SFUND RECORDS CTR
2033357

Continental Heat Treating 5194

INORGANIC/ORGANIC COMPLETE SDG FILE (CSF) INVENTORY CHECKLIST

Case No. 31519 SDG No. Y0552 SDG Nos. To Follow _____ Date Recvd 4 / 15 / 2003

EPA Lab ID: A4 Scientific

Lab Location: TX

Region: IX Audit No.: 3/03-19

Re-Submitted CSF? Yes ___ No ✓

Box No(s): _____

COMMENTS:

Over for additional comments.

ITEMS	YES	NO	N/A
CUSTODY SEALS			
1. Present on package?	✓		
2. Intact upon receipt?	✓		
FORM DC-2			
3. Numbering scheme accurate?	✓		
4. Are enclosed documents listed?	✓		
5. Are listed documents enclosed?	✓		
FORM DC-1			
6. Present?	✓		
7. Complete?	✓		
8. Accurate?	✓		
CHAIN-OF-CUSTODY RECORD(s)			
9. Signed?	✓		
10. Dated?	✓		
TRAFFIC REPORT(s) PACKING LIST(s)			
11. Signed?	✓		
12. Dated?	✓		
AIRBILLS/AIRBILL STICKER			
13. Present?	✓		
14. Signed?	✓		
15. Dated?	✓		
SAMPLE TAGS			
16. Does DC-1 list tags as being included?		✓	
17. Present?			✓
ALL DOCUMENTS			
18. Activities identified?	✓		
19. Legible?	✓		
20. Original?		✓	
20a. If "NO," does the copy indicate where original documents are located?	✓		

Received by: Bob Freeman, RSCC _____ Date 4/15/2003

Audited by: [signature] SANTIAGO LEE / Data Reviewer Date 5/18/03

Signature Printed Name/Title

TO BE COMPLETED BY CEAT

Date Recvd by CEAT: ___/___/___ Date Entered: ___/___/___ Date Reviewed: ___/___/___

Entered by: _____

Reviewed by: _____ _____

Signature Printed Name/Title

DC-2

LOW CONCENTRATION WATER ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

APR 10 2003

2033357

LABORATORY NAME A4 Scientific Inc
CITY/STATE Woodlands TX
CASE NO. 31579 SDG NO. 40572 SDG NOS. TO FOLLOW N/A
CLIENT NO. N/A
CONTRACT NO. 68-W-01-038
SOW NO. OLC03.2

All documents delivered in the Complete SDG File must be original documents where possible.

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
1. Inventory Sheet (Form DC-2) (Do Not Number)	—	—	—	✓
2. SDG Case Narrative	1	2	—	✓
3. SDG Cover Sheet/Traffic Report	3	4	—	✓
4. Volatiles Data				
a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II LCV)	5	6	—	✓
Matrix Spike/Matrix Spike Duplicate Recovery (Form III LCV) (if Region requests)	~~N/A~~	~~N/A~~	~~N/A~~	
Method Blank Summary (Form IV LCV)	~~10~~ 7	9	—	✓
GC/MS Instrument Performance Check (Form V LCV)	10	13	—	✓
Internal Standard Area and RT Summary (Form VIII LCV)	14	17	—	✓
b. Sample Data				
TCL Results - (Form I LCV-1, LCV-2)			—	✓
Tentatively Identified Compounds (Form I LCV-TIC)			—	✓
Reconstructed Total Ion Chromatograms (RIC) for each sample	18	219	—	✓
For each sample:				
Raw Spectra and background-subtracted mass spectra of target compounds identified			—	✓
Quantitation reports			—	✓
Mass Spectra of all reported TICs with three best library matches			—	✓
c. Standards Data (All Instruments)	220	264		
Initial Calibration Data (Form VI LCV-1, LCV-2, LCV-3)			—	✓
RICs and Quantitation Reports for all Standards			—	✓
Continuing Calibration Data (Form VII LCV-1, LCV-2, LCV-3)			—	✓
RICs and Quantitation Reports for all Standards			—	✓
d. Raw QC Data				
BFB	265	280	—	✓
Blank Data	281	347	—	✓
Matrix Spike/Matrix Spike Duplicate Data (if Region requests)	N/A	N/A	N/A	

CASE NO. 31519 SDG NO. 40512 SDG NOS. TO FOLLOW N/A
CLIENT NO. N/A

	PAGE NOs FROM	PAGE NOs TO	CHECK LAB	CHECK EPA
5. Semivolatiles Data				
a. QC Summary	N/A	N/A	N/A	
Deuterated Monitoring Compound (Form II LCSV)				
MS/MSD Summary (Form III LCSV) (if Region requests)				
Method Blank Summary (Form IV LCSV)				
GC/MS Instrument Performance Check (Form V LCSV)				
Internal Standard Area and RT Summary (Form VIII LCSV)				
b. Sample Data				
TCL Results - (Form I LCSV-1, LCSV-2)				
Tentatively Identified Compounds (Form I LCSV-TIC)				
Reconstructed Total Ion Chromatograms (RIC) for each sample				
For each sample:				
Raw Spectra and background-subtracted mass spectra of target compounds				
Quantitation reports				
Mass Spectra of TICs with three best library matches				
c. Standards Data (All Instruments)				
Initial Calibration Data (Form VI LCSV-1, LCSV-2, LCSV-3)				
RICs and Quantitation Reports for all Standards				
Continuing Calibration Data (Form VII LCSV-1, LCSV-2, LCSV-3)				
RICs and Quantitation Reports for all Standards				
d. Raw QC Data				
DFTPP				
Blank Data				
Matrix Spike/Matrix Spike Duplicate Data (if Region requests)				
6. Pesticides Data				
a. QC Summary				
Surrogate Percent Recovery Summary (Form II LCP)				
MS/MSD Duplicate Summary (Form III LCP-1) (if Region requests)				
Laboratory Control Sample Recovery (Form III LCP-2)				
Method Blank Summary (Form IV LCP)				
b. Sample Data				
TCL Results - Organic Analysis Data Sheet (Form I LCP)				
Chromatograms (Primary Column)				
Chromatograms from second GC column confirmation				
GC Integration report or data system printout				
Manual work sheets				

CASE NO. 31519 SDG NO. 40552 SDG NOS. TO FOLLOW N/A
CLIENT NO. N/A

	PAGE NOs FROM	TO	CHECK LAB	EPA
6. Pesticides Data (Con't)				
c. Standards Data	N/A	N/A	N/A	
Initial Calibration of Single Component Analytes (Form VI LCP-1 and LCP-2)				
Initial Calibration of Multicomponent Analytes (Form VI LCP-3)				
Analyte Resolution Summary (Form VI LCP-4)				
Performance Evaluation Mixture (Form VI LCP-5)				
Individual Standard Mixture A (Form VI LCP-6)				
Individual Standard Mixture B (Form VI LCP-7)				
Calibration Verification Summary (Form VII LCP-1)				
Calibration Verification Summary (Form VII LCP-2)				
Analytical Sequence (Form VIII LCP)				
Florisil Cartridge Check (Form IX LCP)				
Pesticide Identification Summary for Single Component Analytes (Form X LCP-1)				
Pesticide Identification Summary for Multicomponent Analytes (Form X LCP-2)				
Chromatograms and data system printouts				
A printout of retention times and corresponding peak areas or peak heights				
d. Raw QC Data				
Blank Data				
Matrix Spike/Matrix Spike Duplicate Data (if Region requests)				
Laboratory Control Sample Data				
e. Raw Florisil Data				
7. Miscellaneous Data				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	348	363	✓	✓
Internal sample and sample extract transfer chain-of-custody records	N/A	N/A	N/A	
Screening records				
All instrument output, including strip charts from screening activities (describe or list)				

LOW CONCENTRATION WATER ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET (Con't)

CASE NO. 31519 SDG NO. 40552 SDG NOS. TO FOLLOW N/A
CLIENT NO. N/A

	PAGE NOs FROM	TO	CHECK LAB	EPA
8. EPA Shipping/Receiving Documents				
Airbills (No. of shipments 1)	364	364	—	✓
Chain-of-Custody Records	365	365	—	✓
Sample Tags	N/A	N/A	N/A	
Sample Log-in Sheet (Lab & DC1)	366	367	—	✓
Miscellaneous Shipping/Receiving Records (describe or list)				
Shipping & custody seals	368	369	—	✓
9. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
cooler - Log	370	370	—	✓
10. Other Records (describe or list)				
Telephone Communication Log				
A-S 04/09/03				

11. Comments:

Completed by: (CLP Lab) [signature] (Signature) SHYAM. A / Q Coordinator (Printed Name/Title) 04/09/03 (Date)

Verified by: (CLP Lab) [signature] (Signature) JASON LAM / GC Analyst (Printed Name/Title) 4/9/03

Audited by: (EPA) [signature] (Signature) SANTIAGO LEE / Data Reviewer (Printed Name/Title) 5/8/03 (Date)

A4 SCIENTIFIC, INC.
1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

APR 1 0 2003

Contract #: 68W01038	Case #: 31519	SDG #: Y0SJ2

SDG NARRATIVE

SAMPLE RECEIPT & LOGIN

The following samples were received on the dates listed against them. The samples were logged in for analysis as listed.

EPA SAMPLE #	LAB SAMPLE #	DATE /TIME RECEIVED	AIRBILL NO.	VOA	BNA	PEST	REMARKS
Y0SJ2	2762.002	03/20/03 10:35	835859426446	x			
Y0SJ3	2762.003	03/20/03 10:35	835859426446	x			
Y0SJ4	2762.004	03/20/03 10:35	835859426446	x			
Y0SJ5	2762.005	03/20/03 10:35	835859426446	x			

The cooler temperature was 3°C. No other discrepancies or issues were noted during sample receipt and login.

VOLATILES

Samples were analyzed using instrument **C-5973** and/or **E-5973**.

Instrument **C-5973** consisted of an Agilent 5973 GC/MS with a 25-meter long DB-624 (Agilent cat# 128-1324) column having a 0.2mm ID and 1.12µm film thickness, an OI Analytical Purge and Trap Model 4560 with an Archon autosampler. The trap used is a K trap (Supelco Cat # 24940-U; VOCARB 3000) having 10cm of Carbopack B, 6cm of Carboxen 1000, and 1cm of Carboxen 1001.

Instrument **E-5973** consisted of an Agilent 5973 GC/MS with a 25-meter long DB-624 (Agilent cat# 128-1324) column having a 0.2mm ID and 1.12µm film thickness, a Tekmar Purge and Trap Model LSC2000 with an Archon autosampler. The trap used was a K trap (Supelco Cat # 21066-U; VOCARB 3000) having 10cm of Carbopack B, 6cm of Carboxen 1000, and 1cm Carboxen 1001.

Secondary ions are used for the quantitation of 1,1-Dichloroethene-d_2, Chloroform-d, and 2-Hexanone-d_5 to minimize the interferences from the associated target compounds and common non-target compounds.

TICs at the RT of 7.8 min on instrument E and at the RT of 7.8 min on the instrument C are contaminants. Per Cambridge Isotope Limited (suppliers) these are artifacts from the non-ketone surrogates. The concentrations of these compounds range between 2µg/L to 4µg/L.

All VOA samples had the pH characteristic verified. The reading is listed below.

EPA SAMPLE #	LAB SAMPLE #	pH
Y0SJ2	2762.002	≤ 2
Y0SJ3	2762.003	≤ 2
Y0SJ4	2762.004	≤ 2
Y0SJ5	2762.005	≤ 2

A4 SCIENTIFIC, INC.

1544 Sawdust Road, Suite 505 • The Woodlands, TX 77380 • Phone (281) 292-5277

Contract #: 68W01038	Case #: 31519	SDG #: Y0SJ2

SDG NARRATIVE

The estimated total concentrations of alkanes by type are listed below.

EPA Sample #	Lab Sample #	Straight Chain (µg/L)	Branched (µg/L)	Cyclic (µg/L)
Y0SJ2	2762.002		13.91	241.67
Y0SJ2DL	2762.002DL		0.83	17.2
Y0SJ3	2762.003		12.79	218.58
Y0SJ3DL	2762.003DL		0.5	5.87
Y0SJ4	2762.004		0.67	

The samples Y0SJ2,Y0SJ3 AND Y0SJ4 were analyzed at a dilution to get all the compounds with in the range.

Manual integrations were performed for the following samples for the compounds listed against them.

Y0SJ2 – Xylene(total)
Y0SJ3 – Xylene(total)
Y0SJ4 – Xylene(total)

These manual integrations were necessary because the software failed to accurately integrate the entire peak. In all the above instances, the quantitation reports are flagged with "m". A hard copy printout of the manual integration, the scan ranges, and initials of the analyst or manager is included in the data package.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package and in the computer readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature:

QC coordinator — Signature and Title

04/09/03 — Date of Signature

Sample Delivery Group (SDG)
Cover Sheet

SDG Number: **Y0SJ2**

Laboratory Name: **A4 Scientific, Inc.**

Laboratory Code: **A4**

Contract No.: **68W01038**

Case No.: **31519**

Analysis Price: **$ 390.00**

SDG Turnaround: **21 days**

EPA Sample Numbers in SDG (Listed in Numerical Order)

1) Y0SJ2	7)	13)	19)
2) Y0SJ3	8)	14)	20)
3) Y0SJ4	9)	15)	21)
4) Y0SJ5	10)	16)	22)
5)	11)	17)	23)
6)	12)	18)	24)

Y0SJ2	**Y0SJ5**
First Sample in SDG	Last Sample in SDG
03/20/03	03/20/03
First Sample Receipt Date	Last Sample Receipt Date

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TRs to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date 03/24/03

(2)

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 31519
DAS No:
SDG No: Y0SJ2

L

Date Shipped:	3/19/2003
Carrier Name:	FedEx
Airbill:	835859426446
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: [signature]

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [signature]	3-19-03 1600	Federal Express	3-19-03 1600
2		[signature]	3/20/03 10:35
3			
4			

For Lab Use Only

Lab Contract No:	68-W-01-038
Unit Price:	$390.00
Transfer To:	
Lab Contract No:	A-S 03/21/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
Y0SJ2	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) ~~(8)~~ (3)	CHT-GW-1	S: 3/19/2003	14:30	MY0SJ2	Intact 1 Ex
Y0SJ3	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) (3)	CHT-GW-3	S: 3/19/2003	14:40	MY0SJ3	
Y0SJ4	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) (3)	CHT-GW-2	S: 3/19/2003	11:52	MY0SJ4	
Y0SJ5	Ground Water/ Amanda Cohan	L/G	VOA (21)	(HCL) (3)	CHT-GW-4	S: 3/19/2003	15:30	MY0SJ5	Lab Ex

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:
	Y0SJ2	[signature]	3°C	

Analysis Key: VOA = CLP TCL Volatiles

Concentration: L = Low, M = Low/Medium, H = High **Type/Designate:** Composite = C, Grab = G

Custody Seal Intact? Y **Shipment Iced?** Y

TR Number: 9-233994445-031903-0004

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

2LCA

LOW CONCENTRATION WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLK4N	105	106	106	120	100	103	107
02	Y0SJ2DL	84	86	85	133	85	89	88
03	Y0SJ3DL	100	105	99	118	104	107	107
04	Y0SJ5	105	112	111	113	113	115	119
05	Y0SJ4DL	88	93	95	122	93	96	93
06	VBLK4P	104	106	110	110	101	96	107
07	Y0SJ2	94	104	108	104	101	123	114
08	VIBLK01	104	106	102	107	98	87	106
09	Y0SJ3	100	112	111	143	103	107	123 *
10	VIBLK02	99	102	92	107	95	83	108
11	Y0SJ4	94	91	99	111	96	85	111
12	VBLK4U	94	97	99	93	95	96	105
13	VHBLK01	106	115	123	101	118	119	117
14								
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16								
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30								

			QC LIMITS
VDMC1	(VCL)	= Vinyl Chloride-d3	(49-138)
VDMC2	(CLA)	= Chloroethane-d5	(60-126)
VDMC3	(DCE)	= 1,1-Dichloroethene-d2	(65-130)
VDMC4	(BUT)	= 2-Butanone-d5	(42-171)
VDMC5	(CLF)	= Chloroform-d	(80-123)
VDMC6	(DCA)	= 1,2-Dichloroethane-d4	(78-129)
VDMC7	(BEN)	= Benzene-d6	(78-121)

Column to be used to flag recovery values

* Values outside of contract required QC limits

2LCB

LOW CONCENTRATION WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (BRF) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT OUT
01	VBLK4N	91	106	101	112	93	102	109	0
02	Y0SJ2DL	104	89	95	110	77	86	87	0
03	Y0SJ3DL	109	108	117	100	104	112	107	0
04	Y0SJ5	101	116	116	99	103	116	116	0
05	Y0SJ4DL	79D	87	90	90	78	90	91	0
06	VBLK4P	90	103	98	101	94	92	102	0
07	Y0SJ2	106	157 *	144 *	110	75 *	98	102	3
08	VIBLK01	89	105	100	98	87	97	105	0
09	Y0SJ3	103	145 *	199 *	148	80	97	109	3
10	VIBLK02	93	109	105	99	89	105	109	0
11	Y0SJ4	93	107	100	108	85	96	102	0
12	VBLK4U	89	104	102	89	103	103	104	0
13	VHBLK01	100	110	112	86	97	111	110	0
14									
15									
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30									

			QC LIMITS
VDMC8	(DPA)	= 1,2-Dichloropropane-d6	(84-123)
VDMC9	(TOL)	= Toluene-d8	(77-120)
VDMC10	(TDP)	= trans-1,3-Dichloropropene-d4	(80-128)
VDMC11	(HEX)	= 2-Hexanone-d5	(37-169)
VDMC12	(BRF)	= Bromoform-d	(76-135)
VDMC13	(TCA)	= 1,1,2,2-Tetrachloroethane-d2	(75-131)
VDMC14	(DCZ)	= 1,2-Dichlorobenzene-d4	(50-150)

Column to be used to flag recovery values

* Values outside of contract required QC limits

4LCA
LOW CONCENTRATION WATER
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK4U

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4U Date Analyzed: 04/02/2003

Lab File ID: E4110 Time Analyzed: 1138

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLE ANALYSES:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	2762.001	E4116	1540
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
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COMMENTS _____

4LCA
LOW CONCENTRATION WATER
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK4N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4N Date Analyzed: 03/27/2003

Lab File ID: E4010 Time Analyzed: 0939

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLE ANALYSES:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	Y0SJ2DL	2762.002DL	E4018	1556
02	Y0SJ3DL	2762.003DL	E4019	1636
03	Y0SJ5	2762.005	E4020	1716
04	Y0SJ4DL	2762.004DL	E4021	1757
05				
06				
07				
08				
09				
10				
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12				
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COMMENTS _____

4LCA
LOW CONCENTRATION WATER
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VBLK4P

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4P Date Analyzed: 03/28/2003

Lab File ID: E4042 Time Analyzed: 1300

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLE ANALYSES:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	Y0SJ2	2762.002	E4043	1341
02	VIBLK01	EVIBLK01	E4044	1505
03	Y0SJ3	2762.003	E4045	1626
04	VIBLK02	VIBLK02	E4046	1708
05	Y0SJ4	2762.004	E4047	1820
06				
07				
08				
09				
10				
11				
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13				
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COMMENTS _____

5LCA

LOW CONCENTRATION WATER VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No. 31519 Client No: SDG No.: Y0SJ2

Lab File ID: E4001 BFB Injection Date: 03/26/2003

Instrument ID: E-5973 BFB Injection Time: 1752

GC Column: DB-624 ID: 0.20 (MM) Column Length: 25 (M)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	13.0
75	30.0 - 66.0% of mass 95	43.8
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.3 (0.3)1
174	50.0 - 120.0% of mass 95	83.0
175	4.0 - 9.0% of mass 174	6.3 (7.6)1
176	93.0 - 101.0% of mass 174	80.6 (97.1)1
177	5.0 - 9.0% of mass 176	5.5 (6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0254M	EVSTD0254M	E4002	03/26/2003	1819
02	VSTD0104M	EVSTD0104M	E4003	03/26/2003	1900
03	VSTD0054M	EVSTD0054M	E4004	03/26/2003	1940
04	VSTD0014M	EVSTD0014M	E4005	03/26/2003	2021
05	VSTD0.54M	EVSTD0.54M	E4006	03/26/2003	2101
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5LCA

LOW CONCENTRATION WATER VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No. 31519 Client No: SDG No.: Y0SJ2

Lab File ID: E4008 BFB Injection Date: 03/27/2003

Instrument ID: E-5973 BFB Injection Time: 0753

GC Column: DB-624 ID: 0.20 (MM) Column Length: 25 (M)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	13.4
75	30.0 - 66.0% of mass 95	43.9
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.5 (0.6)1
174	50.0 - 120.0% of mass 95	84.6
175	4.0 - 9.0% of mass 174	6.0 (7.1)1
176	93.0 - 101.0% of mass 174	81.7 (96.6)1
177	5.0 - 9.0% of mass 176	5.6 (6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0054N	EVSTD0054N	E4009	03/27/2003	0859
02	VBLK4N	EVBLK4N	E4010	03/27/2003	0939
03	Y0SJ2DL	2762.002DL	E4018	03/27/2003	1556
04	Y0SJ3DL	2762.003DL	E4019	03/27/2003	1636
05	Y0SJ5	2762.005	E4020	03/27/2003	1716
06	Y0SJ4DL	2762.004DL	E4021	03/27/2003	1757
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5LCA

LOW CONCENTRATION WATER VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No. 31519 Client No: SDG No.: Y0SJ2

Lab File ID: E4040 BFB Injection Date: 03/28/2003

Instrument ID: E-5973 BFB Injection Time: 0946

GC Column: DB-624 ID: 0.20 (MM) Column Length: 25 (M)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	12.4
75	30.0 - 66.0% of mass 95	41.0
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	50.0 - 120.0% of mass 95	80.7
175	4.0 - 9.0% of mass 174	5.7 (7.1)1
176	93.0 - 101.0% of mass 174	78.7 (97.5)1
177	5.0 - 9.0% of mass 176	5.8 (7.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0054P	EVSTD0054P	E4041	03/28/2003	1150
02	VBLK4P	EVBLK4P	E4042	03/28/2003	1300
03	Y0SJ2	2762.002	E4043	03/28/2003	1341
04	VIBLK01	EVIBLK01	E4044	03/28/2003	1505
05	Y0SJ3	2762.003	E4045	03/28/2003	1626
06	VIBLK02	VIBLK02	E4046	03/28/2003	1708
07	Y0SJ4	2762.004	E4047	03/28/2003	1820
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5LCA

LOW CONCENTRATION WATER VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No. 31519 Client No: SDG No.: Y0SJ2

Lab File ID: E4108 BFB Injection Date: 04/02/2003

Instrument ID: E-5973 BFB Injection Time: 0910

GC Column: DB-624 ID: 0.20 (MM) Column Length: 25 (M)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	13.3
75	30.0 - 66.0% of mass 95	42.7
95	Base peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.5 (0.6)1
174	50.0 - 120.0% of mass 95	86.8
175	4.0 - 9.0% of mass 174	6.3 (7.2)1
176	93.0 - 101.0% of mass 174	84.2 (97.0)1
177	5.0 - 9.0% of mass 176	5.3 (6.2)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0054U	EVSTD0054U	E4109	04/02/2003	1017
02	VBLK4U	EVBLK4U	E4110	04/02/2003	1138
03	VHBLK01	2762.001	E4116	04/02/2003	1540
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8LCA

LOW CONCENTRATION WATER VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

EPA SAMPLE No.(VSTD005##): VSTD0054M Date Analyzed: 03/26/2003

Lab File ID (Standard): E4004 Time Analyzed: 1940

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	1060903	10.32	1332727	6.30	387145	13.19
	UPPER LIMIT	1485264	10.65	1865817	6.63	542002	13.52
	LOWER LIMIT	636541	9.99	799636	5.97	232286	12.86
	EPA SAMPLE No.						
01	VSTD0254M	1139486	10.31	1304903	6.30	458088	13.19
02	VSTD0104M	934064	10.32	1138656	6.30	372246	13.19
03	VSTD0014M	856245	10.32	1097472	6.30	310961	13.19
04	VSTD0.54M	876806	10.32	1125994	6.31	302861	13.19
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +40% of internal standard area.
AREA LOWER LIMIT = -40% of internal standard area.
RT UPPER LIMIT = +0.33 minutes of internal standard RT.
RT LOWER LIMIT = -0.33 minutes of internal standard RT.

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

8LCA

LOW CONCENTRATION WATER VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

EPA SAMPLE No.(VSTD005##): VSTD0054N Date Analyzed: 03/27/2003

Lab File ID (Standard): E4009 Time Analyzed: 0859

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	957384	10.32	1192885	6.31	325392	13.19
	UPPER LIMIT	1340337	10.65	1670039	6.64	455548	13.52
	LOWER LIMIT	574430	9.99	715731	5.98	195235	12.86
	EPA SAMPLE No.						
01	VBLK4N	917698	10.32	1146896	6.31	315417	13.19
02	Y0SJ2DL	812337	10.32	1028037	6.31	283781	13.19
03	Y0SJ3DL	990022	10.33	1248383	6.31	346192	13.19
04	Y0SJ5	1031488	10.32	1343415	6.31	370794	13.19
05	Y0SJ4DL	689455	10.33	882096	6.30	250550	13.19
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +40% of internal standard area.
AREA LOWER LIMIT = -40% of internal standard area.
RT UPPER LIMIT = +0.33 minutes of internal standard RT.
RT LOWER LIMIT = -0.33 minutes of internal standard RT.

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

8LCA

LOW CONCENTRATION WATER VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

EPA SAMPLE No.(VSTD005##): VSTD0054P Date Analyzed: 03/28/2003

Lab File ID (Standard): E4041 Time Analyzed: 1150

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	868164	10.33	1121090	6.31	292240	13.19
	UPPER LIMIT	1215429	10.66	1569526	6.64	409135	13.52
	LOWER LIMIT	520898	10.00	672654	5.98	175343	12.86
	EPA SAMPLE No.						
01	VBLK4P	741735	10.32	999749	6.30	235180	13.19
02	Y0SJ2	1059664	10.31	1258075	6.30	401842	13.19
03	VIBLK01	958610	10.32	1256981	6.31	335442	13.19
04	Y0SJ3	897723	10.31	1188258	6.30	333879	13.19
05	VIBLK02	1112651	10.32	1489419	6.30	392971	13.19
06	Y0SJ4	997384	10.31	1410706	6.30	353389	13.19
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +40% of internal standard area.
AREA LOWER LIMIT = -40% of internal standard area.
RT UPPER LIMIT = +0.33 minutes of internal standard RT.
RT LOWER LIMIT = -0.33 minutes of internal standard RT.

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

8LCA

LOW CONCENTRATION WATER VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

EPA SAMPLE No.(VSTD005##): VSTD0054U Date Analyzed: 04/02/2003

Lab File ID (Standard): E4109 Time Analyzed: 1017

Instrument ID: E-5973

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

		IS1(CBZ) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(DCB) AREA #	RT #
	12 HOUR STD	755795	10.32	943070	6.30	268487	13.19
	UPPER LIMIT	1058113	10.65	1320298	6.63	375881	13.52
	LOWER LIMIT	453477	9.99	565842	5.97	161092	12.86
	EPA SAMPLE No.						
01	VBLK4U	714456	10.32	924756	6.31	237615	13.19
02	VHBLK01	587075	10.31	774557	6.30	210544	13.19
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IS1 (CBZ) = Chlorobenzene-d5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +40% of internal standard area.
AREA LOWER LIMIT = -40% of internal standard area.
RT UPPER LIMIT = +0.33 minutes of internal standard RT.
RT LOWER LIMIT = -0.33 minutes of internal standard RT.

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

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ2

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002 Date Received: 03/20/2003

Lab File ID: E4043 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.15	J
75-01-4	Vinyl Chloride	1.1	
74-83-9	Bromomethane	0.45	J
75-00-3	Chloroethane	0.28	J
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	29	E
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	33	
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	2.2	
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	4.6	
156-59-2	cis-1,2-Dichloroethene	90	E
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.30	JB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	43	E
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.74	
107-06-2	1,2-Dichloroethane	0.50	U

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

Y0SJ2

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002 Date Received: 03/20/2003

Lab File ID: E4043 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	2.2	
108-87-2	Methylcyclohexane	140	E
78-87-5	1,2-Dichloropropane	4.7	
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.1	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	3.7	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	14	
1330-20-7	Xylene (total)	1.4	
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.21	JB
98-82-8	Isopropylbenzene	22	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ2

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002 Date Received: 03/20/2003

Lab File ID: E4043 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 6

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01		UNKNOWN	8.42	3.8	J
02	000694-72-4	Pentalene, octahydro-	10.47	5.0	JN
03	000103-65-1	Benzene, propyl-	12.26	22	JN
04	000135-98-8	Benzene, (1-methylpropyl)-	13.02	5.0	JN
05	000496-11-7	Indane	13.45	21	JN
06	000767-58-8	Indan, 1-methyl-	13.96	8.5	JN
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Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 11:16:53 2003

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

KCR 04/03/03

SP 4/04/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1258075	5.00	ug/L	-0.01
28) Chlorobenzene-d5	10.31	117	1059664	5.00	ug/L	-0.01
60) 1,4-Dichlorobenzene-d4	13.19	152	401842	5.00	ug/L	0.00

System Monitoring Compounds						
4) Vinyl Chloride-d3	2.13	65	461906	4.71	ug/L	-0.02
Spiked Amount 5.000	Range 49 - 138		Recovery	=	94.20%	
7) Chloroethane-d5	2.52	69	433806	5.21	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 126		Recovery	=	104.20%	
10) 1,1-Dichloroethene-d2	3.24	65	230380	5.40	ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery	=	108.00%	
20) 2-Butanone-d5	4.86	46	46564	5.18	ug/L	-0.01
Spiked Amount 5.000	Range 42 - 171		Recovery	=	103.60%	
24) Chloroform-d	5.23	86	502288	5.05	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 123		Recovery	=	101.00%	
26) 1,2-Dichloroethane-d4	5.80	65	345362	6.17	ug/L	-0.01
Spiked Amount 5.000	Range 78 - 129		Recovery	=	123.40%	
32) Benzene-d6	5.84	84	2602765	5.70	ug/L	-0.01
Spiked Amount 5.000	Range 78 - 121		Recovery	=	114.00%	
35) 1,2-Dichloropropane-d6	6.79	67	667789	5.32	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	=	106.40%	
41) Toluene-d8	8.20	98	3435870	7.84	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	=	156.80%#	
43) trans-1,3-Dichloropropene-	8.53	79	109462	7.18	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	=	143.60%#	
47) 2-Hexanone-d5	9.12	46	92365	5.51	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	=	110.20%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	210865	4.91	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	=	98.20%	
61) Bromoform-d	11.51	174	104155	3.77	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	=	75.40%#	
65) 1,2-Dichlorobenzene-d4	13.54	152	468684	5.09	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	=	101.80%	

Target Compounds						Qvalue
3) Chloromethane	2.02	50	44768	0.15	ug/L #J	42
5) Vinyl Chloride	2.14	62	233043	1.09	ug/L	99
6) Bromomethane	2.45	94	12188	0.45	ug/L #J	76
8) Chloroethane	2.55	64	33676	0.28	ug/L J	90
11) 1,1-Dichloroethene	3.26	96	3144955	28.52	ug/L #E	58
13) Acetone	3.28	43	211060	33.45	ug/L #E	61
17) trans-1,2-Dichloroethene	3.95	96	247193	2.16	ug/L	94
19) 1,1-Dichloroethane	4.35	63	833575	4.64	ug/L	100
21) cis-1,2-Dichloroethene	4.92	96	9115655	89.54	ug/L E	98
25) Chloroform	5.25	83	49376	0.30	ug/L JB	96
30) Cyclohexane	5.57	56	9549266	43.47	ug/L #E	67
33) Benzene	5.89	78	374302	0.74	ug/L	100
34) Trichloroethene	6.63	95	244420	2.20	ug/L	99
36) Methylcyclohexane	6.90	83	31877357	135.44	ug/L E	92
37) 1,2-Dichloropropane	6.90	63	475127	4.72	ug/L #	1
42) Toluene	8.29	91	596248	1.09	ug/L	98
46) Tetrachloroethene	9.08	164	442721	3.73	ug/L	99
52) Ethylbenzene	10.54	91	6777704	13.66	ug/L	99
53) m/p-Xylene	10.72	106	172058	0.89	ug/L	93
54) o-Xylene	11.29	106	67601	0.40	ug/L J	98

J11021

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 31 11:16:53 2003 Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

	Compound	R.T.	QIon	Response	Conc	Unit		Qvalue
55)	Xylene (total)	10.72	106	239180m	1.43	ug/L		
57)	Isopropylbenzene	11.77	105	8590441	21.56	ug/L		100
59)	1,1,2,2-Tetrachloroethane	12.04	83	44357	1.01	ug/L	#	41
62)	Bromoform	11.53	173	6489	0.21	ug/L	JB	80

04/03/03

.0022

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

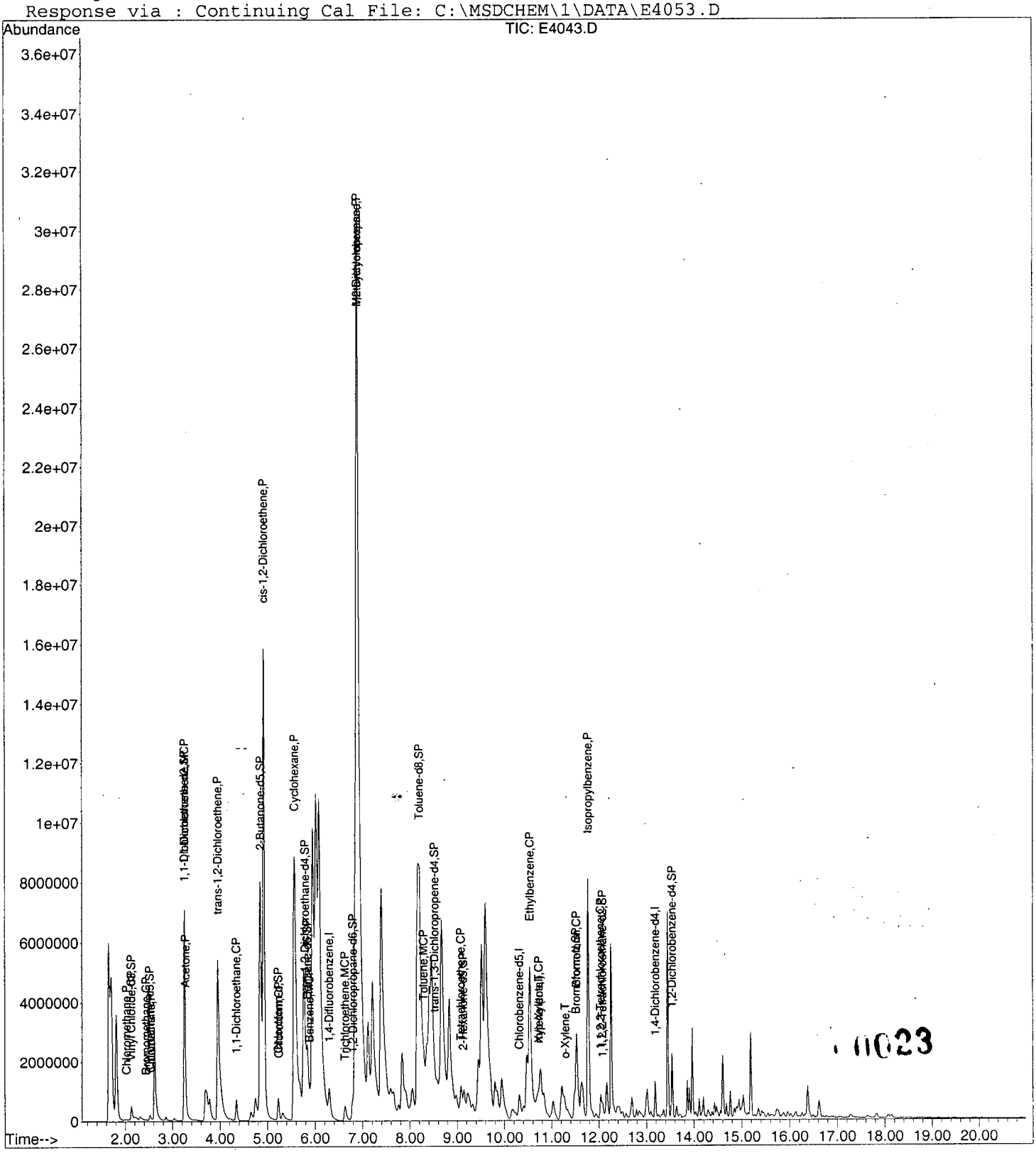
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:27 2003

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

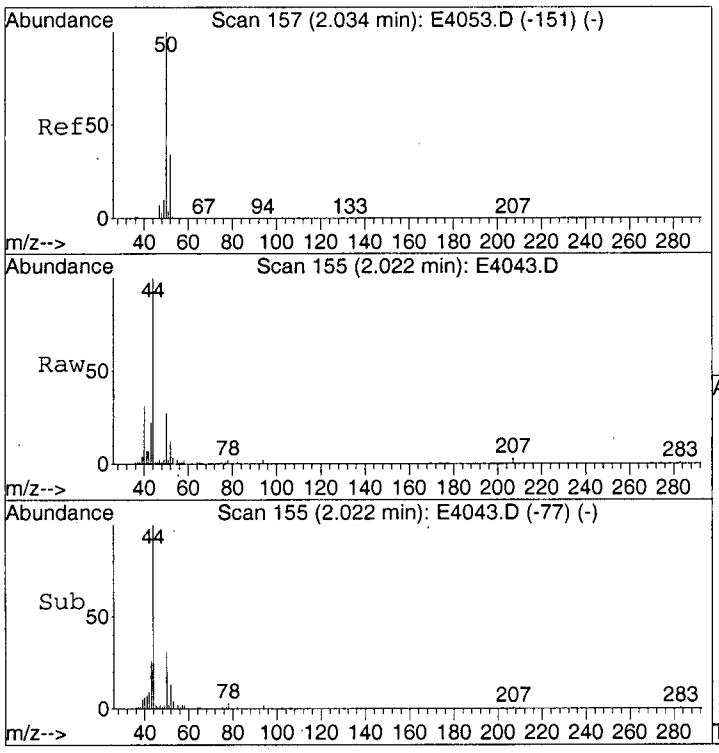
Quant Results File: LCE4041.RES

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

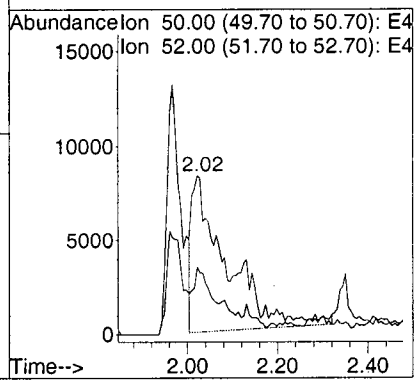
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

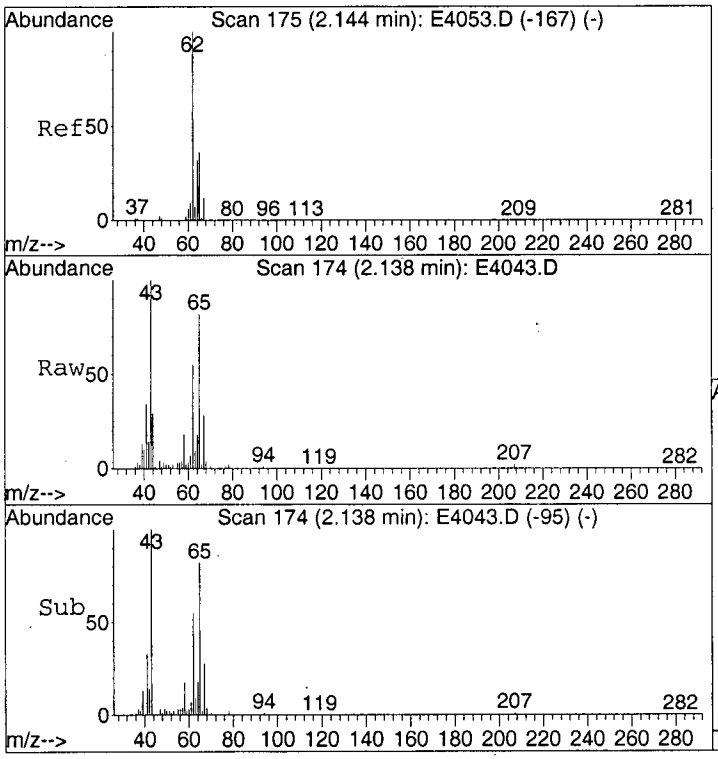


#3
Chloromethane
Concen: 0.15 ug/L
RT: 2.02 min Scan# 155
Delta R.T. -0.02 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 50 Resp: 44768

Ion	Ratio	Lower	Upper
50	100		
52	0.0	12.9	52.9#

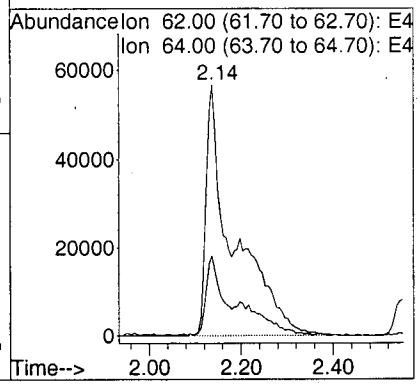




#5
Vinyl Chloride
Concen: 1.09 ug/L
RT: 2.14 min Scan# 174
Delta R.T. -0.02 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 62 Resp: 233043

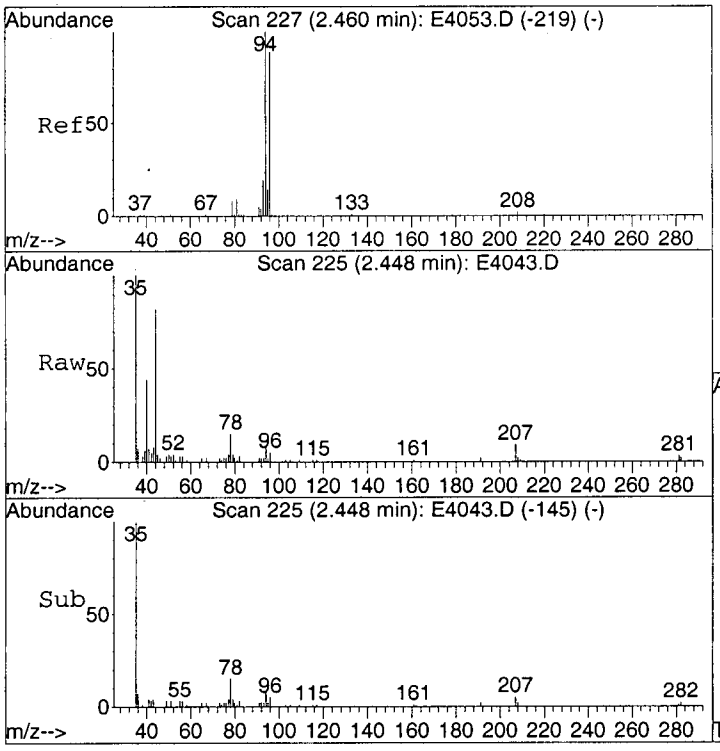
Ion	Ratio	Lower	Upper
62	100		
64	33.6	13.2	53.2



11024

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

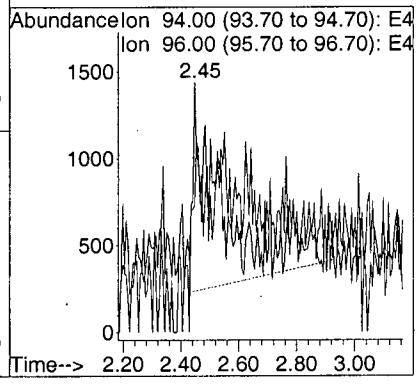
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

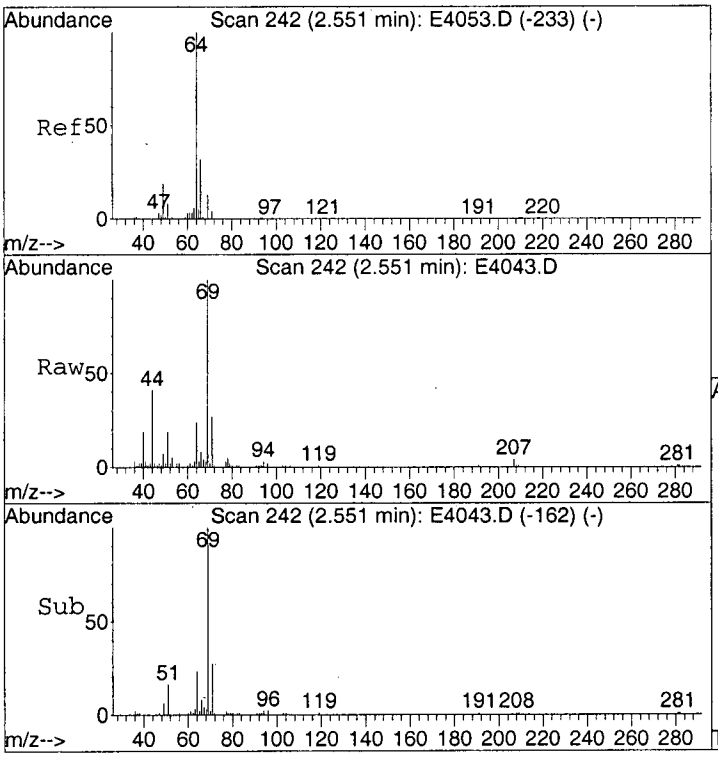


#6
Bromomethane
Concen: 0.45 ug/L
RT: 2.45 min Scan# 225
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 94 Resp: 12188

Ion	Ratio	Lower	Upper
94	100		
96	65.0	67.5	107.5#

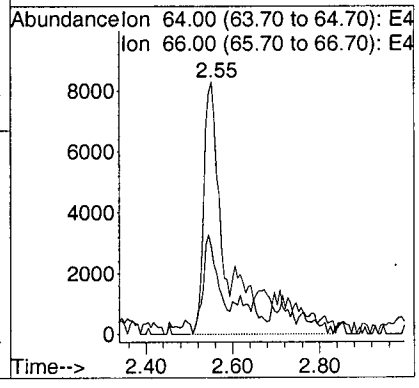




#8
Chloroethane
Concen: 0.28 ug/L
RT: 2.55 min Scan# 242
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 64 Resp: 33676

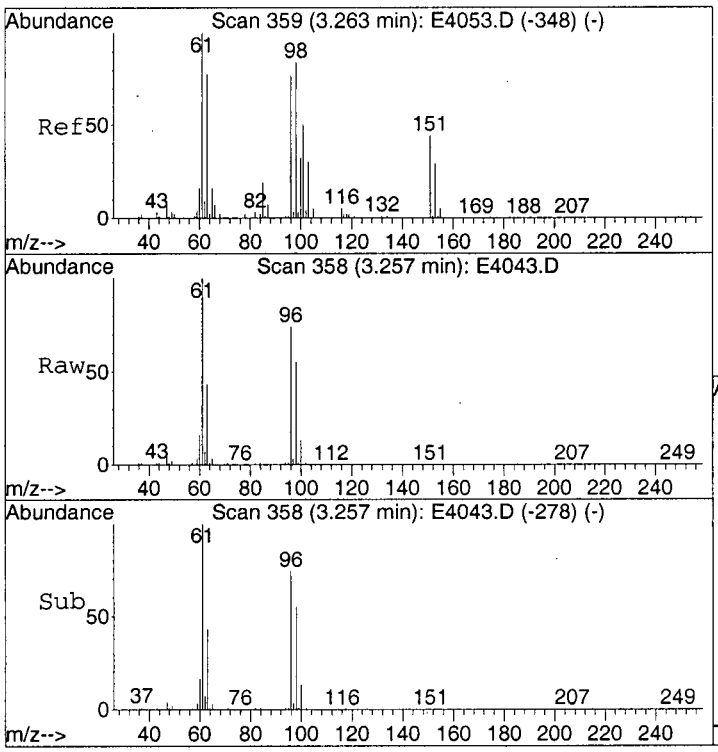
Ion	Ratio	Lower	Upper
64	100		
66	36.8	11.4	51.4



0 0025

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

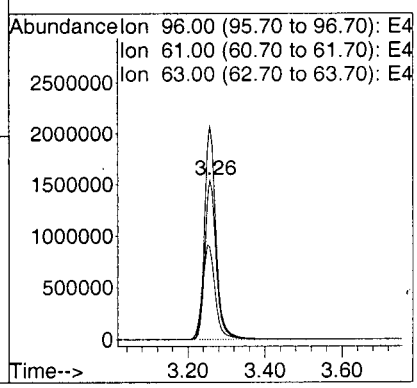
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

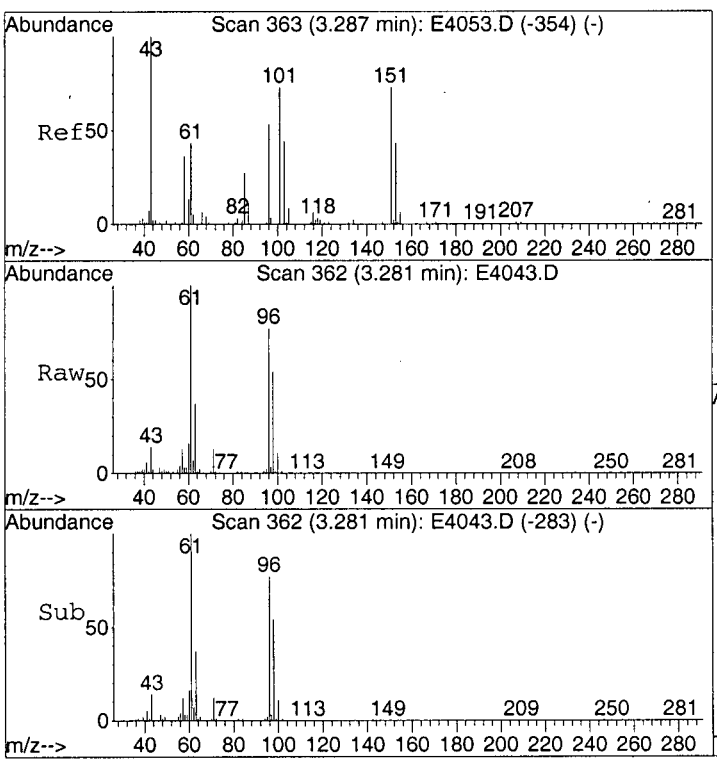


#11
1,1-Dichloroethene
Concen: 28.52 ug/L
RT: 3.26 min Scan# 358
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 96 Resp: 3144955

Ion	Ratio	Lower	Upper
96	100		
61	136.7	127.3	167.3
63	67.1	144.8	184.8#

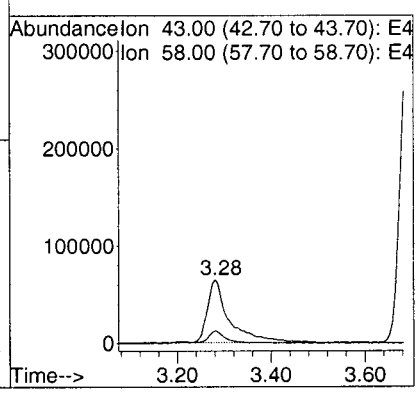




#13
Acetone
Concen: 33.45 ug/L
RT: 3.28 min Scan# 362
Delta R.T. -0.02 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 43 Resp: 211060

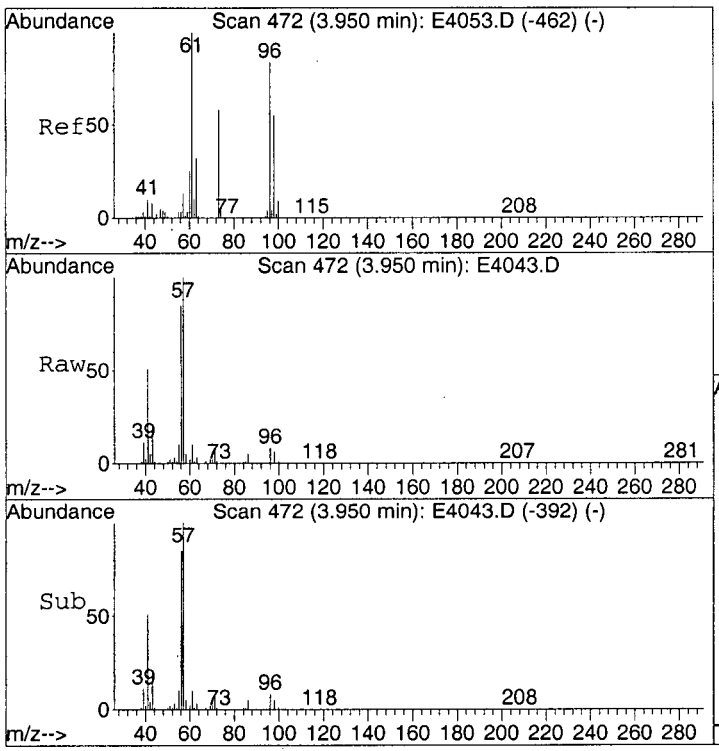
Ion	Ratio	Lower	Upper
43	100		
58	16.7	20.7	60.7#



1 0026

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

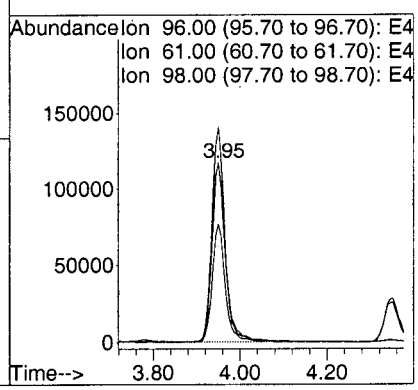
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

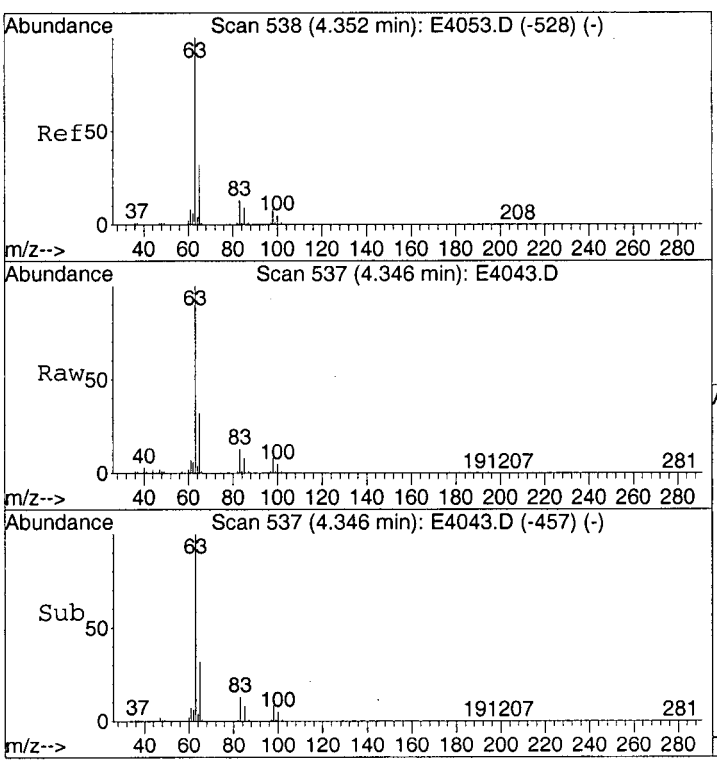


#17
trans-1,2-Dichloroethene
Concen: 2.16 ug/L
RT: 3.95 min Scan# 472
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 96 Resp: 247193

Ion	Ratio	Lower	Upper
96	100		
61	123.9	110.4	150.4
98	66.8	42.0	82.0

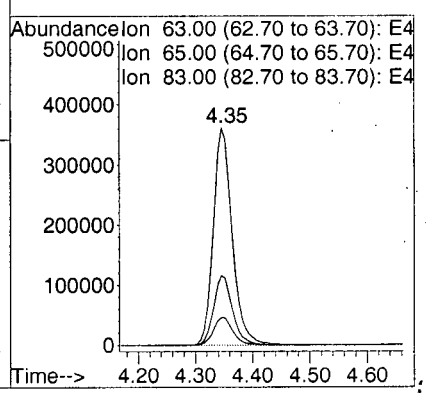




#19
1,1-Dichloroethane
Concen: 4.64 ug/L
RT: 4.35 min Scan# 537
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 63 Resp: 833575

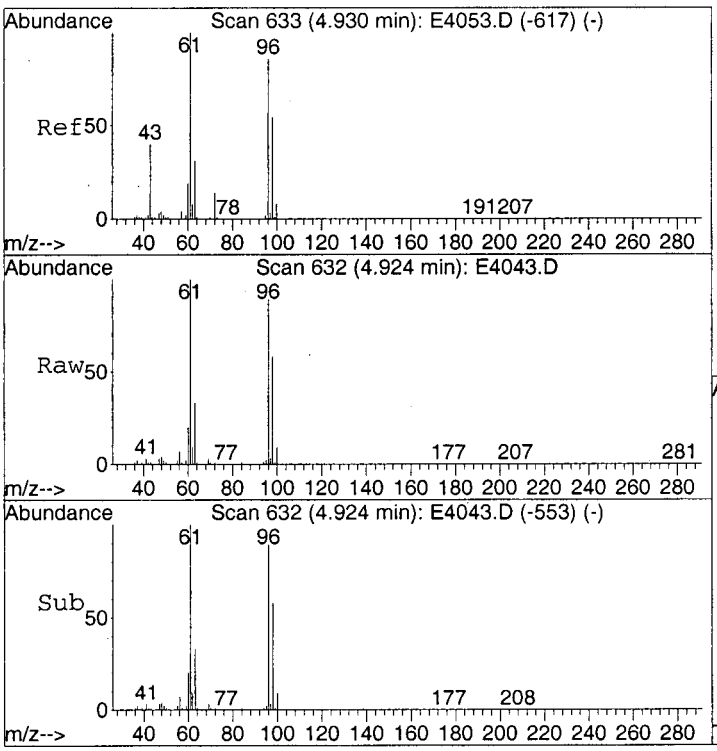
Ion	Ratio	Lower	Upper
63	100		
65	32.1	11.8	51.8
83	13.0	0.0	32.9



11027

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

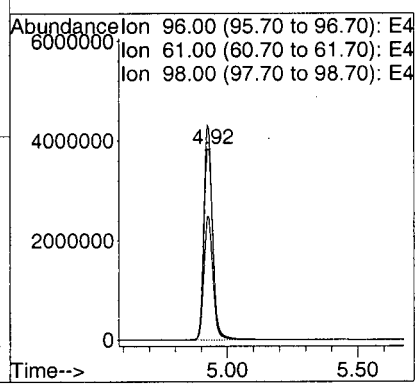
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

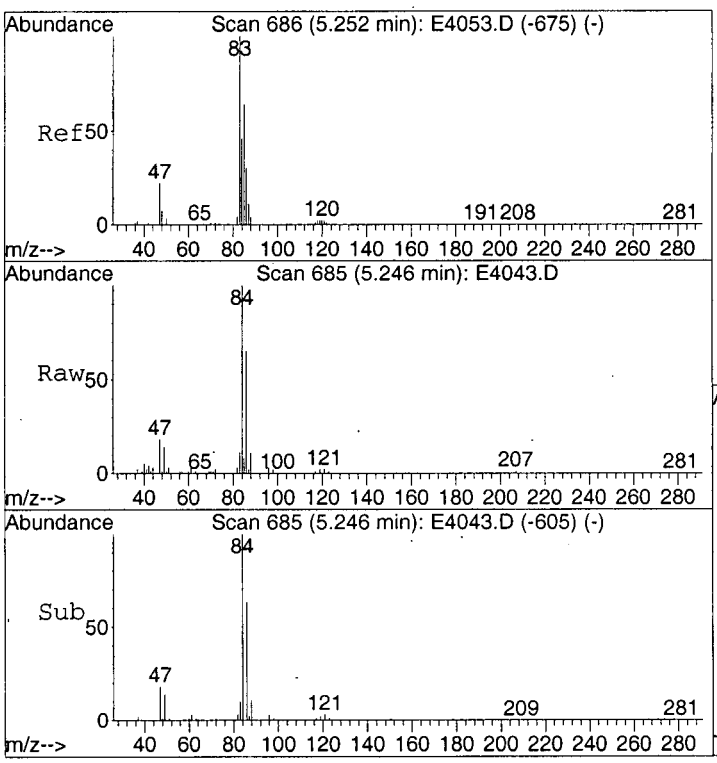


#21
cis-1,2-Dichloroethene
Concen: 89.54 ug/L
RT: 4.92 min Scan# 632
Delta R.T. -0.02 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 96 Resp: 9115655

Ion	Ratio	Lower	Upper
96	100		
61	113.8	93.0	133.0
98	64.4	41.5	81.5

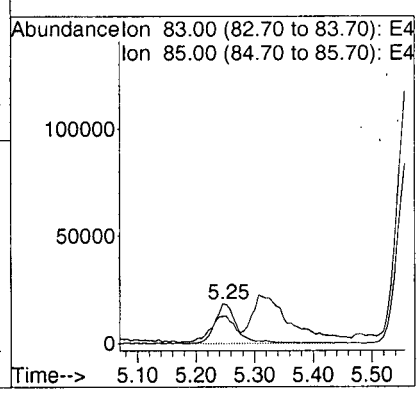




#25
Chloroform
Concen: 0.30 ug/L
RT: 5.25 min Scan# 685
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

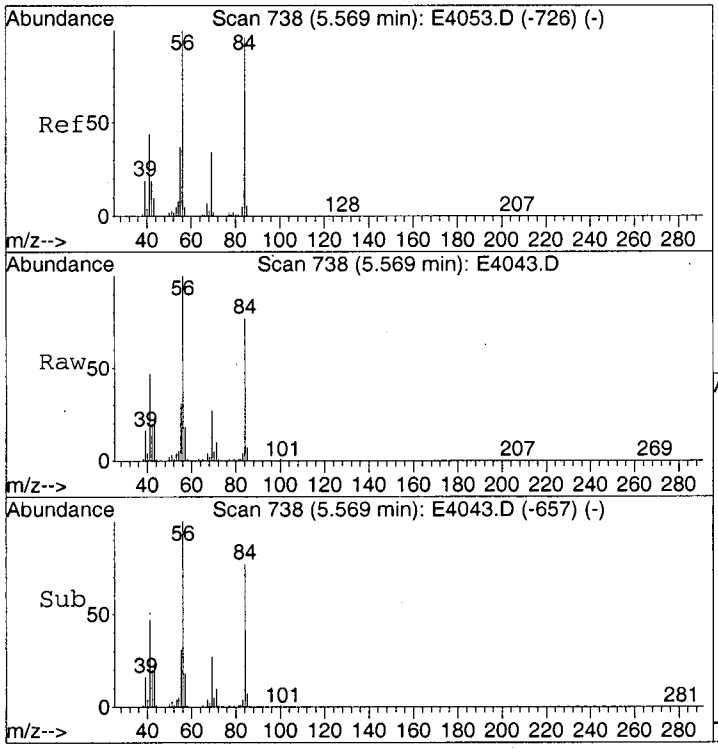
Tgt Ion: 83 Resp: 49376

Ion	Ratio	Lower	Upper
83	100		
85	68.6	45.3	85.3



0028

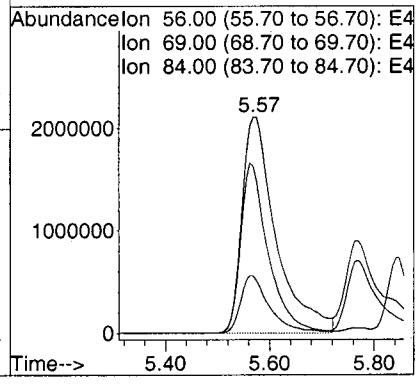
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

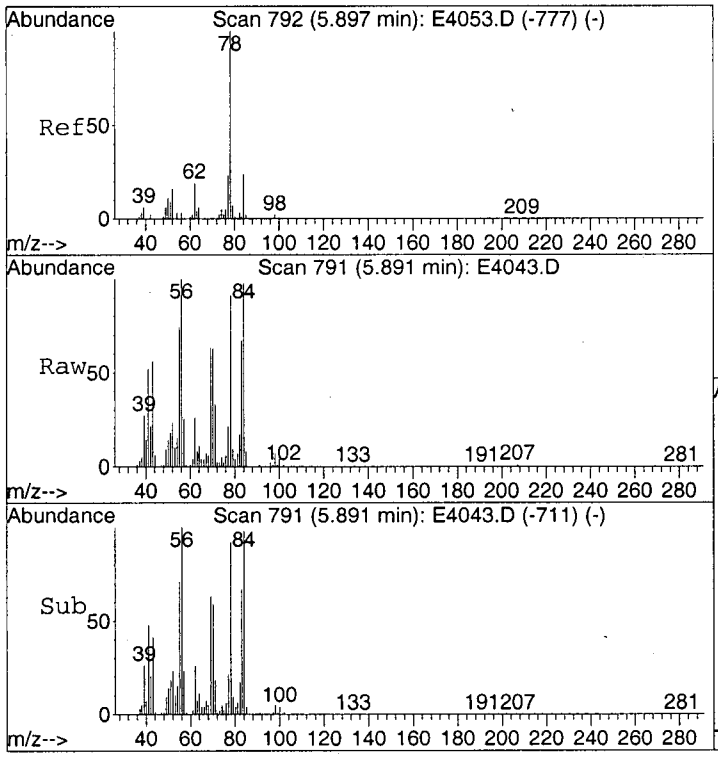


#30
Cyclohexane
Concen: 43.47 ug/L
RT: 5.57 min Scan# 738
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 56 Resp: 9549266

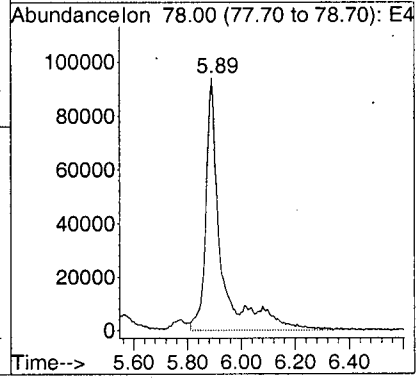
Ion	Ratio	Lower	Upper
56	100		
69	22.5	11.9	51.9
84	63.4	81.9	121.9#





#33
Benzene
Concen: 0.74 ug/L
RT: 5.89 min Scan# 791
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

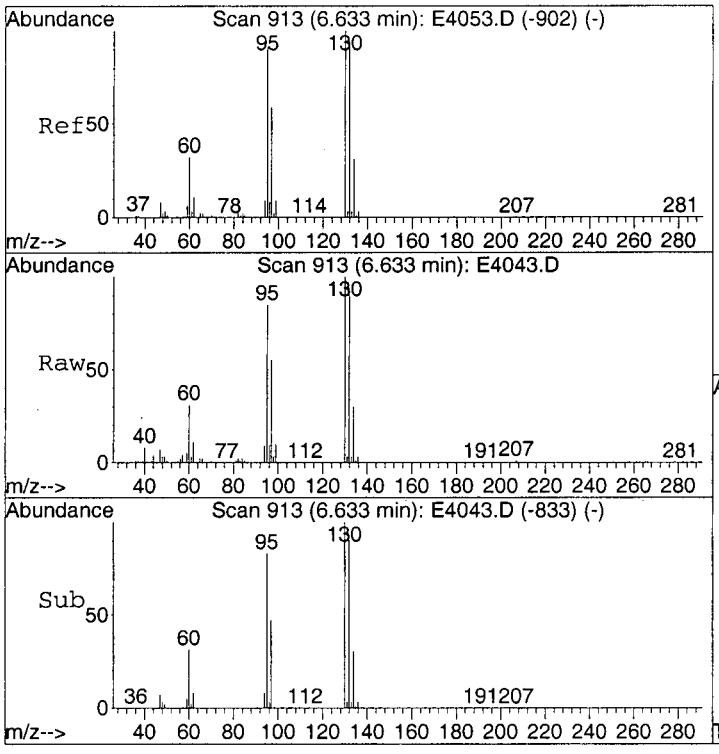
Tgt Ion: 78 Resp: 374302



0029

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

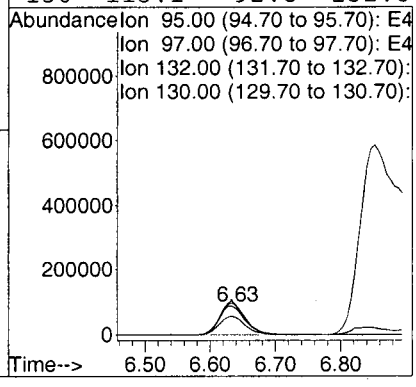
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

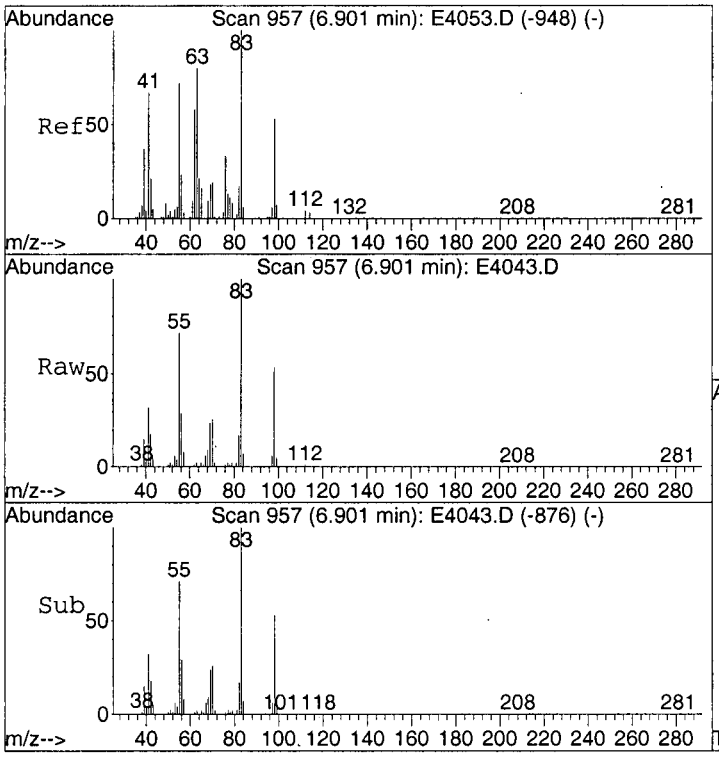


#34
Trichloroethene
Concen: 2.20 ug/L
RT: 6.63 min Scan# 913
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 95 Resp: 244420

Ion	Ratio	Lower	Upper
95	100		
97	64.9	45.9	85.9
132	106.1	88.6	128.6
130	113.1	92.8	132.8

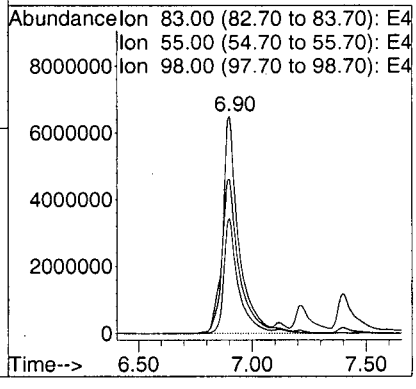




#36
Methylcyclohexane
Concen: 135.44 ug/L
RT: 6.90 min Scan# 957
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

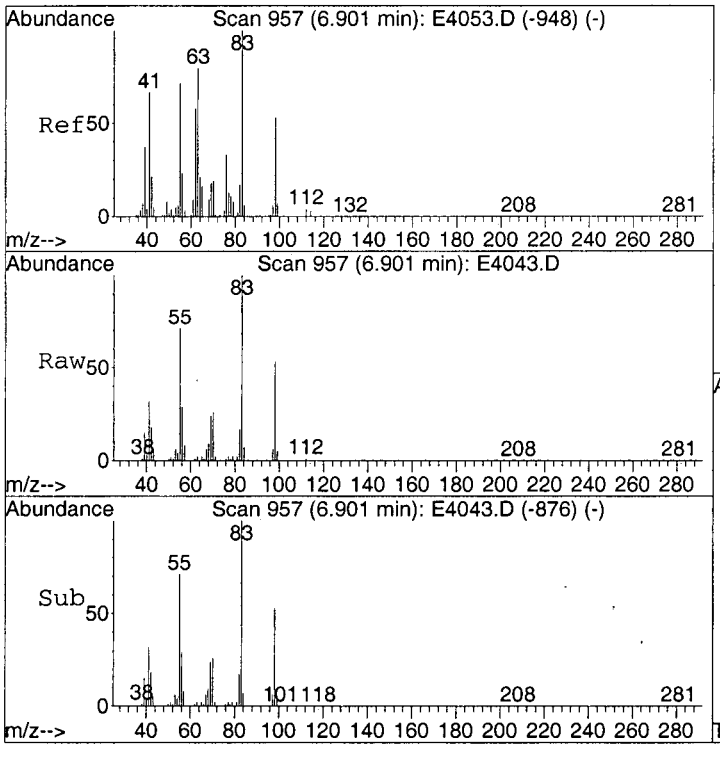
Tgt Ion: 83 Resp:31877357

Ion	Ratio	Lower	Upper
83	100		
55	80.2	51.5	91.5
98	49.0	33.2	73.2



0030

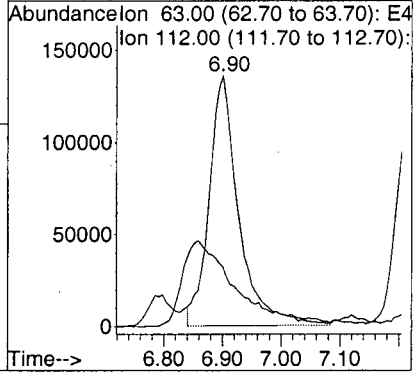
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

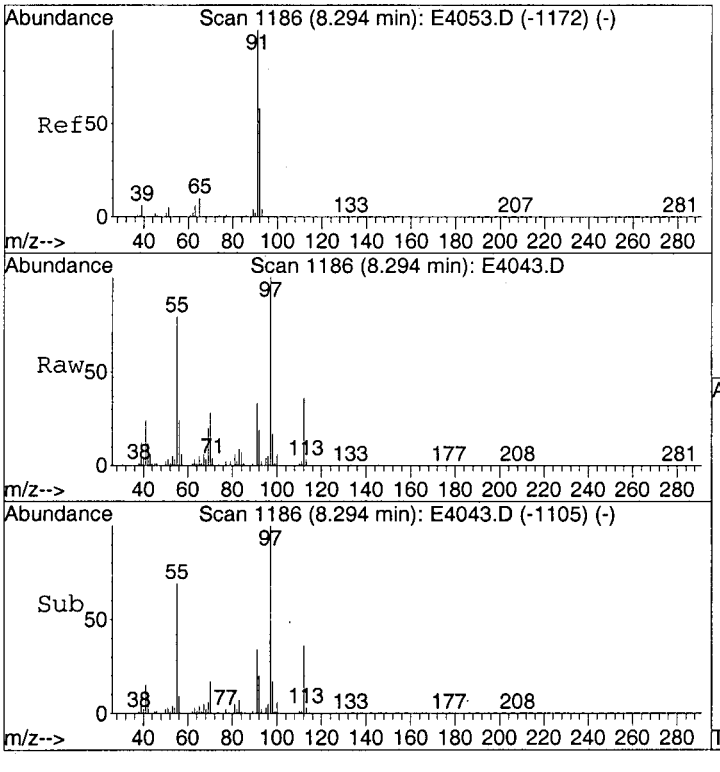


#37
1,2-Dichloropropane
Concen: 4.72 ug/L
RT: 6.90 min Scan# 957
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 63 Resp: 475127

Ion	Ratio	Lower	Upper
63	100		
112	65.0	0.0	25.3#

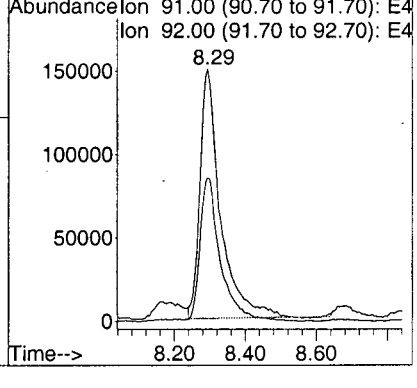




#42
Toluene
Concen: 1.09 ug/L
RT: 8.29 min Scan# 1186
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

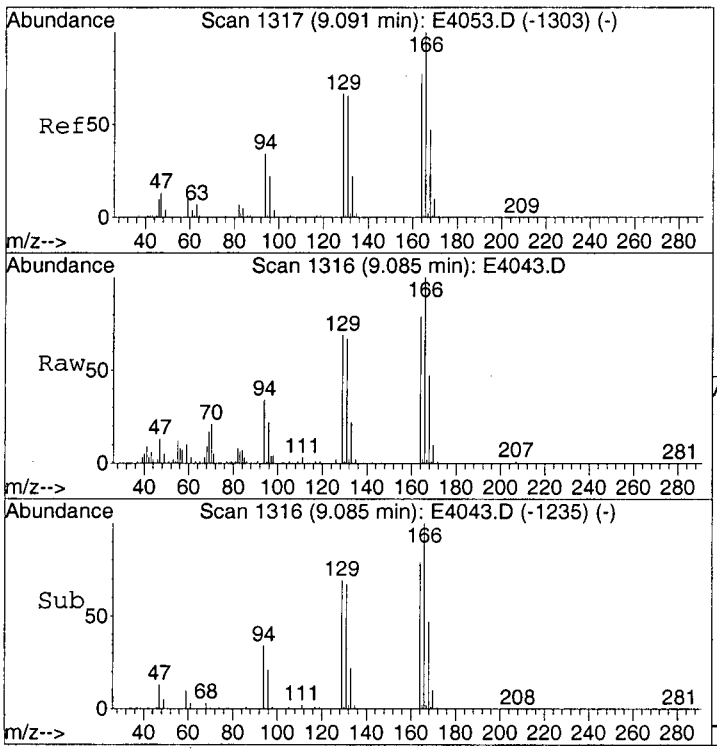
Tgt Ion: 91 Resp: 596248

Ion	Ratio	Lower	Upper
91	100		
92	58.0	39.2	79.2



0031

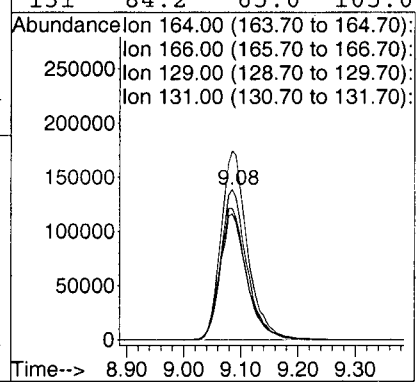
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

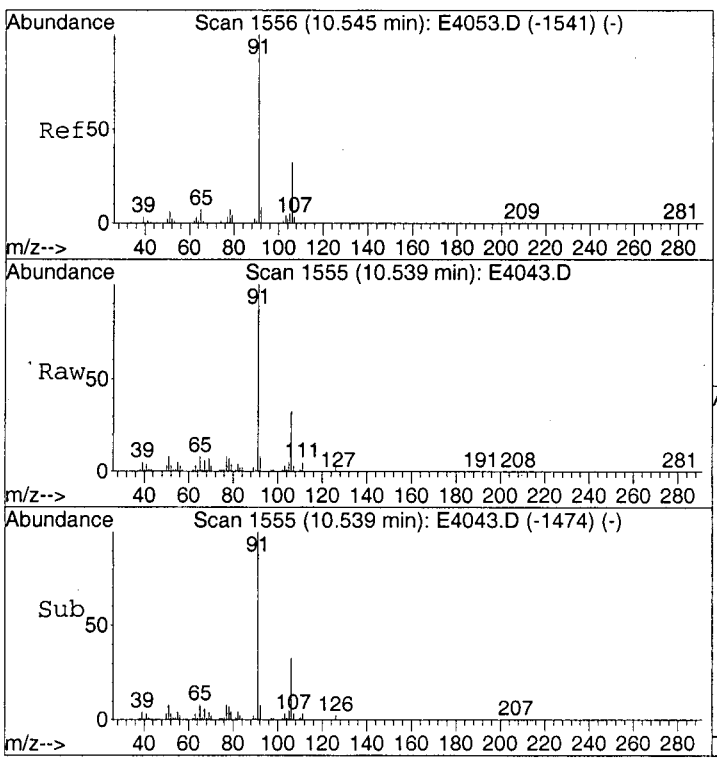


#46
Tetrachloroethene
Concen: 3.73 ug/L
RT: 9.08 min Scan# 1316
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion:164 Resp: 442721

Ion	Ratio	Lower	Upper
164	100		
166	127.3	108.0	148.0
129	89.6	67.5	107.5
131	84.2	65.0	105.0

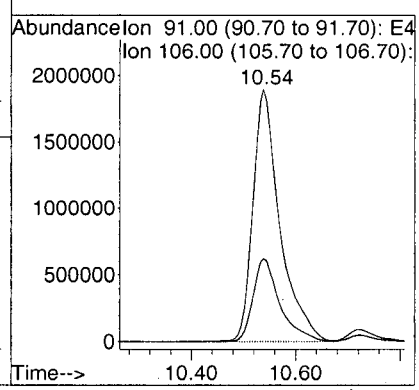




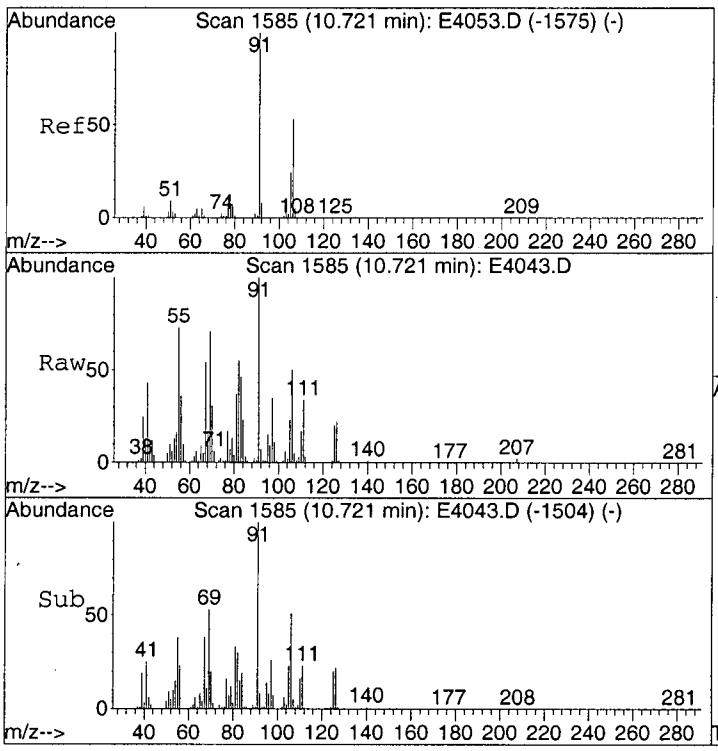
#52
Ethylbenzene
Concen: 13.66 ug/L
RT: 10.54 min Scan# 1555
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 91 Resp: 6777704

Ion	Ratio	Lower	Upper
91	100		
106	32.9	13.7	53.7



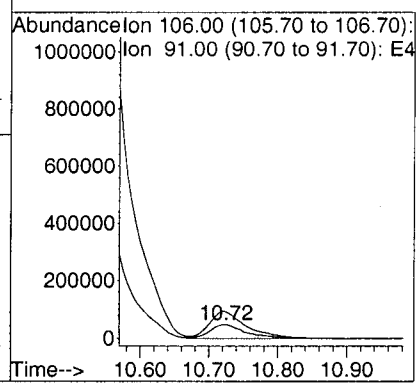
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

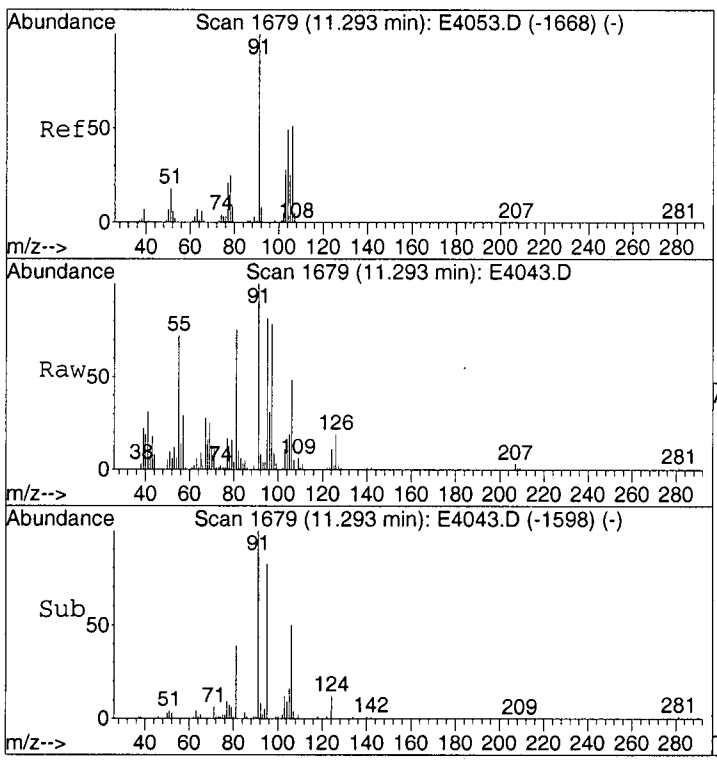


#53
m/p-Xylene
Concen: 0.89 ug/L
RT: 10.72 min Scan# 1585
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion:106 Resp: 172058

Ion	Ratio	Lower	Upper
106	100		
91	203.3	172.5	212.5

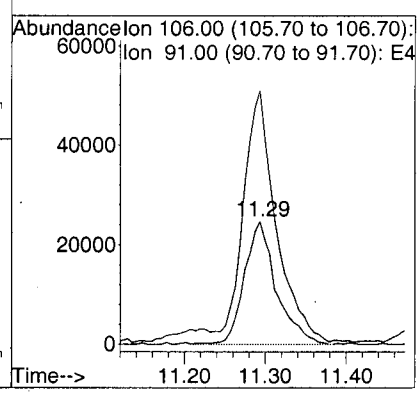




#54
o-Xylene
Concen: 0.40 ug/L
RT: 11.29 min Scan# 1679
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

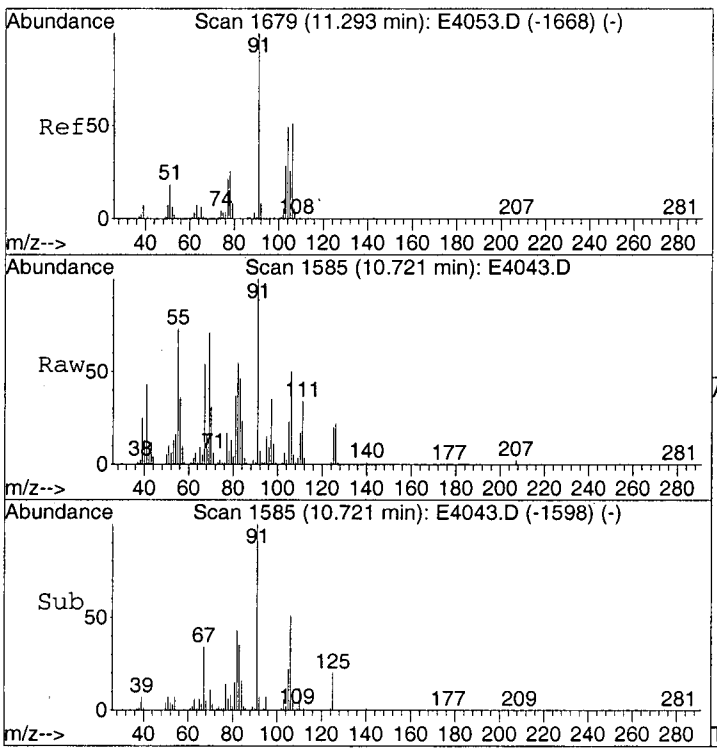
Tgt Ion:106 Resp: 67601

Ion	Ratio	Lower	Upper
106	100		
91	206.2	182.7	222.7



0033

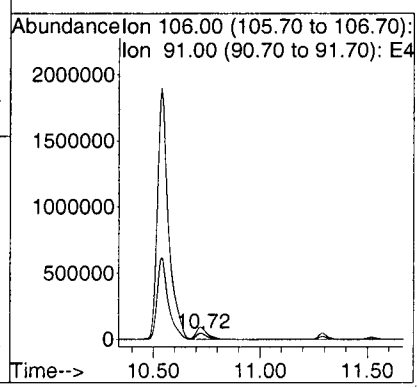
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

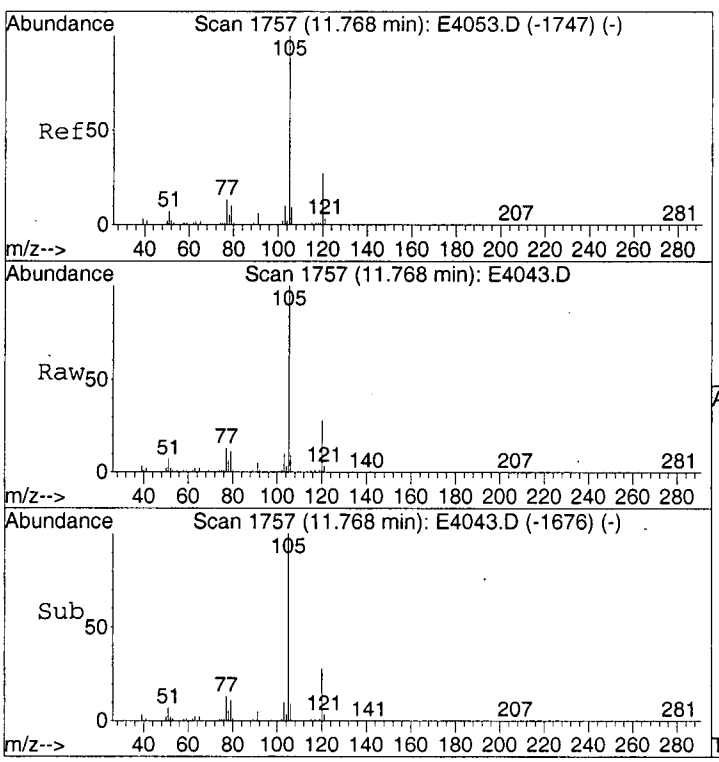


#55
Xylene (total)
Concen: 1.43 ug/L m
RT: 10.72 min Scan# 1585
Delta R.T. -0.58 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion:106 Resp: 239180

Ion	Ratio	Lower	Upper
106	100		
91	58.3	182.7	222.7#

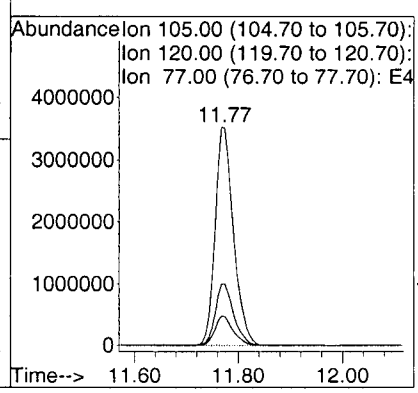




#57
Isopropylbenzene
Concen: 21.56 ug/L
RT: 11.77 min Scan# 1757
Delta R.T. -0.01 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

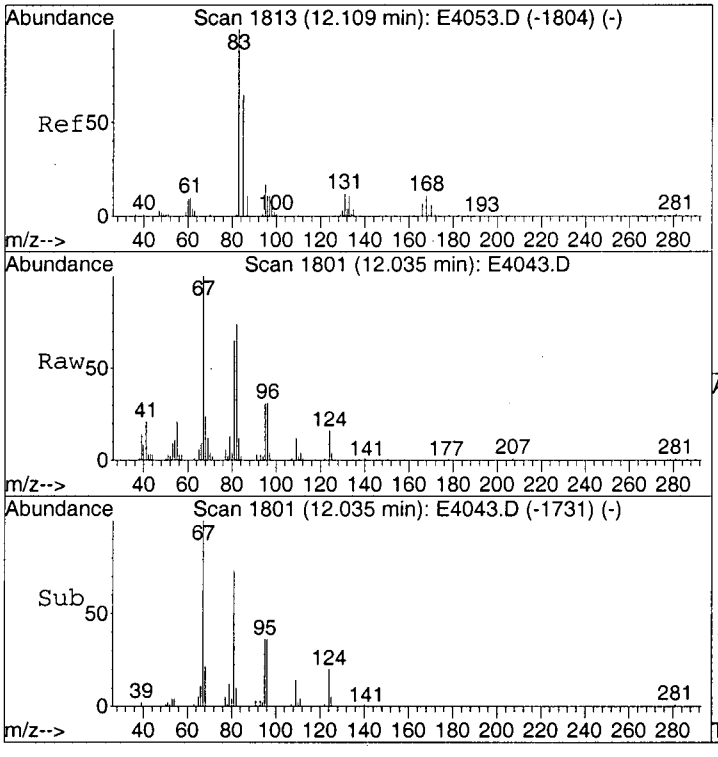
Tgt Ion:105 Resp: 8590441

Ion	Ratio	Lower	Upper
105	100		
120	28.2	7.9	47.9
77	13.3	0.0	33.3



0034

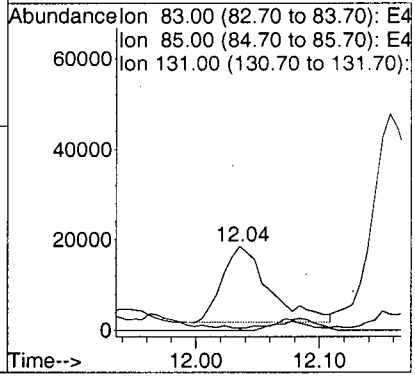
Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

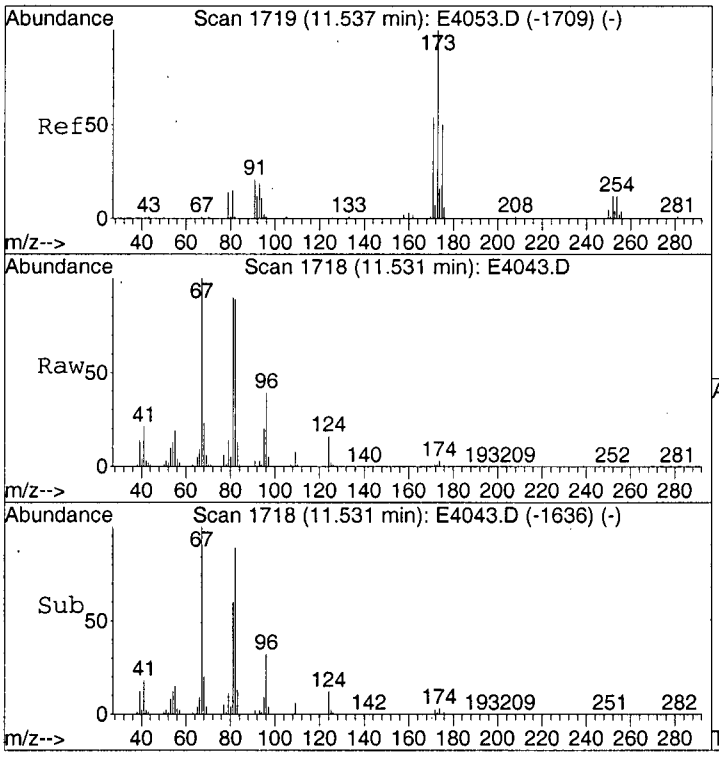


#59
1,1,2,2-Tetrachloroethane
Concen: 1.01 ug/L
RT: 12.04 min Scan# 1801
Delta R.T. -0.07 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion: 83 Resp: 44357

Ion	Ratio	Lower	Upper
83	100		
85	11.6	45.6	85.6#
131	8.8	0.0	32.8

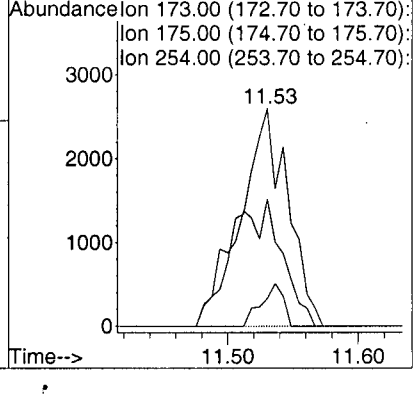




#62
Bromoform
Concen: 0.21 ug/L
RT: 11.53 min Scan# 1718
Delta R.T. -0.00 min
Lab File: E4043.D
Acq: 28 Mar 2003 13:41

Tgt Ion:173 Resp: 6489

Ion	Ratio	Lower	Upper
173	100		
175	65.1	29.2	69.2
254	9.2	0.0	31.1



.0035

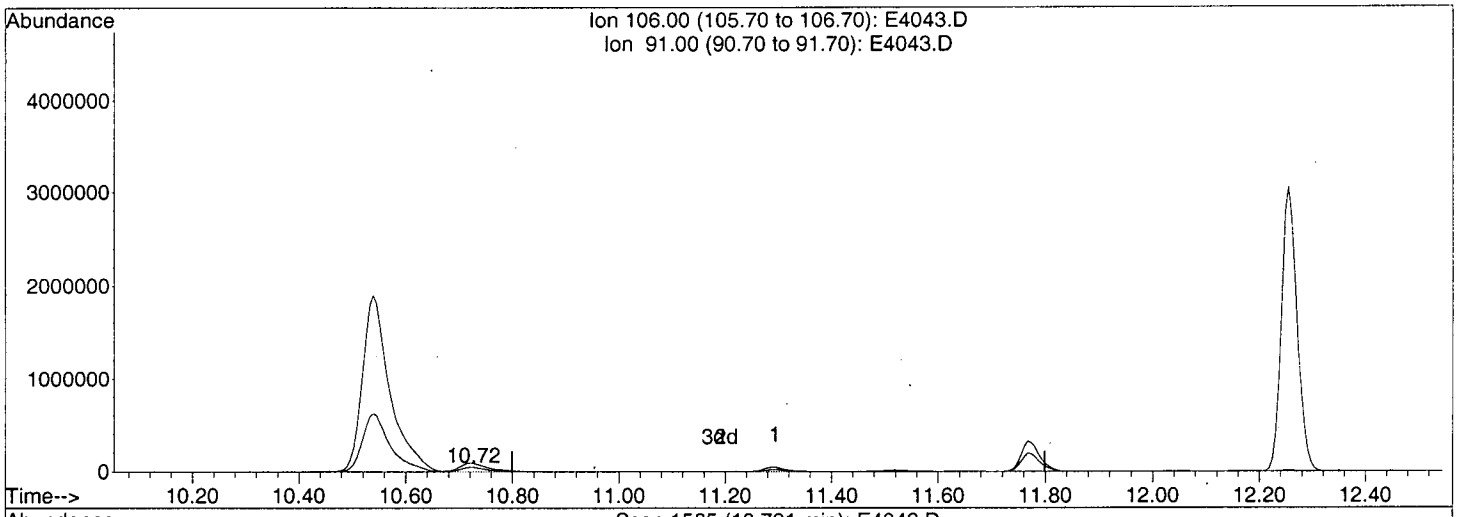
Quantitation Report (Qedit)

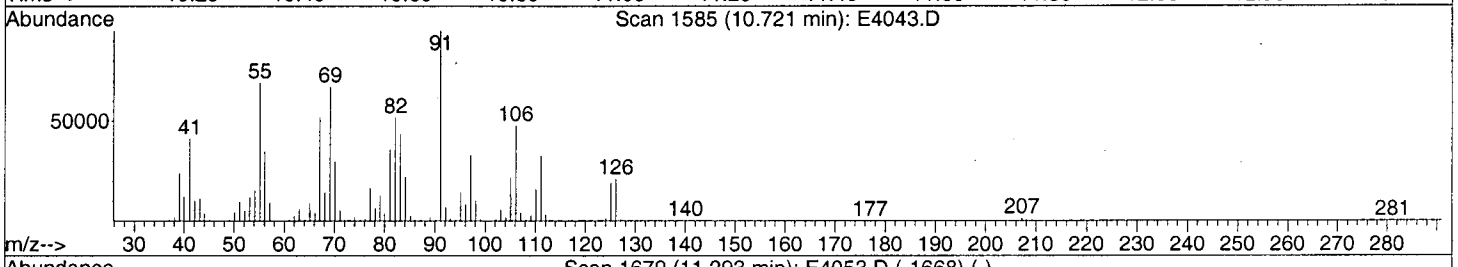
Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:27 2003

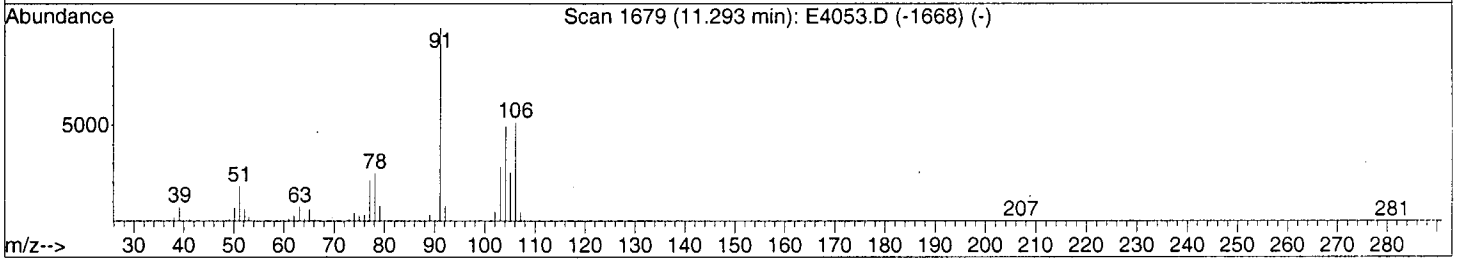
Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Single Level Calibration







TIC: E4043.D

(55) Xylene (total) (CP)

10.72min 1.43ug/L m

response 239180

Ion	Exp%	Act%
106.00	100	100
91.00	202.70	58.28#
0.00	0.00	0.00
0.00	0.00	0.00

GW 4/04/03
04/03/03

00036

E4043.D LCE4041.M Thu Apr 03 09:27:51 2003

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 100000 Area counts
Start Thrs: 0.2
Max Peaks: 40
Stop Thrs : 0
Peak Location: TOP

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

Signal : TIC

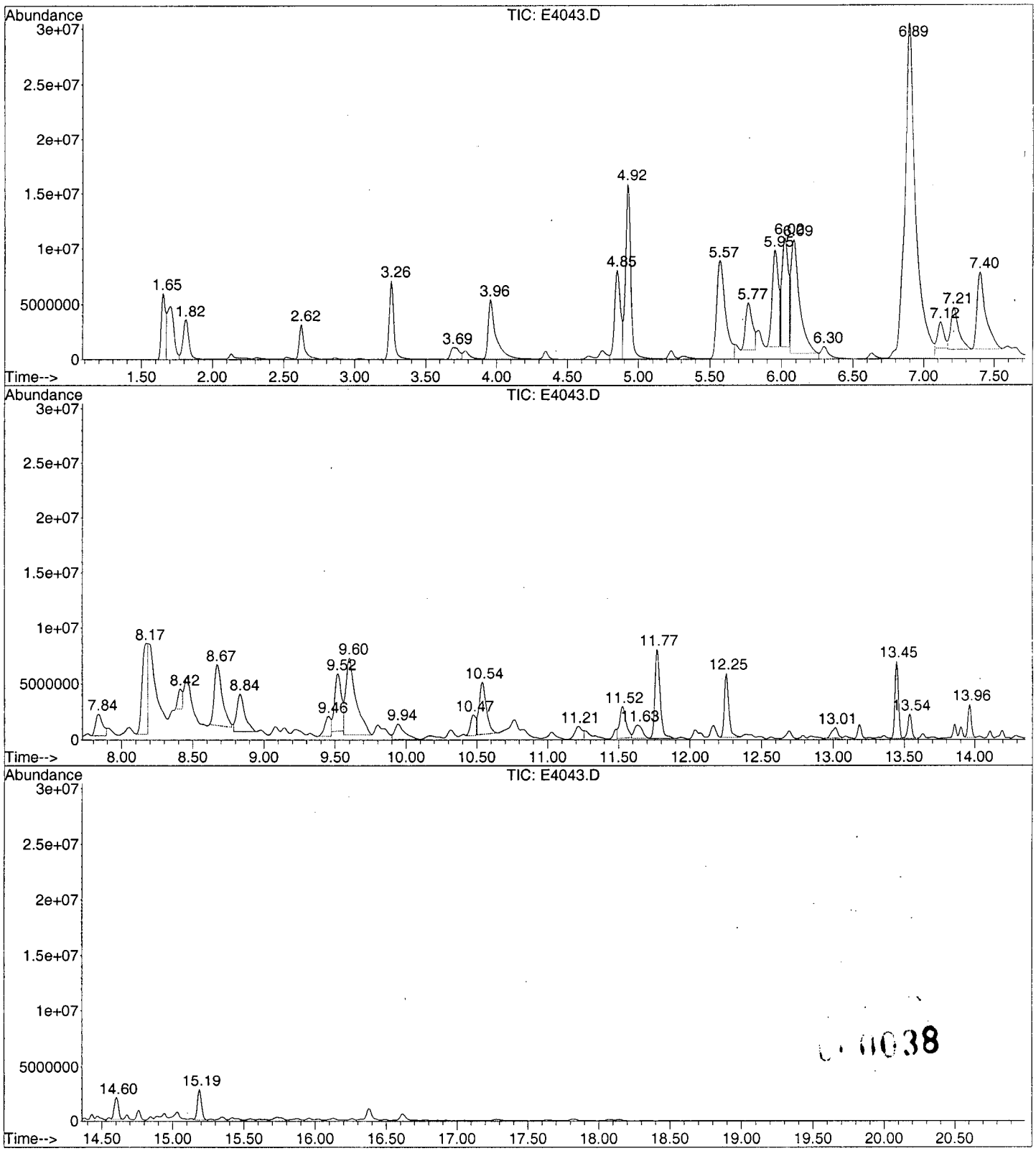
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.651	88	94	98	rBV	5970482	12660218	7.71%	1.715%
2	1.815	113	121	142	rVB	3558060	9956369	6.07%	1.349%
3	2.624	247	254	279	rVB	3114994	7473387	4.55%	1.012%
4	3.257	348	358	388	rBV2	7072783	15951804	9.72%	2.161%
5	3.695	419	430	440	rBV3	1050130	4494095	2.74%	0.609%
6	3.957	464	473	511	rVV	5361498	19775234	12.05%	2.679%
7	4.851	611	620	626	rVV	8007244	23364596	14.23%	3.165%
8	4.924	626	632	673	rVV	15822309	40611480	24.74%	5.501%
9	5.569	726	738	755	rBV3	8817598	37844530	23.05%	5.126%
10	5.769	763	771	779	rBV2	4284896	14471909	8.82%	1.960%
11	5.952	792	801	807	rBV2	8702586	26974114	16.43%	3.654%
12	6.025	808	813	818	rVV	9881567	29420576	17.92%	3.985%
13	6.086	819	823	852	rVB	10302249	41032490	25.00%	5.558%
14	6.299	852	858	896	rVB	1111781	4301244	2.62%	0.583%
15	6.895	930	956	986	rBV	30408802	164152617	100.00%	22.234%
16	7.120	986	993	1001	rVV	2388614	7335227	4.47%	0.994%
17	7.211	1001	1008	1029	rVB	3849773	15042494	9.16%	2.037%
18	7.400	1030	1039	1065	rBV2	6941273	30017452	18.29%	4.066%
19	7.838	1103	1111	1120	rBV	1926638	6726943	4.10%	0.911%
20	8.172	1155	1166	1168	rBV	8108229	22149907	13.49%	3.000%
21	8.416	1200	1206	1208	rBV2	1796477	3790296	2.31%	0.513%
22	8.671	1240	1248	1265	rVV	5420160	21073253	12.84%	2.854%
23	8.836	1267	1275	1293	rVB2	3372197	13145244	8.01%	1.780%
24	9.456	1365	1377	1380	rBV4	1753495	5381992	3.28%	0.729%
25	9.517	1380	1387	1394	rVV	5160726	17436436	10.62%	2.362%
26	9.602	1394	1401	1427	rVB2	6883461	33770372	20.57%	4.574%
27	9.943	1450	1457	1483	rVB2	1364818	6382162	3.89%	0.864%
28	10.472	1536	1544	1548	rVV	1825262	4939834	3.01%	0.669%
29	10.539	1549	1555	1573	rVB	4601555	15875172	9.67%	2.150%
30	11.214	1654	1666	1673	rBV2	1150467	4356787	2.65%	0.590%
31	11.524	1711	1717	1728	rVV	2809042	8652055	5.27%	1.172%
32	11.634	1728	1735	1748	rVB4	1157592	4536616	2.76%	0.614%
33	11.768	1748	1757	1778	rVB	7974809	20039497	12.21%	2.714%
34	12.255	1830	1837	1853	rBV	5739945	12192582	7.43%	1.651%
35	13.015	1951	1962	1970	rBV3	951691	2799887	1.71%	0.379%
36	13.447	2027	2033	2040	rVV	6907975	11735184	7.15%	1.590%
37	13.538	2040	2048	2057	rVV	2157852	4025970	2.45%	0.545%
38	13.964	2113	2118	2125	rVV2	2952172	4748767	2.89%	0.643%
39	14.603	2217	2223	2231	rVB3	2018312	4146651	2.53%	0.562%
40	15.187	2313	2319	2328	rVB	2828257	5504068	3.35%	0.746%

00037

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00



0038

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

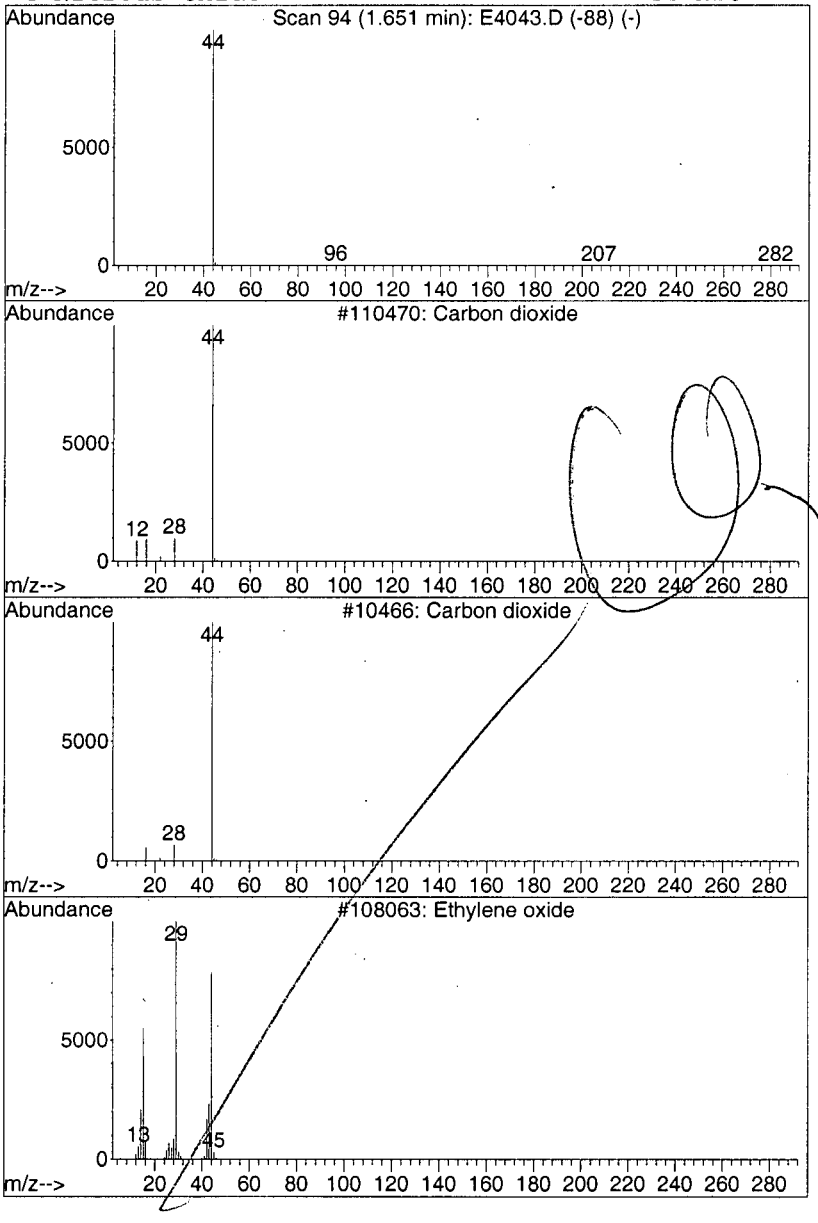
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

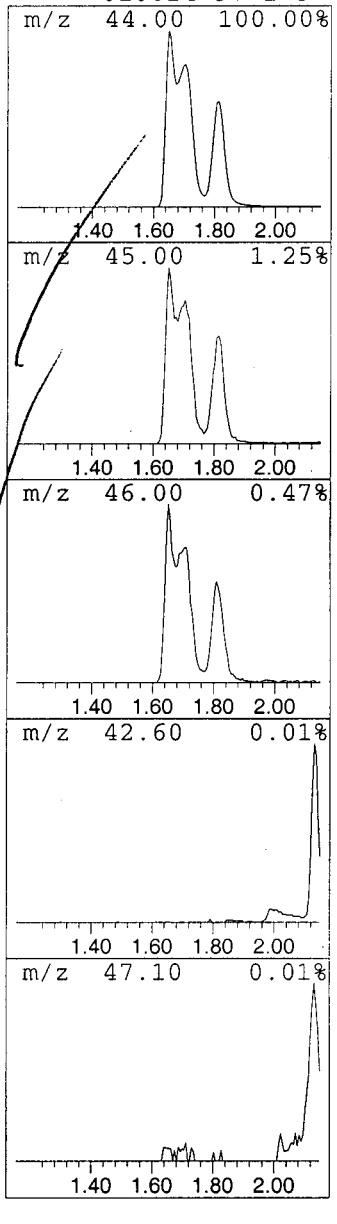
****

Peak Number 1 Carbon dioxide Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.65	14.72 ug/L	12660200	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0039

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

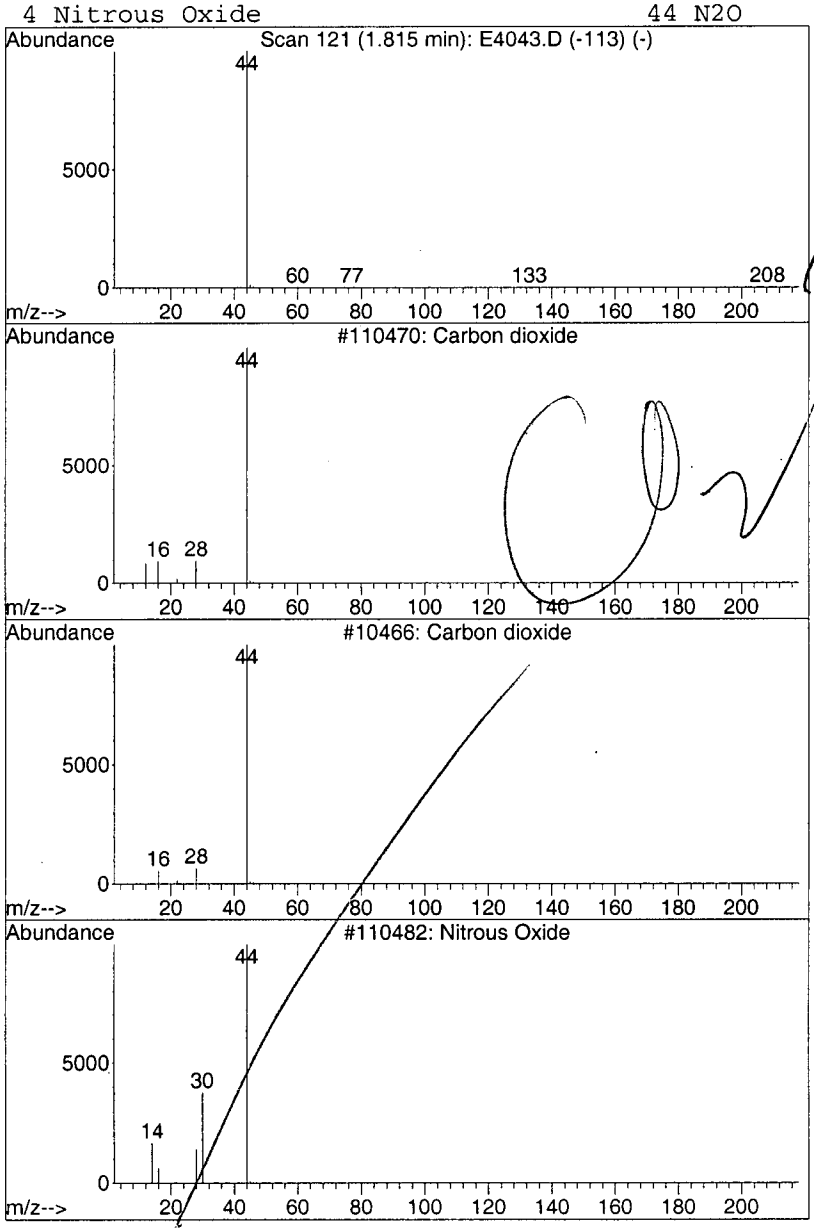
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

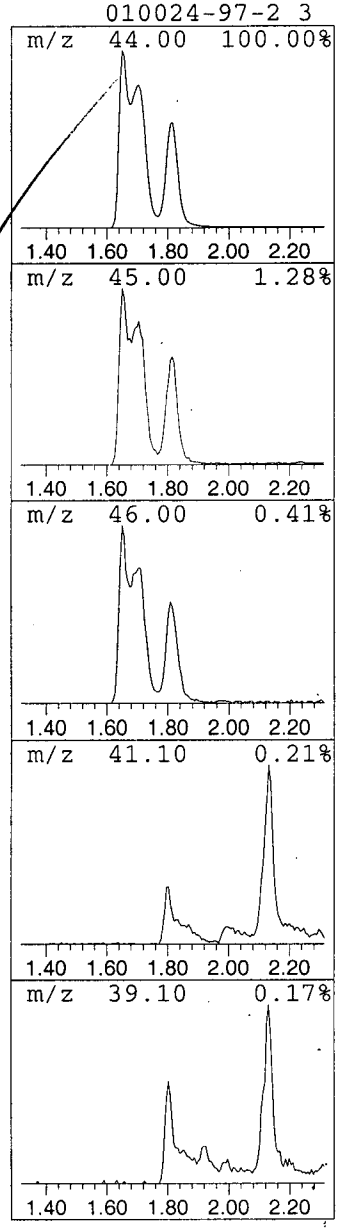
****

Peak Number 2 Carbon dioxide Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.82	11.57 ug/L	9956370	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





1040

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

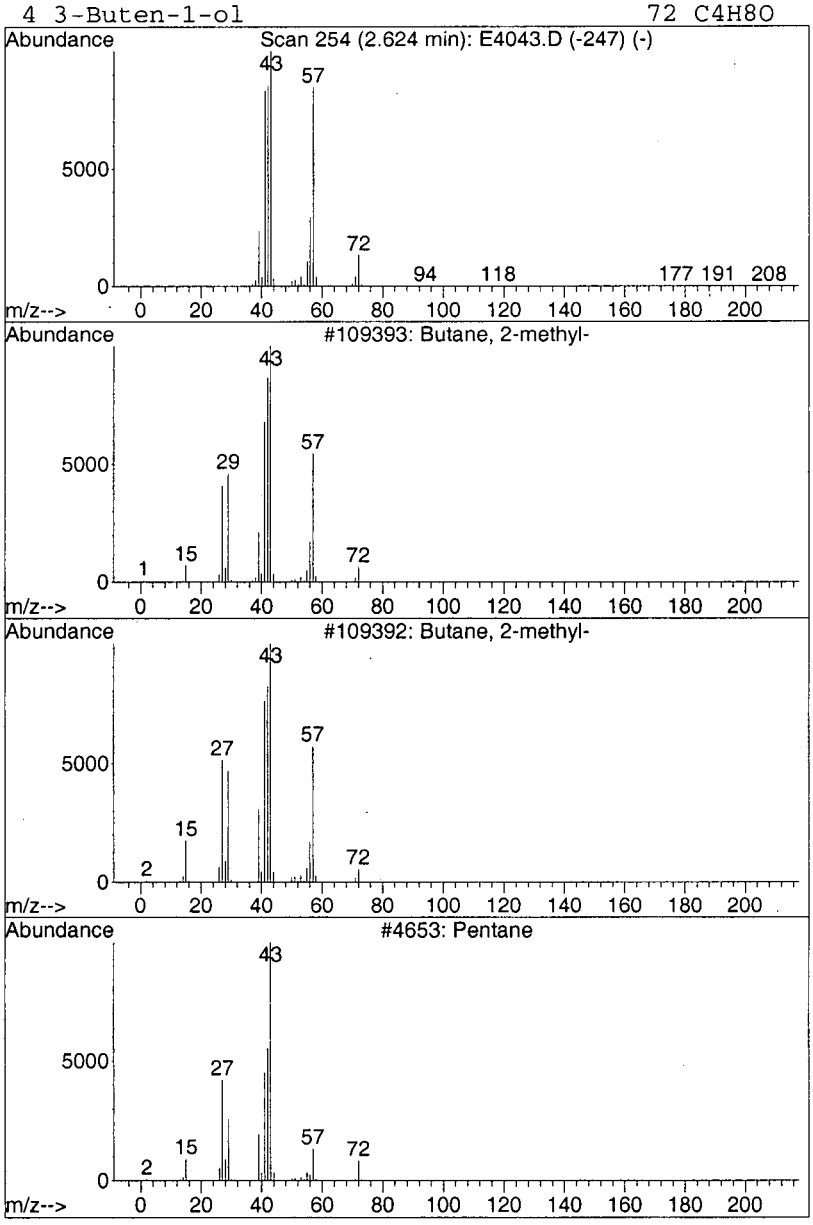
****

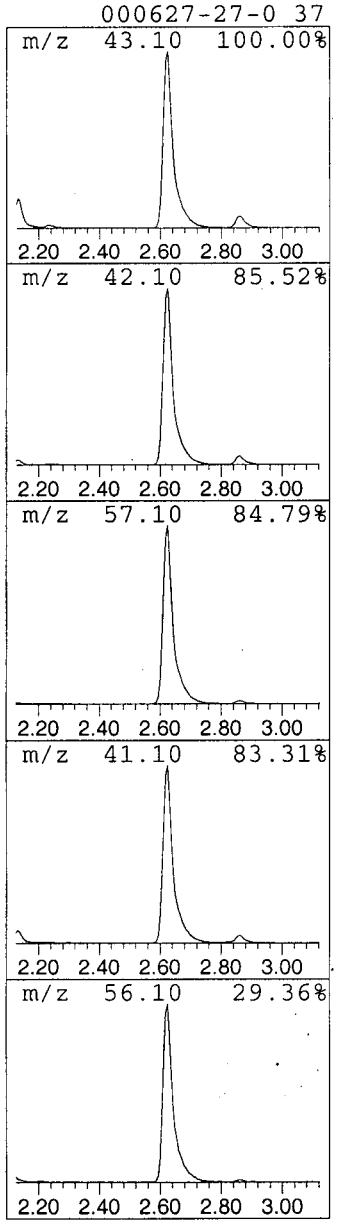
Peak Number 3 Butane, 2-methyl- Concentration Rank 15

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.62	8.69 ug/L	7473390	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	83
3	Pentane	72	C5H12	000109-66-0	40
4	3-Buten-1-ol	72	C4H8O	000627-27-0	37

Branched alkane





C 10041

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

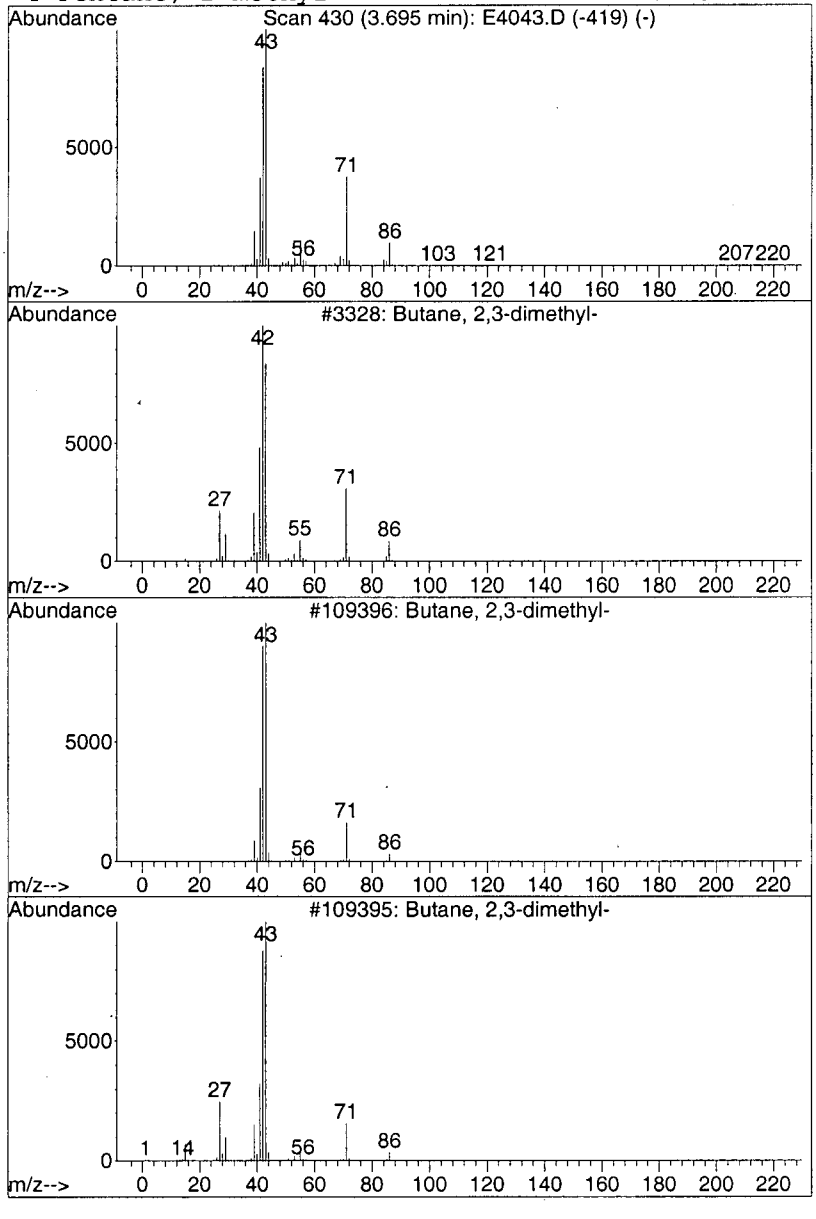
****

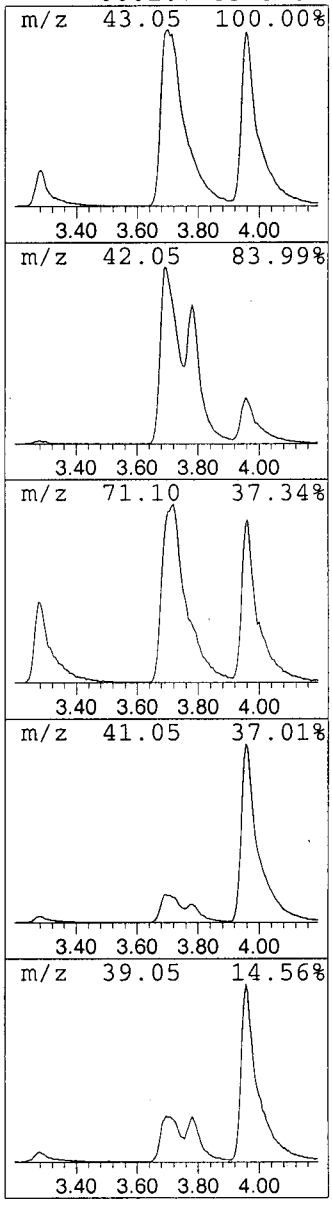
Peak Number 4 Butane, 2,3-dimethyl- Concentration Rank 22

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.69	5.22 ug/L	4494100	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	87
2	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	86
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	78
4	Pentane, 2-methyl-	86	C6H14	000107-83-5	52

Branched alkane





.0042

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

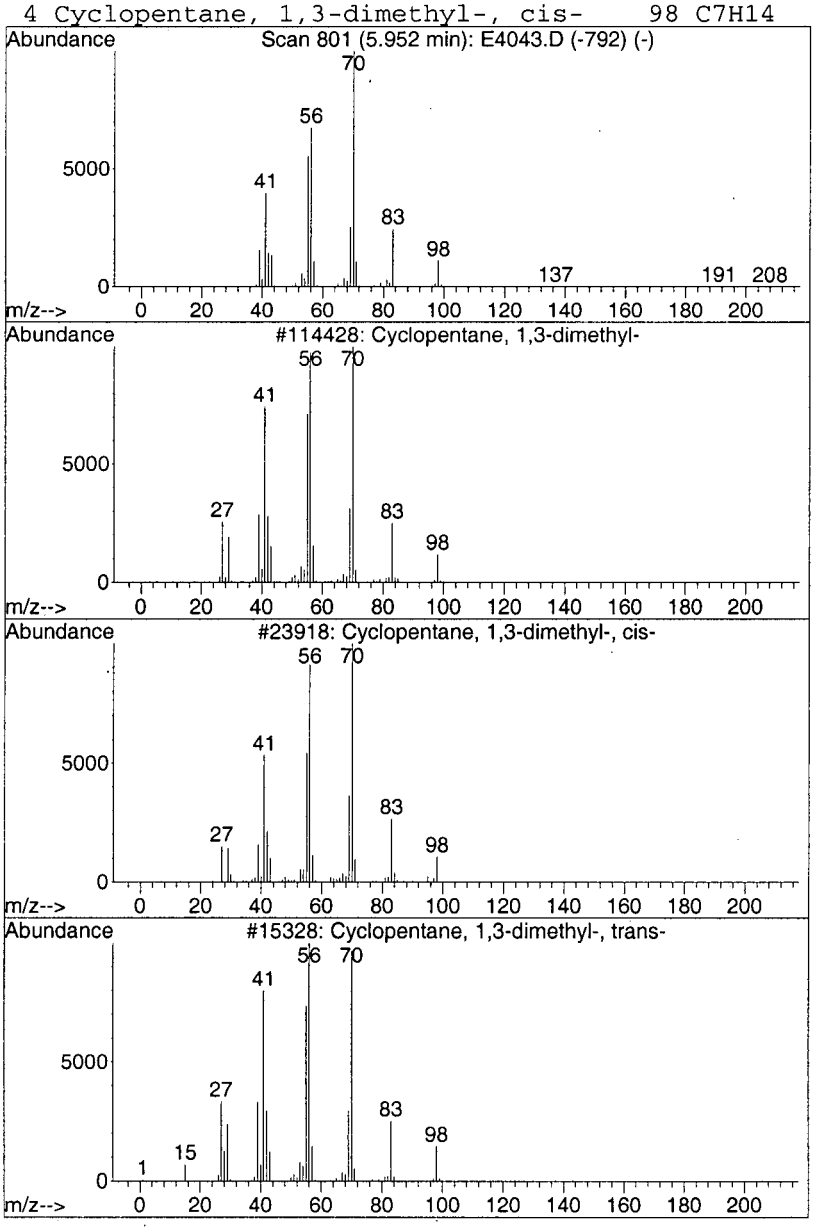
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

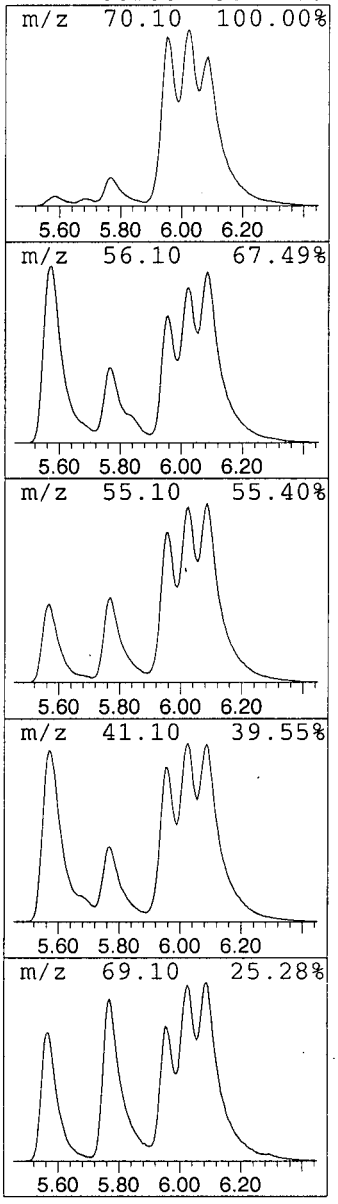
****

Peak Number 5 Cyclopentane, 1,3-dimethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.95	31.36 ug/L	26974100	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	91
2	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	91
3	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	53
4	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	53





cyclic alkane

11043

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

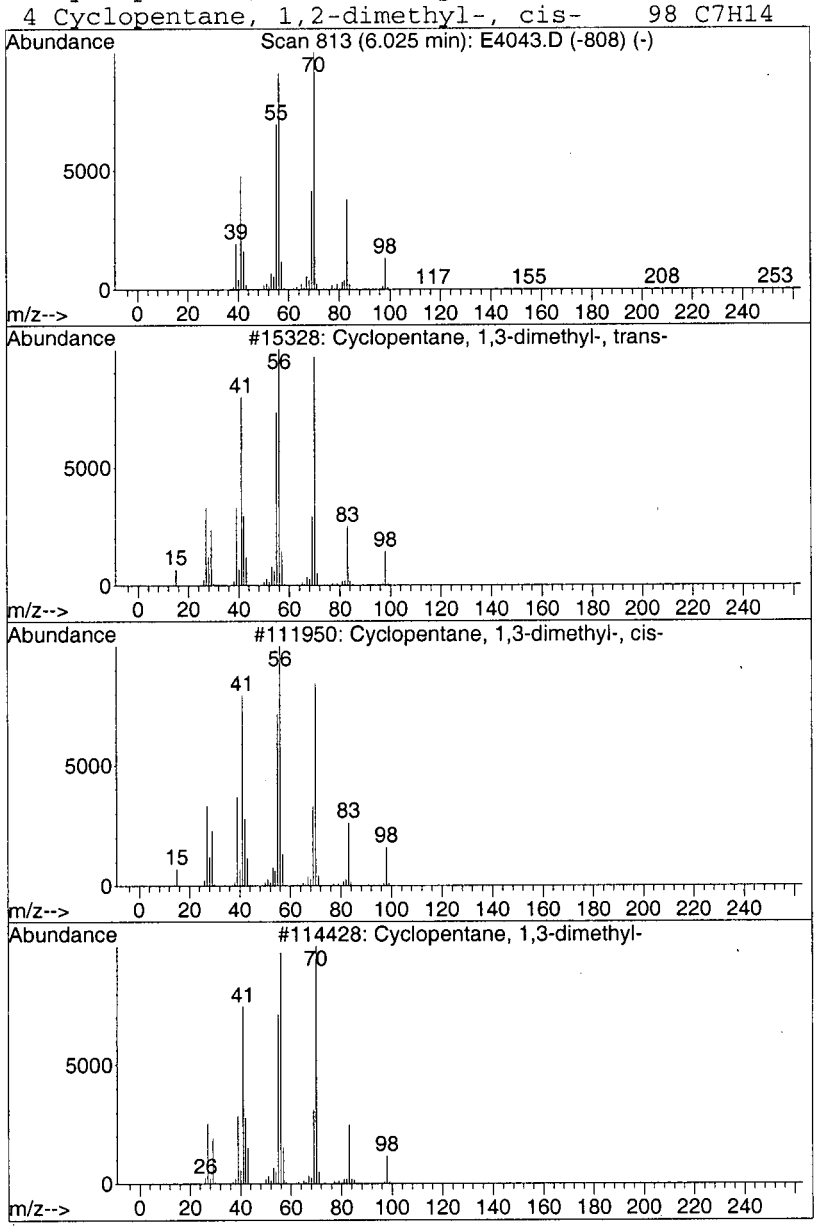
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

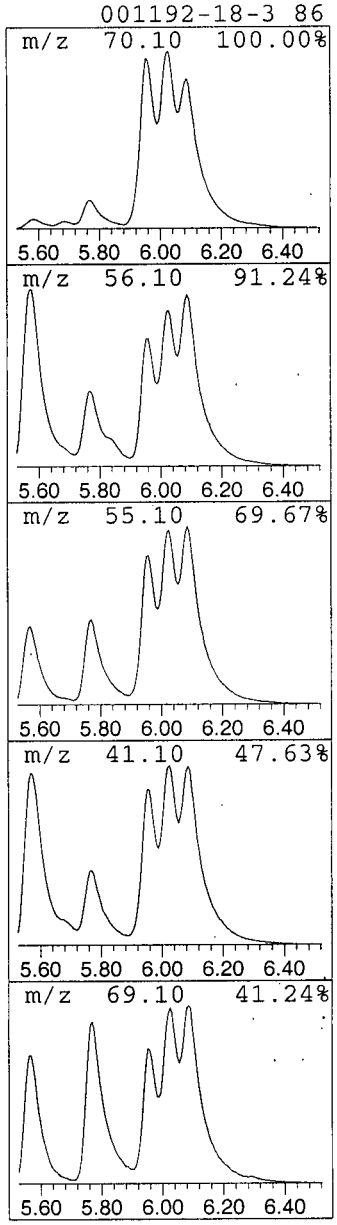
****

Peak Number 6 Cyclopentane, 1,3-dimethyl-... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.02	34.20 ug/L	29420600	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	91
2	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	91
3	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	91
4	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	86





cyclic alkane

11044

Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4043.D                    Vial: 4
   Acq On    : 03/28/2003  1341                          Operator: AK
   Sample    : Y0SJ2                                     Inst    : E-5973
   Misc      : 2762.002  25ML                            Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number  7  1-Heptene                          Concentration Rank  1

  R.T.   EstConc          Area       Relative to ISTD          R.T.
-------------------------------------------------------------------
  6.09   47.70 ug/L    41032500    1,4-Difluorobenzene          6.30

 Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
-------------------------------------------------------------------------
 1 1-Heptene                               98 C7H14         000592-76-7 90
 2 1-Heptene                               98 C7H14         000592-76-7 90
 3 Cyclopentane, 1,2-dimethyl-, trans-     98 C7H14         000822-50-4 90
 4 Cyclopentane, 1,2-dimethyl-, trans-     98 C7H14         000822-50-4 78
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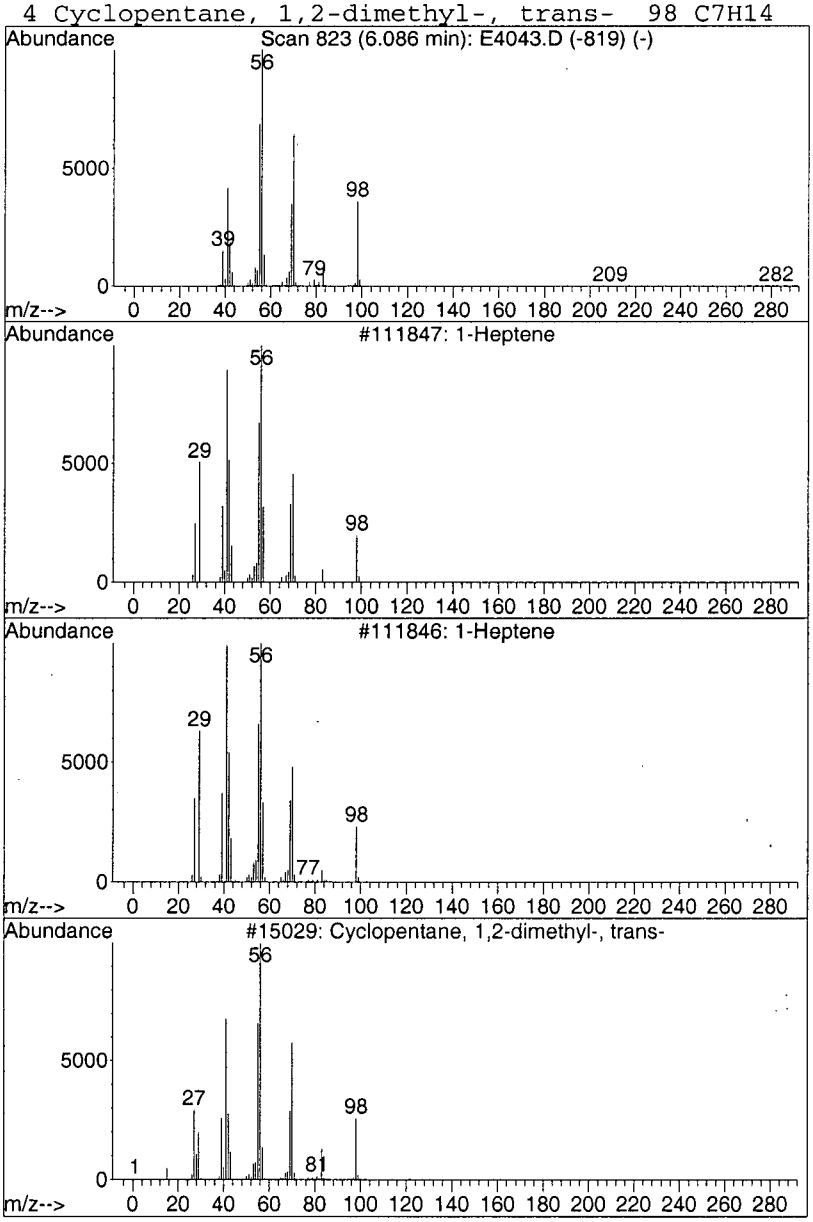
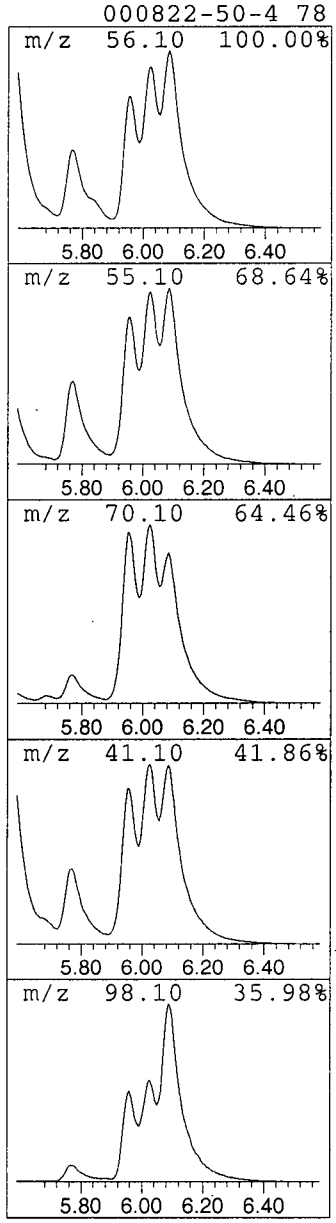




0045

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

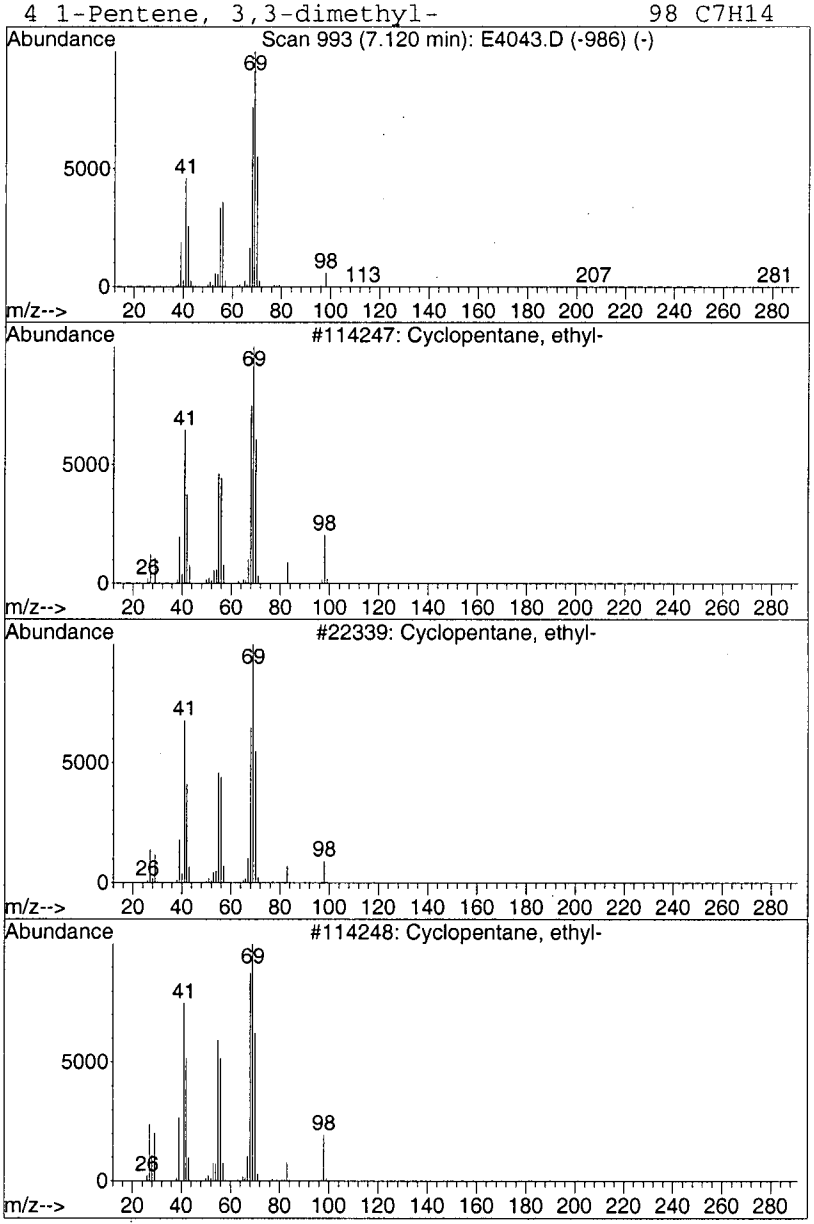
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

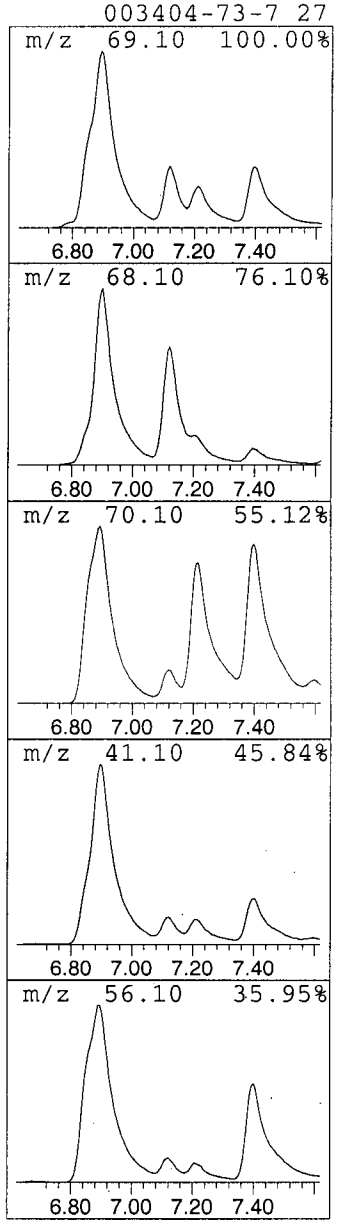
****

Peak Number 8 Cyclopentane, ethyl- Concentration Rank 16

R.T.	EstConc.	Area	Relative to ISTD	R.T.
7.12	8.53 ug/L	7335230	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, ethyl-	98	C7H14	001640-89-7	91
2	Cyclopentane, ethyl-	98	C7H14	001640-89-7	43
3	Cyclopentane, ethyl-	98	C7H14	001640-89-7	42
4	1-Pentene, 3,3-dimethyl-	98	C7H14	003404-73-7	27





cyclic alkane

E4043.D LCE4041.M Thu Apr 03 09:28:37 2003 Page 11

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

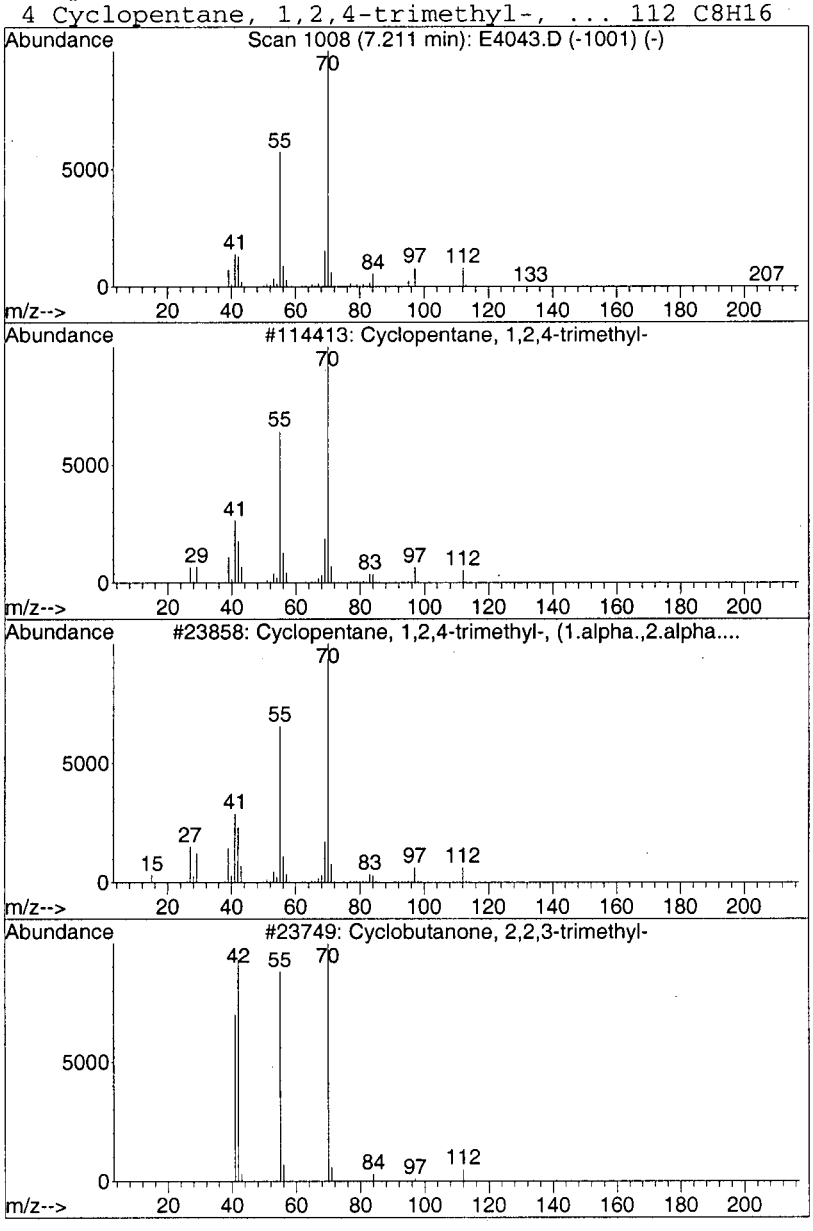
****

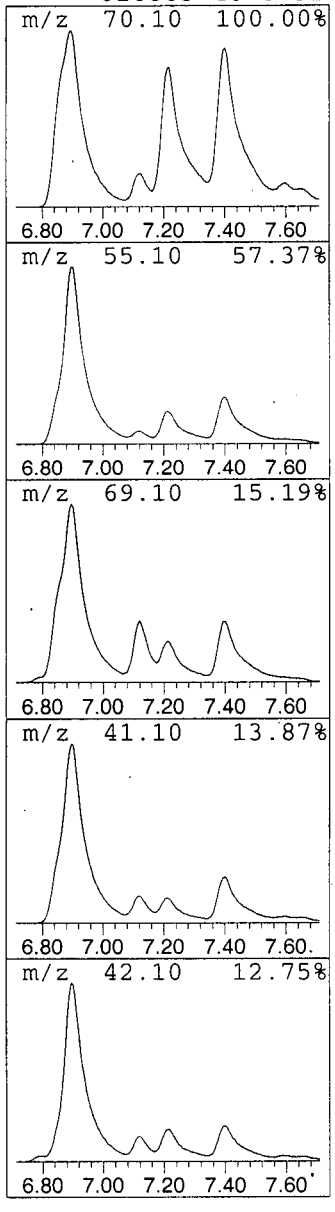
Peak Number 9 Cyclopentane, 1,2,4-trimethyl- Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.21	17.49 ug/L	15042500	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,4-trimethyl-	112	C8H16	002815-58-9	91
2	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	004850-28-6	86
3	Cyclobutanone, 2,2,3-trimethyl-	112	C7H12O	001449-49-6	78
4	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	016883-48-0	52

cyclic alkane





0047

Library Search Compound Report

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   Data File : C:\MSDCHEM\1\DATA\E4043.D                    Vial: 4
   Acq On    : 03/28/2003  1341                          Operator: AK
   Sample    : Y0SJ2                                     Inst    : E-5973
   Misc      : 2762.002  25ML                            Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number 10  Cyclopentane, 1,2,3-trimeth...  Concentration Rank  2
```
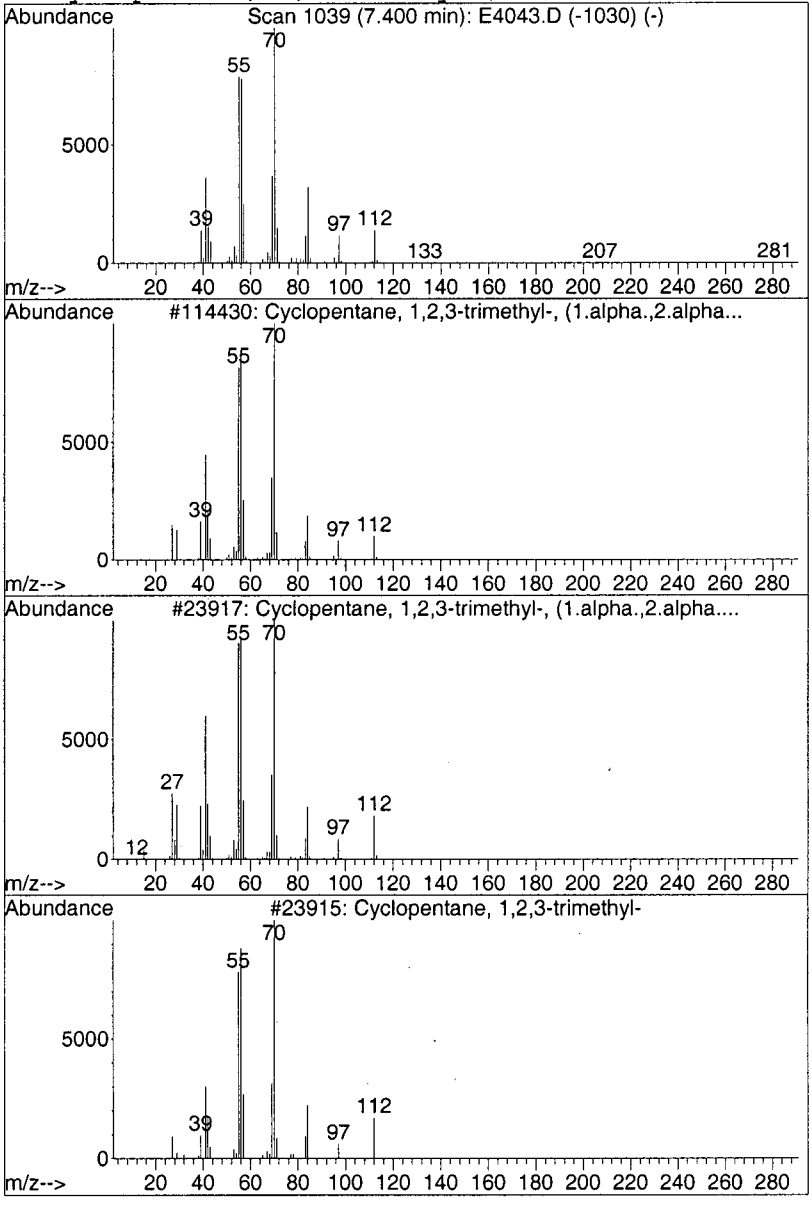
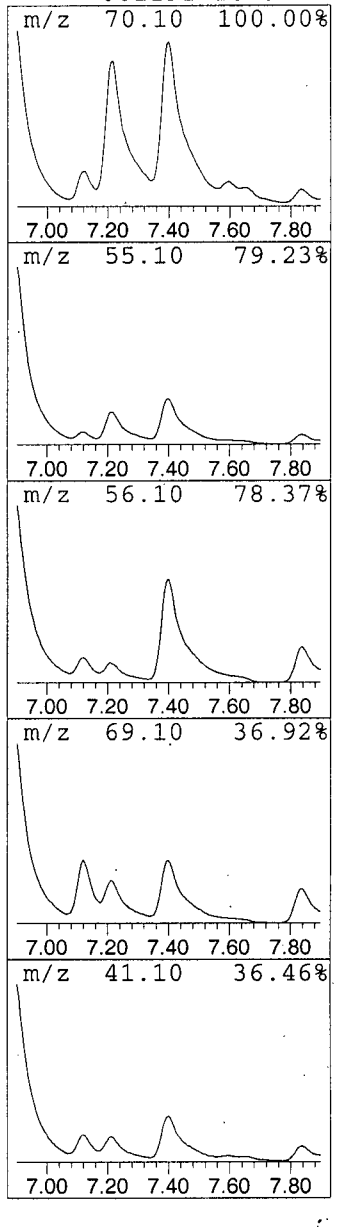

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.40	34.89 ug/L	30017500	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	95
2	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	95
3	Cyclopentane, 1,2,3-trimethyl-	112	C8H16	002815-57-8	90
4	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	64





cyclic alkane

C 0048

Library Search Compound Report

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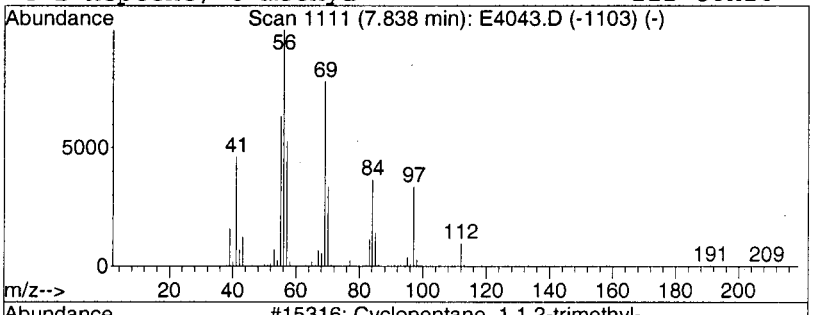
   Data File : C:\MSDCHEM\1\DATA\E4043.D                    Vial: 4
   Acq On    : 03/28/2003  1341                         Operator: AK
   Sample    : Y0SJ2                                    Inst    : E-5973
   Misc      : 2762.002  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

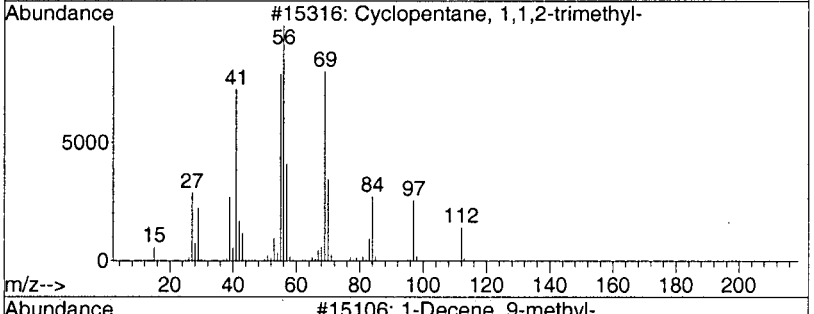
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 11  Cyclopentane, 1,1,2-trimethyl-  Concentration Rank 18

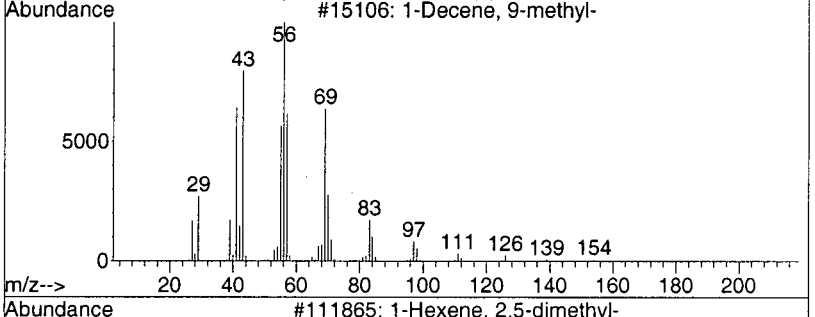
   R.T.   EstConc          Area       Relative to ISTD        R.T.
 ------------------------------------------------------------------
   7.84    7.82 ug/L      6726940    1,4-Difluorobenzene       6.30

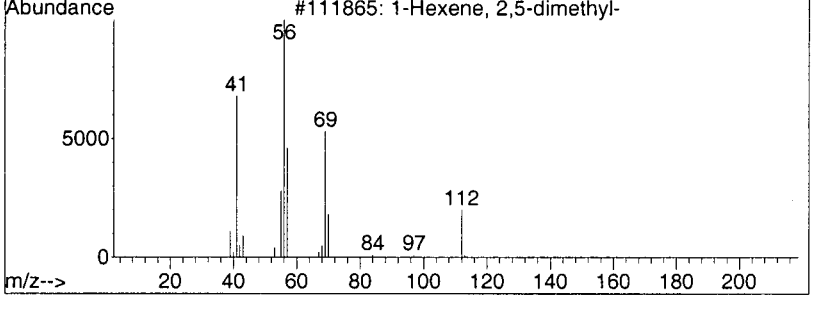
  Hit# of  5    Tentative ID              MW  MolForm       CAS#        Qual
 ------------------------------------------------------------------------
  1 Cyclopentane, 1,1,2-trimethyl-       112 C8H16         004259-00-1 83
  2 1-Decene, 9-methyl-                  154 C11H22        061142-78-7 64
  3 1-Hexene, 2,5-dimethyl-              112 C8H16         006975-92-4 64
  4 1-Heptene, 6-methyl-                 112 C8H16         005026-76-6 64
```

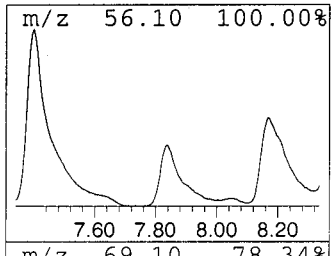
cyclic alkane

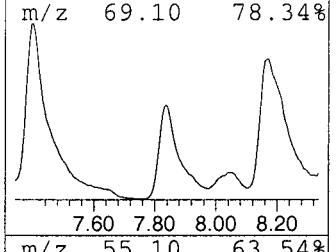


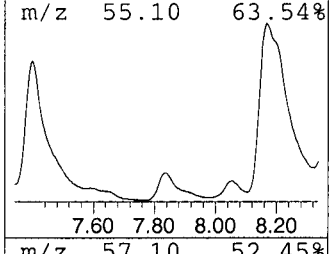


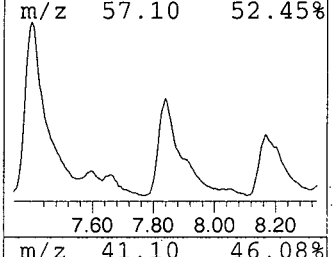


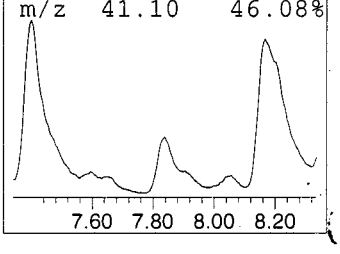












11049

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

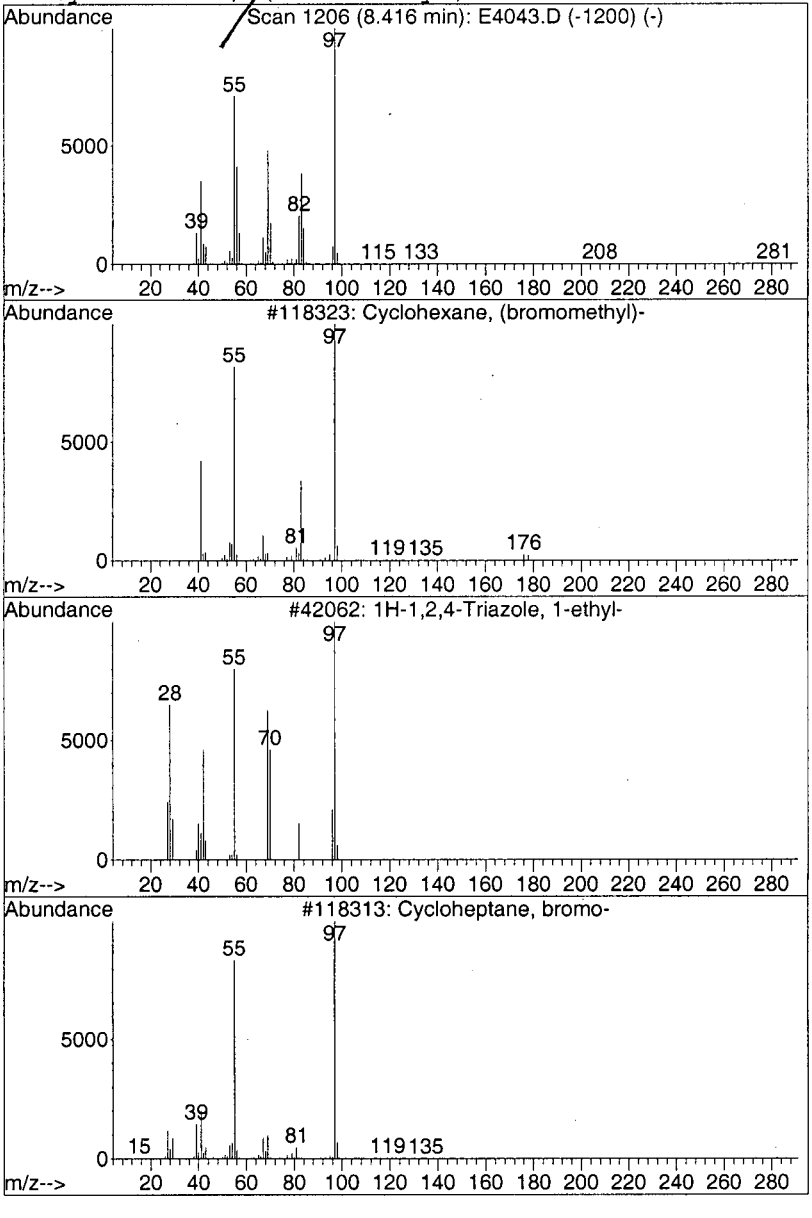
****

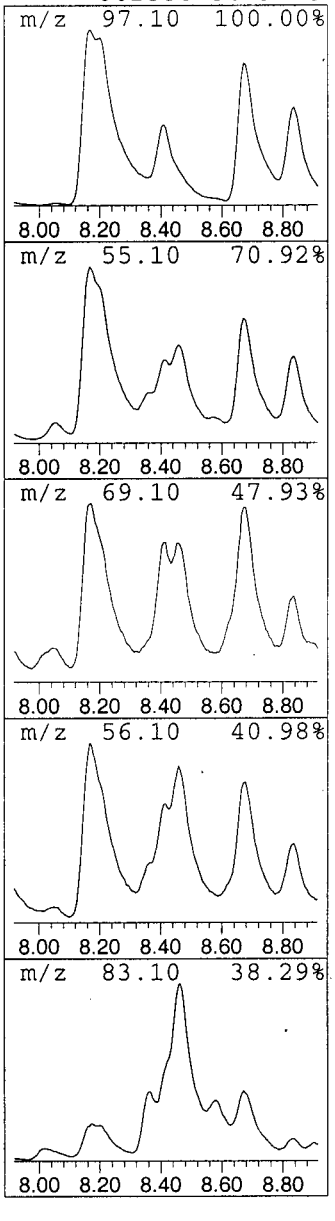
Peak Number 12 Cyclohexane, (bromomethyl)- Concentration Rank 27

