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May 4, 2006

Mr. John Carrigan
MADEP NERO
205B Lowell Street
Wilmington, MA 01887

Subject: FINAL Report on Field Sampling and Analysis Efforts for the Crow Lane Landfill, Newburyport, MA

Dear Mr. Carrigan,

As outlined in our 3/2/06 Proposal for Landfill Gas and Ambient Air Sampling, Crow Lane Landfill, Newburyport, Massachusetts, ENSR provides this final report for work conducted in Task 1: Collection of Landfill Gas/Ambient Air Samples for Laboratory Analysis.

SUMMARY OF SAMPLE COLLECTION

Field Measurements. Per our proposal, the following field measurements were collected and are summarized in attached Tables 1 and 2.

Concentrations of O_2, CO_2, methane (including LEL) and H_2S from all extraction wells, ambient air sampling locations and the flare inlet (to be performed using a Land-tec multi-gas landfill gas meter). The results of these measurements are summarized in Table 1. It is noted that MiniRAE colorimetric tubes were used to measure hydrogen sulfide, with the exception of gas well EW-3 and all ambient readings; well EW-3 was measured with the LandTec Meter (Serial GM08015/05) while the ambient samples were collected with the Jerome Meter (Serial 631-2313) .

The vacuum at each extraction well and the flare inlet was measured. The results of these measurements are summarized in Table 2. It is noted that flow could not be measured in the wellheads as there was an obstruction at the sampling port preventing insertion of the pitot tube to a sufficient location to permit measurements. The pitot tube measurement near the flare inlet was measured at 0.01” water column (w.c.). Attached to this letter please find a calculation sheet showing that this measurement correlates to a gas flow of approximately 23 scfm (+/- 30%). It is further noted that 2 of the 8 extraction wells (TEW-1 and EW-6) were throttled down so that no vacuum was actually being applied to the well. Five of the remaining 6 wells were throttled down so as to have allowed less than 1” w.c. applied to the well. The remaining well was under a 1.5” w.c. vacuum. The line pressure at the flare and on the manifold side of the throttle valve was approximately 25” w.c. vacuum with the exception of TEW-2 which had a line pressure of 2” w.c. due to liquids blocking the pipe.

Meteorological data at each ambient air sampling location, at the top of the landfill and near the flare (including wind speed/direction, air temperature, barometric pressure and turbulence) was collected. Data are summarized in sheets attached to this letter report.

General field observations (including odors, sampling conditions, etc.) were collected into a field notebook. A copy of the hand-written notes are provided as an attachment to this letter report.

Ambient Air Samples. Per our proposal, ambient air samples were collected according to the following procedures.

The landfill was surveyed prior to establishing ambient air sampling locations. Based on both measurements and olfactory observation, two locations where hydrogen sulfide odors were detected were selected for collection of ambient air samples. AMB-1 was collected on the southwest side of the landfill on the access road as marked on Figure 1. The hydrogen sulfide readings ranged from 3-50 parts per billion (ppb) at this location. AMB-2 was collected 20' southeast of flare also marked on Figure 1. The hydrogen sulfide readings ranged from 3 to 81 ppb at this location. Referenced hydrogen sulfide readings were obtained using the Jerome Meter. As noted on field data collection sheets attached to this letter report, there was a light swirling wind which influenced the detection of the hydrogen sulfide odors both by olfactory detection and instrument measurement. ENSR collected grab samples for sulfur gases (according to EPA Method 15 using GC/FPD) for both ambient air sample locations . A Tedlar bag of approximately 12 liters in capacity was filled by evacuating a rigid air-tight container used to hold the bags. The background ambient air sample (AMB-3) was collected approximately ½ mile north of the landfill in a retail parking lot (Blockbusters Video). There was very limited traffic observed at the time of sampling. No hydrogen sulfide was measured on the Jerome Meter at the background location.

In addition to the Tedlar bag samples for sulfide analysis, grab samples using SUMMA canisters were collected for volatile organic compound (VOC) analysis (according to EPA Method TO-15 using GC/MS) at each ambient location. An instantaneous grab sample drawn through a charcoal tube and Hopalite tube, respectively, were used for collection of ambient samples for analysis of arsine (according to NIOSH 6001) and mercury vapor (according to NIOSH 6009).

All samples were transported to ENSR's Air Toxics Laboratory in Harvard, MA; all samples were analyzed in Harvard with the exception of the arsine and mercury vapor samples which were sent to Adirondack Environmental Services, Inc., located in Albany, New York.

Raw Landfill Gas Samples. Per our proposal, raw landfill gas samples were collected according to the following procedures.

Extraction well EW-1 (located on the eastern side of the landfill), temporary extraction well TEW-2 (located on the western side of the landfill); and influent gas at the flare (located on the southeastern portion of the landfill) were sampled for sulfides, VOCs, arsine and mercury vapor according to procedures outlined above for the ambient air samples. Field observations for raw landfill gas samples that differed from ambient samples include: 1) MiniRAE colorimetric tubes identified hydrogen sulfide concentrations in the 0.1-0.2% range; therefore, laboratory analyses will include dilution of the samples; and 2) arsine and mercury vapor samples collected from the EW-1 and TEW-2 locations contained moisture which may affect analysis. It is noted that results obtained with colorimetric tubes may underestimate the hydrogen sulfide concentration because the hand pump used in sample collection may not be sufficient to overcome the vacuum applied to the system.

SUMMARY OF ANALYTICAL METHODOLOGIES

VOCs - EPA Method TO-15 using GC/MS. ENSR collected grab samples using SUMMA canisters for both the raw landfill gas samples and the ambient air samples. In utilizing the TO-15 analysis, each sample was analyzed for a standard list of 64 volatile organic compounds. Compounds not identified and quantified in the standard TO-15 analysis were identified as Tentatively Identified Compounds (TICs). A library search of each unidentified peak's spectrum was conducted using the most current NIST mass spectral database. ENSR's chemists reviewed the library searches and tentatively identify each unknown peak and identified; TICs were only identified for the in-line landfill gas samples. In addition to the identification of the unknown peaks, an estimated concentration was calculated for each unknown peak. These estimated concentrations

may vary from the true concentrations by several orders of magnitude, depending on the true response factor value. The samples were analyzed by ENSR's Air Toxic Specialty Laboratory.

Sulfur Gases – EPA Method 15 using GC/FPD. As with the VOC collection methodology, ENSR collected grab samples for both the raw landfill gas samples and the ambient air samples. The analysis included H_2S, sulfides, mercaptans and thiols. Sulfur dioxide was also be included as part of the analyses. The samples were analyzed by ENSR's Air Toxic Specialty Laboratory. The samples were analyzed by the laboratory in the order from the least to the highest hydrogen sulfide concentration based on field screening data.

Arsine (NIOSH 6001) and Mercury Vapor (NIOSH 6009). The arsine and mercury samples consisted of an instantaneous grab sample drawn through a charcoal tube and Hopalite tube, respectively. The samples were analyzed by Adirondack Environmental Services, Inc., located in Albany, New York.

RESULTS

The VOC results are presented in Table 3 and 4. Table 3 indicates the detected VOCs for each sample. There were 26 VOCs detected overall. Well EW-1 had 20 VOCs detected with the highest measured concentration being toluene at 2,700 parts per billion by volume (ppbV). Well TEW-2 had 21 VOCs detected with the highest measured concentration being 1700 ppbV acetone. The inlet to the flare had 21 VOCs detected with the highest measured concentration being 2,500 ppbV toluene. None of the ambient samples contained VOCs above the analytical detection limit. Table 4 indicates the detected TICs for each sample. There were 23 TIC VOC detected overall. Well EW-1 had 10 TICs detected with the highest measured concentration being alpha pinene at 2,000 ppbV. Well TEW-2 also had 10 TICs detected with the highest measured concentration being methyl cyclohexane at 2,100 ppbV. The inlet to the flare had also had 10 TICs detected with the highest measured concentration being alpha pinene at 1,000 ppbV. None of the ambient or background samples contained any TICs.

The sulfur gas results are presented in Table 5. All in-line samples contained hydrogen sulfide and carbonyl sulfide/sulfur dioxide. The concentrations hydrogen sulfide ranged from 8,500,000 ppbV in well EW-1 to 41,000,000 in the inlet to the flare. The concentrations of carbonyl sulfide/sulfur dioxide ranged from 840,000/1,600,000 ppbV in well EW-1 to 3,500,000/4,900,000 ppbV in the inlet to the flare. None of the ambient air samples analyzed produced readings above the method detection limit. There was a significant discrepancy in the hydrogen sulfide field screening and analytical results collected from the extraction wells. In ENSR's opinion, the inability of the field measurement pump to overcome the effect of the vacuum in the extraction wells resulted in an under reporting of the hydrogen sulfide field screening results.

The arsine and mercury vapor results were all non-detected relative to method detection limits as well. Copies of all laboratory results are attached to this letter report.

ENSR provides this final report with noted attachments for your review and consideration. Please feel free to contact the undersigned with any questions.

Sincerely yours,

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Attachments

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Table 1
CO_2, H_2S, LEL(CH_4), O_2 Data
Crow Lane Landfill
Newburyport, MA
March 8, 2006

Location	CO_2 %	H_2S %	CH_4 %	O_2 %
EW-1	27.4	0.06	19.2	7.4
TEW-1	46.5	0.49	28.2	3.2
TEW-2	46.4	0.17	44.8	0.6
EW-6	46	0.25	25.6	1.7
EW-5	32.5	0.19	26.7	5.1
EW-4	32	0.12	31.2	4.9
EW-3	21.9	0.0128	25.7	10.1
EW-2	35	0.26	22.2	4
Flare	27.2	0.1	20	9.3
Ambient 1	0	0.003 – 0.050	0	21
Ambient 2	0	0.003 – 0.081	0	20.9
Ambient 3	0	0	0	20.6

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Table 2
Flow and Vacuum Data
Crow Lane Landfill
Newburyport, MA
March 8, 2006

Well	Vacuum at (inch WC)	Vacuum on Header (inch WC)	Pitot Tube Head (inch)
TEW-2	1 – 1.5	1 – 2	Obstruction in pipe
TEW-1	0	10 – 20	Obstruction in pipe
EW-6	0	No port for header	Obstruction in pipe
EW-5	0.7	25	Obstruction in pipe
EW-4	0.1	25	Obstruction in pipe
EW-3	0.23	25	Obstruction in pipe
EW-2	0.6	25	Obstruction in pipe
EW-1	0.5	25	Obstruction in pipe
Flow at flare	N/A	25”	0.01

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Table 3
Detected Volatile Organic Compounds (VOCs)
Crow Lane Landfill
Newburyport, MA
March 9, 2006

Sample ID	Well EW-1		Well TEW-2		Inlet Flare		AMB-1		AMB-2		Background	
Compound	ppbV	µg/m3	ppbV	µg/m^3	ppbV	µg/m^3	ppbV	µg/m^3	ppbV	µg/m^3	ppbV	µg/m^3
chloromethane	10 U	21 U	10 U	21 U	11	23	0.5 U	1.0 U	0.5 U	1.0 U	0.5 U	1.0 U
chloroethane	10 U	26 U	10 U	26 U	42	110	0.5 U	1.3 U	0.5 U	1.3 U	0.5 U	1.3 U
acetone	2500 E	6000 E	1700 E	4000 E	20 U	48 U	1.0 U	2.4 U	1.0 U	2.4 U	1.0 U	2.4 U
trichlorofluoromethane	330	1900	53	300	1700 E	9700 E	0.5 U	2.8 U	0.5 U	2.8 U	0.5 U	2.8 U
3-chloropropene	10 U	31 U	19	59	10 U	31 U	0.5 U	1.6 U	0.5 U	1.6 U	0.5 U	1.6 U
2-butanone (MEK)	24	71	10 U	29 U	130	370	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	1.5 U
n-hexane	10 U	35 U	1200 E	4100 E	10 U	35 U	0.5 U	1.8 U	0.5 U	1.8 U	0.5 U	1.8 U
tetrahydrofuran	10 U	29 U	10 U	29 U	44	130	0.5 U	1.5 U	0.5 U	1.5 U	0.5 U	1.5 U
benzene	64	210	180	580	190	620	0.5 U	1.6 U	0.5 U	1.6 U	0.5 U	1.6 U
cyclohexane	300	1000	420	1400	440	1500	0.5 U	1.7 U	0.5 U	1.7 U	0.5 U	1.7 U
2,2,4-trimethylpentane	65	310	200	940	130	610	0.5 U	2.3 U	0.5 U	2.3 U	0.5 U	2.3 U
n-heptane	1200 E	4900 E	1500 E	6000 E	1800 E	7500 E	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
trichloroethene	36	200	32	170	58	310	0.5 U	2.7 U	0.5 U	2.7 U	0.5 U	2.7 U
MIBK	79	330	83	340	210	850	0.5 U	2.0 U	0.5 U	2.0 U	0.5 U	2.0 U
1,1,2-trichloroethane	10 U	55 U	23	120	10 U	55 U	0.5 U	2.7 U	0.5 U	2.7 U	0.5 U	2.7 U
toluene	2700 E	10000 E	1400 E	5300 E	2500 E	9300 E	0.5 U	1.9 U	0.5 U	1.9 U	0.5 U	1.9 U
tetrachloroethene	360	200	31	210	58	390	0.5 U	3.4 U	0.5 U	3.4 U	0.5 U	3.4 U
chlorobenzene	70	320	230	1000	140	660	0.5 U	2.3 U	0.5 U	2.3 U	0.5 U	2.3 U
ethylbenzene	770	3300	360	1600	880	3800	0.5 U	2.2 U	0.5 U	2.2 U	0.5 U	2.2 U
p & m-xylene	840	3600	440	1900	1100	4900	1.0 U	4.3 U	1.0 U	4.3 U	1.0 U	4.3 U
styrene	31	130	10 U	43 U	10 U	43 U	0.5 U	2.1 U	0.5 U	2.1 U	0.5 U	2.1 U
o-xylene	290	1300	120	530	290	1300	0.5 U	2.2 U	0.5 U	2.2 U	0.5 U	2.2 U
4-ethyl toluene	110	510	42	200	92	450	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,3,5-trimethylbenzene	92	450	74	360	90	440	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,2,4-trimethylbenzene	180	890	73	360	230	1100	0.5 U	2.5 U	0.5 U	2.5 U	0.5 U	2.5 U
1,4-dichlorobenzene	14	85	30	180	27	170	0.5 U	3.0 U	0.5 U	3.0 U	0.5 U	3.0 U

U - Not Detected
E - Estimated, Value exceeded upper range of calibration
ppbV - parts per billion by volume
µg/m ^{3} - micrograms per cubic meter

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Table 4
Tentatively Identified Compounds
Crow Lane Landfill
Newburyport, MA
March 9, 2006

Sample ID	MW	Well EW-1			Well TEW-2			Inlet Flare			AMB-1*			AMB-2*			Background*		
Compound		RT (min)	Est. ppbV	Est. µg/m3	RT (min)	Est. ppbV	Est. µg/m3	RT (min)	Est. ppbV	Est. µg/m3	RT (min)	Est. ppbV	Est. µg/m3	RT (min)	Est. ppbV	Est. µg/m3	RT (min)	Est. ppbV	Est. µg/m3
unknown		12.87	170	--															
methyl cyclohexane	98.1876	22.17	130	522	21.48	2100	8433	22.12	300	1205									
unknown C_8H_{16} hydrocarbon					24.20	350	--	24.50	160	--									
unknown		25.22	190	--															
1,1,3-triethylbenzene	126.24				26.67	320	1652												
3-methyl octane	128.26				27.31	400	2098	27.36	180	944									
unknown					27.83	370	--												
unknown								27.88	170	--									
unknown C_9H_{18} hydrocarbon		27.88	130	--															
n-nonane	128.26	28.06	300	1574				28.04	210	1102									
unknown					28.35	300	--												
unknown C_9H_{18} hydrocarbon		28.39	130	--				28.38	160	--									
unknown					28.69	510	--												
2,6-dimethyl octane	142.28				28.90	920	5354	28.90	220	1280									
propyl cyclohexane	126.24	28.92	120	620				28.92	200	1033									
alpha pinene	136.23	29.07	2000	11144				29.05	1000	5572									
unknown					29.64	290	--												
beta pinene	136.23	30.01	200	1114															
1,2,3-trimethylbenzene	120.19				30.12	310	1524												
decane	142.28	30.27	190	1106															
unknown aliphatic hydrocarbon								30.26	170	--									

U - Not Detected

E - Estimated concentration, value is above the upper limit of calibration.

NQ - No Qualifier (for carbonyl sulfide and/or sulfur dioxide)

** - Co-eluters

ppbV - parts per billion by volume

µg / m3 - micrograms per cubic meter

µg / m3 = ppbV * (MW / 24.45)

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Table 5
Sulphur Compounds
Crow Lane Landfill
Newburyport, MA
March 9, 2006

Sample ID		Well EW-1			Well TEW-2			Inlet Flare			AMB-1			AMB-2			Background		
Compound	Molecular Weight	ppbV		µg/m3(1)	ppbV		µg/m3(1)	ppbV		µg/m3(1)	ppbV		µg/m3(1)	ppbV		µg/m3(1)	ppbV		µg/m3(1)
Hydrogen Sulfide	**34.08**	8,500,000	E	11,847,853	27,000,000	E	37,634,356	41,000,000	E	57,148,466	55	U	77	55	U	77	55	U	77
Carbonyl Sulfide / Sulfur Dioxide **	**60.08/64.06**	840,000 / 1,600,000	NQ / E	2,064,100 / 4,192,100	1,600,000 / 2,500,000	NQ / E	3,931,600 / 6,550,100	3,500,000 / 4,900,000	NQ / E	8,600,400 / 12,838,200	83	U		83	U		83	U	
Methyl Mercaptan	**48.11**	550,000	U	1,082,229	290,000	U	570,630	540,000	U	1,062,552	55	U	108	55	U	108	55	U	108
Ethyl mercaptan	**62.14**	750,000	U	1,906,135	390,000	U	991,190	740,000	U	1,880,720	75	U	191	75	U	191	75	U	191
Dimethyl Sulfide	**62.14**	760,000	U	1,931,550	400,000	U	1,016,605	750,000	U	1,906,135	76	U	193	76	U	193	76	U	193
Isopropyl mercaptan	**76.16**	600,000	U	1,868,957	310,000	U	965,628	590,000	U	1,837,808	60	U	187	60	U	187	60	U	187
t-butyl mercaptan	**90.19**	490,000	U	1,807,489	250,000	U	922,188	490,000	U	1,807,489	49	U	181	49	U	181	49	U	181
Ethyl methyl sulfide	**76.16**	620,000	U	1,931,256	320,000	U	996,777	610,000	U	1,900,106	62	U	193	62	U	193	62	U	193
Dimethyl Disulfide	**94.2**	620,000	U	2,388,712	320,000	U	1,232,883	610,000	U	2,350,184	62	U	239	62	U	239	62	U	239

U - Not Detected

E - Estimated concentration, value is above the upper limit of calibration.

NQ - No Qualifier (for carbonyl sulfide and/or sulfur dioxide)

** - Co-eluters

ppbV - parts per billion by volume

µg/m3 - micrograms per cubic meter

(1) - Note ppbV results were converted to µg/m3 using the following equation: µg/m3 = ppbV * (MW / 24.45)

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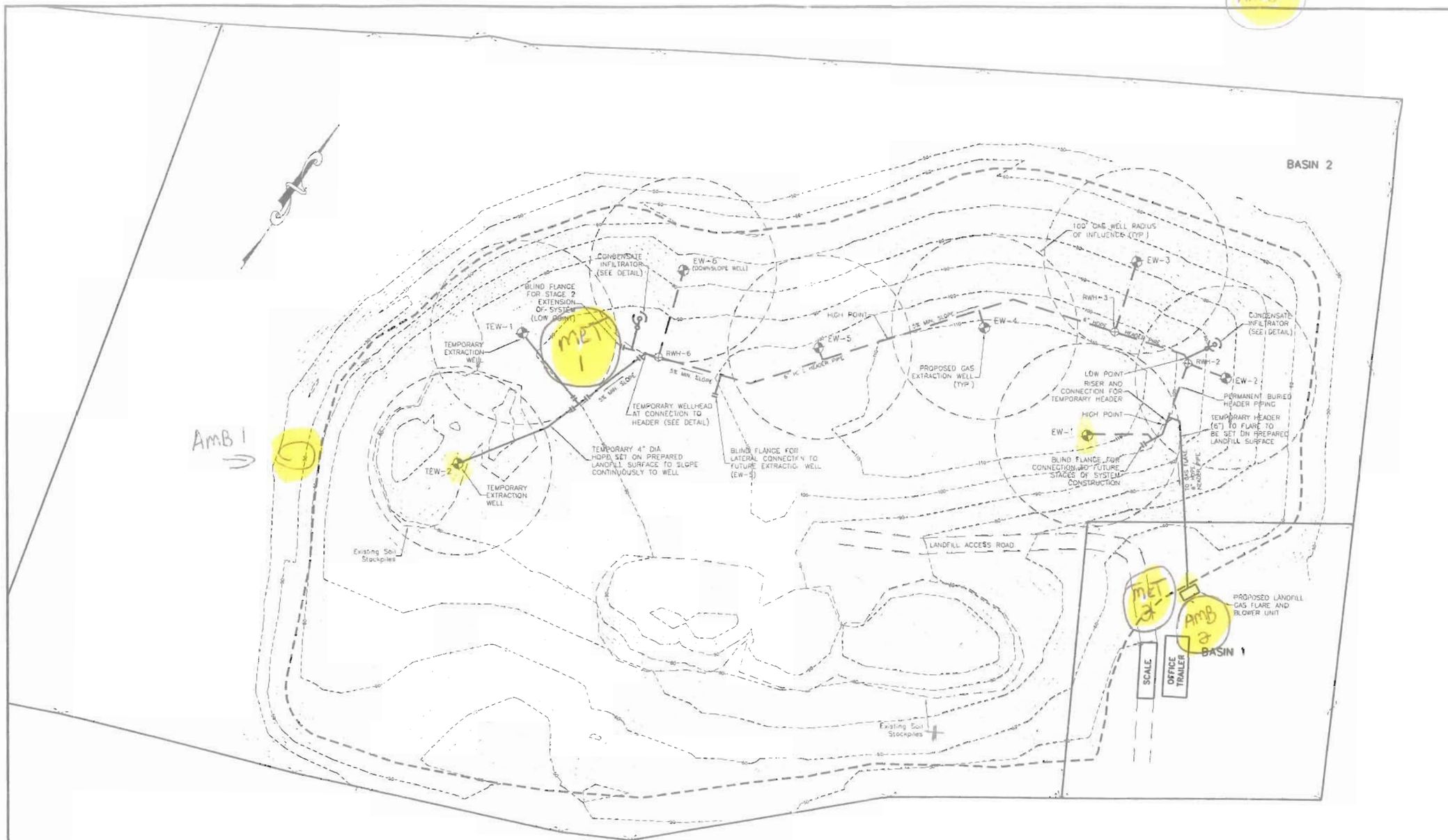
Table 6
Mercury and Arsine Compounds
Crow Lane Landfill
Newburyport, MA
March 9, 2006

Sample ID	Well EW-1		Well TEW-2		Inlet Flare		AMB-1		AMB-2		Background	
Compound	mg/m^3		mg/m^3		mg/m^3		mg/m^3		mg/m^3		mg/m^3	
Mercury	<0.00167	U	<0.00180	U	<0.00142	U	<0.00195	U	<0.00184	U	<0.00185	U
Arsine	<0.000676	U	<0.00103	U	<0.000943	U	<0.00119	U	<0.000804	U	<0.000958	U

U - Not Detected

Sample Location Plan

AMB 3 1



NOTES:

1. EXISTING CONTOURS BASED ON A TOPOGRAPHIC SURVEY CONDUCTED BY HANCOCK ASSOCIATES, INC. ON JANUARY 25, 2005.
2. THIS DRAWING PRESENTS THE LANDFILL GAS SYSTEM COMPONENTS TO BE INSTALLED AS PART OF STAGE 1 GAS SYSTEM CONSTRUCTION. FUTURE STAGES OF CONSTRUCTION WILL BE PROPOSED TO THE DEPARTMENT AS LANDFILL AREAS APPROACH FINAL GRADE AND ELEVATION.
3. REFER TO DWG NO. 3 FOR THE FULL LAYOUT OF GAS SYSTEM COMPONENTS TO BE INSTALLED IN SEVERAL STAGES OF CONSTRUCTION.

No.	Date	Revision Description	Chkd by	Appvd by
1	3-28-05	REVISED WELL LOCATIONS AND ASSOCIATED PIPING	MQ	JAC

scale: 1"=50'
date: MAR 18, 2005
drawn: JAC
checked: MQ
approved: ARQ
sheet 1 of 1
drawing number: SP-1

project: CROW LANE LANDFILL
NEWBURYPORT, MASSACHUSETTS
client: NEW VENTURES, L.L.C.
drawing title: STAGE 1
GAS EXTRACTION SYSTEM SITE PLAN

SITEC ENVIRONMENTAL
SITEC Environmental, Inc.
Acad No. NBP 05-533 Ph1 GAS.dwg
File No. SE05-533

Meteorological Data

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0
06:50	25.2F	335.3F	7.9F	1017F	16.3
06:55	25.3	341.3	5.3	1017	21.2
07:00	25.6	338.4	5.4	1017	16.4
07:05	26.0	345.8	5.5	1017	15.9
07:10	26.4	352.8	4.9	1017	19.4
07:15	26.6	351.4	4.9	1017	14.0
07:20	26.9	357.3	4.5	1017	18.6
07:25	27.3	2.0	5.7	1017	13.9
07:30	27.3	0.9	6.9	1017	16.8
07:35	27.6	0.0	5.8	1017	17.9
07:40	27.8	351.4	7.0	1017	12.8
07:45	27.9	349.4	6.5	1017	15.8
07:50	28.2	4.0	6.9	1017	16.3
07:55	28.4	6.0	5.6	1017	21.2
08:00	28.4	351.4	7.3	1017	16.4

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0
08:05	28.6	351.4	6.1	1017	30.0
08:10	28.7	355.9	5.9	1017	19.4
08:15	28.9	359.3	6.5	1017	24.9
08:20	29.1	345.4	6.2	1017	26.7
08:25	29.5	0.9	5.2	1017	26.7
08:30	29.6	357.3	5.5	1017	17.0
08:35	29.8	355.3	6.3	1017	14.7
08:40	30.1	352.4	5.5	1017	38.8
08:45	30.5	352.8	6.4	1017	49.4
08:50	30.7	356.9	5.8	1017	24.4
08:55	30.4	6.9	6.2	1017	28.4
09:00	31.2	15.0	4.8	1017	61.2
09:05	31.4	359.3	4.3	1017	30.0
09:10	30.9	335.3	5.0	1018	19.4
09:15	31.6	2.9	4.5	1017	24.9
09:20	31.5	339.3	5.8	1017	26.7
09:25	31.2	347.4	4.7	1017	26.7
09:30	31.5	41.1	4.2	1017	17.0
09:35	31.6	20.0	3.3	1017	14.7
09:40	33.3	115.9	1.3	1017	38.8
09:45	32.8	343.3	3.3	1017	49.4
09:50	32.6	337.3	3.8	1017	24.4
09:55	33.0	336.4	2.8	1017	28.4
10:00	33.4	34.9	2.6	1017	61.2

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0
10:05	33.6	29.9	2.4	1017	19.6
10:10	34.7	123.8	1.6	1017	33.8
10:15	34.7	79.9	2.5	1017	57.9
10:20	33.8	36.9	3.7	1017	72.5
10:25	34.0	49.0	2.2	1017	17.3
10:30	35.3	123.8	2.0	1017	52.7
10:35	35.3	0.0	2.0	1017	15.0
10:40	35.0	34.0	2.9	1016	24.0
10:45	35.7	315.9	2.3	1016	38.5
10:50	34.7	262.3	5.3	1017	45.3
10:55	34.5	265.3	5.9	1016	40.8
11:00	34.4	227.9	5.8	1016	44.7
11:05	34.9	231.8	3.7	1016	19.6
11:10	35.6	166.1	2.8	1016	33.8
11:15	36.3	253.3	3.3	1016	57.9
11:20	36.8	208.8	3.4	1016	72.5
11:25	36.0	234.9	5.5	1016	17.3
11:30	36.8	288.4	3.5	1016	52.7
11:35	36.3	332.1	5.2	1016	15.0
11:40	36.6	289.3	3.3	1016	24.0
11:45	36.9	280.8	5.3	1016	38.5
11:50	36.4	302.9	5.2	1016	45.3
11:55	37.6	267.3	4.8	1015	40.8
12:00	37.6	268.2	3.7	1015	44.7

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0
12:05	37.9	333.4	3.4	1015	11.8
12:10	36.4	87.0	6.4	1015	19.2
12:15	35.8	103.9	7.2	1015	12.3
12:20	35.6	96.1	7.7	1015	13.9
12:25	36.1	101.9	6.0	1015	12.9
12:30	35.8	110.9	7.1	1015	19.0
12:35	36.2	111.1	6.7	1014	17.8
12:40	35.8	103.9	7.3	1014	14.7
12:45	35.9	96.9	6.7	1014	13.6
12:50	35.8	94.0	8.1	1014	12.0
12:55	35.6	96.1	7.8	1014	17.9
13:00	36.2	104.9	7.3	1014	12.8
13:05	35.8	103.0	8.3	1014	11.8
13:10	36.0	126.0	8.3	1014	19.2
13:15	36.0	90.0	8.1	1014	12.3
13:20	35.9	125.8	8.3	1014	13.9
13:25	35.5	110.0	8.7	1014	12.9
13:30	36.0	88.0	6.6	1014	19.0
13:35	36.7	103.0	6.8	1014	17.8
13:40	36.3	123.1	7.9	1014	14.7
13:45	37.1	113.9	6.8	1013	13.6

13:50	36.8	92.9	7.3	1013	12.0
13:55	37.6	103.9	7.0	1013	17.9
14:00	36.4	79.0	8.7	1013	12.8

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0

14:05	37.2	78.0	7.2	1013	23.3
14:10	36.9	103.0	8.1	1013	15.7
14:15	37.5	104.0	7.0	1013	14.2
14:20	37.4	90.9	8.0	1013	19.4
14:25	37.6	107.1	7.7	1013	16.8
14:30	37.3	101.0	7.9	1013	11.5
14:35	36.3	117.0	9.3	1013	15.9
14:40	36.6	110.0	8.9	1013	21.8
14:45	36.9	120.1	9.3	1013	13.1
14:50	37.1	128.0	8.1	1013	13.2
14:55	36.6	130.9	8.7	1013	18.8
15:00	36.7	135.0	7.7	1013	19.5
15:05	37.5	117.0	6.8	1013	23.3
15:10	37.0	125.1	8.2	1013	15.7
15:15	37.4	115.0	7.3	1013	14.2
15:20	37.5	130.9	7.4	1013	19.4
15:25	37.1	136.1	7.4	1013	16.8
15:30	36.5	104.9	8.7	1013	11.5
15:35	37.1	128.0	7.6	1013	15.9
15:40	37.6	130.1	5.8	1013	21.8
15:45	37.6	128.2	6.8	1013	13.1
15:50	37.8	128.9	6.9	1013	13.2
15:55	38.1	134.8	7.1	1013	18.8
16:00	38.5	134.1	6.2	1013	19.5

0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0

16:05	38.6	139.0	7.2	1013	11.7
16:10	38.4	144.2	7.1	1013	9.0
16:15	37.9	145.8	8.3	1013	51.9
16:20	37.2	146.9	9.2	1013	0.4
16:25	37.0	149.0	7.6	1013	9.9
16:30	37.4	161.1	5.7	1013	11.4
16:35	37.3	153.9	5.7	1013	13.2
16:40	36.2	138.1	7.8	1013	12.1
16:45	35.6	130.1	7.6	1013	9.7
16:50	35.3	135.9	7.1	1013	12.1
16:55	35.3	148.0	6.1	1013	9.7
17:00	35.4	139.0	5.3	1013	15.3
17:05	35.2	135.0	5.7	1013	11.7
17:10	35.1	145.8	6.6	1013	9.0

17:39:30 0067 01 Flare 03/08/06

CHAN	01 TEMP	02 WDR	03 WSP	04 Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0
01:00	-22.0F	00F	0.0F	794F	0.0
02:00	-22.0F	00F	0.0F	794F	0.0
03:00	-22.0F	00F	0.0F	794F	0.0
04:00	-22.0F	00F	0.0F	794F	0.0
05:00	-22.0F	00F	0.0F	794F	0.0
06:00	-22.0F	00F	0.0F	794F	0.0
07:00	27.2<	346<	0.6<	1020<	14.2
08:00	30.4	10	0.7	1020	21.1
09:00	33.3	11	0.7	1020	26.8
10:00	36.1	10	0.3	1020	51.4
11:00	38.1	250	0.4	1019	66.2
12:00	40.2	236	0.4	1019	61.7
13:00	39.8	107	0.5	1017	36.0
14:00	40.4	116	0.7	1017	35.0
15:00	40.7	118	0.7	1016	29.5
16:00	40.3	132	0.7	1016	23.3
17:00	39.2	144	0.7	1016	23.5

0067 01 Flare 03/08/06

CHAN	01 TEMP	02 WDR	03 WSP	04 Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0
06:20	26.0F	333F	0.5F	1020F	15.0
06:25	26.3	340	0.5	1020	21.3
06:30	26.5	345	0.6	1020	18.6
06:35	26.6	352	0.6	1020	20.0
06:40	26.8	349	0.4	1020	21.1
06:45	27.5	342	0.6	1020	19.4
06:50	27.9	347	0.6	1020	26.8
06:55	28.0	349	0.7	1020	25.4
07:00	28.0	348	0.7	1020	22.8
07:05	27.9	358	0.6	1020	16.2
07:10	28.1	04	0.4	1020	19.6
07:15	28.8	11	0.3	1020	18.6
07:20	29.9	13	0.6	1020	15.0
07:25	30.4	10	0.9	1020	21.3
07:30	30.2	07	1.5	1020	18.6
07:35	30.7	11	0.9	1020	20.0
07:40	31.2	10	1.2	1020	21.1
07:45	31.6	12	0.7	1020	19.4
07:50	31.7	17	0.7	1020	26.8
07:55	32.5	20	0.4	1020	25.4
08:00	32.2	07	0.7	1020	22.8

0067 01 Flare 03/08/06

CHAN	01 TEMP	02 WDR	03 WSP	04 Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0
08:05	32.0	01	0.7	1020	62.3
08:10	32.5	10	0.7	1020	68.3
08:15	32.5	02	1.0	1020	32.3
08:20	32.5	03	1.4	1020	26.1
08:25	32.6	02	0.9	1020	23.5
08:30	33.1	05	0.8	1020	34.5
08:35	33.6	10	0.7	1020	53.9
08:40	34.0	20	0.6	1020	53.6
08:45	34.2	14	0.6	1020	16.4
08:50	34.0	12	0.7	1020	16.3
08:55	34.7	21	0.5	1020	33.3
09:00	34.5	33	0.7	1020	69.5
09:05	35.1	43	0.3	1020	62.3
09:10	36.4	56	0.3	1020	68.3
09:15	35.8	25	0.4	1020	32.3
09:20	35.1	354	0.6	1020	26.1
09:25	35.1	337	0.5	1020	23.5
09:30	35.8	356	0.2	1020	34.5
09:35	36.2	351	0.3	1020	53.9
09:40	38.0	100	0.1	1020	53.6
09:45	36.3	07	0.6	1020	16.4
09:50	35.6	358	0.6	1020	16.3

09:55	36.2	18	0.4	1020	33.3
10:00	37.0	357	0.1	1020	69.5

0067 01 Flare 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0
10:05	37.1	254	0.4	1020	17.7
10:10	36.3	219	0.5	1020	33.6
10:15	37.6	359	0.2	1020	45.7
10:20	37.6	321	0.2	1019	72.5
10:25	38.7	218	0.0	1019	17.4
10:30	38.9	107	0.2	1019	46.5
10:35	38.6	101	0.2	1019	30.5
10:40	39.3	60	0.1	1019	57.7
10:45	39.4	43	0.0	1019	28.7
10:50	39.3	263	0.6	1019	57.3
10:55	37.9	243	1.0	1019	88.4
11:00	37.4	233	1.2	1019	76.6
11:05	37.6	218	0.7	1019	17.7
11:10	38.4	199	0.6	1019	33.6
11:15	39.7	219	0.1	1019	45.7
11:20	39.9	220	0.3	1019	72.5
11:25	39.5	238	0.9	1019	17.4
11:30	39.9	223	0.3	1019	46.5
11:35	41.2	337	0.3	1019	30.5
11:40	41.1	293	0.2	1019	57.7
11:45	41.0	215	0.4	1018	28.7
11:50	40.9	275	0.4	1018	57.3
11:55	41.0	246	0.5	1018	88.4
12:00	42.1	179	0.1	1018	76.6

0067 01 Flare 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0
12:05	41.2	103	0.3	1018	21.1
12:10	40.4	90	0.3	1018	34.3
12:15	39.7	126	0.8	1018	42.6
12:20	39.3	114	0.6	1018	38.2
12:25	39.6	85	0.5	1018	31.4
12:30	39.4	121	0.6	1017	31.6
12:35	39.8	103	0.7	1017	23.0
12:40	39.3	134	0.7	1017	38.3
12:45	39.7	103	0.6	1017	24.4
12:50	39.7	100	0.7	1017	31.7
12:55	39.9	94	0.4	1017	46.5
13:00	40.0	111	0.6	1017	21.4
13:05	39.5	132	0.9	1017	21.1
13:10	40.2	129	0.9	1017	34.3
13:15	41.0	116	0.5	1017	42.6

13:20	40.6	115	0.7	1017	38.2
13:25	39.7	99	0.6	1017	31.4
13:30	40.0	97	0.5	1017	31.6
13:35	40.7	135	0.6	1017	23.0
13:40	40.8	153	0.6	1017	38.3
13:45	41.4	140	0.5	1016	24.4
13:50	41.1	103	0.4	1016	31.7
13:55	40.6	106	1.4	1016	46.5
14:00	40.0	61	1.1	1016	21.4

0067 01 Flare 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0

14:05	40.8	82	0.9	1016	20.7
14:10	41.5	104	0.5	1016	23.6
14:15	41.5	102	0.7	1016	26.0
14:20	41.3	103	0.5	1016	22.8
14:25	42.4	106	0.5	1016	20.7
14:30	41.5	118	0.7	1016	23.8
14:35	40.0	140	1.1	1016	17.3
14:40	39.5	124	1.2	1016	26.1
14:45	40.1	128	0.7	1016	18.5
14:50	40.4	140	0.9	1016	20.1
14:55	39.7	124	0.8	1016	26.8
15:00	40.0	137	0.8	1016	21.3
15:05	39.4	130	1.1	1016	20.7
15:10	40.3	127	0.6	1016	23.6
15:15	40.3	131	0.8	1016	26.0
15:20	40.2	117	0.7	1016	22.8
15:25	40.5	142	1.1	1016	20.7
15:30	39.5	135	0.8	1016	23.8
15:35	39.5	135	0.9	1016	17.3
15:40	40.2	122	0.7	1016	26.1
15:45	40.5	127	0.7	1016	18.5
15:50	40.9	140	0.7	1016	20.1
15:55	41.2	136	0.6	1016	26.8
16:00	41.3	144	0.6	1016	21.3

0067 01 Flare 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360	100.0	1094	99.9
ZERO	-22.0	0	0.0	794	00.0

16:05	41.6	145	0.7	1016	14.1
16:10	40.9	150	0.9	1016	28.2
16:15	40.3	135	0.9	1016	21.2
16:20	40.2	148	0.9	1017	19.6
16:25	39.9	180	0.7	1016	19.2
16:30	39.7	161	0.9	1017	15.2
16:35	39.5	137	0.7	1017	21.9
16:40	38.4	133	0.8	1016	23.8

16:45	37.6	130	0.7	1017	14.1
16:50	37.6	141	0.6	1017	20.7
16:55	37.3	142	0.4	1017	22.4
17:00	37.1	129	0.4	1017	18.9
17:05	36.8	136	0.5	1017	14.1
17:10	36.6	152	0.5	1017	28.2
17:15	36.3	145	0.5	1016	21.2
17:20	36.1	133	0.5	1016	19.6
17:25	36.0	125	0.3	1015	19.2
17:30	35.6	120	0.1	1015	15.2
17:35	35.6	108	0.0	1015	21.9

17:19:46 0067 01 Landfill 03/08/06

	01	02	03	04	
CHAN	TEMP	WDR	WSP	Bp	SD1
UNITS	DEGF	DEG	MPH	Mb	DEG
FSCL	122.0	360.0	100.0	1094	99.9
ZERO	-22.0	0.0	0.0	794	00.0
01:00	-22.0F	00F	0.0F	794F	0.0
02:00	-22.0F	00F	0.0F	794F	0.0
03:00	-22.0F	00F	0.0F	794F	0.0
04:00	-22.0F	00F	0.0F	794F	0.0
05:00	-22.0F	00F	0.0F	794F	0.0
06:00	25.45<	339.80<	5.30<	1017.<	16.2<
07:00	27.38	356.07	5.89	1017.	22.1
08:00	29.74	357.10	5.79	1017.	40.4
09:00	32.05	357.18	3.35	1017.	59.2
10:00	34.62	319.40	0.64	1016.	44.0
11:00	36.46	267.38	3.20	1015.	42.3
12:00	36.07	98.49	6.29	1014.	18.9
13:00	36.32	105.11	7.43	1013.	16.5
14:00	36.99	111.15	7.83	1013.	17.6
15:00	37.45	125.62	7.06	1012.	15.0
16:00	36.78	143.85	6.97	1012.	17.4
17:00	31.87<	139.20<	4.22<	1012.<	14.8<

Field Data Collection Sheets

Crow Lane Landfill

CO, H2S, LEL (CH4) , O2, Well Flow Rate and Vacuum

DATE: 3/8/06 **MFG./MODEL** Land Tec Meter **SERIAL # :** GM08015/05

OPERATOR : KGM

ON ANOTHER SHEET

Readings

Location	Time Sample Taken	CO_2 ppm	H_2S ppm	LEL % CH_4	O_2 %	Well Flow Rate	Well Vacu In H2o	Comments
EW1	17:10		2ND TOUR .05%					
Well 1- EW1	14:08	27.4	.06%	19.2	7.4	~~AIR~~		
TEW1 Well 2- ~~Fwt~~	15:02	46.5	.4%	28.2	3.2			
Well 3- TEW2	15:38	46.4	.17%	44.8	0.6			
Well 4- EW6	16:00	46.0	.25%	25.6	1.7			
Well 5- EW5	16:15	32.5	.19%	26.7	5.1			
Well 6- EW4	16:30	32.0	.12%	31.2	4.9			
Well 7- EW3	16:40	21.9	128 ppm	25.7	10.1			H_2S From GAS MOTOR
Well 8- EW2	16:50	35.0	.26%	22.2	4.0			
2ND TOUR	17:15		.06%					
Flare	14:00	27.2	.1%	20.0	9.3			
Amb 1	8:30	0	.003-.050	0	21.0			H_2S HIGH/LOW WHILE SAMPLING
Amb 2	9:15	0	.003-.081	0	20.9			
Amb 3 (BKG)	10:18	0	0.0	0	20.6			

Note - 1) Do Not use Jerome meter for Well measurements
2) If H2S in the Well or the Flare or ambient site > 200 PPM, use Draeger Tube

Flow and Vacuum data collection sheet

MA-Newburyport-DEP, Crow Lane

date 3/8/06

operator K Watts

WELL	size of pipe (inches)	vacuum (inch WC)	pitot tube head (inch WC)	
TEW-2		1-1.5" WELL PULSING 1-2" HEADER IN	*	
TEW-1		0.0" WELL 10-20" HEADER PULSING BECAUSE WATER IN PIPE	*	VALVE CLOSED
EW-6		0.0" WELL NO PORT FOR HEADER	*	VALVE CLOSED
EW-5		0.7" WELL 25" HEADER	*	
EW-4		0.1" WELL 25" HEADER	*	
EW-3		.23" WELL 25" HEADER	TOO CLOSE TO VALVE WELL & HEADER REVERSED	
EW-2		0.6" WELL 25" HEADER	TOO CLOSE TO VALVE WELL & HEADER REVERSED	
EW-1		0.5" WELL 25" HEADER	*	
flow at oxidizer		25"	.01"	

notes: * SOMETHING IN PIPE COULD NOT STICK PITOT TUBE IN ALSO PITOT TO LARGE FOR HOLE ONLY 1/4 PIPE. VALVES TO SOME WELL CLOSED SOME JUST BARELY OPEN.

Crow Lane Landfill

Ambient Siting -by H2S concentration
2 high impact sites and 1 Background

DATE: 3/8/06 **MFG./MODEL** Jerome Meter **SERIAL # :** 631-2313

OPERATOR : M Cobb

Readings

	Location	Time Sample Taken		H_2S ppm					Comments
SW FLARE	Amb 1	7:20 – 8:20		VARIOUS READINGS BETWEEN .003 – .050					H_2S
	Amb 2	8:35 – 9:45		"		"	"	.003 – .081	"
	Amb 3 (BKG)	9:50 – 10:40		NO H_2S					
	AMB 1 & 2 SWIRLING WINDS ODOR GOMES & GOKS								

Note - 1) Use Land Tec meter if H2S conc > 50 PPB
2) Likely , the 2 high impact sites could be located 1st SE portion of the landfill near area of the flare and 2nd be @ NW section of the landfill. The background site (Vital to be clean) could be area North of the landfill

AMB 1 SW SIDE OF LANDFILL ON ACCESS ROAD MARKED ON MAP

AMB 2 20' SOUTH OF FLARE

BACKGROUND SITE ½ MILE NORTH IN PARKING LOT IN FRONT OF BLOCKBUSTER VIDEO

Crow Lane Landfill

Ambient site Sampling
2 high impact sites and 1 Background

DATE: 3/6/06 **OPERATOR :** R Cobb

Sample Collection

Location	Start Time	End Time	Flow rate (SCCM)	Total Volume (liters)	SAMPLE LENGTH (MIN)		Comments
							SW ON ROAD
Amb 1							ODOR COMES & GOES
Tedlar bag (Sulfides)	7:43	7:48	GRAB	~10 LT			.003-.050 H_2S
SUMMA Canister	7:42	7:42	QUICK GRAB				"
Arsine	7:40	8:06	PRE 208.3 / 120.7 POST	4.21	26		PUMP 549616 FLOW CHANGED PUMP TO 60LC
Mercury	7:30	8:12	PRE 200.0 / 239.3 POST	10.28	42		PUMP 549418
Amb #2		20' SOUTH OF FLARE					ODOR COMES & GOES
Tedlar bag (Sulfides)	9:00	9:05	GRAB	~10 LT			.003-.081 H_2S
SUMMA Canister	8:49	8:49	QUICK GRAB				~.03) H_2S
Arsine	8:58	9:28	PRE 208.5 / 211.2 POST	6.22	30		PUMP 549443
Mercury	8:53	9:35	PRE 221.6 / 265.5 POST	10.86	42		549466
Amb 3 (BKG)	½ MILE NORTH IN PARKING LOT IN FRONT OF BLOCKBUSTER VIDEO						
Tedlar bag (Sulfides)	10:11	10:16	GRAB	~10 LT			
SUMMA Canister	10:08	10:08	QUICK GRAB				
Arsine	9:57	10:23	PRE 200.7 / 200.5 POST	5.22	26		PUMP 585026
Mercury	9:54	10:37	PRE 250.1 / 253.9 POST	10.84	43		PUMP 585183

Crow Lane Landfill

Well/Flare Sampling
2 wells and the Flare

DATE: 3/8/06 OPERATOR : H Cobb

Sample Collection

Location	Start Time	End Time	Flow rate (SCCM)	Total Volume (liters)	SAMPLE LENGTH (MIN)		Comments
							EW1
Well 1							
EW1 Tedlar bag (Sulfides)	14:15	14:20	GRAB	~10LT			
SUMMA Canister	14:21	14:21	QUICK GRAB				
Arsine	13:26	14:02	PRE 199.7 / 190.0	7.40	38		PUMP 549466 MOISTURE IN TUBE
Mercury	12:26	13:15	PRE 250.0 / 239.3 POST	11.99	49		SAME PUMP MOISTURE IN TUBE
Well 2							TEW-2
TEW-2 Tedlar bag (Sulfides)	15:22	15:27	GRAB	~10LT			
SUMMA Canister	15:29	15:29	QUICK GRAB				
Arsine	14:50 ~~15~~ KC	15:16 ~~14:02~~ KC	PRE 190.7 / 183.5 POST	4.86	26		PUMP ~~549466~~ KC 585183 MOISTURE IN TUBE
Mercury	12:49	13:32	PRE 249.7 / 261.1 ~~261.1~~ KC	11.11	43		" " "
The Flare							
Tedlar bag (Sulfides)	KC 11:35 ~~11:40~~	11:40	GRAB	~10LT			HIGH VACUUM
SUMMA Canister	11:43	11:43	QUICK GRAB				VALVE TO FLARE ALMOST CLOSED
Arsine	13:12	13:38	PRE 203.2 / 204.3 POST	5.30	26 ~~50~~ KC		PUMP 549413
Mercury	12:03	13:01	PRE 248.6 / 238.6 POST	14.13	58		" " SAME ONE USED

Field Log Entries

1205A271

"Rite in the Rain®"
ALL-WEATHER WRITING PAPER

Name Ron Cobb

Address

Phone

Project

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[redacted] 1205A271

CONTENTS

PAGE	REFERENCE	DATE

Personal Sampling Pumps Cal

3/6/06 PRE Pumps S/N POST

251.1 cc/min	585183		
250.0	549413		
256.4	585131		
251.8	549443		
203.3	549616		
201.6	585006		
201.3	549466		
202.4	585112	*	

Mercury

Arsine

* NOT GOING TO USE
PRE CAL numbers
HAD problem with
FIRST sample will
CALIB before USE

(1) ARRIVE AT SITE 5:45 3/7/06
SET UP MET SITE & AT
FLARE 6:15
MET SITE 1 on Top of
LANDFILL 6:45 START
CLEAR MID 20'S LIGHT
WIND
JEROME S/N 631-2313
7:42 CANISTER SAMPLE AMB 1
(SW SIDE ~~[illegible]~~ DOOR COMES
ROAD)

H_2S

AND GOES 003 – .050 3/6/06 3/8/07

CAL PRE ARSINE pump 549616 PRE 203.3 POST 120.7

3/6/06 MERCURY " 549413 PRE 280.0 " 239.3

POST 3/8/06 ARSINE pump POST CAL LOW WILL CAL pump BEFORE USE NEXT SAMPLE

AMB @ 20' SOUTH OF FLARE

8:49 CANISTER H_2S ~.03

9:00-9:05 BAG SAMPLE H_2S .003 – .081

CAL ARSINE pump 549443 PRE 200.5 POST 211.2

3/8/06 MERCURY " 549466 251.6 265.5

WARMING UP, CLEAR, LIGHT WINDS, W/O CHANGING AT FLARE SWIRLING.

BACKGROUND ABOUT ½ mile NORTH OF LANDFILL IN PARKING LOT IN FRONT OF BLOCKBUSTER VIDEO

NOT TO MUCH TRAFFIC

CAL ARSINE Pump 585006 PRE 200.7 POST 200.5

3/8/06 MERCURY " 585183 250.1 253.9

VALVE TO FLARE ALMOST CLOSED

FLOW .01" H_2O VAC 25"

MERCURY Pump 549413 PRE 298.6 POST 238.6

CAL 3/8/06 ARSINE " " 203.2 209.3

BOTH AMBIENT SITES DIFFICULT TO COLLECT GOOD SAMPLE. LIGHT WINDS SWIRLING AROUND. MY NOSE REACTS FASTER THAN THE JEROME METER WITH THE H_2S. I SMELL IT, THEN IT GOES AWAY, A FEW SECONDS LATER I GET A READING ON THE JEROME. WE DID THE BEST WE COULD BUT MAY NEED TO GO BACK WHEN LESS WINDY?

HAD TO OPEN HOLE UP TO TAKE FLOW READING.

FLARE

WHEN WE TOOK DRAEGER TUBE DIDN'T GET A VERY HIGH READING MAYBE BECAUSE OF HIGH VACUUM ~~.06% H_2S~~ .1 % H_2S

GEM 2000 MULTI GAS METER
S/N GM08015/05 CALDATE 3/6/06

JEROME METER S/N 631-2313
CAL DATE 12/28/05

ALL WELL GAS READINGS
ARE ON SEPARATE SHEETS

WAS UNABLE TO DO FLOWS
BECAUSE THERE WAS SOMETHING
INSIDE PIPE COULD NOT STICK
PITOT TUBE ~~METER~~ IN ALSO HOLE TO SMALL
ONLY ~~A~~ 1/4" PIPE.

HAD ~~TEN~~ TWO DRAGGER TUBES LEFT
SO DID FLARE & EW1 AGAIN
EW1 2ND TUBE .05%
FLARE " .06%

FINISHED SAMPLING ~ 17:15

LEAVE SITE 18:05

Gas Flow Calculation

Title	Date	Dwg.	Project	Proposal
Flare Influent flow	3-9-05		MA - Newburyport - DEP	

Given: Air @ 25"wc vacuum, 4" sch 40 pipe
averaging pitot tube with K = 0.66

Find: flow @ 0.01"wc velocity head

Solution

$$Q = VA \qquad V = \sqrt{2g\Delta h} \qquad A = \frac{\pi}{4}d^2$$

$$Q = K\sqrt{2g\Delta h}\left(\frac{\pi d^2}{4}\right)$$

$$Q_m = K\sqrt{2\left(32.2\,\frac{ft}{s^2}\right)\left(\frac{0.01}{12}\times\frac{62.4}{0.075}\right)ft}\left(\frac{\pi\left(\frac{4.026}{12}\,in\right)^2}{4}\right)$$

$$Q_m = 0.39 \text{ mcfs}$$
$$\times\ 60 \text{ sec/min}$$

$$Q_m = 23 \text{ mcfm}$$

$$Q_s = 23 \times \underbrace{\sqrt{\frac{408 - 25"wc}{408"wc}}}_{\text{correction for vacuum}} = 23 \text{ mcfm}$$

Dennis Rentschler / ENSR

FORM 1052

Raw Data

Adirondack Environmental Services, Inc.®
Experience is the solution
314 North Pearl Street ♦ Albany, New York 12207
(800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

March 17, 2006

Steve Wright
ENSR Corporation
2 Technology Park Drive
Westford, MA 01886

TEL: (978) 589-3000
FAX: (978) 589-3100

Work Order No: 060310003
PO#: Call Steve Wright for PO

RE: Crow Lane Landfill, MA
Crow Lane Landfill

Dear Steve Wright:

Adirondack Environmental Services, Inc received 12 samples on 3/10/2006 for the analyses presented in the following report.

There were no problems with the analyses and all associated QC met EPA or laboratory specifications, except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

ELAP#: 10709
AIHA#: 100307

Christopher Hess
QA Manager

Steve Wright - FAX

Analytical Results
for
ENSR Corporation

WorkOrder: 060310003
Client Reference: Crow Lane Landfill, MA
PO#: Call Steve Wright for PO

Analyte	Concentration (ug)	Concentration (mg/m³)	Concentration (ppm)	Limit of Detection (ug)	Qual	Test Method	Date Analyzed /Analyst	
Client ID: AMB 1	**Lab ID:** 001A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 10.28	
Mercury	<0.0200	<0.00195	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: AMB 2	**Lab ID:** 002A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 10.86	
Mercury	<0.0200	<0.00184	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: Background	**Lab ID:** 003A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 10.84	
Mercury	<0.0200	<0.00185	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: EW 1	**Lab ID:** 004A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 11.99	
Mercury	<0.0200	<0.00167	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: TEW 2	**Lab ID:** 005A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 11.11	
Mercury	<0.0200	<0.00180	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: Flare Inlet	**Lab ID:** 006A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 14.13	
Mercury	<0.0200	<0.00142	--	0.02		Niosh 6009	03/17/2006	KH
Client ID: AMB 1	**Lab ID:** 007A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 4.21	
Arsine(arsenic trihydride),as As	<0.00500	<0.00119	--	0.005		NIOSH 6001	03/17/2006	SM
Client ID: AMB 2	**Lab ID:** 008A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 6.22	
Arsine(arsenic trihydride),as As	<0.00500	<0.000804	--	0.005		NIOSH 6001	03/17/2006	SM
Client ID: Background	**Lab ID:** 009A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 5.22	
Arsine(arsenic trihydride),as As	<0.00500	<0.000958	--	0.005		NIOSH 6001	03/17/2006	SM
Client ID: EW 1	**Lab ID:** 010A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 7.4	
Arsine(arsenic trihydride),as As	<0.00500	<0.000676	--	0.005		NIOSH 6001	03/17/2006	SM
Client ID: TEW 2	**Lab ID:** 011A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 4.86	
Arsine(arsenic trihydride),as As	<0.00500	<0.00103	--	0.005		NIOSH 6001	03/17/2006	SM
Client ID: Flare Inlet	**Lab ID:** 012A	**Date Sampled:** 3/8/2006					**Air Vol.(L):** 5.3	
Arsine(arsenic trihydride),as As	<0.00500	<0.000943	--	0.005		NIOSH 6001	03/17/2006	SM

General Notes:
<: Less than the indicated limit of detection (LOD).
--: Information not available or not applicable.
Results have not been Blank Corrected

Adirondack Environmental Services, Inc.

314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

060310003

REQUEST FOR INDUSTRIAL HYGIENE ANALYSIS

CLIENT NAME	PROJECT NAME (Location)	SAMPLERS' (Names)
ENSR	CROW LANE LANDFILL	KEN COBB
ADDRESS	**PO NUMBER**	**SAMPLERS' (Signatures)**
2 TECHNOLOGY PK DR. WILTFORD MASS	CALL STEVE WRIGHT AT ENSR	Ken Cobb

AES SAMPLE NUMBER	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME A = A.M. P = P.M.	MEDIA TYPE/ MATRIX	NO. OF CONT'S	TOTAL SAMPLING TIME (MIN.)	AIR SAMPLE VOLUME (LITERS)	ANALYSIS REQUESTED
001	AMB 1	3/8/06	A	TUBE		42	10.28	MERCURY N6009
002	AMB 2		A			42	10.86	
003	BACKGROUND		A			43	10.84	
004	EW 1		A			49	11.99	
005	TEW 2		A			43	11.11	
006	FLARE INLET		A			58	14.13	
			A					
007	AMB 1		A			26	4.21	ARSINE N6001
008	AMB 2		A			30	6.22	
009	BACKGROUND		A			26	5.22	
010	EW 1		A			38	7.40	
011	TEW 2		A			26	4.86	
012	FLARE INLET		A			26	5.30	
			A					

SEND REPORT TO	SEND INVOICE TO
STEVE WRIGHT ENSR	ENSR

Samples received in good condition: ___Y ___N
Samples collected on proper media: ___Y ___N
Comments:

TURN-AROUND TIME — PLEASE CHECK ALL THAT APPLY

- ☐ *STANDARD SERVICE
- ☒ *RUSH SERVICE — Results requested by: (1 WEEK TURNAROUND)
- ☐ FAX RESULTS TO: _____ FAX # ( )
- ☐ PHONE RESULTS TO: STEVE WRIGHT PH # (978) 589-3114

*Turn-around time varies by substance. For most substances, standard turn-around time is ten (10) working days. Please inquire for capacity of rush analysis.

LABORATORY APPROVAL	DATE	TIME	RECEIVED FOR LABORATORY BY	DATE	TIME
			D. Ful	3/10/06	8:50

CHAIN OF CUSTODY

RELINQUISHED BY (Signature)	RECEIVED BY (Signature)	DATE	TIME
RELINQUISHED BY (Signature)	**RECEIVED BY (Signature)**	**DATE**	**TIME**

WHITE — Lab Copy YELLOW — Sampler Copy PINK — Generator Copy

The Laboratory reserves the right to return hazardous samples to the client or may levy an appropriate fee per container for disposal.

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TERMS, CONDITIONS & LIMITATIONS

All Services rendered by **Adirondack Environmental Services, Inc.** are undertaken and all rates are based upon the following terms:

(a) Neither **Adirondack Environmental Services, Inc.**, nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of **Adirondack Environmental Services, Inc.'s** performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against **Adirondack Environmental Services, Inc.** arising out of its work.

(b) All claims made must be in writing within forty-five (45) days after delivery of the **Adirondack Environmental Services, Inc.** report regarding said work or such claim shall be deemed as irrevocably waived.

(c) **Adirondack Environmental Services, Inc.** reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an **Adirondack Environmental Services, Inc.** report by other than our customer does not constitute a representation of **Adirondack Environmental Services, Inc.** as to the accuracy of the contents thereof.

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(e) No deviation from the terms set forth herein shall bind **Adirondack Environmental Services, Inc.** unless in writing and signed by a Director of **Adirondack Environmental Services, Inc.**

(f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and **Adirondack Environmental Services, Inc.** is not responsible for the accuracy of this information.

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Albany, New York 12207
518-434-4546/434-0891 FAX

REQUEST FOR INDUSTRIAL HYGIENE ANALYSIS

CLIENT NAME	PROJECT NAME (Location)	SAMPLERS' (Names)
ENSR	CROW LANE LANDFILL	KEN LOW
ADDRESS 2 TECHNology PK DR WILTON MAIL	PO NUMBER CALL STEVE WRIGHT AT ENSR	SAMPLERS' (Signatures) Ken Low

AES SAMPLE NUMBER	SAMPLE IDENTIFICATION	DATE SAMPLED	TIME A = A.M. P = P.M.	MEDIA TYPE/ MATRIX	NO. OF CONT'S	TOTAL SAMPLING TIME (MIN.)	AIR SAMPLE VOLUME (LITERS)	ANALYSIS REQUESTED
	AMB 1	3/8/06	A/P	TUBE		42	10.28	METHOD NO. 9
	AMB 2		A/P			42	10.20	
	BACKGROUND		A/P			43	10.84	
	EW 1		A/P			49	11.77	
	TEW 2		A/P			43	11.11	
	FUGITIVE		A/P			58	12.13	
			A/P					
	AMB 1		A/P			50	4.51	ARSINE TUBE
	AMB 2		A/P			30	6.02	
	BACKGROUND		A/P			30	[illegible]	
	EW 1		A/P			32	7.40	
	TEW 2		A/P			20	4.50	
	FUGITIVE		A/P			30	5.30	
			A/P					

SEND REPORT TO	SEND INVOICE TO
STEVE WRIGHT ENSR	ENSR

Samples received in good condition: ___Y ___N
Samples collected on proper media: ___Y ___N
Comments:

TURN-AROUND TIME — PLEASE CHECK ALL THAT APPLY

- ☐ *STANDARD SERVICE
- ☒ *RUSH SERVICE — Results requested by: 1 WEEK TURNAROUND
- ☐ FAX RESULTS TO: _____ FAX # ( ) -
- ☐ PHONE RESULTS TO: STEVE WRIGHT PH # (716) 849-[illegible]

*Turn-around time varies by substance. For most substances, standard turn-around time is ten (10) working days. Please inquire for capacity of rush analysis.

LABORATORY APPROVAL	DATE	TIME	RECEIVED FOR LABORATORY BY	DATE	TIME

CHAIN OF CUSTODY

RELINQUISHED BY (Signature)	RECEIVED BY (Signature)	DATE	TIME
RELINQUISHED BY (Signature)	**RECEIVED BY (Signature)**	**DATE**	**TIME**

WHITE — Lab Copy YELLOW — Sampler Copy PINK — Generator Copy

The Laboratory reserves the right to return hazardous samples to the client or may levy an appropriate fee per container for disposal.

ENSR | AECOM

ENSR
Harvard Air Laboratory, 826 Ayer Road, Harvard, Massachusetts 01451
T 978.772.6345 F 978.772.4780 www.ensr.aecom.com

ENSR Air Toxics Specialty Laboratory
Analytical Report

Client: Steve Wright
ENSR
2 Technology Park Drive
Westford, MA 01886

Client ID: 10736-001

Laboratory ID: 06-061 TO-15

Date(s) Received: 3/9/06

All work contained in this report has been done in accordance with laboratory standard operating procedures. ENSR's Air Toxics Specialty Laboratory follows methodologies based upon standard EPA/NIOSH/OSHA Methods. Data contained herein should be considered accurate and complete to the best of our knowledge. This report cannot be duplicated in part without the written permission of ENSR.

Christopher Philbrick
Christopher Philbrick
Senior Chemist
ENSR Air Toxics Specialty Laboratory

3/20/06
Date

ACCREDITED IN ACCORDANCE WITH nelac
NYSDOH / NELAC # 11631

Case Narrative

Re: Volatile Organic Analysis of SUMMA® Canisters by Gas Chromatography/Mass Spectrometry (GC/MS) – **Crow Landfill**

Project #: **10736-001**

LAB ID #: **06-061**

ANALYTICAL PROCEDURE:

Seven (7) SUMMA® canister samples, including one trip blank, were analyzed for ENSR's TO-15 compound list under the guidelines of EPA TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography Mass Spectrometry (GC/MS)*.

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5973 mass selective detector (MSD) was employed for the analysis. A Nutech 3550A/3600 automatic concentrator was utilized for pre-concentration.

A 500-mL and/or 25-ml aliquot was drawn from each sample, concentrated at -160°C and then transferred to the GC/MSD for the analysis. The operating conditions of the GC/MSD are listed in Table 1.

GC/MSD calibration was performed with canister standards prepared for each target compound. Five to six-point calibrations were generated for each compound using these standards.

No problems occurred during sample receipt or login.

The sulfur analytes are reported under a separate cover letter.

QUALITY CONTROL:

1. A laboratory blank was analyzed daily prior to sample analysis in the same manner as the samples. Target compounds were not detected in the blank.

2. A laboratory check standard (LCS) was analyzed with the batch of samples. All percent recoveries were within the laboratory's QC acceptance limits.

3. Sample [AMB-1] was analyzed in duplicate. No compounds were detected in the initial or duplicate runs. Precision has been deemed acceptable. It should be noted that no tentatively identified compound information is provided on the duplicate report.

4. The SUMMA canisters for the samples were cleaned on 2/23/06 and 3/7/06 and were certified clean by the analysis of one canister (A204, A219) from each cleaning batch.

DISCUSSION:

1. Per the client's request, tentatively identified compounds (TICs) were identified and estimated concentrations were reported as part of the sample results.

2. Samples [WELL EW 1], [WELL TEW 2] and [INLET FLARE] were analyzed initially as twenty fold dilutions due to the expected elevated concentrations of target analytes which would have exceeded the calibrated range of the instrument and/or caused detector saturation if analyzed undiluted. The concentrations of acetone, trichlorofluoromethane, n-hexane, n-heptane and/or toluene in the samples still exceeded the calibrated range of the instrument. Due to analytical limitations, a further dilution was not performed. These diluted values have been reported and flagged with an "E" and should be considered estimated.

3. Due to high levels of hydrogen sulfide samples [WELL EW 1], [WELL TEW 2] and [INLET FLARE] yielded recoveries of the first and/or second internal standards that were below the laboratory's QC acceptance limits. Due to turn-around-time requirements, results from these initial analyses were reported.

TABLE 1

GC/MSD Operating Conditions

Instrument	Hewlett Packard 6890 GC/ 5973 MSD
Injector Temperature	220°C
Column	Rtx-1 60 m Capillary
Parameters	0.25mm ID, 1.0µm df
Carrier gas	UHP Helium; Flow rate = 2.0 cc/min
Detector	Mass Selective detector; Temperature: 240°C
Temperature program	Initial Temp.: 10°C Hold: 6.0 min
	Ramping Rate: 8.0°C/min
	Final Temp: 170°C Time 5. 0 min
Data System	HP ChemStation

TABLE 2

SUMMARY OF MAJOR METHOD MODIFICATIONS USED

TO-15 Method Requirement	ENSR SOP (ATSOP041) Requirement	Analytes Flagged
Initial calibration: All %RSDs must be <30%, with no more than two up to 40%	All %RSDs for NJ NELAP certified analytes must be <30% with no more than two up to 40%, for all other compounds if >30% may use linear or quadratic regression with R^2 of ≥0.990	N/A
Continuing/daily calibration: All %Ds must be less than 30%	All %Ds must be less than 30% for NJ NELAP certified analytes, with no more than 4 other compounds at 30-50%	N/A
BFB acceptance criteria	SW846 criteria (built into Chemstation software—more stringent than method requirements)	N/A
Replicate precision: Must be within 25%	Replicates must be within 30%	N/A

Date Analysis Started: 3/15/06

R:\Air_Tox\LAB\2006 Reports\06-061 Crow Landfill (TO15)\06-061 TO-15rpt.doc

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill
Lab Sample ID: 06-061-1
Client Sample ID: **AMB-1**

Laboratory ID: 06-061
Data File ID: 031406_09.D
Date Sampled: 3/8/06

Date Received: 3/9/06
Dilution Factor: 1.0
Date & Time Analyzed: 16 Mar 2006 4:27 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-1

Client Sample ID: **AMB-1**

Laboratory ID: 06-061

Data File ID: 031406_09.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 4:27 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	Crow Landfill	Lab Sample ID:	06-061-1	Client Sample ID:	**AMB-1**
Laboratory ID:	06-061	Data File ID:	031406_09.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 4:27 am

Compound	RT (min)	CAS #	Estimated ppbV
No tentatively identified compounds			

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill | Lab Sample ID: 06-061-2 | Client Sample ID: **AMB-2**

Laboratory ID: 06-061 | Data File ID: 031406_11.D | Date Sampled: 3/8/06

Date Received: 3/9/06 | Dilution Factor: 1.0 | Date & Time Analyzed: 16 Mar 2006 6:32 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-2

Client Sample ID: **AMB-2**

Laboratory ID: 06-061

Data File ID: 031406_11.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 6:32 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	Crow Landfill	Lab Sample ID:	06-061-2	Client Sample ID:	**AMB-2**
Laboratory ID:	06-061	Data File ID:	031406_11.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 6:32 am

Compound	RT (min)	CAS #	Estimated ppbV
No tentatively identified compounds			

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-3

Client Sample ID: **BACKGROUND**

Laboratory ID: 06-061

Data File ID: 031406_12.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 7:34 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-3

Client Sample ID: **BACKGROUND**

Laboratory ID: 06-061

Data File ID: 031406_12.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 7:34 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	Crow Landfill	Lab Sample ID:	06-061-3	Client Sample ID:	**BACKGROUND**
Laboratory ID:	N/A	Data File ID:	031406_12.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 7:34 am

Compound	RT (min)	CAS #	Estimated ppbV
No tentatively identified compounds			

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client:	Crow Landfill	Lab Sample ID:	06-061-4 20X	Client Sample ID:	**WELL EW 1**
Laboratory ID:	06-061	Data File ID:	031406_13.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 8:22 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	10 U	21 U
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106-99-0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	10 U	26 U
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	2500 E	6000 E
trichlorofluoromethane	75-69-4	330	1900
isopropanol	67-63-0	20 U	49 U
1,1-dichloroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	10 U	31 U
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
trans-1,2-dichloroethene	156-60-5	10 U	40 U
1,1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
vinyl acetate	108-05-4	10 U	35 U
2-butanone (MEK)	78-93-3	24	71
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	10 U	35 U
chloroform	67-66-3	10 U	49 U
ethyl acetate	141-78-6	10 U	36 U
tetrahydrofuran	109-99-9	10 U	29 U
1,2-dichloroethane	107-06-2	10 U	40 U
1,1,1-trichloroethane	71-55-6	10 U	55 U
benzene	71-43-2	64	210
carbon tetrachloride	56-23-5	10 U	63 U
cyclohexane	110-82-7	300	1000
1,2-dichloropropane	78-87-5	10 U	46 U
bromodichloromethane	75-27-4	10 U	67 U
2,2,4-trimethylpentane	540-84-1	65	310
1,4-dioxane	123-91-1	10 U	36 U
n-heptane	142-82-5	1200 E	4900 E
trichloroethene	79-01-6	36	200
cis-1,3-dichloropropene	10061-01-5	10 U	45 U
MIBK	108-10-1	79	330
trans-1,3-dichloropropene	10061-02-6	10 U	45 U
1,1,2-trichloroethane	79-00-5	10 U	55 U
toluene	108-88-3	2700 E	10000 E
2-hexanone	591-78-6	10 U	41 U
dibromochloromethane	124-48-1	10 U	85 U
1,2-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Laboratory ID: 06-061

Date Received: 3/9/06

Lab Sample ID: 06-061-4 20X

Data File ID: 031406_13.D

Dilution Factor: 20

Client Sample ID: **WELL EW 1**

Date Sampled: 3/8/06

Date & Time Analyzed: 16 Mar 2006 8:22 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	30	200
chlorobenzene	108-90-7	70	320
ethylbenzene	100-41-4	770	3300
p & m-xylene	106-42-3 & 108-38-3	840	3600
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	31	130
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	290	1300
4-ethyl toluene	622-96-8	110	510
1,3,5-trimethylbenzene	108-67-8	92	450
1,2,4-trimethylbenzene	95-63-6	180	890
benzyl chloride	100-44-7	10 U	52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	14	85
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2,4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client: Crow Landfill

Lab Sample ID: 06-061-4 20X

Client Sample ID: **WELL EW 1**

Laboratory ID: 06-061

Data File ID: 031406_13.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 20

Date & Time Analyzed: 16 Mar 2006 8:22 am

Compound	RT (min)	CAS #	Estimated ppbV
unknown	12.87	N/A	170
methyl cyclohexane	22.17	108-87-2	130
unknown	25.22	N/A	190
unknown C_9H_{18} hydrocarbon	27.88	N/A	130
n-nonane	28.06	111-84-2	300
unknown C_9H_{18} hydrocarbon	28.39	N/A	130
propyl cyclohexane	28.92	1678-92-8	120
alpha pinene	29.07	7785-70-8	2000
beta pinene	30.01	127-91-3	200
decane	30.27	124-18-5	190

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Laboratory ID: 06-061

Date Received: 3/9/06

Lab Sample ID: 06-061-5 20X

Data File ID: 031406_14.D

Dilution Factor: 20

Client Sample ID: **WELL TEW 2**

Date Sampled: 3/8/06

Date & Time Analyzed: 16 Mar 2006 12:21 pm

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	10 U	21 U
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106-99-0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	10 U	26 U
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	1700 E	4000 E
trichlorofluoromethane	75-69-4	53	300
isopropanol	67-63-0	20 U	49 U
1,1-dichloroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	19	59
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
trans-1,2-dichloroethene	156-60-5	10 U	40 U
1,1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
vinyl acetate	108-05-4	10 U	35 U
2-butanone (MEK)	78-93-3	10 U	29 U
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	1200 E	4100 E
chloroform	67-66-3	10 U	49 U
ethyl acetate	141-78-6	10 U	36 U
tetrahydrofuran	109-99-9	10 U	29 U
1,2-dichloroethane	107-06-2	10 U	40 U
1,1,1-trichloroethane	71-55-6	10 U	55 U
benzene	71-43-2	180	580
carbon tetrachloride	56-23-5	10 U	63 U
cyclohexane	110-82-7	420	1400
1,2-dichloropropane	78-87-5	10 U	46 U
bromodichloromethane	75-27-4	10 U	67 U
2,2,4-trimethylpentane	540-84-1	200	940
1,4-dioxane	123-91-1	10 U	36 U
n-heptane	142-82-5	1500 E	6000 E
trichloroethene	79-01-6	32	170
cis-1,3-dichloropropene	10061-01-5	10 U	45 U
MIBK	108-10-1	83	340
trans-1,3-dichloropropene	10061-02-6	10 U	45 U
1,1,2-trichloroethane	79-00-5	23	120
toluene	108-88-3	1400 E	5300 E
2-hexanone	591-78-6	10 U	41 U
dibromochloromethane	124-48-1	10 U	85 U
1,2-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-5 20X

Client Sample ID: **WELL TEW 2**

Laboratory ID: 06-061

Data File ID: 031406_14.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 20

Date & Time Analyzed: 16 Mar 2006 12:21 pm

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	31	210
chlorobenzene	108-90-7	230	1000
ethylbenzene	100-41-4	360	1600
p & m-xylene	106-42-3 & 108-38-3	440	1900
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	10 U	43 U
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	120	530
4-ethyl toluene	622-96-8	42	200
1,3,5-trimethylbenzene	108-67-8	74	360
1,2,4-trimethylbenzene	95-63-6	73	360
benzyl chloride	100-44-7	10 U	52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	30	180
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2,4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client: Crow Landfill | Lab Sample ID: 06-061-5 20X | Client Sample ID: **WELL TEW 2**

Laboratory ID: 06-061 | Data File ID: 031406_14.D | Date Sampled: 3/8/06

Date Received: 3/9/06 | Dilution Factor: 20 | Date & Time Analyzed: 16 Mar 2006 12:21 pm

Compound	RT (min)	CAS #	Estimated ppbV
methyl cyclohexane	21.48	108-87-2	2100
unknown C_8H_{16} hydrocarbon	24.20	N/A	350
1,1,3-trimethylbenzene	26.37	3073-66-3	320
3-methyl octane	27.31	2216-33-3	400
unknown	27.83	N/A	370
unknown	28.35	N/A	300
unknown	28.69	N/A	510
2,6-dimethyl octane	28.90	2051-30-1	920
unknown	29.64	N/A	290
1,2,3-trimethylbenzene	30.12	526-73-7	310

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill | Lab Sample ID: 06-061-6 20X | Client Sample ID: **INLET FLARE**

Laboratory ID: 06-061 | Data File ID: 031406_15.D | Date Sampled: 3/8/06

Date Received: 3/9/06 | Dilution Factor: 20 | Date & Time Analyzed: 16 Mar 2006 1:09 pm

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	10 U	17 U
dichlorodifluoromethane	75-71-8	10 U	49 U
chloromethane	74-87-3	11	23
Freon-114	76-14-2	10 U	70 U
vinyl chloride	75-01-4	10 U	26 U
1,3-butadiene	106-99-0	10 U	22 U
bromomethane	74-83-9	10 U	39 U
chloroethane	75-00-3	42	110
vinyl bromide	593-60-2	10 U	44 U
acetone	67-64-1	20 U	48 U
trichlorofluoromethane	75-69-4	1700 E	9700 E
isopropanol	67-63-0	20 U	49 U
1,1-dichloroethene	75-35-4	10 U	40 U
methylene chloride	75-09-2	20 U	69 U
3-chloropropene	107-05-1	10 U	31 U
carbon disulfide	75-15-0	10 U	31 U
Freon-113	76-13-1	10 U	77 U
trans-1,2-dichloroethene	156-60-5	10 U	40 U
1,1-dichloroethane	75-34-3	10 U	40 U
MTBE	1634-04-4	10 U	36 U
vinyl acetate	108-05-4	10 U	35 U
2-butanone (MEK)	78-93-3	130	370
cis-1,2-dichloroethene	156-59-2	10 U	40 U
n-hexane	110-54-3	10 U	35 U
chloroform	67-66-3	10 U	49 U
ethyl acetate	141-78-6	10 U	36 U
tetrahydrofuran	109-99-9	44	130
1,2-dichloroethane	107-06-2	10 U	40 U
1,1,1-trichloroethane	71-55-6	10 U	55 U
benzene	71-43-2	190	620
carbon tetrachloride	56-23-5	10 U	63 U
cyclohexane	110-82-7	440	1500
1,2-dichloropropane	78-87-5	10 U	46 U
bromodichloromethane	75-27-4	10 U	67 U
2,2,4-trimethylpentane	540-84-1	130	610
1,4-dioxane	123-91-1	10 U	36 U
n-heptane	142-82-5	1800 E	7500 E
trichloroethene	79-01-6	58	310
cis-1,3-dichloropropene	10061-01-5	10 U	45 U
MIBK	108-10-1	210	850
trans-1,3-dichloropropene	10061-02-6	10 U	45 U
1,1,2-trichloroethane	79-00-5	10 U	55 U
toluene	108-88-3	2500 E	9300 E
2-hexanone	591-78-6	10 U	41 U
dibromochloromethane	124-48-1	10 U	85 U
1,2-dibromoethane	106-93-4	10 U	77 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client:	Crow Landfill	Lab Sample ID:	06-061-6 20X	Client Sample ID:	**INLET FLARE**
Laboratory ID:	06-061	Data File ID:	031406_15.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	20	Date & Time Analyzed:	16 Mar 2006 1:09 pm

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	58	390
chlorobenzene	108-90-7	140	660
ethylbenzene	100-41-4	880	3800
p & m-xylene	106-42-3 & 108-38-3	1100	4900
bromoform	75-25-2	10 U	100 U
styrene	100-42-5	10 U	43 U
1,1,2,2-tetrachloroethane	79-34-5	10 U	69 U
o-xylene	95-47-6	290	1300
4-ethyl toluene	622-96-8	92	450
1,3,5-trimethylbenzene	108-67-8	90	440
1,2,4-trimethylbenzene	95-63-6	230	1100
benzyl chloride	100-44-7	10 U	52 U
1,3-dichlorobenzene	541-73-1	10 U	60 U
1,4-dichlorobenzene	106-46-7	27	170
1,2-dichlorobenzene	95-50-1	10 U	60 U
1,2,4-trichlorobenzene	120-82-1	10 U	74 U
hexachlorobutadiene	87-68-3	10 U	110 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client: Crow Landfill | Lab Sample ID: 06-061-6 20X | Client Sample ID: **INLET FLARE**

Laboratory ID: 06-061 | Data File ID: 031406_15.D | Date Sampled: 3/8/06

Date Received: 3/9/06 | Dilution Factor: 20 | Date & Time Analyzed: 16 Mar 2006 1:09 pm

Compound	RT (min)	CAS #	Estimated ppbV
methyl cyclohexane	22.12	108-87-2	300
unknown C_8H_{16} hydrocarbon	24.50	N/A	160
3-methyl octane	27.36	2216-33-3	180
unknown	27.88	N/A	170
n-nonane	28.04	111-84-2	210
unknown C_9H_{18} hydrocarbon	28.38	N/A	160
2-6-dimethyl octane	28.90	2051-30-1	220
propyl-cyclohexane	28.92	1678-92-8	200
alpha pinene	29.05	7785-70-8	1000
unknown aliphatic hydrocarbon	30.26	N/A	170

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Laboratory ID: 06-061

Date Received: 3/9/06

Lab Sample ID: 06-061-7

Data File ID: 031406_08.D

Dilution Factor: 1.0

Client Sample ID: **BLANK**

Date Sampled: 3/8/06

Date & Time Analyzed: 16 Mar 2006 3:24 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client: Crow Landfill

Lab Sample ID: 06-061-7

Client Sample ID: **BLANK**

Laboratory ID: 06-061

Data File ID: 031406_08.D

Date Sampled: 3/8/06

Date Received: 3/9/06

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 3:24 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

TENTATIVELY IDENTIFIED COMPOUNDS

Client:	06-061	Lab Sample ID:	06-061-7	Client Sample ID:	**BLANK**
Laboratory ID:	06-061	Data File ID:	031406_08.D	Date Sampled:	3/8/06
Date Received:	3/9/06	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 3:24 am

Compound	RT (min)	CAS #	Estimated ppbV
No tentatively identified compounds			

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-METHOD BLANK

Client: Crow Landfill | Lab Sample ID: METHOD BLANK | Client Sample ID: N/A

Laboratory ID: 06-061 | Data File ID: 031406_07.D | Date Sampled: N/A

Date Received: N/A | Dilution Factor: 1.0 | Date & Time Analyzed: 16 Mar 2006 1:18 am

Compound	CAS #	ppbV	ug/m^3
propylene	115-7-1	0.50 U	0.86 U
dichlorodifluoromethane	75-71-8	0.50 U	2.5 U
chloromethane	74-87-3	0.50 U	1.0 U
Freon-114	76-14-2	0.50 U	3.5 U
vinyl chloride	75-01-4	0.50 U	1.3 U
1,3-butadiene	106-99-0	0.50 U	1.1 U
bromomethane	74-83-9	0.50 U	1.9 U
chloroethane	75-00-3	0.50 U	1.3 U
vinyl bromide	593-60-2	0.50 U	2.2 U
acetone	67-64-1	1.0 U	2.4 U
trichlorofluoromethane	75-69-4	0.50 U	2.8 U
isopropanol	67-63-0	1.0 U	2.5 U
1,1-dichloroethene	75-35-4	0.50 U	2.0 U
methylene chloride	75-09-2	1.0 U	3.5 U
3-chloropropene	107-05-1	0.50 U	1.6 U
carbon disulfide	75-15-0	0.50 U	1.6 U
Freon-113	76-13-1	0.50 U	3.8 U
trans-1,2-dichloroethene	156-60-5	0.50 U	2.0 U
1,1-dichloroethane	75-34-3	0.50 U	2.0 U
MTBE	1634-04-4	0.50 U	1.8 U
vinyl acetate	108-05-4	0.50 U	1.8 U
2-butanone (MEK)	78-93-3	0.50 U	1.5 U
cis-1,2-dichloroethene	156-59-2	0.50 U	2.0 U
n-hexane	110-54-3	0.50 U	1.8 U
chloroform	67-66-3	0.50 U	2.4 U
ethyl acetate	141-78-6	0.50 U	1.8 U
tetrahydrofuran	109-99-9	0.50 U	1.5 U
1,2-dichloroethane	107-06-2	0.50 U	2.0 U
1,1,1-trichloroethane	71-55-6	0.50 U	2.7 U
benzene	71-43-2	0.50 U	1.6 U
carbon tetrachloride	56-23-5	0.50 U	3.1 U
cyclohexane	110-82-7	0.50 U	1.7 U
1,2-dichloropropane	78-87-5	0.50 U	2.3 U
bromodichloromethane	75-27-4	0.50 U	3.4 U
2,2,4-trimethylpentane	540-84-1	0.50 U	2.3 U
1,4-dioxane	123-91-1	0.50 U	1.8 U
n-heptane	142-82-5	0.50 U	2.0 U
trichloroethene	79-01-6	0.50 U	2.7 U
cis-1,3-dichloropropene	10061-01-5	0.50 U	2.3 U
MIBK	108-10-1	0.50 U	2.0 U
trans-1,3-dichloropropene	10061-02-6	0.50 U	2.3 U
1,1,2-trichloroethane	79-00-5	0.50 U	2.7 U
toluene	108-88-3	0.50 U	1.9 U
2-hexanone	591-78-6	0.50 U	2.0 U
dibromochloromethane	124-48-1	0.50 U	4.3 U
1,2-dibromoethane	106-93-4	0.50 U	3.8 U

U= undetected at specified reporting limit
B= analyte found in blank

E= value exceeded upper range of calibration
D= value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-METHOD BLANK

Client:	Crow Landfill	Lab Sample ID:	METHOD BLANK	Client Sample ID:	N/A
Laboratory ID:	06-061	Data File ID:	031406_07.D	Date Sampled:	N/A
Date Received:	N/A	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 1:18 am

Compound	CAS #	ppbV	ug/m^3
tetrachloroethene	127-18-4	0.50 U	3.4 U
chlorobenzene	108-90-7	0.50 U	2.3 U
ethylbenzene	100-41-4	0.50 U	2.2 U
p & m-xylene	106-42-3 & 108-38-3	1.0 U	4.3 U
bromoform	75-25-2	0.50 U	5.2 U
styrene	100-42-5	0.50 U	2.1 U
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	3.4 U
o-xylene	95-47-6	0.50 U	2.2 U
4-ethyl toluene	622-96-8	0.50 U	2.5 U
1,3,5-trimethylbenzene	108-67-8	0.50 U	2.5 U
1,2,4-trimethylbenzene	95-63-6	0.50 U	2.5 U
benzyl chloride	100-44-7	0.50 U	2.6 U
1,3-dichlorobenzene	541-73-1	0.50 U	3.0 U
1,4-dichlorobenzene	106-46-7	0.50 U	3.0 U
1,2-dichlorobenzene	95-50-1	0.50 U	3.0 U
1,2,4-trichlorobenzene	120-82-1	0.50 U	3.7 U
hexachlorobutadiene	87-68-3	0.50 U	5.3 U

U= undetected at specified reporting limit
B= analyte found in blank

E= value exceeded upper range of calibration
D= value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Client:	Crow Landfill	Lab Sample ID:	METHOD BLANK	Client Sample ID:	N/A
Laboratory ID:	06-061	Data File ID:	031406_07.D	Date Sampled:	N/A
Date Received:	N/A	Dilution Factor:	1.0	Date & Time Analyzed:	16 Mar 2006 1:18 am

Compound	RT (min)	CAS #	Estimated ppbV
No tentatively identified compounds			

U = undetected at specified reporting limit
B = analyte found in blank

E = value exceeded upper range of calibration
D = value obtained from diluted analysis

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-LABORATORY CONTROL SPIKE

Client: Crow Landfill | Lab Sample ID: 5.0 TO15 LCS | Client Sample ID: N/A

Laboratory ID: 06-061 | Data File ID: 031406_04.D | Date Sampled: N/A

Date Received: N/A | Dilution Factor: 1.0 | Date & Time Analyzed: 15 Mar 2006 11:13 pm

Compound	ppbV	ug/m^3	True Value ppbV	% Recovery	Control Limits
dichlorodifluoromethane	3.8	19	5.0	76%	70-130%
chloromethane	3.7	7.6	5.0	73%	70-130%
Freon-114	4.0	28	5.0	79%	70-130%
vinyl chloride	3.9	9.9	5.0	77%	70-130%
bromomethane	3.6	14	5.0	71%	70-130%
chloroethane	3.5	9.3	5.0	70%	70-130%
trichlorofluoromethane	3.9	22	5.0	78%	70-130%
1,1-dichloroethene	4.0	16	5.0	80%	70-130%
methylene chloride	3.6	12	5.0	71%	70-130%
Freon-113	3.7	28	5.0	73%	70-130%
1,1-dichloroethane	4.0	16	5.0	79%	70-130%
cis-1,2-dichloroethene	4.1	16	5.0	82%	70-130%
chloroform	3.9	19	5.0	78%	70-130%
1,2-dichloroethane	3.7	15	5.0	73%	70-130%
1,1,1-trichloroethane	4.0	22	5.0	80%	70-130%
benzene	4.0	13	5.0	81%	70-130%
carbon tetrachloride	4.1	26	5.0	81%	70-130%
1,2-dichloropropane	3.9	18	5.0	78%	70-130%
trichloroethene	3.9	21	5.0	77%	70-130%
cis-1,3-dichloropropene	4.1	19	5.0	83%	70-130%
trans-1,3-dichloropropene	3.9	18	5.0	77%	70-130%
1,1,2-trichloroethane	3.9	21	5.0	77%	70-130%
toluene	3.6	14	5.0	73%	70-130%
1,2-dibromoethane	3.7	29	5.0	75%	70-130%
tetrachloroethene	3.9	26	5.0	78%	70-130%
chlorobenzene	3.9	18	5.0	79%	70-130%
ethylbenzene	3.9	17	5.0	78%	70-130%
p & m-xylene	7.6	33	10	76%	70-130%
styrene	3.7	16	5.0	75%	70-130%
1,1,2,2-tetrachloroethane	4.1	28	5.0	82%	70-130%
o-xylene	3.5	15	5.0	71%	70-130%
1,3,5-trimethylbenzene	4.0	20	5.0	81%	70-130%
1,2,4-trimethylbenzene	3.7	18	5.0	74%	70-130%
1,3-dichlorobenzene	3.7	22	5.0	74%	70-130%
1,4-dichlorobenzene	3.6	21	5.0	71%	70-130%
1,2-dichlorobenzene	3.9	23	5.0	78%	70-130%
1,2,4-trichlorobenzene	3.5	26	5.0	70%	70-130%
hexachlorobutadiene	4.2	44	5.0	83%	70-130%

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-DUPLICATE ANALYSES

Client: Crow Landfill

Lab Sample IDs: 06-061-1 06-061-1 DUP

Client Sample ID: AMB-1

Laboratory ID: 06-061

Data File IDs: 031406_09.D 031406_10.D

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 4:27 am 16 Mar 2006 5:29 am

Compound	CAS #	ppbV	ppbV DUP	% RPD
propylene	115-7-1	0.50 U	0.50 U	NC
dichlorodifluoromethane	75-71-8	0.50 U	0.50 U	NC
chloromethane	74-87-3	0.50 U	0.50 U	NC
Freon-114	76-14-2	0.50 U	0.50 U	NC
vinyl chloride	75-01-4	0.50 U	0.50 U	NC
1,3-butadiene	106-99-0	0.50 U	0.50 U	NC
bromomethane	74-83-9	0.50 U	0.50 U	NC
chloroethane	75-00-3	0.50 U	0.50 U	NC
vinyl bromide	593-60-2	0.50 U	0.50 U	NC
acetone	67-64-1	1.0 U	1.0 U	NC
trichlorofluoromethane	75-69-4	0.50 U	0.50 U	NC
isopropanol	67-63-0	1.0 U	1.0 U	NC
1,1-dichloroethene	75-35-4	0.50 U	0.50 U	NC
methylene chloride	75-09-2	1.0 U	1.0 U	NC
3-chloropropene	107-05-1	0.50 U	0.50 U	NC
carbon disulfide	75-15-0	0.50 U	0.50 U	NC
Freon-113	76-13-1	0.50 U	0.50 U	NC
trans-1,2-dichloroethene	156-60-5	0.50 U	0.50 U	NC
1,1-dichloroethane	75-34-3	0.50 U	0.50 U	NC
MTBE	1634-04-4	0.50 U	0.50 U	NC
vinyl acetate	108-05-4	0.50 U	0.50 U	NC
2-butanone (MEK)	78-93-3	0.50 U	0.50 U	NC
cis-1,2-dichloroethene	156-59-2	0.50 U	0.50 U	NC
n-hexane	110-54-3	0.50 U	0.50 U	NC
chloroform	67-66-3	0.50 U	0.50 U	NC
ethyl acetate	141-78-6	0.50 U	0.50 U	NC
tetrahydrofuran	109-99-9	0.50 U	0.50 U	NC
1,2-dichloroethane	107-06-2	0.50 U	0.50 U	NC
1,1,1-trichloroethane	71-55-6	0.50 U	0.50 U	NC
benzene	71-43-2	0.50 U	0.50 U	NC
carbon tetrachloride	56-23-5	0.50 U	0.50 U	NC
cyclohexane	110-82-7	0.50 U	0.50 U	NC
1,2-dichloropropane	78-87-5	0.50 U	0.50 U	NC
bromodichloromethane	75-27-4	0.50 U	0.50 U	NC
2,2,4-trimethylpentane	540-84-1	0.50 U	0.50 U	NC
1,4-dioxane	123-91-1	0.50 U	0.50 U	NC
n-heptane	142-82-5	0.50 U	0.50 U	NC
trichloroethene	79-01-6	0.50 U	0.50 U	NC
cis-1,3-dichloropropene	10061-01-5	0.50 U	0.50 U	NC
MIBK	108-10-1	0.50 U	0.50 U	NC
trans-1,3-dichloropropene	10061-02-6	0.50 U	0.50 U	NC
1,1,2-trichloroethane	79-00-5	0.50 U	0.50 U	NC
toluene	108-88-3	0.50 U	0.50 U	NC
2-hexanone	591-78-6	0.50 U	0.50 U	NC
dibromochloromethane	124-48-1	0.50 U	0.50 U	NC
1,2-dibromoethane	106-93-4	0.50 U	0.50 U	NC

U = undetected at specified reporting limit
B = analyte found in blank
NC = not calculable

E = value exceeded upper range of calibration
D = value obtained from diluted analysis
RPD Limit = 30%

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-DUPLICATE ANALYSES

Client: Crow Landfill

Lab Sample IDs: 06-061-1 06-061-1 DUP

Client Sample ID: AMB-1

Laboratory ID: 06-061

Data File IDs: 031406_09.D 031406_10.D

Dilution Factor: 1.0

Date & Time Analyzed: 16 Mar 2006 4:27 am 16 Mar 2006 5:29 am

Compound	CAS #	ppbV	ppbV DUP	% RPD
tetrachloroethene	127-18-4	0.50 U	0.50 U	NC
chlorobenzene	108-90-7	0.50 U	0.50 U	NC
ethylbenzene	100-41-4	0.50 U	0.50 U	NC
p & m-xylene	106-42-3 & 108-38-3	1.0 U	1.0 U	NC
bromoform	75-25-2	0.50 U	0.50 U	NC
styrene	100-42-5	0.50 U	0.50 U	NC
1,1,2,2-tetrachloroethane	79-34-5	0.50 U	0.50 U	NC
o-xylene	95-47-6	0.50 U	0.50 U	NC
4-ethyl toluene	622-96-8	0.50 U	0.50 U	NC
1,3,5-trimethylbenzene	108-67-8	0.50 U	0.50 U	NC
1,2,4-trimethylbenzene	95-63-6	0.50 U	0.50 U	NC
benzyl chloride	100-44-7	0.50 U	0.50 U	NC
1,3-dichlorobenzene	541-73-1	0.50 U	0.50 U	NC
1,4-dichlorobenzene	106-46-7	0.50 U	0.50 U	NC
1,2-dichlorobenzene	95-50-1	0.50 U	0.50 U	NC
1,2,4-trichlorobenzene	120-82-1	0.50 U	0.50 U	NC
hexachlorobutadiene	87-68-3	0.50 U	0.50 U	NC

U = undetected at specified reporting limit
B = analyte found in blank
NC = not calculable

E = value exceeded upper range of calibration
D = value obtained from diluted analysis
RPD Limit = 30%

ENSR INTERNATIONAL
ENSR Air Laboratory
325 Ayer Rd
Harvard, MA 01451-1132
Phone: (978) 772-2345
Fax: (978) 772-4956

CHAIN OF CUSTODY RECORD

Client: DEP
Project Name: CROW LAND LANDFILL
Location: NEWBURYPORT MA
Project Number: 10736-001
Field Logbook No.: 12052271
Chain of Custody Tape No.:
Sampler: (Print Name)/(Affiliation)
Signature: KEN COBB / ENSR
Send Results/Report to: STEVE WRIGHT
Email:

Analysis Requested: TO-15 + 10 TICs

Field Sample No./ Identification	Date	Time	Grab	Comp	Sample Container (Can/Bag)	Canister I.D.	Regulator I.D.	Sample Type (Soil gas/ambient)	TO-15 + 10 TICs				Lab I.D.	Remarks
AMB 1	3/8/06	7:42	✓		CAN	A217			X				06-0649	
AMB 2		8:49	✓			A235			X				-2	
BACKGROUND		10:08	✓			A230			X				-3	
WELL EW 1		14:21	✓			C135			X				-4	
WELL TEW 2		15:29	✓			C141			X				-5	
INLET ~~BOOSTER~~ FLARE		~~14:45~~ 11:45	✓			B241			X				-6	
BLANK						A204			X				DL-061-7	

Relinquished by: (print name)	Date: 3/8/06	Received by: (print name)	Date:	Turn-Around Time:
Signature: Ken Cobb	Time: 11:45	Signature: AB	Time:	☒ Standard 10-day
				☐ RUSH (only pre-approved jobs guaranteed)
Relinquished by: (print name)	Date:	Received by: (print name)	Date:	Notes: (i.e., special reporting limits needed, billing information)
Signature:	Time:	Signature:	Time:	
Relinquished by: (print name)	Date:	Received for laboratory by: (print name) Allyson Brown	Date: 3/9/06	
Signature:	Time:	Signature:	Time: 11:45	

M2K0262.1001a

White: Original (to Lab) Yellow: Lab Pink: Sampler

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06-0649 1 of 2

SAMPLE LOG-IN & RECEIPT CHECKLIST

Client/Proj# Crow Lane Landfill / 10736-001

Project Mgr: Steve Wright Lab Pool #: 06-061

Inspected & Logged in by: A Fosune Date & Time: 3/9/06 1145

Sample Matrix	Number of Samples	Analysis Requested	Hold Time & Due by(date)	Storage Location	Disposal Date*
Tedlar Bags	6	Sulfur comps via MS mod	HT: 3/11/06 Due: 3/23/06	GC lab	
Summa cans	7	TO-15 + 10 TICs	HT: 4/6/06 Due: 3/23/06	GCMS lab	
			HT: Due:		

Circle the appropriate response:

1) Shipped / Hand delivered

2) COC present / not present on receipt

3) COC Tape present / not present on shipping container N/A

4) Samples broken / leaking / intact on receipt

5) Samples ambient / chilled on receipt

6) Samples preserved correctly / incorrectly / none recommended

7) Received within / outside holding time

8) COC tapes present / not present on samples

9) Discrepancies / NO discrepancies noted between COCs and samples

Additional Comments: _____

*= Note that all Canister samples will be considered disposed of during next cleaning.
For canister samples, please refer to Canister Log Book for details.

