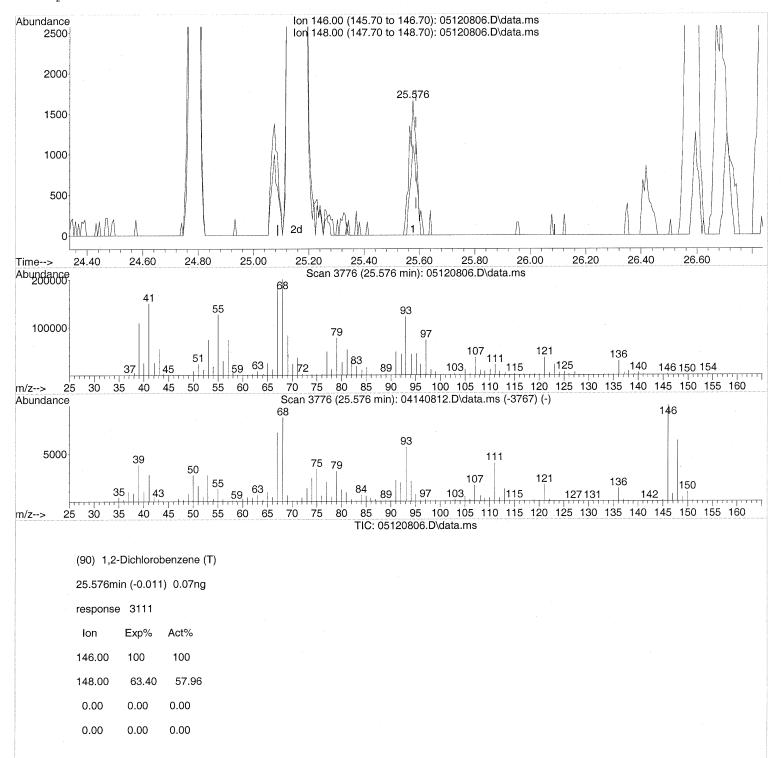
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Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration





Data File : 05120806.D

: 12 May 2008 14:08 Acq On

: RTB Operator

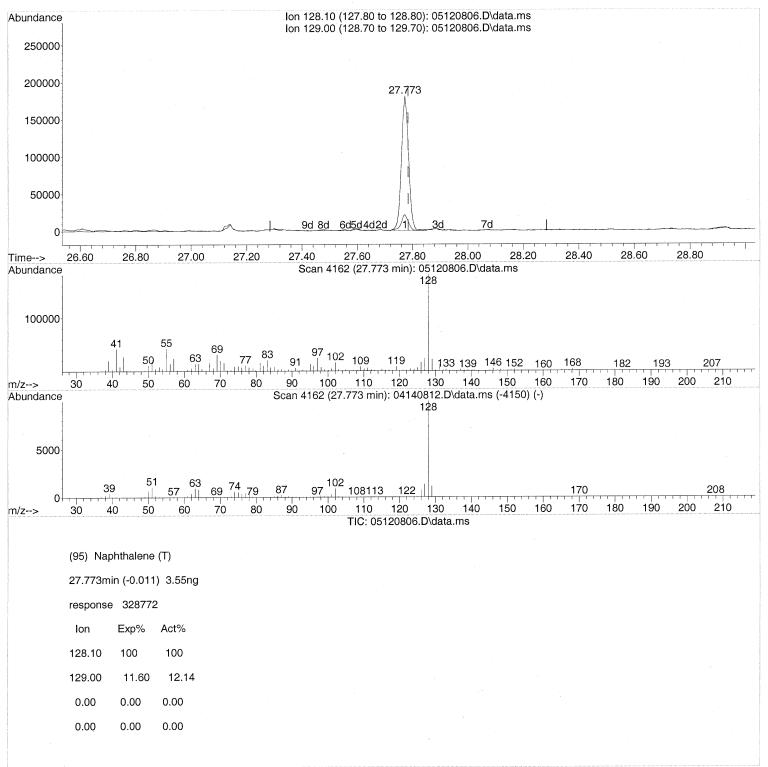
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Quant Time: May 27 16:47:39 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

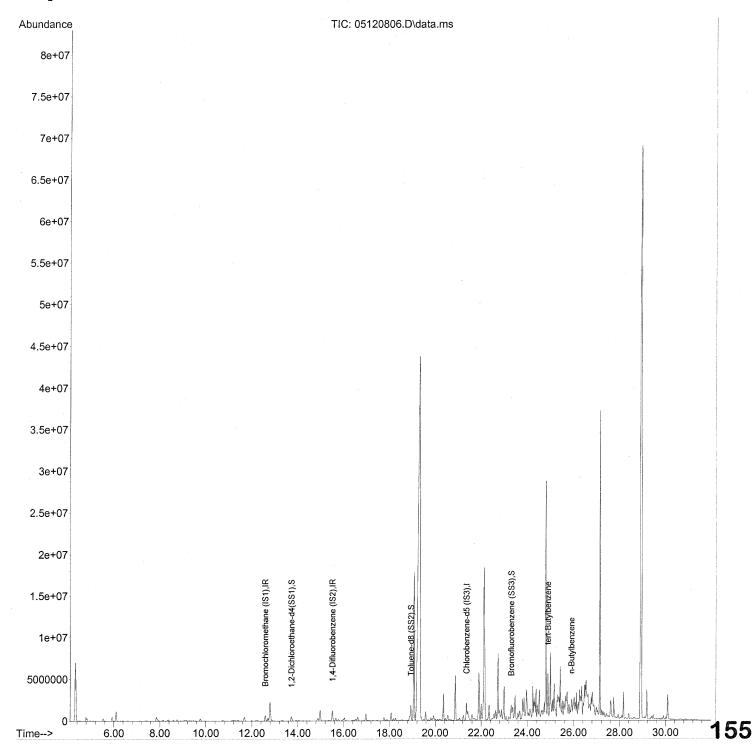
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Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 15:44:28 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5) ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 15:44:28 2008
Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.36	114	313097 1366600 725160	25.000 25.000 25.000	ng	
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000	13.73	65		22.227 ery =		
5) Toluene-d8 (SS2) Spiked Amount 25.000	18.93	98	1514770		ng	0.00
	23.30	174	574914		ng	0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88	119) 91	186465 141321	2.348 (1.650		Qvalue # 55 # 40

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

Page: 1

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120806.D

Acq On : 12 May 2008 2:08 pm

Operator : RTB

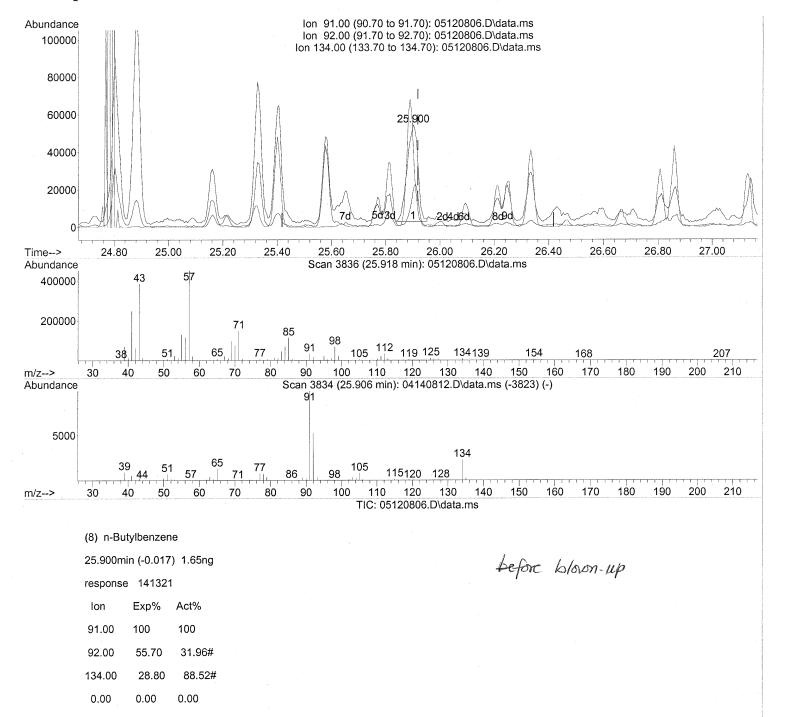
Sample : P0801385-002 (1000mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 27 15:44:28 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



File :J:\MS13\DATA\2008_05\12\05120806.D

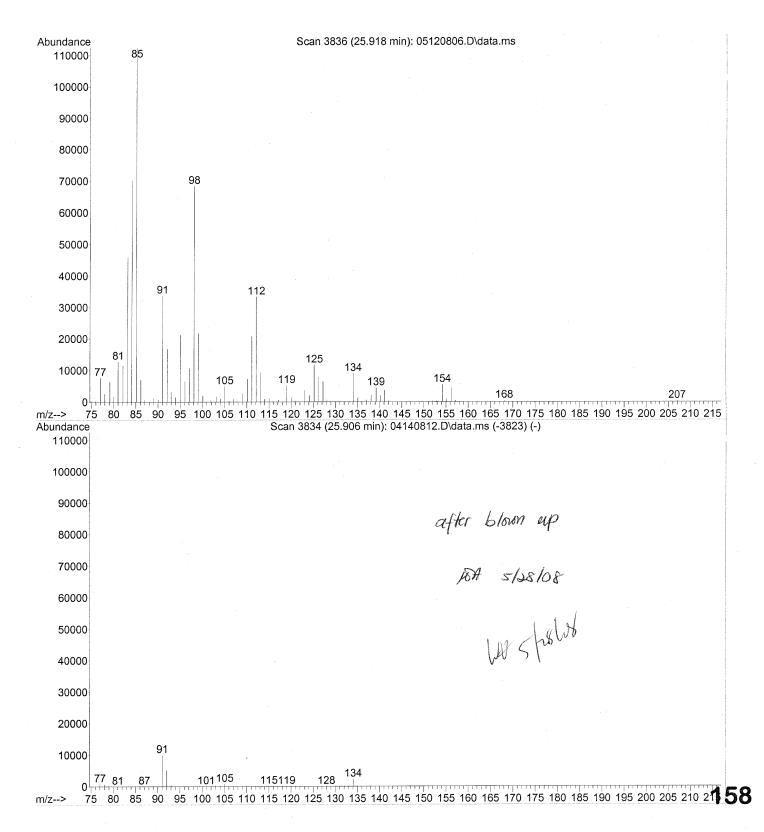
Operator : RTB

Acquired: 12 May 2008 2:08 pm using AcqMethod TO15.M

Instrument : GCMS13

Sample Name: P0801385-002 (1000mL)
Misc Info : ENSR SG41B-20 (-3.7, 3.5)

Vial Number: 2



Data File : 05120815.D

: 12 May 2008 Acq On

: RTB Operator

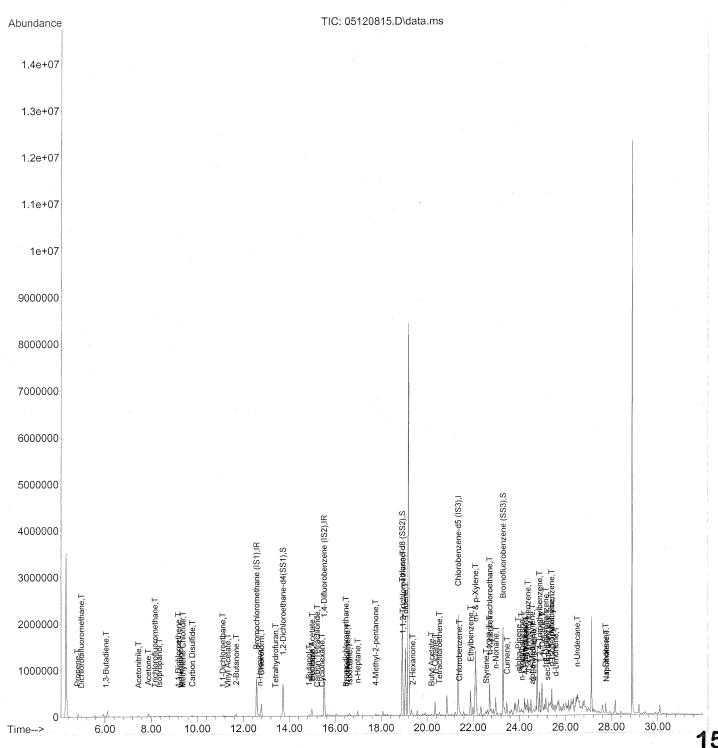
: P0801385-002 DIL (100mL) Sample : ENSR SG41B-20 (-3.7, 3.5) ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 11:17:16 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



Page: 4

Data File : 05120815.D

Acq On : 12 May 2008 9:08 pm

Operator : RTB

Sample : P0801385-002 DIL (100mL) : ENSR SG41B-20 (-3.7, 3.5) Misc ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 11:17:16 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (1	Min)
1) Bromochloromethane (IS1)			389340				
37) 1,4-Difluorobenzene (IS2)			1701903				
56) Chlorobenzene-d5 (IS3)	21.35	82	801622	25.000	ng	0	.00
System Monitoring Compounds	10 70	CE	676410	21 663	na	0	Λ 3
33) 1,2-Dichloroethane-d4(Spiked Amount 25.000	13.72	65		z1.003 ery =			
57) Toluene-d8 (SS2)	18.93	98	1829767	25.466	ng	0	.00
Spiked Amount 25.000				ery =	101	.88% ✓	•
73) Bromofluorobenzene (SS3)	23.29	174					
Spiked Amount 25.000			Recove	ery =	100	.5∠₹ /	
Target Compounds						Qva	
2) Propene		42	34265		_	#	64
3) Dichlorodifluoromethane	4.97		8322		ng		96
4) Chloromethane			112	N.D			
0, 110000	0.00	135		N.D N.D			
0,	0.00 6.04	62 E 4	0 3014			#	.59
, , = , = = = = = = = = = = = = = = = =			136			TT	,55
O / ===		64		N.D			
2 / O.L	7.17		426		,		
20, 2000000	7.45		3495				89
12) Acrolein	7.66	56	567	N.D	_		
	7.87		33246	1.543	ng	#	62
14) Trichlorofluoromethane	8.16	101	15613				100
15) Isopropanol	8.36	45			_	#	61
16) Acrylonitrile	8.66		379	N.D			
			9154		_	#	72
			4530			#	74
19) Methylene Chloride			2606			#	65
20) Allyl Chloride			1301 530				
21) Trichlorotrifluoroethane 22) Carbon Disulfide	9.02	76					93
23) trans-1,2-Dichloroethene	0.00	61	0/304	N.D			7 9
24) 1,1-Dichloroethane	11.10	63	1886	0.043			99
25) Methyl tert-Butyl Ether	11.19	73	187	N.D			
26) Vinyl Acetate	11.32	86	1158	0.270		#	1
27) 2-Butanone	11.68	72	25267	1.672	ng	#	91
28) cis-1,2-Dichloroethene	12.34	61	52	N.D			
29) Diisopropyl Ether	12.71	87	191	N.D			* .
30) Ethyl Acetate	12.71	61	217	N.D			0.0
31) n-Hexane	12.71	57	23613	0.482	ng		⁹ 460

Data File : 05120815.D

Acq On : 12 May 2008 9:08 pm

Operator : RTB

Sample : P0801385-002 DIL (100mL)
Misc : ENSR SG41B-20 (-3.7, 3.5) ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 11:17:16 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Inte	rnal Standards	R.T.	QIon	Respons	e Conc Uni	its	Dev(M	Min)
32)	Chloroform	12.78	83	275745	7.586 ng	3		99
34)	Tetrahydrofuran	13.40	72	1154	0.076 ng	9	#	86
35)	Ethyl tert-Butyl Ether	0.00	87	0	N.D.			
36)	1,2-Dichloroethane	13.88	62	54	N.D.			
38)	1,1,1-Trichloroethane	0.00	97	0	N.D.			
39)	Isopropyl Acetate	14.99	61	1625	0.105 ng	3	#	1
40)	1-Butanol	14.85	56	31966	1.376 ng	3		93
	Benzene	14.98	78	181316	2.008 ng	3		99
	Carbon Tetrachloride	15.21	117	3891	0.130 ng	3		93
	Cyclohexane	15.41	84	2463	0.074 ng	3	#	85
	tert-Amyl Methyl Ether		73	0	N.D.			
45)		16.21	63	172	N.D.			
	Bromodichloromethane	16.46	83	5928	0.193 ng	3		91
	Trichloroethene	16.53	130	6133	0.276 ng	3		94
48)		0.00	88	0	N.D.	-		
49)		16.62	57	61547	0.576 ng	3		68
	Methyl Methacrylate	16.81	100	72	N.D.			
51)	n-Heptane	16.98	71	26731	1.069 ng	3	#	80
	cis-1,3-Dichloropropene	0.00	75	0	N.D.			
		17.76	58	15520	0.628 ng	3		84
54)	trans-1,3-Dichloropropene	0.00	75	0	N.D.	-		
55)	1,1,2-Trichloroethane	18.95	97	165822	7.627 no	3	#	9
	Toluene	(19.06)	91	1322444	(14.649 n	3		97
59)		19.37	43	27426	0.408 ng	3	#	32
	Dibromochloromethane	0.00	129	0	N.D.			
	1,2-Dibromoethane	0.00	107	0	N.D.			
	Butyl Acetate	20.19	43	5934	0.088 ng	3	#	1
	n-Octane	20.35	57	60390	2.854 ng	J		94
64)		20.53	166	18540	0.820 ng	J		97
	Chlorobenzene	21.40	112	3436				82
66)	Ethylbenzene	21.89	91	485823	4.820 ng	g,	Jot .	92
67)	-	(22.10)	91	1301731	(19.318 mg	3 (Y) S	1 Con	90
68)	Bromoform	0.00	173	0	N.D.	, \h	d" de	ml_
69)	Styrene	22.57	104	5731	0.099 ng	J HIN	c p-th	88
	o-Xylene	22.71	91	399769	5.513 ng	a w	Ω.	92
	n-Nonane	22.98	43	172416	2.969 ng		#	83
72)		22.72	83	3013	0.087 ng	_	#	1
	Cumene	23.46	105	18653	0.203 ng	-		98
	alpha-Pinene	23.97	93	133424	2.729 ng	-		90
	n-Propylbenzene	24.10	91	60166	0.489 ng	_	#	74
	3-Ethyltoluene	24.23	105	173655		_		96
	4-Ethyltoluene	24.28	105	75502		_		95
	1,3,5-Trimethylbenzene	24.37	105	68913	0.840 ng	3		96
•	-				, alak			96
0414	08.M Tue May 13 11:17:55 2	800		ı	A5/28/08	Р	age:	2
				. (<i>إ</i> '			

Quantitation Report (Not Reviewed)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120815.D

Acq On : 12 May 2008 9:08 pm

Operator : RTB

Sample : P0801385-002 DIL (100mL)
Misc : ENSR SG41B-20 (-3.7, 3.5) ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 11:17:16 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(1	Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene	24.56 24.61 24.88 24.98 25.04 25.08	118 105 105 57 91 146	1825 51228 146336 248542 502 552	0.042 ng 0.508 ng 1.579 ng 4.849 ng N.D. N.D.	#	14 99 86 69
86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene	25.15 25.21 25.39	146 105 119	76459 5384 28331	1.592 ng 0.049 ng 0.299 ng		99 94 85
89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene	25.40 25.15 25.57	105 146 68	28042 76459 30497	0.308 ng 1.487 ng 0.726 ng		94 98 97
92) 1,2-Dibromo-3-Chloropr93) n-Undecane94) 1,2,4-Trichlorobenzene	26.50 26.50 27.64	157 57 180	410 101538 126	N.D. 1.887 ng N.D.	#	63
95) Naphthalene 96) n-Dodecane 97) Hexachloro-1,3-butadiene	27.77 27.74 0.00	128 57 225	32477 72144 0	0.317 ng 1.321 ng N.D.		98 82

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

M5/28/08

Data File : 05120815.D

Acq On : 12 May 2008 21:08

Operator : RTB

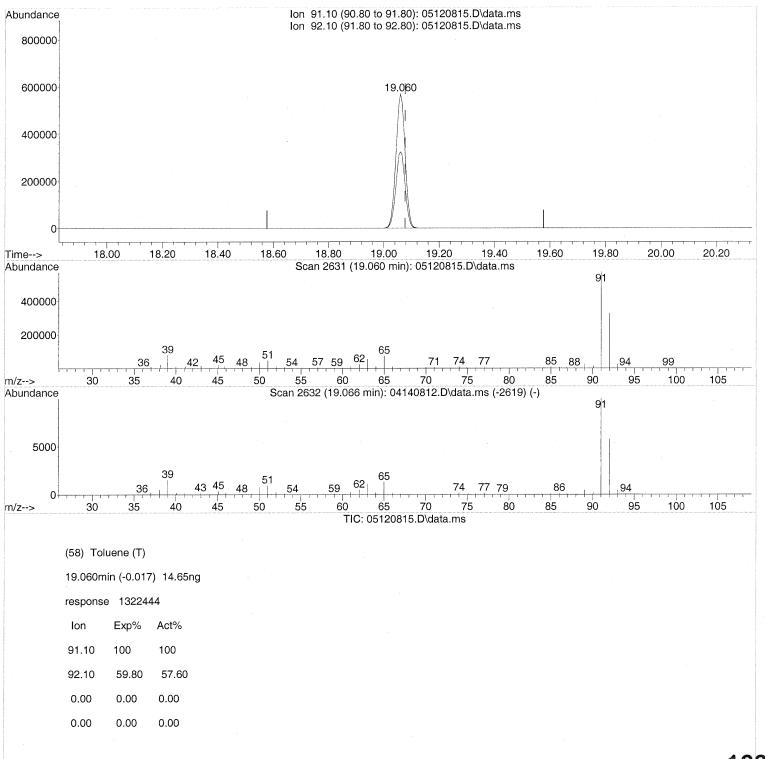
Sample : P0801385-002 DIL (100mL)
Misc : ENSR SG41B-20 (-3.7, 3.5)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 13 11:17:16 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG41B-20D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-003

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s) 0.10 Liter(s)

Test Notes:

Container ID:

SC00781

Initial Pressure (psig):

-3.4

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.61

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.81	0.081	0.45	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.081	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.089	0.81	0.081	0.013	0.12	0.012	J
75-01-4	Vinyl Chloride	ND	0.16	0.081	ND	0.063	0.032	
74-83-9	Bromomethane	ND	0.16	0.081	ND	0.041	0.021	
75-00-3	Chloroethane	ND	0.16	0.081	ND	0.061	0.031	
64-17-5	Ethanol	7.6	8.1	0.081	4.1	4.3	0.043	J
67-64-1	Acetone	26	8.1	0.12	11	3.4	0.049	В
75-69-4	Trichlorofluoromethane	5.4	0.16	0.081	0.97	0.029	0.014	
107-13-1	Acrylonitrile	0.31	0.81	0.11	0.14	0.37	0.052	J
75-35-4	1,1-Dichloroethene	5.4	0.16	0.081	1.4	0.041	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.67	0.81	0.12	0.22	0.27	0.039	J
75-09-2	Methylene Chloride	1.2	0.81	0.081	0.34	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.081	ND	0.051	0.026	
76-13-1	Trichlorotrifluoroethane	0.53	0.16	0.090	0.069	0.021	0.012	
75-15-0	Carbon Disulfide	15	0.81	0.19	4.7	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.081	ND	0.041	0.020	
75-34-3	1,1-Dichloroethane	0.56	0.16	0.081	0.14	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	0.30	0.16	0.081	0.082	0.045	0.022	
108-05-4	Vinyl Acetate	2.8	8.1	0.26	0.81	2.3	0.073	J, M
78-93-3	2-Butanone (MEK)	28	0.81	0.081	9.3	0.27	0.027	and the second s
156-59-2	cis-1,2-Dichloroethene	0.093	0.16	0.081	0.024	0.041	0.020	J
108-20-3	Diisopropyl Ether	ND	0.81	0.095	ND	0.19	0.023	
67-66-3	Chloroform	110	0.16	0.095	23	0.033	0.019	

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

Verified By:	CH	Date:	5/28/08	A C	A
		TOISSCAN XLT - Tropox	- Henderson - PageNo :	04	4

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

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

B = Analyte was found in the method blank.

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG41B-20D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-003

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/9/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08 Volume(s) Analyzed:

1.00 Liter(s)

Sampling Media:

Test Notes:

6.0 L Summa Canister

0.10 Liter(s)

Container ID:

SC00781

Initial Pressure (psig):

-3.4

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.61

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.81	0.082	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	0.14	0.16	0.081	0.035	0.040	0.020	\mathbf{J}
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
71-43-2	Benzene	24	0.16	0.081	7.5	0.050	0.025	
56-23-5	Carbon Tetrachloride	2.0	0.16	0.081	0.32	0.026	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.81	0.081	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	0.23	0.16	0.081	0.050	0.035	0.017	
75-27-4	Bromodichloromethane	2.8	0.16	0.081	0.42	0.024	0.012	
79-01-6	Trichloroethene	3.6	0.16	0.081	0.66	0.030	0.015	
123-91-1	1,4-Dioxane	0.14	0.81	0.098	0.038	0.22	0.027	J
80-62-6	Methyl Methacrylate	0.36	0.81	0.12	0.087	0.20	0.030	J
142-82-5	n-Heptane	10	0.81	0.10	2.5	0.20	0.025	
10061-01-5	cis-1,3-Dichloropropene	ND	0.81	0.084	ND	0.18	0.018	
108-10-1	4-Methyl-2-pentanone	14	0.81	0.090	3.4	0.20	0.022	
10061-02-6	trans-1,3-Dichloropropene	ND	0.81	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.081	ND	0.030	0.015	
108-88-3	Toluene	230	0.81	0.081	62	0.21	0.021	
591-78-6	2-Hexanone	3.9	0.81	0.12	0.96	0.20	0.030	
124-48-1	Dibromochloromethane	0.12	0.16	0.11	0.014	0.019	0.013	\mathbf{J}
106-93-4	1,2-Dibromoethane	ND	0.16	0.087	ND	0.021	0.011	
111-65-9	n-Octane	30	0.81	0.081	6.4	0.17	0.017	,
127-18-4	Tetrachloroethene	13	0.16	0.081	2.0	0.024	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.082	ND	0.035	0.018	

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

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

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

Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo Verified By:

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

Client Sample ID: SG41B-20D

CAS Project ID: P0801385 CAS Sample ID: P0801385-003

Date Collected: 5/9/08

Date Received: 5/12/08

Date Analyzed: 5/12/08

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Sampling Media: Rusty Bravo

6.0 L Summa Canister

Test Notes: Container ID:

SC00781

Initial Pressure (psig):

-3.4

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Canister Dilution Factor: 1.61

1.00 Liter(s)

0.10 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	87	0.81	0.10	20	0.19	0.023	
179601-23-1	m,p-Xylenes	350	0.81	0.21	80	0.19	0.048	
75-25-2	Bromoform	ND	0.81	0.12	ND	0.078	0.012	
100-42-5	Styrene	1.9	0.81	0.12	0.44	0.19	0.029	
95-47-6	o-Xylene	120	0.81	0.10	27	0.19	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	3.7	0.81	0.090	0.74	0.16	0.018	
103-65-1	n-Propylbenzene	9.7	0.81	0.084	2.0	0.16	0.017	
622-96-8	4-Ethyltoluene	17	0.81	0.092	3.4	0.16	0.019	
108-67-8	1,3,5-Trimethylbenzene	19	0.81	0.097	3.8	0.16	0.020	
98-83-9	alpha-Methylstyrene	0.53	0.81	0.12	0.11	0.17	0.024	J
95-63-6	1,2,4-Trimethylbenzene	39	0.81	0.11	7.9	0.16	0.023	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.10	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	35	0.16	0.090	5.8	0.027	0.015	
135-98-8	sec-Butylbenzene	0.93	0.81	0.093	0.17	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	6.9	0.81	0.10	1.3	0.15	0.019	
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.81	0.12	ND	0.083	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.016	
91-20-3	Naphthalene	7.0	0.32	0.12	1.3	0.061	0.023	
87-68-3	Hexachlorobutadiene	ND	0.16	0.14	ND	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.081	ND	0.059	0.015	
104-51-8	n-Butylbenzene	3.0	0.32	0.081	0.55	0.059	0.015	

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

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

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

					_	-
Verified By:	CH	Date:	5/28	108	1	F
*		TO15SCAN.XLT - Tronc	x - Henders	on - PageNo.:		•

Data File : 05120807.D

Acg On : 12 May 2008 14:50

Operator : RTB

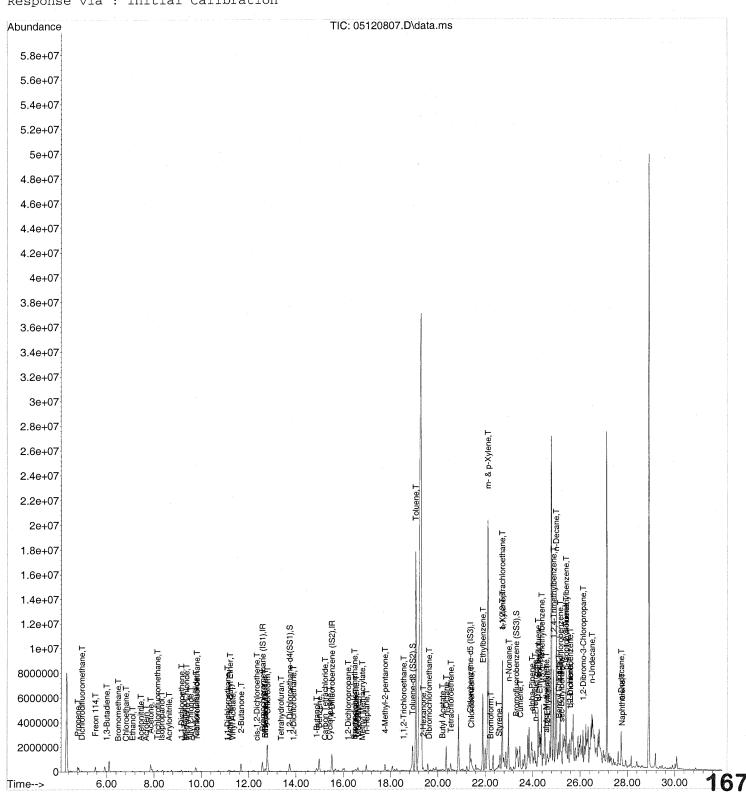
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 17:01:50 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120807.D Acq On : 12 May 2008 14:50 Operator : RTB

: P0801385-003 (1000mL) : ENSR SG41B-20D (-3.4, 3.5) Sample Misc ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 17:01:50 2008
Quant Method: J:\MS13\METHODS\R13041408.M
Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update: Tue Apr 15 06:47:20 2008
Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	365729	25.000 ng	-0.02
37) 1,4-Difluorobenzene (IS2)		114	1580836	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.36	82	777638	25.000 ng	0.02
56) Chrorobenzene-d5 (155)	21.30	02	777030	23.000 Hg	0.00
System Monitoring Compounds					
33) 1,2-Dichloroethane-d4(. 13.73	65	641979	21.888 ng	-0.02
Spiked Amount 25.000	. 13.73	0.5	Recove		7.568 <i>i</i>
57) Toluene-d8 (SS2)	18.93	98	1714841	24.603 ng	0.00
Spiked Amount 25.000	10.55	50	Recove		3.40%
73) Bromofluorobenzene (SS3)	23.30	174	615318	25.653 ng	0.00
Spiked Amount 25.000	23.30	1. / 1	Recove		2.60%
Spiked Amount 25.000			necove	217 102	
Target Compounds					Ovalue
2) Propene	(4.79)	42	211777	(6.996 ng)	96
3) Dichlorodifluoromethane	4.96	85	76087	1.379 ng	99
4) Chloromethane	5.30	50	352	N.D.	
5) Freon 114	5.53	135		0.055 ng	85
6) Vinyl Chloride	5.73	62	237	N.D.	٠
7) 1,3-Butadiene	6.00	54	21176	0.638 ng	# 78
8) Bromomethane	6.49	94	1007	0.049 ng	# 77
9) Chloroethane	6.82	64	851	0.048 ng	# 60
10) Ethanol	7.10	45		(4.740 ng)	" 00
11) Acetonitrile	7.44	41	48908	0.902 ng	94
12) Acrolein	7.66	56	6174	0.423 ng	# 74
13) Acetone	7_85	58	327557	16.180 ng	» # 56
14) Trichlorofluoromethane	8.14)101	146518	3.379 ng)	98
15) Isopropanol	8.32	45	112796	1.646 ng	98
16) Acrylonitrile	(8,63)	53	5999	(0.191 ng)	89
17) 1,1-Dichloroethene	9.16	96	67755	3.355 no	# 87
18) tert-Butanol	9.27	59	23595m (" "
19) Methylene Chloride	9.36	84		0.742 ng	89
20) Allyl Chloride	9.54	41	6477	0.208 ng M	
21) Trichlorotrifluoroethane	(9.81)	151	6060	(0.327 ng)	92
22) Carbon Disulfide	9.76	76	780520	9.052 ng	100
23) trans-1,2-Dichloroethene	10.75	61	429	N.D. 4	100
24) 1,1-Dichloroethane	(11.10)	63	14247	0.348 ng	99
25) Methyl tert-Butyl Ether	11.20	73	12382	0.184 ng	98
26) Vinyl Acetate	(11.31)	86	7100	1.765 ng	M# 1
27) 2-Butanone	11.67	72	242788 >	17.101 ng	94
28) cis-1,2-Dichloroethene	(12.34)	61	1932	0.058 ng	# 66
29) Diisopropyl Ether	12.70	87	1408	0.076 ng/(
30) Ethyl Acetate	12.70	61	9870 /	1 115 ng	81
31) n-Hexane	(12.70)	57		2.805 ng	90
32) Chloroform	12.79	83	2369192	69.383 ng	99
34) Tetrahydrofuran	13.36	72	10663	0.751 ng	97
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D. 4	· ·
36) 1,2-Dichloroethane	(13.89)	62		(0.087 ng)	
38) 1,1,1-Trichloroethane	14.29	97	1065	N.D.	
39) Isopropyl Acetate	14.85	61	325	N.D.	
40) 1-Butanol	14.87	56	222298	10.303 ng	89
41) Benzene	14.98	78		14.806 ng	99
41) Carbon Tetrachloride	15.22	117	34577	1.247 ng	99
43) Cyclohexane	15.42	84	18903	0.609 ng	# 57
44) tert-Amyl Methyl Ether	15.86	73	291	N.D.	
45) 1,2-Dichloropropane	(16-20)	63	3437	0.143 ng	92
46) Bromodichloromethane	16.47	83	50074	(1.756 ng)	87
10, DI OMOGICITIOI OMCCITATIO	(10.1)	0.5	300/4	1.700 119	0,

Data File: 05120807.D
Acq On: 12 May 2008 14:50
Operator: RTB

: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 17:01:50 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc U	Jnits De	ev(Min)
47) Trichloroethene 48) 1,4-Dioxane	16.54 (6.52	130	45506 1246m	2.206	······································	99
49) Isooctane	16.62	57	334371	3.368		68
50) Methyl Methacrylate	16.80	100	1684	< 0.221	ng #	3
51) n-Heptane	16.98	71	146157	6.291		80
52) cis-1,3-Dichloropropene	17.72	75	135	N.D.	MANAGEMENT OF THE PARTY OF THE	
53) 4-Methyl-2-pentanone	17.77	58	197352	8.604	ng	86
54) trans-1,3-Dichloropropene	18.45	.75	429	N.D.		
55) 1,1,2-Trichloroethane	18.55	97	3102	0.154	ng H Q	
58) Toluene	19.07		14137894	161.437		M197
59) 2-Hexanone	19.38	43	159977 (The state of the s	_ng / #	39
60) Dibromochloromethane	(19.62)	129	1517	0.072		83
61) 1,2-Dibromoethane	20-28	107	58	N.D.		
62) Butyl Acetate	20-19	43	66643	$\underbrace{1.022}_{10.530}$		66
63) n-Octane	20.35	57	380517	18.538	The same of the sa	94
64) Tetrachloroethene	20.55 21.41)166 112	180547 (31639	8.234		98 73
65) Chlorobenzene 66) Ethylbenzene	21.89	91	5306869	54.271		, , 193
67) m- & p-Xylene	22.12		17472962	267.306		1 95
68) Bromoform	22.22	173	961	-0.067		
69) Styrene	22.58	104	65209	1.156		91
70) o-Xylene	22.72	91	5096122	A Parliament to manage of the second	no	92
71) n-Nonane	22.99	43	2129563	37.803		81
72) 1,1,2,2-Tetrachloroethane	22.72	83	34349		TIG HP#	4
74) Cumene		105	202551	(2.270		99
75) alpha-Pinene	23.97	93	817166	17.229	ng	92
76) n-Propylbenzene	24.10	91	720562	6.034	ng)#	78
77) 3-Ethyltoluene	24.23	105	2233249	22.952	ng	98
78) 4-Ethyltoluene		105	925719 ,	10.333		96
79) 1,3,5-Trimethylbenzene	24.38	105	925881 (11.636	ng	97
80) alpha-Methylstyrene	(24.57)	118		0.330	A STATE OF THE STA	1
81) 2-Ethyltoluene	24.61	105	641460	- Marian	ng	99
82) 1,2,4-Trimethylbenzene		105	2174501	(24.186)		86 81
83) n-Decane 84) Benzyl Chloride	24.99 25.10	57 91	4845957 8420	97.463 -0.137		69
85) 1,3-Dichlorobenzene	25.16	146	1004476	20.637	#10 HP	
86) 1,4-Dichlorobenzene	25 16	146	1004476	(21.565)		99
87) sec-Butylbenzene	25.21	105	61032	0.578		93
88) p-Isopropyltoluene	25.40	119	396767	4.310		85
89) 1,2,3-Trimethylbenzene	25.41	105	424413	4.800		95
90) 1,2-Dichlorobenzene	25.58	146	3067	0.061		86
91) d-Limonene	25.58	68	367278	9.009	ng	92
92) 1,2-Dibromo-3-Chloropr	26.13	157	697	.0.053	ng #	1
93) n-Undecane	26.50	57	3990993	76.455	ng#	72
94) 1,2,4-Trichlorobenzene	27-63	180	1112	N.D.	6	
<u>_</u>	27.77	128	434199	4.368		98
96) n-Dodecane	27.74	57	897357	16.943		86
97) Hexachloro-1,3-butadiene	0.00	225	0	N.D.		

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

IM 5/27/08

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

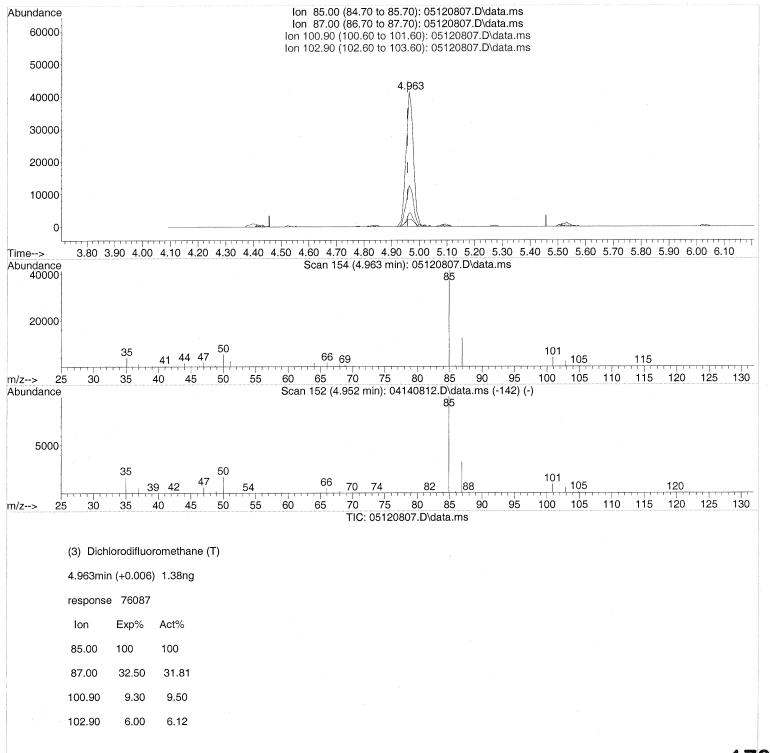
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 12 16:14:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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Data File : 05120807.D

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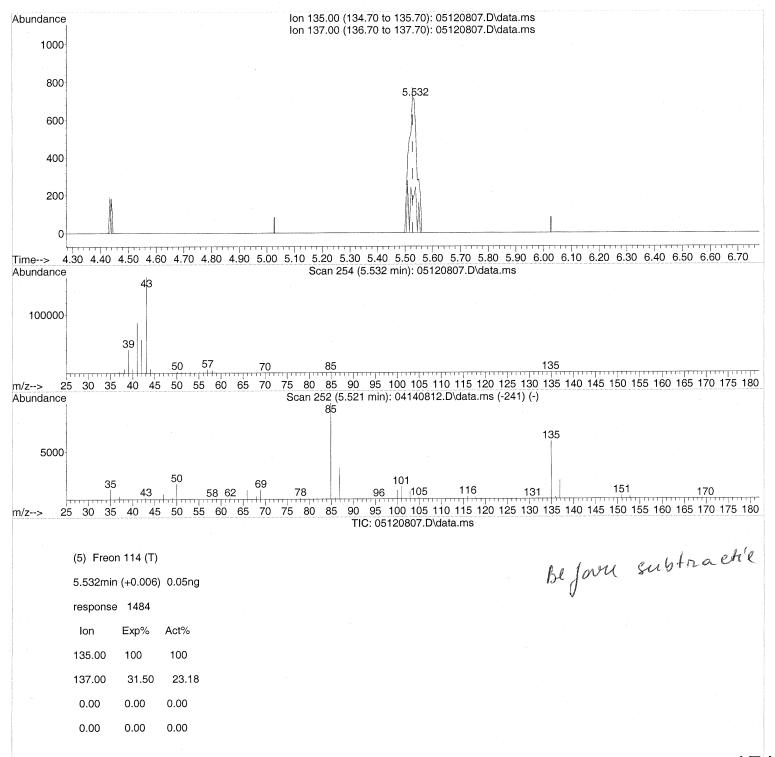
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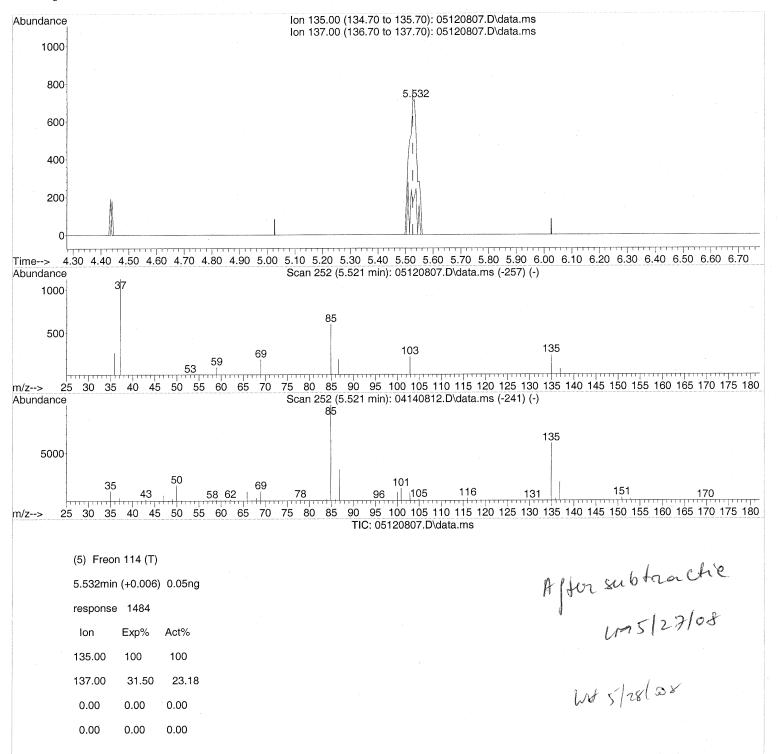
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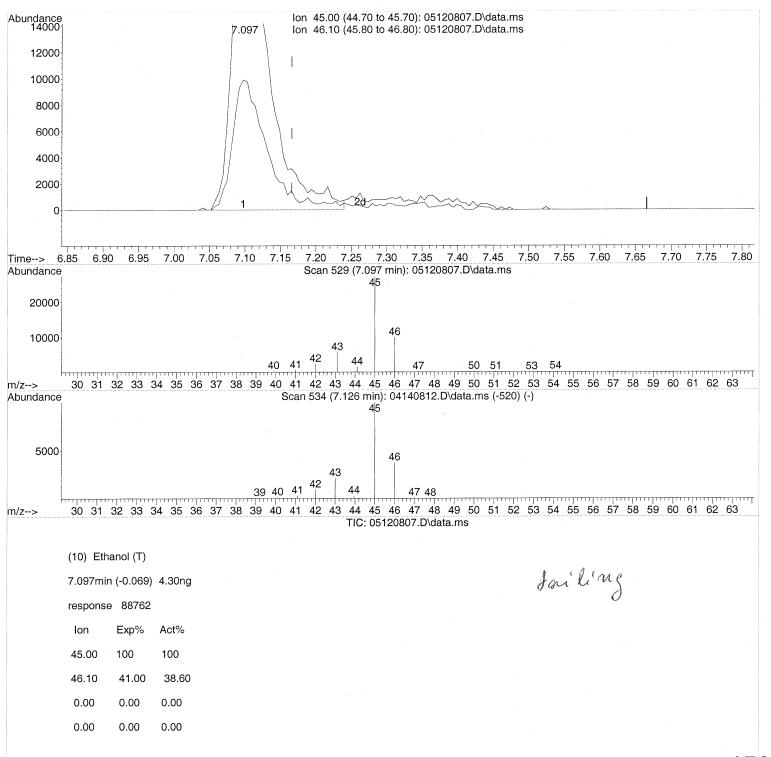
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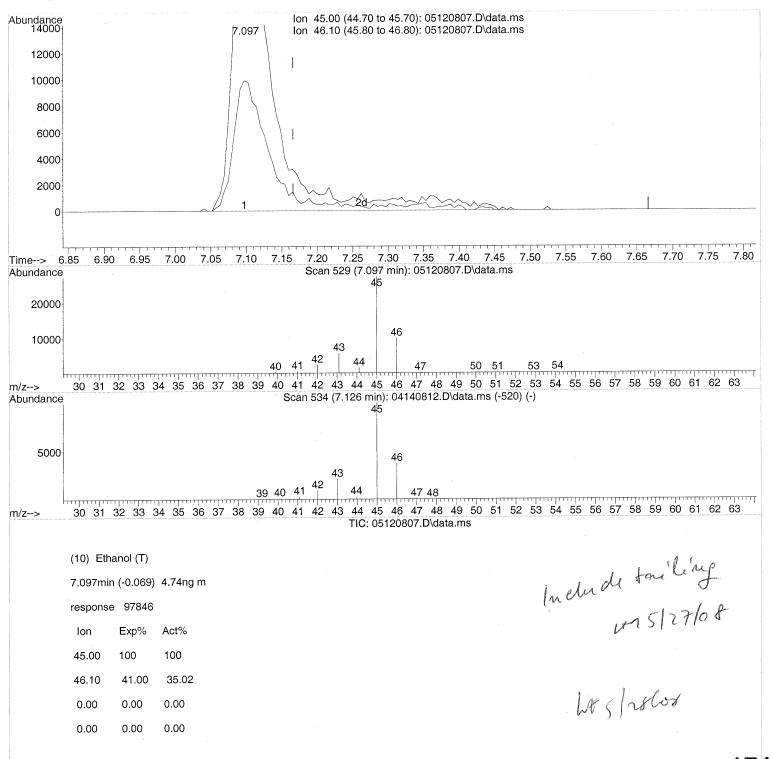
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ALS Vial : 3 Sample Multiplier: 1

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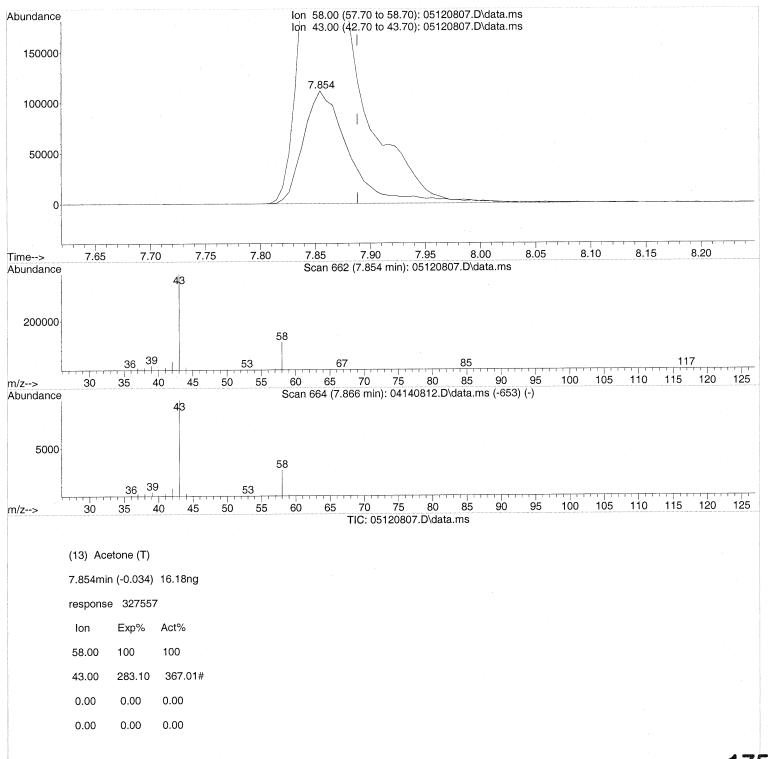
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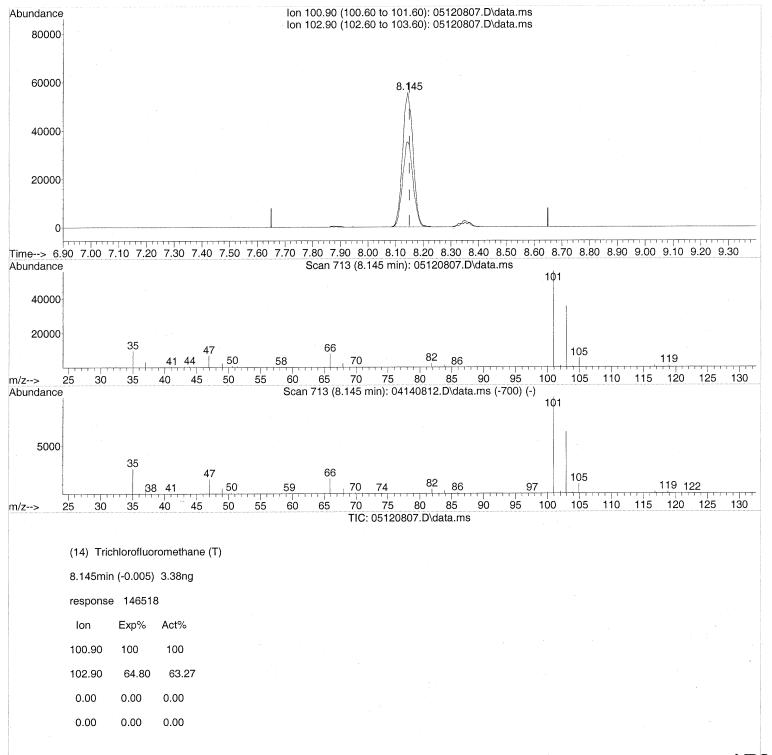
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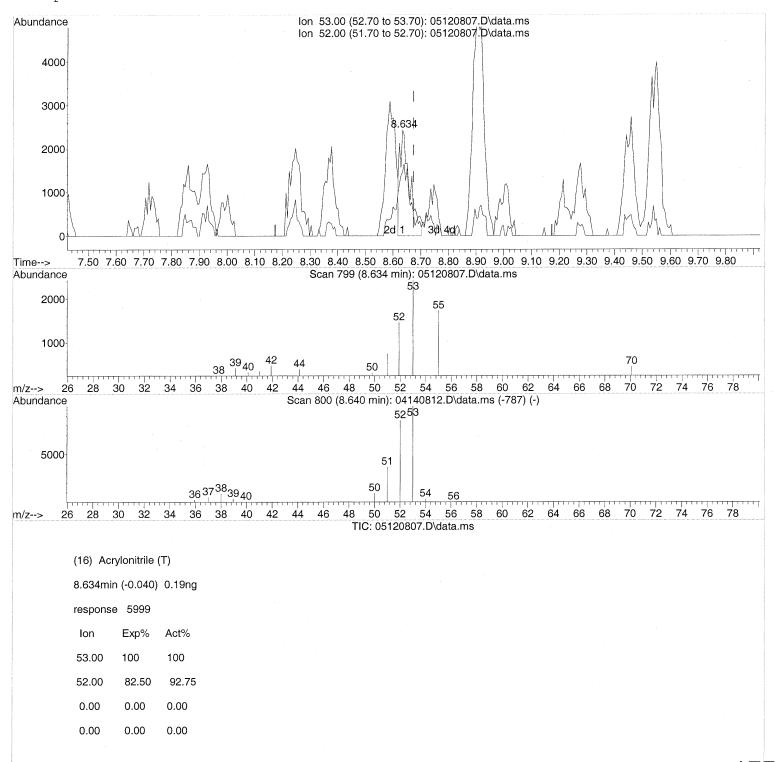
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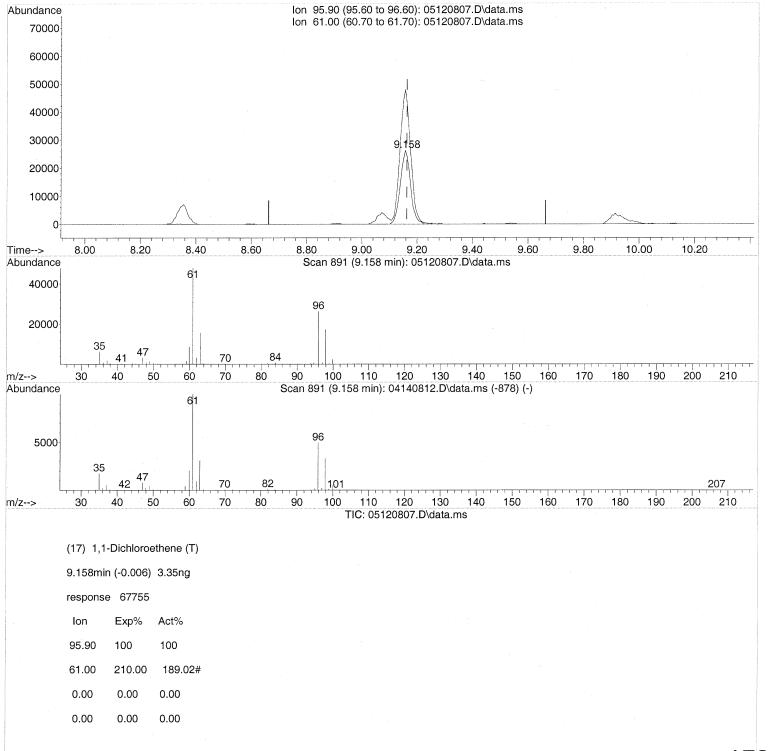
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Misc : ENSR SG41B-20D (-3.4, 3.5)
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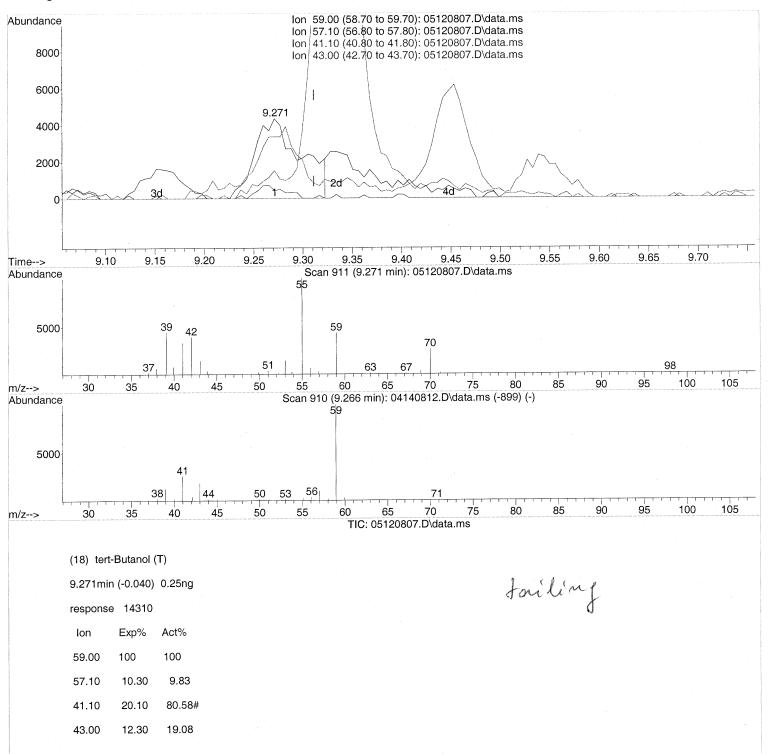
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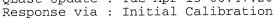
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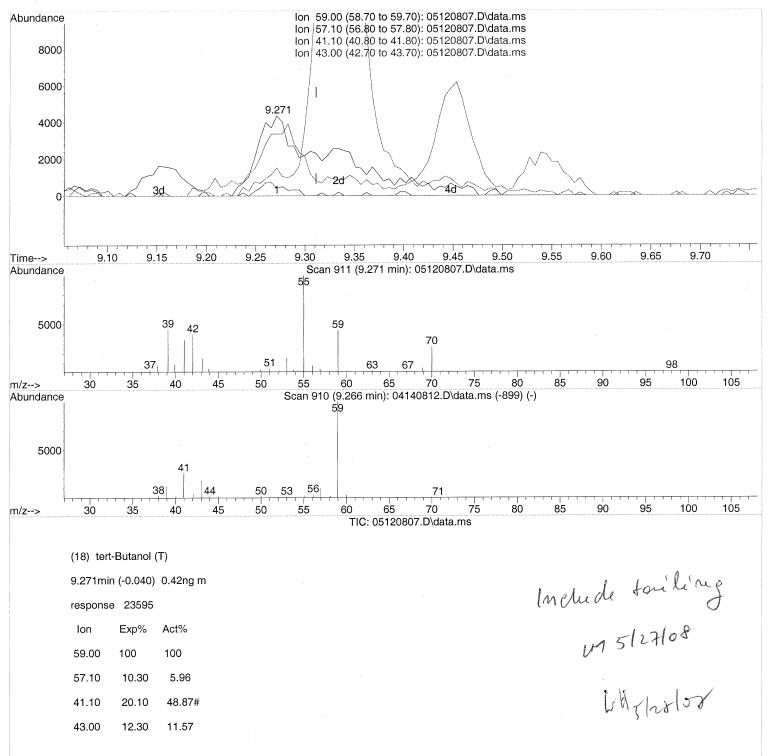
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Operator : RTB

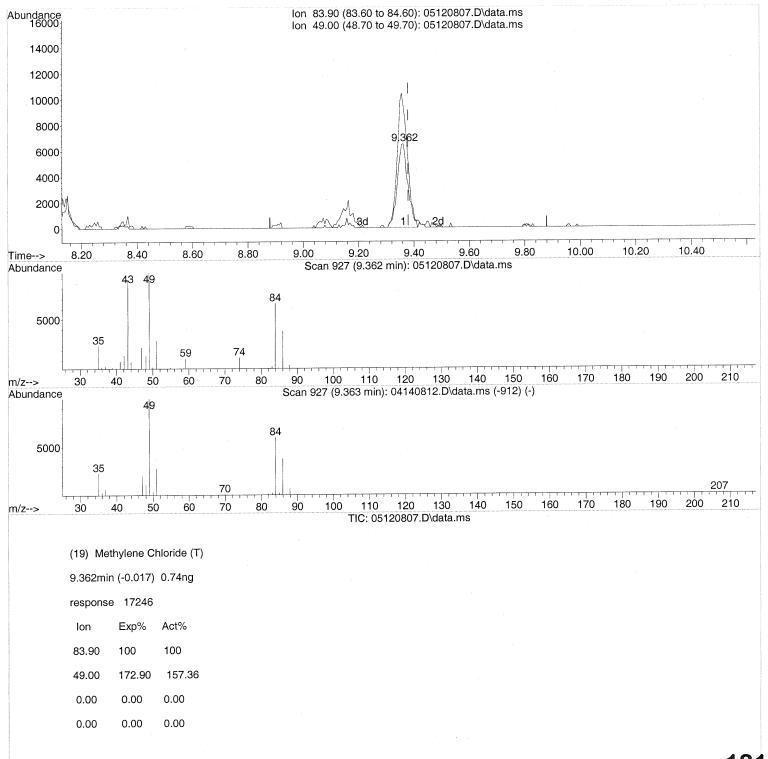
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Quant Time: May 12 16:14:08 2008

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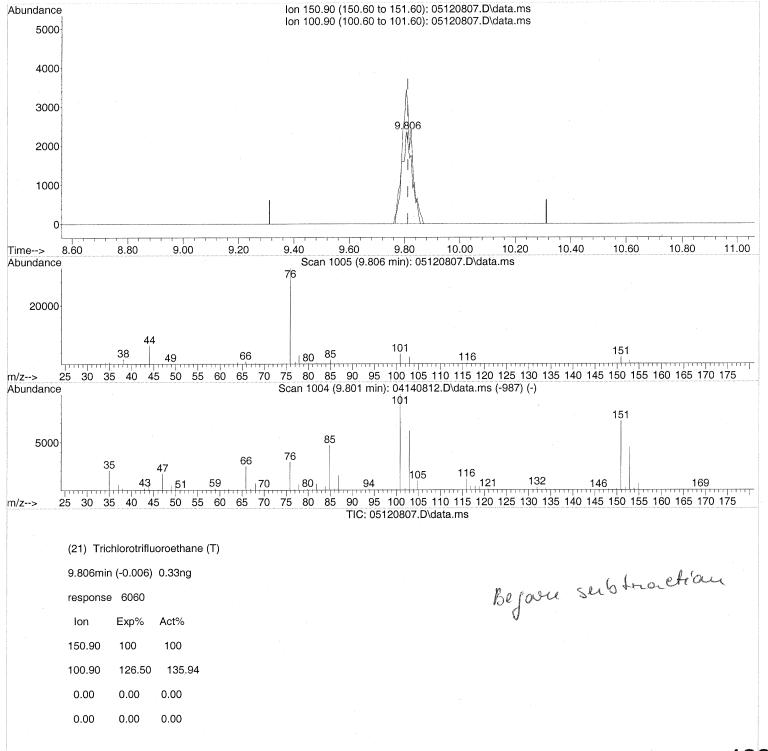
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

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Data File: 05120807.D

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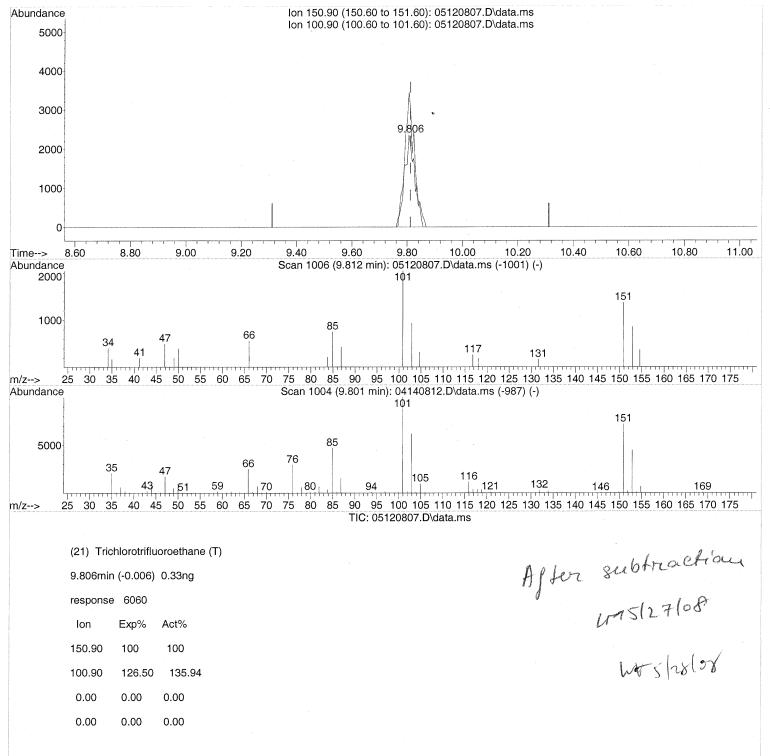
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Misc : ENSR SG41B-20D (-3.4, 3.5)
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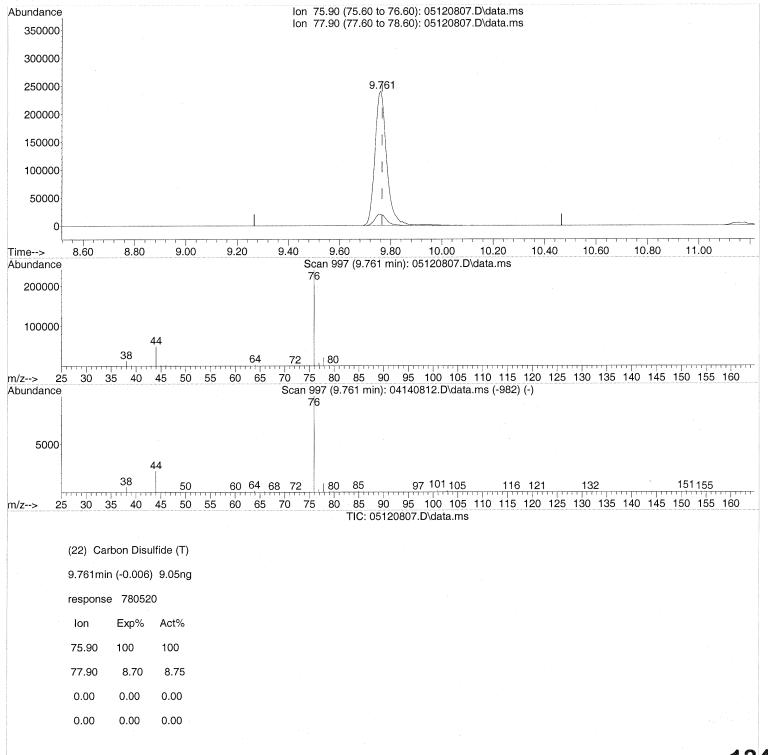
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Data Path : J:\MS13\DATA\2008_05\12\

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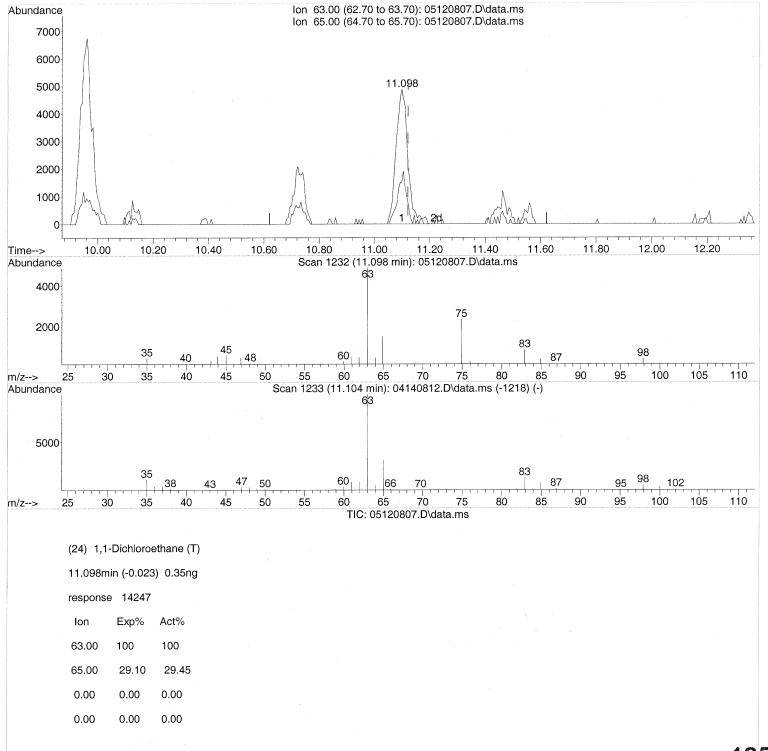
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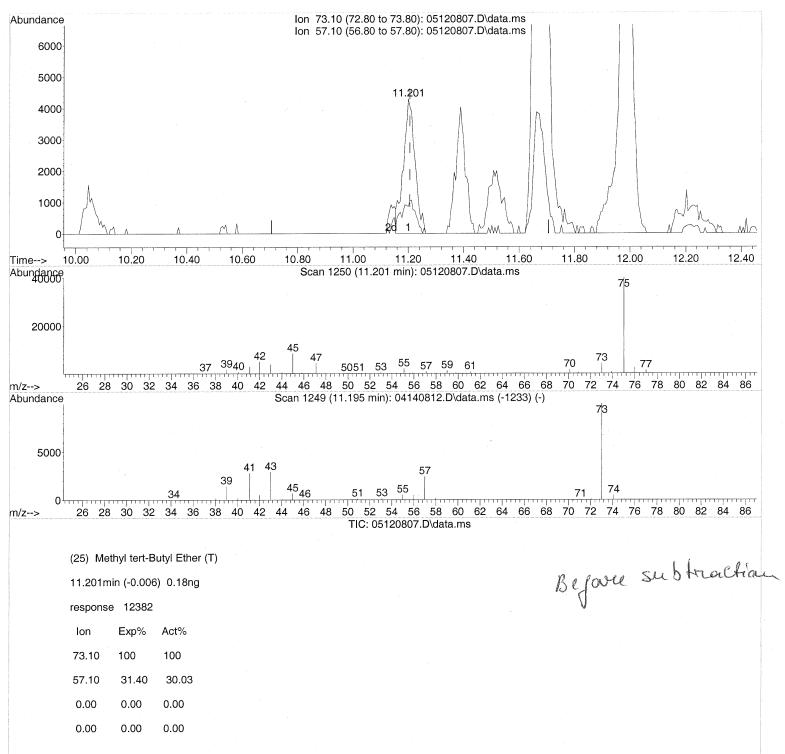
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Quant Time: May 12 16:14:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

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Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

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ALS Vial : 3 Sample Multiplier: 1

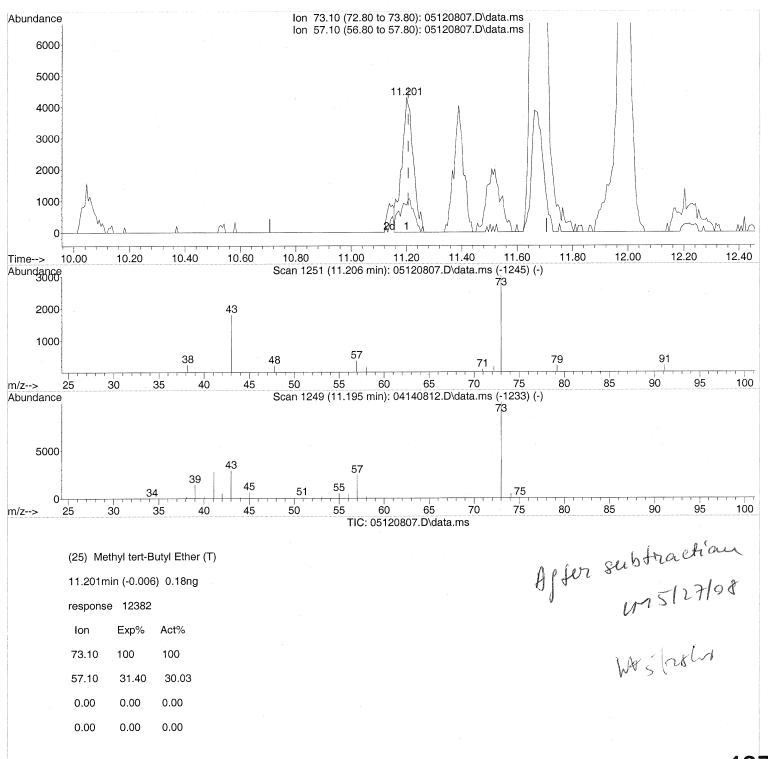
Quant Time: May 12 16:14:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



Page: 1

Data File : 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

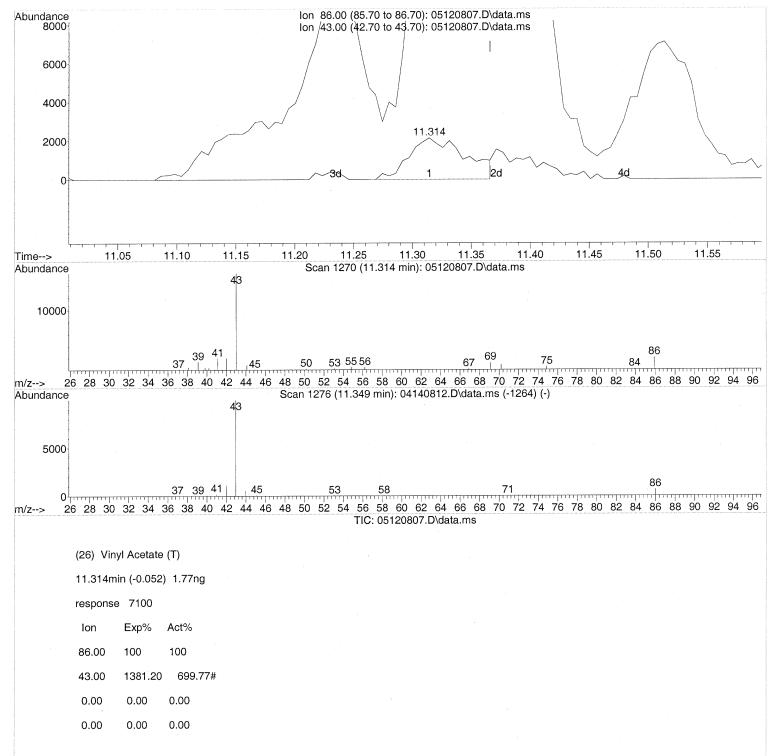
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 12 16:14:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File : 05120807.D

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Operator : RTB

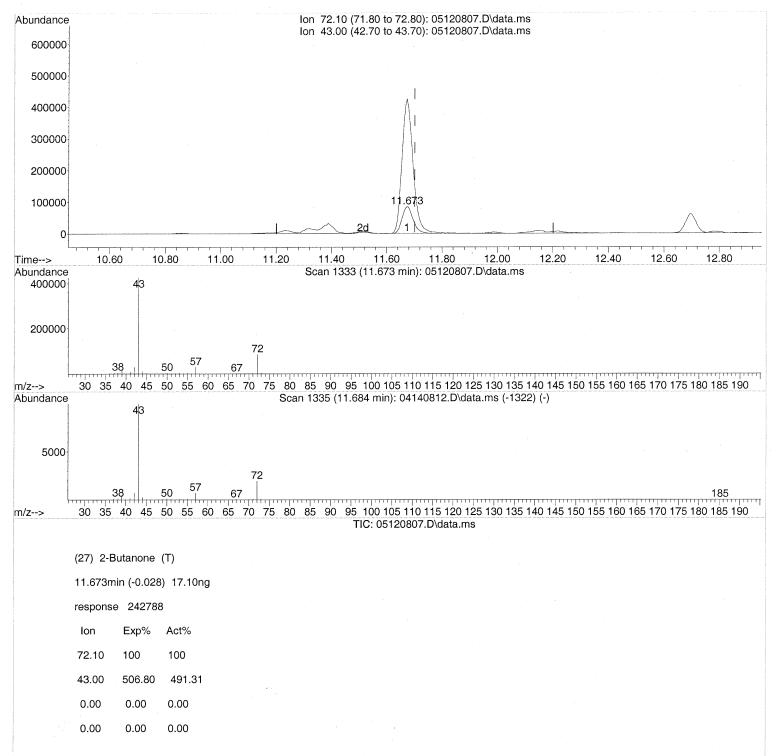
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ALS Vial : 3 Sample Multiplier: 1

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Quant Method : J:\MS13\METHODS\R13041408.M

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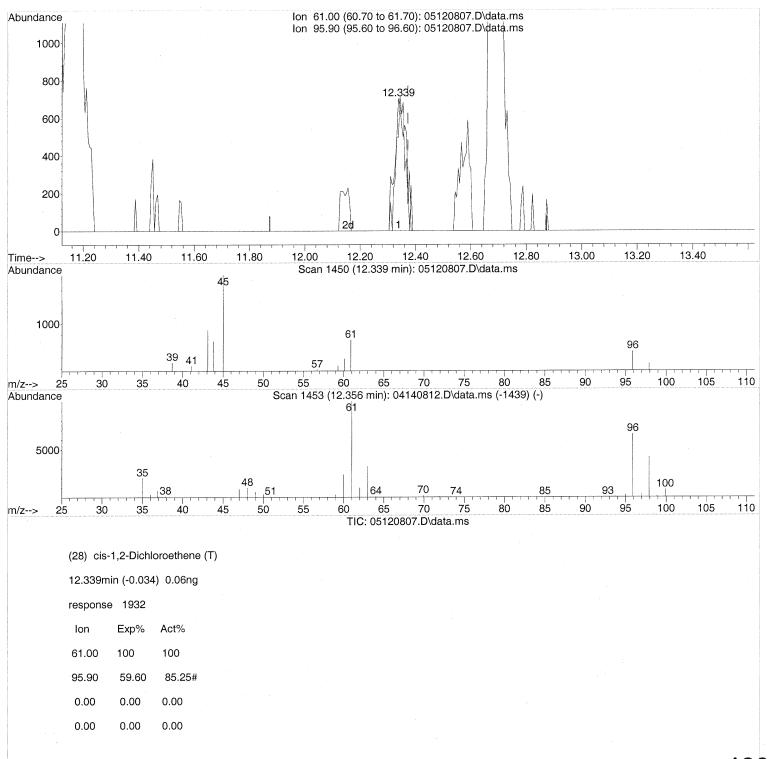
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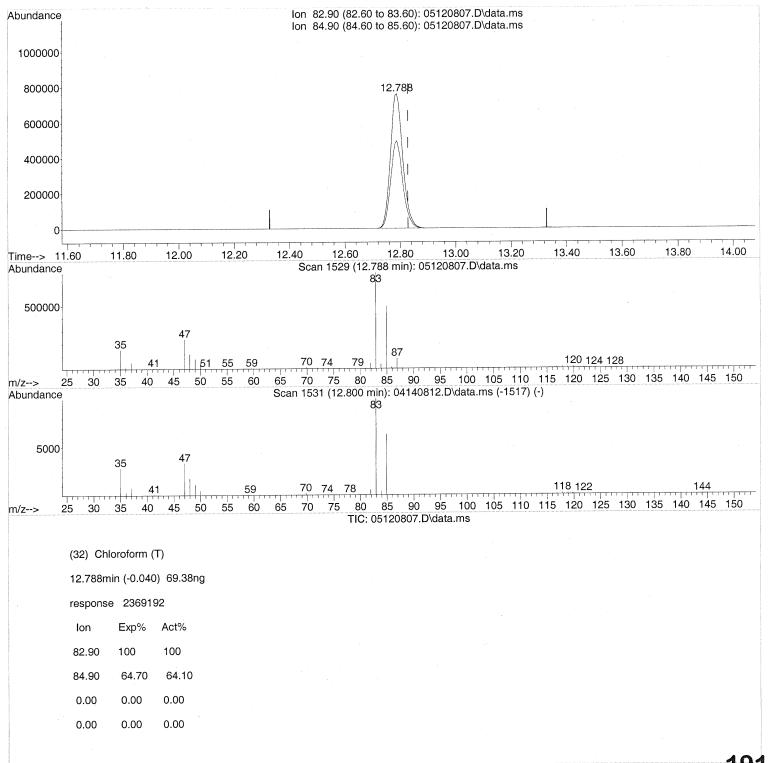
Operator : RTB

: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 12 16:14:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



Data File : 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

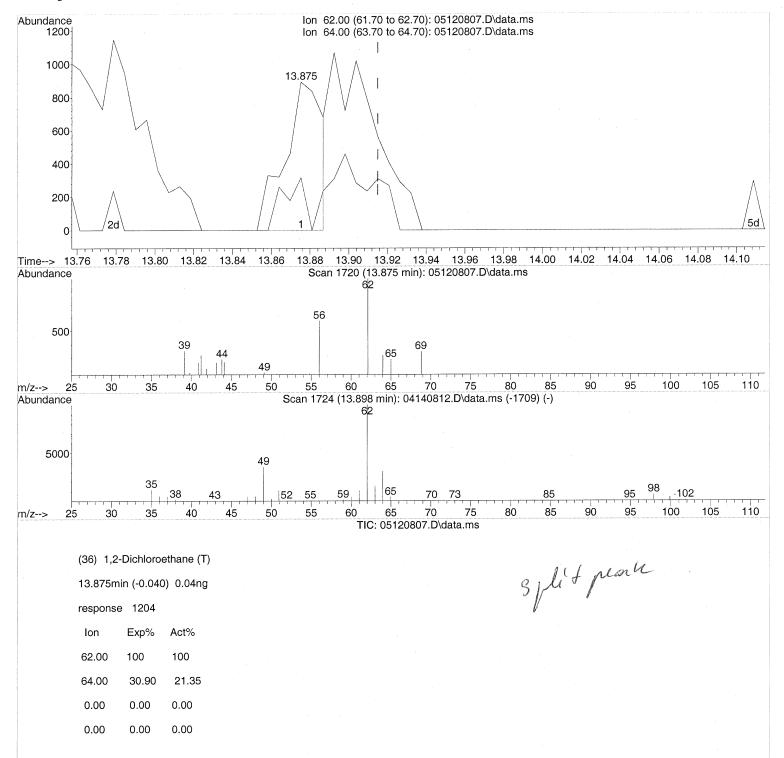
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:59:12 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

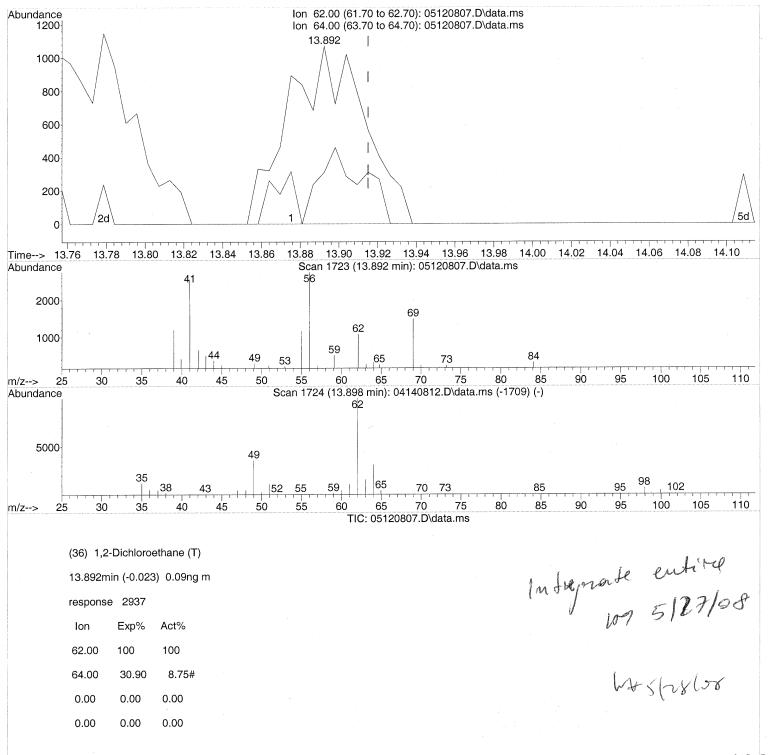
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120807.D

: 12 May 2008 Acq On

Operator : RTB

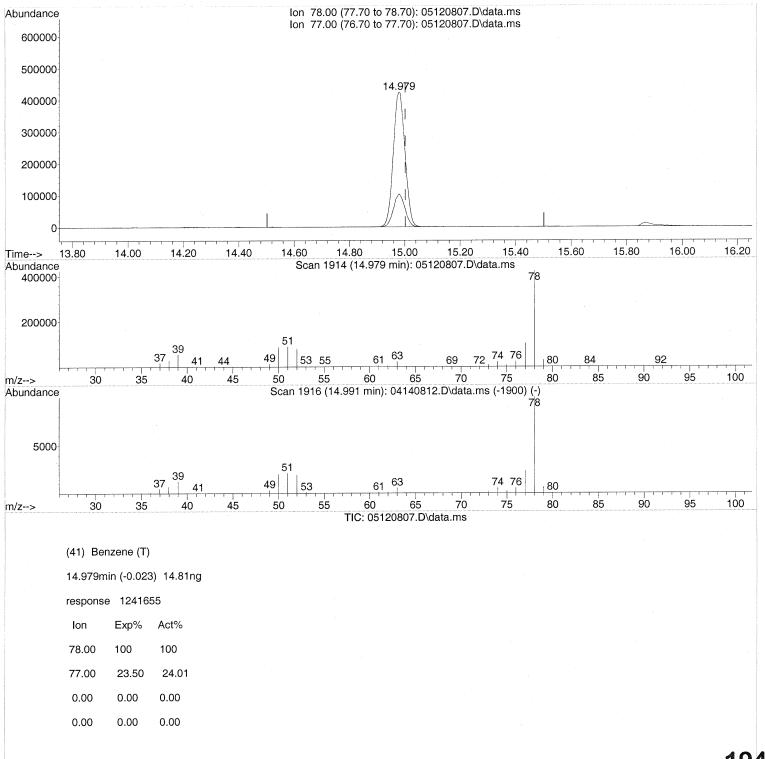
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:59:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

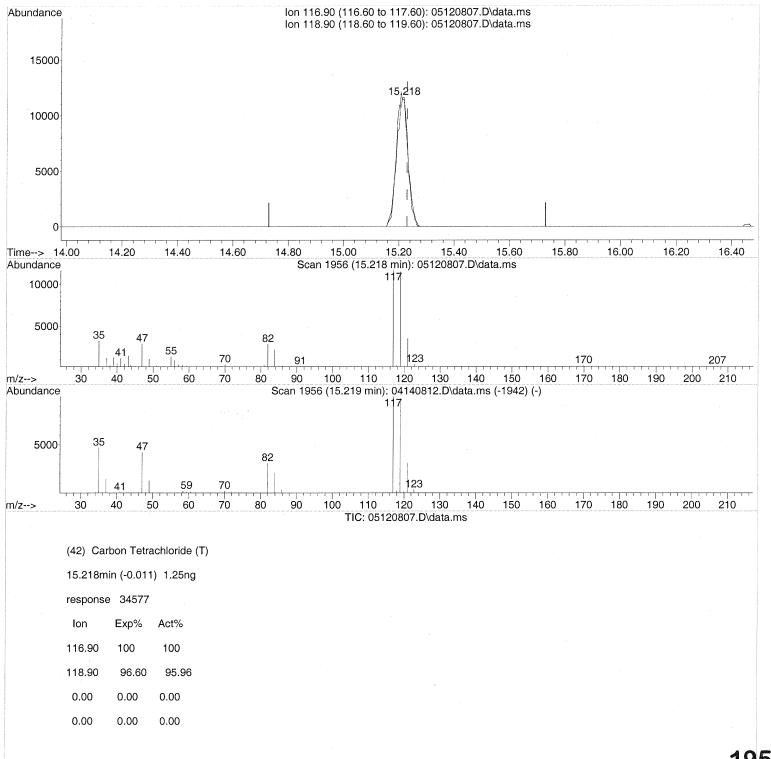
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

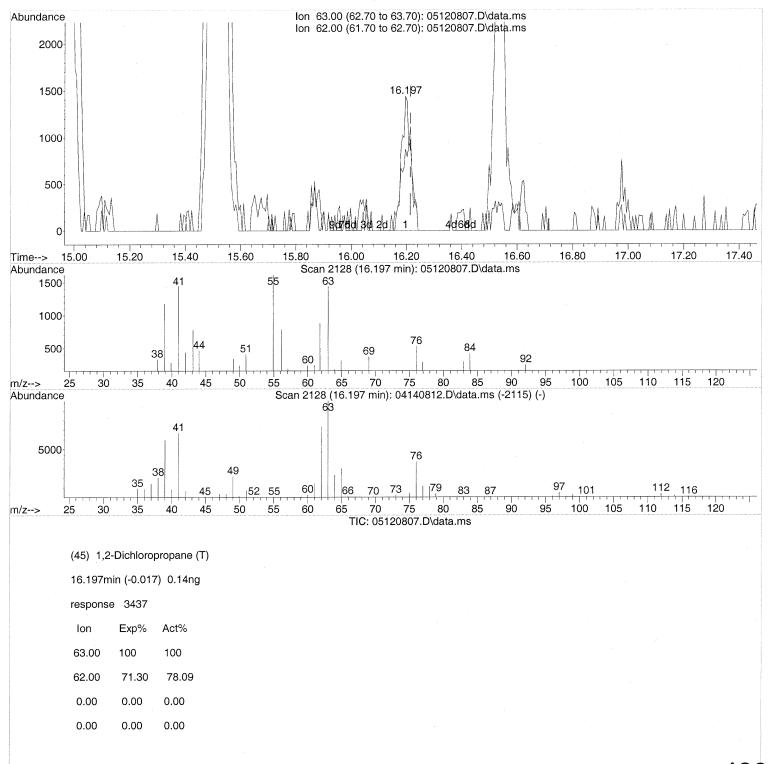
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

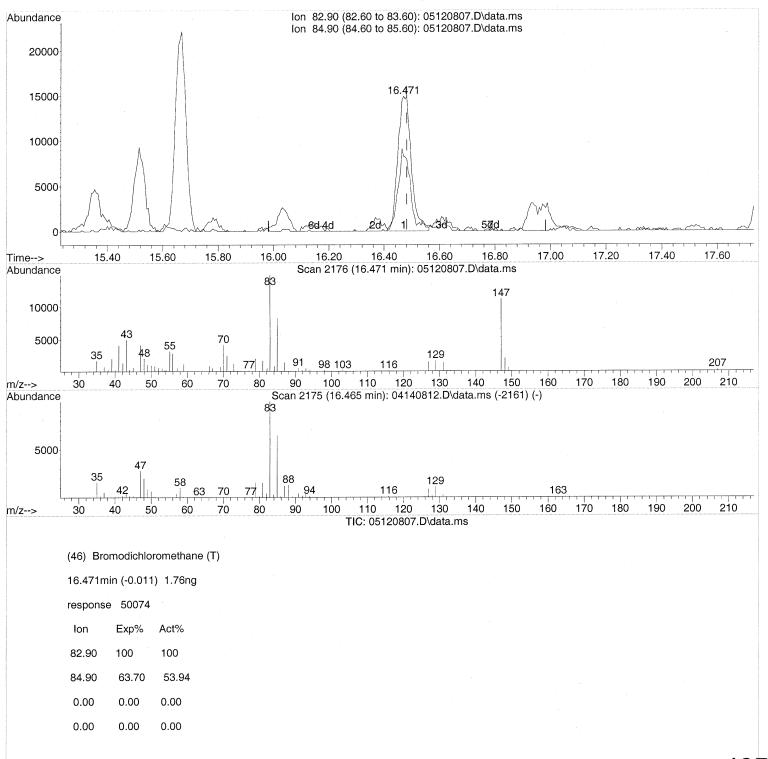
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File : 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

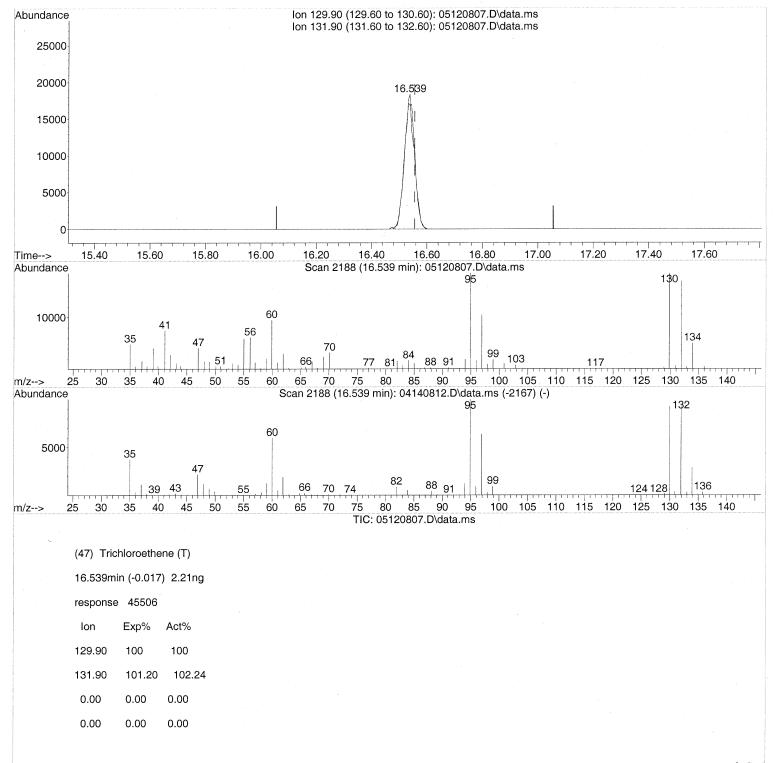
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method : $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File : 05120807.D

: 12 May 2008 14:50 Acq On

: RTB Operator

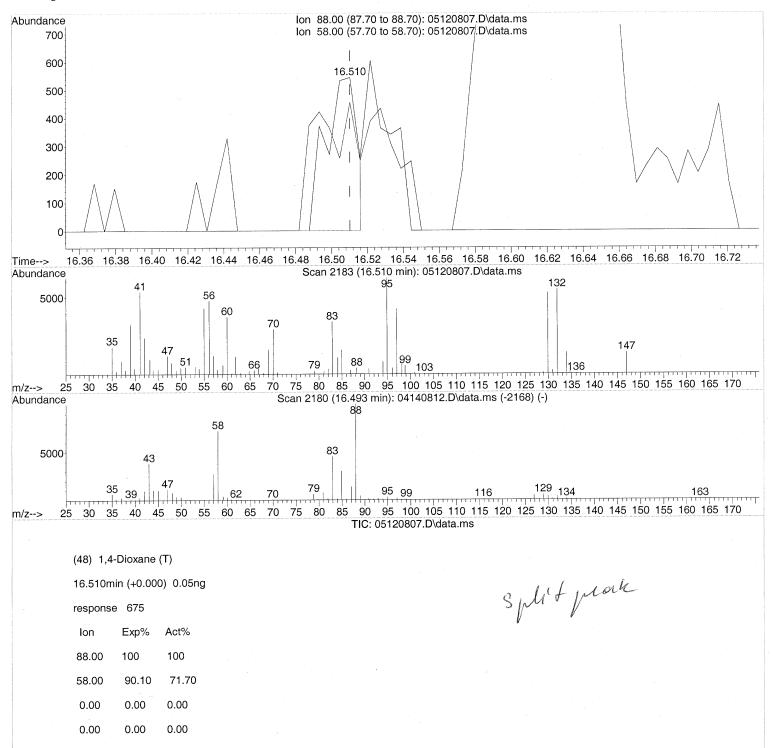
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc ALS Vial Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008 Response via : Initial Calibration



Data File: 05120807.D

: 12 May 2008 14:50 Acq On

Operator : RTB

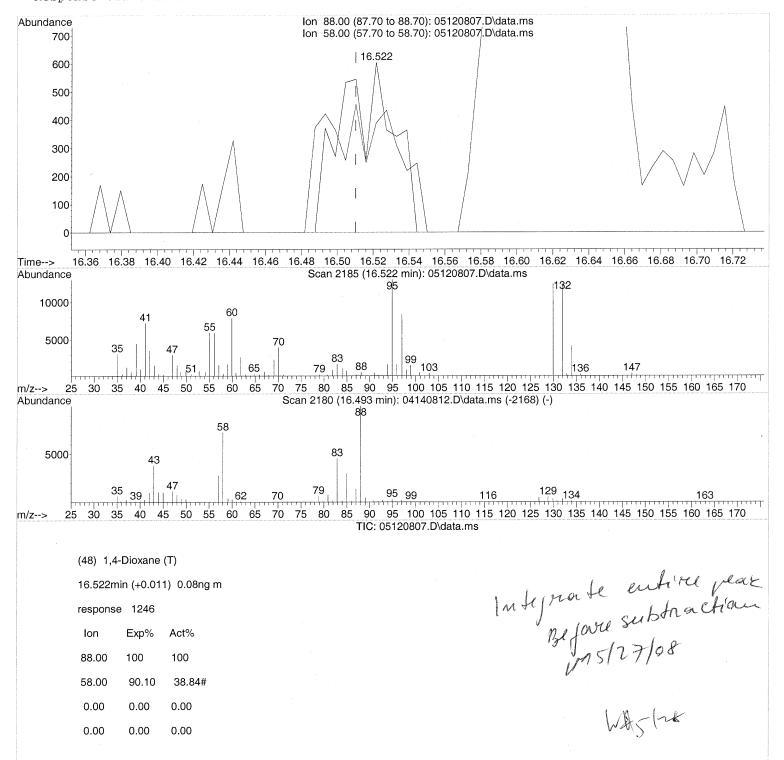
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Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data File: 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

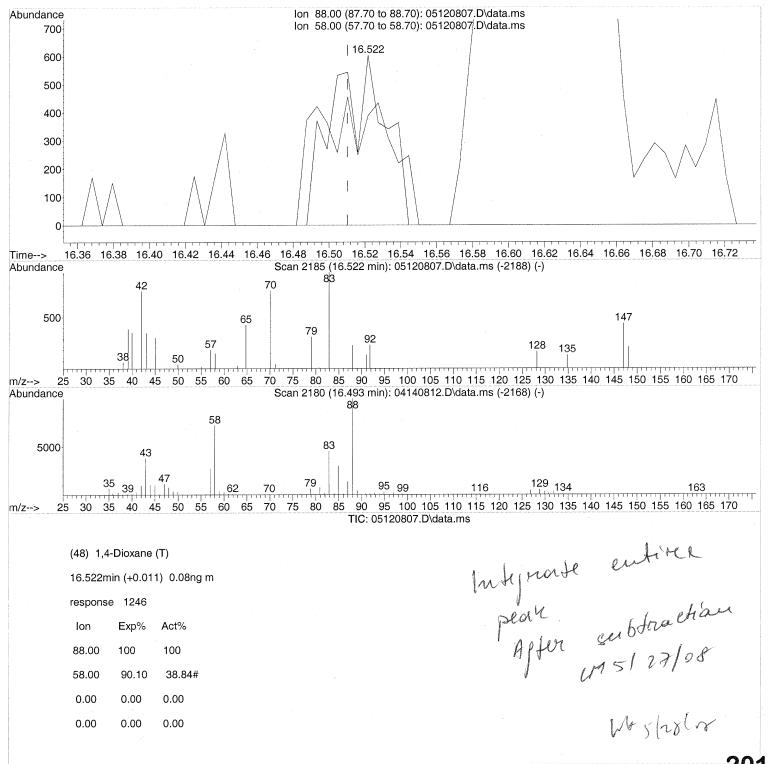
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

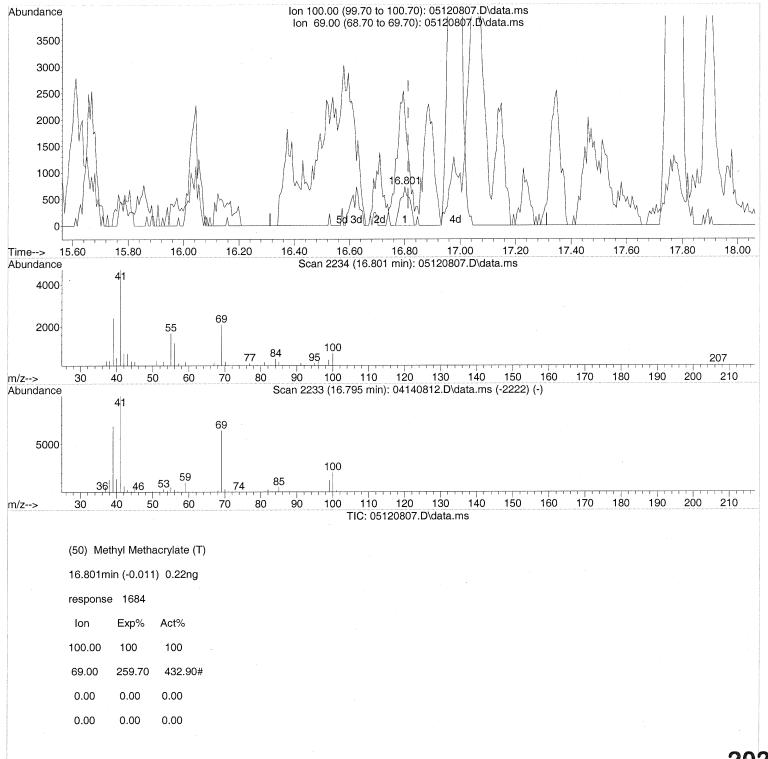
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

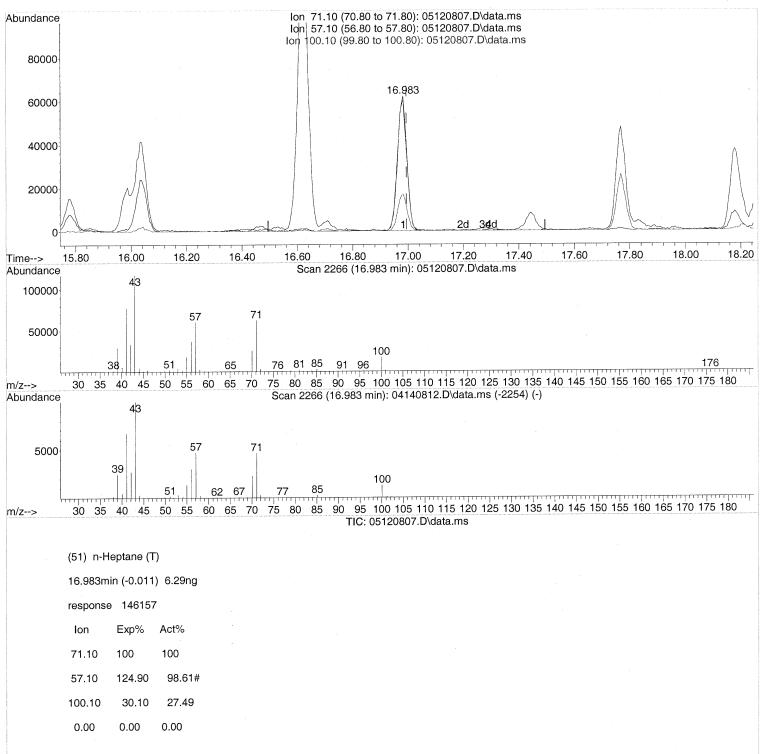
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File: 05120807.D

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Operator : RTB

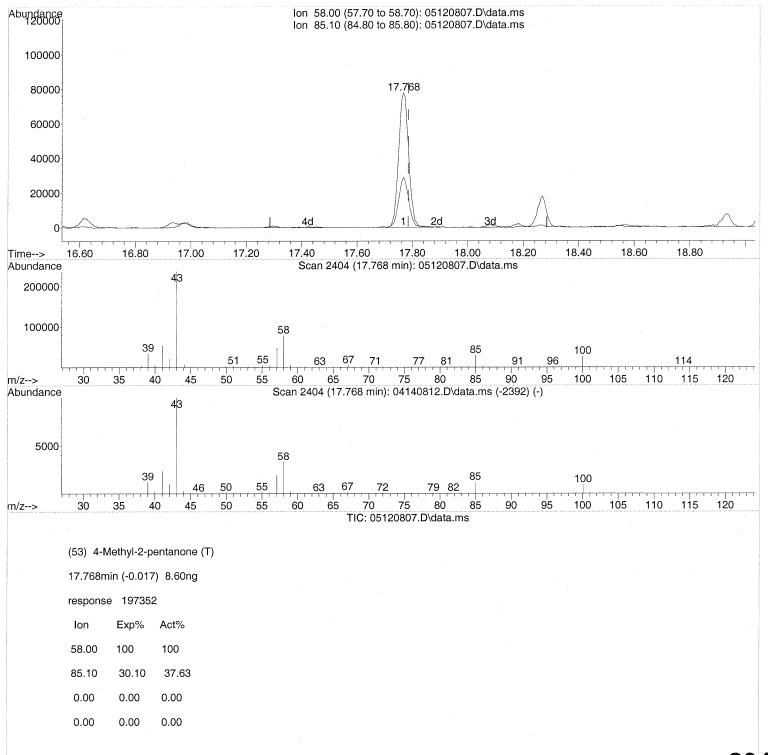
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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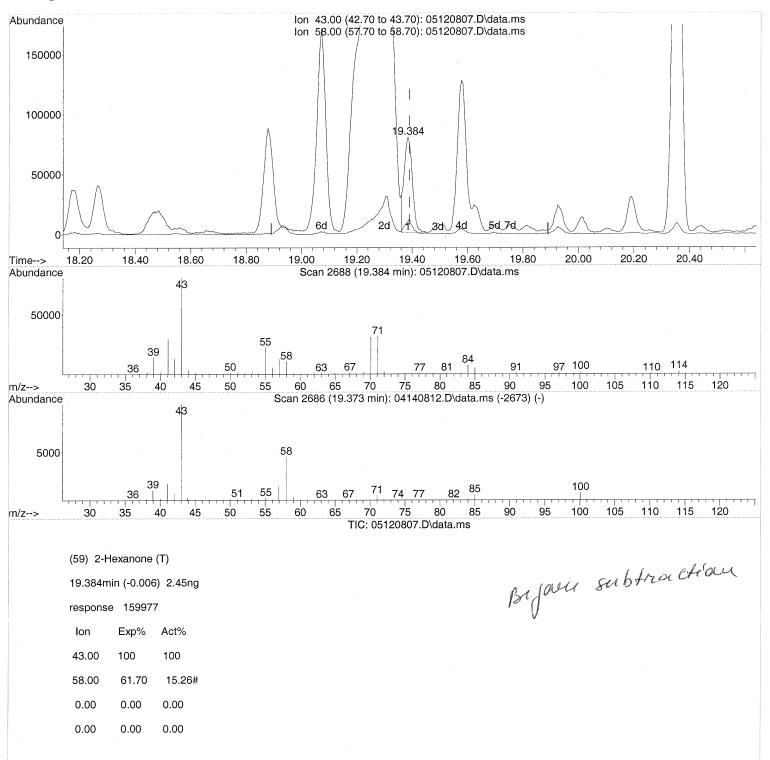
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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Data Path : J:\MS13\DATA\2008_05\12\

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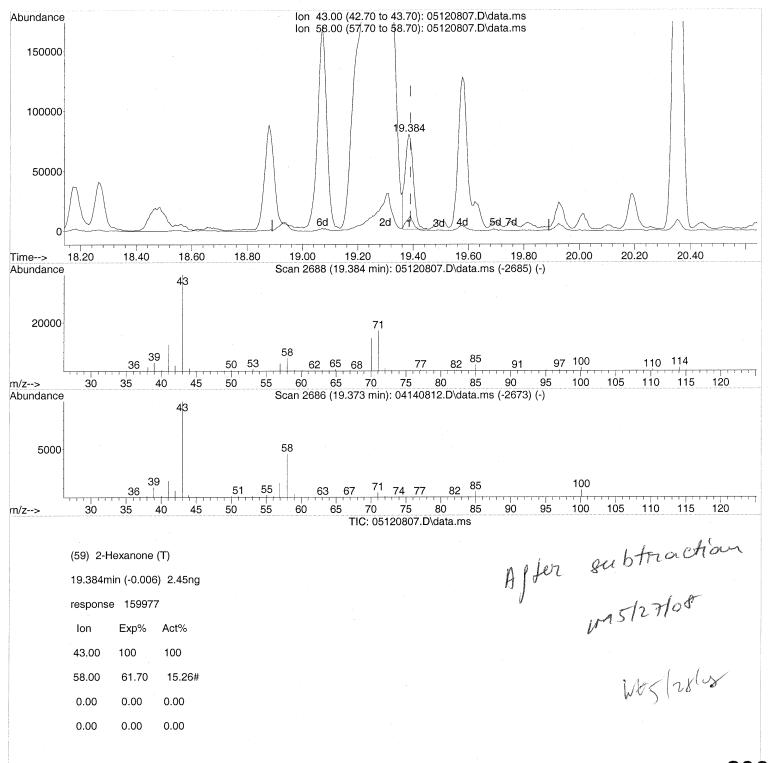
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

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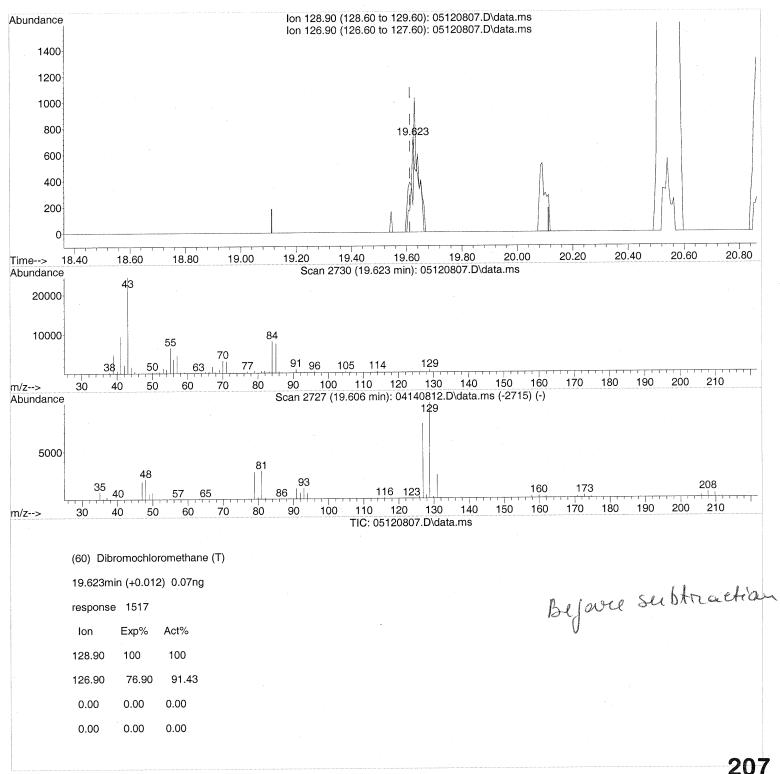
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

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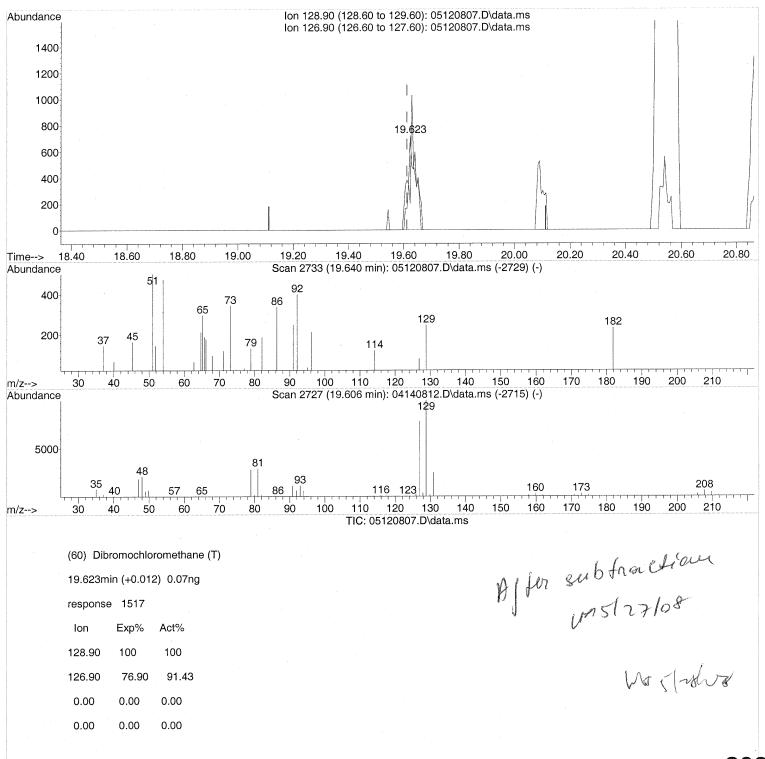
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

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Quant Method : J:\MS13\METHODS\R13041408.M

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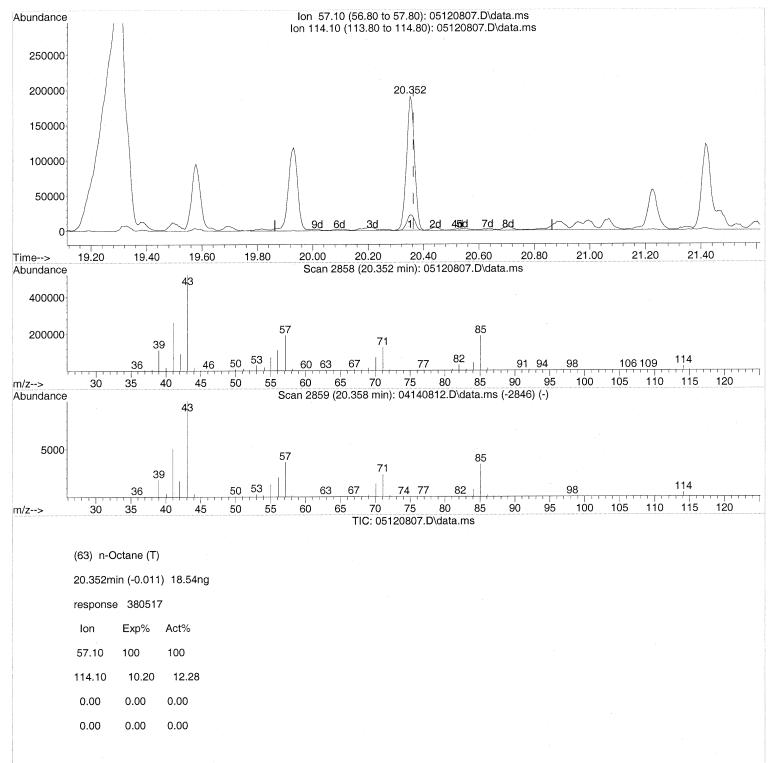
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data Path : J:\MS13\DATA\2008_05\12\

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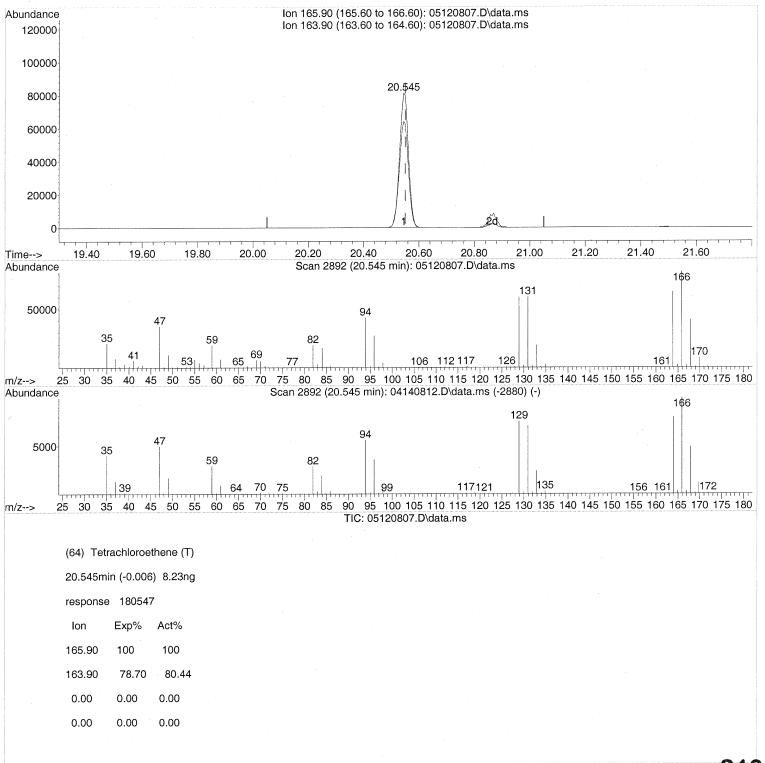
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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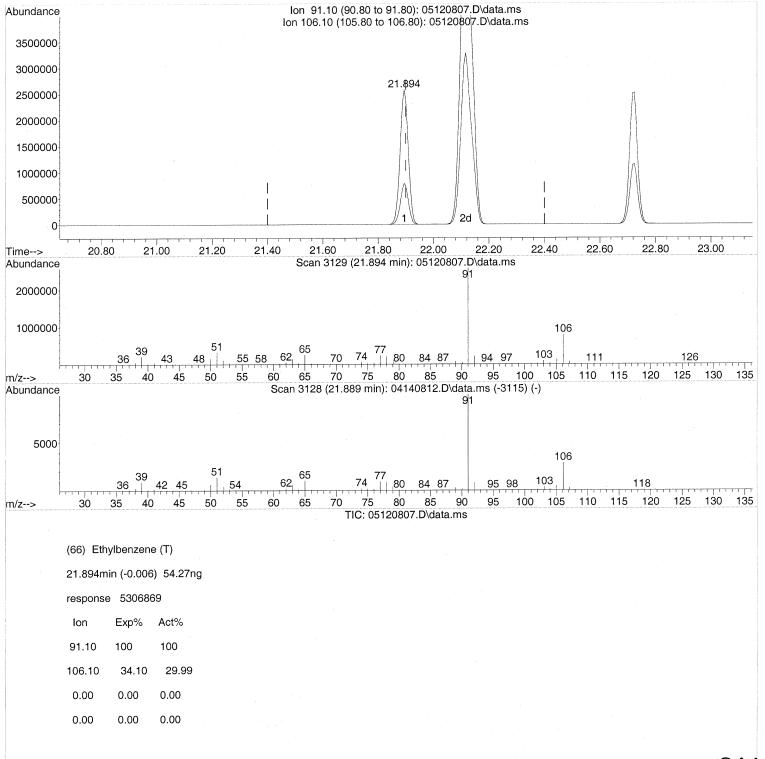
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

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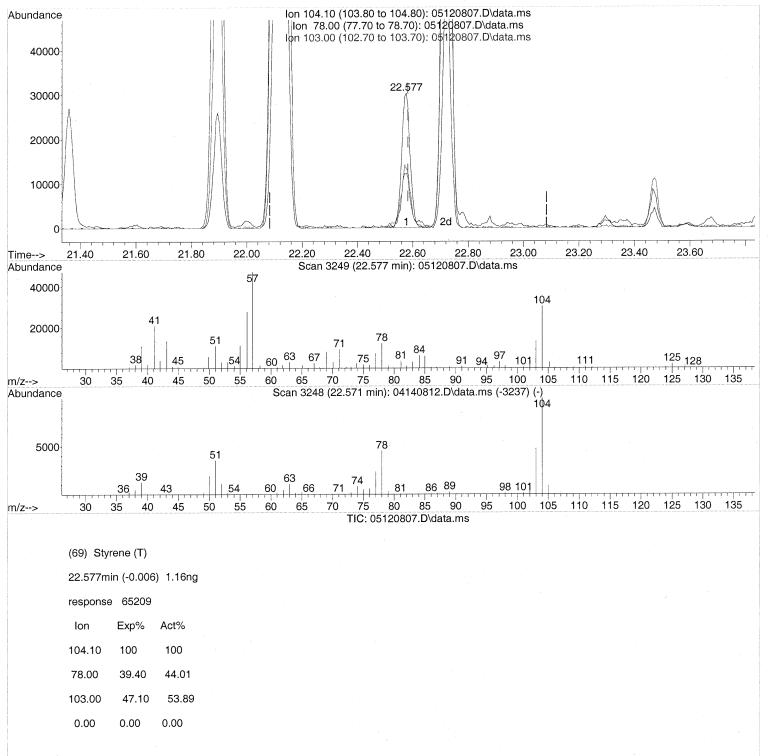
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