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.42	3.84 ug/L	3790300	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, (bromomethyl)-	176	C7H13Br	002550-36-9	43
2	1H-1,2,4-Triazole, 1-ethyl-	97	C4H7N3	016778-70-4	25
3	Cycloheptane, bromo-	176	C7H13Br	002404-35-5	25
4	Cyclohexane, (bromomethyl)-	176	C7H13Br	002550-36-9	25

unknown





Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4043.D                    Vial: 4
   Acq On    : 03/28/2003  1341                         Operator: AK
   Sample    : Y0SJ2                                    Inst    : E-5973
   Misc      : 2762.002  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number 13  Cyclohexane, 1,3-dimethyl-,...  Concentration Rank  7

   R.T.   EstConc           Area       Relative to ISTD         R.T.
 --------------------------------------------------------------------
   8.67   21.33 ug/L     21073300    Chlorobenzene-d5          10.31

  Hit# of  5    Tentative ID              MW  MolForm       CAS#       Qual
 --------------------------------------------------------------------
  1 Cyclohexane, 1,3-dimethyl-, trans-  112 C8H16          002207-03-6 87
  2 Cyclohexane, 1,4-dimethyl-          112 C8H16          000589-90-2 87
  3 Cyclohexane, 1,3-dimethyl-, trans-  112 C8H16          002207-03-6 87
  4 Cyclohexane, 1,4-dimethyl-, trans-  112 C8H16          002207-04-7 87
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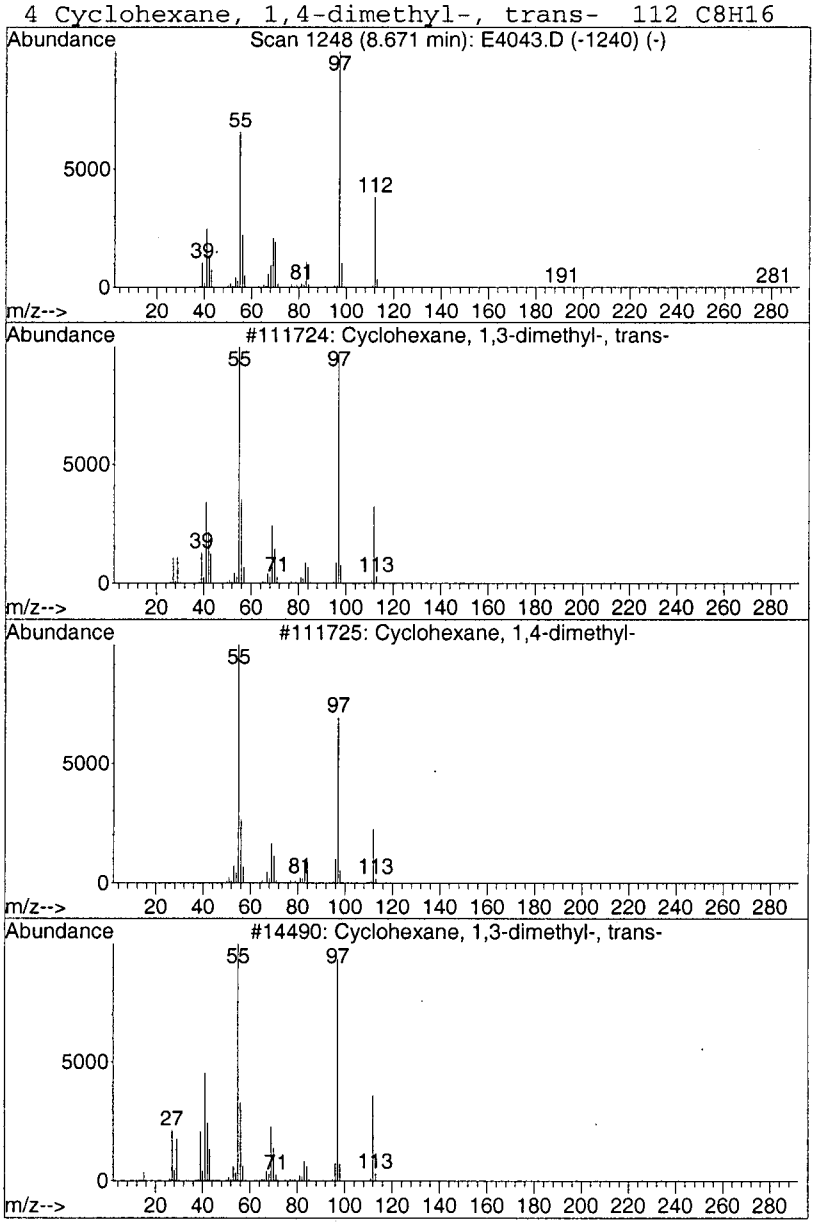
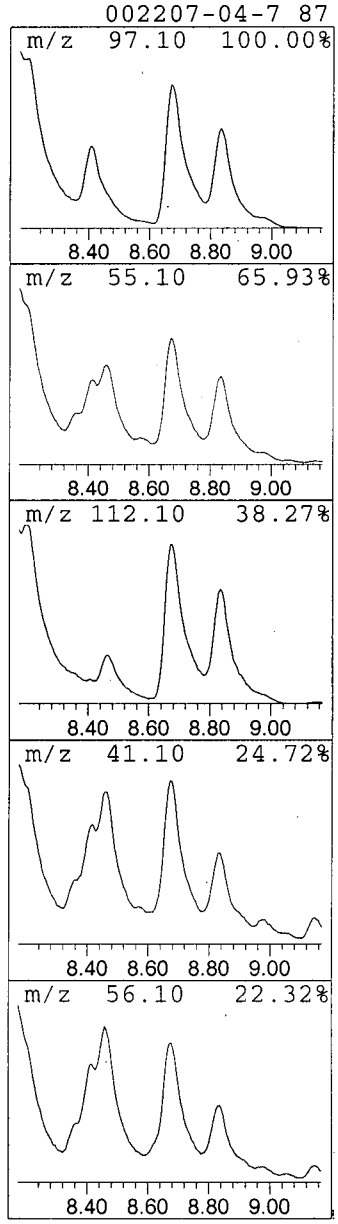
cyclo alkane





0051

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

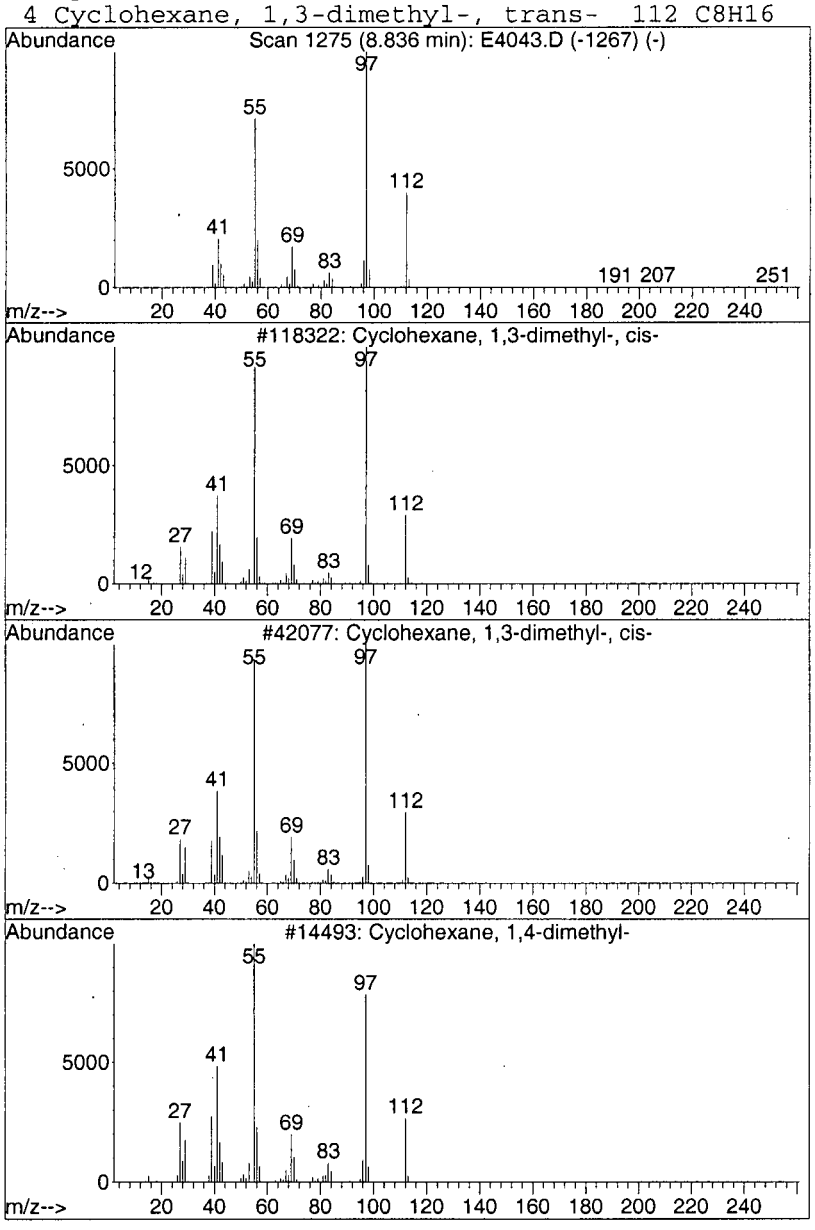
****

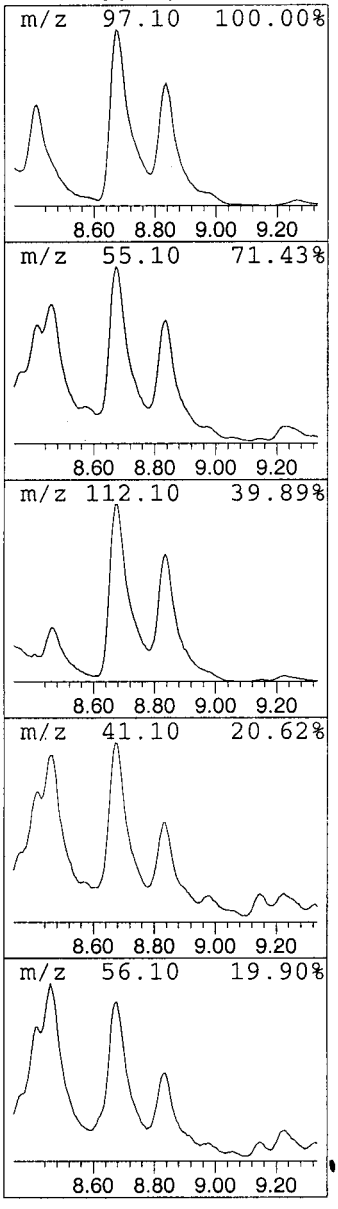
Peak Number 14 Cyclohexane, 1,3-dimethyl-,... Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.84	13.31 ug/L	13145200	Chlorobenzene-d5	10.31

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-	112	C8H16	000589-90-2	91
4	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	91

cyclic alkane





1052

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

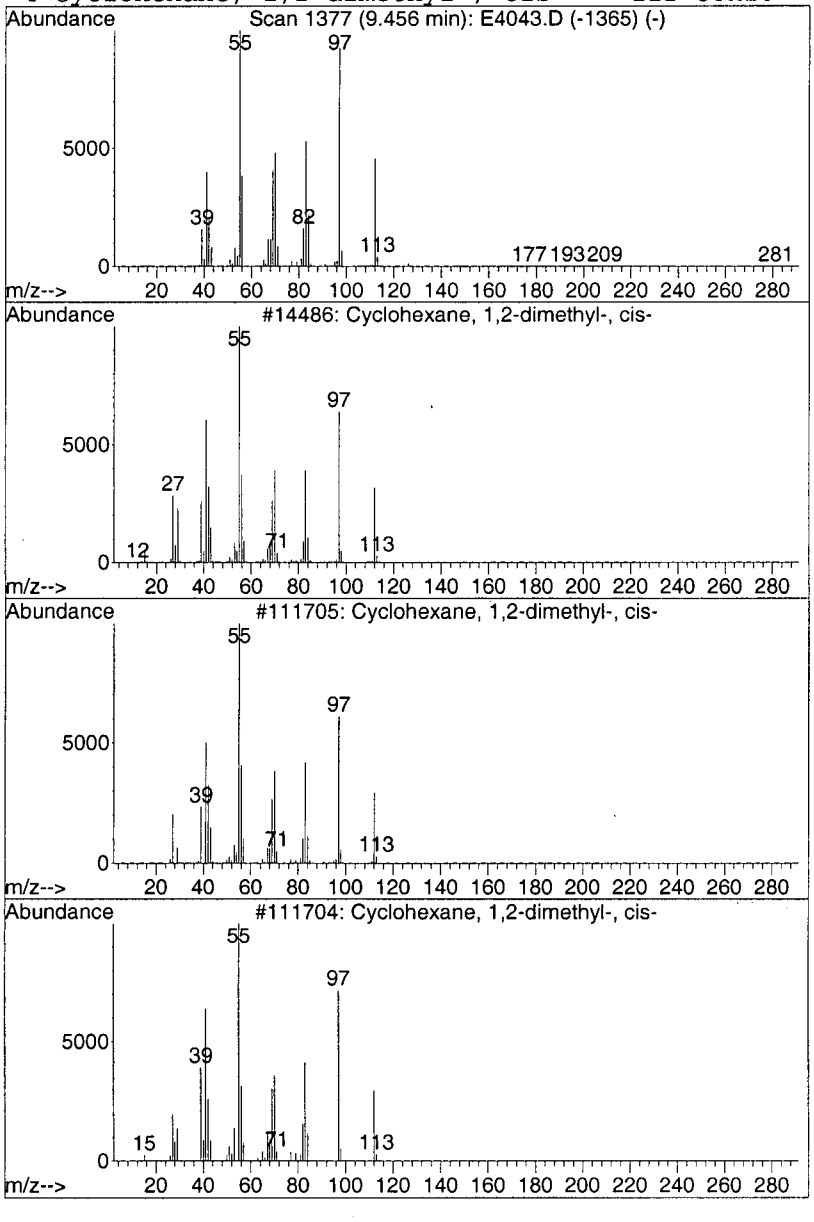
****

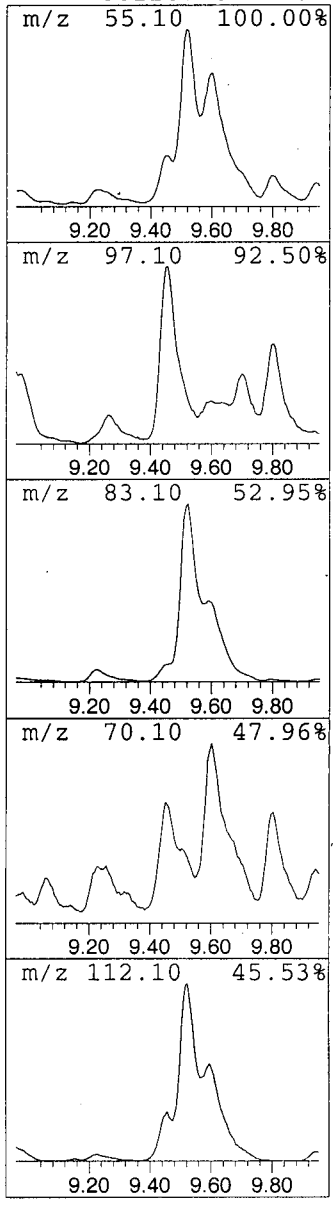
Peak Number 15 Cyclohexane, 1,2-dimethyl-,... Concentration Rank 21

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.46	5.45 ug/L	5381990	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	94
2	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	94
3	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	90
4	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	87

cyclo alkane





0053

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

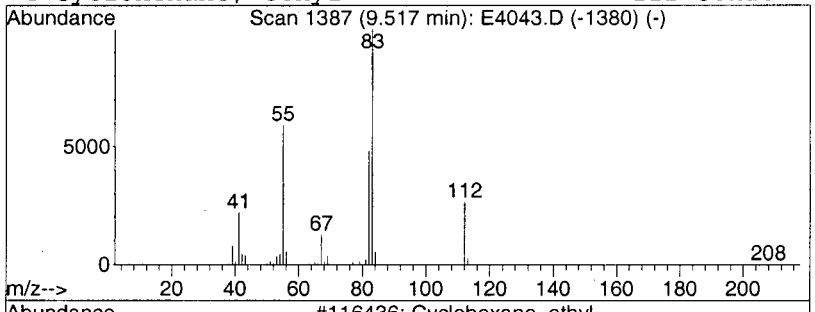
****

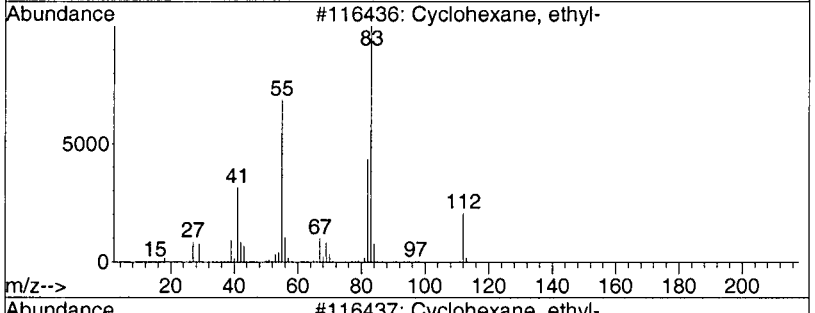
Peak Number 16 Cyclohexane, ethyl- Concentration Rank 9

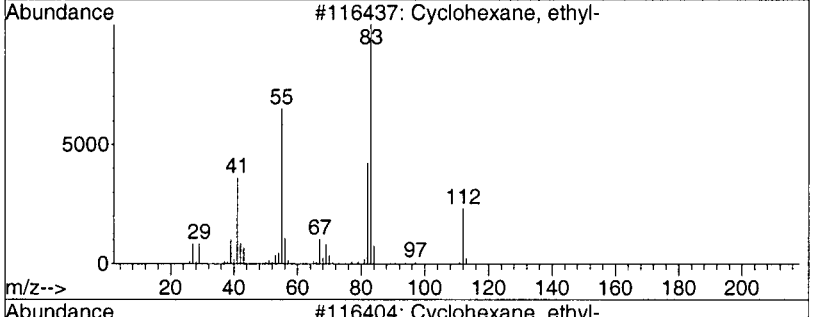
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.52	17.65 ug/L	17436400	Chlorobenzene-d5	10.31

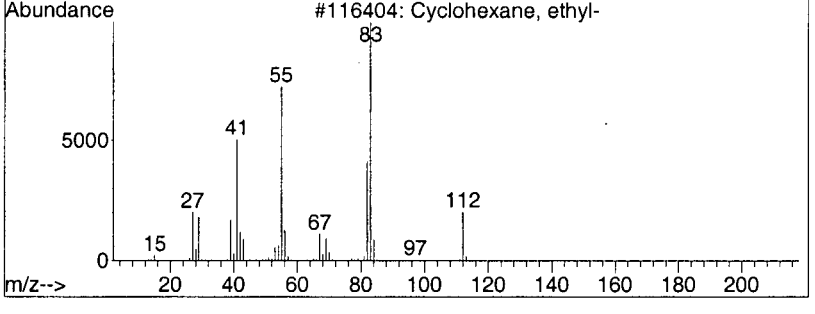
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, ethyl-	112	C8H16	001678-91-7	86
2	Cyclohexane, ethyl-	112	C8H16	001678-91-7	86
3	Cyclohexane, ethyl-	112	C8H16	001678-91-7	78
4	Cyclohexane, ethyl-	112	C8H16	001678-91-7	64

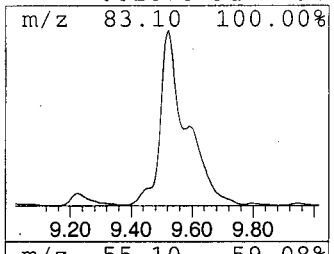
cyclic alkane

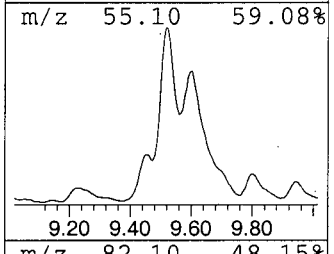


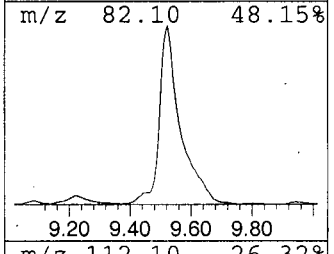


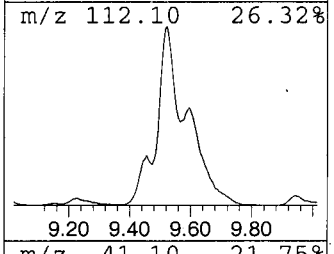


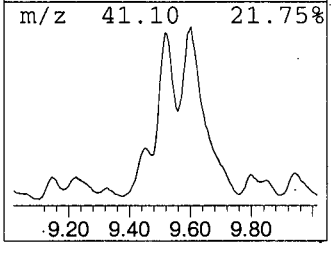












0054

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

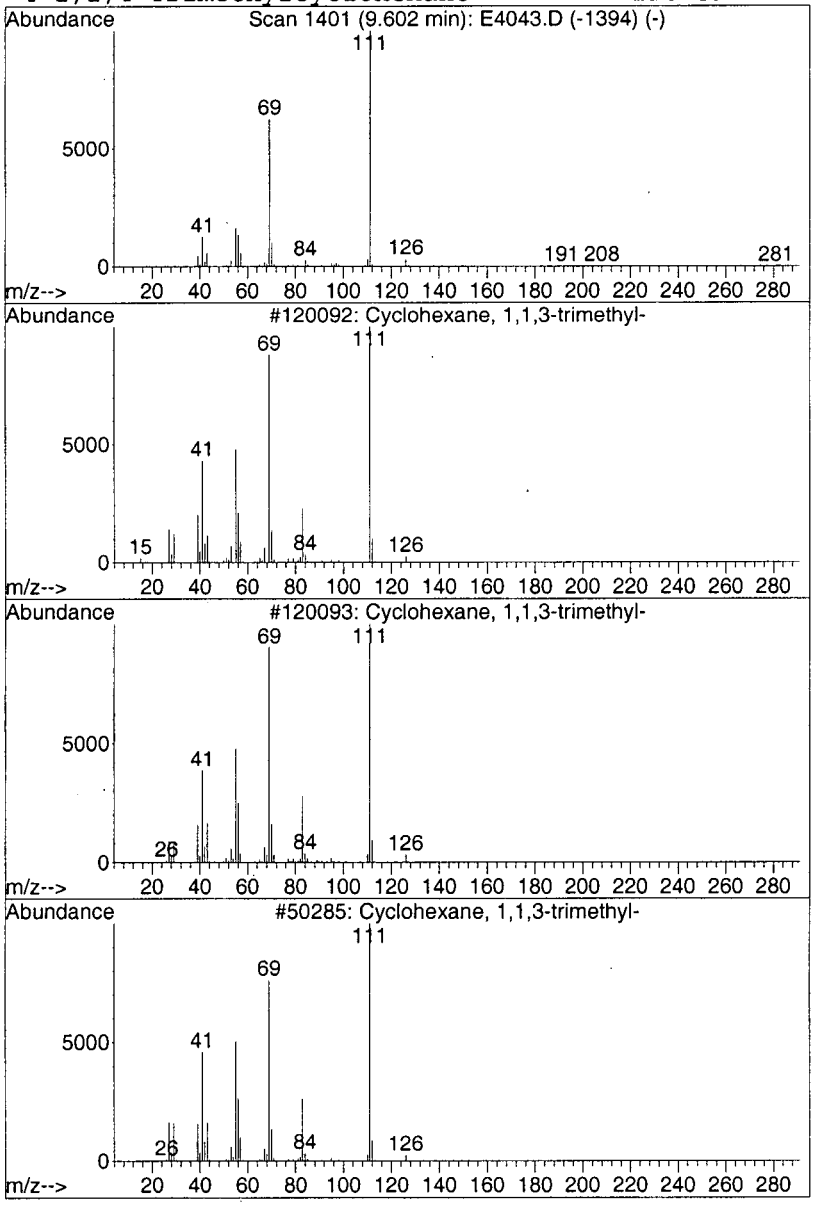
****

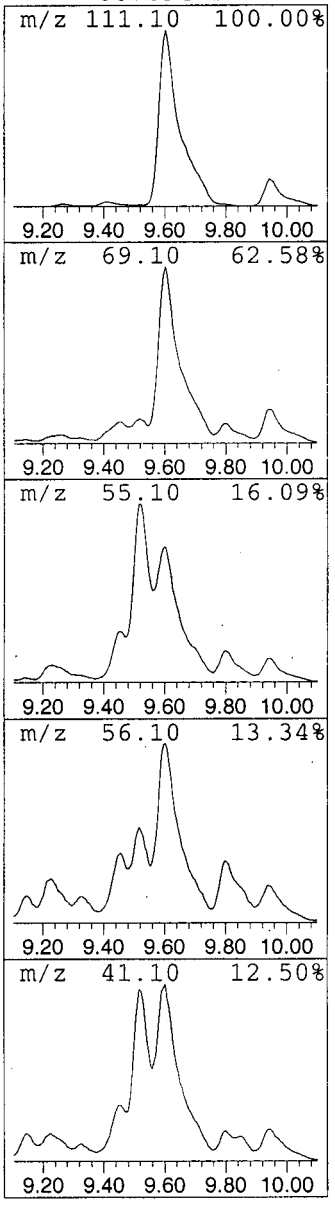
Peak Number 17 Cyclohexane, 1,1,3-trimethyl- Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.60	34.18 ug/L	33770400	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	83
2	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	74
3	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	72
4	1,1,4-Trimethylcyclohexane	126	C9H18	007094-27-1	37

cyclic alkane





1 1055

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

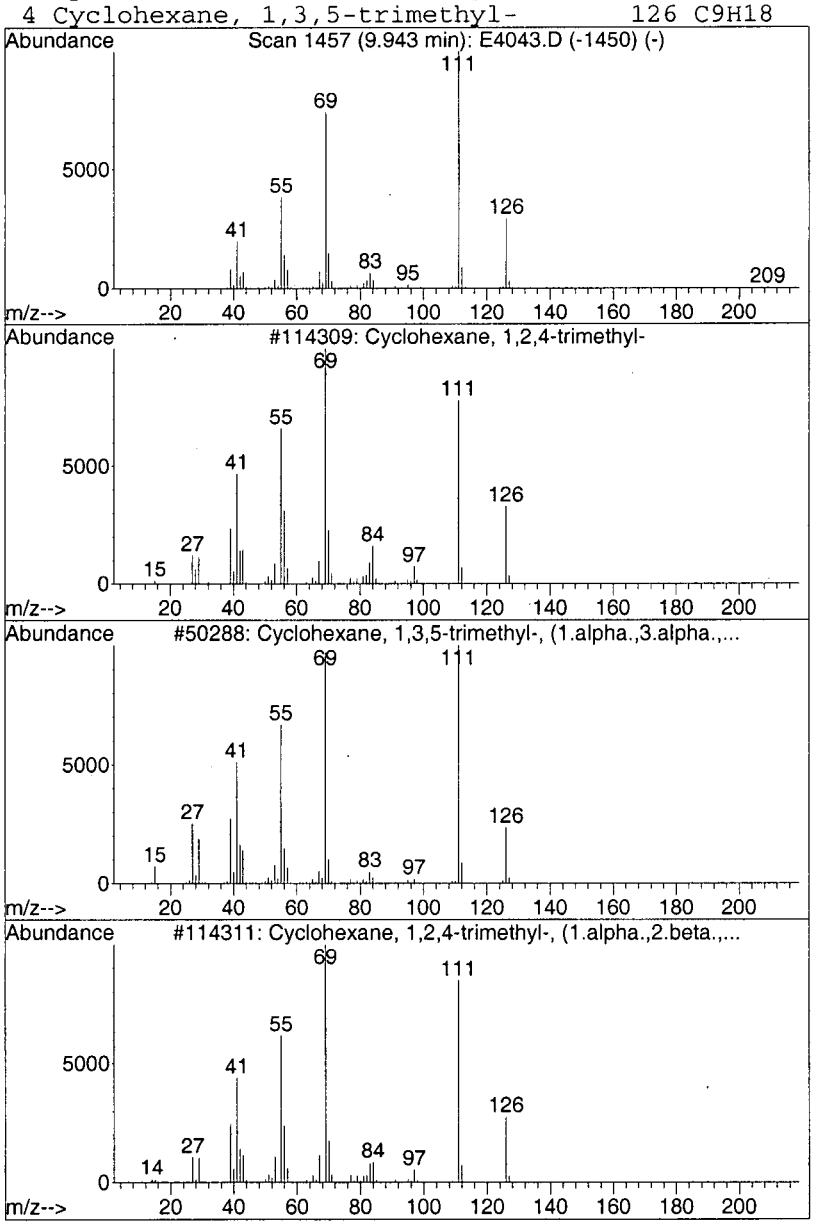
****

Peak Number 18 Cyclohexane, 1,2,4-trimethyl- Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.94	6.46 ug/L	6382160	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2,4-trimethyl-	126	C9H18	002234-75-5	91
2	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-27-3	91
3	Cyclohexane, 1,2,4-trimethyl-, (...	126	C9H18	007667-60-9	91
4	Cyclohexane, 1,3,5-trimethyl-	126	C9H18	001839-63-0	90

cyclic alkane



0056

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

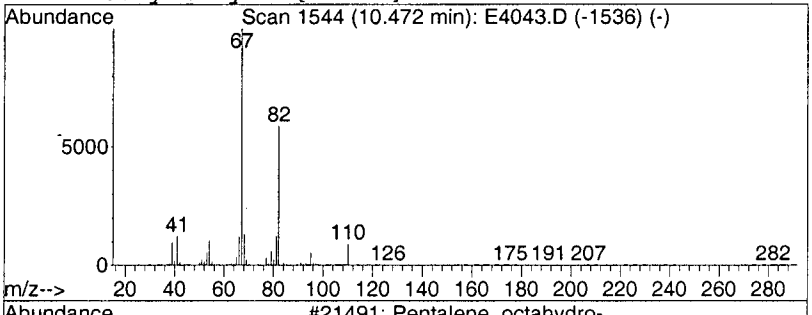
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

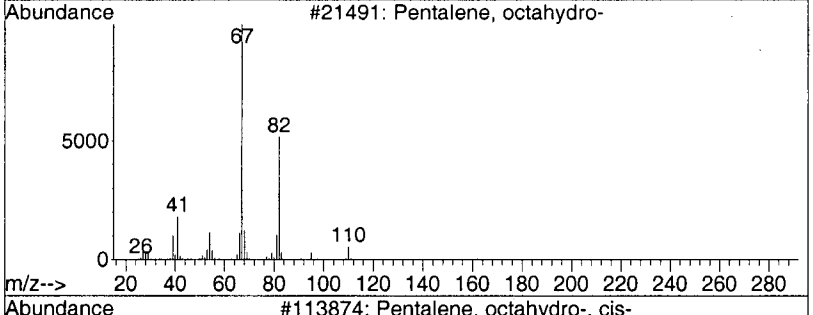
****

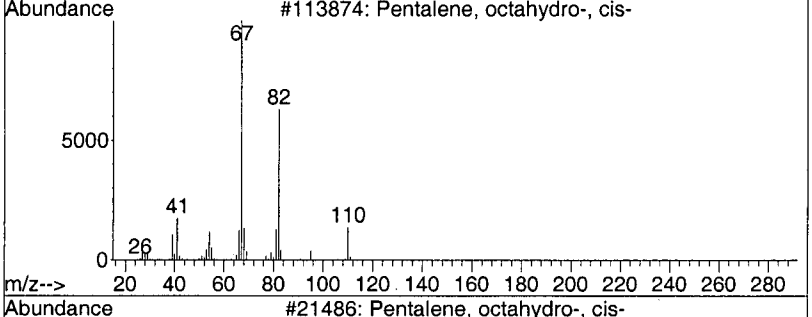
Peak Number 19 Pentalene, octahydro- Concentration Rank 23

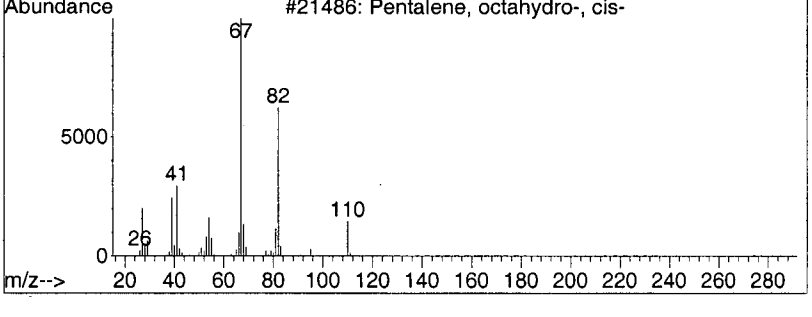
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.47	5.00 ug/L	4939830	Chlorobenzene-d5	10.31

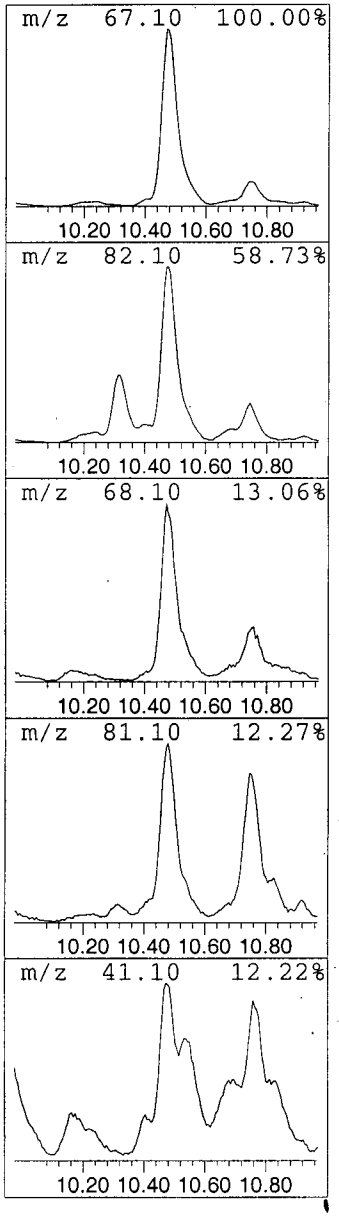
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentalene, octahydro-	110	C8H14	000694-72-4	91
2	Pentalene, octahydro-, cis-	110	C8H14	001755-05-1	91
3	Pentalene, octahydro-, cis-	110	C8H14	001755-05-1	78
4	7-Methylbicyclo[4.2.0]octane	124	C9H16	1000210-90-2	72











0057

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

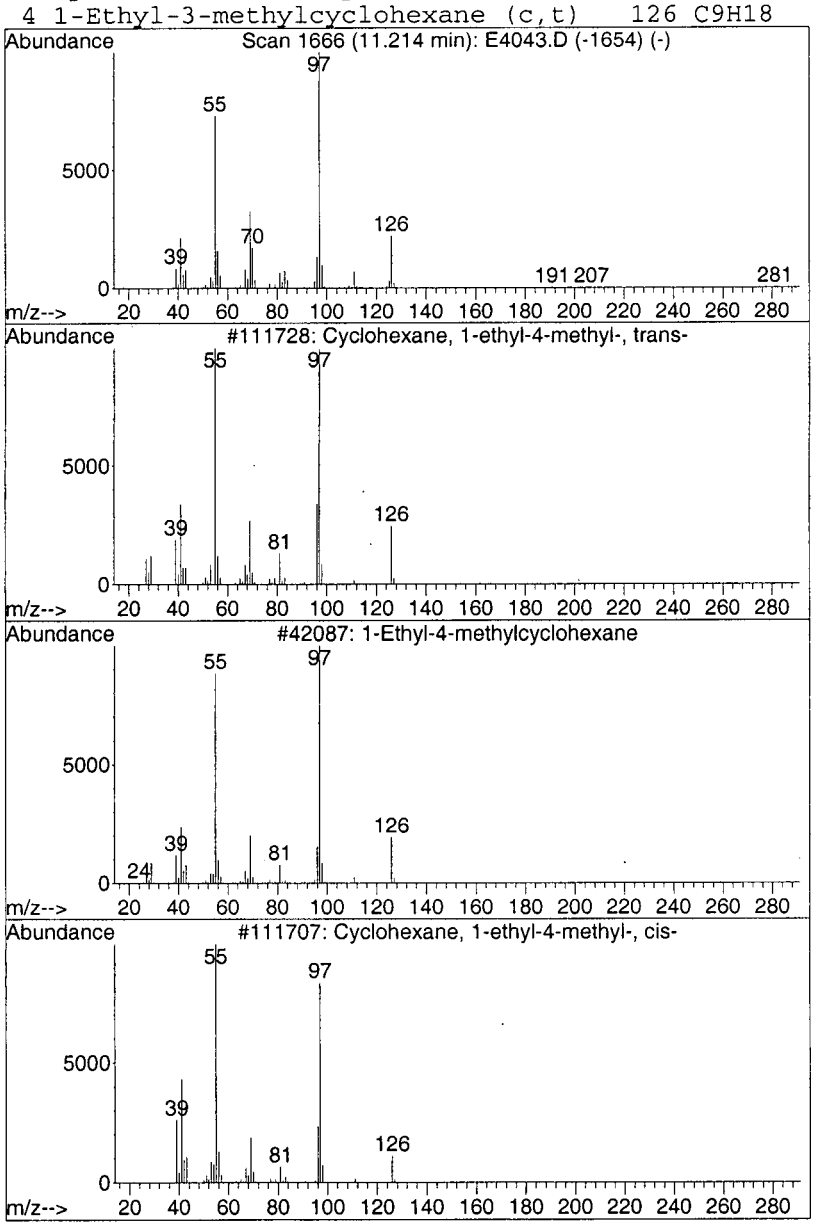
****

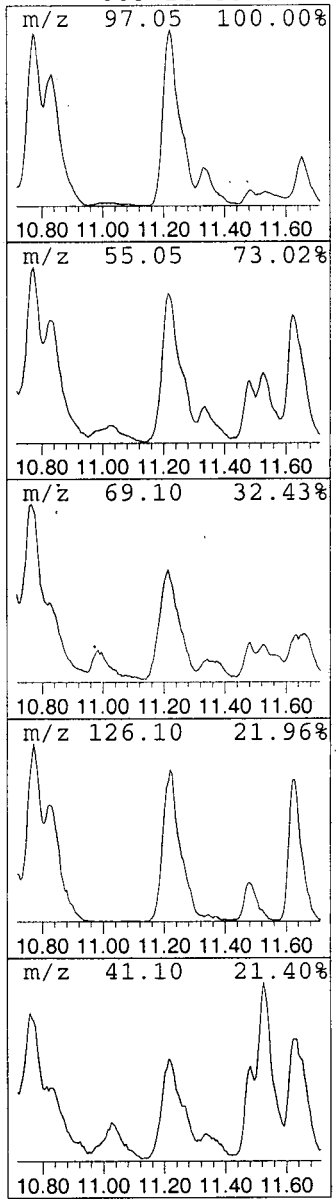
Peak Number 20 Cyclohexane, 1-ethyl-4-meth... Concentration Rank 26

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.21	4.41 ug/L	4356790	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	72
2	1-Ethyl-4-methylcyclohexane	126	C9H18	003728-56-1	72
3	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	004926-78-7	72
4	1-Ethyl-3-methylcyclohexane (c,t)	126	C9H18	003728-55-0	72

cyclic alkane





0058

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

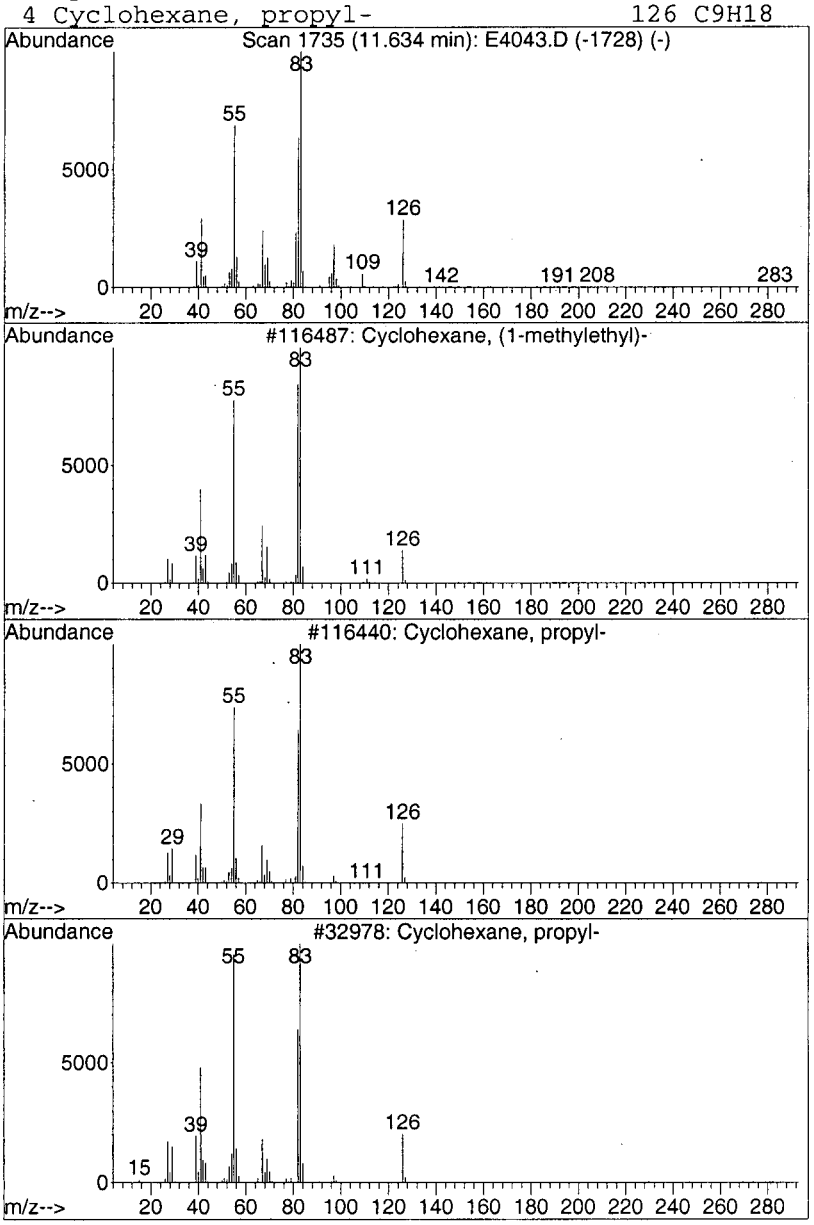
****

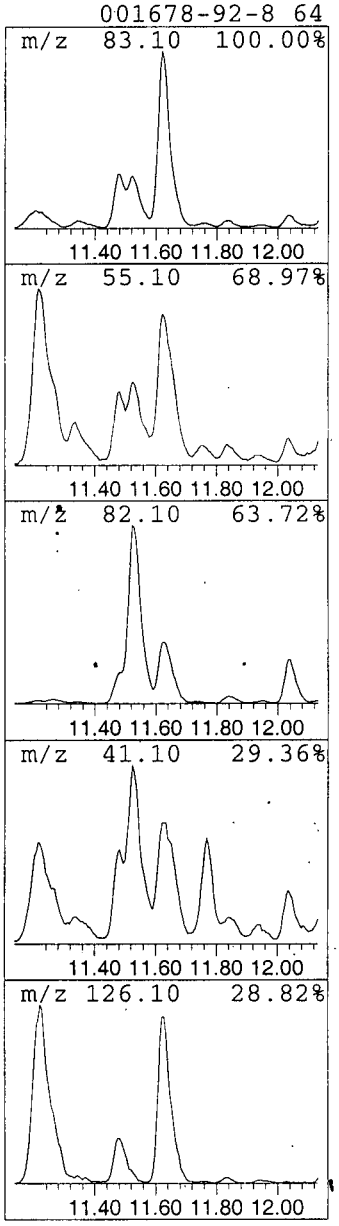
Peak Number 21 Cyclohexane, (1-methylethyl)- Concentration Rank 25

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.63	4.59 ug/L	4536620	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, (1-methylethyl)-	126	C9H18	000696-29-7	87
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	81
3	Cyclohexane, propyl-	126	C9H18	001678-92-8	64
4	Cyclohexane, propyl-	126	C9H18	001678-92-8	64

cyclic alkane





1059

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

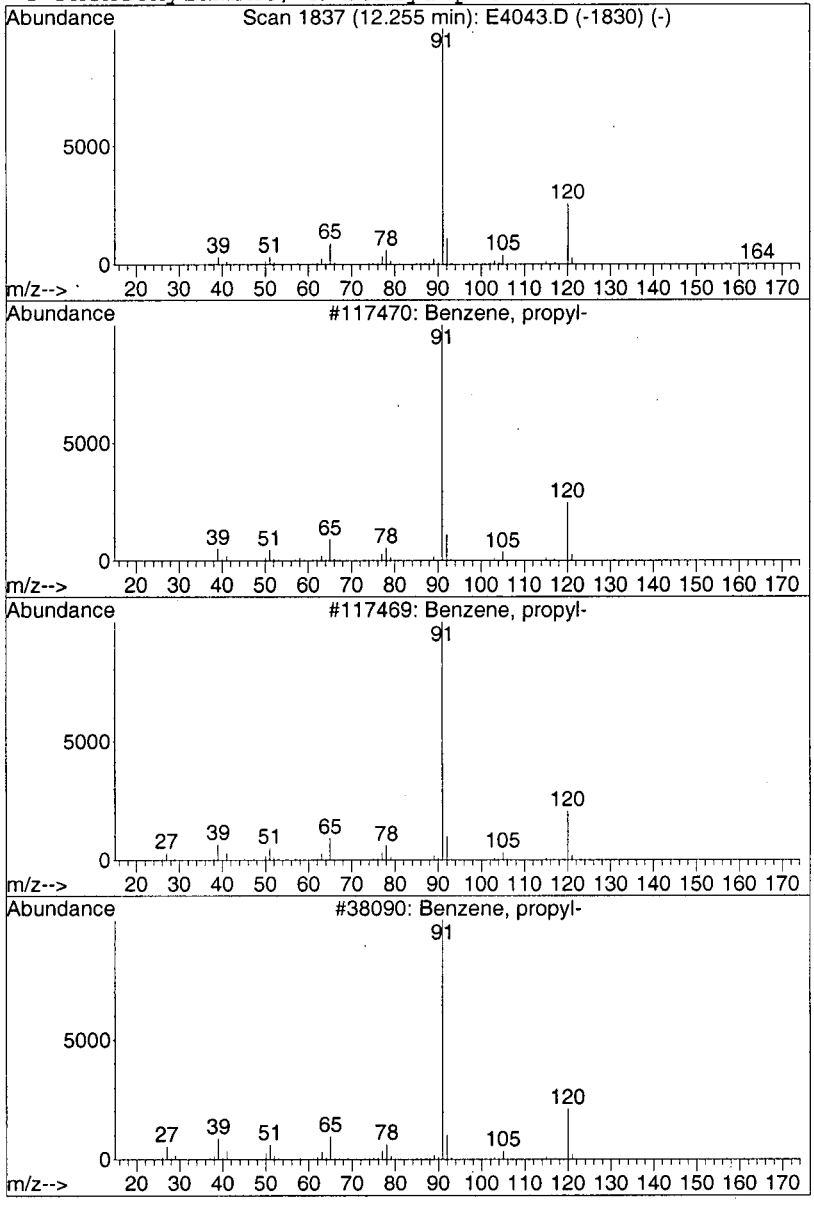
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

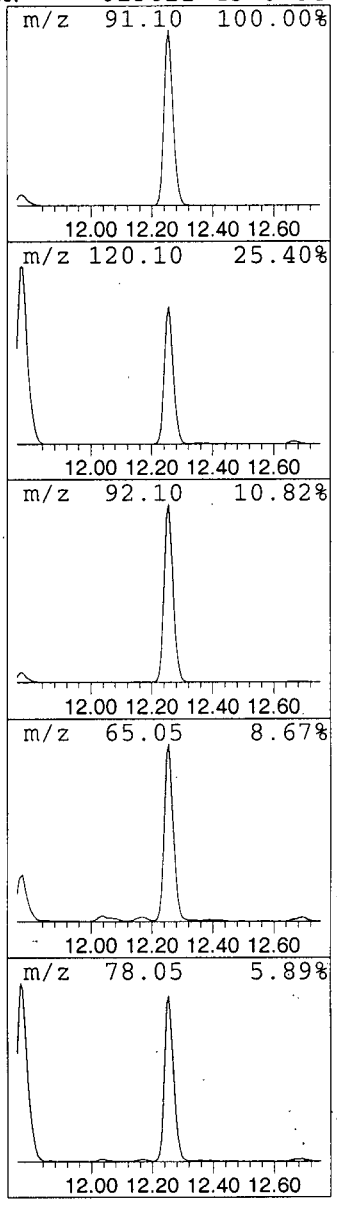
****

Peak Number 22 Benzene, propyl- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.25	21.77 ug/L	12192600	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	Benzene, propyl-	120	C9H12	000103-65-1	87
4	Phenethylamine, N-benzyl-p-chlor...	281	C15H17Cl2N	013622-43-0	64





0060

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

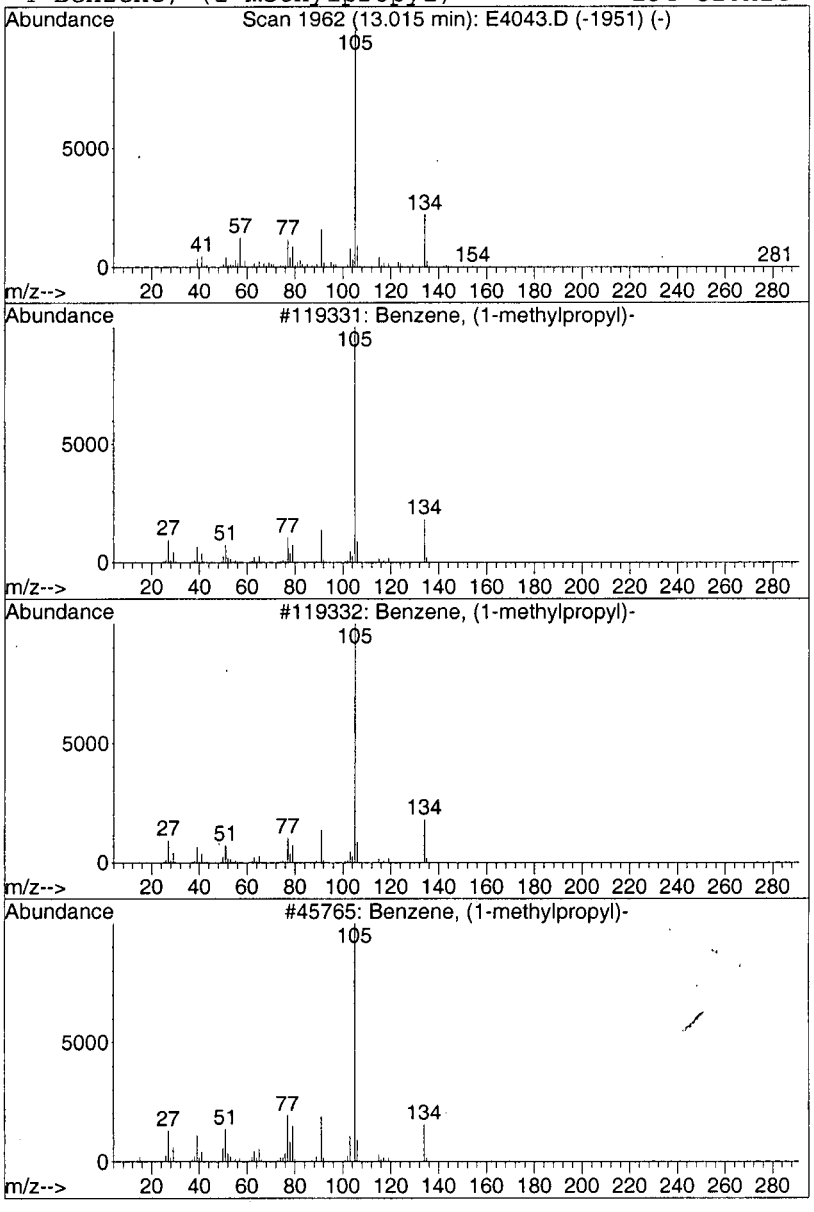
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

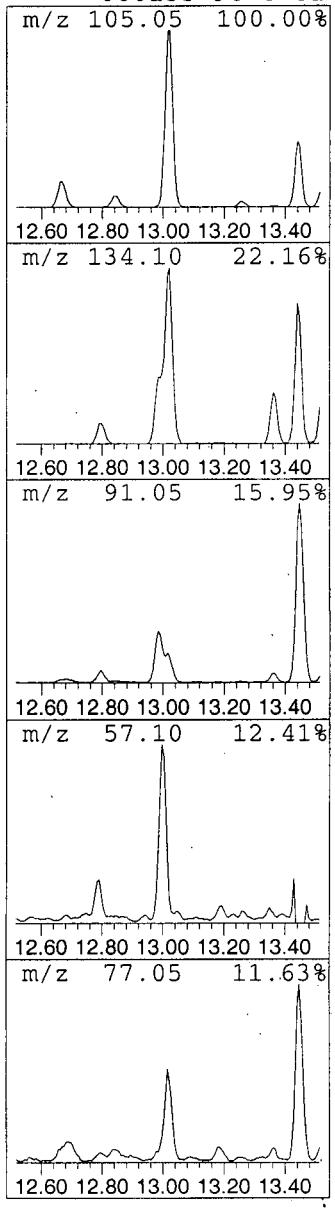
****

Peak Number 23 Benzene, (1-methylpropyl)- Concentration Rank 24

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.02	5.00 ug/L	2799890	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, (1-methylpropyl)-	134	C10H14	000135-98-8	81
2	Benzene, (1-methylpropyl)-	134	C10H14	000135-98-8	81
3	Benzene, (1-methylpropyl)-	134	C10H14	000135-98-8	81
4	Benzene, (1-methylpropyl)-	134	C10H14	000135-98-8	81





0061

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

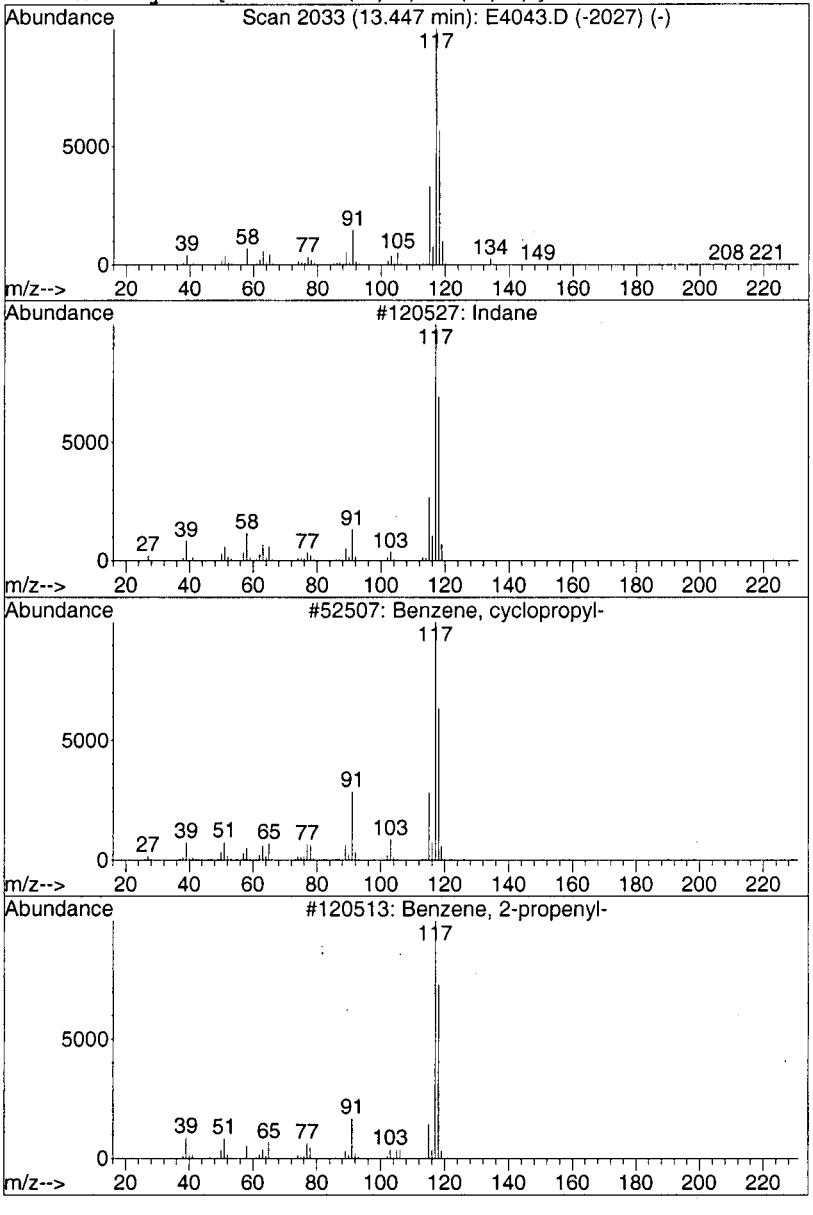
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

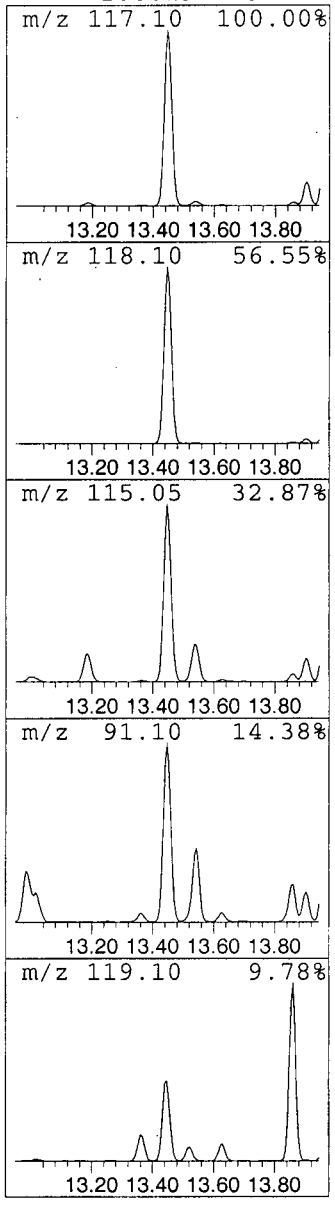
****

Peak Number 24 Indane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.45	20.96 ug/L	11735200	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	87
2	Benzene, cyclopropyl-	118	C9H10	000873-49-4	81
3	Benzene, 2-propenyl-	118	C9H10	000300-57-2	80
4	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	74





0062

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

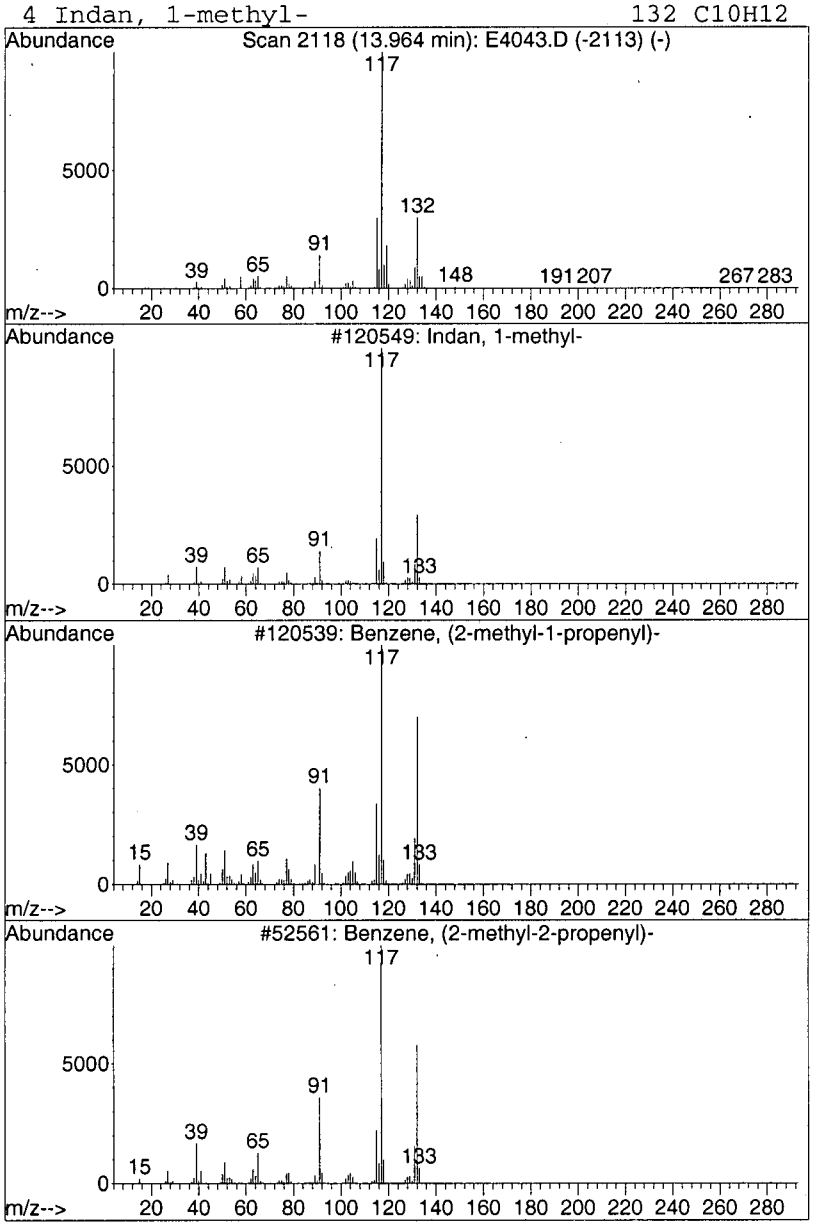
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

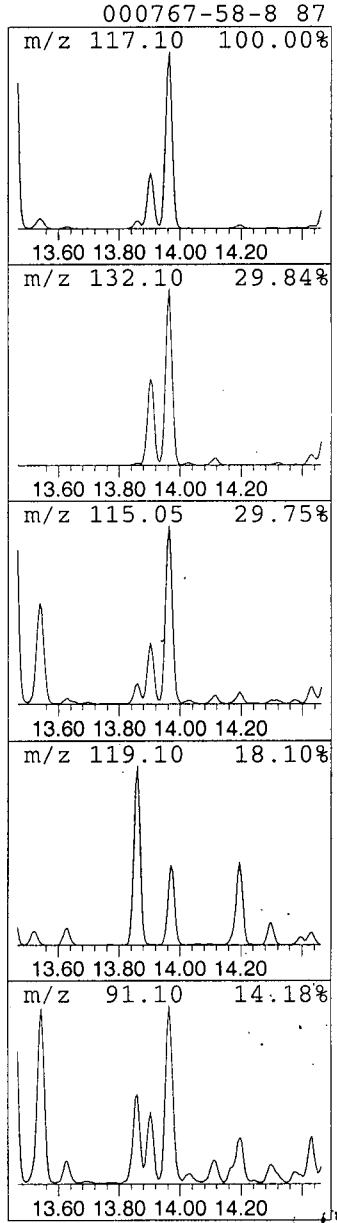
****

Peak Number 25 Indan, 1-methyl- Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.96	8.48 ug/L	4748770	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	93
2	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	90
3	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	87
4	Indan, 1-methyl-	132	C10H12	000767-58-8	87





1 0063

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D Vial: 4
Acq On : 03/28/2003 1341 Operator: AK
Sample : Y0SJ2 Inst : E-5973
Misc : 2762.002 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

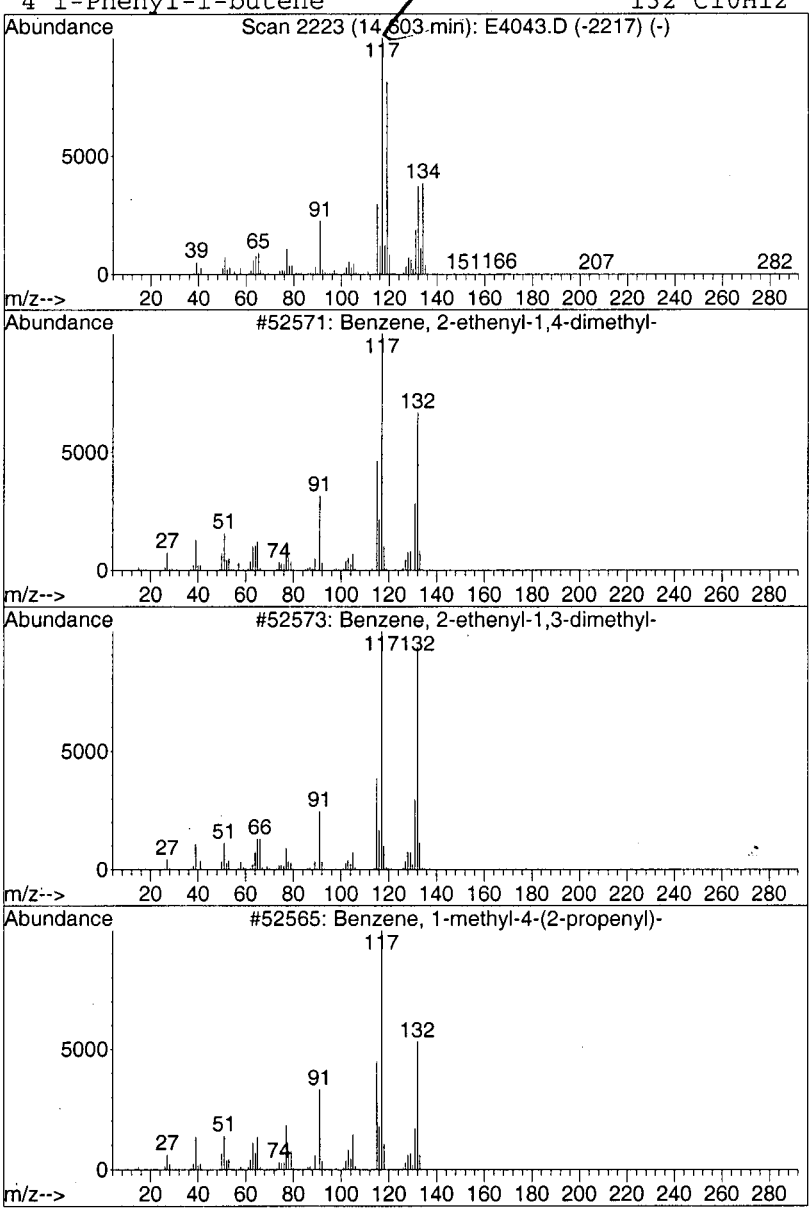
****

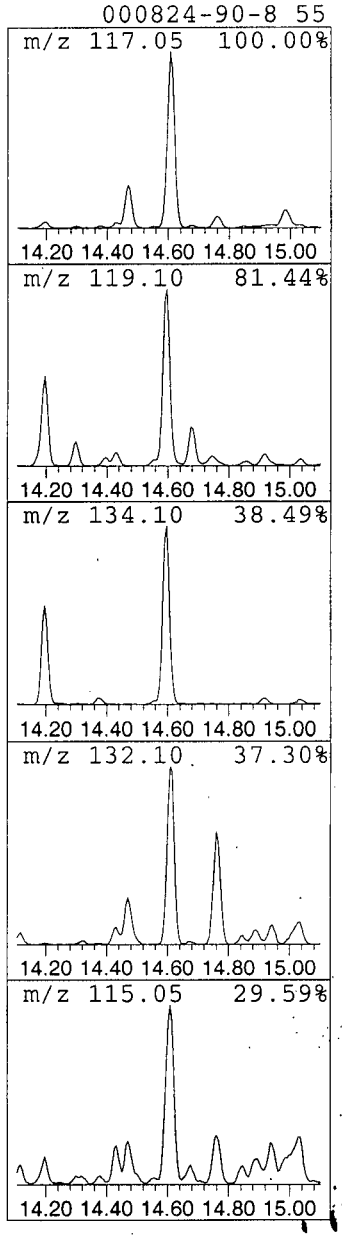
Peak Number 26 Benzene, 2-ethenyl-1,4-dime... Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.60	7.41 ug/L	4146650	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	74
2	Benzene, 2-ethenyl-1,3-dimethyl-	132	C10H12	002039-90-9	70
3	Benzene, 1-methyl-4-(2-propenyl)-	132	C10H12	003333-13-9	55
4	1-Phenyl-1-butene	132	C10H12	000824-90-8	55

unknown





11064

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4043.D
Acq On : 03/28/2003 1341
Sample : Y0SJ2
Misc : 2762.002 25ML
MS Integration Params: Lscint.p

Vial: 4
Operator: AK
Inst : E-5973
Multiplr: 1.00

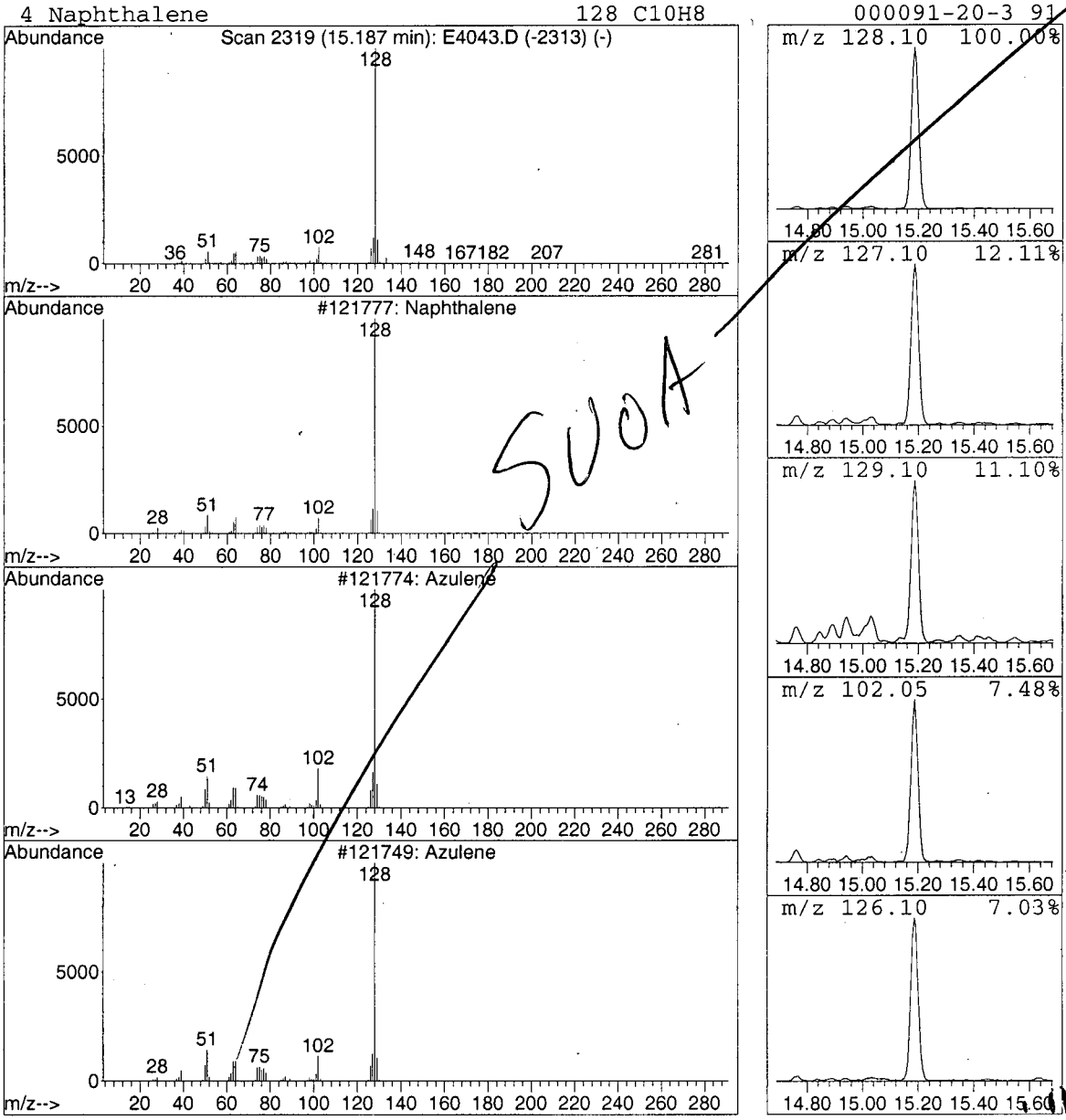
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

****

Peak Number 27 Naphthalene Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.19	9.83 ug/L	5504070	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	94
2	Azulene	128	C10H8	000275-51-4	91
3	Azulene	128	C10H8	000275-51-4	91
4	Naphthalene	128	C10H8	000091-20-3	91



SVOA

0065

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ2DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002DL Date Received: 03/20/2003

Lab File ID: E4018 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 10.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl Chloride	5.0	U
74-83-9	Bromomethane	6.3	D
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	26	D
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	47	JD
75-15-0	Carbon Disulfide	5.0	U
79-20-9	Methyl Acetate	5.0	U
75-09-2	Methylene Chloride	6.3	DB
156-60-5	trans-1,2-Dichloroethene	2.4	JD
1634-04-4	Methyl tert-Butyl Ether	5.0	U
75-34-3	1,1-Dichloroethane	4.6	JD
156-59-2	cis-1,2-Dichloroethene	97	D
78-93-3	2-Butanone	50	U
74-97-5	Bromochloromethane	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	38	D
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

Y0SJ2DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002DL Date Received: 03/20/2003

Lab File ID: E4018 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 10.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	3.2	JD
108-87-2	Methylcyclohexane	100	D
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	6.6	D
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	17	D
1330-20-7	Xylene (total)	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	26	D
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
87-61-6	1,2,3-Trichlorobenzene	5.0	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ2DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.002DL Date Received: 03/20/2003

Lab File ID: E4018 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 10.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 4

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01	000103-65-1	Benzene, propyl-	12.26	41	JND
02	000496-11-7	Indane	13.45	39	JND
03	000767-58-8	Indan, 1-methyl-	13.96	18	JND
04	000767-58-8	Indan, 1-methyl-	14.61	13	JND
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
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28					
29					
30					

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4018.D
Acq On : 03/27/2003 1556
Sample : Y0SJ2DL
Misc : 2762.002DL 25ML 10X
MS Integration Params: RTEINT.P
Quant Time: Mar 27 16:21:16 2003

Vial: 11
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4009.RES

KGR 04/02/03

GP 04/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1028037	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	812337	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	283781	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.15	65	317599	4.21 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 84.20%	
7) Chloroethane-d5	2.54	69	269837	4.28 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 85.60%	
10) 1,1-Dichloroethene-d2	3.26	65	140205	4.26 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 85.20%	
20) 2-Butanone-d5	4.88	46	44149	6.65 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 133.00%	
24) Chloroform-d	5.24	86	307667	4.24 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 84.80%	
26) 1,2-Dichloroethane-d4	5.81	65	173490	4.46 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 89.20%	
32) Benzene-d6	5.85	84	1338481	4.41 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 88.20%	
35) 1,2-Dichloropropane-d6	6.80	67	442245	5.20 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 104.00%	
41) Toluene-d8	8.21	98	1318483	4.43 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 88.60%	
43) trans-1,3-Dichloropropene-	8.53	79	48446	4.77 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 95.40%	
47) 2-Hexanone-d5	9.13	46	68785	5.48 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 109.60%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	123528	4.30 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 86.00%	
61) Bromoform-d	11.51	174	61439	3.83 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 76.60%	
65) 1,2-Dichlorobenzene-d4	13.54	152	252225	4.34 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 86.80%	

Target Compounds					Qvalue
6) Bromomethane	2.48	94	22602	0.63 ug/L	91
11) 1,1-Dichloroethene	3.28	96	232505	2.65 ug/L #	71
13) Acetone	3.29	43	20671	4.70 ug/L J	70
16) Methylene Chloride	3.70	84	48813	0.63 ug/L B	92
17) trans-1,2-Dichloroethene	3.96	96	23267	0.24 ug/L J	97
19) 1,1-Dichloroethane	4.36	63	65679	0.46 ug/L J	99
21) cis-1,2-Dichloroethene	4.94	96	777345	9.70 ug/L	100
30) Cyclohexane	5.57	56	597110	3.78 ug/L #	74
34) Trichloroethene	6.64	95	25588	0.32 ug/L J	97
36) Methylcyclohexane	6.91	83	1754899	10.23 ug/L	89
46) Tetrachloroethene	9.09	164	55105	0.66 ug/L	99
52) Ethylbenzene	10.55	91	657734	1.73 ug/L	100
57) Isopropylbenzene	11.77	105	826872	2.64 ug/L	99

0069

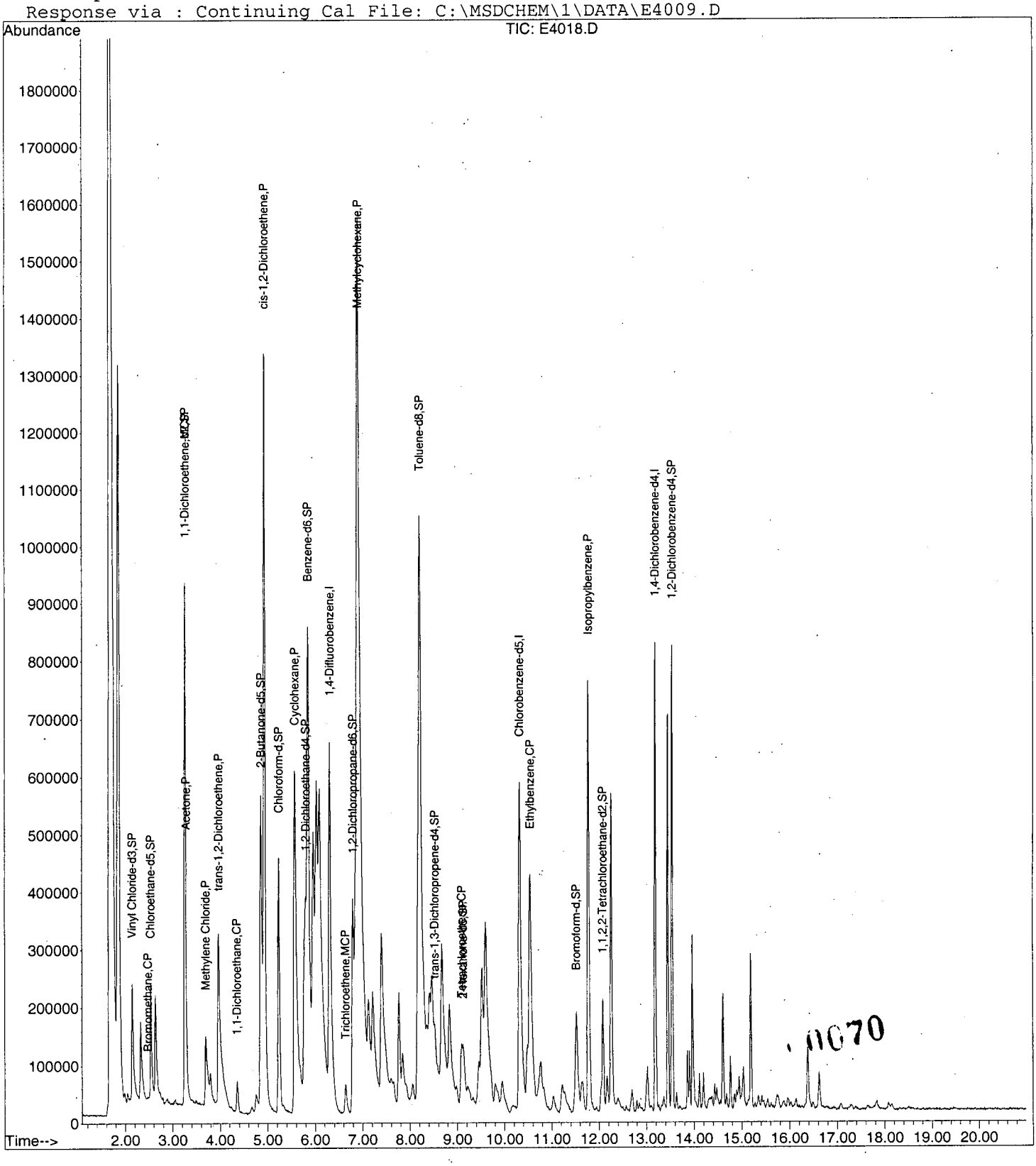
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

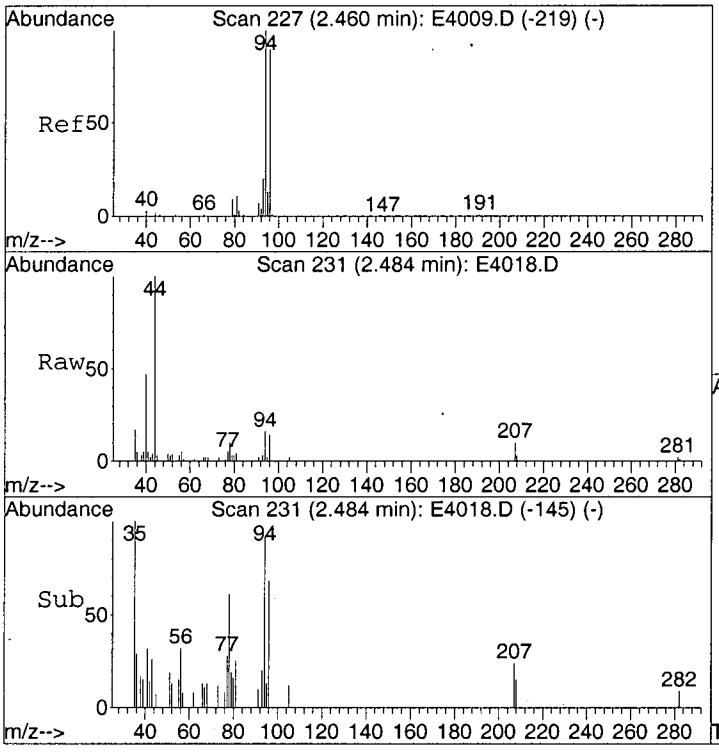
Data File : C:\MSDCHEM\1\DATA\E4018.D
Acq On : 03/27/2003 1556
Sample : Y0SJ2DL
Misc : 2762.002DL 25ML 10X
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:56 2003

Vial: 11
Operator: AK
Inst : E-5973
Multiplr: 1.00
Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D



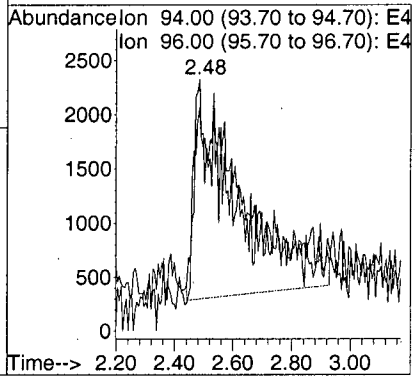
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

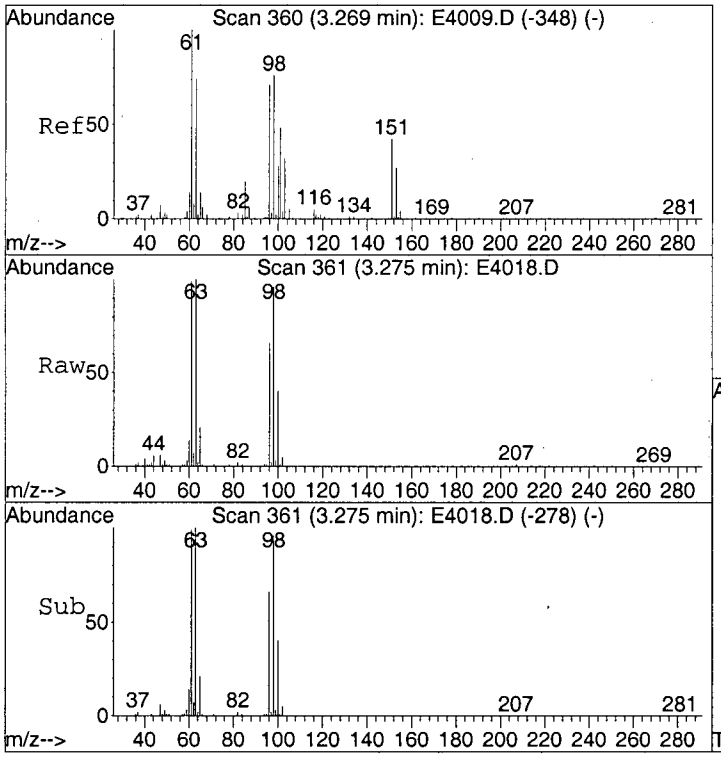


#6
Bromomethane
Concen: 0.63 ug/L
RT: 2.48 min Scan# 231
Delta R.T. 0.02 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 94 Resp: 22602

Ion	Ratio	Lower	Upper
94	100		
96	88.7	77.2	117.2

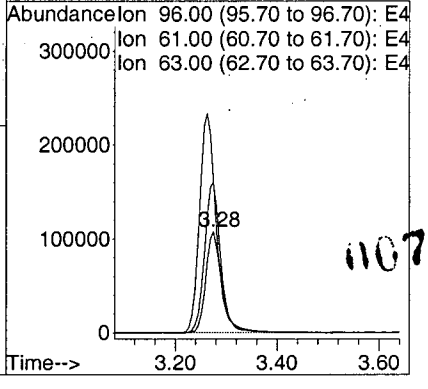




#11
1,1-Dichloroethene
Concen: 2.65 ug/L
RT: 3.28 min Scan# 361
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

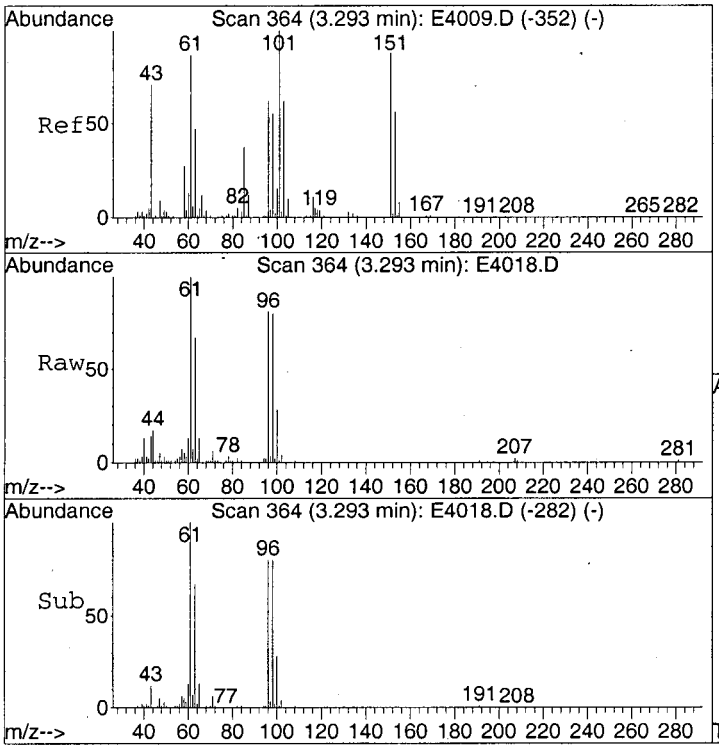
Tgt Ion: 96 Resp: 232505

Ion	Ratio	Lower	Upper
96	100		
61	152.8	126.8	166.8
63	231.3	142.5	182.5#



0071

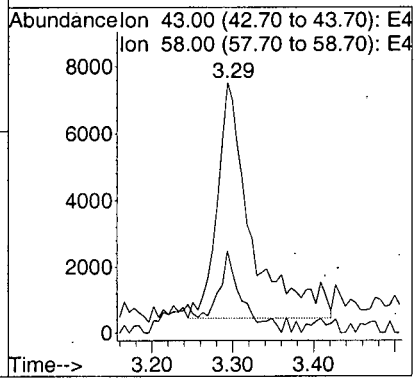
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

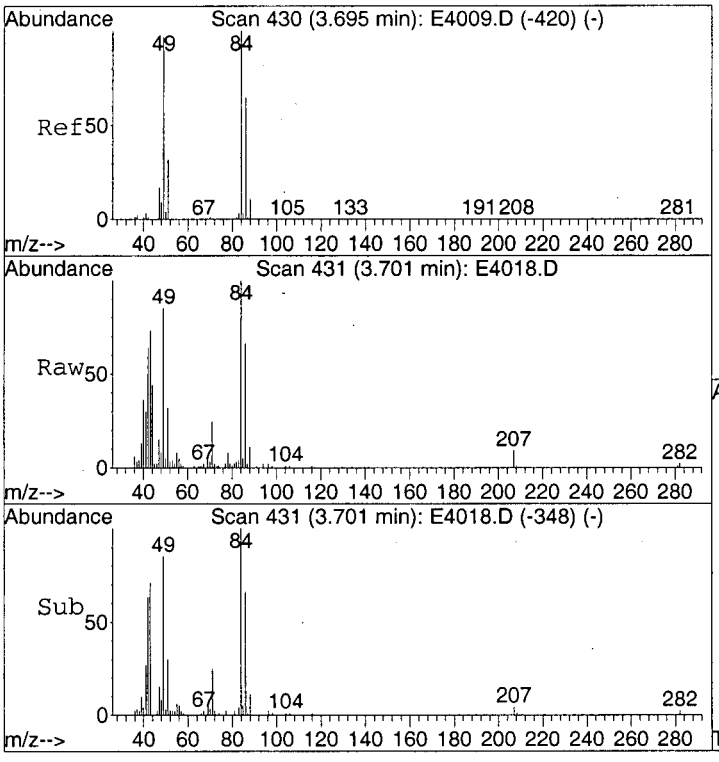


#13
Acetone
Concen: 4.70 ug/L
RT: 3.29 min Scan# 364
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 43 Resp: 20671

Ion	Ratio	Lower	Upper
43	100		
58	23.6	22.6	62.6

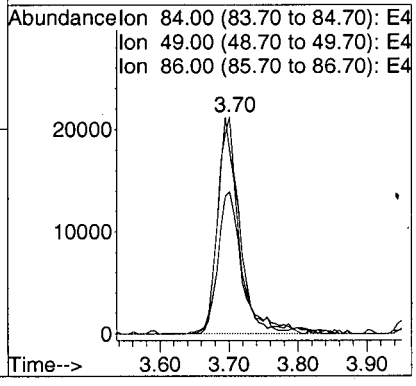




#16
Methylene Chloride
Concen: 0.63 ug/L
RT: 3.70 min Scan# 431
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

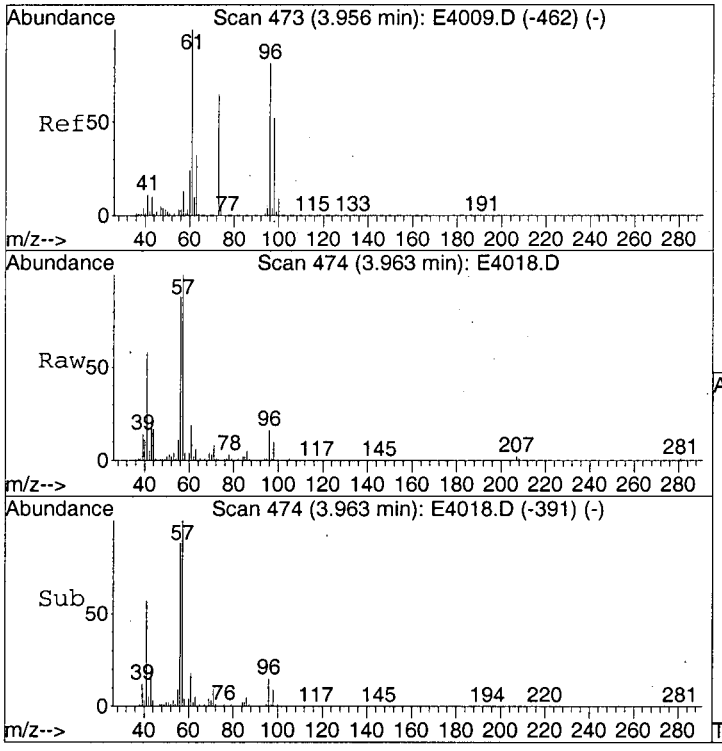
Tgt Ion: 84 Resp: 48813

Ion	Ratio	Lower	Upper
84	100		
49	89.5	76.2	116.2
86	71.2	43.2	83.2



0072

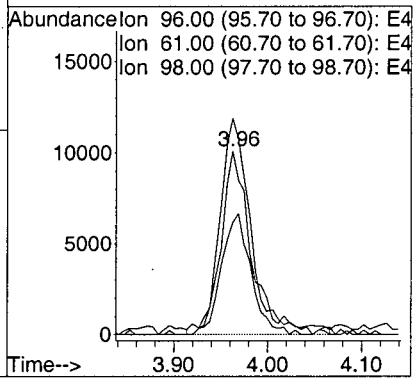
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

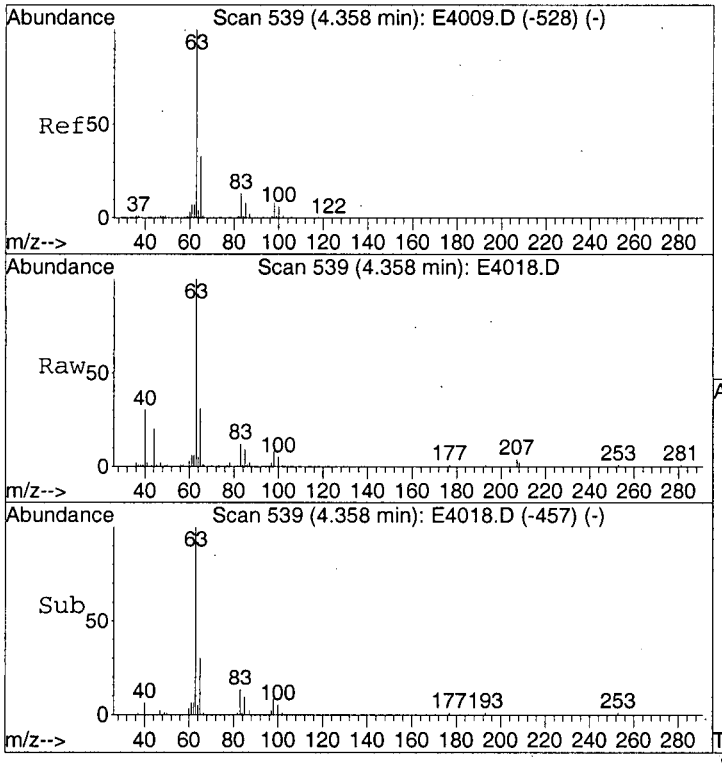


#17
trans-1,2-Dichloroethene
Concen: 0.24 ug/L
RT: 3.96 min Scan# 474
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 96 Resp: 23267

Ion	Ratio	Lower	Upper
96	100		
61	115.5	100.0	140.0
98	63.0	42.9	82.9

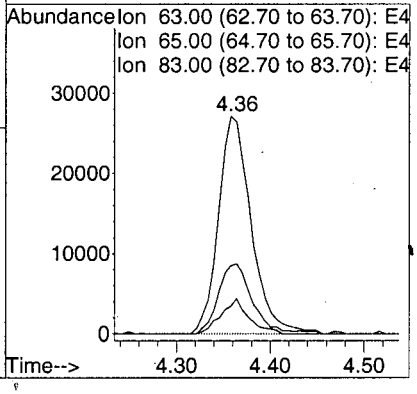




#19
1,1-Dichloroethane
Concen: 0.46 ug/L
RT: 4.36 min Scan# 539
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

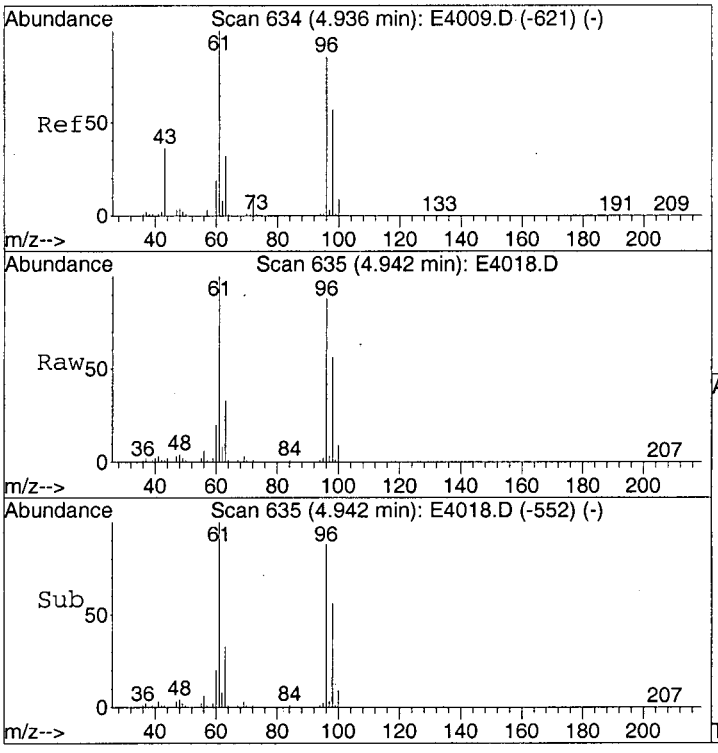
Tgt Ion: 63 Resp: 65679

Ion	Ratio	Lower	Upper
63	100		
65	32.9	12.4	52.4
83	13.3	0.0	33.0



0073

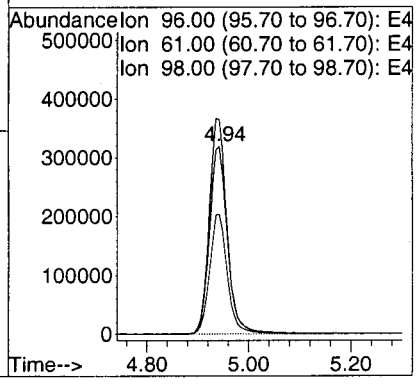
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

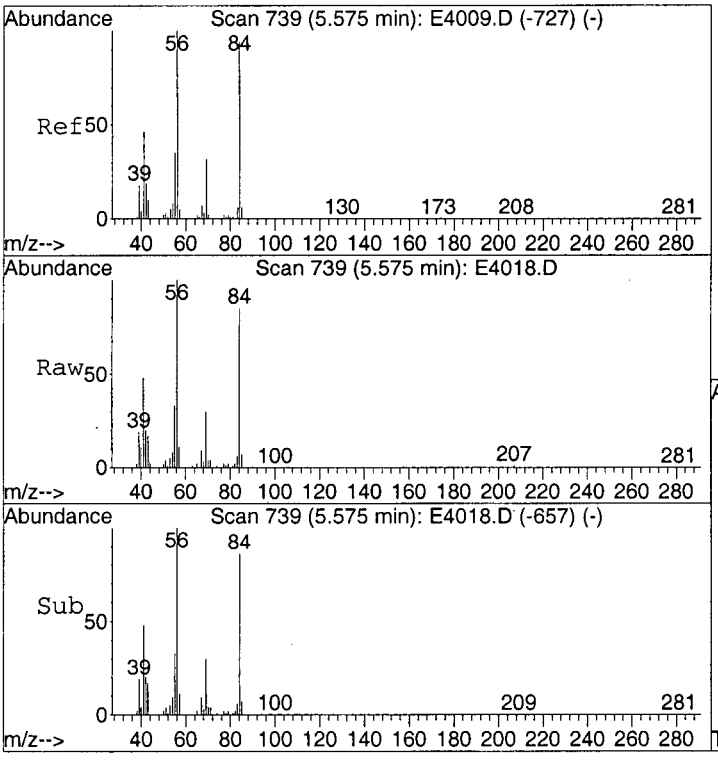


#21
cis-1,2-Dichloroethene
Concen: 9.70 ug/L
RT: 4.94 min Scan# 635
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 96 Resp: 777345

Ion	Ratio	Lower	Upper
96	100		
61	116.5	95.9	135.9
98	63.5	43.4	83.4

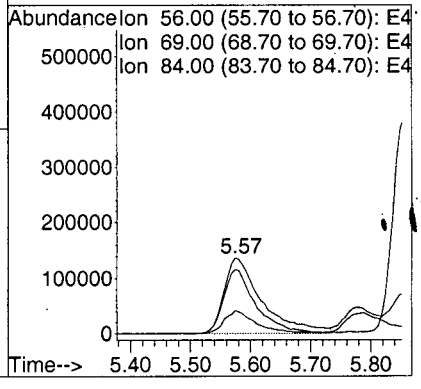




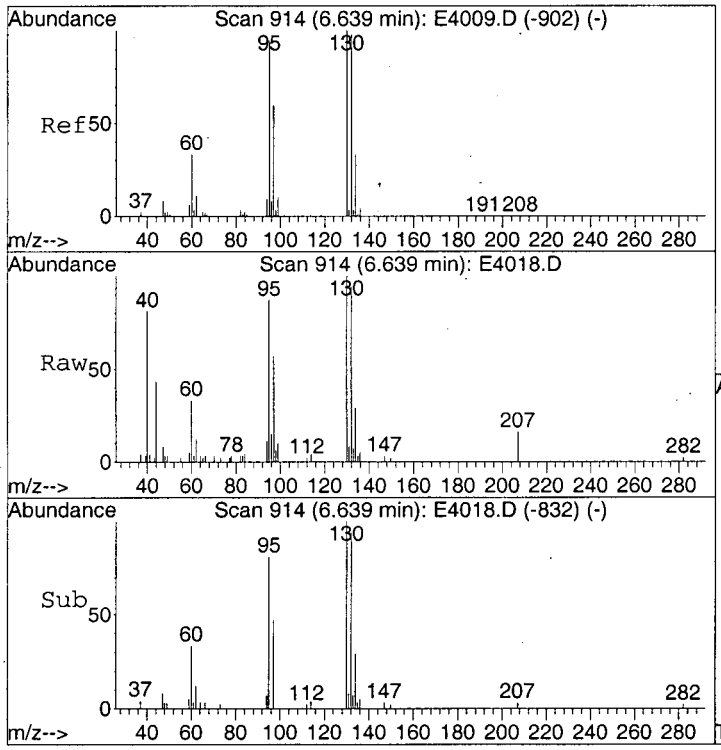
#30
Cyclohexane
Concen: 3.78 ug/L
RT: 5.57 min Scan# 739
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 56 Resp: 597110

Ion	Ratio	Lower	Upper
56	100		
69	25.2	11.9	51.9
84	71.8	82.1	122.1#



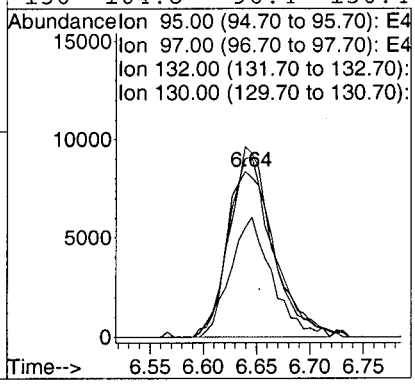
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

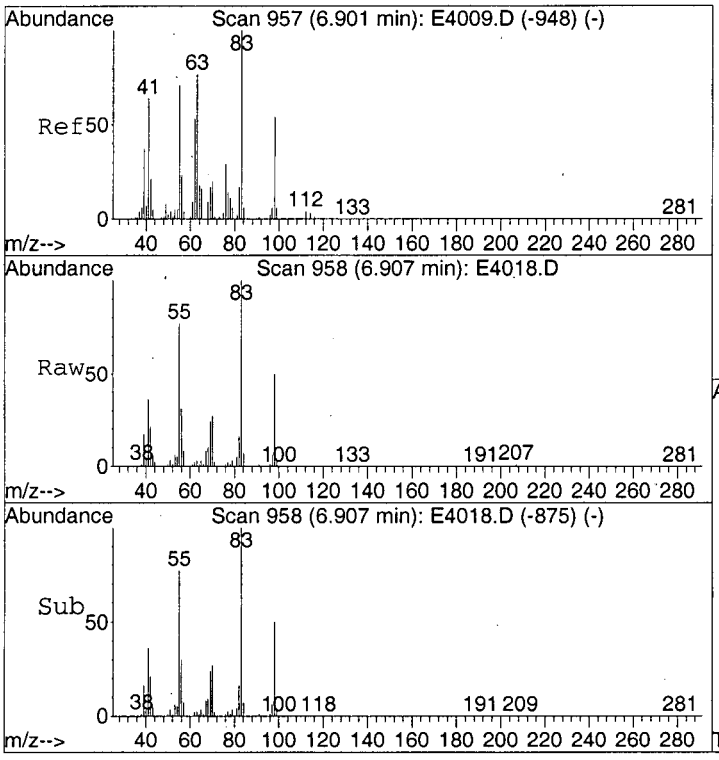


#34
Trichloroethene
Concen: 0.32 ug/L
RT: 6.64 min Scan# 914
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion: 95 Resp: 25588

Ion	Ratio	Lower	Upper
95	100		
97	64.5	43.5	83.5
132	103.8	86.1	126.1
130	104.8	90.4	130.4

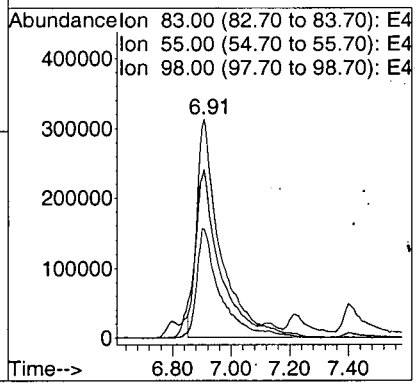




#36
Methylcyclohexane
Concen: 10.23 ug/L
RT: 6.91 min Scan# 958
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

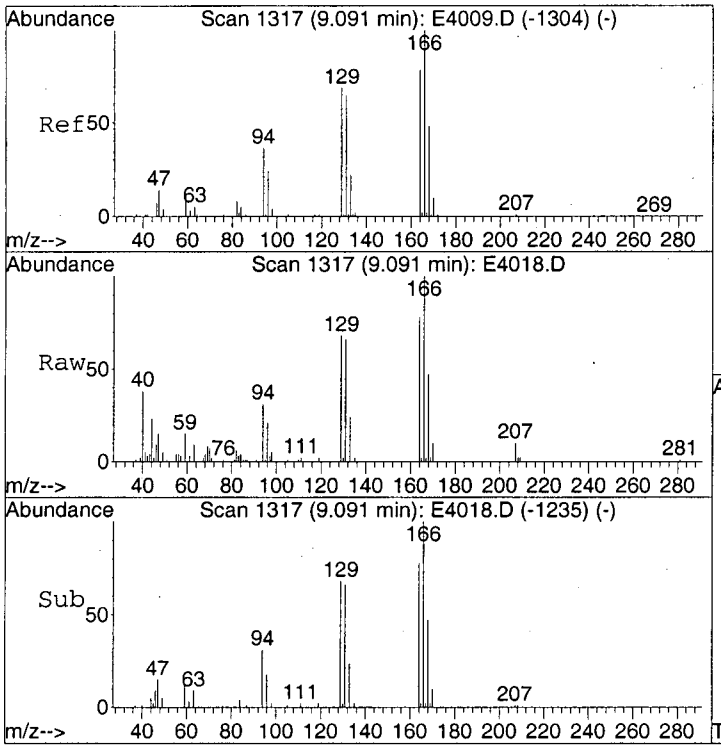
Tgt Ion: 83 Resp: 1754899

Ion	Ratio	Lower	Upper
83	100		
55	85.2	51.1	91.1
98	50.4	32.0	72.0



0075

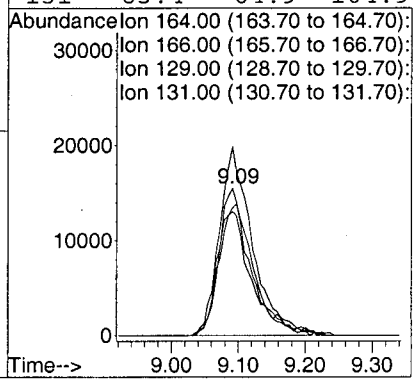
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

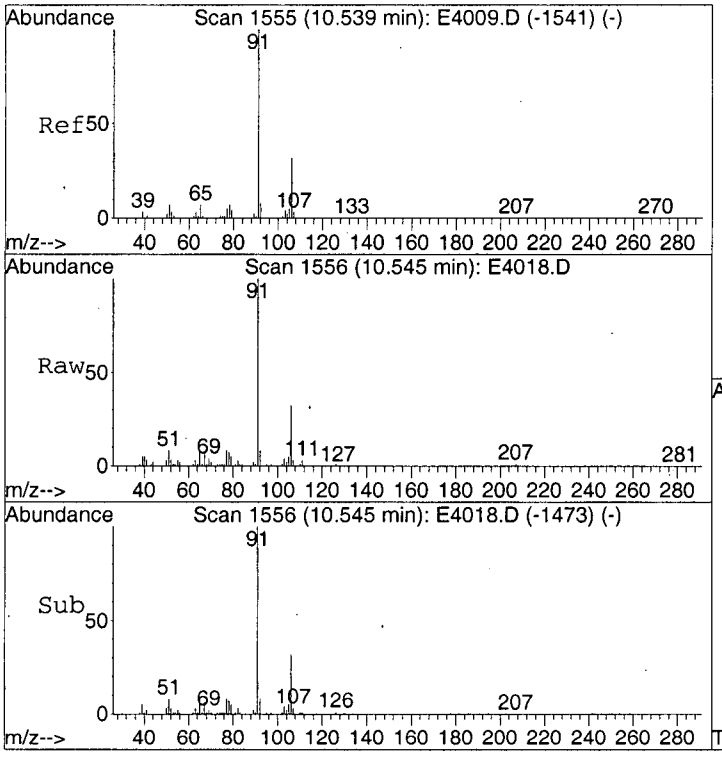


#46
Tetrachloroethene
Concen: 0.66 ug/L
RT: 9.09 min Scan# 1317
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion:164 Resp: 55105

Ion	Ratio	Lower	Upper
164	100		
166	125.0	105.5	145.5
129	88.7	68.3	108.3
131	83.4	64.9	104.9

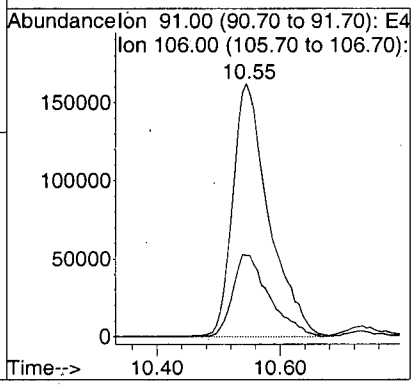




#52
Ethylbenzene
Concen: 1.73 ug/L
RT: 10.55 min Scan# 1556
Delta R.T. 0.01 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

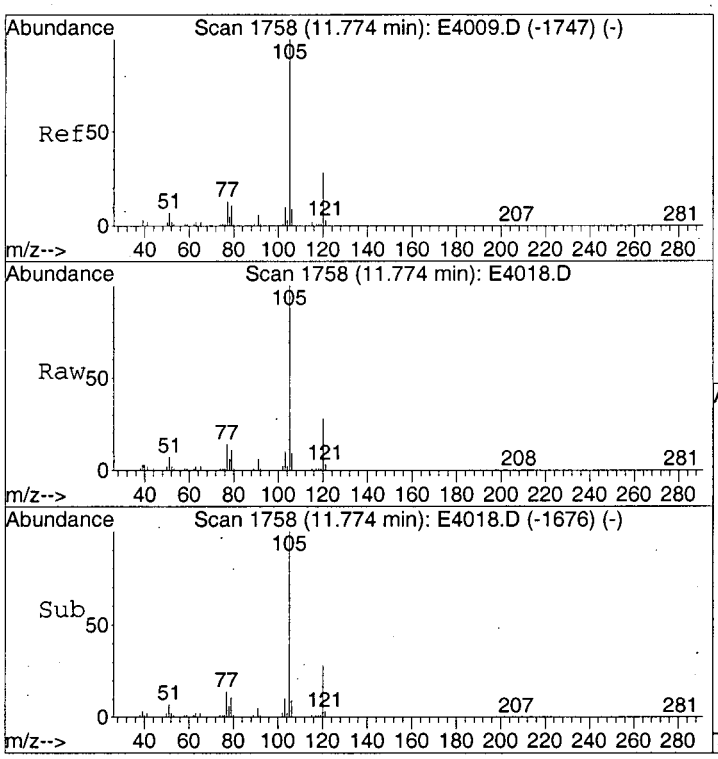
Tgt Ion: 91 Resp: 657734

Ion	Ratio	Lower	Upper
91	100		
106	33.0	12.7	52.7



00076

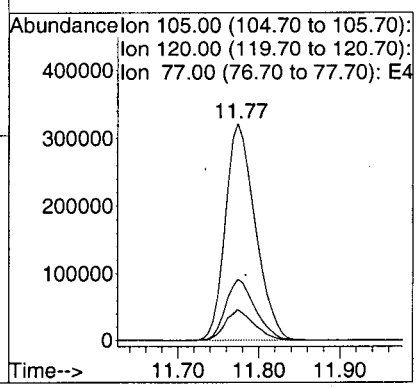
Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2



#57
Isopropylbenzene
Concen: 2.64 ug/L
RT: 11.77 min Scan# 1758
Delta R.T. 0.00 min
Lab File: E4018.D
Acq: 27 Mar 2003 15:56

Tgt Ion:105 Resp: 826872

Ion	Ratio	Lower	Upper
105	100		
120	27.9	7.7	47.7
77	13.8	0.0	33.5



11077

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4018.D
Acq On : 03/27/2003 1556
Sample : Y0SJ2DL
Misc : 2762.002DL 25ML 10X
MS Integration Params: Lscint.p

Vial: 11
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 100000 Area counts
Start Thrs: 0.2
Max Peaks: 40
Stop Thrs : 0
Peak Location: TOP

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

Signal : TIC

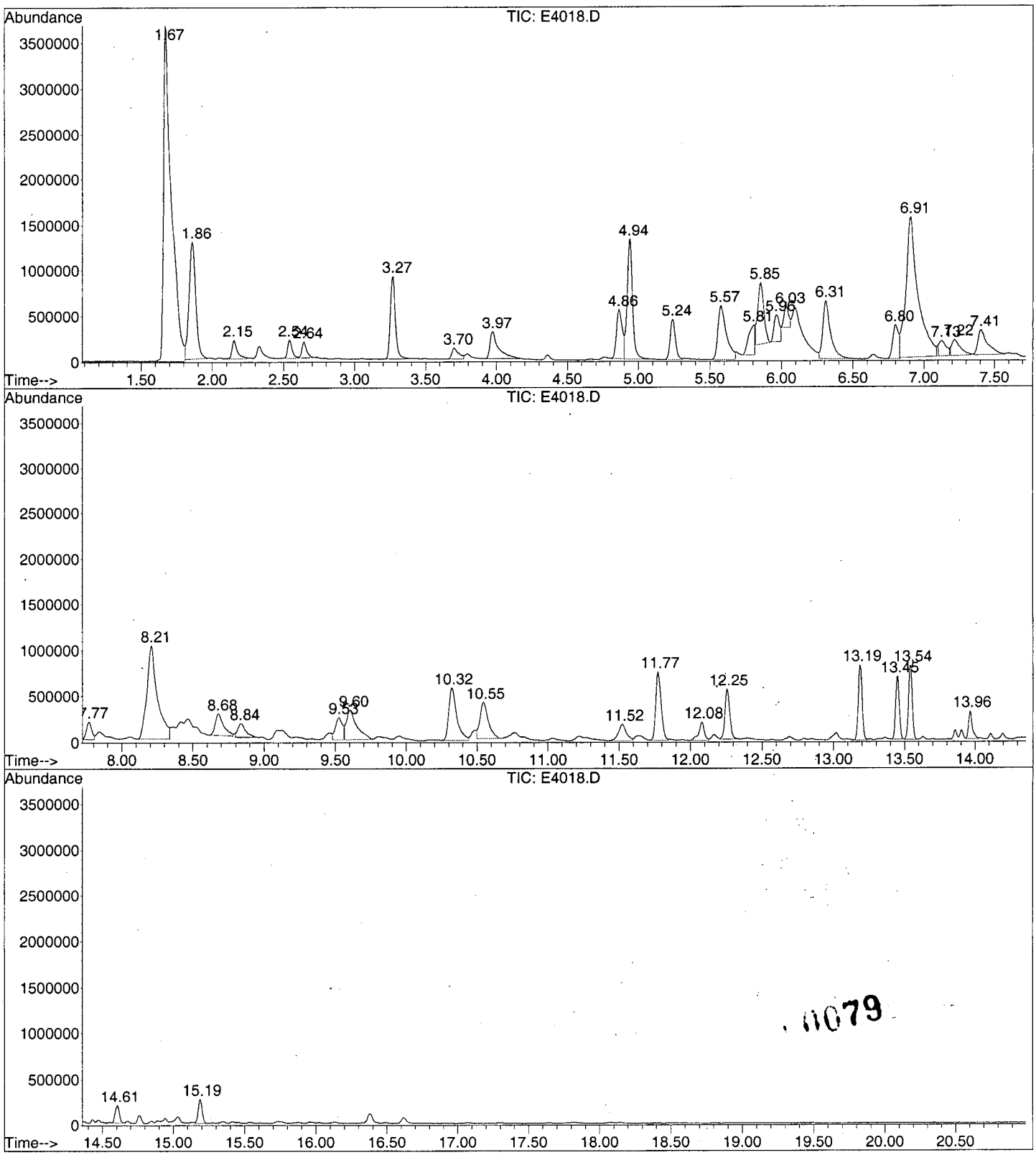
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.669	84	97	120	rBV	3677531	14109426	100.00%	18.895%
2	1.858	120	128	145	rVB	1277545	4160537	29.49%	5.572%
3	2.150	169	176	192	rBV	201290	511004	3.62%	0.684%
4	2.539	234	240	251	rBV	196790	431418	3.06%	0.578%
5	2.643	251	257	270	rVB	171086	388481	2.75%	0.520%
6	3.269	351	360	379	rBV2	901007	2205068	15.63%	2.953%
7	3.701	424	431	442	rBV4	119560	397182	2.82%	0.532%
8	3.975	468	476	509	rVB2	293476	1208419	8.56%	1.618%
9	4.863	613	622	628	rBV	536953	1534638	10.88%	2.055%
10	4.936	628	634	659	rVB	1314056	3410475	24.17%	4.567%
11	5.240	675	684	696	rBV	442051	1119451	7.93%	1.499%
12	5.575	727	739	756	rBV3	594044	2436666	17.27%	3.263%
13	5.806	764	777	778	rBV3	324924	953054	6.75%	1.276%
14	5.855	779	785	796	rVB	676849	1959428	13.89%	2.624%
15	5.964	797	803	808	rBV4	296643	779628	5.53%	1.044%
16	6.031	809	814	819	rBV3	229643	526644	3.73%	0.705%
17	6.311	852	860	888	rVB	636885	2338706	16.58%	3.132%
18	6.798	930	940	945	rBV	370624	1088280	7.71%	1.457%
19	6.907	945	958	988	rVV2	1539966	9175478	65.03%	12.287%
20	7.126	990	994	1003	rVV4	167708	589277	4.18%	0.789%
21	7.217	1004	1009	1029	rVV	173895	735010	5.21%	0.984%
22	7.406	1031	1040	1068	rVV	267890	1284750	9.11%	1.720%
23	7.771	1092	1100	1106	rBV	189380	495965	3.52%	0.664%
24	8.209	1156	1172	1193	rBV4	1011332	5208852	36.92%	6.975%
25	8.677	1240	1249	1266	rBV2	227862	934807	6.63%	1.252%
26	8.836	1269	1275	1292	rVB5	145245	554871	3.93%	0.743%
27	9.529	1381	1389	1394	rVV3	235565	799934	5.67%	1.071%
28	9.602	1395	1401	1427	rVB2	312819	1563087	11.08%	2.093%
29	10.320	1509	1519	1539	rBV	564407	2180175	15.45%	2.920%
30	10.545	1548	1556	1578	rVB	387751	1579990	11.20%	2.116%
31	11.525	1703	1717	1729	rBV4	174176	664316	4.71%	0.890%
32	11.774	1748	1758	1770	rBV	744326	1923192	13.63%	2.575%
33	12.078	1794	1808	1816	rBV3	195866	529098	3.75%	0.709%
34	12.255	1829	1837	1850	rVB	540758	1262250	8.95%	1.690%
35	13.185	1982	1990	1999	rBV	812480	1529107	10.84%	2.048%
36	13.453	2027	2034	2040	rBV	681597	1207006	8.55%	1.616%
37	13.544	2041	2049	2058	rVB	802391	1454185	10.31%	1.947%
38	13.964	2113	2118	2128	rBV3	296360	536159	3.80%	0.718%
39	14.609	2217	2224	2231	rVB3	192550	393386	2.79%	0.527%
40	15.187	2313	2319	2329	rVB	267987	514230	3.64%	0.689%

11078

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4018.D
Acq On : 03/27/2003 1556
Sample : Y0SJ2DL
Misc : 2762.002DL 25ML 10X
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 11
Operator: AK
Inst : E-5973
Multiplr: 1.00



.0079

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

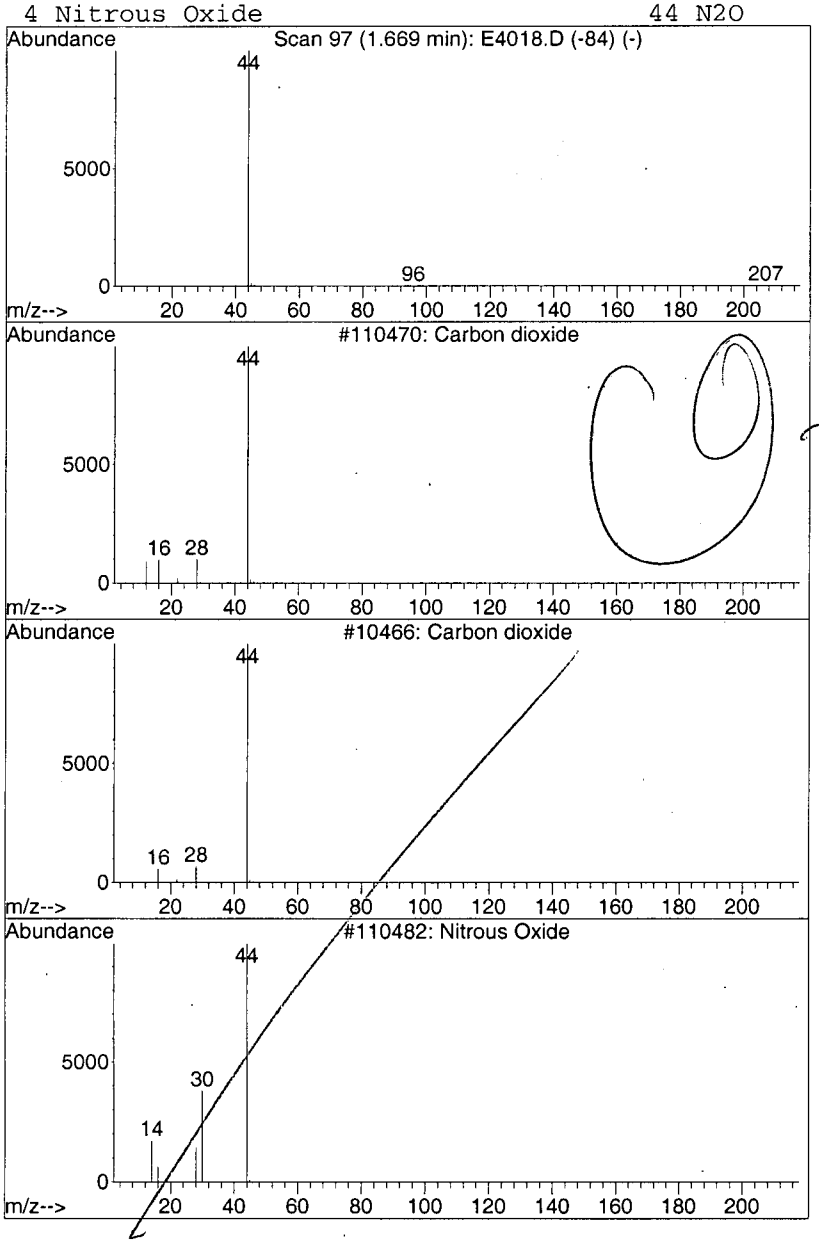
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

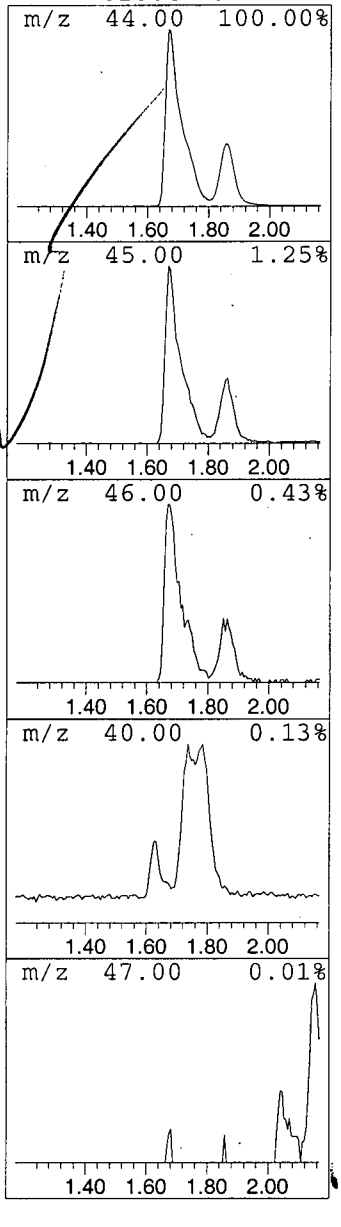
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.67	30.16 ug/L	14109400	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





1080

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

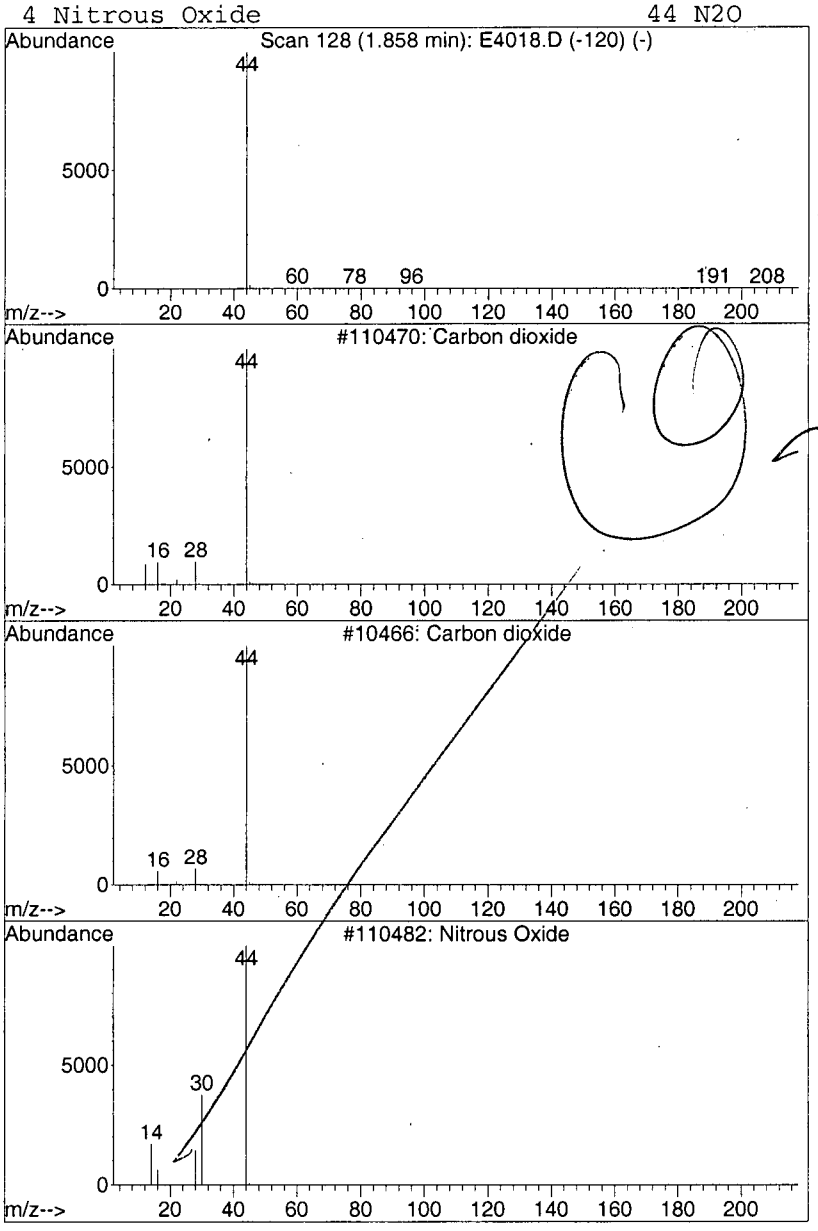
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

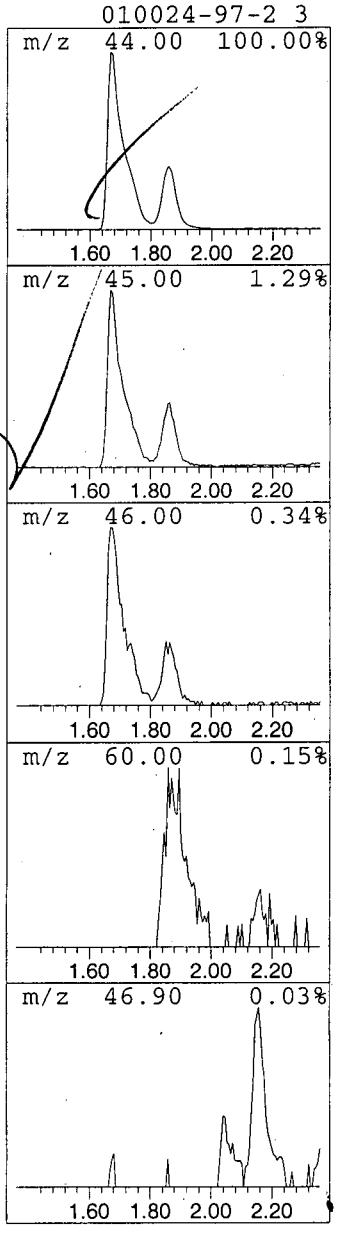
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.86	8.89 ug/L	4160540	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





1081

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

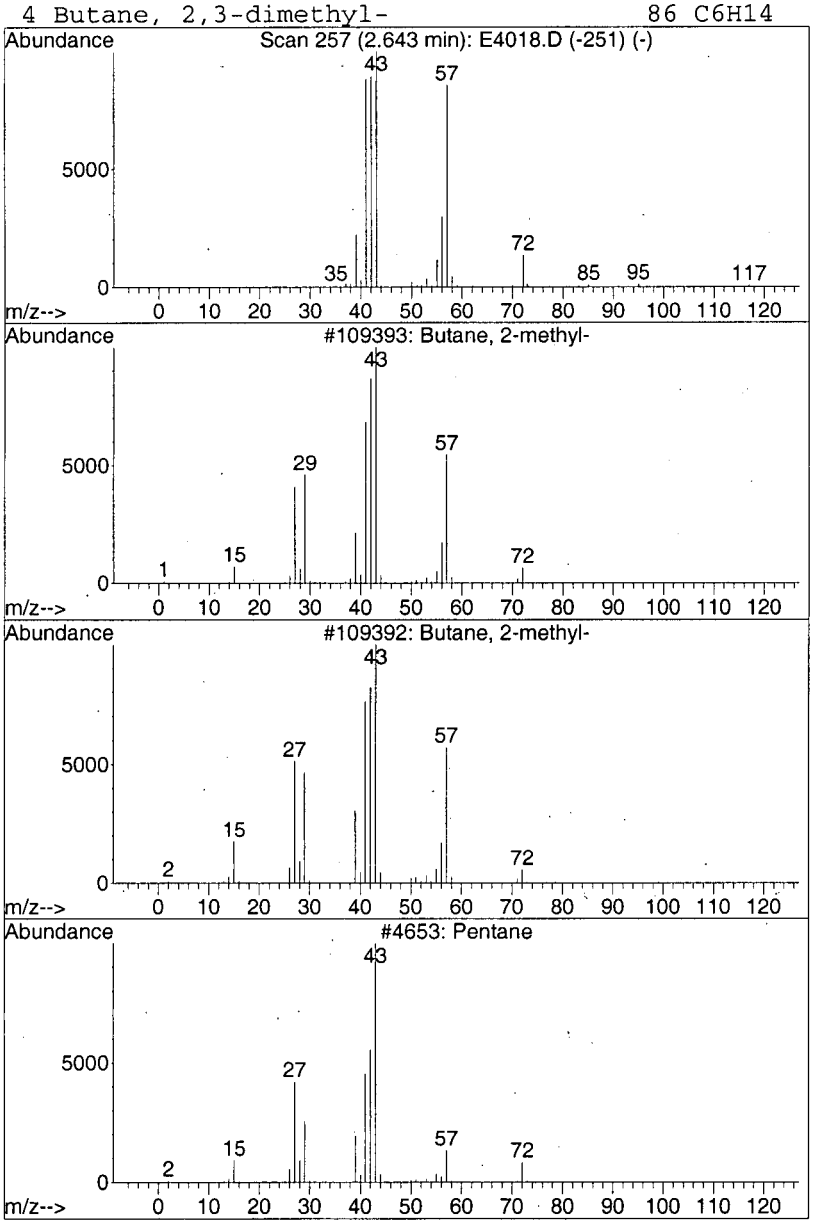
****

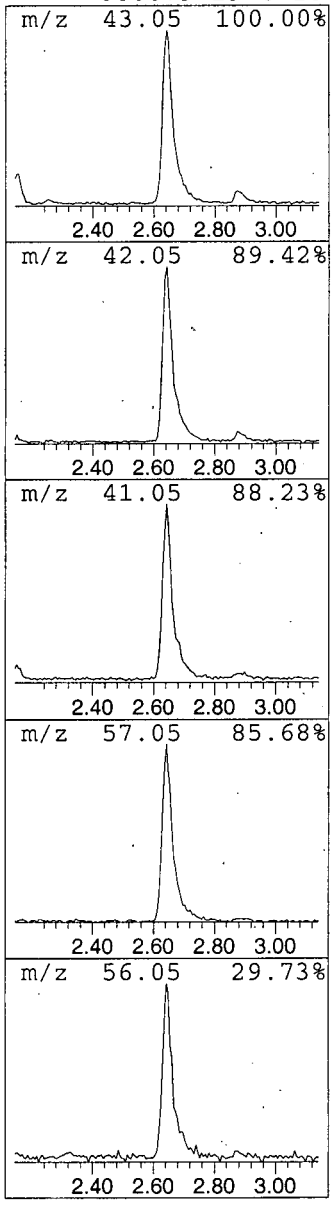
Peak Number 3 Butane, 2-methyl- Concentration Rank 18

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.64	0.83 ug/L	388481	1,4-Difluorobenzene	6.31

Branched alkane

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	83 ✓
2	Butane, 2-methyl-	72	C5H12	000078-78-4	83
3	Pentane	72	C5H12	000109-66-0	40
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	25



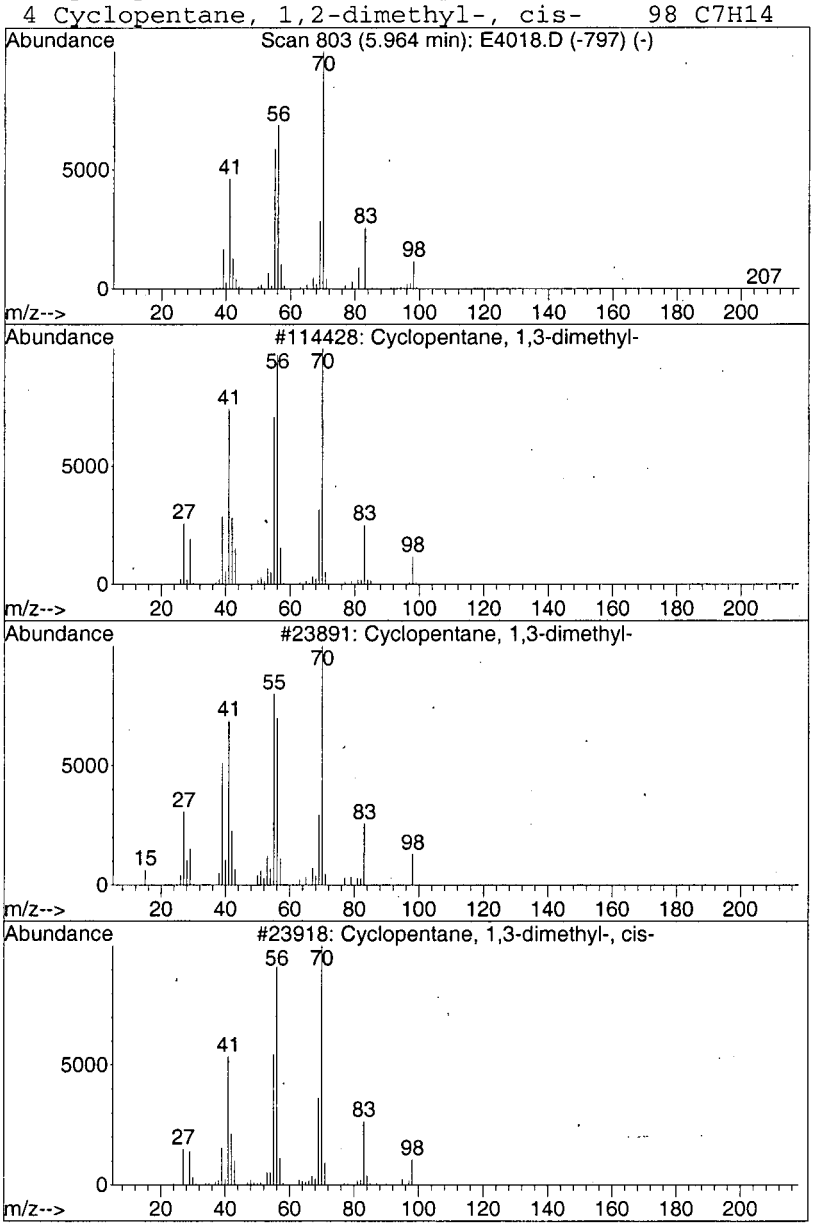


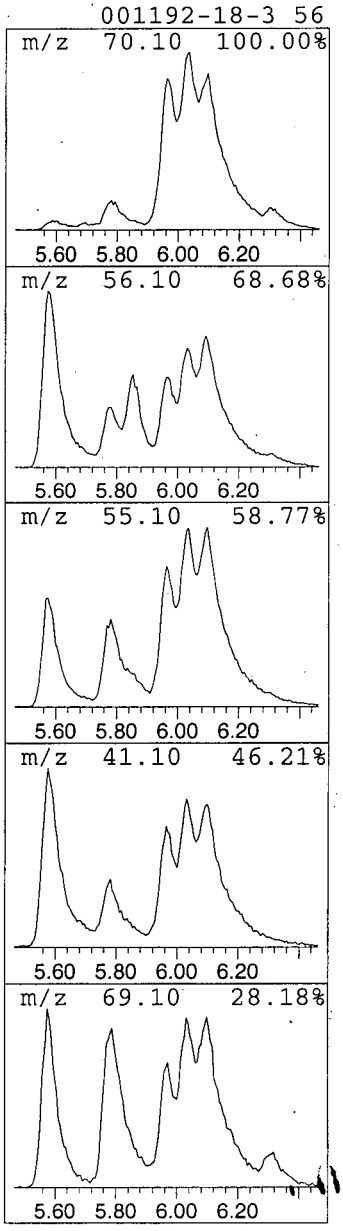
1082

Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                          Operator: AK
   Sample    : Y0SJ2DL                                   Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                 Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number  4  Cyclopentane, 1,3-dimethyl-     Concentration Rank 11

  R.T.   EstConc          Area       Relative to ISTD        R.T.
---------------------------------------------------------------------
  5.96    1.67 ug/L       779628     1,4-Difluorobenzene      6.31

 Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
---------------------------------------------------------------------------
 1 Cyclopentane, 1,3-dimethyl-             98 C7H14          002453-00-1 91
 2 Cyclopentane, 1,3-dimethyl-             98 C7H14          002453-00-1 91
 3 Cyclopentane, 1,3-dimethyl-, cis-       98 C7H14          002532-58-3 86
 4 Cyclopentane, 1,2-dimethyl-, cis-       98 C7H14          001192-18-3 56
```

cyclic alkane





1083

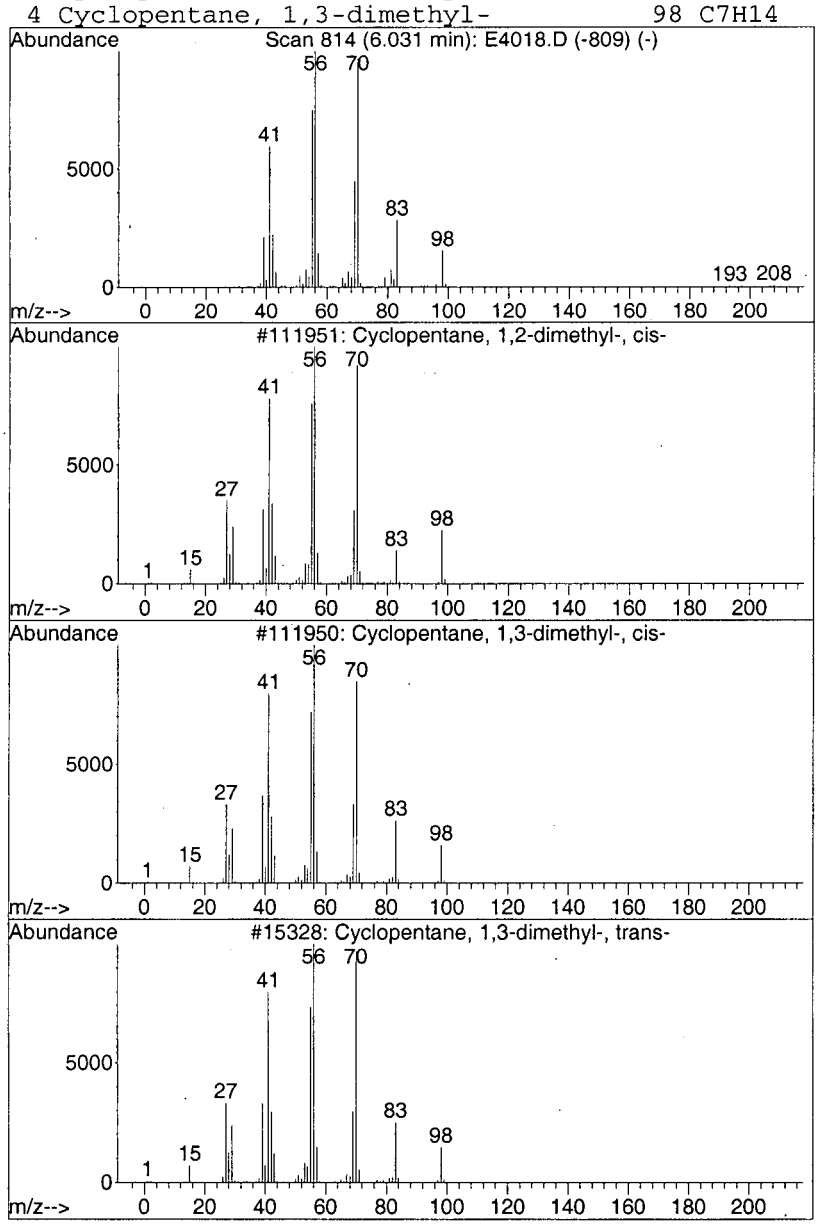
Library Search Compound Report

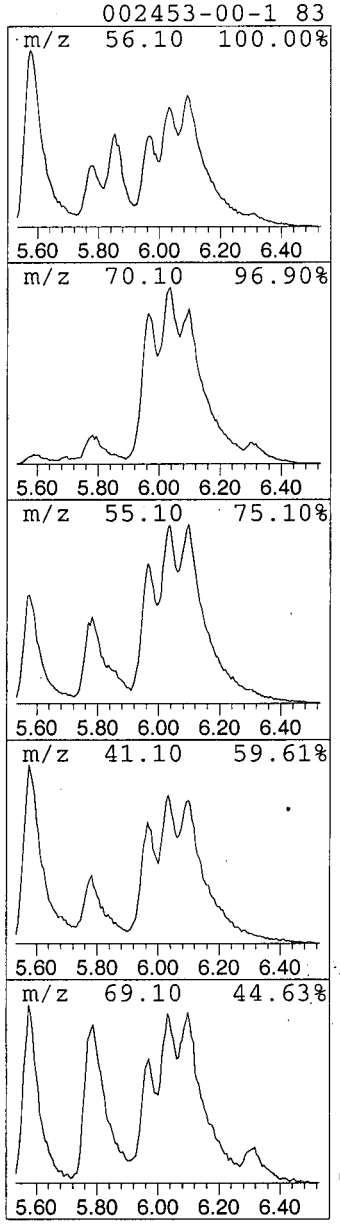
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number  5  Cyclopentane, 1,2-dimethyl-...  Concentration Rank 16
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.03	1.13 ug/L	526644	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	91
2	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	91
3	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	91
4	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	83

cyclic alkane





.0084

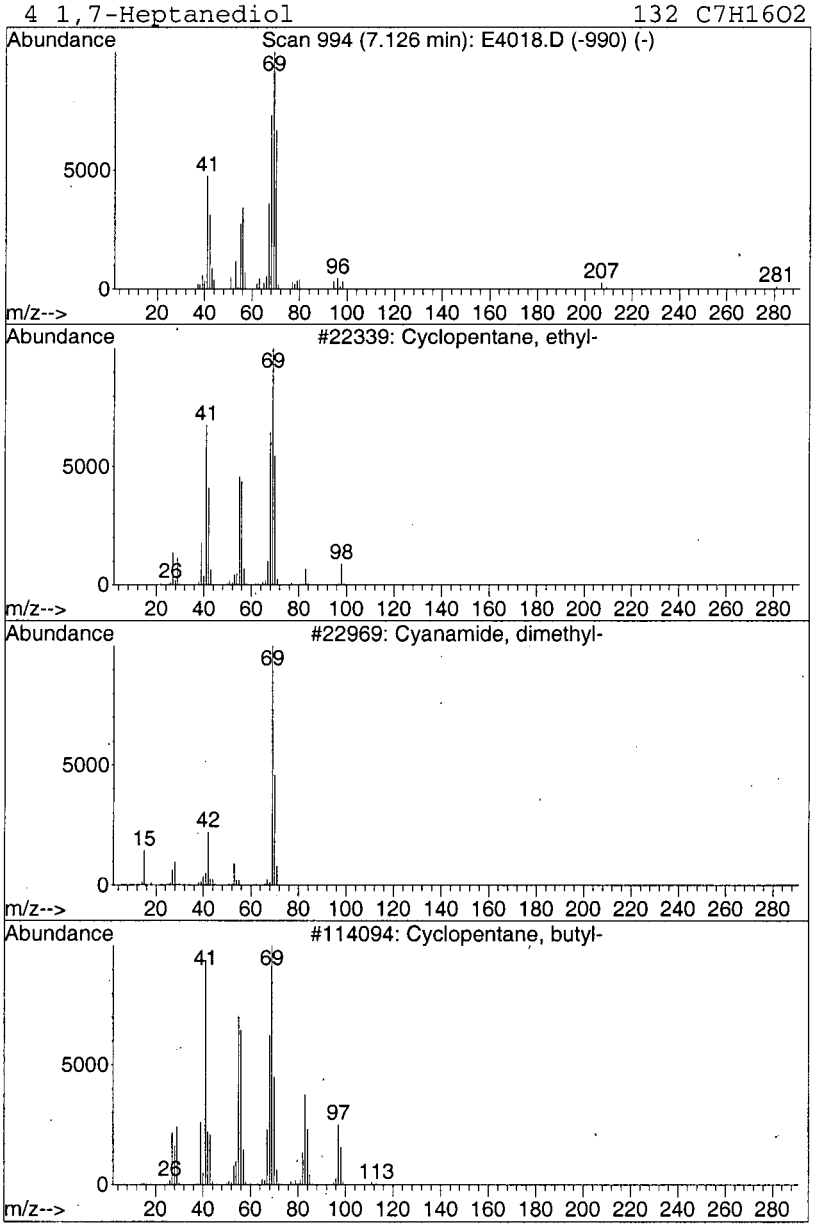
Library Search Compound Report

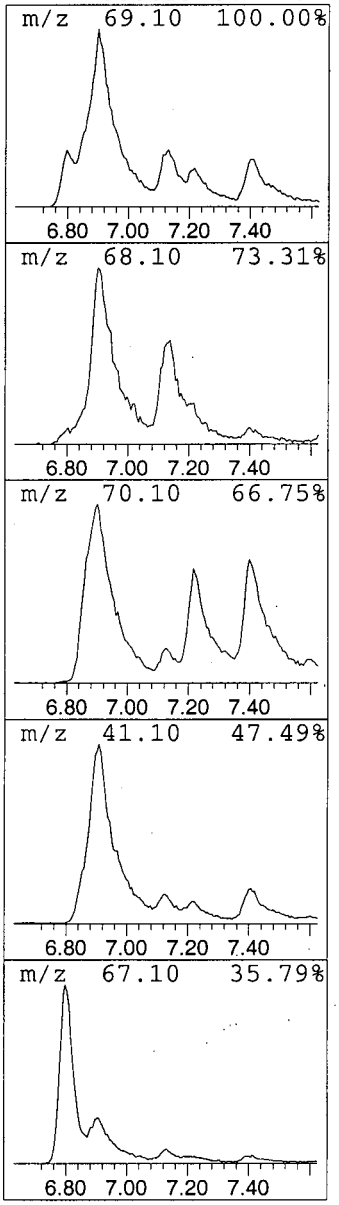
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number  6  Cyclopentane, ethyl-            Concentration Rank 15
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.13	1.26 ug/L	589277	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, ethyl-	98	C7H14	001640-89-7	56 ✓
2	Cyanamide, dimethyl-	70	C3H6N2	001467-79-4	43
3	Cyclopentane, butyl-	126	C9H18	002040-95-1	40
4	1,7-Heptanediol	132	C7H16O2	000629-30-1	37

cyclic alkane



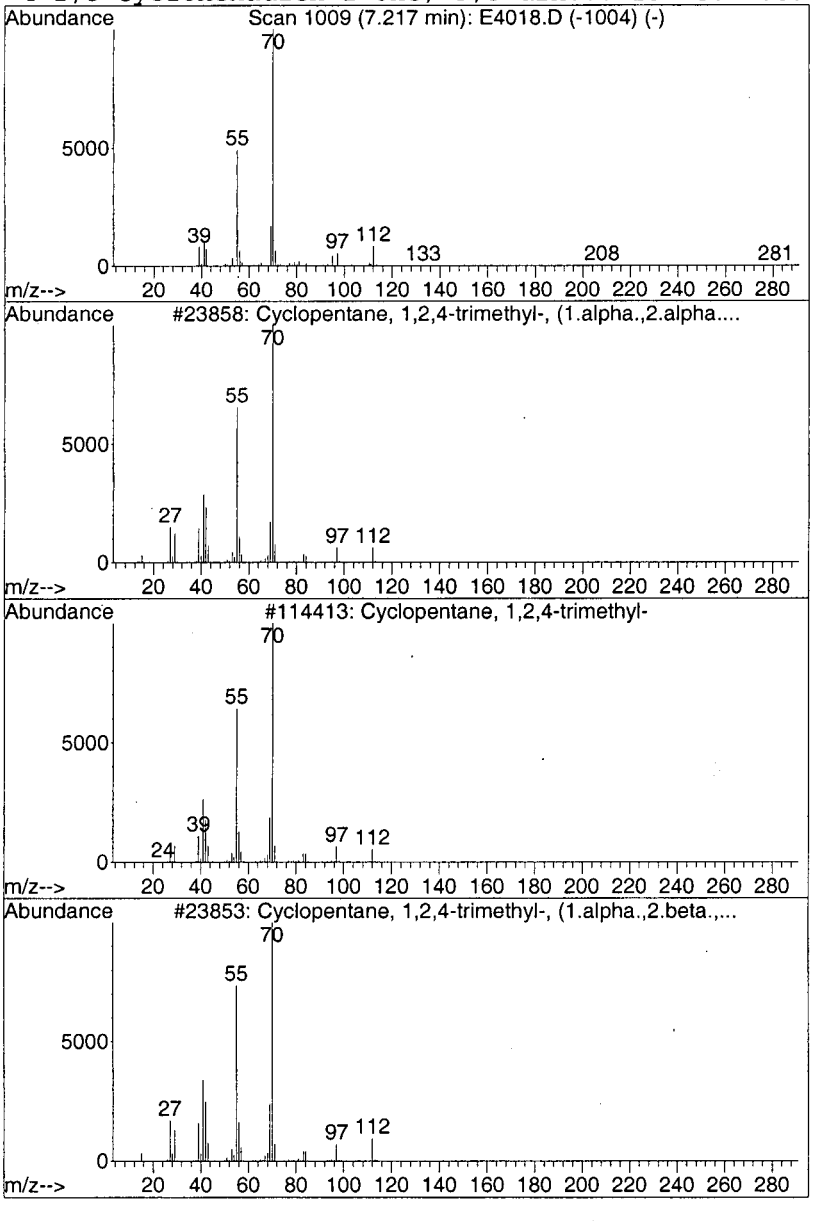


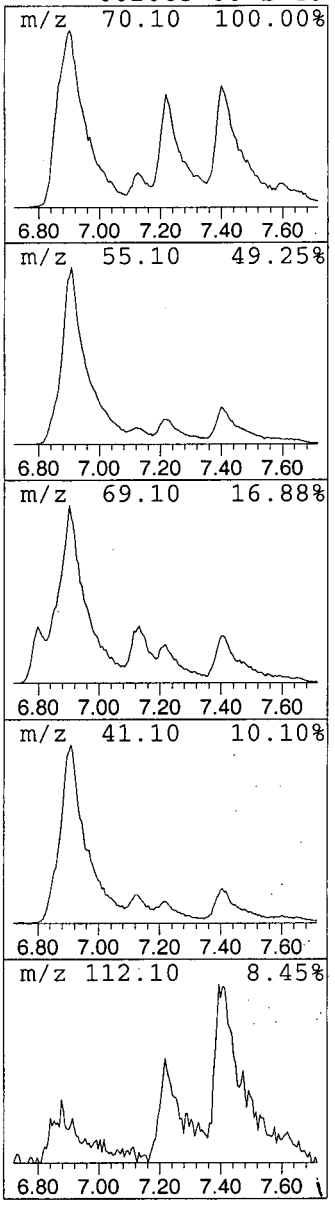
00085

Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                          Operator: AK
   Sample    : Y0SJ2DL                                   Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                 Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number  7  Cyclopentane, 1,2,4-trimeth...  Concentration Rank 12

   R.T.   EstConc          Area       Relative to ISTD        R.T.
 ------------------------------------------------------------------
   7.22   1.57 ug/L       735010    1,4-Difluorobenzene       6.31

  Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
 ------------------------------------------------------------------------
  1 Cyclopentane, 1,2,4-trimethyl-, ... 112 C8H16          004850-28-6 72
  2 Cyclopentane, 1,2,4-trimethyl-      112 C8H16          002815-58-9 72
  3 Cyclopentane, 1,2,4-trimethyl-, ... 112 C8H16          016883-48-0 43
  4 2,5-Cyclohexadien-1-one, 3,5-dih... 154 C8H10O3        002065-00-1 40
```

cyclic alkane





0086

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D
Acq On : 03/27/2003 1556
Sample : Y0SJ2DL
Misc : 2762.002DL 25ML 10X
MS Integration Params: Lscint.p

Vial: 11
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

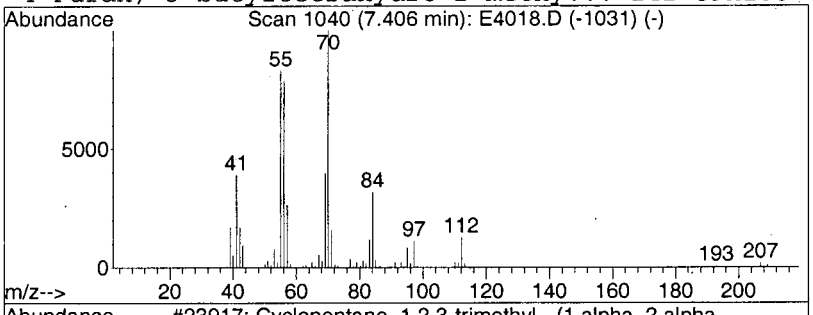
****

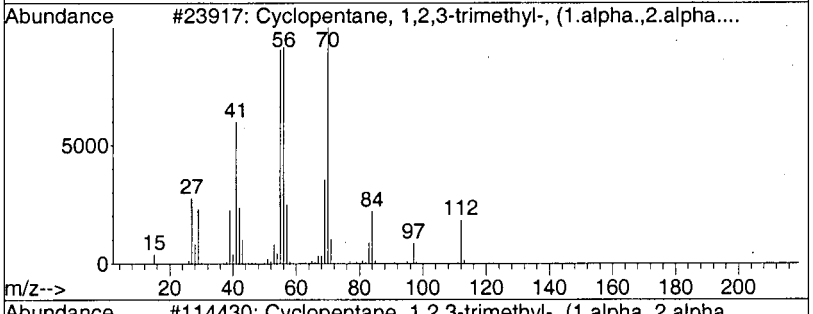
Peak Number 8 Cyclopentane, 1,2,3-trimeth... Concentration Rank 6

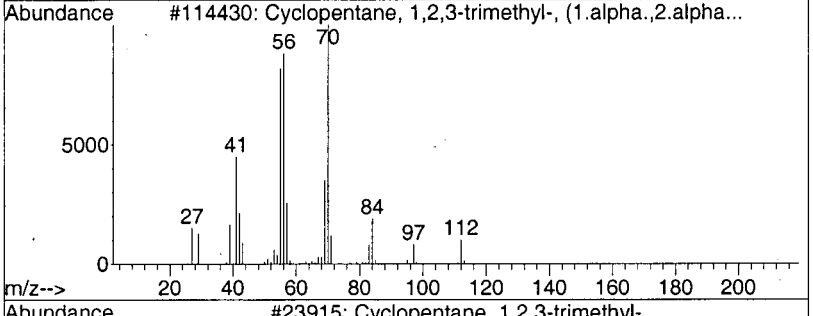
R.T.	EstConc	Area	Relative to ISTD	R.T.
7.41	2.75 ug/L	1284750	1,4-Difluorobenzene	6.31

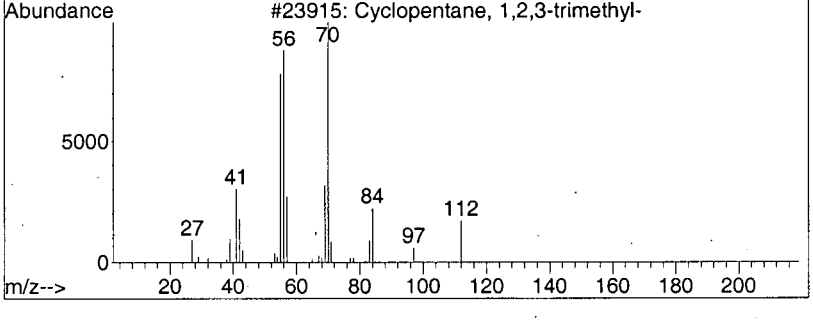
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	91
2	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	91
3	Cyclopentane, 1,2,3-trimethyl-	112	C8H16	002815-57-8	91
4	Furan, 3-butyltetrahydro-2-methy...	142	C9H18O	036712-20-6	59