R:\Air_Tox\LAB\Lab forms\samplog.xls
Last Revised 5/30/03

ENSR Air Laboratory
325 Ayer Rd
Harvard, MA 01451-1132
Phone: (978) 772-2345
Fax: (978) 772-4956

CHAIN OF CUSTODY RECORD

Client: DEP	Project Name: CLAW CAN LANDFILL	Location: NEWBURY MA
Project Number: 10736-001	Field Logbook No.: 128-0271	Chain of Custody Tape No.:
Sampler: (Print Name)/(Affiliation)	Send Results/Report to:	Email:
Signature: KEN Cobb / ENSR	STEVE WIZIOT	

Analysis Requested: TO-15 + TOTALS

Field Sample No./ Identification	Date	Time	Grab	Comp	Sample Container (Can/Bag)	Canister I.D.	Regulator I.D.	Sample Type (Soil gas/ambient)	TO-15 + TOTALS				Lab I.D.	Remarks
AMB 1	3/8/06	7:42	✓		CAN				X					
AMB 2		8:49	✓						X					
BACKGROUND		10:08	✓						X					
WELL EW 1		14:21	✓						X					
WELL TEW 2		15:09	✓						X					
~~WELL~~ FLARE		~~15:38~~ 11:43	✓						X					
BLANK									X					

Relinquished by: (print name) Signature:	Date: Time:	Received by: (print name) Signature:	Date: Time:
Relinquished by: (print name) Signature:	Date: Time:	Received by: (print name) Signature:	Date: Time:
Relinquished by: (print name) Signature:	Date: Time:	Received for laboratory by: (print name) Signature:	Date: 3/8/06 Time: 1405

Turn-Around Time:
- [x] Standard 10-day
- [ ] RUSH (only pre-approved jobs guaranteed)

Notes: (i.e., special reporting limits needed, billing information)

M2K0262.1001a

White: Original (to Lab) Yellow: Lab Pink: Sampler

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:02 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.70	128	672817	10.00 ppbV	-0.10
4) 1,4-difluorobenzene	19.39	114	4078825	10.00 ppbV	-0.05
7) chlorobenzene-d5	26.27	117	5108566	10.00 ppbV	-0.02

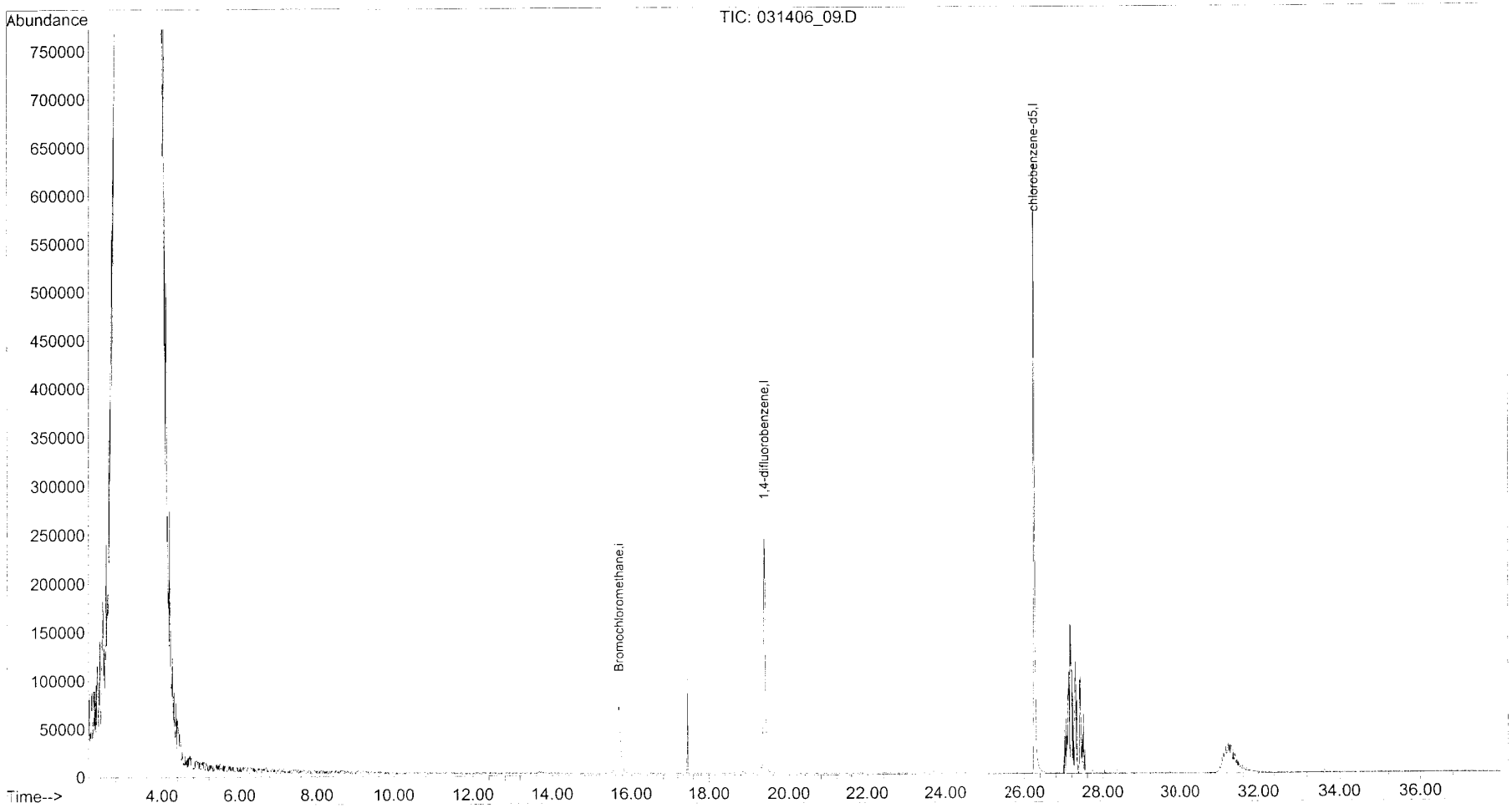
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:02 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 A217 031506_09

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 01:58:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 15:48:03 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.69	128	637314	10.00 ppbV	-0.11
4) 1,4-difluorobenzene	19.38	114	3765796	10.00 ppbV	-0.07
7) chlorobenzene-d5	26.26	117	4415292	10.00 ppbV	-0.03

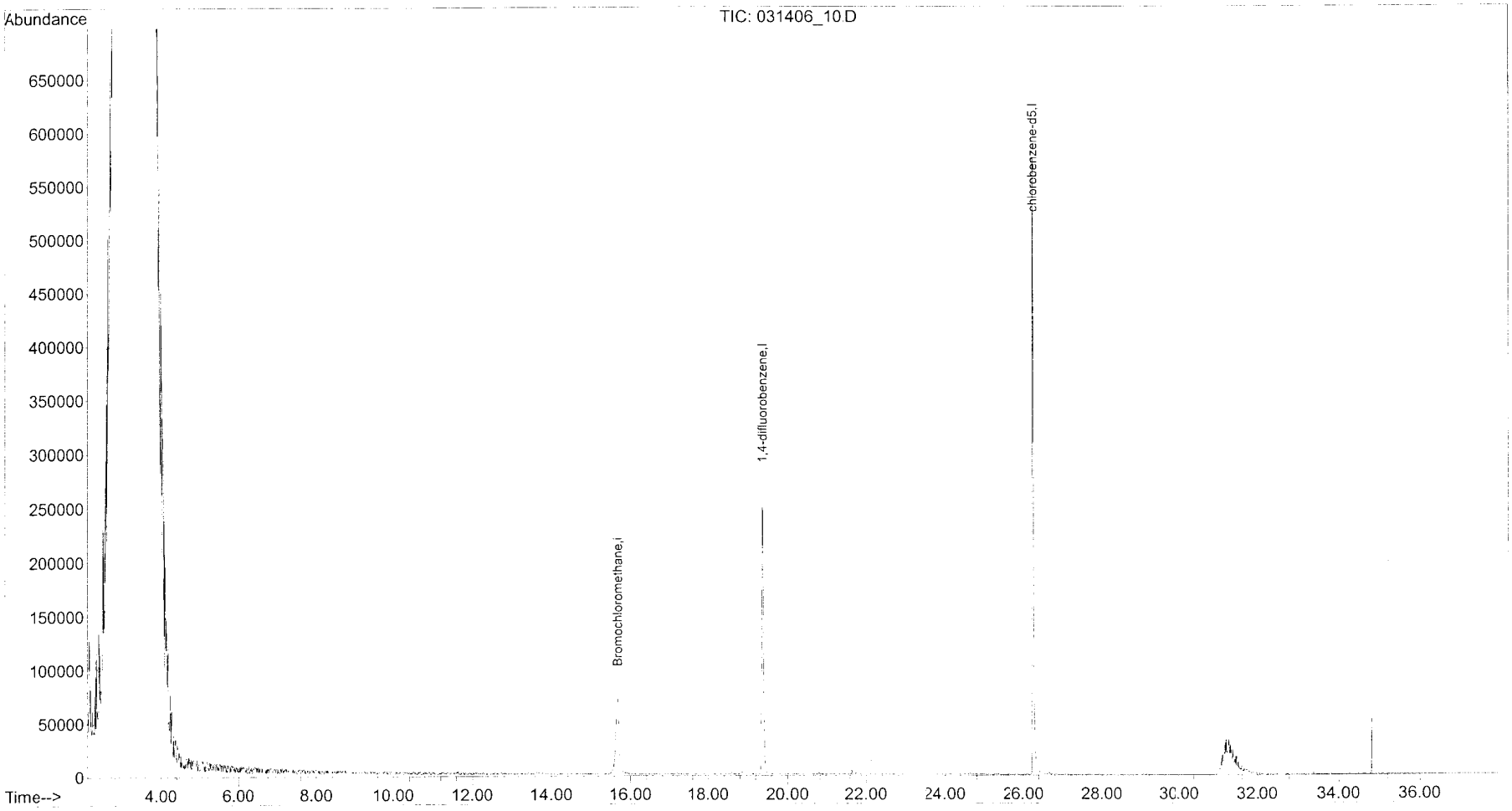
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 15:48:03 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 DUP 031506_10

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 03:00:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 16:02:56 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.70	128	848396	10.00 ppbV	-0.10
4) 1,4-difluorobenzene	19.39	114	4252793m	10.00 ppbV	-0.06
7) chlorobenzene-d5	26.27	117	5347579	10.00 ppbV	-0.02

Target Compounds	Qvalue

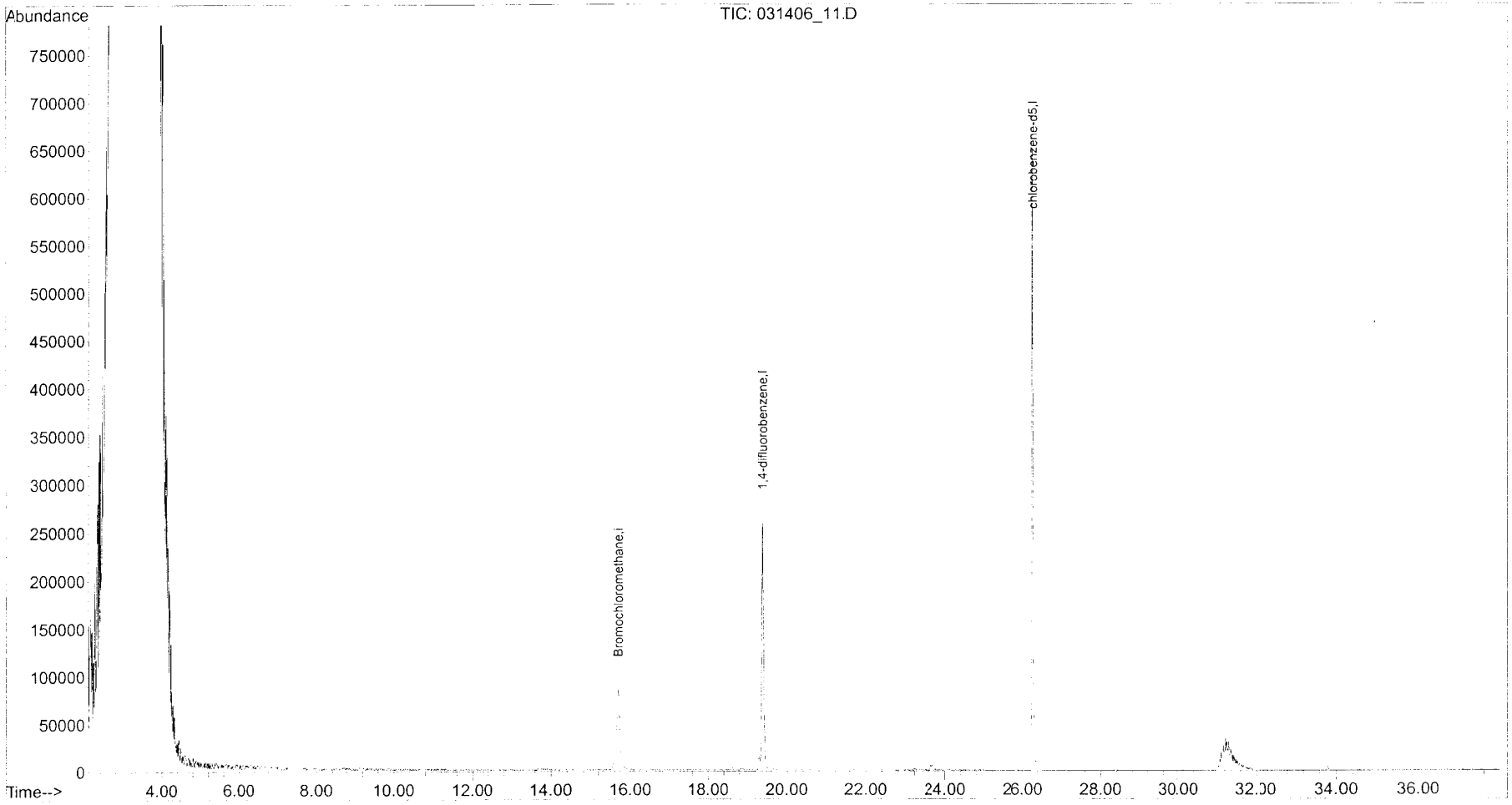
(#) = qualifier out of range (m) = manual integration (+) = signals summed

GP 3/20/06

Quantitation Report (Q1 Re[illegible] ed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 16:02:56 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-2 B235 031506_11

Inlet Position : 5

Injection Number: 1

Run Information

Inject Time : 04:03:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:03:18 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	14.93	128	842461m	10.00 ppbV	-0.87
4) 1,4-difluorobenzene	18.91	114	4045005m	10.00 ppbV	-0.54
7) chlorobenzene-d5	26.17	117	4354594	10.00 ppbV	-0.12

Target Compounds	Qvalue

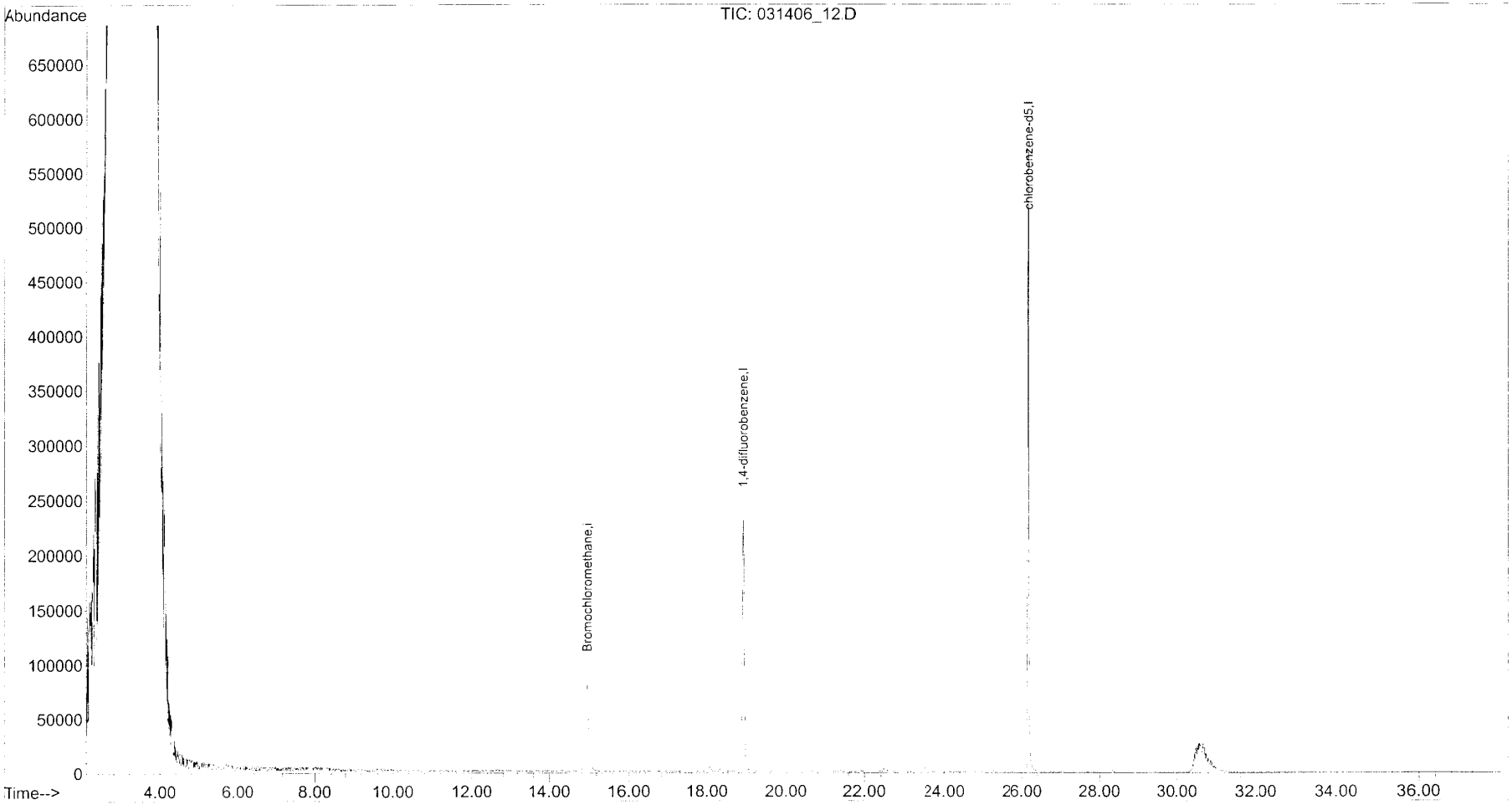
(#) = qualifier out of range (m) = manual integration (+) = signals summed

SP 3/20/06

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:03:18 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-3 A230 031506_12

Inlet Position : 6

Injection Number: 1

Run Information

Inject Time : 05:05:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 16:04:07 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.26	128	417255m	10.00 ppbV	-0.53
4) 1,4-difluorobenzene	19.30	114	2855963m	10.00 ppbV	-0.14
7) chlorobenzene-d5	26.27	117	5570010m	10.00 ppbV	-0.02

Target Compounds					Qvalue
3) vinyl acetate	14.27	43	94866	~~1.83263 ppbV #~~	74
6) MIBK	22.27	43	456077m	3.97265 ppbV	

Not good data

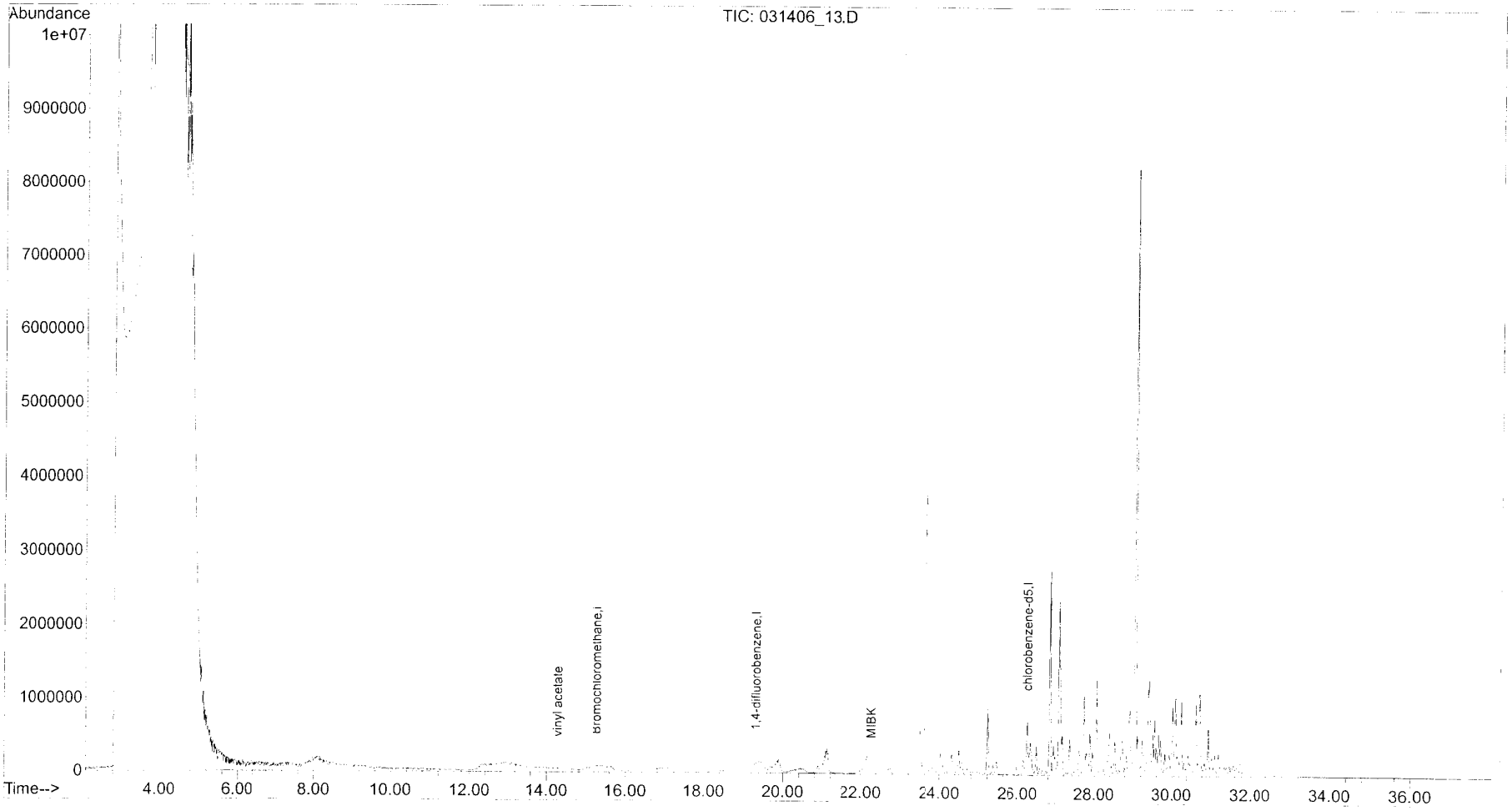
(#) = qualifier out of range (m) = manual integration (+) = signals summed

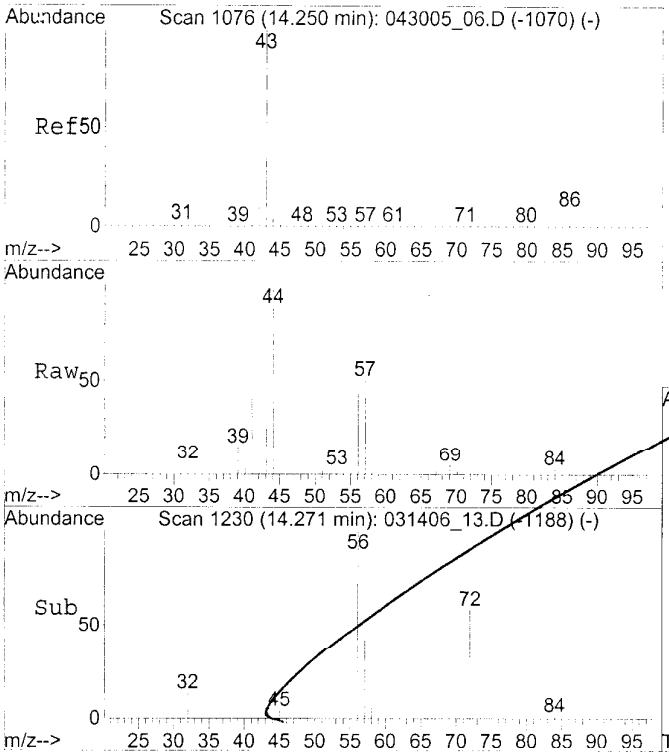
3/20/06

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 16:04:07 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

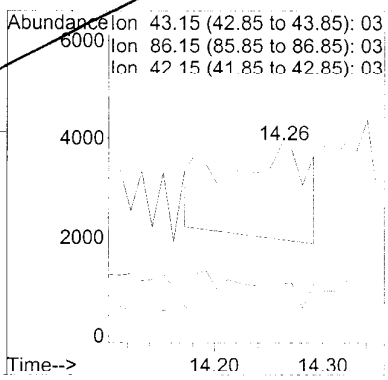




#3
vinyl acetate
Concen: 1.83 ppbV
RT: 14.27 min Scan# 1230
Delta R.T. -0.09 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

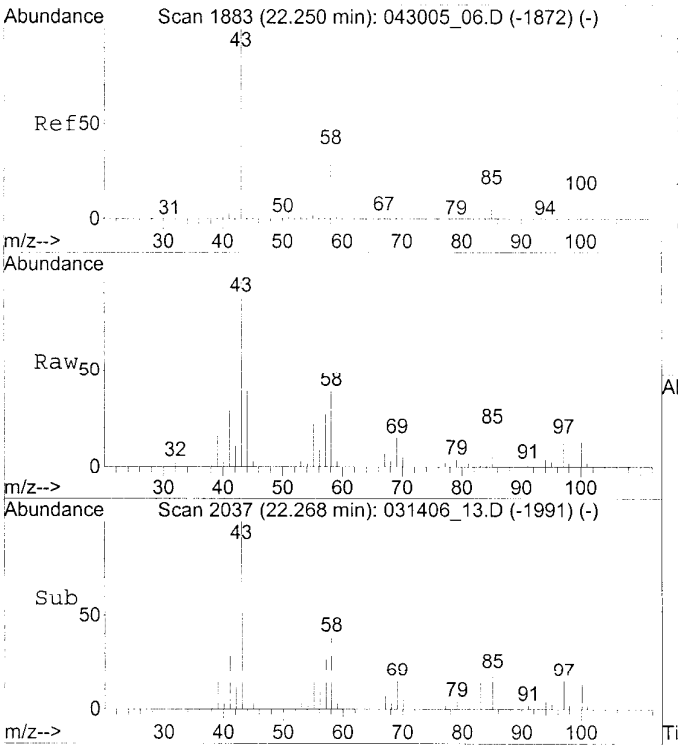
Tgt Ion: 43 Resp: 94866

Ion	Ratio	Lower	Upper
43	100		
86	0.0	6.2	9.4#
42	0.0	8.5	12.7#



Not a good match

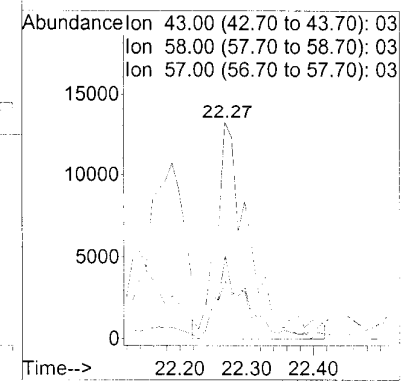
GP 3/20/06



#6
MIBK
Concen: 3.97 ppbV m
RT: 22.27 min Scan# 2037
Delta R.T. -0.05 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 43 Resp: 456077

Ion	Ratio	Lower	Upper
43	100		
58	0.0	27.9	41.9#
57	0.0	19.6	29.4#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-4 C135 031506_13

Inlet Position : 7

Injection Number: 1

Run Information

Inject Time : 05:53:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 16:05:26 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	13.23	128	286430m	10.00 ppbV	-2.57
4) 1,4-difluorobenzene	18.26	114	2164402m	10.00 ppbV	-1.19
7) chlorobenzene-d5	26.11	117	3448357	10.00 ppbV	-0.18

Target Compounds					Qvalue
6) MIBK	21.72	43	359571m	4.13278 ppbV	

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

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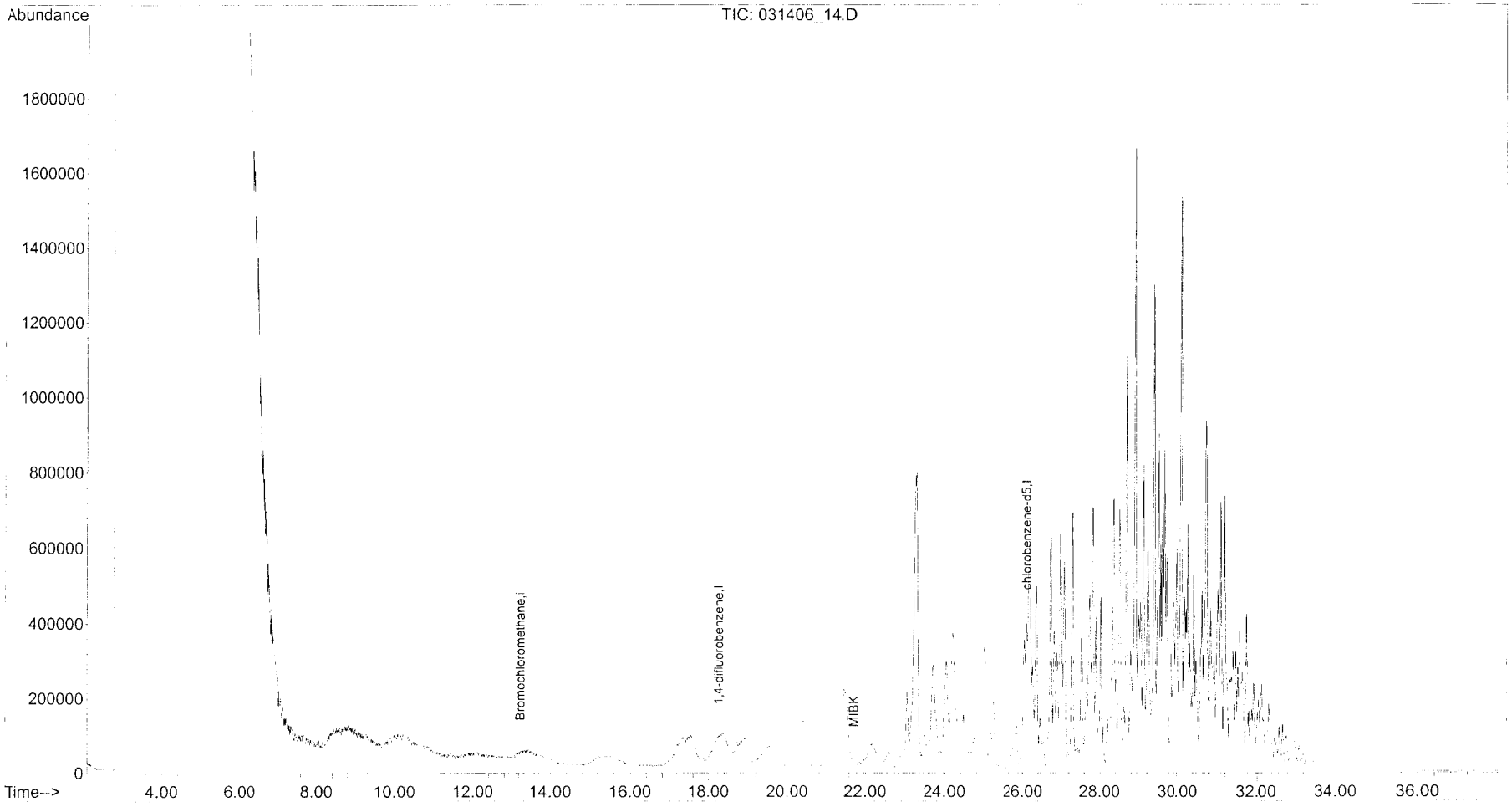
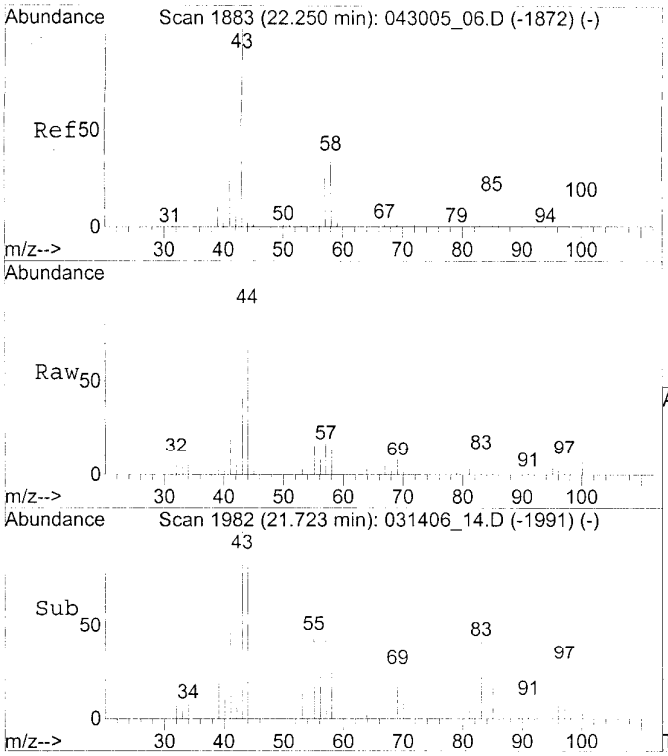
Quantitation Report (not reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 16:05:26 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

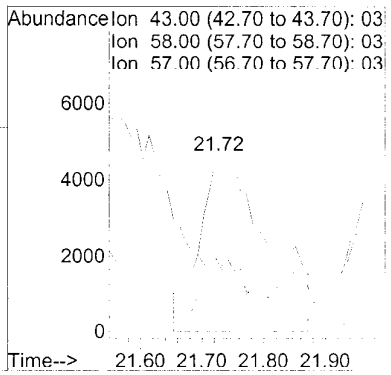




#6
MIBK
Concen: 4.13 ppbV m
RT: 21.72 min Scan# 1982
Delta R.T. -0.59 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 43 Resp: 359571

Ion	Ratio	Lower	Upper
43	100		
58	0.0	27.9	41.9#
57	0.0	19.6	29.4#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-5 C141 031506_14

Inlet Position : 8

Injection Number: 1

Run Information

Inject Time : 09:52:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 16:06:29 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.36	128	242520m	10.00 ppbV	-0.43
4) 1,4-difluorobenzene	19.30	114	1224893	10.00 ppbV	-0.15
7) chlorobenzene-d5	26.25	117	3506282m	10.00 ppbV	-0.04

Target Compounds					Qvalue
6) MIBK	22.26	43	511615m	10.39059 ppbV	

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

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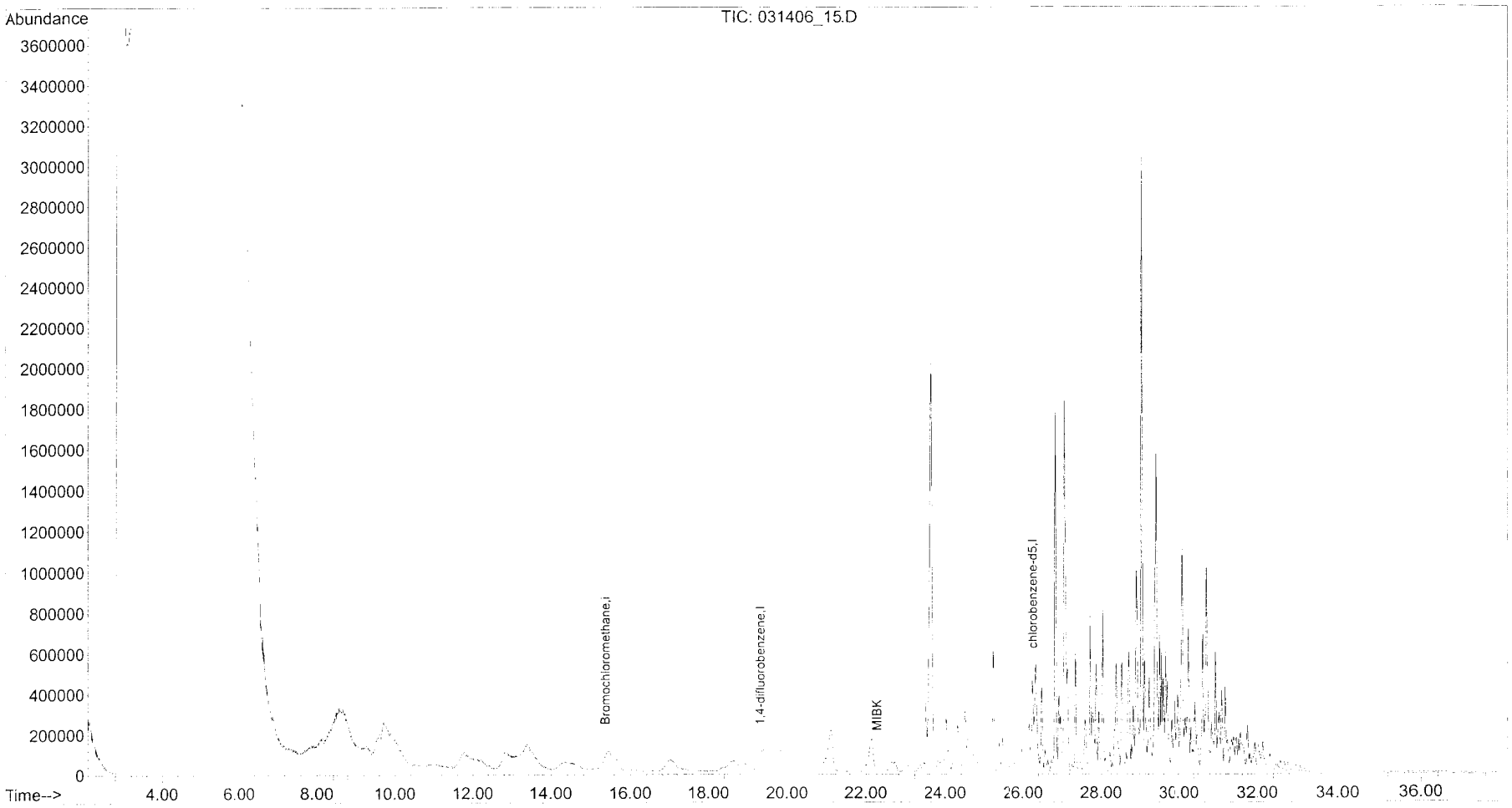
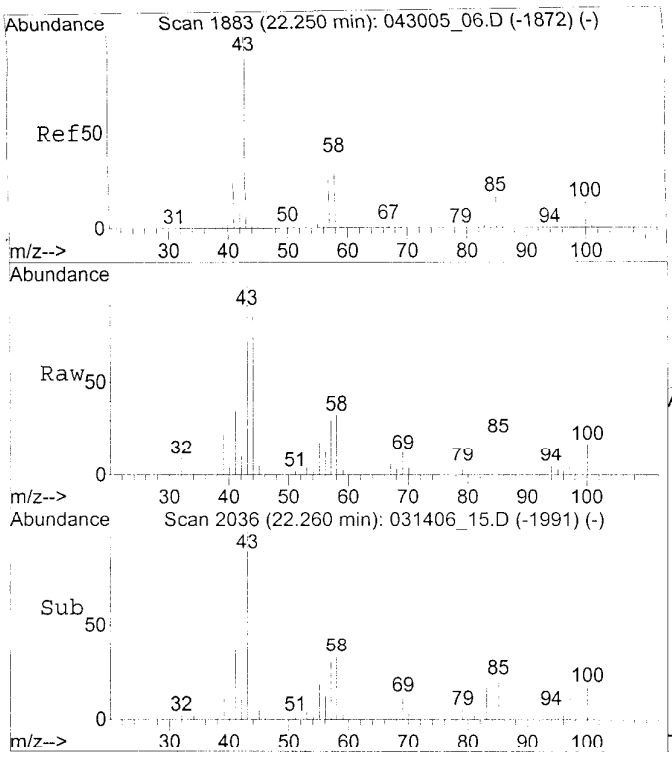
Quantitation Report (Q[illegible]ewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 16:06:29 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15C12505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

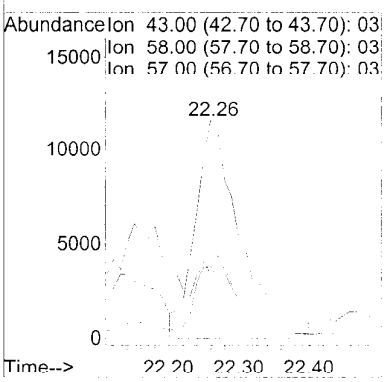




#6
MIBK
Concen: 10.39 ppbV m
RT: 22.26 min Scan# 2036
Delta R.T. -0.05 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 43 Resp: 511615

Ion	Ratio	Lower	Upper
43	100		
58	0.0	27.9	41.9#
57	51.2	19.6	29.4#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-6 B241 031506_15

Inlet Position : 9

Injection Number: 1

Run Information

Inject Time : 10:40:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:01 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.76	128	743457	10.00 ppbV	-0.04
4) 1,4-difluorobenzene	19.42	114	3525012	10.00 ppbV	-0.03
7) chlorobenzene-d5	26.27	117	4196234	10.00 ppbV	-0.02

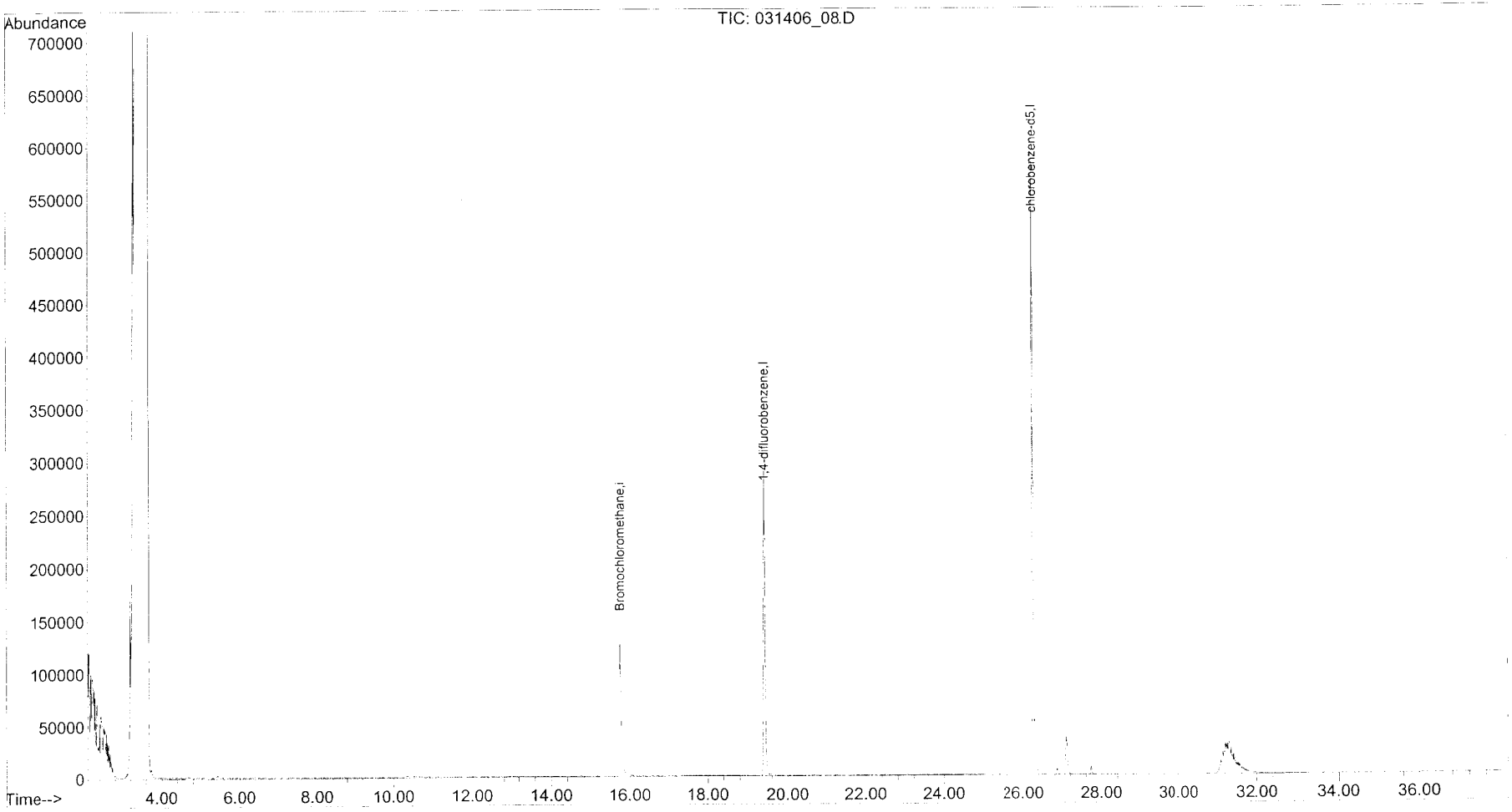
Target Compounds	Qvalue

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

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 15:48:01 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15012505B.M
Quant Title :
QLast Update : Fri Mar 10 09:59:33 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-7 A204 031506_08

Inlet Position : 3

Injection Number: 1

Run Information

Inject Time : 00:55:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 14:33:46 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	15.70	128	672817	10.00	ppbV	-0.10
32) 1,4-difluorobenzene	19.39	114	4078825	10.00	ppbV	-0.05
47) chlorobenzene-d5	26.27	117	5108566	10.00	ppbV	-0.02
System Monitoring Compounds						
30) 1,2-dichloroethane-d4	0.00	65	0	0.00	ppbV	
48) toluene-d8	0.00	98	0	0.00	ppbV	
Target Compounds						Qvalue
12) acetone	9.29	43	214767m	0.90195	ppbV	

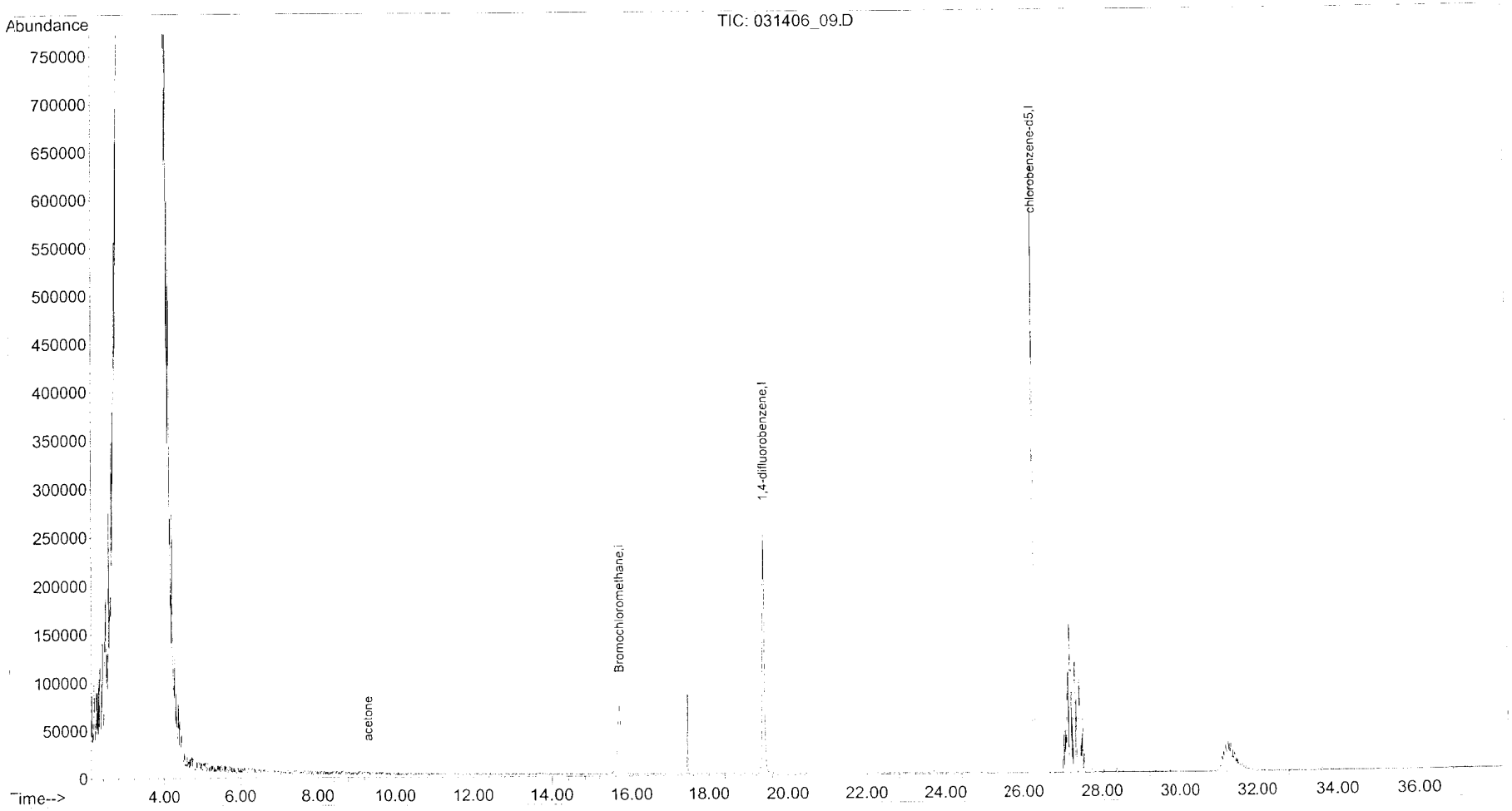
(#) = qualifier out of range (m) = manual integration (+) = signals summed

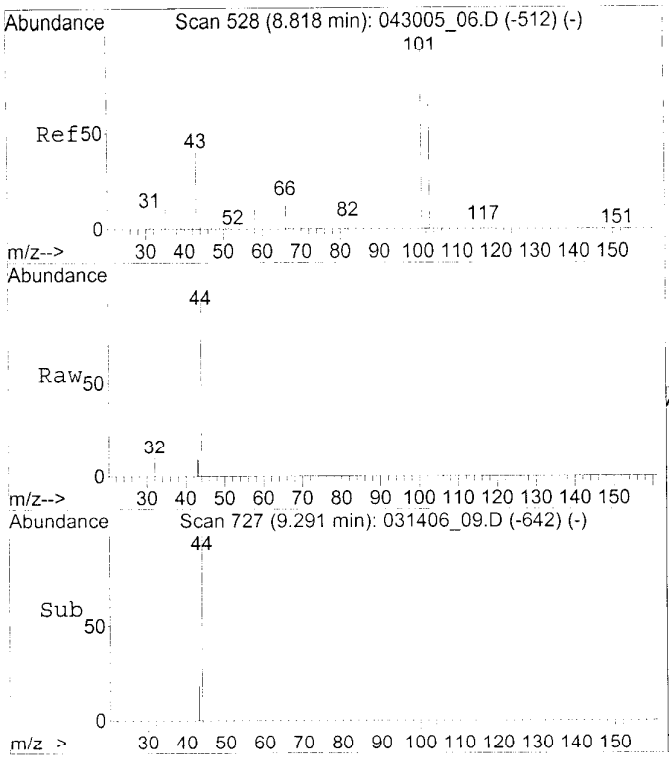
Cp 3/20/06

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 14:33:46 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

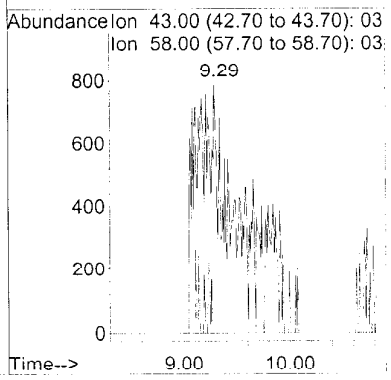




#12
acetone
Concen: 0.90 ppbV m
RT: 9.29 min Scan# 727
Delta R.T. 0.35 min
Lab File: 031406_09.D
Acq: 16 Mar 2006 4:27 am

Tgt Ion: 43 Resp: 214767

Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.1	15.1#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 A217 031506_09

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 01:58:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 14:33:56 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.69	128	637314	10.00 ppbV	-0.11
32) 1,4-difluorobenzene	19.38	114	3765796	10.00 ppbV	-0.07
47) chlorobenzene-d5	26.26	117	4415292	10.00 ppbV	-0.03
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	
Target Compounds					Qvalue
12) acetone	9.10	43	165837m	0.73526 ppbV	

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

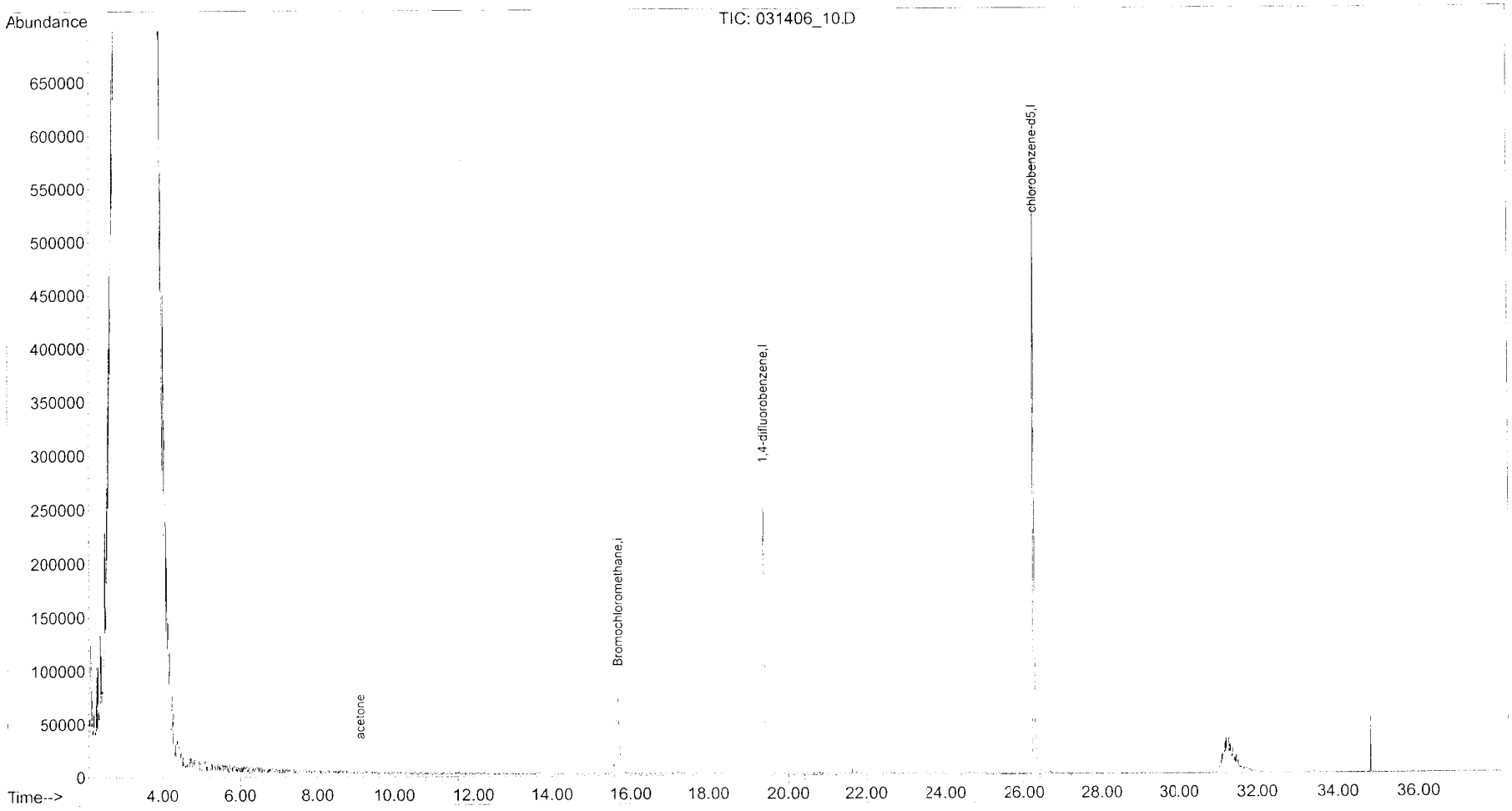
b

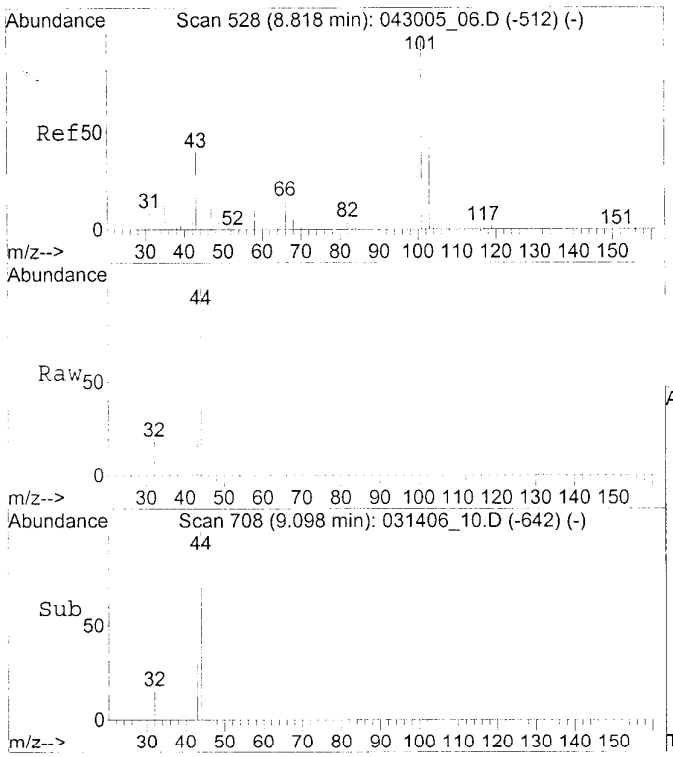
3/20/06

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 20 14:33:56 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

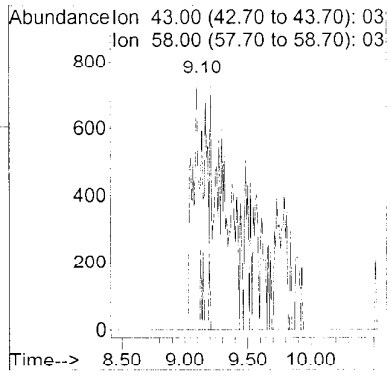




#12
acetone
Concen: 0.74 ppbV m
RT: 9.10 min Scan# 708
Delta R.T. 0.15 min
Lab File: 031406_10.D
Acq: 16 Mar 2006 5:29 am

Tgt Ion: 43 Resp: 165837

Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.1	15.1#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 DUP 031506_10

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 03:00:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 14:24:14 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.70	128	848396	10.00 ppbV	-0.10
32) 1,4-difluorobenzene	19.39	114	3938388	10.00 ppbV	-0.06
47) chlorobenzene-d5	26.27	117	5347579	10.00 ppbV	-0.02
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	

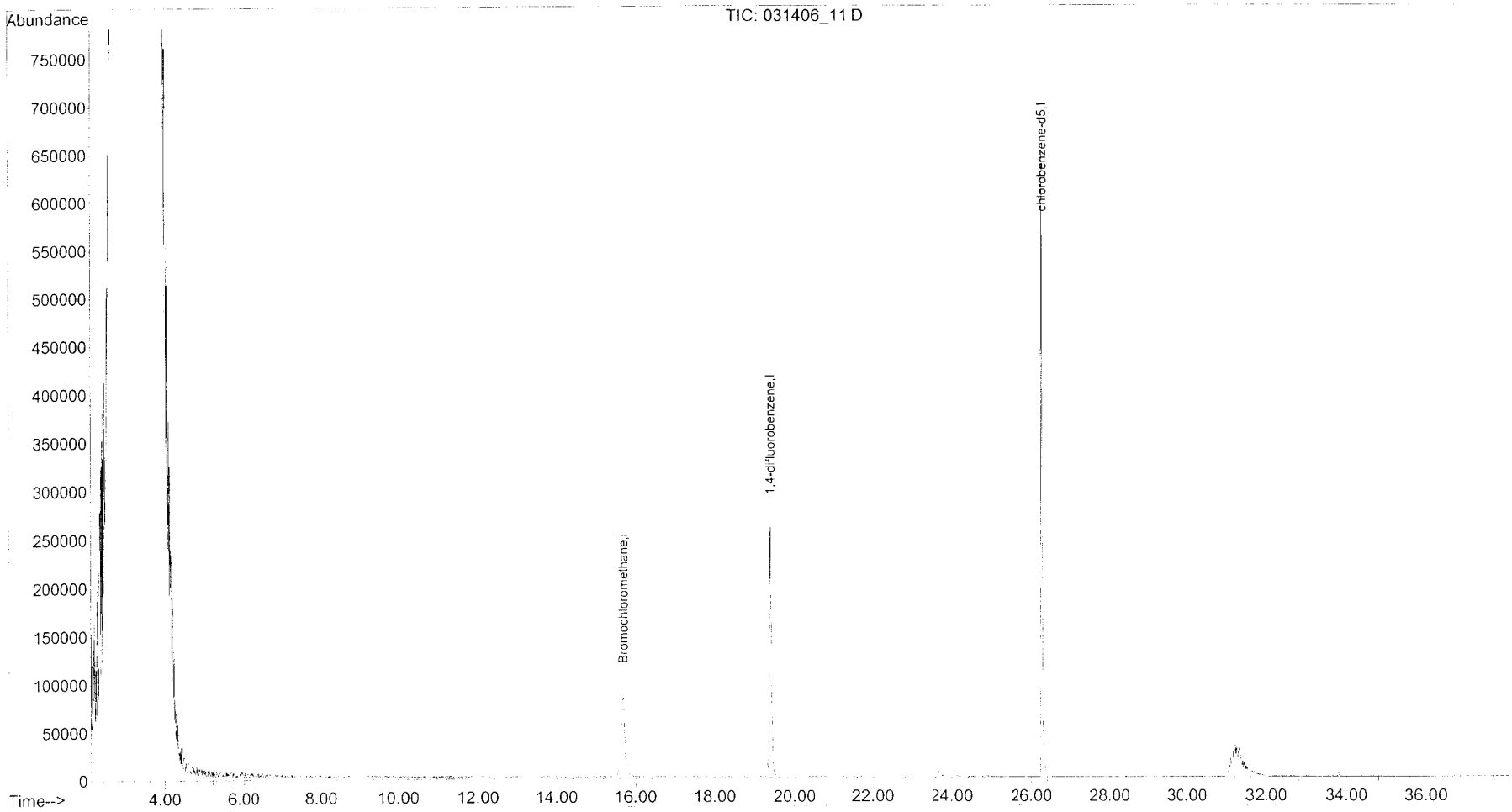
Target Compounds	Qvalue

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

Qu[illegible]ation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 20 14:24:14 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration



3550A QA/QC REPORT

Sample Information

Sample Name: 061-2 B235 031506_11

Inlet Position : 5

Injection Number: 1

Run Information

Inject Time : 04:03:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:37:31 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	14.93	128	842461m	10.00 ppbV	-0.87
32) 1,4-difluorobenzene	18.91	114	4034866m	10.00 ppbV	-0.54
47) chlorobenzene-d5	26.17	117	4354594	10.00 ppbV	-0.12
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	
Target Compounds					Qvalue
12) acetone	8.14	43	253450m	0.85007 ppbV	

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

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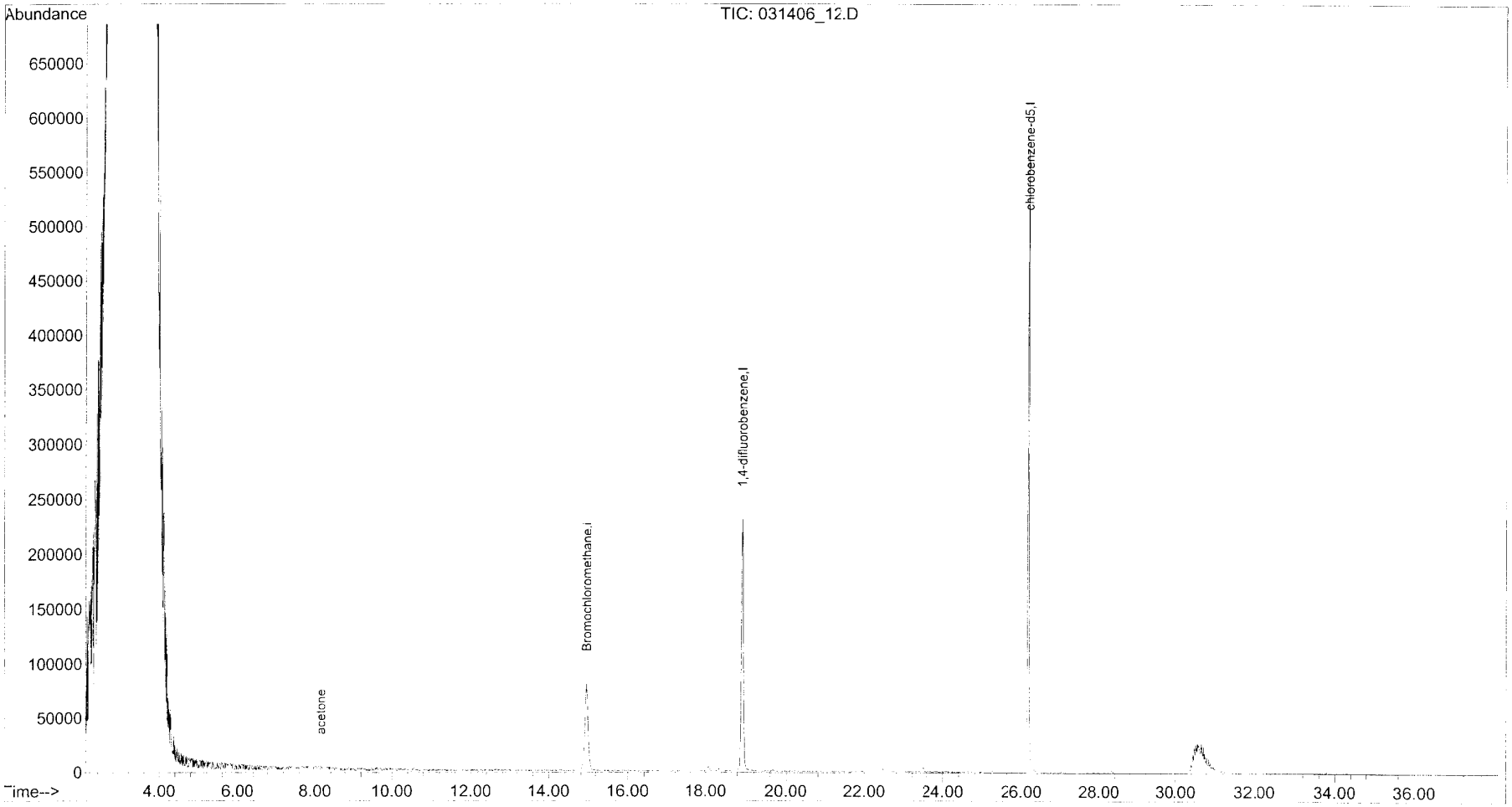
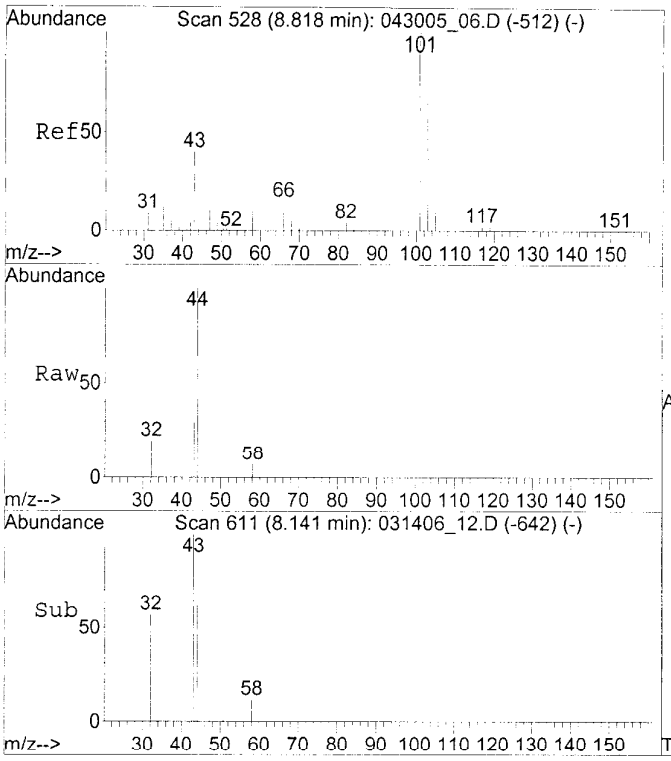
Quantitation Report (LSC Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 20 16:37:31 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

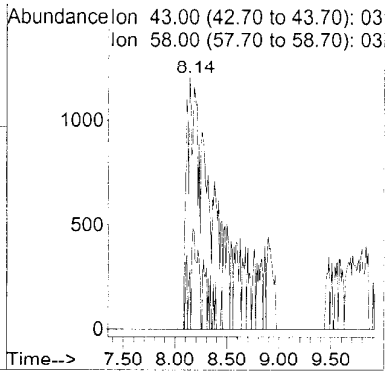




#12
acetone
Concen: 0.85 ppbV m
RT: 8.14 min Scan# 611
Delta R.T. -0.80 min
Lab File: 031406_12.D
Acq: 16 Mar 2006 7:34 am

Tgt Ion: 43 Resp: 253450

Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.1	15.1#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-3 A230 031506_12

Inlet Position : 6

Injection Number: 1

Run Information

Inject Time : 05:05:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 14:55:05 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.26	128	417255m	10.00 ppbV	-0.53
32) 1,4-difluorobenzene	19.30	114	2855963m	10.00 ppbV	-0.14
47) chlorobenzene-d5	26.27	117	5570010m	10.00 ppbV	-0.02
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	
Target Compounds					Qvalue
12) acetone	8.10	43	18611418m	126.03425 ppbV	
13) trichlorofluoromethane	6.95	101	4452293m	16.61824 ppbV	
~~24) 2-butanone (MEK)~~	~~15.03~~	~~43~~	~~105127~~	~~1.20762 ppbV #~~	~~64~~
26) n-hexane	15.63	57	-1508560	Below Cal #	13
34) Benzene	18.41	78	912391m	3.20820 ppbV	
36) cyclohexane	18.92	56	1750440m	14.95583 ppbV	
39) 2,2,4-trimethylpentane	20.54	57	1069274m	3.26526 ppbV	
41) n-heptane	21.12	43	5606311m	59.42126 ppbV	
42) trichloroethene	20.49	130	289032	1.81388 ppbV #	19
49) toluene	23.66	91	72395325m	134.34099 ppbV	
53) tetrachloroethene	25.36	166	565882m	1.50441 ppbV	
54) chlorobenzene	26.33	112	1725557	3.51905 ppbV #	84
55) ethylbenzene	26.85	91	25017137	38.24945 ppbV #	83
56) p & m-xylene	27.09	91	22209551	41.77608 ppbV #	18
~~58) styrene~~	~~27.60~~	~~104~~	~~509310~~	~~1.54311 ppbV #~~	~~59~~
60) o-xylene	27.74	91	8033508	14.42320 ppbV	89
61) 4-ethyl toluene	29.38	105	5501963m	5.23056 ppbV	
62) 1,3,5-trimethylbenzene	29.55	105	2396763	4.59423 ppbV	92
63) 1,2,4-trimethylbenzene	30.12	105	4142189	9.00578 ppbV #	90
66) 1,4-dichlorobenzene	30.44	146	310394	0.70674 ppbV #	36

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

AP

poor match

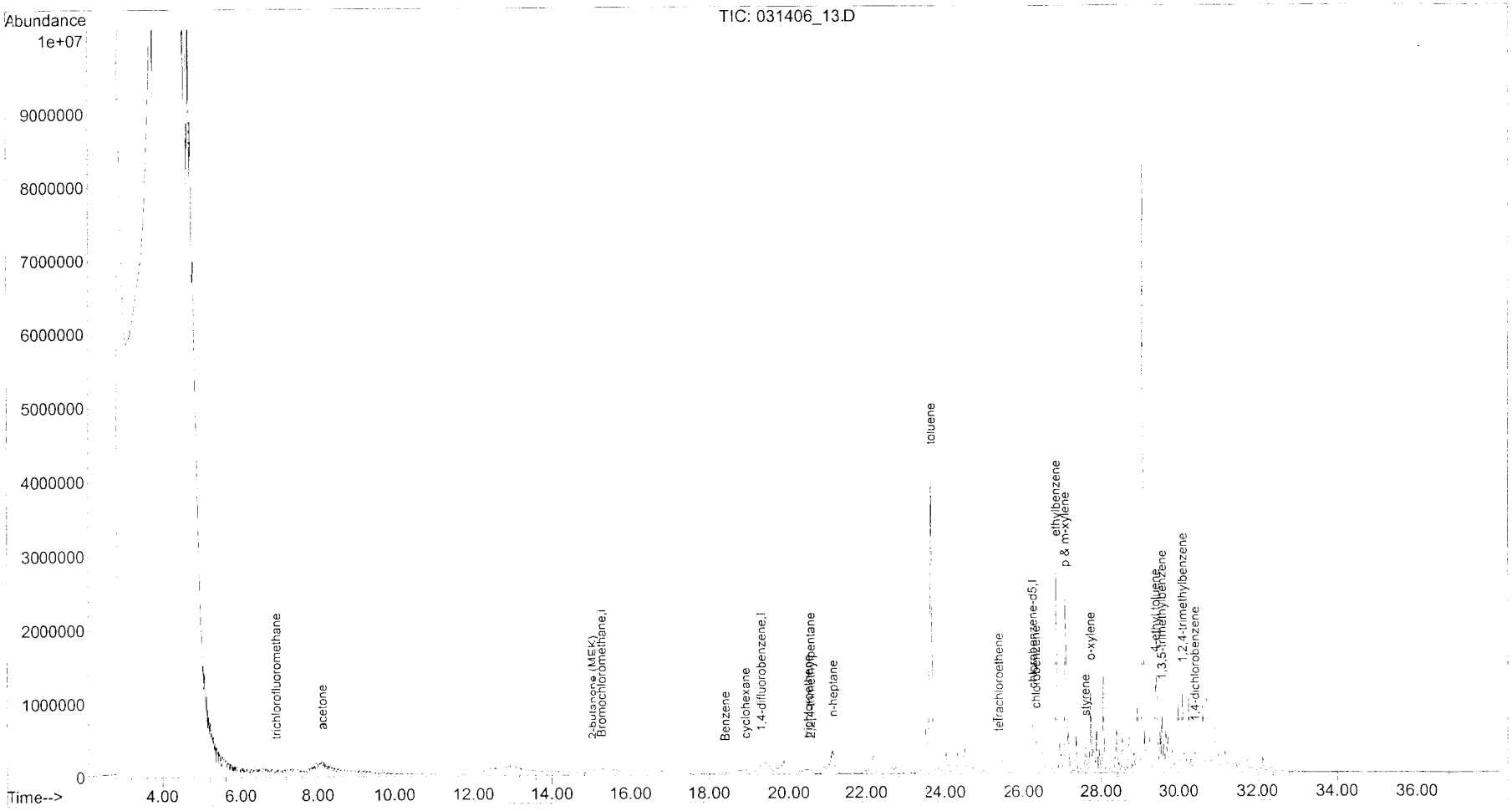
AP

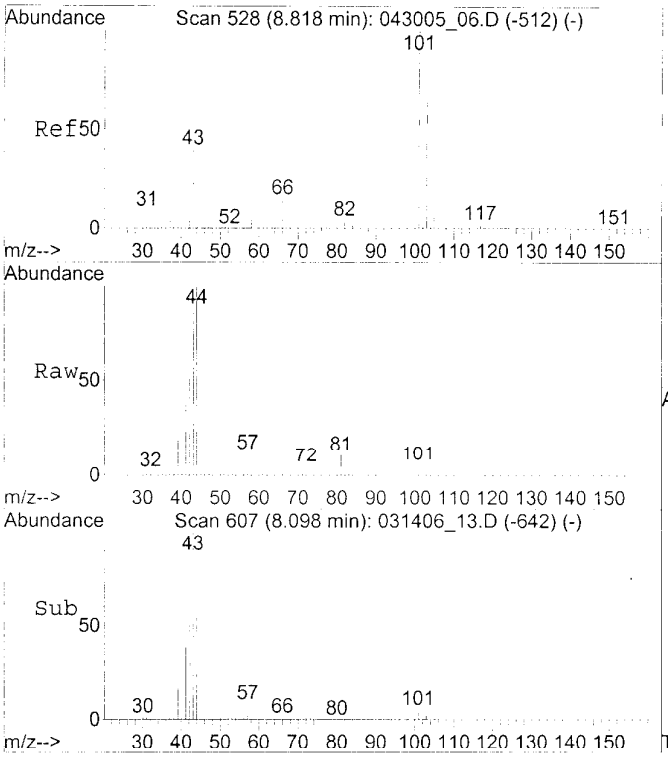
poor match

3/20/06

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 20 14:55:05 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