Acq On : 12 May 2008 14:50

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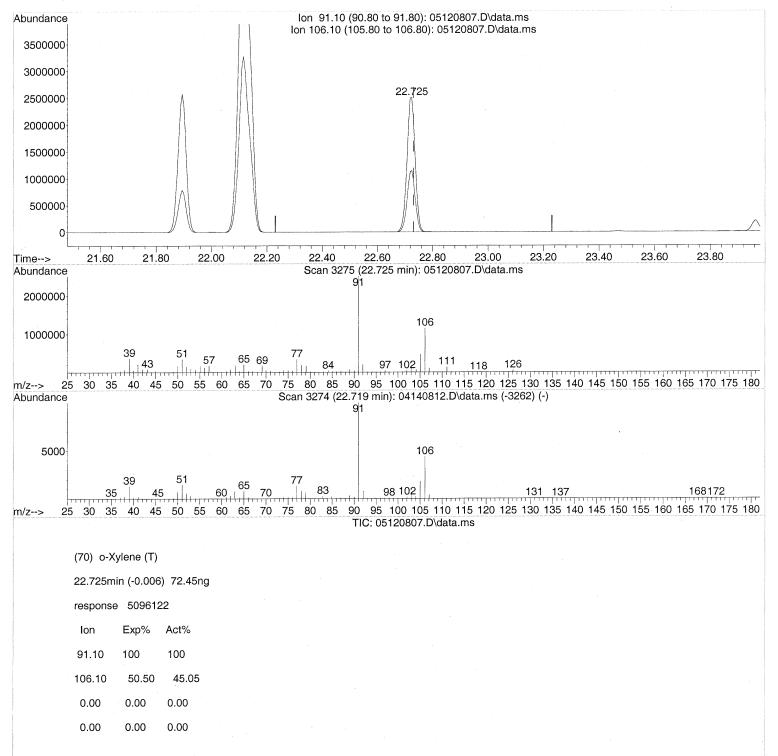
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

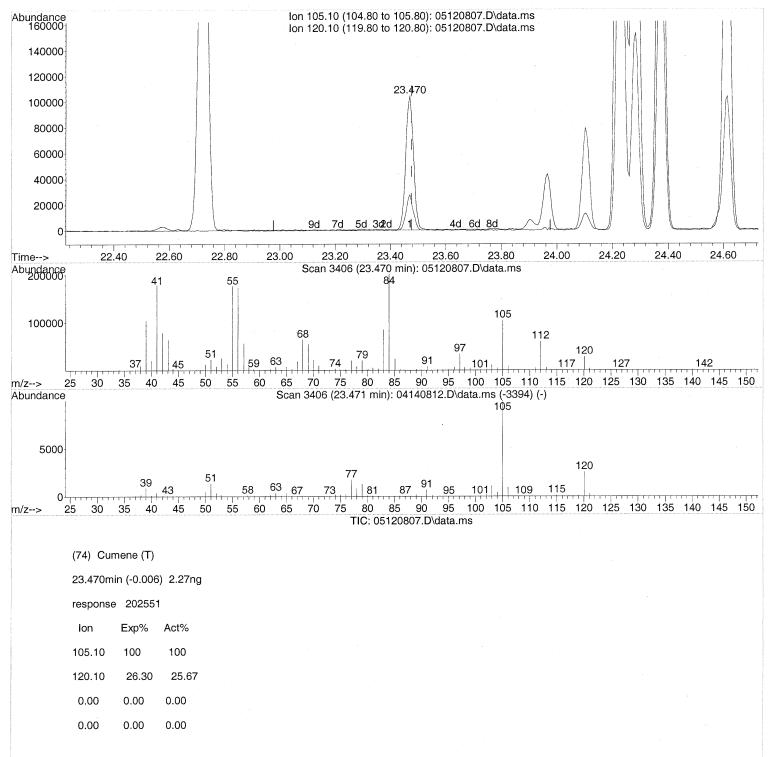
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: $J:\MS13\METHODS\R13041408.M$

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120807.D

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Operator : RTB

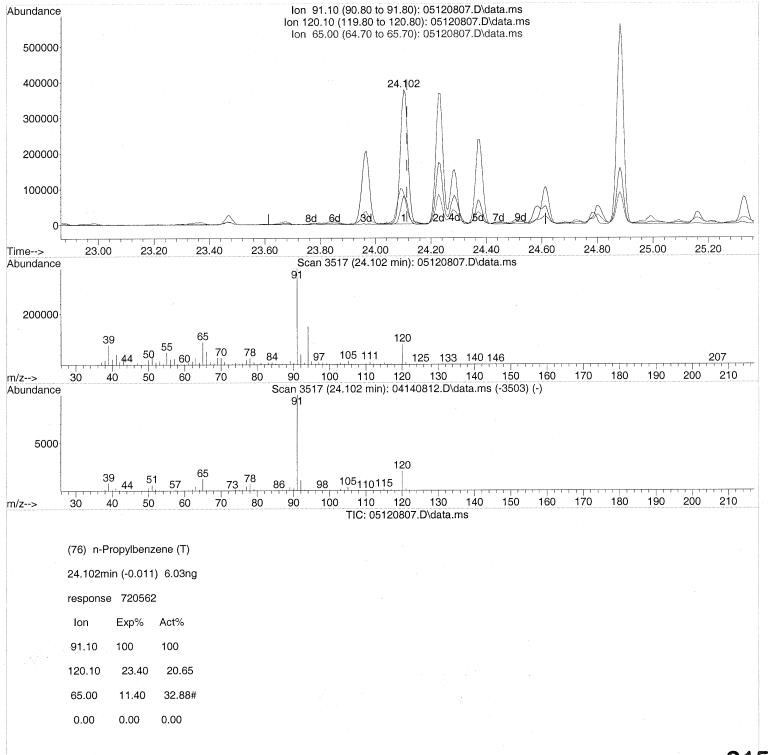
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

 $\rm \widetilde{Q}uant\ Title$: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



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Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

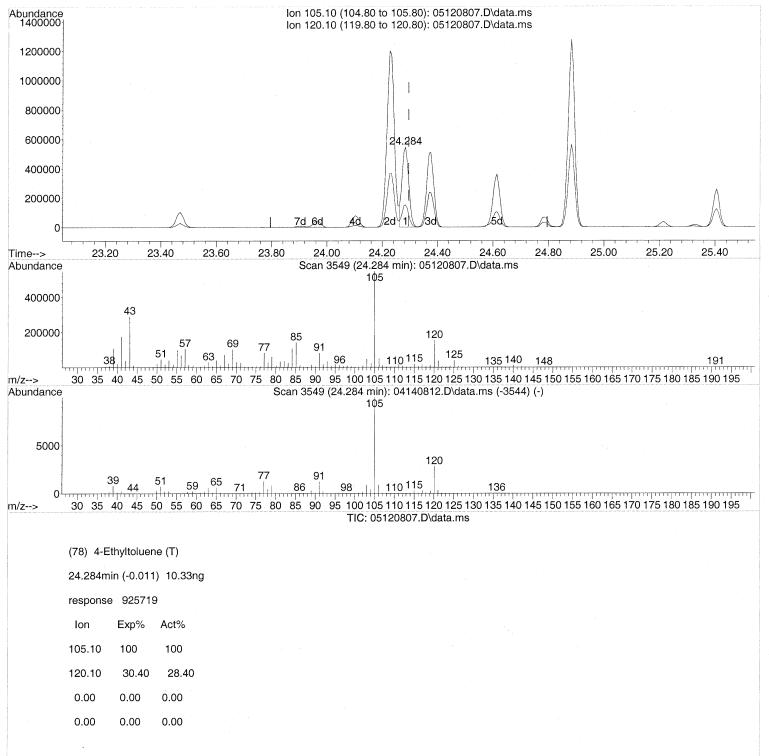
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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Acg On : 12 May 2008 14:50

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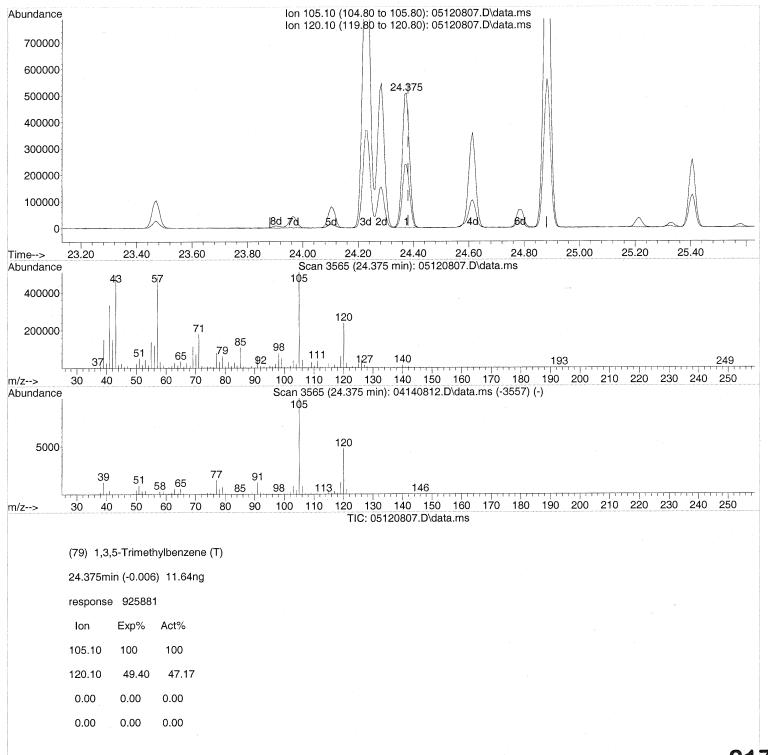
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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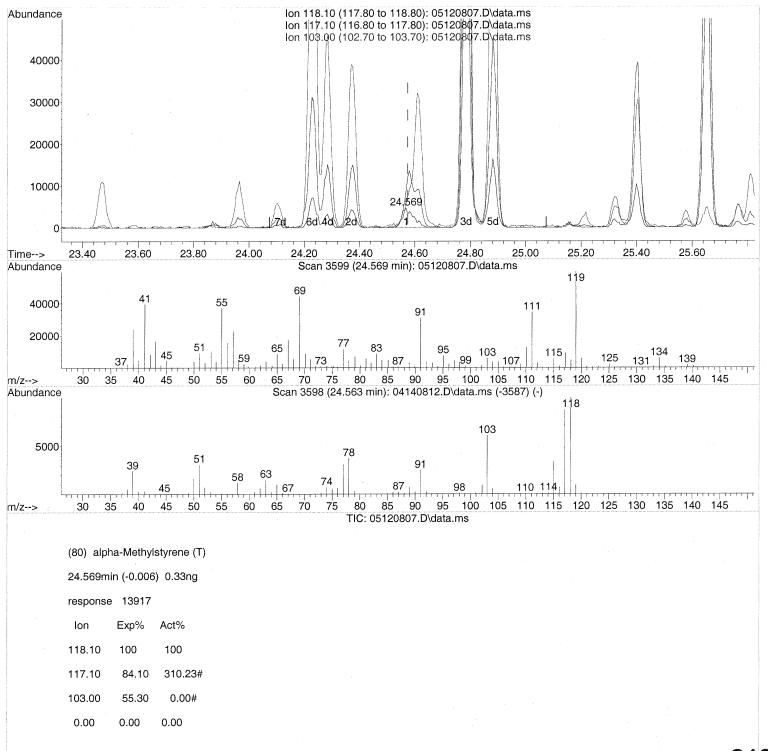
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120807.D

: 12 May 2008 Acq On

Operator : RTB

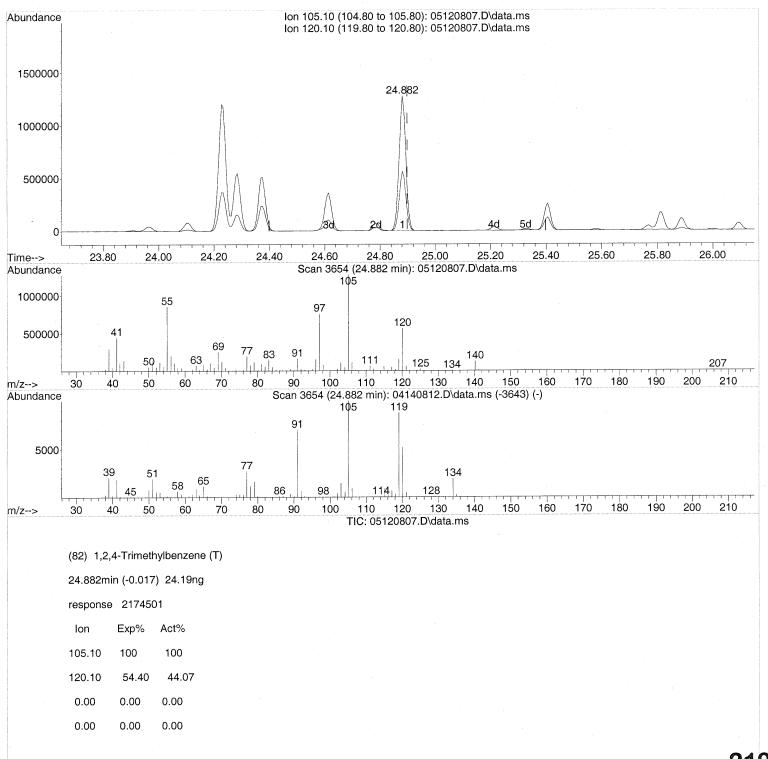
: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) Misc Sample Multiplier: 1 ALS Vial

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120807.D

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Operator : RTB

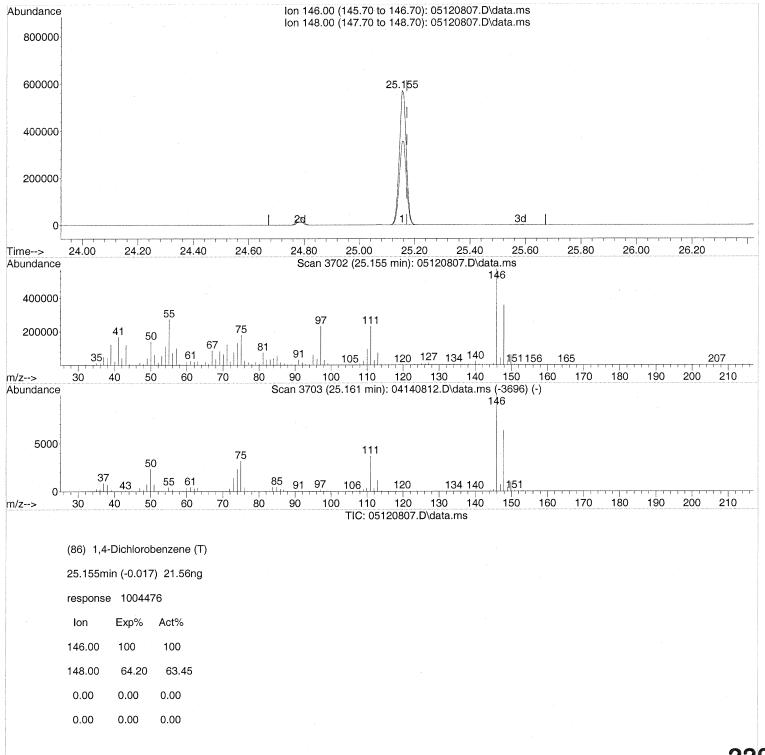
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Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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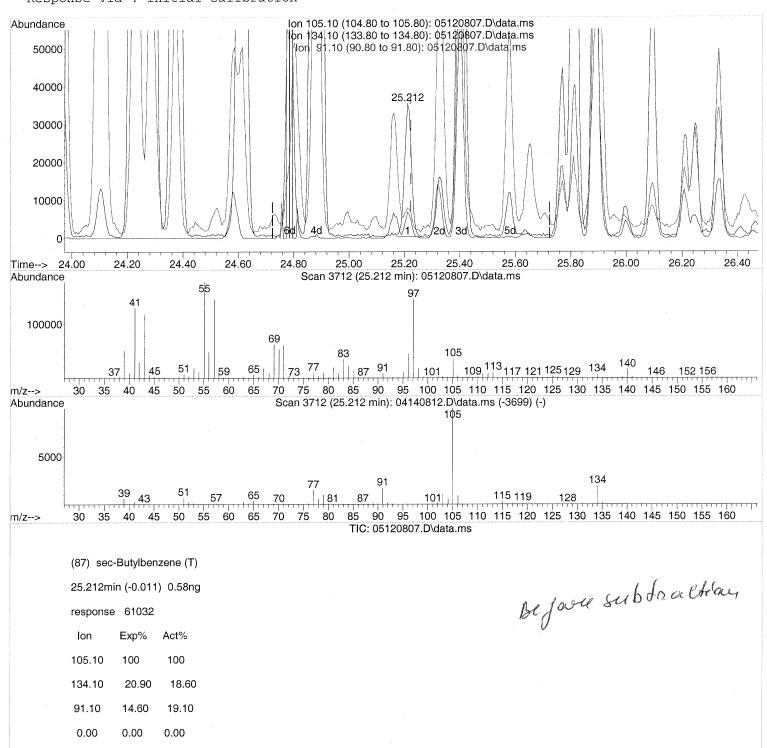
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

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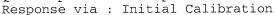
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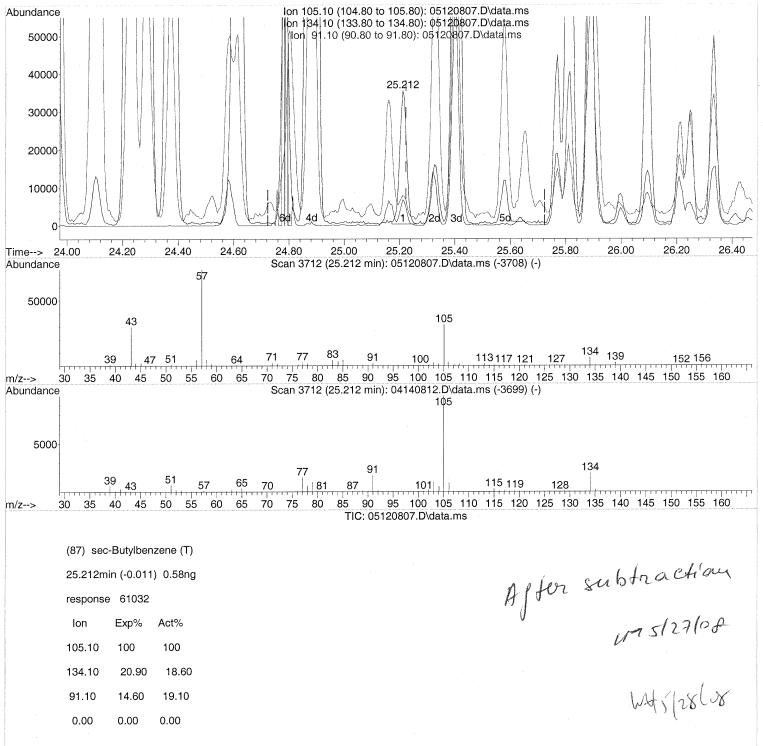
Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120807.D

Acg On : 12 May 2008 14:50

Operator : RTB

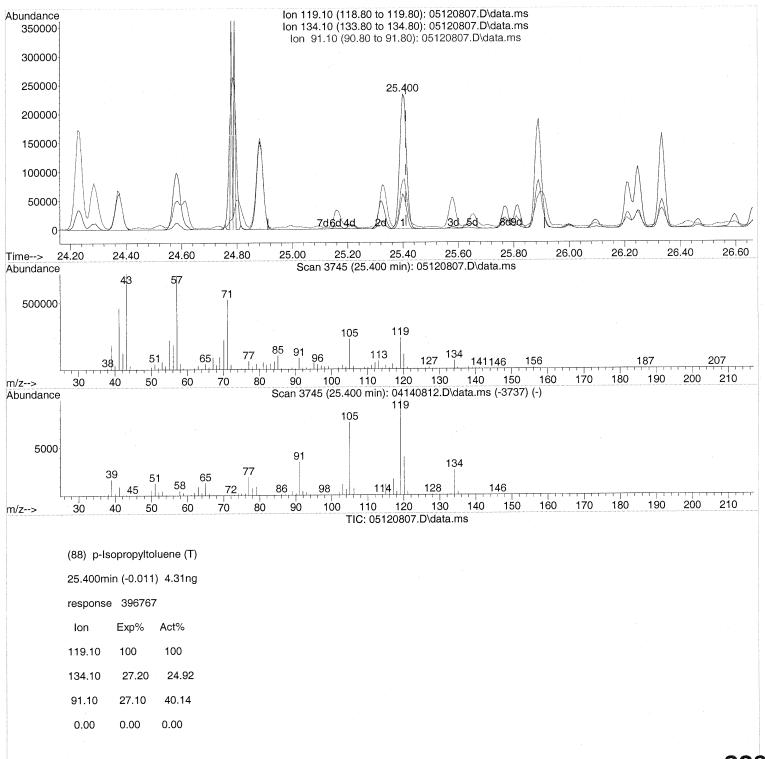
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Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

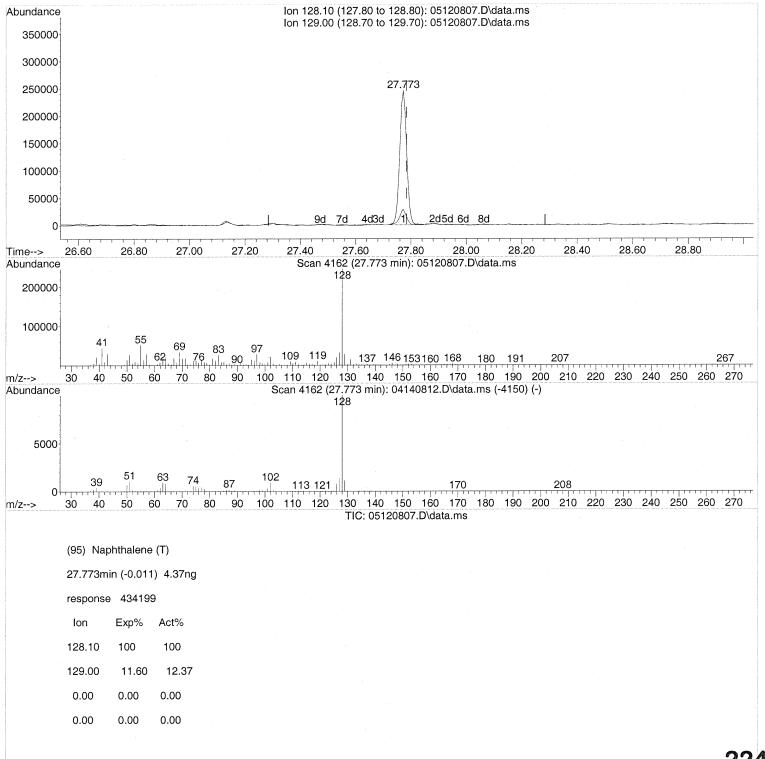
Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 16:59:12 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120807.D

Acq On : 12 May 2008 2:50 pm

Operator : RTB

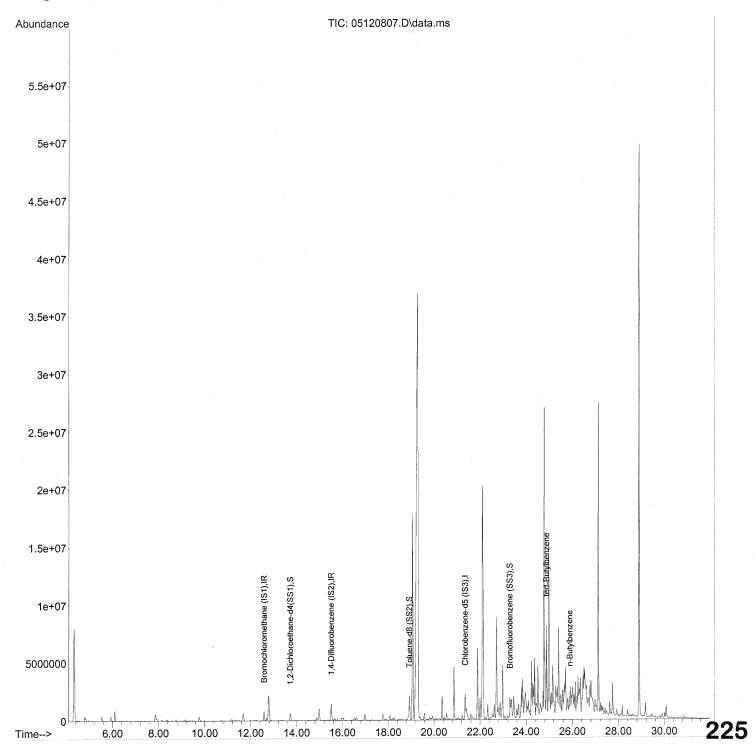
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ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 15:44:30 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120807.D

Acq On : 12 May 2008 2:50 pm

Operator : RTB

: P0801385-003 (1000mL) Sample : ENSR SG41B-20D (-3.4, 3.5) ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 27 15:44:30 2008

Quant Method : J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD QLast Update : Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.36	114	365729 1580836 777638	25.000 25.000 25.000	ng	
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	98	1714841 Recove 615318	ery = 24.603 ery =	87 ng 98 ng	.56% 0.00 .40% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88	119 91	260224 172733	3.056 1.880	ng UR	Qvalue # 55 # 38

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120807.D

Acq On : 12 May 2008 14:50

Operator : RTB

KIB

Sample : P0801385-003 (1000mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

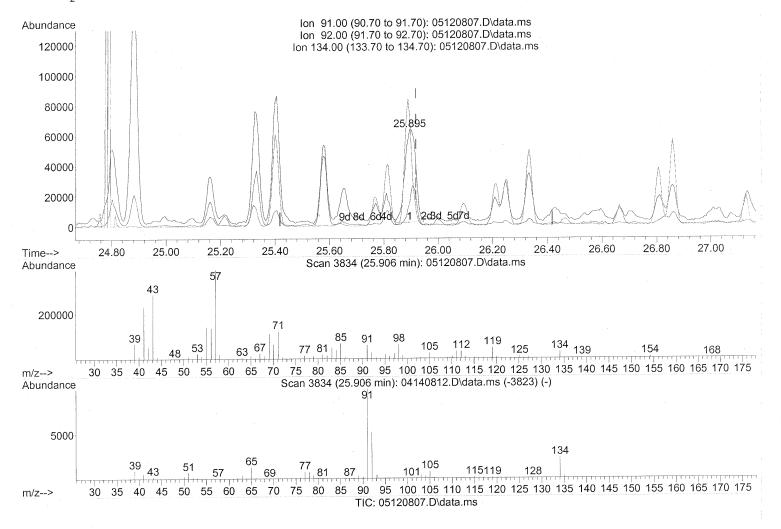
Quant Time: May 27 15:44:30 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.895min (-0.023) 1.88ng

response 172733

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 29.45#

 134.00
 28.80
 88.96#

 0.00
 0.00
 0.00

Data File : 05120816.D

Acq On : 12 May 2008 9:49 pm

Operator : RTB

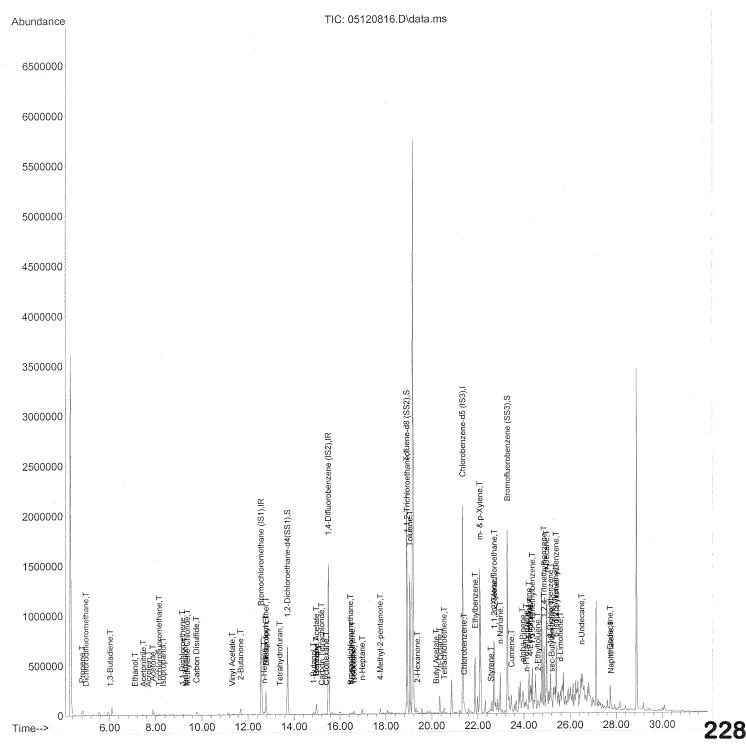
Sample : P0801385-003 DIL (100mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120816.D

Acq On : 12 May 2008 9:49 pm Operator : RTB

Sample : P0801385-003 DIL (100mL) Misc : ENSR SG41B-20D (-3.4, 3.5) ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	385677				.03
37) 1,4-Difluorobenzene (IS2)	15.51	114					
56) Chlorobenzene-d5 (IS3)	21.35	82	773422	25.000	ng	0	.00
System Monitoring Compounds	10 50	~ m	660400	01 410	70 CT	0	0.3
33) 1,2-Dichloroethane-d4(13.72	65	662488	21.419 ery =	119	- U	. U.S
Spiked Amount 25.000	10 02	0.0	1790155	=ry = 25.823			.00
57) Toluene-d8 (SS2)	18.93	98	PACÓTE	ery =	103		
Spiked Amount 25.000 73) Bromofluorobenzene (SS3)	23 29	174	604363	25.333	na		. 00
Spiked Amount 25.000	23.29	1/4		ery =			
Target Compounds						Qva	lue
2) Propene	4.82	42	25078	0.786	nq	#	45
3) Dichlorodifluoromethane	4.98		8175		ng		96
4) Chloromethane	5.31	50	68	N.D			
5) Freon 114	0.00	135	0	N.D			
6) Vinyl Chloride	0.00	62	0	N.D	•		
7) 1,3-Butadiene	6.03	54	2321			#	50
8) Bromomethane	6.51	94	57	N.D			
9) Chloroethane	0.00	64	0				
10) Ethanol	7.10		8887				89
11) Acetonitrile	7.46	41	2690		_	#	69
12) Acrolein	7.68	56	1012		-		78
13) Acetone	7.88	58	36170		_	#	70
14) Trichlorofluoromethane	8.15		15046				96 96
15) Isopropanol	8.32	45	10631				96
	8.66		259 7145			#	81
17) 1,1-Dichloroethene	9.16		7145 4071		_	#	63
20, 00-0 - 01-11-1	9.28 9.37		2893		_	#	75
22/	9.54		573		_	π	15
20) Allyl Chloride 21) Trichlorotrifluoroethane			186				
22) Carbon Disulfide	9.77		83726				100
23) trans-1,2-Dichloroethene	0.00		0	N.D	-		
24) 1,1-Dichloroethane	11.10	63	1533	N.D			
25) Methyl tert-Butyl Ether	11.18	73	117	N.D			
26) Vinyl Acetate	11.32	86	1030	0.243		#	15
27) 2-Butanone	11.68	72	27320	1.825		#	80
28) cis-1,2-Dichloroethene	12.34	61	72	N.D			
29) Diisopropyl Ether	12.79	8.7	23066	1.173	_	#	1
30) Ethyl Acetate	12.70	61	300	N.D			
31) n-Hexane	12.70	57	13513	0.279	ng		⁹ 2
041408.M Tue May 13 11:17:59 20	008		W75/20	108		Page:	1
3041408.M Tue May 13 11:17:59 20	008		UM 5/20	100	. •	raye:	1

Data File : 05120816.D

Acq On : 12 May 2008

Operator : RTB

Sample : P0801385-003 DIL (100mL) : ENSR SG41B-20D (-3.4, 3.5) Misc ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

R13041408.M Tue May 13 11:17:59 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(I	Min)
32) Chloroform	12.78	83	232598	6.459 ng		99
34) Tetrahydrofuran	13.39	72	1195		#	86
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	13.88	62	105	N.D.		
38) 1,1,1-Trichloroethane	0.00	97	0	N.D.		
39) Isopropyl Acetate	14.99	61	991	0.066 ng	#	1
40) 1-Butanol	14.85	56	23295			92
41) Benzene	14.98	78	125342			98
42) Carbon Tetrachloride	15.21	117	3585			91
43) Cyclohexane	15.40	84	2840		#	57
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	0.00	63	0	N.D.		
46) Bromodichloromethane	16.47	83	4702	_		97
47) Trichloroethene	16.55	130	5347		#	1
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	16.61	57	32824	0.315 ng		63
50) Methyl Methacrylate	16.81	100	59	N.D.		
51) n-Heptane	16.98	71	14350	0.588 ng	#	85
52) cis-1,3-Dichloropropene	0.00	75	0	N.D.		
53) 4-Methyl-2-pentanone	17.77	58	19216	0.798 ng		88
54) trans-1,3-Dichloropropene	18.48	75	63	N.D.		
55) 1,1,2-Trichloroethane	18.94		162225	7.648 ng	#	8
58) Toluene	(19.06)			14.440 ng		97
59) 2-Hexanone	19.38	43	13853	0.214 ng	#	43
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	20.19	43	6578		#	60
63) n-Octane	20.35	57	36692			93
64) Tetrachloroethene	20.54	166	17708			100
65) Chlorobenzene	21.40	112	4204	0.078 ng	#	63
66) Ethylbenzene	21.89		491800	5.057 ng		92
67) m- & p-Xylene (22.10	ノ 91	1396680	(21.483 ng)		90
68) Bromoform	0.00	173	0	N.D.		0.0
69) Styrene	22.57	104	6779	0.121 ng		90
70) o-Xylene	22.71	91	444499	6.353 ng		92
71) n-Nonane	22.98	43	189647	3.385 ng	#	82
72) 1,1,2,2-Tetrachloroethane	22.73	83	3947	0.118 ng	#	36
74) Cumene	23.46	105	18557			97
75) alpha-Pinene	23.96	93	77112	1.635 ng		87
76) n-Propylbenzene	24.10	91	68145			82
77) 3-Ethyltoluene	24.22	105	200652	2.073 ng		98
78) 4-Ethyltoluene	24.28	105	88493	_		96
79) 1,3,5-Trimethylbenzene	24.37	105	83019	_		95 220
	0.0			7/20/08	Dage :	230
3041408.M Tue May 13 11:17:59 20	08		100	12010	Page:	4
			V			

Quantitation Report (Not Reviewed)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120816.D

Acq On : 12 May 2008 9:49 pm

Operator : RTB

Sample : P0801385-003 DIL (100mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

80) alpha-Methylstyrene 24.58 118 1389 N.D. 81) 2-Ethyltoluene 24.61 105 62355 0.641 ng 99 82) 1,2,4-Trimethylbenzene 24.88 105 186145 2.082 ng 86 83) n-Decane 24.98 57 384201 7.769 ng 80 84) Benzyl Chloride 25.06 91 544 N.D. 85) 1,3-Dichlorobenzene 25.08 146 290 N.D. 86) 1,4-Dichlorobenzene 25.16 146 89779 1.938 ng 100 87) sec-Butylbenzene 25.21 105 6425 0.061 ng 91 88) p-Isopropyltoluene 25.39 119 35063 0.383 ng 88 89) 1,2,3-Trimethylbenzene 25.40 105 37478 0.426 ng 93 90) 1,2-Dichlorobenzene 25.16 146 89779 1.810 ng 99 91) d-Limonene 25.58 68 33538 0.827 ng 93 92) 1,2-Dibromo-3-Chloropr 25.96 157 76 N.D. 93) n-Undecane 26.50 57 382848 7.374 ng # 73 94) 1,2,4-Trichlorobenzene 27.62 180 54 N.D. 95) Naphthalene 27.77 128 39120 0.396 ng 96 96) n-Dodecane 27.73 57 83081 1.577 ng 92	Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
96) n-Dodecane 27.73 57 83081 1.577 ng 92	80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene	24.58 24.61 24.88 24.98 25.06 25.16 25.16 25.21 25.39 25.40 25.16 25.58 25.58 25.60 27.62	118 105 105 57 91 146 146 105 119 105 146 68 157 57	1389 62355 186145 384201 544 290 89779 6425 35063 37478 89779 33538 76 382848 54	N.D. 0.641 ng 2.082 ng 7.769 ng N.D. N.D. 1.938 ng 0.061 ng 0.383 ng 0.426 ng 1.810 ng 0.827 ng N.D. 7.374 ng N.D.	99 86 80 100 91 88 93 99 93
97) Hexachloro-1,3-butadiene 0.00 225 0 N.D.	96) n-Dodecane	27.73	57	83081	1.577 ng	92

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

m 5/28/08.

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Data Path : J:\MS13\DATA\2008_05\12\
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Data File: 05120816.D

Acq On : 12 May 2008 21:49

Operator : RTB

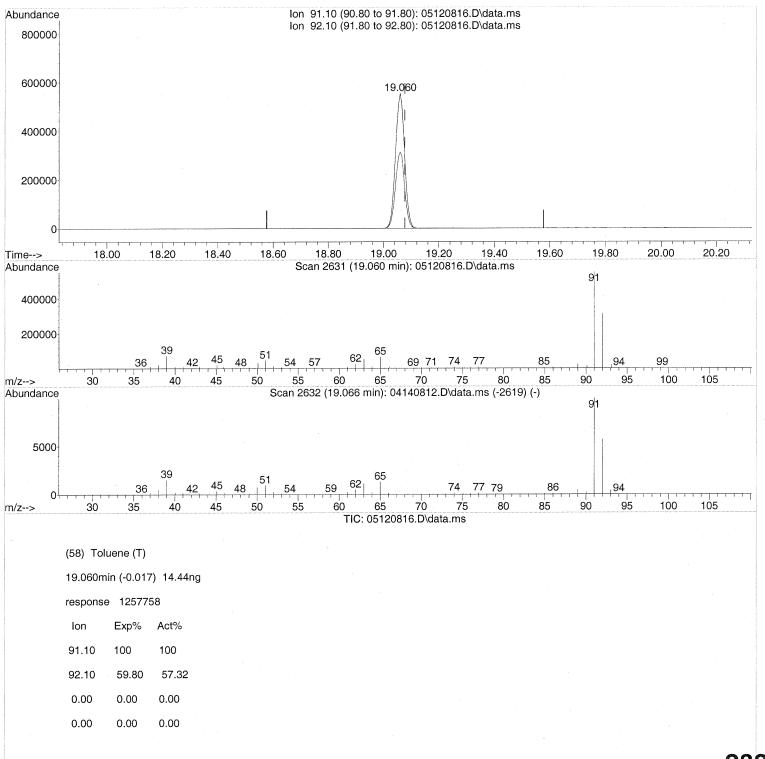
Sample : P0801385-003 DIL (100mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



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Data Path : J:\MS13\DATA\2008_05\12\
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Data File: 05120816.D

Acq On : 12 May 2008 21:49

Operator : RTB

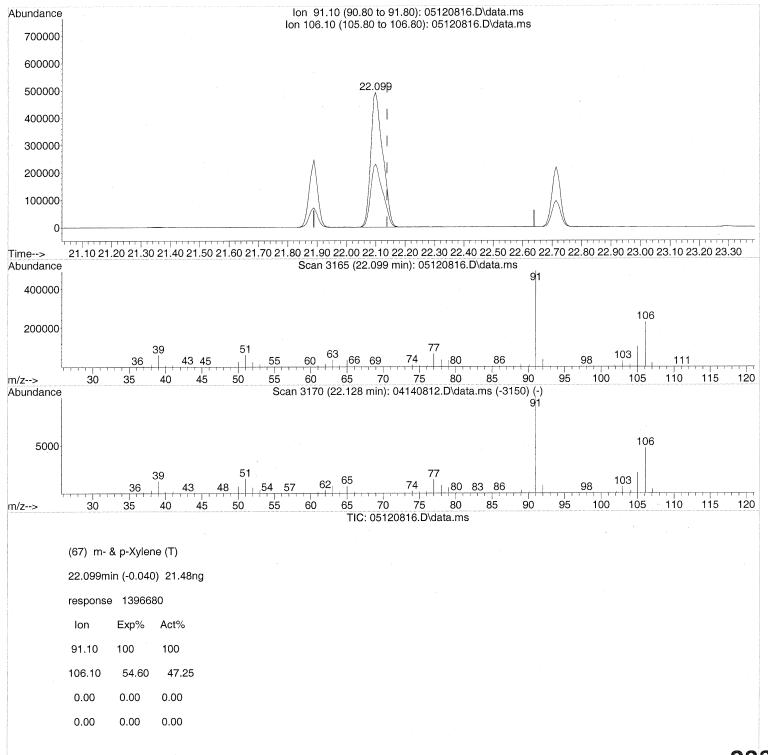
Sample : P0801385-003 DIL (100mL)
Misc : ENSR SG41B-20D (-3.4, 3.5)
ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 11:17:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID:

Rusty Bravo

Date Analyzed: 5/12/08

Analyst: Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3 Final Pressure (psig): 3.5

Canister Dilution Factor: 1.94

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		μg/m³	μg/m³	μg/m³	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.97	0.097	0.45	0.20	0.020	
74-87-3	Chloromethane	ND	0.19	0.097	ND	0.094	0.047	
76-14-2	1,2-Dichloro-1,1,2,2-	0.11	0.97	0.097	0.016	0.14	0.014	J
/0-14-2	tetrafluoroethane (CFC 114)	0.11	0.57	0.057	0.010	0.14	0.014	J
75-01-4	Vinyl Chloride	ND	0.19	0.097	ND	0.076	0.038	
74-83-9	Bromomethane	ND	0.19	0.097	ND	0.050	0.025	
75-00-3	Chloroethane	0.17	0.19	0.097	0.065	0.074	0.037	J
64-17-5	Ethanol	3.1	9.7	0.097	1.6	5.2	0.052	J
67-64-1	Acetone	34	9.7	0.14	14	4.1	0.060	B, M
75-69-4	Trichlorofluoromethane	3.1	0.19	0.097	0.55	0.035	0.017	
107-13-1	Acrylonitrile	0.15	0.97	0.14	0.070	0.45	0.063	J
75-35-4	1,1-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
75-65-0	2-Methyl-2-Propanol	0.28	0.97	0.14	0.091	0.32	0.047	J
/3-03-0	(tert-Butyl Alcohol)	0.28	0.97	0.14	0.091	0.32	0.047	J
75-09-2	Methylene Chloride	ND	0.97	0.097	ND	0.28	0.028	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.19	0.097	ND	0.062	0.031	
76-13-1	Trichlorotrifluoroethane	0.46	0.19	0.11	0.060	0.025	0.014	
75-15-0	Carbon Disulfide	1.3	0.97	0.23	0.41	0.31	0.075	
156-60-5	trans-1,2-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
75-34-3	1,1-Dichloroethane	ND	0.19	0.097	ND	0.048	0.024	
1634-04-4	Methyl tert-Butyl Ether	ND	0.19	0.097	ND	0.054	0.027	
108-05-4	Vinyl Acetate	2.5	9.7	0.31	0.70	2.8	0.088	J, M
78-93-3	2-Butanone (MEK)	13	0.97	0.097	4.3	0.33	0.033	
156-59-2	cis-1,2-Dichloroethene	ND	0.19	0.097	ND	0.049	0.024	
108-20-3	Diisopropyl Ether	ND	0.97	0.11	ND	0.23	0.027	
67-66-3	Chloroform	130	0.19	0.11	26	0.040	0.023	

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

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

Verified By:	CH	Date:	5/28/08	2	3
	TOI	SCCAN VIT Tropo	v Handarson PagaNa:		

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

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

B = Analyte was found in the method blank.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004

Test Code:

Analyst:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.94

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${\sf ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.97	0.099	ND	0.23	0.024	
107-06-2	1,2-Dichloroethane	ND	0.19	0.097	ND	0.048	0.024	
71-55-6	1,1,1-Trichloroethane	ND	0.19	0.097	ND	0.036	0.018	
71-43-2	Benzene	6.8	0.19	0.097	2.1	0.061	0.030	
56-23-5	Carbon Tetrachloride	4.9	0.19	0.097	0.78	0.031	0.015	
994-05-8	tert-Amyl Methyl Ether	ND	0.97	0.097	ND	0.23	0.023	
78-87-5	1,2-Dichloropropane	ND	0.19	0.097	ND	0.042	0.021	
75-27-4	Bromodichloromethane	0.54	0.19	0.097	0.080	0.029	0.014	
79-01-6	Trichloroethene	0.29	0.19	0.097	0.054	0.036	0.018	
123-91-1	1,4-Dioxane	ND	0.97	0.12	ND	0.27	0.033	
80-62-6	Methyl Methacrylate	ND	0.97	0.15	ND	0.24	0.036	
142-82-5	n-Heptane	0.34	0.97	0.12	0.082	0.24	0.030	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.97	0.10	ND	0.21	0.022	
108-10-1	4-Methyl-2-pentanone	2.7	0.97	0.11	0.65	0.24	0.027	
10061-02-6	trans-1,3-Dichloropropene	ND	0.97	0.12	ND	0.21	0.027	
79-00-5	1,1,2-Trichloroethane	ND	0.19	0.097	ND	0.036	0.018	
108-88-3	Toluene	13	0.97	0.097	3.4	0.26	0.026	
591-78-6	2-Hexanone	1.2	0.97	0.15	0.29	0.24	0.036	
124-48-1	Dibromochloromethane	ND	0.19	0.13	ND	0.023	0.015	
106-93-4	1,2-Dibromoethane	ND	0.19	0.10	ND	0.025	0.014	
111-65-9	n-Octane	1.0	0.97	0.097	0.21	0.21	0.021	
127-18-4	Tetrachloroethene	180	0.19	0.097	27	0.029	0.014	
108-90-7	Chlorobenzene	ND	0.19	0.099	ND	0.042	0.021	

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

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

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

Verified By:___ Date: 5/28/08
TOISSCAN.XLT - Tronox - Henderson - PageNo.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Date Collected: 5/10/08

Client Sample ID: SG43B-05

CAS Sample ID: P0801385-004

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13 Instrument ID: Analyst:

Date Received: 5/12/08

Rusty Bravo 6.0 L Summa Canister

Date Analyzed: 5/12/08 Volume(s) Analyzed:

1.00 Liter(s)

Sampling Media: Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.94

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	μg/m³	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	8.0	0.97	0.12	1.8	0.22	0.028	
179601-23-1	m,p-Xylenes	40	0.97	0.25	9.1	0.22	0.058	
75-25-2	Bromoform	ND	0.97	0.15	ND	0.094	0.014	
100-42-5	Styrene	0.28	0.97	0.15	0.065	0.23	0.035	J
95-47-6	o-Xylene	14	0.97	0.12	3.3	0.22	0.028	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.19	0.12	ND	0.028	0.018	
98-82-8	Cumene	0.47	0.97	0.11	0.096	0.20	0.022	J
103-65-1	n-Propylbenzene	0.56	0.97	0.10	0.11	0.20	0.021	J
622-96-8	4-Ethyltoluene	0.93	0.97	0.11	0.19	0.20	0.023	J
108-67-8	1,3,5-Trimethylbenzene	0.97	0.97	0.12	0.20	0.20	0.024	J
98-83-9	alpha-Methylstyrene	ND	0.97	0.14	ND	0.20	0.029	
95-63-6	1,2,4-Trimethylbenzene	2.3	0.97	0.13	0.47	0.20	0.027	
100-44-7	Benzyl Chloride	ND	0.19	0.17	ND	0.037	0.032	
541-73-1	1,3-Dichlorobenzene	ND	0.19	0.12	ND	0.032	0.020	
106-46-7	1,4-Dichlorobenzene	4.5	0.19	0.11	0.74	0.032	0.018	
135-98-8	sec-Butylbenzene	ND	0.97	0.11	ND	0.18	0.021	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.29	0.97	0.13	0.052	0.18	0.023	J
95-50-1	1,2-Dichlorobenzene	ND	0.19	0.13	ND	0.032	0.021	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.97	0.15	ND	0.10	0.015	
120-82-1	1,2,4-Trichlorobenzene	ND	0.19	0.15	ND	0.026	0.020	
91-20-3	Naphthalene	2.0	0.39	0.14	0.38	0.074	0.027	
87-68-3	Hexachlorobutadiene	ND	0.19	0.17	ND	0.018	0.016	
98-06-6	tert-Butylbenzene	ND	0.39	0.097	ND	0.071	0.018	
104-51-8	n-Butylbenzene	0.43	0.39	0.097	0.078	0.071	0.018	

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

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

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

Date: 5/28/08
TOI5SCAN.XLT - Tronox - Henderson - PageNo.: CH

P0801385_TO15_0805281357_SS.xls - Sample (4)

Data File: 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

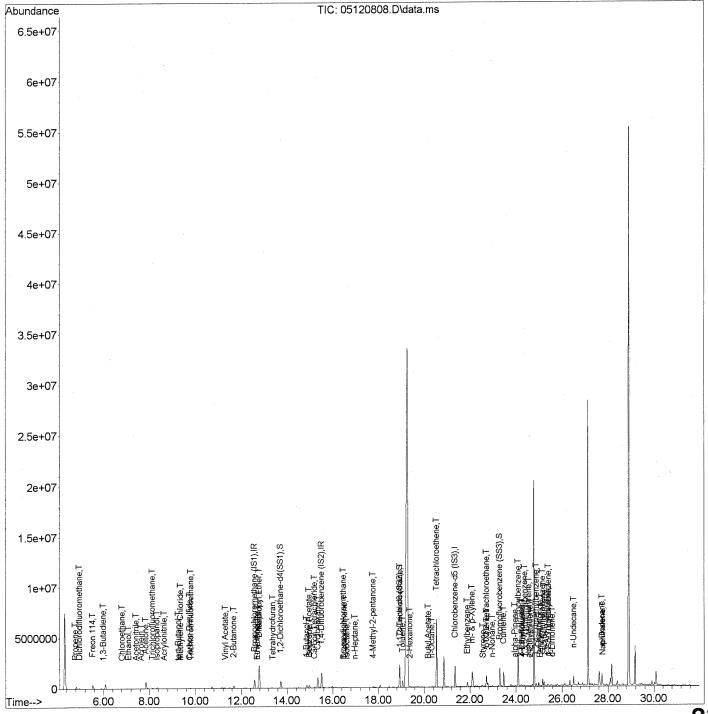
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:57:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

Sample : P0801385-004 (1000mL) Misc : ENSR SG43B-05 (-5.3, 3.5) ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:57:51 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Ouant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc	Units	Dev(1	Min)
1) Bromochloromethane (IS1)	12.58	130	379812	25.000	_		.03
37) 1,4-Difluorobenzene (IS2)		114	1672734	25.000			.02
56) Chlorobenzene-d5 (IS3)	21.35	82	784338	25.000	ng	0	.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(13.72	65	663443	21.781			.03
Spiked Amount 25.000	10.00	0.0	Reco			.12%	00 4
57) Toluene-d8 (SS2)	18.93	98	1780863	25.332	: 101		.00
Spiked Amount 25.000	22 20	174	Recov 601945	24.881			.00
73) Bromofluorobenzene (SS3)	23.29	1/4	Reco			.52%	.00
Spiked Amount 25.000			Reco	verà -		. 22 0	
Target Compounds						Qva:	
2) Propene	4.79	42	21149	0.673	The state of the s		93
3) Dichlorodifluoromethane	4.96		66193	(1.155)		>	98
4) Chloromethane	5.28	50	554	N.I	The state of the s		70
5) Freon 114	5.54		1607	○ 0.057 N.D		>	70
6) Vinyl Chloride	0.00	62 54	0 2301	0.067		#	41
7) 1,3-Butadiene	6.01 6.47	94	69	N.D	_	π	-T-T-
8) Bromomethane9) Chloroethane	6.81		1626	0.088	THE REAL PROPERTY.		75
10) Ethanol	7.09	3 45		1.576	NAME AND POST OF THE PARTY OF T	· .	, 5
11) Acetonitrile	7.43	41	32550	0.578			96
12) Acrolein	7.64	56	8512		ng M	#	71
13) Acetone	7.85			<17.392	ng	#	70
14) Trichlorofluoromethane	(8.14)		71387	(1.585	ng	,	99
15) Isopropanol	8.33	45	82694	1.162	ng	#	61
16) Acrylonitrile	(8.65)	> 53	2557	0.078	ng	>	95
17) 1,1-Dichloroethene	0.00	96	0)		
18) tert-Butanol	9.26		8373	<0.142 ○ 0.142		#	71
19) Methylene Chloride	9.36	84	1188	0049			99
20) Allyl Chloride	9.54	41	436	- AND THE PROPERTY OF STREET AND ADDRESS OF THE PROPERTY OF TH)		0.0
21) Trichlorotrifluoroethane	9.80		4580	0.238		#	82
22) Carbon Disulfide	(9.76)		59149	(0.661)		•	97
23) trans-1,2-Dichloroethene	10.74	61	1300)		
24) 1,1-Dichloroethane	11.10	63 73	84 1445	N.D N.D			
25) Methyl tert-Butyl Ether	11.18	/3 > 86	5314	(1.272	transportation US /	· #	1
26) Vinyl Acetate	11.67	→ 72	95929	6.506	The state of the s	π	97
27) 2-Butanone 28) cis-1,2-Dichloroethene	12.13	61	66	N.E			
29) Diisopropyl Ether	12.78	87	238228	-12.306		#	1
30) Ethyl Acetate	12.70	61	411	0.045		#	45
50, Helly I Medeade	,		· -		J	••	238
041408.M Tue May 27 16:02:02 2	800					Page:	1
		Se.	1-1-				

Data File : 05120808.D

: 12 May 2008 3:33 pm Acq On

Operator : RTB

Sample : P0801385-004 (1000mL)
Misc : ENSR SC43R-05 (-5 3 : ENSR SG43B-05 (-5.3, 3.5) Misc Sample Multiplier: 1 ALS Vial : 5

Quant Time: May 27 15:57:51 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Inter	rnal Standards	R.T.	QIon	Respons	e Conc	Units	Dev((Min)
21\	n Howano	12.70	57	10493	0.220	na	#	71
31) 32)	n-Hexane Chloroform	12.78	83	2355282	66.418		71	99
34)	Tetrahydrofuran	13.38	72	5016	0.340		#	72
	Ethyl tert-Butyl Ether	0.00	87	0	N.D	_	1.1	
36)	1,2-Dichloroethane	13.77	62	68	N.D			
38)	1,1,1-Trichloroethane	14.29	97	1299	N.D		•	
39)	Isopropyl Acetate	14.97	61	2448	0.161		#	1
40)	1-Butanol	14.86	56	234394	10.267	_	.,	86
	Benzene	(14.98)	78	311886	3.515	NOTIFICATION OF THE PARTY OF TH		100
42)	Carbon Tetrachloride	15.21	117	74369	2.534			93
	Cyclohexane	15.34	84	47016	1.432	The same of the sa	#	1
	tert-Amyl Methyl Ether	15.67	73	56	N.D	_		
45)	1,2-Dichloropropane	16.19	63	226	N.D			
	Bromodichloromethane	16.47		8320	○0.276			98
47)	Trichloroethene	16.53	130	3285	0.150			95
48)	1,4-Dioxane	16.53	88	342	The state of the s	· i		
49)	Isooctane	16.62	57	18569	0.177		#	46
50)	Methyl Methacrylate	16.81	100	54	N.D			
51)	n-Heptane	16.98	71	4243	0.173	and the same of th		87
52)	cis-1,3-Dichloropropene	17.82	75	306	N.D			
	4-Methyl-2-pentanone	(17.77)	58	33528	(1.381			91
	trans-1,3-Dichloropropene	The second secon	75	134	N.D			
55)	1,1,2-Trichloroethane	18.95	97	158798	7,431		# .	9
58)	Toluene	(19.06)	91	579157	€ 6.557			96
59)	2-Hexanone	19.38	43	40123	< 0.610			80
	Dibromochloromethane	19.63	129	569	N.D	The state of the s		
-	1,2-Dibromoethane	19.79	107	57	N.D			
	Butyl Acetate	20.19	43	7852	0.119			78
63)	n-Octane	(20.35)	57	10649	< 0.514			100
64)	Tetrachloroethene	20.55	166	2103249	<u>95.102</u>			99
	Chlorobenzene	21.40	112	2136	N.D			
66)	Ethylbenzene	(21.89)	91	407809	€ 4.135			92
67)	m- & p-Xylene	22.10	91	1348488	<20.453			91
68)	Bromoform	22.21	173	131	N.D			
69)	Styrene	(22.57)	104	8111	<-0.143	The state of the s		88
	o-Xylene	22.71		529999	< 7.470		7	92
	n-Nonane	22.98	43	60727	1.069		#	82
	1,1,2,2-Tetrachloroethane		83	2440		-ng/k		1
	Cumene	(23.46)	105	21956	0.244			89
	alpha-Pinene	23.96	93	43381	0.907			96
	n-Propylbenzene	24.10		34727		now	<u>`</u> #	1
	3-Ethyltoluene	24.23	105	90214	0.919	ng Ye	b < b	98
, , ,						g _	m 5/27	68 239
1304140	08.M Tue May 27 16:02:02 2	008					Page:	

Data File : 05120808.D

: 12 May 2008 3:33 pm Acq On

Operator : RTB

Sample : P0801385-004 (1000mL)
Misc : ENSR SC43R-05 (-5 3 : ENSR SG43B-05 (-5.3, 3.5) Misc Sample Multiplier: 1 ALS Vial : 5

Quant Time: May 27 15:57:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T. QIon	Respons	e Conc Units I	Jev(Min)
78) 4-Ethyltoluene 79) 1,3,5-Trimethylbenzene 80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride	24.28 105 24.38 105 24.56 118 24.61 105 24.88 105 24.98 57 25.05 91	43325 39997 2353 34659 108232 131301 2838 898	0.479 ng 0.498 ng 0.055 ng 0.351 ng 1.194 ng 2.618 ng 0.046 ng N.D.	96 97 79 99 86 83 92
85) 1,3-Dichlorobenzene86) 1,4-Dichlorobenzene87) sec-Butylbenzene	25.08 146 25.16 146 25.21 105	107766 4406	2.294 ng 0.041 ng	100 # 85
88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene	25.40 119 25.40 105 25.56 146	13698 34166 720	0.148 ng 0.383 ng N.D.	# 65 88
91) d-Limonene 92) 1,2-Dibromo-3-Chloropr	25.58 68 . 26.25 157	15462 193	0.376 ng N.D.	99
93) n-Undecane 94) 1,2,4-Trichlorobenzene	26.50 57 27.62 180	315250 315	5.988 ng N.D.	75
95) Naphthalene 96) n-Dodecane 97) Hexachloro-1,3-butadiene	27.77 128 27.74 57 0.00 225	103413 343373 0	1.031 ng 6.428 ng N.D.	98 86

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

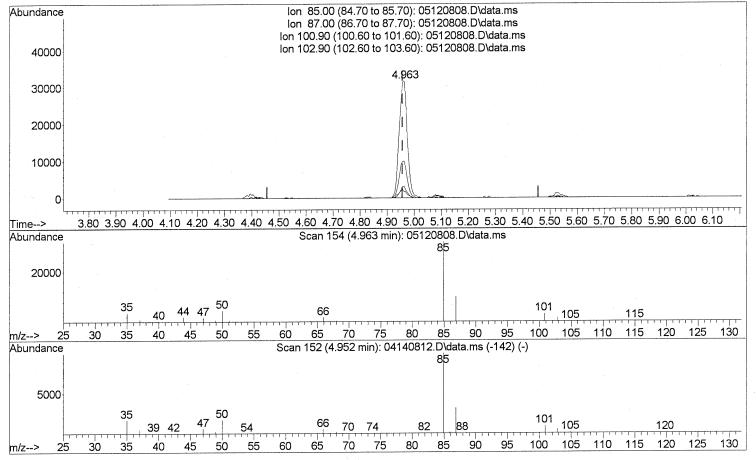
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

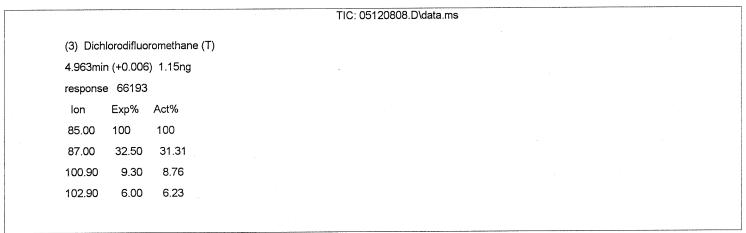
Quant Time: May 12 16:14:11 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





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Acq On : 12 May 2008 3:33 pm

Operator : RTB

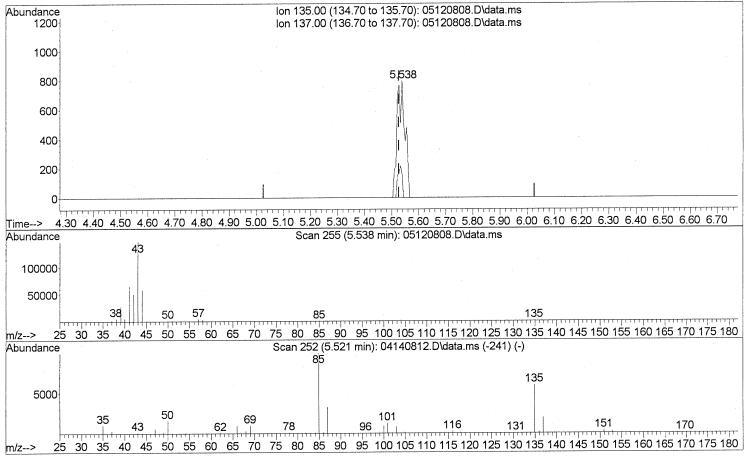
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

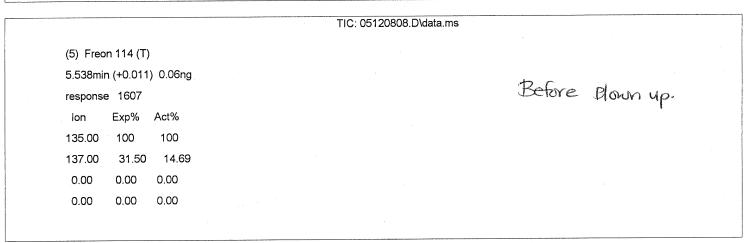
Quant Time: May 12 16:14:11 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





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:J:\MS13\DATA\2008 05\12\05120808.D

Operator

: RTB

Acquired

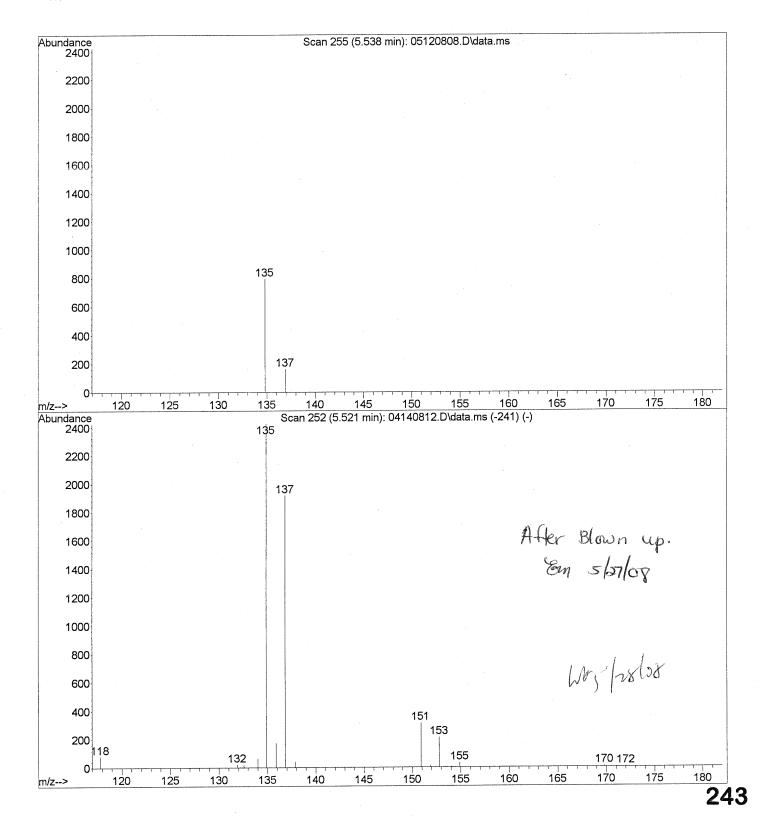
: 12 May 2008

3:33 pm using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-004 (1000mL)
Misc Info : ENSR SG43B-05 (-5.3, 3.5)

Vial Number: 5



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120808.D

: 12 May 2008 3:33 pm Acq On

Operator : RTB

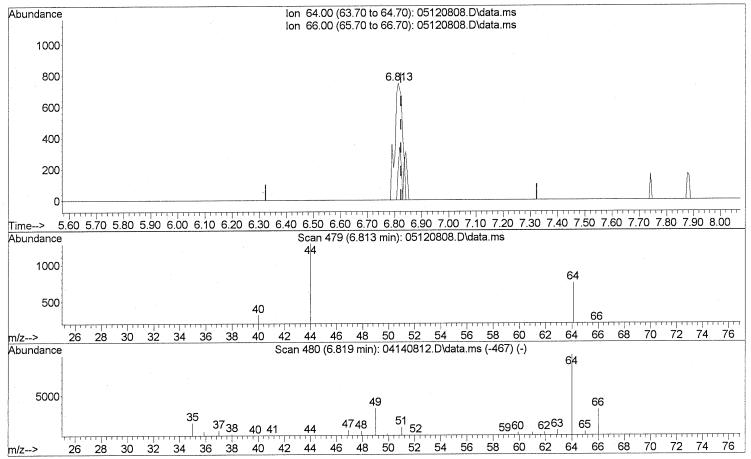
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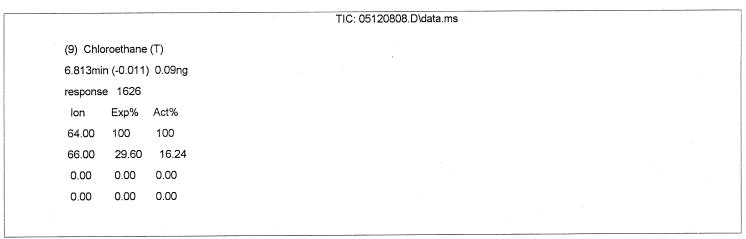
Quant Time: May 12 16:14:11 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120808.D

3:33 pm : 12 May 2008 Acq On

Operator : RTB

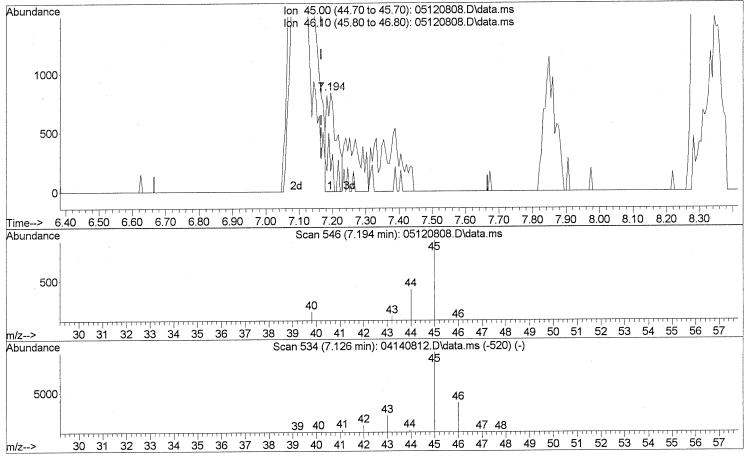
: P0801385-004 (1000mL) Sample : ENSR SG43B-05 (-5.3, 3.5) Misc Sample Multiplier: 1 ALS Vial

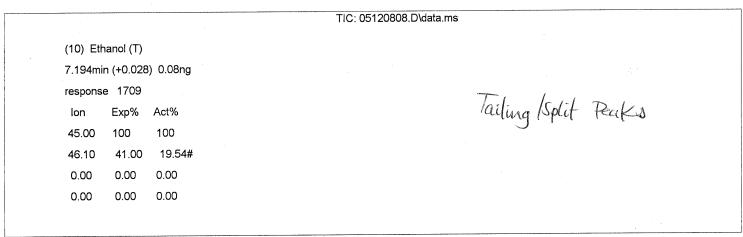
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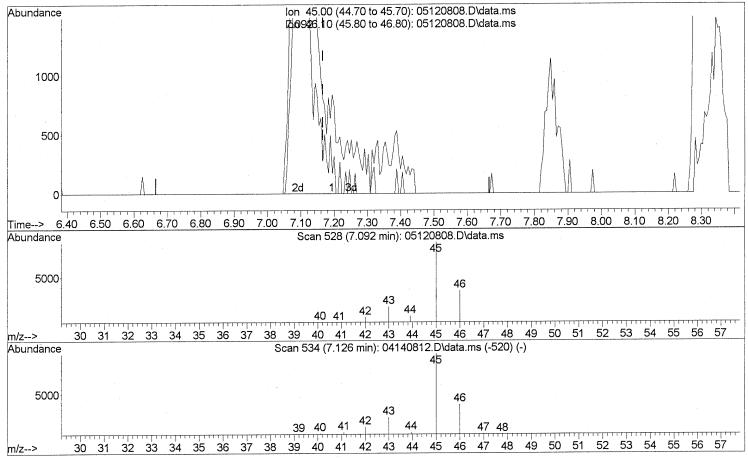
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

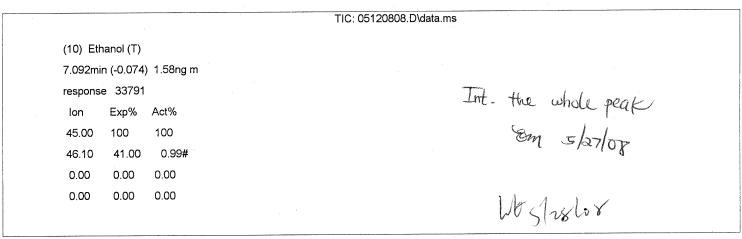
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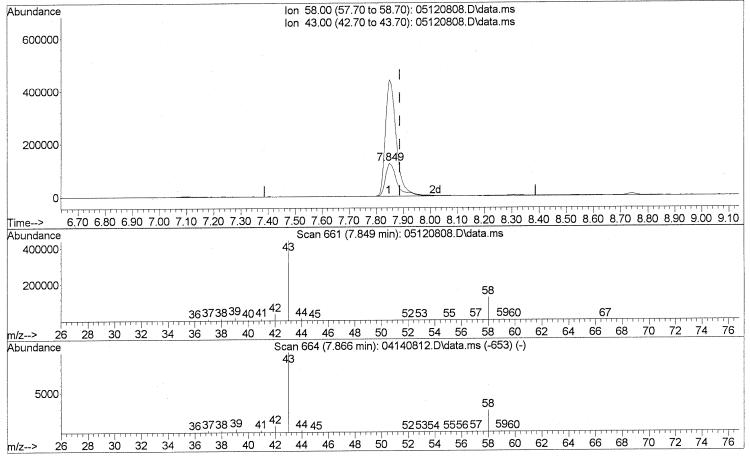
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

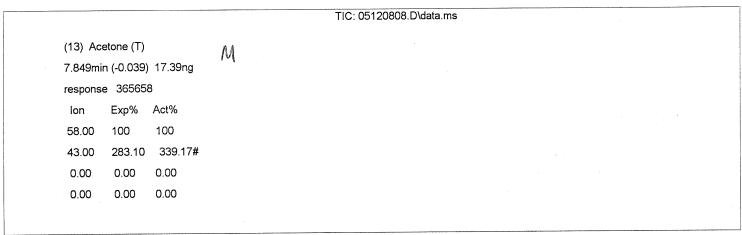
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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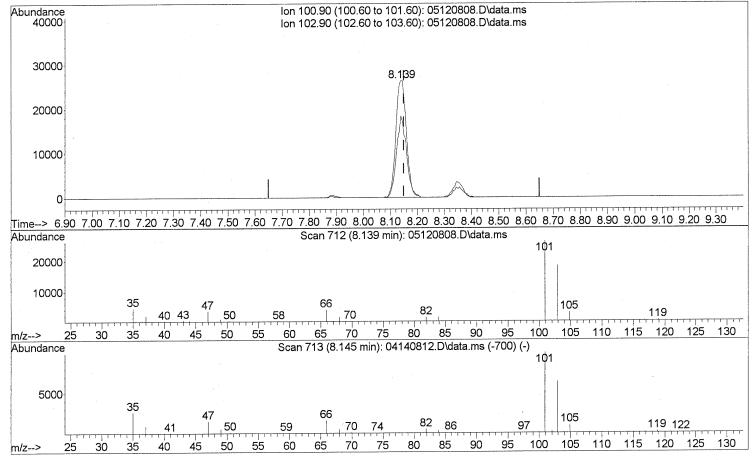
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

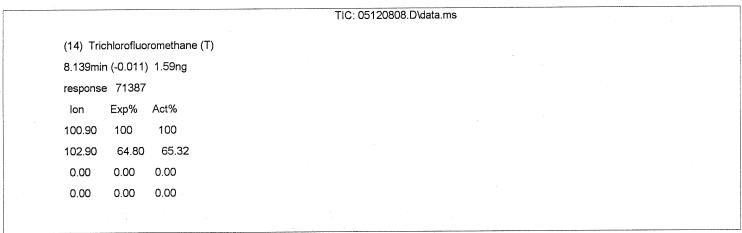
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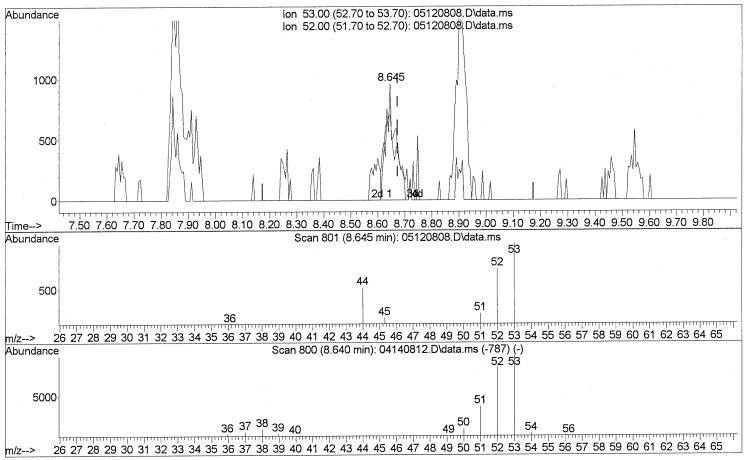
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

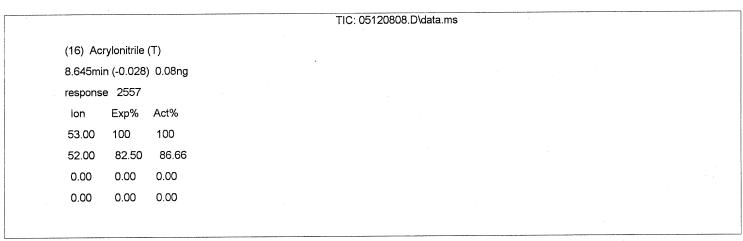
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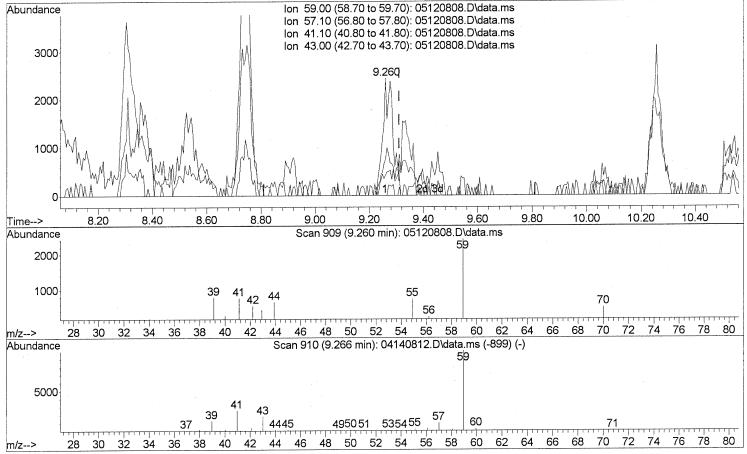
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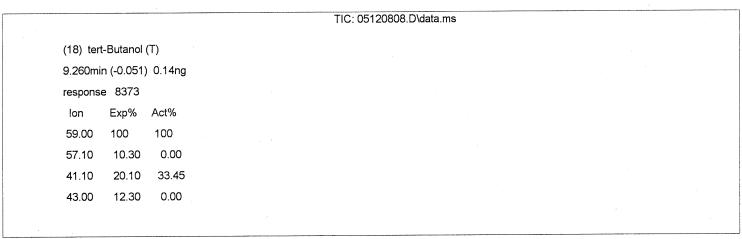
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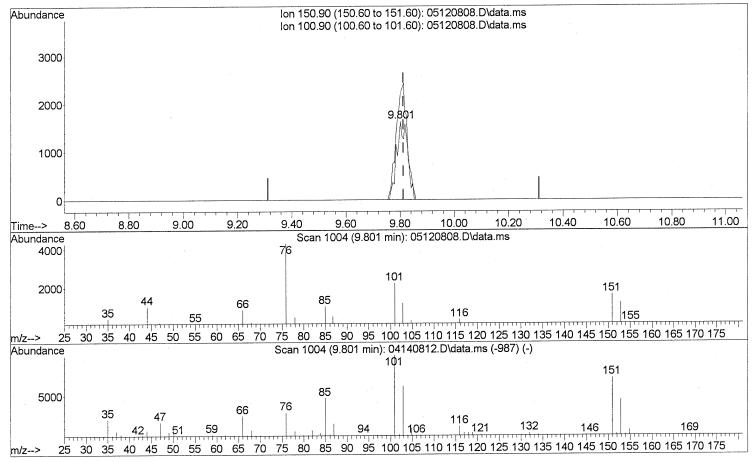
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

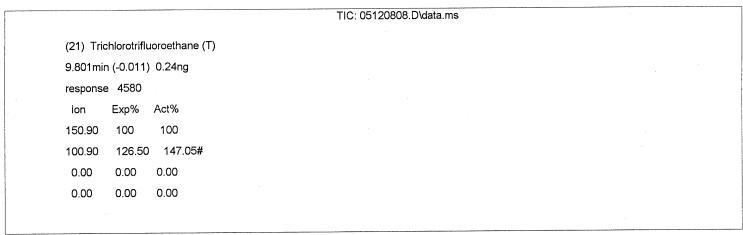
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Acq On : 12 May 2008 3:33 pm

Operator : RTB

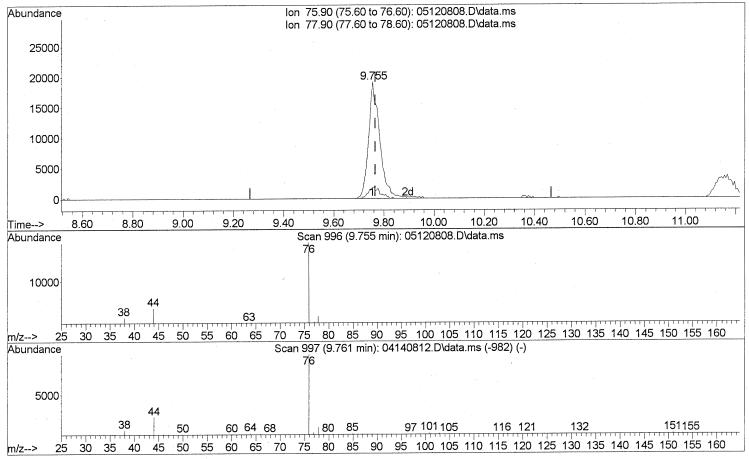
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

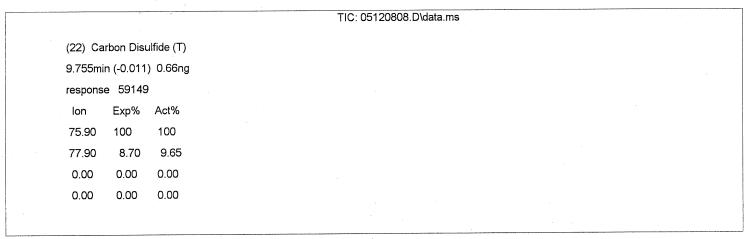
Quant Time: May 27 15:57:51 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

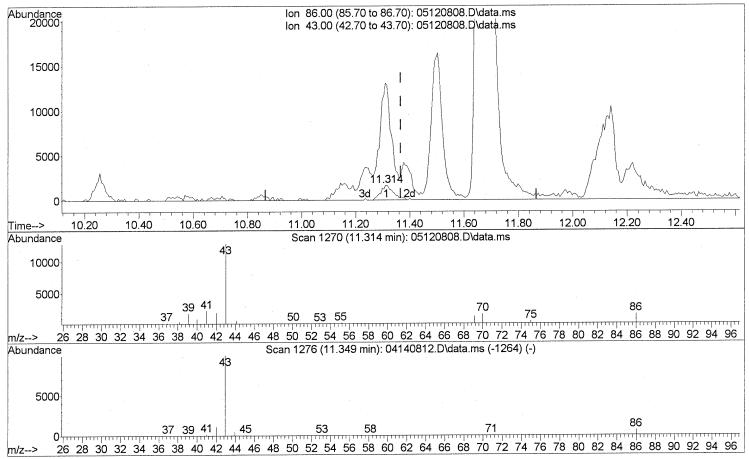
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

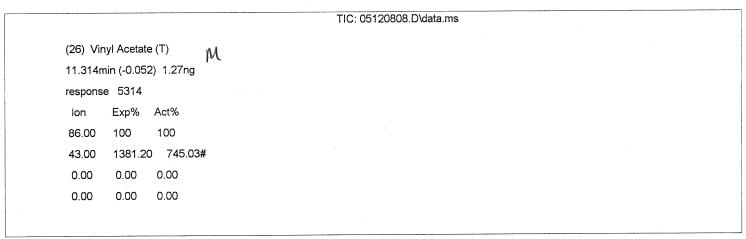
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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Acq On : 12 May 2008 3:33 pm

Operator : RTB

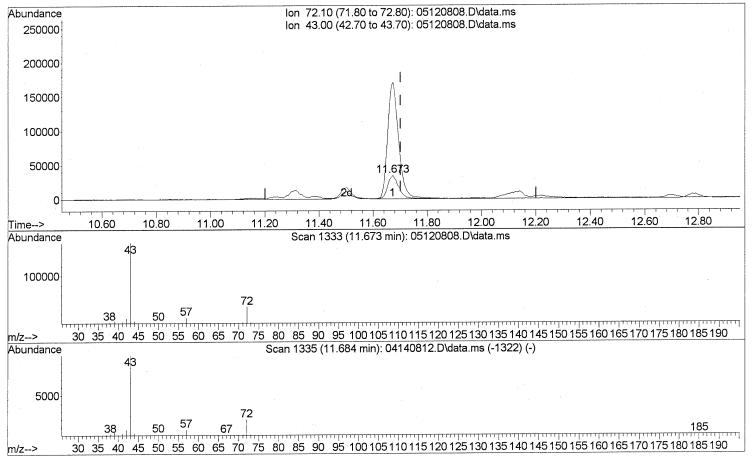
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ALS Vial : 5 Sample Multiplier: 1

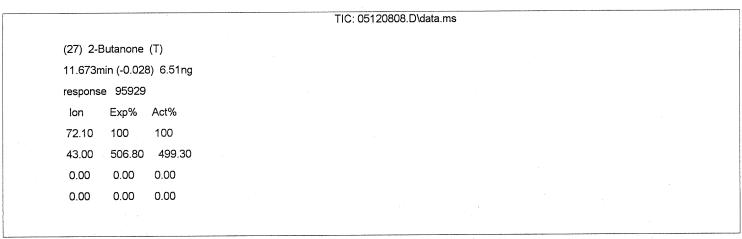
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data File: 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

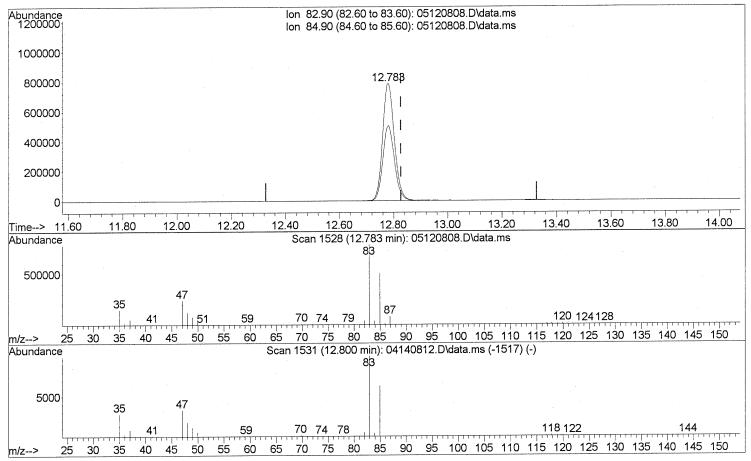
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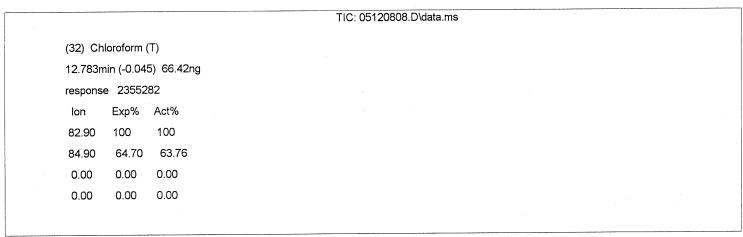
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QLast Update: Tue Apr 15 06:47:20 2008





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Data File : 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

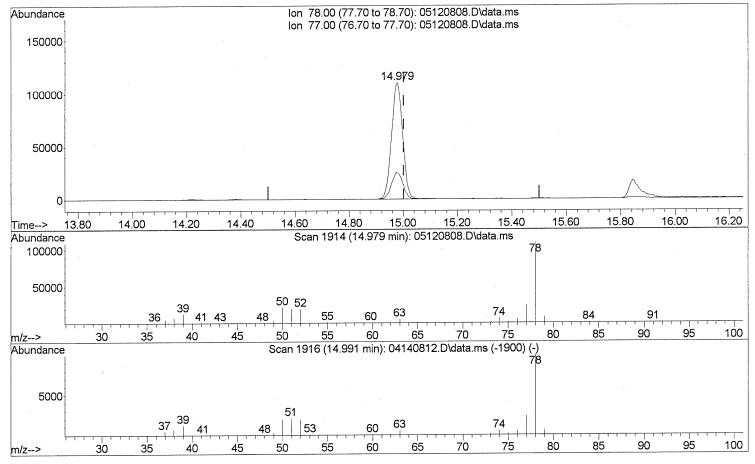
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ALS Vial : 5 Sample Multiplier: 1

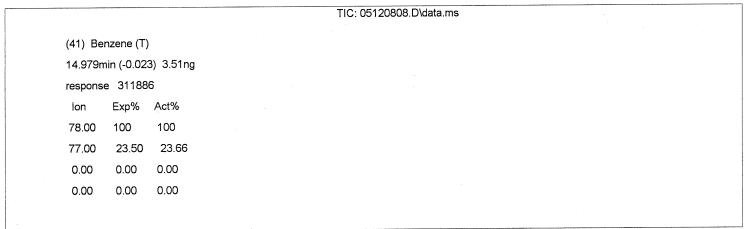
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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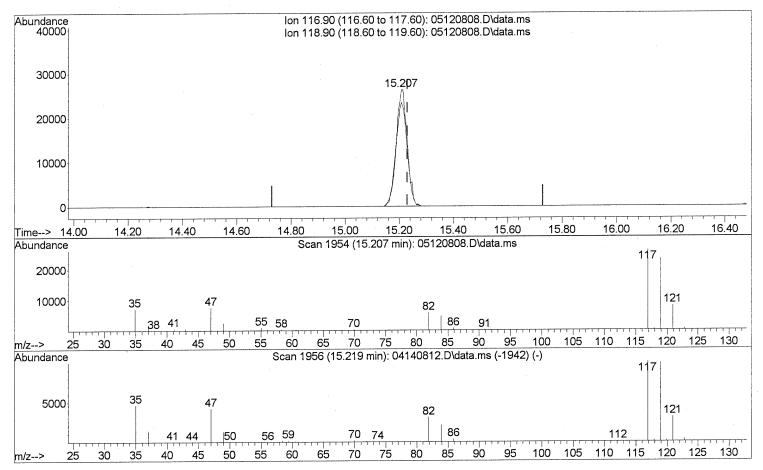
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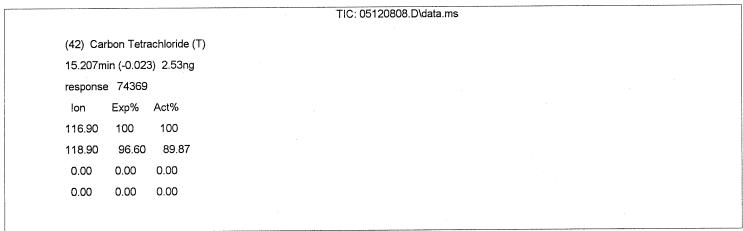
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Operator : RTB

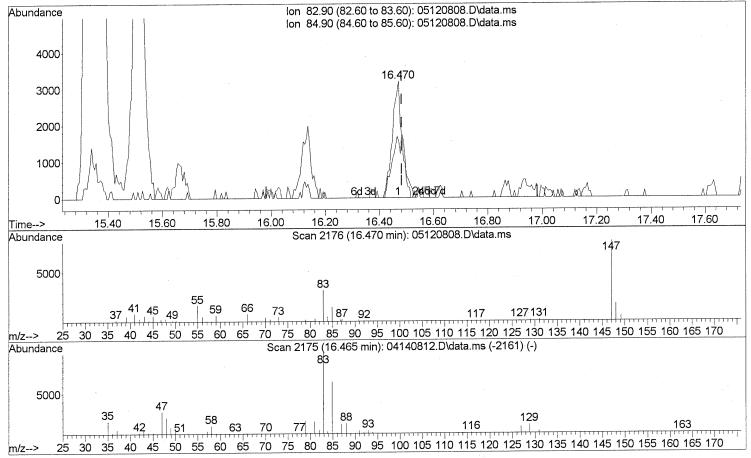
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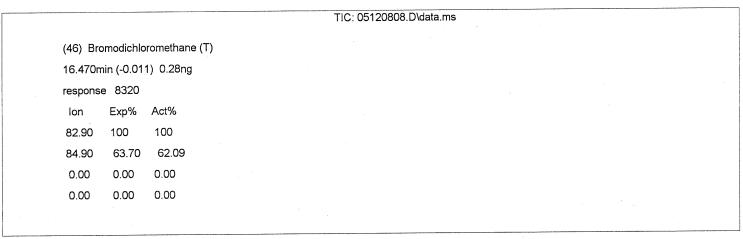
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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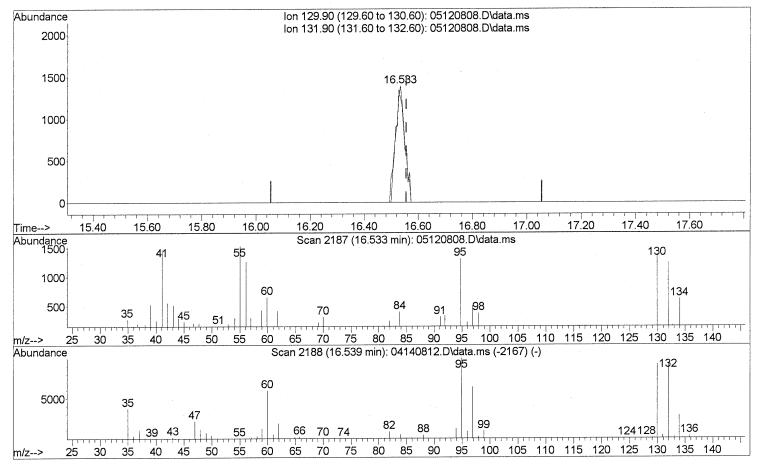
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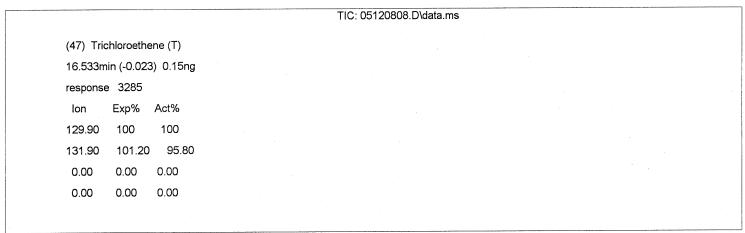
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Acq On : 12 May 2008 3:33 pm

Operator : RTB

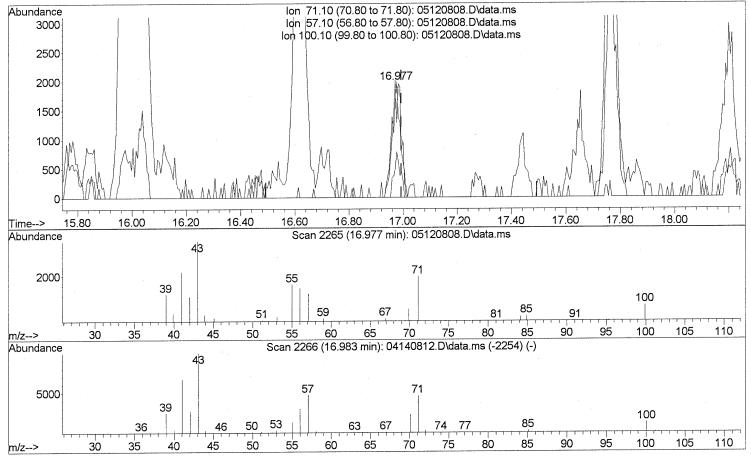
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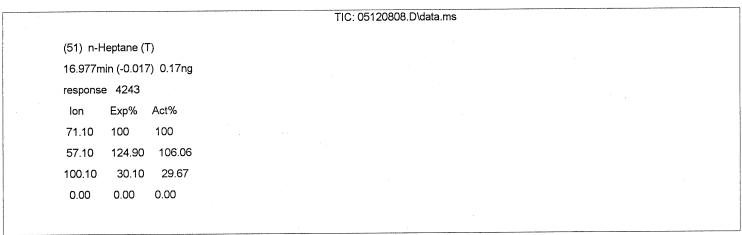
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Data Path : J:\MS13\DATA\2008 05\12\

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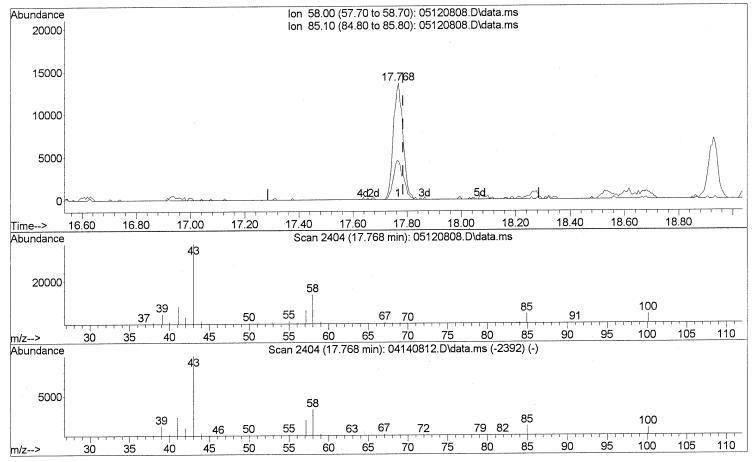
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ALS Vial : 5 Sample Multiplier: 1

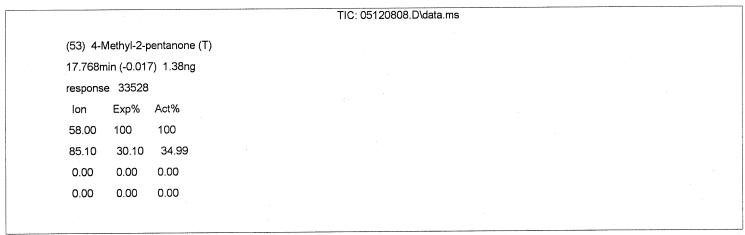
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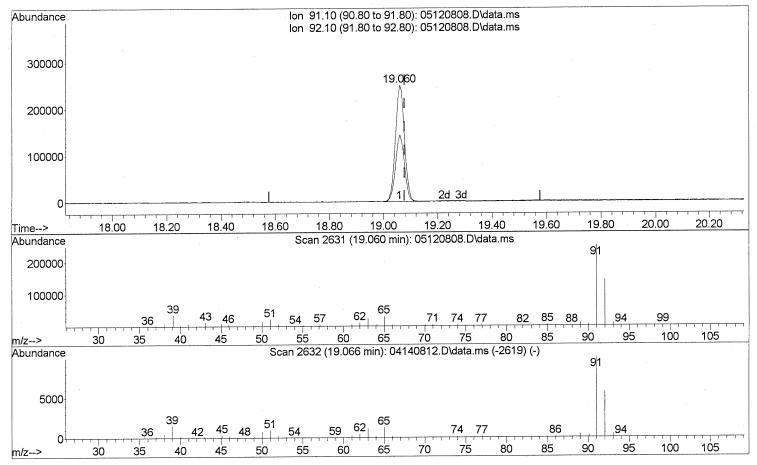
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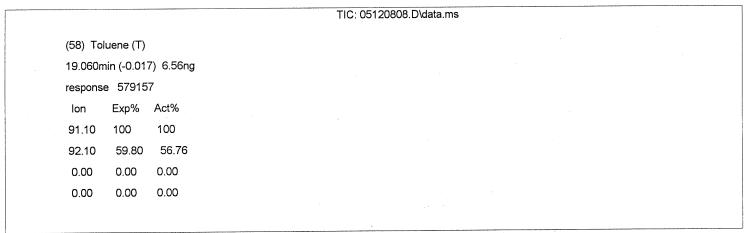
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Operator : RTB

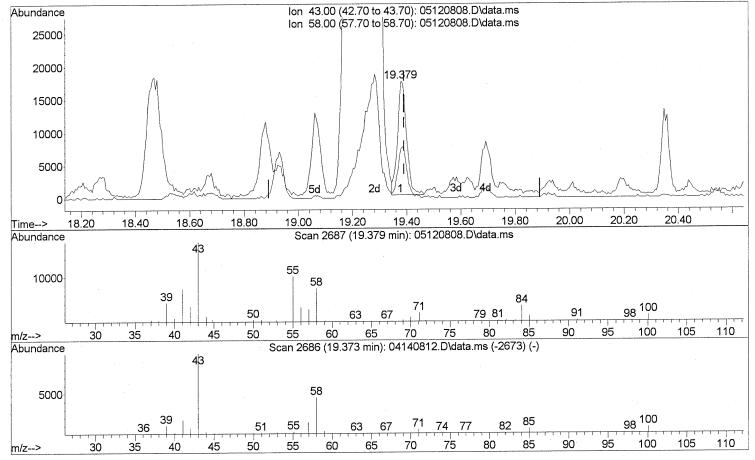
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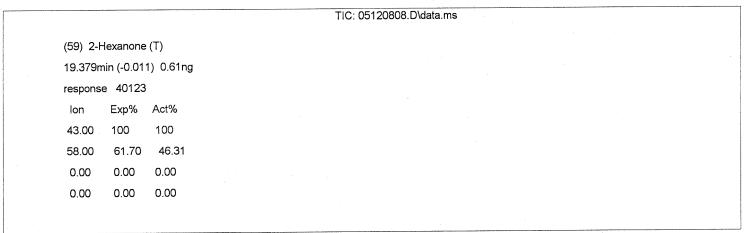
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Data Path : J:\MS13\DATA\2008 05\12\

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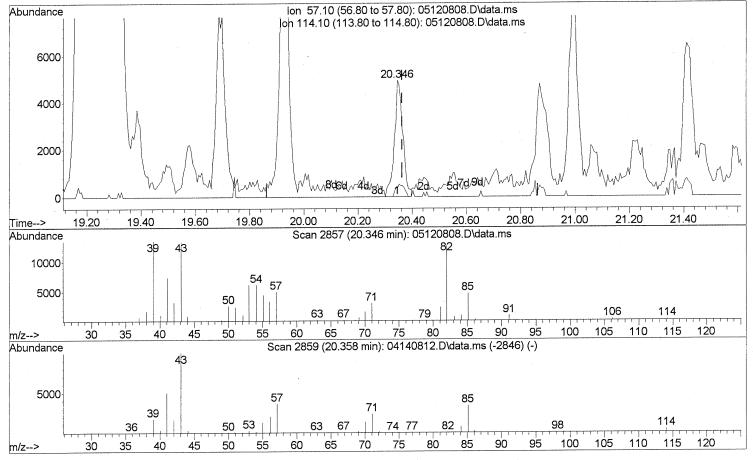
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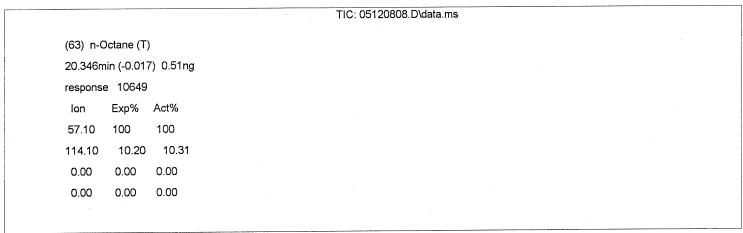
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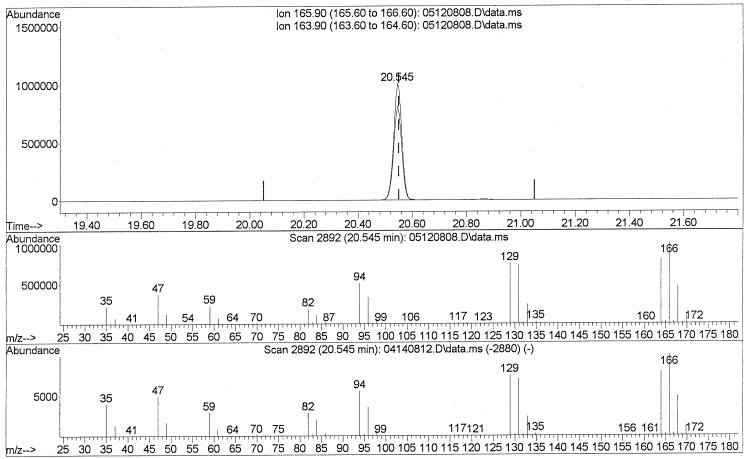
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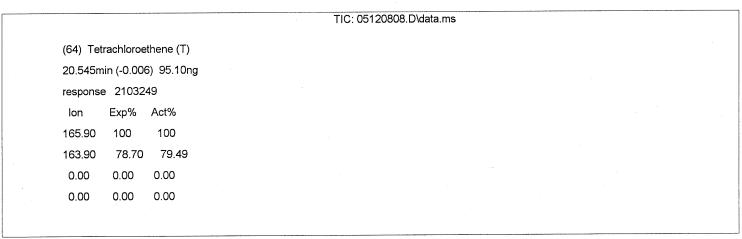
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Data Path : J:\MS13\DATA\2008 05\12\

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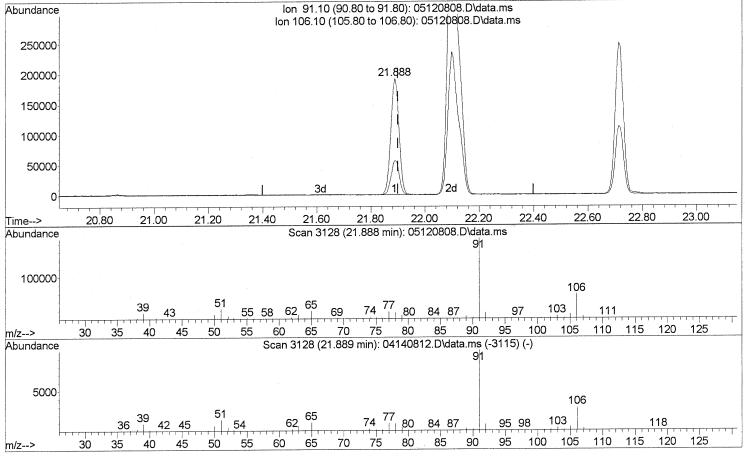
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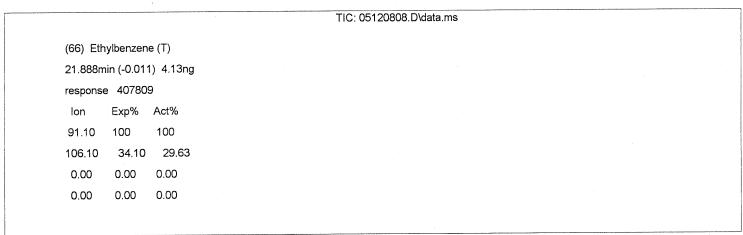
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Operator : RTB

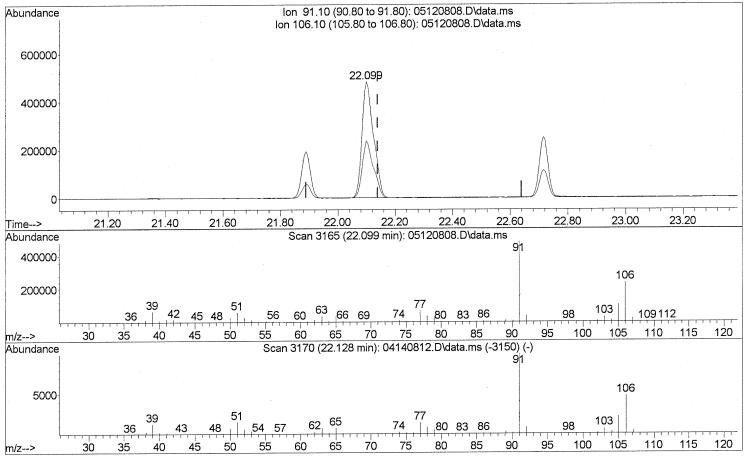
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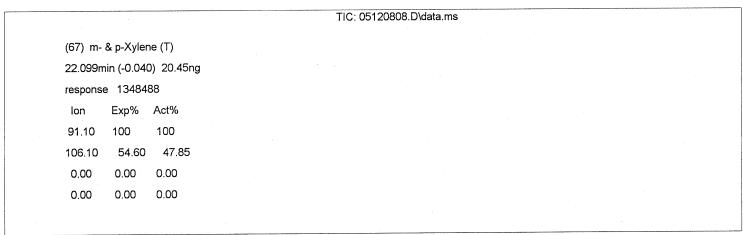
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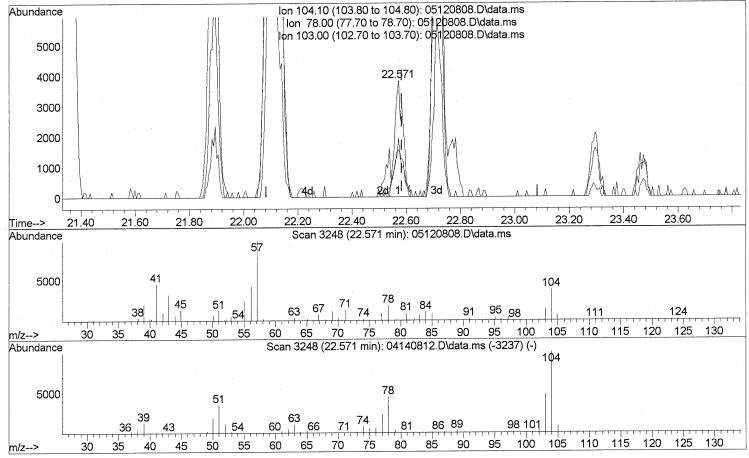
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ALS Vial : 5 Sample Multiplier: 1

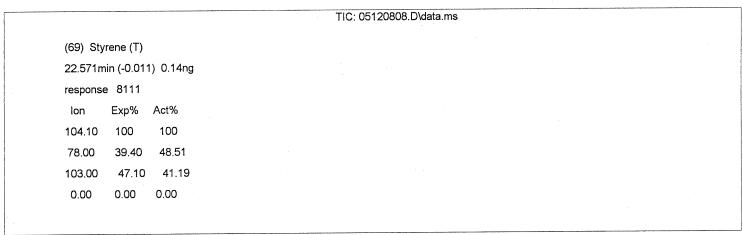
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Acq On : 12 May 2008 3:33 pm

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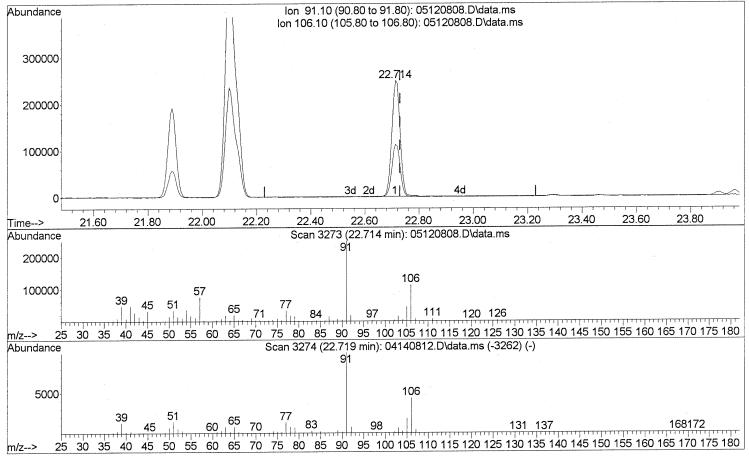
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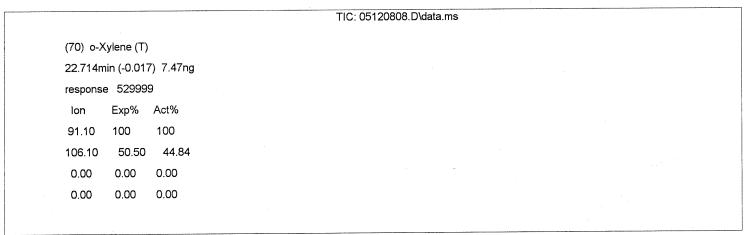
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QLast Update: Tue Apr 15 06:47:20 2008





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Data File : 05120808.D

Acq On : 12 May 2008 3:33 pm

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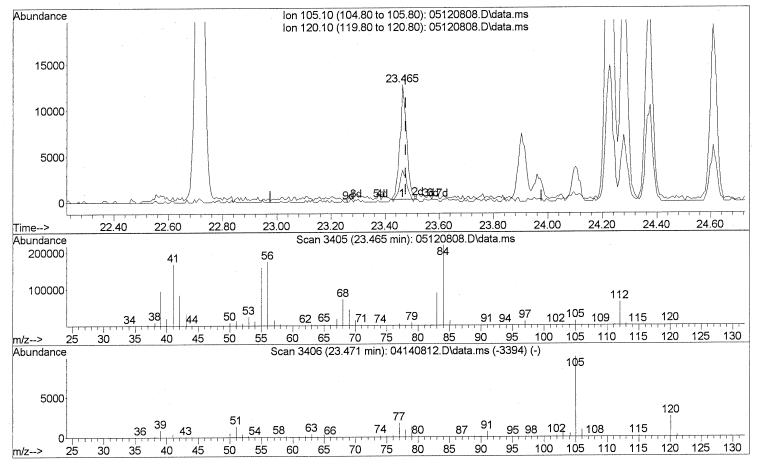
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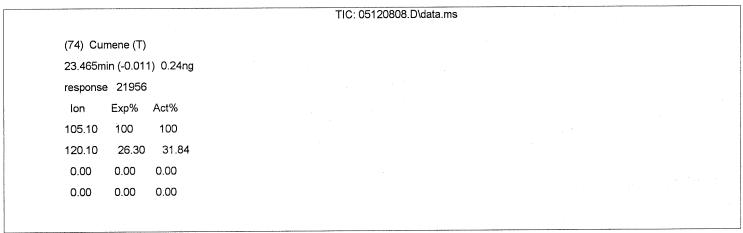
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Acq On : 12 May 2008 3:33 pm

Operator : RTB

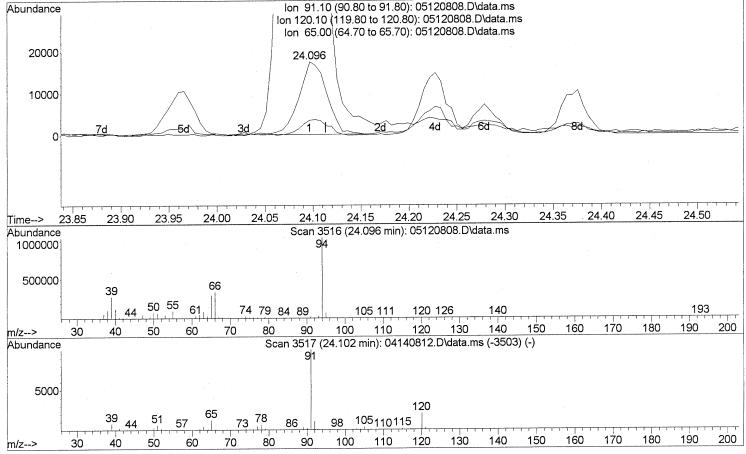
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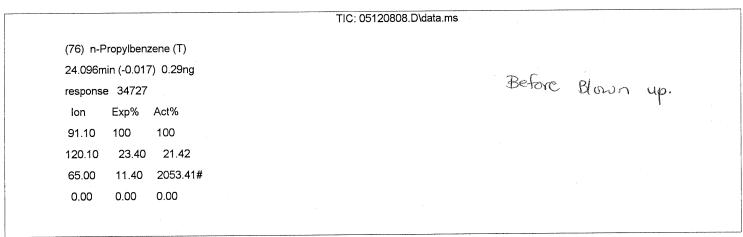
Quant Time: May 27 15:57:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

OLast Update: Tue Apr 15 06:47:20 2008





File :J:\MS13\DATA\2008_05\12\05120808.D

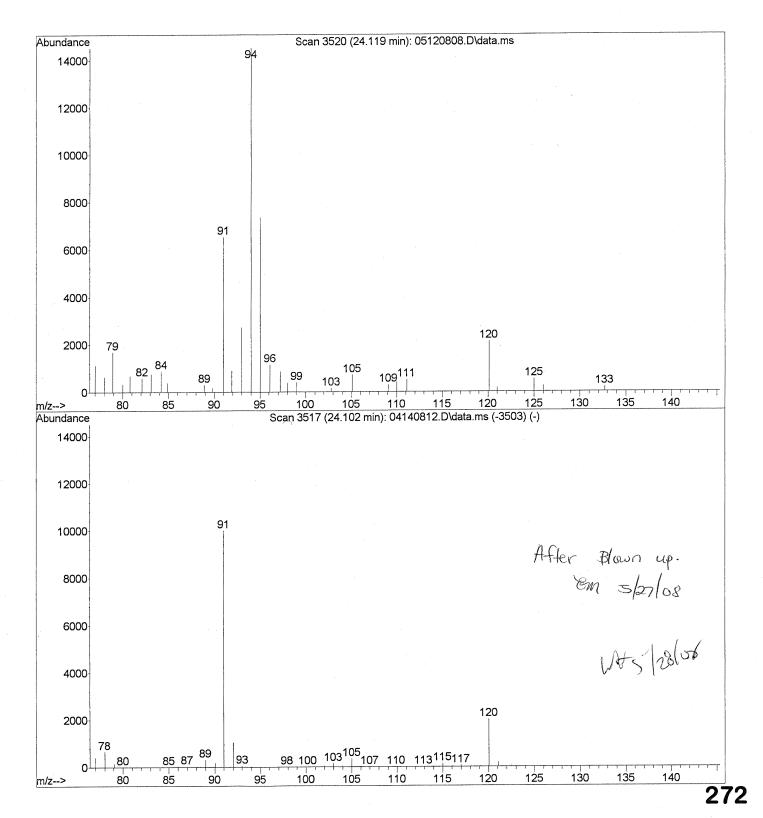
Operator : RTB

Acquired: 12 May 2008 3:33 pm using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-004 (1000mL)
Misc Info : ENSR SG43B-05 (-5.3, 3.5)

Vial Number: 5



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120808.D

Acq On : 12 May 2008 3:33 pm

Operator : RTB

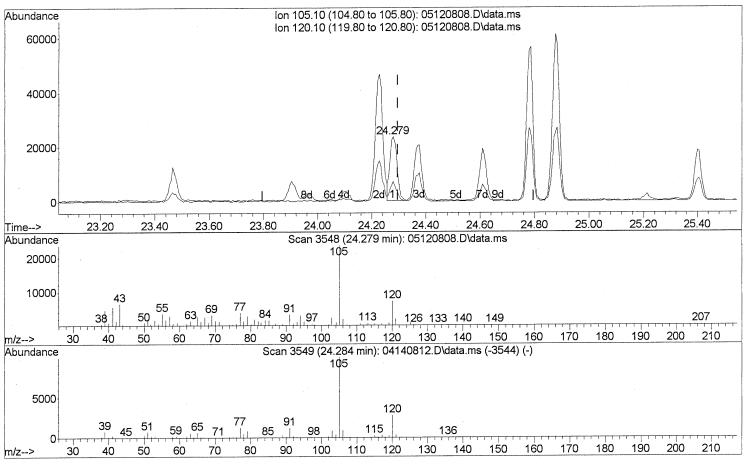
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ALS Vial : 5 Sample Multiplier: 1

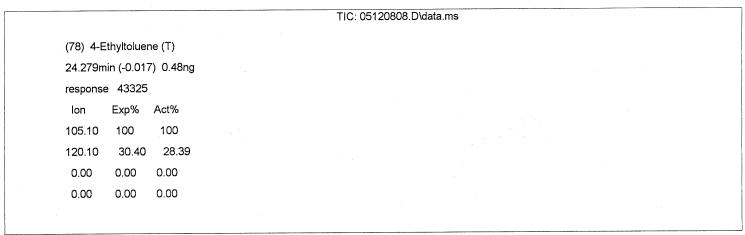
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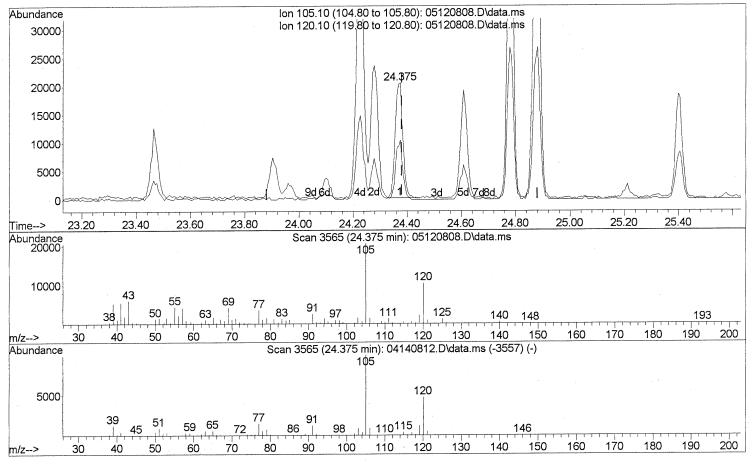
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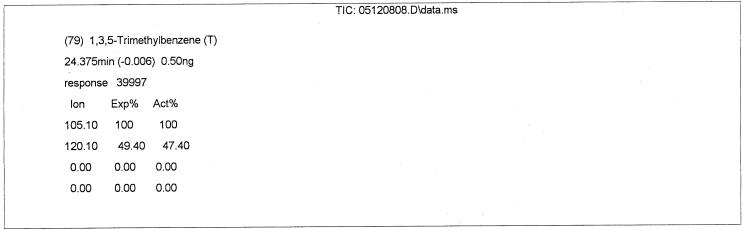
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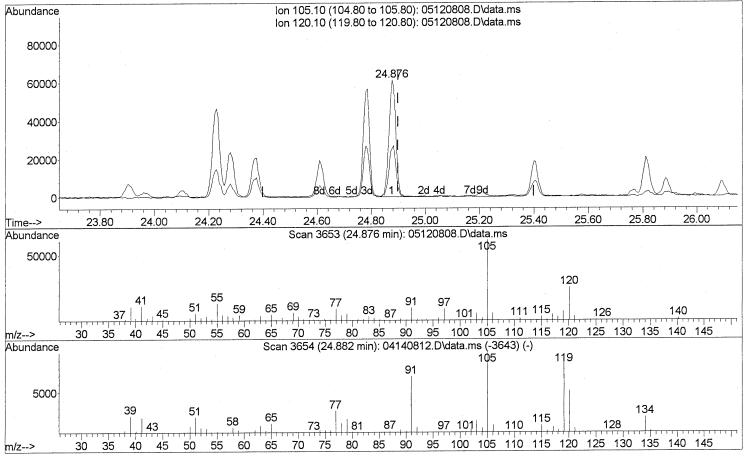
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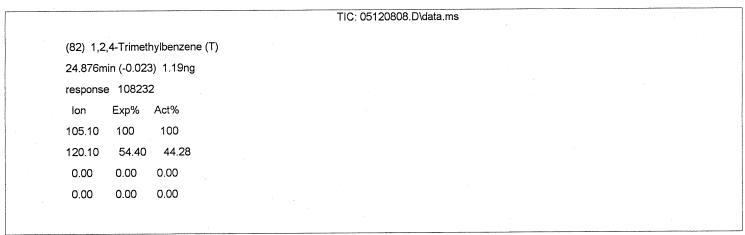
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Quant Method: J:\MS13\METHODS\R13041408.M

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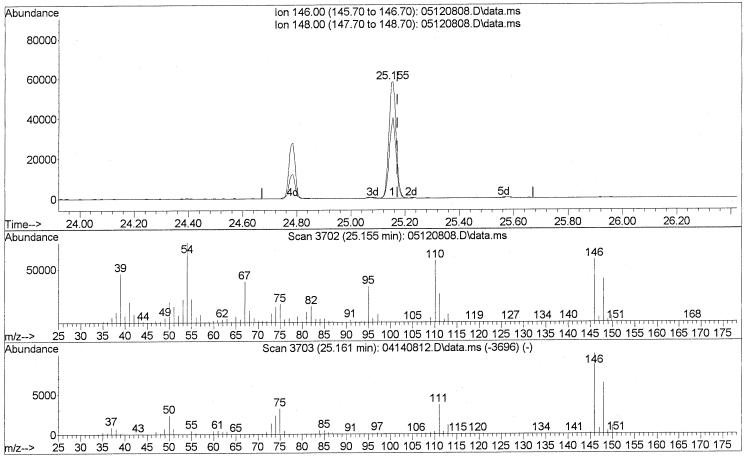
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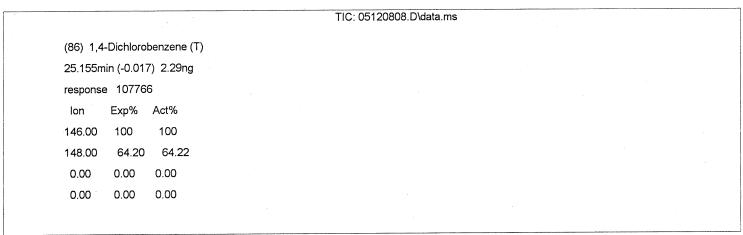
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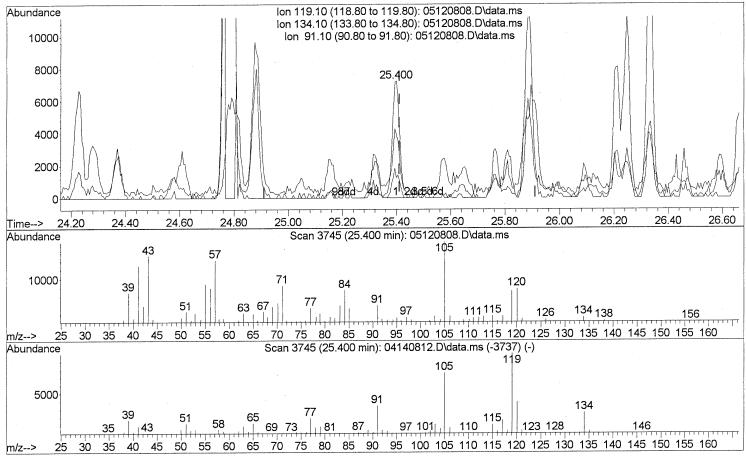
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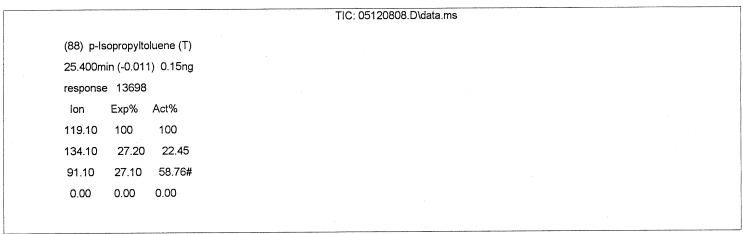
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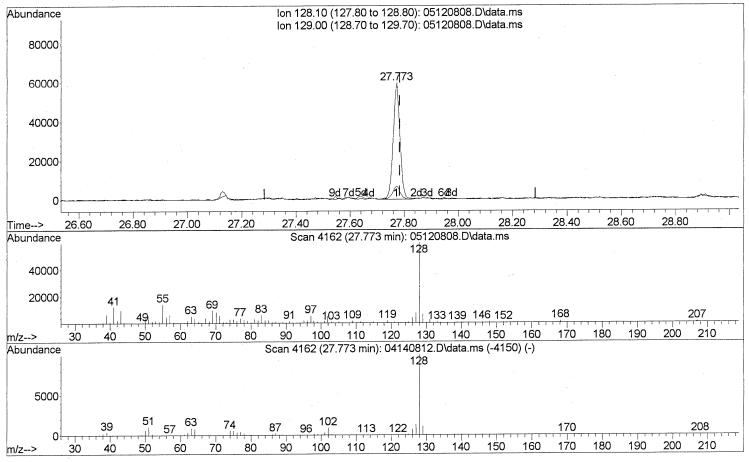
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

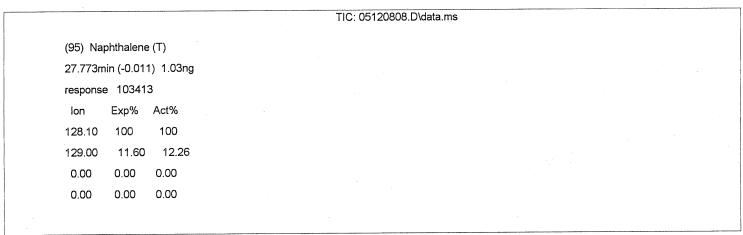
Quant Time: May 27 15:57:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data File : 05120808.D

Acq On : 12 May 2008 15:33

Operator : RTB

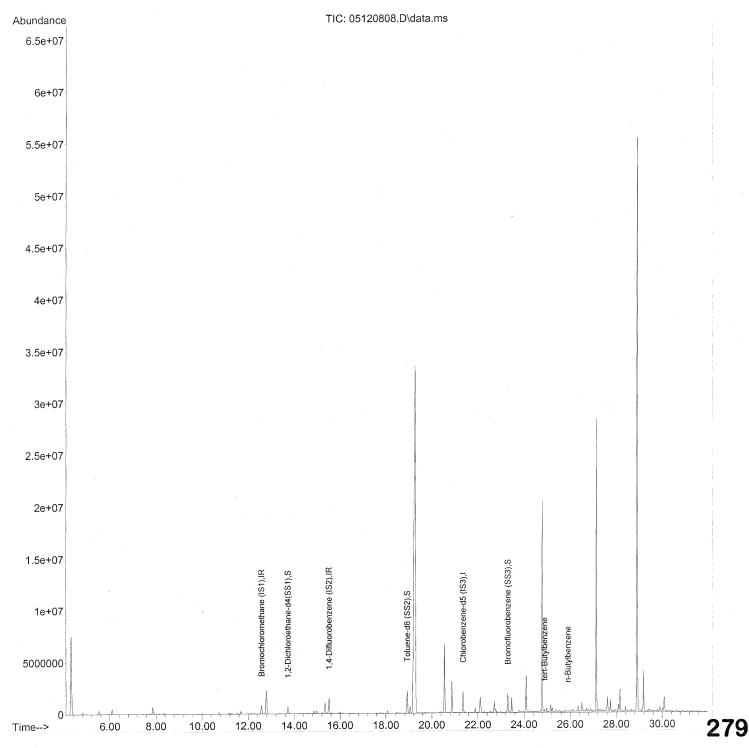
Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:44:32 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120808.D

Acq On : 12 May 2008 15:33

Operator : RTB

Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:44:32 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	114	379812 1672734 784338	25.000 25.000 25.000	ng	-0.03 -0.02
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.72 18.93 23.29	98	1780863 Recove 601945	ery = 25.332 ery =	87 ng 101 ng	.12% 0.00 .32% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88	119 , 91	13774 20343	0 .160 (0.220	ng N	Qvalue # 54 # 57

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

Data File : 05120808.D

Acq On : 12 May 2008 15:33

Operator : RTB

Sample : P0801385-004 (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

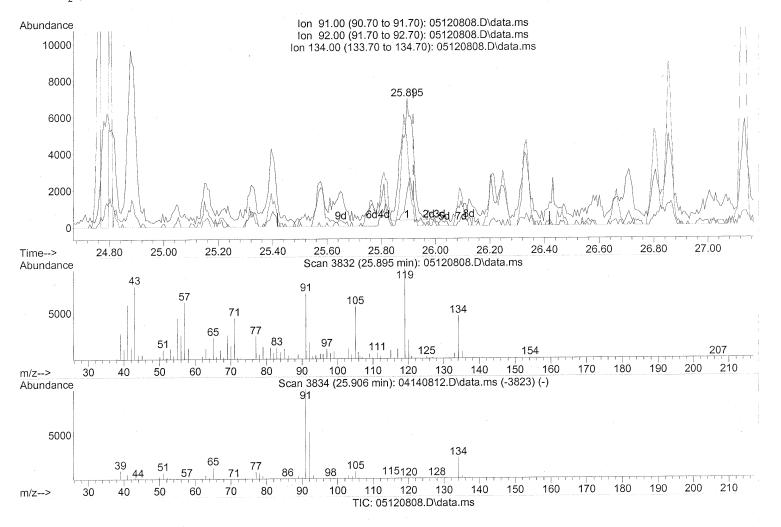
Quant Time: May 27 15:44:32 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.895min (-0.023) 0.22ng

response 20343 Act% Exp% Ion 91.00 100 100 55.70 29.05# 92.00 0.00# 134.00 28.80 0.00 0.00 0.00

bifori substr

Data File: 05120808.D

: 12 May 2008 15:33 Acq On

Operator : RTB

P0801385-004 (1000mL) Sample ENSR SG43B-05 (-5.3, 3.5) Misc Sample Multiplier: 1 ALS Vial 5

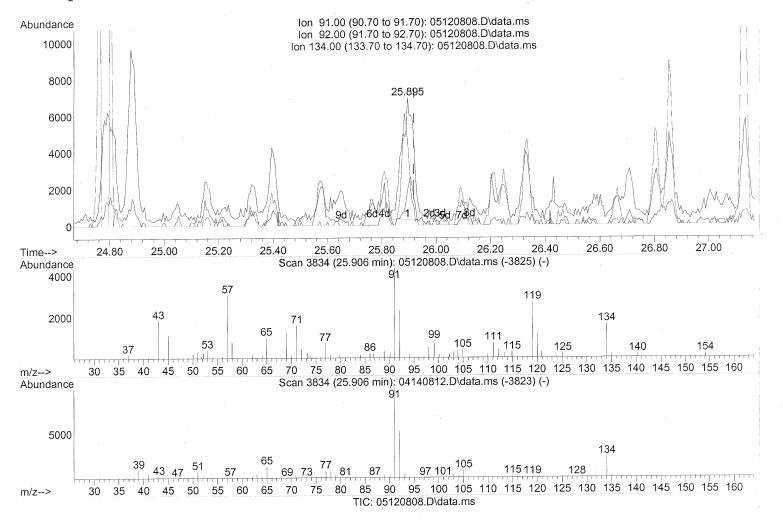
Quant Time: May 27 15:44:32 2008

Quant Method: J:\MS13\METHODS\S13041408.M

: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD Quant Title

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.895min (-0.023) 0.22ng

response 20343

Exp% Act% lon 91.00 100 100 92.00 55.70 29.05# 0.00# 134.00 28.80 0.00 0.00 0.00

after substr.