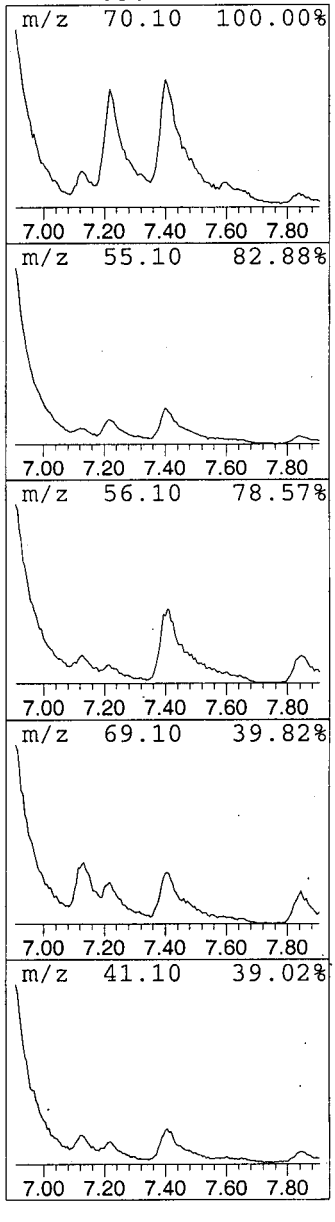
cyclic alkane











.0087

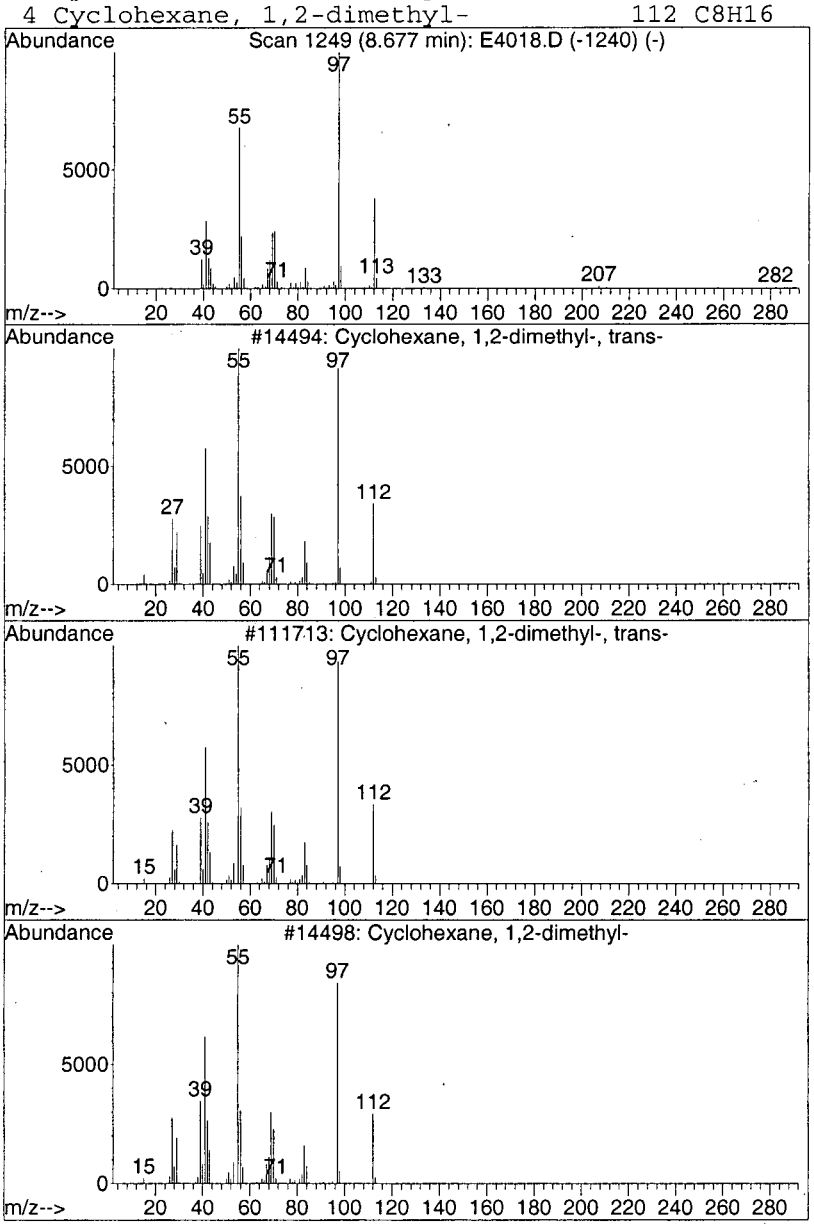
Library Search Compound Report

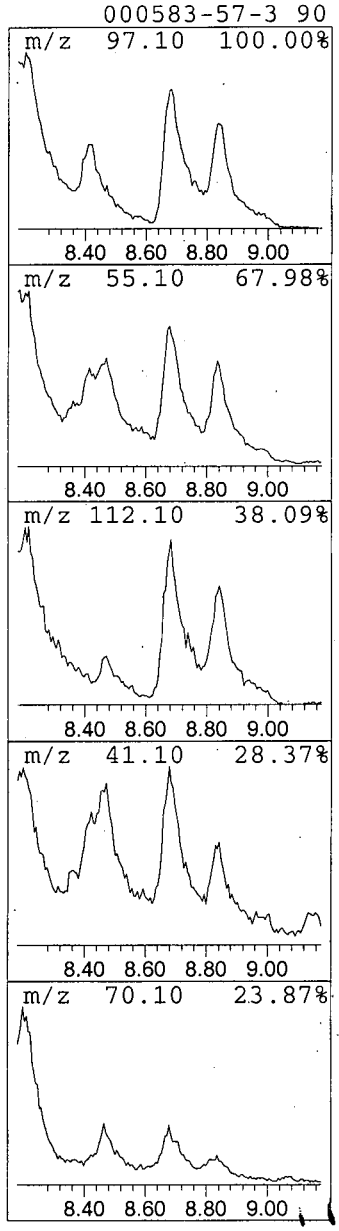
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                          Operator: AK
   Sample    : Y0SJ2DL                                   Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                 Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number 10  Cyclohexane, 1,2-dimethyl-,...  Concentration Rank  7
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.68	2.14 ug/L	934807	Chlorobenzene-d5	10.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2-dimethyl-, trans-	112	C8H16	006876-23-9	91
2	Cyclohexane, 1,2-dimethyl-, trans-	112	C8H16	006876-23-9	91
3	Cyclohexane, 1,2-dimethyl-	112	C8H16	000583-57-3	91
4	Cyclohexane, 1,2-dimethyl-	112	C8H16	000583-57-3	90

cyclic alkane





11088

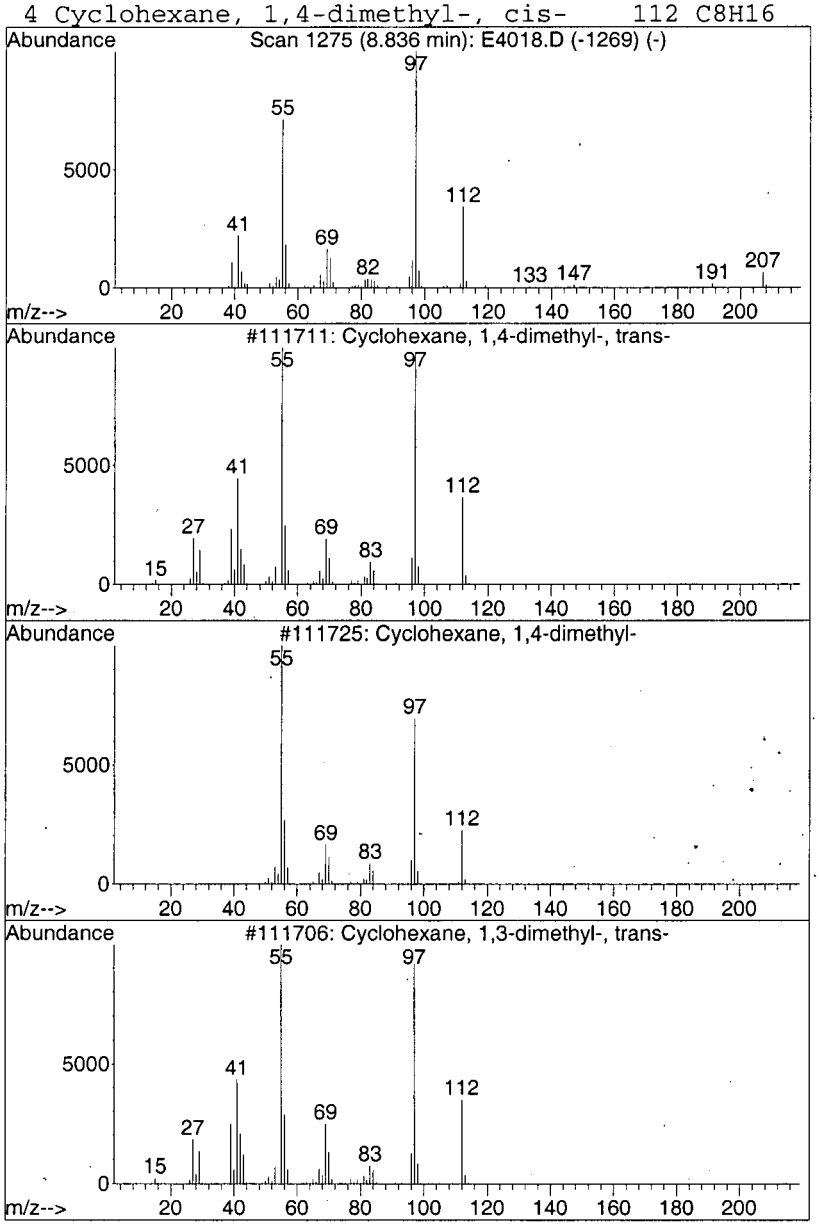
Library Search Compound Report

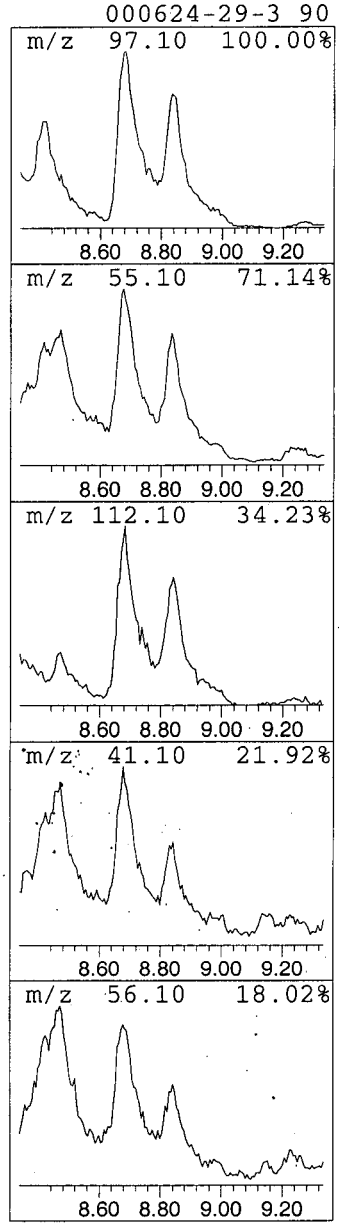
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number 11  Cyclohexane, 1,4-dimethyl-,...  Concentration Rank 14
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.84	1.27 ug/L	554871	Chlorobenzene-d5	10.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	90
2	Cyclohexane, 1,4-dimethyl-	112	C8H16	000589-90-2	90
3	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	90
4	Cyclohexane, 1,4-dimethyl-, cis-	112	C8H16	000624-29-3	90

cyclic alkene





11089

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

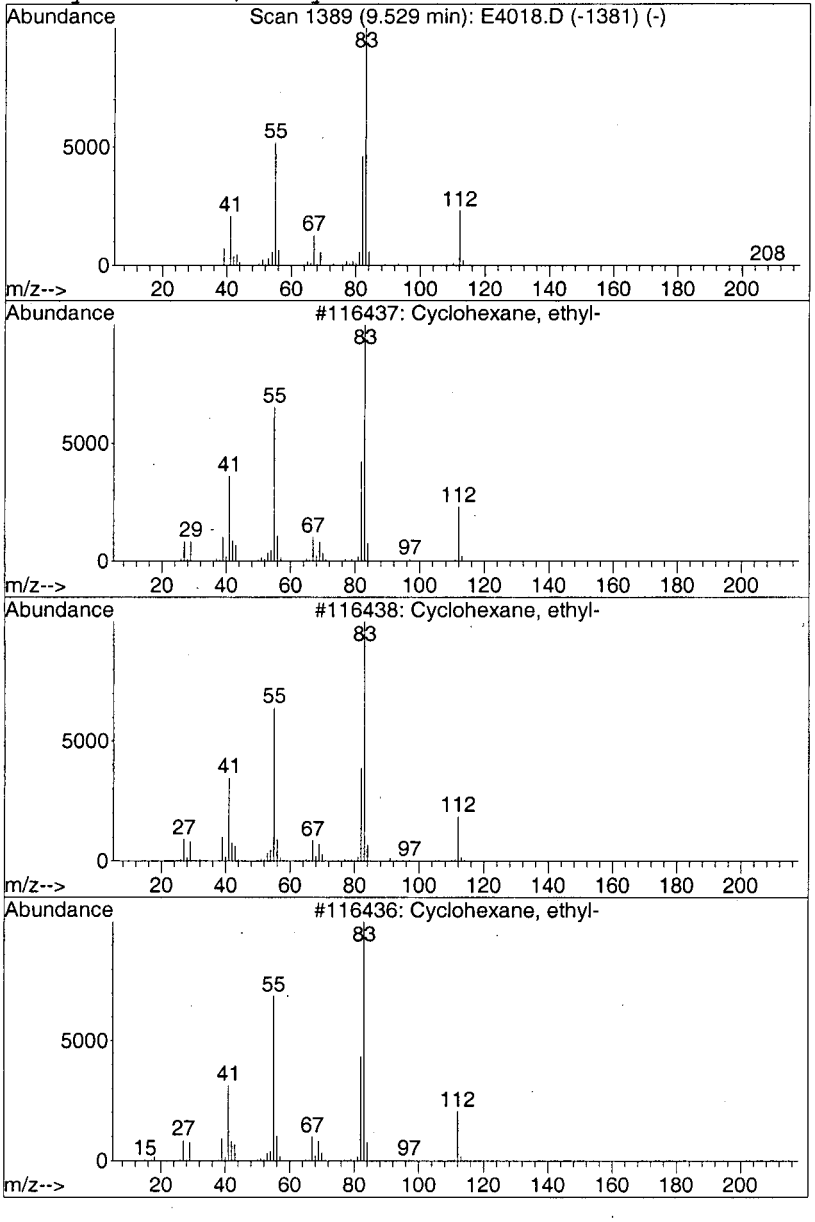
****

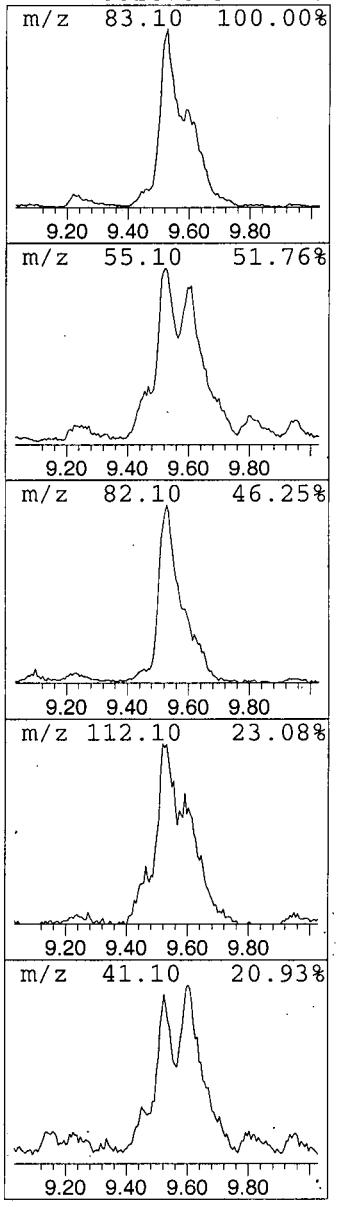
Peak Number 12 Cyclohexane, ethyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.53	1.83 ug/L	799934	Chlorobenzene-d5	10.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, ethyl-	112	C8H16	001678-91-7	91
2	Cyclohexane, ethyl-	112	C8H16	001678-91-7	91
3	Cyclohexane, ethyl-	112	C8H16	001678-91-7	90
4	Cyclohexane, ethyl-	112	C8H16	001678-91-7	78

cyclic alkane





, 0090

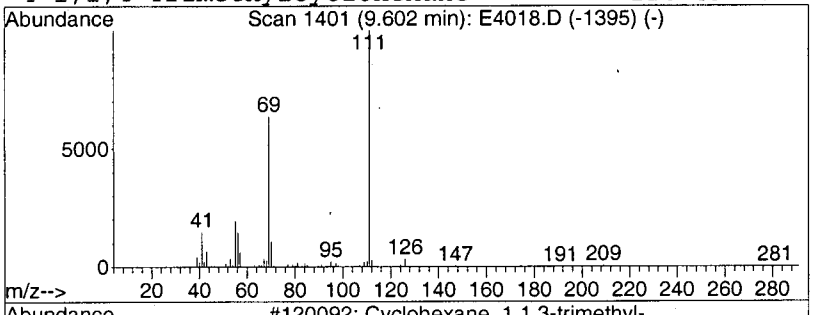
Library Search Compound Report

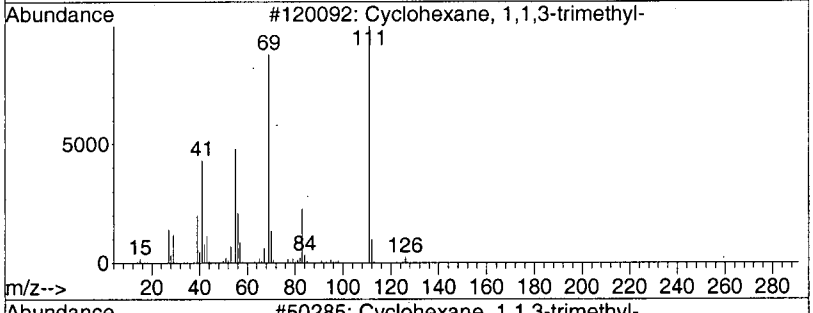
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL  25ML     10X                 Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number 13  Cyclohexane, 1,1,3-trimethyl-   Concentration Rank  5
```

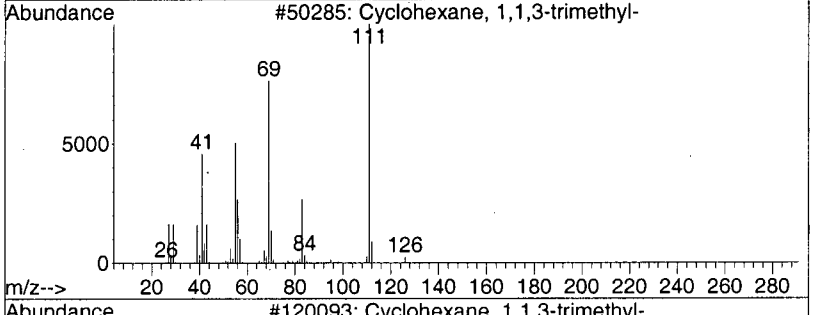
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.60	3.58 ug/L	1563090	Chlorobenzene-d5	10.32

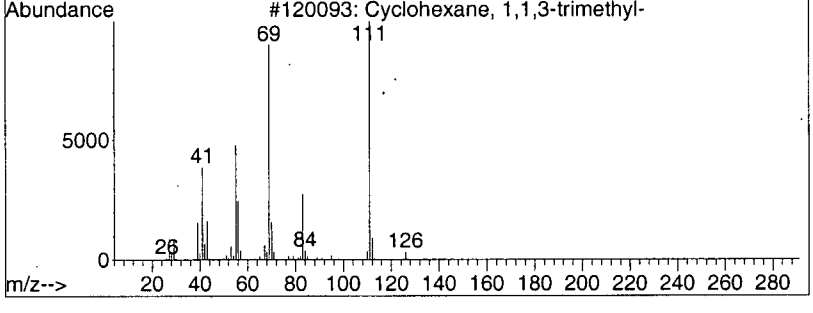
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	78
2	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	78
3	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	64
4	1,1,4-Trimethylcyclohexane	126	C9H18	007094-27-1	39

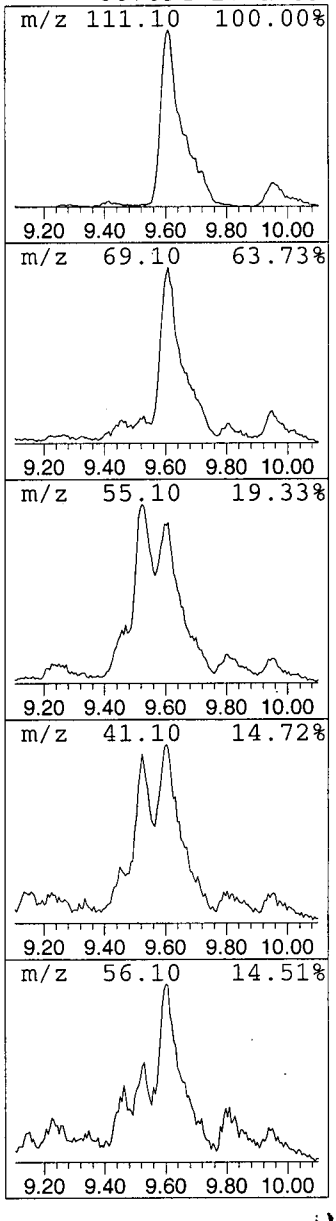
cyclic alkane











0091

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

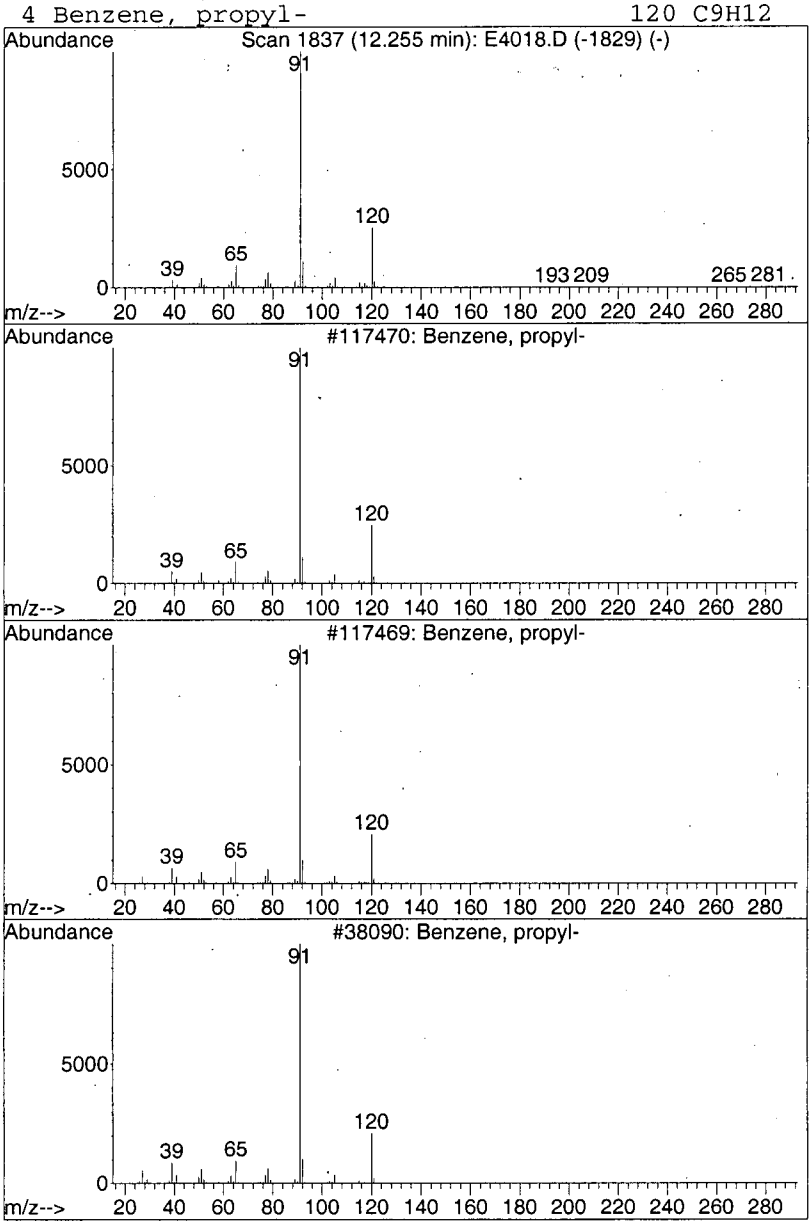
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

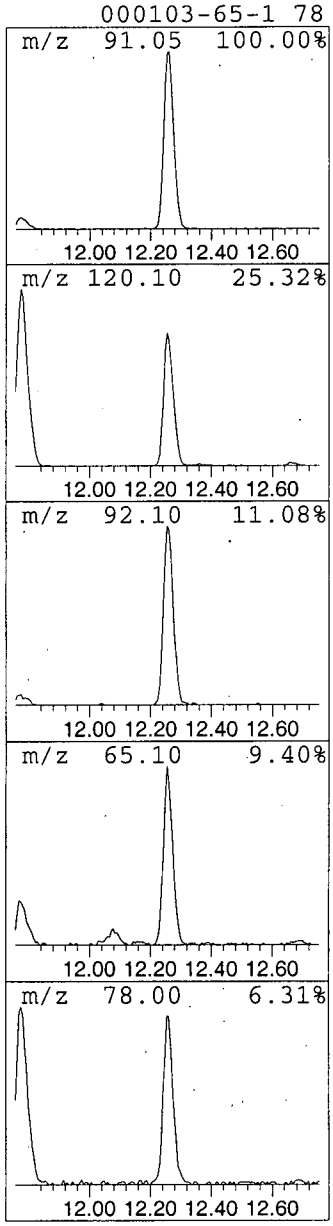
****

Peak Number 14 Benzene, propyl- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.25	4.13 ug/L	1262250	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	Benzene, propyl-	120	C9H12	000103-65-1	87
4	Benzene, propyl-	120	C9H12	000103-65-1	78





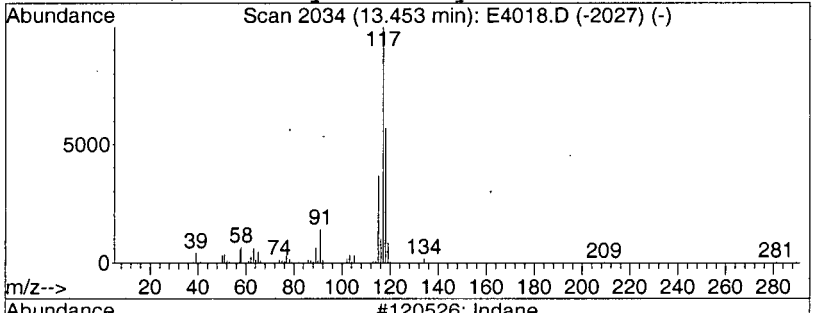
.0092

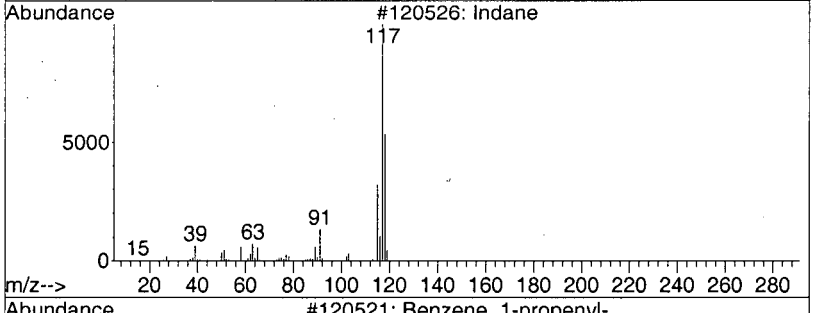
Library Search Compound Report

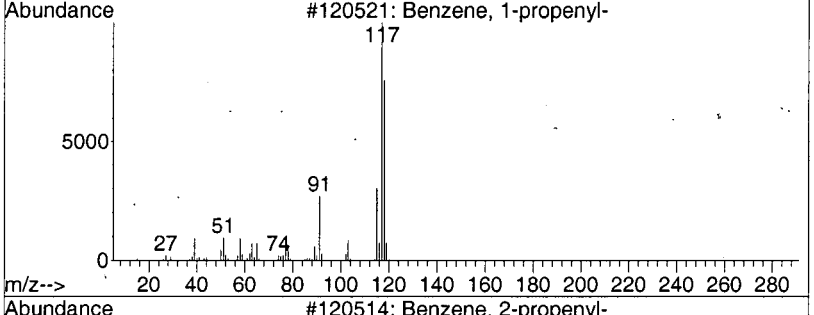
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number 15  Indane                          Concentration Rank  4
```

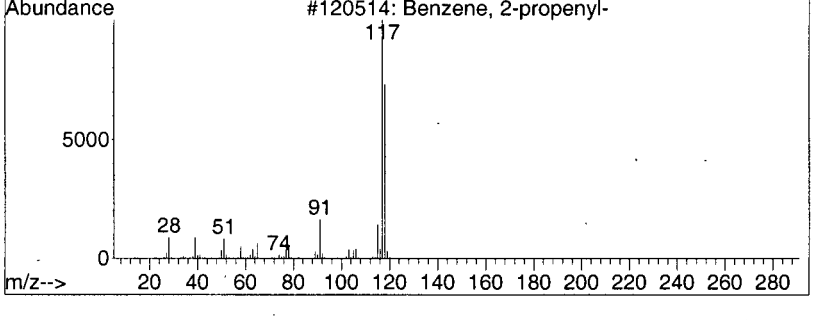
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.45	3.95 ug/L	1207010	1,4-Dichlorobenzene-d4	13.19

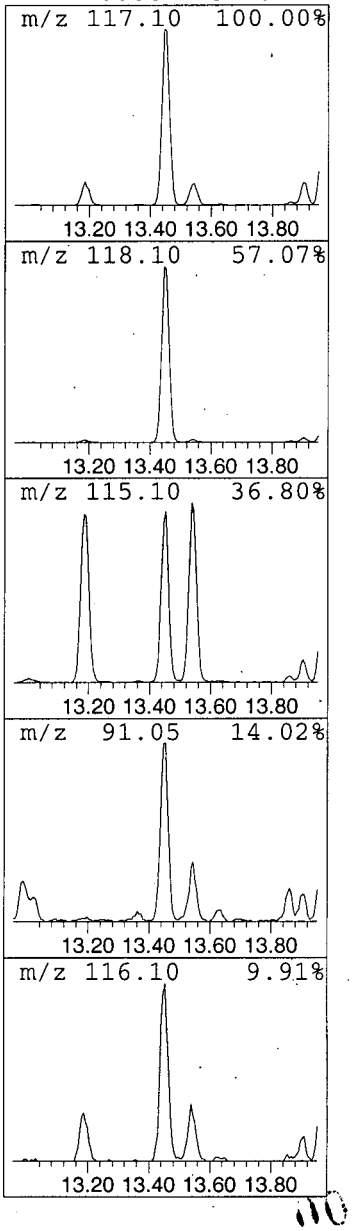
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	87
2	Benzene, 1-propenyl-	118	C9H10	000637-50-3	81
3	Benzene, 2-propenyl-	118	C9H10	000300-57-2	80
4	Benzene, 1-ethenyl-4-methyl-	118	C9H10	000622-97-9	80











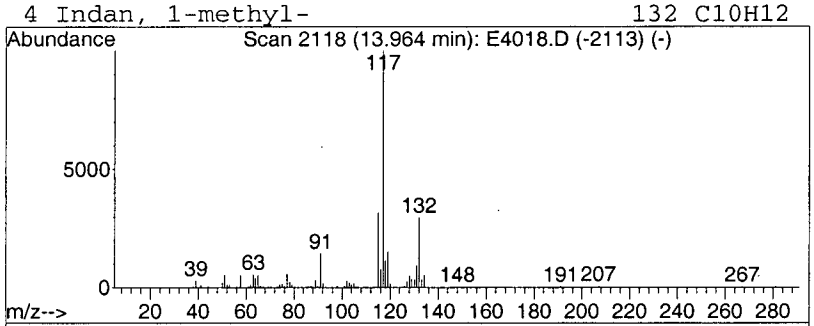
1093

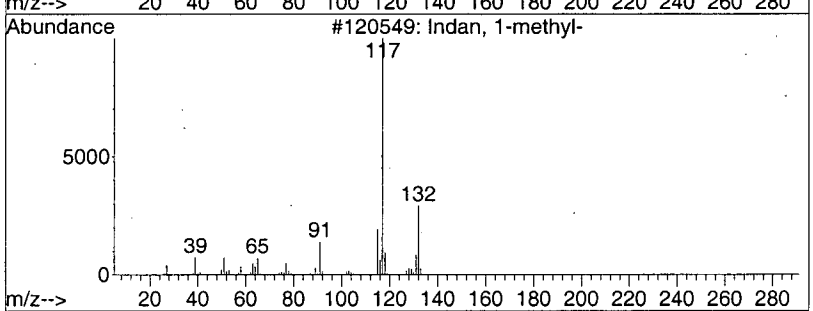
Library Search Compound Report

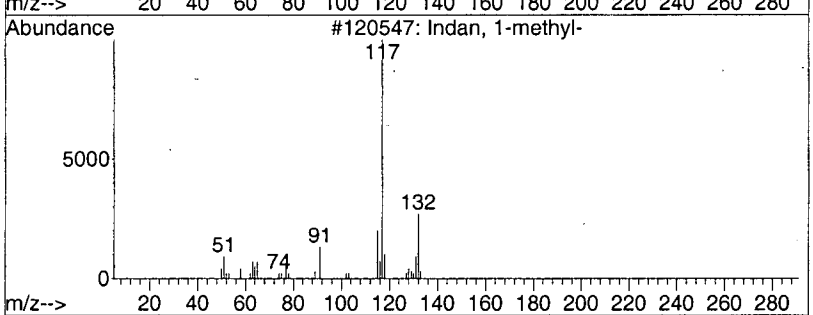
```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                          Operator: AK
   Sample    : Y0SJ2DL                                   Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                 Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 16  Indan, 1-methyl-                Concentration Rank  9
```

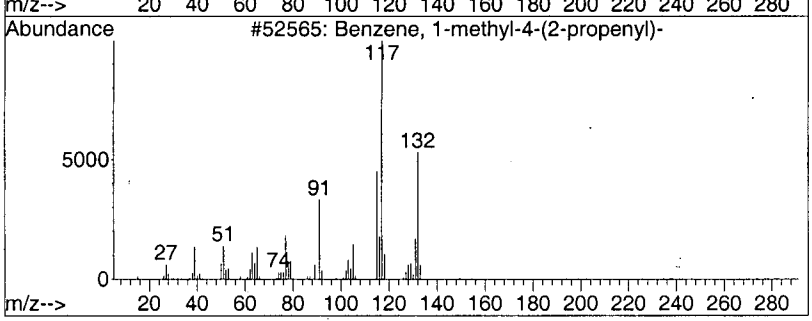
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.96	1.75 ug/L	536159	1,4-Dichlorobenzene-d4	13.19

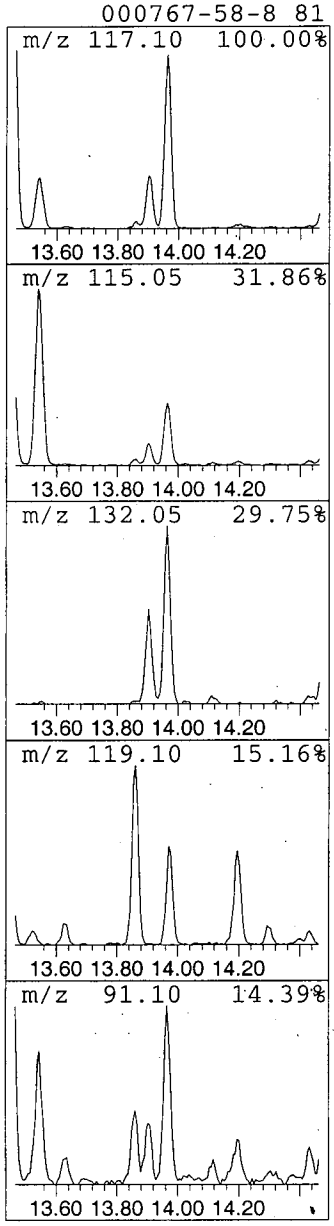
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	94
2	Indan, 1-methyl-	132	C10H12	000767-58-8	93
3	Benzene, 1-methyl-4-(2-propenyl)-	132	C10H12	003333-13-9	83
4	Indan, 1-methyl-	132	C10H12	000767-58-8	81











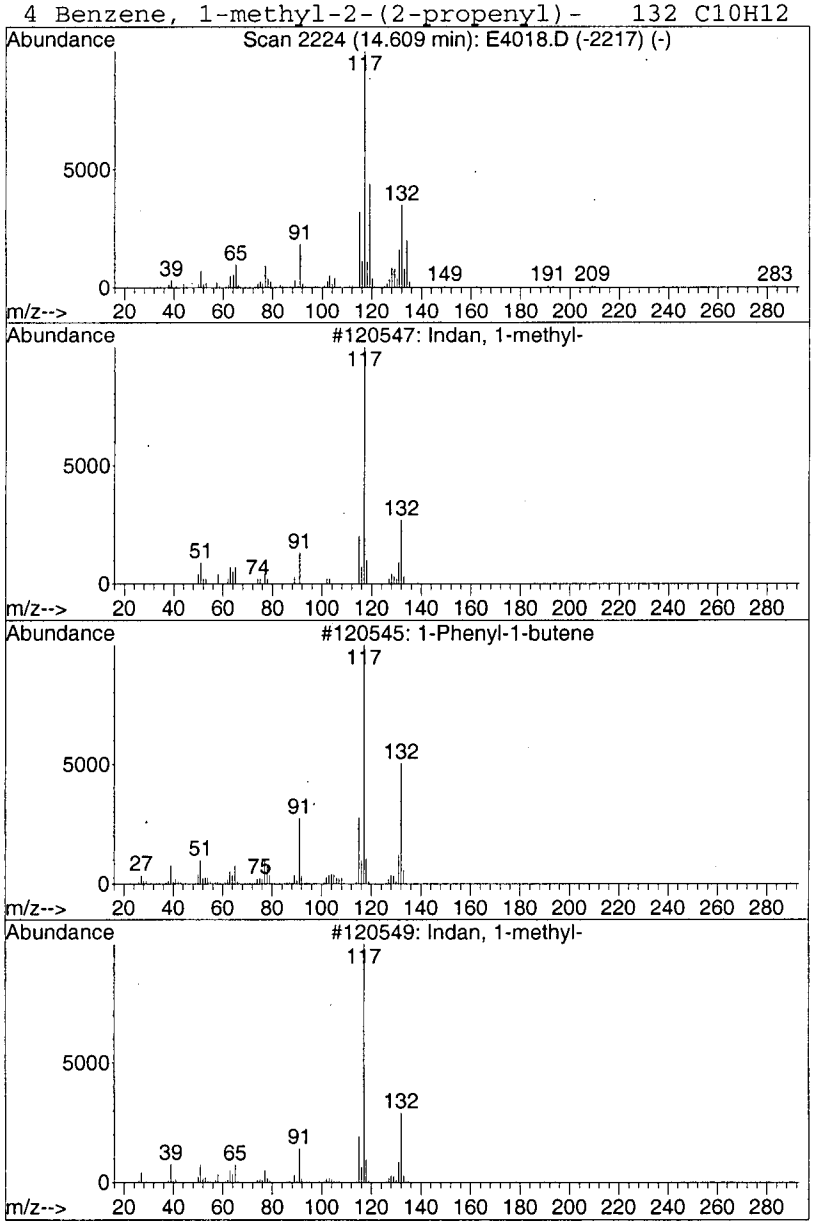
11094

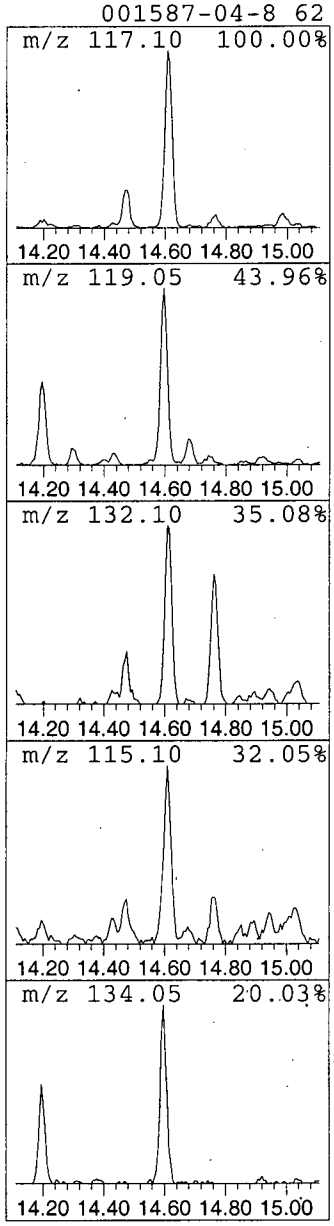
Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4018.D                    Vial: 11
   Acq On    : 03/27/2003  1556                         Operator: AK
   Sample    : Y0SJ2DL                                  Inst    : E-5973
   Misc      : 2762.002DL   25ML     10X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number 17  Indan, 1-methyl-                Concentration Rank 13
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.61	1.29 ug/L	393386	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	70
2	1-Phenyl-1-butene	132	C10H12	000824-90-8	70
3	Indan, 1-methyl-	132	C10H12	000767-58-8	70
4	Benzene, 1-methyl-2-(2-propenyl)-	132	C10H12	001587-04-8	62





0095

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4018.D Vial: 11
Acq On : 03/27/2003 1556 Operator: AK
Sample : Y0SJ2DL Inst : E-5973
Misc : 2762.002DL 25ML 10X Multiplr: 1.00
MS Integration Params: Lscint.p

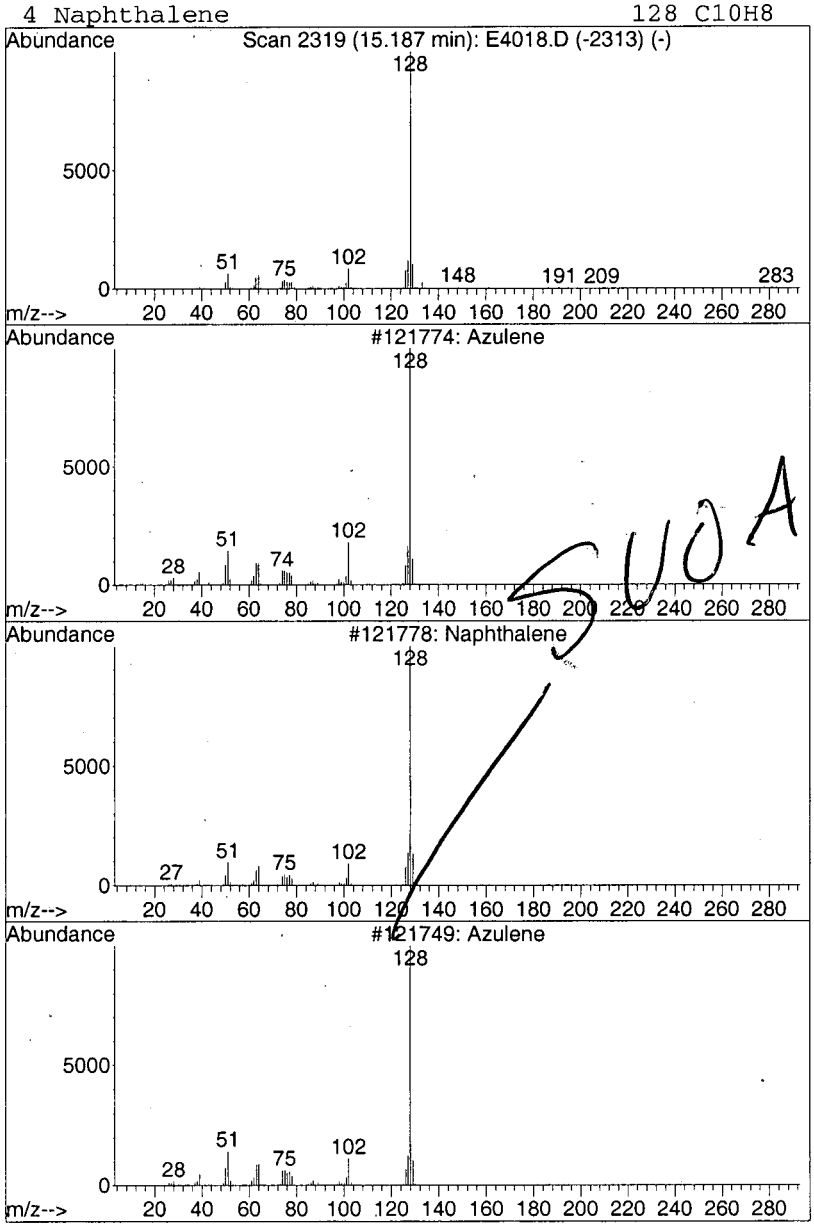
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

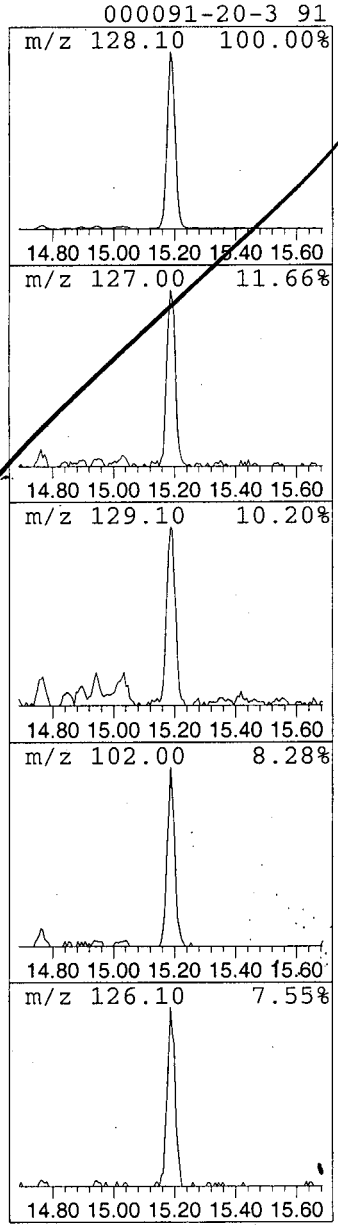
****

Peak Number 18 Azulene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.19	1.68 ug/L	514230	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
~~1~~	~~Azulene~~	128	C10H8	000275-51-4	91
2	Naphthalene	128	C10H8	000091-20-3	91
3	Azulene	128	C10H8	000275-51-4	91
4	Naphthalene	128	C10H8	000091-20-3	91





SVOA

0096

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003 Date Received: 03/20/2003

Lab File ID: E4045 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.27	J
75-01-4	Vinyl Chloride	1.4	
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.34	J
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	33	E
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	27	
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	2.3	
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	5.2	
156-59-2	cis-1,2-Dichloroethene	110	E
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	35	E
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.80	
107-06-2	1,2-Dichloroethane	0.50	U

11097

1LCB
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.
Y0SJ3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003 Date Received: 03/20/2003

Lab File ID: E4045 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	2.4	
108-87-2	Methylcyclohexane	83	E
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.7	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	2.5	
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	11	
1330-20-7	Xylene (total)	2.1	
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	15	
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1098

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ3

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003 Date Received: 03/20/2003

Lab File ID: E4045 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 4

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01	000103-65-1	Benzene, propyl-	12.26	4.7	JN
02	000496-11-7	Indane	13.45	5.0	JN
03	000767-58-8	Indan, 1-methyl-	13.96	1.9	JN
04	002039-89-6	Benzene, 2-ethenyl-1,4-dimet	14.60	1.7	JN
05					
06					
07					
08					
09					
10					
11					
12					
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29					
30					

.0099

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 09:06:27 2003

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1188258	5.00	ug/L	-0.01
28) Chlorobenzene-d5	10.31	117	897723	5.00	ug/L	-0.01
60) 1,4-Dichlorobenzene-d4	13.19	152	333879	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.13	65	461297	4.98	ug/L	-0.02
Spiked Amount 5.000	Range 49 - 138		Recovery	=	99.60%	
7) Chloroethane-d5	2.52	69	439836	5.59	ug/L	-0.02
Spiked Amount 5.000	Range 60 - 126		Recovery	=	111.80%	
10) 1,1-Dichloroethene-d2	3.24	65	224615	5.57	ug/L	-0.02
Spiked Amount 5.000	Range 65 - 130		Recovery	=	111.40%	
20) 2-Butanone-d5	4.87	46	60748	7.15	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	=	143.00%	
24) Chloroform-d	5.23	86	483431	5.14	ug/L	-0.01
Spiked Amount 5.000	Range 80 - 123		Recovery	=	102.80%	
26) 1,2-Dichloroethane-d4	5.80	65	281758	5.33	ug/L	-0.01
Spiked Amount 5.000	Range 78 - 129		Recovery	=	106.60%	
32) Benzene-d6	5.84	84	2378547	6.15	ug/L	-0.01
Spiked Amount 5.000	Range 78 - 121		Recovery	=	123.00%#	
35) 1,2-Dichloropropane-d6	6.79	67	549110	5.16	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	=	103.20%	
41) Toluene-d8	8.20	98	2695874	7.26	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	=	145.20%#	
43) trans-1,3-Dichloropropene-	8.53	79	128246	9.93	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	=	198.60%#	
47) 2-Hexanone-d5	9.12	46	104794	7.38	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	=	147.60%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	175738	4.83	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	=	96.60%	
61) Bromoform-d	11.51	174	91947	4.01	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	=	80.20%	
65) 1,2-Dichlorobenzene-d4	13.54	152	416128	5.43	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	=	108.60%	

Target Compounds						Qvalue
3) Chloromethane	1.96	50	75699	0.27	ug/L J	75
5) Vinyl Chloride	2.13	62	279894	1.39	ug/L	99
8) Chloroethane	2.55	64	38351	0.34	ug/L #J	55
11) 1,1-Dichloroethene	3.26	96	3436553	32.99	ug/L #E	52
13) Acetone	3.28	43	158824	26.65	ug/L #E	67
17) trans-1,2-Dichloroethene	3.95	96	252615	2.34	ug/L	91
19) 1,1-Dichloroethane	4.35	63	876848	5.17	ug/L	98
21) cis-1,2-Dichloroethene	4.92	96	10156890	105.63	ug/L E	96
30) Cyclohexane	5.57	56	6542092	35.15	ug/L #E	77
33) Benzene	5.89	78	344121	0.80	ug/L	100
34) Trichloroethene	6.63	95	222665	2.37	ug/L	98
36) Methylcyclohexane	6.90	83	16646406	83.49	ug/L E	93
42) Toluene	8.29	91	786742	1.69	ug/L	98
46) Tetrachloroethene	9.09	164	250068	2.49	ug/L	99
52) Ethylbenzene	10.54	91	4419833	10.52	ug/L	99
53) m/p-Xylene	10.72	106	217549	1.33	ug/L	99
54) o-Xylene	11.29	106	85901	0.60	ug/L	95
55) Xylene (total)	10.72	106	303488m	2.14	ug/L	
57) Isopropylbenzene	11.77	105	4953666	14.68	ug/L	99

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

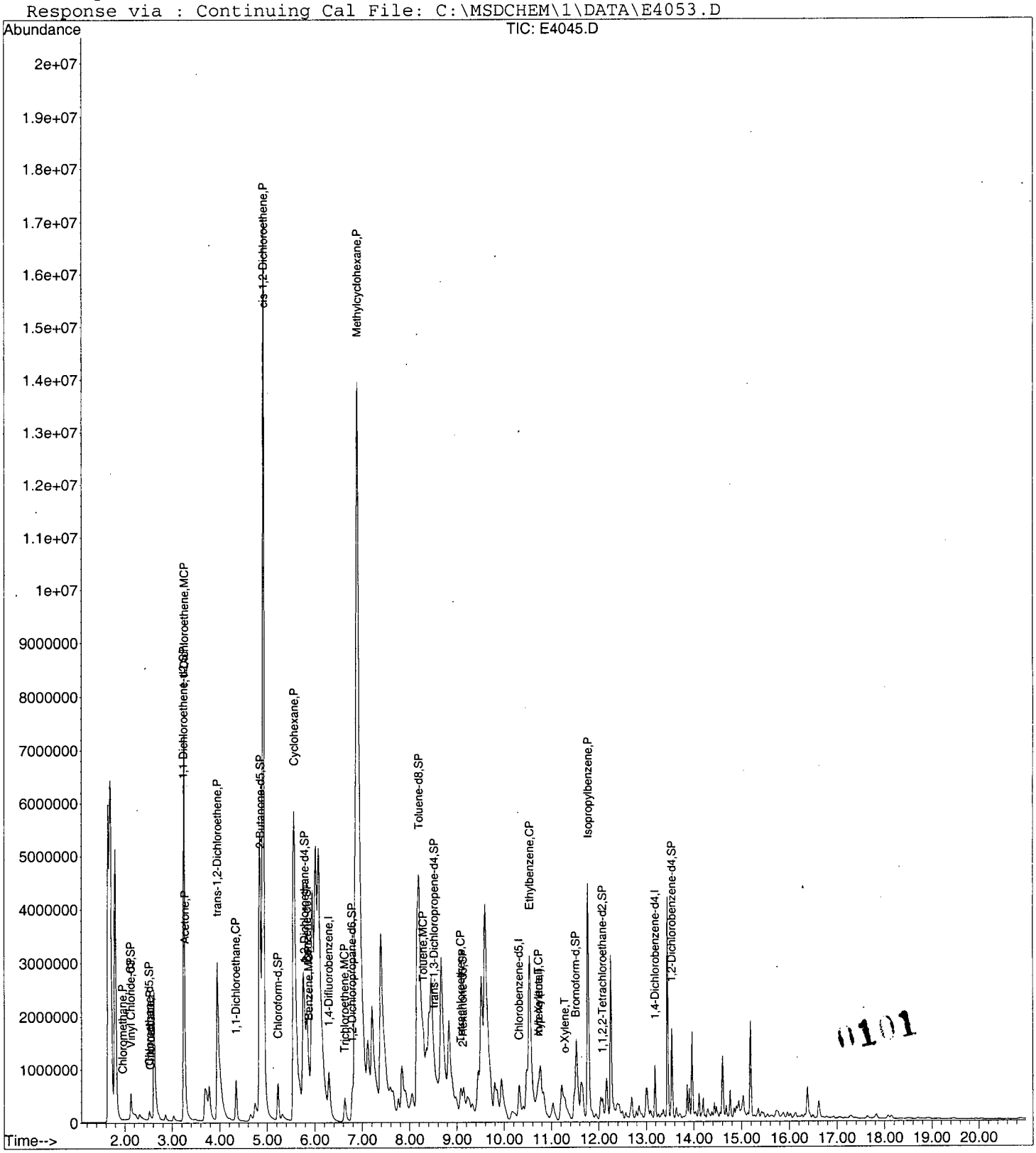
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:40 2003

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

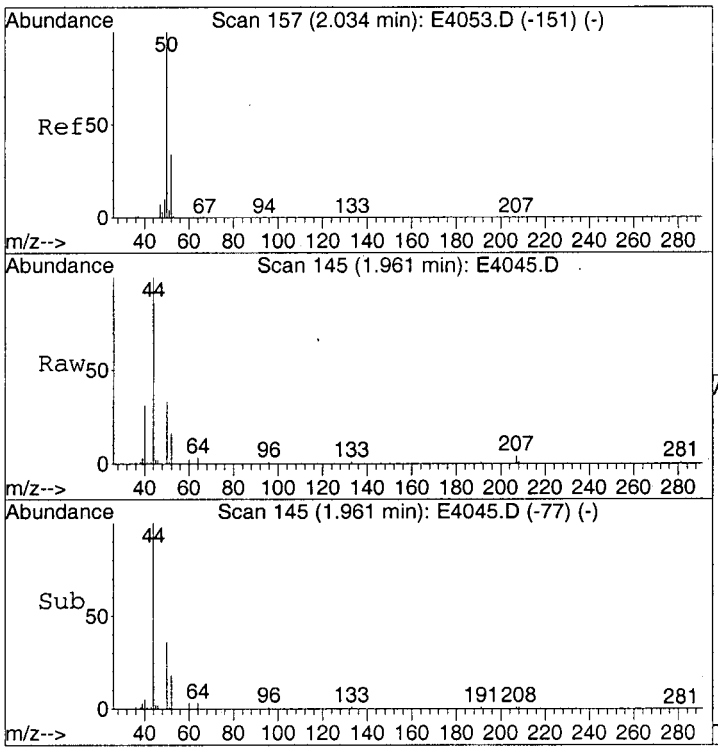
Quant Results File: LCE4041.RES

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

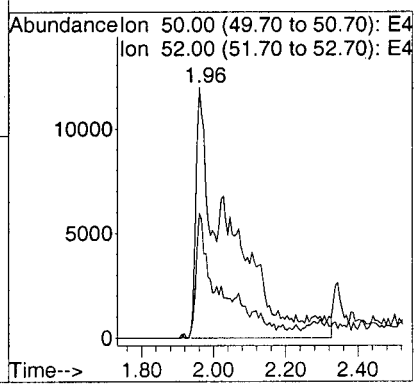
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

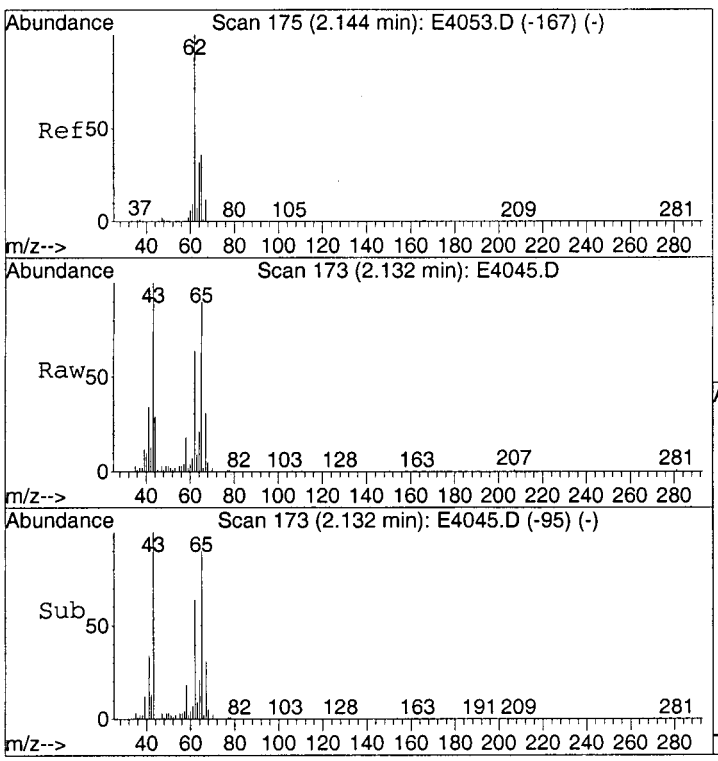


#3
Chloromethane
Concen: 0.27 ug/L
RT: 1.96 min Scan# 145
Delta R.T. -0.09 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 50 Resp: 75699

Ion	Ratio	Lower	Upper
50	100		
52	46.8	12.9	52.9

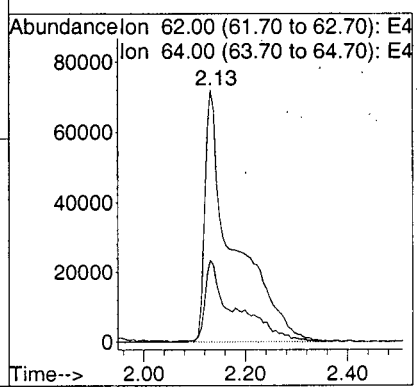




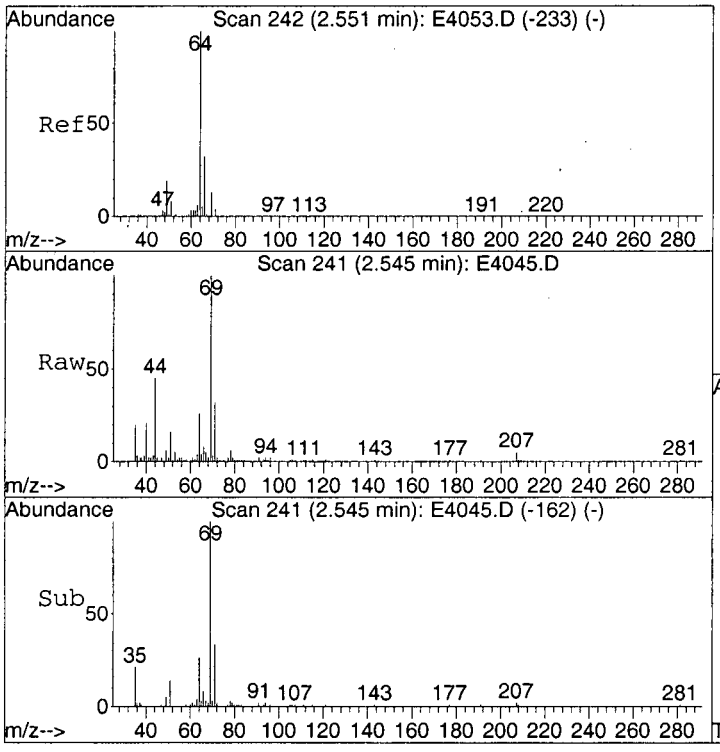
#5
Vinyl Chloride
Concen: 1.39 ug/L
RT: 2.13 min Scan# 173
Delta R.T. -0.02 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 62 Resp: 279894

Ion	Ratio	Lower	Upper
62	100		
64	33.9	13.2	53.2



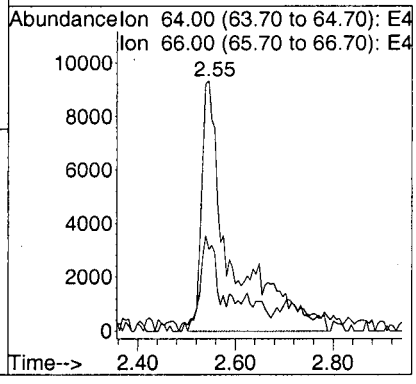
Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

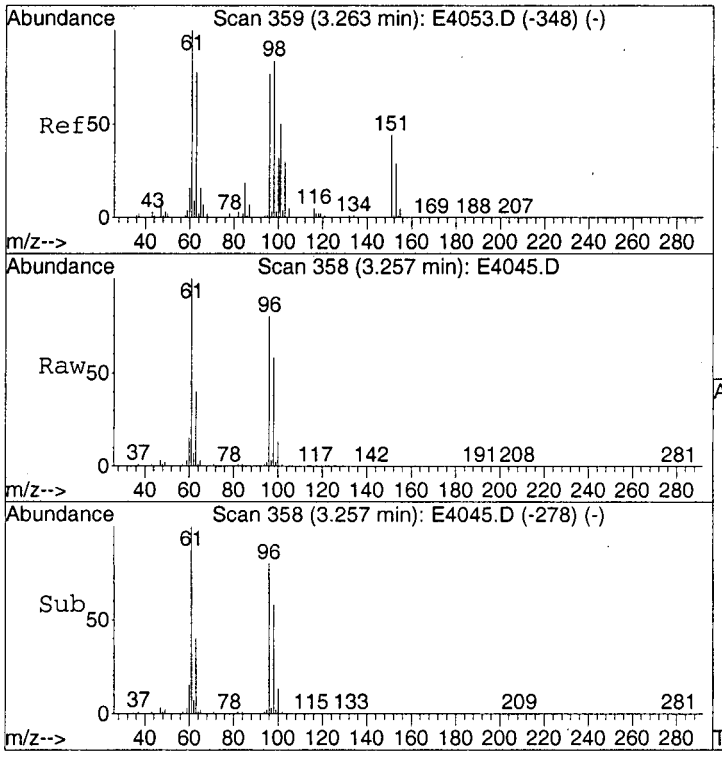


#8
Chloroethane
Concen: 0.34 ug/L
RT: 2.55 min Scan# 241
Delta R.T. -0.02 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 64 Resp: 38351

Ion	Ratio	Lower	Upper
64	100		
66	56.3	11.4	51.4#

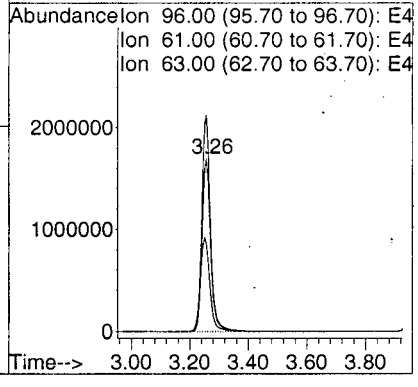




#11
1,1-Dichloroethene
Concen: 32.99 ug/L
RT: 3.26 min Scan# 358
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 96 Resp: 3436553

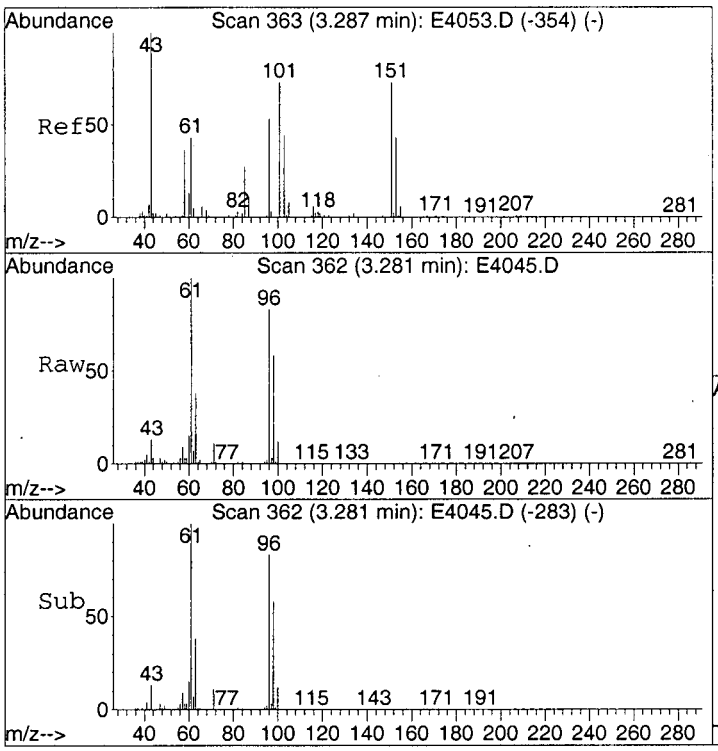
Ion	Ratio	Lower	Upper
96	100		
61	127.7	127.3	167.3
63	61.2	144.8	184.8#



0103

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

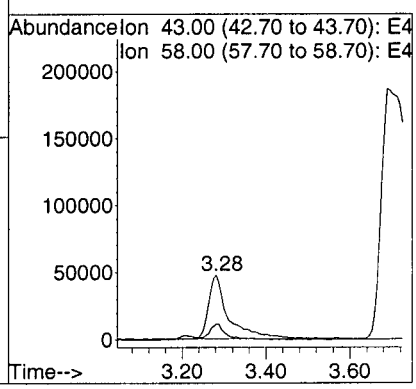
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

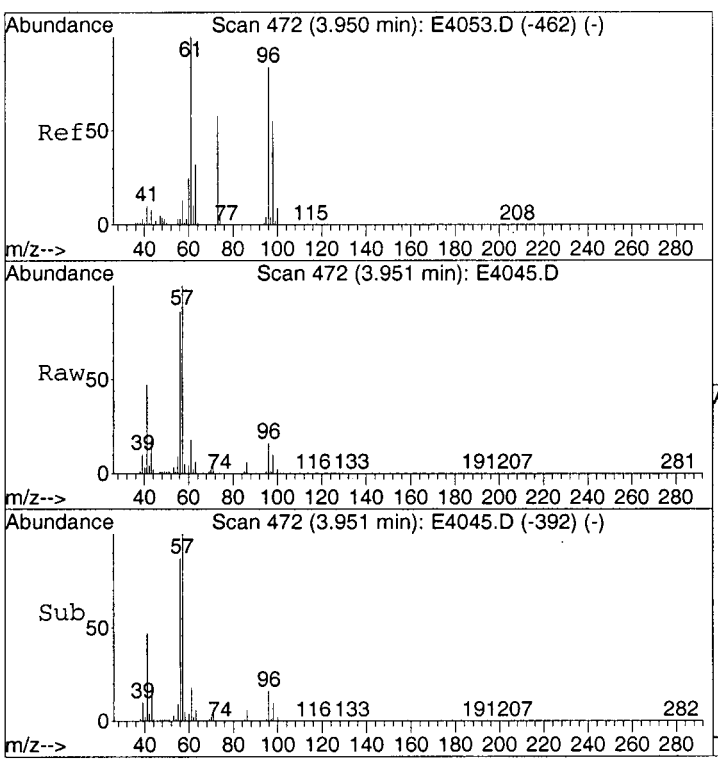


#13
Acetone
Concen: 26.65 ug/L
RT: 3.28 min Scan# 362
Delta R.T. -0.02 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 43 Resp: 158824

Ion	Ratio	Lower	Upper
43	100		
58	20.4	20.7	60.7#

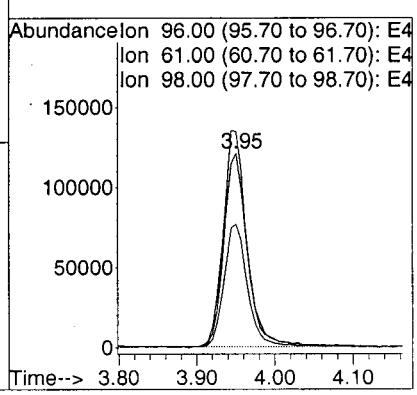




#17
trans-1,2-Dichloroethene
Concen: 2.34 ug/L
RT: 3.95 min Scan# 472
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 96 Resp: 252615

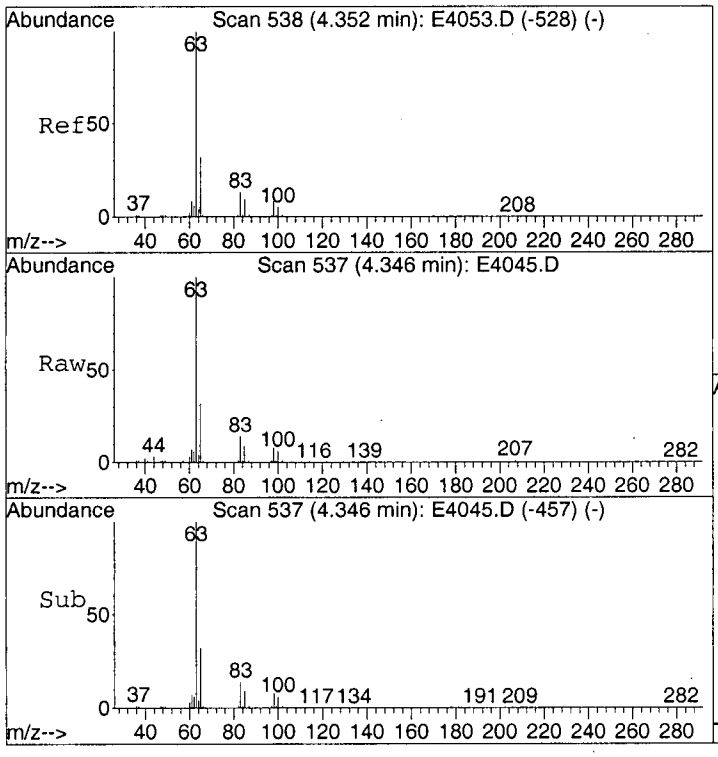
Ion	Ratio	Lower	Upper
96	100		
61	117.2	110.4	150.4
98	66.2	42.0	82.0



.0104

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

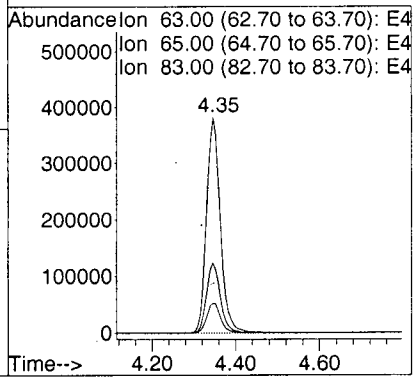
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

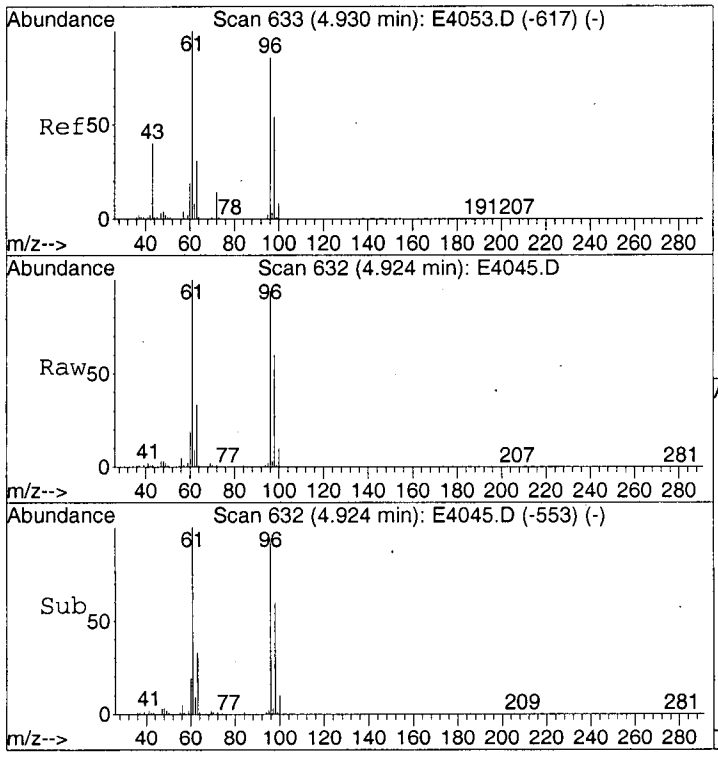


#19
1,1-Dichloroethane
Concen: 5.17 ug/L
RT: 4.35 min Scan# 537
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 63 Resp: 876848

Ion	Ratio	Lower	Upper
63	100		
65	32.5	11.8	51.8
83	13.9	0.0	32.9

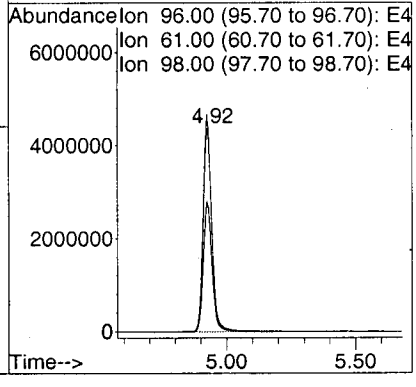




#21
cis-1,2-Dichloroethene
Concen: 105.63 ug/L
RT: 4.92 min Scan# 632
Delta R.T. -0.02 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 96 Resp:10156890

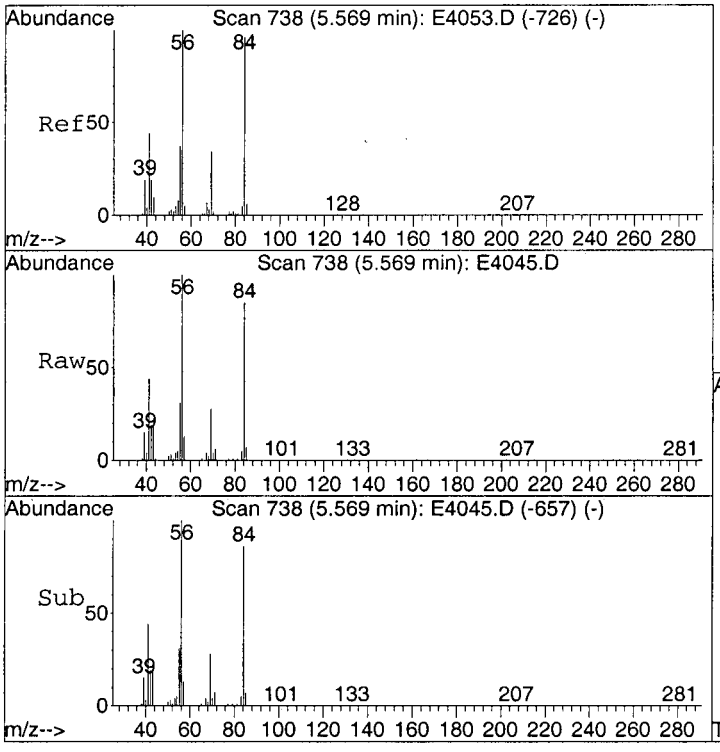
Ion	Ratio	Lower	Upper
96	100		
61	108.0	93.0	133.0
98	64.2	41.5	81.5



0105

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

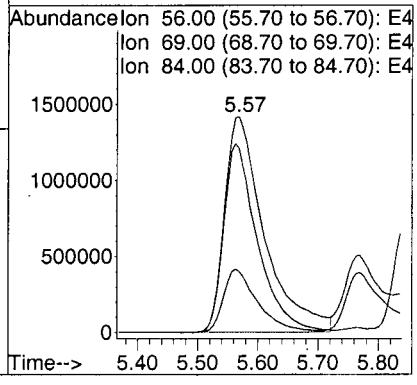
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

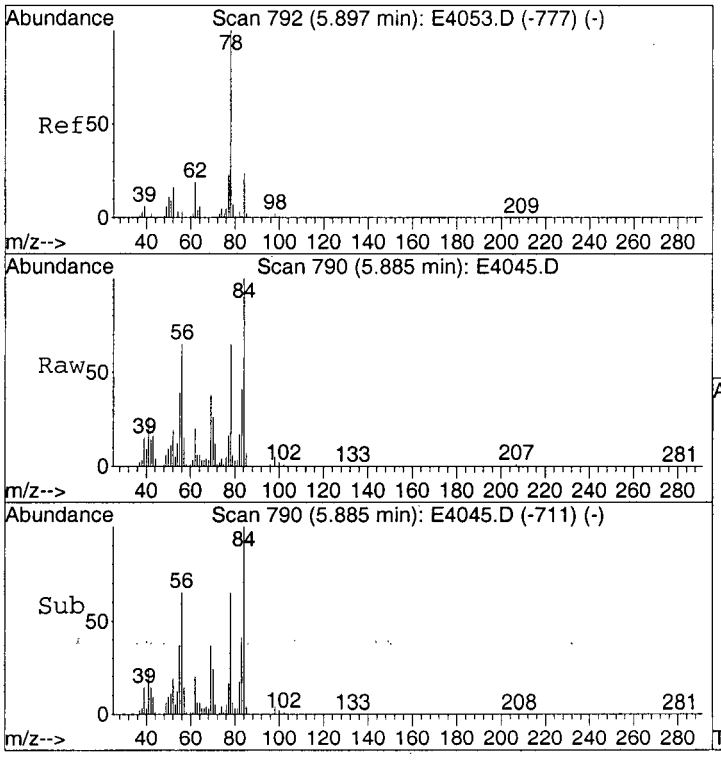


#30
Cyclohexane
Concen: 35.15 ug/L
RT: 5.57 min Scan# 738
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 56 Resp: 6542092

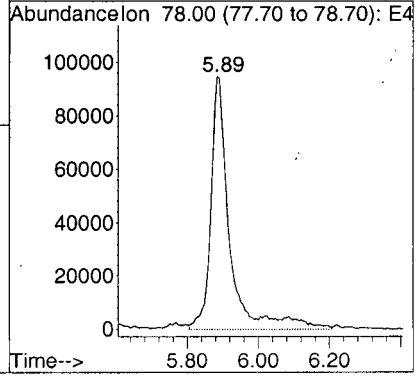
Ion	Ratio	Lower	Upper
56	100		
69	25.4	11.9	51.9
84	75.6	81.9	121.9#





#33
Benzene
Concen: 0.80 ug/L
RT: 5.89 min Scan# 790
Delta R.T. -0.02 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

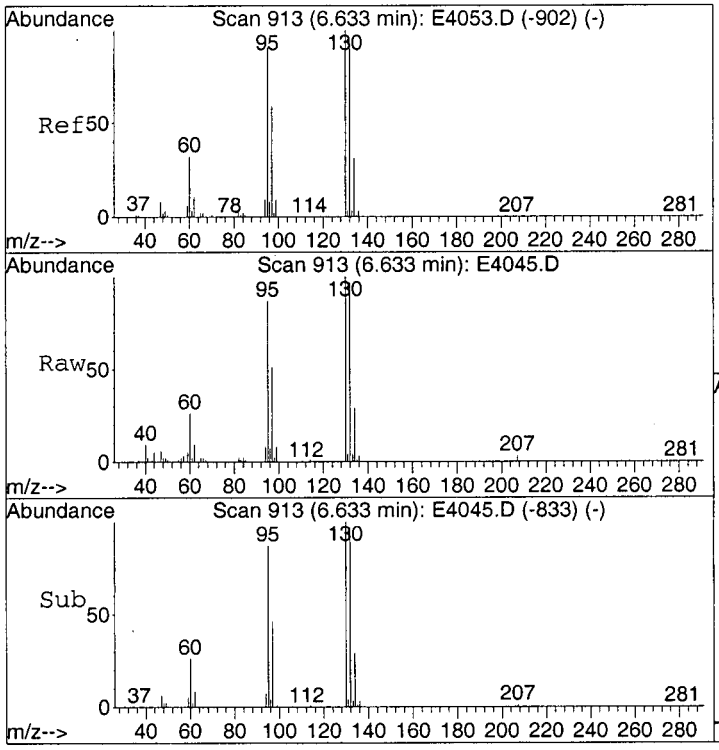
Tgt Ion: 78 Resp: 344121



0106

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

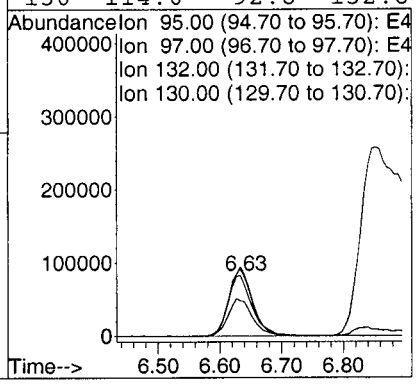
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

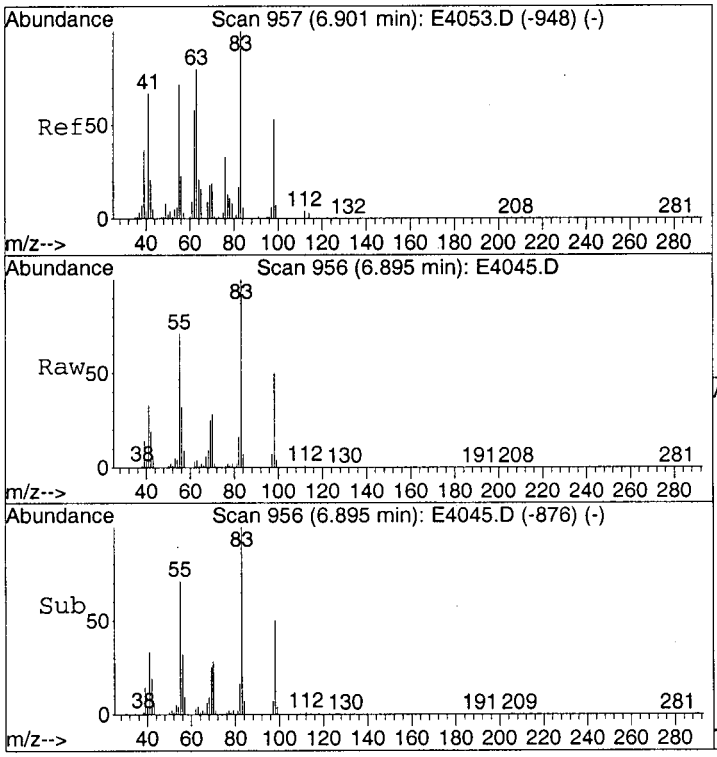


#34
Trichloroethene
Concen: 2.37 ug/L
RT: 6.63 min Scan# 913
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 95 Resp: 222665

Ion	Ratio	Lower	Upper
95	100		
97	63.2	45.9	85.9
132	109.5	88.6	128.6
130	114.0	92.8	132.8

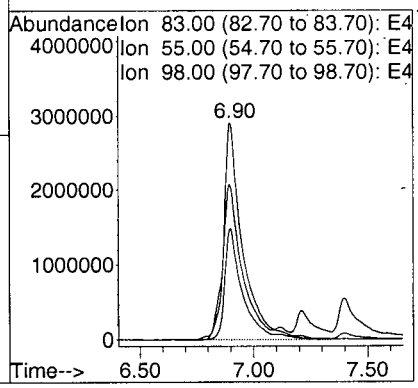




#36
Methylcyclohexane
Concen: 83.49 ug/L
RT: 6.90 min Scan# 956
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

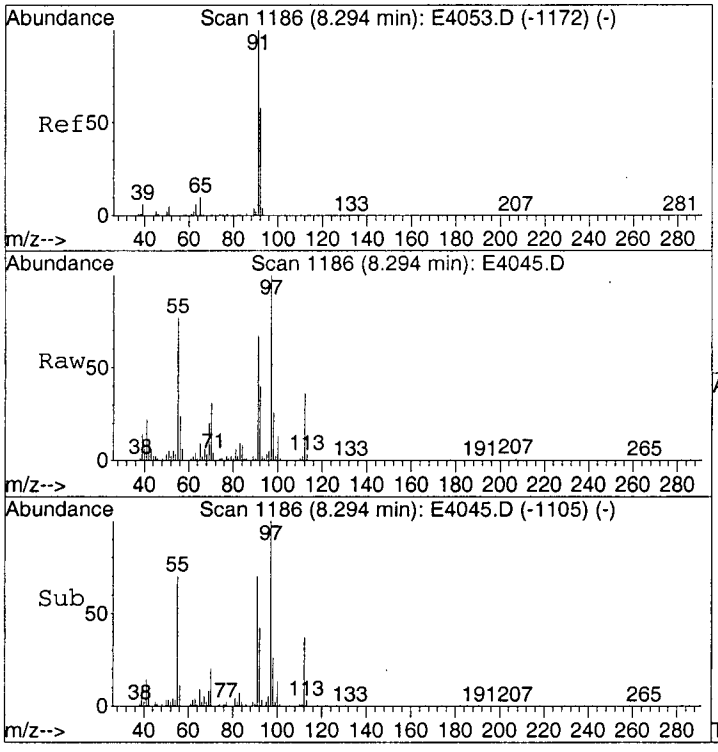
Tgt Ion: 83 Resp:16646406

Ion	Ratio	Lower	Upper
83	100		
55	77.9	51.5	91.5
98	48.3	33.2	73.2



0107

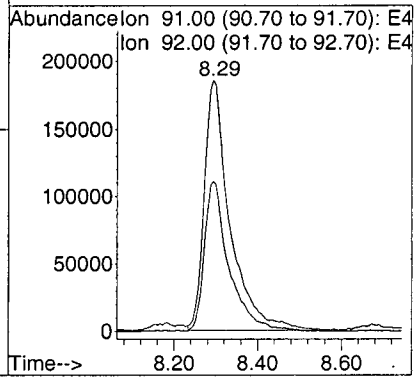
Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

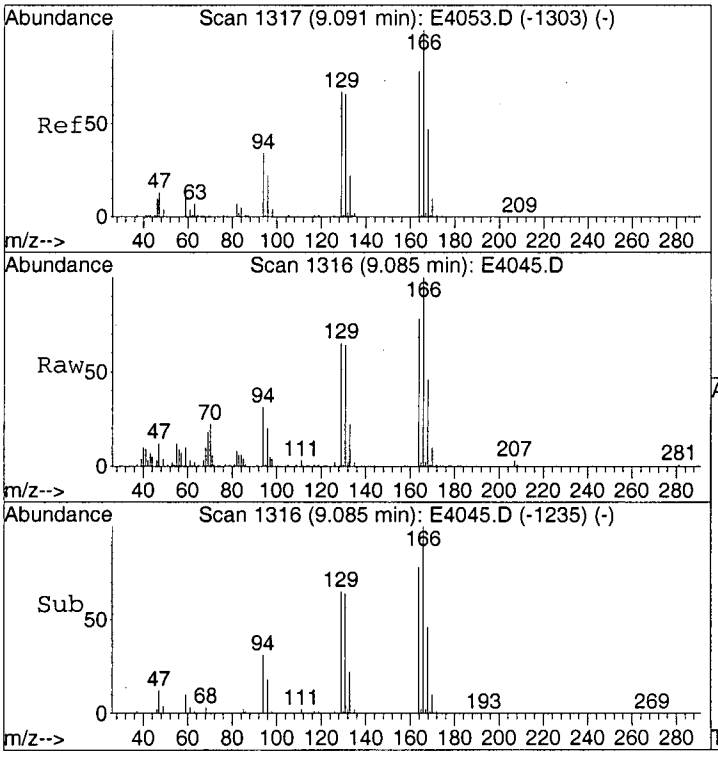


#42
Toluene
Concen: 1.69 ug/L
RT: 8.29 min Scan# 1186
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 91 Resp: 786742

Ion	Ratio	Lower	Upper
91	100		
92	57.8	39.2	79.2

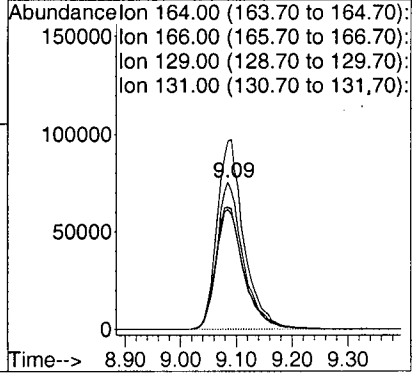




#46
Tetrachloroethene
Concen: 2.49 ug/L
RT: 9.09 min Scan# 1316
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion:164 Resp: 250068

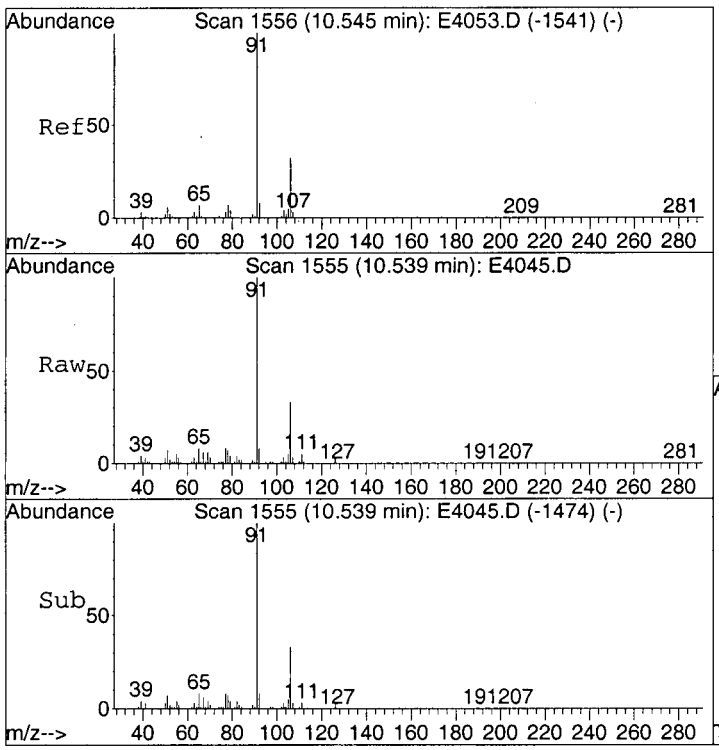
Ion	Ratio	Lower	Upper
164	100		
166	130.2	108.0	148.0
129	87.1	67.5	107.5
131	85.1	65.0	105.0



0108

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

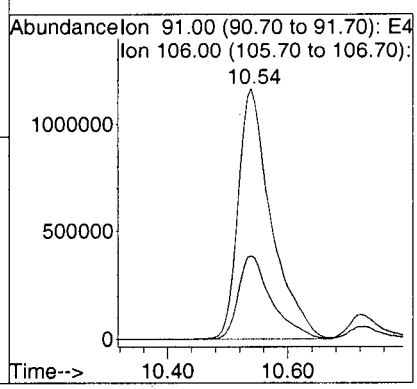
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

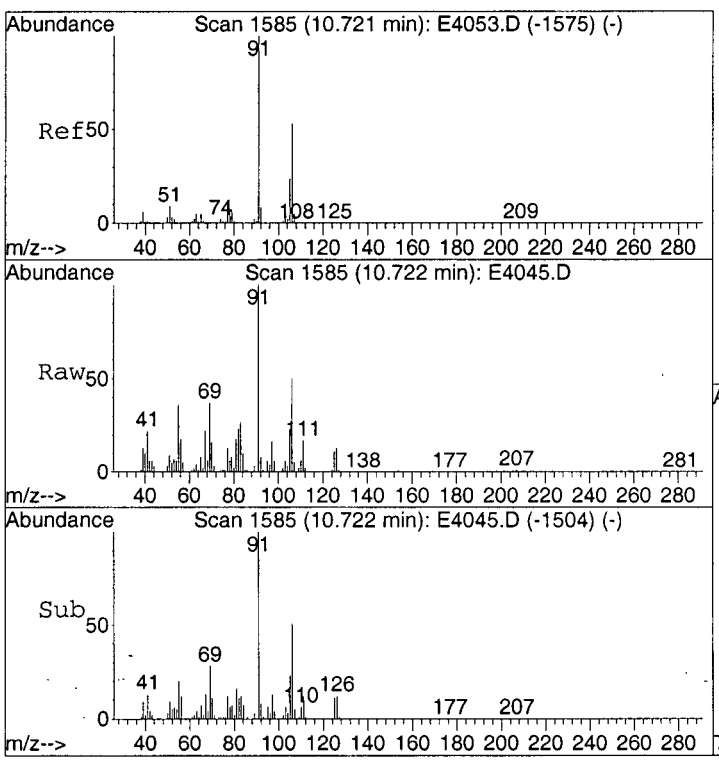


#52
Ethylbenzene
Concen: 10.52 ug/L
RT: 10.54 min Scan# 1555
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion: 91 Resp: 4419833

Ion	Ratio	Lower	Upper
91	100		
106	33.4	13.7	53.7

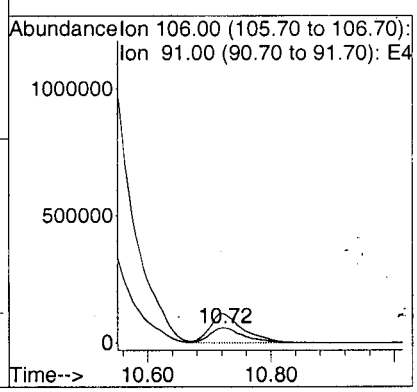




#53
m/p-Xylene
Concen: 1.33 ug/L
RT: 10.72 min Scan# 1585
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

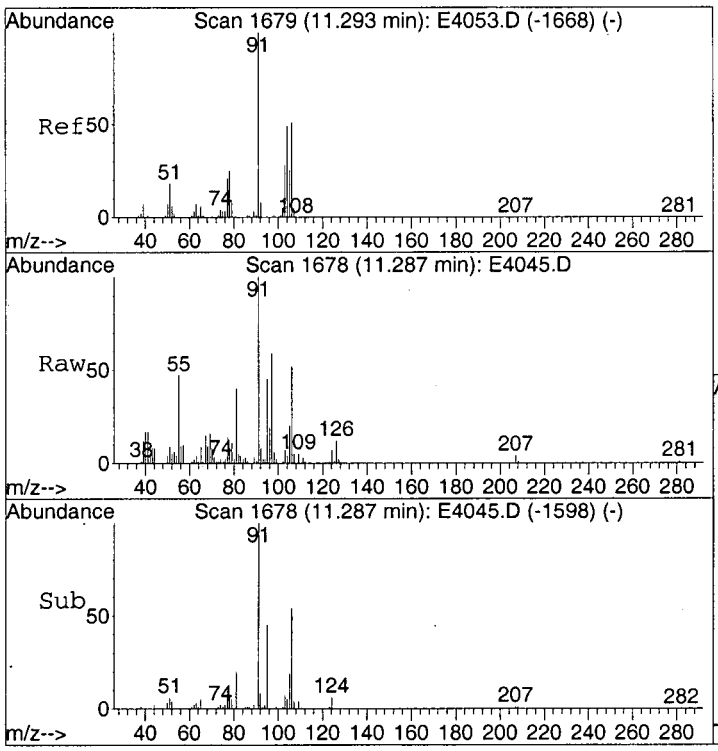
Tgt Ion:106 Resp: 217549

Ion	Ratio	Lower	Upper
106	100		
91	191.6	172.5	212.5



.0109

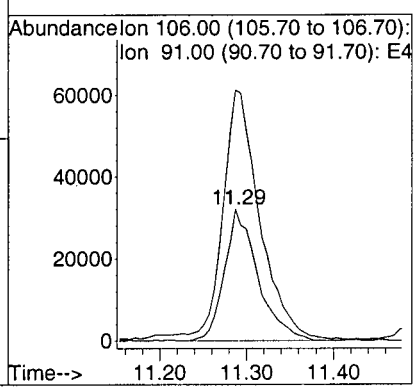
Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

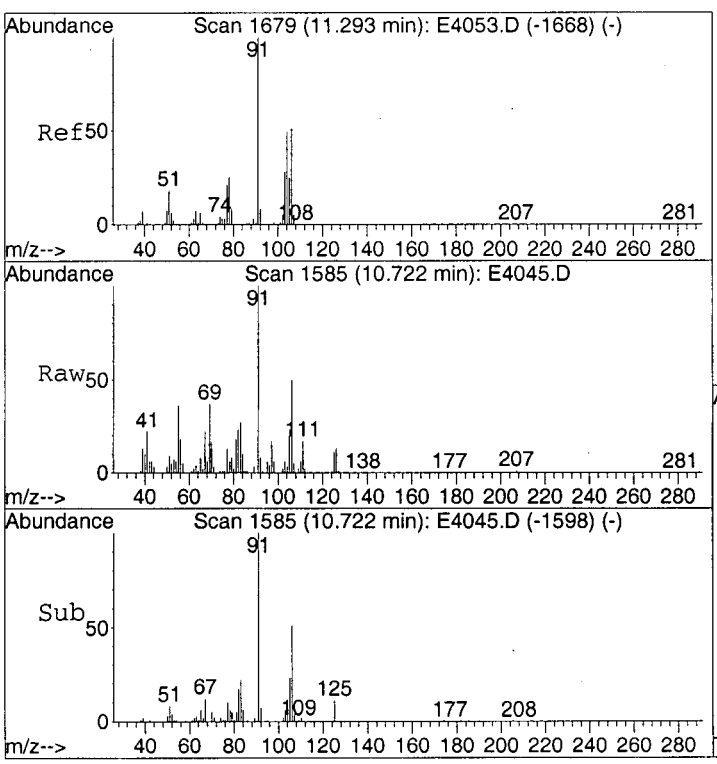


#54
o-Xylene
Concen: 0.60 ug/L
RT: 11.29 min Scan# 1678
Delta R.T. -0.01 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion:106 Resp: 85901

Ion	Ratio	Lower	Upper
106	100		
91	210.4	182.7	222.7

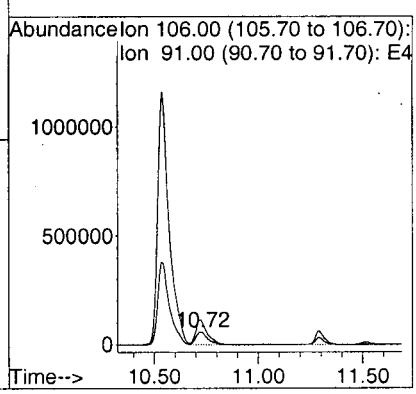




#55
Xylene (total)
Concen: 2.14 ug/L m
RT: 10.72 min Scan# 1585
Delta R.T. -0.58 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

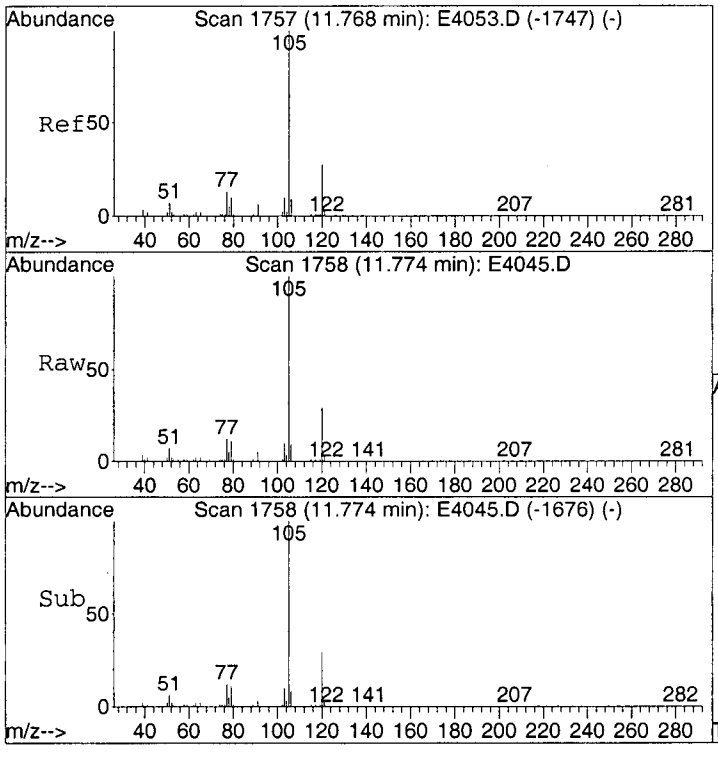
Tgt Ion:106 Resp: 303488

Ion	Ratio	Lower	Upper
106	100		
91	59.6	182.7	222.7#



1110

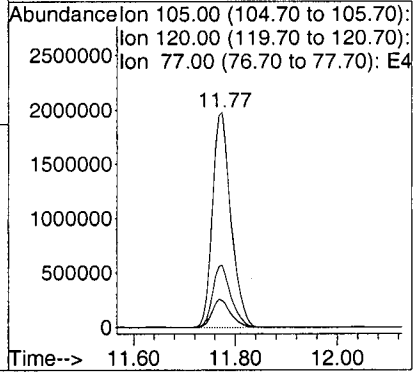
Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2



#57
Isopropylbenzene
Concen: 14.68 ug/L
RT: 11.77 min Scan# 1758
Delta R.T. 0.00 min
Lab File: E4045.D
Acq: 28 Mar 2003 16:26

Tgt Ion:105 Resp: 4953666

Ion	Ratio	Lower	Upper
105	100		
120	28.4	7.9	47.9
77	12.8	0.0	33.3



0111

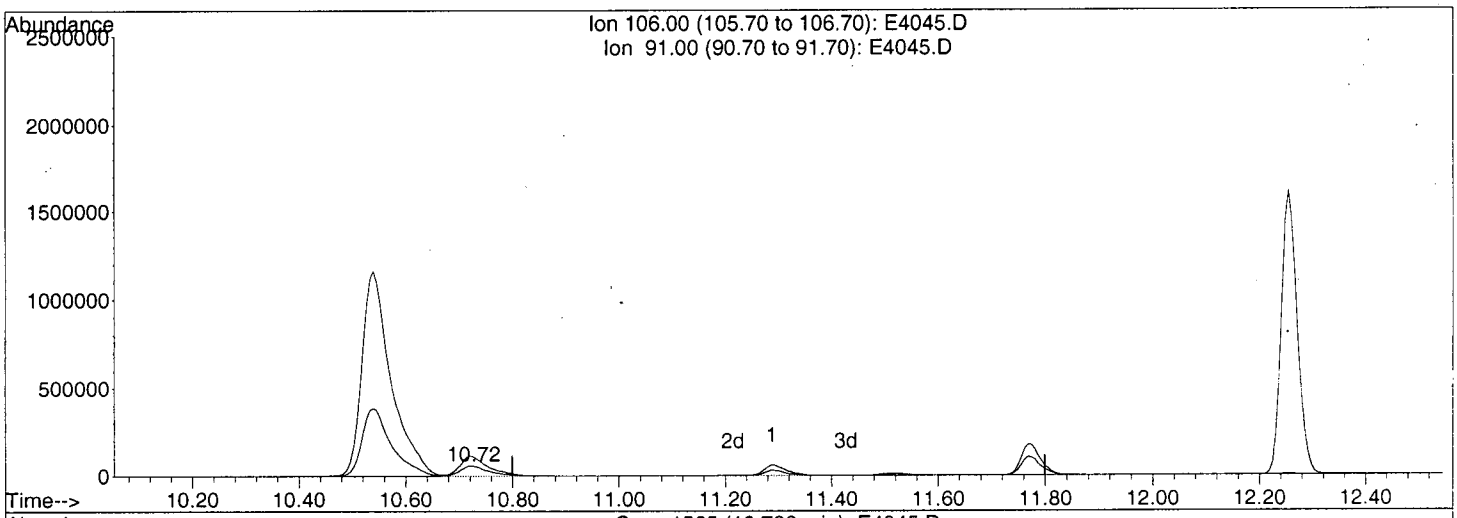
Quantitation Report (Qedit)

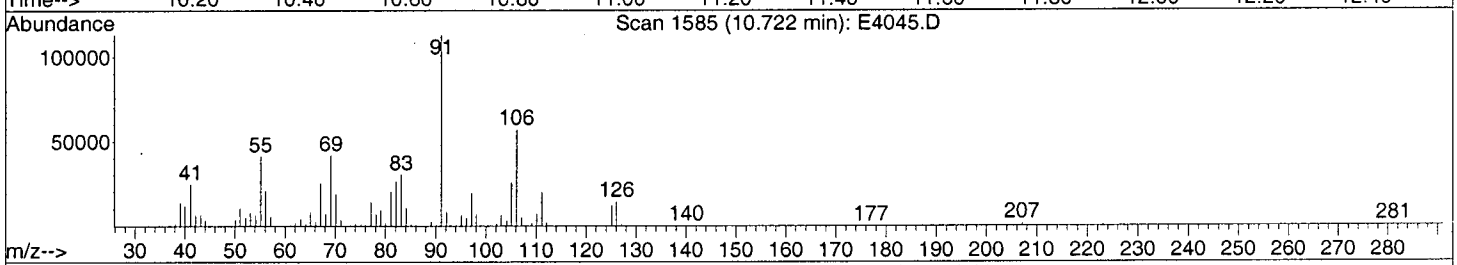
Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:39 2003

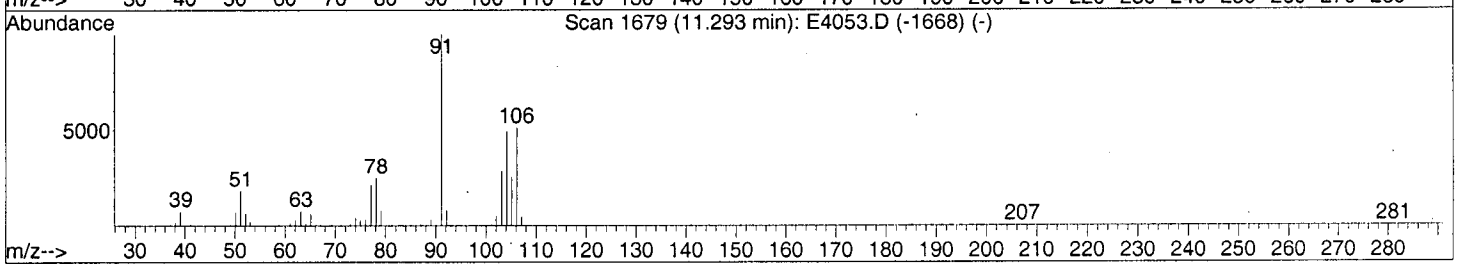
Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Single Level Calibration







TIC: E4045.D

(55) Xylene (total) (CP)

10.72min 2.14ug/L m

response 303488

Ion	Exp%	Act%
106.00	100	100
91.00	202.70	59.56#
0.00	0.00	0.00
0.00	0.00	0.00

Ka
04/03/03

112

E4045.D LCE4041.M Thu Apr 03 09:39:56 2003

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Filtering: 5
Sampling : 1
Min Area: 100000 Area counts
Start Thrs: 0.2
Max Peaks: 40
Stop Thrs : 0
Peak Location: TOP

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

Signal : TIC

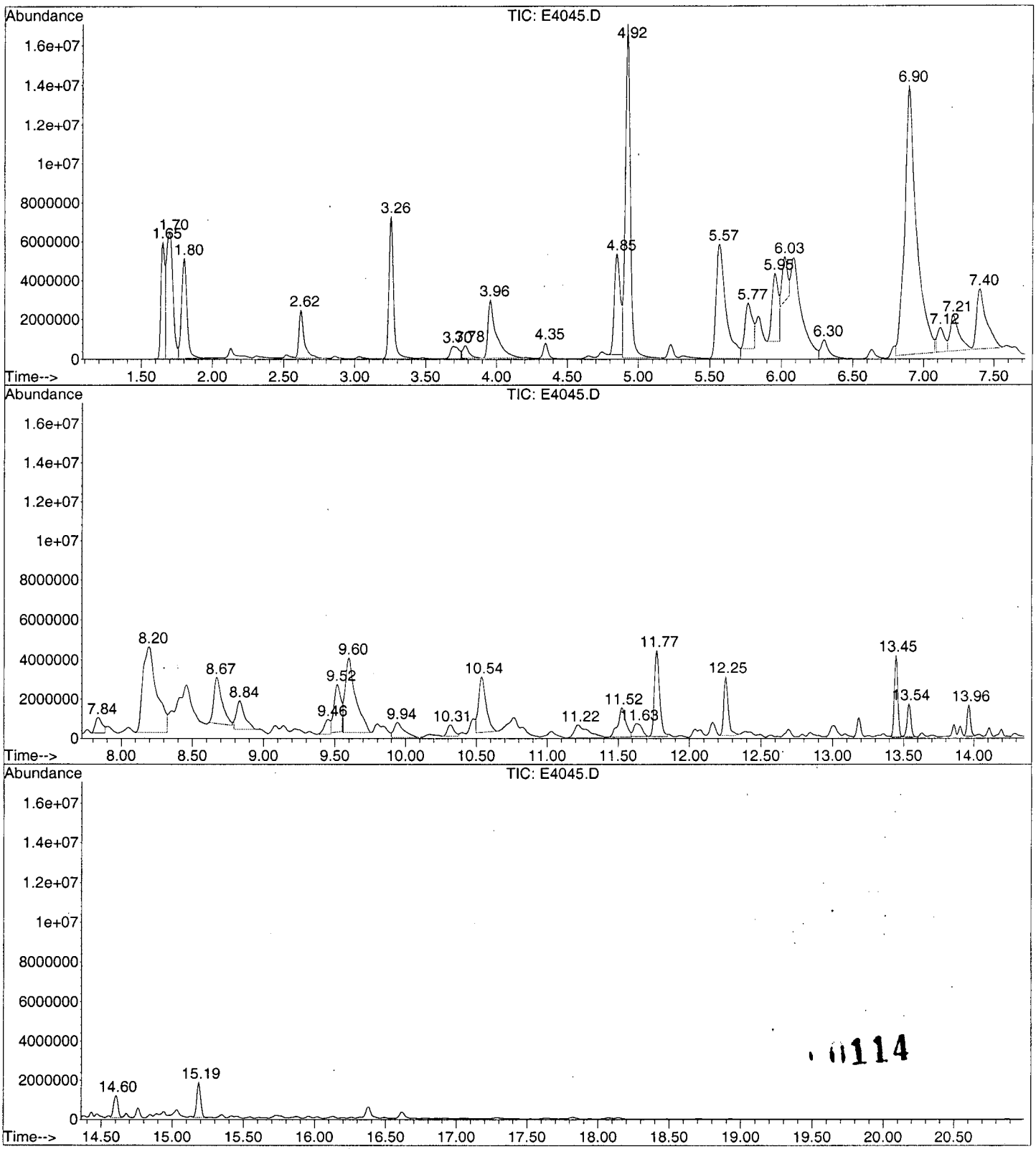
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.651	87	94	97	rBV	5957222	12194480	15.18%	2.722%
2	1.700	97	102	112	rVV	6398712	19758896	24.59%	4.410%
3	1.803	112	119	142	rVB	5081418	13290866	16.54%	2.966%
4	2.618	247	253	280	rVB	2433515	6114058	7.61%	1.365%
5	3.257	347	358	390	rBV	7266607	16218177	20.19%	3.620%
6	3.695	421	430	439	rBV3	605968	2543563	3.17%	0.568%
7	3.780	440	444	464	rVV2	643559	1871675	2.33%	0.418%
8	3.957	464	473	511	rVV2	2957942	11819825	14.71%	2.638%
9	4.346	529	537	560	rVB	778432	1846340	2.30%	0.412%
10	4.851	611	620	626	rBV	5130885	15417438	19.19%	3.441%
11	4.924	626	632	671	rVB	17011292	41278511	51.38%	9.213%
12	5.569	726	738	762	rBV2	5810674	26984241	33.59%	6.023%
13	5.770	762	771	778	rBV2	2312169	8042473	10.01%	1.795%
14	5.952	793	801	807	rBV3	3469432	10980712	13.67%	2.451%
15	6.025	807	813	818	rVV	2109370	6106019	7.60%	1.363%
16	6.299	852	858	885	rVB	921678	3384067	4.21%	0.755%
17	6.895	941	956	986	rVV2	13744378	80343086	100.00%	17.932%
18	7.120	988	993	1001	rVV3	1210944	4233961	5.27%	0.945%
19	7.211	1001	1008	1029	rVV	1769745	7981762	9.93%	1.781%
20	7.400	1030	1039	1065	rVV2	3018450	14822386	18.45%	3.308%
21	7.838	1103	1111	1119	rBV2	799915	2743645	3.41%	0.612%
22	8.197	1155	1170	1191	rBV5	4350502	29647813	36.90%	6.617%
23	8.671	1240	1248	1266	rVV2	2327259	9439725	11.75%	2.107%
24	8.836	1268	1275	1293	rVB2	1468858	5907656	7.35%	1.319%
25	9.456	1365	1377	1380	rBV4	758123	2373913	2.95%	0.530%
26	9.517	1380	1387	1393	rVV	2444928	8133127	10.12%	1.815%
27	9.602	1394	1401	1427	rVB2	3798904	19204859	23.90%	4.286%
28	9.943	1450	1457	1483	rVB2	769920	3733990	4.65%	0.833%
29	10.314	1510	1518	1528	rBV2	581052	1909352	2.38%	0.426%
30	10.539	1548	1555	1574	rVB	2806542	10364626	12.90%	2.313%
31	11.220	1654	1667	1700	rBV5	659547	4529891	5.64%	1.011%
32	11.525	1702	1717	1728	rBV3	1499626	5876078	7.31%	1.311%
33	11.634	1728	1735	1748	rVB4	646519	2646459	3.29%	0.591%
34	11.774	1749	1758	1770	rBV	4367522	11129265	13.85%	2.484%
35	12.255	1830	1837	1850	rBV	3005514	6542087	8.14%	1.460%
36	13.447	2027	2033	2040	rVV	4156146	6980383	8.69%	1.558%
37	13.538	2040	2048	2057	rVV	1690452	3097332	3.86%	0.691%
38	13.964	2112	2118	2125	rVV2	1599197	2683819	3.34%	0.599%
39	14.603	2217	2223	2230	rVV3	1145969	2425574	3.02%	0.541%
40	15.187	2312	2319	2327	rVB	1811326	3442301	4.28%	0.768%

113

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00



0114

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

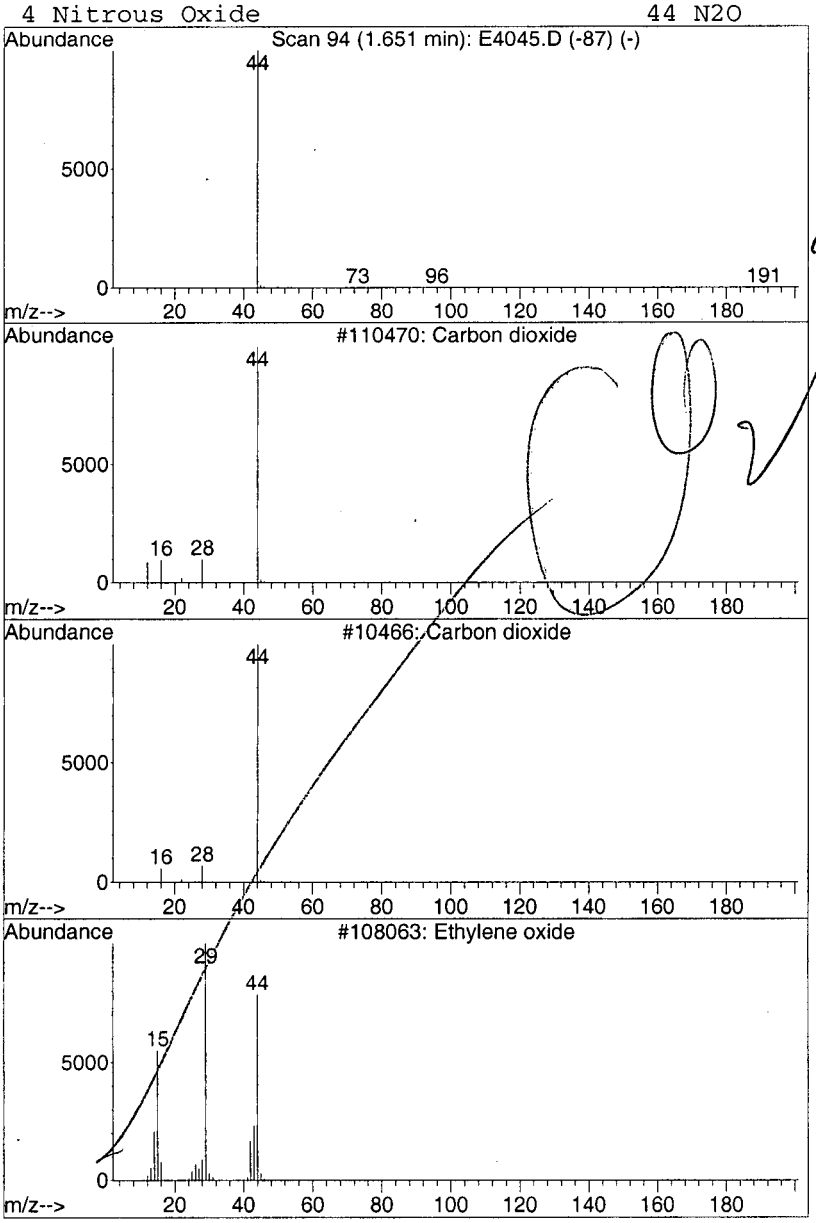
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

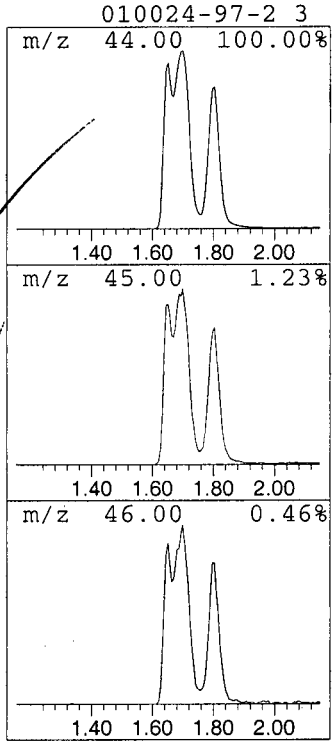
****

Peak Number 1 Carbon dioxide Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.65	18.02 ug/L	12194500	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





115

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

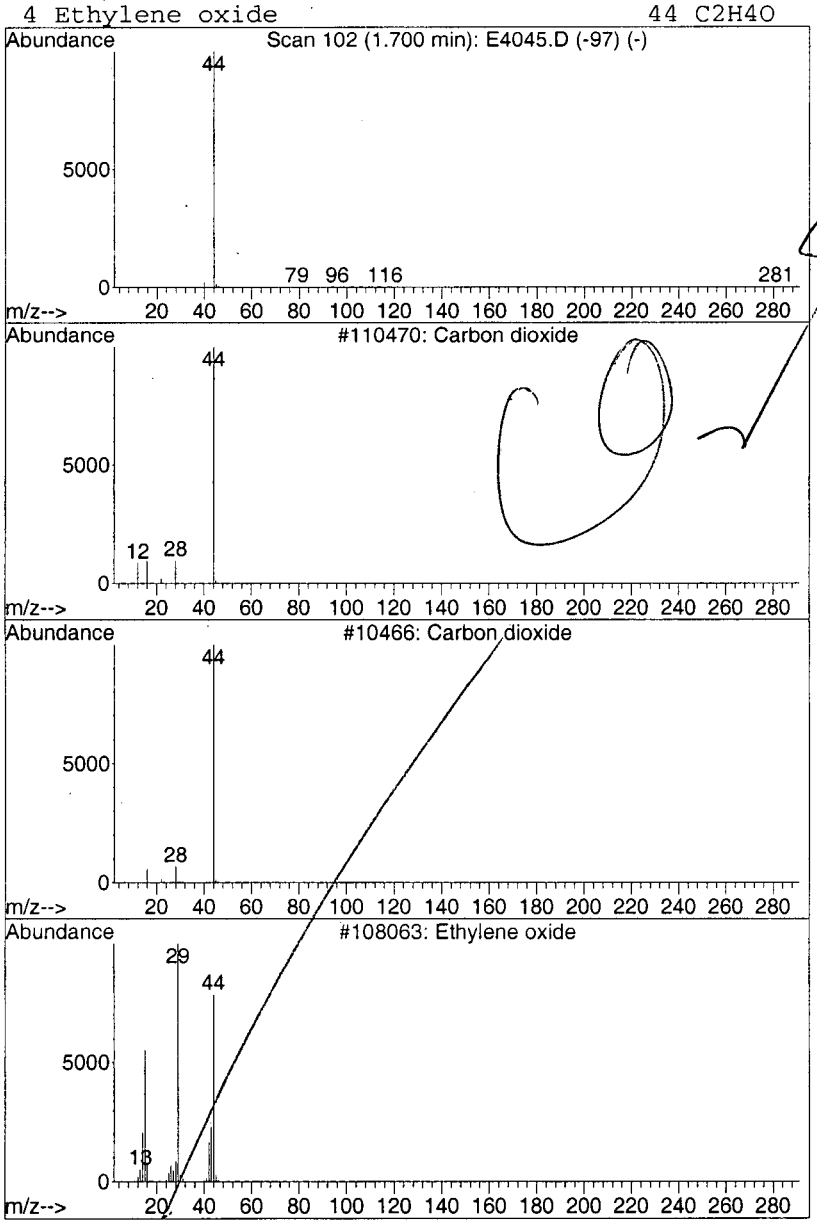
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

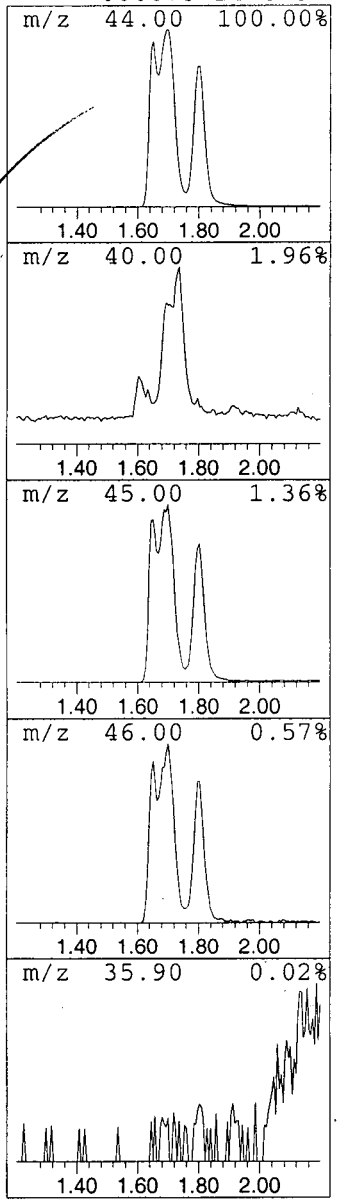
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.70	29.19 ug/L	19758900	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Ethylene oxide	44	C2H4O	000075-21-8	3





0116

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

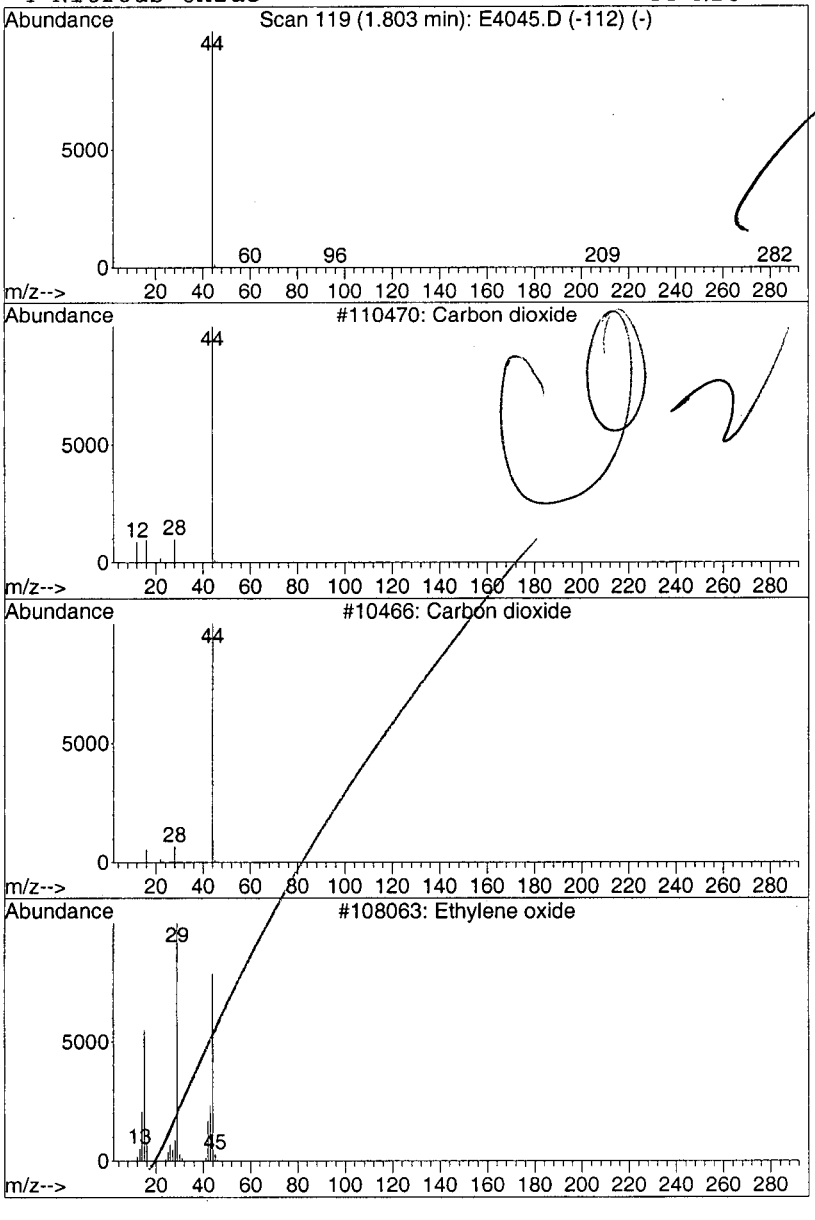
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

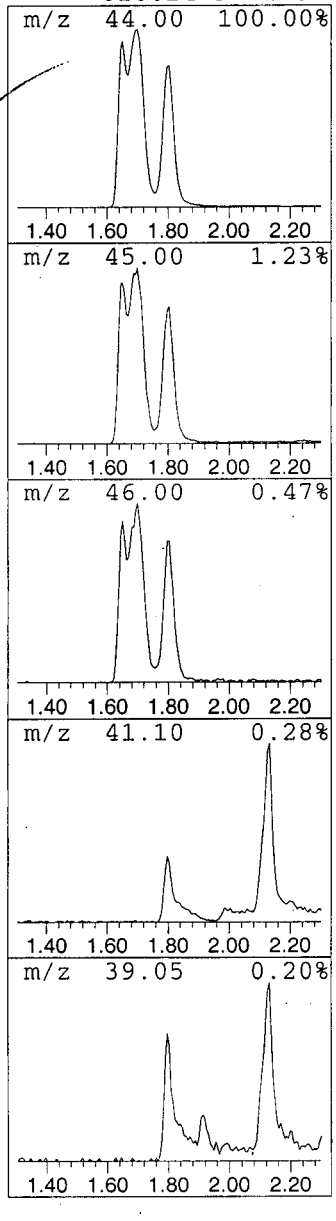
****

Peak Number 3 Carbon dioxide Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.80	19.64 ug/L	13290900	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





CO2

117

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

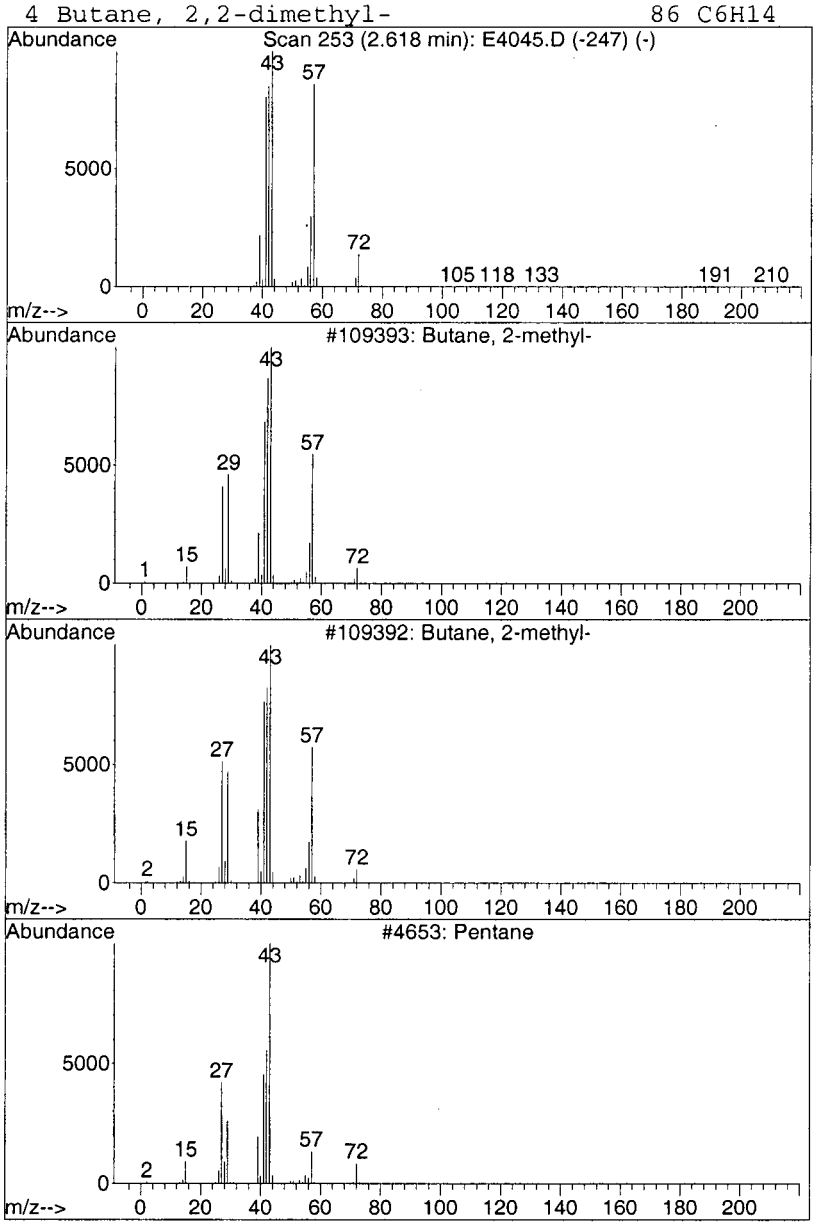
****

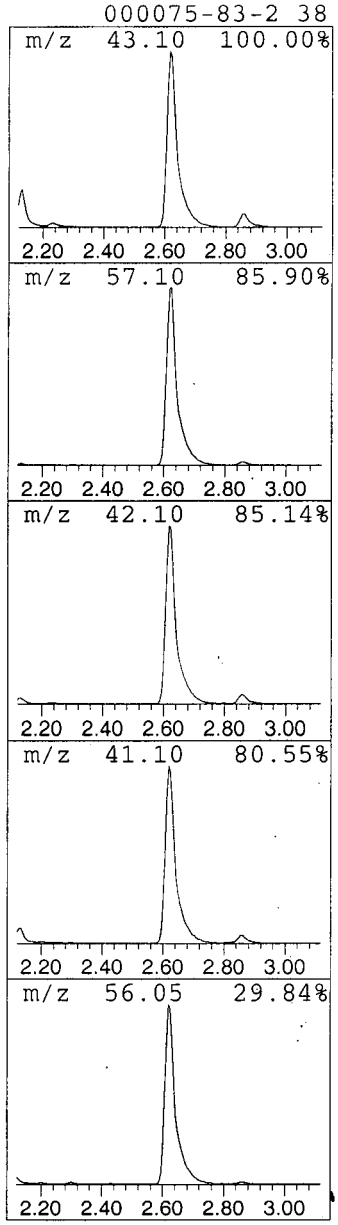
Peak Number 4 Butane, 2-methyl- Concentration Rank 13

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.62	9.03 ug/L	6114060	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	91
2	Butane, 2-methyl-	72	C5H12	000078-78-4	43
3	Pentane	72	C5H12	000109-66-0	40
4	Butane, 2,2-dimethyl-	86	C6H14	000075-83-2	38

Branched alkane





.11118

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

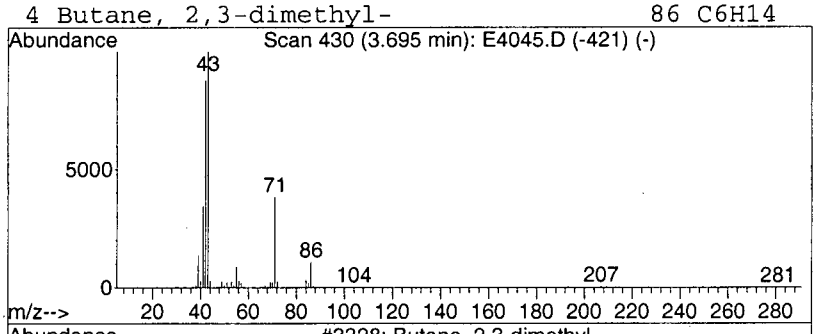
****

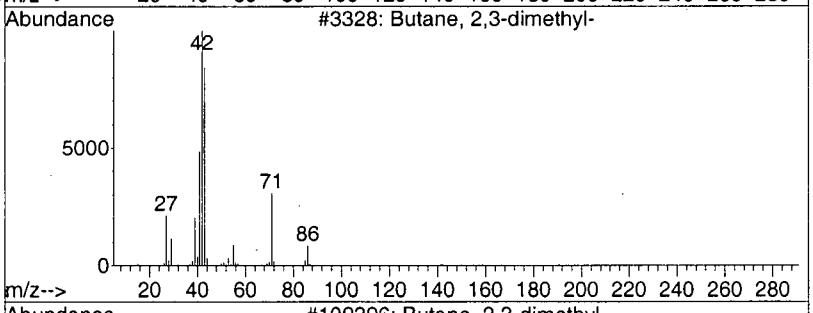
Peak Number 5 Butane, 2,3-dimethyl- Concentration Rank 21

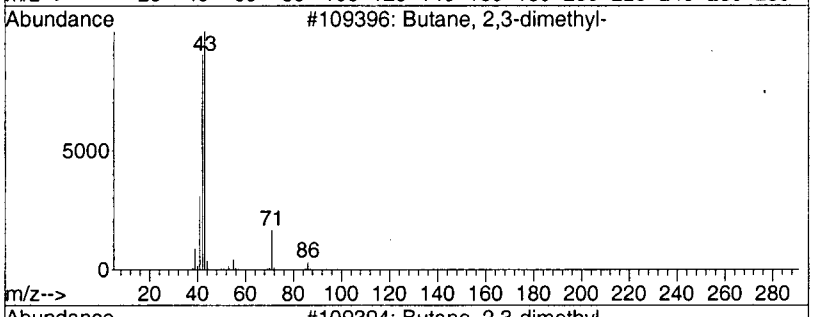
R.T.	EstConc	Area	Relative to ISTD	R.T.
3.70	3.76 ug/L	2543560	1,4-Difluorobenzene	6.30

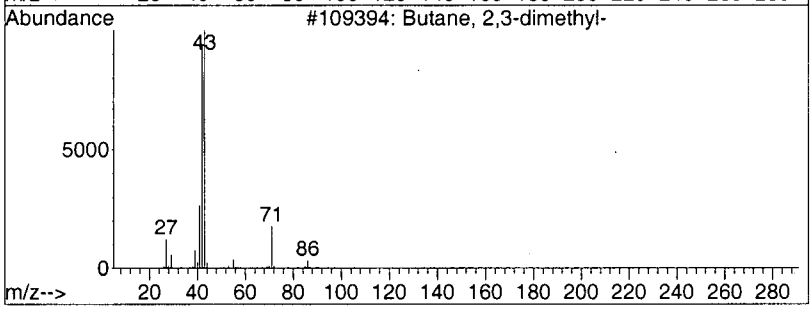
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	91
2	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	91
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	83
4	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	83

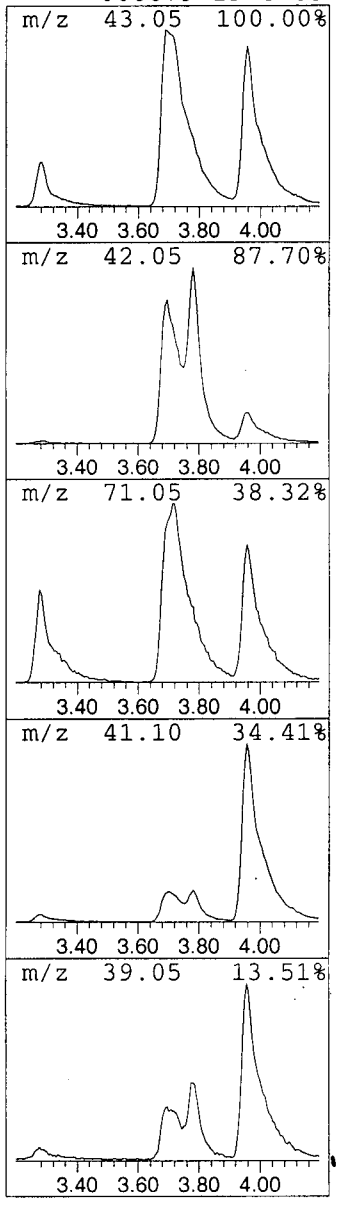
Branched alkane









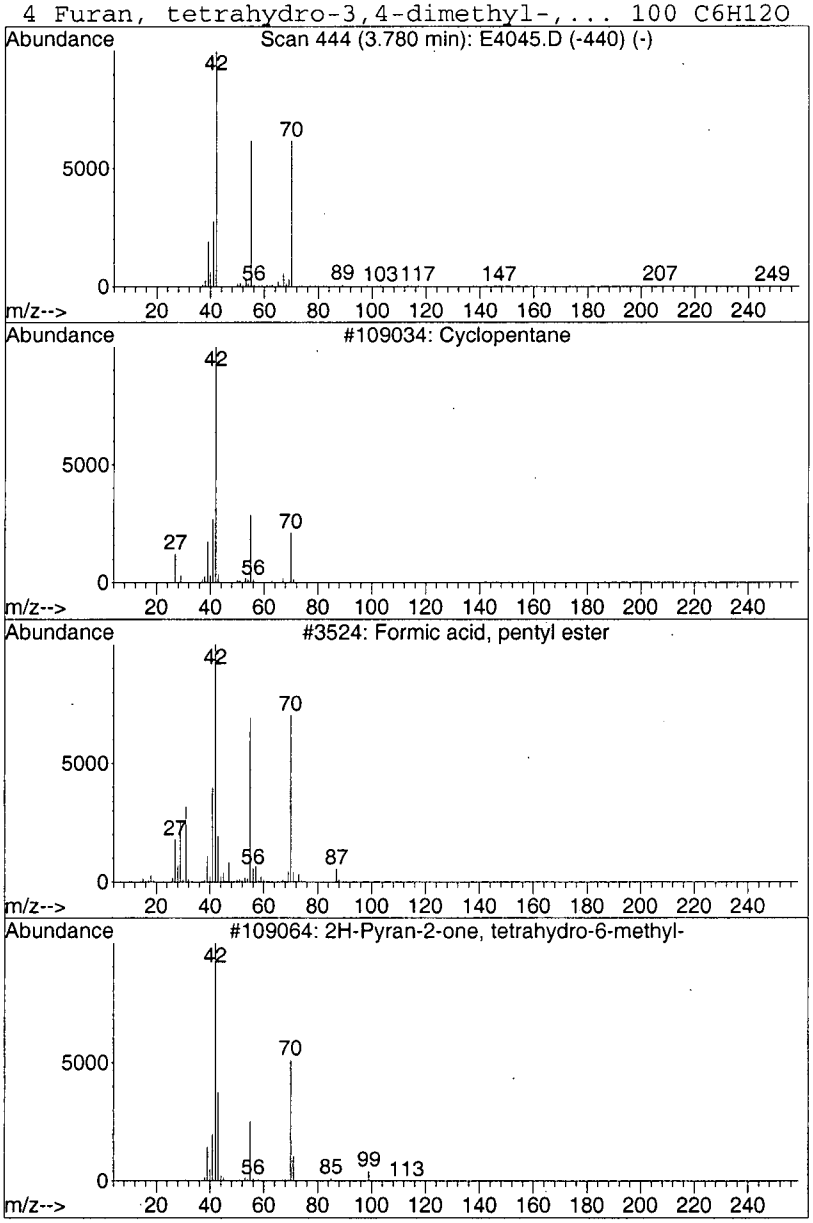


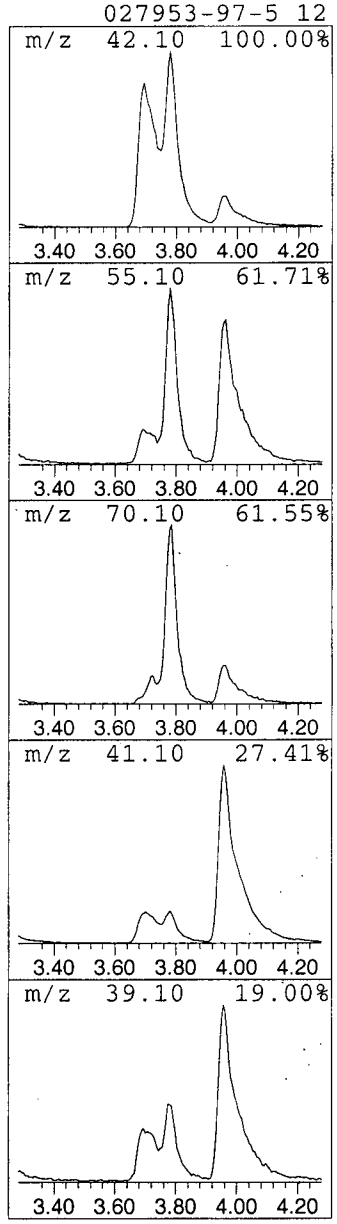
0119

Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4045.D                    Vial: 6
   Acq On    : 03/28/2003  1626                         Operator: AK
   Sample    : Y0SJ3                                    Inst    : E-5973
   Misc      : 2762.003  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number  6  Cyclopentane                    Concentration Rank 22

  R.T.   EstConc          Area       Relative to ISTD        R.T.
---------------------------------------------------------------------
  3.78    2.77 ug/L      1871680    1,4-Difluorobenzene       6.30

 Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
---------------------------------------------------------------------------
 1 Cyclopentane                            70 C5H10         000287-92-3 78
 2 Formic acid, pentyl ester              116 C6H12O2       000638-49-3 72
 3 2H-Pyran-2-one, tetrahydro-6-met...    114 C6H10O2       000823-22-3 39
 4 Furan, tetrahydro-3,4-dimethyl-,...    100 C6H12O        027953-97-5 12
```

cyclic alkane





0120

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

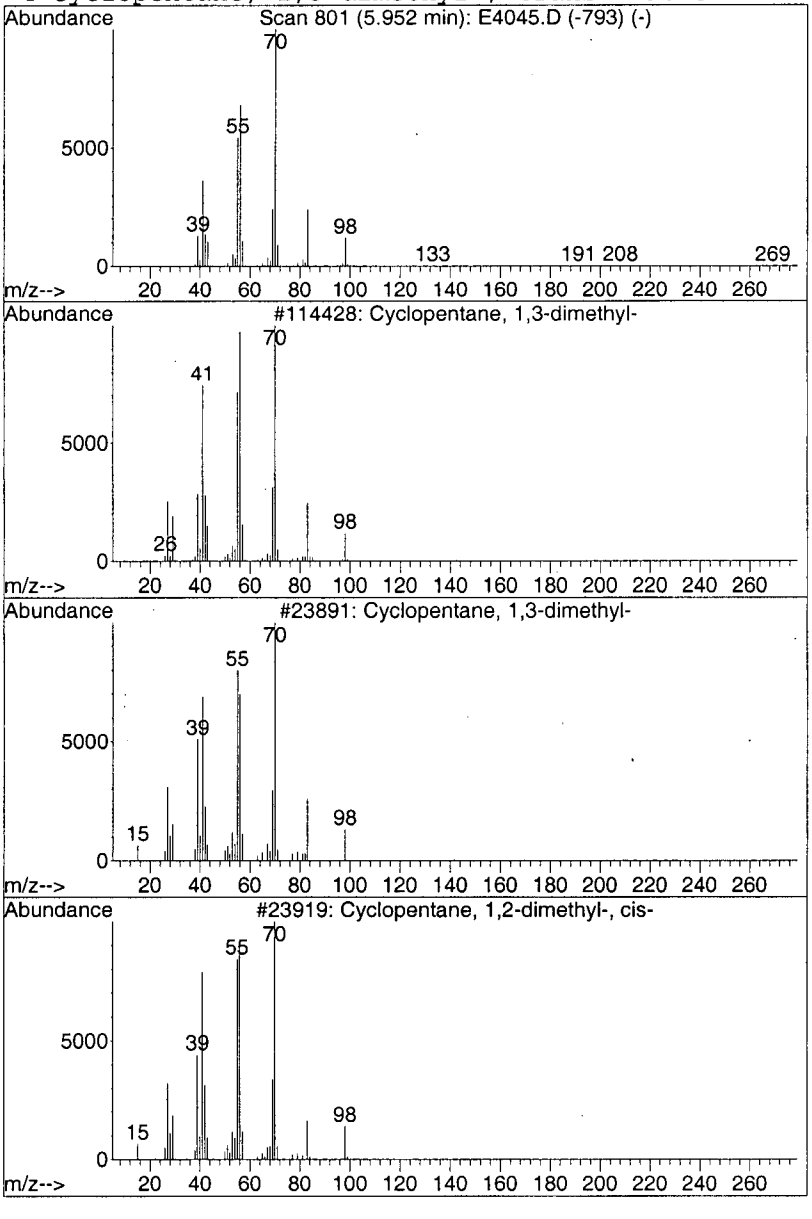
****

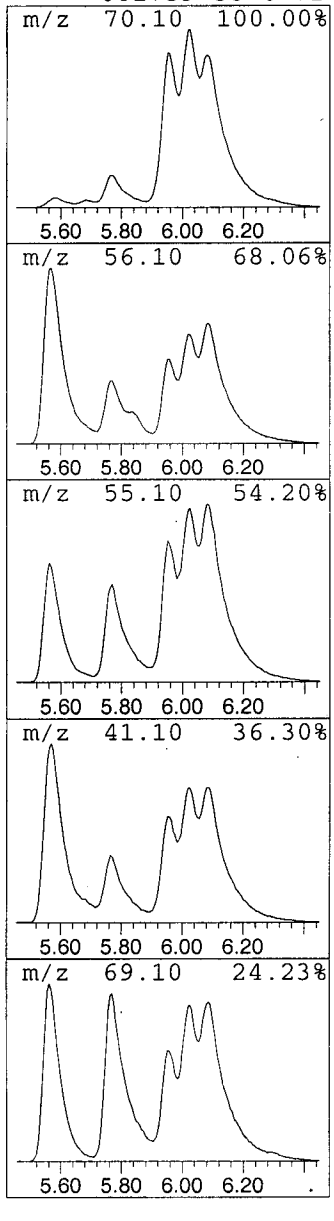
Peak Number 7 Cyclopentane, 1,3-dimethyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.95	16.22 ug/L	10980700	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	91
2	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	74
3	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	72
4	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	72

Cyclic alkane





0121

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

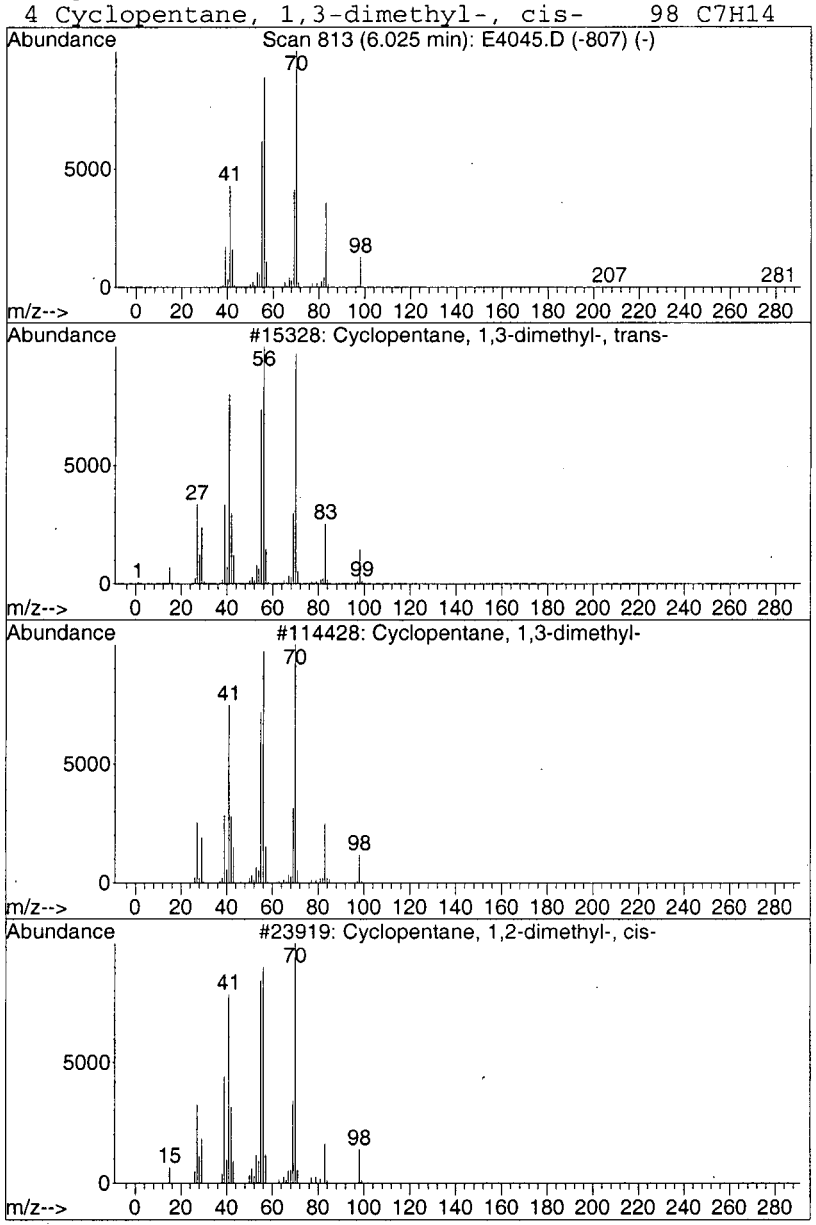
****

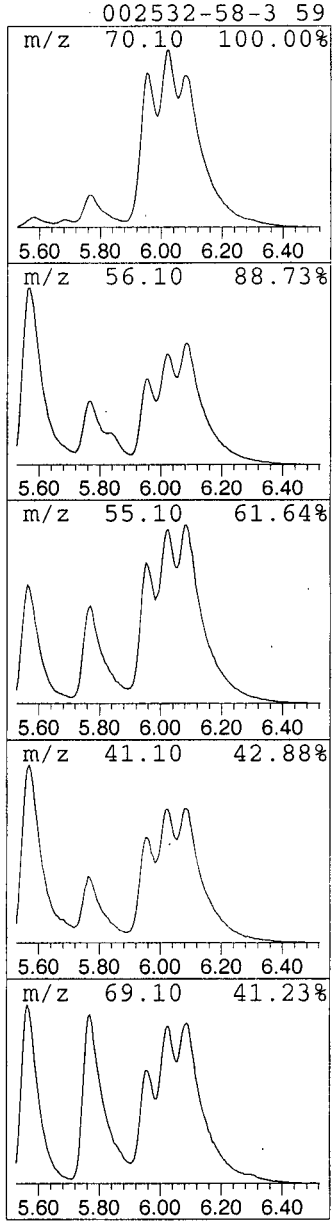
Peak Number 8 Cyclopentane, 1,3-dimethyl-... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.03	9.02 ug/L	6106020	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,3-dimethyl-, trans-	98	C7H14	001759-58-6	91
2	Cyclopentane, 1,3-dimethyl-	98	C7H14	002453-00-1	90
3	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	78
4	Cyclopentane, 1,3-dimethyl-, cis-	98	C7H14	002532-58-3	59

cyclic alkane





1122

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

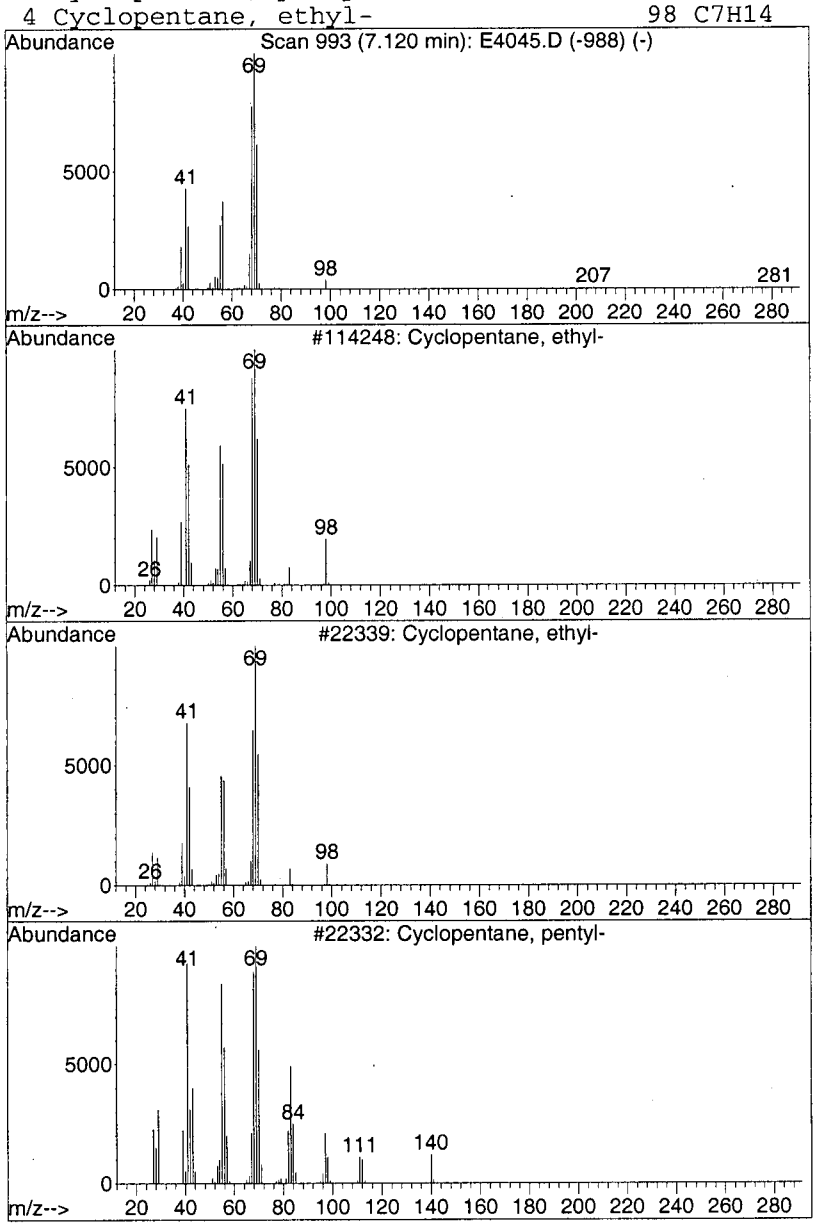
****

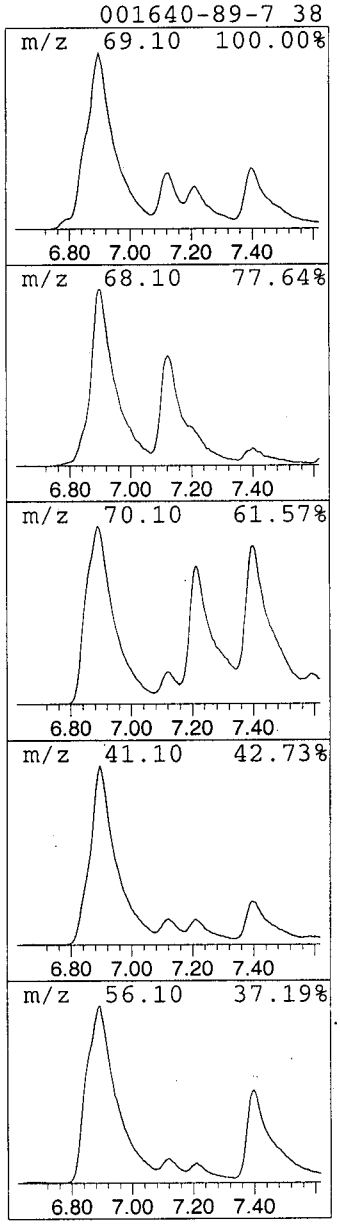
Peak Number 9 Cyclopentane, ethyl- Concentration Rank 16

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.12	6.26 ug/L	4233960	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, ethyl-	98	C7H14	001640-89-7	83 ✓
2	Cyclopentane, ethyl-	98	C7H14	001640-89-7	74
3	Cyclopentane, pentyl-	140	C10H20	003741-00-2	39
4	Cyclopentane, ethyl-	98	C7H14	001640-89-7	38

cyclic alkane





11123

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

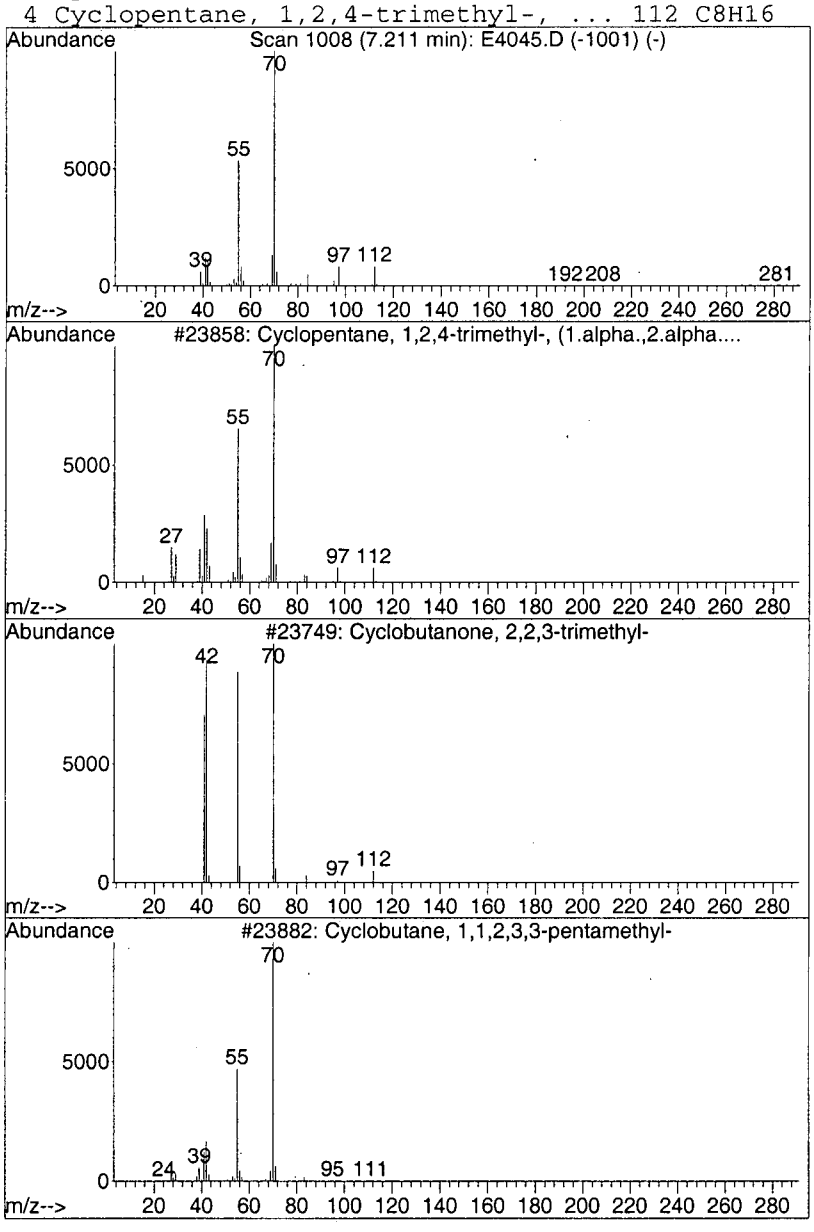
****

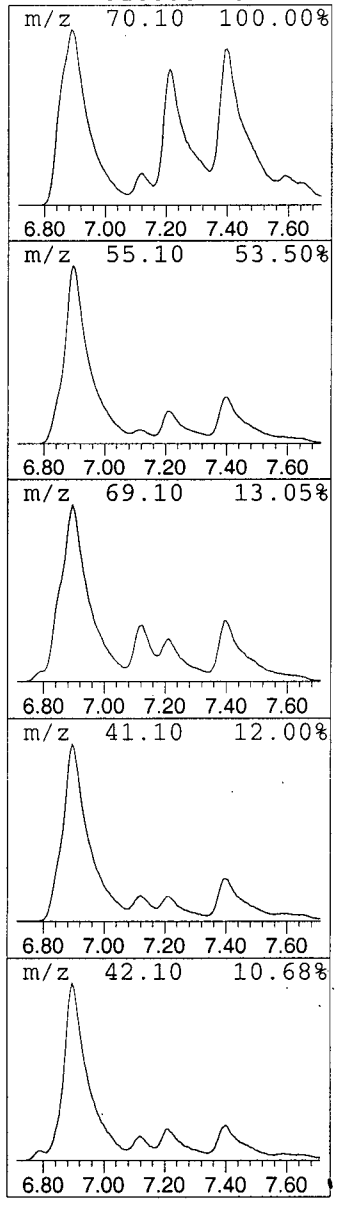
Peak Number 10 Cyclopentane, 1,2,4-trimeth... Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.21	11.79 ug/L	7981760	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	004850-28-6	78
2	Cyclobutanone, 2,2,3-trimethyl-	112	C7H12O	001449-49-6	72
3	Cyclobutane, 1,1,2,3,3-pentamethyl-	126	C9H18	057905-86-9	64
4	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	016883-48-0	56

cyclic alkane





11124

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

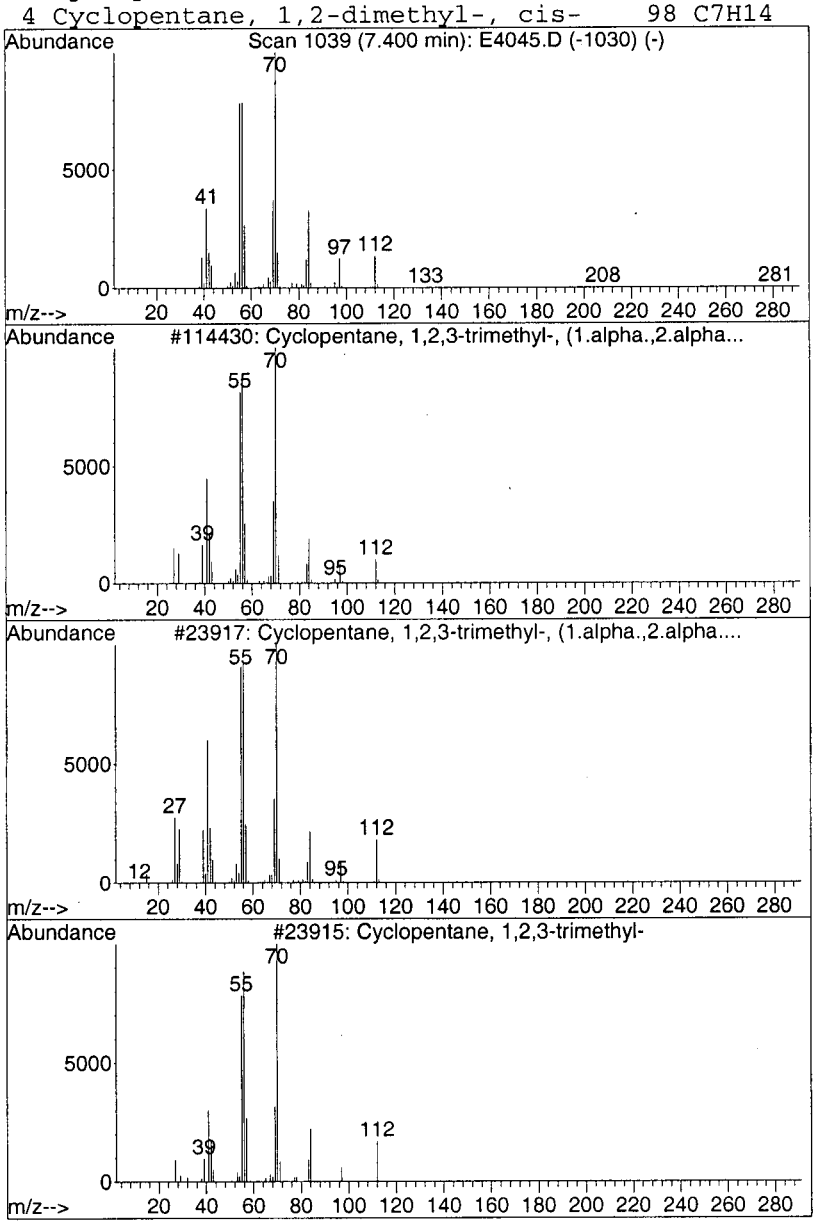
****

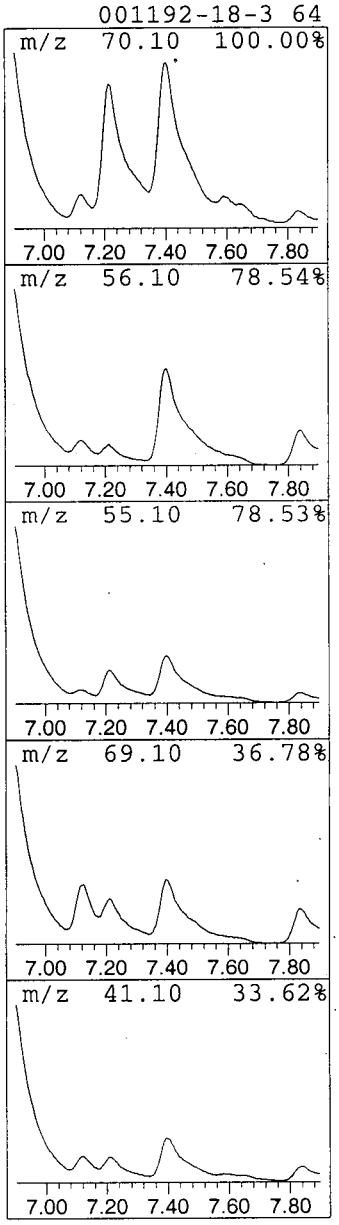
Peak Number 11 Cyclopentane, 1,2,3-trimeth... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.40	21.90 ug/L	14822400	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	95
2	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	95
3	Cyclopentane, 1,2,3-trimethyl-	112	C8H16	002815-57-8	90
4	Cyclopentane, 1,2-dimethyl-, cis-	98	C7H14	001192-18-3	64

cyclic alkane





11125

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

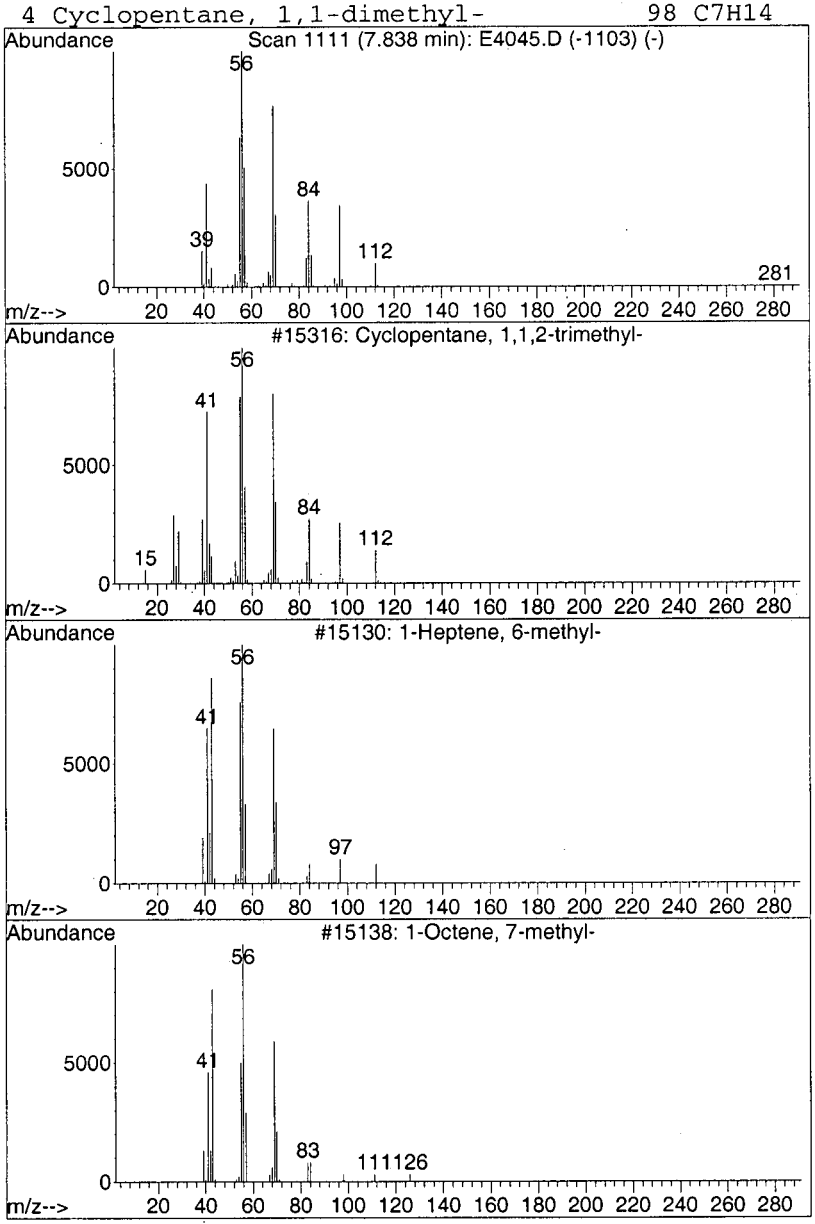
****

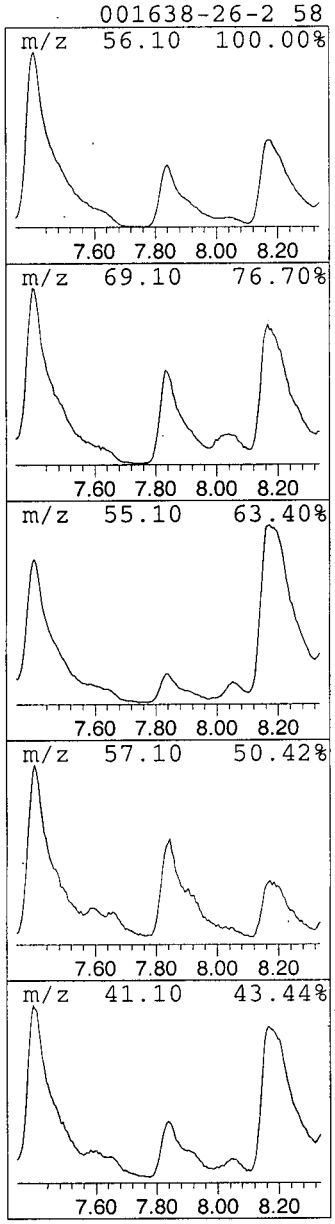
Peak Number 12 Cyclopentane, 1,1,2-trimethyl- Concentration Rank 20

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.84	4.05 ug/L	2743650	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,1,2-trimethyl-	112	C8H16	004259-00-1	83
2	1-Heptene, 6-methyl-	112	C8H16	005026-76-6	64
3	1-Octene, 7-methyl-	126	C9H18	013151-06-9	59
4	Cyclopentane, 1,1-dimethyl-	98	C7H14	001638-26-2	58

cyclic alkane





111126

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

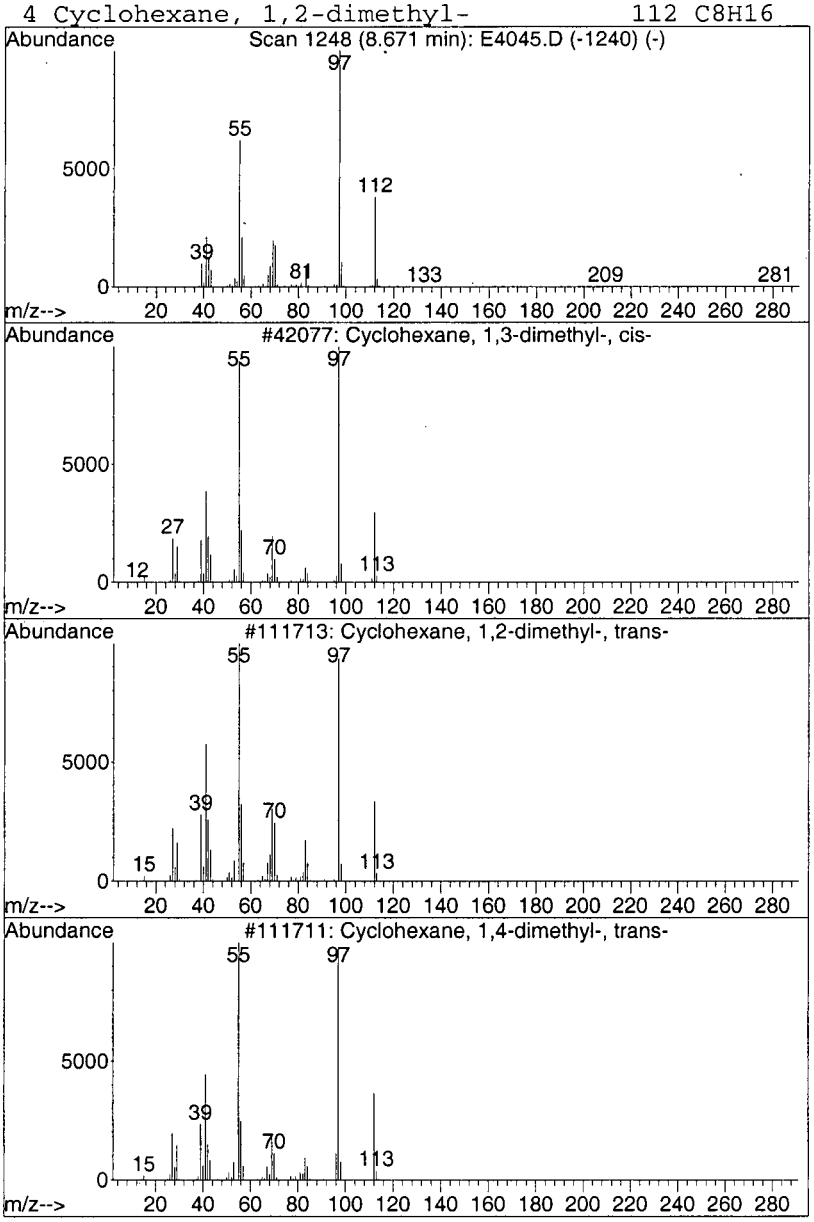
****

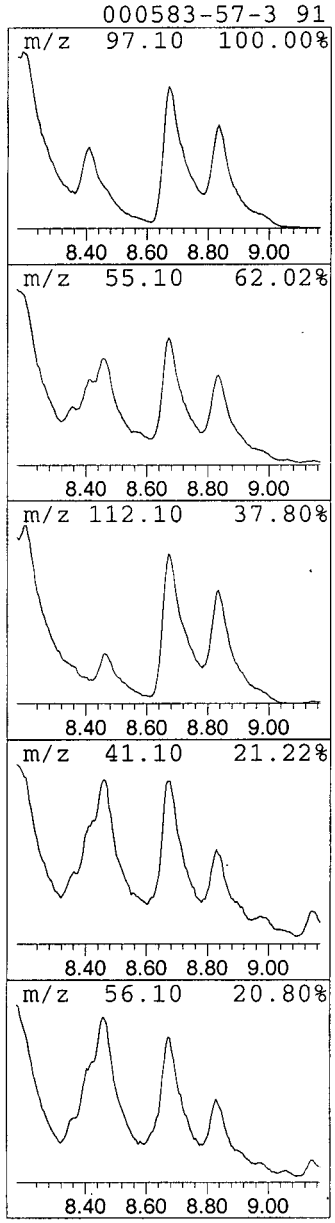
Peak Number 13 Cyclohexane, 1,3-dimethyl-,... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.67	24.72 ug/L	9439730	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	91
2	Cyclohexane, 1,2-dimethyl-, trans-	112	C8H16	006876-23-9	91
3	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	91
4	Cyclohexane, 1,2-dimethyl-	112	C8H16	000583-57-3	91

cyclic alkane





0127

Library Search Compound Report

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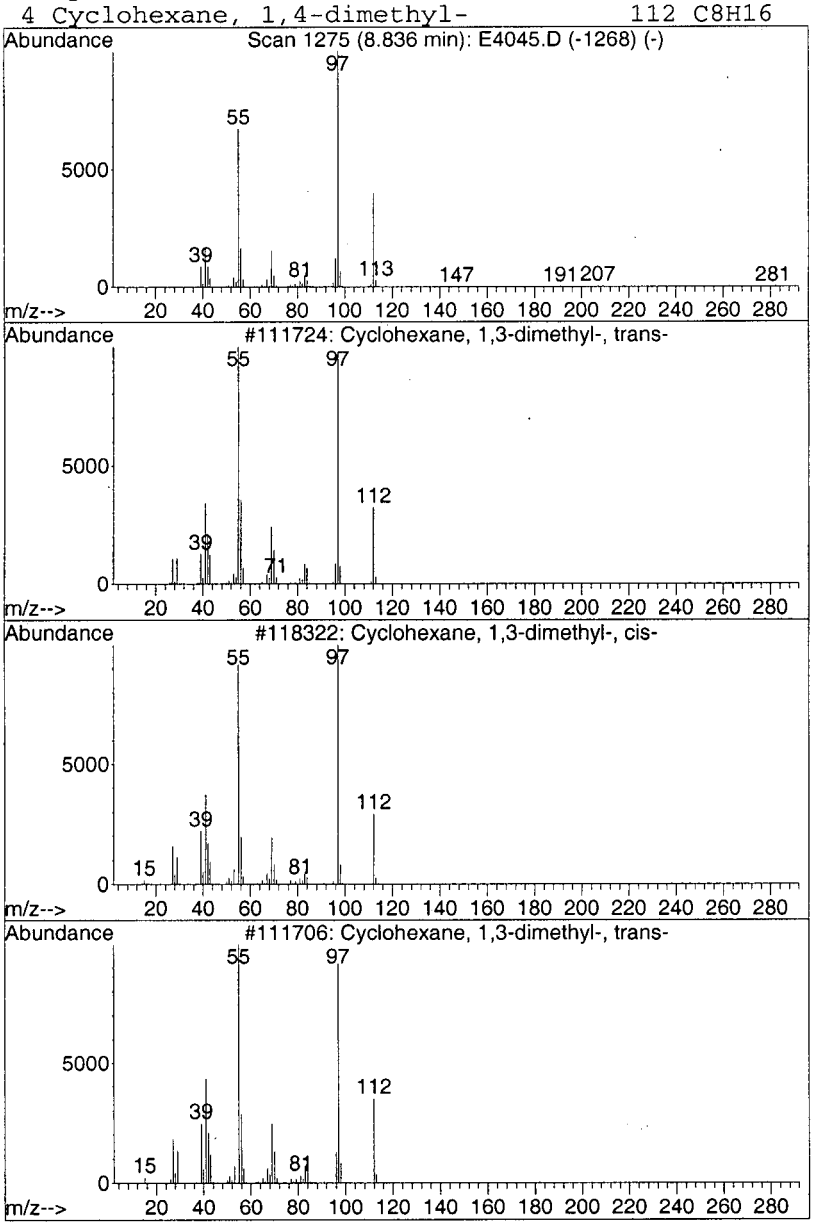
   Data File : C:\MSDCHEM\1\DATA\E4045.D                    Vial: 6
   Acq On    : 03/28/2003  1626                         Operator: AK
   Sample    : Y0SJ3                                    Inst    : E-5973
   Misc      : 2762.003  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

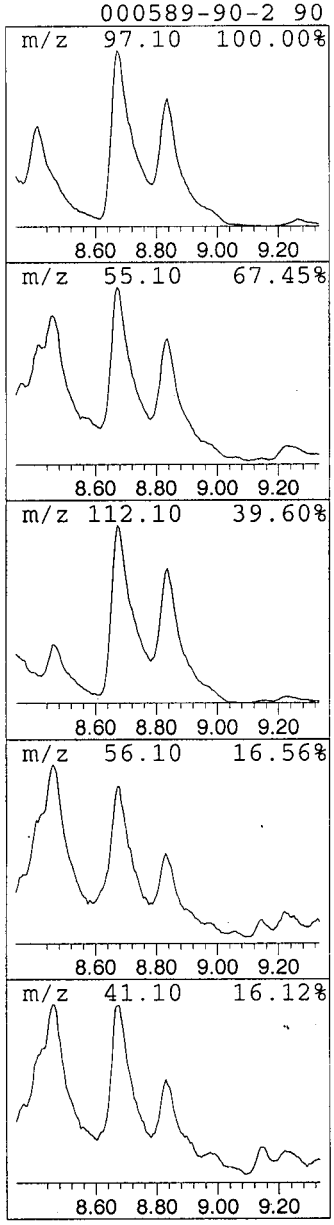
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 14  Cyclohexane, 1,3-dimethyl-,...  Concentration Rank  9
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.84	15.47 ug/L	5907660	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	91
2	Cyclohexane, 1,3-dimethyl-, cis-	112	C8H16	000638-04-0	90
3	Cyclohexane, 1,3-dimethyl-, trans-	112	C8H16	002207-03-6	90
4	Cyclohexane, 1,4-dimethyl-	112	C8H16	000589-90-2	90

cyclic alkane





0128

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

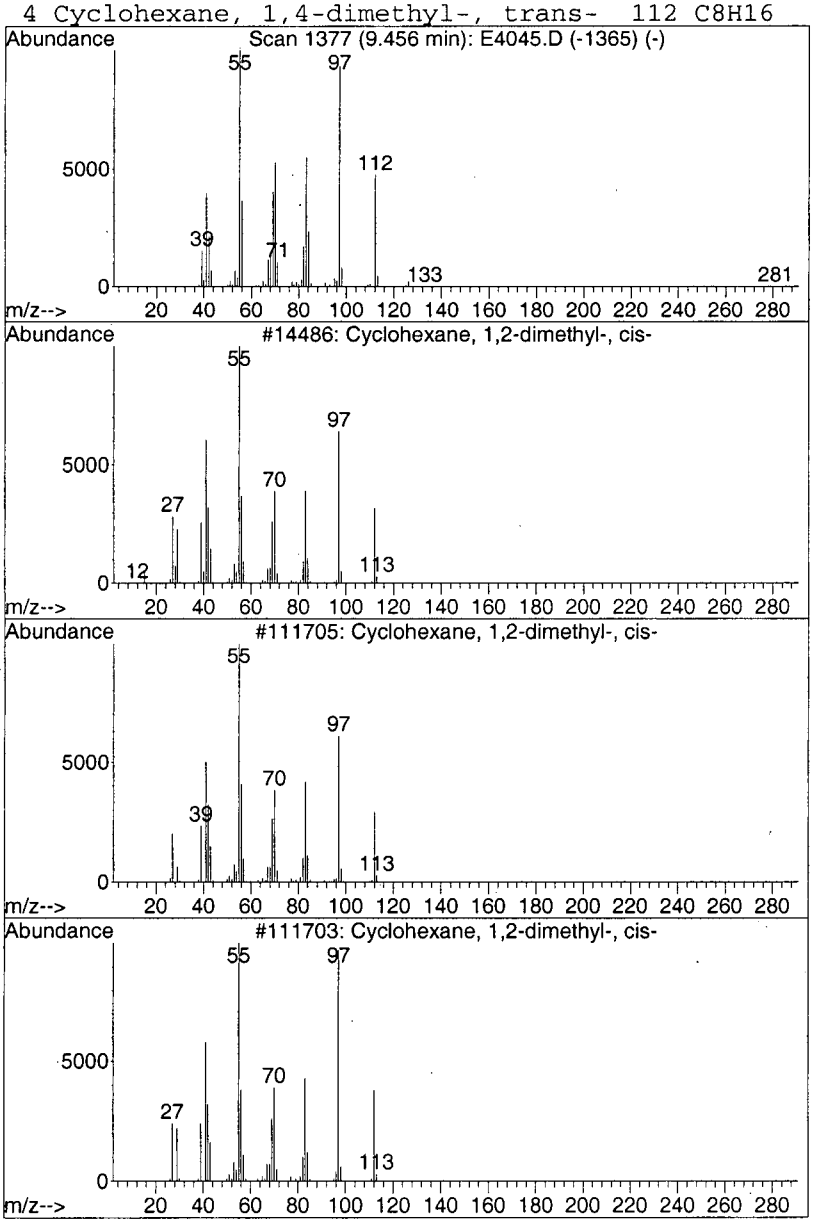
****

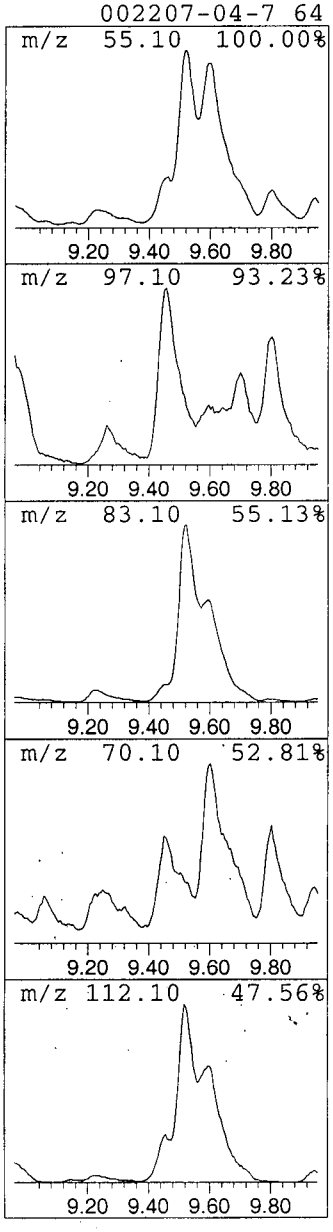
Peak Number 15 Cyclohexane, 1,2-dimethyl-,... Concentration Rank 17

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.46	6.22 ug/L	2373910	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	94
2	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	94
3	Cyclohexane, 1,2-dimethyl-, cis-	112	C8H16	002207-01-4	87
4	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	64

cyclic alkane





1129

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D
Acq On : 03/28/2003 1626
Sample : Y0SJ3
Misc : 2762.003 25ML
MS Integration Params: Lscint.p

Vial: 6
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

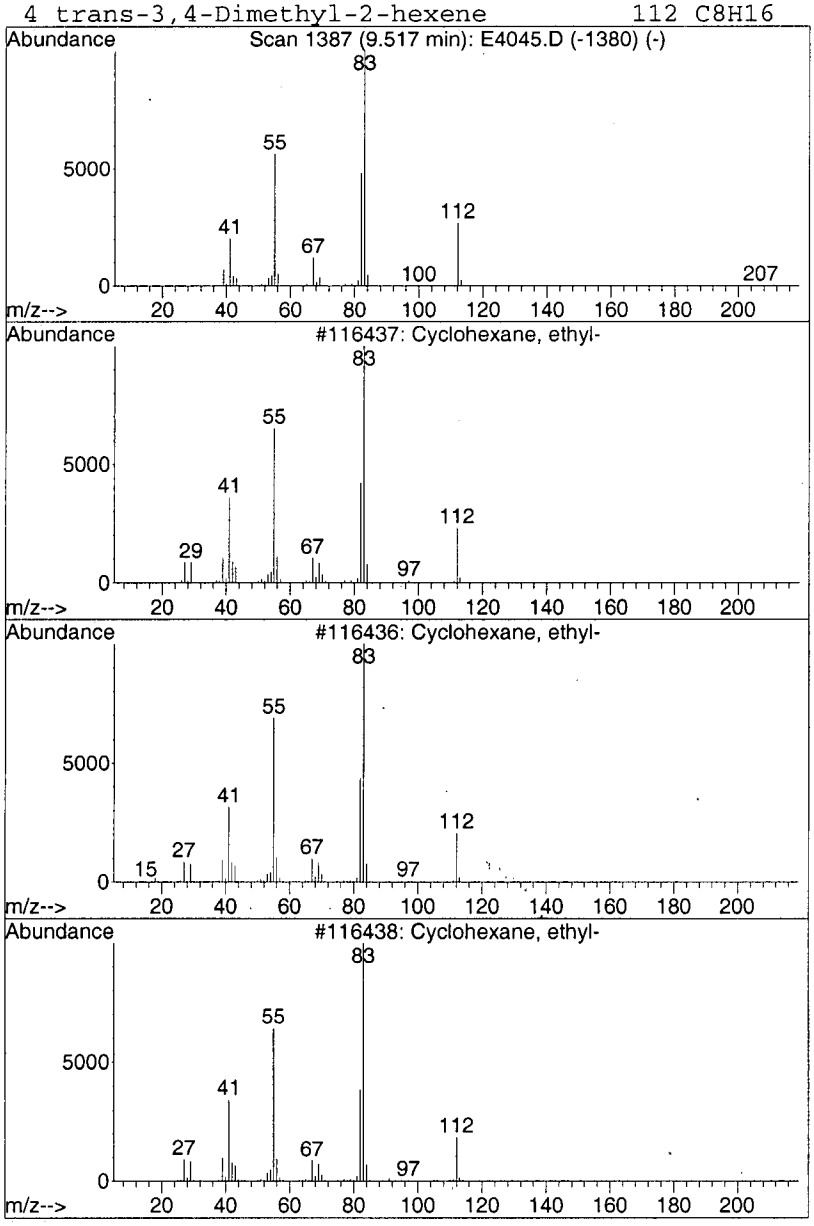
****

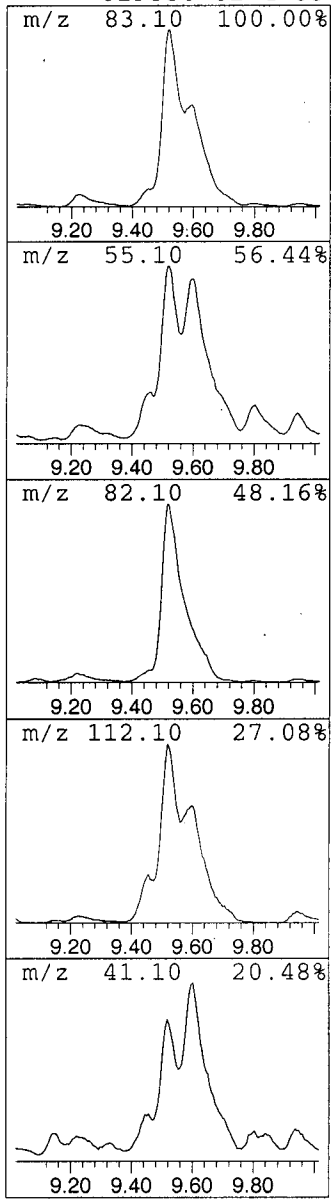
Peak Number 16 Cyclohexane, ethyl- Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.52	21.30 ug/L	8133130	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, ethyl-	112	C8H16	001678-91-7	78
2	Cyclohexane, ethyl-	112	C8H16	001678-91-7	72
3	Cyclohexane, ethyl-	112	C8H16	001678-91-7	64
4	trans-3,4-Dimethyl-2-hexene	112	C8H16	019550-82-4	53

cyclic alkane





.11130

Library Search Compound Report

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   Data File : C:\MSDCHEM\1\DATA\E4045.D                    Vial: 6
   Acq On    : 03/28/2003  1626                         Operator: AK
   Sample    : Y0SJ3                                    Inst    : E-5973
   Misc      : 2762.003  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 17  Cyclohexane, 1,1,3-trimethyl-   Concentration Rank  1
```
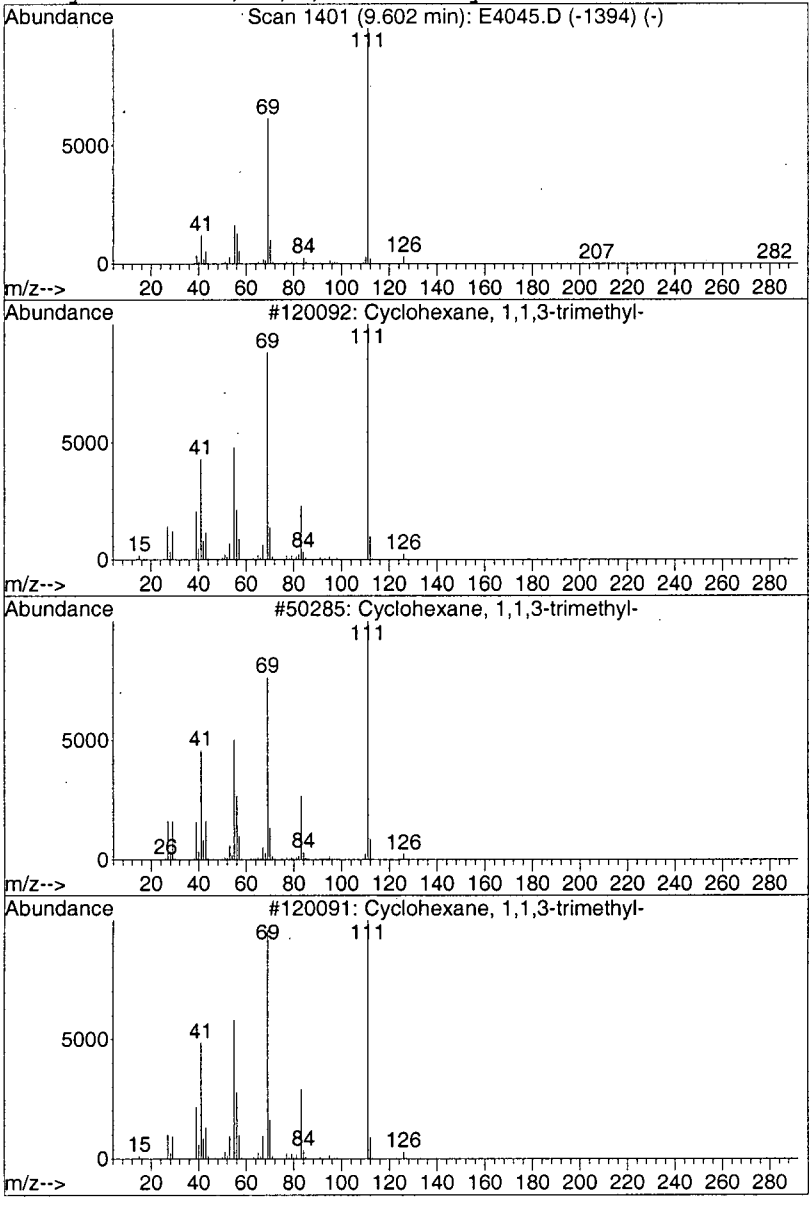
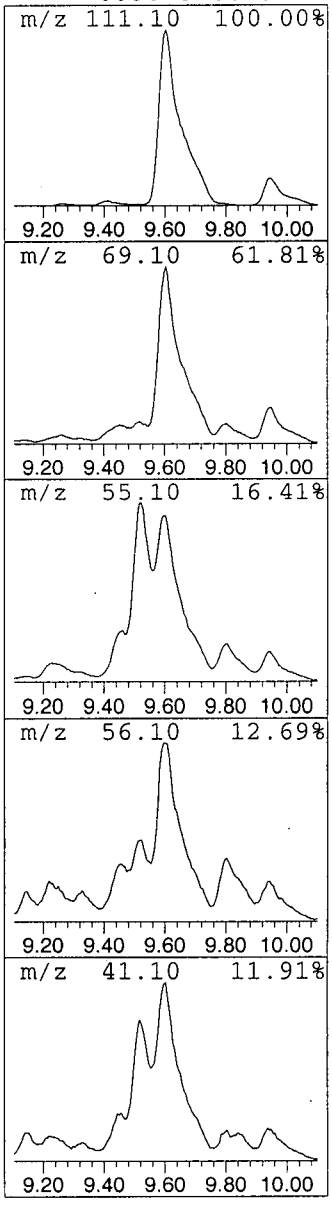

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.60	50.29 ug/L	19204900	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	83
2	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	83
3	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	83
4	Cyclohexane, 1,1,3-trimethyl-	126	C9H18	003073-66-3	83

cyclic alkane





1131

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

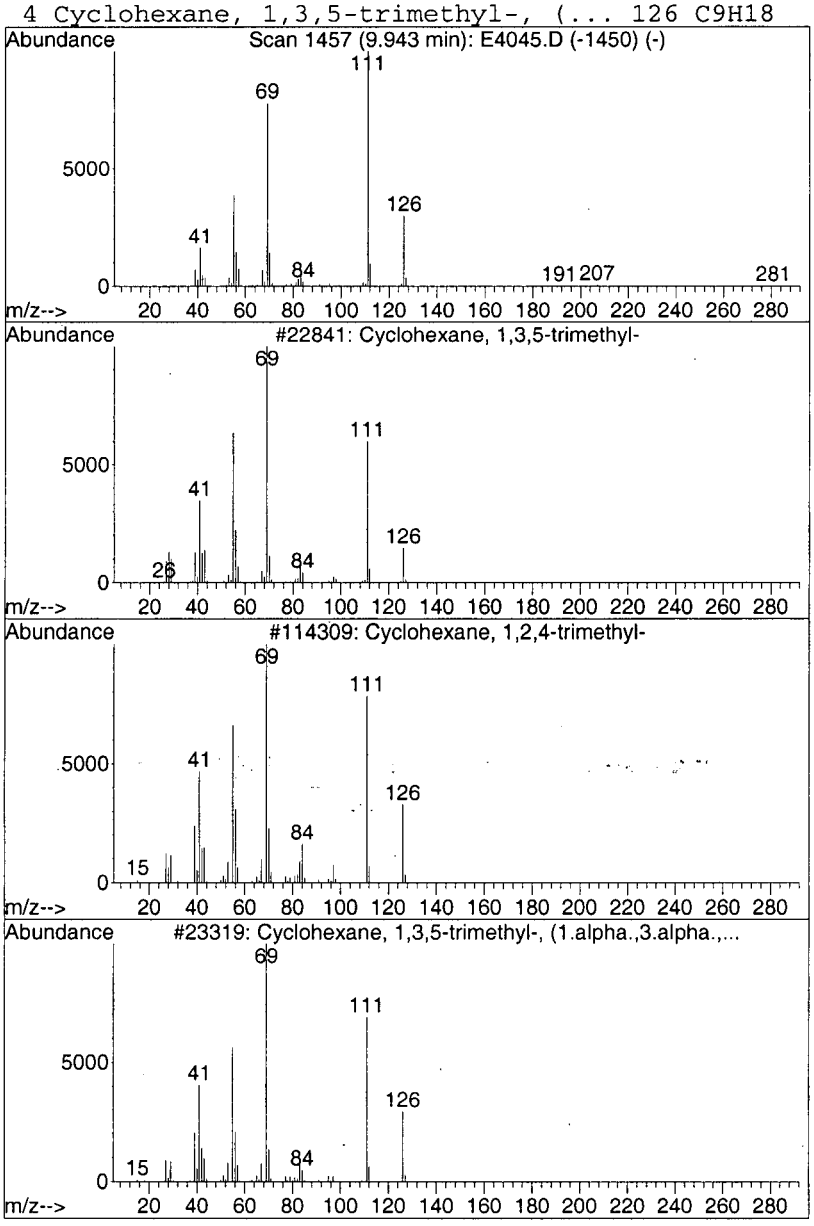
****

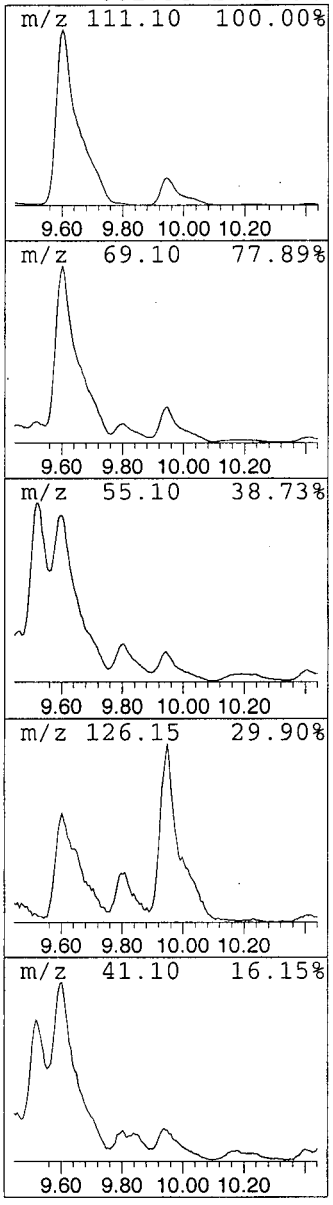
Peak Number 18 Cyclohexane, 1,3,5-trimethyl-. Concentration Rank 12

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.94	9.78 ug/L	3733990	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,3,5-trimethyl-	126	C9H18	001839-63-0	91
2	Cyclohexane, 1,2,4-trimethyl-	126	C9H18	002234-75-5	91
3	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-26-2	91
4	Cyclohexane, 1,3,5-trimethyl-, (...	126	C9H18	001795-27-3	90

cyclic alkane





11132

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

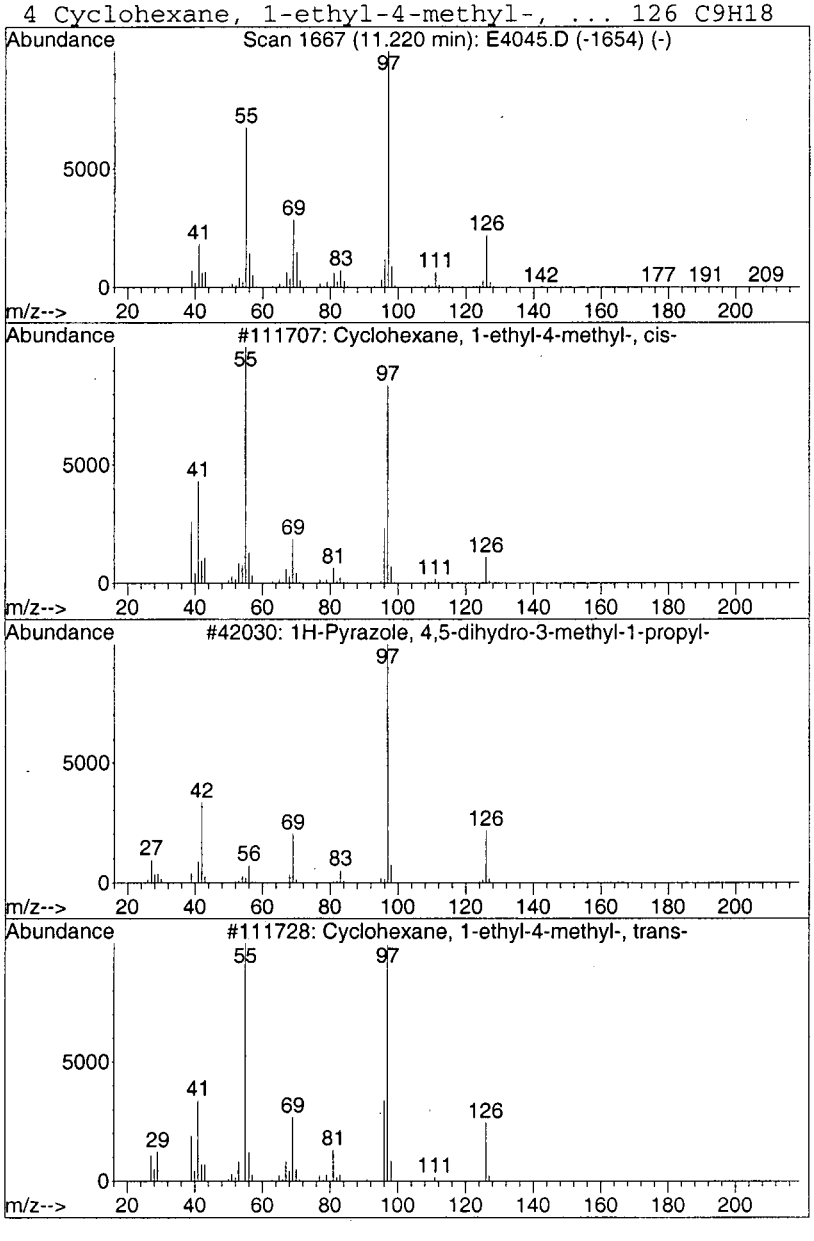
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

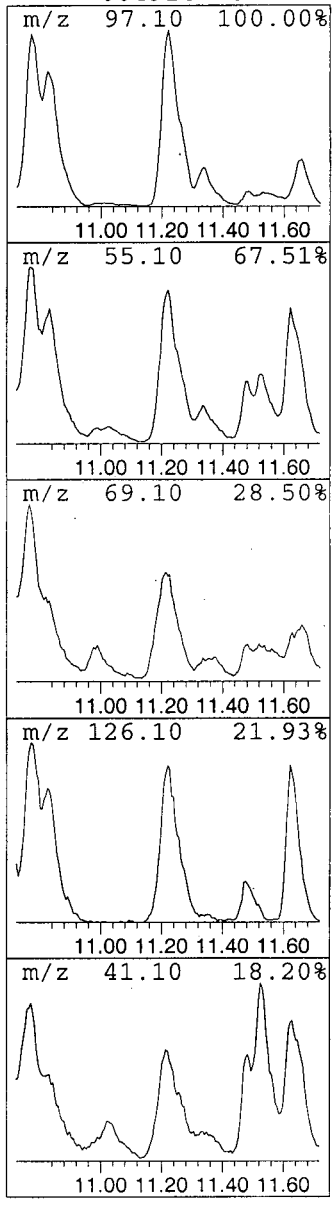
****

Peak Number 19 Cyclohexane, 1-ethyl-4-meth... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.22	11.86 ug/L	4529890	Chlorobenzene-d5	10.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	004926-78-7	80
2	1H-Pyrazole, 4,5-dihydro-3-methy...	126	C7H14N2	026964-49-8	74
3	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	006236-88-0	72
4	Cyclohexane, 1-ethyl-4-methyl-, ...	126	C9H18	004926-78-7	72





cyclic alkane

.1133

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

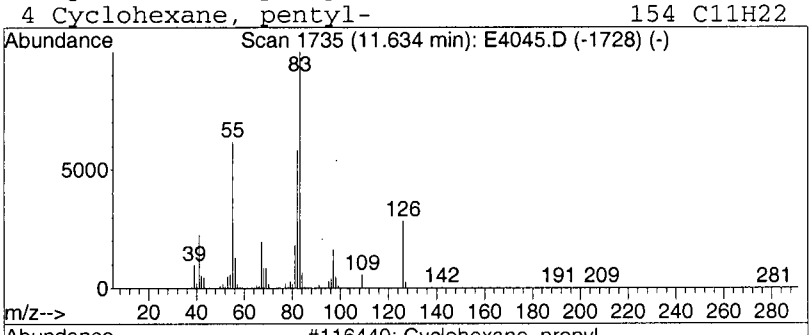
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

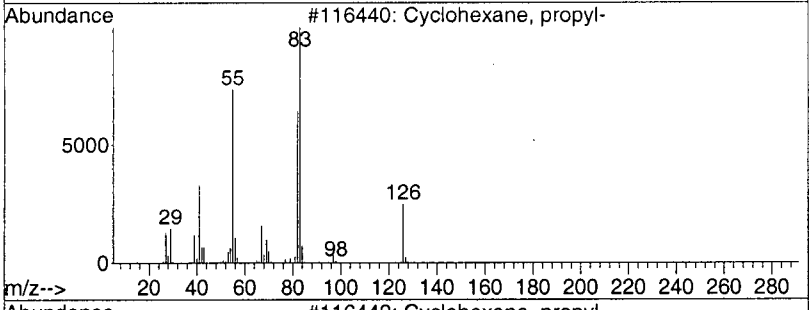
****

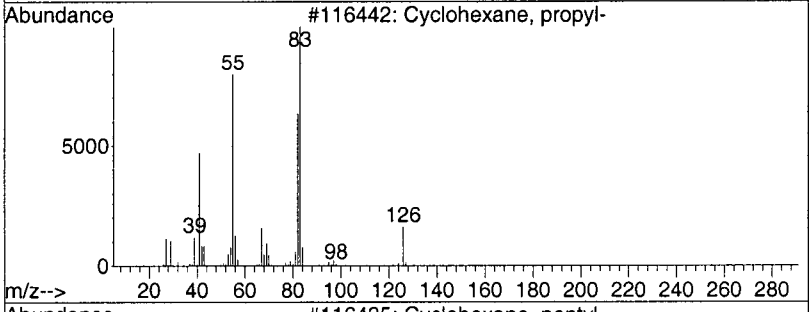
Peak Number 20 Cyclohexane, propyl- Concentration Rank 15

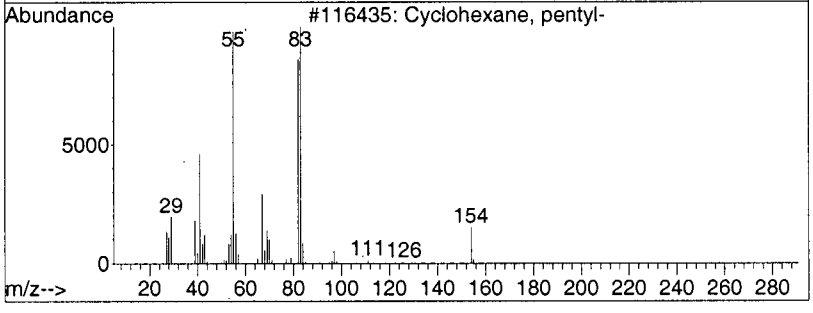
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.63	6.93 ug/L	2646460	Chlorobenzene-d5	10.31

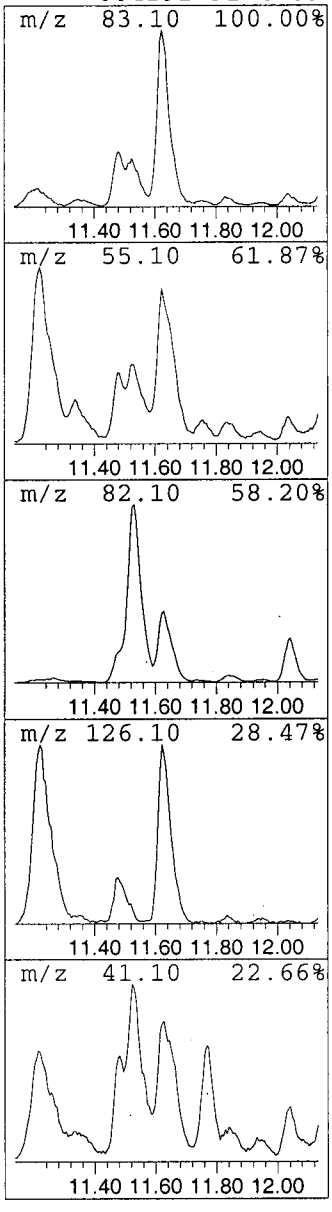
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, propyl-	126	C9H18	001678-92-8	81
2	Cyclohexane, propyl-	126	C9H18	001678-92-8	64
3	Cyclohexane, pentyl-	154	C11H22	004292-92-6	59
4	Cyclohexane, pentyl-	154	C11H22	004292-92-6	59











cyclic alkane

1134

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

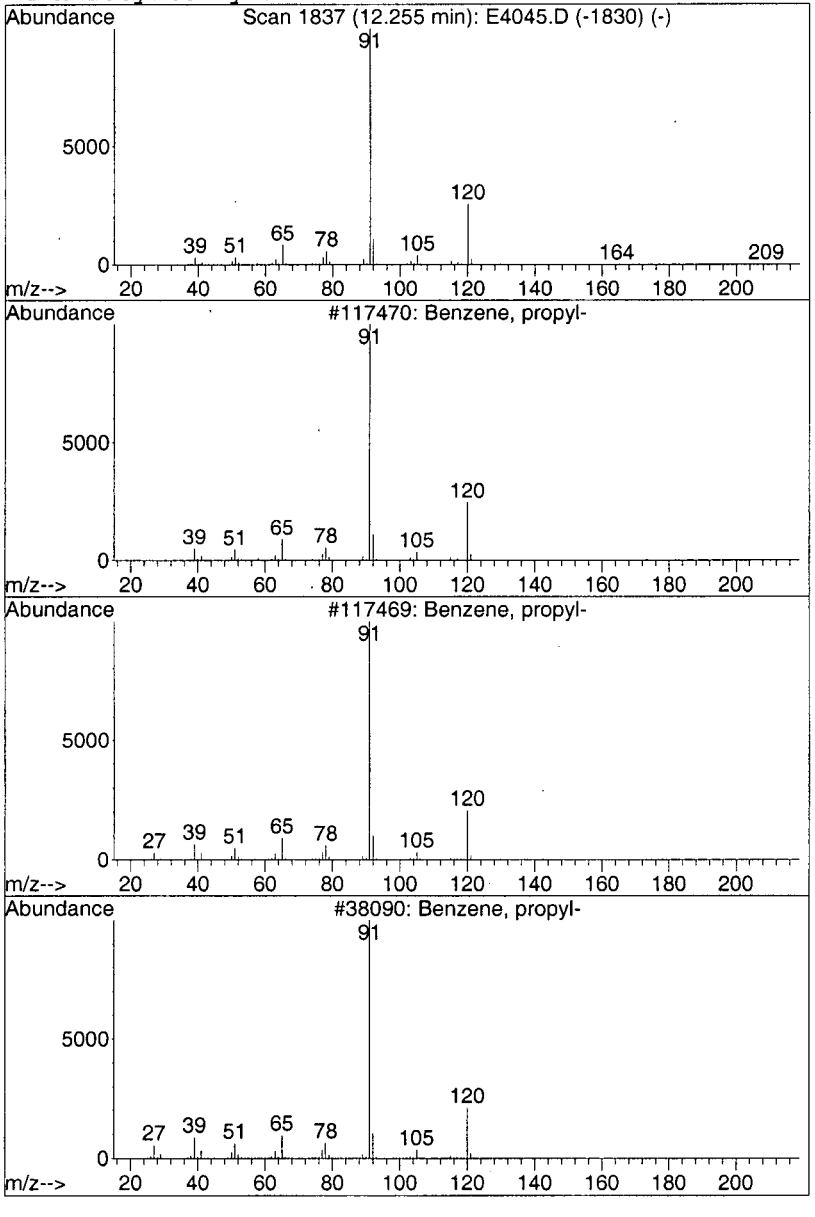
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

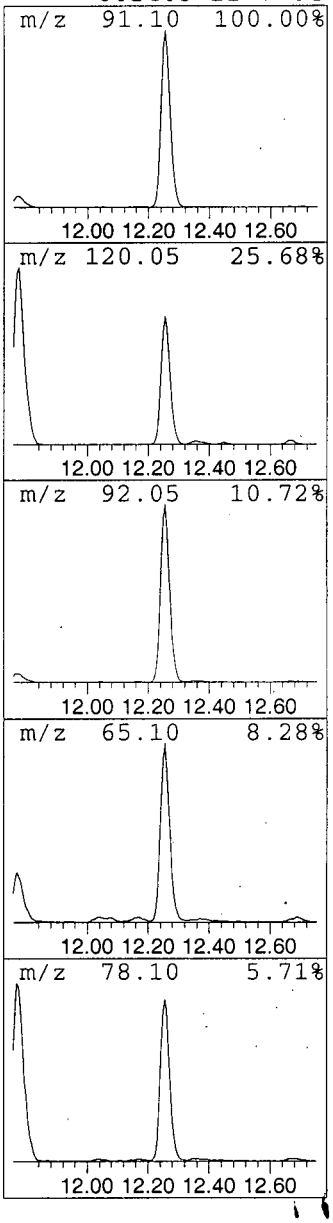
****

Peak Number 21 Benzene, propyl- Concentration Rank 19

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.25	4.69 ug/L	6542090	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, propyl-	120	C9H12	000103-65-1	91
2	Benzene, propyl-	120	C9H12	000103-65-1	90
3	Benzene, propyl-	120	C9H12	000103-65-1	87
4	n-Butylbenzylamine	163	C11H17N	002403-22-7	64





1135

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

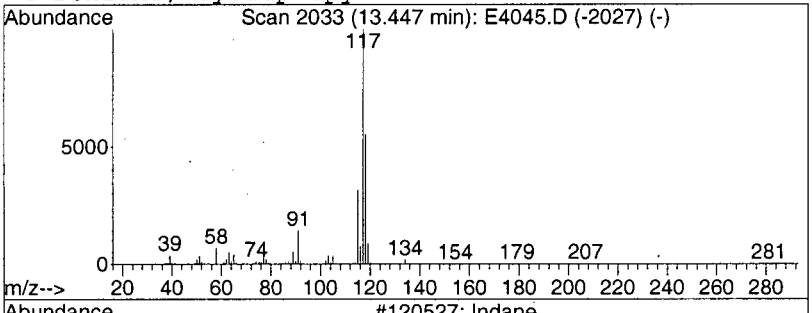
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

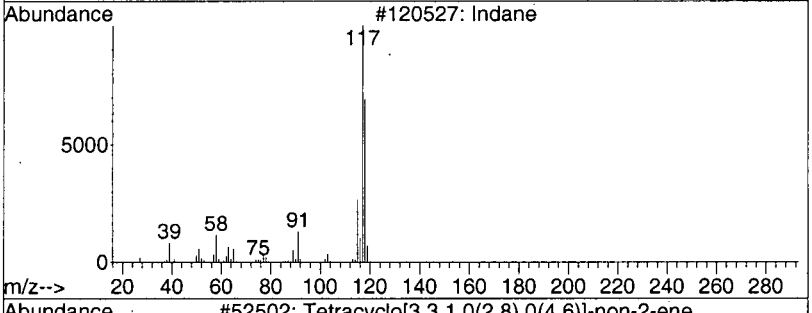
****

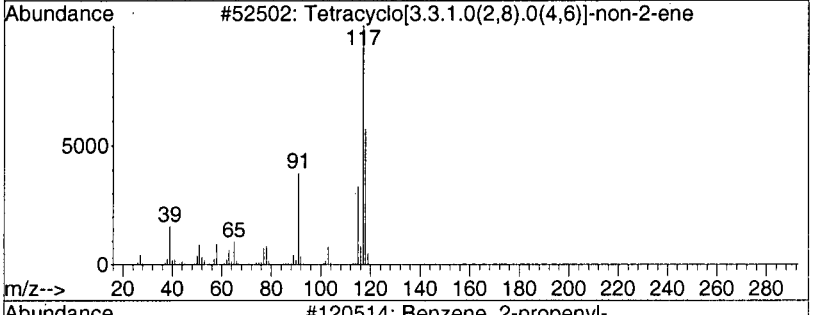
Peak Number 22 Indane Concentration Rank 18

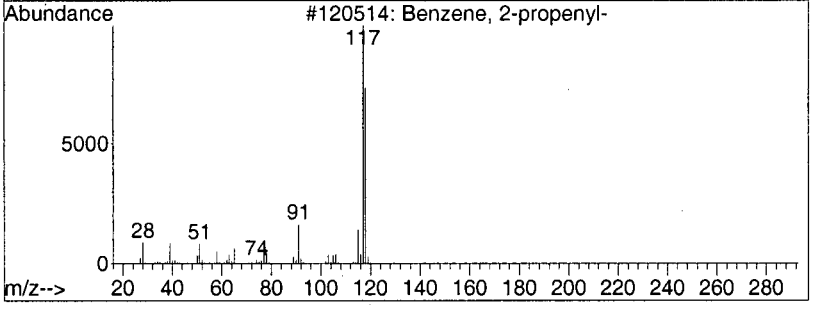
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.45	5.00 ug/L	6980380	1,4-Dichlorobenzene-d4	13.19

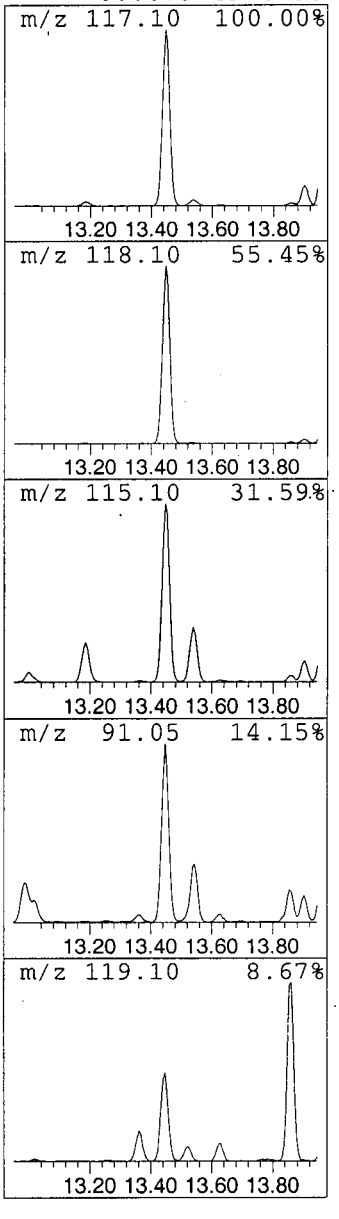
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	87
2	Tetracyclo[3.3.1.0(2,8).0(4,6)]-...	118	C9H10	1000191-13-7	83
3	Benzene, 2-propenyl-	118	C9H10	000300-57-2	80
4	Benzene, cyclopropyl-	118	C9H10	000873-49-4	80











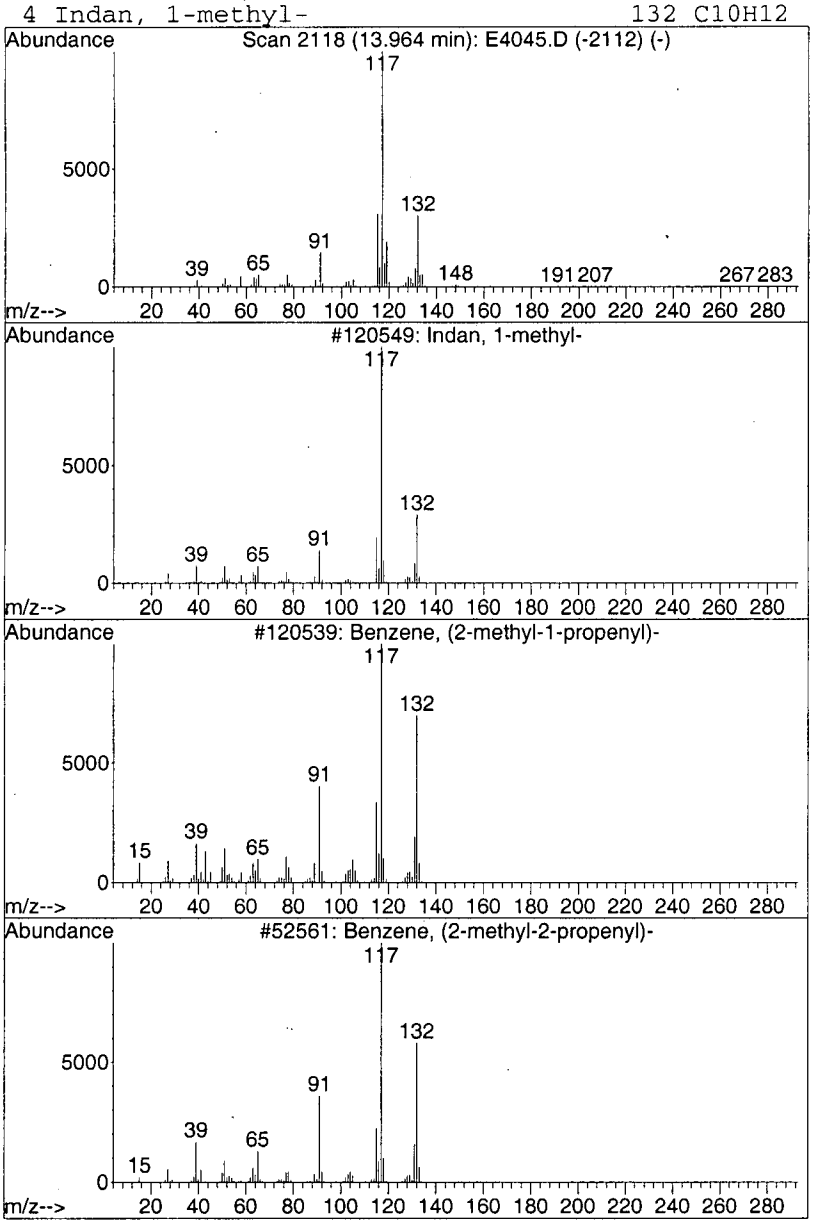
0136

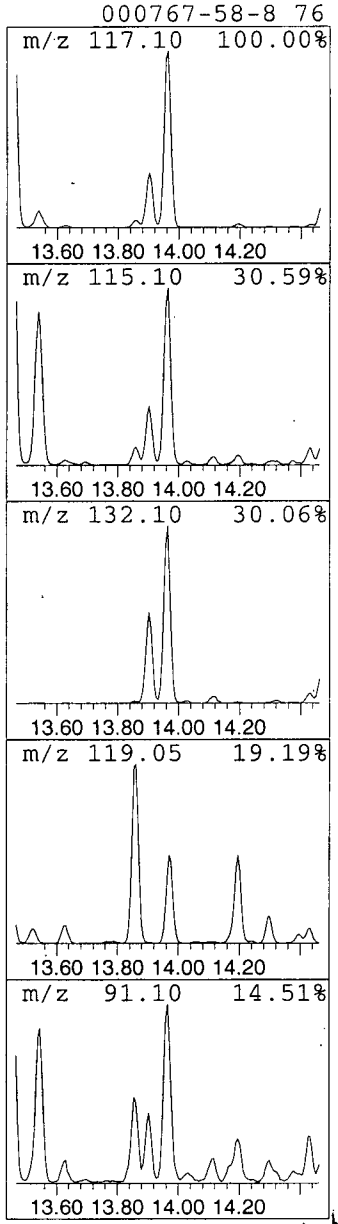
Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4045.D                    Vial: 6
   Acq On    : 03/28/2003  1626                         Operator: AK
   Sample    : Y0SJ3                                    Inst    : E-5973
   Misc      : 2762.003  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ********************************************************************
 Peak Number 23  Indan, 1-methyl-                Concentration Rank 24
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.96	1.92 ug/L	2683820	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	93
2	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	87
3	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	83
4	Indan, 1-methyl-	132	C10H12	000767-58-8	76





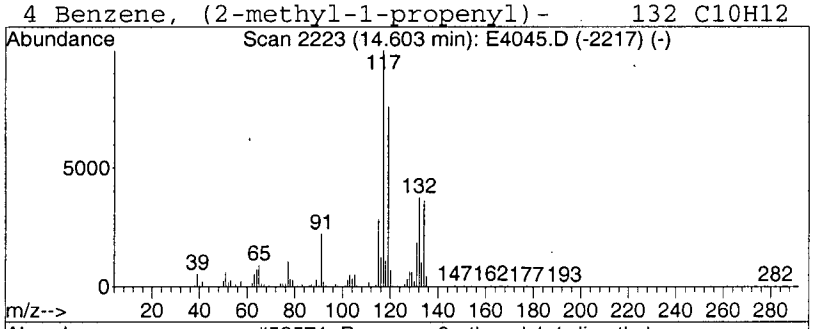
11.37

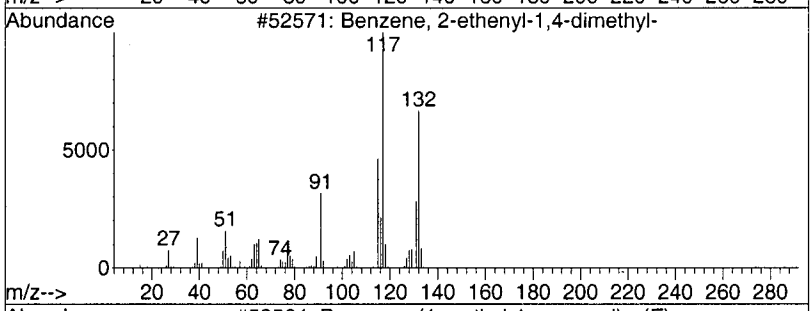
Library Search Compound Report

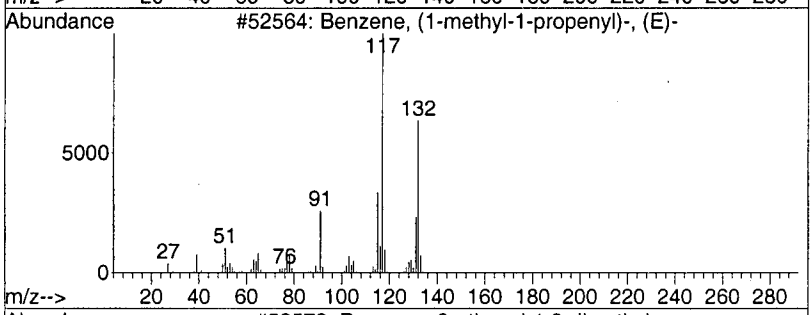
```
   Data File : C:\MSDCHEM\1\DATA\E4045.D                    Vial: 6
   Acq On    : 03/28/2003  1626                         Operator: AK
   Sample    : Y0SJ3                                    Inst    : E-5973
   Misc      : 2762.003  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 24  Benzene, 2-ethenyl-1,4-dime...  Concentration Rank 25
```

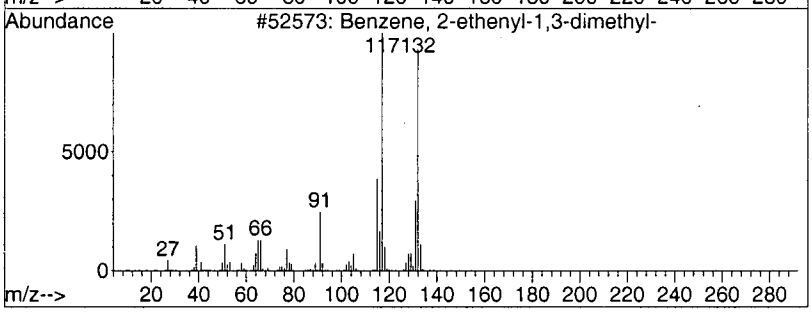
R.T.	EstConc	Area	Relative to ISTD	R.T.
14.60	1.74 ug/L	2425570	1,4-Dichlorobenzene-d4	13.19

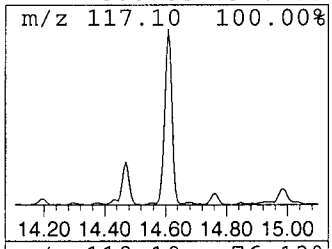
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 2-ethenyl-1,4-dimethyl-	132	C10H12	002039-89-6	86
2	Benzene, (1-methyl-1-propenyl)-,...	132	C10H12	000768-00-3	70
3	Benzene, 2-ethenyl-1,3-dimethyl-	132	C10H12	002039-90-9	70
4	Benzene, (2-methyl-1-propenyl)-	132	C10H12	000768-49-0	55

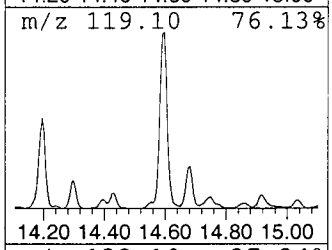


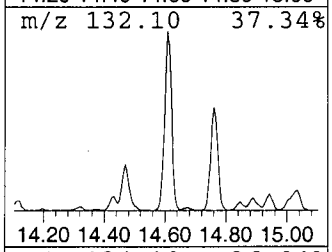


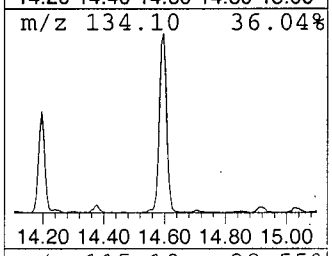


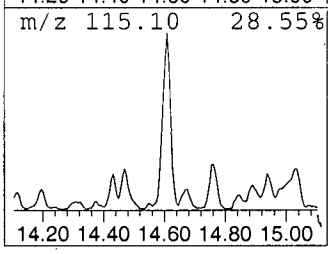












0138

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4045.D Vial: 6
Acq On : 03/28/2003 1626 Operator: AK
Sample : Y0SJ3 Inst : E-5973
Misc : 2762.003 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

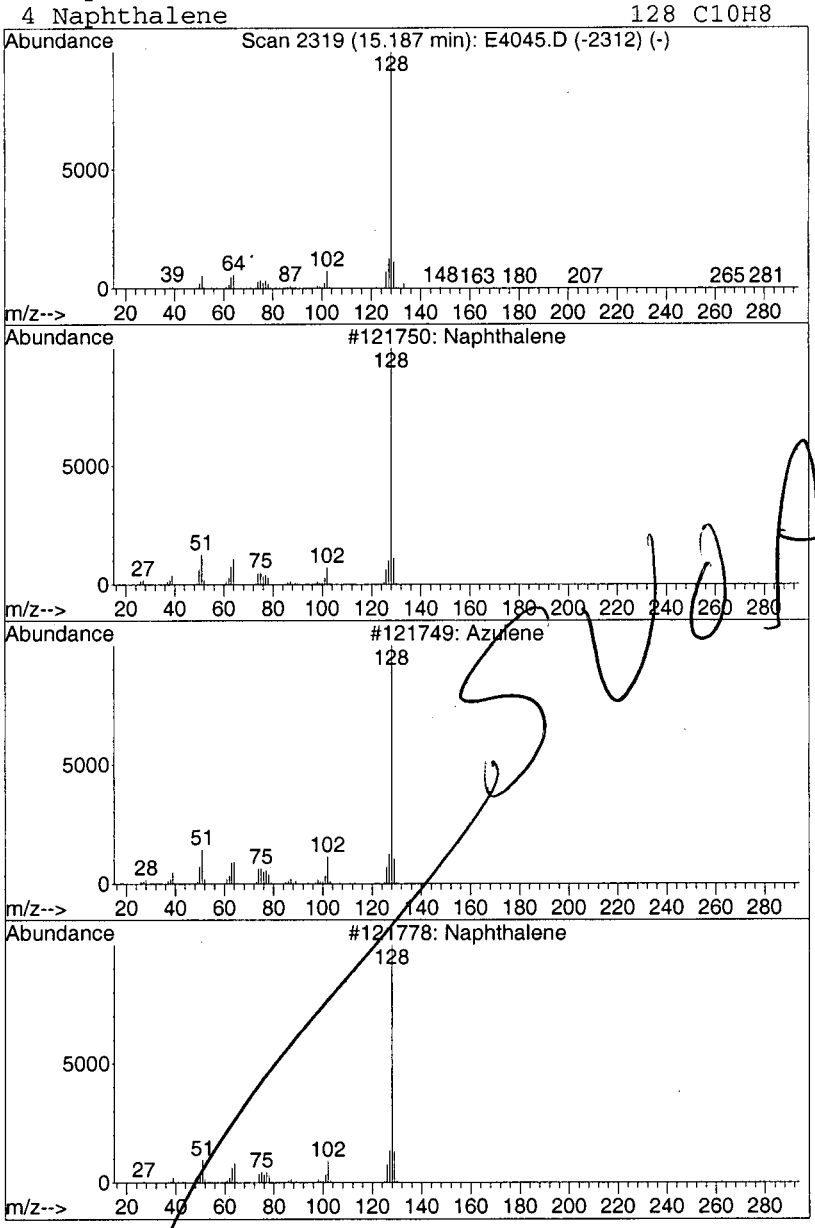
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

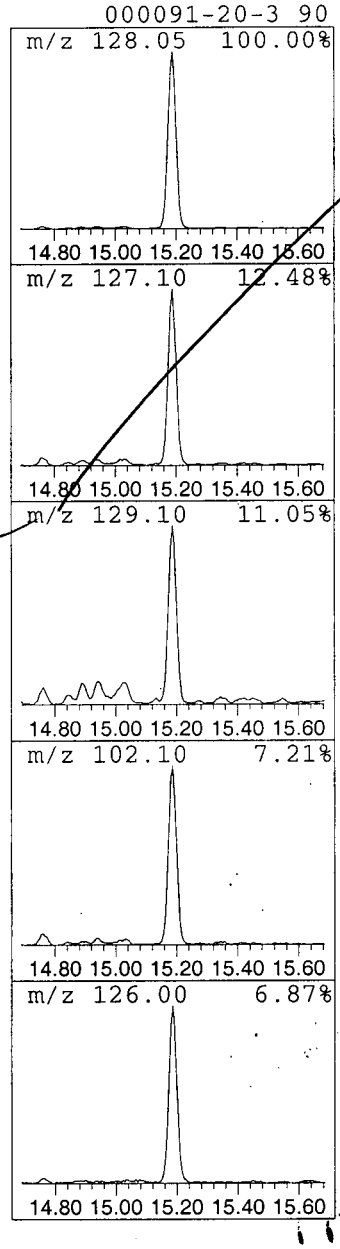
****

Peak Number 25 Naphthalene Concentration Rank 23

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.19	2.47 ug/L	3442300	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Naphthalene	128	C10H8	000091-20-3	91
2	Azulene	128	C10H8	000275-51-4	91
3	Naphthalene	128	C10H8	000091-20-3	91
4	Naphthalene	128	C10H8	000091-20-3	90





1139

1LCA

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

Y0SJ3DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003DL Date Received: 03/20/2003

Lab File ID: E4019 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	4.0	U
74-87-3	Chloromethane	4.0	U
75-01-4	Vinyl Chloride	4.0	U
74-83-9	Bromomethane	6.7	D
75-00-3	Chloroethane	4.0	U
75-69-4	Trichlorofluoromethane	4.0	U
75-35-4	1,1-Dichloroethene	18	D
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U
67-64-1	Acetone	29	JD
75-15-0	Carbon Disulfide	4.0	U
79-20-9	Methyl Acetate	4.0	U
75-09-2	Methylene Chloride	4.6	DB
156-60-5	trans-1,2-Dichloroethene	1.6	JD
1634-04-4	Methyl tert-Butyl Ether	4.0	U
75-34-3	1,1-Dichloroethane	3.6	JD
156-59-2	cis-1,2-Dichloroethene	70	D
78-93-3	2-Butanone	40	U
74-97-5	Bromochloromethane	4.0	U
67-66-3	Chloroform	4.0	U
71-55-6	1,1,1-Trichloroethane	4.0	U
110-82-7	Cyclohexane	14	D
56-23-5	Carbon Tetrachloride	4.0	U
71-43-2	Benzene	4.0	U
107-06-2	1,2-Dichloroethane	4.0	U

1LCB
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.
Y0SJ3DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003DL Date Received: 03/20/2003

Lab File ID: E4019 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	1.6	JD
108-87-2	Methylcyclohexane	33	D
78-87-5	1,2-Dichloropropane	3.4	JD
75-27-4	Bromodichloromethane	4.0	U
10061-01-5	cis-1,3-Dichloropropene	4.0	U
108-10-1	4-Methyl-2-pentanone	40	U
108-88-3	Toluene	1.4	JD
10061-02-6	trans-1,3-Dichloropropene	4.0	U
79-00-5	1,1,2-Trichloroethane	4.0	U
127-18-4	Tetrachloroethene	1.6	JD
591-78-6	2-Hexanone	40	U
124-48-1	Dibromochloromethane	4.0	U
106-93-4	1,2-Dibromoethane	4.0	U
108-90-7	Chlorobenzene	4.0	U
100-41-4	Ethylbenzene	6.0	D
1330-20-7	Xylene (total)	4.0	U
100-42-5	Styrene	4.0	U
75-25-2	Bromoform	4.0	U
98-82-8	Isopropylbenzene	7.4	D
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.0	U
120-82-1	1,2,4-Trichlorobenzene	4.0	U
87-61-6	1,2,3-Trichlorobenzene	4.0	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ3DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.003DL Date Received: 03/20/2003

Lab File ID: E4019 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 3

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01	000103-65-1	Benzene, propyl-	12.26	12	JND
02	000496-11-7	Indane	13.45	13	JND
03	000767-58-8	Indan, 1-methyl-	13.96	5.1	JND
04					
05					
06					
07					
08					
09					
10					
11					
12					
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14					
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16					
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18					
19					
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21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

.0142

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4019.D
Acq On : 03/27/2003 1636
Sample : Y0SJ3DL
Misc : 2762.003DL 25ML 8X
MS Integration Params: RTEINT.P
Quant Time: Mar 27 18:07:15 2003

Vial: 12
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4009.RES

KAR 04/02/03
GT 04/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1248383	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.33	117	990022	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	346192	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.16	65	458430	5.01	ug/L	0.01
Spiked Amount 5.000	Range 49 - 138		Recovery	=	100.20%	
7) Chloroethane-d5	2.55	69	400687	5.23	ug/L	0.01
Spiked Amount 5.000	Range 60 - 126		Recovery	=	104.60%	
10) 1,1-Dichloroethene-d2	3.26	65	198266	4.96	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	=	99.20%	
20) 2-Butanone-d5	4.88	46	47702	5.91	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	=	118.20%	
24) Chloroform-d	5.24	86	457980	5.20	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	=	104.00%	
26) 1,2-Dichloroethane-d4	5.81	65	251394	5.33	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	=	106.60%	
32) Benzene-d6	5.85	84	1978530	5.35	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	=	107.00%	
35) 1,2-Dichloropropane-d6	6.80	67	564675	5.45	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	=	109.00%	
41) Toluene-d8	8.21	98	1949266	5.38	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	=	107.60%	
43) trans-1,3-Dichloropropene-	8.53	79	72676	5.87	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	=	117.40%	
47) 2-Hexanone-d5	9.13	46	76460	4.99	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	=	99.80%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	196601	5.61	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	=	112.20%	
61) Bromoform-d	11.51	174	101707	5.20	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	=	104.00%	
65) 1,2-Dichlorobenzene-d4	13.54	152	380016	5.37	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	=	107.40%	

Target Compounds						Qvalue
6) Bromomethane	2.48	94	36219	0.84	ug/L #	19
11) 1,1-Dichloroethene	3.28	96	241566	2.27	ug/L #	46
13) Acetone	3.30	43	19244	3.61	ug/L J	73
16) Methylene Chloride	3.70	84	53349	0.57	ug/L B	96
17) trans-1,2-Dichloroethene	3.97	96	22353	0.19	ug/L J	89
19) 1,1-Dichloroethane	4.36	63	75360	0.44	ug/L J	99
21) cis-1,2-Dichloroethene	4.94	96	846469	8.70	ug/L	100
30) Cyclohexane	5.57	56	349053	1.81	ug/L #	75
34) Trichloroethene	6.65	95	18195	0.19	ug/L J	97
36) Methylcyclohexane	6.91	83	854192	4.09	ug/L	89
37) 1,2-Dichloropropane	6.91	63	36584	0.43	ug/L J	67
42) Toluene	8.30	91	86850	0.18	ug/L J	93
46) Tetrachloroethene	9.10	164	20012	0.20	ug/L J	97
52) Ethylbenzene	10.55	91	345331	0.75	ug/L	99
57) Isopropylbenzene	11.77	105	356038	0.93	ug/L	100

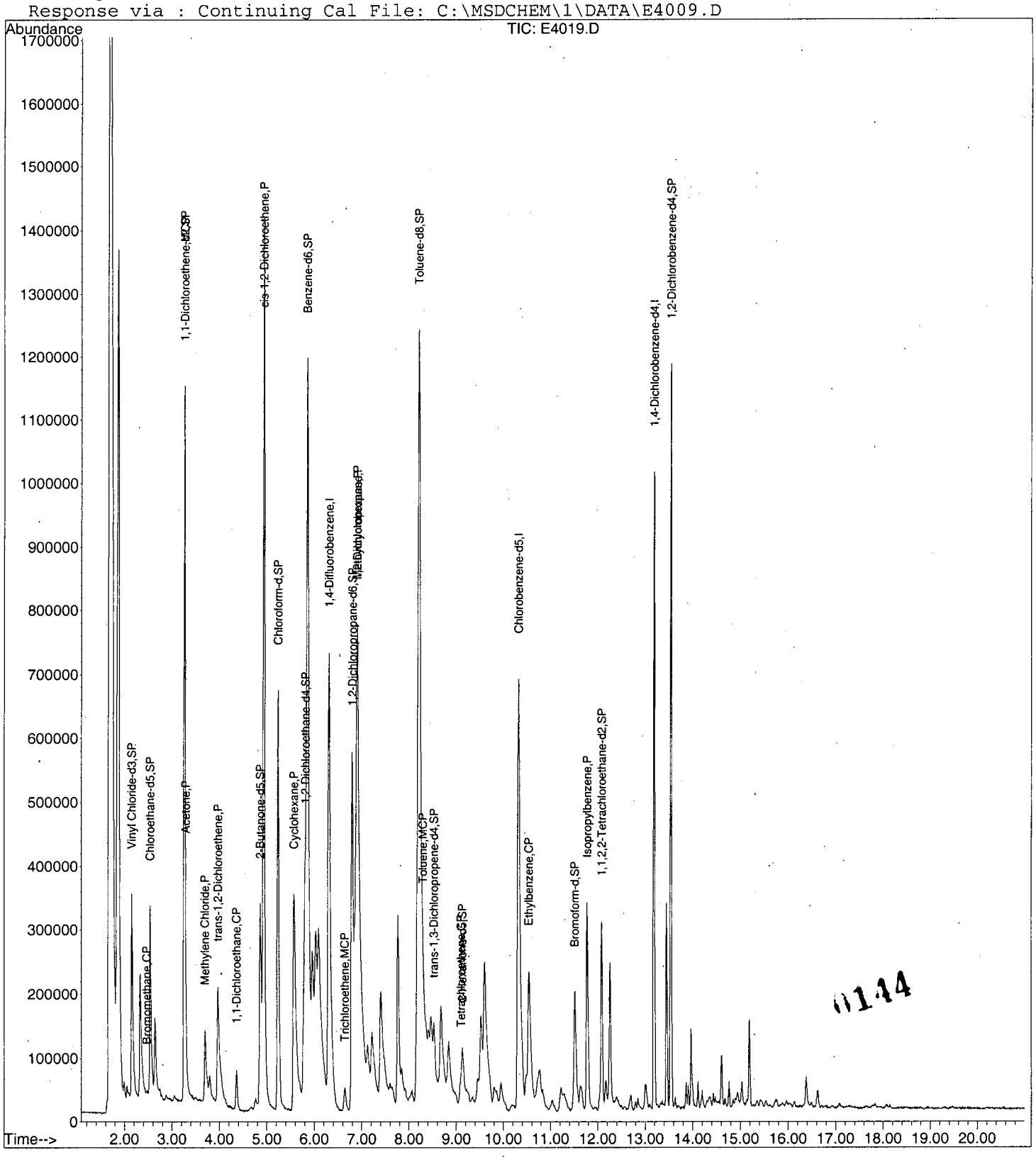
11143

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

Quantitation Report (QT Reviewed)

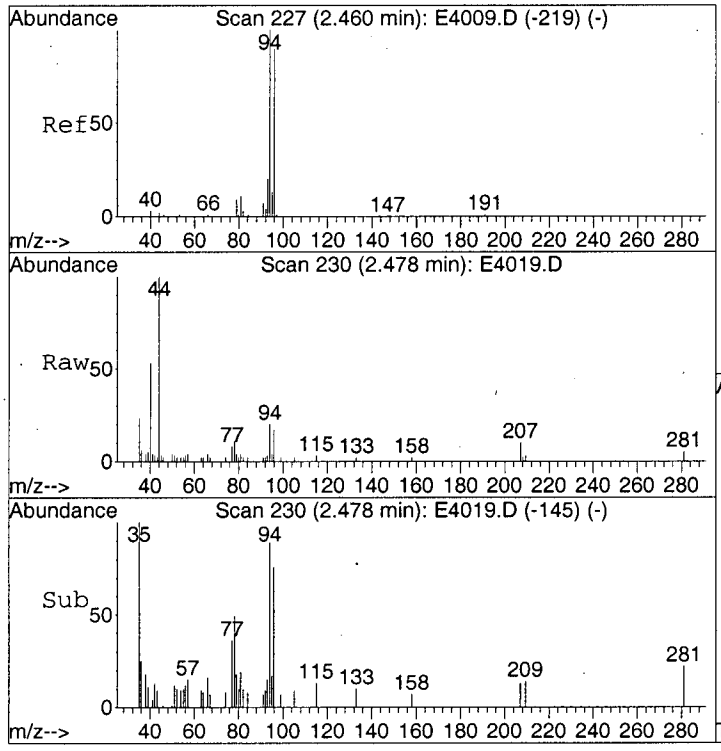
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:58 2003 Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D



0114

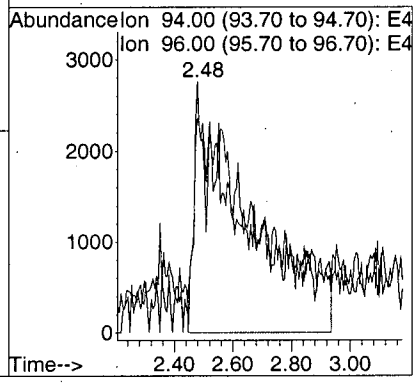
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

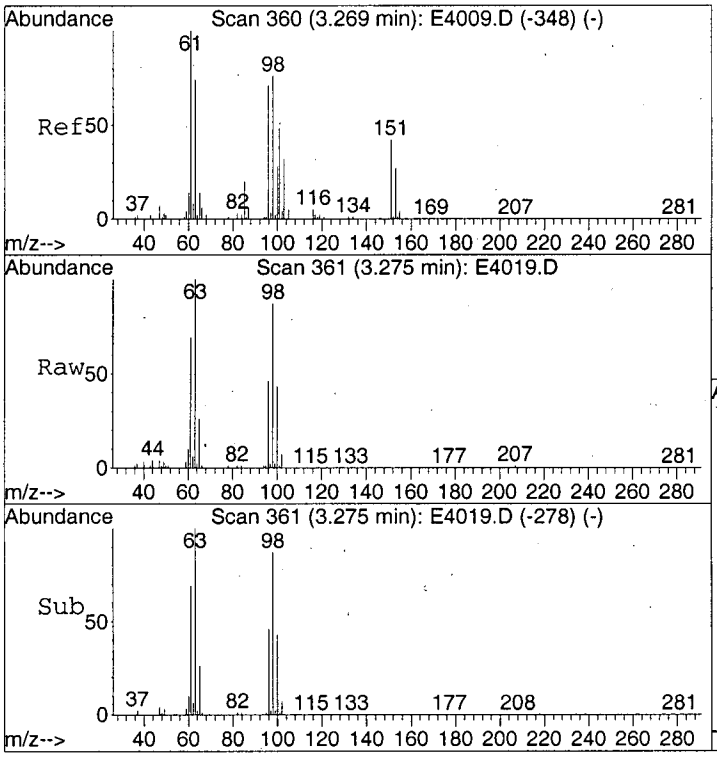


#6
Bromomethane
Concen: 0.84 ug/L
RT: 2.48 min Scan# 230
Delta R.T. 0.02 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 94 Resp: 36219

Ion	Ratio	Lower	Upper
94	100		
96	17.7	77.2	117.2#

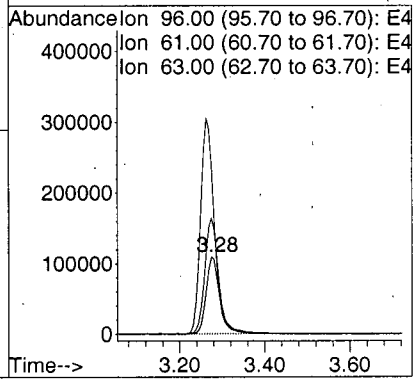




#11
1,1-Dichloroethene
Concen: 2.27 ug/L
RT: 3.28 min Scan# 361
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

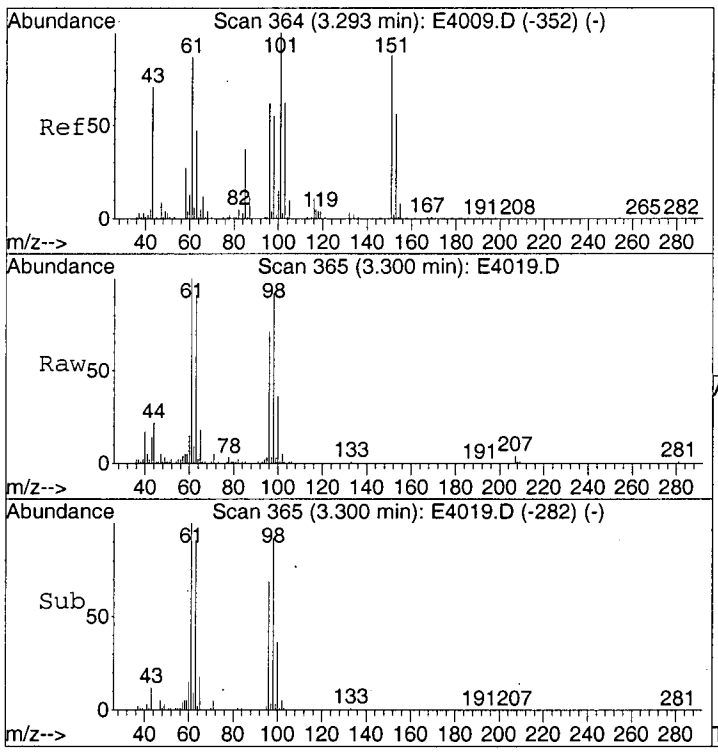
Tgt Ion: 96 Resp: 241566

Ion	Ratio	Lower	Upper
96	100		
61	155.1	126.8	166.8
63	290.2	142.5	182.5#



0145

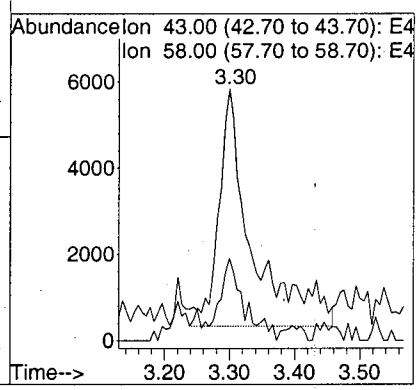
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

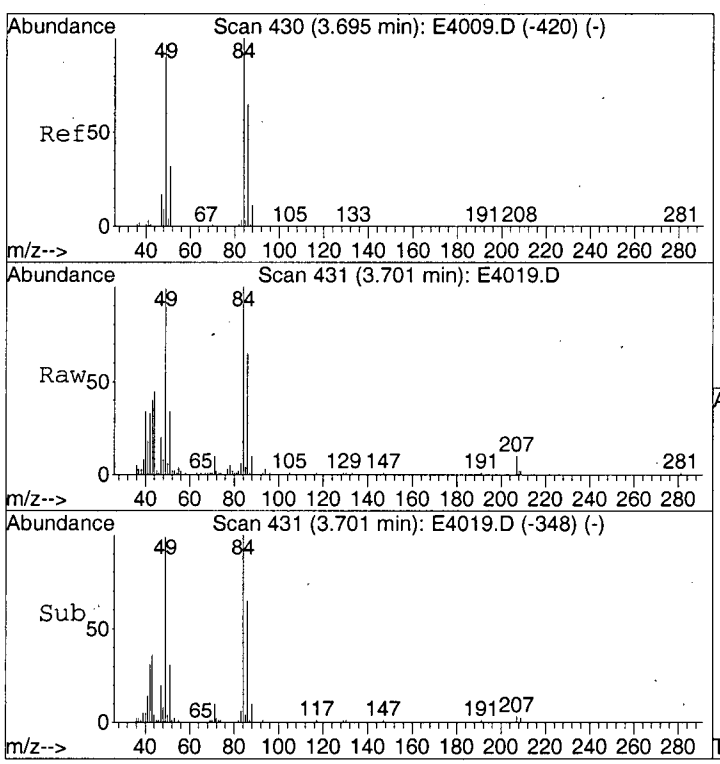


#13
Acetone
Concen: 3.61 ug/L
RT: 3.30 min Scan# 365
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 43 Resp: 19244

Ion	Ratio	Lower	Upper
43	100		
58	25.3	22.6	62.6

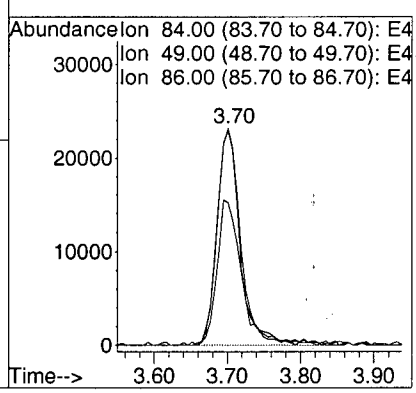




#16
Methylene Chloride
Concen: 0.57 ug/L
RT: 3.70 min Scan# 431
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

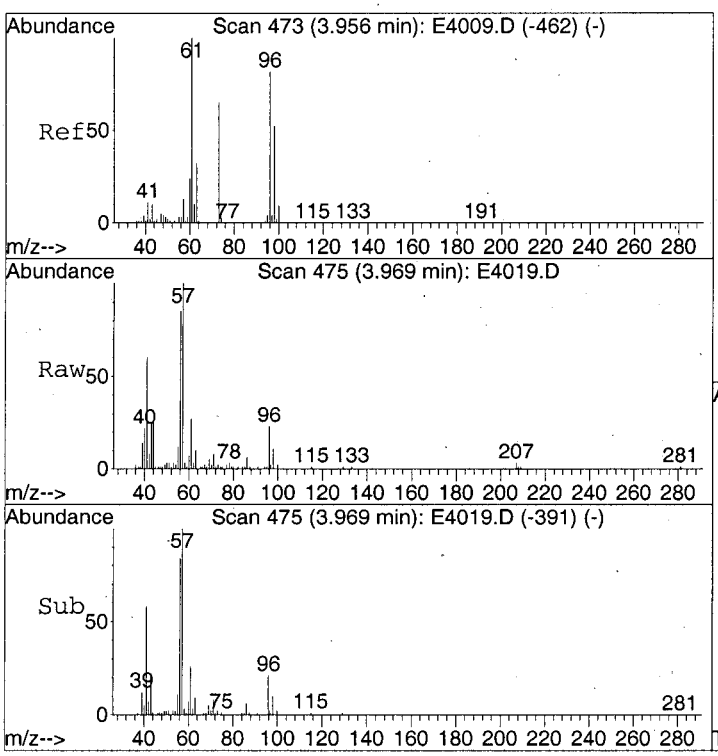
Tgt Ion: 84 Resp: 53349

Ion	Ratio	Lower	Upper
84	100		
49	93.6	76.2	116.2
86	67.2	43.2	83.2



0116

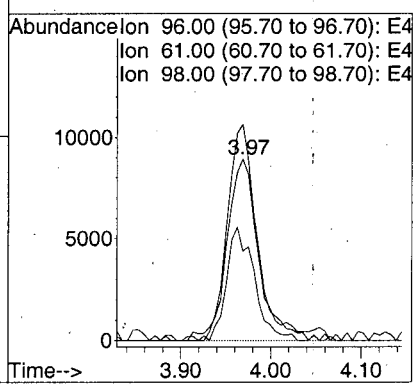
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

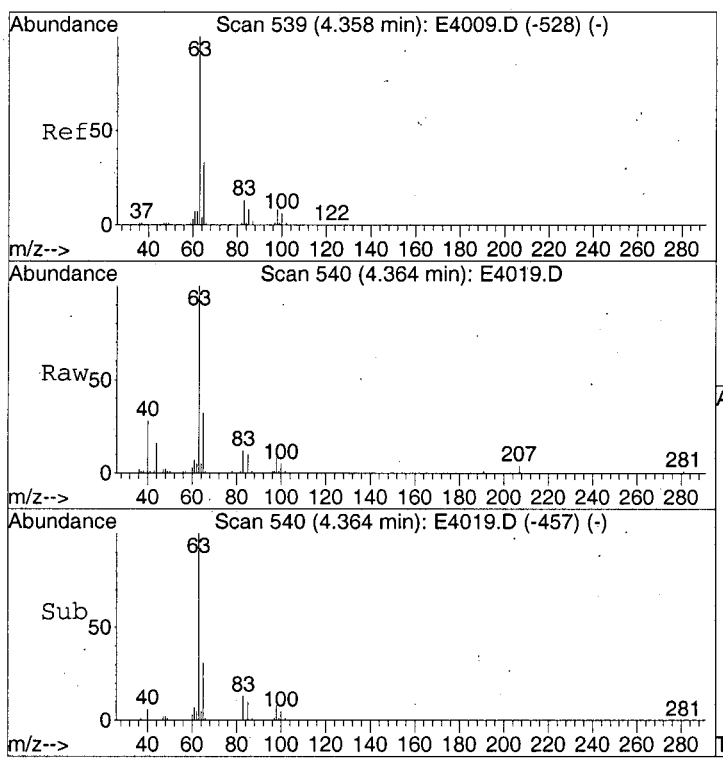


#17
trans-1,2-Dichloroethene
Concen: 0.19 ug/L
RT: 3.97 min Scan# 475
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 96 Resp: 22353

Ion	Ratio	Lower	Upper
96	100		
61	107.8	100.0	140.0
98	53.4	42.9	82.9

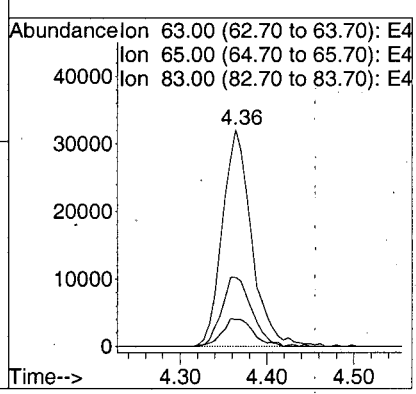




#19
1,1-Dichloroethane
Concen: 0.44 ug/L
RT: 4.36 min Scan# 540
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

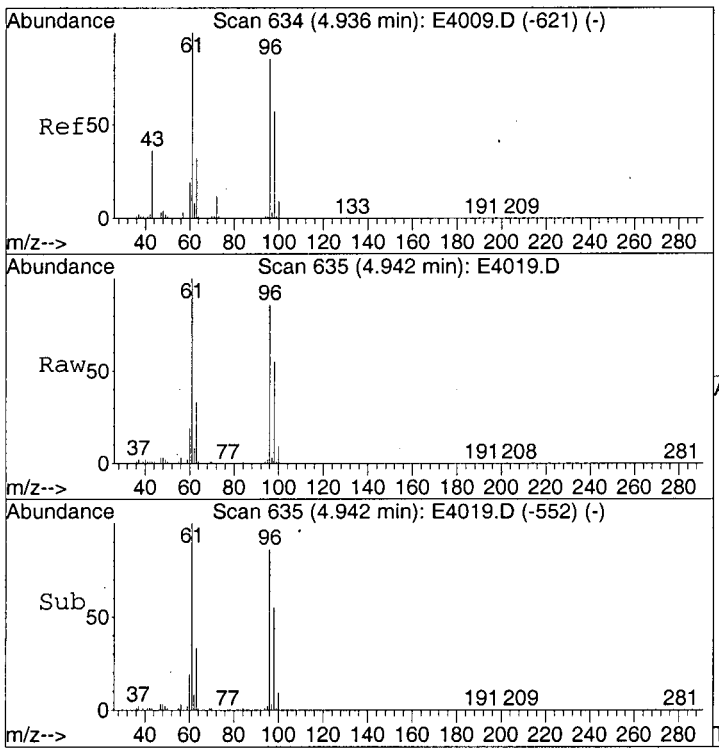
Tgt Ion: 63 Resp: 75360

Ion	Ratio	Lower	Upper
63	100		
65	33.1	12.4	52.4
83	13.5	0.0	33.0



11-17

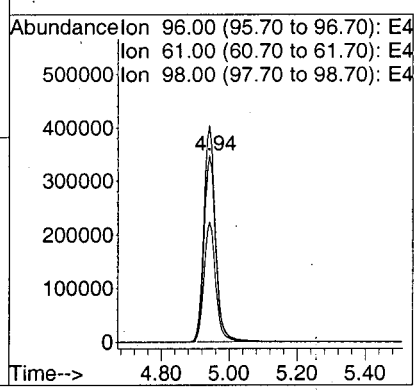
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

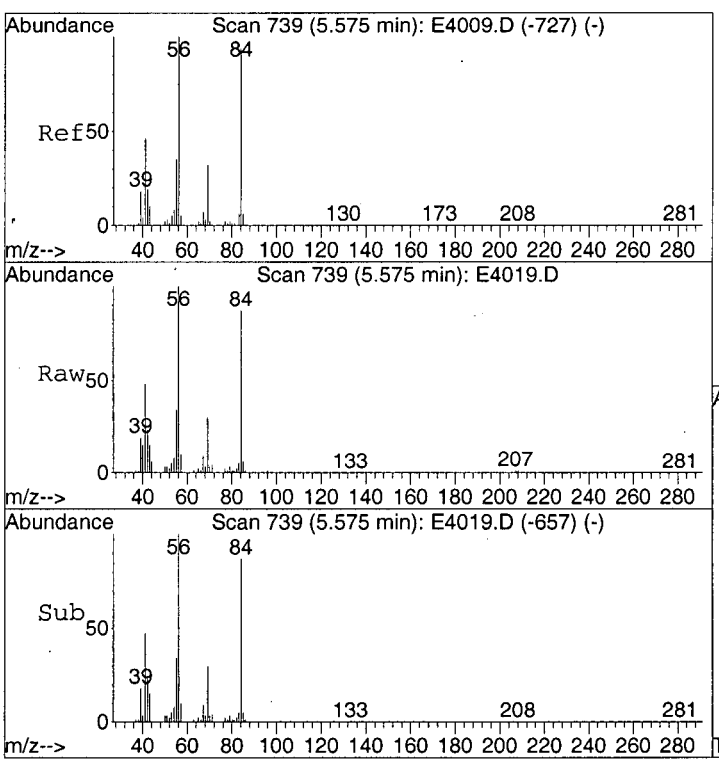


#21
cis-1,2-Dichloroethene
Concen: 8.70 ug/L
RT: 4.94 min Scan# 635
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 96 Resp: 846469

Ion	Ratio	Lower	Upper
96	100		
61	116.0	95.9	135.9
98	63.8	43.4	83.4

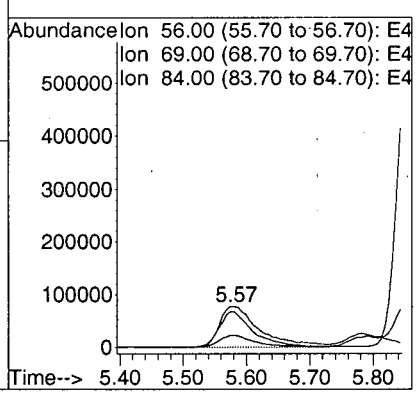




#30
Cyclohexane
Concen: 1.81 ug/L
RT: 5.57 min Scan# 739
Delta R.T. 0.00 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

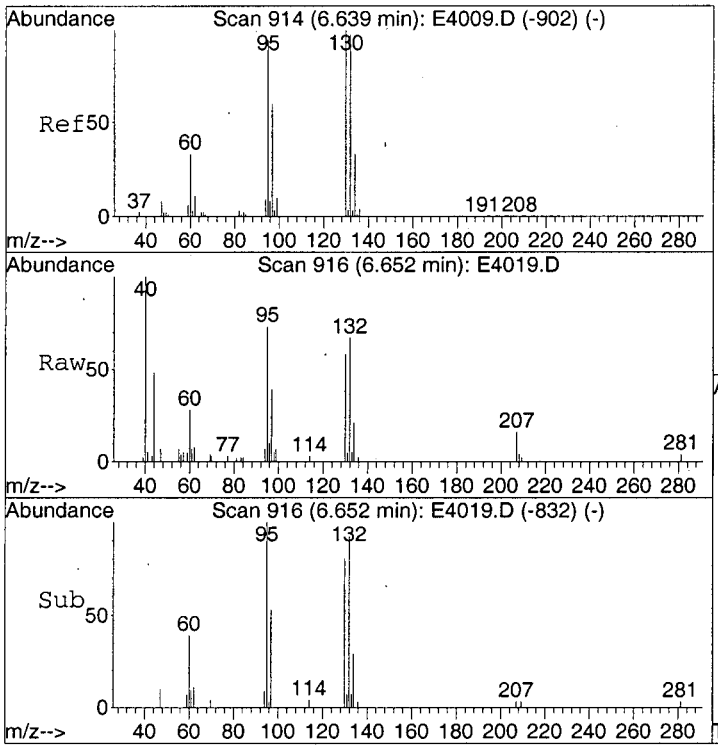
Tgt Ion: 56 Resp: 349053

Ion	Ratio	Lower	Upper
56	100		
69	26.0	11.9	51.9
84	71.9	82.1	122.1#



1148

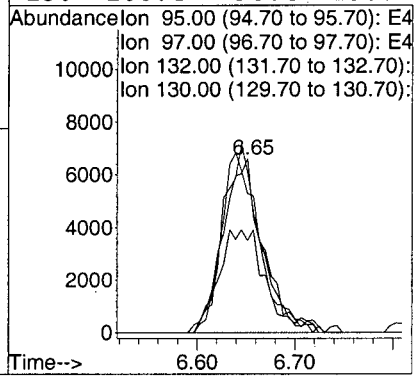
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

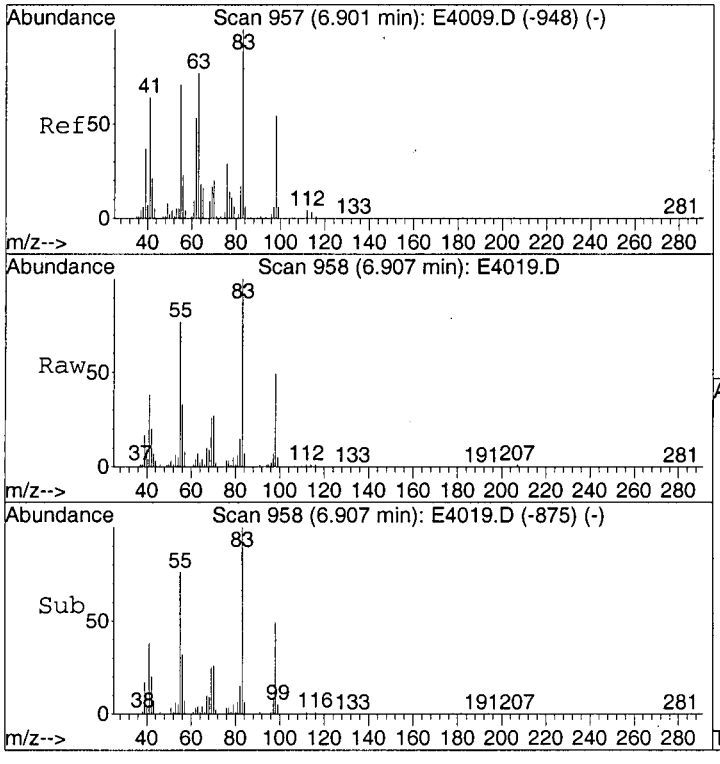


#34
Trichloroethene
Concen: 0.19 ug/L
RT: 6.65 min Scan# 916
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 95 Resp: 18195

Ion	Ratio	Lower	Upper
95	100		
97	69.2	43.5	83.5
132	106.2	86.1	126.1
130	106.4	90.4	130.4

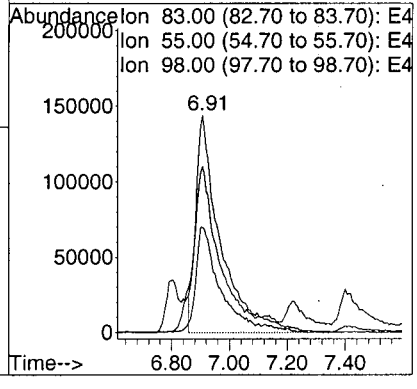




#36
Methylcyclohexane
Concen: 4.09 ug/L
RT: 6.91 min Scan# 958
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

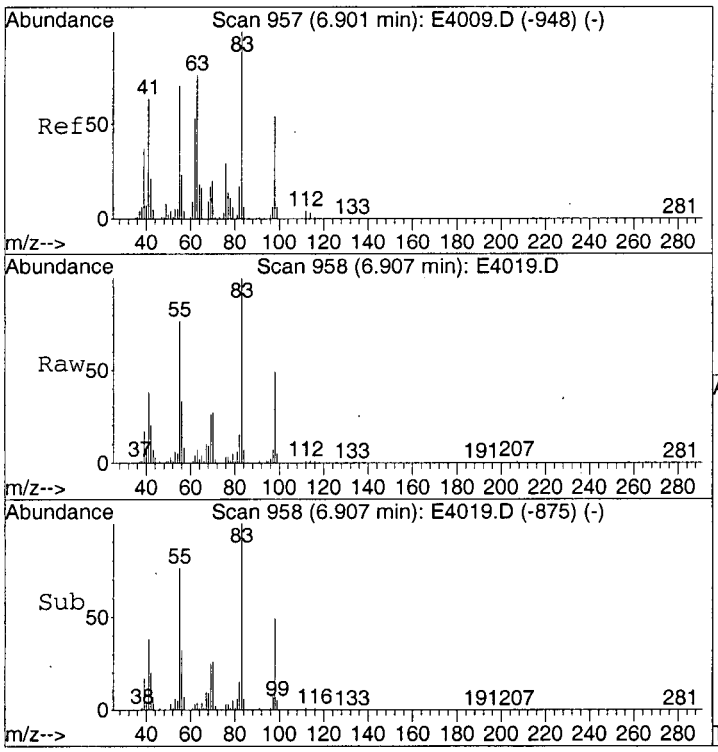
Tgt Ion: 83 Resp: 854192

Ion	Ratio	Lower	Upper
83	100		
55	84.8	51.1	91.1
98	49.1	32.0	72.0



1119

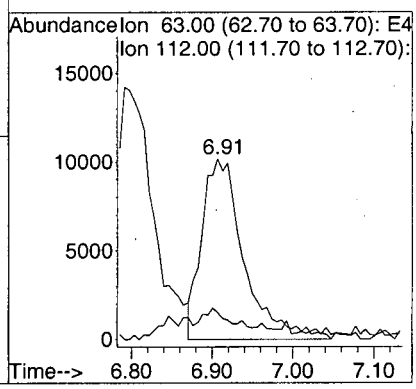
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

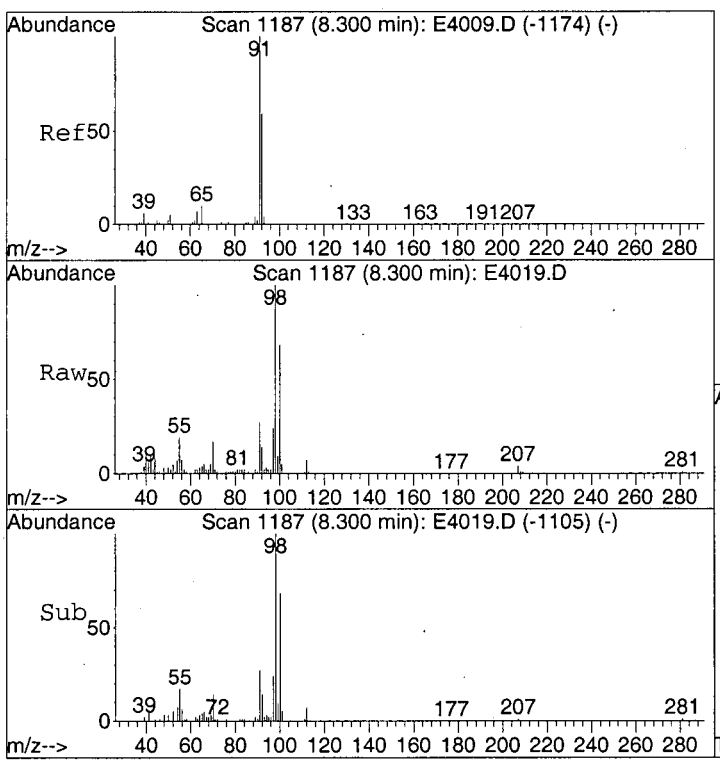


#37
1,2-Dichloropropane
Concen: 0.43 ug/L
RT: 6.91 min Scan# 958
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 63 Resp: 36584

Ion	Ratio	Lower	Upper
63	100		
112	16.3	0.0	25.4

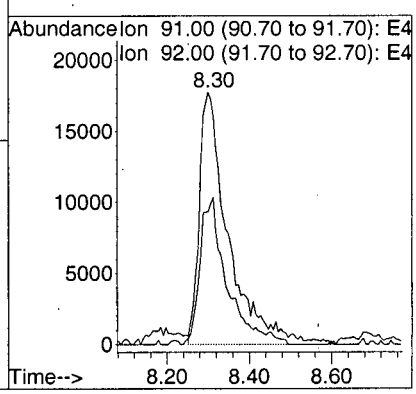




#42
Toluene
Concen: 0.18 ug/L
RT: 8.30 min Scan# 1187
Delta R.T. 0.00 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

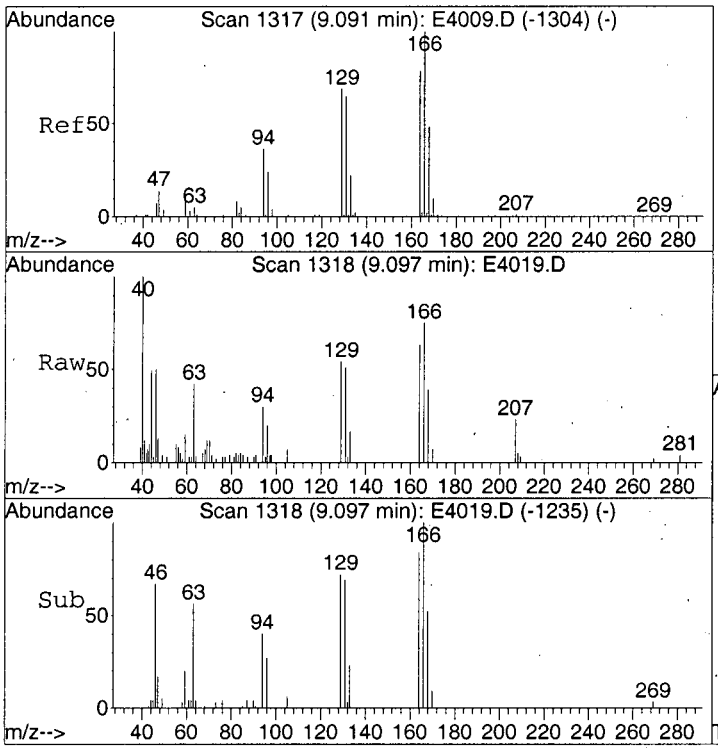
Tgt Ion: 91 Resp: 86850

Ion	Ratio	Lower	Upper
91	100		
92	54.1	39.2	79.2



0150

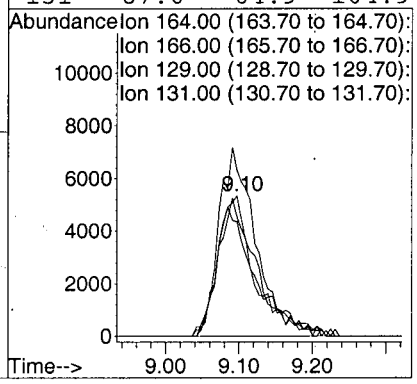
Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

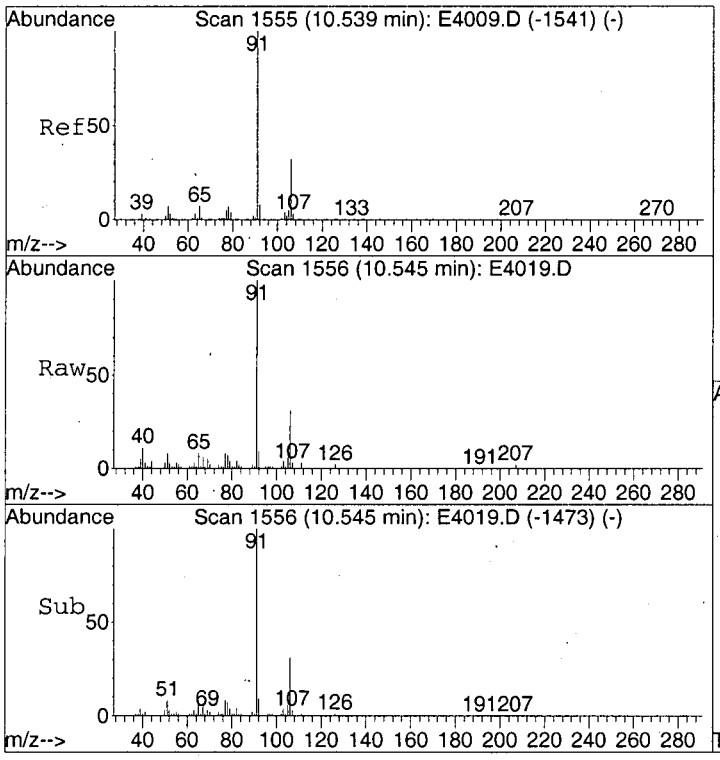


#46
Tetrachloroethene
Concen: 0.20 ug/L
RT: 9.10 min Scan# 1318
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion:164 Resp: 20012

Ion	Ratio	Lower	Upper
164	100		
166	128.5	105.5	145.5
129	91.2	68.3	108.3
131	87.0	64.9	104.9

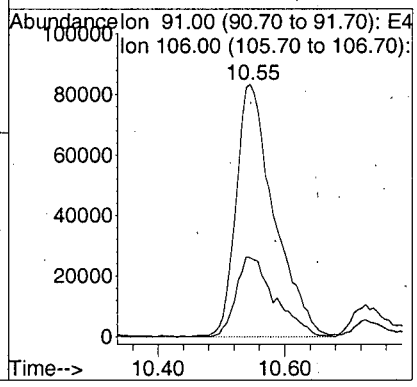




#52
Ethylbenzene
Concen: 0.75 ug/L
RT: 10.55 min Scan# 1556
Delta R.T. 0.01 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion: 91 Resp: 345331

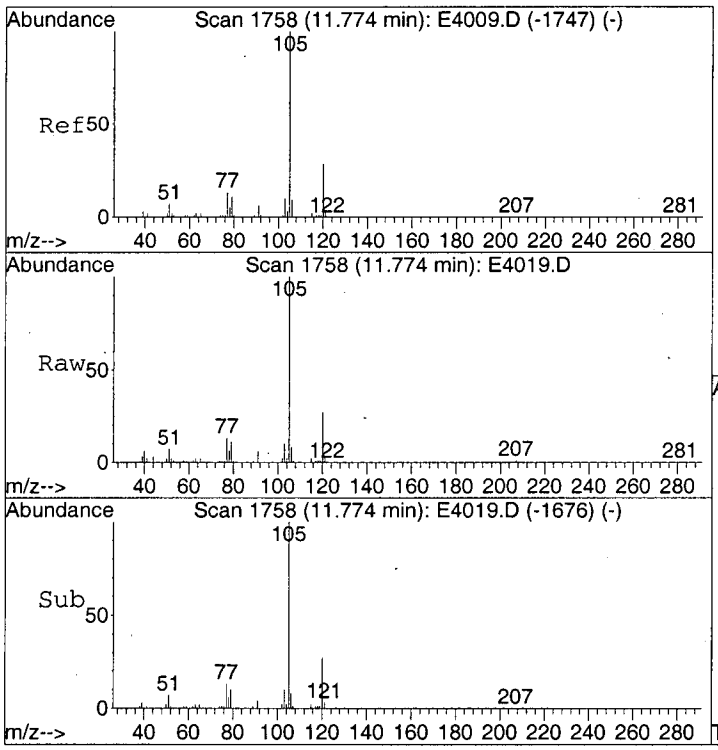
Ion	Ratio	Lower	Upper
91	100		
106	32.3	12.7	52.7



0151

Data File : C:\MSDCHEM\1\DATA\E4019.D
Acq On : 03/27/2003 1636
Sample : Y0SJ3DL
Misc : 2762.003DL 25ML 8X
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

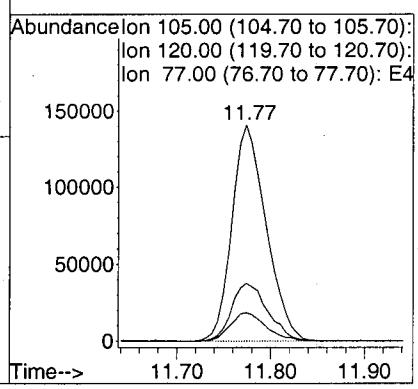
Vial: 12
Operator: AK
Inst : E-5973
Multiplr: 1.00



#57
Isopropylbenzene
Concen: 0.93 ug/L
RT: 11.77 min Scan# 1758
Delta R.T. 0.00 min
Lab File: E4019.D
Acq: 27 Mar 2003 16:36

Tgt Ion:105 Resp: 356038

Ion	Ratio	Lower	Upper
105	100		
120	28.0	7.7	47.7
77	13.6	0.0	33.5



1152

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 100000 Area counts
Start Thrs: 0.2 Max Peaks: 40
Stop Thrs : 0 Peak Location: TOP

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

Signal : TIC

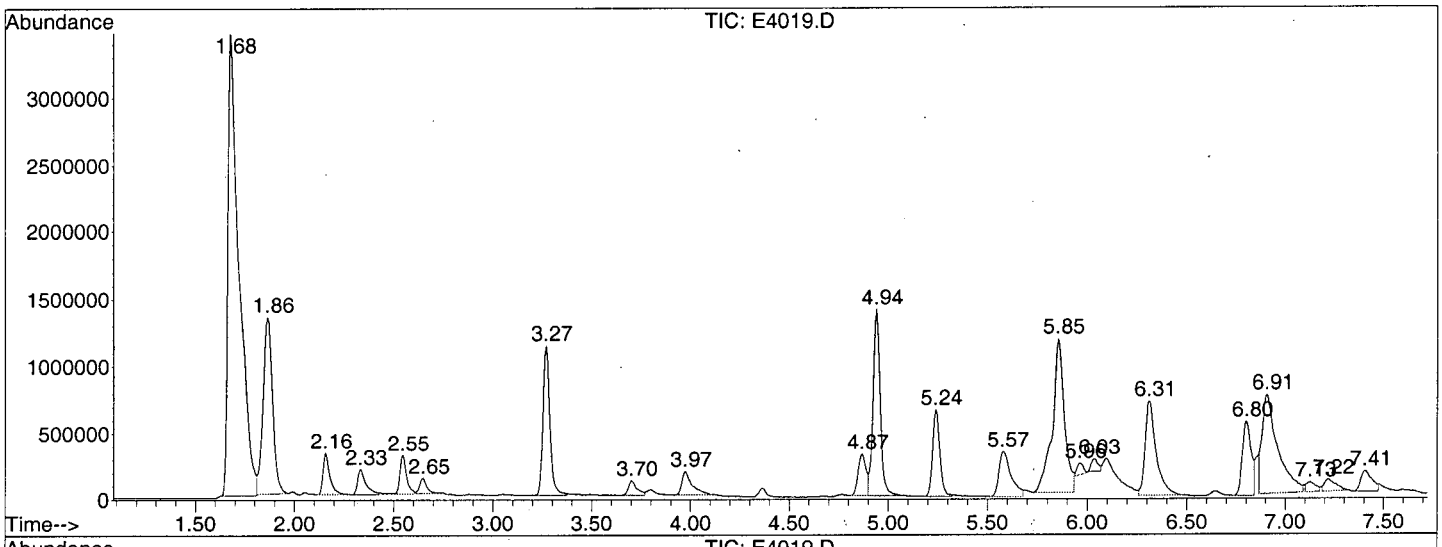
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.675	91	98	120	rBV	3449212	13528203	100.00%	20.088%
2	1.864	120	129	146	rVB	1322791	4413731	32.63%	6.554%
3	2.156	171	177	192	rBV	313094	717059	5.30%	1.065%
4	2.332	199	206	221	rBV	192012	549610	4.06%	0.816%
5	2.545	234	241	251	rBV	293047	658498	4.87%	0.978%
6	2.649	252	258	270	rVB	113610	273545	2.02%	0.406%
7	3.269	350	360	378	rBV2	1121140	2716604	20.08%	4.034%
8	3.701	425	431	442	rBV4	109426	313052	2.31%	0.465%
9	3.975	468	476	497	rBV3	175624	620915	4.59%	0.922%
10	4.869	614	623	628	rBV3	313040	882761	6.53%	1.311%
11	4.942	628	635	657	rVB	1395086	3473729	25.68%	5.158%
12	5.240	675	684	697	rBV	655738	1639195	12.12%	2.434%
13	5.575	729	739	756	rBV4	338729	1410144	10.42%	2.094%
14	5.855	764	785	798	rBV2	1153081	4866502	35.97%	7.226%
15	5.964	799	803	809	rVV4	82214	194377	1.44%	0.289%
16	6.031	810	814	820	rBV2	94393	225247	1.67%	0.334%
17	6.311	851	860	888	rVB	710712	2719994	20.11%	4.039%
18	6.804	929	941	947	rBV	560979	1773399	13.11%	2.633%
19	6.907	951	958	988	rVV2	741016	4145073	30.64%	6.155%
20	7.126	990	994	1002	rVV4	74658	238288	1.76%	0.354%
21	7.217	1004	1009	1026	rVB3	86012	363299	2.69%	0.539%
22	7.406	1031	1040	1051	rBV3	157677	632013	4.67%	0.938%
23	7.771	1091	1100	1108	rBV	293267	823644	6.09%	1.223%
24	8.209	1157	1172	1202	rBV	1210250	6283841	46.45%	9.331%
25	8.677	1242	1249	1264	rVB3	112667	395902	2.93%	0.588%
26	8.842	1269	1276	1291	rVB5	79064	298690	2.21%	0.444%
27	9.134	1309	1324	1337	rBV4	87825	421225	3.11%	0.625%
28	9.523	1381	1388	1395	rVV2	135278	481330	3.56%	0.715%
29	9.602	1395	1401	1428	rVB3	220327	1078830	7.97%	1.602%
30	10.320	1508	1519	1540	rBV	671586	2678840	19.80%	3.978%
31	10.539	1548	1555	1574	rVB	197162	784583	5.80%	1.165%
32	11.518	1705	1716	1728	rBV4	183530	611599	4.52%	0.908%
33	11.774	1749	1758	1771	rBV	323314	842543	6.23%	1.251%
34	12.084	1794	1809	1817	rBV	297008	740106	5.47%	1.099%
35	12.261	1829	1838	1851	rVB	219252	528913	3.91%	0.785%
36	13.185	1983	1990	1998	rBV	998276	1830810	13.53%	2.719%
37	13.453	2027	2034	2041	rBV	318075	594708	4.40%	0.883%
38	13.544	2041	2049	2057	rVB	1165341	2094200	15.48%	3.110%
39	13.964	2112	2118	2129	rBV4	119574	235402	1.74%	0.350%
40	15.187	2313	2319	2328	rVB	135563	263815	1.95%	0.392%

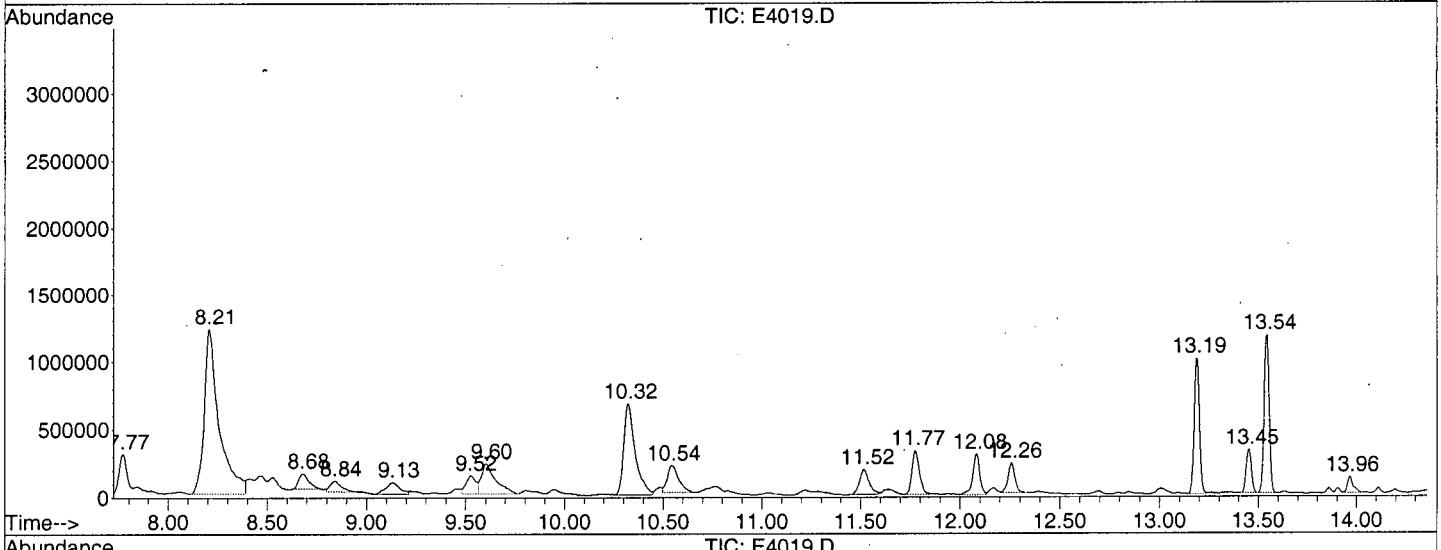
153

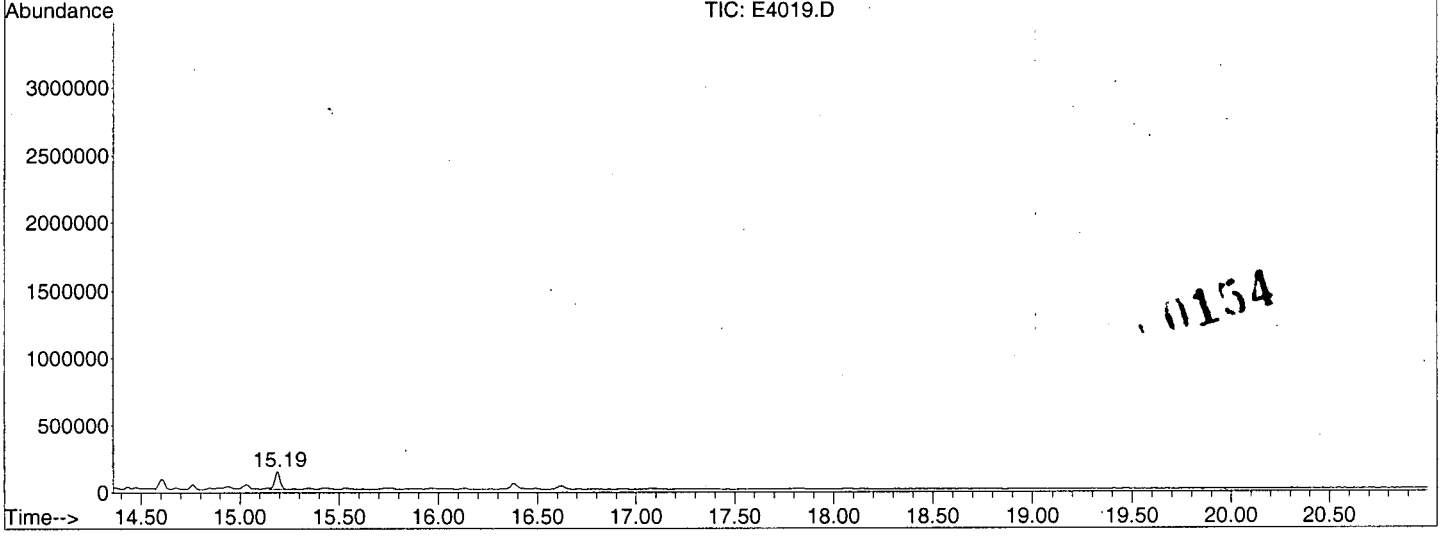
LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4019.D
Acq On : 03/27/2003 1636
Sample : Y0SJ3DL
Misc : 2762.003DL 25ML 8X
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 12
Operator: AK
Inst : E-5973
Multiplr: 1.00







0154

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

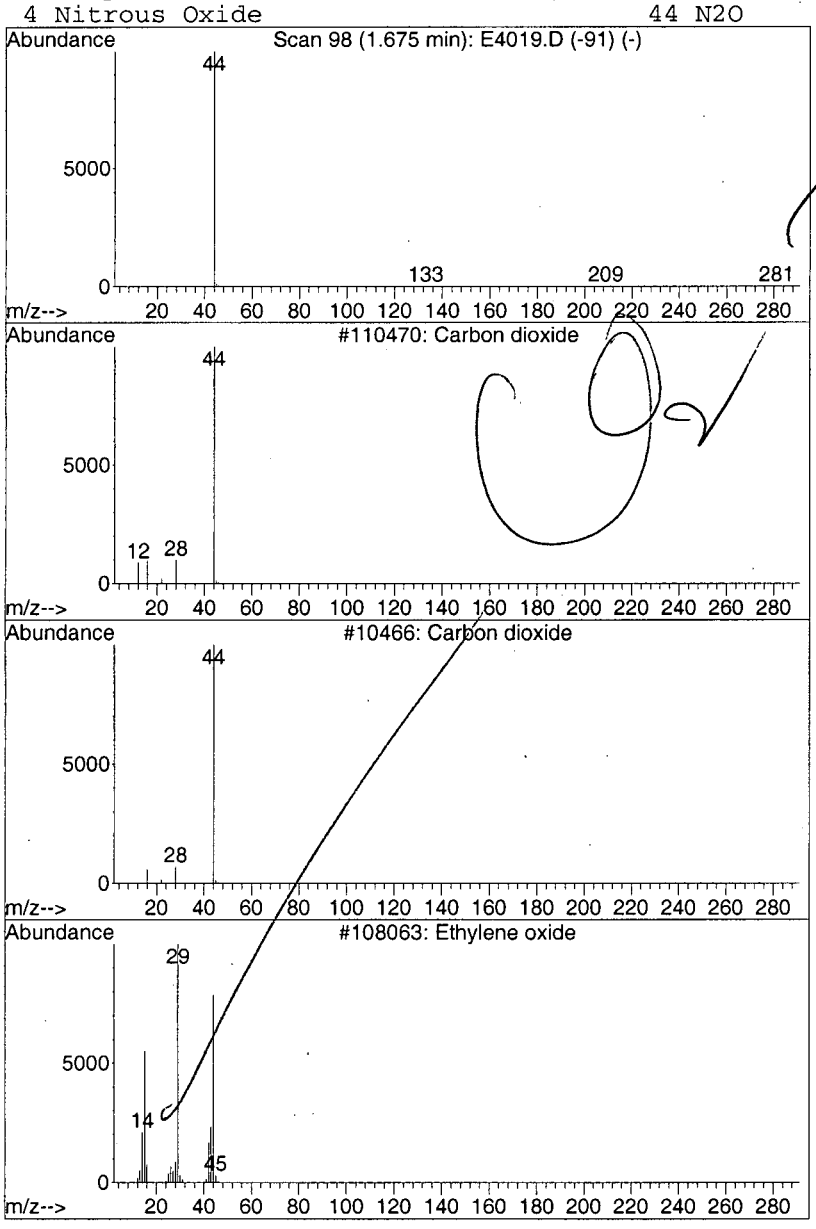
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

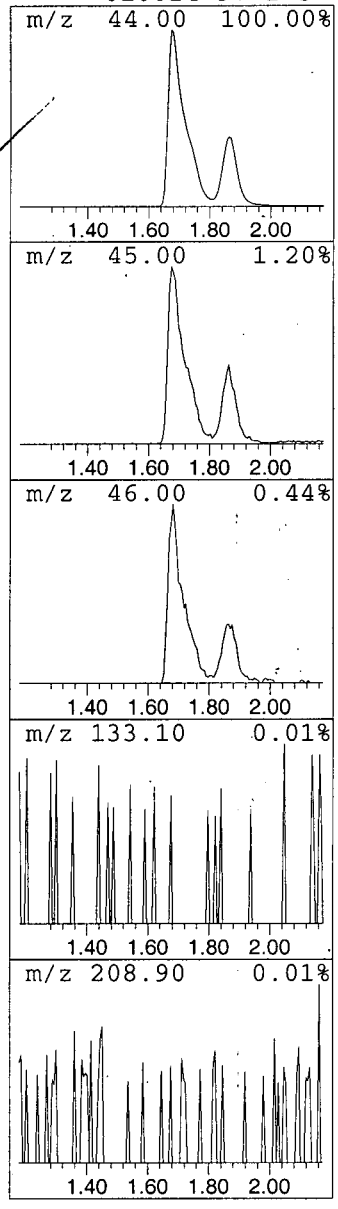
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.68	24.87 ug/L	13528200	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0155

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

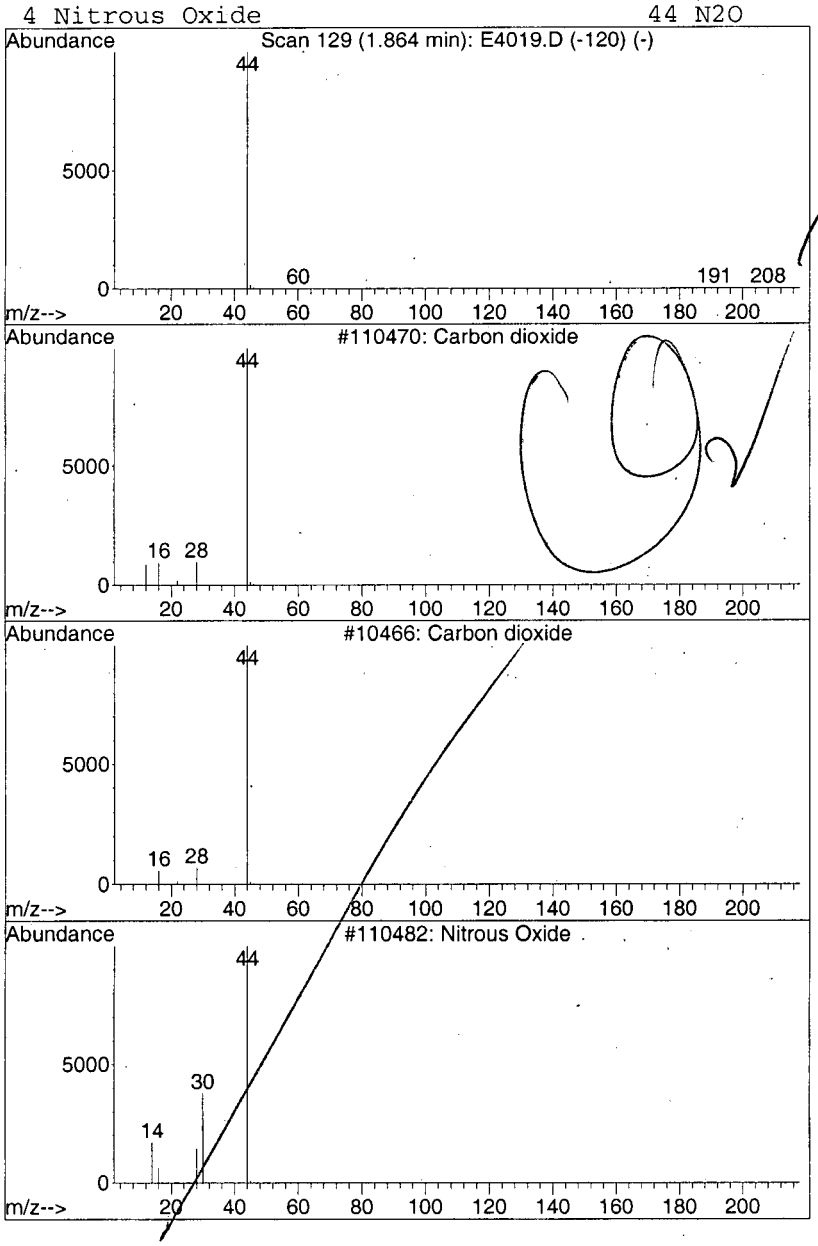
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

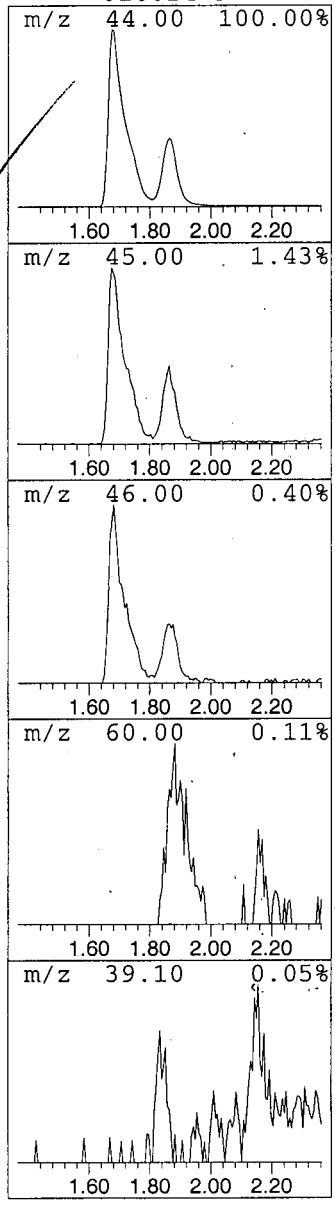
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.86	8.11 ug/L	4413730	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0156

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

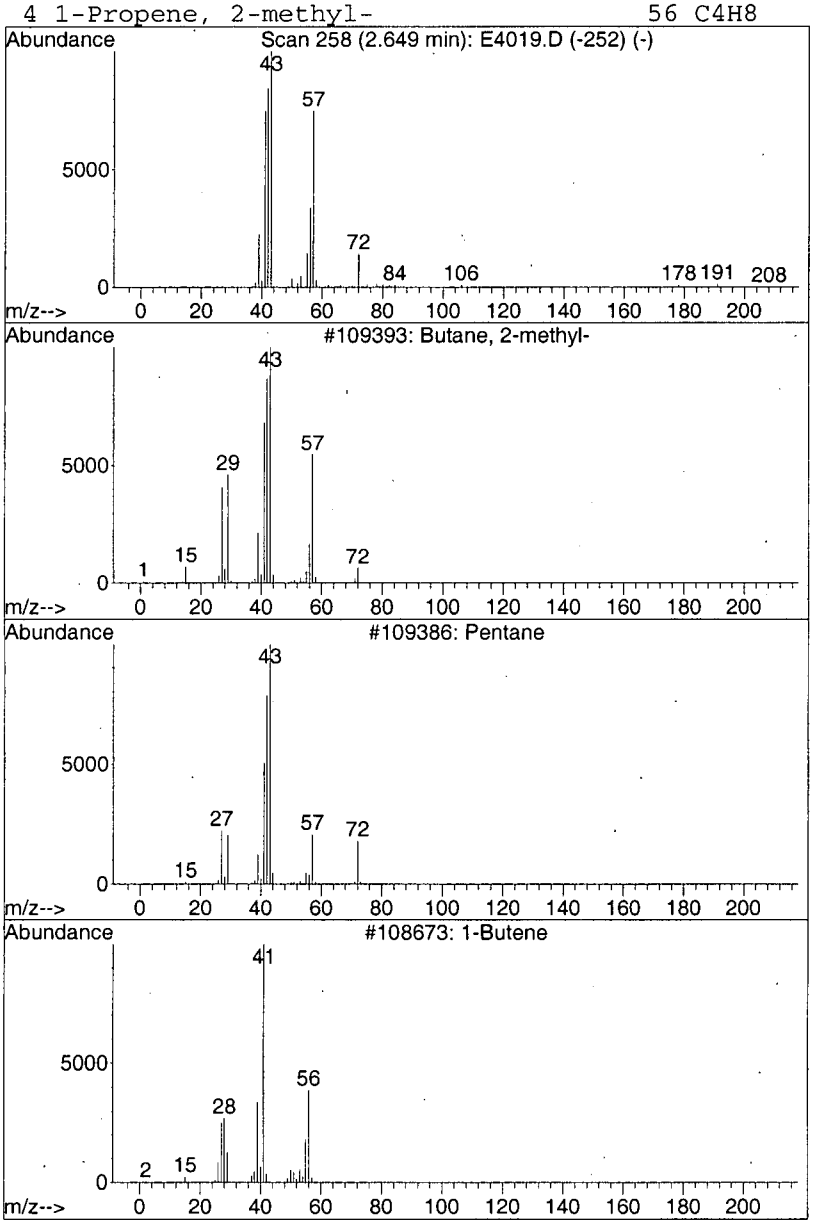
****

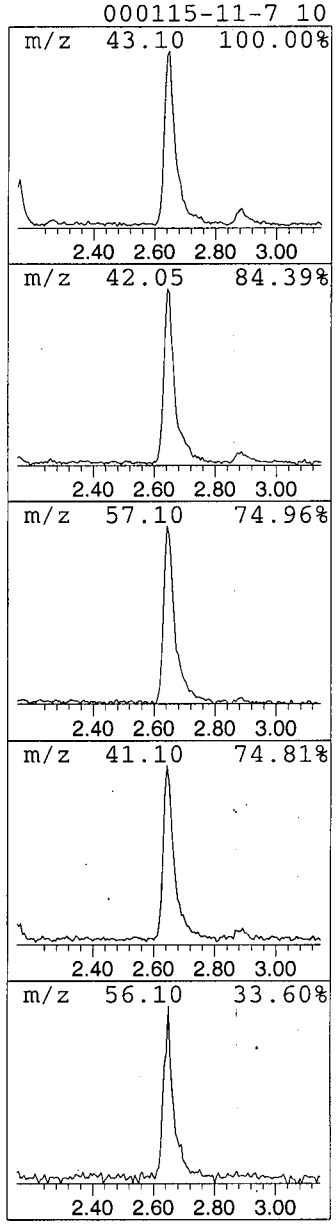
Peak Number 4 Butane, 2-methyl- Concentration Rank 15

Branched alkane

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.65	0.50 ug/L	273545	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	90
2	Pentane	72	C5H12	000109-66-0	42
3	1-Butene	56	C4H8	000106-98-9	10
4	1-Propene, 2-methyl-	56	C4H8	000115-11-7	10





0157

Library Search Compound Report

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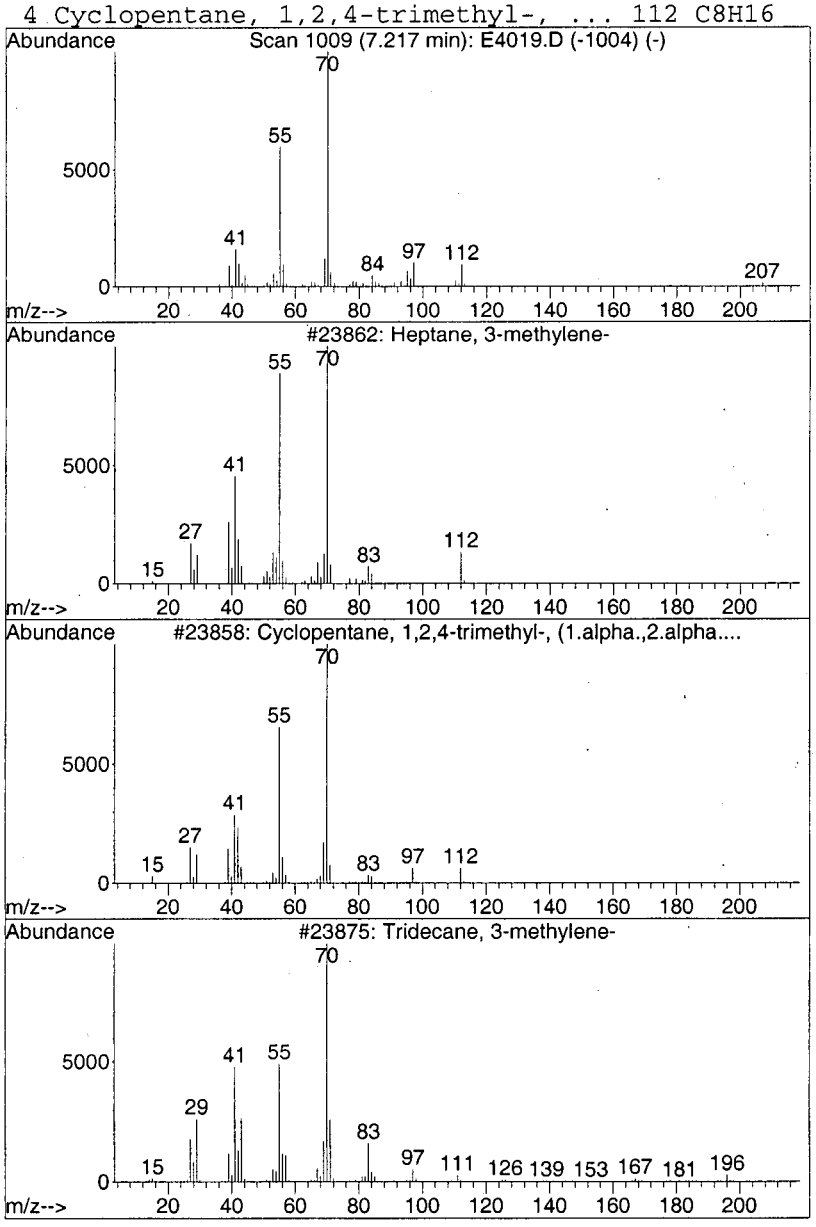
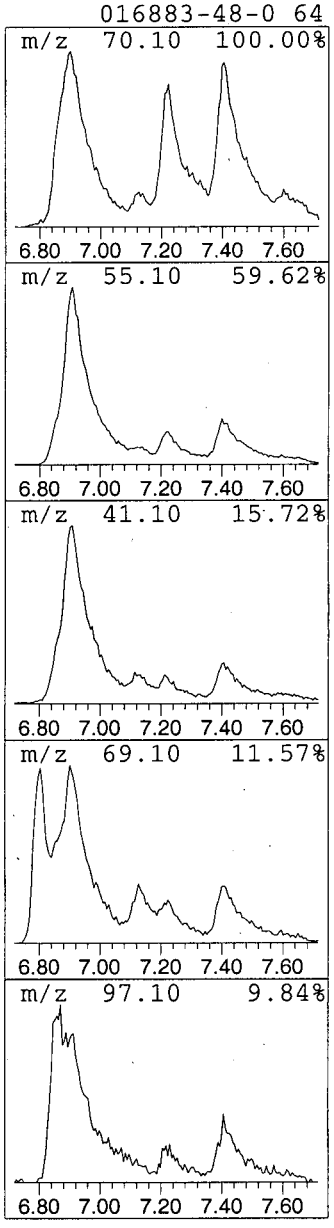
   Data File : C:\MSDCHEM\1\DATA\E4019.D                    Vial: 12
   Acq On    : 03/27/2003  1636                         Operator: AK
   Sample    : Y0SJ3DL                                  Inst    : E-5973
   Misc      : 2762.003DL   25ML     8X                Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number  5  Heptane, 3-methylene-          Concentration Rank 12
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.22	0.67 ug/L	363299	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptane, 3-methylene-	112	C8H16	001632-16-2	72
2	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	004850-28-6	64
3	Tridecane, 3-methylene-	196	C14H28	019780-34-8	64
4	Cyclopentane, 1,2,4-trimethyl-, ...	112	C8H16	016883-48-0	64