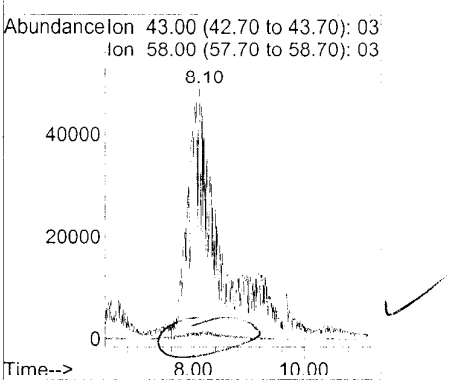


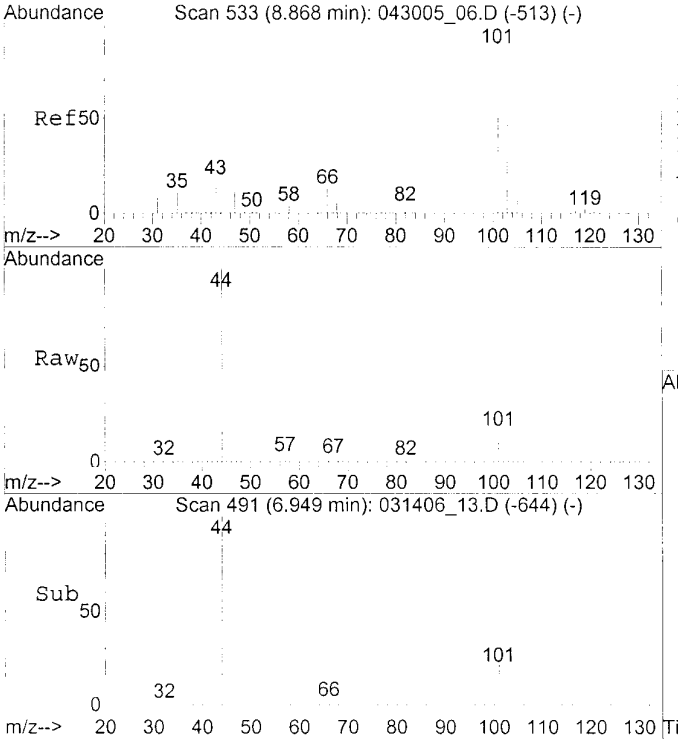


#12
acetone
Concen: 126.03 ppbV m
RT: 8.10 min Scan# 607
Delta R.T. -0.85 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 43 Resp:18611418

Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.1	15.1#

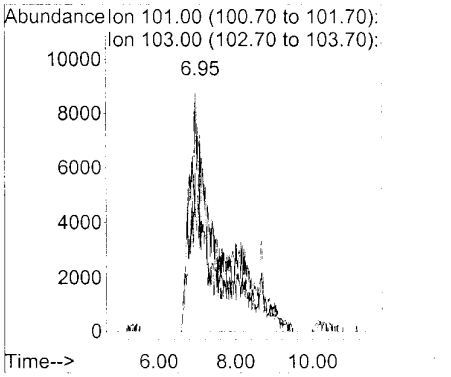


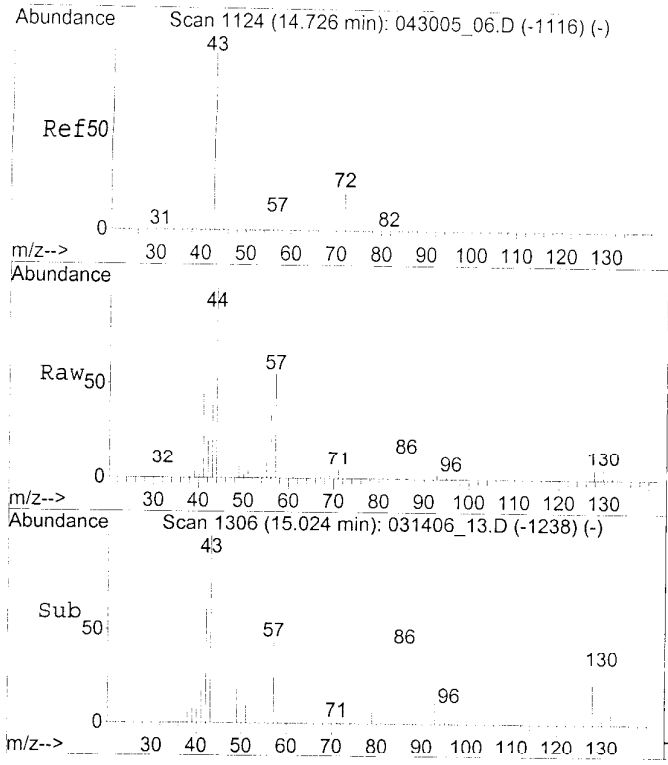


#13
trichlorofluoromethane
Concen: 16.62 ppbV m
RT: 6.95 min Scan# 491
Delta R.T. -2.01 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:101 Resp: 4452293

Ion	Ratio	Lower	Upper
101	100		
103	0.0	52.4	78.6#



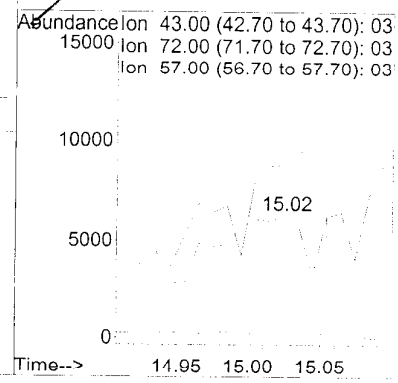


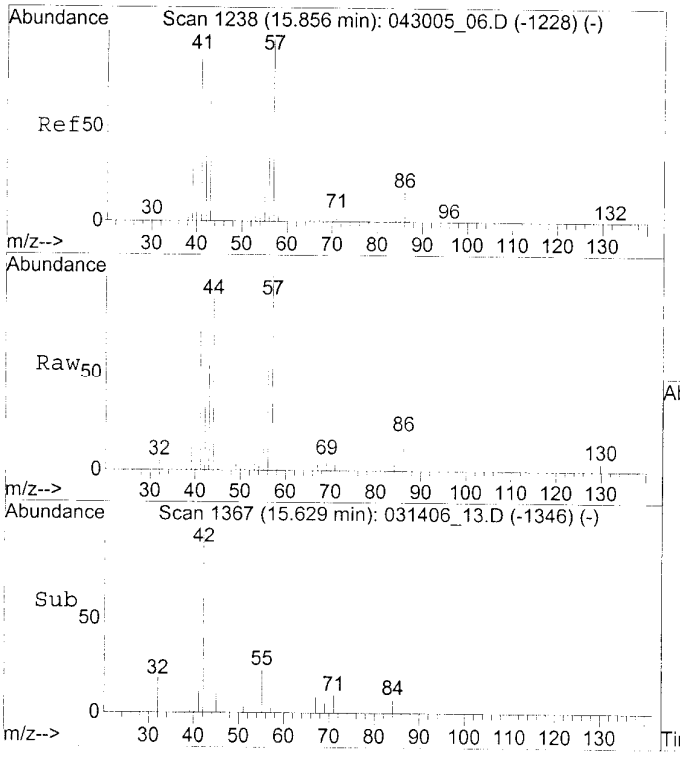
#24
2 butanone (MEK)
Concen: 1.21 ppbV
RT: 15.03 min Scan# 1306
Delta R.T. 0.18 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 43 Resp: 105127

Ion	Ratio	Lower	Upper
43	100		
72	0.0	14.8	22.2#
57	0.0	5.8	8.6#

DNR poor match

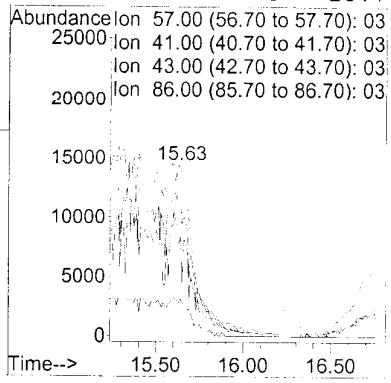


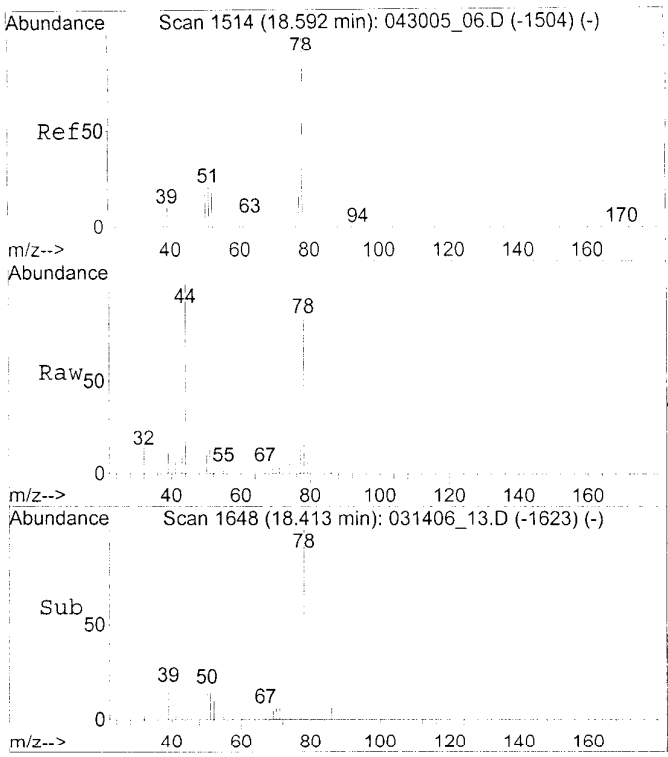


#26
n-hexane
Concen: Below Cal
RT: 15.63 min Scan# 1367
Delta R.T. -0.29 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 57 Resp:-1508560

Ion	Ratio	Lower	Upper
57	100		
41	0.0	73.9	110.9#
43	0.0	55.4	83.0#
86	0.0	12.5	18.7#

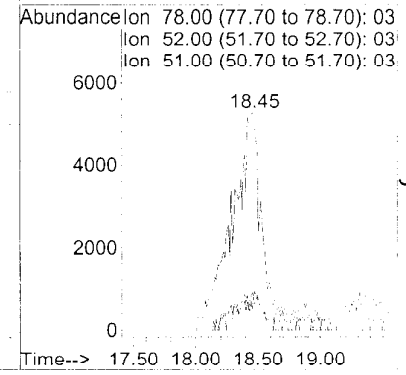


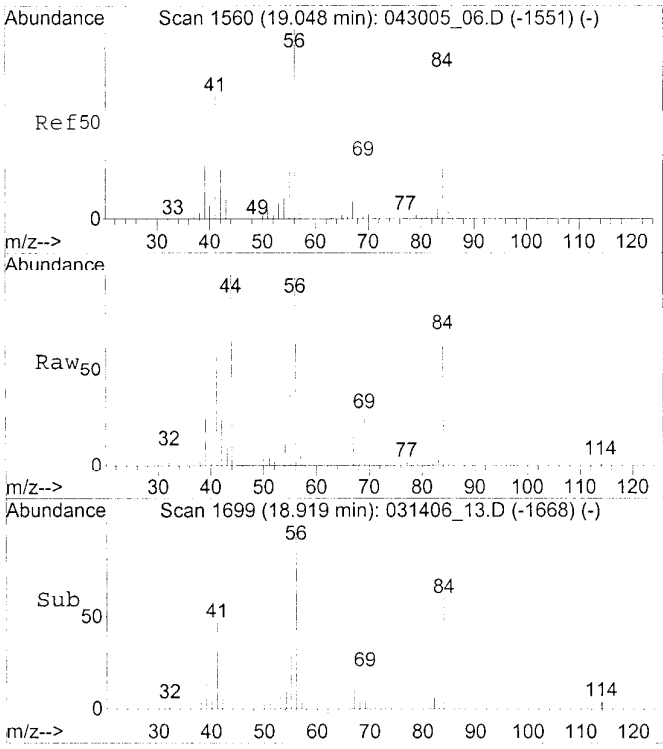


#34
Benzene
Concen: 3.21 ppbV m
RT: 18.41 min Scan# 1648
Delta R.T. -0.25 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 78 Resp: 912391

Ion	Ratio	Lower	Upper
78	100		
52	0.0	14.8	22.2#
51	0.0	16.8	25.2#

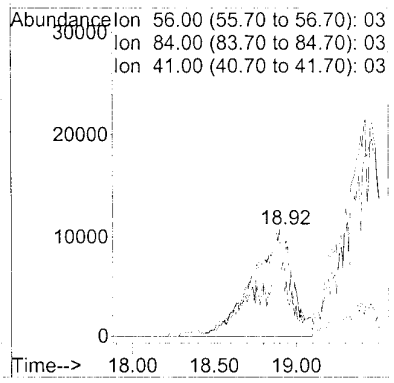


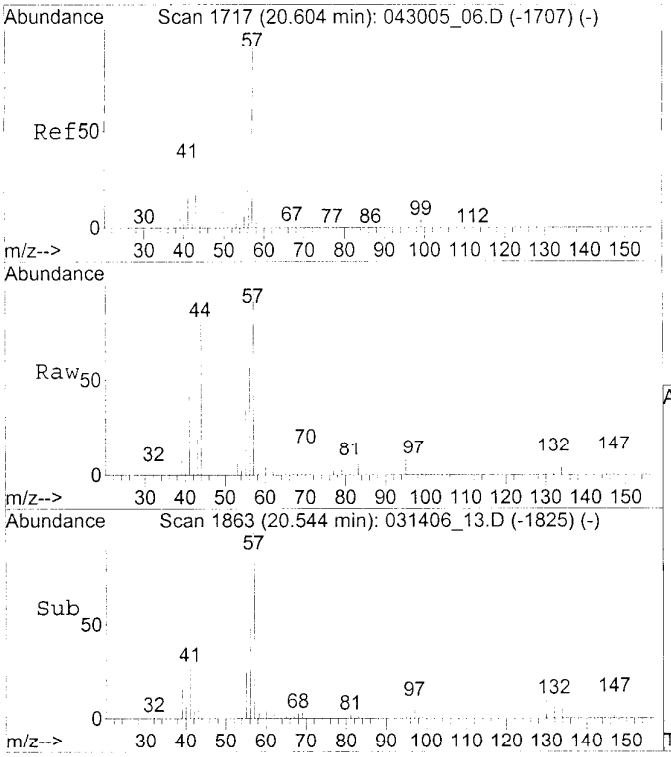


#36
cyclohexane
Concen: 14.96 ppbV m
RT: 18.92 min Scan# 1699
Delta R.T. -0.19 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 56 Resp: 1750440

Ion	Ratio	Lower	Upper
56	100		
84	0.0	62.2	93.2#
41	20.8	52.1	78.1#

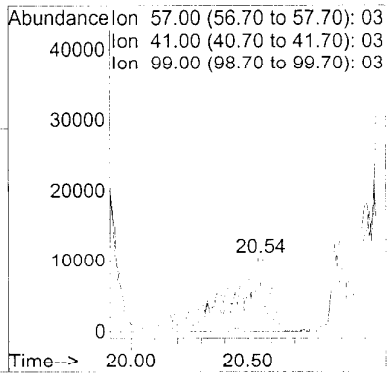


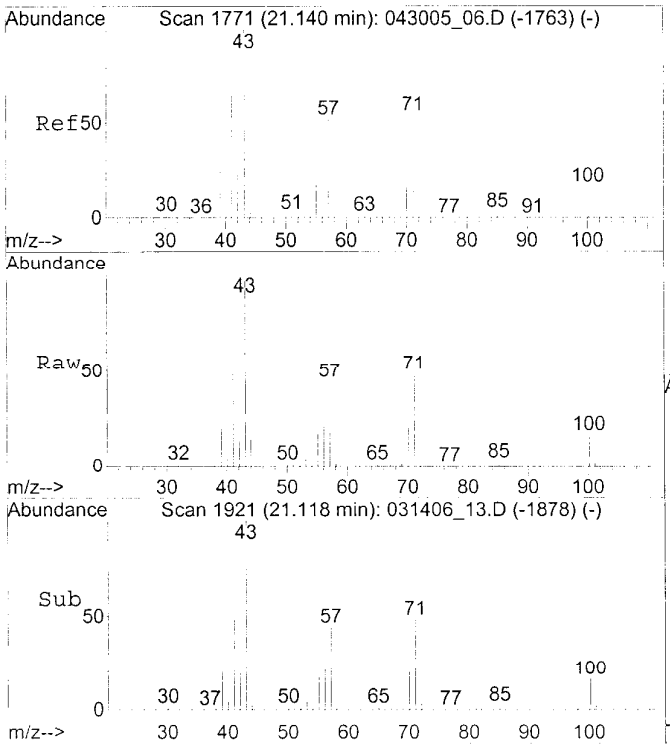


#39
2,2,4-trimethylpentane
Concen: 3.27 ppbV m
RT: 20.54 min Scan# 1863
Delta R.T. -0.12 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 57 Resp: 1069274

Ion	Ratio	Lower	Upper
57	100		
41	0.0	26.6	40.0#
99	0.0	4.2	6.4#

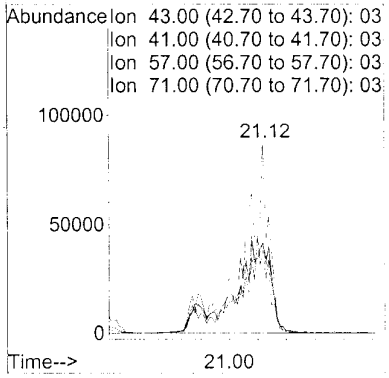


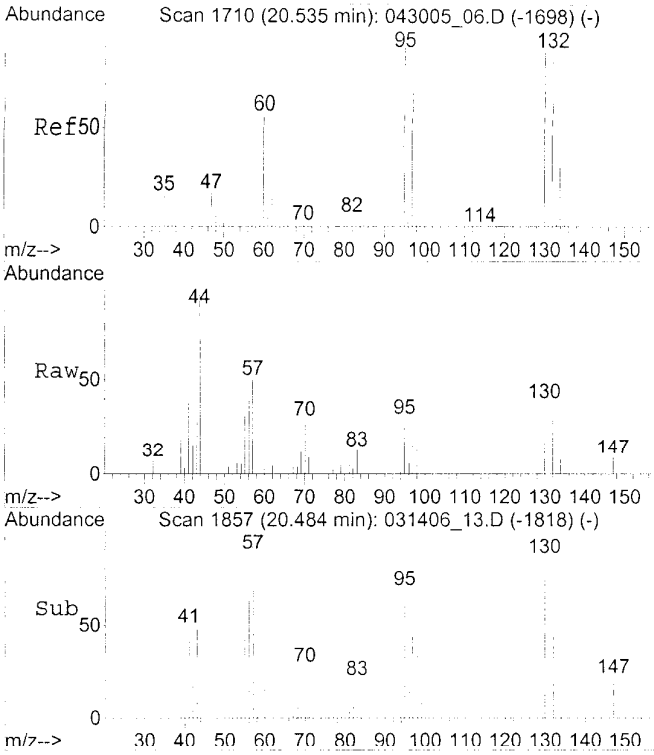


#41
n-heptane
Concen: 59.42 ppbV m
RT: 21.12 min Scan# 1921
Delta R.T. -0.08 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 43 Resp: 5606311

Ion	Ratio	Lower	Upper
43	100		
41	0.0	57.3	85.9#
57	0.0	40.9	61.3#
71	21.5	41.8	62.6#

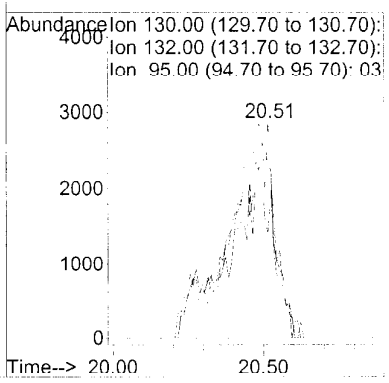


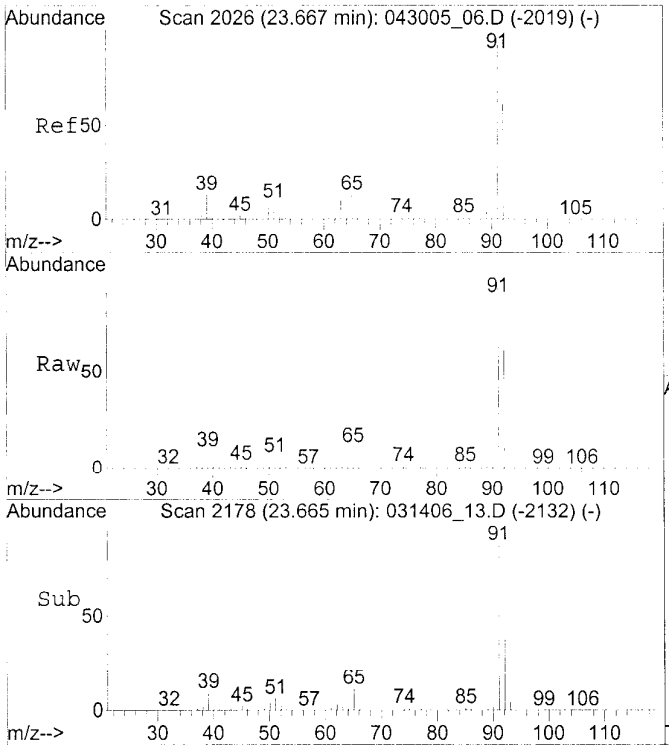


#42
trichloroethene
Concen: 1.81 ppbV
RT: 20.49 min Scan# 1857
Delta R.T. -0.11 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:130 Resp: 289032

Ion	Ratio	Lower	Upper
130	100		
132	44.5	77.0	115.4#
95	0.0	90.3	135.5#

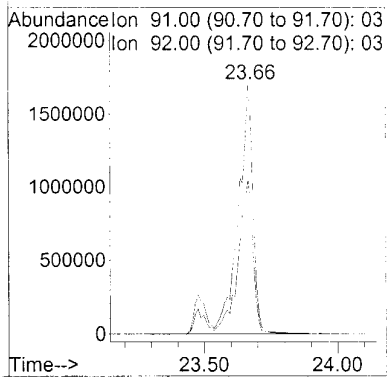


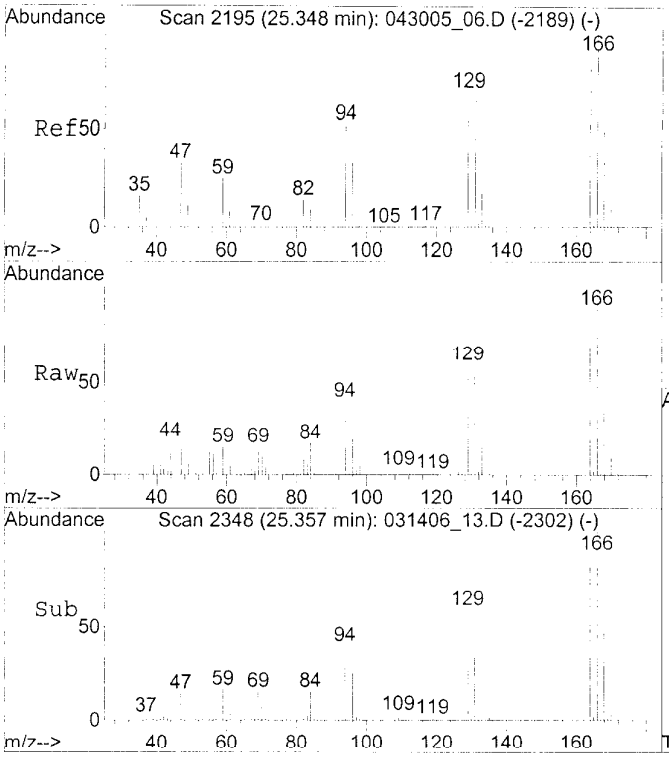


#49
toluene
Concen: 134.34 ppbV m
RT: 23.66 min Scan# 2178
Delta R.T. -0.05 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 91 Resp:72395325

Ion	Ratio	Lower	Upper
91	100		
92	56.1	48.6	73.0

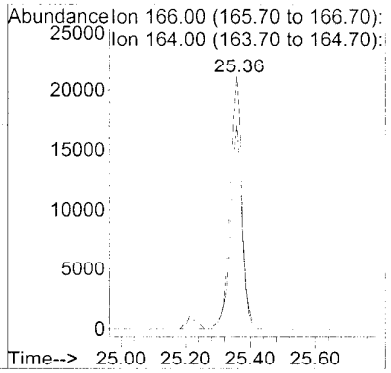


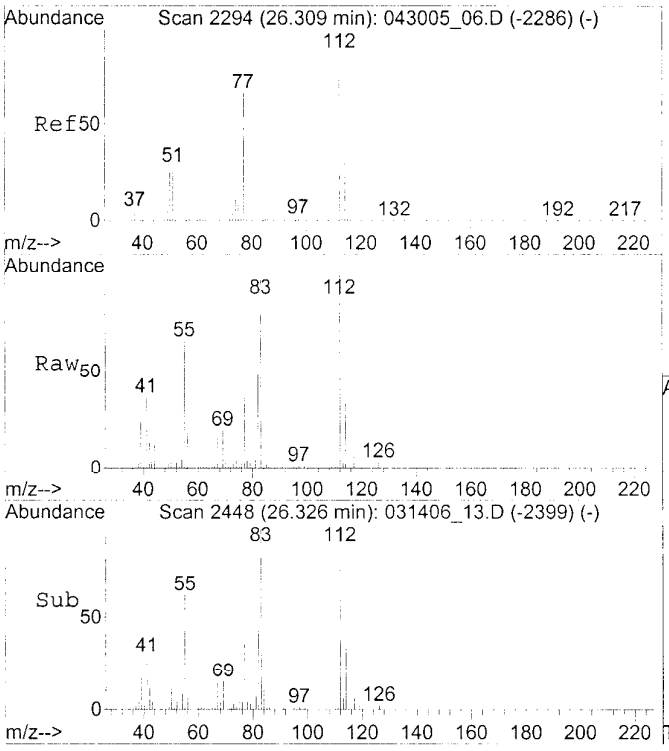


#53
tetrachloroethene
Concen: 1.50 ppbV m
RT: 25.36 min Scan# 2348
Delta R.T. -0.03 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:166 Resp: 565882

Ion	Ratio	Lower	Upper
166	100		
164	74.7	63.0	94.6

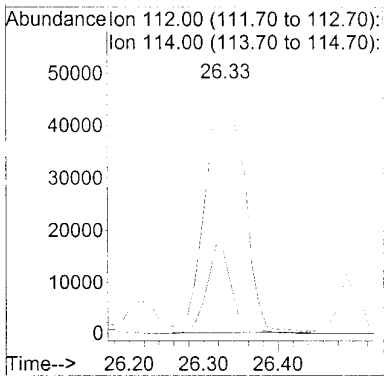


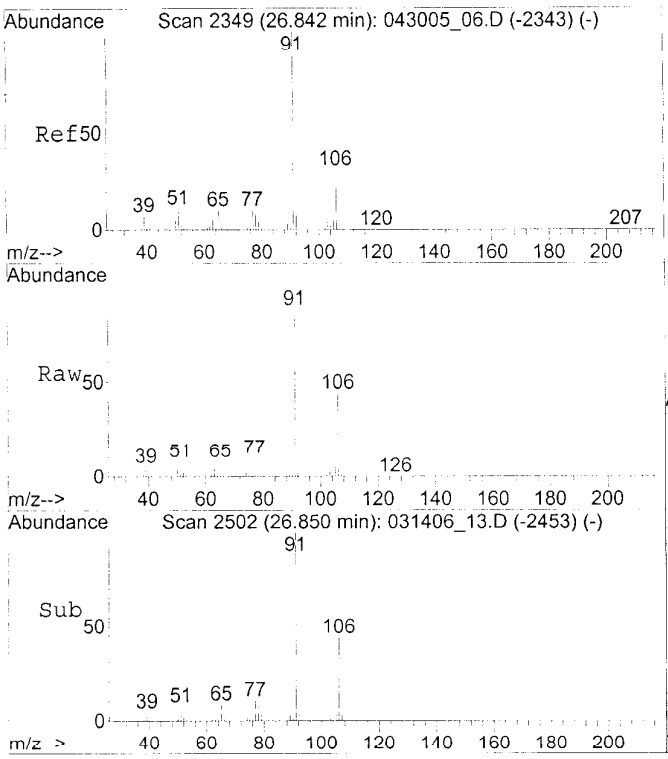


#54
chlorobenzene
Concen: 3.52 ppbV
RT: 26.33 min Scan# 2448
Delta R.T. -0.02 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:112 Resp: 1725557

Ion	Ratio	Lower	Upper
112	100		
114	23.3	25.8	38.6#

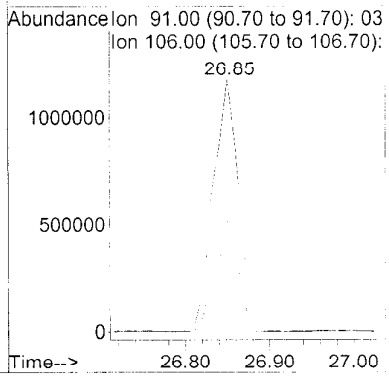


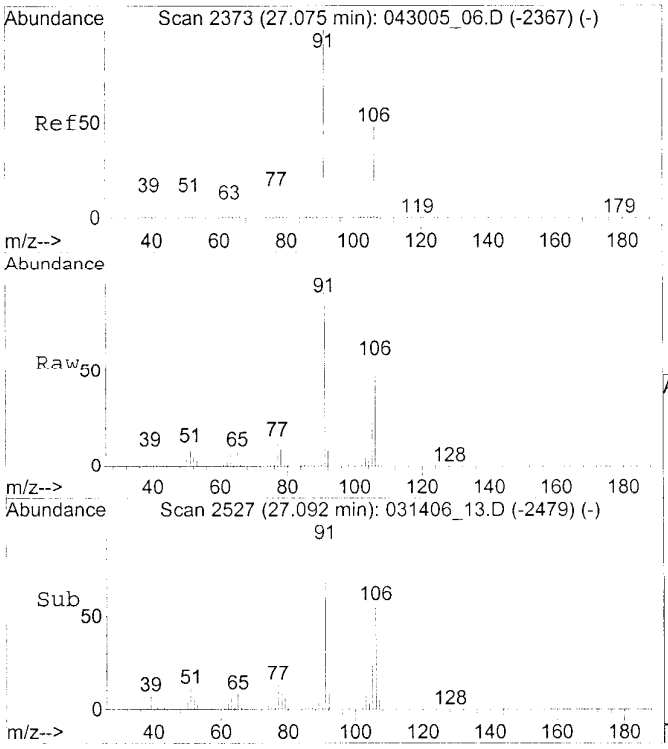


#55
ethylbenzene
Concen: 38.25 ppbV
RT: 26.85 min Scan# 2502
Delta R.T. -0.02 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 91 Resp:25017137

Ion	Ratio	Lower	Upper
91	100		
106	39.8	24.2	36.4#

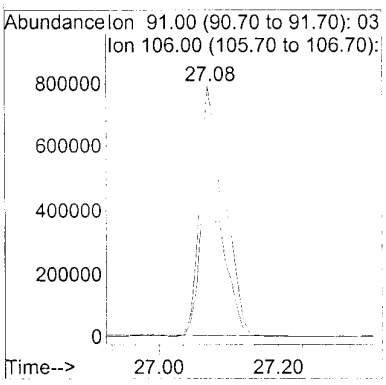


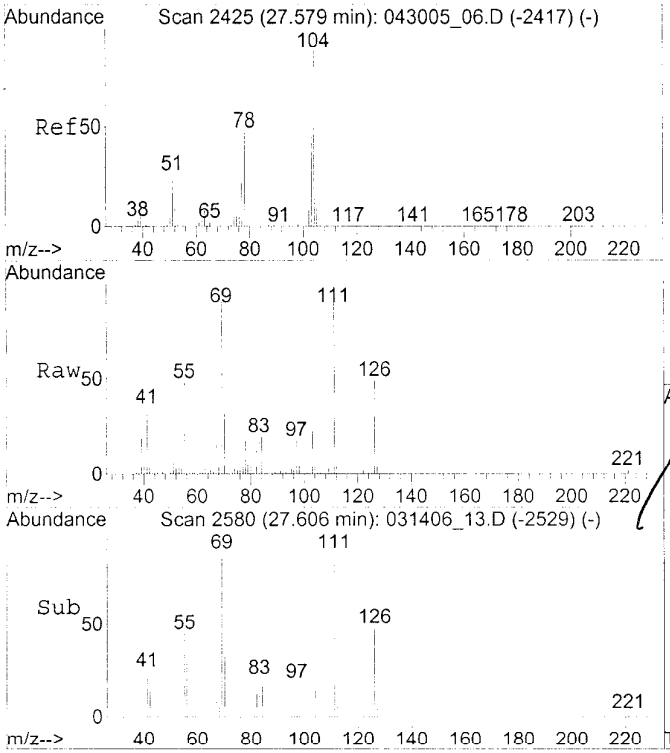


#56
p & m-xylene
Concen: 41.78 ppbV
RT: 27.09 min Scan# 2527
Delta R.T. -0.04 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 91 Resp:22209551

Ion	Ratio	Lower	Upper
91	100		
106	60.8	17.4	26.2#

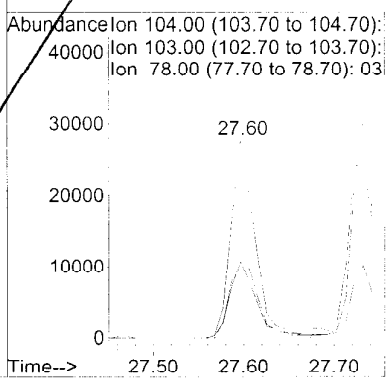




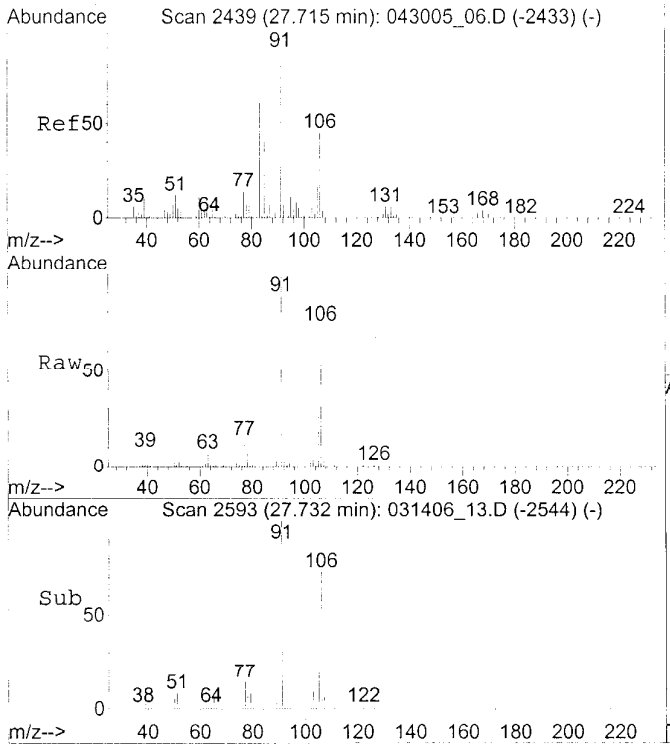
#58
styrene
Concen: 1.54 ppbV
RT: 27.60 min Scan# 2580
Delta R.T. -0.01 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:104 Resp: 509310

Ion	Ratio	Lower	Upper
104	100		
103	41.8	37.1	55.7
78	0.0	40.0	60.0#



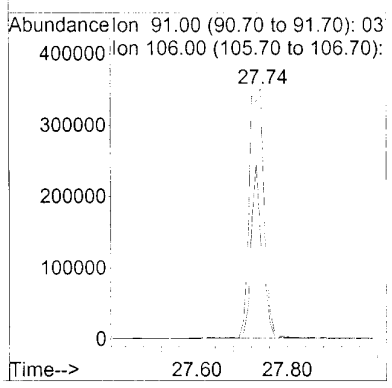
poor match

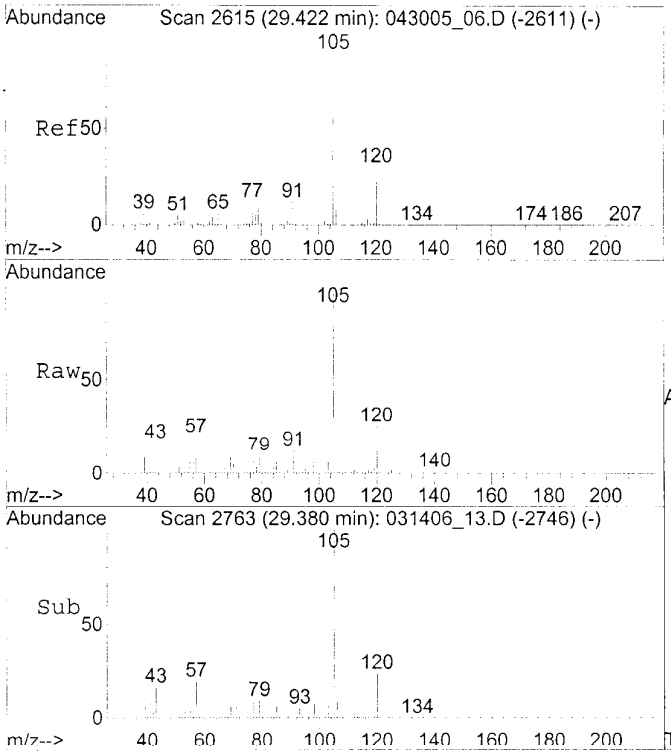


#60
o-xylene
Concen: 14.42 ppbV
RT: 27.74 min Scan# 2593
Delta R.T. -0.02 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion: 91 Resp: 8033508

Ion	Ratio	Lower	Upper
91	100		
106	51.7	35.8	53.6

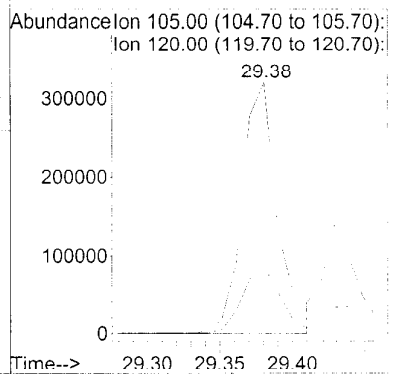


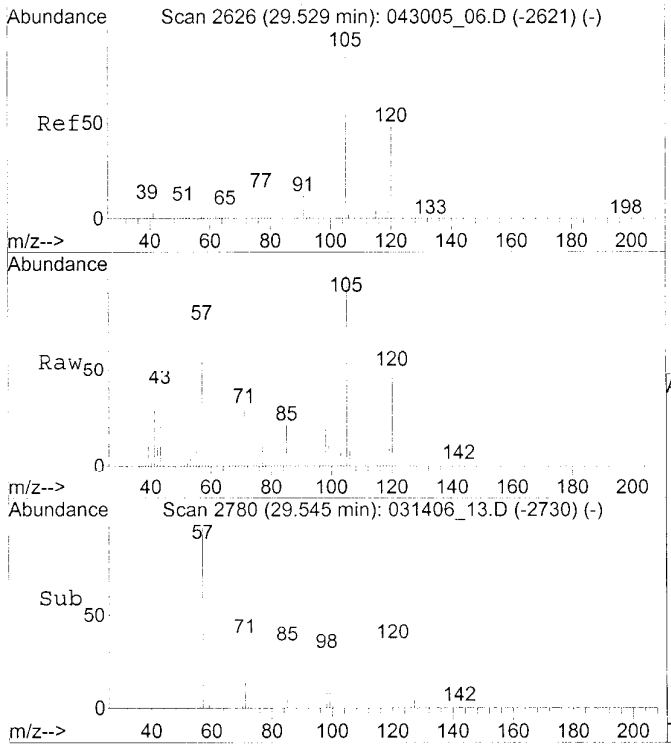


#61
4-ethyl toluene
Concen: 5.23 ppbV m
RT: 29.38 min Scan# 2763
Delta R.T. -0.04 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:105 Resp: 5501963

Ion	Ratio	Lower	Upper
105	100		
120	23.3	23.0	34.6

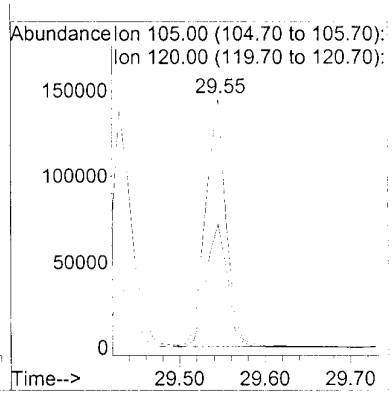


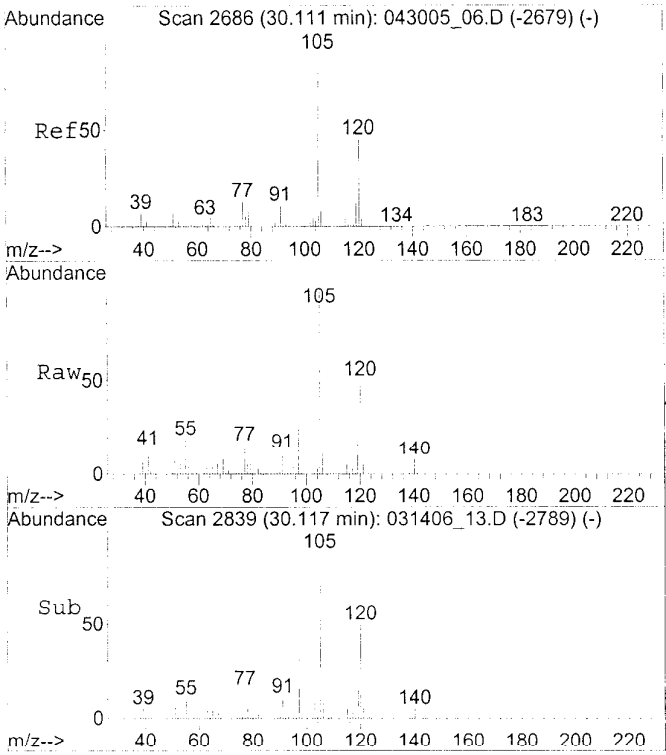


#62
1,3,5-trimethylbenzene
Concen: 4.59 ppbV
RT: 29.55 min Scan# 2780
Delta R.T. -0.01 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:105 Resp: 2396763

Ion	Ratio	Lower	Upper
105	100		
120	51.8	37.0	55.4

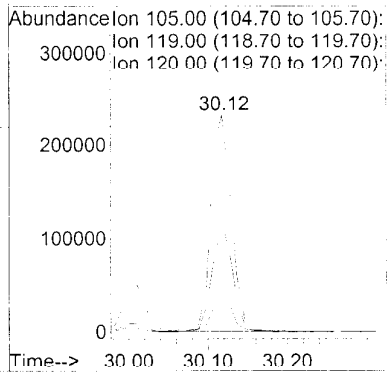


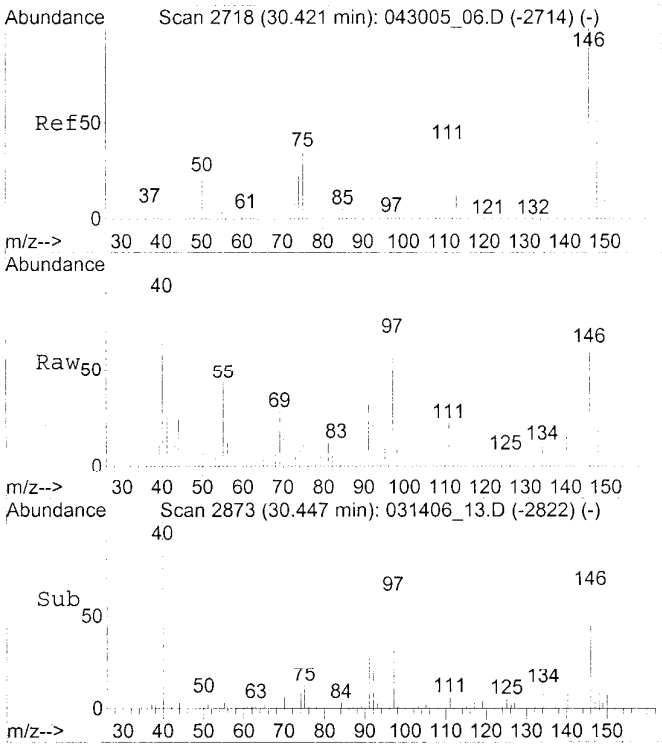


#63
1,2,4-trimethylbenzene
Concen: 9.01 ppbV
RT: 30.12 min Scan# 2839
Delta R.T. -0.01 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:105 Resp: 4142189

Ion	Ratio	Lower	Upper
105	100		
119	17.7	8.9	13.3#
120	49.3	35.0	52.6

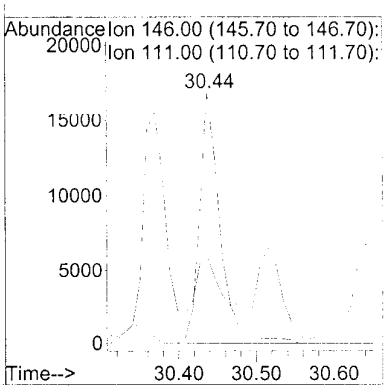




#66
1,4-dichlorobenzene
Concen: 0.71 ppbV
RT: 30.44 min Scan# 2873
Delta R.T. -0.01 min
Lab File: 031406_13.D
Acq: 16 Mar 2006 8:22 am

Tgt Ion:146 Resp: 310394

Ion	Ratio	Lower	Upper
146	100		
111	0.0	31.3	46.9#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-4 C135 031506_13

Inlet Position : 7

Injection Number: 1

Run Information

Inject Time : 05:53:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C.\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 14:58:15 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	13.23	128	286430m b	10.00 ppbV	-2.57
32) 1,4-difluorobenzene	18.26	114	2164402m	10.00 ppbV	-1.19
47) chlorobenzene-d5	26.10	117	3563744m	10.00 ppbV	-0.18
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	

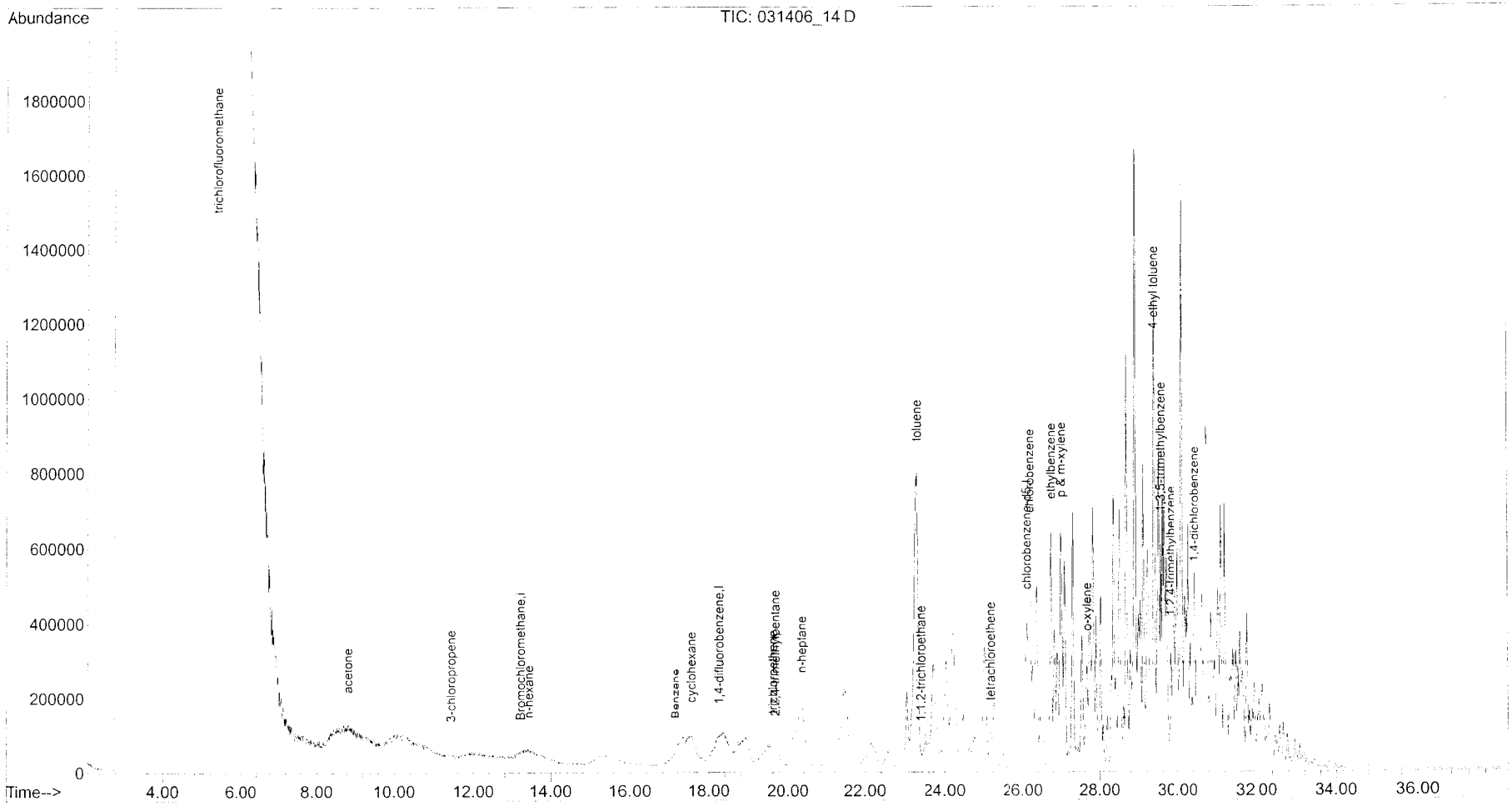
Target Compounds						Qvalue
12) acetone	8.83	43	8452219m b	83.38022 ppbV		
13) trichlorofluoromethane	5.41	101	486054m	2.64283 ppbV		
~~17) 3-chloropropene~~	~~11.43~~	~~39~~	~~32857~~	~~0.94851 ppbV~~	~~#~~	~~1~~ AF poor match
26) n-hexane	13.44	57	2345507m b	58.28332 ppbV		
34) Benzene	17.12	78	1961752m	9.10204 ppbV		
36) cyclohexane	17.55	56	1862756m	21.00070 ppbV		
39) 2,2,4-trimethylpentane	19.68	57	2506924m	10.10146 ppbV		
41) n-heptane	20.35	43	5213807m	72.91791 ppbV		AF poor match
~~42) trichloroethene~~	~~19.61~~	~~130~~	~~195362m~~	~~1.61778 ppbV~~		AF poor match
~~46) 1,1,2-trichloroethane~~	~~23.38~~	~~97~~	~~116109~~	~~1.13012 ppbV~~	~~#~~	~~12~~
49) toluene	23.27	91	24413428m b	70.80700 ppbV		
53) tetrachloroethene	25.14	166	368813m	1.53249 ppbV		
54) chlorobenzene	26.17	112	3568031	11.37299 ppbV	#	83
55) ethylbenzene	26.74	91	7616155	18.20006 ppbV		92
56) p & m-xylene	27.00	91	7470414	21.96251 ppbV	#	33
60) o-xylene	27.67	91	2176518	6.10757 ppbV		93
61) 4-ethyl toluene	29.36	105	1401980m a	2.08316 ppbV		
62) 1,3,5-trimethylbenzene	29.54	105	1227514	3.67759 ppbV		90
63) 1,2,4-trimethylbenzene	29.80	105	1072394m a	3.64414 ppbV		
66) 1,4-dichlorobenzene	30.44	146	420626	1.49691 ppbV	#	36

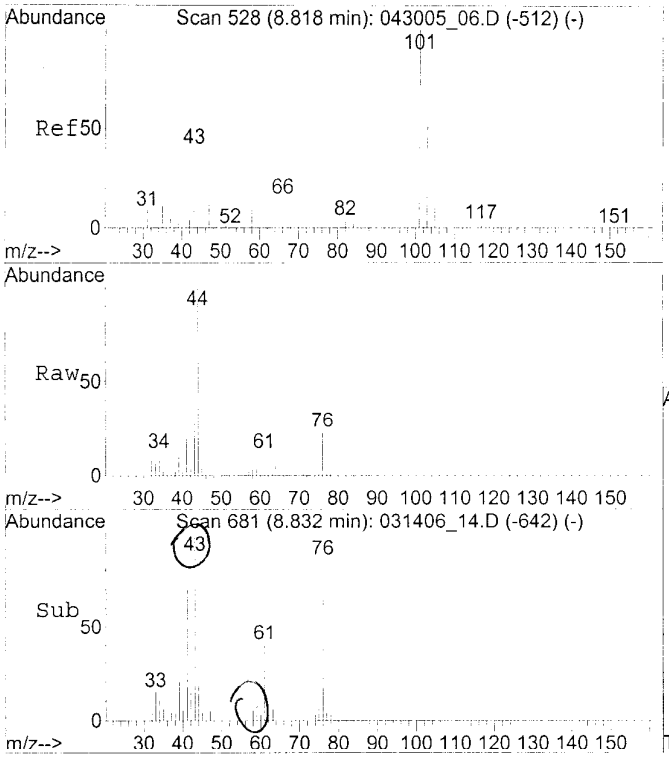
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantification Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 20 14:58:15 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

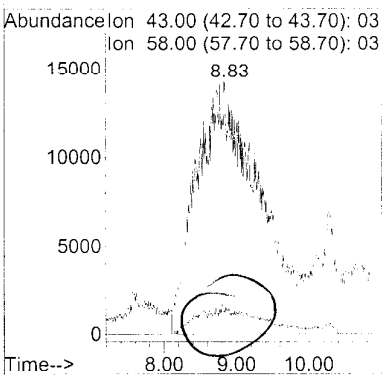


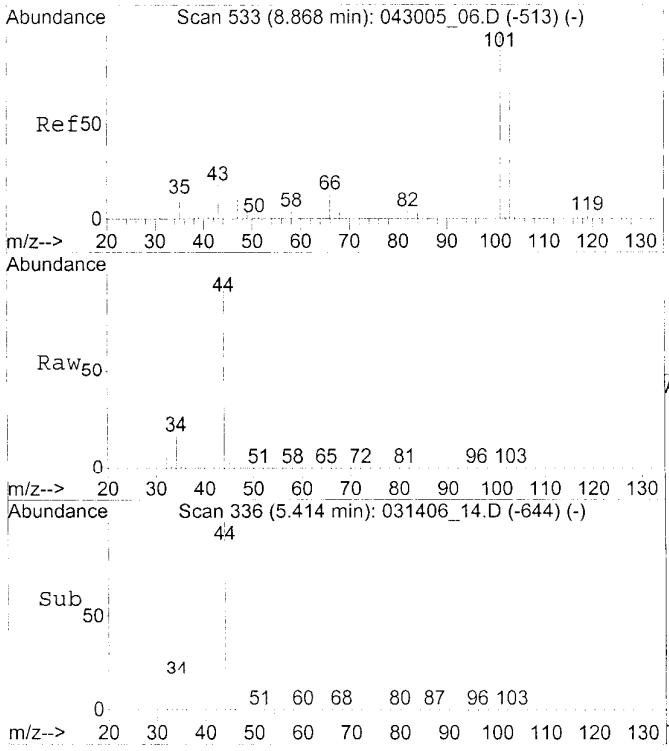


#12
acetone
Concen: 83.38 ppbV m
RT: 8.83 min Scan# 681
Delta R.T. -0.11 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 43 Resp: 8452219

Ion	Ratio	Lower	Upper
43	100		
58	0.0	10.1	15.1#

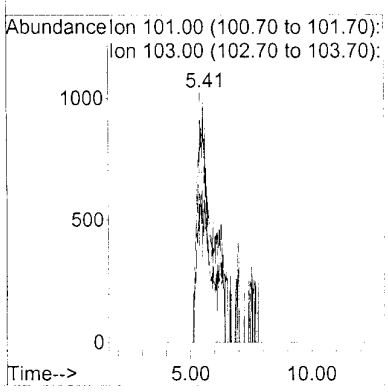


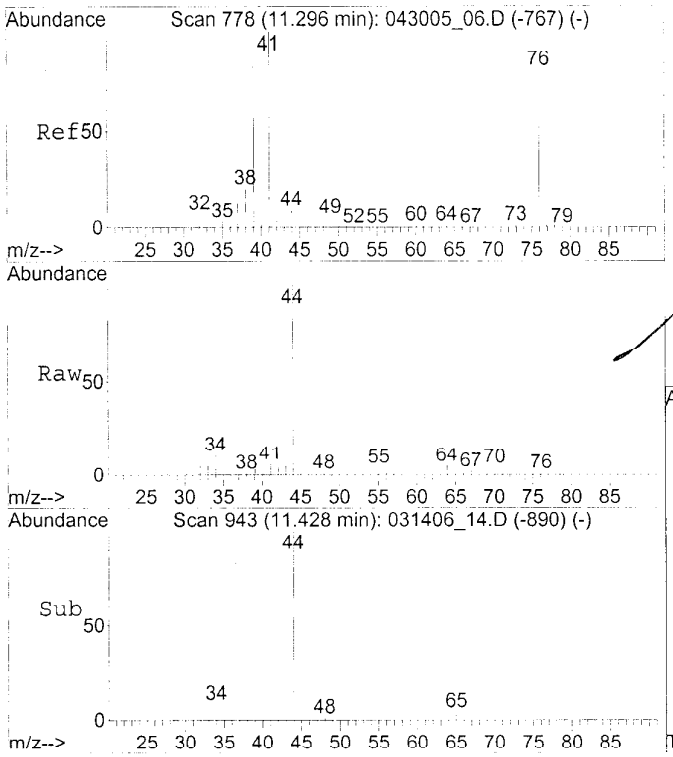


#13
trichlorofluoromethane
Concen: 2.64 ppbV m
RT: 5.41 min Scan# 336
Delta R.T. -3.55 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:101 Resp: 486054

Ion	Ratio	Lower	Upper
101	100		
103	0.0	52.4	78.6#

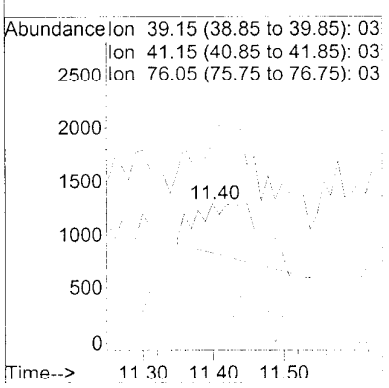


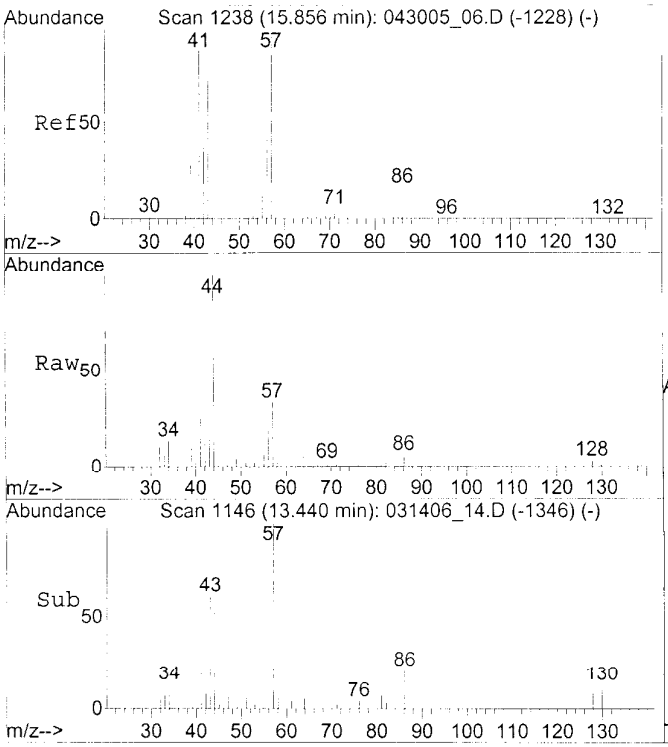


#17
3-chloropropene
Concen: 0.95 ppbV
RT: 11.43 min Scan# 943
Delta R.T. 0.03 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 39 Resp: 32857

Ion	Ratio	Lower	Upper
39	100		
41	0.0	95.5	143.3#
76	0.0	0.0	0.0

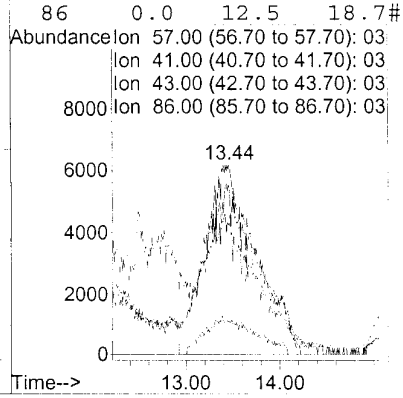


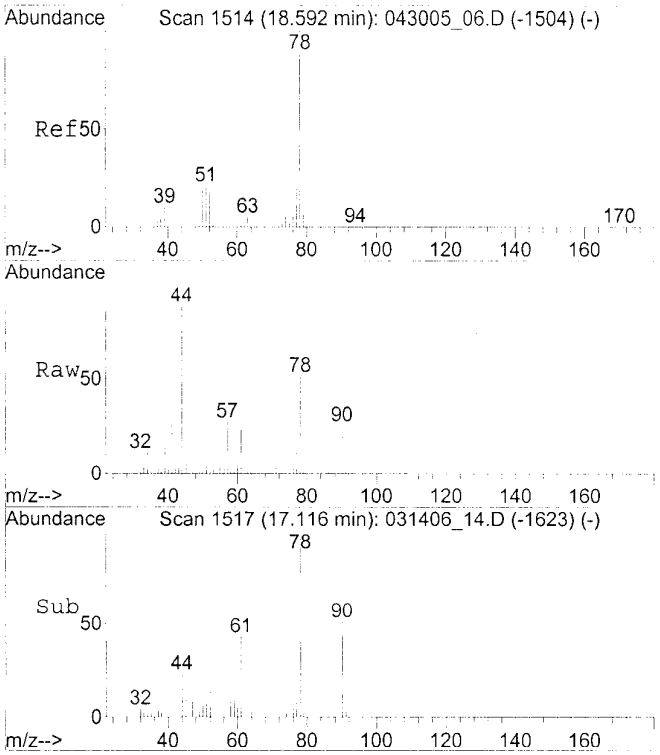


#26
n-hexane
Concen: 58.28 ppbV m
RT: 13.44 min Scan# 1146
Delta R.T. -2.48 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 57 Resp: 2345507

Ion	Ratio	Lower	Upper
57	100		
41	0.0	73.9	110.9#
43	0.0	55.4	83.0#
86	0.0	12.5	18.7#

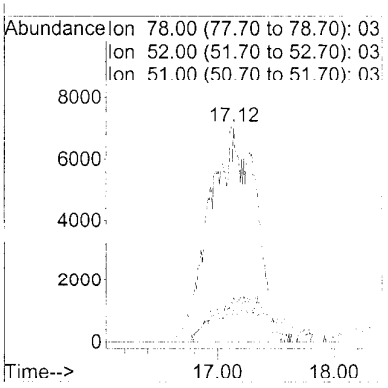


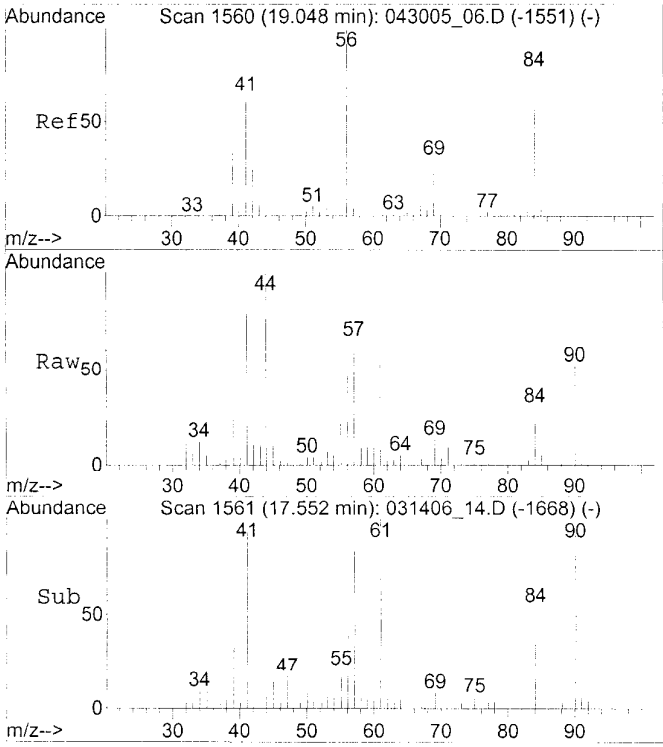


#34
Benzene
Concen: 9.10 ppbV m
RT: 17.12 min Scan# 1517
Delta R.T. -1.55 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 78 Resp: 1961752

Ion	Ratio	Lower	Upper
78	100		
52	0.0	14.8	22.2#
51	0.0	16.8	25.2#

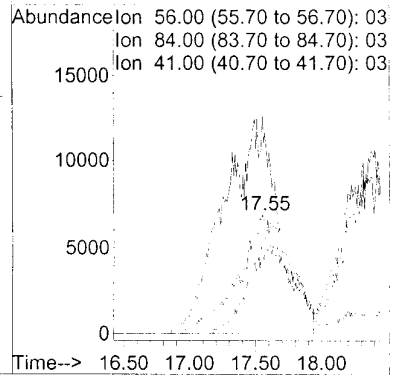


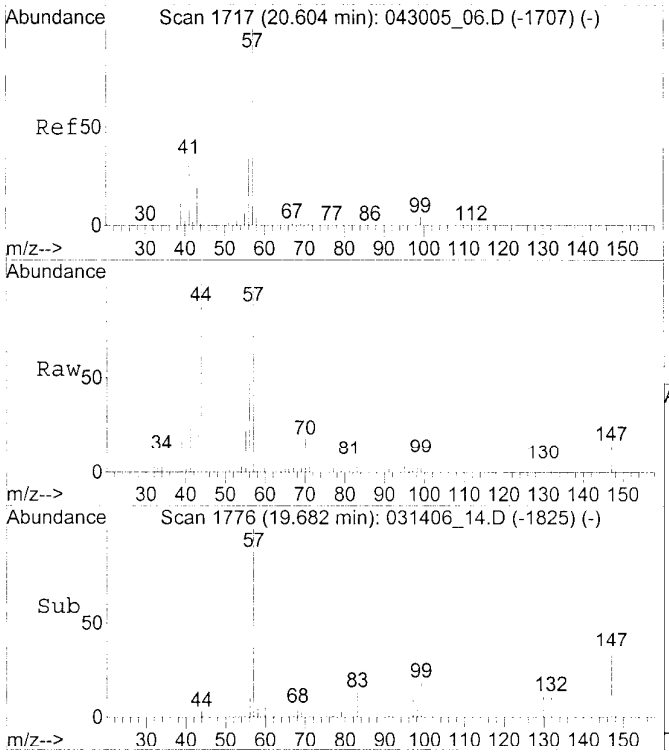


#36
cyclohexane
Concen: 21.00 ppbV m
RT: 17.55 min Scan# 1561
Delta R.T. -1.56 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 56 Resp: 1862756

Ion	Ratio	Lower	Upper
56	100		
84	0.0	62.2	93.2#
41	0.0	52.1	78.1#

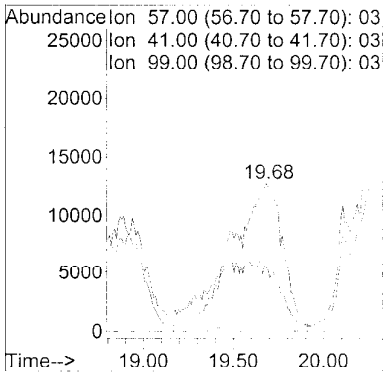


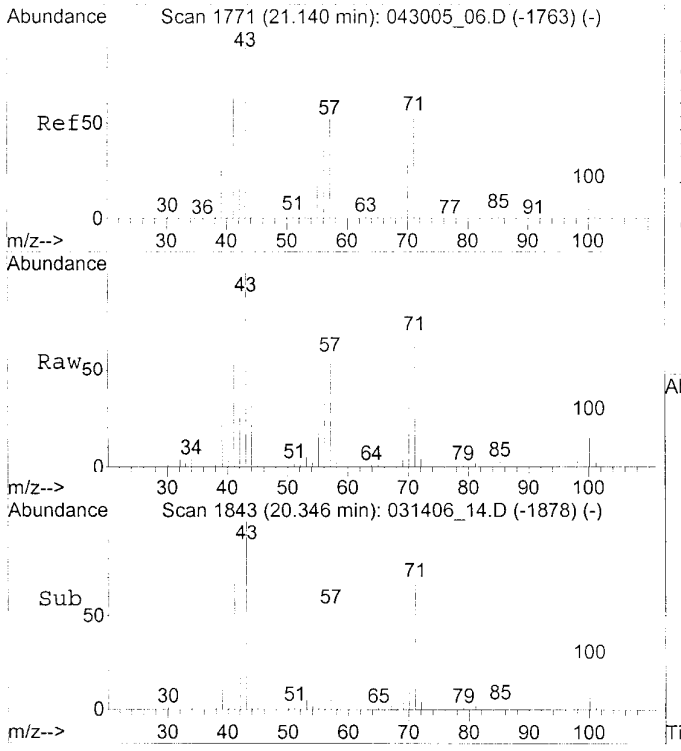


#39
2,2,4-trimethylpentane
Concen: 10.10 ppbV m
RT: 19.68 min Scan# 1776
Delta R.T. -0.99 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 57 Resp: 2506924

Ion	Ratio	Lower	Upper
57	100		
41	41.0	26.6	40.0#
99	0.0	4.2	6.4#

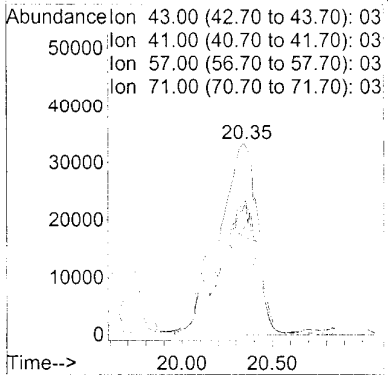


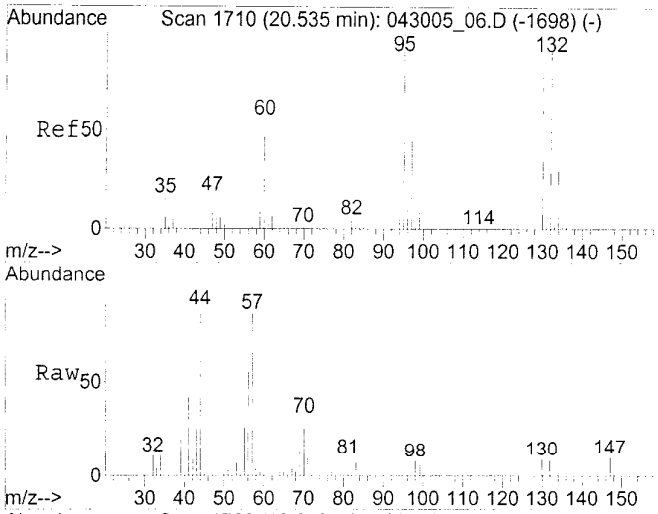


#41
n-heptane
Concen: 72.92 ppbV m
RT: 20.35 min Scan# 1843
Delta R.T. -0.85 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 43 Resp: 5213807

Ion	Ratio	Lower	Upper
43	100		
41	40.6	57.3	85.9#
57	0.0	40.9	61.3#
71	0.0	41.8	62.6#





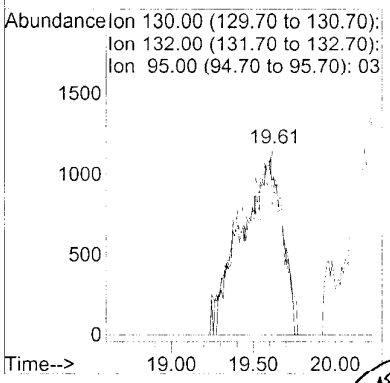
#42
trichloroethene
Concen: 1.62 ppbV m
RT: 19.61 min Scan# 1769
Delta R.T. -0.98 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

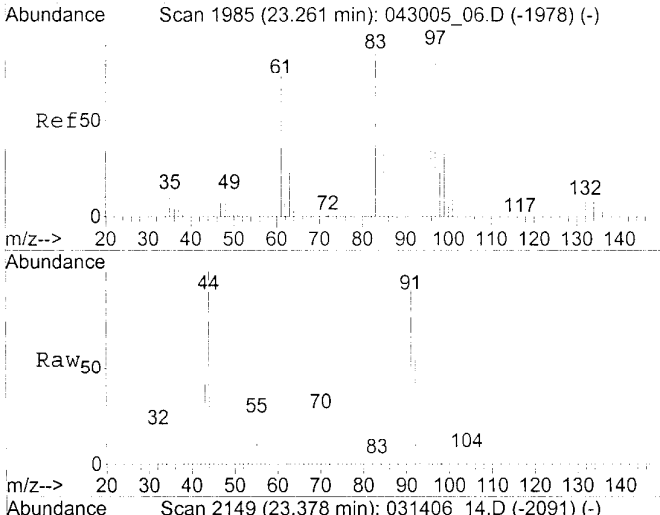
Tgt Ion:130 Resp: 195362

Ion	Ratio	Lower	Upper
130	100		
132	0.0	77.0	115.4#
95	0.0	90.3	135.5#

AB

poor match



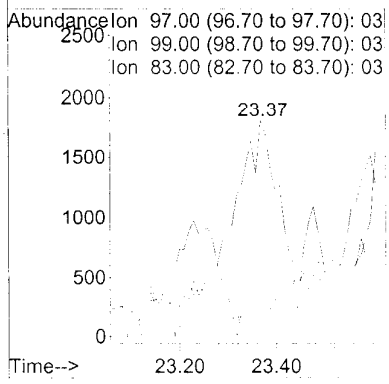


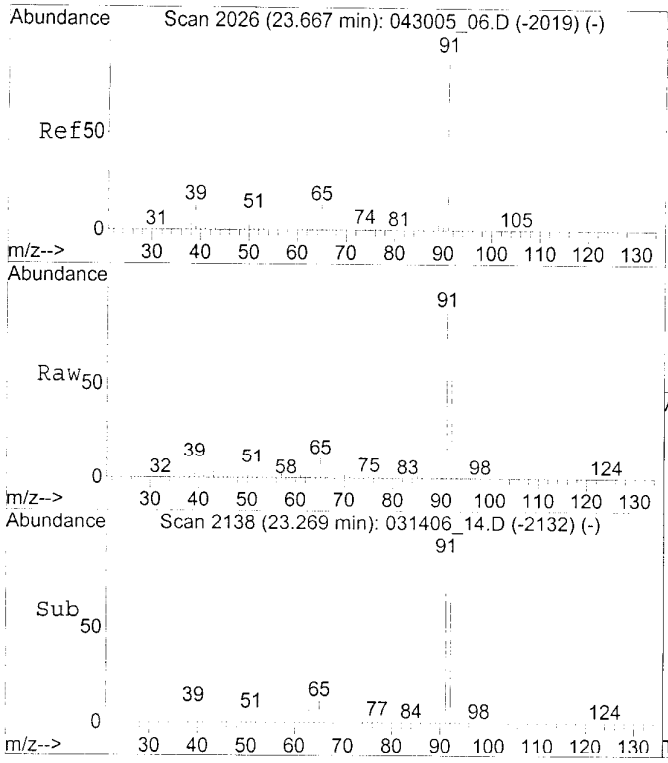
#46
1,1,2-trichloroethane
Concen: 1.13 ppbV
RT: 23.38 min Scan# 2149
Delta R.T. 0.07 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 97 Resp: 116109

Ion	Ratio	Lower	Upper
97	100		
99	0.0	31.1	93.3#
83	0.0	0.0	171.6

AB poor match

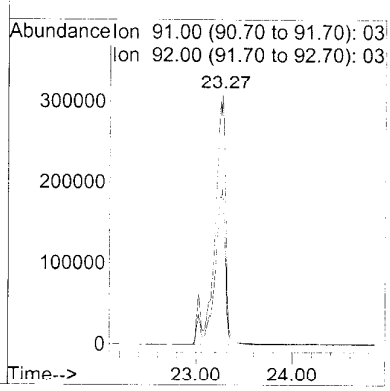


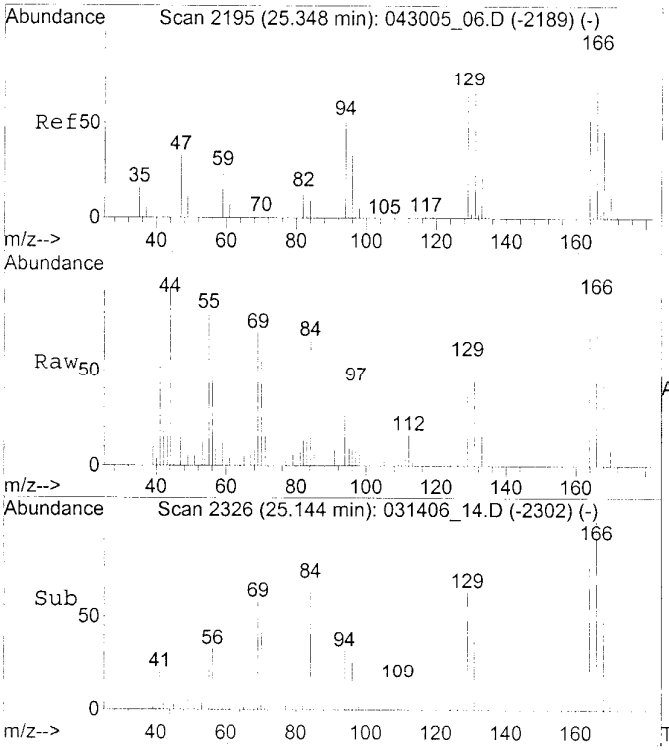


#49
toluene
Concen: 70.81 ppbV m
RT: 23.27 min Scan# 2138
Delta R.T. -0.44 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 91 Resp:24413428

Ion	Ratio	Lower	Upper
91	100		
92	49.8	48.6	73.0

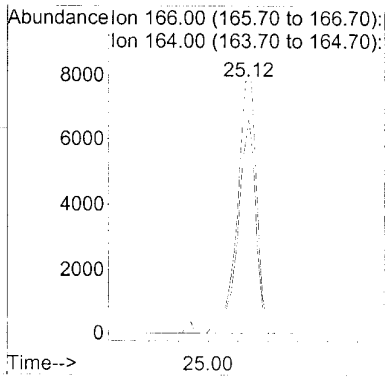


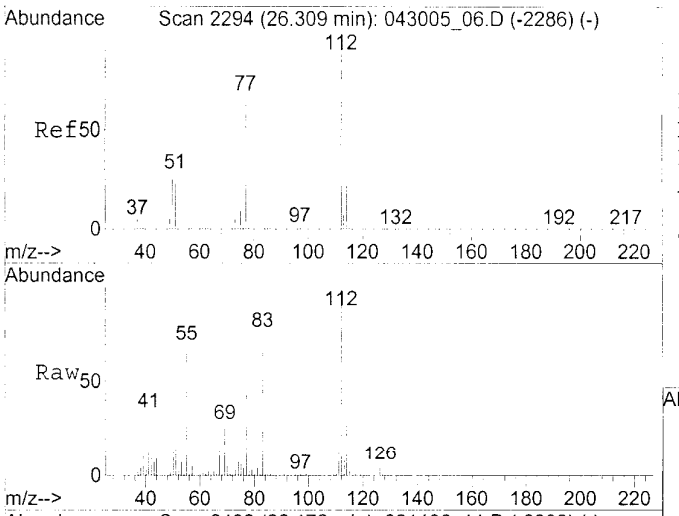


#53
tetrachloroethene
Concen: 1.53 ppbV m
RT: 25.14 min Scan# 2326
Delta R.T. -0.25 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:166 Resp: 368813

Ion	Ratio	Lower	Upper
166	100		
164	74.8	63.0	94.6

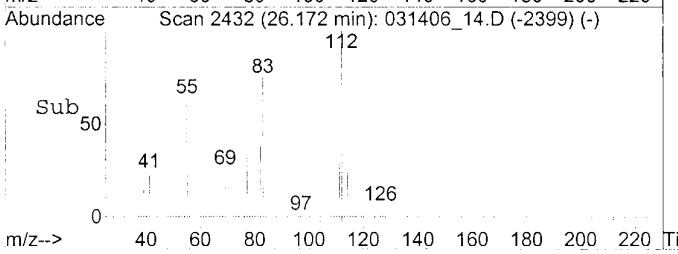


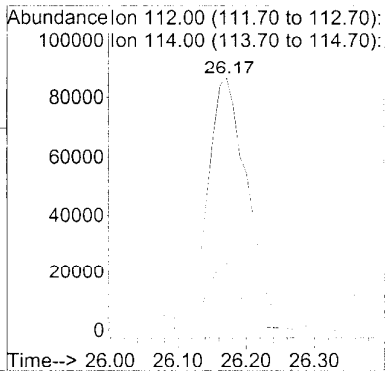


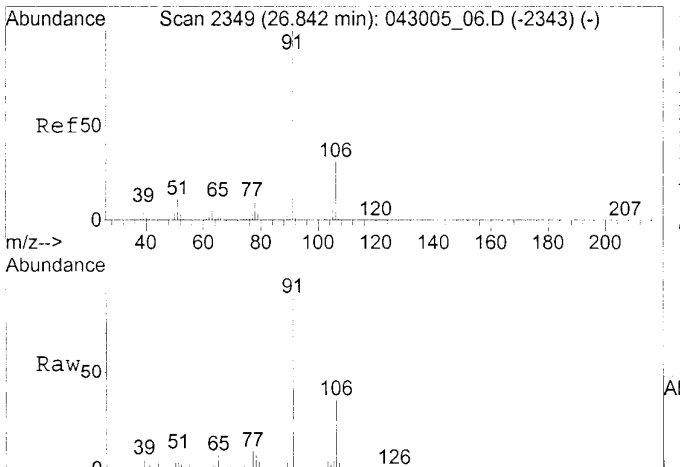
#54
chlorobenzene
Concen: 11.37 ppbV
RT: 26.17 min Scan# 2432
Delta R.T. -0.17 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:112 Resp: 3568031

Ion	Ratio	Lower	Upper
112	100		
114	22.7	25.8	38.6#



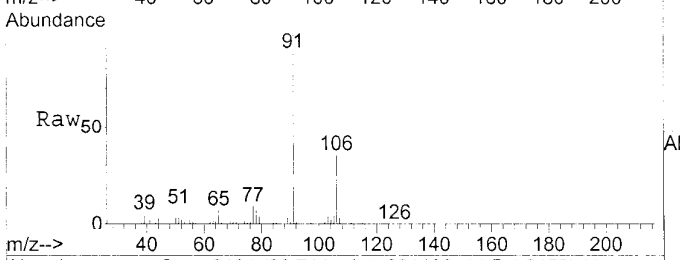


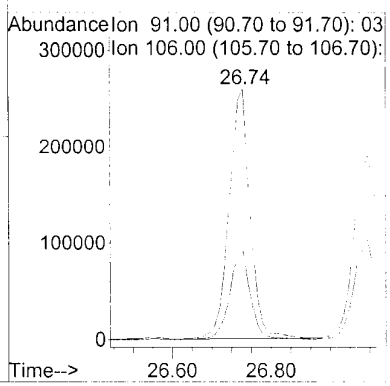


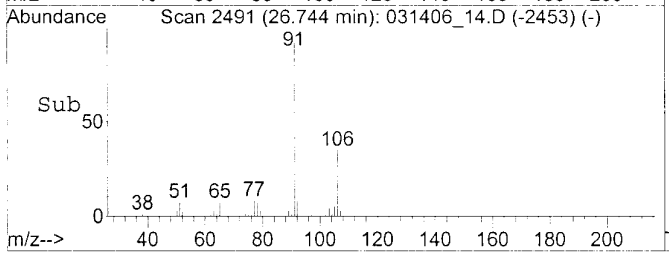
#55
ethylbenzene
Concen: 18.20 ppbV
RT: 26.74 min Scan# 2491
Delta R.T. -0.13 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

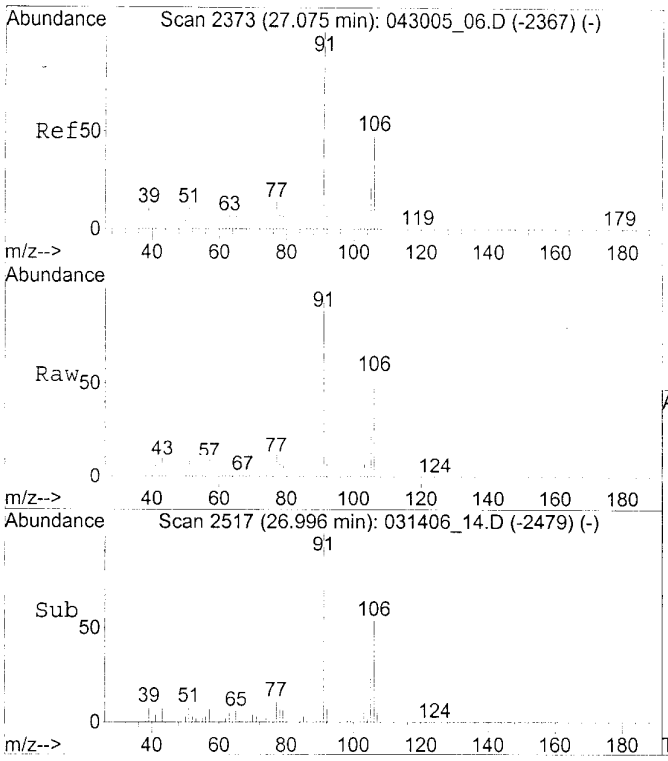
Tgt Ion: 91 Resp: 7616155

Ion	Ratio	Lower	Upper
91	100		
106	34.8	24.2	36.4





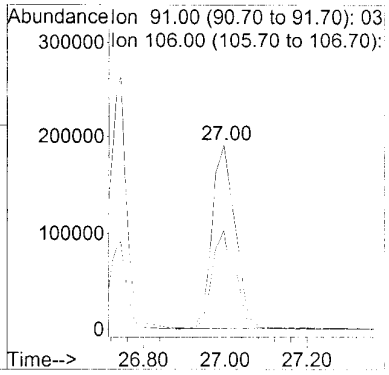


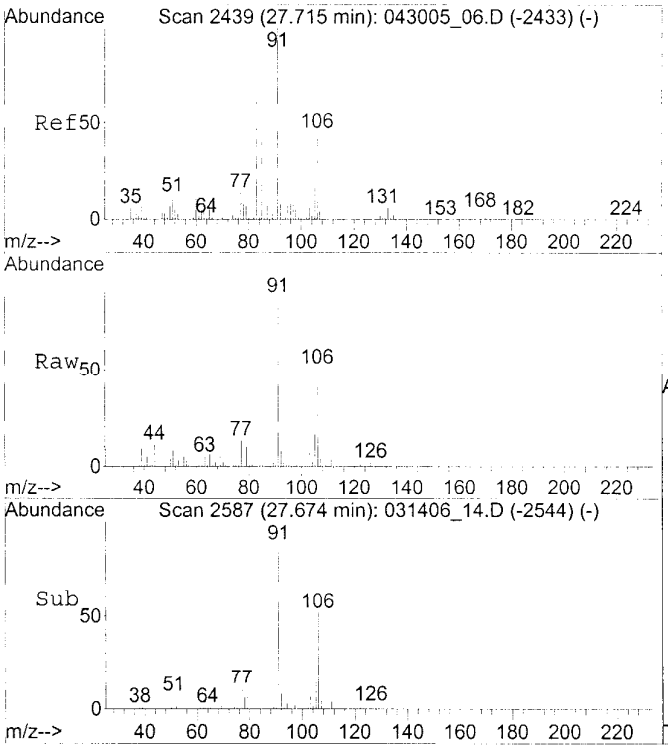


#56
p & m-xylene
Concen: 21.96 ppbV
RT: 27.00 min Scan# 2517
Delta R.T. -0.13 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 91 Resp: 7470414

Ion	Ratio	Lower	Upper
91	100		
106	53.5	17.4	26.2#

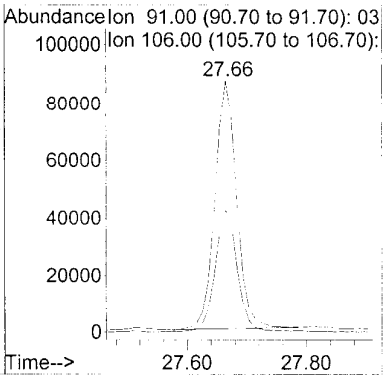


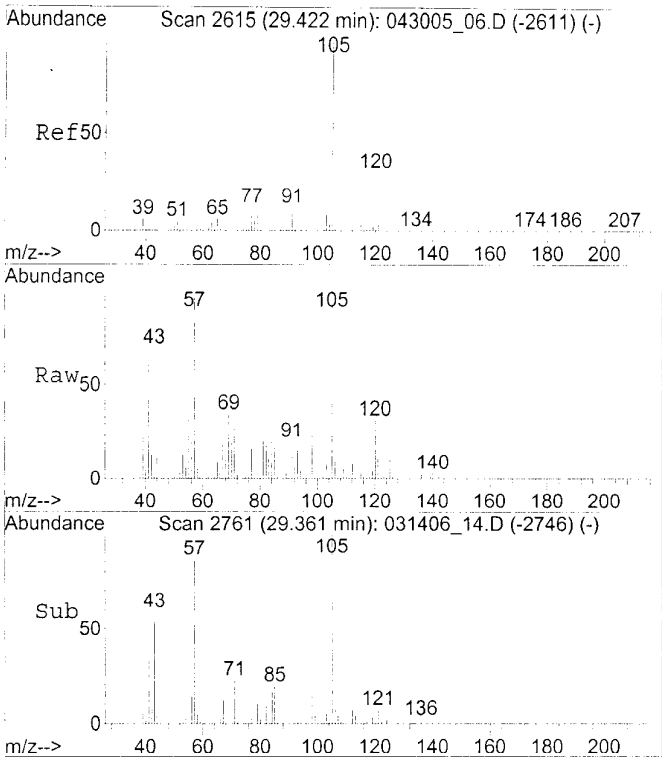


#60
o-xylene
Concen: 6.11 ppbV
RT: 27.67 min Scan# 2587
Delta R.T. -0.08 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion: 91 Resp: 2176518

