W03804

0058599

W03804 Sample Data Summary **1**

Sample Receipt Documentation **20**

Volatiles **23**
- QC Summary 24
- Raw Sample Data 38
- Standards Data 55
- Raw QC Data 214
- Miscellaneous Data 255

Sample Receipt Documentation **266**

Total Number of Pages **268**

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SEVERN TRENT SERVICES

CERTIFICATE OF ANALYSIS

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Knoxville, TN 37921-5947

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Fax: 865-584-4315
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Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

August 15, 2002

Attention: Keith Maki

W03804 Dayes 8/29/02

AUG 2002 RECEIVED

SAF Number	:	B99-009
Date Samples Received	:	July 18, 2002
Number of Samples	:	Two (2)
Sample Type	:	Air
Data Deliverable	:	45 Day Data Package

I. Introduction

Two (2) air samples were received on July 18, 2002 by the STL Knoxville Laboratory for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Bechtel Hanford, Inc. (BHI) specific ID:

STLKL ID#	BHI ID#	MATRIX	DATE OF RECEIPT
E4W71	B15376	Air	07/18/02
E4W73	B15377	Air	07/18/02

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information and analytical results.

The requested analysis was:

Volatile Organics by TO-14

0000002

III. Quality Control

The analytical results for the analysis performed includes a minimum of one Laboratory Control Sample (LCS).

Quality control sample results are reported in the same units as sample results.

IV. Comments

The original chain of custody documentation is included with this report.

Unless otherwise noted, all holding times and QC criteria were met. The test results shown in this report meet all applicable NELAC requirements. Any exceptions are noted below.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:

Jamie McKinney
Project Manager

Sample Data Summary

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2G180110 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W711AA Date Extracted:08/05/02
Dilution factor: 1.55 Date Analyzed: 08/06/02

QC Batch: 2218255

Client Sample Id: B15376

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.8	U
56-23-5	Carbon tetrachloride	0.31	U
67-66-3	Chloroform	0.31	U
75-09-2	**Methylene chloride**	**3.5**	
127-18-4	**Tetrachloroethene**	**0.31**	
79-01-6	Trichloroethene	0.31	U
78-93-3	2-Butanone (MEK)	0.78	U

BECHTEL HANFORD, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: W03804

Matrix: (soil/water) AIR Lab Sample ID: H2G180110 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W731AA Date Extracted: 08/09/02
Dilution factor: 688.67 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: B15377

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	3400	U
56-23-5	**Carbon tetrachloride**	**10000**	
67-66-3	Chloroform	140	U
75-09-2	Methylene chloride	340	U
127-18-4	Tetrachloroethene	140	U
79-01-6	Trichloroethene	140	U
78-93-3	2-Butanone (MEK)	340	U

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number: W03804

Matrix: (soil/water) AIR Lab Sample ID: H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/26/02
Work Order: E50GF1AA Date Extracted: 08/05/02
Dilution factor: 1 Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.50	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/26/02
Work Order: E50GF1AC Date Extracted:08/05/02
Dilution factor: 1 Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18	
56-23-5	Carbon tetrachloride	9.9	
67-66-3	Chloroform	9.7	
75-09-2	Methylene chloride	9.6	
127-18-4	Tetrachloroethene	9.7	
79-01-6	Trichloroethene	10	
75-71-8	Dichlorodifluoromethane	11	
74-87-3	Chloromethane	9.2	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	10	
75-01-4	Vinyl chloride	9.8	
74-83-9	Bromomethane	9.9	
75-00-3	Chloroethane	9.9	
75-69-4	Trichlorofluoromethane	9.8	
75-35-4	1,1-Dichloroethene	9.9	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	9.8	
75-34-3	1,1-Dichloroethane	9.9	
156-59-2	cis-1,2-Dichloroethene	9.8	
71-55-6	1,1,1-Trichloroethane	10	
107-06-2	1,2-Dichloroethane	11	
71-43-2	Benzene	9.6	
78-87-5	1,2-Dichloropropane	9.3	
10061-01-5	cis-1,3-Dichloropropene	9.9	
10061-02-6	trans-1,3-Dichloropropene	10	
108-88-3	Toluene	9.8	
79-00-5	1,1,2-Trichloroethane	9.7	
106-93-4	1,2-Dibromoethane (EDB)	9.6	
108-90-7	Chlorobenzene	9.7	
100-41-4	Ethylbenzene	9.6	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/26/02
Work Order: E50GF1AC Date Extracted:08/05/02
Dilution factor: 1 Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
136777-61-2	m-Xylene & p-Xylene	9.7	
100-42-5	Styrene	9.4	
95-47-6	o-Xylene	9.4	
79-34-5	1,1,2,2-Tetrachloroethane	9.2	
108-67-8	1,3,5-Trimethylbenzene	9.6	
95-63-6	1,2,4-Trimethylbenzene	9.3	
541-73-1	1,3-Dichlorobenzene	9.3	
100-44-7	Benzyl chloride	9.4	
106-46-7	1,4-Dichlorobenzene	9.4	
95-50-1	1,2-Dichlorobenzene	9.4	
120-82-1	1,2,4-Trichlorobenzene	9.9	
87-68-3	Hexachlorobutadiene	8.2	

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E6AR51AA Date Extracted:08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.50	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/18/02
Work Order: E6AR51AC Date Extracted:08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18	
56-23-5	Carbon tetrachloride	9.9	
67-66-3	Chloroform	9.8	
75-09-2	Methylene chloride	9.7	
127-18-4	Tetrachloroethene	10	
79-01-6	Trichloroethene	9.8	
75-71-8	Dichlorodifluoromethane	9.7	
74-87-3	Chloromethane	9.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	9.8	
75-01-4	Vinyl chloride	9.8	
74-83-9	Bromomethane	9.8	
75-00-3	Chloroethane	9.8	
75-69-4	Trichlorofluoromethane	9.8	
75-35-4	1,1-Dichloroethene	9.8	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	9.8	
75-34-3	1,1-Dichloroethane	9.9	
156-59-2	cis-1,2-Dichloroethene	9.9	
71-55-6	1,1,1-Trichloroethane	9.8	
107-06-2	1,2-Dichloroethane	9.8	
71-43-2	Benzene	10	
78-87-5	1,2-Dichloropropane	10	
10061-01-5	cis-1,3-Dichloropropene	9.9	
10061-02-6	trans-1,3-Dichloropropene	9.9	
108-88-3	Toluene	10	
79-00-5	1,1,2-Trichloroethane	9.8	
106-93-4	1,2-Dibromoethane (EDB)	10	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/18/02
Work Order: E6AR51AC Date Extracted:08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
136777-61-2	m-Xylene & p-Xylene	9.9	
100-42-5	Styrene	10	
95-47-6	o-Xylene	10	
79-34-5	1,1,2,2-Tetrachloroethane	9.9	
108-67-8	1,3,5-Trimethylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
541-73-1	1,3-Dichlorobenzene	9.9	
100-44-7	Benzyl chloride	10	
106-46-7	1,4-Dichlorobenzene	9.9	
95-50-1	1,2-Dichlorobenzene	10	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	8.7	

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2G180110 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W731AC Date Extracted:08/09/02
Dilution factor: 688.67 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: B15377 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	3400	U
56-23-5	Carbon tetrachloride	9700	
67-66-3	Chloroform	140	U
75-09-2	Methylene chloride	340	U
127-18-4	Tetrachloroethene	140	U
79-01-6	Trichloroethene	140	U
78-93-3	2-Butanone (MEK)	340	U