184 5/27/08

W/5/1868

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG38B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Date Collected: 5/10/08

CAS Sample ID: P0801385-005

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08 Volume(s) Analyzed:

Sampling Media:

6.0 L Summa Canister

1.00 Liter(s)

Test Notes:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.56

CAS#	Compound	Result μg/m³	MRL μg/m³	MDL μg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	$\frac{\mu g/m}{0.78}$	$\frac{\mu g/m}{0.078}$	0.44	0.16	0.016	Quanner
74-87-3	Chloromethane	ND	0.16	0.078	ND	0.076	0.038	
	1,2-Dichloro-1,1,2,2-							
76-14-2	tetrafluoroethane (CFC 114)	0.10	0.78	0.078	0.014	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.078	ND	0.061	0.031	
74-83-9	Bromomethane	ND	0.16	0.078	ND	0.040	0.020	
75-00-3	Chloroethane	ND	0.16	0.078	ND	0.059	0.030	
64-17-5	Ethanol	2.1	7.8	0.078	1.1	4.1	0.041	\mathbf{J}
67-64-1	Acetone	14	7.8	0.11	5.8	3.3	0.048	В
75-69-4	Trichlorofluoromethane	1.2	0.16	0.078	0.22	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.78	0.11	ND	0.36	0.050	
75-35-4	1,1-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.26	0.78	0.12	0.085	0.26	0.038	J
75-09-2	Methylene Chloride	0.10	0.78	0.078	0.030	0.22	0.022	J
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.078	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.60	0.16	0.087	0.078	0.020	0.011	
75-15-0	Carbon Disulfide	1.5	0.78	0.19	0.47	0.25	0.060	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
75-34-3	1,1-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.078	ND	0.043	0.022	
108-05-4	Vinyl Acetate	0.73	7.8	0.25	0.21	2.2	0.071	J, M
78-93-3	2-Butanone (MEK)	14	0.78	0.078	4.7	0.26	0.026	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.078	ND	0.039	0.020	
108-20-3	Diisopropyl Ether	ND	0.78	0.092	ND	0.19	0.022	
67-66-3	Chloroform	75	0.16	0.092	15	0.032	0.019	

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

Verified By:	CH	Date:	5/28/08	28	3

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

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

B = Analyte was found in the method blank.

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG38B-20

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-005

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08

Date Received: 5/12/08

Instrument ID: Analyst:

Date Analyzed: 5/12/08

Sampling Media:

Rusty Bravo 6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.56

CAS#	Compound	Result µg/m³	MRL μg/m³	MDL $\mu g/m^3$	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.78	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	ND	0.16	0.078	ND	0.039	0.019	
71-55-6	1,1,1-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
71-43-2	Benzene	3.4	0.16	0.078	1.1	0.049	0.024	
56-23-5	Carbon Tetrachloride	7.8	0.16	0.078	1.2	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.78	0.078	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	ND	0.16	0.078	ND	0.034	0.017	
75-27-4	Bromodichloromethane	1.3	0.16	0.078	0.19	0.023	0.012	
79-01-6	Trichloroethene	0.17	0.16	0.078	0.031	0.029	0.015	
123-91-1	1,4-Dioxane	ND	0.78	0.095	ND	0.22	0.026	
80-62-6	Methyl Methacrylate	ND	0.78	0.12	ND	0.19	0.029	
142-82-5	n-Heptane	0.18	0.78	0.10	0.044	0.19	0.024	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.78	0.081	ND	0.17	0.018	
108-10-1	4-Methyl-2-pentanone	1.8	0.78	0.087	0.44	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.78	0.098	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.078	ND	0.029	0.014	
108-88-3	Toluene	3.8	0.78	0.078	1.0	0.21	0.021	
591-78-6	2-Hexanone	0.55	0.78	0.12	0.14	0.19	0.029	J
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.018	0.012	
106-93-4	1,2-Dibromoethane	ND	0.16	0.084	ND	0.020	0.011	
111-65-9	n-Octane	0.41	0.78	0.078	0.089	0.17	0.017	J
127-18-4	Tetrachloroethene	4.3	0.16	0.078	0.63	0.023	0.012	
108-90-7	Chlorobenzene	ND	0.16	0.080	ND	0.034	0.017	

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

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

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Client Sample ID: SG38B-20

CAS Sample ID: P0801385-005

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00970

Initial Pressure (psig):

-3.0

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.56

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	0.93	0.78	0.097	0.21	0.18	0.022	
179601-23-1	m,p-Xylenes	4.1	0.78	0.20	0.95	0.18	0.047	
75-25-2	Bromoform	ND	0.78	0.12	ND	0.075	0.011	
100-42-5	Styrene	0.25	0.78	0.12	0.058	0.18	0.028	J
95-47-6	o-Xylene	1.4	0.78	0.098	0.32	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.090	0.78	0.087	0.018	0.16	0.018	$^{\mathrm{J}}$
103-65-1	n-Propylbenzene	0.24	0.78	0.081	0.050	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.41	0.78	0.089	0.084	0.16	0.018	J
108-67-8	1,3,5-Trimethylbenzene	0.42	0.78	0.094	0.085	0.16	0.019	J
98-83-9	alpha-Methylstyrene	0.22	0.78	0.11	0.046	0.16	0.024	J
95-63-6	1,2,4-Trimethylbenzene	1.5	0.78	0.11	0.31	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.13	ND	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.097	ND	0.026	0.016	
106-46-7	1,4-Dichlorobenzene	4.1	0.16	0.087	0.68	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.78	0.090	ND	0.14	0.016	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.20	0.78	0.10	0.037	0.14	0.018	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.78	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	0.19	0.16	0.12	0.025	0.021	0.016	
91-20-3	Naphthalene	2.3	0.31	0.12	0.43	0.060	0.022	
87-68-3	Hexachlorobutadiene	ND	0.16	0.14	ND	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.078	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.29	0.31	0.078	0.053	0.057	0.014	J

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

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

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

Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo. Verified By:

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

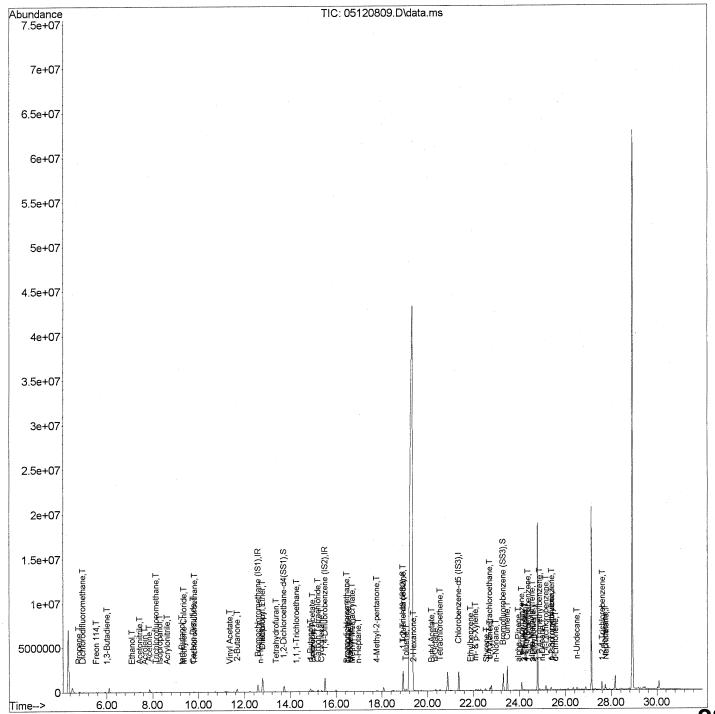
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm Operator : RTB

Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, : ENSR SG38B-20 (-3.0, 3.5) Sample Multiplier: 1 ALS Vial : 6

Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Apr 15 06:47:20 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Uni	ts Dev	7(Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)			381052 1683477 806379	25.000 ng		-0.02 -0.02 0.00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000 73) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	65 98 174	1804652 Recov 617963	ery = 24.968 ng ery = 24.845 ng	88.408 99.888	0.00
Target Compounds	4 90	4.2	46685	1.480 ng		alue 64
2) Propene3) Dichlorodifluoromethane4) Chloromethane5) Freon 114	4.80 4.97 5.29 5.55	42 85 50 135	79456 194 1798 <	1.382 ng N.D. 0.064 ng	5	97
6) Vinyl Chloride7) 1,3-Butadiene8) Bromomethane	0.00 6.02 6.51 0.00	62 54 94 64	0 3281 59 0	N.D 0.095 ng N.D N.D	#	35
9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein	7.11 7.44 7.66		29301m 62544 4722	1.362 ng 1.106 ng 0.311 ng	- contractive contractive	91 84
13) Acetone14) Trichlorofluoromethane15) Isopropanol	7.86 8.15 8.32	45	187247 35593 53988	8.877 ng 0.788 ng 0.756 ng 0.042 ng		69 98 81 88
16) Acrylonitrile17) 1,1-Dichloroethene18) tert-Butanol19) Methylene Chloride	8.64 0.00 9.27 9.36	53 96 59 84	1383 0 9808m 1616	N.D. 0.166 ng 0.067 ng	-	69
20) Allyl Chloride21) Trichlorotrifluoroethane22) Carbon Disulfide	9.56 9.82 9.77	41 151 76	766 7373 84615	N.D 0.382 ng 0.942 ng	3,	89 99
23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether	10.72 11.16 11.19 11.36	61 63 73 86	737 55 1184 1963	N.D. N.D. N.D. 0.468 ng	•	1
26) Vinyl Acetate27) 2-Butanone28) cis-1,2-Dichloroethene29) Diisopropyl Ether	11.68 0.00 12.78	72 61 87	132244 0 177298	8.940 ng N.D 9.129 ng	5 #	90
30) Ethyl Acetate	12.69	61	62	N.D.		00-

Em 5/21/08

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm Operator : RTB

Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0 : ENSR SG38B-20 (-3.0, 3.5) Sample Multiplier: 1 ALS Vial : 6

Quant Time: May 27 16:56:36 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc Units	Dev(Min)
21\ n Hoyano	12.70	57	6914	0.144 ng	90
31) n-Hexane 32) Chloroform	12.78			48.349 ng	99
34) Tetrahydrofuran	13.38	72	5410	0.366 ng	# 78
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	13.79	62	73	N.D	
38) 1,1,1-Trichloroethane	14.28	97	1613	0.046 ng	86
39) Isopropyl Acetate	14.97	61	1636	0.107 ng	# 1
40) 1-Butanol	14.88	56	306692	13.347 ng	85
41) Benzene	14.98		197050	<2.206 ng	99
42) Carbon Tetrachloride	15.21		147717	(5.001 ng)	99
43) Cyclohexane	15.35	84	11816	0.358 ng	# 1
44) tert-Amyl Methyl Ether	15.86	73	63	N.D	,,
45) 1,2-Dichloropropane	15.98	63	191	N.D.	
46) Bromodichloromethane	16.47	83	24471 <	. 0.806 ng	96
47) Trichloroethene	C16.53	130		0.107 ng	, 95
48) 1,4-Dioxane	16.54	88	63	N.D.	<i>⊶</i>
49) Isooctane	16.62	57	4628	0.044 ng	# 55
50) Methyl Methacrylate	16.71	100	388	0.048 ng	# 1
51) n-Heptane	(16.98)	> 71	2839	(0.115 ng)	93
52) cis-1,3-Dichloropropene	17.82	75	1267	N.D.	
53) 4-Methyl-2-pentanone	(17.77	> 58	28188	(1.154 ng	86
54) trans-1,3-Dichloropropene		75	63	N.D.	í
55) 1,1,2-Trichloroethane	18.94	97	163867	-7.619 ng NR	4 9
58) Toluene	(19.06)		218902	<2.410 ng	94
59) 2-Hexanone	(19.40)	43	23986	0.355 ng Nk	73 دا⁄∤#
60) Dibromochloromethane	19.66	129	754	N.D.	/
61) 1,2-Dibromoethane	0.00	107	0	N.D	
62) Butyl Acetate	20.19	43	6973	0.103 ng	92
63) n-Octane	20.35	₃ 57	5656	<0.266 ng	89
64) Tetrachloroethene		166	62189	<2.735 ng	100
65) Chlorobenzene	21.42	112	972	N.D.	<i>)</i>
66) Ethylbenzene	21.89	91	60457	0.596 ng	94
67) m- & p-Xylene	22.10	91	178495	2.633 ng	91
68) Bromoform	0.00	173	0	N.D.	
69) Styrene	(22.57)	104	9240	0.158 ng	96
70) o-Xylene	(22.72)	91	65663	≥0.900 ng	92
71) n-Nonane	22.98	43	13460	0.230 ng	[*] # 73
72) 1,1,2,2-Tetrachloroethane		83	1770	0.051 ng	# 28
74) Cumene <	23.47	>105	5382	< 0.058 ng	97
75) alpha-Pinene	23.96	93	7480	0.152 ng	78
76) n-Propylbenzene	24.10	> 91	19331	< 0.156 ng	# 1
77) 3-Ethyltoluene	24.23	105	48309	0.479 ng	100
-					00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0.3 : ENSR SG38B-20 (-3.0, 3.5) ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Apr 15 06:47:20 2008
Response via : Initial Calibration

Internal Standards	R.T. QIon	Response	e Conc Units	Dev(Min)
78) 4-Ethyltoluene	24.28 105 24.38 105	24486 22081	0.264 ng 0.268 ng	98 98
79) 1,3,5-Trimethylbenzene	The state of the s		0.142 ng	99
80) alpha-Methylstyrene	24.56 118	6219		97
81) 2-Ethyltoluene	24.61 105	20580	0.203 ng	
82) 1,2,4-Trimethylbenzene	24.88 105	91998	0.987 ng	87
83) n-Decane	24.98 57	40952	0.794 ng	73
84) Benzyl Chloride	25.04 91	1532	N.D.	
85) 1,3-Dichlorobenzene	25.08 146	1842	N.D.	
86) 1,4-Dichlorobenzene	25.15 146	126775 (2.625 ng	98
87) sec-Butylbenzene	25.21 105	2770	N.D.	
88) p-Isopropyltoluene	25.40 119	12546	€0.131 ng	# 71
89) 1,2,3-Trimethylbenzene	25.41 105	26031	0.284 ng	92
90) 1,2-Dichlorobenzene	25.58 146	655	N.D.	
91) d-Limonene	25.57 68	15997	0.378 ng	94
92) 1,2-Dibromo-3-Chloropr	26.50 157	389	N.D.	
93) n-Undecane	26.50 57	106683	1.971 ng	# 66
94) 1,2,4-Trichlorobenzene	(27.62) 180	3878	<0.121 ng	93
95) Naphthalene	27.77>128	149140	(1.447 ng)	100
96) n-Dodecane	27.73 57	193892	3.530 ng	85
97) Hexachloro-1,3-butadiene	0.00 225	0	N.D.	

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

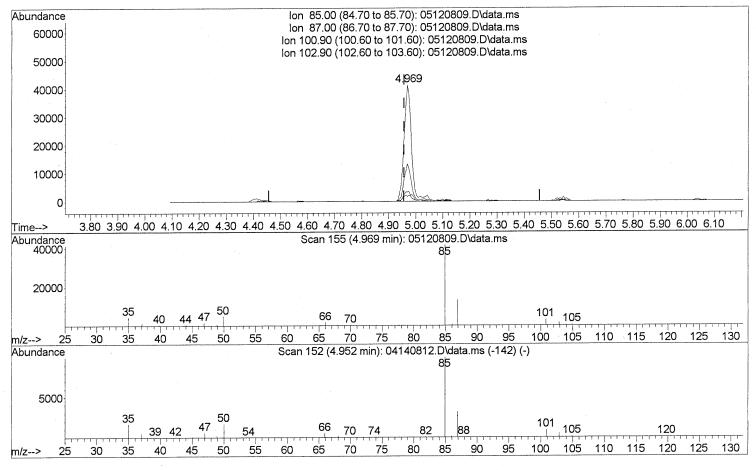
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

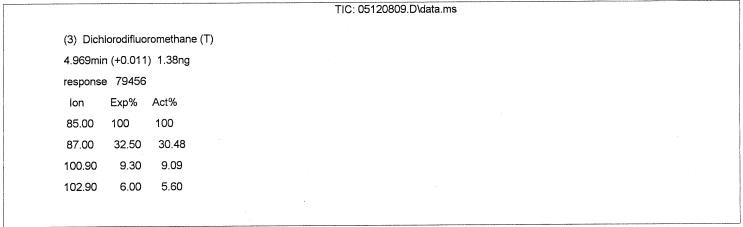
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

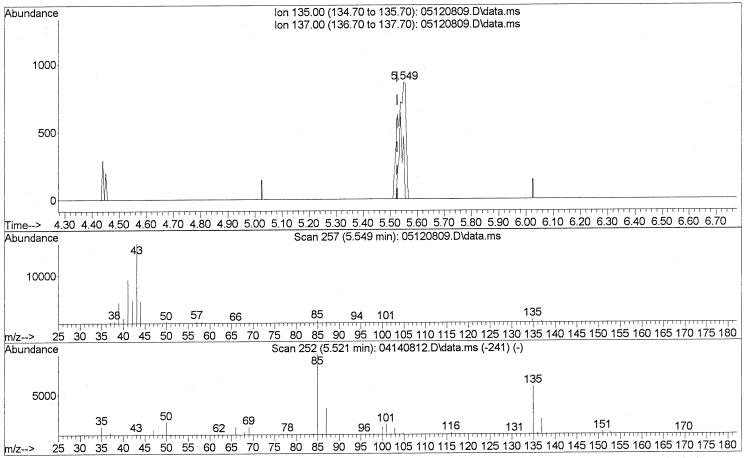
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

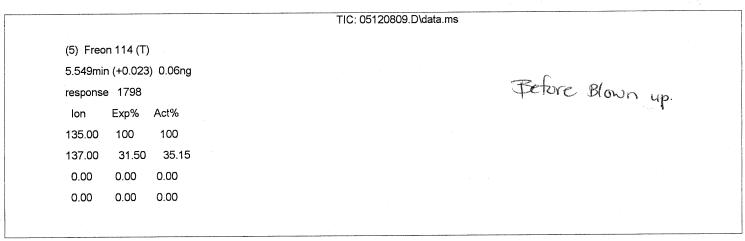
Ouant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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QLast Update: Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008 05\12\05120809.D

Operator

: RTB

Acquired

4:29 pm using AcqMethod TO15.M : 12 May 2008

Instrument :

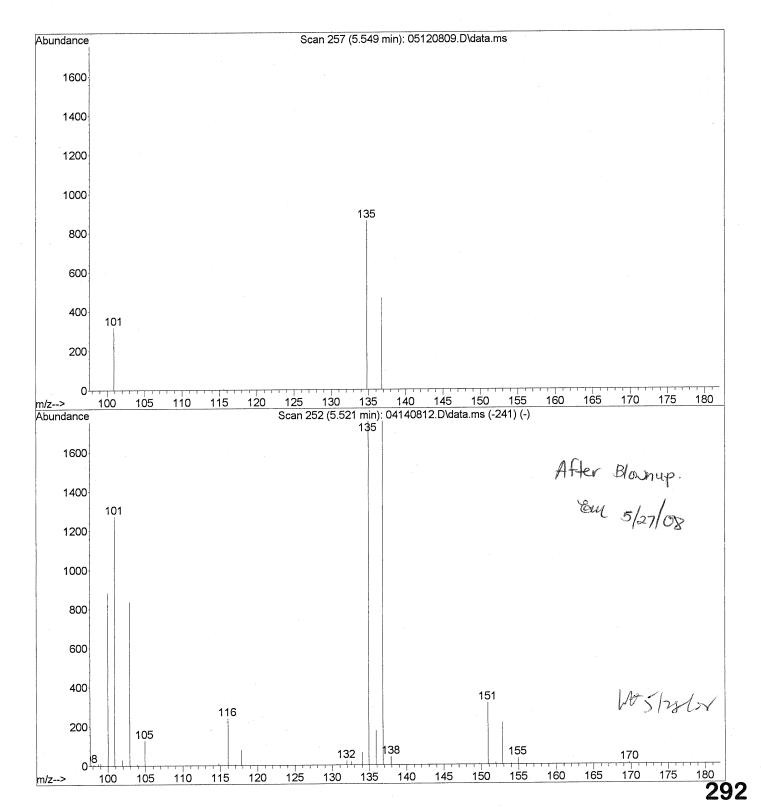
GCMS13

Sample Name: P0801385-005 (1000mL)

Misc Info

: ENSR SG38B-20 (-3.0, 3.5)

Vial Number: 6



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

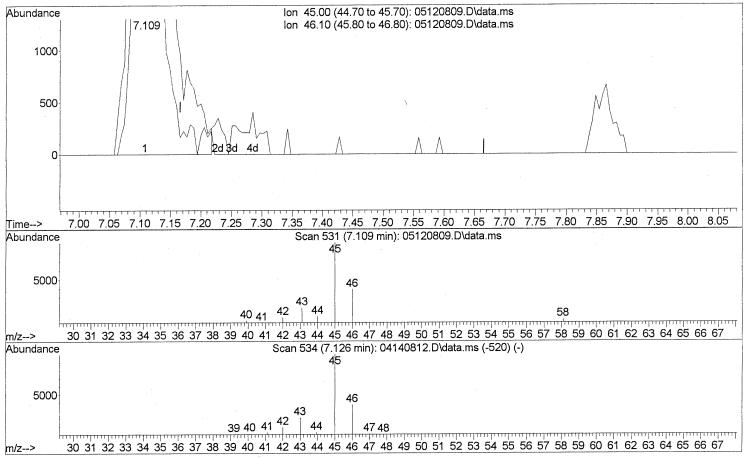
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

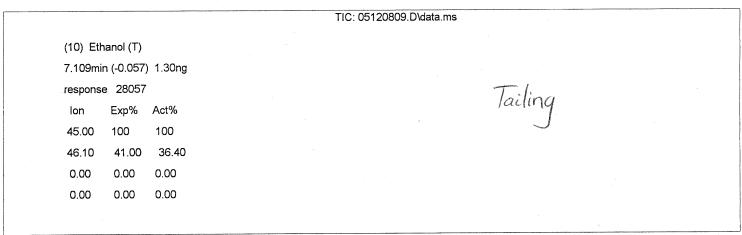
Quant Time: May 27 16:54:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

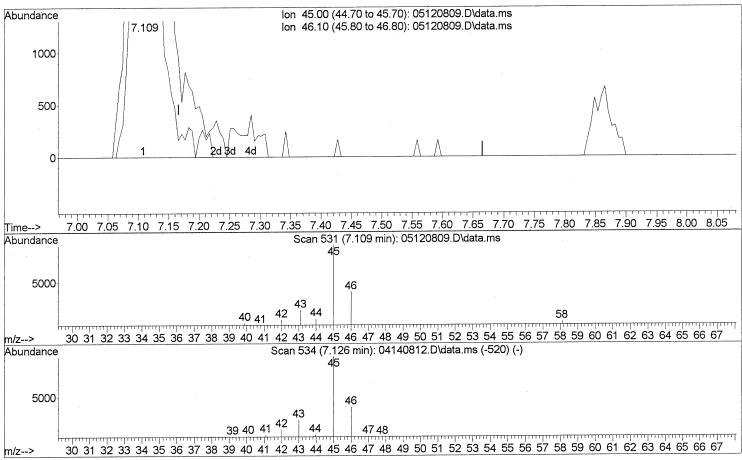
Sample : P0801385-005 (1000mL)
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ALS Vial : 6 Sample Multiplier: 1

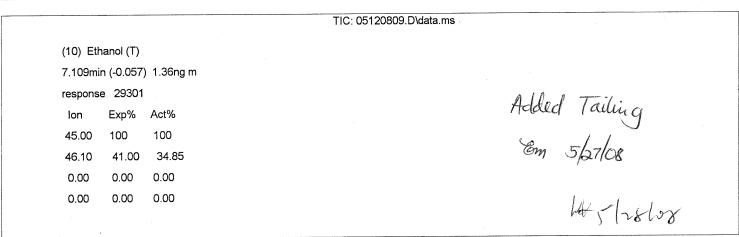
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Quant Method : J:\MS13\METHODS\R13041408.M

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Acq On : 12 May 2008 4:29 pm

Operator : RTB

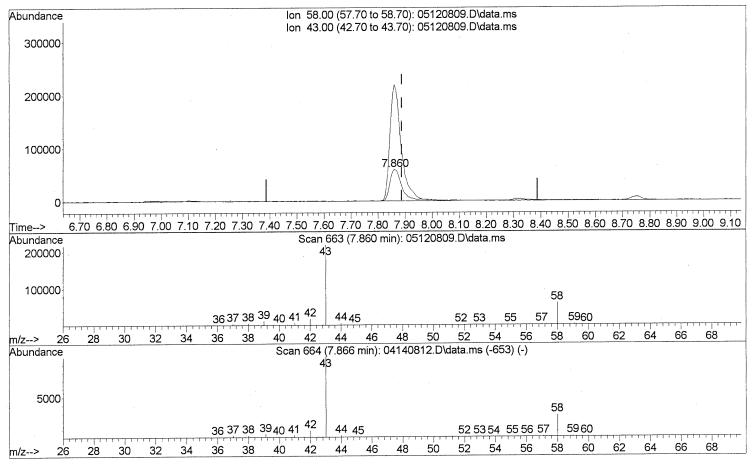
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

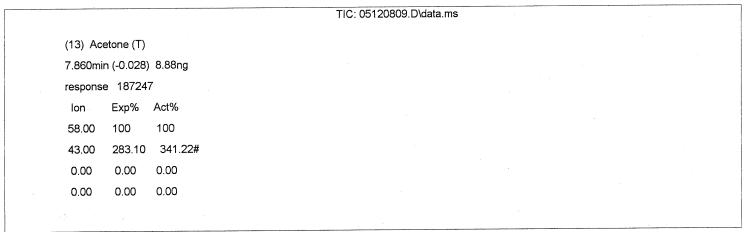
Quant Time: May 27 16:56:36 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

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Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

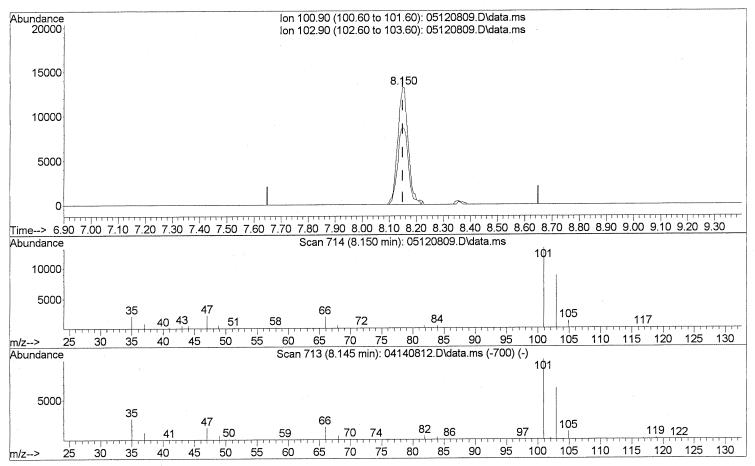
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

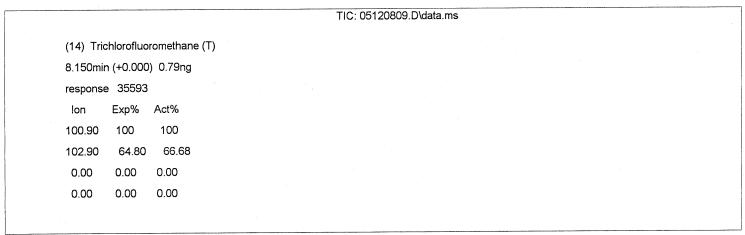
Quant Time: May 27 16:56:36 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

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QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120809.D

Acg On : 12 May 2008 4:29 pm

Operator : RTB

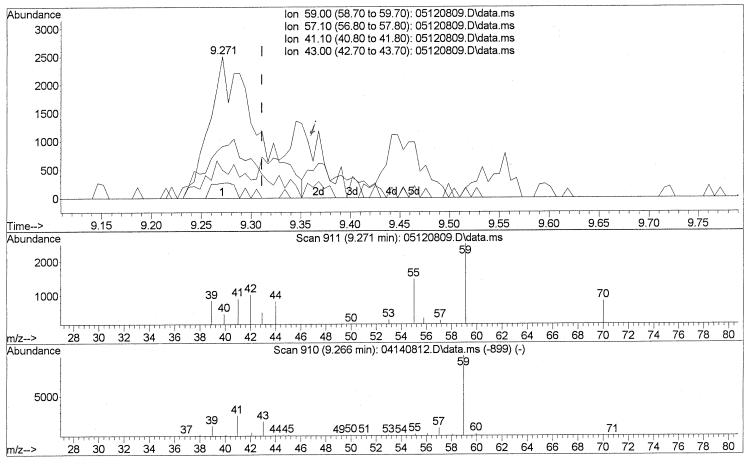
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

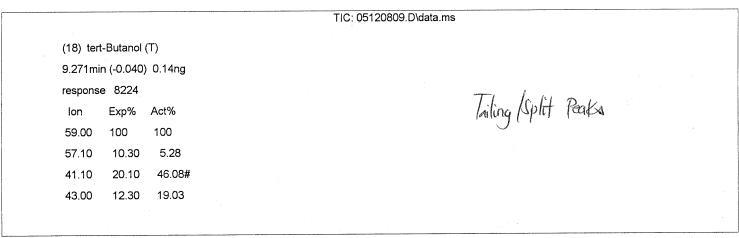
Quant Time: May 12 17:41:21 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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Acq On : 12 May 2008 4:29 pm

Operator : RTB

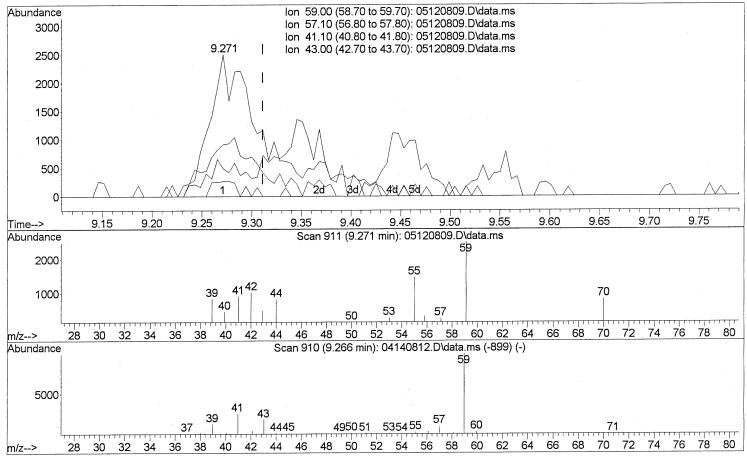
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 12 17:41:21 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



TIC: 05120809.D\data.ms		
(18) tert-Butanol (T)		
9.271min (-0.040) 0.17ng m		
response 9808		
Ion Exp% Act%	Int. the whole peak	
59.00 100 100		
57.10 10.30 4.42	Em 5/08	
41.10 20.10 38.64	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
43.00 12.30 15.96	· · · · · · · · · · · · · · · · · · ·	
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Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

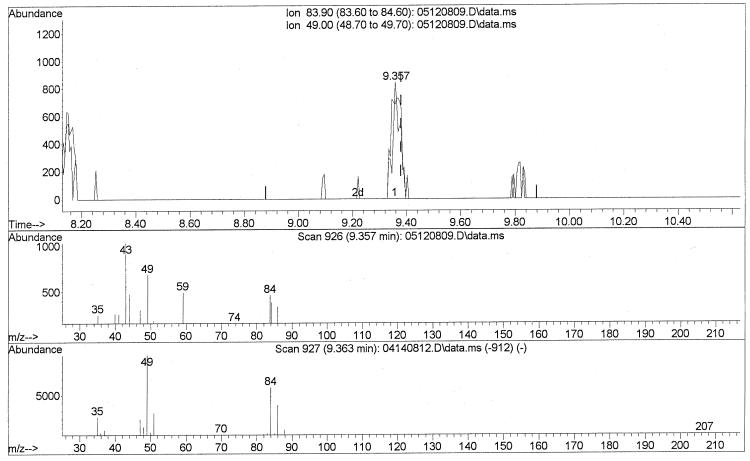
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ALS Vial : 6 Sample Multiplier: 1

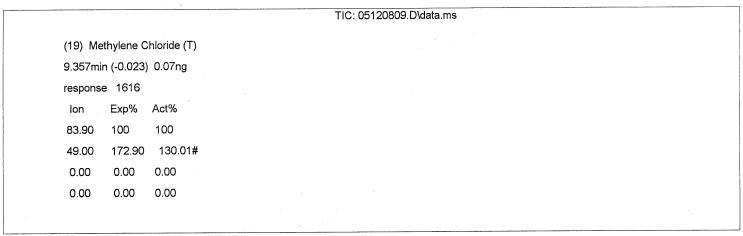
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Quant Method: J:\MS13\METHODS\R13041408.M

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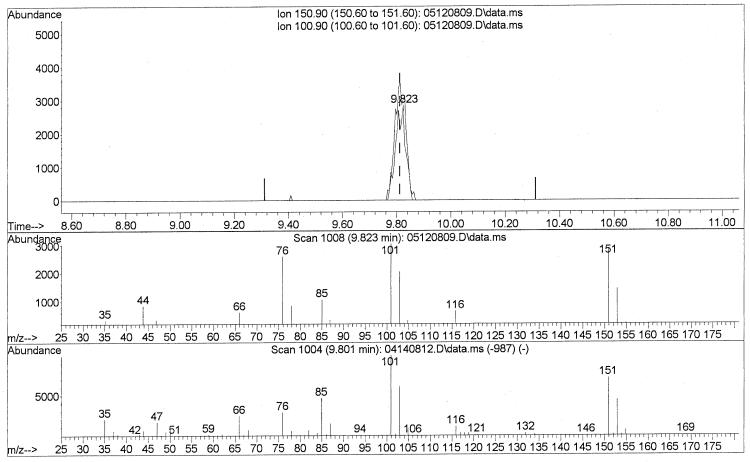
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ALS Vial : 6 Sample Multiplier: 1

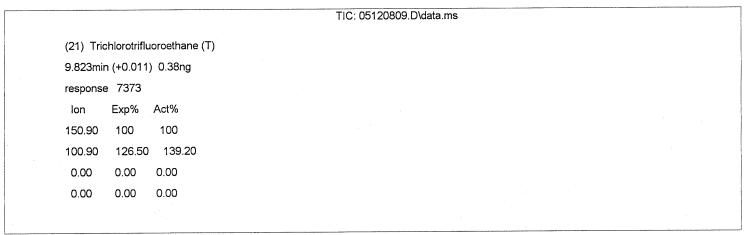
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Ouant Method: J:\MS13\METHODS\R13041408.M

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Operator : RTB

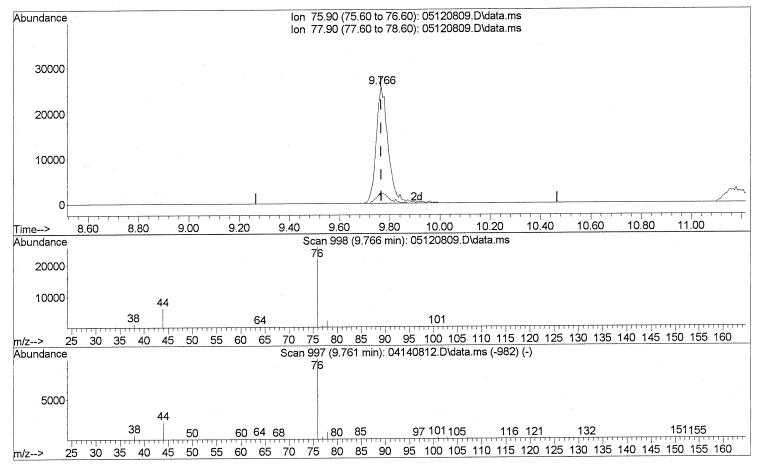
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ALS Vial : 6 Sample Multiplier: 1

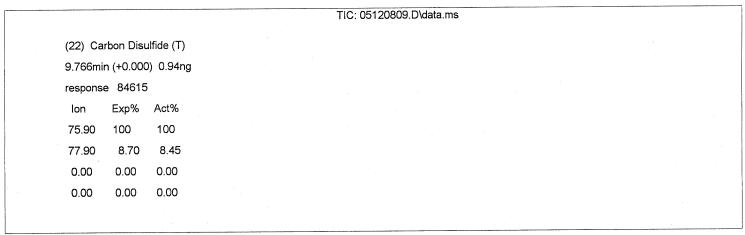
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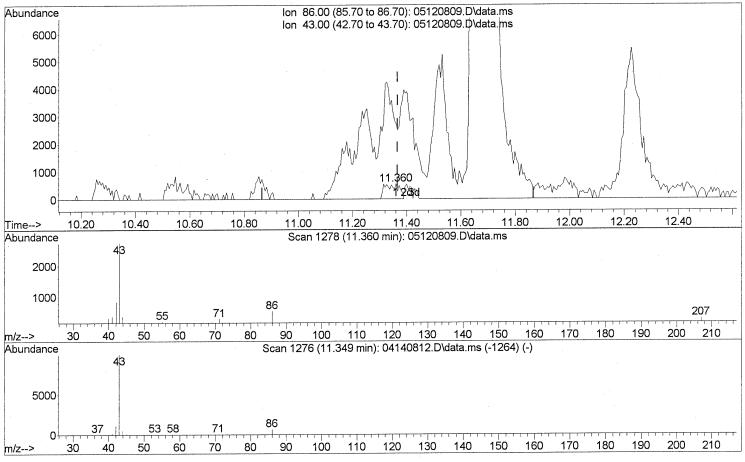
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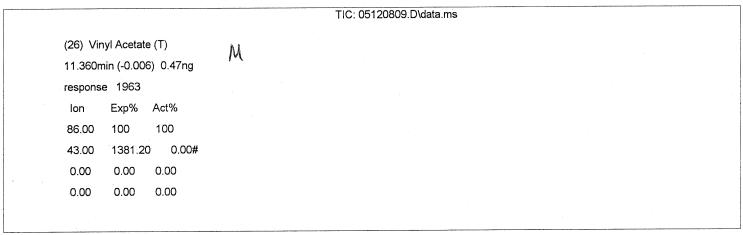
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Acq On : 12 May 2008 4:29 pm

Operator : RTB

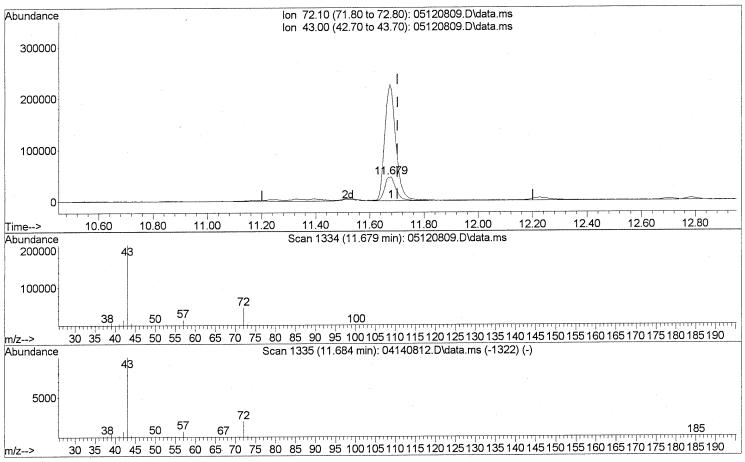
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ALS Vial : 6 Sample Multiplier: 1

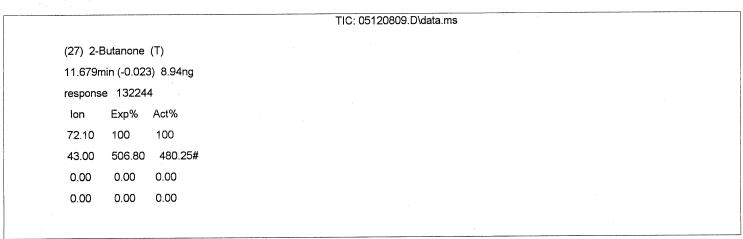
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

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Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

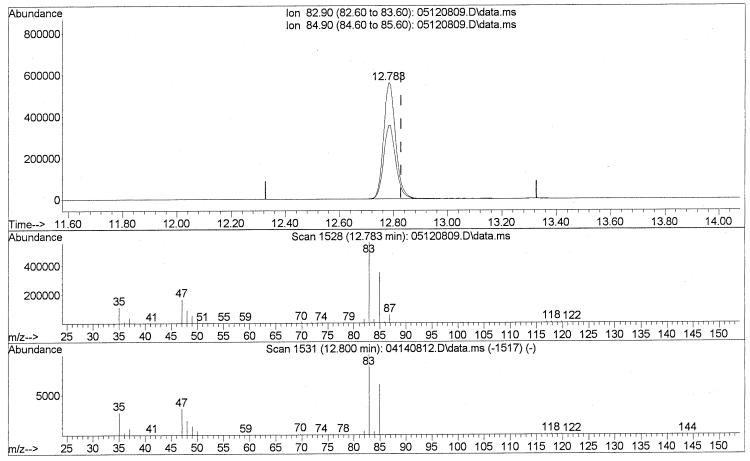
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

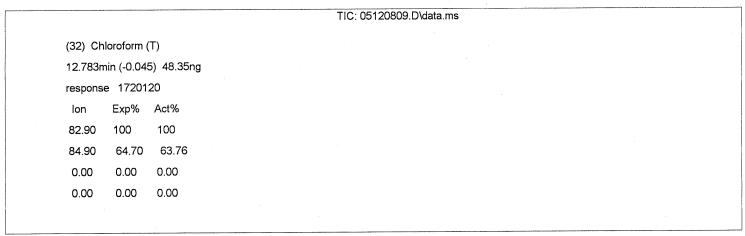
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

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Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

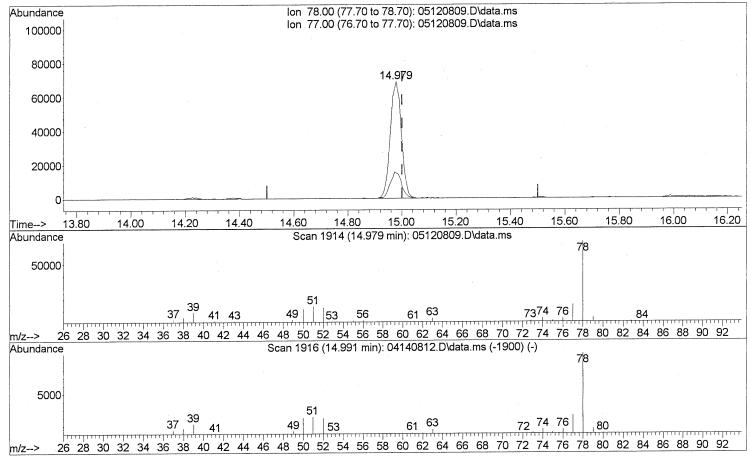
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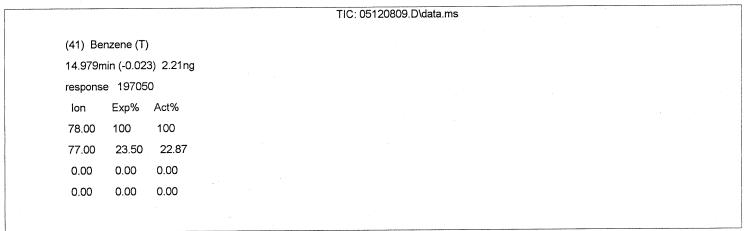
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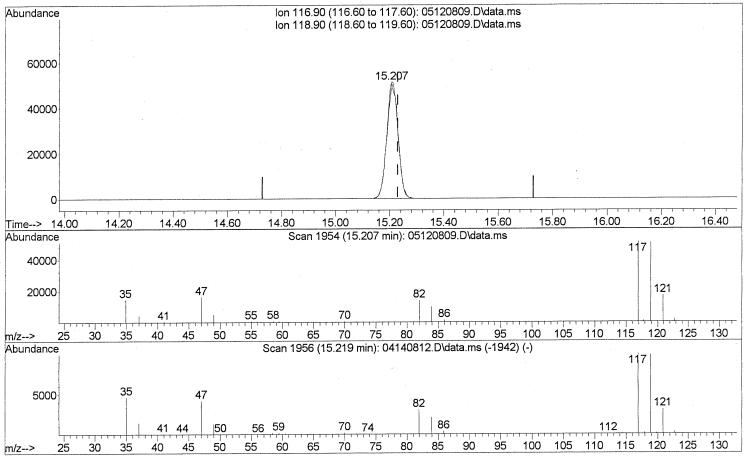
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ALS Vial : 6 Sample Multiplier: 1

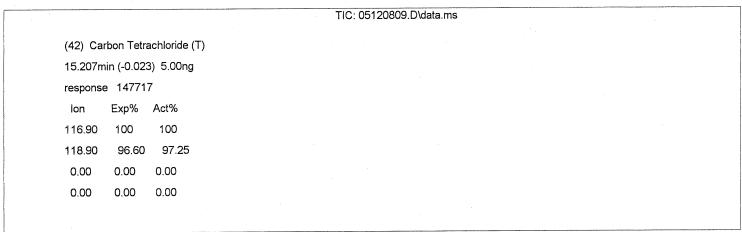
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Operator : RTB

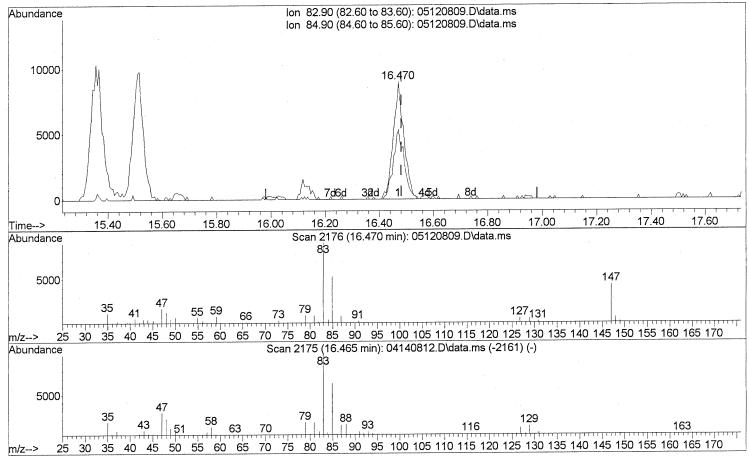
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ALS Vial : 6 Sample Multiplier: 1

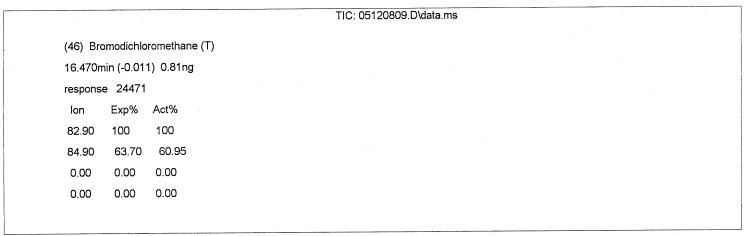
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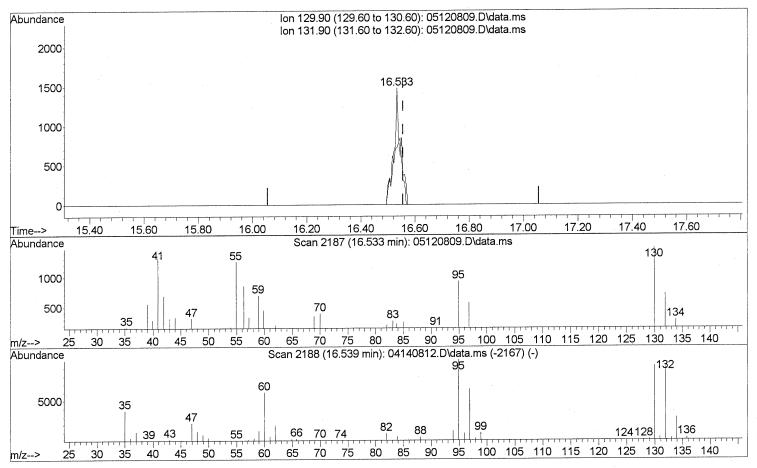
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

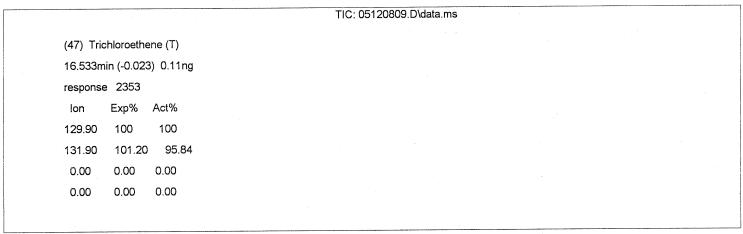
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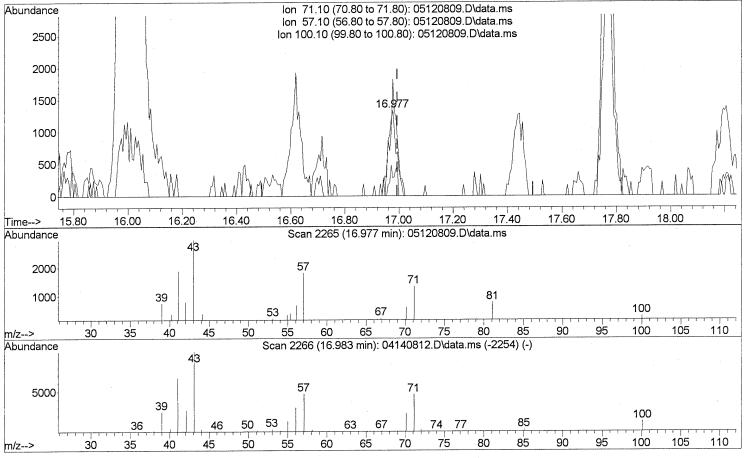
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ALS Vial : 6 Sample Multiplier: 1

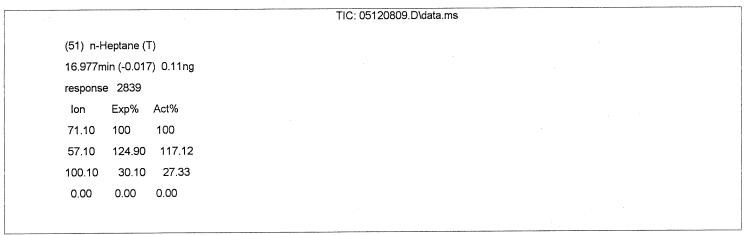
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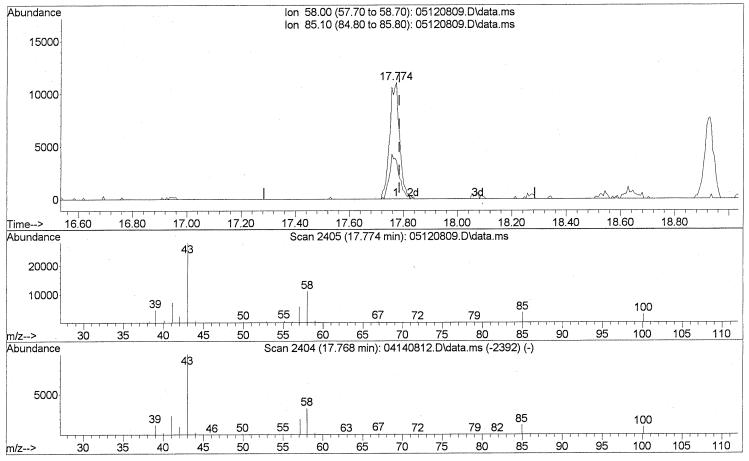
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ALS Vial : 6 Sample Multiplier: 1

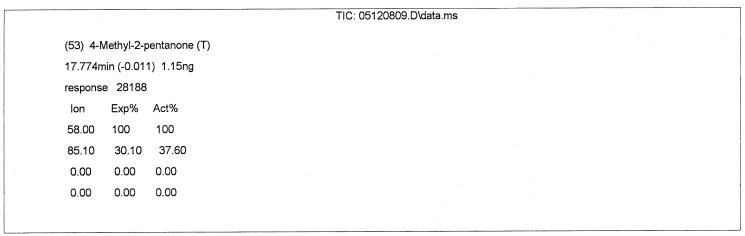
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Acq On : 12 May 2008 4:29 pm

Operator : RTB

Sample : P0801385-005 (1000mL)

Misc : ENSR SG38B-20 (-3.0, 3.5)

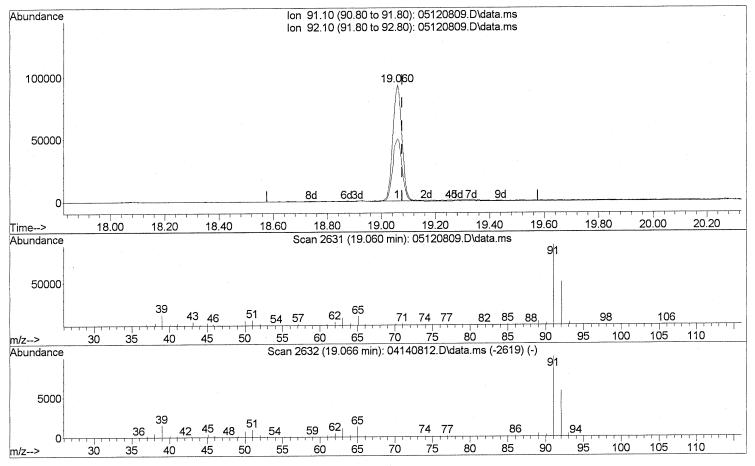
ALS Vial : 6 Sample Multiplier: 1

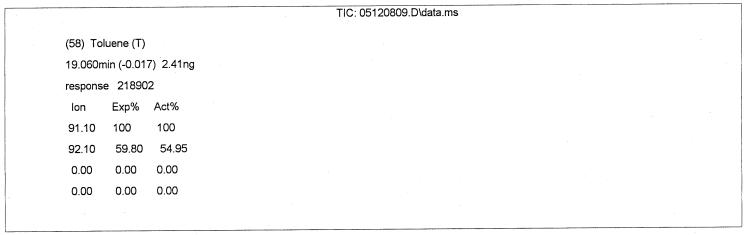
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Operator : RTB

Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

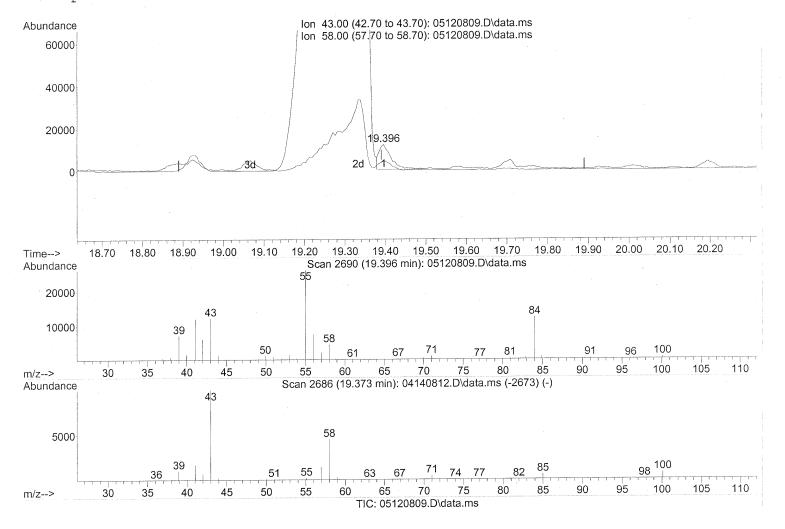
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(59) 2-Hexanone (T)

19.396min (+0.006) 0.35ng

response 23986

 Ion
 Exp%
 Act%

 43.00
 100
 100

 58.00
 61.70
 41.30#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008 05\12\

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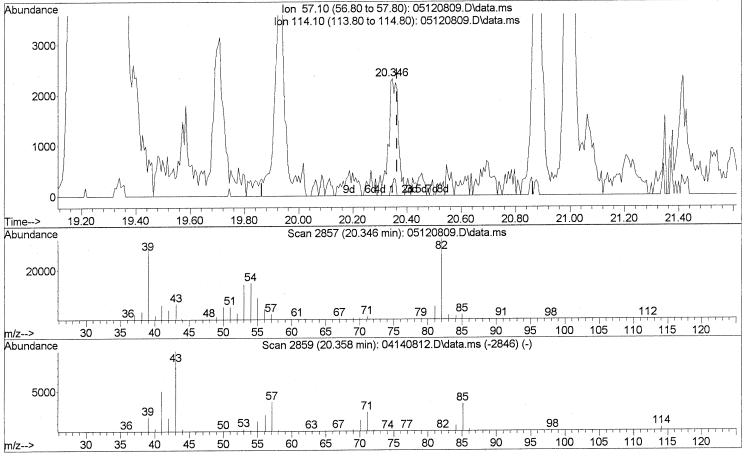
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ALS Vial : 6 Sample Multiplier: 1

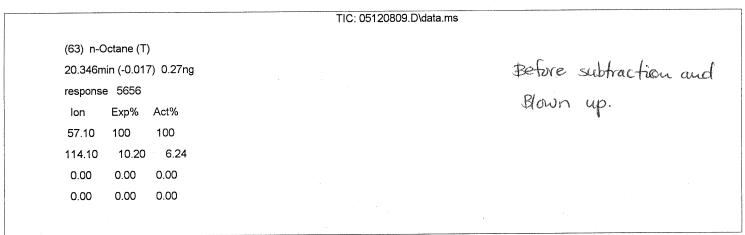
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





:J:\MS13\DATA\2008_05\12\05120809.D

Operator

: RTB

Acquired

4:29 pm using AcqMethod TO15.M : 12 May 2008

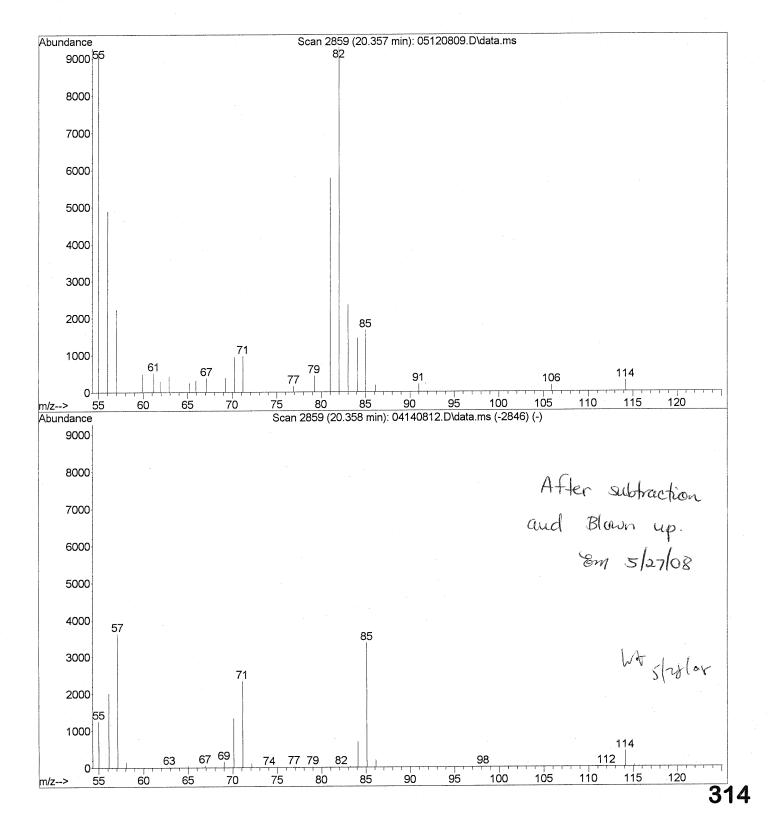
Instrument:

GCMS13

Misc Info

Sample Name: P0801385-005 (1000mL) : ENSR SG38B-20 (-3.0, 3.5)

Vial Number: 6



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

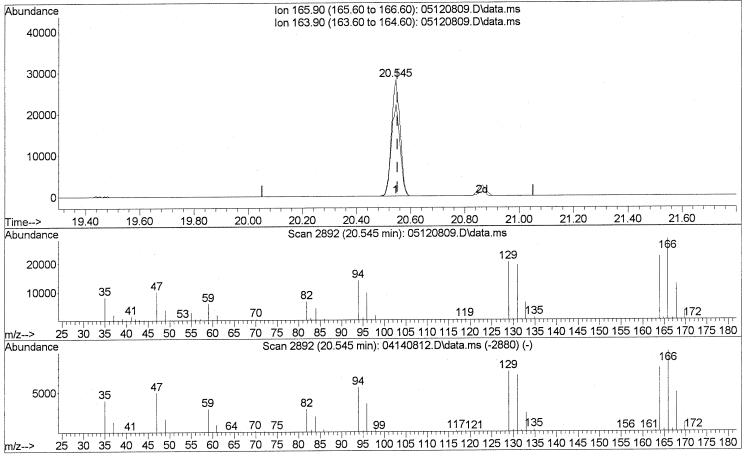
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

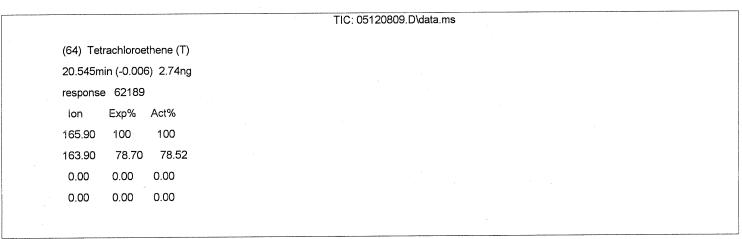
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

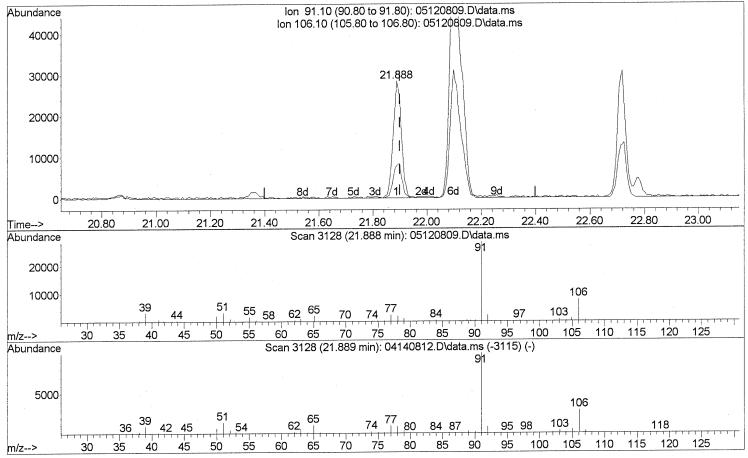
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

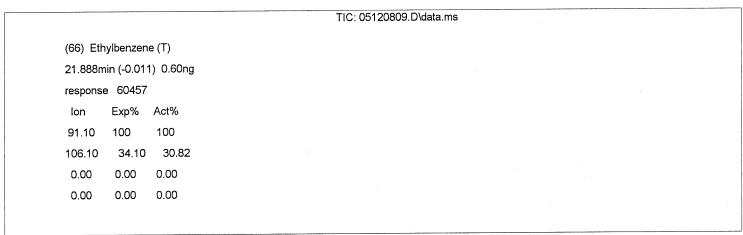
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

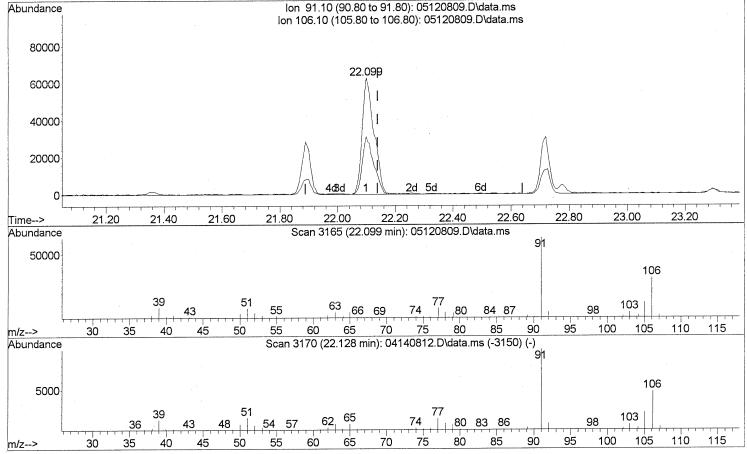
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Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

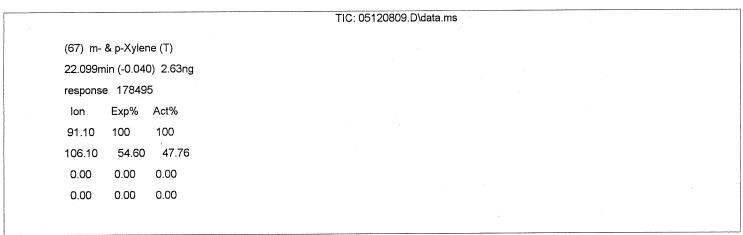
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

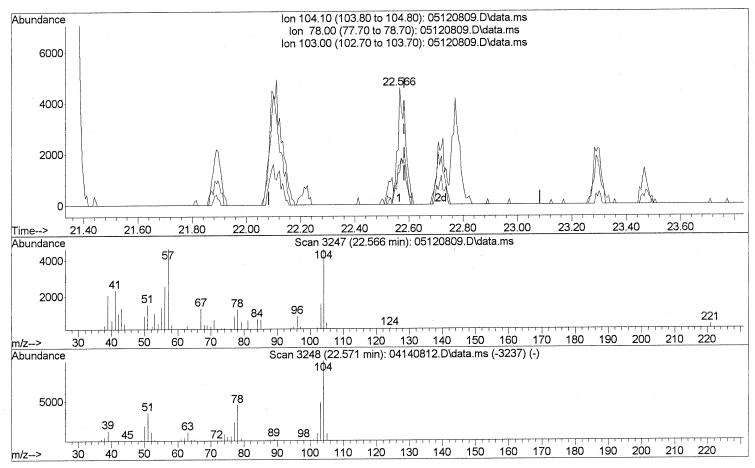
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

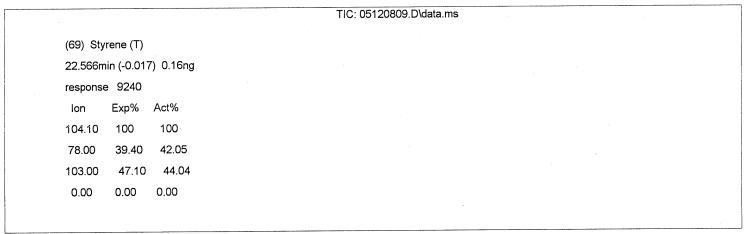
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

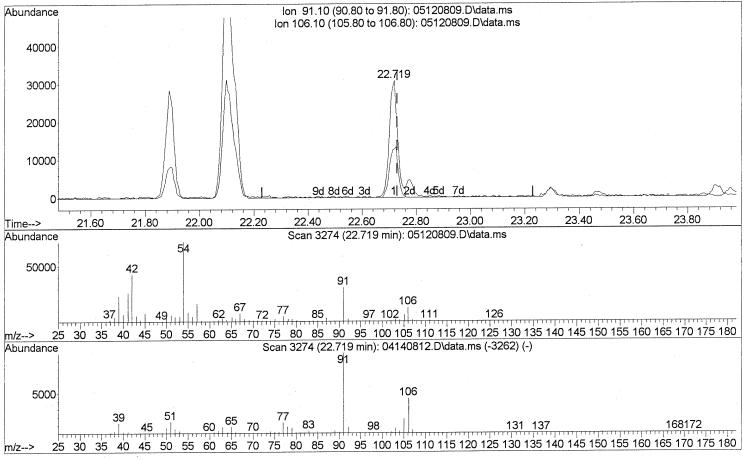
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

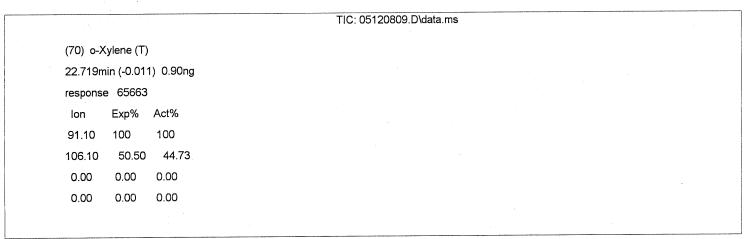
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

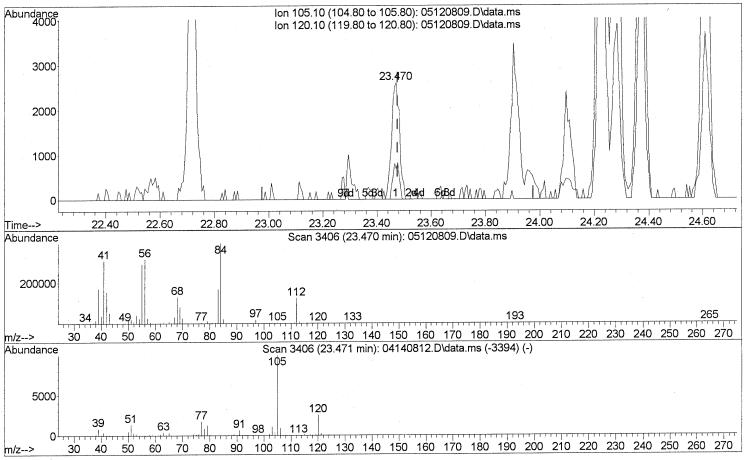
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

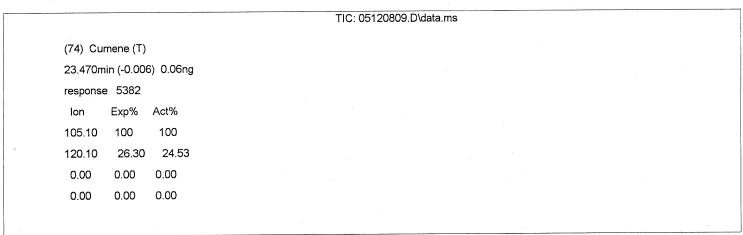
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

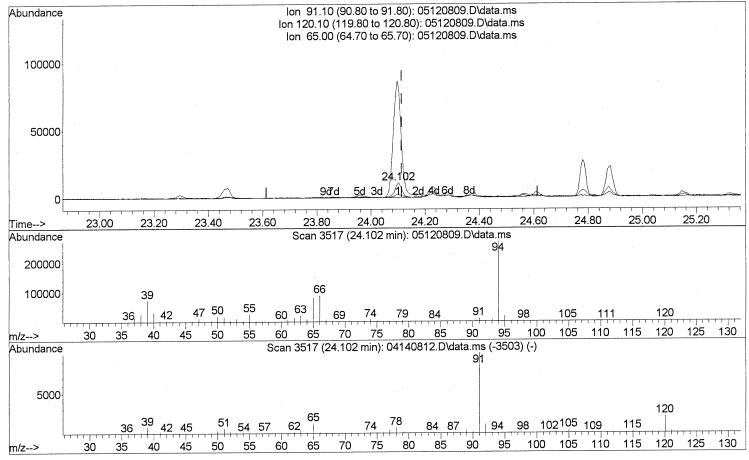
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

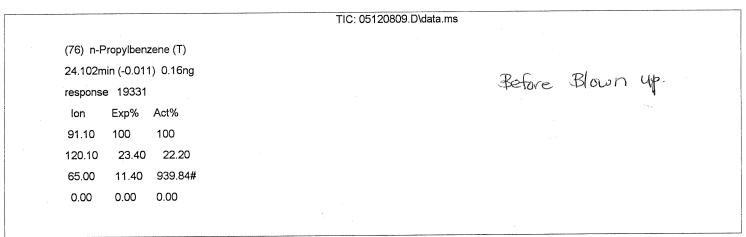
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008_05\12\05120809.D

Operator

: RTB

Acquired

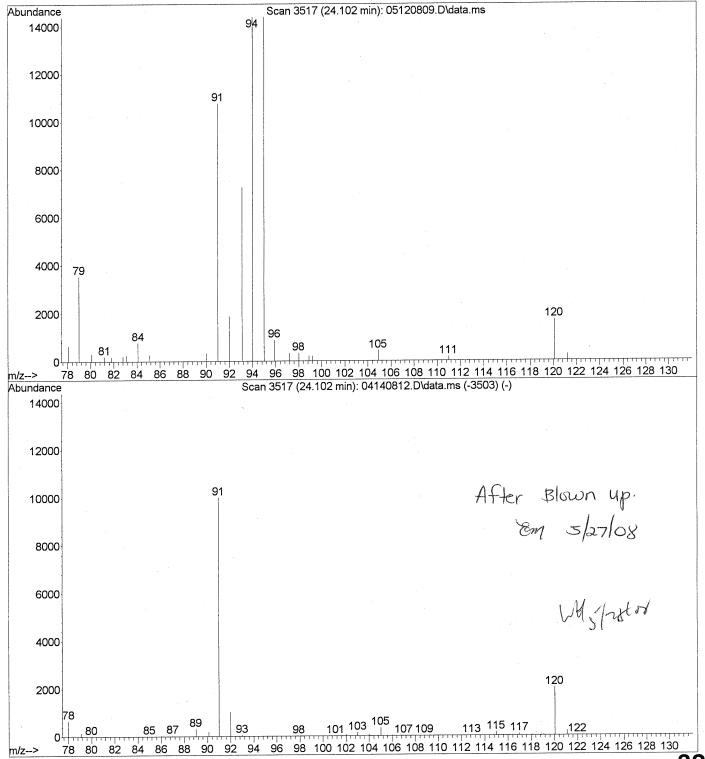
: 12 May 2008

4:29 pm using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-005 (1000mL)
Misc Info : ENSR SG38B-20 (-3.0, 3.5)

Vial Number: 6



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

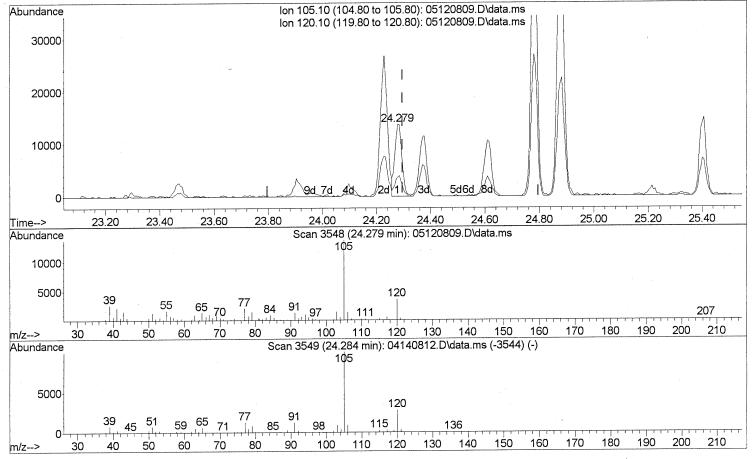
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

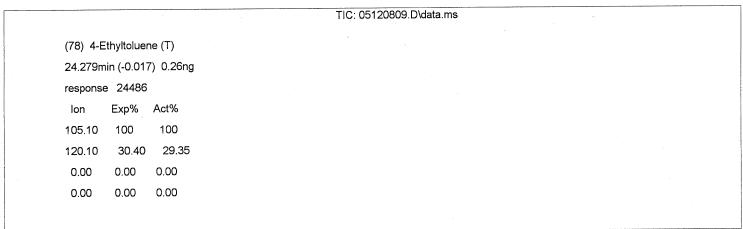
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

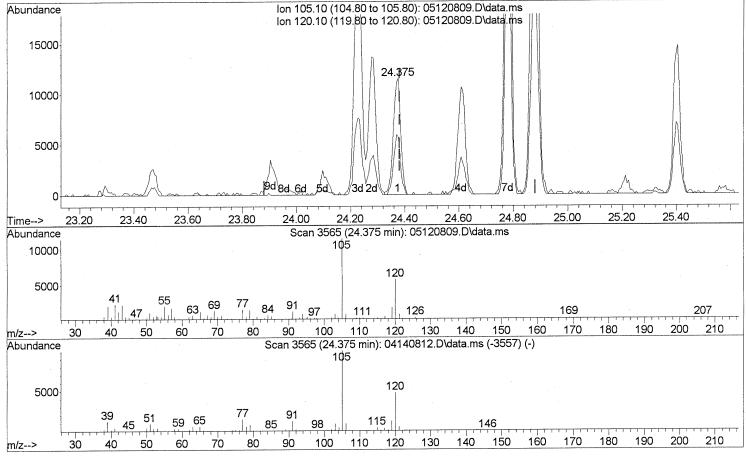
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

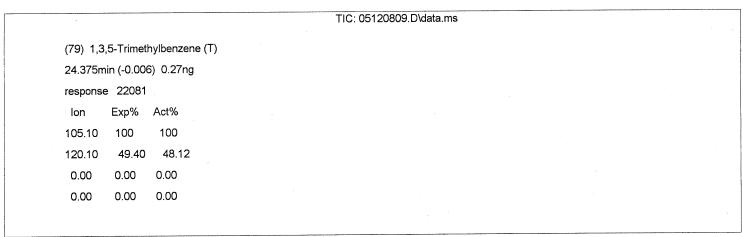
Quant Time: May 27 16:56:36 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

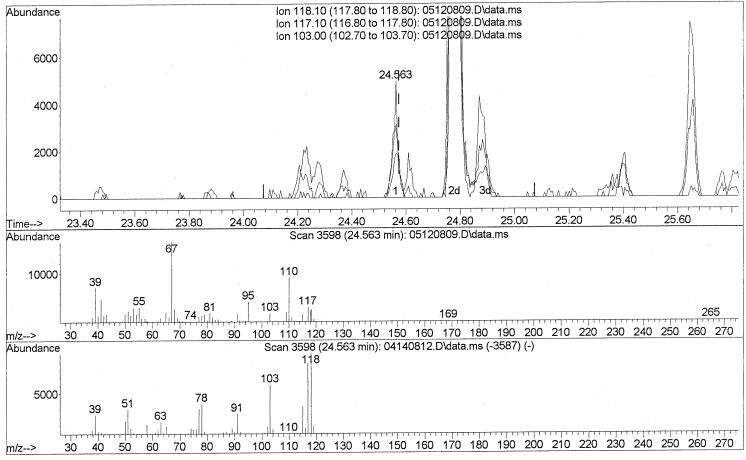
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

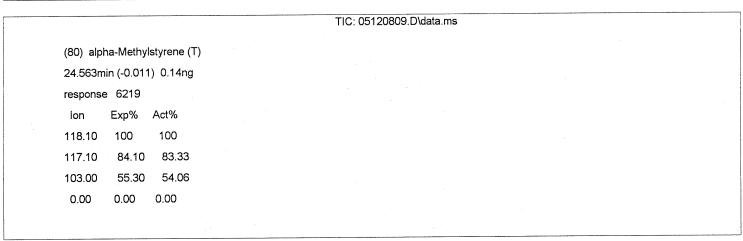
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

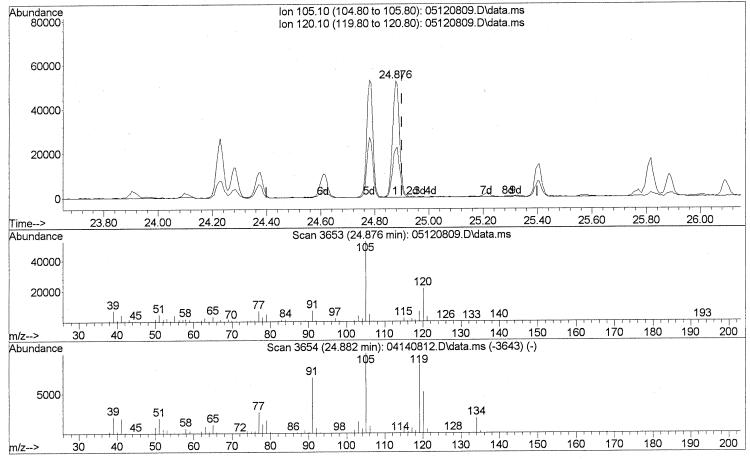
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

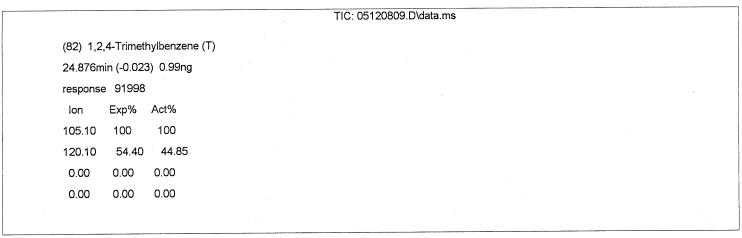
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

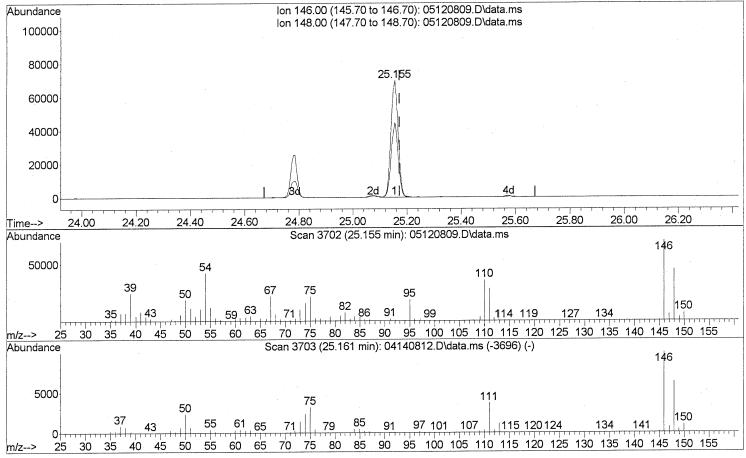
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

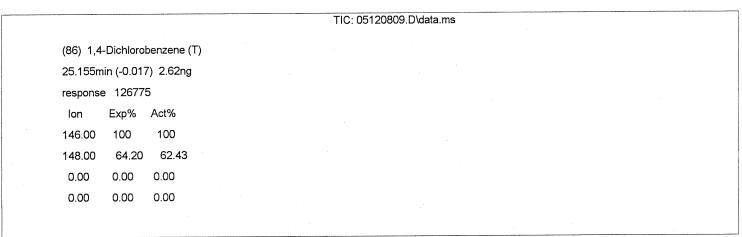
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

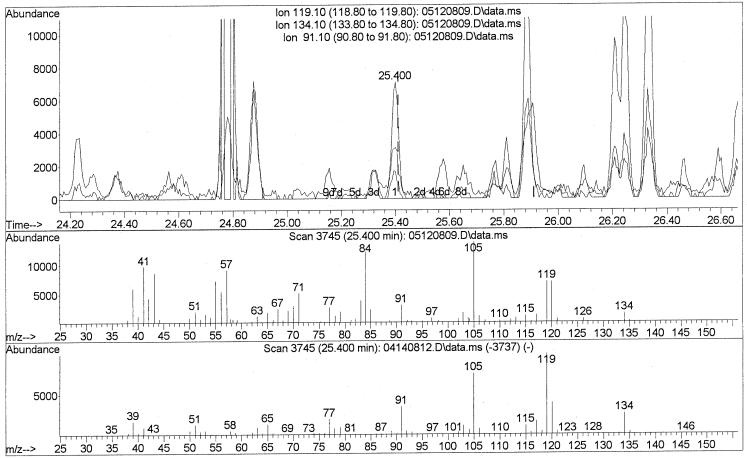
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

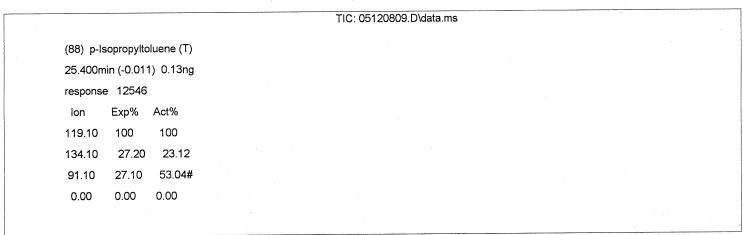
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

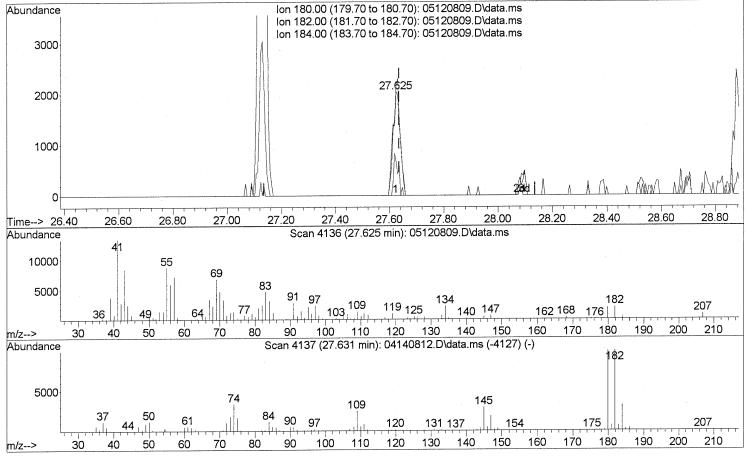
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

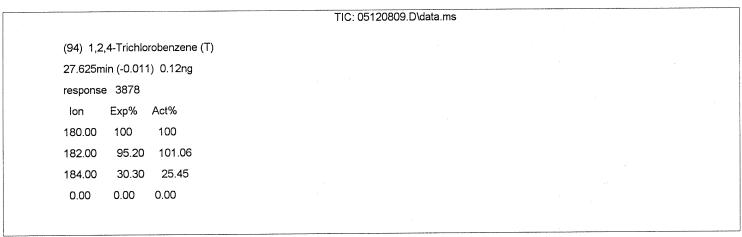
Quant Time: May 27 16:56:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120809.D

Acq On : 12 May 2008 4:29 pm

Operator : RTB

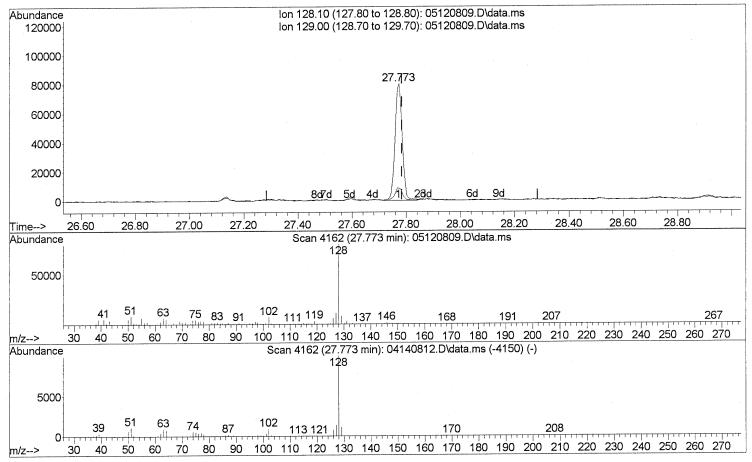
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

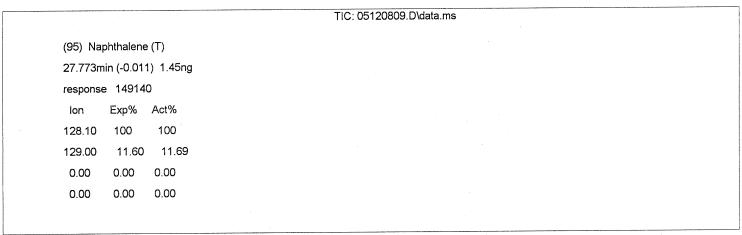
Quant Time: May 27 16:56:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data File : 05120809.D

Acq On : 12 May 2008 16:29

Operator : RTB

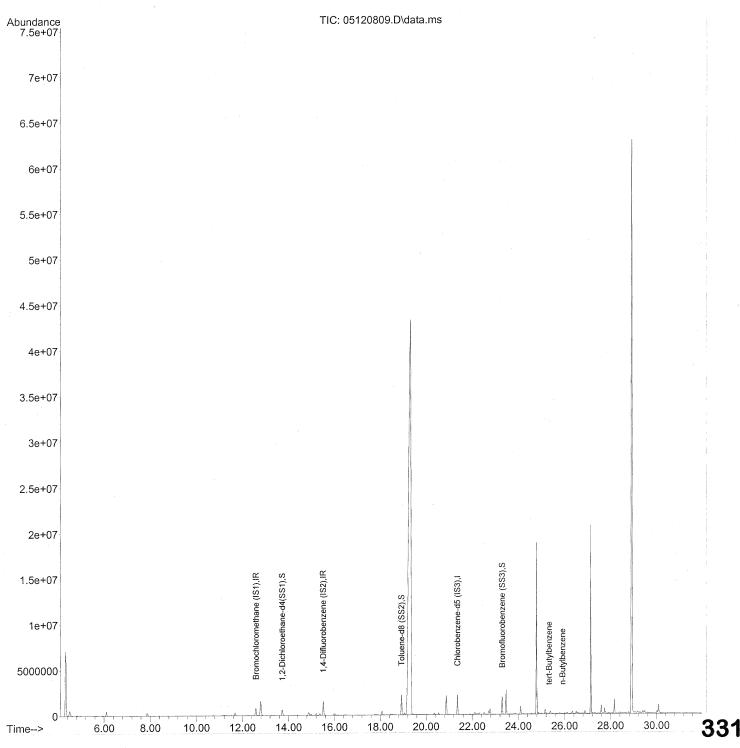
Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 27 15:44:34 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 16:29

Operator : RTB

Sample : P0801385-005 (1000mL) : ENSR SG38B-20 (-3.0, 3.5) ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 27 15:44:34 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD QLast Update : Mon Apr 28 10:06:00 2008

R.T.	QIon	Response	Conc	Units	Dev(Min)
12.58 15.51 21.36	114	381052 1683477 806379	25.000	ng	-0.02 -0.02 0.00
	98	Recove 1804652 Recove	ery = 24.968 ery =	88 ng 99	.40% 0.00 .88%
25.32 25.91	119 91		ery = 0 .040	99 <u>n</u> g	
	12.58 15.51 21.36 13.72 18.93 23.29	12.58 130 15.51 114 21.36 82 13.72 65 18.93 98 23.29 174	12.58 130 381052 15.51 114 1683477 21.36 82 806379 13.72 65 675325 Recovers 18.93 98 1804652 Recovers 23.29 174 617963 Recovers 25.32 119 3541	12.58 130 381052 25.000 15.51 114 1683477 25.000 21.36 82 806379 25.000 13.72 65 675325 22.099 Recovery = 18.93 98 1804652 24.968 Recovery = 23.29 174 617963 24.845 Recovery =	15.51 114 1683477 25.000 ng 21.36 82 806379 25.000 ng 13.72 65 675325 22.099 ng Recovery = 88 18.93 98 1804652 24.968 ng Recovery = 99 23.29 174 617963 24.845 ng Recovery = 99 25.32 119 3541 0.040 ng

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

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120809.D

Acq On : 12 May 2008 16:29

Operator : RTB

Sample : P0801385-005 (1000mL)
Misc : ENSR SG38B-20 (-3.0, 3.5)
ALS Vial : 6 Sample Multiplier: 1

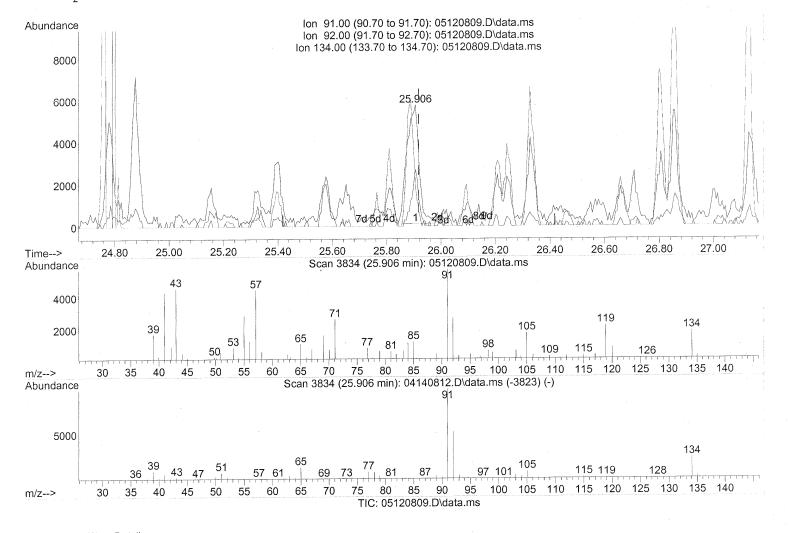
Quant Time: May 27 15:44:34 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Ouant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.906min (-0.011) 0.19ng

response 17656

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 28.36#

 134.00
 28.80
 67.39#

 0.00
 0.00
 0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG40B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Sampling Media:

Test Notes:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00938

Initial Pressure (psig):

Final Pressure (psig): -3.3

3.5

Canister Dilution Factor: 1.60

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.3	0.80	0.080	0.46	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.080	ND	0.078	0.039	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.099	0.80	0.080	0.014	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.080	ND	0.063	0.031	
74-83-9	Bromomethane	0.093	0.16	0.080	0.024	0.041	0.021	J
75-00-3	Chloroethane	0.54	0.16	0.080	0.20	0.061	0.030	
64-17-5	Ethanol	2.5	8.0	0.080	1.4	4.2	0.042	J
67-64-1	Acetone	19	8.0	0.12	8.1	3.4	0.049	В
75-69-4	Trichlorofluoromethane	1.5	0.16	0.080	0.26	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.80	0.11	ND	0.37	0.052	
75-35-4	1,1-Dichloroethene	0.48	0.16	0.080	0.12	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.50	0.80	0.12	0.16	0.26	0.039	J
75-09-2	Methylene Chloride	0.96	0.80	0.080	0.28	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	5.5	0.16	0.080	1.8	0.051	0.026	
76-13-1	Trichlorotrifluoroethane	0.51	0.16	0.090	0.067	0.021	0.012	
75-15-0	Carbon Disulfide	0.92	0.80	0.19	0.30	0.26	0.062	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.080	ND	0.040	0.020	
75-34-3	1,1-Dichloroethane	0.56	0.16	0.080	0.14	0.040	0.020	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.080	ND	0.044	0.022	
108-05-4	Vinyl Acetate	2.9	8.0	0.26	0.81	2.3	0.073	J, M
78-93-3	2-Butanone (MEK)	5.8	0.80	0.080	2.0	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.080	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.80	0.094	ND	0.19	0.023	
67-66-3	Chloroform	5,000	0.16	0.094	1,000	0.033	0.019	

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

Verified By: 64

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

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

B = Analyte was found in the method blank.