Ion	Ratio	Lower	Upper
91	100		
106	49.3	35.8	53.6

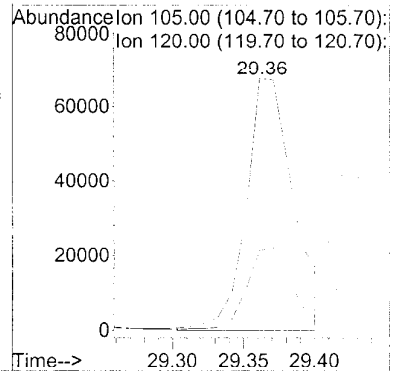


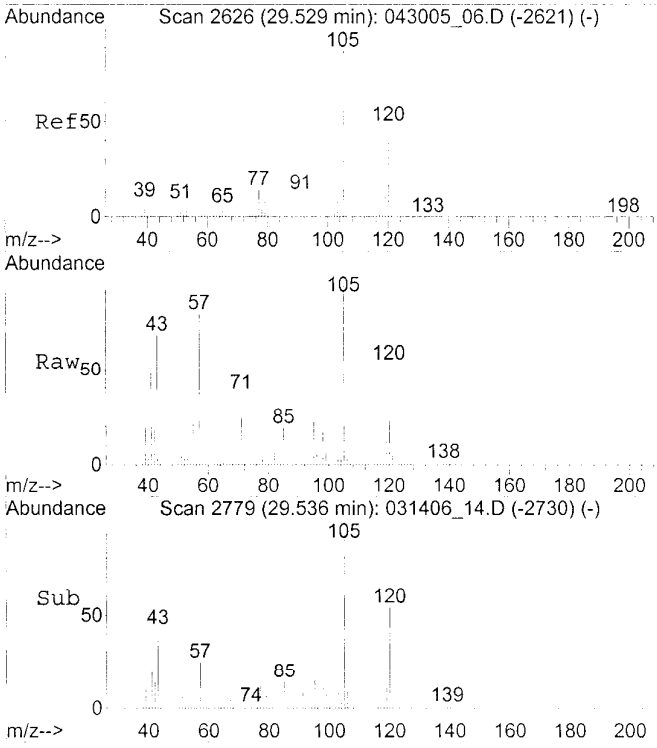


#61
4-ethyl toluene
Concen: 2.08 ppbV m
RT: 29.36 min Scan# 2761
Delta R.T. -0.06 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:105 Resp: 1401980

Ion	Ratio	Lower	Upper
105	100		
120	39.5	23.0	34.6#

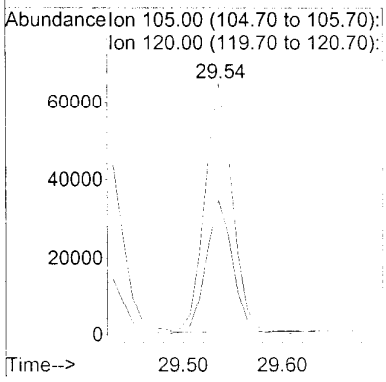


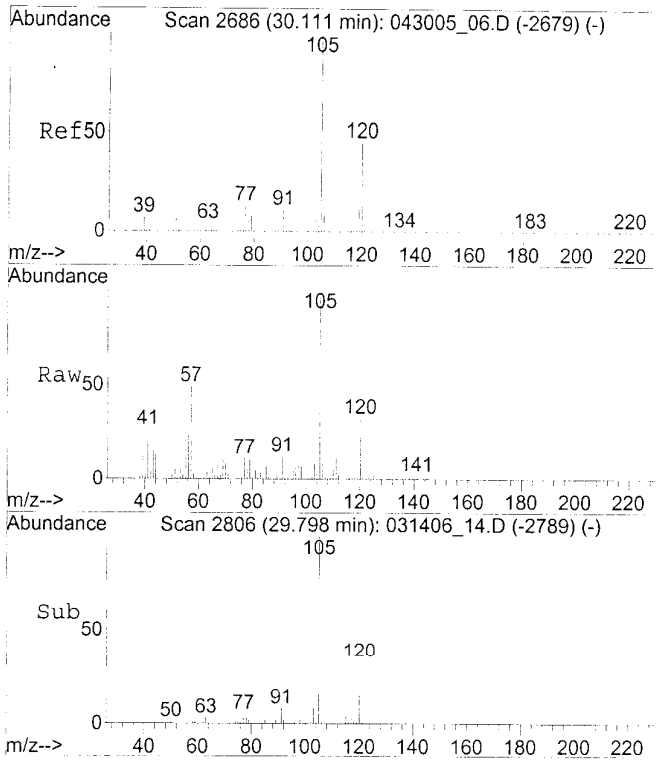


#62
1,3,5-trimethylbenzene
Concen: 3.68 ppbV
RT: 29.54 min Scan# 2779
Delta R.T. -0.02 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:105 Resp: 1227514

Ion	Ratio	Lower	Upper
105	100		
120	52.8	37.0	55.4

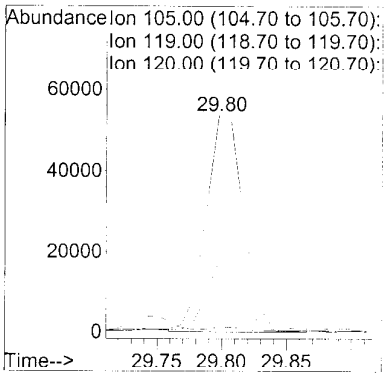


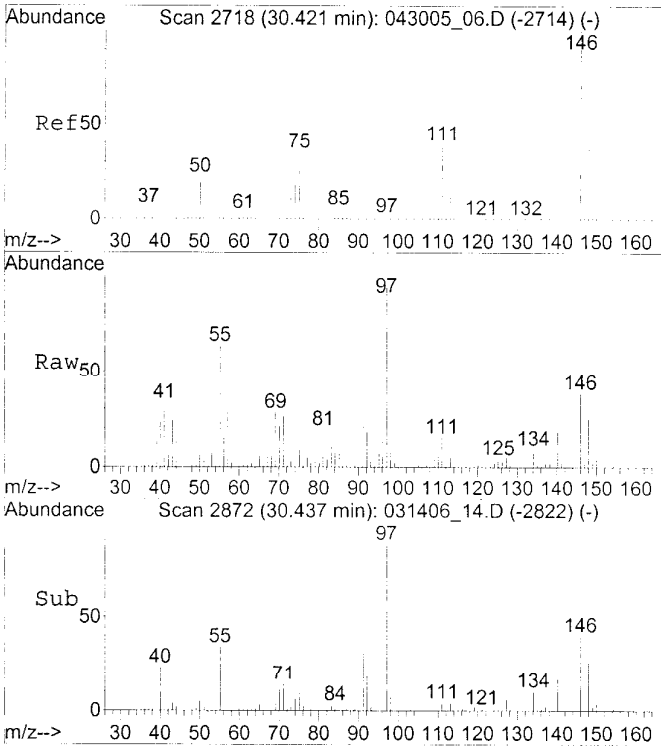


#63
1,2,4-trimethylbenzene
Concen: 3.64 ppbV m
RT: 29.80 min Scan# 2806
Delta R.T. -0.34 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:105 Resp: 1072394

Ion	Ratio	Lower	Upper
105	100		
119	0.0	8.9	13.3#
120	31.8	35.0	52.6#

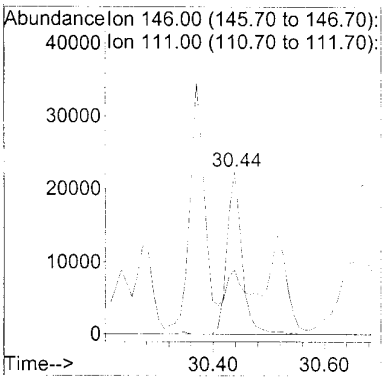




#66
1,4-dichlorobenzene
Concen: 1.50 ppbV
RT: 30.44 min Scan# 2872
Delta R.T. -0.01 min
Lab File: 031406_14.D
Acq: 16 Mar 2006 12:21 pm

Tgt Ion:146 Resp: 420626

Ion	Ratio	Lower	Upper
146	100		
111	0.0	31.3	46.9#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-5 C141 031506_14

Inlet Position : 8

Injection Number: 1

Run Information

Inject Time : 09:52:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 15:00:02 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Bromochloromethane	15.36	128	242520m b	10.00 ppbV	-0.43
32) 1,4-difluorobenzene	19.30	114	1224893	10.00 ppbV	-0.15
47) chlorobenzene-d5	26.25	117	3522410m b	10.00 ppbV	-0.04
System Monitoring Compounds					
30) 1,2-dichloroethane-d4	0.00	65	0	0.00 ppbV	
48) toluene-d8	0.00	98	0	0.00 ppbV	

Target Compounds					Qvalue	
~~4) chloromethane~~	~~4.51~~	~~50~~	~~13278~~	~~0.54616 ppbV~~	~~# 42~~	
~~9) chloroethane~~	~~6.71~~	~~64~~	~~29626~~	~~2.08516 ppbV~~	~~# 43~~	
13) trichlorofluoromethane	8.70	101	13417596m a	86.16481 ppbV		
24) 2-butanone (MEK)	14.57	43	316878	6.26266 ppbV	# 64	
~~29) tetrahydrofuran (THF)~~	~~16.94~~	~~42~~	~~62254~~	~~2.17818 ppbV~~	~~# 28~~	
34) Benzene	18.44	78	1178525	9.66214 ppbV	# 66	
36) cyclohexane	18.86	56	1103456	21.98229 ppbV	# 50	
39) 2,2,4-trimethylpentane	20.52	57	921323	6.55987 ppbV	# 47	
41) n-heptane	21.09	43	3706068	91.58674 ppbV	# 90	
42) trichloroethene	20.46	130	197315m b	2.88721 ppbV		
49) toluene	23.65	91	42230708m	123.92028 ppbV		
53) tetrachloroethene	25.36	166	685779m	2.88298 ppbV		
54) chlorobenzene	26.32	112	2210815	7.12960 ppbV	# 80	
55) ethylbenzene	26.85	91	18165201	43.91812 ppbV	95	
56) p & m-xylene	27.08	91	19159765	56.98941 ppbV	# 35	
60) o-xylene	27.73	91	5149345	14.61923 ppbV	91	
61) 4-ethyl toluene	29.37	105	3071990m a	4.61813 ppbV		
62) 1,3,5-trimethylbenzene	29.54	105	1489826	4.51584 ppbV	88	
63) 1,2,4-trimethylbenzene	30.12	105	3354231	11.53189 ppbV	# 89	
66) 1,4-dichlorobenzene	30.44	146	379721	1.36719 ppbV	# 82	

poor matches

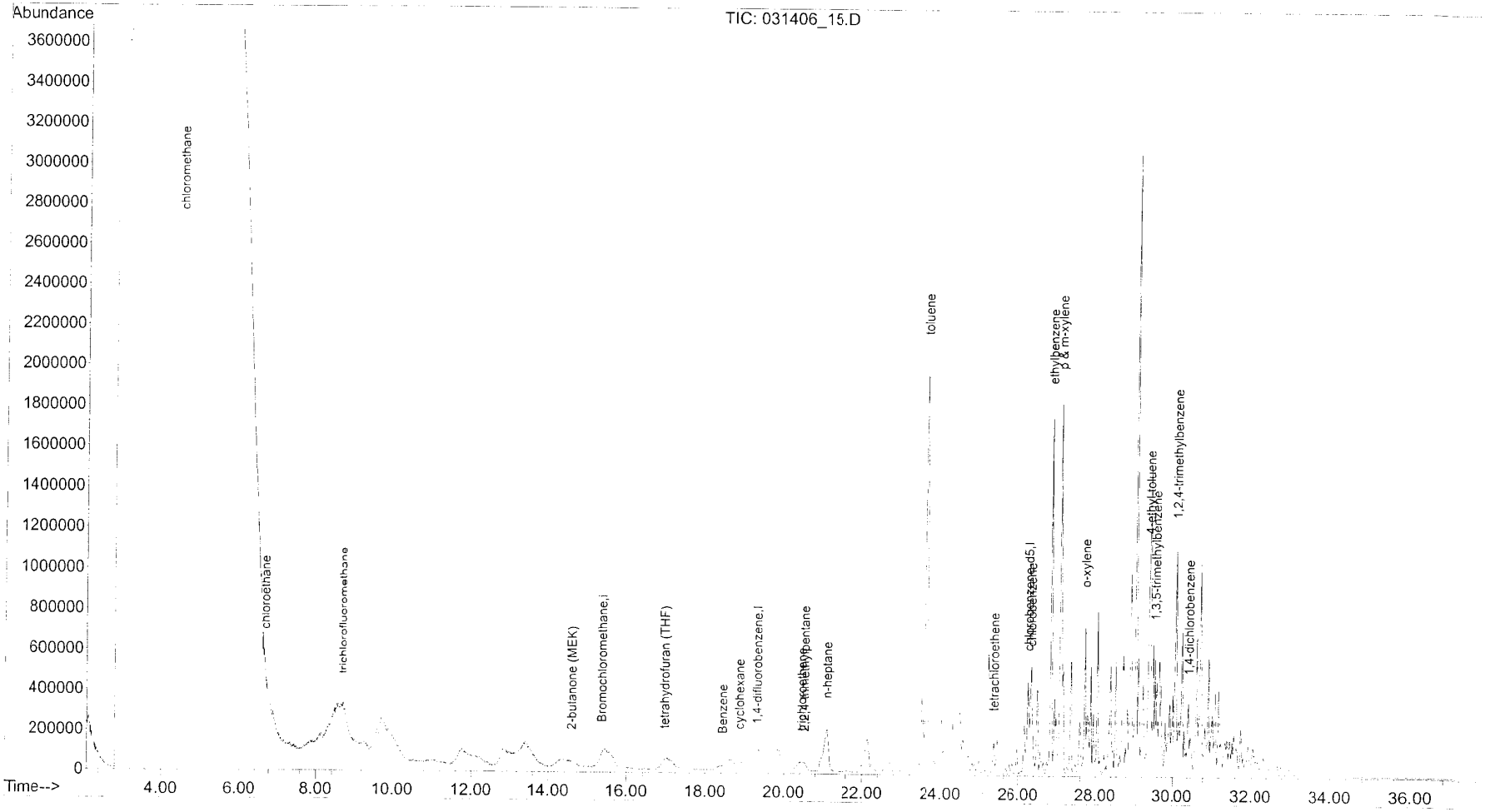
poor match

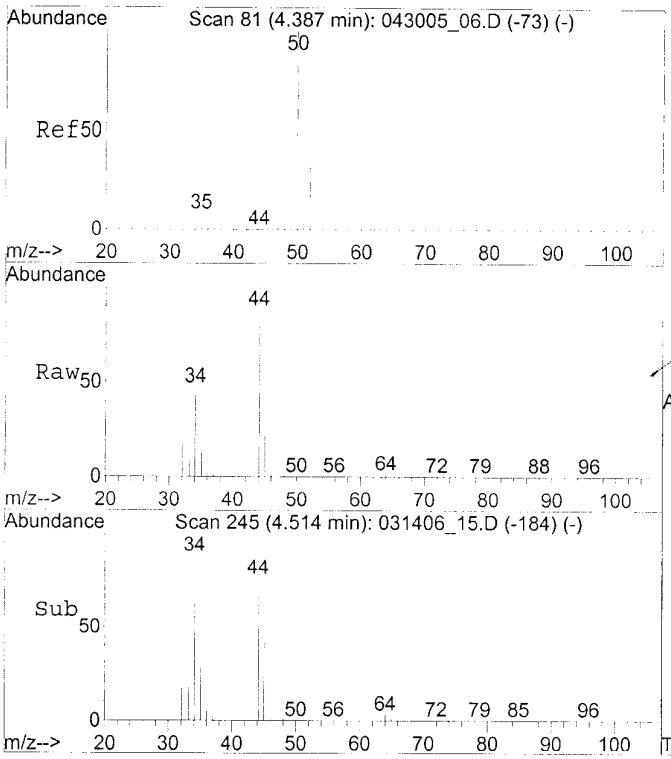
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Reviewed)

Data Path : C:\MSDCHEM\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Mar 20 15:00:02 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Wed Feb 22 17:36:58 2006
Response via : Initial Calibration

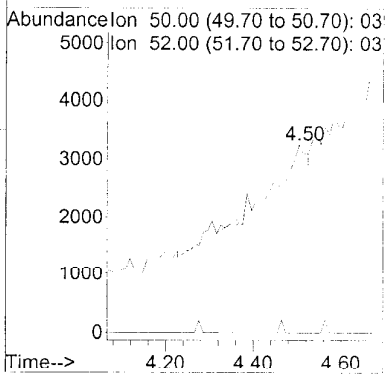


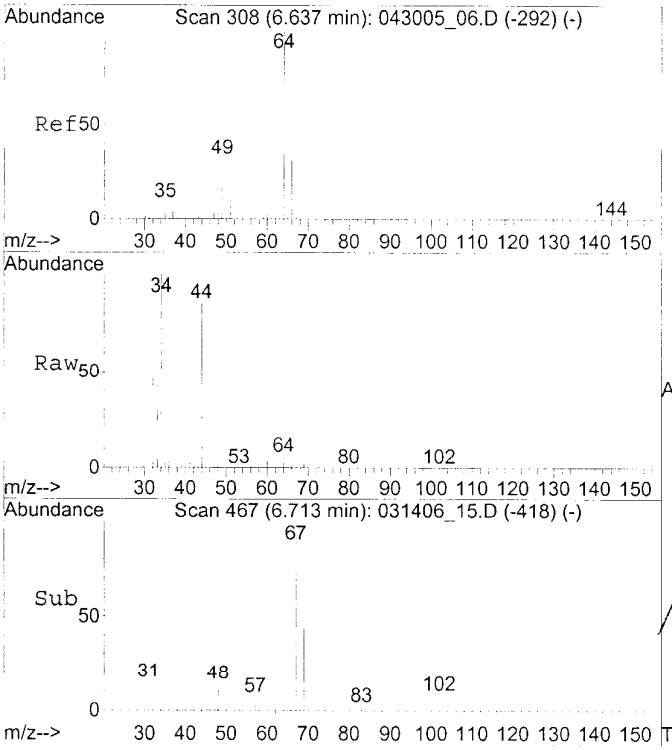


#4
chloromethane
Concen: 0.55 ppbV
RT: 4.51 min Scan# 245
Delta R.T. 0.10 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 50 Resp: 13278

Ion	Ratio	Lower	Upper
50	100		
52	0.0	25.8	38.6#

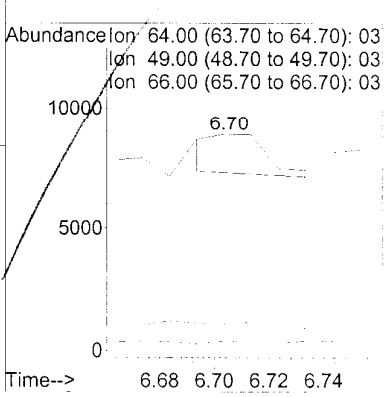


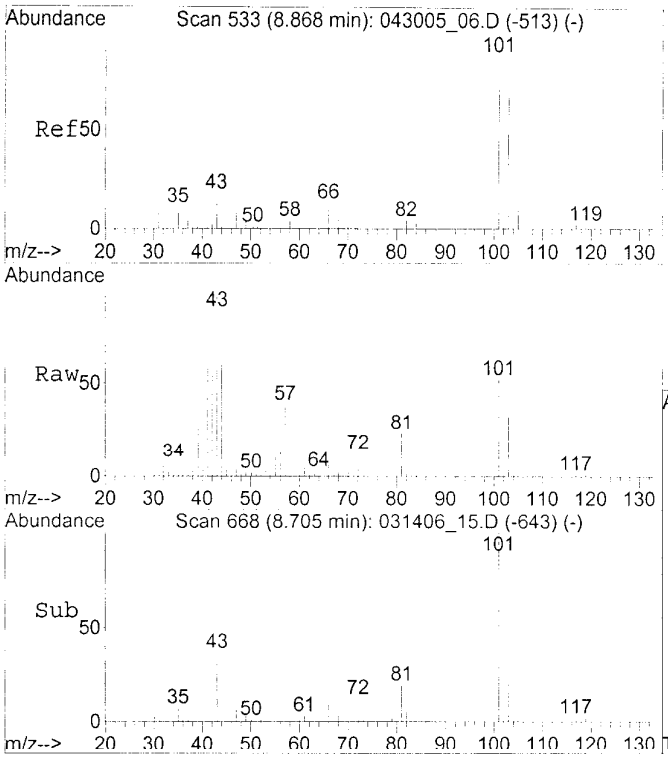


#9
chloroethane
Concen: 2.09 ppbV
RT: 6.71 min Scan# 467
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 64 Resp: 29626

Ion	Ratio	Lower	Upper
64	100		
49	0.0	25.5	38.3#
66	0.0	25.7	38.5#

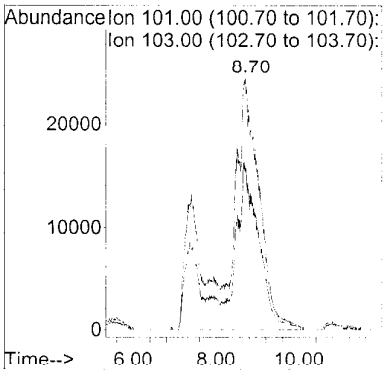


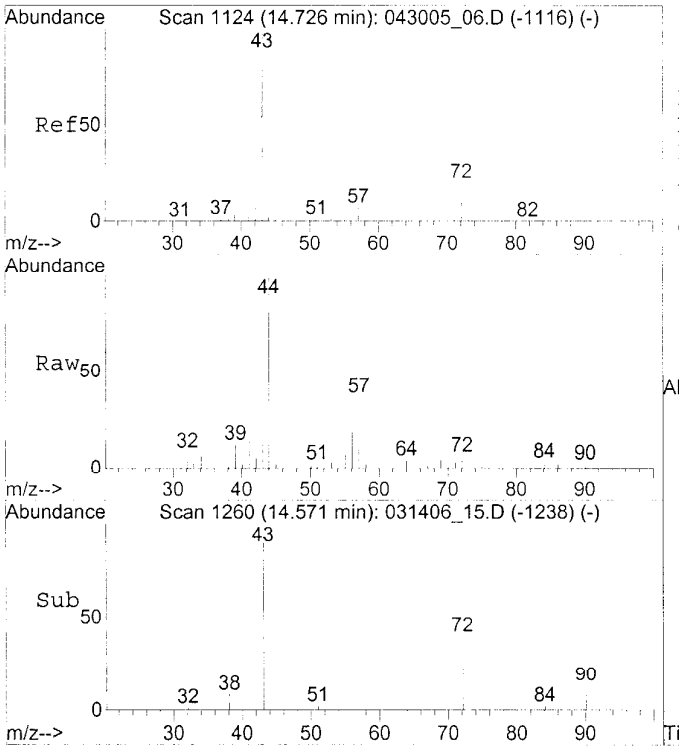


#13
trichlorofluoromethane
Concen: 86.16 ppbV m
RT: 8.70 min Scan# 668
Delta R.T. -0.26 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:101 Resp:13417596

Ion	Ratio	Lower	Upper
101	100		
103	0.0	52.4	78.6#

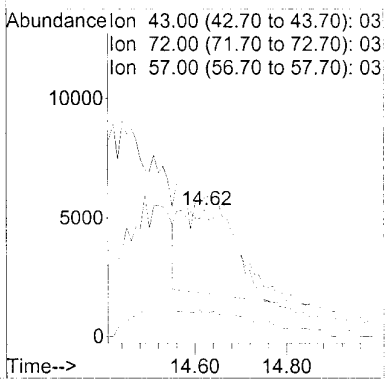


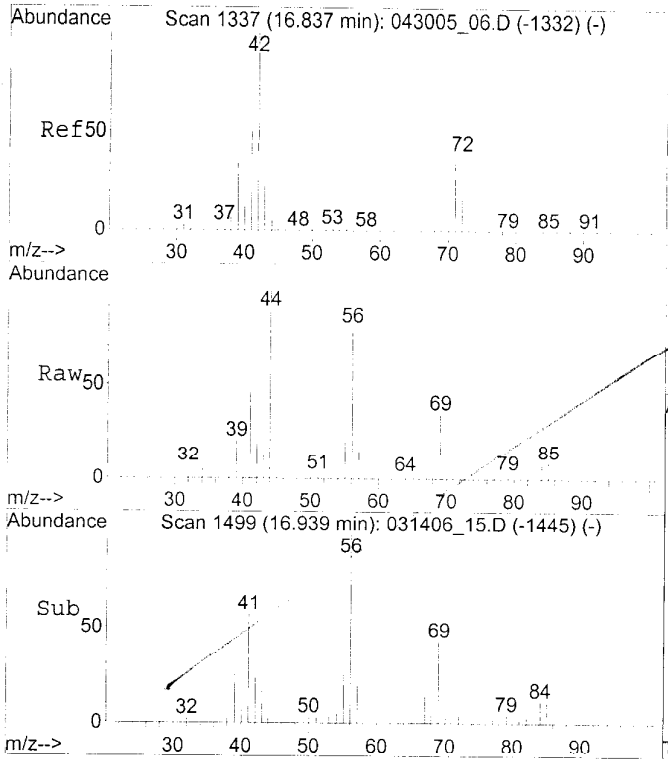


#24
2-butanone (MEK)
Concen: 6.26 ppbV
RT: 14.57 min Scan# 1260
Delta R.T. -0.28 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 43 Resp: 316878

Ion	Ratio	Lower	Upper
43	100		
72	0.0	14.8	22.2#
57	0.0	5.8	8.6#

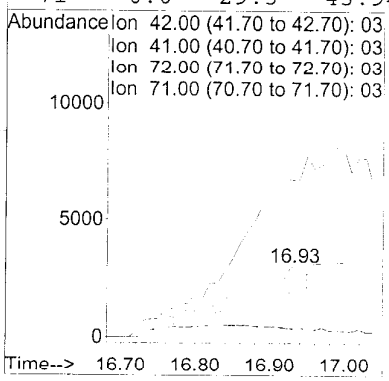




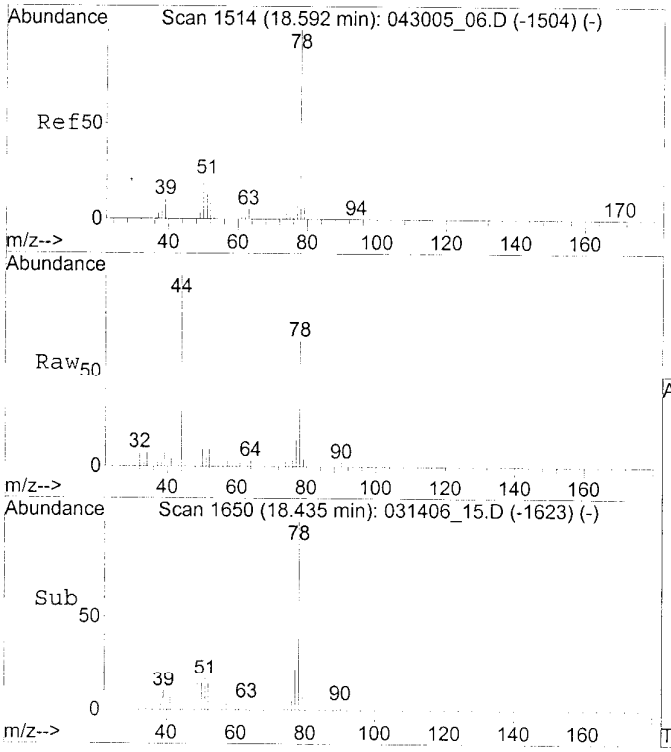
#29
tetrahydrofuran (THF)
Concen: 2.18 ppbV
RT: 16.94 min Scan# 1499
Delta R.T. 0.03 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 42 Resp: 62254

Ion	Ratio	Lower	Upper
42	100		
41	0.0	52.6	78.8#
72	0.0	30.6	46.0#
71	0.0	29.3	43.9#



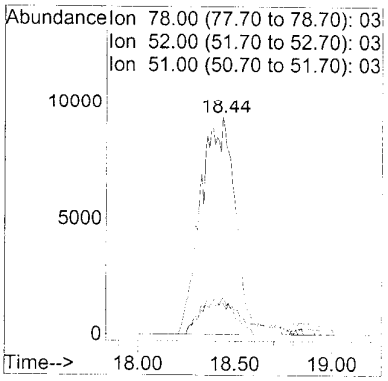
poor match

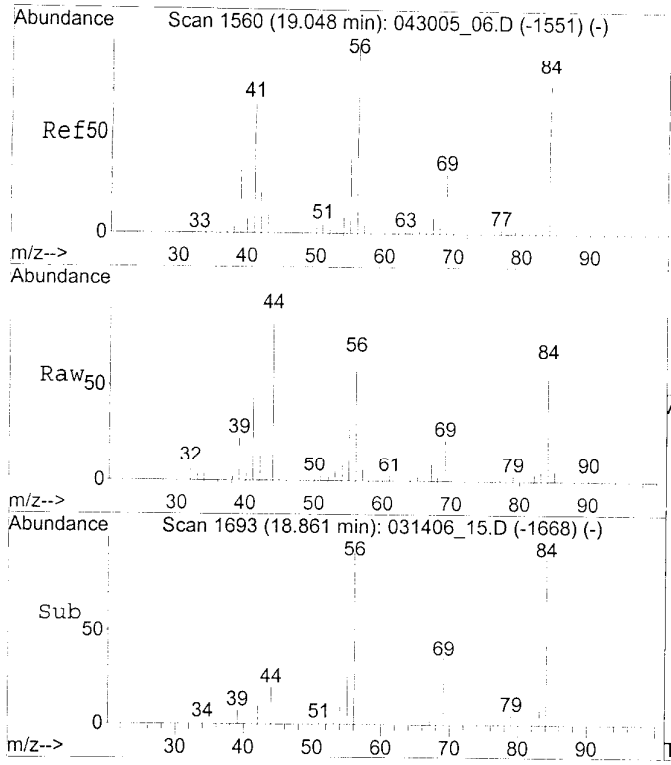


#34
Benzene
Concen: 9.66 ppbV
RT: 18.44 min Scan# 1650
Delta R.T. -0.23 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 78 Resp: 1178525

Ion	Ratio	Lower	Upper
78	100		
52	0.0	14.8	22.2#
51	8.0	16.8	25.2#

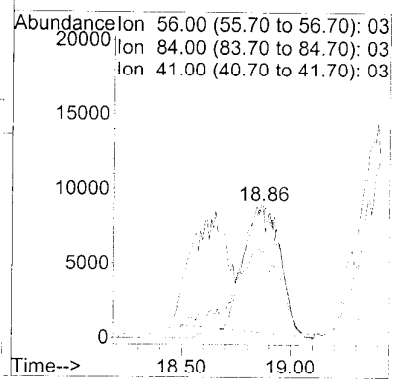


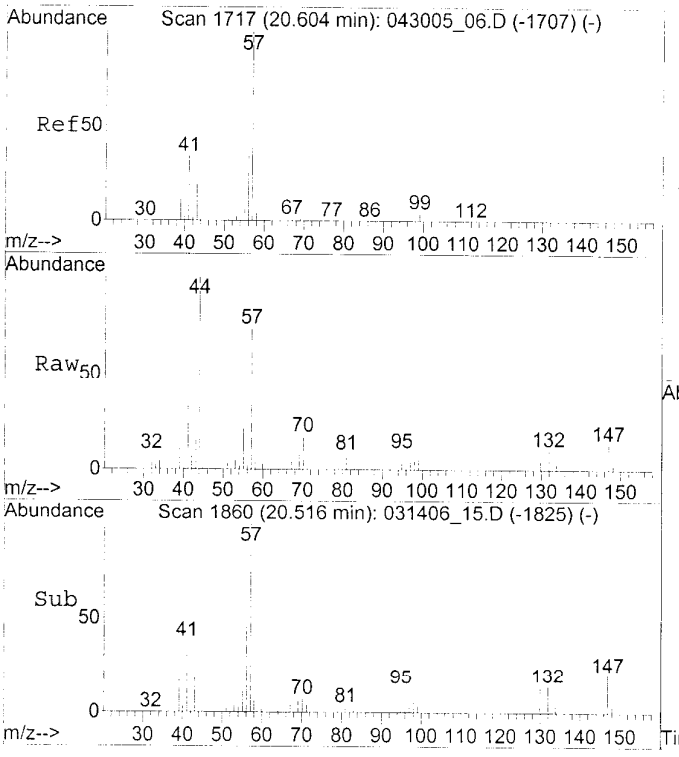


#36
cyclohexane
Concen: 21.98 ppbV
RT: 18.86 min Scan# 1693
Delta R.T. -0.25 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 56 Resp: 1103456

Ion	Ratio	Lower	Upper
56	100		
84	98.2	62.2	93.2#
41	0.0	52.1	78.1#

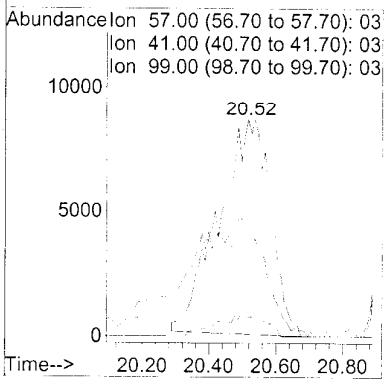


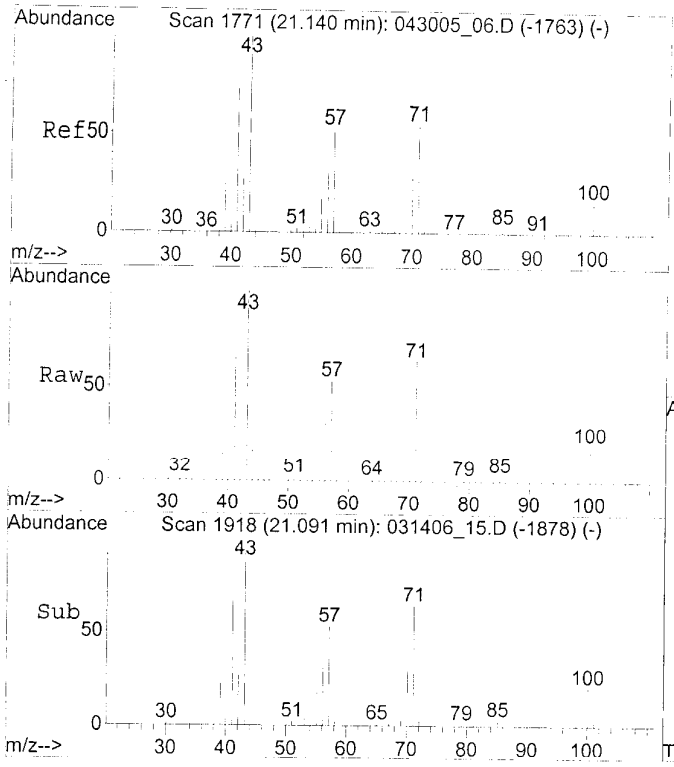


#39
2,2,4-trimethylpentane
Concen: 6.56 ppbV
RT: 20.52 min Scan# 1860
Delta R.T. -0.15 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 57 Resp: 921323

Ion	Ratio	Lower	Upper
57	100		
41	0.0	26.6	40.0#
99	0.0	4.2	6.4#

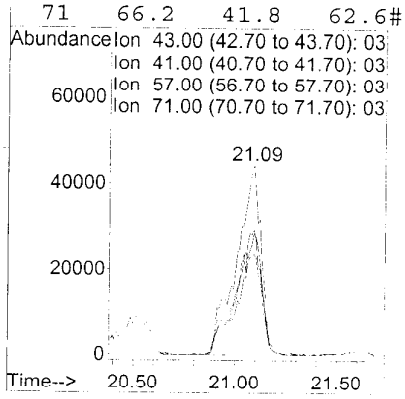


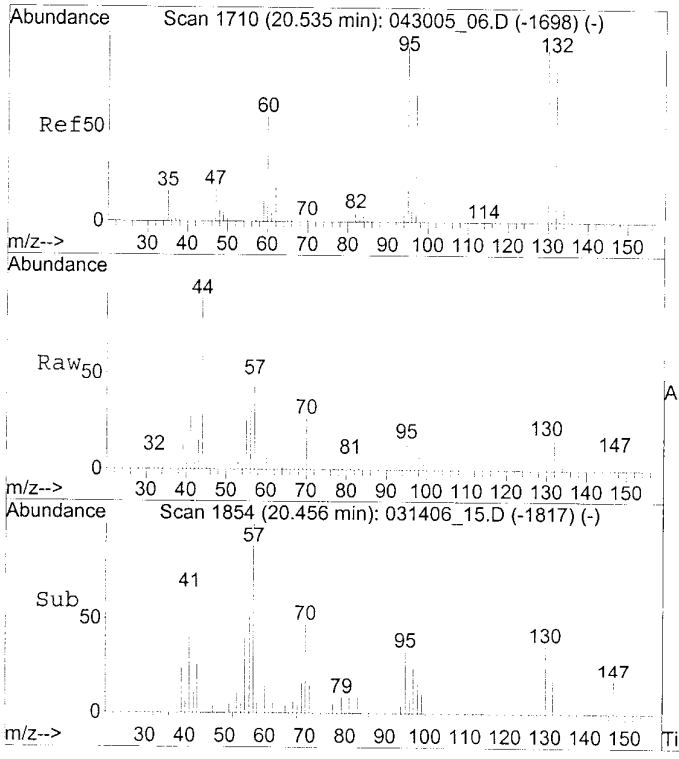


#41
n-heptane
Concen: 91.59 ppbV
RT: 21.09 min Scan# 1918
Delta R.T. -0.11 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 43 Resp: 3706068

Ion	Ratio	Lower	Upper
43	100		
41	66.9	57.3	85.9
57	54.9	40.9	61.3
71	66.2	41.8	62.6#

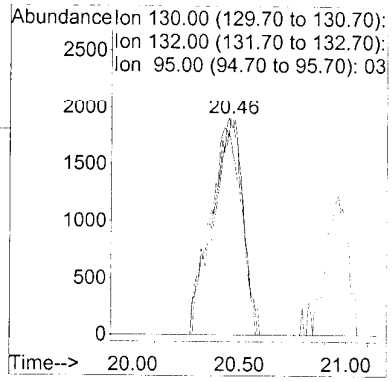


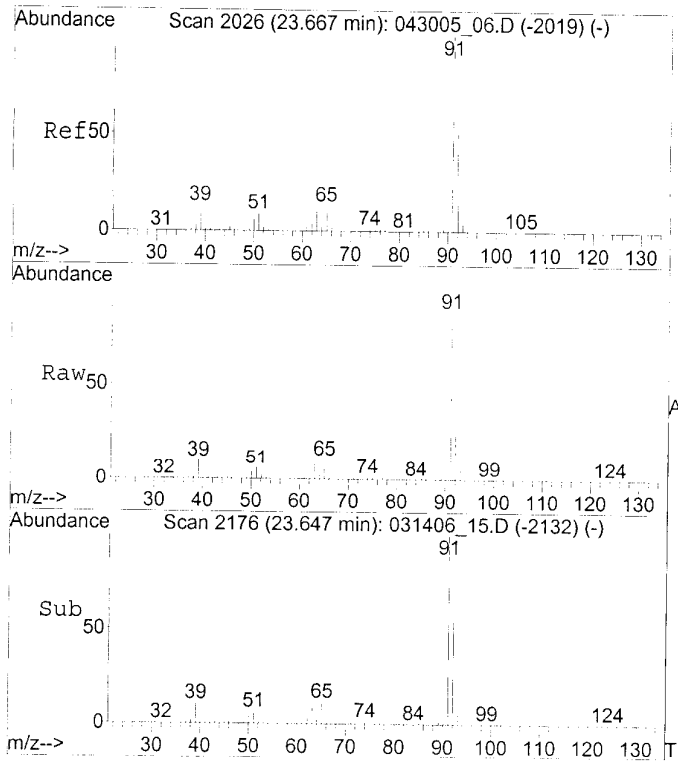


#42
trichloroethene
Concen: 2.89 ppbV m
RT: 20.46 min Scan# 1854
Delta R.T. -0.14 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:130 Resp: 197315

Ion	Ratio	Lower	Upper
130	100		
132	0.0	77.0	115.4#
95	0.0	90.3	135.5#

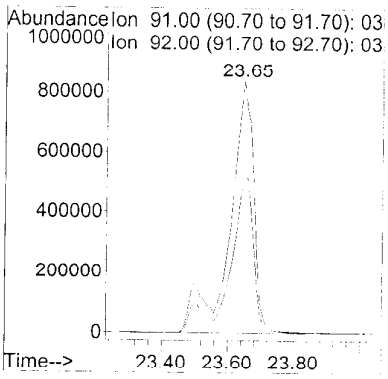


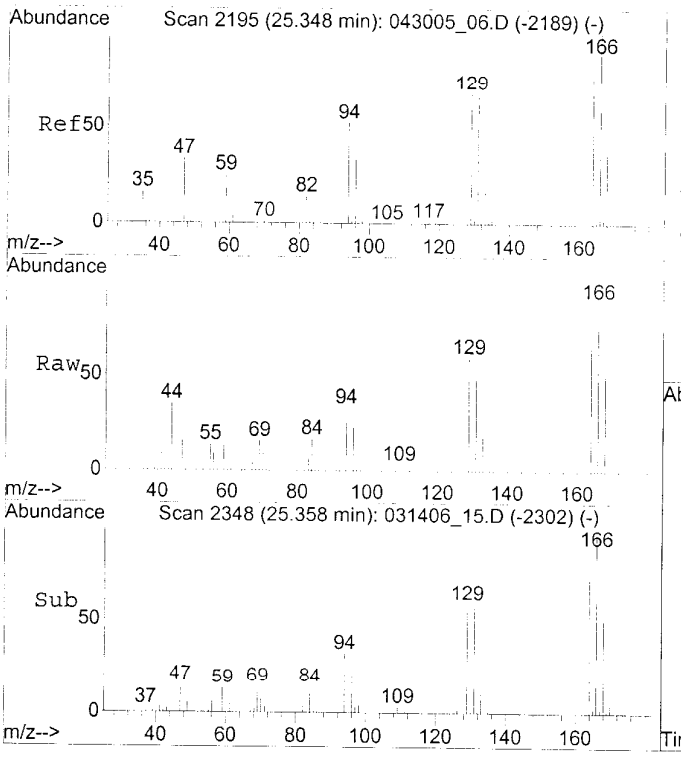


#49
toluene
Concen: 123.92 ppbV m
RT: 23.65 min Scan# 2176
Delta R.T. -0.07 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 91 Resp:42230708

Ion	Ratio	Lower	Upper
91	100		
92	52.4	48.6	73.0

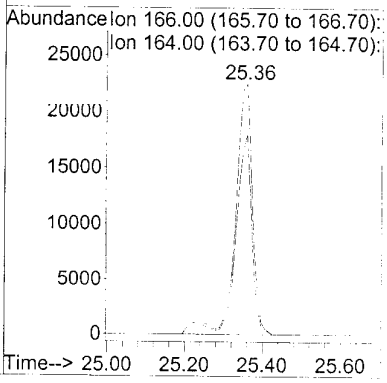


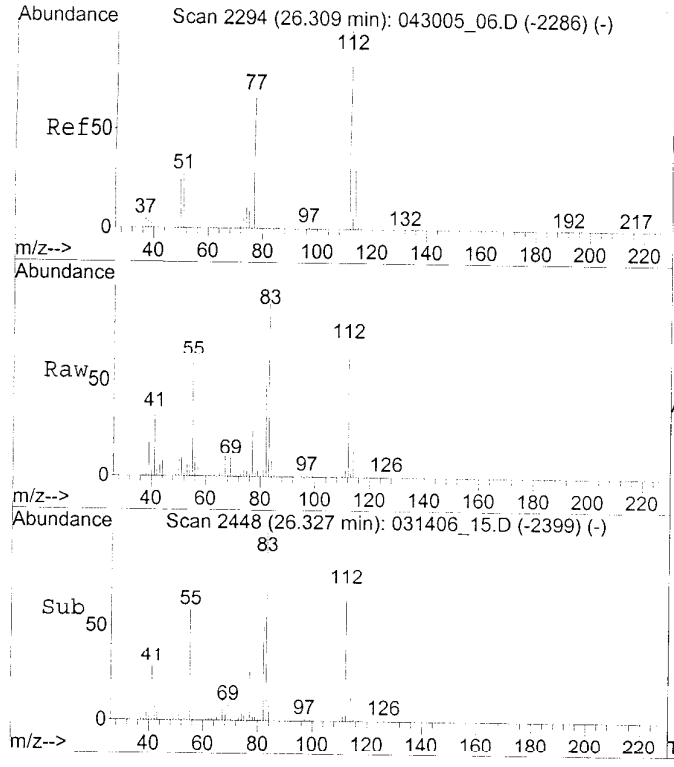


#53
tetrachloroethene
Concen: 2.88 ppbV m
RT: 25.36 min Scan# 2348
Delta R.T. -0.03 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:166 Resp: 685779

Ion	Ratio	Lower	Upper
166	100		
164	71.9	63.0	94.6

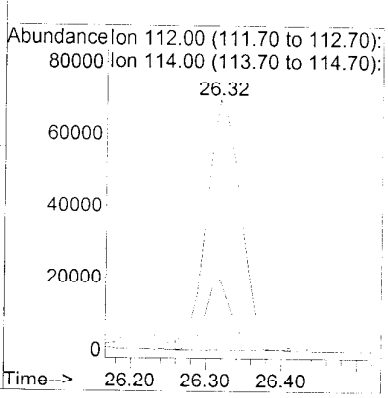


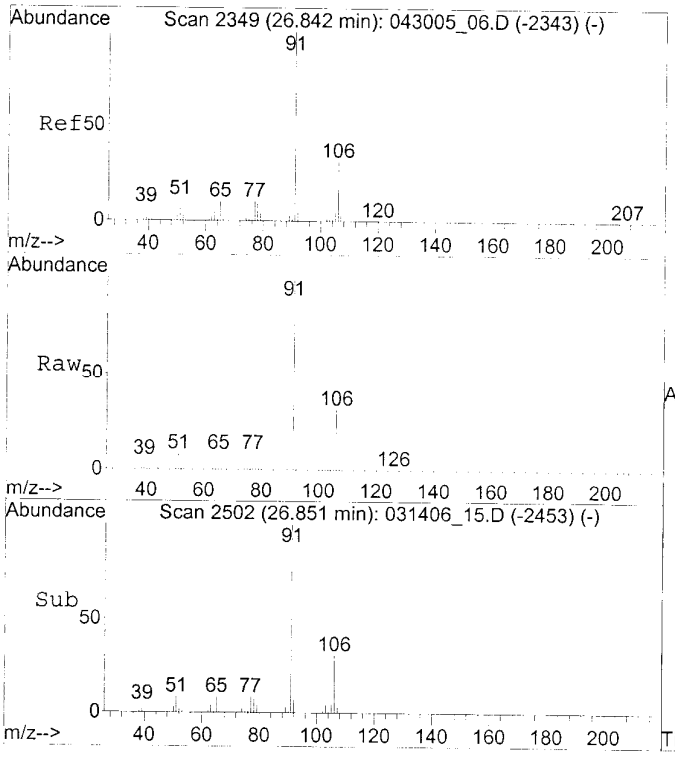


#54
chlorobenzene
Concen: 7.13 ppbV
RT: 26.32 min Scan# 2448
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:112 Resp: 2210815

Ion	Ratio	Lower	Upper
112	100		
114	20.8	25.8	38.6#

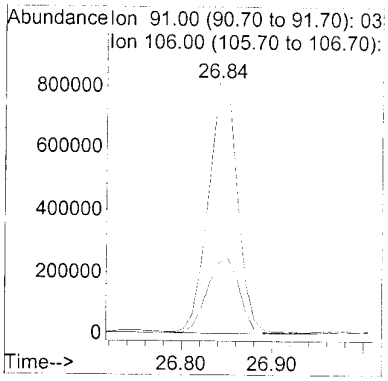


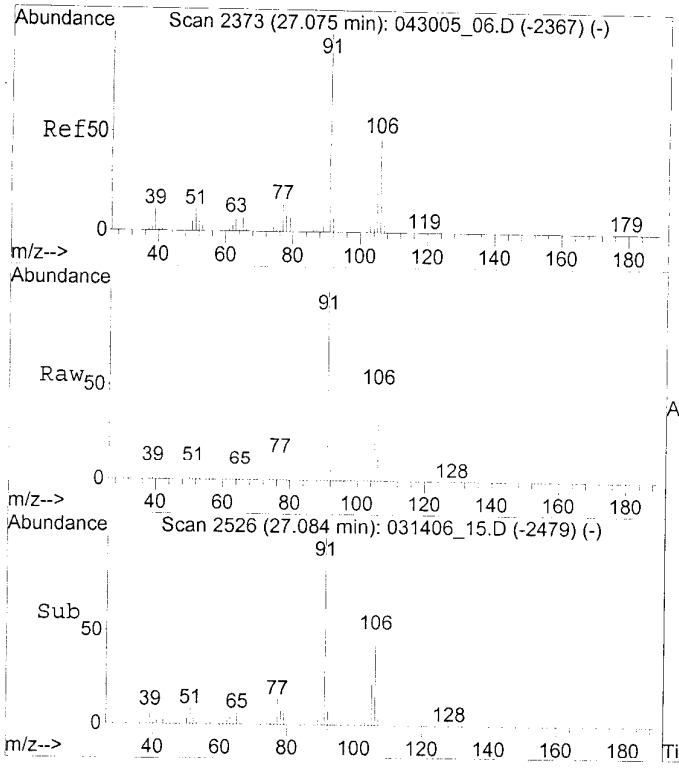


#55
ethylbenzene
Concen: 43.92 ppbV
RT: 26.85 min Scan# 2502
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 91 Resp:18165201

Ion	Ratio	Lower	Upper
91	100		
106	33.0	24.2	36.4

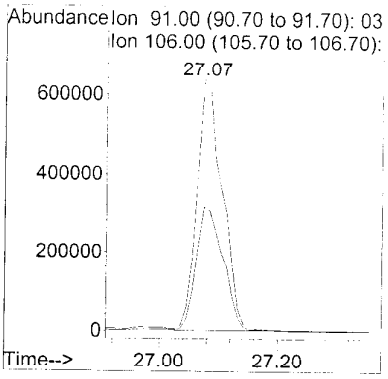


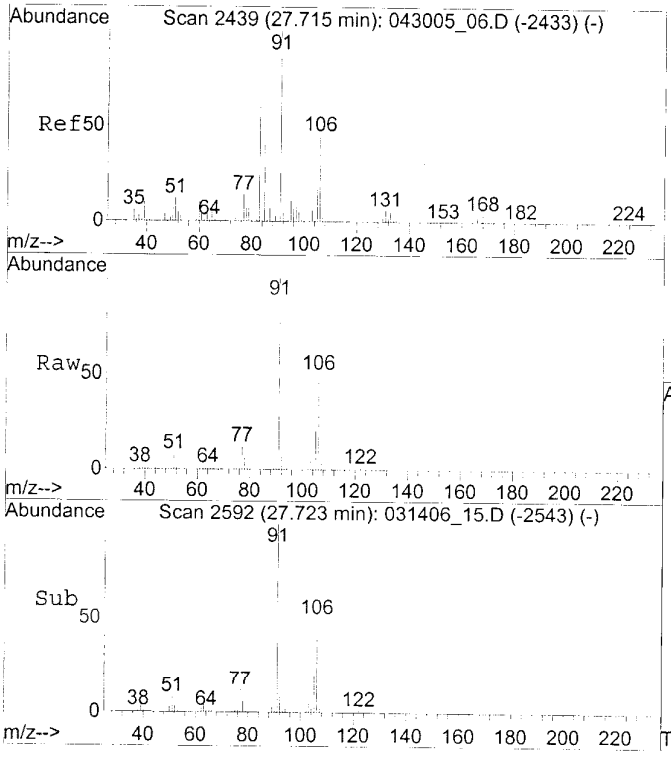


#56
p & m-xylene
Concen: 56.99 ppbV
RT: 27.08 min Scan# 2526
Delta R.T. -0.04 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 91 Resp:19159765

Ion	Ratio	Lower	Upper
91	100		
106	52.5	17.4	26.2#

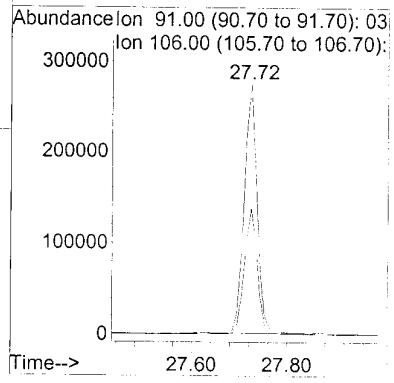


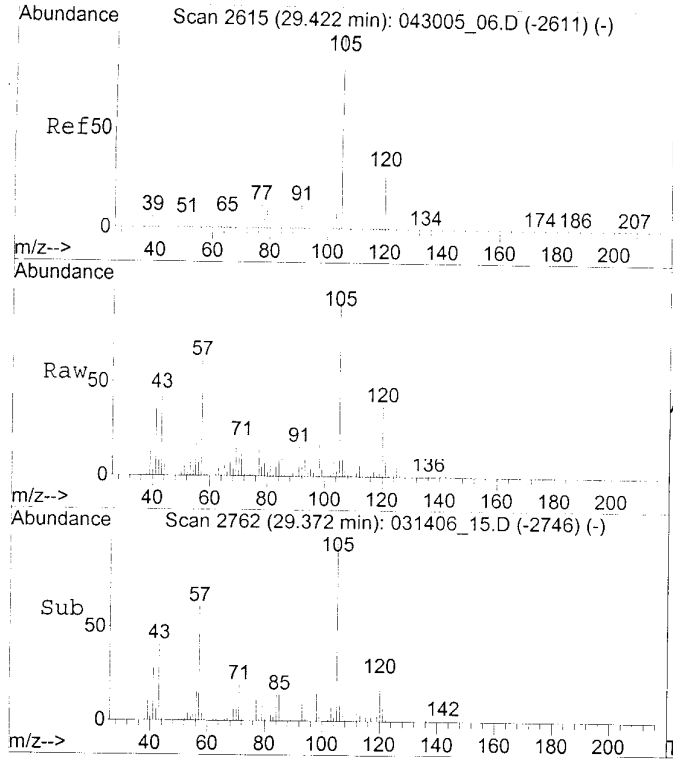


#60
o-xylene
Concen: 14.62 ppbV
RT: 27.73 min Scan# 2592
Delta R.T. -0.03 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion: 91 Resp: 5149345

Ion	Ratio	Lower	Upper
91	100		
106	50.7	35.8	53.6

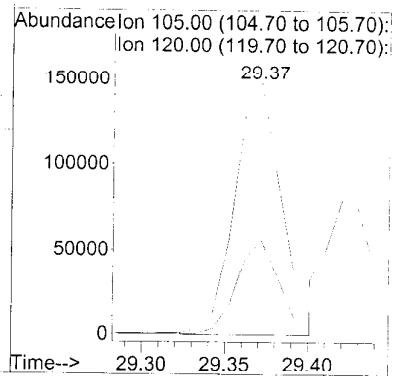


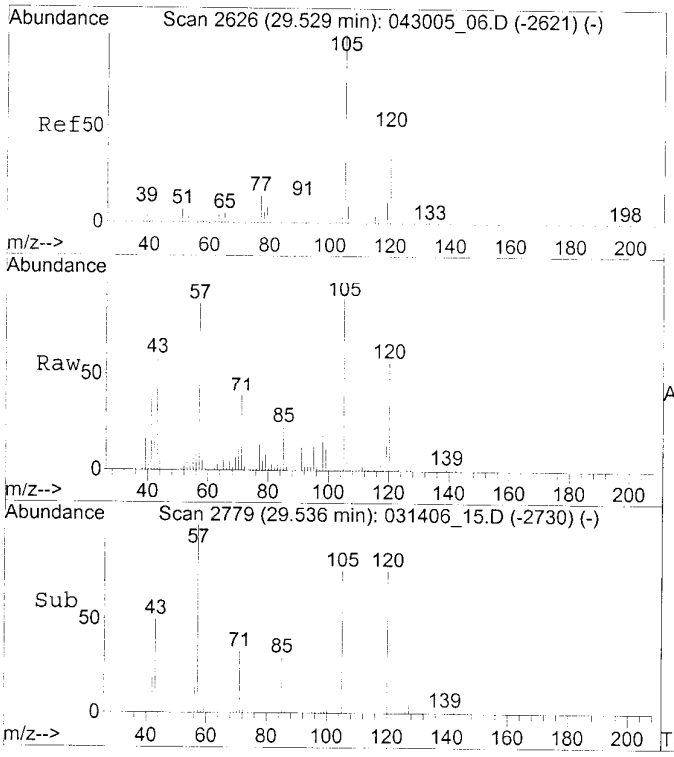


#61
4-ethyl toluene
Concen: 4.62 ppbV m
RT: 29.37 min Scan# 2762
Delta R.T. -0.05 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:105 Resp: 3071990

Ion	Ratio	Lower	Upper
105	100		
120	6.8	23.0	34.6#

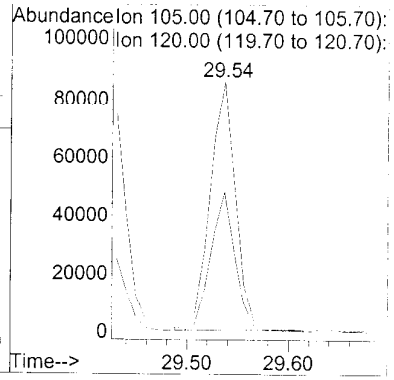


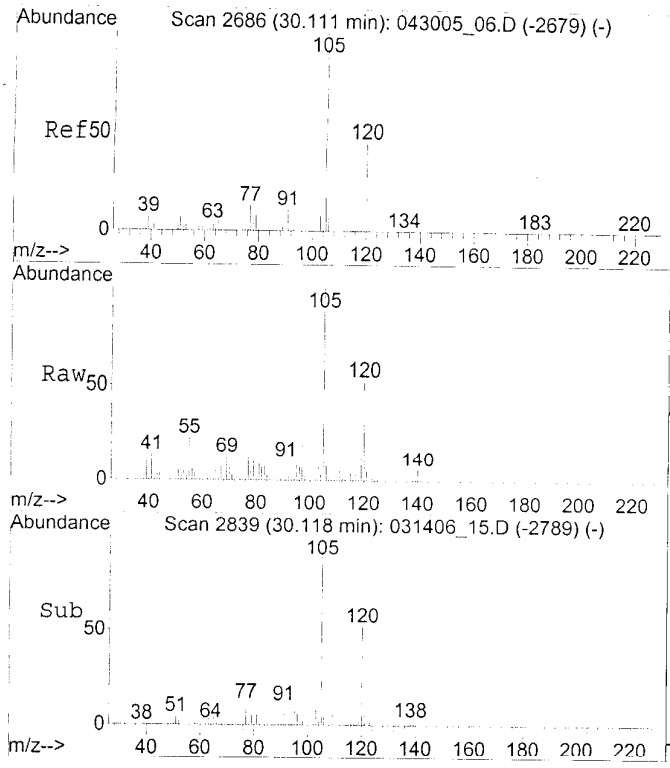


#62
1,3,5-trimethylbenzene
Concen: 4.52 ppbV
RT: 29.54 min Scan# 2779
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:105 Resp: 1489826

Ion	Ratio	Lower	Upper
105	100		
120	54.4	37.0	55.4

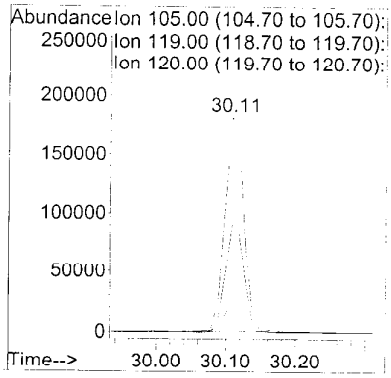


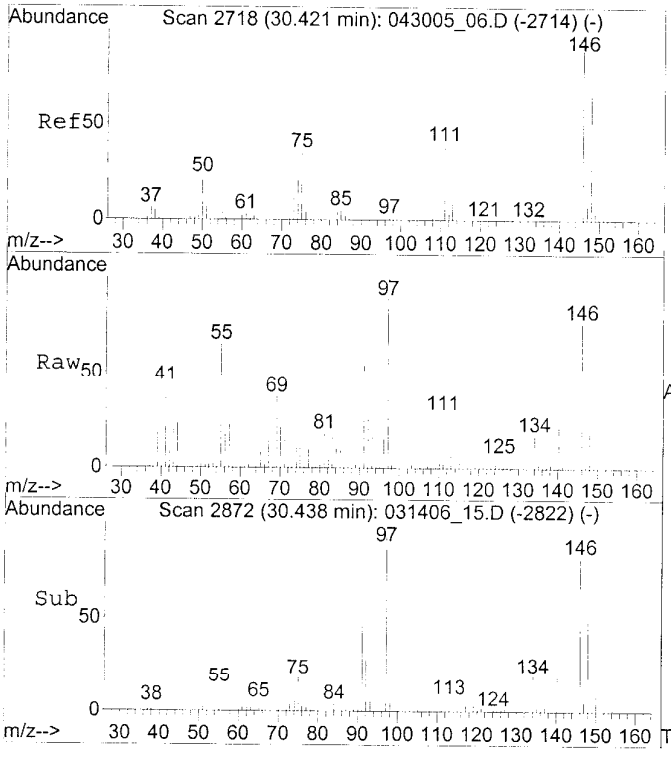


#63
1,2,4-trimethylbenzene
Concen: 11.53 ppbV
RT: 30.12 min Scan# 2839
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:105 Resp: 3354231

Ion	Ratio	Lower	Upper
105	100		
119	15.7	8.9	13.3#
120	50.4	35.0	52.6

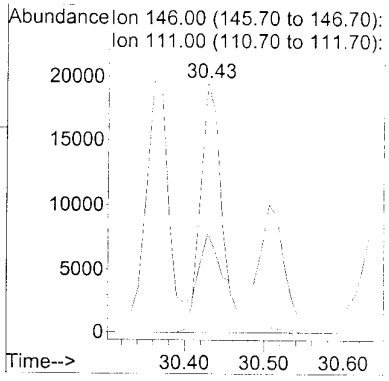




#66
1,4-dichlorobenzene
Concen: 1.37 ppbV
RT: 30.44 min Scan# 2872
Delta R.T. -0.02 min
Lab File: 031406_15.D
Acq: 16 Mar 2006 1:09 pm

Tgt Ion:146 Resp: 379721

Ion	Ratio	Lower	Upper
146	100		
111	50.1	31.3	46.9#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-6 B241 031506_15

Inlet Position : 9

Injection Number: 1

Run Information

Inject Time : 10:40:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 16:14:11 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Mon Mar 20 16:13:59 2006
Response via : Initial Calibration

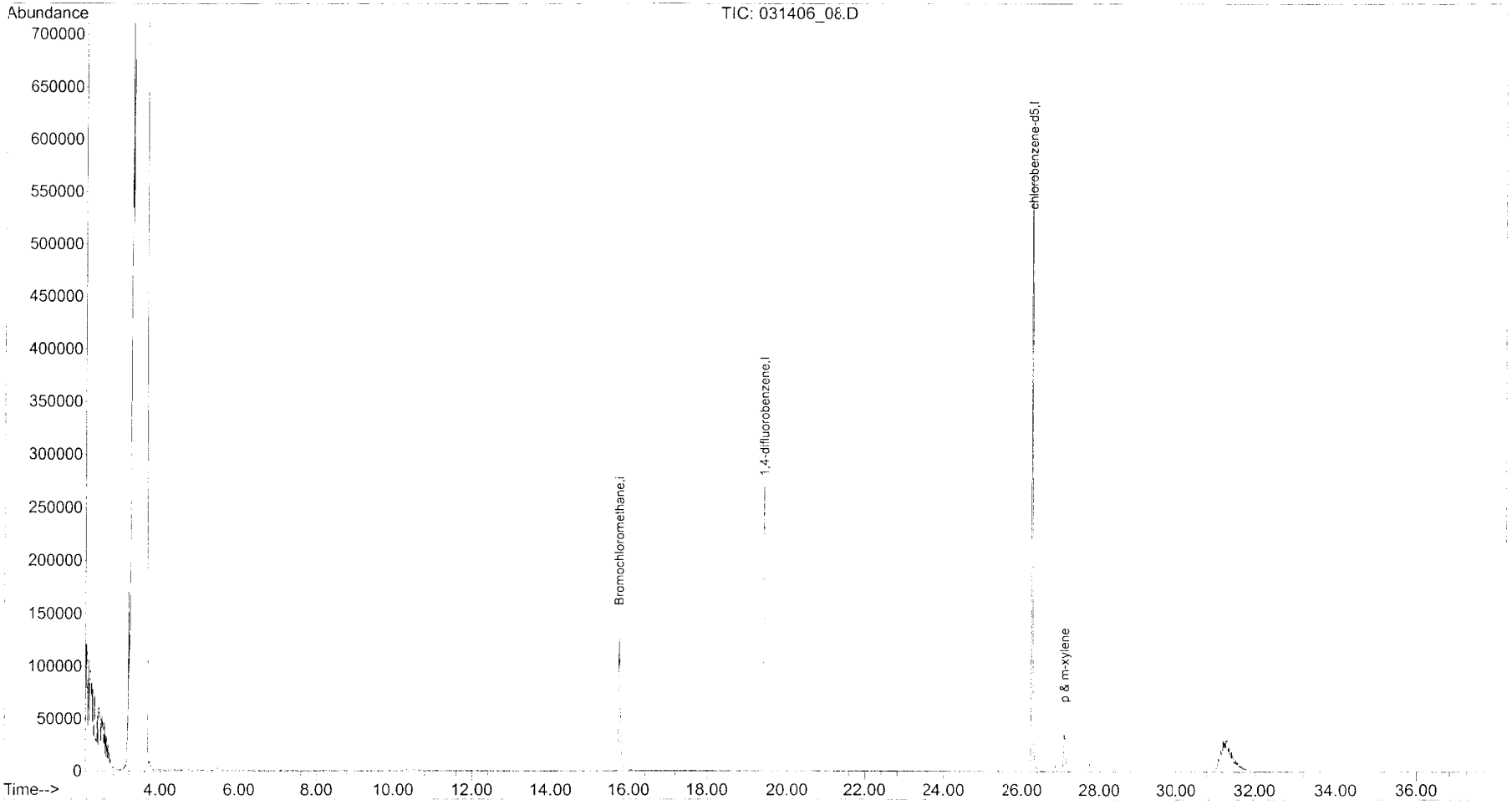
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	15.76	128	743457	10.00	ppbV	-0.04
32) 1,4-difluorobenzene	19.42	114	3525012	10.00	ppbV	-0.03
47) chlorobenzene-d5	26.27	117	4196234	10.00	ppbV	-0.02
System Monitoring Compounds						
30) 1,2-dichloroethane-d4	0.00	65	0	0.00	ppbV	
48) toluene-d8	0.00	98	0	0.00	ppbV	
Target Compounds						Qvalue
56) p & m-xylene	27.10	91	433925	0.86186	ppbV #	31

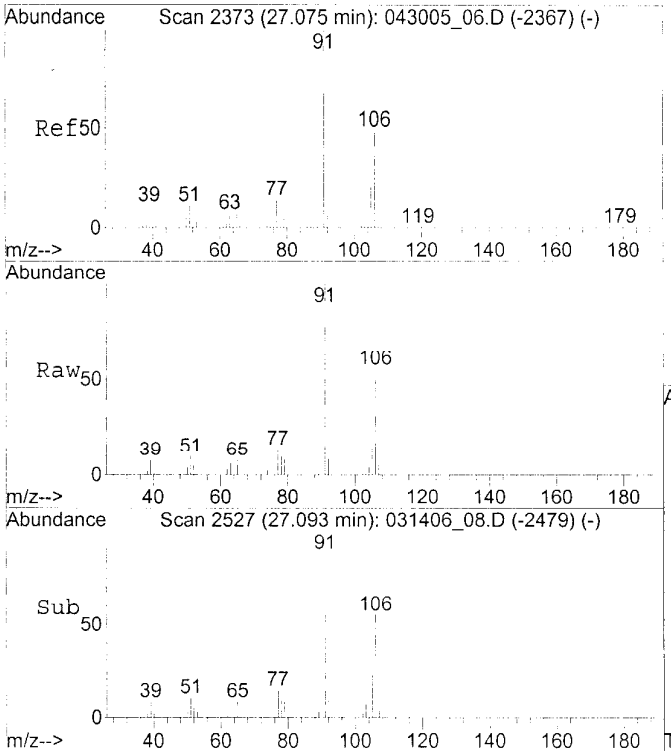
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 20 16:14:11 2006
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :
QLast Update : Mon Mar 20 16:13:59 2006
Response via : Initial Calibration

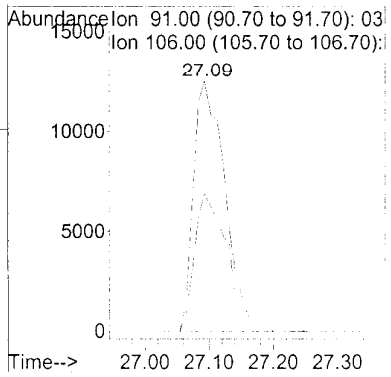




#56
p & m-xylene
Concen: 0.86 ppbV
RT: 27.10 min Scan# 2527
Delta R.T. -0.03 min
Lab File: 031406_08.D
Acq: 16 Mar 2006 3:24 am

Tgt Ion: 91 Resp: 433925

Ion	Ratio	Lower	Upper
91	100		
106	54.7	17.4	26.2#



3550A QA/QC REPORT

Sample Information

Sample Name: 061-7 A204 031506_08

Inlet Position : 3

Injection Number: 1

Run Information

Inject Time : 00:55:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	15.692	1343	1373	1397	BV 3	70517	4313225	31.45%	9.935%
2	17.455	1541	1551	1554	BB 2	83172	781400	5.70%	1.800%
3	19.387	1739	1746	1770	VV 2	240391	8622071	62.87%	19.860%
4	26.268	2431	2442	2471	BB	629912	13713406	100.00%	31.587%
5	27.034	2514	2521	2523	BV 2	43241	611666	4.46%	1.409%
6	27.141	2523	2532	2534	VV 7	107559	3472465	25.32%	7.998%
7	27.180	2534	2536	2545	VV 8	162457	4848754	35.36%	11.168%
8	27.306	2545	2549	2551	VV 5	116057	2652145	19.34%	6.109%
9	27.344	2551	2553	2556	VV	77648	984348	7.18%	2.267%
10	27.422	2556	2561	2565	VV 5	90228	2059322	15.02%	4.743%
11	27.509	2565	2570	2577	VV 5	53538	1356533	9.89%	3.125%

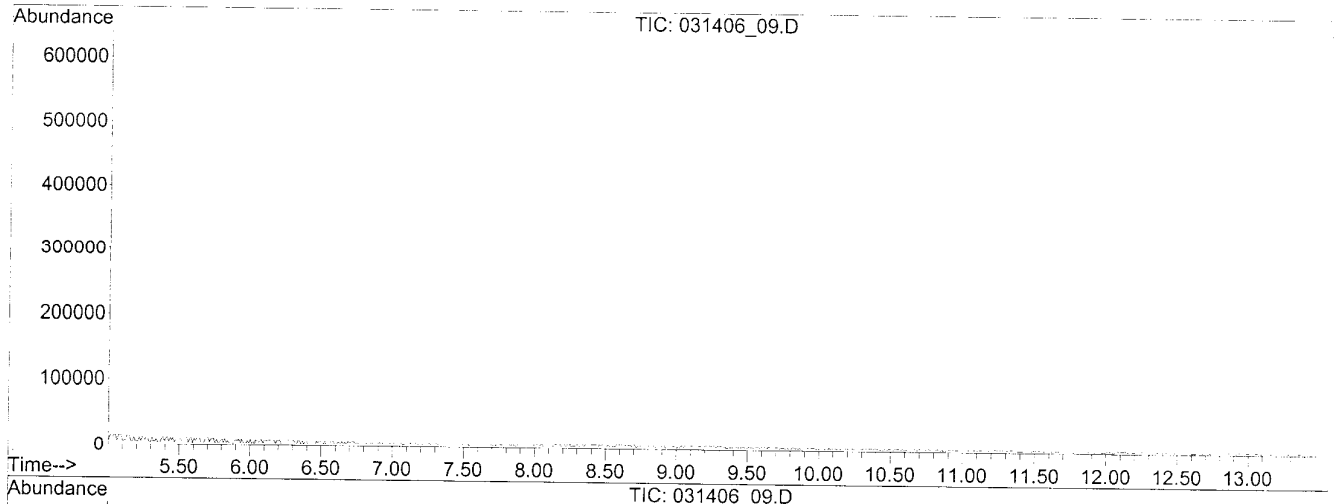
Sum of corrected areas: 43415335

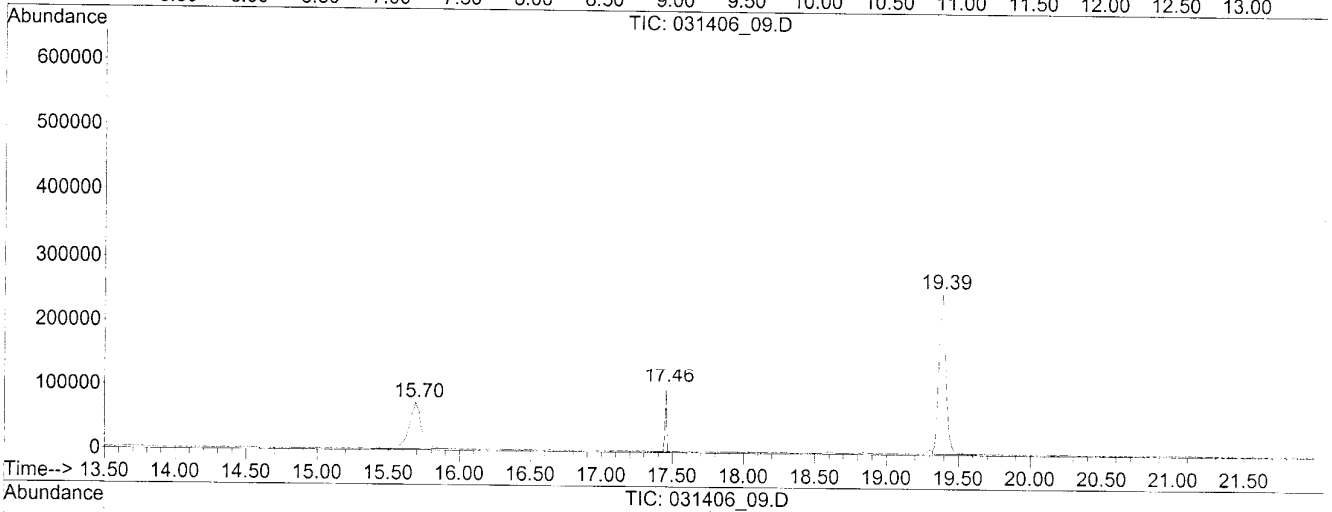
LSC Report - Integrated Chromatogram

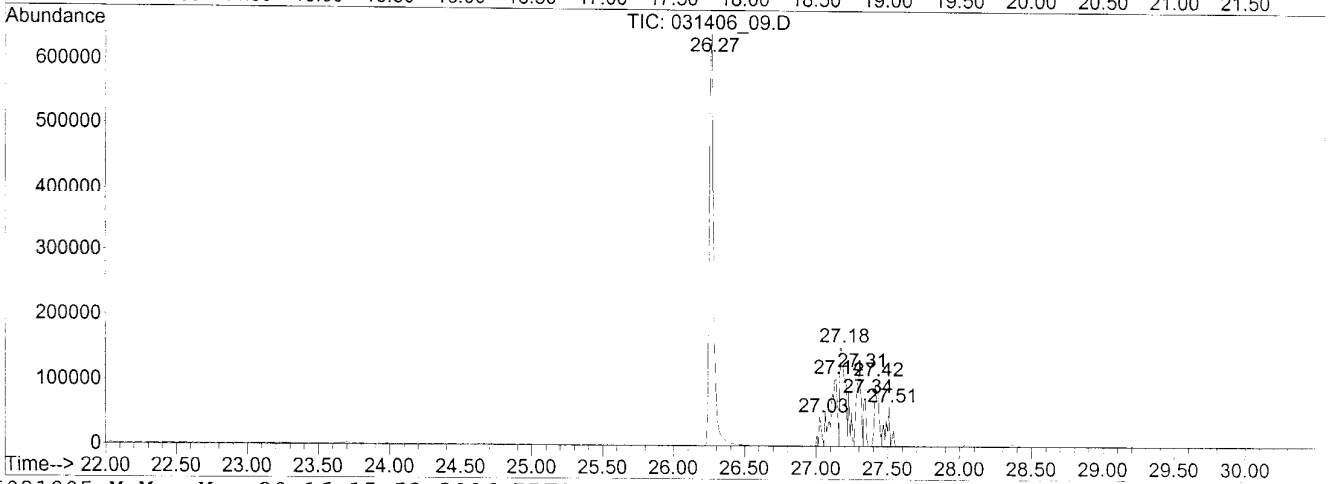
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_09.D
Acq On : 16 Mar 2006 4:27 am
Operator : AF
Sample : 06-061-1
Misc : 500ML A217
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







Data Path: C:\MSDEM\1\DATA\2006FEB\0015865\
Data File: 0314060 09DD
Acq On : 16 Mar 2006 4:27 am
Operator : AEF
Sample : 06006111
Misc : 500MLAA277
ALS Vial : 33 Sample Multiplier: 11

Quant Method : C:\MSDEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lascintee

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

No Library Search Compounds Detected
****

3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 A217 031506_09

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 01:58:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	15.687	1350	1373	1392	BV 3	69994	4012973	31.85%	16.487%
2	19.383	1733	1746	1761	BB	253767	7727808	61.34%	31.749%
3	26.259	2433	2441	2471	BV 2	590199	12599288	100.00%	51.764%

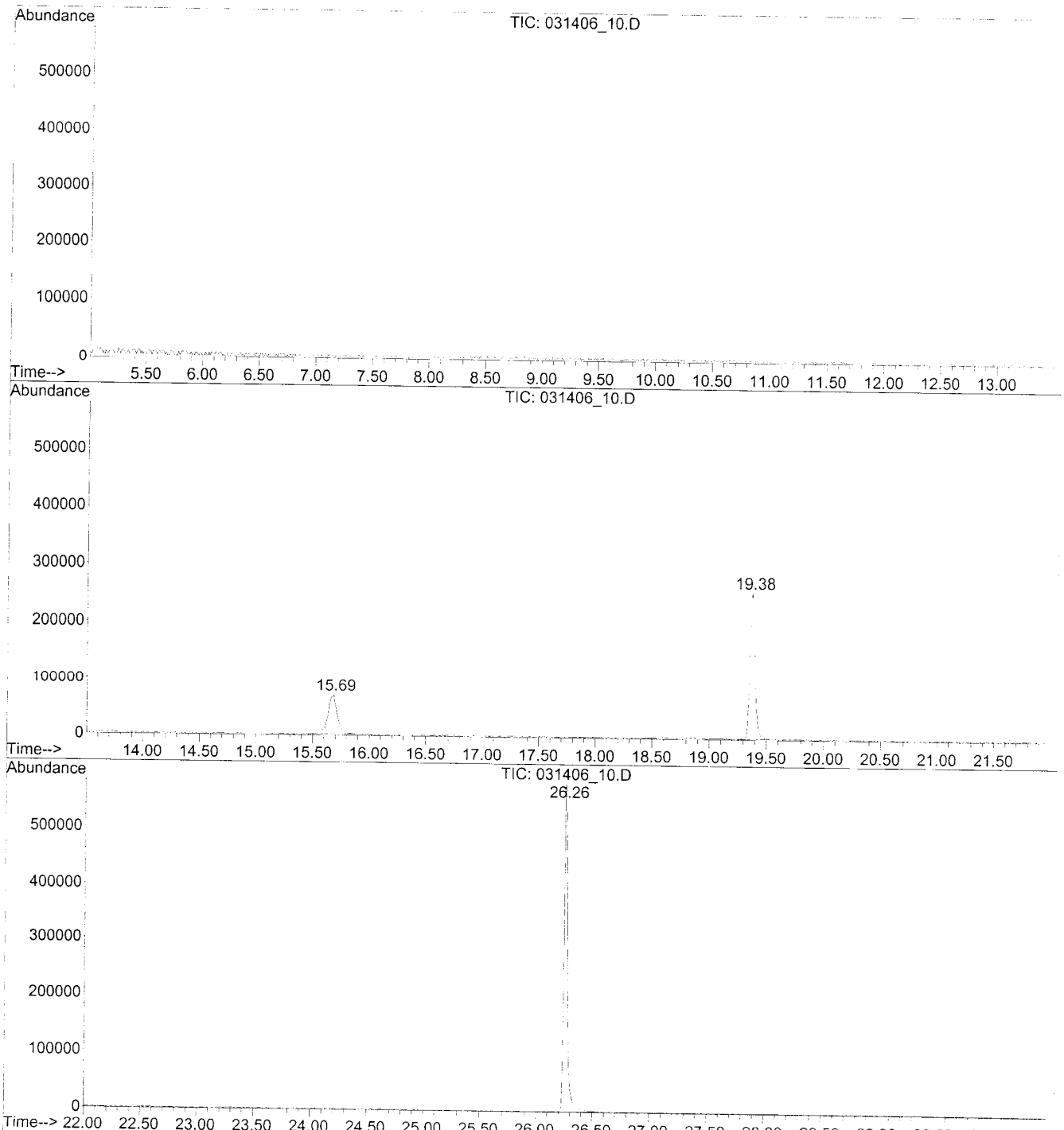
Sum of corrected areas: 24340068

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_10.D
Acq On : 16 Mar 2006 5:29 am
Operator : AF
Sample : 06-061-1 DUP
Misc : 500ML A217
ALS Vial : 4 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e



Data Path: C:\MSDCHEM\1\DATA\20060FEB\015065\
Data File: 015065.D
Acq On: 16 Mar 2006 5:29 am
Operator: AEF
Sample: 060606-1-1 DDVP
Misc: 500 ML/2.17
ALS Vial: 44 Sample Multiplier: 1.1

Quant Method: C:\MSDCHEM\1\METHODS\TOX50021805.M
Quant Title:

TIC Library: C:\DATABASE\NIST02.L
TIC Integration Parameters: lsciintee

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

No Library Search Compounds Detected
****

3550A QA/QC REPORT

Sample Information

Sample Name: 061-1 DUP 031506_10

Inlet Position : 4

Injection Number: 1

Run Information

Inject Time : 03:00:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

if leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	15.702	1342	1374	1398	PV 2	83984	4738064	33.44%	17.065%
2	19.308	1729	1738	1740	PV	14433	373315	2.64%	1.345%
3	19.388	1740	1746	1767	VV	253149	8486021	59.90%	30.564%
4	26.268	2433	2442	2473	BB 2	669320	14167408	100.00%	51.026%

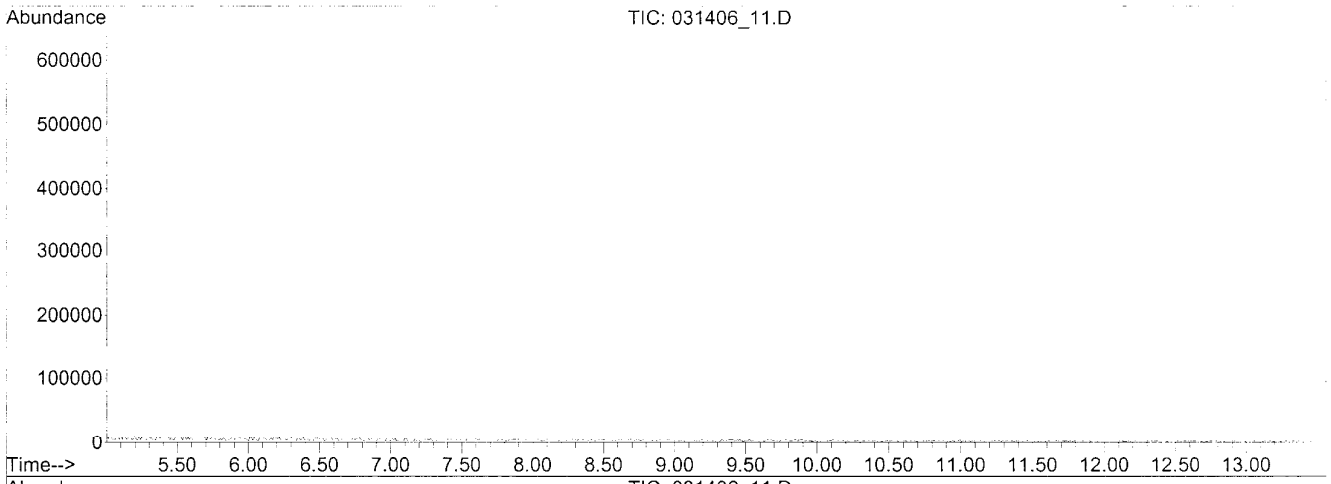
Sum of corrected areas: 27764809

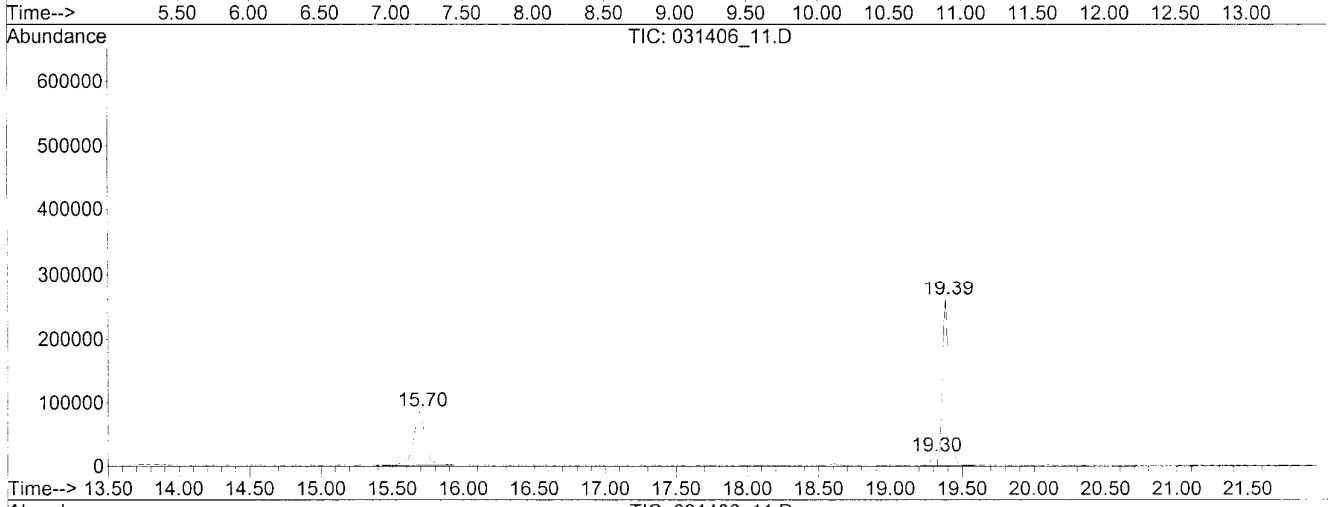
LSC Report - Integrated Chromatogram

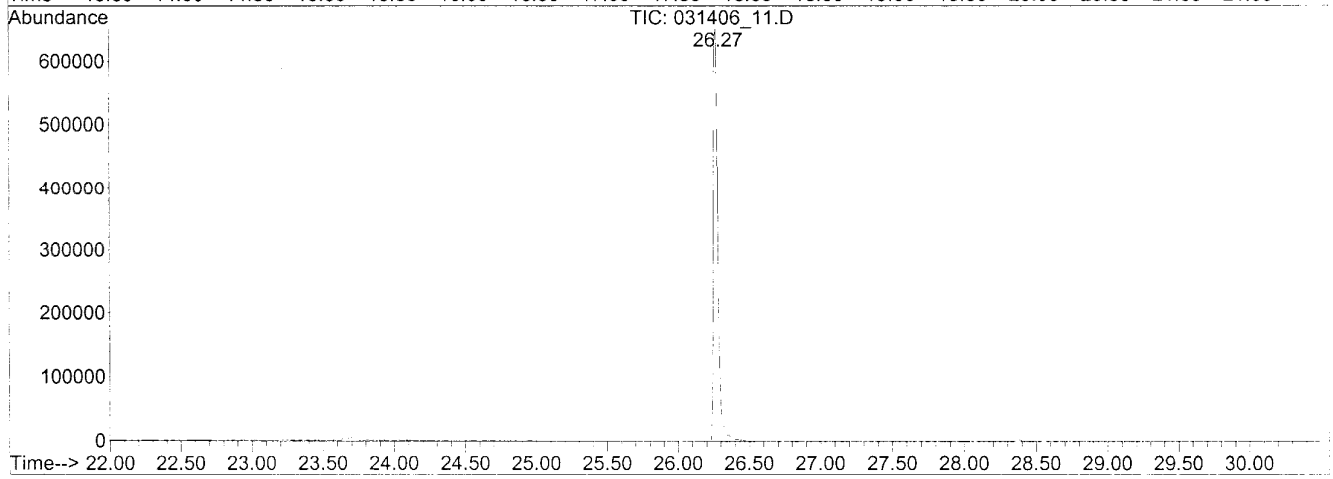
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_11.D
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 06-061-2
Misc : 500ML B235
ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







Data Path: C:\MSDCHEM\1\DATA\2006FEB\0315066\
Data File: 0314066111DD
Acq On : 16 Mar 2006 6:32 am
Operator : AF
Sample : 0606066122
Misc : 500MLB235
ALS Vial : 55 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lsscintee

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc

No Library Search Compounds Detected
****

3550A QA/QC REPORT

Sample Information

Sample Name: 061-2 B235 031506_11

Inlet Position : 5

Injection Number: 1

Run Information

Inject Time : 04:03:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	14.938	1277	1297	1311	PV 3	78524	4229067	34.07%	17.124%
2	18.911	1678	1698	1717	PB 2	231206	8053827	64.88%	32.611%
3	26.173	2426	2432	2459	BV	578828	12413431	100.00%	50.264%

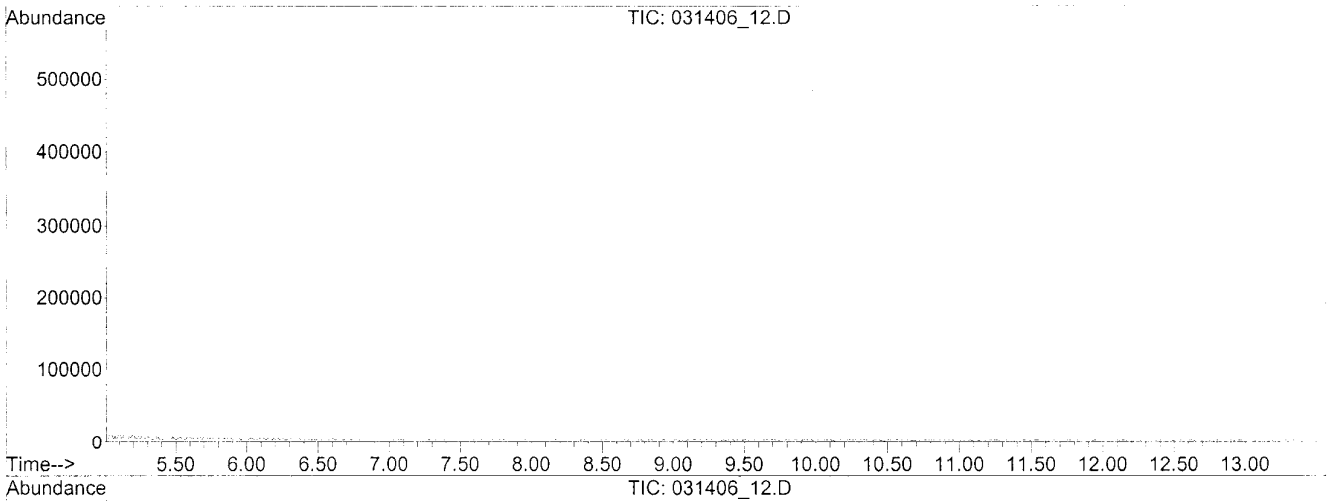
Sum of corrected areas: 24696325

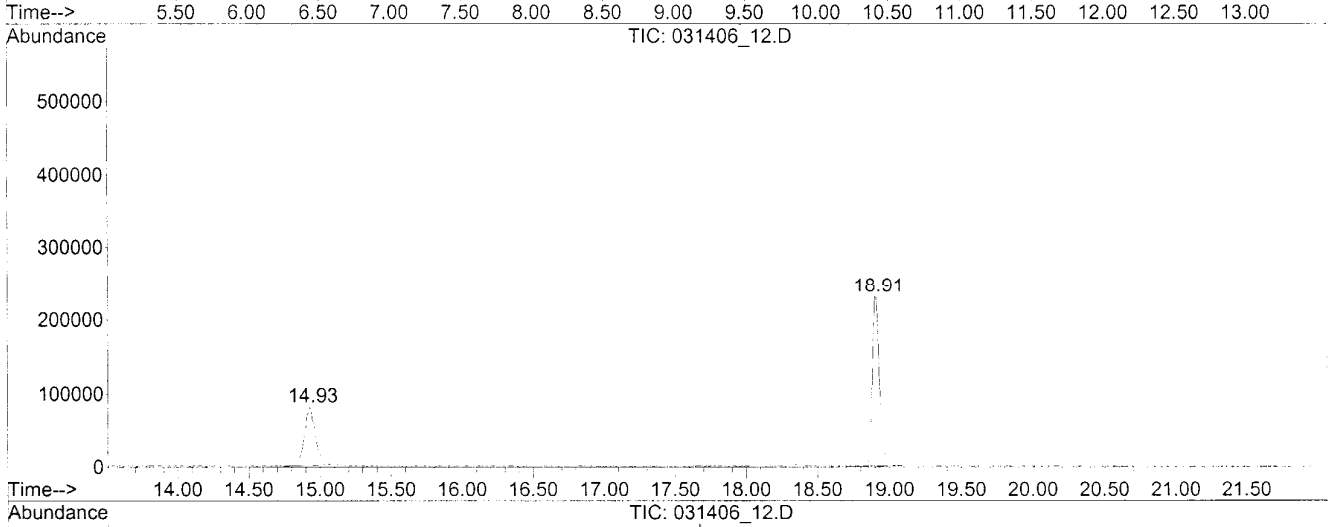
LSC Report - Integrated Chromatogram

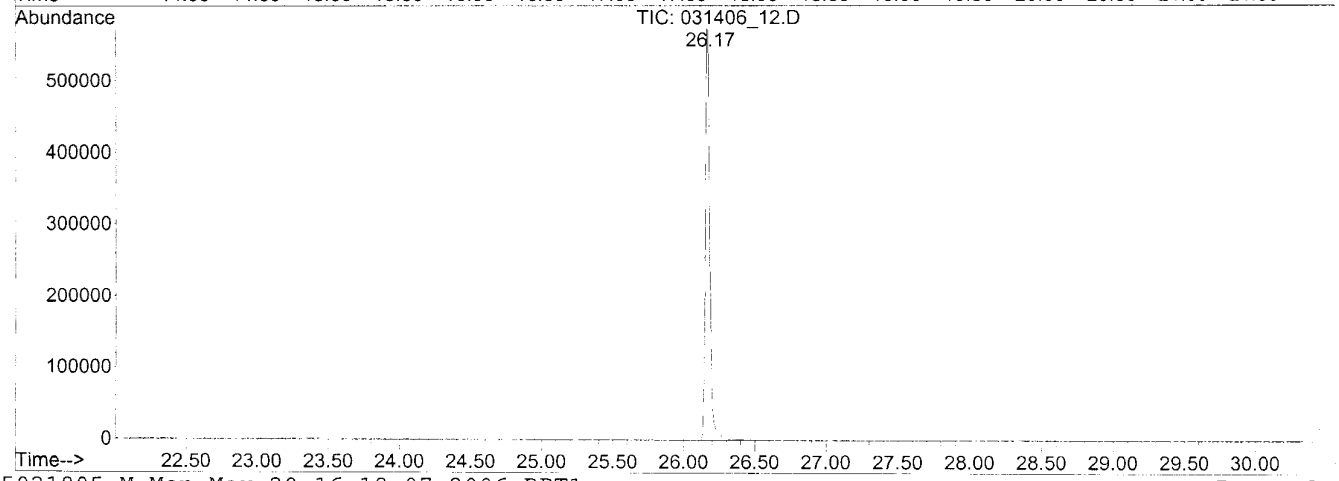
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_12.D
Acq On : 16 Mar 2006 7:34 am
Operator : AF
Sample : 06-061-3
Misc : 500ML A230
ALS Vial : 6 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







Tentatively Identified Compound Report summary

Data Path: C:\MSDCHEM\1\DATA\2006FEB\0315\06\
Data File: 0314061.22D
Acq On : 16 Mar 2006 7:34 am
Operator : AAF
Sample : 06006133
Misc : 580MLAA390
ALS Vial : 66 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscintegr.