EPA-19 TO-14 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2G180110

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B15376	106	103	96	00
02	B15377	102	104	103	00
03	METHOD BLK. E50GF1AA	105	104	93	00
04	METHOD BLK. E6AR51AA	100	102	102	00
05	LCS E50GF1AC	106	102	96	00
06	LCS E6AR51AC	99	100	100	00
07	B15377 DUP	101	104	103	00

SURROGATES		QC LIMITS
SRG01	= 1,2-Dichloroethane-d4	(70-130)
SRG02	= Toluene-d8	(70-130)
SRG03	= 4-Bromofluorobenzene	(70-130)

\# Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

FORM II

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H060000 WO #: E50GF1AC
BATCH: 2218255

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	11	107	70- 130	
Chloromethane	10	9.2	92	70- 130	
1,2-Dichloro-1,1,2,2-tetr	10	10	102	70- 130	
Vinyl chloride	10	9.8	98	70- 130	
Bromomethane	10	9.9	99	70- 130	
Chloroethane	10	9.9	99	70- 130	
Trichlorofluoromethane	10	9.8	98	70- 130	
1,1,2-Trichloro-1,2,2-tri	10	9.8	98	70- 130	
Methylene chloride	10	9.6	96	70- 130	
1,1-Dichloroethane	10	9.9	99	70- 130	
Acetone	20	18	88	70- 130	
1,1-Dichloroethene	10	9.9	99	70- 130	
cis-1,2-Dichloroethene	10	9.8	98	70- 130	
Chloroform	10	9.7	97	70- 130	
1,1,1-Trichloroethane	10	10	103	70- 130	
1,2-Dichloroethane	10	11	107	70- 130	
Benzene	10	9.6	96	70- 130	
Carbon tetrachloride	10	9.9	99	70- 130	
1,2-Dichloropropane	10	9.3	93	70- 130	
Trichloroethene	10	10	100	70- 130	
cis-1,3-Dichloropropene	10	9.9	99	70- 130	
trans-1,3-Dichloropropene	10	10	100	70- 130	
Toluene	10	9.8	98	70- 130	
1,1,2-Trichloroethane	10	9.7	97	70- 130	
1,2-Dibromoethane (EDB)	10	9.6	96	70- 130	
Tetrachloroethene	10	9.7	97	70- 130	
Chlorobenzene	10	9.7	97	70- 130	
Ethylbenzene	10	9.6	96	70- 130	
m-Xylene & p-Xylene	10	9.7	97	70- 130	
Styrene	10	9.4	94	70- 130	
o-Xylene	10	9.4	94	70- 130	

(Continued on next page)

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H060000 WO #: E50GF1AC
BATCH: 2218255

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	9.2	92	70- 130	
1,3,5-Trimethylbenzene	10	9.6	96	70- 130	
1,2,4-Trimethylbenzene	10	9.3	93	70- 130	
1,3-Dichlorobenzene	10	9.3	93	70- 130	
Benzyl chloride	10	9.4	94	70- 130	
1,4-Dichlorobenzene	10	9.4	94	70- 130	
1,2-Dichlorobenzene	10	9.4	94	70- 130	
1,2,4-Trichlorobenzene	10	9.9	99	70- 130	
Hexachlorobutadiene	10	8.2	82	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H120000 WO #: E6AR51AC
BATCH: 2224250

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	9.7	97	70- 130	
Chloromethane	10	9.7	97	70- 130	
1,2-Dichloro-1,1,2,2-tetr	10	9.8	98	70- 130	
Vinyl chloride	10	9.8	98	70- 130	
Bromomethane	10	9.8	98	70- 130	
Chloroethane	10	9.8	98	70- 130	
Trichlorofluoromethane	10	9.8	98	70- 130	
Acetone	20	18	90	70- 130	
1,1-Dichloroethene	10	9.8	98	70- 130	
1,1,2-Trichloro-1,2,2-tri	10	9.8	98	70- 130	
Methylene chloride	10	9.7	97	70- 130	
1,1-Dichloroethane	10	9.9	99	70- 130	
cis-1,2-Dichloroethene	10	9.9	99	70- 130	
Chloroform	10	9.8	98	70- 130	
1,1,1-Trichloroethane	10	9.8	98	70- 130	
1,2-Dichloroethane	10	9.8	98	70- 130	
Benzene	10	10	100	70- 130	
Carbon tetrachloride	10	9.9	99	70- 130	
1,2-Dichloropropane	10	10	101	70- 130	
Trichloroethene	10	9.8	98	70- 130	
cis-1,3-Dichloropropene	10	9.9	99	70- 130	
trans-1,3-Dichloropropene	10	9.9	99	70- 130	
Toluene	10	10	100	70- 130	
1,1,2-Trichloroethane	10	9.8	98	70- 130	
1,2-Dibromoethane (EDB)	10	10	100	70- 130	
Tetrachloroethene	10	10	100	70- 130	
Chlorobenzene	10	10	100	70- 130	
Ethylbenzene	10	10	100	70- 130	
m-Xylene & p-Xylene	10	9.9	99	70- 130	
Styrene	10	10	100	70- 130	
o-Xylene	10	10	100	70- 130	

(Continued on next page)

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H120000 WO #: E6AR51AC
BATCH: 2224250

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	9.9	99	70- 130	
1,3,5-Trimethylbenzene	10	10	100	70- 130	
1,2,4-Trimethylbenzene	10	10	100	70- 130	
1,3-Dichlorobenzene	10	9.9	99	70- 130	
Benzyl chloride	10	10	101	70- 130	
1,4-Dichlorobenzene	10	9.9	99	70- 130	
1,2-Dichlorobenzene	10	10	100	70- 130	
1,2,4-Trichlorobenzene	10	10	103	70- 130	
Hexachlorobutadiene	10	8.7	87	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

0000018

FORM III

BLANK WORKORDER NO.

E50GF1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number: W03804

Lab File ID: ebk0805b.

Lot Number: H2G180110

Date Analyzed: 08/05/02

Time Analyzed: 16:42

Matrix: AIR

Date Extracted: 08/05/02

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: ME

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	B15376	E4W711AA	e4w71r.d	08/06/02	11:18
02	CHECK SAMPLE	E50GF1AC C	erf0805.d	08/05/02	15:32
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					

COMMENTS:

BLANK WORKORDER NO.

E6AR51AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number: W03804

Lab File ID: ebk0809b.