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG40B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08

Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Sampling Media:

Test Notes:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00938

Initial Pressure (psig):

-3.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.60

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
	•	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.80	0.082	ND	0.19	0.020	
107-06-2	1,2-Dichloroethane	ND	0.16	0.080	ND	0.040	0.020	
71-55-6	1,1,1-Trichloroethane	2.6	0.16	0.080	0.47	0.029	0.015	
71-43-2	Benzene	4.2	0.16	0.080	1.3	0.050	0.025	
56-23-5	Carbon Tetrachloride	26	0.16	0.080	4.1	0.025	0.013	
994-05-8	tert-Amyl Methyl Ether	ND	0.80	0.080	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	1.3	0.16	0.080	0.28	0.035	0.017	
75-27-4	Bromodichloromethane	6.3	0.16	0.080	0.94	0.024	0.012	
79-01-6	Trichloroethene	3.3	0.16	0.080	0.61	0.030	0.015	
123-91-1	1,4-Dioxane	ND	0.80	0.098	ND	0.22	0.027	
80-62-6	Methyl Methacrylate	ND	0.80	0.12	ND	0.20	0.029	
142-82-5	n-Heptane	0.58	0.80	0.10	0.14	0.20	0.025	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.80	0.083	ND	0.18	0.018	
108-10-1	4-Methyl-2-pentanone	1.3	0.80	0.090	0.33	0.20	0.022	
10061-02-6	trans-1,3-Dichloropropene	ND	0.80	0.10	ND	0.18	0.022	
79-00-5	1,1,2-Trichloroethane	ND	0.16	0.080	ND	0.029	0.015	
108-88-3	Toluene	7.0	0.80	0.080	1.9	0.21	0.021	
591-78-6	2-Hexanone	1.6	0.80	0.12	0.40	0.20	0.030	
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.019	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.086	ND	0.021	0.011	
111-65-9	n-Octane	1.1	0.80	0.080	0.23	0.17	0.017	
127-18-4	Tetrachloroethene	40	0.16	0.080	6.0	0.024	0.012	
108-90-7	Chlorobenzene	0.44	0.16	0.082	0.096	0.035	0.018	

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

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

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

Verified By: Date: 5/28/08
TO15SCAN.XLT - Tronox - Henderson - PageNo. Cot

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

Client Sample ID: SG40B-05

CAS Project ID: P0801385

CAS Sample ID: P0801385-006

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

6.0 L Summa Canister

0.025 Liter(s)

Container ID:

SC00938

Initial Pressure (psig):

-3.3

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.60

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	μg/m³	μg/m³	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	2.6	0.80	0.099	0.60	0.18	0.023	
179601-23-1	m,p-Xylenes	12	0.80	0.21	2.7	0.18	0.048	
75-25-2	Bromoform	ND	0.80	0.12	ND	0.077	0.012	
100-42-5	Styrene	0.15	0.80	0.12	0.034	0.19	0.029	J
95-47-6	o-Xylene	3.6	0.80	0.10	0.82	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.14	0.80	0.090	0.028	0.16	0.018	J
103-65-1	n-Propylbenzene	0.48	0.80	0.083	0.098	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.70	0.80	0.091	0.14	0.16	0.019	J
108-67-8	1,3,5-Trimethylbenzene	0.66	0.80	0.096	0.13	0.16	0.020	J
98-83-9	alpha-Methylstyrene	ND	0.80	0.12	ND	0.17	0.024	
95-63-6	1,2,4-Trimethylbenzene	1.8	0.80	0.11	0.37	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.031	0.027	
541-73-1	1,3-Dichlorobenzene	ND	0.16	0.099	ND	0.027	0.017	
106-46-7	1,4-Dichlorobenzene	81	0.16	0.090	13	0.027	0.015	
135-98-8	sec-Butylbenzene	ND	0.80	0.093	ND	0.15	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.37	0.80	0.10	0.067	0.15	0.019	J
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.11	ND	0.027	0.018	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.80	0.12	ND	0.083	0.013	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.022	0.016	
91-20-3	Naphthalene	3.2	0.32	0.12	0.61	0.061	0.023	
87-68-3	Hexachlorobutadiene	3.6	0.16	0.14	0.33	0.015	0.014	
98-06-6	tert-Butylbenzene	ND	0.32	0.080	ND	0.058	0.015	
104-51-8	n-Butylbenzene	0.53	0.32	0.080	0.097	0.058	0.015	

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

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

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

Verified By:_	Cos	Date:	5/28/08
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Data Path : J:\MS13\DATA\2008_05\12\
Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

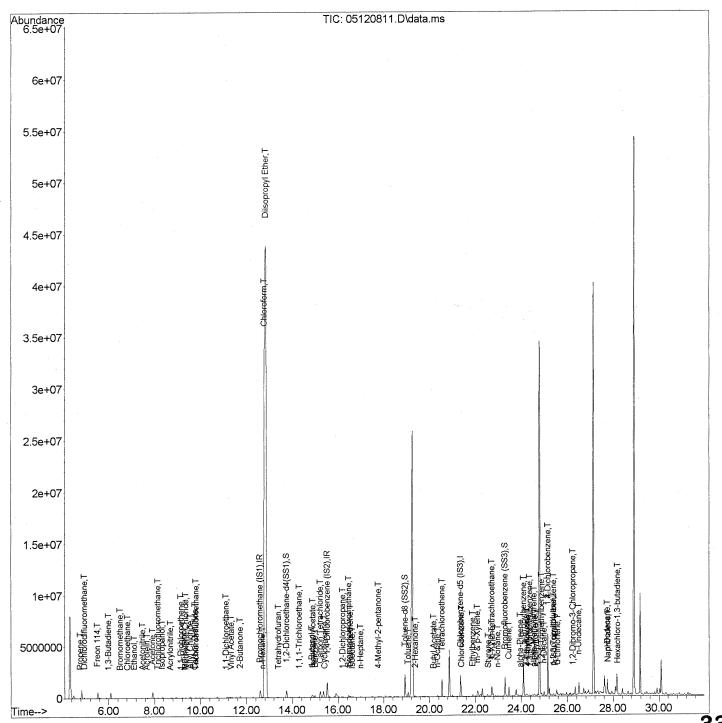
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm Operator : RTB

Sample : P0801385-006 (1000mL) Misc : ENSR SG40B-05 (-3.3, 3.5) ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	n Respons	e Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.60	130	387191	25.000	ng	-0.01
37) 1,4-Difluorobenzene (IS2)		114	1580750	25.000	_	-0.01
56) Chlorobenzene-d5 (IS3)	21.35	82	772774	25.000	ng	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4(13.74	65	626395	20.173	ng	-0.01
Spiked Amount 25.000				very =		.68%
57) Toluene-d8 (SS2)	18.93	98	1735251	25.052		0.00
Spiked Amount 25.000				very =		
73) Bromofluorobenzene (SS3)	23.29	174	600114	25.176		0.00
Spiked Amount 25.000			Reco	very =	100	.72%
Target Compounds				0 651		Qvalue
2) Propene	4.79	42	20858	0.651		# 56
3) Dichlorodifluoromethane	4.96		83426	(1.428)		99
4) Chloromethane	5.32	50	999	N.D	The state of the s	ш го
5) Freon 114	5.52		1760	<u>0.062</u>		# 53
6) Vinyl Chloride	5.73	62	193	N.D		# 47
7) 1,3-Butadiene	6.01	54	1666	0.047		# 47 # 77
8) Bromomethane	6.51	> 94	1261	0.058 0.337		, 93
9) Chloroethane	6.83	> 64	6339 34775m	and property with the party of		, 93
10) Ethanol	$\frac{7.11}{7.48}$	45 41	26979	0.470	Contraction of the Party of the	81
11) Acetonitrile	7.48 7.68	56	33846	2.192		87
12) Acrolein	7.92		256399m	- 1 mar Professor - 1 mar 2 ma		. 07
13) Acetone14) Trichlorofluoromethane	8.15	_	41914	0.913		99
15) Isopropanol	8.33	45	154915		The second secon	99
16) Acrylonitrile	8.69	53	2266	0.068	_	# 41
17) 1,1-Dichloroethene		<u> </u>	6436	<0.301		;; ;# 70
18) tert-Butanol	9.28		18669m	A STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN		>"
19) Methylene Chloride	9.36	S 84	14850	0.603		\ 86
20) Allyl Chloride	9.55	> 41	113293	< 3.444		98
21) Trichlorotrifluoroethane	9.81		6268	< 0.320		87
22) Carbon Disulfide	9.76	76	52400	0.574		99
23) trans-1,2-Dichloroethene	10.81	61	329	N.D	· Conservation	
24) 1,1-Dichloroethane	11.12	>63	15058	(0.347	ng >	96
25) Methyl tert-Butyl Ether	11.17	73	1604	N.D		4
26) Vinyl Acetate	<11.34	> 86	7612	\bigcirc 1.788	1936manager - Carlo	1 1
27) 2-Butanone	$\bigcirc 11.73$	> 72	54877	\bigcirc 3.651		93
28) cis-1,2-Dichloroethene	0.00	61	0	N.D		
29) Diisopropyl Ether	12.83		15449873	-7 82.8 65		# 01. 1
30) Ethyl Acetate	12.75	61	92	N.D	· . /	UK
					-	338
3041408.M Tue May 27 17:25:26 2	008				3	Page: 1
		6	-11:			

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm Operator : RTB

Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, : ENSR SG40B-05 (-3.3, 3.5) ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T. QIO	n Respons	se Conc Units De	ev(Min)
31) n-Hexane	12.70 57	36571	0.751 ng	92
32) Chloroform	12.78 83	58561835	-1619.943 ng See	#Dil. 65
34) Tetrahydrofuran	13.40 72	3554	0.236 ng #	74
35) Ethyl tert-Butyl Ether	13.50 87	293	N.D.	
36) 1,2-Dichloroethane	13.90 62	164	N.D.	
38) 1,1,1-Trichloroethane	(14.30) 97	53319	(1.619 ng)	98
39) Isopropyl Acetate	14.90 61	764	0.053 ng #	1
40) 1-Butanol	14.85 56	190275	8.819 ng	88
41) Benzene	14.99 78	218880	2.610 ng	98
42) Carbon Tetrachloride	(15.22)117	446232	16.089 ng	100
43) Cyclohexane	15.41 84	8553	0.276 ng #	1
44) tert-Amyl Methyl Ether	15.89 73	1485	N.D.	
45) 1,2-Dichloropropane	(16.20) 63	19502	0.812 ng	98
46) Bromodichloromethane	(16.46) 83	112058	3.930 ng	100
47) Trichloroethene	16.54 130	42264	2.048 ng	99
48) 1,4-Dioxane	16.50 88	216	N.D	 0
49) Isooctane	16.62 57	31458	0.317 ng	58
50) Methyl Methacrylate	16.65 100	62	N.D.	0.1
51) n-Heptane	<u> </u>	8358	< 0.360 ng #	81
52) cis-1,3-Dichloropropene	17.79 75	106	N.D.	60
53) 4-Methyl-2-pentanone	<u> </u>	19209	0.837 ng #	62
54) trans-1,3-Dichloropropen		141	N.D.	
55) 1,1,2-Trichloroethane	18.70 97	505	N.D.	0.5
58) Toluene	19.06 91	382887	(4.400 ng)	95
59) 2-Hexanone	<u>19.38</u> 43	65975	(1.018 ng)	77
60) Dibromochloromethane	19.61 129	432	N.D.	
61) 1,2-Dibromoethane	19.75 107	83	N.D	2.0
62) Butyl Acetate	20.19 43	5706	0.088 ng #	39
63) n-Octane	20.35 57	13399	0.657 ng	91 98
64) Tetrachloroethene	20.55 166	549763	25.231 ng 0.277 ng	96 96
65) Chlorobenzene	21.40 112	14945		93
66) Ethylbenzene	21.89 91	159037 475947	1.637 ng 7.327 ng	89
67) m- & p-Xylene	22.10 91 0.00 173	4/394/	N.D.	0,5
68) Bromoform	22.57 104	5105	0.091 ng #	58
69) Styrene	22.71 91	155385	2.223 ng	91
70) o-Xylene	22.98 43	36878	0.659 ng #	76
71) n-Nonane		3343	-0.100 ng Nr #	1
72) 1,1,2,2-Tetrachloroethan	23.46 105	7751	© 0.087 ng	94
74) Cumene	23.40 103	20818	0.442 ng	85
75) alpha-Pinene 76) n-Propylbenzene	(24.10) 91	35784	VCX	1
77) 3-Ethyltoluene	24.23 105	84545	A A T 1	95
/// J Helly reorderic	21.20 100		0.874 ng Eu	5/21/0339
3041408.M Tue May 27 17:25:26	2008		Pac	ge: 2
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Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T. QIon	Response	e Conc Units Dev	(Min)
78) 4-Ethyltoluene	24.28 105	39011	0.438 ng	97
79) 1,3,5-Trimethylbenzene	24.37)105	32527	0.411 ng	95
80) alpha-Methylstyrene	24.56 118	2151	0.051 ng #	47
81) 2-Ethyltoluene	24.61 105	28502	0.293 ng	97
82) 1,2,4-Trimethylbenzene	(24.88)105	102024	(1.142 ng)	88
83) n-Decane	24.98 57	144945	2.934 ng	82
84) Benzyl Chloride	25.06 91	1997	N.D.	
85) 1,3-Dichlorobenzene	25.16 146	2332755	48.228 ng NF	100
86) 1,4-Dichlorobenzene	25.16 146	2332755	50.396 ng	100
87) sec-Butylbenzene	25.21 105	3480	N.D.	
88) p-Isopropyltoluene	<25.39 119	21068 .	0.230 ng #	75
89) 1,2,3-Trimethylbenzene	25.40 105	38547	0.439 ng	93
90) 1,2-Dichlorobenzene	<25.16 146	2332755 -	47.058 ng NR	99
91) d-Limonene	25.57 68	66849	1.650 ng	98
92) 1,2-Dibromo-3-Chloropr	. 26.24 157	7882	0.600 ng NR #	1
93) n-Undecane	26.50 57	404962	7.807 ng	74
94) 1,2,4-Trichlorobenzene	27.63 180	499	N.D	
95) Naphthalene	(27.77)128	198273	2.007 ng	94
96) n-Dodecane	27.74 57	433856	8.243 ng	85
97) Hexachloro-1,3-butadiene	28.19 225	44104	2.229 ng	97

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File: 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

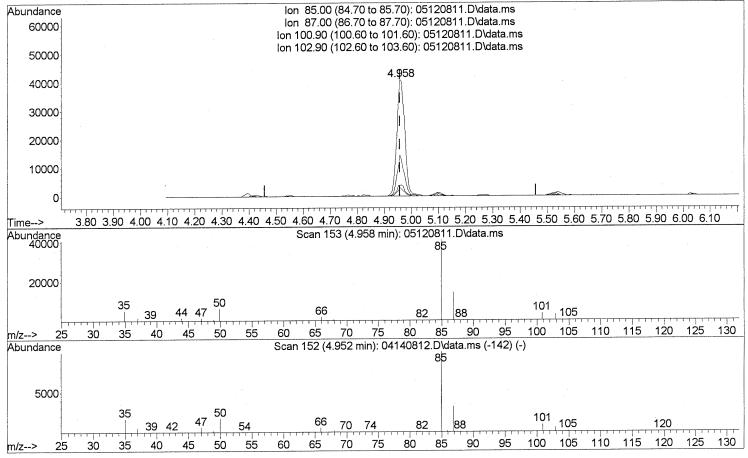
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

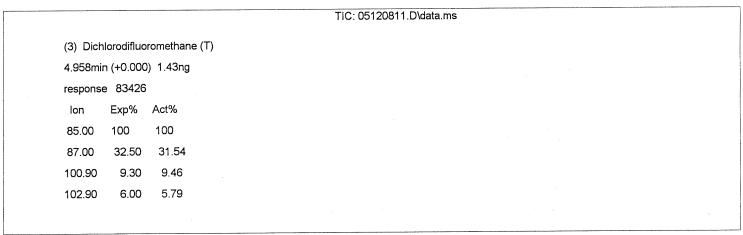
Ouant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

: 12 May 2008 5:55 pm Acq On

Operator : RTB

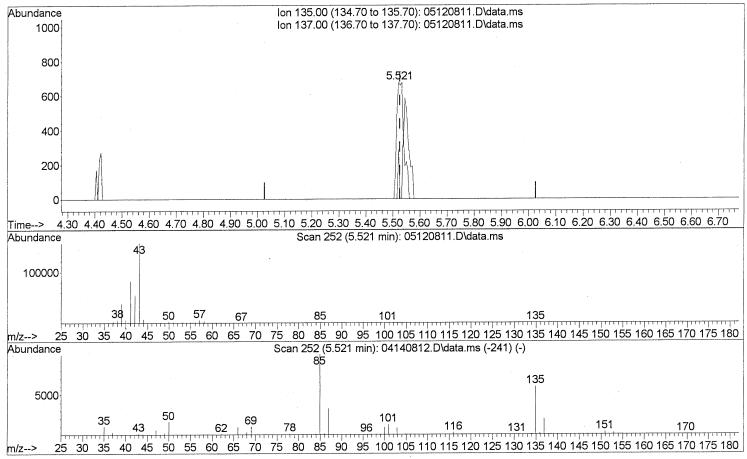
: P0801385-006 (1000mL) : ENSR SG40B-05 (-3.3, 3.5) Misc Sample Multiplier: 1 ALS Vial

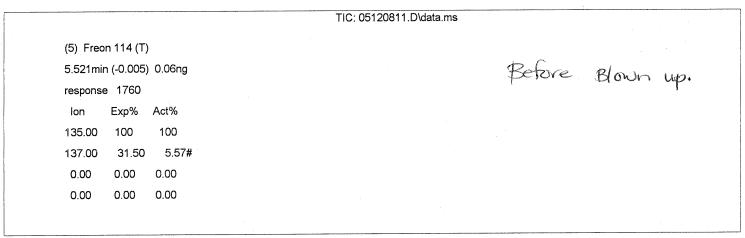
Ouant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008_05\12\05120811.D

Operator

: RTB

Acquired

: 12 May 2008

5:55 pm using AcqMethod TO15.M

Instrument :

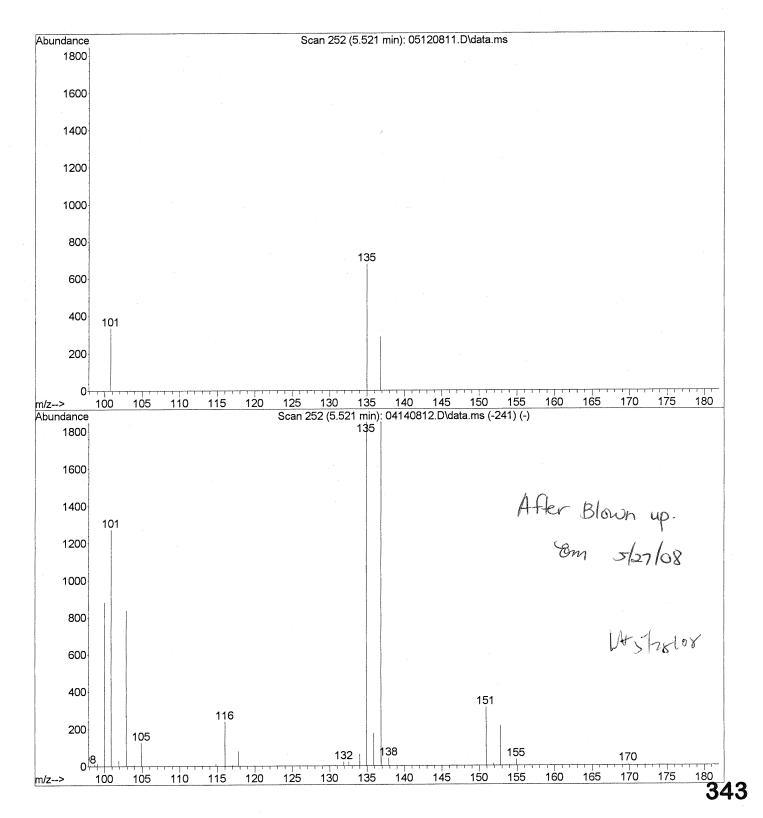
GCMS13

Sample Name: P0801385-006 (1000mL)

Misc Info

: ENSR SG40B-05 (-3.3, 3.5)

Vial Number: 7



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

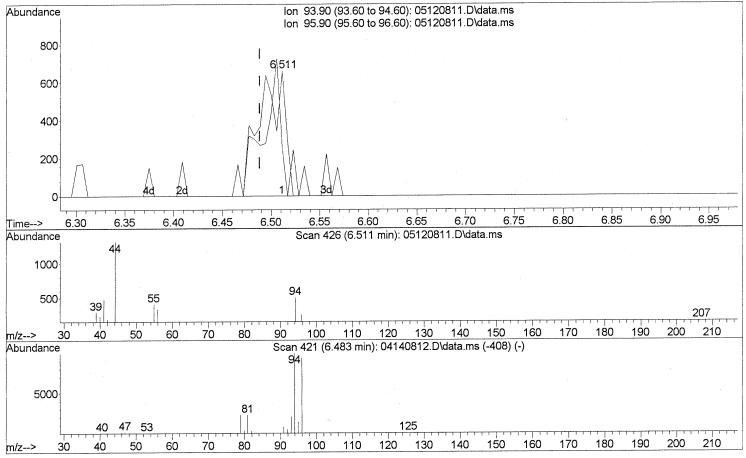
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

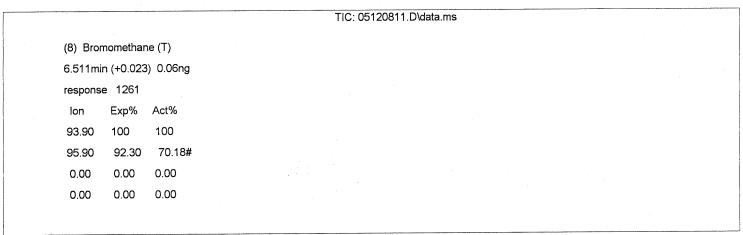
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

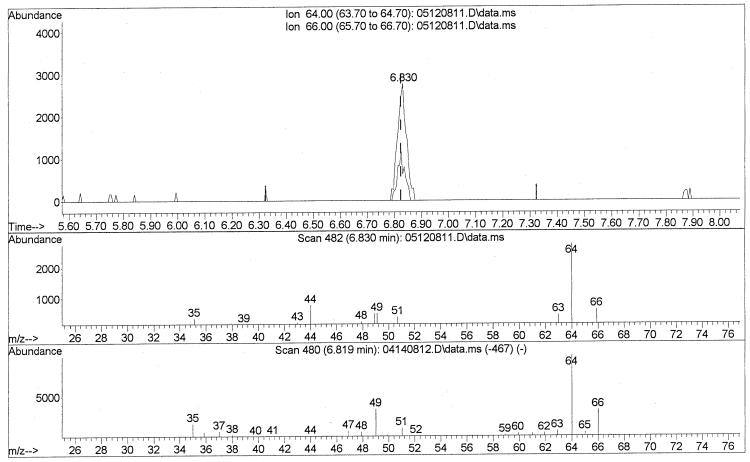
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

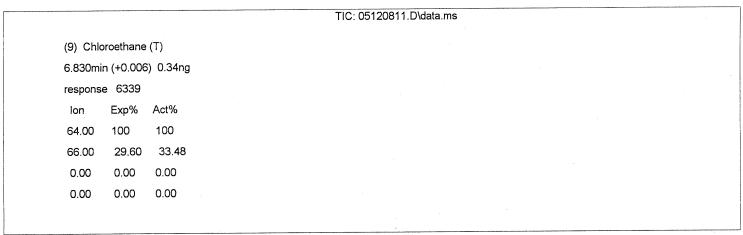
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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Acq On : 12 May 2008 5:55 pm

Operator : RTB

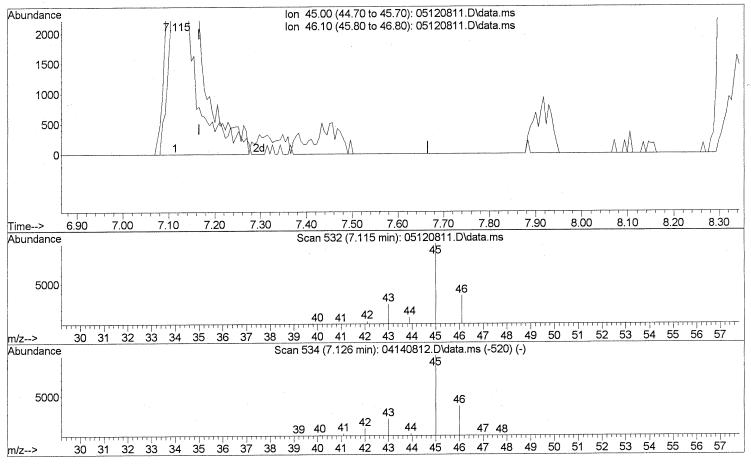
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

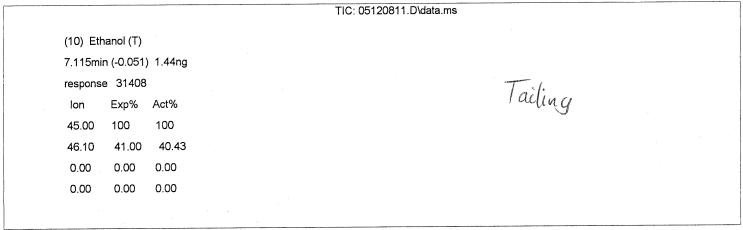
Quant Time: May 12 18:23:25 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

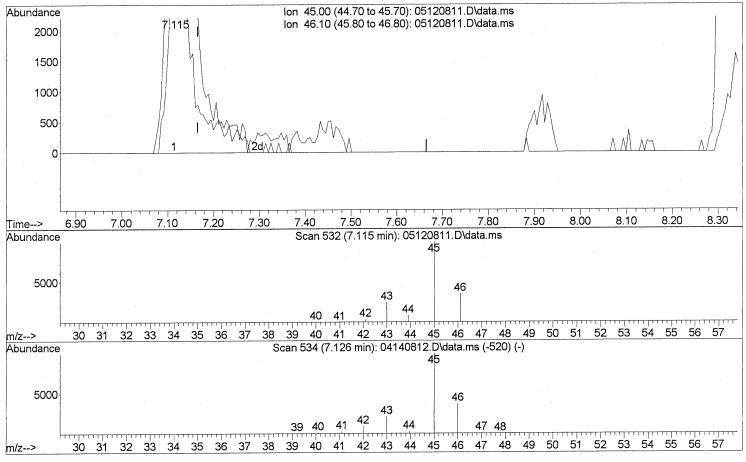
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

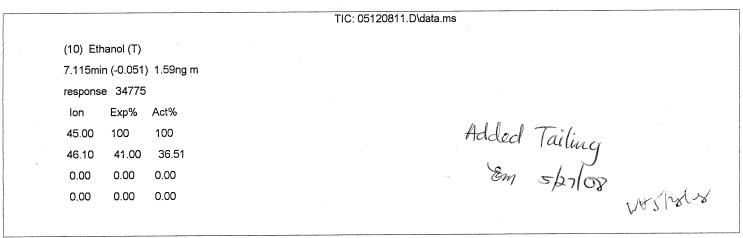
Quant Time: May 12 18:23:25 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

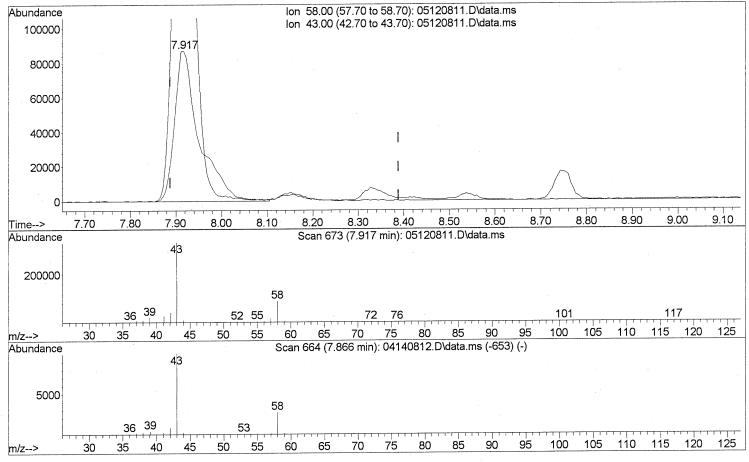
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

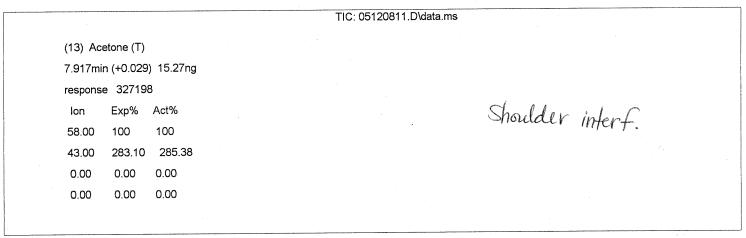
Quant Time: May 12 18:23:25 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

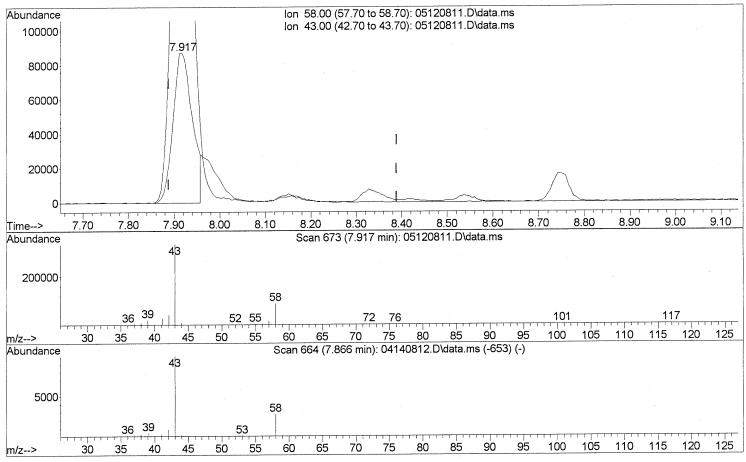
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Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

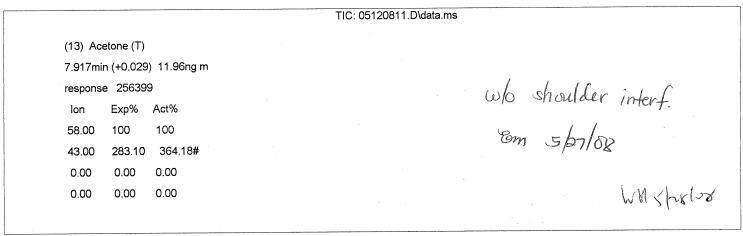
Quant Time: May 12 18:23:25 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

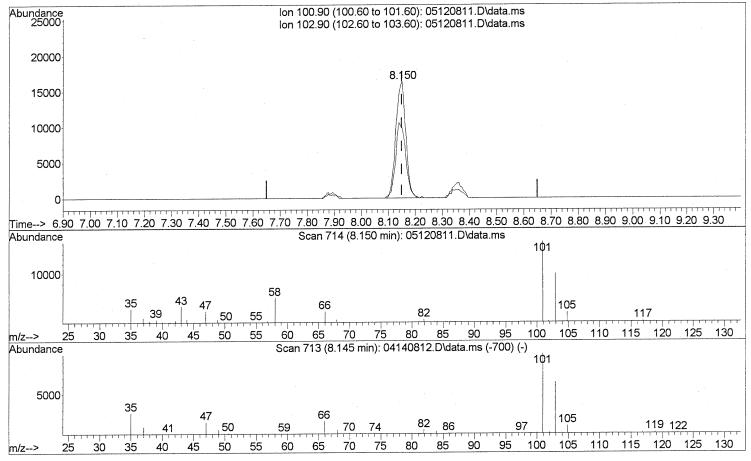
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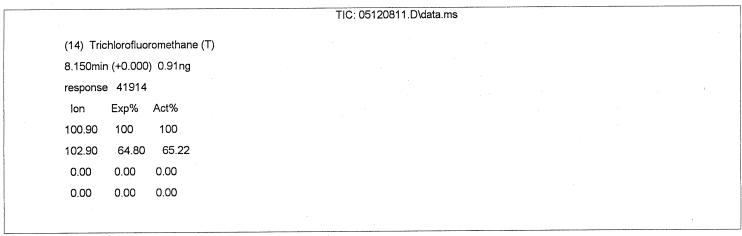
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Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Acq On : 12 May 2008 5:55 pm

Operator : RTB

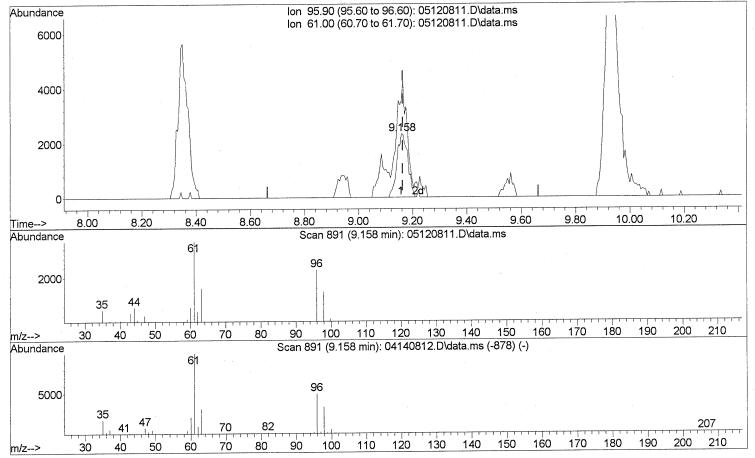
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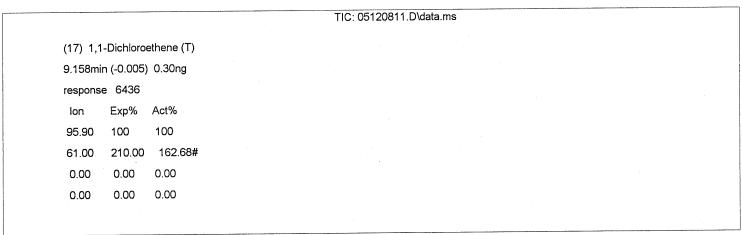
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QLast Update: Tue Apr 15 06:47:20 2008





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Acq On : 12 May 2008 5:55 pm

Operator : RTB

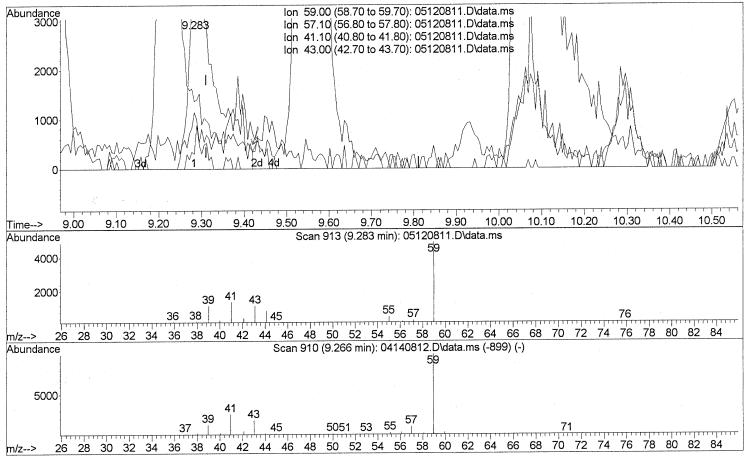
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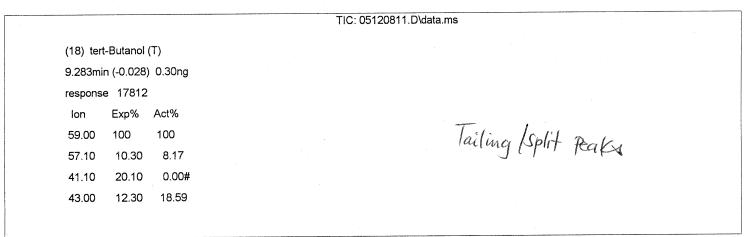
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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Acq On : 12 May 2008 5:55 pm

Operator : RTB

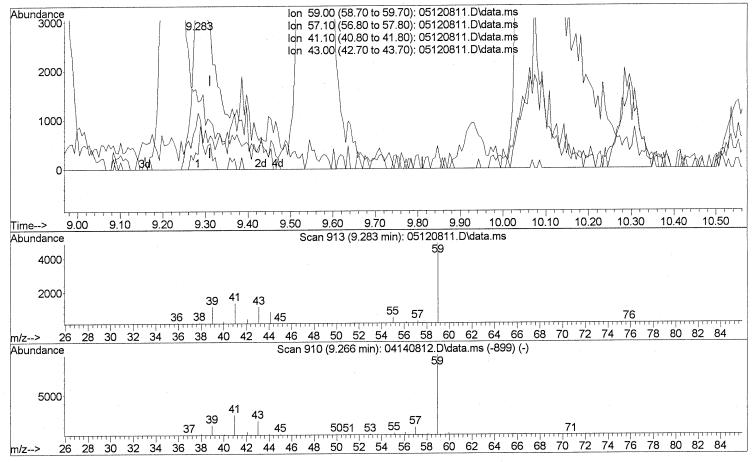
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ALS Vial : 7 Sample Multiplier: 1

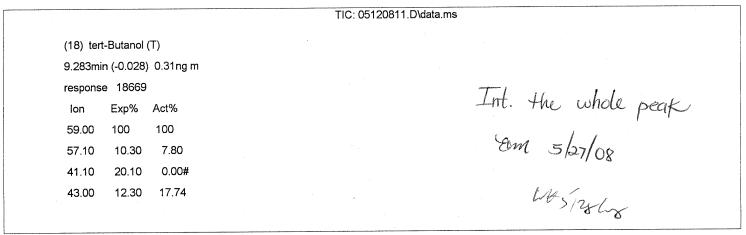
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





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Data File : 05120811.D

: 12 May 2008 5:55 pm Acq On

Operator : RTB

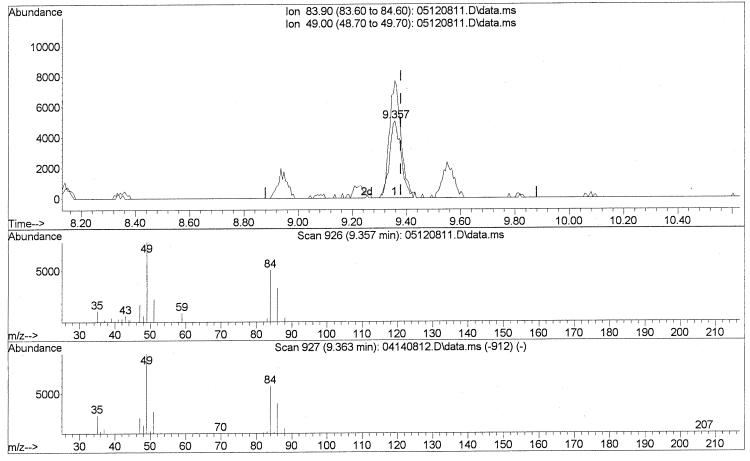
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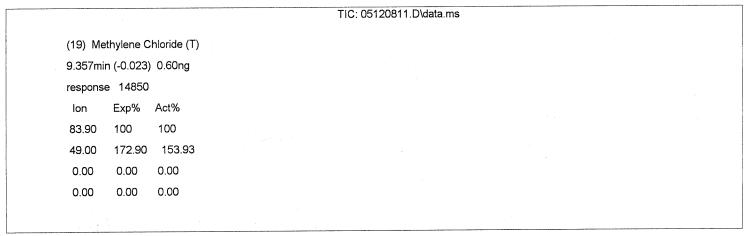
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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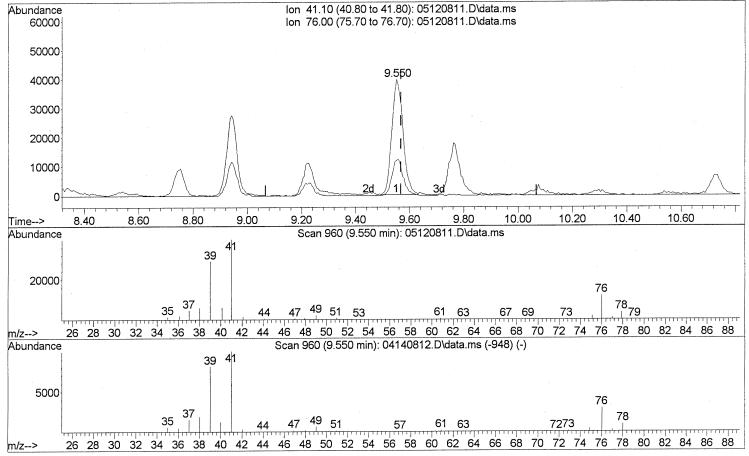
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ALS Vial : 7 Sample Multiplier: 1

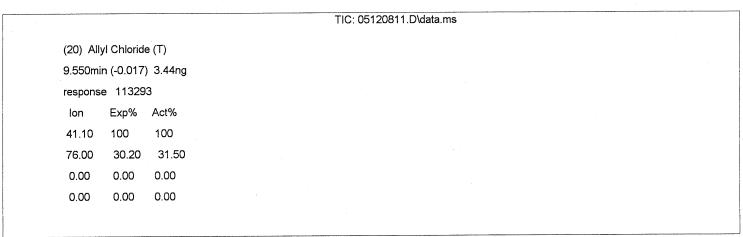
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Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

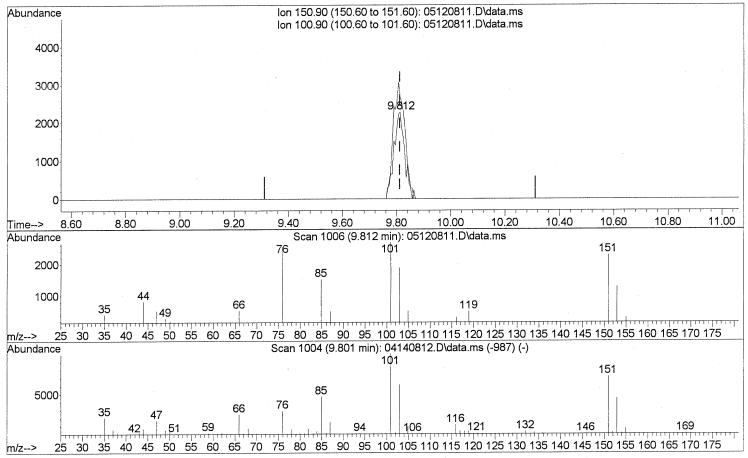
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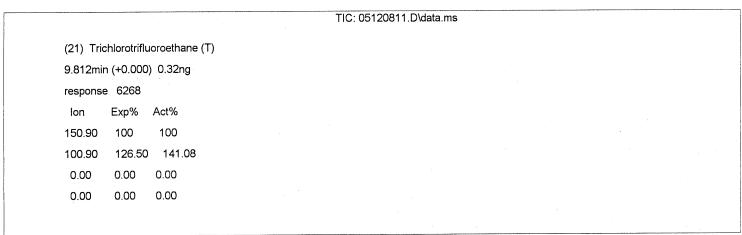
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data File: 05120811.D

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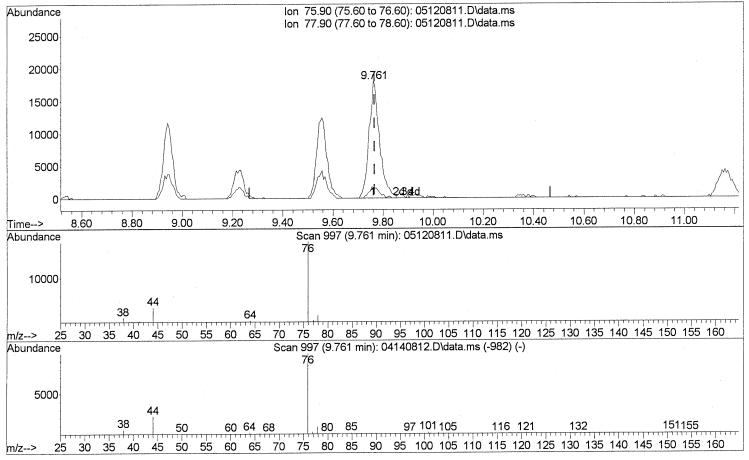
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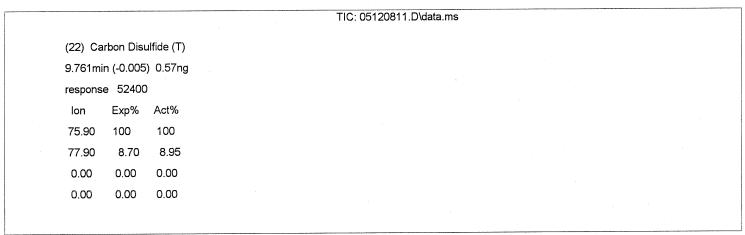
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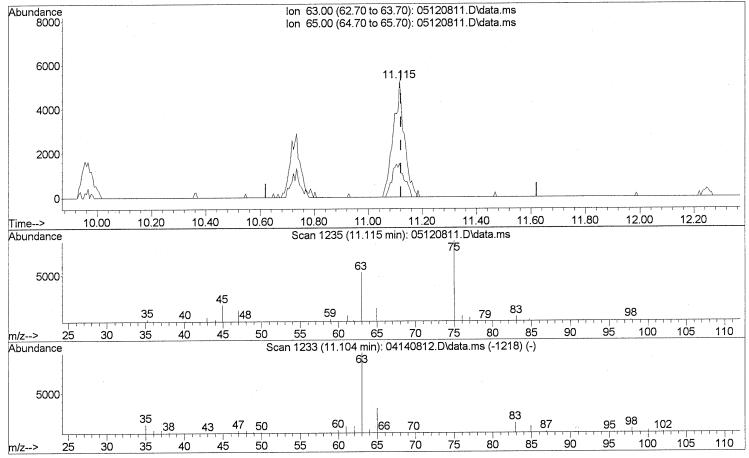
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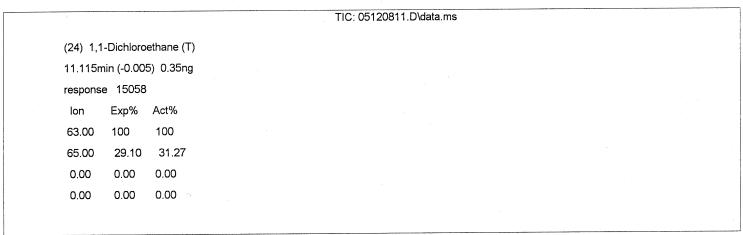
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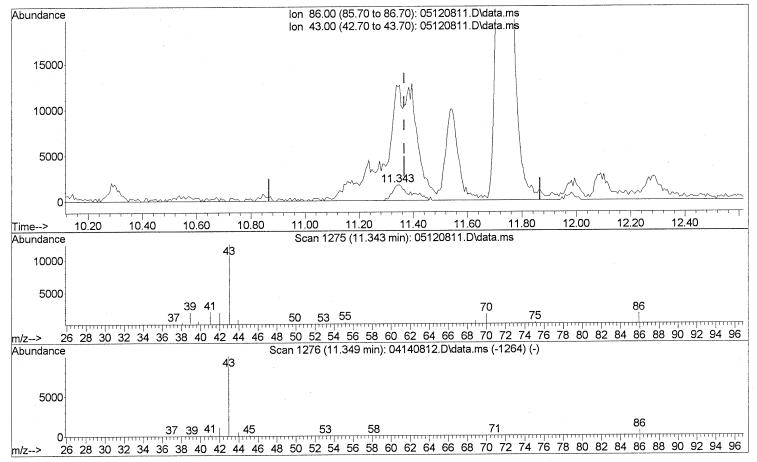
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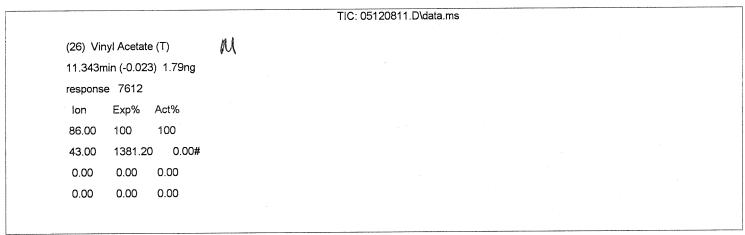
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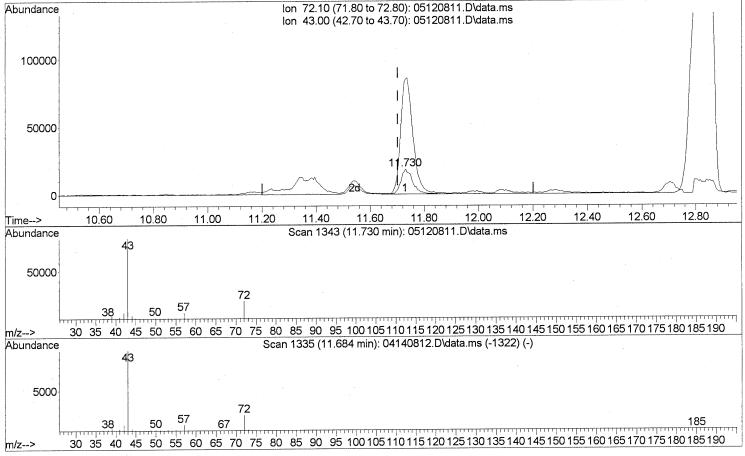
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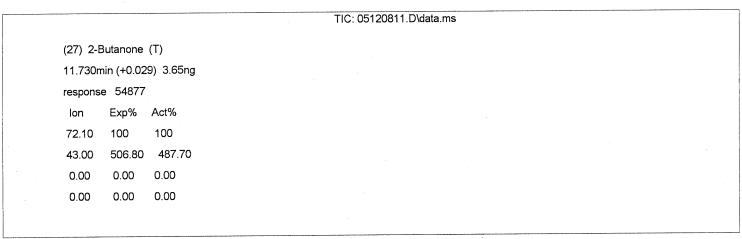
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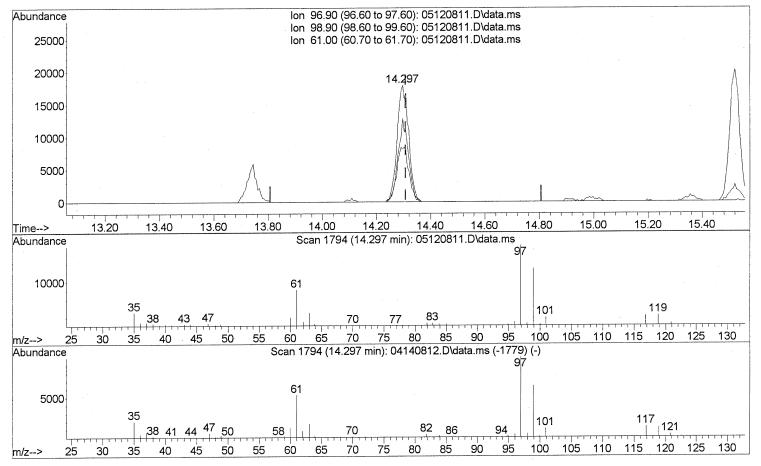
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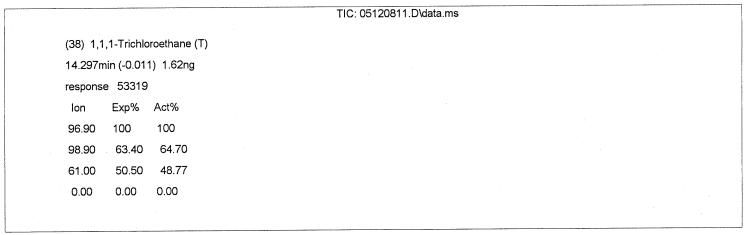
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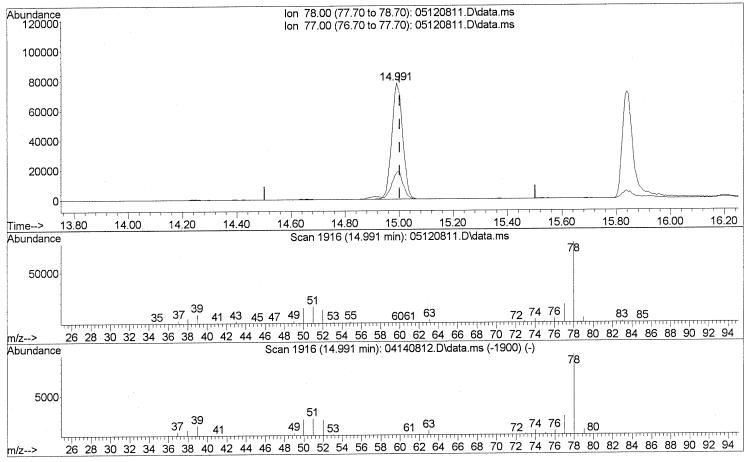
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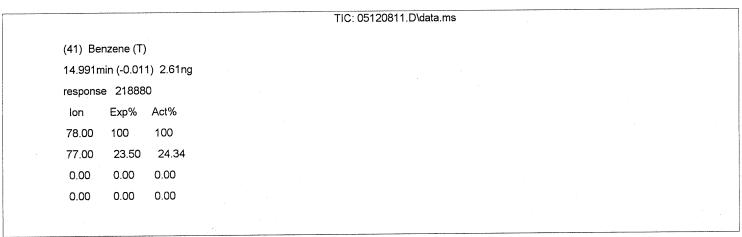
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Data Path : J:\MS13\DATA\2008 05\12\

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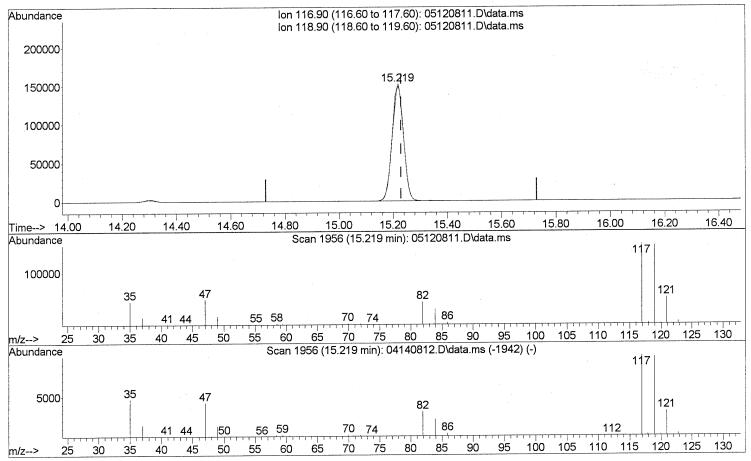
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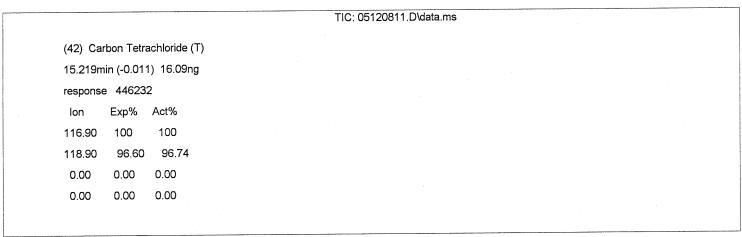
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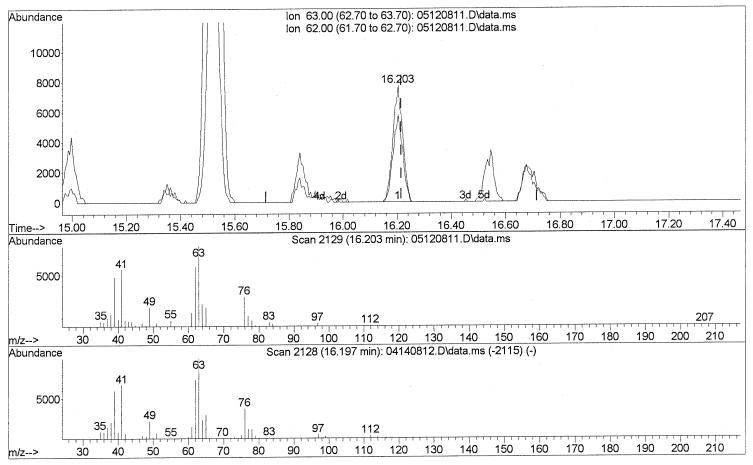
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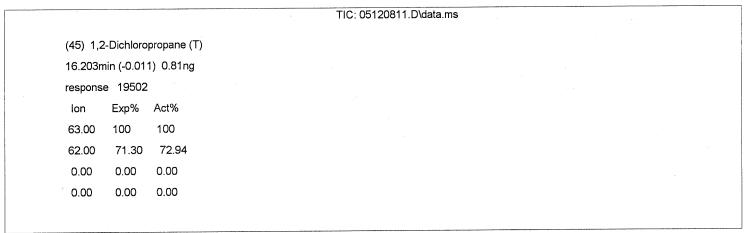
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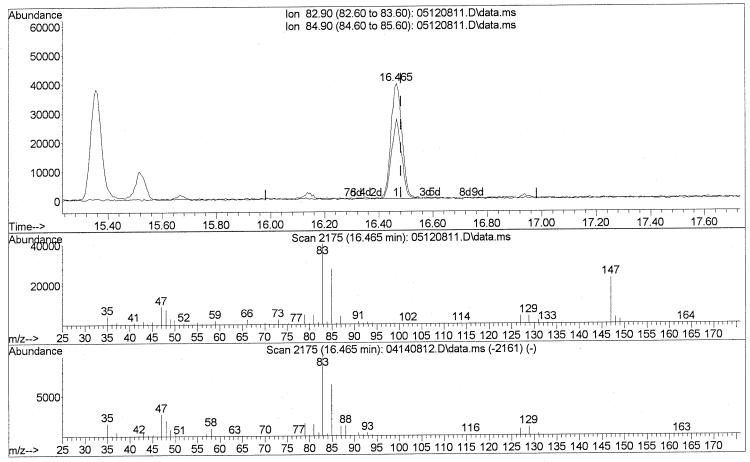
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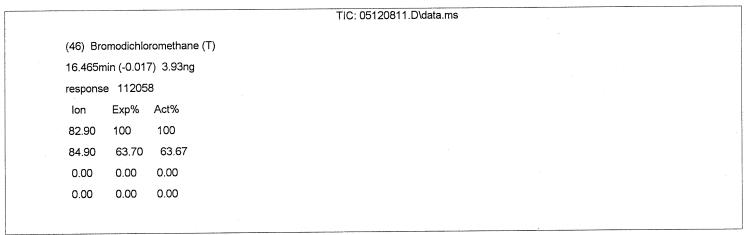
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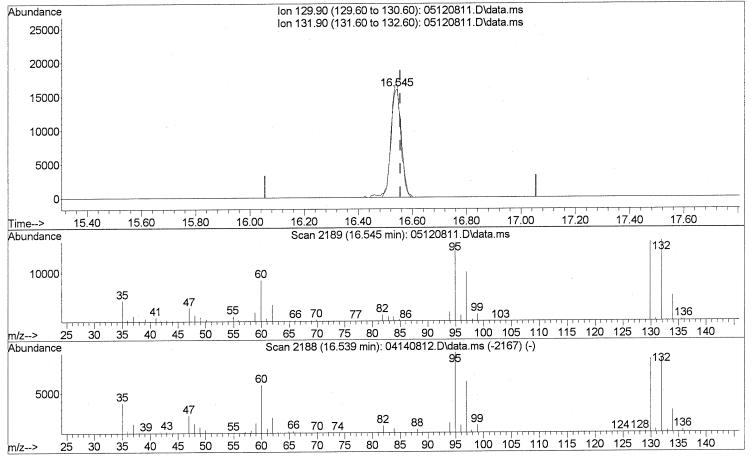
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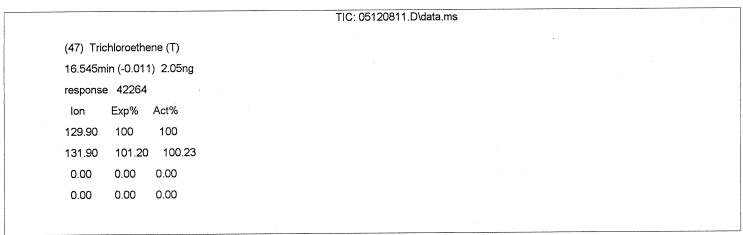
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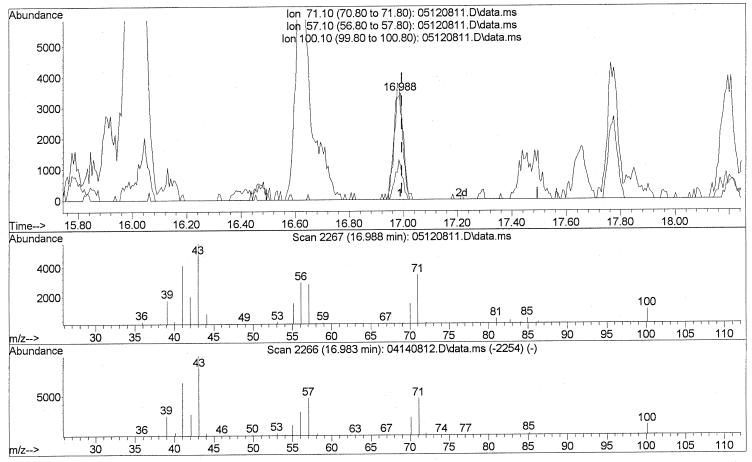
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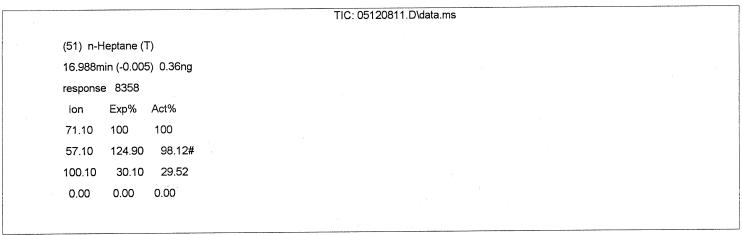
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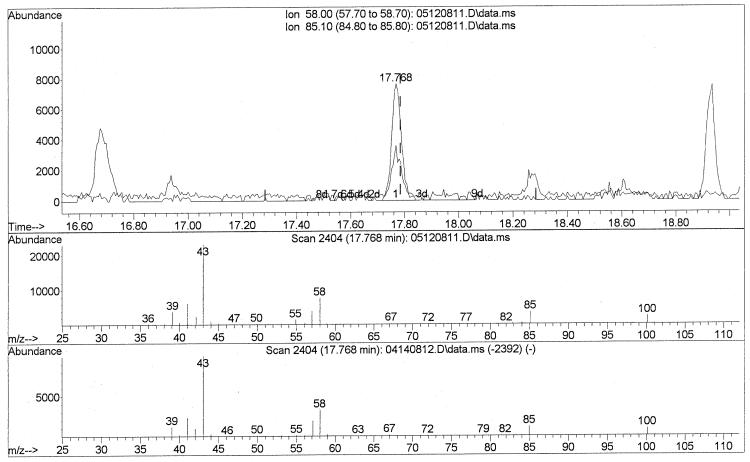
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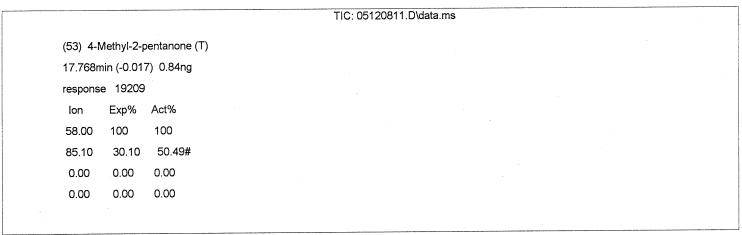
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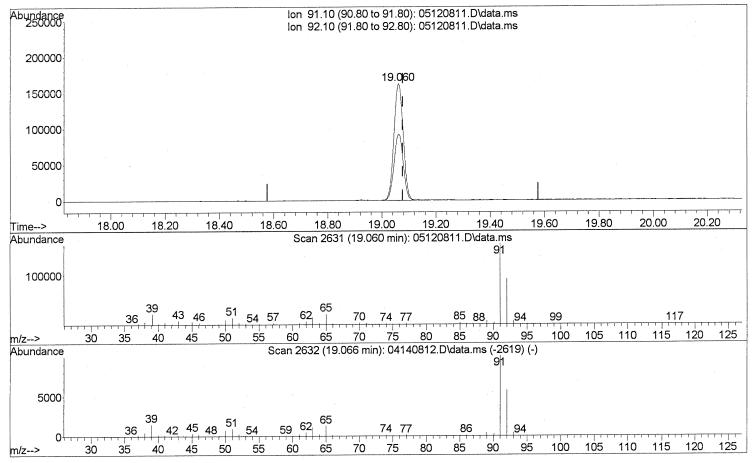
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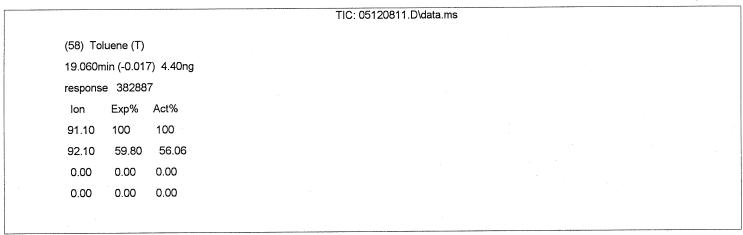
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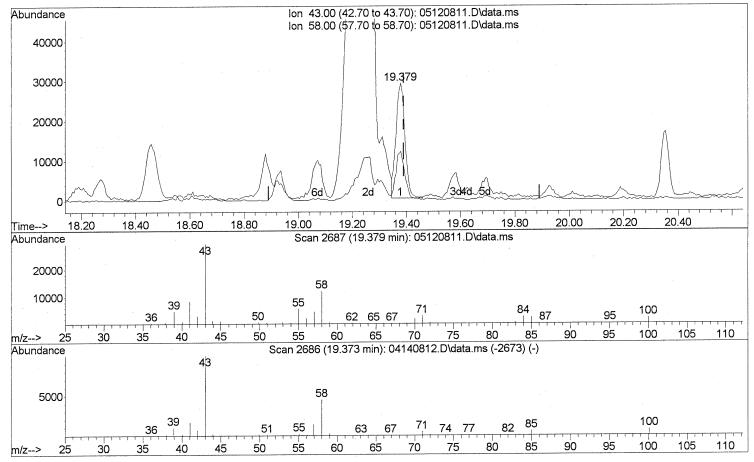
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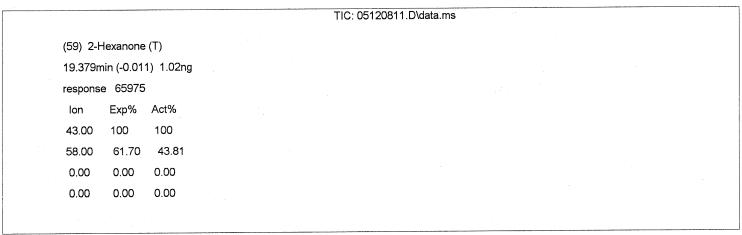
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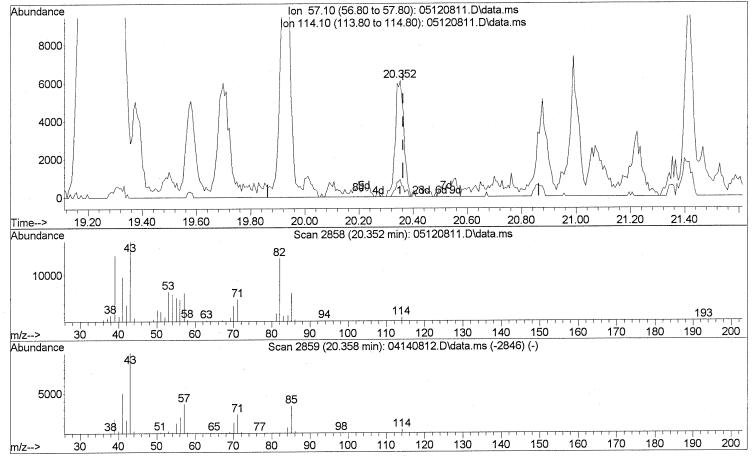
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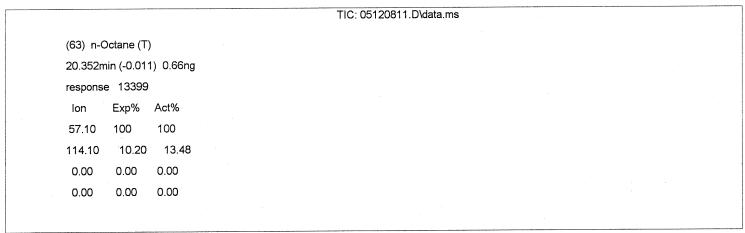
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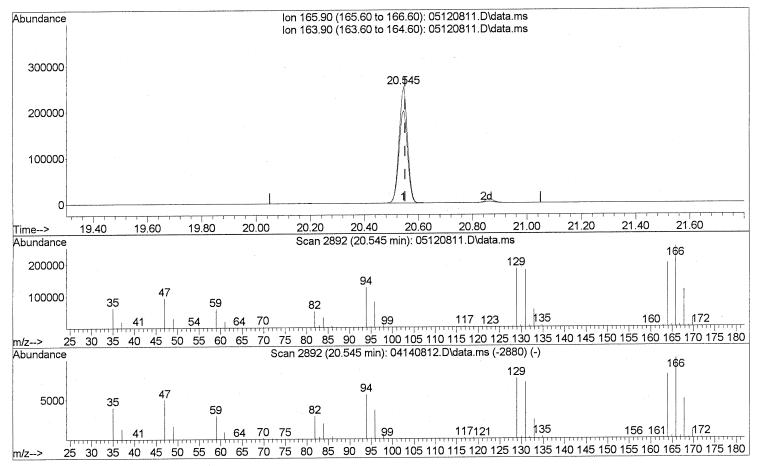
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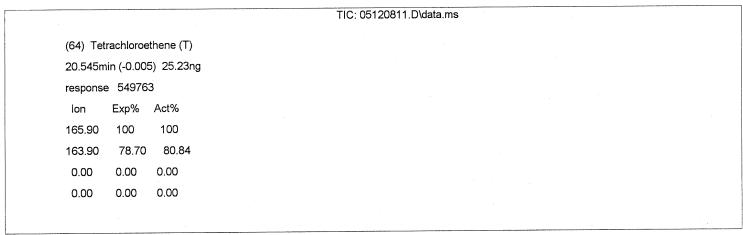
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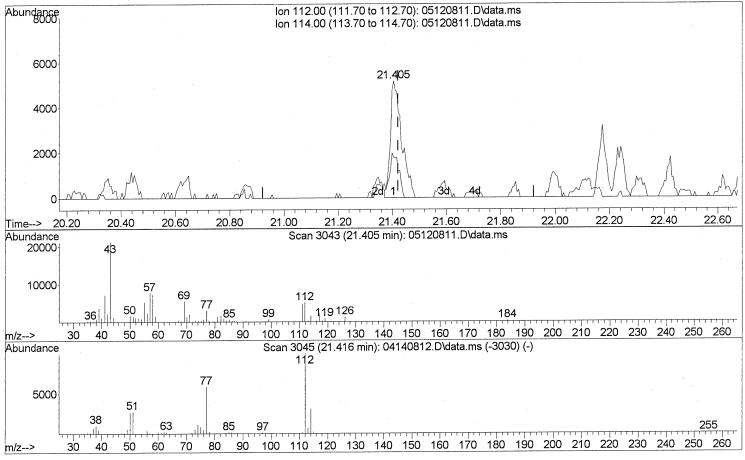
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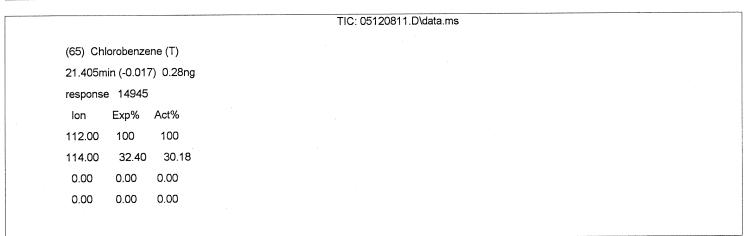
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Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

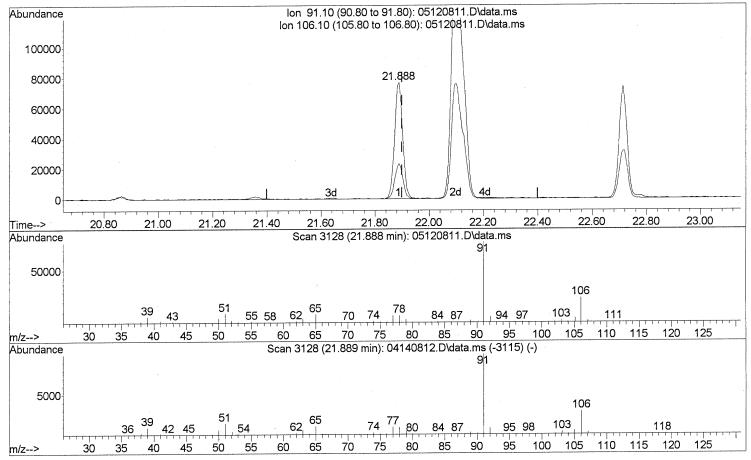
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

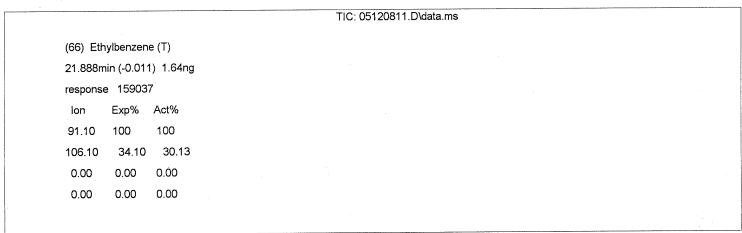
Quant Time: May 27 17:25:02 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

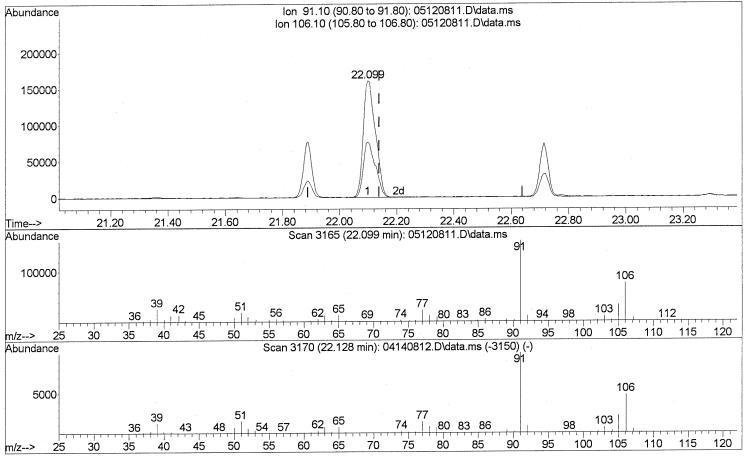
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

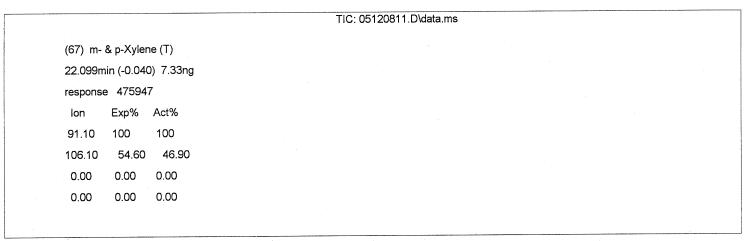
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

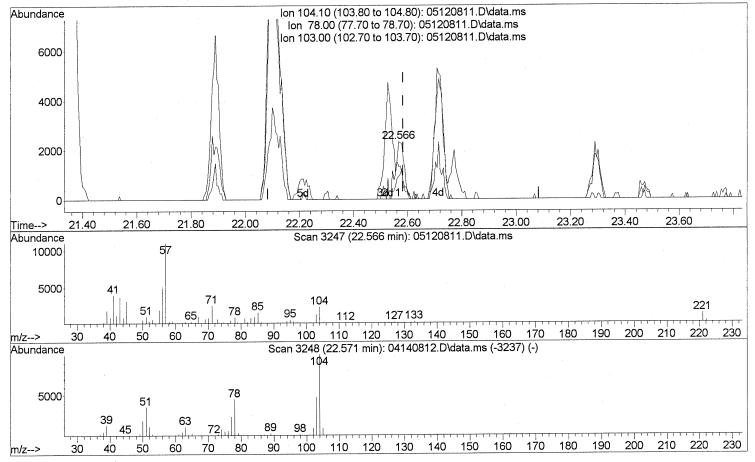
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

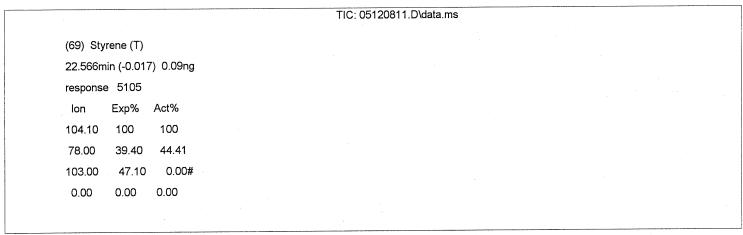
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

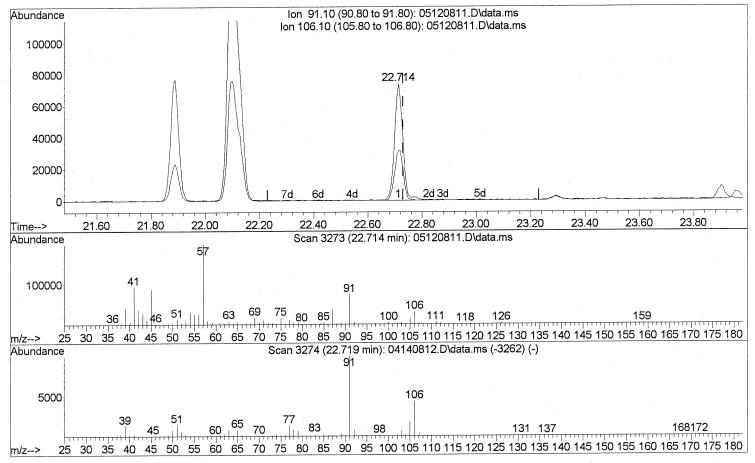
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

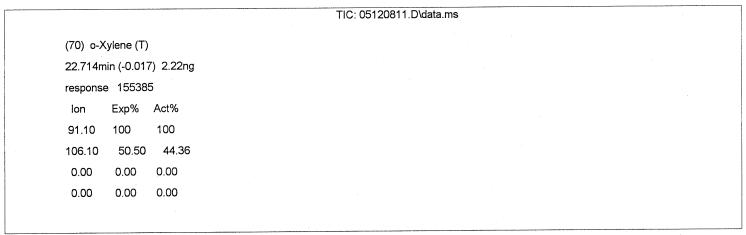
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

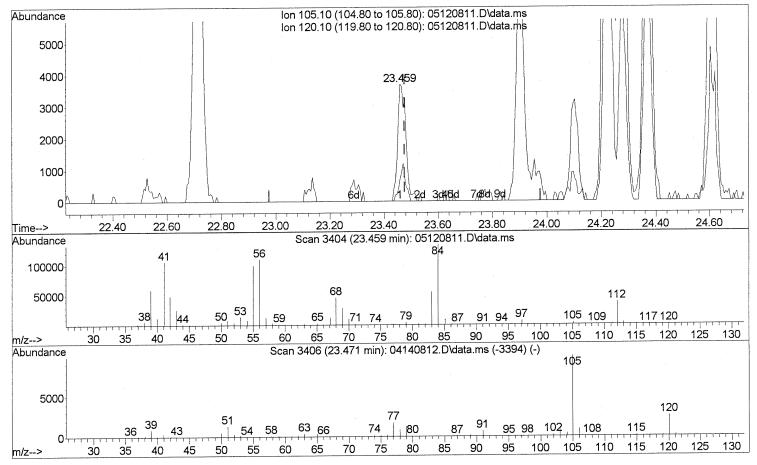
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

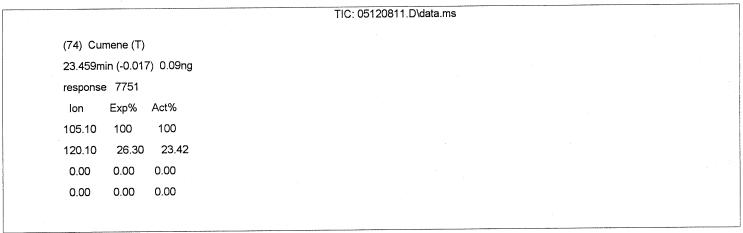
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

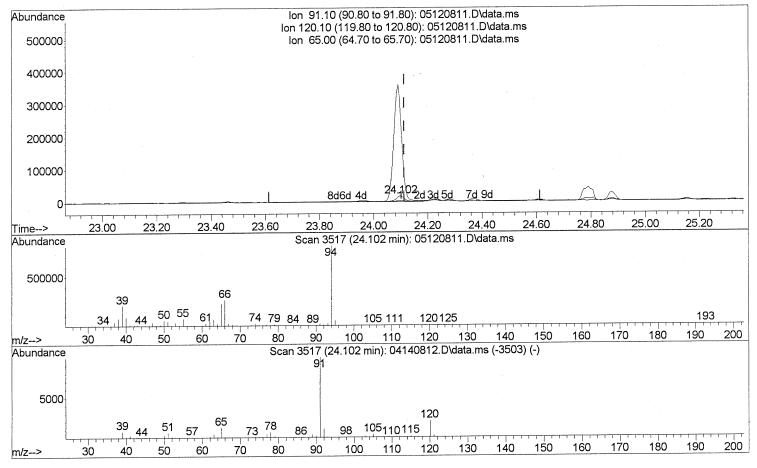
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

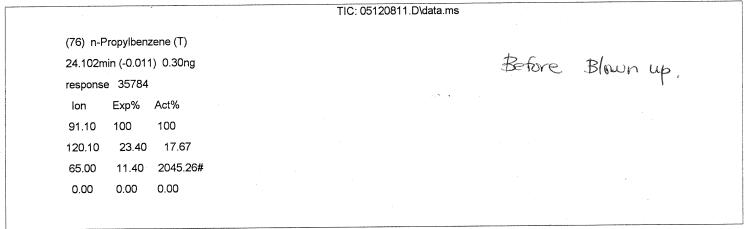
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008_05\12\05120811.D

Operator

: RTB

Acquired

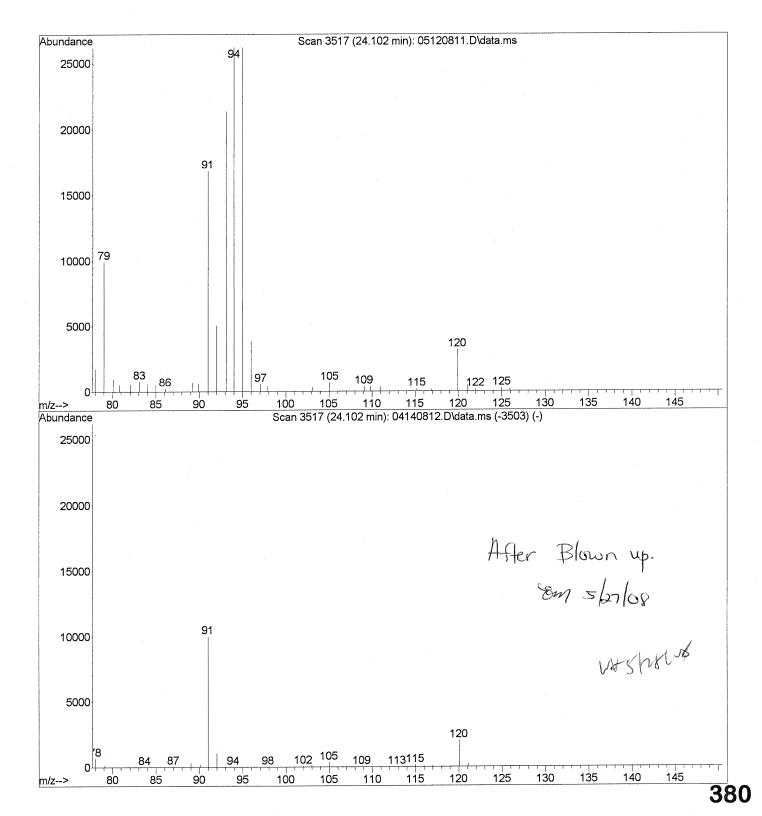
: 12 May 2008

5:55 pm using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-006 (1000mL)
Misc Info : ENSR SG40B-05 (-3.3, 3.5)

Vial Number: 7



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

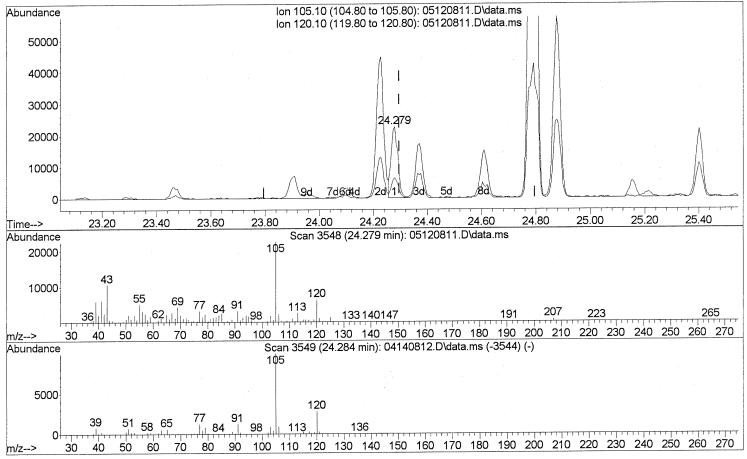
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

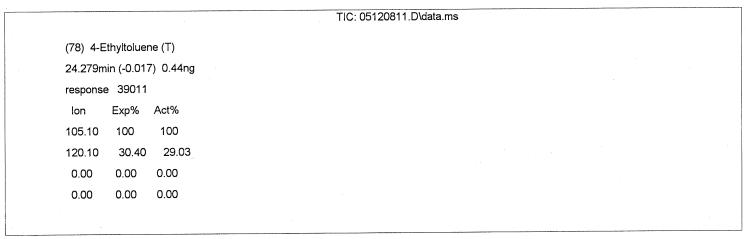
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

OLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

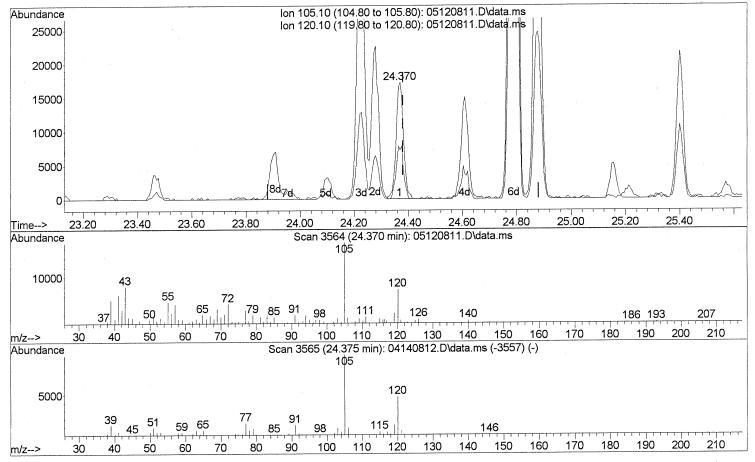
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

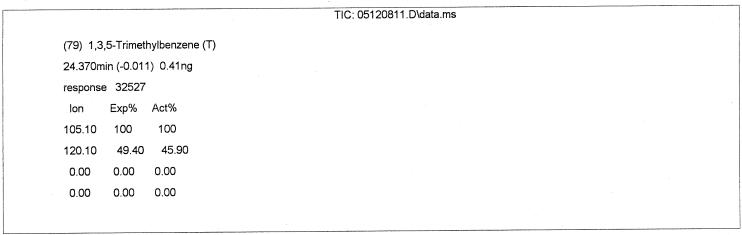
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

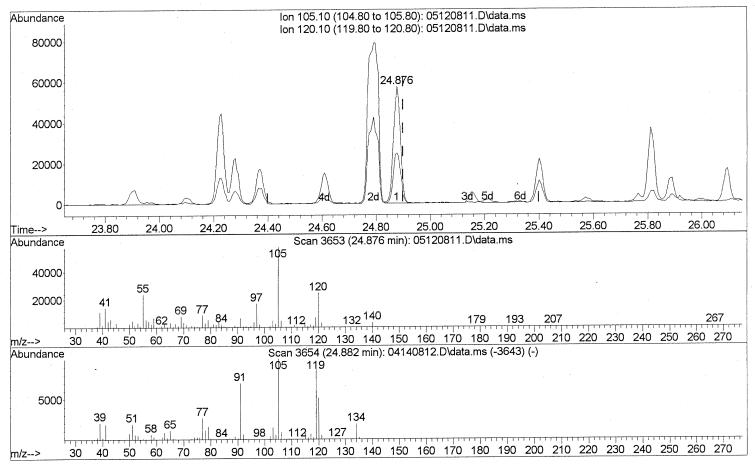
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

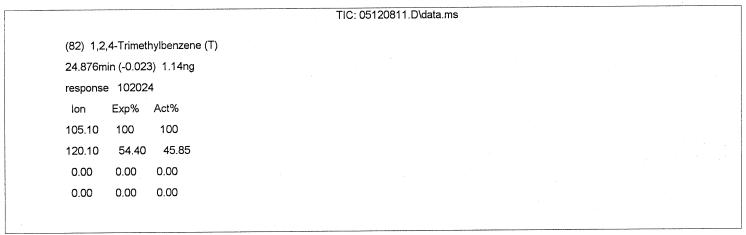
Quant Time: May 27 17:25:02 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

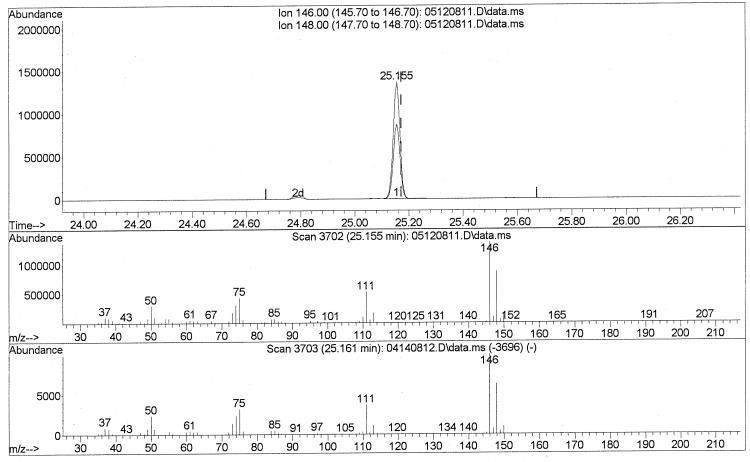
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

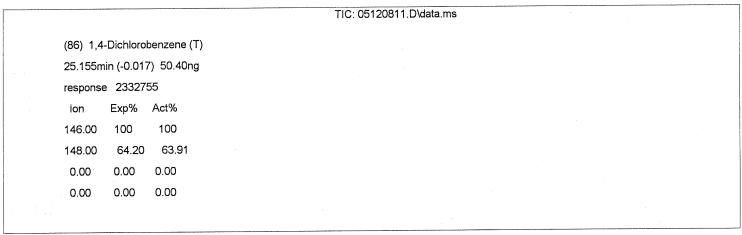
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

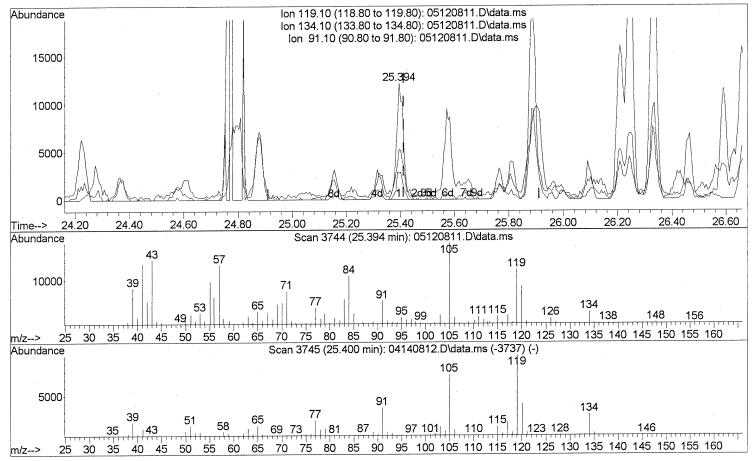
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

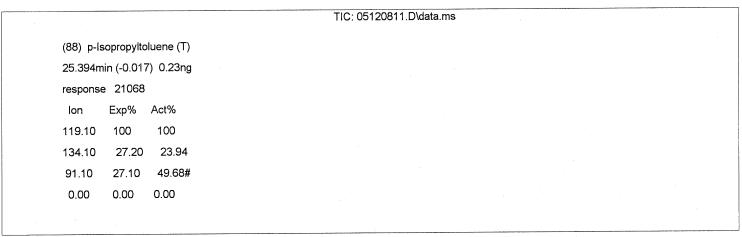
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120811.D

: 12 May 2008 5:55 pm Acq On

Operator : RTB

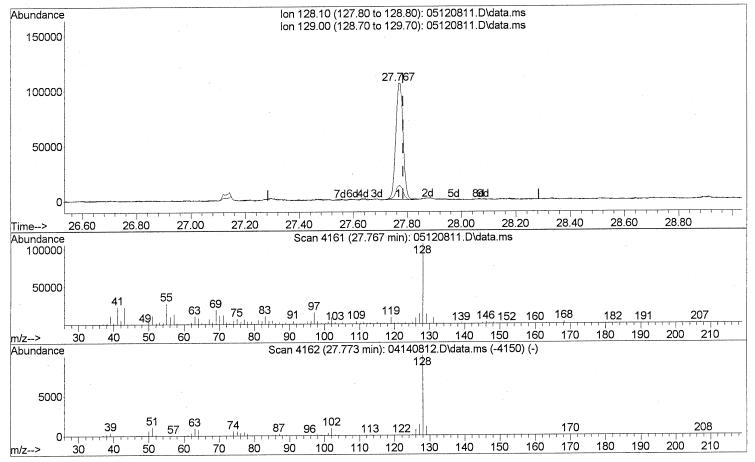
: P0801385-006 (1000mL) Sample : ENSR SG40B-05 (-3.3, 3.5) Misc ALS Vial : 7 Sample Multiplier: 1

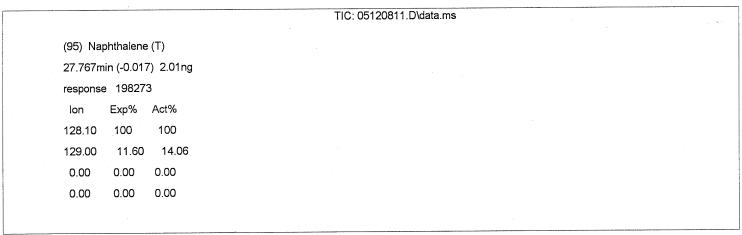
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Ouant Title

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 5:55 pm

Operator : RTB

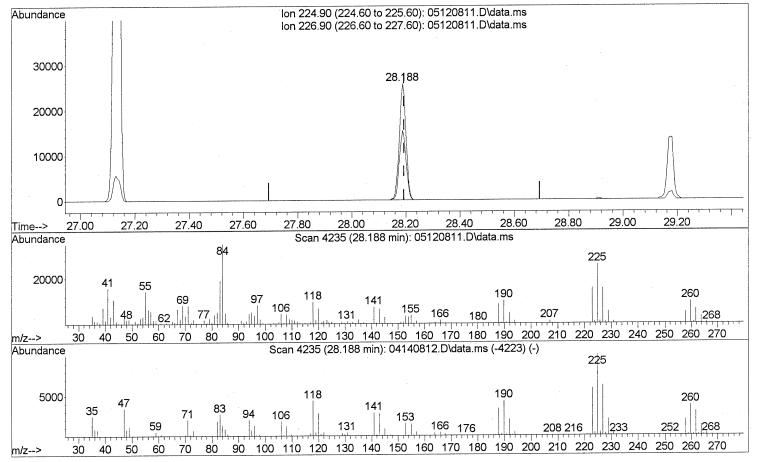
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

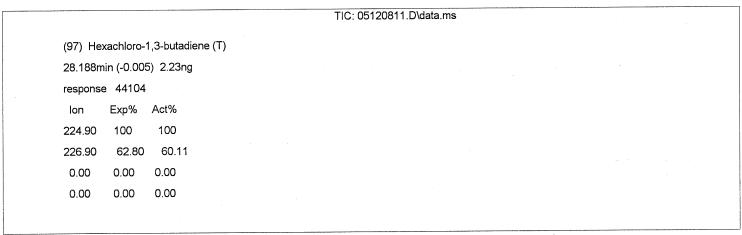
Quant Time: May 27 17:25:02 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data File : 05120811.D

Acq On : 12 May 2008 17:55

Operator : RTB

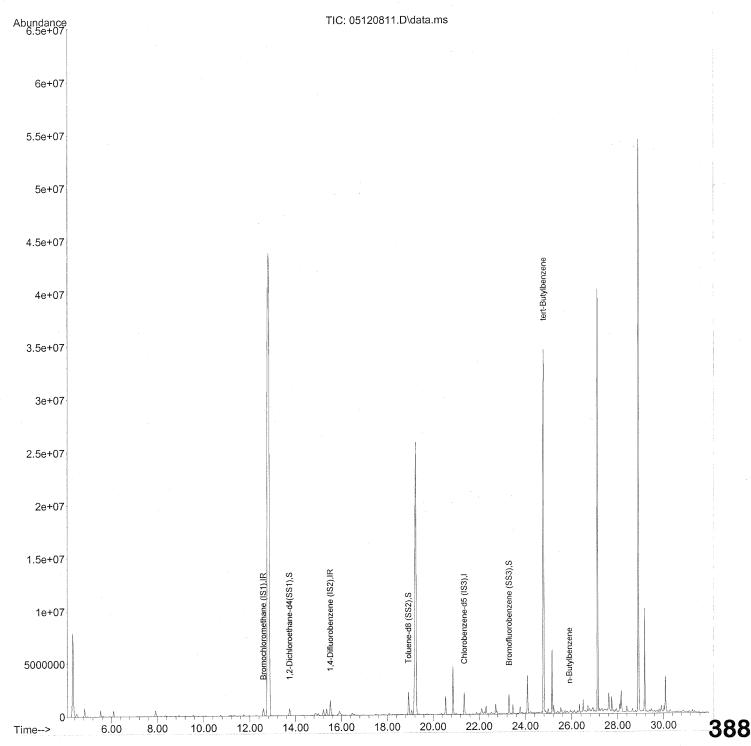
Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 15:44:38 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120811.D

Acq On : 12 May 2008 17:55

Operator : RTB

Sample : P0801385-006 (1000mL) Misc : ENSR SG40B-05 (-3.3, 3.5) ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 27 15:44:38 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.60 15.52 21.35	130 114 82	387191 1580750 772774	25.000 25.000 25.000	ng	-0.01 -0.01 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.74 18.93 23.29	65 98 174	Recove 1735251 Recove 600114	ery = 25.052 ery =	80 ng 100 ng	.68% 0.00 .20% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.79 25.90	119) 91	845486 30205	9 .992 (0.331	ng N	Qvalue 93 # 58

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

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120811.D

Acq On : 12 May 2008 17:55

Operator : RTB

Sample : P0801385-006 (1000mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

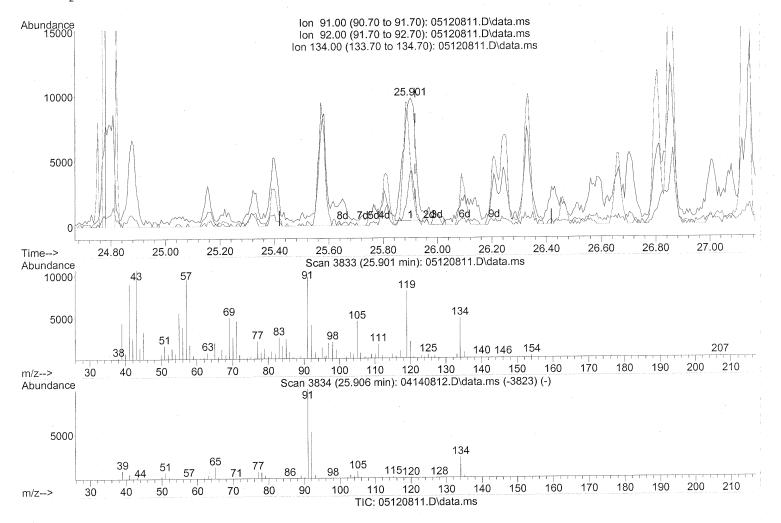
Quant Time: May 27 15:44:38 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.901min (-0.017) 0.33ng

response 30205

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 29.73#

 134.00
 28.80
 0.00#

 0.00
 0.00
 0.00

Data File : 05120817.D

Acq On : 12 May 2008 10:30 pm

Operator : RTB

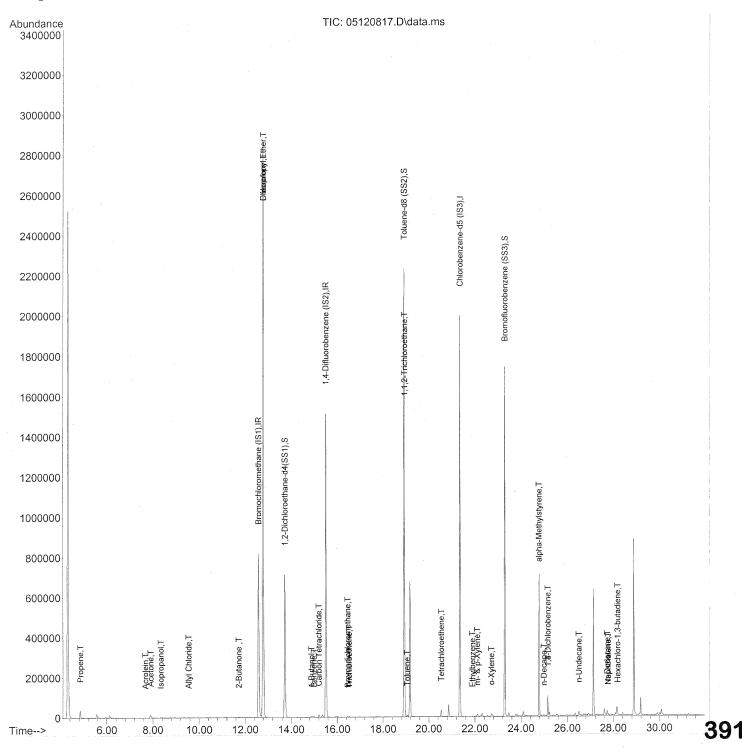
Sample : P0801385-006 DIL (25mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 11:17:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008



Data File : 05120817.D

Acq On : 12 May 2008 10:30 pm

Operator : RTB

Sample : P0801385-006 DIL (25mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 11:17:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	12.58	130	383903	25.000	ng	- 0	.03
37) 1,4-Difluorobenzene (IS2)	15.51	114	1663601	25.000	ng	- 0	.02
56) Chlorobenzene-d5 (IS3)	21.35	82	762697	25.000	ng	U	.00
ystem Monitoring Compounds		. -		00 007		0	0.2
33) 1,2-Dichloroethane-d4(Spiked Amount 25.000	13.72	65	677547 Recov	22.007 ery =	ng : 88	0- 1,048.	.03 /
57) Toluene-d8 (SS2)	18.92	98	1801075	26.346	nq	- 0	.01
Spiked Amount 25.000		104		ery =			
73) Bromofluorobenzene (SS3)	23.29	174	582974				
Spiked Amount 25.000			Recov	ery =	. 99	. 120 l	
arget Compounds							lue
2) Propene	4.86			0.143		#	1
3) Dichlorodifluoromethane		85	2215	N.D			
4) Chloromethane	0.00		0	N.D			
5) Freon 114	0.00	135	0	N.D			
6) Vinyl Chloride	0.00	62	0	N.D			
7) 1,3-Butadiene	0.00	54		N.D			
8) Bromomethane	0.00	94	0	N.D			
9) Chloroethane	6.85	64	64	N.D			
0) Ethanol	7.13	45	543	N.D			
1) Acetonitrile	7.44		138	N.D			- 1
2) Acrolein	7.67		718 10965	0.047		#	64
.3) Acetone	7.90	58	10965	0.516	ng	,#	82
(4) Trichlorofluoromethane		101		N.D			0.4
5) Isopropanol	8.34	45					94
6) Acrylonitrile	0.00	53		N.D			
	0.00	96	0	N.D			
.8) tert-Butanol	9.29	59	137				
9) Methylene Chloride	9.36	84	912	N.D 0.065	· ~~		92
0) Allyl Chloride	9.54	41	2121	U.U65	119		92
1) Trichlorotrifluoroethane	0.00	T 2 T	1055	N.D			
(2) Carbon Disulfide	9.77						
3) trans-1,2-Dichloroethene	0.00	61	0	N.D			
-, ,	11.11			N.D			
5) Methyl tert-Butyl Ether	0.00	73	0	N.D			
6) Vinyl Acetate	0.00	86	1220	N.D		#	84
27) 2-Butanone	11.72	72	1229	0.082		#	04
28) cis-1,2-Dichloroethene	0.00	61	0	N.D		» #	1
29) Diisopropyl Ether	12.78	8.7 6.1	279649	-14.292			Τ.
30) Ethyl Acetate	0.00	61 57	0	N.D N.D			.
31) n-Hexane	12.68	57	331	1N • T	₹.•		39
			<i>t</i> /				

Data File : 05120817.D

: 12 May 2008 10:30 pm Acq On

Operator : RTB

Sample : P0801385-006 DIL (25mL) : ENSR SG40B-05 (-3.3, 3.5) Misc ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 13 11:17:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	(12.78)	S 83	2784971	77.698 ng)	99
34) Tetrahydrofuran	0.00	72	0	N.D.		
35) Ethyl tert-Butyl Ether	0.00		0	N.D.		
36) 1,2-Dichloroethane	13.77		118	N.D.		
38) 1,1,1-Trichloroethane	14.30		1101	N.D.		
39) Isopropyl Acetate	0.00		0	N.D.		
40) 1-Butanol	14.88		4597			96
41) Benzene	14.99			_		92
42) Carbon Tetrachloride	15.20			_		97
43) Cyclohexane	15.41			_		
44) tert-Amyl Methyl Ether	0.00		0	N.D.		
	16.17		59			
45) 1,2-Dichloropropane 46) Bromodichloromethane	16.46		2915			80
	16.52			_	#	1
47) Trichloroethene	0.00		0	N.D.	п	
48) 1,4-Dioxane			525			
49) Isooctane	16.62		5 <u>2</u> 5	N.D.		
50) Methyl Methacrylate	0.00			N.D.		
51) n-Heptane	16.97		52			
52) cis-1,3-Dichloropropene	0.00		0	N.D.		
53) 4-Methyl-2-pentanone	0.00		0	N.D.		
54) trans-1,3-Dichloropropene			0	N.D.	ш	0
55) 1,1,2-Trichloroethane	18.94		161352		#	9
58) Toluene	19.05		9079	0.106 ng		96
59) 2-Hexanone	19.40	43	1790	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.		
62) Butyl Acetate	20.29	43	51	N.D.		
63) n-Octane	20.36	57	113	N.D.		
64) Tetrachloroethene	20.55		12216			98
65) Chlorobenzene	21.42	112	203	N.D.		
66) Ethylbenzene	21.89		3936			94
67) m- & p-Xylene	22.10	91	10748	0.168 ng		88
68) Bromoform	0.00		0	N.D.		
69) Styrene	0.00	104	0	N.D.		
70) o-Xylene	22.71	91	3294	0.048 ng		97
71) n-Nonane	22.98	43	557	N.D.		
72) 1,1,2,2-Tetrachloroethane	2,2.32	83	717	N.D.		
74) Cumene	23.48	105	77	N.D.		
75) alpha-Pinene	23.96	93	522	N.D.		
76) n-Propylbenzene	24.10	91	871	N.D.		
77) 3-Ethyltoluene	24.22	105	2145	N.D.		
78) 4-Ethyltoluene	24.29	105	1242	N.D.		
79) 1,3,5-Trimethylbenzene	24.38	105	1004	N.D.		303
, -, ,						393

Data File : 05120817.D

: 12 May 2008 10:30 pm Acq On

Operator : RTB

Sample : P0801385-006 DIL (25mL) : ENSR SG40B-05 (-3.3, 3.5) Sample Multiplier: 1 ALS Vial : 7

Quant Time: May 13 11:17:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

R.T.	QIon	Response	Conc Units	Dev(Min)
24.77 24.60 24.88	118 105	8313 958 2214	0.201 ng N.D. N.D.	#	4
24.98	57	3294	0.068 ng	#	67
25.16	146	43694	0.915 ng		98 98
25.41	105	1037	N.D.		,
25.41	105	1037	N.D.		
25.58	68	1518	N.D.		
26.50	57	8260	0.161 ng		77
27.77	128	4668	0.048 ng		89
		8565 962	0.165 ng 0.049 ng		89 94
	24.77 24.60 24.88 24.98 25.04 25.16 25.16 25.41 25.41 25.27 25.58 0.00 26.50 0.00 27.77 27.73	24.77 118 24.60 105 24.88 105 24.98 57 25.04 91 25.16 146 25.16 146 25.41 105 25.40 119 25.41 105 25.27 146 25.27 146 25.58 68 0.00 157 26.50 57 0.00 180 27.77 128 27.73 57	24.77 118 8313 24.60 105 958 24.88 105 2214 24.98 57 3294 25.04 91 55 25.16 146 43694 25.41 105 1037 25.40 119 653 25.41 105 1037 25.27 146 89 25.58 68 1518 0.00 157 0 26.50 57 8260 0.00 180 0 27.77 128 4668 27.73 57 8565	24.77 118 8313 0.201 ng 24.60 105 958 N.D. 24.88 105 2214 N.D. 24.98 57 3294 0.068 ng 25.04 91 55 N.D. 25.16 146 43694 0.915 ng 25.16 146 43694 0.956 ng 25.41 105 1037 N.D. 25.40 119 653 N.D. 25.41 105 1037 N.D. 25.27 146 89 N.D. 25.27 146 89 N.D. 25.58 68 1518 N.D. 25.58 68 1518 N.D. 26.50 57 8260 0.161 ng 0.00 180 0 N.D. 27.77 128 4668 0.048 ng 27.73 57 8565 0.165 ng	24.60 105 958 N.D. 24.88 105 2214 N.D. 24.98 57 3294 0.068 ng # 25.04 91 55 N.D. 25.16 146 43694 0.915 ng 25.16 146 43694 0.956 ng 25.41 105 1037 N.D. 25.40 119 653 N.D. 25.41 105 1037 N.D. 25.41 105 1037 N.D. 25.27 146 89 N.D. 25.27 146 89 N.D. 25.58 68 1518 N.D. 25.58 68 1518 N.D. 0.00 157 0 N.D. 26.50 57 8260 0.161 ng 0.00 180 0 N.D. 27.77 128 4668 0.048 ng 27.73 57 8565 0.165 ng

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

Page: 3

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120817.D

Acq On : 12 May 2008 10:30 pm

Operator : RTB

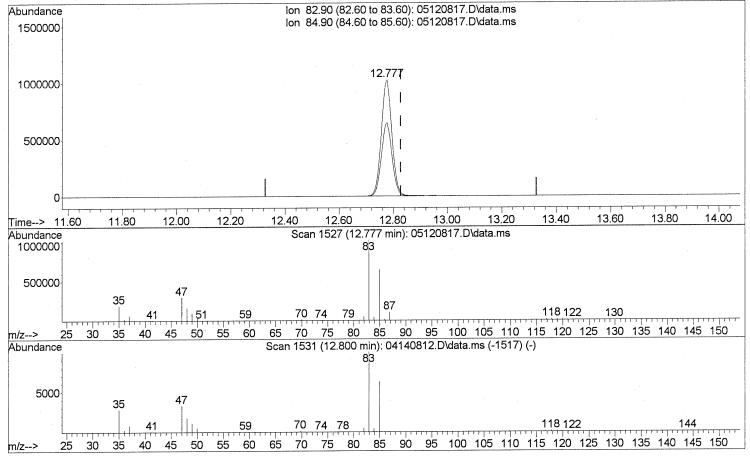
Sample : P0801385-006 DIL (25mL)
Misc : ENSR SG40B-05 (-3.3, 3.5)
ALS Vial : 7 Sample Multiplier: 1

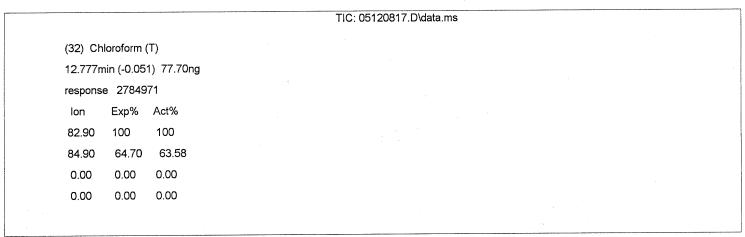
Quant Time: May 13 11:17:24 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG40B-05D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-007

Test Code: Instrument ID: EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08

Date Received: 5/12/08

Rusty Bravo

Date Analyzed: 5/12/08

1.00 Liter(s)

Test Notes:

Analyst:

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

0.025 Liter(s)

Container ID:

SC00289

Initial Pressure (psig):

Final Pressure (psig): -3.1

3.5

Canister Dilution Factor: 1.57

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	2.2	0.79	0.079	0.44	0.16	0.016	
74-87-3	Chloromethane	ND	0.16	0.079	ND	0.076	0.038	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	0.12	0.79	0.079	0.017	0.11	0.011	J
75-01-4	Vinyl Chloride	ND	0.16	0.079	ND	0.061	0.031	
74-83-9	Bromomethane	0.080	0.16	0.079	0.021	0.040	0.020	J
75-00-3	Chloroethane	0.59	0.16	0.079	0.22	0.060	0.030	
64-17-5	Ethanol	5.3	7.9	0.079	2.8	4.2	0.042	${f J}$
67-64-1	Acetone	13	7.9	0.11	5.5	3.3	0.048	В
75-69-4	Trichlorofluoromethane	1.5	0.16	0.079	0.26	0.028	0.014	
107-13-1	Acrylonitrile	ND	0.79	0.11	ND	0.36	0.051	
75-35-4	1,1-Dichloroethene	0.48	0.16	0.079	0.12	0.040	0.020	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.29	0.79	0.12	0.096	0.26	0.038	J
75-09-2	Methylene Chloride	1.0	0.79	0.079	0.30	0.23	0.023	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.16	0.079	ND	0.050	0.025	
76-13-1	Trichlorotrifluoroethane	0.61	0.16	0.088	0.080	0.020	0.011	
75-15-0	Carbon Disulfide	1.0	0.79	0.19	0.32	0.25	0.061	
156-60-5	trans-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
75-34-3	1,1-Dichloroethane	0.58	0.16	0.079	0.14	0.039	0.019	
1634-04-4	Methyl tert-Butyl Ether	ND	0.16	0.079	ND	0.044	0.022	
108-05-4	Vinyl Acetate	1.8	7.9	0.25	0.50	2.2	0.071	J, M
78-93-3	2-Butanone (MEK)	4.9	0.79	0.079	1.7	0.27	0.027	
156-59-2	cis-1,2-Dichloroethene	ND	0.16	0.079	ND	0.040	0.020	
108-20-3	Diisopropyl Ether	ND	0.79	0.093	ND	0.19	0.022	
67-66-3	Chloroform	5,000	0.16	0.093	1,000	0.032	0.019	

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

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

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

B = Analyte was found in the method blank.