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

No Library Search Compounds Detected
****

3550A QA/QC REPORT

Sample Information

Sample Name: 061-3 A230 031506_12

Inlet Position : 6

Injection Number: 1

Run Information

Inject Time : 05:05:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc
Cyclobutane, methyl-	12.30	5.4	ppbV	2961760	1	15.26	5447010	10.0
1-Methoxy-2,3-cis...	12.87	8.5	ppbV	4632990	1	15.26	5447010	10.0
1,3-Propanediamin...	19.46	6.2	ppbV	6119020	2	19.31	9895060	10.0
Cyclohexane, methyl-	22.17	6.4	ppbV	6347920	2	19.31	9895060	10.0
Octane	25.22	9.7	ppbV	19770500	3	26.27	20439000	10.0
1-Ethyl-4-methylc...	27.88	6.3	ppbV	12801500	3	26.27	20439000	10.0
Nonane	28.06	15.2	ppbV	30962000	3	26.27	20439000	10.0
1-Ethyl-4-methylc...	28.39	6.4	ppbV	13153600	3	26.27	20439000	10.0
Cyclohexane, propyl-	28.92	5.8	ppbV	11833600	3	26.27	20439000	10.0
1R-.alpha.-Pinene	29.07	97.8	ppbV	199971000	3	26.27	20439000	10.0
.beta.-Pinene	30.01	10.0	ppbV	20371100	3	26.27	20439000	10.0
Decane	30.27	9.5	ppbV	19498200	3	26.27	20439000	10.0

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

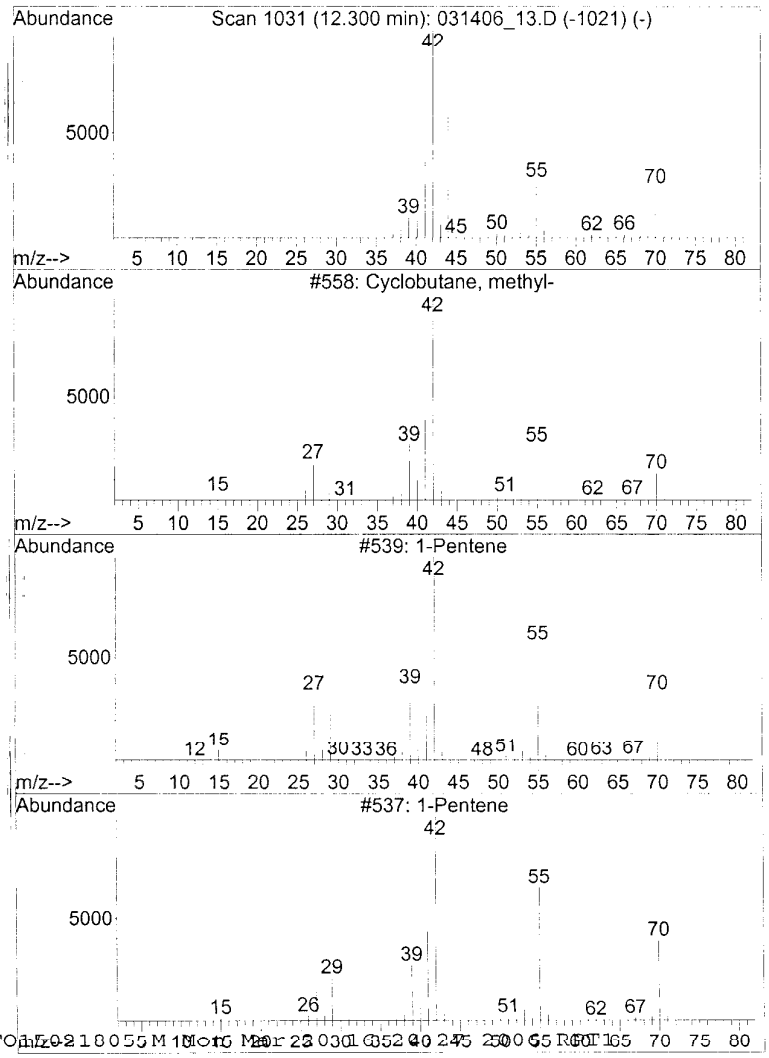
not reported
not in top
10.

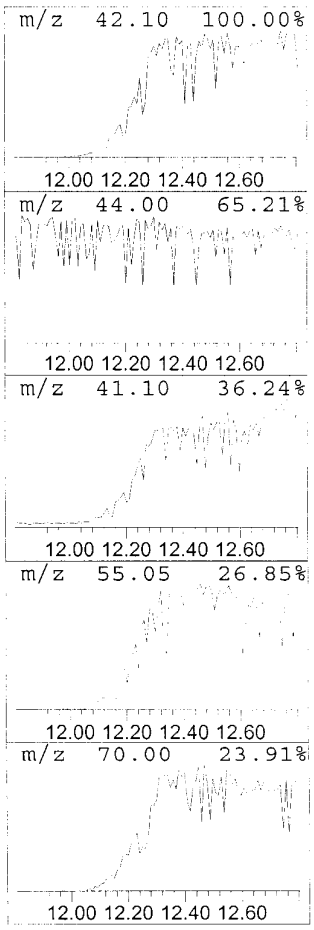
AP

****
Peak Number 7 Cyclobutane, methyl- Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.30	5.44 ppbV	2961760	Bromochloromethane	15.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclobutane, methyl-	70	C5H10	000598-61-8	58
2	1-Pentene	70	C5H10	000109-67-1	53
3	1-Pentene	70	C5H10	000109-67-1	50
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	50
5	Cyclobutanone	70	C4H6O	001191-95-3	50





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

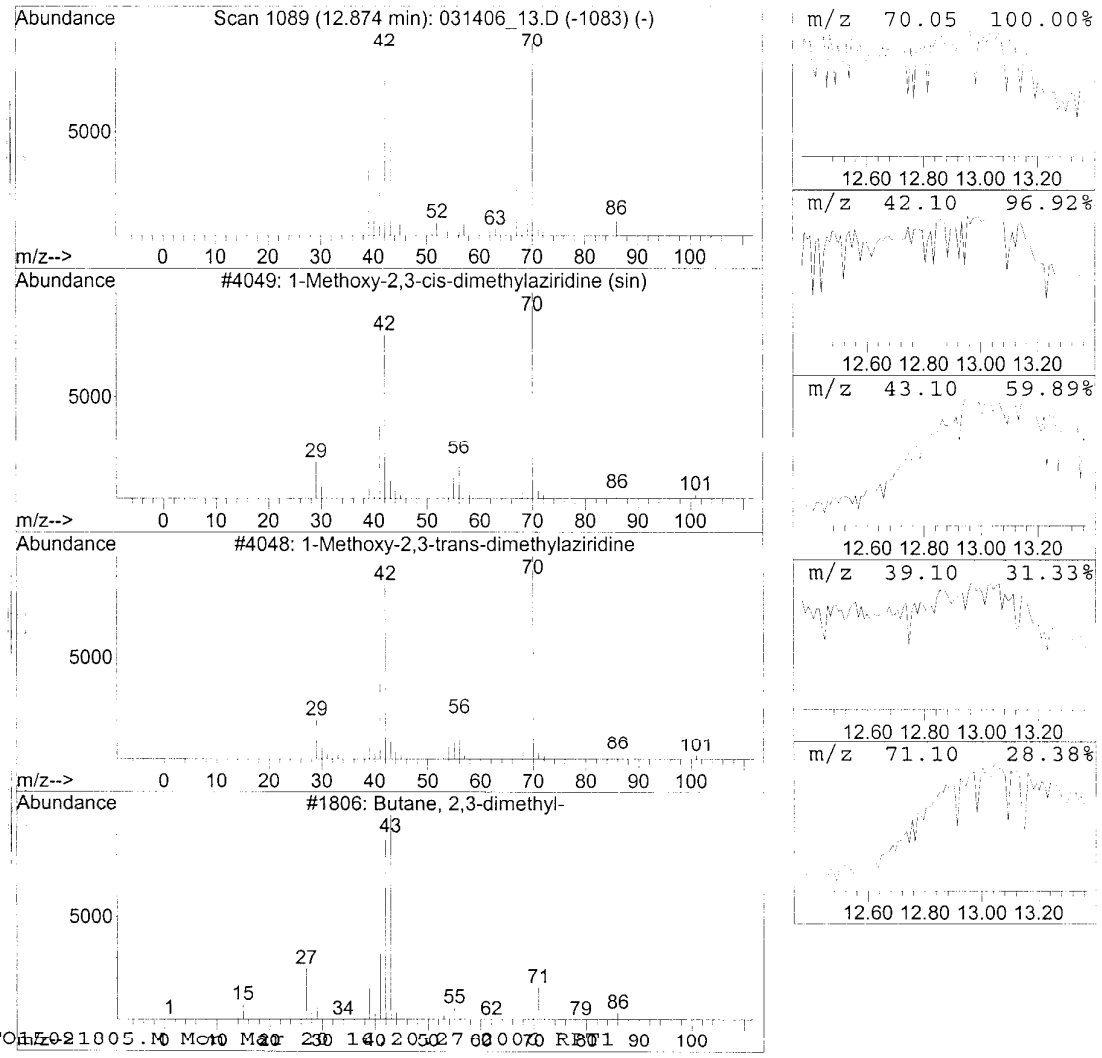
****
Peak Number 10 1-Methoxy-2,3-cis-dimethyla... Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.87	8.51 ppbV	4632990	Bromochloromethane	15.26

Unknown

AF

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Methoxy-2,3-cis-dimethylazirid...	101	C5H11NO	061593-25-7	64
2	1-Methoxy-2,3-trans-dimethylazir...	101	C5H11NO	1000283-23-4	50
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	35
4	Pentane, 2-methyl-	86	C6H14	000107-83-5	25
5	2-Acetylpyrrolidine	113	C6H11NO	060026-20-2	17



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

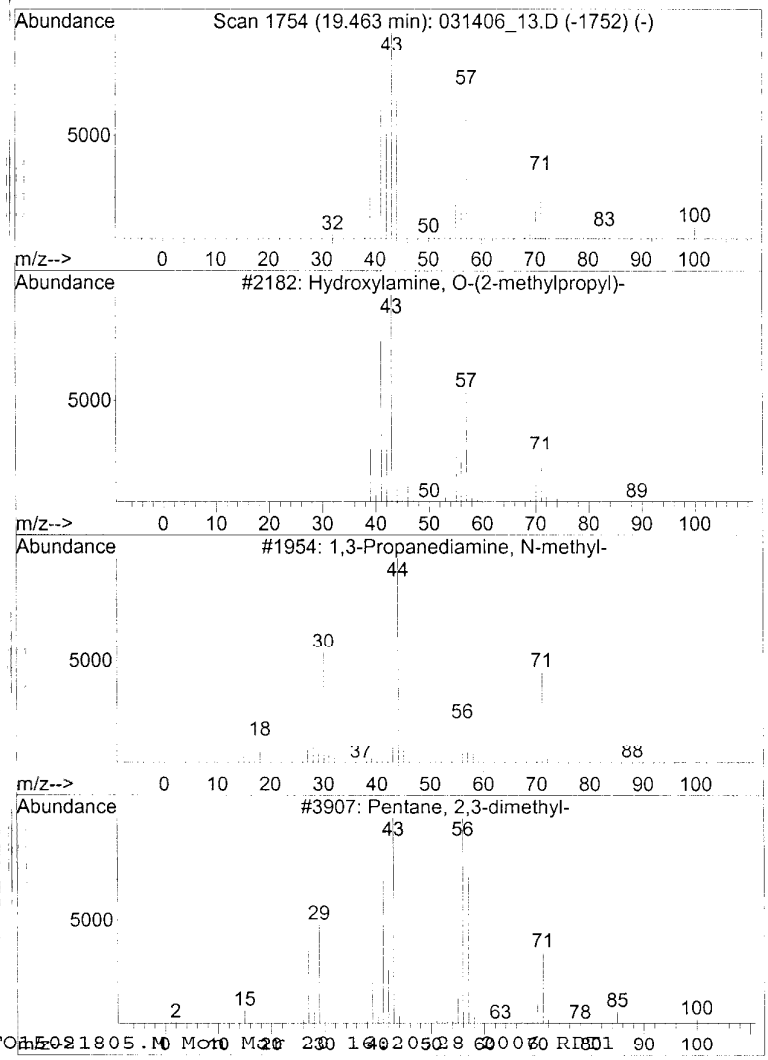
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

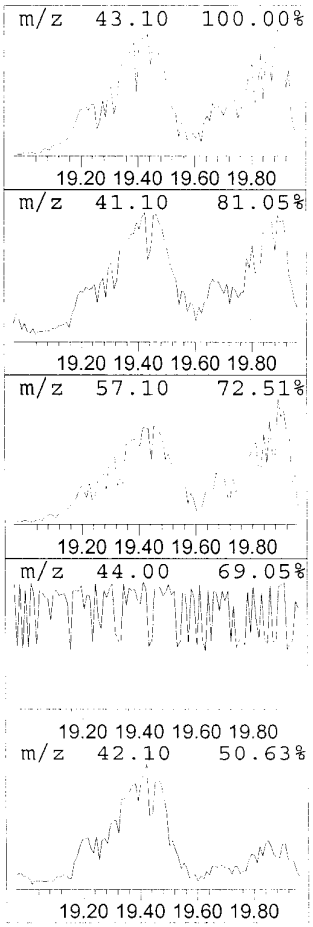
****
Peak Number 14 1,3-Propanediamine, N-methyl- Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
19.46	6.18 ppbV	6119020	1,4-difluorobenzene	19.31

not reported
not top 10
A3

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hydroxylamine, O-(2-methylpropyl)-	89	C4H11NO	005618-62-2	28
2	1,3-Propanediamine, N-methyl-	88	C4H12N2	006291-84-5	25
3	Pentane, 2,3-dimethyl-	100	C7H16	000565-59-3	25
4	N-Methylallylamine	71	C4H9N	000627-37-2	23
5	Pentane, 1,3-epoxy-4-methyl-	100	C6H12O	015045-60-0	22





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

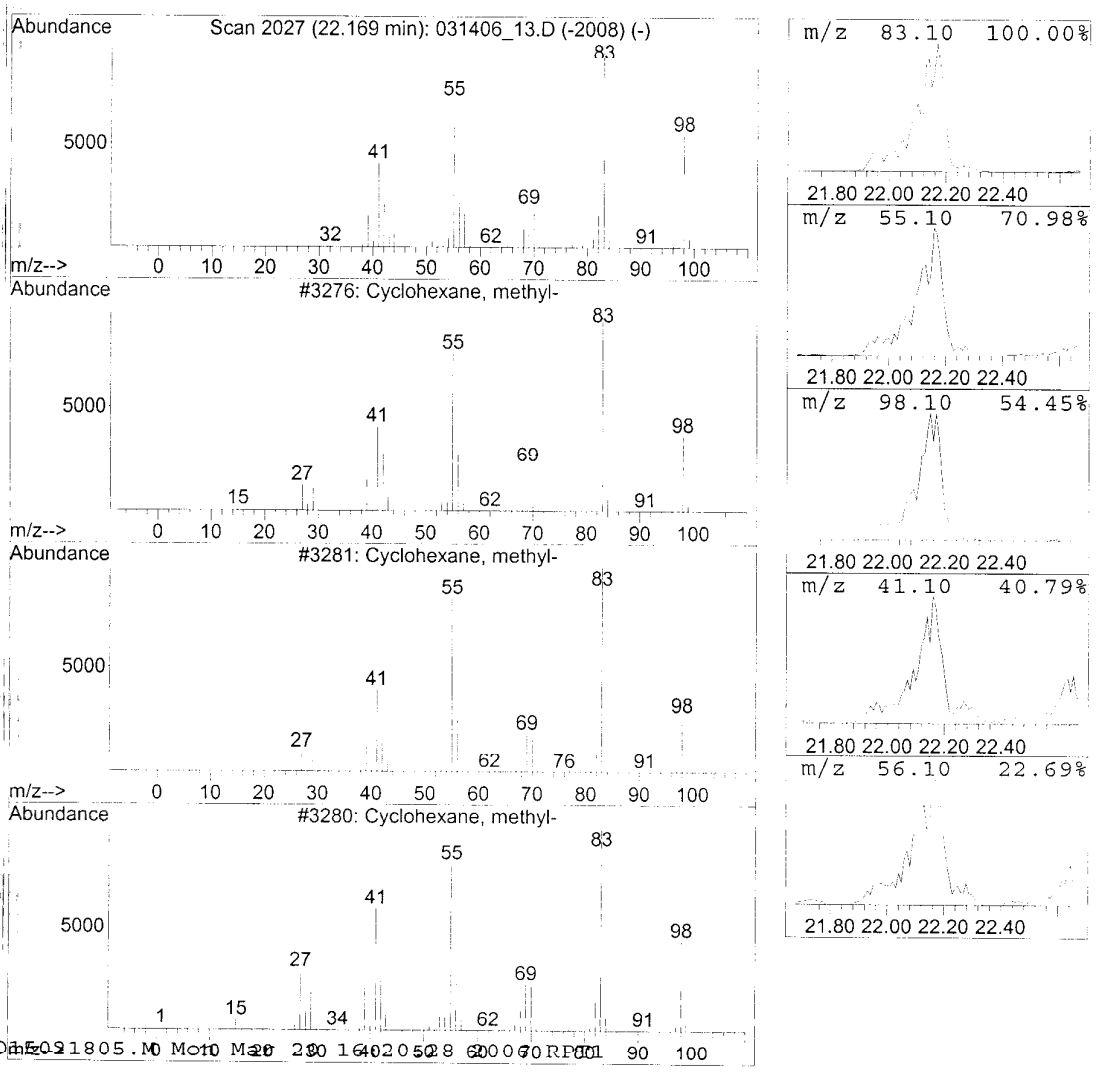
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 15 Cyclohexane, methyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.17	6.42 ppbV	6347920	1,4-difluorobenzene	19.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	90
5	1H-Pyrazole, 3-ethyl-4,5-dihydro-	98	C5H10N2	005920-29-6	64



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

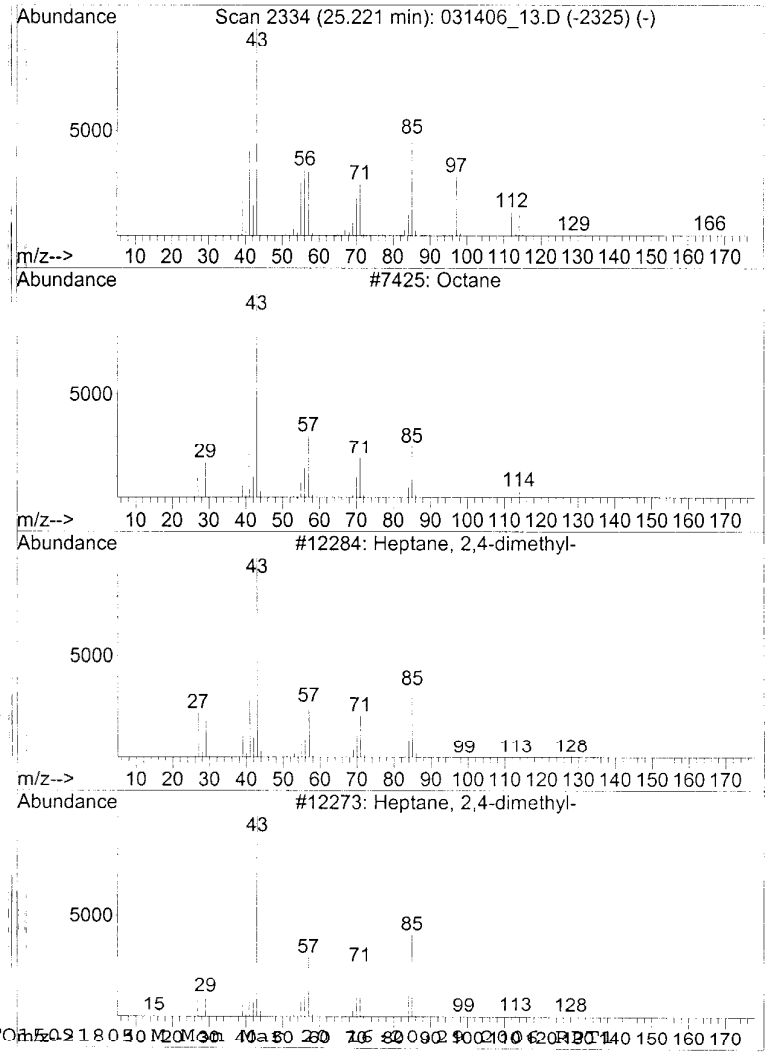
Peak Number 17 Octane Concentration Rank 6

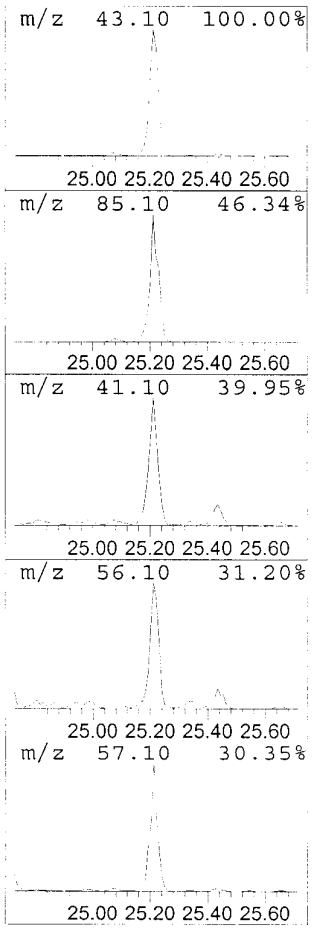
R.T.	EstConc	Area	Relative to ISTD	R.T.
25.22	9.67 ppbV	19770500	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane	114	C8H18	000111-65-9	59
2	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	53
3	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	53
4	Octane	114	C8H18	000111-65-9	52
5	Heptane, 2,4-dimethyl-	128	C9H20	002213-23-2	50

Unknown hydrocarbon

AP





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

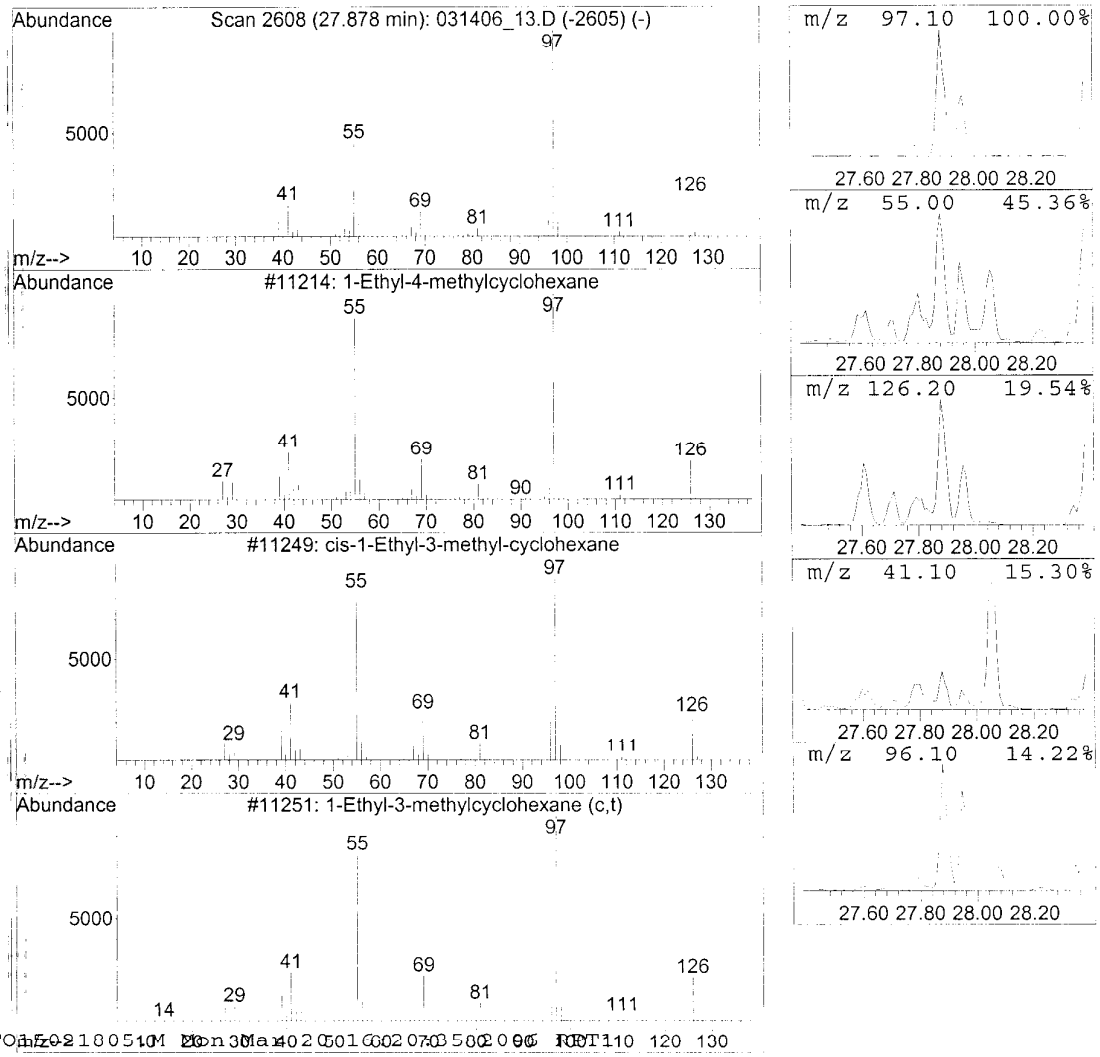
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 19 1-Ethyl-4-methylcyclohexane Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.88	6.26 ppbV	12801500	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	91
2	cis-1-Ethyl-3-methyl-cyclohexane	126	C9H18	019489-10-2	91
3	1-Ethyl-3-methylcyclohexane (c,t)	126	C9H18	003728-55-0	91
4	Furan, 2,3-dihydro-4-(1-methylpr...	126	C8H14O	034379-54-9	80
5	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	004926-78-7	78

Unknown
C_9H_{18}



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

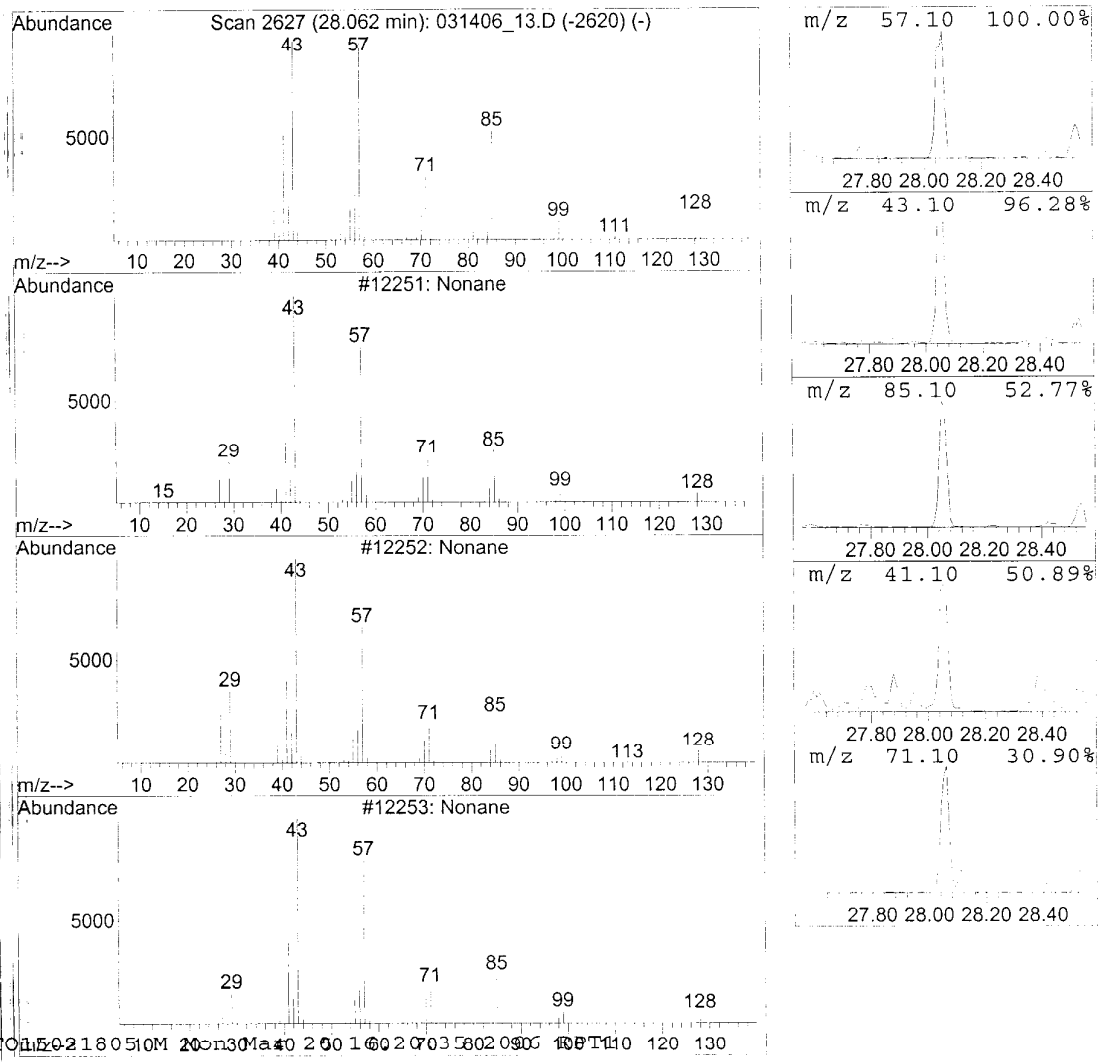
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 20 Nonane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.06	15.15 ppbV	30962000	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane	128	C9H20	000111-84-2	94
2	Nonane	128	C9H20	000111-84-2	94
3	Nonane	128	C9H20	000111-84-2	76
4	Octane	114	C8H18	000111-65-9	72
5	Nonadecane	268	C19H40	000629-92-5	59



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

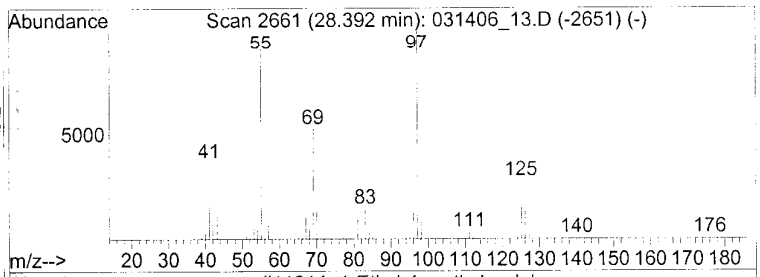
A8

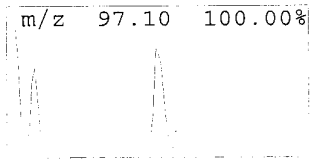
unk. C9H18

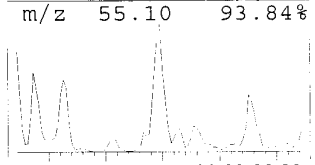
****
Peak Number 21 1-Ethyl-4-methylcyclohexane Concentration Rank 14

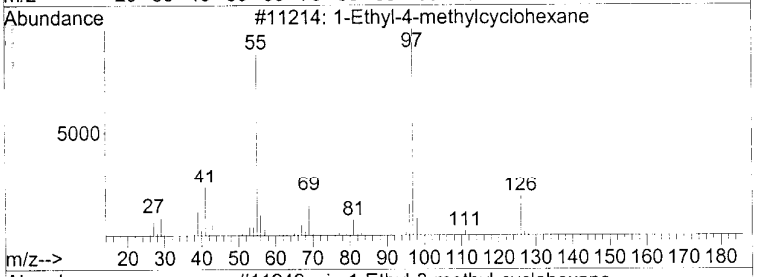
R.T.	EstConc	Area	Relative to ISTD	R.T.
28.39	6.44 ppbV	13153600	chlorobenzene-d5	26.27

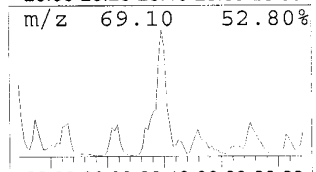
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	81
2	cis-1-Ethyl-3-methyl-cyclohexane	126	C9H18	019489-10-2	76
3	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	68
4	3,5-Dimethyl-3-heptene	126	C9H18	059643-68-4	68
5	1-Ethyl-3-methylcyclohexane (c,t)	126	C9H18	003728-55-0	68

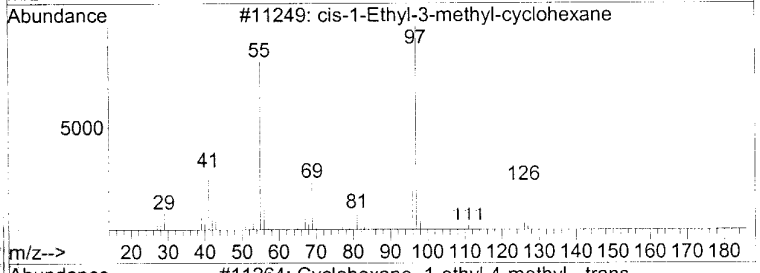


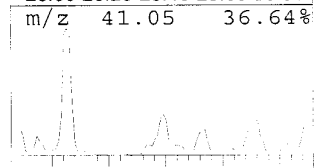


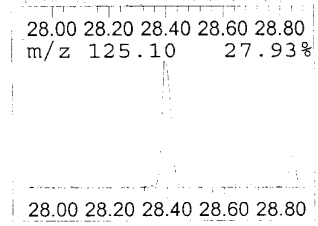


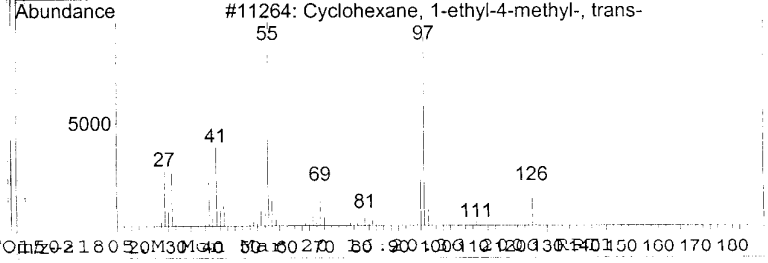












Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

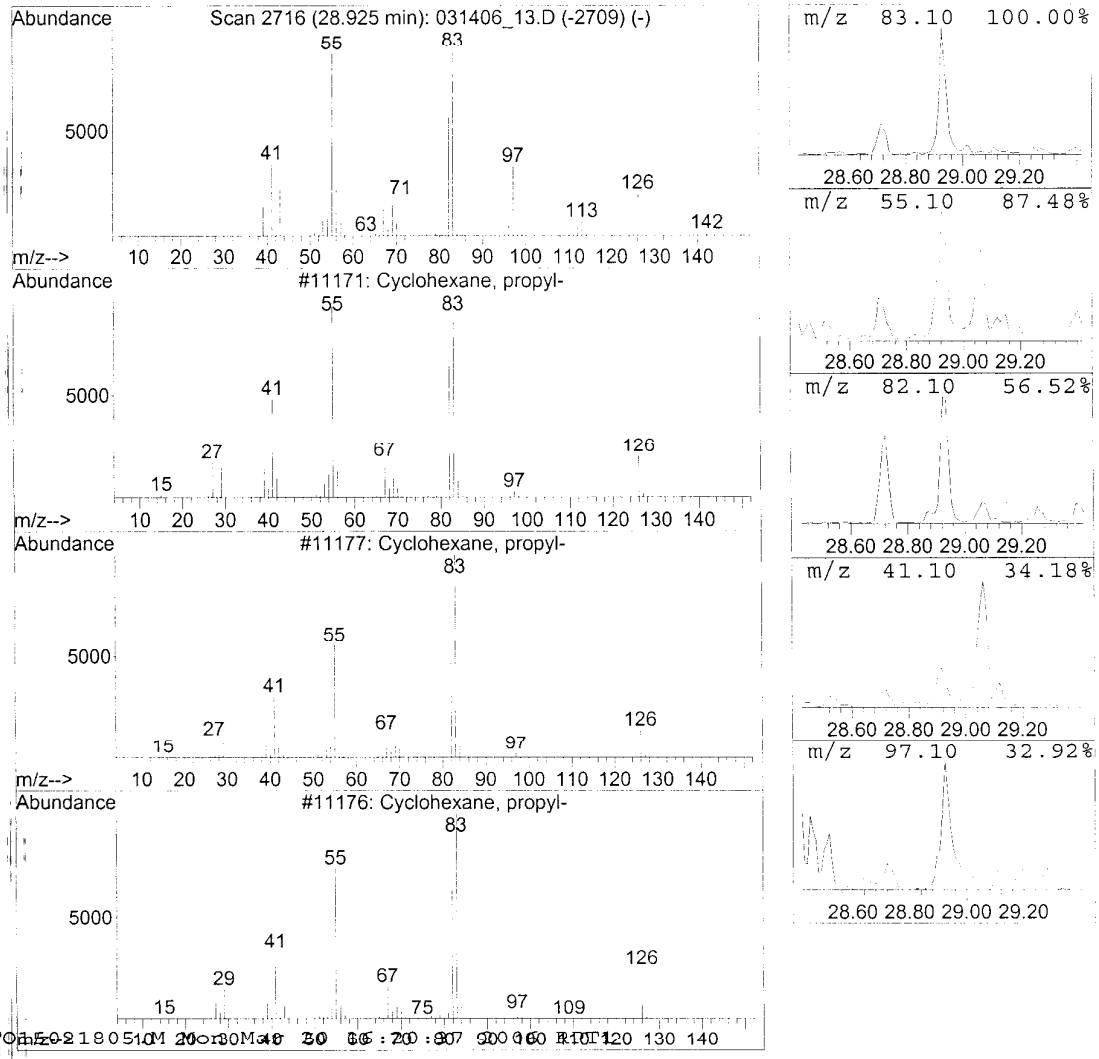
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 22 Cyclohexane, propyl- Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.92	5.79 ppbV	11833600	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, propyl-	126	C9H18	001678-92-8	81
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	76
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	76
4	Cyclohexane, propyl-	126	C9H18	001678-92-8	74
5	Cyclohexane, propyl-	126	C9H18	001678-92-8	59



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

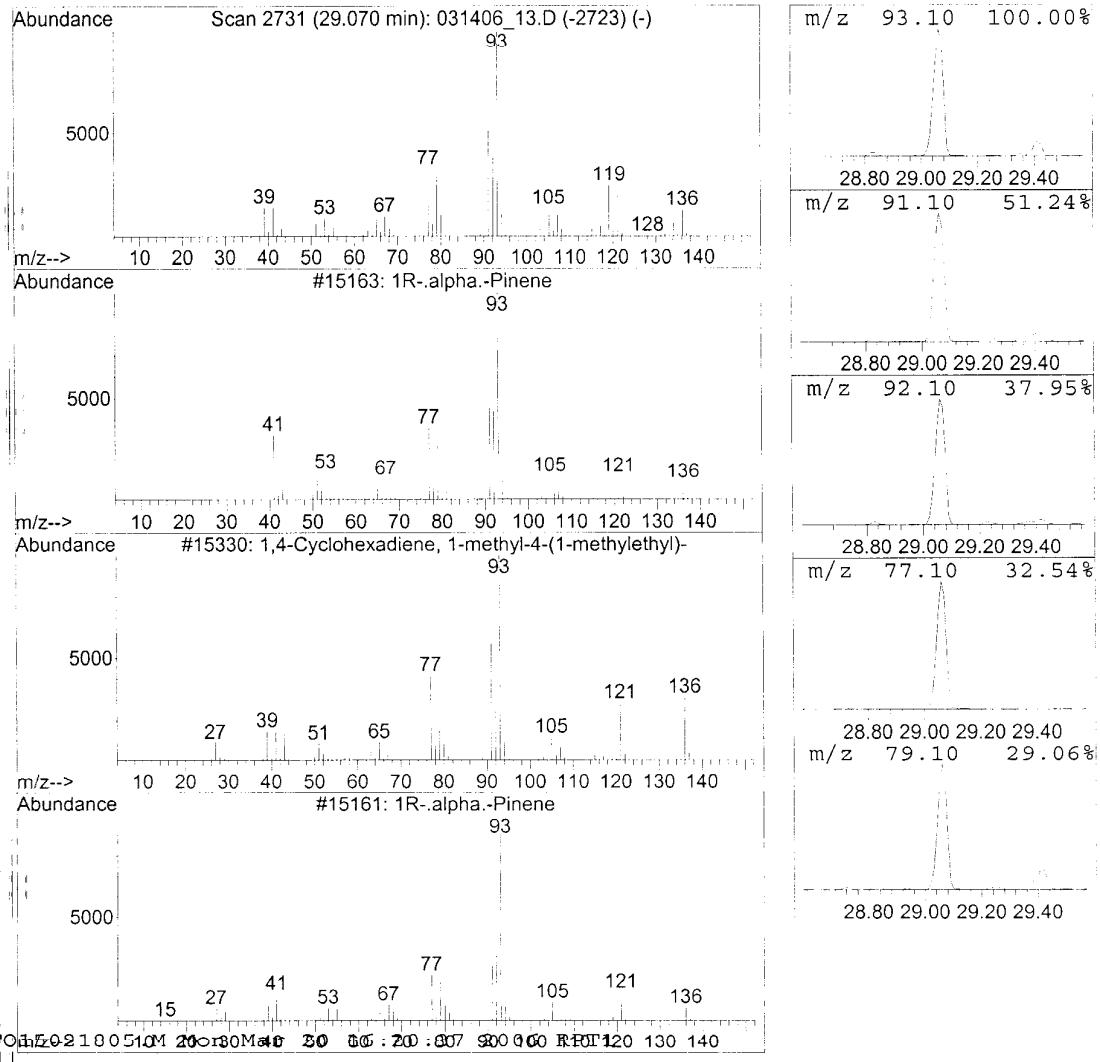
Peak Number 23 1R-.alpha.-Pinene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.07	97.84 ppbV	199971000	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R-.alpha.-Pinene	136	C10H16	007785-70-8	93
2	1,4-Cyclohexadiene, 1-methyl-4-(...	136	C10H16	000099-85-4	93
3	1R-.alpha.-Pinene	136	C10H16	007785-70-8	93
4	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	91
5	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000488-97-1	90

a-pinene

AF



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

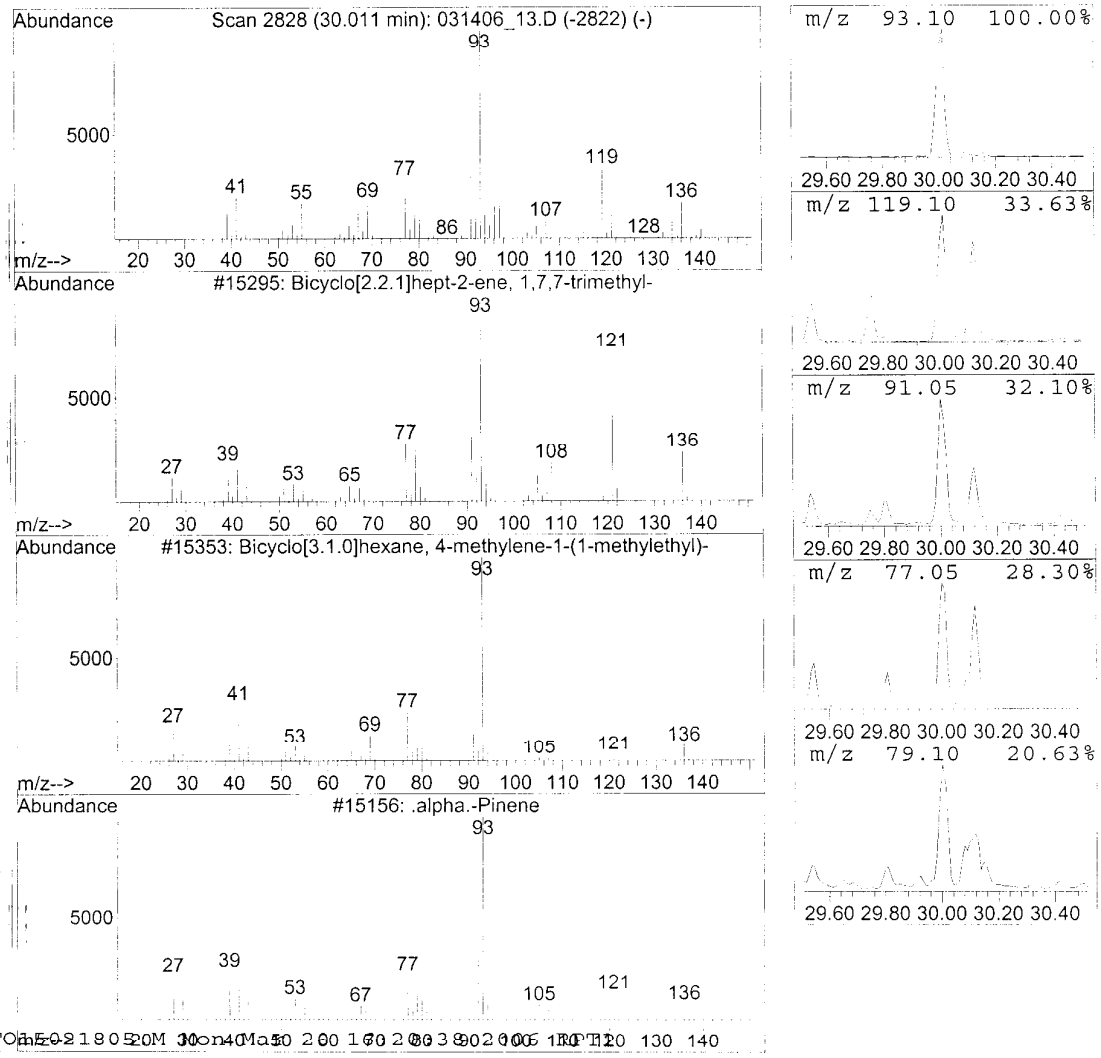
Peak Number 24 .beta.-Pinene Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
30.01	9.97 ppbV	20371100	chlorobenzene-d5	26.27

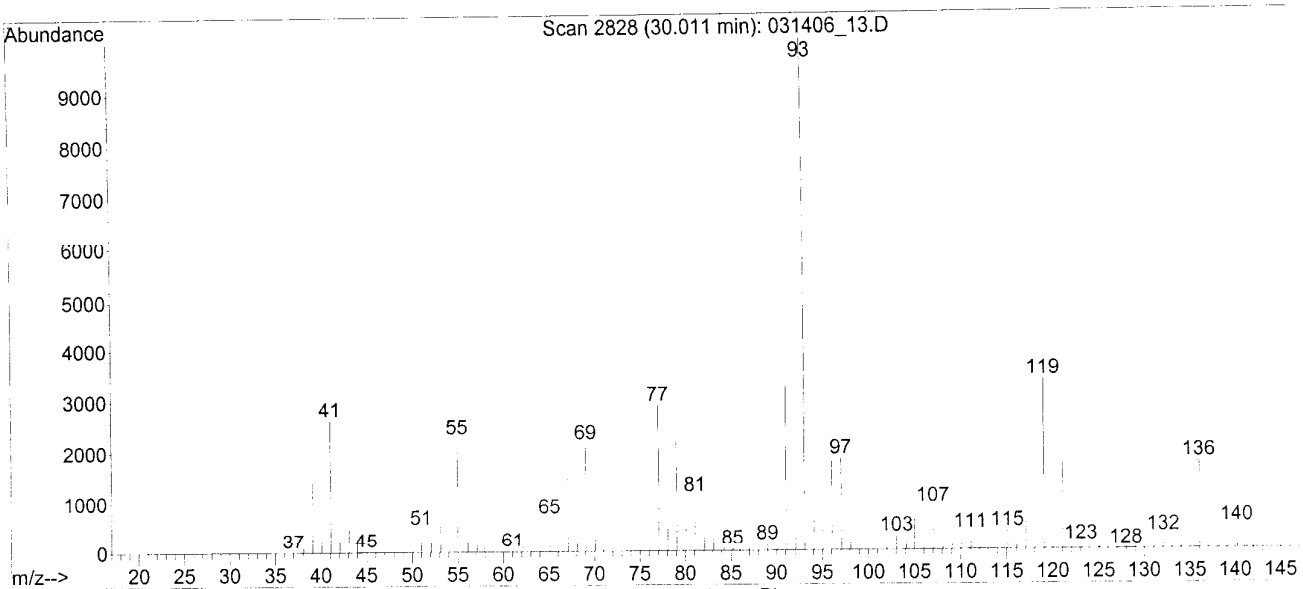
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Bicyclo[2.2.1]hept-2-ene, 1,7,7-...	136	C10H16	000464-17-5	76
2	Bicyclo[3.1.0]hexane, 4-methylen...	136	C10H16	003387-41-5	76
3	.alpha.-Pinene	136	C10H16	000080-56-8	76
4	.beta.-Pinene	136	C10H16	000127-91-3	70
5	.beta.-Phellandrene	136	C10H16	000555-10-2	68

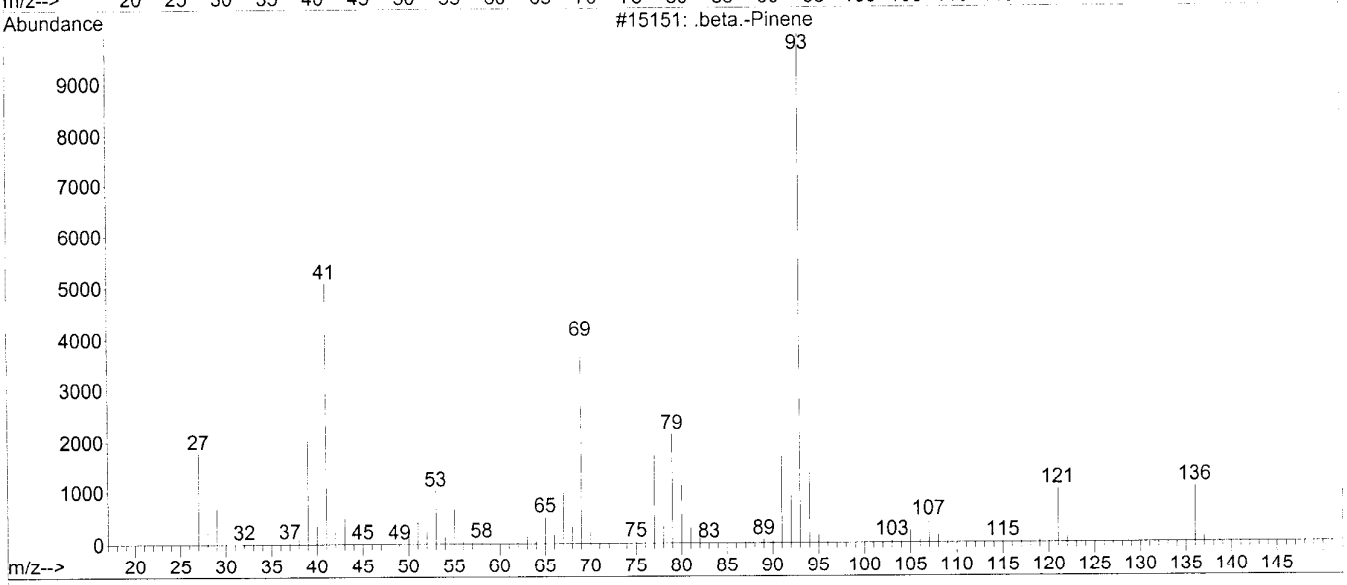
b-pinene

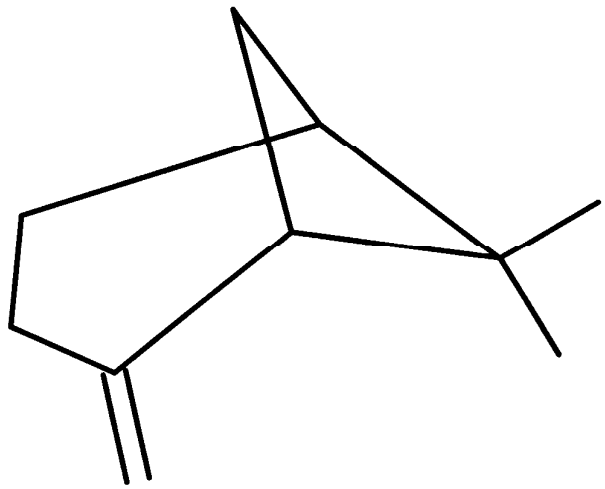
See Next page for spectra



Library Searched : C:\Database\NIST02.L
Quality : 76
ID : .beta.-Pinene







Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

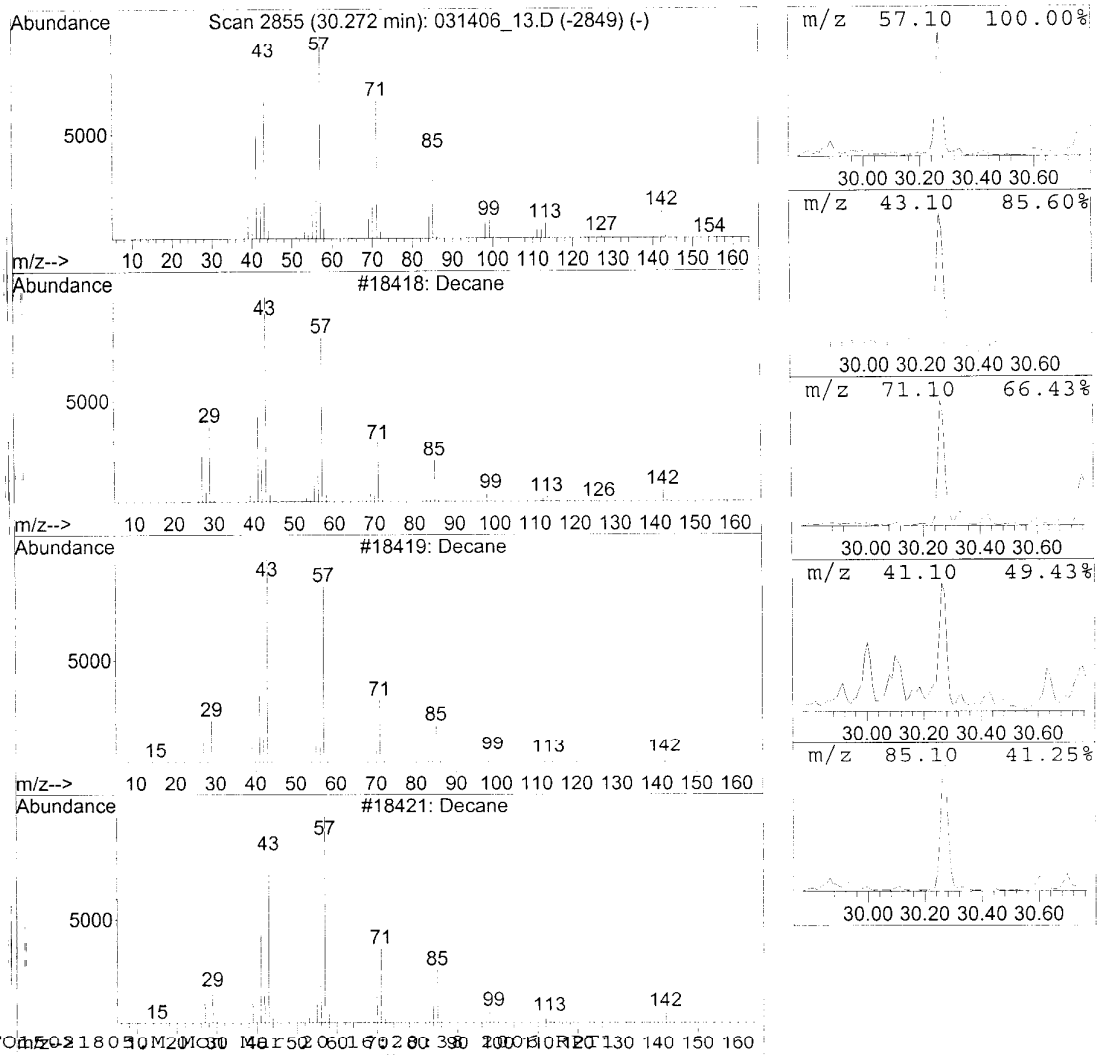
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 25 Decane Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
30.27	9.54 ppbV	19498200	chlorobenzene-d5	26.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane	142	C10H22	000124-18-5	90
2	Decane	142	C10H22	000124-18-5	87
3	Decane	142	C10H22	000124-18-5	81
4	Tetradecane	198	C14H30	000629-59-4	80
5	Hexadecane	226	C16H34	000544-76-3	72



LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.076	299	302	305	BV	290011	4411318	2.21%	0.298%
2	5.126	305	307	314	PV	238232	3742887	1.87%	0.253%
3	5.215	314	316	318	PV	168002	2017722	1.01%	0.136%
4	5.245	318	319	322	VV	105628	2042539	1.02%	0.138%
5	5.294	322	324	326	VV	145266	1823583	0.91%	0.123%
6	5.324	326	327	331	VV	129914	1938201	0.97%	0.131%
7	5.374	331	332	341	PV	149524	5921555	2.96%	0.400%
8	5.473	341	342	344	VV	119491	1029943	0.52%	0.070%
9	5.522	344	347	349	PV	145181	2282673	1.14%	0.154%
10	5.552	349	350	358	VV	120094	5749561	2.88%	0.388%
11	5.651	358	360	365	VV	99806	2513284	1.26%	0.170%
12	5.710	365	366	374	VV	89297	2786812	1.39%	0.188%
13	5.800	374	375	381	PV	72127	1844568	0.92%	0.125%
14	5.879	381	383	385	VV	80736	1081799	0.54%	0.073%
15	5.948	385	390	395	VV	74049	2987553	1.49%	0.202%
16	6.018	395	397	401	PV	60299	1523079	0.76%	0.103%
17	6.097	401	405	406	VV	33036	547096	0.27%	0.037%
18	6.136	406	409	410	VV 2	80024	1253048	0.63%	0.085%
19	6.166	410	412	414	VV	63194	925821	0.46%	0.063%
20	6.196	414	415	417	VV	40172	461203	0.23%	0.031%
21	6.255	417	421	426	PV	50804	1380661	0.69%	0.093%
22	6.325	426	428	429	VV	43799	531563	0.27%	0.036%
23	6.364	429	432	437	VV	73125	2119814	1.06%	0.143%
24	6.424	437	438	440	VV	60863	550871	0.28%	0.037%
25	6.543	440	450	452	VV	54716	2789201	1.39%	0.188%
26	6.582	452	454	457	VV	62420	1203181	0.60%	0.081%
27	6.632	457	459	462	VV	58700	1176563	0.59%	0.079%
28	6.672	462	463	470	VV	62076	2146306	1.07%	0.145%
29	6.761	470	472	474	VV	50722	817870	0.41%	0.055%
30	6.800	474	476	478	VV	50561	820075	0.41%	0.055%
31	6.840	478	480	486	VV	51332	1256712	0.63%	0.085%
32	6.919	486	488	490	VV	22821	269510	0.13%	0.018%
33	6.999	490	496	500	VV	52264	1621296	0.81%	0.109%
34	7.058	500	502	504	VV	31757	361708	0.18%	0.024%
35	7.137	504	510	511	VV	44203	1077099	0.54%	0.073%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

36	7.167	511	513	515	VV 2	54936	748087	0.37%	0.051%
37	7.207	515	517	518	VV 2	49591	932663	0.47%	0.063%
38	7.226	518	519	522	VV	49356	724473	0.36%	0.049%
39	7.345	522	531	533	VV	62364	3005633	1.50%	0.203%
40	7.385	533	535	538	VV	58781	1257969	0.63%	0.085%
41	7.444	538	541	544	VV	61047	1591868	0.80%	0.107%
42	7.504	544	547	551	VV	55257	2201917	1.10%	0.149%
43	7.563	551	553	558	VV	48136	1124293	0.56%	0.076%
44	7.653	558	562	564	VV	37672	838372	0.42%	0.057%
45	7.702	564	567	569	VV	36488	603514	0.30%	0.041%
46	7.781	569	575	576	VV	73101	2397468	1.20%	0.162%
47	7.811	576	578	579	VV	66156	879879	0.44%	0.059%
48	7.841	579	581	584	VV 2	89573	2312918	1.16%	0.156%
49	7.890	584	586	590	VV 3	94468	3034069	1.52%	0.205%
50	7.970	590	594	597	VV 2	144369	4961175	2.48%	0.335%
51	8.029	597	600	604	VV 4	155036	4811271	2.41%	0.325%
52	8.079	604	605	606	VV	157229	2481886	1.24%	0.168%
53	8.108	606	608	611	VV 2	171589	4058093	2.03%	0.274%
54	8.158	611	613	614	VV	156148	2440274	1.22%	0.165%
55	8.188	614	616	620	VV 3	126022	3487923	1.74%	0.235%
56	8.247	620	622	626	VV 2	116275	3095640	1.55%	0.209%
57	8.326	626	630	636	VV 3	114839	4771677	2.39%	0.322%
58	8.406	636	638	639	VV 2	84322	1365680	0.68%	0.092%
59	8.435	639	641	644	VV	78254	1649222	0.82%	0.111%
60	8.495	644	647	648	VV 2	79840	1475434	0.74%	0.100%
61	8.524	648	650	654	VV 2	73285	2142417	1.07%	0.145%
62	8.584	654	656	657	VV 2	58311	863519	0.43%	0.058%
63	8.614	657	659	661	VV	70452	1255286	0.63%	0.085%
64	8.643	661	662	665	VV	69904	1518372	0.76%	0.103%
65	8.683	665	666	668	VV	62207	954047	0.48%	0.064%
66	8.723	668	670	674	VV	57058	1239243	0.62%	0.084%
67	8.802	674	678	689	VV 3	58426	3938241	1.97%	0.266%
68	8.960	689	694	697	VV 2	56619	2497786	1.25%	0.169%
69	9.040	697	702	706	VV 4	56146	2435113	1.22%	0.164%
70	9.099	706	708	710	VV	50943	753723	0.38%	0.051%
71	9.169	713	715	720	VV 2	52491	1531483	0.77%	0.103%
72	9.238	720	722	727	VV 2	52060	1705839	0.85%	0.115%
73	9.307	727	729	731	VV	51531	794818	0.40%	0.054%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

74	9.337	731	732	735	VV	40582	1011421	0.51%	0.068%
75	9.386	735	737	740	VV	43175	962447	0.48%	0.065%
76	9.436	740	742	745	VV	36024	902826	0.45%	0.061%
77	9.604	757	759	761	VV	16540	158516	0.08%	0.011%
78	9.654	761	764	765	PV	22800	258720	0.13%	0.017%
79	9.684	765	767	771	VV	42487	954360	0.48%	0.064%
80	9.743	771	773	777	VV	31812	788954	0.39%	0.053%
81	9.822	777	781	783	VV	27964	584689	0.29%	0.039%
82	9.852	783	784	790	VV	22047	667007	0.33%	0.045%
83	9.931	790	792	794	VV	22858	288259	0.14%	0.019%
84	9.991	794	798	804	VV	17555	712866	0.36%	0.048%
85	10.090	804	808	811	VV	18286	450308	0.23%	0.030%
86	10.130	811	812	816	PV	14551	265699	0.13%	0.018%
87	10.229	816	822	823	VV	18466	641538	0.32%	0.043%
88	10.377	833	837	841	VV	24009	856287	0.43%	0.058%
89	10.437	841	843	848	VV	23619	545657	0.27%	0.037%
90	10.506	848	850	860	VV	20528	972731	0.49%	0.066%
91	11.319	925	932	936	PV	13794	657944	0.33%	0.044%
92	12.191	1012	1020	1021	VV 2	26179	867823	0.43%	0.059%
93	12.300	1021	1031	1032	VV	70286	2961762	1.48%	0.200%
94	12.329	1032	1034	1038	VV 2	77735	2738139	1.37%	0.185%
95	12.389	1038	1040	1042	VV	84912	1979692	0.99%	0.134%
96	12.428	1042	1044	1046	VV	79205	1535423	0.77%	0.104%
97	12.478	1046	1049	1062	VV 4	81505	7342997	3.67%	0.496%
98	12.646	1062	1066	1068	VV 2	82261	2455941	1.23%	0.166%
99	12.775	1068	1079	1083	VV 6	95611	7674935	3.84%	0.518%
100	12.864	1083	1088	1090	VV	111513	4632989	2.32%	0.313%
101	12.904	1090	1092	1096	VV	105353	3364191	1.68%	0.227%
102	12.963	1096	1098	1101	VV 4	116341	3201728	1.60%	0.216%
103	13.033	1101	1105	1111	VV 3	117523	6717032	3.36%	0.453%
104	13.112	1111	1113	1125	VV 3	103236	7367249	3.68%	0.497%
105	13.251	1125	1127	1132	VV	79029	2581831	1.29%	0.174%
106	14.925	1290	1296	1298	PV 2	17306	523989	0.26%	0.035%
107	15.034	1298	1307	1313	VV 3	35837	2440935	1.22%	0.165%
108	15.153	1313	1319	1320	VV 4	50095	1951227	0.98%	0.132%
109	15.282	1320	1332	1337	VV 5	61498	5447015	2.72%	0.368%
110	15.342	1337	1338	1342	VV 2	55324	1718751	0.86%	0.116%
111	15.411	1342	1345	1353	VV 2	54219	3329876	1.67%	0.225%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

112	15.510	1353	1355	1359	VV 2	49058	1514306	0.76%	0.102%
113	15.589	1359	1363	1378	VV 3	51493	3832805	1.92%	0.259%
114	16.768	1453	1482	1486	PV 3	38610	4418913	2.21%	0.298%
115	16.828	1486	1488	1490	VV 2	43734	903034	0.45%	0.061%
116	16.877	1490	1493	1495	VV 2	47476	1297394	0.65%	0.088%
117	16.917	1495	1497	1498	VV 3	45393	892325	0.45%	0.060%
118	16.976	1498	1503	1508	VV 6	48818	2571390	1.29%	0.174%
119	17.046	1508	1510	1511	VV	47073	913622	0.46%	0.062%
120	17.085	1511	1514	1533	VV 3	47718	3415806	1.71%	0.231%
121	18.483	1649	1655	1657	VV 3	16724	718311	0.36%	0.048%
122	18.562	1657	1663	1664	VV 7	18989	678113	0.34%	0.046%
123	18.730	1664	1680	1682	VV 6	42495	3062451	1.53%	0.207%
124	18.770	1682	1684	1690	VV 4	45916	1831280	0.92%	0.124%
125	18.899	1690	1697	1709	VV 5	52131	4706174	2.35%	0.318%
126	19.305	1719	1738	1740	VV 3	140084	9895058	4.95%	0.668%
127	19.374	1740	1745	1747	VV 2	164800	6566046	3.28%	0.443%
128	19.424	1747	1750	1752	VV 3	159767	4217573	2.11%	0.285%
129	19.463	1752	1754	1770	VV 3	167191	9272630	4.64%	0.626%
130	19.672	1770	1775	1780	VV 5	75071	3775014	1.89%	0.255%
131	19.741	1780	1782	1783	VV	76489	1421214	0.71%	0.096%
132	19.800	1783	1788	1790	VV 2	117484	3955105	1.98%	0.267%
133	19.860	1790	1794	1796	VV 2	164368	4567477	2.28%	0.308%
134	19.899	1796	1798	1815	VV 4	179826	7411095	3.71%	0.500%
135	20.256	1823	1834	1835	VV 4	32664	1544331	0.77%	0.104%
136	20.306	1835	1839	1843	VV	39387	1644582	0.82%	0.111%
137	20.385	1843	1847	1848	VV 3	49475	1326043	0.66%	0.090%
138	20.415	1848	1850	1851	VV	59064	1072045	0.54%	0.072%
139	20.444	1851	1853	1857	VV 3	61278	1912884	0.96%	0.129%
140	20.504	1857	1859	1877	VV 9	54162	3167677	1.58%	0.214%
141	20.890	1882	1898	1901	BV 3	91227	3471686	1.74%	0.234%
142	21.009	1901	1910	1912	VV 3	132148	5756806	2.88%	0.389%
143	21.118	1912	1921	1930	VV 3	332035	19906616	9.95%	1.344%
144	21.970	1995	2007	2008	VV 4	43851	1482545	0.74%	0.100%
145	22.169	2008	2027	2034	VV 4	243433	16058971	8.03%	1.084%
146	22.268	2034	2037	2047	VV 3	48352	2041650	1.02%	0.138%
147	22.456	2047	2056	2060	VV 4	25680	1101193	0.55%	0.074%
148	22.644	2065	2075	2081	VV 5	70841	3989668	2.00%	0.269%
149	22.743	2081	2085	2092	VV 3	74056	2762811	1.38%	0.187%
150	23.031	2105	2114	2124	VV 6	37698	1900078	0.95%	0.128%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

151	23.348	2131	2146	2151	VV	5	38548	1716562	0.86%	0.116%
152	23.476	2151	2159	2165	VV		594904	19451608	9.73%	1.313%
153	23.665	2165	2178	2192	VV		3921642	156848873	78.44%	10.589%
154	23.843	2192	2196	2202	VV	2	83152	2966510	1.48%	0.200%
155	24.041	2206	2216	2220	VV	2	281051	10012974	5.01%	0.676%
156	24.101	2220	2222	2226	VV		117941	2613704	1.31%	0.176%
157	24.180	2226	2230	2237	VV	4	35527	1560822	0.78%	0.105%
158	24.319	2237	2244	2254	VV	2	269159	9626304	4.81%	0.650%
159	24.507	2254	2263	2267	VV		327875	10955159	5.48%	0.740%
160	24.566	2267	2269	2276	VV	2	153771	4651292	2.33%	0.314%
161	24.705	2276	2283	2289	VV		76345	2376091	1.19%	0.160%
162	24.814	2289	2294	2296	VV	2	38286	1159011	0.58%	0.078%
163	24.864	2296	2299	2303	VV	3	36415	1068595	0.53%	0.072%
164	24.943	2303	2307	2309	VV	3	33827	968891	0.48%	0.065%
165	24.992	2309	2312	2315	VV	3	44990	1245544	0.62%	0.084%
166	25.076	2315	2319	2325	VV	3	41765	1282043	0.64%	0.087%
167	25.221	2325	2334	2340	VV		834092	19770494	9.89%	1.335%
168	25.357	2340	2348	2352	VV	3	137917	4203805	2.10%	0.284%
169	25.444	2352	2357	2365	VV		174155	4548677	2.27%	0.307%
170	25.657	2372	2379	2384	VV	3	22581	574664	0.29%	0.039%
171	25.793	2387	2393	2396	VV	3	28494	731801	0.37%	0.049%
172	25.861	2396	2400	2406	VV	6	42794	1229682	0.61%	0.083%
173	25.987	2406	2413	2419	PV	2	103612	2431360	1.22%	0.164%
174	26.171	2426	2432	2435	VV	4	202918	5568599	2.78%	0.376%
175	26.268	2435	2442	2446	VV	2	700502	20438997	10.22%	1.380%
176	26.346	2446	2450	2460	VV	6	421214	17211489	8.61%	1.162%
177	26.491	2460	2465	2471	VV		381312	9198933	4.60%	0.621%
178	26.588	2471	2475	2479	VV	4	89248	2671126	1.34%	0.180%
179	26.656	2479	2482	2487	VV	3	57809	1344505	0.67%	0.091%
180	26.743	2487	2491	2494	VV	2	51559	1242377	0.62%	0.084%
181	26.850	2494	2502	2507	VV		2668519	60819040	30.41%	4.106%
182	26.937	2507	2511	2519	VV	3	389786	14330265	7.17%	0.967%
183	27.083	2519	2526	2533	VV		2296233	74267549	37.14%	5.014%
184	27.160	2533	2534	2541	VV		531480	11144816	5.57%	0.752%
185	27.267	2541	2545	2547	VV	3	26645	586835	0.29%	0.040%
186	27.364	2547	2555	2560	VV	2	493454	11528940	5.77%	0.778%
187	27.471	2560	2566	2572	VV	8	40860	1869150	0.93%	0.126%
188	27.606	2572	2580	2586	VV	5	336671	11090427	5.55%	0.749%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

189	27.732	2586	2593	2597	VV	2	1076667	26427497	13.22%	1.784%
190	27.800	2597	2600	2605	VV	4	309929	10737283	5.37%	0.725%
191	27.887	2605	2609	2613	VV		591814	12801515	6.40%	0.864%
192	27.955	2613	2616	2620	VV	2	297922	6931132	3.47%	0.468%
193	28.062	2620	2627	2639	VV		1341784	30961952	15.48%	2.090%
194	28.227	2639	2644	2651	PV	2	91632	2249992	1.13%	0.152%
195	28.392	2651	2661	2666	PV	3	571382	19118253	9.56%	1.291%
196	28.459	2666	2668	2671	VV	2	117709	2183752	1.09%	0.147%
197	28.537	2671	2676	2684	VV	2	447710	11628662	5.82%	0.785%
198	28.644	2684	2687	2689	VV	4	62821	1198388	0.60%	0.081%
199	28.721	2689	2695	2700	VV	3	450552	14456191	7.23%	0.976%
200	28.789	2700	2702	2703	VV		87902	1412486	0.71%	0.095%
201	28.838	2703	2707	2709	VV	2	249183	5476304	2.74%	0.370%
202	28.925	2709	2716	2723	VV	4	870119	31855187	15.93%	2.151%
203	29.070	2723	2731	2735	VV		8260906	199971170	100.00%	13.500%
204	29.119	2735	2736	2742	VV	2	522766	11883768	5.94%	0.802%
205	29.235	2742	2748	2756	VV	4	454816	14565076	7.28%	0.983%
206	29.419	2756	2767	2772	VV	4	1283662	55751725	27.88%	3.764%
207	29.497	2772	2775	2778	VV	3	516635	10079132	5.04%	0.680%
208	29.545	2778	2780	2783	VV		737538	13426730	6.71%	0.906%
209	29.594	2783	2785	2788	VV	2	333522	6924393	3.46%	0.467%
210	29.652	2788	2791	2794	VV	2	517373	11005462	5.50%	0.743%
211	29.700	2794	2796	2804	VV	4	427832	9161379	4.58%	0.618%
212	29.807	2804	2807	2811	PV		244711	4821867	2.41%	0.326%
213	29.865	2811	2813	2814	VV		63319	945792	0.47%	0.064%
214	29.923	2814	2819	2822	VV	5	228053	5695371	2.85%	0.384%
215	30.011	2822	2828	2832	VV		878669	20371141	10.19%	1.375%
216	30.117	2832	2839	2849	VV	4	993391	34554692	17.28%	2.333%
217	30.272	2849	2855	2859	VV		944512	19498217	9.75%	1.316%
218	30.331	2859	2861	2867	VV	4	100972	1785470	0.89%	0.121%
219	30.437	2867	2872	2873	PBA	3	92706	1709886	0.86%	0.115%

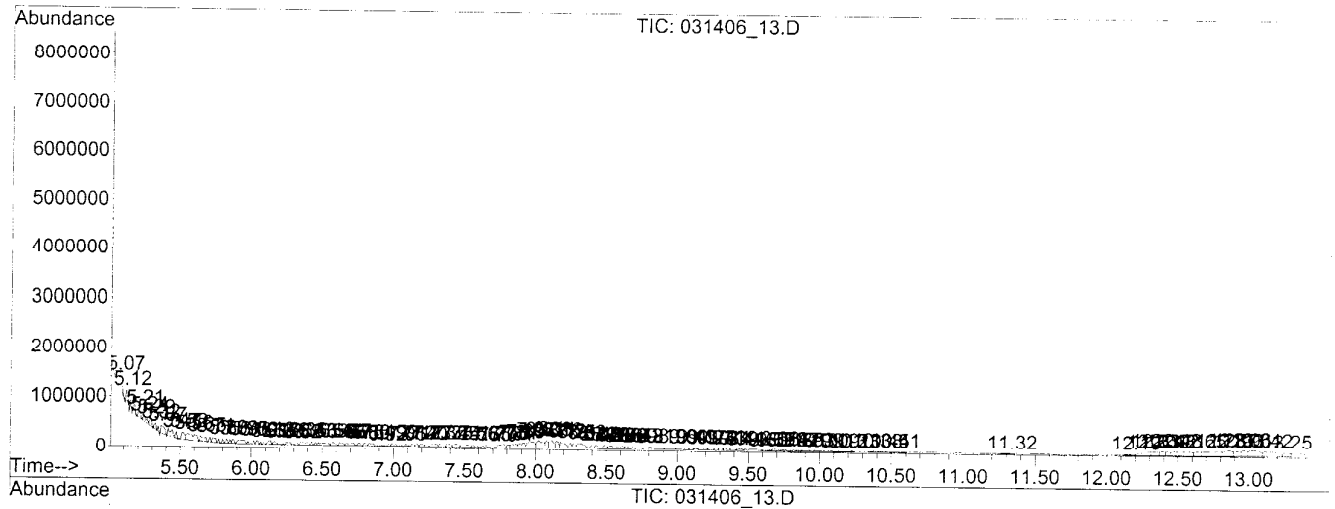
Sum of corrected areas: 1481275810

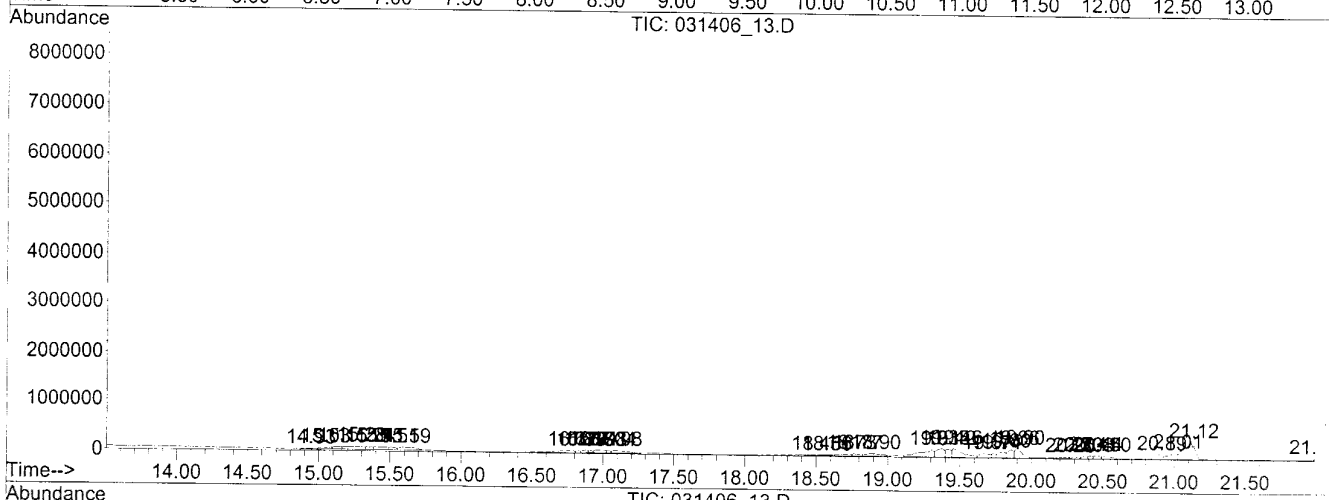
LSC Report - Integrated Chromatogram

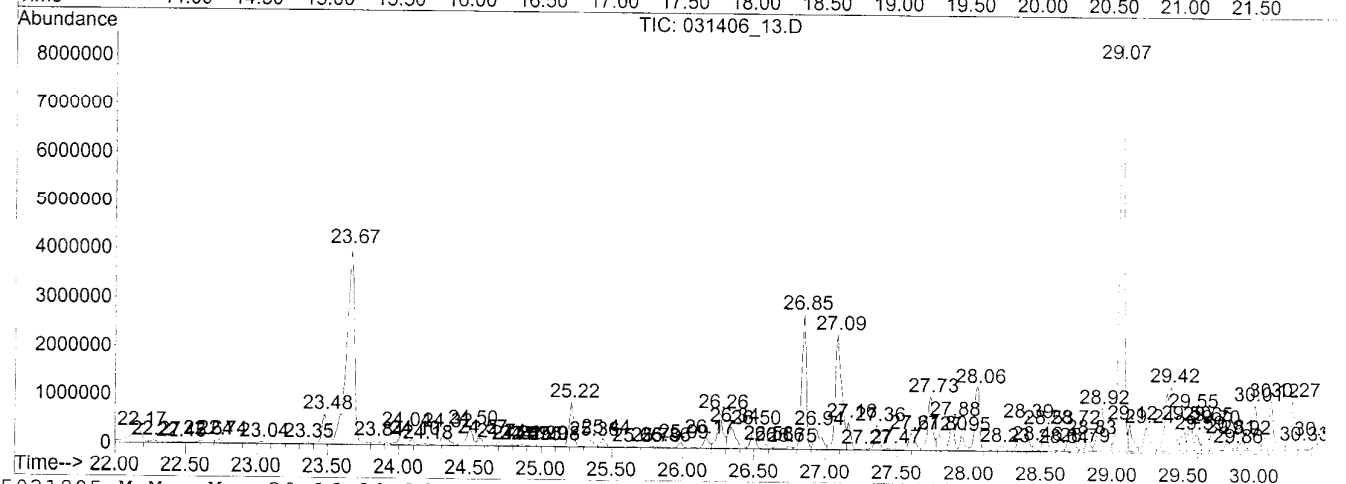
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_13.D
Acq On : 16 Mar 2006 8:22 am
Operator : AF
Sample : 06-061-4 20X
Misc : 25ML C135
ALS Vial : 7 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