Lot Number: H2G180110

Date Analyzed: 08/09/02

Time Analyzed: 15:10

Matrix: AIR

Date Extracted: 08/09/02

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: ME

Level: (low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	B15377	E4W731AA	e4w73.d	08/09/02	16:24
02	B15377 DUP	E4W731AC X	e4w73d.d	08/09/02	16:58
03	CHECK SAMPLE	E6AR51AC C	erf0809.d	08/09/02	14:00
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
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COMMENTS:

FORM IV

Sample Receipt Documentation

H2618040

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947
Phone: (865) 291-3000
Fax: (865) 584-4315

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 7633
Page 1 of ___

Project Name/No. [1] Bottle order #2002
Sample Team Members [2]
Profit Center No. [3] 140
Project Manager [4]
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 07-16-02
Lab Destination [8] STL-Richland
Lab Contact [9] Barbara Gillespie
Project Contact/Phone [12]
Carrier/Waybill No. [13]

Bill to: [5] Jamie McKinney
STL-Knox

Report to: [10] Jamie McKinney
STL-Knox

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
Can# 1797	Air	NA	Summa	6L	None			
0049	↓	↓	↓	↓	↓		FOR LAB USE ONLY	
						Custody seals intact		
						received at ambient temp		
						BKD 7-18-02	FOR LAB USE ONLY	
						1 BOX FEDX# 792071252760		

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: [25]
Return to Client ☒ Disposal by Lab ☐ Archive (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Matthew T. Howard	Date: 07-12-02 Time: 08:21	1. Received by [28] (Signature/Affiliation) April Rhoulac	Date: 7-16-02 Time: 10:00
2. Relinquished by (Signature/Affiliation) April Rhoulac	Date: 7-17-02 Time: 14:00	2. Received by (Signature/Affiliation) Bryan K. Vannoy	Date: 7-18-02 Time: 08:45
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

0000022

17

1220180110

FH - Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-01	Page 1 of 1

Collector M. Baechler/T. Johansen	Company Contact J. V. Borghese	Telephone No. 373-3804	Project Coordinator TRENT, SJ	Price Code 9N Air Quality ☐	Data Turnaround 45 Days
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	Sampling Location 200-ZP-1		SAF No. F02-002		
Ice Chest No. N/A	Field Logbook No. HNF-N-295	COA 117523ES10	Method of Shipment Government Vehicle		
Shipped To Severn Trent Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	Summa Canister										
No. of Container(s)	1										
Volume	6L										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
B15376	GASEOUS	7/17/02	0942	X									AS-3
B15377	GASEOUS	7/17/02	0948	X									AS-2

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible] STL	7/17/02 1345	[illegible] A. Rhineheart STL	7/17/02 1345
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
[illegible] A Rhineheart STL	7/17/02 13:45	[illegible] STL	7-18-02 08:45
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) VOA - T0-14 {2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene}

Custody seal intact
received at ambient temp
DID 7-18-02
1 BOX FEDX # 7920 7125 2760

Matrix *
S=Soil
SE=Sediment
SO=Solid
SI=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (03/01/2002)

000023

22

Volatiles

QC Summary

EPA-19 TO-14 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2G180110

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B15376	106	103	96	00
02	B15377	102	104	103	00
03	METHOD BLK. E50GF1AA	105	104	93	00
04	METHOD BLK. E6AR51AA	100	102	102	00
05	LCS E50GF1AC	106	102	96	00
06	LCS E6AR51AC	99	100	100	00
07	B15377 DUP	101	104	103	00

SURROGATES		QC LIMITS
SRG01	= 1,2-Dichloroethane-d4	(70-130)
SRG02	= Toluene-d8	(70-130)
SRG03	= 4-Bromofluorobenzene	(70-130)

Column to be used to flag recovery values
* Values outside of required QC Limits
D System monitoring Compound diluted out

0000026

FORM II

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H060000 WO #: E50GF1AC
BATCH: 2218255

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	11	107	70 - 130	
Chloromethane	10	9.2	92	70 - 130	
1,2-Dichloro-1,1,2,2-tetr	10	10	102	70 - 130	
Vinyl chloride	10	9.8	98	70 - 130	
Bromomethane	10	9.9	99	70 - 130	
Chloroethane	10	9.9	99	70 - 130	
Trichlorofluoromethane	10	9.8	98	70 - 130	
1,1,2-Trichloro-1,2,2-tri	10	9.8	98	70 - 130	
Methylene chloride	10	9.6	96	70 - 130	
1,1-Dichloroethane	10	9.9	99	70 - 130	
Acetone	20	18	88	70 - 130	
1,1-Dichloroethene	10	9.9	99	70 - 130	
cis-1,2-Dichloroethene	10	9.8	98	70 - 130	
Chloroform	10	9.7	97	70 - 130	
1,1,1-Trichloroethane	10	10	103	70 - 130	
1,2-Dichloroethane	10	11	107	70 - 130	
Benzene	10	9.6	96	70 - 130	
Carbon tetrachloride	10	9.9	99	70 - 130	
1,2-Dichloropropane	10	9.3	93	70 - 130	
Trichloroethene	10	10	100	70 - 130	
cis-1,3-Dichloropropene	10	9.9	99	70 - 130	
trans-1,3-Dichloropropene	10	10	100	70 - 130	
Toluene	10	9.8	98	70 - 130	
1,1,2-Trichloroethane	10	9.7	97	70 - 130	
1,2-Dibromoethane (EDB)	10	9.6	96	70 - 130	
Tetrachloroethene	10	9.7	97	70 - 130	
Chlorobenzene	10	9.7	97	70 - 130	
Ethylbenzene	10	9.6	96	70 - 130	
m-Xylene & p-Xylene	10	9.7	97	70 - 130	
Styrene	10	9.4	94	70 - 130	
o-Xylene	10	9.4	94	70 - 130	

(Continued on next page)

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H060000 WO #: E50GF1AC
BATCH: 2218255

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	9.2	92	70- 130	
1,3,5-Trimethylbenzene	10	9.6	96	70- 130	
1,2,4-Trimethylbenzene	10	9.3	93	70- 130	
1,3-Dichlorobenzene	10	9.3	93	70- 130	
Benzyl chloride	10	9.4	94	70- 130	
1,4-Dichlorobenzene	10	9.4	94	70- 130	
1,2-Dichlorobenzene	10	9.4	94	70- 130	
1,2,4-Trichlorobenzene	10	9.9	99	70- 130	
Hexachlorobutadiene	10	8.2	82	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H120000 WO #: E6AR51AC
BATCH: 2224250

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	9.7	97	70 - 130	
Chloromethane	10	9.7	97	70 - 130	
1,2-Dichloro-1,1,2,2-tetr	10	9.8	98	70 - 130	
Vinyl chloride	10	9.8	98	70 - 130	
Bromomethane	10	9.8	98	70 - 130	
Chloroethane	10	9.8	98	70 - 130	
Trichlorofluoromethane	10	9.8	98	70 - 130	
Acetone	20	18	90	70 - 130	
1,1-Dichloroethene	10	9.8	98	70 - 130	
1,1,2-Trichloro-1,2,2-tri	10	9.8	98	70 - 130	
Methylene chloride	10	9.7	97	70 - 130	
1,1-Dichloroethane	10	9.9	99	70 - 130	
cis-1,2-Dichloroethene	10	9.9	99	70 - 130	
Chloroform	10	9.8	98	70 - 130	
1,1,1-Trichloroethane	10	9.8	98	70 - 130	
1,2-Dichloroethane	10	9.8	98	70 - 130	
Benzene	10	10	100	70 - 130	
Carbon tetrachloride	10	9.9	99	70 - 130	
1,2-Dichloropropane	10	10	101	70 - 130	
Trichloroethene	10	9.8	98	70 - 130	
cis-1,3-Dichloropropene	10	9.9	99	70 - 130	
trans-1,3-Dichloropropene	10	9.9	99	70 - 130	
Toluene	10	10	100	70 - 130	
1,1,2-Trichloroethane	10	9.8	98	70 - 130	
1,2-Dibromoethane (EDB)	10	10	100	70 - 130	
Tetrachloroethene	10	10	100	70 - 130	
Chlorobenzene	10	10	100	70 - 130	
Ethylbenzene	10	10	100	70 - 130	
m-Xylene & p-Xylene	10	9.9	99	70 - 130	
Styrene	10	10	100	70 - 130	
o-Xylene	10	10	100	70 - 130	

(Continued on next page)

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: BECHTEL HANFORD, INC.