Library Search Compound Report

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   Data File : C:\MSDCHEM\1\DATA\E4019.D                    Vial: 12
   Acq On    : 03/27/2003  1636                          Operator: AK
   Sample    : Y0SJ3DL                                   Inst    : E-5973
   Misc      : 2762.003DL   25ML     8X                  Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number  6  Cyclopentane, 1,2,3-trimeth...  Concentration Rank  7
```
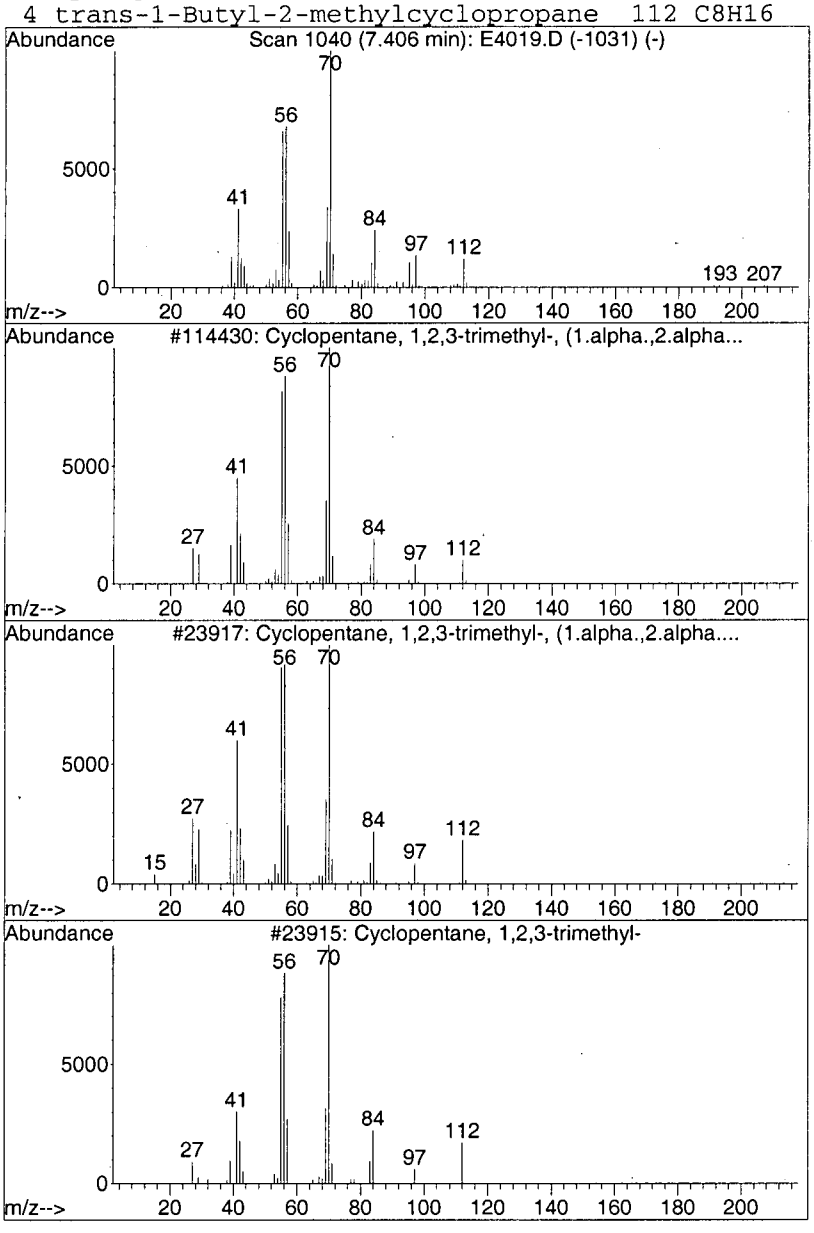
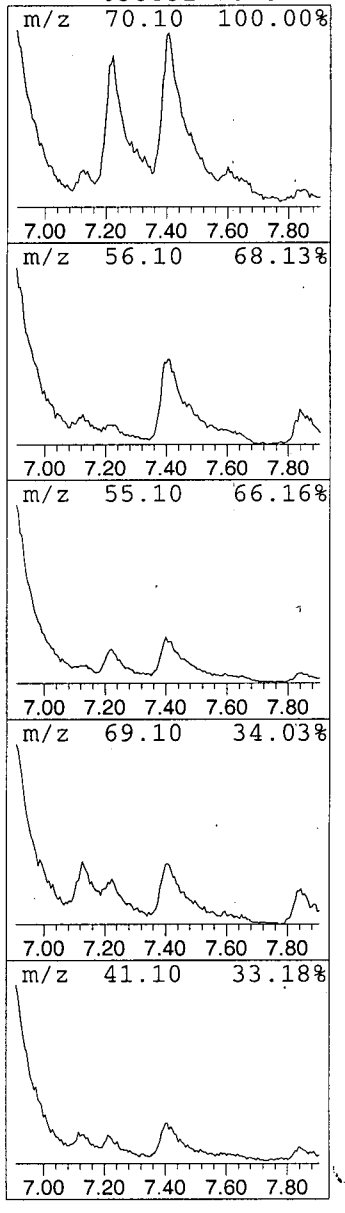

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.41	1.16 ug/L	632013	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	94
2	Cyclopentane, 1,2,3-trimethyl-, ...	112	C8H16	015890-40-1	91
3	Cyclopentane, 1,2,3-trimethyl-	112	C8H16	002815-57-8	90
4	trans-1-Butyl-2-methylcyclopropane	112	C8H16	038851-70-6	72

cyclic alkane





0159

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

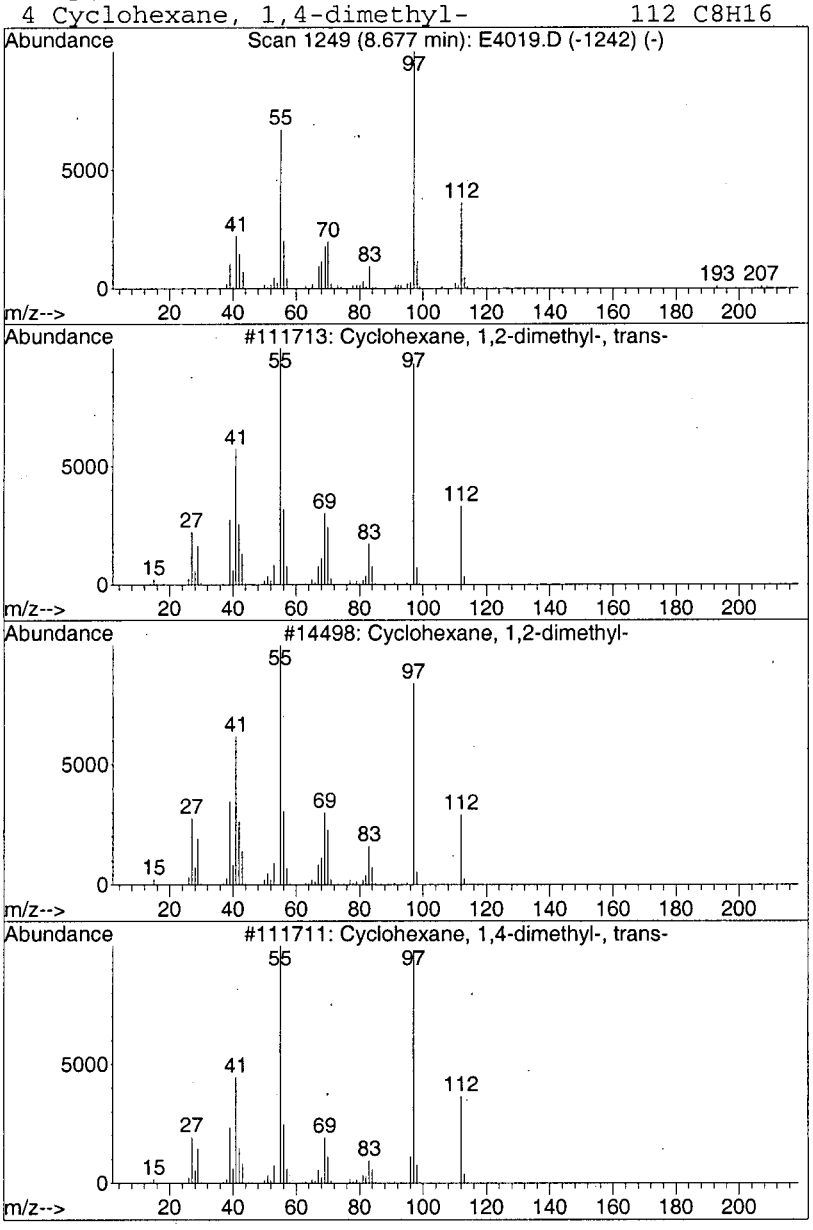
****

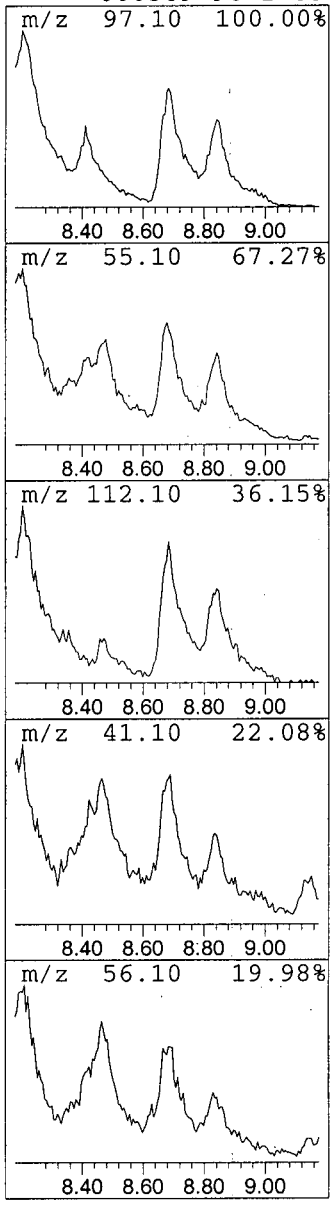
Peak Number 8 Cyclohexane, 1,2-dimethyl-,... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.68	0.74 ug/L	395902	Chlorobenzene-d5	10.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,2-dimethyl-, trans-	112	C8H16	006876-23-9	87
2	Cyclohexane, 1,2-dimethyl-	112	C8H16	000583-57-3	87
3	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	86
4	Cyclohexane, 1,4-dimethyl-	112	C8H16	000589-90-2	83

cyclic alkane





111160

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

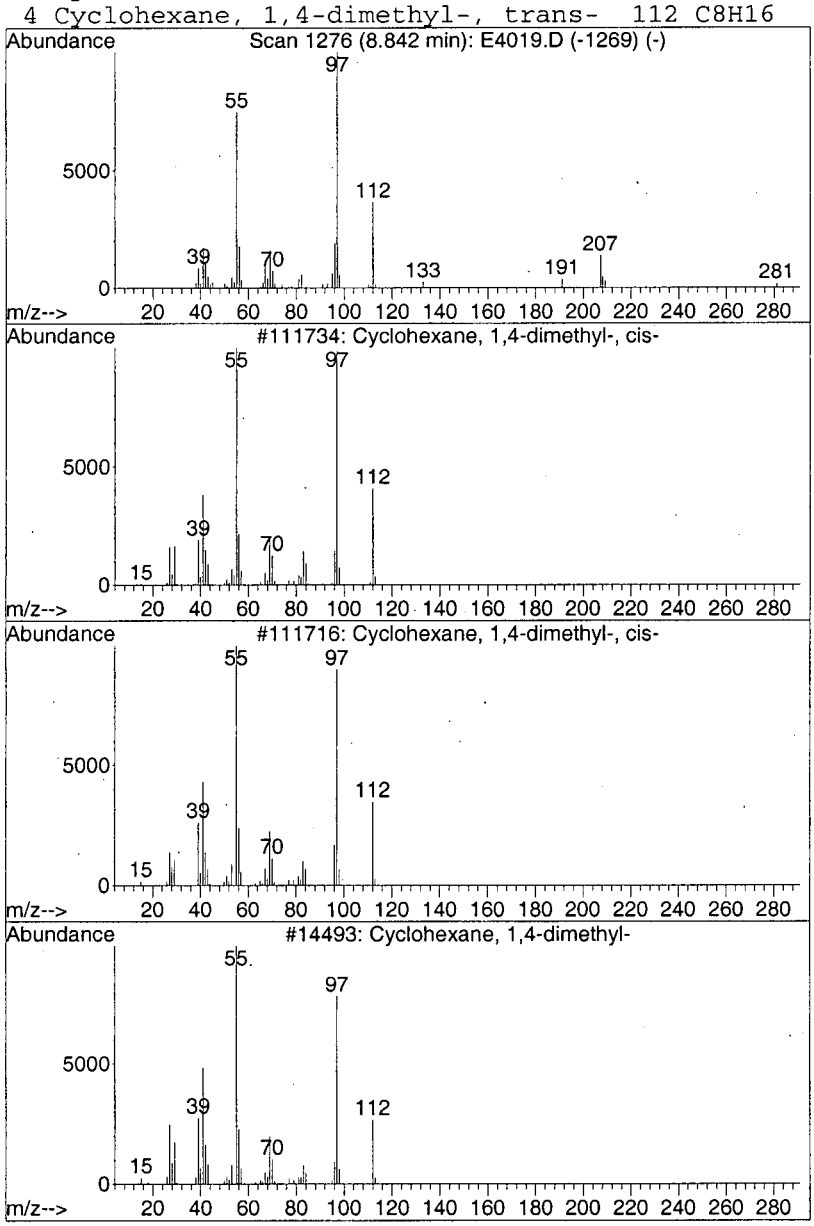
****

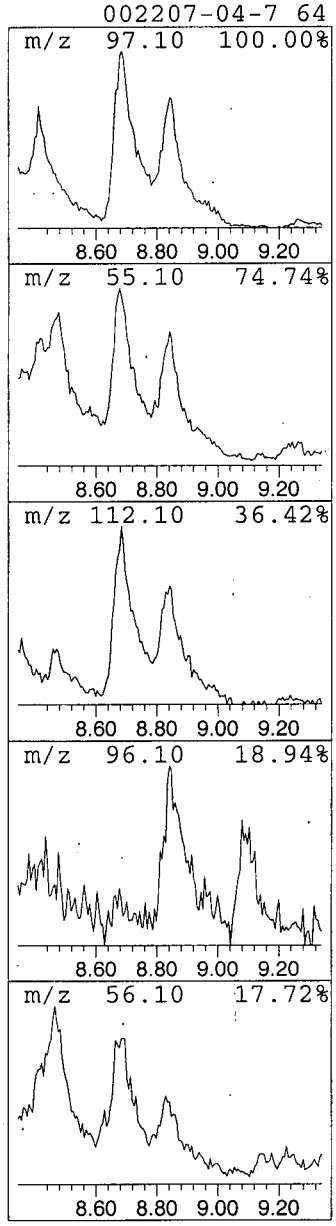
Peak Number 9 Cyclohexane, 1,4-dimethyl-,... Concentration Rank 14

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.84	0.56 ug/L	298690	Chlorobenzene-d5	10.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, 1,4-dimethyl-, cis-	112	C8H16	000624-29-3	74
2	Cyclohexane, 1,4-dimethyl-, cis-	112	C8H16	000624-29-3	74
3	Cyclohexane, 1,4-dimethyl-	112	C8H16	000589-90-2	64
4	Cyclohexane, 1,4-dimethyl-, trans-	112	C8H16	002207-04-7	64

cyclic alkane





1:1

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

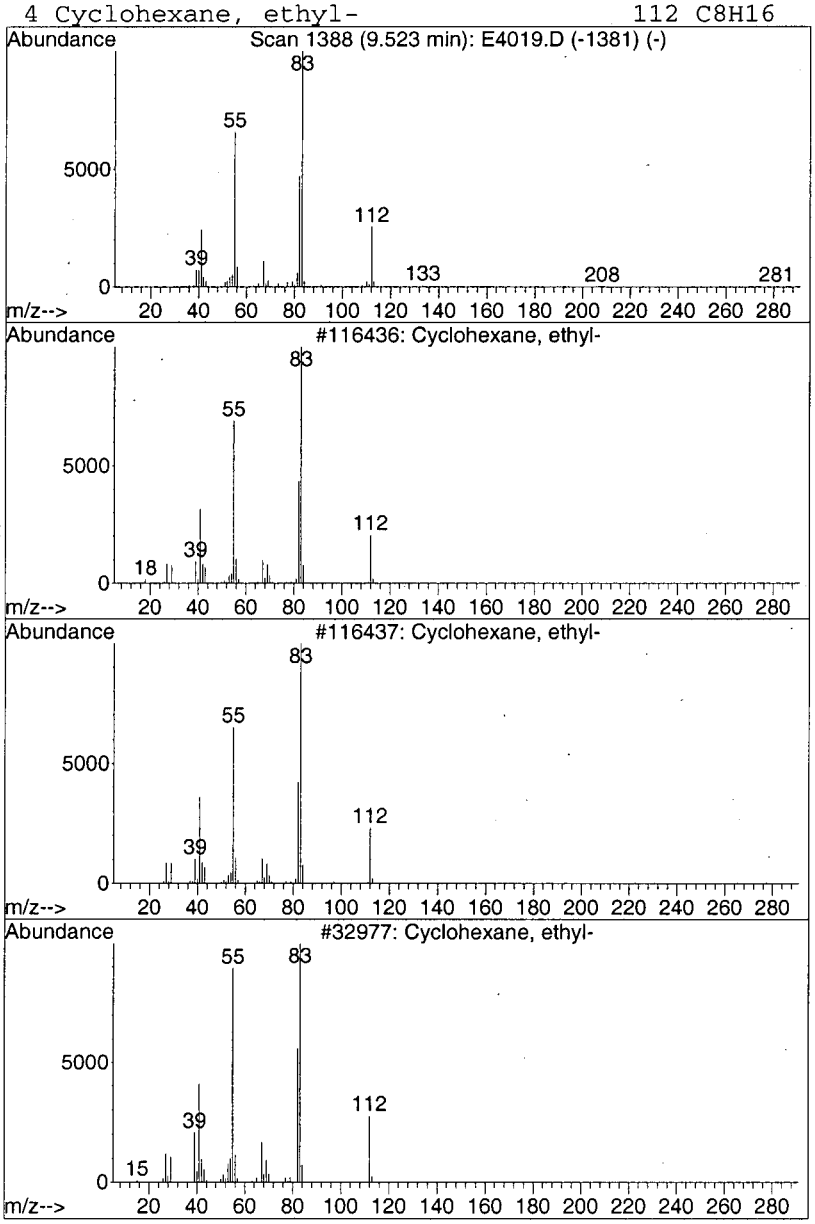
****

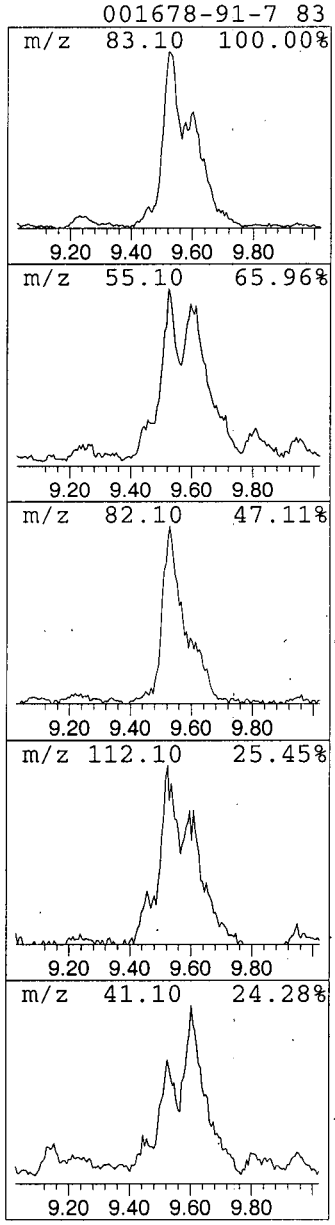
Peak Number 10 Cyclohexane, ethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.52	0.90 ug/L	481330	Chlorobenzene-d5	10.33

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexane, ethyl-	112	C8H16	001678-91-7	90
2	Cyclohexane, ethyl-	112	C8H16	001678-91-7	87
3	Cyclohexane, ethyl-	112	C8H16	001678-91-7	86
4	Cyclohexane, ethyl-	112	C8H16	001678-91-7	83

cyclic alkane





0162

Library Search Compound Report

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   Data File : C:\MSDCHEM\1\DATA\E4019.D                    Vial: 12
   Acq On    : 03/27/2003  1636                          Operator: AK
   Sample    : Y0SJ3DL                                   Inst    : E-5973
   Misc      : 2762.003DL   25ML     8X                  Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 11  Cyclohexane, 1,1,3-trimethyl-   Concentration Rank  3

   R.T.   EstConc          Area       Relative to ISTD        R.T.
 ------------------------------------------------------------------
   9.60    2.01 ug/L     1078830    Chlorobenzene-d5          10.33

  Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
 ------------------------------------------------------------------------
  1 Cyclohexane, 1,1,3-trimethyl-          126 C9H18         003073-66-3 72
  2 Cyclohexane, 1,1,3-trimethyl-          126 C9H18         003073-66-3 72
  3 Cyclohexane, 1-ethyl-1,4-dimethy...    140 C10H20        062238-32-8 64
  4 Cyclohexane, 1-ethyl-1,4-dimethy...    140 C10H20        062238-30-6 64
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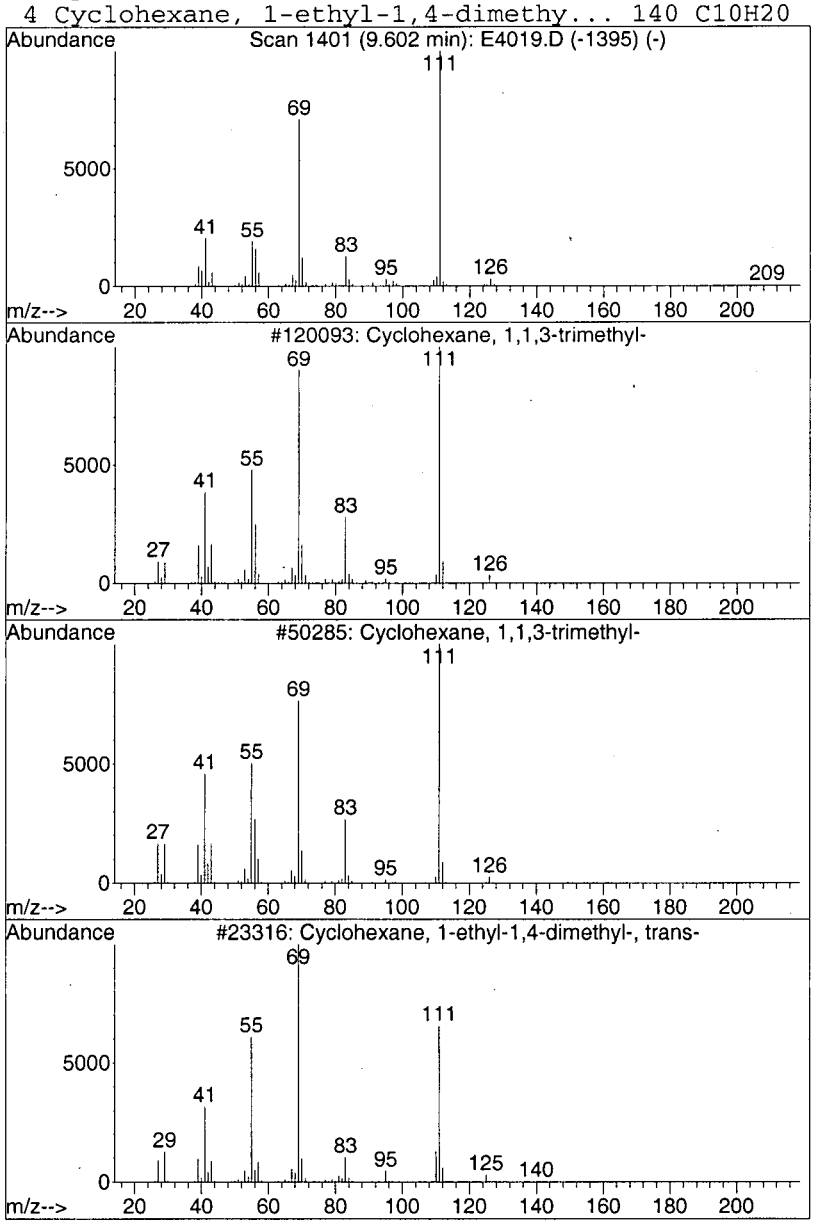
cyclic alkane



Library Search Compound Report

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   Data File : C:\MSDCHEM\1\DATA\E4019.D                    Vial: 12
   Acq On    : 03/27/2003  1636                          Operator: AK
   Sample    : Y0SJ3DL                                   Inst    : E-5973
   Misc      : 2762.003DL   25ML     8X                  Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
*********************************************************************
Peak Number 12  Benzene, propyl-                 Concentration Rank  6

  R.T.   EstConc          Area       Relative to ISTD          R.T.
-------------------------------------------------------------------
 12.26    1.44 ug/L      528913    1,4-Dichlorobenzene-d4     13.19

 Hit# of  5    Tentative ID              MW  MolForm        CAS#        Qual
-------------------------------------------------------------------
 1 Benzene, propyl-                      120 C9H12          000103-65-1 90
 2 Benzene, propyl-                      120 C9H12          000103-65-1 87
 3 Benzene, propyl-                      120 C9H12          000103-65-1 87
 4 Benzene, propyl-                      120 C9H12          000103-65-1 83
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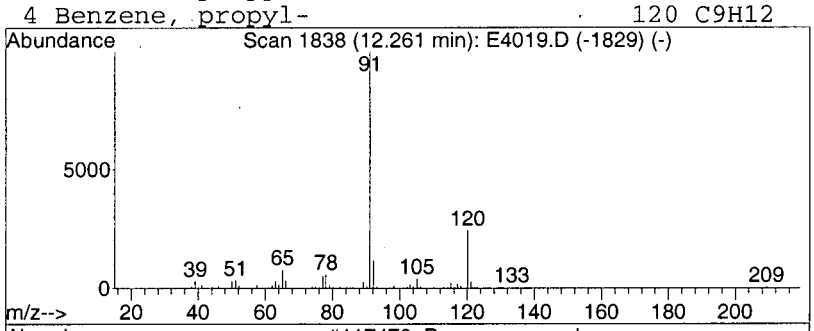
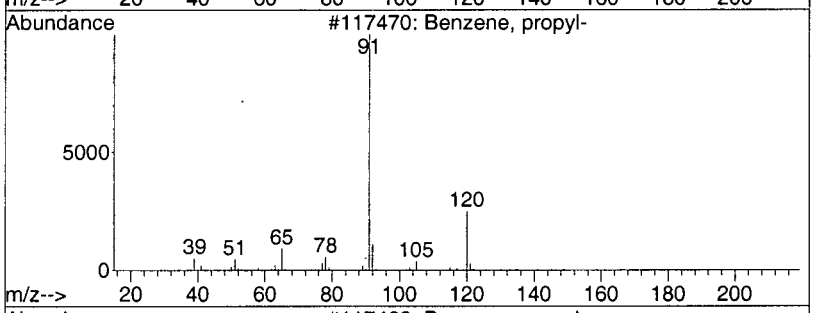
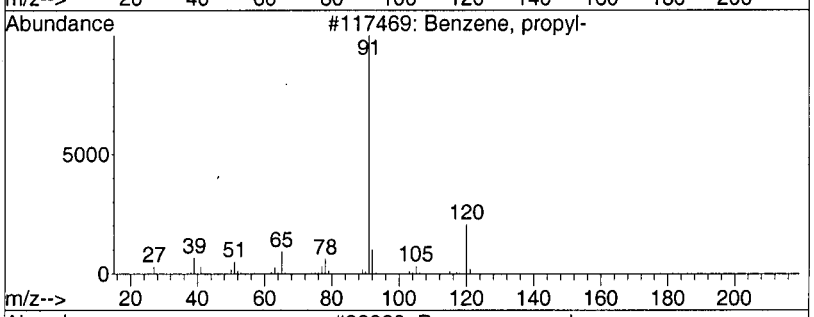
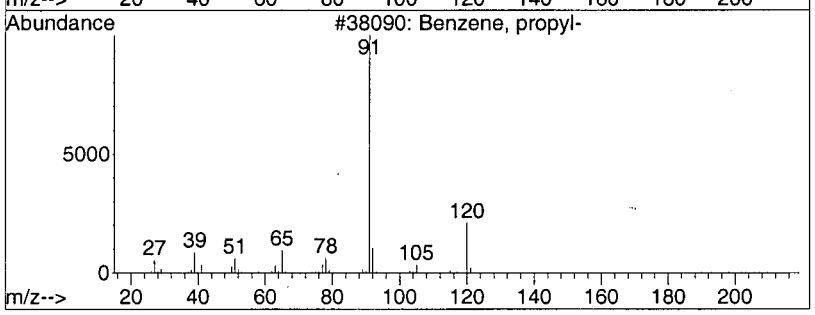
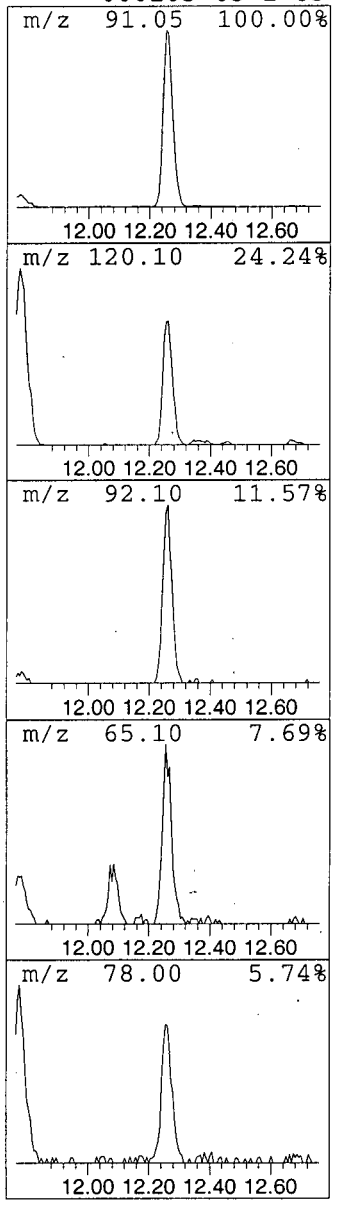










0164

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

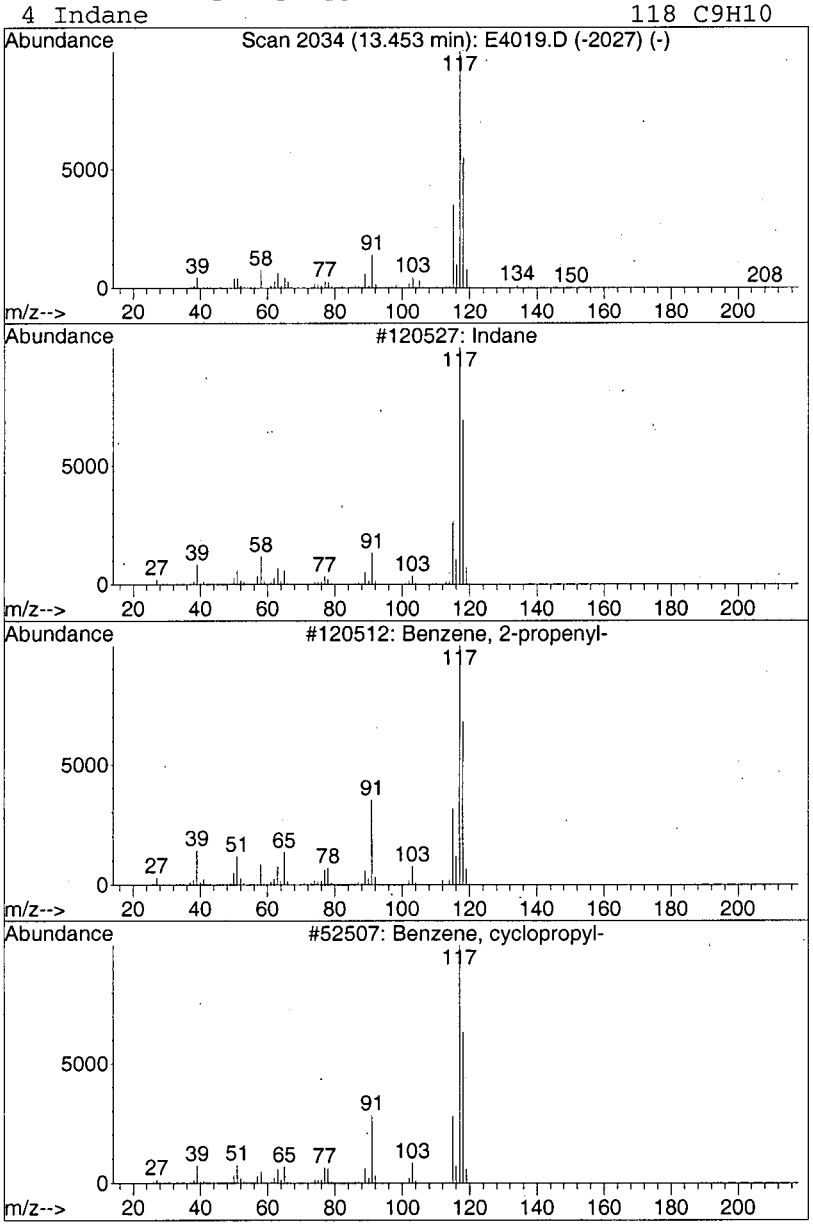
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

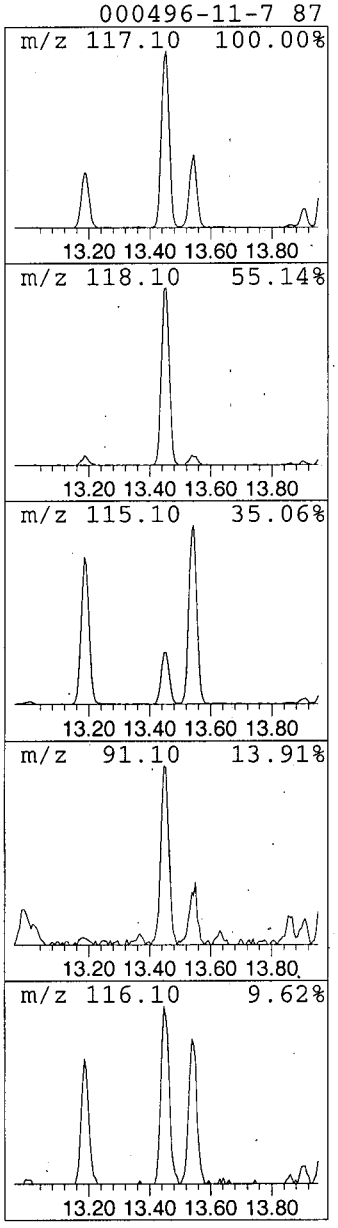
****

Peak Number 13 Indane Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.45	1.62 ug/L	594708	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indane	118	C9H10	000496-11-7	91
2	Benzene, 2-propenyl-	118	C9H10	000300-57-2	87
3	Benzene, cyclopropyl-	118	C9H10	000873-49-4	87
4	Indane	118	C9H10	000496-11-7	87





0165

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

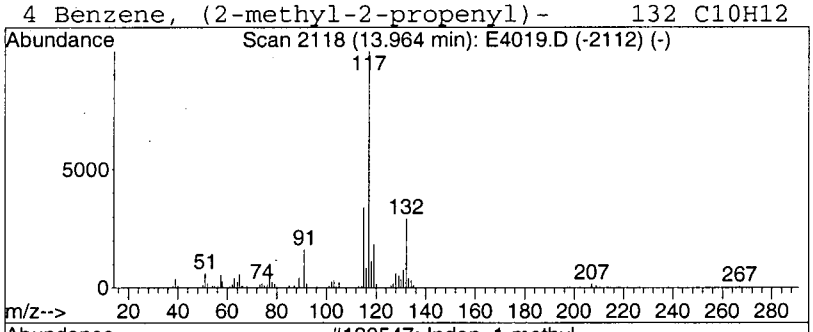
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

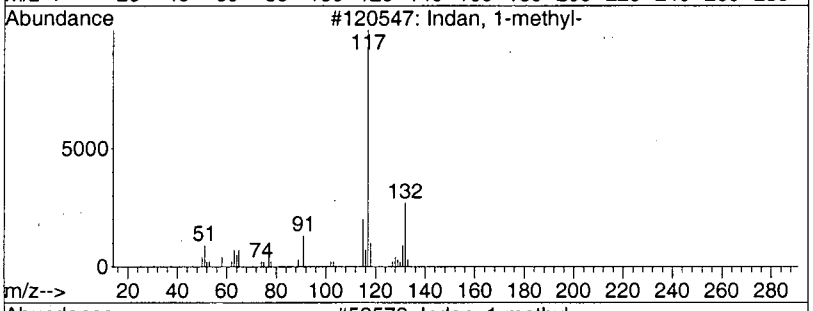
****

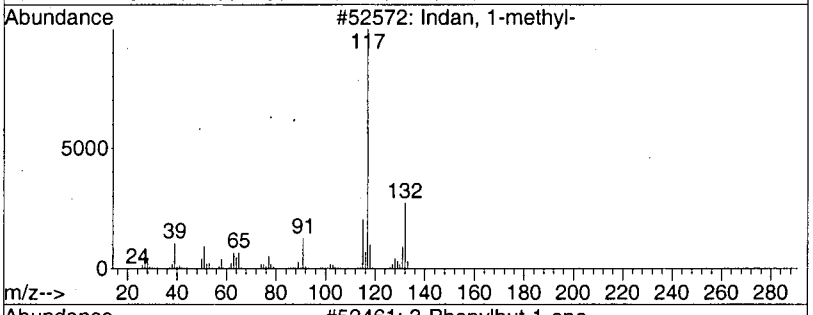
Peak Number 14 Indan, 1-methyl- Concentration Rank 13

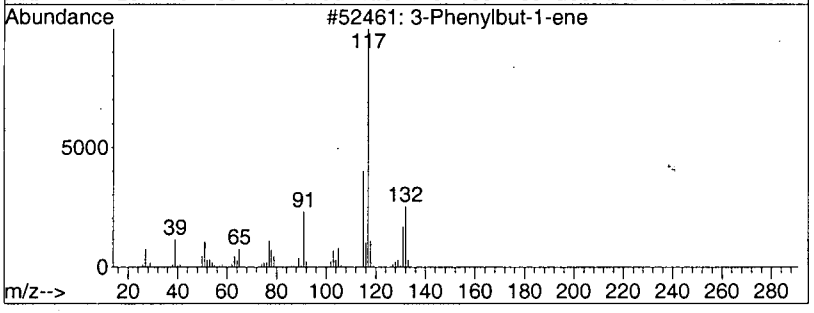
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.96	0.64 ug/L	235402	1,4-Dichlorobenzene-d4	13.19

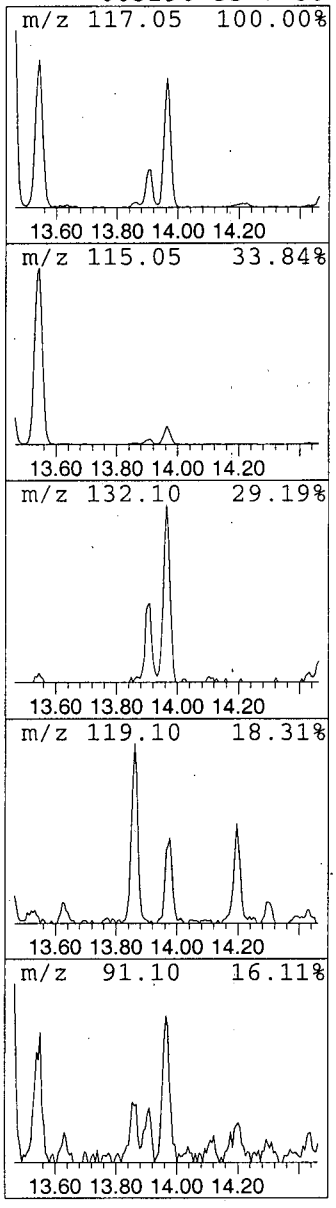
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Indan, 1-methyl-	132	C10H12	000767-58-8	91
2	Indan, 1-methyl-	132	C10H12	000767-58-8	87
3	3-Phenylbut-1-ene	132	C10H12	000934-10-1	83
4	Benzene, (2-methyl-2-propenyl)-	132	C10H12	003290-53-7	80











0166

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4019.D Vial: 12
Acq On : 03/27/2003 1636 Operator: AK
Sample : Y0SJ3DL Inst : E-5973
Misc : 2762.003DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

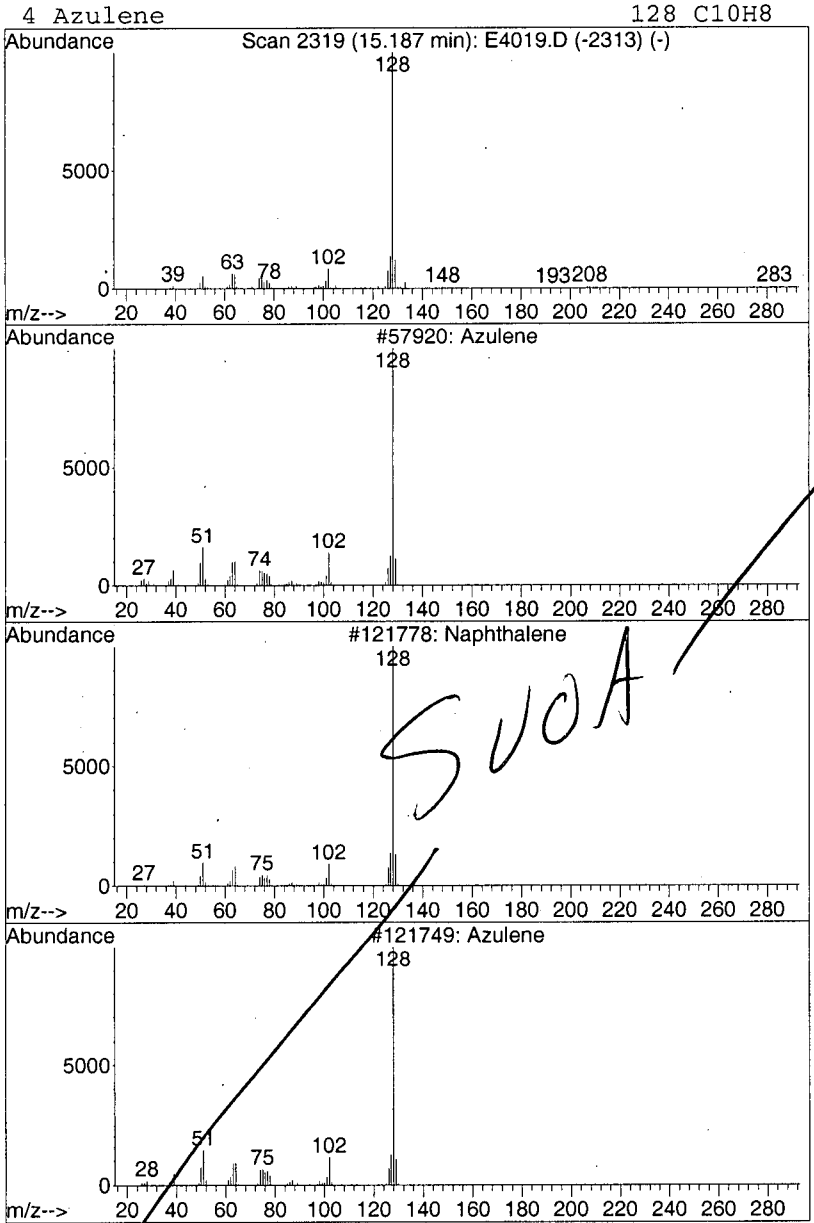
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

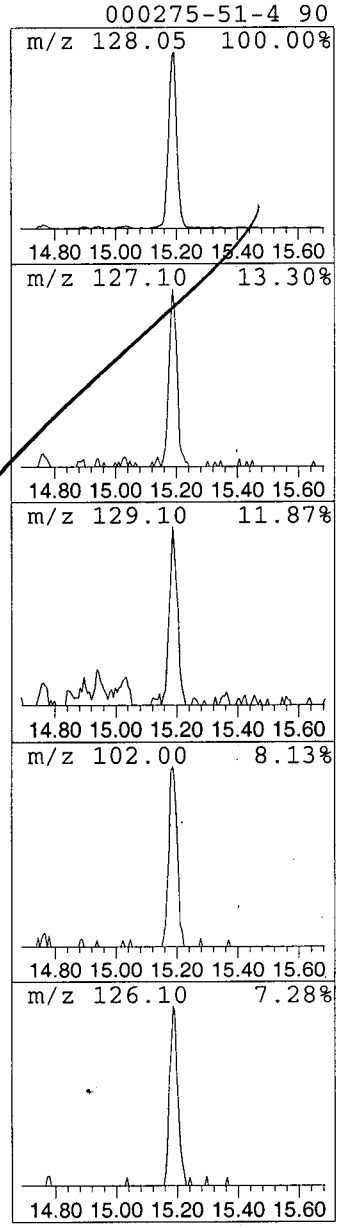
****

Peak Number 15 Azulene Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.19	0.72 ug/L	263815	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Azulene	128	C10H8	~~000275-51-4~~	~~91~~
2	Naphthalene	128	C10H8	000091-20-3	90
3	Azulene	128	C10H8	000275-51-4	90
4	Azulene	128	C10H8	000275-51-4	90





SVOA

.0167

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004 Date Received: 03/20/2003

Lab File ID: E4047 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.21	J
75-01-4	Vinyl Chloride	0.27	J
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	89	E
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.57	
67-64-1	Acetone	4.2	J
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.40	J
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	7.1	
156-59-2	cis-1,2-Dichloroethene	13	
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.97	
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.15	J
107-06-2	1,2-Dichloroethane	0.50	U

.0118

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

Y0SJ4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004 Date Received: 03/20/2003

Lab File ID: E4047 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	60	E
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	3.5	
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.82	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.58	
127-18-4	Tetrachloroethene	63	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	1.0	
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ4

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004 Date Received: 03/20/2003

Lab File ID: E4047 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 6

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01		UNKNOWN	3.04	1.1	J
02	000556-67-2	Cyclotetrasiloxane, octameth	12.23	0.82	JN
03	000108-67-8	Benzene, 1,3,5-trimethyl-	12.85	0.67	JN
04		UNKNOWN	13.00	0.73	J
05		UNKNOWN	13.99	0.56	J
06	000124-19-6	Nonanal	14.11	0.89	JN
07					
08					
09					
10					
11					
12					
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30					

0169

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 09:09:55 2003

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

Kea 04/03/03

GD 4/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1410706	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.31	117	997384	5.00 ug/L	-0.01
60) 1,4-Dichlorobenzene-d4	13.19	152	353389	5.00 ug/L	0.00

System Monitoring Compounds					
4) Vinyl Chloride-d3	2.14	65	519130	4.72 ug/L	-0.01
Spiked Amount 5.000	Range 49 - 138		Recovery	= 94.40%	
7) Chloroethane-d5	2.53	69	425360	4.55 ug/L	-0.01
Spiked Amount 5.000	Range 60 - 126		Recovery	= 91.00%	
10) 1,1-Dichloroethene-d2	3.24	65	236021	4.93 ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery	= 98.60%	
20) 2-Butanone-d5	4.87	46	55996	5.55 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 111.00%	
24) Chloroform-d	5.23	86	536201	4.80 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 96.00%	
26) 1,2-Dichloroethane-d4	5.81	65	266985	4.25 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 85.00%	
32) Benzene-d6	5.85	84	2375666	5.53 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 110.60%	
35) 1,2-Dichloropropane-d6	6.79	67	546586	4.63 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 92.60%	
41) Toluene-d8	8.21	98	2210657	5.36 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 107.20%	
43) trans-1,3-Dichloropropene-	8.53	79	71814	5.00 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 100.00%	
47) 2-Hexanone-d5	9.13	46	85440	5.42 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 108.40%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	194100	4.80 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 96.00%	
61) Bromoform-d	11.51	174	103393	4.26 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 85.20%	
65) 1,2-Dichlorobenzene-d4	13.54	152	413145	5.10 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 102.00%	

Target Compounds					Qvalue
3) Chloromethane	1.97	50	68065	0.21 ug/L J	87
5) Vinyl Chloride	2.14	62	64250	0.27 ug/L J	86
11) 1,1-Dichloroethene	3.26	96	10986516	88.85 ug/L #E	43
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	79560	0.57 ug/L #	68
13) Acetone	3.29	43	29723	4.20 ug/L J	75
17) trans-1,2-Dichloroethene	3.95	96	51885	0.40 ug/L J	88
19) 1,1-Dichloroethane	4.35	63	1432128	7.11 ug/L	99
21) cis-1,2-Dichloroethene	4.93	96	1483176	12.99 ug/L	96
30) Cyclohexane	5.57	56	201017	0.97 ug/L	86
33) Benzene	5.90	78	71777	0.15 ug/L J	100
34) Trichloroethene	6.64	95	6327187	60.50 ug/L E	98
37) 1,2-Dichloropropane	6.91	63	328545	3.47 ug/L	95
42) Toluene	8.30	91	422679	0.82 ug/L	99
45) 1,1,2-Trichloroethane	8.84	97	27688	0.58 ug/L #	38
46) Tetrachloroethene	9.09	164	7036997	63.02 ug/L E	99
53) m/p-Xylene	10.73	106	114684	0.63 ug/L	94
54) o-Xylene	11.30	106	48772	0.31 ug/L J	99
55) Xylene (total)	10.73	106	163441m	1.04 ug/L	

Kea 04/03/03

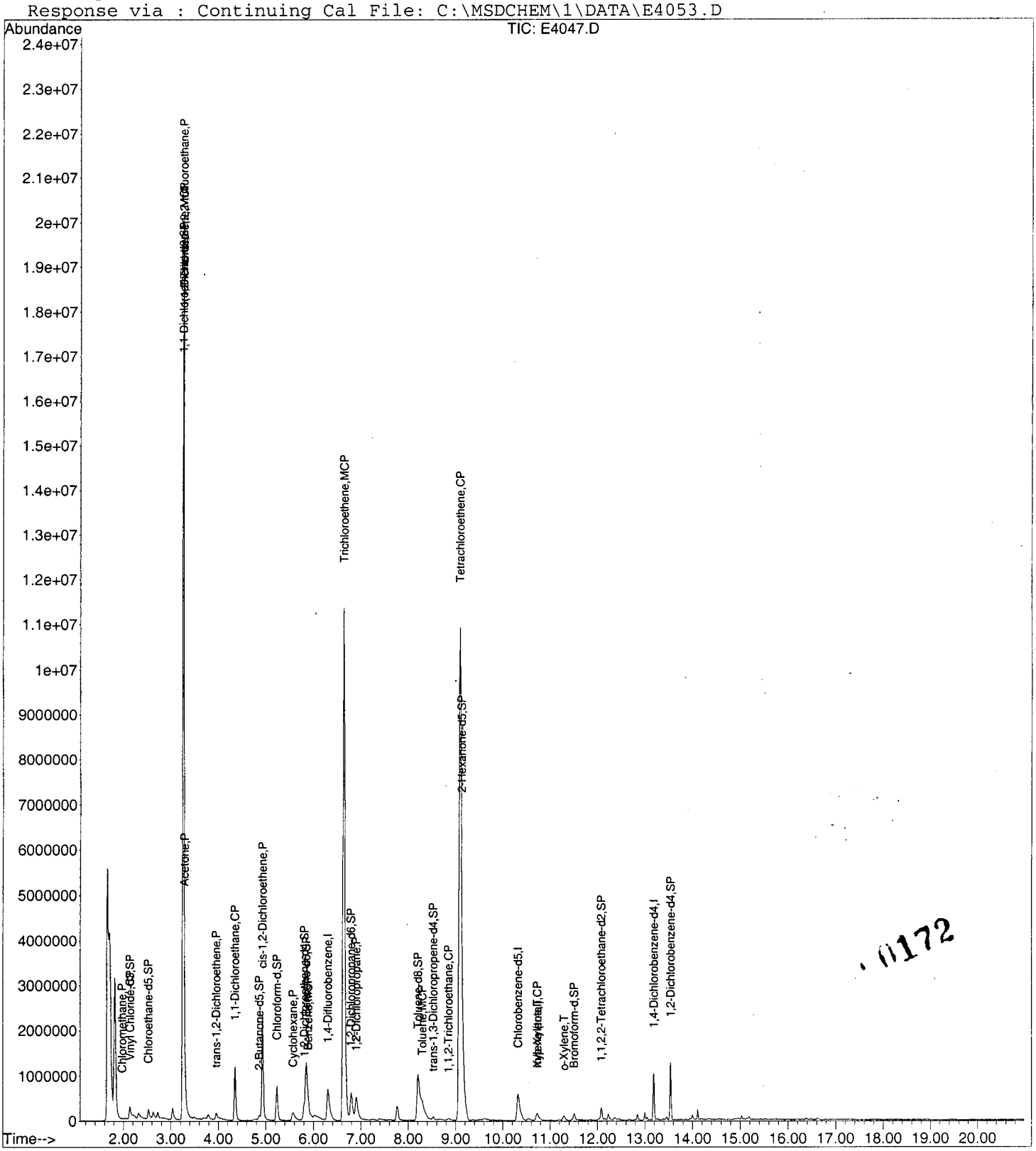
.11171

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

Quantitation Report (QT Reviewed)

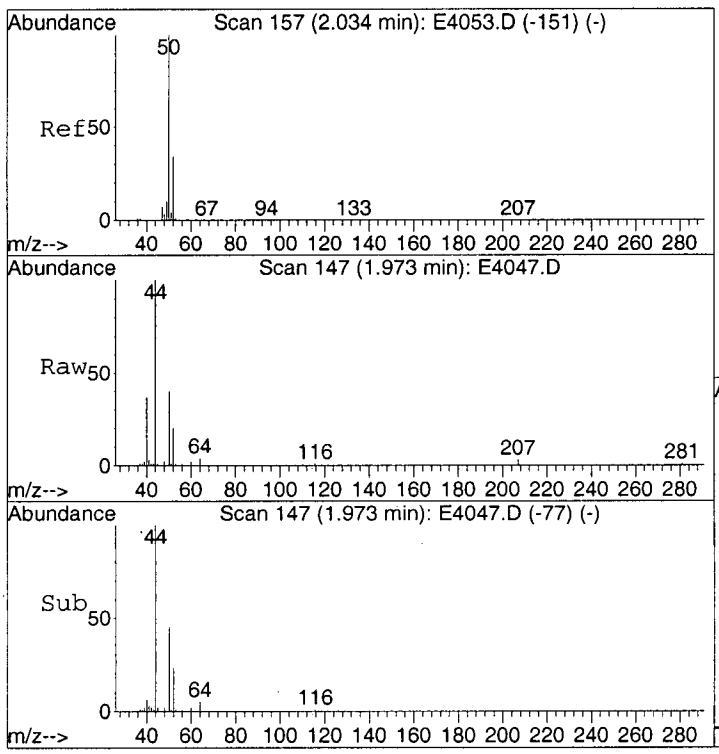
Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:44 2003 Quant Results File: LCE4041.RES

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



.01172

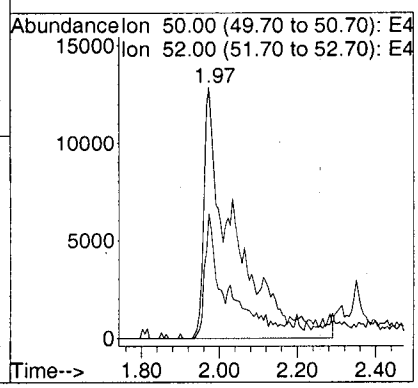
Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

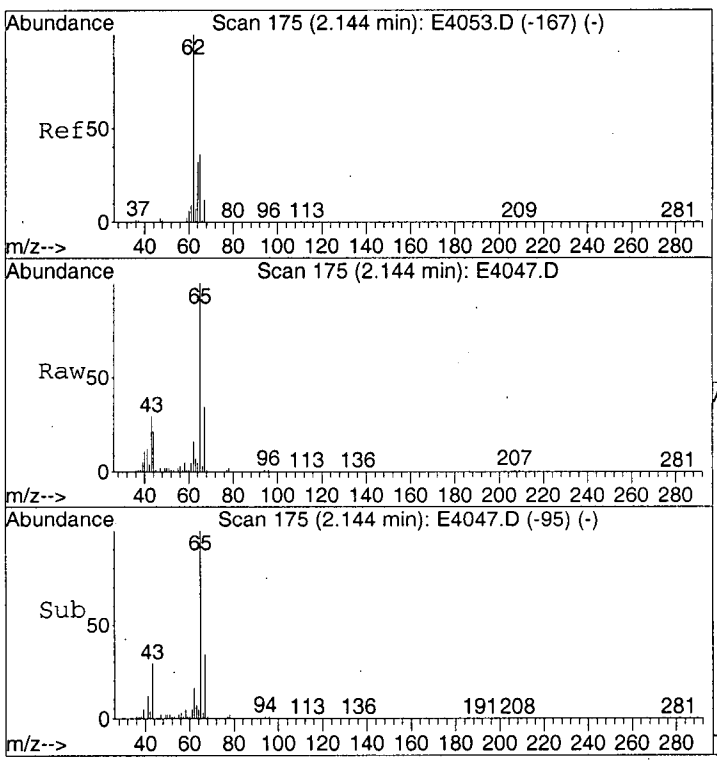


#3
Chloromethane
Concen: 0.21 ug/L
RT: 1.97 min Scan# 147
Delta R.T. -0.07 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 50 Resp: 68065

Ion	Ratio	Lower	Upper
50	100		
52	40.3	12.9	52.9

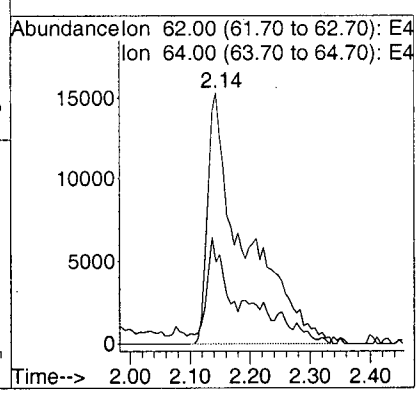




#5
Vinyl Chloride
Concen: 0.27 ug/L
RT: 2.14 min Scan# 175
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 62 Resp: 64250

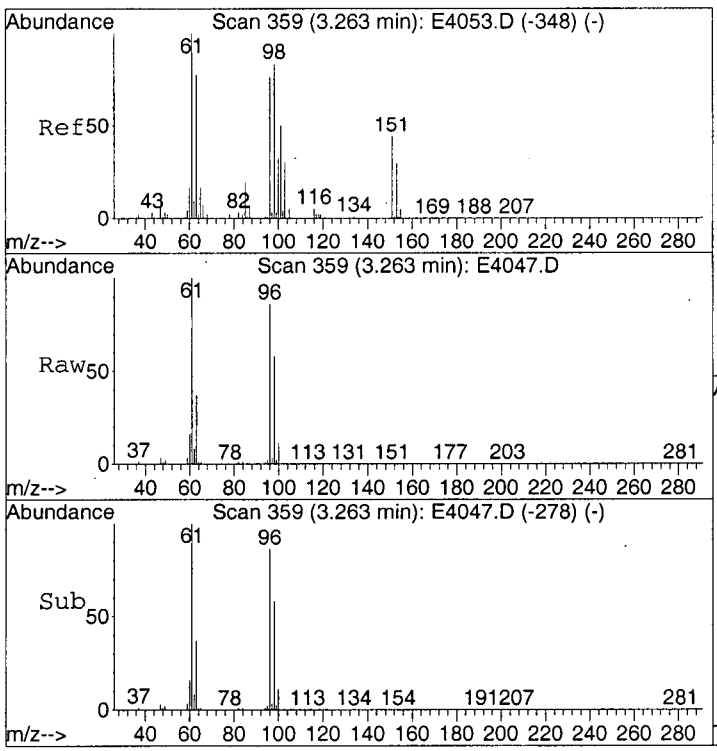
Ion	Ratio	Lower	Upper
62	100		
64	41.2	13.2	53.2



0173

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

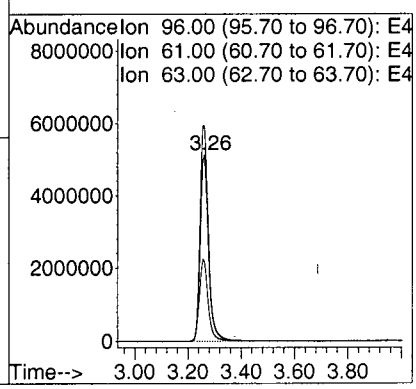
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

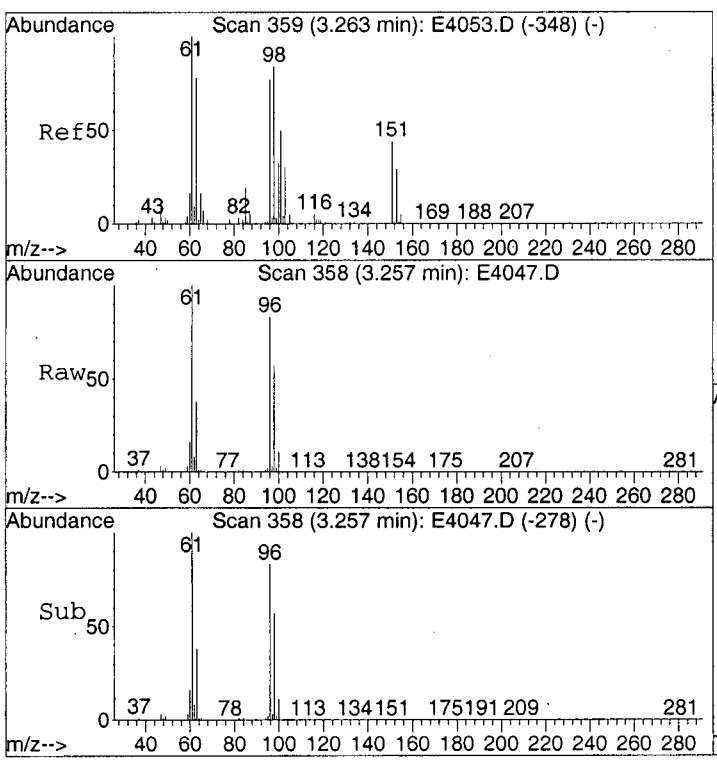


#11
1,1-Dichloroethene
Concen: 88.85 ug/L
RT: 3.26 min Scan# 359
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 96 Resp:10986516

Ion	Ratio	Lower	Upper
96	100		
61	120.3	127.3	167.3#
63	46.6	144.8	184.8#

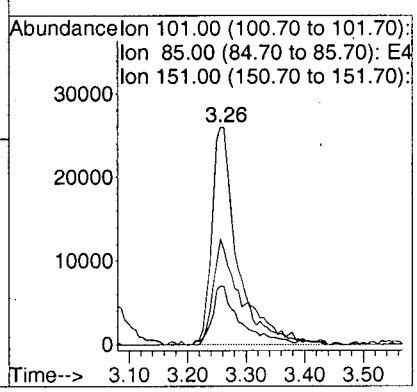




#12
1,1,2-Trichloro-1,2,2-trifluoroethane
Concen: 0.57 ug/L
RT: 3.26 min Scan# 358
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion:101 Resp: 79560

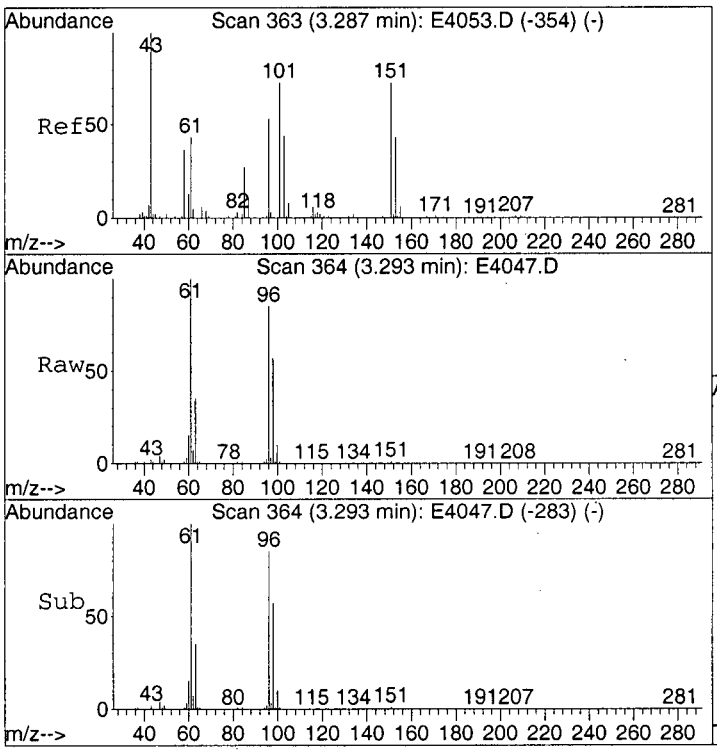
Ion.	Ratio	Lower	Upper
101	100		
85	28.4	20.1	60.1
151	53.1	68.6	108.6#



11174

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

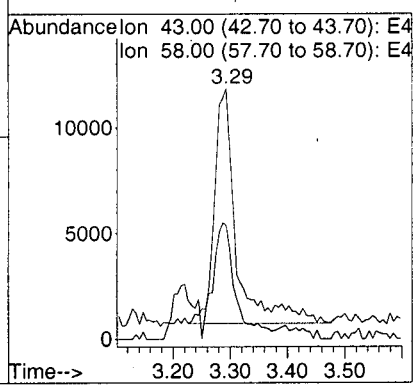
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

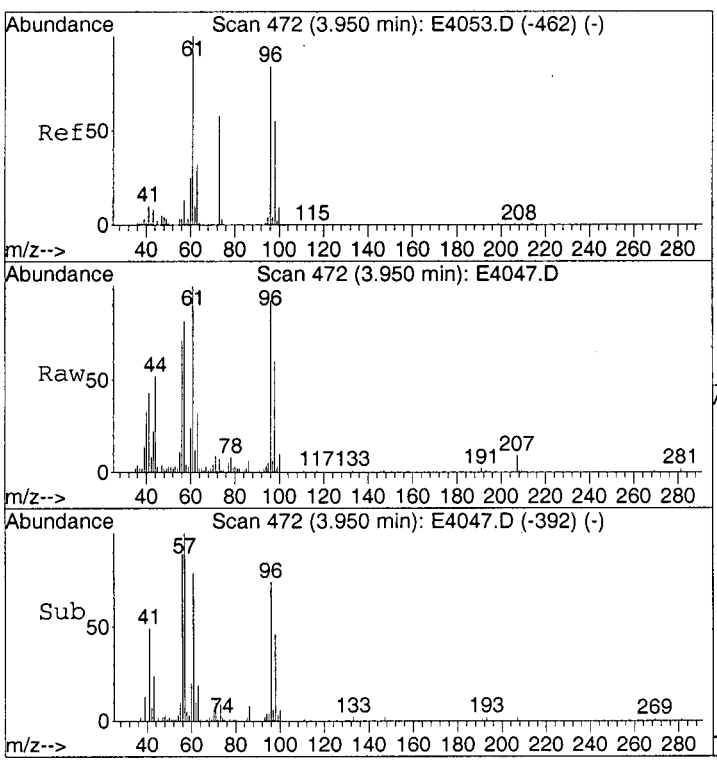


#13
Acetone
Concen: 4.20 ug/L
RT: 3.29 min Scan# 364
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 43 Resp: 29723

Ion	Ratio	Lower	Upper
43	100		
58	56.1	20.7	60.7

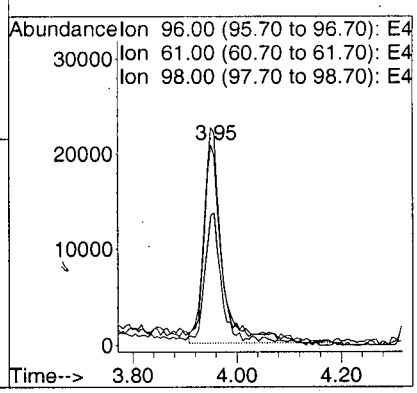




#17
trans-1,2-Dichloroethene
Concen: 0.40 ug/L
RT: 3.95 min Scan# 472
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

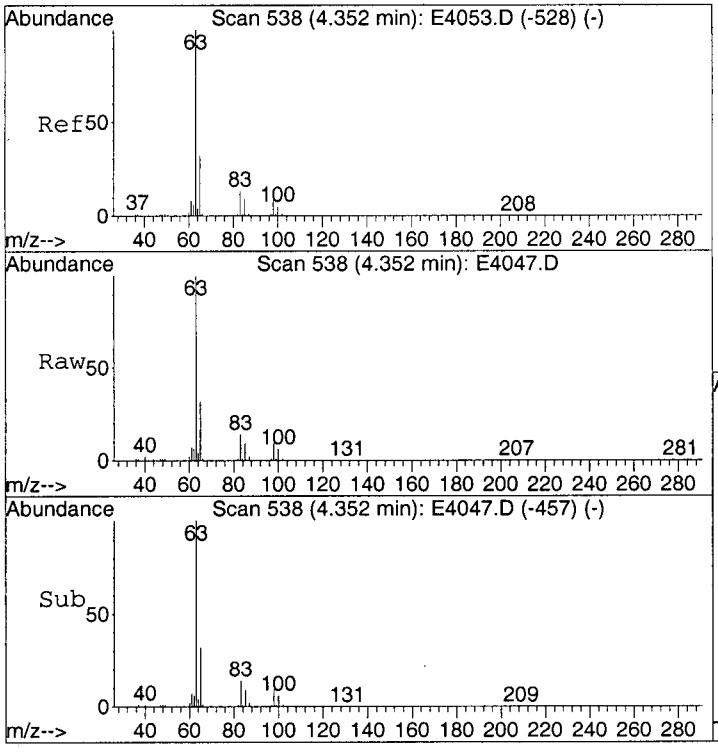
Tgt Ion: 96 Resp: 51885

Ion	Ratio	Lower	Upper
96	100		
61	111.7	110.4	150.4
98	58.6	42.0	82.0



11175

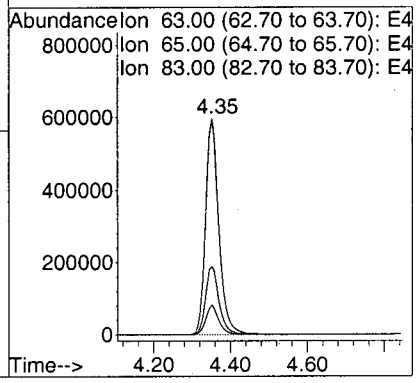
Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

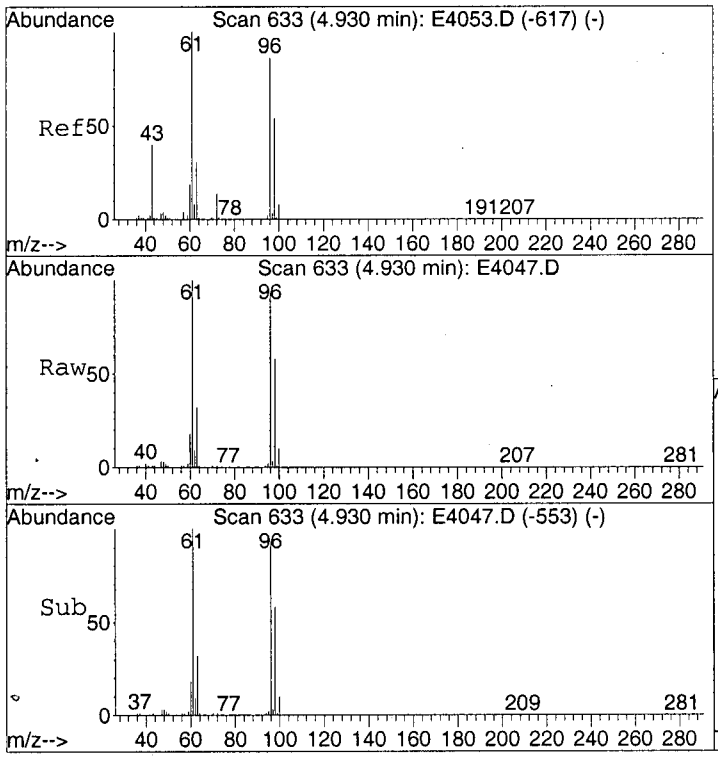


#19
1,1-Dichloroethane
Concen: 7.11 ug/L
RT: 4.35 min Scan# 538
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 63 Resp: 1432128

Ion	Ratio	Lower	Upper
63	100		
65	32.1	11.8	51.8
83	13.0	0.0	32.9

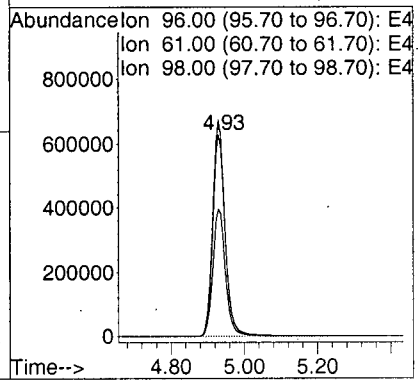




#21
cis-1,2-Dichloroethene
Concen: 12.99 ug/L
RT: 4.93 min Scan# 633
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

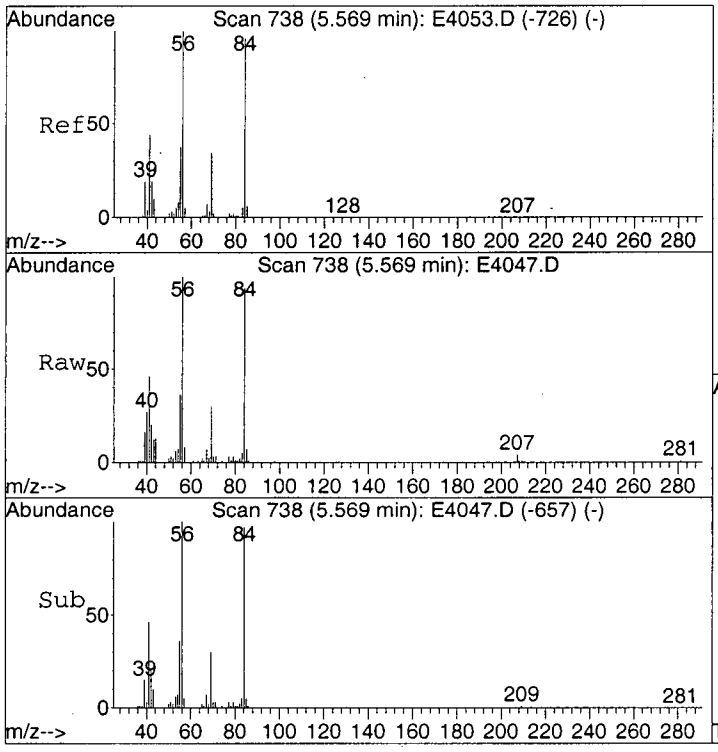
Tgt Ion: 96 Resp: 1483176

Ion	Ratio	Lower	Upper
96	100		
61	108.1	93.0	133.0
98	64.3	41.5	81.5



0176

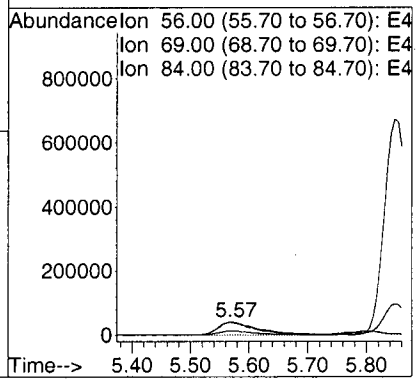
Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

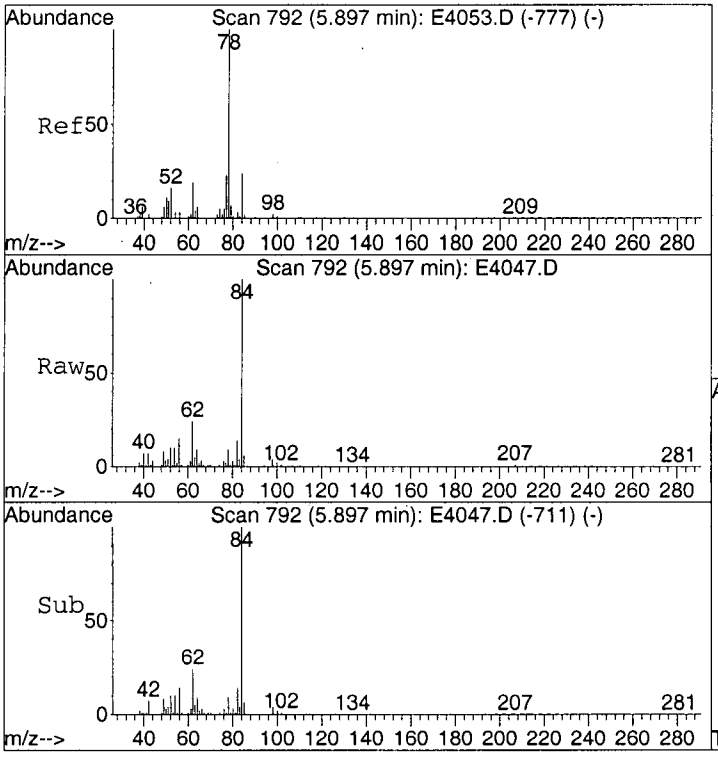


#30
Cyclohexane
Concen: 0.97 ug/L
RT: 5.57 min Scan# 738
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 56 Resp: 201017

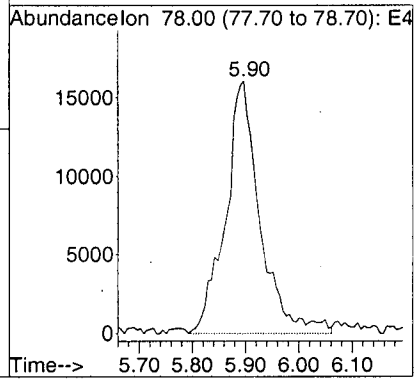
Ion	Ratio	Lower	Upper
56	100		
69	28.9	11.9	51.9
84	85.0	81.9	121.9





#33
Benzene
Concen: 0.15 ug/L
RT: 5.90 min Scan# 792
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

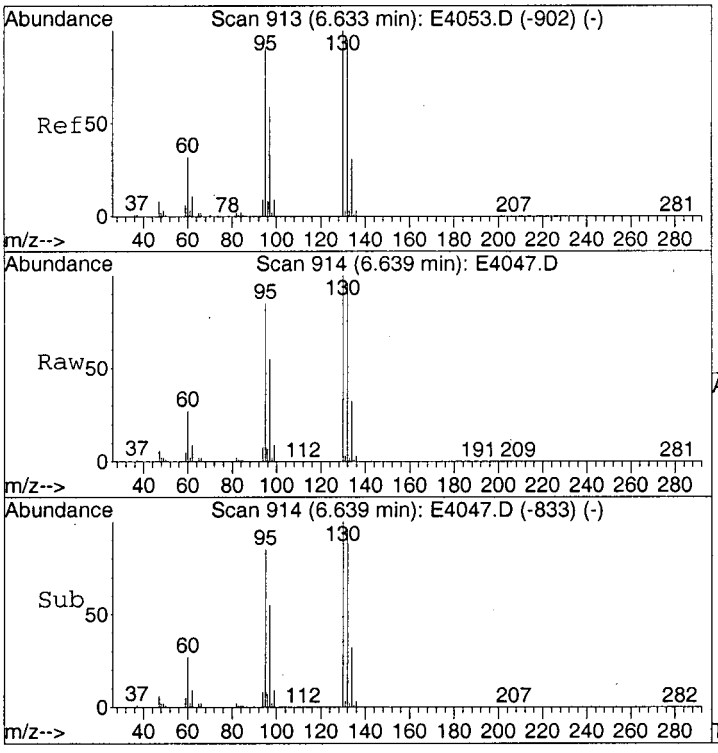
Tgt Ion: 78 Resp: 71777



0177

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

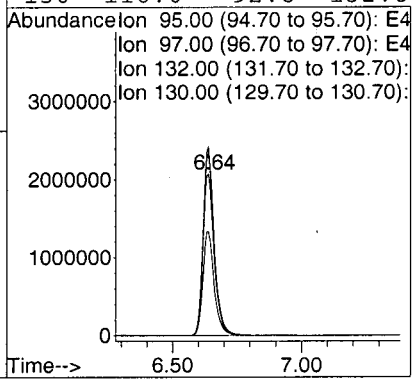
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

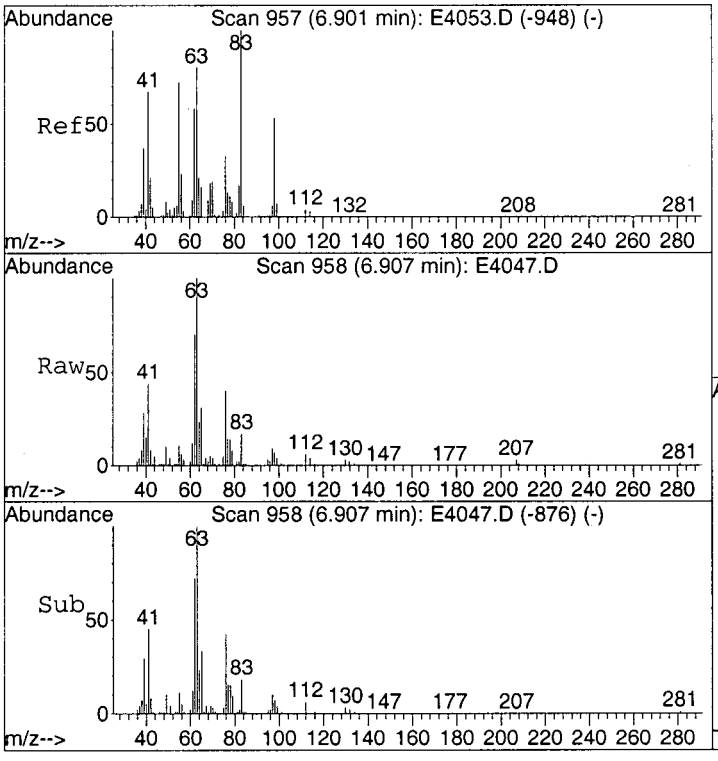


#34
Trichloroethene
Concen: 60.50 ug/L
RT: 6.64 min Scan# 914
Delta R.T. -0.01 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 95 Resp: 6327187

Ion	Ratio	Lower	Upper
95	100		
97	65.3	45.9	85.9
132	111.5	88.6	128.6
130	116.0	92.8	132.8

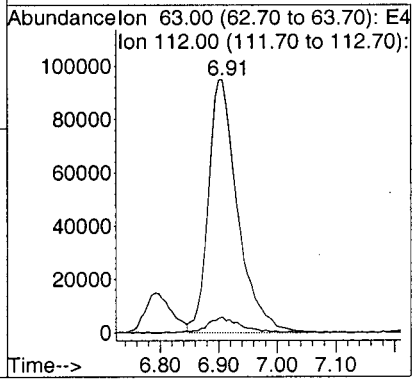




#37
1,2-Dichloropropane
Concen: 3.47 ug/L
RT: 6.91 min Scan# 958
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 63 Resp: 328545

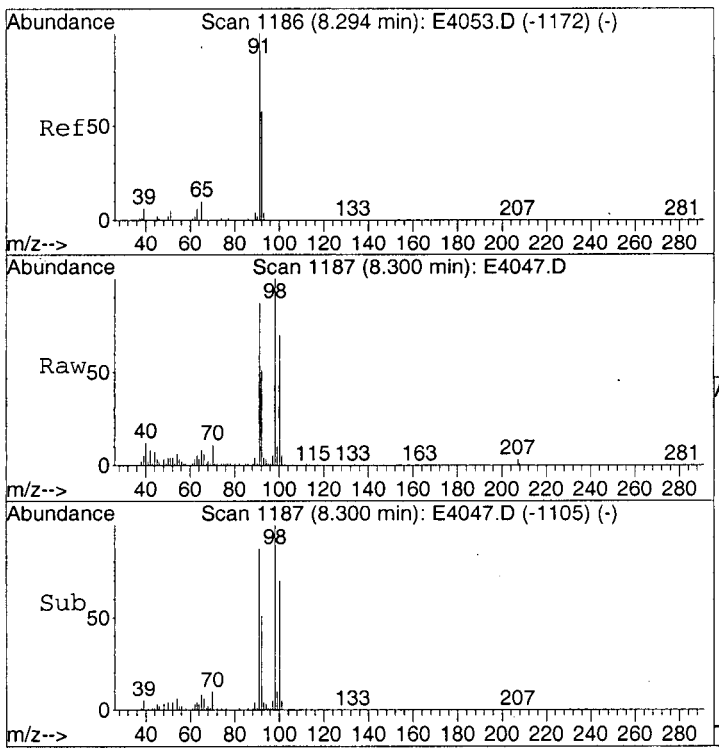
Ion	Ratio	Lower	Upper
63	100		
112	7.0	0.0	25.3



10178

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

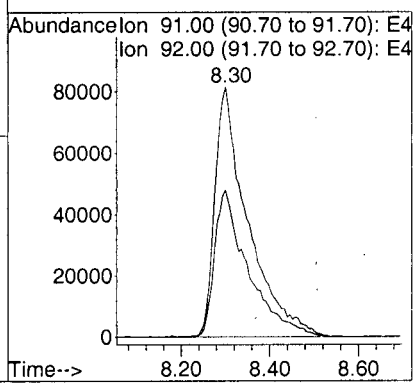
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

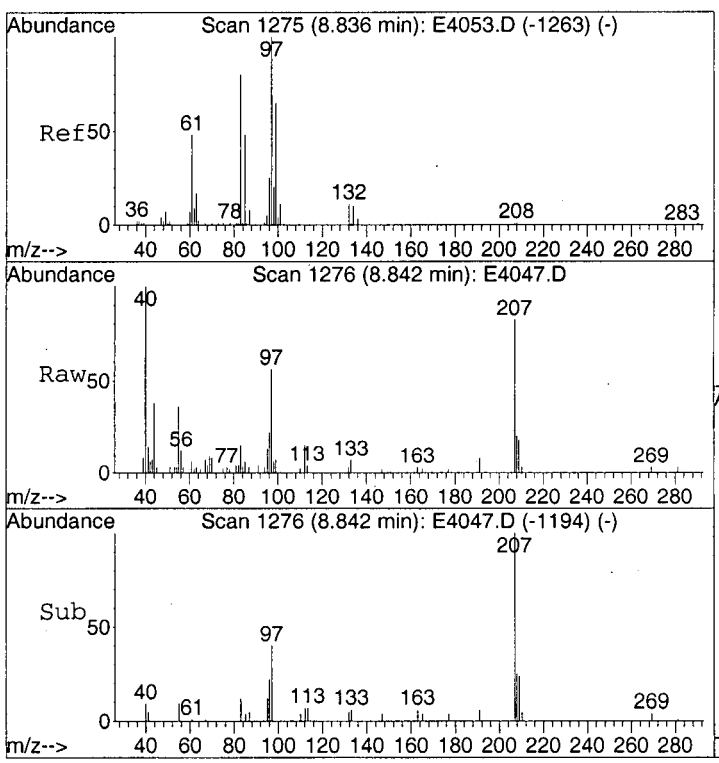


#42
Toluene
Concen: 0.82 ug/L
RT: 8.30 min Scan# 1187
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 91 Resp: 422679

Ion	Ratio	Lower	Upper
91	100		
92	59.9	39.2	79.2

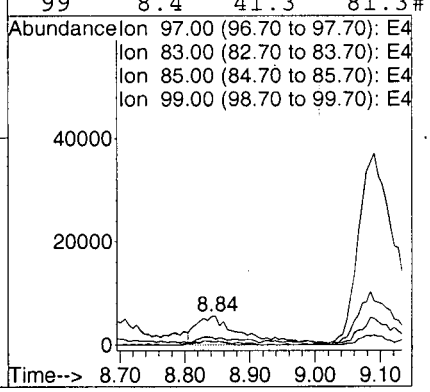




#45
1,1,2-Trichloroethane
Concen: 0.58 ug/L
RT: 8.84 min Scan# 1276
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion: 97 Resp: 27688

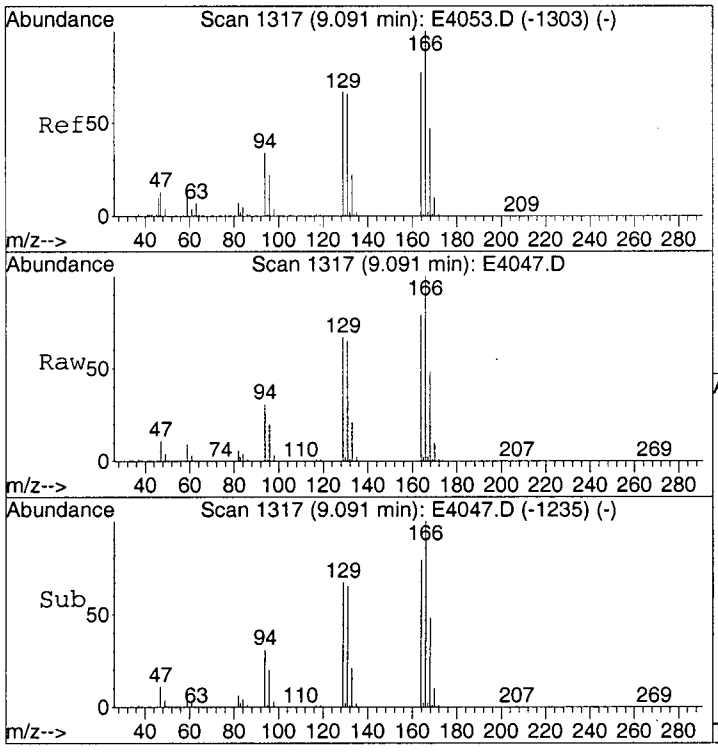
Ion	Ratio	Lower	Upper
97	100		
83	27.2	60.0	100.0#
85	11.5	30.8	70.8#
99	8.4	41.3	81.3#



1179

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

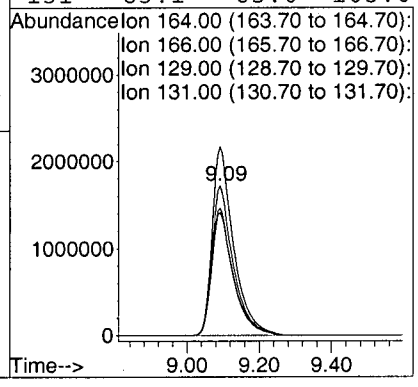
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

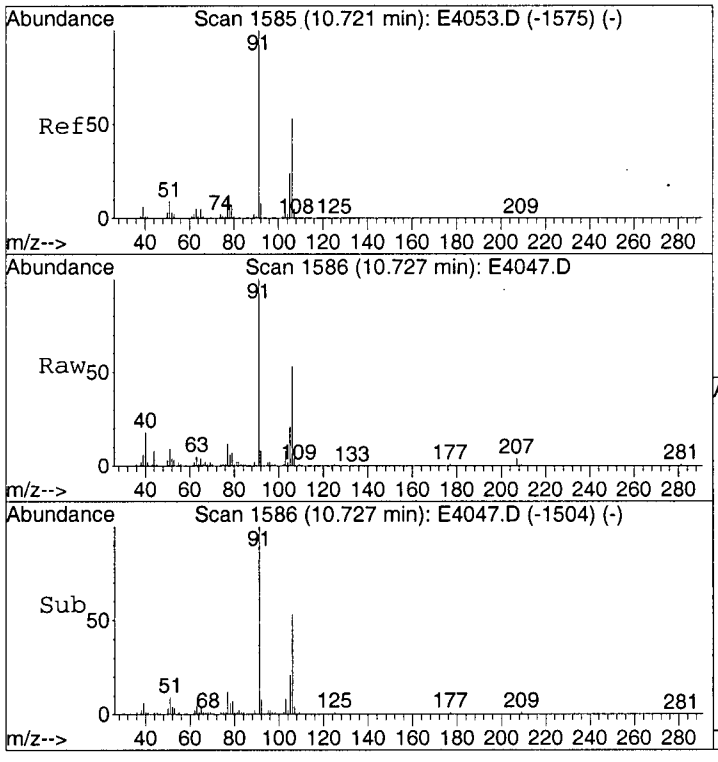


#46
Tetrachloroethene
Concen: 63.02 ug/L
RT: 9.09 min Scan# 1317
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion:164 Resp: 7036997

Ion	Ratio	Lower	Upper
164	100		
166	127.1	108.0	148.0
129	86.2	67.5	107.5
131	83.1	65.0	105.0

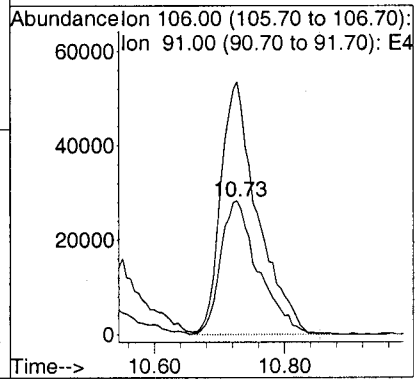




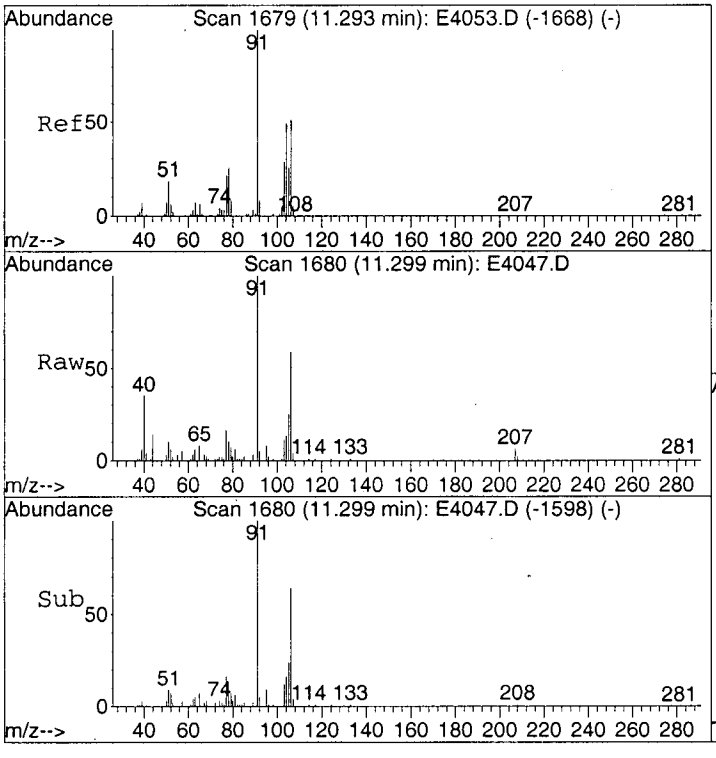
#53
m/p-Xylene
Concen: 0.63 ug/L
RT: 10.73 min Scan# 1586
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion:106 Resp: 114684

Ion	Ratio	Lower	Upper
106	100		
91	183.2	172.5	212.5



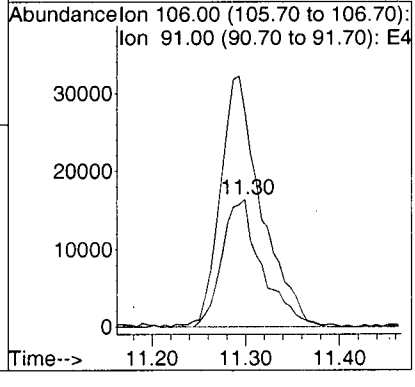
Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

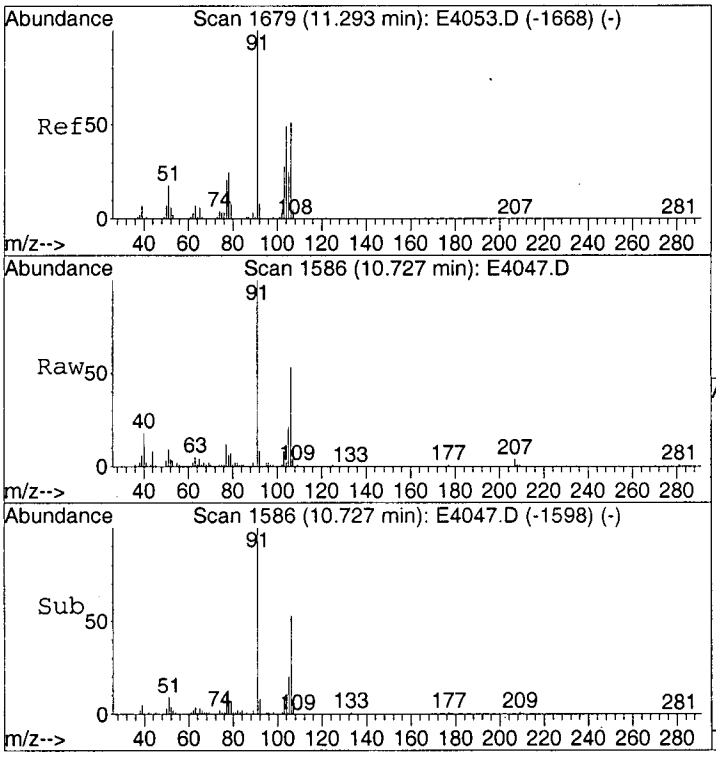


#54
o-Xylene
Concen: 0.31 ug/L
RT: 11.30 min Scan# 1680
Delta R.T. -0.00 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion:106 Resp: 48772

Ion	Ratio	Lower	Upper
106	100		
91	201.0	182.7	222.7

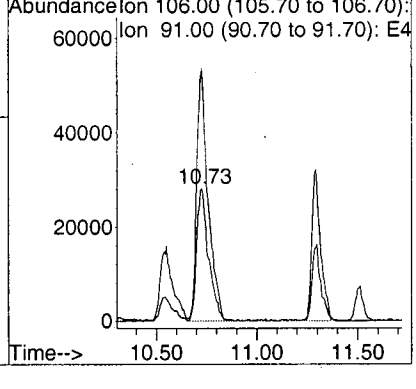




#55
Xylene (total)
Concen: 1.04 ug/L m
RT: 10.73 min Scan# 1586
Delta R.T. -0.57 min
Lab File: E4047.D
Acq: 28 Mar 2003 18:20

Tgt Ion:106 Resp: 163441

Ion	Ratio	Lower	Upper
106	100		
91	60.0	182.7	222.7#



01181

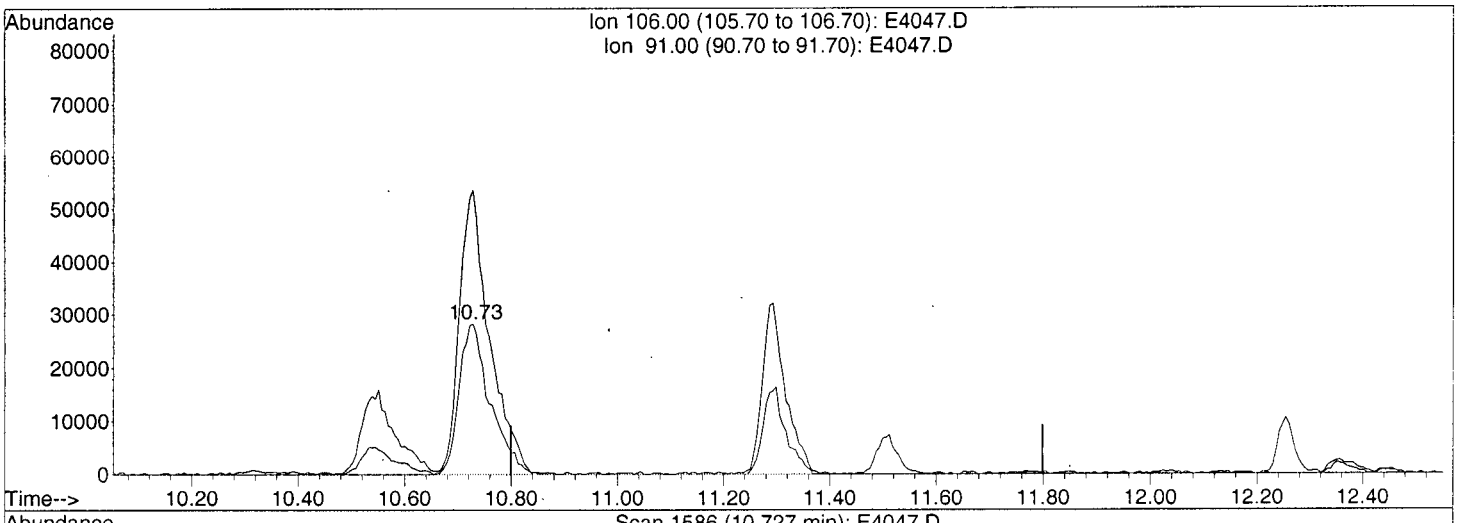
Quantitation Report (Qedit)

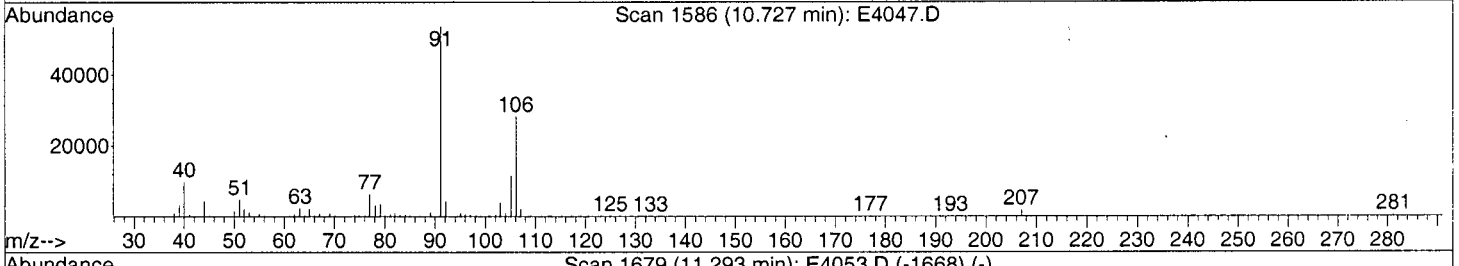
Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:44 2003

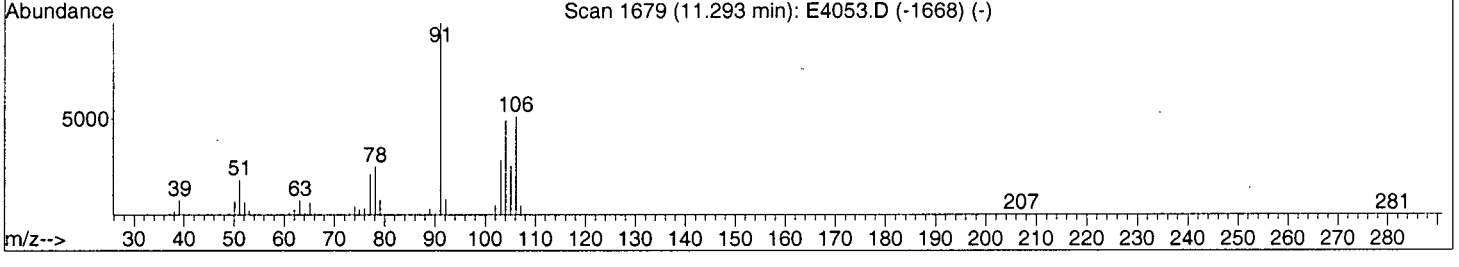
Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Single Level Calibration







TIC: E4047.D

(55) Xylene (total) (CP)

10.73min 1.04ug/L m

response 163441

Kon
04/03/03

Ion	Exp%	Act%
106.00	100	100
91.00	202.70	59.97#
0.00	0.00	0.00
0.00	0.00	0.00

.0182

E4047.D LCE4041.M Thu Apr 03 09:44:13 2003

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

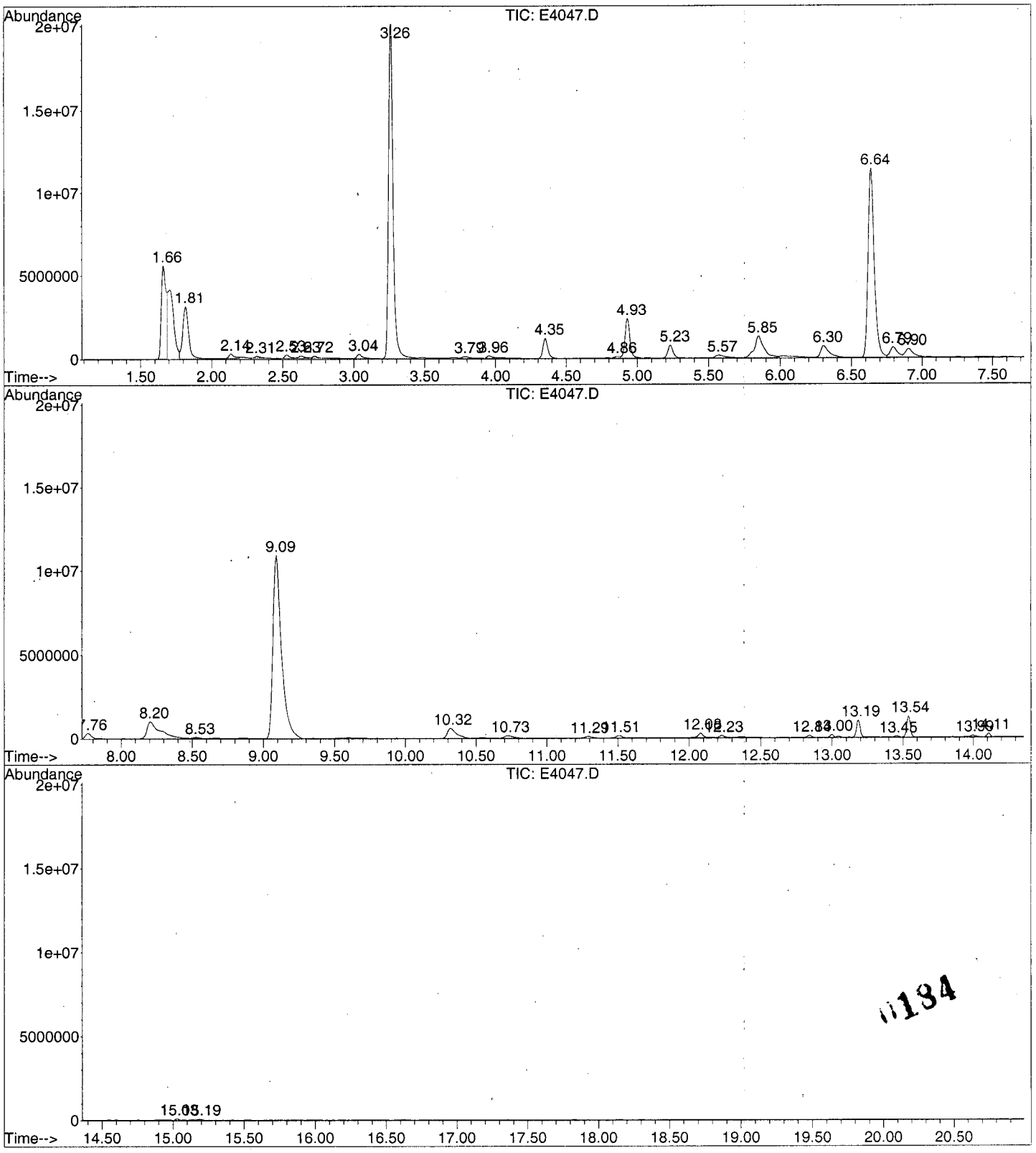
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.657	88	95	100	rBV	5576757	13550587	29.88%	7.048%
2	1.815	114	121	143	rVB	3114878	8692240	19.16%	4.521%
3	2.137	167	174	184	rBV3	273103	744718	1.64%	0.387%
4	2.314	198	203	216	rBV	112657	333789	0.74%	0.174%
5	2.527	232	238	249	rBV	214931	508137	1.12%	0.264%
6	2.630	249	255	264	rVV3	140668	381161	0.84%	0.198%
7	2.721	266	270	280	rVB	131090	267841	0.59%	0.139%
8	3.038	314	322	334	rBV	256541	629754	1.39%	0.328%
9	3.263	346	359	390	rBV	20083585	44686496	98.53%	23.243%
10	3.786	439	445	461	rVB3	105499	328382	0.72%	0.171%
11	3.956	466	473	484	rBV2	136928	386344	0.85%	0.201%
12	4.352	528	538	556	rBV	1193919	2826032	6.23%	1.470%
13	4.863	614	622	625	rBV4	86547	229616	0.51%	0.119%
14	4.930	625	633	652	rVB	2343713	5516538	12.16%	2.869%
15	5.234	672	683	703	rBV	767788	1942276	4.28%	1.010%
16	5.569	729	738	754	rBV2	170464	723570	1.60%	0.376%
17	5.848	765	784	808	rBV2	1275433	5807376	12.80%	3.021%
18	6.305	849	859	888	rVB2	702502	2827105	6.23%	1.470%
19	6.639	902	914	932	rBV	11355539	34276021	75.57%	17.828%
20	6.791	932	939	950	rVV	608719	2137514	4.71%	1.112%
21	6.901	950	957	978	rVB2	493882	1907910	4.21%	0.992%
22	7.765	1089	1099	1112	rBV	316895	926500	2.04%	0.482%
23	8.203	1156	1171	1217	rBV2	1022342	6644327	14.65%	3.456%
24	8.525	1218	1224	1235	rVB2	69468	198596	0.44%	0.103%
25	9.091	1304	1317	1350	rBV	10914169	45354947	100.00%	23.590%
26	10.320	1508	1519	1543	rBV	595522	2645990	5.83%	1.376%
27	10.727	1574	1586	1607	rBV2	154828	665645	1.47%	0.346%
28	11.287	1669	1678	1695	rVB2	102803	364081	0.80%	0.189%
29	11.506	1702	1714	1725	rBV2	149068	469170	1.03%	0.244%
30	12.078	1802	1808	1817	rVB2	259148	550331	1.21%	0.286%
31	12.230	1827	1833	1844	rBV2	126866	298614	0.66%	0.155%
32	12.845	1928	1934	1942	rVB	132613	243528	0.54%	0.127%
33	12.997	1953	1959	1963	rBV	168155	267785	0.59%	0.139%
34	13.185	1983	1990	1997	rBV	1030849	1822021	4.02%	0.948%
35	13.453	2029	2034	2041	rVB3	63697	138200	0.30%	0.072%
36	13.538	2041	2048	2058	rVB	1265339	2188460	4.83%	1.138%
37	13.994	2119	2123	2133	rVB3	103070	202983	0.45%	0.106%
38	14.110	2134	2142	2148	rVV	226546	324774	0.72%	0.169%
39	15.029	2288	2293	2298	rBV2	83293	127640	0.28%	0.066%
40	15.187	2315	2319	2326	rVB2	62875	124230	0.27%	0.065%

11183

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00



Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

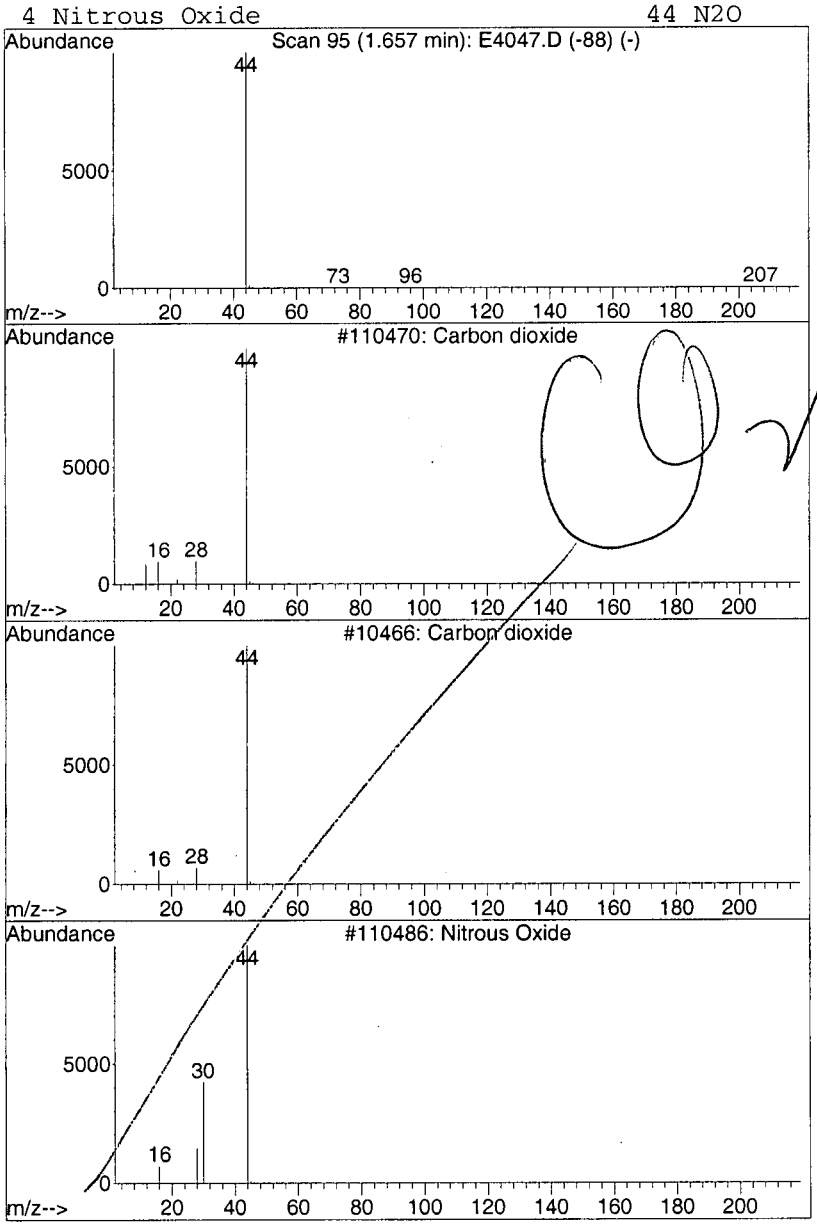
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

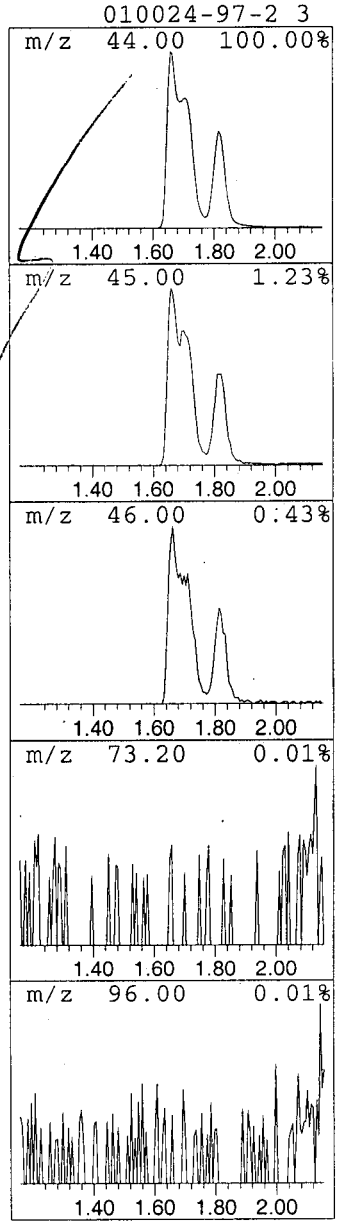
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.66	23.97 ug/L	13550600	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





.0185

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

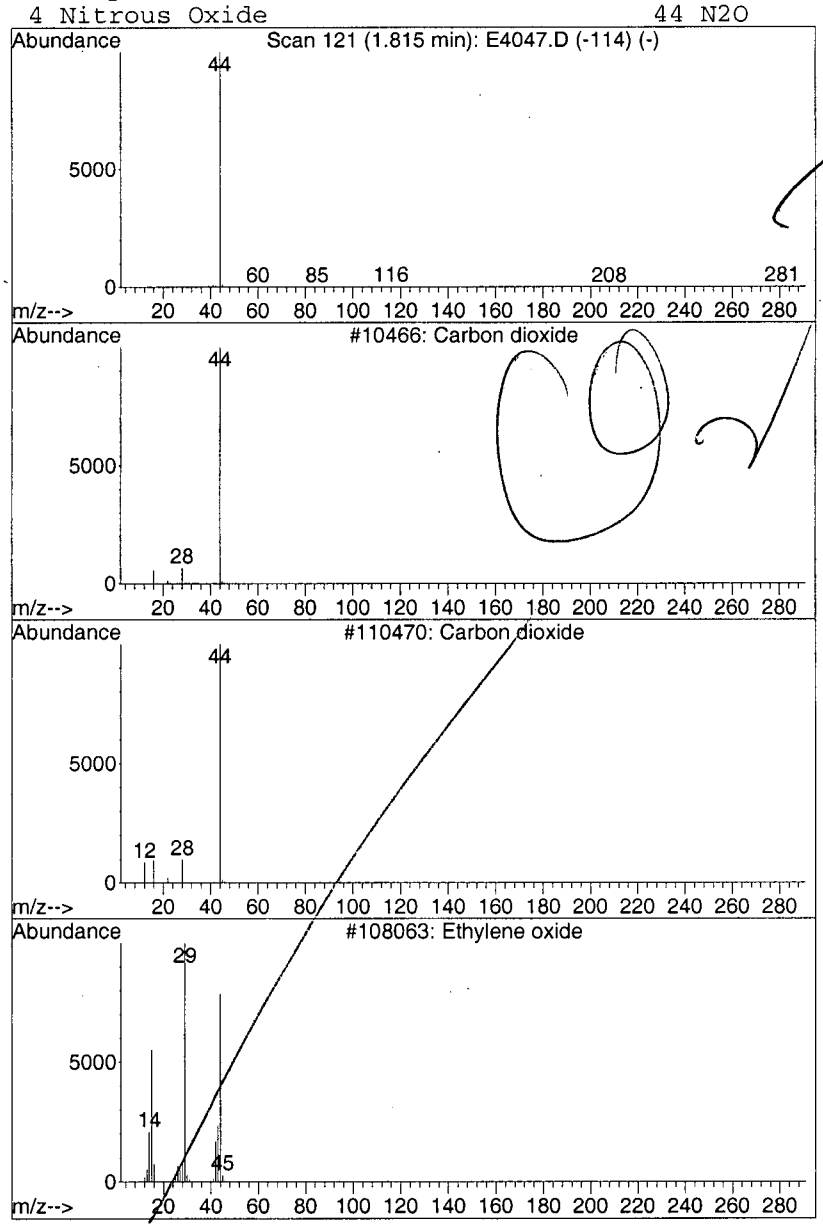
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

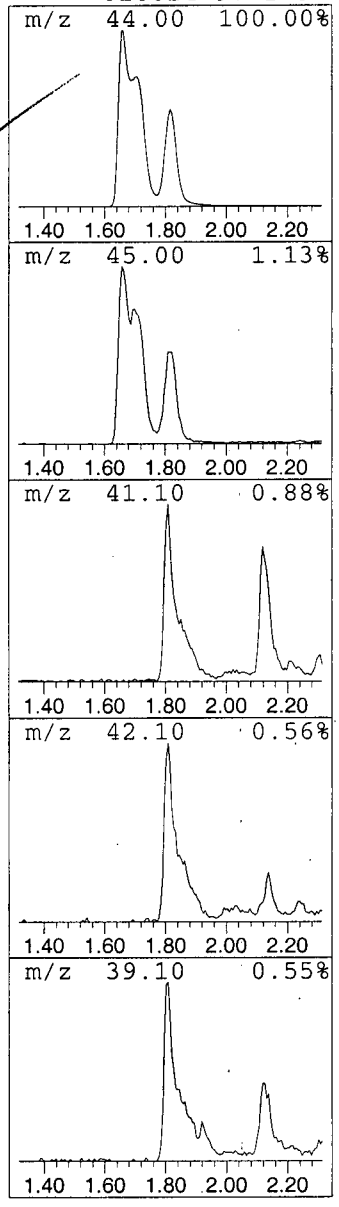
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.81	15.37 ug/L	8692240	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0186

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

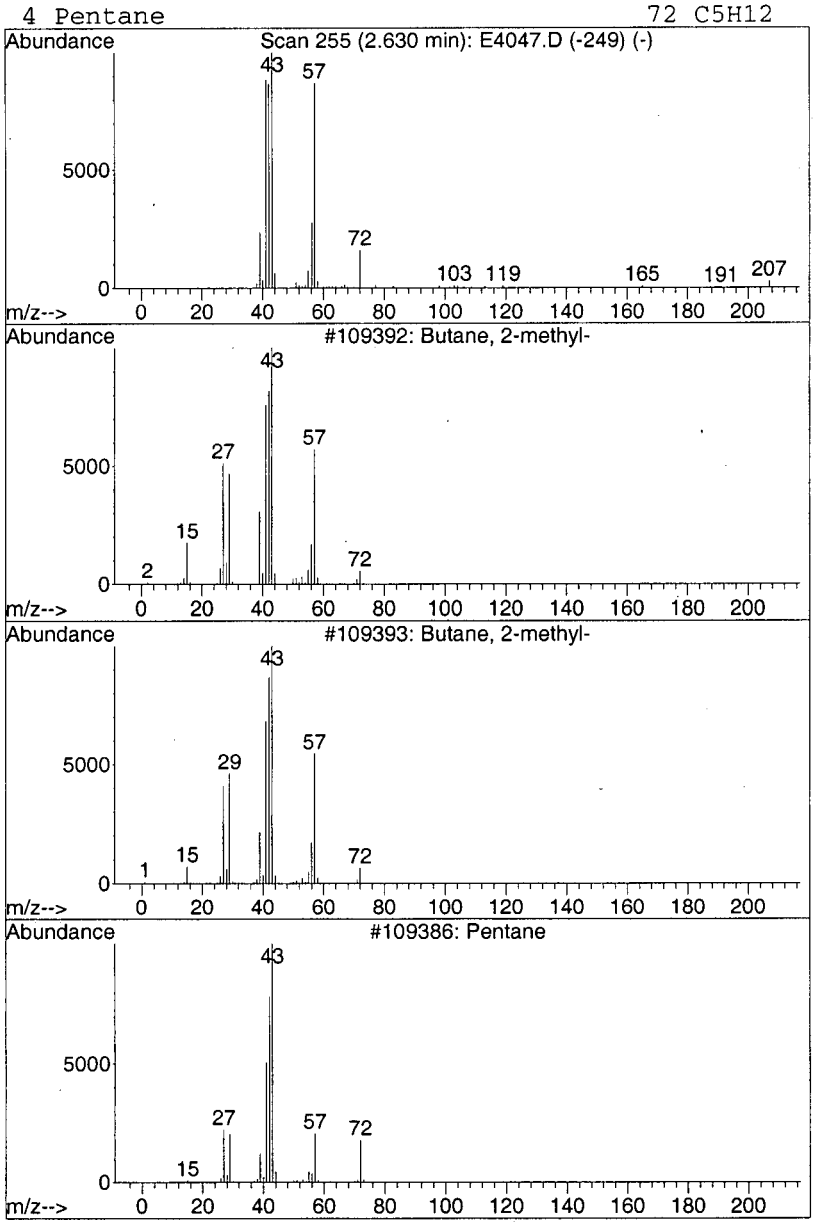
****

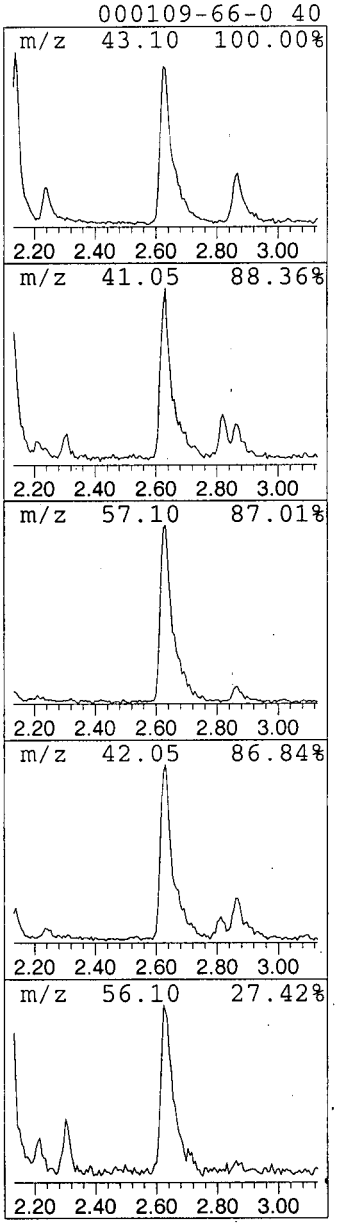
Peak Number 4 Butane, 2-methyl- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.63	0.67 ug/L	381161	1,4-Difluorobenzene	6.30

Branched alkane

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butane, 2-methyl-	72	C5H12	000078-78-4	83 ✓
2	Butane, 2-methyl-	72	C5H12	000078-78-4	78
3	Pentane	72	C5H12	000109-66-0	53
4	Pentane	72	C5H12	000109-66-0	40





11187

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

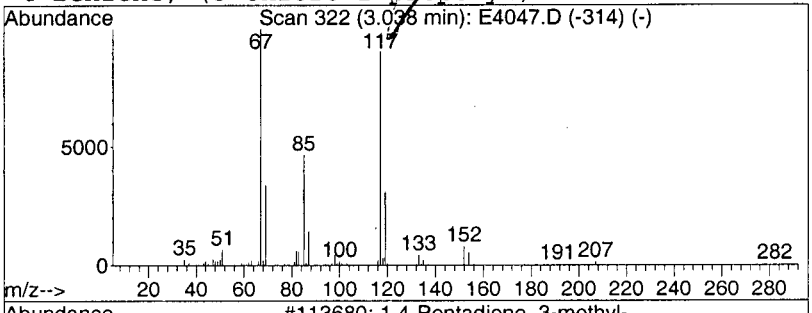
****

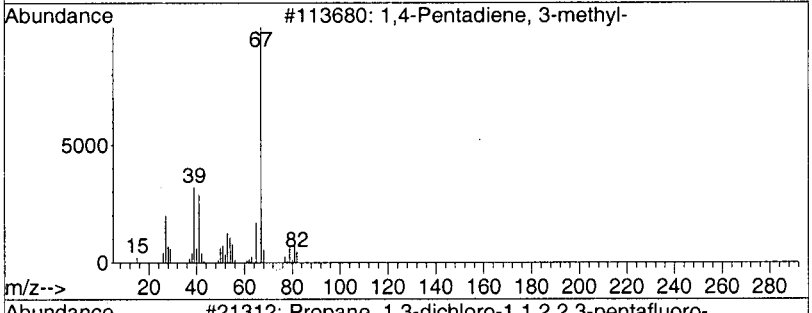
Peak Number 5 1,4-Pentadiene, 3-methyl- Concentration Rank 4

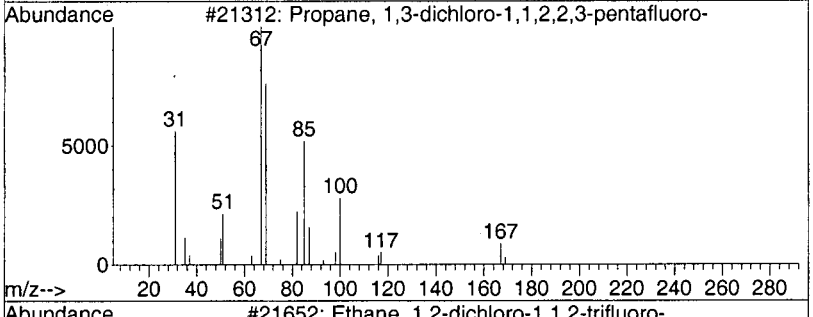
R.T.	EstConc	Area	Relative to ISTD	R.T.
3.04	1.11 ug/L	629754	1,4-Difluorobenzene	6.30

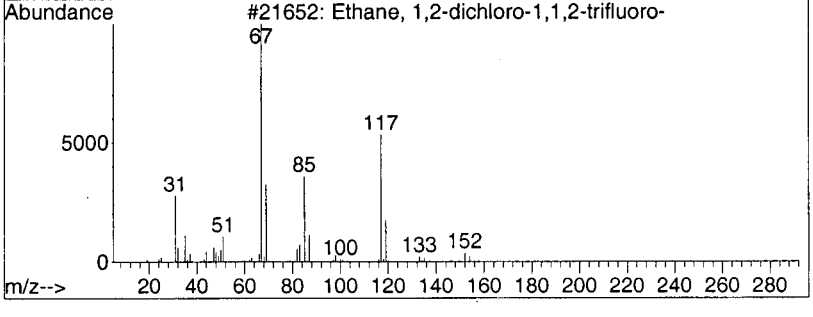
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,4-Pentadiene, 3-methyl-	82	C6H10	001115-08-8	9
2	Propane, 1,3-dichloro-1,1,2,2,3-...	202	C3HCl2F5	000507-55-1	9
3	Ethane, 1,2-dichloro-1,1,2-trifl...	152	C2HCl2F3	000354-23-4	9
4	Benzene, (3-chloro-1-propenyl)-	152	C9H9Cl	002687-12-9	7

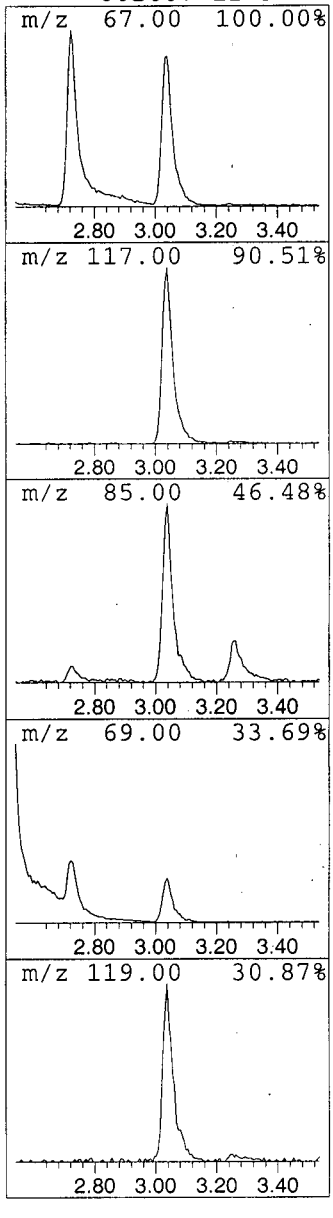
Unknown











11138

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

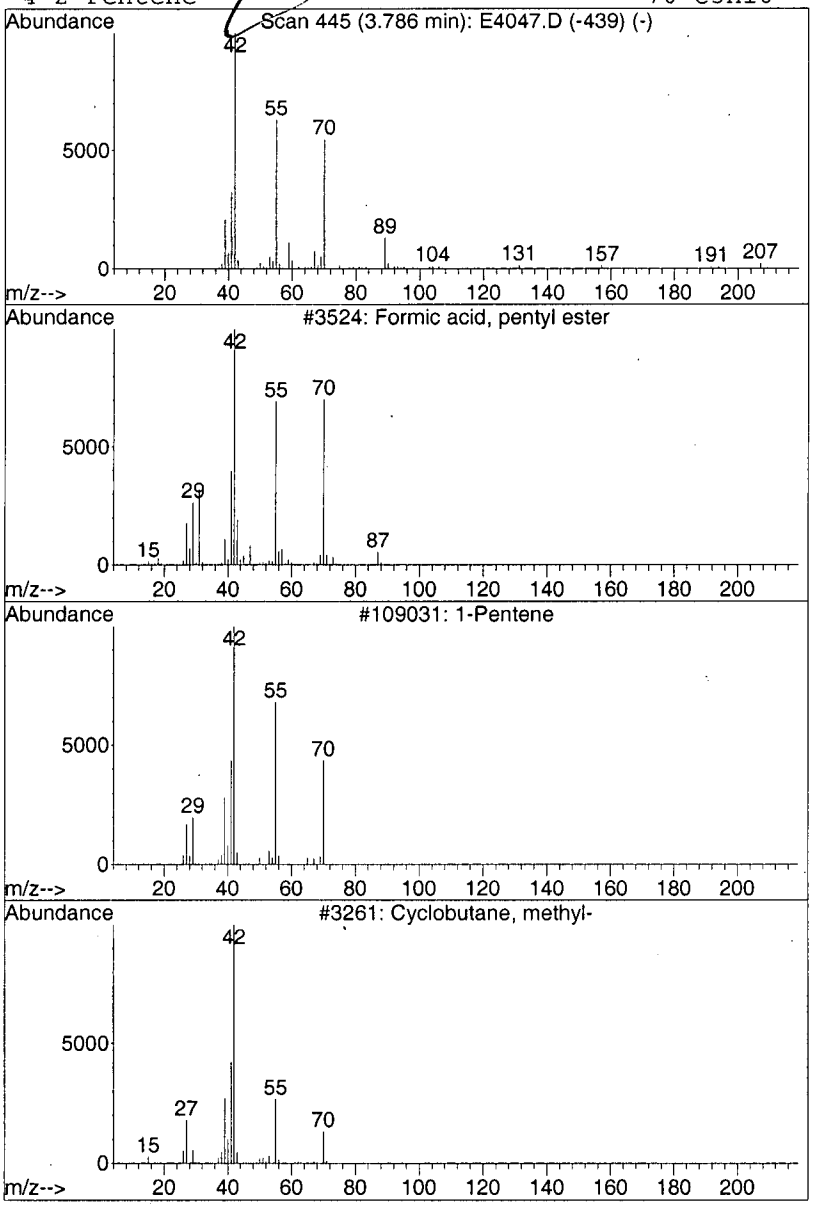
****

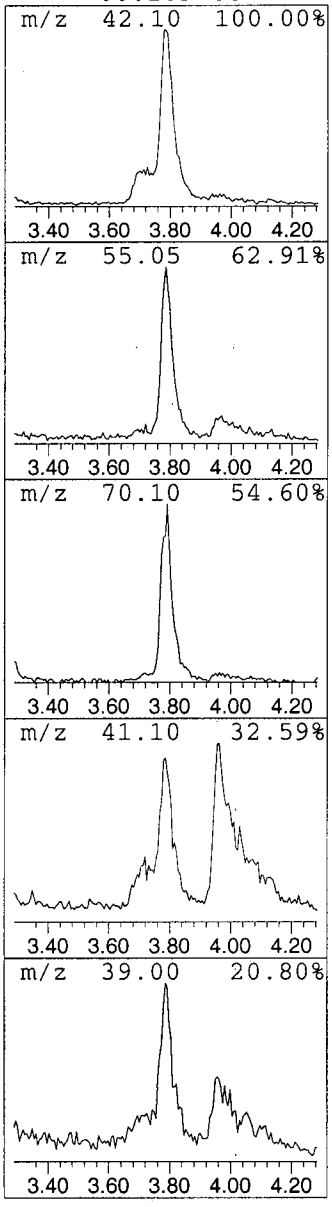
Peak Number 6 Formic acid, pentyl ester Concentration Rank 11

R.T.	EstConc	Area	Relative to ISTD	R.T.
3.79	0.58 ug/L	328382	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Formic acid, pentyl ester	116	C6H12O2	000638-49-3	50
2	1-Pentene	70	C5H10	000109-67-1	50
3	Cyclobutane, methyl-	70	C5H10	000598-61-8	38
4	2-Pentene	70	C5H10	000109-68-2	12

unknown





1189

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

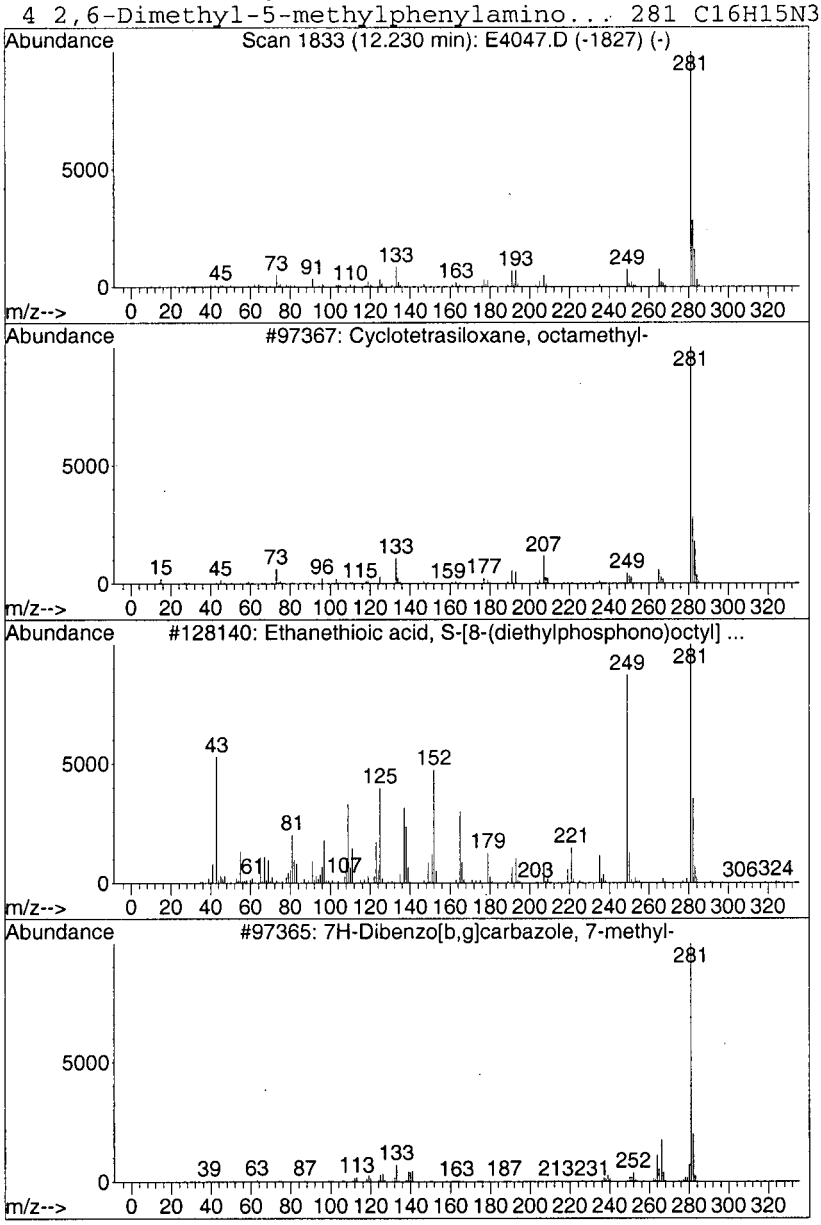
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

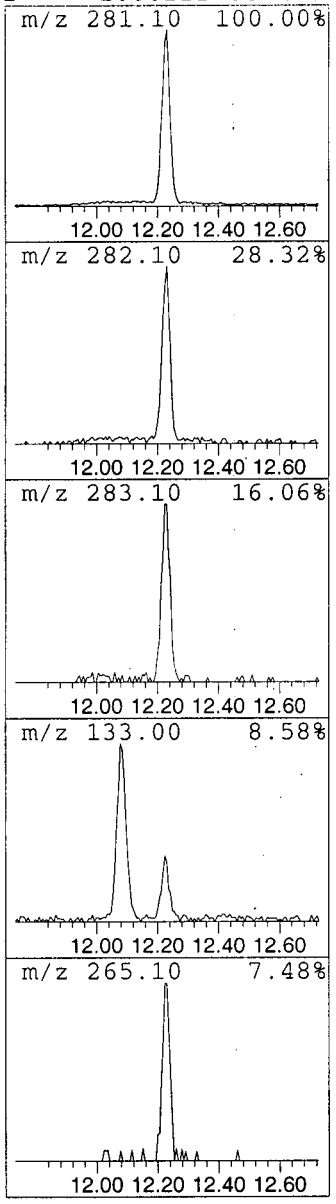
****

Peak Number 8 Cyclotetrasiloxane, octamet... Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.23	0.82 ug/L	298614	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetrasiloxane, octamethyl-	296	C8H24O4Si4	000556-67-2	78
2	Ethanethioic acid, S-[8-(diethyl...	324	C14H29O4PS	129065-11-8	59
3	7H-Dibenzo[b,g]carbazole, 7-methyl-	281	C21H15N	003557-49-1	59
4	2,6-Dimethyl-5-methylphenylamino...	281	C16H15N3O2	1000222-06-1	59





0190

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

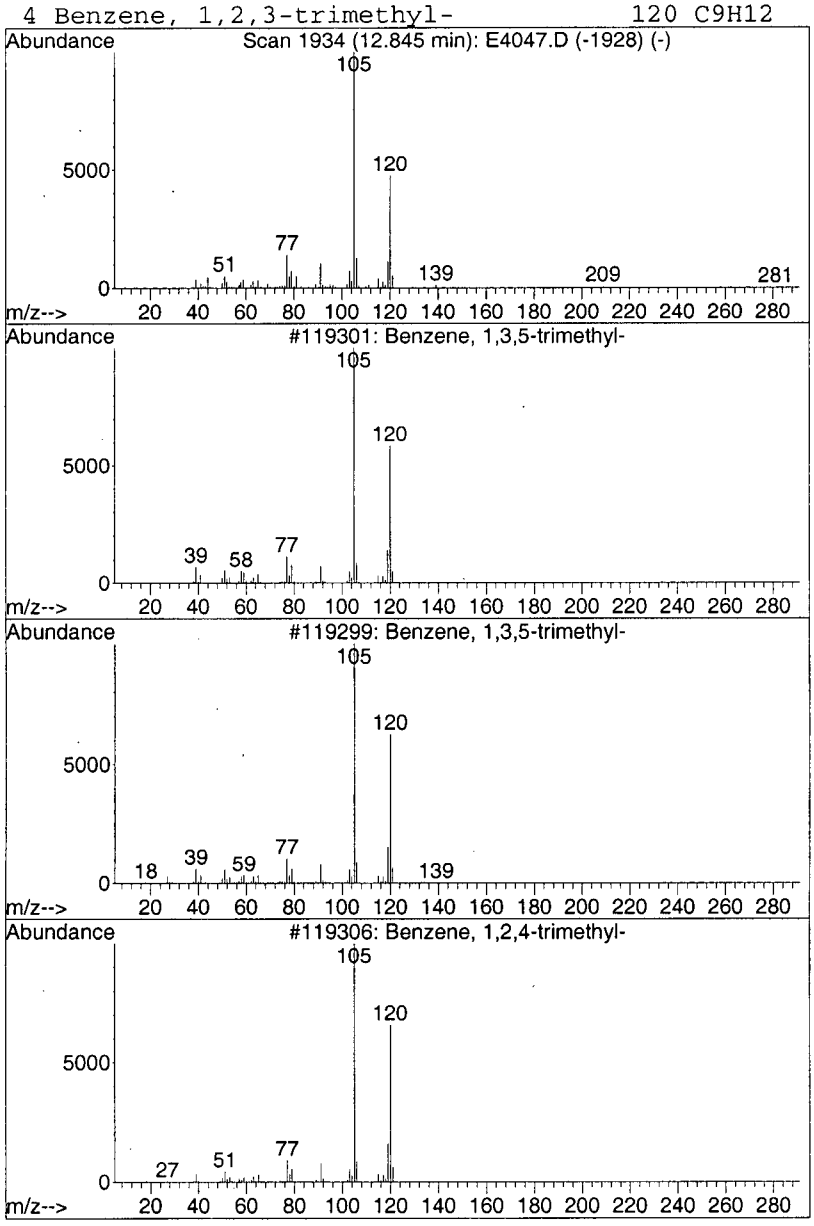
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

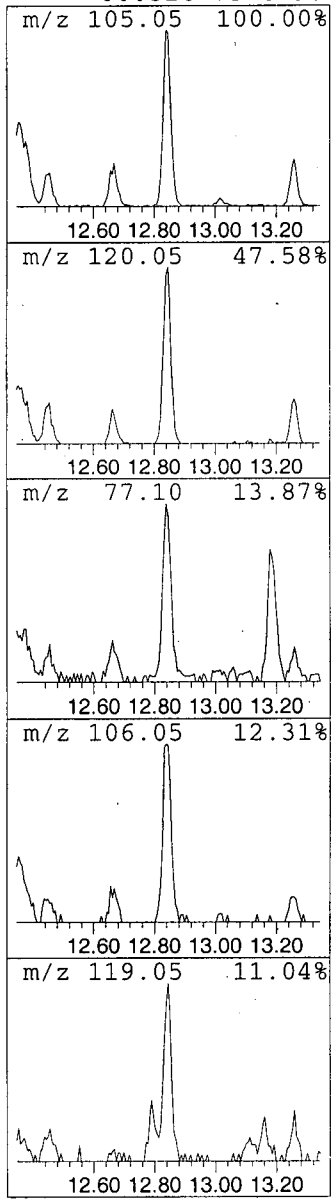
****

Peak Number 9 Benzene, 1,3,5-trimethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.84	0.67 ug/L	243528	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	97
2	Benzene, 1,3,5-trimethyl-	120	C9H12	000108-67-8	95
3	Benzene, 1,2,4-trimethyl-	120	C9H12	000095-63-6	94
4	Benzene, 1,2,3-trimethyl-	120	C9H12	000526-73-8	93





191

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D
Acq On : 03/28/2003 1820
Sample : Y0SJ4
Misc : 2762.004 25ML
MS Integration Params: Lscint.p

Vial: 8
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

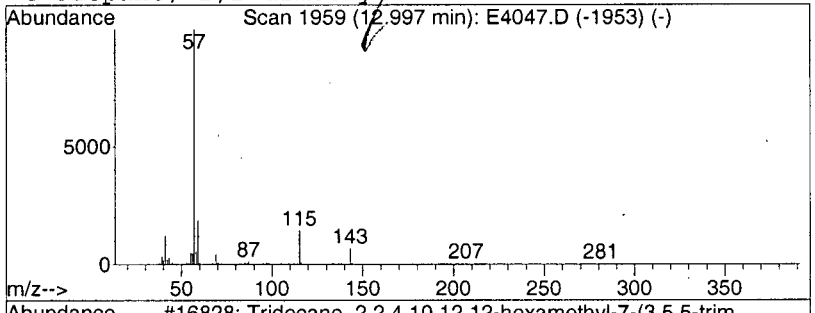
****

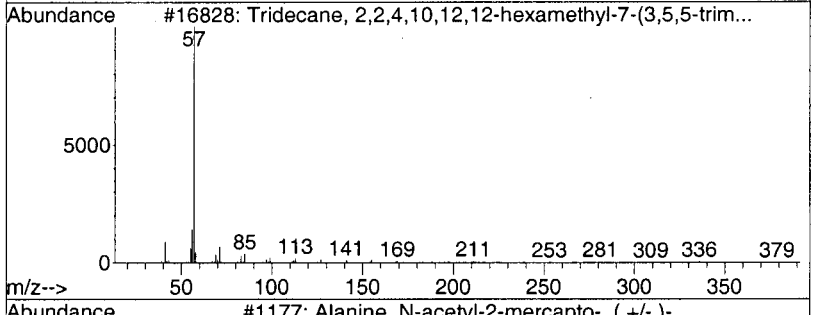
Peak Number 10 Tridecane, 2,2,4,10,12,12-h... Concentration Rank 7

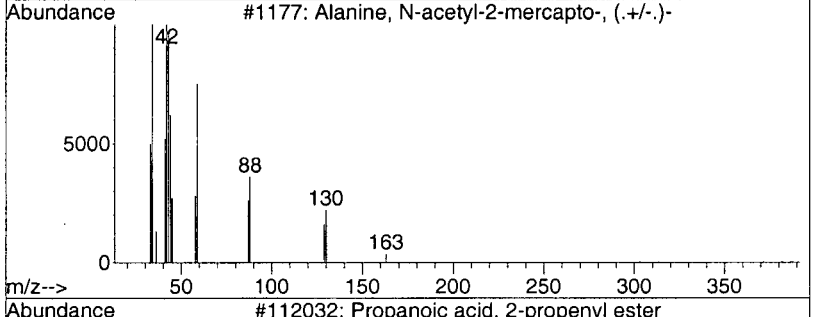
R.T.	EstConc	Area	Relative to ISTD	R.T.
13.00	0.73 ug/L	267785	1,4-Dichlorobenzene-d4	13.19

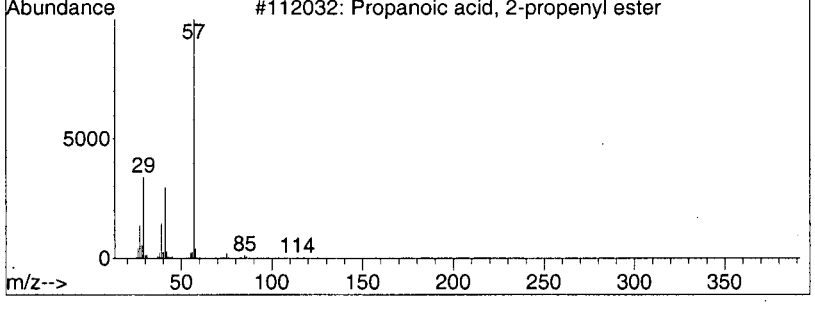
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tridecane, 2,2,4,10,12,12-hexame...	394	C28H58	003035-75-4	23
2	Alanine, N-acetyl-2-mercapto-, (...	163	C5H9NO3S	055956-23-5	9
3	Propanoic acid, 2-propenyl ester	114	C6H10O2	002408-20-0	9
4	Propane, 2,2-dimethyl-	72	C5H12	000463-82-1	9

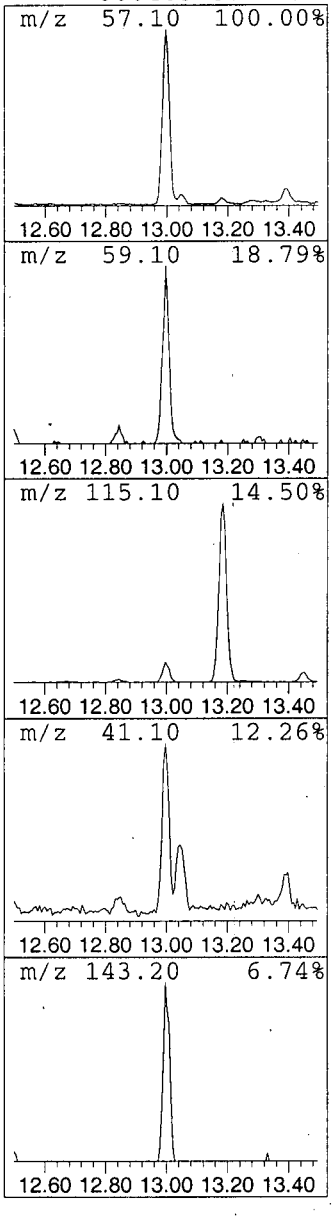
unknown









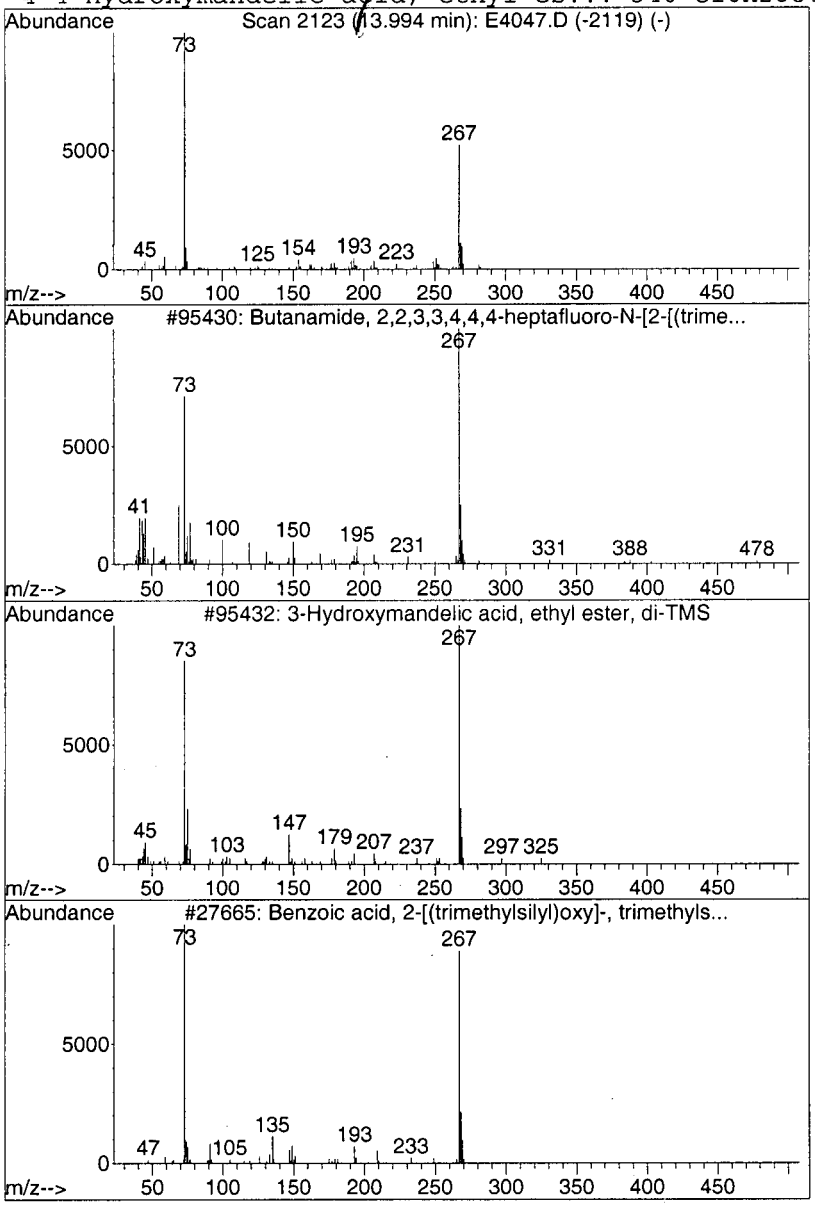


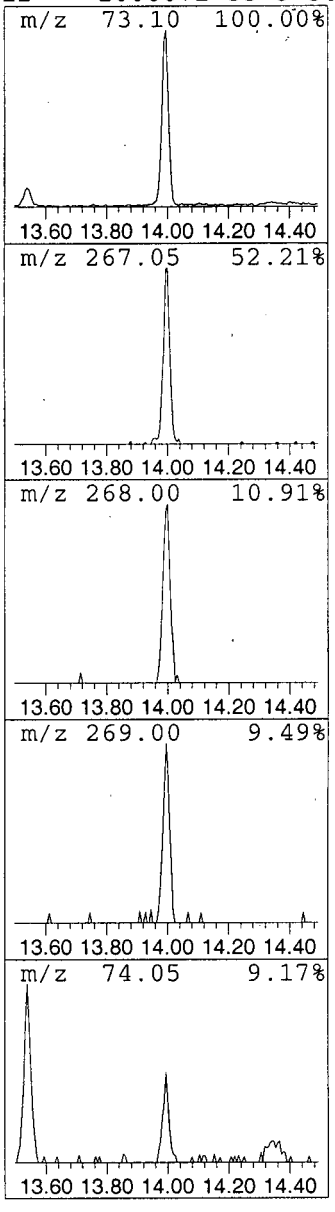
0192

Library Search Compound Report

```
   Data File : C:\MSDCHEM\1\DATA\E4047.D                    Vial: 8
   Acq On    : 03/28/2003  1820                         Operator: AK
   Sample    : Y0SJ4                                    Inst    : E-5973
   Misc      : 2762.004  25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number 11  Butanamide, 2,2,3,3,4,4,4-h...  Concentration Rank 12

   R.T.   EstConc          Area       Relative to ISTD        R.T.
 ------------------------------------------------------------------
  13.99    0.56 ug/L       202983     1,4-Dichlorobenzene-d4    13.19