3550A QA/QC REPORT

Sample Information

Sample Name: 061-4 C135 031506_13

Inlet Position : 7

Injection Number: 1

Run Information

Inject Time : 05:53:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--- #	RT	Resp	Conc	
Heptane	20.11	10.0	ppbV	2665730	2	18.26	2665730	10.0	not reported. Target.
Cyclohexane, methyl-	21.47	38.8	ppbV	10339800	2	18.26	2665730	10.0	
Cyclohexane, methyl-	21.48	14.3	ppbV	3815490	2	18.26	2665730	10.0	1 peak split
Cyclohexane, methyl-	21.49	52.6	ppbV	14016700	2	18.26	2665730	10.0	
Heptane, 3-methyl-	24.03	9.0	ppbV	10134100	3	26.10	11278400	10.0	
Cyclohexane, 1,3-...	24.20	17.5	ppbV	19755900	3	26.10	11278400	10.0	
Cyclohexane, 1,1,...	26.37	16.1	ppbV	18141900	3	26.10	11278400	10.0	
Octane, 4-methyl-	27.09	13.3	ppbV	15046500	3	26.10	11278400	10.0	
Octane, 3-methyl-	27.31	19.9	ppbV	22505900	3	26.10	11278400	10.0	
Cyclopentane, 1-m...	27.73	8.8	ppbV	9911310	3	26.10	11278400	10.0	
4-Octen-3-one	27.83	18.3	ppbV	20580500	3	26.10	11278400	10.0	
Cyclohexane, 1-et...	27.90	9.0	ppbV	10199900	3	26.10	11278400	10.0	
Nonane	28.02	9.1	ppbV	10221700	3	26.10	11278400	10.0	
1-Ethyl-3-methylc...	28.35	14.9	ppbV	16825800	3	26.10	11278400	10.0	
1-Cyclobutanone,2...	28.69	25.7	ppbV	28981200	3	26.10	11278400	10.0	
Octane, 2,6-dimet...	28.90	25.0	ppbV	28192700	3	26.10	11278400	10.0	
Octane, 2,6-dimet...	28.91	21.0	ppbV	23638800	3	26.10	11278400	10.0	
Heptane, 4-propyl-	29.11	12.4	ppbV	13932800	3	26.10	11278400	10.0	
Benzene, propyl-	29.22	8.1	ppbV	9124500	3	26.10	11278400	10.0	
[1R,2c,7,7-Tetrameth...	29.60	12.9	ppbV	14524800	3	26.10	11278400	10.0	
[1R,2c,3t,4t-Tetra...	29.64	14.5	ppbV	16379100	3	26.10	11278400	10.0	
Nonane, 3-methyl-	29.70	11.5	ppbV	12965400	3	26.10	11278400	10.0	
Benzene, 1,2,3-tr...	30.12	15.6	ppbV	17571500	3	26.10	11278400	10.0	

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

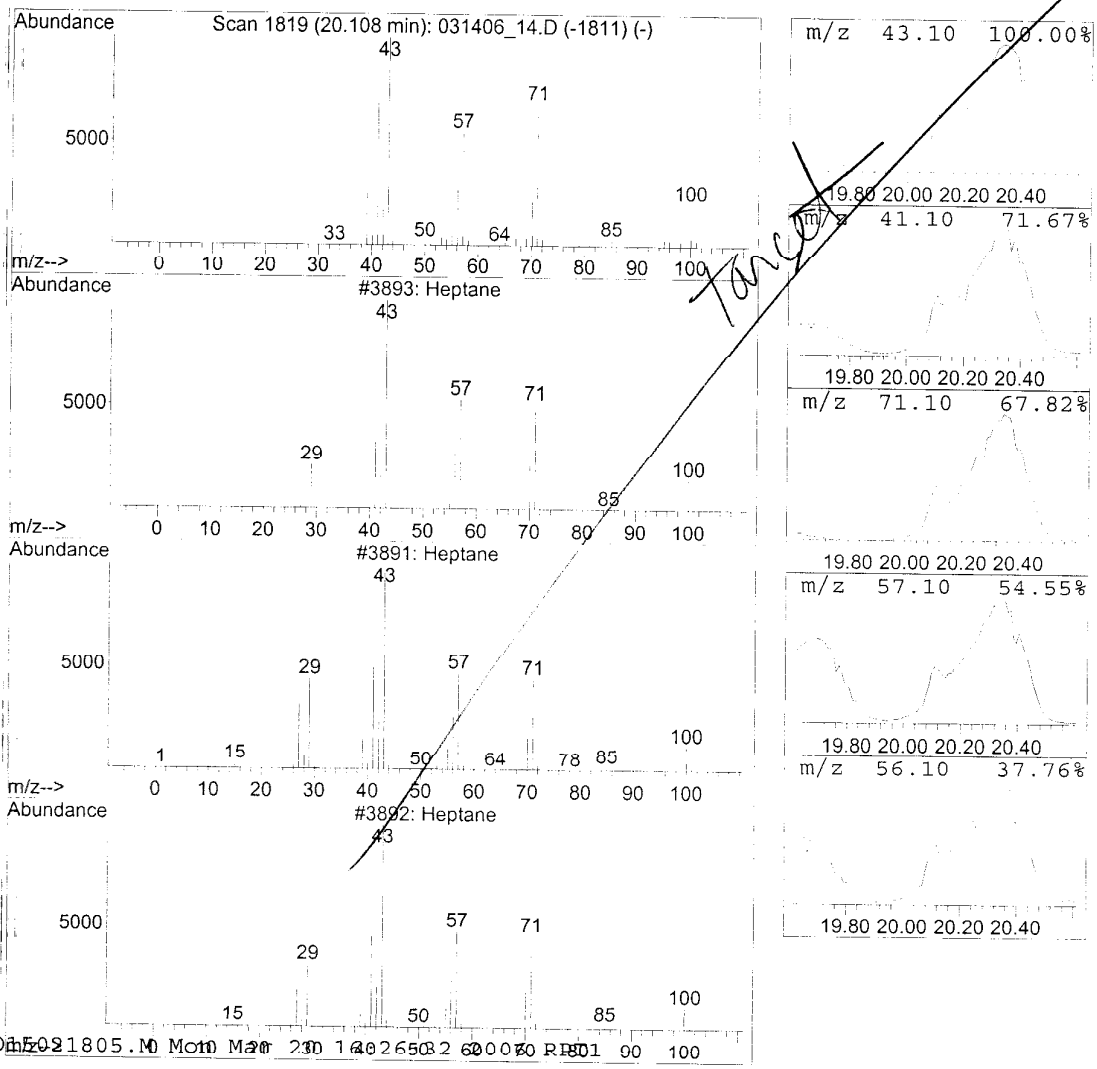
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 1 Heptane Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
20.11	10.00 ppbV	2665730	1,4-difluorobenzene	18.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane	100	C7H16	000142-82-5	86
2	Heptane	100	C7H16	000142-82-5	86
3	Heptane	100	C7H16	000142-82-5	64
4	Heptane	100	C7H16	000142-82-5	56
5	Hexane, 3-methyl-	100	C7H16	000589-34-4	47



Target

QP 3/20/06

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	20.118	1811	1820	1823	BV 2	64994	2665730	4.60%	0.265%
2	20.346	1823	1843	1869	VV 3	159739	21262346	36.71%	2.110%
3	21.287	1915	1938	1939	PV 2	74626	2584290	4.46%	0.256%
4	21.475	1939	1957	1980	VV 3	210189	28172326	48.65%	2.796%
5	22.129	2001	2023	2025	VV 4	61552	4462590	7.71%	0.443%
6	22.169	2025	2027	2047	VV 5	63451	4793957	8.28%	0.476%
7	22.555	2047	2066	2082	VV 5	39796	3928090	6.78%	0.390%
8	22.932	2082	2104	2107	VV 5	53207	4154926	7.17%	0.412%
9	23.031	2107	2114	2120	VV	198231	8199244	14.16%	0.814%
10	23.249	2120	2136	2152	VV	772895	57913832	100.00%	5.748%
11	23.477	2152	2159	2169	VV 4	87530	6292185	10.86%	0.624%
12	23.725	2169	2184	2198	VV 4	276139	22864416	39.48%	2.269%
13	24.042	2205	2216	2223	VV 3	285296	18367026	31.71%	1.823%
14	24.210	2223	2233	2249	VV 3	362260	27866858	48.12%	2.766%
15	24.468	2249	2259	2271	VV 3	142571	9849306	17.01%	0.978%
16	24.616	2271	2274	2278	VV 5	48823	1777276	3.07%	0.176%
17	24.735	2278	2286	2298	VV 7	79092	6216115	10.73%	0.617%
18	24.993	2298	2312	2320	VV 3	323992	20896180	36.08%	2.074%
19	25.144	2320	2326	2329	VV 3	95558	3875311	6.69%	0.385%
20	25.231	2329	2335	2351	VV	177630	7881441	13.61%	0.782%
21	25.464	2351	2359	2367	VV 2	35415	1319681	2.28%	0.131%
22	25.638	2367	2377	2382	PV 3	69397	2866453	4.95%	0.284%
23	25.735	2382	2387	2392	VV 2	53541	2606943	4.50%	0.259%
24	25.842	2392	2398	2405	VV 3	115470	4711934	8.14%	0.468%
25	26.055	2405	2420	2422	VV 3	340602	13811583	23.85%	1.371%
26	26.113	2422	2426	2428	VV	386586	11278384	19.47%	1.119%
27	26.191	2428	2434	2439	VV 3	596165	28517100	49.24%	2.830%
28	26.268	2439	2442	2446	VV	270003	8202320	14.16%	0.814%
29	26.365	2446	2452	2458	VV	475402	18141901	31.33%	1.801%
30	26.453	2458	2461	2467	VV 2	129474	4901261	8.46%	0.486%
31	26.744	2476	2491	2495	VV	622559	22945765	39.62%	2.277%
32	26.831	2495	2500	2504	VV 2	364866	11827579	20.42%	1.174%
33	26.899	2504	2507	2511	VV 2	304633	9933704	17.15%	0.986%
34	26.996	2511	2517	2523	VV	625360	26659894	46.03%	2.646%
35	27.093	2523	2527	2534	VV 2	539326	17529626	30.27%	1.740%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

36	27.306	2539	2549	2555	VV	674295	22505874	38.86%	2.234%
37	27.393	2555	2558	2560	VV 2	41767	1098323	1.90%	0.109%
38	27.442	2560	2563	2565	VV	43415	1120672	1.94%	0.111%
39	27.529	2565	2572	2578	VV 3	340779	12236155	21.13%	1.214%
40	27.665	2578	2586	2589	VV 2	266530	10198071	17.61%	1.012%
41	27.742	2589	2594	2598	VV 2	456505	16993780	29.34%	1.687%
42	27.829	2598	2603	2607	VV	687733	20580459	35.54%	2.043%
43	27.897	2607	2610	2615	VV	381769	10199941	17.61%	1.012%
44	28.023	2615	2623	2627	VV 2	445223	14261060	24.62%	1.415%
45	28.081	2627	2629	2635	VV	99019	2274440	3.93%	0.226%
46	28.188	2635	2640	2645	VV 3	123777	3358920	5.80%	0.333%
47	28.304	2645	2652	2653	PV	230029	4774962	8.24%	0.474%
48	28.353	2653	2657	2661	VV 2	717333	22310158	38.52%	2.214%
49	28.411	2661	2663	2667	VV 2	222161	5126839	8.85%	0.509%
50	28.508	2667	2673	2680	VV 4	676749	22564768	38.96%	2.240%
51	28.615	2680	2684	2687	VV 3	138758	3601197	6.22%	0.357%
52	28.683	2687	2691	2698	VV	1039157	28981150	50.04%	2.876%
53	28.789	2698	2702	2705	VV 3	279145	9163488	15.82%	0.909%
54	28.906	2705	2714	2719	VV 2	1635416	51831590	89.50%	5.144%
55	28.993	2719	2723	2725	VV 3	370271	10865437	18.76%	1.078%
56	29.041	2725	2728	2732	VV 2	397207	10995475	18.99%	1.091%
57	29.119	2732	2736	2741	VV 3	748883	20803643	35.92%	2.065%
58	29.226	2741	2747	2755	VV 6	539520	23523811	40.62%	2.335%
59	29.390	2755	2764	2769	VV 3	1212767	37994427	65.61%	3.771%
60	29.497	2769	2775	2778	VV 3	801131	23873305	41.22%	2.369%
61	29.545	2778	2780	2783	VV 3	520407	10797320	18.64%	1.072%
62	29.594	2783	2785	2788	VV	672343	14524836	25.08%	1.442%
63	29.642	2788	2790	2794	VV 2	773962	19193374	33.14%	1.905%
64	29.701	2794	2796	2803	VV	489356	12965383	22.39%	1.287%
65	29.807	2803	2807	2810	PV 2	240402	5135473	8.87%	0.510%
66	29.914	2810	2818	2822	VV 5	506158	19708388	34.03%	1.956%
67	30.001	2822	2827	2831	VV 4	475404	15725829	27.15%	1.561%
68	30.117	2831	2839	2843	VV 3	1402682	39072108	67.47%	3.878%
69	30.195	2843	2847	2849	VV 3	326163	8973005	15.49%	0.891%
70	30.234	2849	2851	2853	VV 2	275746	4877617	8.42%	0.484%
71	30.273	2853	2855	2858	VV 2	484453	9162435	15.82%	0.909%
72	30.331	2858	2861	2864	VV 3	183452	3256551	5.62%	0.323%
73	30.370	2864	2865	2867	PV	27389	254543	0.44%	0.025%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

74	30.428	2867	2871	2873	PBA3	202046	3402890	5.88%	0.338%

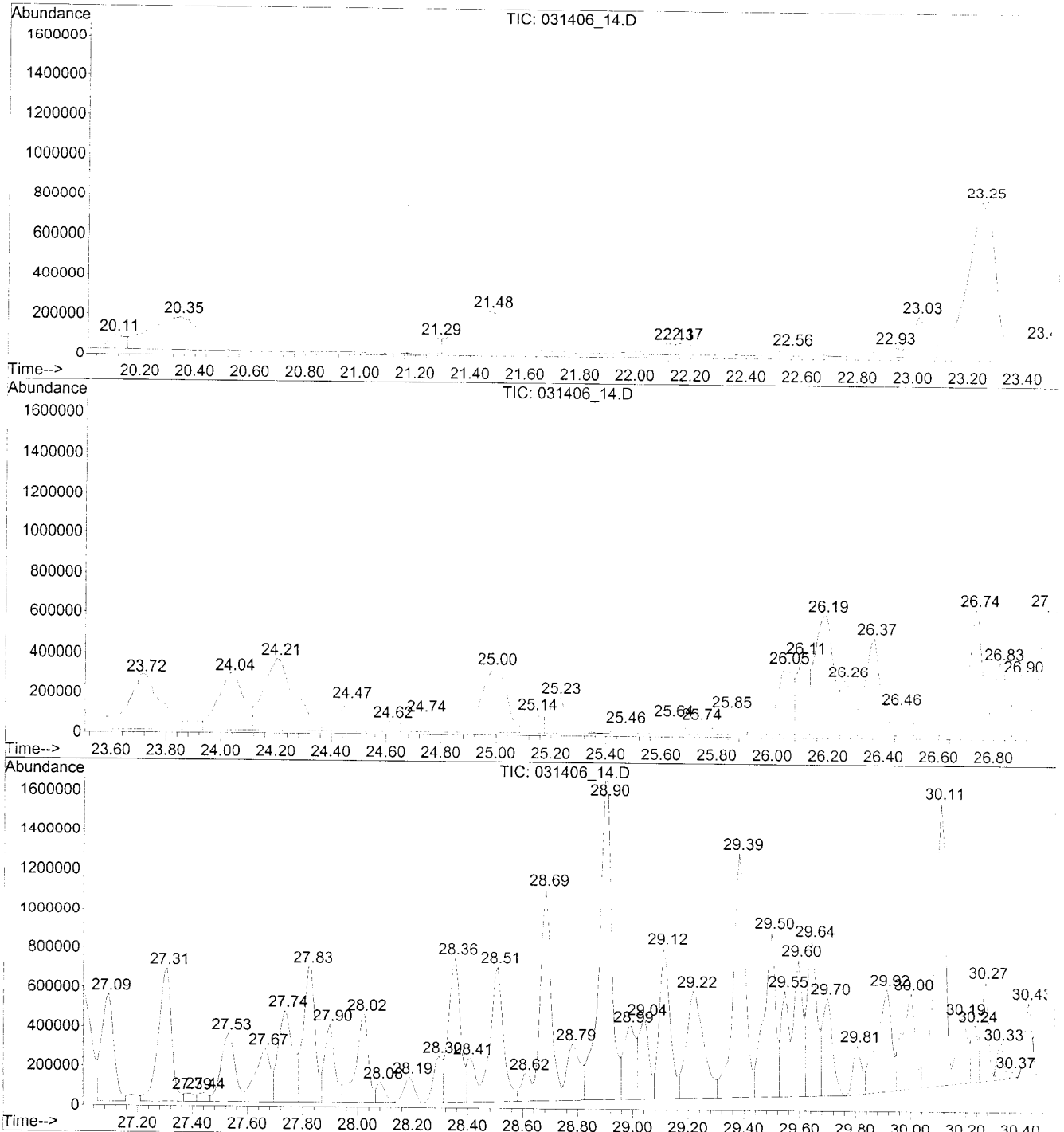
Sum of corrected areas: 1007565271

LSC Report - Integrated Chromatogram

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e



3550A QA/QC REPORT

Sample Information

Sample Name: 061-5 C141 031506_14

Inlet Position : 8

Injection Number: 1

Run Information

Inject Time : 09:52:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

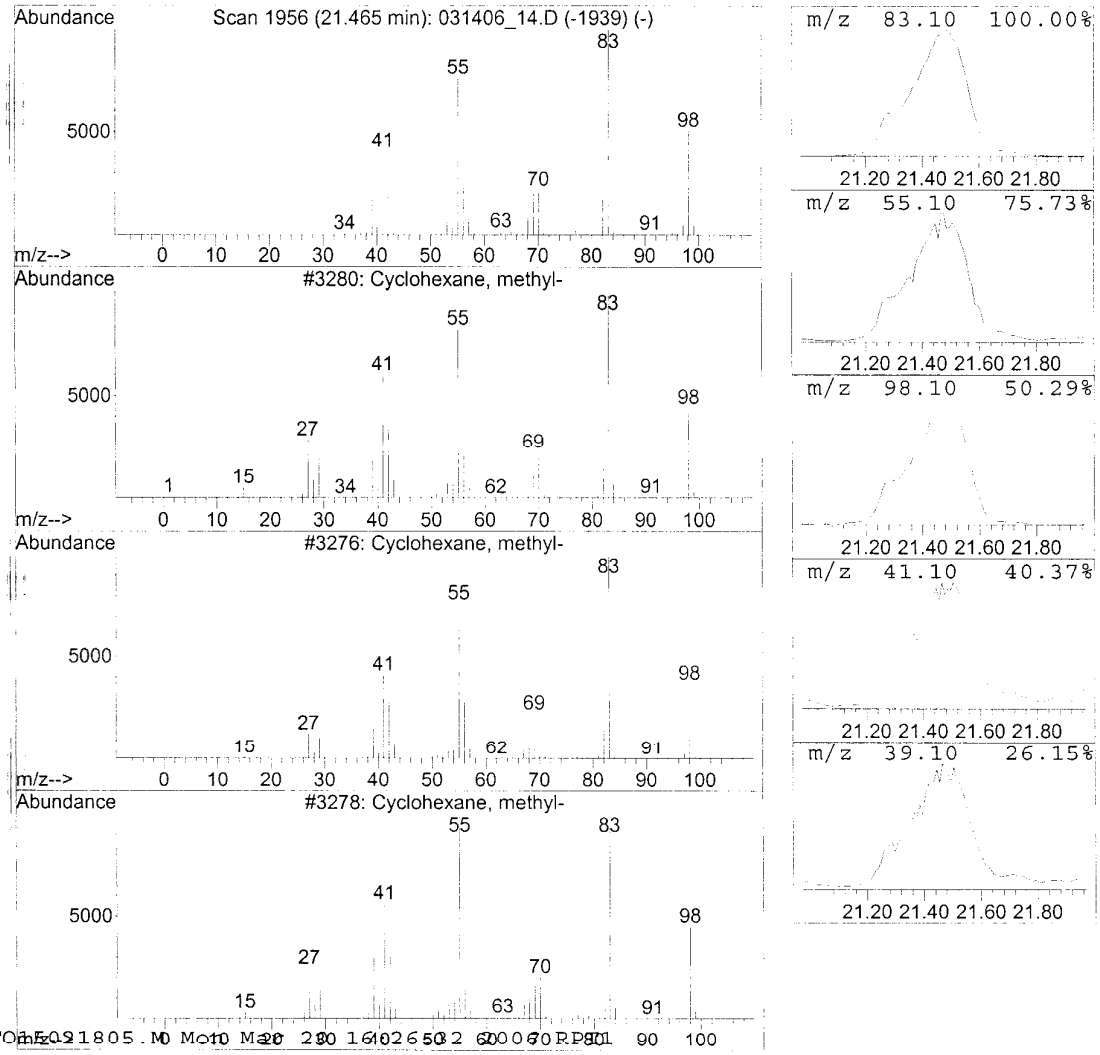
TOP 10 TICs reported

****

Peak Number 2 Cyclohexane, methyl- Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.47	38.79 ppbV	10339800	1,4-difluorobenzene	18.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	90
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	86
5	1H-Pyrazole, 4,5-dihydro-1,5-dim...	98	C5H10N2	005775-96-2	64



(+) 9

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

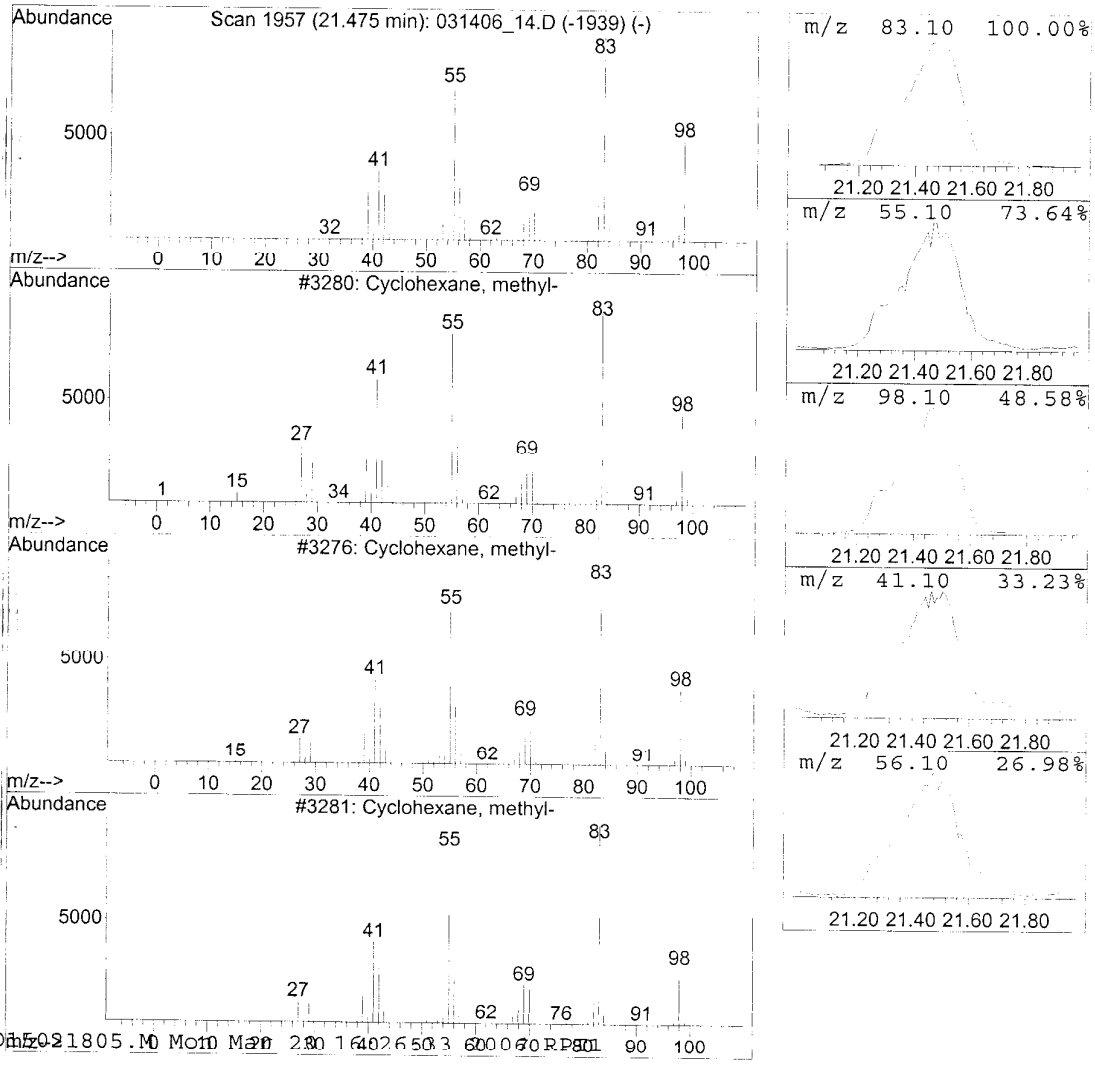
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 3 Cyclohexane, methyl Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.48	14.31 ppbV	3815490	1,4-difluorobenzene	18.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	94
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	93
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	90
5	1H-Pyrazole, 4,5-dihydro-4,5-dim...	98	C5H10N2	028019-94-5	59



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

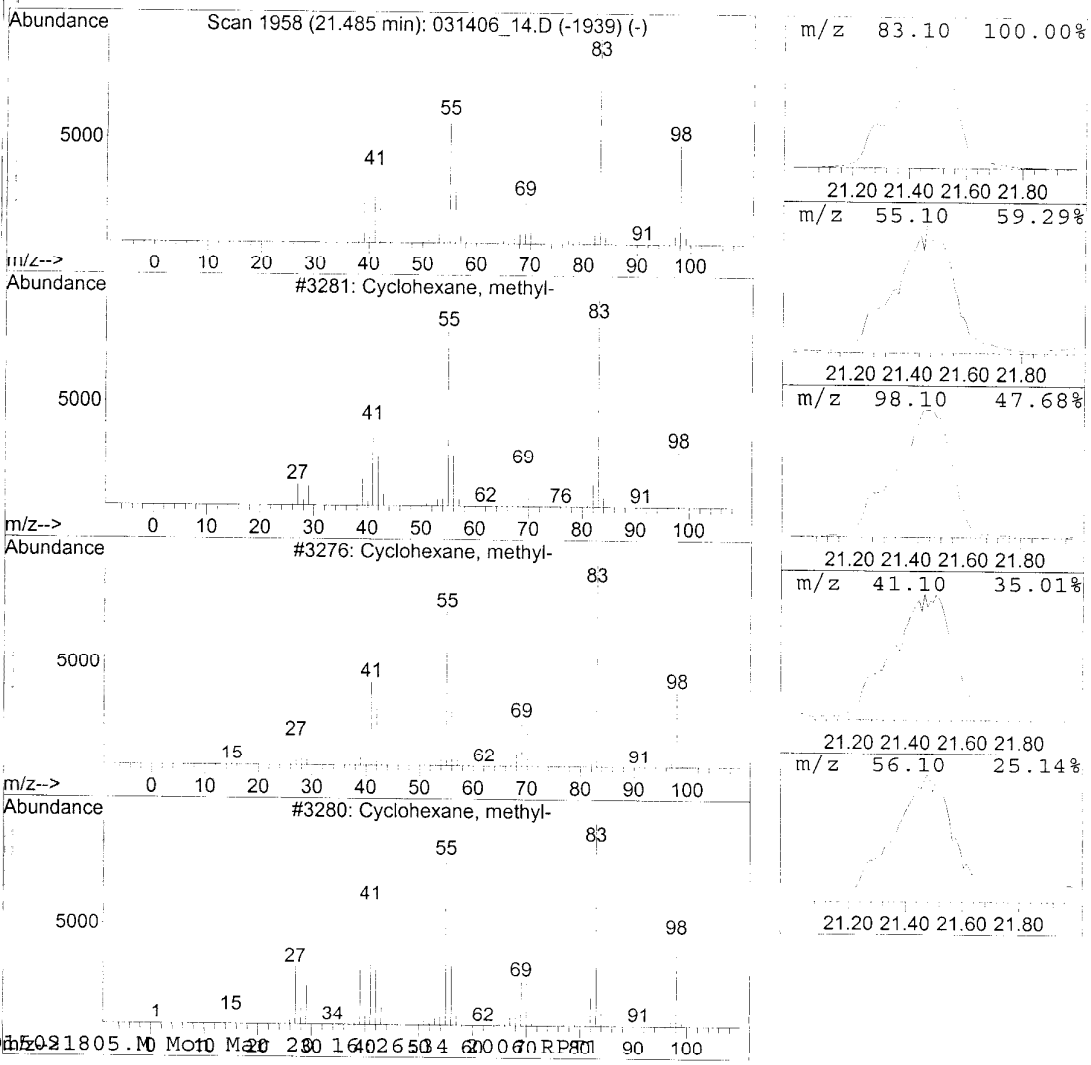
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 4 Cyclohexane, methyl- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
21.49	52.58 ppbV	14016700	1,4-difluorobenzene	18.26

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	87
5	1H-Pyrazole, 4,5-dihydro-4,5-dim...	98	C5H10N2	028019-94-5	64



G(+)

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

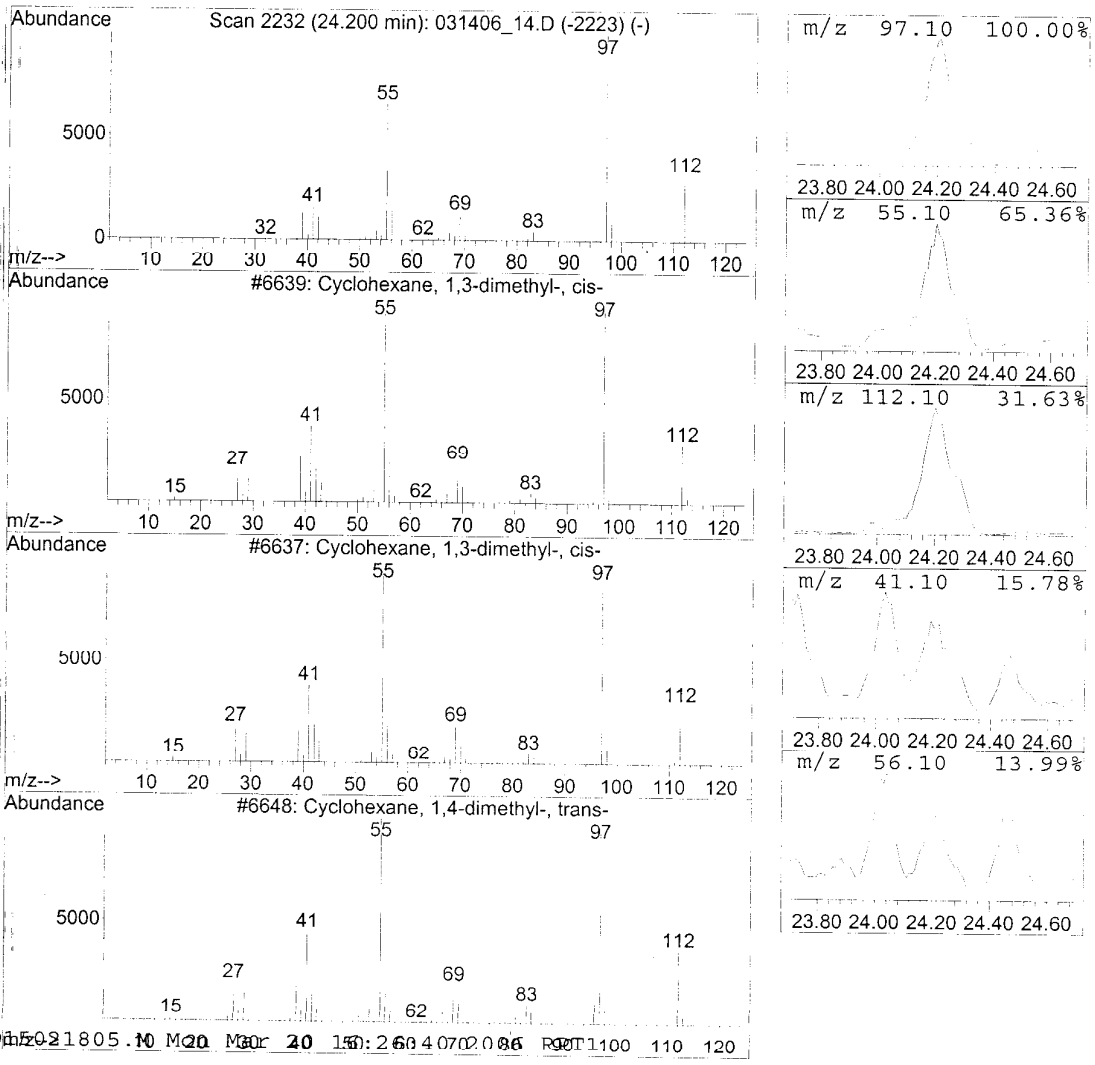
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 6 Cyclohexane, 1,3-dimethyl-,... Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.20	17.52 ppbV	19755900	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	91
2	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	91
3	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	90
4	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	86
5	Cyclohexane, 1,4-dimethyl-	112	C8H16	000589-90-2	83

unkn.
C8H16
#2 (AP)



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

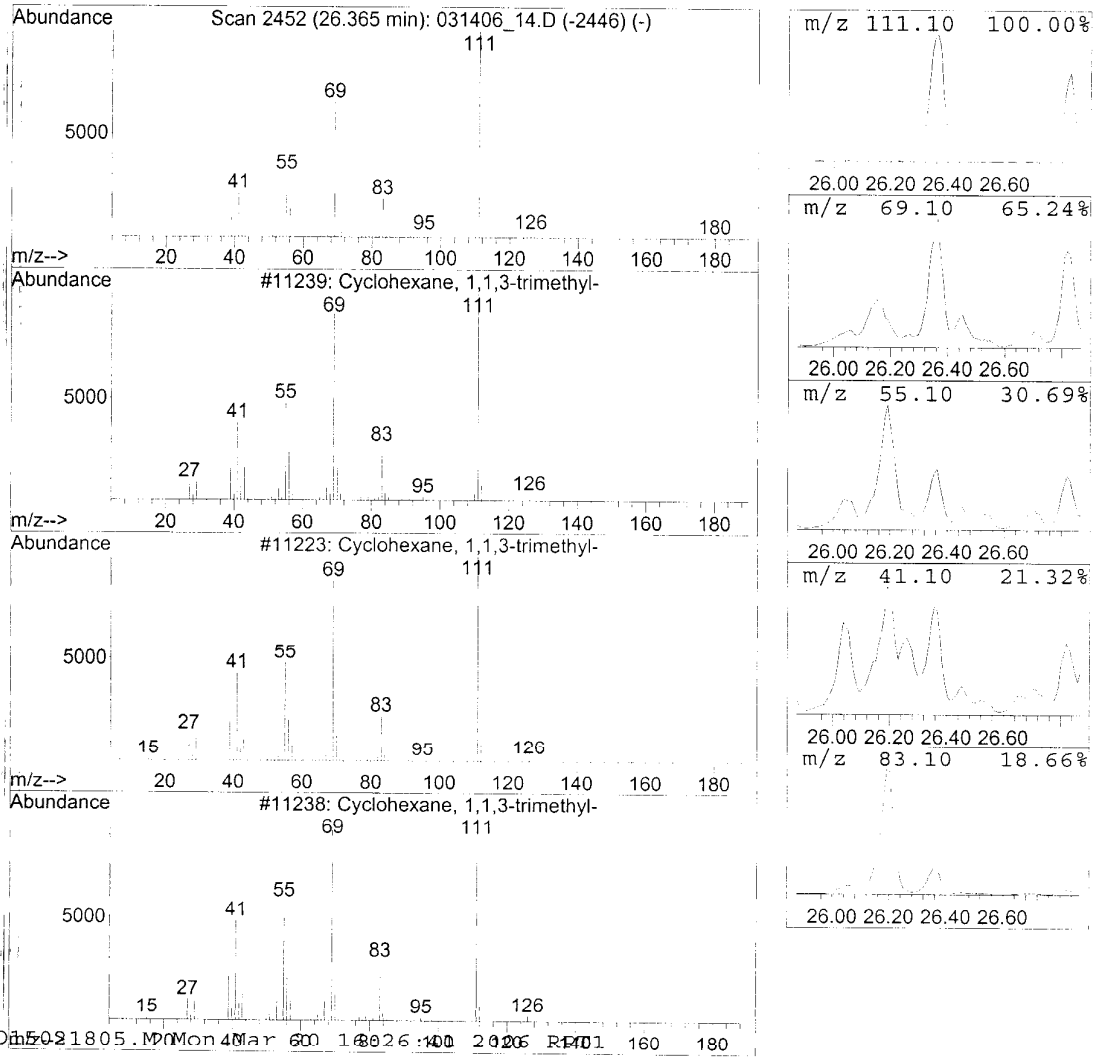
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 8 Cyclohexane, 1,1,3-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.37	16.09 ppbV	18141900	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	92
2	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	91
3	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	91
4	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	91
5	Cyclohexane, 1,3,5-trimethyl-	126	C9H18	001839-63-0	72



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

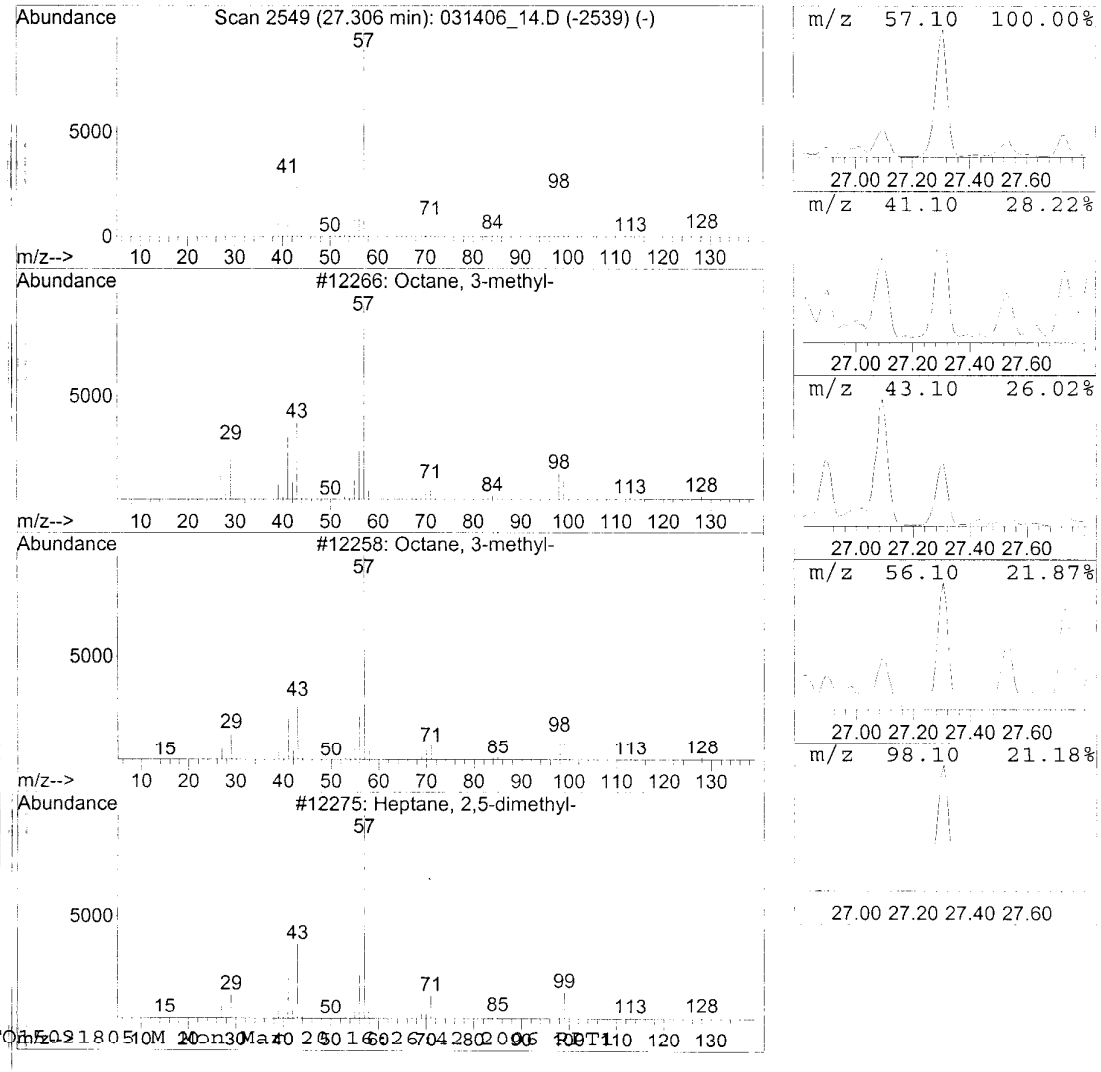
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 10 Octane, 3-methyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.31	19.95 ppbV	22505900	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 3-methyl-	128	C9H20	002216-33-3	90
2	Octane, 3-methyl-	128	C9H20	002216-33-3	87
3	Heptane, 2,5-dimethyl-	128	C9H20	002216-30-0	81
4	Octane, 3-methyl-	128	C9H20	002216-33-3	74
5	Heptane, 2,5-dimethyl-	128	C9H20	002216-30-0	70



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

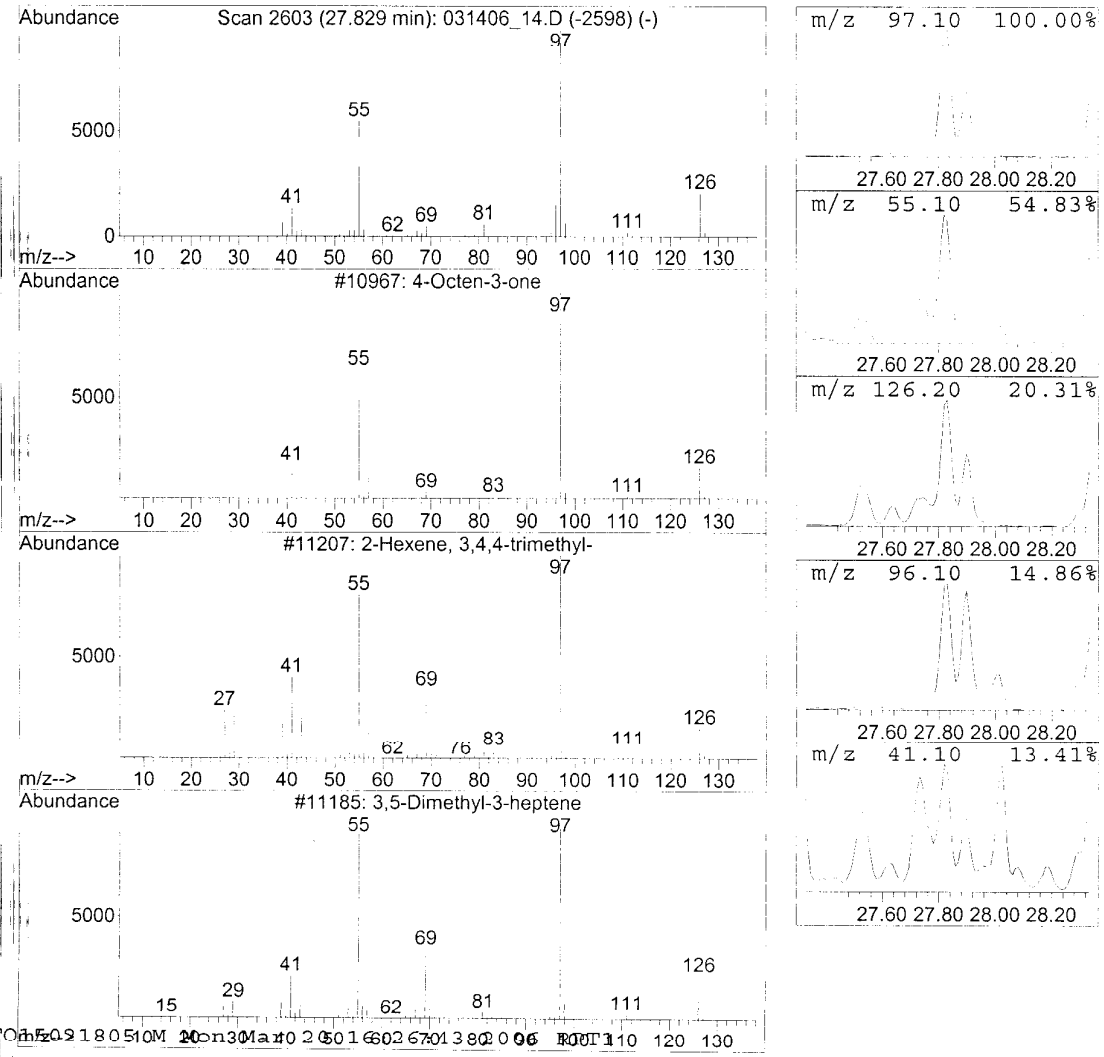
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 12 4-Octen-3-one Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.83	18.25 ppbV	20580500	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-Octen-3-one	126	C8H14O	014129-48-7	72
2	2-Hexene, 3,4,4-trimethyl-	126	C9H18	053941-19-8	72
3	3,5-Dimethyl-3-heptene	126	C9H18	059643-68-4	72
4	Thiophene, 2-propyl-	126	C7H10S	001551-27-5	64
5	Furan, 2,3-dihydro-4-(1-methylpr...	126	C8H14O	034379-54-9	64

Unknown



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 15 1-Ethyl-3-methylcyclohexane... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.35	14.92 ppbV	16825800	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Ethyl-3-methylcyclohexane (c,t)	126	C9H18	003728-55-0	64
2	cis-1-Ethyl-3-methyl-cyclohexane	126	C9H18	019489-10-2	64
3	1H-Pyrazole, 4,5-dihydro-3-methy...	126	C7H14N2	026964-49-8	59
4	Cyclohexane, 1-ethyl-2-methyl-	126	C9H18	003728-54-9	59
5	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	59

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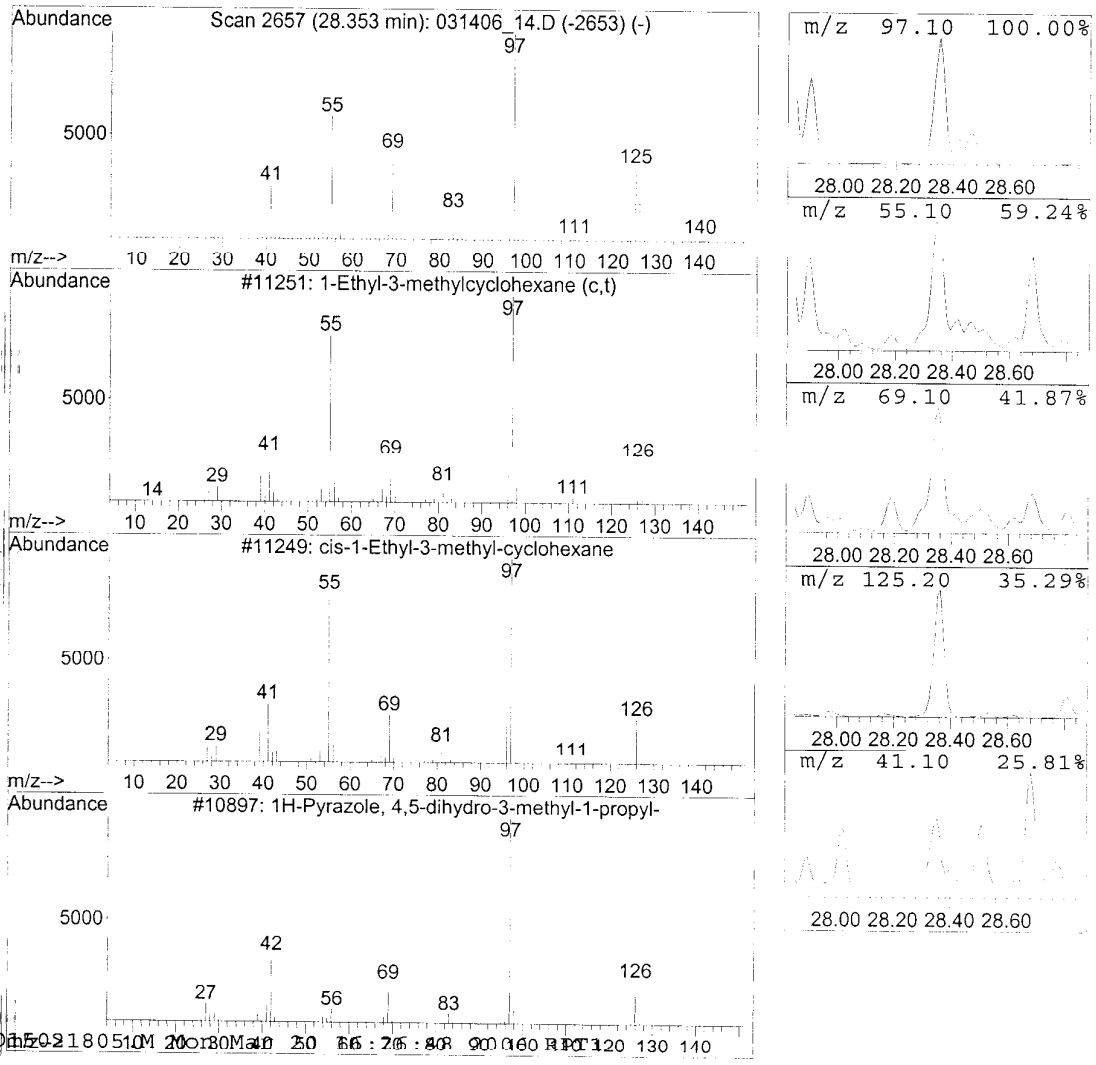

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 16 1-Cyclobutanone,2 (2 methyl... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.69	25.70 ppbV	28981200	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Cyclobutanone,2-(2-methyl-1-pr...	124	C8H12O	091531-45-2	53
2	1,3-Pentadiene, 2-methyl-, (E)-	82	C6H10	000926-54-5	43
3	2-Cyclohexen-1-one, 4,5-dimethyl-	124	C8H12O	005715-25-3	43
4	5-Bromo-1-hexene	162	C6H11Br	004558-27-4	38
5	Cyclopentene, 1-methyl-	82	C6H10	000693-89-0	38

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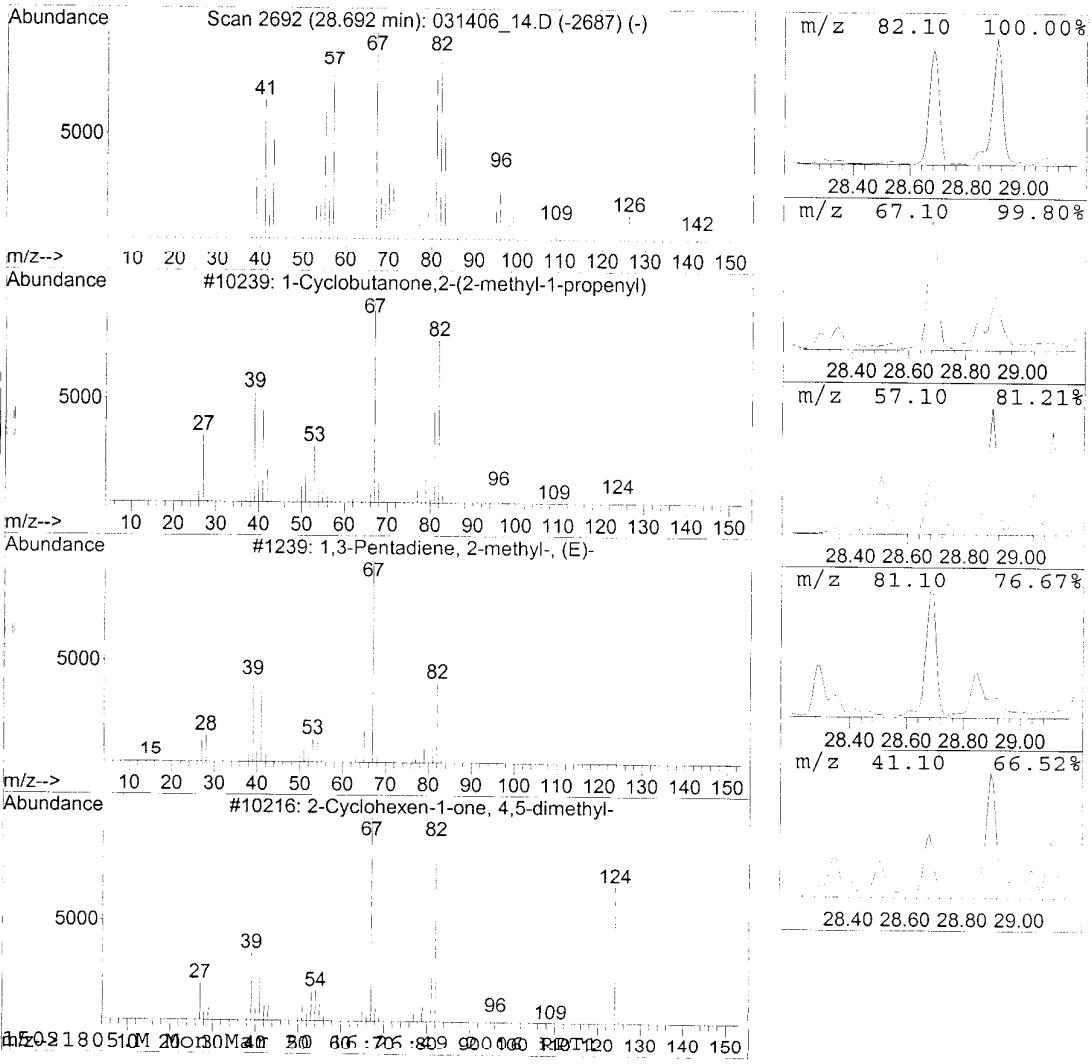

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Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

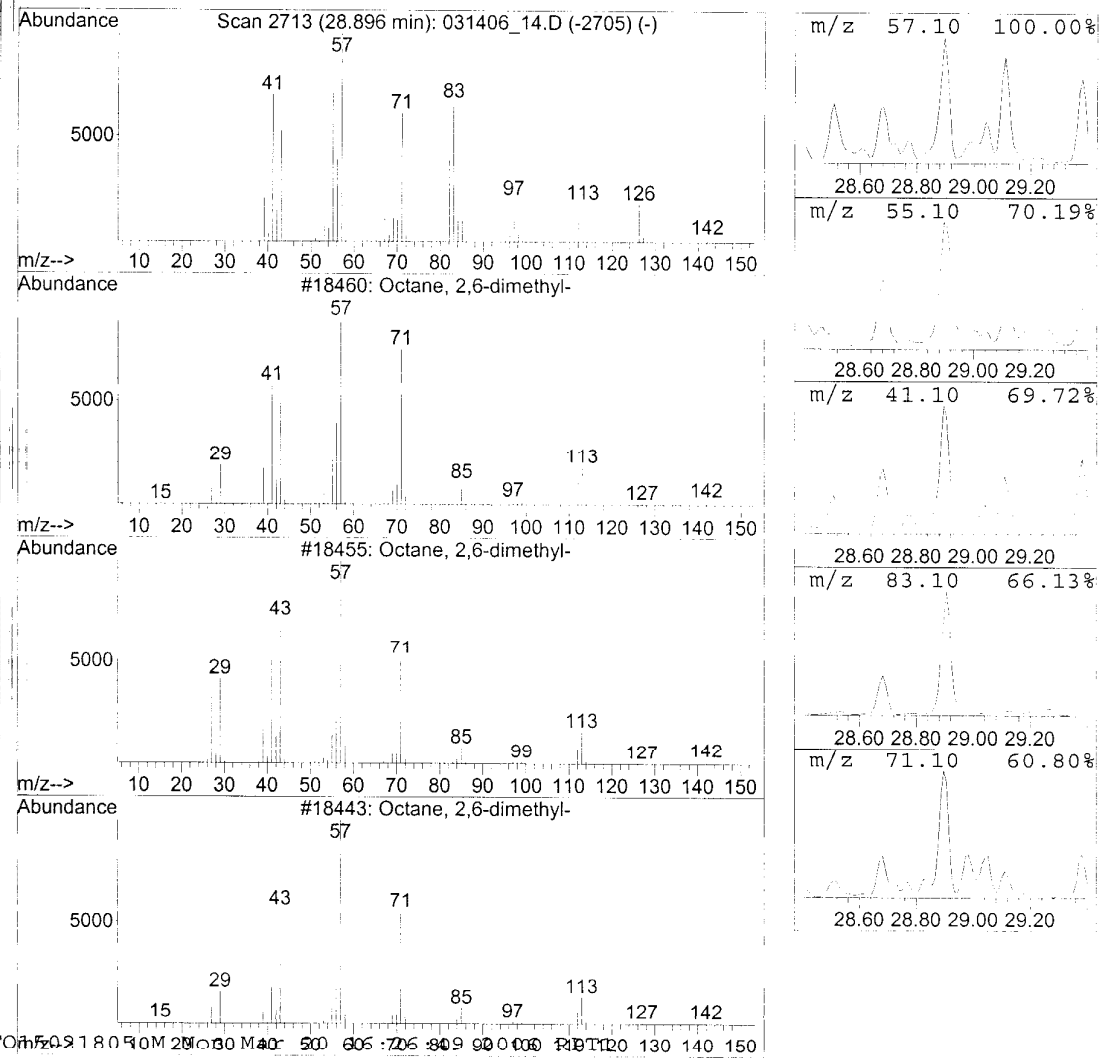
Add w/ peak @ 28.91 min

****

Peak Number 17 Octane, 2,6-dimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.90	25.00 ppbV	28192700	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	86 ✓
2	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	46
3	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	45
4	Cyclohexane, ethyl-	112	C8H16	001678-91-7	41
5	Nonane, 3-methyl-	142	C10H22	005911-04-6	41



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Library Search Compound Report

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Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 18 Octane, 2,6-dimethyl- Concentration Rank 5

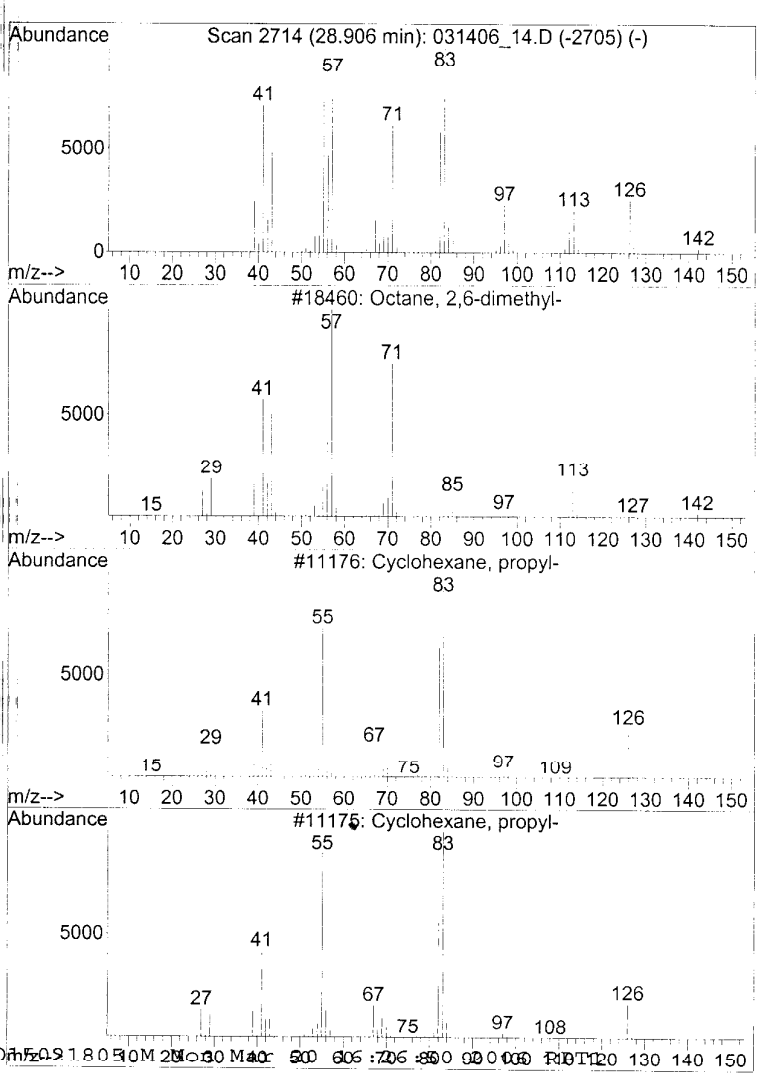
R.T.	EstConc	Area	Relative to ISTD	R.T.
28.91	20.96 ppbV	23638800	chlorobenzene-d5	26.10

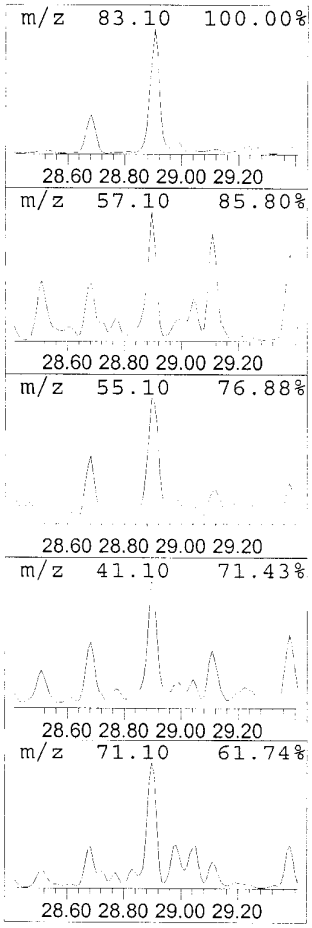
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	80
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	55
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	49
4	Cyclohexane, propyl-	126	C9H18	001678-92-8	49
5	Cyclohexane, propyl-	126	C9H18	001678-92-8	46

Add w/ peak @ 28.90 min

(+) ←

AP





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Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

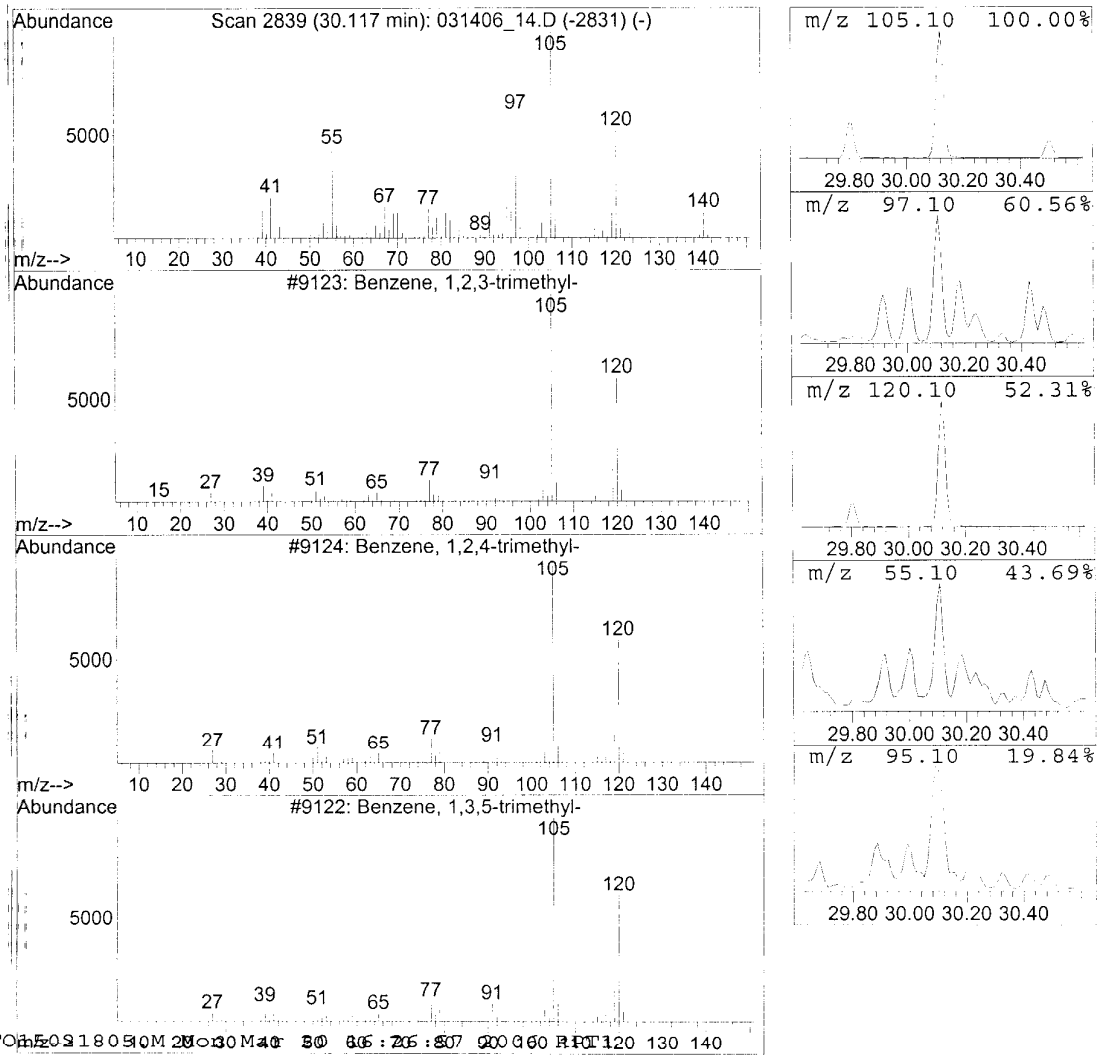
Peak Number 25 Benzene, 1,2,3-trimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
30.12	15.58 ppbV	17571500	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	89
2	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	86
3	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	86
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	86
5	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	83

not this isomer hits in samples.

AP



Library Search Compound Report

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Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 22 1R,2c,3t,4t-Tetramethyl-cyc... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.64	14.52 ppbV	16379100	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R,2c,3t,4t-Tetramethyl-cyclohexane	140	C10H20	1000144-07-3	49
2	2-Octene, 2,6-dimethyl-	140	C10H20	004057-42-5	43
3	Diisoamylene	140	C10H20	054063-09-1	42
4	Cyclohexane, 1,2,4-trimethyl-	126	C9H18	002234-75-5	38
5	4-Octene, 2,6-dimethyl-, [S-(E)]-	140	C10H20	062960-76-3	35

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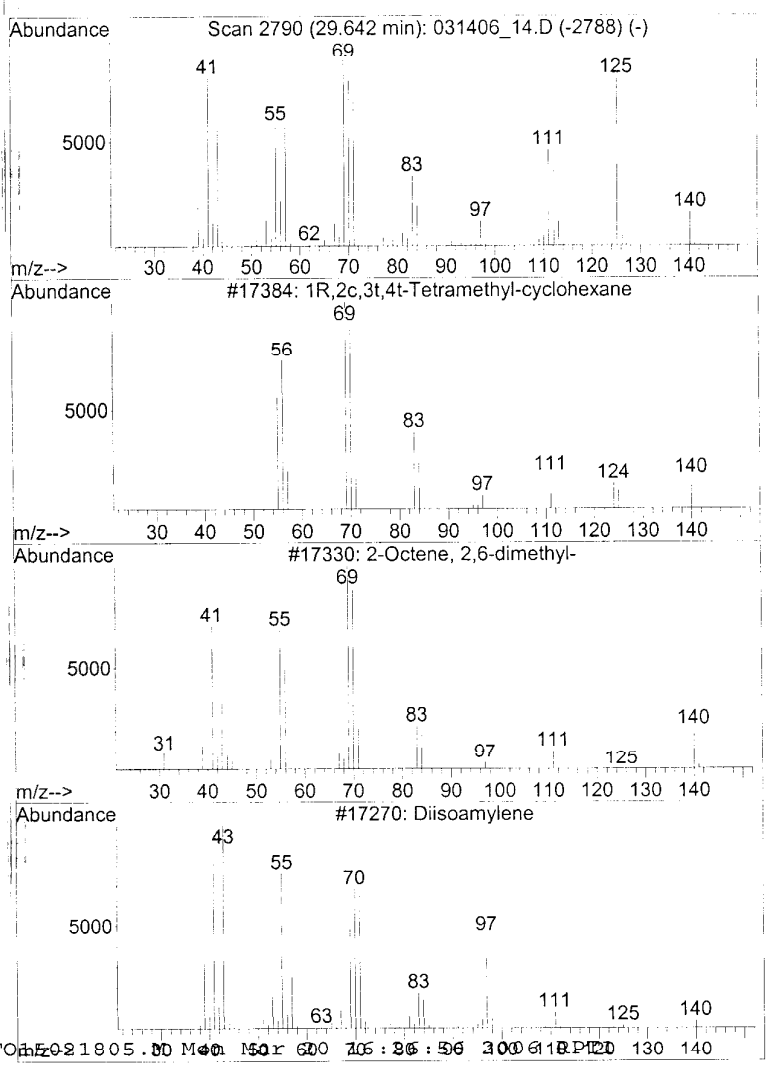

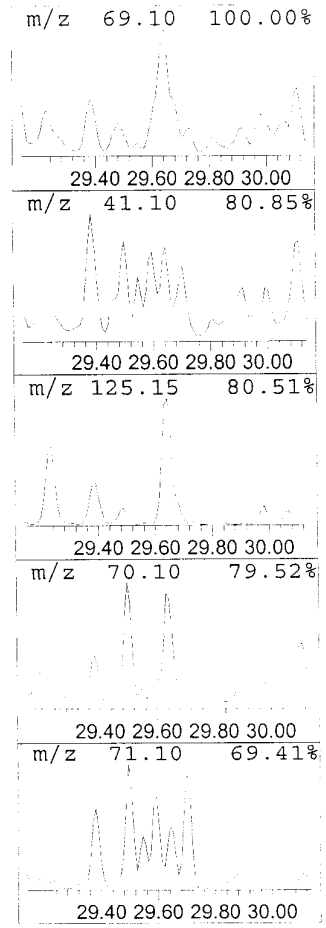

Library Search Compound Report

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Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

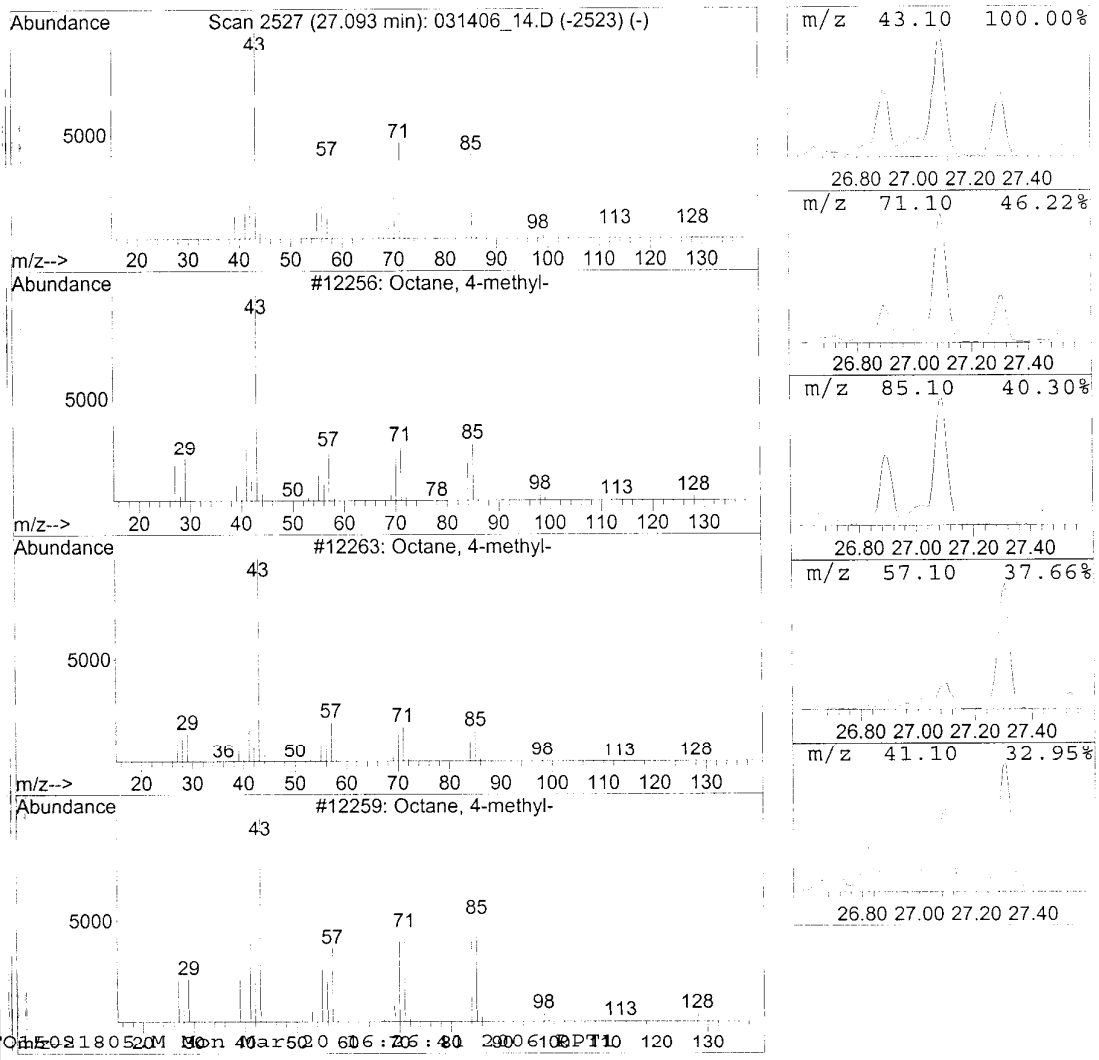
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 9 Octane, 4-methyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.09	13.34 ppbV	15046500	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 4-methyl-	128	C9H20	002216-34-4	64
2	Octane, 4-methyl-	128	C9H20	002216-34-4	64
3	Octane, 4-methyl-	128	C9H20	002216-34-4	62
4	Hexane, 2,3,4-trimethyl-	128	C9H20	000921-47-1	59
5	Hexane, 3,3-dimethyl-	114	C8H18	000563-16-6	59



Library Search Compound Report

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Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

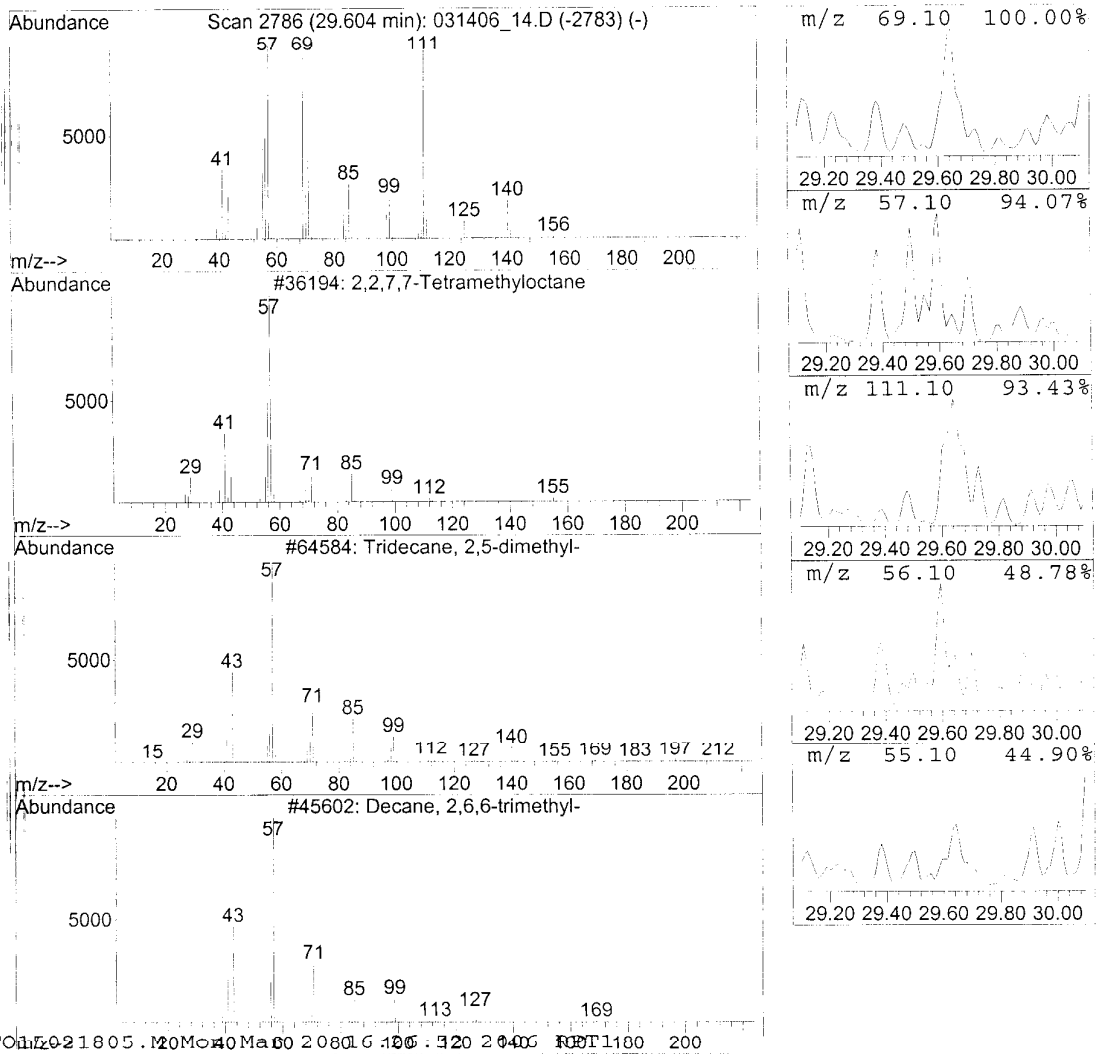
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 21 2,2,7,7-Tetramethyloctane Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.60	12.88 ppbV	14524800	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2,2,7,7-Tetramethyloctane	170	C12H26	001071-31-4	50
2	Tridecane, 2,5-dimethyl-	212	C15H32	056292-66-1	42
3	Decane, 2,6,6-trimethyl-	184	C13H28	062108-24-1	42
4	Tetradecane, 2,5-dimethyl-	226	C16H34	056292-69-4	40
5	Decane, 2,5,6-trimethyl-	184	C13H28	062108-23-0	38



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Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

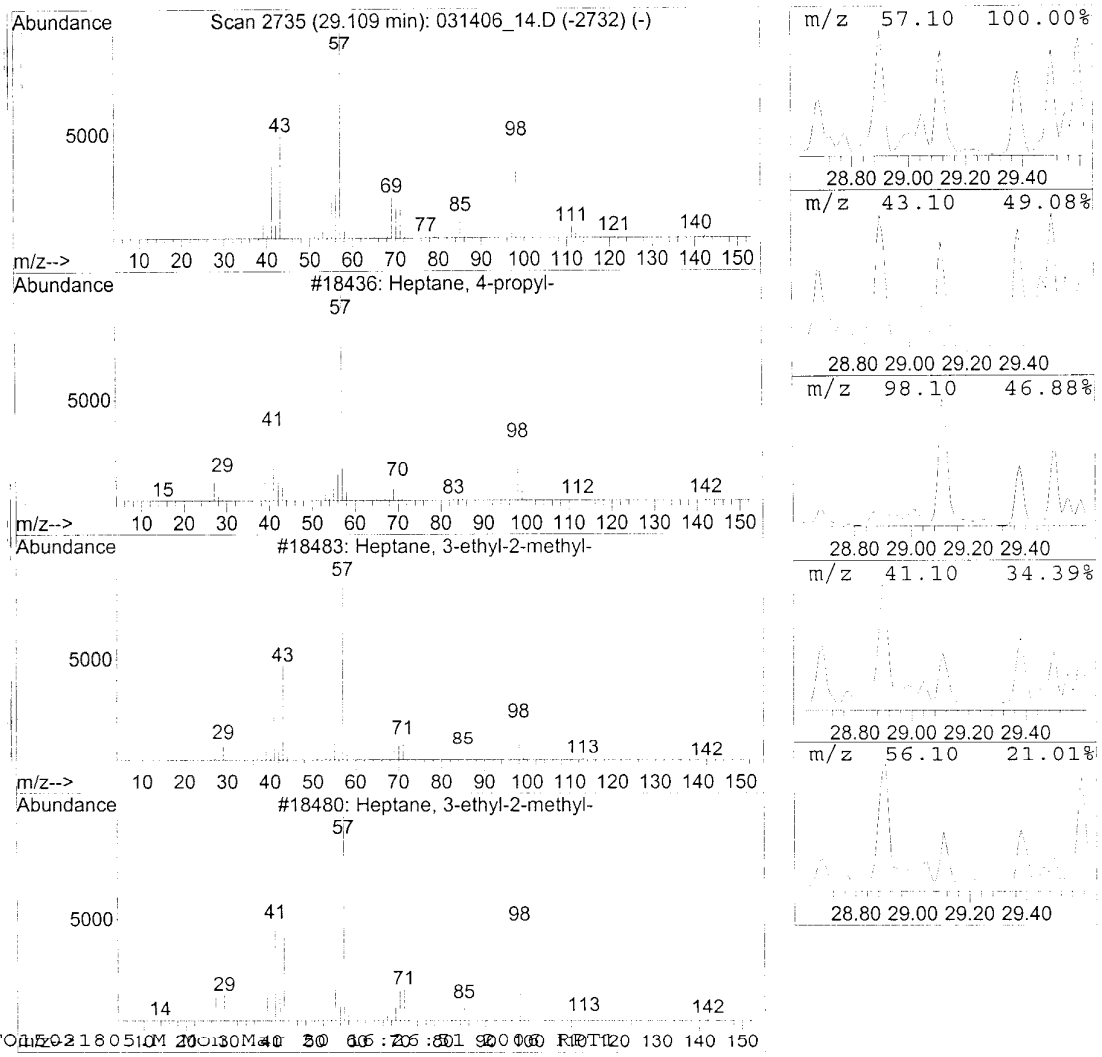
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 19 Heptane, 4-propyl- Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.11	12.35 ppbV	13932800	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 4-propyl-	142	C10H22	003178-29-8	59
2	Heptane, 3-ethyl-2-methyl-	142	C10H22	014676-29-0	59
3	Heptane, 3-ethyl-2-methyl-	142	C10H22	014676-29-0	58
4	Octane, 2,3-dimethyl-	142	C10H22	007146-60-3	58
5	Undecane, 6-methyl-	170	C12H26	017302-33-9	53



Library Search Compound Report

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Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

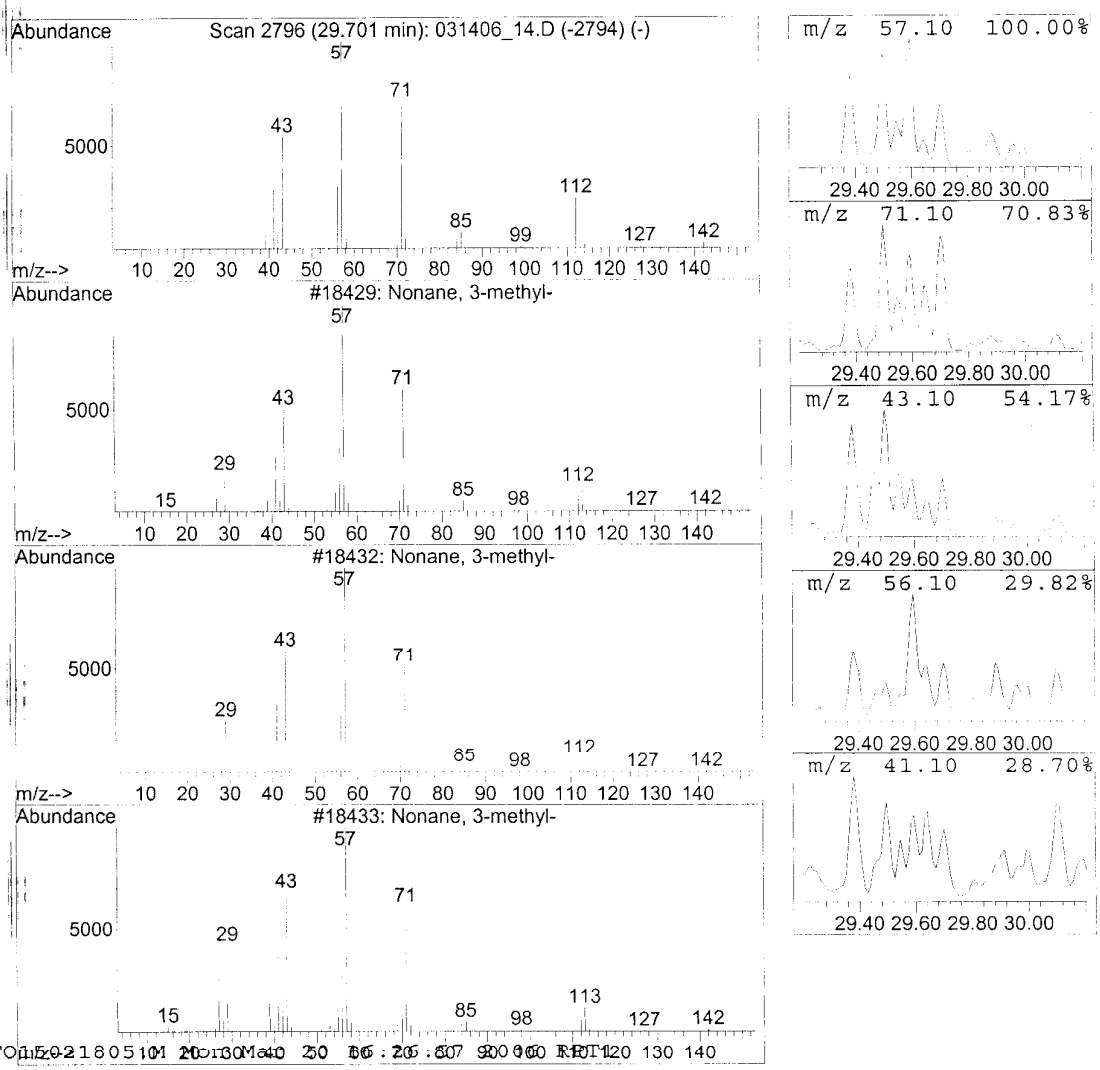
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 23 Nonane, 3-methyl- Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.70	11.50 ppbV	12965400	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane, 3-methyl-	142	C10H22	005911-04-6	91
2	Nonane, 3-methyl-	142	C10H22	005911-04-6	91
3	Nonane, 3-methyl-	142	C10H22	005911-04-6	83
4	Octane, 3,6-dimethyl-	142	C10H22	015869-94-0	74
5	Octyl thioglycolate	204	C10H20O2S	007664-80-4	72



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Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

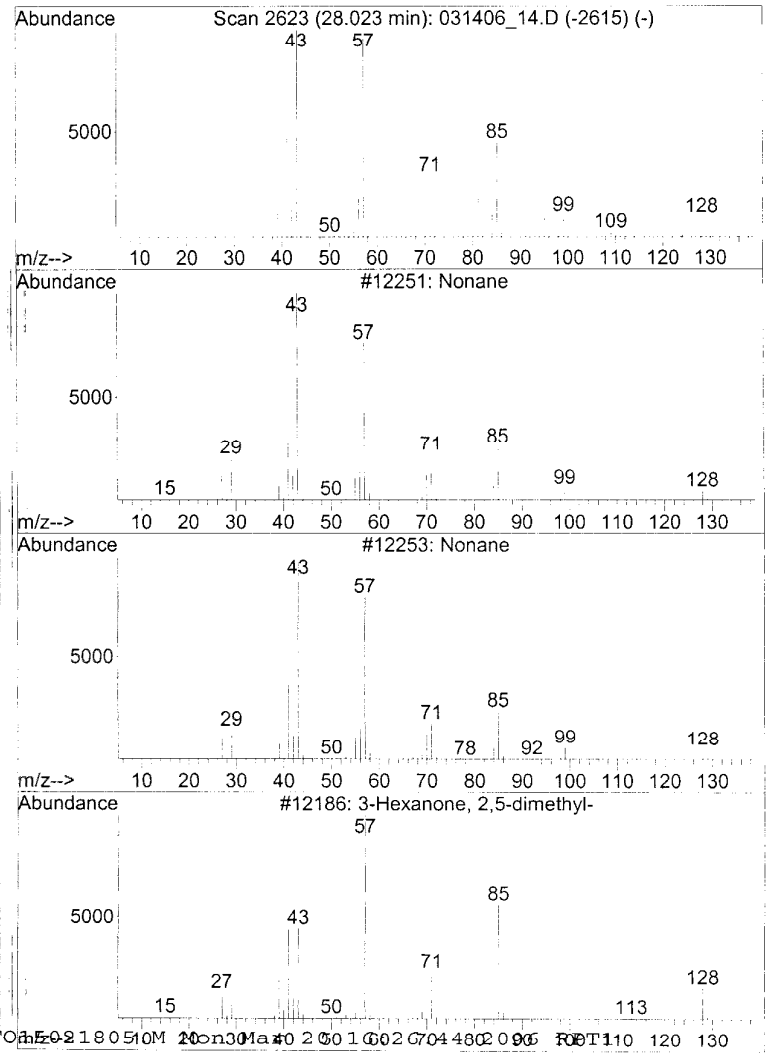
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