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

Verified By:	Date:	5/28/08	39	6
		Handanan DanaMa		

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG40B-05D

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-007

Test Code:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08 Date Received: 5/12/08

Instrument ID: Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s) 0.025 Liter(s)

Test Notes: Container ID:

SC00289

Initial Pressure (psig):

-3.1

Final Pressure (psig):

3.5

Canister Dilution Factor: 1.57

CAS#	Compound	Result	MRL	MDL	Result	MRL	MDL	Data
		$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	${f ppbV}$	ppbV	ppbV	Qualifier
637-92-3	Ethyl tert-Butyl Ether	ND	0.79	0.080	ND	0.19	0.019	
107-06-2	1,2-Dichloroethane	0.080	0.16	0.079	0.020	0.039	0.019	J
71-55-6	1,1,1-Trichloroethane	2.6	0.16	0.079	0.48	0.029	0.014	
71-43-2	Benzene	3.1	0.16	0.079	0.97	0.049	0.025	
56-23-5	Carbon Tetrachloride	26	0.16	0.079	4.1	0.025	0.012	
994-05-8	tert-Amyl Methyl Ether	ND	0.79	0.079	ND	0.19	0.019	
78-87-5	1,2-Dichloropropane	0.27	0.16	0.079	0.057	0.034	0.017	
75-27-4	Bromodichloromethane	6.1	0.16	0.079	0.91	0.023	0.012	
79-01-6	Trichloroethene	3.3	0.16	0.079	0.62	0.029	0.015	
123-91-1	1,4-Dioxane	ND	0.79	0.096	ND	0.22	0.027	
80-62-6	Methyl Methacrylate	ND	0.79	0.12	ND	0.19	0.029	
142-82-5	n-Heptane	0.61	0.79	0.10	0.15	0.19	0.025	J
10061-01-5	cis-1,3-Dichloropropene	ND	0.79	0.082	ND	0.17	0.018	
108-10-1	4-Methyl-2-pentanone	1.3	0.79	0.088	0.31	0.19	0.021	
10061-02-6	trans-1,3-Dichloropropene	ND	0.79	0.099	ND	0.17	0.022	
79-00-5	1,1,2-Trichloroethane	ND.	0.16	0.079	ND	0.029	0.014	
108-88-3	Toluene	6.9	0.79	0.079	1.8	0.21	0.021	
591-78-6	2-Hexanone	1.5	0.79	0.12	0.37	0.19	0.029	
124-48-1	Dibromochloromethane	ND	0.16	0.11	ND	0.018	0.013	
106-93-4	1,2-Dibromoethane	ND	0.16	0.085	ND	0.020	0.011	
111-65-9	n-Octane	1.0	0.79	0.079	0.22	0.17	0.017	
127-18-4	Tetrachloroethene	38	0.16	0.079	5.6	0.023	0.012	
108-90-7	Chlorobenzene	0.44	0.16	0.080	0.097	0.034	0.017	

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

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

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

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		TO15SCAN.XLT - Trono	- Henderson - PageNo.:		_

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Date Collected: 5/10/08

Date Received: 5/12/08 Date Analyzed: 5/12/08

Client Sample ID: SG40B-05D

CAS Sample ID: P0801385-007

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Sampling Media: Rusty Bravo

6.0 L Summa Canister

Test Notes:

Container ID:

SC00289

Initial Pressure (psig):

-3.1

Final Pressure (psig):

3.5

Volume(s) Analyzed:

Canister Dilution Factor: 1.57

1.00 Liter(s) 0.025 Liter(s)

		Result	MRL	MDL	Result	MRL	MDL	Data
CAS#	Compound	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ppbV	ppbV	ppbV	Qualifier
100-41-4	Ethylbenzene	2.8	0.79	0.097	0.64	0.18	0.022	
179601-23-1	m,p-Xylenes	12	0.79	0.20	2.8	0.18	0.047	
75-25-2	Bromoform	ND	0.79	0.12	ND	0.076	0.012	
100-42-5	Styrene	0.21	0.79	0.12	0.049	0.18	0.028	J
95-47-6	o-Xylene	3.7	0.79	0.099	0.84	0.18	0.023	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.16	0.10	ND	0.023	0.015	
98-82-8	Cumene	0.14	0.79	0.088	0.027	0.16	0.018	${f J}$
103-65-1	n-Propylbenzene	0.59	0.79	0.082	0.12	0.16	0.017	J
622-96-8	4-Ethyltoluene	0.76	0.79	0.089	0.15	0.16	0.018	\mathbf{J}
108-67-8	1,3,5-Trimethylbenzene	0.67	0.79	0.094	0.14	0.16	0.019	${f J}$
98-83-9	alpha-Methylstyrene	ND	0.79	0.11	ND	0.16	0.024	
95-63-6	1,2,4-Trimethylbenzene	1.8	0.79	0.11	0.36	0.16	0.022	
100-44-7	Benzyl Chloride	ND	0.16	0.14	ND	0.030	0.026	
541-73-1	1,3-Dichlorobenzene	0.12	0.16	0.097	0.020	0.026	0.016	J
106-46-7	1,4-Dichlorobenzene	33	0.16	0.088	5.5	0.026	0.015	
135-98-8	sec-Butylbenzene	ND	0.79	0.091	ND	0.14	0.017	
99-87-6	4-Isopropyltoluene (p-Cymene)	0.35	0.79	0.10	0.064	0.14	0.019	\mathbf{J}
95-50-1	1,2-Dichlorobenzene	ND	0.16	0.10	ND	0.026	0.017	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.79	0.12	ND	0.081	0.012	
120-82-1	1,2,4-Trichlorobenzene	ND	0.16	0.12	ND	0.021	0.016	
91-20-3	Naphthalene	2.6	0.31	0.12	0.49	0.060	0.022	
87-68-3	Hexachlorobutadiene	3.7	0.16	0.14	0.35	0.015	0.013	
98-06-6	tert-Butylbenzene	ND	0.31	0.079	ND	0.057	0.014	
104-51-8	n-Butylbenzene	0.28	0.31	0.079	0.051	0.057	0.014	J

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

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

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

Verified By:_	Cos	Date:	5/28/08	3
		TOLERCANIVIT Tours	Dandanan BanaNa	

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) / ALS Vial : 8 Sample Multiplier: 1

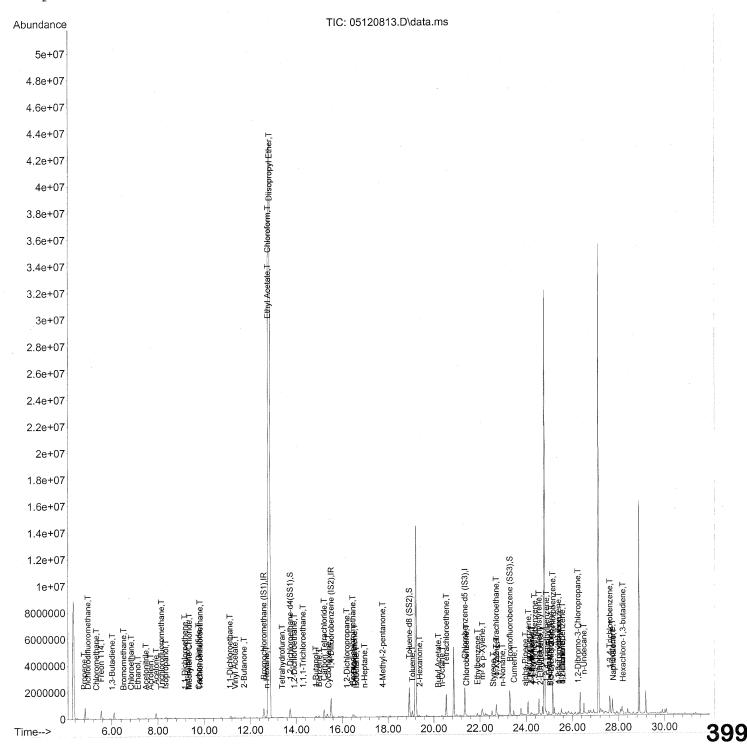
Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)
Misc : ENSR SG40B-05D (-3.1, : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(1	Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	12.59 15.52 21.35	130 114 82	402064 1591654 796246	25.000 ng 25.000 ng 25.000 ng	- 0	.02 .01 .00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000 73) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.74 18.93 23.29	65 98 174	641924 Recov 1729092 Recov 621315 Recov	24.227 ng	0.64% 0 1.92% 0	.00
Target Compounds 2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114	4.79 4.96 5.33 5.54 0.00	42 85 50 135 62	21530 83215 2170 2285 0	0.647 ng 1.372 ng 0.043 ng 0.077 ng N.D.	Qva # #	lue 54 99 50 84
 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 	6.02 6.51 6.84 7.13 7.48	54 94 64 45 41	1686 1145 7355 77005m 26603	0.046 ng 0.051 ng 0.376 ng 3.393 ng 0.446 ng	##	80 72 94
12) Acrolein13) Acetone14) Trichlorofluoromethane15) Isopropanol16) Acrylonitrile	7.69 7.92 8.15 8.33 8.66	56 58 2101 45 53	8332 186066 45006 166472 345	0.520 ng 8.360 ng 0.944 ng 2.210 ng N.D.	# #	59 66 98 97
17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide	9.16 9.29 9.35 9.54 9.81	96 59 84 41 151 76	6747 11638m 16831 1016 7904 60308	0.304 ng 0.186 ng 0.658 ng N.D. / 0.388 ng 0.636 ng	#	97 97
23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether 26) Vinyl Acetate 27) 2-Butanone	10.80 11.12 11.16 11.34 11.73	61 > 63 73 86 > 72	370 16668 2693 4953 48618	N.D. V 0.370 ng N.D. V 1.120 ng 3.115 ng	N # #	91 95 89
28) cis-1,2-Dichloroethene 29) Diisopropyl Ether 30) Ethyl Acetate 31) n-Hexane	12.16 12.85 12.78 12.70	61 87 61 57	67 15246828 33432 47595	N.D. ~ 743.998 ng N 3.436 ng 0.941 ng	* # #	1 22 9 400

Data File : 05120813.D

: 12 May 2008 19:45 Acq On

Operator : RTB

Sample : P0801385-007 (1000mL)

: ENSR SG40B-05D (-3.1, 3.5) Misc ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Unit	s Dev	/(Min)
32) Chloroform	12.78	83 5	8389054	1 555.416 ng	· se el	il 65
34) Tetrahydrofuran	13.39	72	1792	0.115 ng	#	1
35) Ethyl tert-Butyl Ether	13.45	87	611	N.D.		
36) 1,2-Dichloroethane	(13.91)	62	1882	0.051 ng		79
38) 1,1,1-Trichloroethane	(14.30)	97	55189	(1.664 ng		97
39) Isopropyl Acetate	14.95	61	74	N.D.		
40) 1-Butanol	14.85	56	105500	4.856 ng		85
41) Benzene	(14.99)	78	166233	(1.969 ng)		100
42) Carbon Tetrachloride	$\overline{(15.21)}$	117	459542	16.456 ng		98
43) Cyclohexane	15.40	84	8583	0.275 ng	#	1
44) tert-Amyl Methyl Ether	15.87	73	127	N.D.		
45) 1,2-Dichloropropane	(16.20)	63	4085	0.169 ng		87
46) Bromodichloromethane	(16.46)	83	112031	3.902 ng		98
47) Trichloroethene	(16.54)	130	43944	Q.115 ng		99
48) 1,4-Dioxane	16.50	88	925	0 .062 ng		62
49) Isooctane	16.62	57	24146	0.242 ng	#	50
50) Methyl Methacrylate	16.71	100	236	N.D.		
51) n-Heptane	(16.97)	71	9110	0.389 ng	#	81
52) cis-1,3-Dichloropropene	17.82	75	60	N.D.		
53) 4-Methyl-2-pentanone	(17.77)	58	18855	0.816 ng		71
54) trans-1,3-Dichloropropene	18.44	75	207	N.D.		
55) 1,1,2-Trichloroethane	18.66	97	621	N.D.		0.77
58) Toluene	(19.06)	91	396884	4.426 ng	1	97
59) 2-Hexanone	(19.37)	43	64162	0.961 ng		77
60) Dibromochloromethane	19.61	129	298	N.D.		
61) 1,2-Dibromoethane	0.00	107	0	N.D.	11	
62) Butyl Acetate	20.19	43	6714	0.101 ng	#	66 0.5
63) n-Octane	(20.35)	57	13727	0.653 ng		85 98
64) Tetrachloroethene	20.55	166	541280	24.109 mg		98 92
65) Chlorobenzene	21.40	112	15720	0.283 ng) (1.768 ng)		92
66) Ethylbenzene	21.89	91	177053	(1.879 ng)		90
67) m- & p-Xylene	(22.10)	91	527359	N.D. V		90
68) Bromoform	0.00	173	0 7636	0.132 ng	#	58
69) Styrene	The same of the sa	104 > 91	168021	2.333 ng	TT .	93
70) o-Xylene	22.71	43	38039	0.659 ng	#	80
71) n-Nonane	22.90	83	5288	0.055 ng		1
72) 1,1,2,2-Tetrachloroethane	23.47	105	7882	0.086 pg	#	60
74) Cumene	23.96	93	19589	0.403 ng	11	89
75) alpha-Pinene 76) n-Propylbenzene	(24.10)	91	46131	0.377 ng	#	1
	24.22	105	94379	0.947 ng	••	99
77) 3-Ethyltoluene 78) 4-Ethyltoluene	24.28	105	44219	0.482 pg		97
78) 4-Ediyitordene 79) 1,3,5-Trimethylbenzene	24.37	105	34513	0.424 ng		⁹ 40
/ J/ I, J, J-II I I I I I I I DOI LI CITO						40

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 27 15:55:37 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev	(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene 96) n-Dodecane	24.56 24.61 24.88 24.98 25.04 25.16 25.16 25.21 25.40 25.57 25.57 26.24 26.50 27.62	101 105 105 105 57 91 146 146 105 119 146 68 157 180 128 57	2143 34648 104465 96035 3350 3909 1011524 3660 21080 34227 2299 39354 9333 295972 1937 167942 350014	0.050 ng 0.346 ng 1.135 ng 1.886 ng 0.053 ng 0.078 ng 21.208 ng N.D. V 0.224 ng 0.378 ng 0.045 ng 0.943 ng 0.943 ng 0.690 ng V 5.537 ng 0.061 ng 1.650 ng 6.454 ng	#	1 97 89 77 96 83 99 77 88 98 93 52 74 82 94
97) Hexachloro-1,3-butadiene	28.19	225	48213 	2.365 ng		97

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

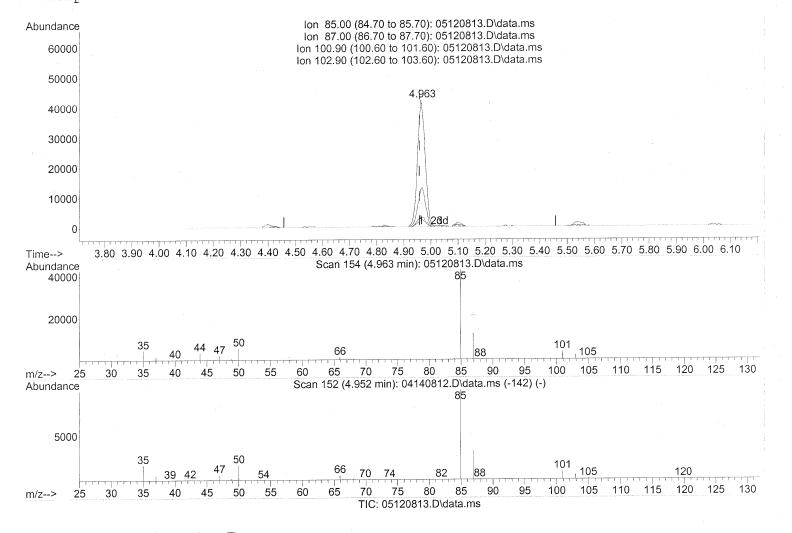
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(3) Dichlorodifluoromethane (T)

4.963min (+0.006) 1.37ng

response 83215

 Ion
 Exp%
 Act%

 85.00
 100
 100

 87.00
 32.50
 31.66

 100.90
 9.30
 9.00

 102.90
 6.00
 5.78

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)
Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

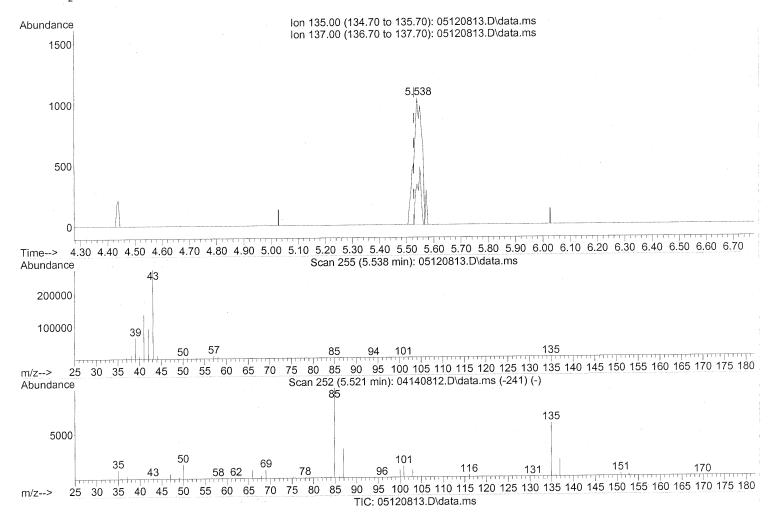
Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(5) Freon 114 (T)

5.538min (+0.011) 0.08ng

blfore blown-up

response 2285 Act% Ion Exp% 135.00 100 100 137.00 31.50 22.71 0.00 0.00 0.00 0.00 0.00 0.00

File :J:\MS13\DATA\2008_05\12\05120813.D

Operator : RTB

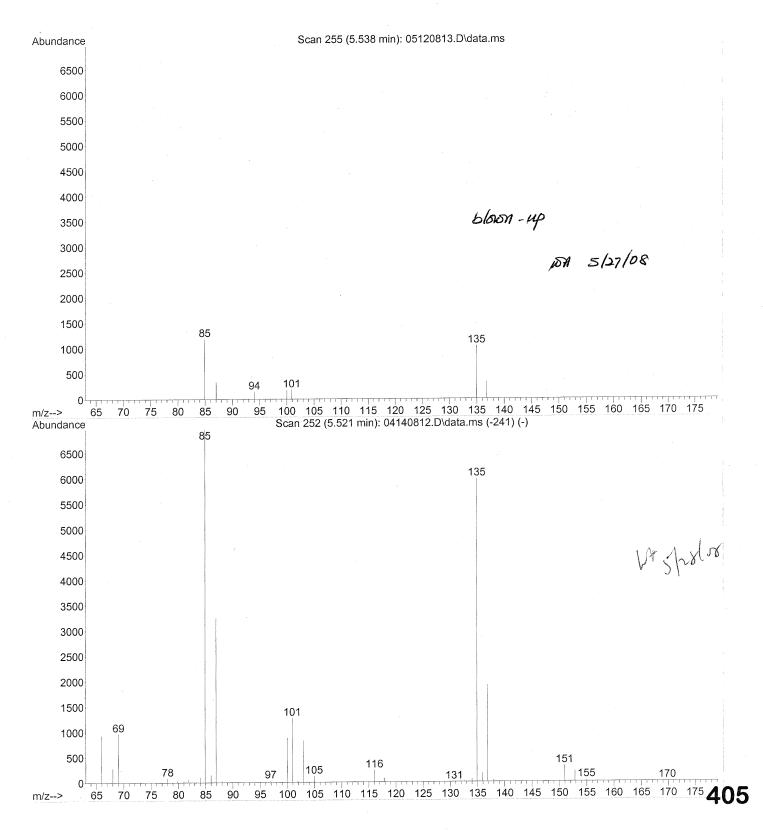
Acquired: 12 May 2008 19:45 using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-007 (1000mL)

Misc Info : ENSR SG40B-05D (-3.1, 3.5)

Vial Number: 8



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

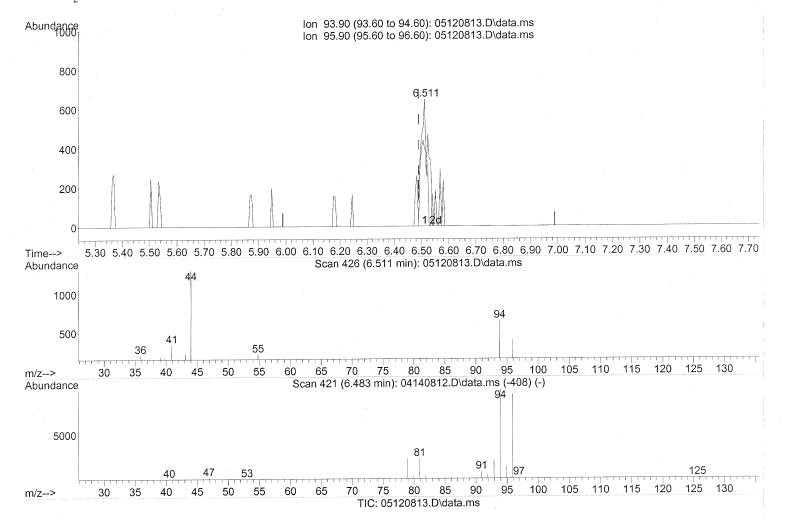
Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(8) Bromomethane (T)

6.511min (+0.023) 0.05ng

response 1145

 Ion
 Exp%
 Act%

 93.90
 100
 100

 95.90
 92.30
 65.41#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

19:45 12 May 2008 Acq On

: RTB Operator

P0801385-007 (1000mL) Sample

ENSR SG40B-05D (-3.1, 3.5) Misc Sample Multiplier: 1 8 ALS Vial

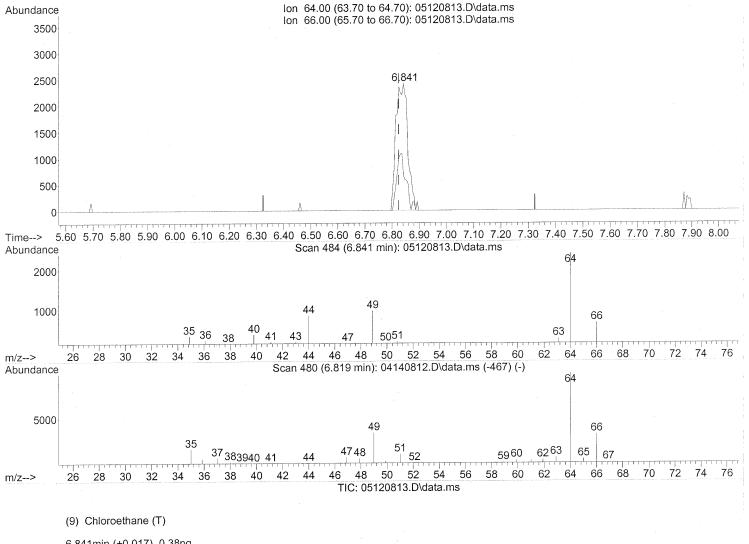
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



6.841min (+0.017) 0.38ng

response 7355

Exp% Act% Ion 64.00 100 100 66.00 29.60 32.74 0.00 0.00 0.00 0.00 0.00 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acg On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

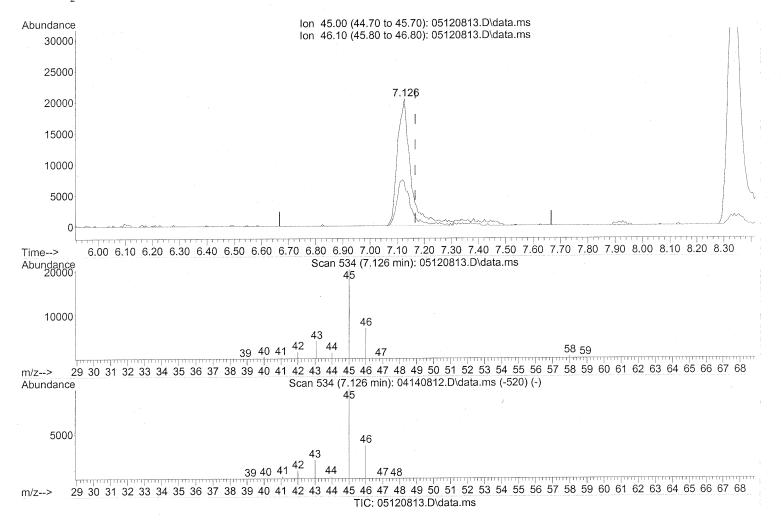
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



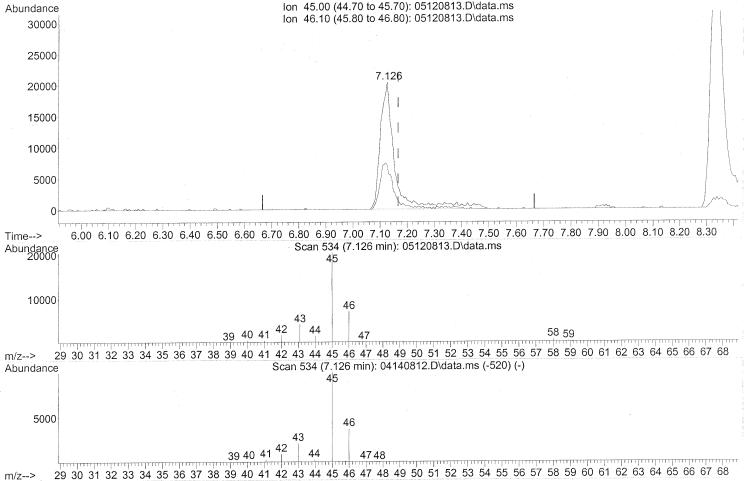
(10) Ethanol (T)

7.126min (-0.040) 3.08ng

response	69920	
lon	Exp%	Act%
45.00	100	100
46.10	41.00	35.47
0.00	0.00	0.00
0.00	0.00	0.00

tailing

Quantitation Report (Qedit) Data Path : J:\MS13\DATA\2008 05\12\ Data File : 05120813.D : 12 May 2008 19:45 Acq On Operator : RTB : P0801385-007 (1000mL) Sample ENSR SG40B-05D (-3.1, 3.5) Misc 8 Sample Multiplier: 1 ALS Vial Quant Time: May 13 11:17:08 2008 Quant Method: J:\MS13\METHODS\R13041408.M : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title QLast Update : Tue Apr 15 06:47:20 2008 Response via: Initial Calibration



TIC: 05120813.D\data.ms

7.126min (-0.040) 3.39ng m
response 77005
lon Exp% Act%
45.00 100 100

(10) Ethanol (T)

 46.10
 41.00
 32.20

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

incl. tailing

M5/28/08

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acg On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

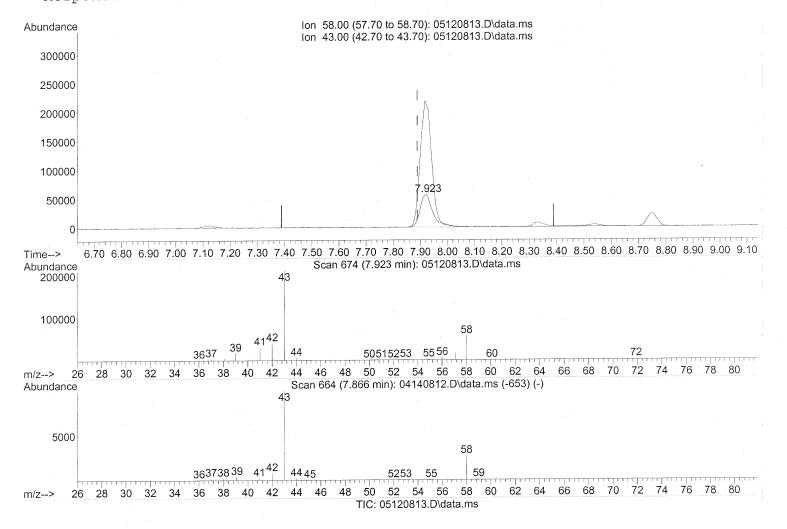
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(13) Acetone (T)

7.923min (+0.035) 8.36ng

response 186066

 Ion
 Exp%
 Act%

 58.00
 100
 100

 43.00
 283.10
 347.22#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)
Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

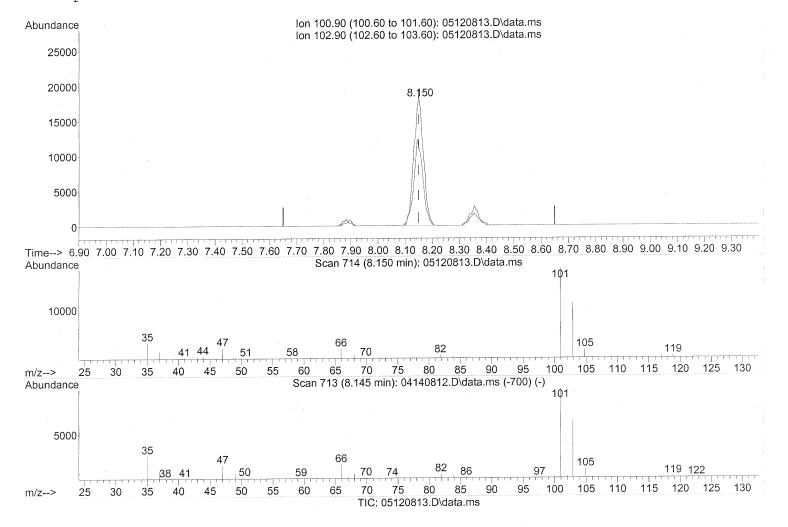
Ouant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(14) Trichlorofluoromethane (T)

8.150min (+0.000) 0.94ng

response 45006

 Ion
 Exp%
 Act%

 100.90
 100
 100

 102.90
 64.80
 63.20

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

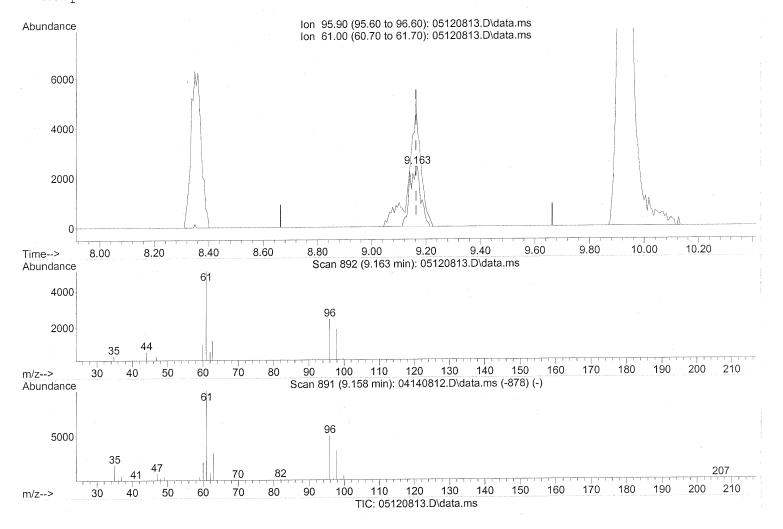
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(17) 1,1-Dichloroethene (T)

9.163min (+0.000) 0.30ng

response 6747

 Ion
 Exp%
 Act%

 95.90
 100
 100

 61.00
 210.00
 183.99#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

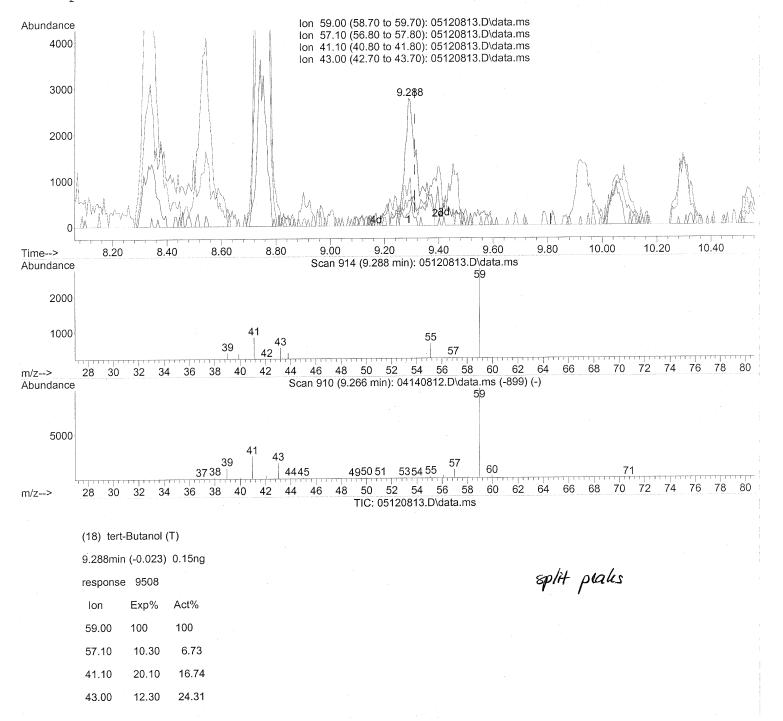
Quant Time: May 13 11:17:08 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

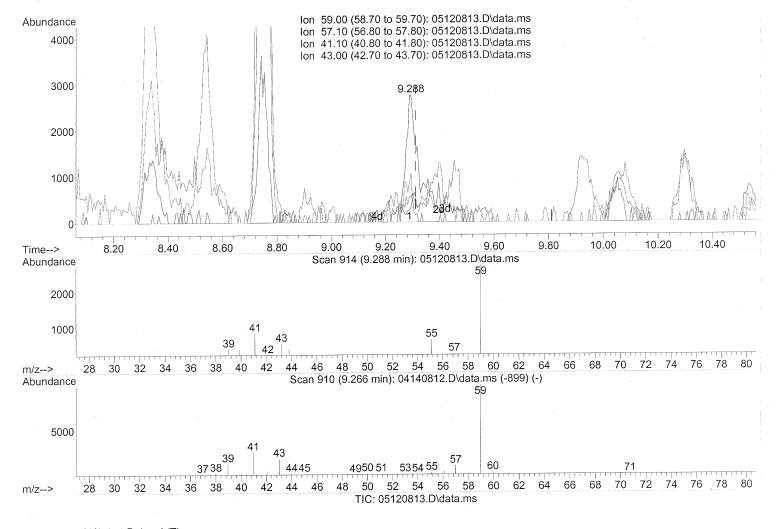
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(18) tert-Butanol (T)

9.288min (-0.023) 0.19ng m

response 11638

 Ion
 Exp%
 Act%

 59.00
 100
 100

 57.10
 10.30
 5.50

 41.10
 20.10
 13.68

 43.00
 12.30
 19.86

int. whole peals

[NS 128608

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

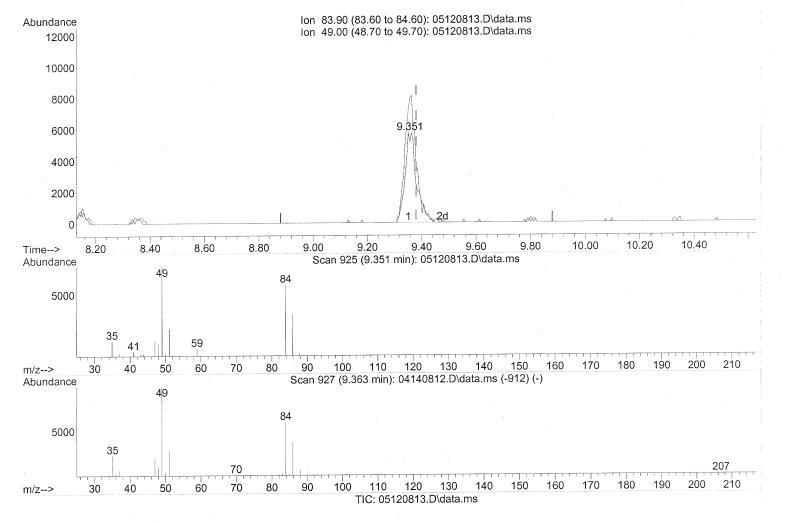
Quant Time: May 13 11:17:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(19) Methylene Chloride (T)

9.351min (-0.028) 0.66ng

response 16831

 Ion
 Exp%
 Act%

 83.90
 100
 100

 49.00
 172.90
 139.65#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

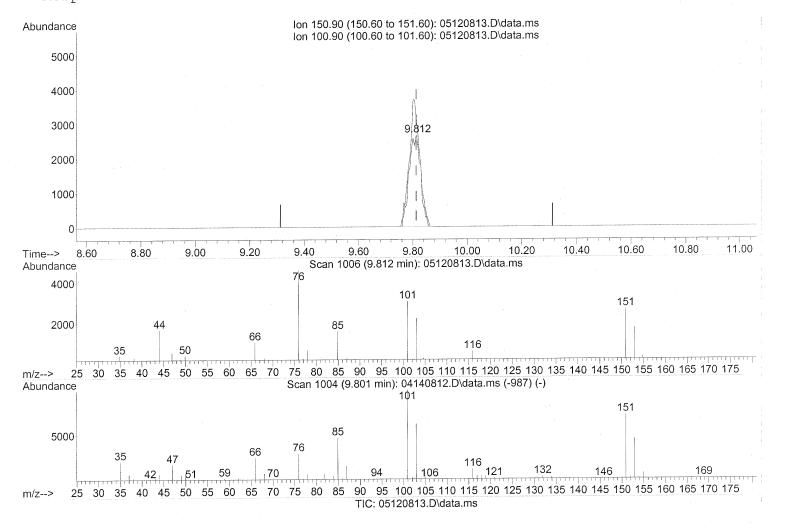
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(21) Trichlorotrifluoroethane (T)

9.812min (+0.000) 0.39ng

response 7904

 Ion
 Exp%
 Act%

 150.90
 100
 100

 100.90
 126.50
 123.55

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

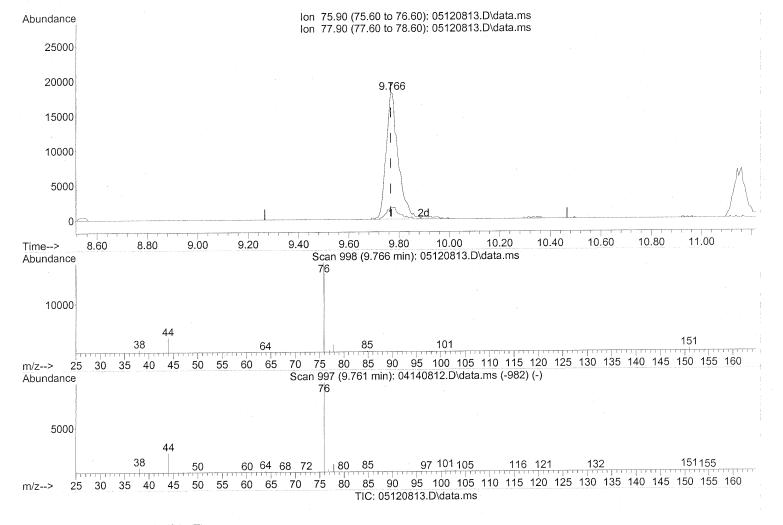
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(22) Carbon Disulfide (T)

9.766min (+0.000) 0.64ng

response 60308

 Ion
 Exp%
 Act%

 75.90
 100
 100

 77.90
 8.70
 9.91

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

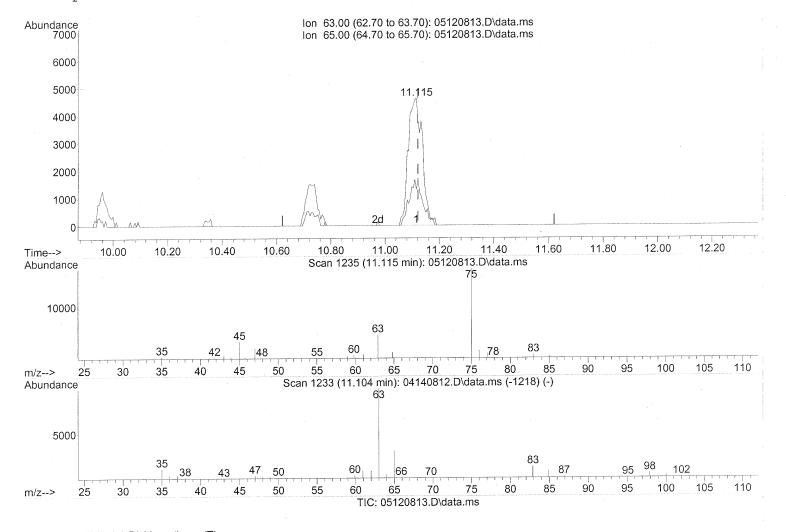
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(24) 1,1-Dichloroethane (T)

11.115min (-0.006) 0.37ng

response 16668

 Ion
 Exp%
 Act%

 63.00
 100
 100

 65.00
 29.10
 33.98

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

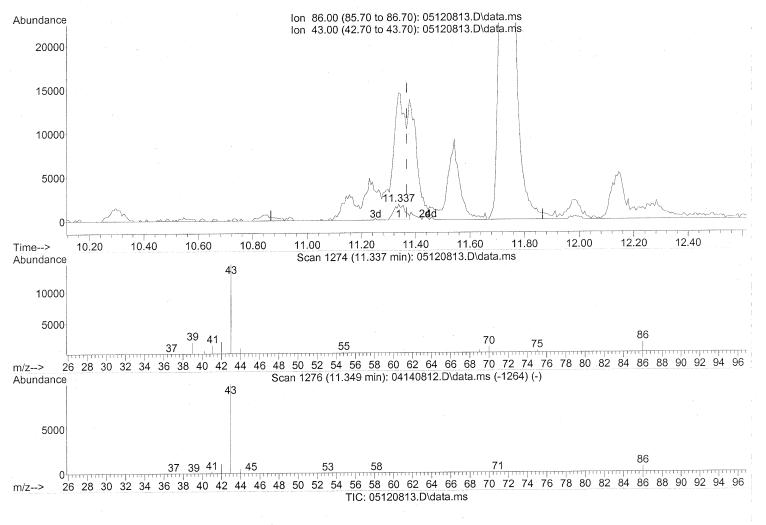
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(26) Vinyl Acetate (T)

11.337min (-0.029) 1.12ng

response 4953

 Ion
 Exp%
 Act%

 86.00
 100
 100

 43.00
 1381.20
 1410.52#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

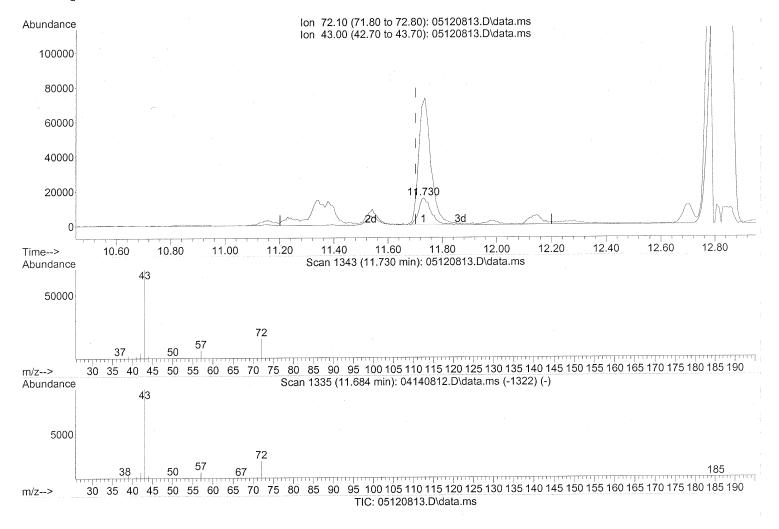
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(27) 2-Butanone (T)

11.730min (+0.029) 3.12ng

response 48618

 Ion
 Exp%
 Act%

 72.10
 100
 100

 43.00
 506.80
 476.01#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

12 May 2008 19:45 Acq On

: RTB Operator

P0801385-007 (1000mL) Sample

ENSR SG40B-05D (-3.1, 3.5) Misc Sample Multiplier: 1 8 ALS Vial

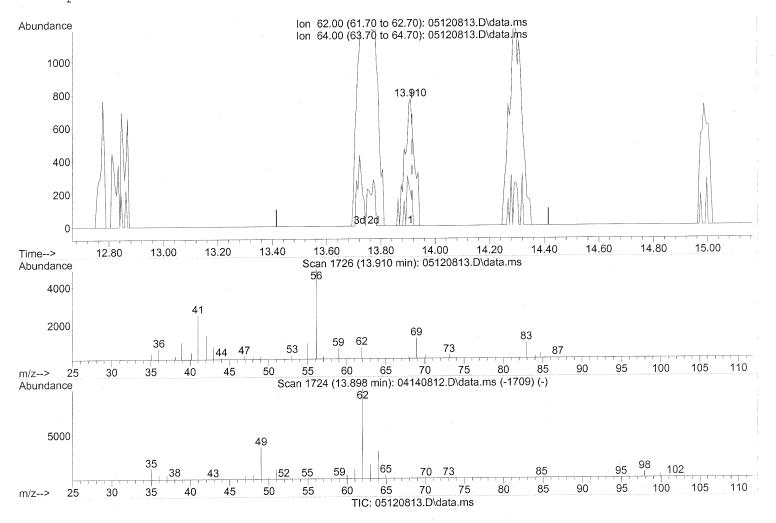
Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(36) 1,2-Dichloroethane (T)

13.910min (-0.006) 0.05ng

before

response 1882 Exp% Act% Ion 62.00 100 100 64.00 30.90 19.34 0.00 0.00 0.00 0.00 0.00

0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

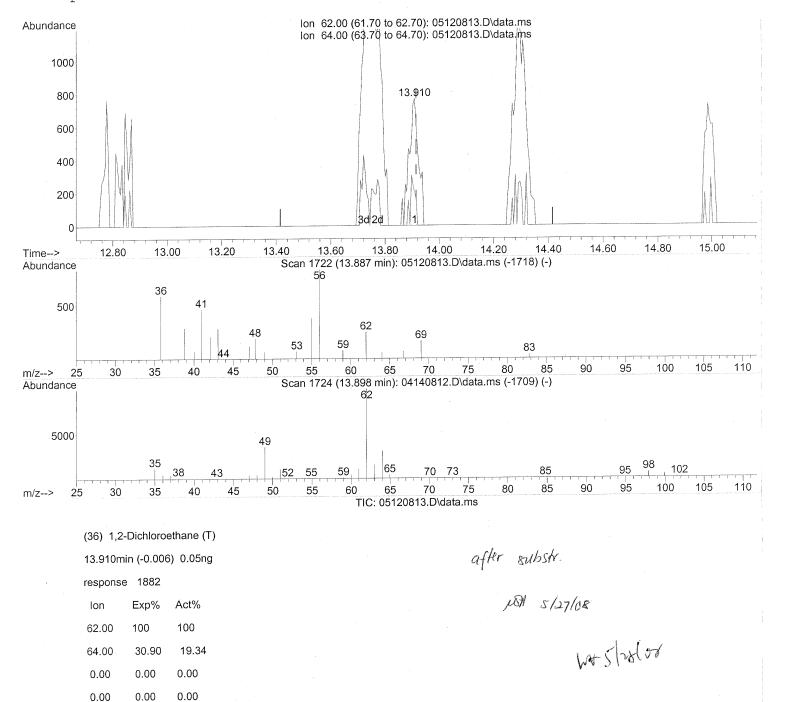
Ouant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

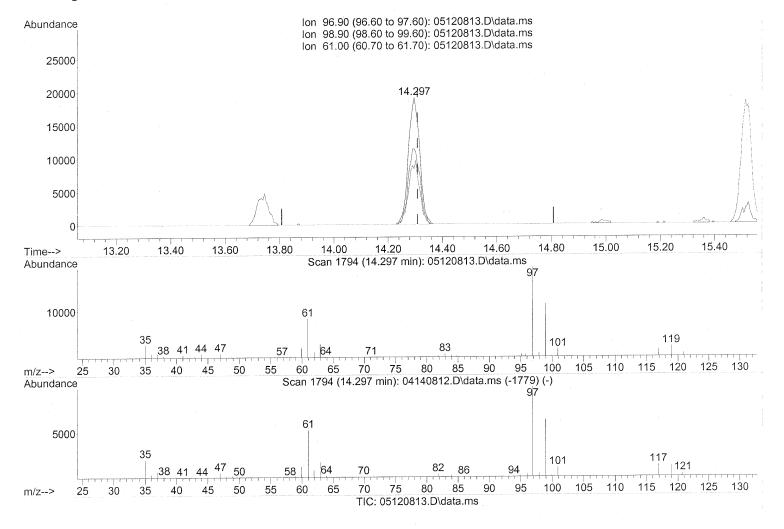
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



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

14.297min (-0.011) 1.66ng

response 55189

 Ion
 Exp%
 Act%

 96.90
 100
 100

 98.90
 63.40
 62.06

 61.00
 50.50
 48.09

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

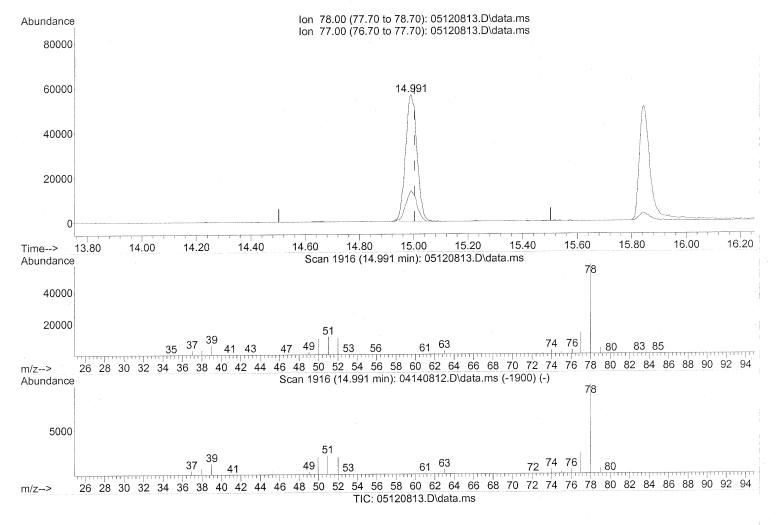
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(41) Benzene (T)

14.991min (-0.011) 1.97ng

response 166233

 Ion
 Exp%
 Act%

 78.00
 100
 100

 77.00
 23.50
 23.46

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File: 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

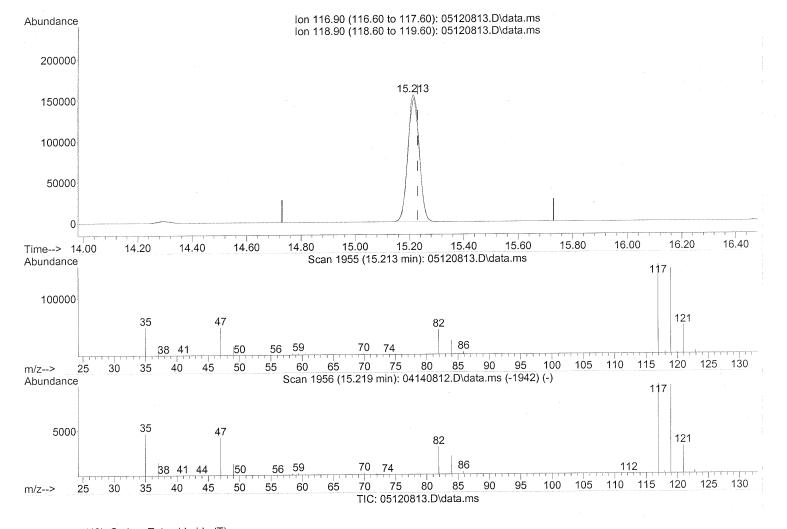
Ouant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(42) Carbon Tetrachloride (T)

15.213min (-0.017) 16.46ng

response 459542

 Ion
 Exp%
 Act%

 116.90
 100
 100

 118.90
 96.60
 94.54

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

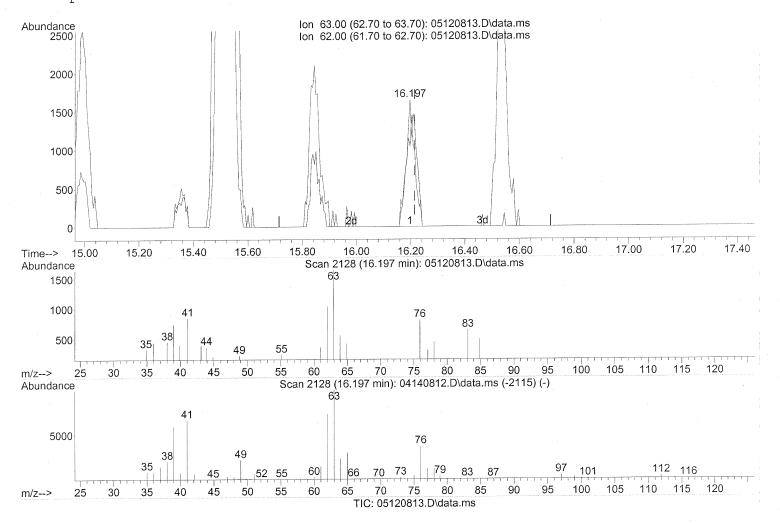
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(45) 1,2-Dichloropropane (T)

16.197min (-0.017) 0.17ng

response 4085

 Ion
 Exp%
 Act%

 63.00
 100
 100

 62.00
 71.30
 81.91

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

```
Data Path : J:\MS13\DATA\2008_05\12\
```

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

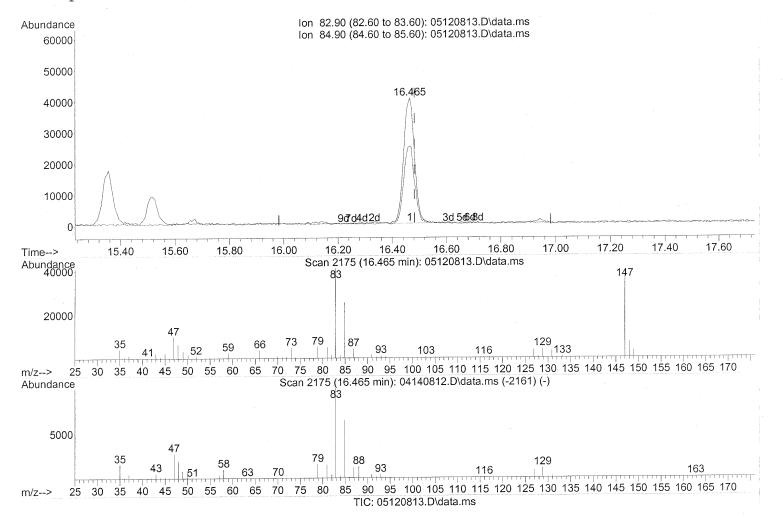
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(46) Bromodichloromethane (T)

16.465min (-0.017) 3.90ng

response 112031

lon	Exp%	Act%
82.90	100	100
84.90	63.70	65.22
0.00	0.00	0.00
0.00	0.00	0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

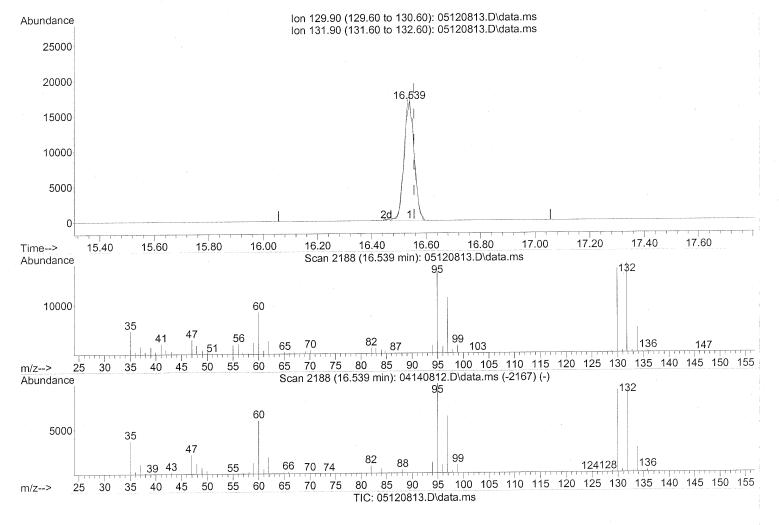
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(47) Trichloroethene (T)

16.539min (-0.017) 2.12ng

response 43944

 Ion
 Exp%
 Act%

 129.90
 100
 100

 131.90
 101.20
 100.34

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

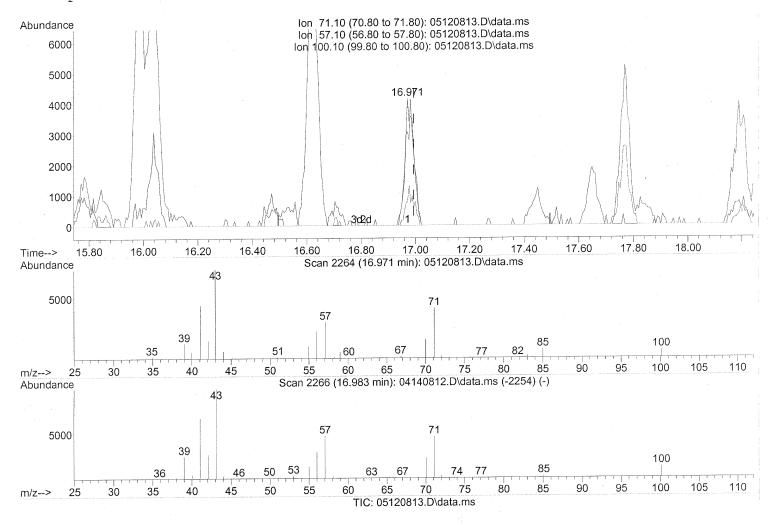
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(51) n-Heptane (T)

16.971min (-0.023) 0.39ng

response 9110

 Ion
 Exp%
 Act%

 71.10
 100
 100

 57.10
 124.90
 99.32#

 100.10
 30.10
 27.30

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

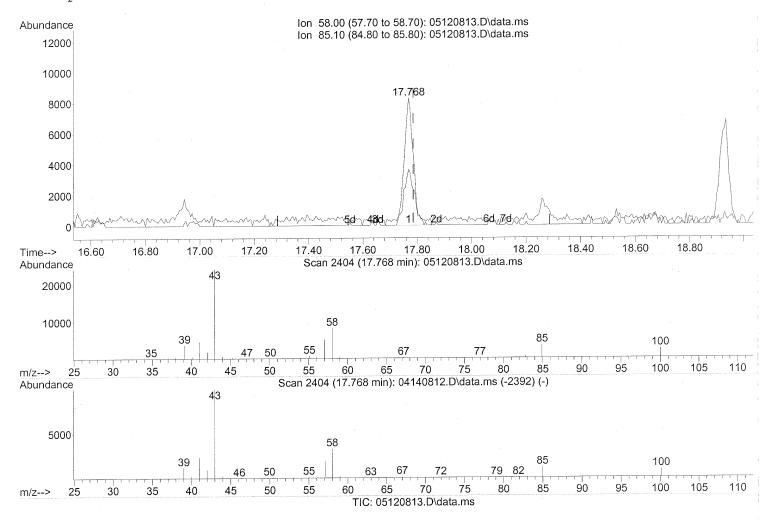
Quant Time: May 13 11:17:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



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

17.768min (-0.017) 0.82ng

response 18855

 Ion
 Exp%
 Act%

 58.00
 100
 100

 85.10
 30.10
 45.81

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

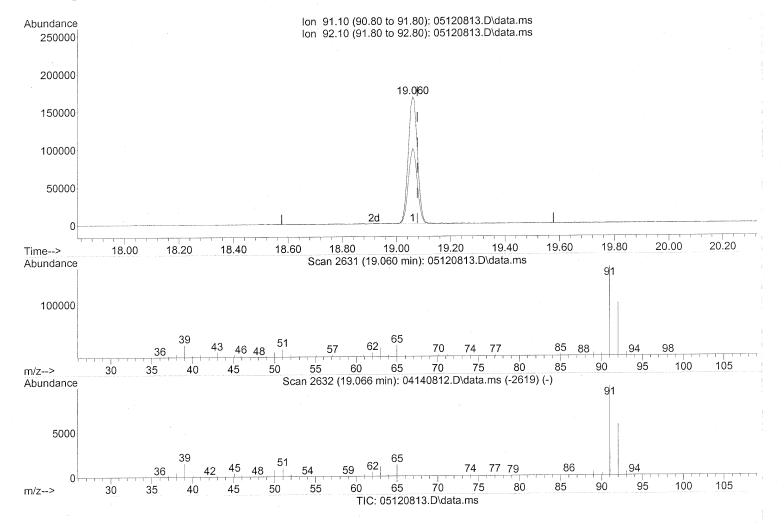
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(58) Toluene (T)

19.060min (-0.017) 4.43ng

response 396884

 Ion
 Exp%
 Act%

 91.10
 100
 100

 92.10
 59.80
 57.68

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

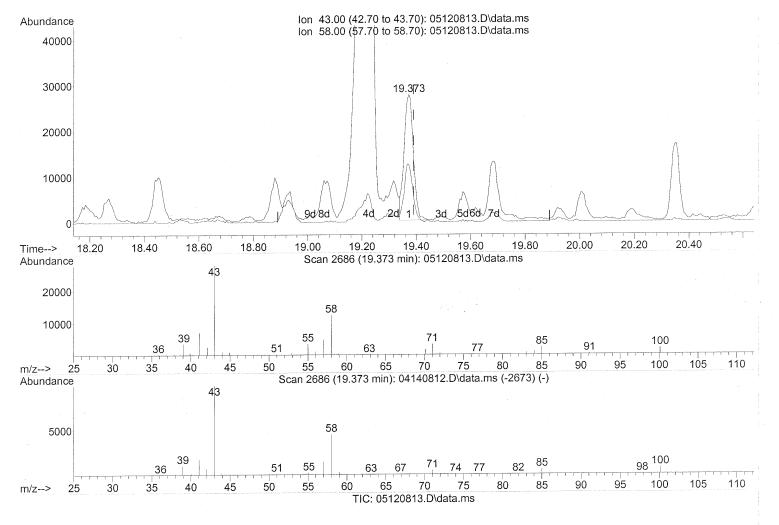
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(59) 2-Hexanone (T)

19.373min (-0.017) 0.96ng

response 64162

 Ion
 Exp%
 Act%

 43.00
 100
 100

 58.00
 61.70
 43.94

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

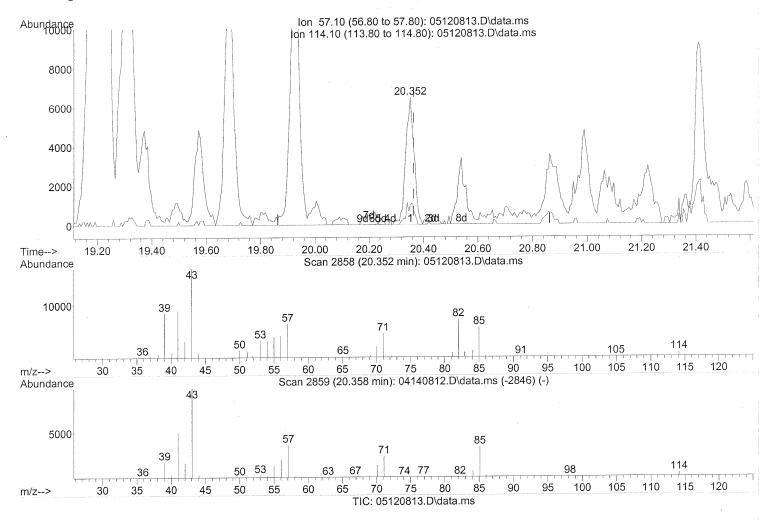
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(63) n-Octane (T)

20.352min (-0.011) 0.65ng

response 13727

 Ion
 Exp%
 Act%

 57.10
 100
 100

 114.10
 10.20
 15.68

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qealt)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

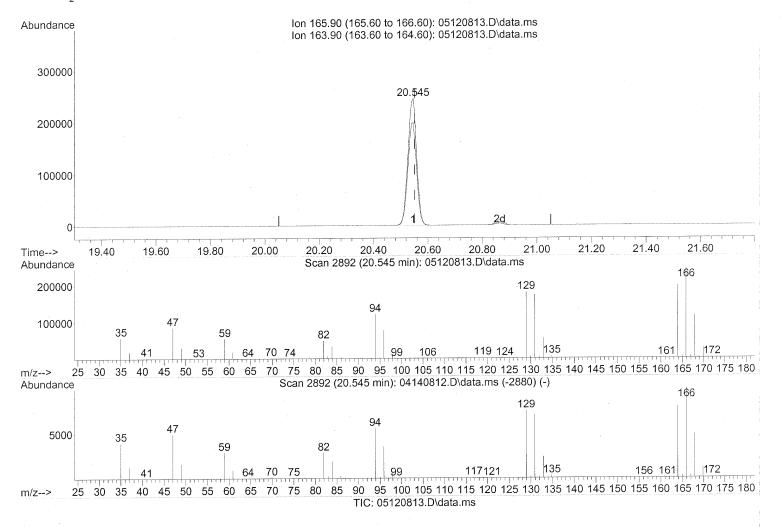
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(64) Tetrachloroethene (T)

20.545min (-0.006) 24.11ng

response 541280

 Ion
 Exp%
 Act%

 165.90
 100
 100

 163.90
 78.70
 80.46

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

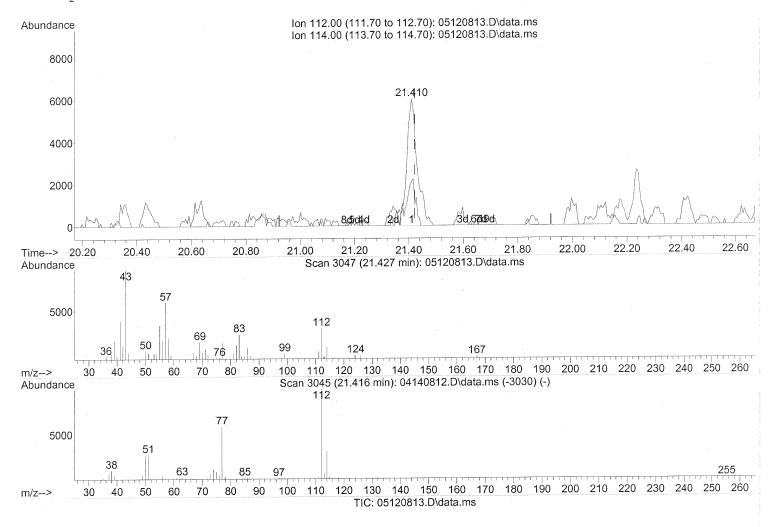
Quant Time: May 13 11:17:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(65) Chlorobenzene (T)

21.410min (-0.011) 0.28ng

response 15720

 Ion
 Exp%
 Act%

 112.00
 100
 100

 114.00
 32.40
 27.82

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

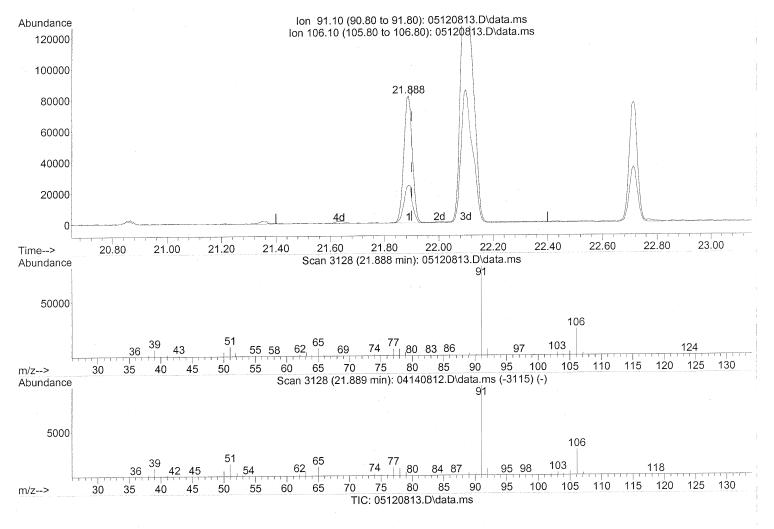
Quant Time: May 13 11:17:08 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(66) Ethylbenzene (T)

21.888min (-0.011) 1.77ng

response 177053

 Ion
 Exp%
 Act%

 91.10
 100
 100

 106.10
 34.10
 29.52

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

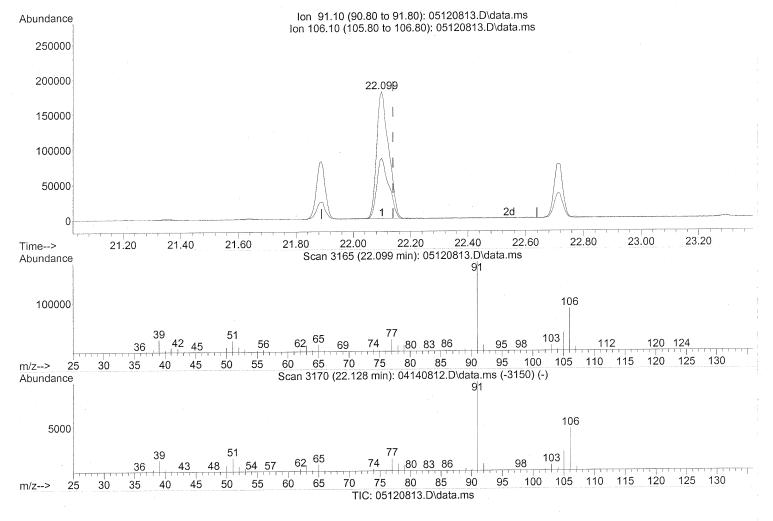
Quant Time: May 13 11:17:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



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

22.099min (-0.040) 7.88ng

response 527359

 Ion
 Exp%
 Act%

 91.10
 100
 100

 106.10
 54.60
 47.29

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

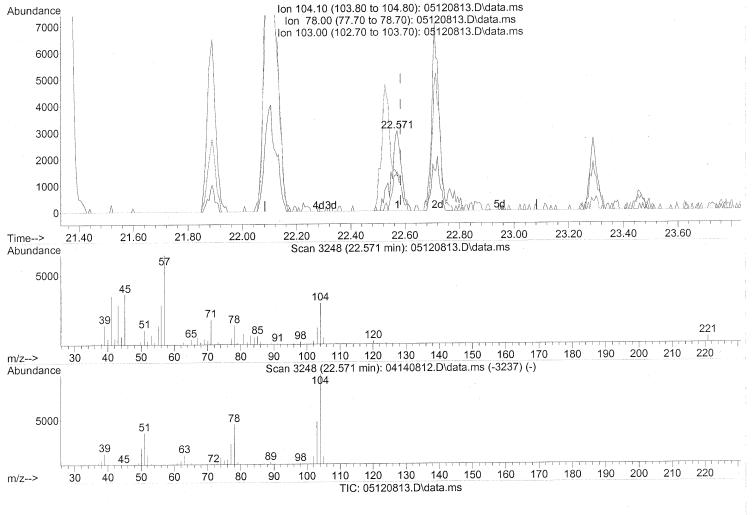
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(69) Styrene (T)

22.571min (-0.011) 0.13ng

response 7636

 Ion
 Exp%
 Act%

 104.10
 100
 100

 78.00
 39.40
 43.67

 103.00
 47.10
 0.00#

 0.00
 0.00
 0.00

Quantitation Report (Qeait)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

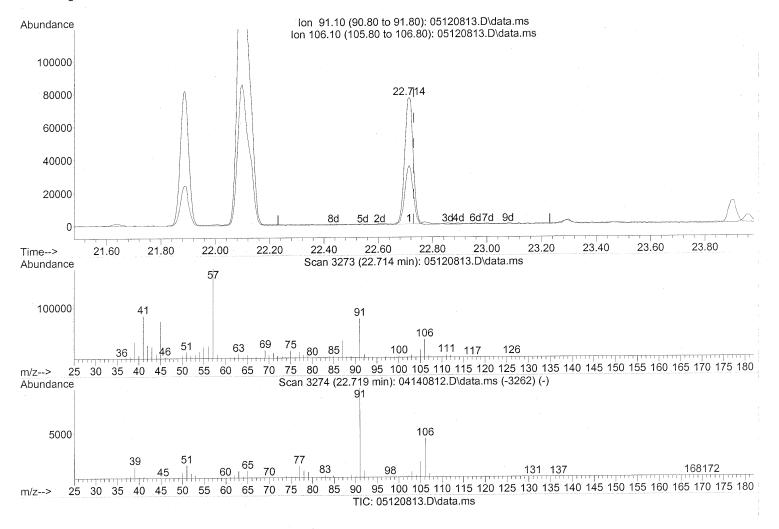
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(70) o-Xylene (T)

22.714min (-0.017) 2.33ng

response 168021

 Ion
 Exp%
 Act%

 91.10
 100
 100

 106.10
 50.50
 45.31

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File: 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

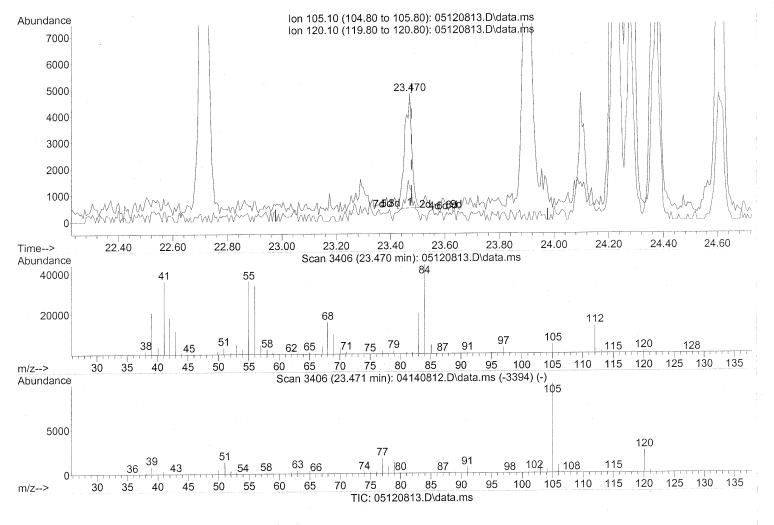
Quant Time: May 27 15:55:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(74) Cumene (T)

23.470min (-0.006) 0.09ng

response 7882

 Ion
 Exp%
 Act%

 105.10
 100
 100

 120.10
 26.30
 46.59#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

before blown up

:J:\MS13\DATA\2008 05\12\05120813.D

: RTB Operator

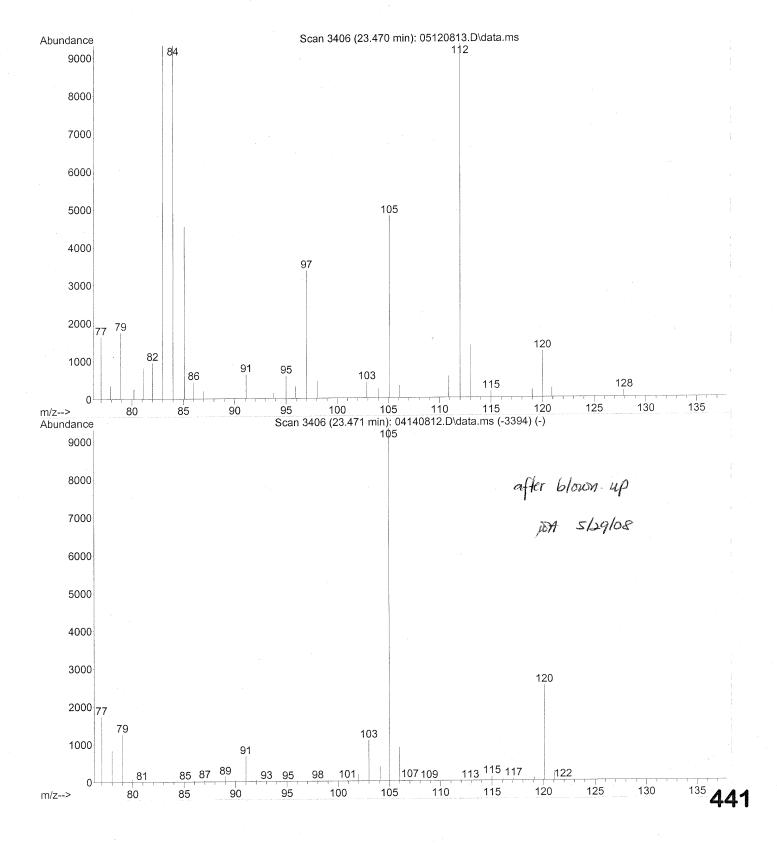
using AcqMethod T015.M 19:45 : 12 May 2008 Acquired

Instrument : GCMS13

Sample Name: P0801385-007 (1000mL)

Misc Info : ENSR SG40B-05D (-3.1, 3.5)

Vial Number: 8



```
Data Path : J:\MS13\DATA\2008_05\12\
```

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

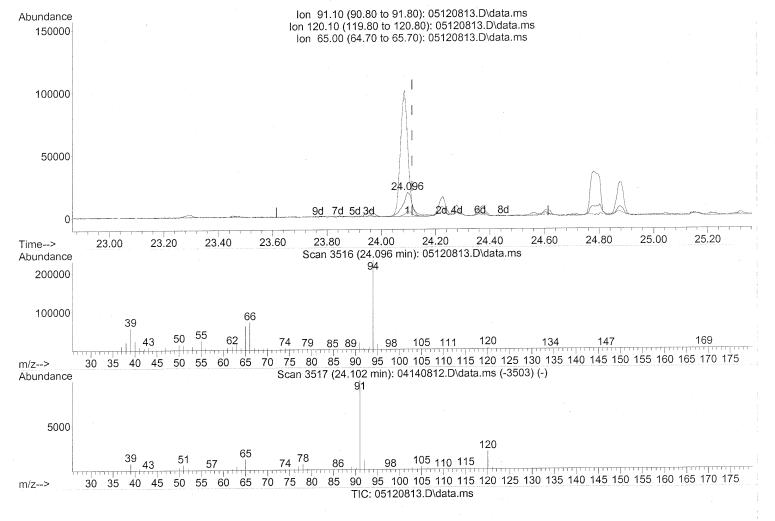
Ouant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(76) n-Propylbenzene (T)

24.096min (-0.017) 0.38ng

response 46131

 Ion
 Exp%
 Act%

 91.10
 100
 100

 120.10
 23.40
 20.40

 65.00
 11.40
 431.31#

 0.00
 0.00
 0.00

SIL blown up spectra

File :J:\MS13\DATA\2008_05\12\05120813.D

Operator : RTB

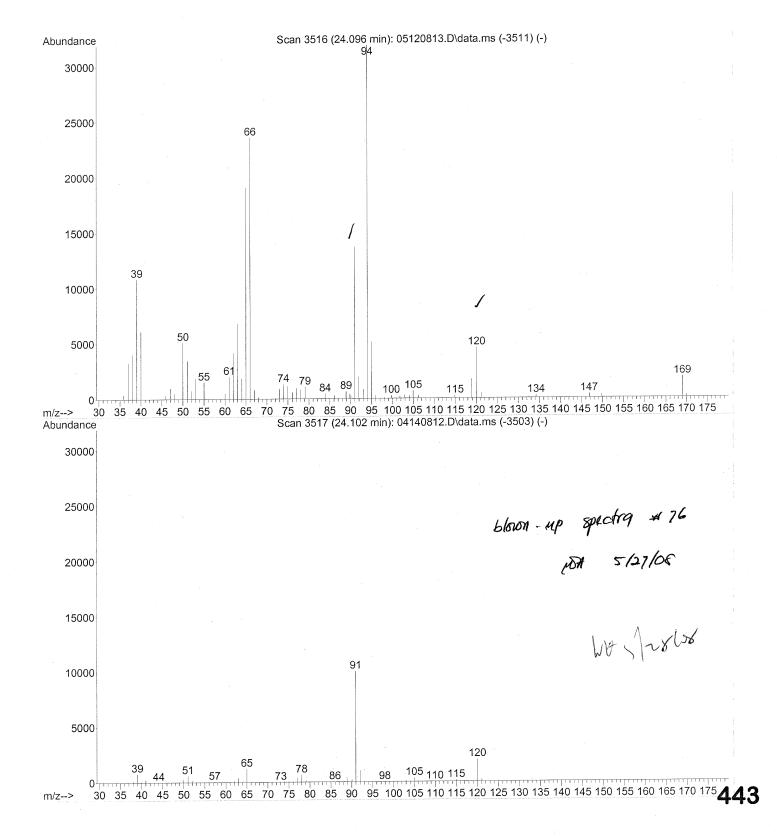
Acquired: 12 May 2008 19:45 using AcqMethod TO15.M

Instrument: GCMS13

Sample Name: P0801385-007 (1000mL)

Misc Info : ENSR SG40B-05D (-3.1, 3.5)

Vial Number: 8



Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

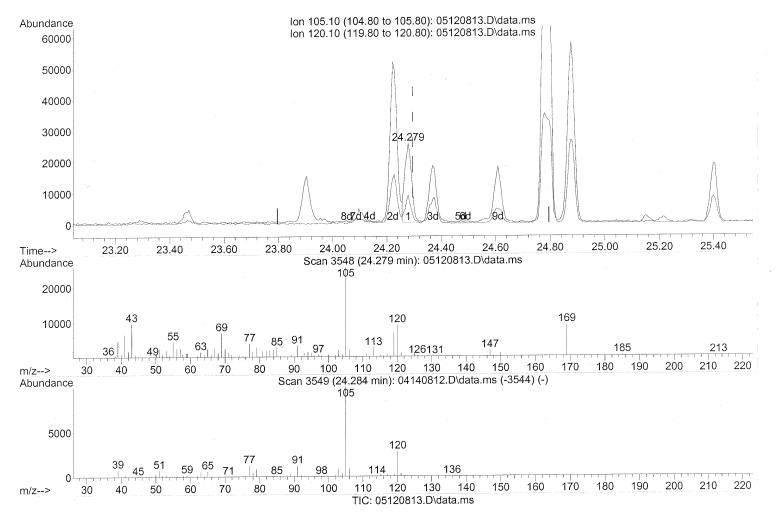
Quant Time: May 13 11:17:08 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(78) 4-Ethyltoluene (T)

24.279min (-0.017) 0.48ng

response 44219

 Ion
 Exp%
 Act%

 105.10
 100
 100

 120.10
 30.40
 32.16

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

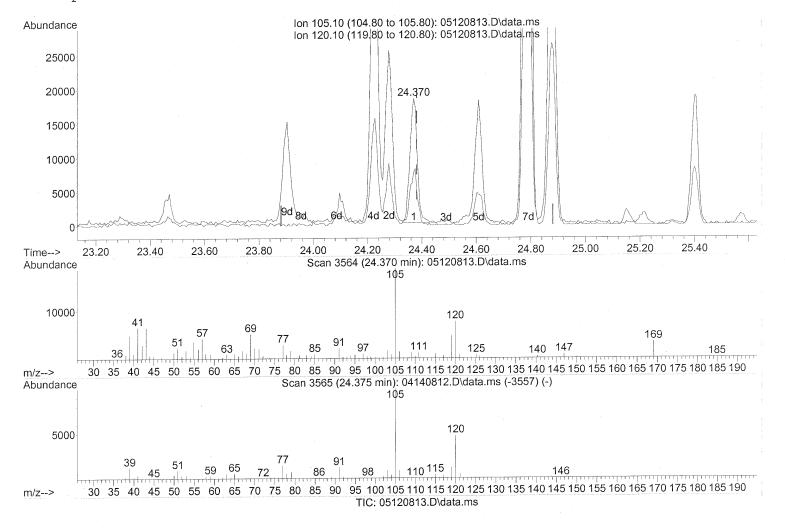
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



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

24.370min (-0.011) 0.42ng

response 34513

 Ion
 Exp%
 Act%

 105.10
 100
 100

 120.10
 49.40
 46.76

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

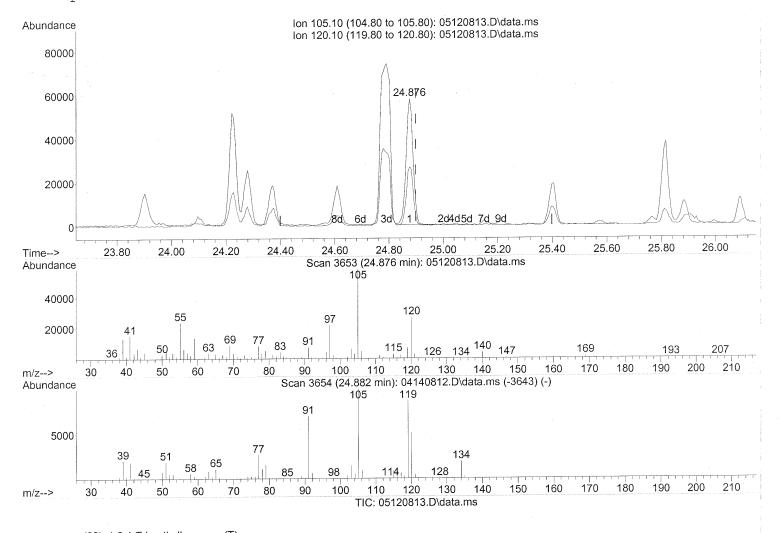
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



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

24.876min (-0.023) 1.13ng

response 104465

 Ion
 Exp%
 Act%

 105.10
 100
 100

 120.10
 54.40
 46.22

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

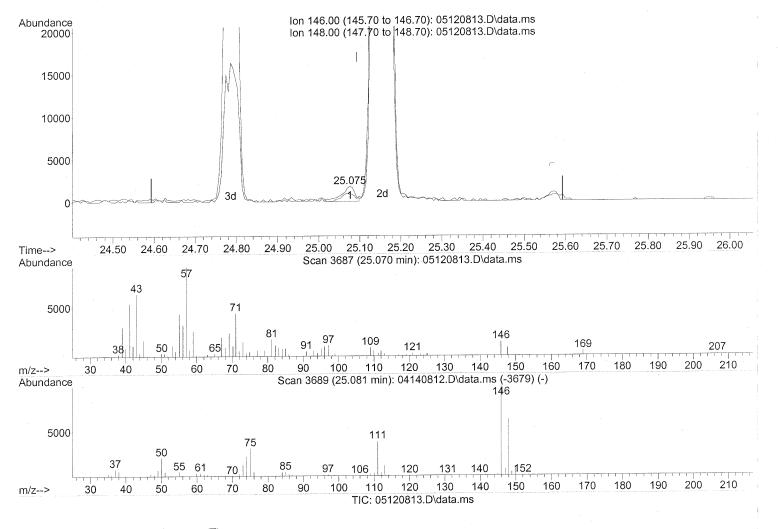
Quant Time: May 13 11:17:08 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(85) 1,3-Dichlorobenzene (T)

25.075min (-0.017) 0.08ng

response 3909

 Ion
 Exp%
 Act%

 146.00
 100
 100

 148.00
 64.00
 50.65

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

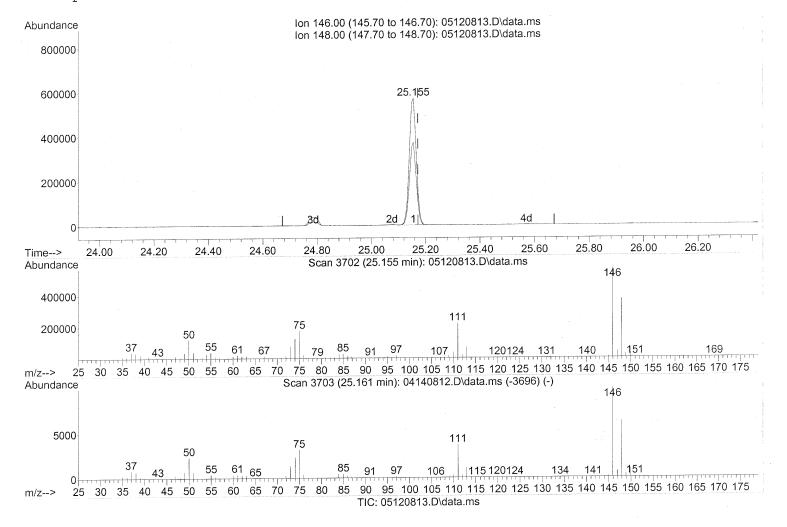
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(86) 1,4-Dichlorobenzene (T)

25.155min (-0.017) 21.21ng

response 1011524

 Ion
 Exp%
 Act%

 146.00
 100
 100

 148.00
 64.20
 63.52

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acg On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

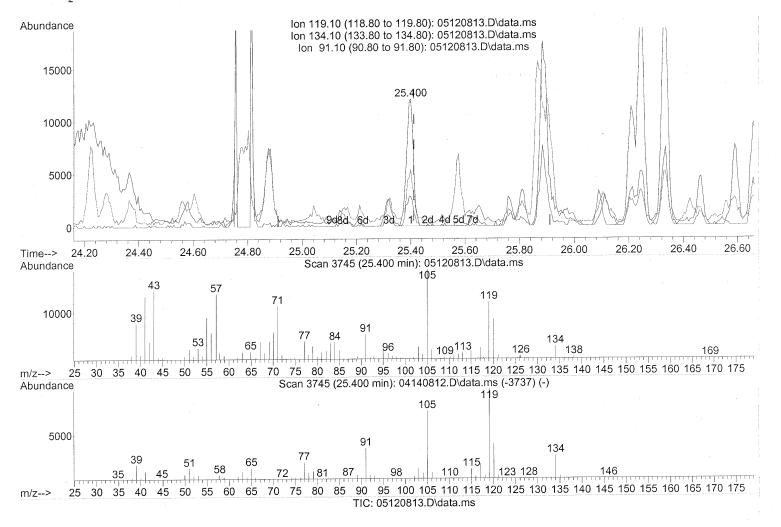
Ouant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(88) p-Isopropyltoluene (T)

25.400min (-0.011) 0.22ng

response 21080

 Ion
 Exp%
 Act%

 119.10
 100
 100

 134.10
 27.20
 25.39

 91.10
 27.10
 49.64#

 0.00
 0.00
 0.00

Quantitation Report (Qedit)

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120813.D

Acg On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

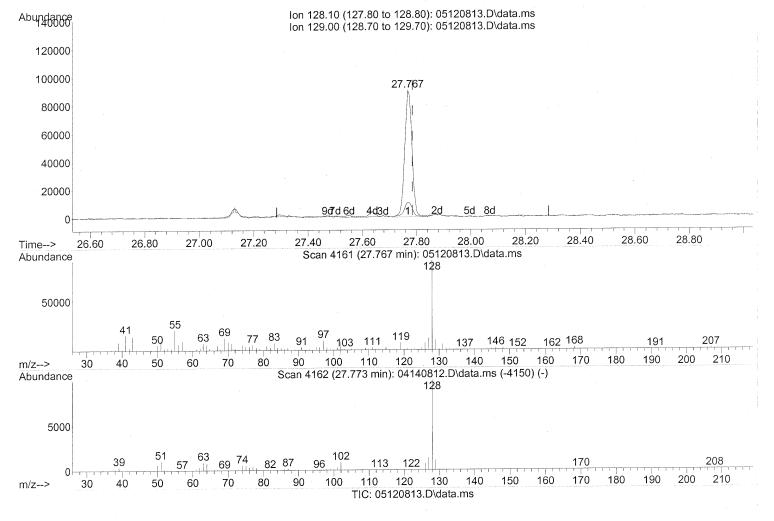
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(95) Naphthalene (T)

27.767min (-0.017) 1.65ng

response 167942

 Ion
 Exp%
 Act%

 128.10
 100
 100

 129.00
 11.60
 13.78

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Quantitation Report (Qealt)

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

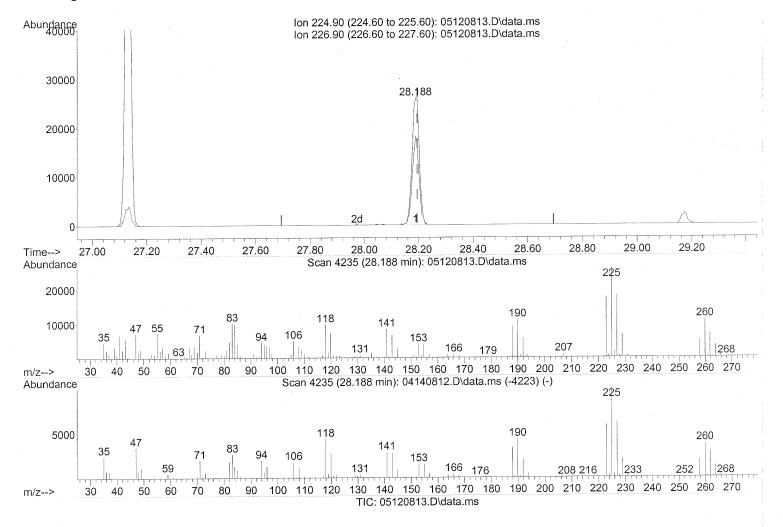
Quant Time: May 13 11:17:08 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



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

28.188min (-0.006) 2.37ng

response 48213

 Ion
 Exp%
 Act%

 224.90
 100
 100

 226.90
 62.80
 64.74

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

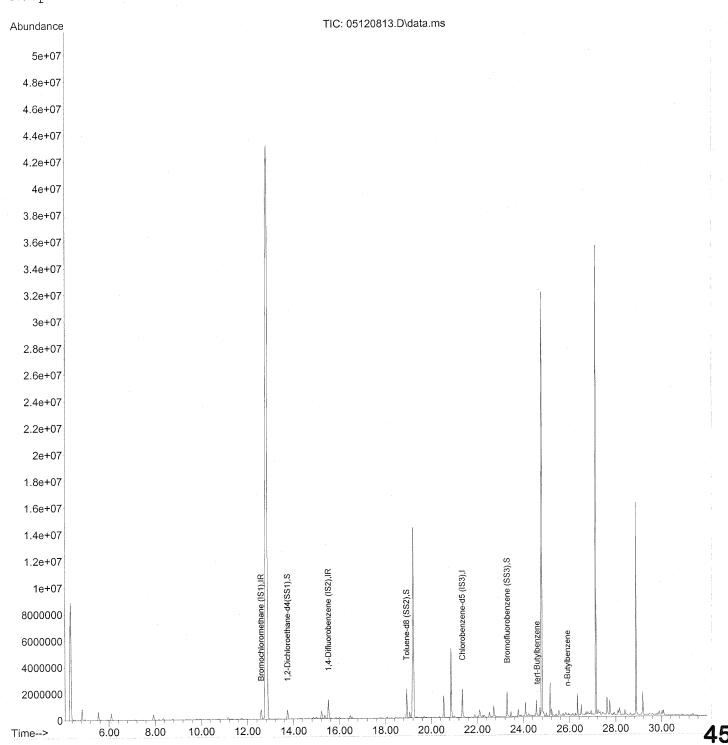
Quant Time: May 27 18:20:34 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via: Initial Calibration



Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 27 18:20:34 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.59 15.52 21.35	114	402064 1591654 796246	25.000 25.000 25.000	ng	-0.02 -0.01 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	98	1729092 Recov 621315	ery = 24.227 ery =	79. ng 96. ng	.64% 0.00 .92% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.58 25.90	119 > 91 	3763 16616m	0.043 0.177	-	Qvalue 99

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

Data File : 05120813.D

Acq On : 12 May 2008 19:45

Operator : RTB

Sample : P0801385-007 (1000mL)

Misc : ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

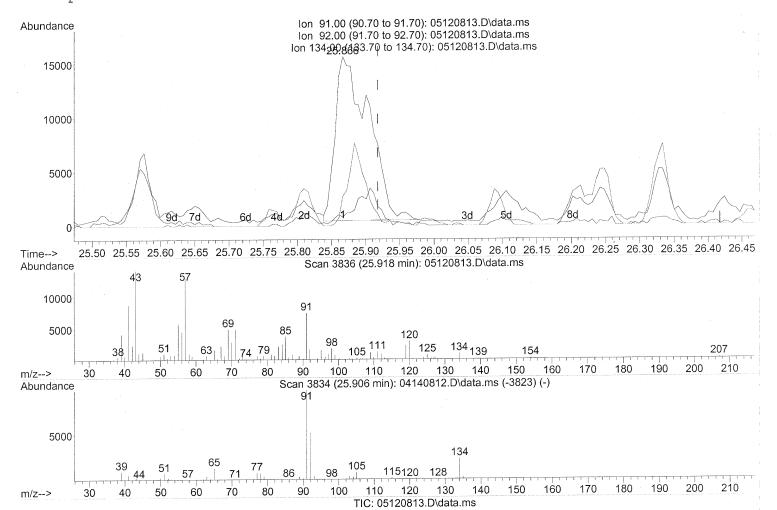
Quant Time: May 27 15:44:42 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.866min (-0.051) 0.55ng

response 51616

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 0.00#

 134.00
 28.80
 26.73

 0.00
 0.00
 0.00

interf. peak

Data File : 05120813.D

: 12 May 2008 Acq On

RTB Operator

: P0801385-007 (1000mL) Sample

: ENSR SG40B-05D (-3.1, 3.5) ALS Vial : 8 Sample Multiplier: 1

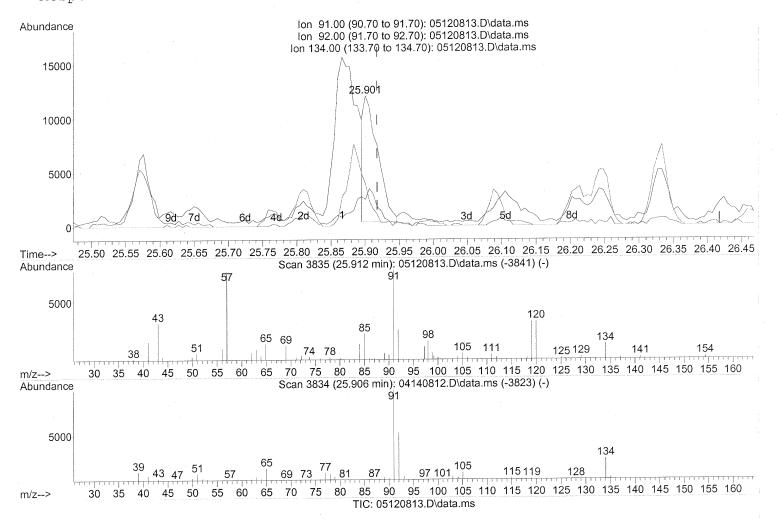
Quant Time: May 27 15:44:42 2008

Quant Method: J:\MS13\METHODS\S13041408.M

: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD Ouant Title

QLast Update : Mon Apr 28 10:06:00 2008

Response via: Initial Calibration



(8) n-Butylbenzene

25.901min (-0.017) 0.18ng m

response 16616

Exp% Act% lon 100 91.00 100 92.00 55.70 0.00# 134.00 28.80 83.02# 0.00 0.00 0.00

Mo interf. peak

jost = 127/08

WHSWOOD

Data File : 05120819.D

Acq On : 12 May 2008 11:51 pm

Operator : RTB

Sample : P0801385-007 DIL (25mL)
Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

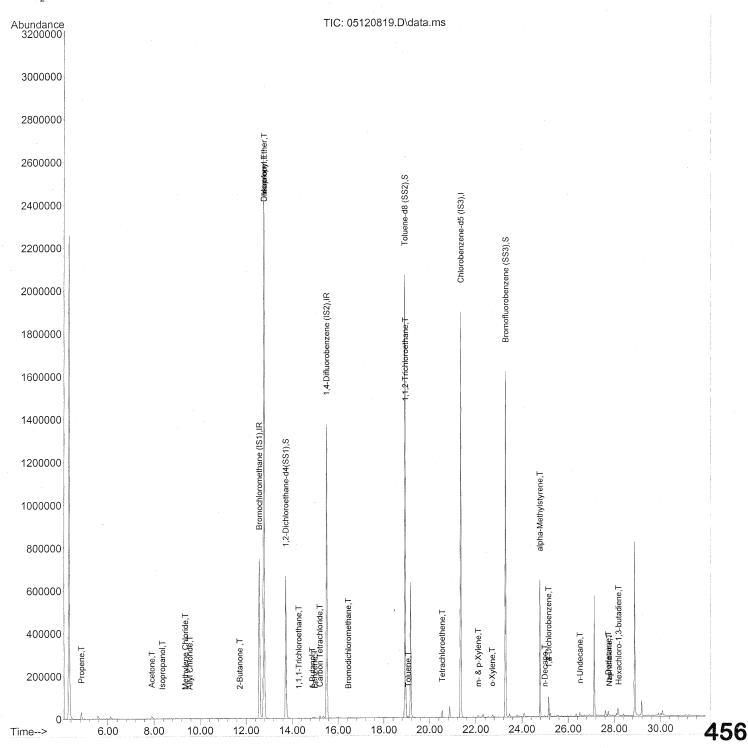
Quant Time: May 13 11:17:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



Data File: 05120819.D Acq On: 12 May 2008 11:51 pm

Operator : RTB

Sample : P0801385-007 DIL (25mL) : ENSR SG40B-05D (-3.1, 3.5) Misc ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 11:17:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	347681	25.000 ng	- C	.03
37) 1.4-Difluorobenzene (IS2)	15.51	114	1528388	25.000 ng	- C	.02
56) Chlorobenzene-d5 (IS3)	21.35	82	718463	25.000 ng	C	.00
System Monitoring Compounds						0.0
33) 1,2-Dichloroethane-d4(Spiked Amount 25.000	13.72	65	630959 Recov	22.629 ng ery = 90	ر - په 528 . (· 03
57) Toluene-d8 (SS2)	18.92	98	1646468	25.567 ng	- C	.01
Spiked Amount 25.000	00.00	1 17 4	Recov	ery = 102	286	
73) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	174		24.342 ng ery = 97		
Target Compounds					Qva	lue
2) Propene	4.86	42	4337	0.151 ng	#	1
3) Dichlorodifluoromethane	4.99	85	1856	N.D.		
4) Chloromethane	0.00	50	0	N.D.		
5) Freon 114	0.00		0			
0/ (211/2 0112 011	0.00					
7) 1,3-Butadiene	0.00	54	0			
8) Bromomethane	0.00	94	0			
9) Chloroethane	0.00					
10) Ethanol			707			
11) Acetonitrile	7.48					
12) Acrolein			412			
13) Acetone	7.90			0.301 ng	#	24
14) Trichlorofluoromethane	8.16		675			0.1
15) Isopropanol		45				91
16) Acrylonitrile	0.00					
, ,	0.00					
18) tert-Butanol	9.32	59	602	N.D.	#	57
19) Methylene Chloride 20) Allyl Chloride	9.36	84 41	931 1702	0.042 ng		61
		41	0		π	O I
21) Trichlorotrifluoroethane	9.79		2152			
22/ 33-13-1-	0.00	61	0	N.D.		
23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane	0.00	63	0	N.D.		
25) Methyl tert-Butyl Ether	0.00	73	0	N.D.		
26) Vinyl Acetate	0.00	86	0	N.D.		
27) 2-Butanone	11.72	72	988	0.073 ng	#	51
28) cis-1,2-Dichloroethene	0.00	61	0	N.D.	••	
29) Diisopropyl Ether	12.78	87	256281	14.462 ng	#	1
30) Ethyl Acetate	0.00	61	0	N.D.	••	
31) n-Hexane	12.68	57	896	N.D.		157
· · · · · · · · · · · · · · · · · · ·						457

Data File : 05120819.D

Acq On : 12 May 2008 11:51 pm

Operator : RTB

Sample : P0801385-007 DIL (25mL) : ENSR SG40B-05D (-3.1, 3.5) Misc ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 11:17:36 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	12.78	83	2576674	79.376 ng		99
34) Tetrahydrofuran	0.00	72	0 -	N.D.		
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.		
36) 1,2-Dichloroethane	13.72	62	797	N.D.		
38) 1,1,1-Trichloroethane	14.29	97	1479	0.046 ng		79
39) Isopropyl Acetate	0.00	61	0	N.D.		
40) 1-Butanol	14.88	56	3922		#	65
41) Benzene	14.98	78	5542			96
42) Carbon Tetrachloride	15.21	117	9390			93
43) Cyclohexane	15.41	84	108	N.D.		
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.		
45) 1,2-Dichloropropane	16.20	63	227	N.D.		
46) Bromodichloromethane	16.45	83	2313	0.084 ng		99
47) Trichloroethene	16.53	130	646	N.D.		
48) 1,4-Dioxane	0.00	88	0	N.D.		
49) Isooctane	16.61	57	306	N.D.		
50) Methyl Methacrylate	0.00	100	0	N.D.		
51) n-Heptane		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.		0
55) 1,1,2-Trichloroethane	18.94	97	150184		#	8
58) Toluene	19.06	91	8130	0.100 ng		97
59) 2-Hexanone	19.38	43	1126	N.D.		
60) Dibromochloromethane	0.00	129	0	N.D.		
61) 1,2-Dibromoethane	0.00	107	. 0	N.D.		
62) Butyl Acetate	20.35	43	948	N.D.		
63) n-Octane	0.00	57	0	N.D.		
64) Tetrachloroethene	20.54	166	10926	0.539 ng		98
65) Chlorobenzene	21.41	112	173	N.D.		
66) Ethylbenzene	21.88	91	3127	N.D.		0.0
67) m- & p-Xylene	22.10	91	9010	0.149 ng		96
68) Bromoform	0.00		0	N.D.		
69) Styrene	22.58	104	127	N.D.		88
70) o-Xylene	22.71	91	2993	0.046 ng		00
71) n-Nonane	22.98	43	1104	N.D.		
72) 1,1,2,2-Tetrachloroethane	22.35	83	71	N.D.		
74) Cumene	23.47	105	64 222	N.D. N.D.		
75) alpha-Pinene	23.97	93	222	N.D.		
76) n-Propylbenzene	24.10	91	636 1727	N.D. N.D.		
77) 3-Ethyltoluene	24.23	105 105	890	N.D.		
78) 4-Ethyltoluene	24.28 24.38	105	876	N.D.		
79) 1,3,5-Trimethylbenzene	24.30	T 0 D	3 / Q	14.1.		45

Data File : 05120819.D

Acq On : 12 May 2008 11:51 pm

Operator : RTB

Sample : P0801385-007 DIL (25mL)
Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 13 11:17:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration

Inte	rnal Standards	R.T.	QIon	Response	Conc Units	Dev	(Min)
80)	alpha-Methylstyrene	24.78	118	7858	0.202 ng	#	5
81)	2-Ethyltoluene	24.62	105	483	N.D.		
82)	1,2,4-Trimethylbenzene	24.88	105	1762	N.D.	•	
83)	n-Decane	24.99	57	2957	0.064 ng		95
84)	Benzyl Chloride	24.88	91	54	N.D.		
85)	1,3-Dichlorobenzene	25.16	146	39722	0.883 ng		99
86)	1,4-Dichlorobenzene	25.16	146	39722	0.923 ng		99
87)	sec-Butylbenzene	25.41	105	901	N.D.		
88)	p-Isopropyltoluene	25.39	119	445	N.D.		
	1,2,3-Trimethylbenzene	25.41	105	901	N.D.		
90)	1,2-Dichlorobenzene	25.16	146	39722	0.862 ng		100
91)	d-Limonene	25.58	68	1182	N.D.		
92)	1,2-Dibromo-3-Chloropr	0.00	157	0	N.D.		
93)	n-Undecane	26.50	57	6634	0.138 ng	#	62
94)	1,2,4-Trichlorobenzene	0.00	180	0	N.D.		
95)	Naphthalene	27.78	128	4236	0.046 ng		98
96)	n-Dodecane	27.74	57	7404	0.151 ng		81
97)	Hexachloro-1,3-butadiene	28.19	225	827	0.045 ng		77

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

Data File : 05120819.D

Acq On : 12 May 2008 23:51

Operator : RTB

Sample : P0801385-007 DIL (25mL)
Misc : ENSR SG40B-05D (-3.1, 3.5)
ALS Vial : 8 Sample Multiplier: 1

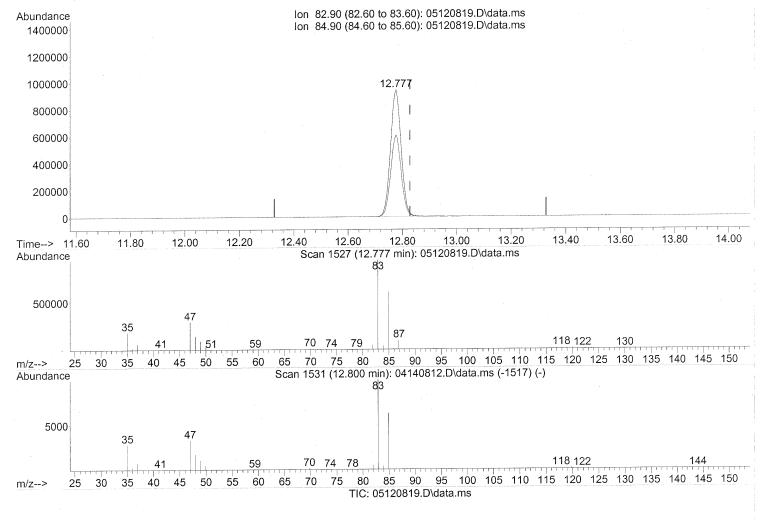
Quant Time: May 13 11:17:36 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(32) Chloroform (T)

12.777min (-0.051) 79.38ng

response 2576674

 Ion
 Exp%
 Act%

 82.90
 100
 100

 84.90
 64.70
 63.71

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 3

Client:

ENSR

Client Sample ID: Method Blank

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385 CAS Sample ID: P080512-MB

Test Code:

Analyst:

Test Notes:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Collected: NA

Date Received: NA Date Analyzed: 5/12/08

Volume(s) Analyzed:

1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS#	Compound	Result μg/m³	MRL μg/m³	MDL μg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	0.050	ND	0.10	0.010	
74-87-3	Chloromethane	ND	0.10	0.050	ND	0.048	0.024	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	ND	0.50	0.050	ND	0.072	0.0072	
75-01-4	Vinyl Chloride	ND	0.10	0.050	ND	0.039	0.020	
74-83-9	Bromomethane	ND	0.10	0.050	ND	0.026	0.013	
75-00-3	Chloroethane	ND	0.10	0.050	ND	0.038	0.019	
64-17-5	Ethanol	ND	5.0	0.050	ND	2.7	0.027	
67-64-1	Acetone	0.31	5.0	0.073	0.13	2.1	0.031	J
75-69-4	Trichlorofluoromethane	ND	0.10	0.050	ND	0.018	0.0089	
107-13-1	Acrylonitrile	ND	0.50	0.070	ND	0.23	0.032	
75-35-4	1,1-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	had 1960-1960 had a had 1.11 (1960 had 2 mile man a common a common a com
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	ND	0.50	0.074	ND	0.17	0.024	
75-09-2	Methylene Chloride	ND	0.50	0.050	ND	0.14	0.014	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.10	0.050	ND	0.032	0.016	
76-13-1	Trichlorotrifluoroethane	ND	0.10	0.056	ND	0.013	0.0073	
75-15-0	Carbon Disulfide	ND	0.50	0.12	ND	0.16	0.039	
156-60-5	trans-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
75-34-3	1,1-Dichloroethane	ND	0.10	0.050	ND	0.025	0.012	
1634-04-4	Methyl tert-Butyl Ether	ND	0.10	0.050	ND	0.028	0.014	
108-05-4	Vinyl Acetate	ND	5.0	0.16	ND	1.4	0.045	
78-93-3	2-Butanone (MEK)	ND	0.50	0.050	ND	0.17	0.017	Proposition of the Control of the Co
156-59-2	cis-1,2-Dichloroethene	ND	0.10	0.050	ND	0.025	0.013	
108-20-3	Diisopropyl Ether	ND	0.50	0.059	ND	0.12	0.014	
67-66-3	Chloroform	ND	0.10	0.059	ND ND	0.020	0.012	

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

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

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

P0801385_TO15_0805281357_SS.xls - MBlank

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS Page 2 of 3

Client:

ENSR

Client Sample ID: Method Blank

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-MB

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Received: NA

Volume(s) Analyzed:

Date Collected: NA

Date Analyzed: 5/12/08

1.00 Liter(s)

Test Notes:

Analyst:

Canister Dilution Factor: 1.00

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

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

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

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 3 of 3

Client:

ENSR

CAS Project ID: P0801385

Client Sample ID: Method Blank

CAS Sample ID: P080512-MB

Client Project ID: Phase B Soil Gas / 04020-023-4311

Test Code:

EPA TO-15

Date Collected: NA

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: NA

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Canister Dilution Factor: 1.00

CAS#	Compound	Result μg/m³	MRL μg/m³	MDL μg/m³	Result ppbV	MRL ppbV	MDL ppbV	Data Qualifier
100-41-4	Ethylbenzene	ND	$\frac{\mu g/m}{0.50}$	0.062	ND	0.12	0.014	X
179601-23-1	m,p-Xylenes	ND	0.50	0.13	ND	0.12	0.030	
75-25-2	Bromoform	ND	0.50	0.076	ND	0.048	0.0074	
100-42-5	Styrene	ND	0.50	0.076	ND	0.12	0.018	
95-47-6	o-Xylene	ND	0.50	0.063	ND	0.12	0.015	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.10	0.064	ND	0.015	0.0093	
98-82-8	Cumene	ND	0.50	0.056	ND	0.10	0.011	
103-65-1	n-Propylbenzene	ND	0.50	0.052	ND	0.10	0.011	
622-96-8	4-Ethyltoluene	ND	0.50	0.057	ND	0.10	0.012	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	0.060	ND	0.10	0.012	
98-83-9	alpha-Methylstyrene	ND	0.50	0.073	ND	0.10	0.015	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	0.069	ND	0.10	0.014	
100-44-7	Benzyl Chloride	ND	0.10	0.086	ND	0.019	0.017	
541-73-1	1,3-Dichlorobenzene	ND	0.10	0.062	ND	0.017	0.010	
106-46-7	1,4-Dichlorobenzene	ND	0.10	0.056	ND	0.017	0.0093	
135-98-8	sec-Butylbenzene	ND	0.50	0.058	ND	0.091	0.011	
99-87-6	4-Isopropyltoluene (p-Cymene)	ND	0.50	0.065	ND	0.091	0.012	
95-50-1	1,2-Dichlorobenzene	ND	0.10	0.066	ND	0.017	0.011	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	0.076	ND	0.052	0.0079	
120-82-1	1,2,4-Trichlorobenzene	ND	0.10	0.076	ND	0.013	0.010	
91-20-3	Naphthalene	ND	0.20	0.074	ND	0.038	0.014	
87-68-3	Hexachlorobutadiene	ND	0.10	0.090	ND	0.0094	0.0084	
98-06-6	tert-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	
104-51-8	n-Butylbenzene	ND	0.20	0.050	ND	0.036	0.0091	

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

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

Verified By:	CH	Date: 5/28/08	_463
-		TO15SCAN.XLT - Tronox - Henderson - PageNo	0.:

Data File : 05120803.D

Acq On : 12 May 2008 11:00 am

Operator : RTB

Sample : TO-15 Method Blank (1.0L)

Misc : S20-04300802

ALS Vial : 4 Sample Multiplier: 1

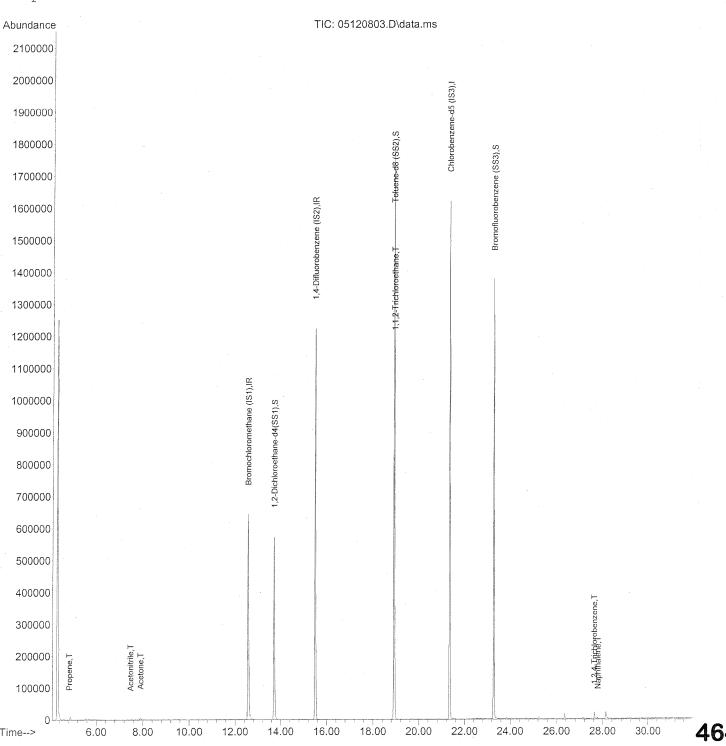
Quant Time: May 12 11:49:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



Data File : 05120803.D

Acq On : 12 May 2008 11:00 am

Operator : RTB

Sample : TO-15 Method Blank (1.0L)

: S20-04300802 Mísc

ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 11:49:48 2008
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

R13041408.M Mon May 12 11:50:22 2008

Internal Standards	R.T.	QIon	Response	Conc Unit	s Dev(Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)		114	1324198	25.000 ng 25.000 ng 25.000 ng	-0.02
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000	18.92	65 98 174	1418776	ery = 9 26.208 ng ery = 10	0.04% / -0.01 4.84% /
73) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	1/4		ery = 9	
Target Compounds 2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol 16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide 23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether 26) Vinyl Acetate 27) 2-Butanone 28) cis-1,2-Dichloroethene 29) Diisopropyl Ether 30) Ethyl Acetate	9.78 0.00 0.00 0.00 0.00 0.00 0.00	64 45 41 56 101 45 58 101 45 59 84 41 151 61 87 61 87	0 0 0 0 0 0 0 569 1844 63 5109 63 52 0 0 74 306 144 0 1338 0 0	N.D. N.D. N.D. N.D. N.D. N.D. N.D. N.D.	Qvalue # 1 # 26 Y/S 5 100 par s/28/08
31) n-Hexane	0.00	57	0	N.D.	465

Page: 1

Data File : 05120803.D

: 12 May 2008 11:00 am Acq On

Operator : RTB

: TO-15 Method Blank (1.0L) Sample

Misc : S20-04300802

ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 11:49:48 2008
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards		QIon	Response	Conc Units	Dev(Min)
	0 00	83	0	N.D.	
32) Chloroform 34) Tetrahydrofuran 35) Ethyl tert-Butyl Ether 36) 1,2-Dichloroethane 38) 1,1,1-Trichloroethane 39) Isopropyl Acetate 40) 1-Butanol 41) Benzene	0.00	72	0	N.D.	
35) Ethyl tert-Butyl Ether	0.00	87	0	N.D.	
36) 1,2-Dichloroethane	13.72	62	267	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	85	N.D.	
41) Benzene	14.98	78	449	N.D.	
42) Carbon recracimorade	0.00	11/	U	N.D.	
43) Cyclohexane	15.46	84	79	N.D.	
44) tert-Amyl Methyl Ether	0.00	73	0	N.D.	
45) 1,2-Dichloropropane	0.00	63	0	N.D.	
46) Bromodichloromethane	0.00	83	0 4	N.D.	
47) Trichloroethene	0.00 16.54	130	0	N.D.	
48) 1,4-Dioxane	16.54	88	69	N.D.	
49) Isooctane	0.00	57	0	N.D.	
50) Methyl Methacrylate	0.00	100	0	N.D.	
51) n-Heptane 52) cis-1,3-Dichloropropene 53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene 55) 1,1,2-Trichloroethane	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.	0
54) trans-1,3-Dichloropropene	0.00	75	0	N.D. \	
55) I,I,2-Trichloroethane	18.94 19.07	9 /	128854	-7.617 ng (V	1 # 8
58) Toluene	19.07	9 <u>1</u>	908	N.D.	
59) 2-Hexanone	19.42	43	222	N.D.	
60) Dibromochloromethane	0.00	107	0	N.D.	
61) 1,2-Dibromoethane	20.35	107		N.D.	
	20.35	43	127 76	N.D. N.D.	
63) n-Octane				N.D.	
64) Tetrachloroethene	21.36	110	219	N.D.	
65) Chlorobenzene	21.90	01	299	N.D.	
66) Ethylbenzene 67) m- & p-Xylene	22.13	91	492	N.D.	
68) Bromoform	0.00	173	0.	N.D.	
69) Styrene	22.58		214	N.D.	
70) o-Xylene	22.74	91	799	N.D.	
71) n-Nonane	22.97	43	315	N.D.	
72) 1,1,2,2-Tetrachloroethane	22.70	83	139	N.D.	
74) Cumene	23.46	105	513	N.D.	
75) alpha-Pinene	23.86	93	110	N.D.	
76) n-Propylbenzene	24.11	91	745	N.D.	
77) 3-Ethyltoluene	24.22	105	666	N.D.	
78) 4-Ethyltoluene	24.28	105	539	N.D.	
79) 1,3,5-Trimethylbenzene	24.39	105	1343	N.D.	AC
-					46

Page: 2

Data File : 05120803.D

Acq On : 12 May 2008 11:00 am

Operator : RTB

: TO-15 Method Blank (1.0L)

Misc : S20-04300802

ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 11:49:48 2008
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene	0.00	118	0	N.D.	
81) 2-Ethyltoluene	24.63				
82) 1,2,4-Trimethylbenzene	24.89	105	744	N.D.	
83) n-Decane	24.79	57	65	N.D.	
84) Benzyl Chloride	25.06	91	813	N.D.	
85) 1,3-Dichlorobenzene	25.10	146	156	N.D.	
86) 1,4-Dichlorobenzene	25.16	146	1143	N.D.	
87) sec-Butylbenzene	25.30	105	66	N.D.	
88) p-Isopropyltoluene	25.14	119	58	N.D.	
89) 1,2,3-Trimethylbenzene	25.40	105	138	N.D.	
90) 1,2-Dichlorobenzene	25.57	146	53	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	26.43	57	126	N.D.	
94) 1,2,4-Trichlorobenzene	27.64	180	1009	-0.042 ng	87
95) Naphthalene	27.79	128	5444	-0.071 ng	90
•	27.75	57	144	N.D.	
97) Hexachloro-1,3-butadiene	28.18	225	52	N.D.	