  Hit# of  5    Tentative ID                MW  MolForm       CAS#        Qual
 ------------------------------------------------------------------
  1 Butanamide, 2,2,3,3,4,4,4-heptaf... 493 C18H26F7NO3Si2 055471-01-7 59
  2 3-Hydroxymandelic acid, ethyl es... 340 C16H28O4Si2    1000071-88-9 50
  3 Benzoic acid, 2-[(trimethylsilyl... 282 C13H22O3Si2    003789-85-3 38
  4 4-Hydroxymandelic acid, ethyl es... 340 C16H28O4Si2    1000071-53-3 38
```

unknown





.0193

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4047.D Vial: 8
Acq On : 03/28/2003 1820 Operator: AK
Sample : Y0SJ4 Inst : E-5973
Misc : 2762.004 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

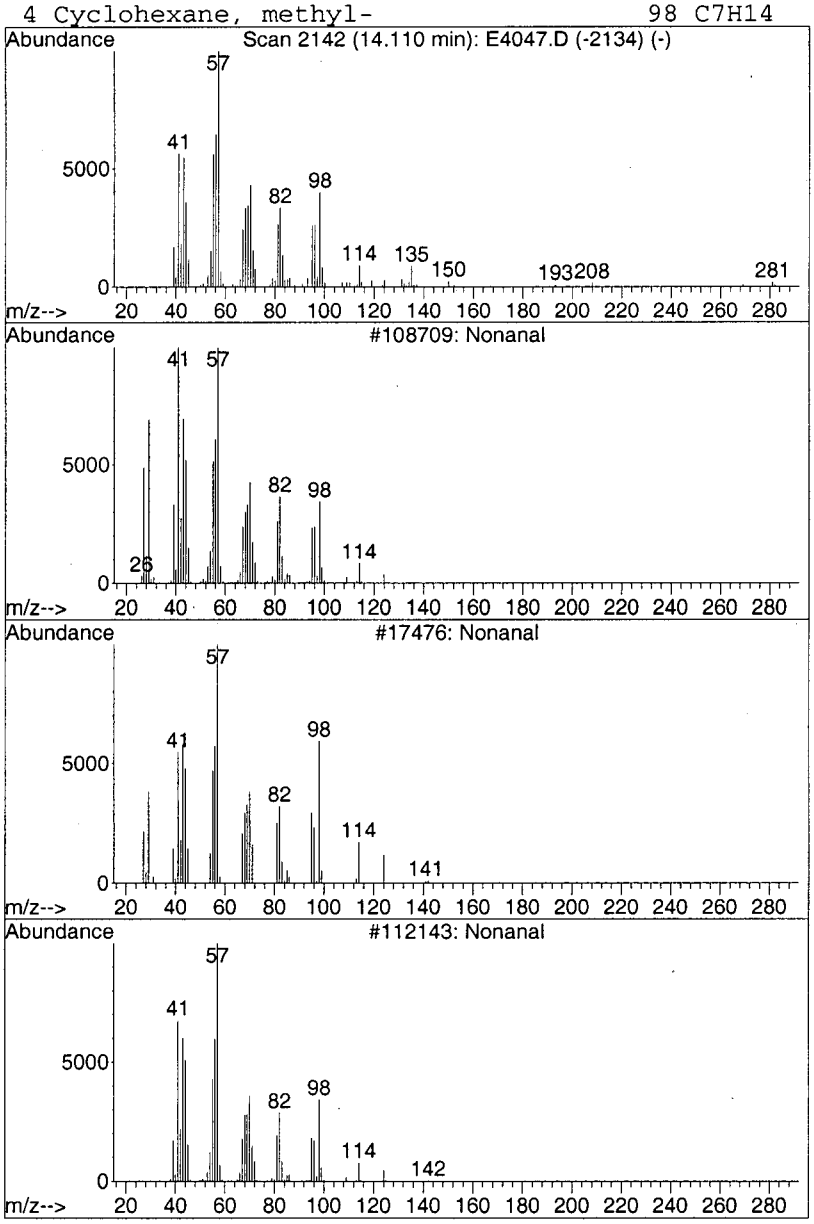
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

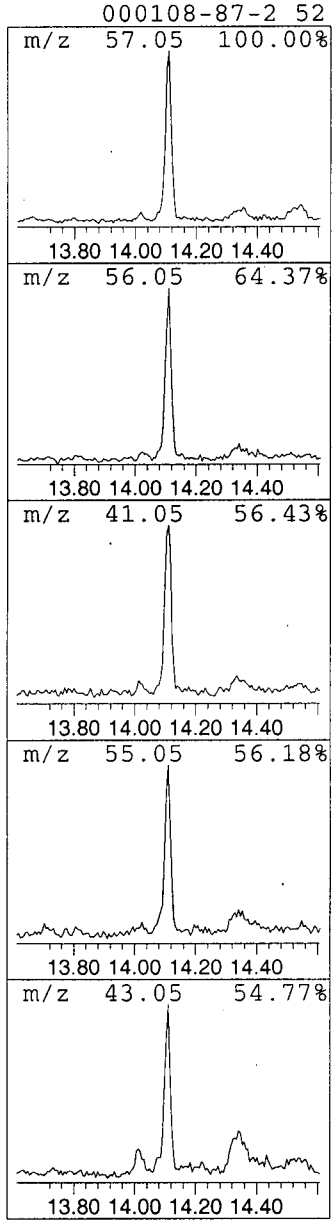
****

Peak Number 12 Nonanal Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.11	0.89 ug/L	324774	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonanal	142	C9H18O	000124-19-6	90
2	Nonanal	142	C9H18O	000124-19-6	78
3	Nonanal	142	C9H18O	000124-19-6	64
4	Cyclohexane, methyl-	98	C7H14	000108-87-2	52





194

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ4DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004DL Date Received: 03/20/2003

Lab File ID: E4021 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	4.0	U
74-87-3	Chloromethane	1.4	JD
75-01-4	Vinyl Chloride	4.0	U
74-83-9	Bromomethane	4.0	U
75-00-3	Chloroethane	4.0	U
75-69-4	Trichlorofluoromethane	4.0	U
75-35-4	1,1-Dichloroethene	140	D
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	4.0	U
67-64-1	Acetone	21	JD
75-15-0	Carbon Disulfide	4.0	U
79-20-9	Methyl Acetate	4.0	U
75-09-2	Methylene Chloride	4.7	DB
156-60-5	trans-1,2-Dichloroethene	4.0	U
1634-04-4	Methyl tert-Butyl Ether	4.0	U
75-34-3	1,1-Dichloroethane	10	D
156-59-2	cis-1,2-Dichloroethene	16	D
78-93-3	2-Butanone	40	U
74-97-5	Bromochloromethane	4.0	U
67-66-3	Chloroform	4.0	U
71-55-6	1,1,1-Trichloroethane	4.0	U
110-82-7	Cyclohexane	4.0	U
56-23-5	Carbon Tetrachloride	4.0	U
71-43-2	Benzene	4.0	U
107-06-2	1,2-Dichloroethane	3.4	JD

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

Y0SJ4DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004DL Date Received: 03/20/2003

Lab File ID: E4021 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	96	D
108-87-2	Methylcyclohexane	4.0	U
78-87-5	1,2-Dichloropropane	4.6	D
75-27-4	Bromodichloromethane	4.0	U
10061-01-5	cis-1,3-Dichloropropene	4.0	U
108-10-1	4-Methyl-2-pentanone	40	U
108-88-3	Toluene	4.0	U
10061-02-6	trans-1,3-Dichloropropene	4.0	U
79-00-5	1,1,2-Trichloroethane	4.0	U
127-18-4	Tetrachloroethene	100	D
591-78-6	2-Hexanone	40	U
124-48-1	Dibromochloromethane	4.0	U
106-93-4	1,2-Dibromoethane	4.0	U
108-90-7	Chlorobenzene	4.0	U
100-41-4	Ethylbenzene	4.0	U
1330-20-7	Xylene (total)	4.0	U
100-42-5	Styrene	4.0	U
75-25-2	Bromoform	4.0	U
98-82-8	Isopropylbenzene	4.0	U
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U
541-73-1	1,3-Dichlorobenzene	4.0	U
106-46-7	1,4-Dichlorobenzene	4.0	U
95-50-1	1,2-Dichlorobenzene	4.0	U
96-12-8	1,2-Dibromo-3-chloropropane	4.0	U
120-82-1	1,2,4-Trichlorobenzene	4.0	U
87-61-6	1,2,3-Trichlorobenzene	4.0	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ4DL

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.004DL Date Received: 03/20/2003

Lab File ID: E4021 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 8.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
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29					
30					

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4021.D
Acq On : 03/27/2003 1757
Sample : Y0SJ4DL
Misc : 2762.004DL 25ML 8X
MS Integration Params: RTEINT.P
Quant Time: Apr 02 10:48:22 2003

Vial: 14
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4009.RES

Kan. 04/02/03

SP 4/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	882096	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.33	117	689455	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	250550	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.13	65	284527	4.40 ug/L	-0.01
Spiked Amount 5.000	Range 49 - 138		Recovery	= 88.00%	
7) Chloroethane-d5	2.52	69	250554	4.63 ug/L	-0.01
Spiked Amount 5.000	Range 60 - 126		Recovery	= 92.60%	
10) 1,1-Dichloroethene-d2	3.24	65	133662	4.74 ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery	= 94.80%	
20) 2-Butanone-d5	4.87	46	34637	6.08 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 121.60%	
24) Chloroform-d	5.23	86	289469	4.65 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 93.00%	
26) 1,2-Dichloroethane-d4	5.80	65	159789	4.79 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 95.80%	
32) Benzene-d6	5.85	84	1193879	4.64 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 92.80%	
35) 1,2-Dichloropropane-d6	6.79	67	285182	3.95 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 79.00%#	
41) Toluene-d8	8.20	98	1100031	4.36 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 87.20%	
43) trans-1,3-Dichloropropene-	8.53	79	38682	4.49 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 89.80%	
47) 2-Hexanone-d5	9.13	46	48234	4.52 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 90.40%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	109404	4.49 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 89.80%	
61) Bromoform-d	11.51	174	55365	3.91 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 78.20%	
65) 1,2-Dichlorobenzene-d4	13.54	152	232678	4.54 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 90.80%	

Target Compounds					Qvalue
3) Chloromethane	2.03	50	35302	0.17 ug/L J	90
11) 1,1-Dichloroethene	3.26	96	1289048	17.14 ug/L #	62
13) Acetone	3.28	43	9731	2.58 ug/L J	81
16) Methylene Chloride	3.68	84	39676	0.59 ug/L B	95
19) 1,1-Dichloroethane	4.35	63	153389	1.27 ug/L	97
21) cis-1,2-Dichloroethene	4.93	96	134983	1.96 ug/L	99
27) 1,2-Dichloroethane	5.89	62	19423	0.42 ug/L J	97
34) Trichloroethene	6.63	95	803470	11.96 ug/L	98
37) 1,2-Dichloropropane	6.90	63	34816	0.58 ug/L	89
46) Tetrachloroethene	9.09	164	898706	12.68 ug/L	99

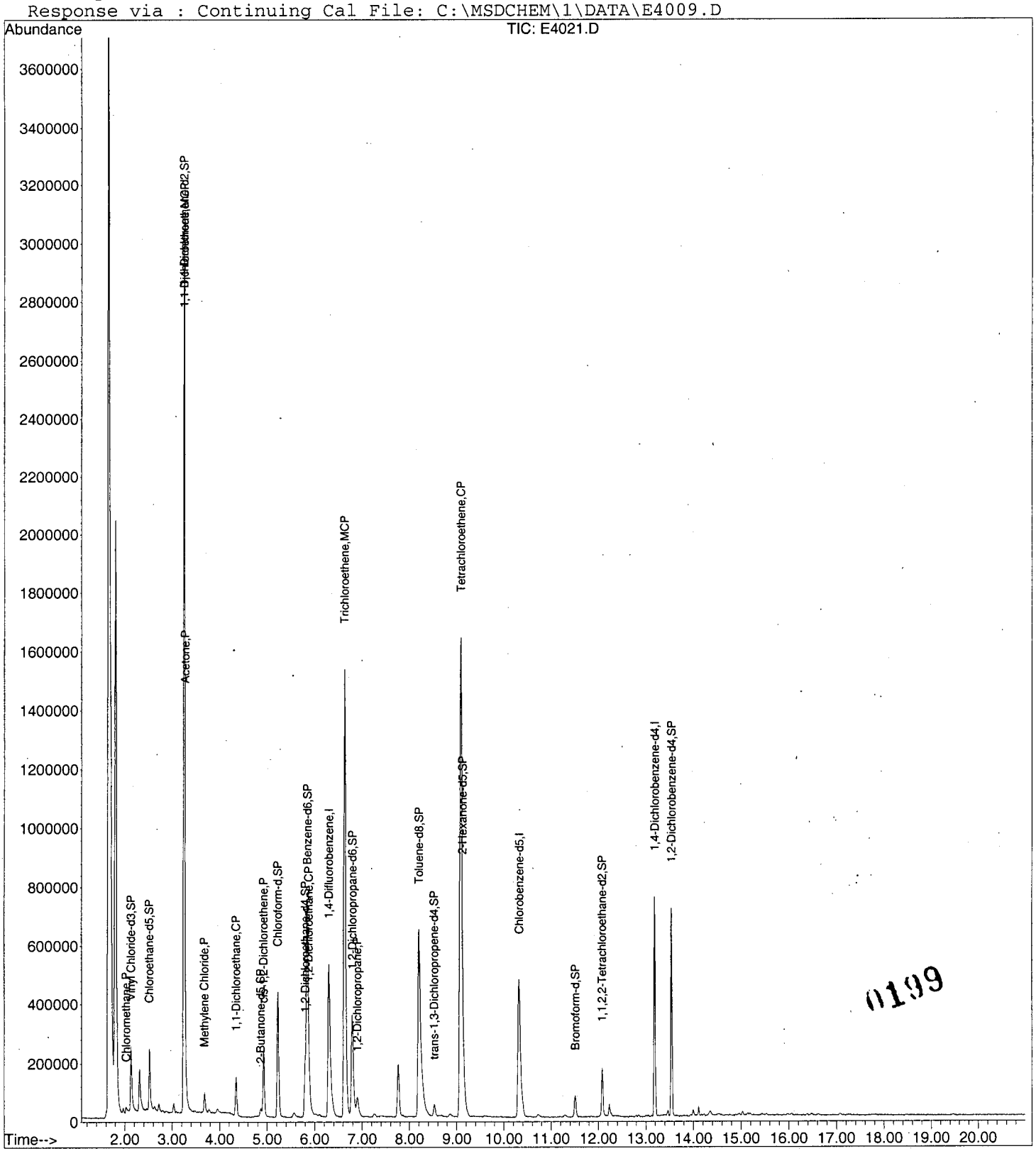
11198

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

Quantitation Report (QT Reviewed)

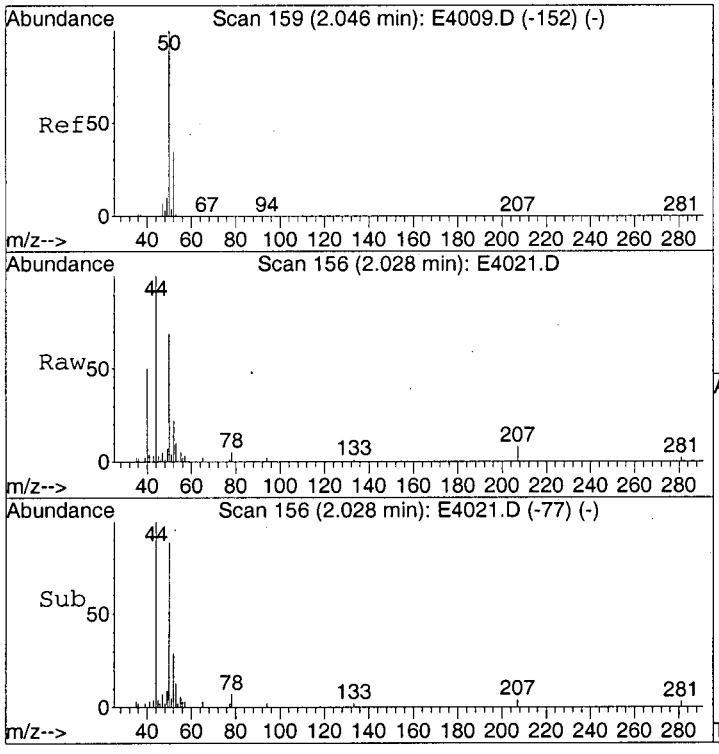
Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 2 11:01 2003 Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D



0199

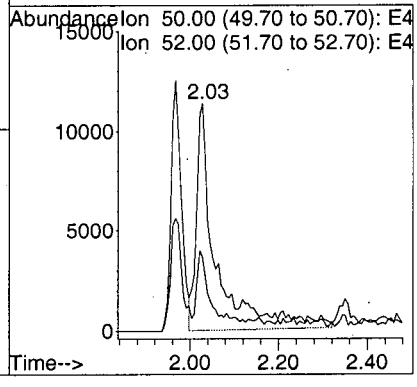
Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

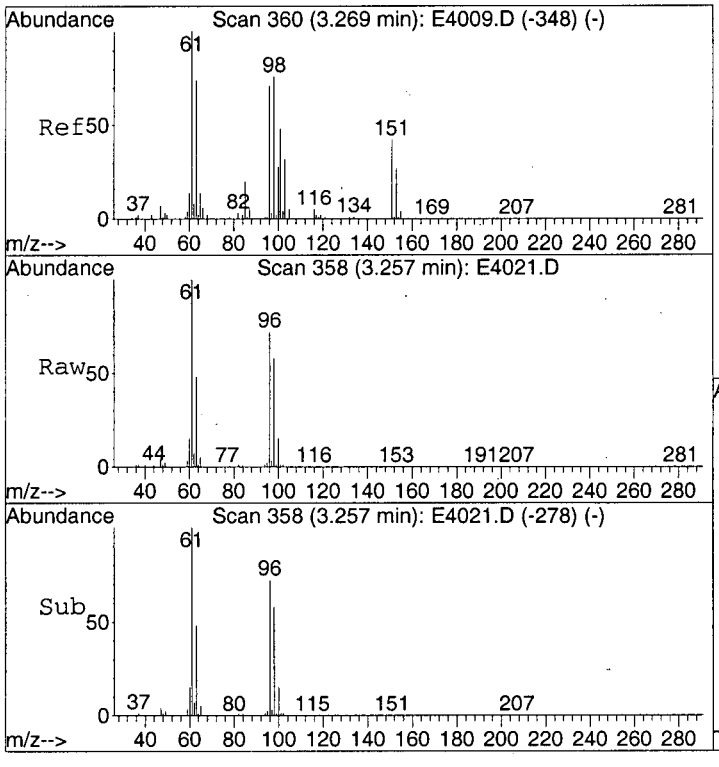


#3
Chloromethane
Concen: 0.17 ug/L
RT: 2.03 min Scan# 156
Delta R.T. -0.02 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 50 Resp: 35302

Ion	Ratio	Lower	Upper
50	100		
52	38.7	13.2	53.2

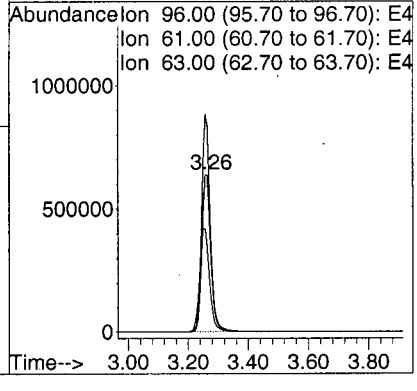




#11
1,1-Dichloroethene
Concen: 17.14 ug/L
RT: 3.26 min Scan# 358
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 96 Resp: 1289048

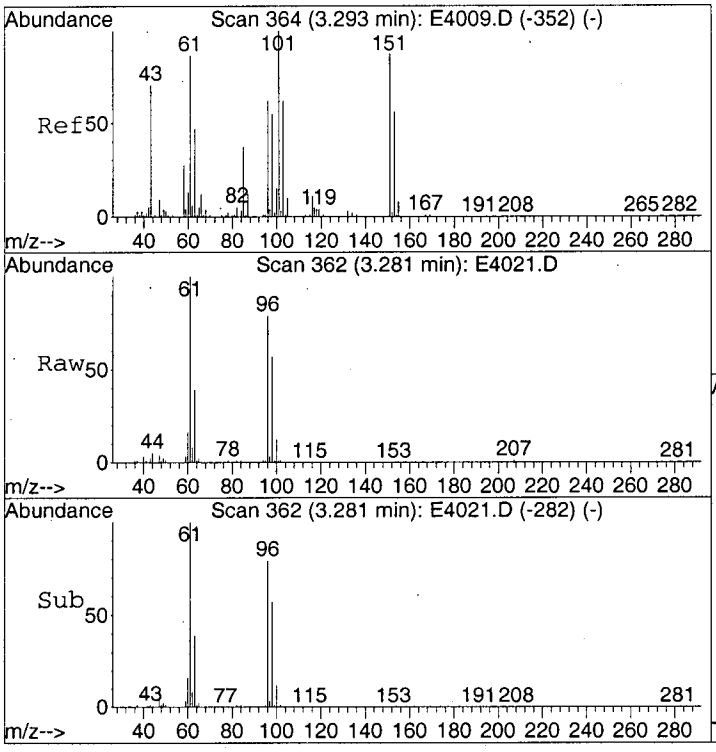
Ion	Ratio	Lower	Upper
96	100		
61	137.8	126.8	166.8
63	75.9	142.5	182.5#



0200

Data File : C:\MSDCHEM\1\DATA\E4021.D
Acq On : 03/27/2003 1757
Sample : Y0SJ4DL
Misc : 2762.004DL 25ML 8X
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

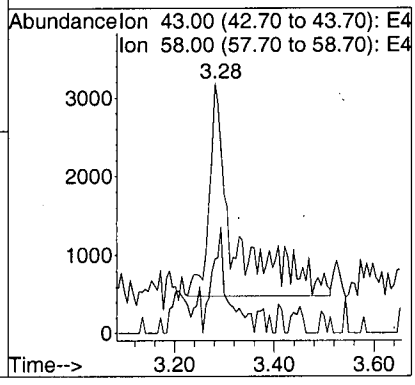
Vial: 14
Operator: AK
Inst : E-5973
Multiplr: 1.00

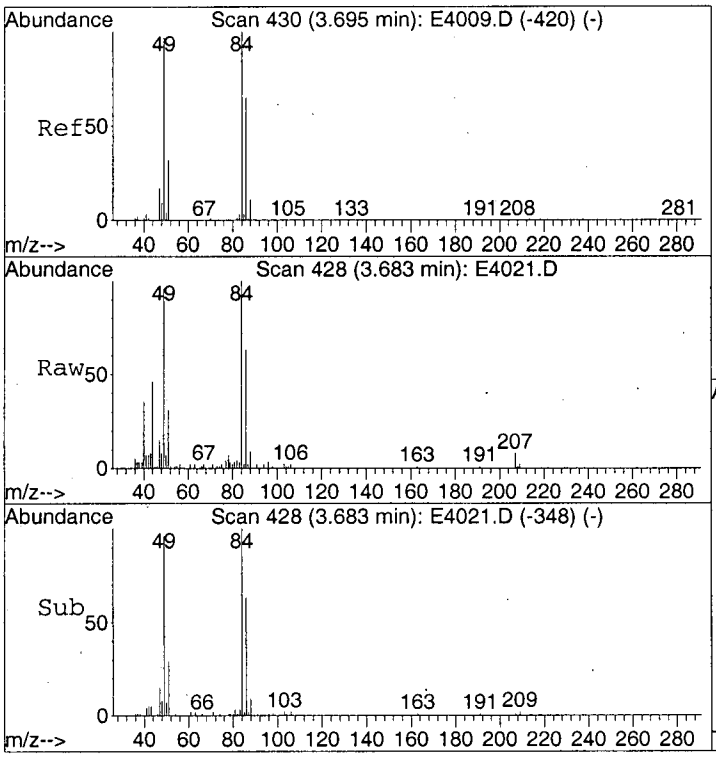


#13
Acetone
Concen: 2.58 ug/L
RT: 3.28 min Scan# 362
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 43 Resp: 9731

Ion	Ratio	Lower	Upper
43	100		
58	30.5	22.6	62.6

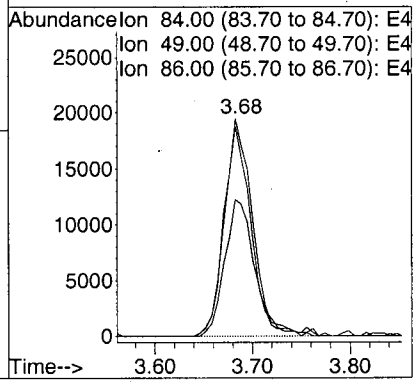




#16
Methylene Chloride
Concen: 0.59 ug/L
RT: 3.68 min Scan# 428
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

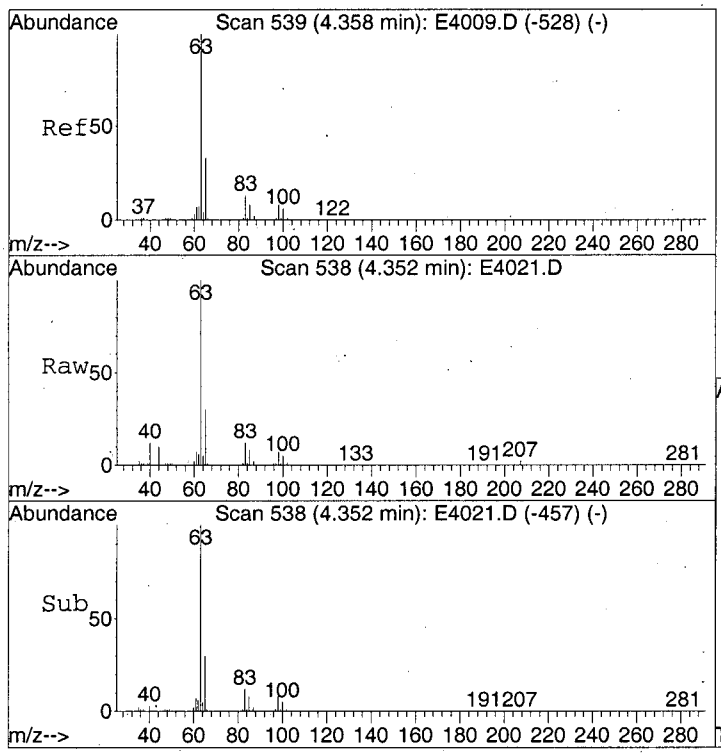
Tgt Ion: 84 Resp: 39676

Ion	Ratio	Lower	Upper
84	100		
49	91.1	76.2	116.2
86	66.3	43.2	83.2



.1201

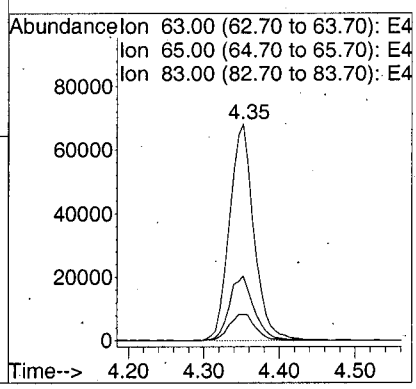
Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

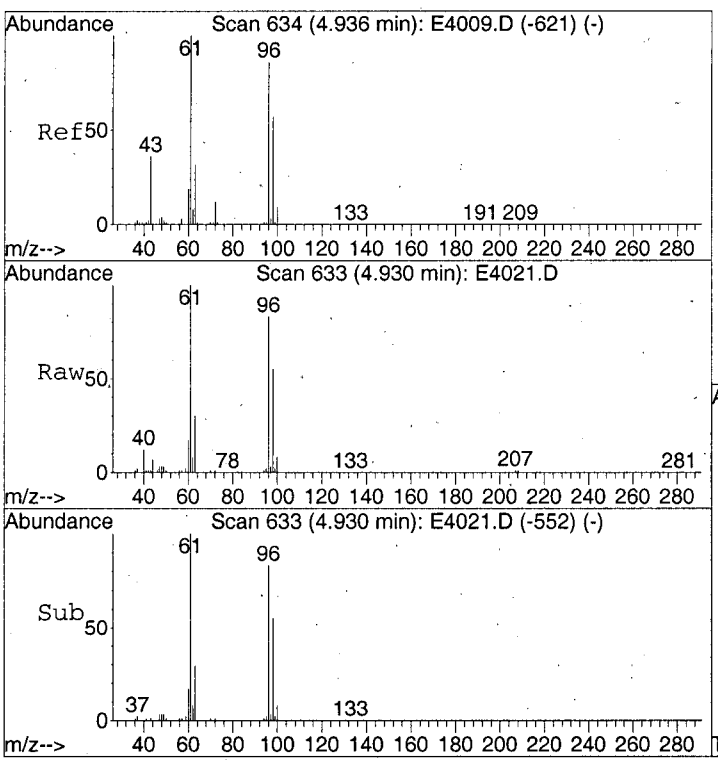


#19
1,1-Dichloroethane
Concen: 1.27 ug/L
RT: 4.35 min Scan# 538
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 63 Resp: 153389

Ion	Ratio	Lower	Upper
63	100		
65	30.1	12.4	52.4
83	13.0	0.0	33.0

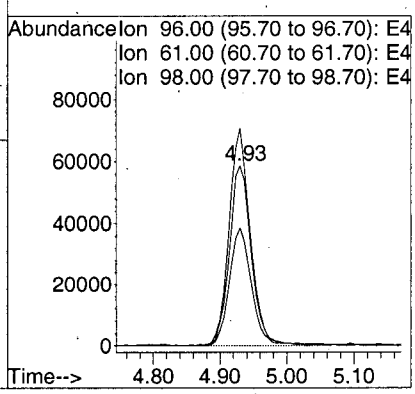




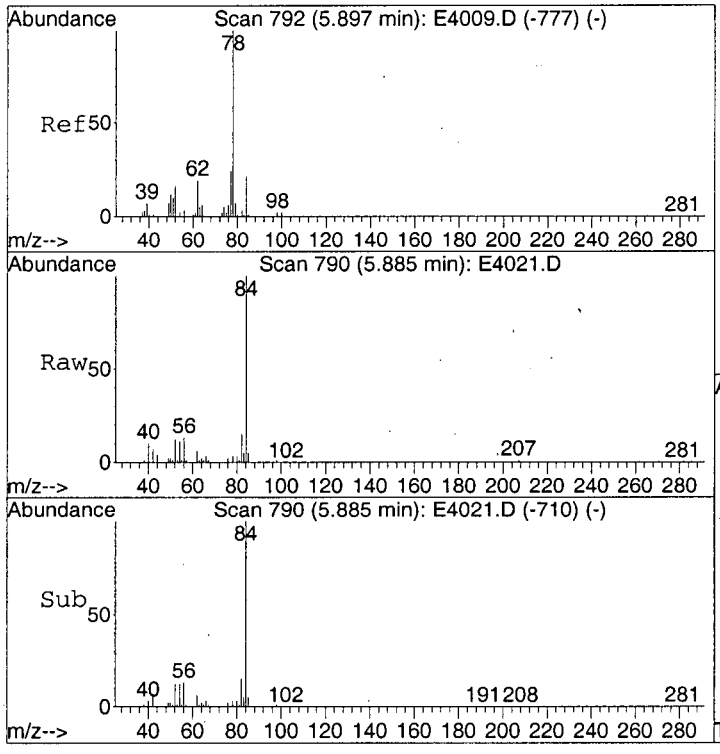
#21
cis-1,2-Dichloroethene
Concen: 1.96 ug/L
RT: 4.93 min Scan# 633
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 96 Resp: 134983

Ion	Ratio	Lower	Upper
96	100		
61	116.7	95.9	135.9
98	65.5	43.4	83.4



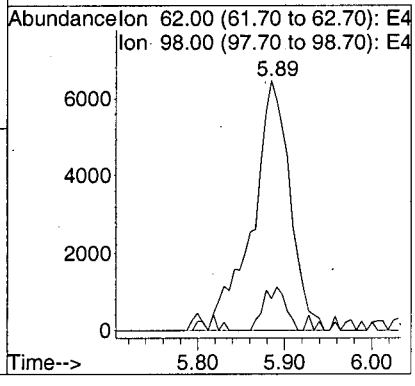
Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

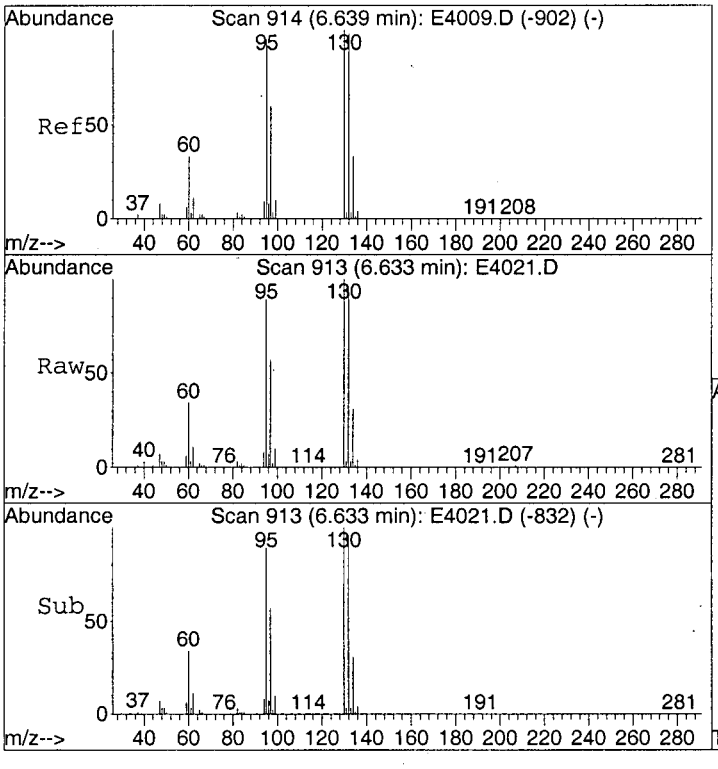


#27
1,2-Dichloroethane
Concen: 0.42 ug/L
RT: 5.89 min Scan# 790
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 62 Resp: 19423

Ion	Ratio	Lower	Upper
62	100		
98	10.2	0.0	31.5

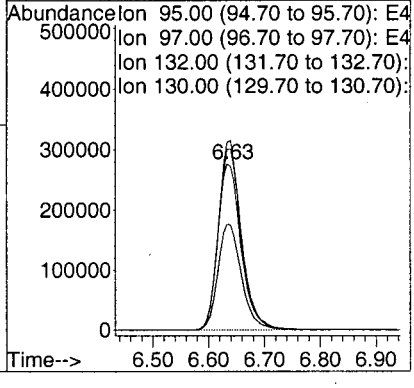




#34
Trichloroethene
Concen: 11.96 ug/L
RT: 6.63 min Scan# 913
Delta R.T. -0.01 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

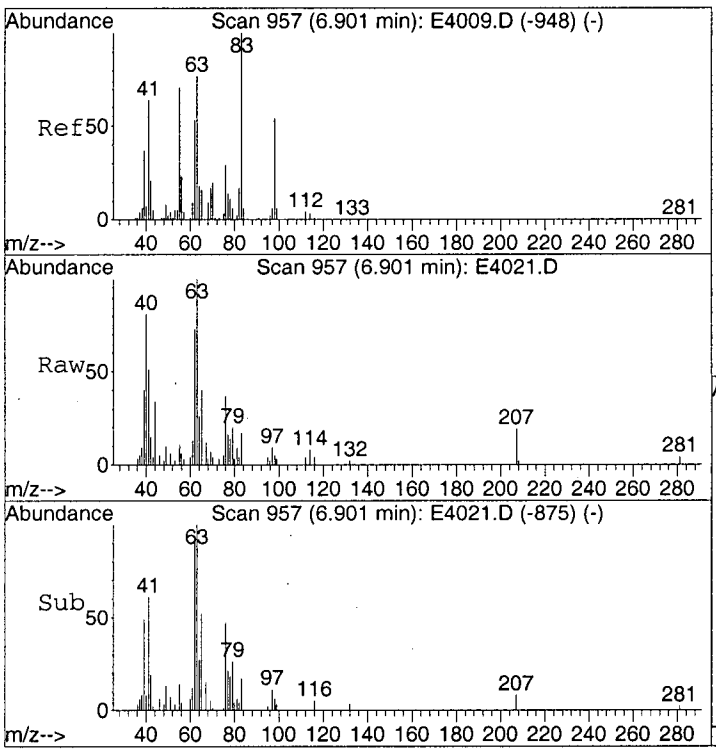
Tgt Ion: 95 Resp: 803470

Ion	Ratio	Lower	Upper
95	100		
97	64.5	43.5	83.5
132	108.1	86.1	126.1
130	112.5	90.4	130.4



0203

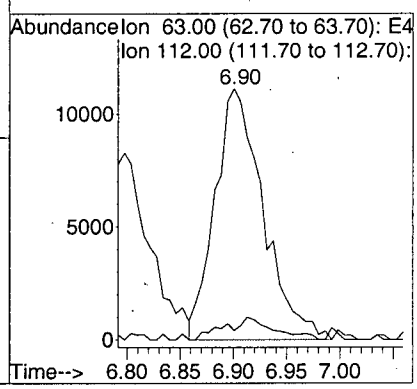
Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

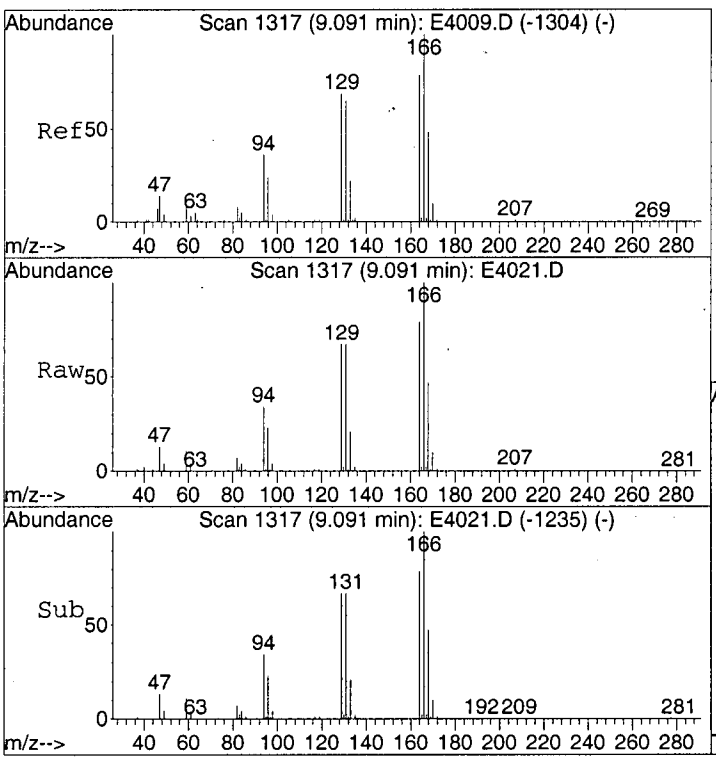


#37
1,2-Dichloropropane
Concen: 0.58 ug/L
RT: 6.90 min Scan# 957
Delta R.T. 0.00 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion: 63 Resp: 34816

Ion	Ratio	Lower	Upper
63	100		
112	9.1	0.0	25.4

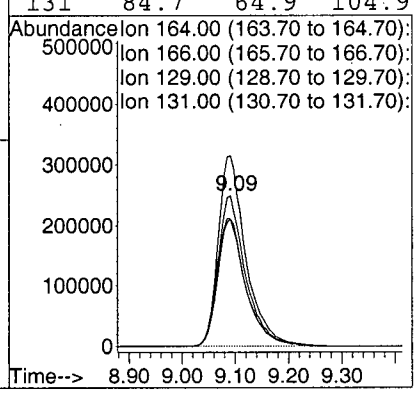




#46
Tetrachloroethene
Concen: 12.68 ug/L
RT: 9.09 min Scan# 1317
Delta R.T. 0.00 min
Lab File: E4021.D
Acq: 27 Mar 2003 17:57

Tgt Ion:164 Resp: 898706

Ion	Ratio	Lower	Upper
164	100		
166	126.6	105.5	145.5
129	87.3	68.3	108.3
131	84.7	64.9	104.9



0204

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 100000 Area counts
Start Thrs: 0.2 Max Peaks: 40
Stop Thrs : 0 Peak Location: TOP

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

Signal : TIC

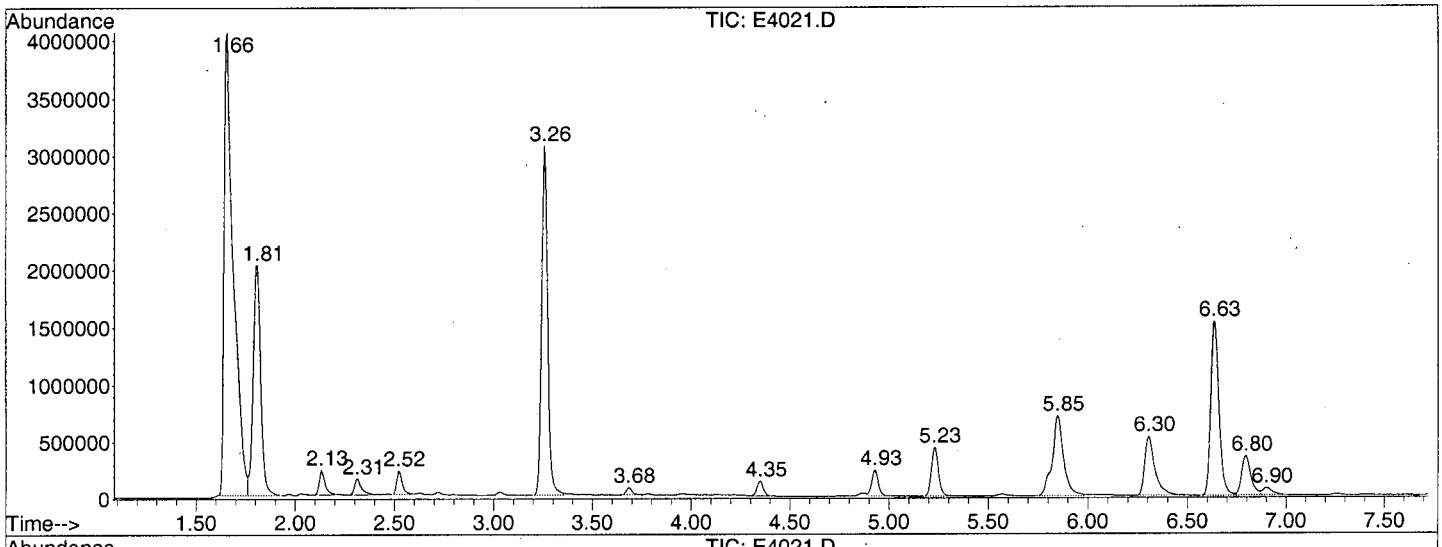
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.657	88	95	112	rBV	4037072	13135009	100.00%	24.820%
2	1.809	112	120	140	rVB	2014487	5292619	40.29%	10.001%
3	2.132	167	173	185	rBV	220105	452367	3.44%	0.855%
4	2.314	197	203	218	rBV	142940	356368	2.71%	0.673%
5	2.521	232	237	250	rVB	206854	397669	3.03%	0.751%
6	3.257	348	358	374	rBV2	3057381	6472046	49.27%	12.229%
7	3.683	423	428	436	rVB	66847	129769	0.99%	0.245%
8	4.352	530	538	547	rVB	132578	291664	2.22%	0.551%
9	4.930	626	633	646	rVB	231955	532694	4.06%	1.007%
10	5.228	673	682	694	rBV	427101	1051002	8.00%	1.986%
11	5.849	768	784	806	rBV2	705021	2762636	21.03%	5.220%
12	6.305	850	859	885	rBV2	519246	1828507	13.92%	3.455%
13	6.633	902	913	930	rBV	1523793	4397937	33.48%	8.310%
14	6.798	930	940	952	rVV2	347104	1138855	8.67%	2.152%
15	6.901	952	957	973	rVB4	65219	216056	1.64%	0.408%
16	7.765	1090	1099	1112	rBV3	181373	501480	3.82%	0.948%
17	8.203	1159	1171	1196	rBV	639971	2710080	20.63%	5.121%
18	8.525	1217	1224	1235	rBV4	39471	107674	0.82%	0.203%
19	9.091	1304	1317	1348	rBV	1630991	6122980	46.62%	11.570%
20	10.326	1507	1520	1541	rBV	470703	1867614	14.22%	3.529%
21	11.512	1706	1715	1726	rVB2	74070	191383	1.46%	0.362%
22	12.078	1797	1808	1818	rBV2	166534	363896	2.77%	0.688%
23	13.185	1983	1990	2000	rBV	749889	1352194	10.29%	2.555%
24	13.538	2041	2048	2057	rBV	709415	1249145	9.51%	2.360%

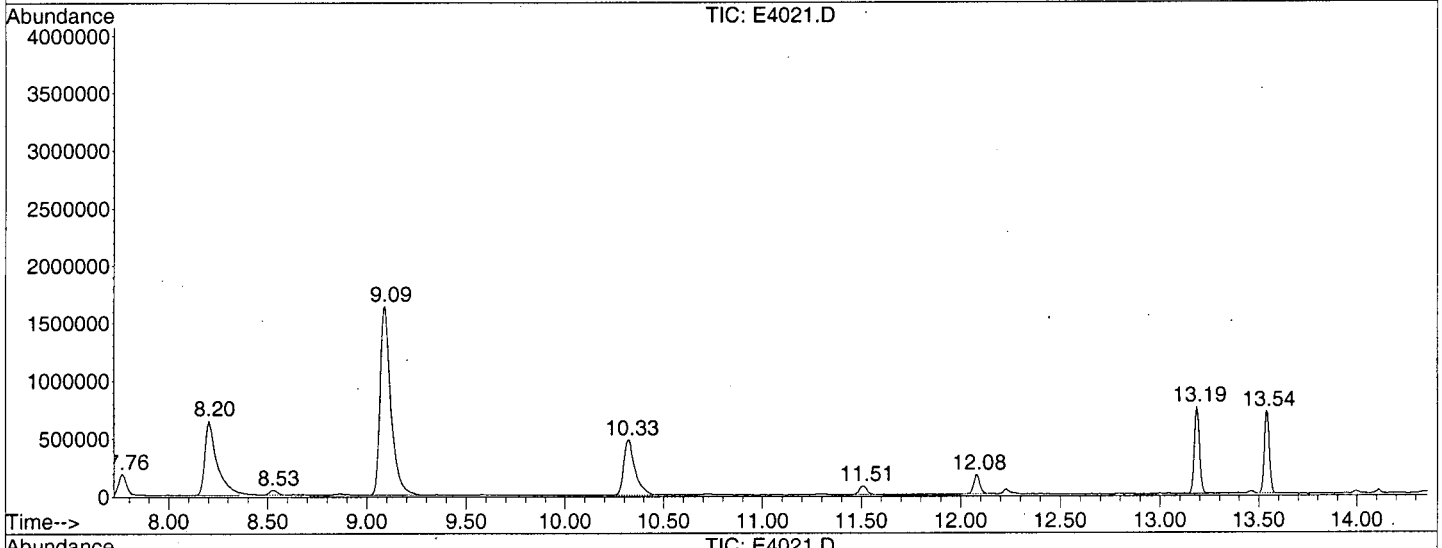
Sum of corrected areas: 52921644

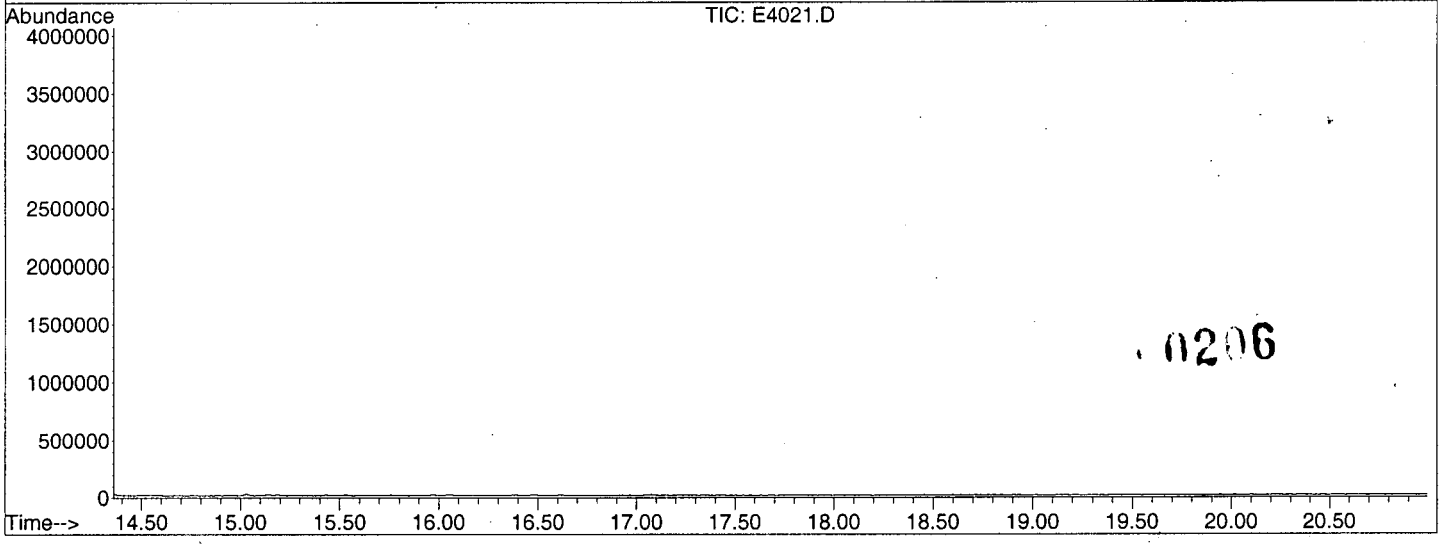
.0205

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2







0206

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

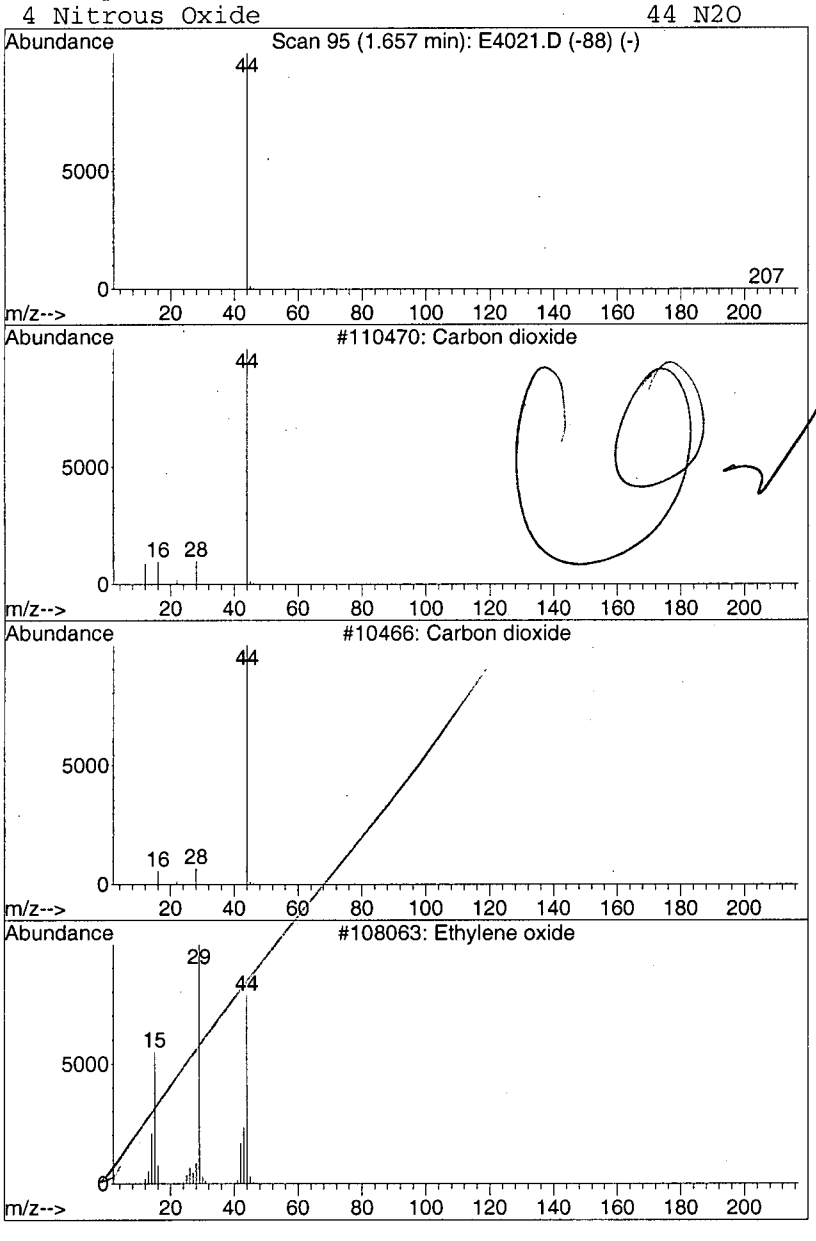
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

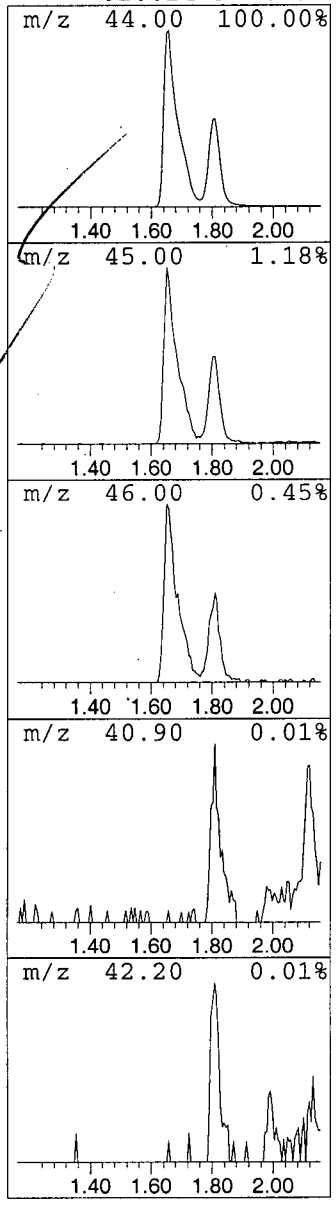
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.66	35.92 ug/L	13135000	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0207

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4021.D Vial: 14
Acq On : 03/27/2003 1757 Operator: AK
Sample : Y0SJ4DL Inst : E-5973
Misc : 2762.004DL 25ML 8X Multiplr: 1.00
MS Integration Params: Lscint.p

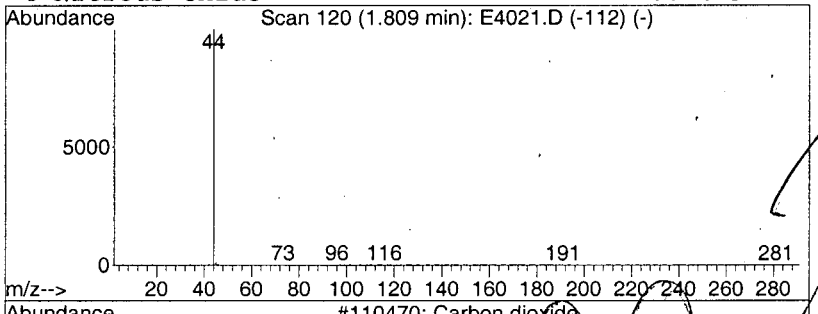
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

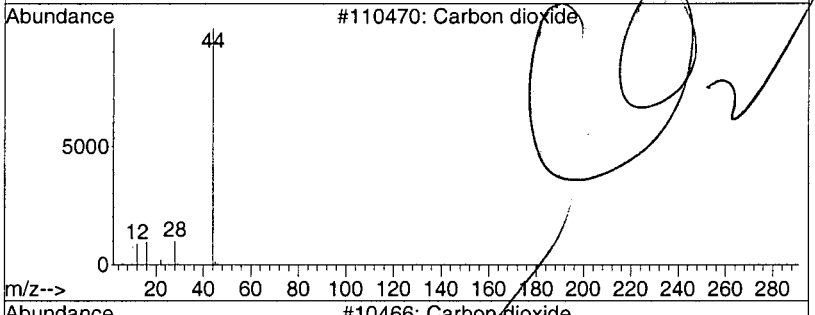
****

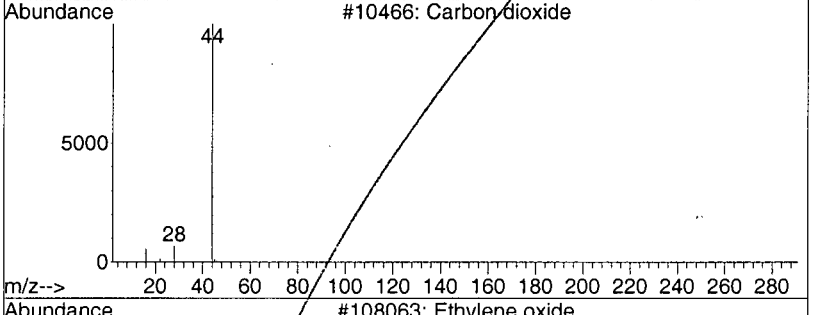
Peak Number 2 Carbon dioxide Concentration Rank 2

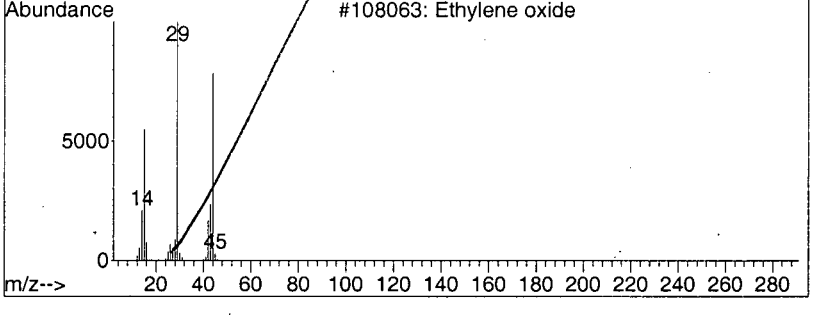
R.T.	EstConc	Area	Relative to ISTD	R.T.
1.81	14.47 ug/L	5292620	1,4-Difluorobenzene	6.30

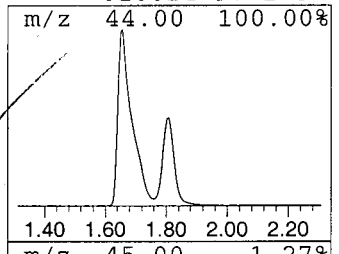
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3

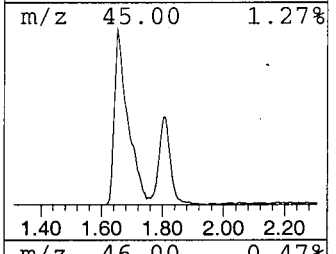


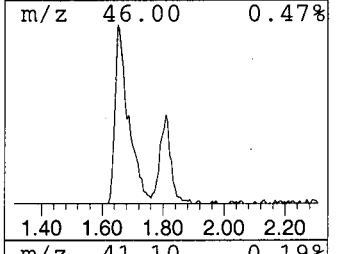


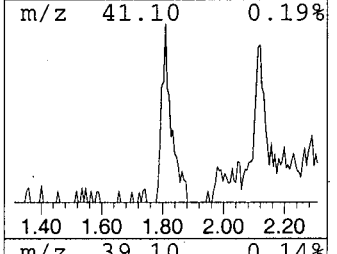


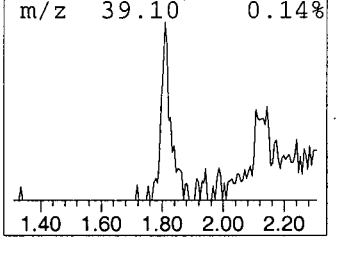












0208

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

Y0SJ5

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.005 Date Received: 03/20/2003

Lab File ID: E4020 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	2.3	J
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.25	JB
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

01209

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

Y0SJ5

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.005 Date Received: 03/20/2003

Lab File ID: E4020 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.17	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.25	JB
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

.0210

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Y0SJ5

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.005 Date Received: 03/20/2003

Lab File ID: E4020 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

0211

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4020.D
Acq On : 03/27/2003 1716
Sample : Y0SJ5
Misc : 2762.005 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 27 18:06:09 2003

Vial: 13
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4009.RES

Kon 04/02/03
EP 4/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1343415	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	1031488	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	370794	5.00 ug/L	0.00

System Monitoring Compounds					
4) Vinyl Chloride-d3	2.15	65	517784	5.26 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 105.20%	
7) Chloroethane-d5	2.54	69	459735	5.58 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 111.60%	
10) 1,1-Dichloroethene-d2	3.26	65	238932	5.56 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 111.20%	
20) 2-Butanone-d5	4.88	46	49029	5.65 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 113.00%	
24) Chloroform-d	5.24	86	533992	5.63 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 112.60%	
26) 1,2-Dichloroethane-d4	5.81	65	292512	5.76 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 115.20%	
32) Benzene-d6	5.85	84	2298714	5.97 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 119.40%	
35) 1,2-Dichloropropane-d6	6.80	67	547091	5.07 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 101.40%	
41) Toluene-d8	8.21	98	2182027	5.78 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 115.60%	
43) trans-1,3-Dichloropropene-	8.53	79	74527	5.78 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 115.60%	
47) 2-Hexanone-d5	9.13	46	78716	4.93 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 98.60%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	210725	5.78 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 115.60%	
61) Bromoform-d	11.51	174	107490	5.13 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 102.60%	
65) 1,2-Dichlorobenzene-d4	13.54	152	438415	5.78 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 115.60%	

Target Compounds					Qvalue
13) Acetone	3.29	43	13292	2.31 ug/L J	97
25) Chloroform	5.26	83	43503	0.25 ug/L J	79
42) Toluene	8.30	91	87599	0.17 ug/L J	98
62) Bromoform	11.52	173	6224	0.25 ug/L JB	84

0212

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

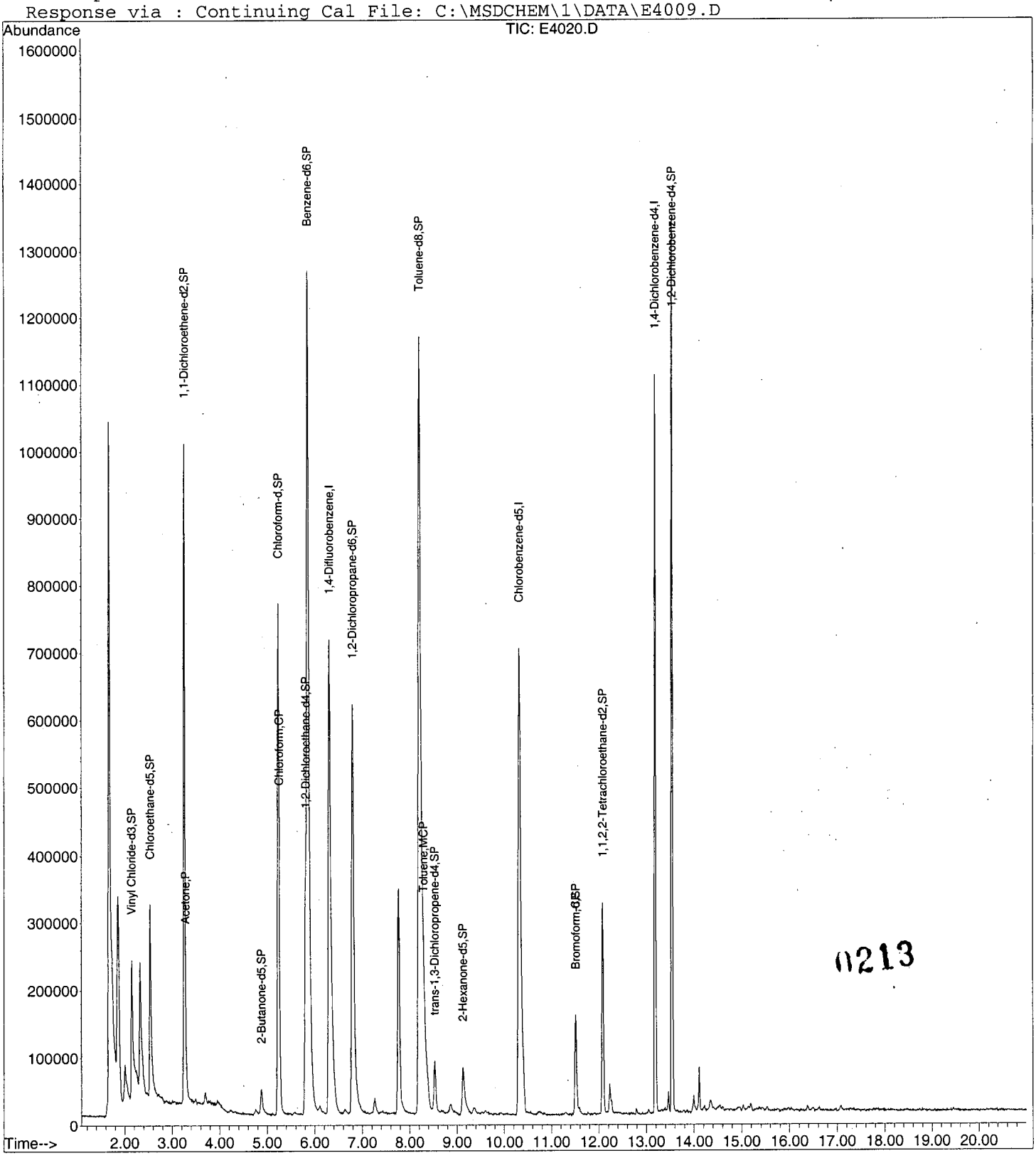
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4020.D
Acq On : 03/27/2003 1716
Sample : Y0SJ5
Misc : 2762.005 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:59 2003

Vial: 13
Operator: AK
Inst : E-5973
Multiplr: 1.00

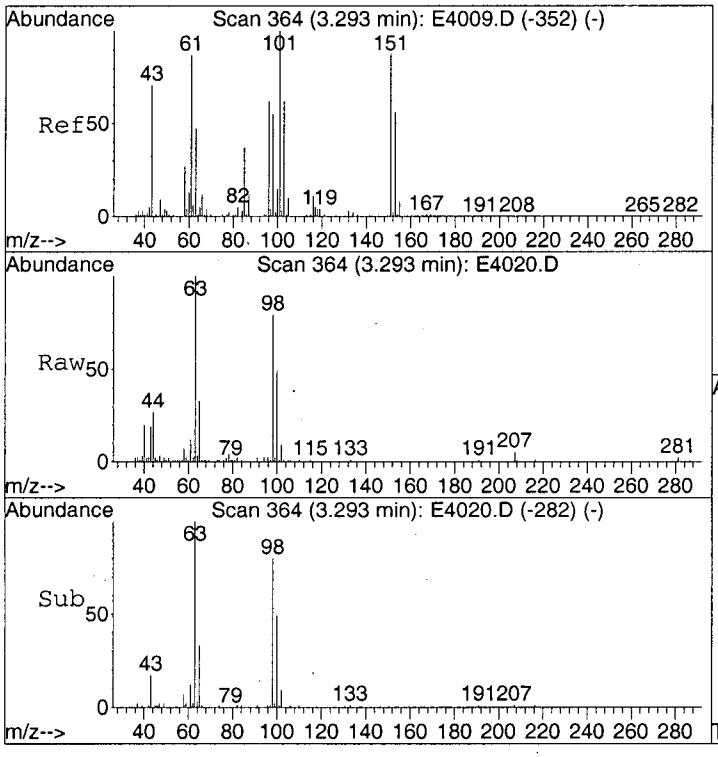
Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D



0213

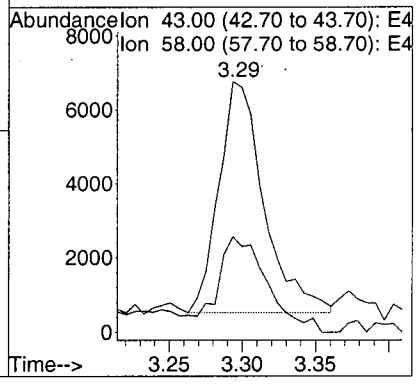
Data File : C:\MSDCHEM\1\DATA\E4020.D Vial: 13
Acq On : 03/27/2003 1716 Operator: AK
Sample : Y0SJ5 Inst : E-5973
Misc : 2762.005 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

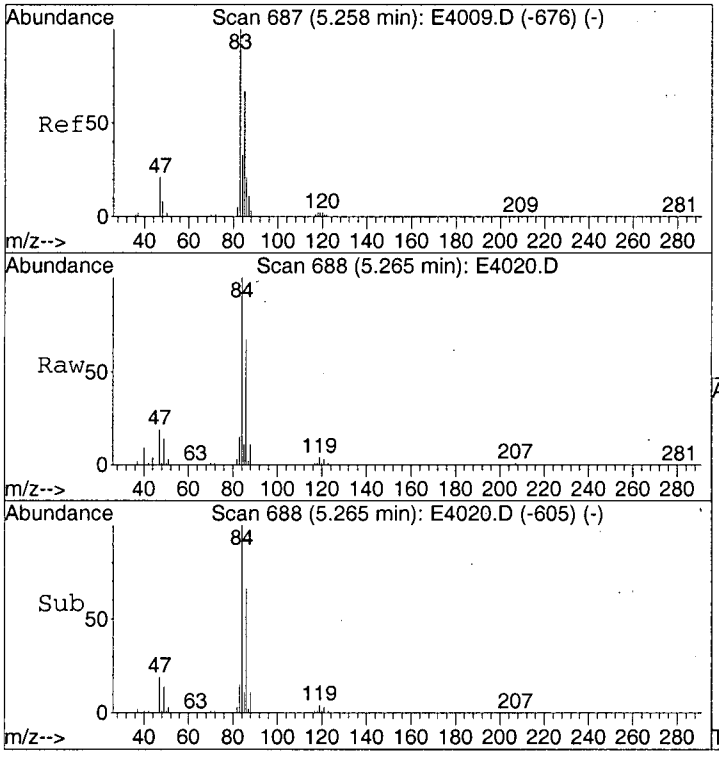


#13
Acetone
Concen: 2.31 ug/L
RT: 3.29 min Scan# 364
Delta R.T. 0.00 min
Lab File: E4020.D
Acq: 27 Mar 2003 17:16

Tgt Ion: 43 Resp: 13292

Ion	Ratio	Lower	Upper
43	100		
58	44.4	22.6	62.6

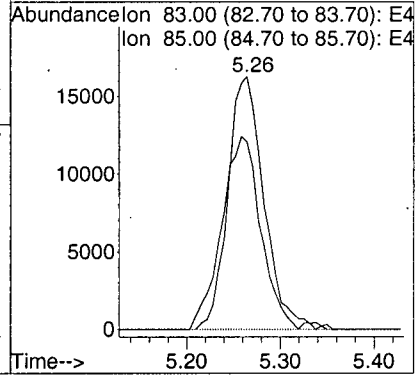




#25
Chloroform
Concen: 0.25 ug/L
RT: 5.26 min Scan# 688
Delta R.T. 0.01 min
Lab File: E4020.D
Acq: 27 Mar 2003 17:16

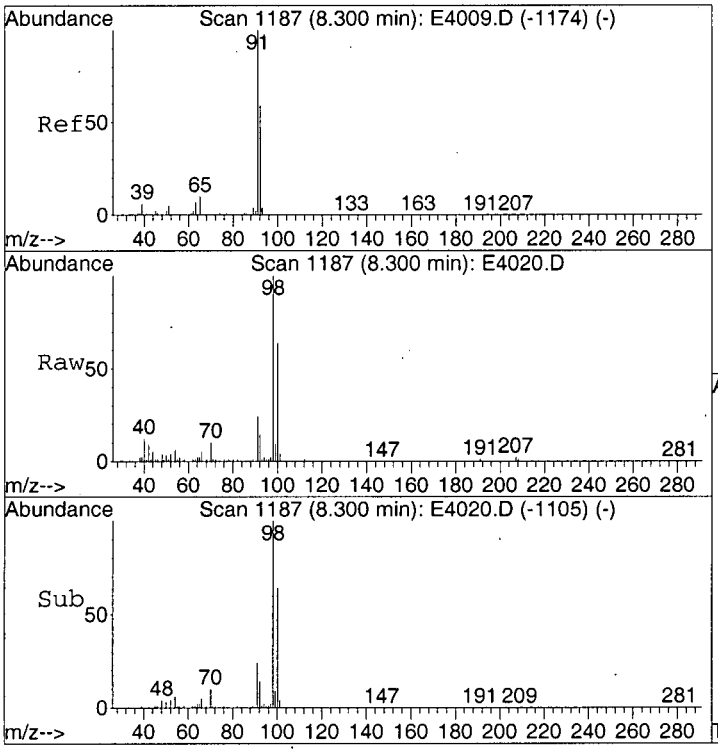
Tgt Ion: 83 Resp: 43503

Ion	Ratio	Lower	Upper
83	100		
85	82.6	45.9	85.9



0214

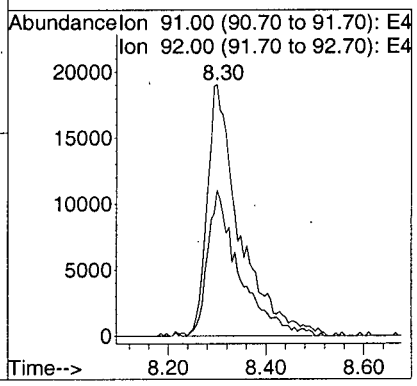
Data File : C:\MSDCHEM\1\DATA\E4020.D Vial: 13
Acq On : 03/27/2003 1716 Operator: AK
Sample : Y0SJ5 Inst : E-5973
Misc : 2762.005 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

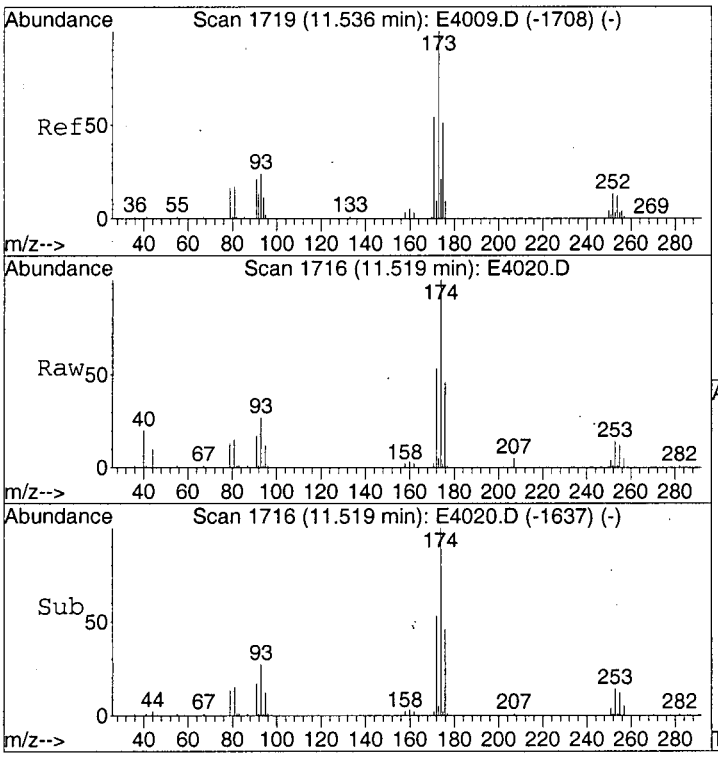


#42
Toluene
Concen: 0.17 ug/L
RT: 8.30 min Scan# 1187
Delta R.T. 0.00 min
Lab File: E4020.D
Acq: 27 Mar 2003 17:16

Tgt Ion: 91 Resp: 87599

Ion	Ratio	Lower	Upper
91	100		
92	57.5	39.2	79.2

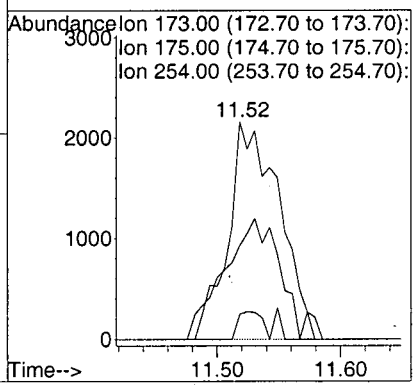




#62
Bromoform
Concen: 0.25 ug/L
RT: 11.52 min Scan# 1716
Delta R.T. -0.02 min
Lab File: E4020.D
Acq: 27 Mar 2003 17:16

Tgt Ion:173 Resp: 6224

Ion	Ratio	Lower	Upper
173	100		
175	60.3	29.4	69.4
254	5.8	0.0	31.9



1215

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4020.D
Acq On : 03/27/2003 1716
Sample : Y0SJ5
Misc : 2762.005 25ML
MS Integration Params: Lscint.p

Vial: 13
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.669	84	97	121	rBV	1031691	3416195	61.33%	9.480%
2	1.864	121	129	144	rVB	304012	987291	17.73%	2.740%
3	2.010	146	153	158	rBV2	52551	131061	2.35%	0.364%
4	2.150	170	176	191	rBV	206295	615520	11.05%	1.708%
5	2.326	200	205	225	rVB	194813	590771	10.61%	1.639%
6	2.539	234	240	255	rBV	283953	685968	12.32%	1.903%
7	3.263	349	359	373	rBV	978559	2105220	37.80%	5.842%
8	5.240	674	684	702	rBV	757101	1955547	35.11%	5.426%
9	5.855	769	785	811	rBV2	1253534	5200356	93.37%	14.431%
10	6.311	849	860	891	rBV	701163	2783408	49.97%	7.724%
11	6.798	930	940	970	rBV2	604583	2192774	39.37%	6.085%
12	7.771	1089	1100	1115	rBV	335597	993544	17.84%	2.757%
13	8.209	1159	1172	1214	rBV	1153379	5569857	100.00%	15.456%
14	8.531	1217	1225	1235	rVB2	73820	203728	3.66%	0.565%
15	9.128	1313	1323	1345	rBV3	71410	305489	5.48%	0.848%
16	10.320	1507	1519	1543	rBV	691835	2803318	50.33%	7.779%
17	11.512	1707	1715	1724	rBV2	147791	379589	6.82%	1.053%
18	12.084	1800	1809	1819	rBV	312797	689747	12.38%	1.914%
19	13.185	1983	1990	2000	rBV	1096505	1963405	35.25%	5.448%
20	13.544	2041	2049	2058	rBV	1330510	2363739	42.44%	6.559%
21	14.110	2134	2142	2147	rBV3	64327	100689	1.81%	0.279%

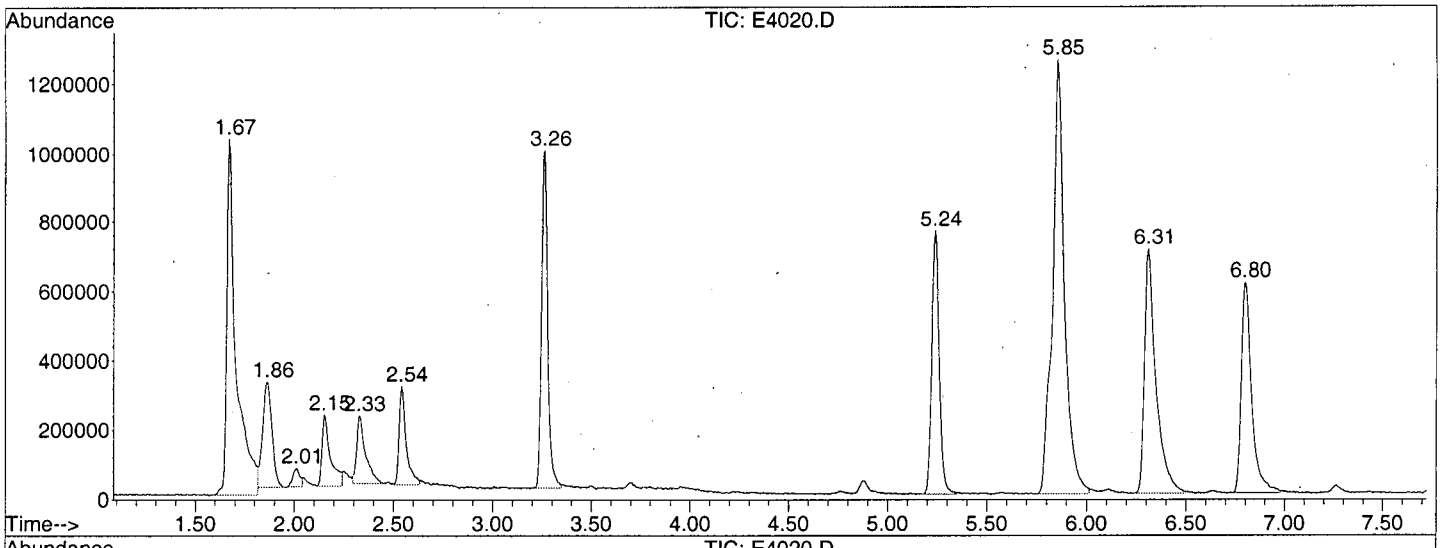
Sum of corrected areas: 36037216

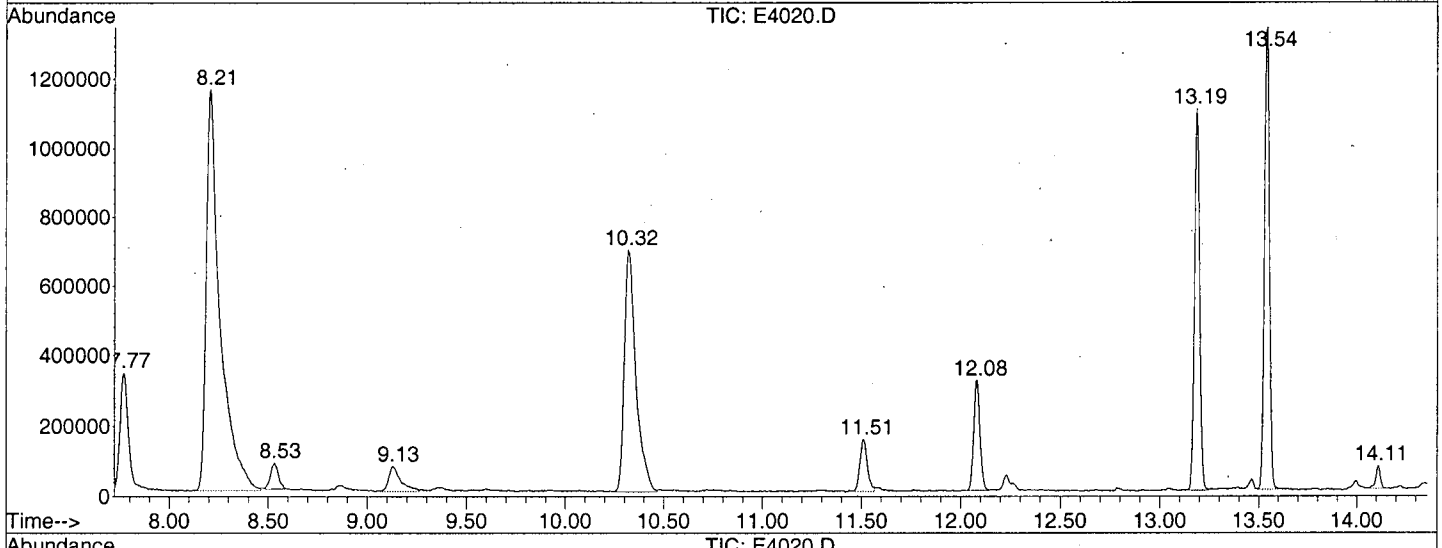
0216

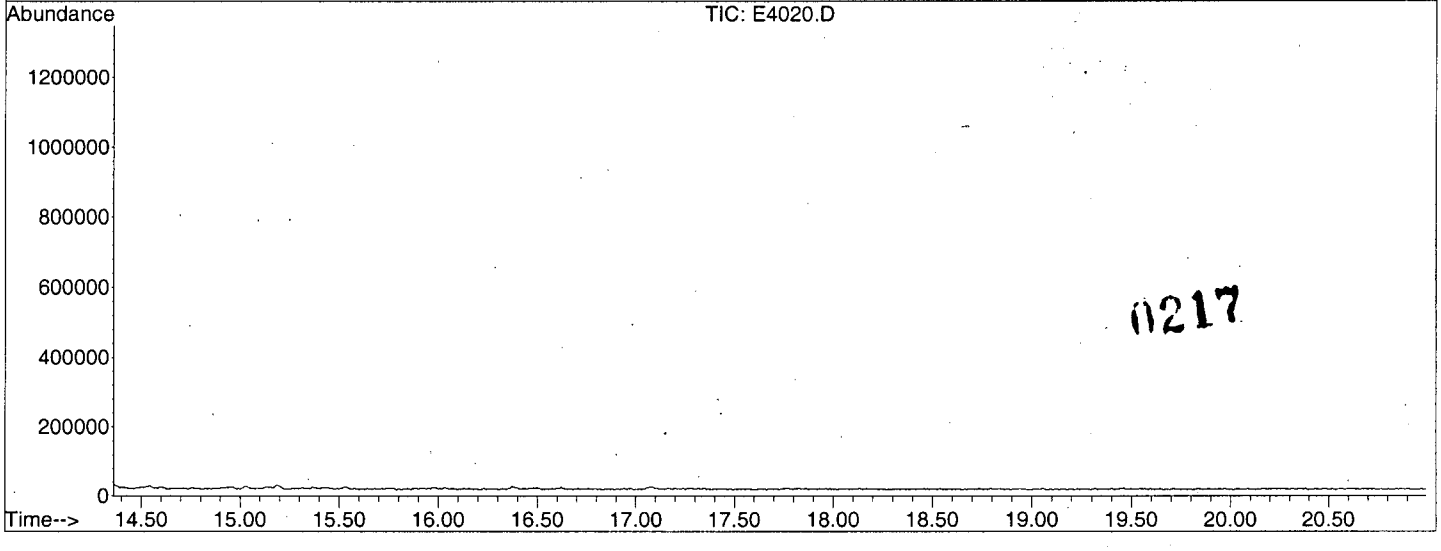
LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4020.D
Acq On : 03/27/2003 1716
Sample : Y0SJ5
Misc : 2762.005 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 13
Operator: AK
Inst : E-5973
Multiplr: 1.00







0217

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4020.D
Acq On : 03/27/2003 1716
Sample : Y0SJ5
Misc : 2762.005 25ML
MS Integration Params: Lscint.p

Vial: 13
Operator: AK
Inst : E-5973
Multiplr: 1.00

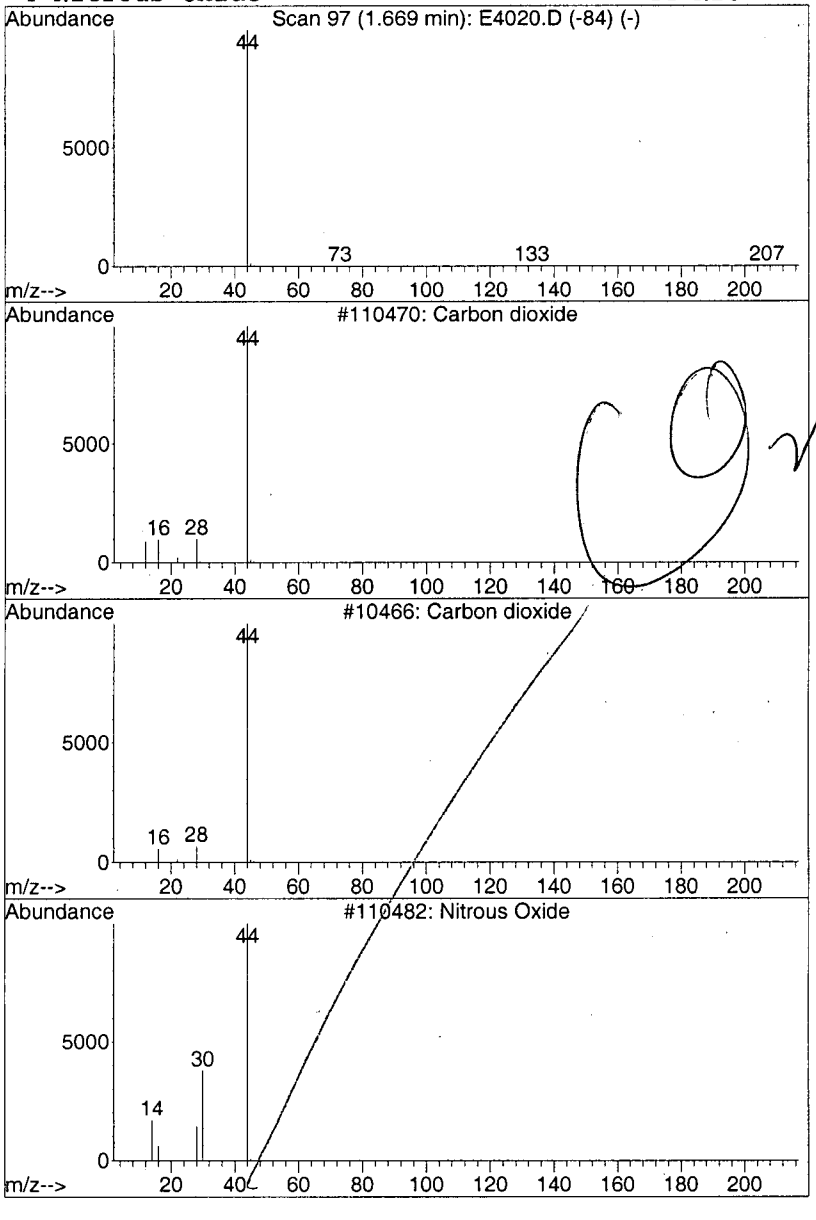
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

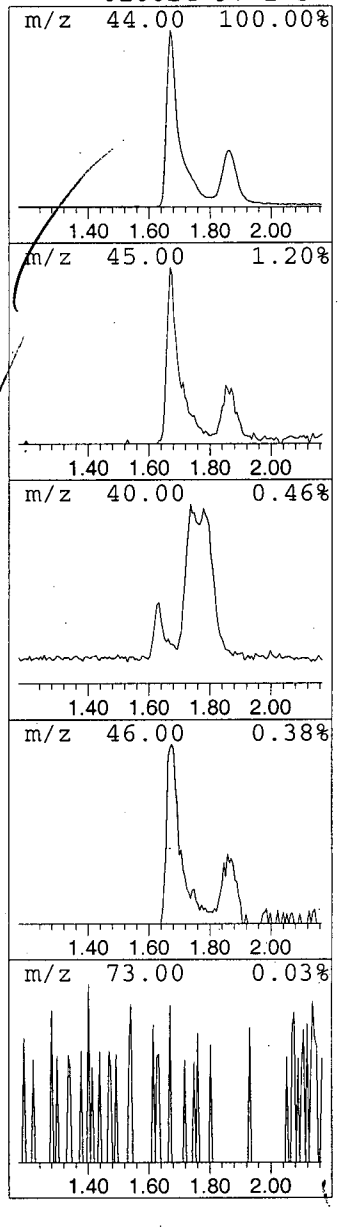
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.67	6.14 ug/L	3416200	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





11218

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4020.D Vial: 13
Acq On : 03/27/2003 1716 Operator: AK
Sample : Y0SJ5 Inst : E-5973
Misc : 2762.005 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

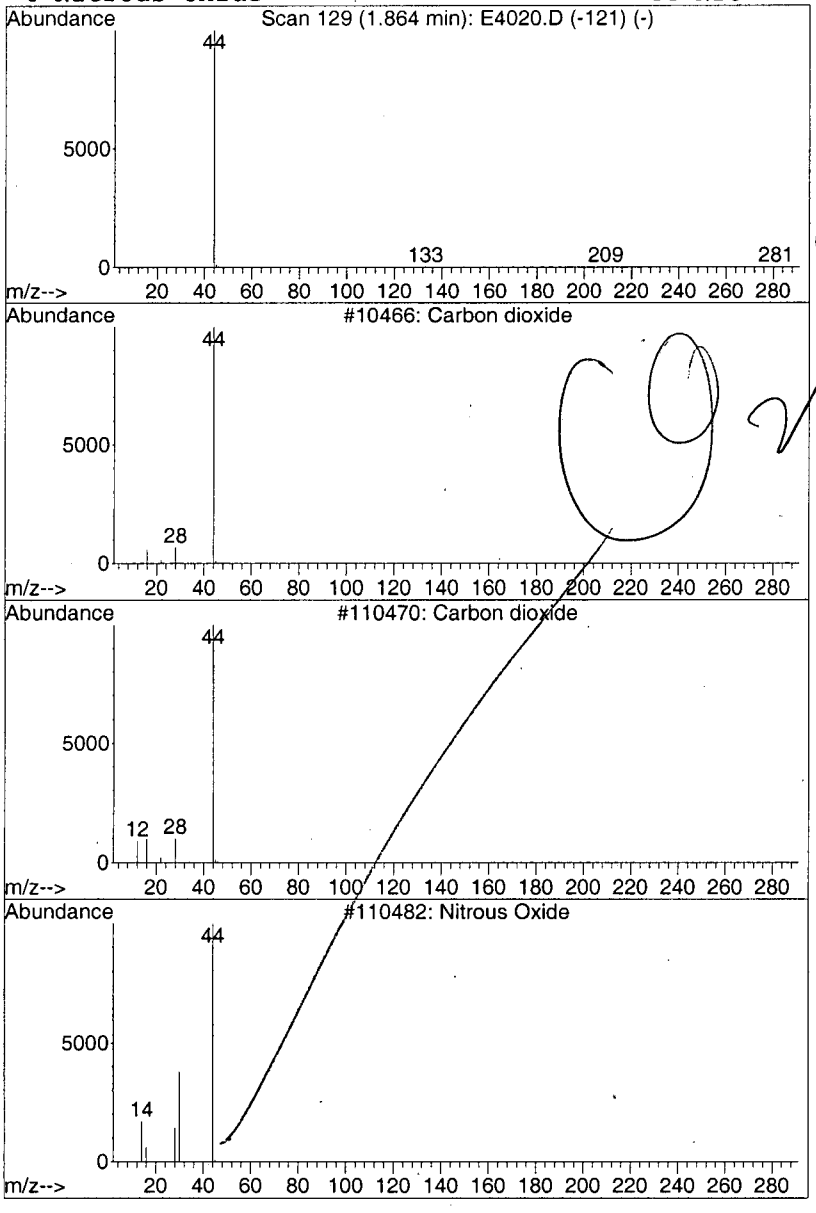
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

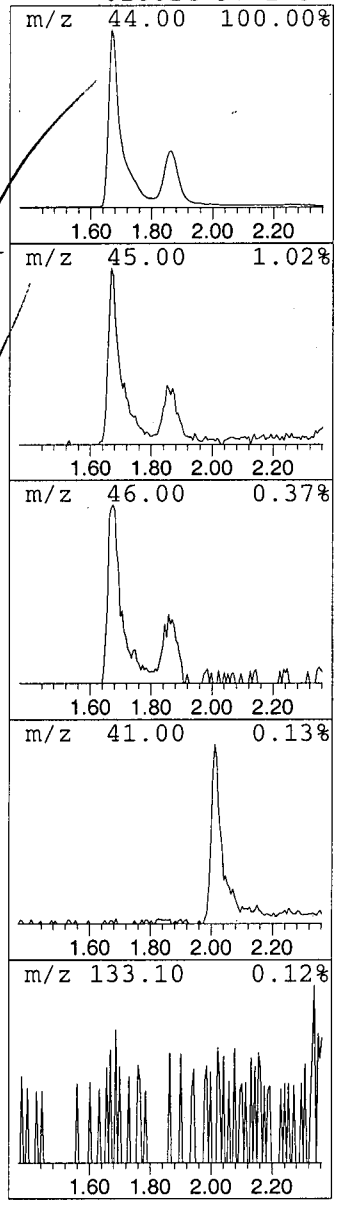
****

Peak Number 2 Carbon dioxide Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.86	1.77 ug/L	987291	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





CO2

110219

6LCA

LOW CONCENTRATION WATER VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Instrument ID: E-5973 Calibration Date(s): 03/26/2003 03/26/2003

Calibration Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

LAB FILE ID: RRF0.5 = E4006 RRF1 = E4005
RRF5= E4004 RRF10 = E4003 RRF25 = E4002

COMPOUND	RRF0.5	RRF1	RRF5	RRF10	RRF25	$\overline{RRF}$	% RSD
Dichlorodifluoromethane	0.776	0.731	0.613	0.780	0.693	0.719	9.6
Chloromethane	1.140	1.059	0.849	1.038	0.911	0.999	11.8
Vinyl Chloride *	0.871	0.821	0.674	0.830	0.707	0.781	10.9 *
Bromomethane *	0.217	0.202	0.167	0.193	0.094	0.175	27.8 *
Chloroethane	0.513	0.474	0.373	0.460	0.194	0.403	31.6
Trichlorofluoromethane	0.984	0.930	0.759	0.952	0.850	0.895	10.1
1,1-Dichloroethene *	0.508	0.494	0.407	0.477	0.420	0.461	9.8 *
1,1,2-Trichloro-1,2,2-trifluoroethane	0.524	0.488	0.428	0.512	0.448	0.480	8.6
Acetone	0.067	0.032	0.022	0.017	0.022	0.032	63.5
Carbon Disulfide	1.609	1.503	1.288	1.508	1.336	1.449	9.2
Methyl Acetate	0.133	0.065	0.054	0.063	0.054	0.074	45.2
Methylene Chloride	0.818	0.593	0.361	0.401	0.338	0.502	40.5
trans-1,2-Dichloroethene	0.557	0.534	0.445	0.512	0.451	0.500	10.0
Methyl tert-Butyl Ether	0.712	0.626	0.517	0.597	0.503	0.591	14.4
1,1-Dichloroethane *	0.831	0.768	0.654	0.751	0.664	0.734	10.1 *
cis-1,2-Dichloroethene	0.478	0.436	0.372	0.429	0.386	0.420	10.1
2-Butanone	0.047	0.042	0.036	0.029	0.039	0.039	17.3
Bromochloromethane *	0.142	0.128	0.114	0.130	0.118	0.126	8.7 *
Chloroform *	0.808	0.744	0.621	0.698	0.609	0.696	12.0 *
1,1,1-Trichloroethane *	0.929	0.859	0.738	0.830	0.696	0.810	11.6 *
Cyclohexane	1.079	1.017	0.900	1.045	0.881	0.984	9.0
Carbon Tetrachloride *	0.698	0.662	0.583	0.674	0.579	0.639	8.6 *
Benzene *	2.698	2.480	2.119	2.339	1.941	2.315	12.8 *
1,2-Dichloroethane *	0.318	0.287	0.249	0.286	0.252	0.278	10.3 *
Trichloroethene *	0.590	0.541	0.452	0.514	0.427	0.505	13.1 *
Methylcyclohexane	1.129	1.072	0.979	1.144	0.968	1.058	7.8

* Compounds with required minimum RRF and maximum %RSD Values.
All other compound must meet a minimum RRF of 0.010.

11220

6LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Instrument ID: E-5973 Calibration Date(s): 03/26/2003 03/26/2003

Calibration Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

LAB FILE ID: RRF0.5 = E4006 RRF1 = E4005
RRF5 = E4004 RRF10 = E4003 RRF25 = E4002

COMPOUND		RRF0.5	RRF1	RRF5	RRF10	RRF25	$\overline{RRF}$	% RSD	
1,2-Dichloropropane		0.550	0.474	0.410	0.455	0.375	0.453	14.7	
Bromodichloromethane	*	0.533	0.488	0.416	0.461	0.390	0.458	12.4	*
cis-1,3-Dichloropropene	*	0.658	0.604	0.535	0.609	0.518	0.585	9.8	*
4-Methyl-2-pentanone		0.122	0.116	0.101	0.079	0.109	0.105	15.9	
Toluene	*	2.833	2.583	2.289	2.577	2.190	2.494	10.3	*
trans-1,3-Dichloropropene	*	0.444	0.411	0.366	0.422	0.364	0.401	8.8	*
1,1,2-Trichloroethane	*	0.279	0.242	0.205	0.229	0.189	0.229	15.2	*
Tetrachloroethene	*	0.601	0.563	0.476	0.540	0.461	0.528	11.2	*
2-Hexanone		0.087	0.079	0.071	0.054	0.076	0.073	16.8	
Dibromochloromethane	*	0.270	0.249	0.227	0.264	0.224	0.247	8.5	*
1,2-Dibromoethane	*	0.221	0.183	0.165	0.190	0.161	0.184	13.0	*
Chlorobenzene	*	1.679	1.538	1.320	1.515	1.300	1.470	10.8	*
Ethylbenzene	*	2.665	2.505	2.228	2.665	2.386	2.490	7.5	*
Xylene (total)	*	0.928	0.872	0.768	0.940	0.849	0.871	7.9	*
Styrene	*	1.239	1.184	1.072	1.330	1.191	1.203	7.8	*
Bromoform	*	0.370	0.324	0.313	0.338	0.291	0.327	9.0	*
Isopropylbenzene		2.253	2.177	1.866	2.316	2.098	2.142	8.2	
1,1,2,2-Tetrachloroethane	*	0.237	0.211	0.188	0.216	0.182	0.207	10.8	*
1,3-Dichlorobenzene	*	2.960	2.573	2.124	2.368	2.093	2.424	14.8	*
1,4-Dichlorobenzene	*	2.860	2.484	2.045	2.266	1.973	2.326	15.5	*
1,2-Dichlorobenzene	*	2.289	2.043	1.656	1.855	1.605	1.890	15.0	*
1,2-Dibromo-3-chloropropane		0.083	0.076	0.052	0.060	0.049	0.064	23.3	
1,2,4-Trichlorobenzene	*	1.675	1.542	1.186	1.256	1.047	1.341	19.4	*
1,2,3-Trichlorobenzene	*	1.318	1.225	0.919	0.977	0.795	1.047	20.8	*

* Compounds with required minimum RRF and maximum %RSD Values.
All other compound must meet a minimum RRF of 0.010.

0221

6LCC

LOW CONCENTRATION WATER VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Instrument ID: E-5973 Calibration Date(s): 03/26/2003 03/26/2003

Calibration Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

LAB FILE ID: RRF0.5 = E4006 RRF1 = E4005
RRF5 = E4004 RRF10 = E4003 RRF25 = E4002

COMPOUND	RRF0.5	RRF1	RRF5	RRF10	RRF25	$\overline{RRF}$	% RSD
Vinyl Chloride-d3	0.473	0.461	0.413	0.434	0.377	0.432	8.9
Chloroethane-d5	0.403	0.391	0.345	0.360	0.152	0.330	31.0
1,1-Dichloroethene-d2	0.199	0.206	0.186	0.194	0.173	0.192	6.6
2-Butanone-d5	0.035	0.035	0.035	0.038	0.034	0.035	4.3
Chloroform-d	0.419	0.429	0.409	0.418	0.390	0.413	3.6
1,2-Dichloroethane-d4	0.257	0.238	0.228	0.233	0.196	0.230	9.6
Benzene-d6	2.402	2.392	2.180	2.163	1.839	2.195	10.4
1,2-Dichloropropane-d6	0.695	0.672	0.591	0.589	0.487	0.607	13.5
Toluene-d8	2.274	2.251	2.119	2.122	1.840	2.121	8.1
trans-1,3-Dichloropropene-d4	0.084	0.083	0.072	0.073	0.065	0.075	10.7
2-Hexanone-d5	0.083	0.080	0.081	0.087	0.075	0.081	5.4
Bromoform-d	0.300	0.303	0.297	0.302	0.271	0.295	4.5
1,1,2,2-Tetrachloroethane-d2	0.226	0.217	0.210	0.216	0.183	0.210	7.8
1,2-Dichlorobenzene-d4	1.431	1.387	1.182	1.175	1.039	1.243	13.1

* Compounds with required minimum RRF and maximum %RSD Values.
All other compound must meet a minimum RRF of 0.010.

11222

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:17:29 2003
Response via : Continuing Calibration

Calibration Files
1 =E4006.D 2 =E4005.D 3 =E4004.D
4 =E4003.D 5 =E4002.D

ORIGINAL COPY
Case: 31517 SDG: CA0277
Episode: 2749 Int./Date: 03/27/03

		Compound	1	2	3	4	5	Avg	%RSD
1)	I	1,4-Difluorobenzene	----------ISTD----------						
2)	P	Dichlorodifluorom	0.776	0.731	0.613	0.780	0.693	0.718	9.59
3)	P	Chloromethane	1.140	1.059	0.850	1.038	0.910	0.999	11.73
4)	SP	Vinyl Chloride-d3	0.473	0.461	0.413	0.434	0.377	0.432	8.90
5)	CP	Vinyl Chloride	0.871	0.821	0.673	0.830	0.707	0.780	10.95
6)	CP	Bromomethane	0.217	0.202	0.167	0.193	0.094	0.174	27.93
7)	SP	Chloroethane-d5	0.403	0.391	0.345	0.360	0.152	0.330	31.03
8)	P	Chloroethane	0.513	0.474	0.373	0.460	0.194	0.403	31.66
9)	P	Trichlorofluorome	0.984	0.930	0.759	0.952	0.850	0.895	10.13
10)	SP	1,1-Dichloroethen	0.199	0.206	0.186	0.194	0.173	0.192	6.70
11)	MCP	1,1-Dichloroethen	0.508	0.494	0.407	0.477	0.420	0.461	9.79
12)	P	1,1,2-Trichloro-1	0.524	0.488	0.428	0.512	0.448	0.480	8.54
13)	P	Acetone	0.067	0.031	0.022	0.017	0.022	0.032	63.91
14)	P	Carbon Disulfide	1.609	1.503	1.288	1.508	1.336	1.449	9.18
15)	P	Methyl Acetate	0.133	0.065	0.054	0.063	0.054	0.074	45.40
16)	P	Methylene Chlorid	0.818	0.593	0.361	0.401	0.338	0.502	40.50
17)	P	trans-1,2-Dichlor	0.557	0.534	0.445	0.512	0.451	0.500	10.01
18)	P	Methyl tert-Butyl	0.712	0.626	0.517	0.597	0.503	0.591	14.44
19)	CP	1,1-Dichloroethan	0.831	0.768	0.654	0.751	0.664	0.733	10.14
20)	SP	2-Butanone-d5	0.035	0.035	0.035	0.038	0.034	0.035	4.77
21)	P	cis-1,2-Dichloroe	0.478	0.436	0.372	0.429	0.386	0.420	10.09
22)	P	2-Butanone	0.047	0.042	0.036	0.029	0.039	0.039	17.89
23)	CP	Bromochloromethan	0.142	0.128	0.114	0.130	0.118	0.126	8.88
24)	SP	Chloroform-d	0.419	0.429	0.409	0.418	0.390	0.413	3.55
25)	CP	Chloroform	0.808	0.743	0.621	0.698	0.609	0.696	12.00
26)	SP	1,2-Dichloroethan	0.257	0.238	0.228	0.232	0.196	0.230	9.65
27)	CP	1,2-Dichloroethan	0.318	0.287	0.249	0.286	0.252	0.279	10.28
28)	I	Chlorobenzene-d5	----------ISTD----------						
29)	CP	1,1,1-Trichloroet	0.929	0.859	0.738	0.830	0.696	0.810	11.56
30)	P	Cyclohexane	1.079	1.017	0.900	1.045	0.881	0.984	9.01
31)	CP	Carbon Tetrachlor	0.698	0.662	0.583	0.674	0.579	0.639	8.55
32)	SP	Benzene-d6	2.402	2.392	2.179	2.163	1.839	2.195	10.43
33)	MCP	Benzene	2.698	2.480	2.119	2.339	1.941	2.315	12.83
34)	MCP	Trichloroethene	0.590	0.541	0.452	0.514	0.427	0.505	13.06
35)	SP	1,2-Dichloropropa	0.695	0.672	0.591	0.589	0.487	0.607	13.50
36)	P	Methylcyclohexane	1.129	1.072	0.979	1.144	0.968	1.058	7.77
37)	P	1,2-Dichloropropa	0.550	0.474	0.410	0.455	0.375	0.453	14.75
38)	CP	Bromodichlorometh	0.533	0.488	0.416	0.461	0.390	0.458	12.43
39)	CP	cis-1,3-Dichlorop	0.658	0.604	0.535	0.609	0.518	0.585	9.83
40)	P	4-Methyl-2-Pentan	0.122	0.116	0.101	0.079	0.109	0.105	16.08
41)	SP	Toluene-d8	2.274	2.251	2.119	2.122	1.840	2.121	8.13
42)	MCP	Toluene	2.833	2.583	2.289	2.576	2.190	2.494	10.31
43)	SP	trans-1,3-Dichlor	0.084	0.083	0.072	0.073	0.065	0.075	10.50
44)	CP	trans-1,3-Dichlor	0.444	0.410	0.365	0.422	0.364	0.401	8.82
45)	CP	1,1,2-Trichloroet	0.279	0.242	0.205	0.229	0.189	0.229	15.17
46)	CP	Tetrachloroethene	0.601	0.563	0.476	0.540	0.461	0.528	11.13
47)	SP	2-Hexanone-d5	0.083	0.080	0.081	0.087	0.075	0.081	5.28
48)	P	2-Hexanone	0.087	0.079	0.071	0.054	0.076	0.073	16.63
49)	CP	Dibromochlorometh	0.270	0.249	0.227	0.264	0.224	0.246	8.50
50)	CP	1,2-Dibromoethane	0.221	0.183	0.165	0.190	0.161	0.184	13.15
51)	MCP	Chlorobenzene	1.679	1.538	1.320	1.515	1.300	1.470	10.84
52)	CP	Ethylbenzene	2.665	2.505	2.227	2.665	2.386	2.490	7.54
53)	T	m/p-Xylene	1.036	0.983	0.875	1.058	0.947	0.980	7.46
54)	T	o-Xylene	0.928	0.872	0.768	0.940	0.849	0.871	7.92
55)	CP	Xylene (total)	0.928	0.872	0.768	0.940	0.849	0.871	7.92

11223

(#) = Out of Range

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:17:29 2003
Response via : Continuing Calibration

Calibration Files
1 =E4006.D 2 =E4005.D 3 =E4004.D
4 =E4003.D 5 =E4002.D

		Compound	1	2	3	4	5	Avg	%RSD
56)	CP	Styrene	1.239	1.184	1.072	1.330	1.191	1.203	7.77
57)	P	Isopropylbenzene	2.253	2.177	1.866	2.316	2.098	2.142	8.15
58)	SP	1,1,2,2-Tetrachlo	0.226	0.217	0.210	0.216	0.183	0.210	7.74
59)	CP	1,1,2,2-Tetrachlo	0.237	0.211	0.187	0.216	0.181	0.207	10.87
60)	I	1,4-Dichlorobenzene-d	----------ISTD----------						
61)	SP	Bromoform-d	0.300	0.303	0.297	0.302	0.271	0.295	4.51
62)	CP	Bromoform	0.370	0.324	0.313	0.338	0.291	0.327	9.07
63)	CP	1,3-Dichlorobenze	2.960	2.573	2.124	2.368	2.093	2.424	14.76
64)	CP	1,4-Dichlorobenze	2.860	2.484	2.045	2.266	1.973	2.326	15.48
65)	SP	1,2-Dichlorobenze	1.431	1.387	1.182	1.175	1.039	1.243	13.10
66)	CP	1,2-Dichlorobenze	2.288	2.043	1.656	1.855	1.605	1.890	14.96
67)	P	1,2-Dibromo-3-chl	0.083	0.076	0.052	0.060	0.049	0.064	23.20
68)	CP	1,2,4-Trichlorobe	1.674	1.542	1.186	1.255	1.047	1.341	19.35
69)	CP	1,2,3-Trichlorobe	1.318	1.225	0.919	0.977	0.795	1.047	20.81

1224

(#) = Out of Range

Data File : C:\MSDCHEM\1\DATA\E4006.D Vial: 6
Acq On : 03/26/2003 2101 Operator: AK
Sample : VSTD0.54M Inst : E-5973
Misc : EVSTD0.54M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:51 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31517 SDG: CA027
Episode: 2749 Int./Date: 03/27/03

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1125994	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	876806	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	302861	5.00 ug/L	0.00

System Monitoring Compounds					
4) Vinyl Chloride-d3	2.14	65	53247	0.57 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 11.40%#		
7) Chloroethane-d5	2.54	69	45414	0.58 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery = 11.60%#		
10) 1,1-Dichloroethene-d2	3.26	65	22419	0.53 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 10.60%#		
20) 2-Butanone-d5	4.87	46	39385	4.98 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 99.60%		
24) Chloroform-d	5.24	86	47195	0.51 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 10.20%#		
26) 1,2-Dichloroethane-d4	5.81	65	28906	0.56 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 11.20%#		
32) Benzene-d6	5.85	84	210598	0.55 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 11.00%#		
35) 1,2-Dichloropropane-d6	6.80	67	60896	0.59 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 11.80%#		
41) Toluene-d8	8.21	98	199361	0.54 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 10.80%#		
43) trans-1,3-Dichloropropene-	8.53	79	7331	0.58 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 11.60%#		
47) 2-Hexanone-d5	9.13	46	73004	5.14 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 102.80%		
58) 1,1,2,2-Tetrachloroethane-	12.08	84	19799	0.54 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 10.80%#		
61) Bromoform-d	11.51	174	9091	0.50 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 10.00%#		
65) 1,2-Dichlorobenzene-d4	13.54	152	43349	0.61 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 12.20%#		

Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.85	85	87337	0.63 ug/L	99
3) Chloromethane	2.05	50	128344	0.67 ug/L	98
5) Vinyl Chloride	2.15	62	98044	0.65 ug/L	96
6) Bromomethane	2.47	94	24410	0.65 ug/L #	68
8) Chloroethane	2.56	64	57814	0.69 ug/L	93
9) Trichlorofluoromethane	2.80	101	110825	0.65 ug/L	99
11) 1,1-Dichloroethene	3.27	96	57182	0.62 ug/L #	89
12) 1,1,2-Trichloro-1,2,2-trif	3.27	101	59018	0.61 ug/L	99
13) Acetone	3.29	43	75842	15.11 ug/L	97
14) Carbon Disulfide	3.49	76	181221	0.62 ug/L	97
15) Methyl Acetate	3.59	43	14985	1.24 ug/L	81
16) Methylene Chloride	3.69	84	92151	1.13 ug/L	99
17) trans-1,2-Dichloroethene	3.96	96	62738	0.63 ug/L	99
18) Methyl tert-Butyl Ether	3.96	73	80201	0.69 ug/L	78
19) 1,1-Dichloroethane	4.35	63	93551	0.64 ug/L	99
21) cis-1,2-Dichloroethene	4.94	96	53866	0.64 ug/L	94
22) 2-Butanone	4.94	43	53269	6.51 ug/L	92
23) Bromochloromethane	5.19	128	16036	0.63 ug/L	92
25) Chloroform	5.26	83	90929	0.65 ug/L	99
27) 1,2-Dichloroethane	5.90	62	35839	0.64 ug/L	98

(#) = qualifier out of range (m) = manual integration

11225

Data File : C:\MSDCHEM\1\DATA\E4006.D Vial: 6
Acq On : 03/26/2003 2101 Operator: AK
Sample : VSTD0.54M Inst : E-5973
Misc : EVSTD0.54M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:51 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

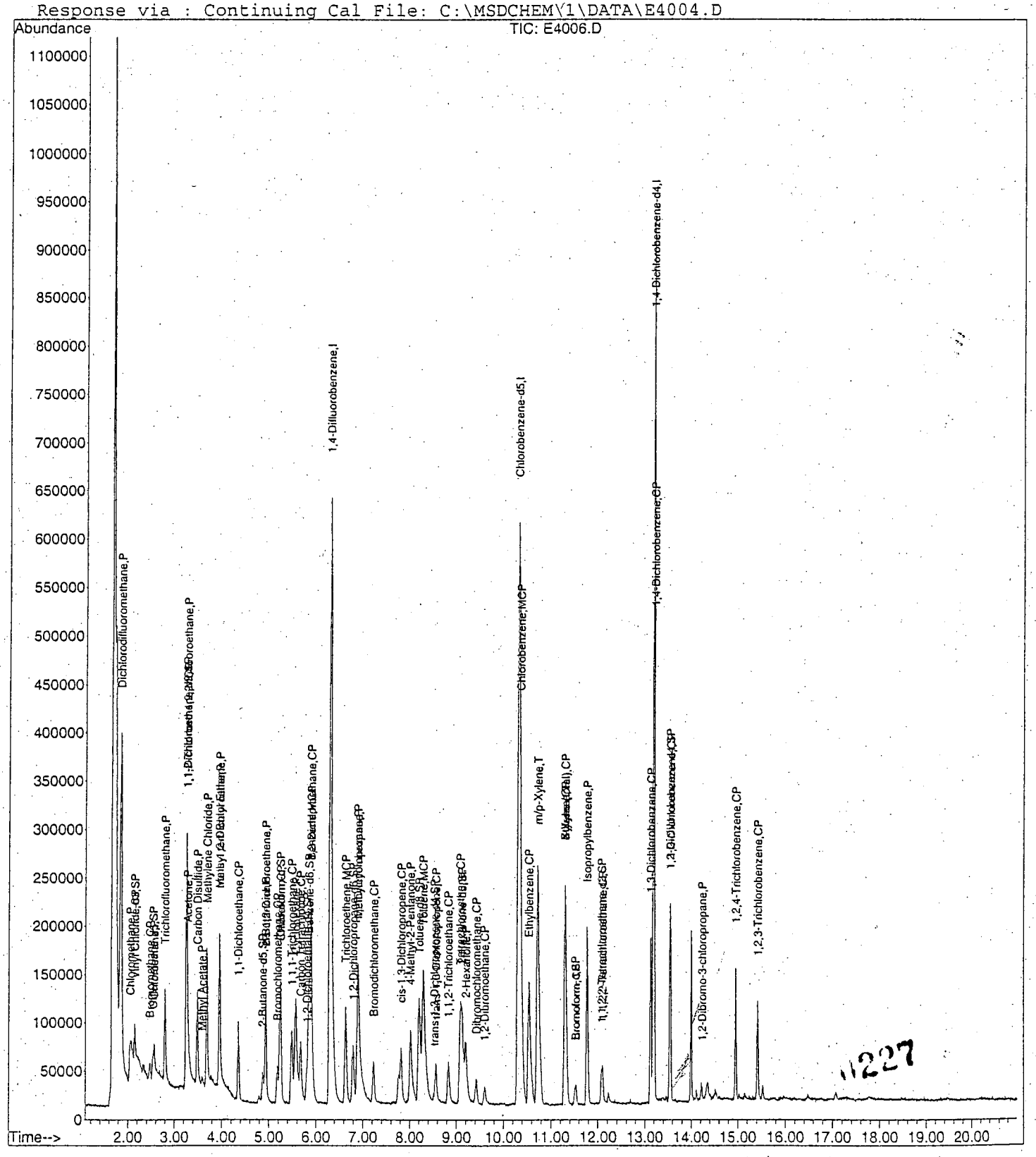
	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	1,1,1-Trichloroethane	5.48	97	81437	0.63 ug/L		99
30)	Cyclohexane	5.57	56	94581	0.60 ug/L		99
31)	Carbon Tetrachloride	5.68	117	61231	0.60 ug/L		99
33)	Benzene	5.90	78	236531	0.64 ug/L		100
34)	Trichloroethene	6.64	95	51689	0.65 ug/L		96
36)	Methylcyclohexane	6.91	83	99008	0.58 ug/L		93
37)	1,2-Dichloropropane	6.91	63	48216	0.67 ug/L		93
38)	Bromodichloromethane	7.23	83	46749	0.64 ug/L		98
39)	cis-1,3-Dichloropropene	7.82	75	57652	0.61 ug/L		100
40)	4-Methyl-2-Pentanone	8.01	43	107317	6.04 ug/L		99
42)	Toluene	8.29	91	248430	0.62 ug/L		99
44)	trans-1,3-Dichloropropene	8.57	75	38968	0.61 ug/L	#	64
45)	1,1,2-Trichloroethane	8.83	97	24462	0.68 ug/L		99
46)	Tetrachloroethene	9.08	164	52688	0.63 ug/L		99
48)	2-Hexanone	9.21	43	76073	6.12 ug/L		93
49)	Dibromochloromethane	9.43	129	23647	0.60 ug/L		93
50)	1,2-Dibromoethane	9.60	107	19414	0.67 ug/L		95
51)	Chlorobenzene	10.36	112	147193	0.64 ug/L		94
52)	Ethylbenzene	10.54	91	233625	0.60 ug/L		100
53)	m/p-Xylene	10.73	106	181611	1.18 ug/L		100
54)	o-Xylene	11.30	106	81370	0.60 ug/L		98
55)	Xylene (total)	11.30	106	81370	0.60 ug/L		98
56)	Styrene	11.31	104	108600	0.58 ug/L		99
57)	Isopropylbenzene	11.77	105	197522	0.60 ug/L		99
59)	1,1,2,2-Tetrachloroethane	12.10	83	20751	0.63 ug/L		98
62)	Bromoform	11.54	173	11214	0.59 ug/L		98
63)	1,3-Dichlorobenzene	13.12	146	89637	0.70 ug/L		98
64)	1,4-Dichlorobenzene	13.21	146	86629	0.70 ug/L		97
66)	1,2-Dichlorobenzene	13.56	146	69309	0.69 ug/L		98
67)	1,2-Dibromo-3-chloropropan	14.23	75	2506	0.79 ug/L		86
68)	1,2,4-Trichlorobenzene	14.96	180	50714	0.71 ug/L		98
69)	1,2,3-Trichlorobenzene	15.42	180	39911	0.72 ug/L		97

1226

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

Data File : C:\MSDCHEM\1\DATA\E4006.D Vial: 6
Acq On : 03/26/2003 2101 Operator: AK
Sample : VSTD0.54M Inst : E-5973
Misc : EVSTD0.54M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:15 2003 Quant Results File: LCE4004.RES

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



11227

Data File : C:\MSDCHEM\1\DATA\E4005.D Vial: 5
Acq On : 03/26/2003 2021 Operator: AK
Sample : VSTD0014M Inst : E-5973
Misc : EVSTD0014M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:47 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31517 SDG: CA0027
Episode: 2749 Int./Date: 03/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1097472	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	856245	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	310961	5.00	ug/L	0.00

System Monitoring Compounds						
4) Vinyl Chloride-d3	2.13	65	101263	1.12	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 22.40%#			
7) Chloroethane-d5	2.53	69	85728	1.13	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery = 22.60%#			
10) 1,1-Dichloroethene-d2	3.24	65	45276	1.11	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 22.20%#			
20) 2-Butanone-d5	4.86	46	76996	10.00	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 200.00%#			
24) Chloroform-d	5.23	86	94253	1.05	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 21.00%#			
26) 1,2-Dichloroethane-d4	5.80	65	52232	1.04	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 20.80%#			
32) Benzene-d6	5.85	84	409587	1.10	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 22.00%#			
35) 1,2-Dichloropropane-d6	6.80	67	114995	1.14	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 22.80%#			
41) Toluene-d8	8.20	98	385433	1.06	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 21.20%#			
43) trans-1,3-Dichloropropene-	8.52	79	14238	1.15	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 23.00%#			
47) 2-Hexanone-d5	9.13	46	137076	9.88	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 197.60%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	37127	1.03	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 20.60%#			
61) Bromoform-d	11.51	174	18829	1.02	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 20.40%#			
65) 1,2-Dichlorobenzene-d4	13.54	152	86231	1.17	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 23.40%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.85	85	160382	1.19	ug/L	97
3) Chloromethane	2.04	50	232537	1.25	ug/L	98
5) Vinyl Chloride	2.14	62	180189	1.22	ug/L	96
6) Bromomethane	2.46	94	44305	1.21	ug/L	89
8) Chloroethane	2.55	64	103996	1.27	ug/L	95
9) Trichlorofluoromethane	2.79	101	204047	1.22	ug/L	97
11) 1,1-Dichloroethene	3.26	96	108407	1.21	ug/L	93
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	107007	1.14	ug/L	99
13) Acetone	3.29	43	69096	14.13	ug/L	99
14) Carbon Disulfide	3.48	76	329904	1.17	ug/L	98
15) Methyl Acetate	3.59	43	14283	1.21	ug/L	83
16) Methylene Chloride	3.69	84	130069	1.64	ug/L	99
17) trans-1,2-Dichloroethene	3.96	96	117270	1.20	ug/L	97
18) Methyl tert-Butyl Ether	3.96	73	137312	1.21	ug/L	97
19) 1,1-Dichloroethane	4.35	63	168585	1.17	ug/L	99
21) cis-1,2-Dichloroethene	4.93	96	95735	1.17	ug/L	98
22) 2-Butanone	4.93	43	92313	11.57	ug/L	96
23) Bromochloromethane	5.18	128	28097	1.12	ug/L	99
25) Chloroform	5.25	83	163192	1.20	ug/L	99
27) 1,2-Dichloroethane	5.89	62	63089	1.16	ug/L	99

(#) = qualifier out of range (m) = manual integration

11228

Data File : C:\MSDCHEM\1\DATA\E4005.D Vial: 5
Acq On : 03/26/2003 2021 Operator: AK
Sample : VSTD0014M Inst : E-5973
Misc : EVSTD0014M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:47 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

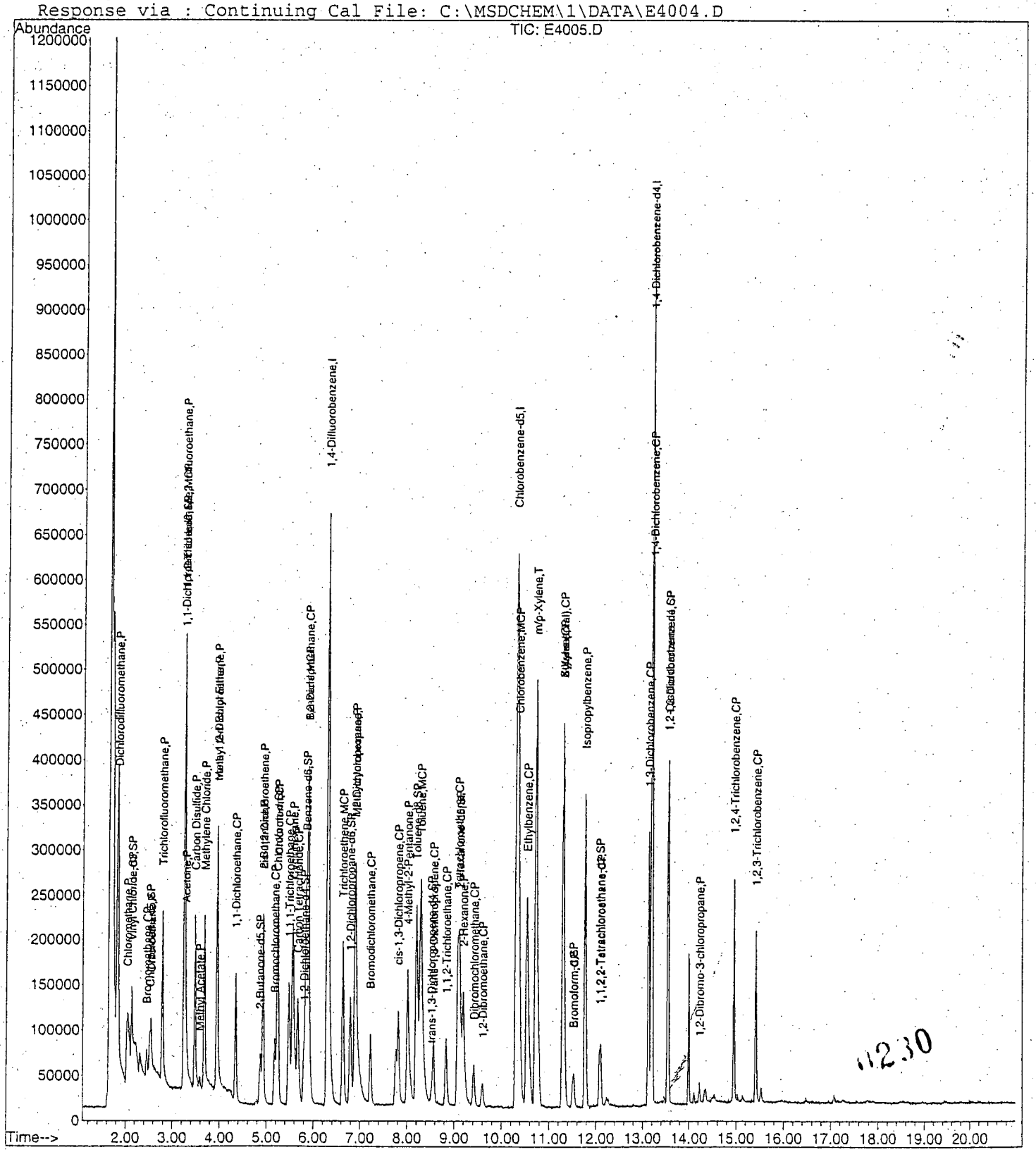
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) 1,1,1-Trichloroethane	5.48	97	147046	1.16 ug/L	98
30) Cyclohexane	5.57	56	174167	1.13 ug/L	97
31) Carbon Tetrachloride	5.67	117	113296	1.14 ug/L	99
33) Benzene	5.89	78	424750	1.17 ug/L	100
34) Trichloroethene	6.63	95	92573	1.20 ug/L	97
36) Methylcyclohexane	6.90	83	183504	1.09 ug/L	96
37) 1,2-Dichloropropane	6.90	63	81186	1.16 ug/L	95
38) Bromodichloromethane	7.23	83	83529	1.17 ug/L	99
39) cis-1,3-Dichloropropene	7.81	75	103468	1.13 ug/L	100
40) 4-Methyl-2-Pentanone	8.01	43	198098	11.42 ug/L	99
42) Toluene	8.29	91	442371	1.13 ug/L	98
44) trans-1,3-Dichloropropene	8.57	75	70293	1.12 ug/L	80
45) 1,1,2-Trichloroethane	8.84	97	41435	1.18 ug/L	97
46) Tetrachloroethene	9.09	164	96399	1.18 ug/L	99
48) 2-Hexanone	9.20	43	135089	11.13 ug/L	96
49) Dibromochloromethane	9.42	129	42587	1.10 ug/L	100
50) 1,2-Dibromoethane	9.61	107	31294	1.11 ug/L	99
51) Chlorobenzene	10.37	112	263433	1.17 ug/L	98
52) Ethylbenzene	10.54	91	428919	1.12 ug/L	99
53) m/p-Xylene	10.73	106	336813	2.25 ug/L	100
54) o-Xylene	11.29	106	149274	1.13 ug/L	98
55) Xylene (total)	11.29	106	149274	1.13 ug/L	98
56) Styrene	11.31	104	202811	1.10 ug/L	100
57) Isopropylbenzene	11.77	105	372785	1.17 ug/L	99
59) 1,1,2,2-Tetrachloroethane	12.11	83	36204	1.13 ug/L	99
62) Bromoform	11.53	173	20133	1.03 ug/L	96
63) 1,3-Dichlorobenzene	13.12	146	160035	1.21 ug/L	99
64) 1,4-Dichlorobenzene	13.21	146	154492	1.21 ug/L	99
66) 1,2-Dichlorobenzene	13.56	146	127074	1.23 ug/L	99
67) 1,2-Dibromo-3-chloropropan	14.23	75	4727	1.45 ug/L	84
68) 1,2,4-Trichlorobenzene	14.96	180	95881	1.30 ug/L	98
69) 1,2,3-Trichlorobenzene	15.42	180	76205	1.33 ug/L	98

01229

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

Data File : C:\MSDCHEM\1\DATA\E4005.D Vial: 5
Acq On : 03/26/2003 2021 Operator: AK
Sample : VSTD0014M Inst : E-5973
Misc : EVSTD0014M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:15 2003 Quant Results File: LCE4004.RES

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



Data File : C:\MSDCHEM\1\DATA\E4004.D Vial: 4
Acq On : 03/26/2003 1940 Operator: AK
Sample : VSTD0054M Inst : E-5973
Misc : EVSTD0054M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:43 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31517 SDG: CA027
Episode: 2749 Int./Date: 03/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1332727	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	1060903	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	387145	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.14	65	550493	5.00	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 100.00%			
7) Chloroethane-d5	2.53	69	459790	5.00	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery = 100.00%			
10) 1,1-Dichloroethene-d2	3.25	65	248290	5.00	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 100.00%			
20) 2-Butanone-d5	4.87	46	233834	25.00	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 500.00%#			
24) Chloroform-d	5.23	86	545567	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 100.00%			
26) 1,2-Dichloroethane-d4	5.81	65	304424	5.00	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 100.00%			
32) Benzene-d6	5.85	84	2312958	5.00	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 100.00%			
35) 1,2-Dichloropropane-d6	6.80	67	626737	5.00	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 100.00%			
41) Toluene-d8	8.20	98	2247577	5.00	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 100.00%			
43) trans-1,3-Dichloropropene-	8.53	79	76645	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 100.00%			
47) 2-Hexanone-d5	9.13	46	429847	25.00	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 500.00%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	222886	5.00	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 100.00%			
61) Bromoform-d	11.51	174	115107	5.00	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 100.00%			
65) 1,2-Dichlorobenzene-d4	13.54	152	457507	5.00	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 100.00%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.85	85	816569	5.00	ug/L	100
3) Chloromethane	2.04	50	1131390	4.99	ug/L	100
5) Vinyl Chloride	2.15	62	897574	5.00	ug/L	100
6) Bromomethane	2.46	94	222263	5.00	ug/L	100
8) Chloroethane	2.56	64	497322	5.00	ug/L	100
9) Trichlorofluoromethane	2.80	101	1012106	5.00	ug/L	100
11) 1,1-Dichloroethene	3.26	96	542096	5.00	ug/L	100
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	570861	5.00	ug/L	100
13) Acetone	3.29	43	148488	25.00	ug/L	100
14) Carbon Disulfide	3.49	76	1717062	5.00	ug/L	100
15) Methyl Acetate	3.59	43	71878	5.01	ug/L	100
16) Methylene Chloride	3.69	84	480974	5.00	ug/L	100
17) trans-1,2-Dichloroethene	3.96	96	592817	5.00	ug/L	100
18) Methyl tert-Butyl Ether	3.96	73	688911	5.00	ug/L	100
19) 1,1-Dichloroethane	4.36	63	871494	5.00	ug/L	100
21) cis-1,2-Dichloroethene	4.94	96	495787	5.00	ug/L	100
22) 2-Butanone	4.93	43	242282	25.00	ug/L	100
23) Bromochloromethane	5.18	128	151751	5.00	ug/L	100
25) Chloroform	5.25	83	827162	5.00	ug/L	100
27) 1,2-Dichloroethane	5.89	62	331531	5.00	ug/L	100

(#) = qualifier out of range (m) = manual integration

0231

Data File : C:\MSDCHEM\1\DATA\E4004.D Vial: 4
Acq On : 03/26/2003 1940 Operator: AK
Sample : VSTD0054M Inst : E-5973
Misc : EVSTD0054M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:43 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

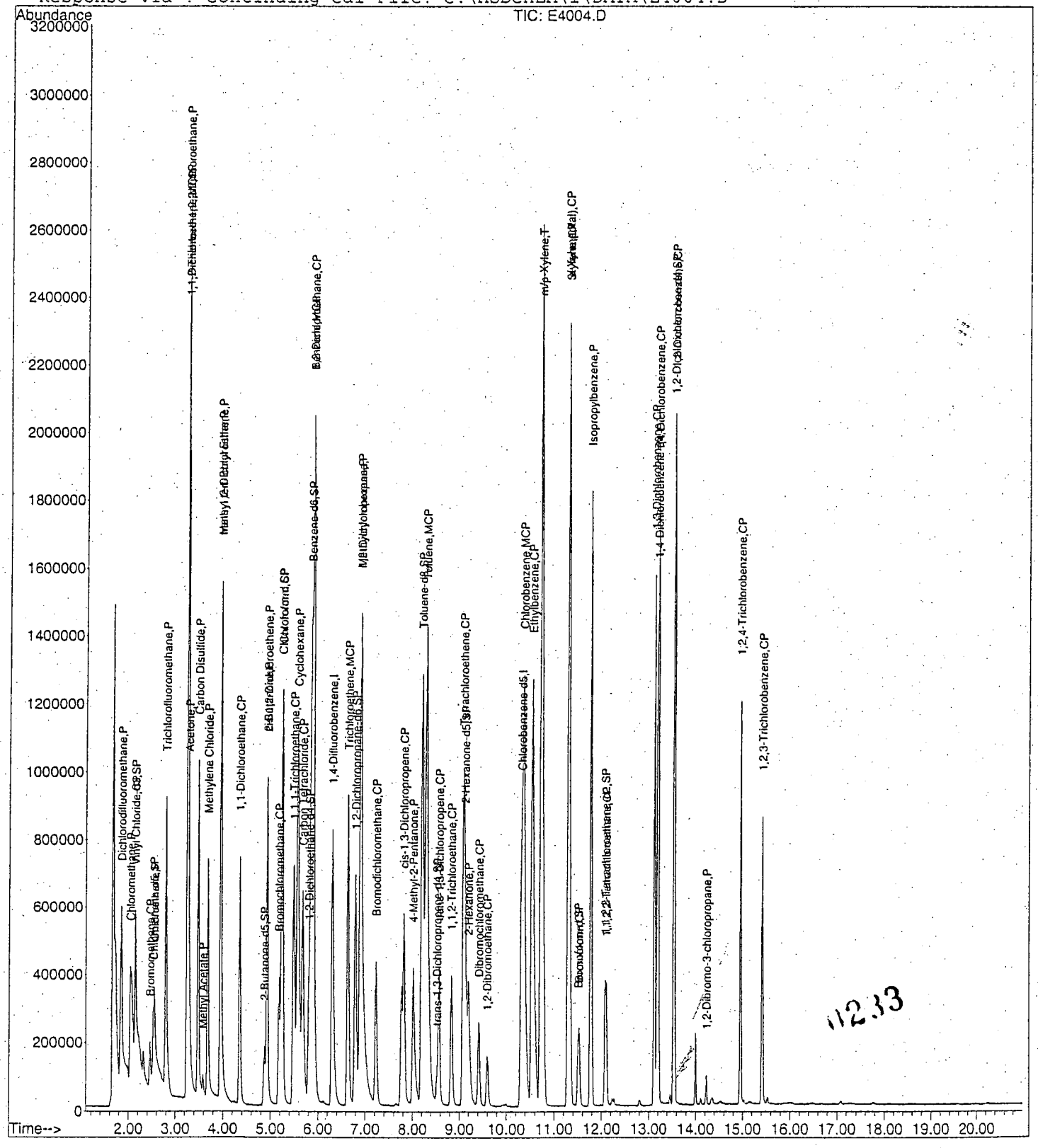
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29) 1,1,1-Trichloroethane	5.48	97	782831	5.00	ug/L	100
30) Cyclohexane	5.57	56	955018	5.00	ug/L	100
31) Carbon Tetrachloride	5.68	117	618389	5.00	ug/L	100
33) Benzene	5.90	78	2247625	5.00	ug/L	100
34) Trichloroethene	6.64	95	479658	5.00	ug/L	100
36) Methylcyclohexane	6.90	83	1038375	5.00	ug/L	100
37) 1,2-Dichloropropane	6.91	63	434544	5.00	ug/L	100
38) Bromodichloromethane	7.23	83	441779	5.00	ug/L	100
39) cis-1,3-Dichloropropene	7.82	75	567253	5.00	ug/L	100
40) 4-Methyl-2-Pentanone	8.01	43	537345	25.01	ug/L	100
42) Toluene	8.30	91	2427983	5.00	ug/L	100
44) trans-1,3-Dichloropropene	8.57	75	387712	5.00	ug/L	100
45) 1,1,2-Trichloroethane	8.84	97	217881	5.00	ug/L	100
46) Tetrachloroethene	9.08	164	504793	5.00	ug/L	100
48) 2-Hexanone	9.19	43	376092	25.00	ug/L	100
49) Dibromochloromethane	9.43	129	240390	5.00	ug/L	100
50) 1,2-Dibromoethane	9.60	107	174803	5.00	ug/L	100
51) Chlorobenzene	10.36	112	1400843	5.00	ug/L	100
52) Ethylbenzene	10.54	91	2363133	5.00	ug/L	100
53) m/p-Xylene	10.73	106	1856124	10.00	ug/L	100
54) o-Xylene	11.29	106	815152	5.00	ug/L	100
55) Xylene (total)	11.29	106	815152	5.00	ug/L	100
56) Styrene	11.31	104	1137323	5.00	ug/L	100
57) Isopropylbenzene	11.77	105	1979600	5.00	ug/L	100
59) 1,1,2,2-Tetrachloroethane	12.11	83	198906	5.00	ug/L	100
62) Bromoform	11.53	173	121122	5.00	ug/L	100
63) 1,3-Dichlorobenzene	13.12	146	822368	5.00	ug/L	100
64) 1,4-Dichlorobenzene	13.21	146	791598	5.00	ug/L	100
66) 1,2-Dichlorobenzene	13.56	146	641149	5.00	ug/L	100
67) 1,2-Dibromo-3-chloropropan	14.23	75	20255	5.00	ug/L	100
68) 1,2,4-Trichlorobenzene	14.96	180	459205	5.00	ug/L	100
69) 1,2,3-Trichlorobenzene	15.42	180	355694	5.00	ug/L	100

11232

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

Data File : C:\MSDCHEM\1\DATA\E4004.D Vial: 4
Acq On : 03/26/2003 1940 Operator: AK
Sample : VSTD0054M Inst : E-5973
Misc : EVSTD0054M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:15 2003 Quant Results File: LCE4004.RES

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



Data File : C:\MSDCHEM\1\DATA\E4003.D Vial: 3
Acq On : 03/26/2003 1900 Operator: AK
Sample : VSTD0104M Inst : E-5973
Misc : EVSTD0104M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:39 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31517 SDG: CAQZ7
Episode: 27449 Int./Date: 03/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1138656	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	934064	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	372246	5.00	ug/L	0.00

System Monitoring Compounds						
4) Vinyl Chloride-d3	2.14	65	989127	10.52	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 210.40%#			
7) Chloroethane-d5	2.53	69	820309	10.44	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery = 208.80%#			
10) 1,1-Dichloroethene-d2	3.25	65	441578	10.41	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 208.20%#			
20) 2-Butanone-d5	4.87	46	435120	54.45	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 1089.00%#			
24) Chloroform-d	5.23	86	951707	10.21	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 204.20%#			
26) 1,2-Dichloroethane-d4	5.81	65	529384	10.18	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 203.60%#			
32) Benzene-d6	5.85	84	4040688	9.93	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 198.60%#			
35) 1,2-Dichloropropane-d6	6.80	67	1100002	9.97	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 199.40%#			
41) Toluene-d8	8.20	98	3964174	10.02	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 200.40%#			
43) trans-1,3-Dichloropropene-	8.53	79	136353	10.10	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 202.00%#			
47) 2-Hexanone-d5	9.13	46	809218	53.46	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 1069.20%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	404015	10.29	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 205.80%#			
61) Bromoform-d	11.51	174	224484	10.14	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 202.80%#			
65) 1,2-Dichlorobenzene-d4	13.54	152	874685	9.94	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 198.80%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.85	85	1775551	12.73	ug/L	99
3) Chloromethane	2.05	50	2363199	12.21	ug/L	99
5) Vinyl Chloride	2.15	62	1891109	12.33	ug/L	100
6) Bromomethane	2.45	94	439041	11.57	ug/L	96
8) Chloroethane	2.55	64	1047794	12.33	ug/L	100
9) Trichlorofluoromethane	2.79	101	2168856	12.54	ug/L	99
11) 1,1-Dichloroethene	3.26	96	1086799	11.73	ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	1166754	11.96	ug/L	99
13) Acetone	3.29	43	191323	37.70	ug/L	98
14) Carbon Disulfide	3.49	76	3435088	11.71	ug/L	100
15) Methyl Acetate	3.59	43	142737	11.65	ug/L	98
16) Methylene Chloride	3.69	84	912309	11.10	ug/L	99
17) trans-1,2-Dichloroethene	3.96	96	1165893	11.51	ug/L	100
18) Methyl tert-Butyl Ether	3.96	73	1358698	11.54	ug/L	99
19) 1,1-Dichloroethane	4.35	63	1709400	11.48	ug/L	100
21) cis-1,2-Dichloroethene	4.94	96	976383	11.53	ug/L	99
22) 2-Butanone	4.93	43	326273	39.40	ug/L	100
23) Bromochloromethane	5.19	128	296621	11.44	ug/L	97
25) Chloroform	5.25	83	1589001	11.24	ug/L	100
27) 1,2-Dichloroethane	5.89	62	650504	11.48	ug/L	100

11234

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\E4003.D Vial: 3
Acq On : 03/26/2003 1900 Operator: AK
Sample : VSTD0104M Inst : E-5973
Misc : EVSTD0104M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:39 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

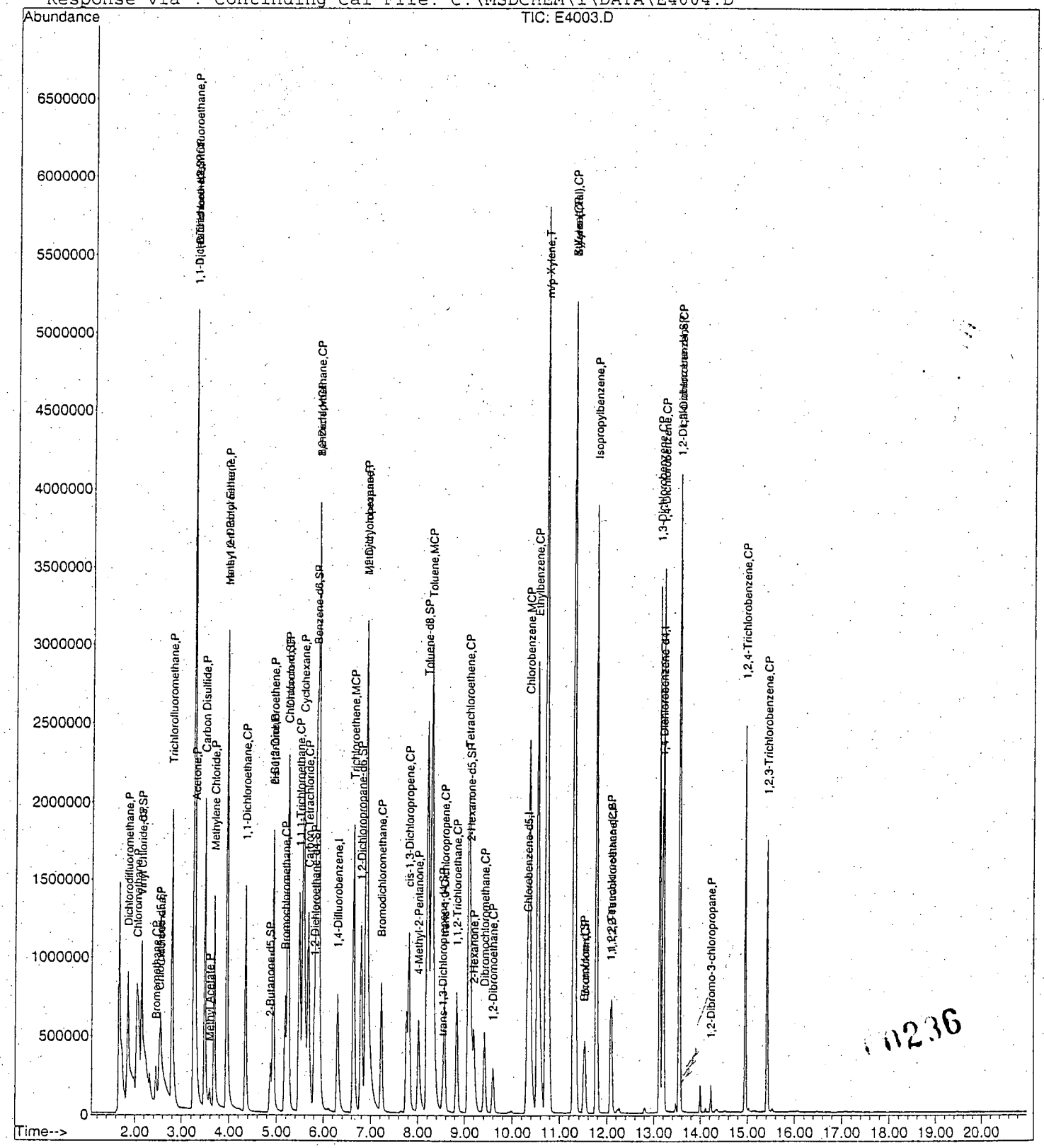
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) 1,1,1-Trichloroethane	5.48	97	1550207	11.25 ug/L	99
30) Cyclohexane	5.57	56	1952431	11.61 ug/L	100
31) Carbon Tetrachloride	5.68	117	1258760	11.56 ug/L	100
33) Benzene	5.90	78	4369750	11.04 ug/L	100
34) Trichloroethene	6.63	95	959936	11.37 ug/L	98
36) Methylcyclohexane	6.90	83	2136816	11.69 ug/L	100
37) 1,2-Dichloropropane	6.90	63	850276	11.11 ug/L	100
38) Bromodichloromethane	7.23	83	860326	11.06 ug/L	98
39) cis-1,3-Dichloropropene	7.82	75	1137434	11.39 ug/L	98
40) 4-Methyl-2-Pentanone	8.01	43	733242	38.76 ug/L	100
42) Toluene	8.29	91	4813222	11.26 ug/L	100
44) trans-1,3-Dichloropropene	8.57	75	787801	11.54 ug/L	95
45) 1,1,2-Trichloroethane	8.84	97	428070	11.16 ug/L	99
46) Tetrachloroethene	9.09	164	1008828	11.35 ug/L	99
48) 2-Hexanone	9.20	43	505251	38.15 ug/L	98
49) Dibromochloromethane	9.42	129	492288	11.63 ug/L	99
50) 1,2-Dibromoethane	9.60	107	354727	11.52 ug/L	99
51) Chlorobenzene	10.36	112	2830632	11.48 ug/L	99
52) Ethylbenzene	10.54	91	4978361	11.96 ug/L	100
53) m/p-Xylene	10.73	106	3952632	24.19 ug/L	99
54) o-Xylene	11.29	106	1756083	12.23 ug/L	100
55) Xylene (total)	11.29	106	1756083	12.23 ug/L	100
56) Styrene	11.31	104	2483933	12.40 ug/L	99
57) Isopropylbenzene	11.77	105	4327192	12.41 ug/L	99
59) 1,1,2,2-Tetrachloroethane	12.11	83	404138	11.54 ug/L	99
62) Bromoform	11.54	173	251305	10.79 ug/L	99
63) 1,3-Dichlorobenzene	13.12	146	1762820	11.15 ug/L	99
64) 1,4-Dichlorobenzene	13.21	146	1686978	11.08 ug/L	99
66) 1,2-Dichlorobenzene	13.56	146	1380991	11.20 ug/L	100
67) 1,2-Dibromo-3-chloropropan	14.23	75	44593	11.45 ug/L	97
68) 1,2,4-Trichlorobenzene	14.96	180	934705	10.58 ug/L	99
69) 1,2,3-Trichlorobenzene	15.42	180	727692	10.64 ug/L	99

112.35

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

Data File : C:\MSDCHEM\1\DATA\E4003.D Vial: 3
Acq On : 03/26/2003 1900 Operator: AK
Sample : VSTD0104M Inst : E-5973
Misc : EVSTD0104M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:15 2003 Quant Results File: LCE4004.RES

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



Data File : C:\MSDCHEM\1\DATA\E4002.D Vial: 2
Acq On : 03/26/2003 1819 Operator: AK
Sample : VSTD0254M Inst : E-5973
Misc : EVSTD0254M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:36 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31517 SDG: CA0227
Episode: 2749 Int./Date: 03/27/03
KK LP 3/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1304903	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.31	117	1139486	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	458088	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.14	65	2460491	22.82	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 456.40%#			
7) Chloroethane-d5	2.50	69	989748	10.99	ug/L	-0.03
Spiked Amount 5.000	Range 60 - 126		Recovery = 219.80%#			
10) 1,1-Dichloroethene-d2	3.24	65	1127167	23.18	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 463.60%#			
20) 2-Butanone-d5	4.87	46	1097456	119.83	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 2396.60%#			
24) Chloroform-d	5.23	86	2546406	23.83	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 476.60%#			
26) 1,2-Dichloroethane-d4	5.81	65	1275546	21.40	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 428.00%#			
32) Benzene-d6	5.85	84	10475462	21.10	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 422.00%#			
35) 1,2-Dichloropropane-d6	6.79	67	2774714	20.61	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 412.20%#			
41) Toluene-d8	8.20	98	10483602	21.71	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 434.20%#			
43) trans-1,3-Dichloropropene-	8.53	79	370482	22.50	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 450.00%#			
47) 2-Hexanone-d5	9.12	46	2136804	115.71	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 2314.20%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	1042905	21.78	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 435.60%#			
61) Bromoform-d	11.51	174	620962	22.80	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 456.00%#			
65) 1,2-Dichlorobenzene-d4	13.54	152	2380505	21.99	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 439.80%#			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.85	85	4522349	28.28	ug/L	99
3) Chloromethane	2.04	50	5940516	26.78	ug/L	99
5) Vinyl Chloride	2.15	62	4609677	26.23	ug/L	100
6) Bromomethane	2.43	94	610442m	14.03	ug/L	
8) Chloroethane	2.53	64	1264972	12.99	ug/L	95
9) Trichlorofluoromethane	2.78	101	5544682	27.98	ug/L	99
11) 1,1-Dichloroethene	3.26	96	2740812	25.82	ug/L	94
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	2925147	26.17	ug/L	99
13) Acetone	3.29	43	720950	123.97	ug/L	98
14) Carbon Disulfide	3.48	76	8719324	25.94	ug/L	100
15) Methyl Acetate	3.59	43	354918	25.28	ug/L	99
16) Methylene Chloride	3.69	84	2205258	23.41	ug/L	99
17) trans-1,2-Dichloroethene	3.95	96	2943949	25.36	ug/L	98
18) Methyl tert-Butyl Ether	3.96	73	3282917	24.33	ug/L	99
19) 1,1-Dichloroethane	4.35	63	4332417	25.39	ug/L	100
21) cis-1,2-Dichloroethene	4.93	96	2519764	25.95	ug/L	99
22) 2-Butanone	4.93	43	1284898	135.41	ug/L	97
23) Bromochloromethane	5.18	128	768845	25.87	ug/L	96
25) Chloroform	5.25	83	3975861	24.55	ug/L	99
27) 1,2-Dichloroethane	5.89	62	1647092	25.37	ug/L	100

KK 03/27/03

1237

(#) = qualifier out of range (m) = manual integration

Data File : C:\MSDCHEM\1\DATA\E4002.D Vial: 2
Acq On : 03/26/2003 1819 Operator: AK
Sample : VSTD0254M Inst : E-5973
Misc : EVSTD0254M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 08:15:36 2003 Quant Results File: LCE4004.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Mar 26 22:12:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

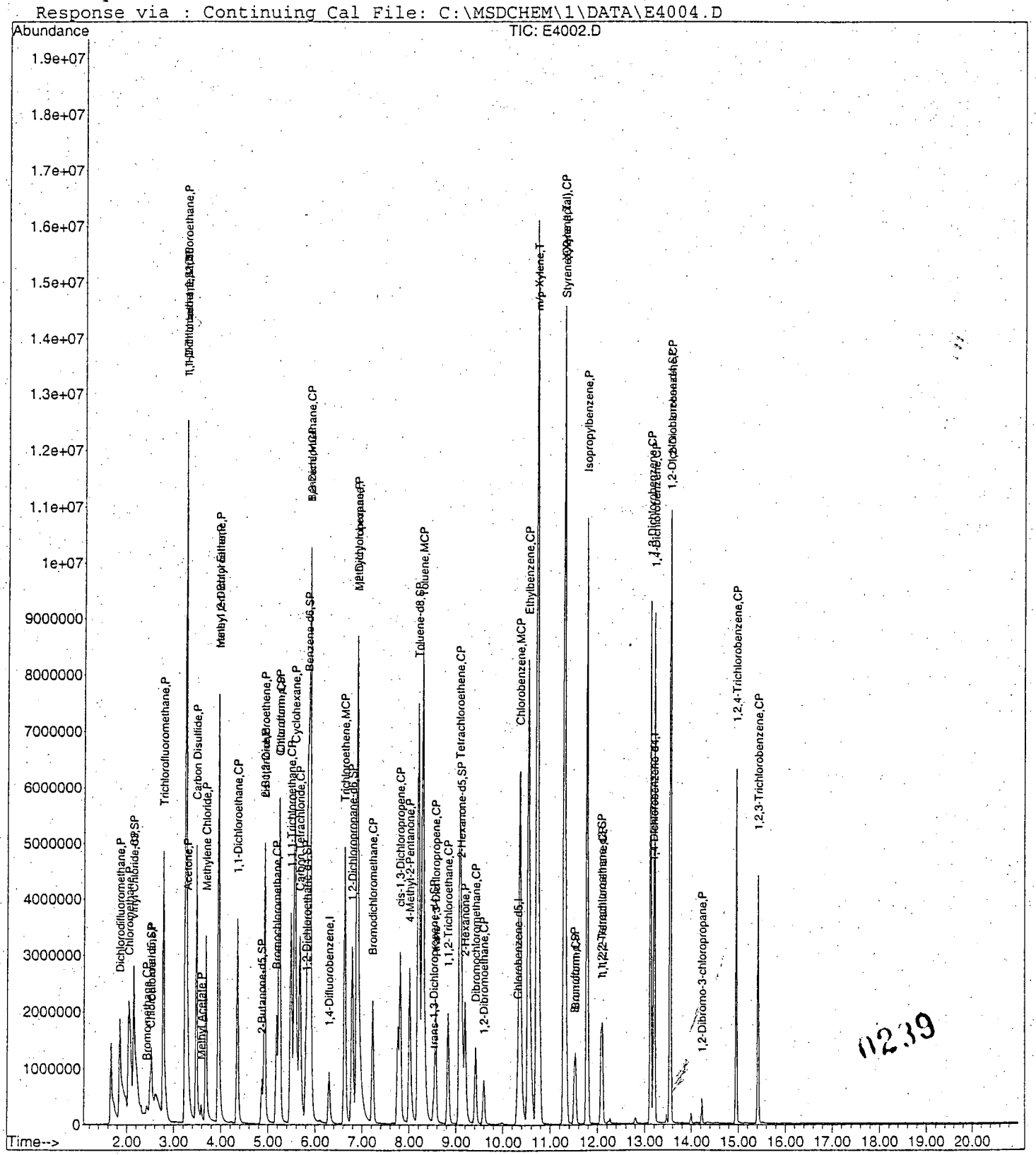
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	1,1,1-Trichloroethane	5.48	97	3964323	23.57 ug/L	100
30)	Cyclohexane	5.57	56	5017961	24.46 ug/L	100
31)	Carbon Tetrachloride	5.67	117	3300507	24.85 ug/L	99
33)	Benzene	5.89	78	11056624	22.90 ug/L	100
34)	Trichloroethene	6.63	95	2432676	23.61 ug/L	100
36)	Methylcyclohexane	6.90	83	5513051	24.72 ug/L	100
37)	1,2-Dichloropropane	6.90	63	2135805	22.88 ug/L	100
38)	Bromodichloromethane	7.23	83	2220625	23.40 ug/L	98
39)	cis-1,3-Dichloropropene	7.81	75	2951626	24.22 ug/L	98
40)	4-Methyl-2-Pentanone	8.01	43	3105351	134.56 ug/L	99
42)	Toluene	8.29	91	12476377	23.92 ug/L	100
44)	trans-1,3-Dichloropropene	8.57	75	2076240	24.93 ug/L	95
45)	1,1,2-Trichloroethane	8.84	97	1077068	23.01 ug/L	99
46)	Tetrachloroethene	9.08	164	2629046	24.24 ug/L	99
48)	2-Hexanone	9.19	43	2165896	134.04 ug/L	99
49)	Dibromochloromethane	9.42	129	1273881	24.67 ug/L	98
50)	1,2-Dibromoethane	9.60	107	916731	24.41 ug/L	99
51)	Chlorobenzene	10.36	112	7404072	24.60 ug/L	100
52)	Ethylbenzene	10.54	91	13594615	26.78 ug/L	100
53)	m/p-Xylene	10.73	106	10785662	54.10 ug/L	99
54)	o-Xylene	11.29	106	4836192	27.62 ug/L	99
55)	Xylene (total)	11.29	106	4836192	27.62 ug/L	99
56)	Styrene	11.31	104	6782958	27.76 ug/L	99
57)	Isopropylbenzene	11.77	105	11954475	28.11 ug/L	100
59)	1,1,2,2-Tetrachloroethane	12.11	83	1034083	24.20 ug/L	98
62)	Bromoform	11.54	173	665533	23.22 ug/L	100
63)	1,3-Dichlorobenzene	13.12	146	4794758	24.64 ug/L	100
64)	1,4-Dichlorobenzene	13.21	146	4518324	24.12 ug/L	99
66)	1,2-Dichlorobenzene	13.56	146	3675925	24.23 ug/L	100
67)	1,2-Dibromo-3-chloropropan	14.23	75	111706	23.30 ug/L	97
68)	1,2,4-Trichlorobenzene	14.96	180	2397885	22.07 ug/L	100
69)	1,2,3-Trichlorobenzene	15.42	180	1821288	21.64 ug/L	100

11238

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

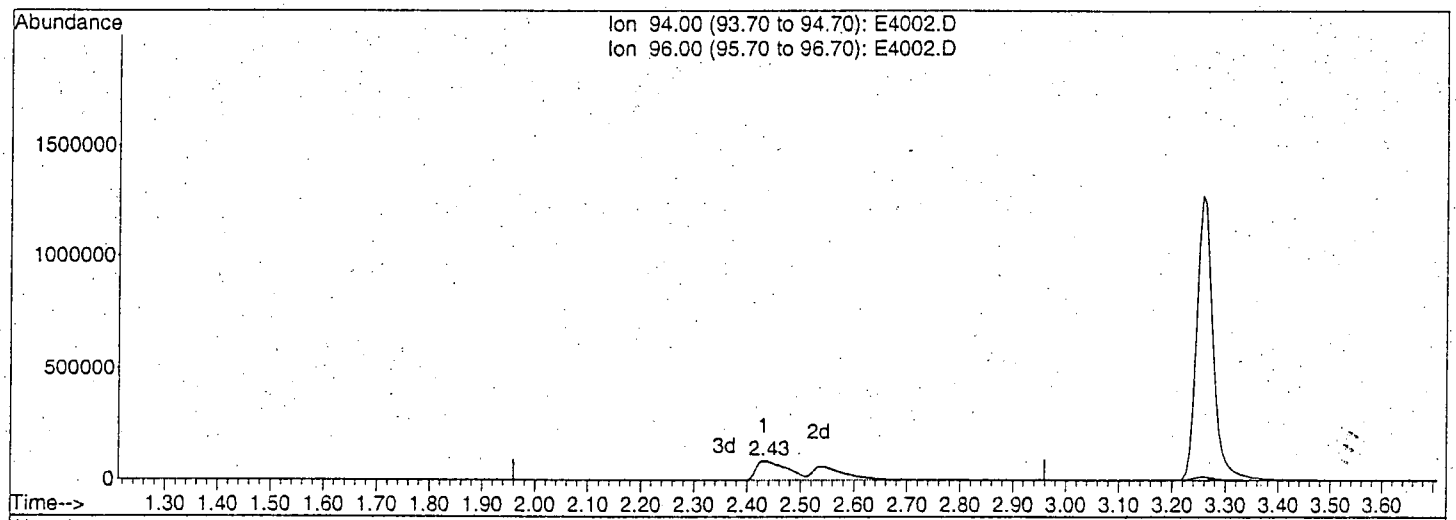
Data File : C:\MSDCHEM\1\DATA\E4002.D Vial: 2
Acq On : 03/26/2003 1819 Operator: AK
Sample : VSTD0254M Inst : E-5973
Misc : EVSTD0254M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:16 2003 Quant Results File: LCE4004.RES

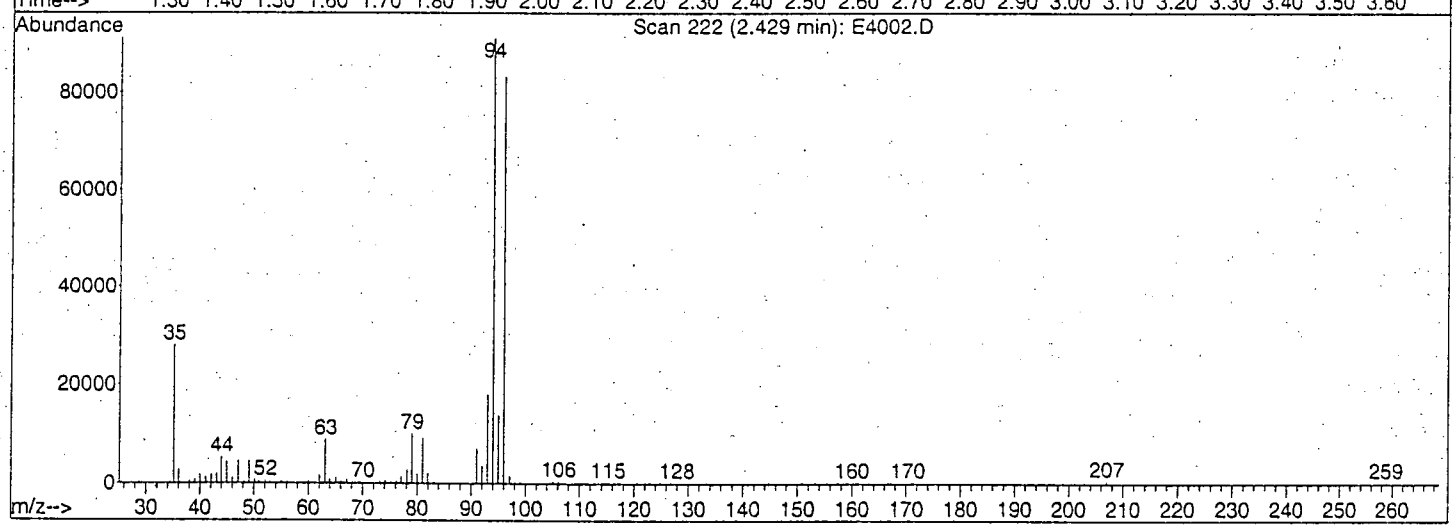
Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:16:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



Data File : C:\MSDCHEM\1\DATA\E4002.D Vial: 2
Acq On : 03/26/2003 1819 Operator: AK
Sample : VSTD0254M Inst : E-5973
Misc : EVSTD0254M 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 8:16 2003 Quant Results File: temp.res

Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:16:08 2003
Response via : Single Level Calibration





TIC: E4002.D

(6) Bromomethane (CP)

2.43min 14.03ug/L m

response 610442

Ion	Exp%	Act%
94.00	100	100
96.00	92.30	55.38#
0.00	0.00	0.00
0.00	0.00	0.00

KDA
03/27/03
3/27/03

0210

E4002.D LCE4004.M Thu Mar 27 08:17:20 2003

7LCA

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/27/2003 Time: 0859

Lab File ID: E4009 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054N Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.719	0.875		21.7	
Chloromethane	0.999	1.165		16.6	
Vinyl Chloride	0.781	0.897	0.100	14.9	30.0
Bromomethane	0.175	0.173	0.100	-1.1	30.0
Chloroethane	0.403	0.502		24.6	
Trichlorofluoromethane	0.895	1.043		16.5	
1,1-Dichloroethene	0.461	0.426	0.100	-7.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.480	0.473		-1.5	
Acetone	0.032	0.021		-34.4	
Carbon Disulfide	1.449	1.380		-4.8	
Methyl Acetate	0.074	0.055		-25.7	
Methylene Chloride	0.502	0.378		-24.7	
trans-1,2-Dichloroethene	0.500	0.465		-7.0	
Methyl tert-Butyl Ether	0.591	0.533		-9.8	
1,1-Dichloroethane	0.734	0.687	0.200	-6.4	30.0
cis-1,2-Dichloroethene	0.420	0.390		-7.1	
2-Butanone	0.039	0.036		-7.7	
Bromochloromethane	0.126	0.117	0.050	-7.1	30.0
Chloroform	0.696	0.645	0.200	-7.3	30.0
1,1,1-Trichloroethane	0.810	0.782	0.100	-3.5	30.0
Cyclohexane	0.984	0.971		-1.3	
Carbon Tetrachloride	0.639	0.635	0.100	-0.6	30.0
Benzene	2.315	2.223	0.400	-4.0	30.0
1,2-Dichloroethane	0.278	0.262	0.100	-5.8	30.0
Trichloroethene	0.505	0.487	0.300	-3.6	30.0
Methylcyclohexane	1.058	1.056		-0.2	

All other compound must meet a minimum RRF of 0.010

11241

7LCB

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/27/2003 Time: 0859

Lab File ID: E4009 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054N Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.453	0.432		-4.6	
Bromodichloromethane	0.458	0.430	0.200	-6.1	30.0
cis-1,3-Dichloropropene	0.585	0.561	0.200	-4.1	30.0
4-Methyl-2-pentanone	0.105	0.100		-4.8	
Toluene	2.494	2.427	0.400	-2.7	30.0
trans-1,3-Dichloropropene	0.401	0.382	0.100	-4.7	30.0
1,1,2-Trichloroethane	0.229	0.211	0.100	-7.9	30.0
Tetrachloroethene	0.528	0.514	0.100	-2.7	30.0
2-Hexanone	0.073	0.068		-6.8	
Dibromochloromethane	0.247	0.238	0.100	-3.6	30.0
1,2-Dibromoethane	0.184	0.173	0.100	-6.0	30.0
Chlorobenzene	1.470	1.391	0.500	-5.4	30.0
Ethylbenzene	2.490	2.337	0.100	-6.1	30.0
Xylene (total)	0.871	0.795	0.300	-8.7	30.0
Styrene	1.203	1.093	0.300	-9.1	30.0
Bromoform	0.327	0.340	0.050	4.0	30.0
Isopropylbenzene	2.142	1.926		-10.1	
1,1,2,2-Tetrachloroethane	0.207	0.189	0.100	-8.7	30.0
1,3-Dichlorobenzene	2.424	2.275	0.400	-6.1	30.0
1,4-Dichlorobenzene	2.326	2.157	0.400	-7.3	30.0
1,2-Dichlorobenzene	1.890	1.768	0.400	-6.5	30.0
1,2-Dibromo-3-chloropropane	0.064	0.057		-10.9	
1,2,4-Trichlorobenzene	1.341	1.295	0.200	-3.4	30.0
1,2,3-Trichlorobenzene	1.047	1.007	0.200	-3.8	30.0

All other compound must meet a minimum RRF of 0.010

0242

7LCC

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/27/2003 Time: 0859

Lab File ID: E4009 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054N Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.432	0.367		-15.0	
Chloroethane-d5	0.330	0.307		-7.0	
1,1-Dichloroethene-d2	0.192	0.160		-16.7	
2-Butanone-d5	0.035	0.032		-8.6	
Chloroform-d	0.413	0.353		-14.5	
1,2-Dichloroethane-d4	0.230	0.189		-17.8	
Benzene-d6	2.195	1.868		-14.9	
1,2-Dichloropropane-d6	0.607	0.523		-13.8	
Toluene-d8	2.121	1.831		-13.7	
trans-1,3-Dichloropropene-d4	0.075	0.063		-16.0	
2-Hexanone-d5	0.081	0.077		-4.9	
Bromoform-d	0.295	0.283		-4.1	
1,1,2,2-Tetrachloroethane-d2	0.210	0.177		-15.7	
1,2-Dichlorobenzene-d4	1.243	1.023		-17.7	

110243

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4009.D Vial: 2
Acq On : 03/27/2003 0859 Operator: AK
Sample : VSTD0054N Inst : E-5973
Misc : EVSTD0054N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

ORIGINAL COPY
Case: 31522 SDG: CAQR2
Episode: 27559 Int./Date: 03/27/03

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Difluorobenzene	1.000	1.000	0.0	90	0.00
2	P	Dichlorodifluoromethane	0.718	0.875	-21.9	128	0.00
3	P	Chloromethane	0.999	1.165	-16.6	123	0.00
4	SP	Vinyl Chloride-d3	0.432	0.367	15.0	79	0.00
5	CP	Vinyl Chloride	0.780	0.897	-15.0	119	0.00
6	CP	Bromomethane	0.174	0.173	0.6	93	0.00
7	SP	Chloroethane-d5	0.330	0.307	7.0	80	0.00
8	P	Chloroethane	0.403	0.502	-24.6	120	0.00
9	P	Trichlorofluoromethane	0.895	1.043	-16.5	123	0.00
10	SP	1,1-Dichloroethene-d2	0.192	0.160	16.7	77	0.00
11	MCP	1,1-Dichloroethene	0.461	0.426	7.6	94	0.00
12	P	1,1,2-Trichloro-1,2,2-trifl	0.480	0.473	1.5	99	0.00
13	P	Acetone	0.032	0.021	34.4#	86	0.00
14	P	Carbon Disulfide	1.449	1.380	4.8	96	0.00
15	P	Methyl Acetate	0.074	0.055	25.7#	92	0.00
16	P	Methylene Chloride	0.502	0.378	24.7	94	0.00
17	P	trans-1,2-Dichloroethene	0.500	0.464	7.2	93	0.00
18	P	Methyl tert-Butyl Ether	0.591	0.533	9.8	92	0.00
19	CP	1,1-Dichloroethane	0.733	0.687	6.3	94	0.00
20	SP	2-Butanone-d5	0.035	0.032	8.6	82	0.00
21	P	cis-1,2-Dichloroethene	0.420	0.390	7.1	94	0.00
22	P	2-Butanone	0.039	0.036	7.7	89	0.00
23	CP	Bromochloromethane	0.126	0.117	7.1	92	0.00
24	SP	Chloroform-d	0.413	0.353	14.5	77	0.00
25	CP	Chloroform	0.696	0.645	7.3	93	0.00
26	SP	1,2-Dichloroethane-d4	0.230	0.189	17.8	74	0.00
27	CP	1,2-Dichloroethane	0.279	0.262	6.1	94	0.00
28	I	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
29	CP	1,1,1-Trichloroethane	0.810	0.782	3.5	96	0.00
30	P	Cyclohexane	0.984	0.971	1.3	97	0.00
31	CP	Carbon Tetrachloride	0.639	0.635	0.6	98	0.00
32	SP	Benzene-d6	2.195	1.868	14.9	77	0.00
33	MCP	Benzene	2.315	2.223	4.0	95	0.00
34	MCP	Trichloroethene	0.505	0.487	3.6	97	0.00
35	SP	1,2-Dichloropropane-d6	0.607	0.523	13.8	80	0.00
36	P	Methylcyclohexane	1.058	1.056	0.2	97	0.00
37	P	1,2-Dichloropropane	0.453	0.432	4.6	95	0.00
38	CP	Bromodichloromethane	0.458	0.430	6.1	93	0.00
39	CP	cis-1,3-Dichloropropene	0.585	0.561	4.1	95	0.00
40	P	4-Methyl-2-Pentanone	0.105	0.100	4.8	89	0.00
41	SP	Toluene-d8	2.121	1.831	13.7	78	0.00
42	MCP	Toluene	2.494	2.427	2.7	96	0.00