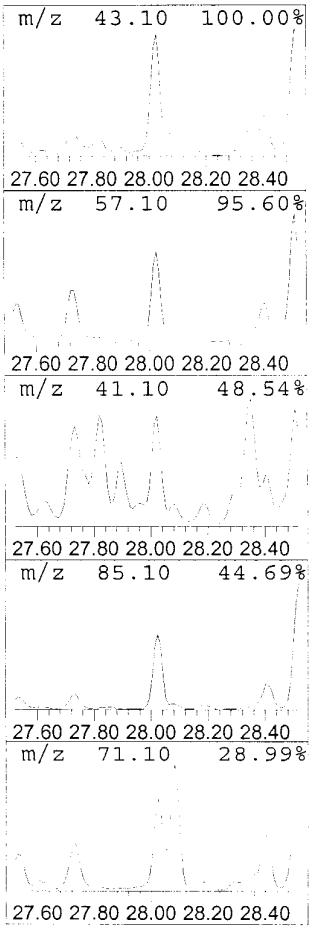
****

Peak Number 14 Nonane Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.02	9.06 ppbV	10221700	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane	128	C9H20	000111-84-2	81
2	Nonane	128	C9H20	000111-84-2	64
3	3-Hexanone, 2,5-dimethyl-	128	C8H16O	001888-57-9	53
4	Undecane, 2,4-dimethyl-	184	C13H28	017312-80-0	50
5	Nonane	128	C9H20	000111-84-2	49





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Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

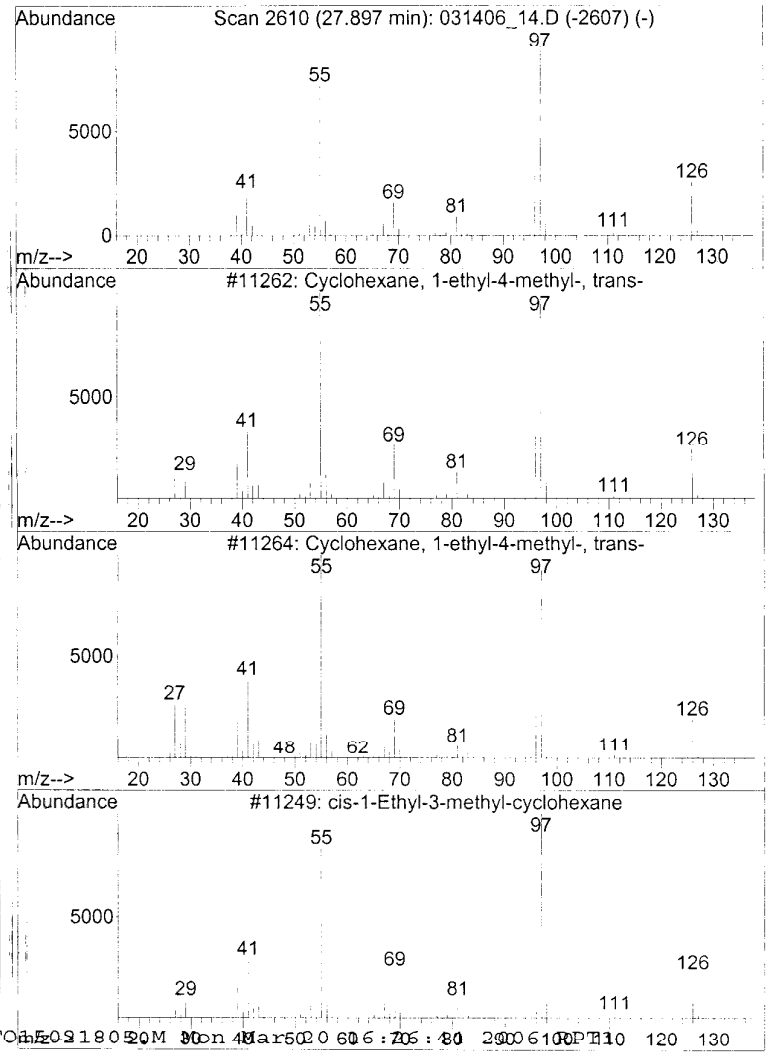
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

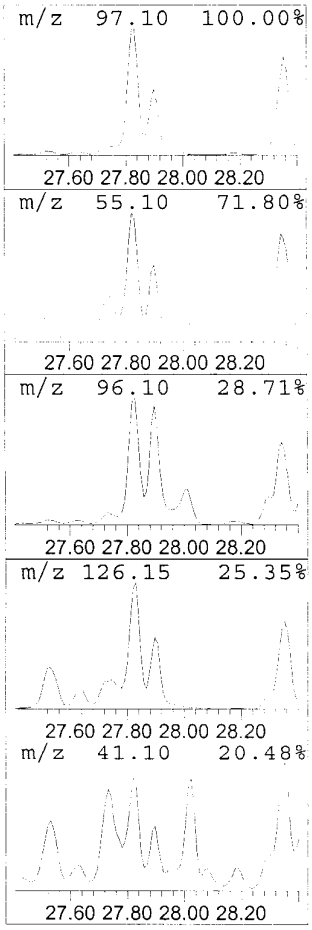
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 13 Cyclohexane, 1-ethyl-4-meth... Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.90	9.04 ppbV	10199900	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	91
2	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	91
3	cis-1-Ethyl-3-methyl-cyclohexane	126	C9H18	019489-10-2	86
4	1-Ethyl-3-methylcyclohexane (c,t)	126	C9H18	003728-55-0	80
5	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	78





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Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

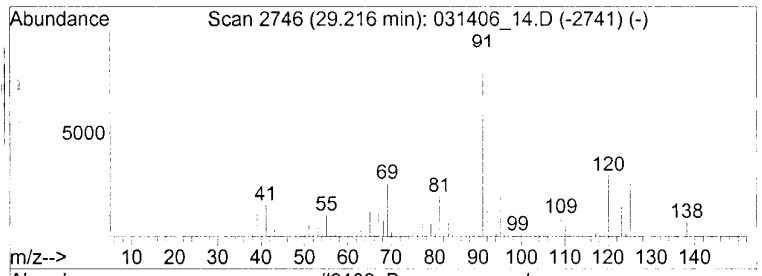
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

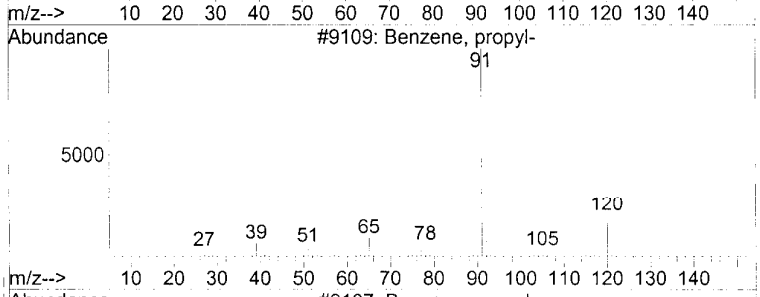
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

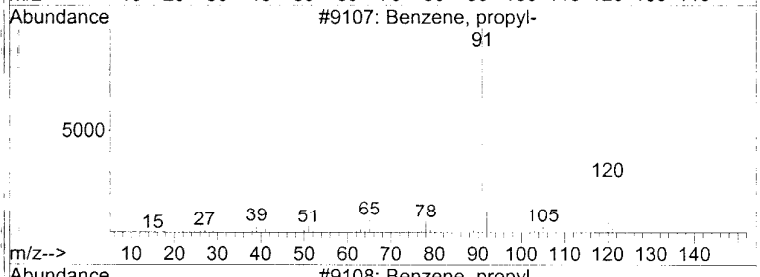
****
Peak Number 20 Benzene, propyl- Concentration Rank 25

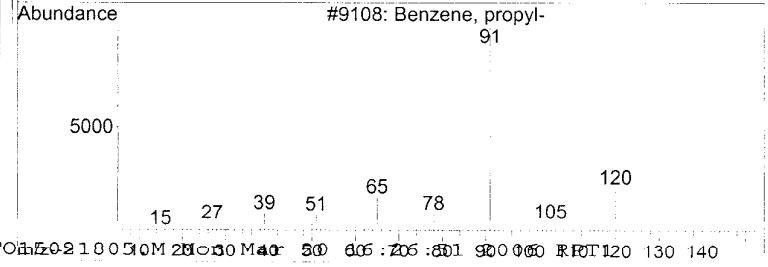
R.T.	EstConc	Area	Relative to ISTD	R.T.
29.22	8.09 ppbV	9124500	chlorobenzene-d5	26.10

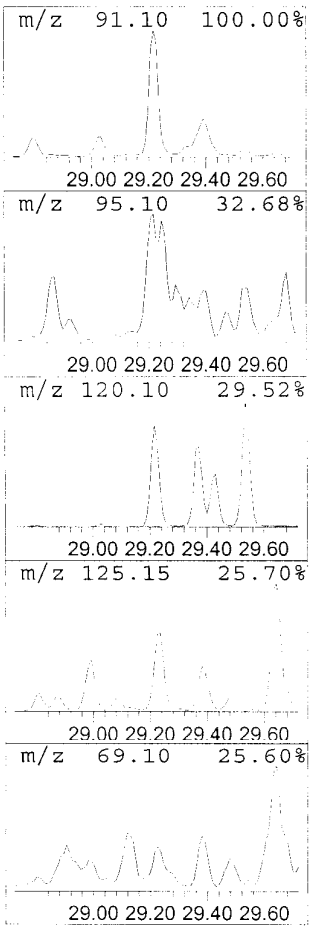
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	42
2	Benzene, propyl-	120	C9H12	000103-65-1	38
3	Benzene, propyl-	120	C9H12	000103-65-1	38
4	N-Benzyl-2-phenethylamine	211	C15H17N	003647-71-0	27
5	1-Benzylamino-2-benzyloxyethane	241	C16H19NO	038336-06-0	27











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Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

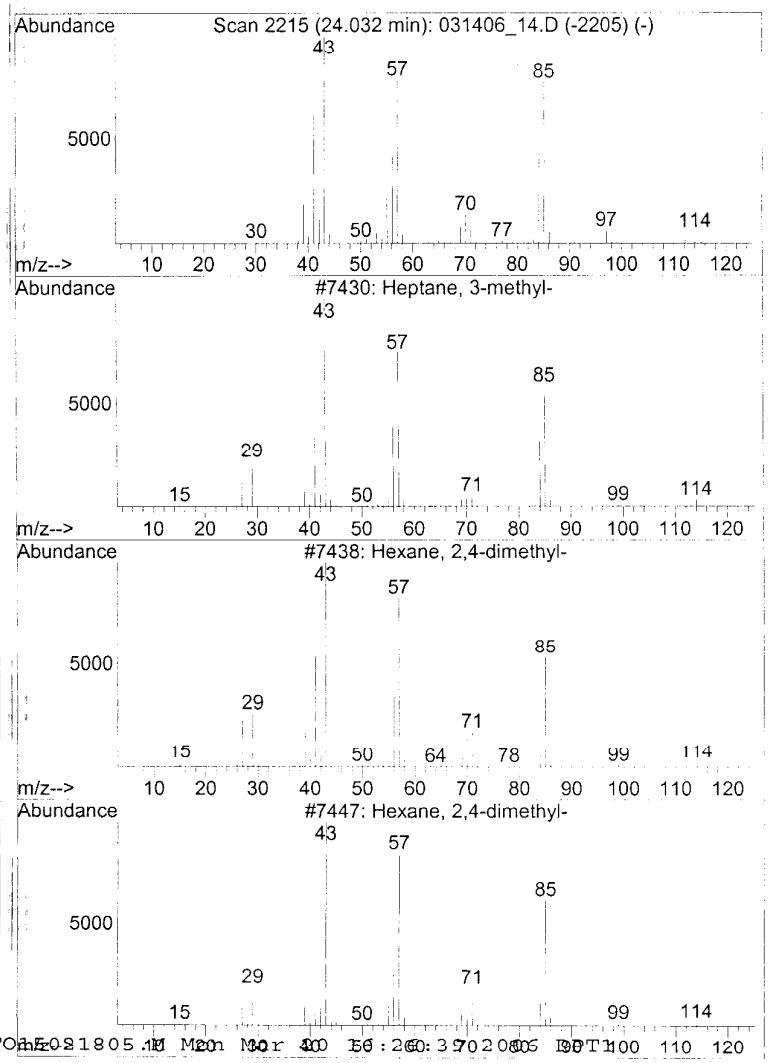
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

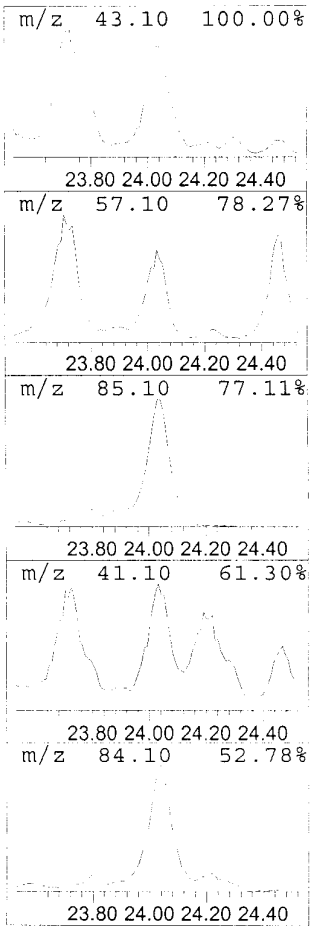
****

Peak Number 5 Heptane, 3-methyl- Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.03	8.99 ppbV	10134100	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methyl-	114	C8H18	000589-81-1	91
2	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	81
3	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	74
4	Pentane, 2,3,3,4-tetramethyl-	128	C9H20	016747-38-9	59
5	Hexane, 2-methyl-	100	C7H16	000591-76-4	53





Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_14.D
Acq On : 16 Mar 2006 12:21 pm
Operator : AF
Sample : 06-061-5 20X
Misc : 25ML C141
ALS Vial : 8 Sample Multiplier: 1

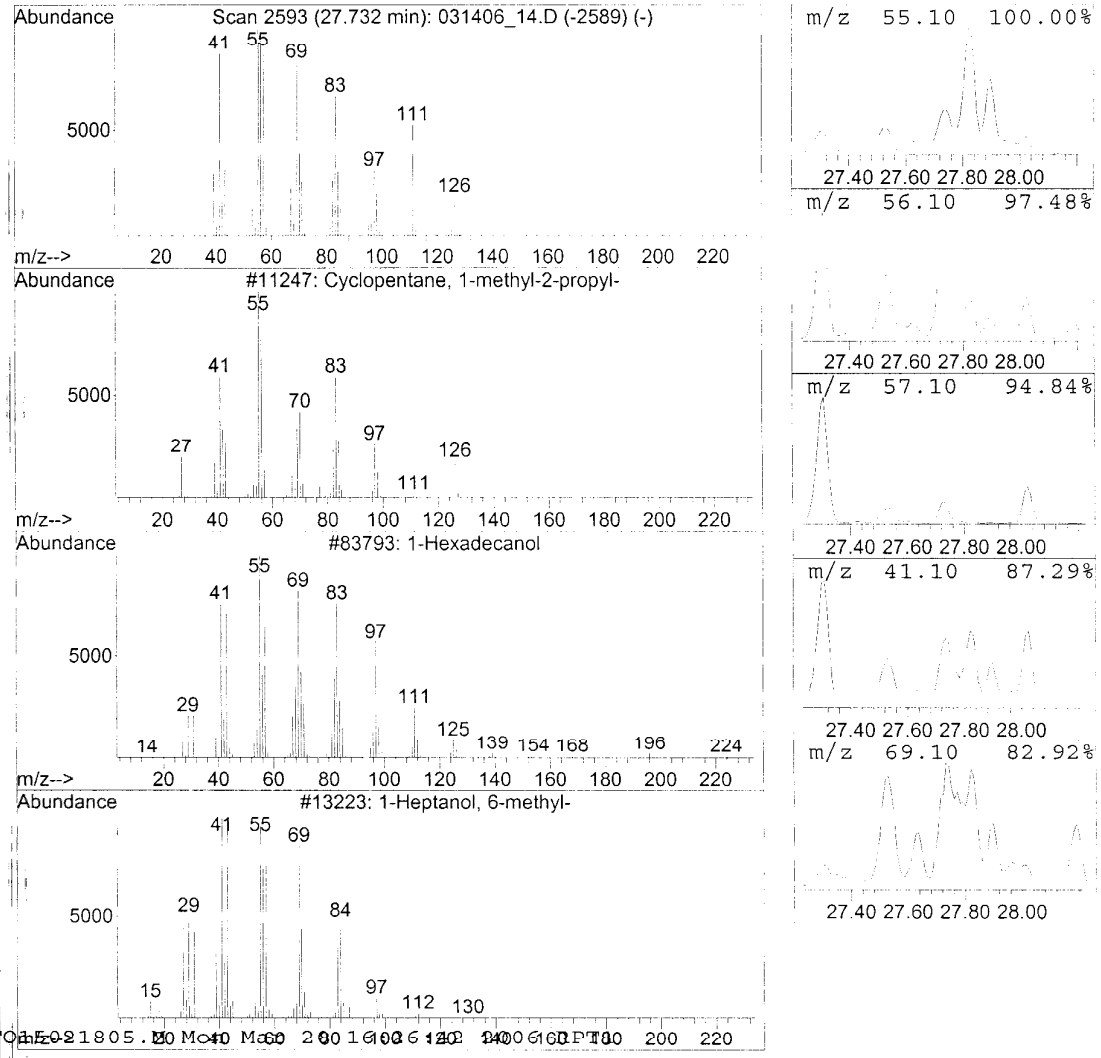
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 11 Cyclopentane, 1-methyl-2-pr... Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.73	8.79 ppbV	9911310	chlorobenzene-d5	26.10

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1-methyl-2-propyl-	126	C9H18	003728-57-2	60
2	1-Hexadecanol	242	C16H34O	036653-82-4	58
3	1-Heptanol, 6-methyl-	130	C8H18O	001653-40-3	52
4	Cyclopentane, 1,1-dimethyl-	98	C7H14	001638-26-2	50
5	Cyclohexane, 1,2,4-trimethyl-	126	C9H18	002234-75-5	50



Tentatively Identified Compound (LSC) summary

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc
Cyclohexane, methyl-	22.12	5.0	ppbV	3353700	2	19.30	6677070	10.0
Cyclohexane, methyl-	22.14	10.2	ppbV	6818560	2	19.30	6677070	10.0
Heptane, 2-methyl-	24.03	7.0	ppbV	10336500	3	26.25	14687600	10.0
Cyclohexane, 1,3-...	24.50	8.2	ppbV	12043100	3	26.25	14687600	10.0
Cyclohexane, 1,1,...	26.49	7.8	ppbV	11445700	3	26.25	14687600	10.0
Cyclohexane, 1,3,...	26.94	6.4	ppbV	9337730	3	26.25	14687600	10.0
Octane, 2-methyl-	27.15	5.6	ppbV	8161160	3	26.25	14687600	10.0
Octane, 3-methyl-	27.36	9.2	ppbV	13548000	3	26.25	14687600	10.0
1-Ethyl-4-methylc...	27.88	8.3	ppbV	12270200	3	26.25	14687600	10.0
Nonane	28.04	10.6	ppbV	15543800	3	26.25	14687600	10.0
1-Ethyl-4-methylc...	28.38	8.0	ppbV	11732200	3	26.25	14687600	10.0
Benzene, (1-methy...	28.52	7.1	ppbV	10410500	3	26.25	14687600	10.0
Octane, 2,5-dimet...	28.68	4.9	ppbV	7207480	3	26.25	14687600	10.0
1R-.alpha.-Pinene	28.82	4.8	ppbV	7124210	3	26.25	14687600	10.0
Octane, 2,6-dimet...	28.90	11.1	ppbV	16251300	3	26.25	14687600	10.0
Cyclohexane, propyl-	28.92	10.1	ppbV	14806200	3	26.25	14687600	10.0
1R-.alpha.-Pinene	29.05	50.5	ppbV	74192200	3	26.25	14687600	10.0
Heptane, 3-ethyl-...	29.11	6.7	ppbV	9845750	3	26.25	14687600	10.0
Benzene, propyl-	29.23	5.5	ppbV	8049960	3	26.25	14687600	10.0
Nonane, 3-methyl-	29.69	5.1	ppbV	7426660	3	26.25	14687600	10.0
Decane	30.26	8.5	ppbV	12492200	3	26.25	14687600	10.0

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	20.437	1834	1852	1877	VV 9	43619	6677069	7.48%	0.714%
2	21.091	1895	1918	1934	VV 2	206092	18717637	20.95%	2.002%
3	22.151	1993	2025	2033	PV 4	164398	13500829	15.11%	1.444%
4	22.270	2033	2037	2048	VV 4	49136	2441966	2.73%	0.261%
5	22.656	2062	2076	2079	VV 6	52459	3486457	3.90%	0.373%
6	22.716	2079	2082	2093	VV 5	50824	2303426	2.58%	0.246%
7	23.033	2105	2114	2125	VV 4	32166	1867577	2.09%	0.200%
8	23.340	2134	2145	2149	VV 4	35833	1862566	2.09%	0.199%
9	23.439	2149	2155	2157	VV	46976	1462739	1.64%	0.156%
10	23.508	2157	2162	2167	VV	374778	14184327	15.88%	1.517%
11	23.657	2167	2177	2190	VV	1989696	89323880	100.00%	9.552%
12	23.835	2190	2195	2198	VV 2	63633	2405179	2.69%	0.257%
13	23.905	2198	2202	2206	VV 4	50340	2053448	2.30%	0.220%
14	24.034	2206	2215	2219	VV	264603	10336548	11.57%	1.105%
15	24.083	2219	2220	2226	VV 2	113208	3088358	3.46%	0.330%
16	24.182	2226	2230	2236	VV 3	44927	1869011	2.09%	0.200%
17	24.321	2236	2244	2253	VV 4	246674	11000840	12.32%	1.176%
18	24.499	2253	2262	2266	VV	311811	12043087	13.48%	1.288%
19	24.569	2266	2269	2276	VV 2	164986	5194067	5.81%	0.555%
20	24.707	2276	2283	2288	VV	88198	3035087	3.40%	0.325%
21	24.806	2288	2293	2296	VV 2	50575	1703855	1.91%	0.182%
22	24.856	2296	2298	2302	VV 3	45315	1411384	1.58%	0.151%
23	24.985	2302	2311	2315	VV 3	63037	2966371	3.32%	0.317%
24	25.086	2315	2320	2325	VV 4	45707	1554078	1.74%	0.166%
25	25.212	2325	2333	2340	VV	605674	17538880	19.64%	1.876%
26	25.348	2340	2347	2352	VV 2	153582	4870985	5.45%	0.521%
27	25.435	2352	2356	2372	VV	171459	5293941	5.93%	0.566%
28	25.649	2372	2378	2384	VV 3	28885	870271	0.97%	0.093%
29	25.784	2384	2392	2396	PV 2	48267	1285606	1.44%	0.137%
30	25.862	2396	2400	2406	VV 3	55271	1534391	1.72%	0.164%
31	25.978	2406	2412	2418	VV	122705	3174640	3.55%	0.339%
32	26.085	2418	2423	2425	VV 4	15847	459915	0.51%	0.049%
33	26.163	2425	2431	2435	VV	245388	6900876	7.73%	0.738%
34	26.259	2435	2441	2444	VV	465245	14687607	16.44%	1.571%
35	26.337	2444	2449	2460	VV 3	521113	23015475	25.77%	2.461%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

36	26.492	2460	2465	2470	VV	423444	11445719	12.81%	1.224%
37	26.579	2470	2474	2479	VV	112597	3493938	3.91%	0.374%
38	26.657	2479	2482	2487	VV 2	59526	1536727	1.72%	0.164%
39	26.744	2487	2491	2493	VV 2	60396	1479954	1.66%	0.158%
40	26.851	2493	2502	2507	VV	1786717	43644027	48.86%	4.667%
41	26.938	2507	2511	2513	VV	386188	9337731	10.45%	0.999%
42	26.977	2513	2515	2519	VV	279287	6351210	7.11%	0.679%
43	27.084	2519	2526	2532	VV	1830942	59994615	67.17%	6.416%
44	27.151	2532	2533	2540	VV 2	514239	11807275	13.22%	1.263%
45	27.258	2540	2544	2549	VV 2	35077	1177260	1.32%	0.126%
46	27.355	2549	2554	2559	VV	569136	13548006	15.17%	1.449%
47	27.481	2559	2567	2571	VV 5	48416	2031510	2.27%	0.217%
48	27.597	2571	2579	2585	VV 4	255126	9427016	10.55%	1.008%
49	27.723	2585	2592	2596	VV	742619	18157613	20.33%	1.942%
50	27.791	2596	2599	2604	VV 5	294081	11780393	13.19%	1.260%
51	27.879	2604	2608	2612	VV	538757	12270174	13.74%	1.312%
52	27.946	2612	2615	2619	VV	304975	7000601	7.84%	0.749%
53	28.043	2619	2625	2630	VV 2	767610	17876710	20.01%	1.912%
54	28.111	2630	2632	2638	VV	68421	1509457	1.69%	0.161%
55	28.218	2638	2643	2647	PV 2	94000	2351966	2.63%	0.252%
56	28.276	2647	2649	2651	VV	40309	741998	0.83%	0.079%
57	28.392	2651	2661	2670	VV 5	527514	21265060	23.81%	2.274%
58	28.528	2670	2675	2682	VV 2	530412	13907708	15.57%	1.487%
59	28.625	2682	2685	2688	VV 2	81604	1855313	2.08%	0.198%
60	28.712	2688	2694	2698	VV 3	584358	18760346	21.00%	2.006%
61	28.780	2698	2701	2702	VV	111907	2019277	2.26%	0.216%
62	28.819	2702	2705	2709	VV	314600	7124208	7.98%	0.762%
63	28.906	2709	2714	2721	VV 3	975649	34244781	38.34%	3.662%
64	29.052	2721	2729	2733	VV	2997127	74192191	83.06%	7.934%
65	29.110	2733	2735	2741	VV 3	540923	14211234	15.91%	1.520%
66	29.226	2741	2747	2754	VV 4	427430	14668974	16.42%	1.569%
67	29.410	2754	2766	2771	VV 2	1493587	56854873	63.65%	6.080%
68	29.488	2771	2774	2777	VV	625565	12805371	14.34%	1.369%
69	29.536	2777	2779	2782	VV	545594	10296374	11.53%	1.101%
70	29.585	2782	2784	2787	VV	426699	9166316	10.26%	0.980%
71	29.643	2787	2790	2793	VV	542854	11967770	13.40%	1.280%
72	29.692	2793	2795	2803	VV 2	409253	9618774	10.77%	1.029%
73	29.808	2803	2807	2810	PV	211038	4455403	4.99%	0.476%

LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 5 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

74	29.915	2810	2818	2821	VV 5	298174	10567157	11.83%	1.130%
75	30.002	2821	2827	2830	VV 4	325999	9750359	10.92%	1.043%
76	30.108	2830	2838	2842	VV 3	1025664	29800056	33.36%	3.187%
77	30.186	2842	2846	2848	VV 3	189307	5510351	6.17%	0.589%
78	30.264	2848	2854	2858	VV 2	626216	14914653	16.70%	1.595%
79	30.322	2858	2860	2863	VV 2	130462	2205277	2.47%	0.236%
80	30.370	2863	2865	2867	VV	18274	195664	0.22%	0.021%
81	30.428	2867	2871	2873	PBA3	198763	3660572	4.10%	0.391%

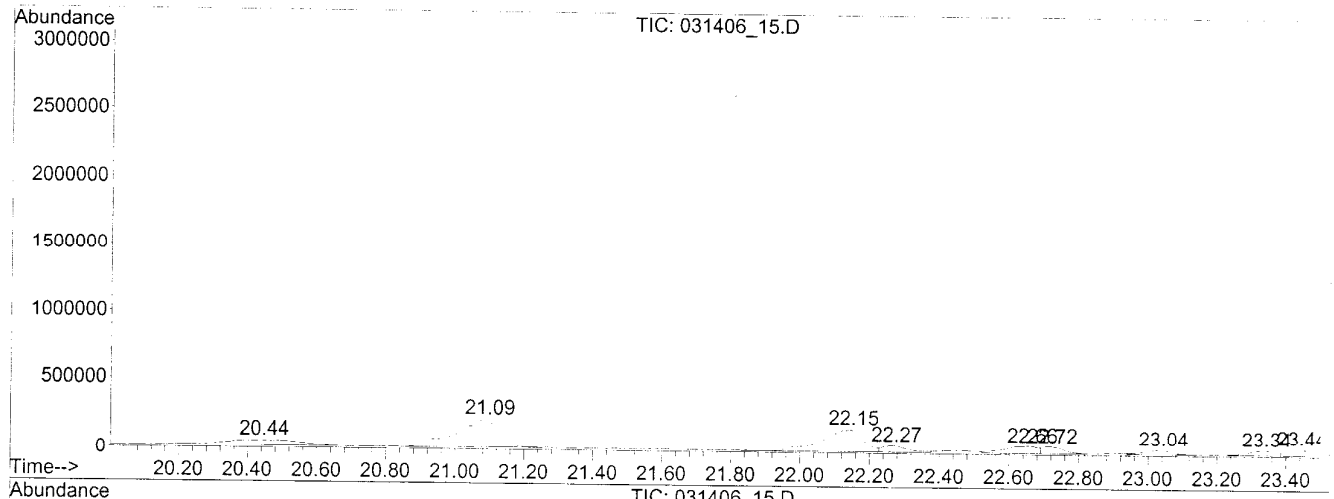
Sum of corrected areas: 935104335

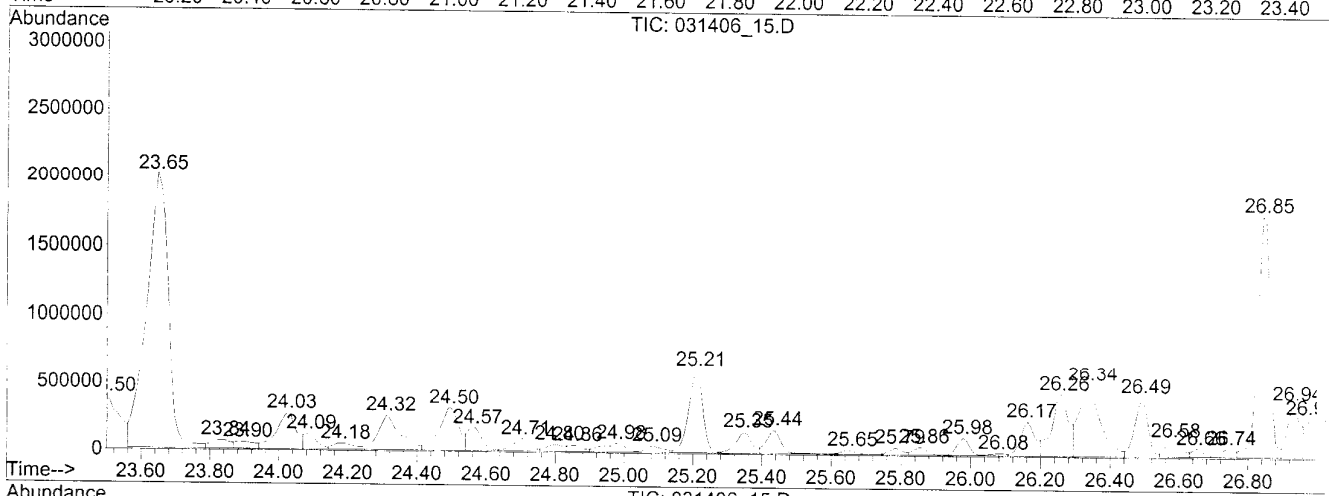
LSC Report - Integrated Chromatogram

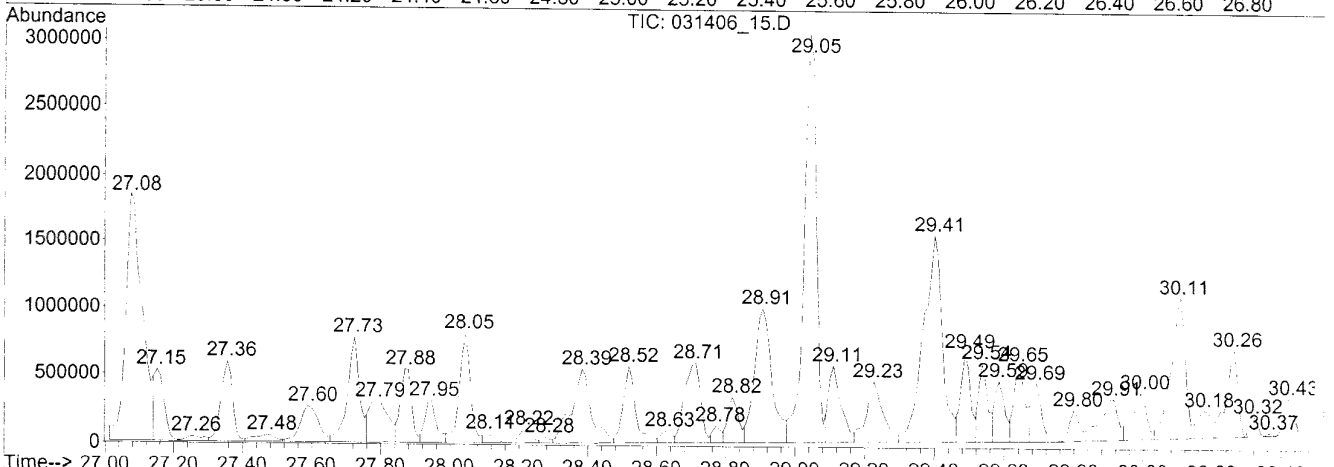
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







3550A QA/QC REPORT

Sample Information

Sample Name: 061-6 B241 031506_15

Inlet Position : 9

Injection Number: 1

Run Information

Inject Time : 10:40:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 25

True Sample Volume : 25

ERRORS: 1

Sample Dryer not ready!

Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

TOP10 TICS reported.

AB

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

Add w/ peak @ 22.14 min.

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

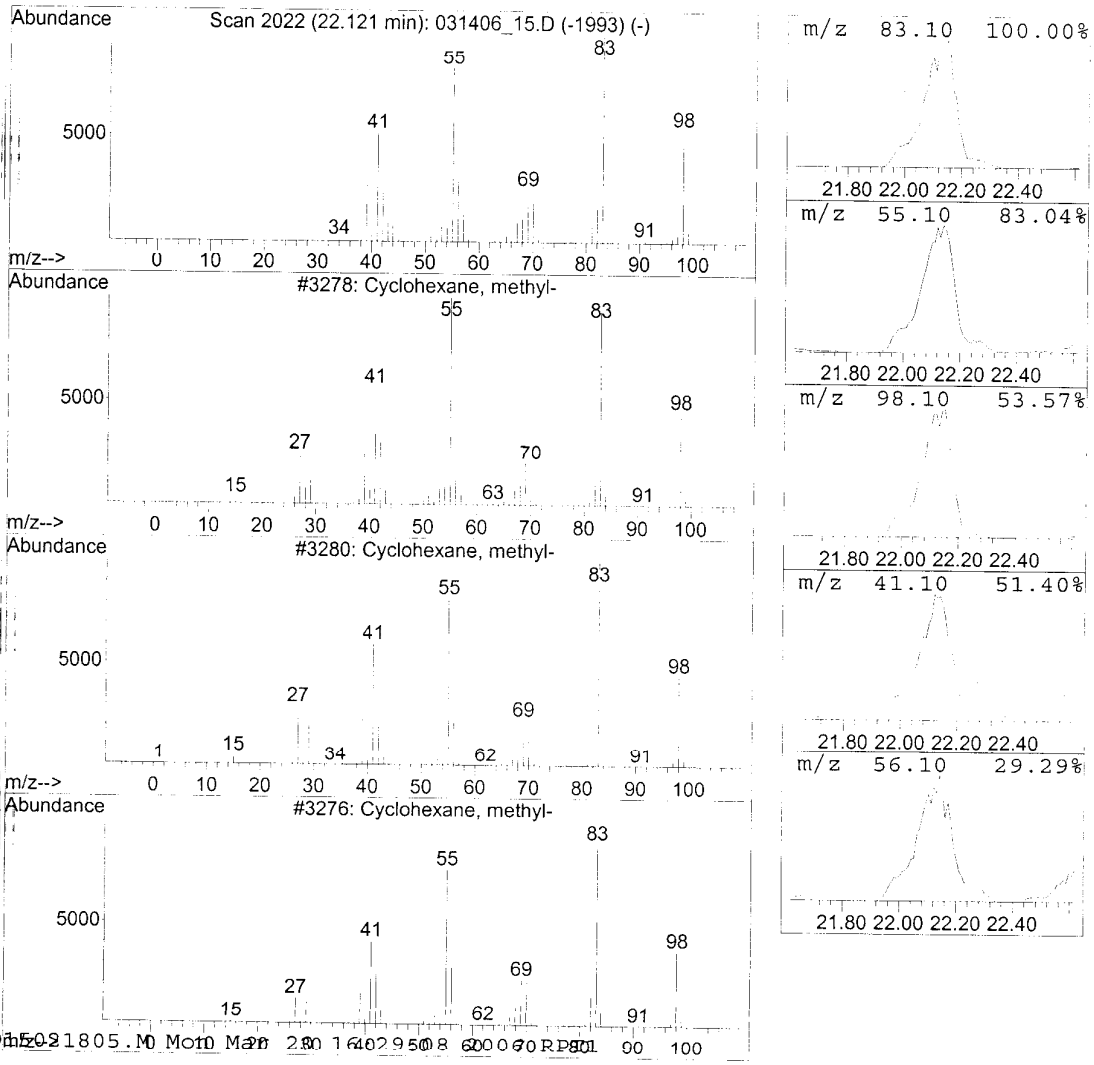
****

Peak Number 1 Cyclohexane, methyl- Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.12	5.02 ppbV	3353700	1,4-difluorobenzene	19.30

(+) →

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	93
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	90
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	87
4	2-Pentene, 3,4-dimethyl-, (E)-	98	C7H14	004914-92-5	59
5	3-Penten-2-one, 4-methyl-	98	C6H10O	000141-79-7	58



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

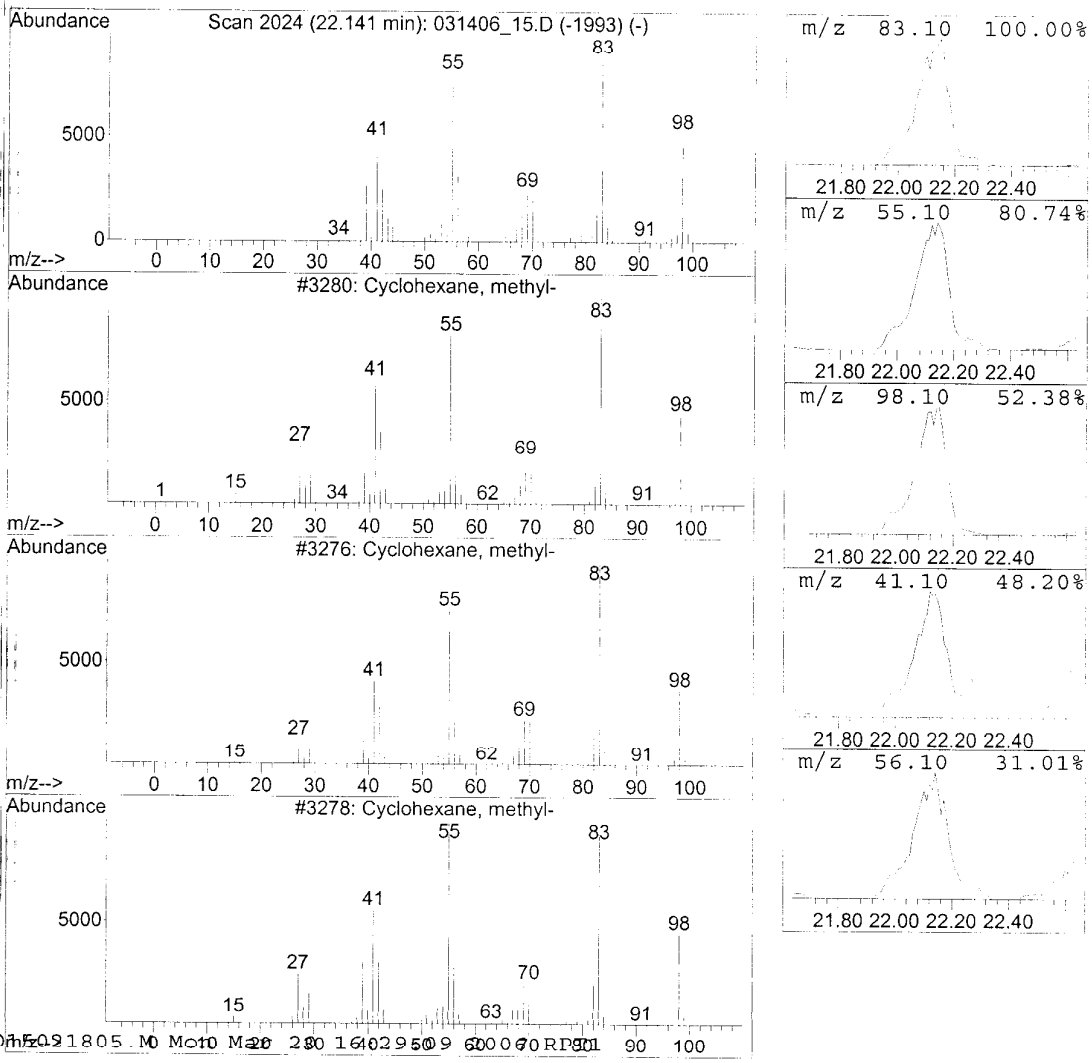
****

Peak Number 2 Cyclohexane, methyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
22.14	10.21 ppbV	6818560	1,4-difluorobenzene	19.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, methyl-	98	C7H14	000108-87-2	93
2	Cyclohexane, methyl-	98	C7H14	000108-87-2	91
3	Cyclohexane, methyl-	98	C7H14	000108-87-2	90
4	1H-Pyrazole, 4,5-dihydro-1,5-dim...	98	C5H10N2	005775-96-2	59
5	1H-Pyrazole, 4,5-dihydro-4,5-dim...	98	C5H10N2	028019-94-5	53

Add w/ peak @ 22.12 min. ← (+)



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

AP AP ~~add to peak @ 24.5~~

****
Peak Number 5 Cyclohexane, 1,3-dimethyl-,... Concentration Rank 11

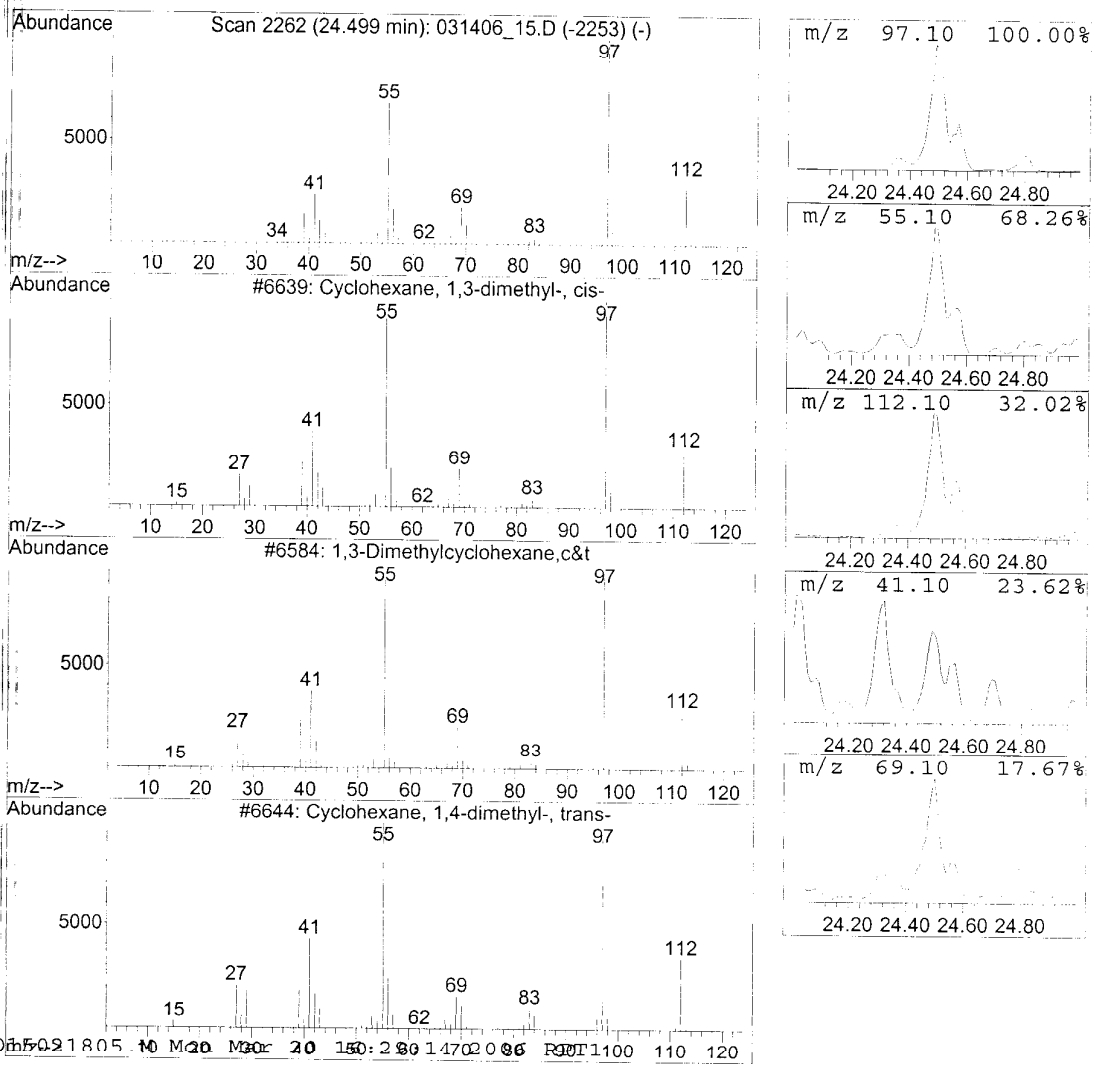
R.T.	EstConc	Area	Relative to ISTD	R.T.
24.50	8.20 ppbV	12043100	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	91
2	1,3-Dimethylcyclohexane,c&t	112	C8H16	000591-21-9	91
3	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	91
4	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	91
5	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	91

Unknown cyclohexane

C_8H_{16}

AP



Library Search Compound Report

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Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

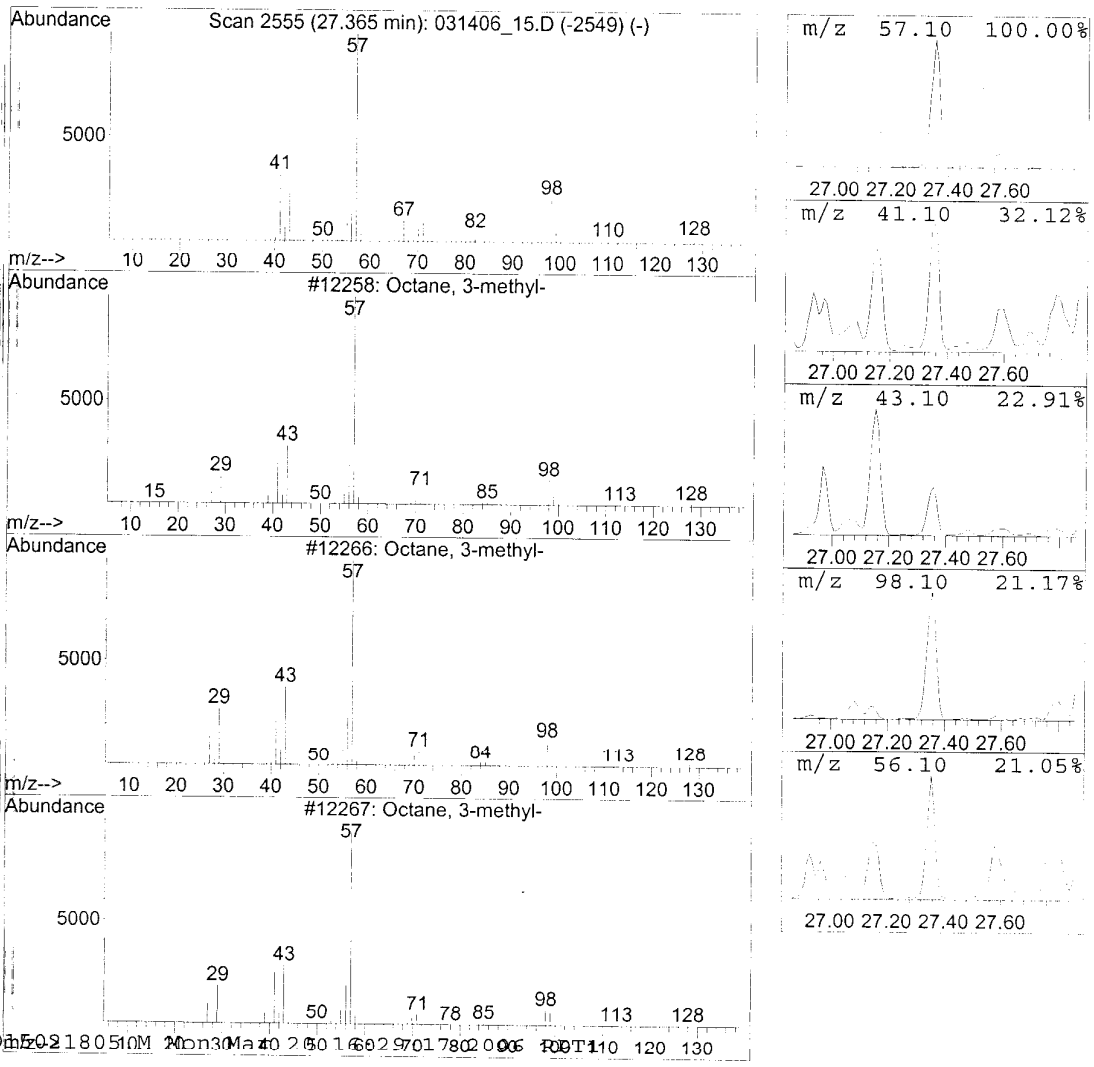
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 10 Octane, 3 methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.36	9.22 ppbV	13548000	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 3-methyl-	128	C9H20	002216-33-3	70
2	Octane, 3-methyl-	128	C9H20	002216-33-3	62
3	Octane, 3-methyl-	128	C9H20	002216-33-3	58
4	Heptane, 2,5-dimethyl-	128	C9H20	002216-30-0	55
5	Heptane, 4-(1-methylethyl)-	142	C10H22	052896-87-4	53



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Quant Title :

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TIC Integration Parameters: lscint.e

****
Peak Number 11 1-Ethyl-4-methylcyclohexane Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.88	8.35 ppbV	12270200	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	86
2	4-Octen-3-one	126	C8H14O	014129-48-7	72
3	3,5-Dimethyl-3-heptene	126	C9H18	059643-68-4	72
4	Furan, 2,3-dihydro-4-(1-methylpr...	126	C8H14O	034379-54-9	72
5	2-Hexene, 3,4,4-trimethyl-	126	C9H18	053941-19-8	72

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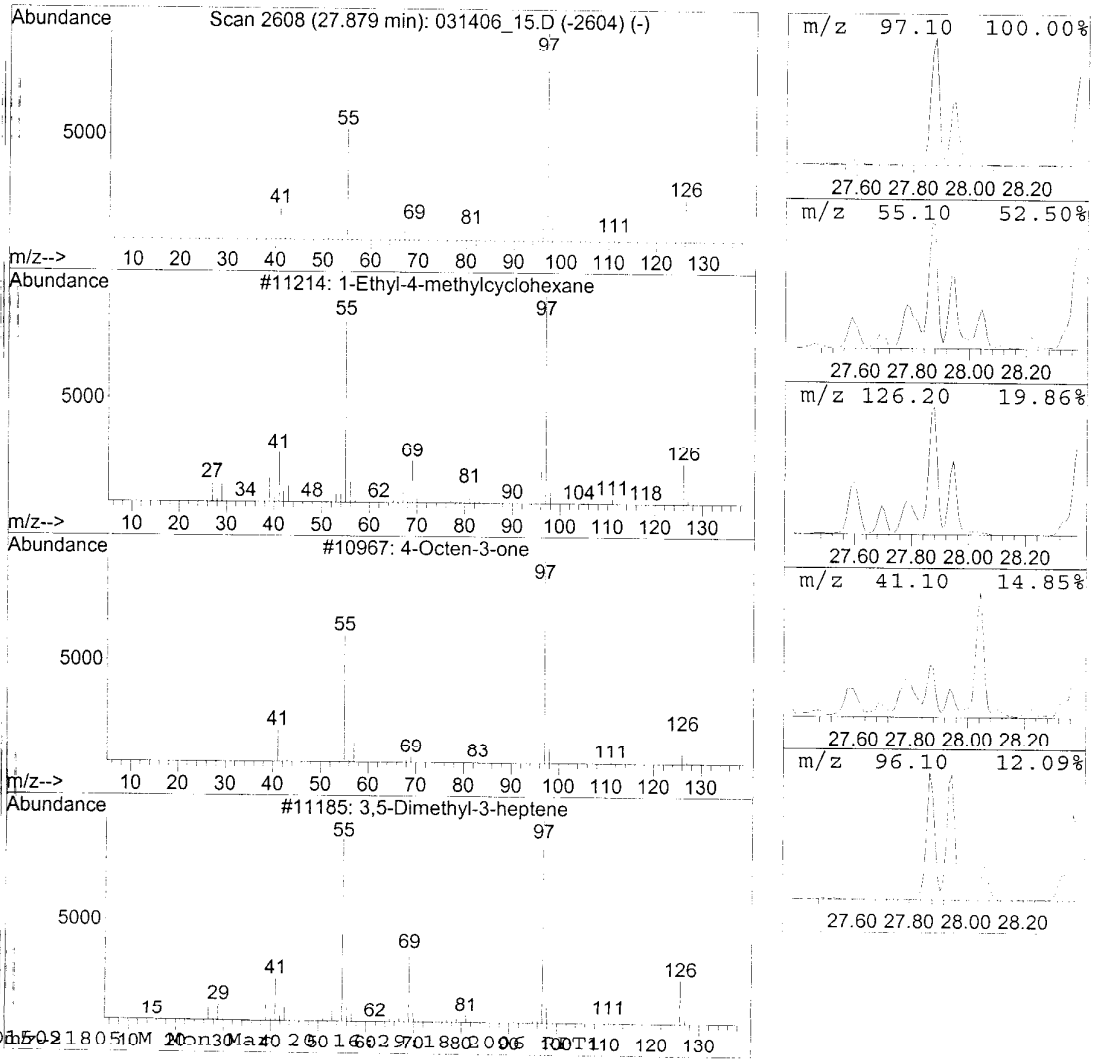

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ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

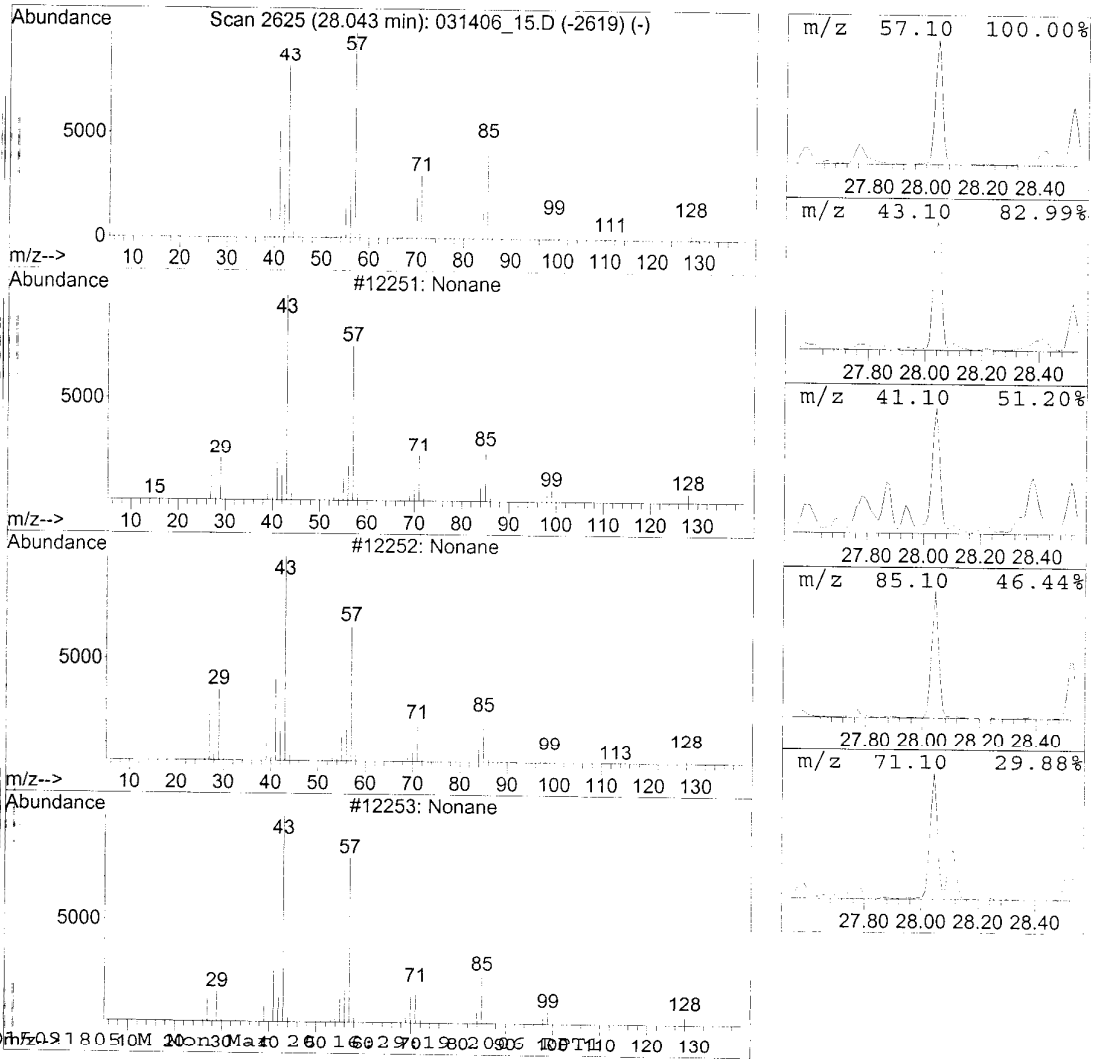
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 12 Nonane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.04	10.58 ppbV	15543800	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane	128	C9H20	000111-84-2	91
2	Nonane	128	C9H20	000111-84-2	91
3	Nonane	128	C9H20	000111-84-2	91
4	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	50
5	Undecane, 2,4-dimethyl-	184	C13H28	017312-80-0	50



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Quant Title :

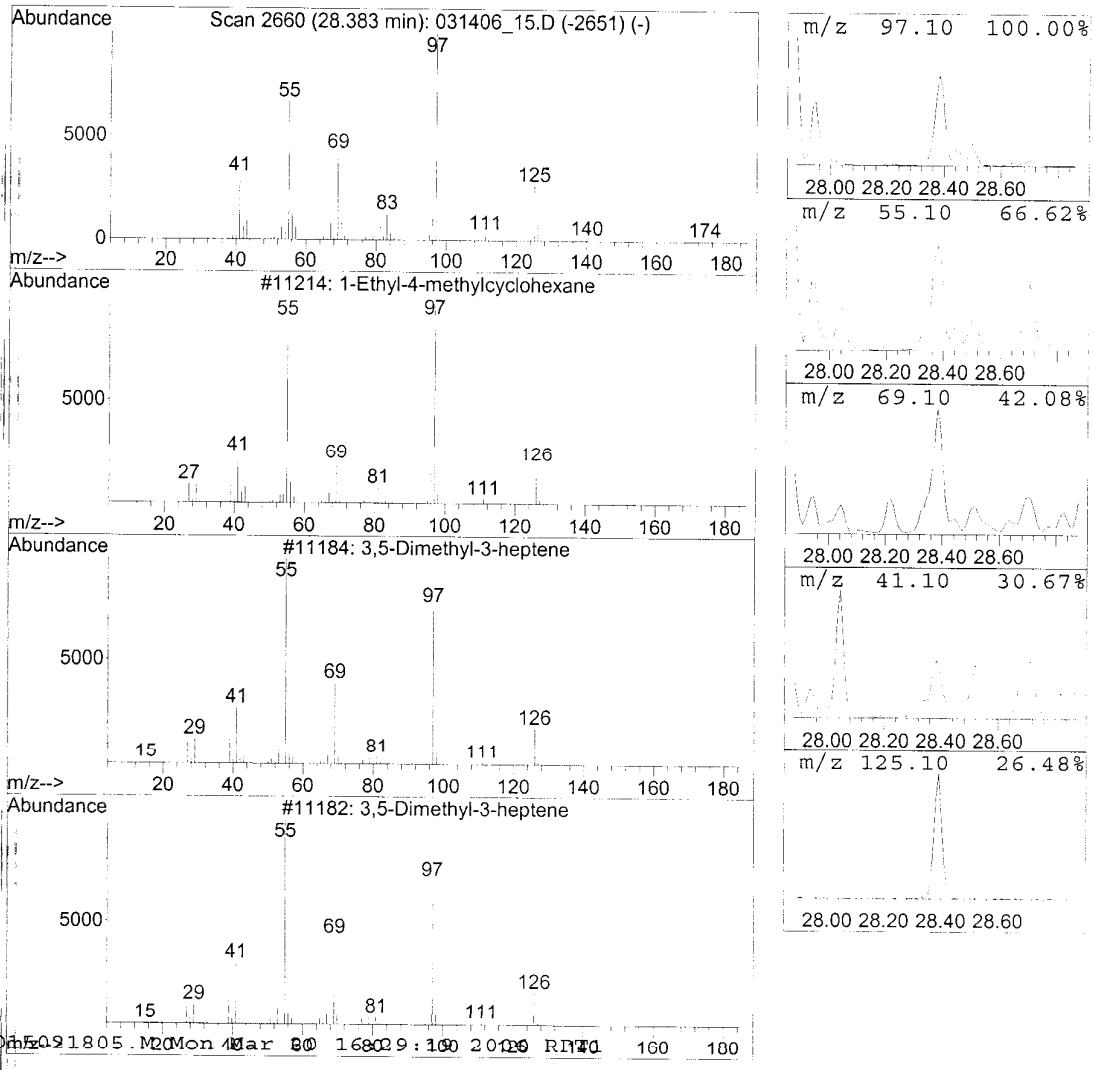
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 13 1-Ethyl 4 methylcyclohexane Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.38	7.99 ppbV	11732200	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	81
2	3,5-Dimethyl-3-heptene	126	C9H18	059643-68-4	70
3	3,5-Dimethyl-3-heptene	126	C9H18	059643-68-4	64
4	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	64
5	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	004926-78-7	64

Unk. C9H18 ?



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ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

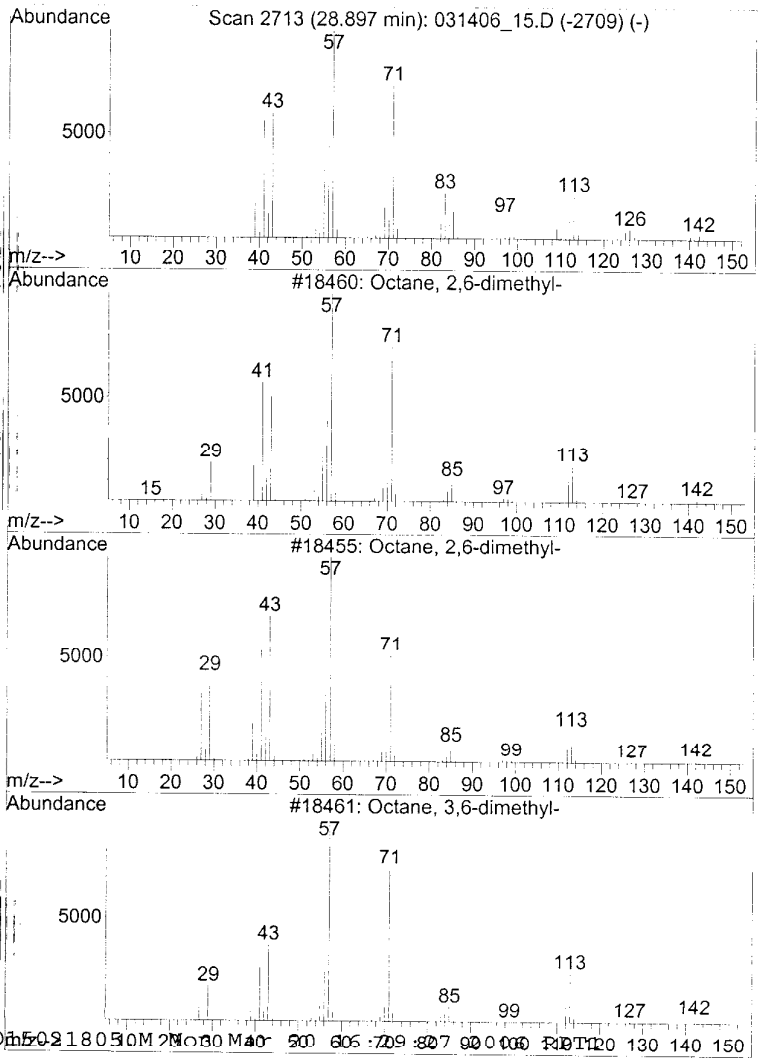
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

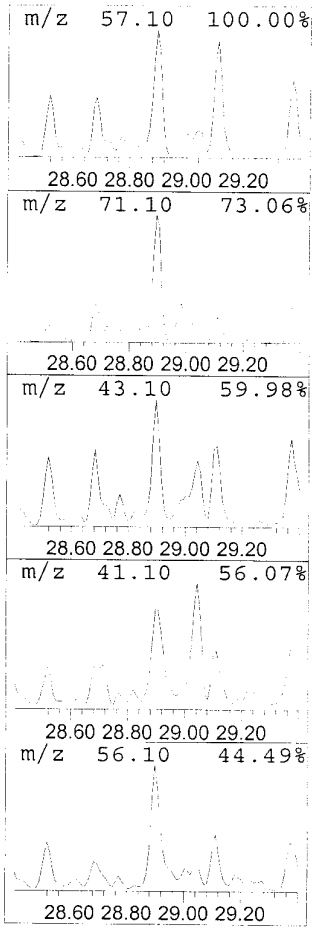
****

Peak Number 18 Octane, 2,6-dimethyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.90	11.06 ppbV	16251300	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	89
2	Octane, 2,6-dimethyl-	142	C10H22	002051-30-1	76
3	Octane, 3,6-dimethyl-	142	C10H22	015869-94-0	64
4	Nonane, 3-methyl-	142	C10H22	005911-04-6	62
5	Nonane, 3-methyl-	142	C10H22	005911-04-6	58





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ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

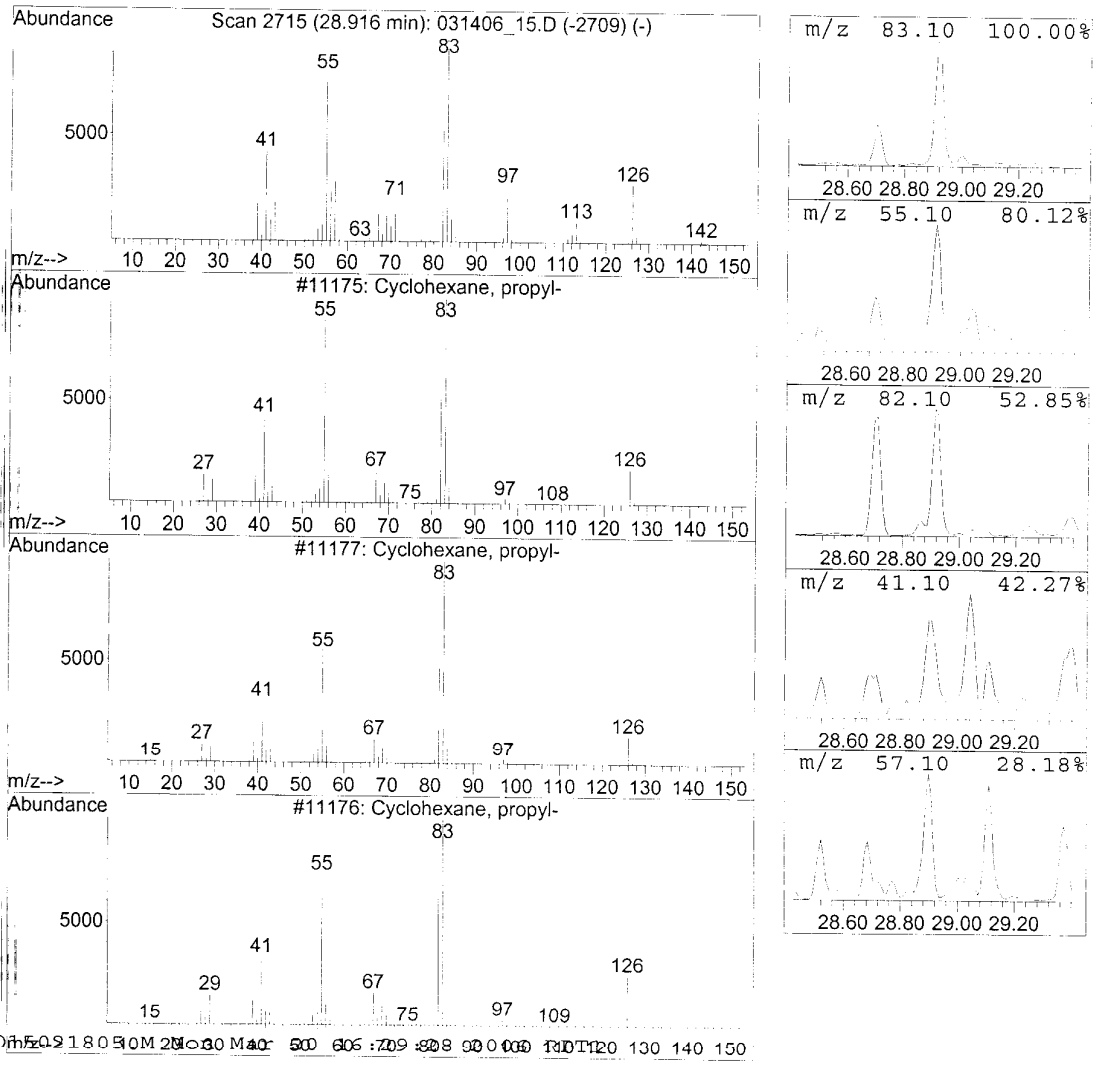
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 19 Cyclohexane, propyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.92	10.08 ppbV	14806200	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, propyl-	126	C9H18	001678-92-8	76
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	76
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	70
4	Cyclohexane, propyl-	126	C9H18	001678-92-8	68
5	Cyclohexane, propyl-	126	C9H18	001678-92-8	64



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ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

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TIC Integration Parameters: lscint.e

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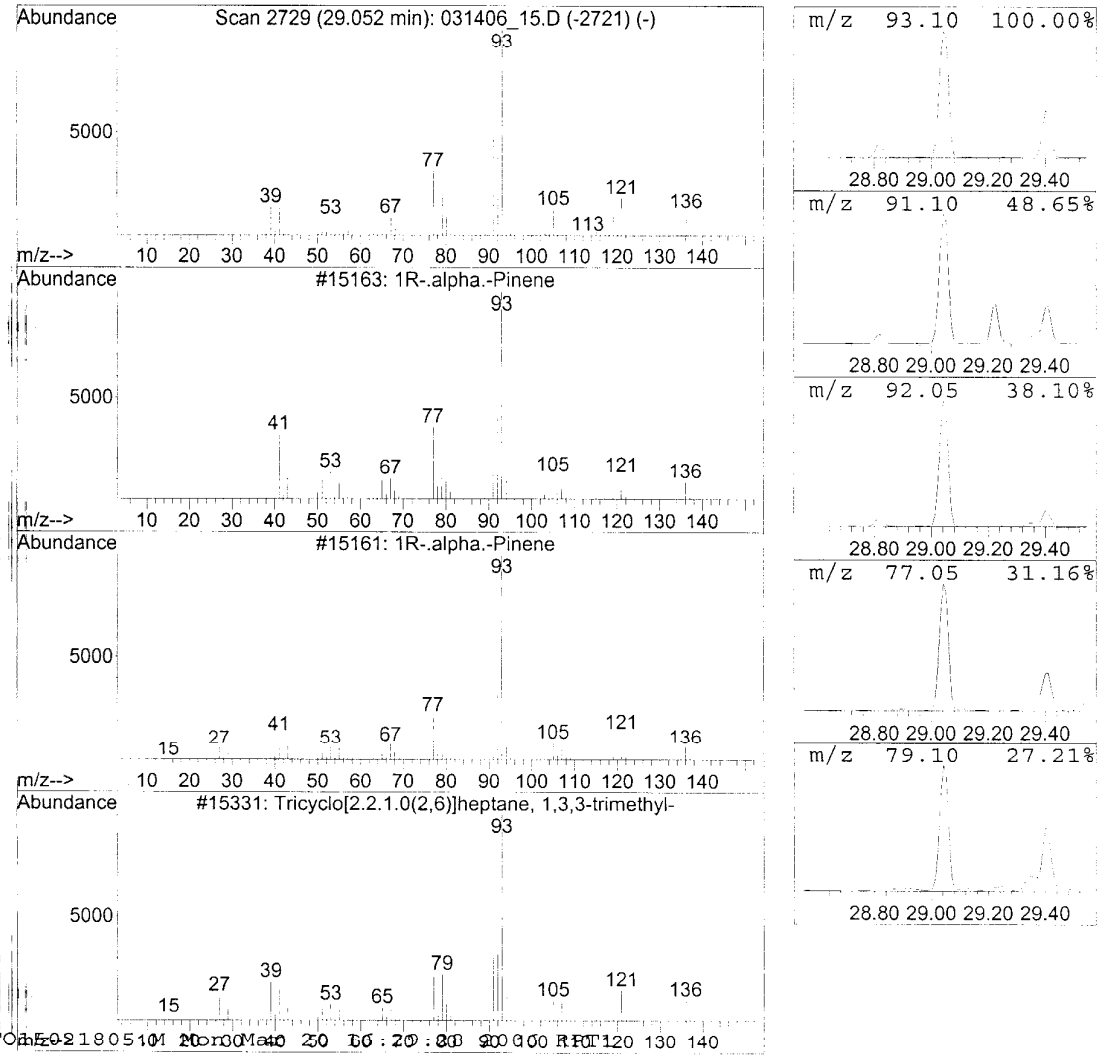
Peak Number 20 1R-.alpha.-Pinene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.05	50.51 ppbV	74192200	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R-.alpha.-Pinene	136	C10H16	007785-70-8	97
2	1R-.alpha.-Pinene	136	C10H16	007785-70-8	95
3	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000488-97-1	94
4	.alpha.-Pinene	136	C10H16	000080-56-8	94
5	Bicyclo[3.1.1]hept-2-ene, 2,6,6-...	136	C10H16	002437-95-8	94



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Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

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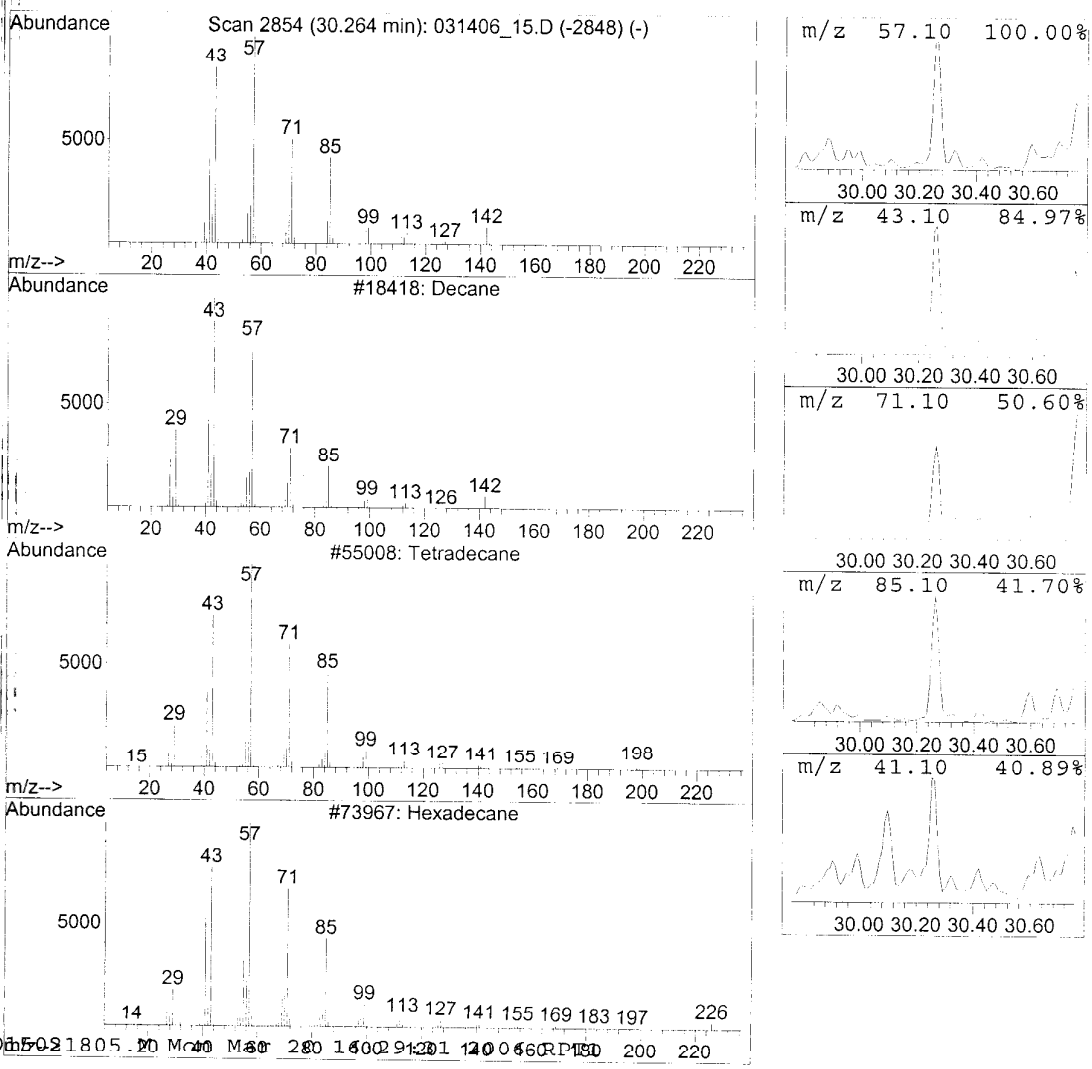
Peak Number 25 Decane Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
30.26	8.51 ppbV	12492200	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Decane	142	C10H22	000124-18-5	95
2	Tetradecane	198	C14H30	000629-59-4	86
3	Hexadecane	226	C16H34	000544-76-3	86
4	Tridecane	184	C13H28	000629-50-5	78
5	Pentadecane	212	C15H32	000629-62-9	78



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Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

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Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

TICS not reported.