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

Data File : 05120803.D

Acq On : 12 May 2008 11:00

Operator : RTB

Sample : TO-15 Method Blank (1.0L)

Misc : S20-04300802

ALS Vial: 4 Sample Multiplier: 1

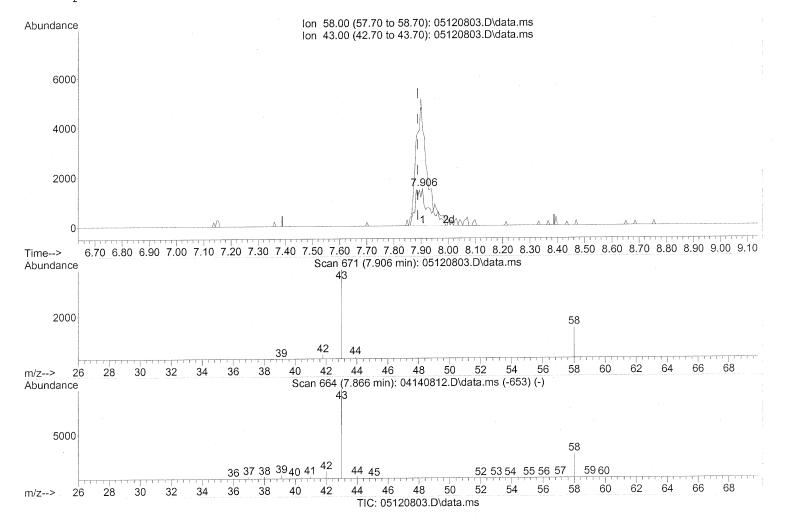
Quant Time: May 12 11:49:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(13) Acetone (T)

7.906min (+0.018) 0.31ng

response 5109

 Ion
 Exp%
 Act%

 58.00
 100
 100

 43.00
 283.10
 283.72

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

Data File : 05120803.D

Acq On : 12 May 2008 11:00

Operator : RTB

Sample : TO-15 Method Blank (1.0L)

Misc : S20-04300802

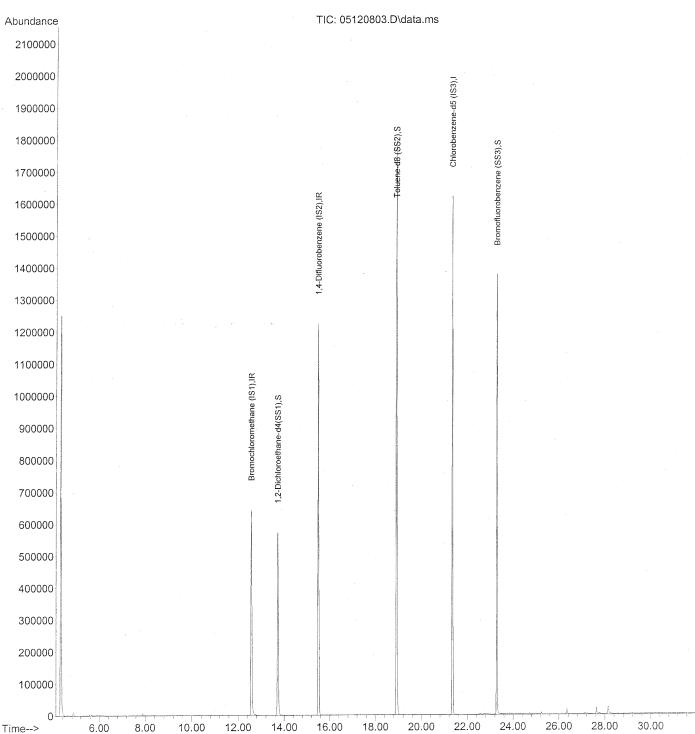
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 27 15:44:24 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120803.D

Acq On : 12 May 2008 11:00

Operator : RTB

Sample : TO-15 Method Blank (1.0L)

: S20-04300802 Misc

ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 27 15:44:24 2008

Quant Method: J:\MS13\METHODS\S13041408.M Quant Title: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via: Initial Calibration

s Dev(Mın)
-0.03 -0.02 -0.01
-0.03
-0.01 4.84%
0.00 9.92%
Qvalue

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

Page: 1

QC SUMMARY FORMS

SURROGATE SPIKE RECOVERY RESULTS Page 1 of 1

Client:

ENSR

Client Project ID:

Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister(s)

Date(s) Analyzed: 5/12/08

Date(s) Collected: 5/9 - 5/10/08

Date(s) Received: 5/12/08

Test Notes:

		1,2-Dichlor	oethane-d4	Tolue	ne-d8	Bromofluo	robenzene	
Client Sample ID	CAS Sample ID	%	Acceptance	%	Acceptance	%	Acceptance	Data
		Recovered	Limits	Recovered	Limits	Recovered	Limits	Qualifier
Method Blank	P080512-MB	90	70-130	105	70-130	100	70-130	
Lab Control Sample	P080512-LCS	86	70-130	100	70-130	100	70-130	
SG64B-05	P0801385-001	87	70-130	101	70-130	99	70-130	
SG41B-20	P0801385-002	89	70-130	93	70-130	103	70-130	
SG41B-20D	P0801385-003	88	70-130	98	70-130	103	70-130	
SG43B-05	P0801385-004	87	70-130	101	70-130	100	70-130	
SG43B-05	P0801385-004DUP	86	70-130	101	70-130	102	70-130	
SG38B-20	P0801385-005	88	70-130	100	70-130	99	70-130	
SG40B-05	P0801385-006	81	70-130	100	70-130	101	70-130	
SG40B-05D	P0801385-007	80	70-130	97	70-130	101	70-130	

Verified By:_ Date: 5/28/08 TO15SCAN.XLT - Tronox - Henderson - PageNo.:

LABORATORY CONTROL SAMPLE SUMMARY Page 1 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08 Volume(s) Analyzed:

NA Liter(s)

Test Notes:

					CAS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
	•	ng	ng	-	Limits	Qualifier
75-71-8	Dichlorodifluoromethane (CFC 12)	25.5	22.3	87	69-117	
74-87-3	Chloromethane	24.5	19.1	78	53-131	
76-14-2	1,2-Dichloro-1,1,2,2- tetrafluoroethane (CFC 114)	26.0	23.4	90	58-133	
75-01-4	Vinyl Chloride	24.8	20.9	84	61-127	
74-83-9	Bromomethane	25.0	23.8	95	67-124	
75-00-3	Chloroethane	25.0	23.9	96	69-123	
64-17-5	Ethanol	23.8	19.8	83	56-137	
67-64-1	Acetone	26.8	25.5	95	63-116	
75-69-4	Trichlorofluoromethane	26.3	24.1	92	71-120	
107-13-1	Acrylonitrile	25.5	24.9	98	74-129	
75-35-4	1,1-Dichloroethene	27.8	25.9	93	77-116	
75-65-0	2-Methyl-2-Propanol (tert-Butyl Alcohol)	25.8	25.2	98	35-141	
75-09-2	Methylene Chloride	27.8	23.6	85	71-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	26.8	29.4	110	75-127	
76-13-1	Trichlorotrifluoroethane	27.8	25.0	90	63-129	
75-15-0	Carbon Disulfide	25.0	22.5	90	72-122	Shirt and the first state of the state of th
156-60-5	trans-1,2-Dichloroethene	26.5	23.7	89	74-118	
75-34-3	1,1-Dichloroethane	26.8	23.7	88	74-118	
1634-04-4	Methyl tert-Butyl Ether	26.8	23.7	88	72-119	
108-05-4	Vinyl Acetate	25.3	29.8	118	32-163	
78-93-3	2-Butanone (MEK)	27.0	26.4	98	71-122	
156-59-2	cis-1,2-Dichloroethene	27.0	23.3	86	74-117	
108-20-3	Diisopropyl Ether	26.3	23.0	87	70-131	
67-66-3	Chloroform	29.8	27.0	91	72-113	

Verified By: Date: 5/28/08 64 TO15SCAN.XLT - Tronox - Henderson - PageNo.:

LABORATORY CONTROL SAMPLE SUMMARY Page 2 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

NA Liter(s)

Test	Notes:

					CAS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
		ng	ng		Limits	Qualifier
637-92-3	Ethyl tert-Butyl Ether	26.0	24.2	93	74-123	
107-06-2	1,2-Dichloroethane	26.3	21.8	83	72-117	
71-55-6	1,1,1-Trichloroethane	26.8	25.2	94	78-114	
71-43-2	Benzene	27.0	24.6	91	73-111	
56-23-5	Carbon Tetrachloride	26.0	26.0	100	78-126	
994-05-8	tert-Amyl Methyl Ether	26.0	25.1	97	81-118	
78-87-5	1,2-Dichloropropane	26.5	23.4	88	78-117	
75-27-4	Bromodichloromethane	27.8	25.8	93	77-120	
79-01-6	Trichloroethene	27.3	25.9	95	80-116	
123-91-1	1,4-Dioxane	27.5	27.1	99	79-122	
80-62-6	Methyl Methacrylate	25.8	26.1	101	79-128	
142-82-5	n-Heptane	26.8	23.8	89	77-117	
10061-01-5	cis-1,3-Dichloropropene	25.0	25.1	100	78-112	
108-10-1	4-Methyl-2-pentanone	27.5	23.6	86	78-128	
10061-02-6	trans-1,3-Dichloropropene	28.0	28.8	103	81-121	
79-00-5	1,1,2-Trichloroethane	26.3	24.3	92	80-117	
108-88-3	Toluene	26.5	25.6	97	76-116	
591-78-6	2-Hexanone	26.3	24.0	91	69-131	
124-48-1	Dibromochloromethane	27.0	29.0	107	80-128	
106-93-4	1,2-Dibromoethane	26.3	28.5	108	79-122	
111-65-9	n-Octane	26.0	25.1	97	78-122	and the second s
127-18-4	Tetrachloroethene	26.0	26.0	100	77-118	
108-90-7	Chlorobenzene	26.5	26.6	100	78-117	

Verified By:	<u>at</u>	Date:	5/28/08	474	,
	TO155	SCAN.XLT - Tronox	- Henderson - PageNo.:		

LABORATORY CONTROL SAMPLE SUMMARY Page 3 of 3

Client:

ENSR

Client Sample ID: Lab Control Sample

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P080512-LCS

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst:

Rusty Bravo

Sampling Media:

6.0 L Summa Canister

Date Collected: NA Date Received: NA

Date Analyzed: 5/12/08

Volume(s) Analyzed:

NA Liter(s)

Test Notes:

					CAS	
CAS#	Compound	Spike Amount	Result	% Recovery	Acceptance	Data
		ng	ng	·	Limits	Qualifier
100-41-4	Ethylbenzene	26.3	26.7	102	79-116	
179601-23-1	m,p-Xylenes	62.5	62.9	101	80-117	
75-25-2	Bromoform	31.3	37.8	121	77-128	
100-42-5	Styrene	26.3	27.2	103	80-124	
95-47-6	o-Xylene	29.8	29.4	99	80-116	
79-34-5	1,1,2,2-Tetrachloroethane	29.8	30.0	101	79-120	
98-82-8	Cumene	27.0	28.1	104	81-119	
103-65-1	n-Propylbenzene	26.3	27.4	104	82-120	
622-96-8	4-Ethyltoluene	26.5	27.1	102	80-119	
108-67-8	1,3,5-Trimethylbenzene	26.0	26.5	102	80-120	
98-83-9	alpha-Methylstyrene	25.5	26.2	103	54-146	
95-63-6	1,2,4-Trimethylbenzene	26.0	25.7	99	80-122	
100-44-7	Benzyl Chloride	25.8	30.2	117	85-131	
541-73-1	1,3-Dichlorobenzene	25.5	25.3	99	81-117	
106-46-7	1,4-Dichlorobenzene	26.3	26.4	100	81-119	
135-98-8	sec-Butylbenzene	26.8	27.2	101	80-124	
99-87-6	4-Isopropyltoluene (p-Cymene)	28.8	29.6	103	78-124	
95-50-1	1,2-Dichlorobenzene	25.8	24.4	95	81-122	
96-12-8	1,2-Dibromo-3-chloropropane	25.8	30.9	120	91-136	
120-82-1	1,2,4-Trichlorobenzene	26.0	27.9	107	75-138	
91-20-3	Naphthalene	26.3	27.9	106	76-143	
87-68-3	Hexachlorobutadiene	26.3	26.9	102	72-128	
98-06-6	tert-Butylbenzene	26.3	25.6	97	70-130	
104-51-8	n-Butylbenzene	26.8	27.3	102	70-130	

Verified By: TO15SCAN.XLT - Tronox - Henderson - PageNo.:

Data File : 05120812.D

Acq On : 12 May 2008 6:35 pm

Operator : RTB

Sample : 25ng TO-15 LCS

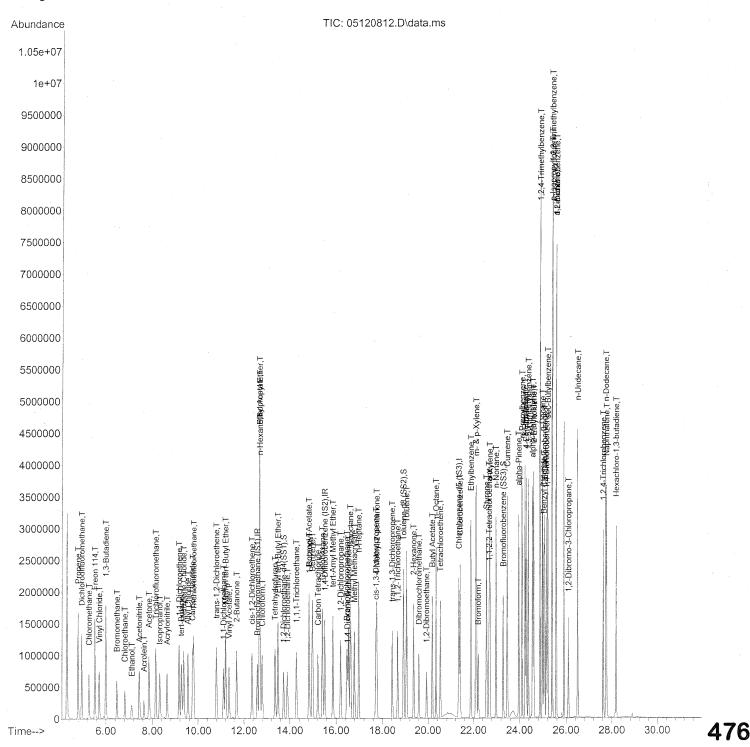
Misc : S20-04300802/S20-04290803 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 12 19:07:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120812.D

Acq On : 12 May 2008 6:35 pm

Operator : RTB

Sample : 25ng TO-15 LCS

: S20-04300802/S20-04290803 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 12 19:07:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev()	Min)
1) Bromochloromethane (IS1)	12.59	130	406558	25.000	ng	- 0	.02
37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	15.52	114	1737318	25.000	ng	- 0	.01
56) Chlorobenzene-d5 (IS3)	21.35	82	827975	25.000	ng	0	.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(13.73	65					
Spiked Amount 25.000				ery =	85	. 84% ,	
57) Toluene-d8 (SS2)	18.93	98	1858556				
Spiked Amount 25.000			Recov	ery =	100.	.16% 🗸	
73) Bromofluorobenzene (SS3)	23.29	174					
Spiked Amount 25.000			Recov	ery =	100.	.08% .	
Target Compounds						Qva:	lue
	4.79		786077	23.360	ng		89
3) Dichlorodifluoromethane		85	1369392	22.322			99
4) Chloromethane	5.27	50	980115	19.117			97
5) Freon 114	5.52		701546	23.356			99
6) Vinyl Chloride	5.72	62	998220	20.920	ng		95
7) 1,3-Butadiene	5.99	54	995020	26.968	ng	#	
8) Bromomethane	6.48	94	545281	23.803	ng		99
9) Chloroethane	6.82	64	472615	23.908			96
10) Ethanol			455444	19.847			95
11) Acetonitrile			1282810	21.271			96
	7.64		385982	23.802			98
	7.86		573359	25.477		#	72
14) Trichlorofluoromethane	8.14	101	1160500	24.076	_		99
15) Isopropanol	8.32	45 53	1636952m	21.494	_		99
16) Acrylonitrile	8.64	23	868012 581671	24.857 25.909		#	81
17) 1,1-Dichloroethene 18) tert-Butanol	9.10	50 50	1593519			11	95
10) Methylene Chloride	9.25	84	609713	23.585	na		85
20) Allyl Chloride	9 55	41	1014261	29 367	na		99
21) Trichlorotrifluoroethane	9 81	151	514711	24.990	na		95
22) Carbon Disulfide	9.76	76	2159275	22.527	na		96
23) trans-1,2-Dichloroethene	10.80	61	929260	23.748	na		85
24) 1,1-Dichloroethane			1079516				95
25) Methyl tert-Butyl Ether	11.19	73	1771108	23.679			86
26) Vinyl Acetate	11.35	86	133182	29.785		#	95
27) 2-Butanone	11.68	72	417006	26.423		#	90
28) cis-1,2-Dichloroethene	12.36	61	858420	23.279			84
29) Diisopropyl Ether	12.69	87	475633	22.953	ng	#	93
30) Ethyl Acetate	12.69	61	251195	25.533			81
31) n-Hexane	12.70	57	1120240	21.908	ng		9047

R13041408.M Mon May 12 19:08:22 2008

Page: 1

Data File : 05120812.D

: 12 May 2008 Acq On 6:35 pm

Operator : RTB

: 25ng TO-15 LCS Sample

: S20-04300802/S20-04290803 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 12 19:07:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev	r(Min)
32) Chloroform	12.80	83	1025527	27.017 ng		100
34) Tetrahydrofuran	13.35	72	389620	24.682 ng	#	90
35) Ethyl tert-Butyl Ether	13.48		659606	24.205 ng	#	78
36) 1,2-Dichloroethane	13.90		818367	21.768 ng		97
38) 1,1,1-Trichloroethane	14.29		913213	25.226 ng		98
39) Isopropyl Acetate	14.83		391182	24.761 ng	#	46
40) 1-Butanol	14.84	56	505176	21.304 ng	#	56
41) Benzene	14.99		2265514	24.581 ng		99
42) Carbon Tetrachloride	15.22		793414	26.029 ng		99
43) Cyclohexane	15.41		866571	25.418 ng	#	76
44) tert-Amyl Methyl Ether		73	1646601	25.107 ng		93
45) 1,2-Dichloropropane	16.20	63	617030	23.363 ng		99
46) Bromodichloromethane	16.46	83	807569	25.772 ng		100
47) Trichloroethene	16.54	130	587607	25.914 ng		99
48) 1,4-Dioxane	16.49	88	442471	27.115 ng		80
49) Isooctane	16.62	57	2593374	23.766 ng		78
50) Methyl Methacrylate	16.79	100	218497	26.106 ng	#	76
51) n-Heptane	16.98	71	608270	23.823 ng	#	79
52) cis-1,3-Dichloropropene	17.73		901105	25.097 ng		98
53) 4-Methyl-2-pentanone	17.77			23.599 ng		82
54) trans-1,3-Dichloropropene	18.43	75	891800	28.752 ng		100
55) 1,1,2-Trichloroethane	18.67		538895	24.281 ng		94
58) Toluene	19.06		2389587	25.627 ng		97
59) 2-Hexanone	19.37		1669713	24.040 ng		82
60) Dibromochloromethane	19.60		651346	28.963 ng		99
61) 1,2-Dibromoethane	19.93	107	624060	28.466 ng		100
62) Butyl Acetate	20.19	43	1849008	26.622 ng		86
63) n-Octane	20.35	<i>- '</i>	547851	25.068 ng		93
64) Tetrachloroethene	20.54	166	606224	25.967 ng		99
65) Chlorobenzene	21.41	112	1537757	26.626 ng		100
66) Ethylbenzene	21.89	91	2780777	26.709 ng		93
67) m- & p-Xylene	22.12		4378855	62.916 ng		90
68) Bromoform	22.21		581804	37.840 ng		98
69) Styrene	22.57		1631328	27.159 ng		96
70) o-Xylene	22.71	91	2204606	29.435 ng		92
71) n-Nonane	22.98	43	1462246	24.379 ng	#	82
72) 1,1,2,2-Tetrachloroethane	22.69	83	1073202	30.024 ng		97
74) Cumene	23.46	105	2670,957	28.114 ng		98 93
75) alpha-Pinene	23.96	93	1374842	27.225 ng		93 96
76) n-Propylbenzene	24.10	91	3485302	27.410 ng		96 97
77) 3-Ethyltoluene	24.23	105	2734823	26.398 ng		97 97
78) 4-Ethyltoluene	24.28	105	2584445	27.093 ng 26.539 ng		91 96
79) 1,3,5-Trimethylbenzene	24.37	105	2248322	20.555 119		⁹⁶ 47

Data File : 05120812.D

: 12 May 2008 6:35 pm Acq On

Operator : RTB

Sample : 25ng TO-15 LCS

: S20-04300802/S20-04290803 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 12 19:07:56 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Unit	s De	v(Min)
Internal Standards 80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene	R.T. 24.56 24.61 24.88 24.98 25.05 25.15 25.40 25.41 25.58 25.58	118 105 105 57 91 146 146 105 119 105	Response 1173581 2665769 2456998 1391923 1970351 1312896 1307897 3061782 2902285 2585900 1296255 987582	Conc Unit 26.159 ng 25.597 ng 25.666 ng 26.293 ng 30.195 ng 25.333 ng 26.372 ng 27.242 ng 29.611 ng 27.468 ng 24.405 ng 22.753 ng		v(Min) 97 98 97 86 96 100 99 96 92 97 99
91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene 96) n-Dodecane 97) Hexachloro-1,3-butadiene	25.58 26.11 26.50 27.62 27.77 27.74 28.19	157 57 180 128	434250 1449749 917483 2949153 1430214 569222	20.861 ng 26.084 ng 27.873 ng 27.865 ng 25.362 ng 26.853 ng	#	74 85 97 99 84 100

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

Data File : 05120812.D

Acq On : 12 May 2008 6:35 pm

Operator : RTB

Sample : 25ng TO-15 LCS

Misc : S20-04300802/S20-04290803 ALS Vial : 16 Sample Multiplier: 1

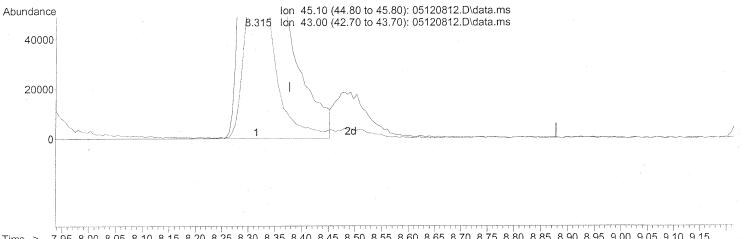
Quant Time: May 12 19:07:31 2008

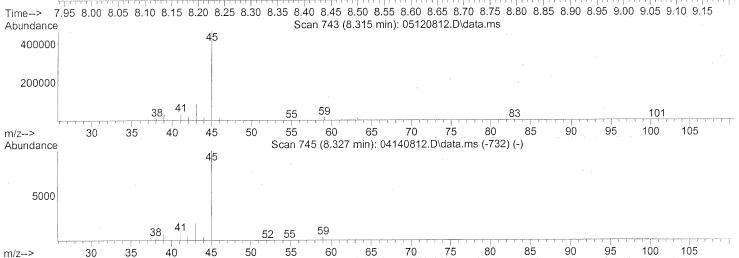
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via : Initial Calibration





TIC: 05120812.D\data.ms

(15) Isopropanol (T)

8.315min (-0.063) 20.42ng

response	15548	19
lon	Exp%	Act%
45.10	100	100
43.00	16.90	20.47
0.00	0.00	0.00
0.00	0.00	0.00

TAILING SPLIT PEAK

Data File : 05120812.D

: 12 May 2008 6:35 pm Acq On

Operator

: RTB

: 25ng TO-15 LCS Sample

: S20-04300802/S20-04290803 Misc Sample Multiplier: 1 : 16 ALS Vial

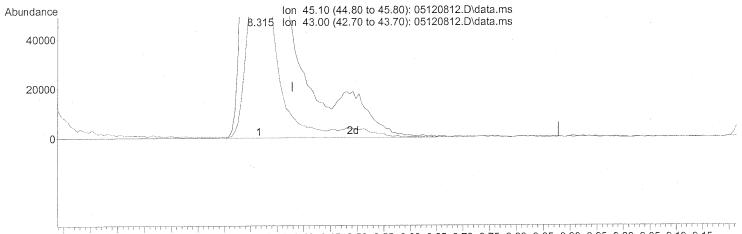
Quant Time: May 12 19:07:31 2008

Quant Method: J:\MS13\METHODS\R13041408.M

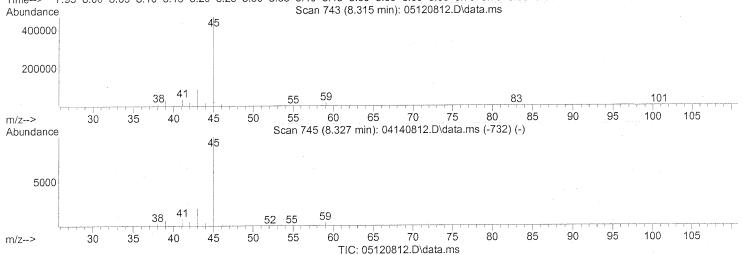
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



Time--> 7.95 8.00 8.05 8.10 8.15 8.20 8.25 8.30 8.35 8.40 8.45 8.50 8.55 8.60 8.65 8.70 8.75 8.80 8.85 8.90 8.95 9.00 9.05 9.10 9.15



(15) Isopropanol (T)

8.315min (-0.063) 21.49ng m

response 1636952

Act% lon Ехр% 45.10 100 100 43.00 16.90 19.44 0.00 0.00 0.00 0.00 0.00 0.00

INT. THE WHOLE PEAK

F05/12/08 8m 5/13/08

Data File: 05120812.D

Acq On : 12 May 2008 18:35

Operator : RTB

Sample : 25ng TO-15 LCS

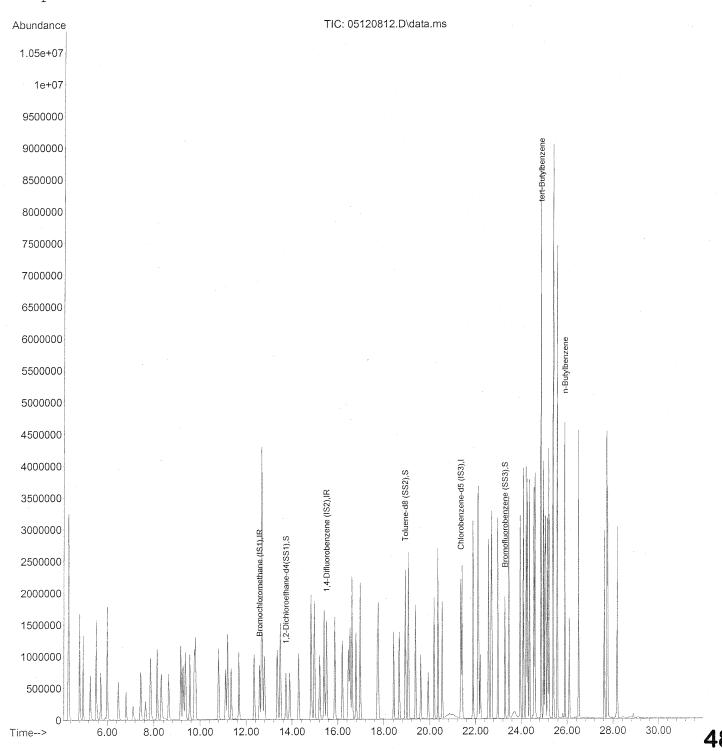
Misc : S20-04300802/S20-04290803 ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 15:44:40 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120812.D

Acq On : 12 May 2008 18:35

Operator : RTB

: 25ng TO-15 LCS Sample

: S20-04300802/S20-04290803 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: May 27 15:44:40 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.59 15.52 21.35	114	406558 1737318 827975	25.000 25.000 25.000	ng	-0.02 -0.01 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000	18.93	98	1858556 Recove	ery = 25.043 ery =	85 ng 100	.84% 0.00 .16%
6) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	174	638994 Recove			
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene			2316510 2665930			Qvalue 100 95

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

LABORATORY DUPLICATE SUMMARY RESULTS

Page 1 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code:

EPA TO-15

Date Collected: 5/10/08

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.94

	Duplicate								
Compound	Sample	Result	Sample	Result	Average	% RPD	RPD	Data	
	μg/m³	ppbV	$\mu g/m^3$	ppbV	$\mu g/m^3$		Limit	Qualifier	
Dichlorodifluoromethane (CFC 12)	2.24	0.453	2.24	0.453	2.24	0	25		
Chloromethane	ND	ND	ND	ND	-		25		
1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	0.111	0.0158	0.0989	0.0142	0.10495	12	25	J	
Vinyl Chloride	ND	ND	ND	ND	-	-	25		
Bromomethane	ND	ND -	ND	ND	-	<i>,</i> =	25		
Chloroethane	0.171	0.0647	0.178	0.0677	0.1745	4	25	J	
Ethanol	3.06	1.62	2.52	1.34	2.79	19	25	J	
Acetone	33.7	14.2	33.1	13.9	33.4	2	25	\mathbf{B}, \mathbf{M}	
Trichlorofluoromethane	3.07	0.547	3.12	0.556	3.095	2	25		
Acrylonitrile	0.151	0.0698	0.144	0.0662	0.1475	5	25	J	
1,1-Dichloroethene	ND	ND	ND	ND	-	-	25	A STATE OF THE STA	
2-Methyl-2-Propanol (tert-Butyl Alcohol)	0.275	0.0909	0.277	0.0916	0.276	0.7	25	J	
Methylene Chloride	ND	ND	0.144	0.0413	- '	-	25	J	
3-Chloro-1-propene (Allyl Chloride)	ND	ND	ND	ND	-	-	25		
Trichlorotrifluoroethane	0.462	0.0603	0.541	0.0707	0.5015	16	25		
Carbon Disulfide	1.28	0.412	1.22	0.393	1.25	5	25		
trans-1,2-Dichloroethene	ND	ND	ND	ND	-	-	25		
1,1-Dichloroethane	ND	ND	ND	ND	-	-	25		
Methyl tert-Butyl Ether	ND	ND	ND	ND	-	-	25		
Vinyl Acetate	2.47	0.701	2.07	0.589	2.27	18	25	J, M	
2-Butanone (MEK)	12.6	4.28	12.2	4.15	12.4	3	25		
cis-1,2-Dichloroethene	ND	ND	ND	ND	` <u>-</u>	-	25		
Diisopropyl Ether	ND	ND	ND	ND	.=	-	25		
Chloroform	129	26.4	127	25.9	128	2	25	-	

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

Verified By:	CA	Date:	5/18/08	484
	-	TO15SCAN,XLT - Tronox	- Henderson - PageNo.:	

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

B = Analyte was found in the method blank.

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

LABORATORY DUPLICATE SUMMARY RESULTS

Page 2 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code:

EPA TO-15

Date Collected: 5/10/08

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Received: 5/12/08

Analyst:

Rusty Bravo

Date Analyzed: 5/12/08

Sampling Media:

6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.94

	Duplicate							
Compound	Sample	Result	Sample	Result	Average	% RPD	RPD	Data
	$\mu g/m^3$	ppbV	$\mu g/m^3$	ppbV	μg/m³		Limit	Qualifier
Ethyl tert-Butyl Ether	ND	ND	ND	ND	_	-	25	
1,2-Dichloroethane	ND	ND	ND	ND	-	-	25.	
1,1,1-Trichloroethane	ND	ND	ND	ND	-	-	25	
Benzene	6.82	2.14	6.71	2.10	6.765	2	25	
Carbon Tetrachloride	4.92	0.782	4.42	0.703	4.67	11	25	
tert-Amyl Methyl Ether	ND	ND	ND	ND	-	-	25	
1,2-Dichloropropane	ND	ND	ND	ND		-	25	
Bromodichloromethane	0.535	0.0800	0.502	0.0750	0.5185	6	25	
Trichloroethene	0.291	0.0542	0.301	0.0560	0.296	3	25	
1,4-Dioxane	ND	ND	ND	ND	-	-	25	
Methyl Methacrylate	ND	ND	ND	ND	-	-	25	
n-Heptane	0.336	0.0819	0.343	0.0838	0.3395	2	25	J
cis-1,3-Dichloropropene	ND	ND	ND	ND	-	. -	25	
4-Methyl-2-pentanone	2.68	0.654	2.57	0.628	2.625	4	25	
trans-1,3-Dichloropropene	ND	ND	ND	ND		-	25	
1,1,2-Trichloroethane	ND	ND	ND	ND	-	-	25	
Toluene	12.7	3.38	12.6	3.33	12.65	0.8	25	
2-Hexanone	1.18	0.289	1.19	0.291	1.185	0.8	25	
Dibromochloromethane	ND	ND	ND	ND	-	-	25	
1,2-Dibromoethane	ND	ND	ND	ND	-	-	25	
n-Octane	1.00	0.214	0.945	0.202	0.9725	6	25	J
Tetrachloroethene	184	27.2	185	27.3	184.5	0.5	25	
Chlorobenzene	ND	ND	ND	ND	-	-	25	

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

Verified By: Date: 5/28/08

P0801385_TO15_0805281357_SS.xls - Dup (4)

TO15SCAN.XLT - Tronox - Henderson - PageNo,:

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

LABORATORY DUPLICATE SUMMARY RESULTS Page 3 of 3

Client:

ENSR

Client Sample ID: SG43B-05

Client Project ID: Phase B Soil Gas / 04020-023-4311

CAS Project ID: P0801385

CAS Sample ID: P0801385-004DUP

Test Code:

Instrument ID:

EPA TO-15

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Date Collected: 5/10/08

Rusty Bravo

Date Received: 5/12/08 Date Analyzed: 5/12/08

Analyst: Sampling Media: 6.0 L Summa Canister

Volume(s) Analyzed:

1.00 Liter(s)

Test Notes:

Container ID:

SC00470

Initial Pressure (psig):

-5.3

Final Pressure (psig): 3.5

Canister Dilution Factor: 1.94

Duplicate								
Compound	Sample	Result	Sample	Result A	verage	% RPD	RPD	Data
	μg/m³	ppbV	$\mu g/m^3$	ppbV	$\mu g/m^3$		Limit	Qualifier
Ethylbenzene	8.02	1.85	8.00	1.84	8.01	0.2	25	
m,p-Xylenes	39.7	9.14	40.0	9.22	39.85	0.8	25	
Bromoform	ND	ND	ND	ND	- '	-	25	
Styrene	0.277	0.0652	0.274	0.0643	0.2755	1	25	J
o-Xylene	14.5	3.34	14.5	3.33	14.5	0	25	
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	-	-	25	
Cumene	0.473	0.0963	0.475	0.0967	0.474	0.4	25	J
n-Propylbenzene	0.559	0.114	0.598	0.122	0.5785	7	25	J
4-Ethyltoluene	0.929	0.189	0.890	0.181	0.9095	4	25	J
1,3,5-Trimethylbenzene	0.966	0.197	0.943	0.192	0.9545	2	25	J
alpha-Methylstyrene	ND	ND	ND	ND	-	-	25	
1,2,4-Trimethylbenzene	2.32	0.471	2.34	0.476	2.33	0.9	25	
Benzyl Chloride	ND	ND	ND	ND	-	-	25	
1,3-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,4-Dichlorobenzene	4.45	0,741	4.44	0.738	4.445	0.2	25	
sec-Butylbenzene	ND	ND	ND	ND	- '	-	25	
4-Isopropyltoluene (p-Cymene)	0.287	0.0523	0.285	0.0520	0.286	0.7	25	J
1,2-Dichlorobenzene	ND	ND	ND	ND	-	-	25	
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	-	-	25	
1,2,4-Trichlorobenzene	ND	ND	ND	ND	-	-	25	
Naphthalene	2.00	0.382	1.90	0.362	1.95	5	25	
Hexachlorobutadiene	ND	ND	ND	ND	-	-	25	
tert-Butylbenzene	ND	ND	ND	ND	-	-	25	
n-Butylbenzene	0.427	0.0778	0.386	0.0704	0.4065	10	25	J

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

Verified By:	Cos	Date: 5/18/08	486
		TO15SCAN.XLT - Tronox - Henderson - PageNo.:	

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

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

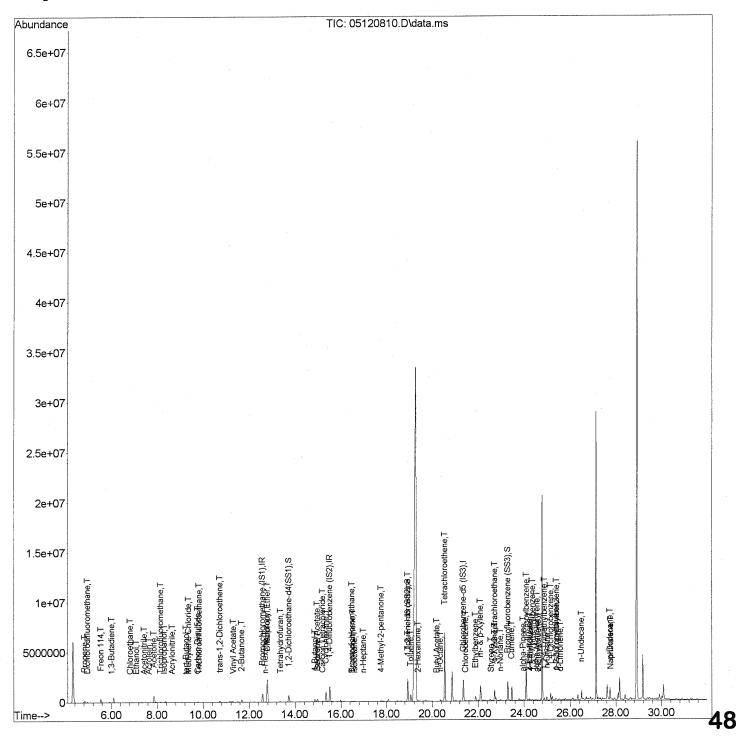
Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 16:33:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43R-05 (-5 3 3 5) : ENSR SG43B-05 (-5.3, 3.5) Misc ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 16:33:57 2008
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T. (QIon	Response	Conc	Units	Dev(N	Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2)		130 114	387049 1687482	25.000 25.000		- 0 - 0	
56) Chlorobenzene-d5 (IS3)	21.36	82	794370	25.000		0.	.00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(13.73	65	664358	21.403	ng	- O .	.02
Spiked Amount 25.000			Recov		85.		
57) Toluene-d8 (SS2)	18.93	98	1805739	25.361	-		.00
Spiked Amount 25.000	22 20 3	1 77 /	Recov 622248	ery = 25.395			.00
73) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	1-74	Recov				. 0 0
Spiked Amount 25.000			10000	CT Y			
Target Compounds						Qva]	
2) Propene	4.84	42	42604	1.330		#	28
3) Dichlorodifluoromethane	4.97	85	67325	$\langle 1.153 \rangle$			99
4) Chloromethane	5.28	50	66	N.D ○ 0.051	and the same of th		64
5) Freon 114	0.00	135 62	1465 (N.D			04
6) Vinyl Chloride 7) 1,3-Butadiene	6.02	54	2542	0.072		#	50
8) Bromomethane	0.00	94	0	N.D			
9) Chloroethane	(6.82)	64	1739 <i><</i>	0.092		#	60
10) Ethanol	$\overline{(7.10)}$	45		\bigcirc 1.300	- Constitution		99
11) Acetonitrile	7.44	41	30251	0.527	_	n'	97
12) Acrolein	7.66	56	7823 365566 <i>←</i>	0.507	ng M	# #	5.8 71
13) Acetone	7.85 8.15	58 101	73883	1.610		#	99
14) Trichlorofluoromethane15) Isopropanol	8.31	45	84177	1.161	ADMINISTRAÇÃO PORTO DE PROPERTO DE PROPERT		86
16) Acrylonitrile	8.65	53	2464	(0.074			99
17) 1,1-Dichloroethene	0.00	96	0	N.D			
18) tert-Butanol	9.26	59	8571m	0.143			
19) Methylene Chloride	(9.36)	84	1811 (0.074		#	57
20) Allyl Chloride	9.55 (9.82)	41	672 5470	N.D (0.279	AND ADDRESS OF THE PARTY OF THE		97
21) Trichlorotrifluoroethane 22) Carbon Disulfide	9.77	76	57571	0.631			98
22) Carbon Disulfide 23) trans-1,2-Dichloroethene	10.72	61	2398	0.064		. #	24
24) 1,1-Dichloroethane	11.12	63	93	N.D	_		
25) Methyl tert-Butyl Ether	11.18	73	1069	N.D			
26) Vinyl Acetate	$\bigcirc 11.31 \bigcirc$	86	4546	1.068	COLD STATE OF THE PARTY OF THE	' # ''	37
27) 2-Butanone	11.67	72	94712 <	6.304		#	91
28) cis-1,2-Dichloroethene	0.00	61 87	0 238217	N.D 12.075		_ #	1
29) Diisopropyl Ether 30) Ethyl Acetate	12.78 12.70	61	167	N.D	_	· II	
50/ Helly I Accease	,	· ·					488
13041408.M Tue May 27 16:34:36 2	008				I	Page:	1
				,			

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

Sample : P0801385-004 DUP (1000mL) Misc : ENSR SG43B-05 (-5.3, 3.5) ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration

Internal Standards	R.T. QIor	n Respons	e Conc Units	Dev(Min)
31) n-Hexane	12.70 57	10660	0.219 ng	92
32) Chloroform	12.78 83		65.216 ng	99
34) Tetrahydrofuran	13.37 72	4506		# 62
35) Ethyl tert-Butyl Ether	0.00 87	0	N.D.	
36) 1,2-Dichloroethane	13.78 62	70	N.D.	
38) 1,1,1-Trichloroethane	14.29 97	1304	N.D	
39) Isopropyl Acetate	14.97 61	2450		# 1
40) 1-Butanol	14.87 56	240314	10.434 ng	87
41) Benzene	<u> </u>	309773	3.460 ng	99
42) Carbon Tetrachloride	(15.21) 117	67452	< 2.278 ng	99
43) Cyclohexane	15.35 84	46104		# 1
44) tert-Amyl Methyl Ether	16.01 73	61	N.D	
45) 1,2-Dichloropropane	16.20 63	178	N.D	
46) Bromodichloromethane	16.48 83	7897	< 0.259 ng	93
47) Trichloroethene	16.53 130	3406	0.155 ng	99
48) 1,4-Dioxane	16.53 88	442	N.D.	
49) Isooctane	16.61 57	18648		# 50
50) Methyl Methacrylate	16.78 100	51	N.D.	
51) n-Heptane	(16.98) 71	4384	(0.177 ng)	89
52) cis-1,3-Dichloropropene	17.82 75	136	N.D.	
53) 4-Methyl-2-pentanone	17.76 58	32493	(1.327 ng)	89
54) trans-1,3-Dichloropropen		52	N.D.	
55) 1,1,2-Trichloroethane	18.94 97	160662	7.453 ng NP	# 9
58) Toluene	19.06 91	579258	6.475 ng	97
59) 2-Hexanone	19.38 43	40899	0.614 ng	78
60) Dibromochloromethane	19.63 129	633	N.D.	, •
	0.00 107	0	N.D.	
61) 1,2-Dibromoethane 62) Butyl Acetate	20.20 43	9699	0.146 ng	97
63) n-Octane	20.36 57	10211	0.487 ng	94
	20.55) 166	2135840	95.356 ng	100
64) Tetrachloroethene 65) Chlorobenzene	21.46 112	7222	0.130 ng NR	
	21.89 91	411815	4.123 ng	, 92
66) Ethylbenzene 67) m- & p-Xylene	22.10 91	1377621	20.631 ng	90
68) Bromoform	0.00 173	0	N.D.	
69) Styrene	22.57 104	8127	0.141 ng	90
70) o-Xylene	22.72) 91	535464	7.452 ng	92
71) n-Nonane	22.98 43	60819	1.057 ng	# 81
		2699	0.079 ng W	
72) 1,1,2,2-Tetrachloroethan 74) Cumene	23.46 105	22305	0.245 ng	98
	23.96 93	42782	0.883 ng	Va. 93
75) alpha-Pinene 76) n-Propylbenzene	24.10 91	37524	0.308 ng W	# 1
	24.23 105	91959	0.925 ng	100
77) 3-Ethyltoluene	24.23 103	7 + 7 0 7	\$1.725 119 Om	start 08 489
13041408.M Tue May 27 16:34:36	2008		, , P	age: 2
LOUTITUO.M THE MAY 21 TO.DT.DO		En	n 5/22/00	J =

com 5/27/08

Data File: 05120810.D Acq On: 12 May 2008 5:12 pm

Operator : RTB

Sample : P0801385-004 DUP (1000mL)
Misc : ENSP SC43R-05 (-5 3 3 5) : ENSR SG43B-05 (-5.3, 3.5) Misc Sample Multiplier: 1 ALS Vial : 5

Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T. QIon	Response	Conc Units	Dev(Min)
78) 4-Ethyltoluene 79) 1,3,5-Trimethylbenzene 80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene	24.28 105 24.37 105 24.56 118 24.61 105 24.88 105 24.98 57 25.04 91 25.08 146 25.15 146 25.21 105	42024 39495 2275 33491 110850 133245 1602 526 108798 3764	0.459 ng 0.486 ng 0.053 ng 0.335 ng 1.207 ng 2.623 ng N.D. N.D. 2.287 ng N.D.	97 95 # 83 99 85 83
88) p-Isopropyltoluene	25.39 119	13832 34940	0.147 ng 0.387 ng	# 63 87
89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene	25.40 105 25.58 146	564	N.D	
91) d-Limonene	25.58 68	16085	0.386 ng	98
92) 1,2-Dibromo-3-Chloropr93) n-Undecane94) 1,2,4-Trichlorobenzene	. 26.24 157 26.50 57 27.62 180	119 330101 484	N.D. — 6.190 ng N.D. —	76
95) Naphthalene	27.77 128	99197	<0.977 ng	98
96) n-Dodecane	27.74 57 0.00 225	365094 0	6.748 ng N.D.	87
97) Hexachloro-1,3-butadiene	0.00 225			

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

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

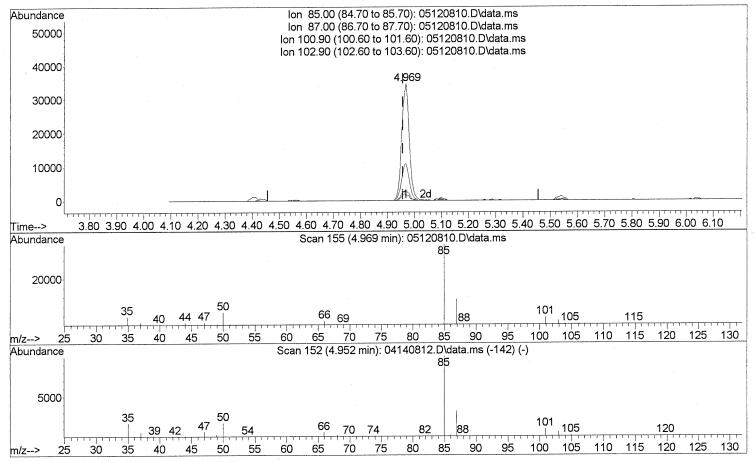
Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

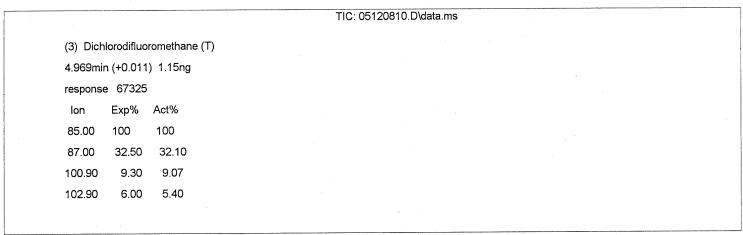
Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

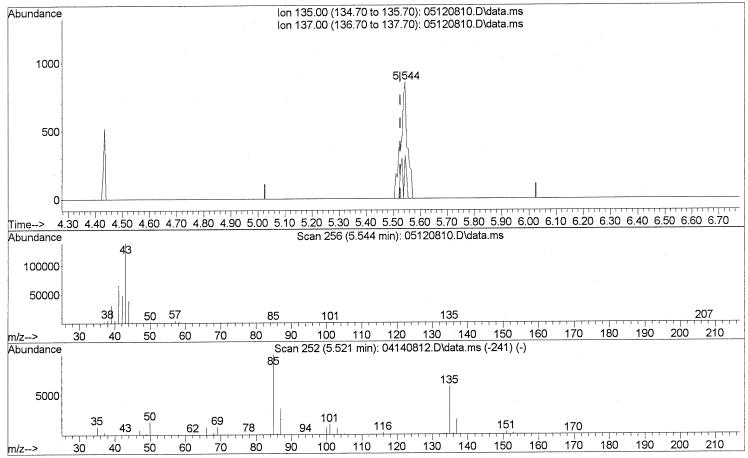
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

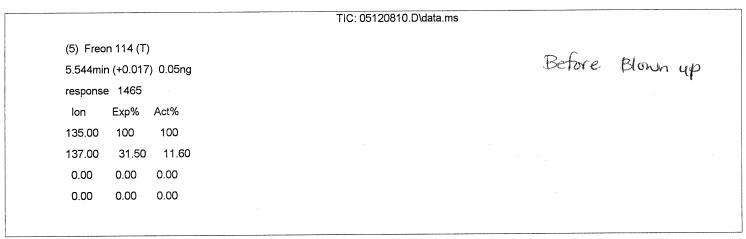
Quant Time: May 27 16:33:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008 05\12\05120810.D

Operator

: RTB

Acquired

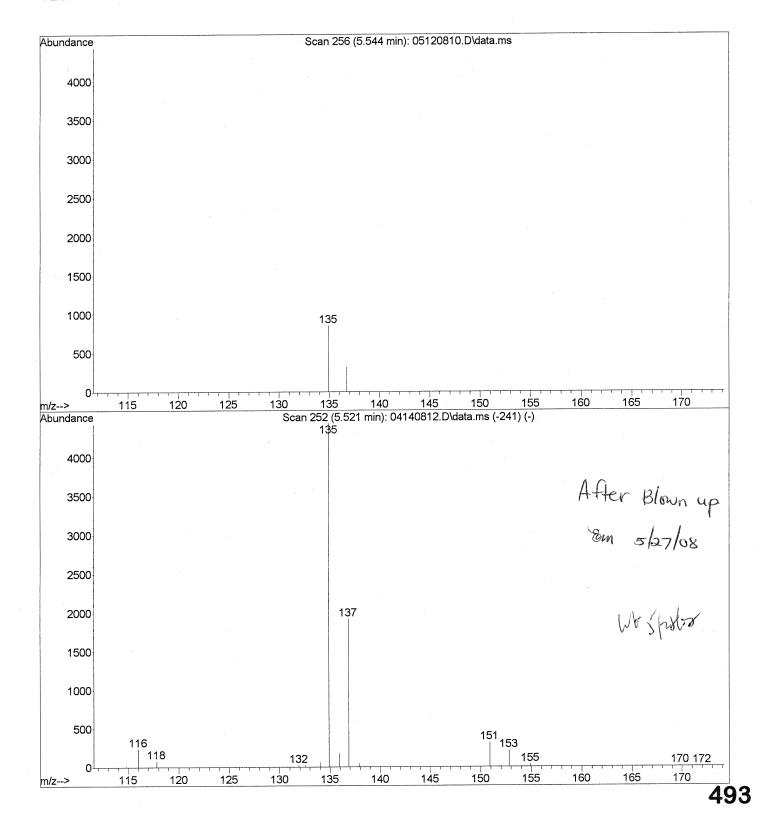
: 12 May 2008

5:12 pm using AcqMethod TO15.M

Instrument : GCMS13

Sample Name: P0801385-004 DUP (1000mL)
Misc Info : ENSR SG43B-05 (-5.3, 3.5)

Vial Number: 5



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

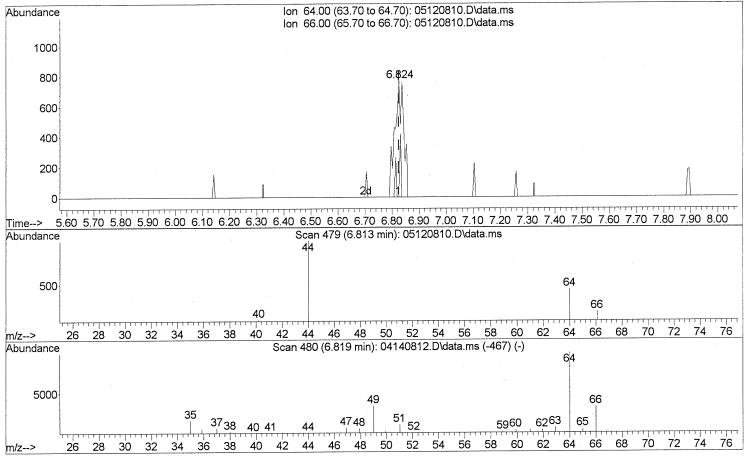
Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

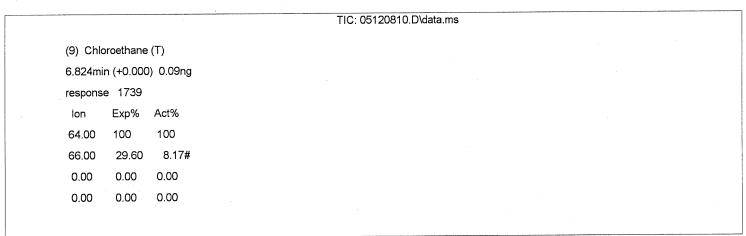
Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

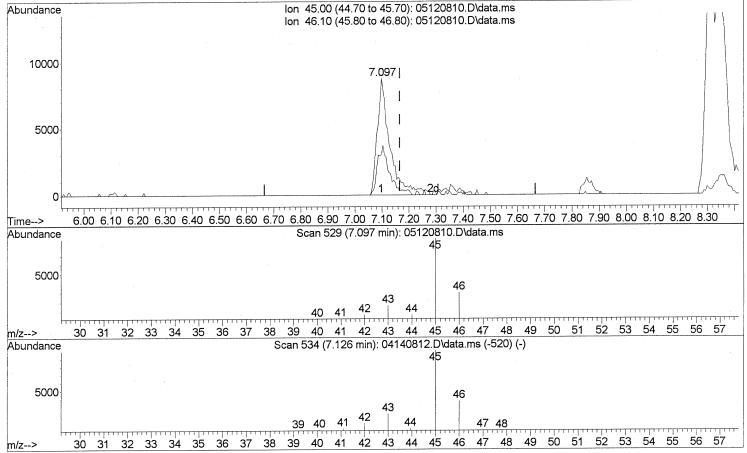
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

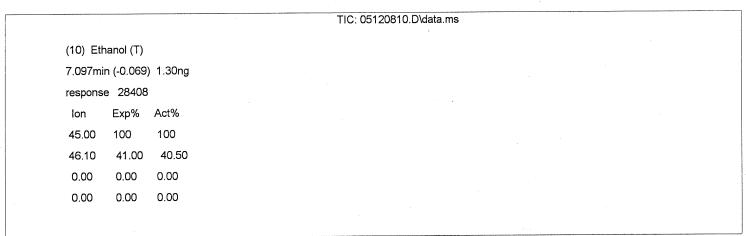
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Acq On : 12 May 2008 5:12 pm

Operator : RTB

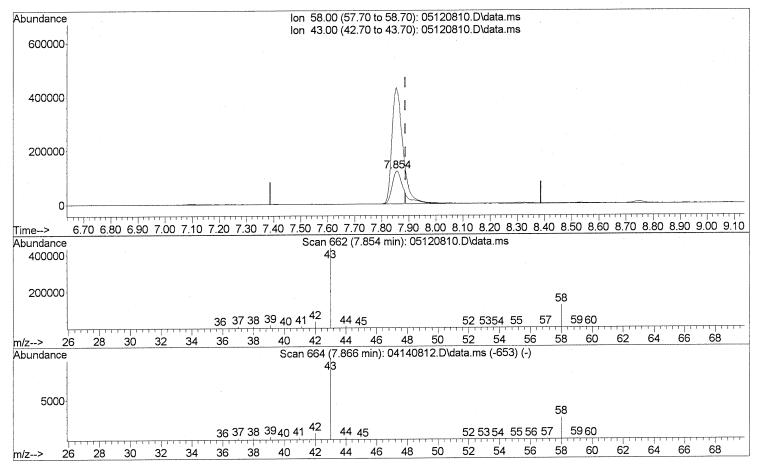
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

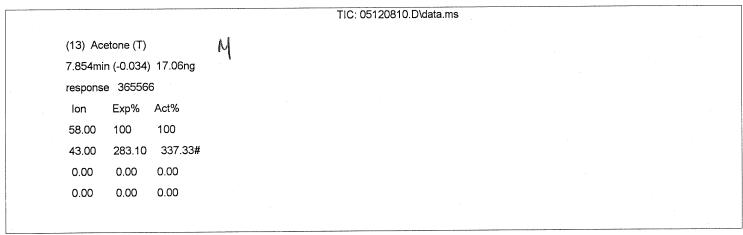
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

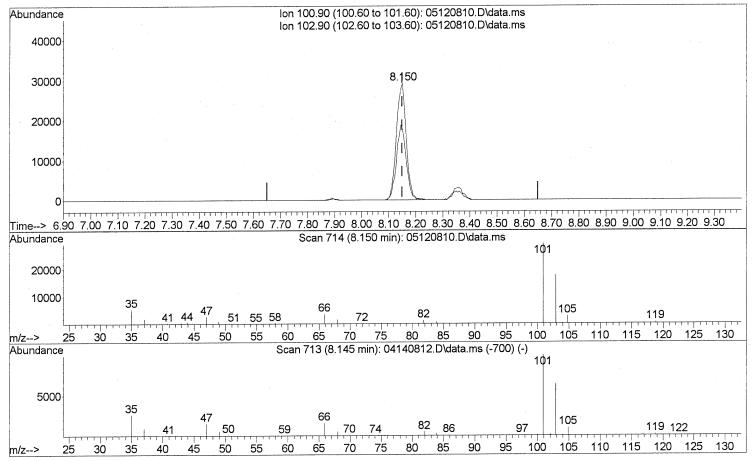
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ALS Vial : 5 Sample Multiplier: 1

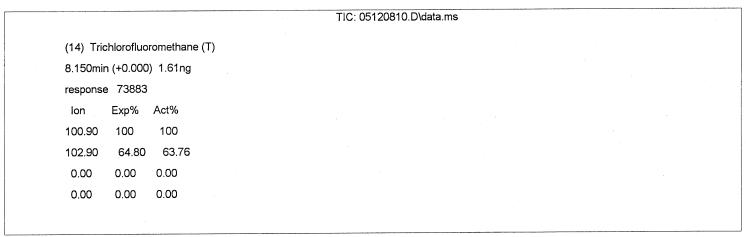
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Operator : RTB

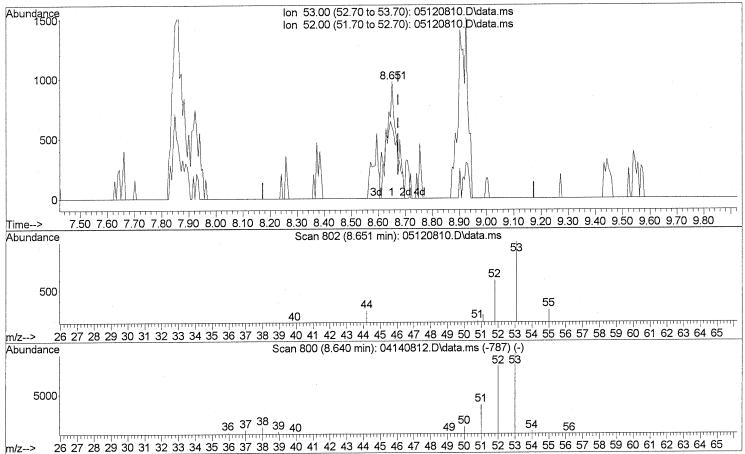
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ALS Vial : 5 Sample Multiplier: 1

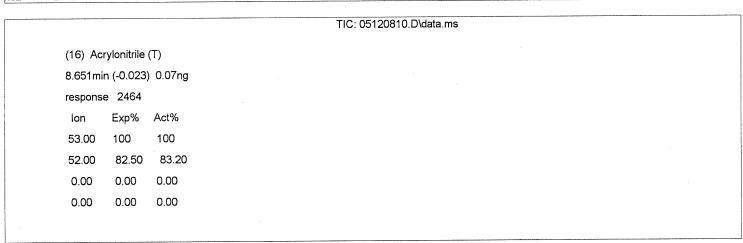
Quant Time: May 27 16:33:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data Path : J:\MS13\DATA\2008 05\12\

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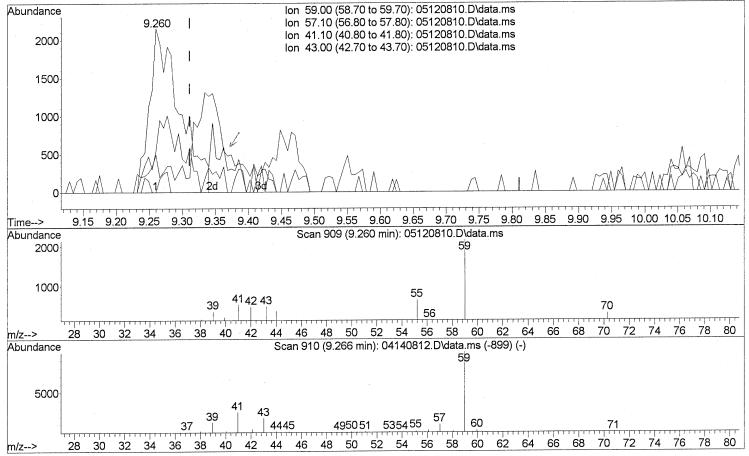
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ALS Vial : 5 Sample Multiplier: 1

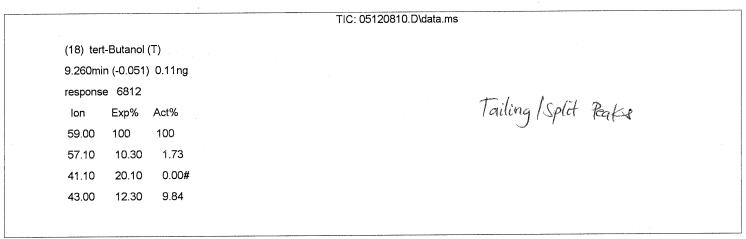
Quant Time: May 12 17:41:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

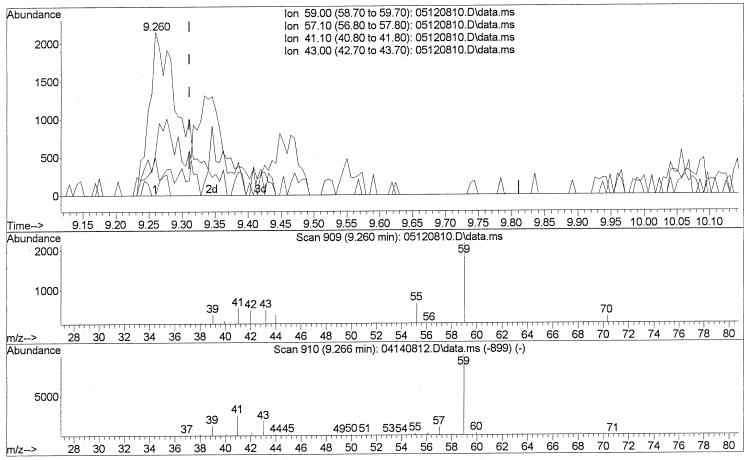
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ALS Vial : 5 Sample Multiplier: 1

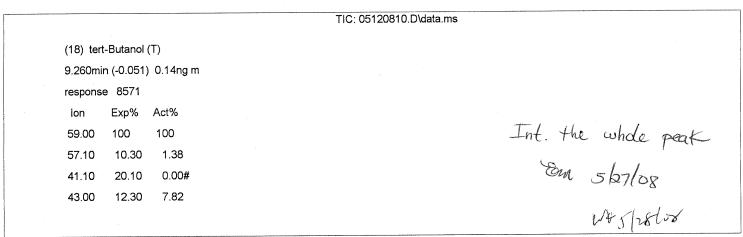
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

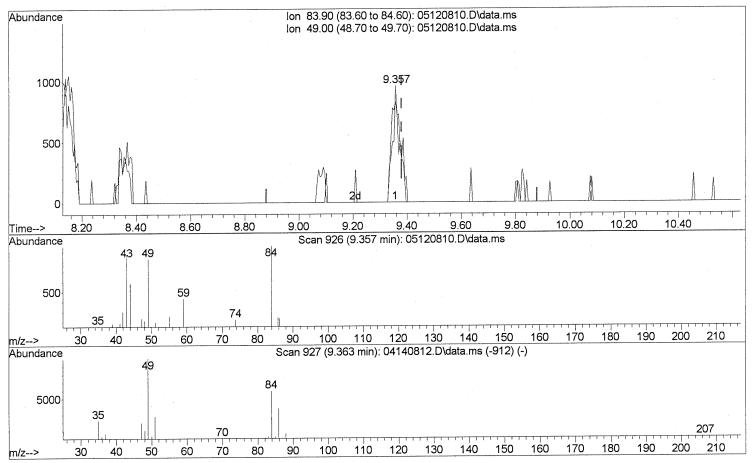
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

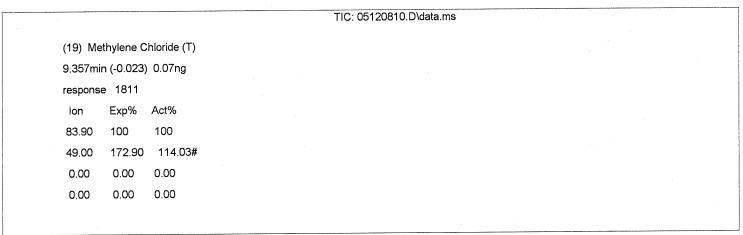
Quant Time: May 27 16:33:57 2008

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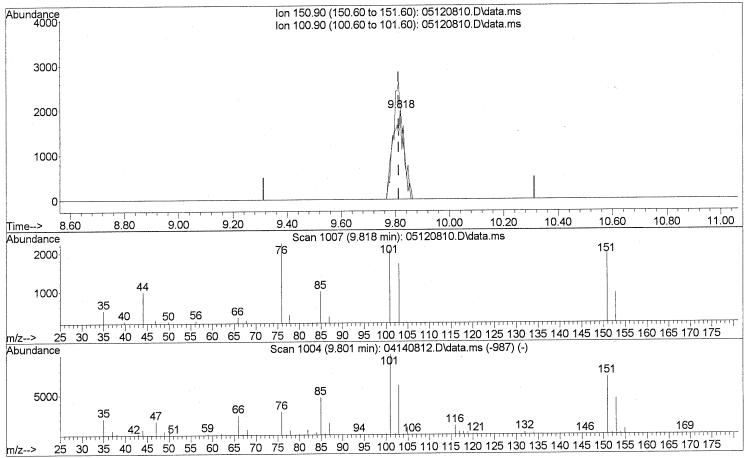
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ALS Vial : 5 Sample Multiplier: 1

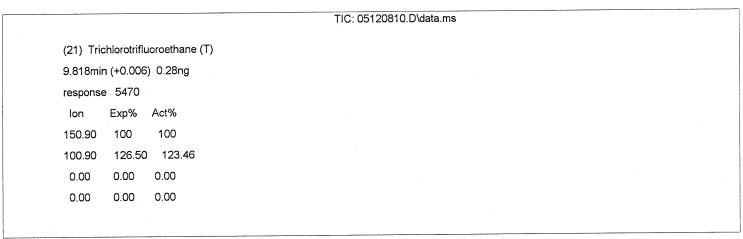
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Acq On : 12 May 2008 5:12 pm

Operator : RTB

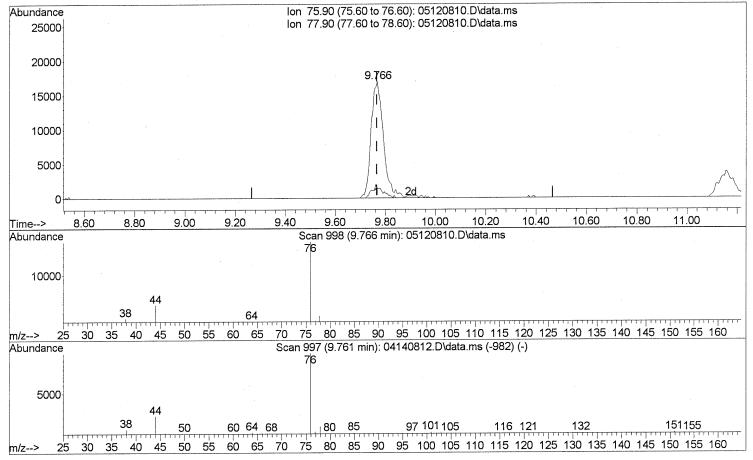
Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

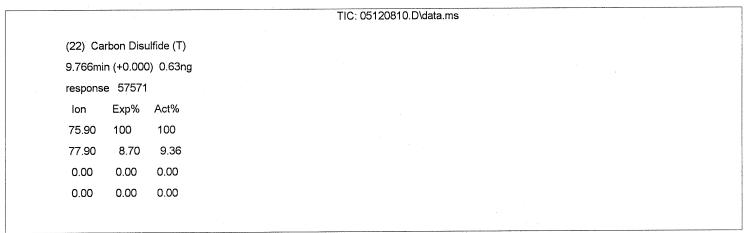
Quant Time: May 27 16:33:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

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Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

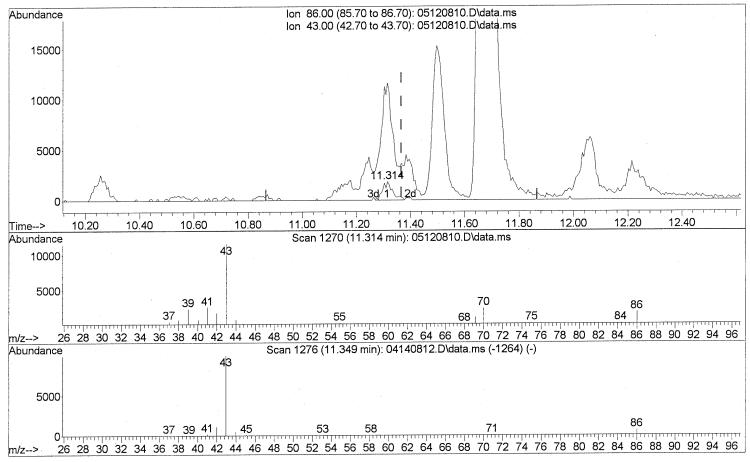
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

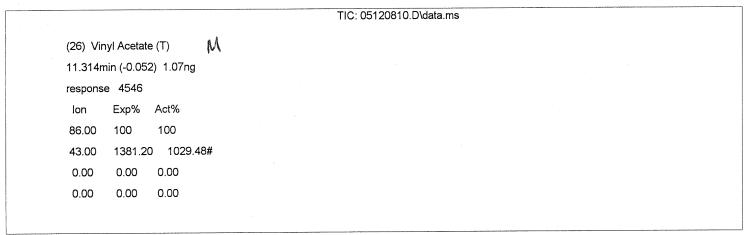
Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

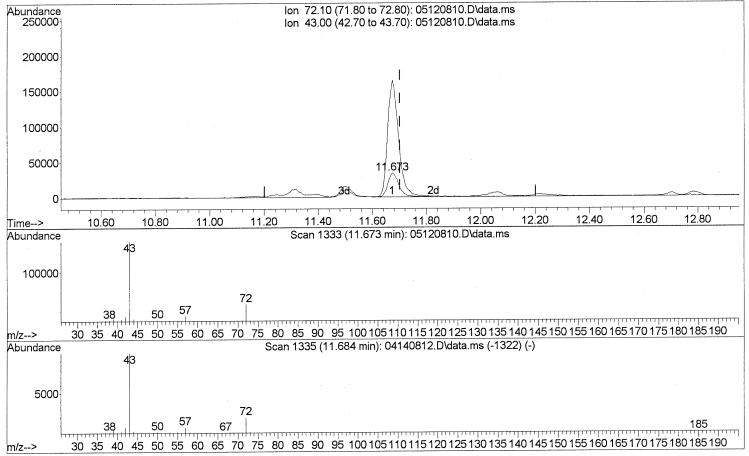
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Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

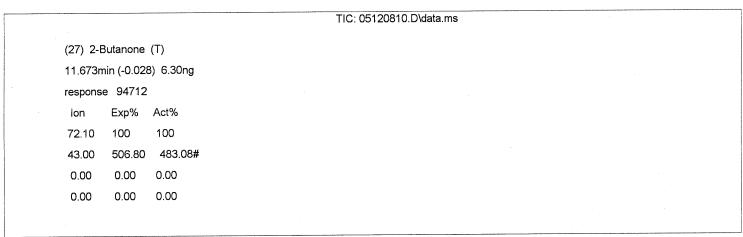
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

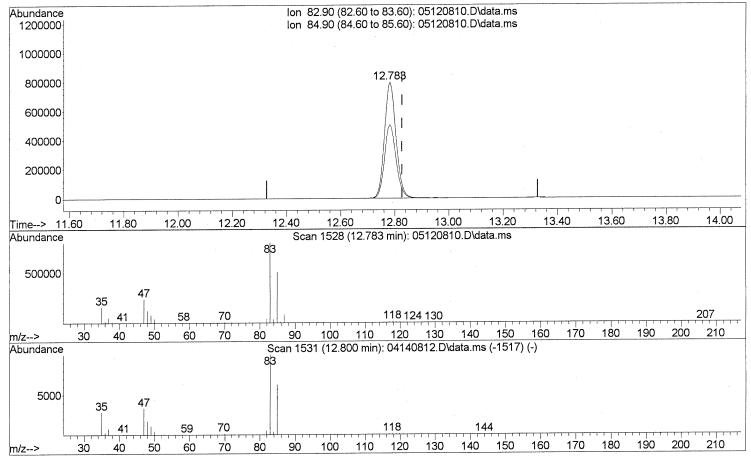
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ALS Vial : 5 Sample Multiplier: 1

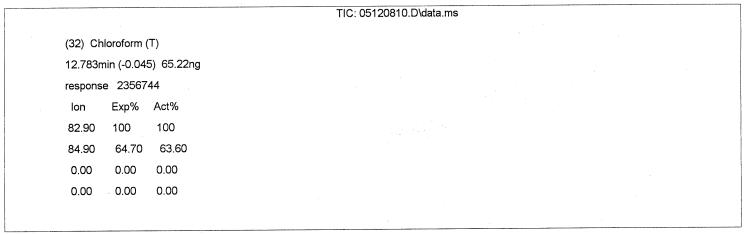
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

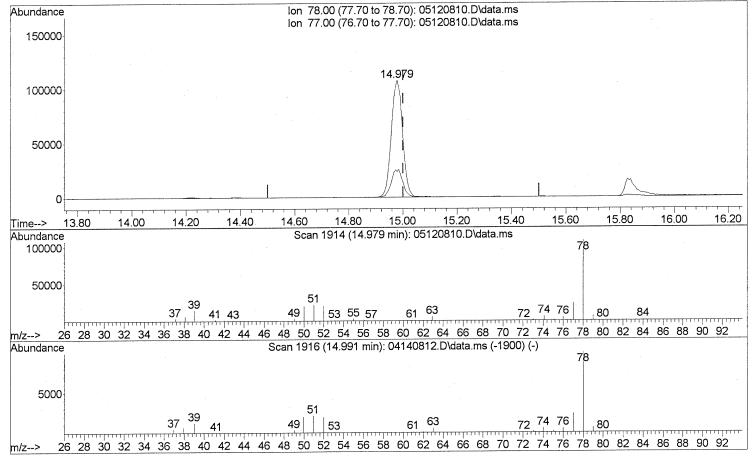
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ALS Vial : 5 Sample Multiplier: 1

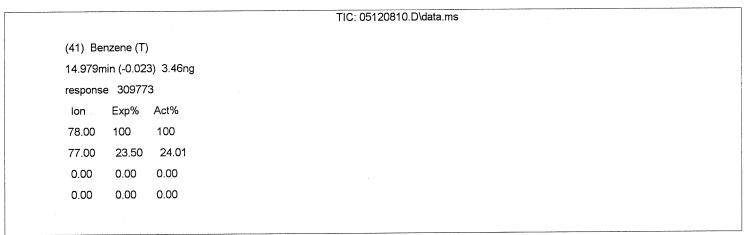
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

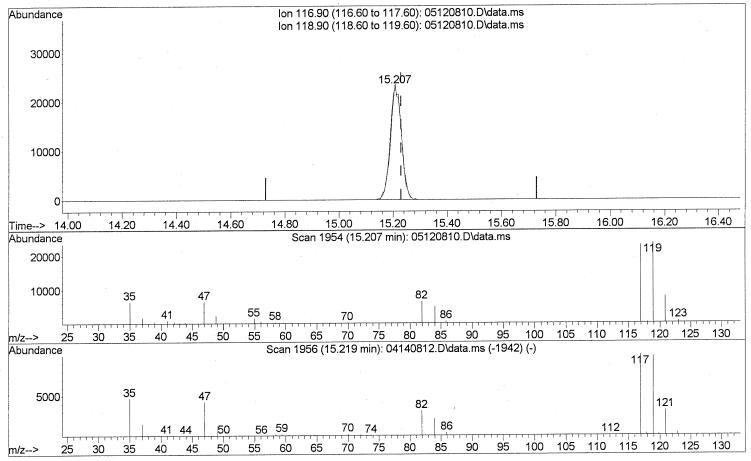
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ALS Vial : 5 Sample Multiplier: 1

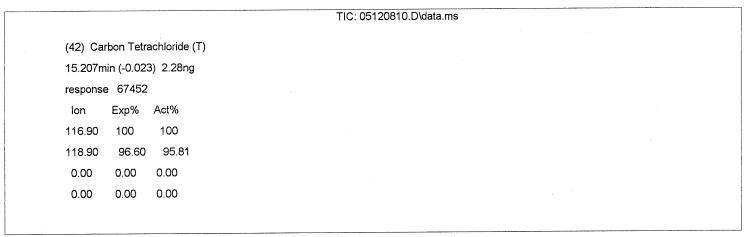
Quant Time: May 27 16:33:57 2008

Ouant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

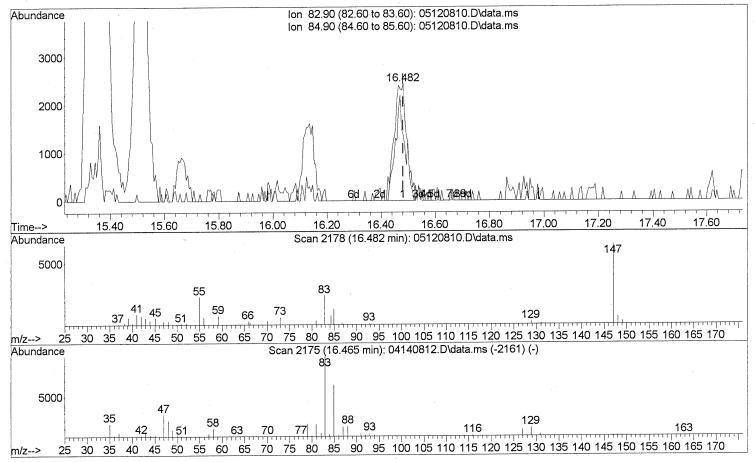
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ALS Vial : 5 Sample Multiplier: 1

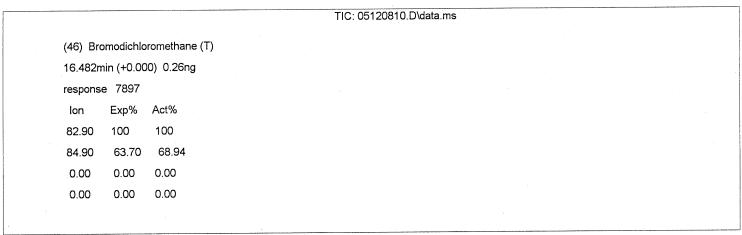
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

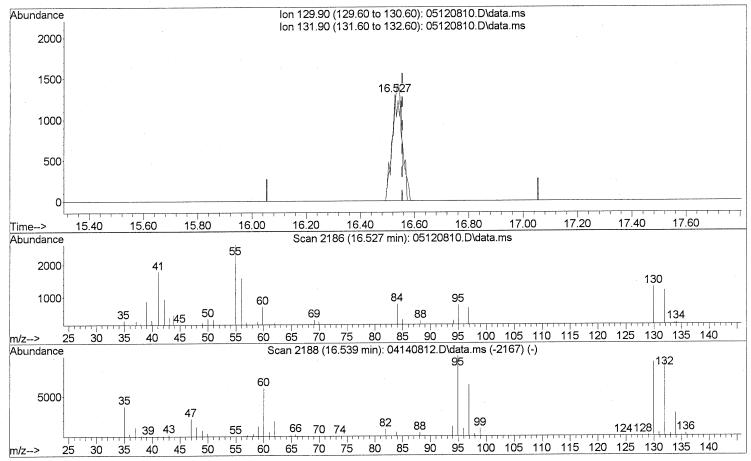
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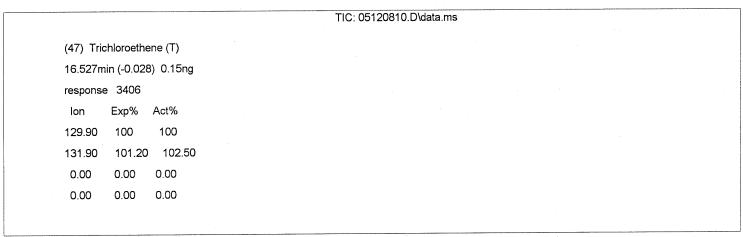
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data Path : J:\MS13\DATA\2008 05\12\

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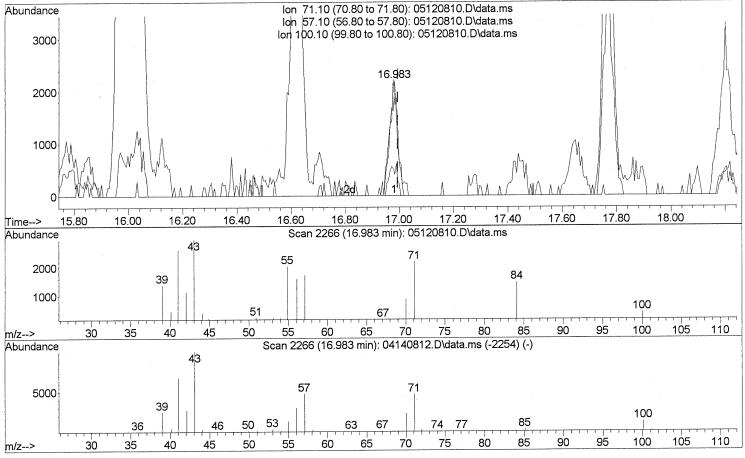
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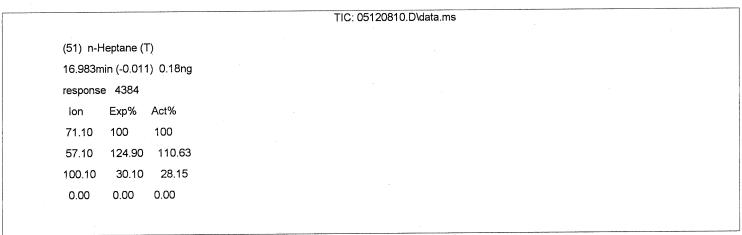
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

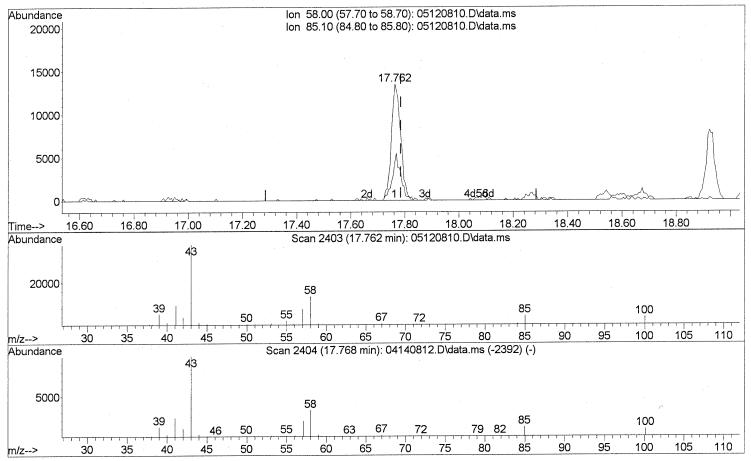
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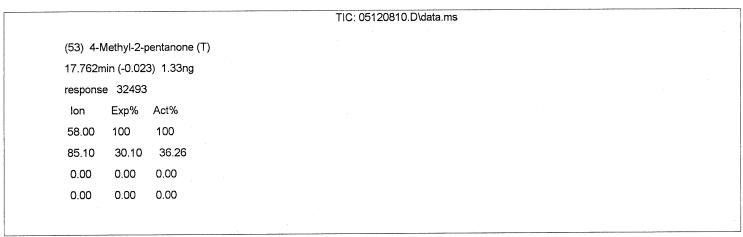
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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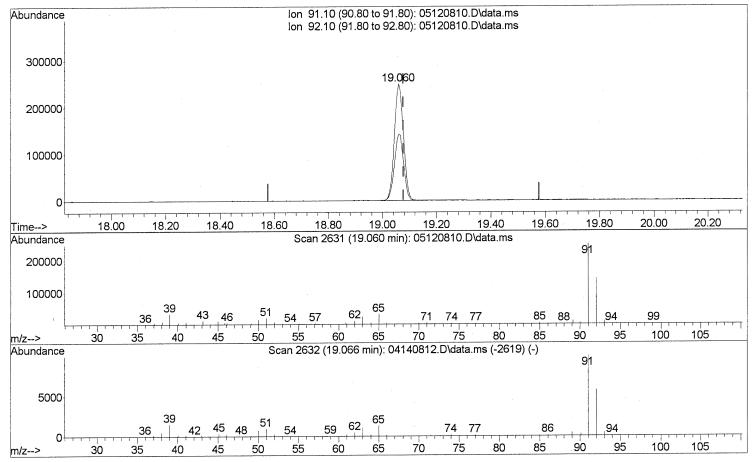
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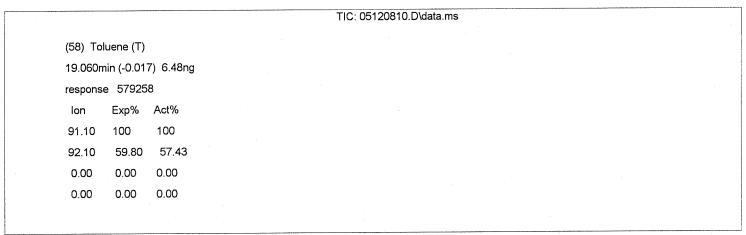
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QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

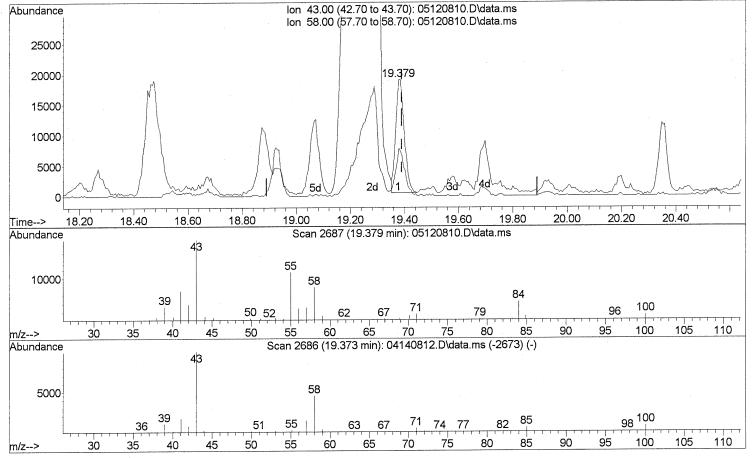
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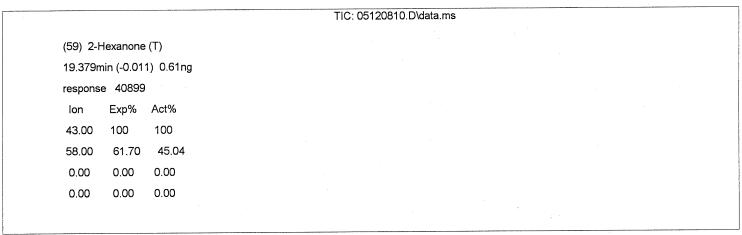
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QLast Update : Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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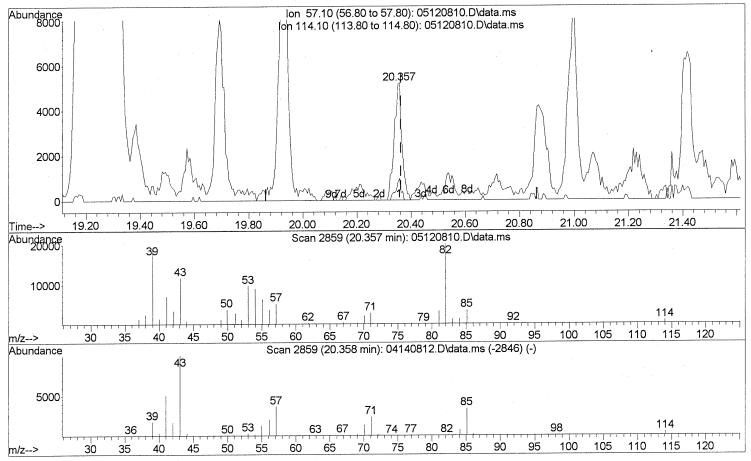
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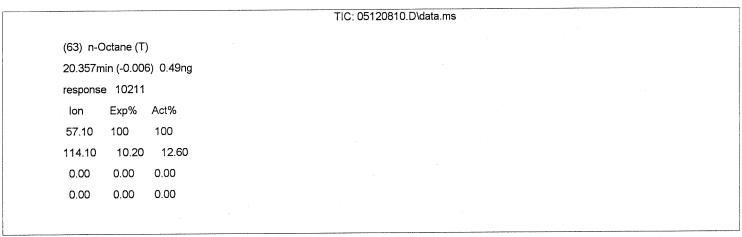
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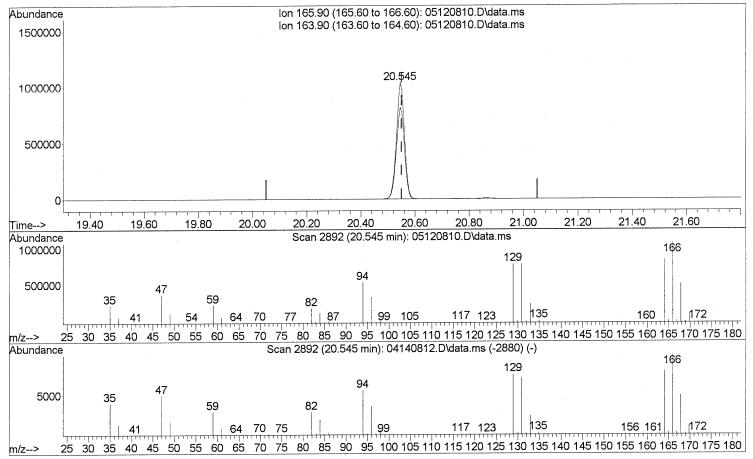
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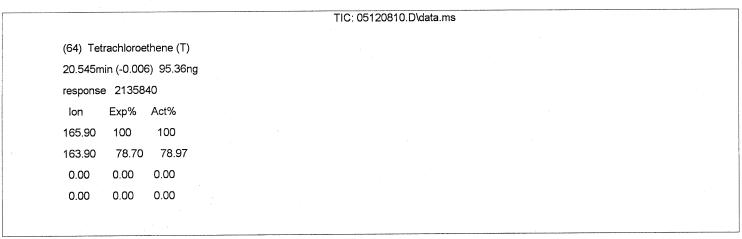
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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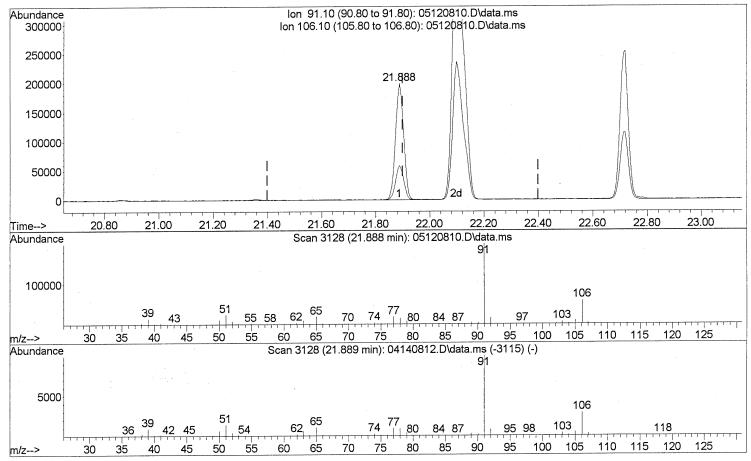
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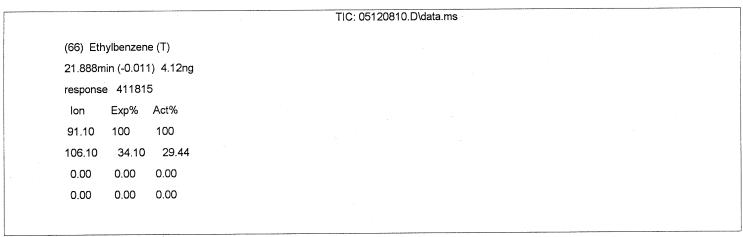
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QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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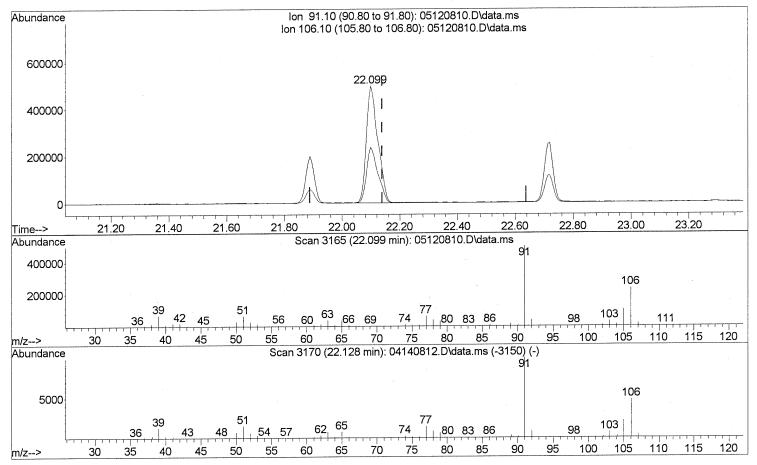
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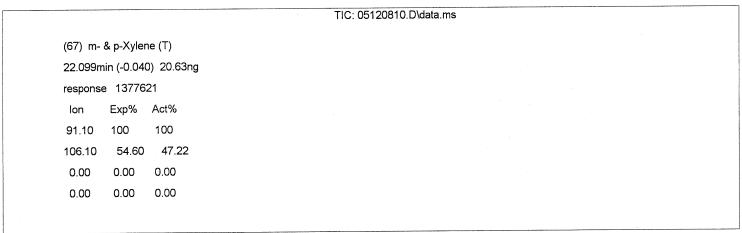
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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Data Path : J:\MS13\DATA\2008 05\12\

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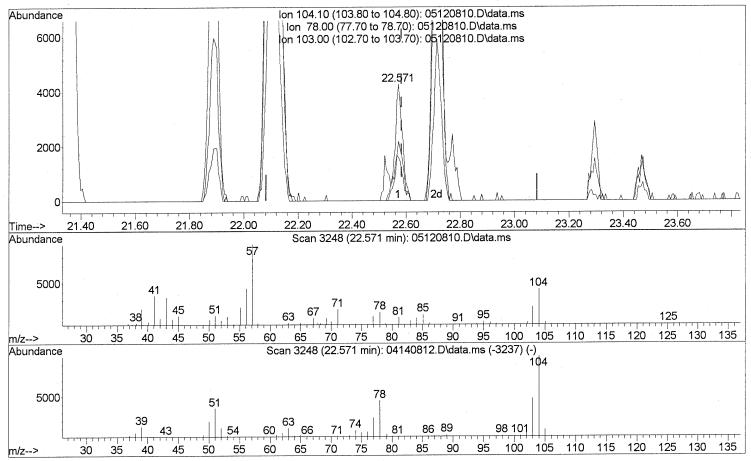
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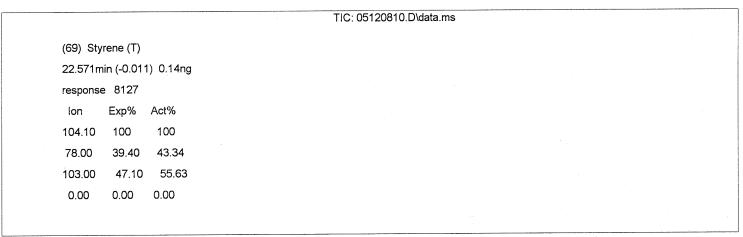
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Data Path : J:\MS13\DATA\2008 05\12\

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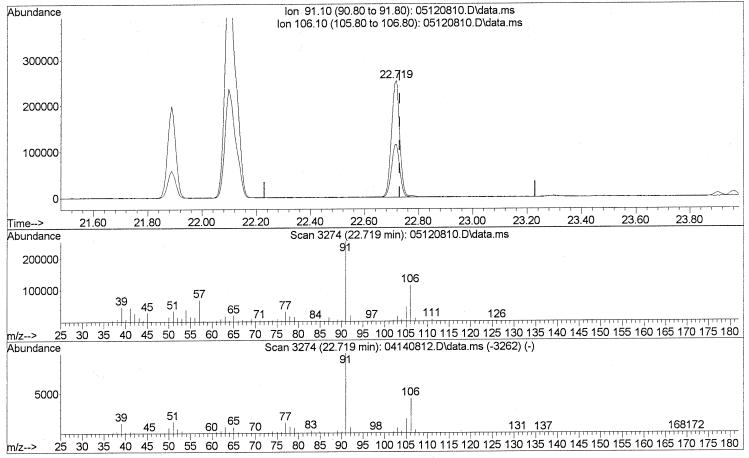
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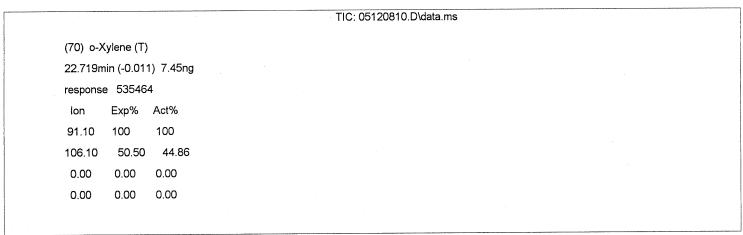
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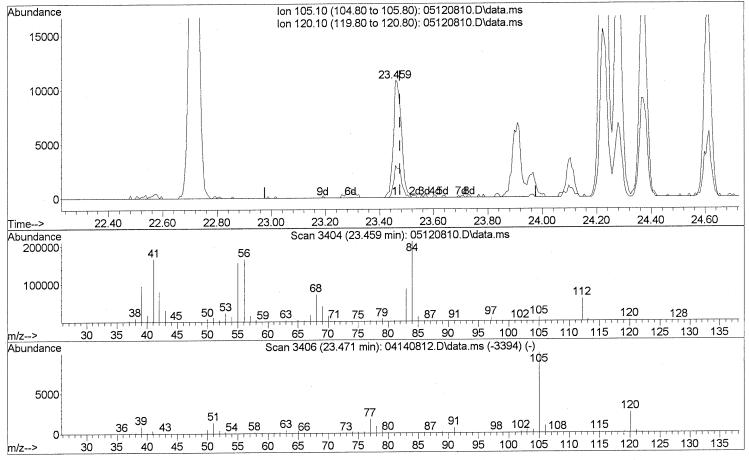
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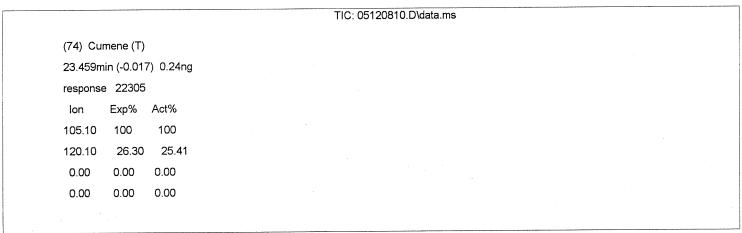
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Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





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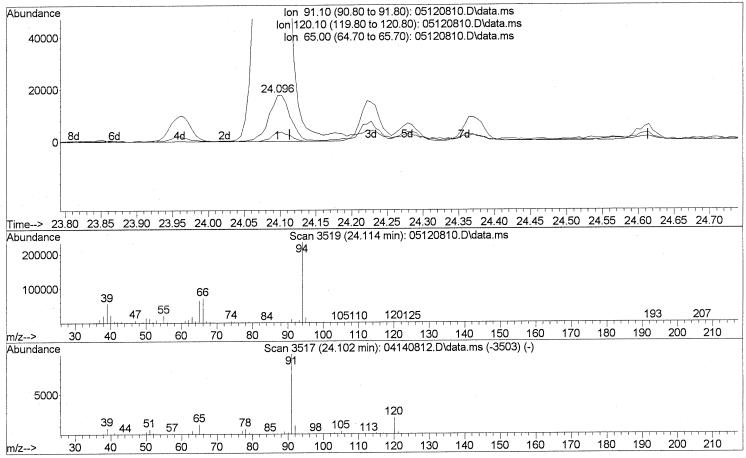
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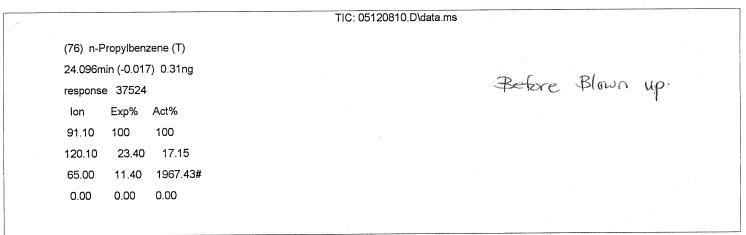
Quant Time: May 27 16:33:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008





File

:J:\MS13\DATA\2008 05\12\05120810.D

Operator

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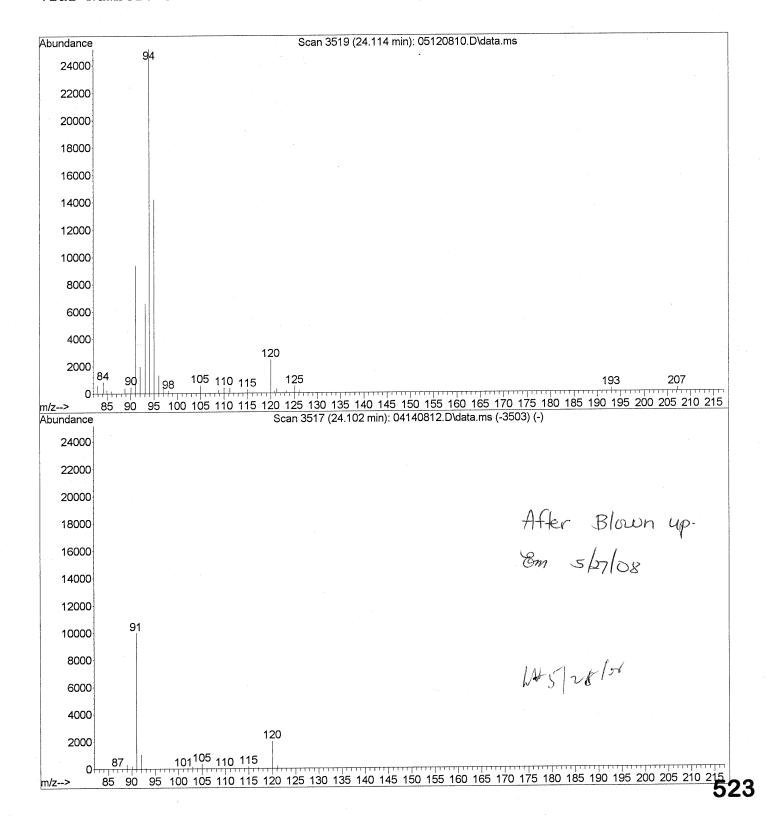
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: 12 May 2008 5:12 pm using AcqMethod TO15.M

Instrument : GCMS13

Sample Name: P0801385-004 DUP (1000mL) Misc Info : ENSR SG43B-05 (-5.3, 3.5)

Vial Number: 5



Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120810.D

Acq On : 12 May 2008 5:12 pm

Operator : RTB

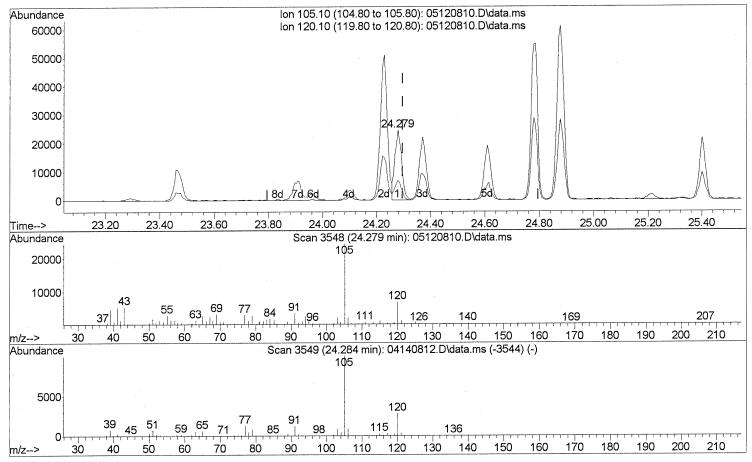
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ALS Vial : 5 Sample Multiplier: 1

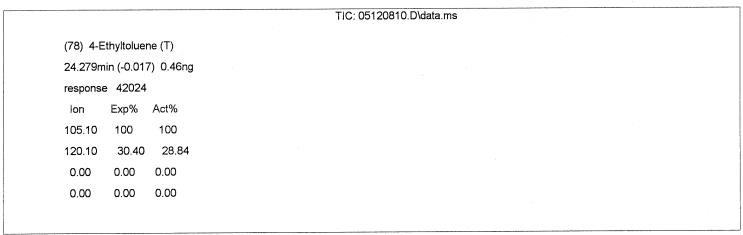
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Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

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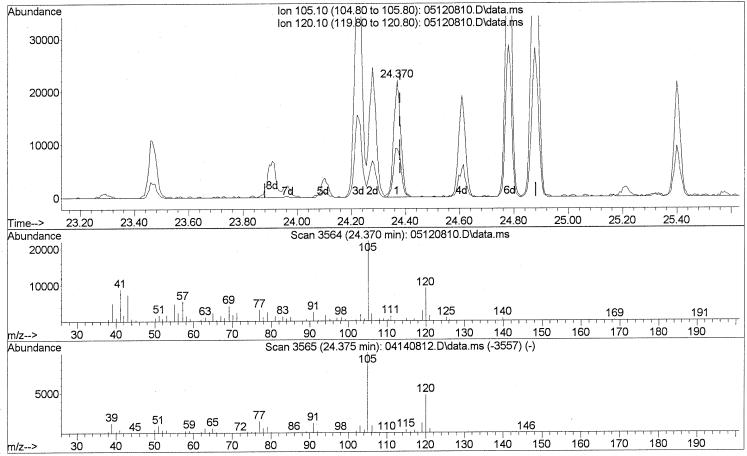
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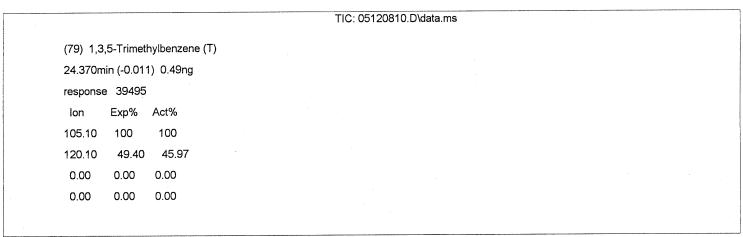
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QLast Update: Tue Apr 15 06:47:20 2008





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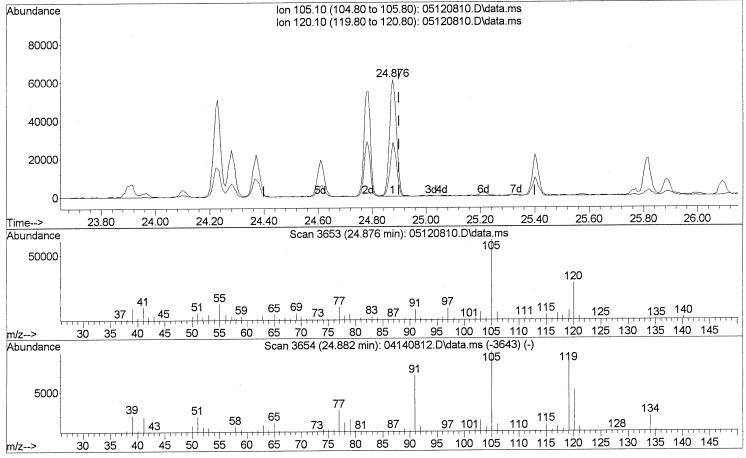
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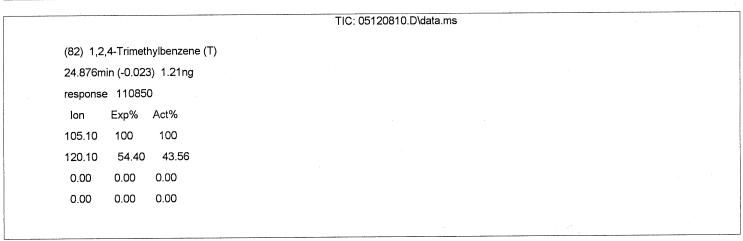
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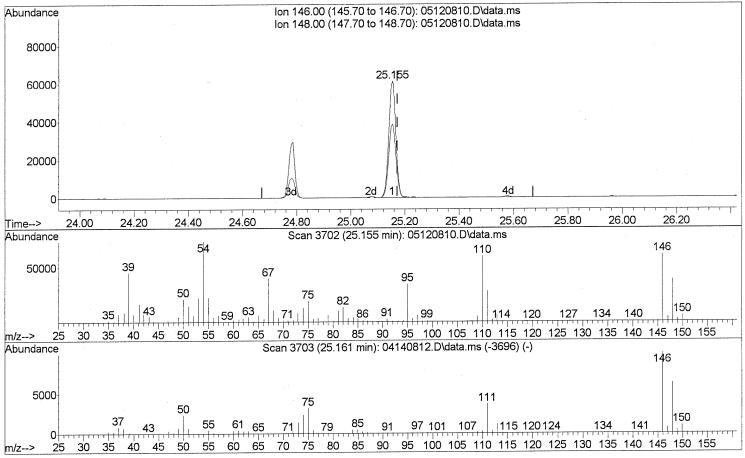
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ALS Vial : 5 Sample Multiplier: 1

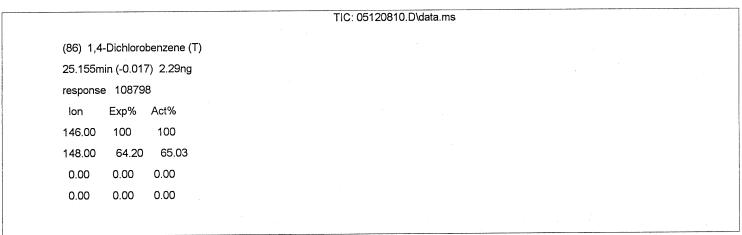
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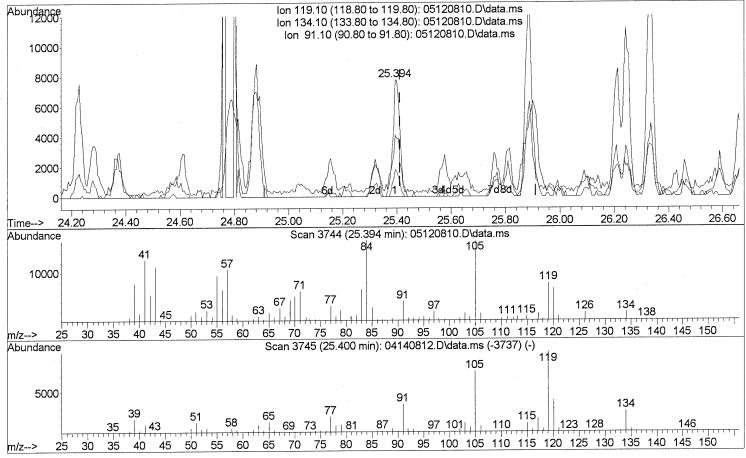
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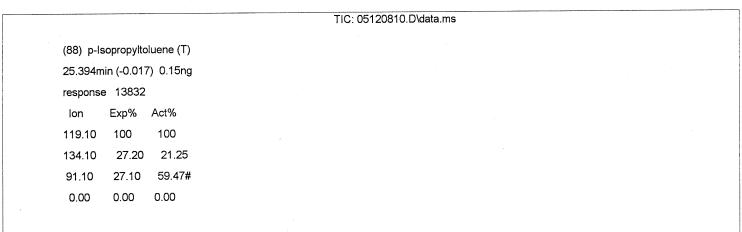
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QLast Update: Tue Apr 15 06:47:20 2008





Data Path : J:\MS13\DATA\2008 05\12\

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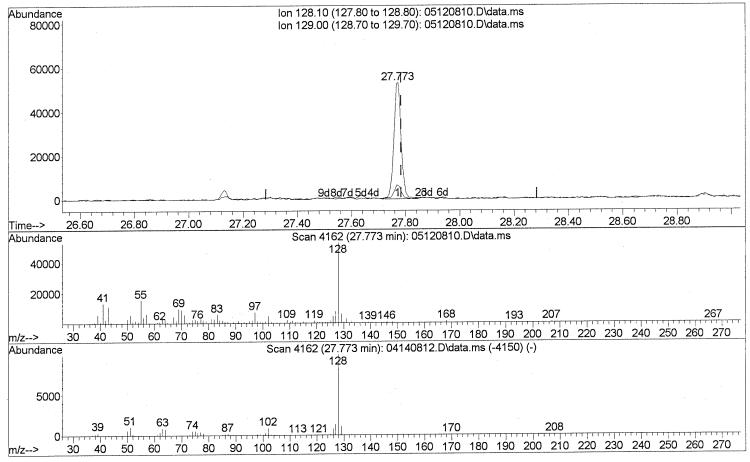
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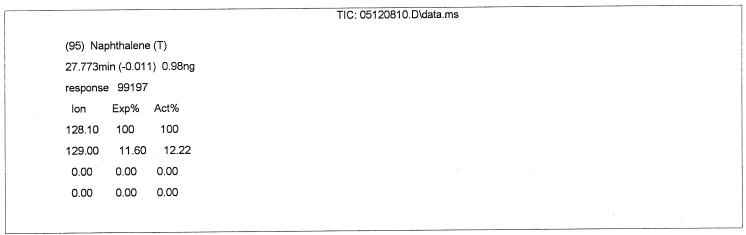
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Operator : RTB

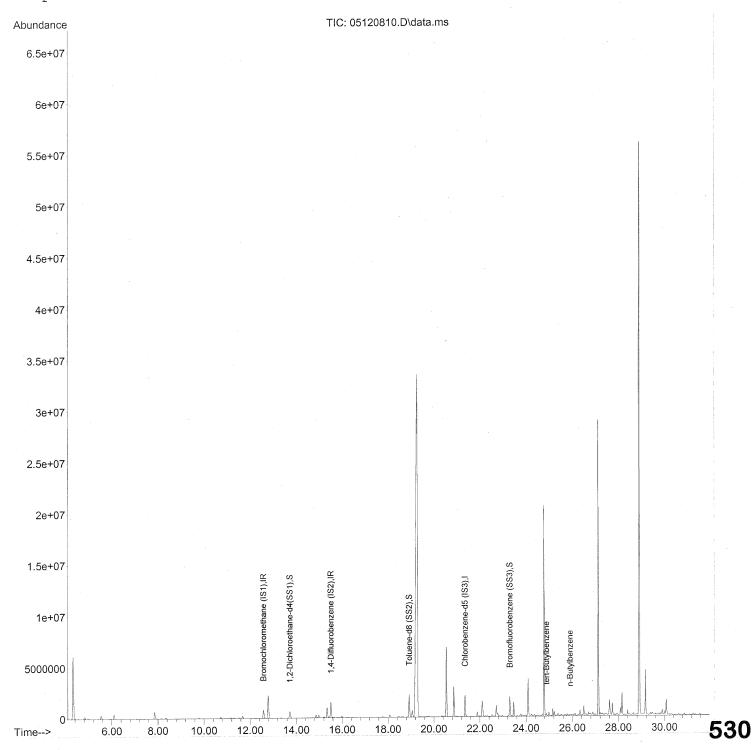
Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:44:36 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120810.D

Acq On : 12 May 2008 17:12

Operator : RTB

Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 27 15:44:36 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.36	114	387049 1687482 794370	25.000 25.000 25.000	ng	-0.03 -0.02 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000			Recove 1805739 Recove 622248	ery = 25.361 ery =	85 ng 101 ng	.60% 0.00 .44% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88	119) 91	14659 18666	0.169		Qvalue # 54 # 56

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

Page: 1

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120810.D

Acq On : 12 May 2008 17:12

Operator : RTB

Sample : P0801385-004 DUP (1000mL)
Misc : ENSR SG43B-05 (-5.3, 3.5)
ALS Vial : 5 Sample Multiplier: 1

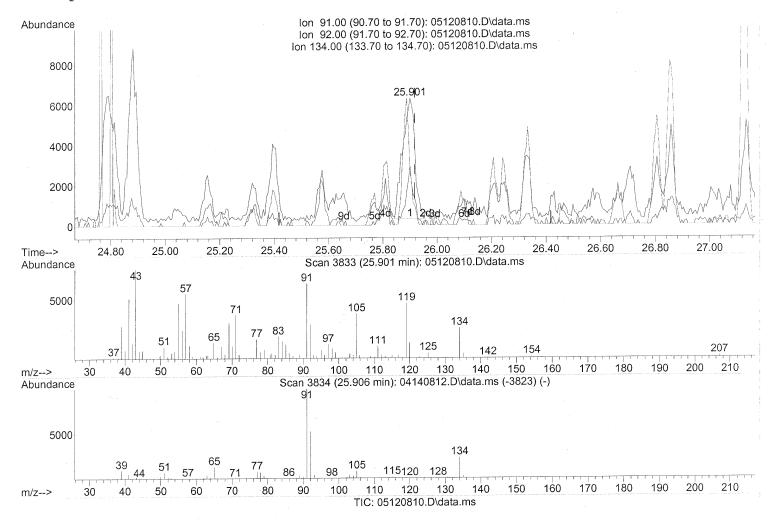
Quant Time: May 27 15:44:36 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration



(8) n-Butylbenzene

25.901min (-0.017) 0.20ng

response 18666

 Ion
 Exp%
 Act%

 91.00
 100
 100

 92.00
 55.70
 30.76#

 134.00
 28.80
 61.59#

 0.00
 0.00
 0.00

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client:

ENSR

CAS Project ID: P0801385

Client Project ID: Phase B Soil Gas / 04020-023-4311

Internal Standard Area and RT Summary

Test Code:

EPA TO-15

Instrument ID:

Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Lab File ID: 05120802.D

Analyst:

Rusty Bravo

5/12/08 Date Analyzed:

Sampling Media:

6.0 L Summa Canister(s)

Time Analyzed: 09:52

Test Notes:

		IS1 (BCM)		IS2 (DFB)		IS3 (CBZ)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	24 Hour Standard	297636	12.59	1318074	15.51	617112	21.35
		416690	12.92	1845304	15.84	863957	21.68
	Upper Limit	178582	12.92	790844	15.18	370267	21.03
L	Lower Limit	1/0302	12.20	790044	13.10	370207	21.02
	Client Sample ID						
01	Method Blank	301500	12.58	1324198	15.51	603978	21.35
02	SG41B-20	313097	12.58	1366600	15.51	725160	21.36
03	SG41B-20D	365729	12.58	1580836	15.51	777638	21.36
04	SG43B-05	379812	12.58	1672734	15.51	784338	21.35
05	SG38B-20	381052	12.58	1683477	15.51	806379	21.36
06	SG43B-05 (Lab Duplicate)	387049	12.58	1687482	15.51	794370	21.36
07	SG40B-05	387191	12.60	1580750	15.52	772774	21.35
08	Lab Control Sample	406558	12.59	1737318	15.52	827975	21.35
09	SG40B-05D	402064	12.59	1591654	15.52	796246	21.35
10	SG64B-05	390537	12.58	1711192	15.51	819519	21.35
11	SG41B-20 (Dilution)	389340	12.58	1701903	15.51	801622	21.35
12	SG41B-20D (Dilution)	385677	12.58	1660460	15.51	773422	21.35
13	SG40B-05 (Dilution)	383903	12.58	1663601	15.51	762697	21.35
14	SG40B-05D (Dilution)	347681	12.58	1528388	15.51	718463	21.35
15							
16							
17							
18							
19							
20							

IS1 (BCM) = Bromochloromethane

IS2 (DFB) = 1,4-Difluorobenzene

IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area

AREA LOWER LIMIT = 60% of internal standard area

RT UPPER LIMIT = 0.33 minutes of internal standard RT

RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.

* Values outside of QC limits.