Lab Code: STLKNX SDG No: W03804

Lot #: H2H120000 WO #: E6AR51AC
BATCH: 2224250

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	9.9	99	70- 130	
1,3,5-Trimethylbenzene	10	10	100	70- 130	
1,2,4-Trimethylbenzene	10	10	100	70- 130	
1,3-Dichlorobenzene	10	9.9	99	70- 130	
Benzyl chloride	10	10	101	70- 130	
1,4-Dichlorobenzene	10	9.9	99	70- 130	
1,2-Dichlorobenzene	10	10	100	70- 130	
1,2,4-Trichlorobenzene	10	10	103	70- 130	
Hexachlorobutadiene	10	8.7	87	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

BLANK WORKORDER NO.

E50GF1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:W03804

Lab File ID: ebk0805b.

Lot Number: H2G180110

Date Analyzed: 08/05/02

Time Analyzed: 16:42

Matrix: AIR

Date Extracted:08/05/02

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: ME

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	B15376	E4W711AA	e4w71r.d	08/06/02	11:18
02	CHECK SAMPLE	E50GF1AC C	erf0805.d	08/05/02	15:32
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
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30					

COMMENTS:

FORM IV

BLANK WORKORDER NO.

E6AR51AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:W03804

Lab File ID: ebk0809b.

Lot Number: H2G180110

Date Analyzed: 08/09/02

Time Analyzed: 15:10

Matrix: AIR

Date Extracted:08/09/02

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: ME

Level:(low/med) LOW

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, LCS, LCSD, MS , MSD:

	CLIENT ID.	SAMPLE WORK ORDER #	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	B15377	E4W731AA	e4w73.d	08/09/02	16:24
02	B15377 DUP	E4W731AC X	e4w73d.d	08/09/02	16:58
03	CHECK SAMPLE	E6AR51AC C	erf0809.d	08/09/02	14:00
04					
05					
06					
07					
08					
09					
10					
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12					
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COMMENTS:

FORM IV

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID: EBF0730 BFB Injection Date: 07/30/02

Instrument ID: ME BFB Injection Time: 0801

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.8
75	30.0 - 60.0% of mass 95	59.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	86.1
175	5.0 - 9.0% of mass 174	6.1 (7.1)1
176	95.0 - 101.0% of mass 174	82.8 (96.1)1
177	5.0 - 9.0% of mass 176	5.3 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	0.2PPB	ICAL	ICAL6	07/30/02	0801
02	0.5PPB	ICAL	ICAL7	07/30/02	0835
03	1PPB	ICAL	ICAL1	07/30/02	0910
04	5PPB	ICAL	ICAL2	07/30/02	0944
05	10PPB	ICAL	ICAL3	07/30/02	1017
06	15PPB	ICAL	ICAL4	07/30/02	1052
07	30PPB	ICAL	ICAL5	07/30/02	1126
08					
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22					

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID: EBF0805 BFB Injection Date: 08/05/02

Instrument ID: ME BFB Injection Time: 1424

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	23.1
75	30.0 - 60.0% of mass 95	57.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	88.1
175	5.0 - 9.0% of mass 174	6.1 (7.0)1
176	95.0 - 101.0% of mass 174	84.0 (95.4)1
177	5.0 - 9.0% of mass 176	5.2 (6.2)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	10PPBV	CCV	EMD0805	08/05/02	1458
02	INTRA-LAB CH	E50GF1AC	ERF0805	08/05/02	1532
03	INTRA-LAB BL	E50GF1AA	EBK0805B	08/05/02	1642
04	B15376	E4W711AA	E4W71R	08/06/02	1118
05					
06					
07					
08					
09					
10					
11					
12					
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14					
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22					

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID: EBF0808 BFB Injection Date: 08/08/02

Instrument ID: ME BFB Injection Time: 1742

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.3
75	30.0 - 60.0% of mass 95	48.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	96.5
175	5.0 - 9.0% of mass 174	7.1 (7.4)1
176	95.0 - 101.0% of mass 174	94.2 (97.5)1
177	5.0 - 9.0% of mass 176	6.2 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	0.2PPB	ICEH086	ICEH086	08/08/02	1816
02	0.5PPB	ICEH087	ICEH087	08/08/02	1850
03	1PPB	ICEH081	ICEH081	08/08/02	1925
04	5PPB	ICEH082	ICEH082	08/08/02	1959
05	10PPB	ICEH083	ICEH083	08/08/02	2033
06	15PPB	ICEH084	ICEH084	08/08/02	2108
07	30PPB	ICEH085	ICEH085	08/08/02	2142
08					
09					
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FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID: EBF0809 BFB Injection Date: 08/09/02

Instrument ID: ME BFB Injection Time: 1252

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 60.0% of mass 95	48.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	96.8
175	5.0 - 9.0% of mass 174	7.2 (7.4)1
176	95.0 - 101.0% of mass 174	93.7 (96.8)1
177	5.0 - 9.0% of mass 176	6.1 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	10PPBV	CCV	EMD0809	08/09/02	1326
02	INTRA-LAB CH	E6AR51AC	ERF0809	08/09/02	1400
03	INTRA-LAB BL	E6AR51AA	EBK0809B	08/09/02	1510
04	B15377	E4W731AA	E4W73	08/09/02	1624
05	B15377 DUP	E4W731AC	E4W73D	08/09/02	1658
06					
07					
08					
09					
10					
11					
12					
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15					
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FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID (Standard): EMD0805 Date Analyzed: 08/05/02

Instrument ID: ME Time Analyzed: 1458

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	229419	9.77	1302532	11.90	1151035	16.48
	UPPER LIMIT	322334	10.27	1830057	12.40	1617204	16.98
	LOWER LIMIT	136504	9.27	775007	11.40	684866	15.98
	CLIENT SAMPLE NO.						
01	INTRA-LAB CH	270995	9.77	1510982	11.90	1299743	16.48
02	INTRA-LAB BL	269939	9.76	1430793	11.89	1187808	16.47
03	B15376	165807	9.76	889302	11.89	747429	16.47
04							
05							
06							
07							
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19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = + 40% of internal standard area
AREA LOWER LIMIT = - 40% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03804

Lab File ID (Standard): EMD0809 Date Analyzed: 08/09/02

Instrument ID: ME Time Analyzed: 1326

GC Column: DB-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

		IS1(BCM) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CBZ) AREA #	RT #
	12 HOUR STD	611867	9.76	3389435	11.89	2876082	16.47
	UPPER LIMIT	859673	10.26	4762156	12.39	4040895	16.97
	LOWER LIMIT	364061	9.26	2016714	11.39	1711269	15.97
	CLIENT SAMPLE NO.						
01	INTRA-LAB CH	616082	9.76	3398155	11.89	2874008	16.47
02	INTRA-LAB BL	620914	9.76	3290461	11.89	2790489	16.46
03	B15377	602974	9.76	3210273	11.89	2695917	16.47
04	B15377 DUP	622413	9.77	3274684	11.90	2757124	16.47
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 (BCM) = Bromochloromethane
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = + 40% of internal standard area
AREA LOWER LIMIT = - 40% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

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

Raw Sample Data

BECHTEL HANFORD, INC.