43	SP	trans-1,3-Dichloropropene-d	0.075	0.062	17.3	78	0.00
44	CP	trans-1,3-Dichloropropene	0.401	0.382	4.7	94	0.00
45	CP	1,1,2-Trichloroethane	0.229	0.211	7.9	93	0.00
46	CP	Tetrachloroethene	0.528	0.514	2.7	98	0.00
47	SP	2-Hexanone-d5	0.081	0.077	4.9	86	0.00
48	P	2-Hexanone	0.073	0.068	6.8	87	0.00
49	CP	Dibromochloromethane	0.246	0.238	3.3	95	0.00
50	CP	1,2-Dibromoethane	0.184	0.173	6.0	95	0.00
51	MCP	Chlorobenzene	1.470	1.391	5.4	95	0.00
52	CP	Ethylbenzene	2.490	2.337	6.1	95	0.00
53	T	m/p-Xylene	0.980	0.913	6.8	94	0.00

01244

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4009.D Vial: 2
Acq On : 03/27/2003 0859 Operator: AK
Sample : VSTD0054N Inst : E-5973
Misc : EVSTD0054N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	T	o-Xylene	0.871	0.794	8.8	93	0.00
55	CP	Xylene (total)	0.871	0.794	8.8	93	0.00
56	CP	Styrene	1.203	1.093	9.1	92	0.00
57	P	Isopropylbenzene	2.142	1.926	10.1	93	0.00
58	SP	1,1,2,2-Tetrachloroethane-d	0.210	0.177	15.7	76	0.00
59	CP	1,1,2,2-Tetrachloroethane	0.207	0.188	9.2	91	0.00
60	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	84	0.00
61	SP	Bromoform-d	0.295	0.283	4.1	80	0.00
62	CP	Bromoform	0.327	0.340	-4.0	91	0.00
63	CP	1,3-Dichlorobenzene	2.424	2.275	6.1	90	0.00
64	CP	1,4-Dichlorobenzene	2.326	2.157	7.3	89	0.00
65	SP	1,2-Dichlorobenzene-d4	1.243	1.023	17.7	73	0.00
66	CP	1,2-Dichlorobenzene	1.890	1.768	6.5	90	0.00
67	P	1,2-Dibromo-3-chloropropane	0.064	0.057	10.9	91	0.00
68	CP	1,2,4-Trichlorobenzene	1.341	1.295	3.4	92	0.00
69	CP	1,2,3-Trichlorobenzene	1.047	1.007	3.8	92	0.00

00245

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4009.D Vial: 2
Acq On : 03/27/2003 0859 Operator: AK
Sample : VSTD0054N Inst : E-5973
Misc : EVSTD0054N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 09:21:11 2003 Quant Results File: LCE4009.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:30:59 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31522 SDG: CAQR2
Episode: 2759 Int./Date: 03/27/03
GP 3/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1192885	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	957384	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	325392	5.00	ug/L	0.00

System Monitoring Compounds						
4) Vinyl Chloride-d3	2.14	65	437239	4.44	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 88.80%			
7) Chloroethane-d5	2.53	69	366043	4.45	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery = 89.00%			
10) 1,1-Dichloroethene-d2	3.26	65	190811	4.29	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 85.80%			
20) 2-Butanone-d5	4.87	46	192722	23.02	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 460.40%#			
24) Chloroform-d	5.23	86	420929	4.31	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 86.20%			
26) 1,2-Dichloroethane-d4	5.81	65	225522	4.14	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 82.80%			
32) Benzene-d6	5.85	84	1788034	4.29	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 85.80%			
35) 1,2-Dichloropropane-d6	6.80	67	500909	4.43	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 88.60%			
41) Toluene-d8	8.21	98	1752626	4.32	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 86.40%			
43) trans-1,3-Dichloropropene-	8.53	79	59814	4.32	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 86.40%			
47) 2-Hexanone-d5	9.13	46	370131	23.85	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 477.00%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	169312	4.21	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 84.20%			
61) Bromoform-d	11.51	174	91924	4.75	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 95.00%			
65) 1,2-Dichlorobenzene-d4	13.54	152	332821	4.33	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 86.60%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.85	85	1043314	7.14	ug/L	100
3) Chloromethane	2.05	50	1389542	6.85	ug/L	100
5) Vinyl Chloride	2.15	62	1070300	6.66	ug/L	100
6) Bromomethane	2.46	94	206871	5.20	ug/L	95
8) Chloroethane	2.56	64	598283	6.72	ug/L	98
9) Trichlorofluoromethane	2.80	101	1243786	6.86	ug/L	100
11) 1,1-Dichloroethene	3.27	96	508424	5.24	ug/L #	91
12) 1,1,2-Trichloro-1,2,2-trif	3.26	101	564756	5.53	ug/L	100
13) Acetone	3.29	43	127493	23.98	ug/L	100
14) Carbon Disulfide	3.49	76	1645624	5.35	ug/L	100
15) Methyl Acetate	3.59	43	66017	5.14	ug/L	96
16) Methylene Chloride	3.69	84	450942	5.24	ug/L	99
17) trans-1,2-Dichloroethene	3.96	96	554055	5.22	ug/L	99
18) Methyl tert-Butyl Ether	3.96	73	635571	5.15	ug/L	99
19) 1,1-Dichloroethane	4.36	63	819668	5.25	ug/L	99
21) cis-1,2-Dichloroethene	4.94	96	464897	5.24	ug/L	99
22) 2-Butanone	4.94	43	214795	24.76	ug/L	100
23) Bromochloromethane	5.19	128	139161	5.12	ug/L	95
25) Chloroform	5.26	83	769552	5.20	ug/L	99
27) 1,2-Dichloroethane	5.90	62	312762	5.27	ug/L	100

(#) = qualifier out of range (m) = manual integration

11246

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4009.D Vial: 2
Acq On : 03/27/2003 0859 Operator: AK
Sample : VSTD0054N Inst : E-5973
Misc : EVSTD0054N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 09:21:11 2003 Quant Results File: LCE4009.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 08:30:59 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D
DataAcq Meth : VOAC

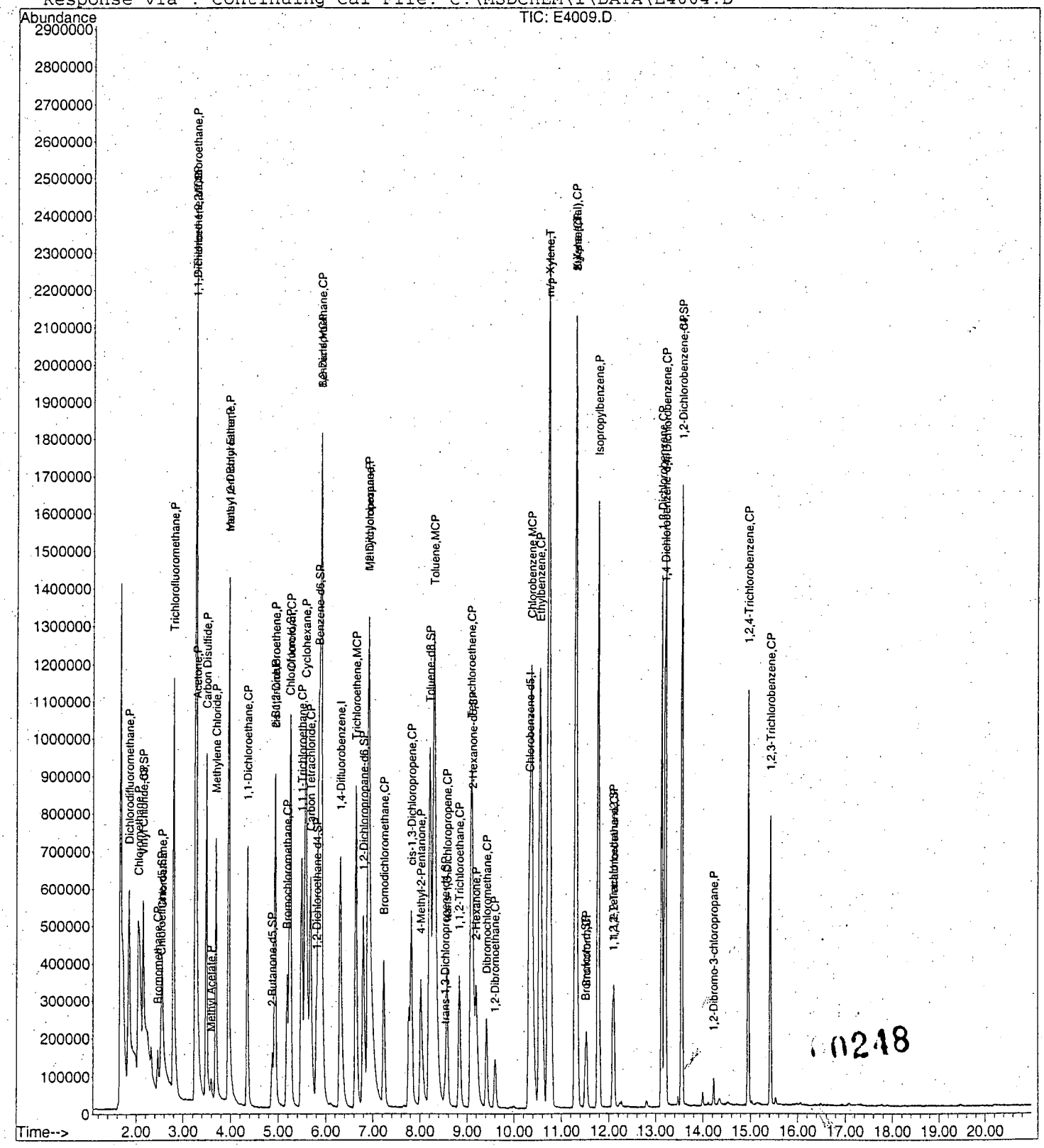
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29) 1,1,1-Trichloroethane	5.49	97	748496	5.30	ug/L	99
30) Cyclohexane	5.57	56	929971	5.40	ug/L	99
31) Carbon Tetrachloride	5.68	117	607482	5.44	ug/L	100
33) Benzene	5.90	78	2128394	5.25	ug/L	100
34) Trichloroethene	6.64	95	466370	5.39	ug/L	98
36) Methylcyclohexane	6.90	83	1010978	5.39	ug/L	99
37) 1,2-Dichloropropane	6.90	63	413737	5.28	ug/L	100
38) Bromodichloromethane	7.24	83	412030	5.17	ug/L	98
39) cis-1,3-Dichloropropene	7.82	75	537076	5.25	ug/L	98
40) 4-Methyl-2-Pentanone	8.02	43	479960	24.75	ug/L	97
42) Toluene	8.30	91	2323803	5.30	ug/L	100
44) trans-1,3-Dichloropropene	8.57	75	365683	5.23	ug/L	99
45) 1,1,2-Trichloroethane	8.84	97	202037	5.14	ug/L	99
46) Tetrachloroethene	9.09	164	492214	5.40	ug/L	99
48) 2-Hexanone	9.20	43	327374	24.11	ug/L	99
49) Dibromochloromethane	9.43	129	227834	5.25	ug/L	97
50) 1,2-Dibromoethane	9.60	107	165349	5.24	ug/L	98
51) Chlorobenzene	10.37	112	1332056	5.27	ug/L	100
52) Ethylbenzene	10.54	91	2237472	5.25	ug/L	100
53) m/p-Xylene	10.73	106	1748084	10.44	ug/L	99
54) o-Xylene	11.29	106	760617	5.17	ug/L	100
55) Xylene (total)	11.29	106	760617	5.17	ug/L	100
56) Styrene	11.31	104	1046625	5.10	ug/L	99
57) Isopropylbenzene	11.77	105	1843768	5.16	ug/L	99
59) 1,1,2,2-Tetrachloroethane	12.11	83	180452	5.03	ug/L	97
62) Bromoform	11.54	173	110613	5.43	ug/L	99
63) 1,3-Dichlorobenzene	13.12	146	740117	5.35	ug/L	99
64) 1,4-Dichlorobenzene	13.21	146	701763	5.27	ug/L	100
66) 1,2-Dichlorobenzene	13.56	146	575310	5.34	ug/L	99
67) 1,2-Dibromo-3-chloropropan	14.23	75	18415	5.41	ug/L	97
68) 1,2,4-Trichlorobenzene	14.96	180	421315	5.46	ug/L	99
69) 1,2,3-Trichlorobenzene	15.42	180	327798	5.48	ug/L	99

0247

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

Data File : C:\MSDCHEM\1\DATA\E4009.D Vial: 2
Acq On : 03/27/2003 0859 Operator: AK
Sample : VSTD0054N Inst : E-5973
Misc : EVSTD0054N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 9:21 2003 Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4004.D



7LCA

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/28/2003 Time: 1150

Lab File ID: E4041 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054P Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.719	0.826		14.9	
Chloromethane	0.999	1.173		17.4	
Vinyl Chloride	0.781	0.847	0.100	8.5	30.0
Bromomethane	0.175	0.108	0.100	-38.3	30.0
Chloroethane	0.403	0.476		18.1	
Trichlorofluoromethane	0.895	1.007		12.5	
1,1-Dichloroethene	0.461	0.438	0.100	-5.0	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.480	0.495		3.1	
Acetone	0.032	0.025		-21.9	
Carbon Disulfide	1.449	1.395		-3.7	
Methyl Acetate	0.074	0.064		-13.5	
Methylene Chloride	0.502	0.369		-26.5	
trans-1,2-Dichloroethene	0.500	0.454		-9.2	
Methyl tert-Butyl Ether	0.591	0.546		-7.6	
1,1-Dichloroethane	0.734	0.714	0.200	-2.7	30.0
cis-1,2-Dichloroethene	0.420	0.405		-3.6	
2-Butanone	0.039	0.040		2.6	
Bromochloromethane	0.126	0.120	0.050	-4.8	30.0
Chloroform	0.696	0.660	0.200	-5.2	30.0
1,1,1-Trichloroethane	0.810	0.857	0.100	5.8	30.0
Cyclohexane	0.984	1.037		5.4	
Carbon Tetrachloride	0.639	0.711	0.100	11.3	30.0
Benzene	2.315	2.398	0.400	3.6	30.0
1,2-Dichloroethane	0.278	0.276	0.100	-0.7	30.0
Trichloroethene	0.505	0.524	0.300	3.8	30.0
Methylcyclohexane	1.058	1.111		5.0	

All other compound must meet a minimum RRF of 0.010

0249

7LCB

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/28/2003 Time: 1150

Lab File ID: E4041 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054P Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.453	0.475		4.9	
Bromodichloromethane	0.458	0.482	0.200	5.2	30.0
cis-1,3-Dichloropropene	0.585	0.613	0.200	4.8	30.0
4-Methyl-2-pentanone	0.105	0.117		11.4	
Toluene	2.494	2.588	0.400	3.8	30.0
trans-1,3-Dichloropropene	0.401	0.421	0.100	5.0	30.0
1,1,2-Trichloroethane	0.229	0.240	0.100	4.8	30.0
Tetrachloroethene	0.528	0.560	0.100	6.1	30.0
2-Hexanone	0.073	0.080		9.6	
Dibromochloromethane	0.247	0.270	0.100	9.3	30.0
1,2-Dibromoethane	0.184	0.188	0.100	2.2	30.0
Chlorobenzene	1.470	1.471	0.500	0.1	30.0
Ethylbenzene	2.490	2.341	0.100	-6.0	30.0
Xylene (total)	0.871	0.791	0.300	-9.2	30.0
Styrene	1.203	1.107	0.300	-8.0	30.0
Bromoform	0.327	0.385	0.050	17.7	30.0
Isopropylbenzene	2.142	1.880		-12.2	
1,1,2,2-Tetrachloroethane	0.207	0.207	0.100	0.0	30.0
1,3-Dichlorobenzene	2.424	2.380	0.400	-1.8	30.0
1,4-Dichlorobenzene	2.326	2.270	0.400	-2.4	30.0
1,2-Dichlorobenzene	1.890	1.868	0.400	-1.2	30.0
1,2-Dibromo-3-chloropropane	0.064	0.059		-7.8	
1,2,4-Trichlorobenzene	1.341	1.419	0.200	5.8	30.0
1,2,3-Trichlorobenzene	1.047	1.117	0.200	6.7	30.0

All other compound must meet a minimum RRF of 0.010

0250

7LCC

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 03/28/2003 Time: 1150

Lab File ID: E4041 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054P Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.432	0.390		-9.7	
Chloroethane-d5	0.330	0.331		0.3	
1,1-Dichloroethene-d2	0.192	0.170		-11.5	
2-Butanone-d5	0.035	0.036		2.9	
Chloroform-d	0.413	0.396		-4.1	
1,2-Dichloroethane-d4	0.230	0.222		-3.5	
Benzene-d6	2.195	2.154		-1.9	
1,2-Dichloropropane-d6	0.607	0.592		-2.5	
Toluene-d8	2.121	2.067		-2.5	
trans-1,3-Dichloropropene-d4	0.075	0.072		-4.0	
2-Hexanone-d5	0.081	0.079		-2.5	
Bromoform-d	0.295	0.344		16.6	
1,1,2,2-Tetrachloroethane-d2	0.210	0.203		-3.3	
1,2-Dichlorobenzene-d4	1.243	1.147		-7.7	

0251

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4041.D Vial: 2
Acq On : 03/28/2003 1150 Operator: AK
Sample : VSTD0054P Inst : E-5973
Misc : EVSTD0054P 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 21:51:11 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

ORIGINAL COPY
Case: 31519 SDG: 705J2
Episode: 2762 Int./Date: 03/28/03

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Difluorobenzene	1.000	1.000	0.0	84	0.00
2	P	Dichlorodifluoromethane	0.718	0.826	-15.0	113	0.00
3	P	Chloromethane	0.999	1.173	-17.4	116	0.00
4	SP	Vinyl Chloride-d3	0.432	0.390	9.7	79	0.00
5	CP	Vinyl Chloride	0.780	0.847	-8.6	106	0.00
6	CP	Bromomethane	0.174	0.108	37.9#	55	0.00
7	SP	Chloroethane-d5	0.330	0.331	-0.3	81	0.00
8	P	Chloroethane	0.403	0.475	-17.9	107	0.00
9	P	Trichlorofluoromethane	0.895	1.007	-12.5	112	0.00
10	SP	1,1-Dichloroethene-d2	0.192	0.170	11.5	77	0.00
11	MCP	1,1-Dichloroethene	0.461	0.438	5.0	91	0.00
12	P	1,1,2-Trichloro-1,2,2-trifl	0.480	0.495	-3.1	97	0.00
13	P	Acetone	0.032	0.025	21.9	95	0.00
14	P	Carbon Disulfide	1.449	1.394	3.8	91	0.00
15	P	Methyl Acetate	0.074	0.064	13.5	100	0.00
16	P	Methylene Chloride	0.502	0.369	26.5#	86	0.00
17	P	trans-1,2-Dichloroethene	0.500	0.454	9.2	86	0.00
18	P	Methyl tert-Butyl Ether	0.591	0.546	7.6	89	0.00
19	CP	1,1-Dichloroethane	0.733	0.714	2.6	92	0.00
20	SP	2-Butanone-d5	0.035	0.036	-2.9	86	0.00
21	P	cis-1,2-Dichloroethene	0.420	0.405	3.6	91	0.00
22	P	2-Butanone	0.039	0.040	-2.6	93	0.00
23	CP	Bromochloromethane	0.126	0.120	4.8	89	0.00
24	SP	Chloroform-d	0.413	0.396	4.1	81	0.00
25	CP	Chloroform	0.696	0.660	5.2	89	0.00
26	SP	1,2-Dichloroethane-d4	0.230	0.222	3.5	82	0.00
27	CP	1,2-Dichloroethane	0.279	0.276	1.1	93	0.00
28	I	Chlorobenzene-d5	1.000	1.000	0.0	82	0.00
29	CP	1,1,1-Trichloroethane	0.810	0.857	-5.8	95	0.00
30	P	Cyclohexane	0.984	1.037	-5.4	94	0.00
31	CP	Carbon Tetrachloride	0.639	0.711	-11.3	100	0.00
32	SP	Benzene-d6	2.195	2.154	1.9	81	0.00
33	MCP	Benzene	2.315	2.398	-3.6	93	0.00
34	MCP	Trichloroethene	0.505	0.524	-3.8	95	0.00
35	SP	1,2-Dichloropropane-d6	0.607	0.592	2.5	82	0.00
36	P	Methylcyclohexane	1.058	1.111	-5.0	93	0.00
37	P	1,2-Dichloropropane	0.453	0.475	-4.9	95	0.00
38	CP	Bromodichloromethane	0.458	0.482	-5.2	95	0.00
39	CP	cis-1,3-Dichloropropene	0.585	0.613	-4.8	94	0.00
40	P	4-Methyl-2-Pentanone	0.105	0.117	-11.4	95	0.00
41	SP	Toluene-d8	2.121	2.067	2.5	80	0.00
42	MCP	Toluene	2.494	2.588	-3.8	93	0.00
43	SP	trans-1,3-Dichloropropene-d	0.075	0.072	4.0	82	0.00
44	CP	trans-1,3-Dichloropropene	0.401	0.421	-5.0	94	0.00
45	CP	1,1,2-Trichloroethane	0.229	0.240	-4.8	95	0.00
46	CP	Tetrachloroethene	0.528	0.560	-6.1	96	0.00
47	SP	2-Hexanone-d5	0.081	0.079	2.5	80	0.00
48	P	2-Hexanone	0.073	0.080	-9.6	92	0.00
49	CP	Dibromochloromethane	0.246	0.270	-9.8	98	0.00
50	CP	1,2-Dibromoethane	0.184	0.188	-2.2	93	0.00
51	MCP	Chlorobenzene	1.470	1.471	-0.1	91	0.00
52	CP	Ethylbenzene	2.490	2.341	6.0	86	0.00
53	T	m/p-Xylene	0.980	0.912	6.9	85	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4041.D
Acq On : 03/28/2003 1150
Sample : VSTD0054P
Misc : EVSTD0054P 25ML
MS Integration Params: RTEINT.P

Vial: 2
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 21:51:11 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	T	o-Xylene	0.871	0.791	9.2	84	0.00
55	CP	Xylene (total)	0.871	0.791	9.2	84	0.00
56	CP	Styrene	1.203	1.107	8.0	85	0.00
57	P	Isopropylbenzene	2.142	1.880	12.2	82	0.00
58	SP	1,1,2,2-Tetrachloroethane-d	0.210	0.203	3.3	79	0.00
59	CP	1,1,2,2-Tetrachloroethane	0.207	0.207	0.0	90	0.00
60	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	75	0.00
61	SP	Bromoform-d	0.295	0.344	-16.6	87	0.00
62	CP	Bromoform	0.327	0.385	-17.7	93	0.00
63	CP	1,3-Dichlorobenzene	2.424	2.380	1.8	85	0.00
64	CP	1,4-Dichlorobenzene	2.326	2.270	2.4	84	0.00
65	SP	1,2-Dichlorobenzene-d4	1.243	1.147	7.7	73	0.00
66	CP	1,2-Dichlorobenzene	1.890	1.868	1.2	85	0.00
67	P	1,2-Dibromo-3-chloropropane	0.064	0.059	7.8	86	0.00
68	CP	1,2,4-Trichlorobenzene	1.341	1.419	-5.8	90	0.00
69	CP	1,2,3-Trichlorobenzene	1.047	1.117	-6.7	92	0.00

00253
AJ
04/09/03

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4041.D Vial: 2
Acq On : 03/28/2003 1150 Operator: AK
Sample : VSTD0054P Inst : E-5973
Misc : EVSTD0054P 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 28 12:38:11 2003 Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 21:51:11 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4025.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31519 SDG: YOSJ2
Episode: 2762 Int./Date: 03/28/03
KS
AP
4/04/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1121090	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.33	117	868164	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	292240	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.15	65	437207	5.21	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	=	104.20%	
7) Chloroethane-d5	2.54	69	371303	5.23	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	=	104.60%	
10) 1,1-Dichloroethene-d2	3.26	65	190250	5.08	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	=	101.60%	
20) 2-Butanone-d5	4.88	46	200363	23.02	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	=	460.40%#	
24) Chloroform-d	5.24	86	443491	5.14	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	=	102.80%	
26) 1,2-Dichloroethane-d4	5.81	65	249385	5.26	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	=	105.20%	
32) Benzene-d6	5.85	84	1869663	5.46	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	=	109.20%	
35) 1,2-Dichloropropane-d6	6.80	67	514084	5.40	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	=	108.00%	
41) Toluene-d8	8.21	98	1794719	5.43	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	=	108.60%	
43) trans-1,3-Dichloropropene-	8.53	79	62479	5.35	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	=	107.00%	
47) 2-Hexanone-d5	9.13	46	343088	23.58	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	=	471.60%#	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	175912	5.18	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	=	103.60%	
61) Bromoform-d	11.51	174	100397	5.78	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	=	115.60%	
65) 1,2-Dichlorobenzene-d4	13.54	152	335096	5.28	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	=	105.60%	

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.86	85	925744	4.61	ug/L	99
3) Chloromethane	2.05	50	1314620	4.67	ug/L	99
5) Vinyl Chloride	2.16	62	949300	4.51	ug/L	99
6) Bromomethane	2.46	94	121313	3.54	ug/L	92
8) Chloroethane	2.56	64	533025	4.45	ug/L	97
9) Trichlorofluoromethane	2.80	101	1129159	4.65	ug/L	100
11) 1,1-Dichloroethene	3.27	96	491359	4.81	ug/L	96
12) 1,1,2-Trichloro-1,2,2-trif	3.27	101	554386	4.97	ug/L	99
13) Acetone	3.30	43	140555	26.28	ug/L	94
14) Carbon Disulfide	3.49	76	1563305	4.81	ug/L	95
15) Methyl Acetate	3.59	43	71505	4.67	ug/L	98
16) Methylene Chloride	3.70	84	413253	4.73	ug/L	99
17) trans-1,2-Dichloroethene	3.96	96	509337	4.67	ug/L	94
18) Methyl tert-Butyl Ether	3.97	73	611925	4.68	ug/L	98
19) 1,1-Dichloroethane	4.36	63	800413	4.88	ug/L	100
21) cis-1,2-Dichloroethene	4.94	96	453587	4.81	ug/L	98
22) 2-Butanone	4.94	43	225929	26.77	ug/L	98
23) Bromochloromethane	5.19	128	134761	4.62	ug/L	95
25) Chloroform	5.26	83	739668	4.94	ug/L	99
27) 1,2-Dichloroethane	5.90	62	308976	4.91	ug/L	100

(#) = qualifier out of range (m) = manual integration

11254

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4041.D
Acq On : 03/28/2003 1150
Sample : VSTD0054P
Misc : EVSTD0054P 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 28 12:38:11 2003

Vial: 2
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 21:51:11 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4025.D
DataAcq Meth : VOAC

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29) 1,1,1-Trichloroethane	5.49	97	743945	5.22	ug/L	100
30) Cyclohexane	5.57	56	899963	5.08	ug/L	100
31) Carbon Tetrachloride	5.68	117	617500	5.33	ug/L	98
33) Benzene	5.90	78	2081555	5.13	ug/L	100
34) Trichloroethene	6.65	95	455152	5.16	ug/L	99
36) Methylcyclohexane	6.91	83	964133	5.09	ug/L	99
37) 1,2-Dichloropropane	6.91	63	412214	5.17	ug/L	100
38) Bromodichloromethane	7.24	83	418547	5.16	ug/L	100
39) cis-1,3-Dichloropropene	7.82	75	532012	5.08	ug/L	99
40) 4-Methyl-2-Pentanone	8.02	43	508360	28.32	ug/L	99
42) Toluene	8.30	91	2246774	5.08	ug/L	100
44) trans-1,3-Dichloropropene	8.57	75	365840	4.99	ug/L	100
45) 1,1,2-Trichloroethane	8.84	97	207942	5.12	ug/L	99
46) Tetrachloroethene	9.09	164	485998	5.20	ug/L	99
48) 2-Hexanone	9.20	43	346203	27.92	ug/L	98
49) Dibromochloromethane	9.43	129	234630	5.20	ug/L	99
50) 1,2-Dibromoethane	9.60	107	163283	4.96	ug/L	98
51) Chlorobenzene	10.37	112	1276830	4.93	ug/L	99
52) Ethylbenzene	10.55	91	2032309	4.71	ug/L	98
53) m/p-Xylene	10.73	106	1583630	9.34	ug/L	98
54) o-Xylene	11.30	106	686903	4.59	ug/L	97
55) Xylene (total)	11.30	106	686903	4.59	ug/L	97
56) Styrene	11.31	104	961387	4.64	ug/L	100
57) Isopropylbenzene	11.77	105	1632072	4.56	ug/L	100
59) 1,1,2,2-Tetrachloroethane	12.11	83	179558	4.86	ug/L	99
62) Bromoform	11.53	173	112432	5.34	ug/L	99
63) 1,3-Dichlorobenzene	13.12	146	695449	4.98	ug/L	100
64) 1,4-Dichlorobenzene	13.21	146	663514	4.91	ug/L	99
66) 1,2-Dichlorobenzene	13.56	146	545962	5.02	ug/L	100
67) 1,2-Dibromo-3-chloropropan	14.23	75	17366	5.17	ug/L	93
68) 1,2,4-Trichlorobenzene	14.96	180	414692	5.47	ug/L	98
69) 1,2,3-Trichlorobenzene	15.42	180	326476	5.46	ug/L	100

1255

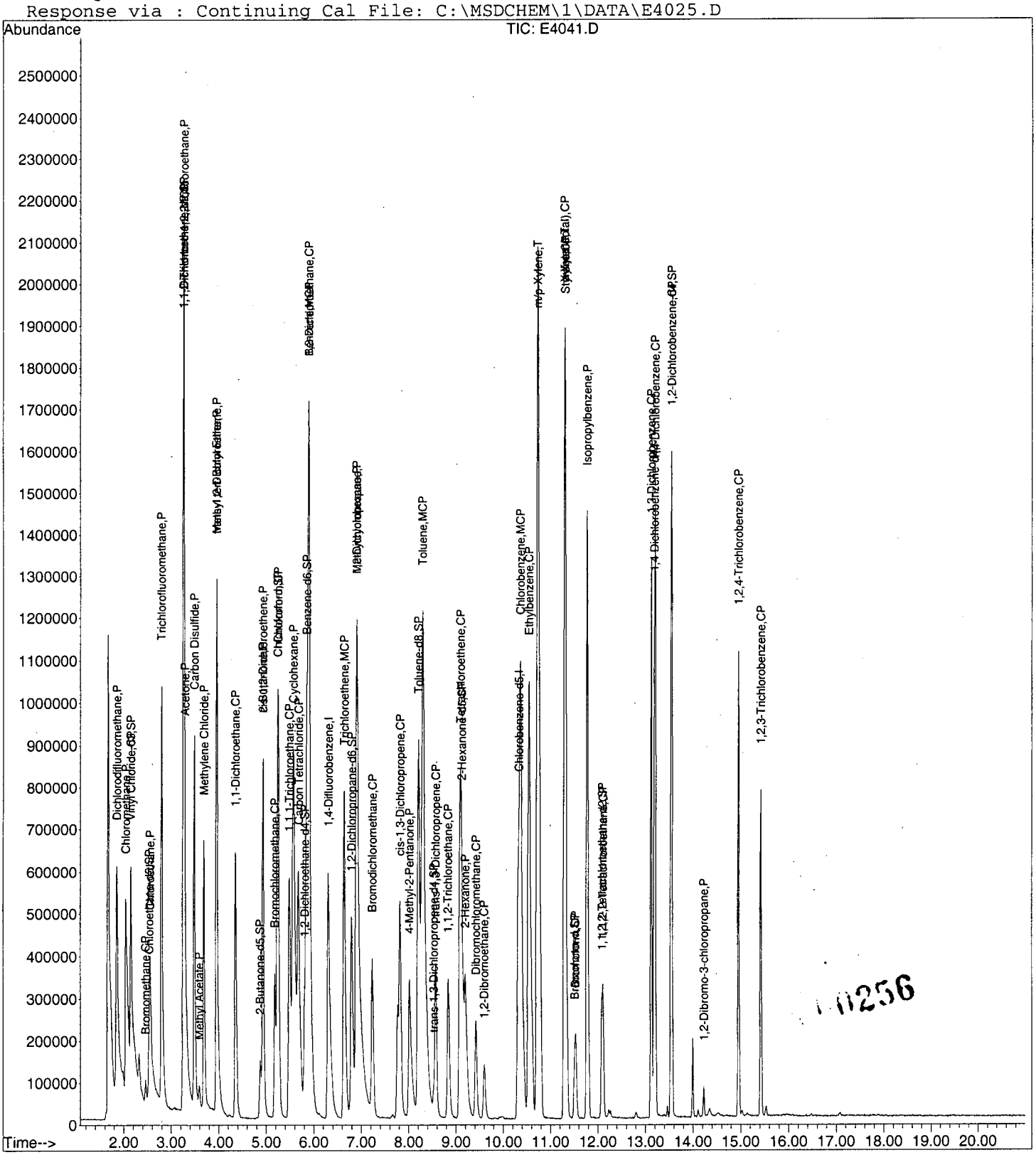
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4041.D
Acq On : 03/28/2003 1150
Sample : VSTD0054P
Misc : EVSTD0054P 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 28 12:38 2003

Vial: 2
Operator: AK
Inst : E-5973
Multiplr: 1.00
Quant Results File: LCE4041.RES

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 21:51:11 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4025.D



11256

7LCA

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 04/02/2003 Time: 1017

Lab File ID: E4109 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054U Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.719	0.959		33.4	
Chloromethane	0.999	1.332		33.3	
Vinyl Chloride	0.781	1.021	0.100	30.7	30.0
Bromomethane	0.175	0.188	0.100	7.4	30.0
Chloroethane	0.403	0.577		43.2	
Trichlorofluoromethane	0.895	1.227		37.1	
1,1-Dichloroethene	0.461	0.487	0.100	5.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.480	0.554		15.4	
Acetone	0.032	0.034		6.3	
Carbon Disulfide	1.449	1.591		9.8	
Methyl Acetate	0.074	0.069		-6.8	
Methylene Chloride	0.502	0.418		-16.7	
trans-1,2-Dichloroethene	0.500	0.486		-2.8	
Methyl tert-Butyl Ether	0.591	0.565		-4.4	
1,1-Dichloroethane	0.734	0.773	0.200	5.3	30.0
cis-1,2-Dichloroethene	0.420	0.439		4.5	
2-Butanone	0.039	0.049		25.6	
Bromochloromethane	0.126	0.139	0.050	10.3	30.0
Chloroform	0.696	0.717	0.200	3.0	30.0
1,1,1-Trichloroethane	0.810	0.944	0.100	16.5	30.0
Cyclohexane	0.984	1.107		12.5	
Carbon Tetrachloride	0.639	0.819	0.100	28.2	30.0
Benzene	2.315	2.607	0.400	12.6	30.0
1,2-Dichloroethane	0.278	0.305	0.100	9.7	30.0
Trichloroethene	0.505	0.566	0.300	12.1	30.0
Methylcyclohexane	1.058	1.233		16.5	

All other compound must meet a minimum RRF of 0.010

10257

7LCB

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 04/02/2003 Time: 1017

Lab File ID: E4109 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054U Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
1,2-Dichloropropane	0.453	0.506		11.7	
Bromodichloromethane	0.458	0.524	0.200	14.4	30.0
cis-1,3-Dichloropropene	0.585	0.666	0.200	13.8	30.0
4-Methyl-2-pentanone	0.105	0.138		31.4	
Toluene	2.494	2.864	0.400	14.8	30.0
trans-1,3-Dichloropropene	0.401	0.465	0.100	16.0	30.0
1,1,2-Trichloroethane	0.229	0.261	0.100	14.0	30.0
Tetrachloroethene	0.528	0.626	0.100	18.6	30.0
2-Hexanone	0.073	0.093		27.4	
Dibromochloromethane	0.247	0.297	0.100	20.2	30.0
1,2-Dibromoethane	0.184	0.215	0.100	16.8	30.0
Chlorobenzene	1.470	1.651	0.500	12.3	30.0
Ethylbenzene	2.490	2.731	0.100	9.7	30.0
Xylene (total)	0.871	0.940	0.300	7.9	30.0
Styrene	1.203	1.286	0.300	6.9	30.0
Bromoform	0.327	0.415	0.050	26.9	30.0
Isopropylbenzene	2.142	2.275		6.2	
1,1,2,2-Tetrachloroethane	0.207	0.229	0.100	10.6	30.0
1,3-Dichlorobenzene	2.424	2.651	0.400	9.4	30.0
1,4-Dichlorobenzene	2.326	2.544	0.400	9.4	30.0
1,2-Dichlorobenzene	1.890	2.061	0.400	9.0	30.0
1,2-Dibromo-3-chloropropane	0.064	0.064		0.0	
1,2,4-Trichlorobenzene	1.341	1.503	0.200	12.1	30.0
1,2,3-Trichlorobenzene	1.047	1.161	0.200	10.9	30.0

All other compound must meet a minimum RRF of 0.010

0258

7LCC

LOW CONCENTRATION WATER VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client NO. SDG NO.: Y0SJ2

Instrument ID: E-5973 Calibration Date: 04/02/2003 Time: 1017

Lab File ID: E4109 Init. Calib. Date(s): 03/26/2003 03/26/2003

EPA Sample No.(VSTD005##): VSTD0054U Init. Calib. Times: 1819 2101

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

COMPOUND	$\overline{RRF}$	RRF5	MIN RRF	%D	MAX %D
Vinyl Chloride-d3	0.432	0.458		6.0	
Chloroethane-d5	0.330	0.381		15.5	
1,1-Dichloroethene-d2	0.192	0.191		-0.5	
2-Butanone-d5	0.035	0.043		22.9	
Chloroform-d	0.413	0.459		11.1	
1,2-Dichloroethane-d4	0.230	0.241		4.8	
Benzene-d6	2.195	2.328		6.1	
1,2-Dichloropropane-d6	0.607	0.638		5.1	
Toluene-d8	2.121	2.273		7.2	
trans-1,3-Dichloropropene-d4	0.075	0.079		5.3	
2-Hexanone-d5	0.081	0.087		7.4	
Bromoform-d	0.295	0.385		30.5	
1,1,2,2-Tetrachloroethane-d2	0.210	0.222		5.7	
1,2-Dichlorobenzene-d4	1.243	1.284		3.3	

.0259

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4109.D Vial: 2
Acq On : 04/02/2003 1017 Operator: AK
Sample : VSTD0054U Inst : E-5973
Misc : EVSTD0054U 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:40:01 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

ORIGINAL COPY
Case: 31512 SDG: E00083
Episode: 2757 Int./Date: 04/02/03

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Difluorobenzene	1.000	1.000	0.0	71	0.00
2	P	Dichlorodifluoromethane	0.718	0.959	-33.6#	111	0.00
3	P	Chloromethane	0.999	1.332	-33.3#	111	0.00
4	SP	Vinyl Chloride-d3	0.432	0.458	-6.0	78	0.00
5	CP	Vinyl Chloride	0.780	1.021	-30.9#	107	0.00
6	CP	Bromomethane	0.174	0.188	-8.0	80	0.00
7	SP	Chloroethane-d5	0.330	0.381	-15.5	78	0.00
8	P	Chloroethane	0.403	0.577	-43.2#	109	0.00
9	P	Trichlorofluoromethane	0.895	1.227	-37.1#	114	0.00
10	SP	1,1-Dichloroethene-d2	0.192	0.191	0.5	73	0.00
11	MCP	1,1-Dichloroethene	0.461	0.487	-5.6	85	0.00
12	P	1,1,2-Trichloro-1,2,2-trifl	0.480	0.554	-15.4	92	0.00
13	P	Acetone	0.032	0.034	-6.3	108	0.00
14	P	Carbon Disulfide	1.449	1.591	-9.8	87	0.00
15	P	Methyl Acetate	0.074	0.069	6.8	90	0.00
16	P	Methylene Chloride	0.502	0.418	16.7	82	0.00
17	P	trans-1,2-Dichloroethene	0.500	0.486	2.8	77	0.00
18	P	Methyl tert-Butyl Ether	0.591	0.565	4.4	77	0.00
19	CP	1,1-Dichloroethane	0.733	0.773	-5.5	84	0.00
20	SP	2-Butanone-d5	0.035	0.043	-22.9	87	0.00
21	P	cis-1,2-Dichloroethene	0.420	0.439	-4.5	84	0.00
22	P	2-Butanone	0.039	0.049	-25.6#	96	0.00
23	CP	Bromochloromethane	0.126	0.139	-10.3	87	0.00
24	SP	Chloroform-d	0.413	0.459	-11.1	79	0.00
25	CP	Chloroform	0.696	0.717	-3.0	82	0.00
26	SP	1,2-Dichloroethane-d4	0.230	0.241	-4.8	75	0.00
27	CP	1,2-Dichloroethane	0.279	0.305	-9.3	87	0.00
28	I	Chlorobenzene-d5	1.000	1.000	0.0	71	0.00
29	CP	1,1,1-Trichloroethane	0.810	0.944	-16.5	91	0.00
30	P	Cyclohexane	0.984	1.107	-12.5	88	0.00
31	CP	Carbon Tetrachloride	0.639	0.819	-28.2	100	0.00
32	SP	Benzene-d6	2.195	2.328	-6.1	76	0.00
33	MCP	Benzene	2.315	2.607	-12.6	88	0.00
34	MCP	Trichloroethene	0.505	0.566	-12.1	89	0.00
35	SP	1,2-Dichloropropane-d6	0.607	0.638	-5.1	77	0.00
36	P	Methylcyclohexane	1.058	1.233	-16.5	90	0.00
37	P	1,2-Dichloropropane	0.453	0.506	-11.7	88	0.00
38	CP	Bromodichloromethane	0.458	0.524	-14.4	90	0.00
39	CP	cis-1,3-Dichloropropene	0.585	0.666	-13.8	89	0.00
40	P	4-Methyl-2-Pentanone	0.105	0.137	-30.5#	97	0.00
41	SP	Toluene-d8	2.121	2.272	-7.1	76	0.00
42	MCP	Toluene	2.494	2.864	-14.8	89	0.00
43	SP	trans-1,3-Dichloropropene-d	0.075	0.079	-5.3	78	0.00
44	CP	trans-1,3-Dichloropropene	0.401	0.465	-16.0	91	0.00
45	CP	1,1,2-Trichloroethane	0.229	0.261	-14.0	91	0.00
46	CP	Tetrachloroethene	0.528	0.626	-18.6	94	0.00
47	SP	2-Hexanone-d5	0.081	0.087	-7.4	77	0.00
48	P	2-Hexanone	0.073	0.093	-27.4#	94	0.00
49	CP	Dibromochloromethane	0.246	0.297	-20.7	93	0.00
50	CP	1,2-Dibromoethane	0.184	0.215	-16.8	93	0.00
51	MCP	Chlorobenzene	1.470	1.651	-12.3	89	0.00
52	CP	Ethylbenzene	2.490	2.731	-9.7	87	0.00
53	T	m/p-Xylene	0.980	1.075	-9.7	88	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\E4109.D Vial: 2
Acq On : 04/02/2003 1017 Operator: AK
Sample : VSTD0054U Inst : E-5973
Misc : EVSTD0054U 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:40:01 2003
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54	T	o-Xylene	0.871	0.940	-7.9	87	0.00
55	CP	Xylene (total)	0.871	0.940	-7.9	87	0.00
56	CP	Styrene	1.203	1.286	-6.9	85	0.00
57	P	Isopropylbenzene	2.142	2.275	-6.2	87	0.00
58	SP	1,1,2,2-Tetrachloroethane-d	0.210	0.222	-5.7	75	0.00
59	CP	1,1,2,2-Tetrachloroethane	0.207	0.229	-10.6	87	0.00
60	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	69	0.00
61	SP	Bromoform-d	0.295	0.385	-30.5#	90	0.00
62	CP	Bromoform	0.327	0.415	-26.9	92	0.00
63	CP	1,3-Dichlorobenzene	2.424	2.651	-9.4	87	0.00
64	CP	1,4-Dichlorobenzene	2.326	2.544	-9.4	86	0.00
65	SP	1,2-Dichlorobenzene-d4	1.243	1.284	-3.3	75	0.00
66	CP	1,2-Dichlorobenzene	1.890	2.061	-9.0	86	0.00
67	P	1,2-Dibromo-3-chloropropane	0.064	0.064	0.0	85	0.00
68	CP	1,2,4-Trichlorobenzene	1.341	1.503	-12.1	88	0.00
69	CP	1,2,3-Trichlorobenzene	1.047	1.161	-10.9	88	0.00

00261

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4109.D Vial: 2
Acq On : 04/02/2003 1017 Operator: AK
Sample : VSTD0054U Inst : E-5973
Misc : EVSTD0054U 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 10:39:08 2003 Quant Results File: LCE4109.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Tue Apr 01 10:12:38 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4091.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31512 SDG: E0003
Episode: 2757 Int./Date: 04/02/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	943070	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	755795	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	268487	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.15	65	431891	5.00	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery = 100.00%			
7) Chloroethane-d5	2.53	69	358986	4.83	ug/L	-0.01
Spiked Amount 5.000	Range 60 - 126		Recovery = 96.60%			
10) 1,1-Dichloroethene-d2	3.26	65	180255	4.73	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery = 94.60%			
20) 2-Butanone-d5	4.88	46	204318	29.65	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery = 593.00%#			
24) Chloroform-d	5.24	86	433049	4.97	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery = 99.40%			
26) 1,2-Dichloroethane-d4	5.81	65	227209	4.72	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery = 94.40%			
32) Benzene-d6	5.85	84	1759776	4.70	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery = 94.00%			
35) 1,2-Dichloropropane-d6	6.80	67	482195	4.77	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery = 95.40%			
41) Toluene-d8	8.20	98	1717509	4.80	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery = 96.00%			
43) trans-1,3-Dichloropropene-	8.53	79	59938	4.69	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery = 93.80%			
47) 2-Hexanone-d5	9.13	46	330374	26.75	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery = 535.00%#			
58) 1,1,2,2-Tetrachloroethane-	12.08	84	168120	4.82	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery = 96.40%			
61) Bromoform-d	11.51	174	103292	5.37	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery = 107.40%			
65) 1,2-Dichlorobenzene-d4	13.54	152	344769	5.13	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery = 102.60%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.86	85	904461	5.41	ug/L	99
3) Chloromethane	2.05	50	1256570	5.55	ug/L	98
5) Vinyl Chloride	2.16	62	963095	5.50	ug/L	100
6) Bromomethane	2.47	94	177027	6.46	ug/L	97
8) Chloroethane	2.56	64	543763	5.46	ug/L	98
9) Trichlorofluoromethane	2.80	101	1157387	5.42	ug/L	99
11) 1,1-Dichloroethene	3.27	96	459290	5.65	ug/L #	91
12) 1,1,2-Trichloro-1,2,2-trif	3.27	101	522628	5.67	ug/L	98
13) Acetone	3.29	43	161032	26.33	ug/L	98
14) Carbon Disulfide	3.49	76	1500577	5.88	ug/L	91
15) Methyl Acetate	3.59	43	64728	5.04	ug/L	89
16) Methylene Chloride	3.69	84	394002	5.58	ug/L	100
17) trans-1,2-Dichloroethene	3.96	96	458106	5.34	ug/L	95
18) Methyl tert-Butyl Ether	3.97	73	533184	5.08	ug/L	99
19) 1,1-Dichloroethane	4.36	63	728746	5.64	ug/L	100
21) cis-1,2-Dichloroethene	4.94	96	414368	5.76	ug/L	99
22) 2-Butanone	4.94	43	232538	27.81	ug/L	98
23) Bromochloromethane	5.19	128	131507	5.84	ug/L	94
25) Chloroform	5.26	83	676164	5.56	ug/L	99
27) 1,2-Dichloroethane	5.89	62	287354	5.50	ug/L	100

11262

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4109.D Vial: 2
Acq On : 04/02/2003 1017 Operator: AK
Sample : VSTD0054U Inst : E-5973
Misc : EVSTD0054U 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 10:39:08 2003 Quant Results File: LCE4109.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Tue Apr 01 10:12:38 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4091.D
DataAcq Meth : VOAC

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29) 1,1,1-Trichloroethane	5.49	97	713171	5.48	ug/L	99
30) Cyclohexane	5.57	56	836857	5.61	ug/L	98
31) Carbon Tetrachloride	5.68	117	618989	5.67	ug/L	99
33) Benzene	5.90	78	1970276	5.52	ug/L	100
34) Trichloroethene	6.64	95	427605	5.45	ug/L	98
36) Methylcyclohexane	6.91	83	932151	5.80	ug/L	100
37) 1,2-Dichloropropane	6.91	63	382630	5.43	ug/L	100
38) Bromodichloromethane	7.23	83	396042	5.31	ug/L	98
39) cis-1,3-Dichloropropene	7.82	75	503277	5.56	ug/L	100
40) 4-Methyl-2-Pentanone	8.01	43	519582	25.89	ug/L	100
42) Toluene	8.30	91	2164668	5.69	ug/L	100
44) trans-1,3-Dichloropropene	8.57	75	351135	5.58	ug/L	99
45) 1,1,2-Trichloroethane	8.84	97	197499	5.53	ug/L	98
46) Tetrachloroethene	9.08	164	473098	5.62	ug/L	99
48) 2-Hexanone	9.19	43	352962	26.20	ug/L	98
49) Dibromochloromethane	9.42	129	224570	5.41	ug/L	100
50) 1,2-Dibromoethane	9.60	107	162786	5.75	ug/L	99
51) Chlorobenzene	10.36	112	1247863	5.76	ug/L	99
52) Ethylbenzene	10.54	91	2063915	6.05	ug/L	100
53) m/p-Xylene	10.73	106	1625011	11.76	ug/L	99
54) o-Xylene	11.29	106	710579	5.81	ug/L	99
55) Xylene (total)	11.29	106	710579	5.81	ug/L	99
56) Styrene	11.31	104	972103	5.72	ug/L	100
57) Isopropylbenzene	11.77	105	1719275	5.82	ug/L	100
59) 1,1,2,2-Tetrachloroethane	12.11	83	172976	5.67	ug/L	99
62) Bromoform	11.54	173	111391	5.77	ug/L	97
63) 1,3-Dichlorobenzene	13.12	146	711723	5.95	ug/L	99
64) 1,4-Dichlorobenzene	13.21	146	683050	5.81	ug/L	100
66) 1,2-Dichlorobenzene	13.56	146	553337	5.82	ug/L	100
67) 1,2-Dibromo-3-chloropropan	14.23	75	17146	6.16	ug/L	98
68) 1,2,4-Trichlorobenzene	14.96	180	403462	5.47	ug/L	99
69) 1,2,3-Trichlorobenzene	15.42	180	311588	5.49	ug/L	100

10263

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

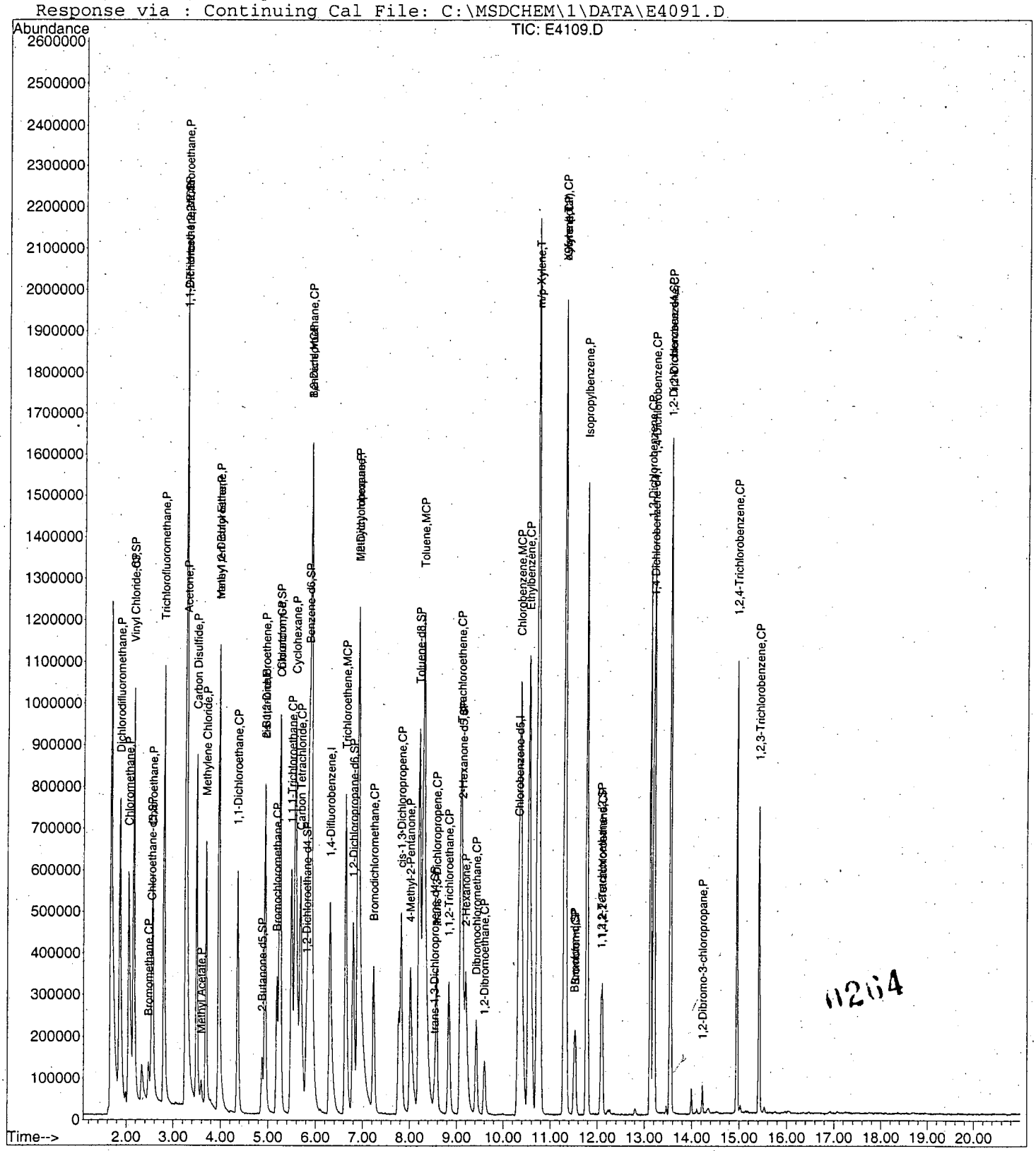
Quantitation Report (Not Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4109.D
Acq On : 04/02/2003 1017
Sample : VSTD0054U
Misc : EVSTD0054U 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 2 10:39 2003

Vial: 2
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4109.RES

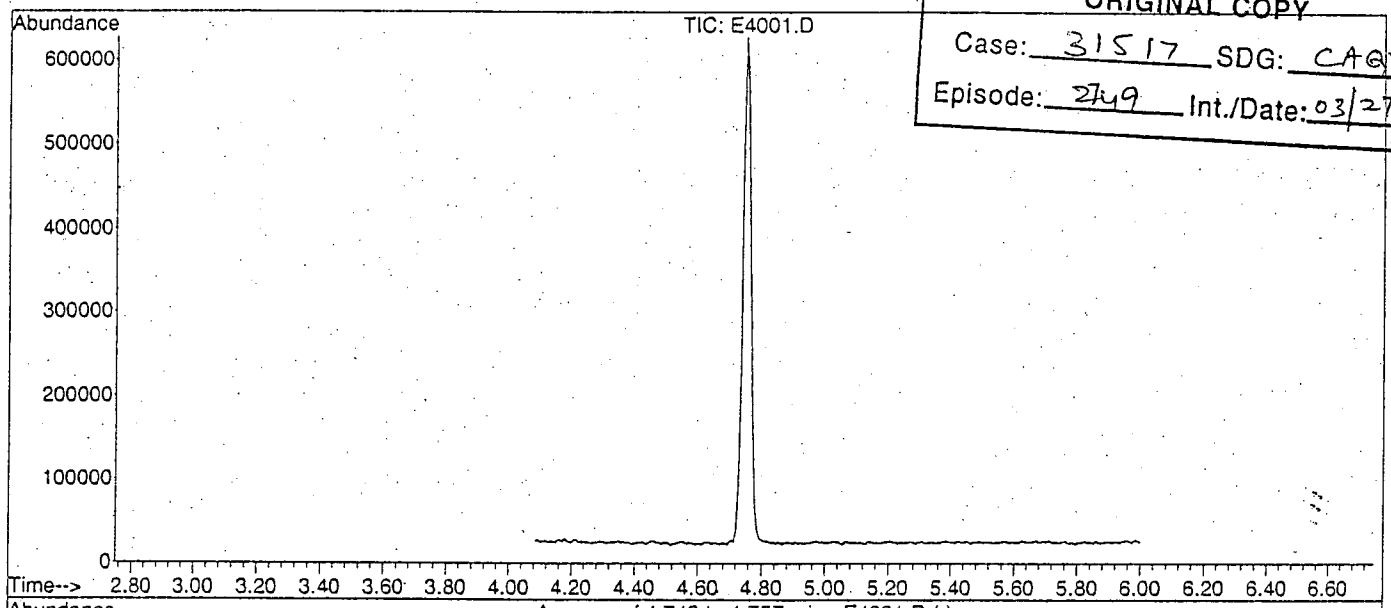
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:40:01 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4091.D

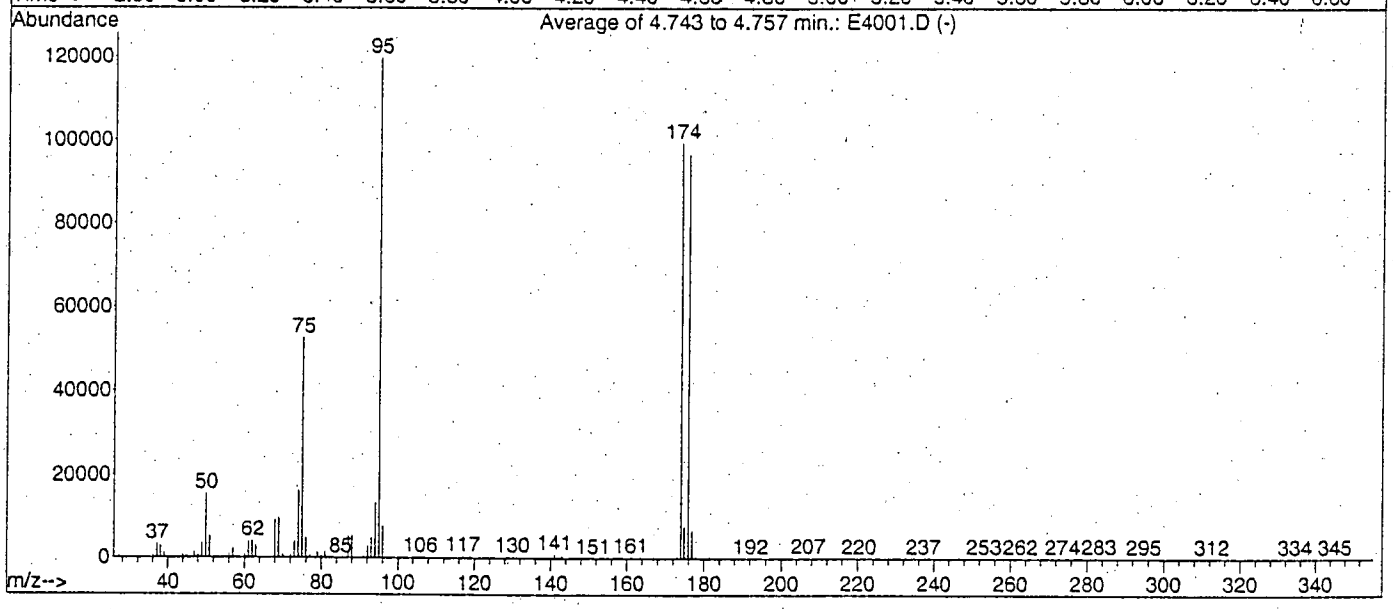


Data File : C:\MSDCHEM\1\DATA\E4001.D
Acq On : 03/26/2003 1752
Sample : BFB4M
Misc : EBFB4M
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE3996.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 1
Operator: AK
Inst : E-5973
Multiplr: 1.00

ORIGINAL COPY
Case: 31517 SDG: CAQ27
Episode: 2749 Int./Date: 03/27/03
CA
GP
3/27/03





AutoFind: Scans 93, 94, 95; Background Corrected with Scan 86

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.0	15506	PASS
75	95	30	66	43.8	52467	PASS
95	95	100	100	100.0	119654	PASS
96	95	5	9	6.4	7654	PASS
173	174	0.00	2	0.3	323	PASS
174	95	50	120	83.0	99325	PASS
175	174	4	9	7.6	7505	PASS
176	174	93	101	97.1	96448	PASS
177	176	5	9	6.8	6573	PASS

0265

E4001.D LCE3996.M Wed Mar 26 17:59:46 2003

Data File : C:\MSDCHEM\1\DATA\E4001.D Vial: 1
Acq On : 03/26/2003 1752 Operator: AK
Sample : BFB4M Inst : E-5973
Misc : EBFB4M Multiplr: 1.00

SCAN 86

35.10	69.0
36.10	112.0
38.00	56.0
39.10	142.0
40.00	7999.0
41.10	189.0
41.80	173.0
43.10	179.0
44.00	3731.0
45.00	146.0
46.20	88.0
50.20	64.0
52.60	99.0
54.10	54.0
55.10	394.0
56.10	173.0
57.10	138.0
57.90	53.0
60.10	50.0
66.20	52.0
67.10	189.0
68.20	68.0
69.40	140.0
70.20	120.0
71.00	77.0
71.60	51.0
73.10	233.0
74.40	70.0
75.10	149.0
77.20	113.0
77.90	92.0
79.30	52.0
80.80	79.0
82.00	112.0
84.70	66.0
89.20	134.0
91.00	115.0
95.00	124.0
95.90	215.0
97.30	56.0
103.00	130.0
103.60	58.0
104.10	97.0
105.60	63.0
107.00	67.0
108.30	73.0
110.00	53.0
110.80	61.0
115.20	77.0
116.10	86.0
117.10	94.0
124.00	50.0
124.90	124.0
126.30	103.0
127.30	64.0
130.30	55.0
131.40	119.0
132.90	142.0
133.60	62.0
135.00	72.0
155.50	64.0
158.50	101.0
162.20	64.0
174.90	62.0
190.90	278.0
192.90	253.0
193.90	71.0
195.70	93.0
201.00	56.0
203.00	68.0
204.90	134.0
207.10	1153.0
207.90	251.0
209.10	131.0
210.00	112.0
218.50	57.0
222.30	51.0
233.10	85.0
245.10	80.0
253.00	89.0
267.20	110.0
269.10	117.0
272.00	53.0
281.00	394.0
282.10	70.0
285.20	53.0
286.30	78.0
297.70	60.0
340.90	56.0
341.90	61.0
347.00	73.0
349.90	54.0

SCAN 93

36.10	747.0
37.10	2893.0
38.10	2695.0
39.00	1239.0
40.00	9300.0
41.10	244.0
42.20	85.0
43.30	109.0
44.00	4617.0
45.00	744.0
46.20	105.0
47.10	891.0
47.90	526.0
49.10	3225.0
50.10	14074.0
51.00	5511.0
52.10	332.0
53.90	60.0
55.10	408.0
56.10	1265.0
57.10	2798.0
58.10	182.0
60.10	532.0
61.00	3744.0
62.10	3839.0
63.00	2115.0
64.00	537.0
65.10	124.0
66.70	136.0
67.20	295.0
68.00	8106.0
69.00	9250.0
70.10	811.0
72.00	489.0
73.00	3489.0
74.00	14907.0
75.10	45728.0
76.00	4488.0
77.10	998.0
77.90	497.0
79.00	1258.0
80.00	269.0
80.90	1440.0
81.90	224.0
82.80	130.0
83.00	127.0
83.90	100.0
85.00	69.0
85.20	80.0
87.00	4257.0
88.00	4438.0
90.90	441.0
92.00	2999.0
93.00	4730.0
94.00	11399.0
95.00	103208.0
96.10	6832.0
96.90	118.0
97.90	60.0
98.80	115.0
101.20	55.0
101.40	65.0
102.90	70.0
103.90	129.0
105.00	140.0
105.90	305.0
106.80	128.0
107.20	74.0
109.50	58.0
110.20	55.0
110.90	86.0
112.10	103.0
115.00	60.0
115.90	304.0
116.90	347.0
117.80	292.0
119.00	425.0
123.90	141.0
126.30	75.0
126.90	69.0
127.90	215.0
128.90	231.0
130.00	289.0
131.00	303.0
133.20	243.0
135.10	170.0
135.80	102.0
137.20	137.0
140.10	57.0
140.90	750.0
141.40	140.0
141.70	118.0
142.10	96.0
143.00	604.0
143.80	85.0
145.10	130.0
146.00	211.0
146.90	223.0
148.10	200.0
149.00	107.0
149.90	81.0
151.00	110.0
153.10	120.0
153.90	88.0
154.80	302.0
156.00	146.0
156.90	219.0
160.90	216.0
163.10	72.0
166.80	62.0
168.00	52.0
172.00	90.0
172.90	216.0
174.00	75912.0
174.90	6068.0
175.90	23180.0

102316

Data File : C:\MSDCHEM\1\DATA\E4001.D Vial: 1
Acq On : 03/26/2003 1752 Operator: AK
Sample : BFB4M Inst : E-5973
Misc : EBFB4M Multiplr: 1.00

		61.00	4149.0	118.00	331.0	179.00	57.0
176.90	5065.0	62.00	4674.0	118.90	685.0	182.60	52.0
178.10	141.0	63.10	3269.0	119.80	123.0	185.40	50.0
184.20	71.0	64.00	462.0	121.90	87.0	186.10	133.0
190.70	80.0	65.10	113.0	122.90	55.0	192.10	139.0
193.10	103.0	66.40	69.0	124.20	93.0	193.00	78.0
201.10	72.0	67.00	271.0	125.10	150.0	193.40	59.0
207.10	1187.0	68.00	9987.0	126.00	60.0	194.30	52.0
207.90	208.0	69.00	11028.0	126.70	114.0	197.10	72.0
208.40	138.0			127.80	536.0	199.90	61.0
209.10	255.0	70.00	1013.0	129.00	197.0	205.70	53.0
213.30	61.0	71.10	217.0	129.90	375.0	207.00	1304.0
216.10	73.0	72.10	852.0	130.50	123.0	208.10	266.0
220.30	89.0	73.00	4525.0	131.00	178.0	209.00	363.0
223.40	70.0	74.00	17704.0	132.10	81.0	222.40	97.0
237.20	57.0			133.00	276.0	241.00	56.0
239.10	53.0	75.00	59336.0	134.20	97.0	252.90	68.0
252.00	51.0			134.80	357.0	254.40	58.0
264.70	60.0	76.00	5275.0	136.00	80.0	273.70	84.0
269.20	205.0	77.00	872.0	136.90	146.0	281.00	341.0
273.60	71.0	78.10	636.0	139.10	61.0	283.00	67.0
277.70	56.0	79.00	1770.0	139.90	164.0	321.10	52.0
281.20	472.0	80.00	576.0	141.00	1252.0	334.60	97.0
282.10	68.0	81.00	1664.0	142.00	145.0	343.10	59.0
283.10	184.0	81.90	429.0	143.10	834.0	SCAN 95	
289.70	82.0	83.00	121.0	145.00	226.0	36.10	523.0
294.80	82.0	83.80	99.0	145.80	280.0	37.10	3284.0
318.40	73.0	86.00	255.0	147.00	290.0	38.00	2749.0
329.00	62.0	87.00	5843.0	147.90	369.0	39.10	1155.0
345.20	52.0	88.00	5834.0	148.90	157.0	40.00	7721.0
SCAN 94		89.80	120.0	150.00	340.0	41.00	479.0
36.00	655.0	91.00	350.0	151.10	122.0	42.20	120.0
37.10	3658.0	92.10	2911.0	152.00	131.0	43.00	202.0
38.10	3505.0	93.00	5579.0	152.80	142.0	44.00	4171.0
39.00	1645.0	94.00	16720.0	153.90	123.0	45.00	427.0
40.00	8159.0			155.00	303.0	46.00	82.0
41.00	389.0	95.00	136192.0	156.20	117.0	47.00	1047.0
43.00	445.0			156.90	269.0	48.10	503.0
44.00	4433.0	96.00	9714.0	157.90	128.0	49.00	3092.0
45.10	707.0	97.20	363.0	158.90	157.0	50.00	14221.0
46.00	280.0	98.20	57.0	160.90	217.0		
47.00	1633.0	102.90	77.0	161.80	104.0	51.10	5108.0
48.00	255.0	104.00	119.0	163.20	106.0	52.00	210.0
49.10	4184.0	104.90	247.0	165.90	95.0	53.00	69.0
50.00	18416.0	105.90	275.0	166.80	91.0	55.00	405.0
		106.70	94.0	171.80	159.0	56.10	1044.0
51.00	5005.0	106.90	103.0	173.00	755.0	57.00	1757.0
52.00	255.0	109.10	107.0	174.00	113232.0	57.90	91.0
54.80	378.0	110.00	119.0			58.20	110.0
56.10	1025.0	112.00	81.0	175.00	8121.0	60.10	784.0
57.00	2574.0	113.10	135.0	176.00	108712.0	61.10	3335.0
58.00	181.0	114.90	249.0			62.00	3866.0
58.60	173.0	115.80	363.0	177.00	7792.0	63.10	3237.0
60.00	955.0	116.90	849.0	178.10	281.0	64.20	3[illegible]

Data File : C:\MSDCHEM\1\DATA\E4001.D Vial: 1
Acq On : 03/26/2003 1752 Operator: AK
Sample : BFB4M Inst : E-5973
Misc : EBFB4M Multiplr: 1.00

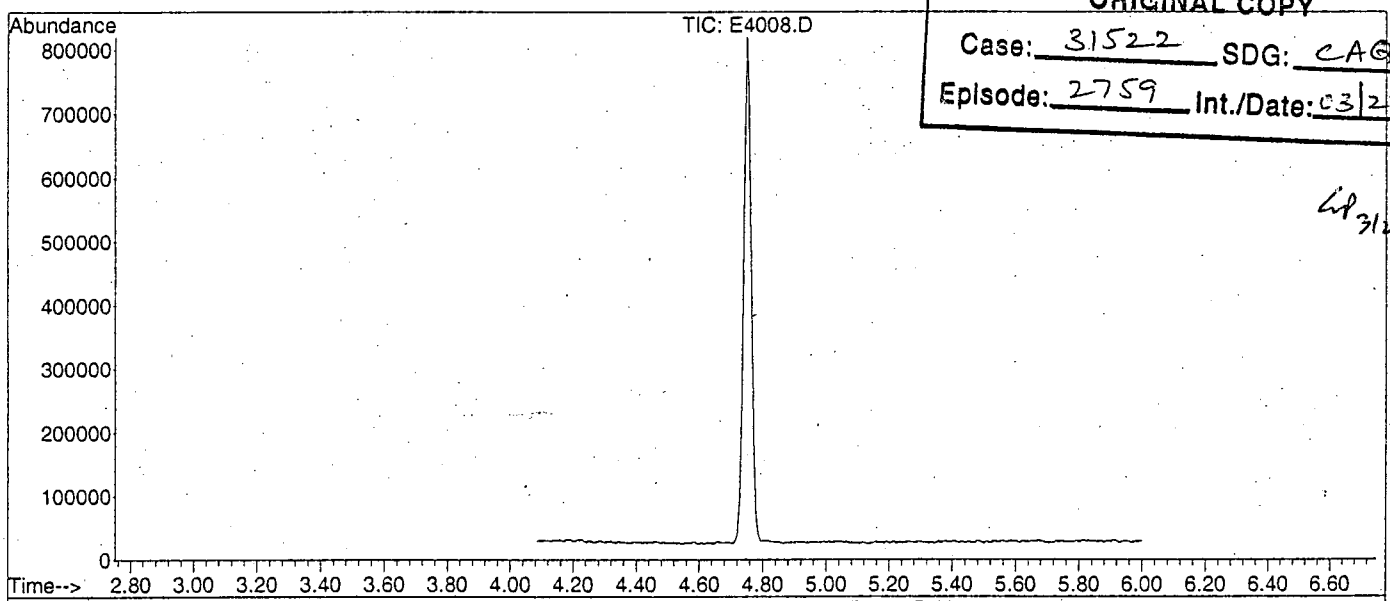
67.00	297.0	125.20	53.0	214.40	75.0
68.00	9764.0	128.10	477.0	221.00	82.0
69.00	8674.0	129.00	251.0	222.00	50.0
70.00	855.0	130.00	345.0	224.00	70.0
71.00	100.0	130.70	135.0	225.40	89.0
72.00	628.0	133.00	175.0	239.80	57.0
73.00	4354.0	133.60	109.0	240.10	51.0
74.00	16102.0	134.90	238.0	253.10	69.0
		135.90	133.0	262.60	65.0
75.00	52784.0	136.90	196.0	266.20	70.0
		138.40	91.0	269.30	198.0
76.10	4778.0	139.80	121.0	281.20	511.0
77.00	597.0	140.90	851.0	282.30	236.0
77.90	334.0	142.10	155.0	283.00	50.0
78.90	1140.0	142.90	742.0	290.40	77.0
80.00	429.0	144.00	64.0	302.50	54.0
81.00	1229.0	145.00	125.0	312.50	81.0
81.90	341.0	145.90	202.0	327.30	65.0
83.20	196.0	147.00	146.0	334.40	96.0
84.10	68.0	147.90	304.0	343.30	85.0
85.00	67.0	148.90	156.0		
86.00	155.0	149.80	141.0		
87.00	6013.0	153.90	212.0		
88.00	6038.0	155.00	268.0		
88.90	100.0	156.00	157.0		
89.60	113.0	156.60	100.0		
91.00	480.0	157.00	186.0		
92.00	2331.0	158.00	183.0		
93.00	4021.0	159.10	111.0		
94.00	12073.0	160.90	312.0		
		163.00	52.0		
95.00	119936.0	163.80	58.0		
		171.80	59.0		
96.00	7061.0	172.10	119.0		
96.90	302.0	174.00	108832.0		
98.20	66.0				
103.90	601.0	175.00	8513.0		
104.40	116.0	176.00	107152.0		
104.90	270.0				
105.90	304.0	177.00	6864.0		
106.80	188.0	178.00	448.0		
109.20	50.0	178.70	94.0		
110.10	242.0	187.40	52.0		
111.10	116.0	191.00	150.0		
111.90	77.0	193.20	77.0		
113.10	64.0	200.20	187.0		
114.90	175.0	200.70	74.0		
115.20	153.0	206.00	83.0		
116.00	221.0	207.10	1587.0		
117.00	666.0	207.90	146.0		
117.90	275.0	209.00	269.0		
119.00	276.0	210.20	54.0		
121.60	70.0	211.00	50.0		
124.00	143.0	213.70	51.0		

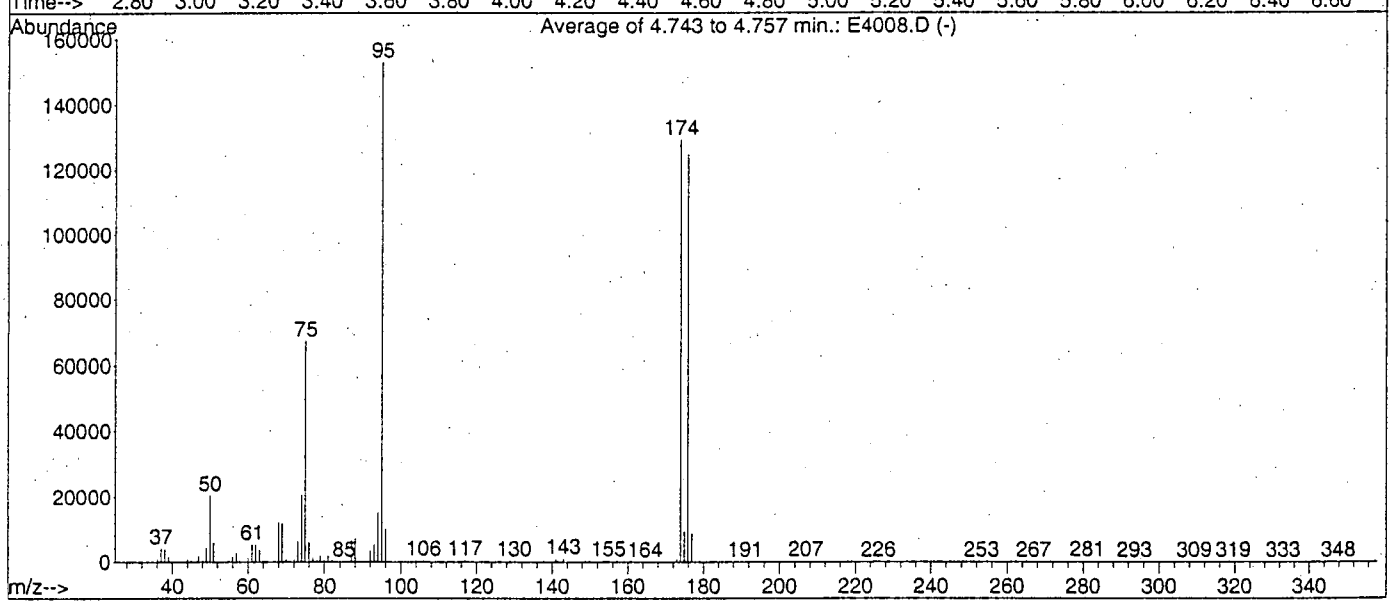
CLPBFB

Data File : C:\MSDCHEM\1\DATA\E4008.D
Acq On : 03/27/2003 0753
Sample : BFB4N
Misc : EBFB4N
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4004.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 1
Operator: AK
Inst : E-5973
Multiplr: 1.00

ORIGINAL COPY
Case: 31522 SDG: CAGR2
Episode: 2759 Int./Date: 03/27/03





AutoFind: Scans 93, 94, 95; Background Corrected with Scan 84

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.4	20474	PASS
75	95	30	66	43.9	67157	PASS
95	95	100	100	100.0	152848	PASS
96	95	5	9	6.6	10020	PASS
173	174	0.00	2	0.6	784	PASS
174	95	50	120	84.6	129312	PASS
175	174	4	9	7.1	9243	PASS
176	174	93	101	96.6	124925	PASS
177	176	5	9	6.9	8597	PASS

0269

E4008.D LCE4004.M Thu Mar 27 07:59:35 2003

Data File : C:\MSDCHEM\1\DATA\E4008.D Vial: 1
Acq On : 03/27/2003 0753 Operator: AK
Sample : BFB4N Inst : E-5973
Misc : EBFB4N Multiplr: 1.00

SCAN 84

36.50	59.0
37.10	71.0
39.20	183.0
40.00	8497.0
41.10	560.0
42.10	163.0
43.00	372.0
44.00	4003.0
44.90	237.0
45.90	103.0
49.00	51.0
49.90	158.0
51.00	125.0
52.00	63.0
53.10	151.0
54.00	152.0
55.10	233.0
56.10	209.0
57.00	534.0
58.90	58.0
61.70	87.0
66.00	65.0
68.10	112.0
68.90	224.0
70.10	385.0
71.00	147.0
73.20	165.0
74.00	186.0
74.90	132.0
75.10	132.0
76.00	68.0
77.00	92.0
78.00	240.0
78.80	205.0
82.90	99.0
85.70	59.0
87.20	91.0
88.80	79.0
90.20	52.0
93.10	60.0
93.90	191.0
95.90	188.0
98.10	50.0
103.20	75.0
105.00	82.0
107.40	55.0
110.40	150.0
111.00	61.0
112.10	114.0
117.00	129.0
118.00	86.0
119.10	133.0
120.10	157.0
127.00	130.0
129.20	66.0
129.40	60.0
131.00	58.0
133.10	338.0
136.20	56.0
140.00	73.0
147.10	61.0
150.00	68.0
151.10	71.0
155.70	149.0
156.90	51.0
159.90	85.0
163.50	64.0
165.10	73.0
167.40	86.0
168.40	80.0
175.80	67.0
176.40	60.0
183.00	58.0
191.10	79.0
193.00	52.0
193.70	79.0
207.00	1180.0
208.00	351.0
209.00	169.0
213.20	50.0
217.20	50.0
218.90	61.0
221.30	105.0
230.60	67.0
236.30	53.0
237.10	55.0
247.00	99.0
251.20	97.0
253.70	55.0
256.70	78.0
274.90	56.0
275.90	64.0
280.20	135.0
281.00	545.0
282.10	53.0
283.20	132.0
296.30	58.0
307.40	106.0
315.20	78.0
321.50	60.0
329.20	96.0
334.20	70.0
341.20	77.0
343.20	80.0

SCAN 93

35.30	51.0
36.00	947.0
37.10	3627.0
38.10	3220.0
39.10	1219.0
40.00	7684.0
41.20	268.0
42.00	152.0
43.00	155.0
43.30	157.0
44.00	4353.0
45.00	836.0
45.90	117.0
47.00	1250.0
48.10	532.0
49.10	3157.0
50.00	17872.0
51.00	6180.0
52.00	286.0
52.60	61.0
53.30	68.0
55.10	802.0
56.00	1825.0
57.00	2694.0
57.90	120.0
58.70	96.0
60.00	917.0
61.00	4653.0
62.00	4496.0
63.00	3224.0
64.10	382.0
65.10	222.0
65.80	119.0
67.10	480.0
68.00	10669.0
69.00	10592.0
70.00	1168.0
70.90	134.0
71.10	136.0
72.00	715.0
73.00	5262.0
74.00	15717.0
75.00	57544.0
76.00	5585.0
77.00	1039.0
78.10	991.0
79.00	1421.0
79.90	298.0
81.00	1561.0
82.00	401.0
83.00	142.0
84.10	204.0
85.00	180.0
86.10	338.0
87.00	5941.0
88.00	5574.0
90.10	109.0
90.90	375.0
92.00	2477.0
93.00	4080.0
94.00	12718.0
95.00	126320.0
96.10	8796.0
97.00	246.0
97.90	64.0
99.00	77.0
102.00	62.0
103.10	121.0
104.00	321.0
104.80	97.0
105.30	79.0
105.90	477.0
106.90	82.0
107.80	59.0
109.30	62.0
110.40	205.0
111.10	92.0
112.00	163.0
112.90	213.0
114.90	174.0
116.00	453.0
117.00	485.0
117.90	342.0
118.90	451.0
119.90	71.0
121.10	141.0
123.90	102.0
125.10	84.0
125.50	50.0
126.20	71.0
126.90	78.0
128.00	338.0
128.80	90.0
130.00	234.0
130.80	196.0
132.10	59.0
133.00	373.0
134.30	64.0
134.90	182.0
136.10	52.0
137.00	194.0
138.40	126.0
138.80	60.0

Data File : C:\MSDCHEM\1\DATA\E4008.D Vial: 1
Acq On : 03/27/2003 0753 Operator: AK
Sample : BFB4N Inst : E-5973
Misc : EBFB4N Multiplr: 1.00

139.30	58.0	265.10	77.0			130.00	444.0
140.10	132.0	267.00	132.0	75.00	76792.0	130.90	197.0
141.00	448.0	269.20	73.0			132.10	103.0
141.90	189.0	274.20	72.0	76.00	6782.0	133.00	300.0
143.00	737.0	280.90	465.0	77.10	1558.0	135.10	286.0
143.80	90.0	282.10	131.0	78.00	771.0	136.90	273.0
145.00	215.0	283.10	73.0	78.90	2647.0	138.90	87.0
145.80	116.0	289.60	107.0	80.00	794.0	139.90	168.0
147.00	252.0	303.50	89.0	80.90	2255.0	140.90	1373.0
147.80	216.0	308.60	74.0	81.90	521.0	142.00	250.0
149.00	60.0	319.60	73.0	83.10	201.0	142.90	1329.0
149.90	147.0	341.00	79.0	84.10	168.0	144.20	68.0
151.20	69.0	343.20	111.0	85.10	284.0	145.10	56.0
151.80	186.0	SCAN 94		86.00	70.0	145.90	191.0
154.10	153.0	36.00	827.0	87.00	7493.0	147.00	80.0
154.90	310.0	37.00	5382.0	88.00	8308.0	147.90	178.0
155.10	298.0	38.00	4531.0	89.10	91.0	148.80	207.0
156.00	78.0	39.10	2046.0	91.00	462.0	149.80	165.0
157.00	367.0	40.00	8374.0	92.00	3774.0	151.70	63.0
158.00	236.0	41.00	361.0	93.00	6570.0	152.90	205.0
158.70	83.0	42.20	203.0	94.00	17408.0	154.00	179.0
158.90	86.0	43.10	446.0			154.90	375.0
161.10	222.0	44.00	5174.0	95.00	178048.0	156.00	300.0
162.20	65.0	45.10	807.0			157.10	415.0
165.10	54.0	47.00	2298.0	96.00	11356.0	157.90	244.0
172.00	154.0	48.00	668.0			159.00	168.0
172.90	643.0	49.00	5158.0	97.10	713.0	160.90	314.0
174.00	93600.0	50.00	23808.0	97.80	97.0	163.10	95.0
				101.10	61.0	164.60	51.0
174.90	6026.0	51.00	7013.0	102.80	114.0	170.10	71.0
175.90	90944.0	51.90	414.0	103.20	97.0	172.10	226.0
		53.10	250.0	103.90	560.0	173.00	1044.0
177.00	6265.0	55.00	519.0	105.00	381.0	173.90	150016.0
178.00	205.0	56.00	1769.0	105.90	363.0		
182.40	63.0	57.10	3882.0	106.90	294.0	175.00	11712.0
183.10	84.0	58.00	132.0	111.00	253.0		
191.00	195.0	59.20	94.0	111.60	139.0	175.90	143360.0
191.80	93.0	60.00	1300.0	113.00	152.0		
192.90	70.0	61.10	6503.0	115.00	269.0	177.00	10029.0
197.30	53.0	62.00	6024.0	116.00	484.0		
197.80	79.0	63.00	4090.0	117.00	937.0	177.90	108.0
203.30	71.0	64.00	553.0	117.90	649.0	178.10	118.0
207.00	1177.0	65.00	332.0	119.00	750.0	178.90	181.0
208.00	115.0	66.00	88.0	120.20	137.0	179.80	56.0
209.00	593.0	67.00	430.0	120.90	53.0	183.90	62.0
210.10	198.0	68.00	14116.0	122.40	82.0	188.30	53.0
220.10	91.0			122.90	214.0	190.60	86.0
228.60	68.0	69.00	13913.0	123.60	61.0	191.00	96.0
229.30	55.0			125.00	95.0	193.10	91.0
245.30	77.0	70.10	1197.0	125.80	50.0	205.10	82.0
248.40	75.0	70.90	262.0	126.30	117.0	207.10	1557.0
248.90	79.0	72.10	681.0	127.10	244.0	208.00	420.0
252.90	88.0	73.00	7200.0	127.80	354.0	208.90	340.0
253.90	90.0	74.00	24896.0	128.90	196.0	210.10	80.0

Data File : C:\MSDCHEM\1\DATA\E4008.D Vial: 1
Acq On : 03/27/2003 0753 Operator: AK
Sample : BFB4N Inst : E-5973
Misc : EBFB4N Multiplr: 1.00

215.90	60.0	70.00	1238.0	125.90	124.0	209.10	152.0
219.00	76.0	71.20	288.0	127.90	332.0	218.10	50.0
220.10	58.0	72.00	749.0	128.90	258.0	220.90	63.0
221.10	86.0	73.00	6451.0	130.00	372.0	225.90	127.0
224.20	57.0	74.00	21752.0	131.00	245.0	232.50	50.0
226.10	78.0			133.10	69.0	236.20	96.0
253.20	82.0	75.00	67928.0	133.80	131.0	249.90	115.0
256.10	97.0			134.90	286.0	253.30	80.0
261.00	86.0	76.10	5741.0	136.90	202.0	254.80	85.0
267.10	63.0	77.00	1297.0	138.00	134.0	257.40	57.0
269.10	123.0	78.00	708.0	139.10	179.0	258.30	53.0
281.10	204.0	78.90	2128.0	139.80	123.0	259.40	54.0
281.90	193.0	80.00	719.0	140.10	113.0	264.20	55.0
283.10	138.0	80.90	1878.0	141.00	1142.0	265.00	120.0
286.40	116.0	82.00	466.0	141.70	63.0	266.90	78.0
293.50	64.0	83.10	265.0	142.00	95.0	269.20	50.0
301.00	99.0	84.00	125.0	142.90	997.0	269.70	50.0
317.10	86.0	85.20	129.0	143.90	57.0	281.10	510.0
342.20	61.0	86.00	173.0	145.00	93.0	282.00	225.0
SCAN 95		87.00	6945.0	146.00	242.0	283.50	50.0
36.10	779.0	88.00	7374.0	146.90	177.0	293.60	59.0
37.00	3356.0	89.20	128.0	147.90	272.0	295.70	57.0
38.00	4046.0	91.00	227.0	149.90	203.0	309.20	155.0
39.10	1934.0	91.30	186.0	151.20	80.0	309.80	65.0
40.00	7908.0	92.00	3836.0	152.10	67.0	316.70	77.0
41.00	464.0	93.00	5010.0	152.90	126.0	318.00	68.0
42.00	154.0	94.00	15530.0	153.70	81.0	325.70	53.0
43.10	577.0			154.30	75.0	328.30	60.0
44.00	5094.0	95.00	154176.0	154.90	419.0	330.70	55.0
45.00	656.0			155.80	173.0	333.00	71.0
46.00	164.0	96.00	10473.0	156.90	349.0	347.80	56.0
47.00	1856.0			158.00	206.0		
48.00	675.0	97.00	313.0	159.00	283.0		
49.00	4210.0	98.20	84.0	160.20	124.0		
50.10	20216.0	100.60	50.0	161.00	186.0		
		100.90	52.0	161.70	88.0		
51.10	4992.0	102.90	154.0	164.10	125.0		
51.90	159.0	104.00	791.0	164.90	63.0		
53.10	92.0	105.00	160.0	170.10	56.0		
55.00	440.0	106.00	453.0	172.00	217.0		
56.00	1368.0	107.20	147.0	172.90	665.0		
57.00	3212.0	109.80	82.0	173.90	144320.0		
58.10	92.0	111.10	178.0				
60.00	1168.0	111.90	82.0	175.00	9993.0		
61.00	4696.0	112.80	137.0	175.90	140672.0		
62.00	5158.0	114.80	98.0				
63.10	3797.0	115.70	187.0	177.00	9497.0		
63.90	356.0	116.20	231.0	178.10	197.0		
65.00	261.0	116.90	686.0	181.20	105.0		
67.10	323.0	118.00	245.0	189.10	59.0		
68.00	11725.0	119.00	669.0	190.80	148.0		
		120.30	103.0	193.50	72.0		
69.00	11634.0	123.30	60.0	207.00	1457.0		
		124.00	188.0	207.90	412.0		

0272

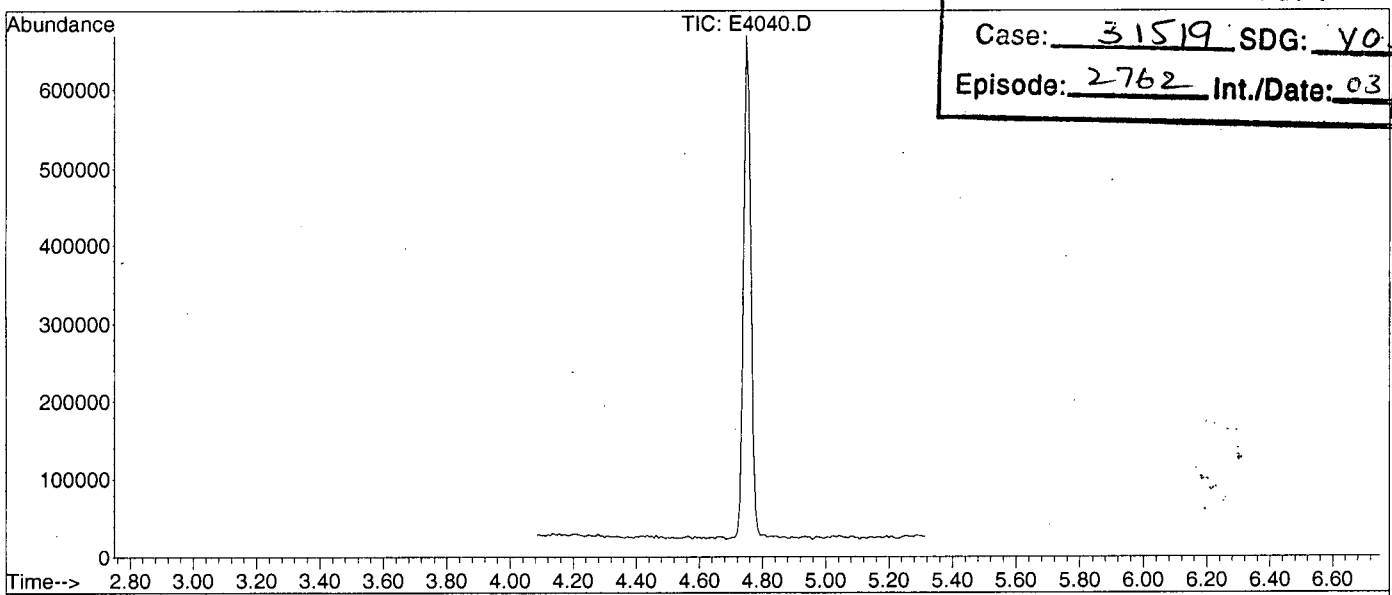
CLPBFB

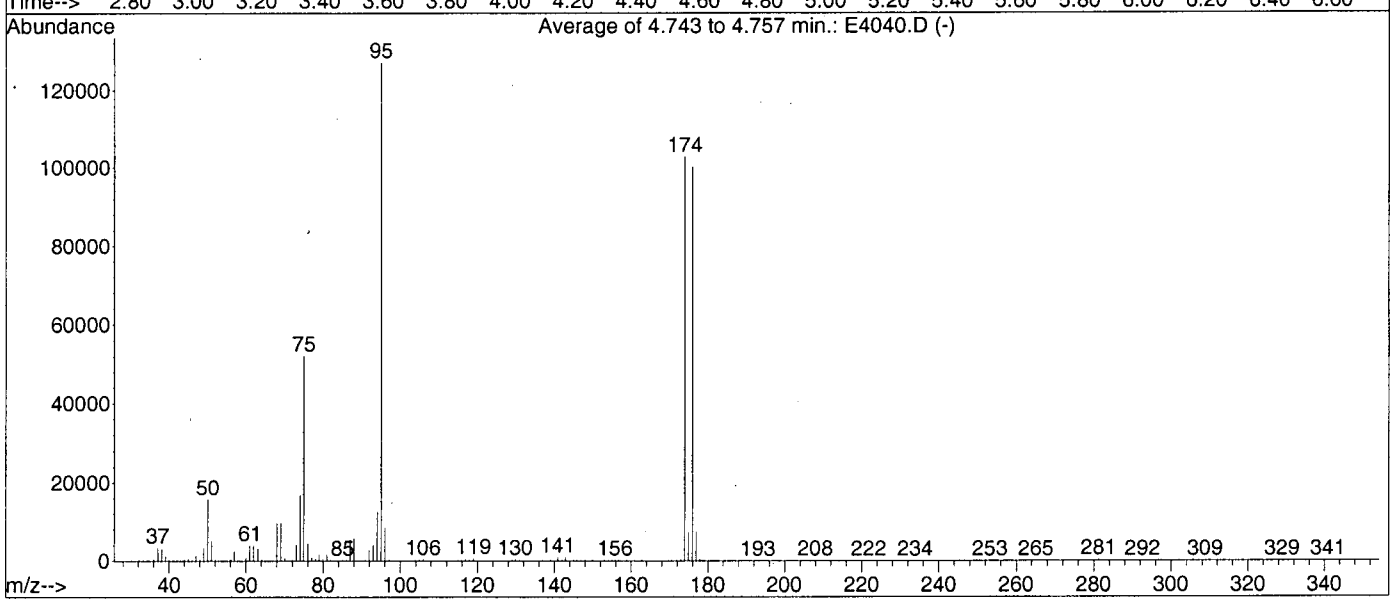
Data File : C:\MSDCHEM\1\DATA\E4040.D
Acq On : 03/28/2003 0946
Sample : BFB4P
Misc : EBFB4P 50NG
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 1
Operator: AK
Inst : E-5973
Multiplr: 1.00

ORIGINAL COPY
Case: 31519 SDG: YOSJ2
Episode: 2762 Int./Date: 03/28/03

KA
WP
4/04/03





AutoFind: Scans 93, 94, 95; Background Corrected with Scan 86

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.4	15725	PASS
75	95	30	66	41.0	52156	PASS
95	95	100	100	100.0	127056	PASS
96	95	5	9	6.6	8432	PASS
173	174	0.00	2	0.4	433	PASS
174	95	50	120	80.7	102594	PASS
175	174	4	9	7.1	7261	PASS
176	174	93	101	97.5	100008	PASS
177	176	5	9	7.3	7323	PASS

0273

E4040.D LCE4041.M Fri Mar 28 12:45:55 2003

Data File : C:\MSDCHEM\1\DATA\E4040.D Vial: 1
Acq On : 03/28/2003 0946 Operator: AK
Sample : BFB4P Inst : E-5973
Misc : EBFB4P 50NG Multiplr: 1.00

SCAN 86

36.10	100.0
38.10	102.0
39.10	131.0
40.00	7863.0
41.00	368.0
41.90	91.0
43.20	178.0
44.00	3753.0
50.20	166.0
50.90	103.0
53.20	115.0
55.10	363.0
56.00	317.0
57.10	346.0
57.80	152.0
58.20	85.0
59.00	104.0
59.70	90.0
60.30	99.0
62.80	75.0
66.10	53.0
67.00	133.0
69.00	246.0
70.10	161.0
71.10	234.0
72.00	144.0
73.00	339.0
74.90	118.0
77.20	120.0
78.00	168.0
79.90	77.0
81.00	71.0
83.00	228.0
84.00	143.0
85.70	69.0
90.90	184.0
92.10	62.0
93.10	105.0
94.10	60.0
95.20	104.0
96.00	106.0
98.40	58.0
98.90	73.0
102.90	139.0
107.00	57.0
109.80	66.0
112.20	70.0
113.40	61.0
115.00	68.0
116.00	66.0
119.80	93.0
125.60	57.0
127.20	65.0
127.80	86.0
128.00	88.0
130.20	51.0
131.00	63.0
132.90	154.0
133.60	119.0
134.90	83.0
138.00	68.0
139.40	103.0
147.90	52.0
152.20	61.0
183.10	106.0
184.30	64.0
184.60	64.0
189.00	80.0
190.30	66.0
190.90	169.0
192.10	60.0
193.90	82.0
202.30	59.0
206.10	53.0
206.90	1242.0
208.10	331.0
208.90	173.0
210.00	84.0
211.60	70.0
224.50	50.0
225.40	65.0
232.30	55.0
233.60	50.0
250.70	54.0
252.80	53.0
256.30	51.0
260.80	60.0
265.80	106.0
267.20	135.0
269.20	55.0
269.80	75.0
281.00	551.0
282.20	152.0
283.10	181.0
309.30	72.0
310.80	60.0
338.50	99.0

SCAN 93

36.00	761.0
37.10	2962.0
38.00	3026.0
39.10	1342.0
40.00	7553.0
41.00	292.0
42.10	106.0
42.90	194.0
43.10	212.0
44.00	4176.0
45.00	458.0
46.20	85.0
47.00	1080.0
48.10	332.0
49.00	2919.0
50.00	14607.0
51.00	4961.0
52.10	347.0
52.90	59.0
53.90	59.0
55.00	617.0
56.00	1045.0
57.00	2018.0
59.90	543.0
61.00	2876.0
62.00	3175.0
63.10	3018.0
64.00	391.0
65.20	136.0
66.90	383.0
68.00	7145.0
69.00	7697.0
70.10	970.0
71.10	425.0
72.00	540.0
73.00	4010.0
74.00	13515.0
75.00	43904.0
76.00	3727.0
77.00	871.0
78.20	580.0
78.90	1550.0
79.90	692.0
80.90	1509.0
81.90	198.0
83.10	134.0
84.10	94.0
85.00	99.0
86.10	209.0
87.00	4238.0
87.90	5373.0
89.20	93.0
90.90	376.0
91.90	2685.0
93.00	3235.0
94.00	11676.0
95.00	106712.0
96.00	7529.0
97.10	373.0
98.20	150.0
99.20	105.0
102.70	92.0
104.00	325.0
104.90	160.0
105.40	95.0
106.00	219.0
107.20	126.0
110.00	119.0
112.10	89.0
113.50	108.0
115.00	231.0
115.80	96.0
116.90	542.0
117.80	243.0
119.00	694.0
120.60	51.0
124.90	188.0
126.70	180.0
127.90	198.0
128.90	126.0
129.80	284.0
130.10	231.0
130.80	126.0
133.00	209.0
134.00	68.0
134.60	67.0
135.00	130.0
135.90	100.0
137.00	174.0
140.90	857.0
142.10	50.0
142.90	564.0
144.00	69.0
145.10	170.0
145.90	154.0
146.90	201.0
147.90	179.0
148.10	176.0
148.90	109.0
150.00	186.0
151.20	88.0
152.10	109.0
152.90	92.0
153.90	157.0
154.40	64.0
155.80	190.0
156.80	88.0
159.80	71.0
161.00	99.0
162.90	123.0
166.80	57.0
168.50	120.0

11274

Data File : C:\MSDCHEM\1\DATA\E4040.D Vial: 1
Acq On : 03/28/2003 0946 Operator: AK
Sample : BFB4P Inst : E-5973
Misc : EBFB4P 50NG Multiplr: 1.00

172.90	420.0	47.00	1925.0	97.20	455.0	157.00	158.0
173.90	72600.0	48.00	771.0	98.10	188.0	159.10	110.0
		49.00	4140.0	99.80	62.0	160.90	206.0
174.90	5766.0	50.10	17296.0	100.80	161.0	162.90	82.0
175.90	69760.0			102.80	209.0	166.10	56.0
		51.10	5588.0	103.80	588.0	167.90	71.0
177.00	6021.0	52.10	293.0	104.90	195.0	169.80	94.0
177.80	305.0	53.00	275.0	106.00	493.0	171.80	323.0
186.50	96.0	53.80	79.0	109.20	116.0	172.90	318.0
191.00	120.0	54.30	57.0	110.90	118.0	173.90	121184.0
207.00	1300.0	55.10	541.0	112.10	54.0		
208.00	332.0	56.20	1297.0	113.00	65.0	174.90	8100.0
209.10	230.0	57.00	3060.0	114.90	115.0	175.90	115704.0
219.00	89.0	60.00	976.0	115.80	225.0		
221.80	72.0	61.00	5121.0	116.10	222.0	176.90	8496.0
227.20	55.0	62.00	4856.0	116.90	422.0	177.90	401.0
234.20	64.0	63.00	3397.0	118.00	495.0	187.50	73.0
235.70	76.0	64.00	554.0	118.90	717.0	190.10	53.0
238.90	57.0	64.80	92.0	120.00	125.0	191.00	298.0
240.70	80.0	65.00	91.0	121.30	85.0	192.00	66.0
242.60	52.0	67.00	467.0	122.00	92.0	195.20	69.0
247.60	73.0	68.00	11854.0	123.10	60.0	203.00	112.0
248.90	85.0			123.90	54.0	207.00	1154.0
249.90	72.0	69.00	12091.0	125.20	53.0	208.20	267.0
265.10	64.0			126.00	75.0	209.10	290.0
269.00	117.0	70.00	910.0	128.00	488.0	210.20	92.0
270.00	97.0	71.00	275.0	129.00	406.0	215.20	56.0
272.00	59.0	71.90	364.0	129.90	404.0	216.50	70.0
279.60	52.0	73.10	4873.0	131.00	210.0	222.10	76.0
281.00	402.0	74.00	19784.0	132.80	107.0	225.00	55.0
281.30	343.0			133.10	137.0	233.20	51.0
283.20	89.0	75.00	61288.0	133.80	224.0	245.80	68.0
285.60	52.0			134.80	299.0	249.20	85.0
292.60	81.0	76.00	5690.0	136.10	50.0	253.30	142.0
295.50	54.0	77.00	1220.0	137.00	253.0	265.10	63.0
301.70	72.0	78.00	894.0	138.00	128.0	266.90	66.0
315.50	76.0	79.00	1680.0	139.10	57.0	270.00	74.0
324.70	91.0	80.00	672.0	139.70	75.0	281.20	448.0
333.30	82.0	81.00	1795.0	140.90	952.0	282.00	171.0
334.40	86.0	81.90	378.0	141.90	208.0	283.10	74.0
338.80	79.0	83.10	283.0	142.90	836.0	298.40	56.0
344.10	51.0	85.10	294.0	144.90	62.0	307.50	51.0
SCAN 94		85.90	161.0	145.80	124.0	314.70	54.0
36.00	649.0	86.20	150.0	147.20	72.0	316.10	86.0
37.10	4012.0	87.00	6164.0	147.70	174.0	321.80	106.0
38.10	3703.0	88.00	6435.0	149.00	135.0	328.90	127.0
39.10	1325.0	91.00	455.0	149.30	147.0	334.10	66.0
40.00	8402.0	92.00	3179.0	149.90	281.0	340.90	106.0
41.00	399.0	93.00	5459.0	151.70	86.0	SCAN 95	
42.00	196.0	94.00	14444.0	152.40	86.0	36.00	437.0
42.90	352.0			153.00	136.0	37.00	3077.0
44.00	4598.0	95.00	149696.0	154.00	78.0	38.00	2655.0
45.00	776.0			154.90	333.0	39.10	1216.0
46.00	80.0	96.00	9522.0	155.90	354.0	40.00	782.0

Data File : C:\MSDCHEM\1\DATA\E4040.D Vial: 1
Acq On : 03/28/2003 0946 Operator: AK
Sample : BFB4P Inst : E-5973
Misc : EBFB4P 50NG Multiplr: 1.00

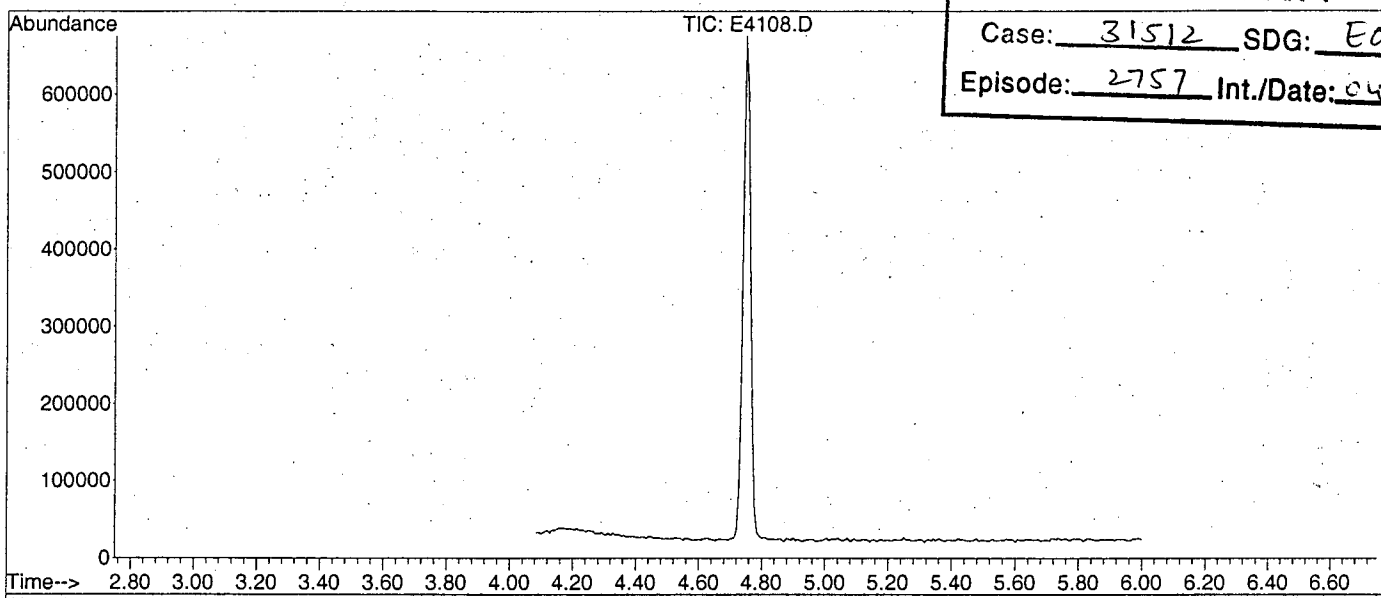
41.20	273.0	92.00	2595.0	158.90	299.0	322.00	61.0
41.80	136.0	93.00	4195.0	159.90	87.0	333.00	116.0
42.10	130.0	94.00	11527.0	161.10	270.0	335.10	56.0
43.00	265.0			162.80	77.0	337.60	54.0
44.00	3843.0	95.00	125072.0	164.60	54.0		
45.00	544.0			168.30	60.0		
45.90	54.0	96.00	8564.0	171.80	119.0		
47.00	1104.0	97.00	235.0	173.00	562.0		
47.90	237.0	98.10	215.0	174.00	114000.0		
49.00	3083.0	101.90	72.0				
50.00	15772.0	102.90	223.0	174.90	7919.0		
		104.00	227.0	175.90	114560.0		
51.00	5289.0	105.00	301.0				
51.90	457.0	105.90	437.0	176.90	7454.0		
54.00	199.0	106.90	182.0	177.90	166.0		
55.10	573.0	109.10	51.0	185.40	50.0		
56.00	1421.0	111.00	167.0	188.60	89.0		
57.00	3623.0	111.90	145.0	189.60	58.0		
58.10	182.0	112.90	231.0	191.00	143.0		
58.90	60.0	115.00	308.0	191.80	65.0		
59.10	62.0	115.90	358.0	193.00	172.0		
60.00	1085.0	117.00	605.0	195.20	76.0		
61.00	3917.0	117.90	471.0	203.20	54.0		
62.00	3678.0	118.90	385.0	206.10	96.0		
63.10	3156.0	120.20	100.0	207.10	1130.0		
64.10	321.0	121.00	121.0	208.10	309.0		
65.10	110.0	123.70	103.0	209.10	88.0		
66.10	183.0	125.20	123.0	210.20	102.0		
67.00	346.0	126.90	50.0	210.90	183.0		
68.00	9891.0	128.00	348.0	212.40	98.0		
69.00	10115.0	129.00	291.0	221.20	63.0		
		129.90	468.0	221.90	57.0		
70.10	709.0	130.90	260.0	224.10	61.0		
71.10	138.0	132.60	170.0	225.10	61.0		
72.00	620.0	134.90	161.0	233.90	89.0		
73.00	4459.0	136.20	99.0	247.30	56.0		
74.00	16800.0	137.00	153.0	251.90	75.0		
		139.00	128.0	253.20	105.0		
75.00	51632.0	140.00	110.0	264.70	81.0		
		140.90	1122.0	265.60	113.0		
76.10	3851.0	142.00	199.0	266.50	72.0		
77.00	814.0	142.90	1478.0	269.20	51.0		
78.00	479.0	145.70	74.0	273.60	56.0		
78.90	1665.0	147.10	244.0	281.00	268.0		
80.10	365.0	147.90	287.0	282.00	106.0		
80.90	1744.0	150.00	70.0	282.30	92.0		
82.00	263.0	153.10	61.0	289.00	58.0		
83.00	120.0	154.00	86.0	299.60	109.0		
84.00	137.0	155.00	250.0	304.50	51.0		
85.00	304.0	155.90	128.0	306.40	74.0		
86.00	115.0	156.80	118.0	307.20	52.0		
87.00	6003.0	157.50	120.0	308.80	114.0		
87.90	5389.0	157.80	123.0	311.30	66.0		
91.10	627.0	158.10	100.0	318.00	54.0		

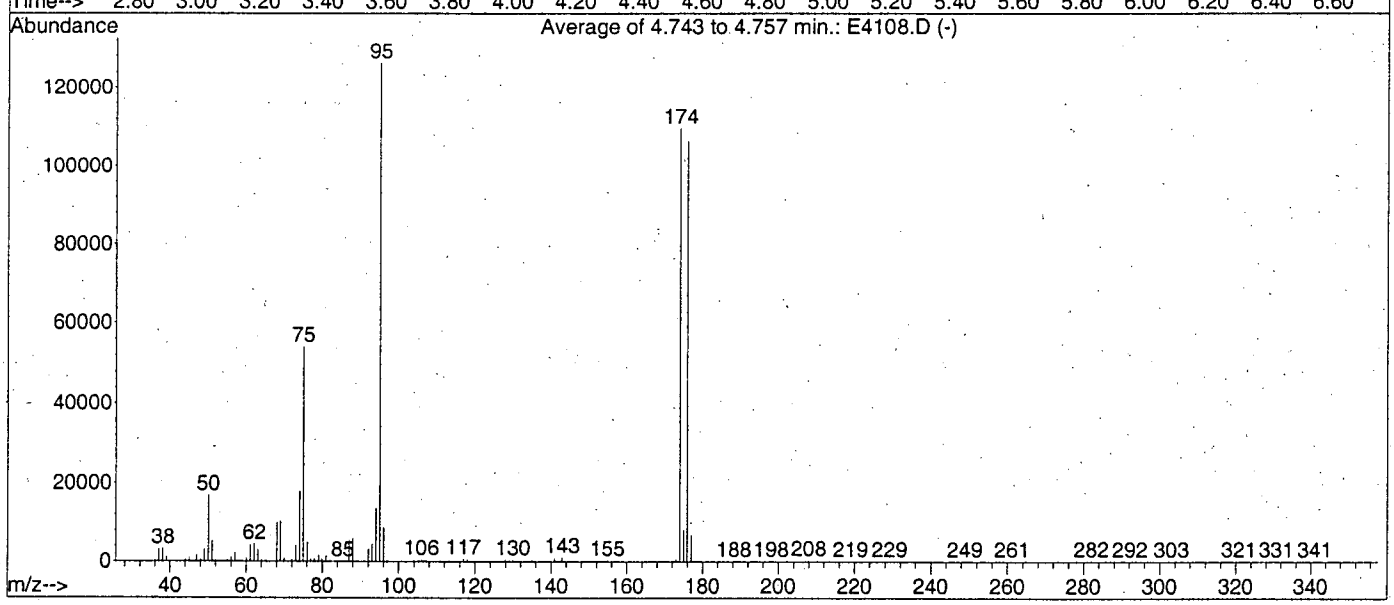
CLPBFB

Data File : C:\MSDCHEM\1\DATA\E4108.D
Acq On : 04/02/2003 0910
Sample : BFB4U
Misc : EBFB4U
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 1
Operator: AK
Inst : E-5973
Multiplr: 1.00

ORIGINAL COPY
Case: 31512 SDG: E0003
Episode: 2757 Int./Date: 04/02/03





AutoFind: Scans 93, 94, 95; Background Corrected with Scan 84

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	13.3	16851	PASS
75	95	30	66	42.7	53910	PASS
95	95	100	100	100.0	126242	PASS
96	95	5	9	6.9	8668	PASS
173	174	0.00	2	0.6	679	PASS
174	95	50	120	86.8	109568	PASS
175	174	4	9	7.2	7895	PASS
176	174	93	101	97.0	106277	PASS
177	176	5	9	6.2	6633	PASS

106277

E4108.D LCE4109.M Wed Apr 02 09:17:44 2003

Data File : C:\MSDCHEM\1\DATA\E4108.D Vial: 1
Acq On : 04/02/2003 0910 Operator: AK
Sample : BFB4U Inst : E-5973
Misc : EBFB4U Multiplr: 1.00

SCAN 84

36.00	355.0
36.90	111.0
38.00	126.0
39.00	325.0
40.00	7783.0
41.10	477.0
42.00	115.0
42.90	238.0
44.00	3866.0
45.00	109.0
46.60	68.0
48.10	93.0
49.70	56.0
50.00	80.0
51.20	131.0
52.00	93.0
53.00	181.0
54.90	325.0
56.00	163.0
57.00	241.0
59.10	53.0
63.80	77.0
65.30	112.0
65.90	51.0
67.10	171.0
68.00	88.0
68.80	218.0
69.30	164.0
70.00	143.0
70.70	57.0
71.10	140.0
73.00	109.0
74.90	58.0
75.70	97.0
76.30	82.0
77.00	146.0
77.20	150.0
78.00	364.0
79.00	88.0
79.90	62.0
81.10	251.0
82.10	128.0
83.00	102.0
85.10	78.0
87.00	56.0
91.00	230.0
93.10	198.0
93.90	113.0
96.10	225.0
97.50	67.0
99.30	58.0
100.40	76.0
101.90	53.0
103.00	183.0
104.10	194.0
105.20	82.0
107.90	102.0
110.90	52.0
112.00	58.0
115.10	183.0
115.90	152.0
118.90	128.0
125.90	125.0
129.20	64.0
134.70	61.0
141.30	50.0
146.00	116.0
146.70	91.0
147.30	59.0
156.00	73.0
156.70	71.0
161.30	60.0
162.20	120.0
164.80	79.0
167.00	57.0
169.00	78.0
175.80	53.0
177.20	73.0
179.60	69.0
183.90	69.0
191.00	127.0
193.10	75.0
207.10	626.0
208.10	101.0
208.90	186.0
239.20	100.0
244.10	71.0
263.90	67.0
265.10	84.0
267.00	64.0
269.00	86.0
281.00	200.0
282.20	81.0
283.10	70.0
284.20	71.0
302.30	61.0
322.20	55.0
328.00	107.0
343.20	125.0

SCAN 93

36.00	651.0
37.10	3202.0
38.10	2815.0
39.00	1440.0
40.00	7645.0
41.10	451.0
42.10	194.0
42.90	159.0
44.00	4215.0
45.00	831.0
46.20	74.0
47.00	1361.0
48.00	555.0
49.00	2883.0
50.00	15946.0
51.10	4873.0
52.00	468.0
54.00	135.0
54.90	395.0
56.00	1093.0
57.00	2208.0
58.10	103.0
59.00	146.0
60.00	772.0
61.00	3897.0
62.10	3800.0
63.10	3374.0
64.10	511.0
64.90	261.0
67.10	265.0
68.00	9154.0
69.00	8050.0
70.00	716.0
71.10	176.0
72.00	303.0
73.00	3276.0
74.00	15797.0
75.00	48968.0
76.00	4126.0
77.00	623.0
78.00	1224.0
79.00	1468.0
80.10	421.0
80.90	1317.0
81.90	334.0
83.00	54.0
83.90	88.0
85.10	94.0
85.80	230.0
86.90	4455.0
87.90	4812.0
90.90	434.0
92.00	3087.0
93.00	4053.0
94.00	11493.0
95.00	109496.0
96.00	8474.0
97.10	394.0
98.40	91.0
99.50	82.0
103.20	67.0
104.00	283.0
105.10	240.0
106.00	441.0
107.00	87.0
111.10	58.0
112.10	115.0
114.80	96.0
115.90	245.0
117.10	569.0
118.00	474.0
119.00	280.0
121.80	57.0
123.10	107.0
125.10	97.0
126.10	94.0
126.90	87.0
127.90	359.0
129.00	333.0
129.80	367.0
131.00	157.0
132.00	62.0
133.20	227.0
134.10	170.0
134.90	172.0
135.80	102.0
136.70	96.0
137.90	61.0
138.70	70.0
139.90	84.0
141.00	501.0
142.10	160.0
143.00	896.0
144.70	112.0
144.90	136.0
146.10	174.0
146.70	124.0
147.10	58.0
148.00	53.0
149.10	138.0
149.90	89.0
151.80	206.0
152.90	94.0
154.20	118.0
155.00	278.0
156.00	58.0
157.20	93.0
158.10	83.0
159.70	64.0
160.80	122.0

Data File : C:\MSDCHEM\1\DATA\E4108.D Vial: 1
Acq On : 04/02/2003 0910 Operator: AK
Sample : BFB4U Inst : E-5973
Misc : EBFB4U Multiplr: 1.00

172.00	170.0	56.00	1400.0	107.00	113.0	175.00	8667.0
173.00	378.0	57.00	2844.0	107.20	113.0	175.90	121240.0
174.00	82928.0	57.80	63.0	109.10	144.0		
		60.00	985.0	110.20	177.0	176.90	8397.0
174.90	7206.0	61.00	4454.0	110.90	184.0	178.00	221.0
176.00	82440.0	62.00	5093.0	112.70	83.0	178.90	54.0
		63.00	2923.0	113.20	122.0	182.50	125.0
177.00	4941.0	64.10	216.0	114.90	156.0	185.00	79.0
177.90	111.0	65.00	382.0	115.90	492.0	188.30	166.0
179.60	79.0	66.00	138.0	116.90	651.0	191.00	223.0
188.60	69.0	67.10	484.0	117.80	618.0	193.30	71.0
190.80	82.0	68.00	11618.0	118.90	391.0	194.10	54.0
193.10	109.0			119.60	125.0	199.20	52.0
195.70	73.0	69.00	12621.0	123.90	143.0	204.70	68.0
198.10	115.0			125.70	75.0	207.10	668.0
207.00	680.0	70.00	1110.0	126.10	95.0	207.90	237.0
208.20	203.0	71.10	169.0	126.30	94.0	208.90	78.0
209.10	171.0	72.00	487.0	127.10	112.0	209.50	67.0
211.20	98.0	73.00	5004.0	127.90	474.0	210.30	160.0
219.00	54.0	74.00	20304.0	128.90	212.0	211.80	66.0
222.10	69.0			129.90	437.0	214.70	77.0
245.90	99.0	75.00	62488.0	131.00	162.0	218.90	56.0
248.90	180.0			132.30	127.0	222.30	51.0
252.10	60.0	76.10	5803.0	132.90	161.0	231.40	64.0
266.40	53.0	77.00	974.0	134.00	90.0	241.60	73.0
269.10	91.0	77.90	742.0	135.00	369.0	266.90	76.0
270.00	67.0	79.00	1833.0	136.90	116.0	281.00	201.0
281.00	266.0	79.90	895.0	139.10	99.0	281.90	88.0
283.20	56.0	81.00	1916.0	139.80	66.0	282.30	60.0
285.30	75.0	81.90	358.0	141.00	1108.0	303.00	94.0
322.00	56.0	82.90	132.0	142.00	139.0	320.80	127.0
344.40	89.0	83.90	74.0	142.90	1140.0	322.20	54.0
SCAN 94		85.40	77.0	144.80	118.0	330.80	62.0
36.00	642.0	86.00	170.0	145.20	68.0	333.20	65.0
37.00	3529.0	86.90	6785.0	145.90	214.0	341.00	121.0