Verified By:	at	Date:	5/28/108	53
	7	OISSCAN VIT Transv	Handerson PanaNo:	

INITIAL CALIBRATION STANDARDS

Method Path : J:\MS13\METHODS\ Method File : R13041408.M

5.0 =04140811.D Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Last Update : Tue Apr 15 06:34:47 2008 Response Via : Initial Calibration 1.0 = 04140810.D 0.5 = 04140809.D Calibration Files 0.1 = 04140808.D

25	=04	140812.D 50 =04140	813.D	100	=0414(0814.D					
		nd	0.1	0.5	1.0	5.0	25	20 0 5	100	Avg	\Box
	ι <u>α</u>	Bromochloromethane	1 1 			1 U				1 1 1 1 1 1	
S F	\ - -		2.452	2.204	2.130	1.859	1.876	1.926	2.0	2.069	0.2
3)	E	Dichlorodifluoromet	69	.06	88	.39	.44	.39	3.52	3.77	2.7
4)	Η	Lh	.15	.52	.36	.80	.94	.87	2.41	3.15	18.24
5)	Н	eon	.15	.01	. 78	.66	.68	.72	1.90	1.84	9.9
(9	<u>-</u>	nyl C	.57	.14	.88	.71	.70	.67	2.83	2.93	1.0
7)	Н	1,3-Butadiene	.42	.39	.10	.04	.21	.27	2.42	2.26	8.0
8	H	Bromomethane	.46	.49	.35	.31	.38	.38	1.47	1.40	4.9
6	H	Chloroethane	.25	. 38	.16	.12	.16	.13	1.28	1.21	7.9
10)	H	Ethanol		.81	.59	.36	.22	. 22	1.24	1.41	7.1
11)	H			. 28	.79	.57	.26	. 23	3.29	3.70	3.00
12)	H	Acrolein	9	.96	.97	.95	.97	.95	0.98	0.99	7.6
13)	⊣	Acetone			.67	.44	.29	.24	1.26	1.38	3.0
14)	E-	Trichlorofluorometh	.36	.18	.93	.71	.84	. 78	2.91	2.96	7.7
15)	Η	Isopropanol	.25	49	.98	.09	.61	.15	4.16	4.68	2.2
16)	Η	\geq	.60	.34	.30	1	.24	.18	2.23	2.14	1.7
17)	E	1,1-Dichloroethene	. 79	.34	.35	.24	.30	. 28	1.33	1.38	3.5
18)	H	tert-Butanol	.76	.37	.19	.89	.05	. 93	3.98	3.88	3.4
19)	H	hy1	.27	. 69	. 53	.39	.42	.37	1.42	1.59	0.1
20)	H	Chlori	1.394	2.089	00.	.09	.38	.39	2.50	2.12	7.6
21)	H	chlorotrif	. 52	.33	. 22	.17	.17	.15	1.27	1.26	0.3
22)	H	Bu	.26	.21	. 85	.49	.83	. 69	5.91	5.89	4.6
23)	⊣	ns-1,2-Dichlor	.61	. 53	.43	.17	.32	.31	2.44	2.40	6.0
24)	H	hloroeth	. 22	.80	.81	.62	.75	.62	2.75	2.80	7.2
25)	H	/l tert-Butyl	.66	.68	.51	.18	.31	.2	4.53	4.59	0.8
26)	H	Vinyl Acetate			.21	.25	. 29	. 29	0.31	0.27	5.0
27)	Η	anon	.75	.10	.03	96.	. 98	96.	0.98	0.97	1.2
28)	H	s-1,2-Dichloro	2.567	. 29	.25	.13	.19	.17	2.24	2.26	6.3
29)	Η	opropyl	.36	.32	.10	.09	.18	. 28	1.56	1.27	2.0
30)	Η	Ethyl Acetate		0.517	.51	.53	.60	. 65	0.80	09.0	8.7
31)	[n-Hexane	3.505	96.	.93	.65	.91	1	3.92	3.14	3.7
•	Æ										

Page:

Method Path : J:\MS13\METHODS\

TO-15/GC-MS)

Method File: R13041408.M Title: EPA TO-15 per SOP VOA-TO15 (CASS Last Update: Tue Apr 15 06:34:47 2008 Response Via: Initial Calibration

		SD	1	9	\mathcal{O}	\vdash	0			\sim	$^{\circ}$	4	0	4	\leftarrow	∞	4	∞	0	.54	\sim	9	4	\vdash	9	\mathcal{O}	7		9	9	.14	\sim	1
		% 兄	1							ω	9	2	10	7	5	4	TT	\mathcal{O}	7	9	Ŋ	5	∞	∞	2	\vdash	10				9		
			1 1	33	00.	.97	9.	.31	 	0.521	. 22	.34	.32	43	.49	.94	.38	.45	.32	. 23	.57	.12	.36	.51	.36	.44	.31	! ! !	2.241	00	.09	.67	•
	0811.D	100	1 1	. 20	.94	. 94		.19	1	0.535	. 24	.35	.30	.49	.51	00.	.37	.47	.34	.26	.64	.13	.38	. 58	.40	. 52	.32	i 1	2.190	92	.25	.76	•
	=04140		1 1	15	96.	.95		.17	1	0.501	. 22	.33	.27	.46	.47	.94	.35	.44	.31	. 23	.53	.12	.35	.54	.37	.49	.30	1	2.195	69	.19	.69	
	.0	25	1 1	. 23	.03	.97		.25		0.514	0.23	0.33	1.28	0.45	0.47	0.94	0.36	0.44	0.31	0.23	1.54	0.12	0.35	0.54	0.37	0.48	0.30	<u>Q</u>	7	2.65	2.21	0.68)
	0810.D 0814.D		1	.14	. 98	. 93	•	.14	 - -	0	0.20	0.33	1.20	0.41	0.45	0.87	0.34	0.40	0.29	0.22	1.41	0.11	0.33	0.49	0.33	0.42	0.28	 S	2.254	2.59	2.05	0.64	
	=0414(=0414(1 0	.30	.04	.91	٠	.36	1	0.484	. 21	.34	.23	.40	.48	.91	.35	.41	.33	.24	.56	1	.35	47	.34	.40	. 29	1	2.272	. 70	. 88	7	
٦	1.0		1 1	.59	. 03	.12	•	.44	1	0.548	.24	.34	.39	.41	.50	.92	.39	.42	.35	. 22	.64	.12	.36	.50	.35	.42	.32	1	2.277	. 93	.05	64)
bration	0809.D 0813.D		1 0 1 1	.70	.02	.94	٠	.60	1	0.597	.21		.59	.42	. 52	99	.47	.53	.33	0.214	.64		.42	.47	0.352	.37	.39	1	2	.20	.03	0.70	
ial Cali	0.5 =0414(50 =0414				roethane-	furan		ane	Α Γ	hloroetha	Φ			rachlorid	d)	H	ropropane	ğ	thene	a)		hacrylate		pr	-pentanon	ro	th	b	SS2)			oromethan	(
Via : Init	on Files 0808 D 0812 D	Compound	1	Chlorotorm	L,2-Dichloroeth	rah	7] t	1,2-Dichlo	4	1,1,1-Trichloroe	30	'n,	enze	Carbon Tet	\sim	cert-Amyl 1	1,2-Dichlo	3romodichl	Trichloroe	1,4-Dioxane		Met	Hepta	is-1,	-Meth	ans-	, 1, 2-5	Chlorobenz	-d8	luene	- 1	Dibromoghlorome	4
esponse	ibrati =0414 =0414	Ð	***				H			; ; ;																			ı w				
Res	Cal: 0.1 25						35)		()	38)	6	(0	1)	2)	3)	4)	5)	(9	7)	(8	6	(0	1)	2)	3)	4)	2		57)				

Method File: R13041408.M

Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Last Update : Tue Apr 15 06:34:47 2008 Response Via : Initial Calibration

Calibration Files

	%RSD	08.6	7.4	1.7	7.8	5.5	0.9	5.3	9.7	0.2	7.6	0.8	1.2	8.9	2.7	5.3	9.7	0.1	2.7	8.6	9.6	4.9	4.3	9.0	6.0	3.6	7.9	3.1	5.7	0.5	1.3	4.1	6.7
	Avg	2.097	0.66	0.70	1.74	3.14	2.10	0.46	1.81	2.26	1.81	1.07	0.77	2.86	1.52	3.83	3.12	2.88	2.55	1.35	3.14	2.89	1.59	1.97	1.56	1.49	3.39	2.95	2.84	1.60	1.31	0.42	1.67
0811.D	100	2.310	.75	.80	88	.41	.53	.57	.13	.70	.04	.29	.77	.33	.91	.09	.70	.39	.18	.84	.69	.07	0.5	.87	.09	.92	.83	.87	.03	.55	H	.55	. 23
=0414	0 1	2.250	.67	.68	.68	. 22	.27	.51	. 88	.35	.84	.12	.76	.04	.62	.06	.34	.13	. 78	.49	.33	.67	.72	.42	.64	.56	.65	. 88	.64	. 93	.57	.48	. 83
5.0	10 1	2.252	.65	.65	.64	.14	.12	.49	.83	.24	.81	.07	. 78	.91	.54	96.	.14	.95	.57	.40	.18	.99	61	.23	.52	.46	.45	.19	. 98	. 58	.33	.46	. 69
0810.D	0 1	2 .	.60	.62	.59	.93	.93	.45	.66	.12	.70	.01	. 78	.69	.41	.62	.87	.67	.32	.24	.89	.43	.46	.90	.36	.33	.13	.50	.34	.30	90.	.41	.55
=0414(=0414(0 1	73	.62	.65	.64	.94	.90	.44	.62	.00	.60	.95	.76	.67	.37	.64	. 88	.64	.31	.13	.80	.30	.46	.54	.37	.36	.10	.39	. 29	. 29	.99	.42	.43
1.0	10		.64	.67	.81	.25	.99	.41	.68	.10	. 78	.97	.75	.81	.40	.83	98	.62	.37	.15	.00	.44	.46	.54	.48	.38	. 28	.42	.37	.34	. 05	.38	.50
0809.D 0813.D	· 1		. 66	.84	.94	.08	.94	.35	.87	.30	.87	.12	.76	.60	.40	.64	.95	. 74	.35	. 20	.08	. 29	.40	.26	.46	.45	. 28	.43	. 22	.19	.03	. 23	4.9
0.5 = 0414(50 = 0414(1 1 1 1 1 1	tate		roethene	ızene	zene	/lene	ľ				μŢ	luorobenzene		nene	oenzene	ltoluene	ltoluene	methylben	-Methylstyrene	toluene	imethylbenz		Chloride	zen	Z (Œ,		zen	1e	omo-3-Chlor	je
4140808.D 4140812.D	Compound	tyl Ac	n-Octane	Tetrachloroeth	Chlorobenzen	Ethylbenz	m- & p-Xy	Bromoform	Styrene	o-Xylene	- 1	,1,2,	Bromofluc	Cumene	alpha-Pin	-Prop	3-Ethyltc	-Ethy	1,3,5-Tri	lpha	thyl	,2,4-Tr	П	enzyl	Ũ	, 4-D	sec-Buty]	H		,2-D	i,m	1,2-Dibromo	n-Undecan
0 =	! !	E	⊣	⊢	<u>[</u>	\vdash	Н	H	E	<u>-</u>	⊱	H	W	H	Η	Η	H	E-4	\vdash	⊱⊣	⊱	H	H	⊱	H	\vdash	Н	⊱	⊣	H	\vdash	⊱	[
0.1	A.C. 1040	62)	63)	64)	(29	(99	(2)	(89)	(69	70)	71)	72)	73)	74)	75)	76)	77)	78)	79)	(08	81)	82)	83)	84)	85)	86)	87)	(88)	(68	06	91)	92)	3

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Page:

: J:\MS13\METHODS\ : R13041408.M Method Path

94) T 1,2,4-Trichlorobenz 0.796 0.875 0.876 0.899 0.992 1.100 1.419 0.994 21.28 95) T Naphthalene 2.304 3.074 2.991 3.156 3.394 3.589 3.861 3.196 15.60 96) T n-Dodecane 1.646 1.521 1.441 1.519 1.671 1.830 2.290 1.703 16.96 97) T Hexachloro-1,3-buta 0.415 0.578 0.567 0.545 0.638 0.724 1.012 0.640 29.53	1	1		1 1 1 1			1 1 1 1 1 1	1 1 1 1 1		1 1 1 1 1	1 1 1 1 1	1 1 1 1
T Naphthalene 2.304 3.074 2.991 3.156 3.394 3.589 3.861 3.196 T n-Dodecane 1.646 1.521 1.441 1.519 1.671 1.830 2.290 1.703 T Hexachloro-1,3-buta 0.415 0.578 0.567 0.545 0.638 0.724 1.012 0.640	94)	H	1,2,4-Trichlorobenz	0.796	0.875	0.876	0.899	0.992	1.100	1.419 0.	.994	21.28
T n-Dodecane 1.646 1.521 1.441 1.519 1.671 1.830 2.290 1.703 T Hexachloro-1,3-buta 0.415 0.578 0.567 0.545 0.638 0.724 1.012 0.640	95)	H	Naphthalene	2.304	3.074	2.991	3.156	3.394	3.589	3.861 3.	.196	15.60
T Hexachloro-1,3-buta 0.415 0.578 0.567 0.545 0.638 0.724 1.012 0.640	(96)	Η	n-Dodecane	1.646	1.521	1.441	1.519	1.671	1.830	2.290 1.	.703	16.96
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	97)	EI	Hexachloro-1,3-buta	0.415	0.578	0.567	0.545	0.638	0.724	1.012 0.	.640	29.53
	1	1		1	1		-	1	1	1 1 1 1	1	1
	(#/	Ċ	++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++ ++									

%RSD

Avg

100

50

25

5.0

1.0

0.5

Compound

Primary Source Standards Concentrations (Working & Initial Calibration)

4ng/L Std. ID: S20-04030801 20ng/L Std. ID: S20-03210809 200ng/L Std. ID: S20-04020808

200ng/L Std. ID:	S20-03210809 S20-04020808						ICAL C	oncentrat	ions (Pri	mary Sou	urce)	
	DELTA SERVICE DE LA CONTRACTOR DE LA CON	2.			Working STD					I		
Dilution Factors:		5	50	250	Conc.(ng/L):	Supplied Chambridge v. 3	20	20	20	200	200	200
	Source Std.	Primary V	Vorking S	tandards	Injection (L):	0.025	0.025	0.050	0.25	0.125	0.25	0.50
Compounds	mg/m ³	200ng/L	20ng/L	4ng/L	ICAL Points:	<u>0.1ng</u>	<u>0.5ng</u>	<u>1ng</u>	<u>5ng</u>	<u>25ng</u>	<u>50ng</u>	<u>100ng</u>
Propene	1.08	216	21.6	4.32		NA	0.540	1.08	5.40	27.0	54.0	108
Dichlorodifluoromethane	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
Chloromethane	1.02	204	20.4	4.08		NA	0.510	1.02	5.10	25.5	51.0	102
Freon-114	1.07	214	21.4	4.28		NA	0.535	1.07	5.35	26.8	53.5 51.5	107 103
Vinyl Chloride	1.03	206	20.6	4.12		NA NA	0.515	1.03	5.15 5.45	25.8 27.3	54.5	109
1,3-Butadiene	1.09	218	21.8 21.0	4.36 4.20		NA NA	0.525	1.05	5.25	26.3	52.5	105
Bromomethane	1.05	210 210	21.0	4.20		NA NA	0.525	1.05	5.25	26.3	52.5	105
Chloroethane	1.05 0.91	182	18.2	3.64		NA NA	0.455	0.910	4.55	22.8	45.5	91.0
Ethanol Acetonitrile	0.980	196	19.6	3.92		NA	0.490	0.980	4.90	24.5	49.0	98.0
Acrolein	0.960	192	19.2	3.84		NA	0.480	0.960	4.80	24.0	48.0	96.0
Acetone	1.11	222	22.2	4.44		NA	0.555	1.11	5.55	27.8	55.5	111
Trichlorofluoromethane	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
Isopropanol	1.03	206	20.6	4.12		NA	0.515	1.03	5.15	25.8	51.5	103
Acrylonitrile	1.010	202	20.2	4.04		NA	0.505	1.01	5.05	25.3	50.5	101
1,1-Dichloroethene	1.13	226	22.6	4.52		NA	0.565	1.13	5.65	28.3	56.5	113
tert-Butanol	1.020	204	20.4	4.08		NA	0.510	1.02	5.10	25.5	51.0	102
Methylene Chloride	1.12	224	22.4	4.48		NA	0.560	1.12	5.60	28.0	56.0	112
Allyl Chloride	1.05	210	21.0	4.20		NA NA	0.525	1.05	5.25	26.3	52.5 57.0	105 114
Trichlorotrifluoroethane	1.14	228	22.8	4.56		NA NA	0.570	1.14	5.70 5.00	28.5 25.0	50.0	100
Carbon Disulfide	1.00	200	20.0	4.00		NA NA	0.500	1.10	5.50	27.5	55.0	110
trans-1,2-Dichloroethene	1.10	220	22.0	4.40 4.44		NA NA	0.555	1.10	5.55	27.8	55.5	111
1,1-Dichloroethane	1.11	222	22.2 - 22.2	4.44		NA NA	0.555	1.11	5.55	27.8	55.5	111
Methyl tert-Butyl Ether	1.11 0.98	196	19.6	3.92		NA NA	0.490	0.980	4.90	24.5	49.0	98.0
Vinyl Acetate	1.12	224	22.4	4.48		NA	0.560	1.12	5.60	28.0	56.0	112
2-Butanone cis-1.2-Dichloroethene	1.12	222	22.2	4.44		NA	0.555	1.11	5.55	27.8	55.5	111
Diisopropyl Ether	1.03	206	20.6	4.12		NA	0.515	1.03	5.15	25.8	51.5	103
Ethyl Acetate	1.27	254	25.4	5.08		NA	0.635	1.27	6.35	31.8	63.5	127
n-Hexane	1.12	224	22.4	4.48		NA	0.560	1.12	5.60	28.0	56.0	112
Chloroform	1.29	258	25.8	5.16		NA	0.645	1.29	6.45	32.3	64.5	129
Tetrahydrofuran	1.11	222	22.2	4.44		NA	0.555	1.11	5.55	27.8	55.5	111
Ethyl tert-Butyl Ether	1.05	210	21.0	4.20		NA	0.525	1.05	5.25	26.3	52.5	105
1,2-Dichloroethane	1.10	220	22.0	4.40		NA	0.550	1.10	5.50	27.5	55.0	110
1,1,1-Trichloroethane	1.10	220	22.0	4.40		NA	0.550	1.10	5.50	27.5	55.0	110
Isopropyl Acetate	1.010	202	20.2	4.04		NA	0.505	1.01	5.05	25.3	50.5	101 91.0
1-Butanol	0.910	182	18.2	3.64		NA	0.455	0.910	4.55 5.50	22.8	45.5 55.0	110
Benzene	1.10	220	22.0	4.40		NA NA	0.550 0.535	1.10 1.07	5.35	26.8	53.5	107
Carbon Tetrachloride	1.07	214	21.4 22.2	4.28 4.44		NA NA	0.555	1.11	5.55	27.8	55.5	111
Cyclohexane	1.11	222	20.8	4.44		NA NA	0.520	1.04	5.20	26.0	52.0	104
tert-Amyl Methyl Ether	1.04	218	21.8	4.16		NA NA	0.545	1.09	5.45	27.3	54.5	109
1,2-Dichloropropane Bromodichloromethane	1.15	230	23.0	4.60		NA	0.575	1.15	5.75	28.8	57.5	115
Trichloroethene	1.14	228	22.8	4.56		NA	0.570	1.14	5.70	28.5	57.0	114
1,4-Dioxane	1.15	230	23.0	4.60		NA	0.575	1.15	5.75	28.8	57.5	115
Isooctane	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
Methyl Methacrylate	1.06	212	21.2	4.24		NA	0.530	1.06	5.30	26.5	53.0	106
n-Heptane	1.11	222	22.2	4.44		NA	0.555	1.11	5.55	27.8	55.5	111
cis-1,3-Dichloropropene	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
4-Methyl-2-pentanone	1.05	210	21.0	4.20		NA	0.525	1.05	5.25	26.3	52.5	105
trans-1,3-Dichloropropene	1,16	232	23.2	4.64		NA	0.580	1.16	5.80	29.0	58.0	116
1,1,2-Trichloroethane	1.09	218	21.8	4.36		NA NA	0.545	1.09	5.45	27.3	54.5	109
Toluene	1.10	220	22.0	4.40		NA NA	0.550	1.10	5.50	27.5	55.0 51.0	110 102
2-Hexanone	1.02	204	20.4	4.08		NA	0.510	1.02	5.10 5.55	25.5 27.8	51.0 55.5	111
Dibromochloromethane	1.11	222	22.2	4.44		NA NA	0.555 0.545	1.11	5.45	27.8	54.5	109
1,2-Dibromoethane	1.09	218	21.8	4.36		NA NA	0.525	1.09	5.25	26.3	52.5	105
n-Butyl Acetate	1.05	210	21.0	4.20 4.16		NA NA	0.520	1.03	5.20	26.0	52.0	104
n-Octane	1.04 1.09	208 218	20.8 21.8	4.16		NA NA	0.545	1.09	5.45	27.3	54.5	109
Tetrachloroethene	1.10	220	22.0	4.40		NA NA	0.550	1.10	5.50	27.5	55.0	110
Chlorobenzene	1.08	216	21.6	4.32		NA NA	0.540	1.08	5.40	27.0	54.0	108
Ethylbenzene m-&p-Xylene	2.58	516	51.6	10.32		NA	1.29	2.58	12.9	64.5	129	258
III QP-Aylono	2.00	1 010	5.10				<u> </u>	·				

Primary Source Standards Concentrations (Working & Initial Calibration)

4ng/L Std. ID: S20-04030801 20ng/L Std. ID: S20-03210809 200ng/L Std. ID: S20-04020808

200ng/L Std. ID:	S20-04020808						ICAL C	oncentra	tions (Pri	mary Sou	ırce)	
					Working STD	1						
Dilution Factors:		5	50	250	Conc.(ng/L):	0	20	20	20	200	200	200
	Source Std.	Primary V	Vorking S	tandards	Injection (L):	0.025	0.025	0.05	0.25	0.125	0.25	0.50
Compounds	mg/m³	200ng/L	20ng/L	4ng/L	ICAL Points:	<u>0.1ng</u>	<u>0.5ng</u>	1ng	5ng	<u>25ng</u>	<u>50ng</u>	<u>100ng</u>
Bromoform	1.31	262	26.2	5.24		NA	0.655	1.31	6.55	32.8	65.5	131
Styrene	1.08	216	21.6	4.32		NA -	0.540	1.08	5.40	27.0	54.0	108
o-Xylene	1.22	244	24.4	4.88		NA	0.610	1.22	6.10	30.5	61.0	122
n-Nonane	1.03	206	20.6	4.12	VIIIIIIIII	NA	0.515	1.03	5.15	25.8	51.5	103
1,1,2,2-Tetrachloroethane	1.23	246	24.6	4.92		NA	0.615	1.23	6.15	30.8	61.5	123
Cumene	1.08	216	21.6	4.32		NA	0.540	1.08	5.40	27.0	54.0	108
alpha-Pinene	1.06	212	21.2	4.24		NA	0.530	1.06	5.30	26.5	53.0	106
n-Propylbenzene	1.05	210	21.0	4.20		NA	0.525	1.05	5.25	26.3	52.5	105
3-Ethyltoluene	1.02	204	20.4	4.08		NA	0.510	1.02	5.10	25.5	51.0	102
4-Ethyltoluene	1.11	222	22.2	4.44		NA	0.555	1.11	5.55	27.8	55.5	111
1,3,5-Trimethylbenzene	1.08	216	21.6	4.32		NA	0.540	1.08	5.40	27.0	54.0	108
alpha-Methylstyrene	1.02	204	20.4	4.08		NA	0.510	1.02	5.10	25.5	51.0	102
2-Ethyltoluene	0.990	198	19.8	3.96		NA	0.495	0.990	4.95	24.8	49.5	99.0
1,2,4-Trimethylbenzene	1.10	220	22.0	4.40		NA	0.550	1.10	5.50	27.5	55.0	110
n-Decane	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
Benzyl Chloride	1.07	214	21.4	4.28		NA	0.535	1.07	5.35	26.8	53.5	107
1,3-Dichlorobenzene	1.06	212	21.2	4.24		NA	0.530	1.06	5.30	26.5	53.0	106
1,4-Dichlorobenzene	1.10	220	22.0	4.40		NA	0.550	1.10	5.50	27.5	55.0	110
sec-Butylbenzene	1.07	214	21.4	4.28		NA	0.535	1.07	5.35	26.8	53.5	107
p-Isopropyltoluene	1.180	236	23.6	4.72		NA ·	0.590	1.18	5.90	29.5	59.0	118
1,2,3-Trimethylbenzene	1.10	220	22.0	4.40		NA	0.550	1.10	5.50	27.5	55.0	110
1,2-Dichlorobenzene	1.08	216	21.6	4.32		NA	0.540	1.08	5.40	27.0	54.0	108
d-Limonene	1.06	212	21.2	4.24		NA	0.530	1.06	5.30	26.5	53.0	106
1,2-Dibromo-3-chloropropane	1.04	208	20.8	4.16		NA	0.520	1.04	5.20	26.0	52.0	104
n-Undecane	1.05	210	21.0	4.20		NA	0.525	1.05	5.25	26.3	52.5	105
1,2,4-Trichlorobenzene	1.12	224	22.4	4.48		NA	0.560	1.12	5.60	28.0	56.0	112
Naphthalene	1.05	210	21.0	4.20		NA	0.525	1.05	5.25	26.3	52.5	105
n-Dodecane	1.06	212	21.2	4.24	<i>HIIIIIII</i>	NA	0.530	1.06	5.30	26.5	53.0	106
Hexachloro-1,3-butadiene	1.11	222	22.2	4.44		NA .	0.555	1.11	5.55	27.8	55.5	111

^{*}Enter Information in the Solid Shaded Areas ONLY.

Calibracion beacab report compre

Method Path : J:\MS13\METHODS\

Method File : R13041408.M

Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Last Update : Tue Apr 15 06:47:20 2008
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0	25	J:\MS13\DATA\2008_04\14\04140808.D
2	0.5	1	-25	J:\MS13\DATA\2008 04\14\04140809.D
Ì.	1.0	1	25	J:\MS13\DATA\2008_04\14\04140810.D
4	5.0	5	25	J:\MS13\DATA\2008 04\14\04140811.D
5	. 25	27	25	J:\MS13\DATA\2008_04\14\04140812.D
. 6	50	54	25	J:\MS13\DATA\2008_04\14\04140813.D
7	100	108	25	J:\MS13\DATA\2008_04\14\04140814.D

#	ID	Update Time	Quant Time	Acquisition Time		
		WHEN THE				
1	0.1	Apr 15 06:33 2008	Apr 14 19:57 2008	14 Apr 2008 18:59		
2	0.5	Apr 15 06:33 2008	Apr 14 20:24 2008	14 Apr 2008 19:40		
3	1.0	Apr 15 06:33 2008	Apr 15 06:20 2008	14 Apr 2008 20:21		
4	5.0	Apr 15 06:34 2008	Apr 15 06:22 2008	14 Apr 2008 21:01		
5	25	Apr 15 06:34 2008	Apr 15 06:24 2008	14 Apr 2008 21:43		
6	50	Apr 15 06:34 2008	Apr 15 06:26 2008	14 Apr 2008 22:24		
7	100	Apr 15 06:34 2008	Apr 15 06:28 2008	14 Apr 2008 23:04		

R13041408.M Tue Apr 15 15:34:11 2008

18A 4/15/08

Data File: 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

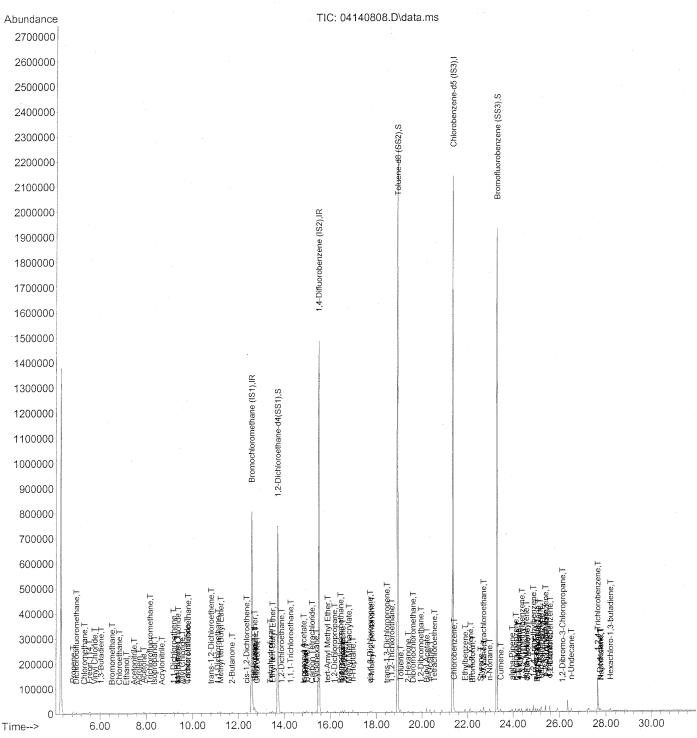
Sample : 0.1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04030801
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 14 19:57:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008



Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59 Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 14 19:57:23 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(N	Min)
1) Bromochloromethane (IS1)	12.58	130	330672	25.000	ng	-0.	. 0 3
37) 1,4-Difluorobenzene (IS2)	15.51	114	1516799	25.000	ng	-0.	.02
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	21.35	82	758152	25.000	ng	0.	. 0 0
System Monitoring Compounds					•		
33) 1,2-Dichloroethane-d4(13.72	65	669686				. 03
Spiked Amount 25.000					86		
57) Toluene-d8 (SS2)	18.93	98	1722189				.01
Spiked Amount 25.000				ery =			0.0
73) Bromofluorobenzene (SS3)	23.29	174	583069				. 00
Spiked Amount 25.000			Recov	ery =	119	.448	
Target Compounds						Qval	
2) Propene	4.84	42	3502	0.089		#	58
3) Dichlorodifluoromethane	4.98	85	6457	0.098	ng		93
4) Chloromethane	5.33	50	5608	0.101	ng		85
5) Freon 114	5.55	135	3051	0.113	ng		89
6) Vinyl Chloride	5.77	62	4872	0.096	ng		94
7) 1,3-Butadiene	6.04	54	3496	0.086	ng	#	61
8) Bromomethane	6.52	94	2038	0.079			91
2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein	6.84	64	1736	0.070			85
10) Ethanol	7.14	45	905	0.037	ng	#	44
11) Acetonitrile	7.47	41	5842	0.094	ng		83
12) Acrolein	7.68	56	1483	0.078	ng	#	73
13) Acetone	7.89	58	4681	0.186	ng	#	56
14) Trichlorofluoromethane	8.16	101	4631	0.087	ng		96
15) Isopropanol	8.35	45	7164m	0.083	ng		
16) Acrylonitrile	8.67	53	2141m	0.053	ng	.11	72
17) 1,1-Dichloroethene	9.17	96	2684	0.107	119	# #	84
18) tert-Butanol	9.34	59	3/24	0.049	ng	#	95
19) Methylene Chloride	9.36	8 4	3365	0.121	119		88
11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol 16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide 23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane	9.56	41	1936	0.047	ng		96
21) Trichlorotrilluoroethane	9.81	12T	2299	0.112	na		93
22) Carbon Disuilide	9.70	61	0202	0.071	ng		94
23) trans-1,2-Dichloroethene	10.80	6.3 D.T	37 3 0	0.082	na		95
		63 73	4737 8322	0.0094			78
25) Methyl tert-Butyl Ether	11.22		0322	N.D			70
26) Vinyl Acetate	0.00	86 72	1112	0.054		#	72
27) 2-Butanone	11.71 12.34	72 61	3769	0.034	_	11	82
28) cis-1,2-Dichloroethene	12.34	87	1863	0.079		#	88
29) Diisopropyl Ether	12.70	61	223	0.020	_	#	71
30) Ethyl Acetate	12.72	57	5193	0.020		11	98
31) n-Hexane		<i>J</i> /	5175	0.001	***		543

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard : S20-04140804/S20-04030801 Misc ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 14 19:57:23 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Internal Standards		QIon	Response	Conc Units	s Dev	(Min)
32) Chloroform	12.79	83	4622	0.106 ng		83
24) Wetter bridge frame	12 20	72	1.2.0.2	0 071 ng	#	84
34) Tetranydroluran 35) Ethyl tert-Butyl Ether 36) 1,2-Dichloroethane 38) 1,1,1-Trichloroethane 39) Isopropyl Acetate	13 49	87	2636	0.082 ng 0.087 ng	#	1
36) 1 2 Dighloroothane	13 88	62	3788	0.002 mg	".	85
30) 1,2-Diction decliane	14 27	97	3981	0.007 ng	#	66
38) I, I, I-III CIII OI OECHAILE	14.27	61	1323m	0.102 ng	11	00
39) Isopropyl Acetate	14.00	56	786	0.030 ng		79
,				_		95
41) Benzene 42) Carbon Tetrachloride 43) Cyclohexane 44) tert-Amyl Methyl Ether 45) 1,2-Dichloropropane 46) Bromodichloromethane 47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane 50) Methyl Methacrylate 51) n-Heptane	15 01	117	2729	0.100 ng		88
42) Carpon retrachioride	15.41	7 1 /	2723	0.002 119	#.	84
43) Cyclonexane	15.40	0 1	5547 6046	0.090 ng	117	90
44) tert-Amyl Metnyl Etner	15.88	(3	0240	0.001 119		95
45) 1,2-Dichioropropane	16.19	0.3	3114 3734	0.103 ng		84
46) Bromodichloromethane	16.45	83	3/34	0.107 ng 0.102 ng	11	
47) Trichloroethene	16.54	130	2307	0.102 ng	#	78
48) 1,4-Dioxane	16.53	88	1490	0.080 ng	#	
49) Isooctane	16.62	57	10380	0.084 ng		69
50) Methyl Methacrylate	16.81	100	424m	0.045 ng		F-1 F
51) n-Heptane	16.98	71	2860		#	75
52) cis-1,3-Dichloropropene	17.73	75	3001	0.068 ng		90
53) 4-Methyl-2-pentanone	17.79	58	2240	0.078 ng		94
51) n-Heptane 52) cis-1,3-Dichloropropene 53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene	18.45	75	2661	0.069 ng		91
55) 1,1,2-Trichloroethane	18.67	9.7	2577	0.111 ng		94
58) Toluene			10684	0.119 ng		95
59) 2-Hexanone 60) Dibromochloromethane 61) 1,2-Dibromoethane 62) Butyl Acetate 63) n-Octane 64) Tetrachloroethene	19.39	43	6288	0.089 ng		68
60) Dibromochloromethane	19.60	129	2380	0.115 ng		97
61) 1,2-Dibromoethane	19.94	107	2269	0.098 ng		98
62) Butyl Acetate	20.21	43	5465	0.077 ng	#	72
63) n-Octane	20.35	57	2088	0.092 ng		80
64) Tetrachloroethene	20.54	166	2776	0.135 ng		85
65) Chlorobenzene	21.41	112	04/0	$0.122 \mathrm{ng}$		65
(C) Ethylhenzene	21 89	91	10115	0 099 na		97
67) m- & n-Xvlene	22.13	91	15249	0.225 ng	#	52
68) Bromoform	22.22	173	1417	0.097 na		100
69) Styrene	22.58	104	6125	0.106 ng		95
70) o-Xylene	22.71		8518	0.117 ng		82
71) n-Nonane	22.98	43	5870	0.098 ng	#	82
72) 1,1,2,2-Tetrachloroethane	22.70	83	4182	0.120 ng	***	78
74) Cumene	23.46	105	8543	0.095 ng		97
75) alpha-Pinene	23.96	93	4522	0.091 ng	#	2
76) n-Propylbenzene	24.11	91	11604	0.097 ng	,,	98
77) 3-Ethyltoluene	24.22	105	9132	0.094 ng		95
78) 4-Ethyltoluene	24.28	105	9233	0.101 ng		96
79) 1,3,5-Trimethylbenzene	24.38	105	7705	0.094 ng		⁹² 544
/9/ I,3,5-IIImechylbenzene	24.50	± 0 ⊃	7 7 0 0	0.001 119		544
7 14 00 00 00 00	0.0				Dage	. າ

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard : S20-04140804/S20-04030801 Misc ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 14 19:57:23 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards	24.57 24.61 24.88 24.99 25.04 25.08 25.16 25.22 25.40 25.40 25.58 25.57 26.12 26.50 27.64 27.78	210n 118 105 105 57 91 146 146 105 119 105 146 68 157 57 180 128	Response 3727 9246 7668 4427 4100 4705 4842 10671 8726 7415 3907 3330 728 4750 2704 7336 5292	0.090 ng 0.096 ng 0.088 ng 0.082 ng 0.060 ng 0.110 ng 0.115 ng 0.102 ng 0.104 ng 0.104 ng 0.088 ng 0.089 ng 0.081 ng 0.060 ng 0.083 ng 0.092 ng 0.083 ng 0.094 ng	87 90 95 84 97 98 99 88 87 94 84 93 # 18 86 93 91 98
97) Hexachloro-1,3-butadiene	28.19	225	1398	0.080 ng	90

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

Page: 3

XUUTTOTOTOTT TOPOTO (XOUTO)

Data Path : J:\MS13\DATA\2008_04\14\

Data File: 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

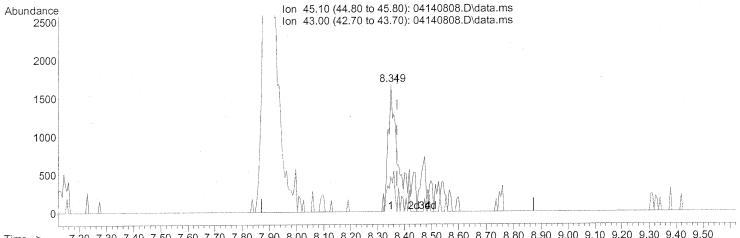
Quant Time: Apr 14 19:49:38 2008

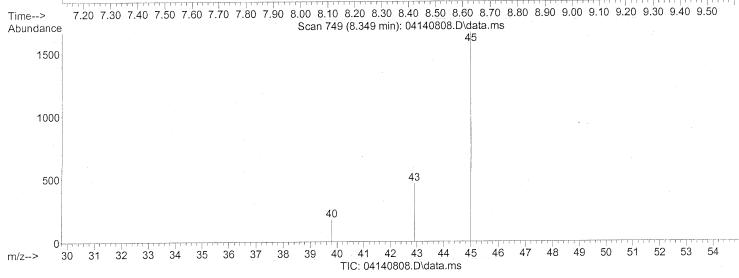
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration





(15) Isopropanol (T)

8.349min (-0.023) 0.04ng

response 3600

 Ion
 Exp%
 Act%

 45.10
 100
 100

 43.00
 16.90
 24.92

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

split peales

Data File: 04140808.D

Acq On : 14 Apr 2008 6:59 pm

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04030801
ALS Vial : 5 Sample Multiplier: 1

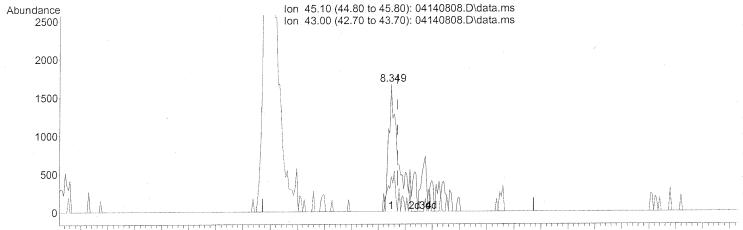
Quant Time: Apr 14 19:57:23 2008

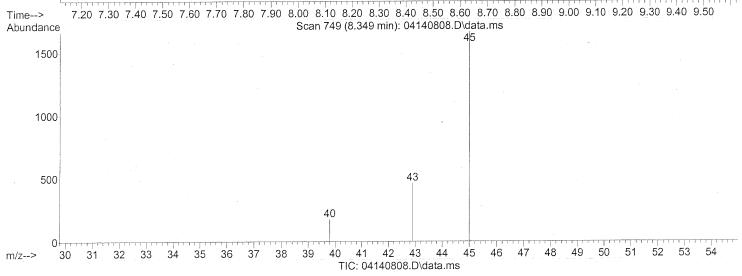
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration





(15) Isopropanol (T)

8.349min (-0.023) 0.08ng m

response 7164				
Ion	Exp%	Act%		
45.10	100	100		
43.00	16.90	12.52		
0.00	0.00	0.00		
0.00	0.00	0.00		

int whole peaks

1291 4/15/08

8 64/17/08

Xaarromoacrorr 100000 /x00000

Data Path : J:\MS13\DATA\2008_04\14\

Data File: 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

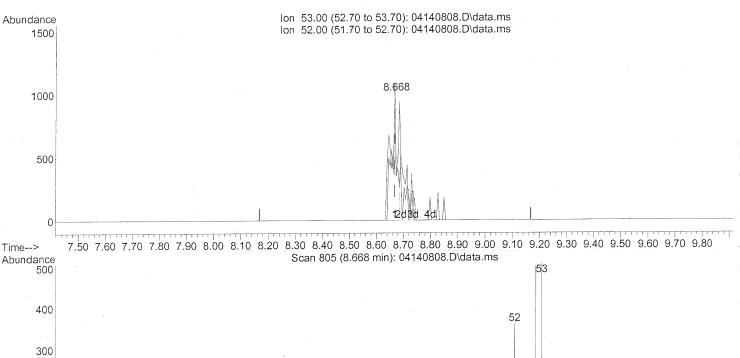
Quant Time: Apr 14 19:49:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



400	52
300	
200	38 44
100	
0 m/z> 2	

(16) Acrylonitrile (T)

8.668min (+0.000) 0.03ng

response	1329	
lon	Exp%	Act%
53.00	100	100
52.00	82.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

split pades

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

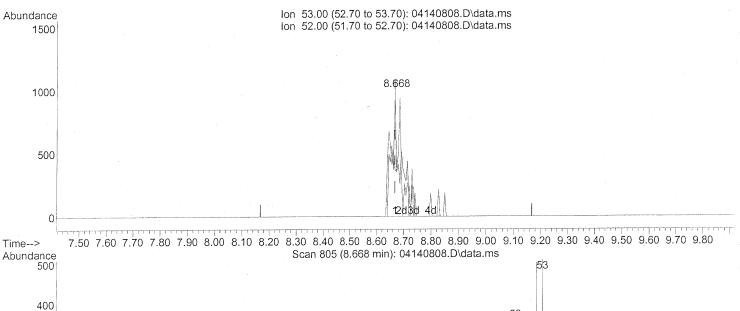
Quant Time: Apr 14 19:49:38 2008

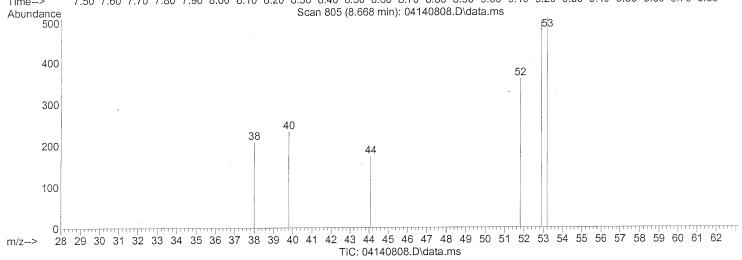
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration





(16) Acrylonitrile (T)

8.668min (+0.000) 0.05ng m

response 2141

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

int. whole pooles

por 4/15/08

Bo4/17/08

Data File: 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

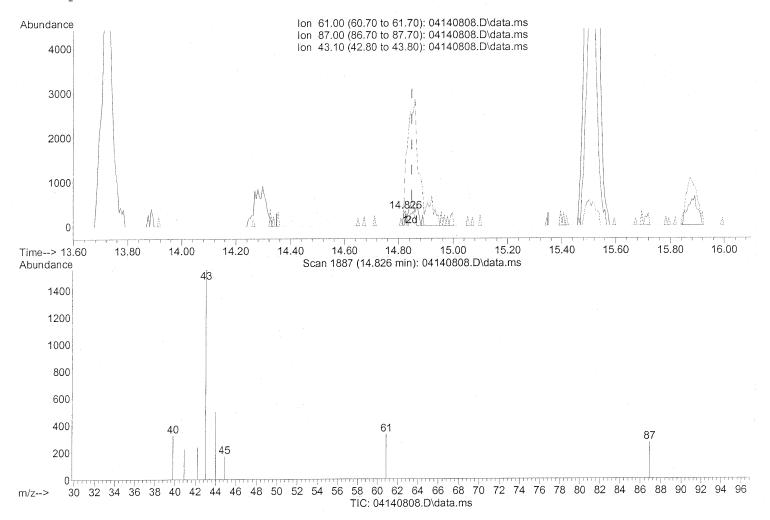
Quant Time: Apr 14 19:49:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(39) Isopropyl Acetate (T)

14.826min (-0.023) 0.01ng

response 261

Ion Exp% Act%
61.00 100 100

87.00 41.70 34.87

43.10 486.60 0.00#

0.00

0.00

split paales

0.00

Andrice concentration of 180000

Data Path : J:\MS13\DATA\2008_04\14\

Data File: 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

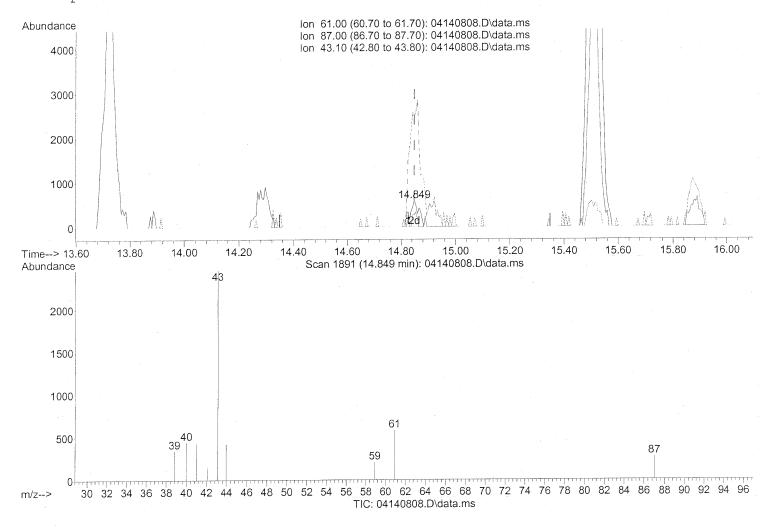
Quant Time: Apr 14 19:49:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(39) Isopropyl Acetate (T)

14.849min (+0.000) 0.08ng m

response 1323 lon Ехр% Act% 61.00 100 100 87.00 41.70 6.88# 0.00# 43.10 486.60 0.00 0.00 0.00

int whole poals

A 4/15/08

Ro4/17/-8

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

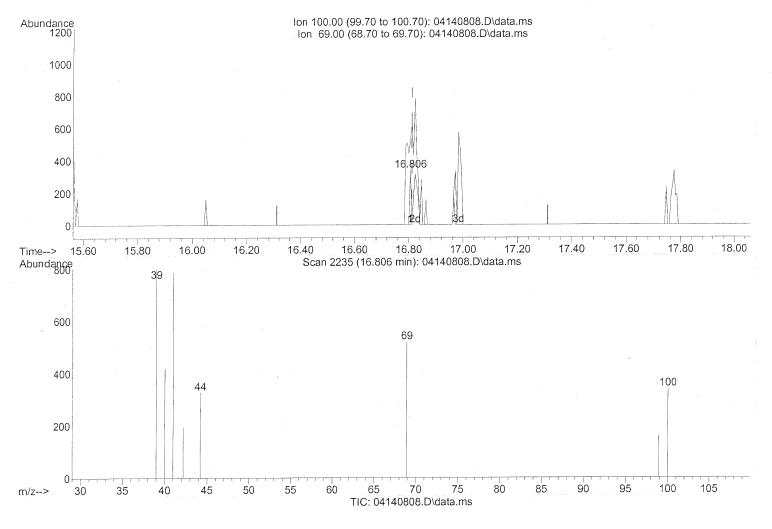
Quant Time: Apr 14 19:49:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(50) Methyl Methacrylate (T)

16.806min (-0.006) 0.01ng

response 115

 Ion
 Exp%
 Act%

 100.00
 100
 100

 69.00
 259.70
 0.00#

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

improper peak int.

Data File: 04140808.D

: 14 Apr 2008 6:59 pm Acq On

Operator : WA

: 0.1ng TO-15 ICAL Standard Sample : S20-04140804/S20-04030801 Misc Sample Multiplier: 1 ALS Vial

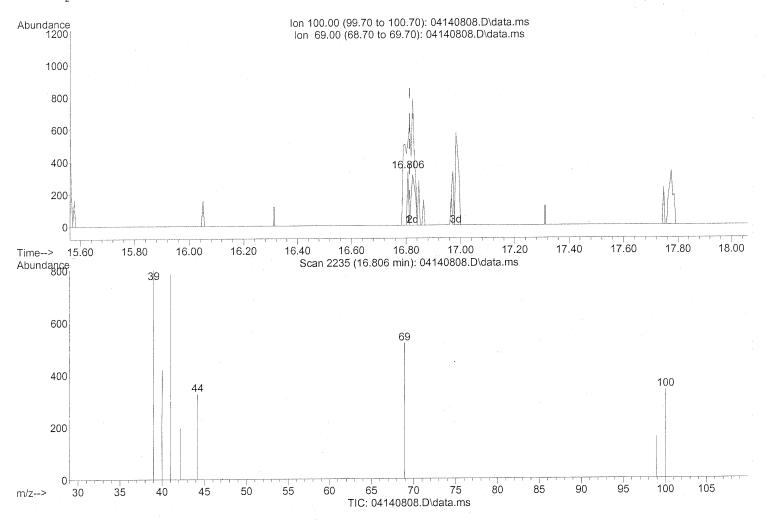
Ouant Time: Apr 14 19:57:23 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(50) Methyl Methacrylate (T)

16.806min (-0.006) 0.04ng m

response 424

Act% lon Exp% 100 100.00 100 0.00# 69.00 259.70 0.00 0.00 0.00 0.00 0.00 0.00

int cor. peak

10th 4/15/00

NOT used F04/17/08

Page:

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

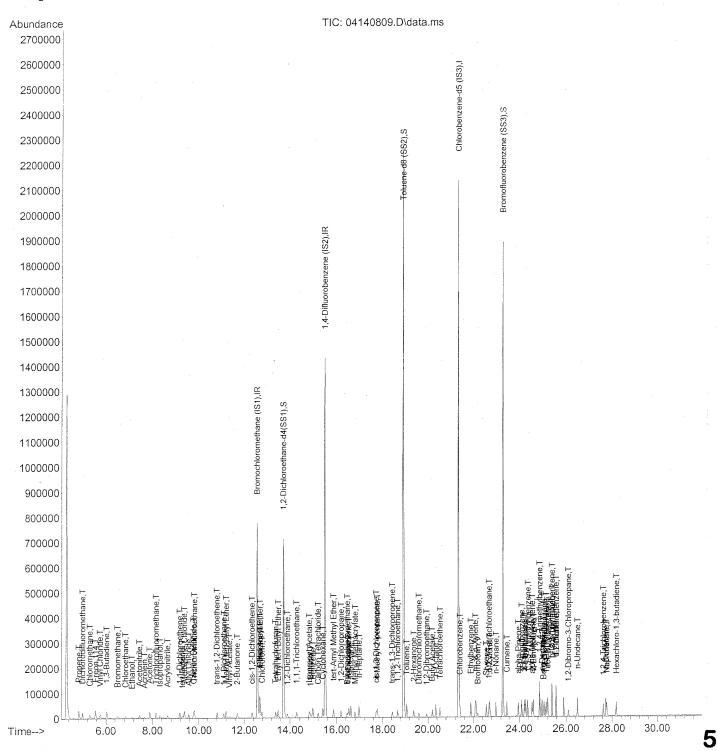
Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 14 20:24:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008



Addition or of the tropoto / XT 110. To

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 14 20:24:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (1	Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	12.58	130	321232	25.000	ng ng	- O	.03
56) Chlorobenzene-d5 (IS3)	21.35	82	744311	25.000	ng	0	.00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(13 73	65	654334	21.812	na	- 0	.02
Spiked Amount 25.000			Dogotz	ery =	87	.24%	
57) Toluene-d8 (SS2)	18.93	98	1694424				.01
Chiland Amount 25 000			Recov	ery =	112	.96%	
73) Bromofluorobenzene (SS3)	23.29	174	565263	29.487	ng	. 0	.00
Spiked Amount 25.000			Recov	ery =	117	.96%	
Target Compounds						Qval	lue
Target Compounds 2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol 16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide 23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane	4.83	42	15290	0.402	ng		89
3) Dichlorodifluoromethane	4.99	85	27136	0.422	ng		99
4) Chloromethane	5.31	50	23085	0.427	ng		97
5) Freon 114	5.56	135	13818	0.528	ng		96
6) Vinyl Chloride	5.75	62	20819	0.420	ng		98
7) 1,3-Butadiene	6.03	54	16796	0.427	ng	#	71
8) Bromomethane	6.52	94	10055	0.402	ng		98
9) Chloroethane	6.85	64	93.31	0.385	ng		94
10) Ethanol	7.13	45	10603m	0.445	ng		0.6
11) Acetonitrile	7.44	41	26981	0.44/	ng		86
12) Acrolein	7.66	56	5948	0.321	ng	.11.	86
13) Acetone	7.88	58	13071	0.533	ng	#	60 98
14) Trichlorofluoromethane	8.16	101	21260	0.412	119		98
15) Isopropanol	8.33	45	3638UM	0.434	ng		94
16) Acrylonitrile	8.65	53	15227	0.309	ng		99
17) 1,1-Dichloroethene	9.17	96 E0	9/00 20620m	0.401	ng		
18) tert-Butanol	9.28	0 /I	20030III	0.388	ng		91
19) Metnylene Chloride	9.37	0 1 /11	1/1/9/	0.454	na		99
20) Allyl Chioride	9.30	151	9793	0.550	na		96
21) Trichiorotriliuoroethane	9.02	76	39910	0.153	na .		99
22) tarbon Distille	10.80	61	17927	0.397	na		94
24) 1,1-Dichloroethane	11.11	63	19996	0.385	na		88
24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether	11.21	73	33409	0.387	na	*	91
26) Vinyl Acetate	11.36	86	1026	0.175		#	31
27) 2-Butanone	11.69	72	7958	0.401		#	91
28) cis-1,2-Dichloroethene	12.35	61	16398	0.383	_	**	83
29) Diisopropyl Ether	12.69	87	8744	0.382		#	79
30) Ethyl Acetate	12.70	61	4220	0.396			94
31) n-Hexane	12.70	57	21335	0.384			86
						D	⁸⁶ 555

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 14 20:24:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008
Response via : Initial Calibration

				(Min)
32) Chloroform 12.78 83	21464	0.507 ng		95
		0.421 ng		94
35) Ethyl tert-Butyl Ether 13.49 87		0.385 ng	#	78
36) 1,2-Dichloroethane 13.89 62		0.410 ng		91
38) 1,1,1-Trichloroethane 14.29 97	17708	0.470 ng		95
39) Isopropyl Acetate 14.84 61		0.423 ng	#	43
40) 1-Butanol 14.89 56		0.369 ng	#	32
	44943	0.436 ng		98
42) Carbon Tetrachloride 15.21 117	13169	0.410 ng		99
12) Cyclohevane 15 41 84	16422	0.434 ng	#	84
44) tert-Amyl Methyl Ether 15.87 73	28263	0.381 ng		92
45) 1,2-Dichloropropane 16.20 63 46) Bromodichloromethane 16.46 83	12735	0.442 ng		99
46) Bromodichloromethane 16.46 83	14378	0.427 ng		98
47) Trichloroethene 16.53 130	11916	0.545 ng		97
48) 1,4-Dioxane 16.50 88	7698	0.426 ng		97
49) Isooctane 16.62 57	50293	0.421 ng		67
50) Methyl Methacrylate 16.81 100		0.413 ng		76
		0.436 ng		79
52) cis-1,3-Dichloropropene 17.73 75		0.366 ng	••	99
TO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10000	0 391 na		88
53) 4-Methyl-2-pentanone 17.77 56 54) trans-1,3-Dichloropropene 18.43 75	14502	0.388 ng		94
55) 1,1,2-Trichloroethane 18.67 97	10473	0.464 ng		94
33/ =/-/-		0.544 ng		93
		0.448 ng		76
59) 2-Hexanone 19.38 43 60) Dibromochloromethane 19.60 129		0.521 ng		96
= = / == ····		0.471 ng		98
		0.469 ng		83
	10003	0.449 ng		94
63) n-Octane 20.35 57 64) Tetrachloroethene 20.54 166		0.547 ng		95
/		0.568 ng		100
00/		0.521 ng		88
		1.148 ng	#	24
		0.565 ng		100
	27145			95
69) Styrene 22.57 104 70) o-Xylene 22.71 91		0.536 ng		94
, 0, 0 111 2011	27324	0.464 ng	#	83
71) n-Nonane 22.98 43 72) 1,1,2,2-Tetrachloroethane 22.69 83	17907	0.523 ng		95
727 - 7 - 7 - 7	45202	0.511 ng		96
· - /		0.456 ng		79
, 0, 0.—[59886	0.509 ng		95
, c, 11 1 - o p 1		0.475 ng		97
7 7 7 3 2011 200 200 200 200 200 200 200 200 20		0.485 ng		99
78) 4-Ethyltoluene 24.28 105 79) 1,3,5-Trimethylbenzene 24.38 105		0.476 ng		96
/9/ 1,3,5-111mechylbenzene 24.50 105	00120	0.1/0 119		556
3041408.M Mon Apr 14 20:27:49 2008	,		Page:	: 2
3041400.M MOII APT 14 20.27.40 2000	f 4/16/08		. د ر	

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard : S20-04140804/S20-03210809 Misc ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 14 20:24:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene	24.56 24.61 24.88 24.98 25.04 25.08 25.16 25.21 25.39 25.40 25.58 25.58 26.11 26.50 27.63 27.77 27.74	21011 118 105 105 57 91 146 146 105 119 105 146 68 157 57 180 128	17575 44341 40098 22637 24611 23450 22608 52247 42606 38936 21674 16667 5914 23533 14591 48051 23996	0.432 ng 0.468 ng 0.467 ng 0.425 ng 0.367 ng 0.560 ng 0.547 ng 0.508 ng 0.518 ng 0.469 ng 0.469 ng 0.411 ng 0.499 ng 0.417 ng 0.497 ng 0.417 ng 0.504 ng 0.417 ng 0.436 ng	87 98 93 82 100 93 99 95 89 95 99 91 47 86 99 99
96) n-Dodecane 97) Hexachloro-1,3-butadiene	28.19	225	9556	0.556 ng	95

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

Page: 3

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

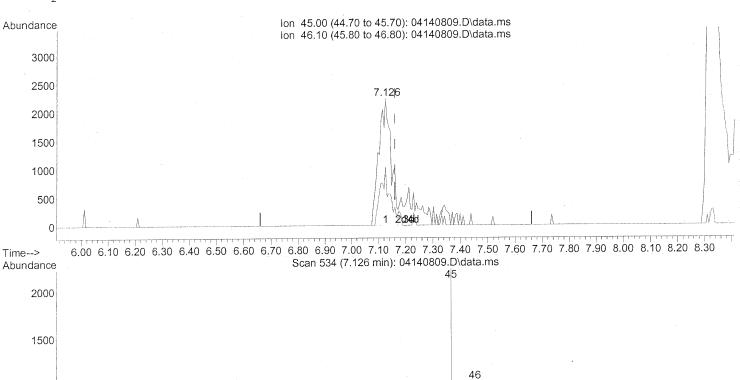
Quant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



43

TIC: 04140809.D\data.ms

42 43 44 45

40

40

38

(10) Ethanol (T)					
7.126min ((-0.034)	0.30ng			
response	7066				

33 34

32

1000

500

m/z-->

Ion Exp% Act%
45.00 100 100
46.10 41.00 37.48
0.00 0.00 0.00
0.00 0.00

split paceles

46 47 48

50

49

53

52

51

35 36 37

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

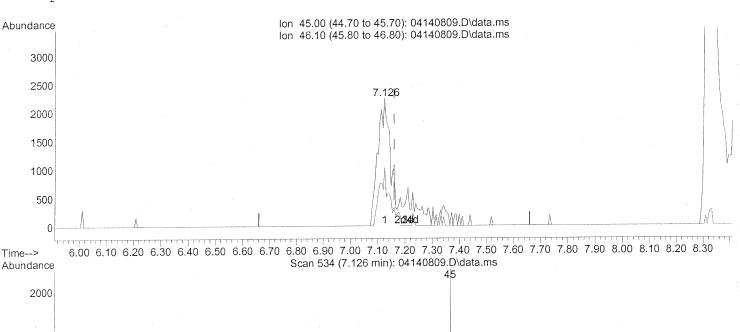
Quant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



1500 46 1000 500 43 40 42 45 47 48 50 51 52 53 40 41 43 44 36 37 38 39 32 33 34 35 TIC: 04140809.D\data.ms

(10) Ethanol (T)

0.00

7.126min (-0.034) 0.45ng m

response 10603

Ion Exp% Act%

45.00 100 100

46.10 41.00 24.97

0.00 0.00 0.00

0.00

int whole peoples

104 4/16/08

Ru4/17/08

0.00

Data File : 04140809.D

: 14 Apr 2008 19:40 Acq On

Operator : WA

: 0.5ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Misc Sample Multiplier: 1 : 13 ALS Vial

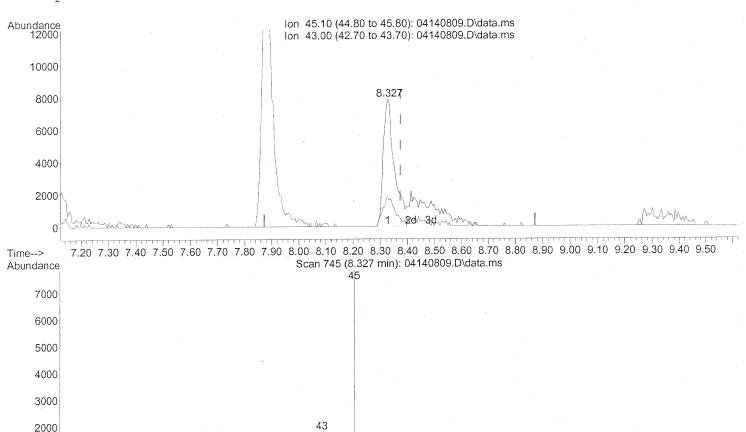
Ouant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



46 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 TIC: 04140809.D\data.ms

40

3738

(15) Isopropanol (T)

1000

8.327min (-0.045) 0.27ng

response	22647	
lon	Exp%	Act%
45.10	100	100
43.00	16.90	25.13
0.00	0.00	0.00
0.00	0.00	0.00

split peales

58 59

Data File : 04140809.D

14 Apr 2008 19:40 Acq On

: WA Operator

: 0.5ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Misc Sample Multiplier: 1 : 13 ALS Vial

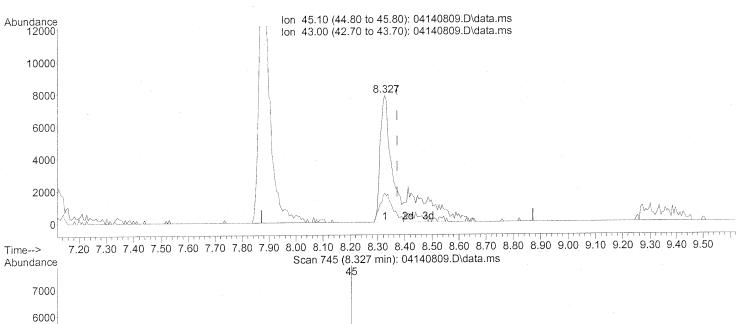
Quant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



5000 4000 3000 43 2000 1000 46 58 59 37 38 40 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 m/z-->

TIC: 04140809.D\data.ms

(15) Isopropanol (T)

8.327min (-0.045) 0.43ng m

response 36380 Ion Exp% Act% 100 100 45.10 43.00 16.90 15.64 0.00 0.00 0.00

0.00

0.00

int. whole peales
104 4/16/08
Ro4/17/08

0.00

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

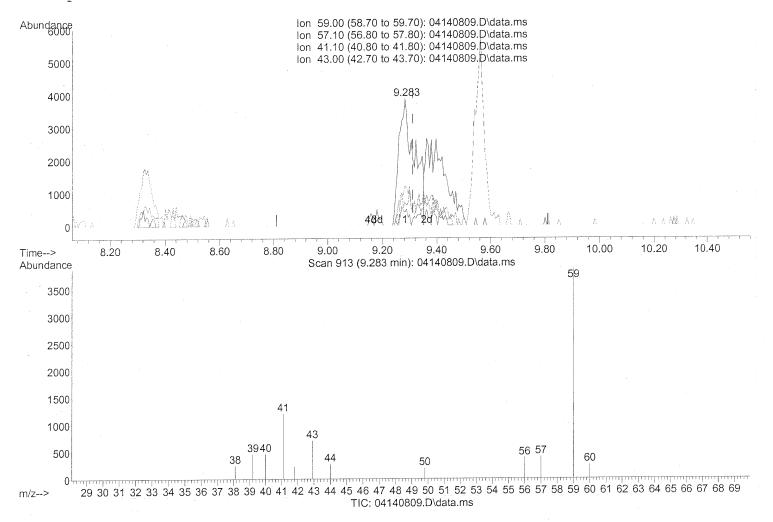
Quant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(18) tert-Butanol (T)

9.283min (-0.028) 0.21ng

response 15479 lon Exp% Act% 59.00 100 100 57.10 10.30 6.96 26.03 20.10 41.10 43.00 12.30 9.52

split peales

Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

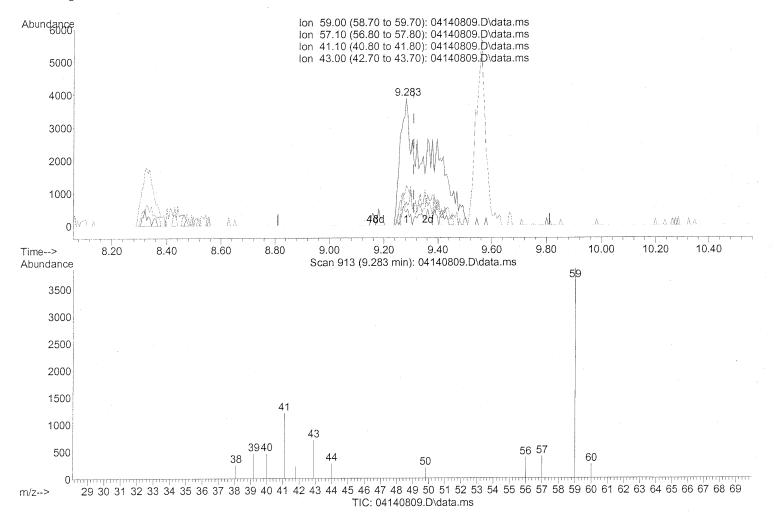
Quant Time: Apr 14 20:22:34 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(18) tert-Butanol (T)

9.283min (-0.028) 0.39ng m

response	28638	
Ion	Exp%	Act%
59.00	100	100
57.10	10.30	3.76
41.10	20.10	14.07
43.00	12.30	5.15

int. whole peales
104 4/16/08
PA/17/08

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

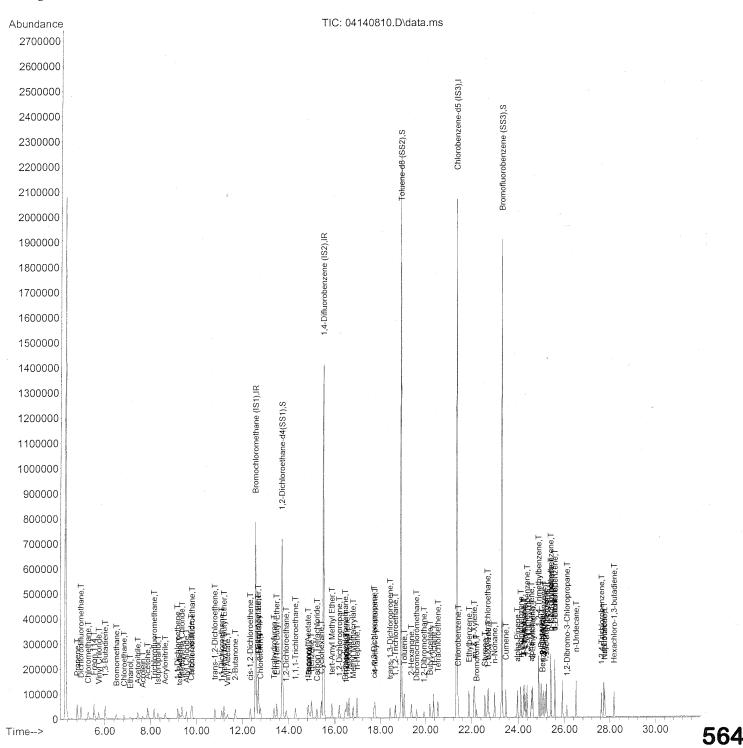
Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:20:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008



Data File : 04140810.D

Acq On : 14 Apr 2008 20:21 Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-0321080 : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:20:17 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane (IS1)	12.58	130	314461	25.000 ng	-0.03
37) 1.4-Difluorobenzene (IS2)	15.51	114	1454647	25.000 ng	-0.02
56) Chlorobenzene-d5 (IS3)	21.35	82	735083	25.000 ng	0.00
System Monitoring Compounds	12 72	65	612127	21.901 ng	-0 03
33) 1,2-Dichloroethane-d4(13.72	65	PACON	ery = 87	60%
Spiked Amount 25.000	10 93	9.8	1669857	28.177 ng	-0.01
57) Toluene-d8 (SS2) Spiked Amount 25.000	10.23	70	Recove	ery = 112	.72%
73) Bromofluorobenzene (SS3)	23 29	174	560818	29.623 na	0.00
Spiked Amount 25.000	20.20	1 / 1	Recove	ery = 118	.48%
Spired Amount				<i>1</i>	
Target Compounds					Qvalue
2) Propene	4.81	42	28935	0.777 ng	96
3) Dichlorodifluoromethane	4.97	85	50859	0.808 ng	99
4) Chlorodilluoromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane	5.29	50	43114	0.814 ng	92
5) Freon 114	5.54	135	23952	0.936 ng	99
6) Vinyl Chloride	5.74	62	37363	0.770 ng	94
7) 1,3-Butadiene	6.02	54	28905	0.751 ng	# 6/
8) Bromomethane	6.51	94	17846	0.729 ng	94
9) Chloroethane 10) Ethanol	6.84	64	15406	0.649 ng	94
10) Ethanol	7.11	45	18205m	0.781 ng	0.0
11) Acetonitrile 12) Acrolein 13) Acetone	7.44	41	46826	0.793 ng	99
12) Acrolein	7.66	56	11810	0.651 ng	95
13) Acetone	7.87	58	23380	0.975 ng	# 58
14) Trichlorofluoromethane	8.15	101	38439	0.761 ng	96
15) Isopropanol	8.31	45	64541m	0.787 ng	0.0
16) Acrylonitrile 17) 1,1-Dichloroethene	8.63	53	29230	0.763 ng	98
17) 1,1-Dichloroethene	9.16	96	19225	0.806 ng	91
18) tert-Butanol	9.25	59	53784m	0.740 ng	
19) Methylene Chloride	9.36	84	21660	0.822 ng	99
20) Allyl Chloride	9.56	41	26454	0.6/1 ng	98
20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide	9.81	151	17568	0.903 ng	85
22) Carbon Disulfide	9.77	76	73649	0.666 ng	88
23) trans-1,2-Dichiloroethene	10.00	0 1	33020	0.700 119	
24) 1,1-Dichloroethane	11.09			0.773 ng	
25) Methyl tert-Butyl Ether	11.20	73	62979	0.745 ng	88 # 78
26) Vinyl Acetate	11.35	86	2591	0.451 ng	# 78 95
27) 2-Butanone	11.68	72	14621	0.752 ng 0.753 ng	91
28) cis-1,2-Dichloroethene	12.34	61	31543	0.753 fig 0.639 ng	# 72
29) Diisopropyl Ether	12.69	87	14325 8291	0.639 ng	84
30) Ethyl Acetate	12.69	61	41296	0.760 ng	93
31) n-Hexane	12.71	57	41270	0.700 119	[~] 565

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Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard : S20-04140804/S20-03210809 Misc ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:20:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc Units	s Dev(Min)
32) Chloroform	12.78	83 .	37394	0.902 ng		96
34) Tetrahydrofuran	13.36	72	12759	0.687 ng	#	86
35) Ethyl tert-Butyl Ether		87	21688	0.706 ng	#	80
36) 1,2-Dichloroethane	13.89	62	32741	0.793 ng		96
38) 1,1,1-Trichloroethane	14.29	97	30975	0.829 ng		93
39) Isopropyl Acetate	14.84	61	12785	0.758 ng	#	24
40) 1-Butanol	14.87	56	18065m	0.724 ng		
41) Benzene	14.98	78	78933	0.773 ng		96
	15.22	117	25485	0.801 ng		97
	15.41	84	31356	0.836 ng	. #	75
44) tert-Amyl Methyl Ether	15.87	73	55276	0.751 ng		92
45) 1,2-Dichloropropane	16.20	63	22647	0.793 ng		94
46) Bromodichloromethane	16.46	83	27761	0.832 ng		100
47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane	16.53	130	22003	1.016 ng		95
48) 1,4-Dioxane	16.49	88	16367	0.915 ng		80
49) Isooctane	16.62	57	94763	0.801 ng		71
50) Methyl Methacrylate	16.81	100	7124	0.781 ng	#	83
51) n-Heptane	16.98		22619	0.827 ng	#	76
52) cis-1,3-Dichloropropene	17.73	75	28447	0.677 ng		97
53) 4-Methyl-2-pentanone	17.77	58	21241	0.770 ng		78
54) trans-1,3-Dichloropropene	18.43	75	27113	0.733 ng		98
55) 1,1,2-Trichloroethane	18.67	9.7	18987	0.850 ng		96
58) Toluene	19.07		87414	1.002 ng		94
59) 2-Hexanone	19.37	43	56543	0.822 ng		81
60) Dibromochloromethane	19.60	129	20024	0.998 ng		98
61) 1,2-Dibromoethane	19.93	107	19169	0.851 ng		94
62) Butyl Acetate	20.19	43	60902	0.882 ng		83
63) n-Octane	20.35	57	18987	0.863 ng		93
64) Tetrachloroethene	20.54	166	20868	1.049 ng		97
65) Chlorobenzene	21.41	112	53156	1.029 ng		95
	21.89		93406	0.942 ng		94
67) m- & p-Xylene	22.12	91	144511	2.196 ng		89
68) Bromoform	22.21	173	16953	1.201 ng		98
69) Styrene	22.57	104	51489	0.919 ng		95
70) o-Xylene	22.71	91	71744	1.020 ng		93
71) n-Nonane	22.98	43	48600	0.835 ng	#	80
72) 1,1,2,2-Tetrachloroethane	22.69	83	34347	1.015 ng		97
74) Cumene	23.46	105	85006	0.973 ng		98
75) alpha-Pinene	23.96	93	42697	0.888 ng		88
76) n-Propylbenzene	24.10	91	112564	0.969 ng		93
77) 3-Ethyltoluene	24.23	105	86580	0.917 ng		92
78) 4-Ethyltoluene	24.28	105	86229	0.975 ng		97
79) 1,3,5-Trimethylbenzene	24.37	105	73399	0.928 ng		⁹⁷ E66
-	0.0				Dage -	566

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-0321080 : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:20:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards	24.56 24.61 24.88 24.98	118 105 105 57 91 146 146 105 119 105 146	Response 34156 81553 74538 44755 48445 42950 44199 97717 83069 74125 41087 30943 13130 44284 28841 92340 44923	0.850 ng 0.872 ng 0.879 ng 0.879 ng 0.851 ng 0.731 ng 1.039 ng 1.083 ng 0.961 ng 1.023 ng 0.961 ng 1.023 ng 0.967 ng 0.772 ng 1.122 ng 0.794 ng 1.008 ng 1.081 ng 0.827 ng	# 65 90 91 92 94 99 94 99 94 95 96 96 96 96 96 96
97) Hexachloro-1,3-butadiene	28.19	225	18513	1:090 ng	95

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

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Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

40

40

39

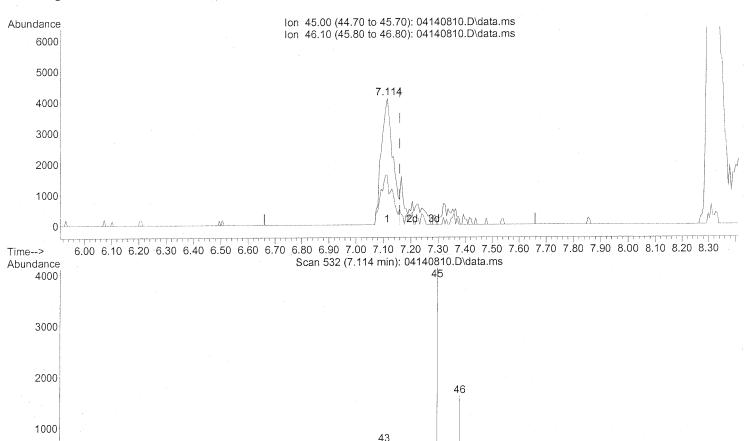
38

42

42 43

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



44

44 45

TIC: 04140810.D\data.ms

(10) Ethanol (T)

7.114min (-0.046) 0.52ng

33

35

36 37

response 12050

 Ion
 Exp%
 Act%

 45.00
 100
 100

 46.10
 41.00
 43.10

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

split prales

47

47

48 49 50

51

46

568

Page: 1

Data File : 04140810.D

: 14 Apr 2008 20:21 Acq On

: WA Operator

: 1ng TO-15 ICAL Standard Sample : S20-04140804/S20-03210809 Misc 13 Sample Multiplier: 1 ALS Vial

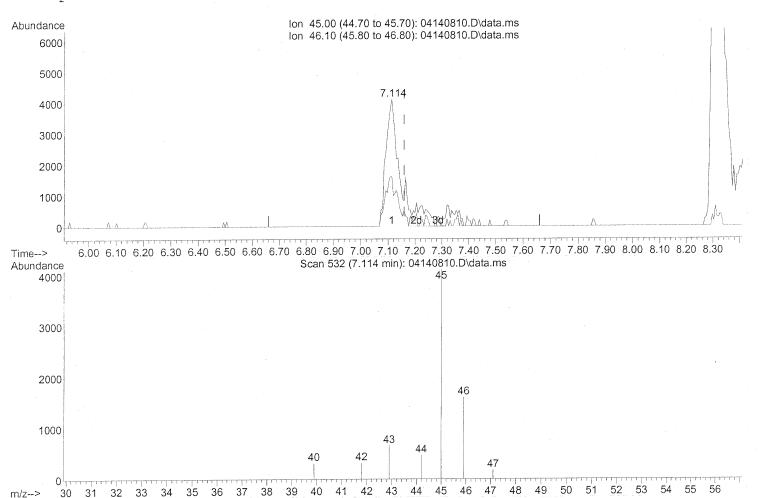
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



TIC: 04140810.D\data.ms

(10) Ethanol (T)

7.114min (-0.046) 0.78ng m

response 18205

lon Exp% Act% 45.00 100 100 46.10 41.00 28.53 0.00 0.00 0.00 0.00 0.00 0.00

int. whole piceles
124 4/16/08

8-4/17/08

Data File : 04140810.D

Acq On 14 Apr 2008 20:21

Operator WA

1ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Misc 13 Sample Multiplier: 1 ALS Vial

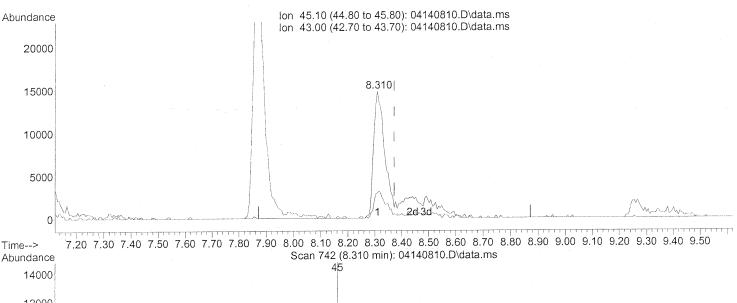
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) Quant Title

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



12000 10000 8000 6000 4000 43 2000 46 40 59 38 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

TIC: 04140810.D\data.ms

(15) Isopropanol (T)

8.310min (-0.062) 0.53ng

response 43552

Act% Exp% Ion 100 100 45.10 22.88 43.00 16.90 0.00 0.00 0.00 0.00 0.00 0.00

split peales

Data File : 04140810.D

: 14 Apr 2008 20:21 Acq On

: WA Operator

: 1ng TO-15 ICAL Standard Sample : S20-04140804/S20-03210809 Misc Sample Multiplier: 1 ALS Vial : 13

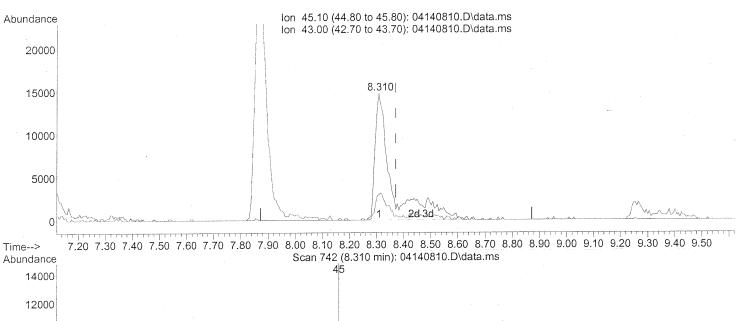
Ouant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



10000 8000 6000 4000 43 2000 46 59

28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 TIC: 04140810.D\data.ms

(15) Isopropanol (T)

8.310min (-0.062) 0.79ng m

response 64541 Ion Exp% Act% 45.10 100 100 43.00 16.90 15.44 0.00 0.00 0.00 0.00 0.00 0.00

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Page:

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

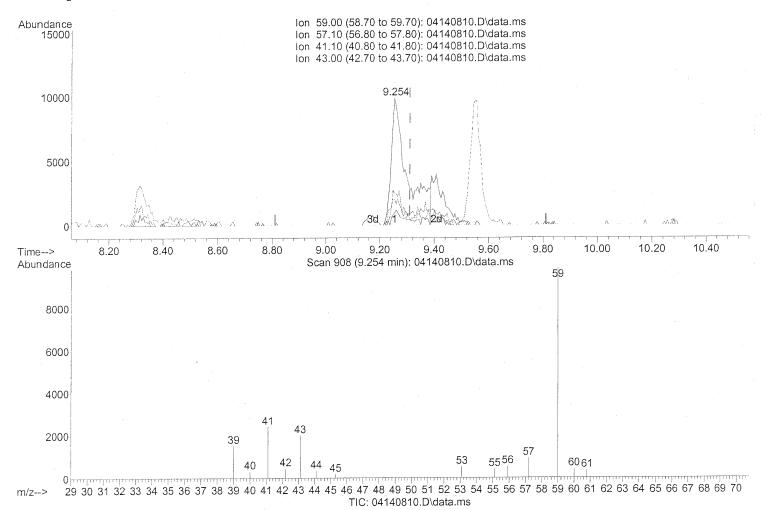
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(18) tert-Butanol (T)

9.254min (-0.057) 0.57ng

response 41188 Act% Exp% lon 59.00 100 100 57.10 10.30 8.21 41.10 20.10 19.46 43.00 12.30 16.67

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Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator WA

1ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Misc 13 Sample Multiplier: 1 ALS Vial

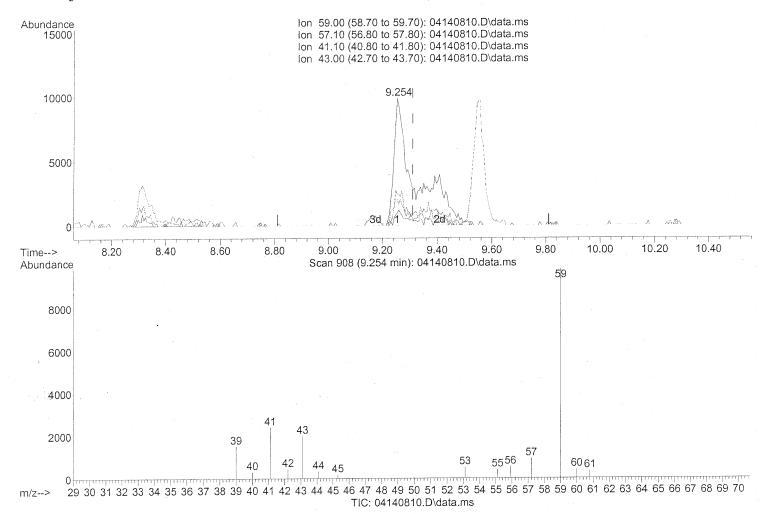
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(18) tert-Butanol (T)

9.254min (-0.057) 0.74ng m

response 53784 Act% lon Exp% 100 59.00 100 57.10 10.30 6.29 20.10 14.90 41.10 43.00 12.30 12.77

int whole peales

121 4/16/08

204/17/08

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Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

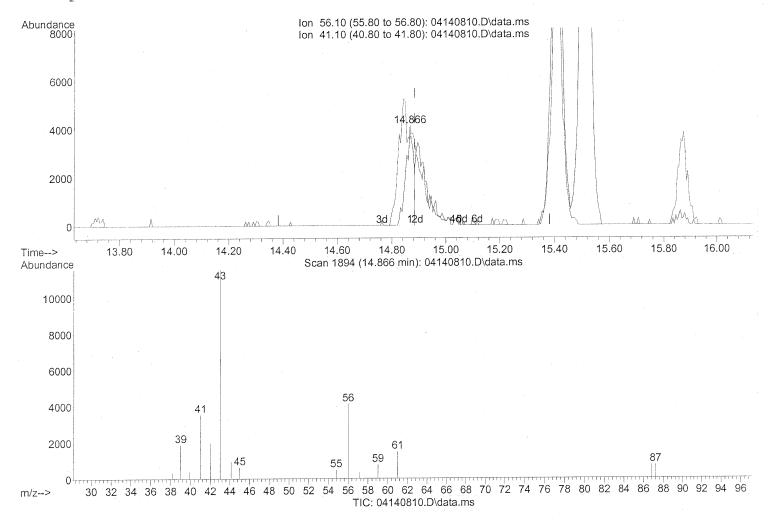
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(40) 1-Butanol (T)

14.866min (-0.017) 0.32ng

response 7948 lon Exp% Act% 56.10 100 100 41.10 92.00 0.00# 0.00 0.00 0.00 0.00 0.00 0.00

split peals

574

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

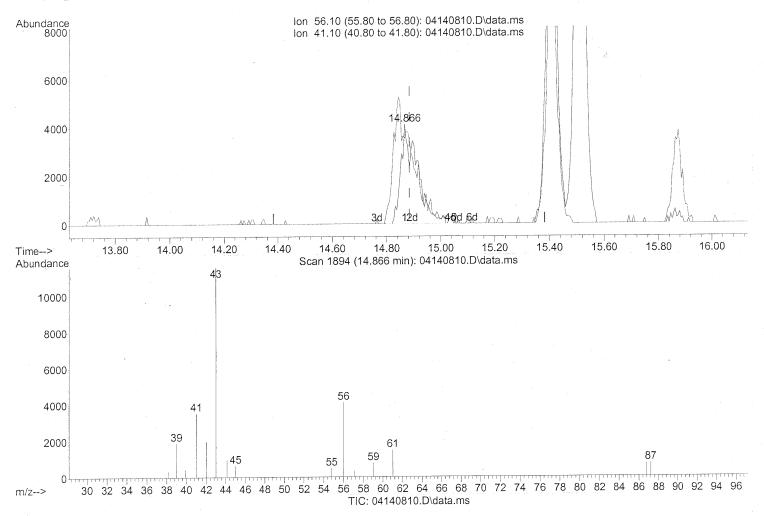
Quant Time: Apr 15 06:18:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(40) 1-Butanol (T)

0.00

14.866min (-0.017) 0.72ng m

 Ion
 Exp%
 Act%

 56.10
 100
 100

 41.10
 92.00
 0.00#

 0.00
 0.00
 0.00

0.00

int whole peaks

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Ro417108

0.00

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

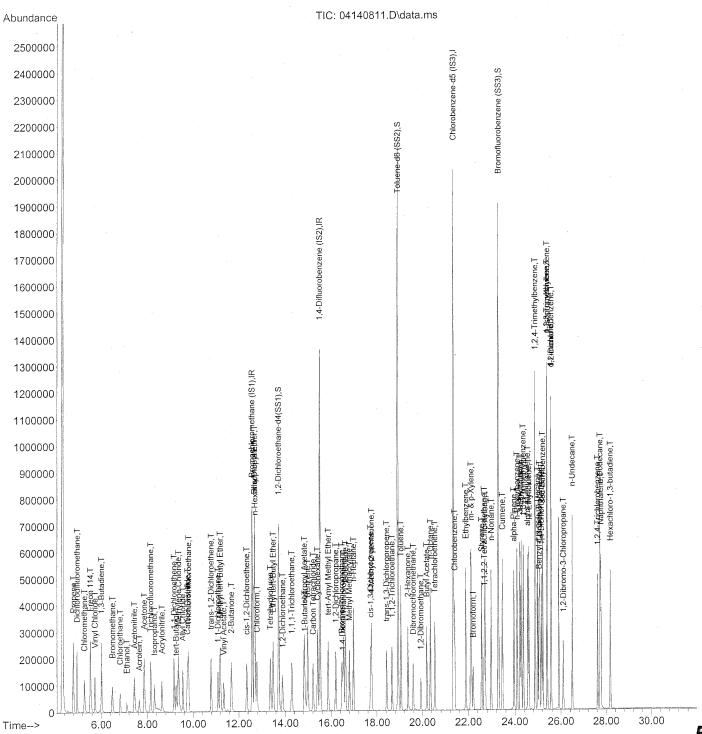
Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:22:32 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008



Data File : 04140811.D

Acq On : 14 Apr 2008 21:01 Operator : WA

Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:22:32 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008

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Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(1	Min)
1) Bromochloromethane (IS1)	12.58	130	313584	25.000	ng	- 0	.02
37) 1.4-Difluorobenzene (IS2)	15.51	114	1406515	25.000	ng	-0.	.02
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	21.35	82	715799	25.000	ng	0.	.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4(13.73	65	620740	21.197	ng	-0	.02
Spiked Amount 25.000			Recov	ery =	84	.80%	
57) Toluene-d8 (SS2)	18.93	98	1613556				.01
Spiked Amount 25.000			Recov	ery =	111	.84%	
73) Bromofluorobenzene (SS3)	23.29	174	563169				.00
Spiked Amount 25.000			Recov	ery =	122	.20%	
Target Compounds						Qva.	
2) Propene	4.80	42	125895	3.389	ng		85
3) Dichlorodifluoromethane	4.96	8.5	221566 179111	3.532	ng		98
1) Chlementhane	L 78	511	179111	3.391	ng		97
5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene	5.53	135	111807	4.380	ng		99
6) Vinyl Chloride	5.73	62	175637	3.632	ng		96
7) 1,3-Butadiene	6.00	54	139777	3.641	ng	#	74
8) Bromomethane	6.49	94	86439	3.541	ng		99
9) Chloroethane	6.82	64	73739	3.114	ng		92
10) Ethanol	7.11	45	78143m	3.361	ng		
	7.43	41	219546	3.729	ng		96
12) Acrolein	7.65	56	219546 57551 100677 177253 264620m 133967	3.184	ng		99
13) Acetone	7.87	58	100677	4.209	ng	#	59
14) Trichlorofluoromethane	8.14	101	177253	3.519	ng		98
15) Isopropanol	8.31	45	264620m	3.234	ng		0.0
16) Acrylonitrile	8.64	53	133967	3.506	ng		98
17) 1,1-Dichloroethene	9.16	96	88422	3.718	ng		94
18) tert-Butanol	9.25	59	248954m	3.436	ng		0.7
19) Methylene Chloride	9.36	84	97826	3./21	ng		9/
20) Allyl Chloride	9.55	41	13/81/	3.506	119		98
16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide 23) trans-1,2-Dichloroethene	9.81	151	84097	4.333	ng		96
22) Carbon Disulfide	9.77	76	344640	3.124	ng		96
23) trans-1,2-Dichloroethene	10.80	61	149982	3.400	ng		05
24) I, I DICHTOLOECHAIR	TT. TO	00	102,02	0.00-			
25) Methyl tert-Butyl Ether	11.19	73	291271	3.457		ш	87
26) Vinyl Acetate	11.35	86	15897	2.776		#	83 96
27) 2-Butanone	11.68	72	67856	3.501 3.554	_		96
28) cis-1,2-Dichloroethene	12.35	61	148407		_	#	76
29) Diisopropyl Ether	12.69	87	70456	3.150		#	76 86
30) Ethyl Acetate	12.69	61 57	42353	4.069 3.435			93
31) n-Hexane	12.70	57	186162	3.435	119		³ 577
	0.0					Dage.	J 1

Andrict cactor 1006010

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

Sample : 5ng TO-15 ICAL Standard : S20-04140804/S20-03210809 Misc ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:22:32 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Unit	s Dev	(Min)
			10000	4 001		
32) Chloroform	12.79	83	1/3682	4.201 ng		99 96
34) Tetrahydrofuran 35) Ethyl tert-Butyl Ether	13.36	72	65400	3.533 ng	#	84
35) Ethyl tert-Butyl Ether	13.48	8 /	99161	3.236 ng	#	99
36) 1,2-Dichloroethane	13.90	62	14/613	3.584 ng		97
38) 1,1,1-Trichloroethane	14.29	9 /	144607	3.618 ng	#	
39) Isopropyl Acetate	14.84	61	58980		# #	49
/ -	14.85	56	85220	3.530 ng	#	99
41) Benzene		78	373533	3.783 ng		
42) Carbon Tetrachloride	15.21	11/	123430	4.010 ng	11	78
43) Cyclohexane 44) tert-Amyl Methyl Ether	15.41	84	142892	3.941 119	#	76 92
44) tert-Amyl Methyl Ether 45) 1,2-Dichloropropane 46) Bromodichloromethane 47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane	15.87	73	255203	3.588 119		99
45) 1,2-Dichloropropane	16.20	63	105707	3.829 ng		
46) Bromodichloromethane	16.46	83	131884	4.086 ng		99
47) Trichloroethene	16.54	130	92877	4.435 ng		98
48) 1,4-Dioxane	16.49	88	72491	4.190 ng		79
49) Isooctane	16.62	57	415119	3.629 ng		68
49) Isooctane 50) Methyl Methacrylate 51) n-Heptane	16.79	T 0 0	3 <i>2</i> 918	3.733 ng	#	69
51) n-Heptane	16.98	71	103038	3.895 ng	#	81
51) n-heptane 52) cis-1,3-Dichloropropene	17.73	75	144063	3.545 ng		98
53) 4-Methyl-2-pentanone	17.77	58	99834	3.742 ng		84
53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene 55) 1,1,2-Trichloroethane	18.43	75	137643	3.848 ng		100
55) 1,1,2-Trichloroethane	18.67	97	88762	4.109 ng		91
58) Toluene	19.06	91	408986	4.816 ng		95
59) 2-Hexanone			299277	4.467 ng		79
60) Dibromochloromethane	19.60	129	102897	5.268 ng		99
61) 1,2-Dibromoethane	19.93	107	99460	4.533 ng		100
62) Butvl Acetate	20.19	43	312695	4.650 ng		83
63) n-Octane	20.35	57	90575	4.226 ng		96
64) Tetrachloroethene	20.54	166		5.007 ng		99
(E) Chlorobonzene	21.41	112		4.986 ng		100
66) Ethylbenzene	21.89	91	454228	4.704 ng		92
66) Ethylbenzene 67) m- & p-Xylene	22.12	91	713405	11.133 ng		89
68) BLOMOTOTM	22.21	173	84675	6.162 ng		98
69) Styrene	22.57	104	257202	4.712 ng		94
70) o-Xylene	22.71	91	370364	5.407 ng		90
71) n-Nonane	22.98	43	252060	4.447 ng	#	77
72) 1,1,2,2-Tetrachloroethane	22.69	83	177954	5.400 ng		99
74) Cumene	23.46	105	415849	4.890 ng		98
75) alpha-Pinene	23,.96	93	214040	4.572 ng		87
76) n-Propylbenzene	24.10	91	545258	4.819 ng		96
77) 3-Ethyltoluene	24.23	105	419141	4.559 ng		98
78) 4-Ethyltoluene	24.28	105	424905	4.932 ng		96
79) 1,3,5-Trimethylbenzene	24.37	105	359917	4.674 ng		⁹⁶ E 70
					_	~578

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01 Operator : WA

Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-0321080 : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 15 06:22:32 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene	R.T. 24.56 24.61 24.88 24.98 25.05 25.08 25.16 25.40 25.40 25.58 26.11 26.50 27.62 27.77 27.74	118 105 105 57 91 146 146 105 119 105 146 68		4.631 ng 4.511 ng 4.654 ng 4.529 ng 5.144 ng 5.286 ng 4.852 ng 5.356 ng 4.630 ng 4.888 ng 4.151 ng 5.448 ng 4.303 ng 5.172 ng 5.706 ng 4.359 ng	96 97 94 87 92 99 100 95 100 95 100 91 4 51 88 96 97 86
96) n-Dodecane 97) Hexachloro-1,3-butadiene	28.19	225	86628	5.239 ng	96

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

Page: 3

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

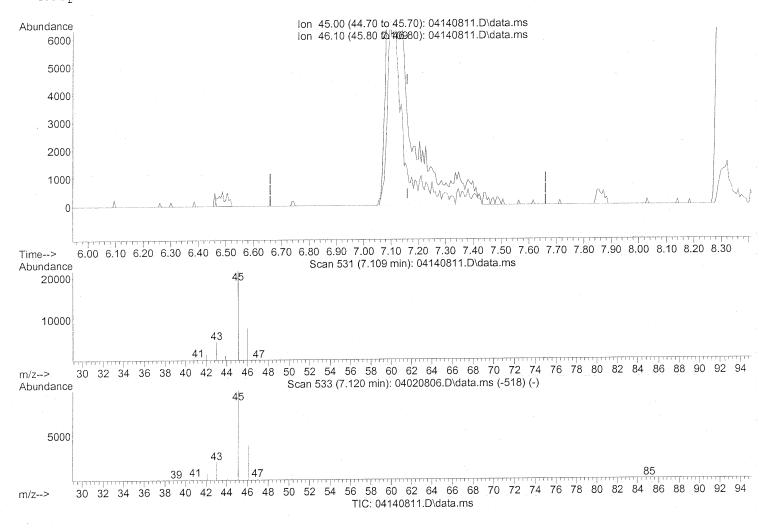
Quant Time: Apr 15 06:21:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(10) Ethanol (T)

7.109min (-0.051) 3.11ng

response 72289

 Ion
 Exp%
 Act%

 45.00
 100
 100

 46.10
 41.00
 32.99

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

split I tailing

Data File : 04140811.D

: 14 Apr 2008 21:01 Acq On

: WA Operator

5ng TO-15 ICAL Standard Sample : S20-04140804/S20-03210809 Misc Sample Multiplier: 1 ALS Vial : 13

Data Path : J:\MS13\DATA\2008_04\14\

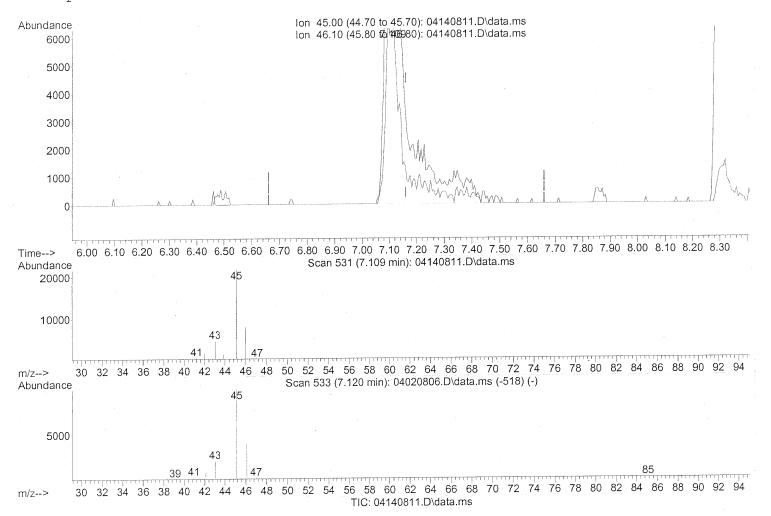
Quant Time: Apr 15 06:21:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(10) Ethanol (T)

7.109min (-0.051) 3.36ng m

response 78143

Ion Exp% Act% 100 45.00 100 46.10 41.00 30.52 0.00 0.00 0.00 0.00 0.00 0.00

incl: tailing

1001 4/16/08

Ro4/17/08

Data File : 04140811.D

: 14 Apr 2008 21:01 Acq On

: WA Operator

: 5ng TO-15 ICAL Standard Sample : S20-04140804/S20-03210809 Misc Sample Multiplier: 1 13 ALS Vial

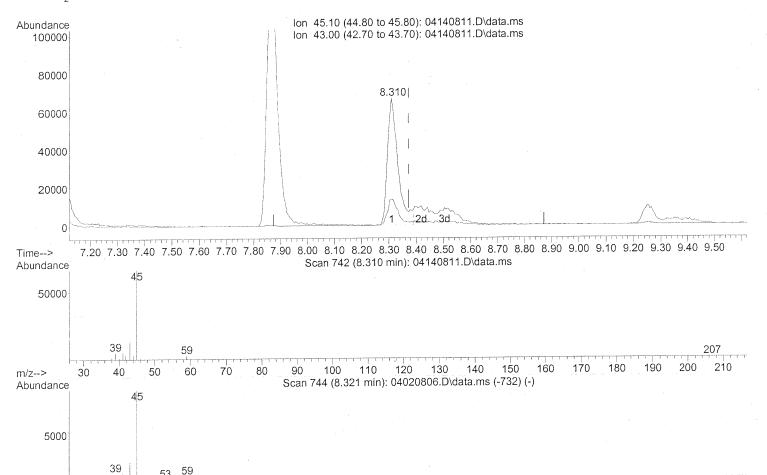
Quant Time: Apr 15 06:21:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



110

120

TIC: 04140811.D\data.ms

130

140

(15) Isopropanol (T)

40

30

m/z-->

8.310min (-0.062) 2.20ng

53

60

50

80

70

90

100

response 180066

lon Exp% Act% 45.10 100 100 43.00 16.90 21.41 0.00 0.00 0.00 0.00 0.00 0.00

split peales

150

160

170

180

200

190

210

Data File : 04140811.D

: 14 Apr 2008 21:01 Acq On

Operator : WA

5ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Sample Multiplier: 1 : 13 ALS Vial

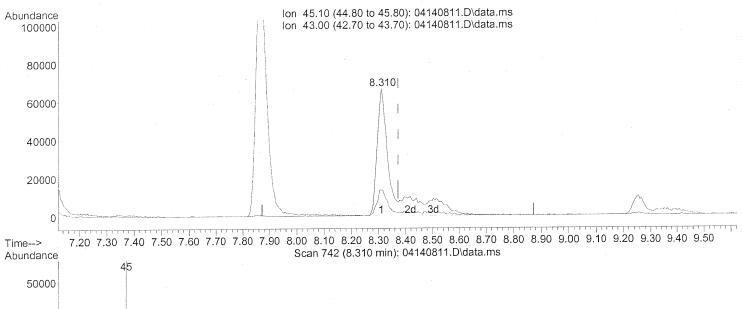
Quant Time: Apr 15 06:21:37 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



39 59 207 200 210 120 130 140 150 160 170 180 40 50 60 70 80 100 110 30 m/z--> Scan 744 (8.321 min): 04020806.D\data.ms (-732) (-) Abundance 45 5000 39 59 200 210 170 180 190 130 140 150 160 70 80 90 100 110 120 50 60 30 40 m/z-->

TIC: 04140811.D\data.ms

(15) Isopropanol (T)

8.310min (-0.062) 3.23ng m

response 264620

Ion Exp% Act% 45.10 100 100 16.90 14.57 43.00 0.00 0.00 0.00 0.00 0.00 0.00

int. whole padles

184 4/16/08

Ru4/17/08

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

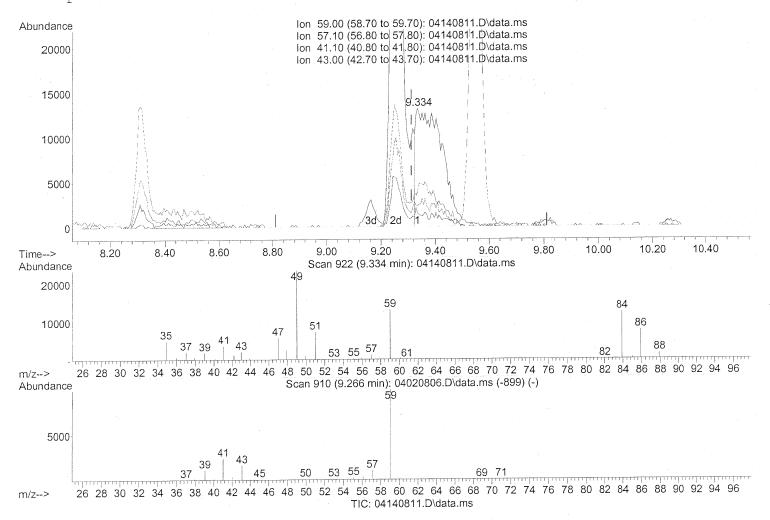
Quant Time: Apr 15 06:21:37 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(18) tert-Butanol (T)

9.334min (+0.023) 1.23ng

response 88968

 Ion
 Exp%
 Act%

 59.00
 100
 100

 57.10
 10.30
 3.64

 41.10
 20.10
 0.00#

 43.00
 12.30
 0.00

split peals

Data File : 04140811.D

: 14 Apr 2008 21:01 Acq On

Operator : WA

5ng TO-15 ICAL Standard Sample S20-04140804/S20-03210809 Misc Sample Multiplier: 1 ALS Vial 13

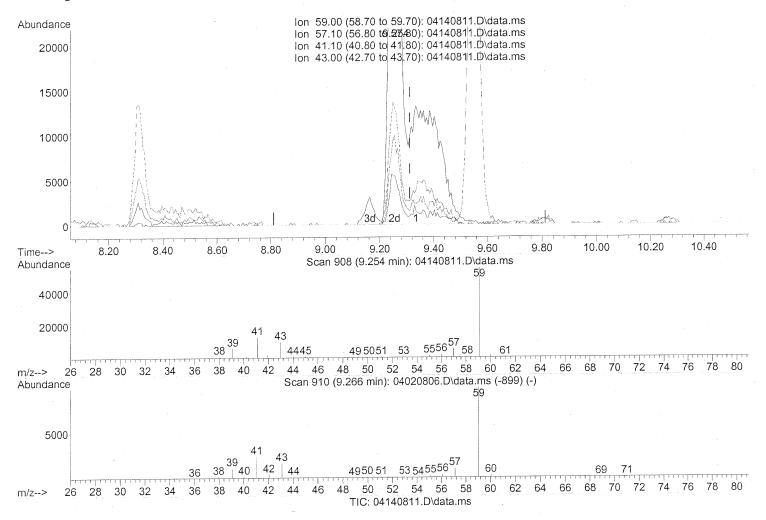
Quant Time: Apr 15 06:21:37 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(18) tert-Butanol (T)

9.254min (-0.057) 3.44ng m

response 248954

lon	Exp%	Act%
59.00	100	100
57.10	10.30	1.30
41.10	20.10	0.00#
43.00	12.30	0.00

int. whole peales

AH 4/16/08

P 04/17/09

Data File : 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

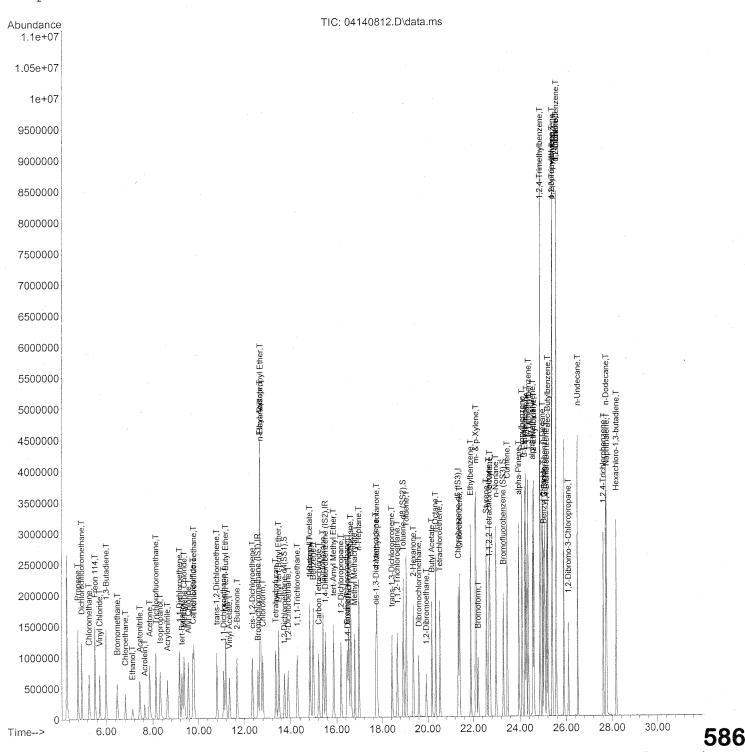
Sample : 25ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:24:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008



Data File : 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

Sample : 25ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:24:41 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc (Jnits De	ev(Min)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2 56) Chlorobenzene-d5 (IS3)	12.60) 15.52 21.35	130 114 82	332070 1467032 762152	25.000 25.000 25.000	ng ng ng	-0.01 -0.01 0.00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000			674919		ng	-0.02
57) Toluene-d8 (SS2)	18.93		1696875	27.616	ng 110 4	-0.01
73) Bromofluorobenzene (SS3) Spiked Amount 25.000	23.29	174	594489 Recov	30.286 ery =	ng 121.1	0.00 5%
Target Compounds 2) Propene 3) Dichlorodifluoromethane	4.79	42 85	672960 1189005	17.105 17.899	na	Qvalue 90 99
	5.27 5.52 5.72	50 135 62	1189005 996447 601060 926947	17.815 22.233 18.099	ng ng ng	97 100 97
7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane	6.00 6.48 6.82	54 94 64	996447 601060 926947 801354 482161 407498 369567m	19.711 18.653 16.251	ng # ng ng	75 98 95
					ng	99
7 = \ T = = = = = = = = = = = = = = = = =	8 33	45	311781 476809 981944 1582931	18.268	ng # ng ng	99 93
16) Acrylonitrile	8.64 9.16	53 96	754718 490975	18.652	ng ng	92
18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide	9.36 9.55 9.80	84 41 151	529930 833997 443941	19.036 20.033 21.599	ng ng ng	95 98 92
22) Carbon Disulfide 23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane	9.76 10.80 11.10	76 61 63	1936445 850827 1018131	16.576 18.214 18.943	ng	96 92 96
25) Methyl tert-Butyl Ether 26) Vinyl Acetate 27) 2-Butanone	11.20 11.35 11.68	73 86 72	1594825 96140 367812	17.877 15.853 17.921	ng ng #	88 76 94
28) cis-1,2-Dichloroethene 29) Diisopropyl Ether 30) Ethyl Acetate	12.36 12.69 12.69	61 87 61	811321 406960 254557	18.348 17.183 23.095	ng ng # ng	92 73 88
31) n-Hexane	12.70	57	1083608	18.882	ng	⁹³ 58

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Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

Sample : 25ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:24:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

 $\tilde{\text{Q}}$ uant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev	/(Min)
32) Chloroform	12.80	83	956625	21.851 ng		98
34) Tetrahydrofuran	13.36		360780	18.405 ng		98
35) Ethyl tert-Butyl Ether	13.49	87		17.155 ng	#	86
36) 1,2-Dichloroethane	13.90		824015	18.894 ng		99
38) 1,1,1-Trichloroethane	14.30		830170			98
39) Isopropyl Acetate		61	345329	20.309 ng	#	30
40) 1-Butanol	14.84	56	447826	17.785 ng	#	47
41) Benzene	14.99	78	2068389	20.085 ng		98
42) Carbon Tetrachloride	15.22	117	718394	22.376 ng		99
43) Cyclohexane	15.41	84	767539	20.298 ng	#	81
44) tert-Amyl Methyl Ether		73	1448190	19.521 ng		91
45) 1,2-Dichloropropane	16.20	63	576719	20.028 ng		98
46) Bromodichloromethane	16.46		756240	22.466 ng		100
47) Trichloroethene	16.54	130	525239	24.045 ng		98
48) 1,4-Dioxane	16.49		396979	22.001 ng		84
49) Isooctane	16.62	57	2351708	19.710 ng		70
50) Methyl Methacrylate	16.80		190312	20.691 ng	#	68
51) n-Heptane	16.98	71	578179	20.955 ng	#	82
52) cis-1,3-Dichloropropene	17.73		823511			98
53) 4-Methyl-2-pentanone	17.77		577342	20.749 ng		87
54) trans-1,3-Dichloropropene		75	819225	21.955 ng		100
55) 1,1,2-Trichloroethane	18.67		481442	21.367 ng		92
58) Toluene	19.07	91	2224726	24.602 ng		96
59) 2-Hexanone	19.37	43	1719849	24.112 ng		79
60) Dibromochloromethane	19.61		583893	28.073 ng		98
61) 1,2-Dibromoethane	19.94	107	559507	23.950 ng		99
62) Butyl Acetate	20.19	43	1805701	25.220 ng		83
63) n-Octane	20.36	57	515467	22.585 ng		97
64) Tetrachloroethene	20.55	166	547110	26.534 ng		99
65) Chlorobenzene	21.42		1376096	25.704 ng		100
66) Ethylbenzene	21.89	91	2587658	25.169 ng		91
67) m- & p-Xylene	22.13	91	4184617	61.330 ng		89
68) Bromoform	22.21	173	497365	33.995 ng		98
69) Styrene	22.57	104	1508280	25.951 ng		95
70) o-Xylene	22.72	91	2083003	28.561 ng		90
71) n-Nonane	22.98	43	1425405	23.621 ng	#	78
72) 1,1,2,2-Tetrachloroethane	22.69	83	1013401	28.884 ng		97
74) Cumene	23.47	105	2395512	26.455 ng		98
75) alpha-Pinene	23.97	93	1244786	24.972 ng		90
76) n-Propylbenzene	24.10	91	3178462	26.384 ng		95
77) 3-Ethyltoluene	24.23	105	2444332	24.967 ng		96
78) 4-Ethyltoluene	24.28	105	2502986	27.285 ng		97
79) 1,3,5-Trimethylbenzene	24.38	105	2115805	25.805 ng		⁹⁶ 58
• • • • • • • • • • • • • • • • • • •						JÖ

Data File : 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

Sample : 25ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:24:41 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title: EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards 80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene	R.T. 24.56 24.61 24.88 24.99 25.05 25.08 25.16 25.21 25.40 25.41 25.58 26.11 26.50 27.63	118 105 105 57 91 146 146 105 119 105 146 68 157	Response 1087973 2410901 2508869 1277785 1825642 1229700 1225313 2824529 2872095 2501708 1306688 1077490 371616 1360612 846601	Conc 26.108 24.872 28.548 23.445 26.564 28.682 28.963 26.797 34.115 29.438 29.663 25.929 30.629 23.532 28.533	ng n	Dev(Min) 96 97 96 88 94 100 99 95 91 96 100 94 # 59 88 95
95) Naphthalene	27.77	128	2721399	30.741		98 87
96) n-Dodecane 97) Hexachloro-1,3-butadiene	27.74 28.19		1350348 540955	23.984 30.728	ng	87 100
Jij liekaciiioio i, J bacadiciie	20.10					

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

Data File: 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

Sample : 25ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

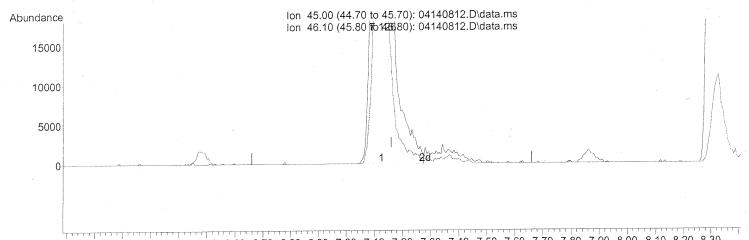
Quant Time: Apr 15 06:24:20 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



Time--> 6.00 6.10 6.20 6.30 6.40 6.50 6.60 6.70 6.80 6.90 7.00 7.10 7.20 7.30 7.40 7.50 7.60 7.70 7.80 7.90 8.00 8.10 8.20 8.30 Scan 534 (7.126 min): 04140812.D\data.ms Abundance 80000 60000 46 40000 43 20000 42 44 41 40 47 48 39 42 47 48 49 50 51 52 53 54 55 39 43 44 45 46 34 35 36 37 38 m/z--> 31 32 33 TIC: 04140812.D\data.ms

(10) Ethanol (T)

7.126min (-0.034) 14.45ng

response 355842

 Ion
 Exp%
 Act%

 45.00
 100
 100

 46.10
 41.00
 38.07

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

split /tailing

Data File : 04140812.D

: 14 Apr 2008 21:43 Acq On

: WA Operator

: 25ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

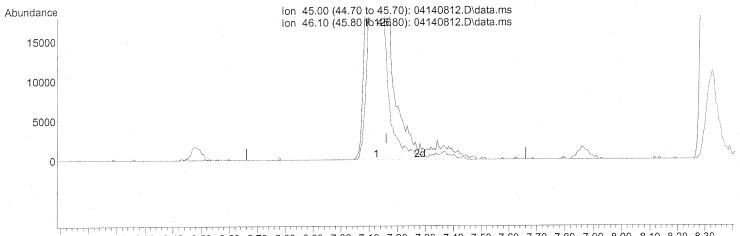
Quant Time: Apr 15 06:24:20 2008

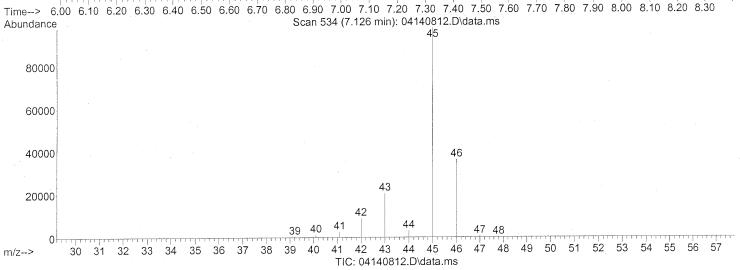
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via : Initial Calibration





(10) Ethanol (T)

7.126min (-0.034) 15.01ng m

response 369567

lon	Exp%	Act%
45.00	100	100
46.10	41.00	36.65
0.00	0.00	0.00
0.00	0.00	0.00

incl. tailing
1001 4116/08
20417/08

Anatic Tracton Wohot / / ***

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

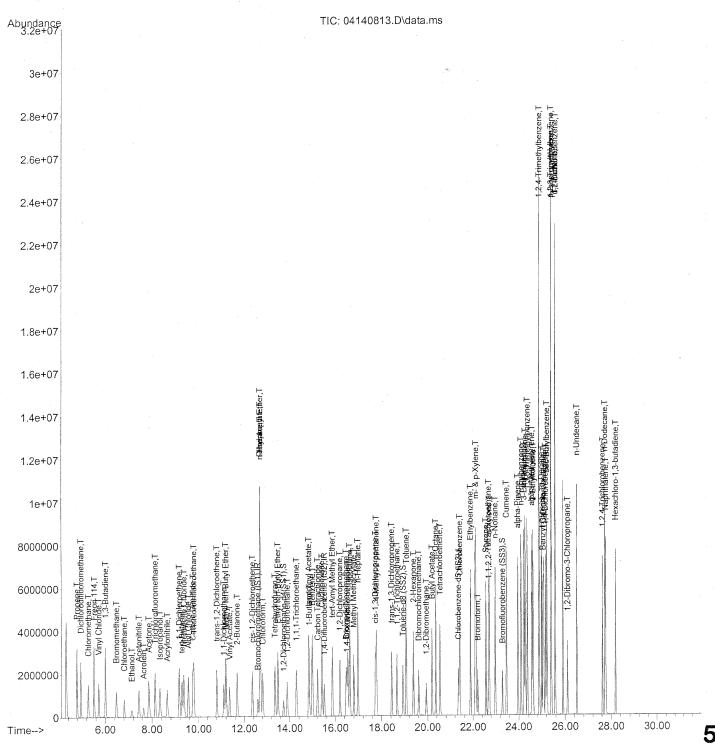
Sample : 50ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:26:42 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

OLast Update: Thu Apr 03 07:50:30 2008



Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

Sample : 50ng TO-15 ICAL Standard : S20-04140804/S20-04020808 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:26:42 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008

ZUU1101001011 110P01

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(M	in)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	15.53	114	359135 1580077 818772	25.000 25.000 25.000	ng	0.	00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000 73) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.74 18.93 23.30	98	1797014 Recove 626773	ery = 27.224	84 ng 108 ng	.28% 0. .88% 0.	00
Target Compounds 2) Propene 3) Dichlorodifluoromethane 4) Chloromethane 5) Freon 114 6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol 16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol 19) Methylene Chloride 20) Allyl Chloride 21) Trichlorotrifluoroethane 22) Carbon Disulfide 23) trans-1,2-Dichloroethene 24) 1,1-Dichloroethane 25) Methyl tert-Butyl Ether 26) Vinyl Acetate 27) 2-Butanone 28) cis-1,2-Dichloroethene 29) Diisopropyl Ether 30) Ethyl Acetate 31) n-Hexane	7.45 7.65 7.87 8.14 8.34 8.65 9.16 9.28 9.37 9.56 9.81	85 50 135 54 94 645 416 81 453 69 84 411 151	802216m 2274356 658477 989790 2079897 3077080m 1587115 1039085 2885669 1106480 1804544	35.317 34.819 45.213 35.751 40.447 37.263 31.541 30.129 33.733 31.805 36.133 36.056 32.835 36.268 38.154 34.776 36.752 40.079 42.638 32.370	ng n	# 1	ue 90997996 009999996 999999999999999999999999

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Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

Sample : 50ng TO-15 ICAL Standard : S20-04140804/S20-04020808 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:26:42 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

	R.T.	QIon	Response	Conc	Units	Dev(Min)
32) Chloroform	12 81	83	1994360	42.122	na		99
32) Chloroform 34) Tetrahydrofuran 35) Ethyl tert-Butyl Ether 36) 1,2-Dichloroethane 38) 1,1,1-Trichloroethane 39) Isopropyl Acetate 40) 1-Butanol 41) Benzene 42) Carbon Tetrachloride	13 36	72	764002	36.038	na		98
34) Tetrally diordian	13.49	87	1193455	34.004	na	#	85
35) Elly Left-Buty Ether	13.45	62	1718931	36.444	na na		99
36) 1,2-Dicitior decliane	14.30	97	1742008	42 924	na		97
38) I, I, I-Irichioroethane	14.30	<i>51</i>	731723	39 953	na	#	28
39) Isopropyi Acetate	14.04	5.6	969057	35 694	na	#	46
40) 1-Butano1	14.00	70	1117522	30.02	na	77	99
41) Benzene	15.00	/O	1555430	11 021	na		98
42) Carbon Tetrachloride	15.22	T T /	1555430	44.901	. 119	#	82
43) Cyclohexane 44) tert-Amyl Methyl Ether 45) 1,2-Dichloropropane 46) Bromodichloromethane	15.42	84	1663679	20.040	n 119	#	90
44) tert-Amyl Methyl Ether	15.8/	/3	3119689	39.043	119		99
45) 1,2-Dichloropropane	16.20	63	1234355	39.798	119		99
46) Bromodichloromethane	16.47	83	1622745	44./58	3 119		99
47) Trichloroethene	16.54	130	1118235	47.528	ng -		99
48) 1,4-Dioxane	16.50	88	862754	44.395	ng		85
49) Isooctane	16.63	57	5039242	39.214	ng	.,	70
50) Methyl Methacrylate	16.81	100	409572	41.343	ng	#	69
51) n-Heptane	16.99	71	1242949	41.826	ng	#	82
52) cis-1,3-Dichloropropene	17.73	75	1789811	39.200) ng		98
53) 4-Methyl-2-pentanone	17.77	58	1234835	41.203	ng		87
54) trans-1.3-Dichloropropene	18.43	75	1796165	44.693	ng		99
55) 1.1.2-Trichloroethane	18.68	97	1038954	42.812	ng ng		92
58) Toluene	19.07	91	4859246	50.019	ng ng		97
59) 2-Hexanone	19.38	43	3659388	47.756	ng		79
60) Dibromochloromethane	19.61	129	1265618	56.643	ng		98
61) 1 2-Dibromoethane	19.94	107	1186210	47.265	ng		100
62) Putul Acetate	20 19	43	3868036	50.289	nq		83
62) nuOdtana	20.36	57	1145169	46.706	nq		95
(4) Totrachloroethene	20.55	166	1217980	54.984	l na		99
64) Tetractiforoethene	21 42	112	3038611	52.833	na		99
65) CITOTODEITZEITE	21 89	91	5696327	51.574	na		92
66) Ethytbelizene	22.02	91	9603967	131 023	} na		90
6/) m- & p-Ayrene	22.13	173	1107855	70 486	na S		98
47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane 50) Methyl Methacrylate 51) n-Heptane 52) cis-1,3-Dichloropropene 53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene 55) 1,1,2-Trichloroethane 58) Toluene 59) 2-Hexanone 60) Dibromochloromethane 61) 1,2-Dibromoethane 62) Butyl Acetate 63) n-Octane 64) Tetrachloroethene 65) Chlorobenzene 66) Ethylbenzene 67) m- & p-Xylene 68) Bromoform 69) Styrene 70) o-Xylene 71) n-Nonane	22.21	104	3333547	23 3 9 () na		94
69) Styrene	22.50	01	1700005	60 101	na		91
70) o-xylene	22.73	<i>7</i> 1 2	3106010	47.912	- 119) na	#	79
71) n-Nonane	22.99	43	3100010	59.945	: 119	TT	97
72) 1,1,2,2-Tetrachloroethane	22.70			55.370			99
74) Cumene	23.47						90
75) alpha-Pinene	23.97			52.669			96
76) n-Propylbenzene	24.11			53.990			98
77) 3-Ethyltoluene	24.23			53.17			98
	24.28			57.725			
79) 1,3,5-Trimethylbenzene	24.38	105	4924010	55.901	L 11g		⁹⁷ 594
	0.0					D-~-	
13041408.M Tue Apr 15 06:27:27 20	08	;	DA 4/16/08			Page:	4
		/	Un Till				

Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

Sample : 50ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:26:42 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene 96) n-Dodecane 97) Hexachloro-1,3-butadiene	24.57 24.62 24.89 24.99 25.05 25.16 25.22 25.41 25.41 25.58 25.58 26.11 26.50 27.63 27.78	118 105 105 57 91 146 146 105 119 105 146 68	2494368 5410812 6613440 2936499 4246418 2859135 2814320 6398402 7505085 6559967 3427526 2738620 833376 3146465 2017846 6171260 3177225 1315241	55.717 ng 51.961 ng 70.050 ng 50.154 ng 57.516 ng 62.075 ng 61.922 ng 56.506 ng 82.980 ng 71.853 ng 72.428 ng 61.346 ng 63.938 ng 50.655 ng 63.304 ng 64.890 ng 52.528 ng 69.543 ng	96 98 98 88 95 100 99 96 91 99 95 62 87 96 99 86
y// Hexacillolo 1/3 bacadione					

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

Data File : 04140813.D

Acg On : 14 Apr 2008 22:24

Operator : WA

Sample : 50ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

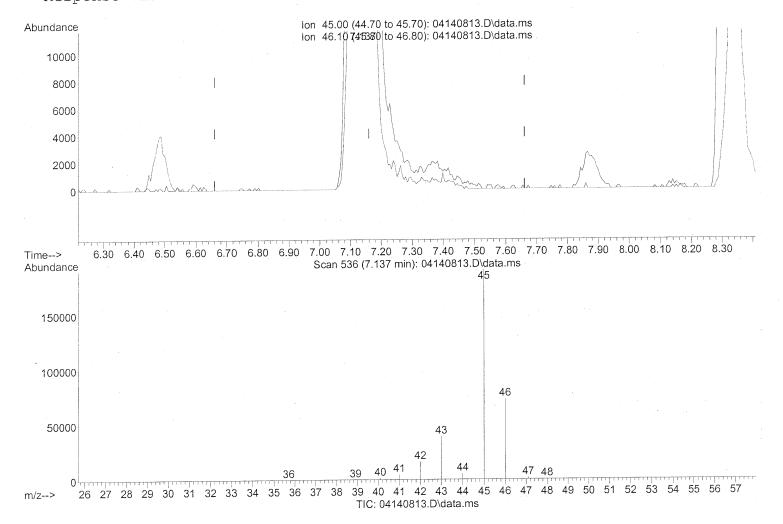
Quant Time: Apr 15 06:25:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(10) Ethanol (T)