Lab Name: Severn Trent Laboratories, Inc. SDG Number: W03804

Matrix: (soil/water) AIR Lab Sample ID: H2G180110 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W711AA Date Extracted: 08/05/02
Dilution factor: 1.55 Date Analyzed: 08/06/02

QC Batch: 2218255

Client Sample Id: B15376

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.8	U
56-23-5	Carbon tetrachloride	0.31	U
67-66-3	Chloroform	0.31	U
75-09-2	**Methylene chloride**	**3.5**	
127-18-4	**Tetrachloroethene**	**0.31**	
79-01-6	Trichloroethene	0.31	U
78-93-3	2-Butanone (MEK)	0.78	U

Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d
Report Date: 06-Aug-2002 13:40

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080502.b/e4w71r.d
Lab Smp Id: E4W711AA Client Smp ID: B15376
Inj Date : 06-AUG-2002 11:18
Operator : 60487 Inst ID: me.i
Smp Info : E4W711AA,1.55,0,,
Misc Info : E080502,LA,,,,500ML
Comment :
Method : /var/chem/gcms/me.i/E080502.b/LA.m
Meth Date : 06-Aug-2002 13:26 wilesd Quant Type: ISTD
Cal Date : 05-AUG-2002 14:58 Cal File: emd0805.d
Als bottle: 6
Dil Factor: 1.55000
Integrator: HP RTE Compound Sublist: g180110.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.756	9.767	(1.000)	165807	10.0000	
* 2 1,4-Difluorobenzene	114	11.891	11.897	(1.000)	889302	10.0000	
* 3 Chlorobenzene-d5	117	16.469	16.475	(1.000)	747429	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.767	10.773	(0.905)	225303	10.5655	10.56
$ 5 Toluene-d8	98	14.441	14.447	(0.877)	864438	10.3048	10.30
$ 6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	554229	9.56836	9.568
20 Acetone	58	6.324	6.109	(0.648)	20908	2.34790	3.639(H)
26 Methylene Chloride	84	7.077	7.082	(0.725)	44682	2.22676	3.451
57 Tetrachloroethene	129	15.652	15.663	(0.950)	4948	0.20080	0.3112

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d
Report Date: 06-Aug-2002 13:27

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: e4w71r.d
Lab Smp Id: E4W711AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /var/chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,500ML

Calibration Date: 05-AUG-2002
Calibration Time: 14:58
Client Smp ID: B15376
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	229419	136504	322334	165807	-27.73
2 1,4-Difluorobenze	1302532	775007	1830057	889302	-31.73
3 Chlorobenzene-d5	1151035	684866	1617204	747429	-35.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.77	9.27	10.27	9.76	-0.11
2 1,4-Difluorobenze	11.90	11.40	12.40	11.89	-0.05
3 Chlorobenzene-d5	16.48	15.98	16.98	16.47	-0.03

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d
Report Date: 06-Aug-2002 13:27

STL Knoxville

RECOVERY REPORT

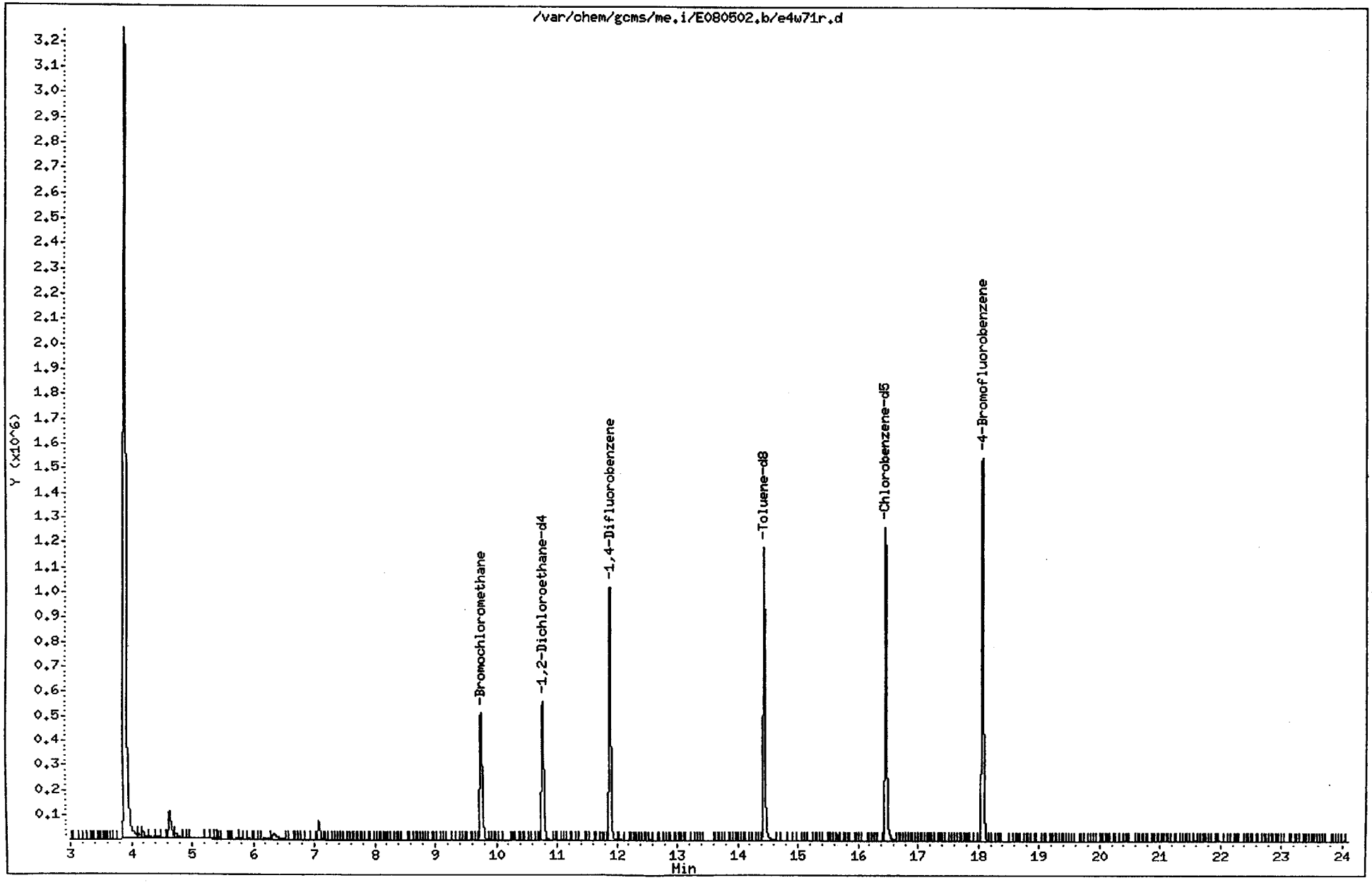
Client Name: BECHTEL HANFORD, INC18-JUL-2002 00:00 Client SDG: W03804
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: E4W711AA Client Smp ID: B15376
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: g180110.sub
Method File: /var/chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,500ML

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.56	105.65	70-130
$ 5 Toluene-d8	10.00	10.30	103.05	70-130
$ 6 4-Bromofluorobenze	10.00	9.568	95.68	70-130

Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d
Date : 06-AUG-2002 11:18
Client ID: B15376
Sample Info: E4W711AA,1.55,0,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d