AP

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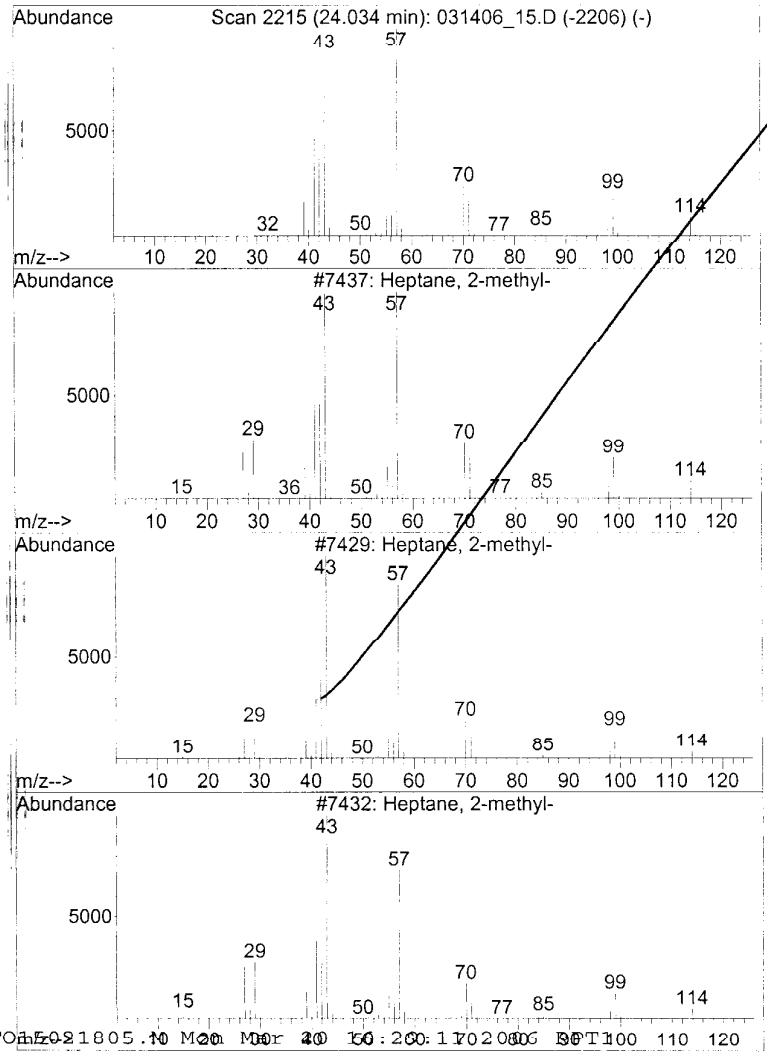
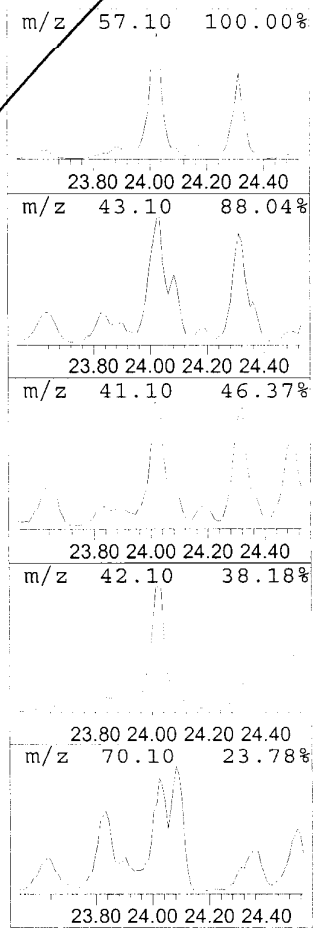
Peak Number 4 Heptane, 2-methyl- Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
24.03	7.04 ppbV	10336500	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 2-methyl-	114	C8H18	000592-27-8	95
2	Heptane, 2-methyl-	114	C8H18	000592-27-8	91
3	Heptane, 2-methyl-	114	C8H18	000592-27-8	91
4	Hexane, 2,5-dimethyl-	114	C8H18	000592-13-2	58
5	Hexane, 2,5-dimethyl-	114	C8H18	000592-13-2	43





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Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

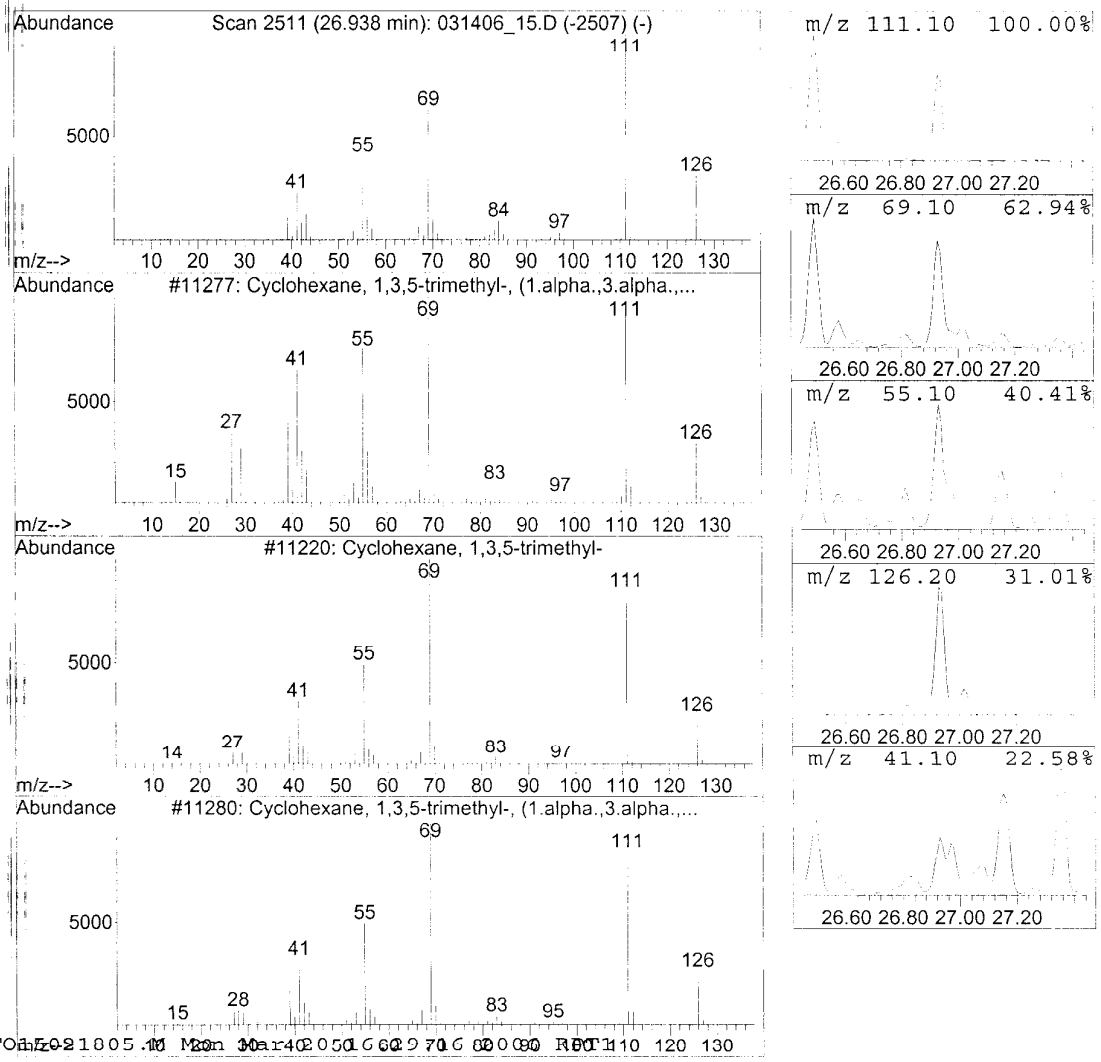
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

TICS not reported AF

****
Peak Number 8 Cyclohexane, 1,3,5-trimethy... Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.94	6.36 ppbV	9337730	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-26-2	91
2	Cyclohexane, 1,3,5-trimethyl-	126	C9H18	001839-63-0	83
3	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-27-3	80
4	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-26-2	70
5	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-27-3	64



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Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

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TIC Integration Parameters: lscint.e

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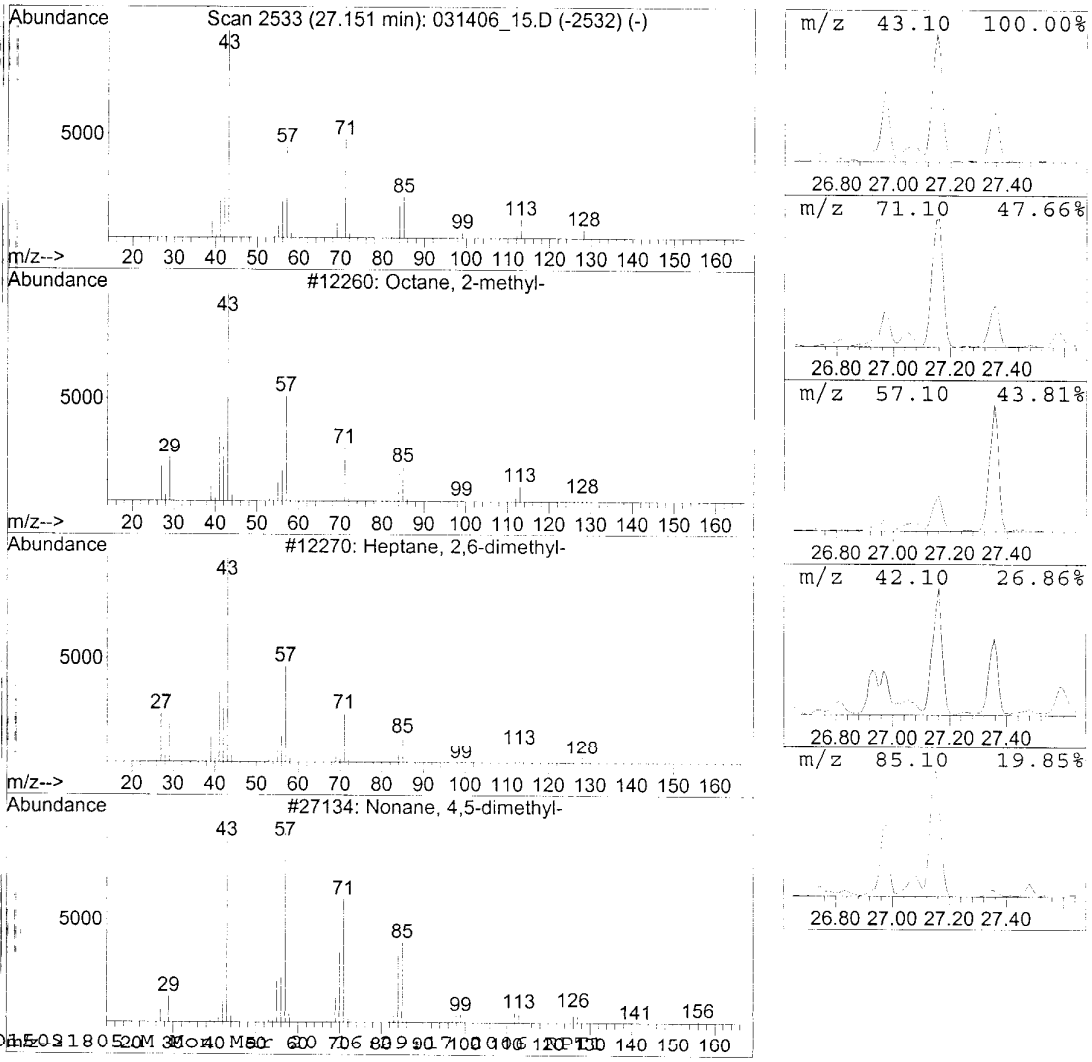
Peak Number 9 Octane, 2-methyl- Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
27.15	5.56 ppbV	8161160	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2-methyl-	128	C9H20	003221-61-2	74
2	Heptane, 2,6-dimethyl-	128	C9H20	001072-05-5	58
3	Nonane, 4,5-dimethyl-	156	C11H24	017302-23-7	53
4	Octane, 2-methyl-	128	C9H20	003221-61-2	52
5	Decane, 2-methyl-	156	C11H24	006975-98-0	50



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Quant Title :

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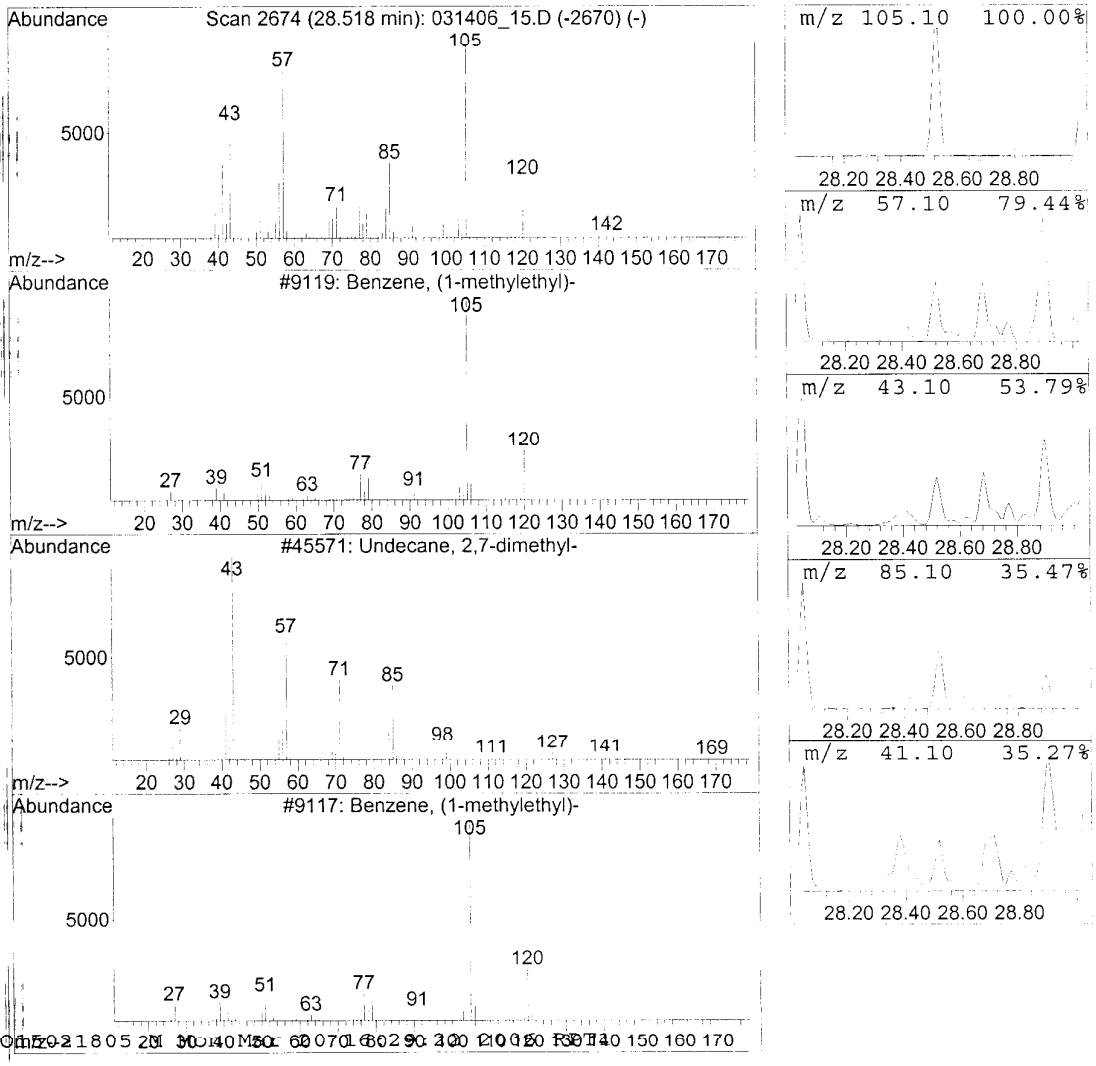
TIC Integration Parameters: lscint.e

****
Peak Number 14 Benzene, (1-methylethyl)- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.52	7.09 ppbV	10410500	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	80
2	Undecane, 2,7-dimethyl-	184	C13H28	017301-24-5	47
3	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	42
4	Benzene, (1-methylethyl)-	120	C9H12	000098-82-8	42
5	Hexane, 2,4-dimethyl-	114	C8H18	000589-43-5	38



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Quant Title :

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TIC Integration Parameters: lscint.e

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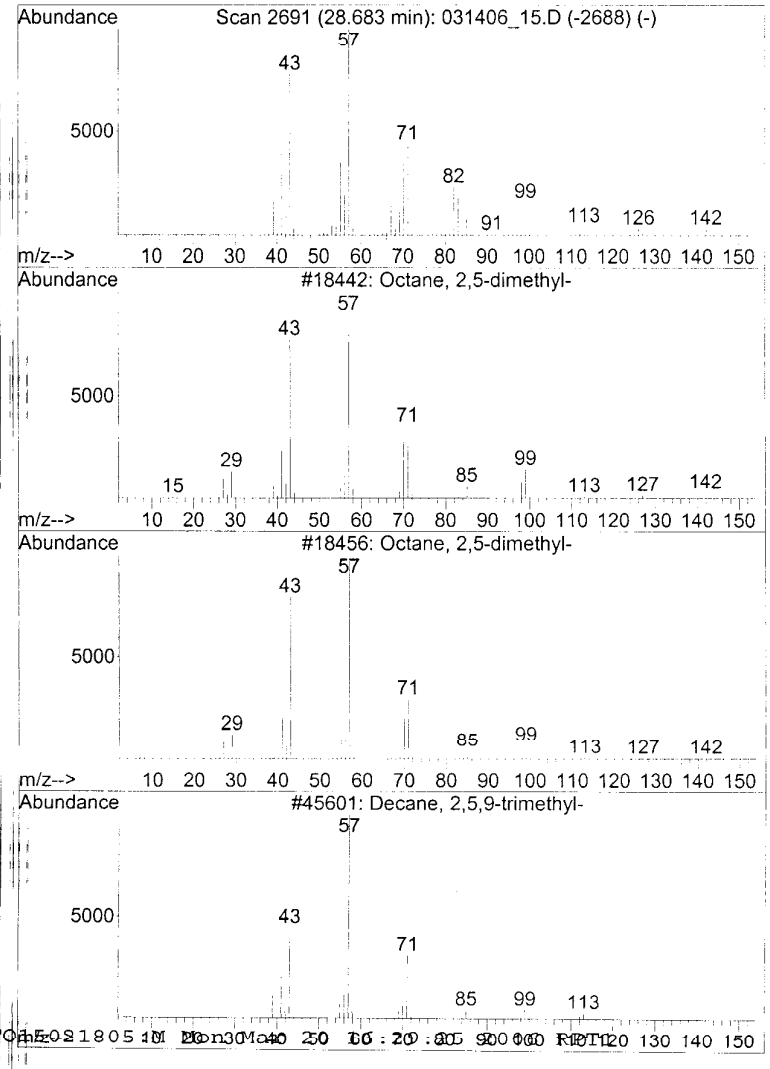
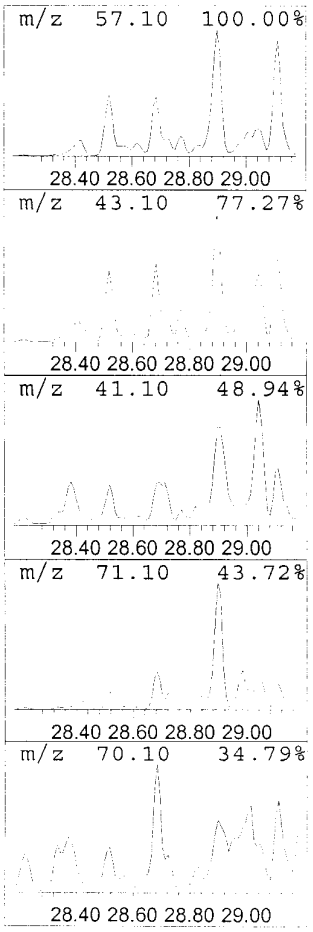
Peak Number 15 Octane, 2,5-dimethyl- Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.68	4.91 ppbV	7207480	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octane, 2,5-dimethyl-	142	C10H22	015869-89-3	76
2	Octane, 2,5-dimethyl-	142	C10H22	015869-89-3	58
3	Decane, 2,5,9-trimethyl-	184	C13H28	062108-22-9	53
4	1-Decanol, 2-ethyl-	186	C12H26O	021078-65-9	50
5	Pentane, 2,2,3,3-tetramethyl-	128	C9H20	007154-79-2	50





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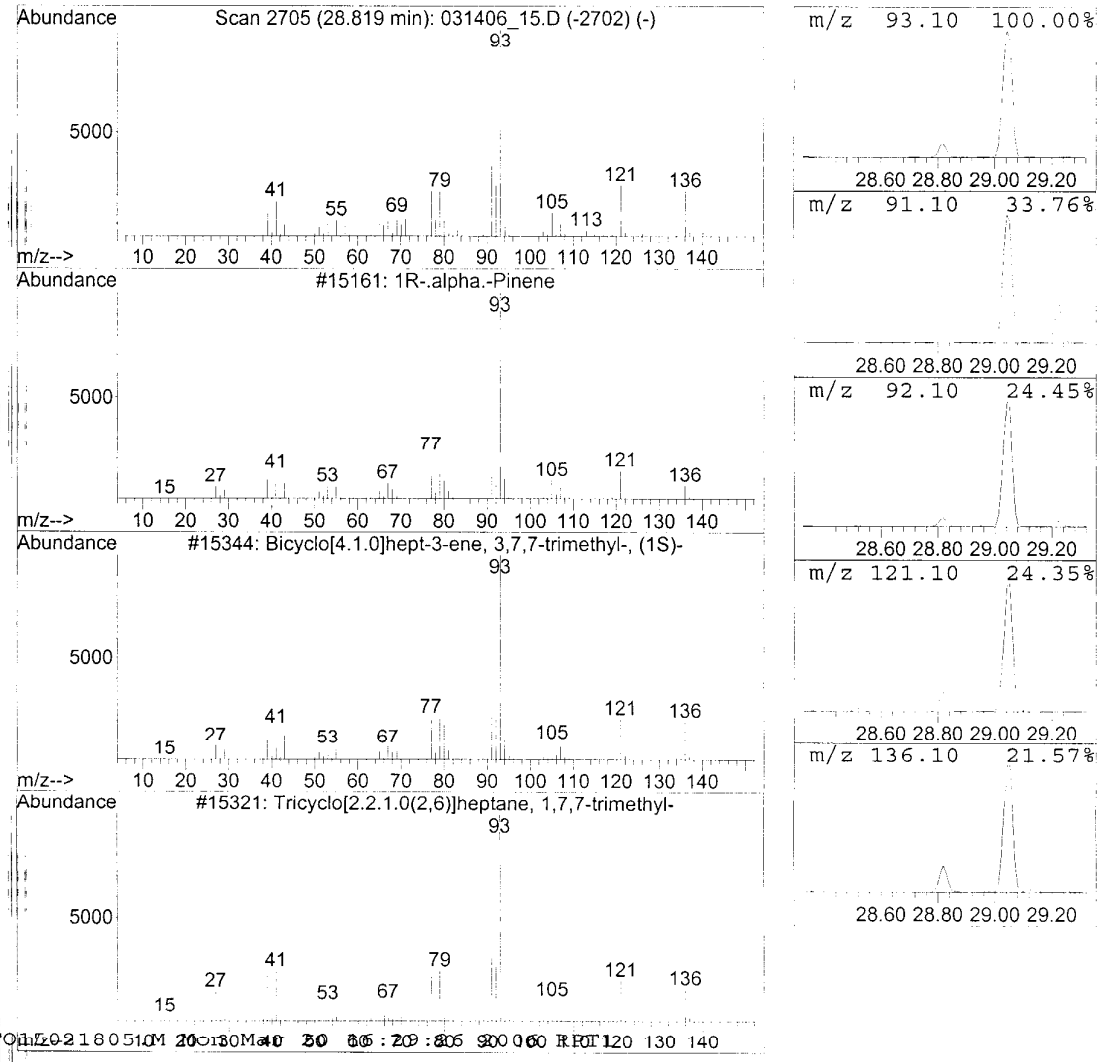
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 17 1R-.alpha.-Pinene Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
28.82	4.85 ppbV	7124210	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1R-.alpha.-Pinene	136	C10H16	007785-70-8	97
2	Bicyclo[4.1.0]hept-3-ene, 3,7,7-...	136	C10H16	000498-15-7	94
3	Tricyclo[2.2.1.0(2,6)]heptane, 1...	136	C10H16	000508-32-7	94
4	1S-.alpha.-Pinene	136	C10H16	007785-26-4	94
5	3-Carene	136	C10H16	013466-78-9	91



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Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

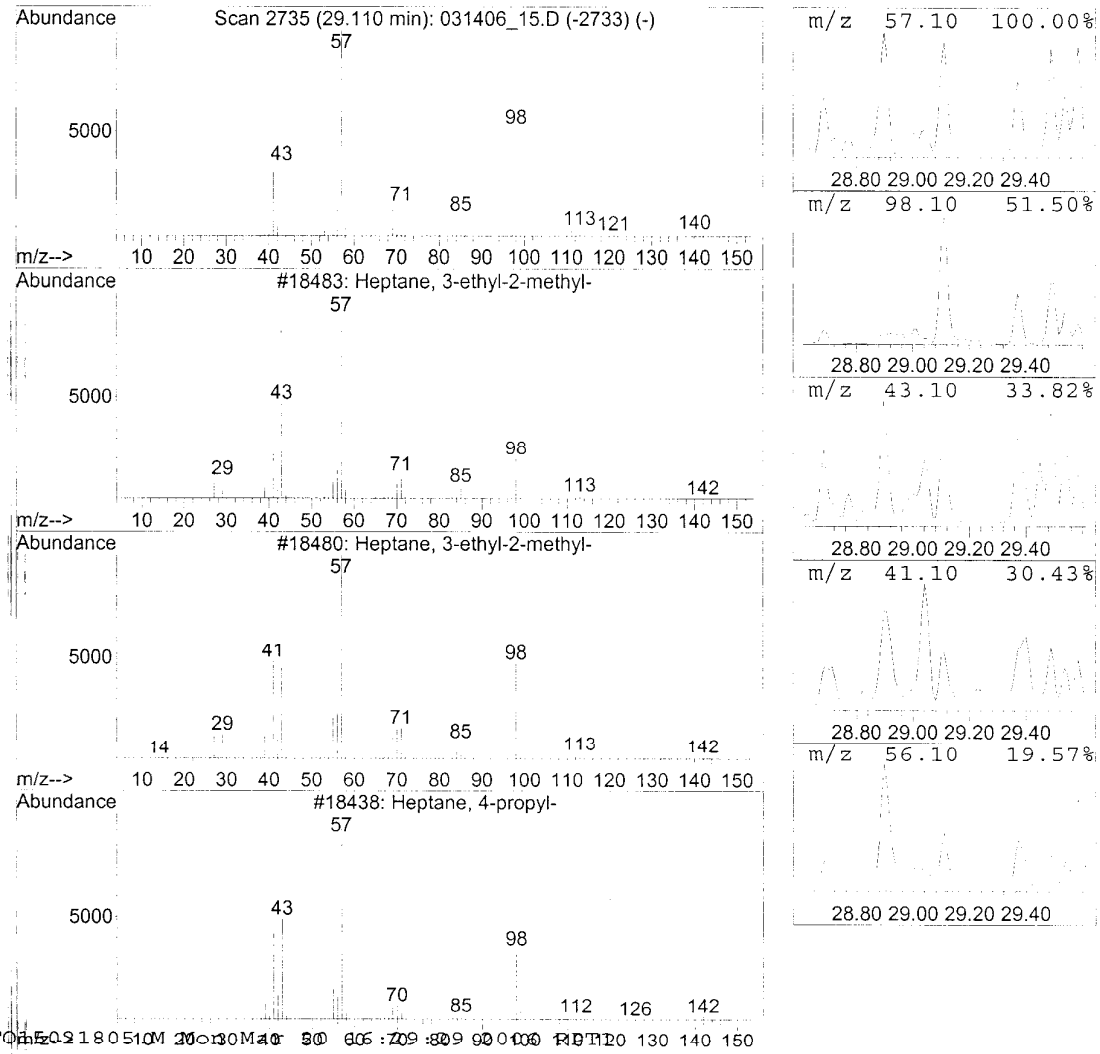
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 21 Heptane, 3-ethyl-2-methyl- Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.11	6.70 ppbV	9845750	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-ethyl-2-methyl-	142	C10H22	014676-29-0	72
2	Heptane, 3-ethyl-2-methyl-	142	C10H22	014676-29-0	64
3	Heptane, 4-propyl-	142	C10H22	003178-29-8	64
4	Heptane, 3-ethyl-2-methyl-	142	C10H22	014676-29-0	53
5	Octane, 2,3-dimethyl-	142	C10H22	007146-60-3	50



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

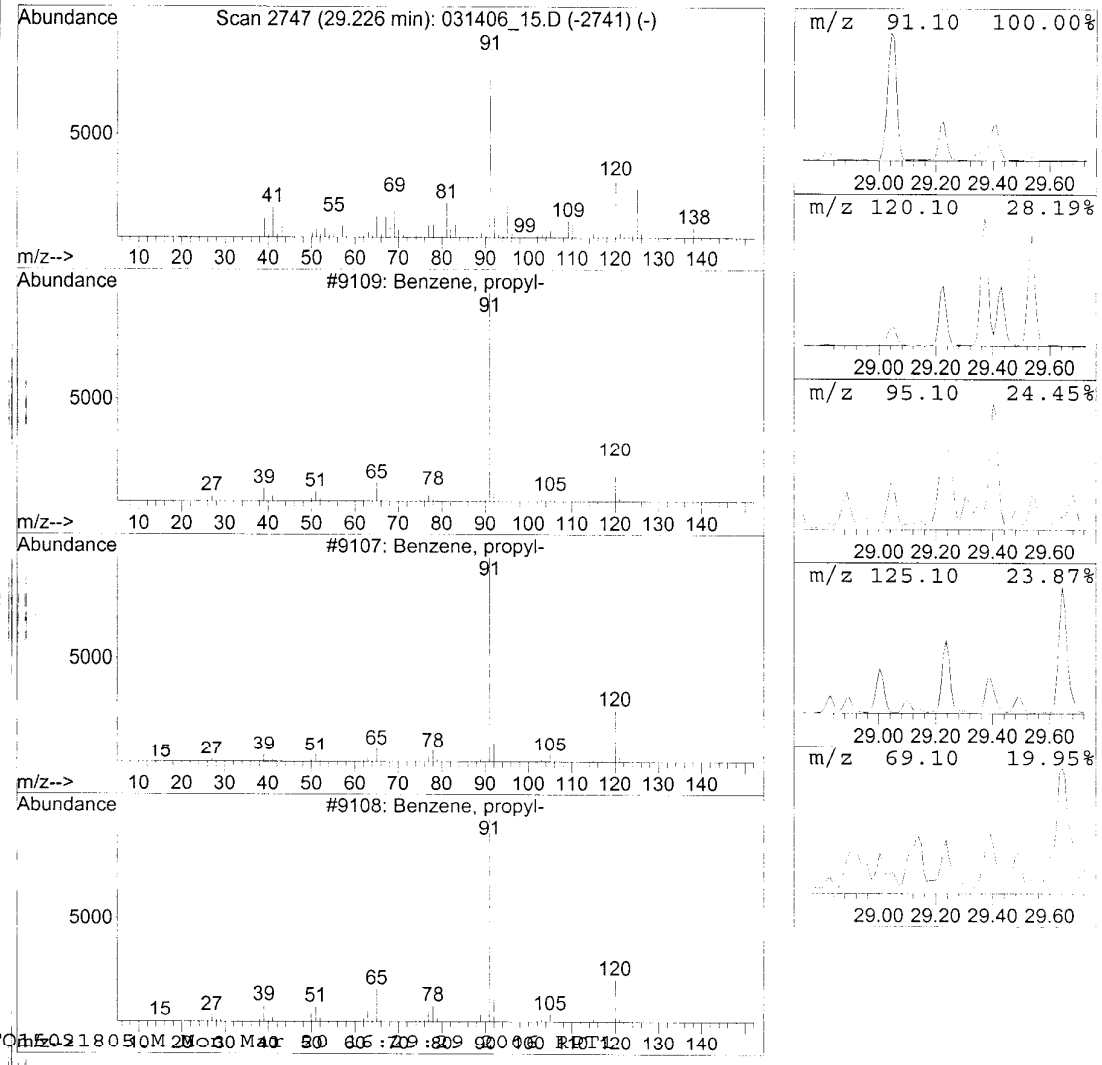
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 22 Benzene, propyl- Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.23	5.48 ppbV	8049960	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	42
2	Benzene, propyl-	120	C9H12	000103-65-1	38
3	Benzene, propyl-	120	C9H12	000103-65-1	35
4	Propanenitrile, 3-[(phenylmethyl...	160	C10H12N2	000706-03-6	22
5	1-Benzylamino-2-benzyloxyethane	241	C16H19NO	038336-06-0	16



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

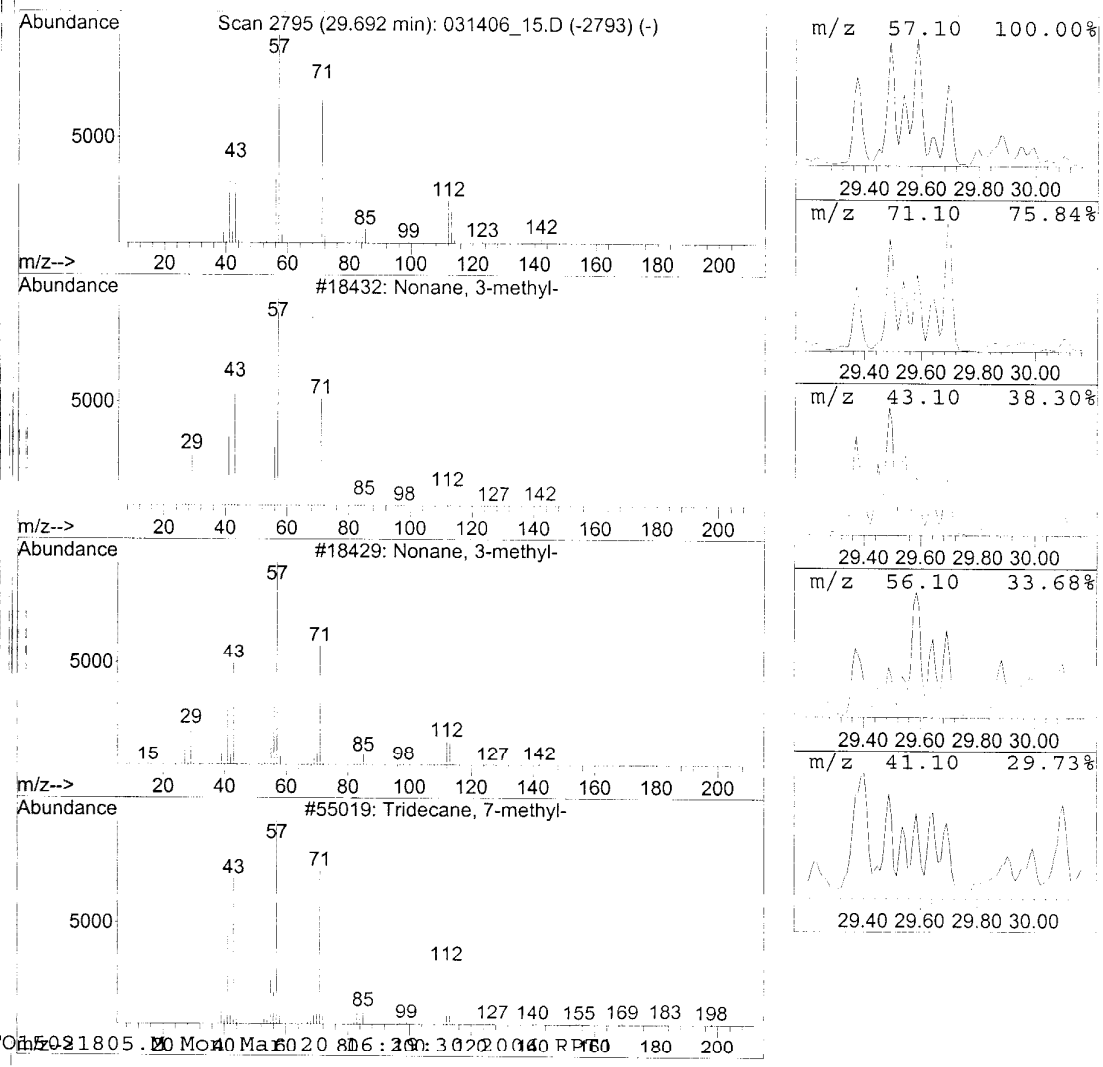
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****

Peak Number 24 Nonane, 3-methyl Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
29.69	5.06 ppbV	7426660	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonane, 3-methyl-	142	C10H22	005911-04-6	91
2	Nonane, 3-methyl-	142	C10H22	005911-04-6	78
3	Tridecane, 7-methyl-	198	C14H30	026730-14-3	78
4	Octane, 1,1'-oxybis-	242	C16H34O	000629-82-3	74
5	Octane, 3,6-dimethyl-	142	C10H22	015869-94-0	72



Library Search Compound Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_15.D
Acq On : 16 Mar 2006 1:09 pm
Operator : AF
Sample : 06-061-6 20X
Misc : 25ML B241
ALS Vial : 9 Sample Multiplier: 1

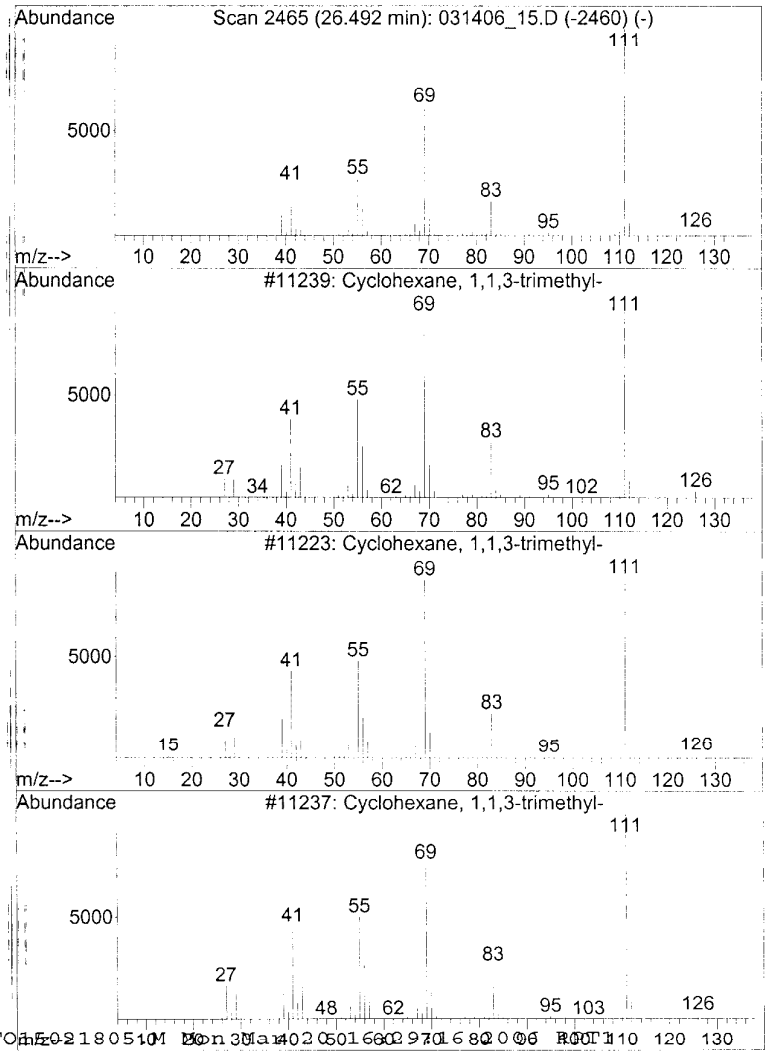
Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

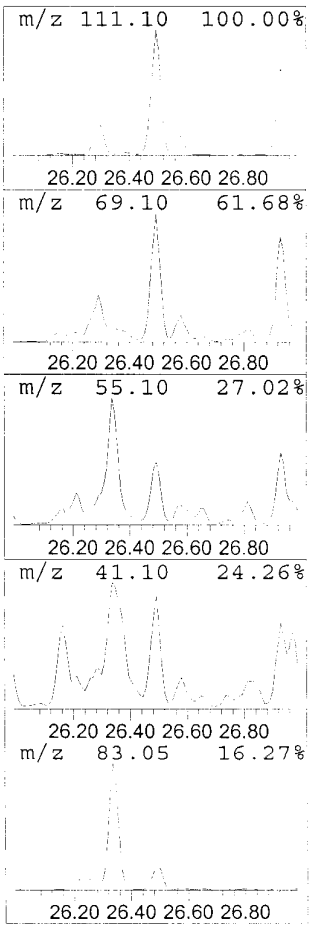
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e

****
Peak Number 7 Cyclohexane, 1,1,3-trimethyl- Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
26.49	7.79 ppbV	11445700	chlorobenzene-d5	26.25

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	92
2	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	91
3	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	90
4	Cyclohexane, 1,3,5-trimethyl-	126	C9H18	001839-63-0	72
5	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-27-3	72





LSC Area Percent Report

Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Integration Parameters: lscint.e
Integrator: ChemStation
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 5 % of largest Peak
Max Peaks: 100
Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Title :

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	15.757	1373	1380	1408	BB	126718	4561750	38.20%	17.868%
2	19.413	1743	1749	1763	BV	279010	7807920	65.38%	30.583%
3	26.269	2436	2442	2470	BB	582856	11941747	100.00%	46.776%
4	27.093	2523	2527	2544	BB 2	35756	1218462	10.20%	4.773%

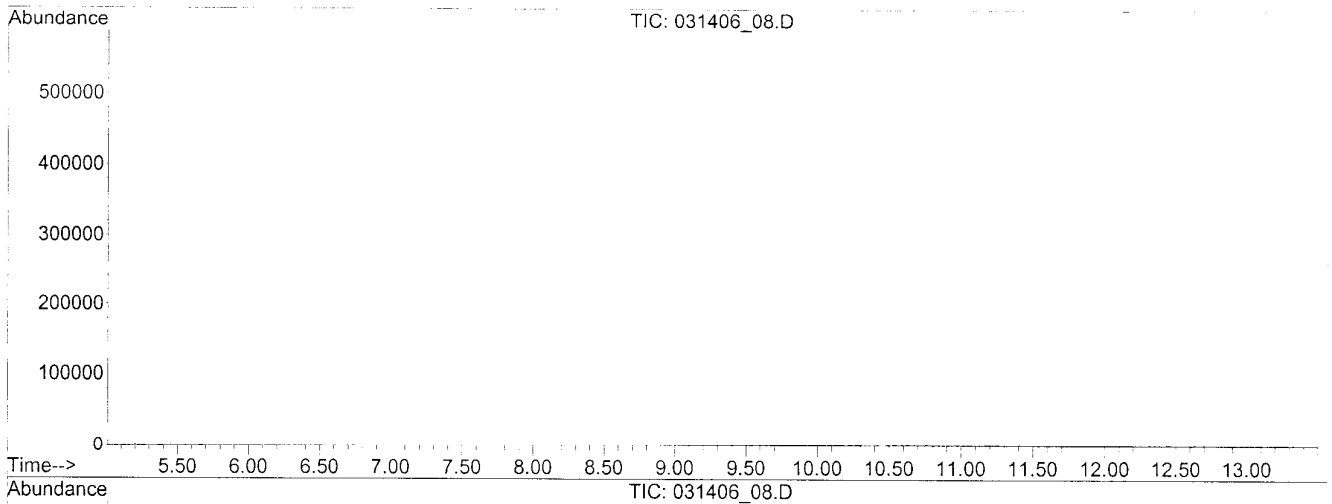
Sum of corrected areas: 25529878

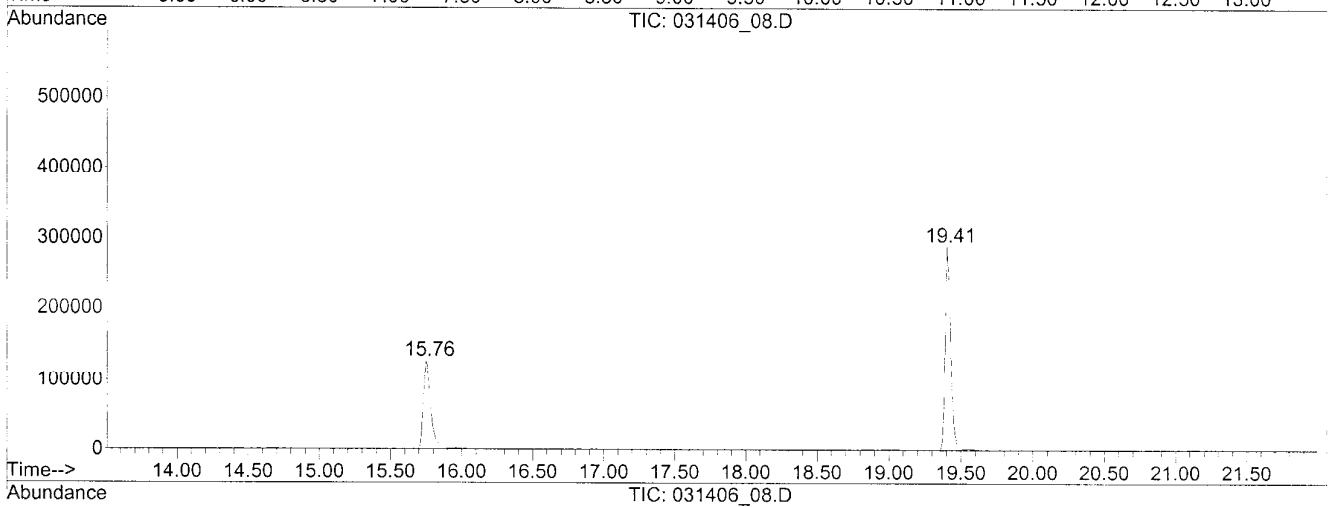
LSC Report - Integrated Chromatogram

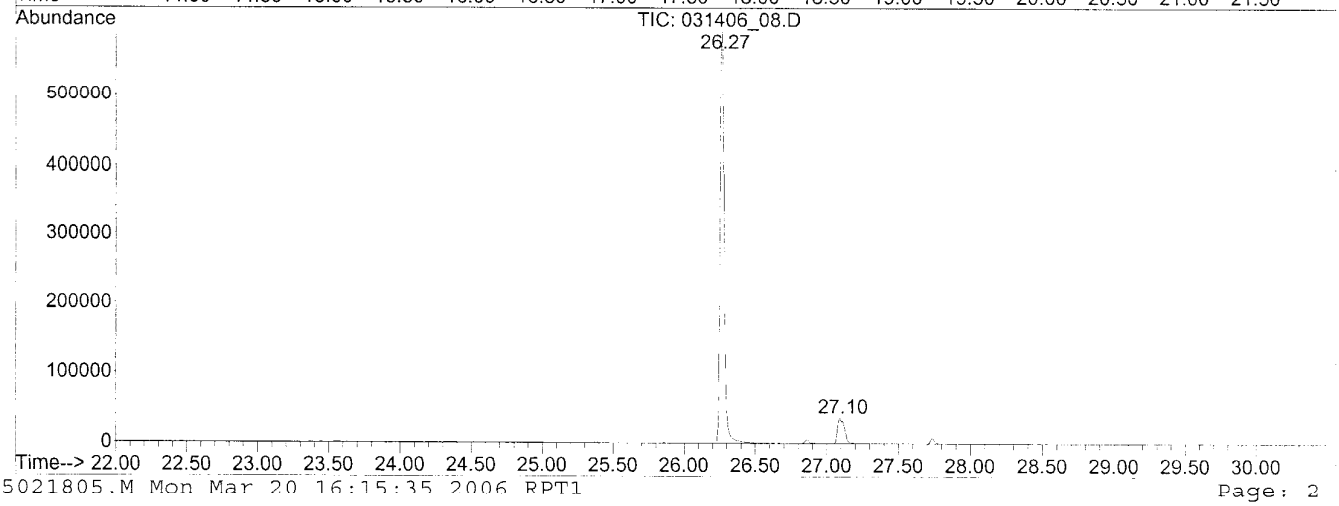
Data Path : C:\MSDChem\1\DATA\2006_FEB\031506\
Data File : 031406_08.D
Acq On : 16 Mar 2006 3:24 am
Operator : AF
Sample : 06-061-7
Misc : 500ML A204
ALS Vial : 3 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805.M
Quant Title :

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: lscint.e







Data Path : C:\MSDCHEM\1\DATA\20060FEB\0015865\
Data File : 0014060088DD
Acq On : 16 Mar 2006 3:32:44 am
Operator : AAF
Sample : 0060061177
Misc : 500MLAA004
ALS Vial : 33 Sample Multiplier: 11

Quant Method : C:\MSDCHEM\1\METHODS\TO15021805MM
Quant Title :

TIC Library : C:\DATABASE\NIST02LL
TIC Integration Parameters: lscintee

TIC Top Hit name	RT	EstConc	Units	Response	Internal Standard #	RT	Resp	Conc

06-061-7

No Library Search Compounds Detected
****

3550A QA/QC REPORT

Sample Information

Sample Name: 061-7 A204 031506_08

Inlet Position : 3

Injection Number: 1

Run Information

Inject Time : 00:55:21

Date : 03-16-06

Analysis Information

Method Name : 14CP_LCI.MTH

Sample Type : Sample

Analysis Type : Low Level

Int. Std. : Yes

Cryofocus : Yes

Target Sample Volume: 500

True Sample Volume : 500

ERRORS: 1

Sample Dryer not ready!

ENSR | AECOM

ENSR
Parsons Air Laboratory, 708 Ayer Road, Harvard, Massachusetts 01451
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ENSR Air Toxics Specialty Laboratory
Analytical Report

Client: Steve Wright
ENSR
2 Technology Park Drive
Westford, MA 01886

Client ID: 10736-001

Laboratory ID: 06-061 Sulfur

Date(s) Received: 3/9/06

All work contained in this report has been done in accordance with laboratory standard operating procedures. ENSR's Air Toxics Specialty Laboratory follows methodologies based upon standard EPA/NIOSH/OSHA Methods. Data contained herein should be considered accurate and complete to the best of our knowledge. This report cannot be duplicated in part without the written permission of ENSR.

Alyson Fortune
Project Manager
ENSR Air Toxics Specialty Laboratory

3/20/06
Date

ACCREDITED IN ACCORDANCE WITH nelac
NYSDOH / NELAC # 11631

Case Narrative

Re: Volatile Organic Analysis of Tedlar Bags by Gas Chromatography/Flame Photometric Detection (GC/FPD) – **Crow Landfill**

PROJECT #: **10736-001**

LAB ID #: **06-061**

ANALYTICAL PROCEDURE:

Six (6) Tedlar bag samples were analyzed for project specific reduced sulfur compounds following the guidelines of EPA Method 15, *Determination of Hydrogen Sulfide, Carbonyl Sulfide, and Carbon Disulfide Emissions from Stationary Sources*, modified.

A Hewlett Packard 5890 Series II gas chromatograph (GC) equipped with a Hewlett Packard flame photometric detector (FPD) was used for the reduced sulfur compound analysis. A 1 mL aliquot of each sample was manually injected onto the head of the chromatographic column for analysis. Five point calibrations were performed for each target compound.

The operating conditions of the GC/FPD are listed in Table 1.

No problems occurred during sample receipt or log-in.

TO-15 results of the associated SUMMA canister samples are submitted under separate cover.

QUALITY CONTROL:

1. A laboratory blank was analyzed daily prior to sample analysis in the same manner as the samples. Target analytes were not detected in the blank.

DISCUSSION:

1. Samples [Well EW-1], [Well Flare], and [Well TEW-2] were analyzed initially as various large dilutions due to known values of hydrogen sulfide which would have exceeded the calibrated range of the instrument and caused detector saturation if analyzed undiluted. Detected values and/or reporting limits have been adjusted accordingly.

2. The concentration of hydrogen sulfide in samples [Well EW-1], [Well Flare], and [Well TEW-2] exceeded the calibrated range of the instrument. Due to holding time limitations and/or analytical limitations, a further dilution was not performed. Values have been flagged with an "E" and should be considered estimated.

3. The compounds sulfur dioxide and carbonyl sulfide co-elute on the GC/FPD system used for this analysis. Therefore, any non-detected values are reported as the sum of the lowest calibration standard concentrations. Any peaks eluting at the retention time of these two compounds were quantified using both calibration curves; thus two values (representing the potential sulfur dioxide or potential carbonyl sulfide concentration) are reported in these cases.

4. The potential sulfur dioxide concentration in samples [Well EW-1], [Well Flare], and [Well TEW-2] exceeded the calibrated range of the instrument. Due to holding time limitations and/or analytical limitations, a further dilution was not performed. Values have been flagged with an "E" and should be considered estimated.

TABLE 1 GC/FPD Operating Conditions	
Instrument	Hewlett Packard 5890 Series II GC
Injector Temperature	210°C
Column	RTX-1 #118563
Parameters	60m x 0.53 mm ID; 7 um df
Carrier gas	UHP Helium; Flow rate = 13 ml/min
Detector	Flame Photometric Detector; Temperature: 225°C
Temperature program	Initial Temp.: 32°C Hold 3 minutes
	Ramp 15°C/min to 150°C for 0.1 minute
	Range = 3
Data System	TurboChrom 4.1 software

Date Analysis Started: 3/9/06

R:\Air_Tox\LAB\2006 Reports\06-061 Crow Landfill\06-061TRS rpt.doc

ENSR AIR TOXICS SPECIALTY LABORATORY
SUMMARY OF ANALYTICAL RESULTS

Project: Crow Lane Landfill
Laboratory ID #: 06-061

Sample ID	Well EW-1		Well Flare		Well TEW-2		AMB-1	
Laboratory ID	06-061-8		06-061-9		06-061-10		06-061-11	
Date Sampled	3/8/06		3/8/06		3/8/06		3/8/06	
Date Received	3/9/06		3/9/06		3/9/06		3/9/06	
Date Analyzed	3/10/06		3/10/06		3/10/06		3/10/06	
Dilution Factor	10,020		9,900		5,200		1.0	
Compound	ppbV		ppbV		ppbV		ppbV	
Hydrogen Sulfide	8,500,000	E	41,000,000	E	27,000,000	E	55	U
Carbonyl Sulfide / Sulfur Dioxide **	840,000 / 1,600,000	NQ / E	3,500,000 / 4,900,000	NQ / E	1,600,000 / 2,500,000	NQ / E	83	U
Methyl Mercaptan	550,000	U	540,000	U	290,000	U	55	U
Ethyl mercaptan	750,000	U	740,000	U	390,000	U	75	U
Dimethyl Sulfide	760,000	U	750,000	U	400,000	U	76	U
Isopropyl mercaptan	600,000	U	590,000	U	310,000	U	60	U
t-butyl mercaptan	490,000	U	490,000	U	250,000	U	49	U
Ethyl methyl sulfide	620,000	U	610,000	U	320,000	U	62	U
Dimethyl Disulfide	620,000	U	610,000	U	320,000	U	62	U

Sample ID	AMB-2		Background	
Laboratory ID	06-061-12		06-061-13	
Date Sampled	3/8/06		3/8/06	
Date Received	3/9/06		3/9/06	
Date Analyzed	3/10/06		3/10/06	
Dilution Factor	1.0		1.0	
Compound	ppbV		ppbV	
Hydrogen Sulfide	55	U	55	U
Carbonyl Sulfide / Sulfur Dioxide **	83	U	83	U
Methyl Mercaptan	55	U	55	U
Ethyl mercaptan	75	U	75	U
Dimethyl Sulfide	76	U	76	U
Isopropyl mercaptan	60	U	60	U
t-butyl mercaptan	49	U	49	U
Ethyl methyl sulfide	62	U	62	U
Dimethyl Disulfide	62	U	62	U

U = undetected at specified reporting limit
E - estimated concentration; value is above the upper limit of calibration
NQ - no qualifier (for carbonyl sulfide and/or sulfur dioxide

B = analyte found in blank
** = Co-eluters

ENSR AIR TOXICS SPECIALTY LABORATORY
QUALITY CONTROL RESULTS-BLANKS

Project: Crow Lane Landfill
Laboratory ID #: 06-061

Laboratory Blanks		
Sample ID Laboratory ID	Method Blank MB06-061	
Date Analyzed	3/10/06	
Compound	ppbV	
Hydrogen Sulfide	55	U
Carbonyl Sulfide / Sulfur Dioxide **	83	U
Methyl Mercaptan	55	U
Ethyl mercaptan	75	U
Dimethyl Sulfide	76	U
Isopropyl mercaptan	60	U
t-butyl mercaptan	49	U
Ethyl methyl sulfide	62	U
Dimethyl Disulfide	62	U

U = undetected at specified reporting limit
E - estimated concentration; value is above the upper limit of calibration
B = analyte found in blank
** = Co-eluters

ENSR INTERNATIONAL
ENSR Air Laboratory
325 Ayer Rd
Harvard, MA 01451-1132
Phone: (978) 772-2345
Fax: (978) 772-4956

CHAIN OF CUSTODY RECORD

~~Client:~~ PROJECT NAME CROW LANE LANDFILL	~~Project Name:~~ CLIENT DEP	Location: NEWBURYPORT MA
Project Number: 10736-001	Field Logbook No.: 12/5A21	Chain of Custody Tape No.:
Sampler: (Print Name)/(Affiliation) Signature: KEN COBB / ENSR	Send Results/Report to: Steve Wright	Email:

Analysis Requested: SUFFOLK COUNTY LAB MASS, MNG

Field Sample No./ Identification	Date	Time	Grab	Comp	Sample Container (Can/Bag)	Canister I.D.	Regulator I.D.	Sample Type (Soil gas/ambient)					Lab I.D.	Remarks
WELL EW 1	3/8/06		✓		BAG				X				06-064-2	
WELL FLARE	↓		✓		↓				X				-9	
WELL TEW 2	↓		✓		↓				X				-10	
AMB 1	↓		✓		↓				X				-11	
AMB 2	↓		✓		↓				X				-12	
BACKGROUND	↓		✓		↓				X				-13	

Relinquished by: (print name) Signature: Ken Cobb	Date: ~~3/8/06~~ 3/9/06 (P) Time: 11:45	Received by: (print name) Signature: (P)	Date: Time:	Turn-Around Time: ☒ Standard 10-day ☐ RUSH (only pre-approved jobs guaranteed)
Relinquished by: (print name) Signature:	Date: Time:	Received by: (print name) Signature:	Date: Time: 3/9/06 (P)	Notes: (i.e., special reporting limits needed, billing information)
Relinquished by: (print name) Signature:	Date: Time:	Received for laboratory by: (print name) Alyson Tessier Signature:	Date: ~~3/8/06~~ Time: 11:45	

M2K0262 1001a

White: Original (to Lab) Yellow: Lab Pink: Sampler

06-061 2 of 2

page 6 of 7

SAMPLE LOG-IN & RECEIPT CHECKLIST

Client/Proj# Cow Lane Landfill / 10736-001

Project Mgr: Steve Wright Lab Pool #: 06-061

Inspected & Logged in by: A Fortune Date & Time: 3/9/06 1145

Sample Matrix	Number of Samples	Analysis Requested	Hold Time & Due by(date)	Storage Location	Disposal Date*
Tedlar Bags	6	Sulfur compds via MS/MSD	HT: 3/11/06 Due: 3/23/06	GC lab	
Summa cans	7	TO15 + 10 TICs	HT: 4/6/06 Due: 3/23/06	GCMS lab	
			HT: Due:		

Circle the appropriate response:

1) Shipped / Hand delivered

2) COC present / not present on receipt

3) COC Tape present / not present on shipping container N/A

4) Samples broken / leaking / intact on receipt

5) Samples ambient / chilled on receipt

6) Samples preserved correctly / incorrectly / none recommended

7) Received within / outside holding time

8) COC tapes present / not present on samples

9) Discrepancies / NO discrepancies noted between COCs and samples

Additional Comments: _____

*= Note that all Canister samples will be considered disposed of during next cleaning.
For canister samples, please refer to Canister Log Book for details.

R:\Air_Tox\LAB\Lab forms\samplog.xls
Last Revised 5/30/03

ENSR Air Laboratory
325 Ayer Rd
Harvard, MA 01451-1132
Phone: (978) 772-2345
Fax: (978) 772-4956

CHAIN OF CUSTODY RECORD

Client: PROJECT NAME CROW LANE LANDFILL	Project Name: CLIENT OEU	Location: NEWBURYPORT MA
Project Number: 10736-001	Field Logbook No.: 12YSA-21	Chain of Custody Tape No.:
Sampler: (Print Name)/(Affiliation) Signature: KEN COBB / ENSR	Send Results/Report to: [illegible]	Email:

Analysis Requested: 5-HRC (ppm) / CH4 (ppm)

Field Sample No./ Identification	Date	Time	Grab	Comp	Sample Container (Can/Bag)	Canister I.D.	Regulator I.D.	Sample Type (Soil gas/ambient)	5-HRC (ppm)	CH4 (ppm)			Lab I.D.	Remarks
WELL EW1	3/8/06		✓		BAG				X					
WELL FLARE			✓						X					
WELL TEW 2			✓						X					
AMB 1			✓						X					
AMB 2			✓						X					
BACKGROUND			✓						X					

Relinquished by: (print name) Signature: [illegible]	Date: 3/8/06 Time: 1145	Received by: (print name) Signature: [illegible]	Date: Time:
Relinquished by: (print name) Signature:	Date: Time:	Received by: (print name) Signature:	Date: Time:
Relinquished by: (print name) Signature:	Date: Time:	Received for laboratory by: (print name) [illegible] Signature: [illegible]	Date: 3/8/06 Time: 1145

Turn-Around Time:
- [x] Standard 10-day
- [ ] RUSH (only pre-approved jobs guaranteed)

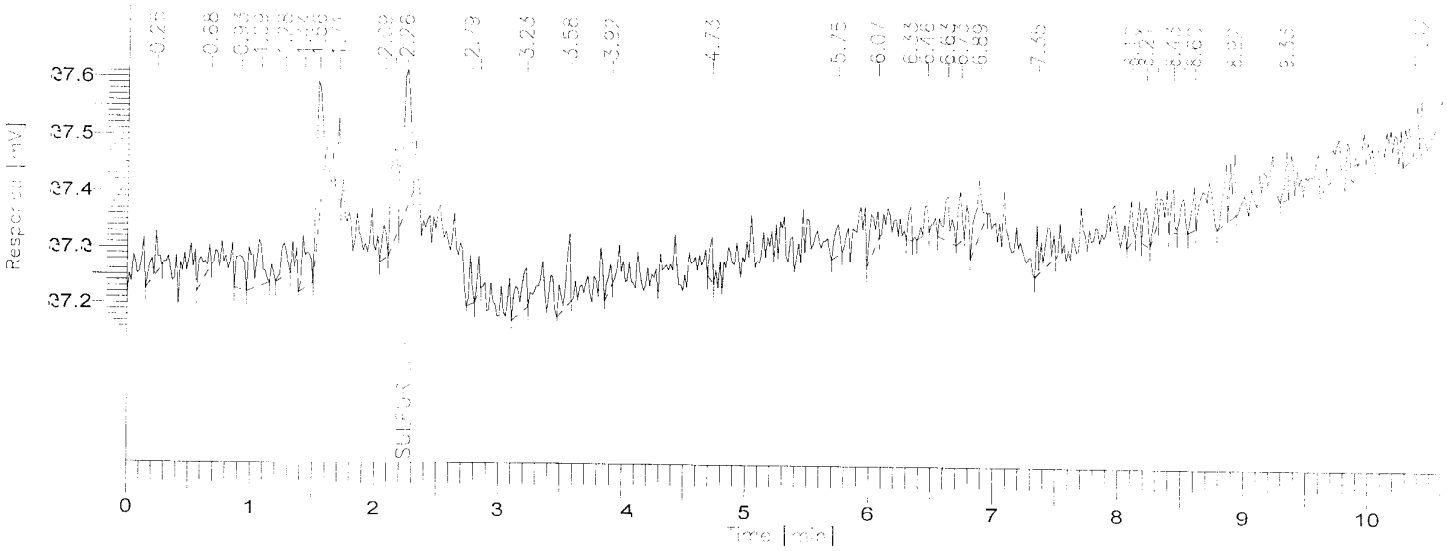
Notes: (i.e., special reporting limits needed, billing information)

M2K0262.1001a

White: Original (to Lab) Yellow: Lab Pink: Sampler

06-061-13 SO2

Software Version: 4.1<2F12>
Date: 3/20/2006 04:13 PM 1.0mL "Background" 06-061-13
Sample Name :
Data File : C:\TC4\DATA2\CRCW013.RAW Date: 3/10/2006 10:23 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 13 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

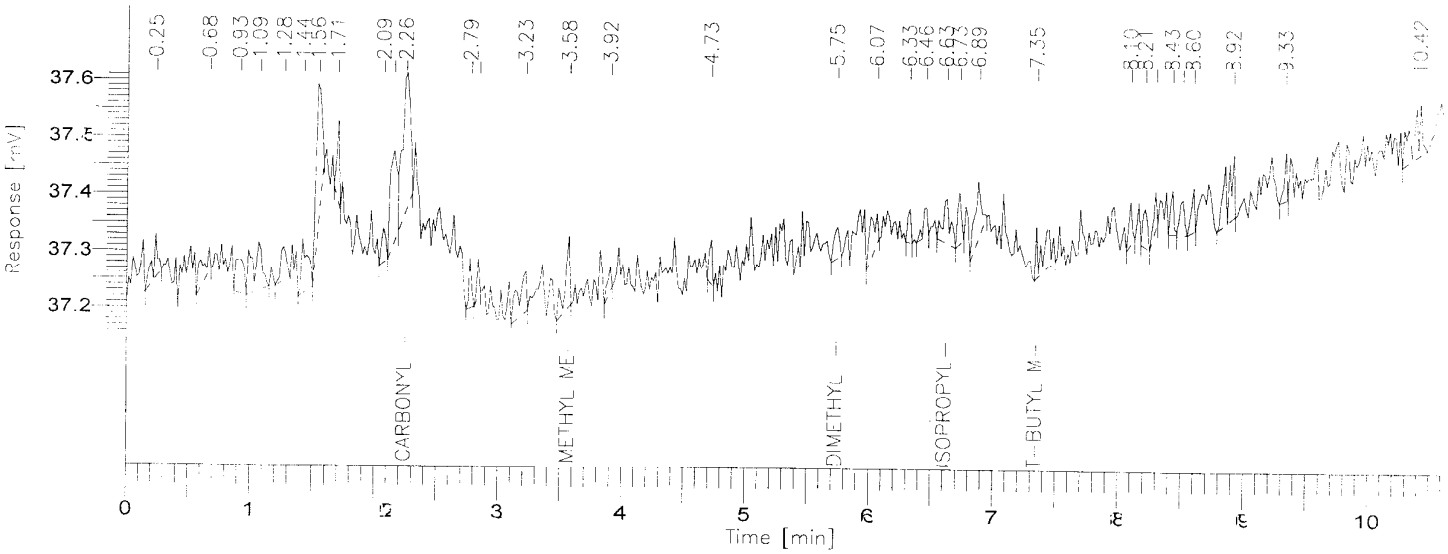
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
2.26	248.07	1056.83	VB	Sulfur Dioxide	-12.38
	248.07	1056.83			-12.38

Tedlar bags for short list TRS

Background SLF3

Software Version: 4.1<2F12>
Date: 3/20/2006 06:10 PM 10ML 06-061-13
Sample Name :
Data File : C:\TC4\DATA2\CROW013.RAW Date: 3/10/2006 10:23 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 13 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

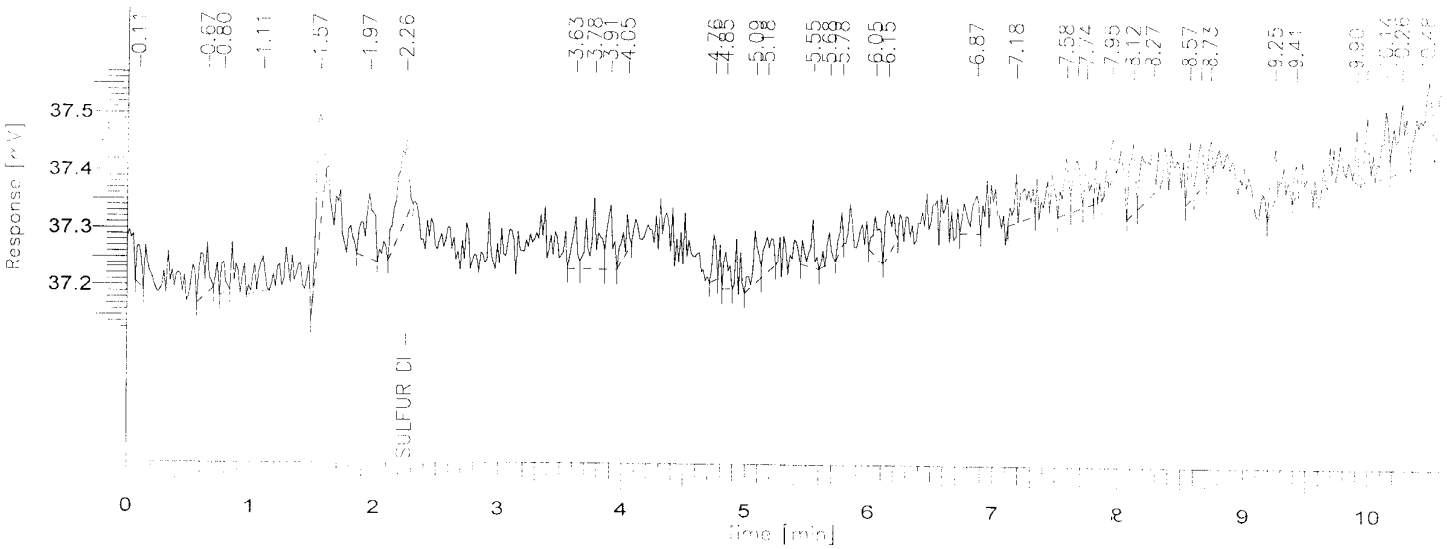
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Weight [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
2.26	248.07	1056.83	VB	Carbonyl sulfide	30.69
	248.07	1056.83			30.69

<RL

Tedlar bags for short list TRS

Software Version: 4.1<2F12>
Date: 3/20/2006 04:14 PM 1.0 mL ~~AB~~ "AMB-1" 06061-11 (N) SO_2
Sample Name :
Data File : C:\TC4\DATA2\CROW014.RAW Date: 3/10/2006 10:39 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 14 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

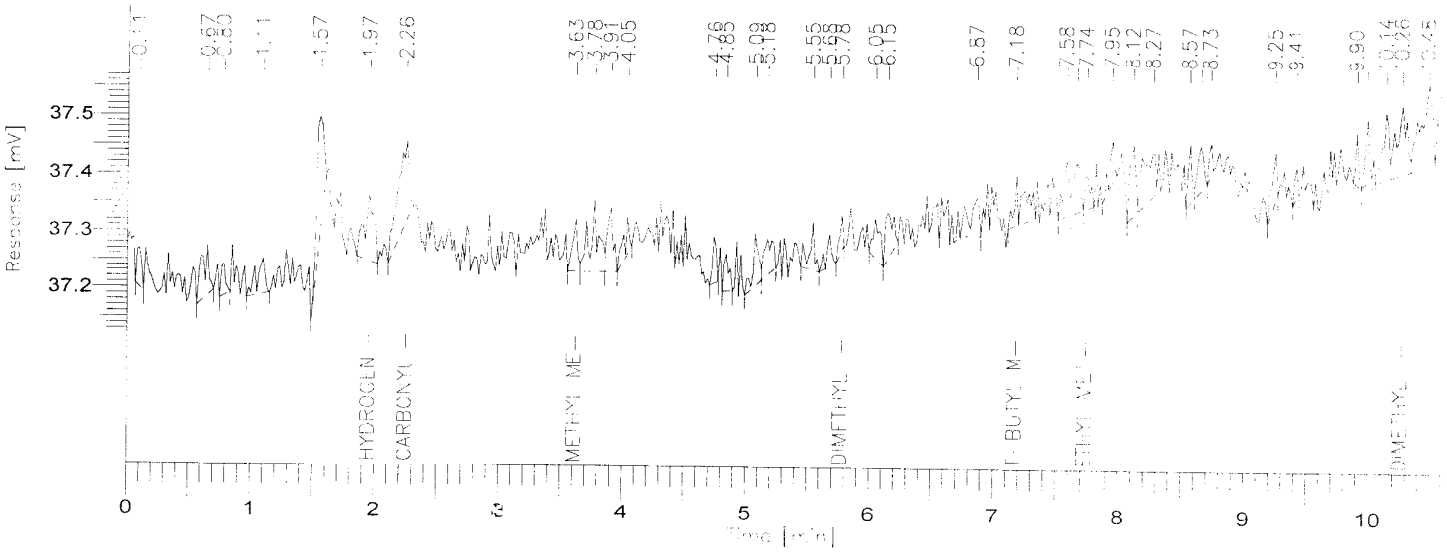
Instrument: HPGC#2	Column: RTX-1 (#118563)	Detector: FPD

No peaks available to report

Tedlar bags for short list TRS

AMB-1 SUTS

ÇSoftware Version: 4.1<2F12> 1.0mL 06-061-11
Date: 3/20/2006 06:11 PM
Sample Name :
Data File : C:\TC4\DATA2\CROW014.RAW Date: 3/10/2006 10:39 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 14 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



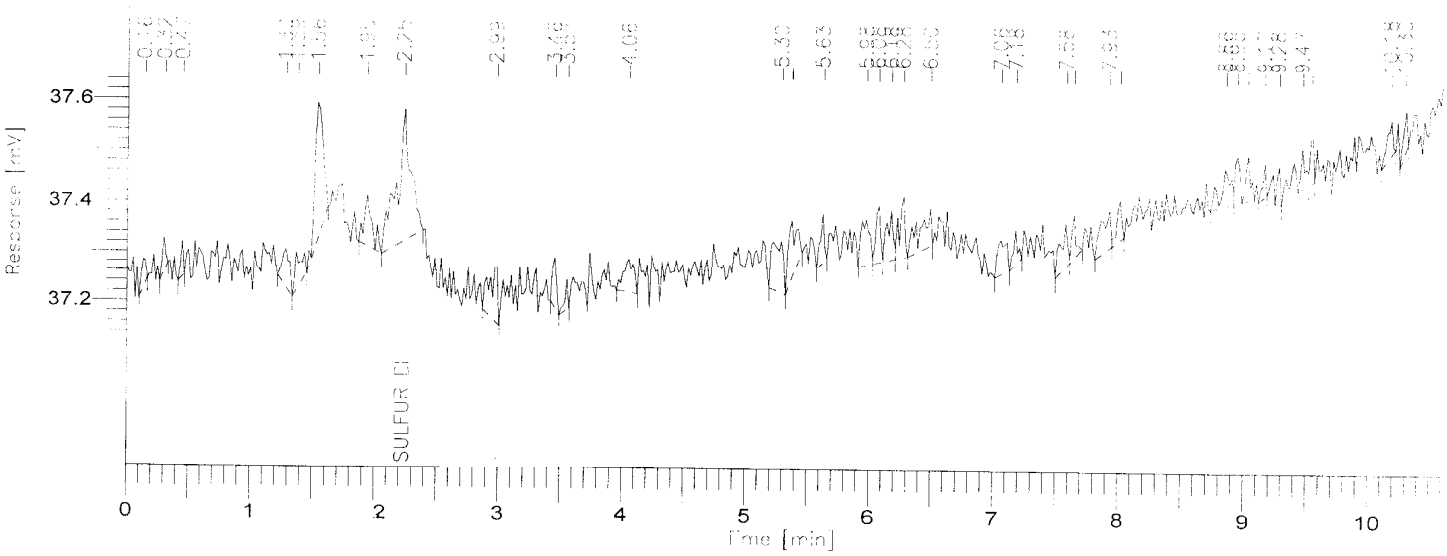
ENSR Air Toxics Specialty Laboratory

==========
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD
==========

No peaks available to report

==========
Tedlar bags for short list TRS
==========

Software Version: 4.1<2F12> 1.0 mL "AMB-2" 06-061-12 SO_2
Date: 3/20/2006 04:15 PM
Sample Name :
Data File : C:\TC4\DATA2\CRCW015.RAW Date: 3/10/2006 10:54 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 15 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

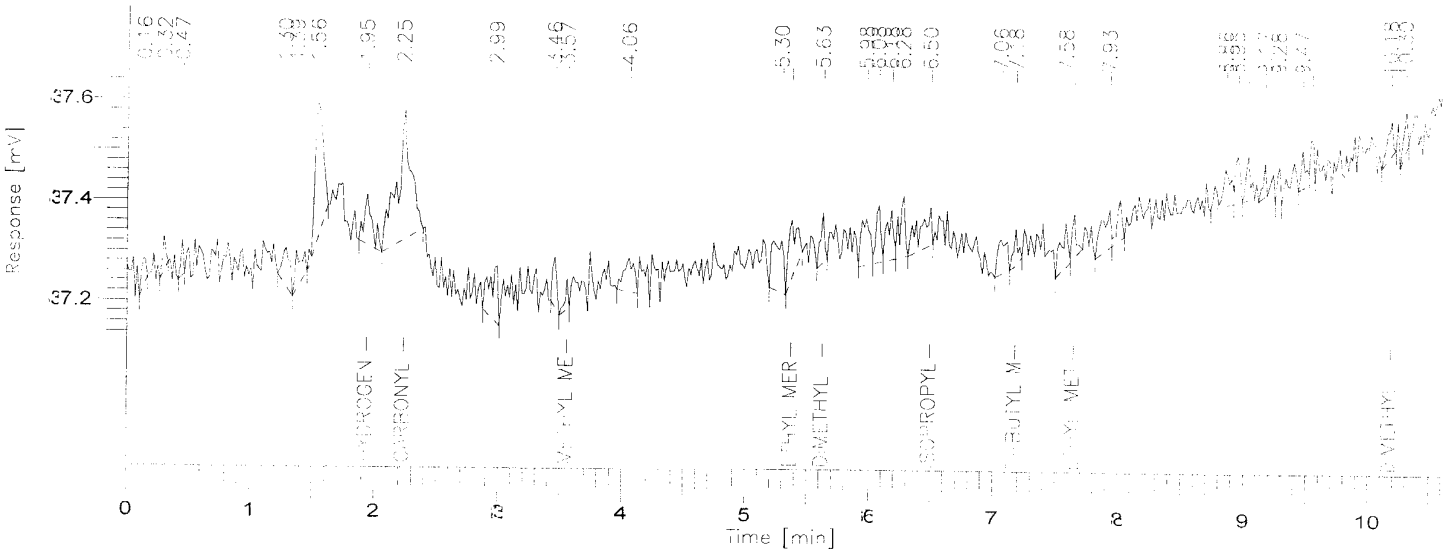
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [µV]	Area [µV·s]	BL	Component Name	Conc µµbV
2.25	260.30	2020.00	BB	Sulfur Dioxide	20.99
	260.30	2020.00			20.99

Tedlar bags for short list TRS

(B) ~~A5~~ AMD-2 SULFS

GC Software Version: 4.1<2F12>
Date: 3/20/2006 06:12 PM 1.0mL 06-061-12
Sample Name :
Data File : C:\TC4\DATA2\CRCW015.RAW Date: 3/10/2006 10:54 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 15 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Weight [uV]	Area [µV·s]	DL	Component Name	Conc ppbV
2.25	260.30	2020.00	BB	Carbonyl sulfide	33.40
	260.30	2020.00			33.40

LRL

Tedlar bags for short list TRS

SO2

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file CSW016. "EW-1" 06061-8

Vdpsoh#Qdph##=#
└Gdwd#Iloh####=#F=_WF7_GDWD5_FURZ3491UDZ###Gdwh=#624325339##44=44#SP
Vhtxhqfh#Iloh=#F=_WF7_GDWD5_363<391VHT###F|foh=#49###Fkdqqho#=#D
Lqvwuxphqw###=#KSJF&5###Udfn2Yldo=#323###Rshudwru=#diruwxqh
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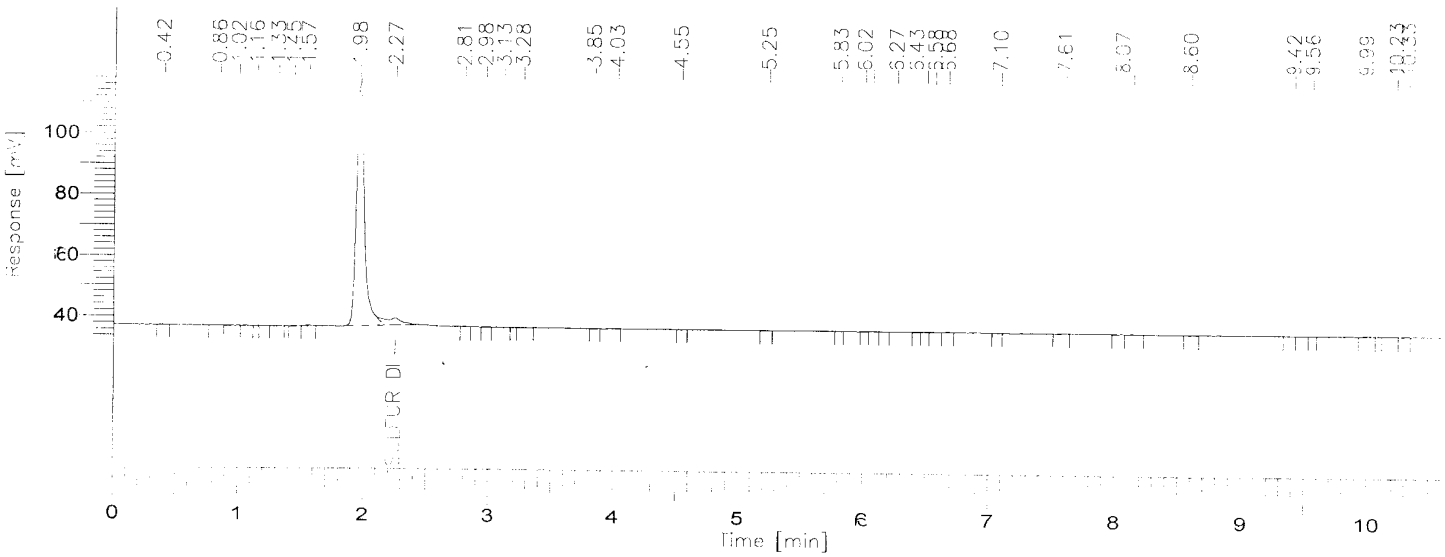


ENSR Air Toxics Specialty Laboratory

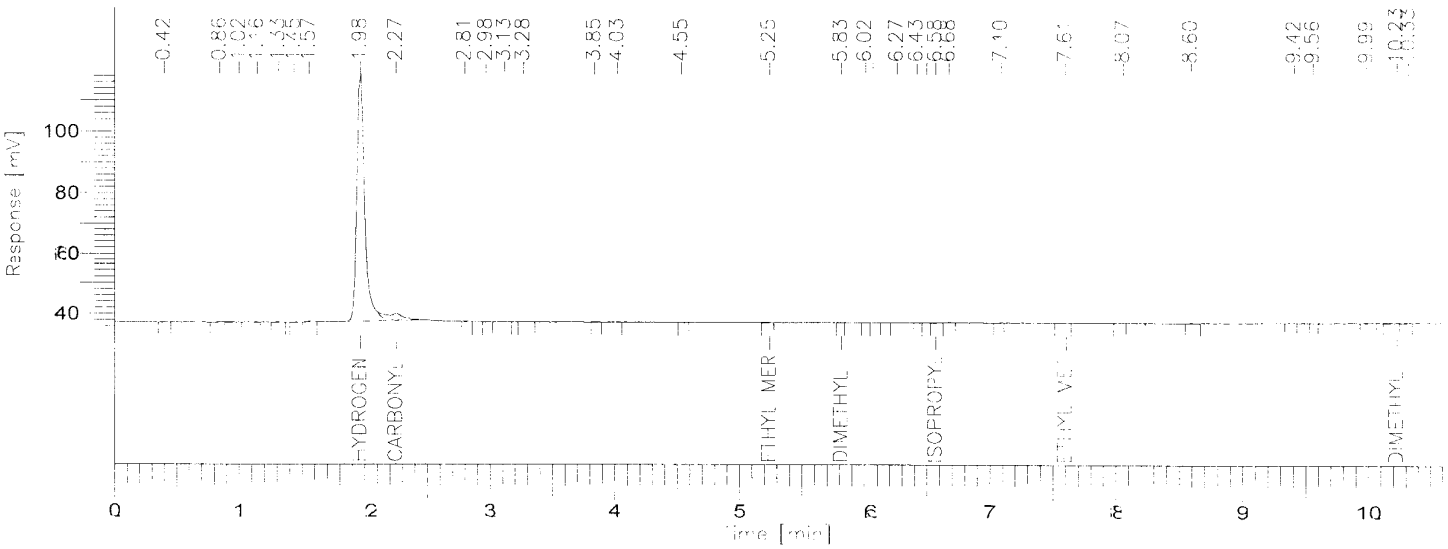
Instrument: HPGC#2 | Column: RTX-1 (#118) | etector: P

Time [min]	Height [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
2.27	2366.90	21409.00	EB	Sulfur Dioxide	161.25
	2366.90	21409.00			161.25

Tedlar bags for short list TRS

EW-1 sulfs

Software Version: 4.1<2F12>
Date: 3/20/2006 06:13 PM 10,020x dil 06-061-8
Sample Name :
Data File : C:\TC4\DATA2\CROW016.RAW Date: 3/10/2006 11:11 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 16 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



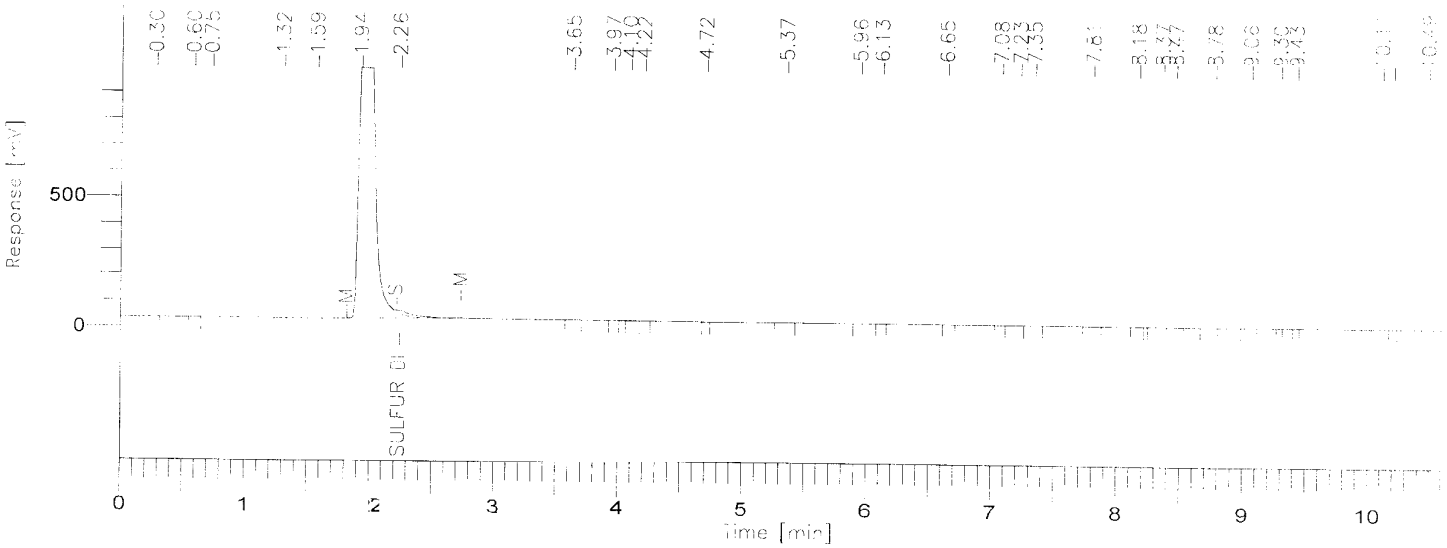
ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Weight [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
1.98	82643.66	355005.50	BB	Hydrogen sulfide	845.96
2.27	2366.90	21409.00	BB	Carbonyl sulfide	83.89
	85010.56	376414.50			929.85

Tedlar bags for short list TRS

Software Version: 4.1<2F12>
Date: 3/20/2006 04:17 PM 5200 x dil "TEW-2" SO 06-061-40
Sample Name :
Data File : C:\TC4\DATA2\CROW017.RAW Date: 3/10/2006 11:27 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 17 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

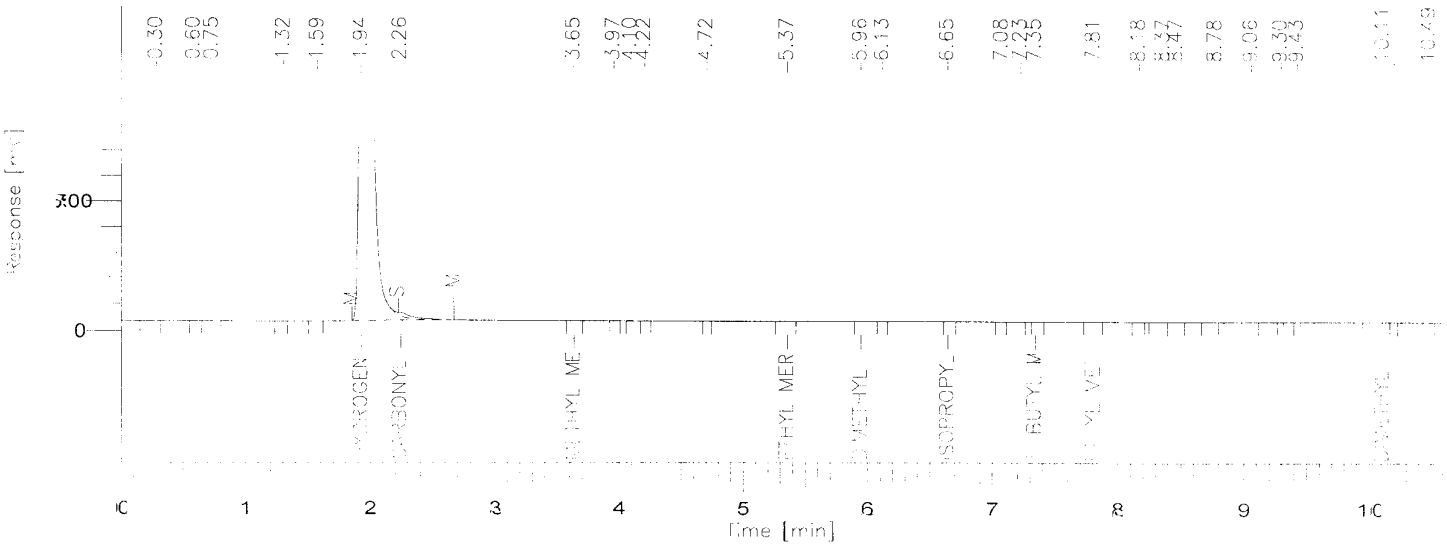
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
2.26	12901.37	160922.00	*EB	Sulfur Dioxide	485.22
	12901.37	160922.00			485.22

Tedlar bags for short list TRS

TEW-2 SULFS

Software Version: 4.1<2F12> 5200 x dil 06-061-10
Date: 3/20/2006 06:14 PM
Sample Name :
Data File : C:\TC4\DATA2\CROW017.RAW Date: 3/10/2006 11:27 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 17 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
1.84	1.01e+06	82853.50	*BE	Hydrogen sulfide	5253.22
2.26	12628.75	144050.00	*EB	Carbonyl sulfide	313.82
	1.03e+06	843838.50			5567.04

Tedlar bags for short list TRS

SO_2

Software Version: 4.1<2F12> 9900 xdil "Flare" 06-061-9

Date: 3/20/2006 04:17 PM

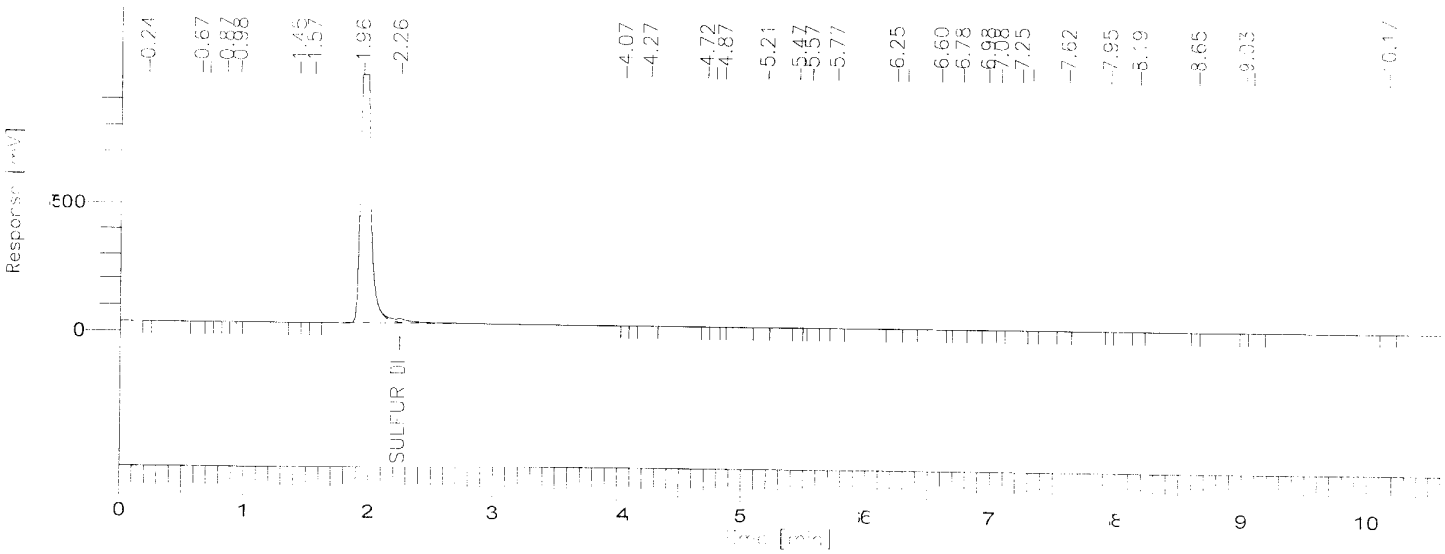
Sample Name :

Data File : C:\TC4\DATA2\CROW018.RAW Date: 3/10/2006 11:46 PM

Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 18 Channel : A

Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune

Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

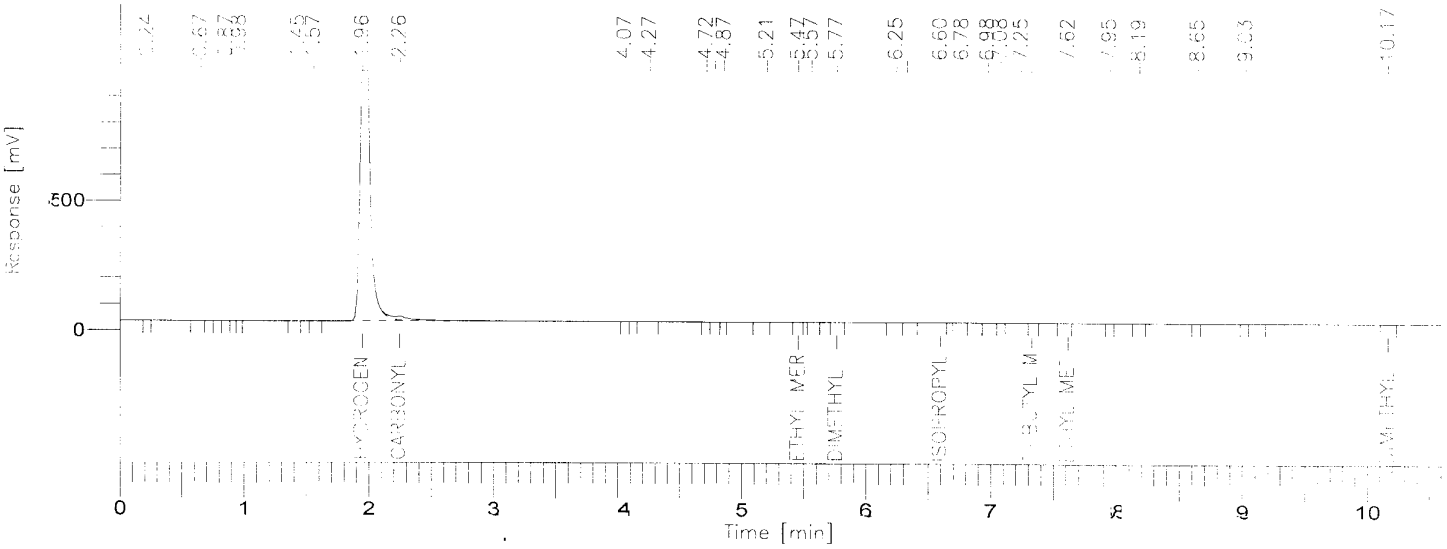
Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [uV]	Area [uV·s]	BL	Component Name	Conc ppbV
2.26	14587.35	169425.00	EB	Sulfur Dioxide	498.44
	14587.35	169425.00			498.44

Tedlar bags for short list TRS

Flare SUB3

= Software Version: 4.1<2F12>
Date: 3/20/2006 06:15 PM 9900x d1 06-061-9
Sample Name :
Data File : C:\TC4\DATA2\CROW018.RAW Date: 3/10/2006 11:46 PM
Sequence File: C:\TC4\DATA2\030906.SEQ Cycle: 18 Channel : A
Instrument : HPGC#2 Rack/Vial: 0/0 Operator: afortune
Sample Amount : 1.0000 Dilution Factor : 1.00



ENSR Air Toxics Specialty Laboratory

Instrument: HPGC#2 | Column: RTX-1 (#118563) | Detector: FPD

Time [min]	Height [uV]	Area [µV·s]	BL	Component Name	Conc ppbV
1.96	1.02e+06	5885747.50	BE	Hydrogen sulfide	4127.41
2.26	14587.35	169425.00	EB	Carbonyl sulfide	351.36
	1.04e+06	6055172.50			4478.77

Tedlar bags for short list TRS