38.10	4376.0	88.00	7390.0	147.00	143.0	347.50	76.0
39.00	1367.0	88.90	149.0	148.00	290.0	SCAN 95	
40.00	7354.0	90.90	478.0	148.80	131.0	36.00	761.0
41.00	363.0	92.00	2918.0	149.90	197.0	37.10	2924.0
42.20	163.0	93.00	5667.0	152.90	150.0	38.10	2794.0
43.20	151.0	94.00	15235.0	153.70	187.0	39.10	1416.0
44.00	4315.0			154.90	465.0	40.00	7756.0
45.10	1465.0	95.00	142656.0	156.00	147.0	41.00	238.0
46.10	82.0			156.80	88.0	43.00	119.0
47.00	1922.0	96.00	10014.0	157.80	244.0	44.00	4634.0
48.10	437.0			161.00	379.0	45.00	865.0
49.00	3776.0	97.00	291.0	164.10	57.0	45.90	130.0
50.10	19376.0	97.70	51.0	165.00	67.0	47.00	1398.0
		99.90	88.0	165.60	75.0	48.00	442.0
51.10	5772.0	102.00	101.0	170.20	56.0	49.00	2690.0
51.90	196.0	103.10	225.0	171.90	145.0	50.10	15472.0
53.00	249.0	103.90	499.0	173.00	994.0		
53.60	57.0	104.90	163.0	174.00	125680.0	51.00	5281.0
55.10	368.0	106.00	462.0			51.90	253.0

Data File : C:\MSDCHEM\1\DATA\E4108.D Vial: 1
Acq On : 04/02/2003 0910 Operator: AK
Sample : BFB4U Inst : E-5973
Misc : EBFB4U Multiplr: 1.00

52.90	165.0	102.90	115.0		
54.10	73.0	104.00	527.0	175.00	7814.0
54.40	50.0	104.90	80.0	175.90	115312.0
55.00	529.0	105.80	388.0		
56.10	915.0	106.30	145.0	176.90	6562.0
57.00	2207.0	107.10	134.0	178.20	156.0
58.10	178.0	107.80	53.0	179.00	91.0
60.00	643.0	109.90	63.0	181.10	62.0
61.00	4069.0	110.90	60.0	183.70	56.0
62.00	4217.0	112.80	107.0	189.00	87.0
63.00	2592.0	113.30	78.0	191.00	89.0
64.00	418.0	115.00	299.0	191.20	91.0
65.20	83.0	116.10	125.0	192.30	52.0
65.90	141.0	116.90	730.0	193.10	149.0
67.00	225.0	118.00	416.0	193.80	73.0
68.00	9054.0	118.90	292.0	204.10	103.0
69.00	10642.0	121.90	63.0	205.90	100.0
		125.00	181.0	207.10	944.0
70.00	699.0	127.80	344.0	208.00	516.0
70.70	102.0	128.90	239.0	209.00	295.0
72.00	739.0	130.00	550.0	210.80	53.0
73.10	4187.0	130.90	183.0	211.90	57.0
74.00	17704.0	132.10	107.0	219.80	57.0
		133.20	217.0	222.90	62.0
75.00	50448.0	134.20	80.0	225.20	78.0
		135.00	376.0	229.20	102.0
76.00	4553.0	135.90	146.0	240.40	89.0
77.00	966.0	136.90	186.0	248.00	105.0
78.00	932.0	139.00	80.0	249.20	80.0
79.00	1530.0	140.20	96.0	253.10	146.0
80.00	637.0	141.00	754.0	261.20	69.0
81.00	1601.0	141.90	77.0	262.80	55.0
82.00	341.0	142.90	948.0	265.20	56.0
83.00	160.0	143.90	108.0	274.10	72.0
83.20	155.0	144.80	170.0	281.10	279.0
84.20	174.0	145.90	254.0	282.00	272.0
85.30	53.0	146.60	121.0	292.10	55.0
85.90	245.0	147.00	246.0	292.30	55.0
87.00	5164.0	148.10	359.0	294.80	57.0
88.00	5340.0	148.80	55.0	315.30	104.0
89.20	51.0	149.80	153.0	341.10	90.0
89.80	70.0	151.40	73.0	343.00	71.0
91.00	579.0	153.10	119.0		
92.00	3569.0	153.80	158.0		
93.00	4053.0	154.80	161.0		
94.00	14175.0	155.90	377.0		
		156.90	284.0		
95.00	126576.0	158.80	182.0		
		161.00	345.0		
96.00	8192.0	163.10	85.0		
97.00	146.0	170.10	52.0		
97.90	52.0	172.00	354.0		
99.10	51.0	173.00	667.0		
101.30	143.0	173.90	120096.0		

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VBLK4N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4N Date Received: _____

Lab File ID: E4010 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.19	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.41	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

VBLK4N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4N Date Received: _____

Lab File ID: E4010 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.38	J
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.16	J
87-61-6	1,2,3-Trichlorobenzene	0.20	J

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK4N

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4N Date Received: _____

Lab File ID: E4010 Date Analyzed: 03/27/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4010.D
Acq On : 03/27/2003 0939
Sample : VBLK4N
Misc : EVBLK4N 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 27 10:01:10 2003

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4009.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31522 SDG: CAQR2
Episode: 2759 Int./Date: 03/27/03
KB AP 3/27/03

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1146896	5.00	ug/L	0.00
28) Chlorobenzene-d5	10.32	117	917698	5.00	ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	315417	5.00	ug/L	0.00
System Monitoring Compounds						
4) Vinyl Chloride-d3	2.15	65	440061	5.23	ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 104.60%		
7) Chloroethane-d5	2.54	69	373931	5.31	ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 106.20%		
10) 1,1-Dichloroethene-d2	3.26	65	194615	5.30	ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 106.00%		
20) 2-Butanone-d5	4.88	46	44393	5.99	ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 119.80%		
24) Chloroform-d	5.23	86	404611	5.00	ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 100.00%		
26) 1,2-Dichloroethane-d4	5.81	65	224220	5.17	ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 103.40%		
32) Benzene-d6	5.85	84	1832505	5.35	ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 107.00%		
35) 1,2-Dichloropropane-d6	6.80	67	434853	4.53	ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 90.60%		
41) Toluene-d8	8.21	98	1781776	5.30	ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 106.00%		
43) trans-1,3-Dichloropropene-	8.53	79	58149	5.07	ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 101.40%		
47) 2-Hexanone-d5	9.13	46	79781	5.62	ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 112.40%		
58) 1,1,2,2-Tetrachloroethane-	12.08	84	166287	5.12	ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 102.40%		
61) Bromoform-d	11.51	174	82779	4.64	ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 92.80%		
65) 1,2-Dichlorobenzene-d4	13.54	152	350162	5.43	ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 108.60%		

Target Compounds						Qvalue
16) Methylene Chloride	3.69	84	16495	0.19	ug/L J	96
25) Chloroform	5.26	83	59971	0.41	ug/L J	89
62) Bromoform	11.54	173	8146	0.38	ug/L J	90
68) 1,2,4-Trichlorobenzene	14.96	180	13408	0.16	ug/L J	94
69) 1,2,3-Trichlorobenzene	15.42	180	12795	0.20	ug/L J	99

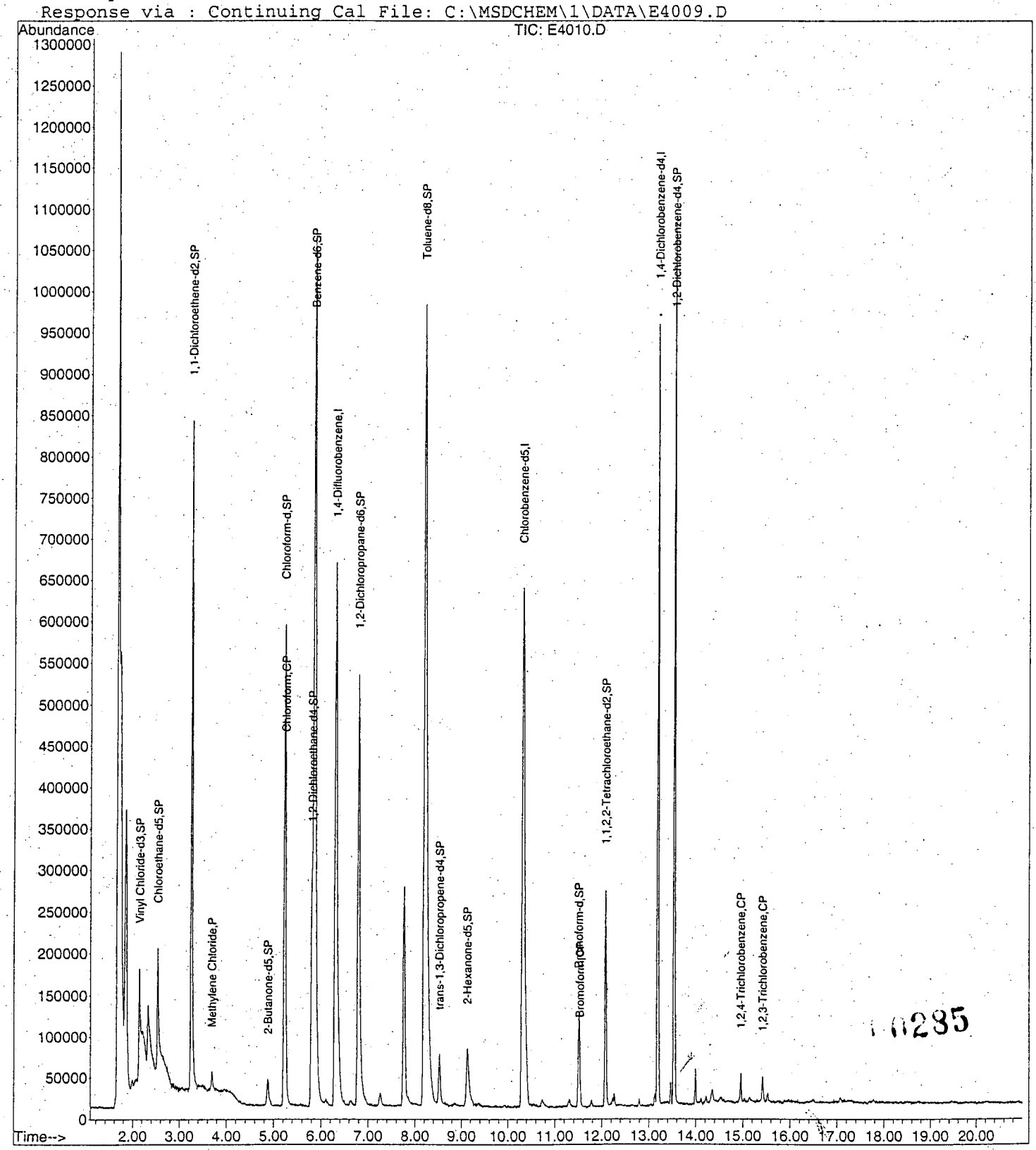
.0284

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

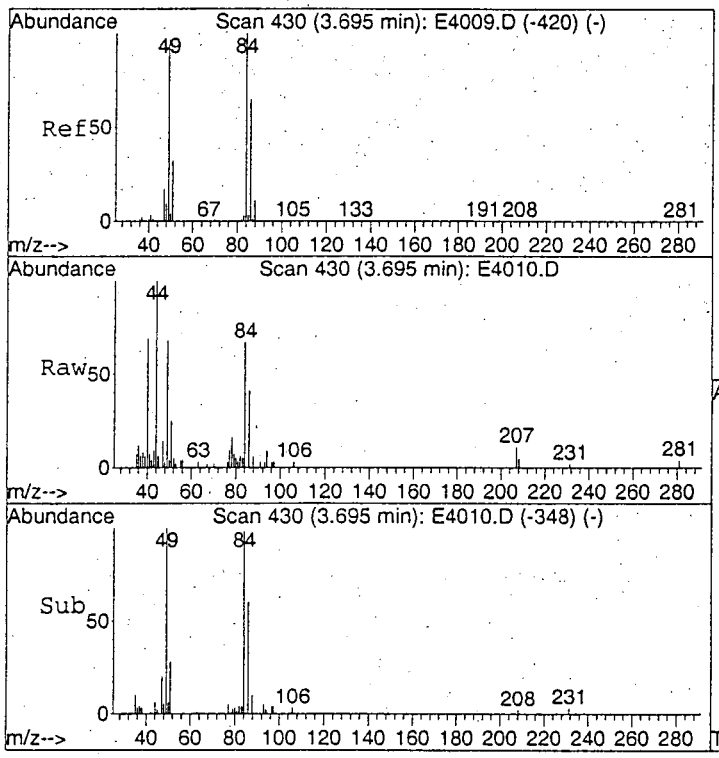
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Mar 27 10:08 2003 Quant Results File: LCE4009.RES

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Thu Mar 27 09:22:08 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4009.D



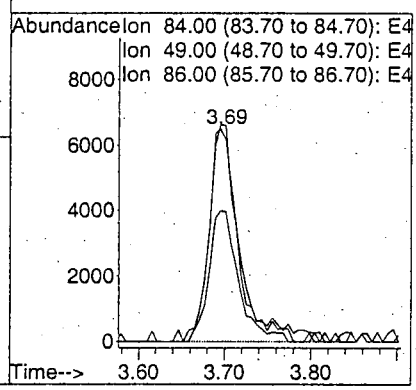
Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

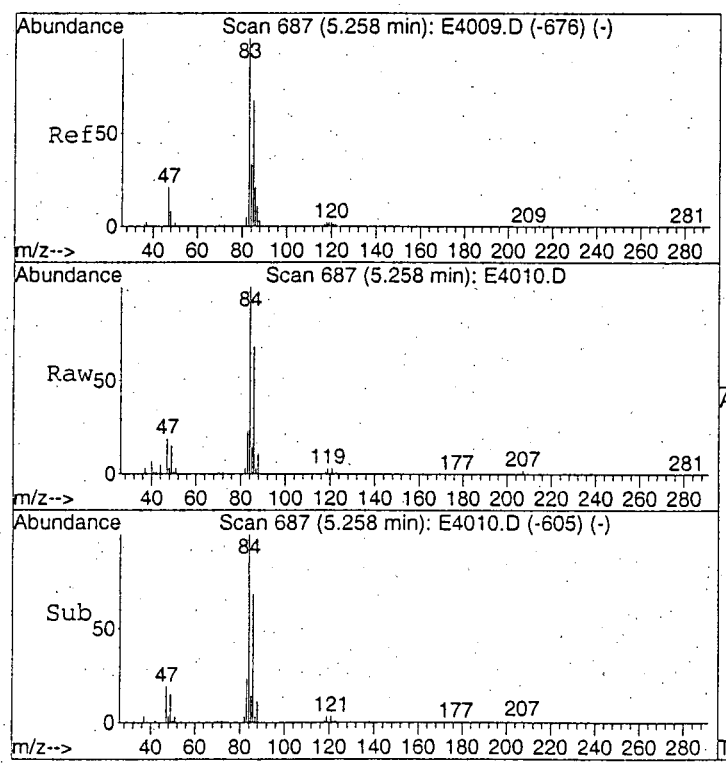


#16
Methylene Chloride
Concen: 0.19 ug/L
RT: 3.69 min Scan# 430
Delta R.T. 0.00 min
Lab File: E4010.D
Acq: 27 Mar 2003 9:39

Tgt Ion: 84 Resp: 16495

Ion	Ratio	Lower	Upper
84	100		
49	93.0	76.2	116.2
86	58.3	43.2	83.2

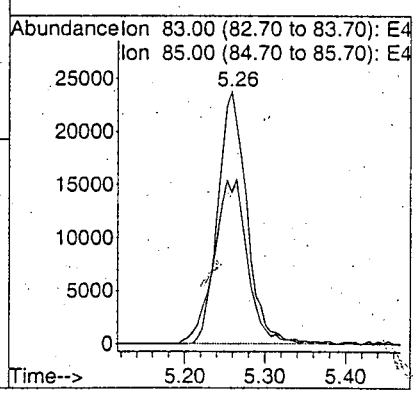




#25
Chloroform
Concen: 0.41 ug/L
RT: 5.26 min Scan# 687
Delta R.T. 0.00 min
Lab File: E4010.D
Acq: 27 Mar 2003 9:39

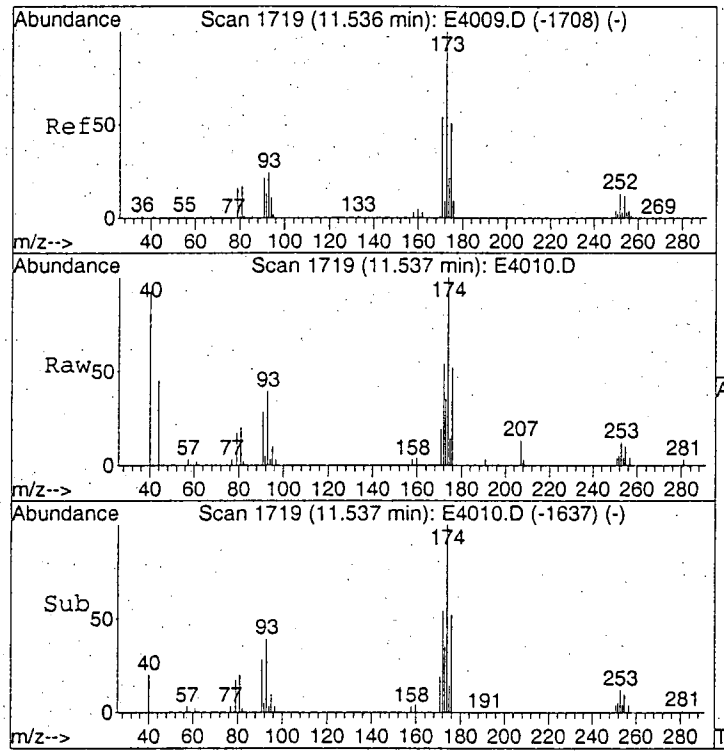
Tgt Ion: 83 Resp: 59971

Ion	Ratio	Lower	Upper
83	100		
85	74.5	45.9	85.9



0286

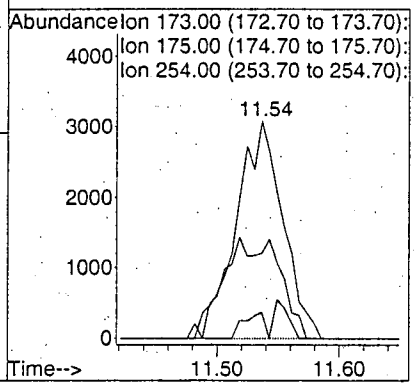
Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

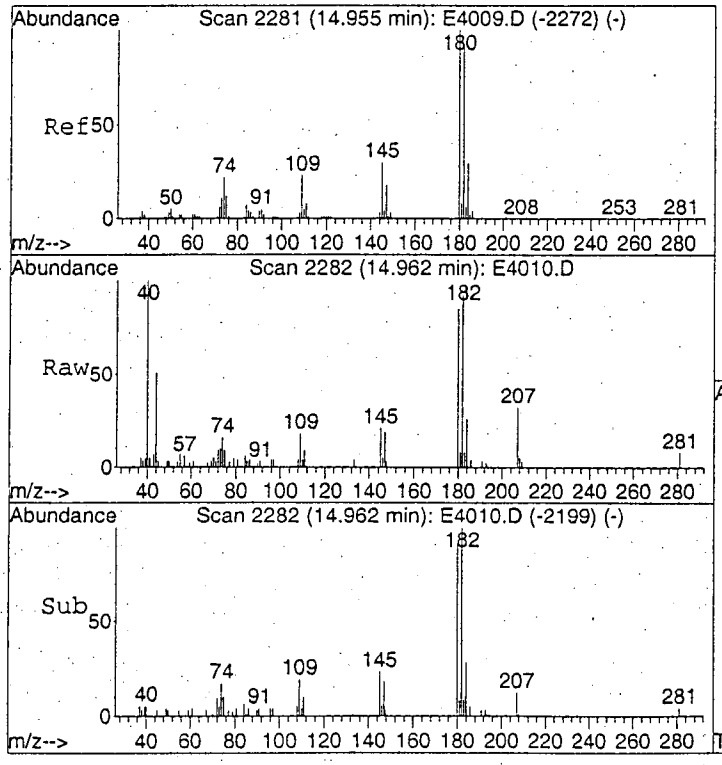


#62
Bromoform
Concen: 0.38 ug/L
RT: 11.54 min Scan# 1719
Delta R.T. 0.00 min
Lab File: E4010.D
Acq: 27 Mar 2003 9:39

Tgt Ion:173 Resp: 8146

Ion	Ratio	Lower	Upper
173	100		
175	55.1	29.4	69.4
254	5.4	0.0	31.9

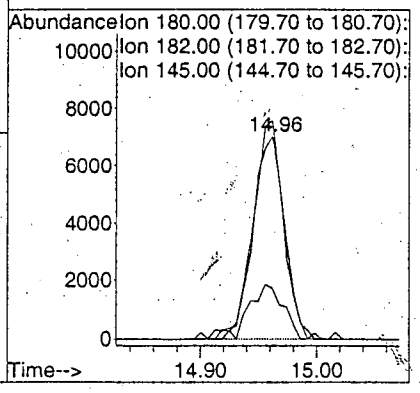




#68
1,2,4-Trichlorobenzene
Concen: 0.16 ug/L
RT: 14.96 min Scan# 2282
Delta R.T. 0.01 min
Lab File: E4010.D
Acq: 27 Mar 2003 9:39

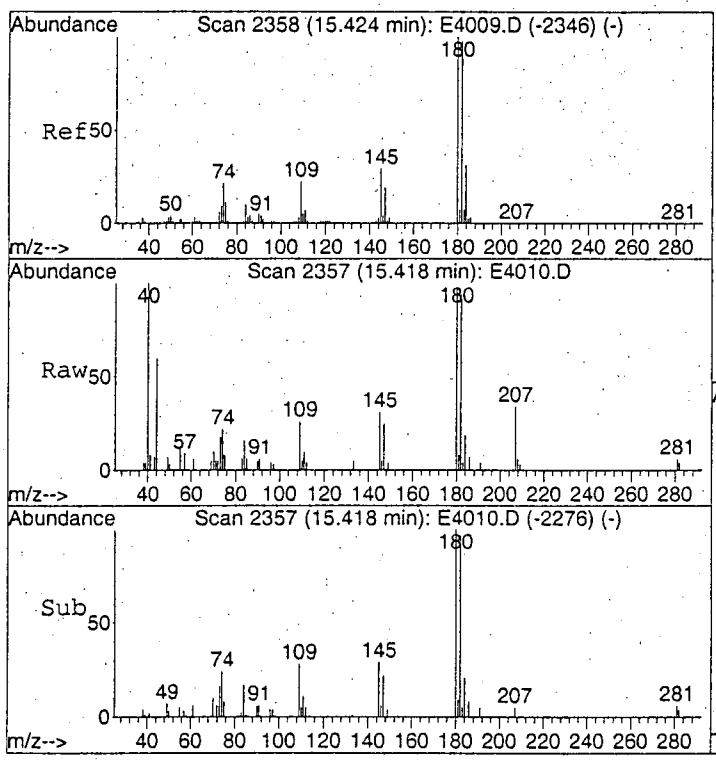
Tgt Ion:180 Resp: 13408

Ion	Ratio	Lower	Upper
180	100		
182	100.9	74.6	114.6
145	27.2	9.1	49.1



001287

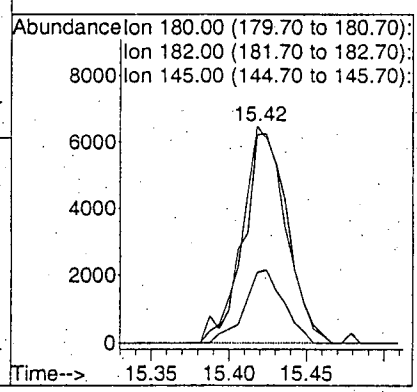
Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2



#69
1,2,3-Trichlorobenzene
Concen: 0.20 ug/L
RT: 15.42 min Scan# 2357
Delta R.T. -0.01 min
Lab File: E4010.D
Acq: 27 Mar 2003 9:39

Tgt Ion:180 Resp: 12795

Ion	Ratio	Lower	Upper
180	100		
182	95.6	76.1	116.1
145	29.7	10.3	50.3



0288

Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 100000 Area counts
Start Thrs: 0.2 Max Peaks: 40
Stop Thrs : 0 Peak Location: TOP

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

Signal : TIC

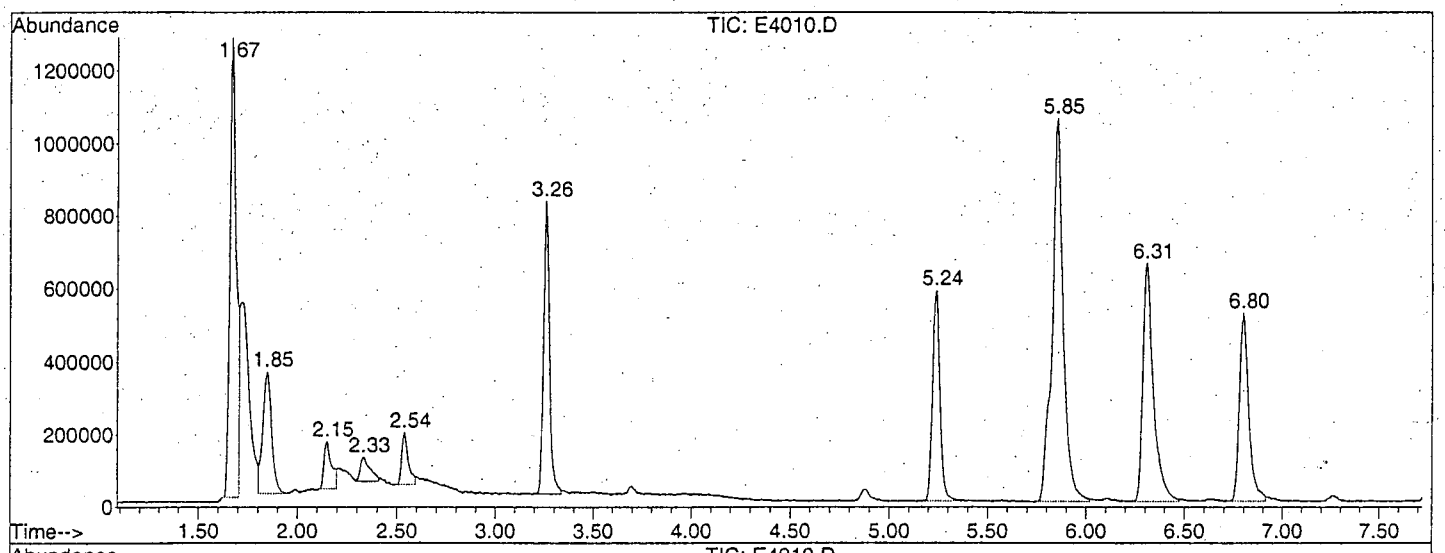
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.669	90	97	103	rBV	1264379	2938858	67.02%	10.145%
2	1.845	119	126	142	rVB	337160	1059917	24.17%	3.659%
3	2.150	170	176	184	rBV	132397	359760	8.20%	1.242%
4	2.332	200	206	219	rBV	68162	229365	5.23%	0.792%
5	2.539	234	240	249	rBV	145195	327291	7.46%	1.130%
6	3.257	351	358	371	rBV	807278	1661972	37.90%	5.737%
7	5.240	675	684	701	rBV	579400	1527879	34.84%	5.274%
8	5.855	768	785	812	rBV2	1054852	4129289	94.17%	14.254%
9	6.311	849	860	887	rBV	655839	2429460	55.41%	8.386%
10	6.798	929	940	959	rBV	519951	1723164	39.30%	5.948%
11	7.771	1089	1100	1112	rBV	265729	770934	17.58%	2.661%
12	8.209	1160	1172	1209	rBV	967363	4384822	100.00%	15.136%
13	8.531	1217	1225	1234	rBV3	58676	155000	3.53%	0.535%
14	9.128	1309	1323	1342	rBV4	70464	297785	6.79%	1.028%
15	10.320	1507	1519	1543	rBV2	626014	2500950	57.04%	8.633%
16	11.506	1707	1714	1724	rBV	113308	295393	6.74%	1.020%
17	12.078	1801	1808	1817	rBV	261865	558085	12.73%	1.926%
18	13.185	1983	1990	2001	rVB	941161	1708489	38.96%	5.898%
19	13.538	2040	2048	2058	rBV	1071845	1910541	43.57%	6.595%

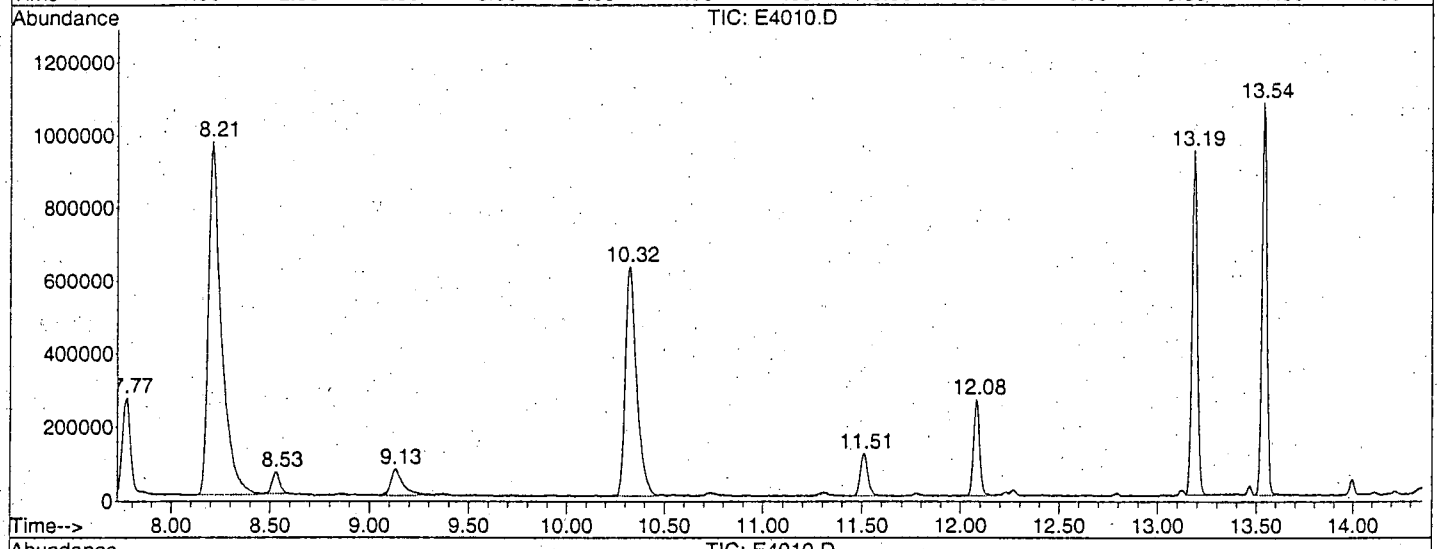
Sum of corrected areas: 28968954

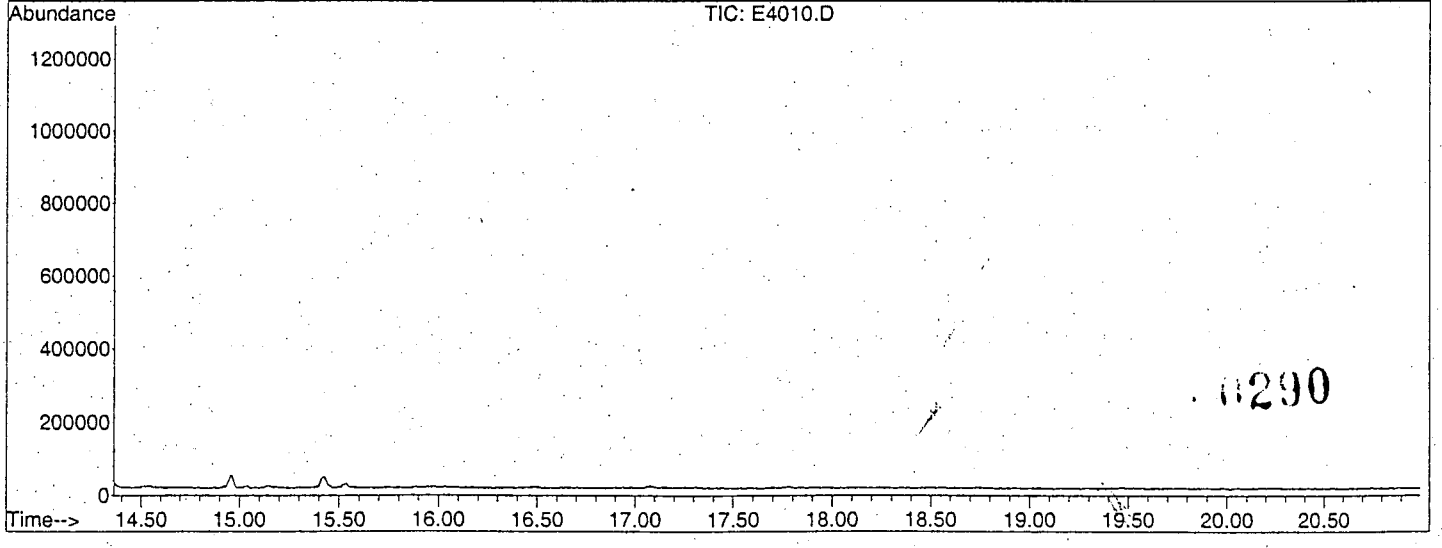
0289

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2







0290

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

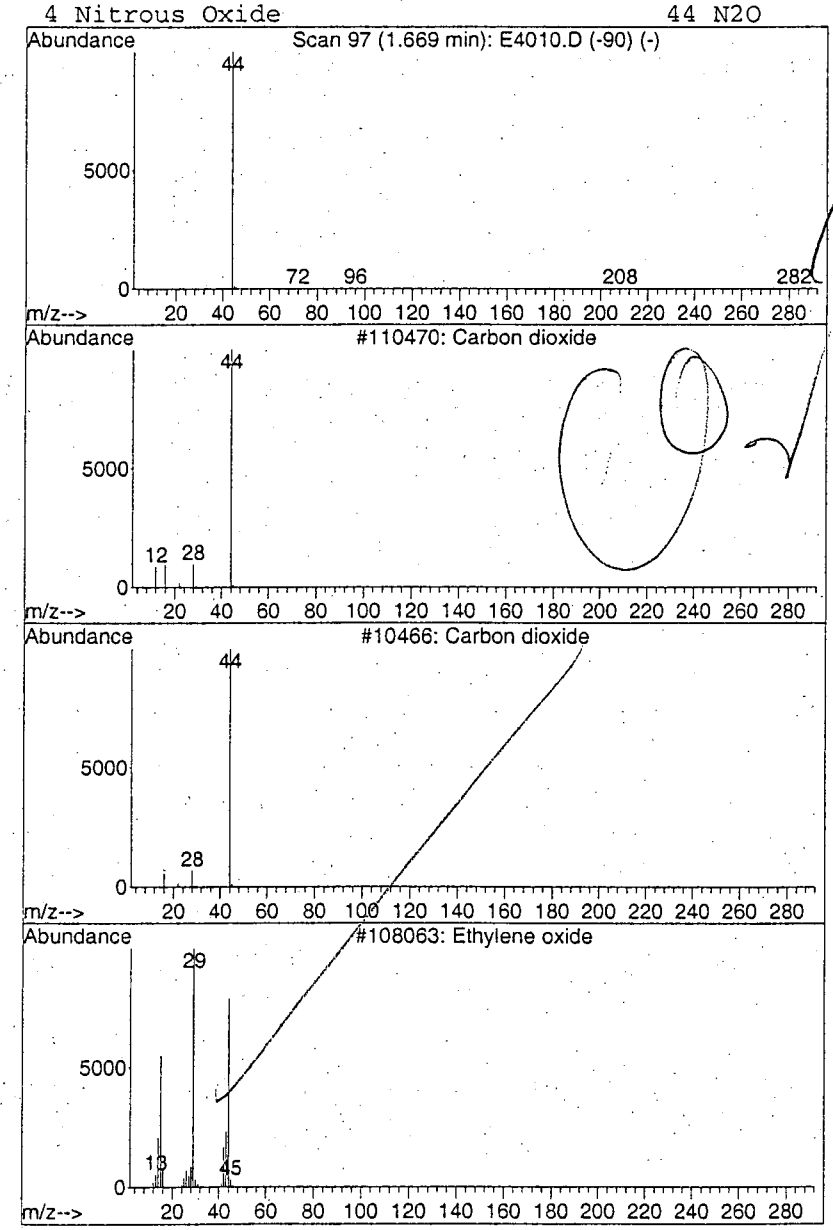
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

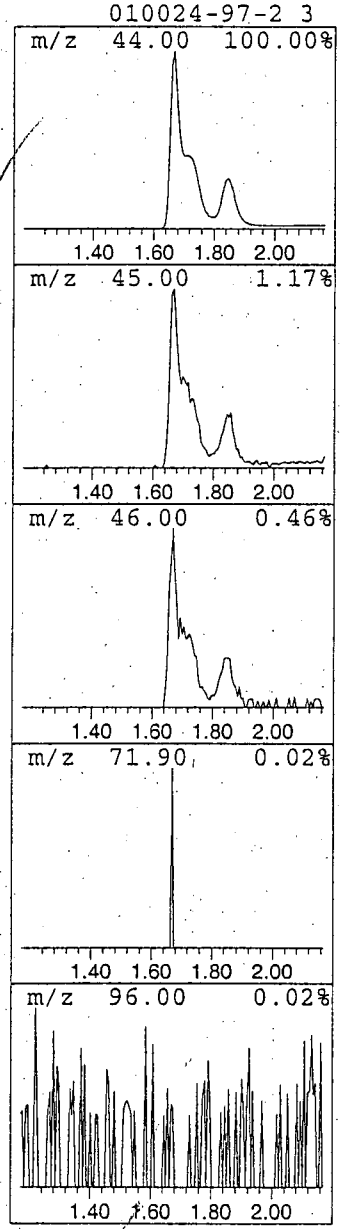
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.67	6.05 ug/L	2938860	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





000291

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4010.D Vial: 3
Acq On : 03/27/2003 0939 Operator: AK
Sample : VBLK4N Inst : E-5973
Misc : EVBLK4N 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

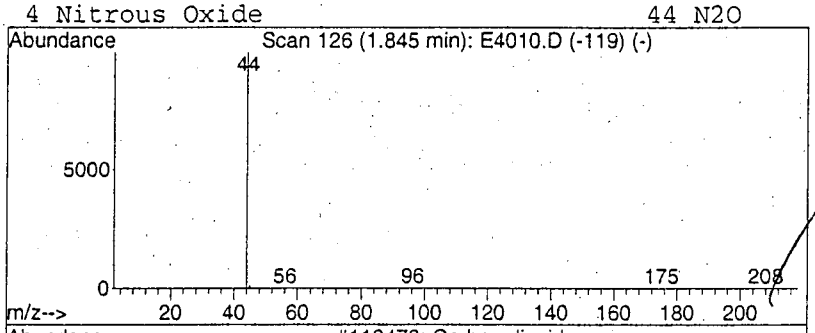
Quant Method : C:\MSDCHEM\1\METHODS\LCE4009.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

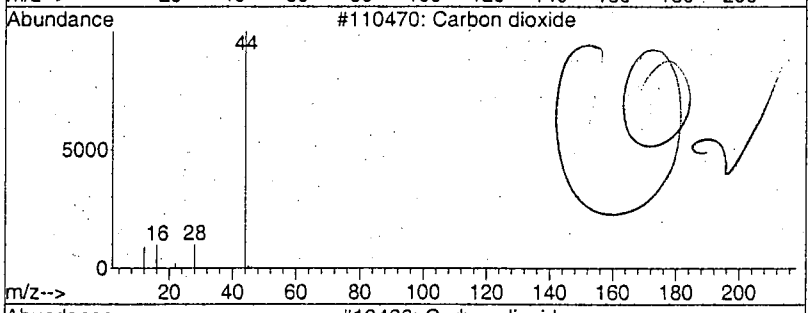
****

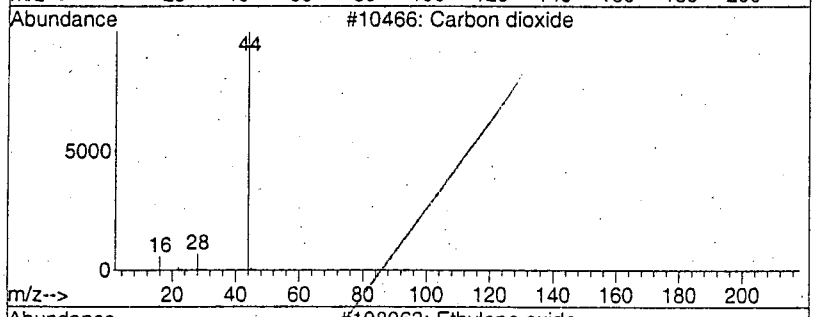
Peak Number 2 Carbon dioxide Concentration Rank 2

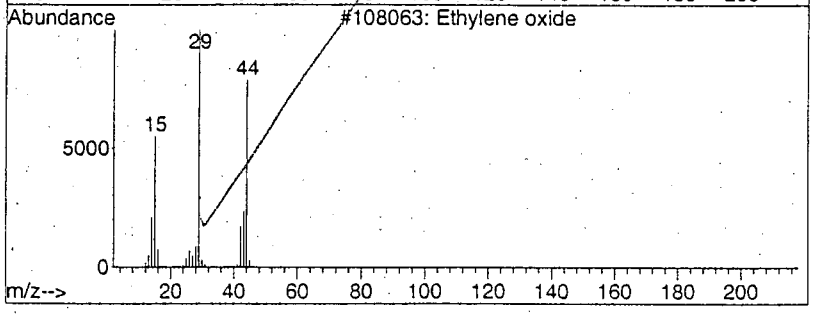
R.T.	EstConc	Area	Relative to ISTD	R.T.
1.85	2.18 ug/L	1059920	1,4-Difluorobenzene	6.31

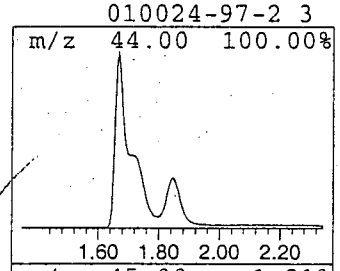
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3

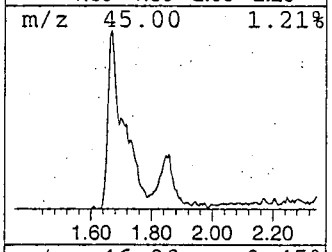


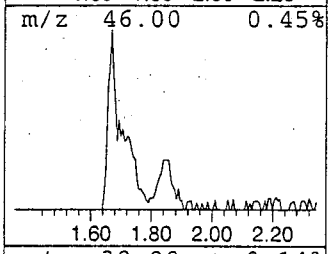


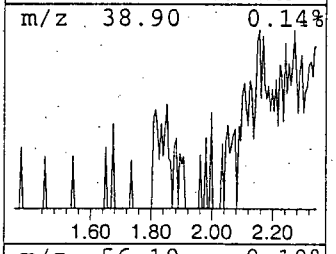


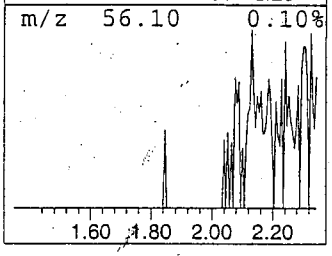












0292

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VBLK4P

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4P Date Received: _____

Lab File ID: E4042 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.16	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.26	J
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

VBLK4P

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4P Date Received: _____

Lab File ID: E4042 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.30	J
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.19	J
87-61-6	1,2,3-Trichlorobenzene	0.23	J

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK4P

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4P Date Received: _____

Lab File ID: E4042 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 1

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01		UNKNOWN	14.00	1.3	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 11:14:14 2003

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00
Quant Results File: LCE4041.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31519 SDG: YOSJ2
Episode: 2762 Int./Date: 03/28/03

KA 4/04/03

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	999749	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	741735	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	235180	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.14	65	405614	5.20 ug/L	-0.01
Spiked Amount 5.000	Range 49 - 138		Recovery	= 104.00%	
7) Chloroethane-d5	2.53	69	350381	5.29 ug/L	-0.01
Spiked Amount 5.000	Range 60 - 126		Recovery	= 105.80%	
10) 1,1-Dichloroethene-d2	3.25	65	186963	5.51 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 110.20%	
20) 2-Butanone-d5	4.87	46	39325	5.50 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 110.00%	
24) Chloroform-d	5.23	86	397953	5.03 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 100.60%	
26) 1,2-Dichloroethane-d4	5.80	65	213429	4.80 ug/L	-0.01
Spiked Amount 5.000	Range 78 - 129		Recovery	= 96.00%	
32) Benzene-d6	5.85	84	1703333	5.33 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 106.60%	
35) 1,2-Dichloropropane-d6	6.80	67	397451	4.52 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 90.40%	
41) Toluene-d8	8.20	98	1575297	5.14 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 102.80%	
43) trans-1,3-Dichloropropene-	8.53	79	52209	4.89 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 97.80%	
47) 2-Hexanone-d5	9.12	46	59454	5.07 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 101.40%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	137697	4.58 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 91.60%	
61) Bromoform-d	11.51	174	76150	4.71 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 94.20%	
65) 1,2-Dichlorobenzene-d4	13.54	152	274166	5.08 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 101.60%	

Target Compounds					Qvalue
16) Methylene Chloride	3.69	84	11870	0.16 ug/L J	96
25) Chloroform	5.25	83	34257	0.26 ug/L J	78
62) Bromoform	11.54	173	5380	0.30 ug/L #J	68
68) 1,2,4-Trichlorobenzene	14.96	180	12625	0.19 ug/L J	96
69) 1,2,3-Trichlorobenzene	15.42	180	11823	0.23 ug/L J	96

0296

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

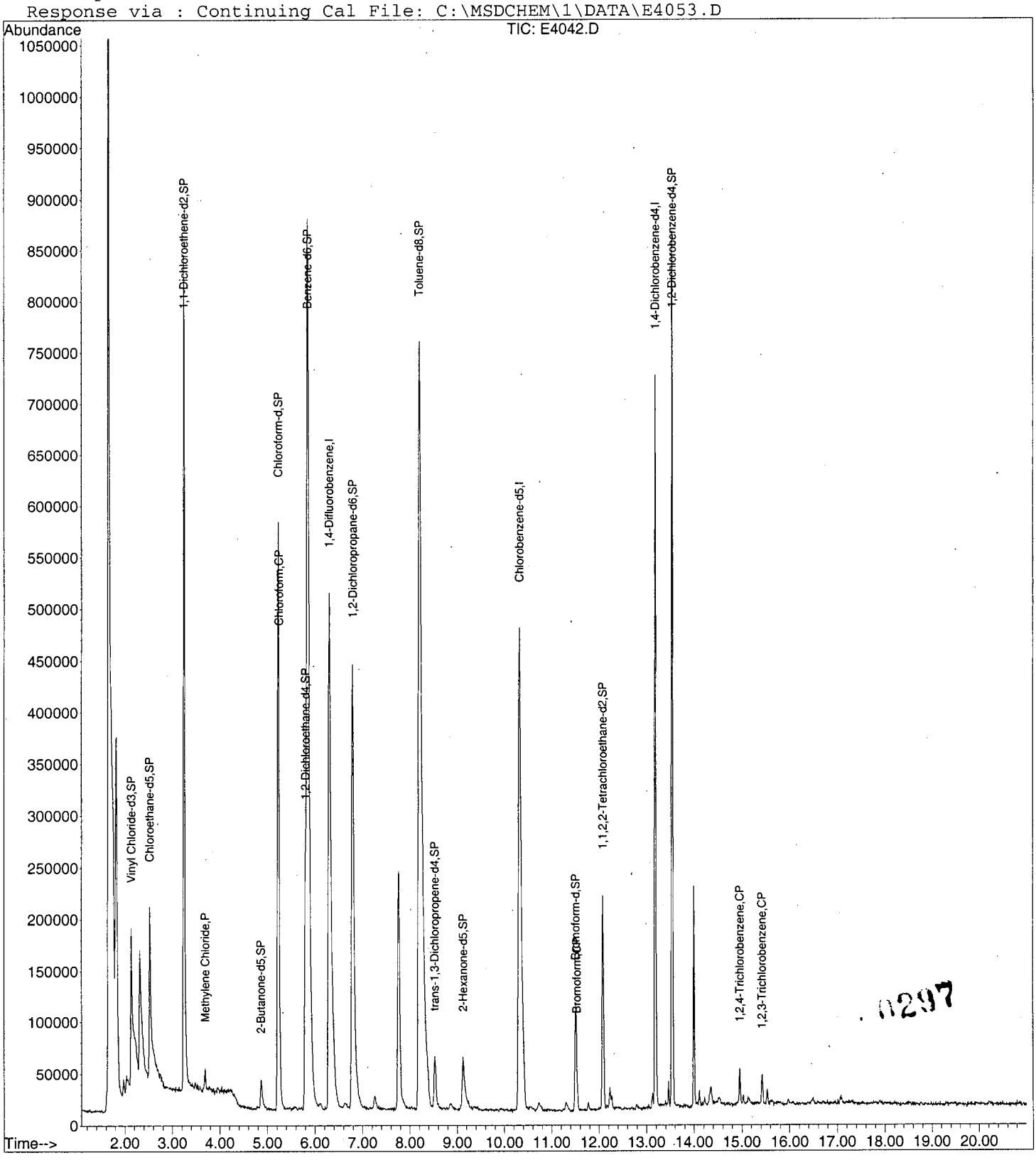
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 11:15 2003

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

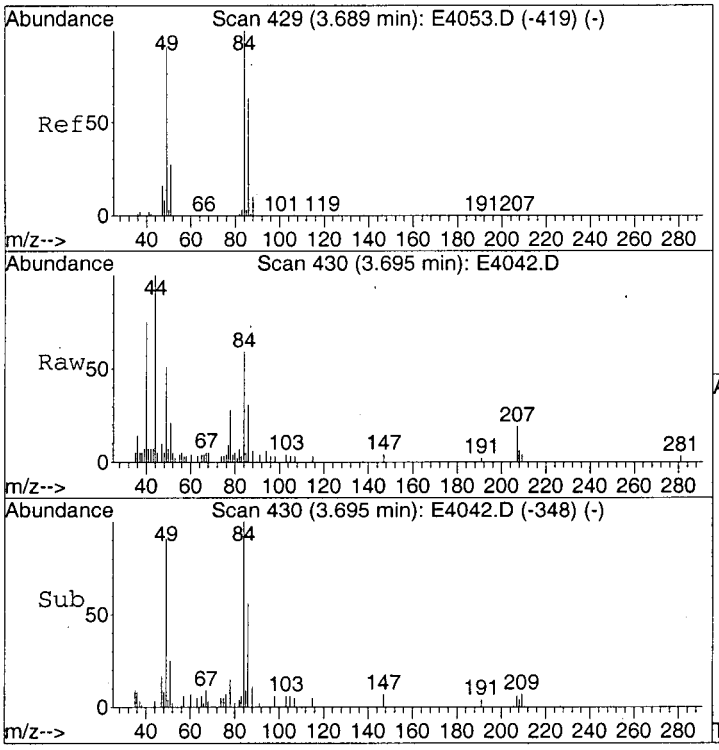
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



0297

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

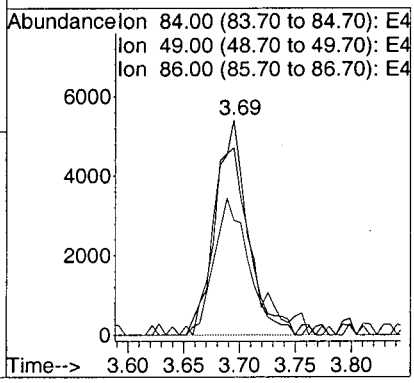
Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

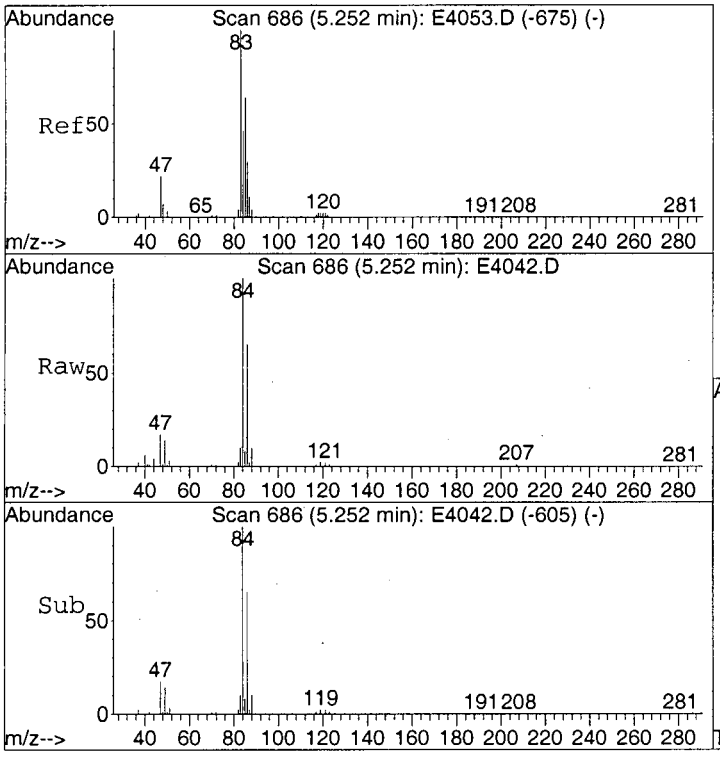


#16
Methylene Chloride
Concen: 0.16 ug/L
RT: 3.69 min Scan# 430
Delta R.T. -0.00 min
Lab File: E4042.D
Acq: 28 Mar 2003 13:00

Tgt Ion: 84 Resp: 11870

Ion	Ratio	Lower	Upper
84	100		
49	89.0	73.7	113.7
86	62.9	41.8	81.8

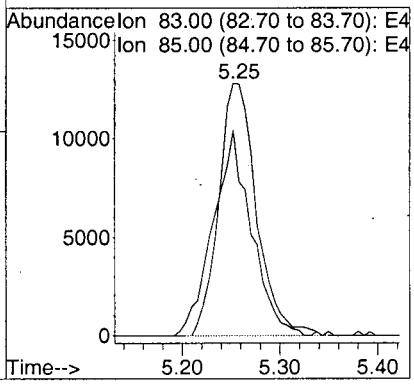




#25
Chloroform
Concen: 0.26 ug/L
RT: 5.25 min Scan# 686
Delta R.T. -0.01 min
Lab File: E4042.D
Acq: 28 Mar 2003 13:00

Tgt Ion: 83 Resp: 34257

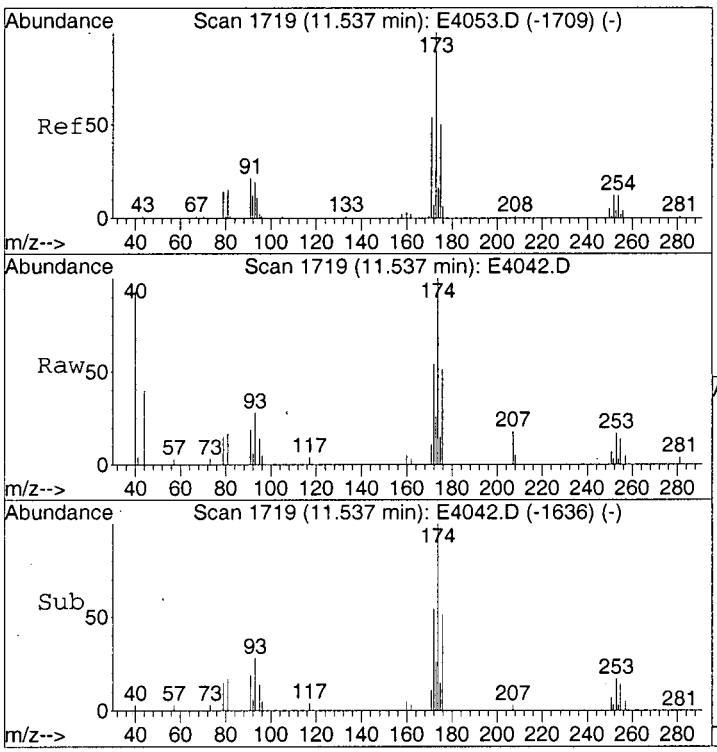
Ion	Ratio	Lower	Upper
83	100		
85	82.6	45.3	85.3



0298

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

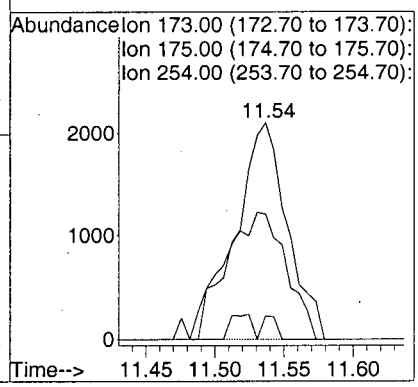
Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

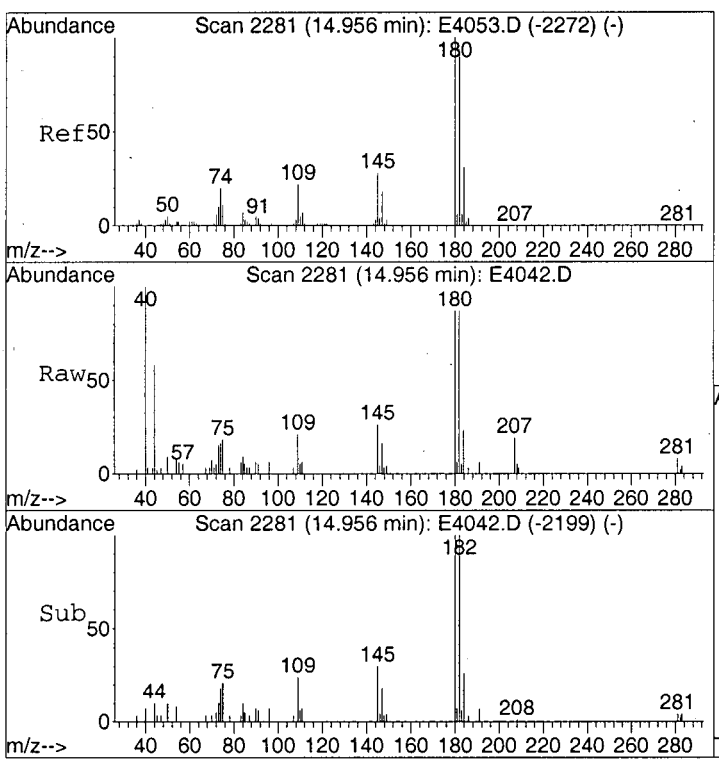


#62
Bromoform
Concen: 0.30 ug/L
RT: 11.54 min Scan# 1719
Delta R.T. 0.01 min
Lab File: E4042.D
Acq: 28 Mar 2003 13:00

Tgt Ion:173 Resp: 5380

Ion	Ratio	Lower	Upper
173	100		
175	73.1	29.2	69.2#
254	3.0	0.0	31.1

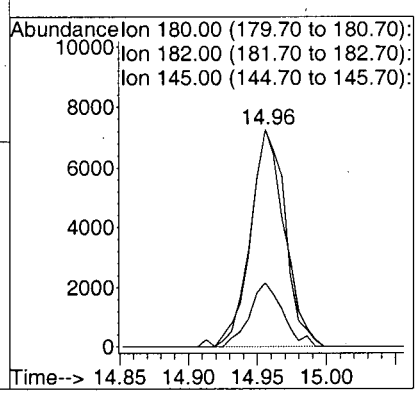




#68
1,2,4-Trichlorobenzene
Concen: 0.19 ug/L
RT: 14.96 min Scan# 2281
Delta R.T. -0.00 min
Lab File: E4042.D
Acq: 28 Mar 2003 13:00

Tgt Ion:180 Resp: 12625

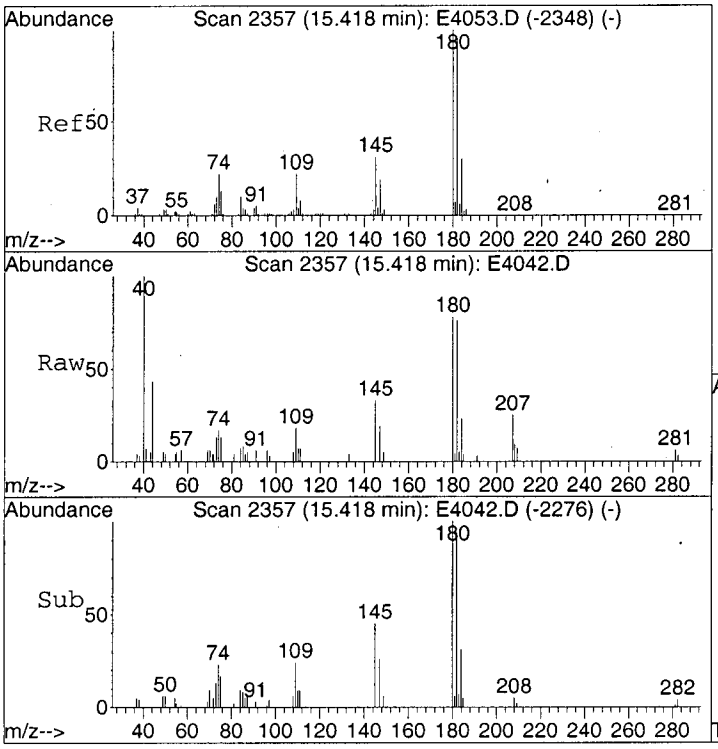
Ion	Ratio	Lower	Upper
180	100		
182	100.9	76.3	116.3
145	28.7	8.5	48.5



0299

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

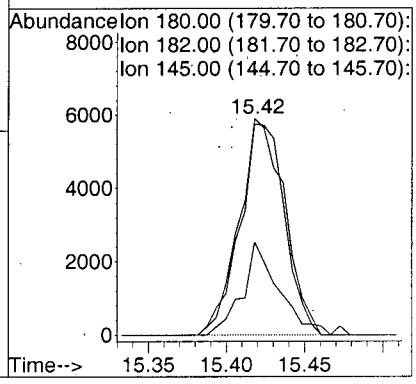
Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00



#69
1,2,3-Trichlorobenzene
Concen: 0.23 ug/L
RT: 15.42 min Scan# 2357
Delta R.T. -0.01 min
Lab File: E4042.D
Acq: 28 Mar 2003 13:00

Tgt Ion:180 Resp: 11823

Ion	Ratio	Lower	Upper
180	100		
182	97.7	74.4	114.4
145	33.9	10.4	50.4



100300

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: Lscint.p

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.657	89	95	116	rBV2	1319221	4321780	100.00%	15.456%
2	1.821	116	122	143	rVB	346951	1006392	23.29%	3.599%
3	2.138	169	174	185	rBV	152690	416108	9.63%	1.488%
4	2.320	198	204	224	rVB	118002	395264	9.15%	1.414%
5	2.527	233	238	249	rBV	163303	393753	9.11%	1.408%
6	3.251	349	357	371	rBV	807923	1627819	37.67%	5.821%
7	5.234	673	683	703	rBV	570011	1487760	34.42%	5.321%
8	5.849	769	784	810	rBV2	864985	3833016	88.69%	13.708%
9	6.305	849	859	892	rBV	499116	2121964	49.10%	7.589%
10	6.798	930	940	969	rBV	430393	1611215	37.28%	5.762%
11	7.765	1086	1099	1112	rBV	231726	700086	16.20%	2.504%
12	8.203	1160	1171	1212	rBV	745479	3890340	90.02%	13.913%
13	8.525	1216	1224	1233	rBV2	49024	143325	3.32%	0.513%
14	9.128	1316	1323	1339	rBV3	47185	170011	3.93%	0.608%
15	10.320	1508	1519	1543	rBV3	466380	2015702	46.64%	7.209%
16	11.506	1705	1714	1727	rBV2	102997	279564	6.47%	1.000%
17	12.078	1801	1808	1817	rBV	206496	454562	10.52%	1.626%
18	13.185	1983	1990	2003	rVB	708797	1274479	29.49%	4.558%
19	13.538	2040	2048	2056	rBV	850966	1500026	34.71%	5.364%
20	13.994	2114	2123	2129	rBV	215491	319354	7.39%	1.142%

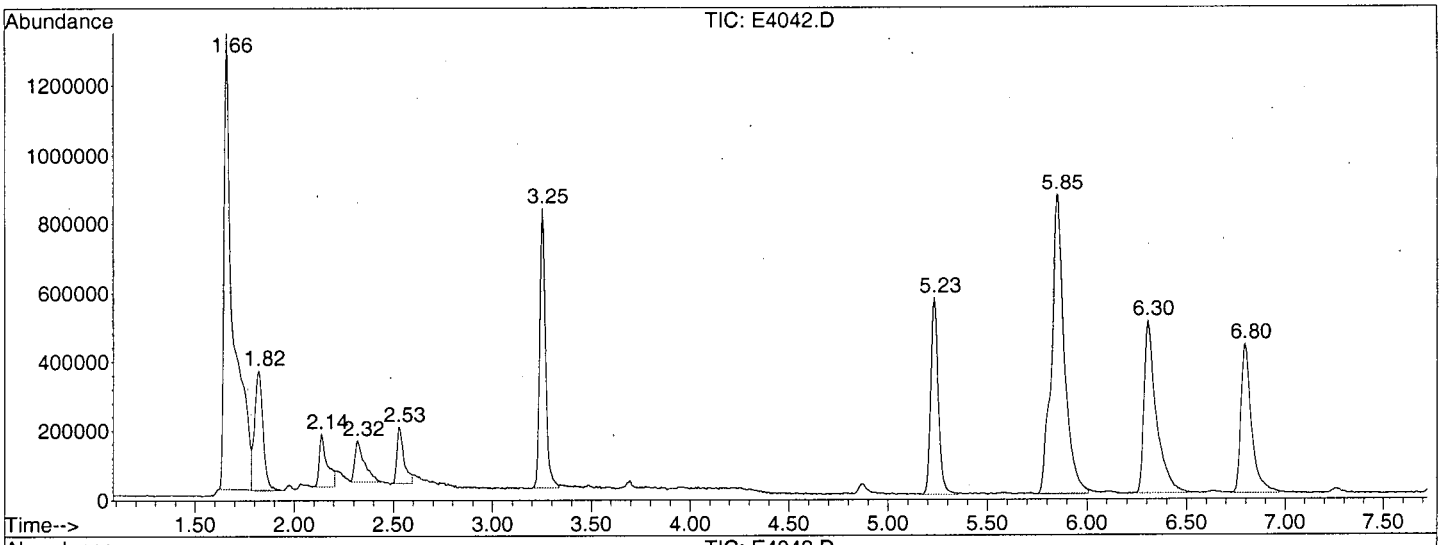
Sum of corrected areas: 27962520

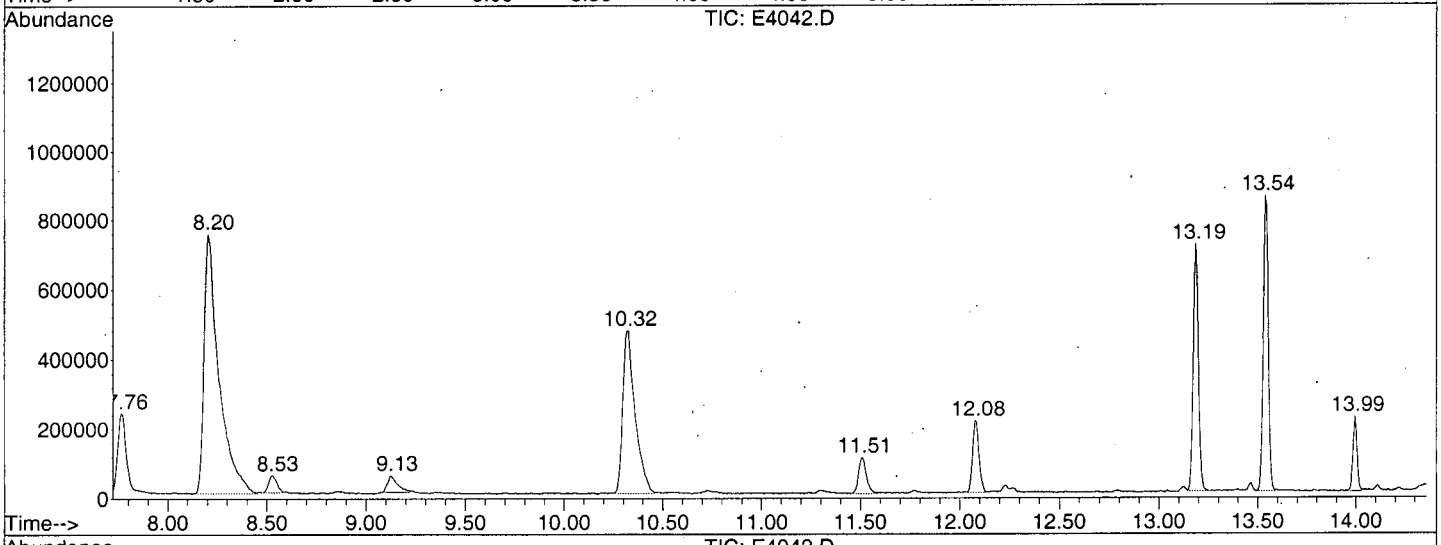
000301

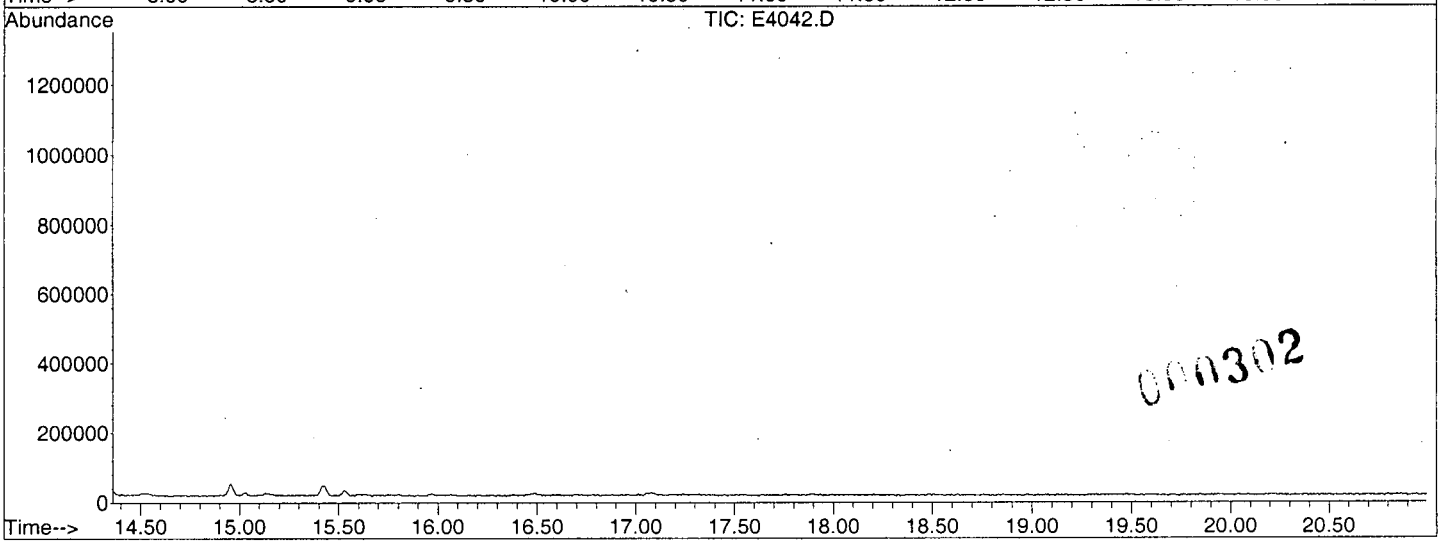
LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00







000302

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: Lscint.p

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

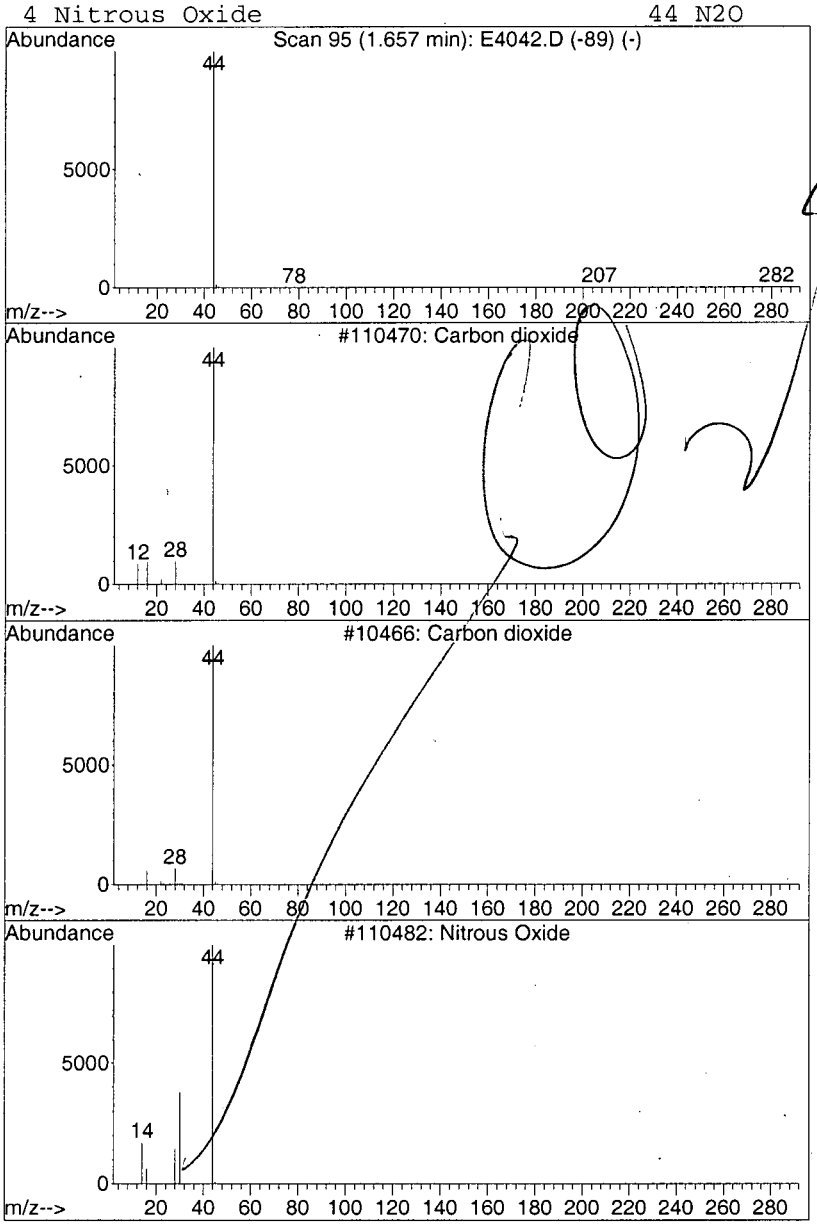
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

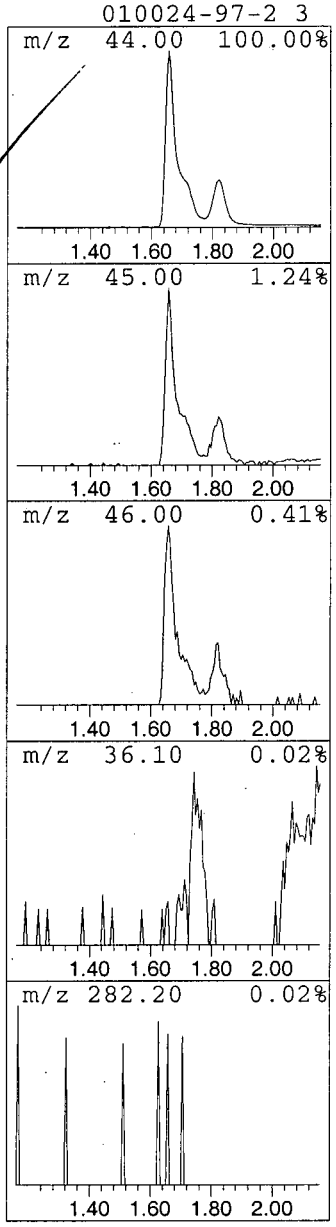
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.66	10.18 ug/L	4321780	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0303

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: Lscint.p

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

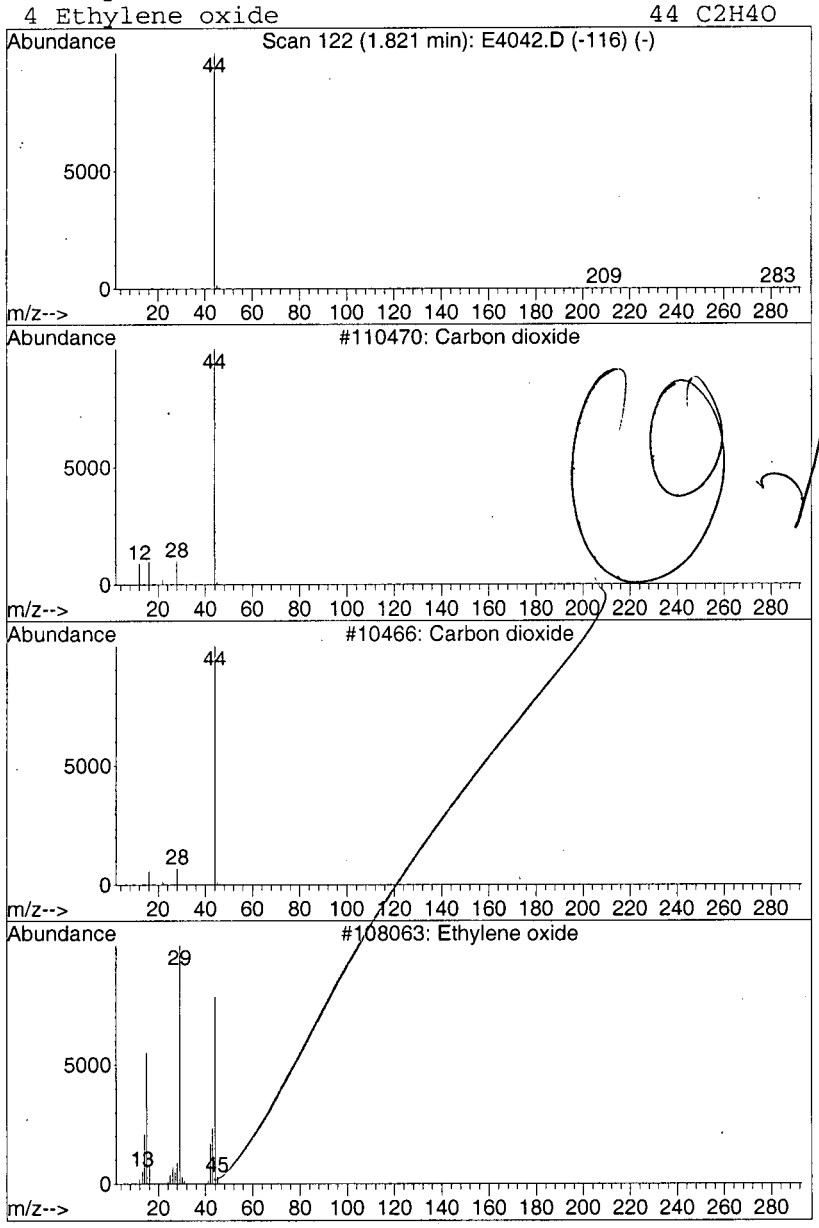
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

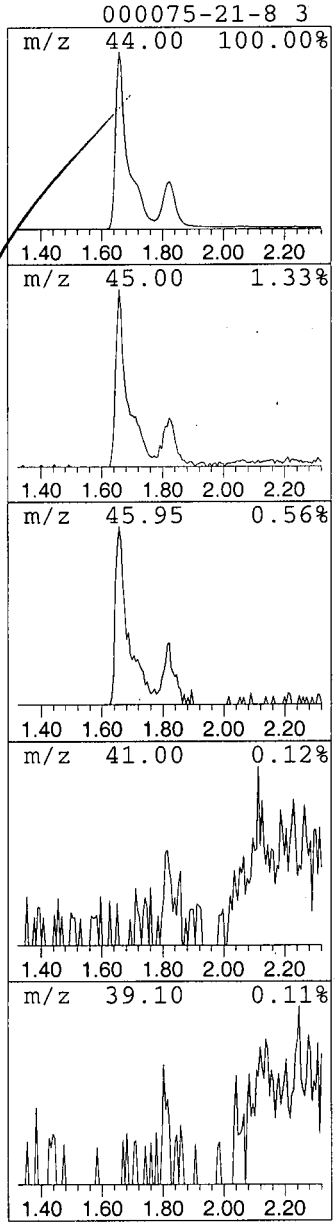
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.82	2.37 ug/L	1006390	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Ethylene oxide	44	C2H4O	000075-21-8	3





000304

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4042.D
Acq On : 03/28/2003 1300
Sample : VBLK4P
Misc : EVBLK4P 25ML
MS Integration Params: Lscint.p

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

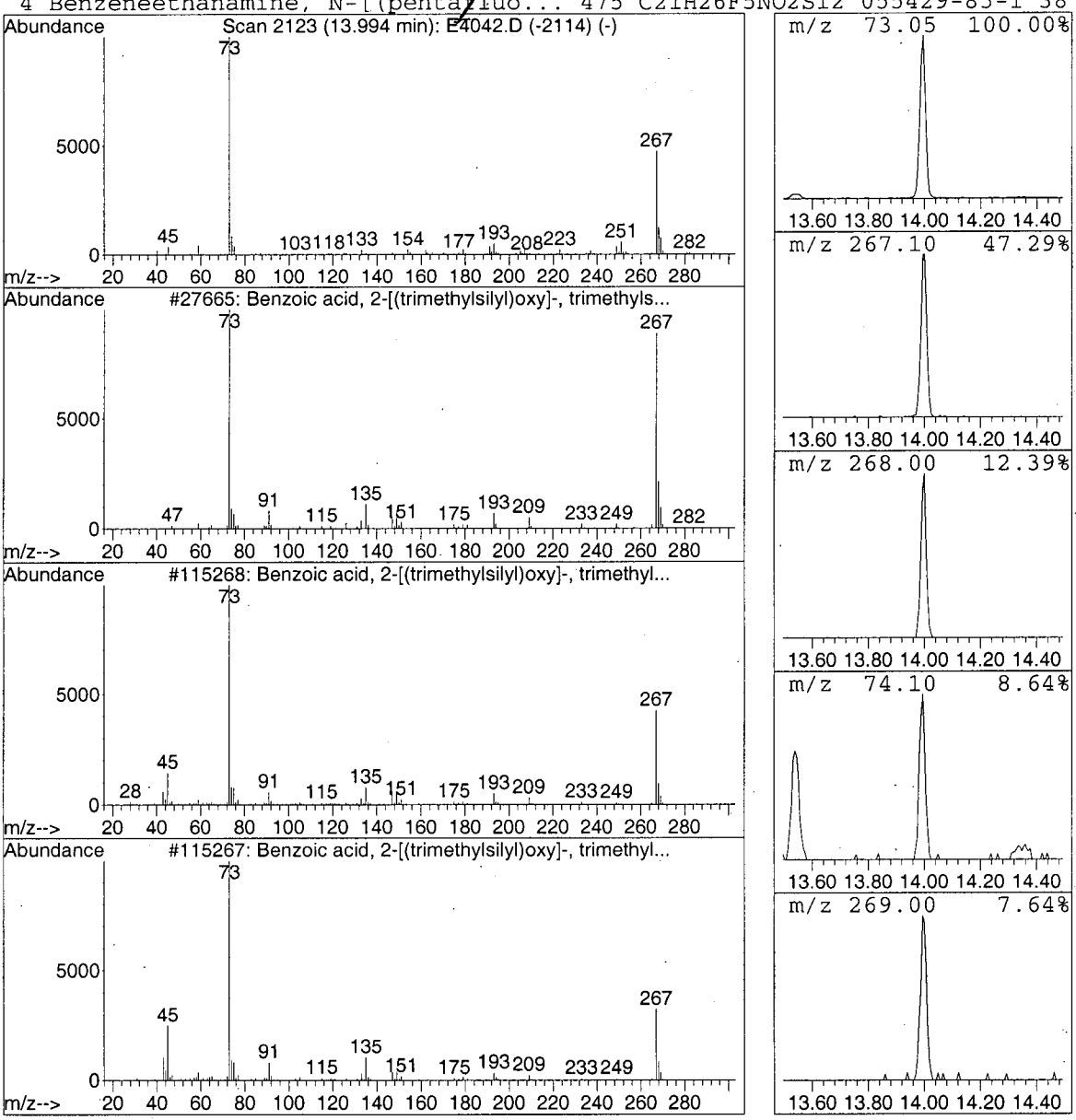
****

Peak Number 5 Benzoic acid, 2-[(trimethyl... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.99	1.25 ug/L	319354	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	59
2	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	50
3	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	45
4	Benzeneethanamine, N-[(pentafluo...	475	C21H26F5NO2Si2	055429-85-1	38

unknown



00305

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VBLK4U

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4U Date Received: _____

Lab File ID: E4110 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.23	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

VBLK4U

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4U Date Received: _____

Lab File ID: E4110 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

110307

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLK4U

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVBLK4U Date Received: _____

Lab File ID: E4110 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

000308

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4110.D Vial: 3
Acq On : 04/02/2003 1138 Operator: AK
Sample : VBLK4U Inst : E-5973
Misc : EVBLK4U 25ML Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Apr 02 12:27:13 2003 Quant Results File: LCE4109.RES

Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:43:22 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4109.D
DataAcq Meth : VOAC

ORIGINAL COPY
Case: 31512 SDG: E0003
Episode: 2757 Int./Date: 04/02/03
KDK 4/02/03

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	924756	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	714456	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	237615	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.16	65	399757	4.72 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 94.40%	
7) Chloroethane-d5	2.55	69	340627	4.84 ug/L	0.01
Spiked Amount 5.000	Range 60 - 126		Recovery	= 96.80%	
10) 1,1-Dichloroethene-d2	3.26	65	174356	4.93 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 98.60%	
20) 2-Butanone-d5	4.87	46	37242	4.65 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 93.00%	
24) Chloroform-d	5.24	86	405408	4.77 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 95.40%	
26) 1,2-Dichloroethane-d4	5.81	65	213962	4.80 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 96.00%	
32) Benzene-d6	5.86	84	1739884	5.23 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 104.60%	
35) 1,2-Dichloropropane-d6	6.80	67	404943	4.44 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 88.80%	
41) Toluene-d8	8.20	98	1680491	5.18 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 103.60%	
43) trans-1,3-Dichloropropene-	8.53	79	57771	5.10 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 102.00%	
47) 2-Hexanone-d5	9.12	46	55591	4.45 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 89.00%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	163873	5.16 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 103.20%	
61) Bromoform-d	11.51	174	94490	5.17 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 103.40%	
65) 1,2-Dichlorobenzene-d4	13.54	152	317303	5.20 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 104.00%	
Target Compounds					Qvalue
16) Methylene Chloride	3.71	84	17424	0.23 ug/L J	97

1.0309

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

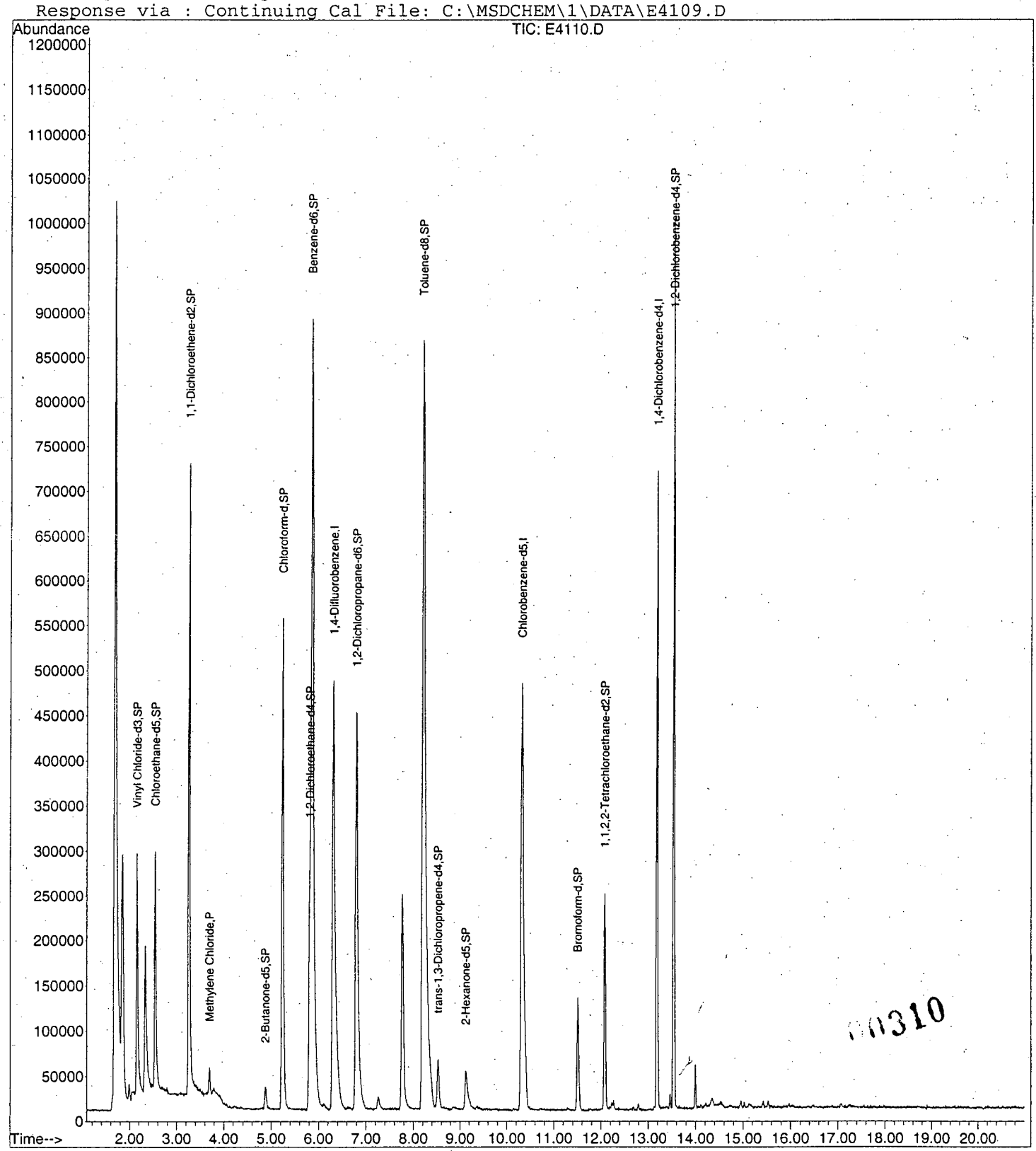
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4110.D
Acq On : 04/02/2003 1138
Sample : VBLK4U
Misc : EVBLK4U 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 2 12:28 2003

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

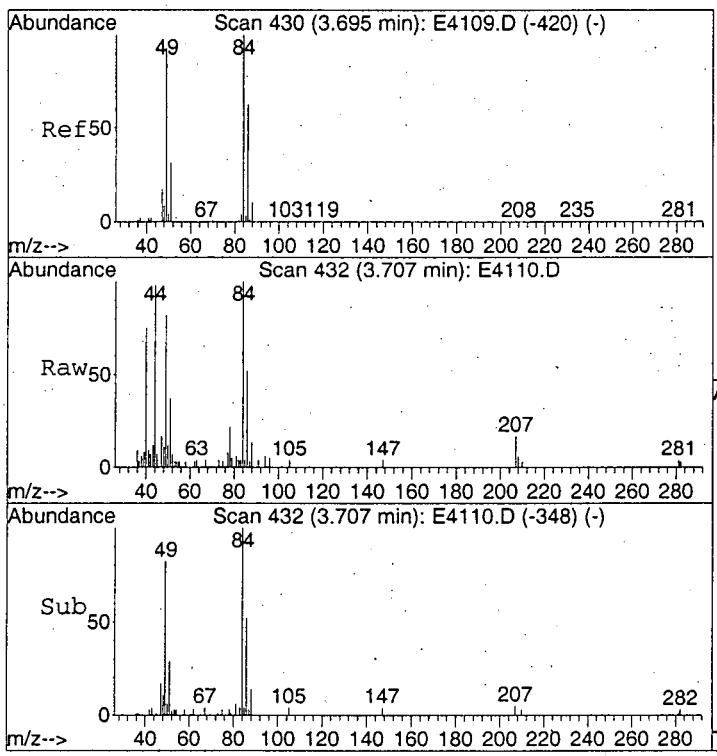
Quant Results File: LCE4109.RES

Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:43:22 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4109.D



Data File : C:\MSDCHEM\1\DATA\E4110.D
Acq On : 04/02/2003 1138
Sample : VBLK4U
Misc : EVBLK4U 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

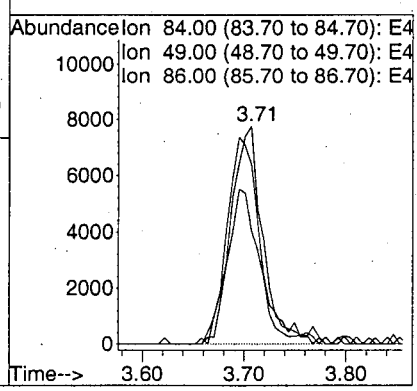
Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00



#16
Methylene Chloride
Concen: 0.23 ug/L
RT: 3.71 min Scan# 432
Delta R.T. 0.01 min
Lab File: E4110.D
Acq: 2 Apr 2003 11:38

Tgt Ion: 84 Resp: 17424

Ion	Ratio	Lower	Upper
84	100		
49	96.7	76.1	116.1
86	68.6	44.2	84.2



00311

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4110.D
Acq On : 04/02/2003 1138
Sample : VBLK4U
Misc : EVBLK4U 25ML
MS Integration Params: Lscint.p

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.675	92	98	119	rBV	997879	3229833	77.88%	11.871%
2	1.845	119	126	144	rVB	271874	854691	20.61%	3.141%
3	2.156	171	177	191	rBV	266913	598640	14.43%	2.200%
4	2.332	199	206	226	rBV	161961	469226	11.31%	1.725%
5	2.545	235	241	259	rVB	263580	579402	13.97%	2.130%
6	3.263	351	359	374	rBV	701180	1546100	37.28%	5.683%
7	5.240	675	684	698	rBV	545104	1419346	34.22%	5.217%
8	5.855	767	785	820	rBV2	882542	3936458	94.92%	14.468%
9	6.311	847	860	895	rBV	477046	1976091	47.65%	7.263%
10	6.798	930	940	964	rBV	439632	1637049	39.47%	6.017%
11	7.765	1089	1099	1113	rBV	240471	735403	17.73%	2.703%
12	8.203	1159	1171	1211	rBV	857555	4147196	100.00%	15.243%
13	8.531	1216	1225	1236	rVB2	54316	163829	3.95%	0.602%
14	9.121	1314	1322	1338	rBV4	42817	176967	4.27%	0.650%
15	10.320	1507	1519	1543	rBV	473978	1926005	46.44%	7.079%
16	11.506	1702	1714	1725	rBV	125279	322858	7.78%	1.187%
17	12.078	1800	1808	1816	rBV	239788	534482	12.89%	1.964%
18	13.185	1983	1990	1998	rBV	708182	1255835	30.28%	4.616%
19	13.538	2041	2048	2057	rBV	991816	1697966	40.94%	6.241%

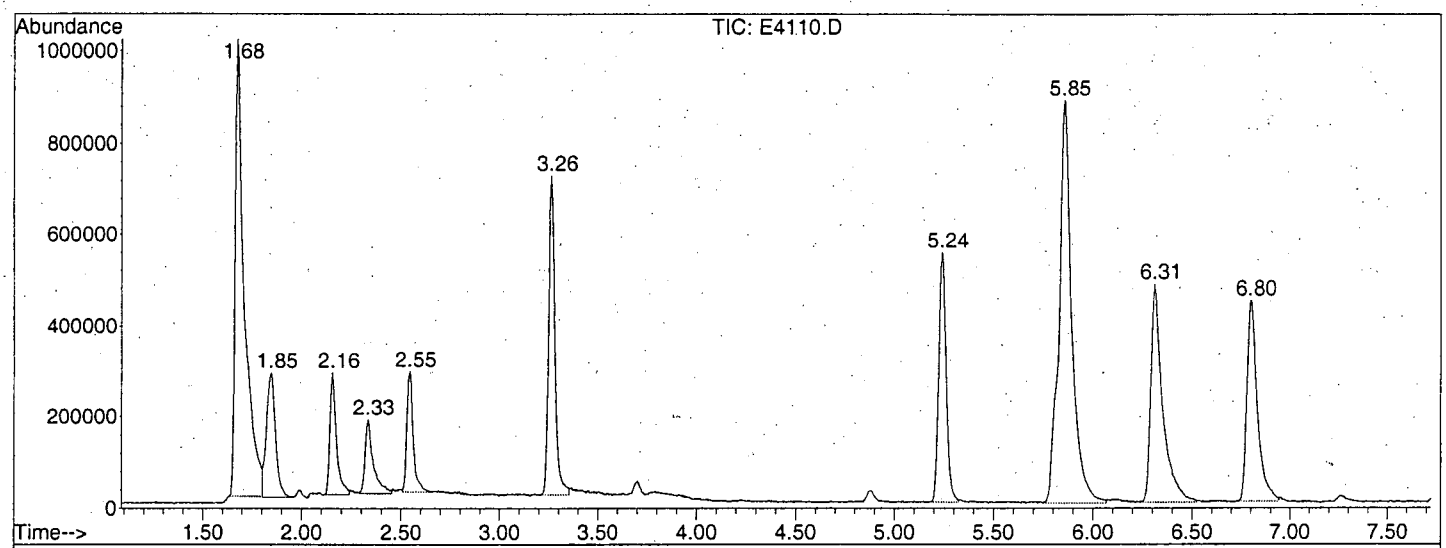
Sum of corrected areas: 27207377

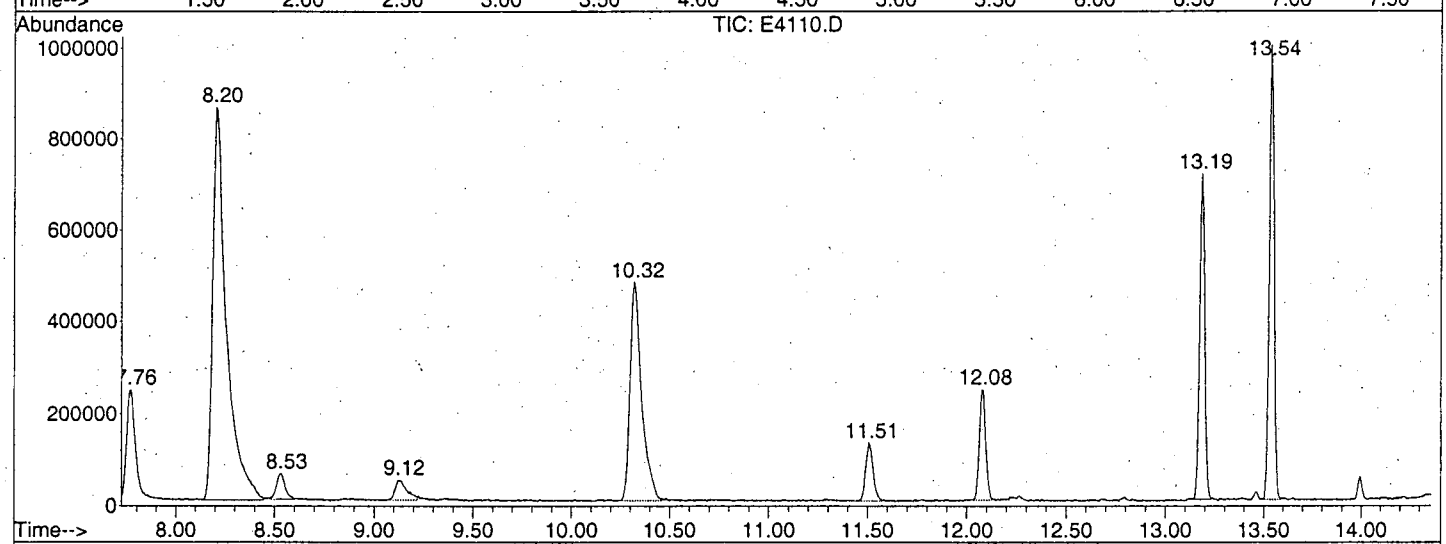
0312

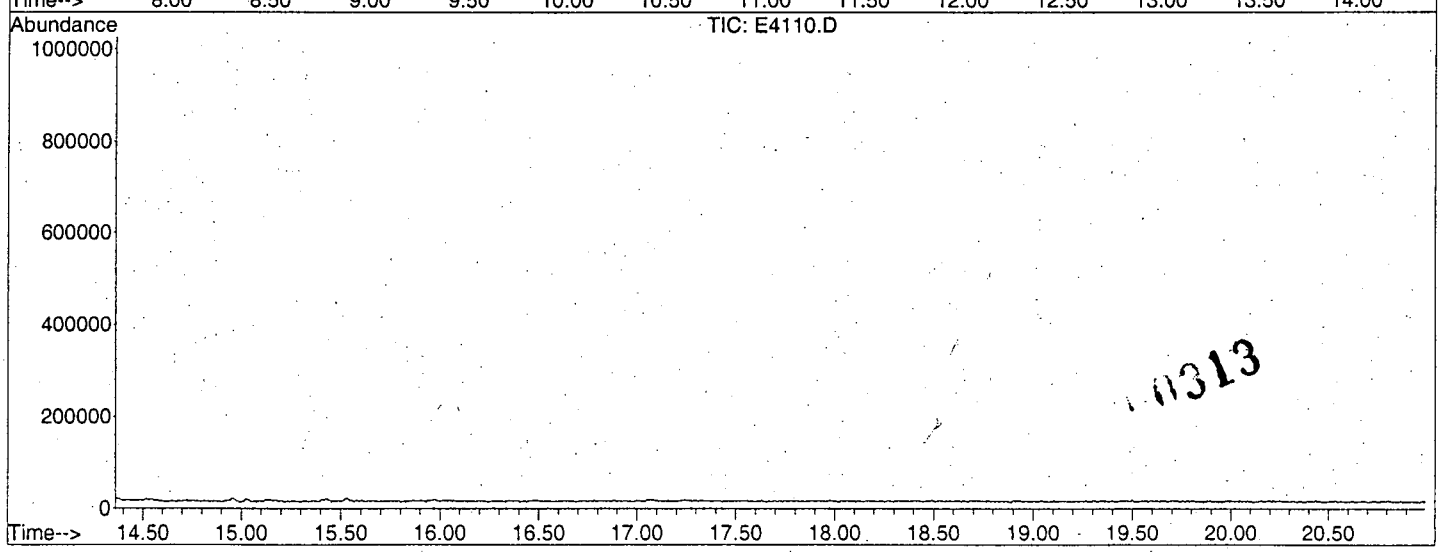
LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4110.D
Acq On : 04/02/2003 1138
Sample : VBLK4U
Misc : EVBLK4U 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 3
Operator: AK
Inst : E-5973
Multiplr: 1.00







11313

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4110.D Vial: 3
Acq On : 04/02/2003 1138 Operator: AK
Sample : VBLK4U Inst : E-5973
Misc : EVBLK4U 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

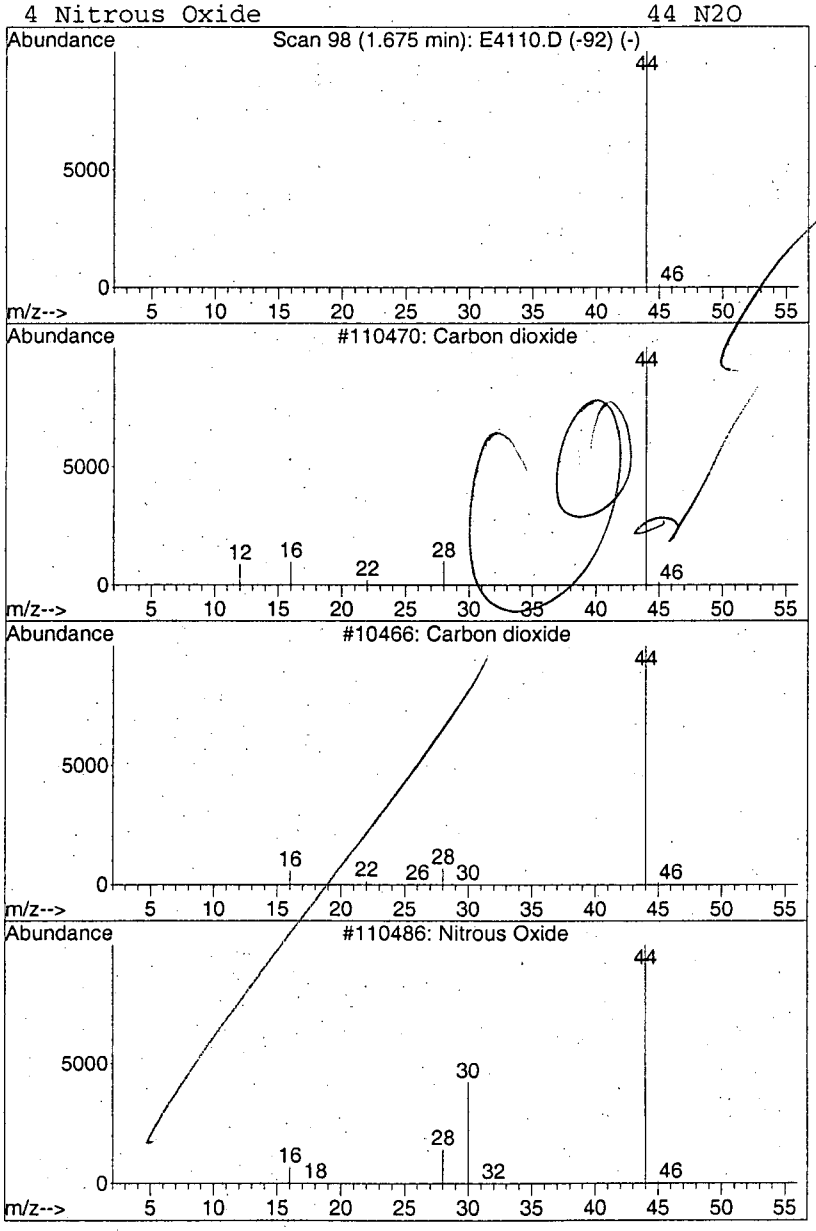
Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

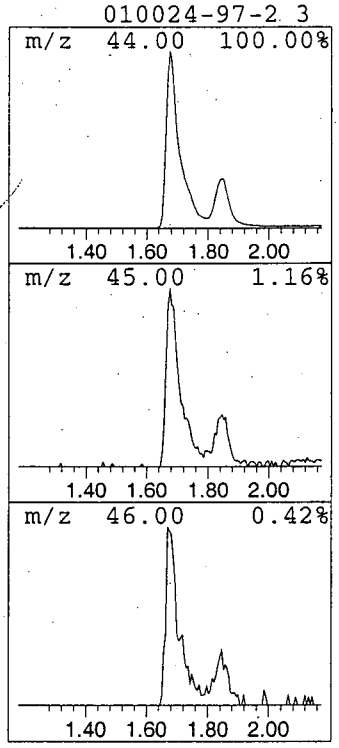
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.68	8.17 ug/L	3229830	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





00314

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4110.D Vial: 3
Acq On : 04/02/2003 1138 Operator: AK
Sample : VBLK4U Inst : E-5973
Misc : EVBLK4U 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

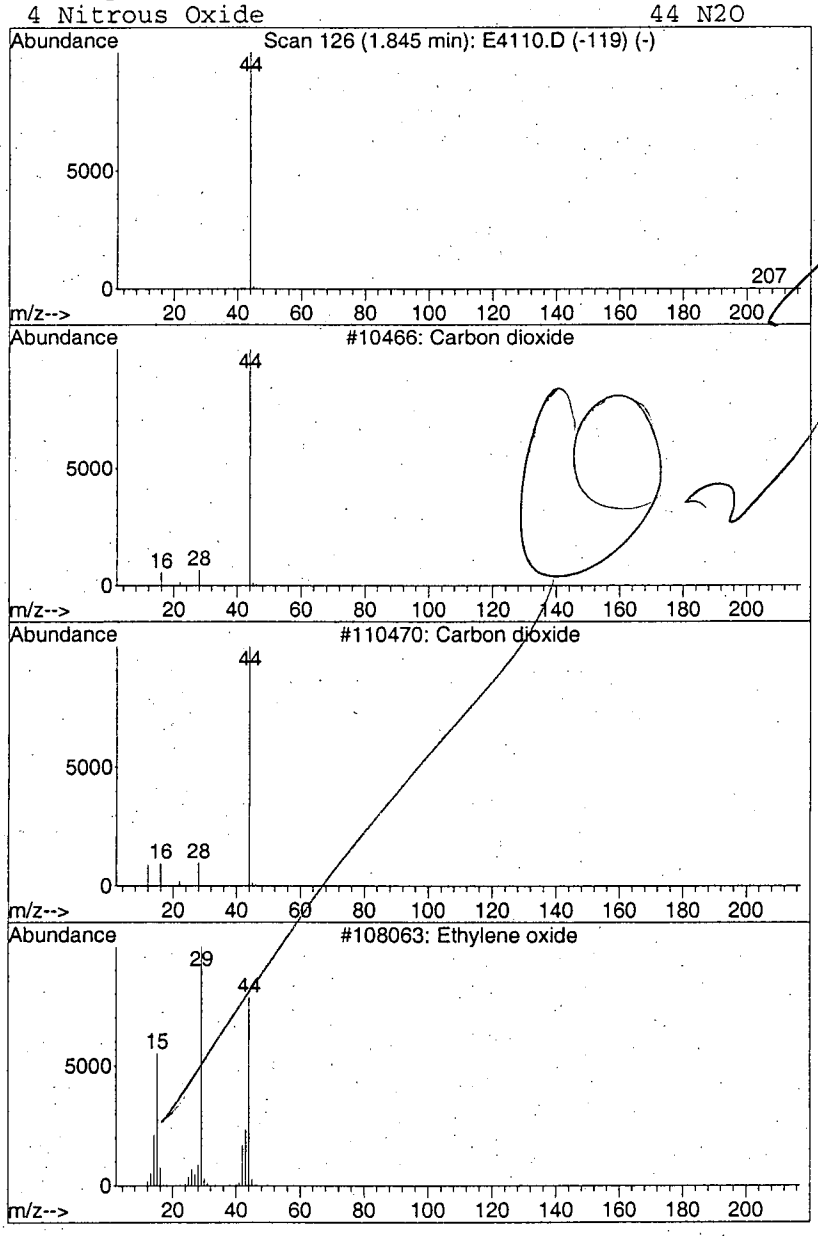
Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

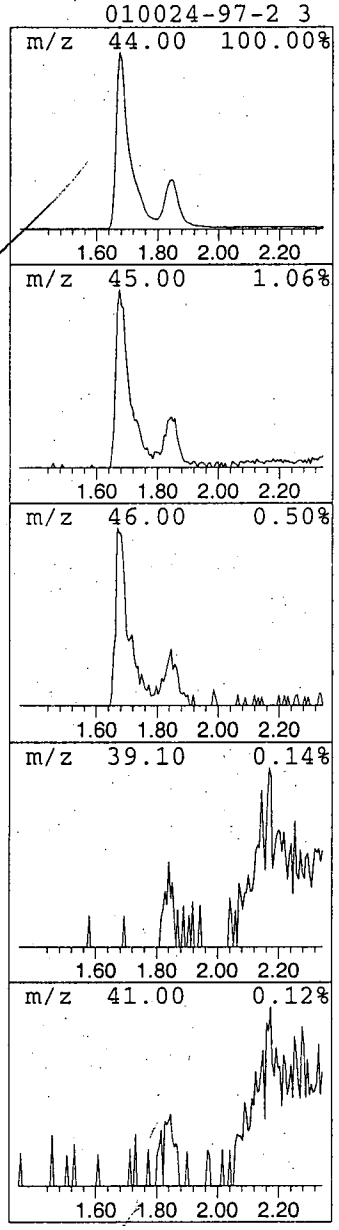
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.85	2.16 ug/L	854691	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0315

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VIBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVIBLK01 Date Received: _____

Lab File ID: E4044 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.17	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

0316

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

VIBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVIBLK01 Date Received: _____

Lab File ID: E4044 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

001317

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: EVIBLK01 Date Received: _____

Lab File ID: E4044 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

11318

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4044.D
Acq On : 03/28/2003 1505
Sample : VIBLK01
Misc : EVIBLK01 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 09:05:57 2003

Vial: 5
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

LCA 04/03/03

SP 4/04/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.31	114	1256981	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	958610	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	335442	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.14	65	508918	5.19 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 103.80%	
7) Chloroethane-d5	2.53	69	441785	5.31 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 106.20%	
10) 1,1-Dichloroethene-d2	3.25	65	216600	5.08 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 101.60%	
20) 2-Butanone-d5	4.87	46	47995	5.34 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 106.80%	
24) Chloroform-d	5.23	86	487804	4.91 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 98.20%	
26) 1,2-Dichloroethane-d4	5.81	65	243643	4.36 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 87.20%	
32) Benzene-d6	5.85	84	2184962	5.29 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 105.80%	
35) 1,2-Dichloropropane-d6	6.80	67	502597	4.43 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 88.60%	
41) Toluene-d8	8.21	98	2081548	5.25 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 105.00%	
43) trans-1,3-Dichloropropene-	8.53	79	68756	4.98 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 99.60%	
47) 2-Hexanone-d5	9.13	46	73961	4.88 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 97.60%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	188434	4.85 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 97.00%	
61) Bromoform-d	11.51	174	100336	4.35 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 87.00%	
65) 1,2-Dichlorobenzene-d4	13.54	152	404785	5.26 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 105.20%	

Target Compounds					Qvalue
16) Methylene Chloride	3.70	84	15443	0.17 ug/L JB	93

11319

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

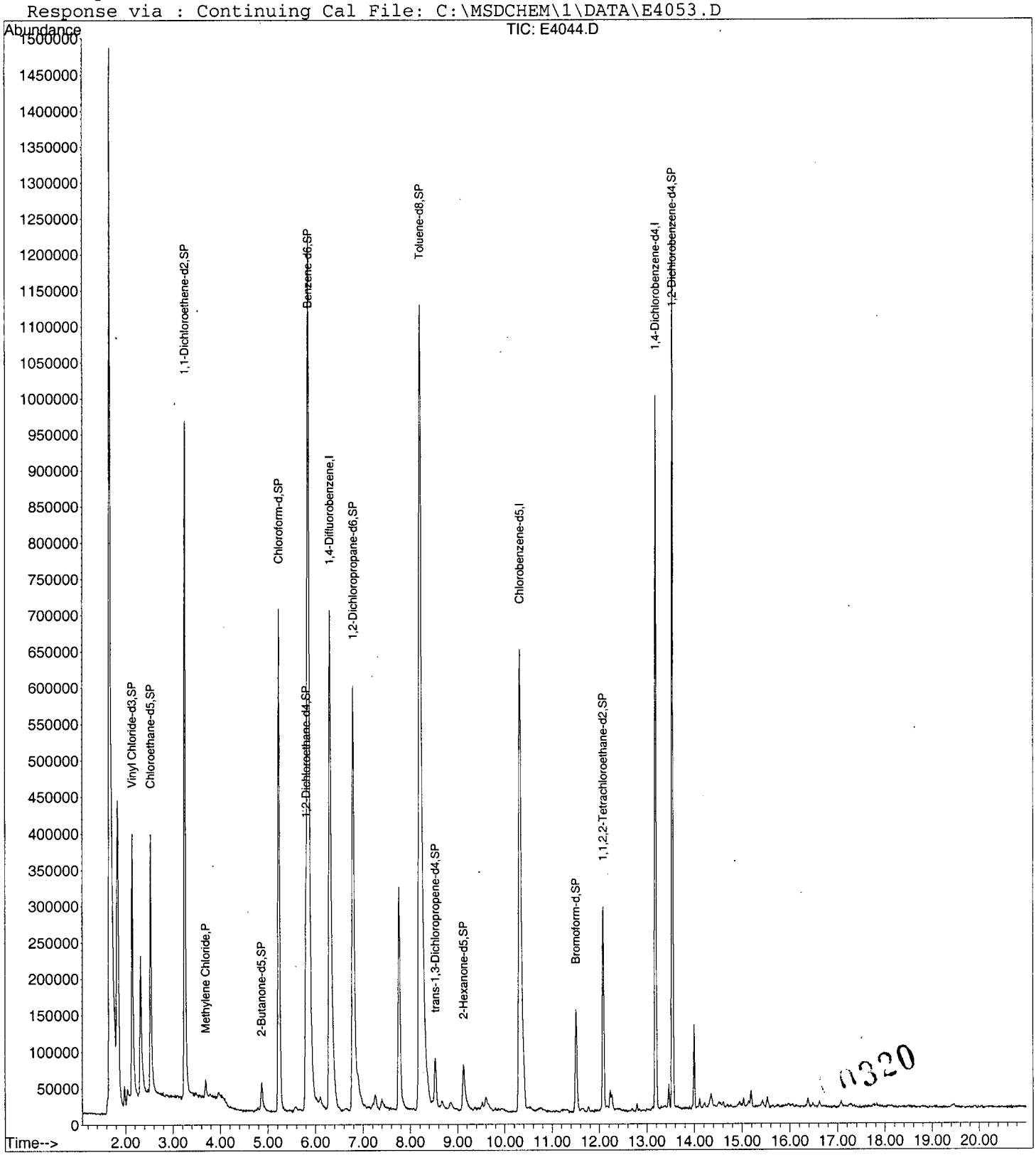
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4044.D
Acq On : 03/28/2003 1505
Sample : VIBLK01
Misc : EVIBLK01 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:30 2003

Vial: 5
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

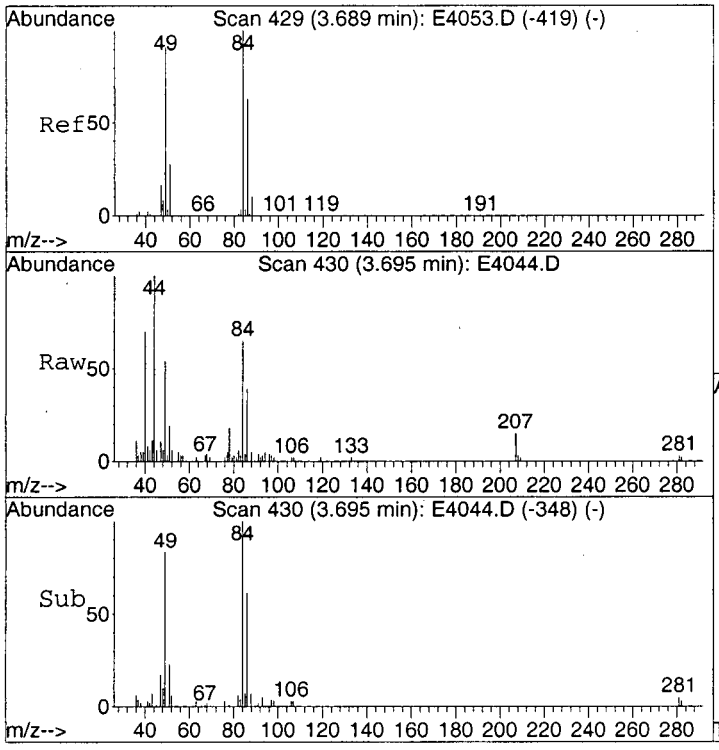
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



0320

Data File : C:\MSDCHEM\1\DATA\E4044.D
Acq On : 03/28/2003 1505
Sample : VIBLK01
Misc : EVIBLK01 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

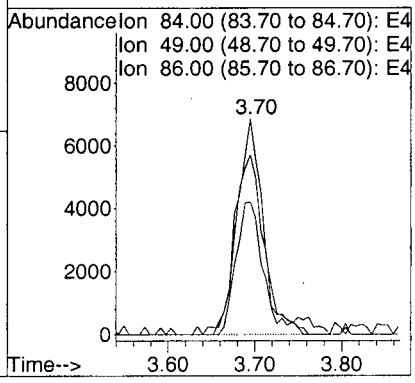
Vial: 5
Operator: AK
Inst : E-5973
Multiplr: 1.00



#16
Methylene Chloride
Concen: 0.17 ug/L
RT: 3.70 min Scan# 430
Delta R.T. -0.00 min
Lab File: E4044.D
Acq: 28 Mar 2003 15:05

Tgt Ion: 84 Resp: 15443

Ion	Ratio	Lower	Upper
84	100		
49	83.5	73.7	113.7
86	60.0	41.8	81.8



000321

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4044.D Vial: 5
Acq On : 03/28/2003 1505 Operator: AK
Sample : VIBLK01 Inst : E-5973
Misc : EVIBLK01 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 100000 Area counts
Start Thrs: 0.2 Max Peaks: 40
Stop Thrs : 0 Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.663	90	96	117	rBV	1452106	4374051	84.16%	12.555%
2	1.833	117	124	144	rVB	419712	1273165	24.50%	3.654%
3	2.144	169	175	195	rVB	361060	773060	14.87%	2.219%
4	2.320	198	204	219	rBV	188141	480506	9.25%	1.379%
5	2.533	233	239	258	rVB	354725	737499	14.19%	2.117%
6	3.257	350	358	371	rBV	930227	1955172	37.62%	5.612%
7	4.869	613	623	631	rBV2	38843	100659	1.94%	0.289%
8	5.234	673	683	697	rBV	690427	1709421	32.89%	4.907%
9	5.849	767	784	811	rBV2	1212321	4812034	92.59%	13.812%
10	6.305	848	859	885	rBV	685696	2565694	49.37%	7.364%
11	6.798	928	940	954	rBV	583903	1944864	37.42%	5.582%
12	7.765	1089	1099	1112	rBV2	306574	880649	16.94%	2.528%
13	8.203	1157	1171	1210	rBV	1111288	5197388	100.00%	14.918%
14	8.531	1217	1225	1237	rVB2	67201	194890	3.75%	0.559%
15	9.128	1314	1323	1333	rBV2	62741	224194	4.31%	0.644%
16	10.320	1508	1519	1542	rBV2	635413	2546880	49.00%	7.310%
17	11.506	1703	1714	1726	rBV	142156	372998	7.18%	1.071%
18	12.078	1799	1808	1818	rBV	278777	612749	11.79%	1.759%
19	13.185	1983	1990	2003	rBV	982587	1768616	34.03%	5.076%
20	13.538	2041	2048	2056	rBV	1229234	2147009	41.31%	6.163%
21	13.995	2118	2123	2129	rVB	115788	168257	3.24%	0.483%

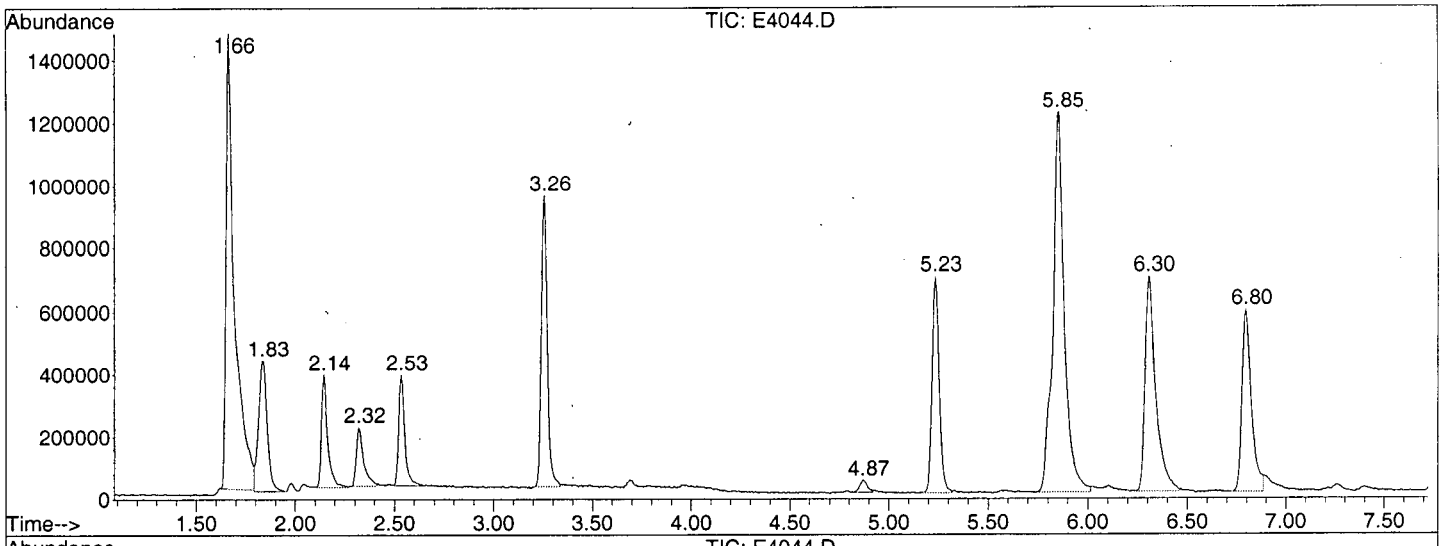
Sum of corrected areas: 34839755

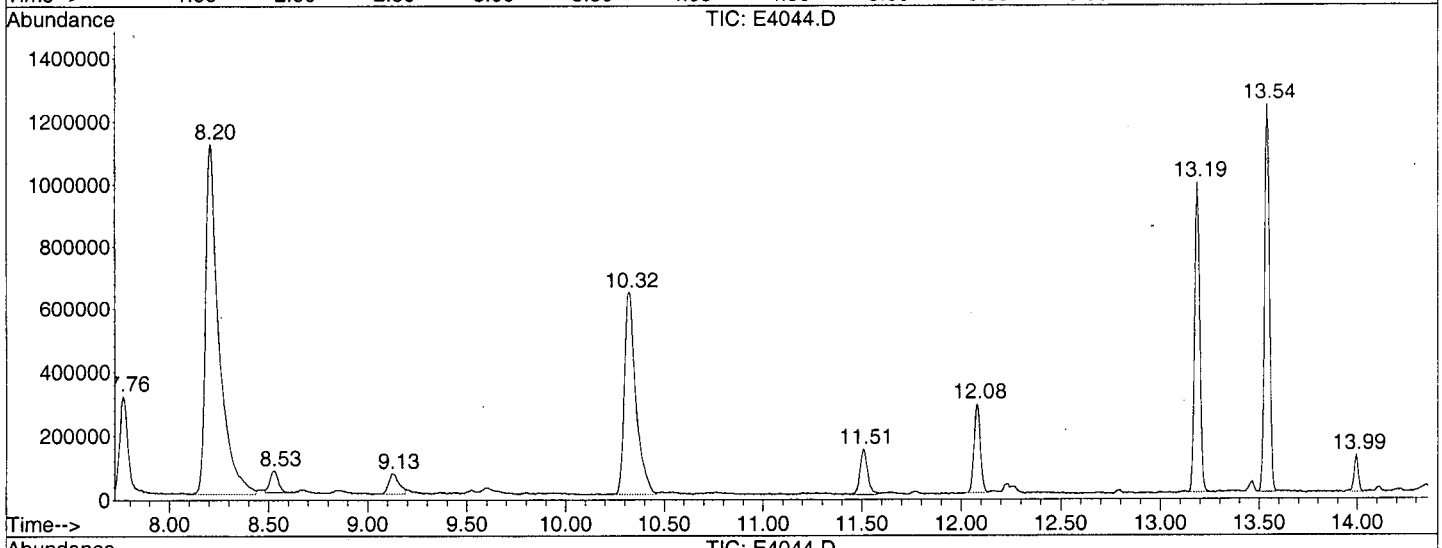
11322

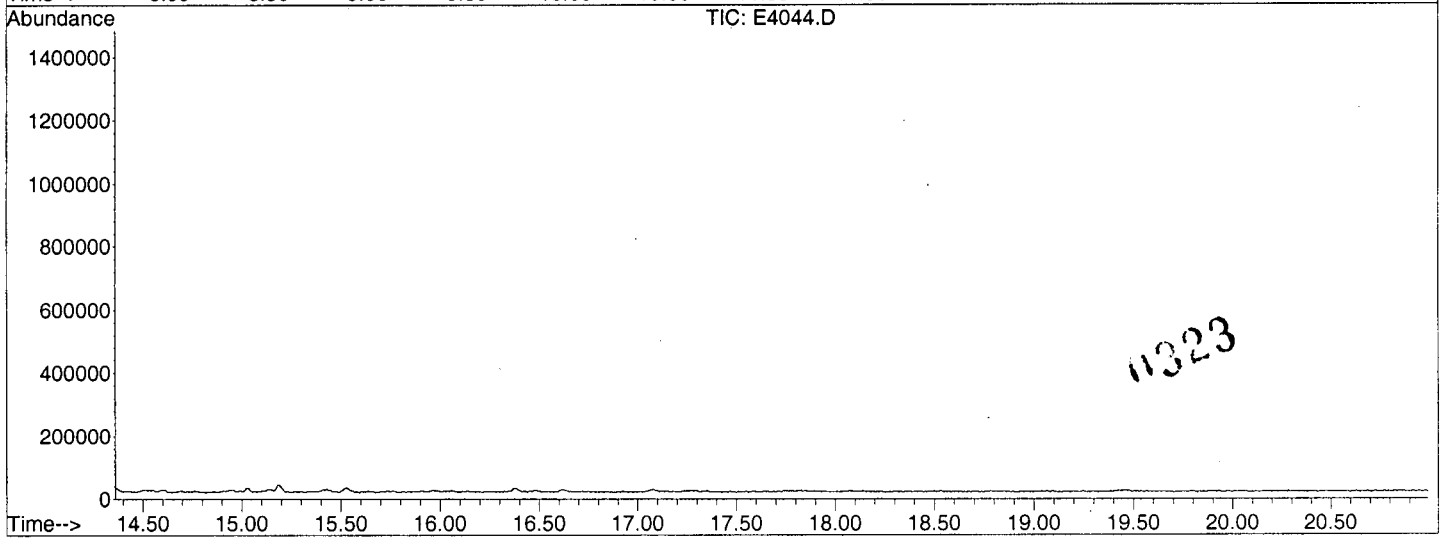
LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4044.D
Acq On : 03/28/2003 1505
Sample : VIBLK01
Misc : EVIBLK01 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTÈ Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 5
Operator: AK
Inst : E-5973
Multiplr: 1.00







11323

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4044.D Vial: 5
Acq On : 03/28/2003 1505 Operator: AK
Sample : VIBLK01 Inst : E-5973
Misc : EVIBLK01 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

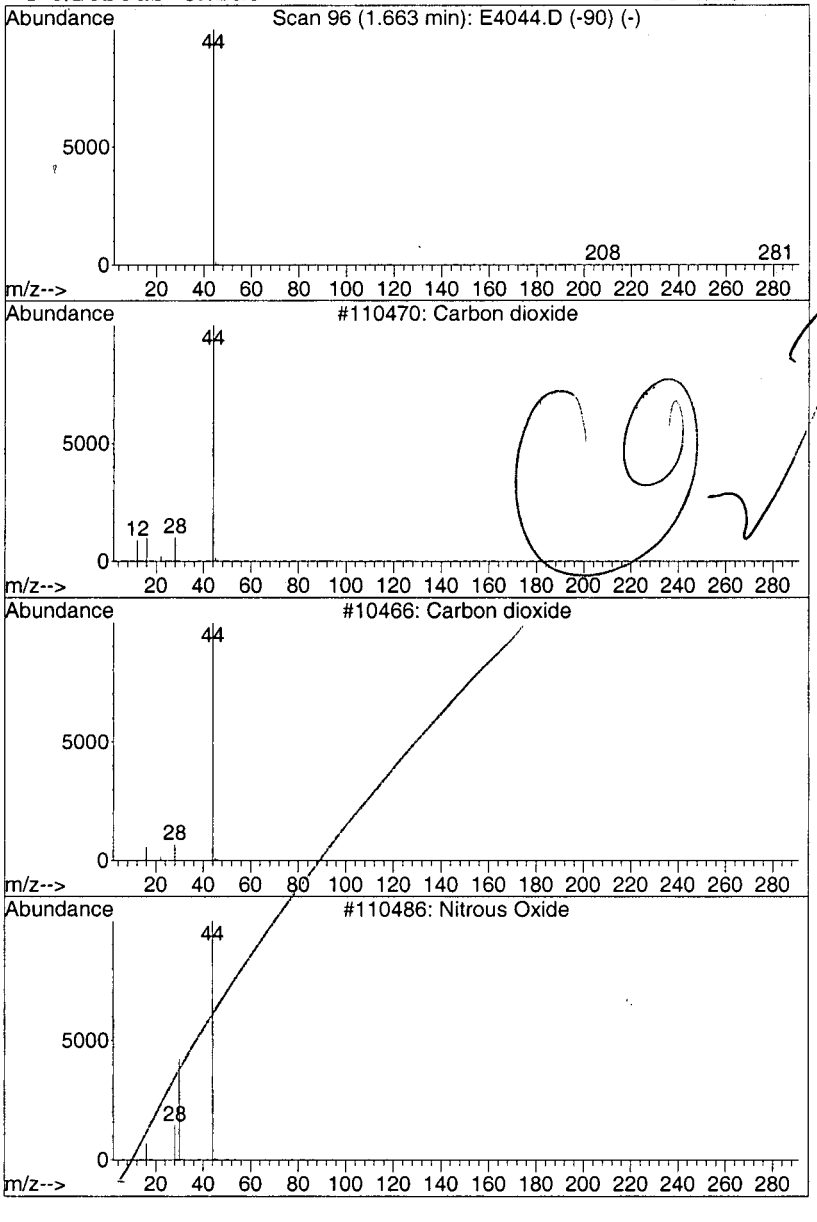
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

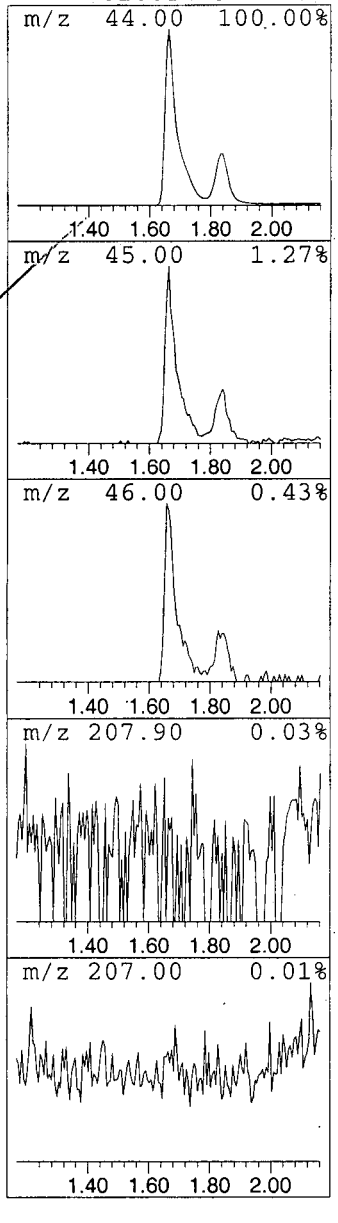
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.66	8.52 ug/L	4374050	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





1324

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4044.D
Acq On : 03/28/2003 1505
Sample : VIBLK01
Misc : EVIBLK01 25ML
MS Integration Params: Lscint.p

Vial: 5
Operator: AK
Inst : E-5973
Multiplr: 1.00

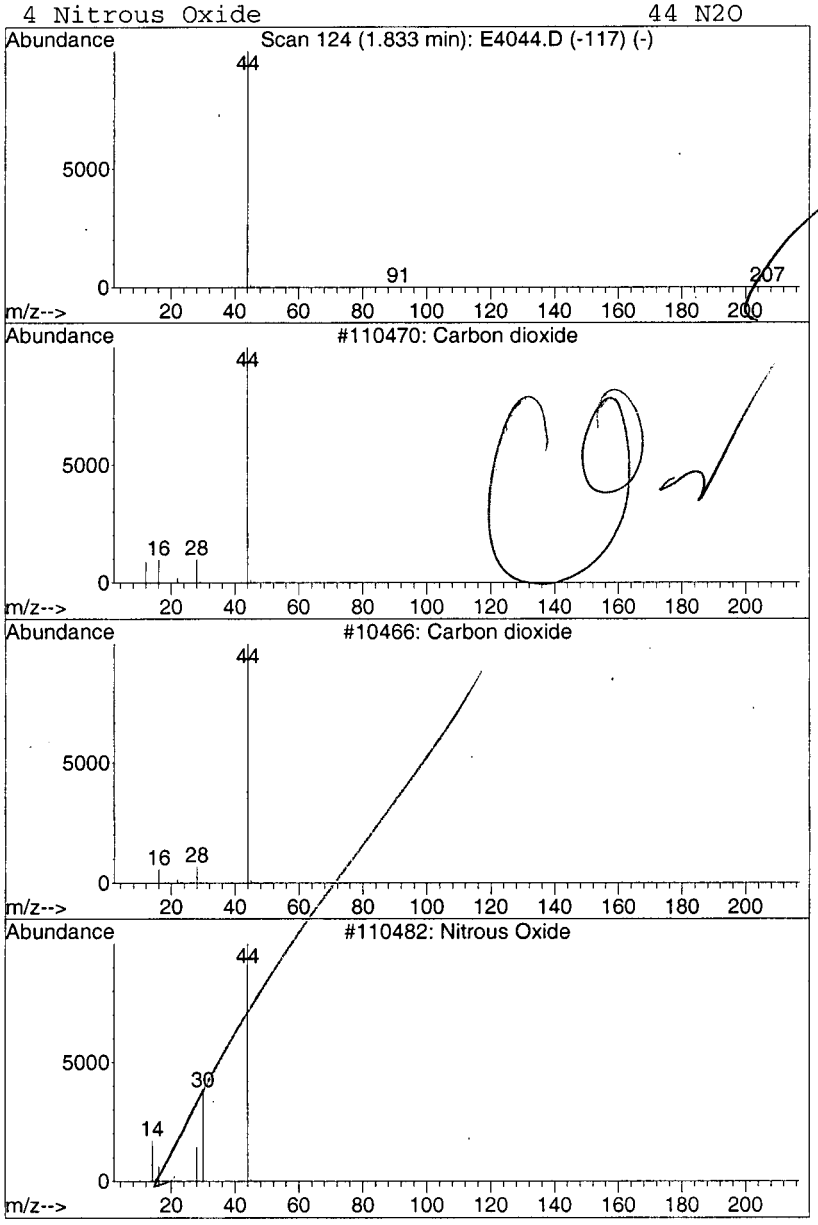
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

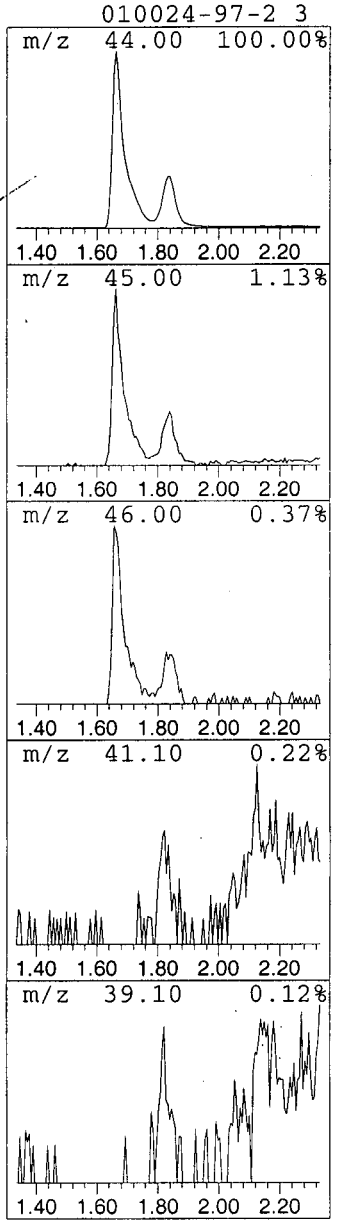
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.83	2.48 ug/L	1273170	1,4-Difluorobenzene	6.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





11325

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VIBLK02

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: VIBLK02 Date Received: _____

Lab File ID: E4046 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	4.0	J
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.17	JB
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.24	J
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

1 of 326

1LCB

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET

EPA SAMPLE NO.

VIBLK02

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: VIBLK02 Date Received: _____

Lab File ID: E4046 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.19	JB
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

01327

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VIBLK02

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: VIBLK02 Date Received: _____

Lab File ID: E4046 Date Analyzed: 03/28/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 1

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01		UNKNOWN	14.00	1.2	JB
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

100328

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: RTEINT.P
Quant Time: Mar 31 09:07:32 2003

Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4041.RES

Koa 04/03/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D
DataAcq Meth : VOAC

CP 4/04/03

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	1489419	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.32	117	1112651	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	392971	5.00 ug/L	0.00

System Monitoring Compounds					
4) Vinyl Chloride-d3	2.15	65	574204	4.94 ug/L	0.00
Spiked Amount 5.000	Range 49 - 138		Recovery	= 98.80%	
7) Chloroethane-d5	2.54	69	502929	5.10 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 102.00%	
10) 1,1-Dichloroethene-d2	3.26	65	231794	4.59 ug/L	0.00
Spiked Amount 5.000	Range 65 - 130		Recovery	= 91.80%	
20) 2-Butanone-d5	4.87	46	56985	5.35 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 107.00%	
24) Chloroform-d	5.23	86	560440	4.76 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 95.20%	
26) 1,2-Dichloroethane-d4	5.81	65	275101	4.15 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 83.00%	
32) Benzene-d6	5.85	84	2594686	5.41 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 108.20%	
35) 1,2-Dichloropropane-d6	6.80	67	614814	4.67 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 93.40%	
41) Toluene-d8	8.20	98	2518037	5.47 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 109.40%	
43) trans-1,3-Dichloropropene-	8.53	79	83709	5.23 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 104.60%	
47) 2-Hexanone-d5	9.13	46	87039	4.95 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 99.00%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	236353	5.24 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 104.80%	
61) Bromoform-d	11.51	174	119876	4.44 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 88.80%	
65) 1,2-Dichlorobenzene-d4	13.54	152	493087	5.47 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 109.40%	

Target Compounds					Qvalue
13) Acetone	3.29	43	29753	3.98 ug/L J	89
16) Methylene Chloride	3.69	84	18441	0.17 ug/L J B	96
21) cis-1,2-Dichloroethene	4.94	96	28466	0.24 ug/L J	97
62) Bromoform	11.52	173	5635	0.19 ug/L #J B	73

11329

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

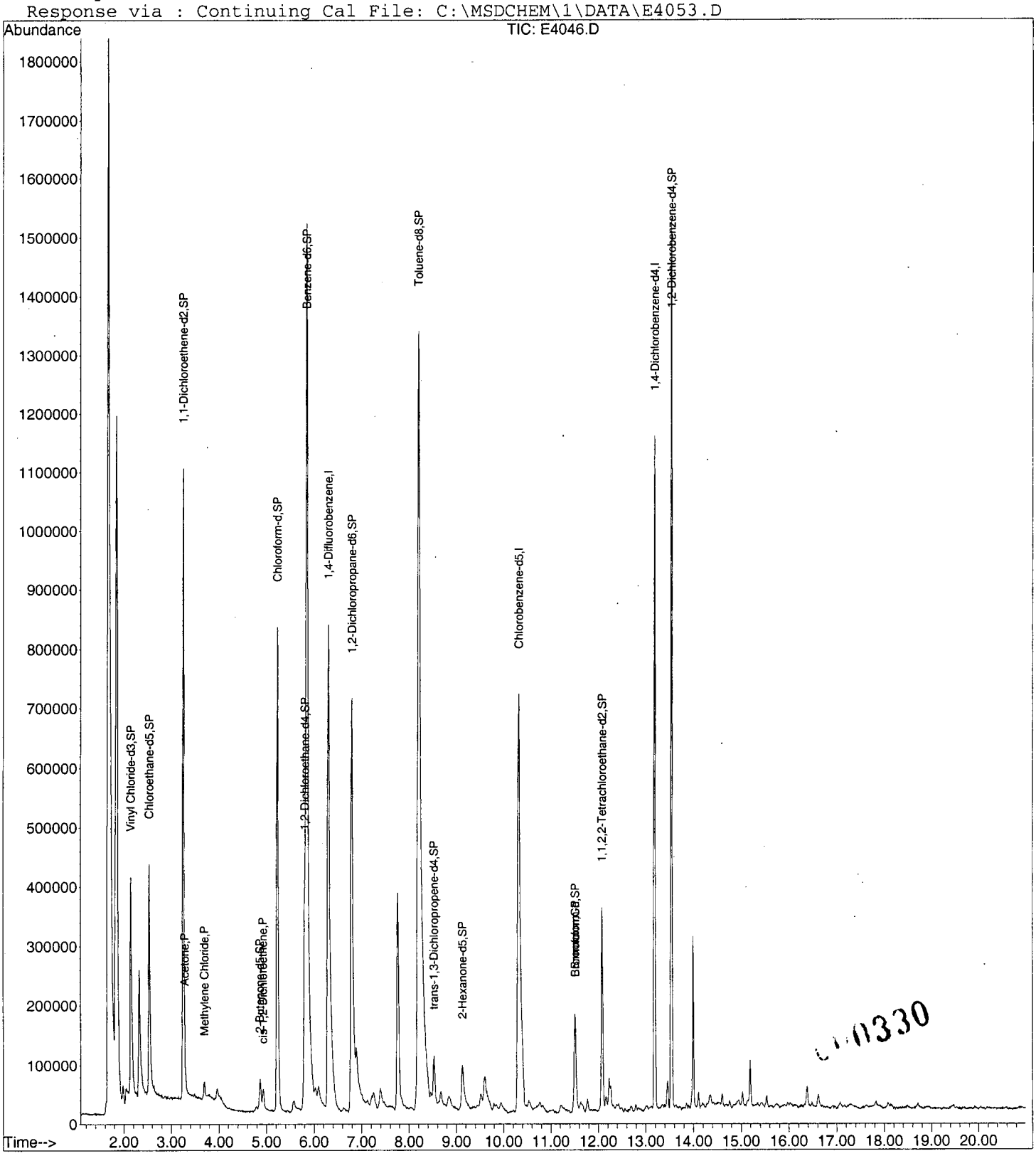
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 3 9:42 2003

Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

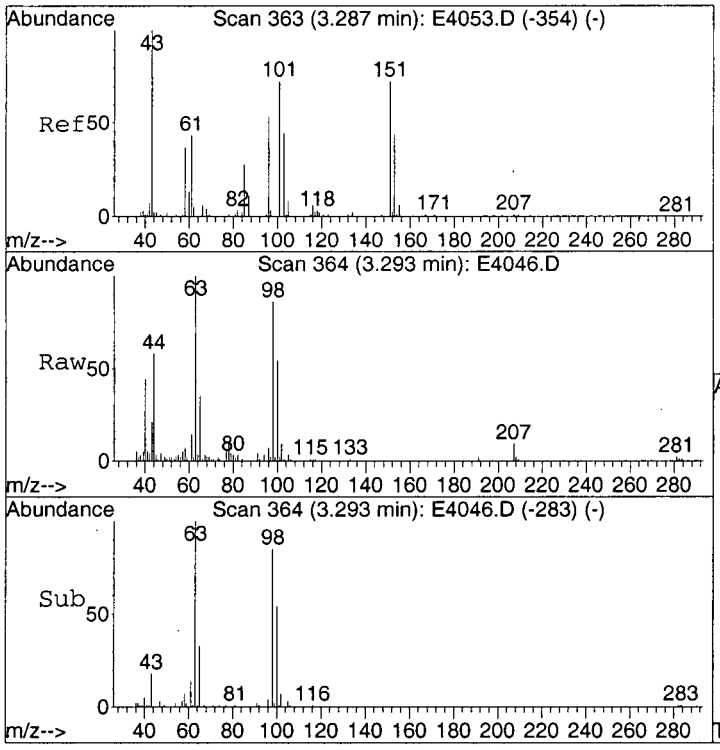
Quant Results File: LCE4041.RES

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Fri Mar 28 12:45:07 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4053.D



Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

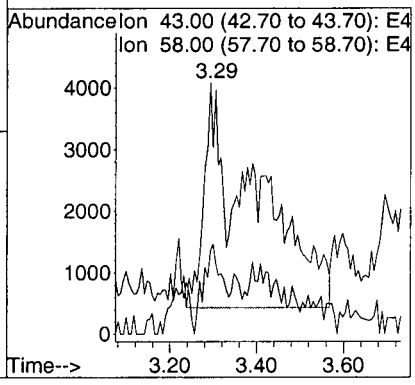
Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

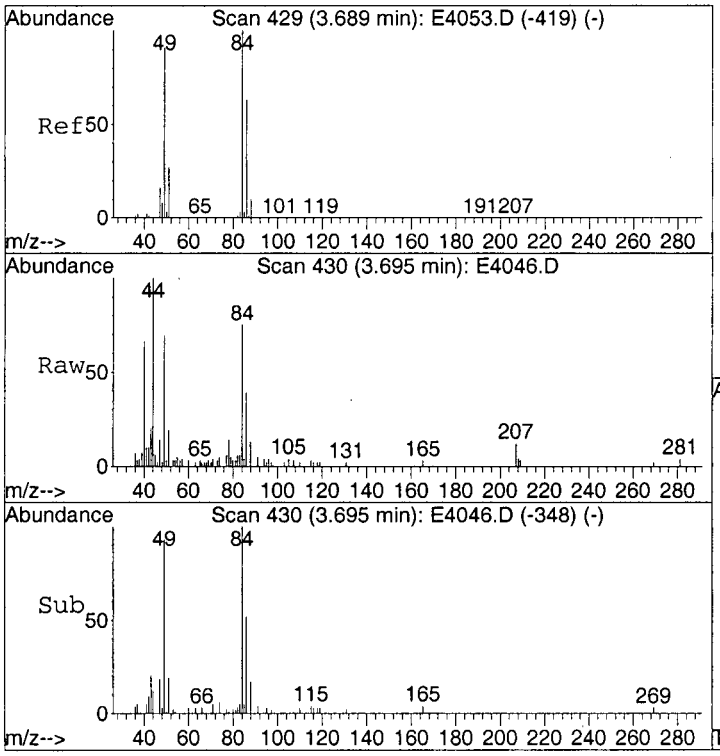


#13
Acetone
Concen: 3.98 ug/L
RT: 3.29 min Scan# 364
Delta R.T. -0.01 min
Lab File: E4046.D
Acq: 28 Mar 2003 17:08

Tgt Ion: 43 Resp: 29753

Ion	Ratio	Lower	Upper
43	100		
58	47.5	20.7	60.7

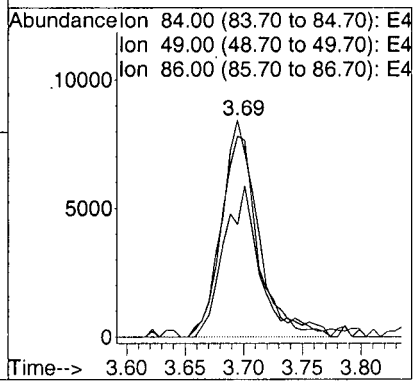




#16
Methylene Chloride
Concen: 0.17 ug/L
RT: 3.69 min Scan# 430
Delta R.T. -0.00 min
Lab File: E4046.D
Acq: 28 Mar 2003 17:08

Tgt Ion: 84 Resp: 18441

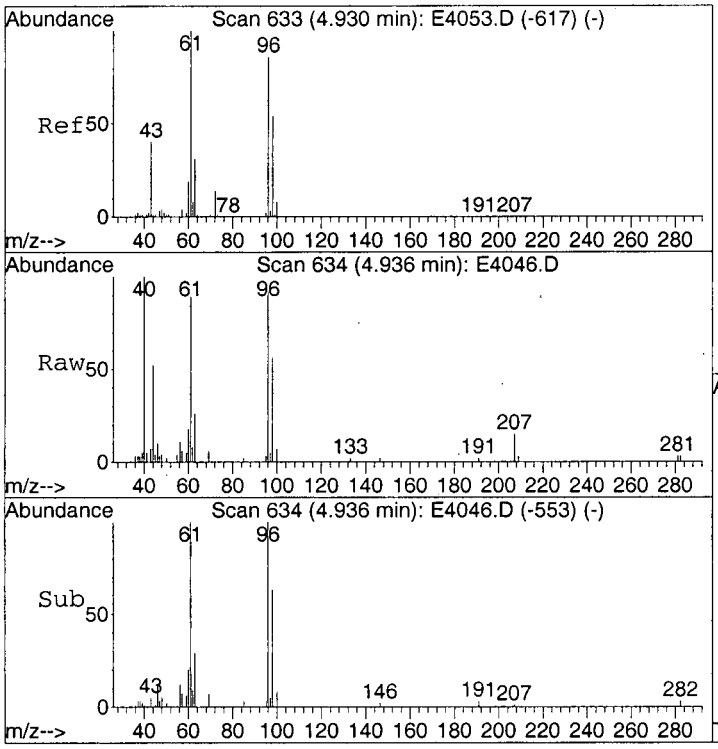
Ion	Ratio	Lower	Upper
84	100		
49	95.2	73.7	113.7
86	67.6	41.8	81.8



0331

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

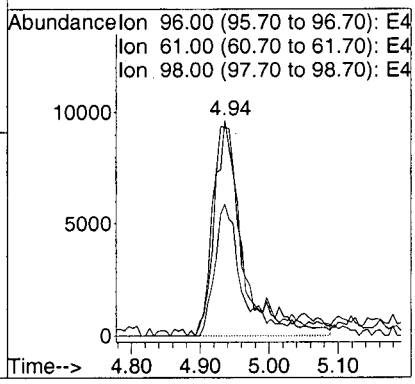
Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

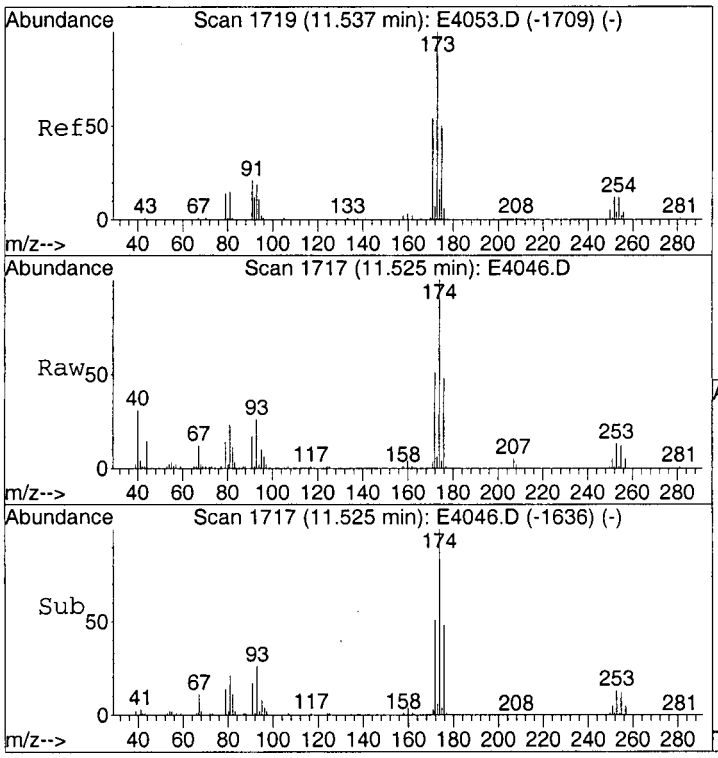


#21
cis-1,2-Dichloroethene
Concen: 0.24 ug/L
RT: 4.94 min Scan# 634
Delta R.T. -0.01 min
Lab File: E4046.D
Acq: 28 Mar 2003 17:08

Tgt Ion: 96 Resp: 28466

Ion	Ratio	Lower	Upper
96	100		
61	109.9	93.0	133.0
98	63.0	41.5	81.5

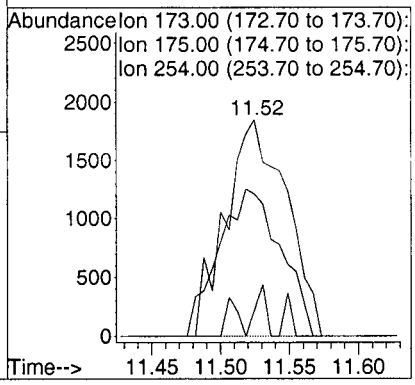




#62
Bromoform
Concen: 0.19 ug/L
RT: 11.52 min Scan# 1717
Delta R.T. -0.01 min
Lab File: E4046.D
Acq: 28 Mar 2003 17:08

Tgt Ion:173 Resp: 5635

Ion	Ratio	Lower	Upper
173	100		
175	69.4	29.2	69.2#
254	4.3	0.0	31.1



1332

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: Lscint.p

Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.669	90	97	118	rBV	1940784	6755832	100.00%	14.778%
2	1.846	118	126	144	rVB	1155035	3518889	52.09%	7.697%
3	2.150	170	176	192	rVB	365785	849290	12.57%	1.858%
4	2.326	199	205	221	rBV	213509	603926	8.94%	1.321%
5	2.539	233	240	253	rBV	384935	821081	12.15%	1.796%
6	3.257	350	358	375	rBV	1063973	2150475	31.83%	4.704%
7	4.869	615	623	630	rBV3	52605	142823	2.11%	0.312%
8	5.234	673	683	697	rBV	815024	1932302	28.60%	4.227%
9	5.849	765	784	808	rBV2	1499710	5679156	84.06%	12.423%
10	6.305	849	859	893	rVB	815181	2954576	43.73%	6.463%
11	6.798	928	940	953	rBV	697702	2339308	34.63%	5.117%
12	6.889	953	955	972	rVB5	84413	269201	3.98%	0.589%
13	7.394	1028	1038	1050	rBV7	34867	130176	1.93%	0.285%
14	7.765	1089	1099	1111	rBV	367953	1055461	15.62%	2.309%
15	8.203	1156	1171	1210	rBV	1317442	6403613	94.79%	14.007%
16	8.531	1218	1225	1235	rVB2	81839	224510	3.32%	0.491%
17	9.134	1308	1324	1337	rBV4	77994	317024	4.69%	0.693%
18	9.602	1393	1401	1417	rVB5	42980	155370	2.30%	0.340%
19	10.320	1507	1519	1542	rBV2	704426	2893963	42.84%	6.330%
20	11.512	1704	1715	1729	rBV	165214	499109	7.39%	1.092%
21	12.078	1797	1808	1817	rBV	343343	763422	11.30%	1.670%
22	13.185	1983	1990	1999	rBV	1136190	2021231	29.92%	4.421%
23	13.538	2041	2048	2058	rBV	1507271	2597496	38.45%	5.682%
24	13.994	2113	2123	2134	rBV	293430	487502	7.22%	1.066%
25	15.187	2314	2319	2326	rVB	78006	150705	2.23%	0.330%

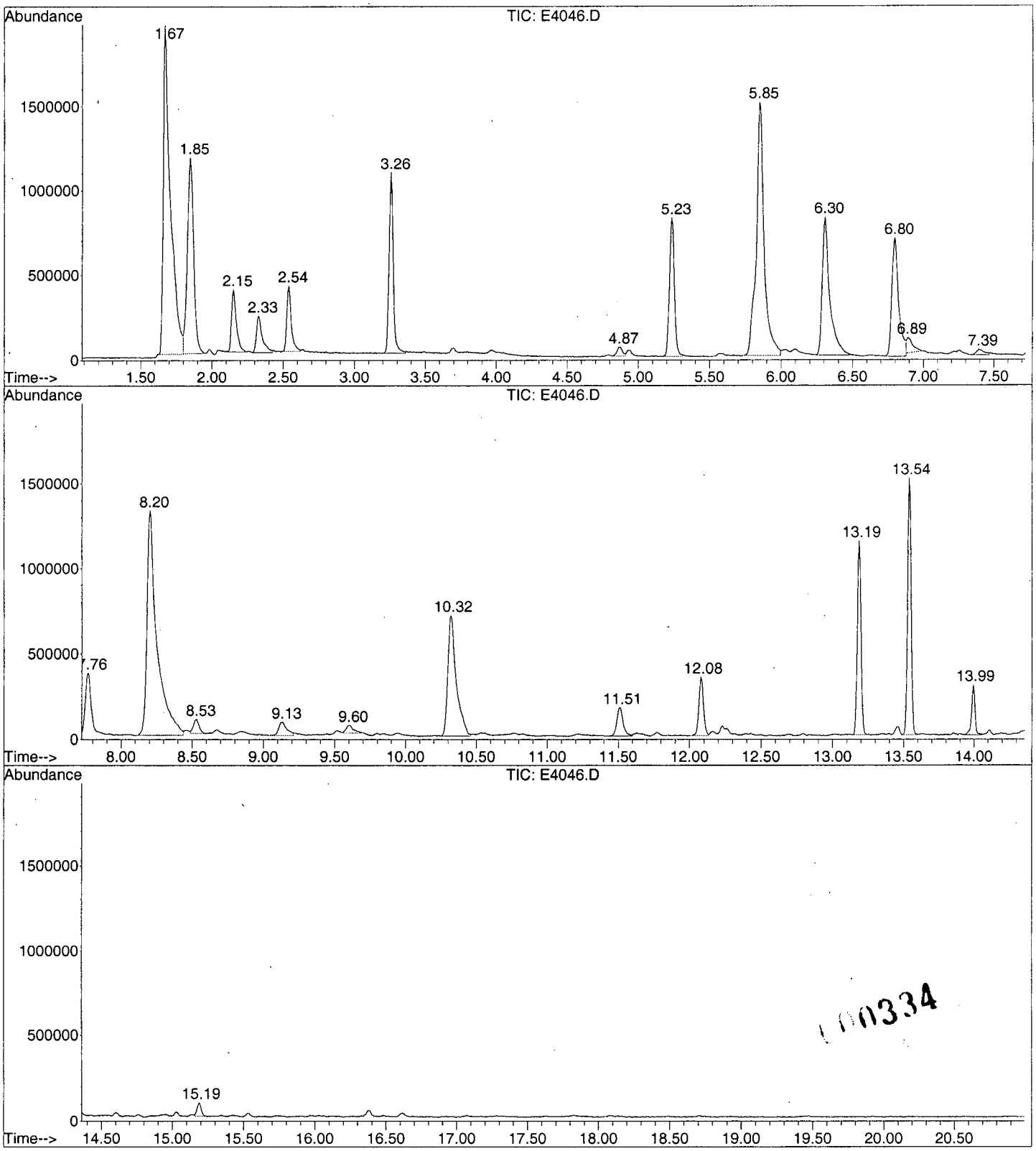
Sum of corrected areas: 45716441

0333

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00



100334

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4046.D
Acq On : 03/28/2003 1708
Sample : VIBLK02
Misc : VIBLK02 25ML
MS Integration Params: Lscint.p

Vial: 7
Operator: AK
Inst : E-5973
Multiplr: 1.00

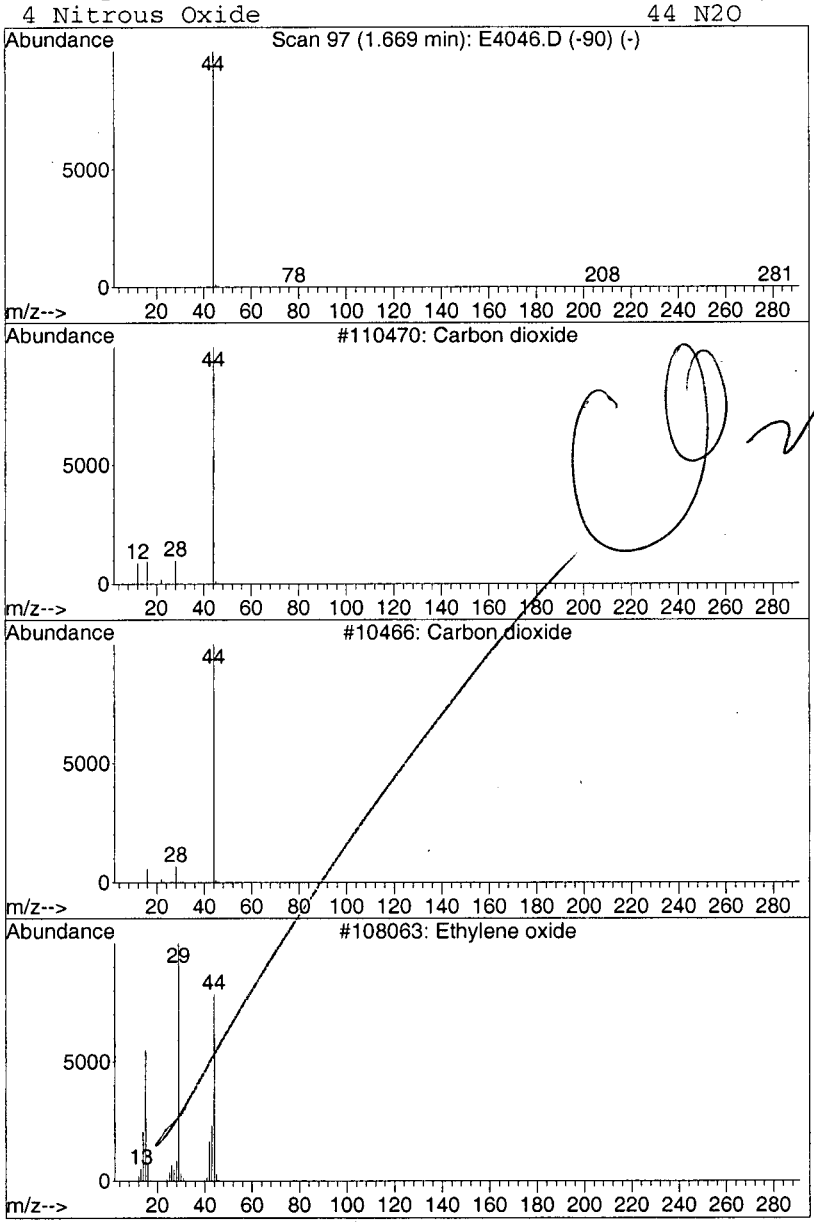
Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

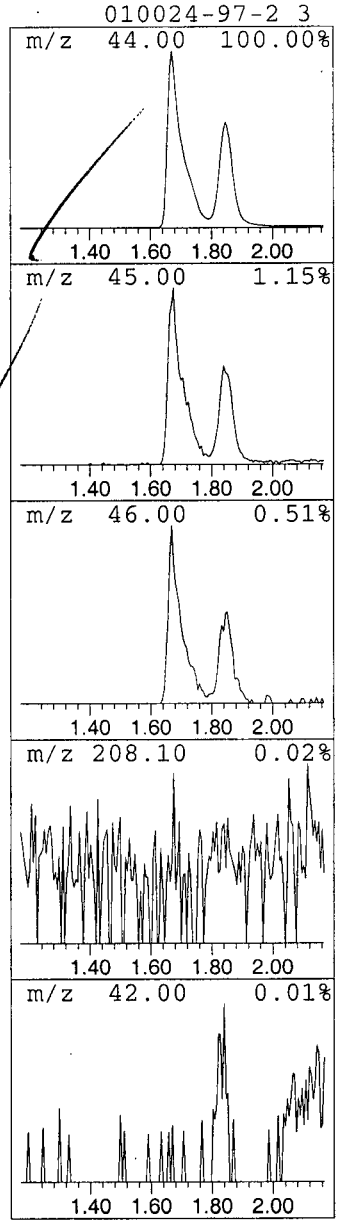
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.67	11.43 ug/L	6755830	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Ethylene oxide	44	C2H4O	000075-21-8	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0335

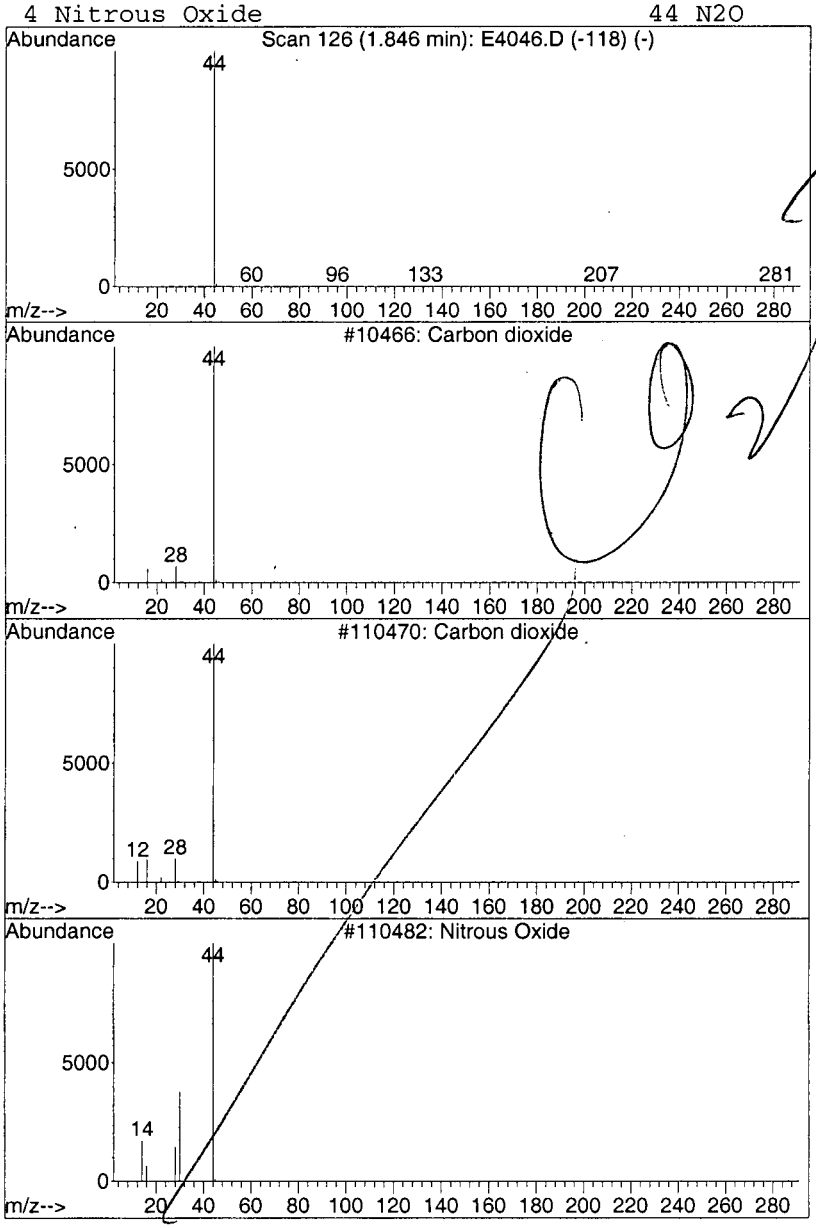
Library Search Compound Report

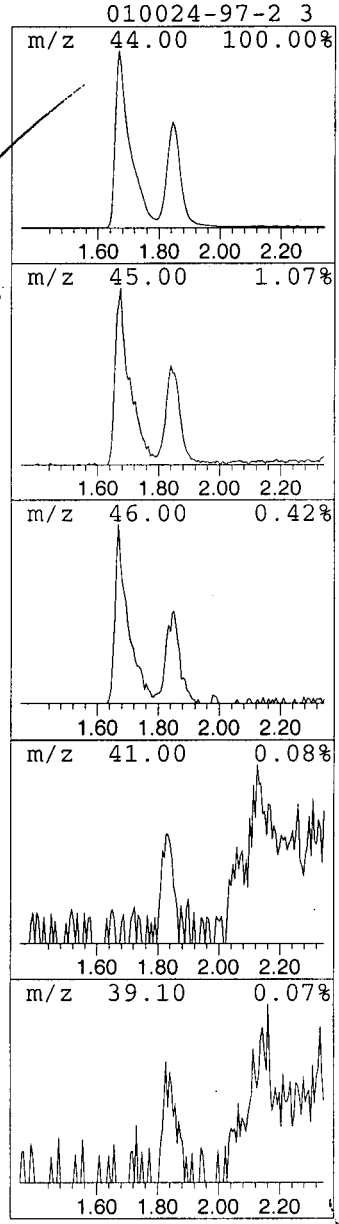
```
   Data File : C:\MSDCHEM\1\DATA\E4046.D                    Vial: 7
   Acq On    : 03/28/2003  1708                         Operator: AK
   Sample    : VIBLK02                                  Inst    : E-5973
   Misc      : VIBLK02   25ML                           Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title        : Voa Low Concentration Organics - OLC03.2
Library      : C:\DATABASE\NIST98.L
 ******************************************************************
 Peak Number  2  Carbon dioxide                  Concentration Rank  2
```

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.85	5.95 ug/L	3518890	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





00336

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4046.D Vial: 7
Acq On : 03/28/2003 1708 Operator: AK
Sample : VIBLK02 Inst : E-5973
Misc : VIBLK02 25ML Multiplr: 1.00
MS Integration Params: Lscint.p

Quant Method : C:\MSDCHEM\1\METHODS\LCE4041.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

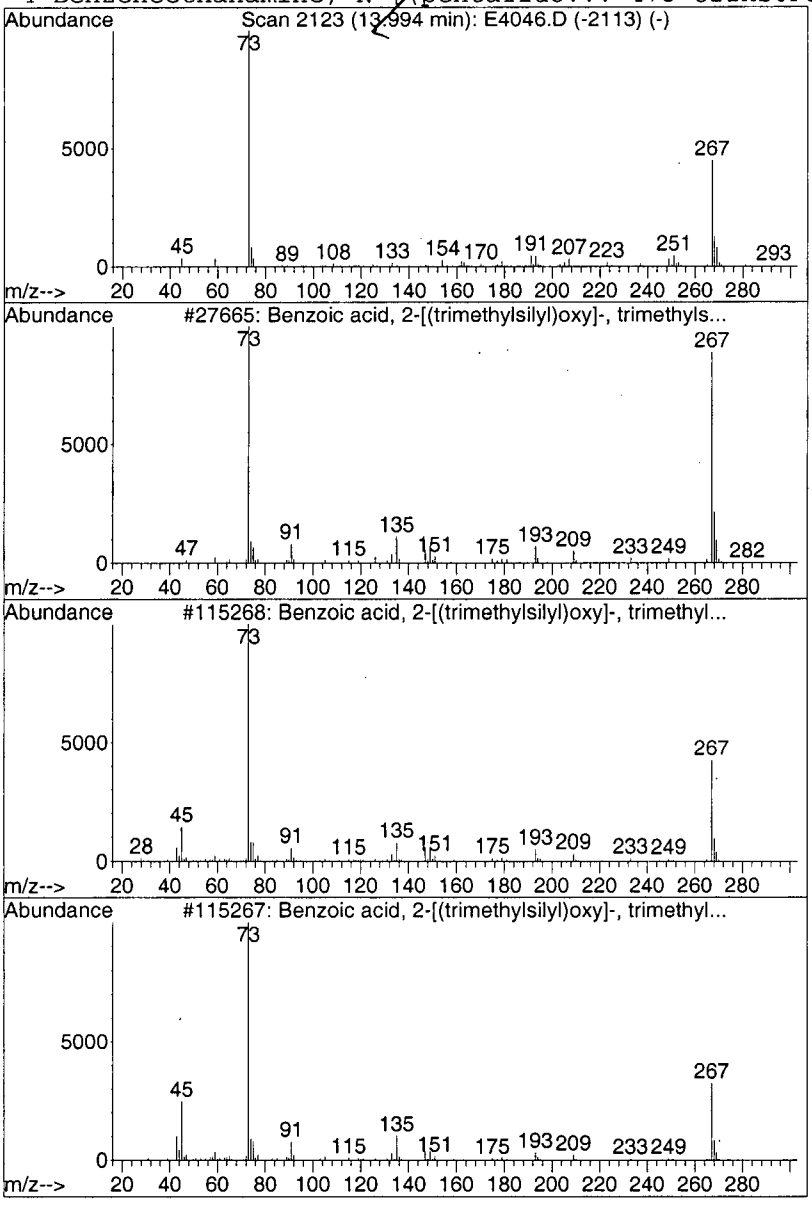
****

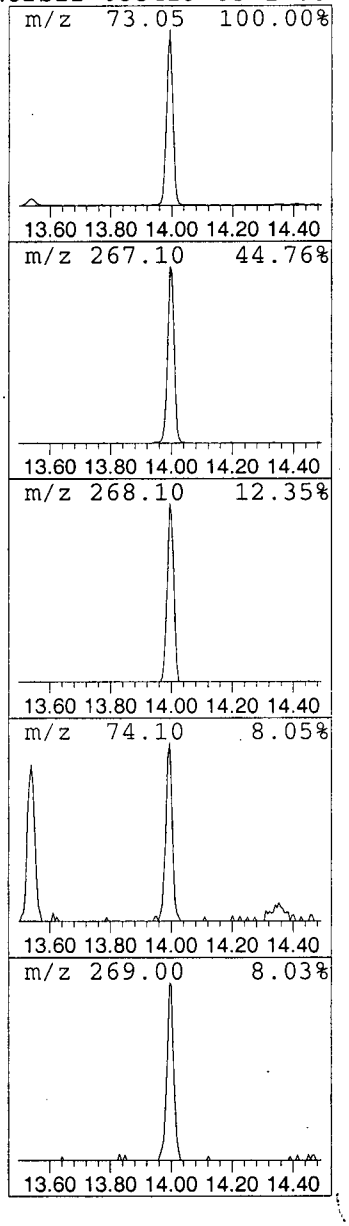
Peak Number 5 Benzoic acid, 2-[(trimethyl... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.99	1.21 ug/L	487502	1,4-Dichlorobenzene-d4	13.19

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	59
2	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	56
3	Benzoic acid, 2-[(trimethylsilyl...	282	C13H22O3Si2	003789-85-3	56
4	Benzeneethanamine, N-[(pentafluo...	475	C21H26F5NO2Si2	055429-85-1	25

unknown





11337

1LCA
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.

VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.001 Date Received: _____

Lab File ID: E4116 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.20	J
75-01-4	Vinyl Chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon Disulfide	0.50	U
79-20-9	Methyl Acetate	0.50	U
75-09-2	Methylene Chloride	0.61	B
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon Tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

1338

1LCB
LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS
DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.001 Date Received: _____

Lab File ID: E4116 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (UG/L)	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
1330-20-7	Xylene (total)	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1LCF

LOW CONCENTRATION WATER VOLATILE ORGANICS ANALYSIS

DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VHBLK01

Lab Name: A4 SCIENTIFIC, INC. Contract: 68-W-01-038

Lab Code: A4 Case No.: 31519 Client No.: SDG No.: Y0SJ2

Lab Sample ID: 2762.001 Date Received: _____

Lab File ID: E4116 Date Analyzed: 04/02/2003

Purge Volume: 25 (ML) Dilution Factor: 1.0

GC Column: DB-624 ID: 0.20 (MM) Length: 25 (M)

Number TICs found: 0

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC. (UG/L)	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 02 16:40:39 2003

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4109.RES

KAC 04/02/03

Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:43:22 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4109.D
DataAcq Meth : VOAC

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Difluorobenzene	6.30	114	774557	5.00 ug/L	0.00
28) Chlorobenzene-d5	10.31	117	587075	5.00 ug/L	0.00
60) 1,4-Dichlorobenzene-d4	13.19	152	210544	5.00 ug/L	0.00
System Monitoring Compounds					
4) Vinyl Chloride-d3	2.13	65	375208	5.29 ug/L	-0.02
Spiked Amount 5.000	Range 49 - 138		Recovery	= 105.80%	
7) Chloroethane-d5	2.53	69	340411	5.77 ug/L	0.00
Spiked Amount 5.000	Range 60 - 126		Recovery	= 115.40%	
10) 1,1-Dichloroethene-d2	3.24	65	181582	6.13 ug/L	-0.01
Spiked Amount 5.000	Range 65 - 130		Recovery	= 122.60%	
20) 2-Butanone-d5	4.87	46	33908	5.05 ug/L	0.00
Spiked Amount 5.000	Range 42 - 171		Recovery	= 101.00%	
24) Chloroform-d	5.23	86	420510	5.91 ug/L	0.00
Spiked Amount 5.000	Range 80 - 123		Recovery	= 118.20%	
26) 1,2-Dichloroethane-d4	5.81	65	221149	5.93 ug/L	0.00
Spiked Amount 5.000	Range 78 - 129		Recovery	= 118.60%	
32) Benzene-d6	5.85	84	1605741	5.87 ug/L	0.00
Spiked Amount 5.000	Range 78 - 121		Recovery	= 117.40%	
35) 1,2-Dichloropropane-d6	6.79	67	376104	5.02 ug/L	0.00
Spiked Amount 5.000	Range 84 - 123		Recovery	= 100.40%	
41) Toluene-d8	8.20	98	1469082	5.51 ug/L	0.00
Spiked Amount 5.000	Range 77 - 120		Recovery	= 110.20%	
43) trans-1,3-Dichloropropene-	8.53	79	52129	5.60 ug/L	0.00
Spiked Amount 5.000	Range 80 - 128		Recovery	= 112.00%	
47) 2-Hexanone-d5	9.13	46	44282	4.31 ug/L	0.00
Spiked Amount 5.000	Range 37 - 169		Recovery	= 86.20%	
58) 1,1,2,2-Tetrachloroethane-	12.08	84	144836	5.55 ug/L	0.00
Spiked Amount 5.000	Range 75 - 131		Recovery	= 111.00%	
61) Bromoform-d	11.51	174	78815	4.87 ug/L	0.00
Spiked Amount 5.000	Range 76 - 135		Recovery	= 97.40%	
65) 1,2-Dichlorobenzene-d4	13.54	152	296360	5.48 ug/L	0.00
Spiked Amount 5.000	Range 50 - 150		Recovery	= 109.60%	

Target Compounds					Qvalue
3) Chloromethane	1.97	50	41487	0.20 ug/L J	75
16) Methylene Chloride	3.68	84	39308	0.61 ug/L B	98

1341

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

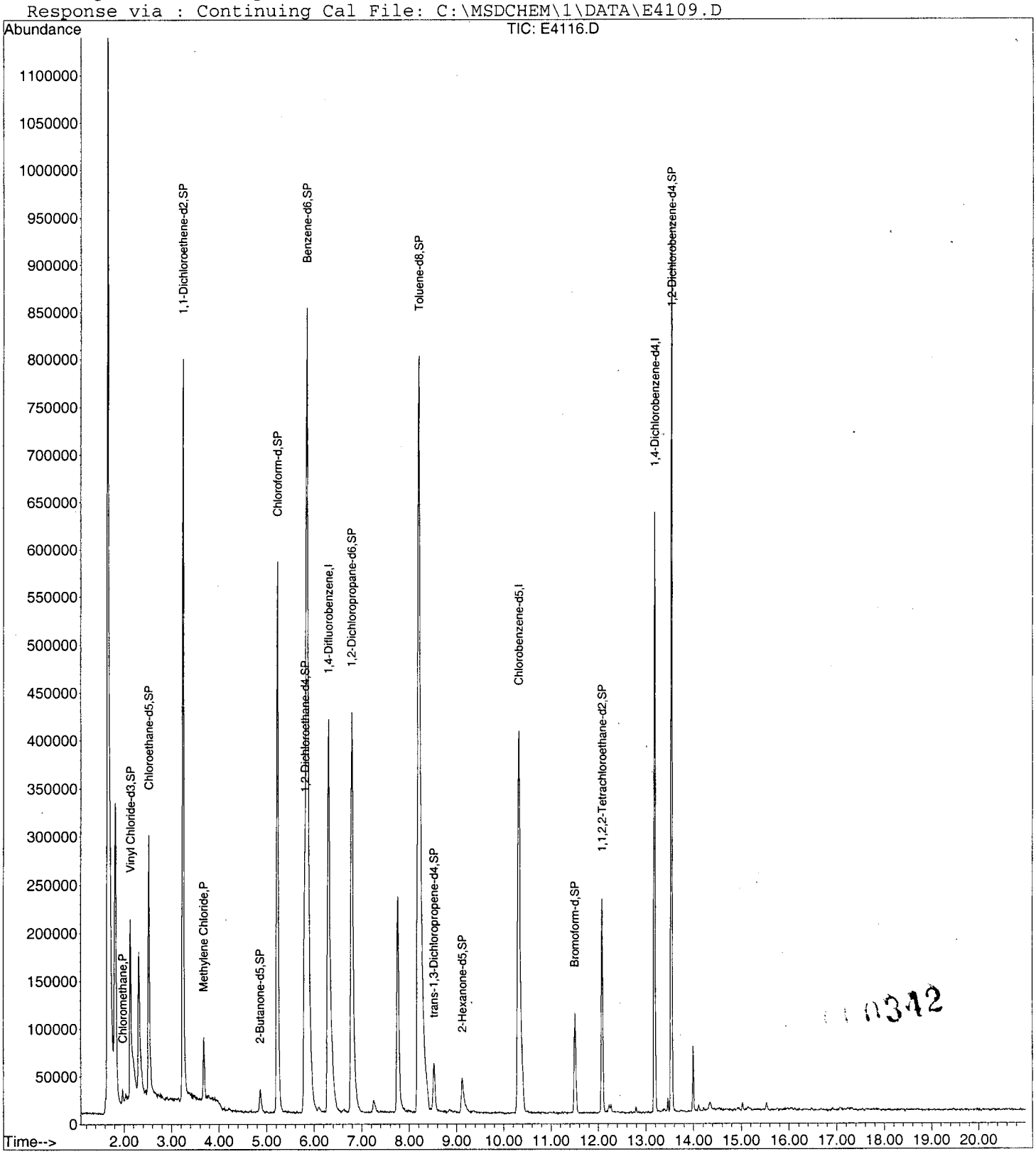
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: RTEINT.P
Quant Time: Apr 2 16:47 2003

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

Quant Results File: LCE4109.RES

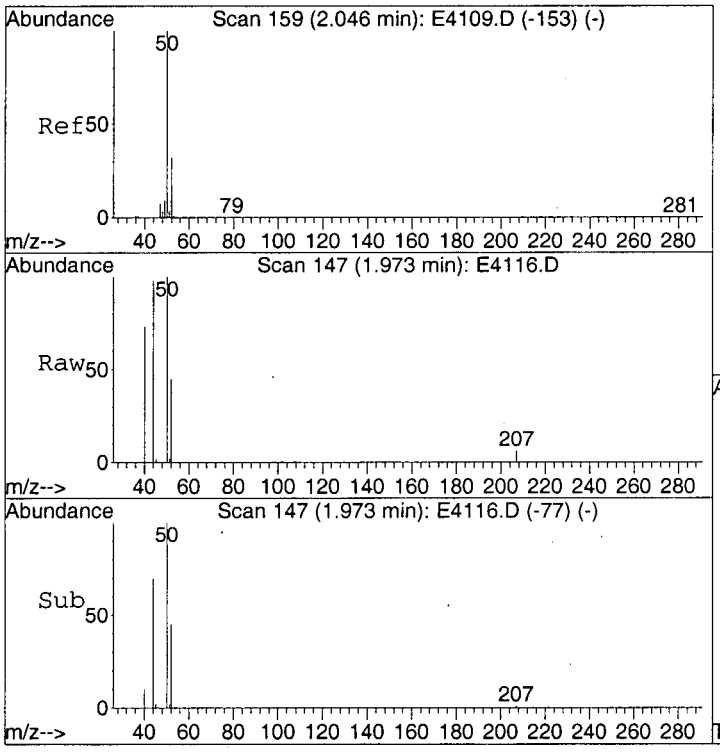
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Last Update : Wed Apr 02 10:43:22 2003
Response via : Continuing Cal File: C:\MSDCHEM\1\DATA\E4109.D



0342

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

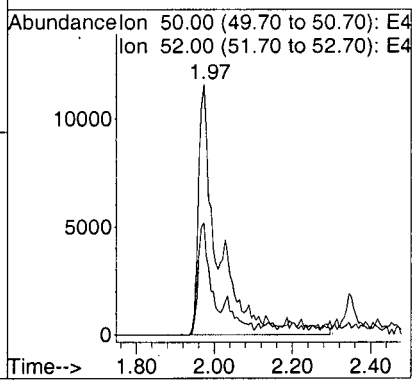
Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

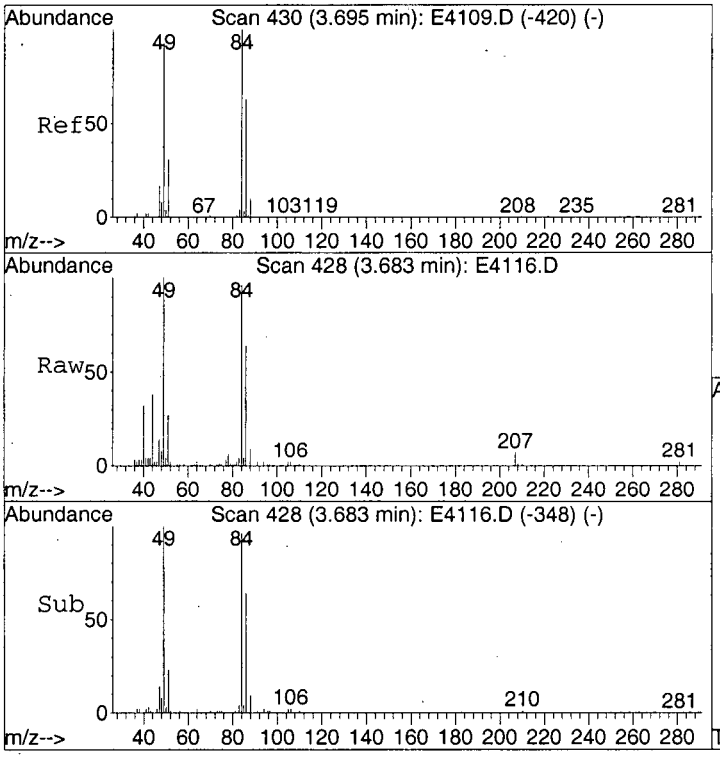


#3
Chloromethane
Concen: 0.20 ug/L
RT: 1.97 min Scan# 147
Delta R.T. -0.07 min
Lab File: E4116.D
Acq: 2 Apr 2003 15:40

Tgt Ion: 50 Resp: 41487

Ion	Ratio	Lower	Upper
50	100		
52	46.9	12.7	52.7

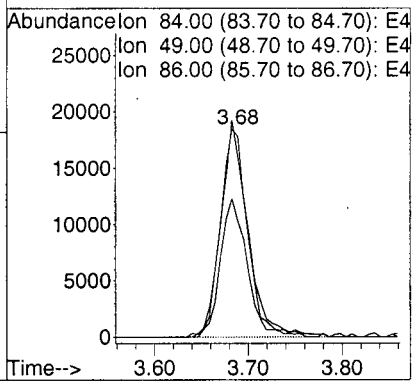




#16
Methylene Chloride
Concen: 0.61 ug/L
RT: 3.68 min Scan# 428
Delta R.T. -0.01 min
Lab File: E4116.D
Acq: 2 Apr 2003 15:40

Tgt Ion: 84 Resp: 39308

Ion	Ratio	Lower	Upper
84	100		
49	93.9	76.1	116.1
86	61.9	44.2	84.2



0343

LSC Area Percent Report

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: Lscint.p

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Smoothing : OFF
Sampling : 1
Start Thrs: 0.2
Stop Thrs : 0

Filtering: 5
Min Area: 100000 Area counts
Max Peaks: 40
Peak Location: TOP

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

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.657	89	95	115	rBV	1211637	3374888	91.95%	13.187%
2	1.815	115	121	141	rVB	313686	863480	23.53%	3.374%
3	2.138	167	174	196	rBV	188339	571630	15.57%	2.234%
4	2.314	197	203	218	rVB	144217	394488	10.75%	1.541%
5	2.527	229	238	255	rBV	270668	577537	15.73%	2.257%
6	3.245	349	356	370	rBV	772698	1591867	43.37%	6.220%
7	3.683	422	428	435	rBV2	65331	128822	3.51%	0.503%
8	5.234	671	683	701	rBV	575640	1475303	40.19%	5.765%
9	5.849	768	784	814	rBV3	841902	3670467	100.00%	14.342%
10	6.305	849	859	891	rBV	410364	1663688	45.33%	6.501%
11	6.792	928	939	958	rBV2	417386	1514769	41.27%	5.919%
12	7.765	1090	1099	1116	rBV	224889	668924	18.22%	2.614%
13	8.203	1160	1171	1210	rBV	791825	3621622	98.67%	14.151%
14	8.525	1217	1224	1237	rVB3	51011	154592	4.21%	0.604%
15	9.128	1314	1323	1334	rBV3	37196	137721	3.75%	0.538%
16	10.320	1507	1519	1544	rBV	399602	1605374	43.74%	6.273%
17	11.506	1706	1714	1724	rBV	105058	266371	7.26%	1.041%
18	12.078	1802	1808	1817	rVB	223062	470398	12.82%	1.838%
19	13.185	1983	1990	2000	rBV	627621	1127541	30.72%	4.406%
20	13.538	2040	2048	2058	rBV	937709	1608690	43.83%	6.286%
21	13.995	2117	2123	2131	rBV2	69348	103821	2.83%	0.406%

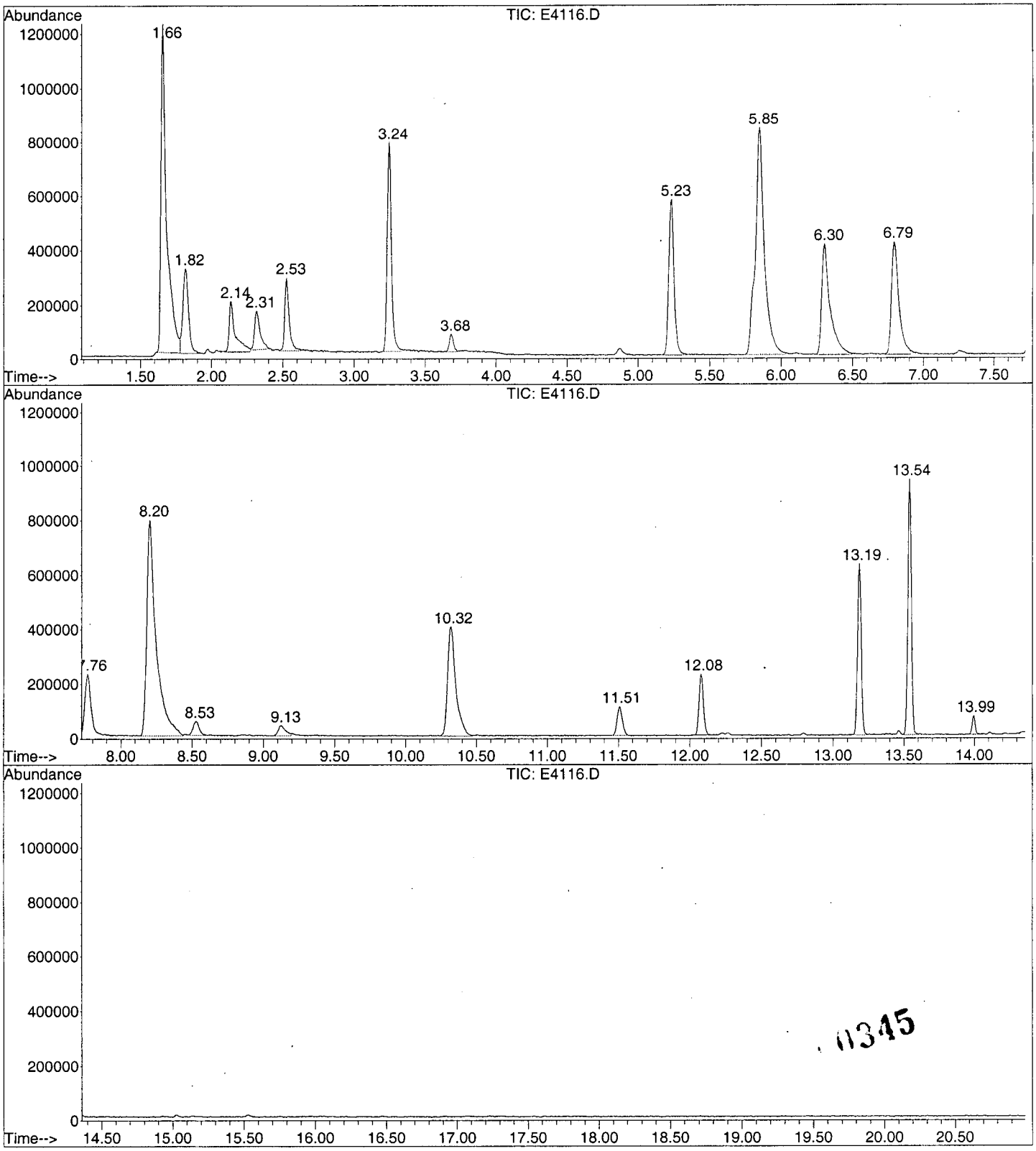
Sum of corrected areas: 25591993

0344

LSC Report - Integrated Chromatogram

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: RTEINT.P
Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00



0345

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: Lscint.p

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

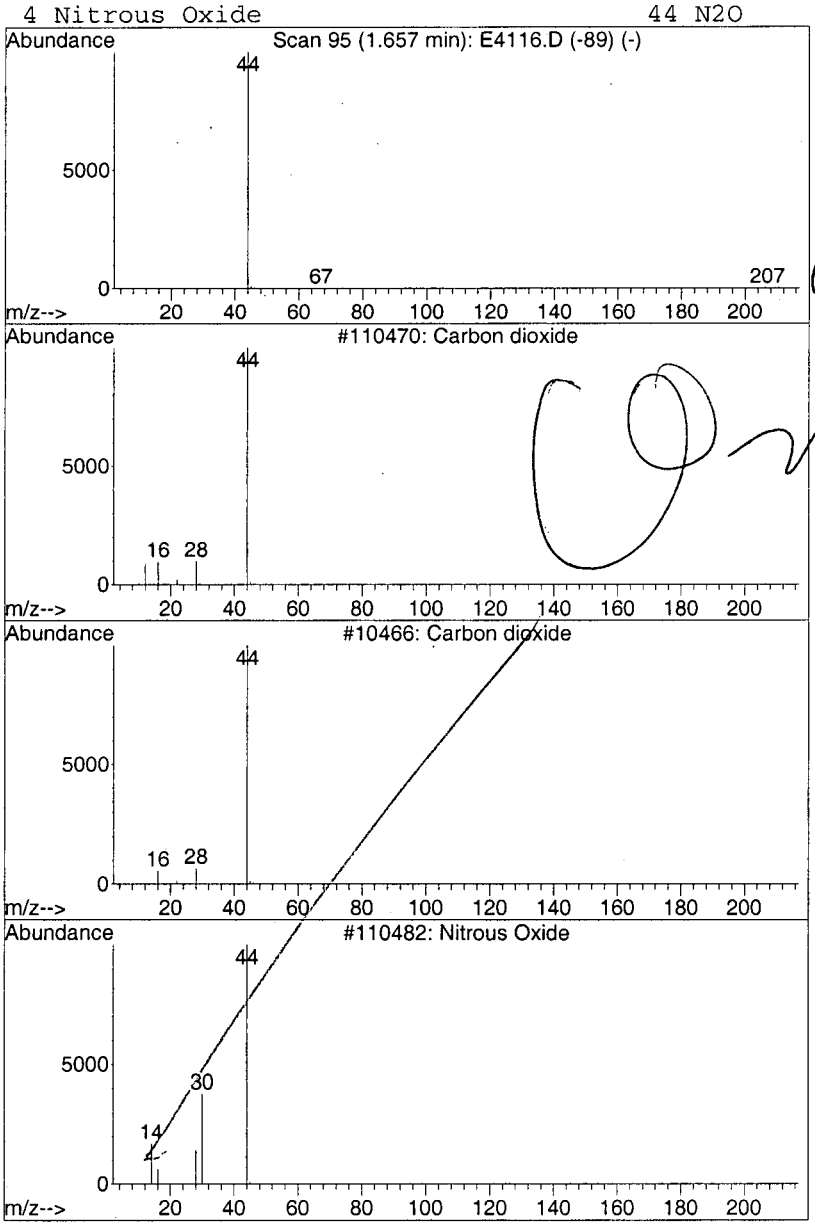
Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

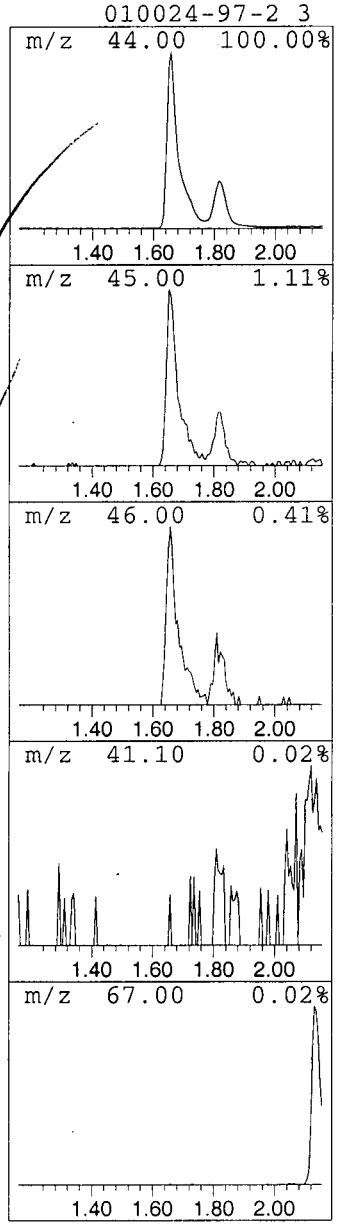
****

Peak Number 1 Carbon dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.66	10.14 ug/L	3374890	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





0316

Library Search Compound Report

Data File : C:\MSDCHEM\1\DATA\E4116.D
Acq On : 04/02/2003 1540
Sample : VHBLK01
Misc : 2762.001 25ML
MS Integration Params: Lscint.p

Vial: 9
Operator: AK
Inst : E-5973
Multiplr: 1.00

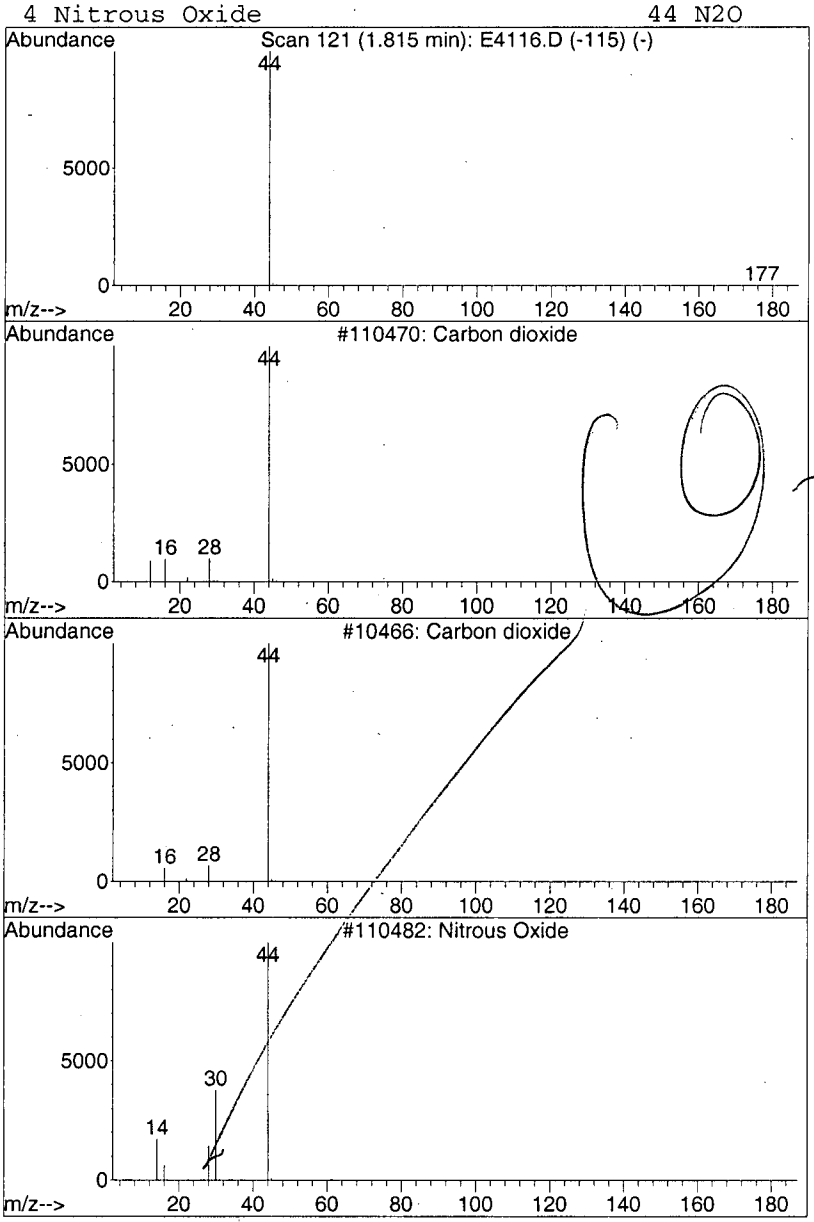
Quant Method : C:\MSDCHEM\1\METHODS\LCE4109.M (RTE Integrator)
Title : Voa Low Concentration Organics - OLC03.2
Library : C:\DATABASE\NIST98.L

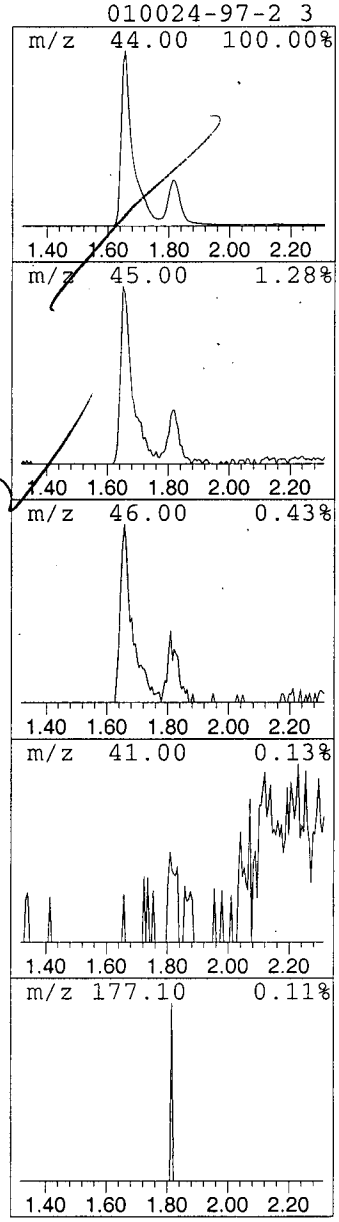
****

Peak Number 2 Carbon dioxide Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.82	2.60 ug/L	863480	1,4-Difluorobenzene	6.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Carbon dioxide	44	CO2	000124-38-9	4
2	Carbon dioxide	44	CO2	000124-38-9	4
3	Nitrous Oxide	44	N2O	010024-97-2	3
4	Nitrous Oxide	44	N2O	010024-97-2	3





11347

A4 Scientific
1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 091-0402

INSTRUMENT RUN LOG – GC/MS PURGEABLES
INSTRUMENT ID: E-5973

ROUTINE MAINTENANCE (record major maintenance in the Maintenance Logbook): _____

TUNE FILE ID: A4BFB.U EMV: 2035 DATE: 03/26/03
METHOD FILEs: BFB.M, VOAC.M, LCE4004.M INTRNAL STD. ID: 166-001-03
ANALYTICAL METHOD: OLC03.2 SOP: A4-VOA-300-B SURR. STD. ID: 166-002-03

FILE ID	CLIENT SAMPLE ID	LAB SAMPLE ID	SAMPLE WT/VOL	AUTO SAMPLER POSITION	DIL	INJ. VOL.	STANDARDS ID pH & COMMENTS
E4001	BFB4M	EBFB4M	1ul	-	–	–	✓
02	VSTD025 4M	EVSTD025 4M	25ul	2	–	–	✓
03	0104M	0104M		3	–	–	✓
04	0054M	0054M		4	–	–	✓
05	0014M	0014M		5	–	–	✓
06	0.54M	0.54M		6	–	–	✓
07	0.54M	0.54M		7	–	–	

NOTES : _____ 11348

ANALYST: _____ REVIEWER: _____

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 091-0402

INSTRUMENT RUN LOG – GC/MS PURGEABLES
INSTRUMENT ID: E-5973

ROUTINE MAINTENANCE (record major maintenance in the Maintenance Logbook): _____

TUNE FILE ID: A4BFB.U EMV: 2035 DATE: 03/27/03

METHOD FILEs: BFB.M, VOAC.M, LCE4009.M INTRNAL STD. ID: 166-001-03

ANALYTICAL METHOD: OLC03.2 SOP: A4-VOA-300-B SURR. STD. ID: 166-002-03

FILE ID	CLIENT SAMPLE ID	LAB SAMPLE ID	SAMPLE WT/VOL	AUTO SAMPLER POSITION	DIL	INJ. VOL.	STANDARDS ID pH & COMMENTS
E4008	BFB4N	EBFB4N	1ul	—	—	—	✓ 0753
09	VSTD0054N	EVSTD0054N	25ml	2	—	—	✓
10	VBLK4N	EVBLK4N		3	—	—	✓
11	CAQY9	2759.017		4	—	—	✓ pH<2
12	CAQZ2	.018		5	—	—	✓
13	CAQS0	.005		6	—	—	✓
14	YOSL6	2761.004		7	—	—	✓ pH<2
15	YOSL7	.005		8	—	—	✓
16	YOSL3DL	.002DL		9	5x	—	✓
17	YOSL4DL	.003DL		10	25x	—	x
18	YOSJ2DL	2762.002DL		11	10x	—	✓
19	YOSJ3DL	.003DL		12	8x	—	✓
20	YOSJ5	.005		13	—	—	✓ pH<2
21	YOSJ4DL	.004DL		14	—	—	✓
22	YOSL9	2775.002		15	—	—	✓ pH<2
23	YOSL3	2761.002		16	—	—	✓ 1918

11349

NOTES : _____

ANALYST: [signature] REVIEWER: [signature]

instrument run log-gcms purgeables.doc

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 091-0402

INSTRUMENT RUN LOG – GC/MS PURGEABLES
INSTRUMENT ID: E-5973

ROUTINE MAINTENANCE (record major maintenance in the Maintenance Logbook): _____

TUNE FILE ID: A4BFB.U EMV: 2035 DATE: 03/28/03
METHOD FILEs: BFB.M, VOAC.M, LCE4041.M INTRNAL STD. ID: 166-001-03
ANALYTICAL METHOD: OLC03.2 SOP A4-VOA-300-B SURR. STD. ID: 166-002-03

FILE ID	CLIENT SAMPLE ID	LAB SAMPLE ID	SAMPLE WT/VOL	AUTO SAMPLER POSITION	DIL	INJ. VOL.	STANDARDS ID pH & COMMENTS
E4040	BFB4P	EBFB4P	1ul	—	—	—	✓ 0946
41	VSTD0054P	EVSTD0054P	2-5ml	2	—	—	✓
42	VBLK4P	EVBLK4P		3	—	—	✓
43	YOSJ2	2762-002		4	—	—	✓ pH<2
44	VIBLK01	EVIBLK01		5	—	—	✓
45	YOSJ3	2762-003		6	—	—	✓ pH<2
46	VIBLK02	EVIBLK02		7	—	—	✓
47	YOSJ4	2762-004		8	—	—	✓ pH<2
48	VIBLK03	EVIBLK03		9	—	—	Not used
49	VIBLK04	EVIBLK04		10	—	—	
50	VIBLK05	EVIBLK05		11	—	—	
51	VIBLK06	EVIBLK06		12	—	—	

11350

NOTES : _____

ANALYST: KM REVIEWER: [illegible]

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 091-0402

INSTRUMENT RUN LOG – GC/MS PURGEABLES
INSTRUMENT ID: E-5973

ROUTINE MAINTENANCE (record major maintenance in the Maintenance Logbook): _____

TUNE FILE ID: A4BFB.U EMV: 2035 DATE: 04/02/03

METHOD FILEs: BFB.M, VOAC.M, LCE4109.M INTRNAL STD. ID: 166-008-03

ANALYTICAL METHOD: OLC03.2 SOP: A4-VOA-300-B SURR. STD. ID: 166-009-03

FILE ID	CLIENT SAMPLE ID	LAB SAMPLE ID	SAMPLE WT/VOL	AUTO SAMPLER POSITION	DIL	INJ. VOL.	STANDARDS ID pH & COMMENTS
E4108	BFB4U	EBFB4U	1ml	–	–	–	✓ 0910
09	VSTD0054U	EVSTD0054U	25 ml	2	–	–	✓
10	VBLK4U	EVBLK4U		3	–	–	✓
11	CAR06	2795.010		4	–	–	✓ pH<2
12	C09E2DL	2817.002DL		5	2X	–	✓
13	C09E4	↓ .004		6	–	–	✓ pH<2
14	VHBLK01	2757.001		7	–	–	✓
15	VHBLK01	2759.001		8	–	–	✓
16	VHBLK01	2762.001		9	–	–	✓
17	VHBLK01	2804.001		10	–	–	✓
18	C09E3	2817.003		11	–	–	✓ pH<2
19	VHBLK01	2795.001		12	–	–	X
20	VHBLK01	2761.001		13	–	–	✓
21	VHBLK01	2776.001		14	–	–	✓
22	VHBLK01	2817.001		15	–	–	✓ 2059
							11351

NOTES : _____

ANALYST: KBR REVIEWER: [signature]

instrument run log-gcms purgeables.doc

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-001-03

ANALYST: AK

SOLUTION NAME: I.S OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 03/26/03

TOTAL VOL.(mL): 0.5 ml

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-013-002	2500	8	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11352

REVIEWER:

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-002-03

ANALYST: AK

SOLUTION NAME: K. Surr OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 03/26/03

TOTAL VOL.(mL): 0.5 mL

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-035-13	20,000	5	200
020-035-14	20,000	5	200

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11353

REVIEWER: [illegible]

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-003-03 ANALYST: AK

SOLUTION NAME: N.K.Surr OLC03.2

DILUTION SOLVENT #.: ~~03/26/03~~ KDR MeOH (020-031-05)

PREP DATE: 04/23/03 KDR TOTAL VOL.(mL): 0.5 ml

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-038-03	1000	240 KDR	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

REVIEWER: ESP

.0354

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-004-03

ANALYST: AK

SOLUTION NAME: K.Std OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 03/26/03

TOTAL VOL.(mL): 0.5 ml

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-034-12	5000	20	200

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

0355

REVIEWER:

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-005-03 ANALYST: AL

SOLUTION NAME: N.K.Std. OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 03/26/03 TOTAL VOL.(mL): 0.5

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-034-~~0~~ 11	2000	10	40
020-034-13	2000	10	40
020-035-12	2000	10	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

0356

REVIEWER:

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-006-03

ANALYST: AR

SOLUTION NAME: Gases OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 03/26/03

TOTAL VOL.(mL): 0.5

EXPIRATION DATE: 04/01/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-036-14	2000	10	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11357

REVIEWER:

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-008-03 ANALYST: AK

SOLUTION NAME: I.S OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03 TOTAL VOL.(mL): 0.5 ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-013-002	2500	8	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

0358

REVIEWER: ESP

A4 Scientific
1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-009-03

ANALYST: AK

SOLUTION NAME: K-Surr OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03

TOTAL VOL.(mL): 0.5ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-035-13	20,000	5	200
020-035-14	20,000	5	200

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11359

REVIEWER: ESB

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-010-03

ANALYST: AR

SOLUTION NAME: N.K Surr OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03

TOTAL VOL.(mL): 0.5 ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-038-03	1000	20	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

0360

REVIEWER: EAP

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-011-03

ANALYST: AK

SOLUTION NAME: K.Std OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03

TOTAL VOL.(mL): 0.5ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-034-12	5000	20	200
	KA		

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11361

REVIEWER: EJP

A4 Scientific
1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166 - 012 - 03

ANALYST: AK

SOLUTION NAME: N.K. Std OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03

TOTAL VOL.(mL): 0.5ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020 - 034 - 11	2000	10	40
020 - 034 - 13	2000	10	40
020 - 035 - 12	2000	10	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

0362

REVIEWER: [illegible]

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 166-0103

ORGANICS STANDARD PREP LOGBOOK

SOLUTION NUMBER: 166-013-03

ANALYST: AK

SOLUTION NAME: Gases OLC03.2

DILUTION SOLVENT #.: MeOH (020-031-05)

PREP DATE: 04/02/03

TOTAL VOL.(mL): 0.5ml

EXPIRATION DATE: 04/08/03

LAB ID (Receipt Logbook)	CONC. (µg/mL)	ALIQUOT (µL)	FINAL CONC. (µg/mL)
020-036-14	2000	10	40

PROBLEMS ENCOUNTERED/SPECIAL TECHNIQUES UTILIZED

11363

REVIEWER: EBP

46

200

FedEx Express USA Airbill

FedEx Tracking Number 8358 5942 6446

Form I.D. No. 0215

Recipient's Copy

1 From This portion can be removed for Recipient's records.

Date 3/14/03 AM FedEx Tracking Number 835859426446

Sender's Name Amanda Cohen Phone 818 382-1900

Company WESTON SOLUTIONS INC

Address 14724 VENTURA BLVD STE 1000 Dept./Floor/Suite/Room

City SHERMAN OAKS State CA ZIP 91403

RECIPIENT: PEEL HERE

NO POUCH NEEDED. See back for peel and stick application instructions.

2 Your Internal Billing Reference 20074.515.025.069.0004

3 To

Recipient's Name Reddy Pakanati Phone 281 292-5277

Company AA

Address 1544 Sawdust Rd 505

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address Dept./Floor/Suite/Room

City The Woodlands State TX ZIP 77380

8358 5942 6446

0324449423

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location — Not available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Obtain Recip. Acct. No.
- [ ] Cash/Check

Total Packages 1 Total Weight 3 Total Charges

†Our liability is limited to $100 unless you declare a higher value. See the *FedEx Service Guide* for details.

Credit Card Auth.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com or call 1.800.Go.FedEx® 800.463.3339.

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447

(2)

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 31519
DAS No:
SDG No: Y0SJ2

L

Date Shipped:	3/19/2003
Carrier Name:	FedEx
Airbill:	835859426446
Shipped to:	A4 Scientific 1544 Sawdust Road Suite 505 The Woodlands TX 77380 (281) 292-5277

Chain of Custody Record

Sampler Signature: [signature]

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [signature]	3-19-03 1600	Federal Express	3-19-03 1600
2		[signature]	3/20/03 1035
3			
4			

For Lab Use Only

Lab Contract No:	68-W-01-038
Unit Price:	$390.00
Transfer To:	
Lab Contract No:	AS 03/21/03
Unit Price:	

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
Y0SJ2	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) ~~(8)~~ (3)	CHT-GW-1	S: 3/19/2003	14:30	MY0SJ2	Intact 1st Ex
Y0SJ3	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) (3)	CHT-GW-3	S: 3/19/2003	14:40	MY0SJ3	
Y0SJ4	Ground Water/ Amanda Cohan	M/G	VOA (21)	(HCL) (3)	CHT-GW-2	S: 3/19/2003	11:52	MY0SJ4	
Y0SJ5	Ground Water/ Amanda Cohan	L/G	VOA (21)	(HCL) (3)	CHT-GW-4	S: 3/19/2003	15:30	MY0SJ5	Last Ex

13105

Shipment for Case Complete? ~~N~~ Y ~~N~~	Sample(s) to be used for laboratory QC: Y0SJ2	Additional Sampler Signature(s): [signature]	Cooler Temperature Upon Receipt: 3°C	Chain of Custody Seal Number:
Analysis Key: VOA = CLP TCL Volatiles	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

TR Number: 9-233994445-031903-0004

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA, 20191-3400 Phone 703/264-9348 Fax 703/264-9222

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

Sample Log-In Report

Logged By: SA

Report Date: 04/09/2003 12:25:50

Client Name: USEPA
Client Project Name: LOW CONCENTRATION ORGANICS
ClientProject #: 68-W-01-038
P.O. No.:
Courier/No.:

Lab Project ID: CLP-OLC03.2
Date Logged: 03/21/03
Date Received: 03/20/03
Time Received: 10:35

Lab Sample ID	Client Sample ID	No. Cont.	Sample Matrix	Date Sampled	Time Sampled	Chain Of Custody No.	Date Due	Remarks
2762.001	VHBLK01	3	DW					LAB DW
	Tests Required							
	VOA_CLP_OLC03.2						03/27/03	
2762.002	Y0SJ2	3	GW	03/19/03	14:30	9-233994445-031903-0004		1ST SX
	Tests Required							
	VOA_CLP_OLC03.2						03/27/03	
2762.003	Y0SJ3	3	GW	03/19/03	14:40	9-233994445-031903-0004		
	Tests Required							
	VOA_CLP_OLC03.2						03/27/03	
2762.004	Y0SJ4	3	GW	03/19/03	11:52	9-233994445-031903-0004		
	Tests Required							
	VOA_CLP_OLC03.2						03/27/03	
2762.005	Y0SJ5	3	GW	03/19/03	15:30	9-233994445-031903-0004		LAST SX
	Tests Required							
	VOA_CLP_OLC03.2						03/27/03	

Instructions To Lab:

CASE#:31519 ; SDG#:Y0SJ2 ; TAT: 21 DAYS ; EPISODE IN THIS SDG:2762
CASE AND SDG CLOSED

1366

Lab Approval

Client Approval

SAMPLE LOG-IN SHEET

Lab Name A-4 Scientific	Page 1 of 1
Received By (Print Name) Elena Cruz	Log-in Date 3/20/03
Received By (Signature) Elena Cruz	
Case Number 31519	Sample Delivery Group No. YOSJ2 — Client Number —

Remarks:

1. Custody Seal(s) ~~Present~~/Absent* ~~Intact~~/Broken
2. Custody Seal Nos. NA
3. Chain of Custody Records ~~Present~~/Absent*
4. Traffic Reports or Packing Lists ~~Present~~/Absent*
5. Airbill ~~Airbill~~/Sticker ~~Present~~/Absent*
6. Airbill No. 8358594264 46
7. Sample Tags Present/~~Absent*~~
   Sample Tag Nos. Listed/Not Listed on Chain-of-Custody
8. Sample Condition ~~Intact~~/Broken*/Leaking
9. Cooler Temperature Indicator Bottle ~~Present~~/Absent*
10. Cooler Temperature 3°C
11. Does information on custody records, traffic reports, ~~and sample tags~~ agree? Yes/No* A.S 03/20/03
12. Date Received at Lab 3/20/03
13. Time Received 10:35

EPA Sample #	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
NHBLK01	NA	2762.001	3 vials
YOSJ2		.002	3
YOSJ3		.003	3
YOSJ4		.004	3
YOSJ5		.005	3
		A-S 03/20/03	

Sample Transfer

Fraction VOA	Fraction
Area # Cooler B	Area # A-1
By Elena Cruz	By 03/21/03
On 3/20/03	On

11:17

* Contact SMO and attach record of resolution

Reviewed By	Logbook No.
Date 03/21/03	Logbook Page No. A-S 03/21/03

FORM DC-1 OLC03.2

A4 SHIPPING NOTIFICATION FORM

Program: OLC03.2

Reg	Case Number	Date Shipped	Airbill Number	Samples Shipped No.	Matrix	Analysis	Sampling Method	TA	Fax Number for Preliminary Results	Case Complete
9	31519	3/19/2003	835859426446	8	Water	VOA	N/A	21	Not Required	Yes
9	31520	3/20/2003	835859426516	3	Water	VOA	N/A	21	Not Required	Yes

Lab should verify all sample shipments and determine whether the TR/COCs received match shipping and scheduling information that is provided by SMO. Call your SMO coordinator if there is a problem with the information above.

Key

Ag - Silver	BNA - Semivolatiles	Cu - Copper	Na - Sodium	Se - Selenium
Al - Aluminum	Ca - Calcium	Fe - Iron	Ni - Nickel	Tl - Thallium
Sb - Antimony	Cd - Cadmium	Hg - Mercury	Pb - Lead	V - Vanadium
As - Arsenic	CN - Cyanide	K - Potassium	PEST - Pesticides	VOA - Volatiles
Ba - Barium	Co - Cobalt	Mg - Magnesium	PR - Preliminary Results	Zn - Zinc
Be - Beryllium	Cr - Chromium	Mn - Manganese		

ICP Metals - TAL Metals without Mercury (Hg)
Filtered - Samples have been filtered in the field

ILM04.1 Analyses
TM - Total Metals
CN - Cyanide
DM - Dissolved Metals

Coordinator	Regions	Telephone	Email
Heather Bauer	1 and 2	703-264-9348	heather.bauer@dyncorp.com
Jessica Brown	4, 5, 8	703-264-9349	Jessica.brown@dyncorp.com
Adam Carscadden	6 and 7	703-264-9512	adam.carscadden@dyncorp.com
Carolyn Mack	10 and QBs	703-264-9323	carolyn.mack@dyncorp.com
Holly Sturdavant	3 and 9	703-264-9526	holly.sturdavant@dyncorp.com

CCS FAX Number for preliminary result is (703) 715-4820
CCS Secondary Fax Number for preliminary result is (703) 264-9236

Case is Complete

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
OFFICIAL SAMPLE SEAL

SAMPLE NO.

DATE 3-19-02

SIGNATURE Anita Dice

PRINT NAME AND TITLE *(Inspector, Analyst or Technician)*

SEAL BROKEN BY

DATE

EPA FORM
7500-2(R7-75)

A4 Scientific

1544 Sawdust Road, Suite 505
The Woodlands, TX 77380

RCN: 129-1002

CUSTODY LOGBOOK
VOLATILES LABORATORY

SAMPLE ID	CONTAINER TYPE & NUMBER		IN OR OUT	BY	DATE & TIME	VERIFIED BY	COMMENTS
2759.004	40ml	2	IN	E.C	3-20-03 13:10	KA	
.005							
.006							
.007							
.008							
.009							
.010		6					
.011		2					
.012							
.013							
.014							
.015							
.016							
.017							
.018							
2761.001	40ml	3	IN	E.C	3-20-03 16:00	KA	
.002							
.003							
.004							
.005							
2762.001	40ml	3	IN	E.C	3-20-03 16:00	KA	
.002							
.003							
.004							
.005							1370
2764.002	40ml	6	IN	E.C	3-20-03 6:30	KA	