Date : 06-AUG-2002 11:18

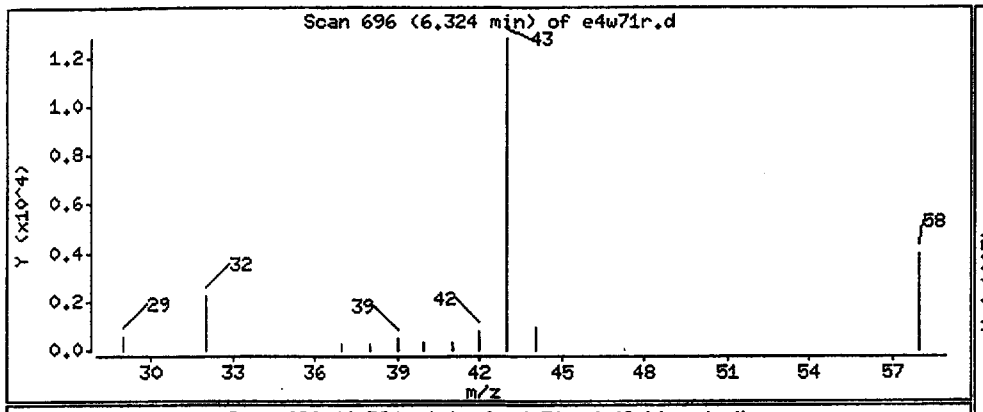
Client ID: B15376 Instrument: me.i

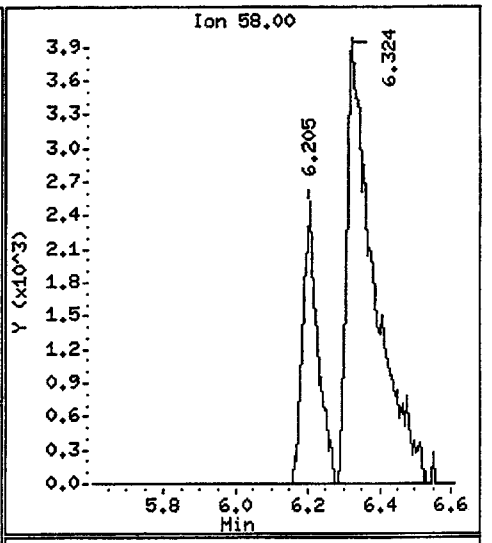
Sample Info: E4W711AA,1.55,0,,

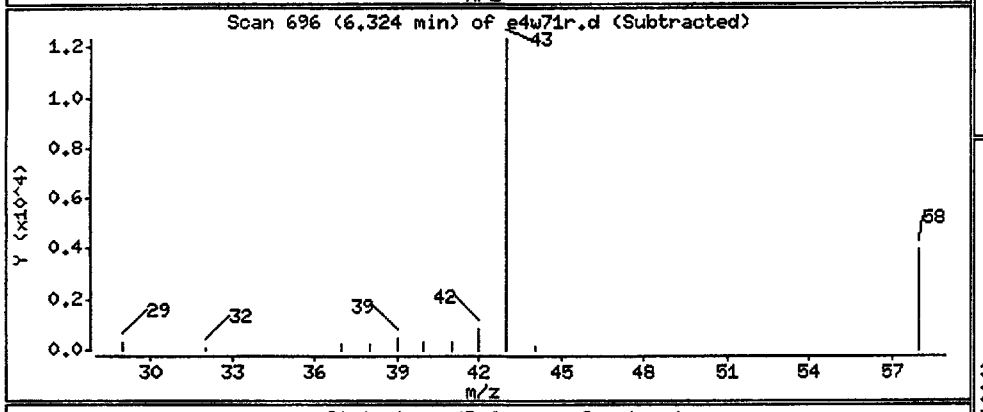
Volume Injected (uL): 500.0 Operator: 60487

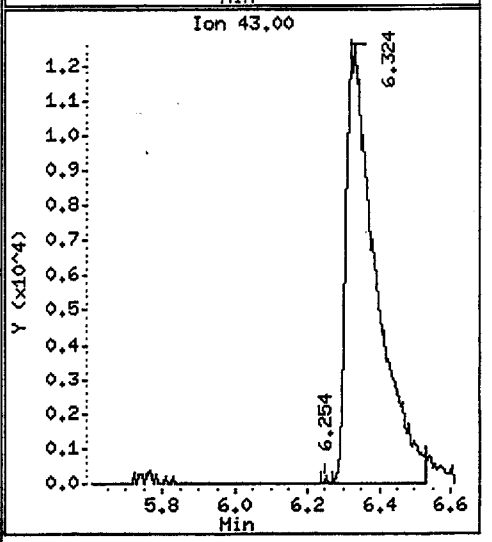
Column phase: DB-5 Column diameter: 0.32

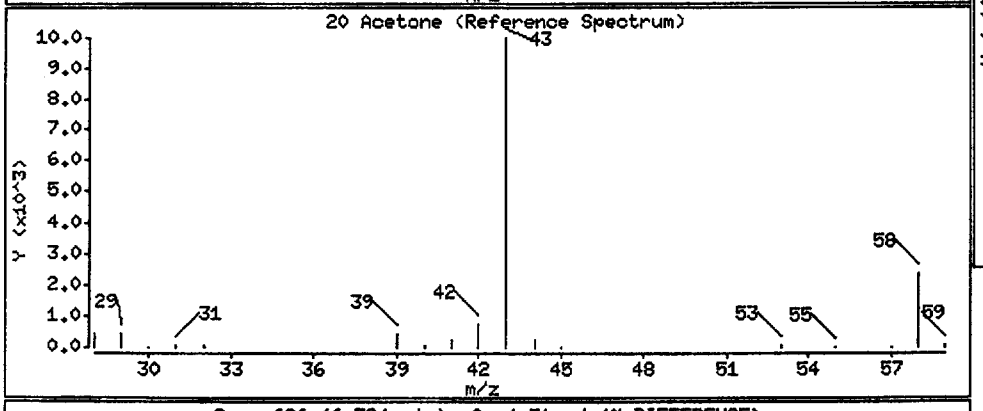
20 Acetone Concentration: 3.639 ppb(v/v)