7.137min (-0.023) 29.70ng

response 790799

 Ion
 Exp%
 Act%

 45.00
 100
 100

 46.10
 41.00
 38.13

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

tailing

Data File : 04140813.D

: 14 Apr 2008 22:24 Acq On

: WA Operator

: 50ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

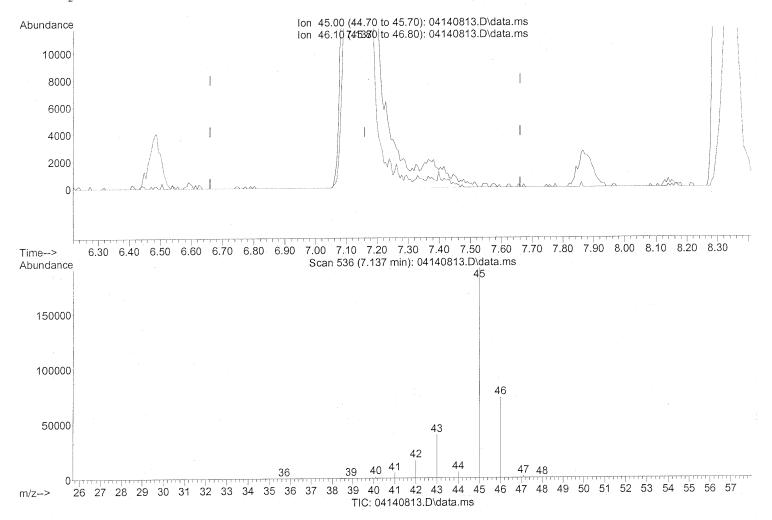
Quant Time: Apr 15 06:25:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



(10) Ethanol (T)

7.137min (-0.023) 30.13ng m

response 802216

Ion	Exp%	Act%
45.00	100	100
46.10	41.00	37.59
0.00	0.00	0.00
0.00	0.00	0.00

incl. tailing
101 4/16/08
ReAlt7/08

Data File : 04140813.D

: 14 Apr 2008 22:24 Acq On

: WA Operator

50ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

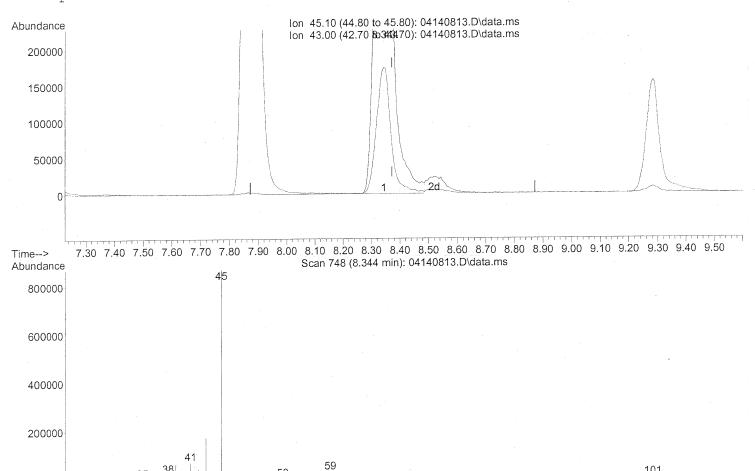
Quant Time: Apr 15 06:25:57 2008

Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



65

70

TIC: 04140813.D\data.ms

(15) Isopropanol (T)

30

m/z-->

25

8.344min (-0.028) 31.68ng

35

38

40

50

55

45

response 2968987

Act% Ion Exp% 45.10 100 100 16.90 20.32 43.00 0.00 0.00 0.00 0.00 0.00 0.00

split plales

85

80

110

101 100

105

95

90

Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

50ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

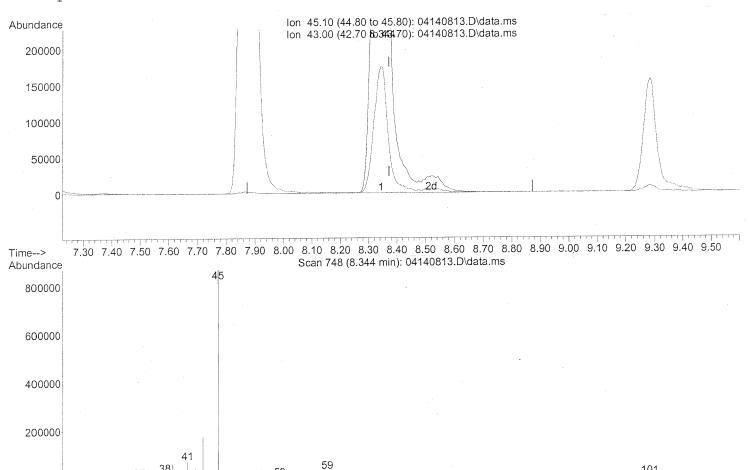
Quant Time: Apr 15 06:25:57 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



(15) Isopropanol (T)

30

m/z-->

8.344min (-0.028) 32.84ng m

35

38

40

50

45

55

response 3077080

lon Ехр% Act% 45.10 100 100 43.00 16.90 19.61 0.00 0.00 0.00 0.00 0.00 0.00

int. whole peales

184 4-116/08

FOR/17/08

80

75

70

TIC: 04140813.D\data.ms

85

90

95

110

101 100

105

Anaticicacion voborc /Ai vontemod

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140814.D

Acq On : 14 Apr 2008 23:04

Operator : WA

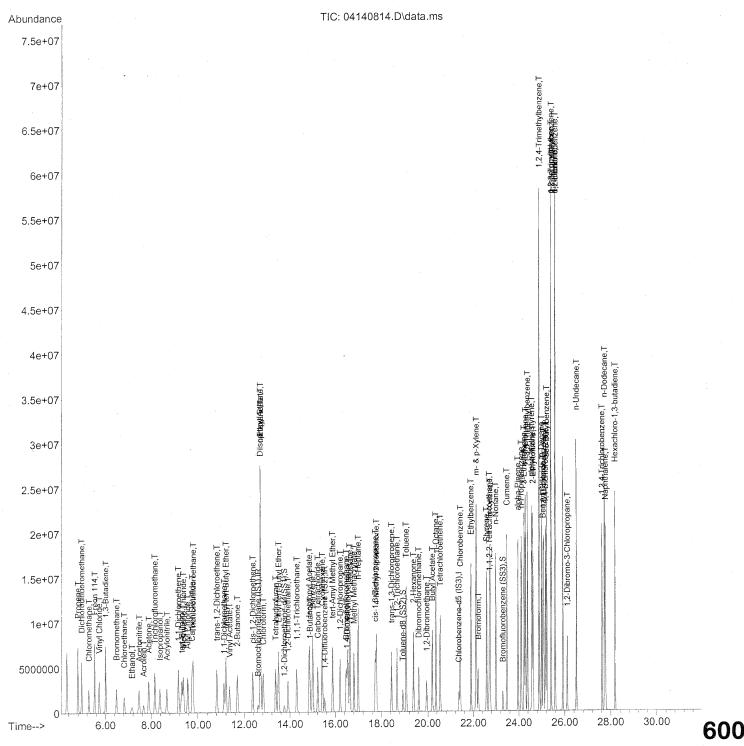
Sample : 100ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:28:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008



Data File : 04140814.D

: 14 Apr 2008 23:04 Acq On

Operator : WA

Sample : 100ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:28:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc	Units	Dev (M	lin)
1) Bromochloromethane (IS1) 37) 1,4-Difluorobenzene (IS2) 56) Chlorobenzene-d5 (IS3)	12.61 15.53 21.36	114	379040 1673737 871036	25.000	ng	0.	00
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(Spiked Amount 25.000 57) Toluene-d8 (SS2) Spiked Amount 25.000 73) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.75 18.93 23.30	98	674346	rery = 27.171 rery = 30.060	83. ng 108.	.40% 0. .68% 0.	00
6) Vinyl Chloride 7) 1,3-Butadiene 8) Bromomethane 9) Chloroethane 10) Ethanol 11) Acetonitrile 12) Acrolein 13) Acetone 14) Trichlorofluoromethane 15) Isopropanol 16) Acrylonitrile 17) 1,1-Dichloroethene 18) tert-Butanol	7.17 7.47 7.67 7.89 8.15 8.38 8.67 9.16 9.31 9.38 9.57	85 50 135 62 54 94 645 41 58 10 45 45 41 58 10 45 41 61 61 63 73	3337708 5560943 3729310 3097182 4423044 4005951 2351722 2051767 1718886m 4896836 1427932 2130633 4597540 6510791m 3418887 2288970 6157599 2423001 3992555 2198878 8961871 4081464 4631185 7628277 466007 1671209 3778700 2440418 1557022	73.339 58.412 100.368 75.661 86.326 79.707 71.687 61.166 68.815 65.349 73.695 75.515 65.827 74.024 79.635 70.310 76.255 84.017 93.726 67.208	ng n	# # #	91 99 99 99 99 99 99 99 99 99 99 99 99 9
31) n-Hexane	12.71	57	6665924	101.761	ng		⁹³ 60

Data File : 04140814.D

: 14 Apr 2008 23:04 Acq On

Operator : WA

: 100ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:28:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Thu Apr 03 07:50:30 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	e Conc	Units	Dev	(Min)
	10 00	83	4316526	86.380	ng		99
32) Chloroform 34) Tetrahydrofuran	13.37	.72	1589023	71.018	ng		99
35) Ethyl tert-Butyl Ether	13.50	87	2735274 3662540	73.840	ng	#	83
36) 1,2-Dichloroethane	13.92	62	3662540	73.573	ng		98
38) 1,1,1-Trichloroethane	14.31	97	3939251	91.634	ng		98
39) Isopropyl Acetate	14.85	61	1662836	85.713	ng	#	39
40) 1-Butanol		56	2156684	75.071	ng	#	48
41) Benzene	15.00	78	9584981	81.578	ng		97
41) Benzene 42) Carbon Tetrachloride 43) Cyclohexane 44) tert-Amyl Methyl Ether 45) 1,2-Dichloropropane 46) Bromodichloromethane 47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane 50) Methyl Methacrylate 51) n-Heptane 52) cis-1,3-Dichloropropene 53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene 55) 1,1,2-Trichloroethane 58) Toluene	15.23	117	3543916	96.750	ng		98
43) Cyclohexane	15.43	84	3854975	89.355	ng	#	
44) tert-Amyl Methyl Ether	15.88	73	7009525	82.815	ng		91
45) 1.2-Dichloropropane	16.21	63	2710579	82.504	ng		98
46) Bromodichloromethane	16.48	83	3687281	96.011	ng		100
47) Trichloroethene	16.56	130	2661846	106.806	ng		99
48) 1.4-Dioxane	16.51	88	2011287	97.704	ng		85
49) Isooctane	16.64	57	11420328	83.897	ng		71
50) Methyl Methacrylate	16.81	100	922903	87.946	ng	# #	71
51) n-Heptane	16.99	71	2893140	91.908	ng	#	82
52) cis-1,3-Dichloropropene	17.74	75	4082390	84.409	ng		99
53) 4-Methyl-2-pentanone	17.79	58	2827913	89.080	ng		87
54) trans-1,3-Dichloropropen	e 18.45	75	4082000	95.887	ng		100
55) 1,1,2-Trichloroethane	18.68	97	2391548	93.033	ng		91
58) Toluene	19.08	91	11200759	108.379	ng		100
59) 2-Hexanone	19.39	43	8010039	98.260	ng		81
60) Dibromochloromethane	19.61	129	2939424	123.660	ng		98
61) 1,2-Dibromoethane	19.95		2707908	101.424	ng		99
62) Butyl Acetate	20.20	43	8449300	103.259	ng		85
63) n-Octane	20.36	57	2750356	105.442	ng		95
64) Tetrachloroethene	20.55	166	3051653	129.497	ng		99
65) Chlorobenzene	21.42	112	7234910	118.246	ng		99
66) Ethylbenzene	21.90	91	12863620	109.477	na		97
66) Ethylbenzene 67) m- & p-Xylene 68) Bromoform	22.14	91	22765274	291.943	na		97
68) Bromoform	22.22	173	2617030 8032744 11508642	156.514	ng		98
69) Styrene	22.58	104	8032744	120.934	ng		93
70) o-Xylene	22.73	91			_		95
71) n-Nonane	22.99	43	7349726	106.571		#	82
72) 1,1,2,2-Tetrachloroethan	e 22.70	83	5547895	138.358			98
74) Cumene	23.48	105	12560717	121.377	_		96
75) alpha-Pinene	23.97		7070026	124.101			90
76) n-Propylbenzene	24.11		14992434	108.892			95
77) 3-Ethyltoluene	24.24		13171114	117.717			96
78) 4-Ethyltoluene	24.30		13115560	125.099			92
79) 1,3,5-Trimethylbenzene	24.38	105	11996184	128.018	ng		⁹⁶ 602
-							002

Quarrer caleron report

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140814.D

Acq On : 14 Apr 2008 23:04

Operator : WA

Sample : 100ng TO-15 ICAL Standard : S20-04140804/S20-04020808 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:28:17 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) QLast Update : Thu Apr 03 07:50:30 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene	24.57 24.63 24.90 25.00 25.06 25.17 25.22 25.41 25.42 25.59 25.59 26.11 26.51 27.64 27.78	118 105 105 57 91 146 146 105 146 68 157 57 180 128	6563154 12754976 15629562 7447447 10726388 7724653 7381200 14301505 15925026 15455833 9624011 7792659 2017145 8173344 5538389 14124345	Conc 137.807 115.139 155.615 119.568 136.566 157.649 152.660 118.722 165.511 159.135 191.165 164.085 145.472 123.688 163.325 139.605	ng n	Dev(Min) 95 96 87 85 99 99 99 89 4 70 86 94 100 # 82 95 80
96) n-Dodecane 97) Hexachloro-1,3-butadiene	27.74 28.19			194.616	~	99

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

Data File : 04140814.D

: 14 Apr 2008 Acq On

Operator : WA

100ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

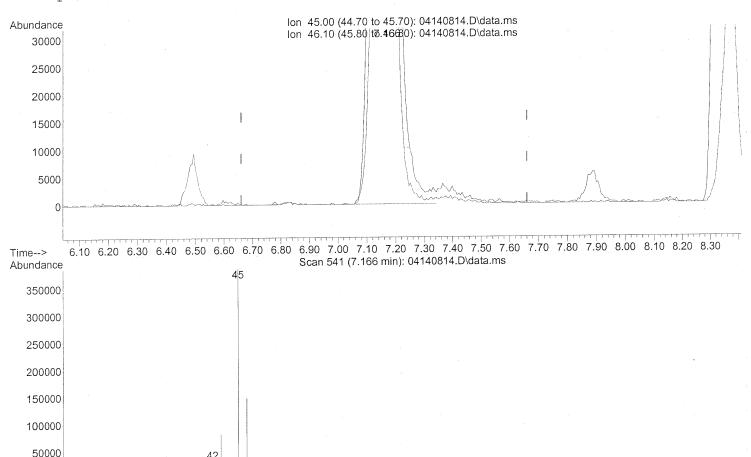
Quant Time: Apr 15 06:27:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration



60

TIC: 04140814.D\data.ms

(10) Ethanol (T)

30

m/z-->

25

7.166min (+0.006) 60.49ng

35

response 1699865

Exp% Act% lon 45.00 100 100 38.00 41.00 46.10 0.00 0.00 0.00 0.00 0.00 0.00

split /tailing

75

80

100

42

45

50

55

39

40

Quarrer cacron report

Data Path : J:\MS13\DATA\2008 04\14\

Data File : 04140814.D

: 14 Apr 2008 23:04 Acq On

Operator : WA

100ng TO-15 ICAL Standard Sample S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

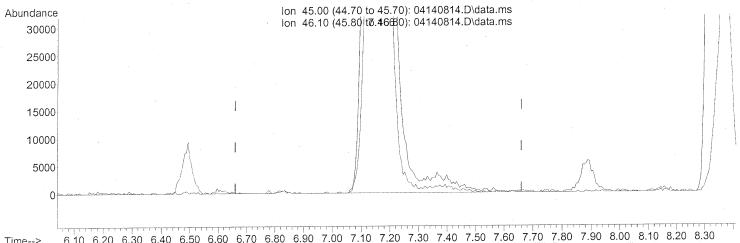
Quant Time: Apr 15 06:27:38 2008

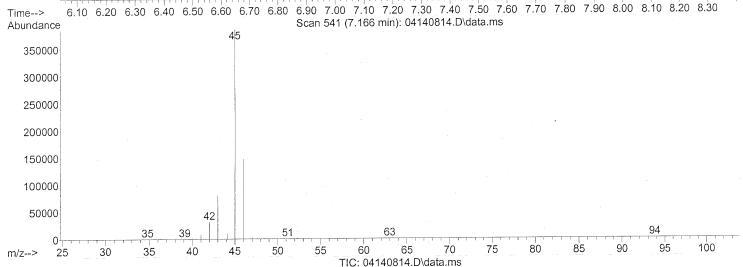
Quant Method : J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via: Initial Calibration





(10) Ethanol (T)

7.166min (+0.006) 61.17ng m

response 1718886

Ion Exp% Act% 100 45.00 100 46.10 41.00 37.58 0.00 0.00 0.00 0.00 0.00 0.00

mcl tailing

100 4/16/08

804/17/08

Data File : 04140814.D

Acq On : 14 Apr 2008 23:04

Operator : WA

Sample : 100ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 15 06:27:38 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

59

65

70

TIC: 04140814.D\data.ms

75

55

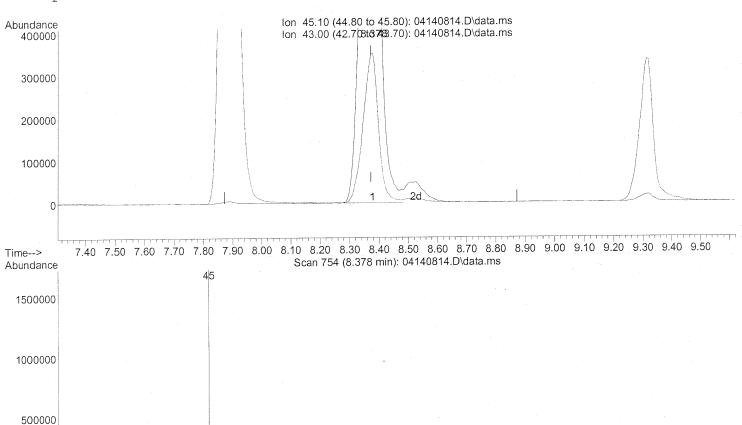
55

50

45

QLast Update: Thu Apr 03 07:50:30 2008

Response via: Initial Calibration



11	5)	Isopropanol (T	١
()	\circ	150proparior	Ι,	,

30

m/z-->

8.378min (+0.006) 63.56ng

35

38

40

response 6286656

 Ion
 Exp%
 Act%

 45.10
 100
 100

 43.00
 16.90
 20.11

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

spit peales

85

105

110

100

Data File : 04140814.D

: 14 Apr 2008 23:04 Acq On

Operator : WA

: 100ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc Sample Multiplier: 1 ALS Vial

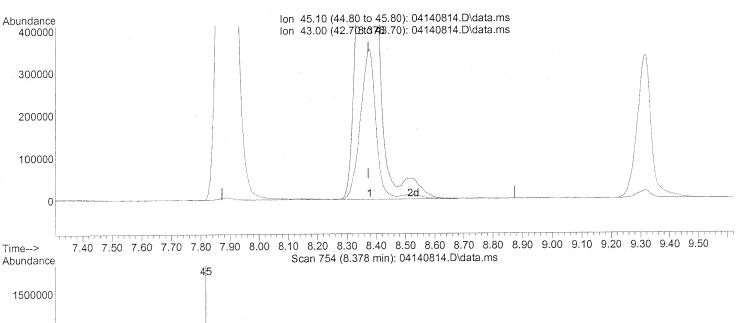
Quant Time: Apr 15 06:27:38 2008

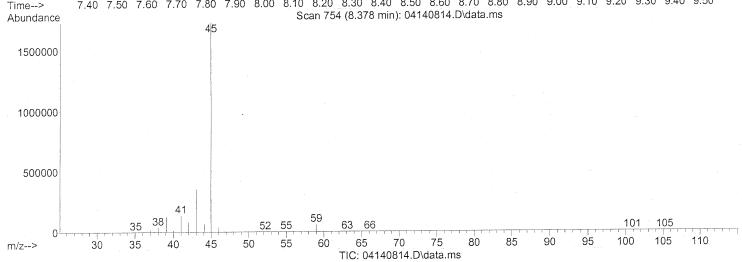
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Thu Apr 03 07:50:30 2008

Response via : Initial Calibration





(15) Isopropanol (T)

8.378min (+0.006) 65.83ng m

response 6510791

Exp% Act% lon 45.10 100 100 43.00 19.42 16.90 0.00 0.00 0.00 0.00 0.00 0.00

incl. int. whole peales

1891 4/16/08

FU4/17/08

Anatiotractous Weborc /Ar westerne

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

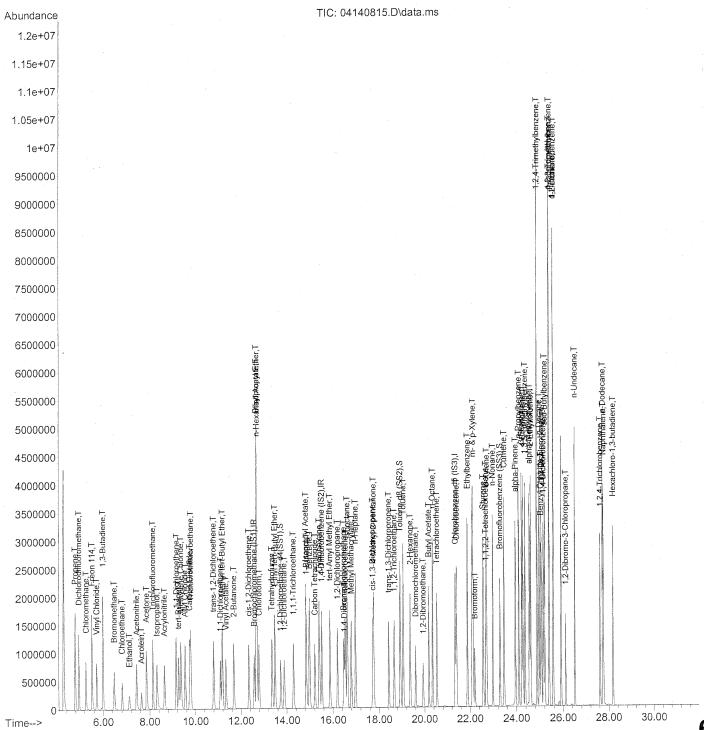
Sample : 25ng TO-15 ICV Standard
Misc : S20-04140804/S20-04040804
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 15 06:48:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard
Misc : S20-04140804/S20-04040804
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 15 06:48:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1)	12.59	130	402323				.02
37) 1,4-Difluorobenzene (IS2)	15.52	114					.01
56) Chlorobenzene-d5 (IS3)	21.36	82	899268	25.000	ng	C	.00
Great am Maritaring Compounds							
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(13.73	65	796514	24.687	ng	- C	.02
Spiked Amount 25.000	20.70			ery =			
57) Toluene-d8 (SS2)	18.93	98	2007332	24.904	ng	C	.00
Spiked Amount 25.000			Recov	ery =	99	.60%	
73) Bromofluorobenzene (SS3)	23.29	174	678298	24.454	ng	C	0.00
Spiked Amount 25.000			Recov	ery =	• 97	.80%	
Target Compounds						Qva	lue
2) Propene	4.79	42	812659	24.404	ng		90
3) Dichlorodifluoromethane	4.95	85	1376403	22.673	ng		99
4) Chloromethane	5.27	50	1150551	22.678	_		97
5) Freon 114	5.52	135	718887	24.185	ng		100
6) Vinyl Chloride	5.71		1089924	23.083			96
7) 1,3-Butadiene	5.99	54	1100149	30.131	_	#	76
8) Bromomethane	6.48		587100	25.899			98
9) Chloroethane			501238	25.623			96
10) Ethanol			514214m	22.644	_		
11) Acetonitrile			1439658	24.123	_		97
12) Acrolein			393970	24.550	_		98
13) Acetone	7.86		573236	25.739	_	#	63
14) Trichlorofluoromethane	8.14		1195874	25.071	_		99
15) Isopropanol	8.32	45	1795159m	23.820	_		0.0
16) Acrylonitrile	8.64		929763	26.906	_		98 90
17) 1,1-Dichloroethene			593272	26.703			90
18) tert-Butanol	9.26		1706507	27.302			94
19) Methylene Chloride	9.36		623916	24.389 31.462	_		98
	9.54		1075294 517618	25.396			91
21) Trichlorotrifluoroethane	9.80		2363815	24.920			96
22) Carbon Disulfide	10.80		1003176	25.906			91
23) trans-1,2-Dichloroethene		63	1164180	25.832			96
24) 1,1-Dichloroethane	11.10 11.19	73	1896288	25.620			88
25) Methyl tert-Butyl Ether	11.35	86	132547	29.955	_	#	87
26) Vinyl Acetate	11.68		436147	27.926	_	11	100
27) 2-Butanone	12.36		943201	25.847			92
28) cis-1,2-Dichloroethene	12.69	87	485978	23.699	_	#	87
29) Diisopropyl Ether	12.69	61	272560	27.996	_		84
30) Ethyl Acetate 31) n-Hexane	12.70	57	1233662	24.380			93
31) II-HEValle	,	<i>- ,</i>			_		60

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Data Path : J:\MS13\DATA\2008_04\14\ Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard : S20-04140804/S20-04040804 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 15 06:48:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
32) Chloroform	12.80	83	1101851	29.333 ng	
34) Tetrahydrofuran	13.35	72	414917	26.561 ng	96
35) Ethvl tert-Butvl Ether	13.48	87	680275	25.226 ng	#1 83
26) 1 2-Dichloroethane	13.89	62	928504	24.958 ng	99
20) 1 1 1 Twichloroothano	14.29	97	953172	25.425 ng	99
39) Isopropyl Acetate	14.83	6 J	423334	25.8/5 119	# 35
40) 1-Butanol	14.85	56	615240	25.054 ng	# 57
41) I-Butanol 41) Benzene 42) Carbon Tetrachloride 43) Cyclohexane 44) tert-Amyl Methyl Ether	14.99	78	2359469	24.720 ng	98
42) Carbon Tetrachloride	15.22	117	820340	25.987 ng	100
43) Cyclohexane	15.41	84	903388	25.586 ng	# 80
44) tert-Amyl Methyl Ether	15.87	73	1749071	25.752 ng	92
45) 1,2-Dichloropropane 46) Bromodichloromethane 47) Trichloroethene	16.20	63	678431	24.804 ng	99
46) Bromodichloromethane	16.46	83	880836	27.143 ng	100
47) Trichloroethene	16.54	130	591829	25.203 ng	100
47) Trichloroethene 48) 1,4-Dioxane 49) Isooctane	16.49	88	472013	27.931 ng	84
49) Isooctane	16.62	57	2817594	24.933 ng	73
50) Methyl Methacrylate 51) n-Heptane	16.80	100	224964	25.954 ng	# 66
51) n-Heptane	16.98	71	641023	24.242 ng	# 81
Eal aid 1 2-Dichloropropene	17/73	7/5	9/2858	26.163 H9	99
53) 4-Methyl-2-pentanone	17.77	58	664693	25.460 ng	86
53) 4-Methyl-2-pentanone 54) trans-1,3-Dichloropropene	18.43	75	971123	30.232 ng	100
55) 1.1.2-Trichloroethane	18.67	9.7	564478	24.559 Ng	90
58) Toluene	19.07	91	2505167	24.737 ng	97
59) 2-Hexanone	19.37	. 43	1913999	25.372 ng	
60) Dibromochloromethane	19.61			27.203 ng	99
(1) 1 0 Dibromoothano	19 94	107	642961	27.003 ng	99
61) 1,2-Dibromoethane 62) Butyl Acetate 63) n-Octane 64) Tetrachloroethene 65) Chlorobenzene	20.19	43	2113209	28.014 ng	
63) n-Octane	20.35	57	597691	25.180 ng	
64) Tetrachloroethene	20.55	166	608547	24.000 ng	100
65) Chlorobenzene	21.42	112	1528340	24.365 ng	99
66) Ethylbenzene	21.89	91	2860827	25.299 ng	91
67) m- & p-Xylene	22.13	91	4528775	59.912 ng	89
68) Bromoform	22.21	173	564282	33.791 ng	98
65) Chlorobenzene 66) Ethylbenzene 67) m- & p-Xylene 68) Bromoform 69) Styrene 70) o-Xylene	22.57	104	1634354	25.052 ng	95
70) o-Xylene	22.72	91	2298442	28.255 ng	91
71) n-Nonane	22.90	4.5	1391770	24.400 119	π . Ο Ο
72) 1,1,2,2-Tetrachloroethane	22.69	83	1126877	29.026 ng	97
74) Cumene	23.47		2716122	26.322 ng	98
75) alpha-Pinene	23.97		1373512	25.042 ng	90
76) n-Propylbenzene	24.10		3581396	25.933 ng	95
77) 3-Ethyltoluene	24.23		2740566	24.357 ng	97
78) 4-Ethyltoluene	24.28		2665450	25.727 ng	97
79) 1,3,5-Trimethylbenzene	24.38	1.05	2286477	24.849 ng	96
					610
13041408.M Tue Apr 15 06:49:39 20	08	M.S.	4/16/08		Page: 2
		jOT.	7110100		

Data File : 04140815.D

: 14 Apr 2008 23:45 Acq On

Operator : WA

: 25ng TO-15 ICV Standard Sample : S20-04140804/S20-04040804 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 15 06:48:51 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene 96) n-Dodecane 97) Hexachloro-1,3-butadiene	24.56 24.61 24.88 24.99 25.05 25.08 25.16 25.21 25.40 25.41 25.58 26.11 26.50 27.63 27.77 27.74 28.19	118 105 105 57 91 146 146 105 119 105 146 68 157 57 180 128	1147662 2676977 2652414 1438401 1996569 1318130 1299460 3116911 3142163 2803039 1341857 1105741 401319 1510474 874742 2949991 1449715 557927	23.553 ng 23.667 ng 25.511 ng 25.017 ng 28.171 ng 23.418 ng 24.124 ng 25.534 ng 29.517 ng 27.414 ng 23.261 ng 23.455 ng 26.260 ng 25.022 ng 24.467 ng 25.664 ng 23.670 ng 24.233 ng	96 97 97 88 94 99 99 95 91 96 100 93 87 95 98

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

Page: 3

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard
Misc : S20-04140804/S20-04040804
ALS Vial : 16 Sample Multiplier: 1

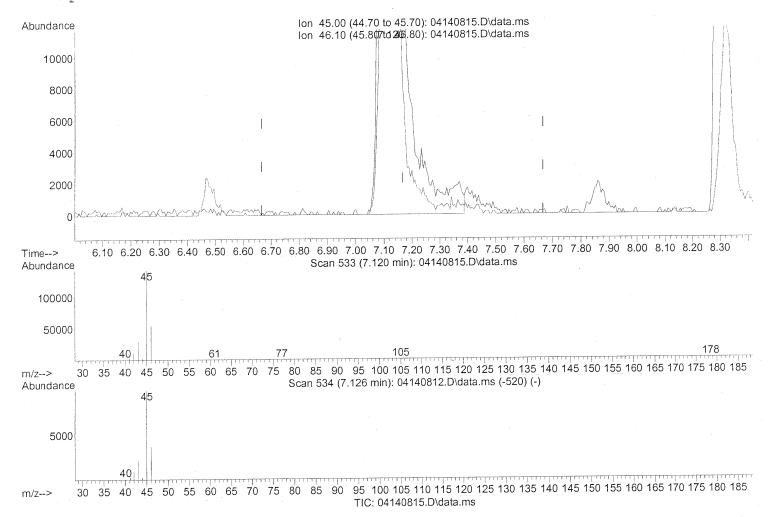
Quant Time: Apr 15 06:47:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(10) Ethanol (T)

7.120min (-0.046) 22.34ng

response	507294	
lon	Ехр%	Act%
45.00	100	100
46.10	41.00	37.44
0.00	0.00	0.00
0.00	0.00	0.00

tailing

Data File : 04140815.D

: 14 Apr 2008 Acq On

Operator : WA

25ng TO-15 ICV Standard Sample : S20-04140804/S20-04040804 Misc Sample Multiplier: 1 : 16 ALS Vial

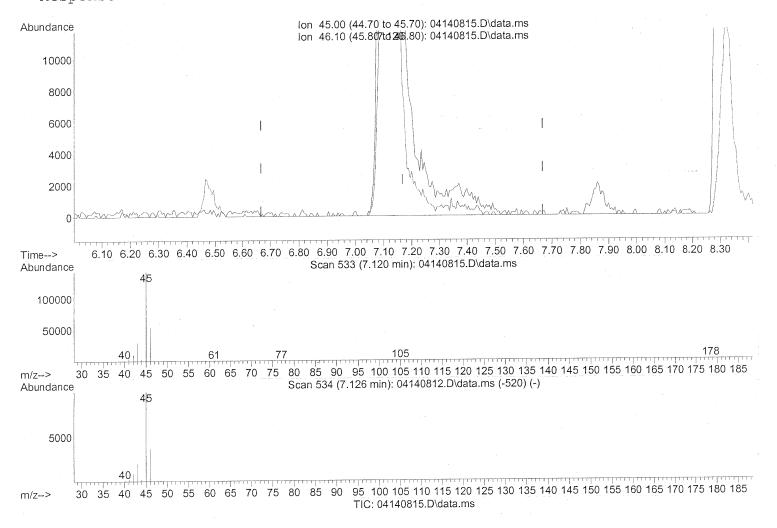
Quant Time: Apr 15 06:47:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(10) Ethanol (T)

7.120min (-0.046) 22.64ng m

response 514214

Act% Exp% lon 45.00 100 100 36.94 46.10 41.00 0.00 0.00 0.00 0.00 0.00 0.00

incl tailing 154 4116108 Fu4/17/18

Anditotonott voboto (Xoato

Data Path : J:\MS13\DATA\2008_04\14\

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard Misc : S20-04140804/S20-04040804 ALS Vial : 16 Sample Multiplier: 1

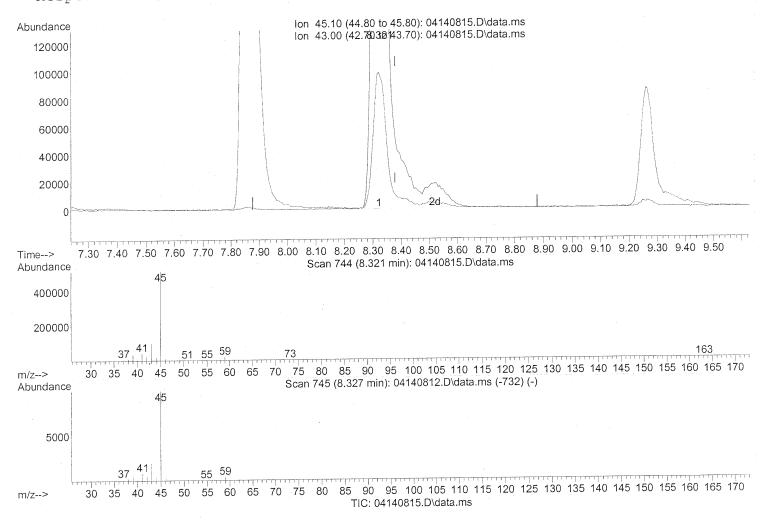
Quant Time: Apr 15 06:47:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via : Initial Calibration



(15) Isopropanol (T)

8.321min (-0.057) 22.52ng

response 1697041

 Ion
 Exp%
 Act%

 45.10
 100
 100

 43.00
 16.90
 20.01

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

split peales

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard
Misc : S20-04140804/S20-04040804
ALS Vial : 16 Sample Multiplier: 1

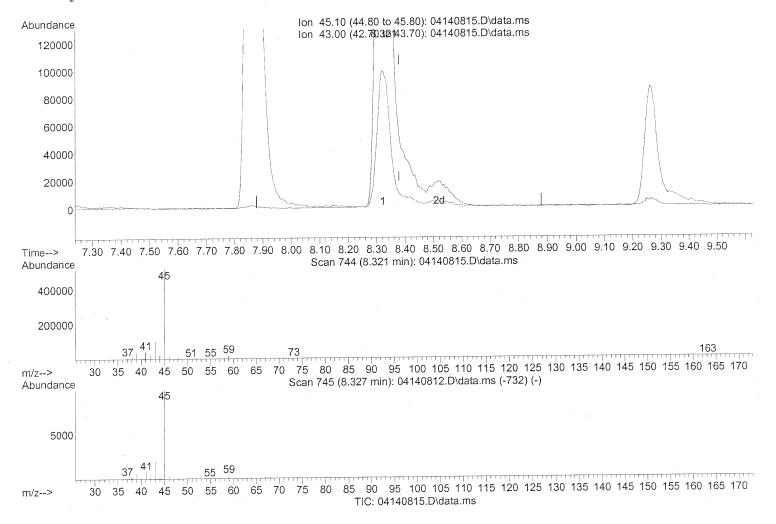
Quant Time: Apr 15 06:47:48 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Response via: Initial Calibration



(15) Isopropanol (T)

8.321min (-0.057) 23.82ng m

response 1795159

 Ion
 Exp%
 Act%

 45.10
 100
 100

 43.00
 16.90
 18.91

 0.00
 0.00
 0.00

 0.00
 0.00
 0.00

int. whole peales

154 4/16/08

R04/17/08

Data File Name: 04140815.D

Data File Path: J:\MS13\DATA\2008_04\14\

Operator: WA

Date Acquired: 4/14/08 23:45 Acq. Method File: TO15.M

Sample Name: 25ng TO-15 ICV Standard

Misc Info: S20-04140804/S20-04040804

Instrument Name: GCMS13

	Name	Ret.	Amt.	Spike	%	Lower	Upper	* OR
<u>#</u>	Compound	<u>Time</u>	<u>(ng)</u>	Amt.(ng)	Rec.	<u>Limit</u>	<u>Limit</u>	<u>Fail</u>
2)	Propene	4.79	24.40	26.3	92.8	70	130	*
3)	Dichlorodifluoromethane	4.95	22.67	25.5	88.9	70	130	*
4)	Chloromethane	5.27	22.68	24.5	92.6	70	130	*
5)	Freon 114	5.52	24.19	26.0	93.0	70	130	*
6)	Vinyl Chloride	5.71	23.08	24.8	93.1	70	130	*
7)	1,3-Butadiene	5.99	30.13	30.0	100.4	70	130	*
8)	Bromomethane	6.48	25.90	25.0	103.6	70	130	*
9)	Chloroethane	6.81	25.62	25.0	102.5	70	130	*
10)	Ethanol	7.12	22.64	23.8	95.1	70	130	*
11)	Acetonitrile	7.44	24.12	25.3	95.3	70	130	*
12)	Acrolein	7.64	24.55	24.8	99.0	70	130	* .
13)	Acetone	7.86	25.74	26.8	96.0	70	130	*
14)	Trichlorofluoromethane	8.14	25.07	26.3	95.3	70	130	*
15)	Isopropanol	8.32	23.82	25.8	92.3	70	130	*
16)	Acrylonitrile	8.64	26.91	25.5	105.5	70	130	*
17)	1,1-Dichloroethene	9.16	26.70	27.8	96.1	70	130	*
18)	tert-Butanol	9.26	27.30	25.8	105.8	70	130	*
19)	Methylene Chloride	9.36	24.39	27.8	87.7	70	130	*
20)	Allyl Chloride	9.54	31.46	26.8	117.4	70	130	*
21)	Trichlorotrifluoroethane	9.80	25.40	27.8	91.4	70	130	*
22)	Carbon Disulfide	9.76	24.92	25.0	99.7	70	130	*
23)	trans-1,2-Dichloroethene	10.80	25.91	26.5	97.8	70	130	*
24)	1,1-Dichloroethane	11.10	25.83	26.8	96.4	70	130	*
25)	Methyl tert-Butyl Ether	11.19	25.62	26.8	95.6	70	130	*
26)	Vinyl Acetate	11.35	29.96	25.3	118.4	70	130	*
27)	2-Butanone	11.68	27.93	27.0	103.4	70	130	*
28)	cis-1,2-Dichloroethene	12.36	25.85	27.0	95.7	70	130	*
29)	Diisopropyl Ether	12.69	23.70	26.3	90.1	70	130	*
30)	Ethyl Acetate	12.69	28.00	29.3	95.6	70	130	*
31)	n-Hexane	12.70	24.38	27.0	90.3	70	130	*
32)	Chloroform	12.80	29.33	29.8	98.4	70	130	*
34)	Tetrahydrofuran	13.35	26.56	26.8	99.1	70	130	*
35)	Ethyl tert-Butyl Ether	13.48	25.23	26.0	97.0	70	130	*
36)	1,2-Dichloroethane	13.89	24.96	26.3	94.9	70	130	*
38)	1,1,1-Trichloroethane	14.29	25.42	26.8	94.9	70	130	*
39)	Isopropyl Acetate	14.83	25.87	25.5	101.5	70	130	*

4/15/08 6:50 AM 616

Data File Name: 04140815.D

Data File Path: J:\MS13\DATA\2008_04\14\

Operator: WA

Date Acquired: 4/14/08 23:45

Acq. Method File: TO15.M

Sample Name: 25ng TO-15 ICV Standard
Misc Info: S20-04140804/S20-04040804

Instrument Name: GCMS13

	Name	Ret.	Amt.	Spike	%	Lower	Upper	* OR
<u>#</u>	Compound	Time	<u>(ng)</u>	Amt.(ng)	Rec.	<u>Limit</u>	<u>Limit</u>	<u>Fail</u>
40)	1-Butanol	14.85	25.05	24.8	101.0	70	130	*
41)	Benzene	14.99	24.72	27.0	91.6	70	130	*
42)	Carbon Tetrachloride	15.22	25.99	26.0	99.9	70	130	*
43)	Cyclohexane	15.41	25.59	26.8	95.5	70	130	*
44)	tert-Amyl Methyl Ether	15.87	25.75	26.0	99.0	70	130	*
45)	1,2-Dichloropropane	16.20	24.80	26.5	93.6	70	130	*
46)	Bromodichloromethane	16.46	27.14	27.8	97.6	. 70	130	*
47)	Trichloroethene	16.54	25.20	27.3	92.3	70	130	*
48)	1,4-Dioxane	16.49	27.93	27.5	101.6	70	130	*
49)	Isooctane	16.62	24.93	26.3	94.8	70	130	*
50)	Methyl Methacrylate	16.80	25.95	25.8	100.6	70	130	*
51)	n-Heptane	16.98	24.24	26.8	90.5	70	130	*
52)	cis-1,3-Dichloropropene	17.73	26.16	25.0	104.7	70	130	*
53)	4-Methyl-2-pentanone	17.77	25.46	27.5	92.6	70	130	*
54)	trans-1,3-Dichloropropene	18.43	30.23	28.0	108.0	70	130	*
55)	1,1,2-Trichloroethane	18.67	24.56	26.3	93.4	70	130	*
58)	Toluene	19.07	24.74	26.5	93.3	70	130	*
59)	2-Hexanone	19.37	25.37	26.3	96.5	70	130	*
60)	Dibromochloromethane	19.61	27.20	27.0	100.8	70	130	*
61)	1,2-Dibromoethane	19.94	27.00	26.3	102.7	70	130	*
62)	Butyl Acetate	20.19	28.01	26.3	106.5	70	130	*
63)	n-Octane	20.35	25.18	26.0	96.8	70	130	*
64)	Tetrachloroethene	20.55	24.00	26.0	92.3	70	130	*
65)	Chlorobenzene	21.42	24.37	26.5	91.9	70	130	*
66)	Ethylbenzene	21.89	25.30	26.3	96.2	70	130	*
67)	m- & p-Xylene	22.13	59.91	62.5	95.9	70	130	*
68)	Bromoform	22.21	33.79	31.3	108.0	70	130	*
69)	Styrene	22.57	25.05	26.3	95.3	70	130	*
70)	o-Xylene	22.72	28.25	29.8	94.8	70	130	*
71)	n-Nonane	22.98	24.43	26.0	94.0	70	130	*
72)	1,1,2,2-Tetrachloroethane	22.69	29.03	29.8	97.4	70	130	*
74)	Cumene	23.47	26.32	27.0	97.5	70	130	*
75)	alpha-Pinene	23.97	25.04	26.3	95.2	70	130	*
76)	n-Propylbenzene	24.10	25.93	26.3	98.6	70	130	*
77)	3-Ethyltoluene	24.23	24.36	25.5	95.5	70	130	*

Data File Name: 04140815.D

Data File Path: J:\MS13\DATA\2008_04\14\

Operator: WA

Date Acquired: 4/14/08 23:45

Acq. Method File: TO15.M

Sample Name: 25ng TO-15 ICV Standard

Misc Info: S20-04140804/S20-04040804

Instrument Name: GCMS13

	Name	Ret.	Amt.	Spike	%	Lower	Upper	* OR
<u>#</u>	Compound	<u>Time</u>	<u>(ng)</u>	Amt.(ng)	Rec.	<u>Limit</u>	<u>Limit</u>	<u>Fail</u>
78)	4-Ethyltoluene	24.28	25.73	26.5	97.1	70	130	*
79)	1,3,5-Trimethylbenzene	24.38	24.85	26.0	95.6	70	130	*
80)	alpha-Methylstyrene	24.56	23.55	25.5	92.4	70	130	*
81)	2-Ethyltoluene	24.61	23.67	24.8	95.4	70	130	*
82)	1,2,4-Trimethylbenzene	24.88	25.51	26.0	98.1	70	130	*
83)	n-Decane	24.99	25.02	26.3	95.1	70	130	*
84)	Benzyl Chloride	25.05	28.17	25.8	109.2	70	130	*
85)	1,3-Dichlorobenzene	25.08	23.42	25.5	91.8	70	130	*
86)	1,4-Dichlorobenzene	25.16	24.12	26.3	91.7	70	130	*
87)	sec-Butylbenzene	25.21	25.53	26.8	95.3	70	130	*
88)	p-Isopropyltoluene	25.40	29.52	28.8	102.5	70	130	*
89)	1,2,3-Trimethylbenzene	25.41	27.41	28.5	96.2	70	130	*
90)	1,2-Dichlorobenzene	25.58	23.26	25.8	90.2	70	130	*
91)	d-Limonene	25.58	23.46	26.0	90.2	70	130	*
92)	1,2-Dibromo-3-Chloropropane	26.11	26.26	25.8	101.8	70	130	*
93)	n-Undecane	26.50	25.02	26.5	94.4	70	130	*
94)	1,2,4-Trichlorobenzene	27.63	24.47	26.0	94.1	70	130	*
95)	Naphthalene	27.77	25.66	26.3	97.6	70	130	*
96)	n-Dodecane	27.74	23.67	26.5	89.3	70	130	*
97)	Hexachloro-1,3-butadiene	28.19	24.23	26.3	92.1	70	130	*

Bold = 67 Compound List

PA 4/16/08

Method Path : J:\MS13\METHODS\

Method File : S13041408.M

Title: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD Last Update: Mon Apr 28 10:06:00 2008
Response Via: Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	0.	25	J:\MS13\DATA\2008_04\14\04140808.D
2	0.5	1	25	J:\MS13\DATA\2008_04\14\04140809.D
3	1.0	1	25	J:\MS13\DATA\2008_04\14\04140810.D
4	5.0	5	25	J:\MS13\DATA\2008_04\14\04140811.D
5	25	26	25	J:\MS13\DATA\2008_04\14\04140812.D
6	50	52	25	J:\MS13\DATA\2008_04\14\04140813.D
7	100	104	25	J:\MS13\DATA\2008_04\14\04140814.D

#	ID	Update Time	Quant Time	Acquisition Time			
1	0.1	Apr 28 10:03 2008	Apr 28 09:59 2008	14 Apr 2008 18:59			
	0.5	Apr 28 10:03 2008	Apr 28 09:59 2008	14 Apr 2008 19:40			
	1.0	Apr 28 10:03 2008	Apr 28 10:00 2008	14 Apr 2008 20:21			
	5.0	Apr 28 10:04 2008	Apr 28 10:00 2008	14 Apr 2008 21:01			
	25	Apr 28 10:04 2008	Apr 28 10:00 2008	14 Apr 2008 21:43			
_	50	Apr 28 10:04 2008	Apr 28 10:02 2008	14 Apr 2008 22:24			
_	100	Apr 28 10:04 2008	Apr 28 10:02 2008	14 Apr 2008 23:04			

S13041408.M Thu May 08 16:19:56 2008

DH 5/8/08

Data File : 04140808.D

Acq On : 14 Apr 2008 18:59

Operator : WA

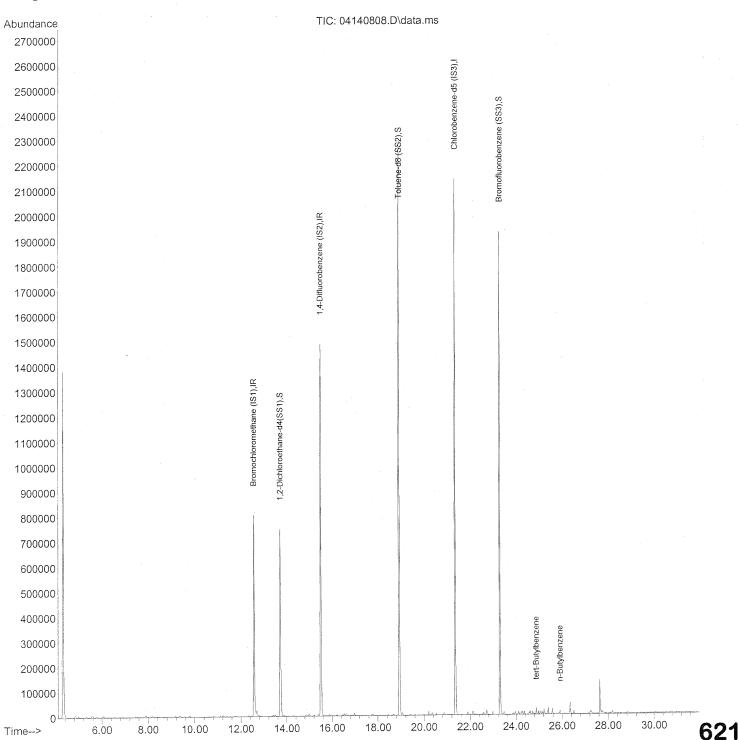
Sample : 0.1ng TO-15 ICAL Standard Misc : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 28 09:59:02 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140808.D

: 14 Apr 2008 18:59 Acq On

Operator : WA

Sample : 0.1ng TO-15 ICAL Standard : S20-04140804/S20-04030801 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 28 09:59:02 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD QLast Update : Thu Apr 24 11:49:59 2008

Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	114	330672 1516799 758152	25.000 25.000 25.000	ng	-0.04 -0.03 -0.01
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.72 18.93 23.29	98	1722189 Recove 583069	ery = 29.398 ery =	127 ng 117 ng	.68% -0.02 .60% -0.01
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91		6805 8975	0.087 0.107		Qvalue 99 # 89

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

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Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

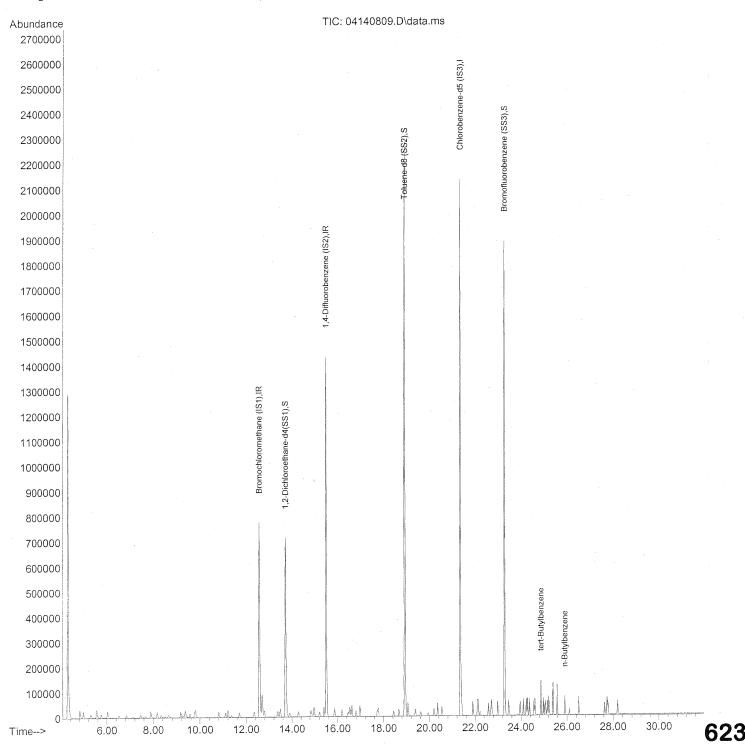
Sample : 0.5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 09:59:45 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140809.D

Acq On : 14 Apr 2008 19:40

Operator : WA

Sample : 0.5ng TO-15 ICAL Standard Misc : S20-04140804/S20-03210809 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 09:59:45 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Thu Apr 24 11:49:59 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	114	321232 1468142 744311	25.000 25.000 25.000	ng	-0.04 -0.02 -0.01
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.73 18.93 23.29	98	1694424 Recove 565263	ery = 29.462 ery =	128 ng 117 ng	.44% -0.02 .84% -0.01
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91		35550 43452	0.461	ng ng	Qvalue 98 95

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

Data File : 04140810.D

Acq On : 14 Apr 2008 20:21

Operator : WA

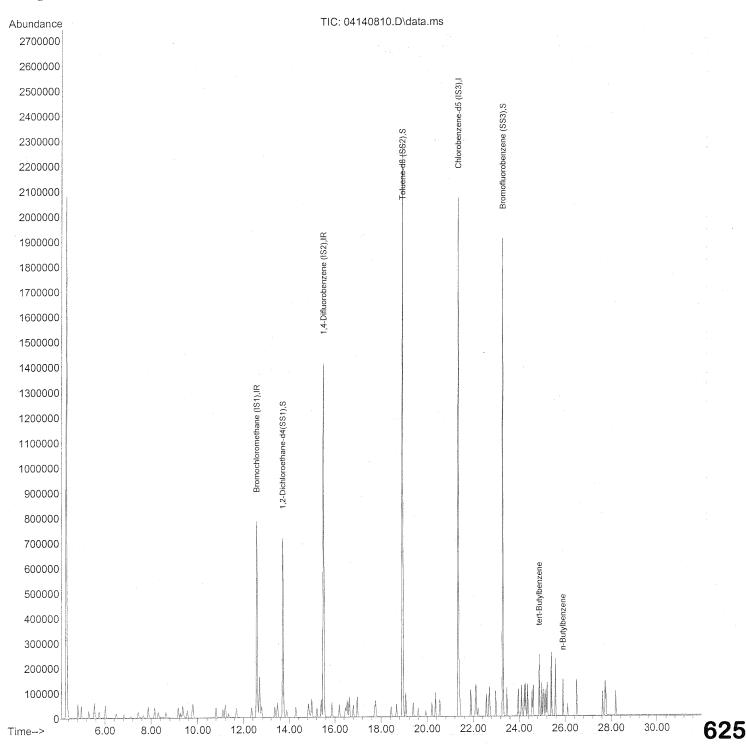
Sample : 1ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 10:00:01 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140810.D

: 14 Apr 2008 20:21 Acq On

Operator : WA

: 1ng TO-15 ICAL Standard Sample : S20-04140804/S20-03210809 Misc ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 10:00:01 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Thu Apr 24 11:49:59 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc l	Units 	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	114	314461 1454647 735083	25.000 25.000 25.000	ng	-0.04 -0.02 -0.01
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3)	13.72 18.93 23.29	98	1669857 Recove	ery = 29.400 ery =	128. ng 117.	.96% -0.02 .60%
Spiked Amount 25.000			Recove	ery =	81.	
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene			67068 85803	0.880	_	Qvalue 98 91

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

Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

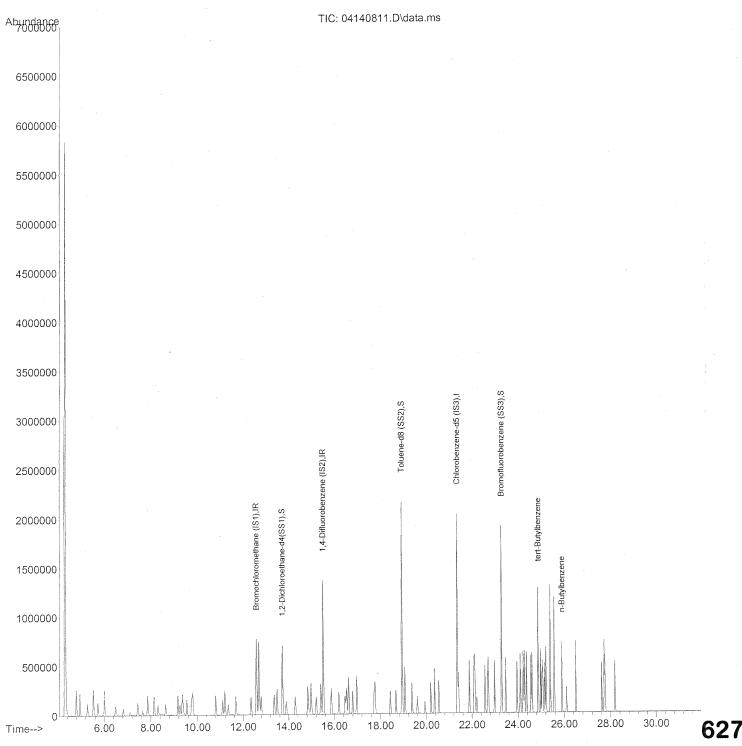
Sample : 5ng TO-15 ICAL Standard
Misc : S20-04140804/S20-03210809
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 28 10:00:13 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Thu Apr 24 11:49:59 2008



Data File : 04140811.D

Acq On : 14 Apr 2008 21:01

Operator : WA

Sample : 5ng TO-15 ICAL Standard : S20-04140804/S20-03210809 Sample Multiplier: 1 ALS Vial : 13

Quant Time: Apr 28 10:00:13 2008

Quant Method $\tilde{:}$ J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD QLast Update : Thu Apr 24 11:49:59 2008 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.58 15.51 21.35	114	313584 1406515 715799	25.000 25.000 25.000	ng	-0.03 -0.02 -0.01
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.73 18.93 23.29	98	563169	ery = 29.174 ery =	: 124 : ng : 116 : ng	.80% -0.02 .68% -0.01
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91	119 91	328918 420404	4.434 5.303		Qvalue 99 # 94

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

Data File : 04140812.D

Acq On : 14 Apr 2008 21:43

Operator : WA

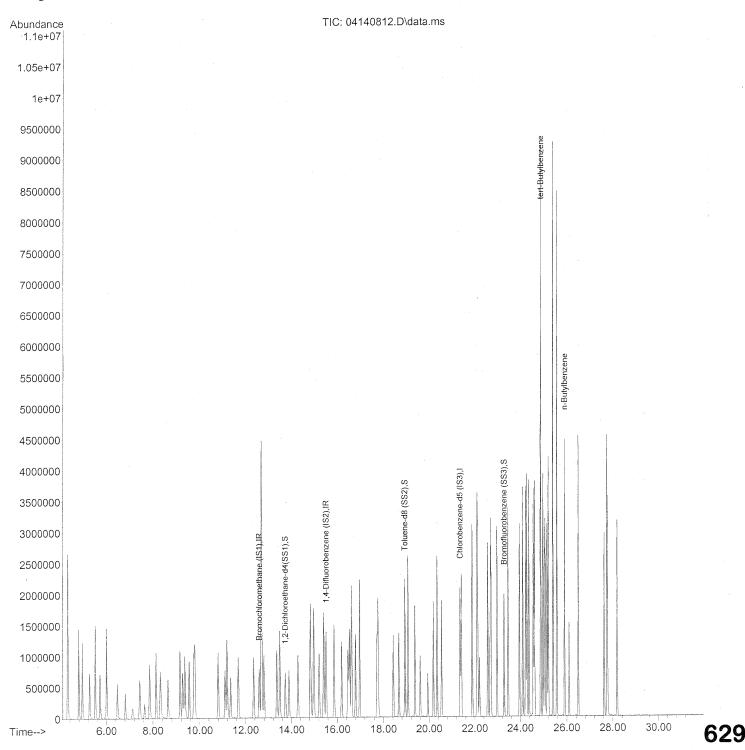
Sample : 25ng TO-15 ICAL Standard Misc : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:00:26 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140812.D

: 14 Apr 2008 21:43 Acq On

Operator : WA

: 25ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:00:26 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Thu Apr 24 11:49:59 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.60 15.52 21.35	114	332070 1467032 762152	25.000 25.000 25.000	ng	-0.02 -0.02 -0.01
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.73 18.93 23.29	98	1696875 Recove 594489	ery = 28.814 ery =	128 ng 115 ng	.16% -0.02 .24% -0.01
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91		2237377 2499993	28.326 29.618	_	Qvalue 99 # 93

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

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Data File : 04140813.D

Acq On : 14 Apr 2008 22:24

Operator : WA

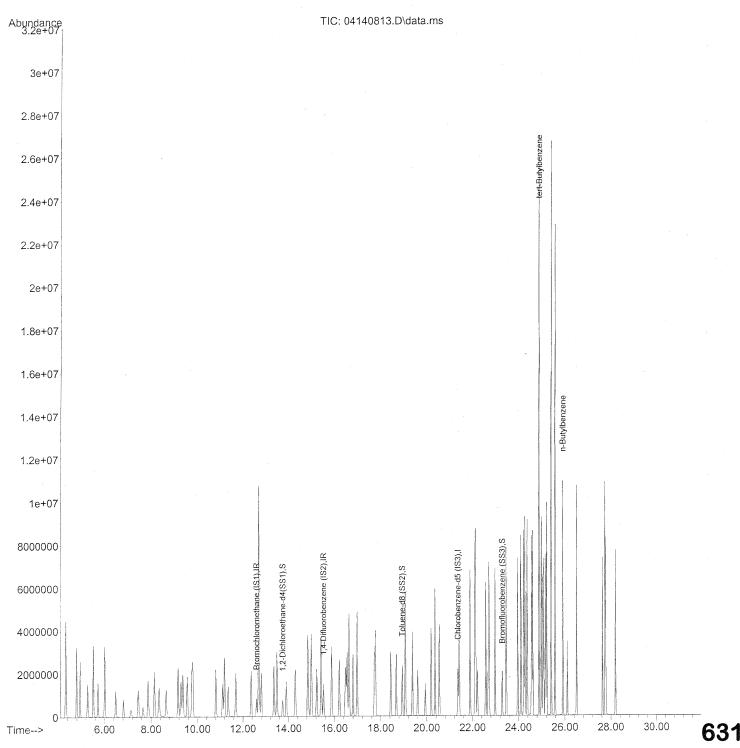
Sample : 50ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:02:07 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140813.D

: 14 Apr 2008 22:24 Acq On

Operator : WA

: 50ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:02:07 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD QLast Update : Thu Apr 24 11:49:59 2008 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.60 15.53 21.36	114	359135 1580077 818772	25.000 25.000 25.000	ng	-0.02 -0.01 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	98	1797014 Recove	ery = 28.405 ery =	124 ng 113 ng	.04% -0.01 .60% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.89 25.91		5885640 5651986	69.362 62.329	_	Qvalue 99 95

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

Data File : 04140814.D

Acq On : 14 Apr 2008 23:04

Operator : WA

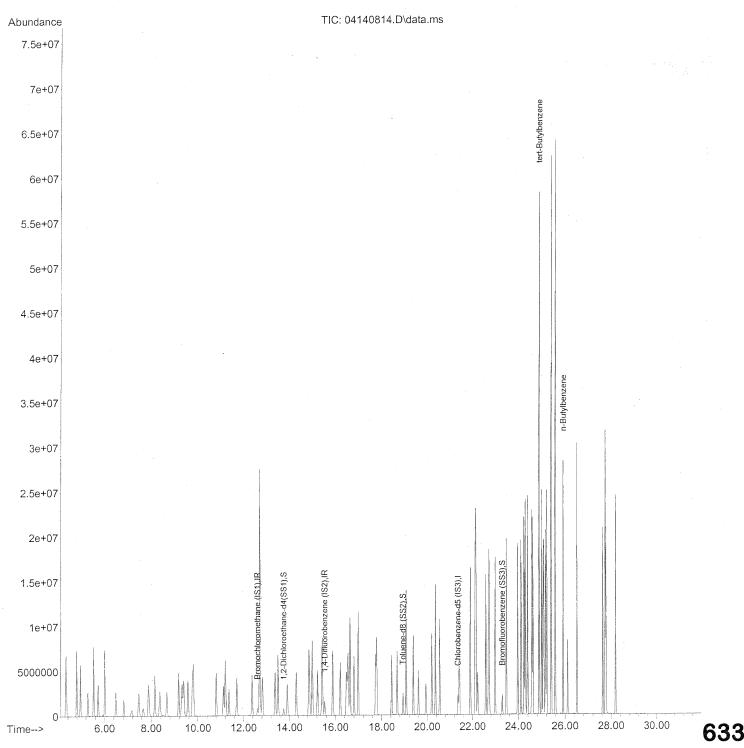
Sample : 100ng TO-15 ICAL Standard
Misc : S20-04140804/S20-04020808
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:02:19 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Thu Apr 24 11:49:59 2008



Data File : 04140814.D

Acq On : 14 Apr 2008 23:04

Operator : WA

: 100ng TO-15 ICAL Standard Sample : S20-04140804/S20-04020808 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 28 10:02:19 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Thu Apr 24 11:49:59 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIor	n Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.61 15.53 21.36	114	379040 1673737 871036	25.000 25.000 25.000	ng	
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	98	Recov 1908001 Recov 674346	ery = 28.349 ery =	122 ng 113 ng	.76% -0.01 .40% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene				161.676 132.321 		Qvalue # 90 93

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

Page: 1

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

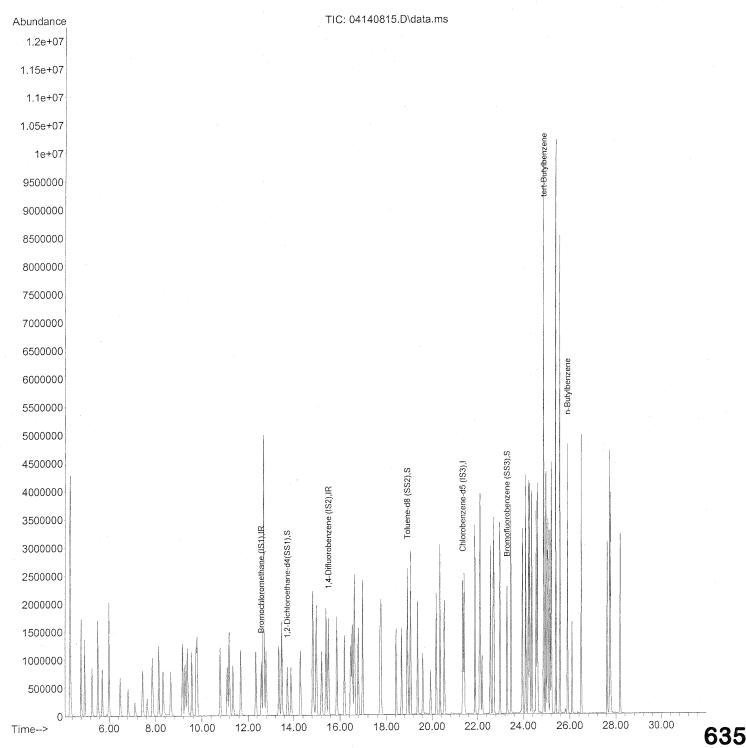
Sample : 25ng TO-15 ICV Standard
Misc : S20-04140804/S20-04040804
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 28 10:08:37 2008

Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008



Quarrencacron report

Data Path : J:\MS13\DATA\2008 04\14\

Data File : 04140815.D

Acq On : 14 Apr 2008 23:45

Operator : WA

Sample : 25ng TO-15 ICV Standard : S20-04140804/S20-04040804 Misc ALS Vial : 16 Sample Multiplier: 1

Quant Time: Apr 28 10:08:37 2008

Quant Method: J:\MS13\METHODS\S13041408.M
Quant Title: TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update: Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units :	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.59 15.52 21.36	114	402323 1799195 899268	25.000 25.000 25.000	ng	-0.02 -0.01 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	13.73 18.93 23.29	98	2007332 Recove 678298	ery = 24.904 ery =	98. ng 99. ng	76% 0.00 60% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91		2453272 2723795	24.914 25.637	_	Qvalue 99 94

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

Data File Name: 04140815.D

Data File Path: J:\MS13\DATA\2008_04\14\

Operator: WA

Date Acquired: 4/14/08 23:45

Acq. Method File: TO15.M

Sample Name: 25ng TO-15 ICV Standard

Misc Info: S20-04140804/S20-04040804

Instrument Name: GCMS13

	Name	Ret.	Amt.	Spike	%	Lower	Upper	* OR
#	Compound	<u>Time</u>	<u>(ng)</u>	Amt.(ng)	Rec.	<u>Limit</u>	<u>Limit</u>	<u>Fail</u>
7)	tert-Butylbenzene	24.88	24.91	26.3	94.7	70	130	*
8)	n-Butylbenzene	25.91	25.64	26.8	95.7	70	130	*

CONTINUING CALIBRATION STANDARDS

Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

Misc : S20-04300802/S20-04250805 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

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 R 2 TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT	Bromochloromethane (IS1) Propene Dichlorodifluoromethane Chloromethane Freon 114 Vinyl Chloride 1,3-Butadiene Bromomethane Chloroethane Ethanol Acetonitrile Acrolein Acetone Trichlorofluoromethane Isopropanol Acrylonitrile 1,1-Dichloroethene tert-Butanol Methylene Chloride Allyl Chloride Trichlorotrifluoroethane Carbon Disulfide trans-1,2-Dichloroethene 1,1-Dichloroethane Methyl tert-Butyl Ether Vinyl Acetate 2-Butanone cis-1,2-Dichloroethene Diisopropyl Ether Ethyl Acetate n-Hexane Chloroform 1,2-Dichloroethane-d4 (SS1) Tetrahydrofuran Ethyl tert-Butyl Ether	1.000 2.069 3.772 3.153 1.847 2.969 1.4216 1.411 3.708 0.984 4.683 2.141 3.797 1.384 4.683 2.147 1.3884 1.267 1.3884 1.267 5.894 2.1267 5.894 2.1267 5.894 2.1267 5.894 2.1267 5.896 8.127 5.897 6.127	1.000 1.734 3.215 2.526 1.551 2.363 1.888 1.217 1.048 1.145 3.025 0.913 1.195 2.565 3.984 1.919 3.683 1.325 2.251 1.140 5.157 2.451 3.947 0.284 0.918 1.912 1.064 0.918 1.912 1.064 0.532 2.548 1.953 1.840 0.878 1.484	0.0 90 -0.02 16.2 83 0.00 14.8 84 0.00 19.9 77 -0.01 16.0 82 0.00 19.5 78 -0.01 16.8 77 -0.01 13.6 79 -0.01 13.8 81 -0.01 18.9 84 -0.05 18.4 83 -0.04 8.4 84 -0.02 13.7 83 -0.03 13.5 81 -0.01 14.9 77 -0.06 7.3 79 -0.03 11.7 84 0.00 5.2 81 -0.02 16.7 83 -0.02 10.0 87 0.00 12.5 79 -0.01 12.8 81 -0.02 14.2 82 -0.02 14.2 82 -0.02 15.7 78 -0.02 15.7 78 -0.02
36 T 37 IR 38 T	1,2-Dichloroethane 1,4-Difluorobenzene (IS2) 1,1,1-Trichloroethane	2.312 1.000 0.521	1.966 1.000 0.462	15.0 78 -0.02 0.0 90 -0.02 11.3 81 -0.02
J U 1				

Page: 1

Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. Rel. Area : 200% Max. RRF Dev : 30%

	Compound	AvgRF	CCRF	%Dev Ar	rea%	Dev(min)
39 T	Isopropyl Acetate	0.227	0.211	7.0	81	-0.02
40 T	1-Butanol	0.341	0.316	7.3	85	-0.03
41 T	Benzene	1.326	1.153	13.0	81	-0.02
42 T	Carbon Tetrachloride	0.439	0.431	1.8	85	-0.02
43 T	Cyclohexane	0.491	0.442	10.0	84	-0.02
44 T	tert-Amyl Methyl Ether	0.944	0.856	9.3	81	-0.02
45 T	1,2-Dichloropropane	0.380	0.325	14.5	81	-0.02
46 T	Bromodichloromethane	0.451	0.401	11.1	81	-0.02
47 T	Trichloroethene	0.326	0.295	9.5	84	-0.02
48 T	1,4-Dioxane	0.235	0.214	8.9	82	-0.02
49 T	Isooctane	1.570	1.386	11.7	81	-0.02
50 T	Methyl Methacrylate	0.120	0.118	1.7	86	-0.02
51 T	n-Heptane	0.367	0.314	14.4	80	-0.01
52 T	cis-1,3-Dichloropropene	0.517	0.495	4.3	82	-0.02
53 T	4-Methyl-2-pentanone	0.363	0.333	8.3	80	-0.02
54 T	trans-1,3-Dichloropropene	0.446	0.433	2.9	81	-0.02
55 T	1,1,2-Trichloroethane	0.319	0.278	12.9	83	-0.02
56 I	Chlorobenzene-d5 (IS3)	1.000	1.000	0.0	81	0.00
57 S	Toluene-d8 (SS2)	2.241	2.338	-4.3	85	0.00
58 T	Toluene	2.815	2.699	4.1	82	-0.02
59 T	2-Hexanone	2.097	2.139	-2.0	78	-0.02
60 T	Dibromochloromethane	0.679	0.721	-6.2	85	-0.01
61 T	1,2-Dibromoethane	0.662	0.683	-,3.2	82	-0.02
62 T	Butyl Acetate	2.097	2.221	-5.9	80	-0.01
63 T	n-Octane	0.660	0.629	4.7	78	-0.01
64 T	Tetrachloroethene	0.705	0.694	1.6	85	0.00
65 T	Chlorobenzene	1.744	1.708	2.1	84	-0.01
66 T	Ethylbenzene	3.144	3.143	0.0	81	-0.01
67 T	m- & p-Xylene	2.101	2.095	0.3	80	-0.02
68 T	Bromoform	0.464	0.532	-14.7	87	-0.02
69 T	Styrene	1.814	1.841	-1.5	8,1	-0.01
70 T	o-Xylene	2.261	2.214	2.1	80	-0.02
71 T	n-Nonane	1.811	1.709	5.6	76	-0.01
72 T	1,1,2,2-Tetrachloroethane	1.079	1.074	0.5	81	-0.02
73 S	Bromofluorobenzene (SS3)	0.771	0.796	-3.2	83	0.00
74 T	Cumene	2.869	2.924	-1.9	81	-0.01
75 T	alpha-Pinene	1.525	1.526	-0.1	80	-0.01
76 T	n-Propylbenzene	3.839	3.983	-3.8	81	-0.01 6

Evaluace conclinating carrotaction reporc

Data Path : J:\MS13\DATA\2008_05\12\

Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008
Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

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 Are	a%	Dev(min)
77 T	3-Ethyltoluene	3.128	3.238	-3.5	83	-0.01
78 T	4-Ethyltoluene	2.880	2.956	-2.6	81	-0.02
79 T	1,3,5-Trimethylbenzene	2.558	2.602	-1.7	82	-0.01
80 T	alpha-Methylstyrene	1.355	1.412	-4.2	82	-0.01
81 T	2-Ethyltoluene	3.145	3.250	-3.3	83	-0.01
82 T	1,2,4-Trimethylbenzene	2.890	2.866	0.8	78	-0.02
83 T	n-Decane	1.598	1.607	-0.6	81	-0.02
84 T	Benzyl Chloride	1.970	2.279	-15.7	83	-0.02
85 T	1,3-Dichlorobenzene	1.565	1.601	-2.3	85	-0.02
86 T	1,4-Dichlorobenzene	1.497	1.538	-2.7	85	-0.02
87 T	sec-Butylbenzene	3.394	3.540	-4.3	83	-0.01
88 T	p-Isopropyltoluene	2.959	3.096	-4.6	79	-0.01
89 T	1,2,3-Trimethylbenzene	2.842	2.884	-1.5	78	-0.01
90 T	1,2-Dichlorobenzene	1.604	1.573	1.9	80	-0.01
91 T	d-Limonene	1.311	1.216	7.2	74	-0.01
92 T	1,2-Dibromo-3-Chloropropane	0.425	0.534	-25.6	92	-0.01
93 T	n-Undecane	1.678	1.665	0.8	79	0.00
94 T	1,2,4-Trichlorobenzene	0.994	1.040	-4.6	85	-0.01
95 T	Naphthalene	3.196	3.492	-9.3	83	-0.01
96 T	n-Dodecane	1.703	1.638	3.8	79	-0.01
97 T	Hexachloro-1,3-butadiene	0.640	0.663	-3.6	84	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

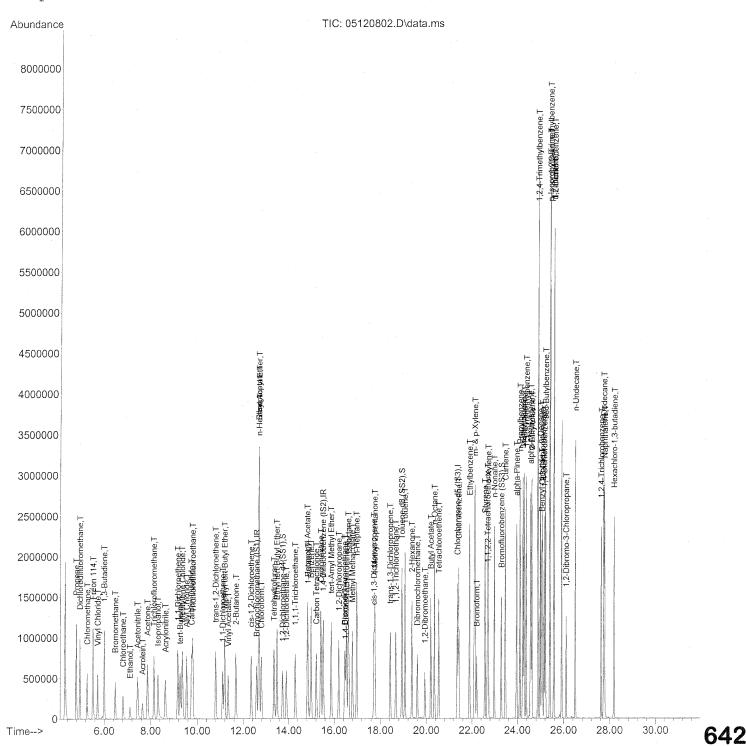
Misc : S20-04300802/S20-04250805 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008



Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

1) Bromochloromethane (IS1) 12.59 130 297636 25.000 ng -0.02 37) 1,4-Diffluorobenzene (IS2) 15.51 114 1318074 25.000 ng -0.02 550 Chlorobenzene-d5 (IS3) 21.35 82 617112 25.000 ng -0.02 895868 Monitoring Compounds 33) 1,2-Dichloroethane-d4(13.73 65 547598 22.942 ng -0.02 Spiked Amount 25.000 18.93 98 1442560 26.080 ng 0.00 Spiked Amount 25.000 Recovery = 104.32% / 491425 25.817 ng 0.00 Spiked Amount 25.000 Recovery = 104.32% / 491425 25.817 ng 0.00 Spiked Amount 25.000 Recovery = 103.28% / 491425 25.817 ng 0.00 Recovery = 103.28% / 491425 25.817 ng 90 Ng	Internal Standards	R.T.	QIon	Response	Conc (Units	Dev(Min)
System Monitoring Compounds 33) 1,2-Dichloroethane-d4(13.73 65 547598 22.942 ng -0.02 spiked Amount 25.000 Recovery = 91.76 ✓ 57) Toluene-d8 (SS2) 18.93 98 1442560 26.080 ng 0.00 spiked Amount 25.000 Recovery = 104.32 ✓ 73) Bromofluorobenzene (SS3) 23.29 174 491425 25.817 ng 0.00 spiked Amount 25.000 Recovery = 103.28 ✓ 73) Bromofluoromethane 4.95 85 995135 22.158 ng 0.00 Recovery = 103.28 ✓ 73) Dichlorodifluoromethane 4.95 85 995135 22.158 ng 100 Action Compounds 2.0 Propene 4.79 42 557346 22.624 ng 90 Action Compounds 2.0 Propene 5.27 50 766941 20.434 ng 98 Action Compounds 4.95 85 995135 22.158 ng 100 Action Compounds 5.71 62 725844 20.779 ng 99 Action Compounds 5.71 62 725844 20.779 ng 97 Action Compounds 6.81 64 328188 22.720 ng # 77 Action Compounds 6.81 64 328188 22.720 ng # 77 Action Compounds 6.81 64 328188 22.720 ng # 77 Action Compounds 6.81 64 328188 22.720 ng # 77 Action Compounds 6.81 64 328188 22.720 ng # 77 Action Compounds 6.81 64 328188 22.720 ng 99 Action Compounds 6.81 64 328188 32.820 ng 99 Action Compounds 6.820 Action 6	37) 1,4-Difluorobenzene (IS2)	15.51	114	1318074	25.000	ng	-0.02
33) 1,2-Dichloroethane-d4(13.73 65 847598 22.942 ng -0.02 Spiked Amount 25.000		21.35	82	61/112	25.000	ng	0.00
S7) Toluene-d8 (SS2)	33) 1,2-Dichloroethane-d4(13.73	65				
Spiked Amount 25.000 73) Bromofluorobenzene (SS3) 23.29 174 491425 25.817 ng 0.00 Recovery = 103.28 √ 73) Bromofluorobenzene (SS3) 23.29 174 491425 25.817 ng 0.00 Recovery = 103.28 √ 74) Propende 4.79 42 557346 22.624 ng 90 30 Dichlorodifluoromethane 4.95 85 995135 22.158 ng 100 40 Chloromethane 5.27 50 766941 20.434 ng 98 50 Freon 114 5.52 135 494719 22.498 ng 99 60 Vinyl Chloride 5.71 62 725844 20.779 ng 97 70 1,3-Butadiene 5.99 54 613695 22.720 ng # 77 80 Bromomethane 6.48 94 381084 22.724 ng 99 90 Chloroethane 6.81 64 328188 22.678 ng 97 100 Ethanol 7.11 45 310723 18.495 ng 94 110 Acetonitrile 7.43 41 882338 19.985 ng 96 120 Acrolein 7.64 56 260910 21.977 ng 99 130 Acetone 7.86 58 395521 24.006 ng # 64 140 Trichlorofluoromethane 8.14 101 793873 22.497 ng 99 150 Isopropanol 8.32 45 1223717 21.948 ng 94 160 Acrylonitrile 8.64 53 599782 23.461 ng 97 170 1,1-Dichloroethene 9.16 96 410685 24.987 ng # 84 180 tert-Butanol 9.26 59 1118017 24.178 ng 95 190 Methylene Chloride 9.36 84 441620 23.335 ng 90 200 Allyl Chloroethane 9.81 151 386813 25.654 ng 97 22 Carbon Disulfide 9.76 76 1534845 21.872 ng 96 23 trans-1,2-Dichloroethene 11.10 63 811099 24.328 ng 96 250 Methyl tert-Butyl Ether 11.19 73 1306469 23.859 ng 87 220 Carbon Disulfide 11.10 63 811099 24.328 ng 96 250 Winyl Acetate 11.34 86 82786 25.290 ng # 93 26 27 2-Butanone 11.68 72 306181 26.500 ng 88 28 26.51.2-Dichloroethene 12.35 61 632760 23.439 ng 87 290 Diisopropyl Ether 12.69 87 326939 21.551 ng # 81 200 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 81 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 87 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 87 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 87 200 Dispopyl Ether 12.69 87 326939 21.551 ng # 87 200 Dispopyl Ether 12.69 87 326939 21.551							
Target Compounds		18.93	98				
Target Compounds 2) Propene 4.79 42 557346 22.624 ng 90 3) Dichlorodifluoromethane 4.95 85 995135 22.158 ng 100 4) Chloromethane 5.27 50 766941 20.434 ng 98 5) Freon 114 5.52 135 494719 22.498 ng 99 6) Vinyl Chloride 5.71 62 725844 20.779 ng 97 7) 1,3-Butadiene 5.99 54 613695 22.720 ng # 77 8) Bromomethane 6.48 94 381084 22.724 ng 99 9) Chloroethane 6.81 64 328188 22.678 ng 97 10) Ethanol 7.11 45 310723 18.495 ng 94 11) Acetonitrile 7.43 41 882338 19.985 ng 96 12) Acrolein 7.64 56 260910 21.977 ng 99 13) Acetone 7.86 58 395521 24.006 ng # 64 14) Trichlorofluoromethane 8.14 101 793873 22.497 ng 99 15) Isopropanol 8.32 45 1223717 21.948 ng 94 16) Acrylonitrile 8.64 53 599782 23.461 ng 97 17) 1,1-Dichloroethene 9.16 96 410685 24.987 ng # 84 18) tert-Butanol 9.26 59 1118017 24.178 ng 95 19) Methylene Chloride 9.36 84 441620 23.335 ng 90 20) Allyl Chloride 9.54 41 704662 27.869 ng 100 21) Trichlorotrifluoroethane 9.16 686692 23.371 ng 97 22) Carbon Disulfide 9.76 76 1534845 21.872 ng 96 23) trans-1,2-Dichloroethene 10.80 61 686692 23.971 ng 87 24) 1,1-Dichloroethane 11.10 63 81099 24.328 ng 96 25) Methyl tert-Butyl Ether 11.34 86 82786 22.90 ng # 93 26) Vinyl Acetate 11.34 86 82786 22.90 ng # 93 27) 2-Butanone 11.68 72 306181 26.500 ng 98 28) cis-1,2-Dichloroethene 12.35 61 632760 23.439 ng 87 29) Diisopropyl Ether 12.69 87 326939 21.551 ng # 81			1				
Target Compounds 2) Propene		23.29	1/4		25.81/	ng	0.00
2) Propene 4.79 42 557346 22.624 ng 90 3) Dichlorodifluoromethane 4.95 85 995135 22.158 ng 100 4) Chloromethane 5.27 50 766941 20.434 ng 98 5) Freon 114 5.52 135 494719 22.498 ng 99 6) Vinyl Chloride 5.71 62 725844 20.779 ng 97 7) 1,3-Butadiene 5.99 54 613695 22.720 ng # 77 8) Bromomethane 6.48 94 381084 22.724 ng 99 9) Chloroethane 6.81 64 328188 22.678 ng 97 10) Ethanol 7.11 45 310723 18.495 ng 94 11) Acetonitrile 7.43 41 882338 19.985 ng 96 12) Acrolein 7.64 56 260910 21.977 ng 99 13) Acetone 7.86 58 395521 24.006 ng # 64 14) Trichlorofluoromethane 8.14 101 793873 22.497 ng 99 15) Isopropanol 8.32 45 1223717 21.948 ng 94 16) Acrylonitrile 8.64 53 599782 23.461 ng 97 17) 1,1-Dichloroethene 9.16 96 410685 24.987 ng # 84 18) tert-Butanol 9.26 59 1118017 24.178 ng 95 19) Methylene Chloride 9.36 84 441620 23.335 ng 90 20) Allyl Chloride 9.54 41 704662 27.869 ng 100 21) Trichlorotrifluoroethane 9.11 386813 25.654 ng 97 22) Carbon Disulfide 9.76 76 1534845 21.872 ng 96 23) trans-1,2-Dichloroethene 10.80 61 68692 23.971 ng 87 24) 1,1-Dichloroethane 11.10 63 811099 24.328 ng 96 25) Methyl tert-Butyl Ether 11.19 73 1306469 23.859 ng 87 26) Vinyl Acetate 11.34 86 82786 25.290 ng # 93 27) 2-Butanone 11.68 72 306181 26.500 ng 98 28) cis-1,2-Dichloroethene 12.35 61 632760 23.439 ng 87 29) Diisopropyl Ether 12.69 87 326939 21.551 ng # 81	Spiked Amount 25.000			Recove	ery =	103.	∠୪ ७ /
2) Propene	Target Compounds						
4) Chloromethane 5.27 50 766941 20.434 ng 98 5) Freon 114 5.52 135 494719 22.498 ng 99 6) Vinyl Chloride 5.71 62 725844 20.779 ng 97 7) 1,3-Butadiene 5.99 54 613695 22.720 ng # 77 8) Bromomethane 6.48 94 381084 22.724 ng 99 9) Chloroethane 6.81 64 328188 22.678 ng 97 10) Ethanol 7.11 45 310723 18.495 ng 94 11) Acetonitrile 7.43 41 882338 19.985 ng 96 12) Acrolein 7.64 56 260910 21.977 ng 99 13) Acetone 7.86 58 395521 24.006 ng # 64 14) Trichlorofluoromethane 8.14 101 793873 22.497 ng 99 15) Isopropanol 8.32 45 1223717 21.948 ng 94 16) Acrylonitrile 8.64 53 599782 23.461 ng 97 17) 1,1-Dichloroethene 9.16 96 410685 24.987 ng # 84 18) tert-Butanol 9.26 59 1118017 24.178 ng 95 19) Methylene Chloride 9.36 84 441620 23.335 ng 90 20) Allyl Chloride 9.54 41 704662 27.869 ng 100 21) Trichlorotrifluoroethane 9.81 151 386813 25.654 ng 97 22) Carbon Disulfide 9.76 76 1534845 21.872 ng 96 23) trans-1,2-Dichloroethene 10.80 61 686692 23.971 ng 87 24) 1,1-Dichloroethane 11.10 63 811099 24.328 ng 96 25) Methyl tert-Butyl Ether 11.19 73 1306469 23.859 ng 87 26) Vinyl Acetate 11.34 86 82786 25.290 ng # 93 27) 2-Butanone 11.68 72 306181 26.500 ng 98 28) cis-1,2-Dichloroethene 12.35 61 632760 23.439 ng 87 29) Diisopropyl Ether 12.69 87 326939 21.551 ng # 81 20 Ethyl Acetate 12.69 87 326939 21.551 ng # 81 20 Ethyl Acetate 12.69 87 326939 21.551 ng # 81							
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31) n-Hexane 12.70 57 849252 22.687 ng 90							87
					22.687	ng	90 6

Page: 1

Data File : 05120802.D

9:52 am Acq On : 12 May 2008

Operator : CJP

: 25ng TO-15 CCV STD Sample

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update: Tue Apr 15 06:47:20 2008 Response via: Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Unit	s De	v(Min)
32) Chloroform	12.79	83	750972	27.024 ng		99
34) Tetrahydrofuran	13.35	72	290711	25.156 ng		95
35) Ethyl tert-Butyl Ether	13.48	87	464801	23.298 ng	#	80
36) 1,2-Dichloroethane	13.89	62	643643	23.386 ng	••	98
38) 1,1,1-Trichloroethane	14.29	97	669177	24.365 ng		99
39) Isopropyl Acetate	14.83	61	281440	23.481 ng	#	36
40) 1-Butanol	14.84	56	379966	21.121 ng	#	54
41) Benzene	14.99	78	1671720	23.908 ng	"	99
42) Carbon Tetrachloride	15.21		608405	26.308 ng		97
43) Cyclohexane	15.41	84	647678	25.040 ng	#	78
44) tert-Amyl Methyl Ether	15.87	73	1173649	23.587 ng		92
45) 1,2-Dichloropropane	16.20		467373	23.325 ng		98
46) Bromodichloromethane	16.46	83	609601	25.642 ng		100
47) Trichloroethene	16.54		443102	25.757 ng		100
48) 1,4-Dioxane	16.49	88	325111	26.260 ng		82
49) Isooctane	16.62	57	1900299	22.954 ng		76
50) Methyl Methacrylate	16.80	100	164524	25.910 ng	#	75
51) n-Heptane	16.98		459985	23.745 ng	#	81
52) cis-1,3-Dichloropropene	17.72		678978	24.925 ng		98
53) 4-Methyl-2-pentanone	17.77		462233	24.168 ng		85
54) trans-1,3-Dichloropropene	18.43		661411	28.107 ng		100
55) 1,1,2-Trichloroethane	18.67		400753	23.800 ng		94
58) Toluene	19.06	91	1832265	26.365 ng		96
59) 2-Hexanone	19.37		1346166	26.004 ng		81
60) Dibromochloromethane	19.60		494575	29.506 ng		99
61) 1,2-Dibromoethane	19.93	107	460593	28.189 ng		99
62) Butyl Acetate	20.19	43	1441845	27.854 ng		85
63) n-Octane	20.35		403501	24.772 ng		94
64) Tetrachloroethene	20.55		467575	26.871 ng		99
65) Chlorobenzene	21.41	112	1159340	26.933 ng		100
66) Ethylbenzene	21.89	91	2094854	26.996 ng		. 92
67) m- & p-Xylene	22.12	91	3336141	64.313 ng		90
68) Bromoform	22.21		430626	37.578 ng		99
69) Styrene	22.57	104	1227277	27.414 ng		96
70) o-Xylene	22.71	91	1666517	29.853 ng		92
71) n-Nonane	22.98	43	1088262	24.343 ng	#	80
72) 1,1,2,2-Tetrachloroethane	22.69	83	816339	30.641 ng		98
74) Cumene	23.46	105	1948729	27.520 ng		99
75) alpha-Pinene	23.96	93	998233	26.522 ng		92
76) n-Propylbenzene	24.10	91	2585743	27.284 ng		96
77) 3-Ethyltoluene	24.23	105	2038245	26.397 ng		97
78) 4-Ethyltoluene	24.28	105	2028291	28.528 ng		97
79) 1,3,5-Trimethylbenzene	24.37	105	1734435	27.468 ng		⁹⁶ 64

Data File : 05120802.D

: 12 May 2008 9:52 am Acq On

Operator : CJP

Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 12 10:23:45 2008

Quant Method: J:\MS13\METHODS\R13041408.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Apr 15 06:47:20 2008

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
80) alpha-Methylstyrene 81) 2-Ethyltoluene 82) 1,2,4-Trimethylbenzene 83) n-Decane 84) Benzyl Chloride 85) 1,3-Dichlorobenzene 86) 1,4-Dichlorobenzene 87) sec-Butylbenzene 88) p-Isopropyltoluene 89) 1,2,3-Trimethylbenzene 90) 1,2-Dichlorobenzene 91) d-Limonene 92) 1,2-Dibromo-3-Chloropr 93) n-Undecane 94) 1,2,4-Trichlorobenzene 95) Naphthalene 96) n-Dodecane	24.56 24.61 24.88 24.98 25.05 25.16 25.21 25.40 25.41 25.58 25.58 26.10 27.63 27.77 27.73	118 105 105 57 91 146 146 105 119 105 146 68 157 57 180 128	888718 1989635 1945642 1031686 1507848 1047448 1044090 2342026 2254776 1957822 1048621 795617 342736 1081211 718908 2267315 1071776	26.578 ng 25.633 ng 27.269 ng 26.147 ng 31.003 ng 27.117 ng 28.246 ng 27.958 ng 30.865 ng 27.903 ng 26.489 ng 24.593 ng 32.680 ng 26.100 ng 29.303 ng 28.743 ng 25.500 ng	Dev (Min) 97 98 96 87 95 99 96 92 97 99 95 # 87 96 98 85
97) Hexachloro-1,3-butadiene	28.19	225 	454952 	28.796 ng	

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

Fratrare concrining carrotation vehore

Data Path : J:\MS13\DATA\2008 05\12\

Data File : 05120802.D

: 12 May 2008 9:52 Acq On

Operator : CJP

Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 27 15:44:21 2008
Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Response via : Initial Calibration

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)	
	IR S	Bromochloromethane (IS1) 1,2-Dichloroethane-d4(SS1)	1.000	1.000	0.0	90 81	-0.02 -0.02	
. 3	IR	1,4-Difluorobenzene (IS2)	1.000	1.000	0.0	90	-0.02	
4 5 6 7 8	S	Chlorobenzene-d5 (IS3) Toluene-d8 (SS2) Bromofluorobenzene (SS3) tert-Butylbenzene n-Butylbenzene	1.000 2.241 0.771 2.738 2.954	1.000 2.338 0.796 2.730 3.093	0.0 -4.3 -3.2 0.3 -4.7	81 85 83 78 82	0.00 0.00 0.00 -0.01 -0.01	

^{(#) =} Out of Range

SPCC's out = 0 CCC's out = 0

Data File : 05120802.D

Acq On : 12 May 2008

Operator : CJP

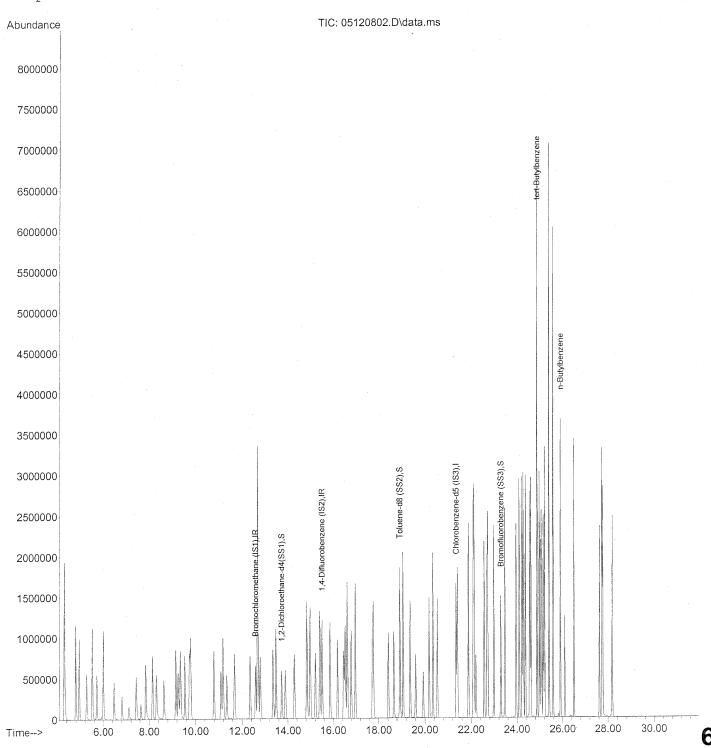
Sample : 25ng TO-15 CCV STD

: S20-04300802/S20-04250805 Misc Sample Multiplier: 1 ALS Vial : 4

Quant Time: May 27 15:44:21 2008 Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008



Data File : 05120802.D

: 12 May 2008 Acq On

Operator : CJP

: 25ng TO-15 CCV STD Sample

: S20-04300802/S20-04250805 Misc ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 27 15:44:21 2008 Quant Method: J:\MS13\METHODS\S13041408.M

Quant Title : TO-15 Tekmar AutoCan/HP 6890/HP 5975 MSD

QLast Update : Mon Apr 28 10:06:00 2008

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane (IS1) 3) 1,4-Difluorobenzene (IS2) 4) Chlorobenzene-d5 (IS3)	12.59 15.51 21.35	114	297636 1318074 617112	25.000 25.000 25.000	ng	-0.02 -0.02 0.00
System Monitoring Compounds 2) 1,2-Dichloroethane-d4(Spiked Amount 25.000 5) Toluene-d8 (SS2) Spiked Amount 25.000 6) Bromofluorobenzene (SS3) Spiked Amount 25.000	18.93	98	1442560 Recove 491425	ery = 26.080 ery =	91 ng 104 ng	.76% 0.00 .32% 0.00
Target Compounds 7) tert-Butylbenzene 8) n-Butylbenzene	24.88 25.91		1751790 2045896	25.924 28.061	_	Qvalue 100 94

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

BFB TUNING & MASS CALIBRATIONS

Data File : 04140807.D

Acq On : 14 Apr 2008 18:18

Operator : WA

Sample : BFB Tune Standard (200ml)

Misc : S20-04140804

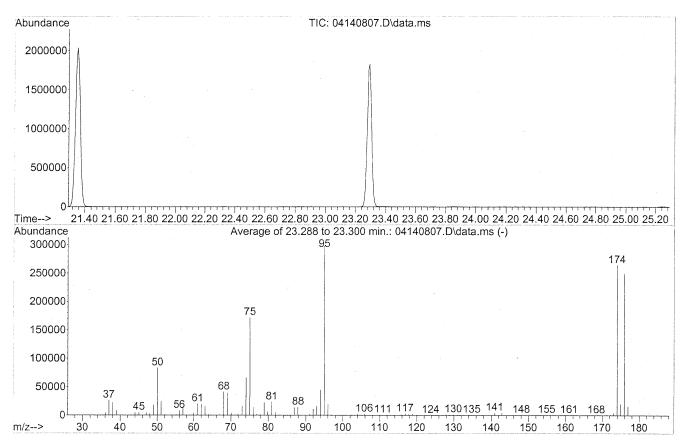
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13041408.M

Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Last Update : Tue Apr 15 06:47:20 2008



AutoFind: Scans 3374, 3375, 3376; Background Corrected with Scan 3363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail	
50 75	95 95	8 30	40 66	27.9 57.6	83021 171669	PASS PASS	
95 96	95 95	100	100	100.0	297792	PASS	
173	174	5 0.00	9 2	6.3	18818 4055	PASS PASS	
174	95	50	120	88.7	264171	PASS	
175	174	4	9	7.6	20123	PASS	
176 177	174 176	93 5	101 9	94.5 6.3	249664 15749	PASS PASS	
		'					1

Data File : 05120802.D

Acq On : 12 May 2008 9:52 am

Operator : CJP

Sample : 25ng TO-15 CCV STD

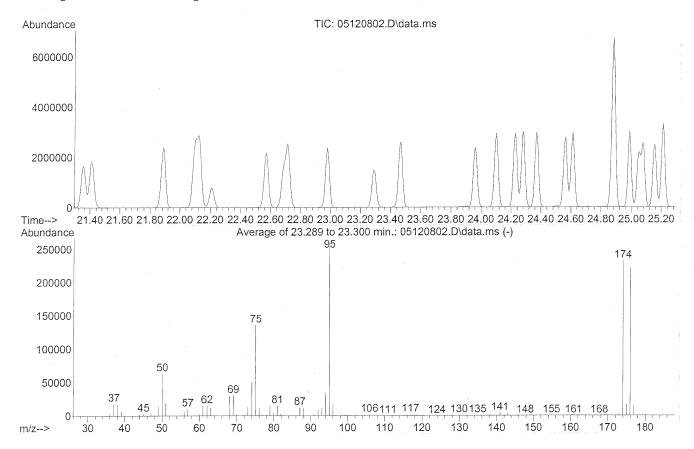
Misc : S20-04300802/S20-04250805 ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : J:\MS13\METHODS\R13041408.M

Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

Last Update : Tue Apr 15 06:47:20 2008



AutoFind: Scans 3374, 3375, 3376; Background Corrected with Scan 3363

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	25.0	63504	PASS
75	95	3.0	66	53.6	136021	PASS
95	95	100	100	100.0	253867	PASS
96	95	5	.9	6.5	16561	PASS
173	174	0.00	2	1.5	3501	PASS
174	95	50	120	91.5	232256	PASS
175	174	4	9	7.2	16749	PASS
176	174	93	101	95.5	221845	PASS
177	176	5	9	6.5	14395	PASS

F05/12/08

RUN LOGS

74									
	Date/Time	File Name	Sample ID	Misc Info	Operator	Vial	Comment		Date
7	04/14/08 18:18	04140807.D	BFB Tune Standard (200ml)	S20-04140804	WA	4			28 04/16/
8	04/14/08 18:59	04140808.D	0.1ng TO-15 ICAL Standard	S20-04140804/S20-04030801	WA	5	I CAL saved as		29 04/16/
9	04/14/08 19:40	04140809.D	0.5ng TO-15 ICAL Standard	S20-04140804/S20-03210809	WA	13	R13041408.H		
10	04/14/08 20:21	04140810.D	1ng TO-15 ICAL Standard	S20-04140804/S20-03210809	WA	13	Actions How 100 ng	, exapt	
11	.04/14/08 21:01	04140811.D	5ng TO-15 ICAL Standard	S20-04140804/S20-03210809	WA	13	FIOH, EA, Ha-Hothacy	dat .	
12	04/14/08 21:43	04140812.D	25ng TO-15 ICAL Standard	S20-04140804/S20-04020808	WA	4		11	And the second s
13	04/14/08 22:24	04140813.D	50ng TO-15 ICAL Standard	S20-04140804/S20-04020808	WA	4			
14	04/14/08 23:04	04140814.D	100ng TO-15 ICAL Standard	S20-04140804/S20-04020808	WA	4	youth him	· ·	
15	04/14/08 23:45	04140815.D	25ng TO-15 ICV Standard	S20-04140804/S20-04040804	WA	16	Passed all (mpds		
16	04/15/08 0:26	04140816.D	Biank (200ml)	Test	WA	4			And the state of t
17	04/15/08 1:07	04140817.D	S20-04170801 (25ml)	Test	WA	3			
18	04/15/08 1:48	04140818.D	S20-04170801 (50ml)	Test	WA	3.		10 / 10 / 10 / 10 / 10 / 10 / 10 / 10 /	
19	04/15/08 2:29	04140819.D	S20-04170801 (250ml)	Test	WA	3			
20	04/15/08 6:10	04140820.D	S20-04170802 (125ml)	Test	WA	1			and the forest contracted by the second country for the second block of the first of the second block of the second country of the s
21	04/15/08 6:57	04140821.D	S20-04170802 (250ml)	Test	WA	1		18	
				I	1	1			
1	04/15/08 7:38	04150801.D	25ng MAPH CCV Standard	S20-04140804/S20-04140802	WA	1			
2	04/15/08 9:33	04150802.D	TO-15/MAPH Method Blank (1000ml)	S20-04140804	WA	1			Management of the Control of the Con
3	04/15/08 10:14	04150803.D	25ng MAPH LCS STD	S20-04140804/S20-04140803	WA	2		<u> </u>	
4	04/15/08 10:55	04150804.D	P0800967-003 (100ml)	Test	WA	8			
5	04/15/08 11:37	04150805.D	P0800967-001 (1000ml)	(-0.8, 3.8)	WA	6			
6	04/15/08 12:18	04150806.D	P0800967-002 (1000ml)	Test	WA	7			Management of the court of the
7	04/15/08 13:01	04150807.D	P0800967-004 (1000ml)	(-1.9, 3.5)	WA -	9	Margin and the control of the contro		
8	04/15/08 13:42	04150808.D	P0800967-005 (1000ml)	(-1.2, 3.5)	. WA	10			
9	04/15/08 14:23	04150809.D	P0800967-001 DUP (1000ml)	(-0.8, 3.8)	WA	6			
10	04/15/08 15:04	04150810.D	P0800967-006 (1000ml)	(-3.4, 3.7)	WA	11	Comment on the Control of Control		Planting of the same are as to the same property of the same debuty or
11	04/15/08 15:47	04150811.D	P0800967-007 (1000ml)	(-3.3, 3.5)	WA	12			Production Accounts to the Assessment State of the Ass
12	04/15/08 16:28	04150812.D	P0800967-003 (1000ml)	(1.2, 3.6)	, WA	8			Manage success to the same as
13	04/15/08 17:29	04150813.D	25ng TO-15 CCV Standard	S20-04140804/S20-04020808	RTB	4	- Passed		With a party and a second seco
14	04/15/08 18:30	04150814.D	TO-15 Method Blank (1.0L)	S20-04140804	RTB	4	- Passed		Management of the Control of the Con
15	04/15/08 19:13	04150815.D	CAS QC Can/FC/Gauge (1.0L)	AC00885/FC00597/AVG00798	RTB	1	- Passed for MR#83	341	The same and the same of the s
16	04/15/08 19:56	04150816.D	CAS QC Can/FC/Gauge (1.0L)	AC00584/FC00174/AVG00797	RTB	2			the property and the second of
17	04/15/08 20:39	04150817.D	CAS QC Can/FC/Gauge (1.0L)	AC00294/FC00628/AVG00796	RTB	3			the participant and the second second second of participant second secon
18	04/15/08 21:22	04150818.D	CAS QC Can/FC/Gauge (1.0L)	AC00991/FC00697/AVG00722	RTB	5			the property the requirement of the control of the
19	04/15/08 22:05	04150819.D	CAS QC Can/FC/Gauge (1.0L)	AC00582/FC00540/AVG00588	RTB	6			Plants and another colors of the colors of t
20	04/15/08 22:48	04150820.D	CAS QC Can/FC/Gauge (1.0L)	AC01136/FC00269/AVG00808	RTB	7.			Personal and the control of the cont
21	04/15/08 23:31	04150821.D	CAS QC Can/FC/Gauge (1.0L)	AC00292/FC00536/AVG00809	RTB	8			And the state of t
22	04/15/08 0:14	04150822.D	CAS QC Can/FC/Gauge (1.0L)	AC01273/FC00565/AVG00804	RTB	9			Section 1. Section 1. 15 and the section of the sec
23	04/16/08 0:57	04150823.D	CAS QC Can/FC/Gauge (1.0L)	AC00803/FC00676/AVG00800	RTB	10			The state of the s
24	04/16/08 1:40	04150824.D	CAS QC Can/FC/Gauge (1.0L)	AC01320/FC00548/AVG00777	RTB	11		and the same of th	653
25	04/16/08 2:23	04150825.D	CAS QC Can/FC/Gauge (1,0L)	AC00753/FC00549/AVG00786	RTB	12			Manager stream heavy to the control of the control
26	04/16/08 3:06	04150826.D	CAS QC Can/FC/Gauge (1.0L)	AC01157/FC00583/AVG00776	RTB	13		and the second second second	
27	UNIA BIU6 3-NU	044E0827 D	CAS OC Can/EC/Garine (1.01.)	AC00522/FC00305/AVG00781	RTB	14	I V		<u>&</u> '

DATE/TIME	FILENAME	SAMPLE ID	MISC. INFO	AS POS	INIT	COMMENT		And the second section of the second section of the second section of the second section of the second section		DA
1	1	1		i.	i	1				10,
05/07/08 8:43		Blank (100mL)	Test	4	RB			is the same of the	Š :	4 0
05/08/08 7:23		Blank (100mL)	Test	4	RB	<u> </u>		The last classes to the set thereton regularization and	· .	5 0
05/08/08 8:04	05070824.D	S20-03100803 (50mL)	Test	15	RB	 		THE RESIDENCE OF THE STREET, MADE AND ADDRESS OF THE STREET, AND ADDRESS OF		6 05
l	i .		1.	1	ı	1		The state of the s		7 0
		- TO 45 DO 40	\$20-04300802/\$20-04250805			- Passed			-	8 0
05/08/08 8:41		25ng TO-15 CCV Standard	S20-04300802/S20-04250805	C 4		Passed				9 0
05/08/08 9:24		TO-15 Method Blank (1.0L)			RB -			Section and the section of the secti	1, 1	10 0
05/08/08 10:05		25ng TO-15 LCS	S20-04300802/S20-04110810	16	RB 1	Passed.			25	11 0
05/08/08 12:19		P0801342-001 (10mL)		. 4	RB			galactica and and apply to the party of the second	3.79	12 0
05/08/08 1:04		P0801342-002 (10mL)		4	RB					13 0
05/08/08 1:45		P0801342-003 (10mL)			RB					14 0
05/08/08 2:30	05080807.D	P0801342-001 DIL (1mL)		- 4	RB		4	4		15 0
05/08/08 3:10	05080808.D	P0801342-002 DIL (1mL)		4	RB				The same of the sa	16 0
05/08/08 3:52	05080809.D	P0801342-003 DIL (1mL)		4	RB	P 1		The second secon		17
05/08/08 4:33	1	P0801342-003 DUP DIL (1mL)		4	RB *	- Passed		2 - 1970 Mile declaration, 1970 1980 1970 1970 1970 1970 1970 1970 1970 197		18
05/08/08 5:14	05080811.D	P0801342-003 DUP (10mL)		4	RB -	- 1955ea	; vol. too low		The state of the s	19 (
05/08/08 6:25	05080812.D	P0801305-001 DIL (0.50mL)		4	RB *	- Case-tite	; Vol. too IsW			20 (
05/08/08 7:09	05080813.D	P0801305-001 DIL (10mL)		4	RB	***************************************				21
05/08/08 7:54	05080814.D	Blank (100mL)	Test	4	RB			7	.44	22
05/09/08 7:23	05080815.D	Blank (100mL)	Test	4	RB			The second Ministration of the second second		23
05/09/08 8:04	05080816.D	S20-03100803 (50mL)	Test	15	RB				The state of the s	24
VMSW and down blin shells of alconomic sold or			Controlled Physical Bulletins and a sufficient of the controlled state of the control of the con			700 VILO NO VI				25 (
		•	,			9 1				26
05/09/08 8:41	05090801.D	25ng TO-15 CCV Standard	\$20-04300802/\$20-04250805	c	RB	- Passed		- Marine Marine Anna Anna Anna Anna Anna Anna Anna An		
05/09/08 9:24	05090802.D	TO-15 Method Blank (1.0L)	\$20-04300802	4	RB	- Passed				
05/09/08 10:05	05090803.D	25ng TO-15 LCS	S20-04300802/S20-04110810	16	RB	Passed			N. Y.	1 (
05/09/08 11:24	05090804.D	P0801339-001 (20mL)		1	RB -	- Case File: 1	une lol	and the second of the second o		2 (
05/09/08 12:18	05090805.D	P0801339-002 (1000mL)		2	RB				The state of the s	3 (
05/09/08 1:01	05090806.D	P0801339-003 (1000mL)			RB			A Charles of America	AND DESCRIPTION OF THE PROPERTY OF THE PARTY	4 (
05/09/08 1:43	05090807.D	P0801339-004 (1000mL)		5	RB					5
5/09/08 2:26	05090808.D	P0801339-001 (1000mL)		1	RB				- A	6
5/09/08 3:09	05090809.D	P0801339-003 DUP (1000mL)		3	RB -	- Passed		7	7	7
5/09/08 4:12	05090810.D	P0801339-003 (100mL)		3	RB T	· Case File;	run by mistake			8
		P0801339-003 (100mL)		3	RB					
5/09/08 7:07		P0801339-003 (100mL)		3	RB				9. 1.	9
5/09/08 7:48		P0801339-003 (100mL)		3	RB			The state of the s	The state of the s	10
5/09/08 8:29		P0801339-003 (100mL)		3	RB				manufacture and the second sec	11
		P0801339-003 (100mL)		3	RB				The state of the s	12
		P0801339-003 (100mL)		3	RB			milet N		13
					RB					14
		P0801339-003 (100mL)	2)			(a so 716.	nse 05/12 tun	Construction of the Construction of Section 19 and		15
		P0801347-001 (1000mL)			RB T	- 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1	The contraction	and the state of the final property and the state of the	12	16
		P0801347-001 DIL (100mL)			RB			Control of the particular and the control of the co	The second second	17
		P0801347-002 (1000mL)			RB			- New York State and State	The state of the s	18
5/10/08 1:18	05090821.D	P0801347-002 DIL (100mL)		7	RB	<u> </u>				19
·	1	and the state of the the state of the state	er personale en la compressión de la compressión	· · · · · · · · · · · · · · · · · · ·		the world wygen is represent the contract to the con-		To be a second of the second o		20 .
								The state of the same and the s	6.	5
5/12/08 8:44	05120801.D	Blank (100mL)		4	P B	Paul		responsible for the good of the Polycon and the depolar depolar and the second	X .	22
5/12/08 9:52	05120802.D	25ng TO-15 CCV STD	\$20-04300802/\$20-04250805	C	RB	- Passed		The second secon		23
		TO-15 Method Blank (1.0L)	\$20-04300802	L	RB +	Passed			(C)	24

The second section of the second section is a second section of the second section of the second section is a second section of the second section sec	***************************************	ıi	1	Programme 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		· · · · · ·	γ	proper consistence of		
and the second s		DATE/TIME	FILENAME	SAMPLE ID	MISC. INFO	AS POS	INIT	COMMENT		- The second of the second
- CONTRACTOR CONTRACTO	4	05/12/08 12:12	05120804 D	 S20-04110810 (250mL)	Test	16	RB			
and the same of th		05/12/08 13:09	05120805.D		ENSR SG64B-05 (-5.6, 3.5)	1	RB			The second second second second
**	6			P0801385-002 (1000mL)	ENSR SG41B-20 (-3.7, 3.5)	2	RB	·		to be the second of the second
	7	05/12/08 14:50		P0801385-003 (1000mL)	ENSR SG41B-20D (-3.4, 3.5)	3	RB			
	8	05/12/08 15:33		P0801385-004 (1000mL)	ENSR SG43B-05 (-5.3, 3.5)	4	RB			
Account of the contract of the	9	05/12/08 16:29	05120809.D	P0801385-005 (1000mL)	ENSR SG38B-20 (-3.0, 3.5)	5	RB			
and the same of th	10	05/12/08 17:12	05120810.D	P0801385-004 DUP (1000mL)	ENSR SG43B-05 (-5.3, 3.5)	4	RB -	- Pasced		
and the second s	11	05/12/08 17:55	05120811.D	P0801385-006 (1000mL)	ENSR SG40B-05 (-3.3, 3.5)	7	RB	1		
The second secon	12	05/12/08 18:35	05120812.D	25ng TO-15 LCS	S20-04300802/S20-04290803	16	RB -	- Passed		
Commence and a series of the commence of the c	13	05/12/08 19:45	05120813.D	P0801385-007 (1000mL)	ENSR SG40B-05D (-3.1, 3.5)	8	RB	. 1		Andrew Companies and Annahaman
	14	05/12/08 20:27	05120814.D	P0801385-001 (1000mL)	ENSR SG64B-05 (-5.6; 3.5)	1	RB	,		
	15	05/12/08 21:08	05120815.D	P0801385-002 DIL (100mL)	ENSR SG41B-20 (-3.7, 3.5)	2	RB			
	16	05/12/08 21:49	05120816.D	P0801385-003 DIL (100mL)	ENSR SG41B-20D (-3.4, 3.5)	3	RB			
	17	05/12/08 22:30	05120817.D	P0801385-006 DIL (25mL)	ENSR SG40B-05 (-3.3, 3.5)	7	RB			
and an in the contract of the	18	05/12/08 23:10	05120818.D	P0801385-006 DIL (20mL)	ENSR SG40B-05 (-3.3, 3.5)	7	RB			
The state of the s	19	05/12/08 23:51	05120819.D	P0801385-007 DIL (25mL)	ENSR SG40B-05D (-3.1, 3.5)	8	RB			
THE STATE SEASON SERVICE AND ADDRESS AND ADDRESS OF THE STATE OF THE S	20	05/13/08 0:32	05120820.D	P0801385-007 DIL (20mL)	ENSR SG40B-05D (-3.1, 3.5)	8	RB			
	21	05/13/08 1:14	05120821.D	P0801347-001 (1000mL)		9	RB			Color of the Color
The second of the first of the second of the	22	05/13/08 1:55	05120822.D	P0801347-001 DIL (100mL)		9	RB		,	
The second secon	23	05/13/08 2:38	05120823.D	P0801347-002 (1000mL)		10	RB			
	24	05/13/08 3:23	05120824.D	Blank (100mL)	Test	4	RB			
	25	05/13/08 6:38	05120825.D	Blank (100mL)	Test	4	RB	· · · · · · · · · · · · · · · · · · ·		
The state of the s	26	05/13/08 7:20	05120826.D	S20-03100803 (50mL)	Test	15	RB			
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and the second s								Paral		
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and the state of t				20801379-001 (400mL)			₹B			
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and the second s				0801352-003 (1000mL)	7		В	· · · · · · · · · · · · · · · · · · ·	•	Marin Malain Addis and a second of the second
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- Company of the Comp				0801353-002 (1000mL)			В		-	
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and the same of th				0801353-003 (1000mL)		0 R				
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				0801379-007 (400mL)		R	16	4	· -	***************************************
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