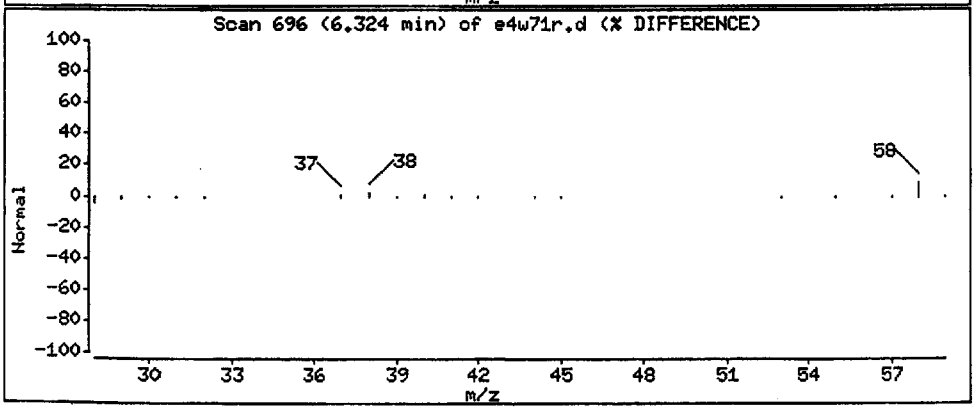












000045

Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d

Date : 06-AUG-2002 11:18

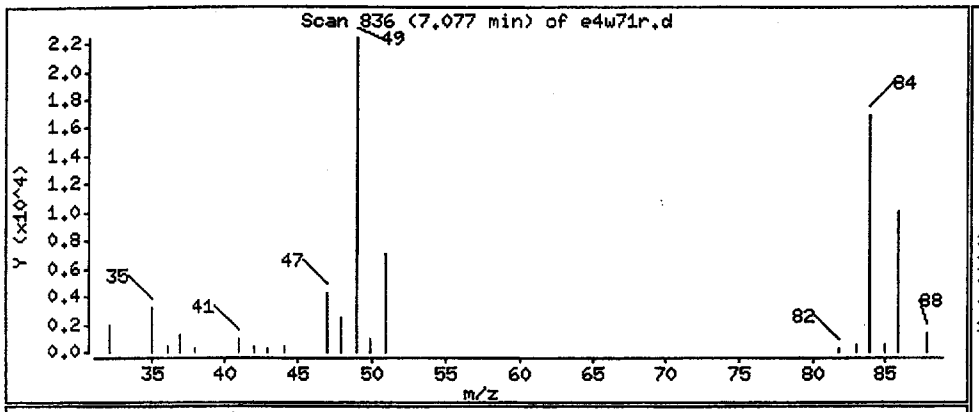
Client ID: B15376 Instrument: me.i

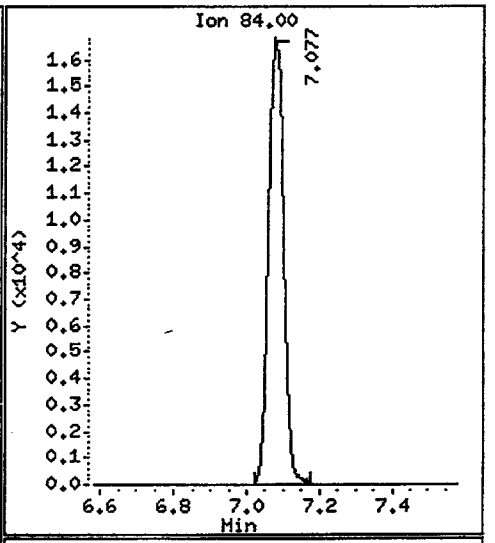
Sample Info: E4W711AA,1.55,0,,

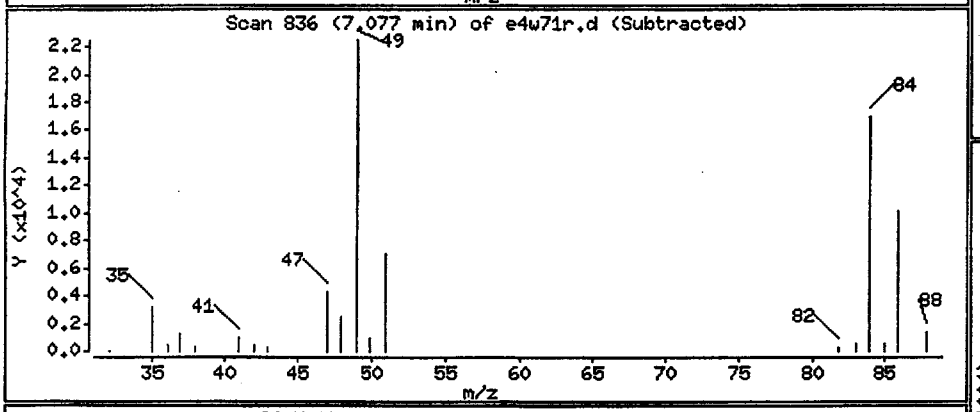
Volume Injected (uL): 500.0 Operator: 60487

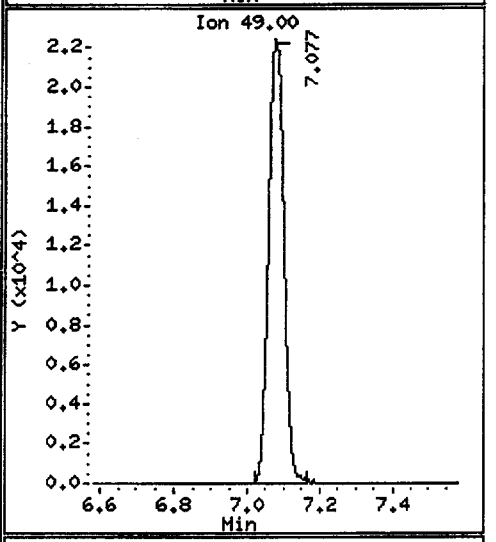
Column phase: DB-5 Column diameter: 0.32

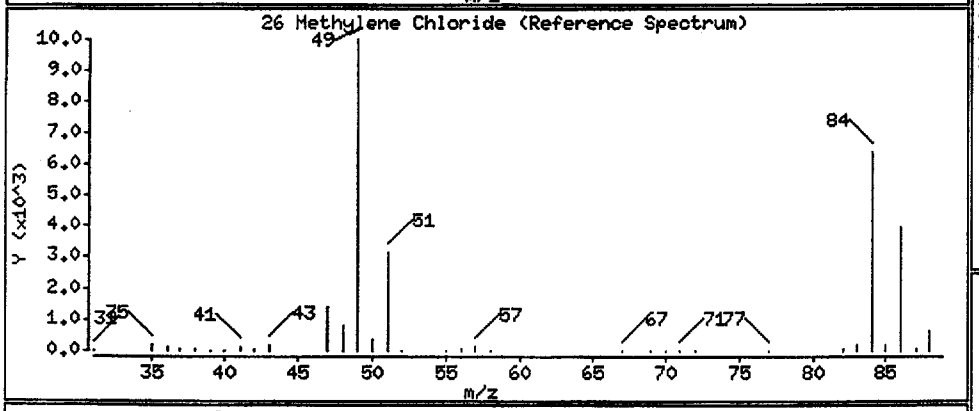
26 Methylene Chloride Concentration: 3.452 ppb(v/v)

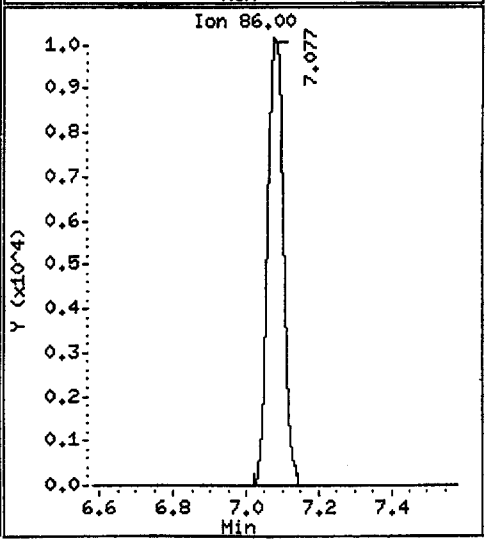


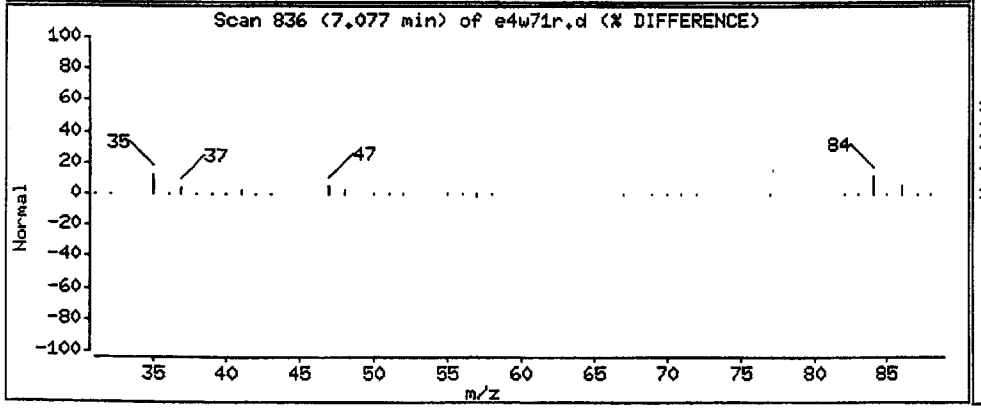












Data File: /var/chem/gcms/me.i/E080502.b/e4w71r.d

Date : 06-AUG-2002 11:18

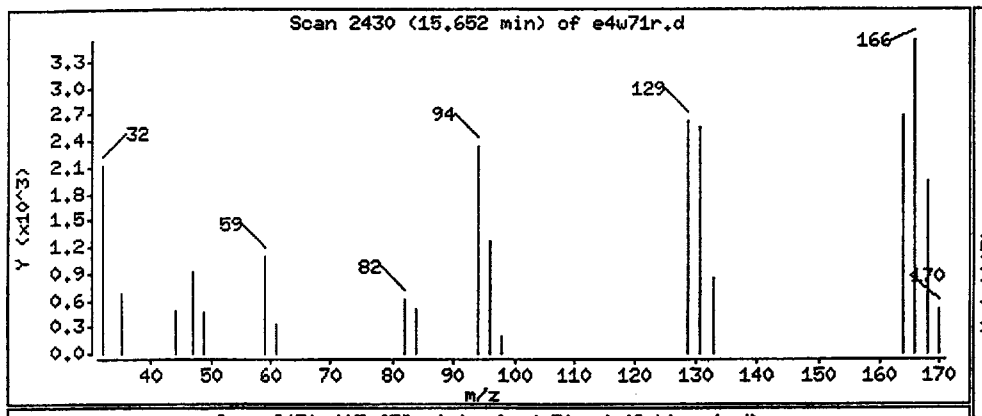
Client ID: B15376 Instrument: me.i

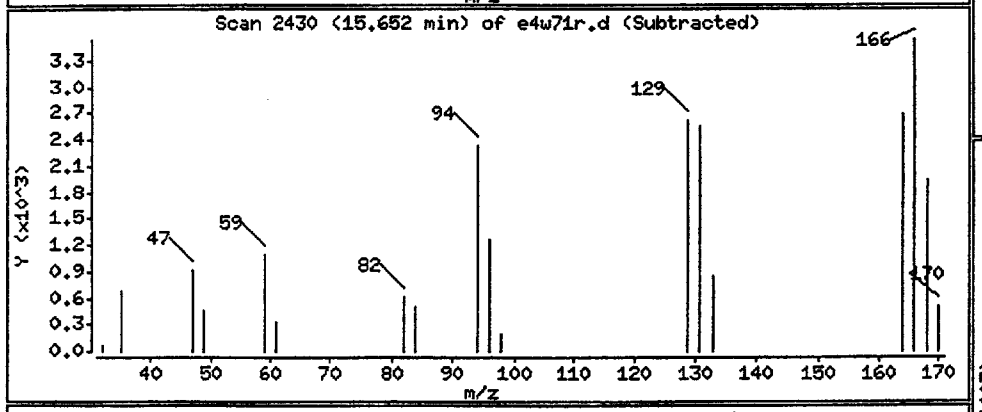
Sample Info: E4W711AA,1.55,0,,

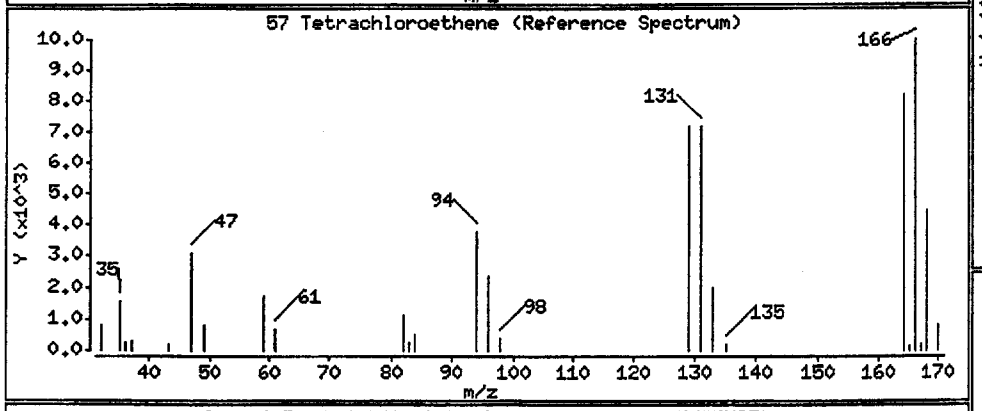
Volume Injected (uL): 500.0 Operator: 60487

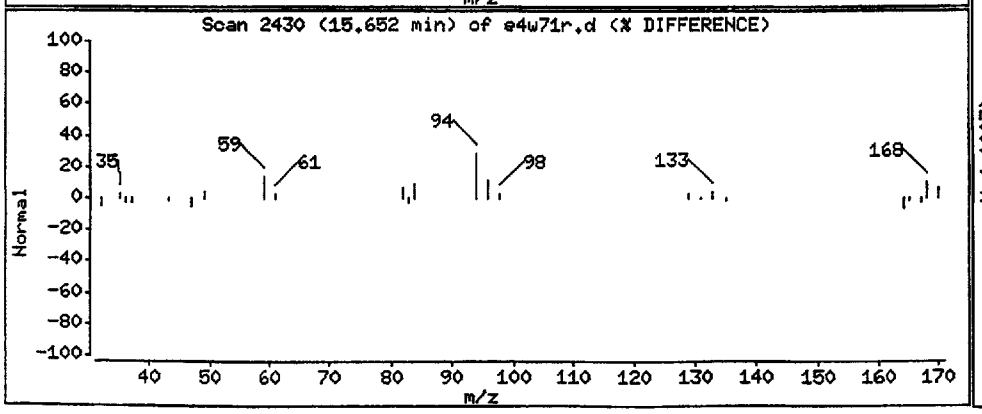
Column phase: DB-5 Column diameter: 0.32

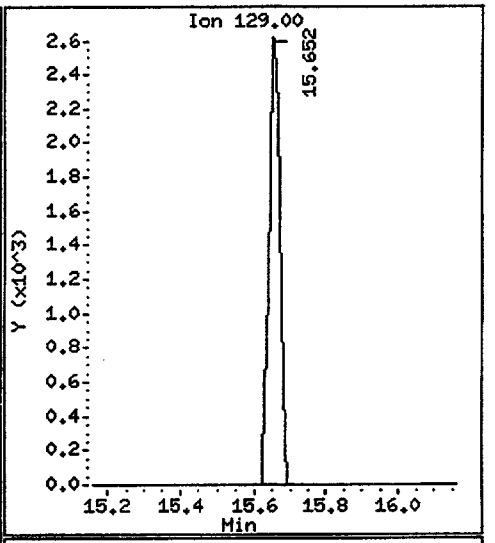
57 Tetrachloroethene Concentration: 0.3112 ppb(v/v)

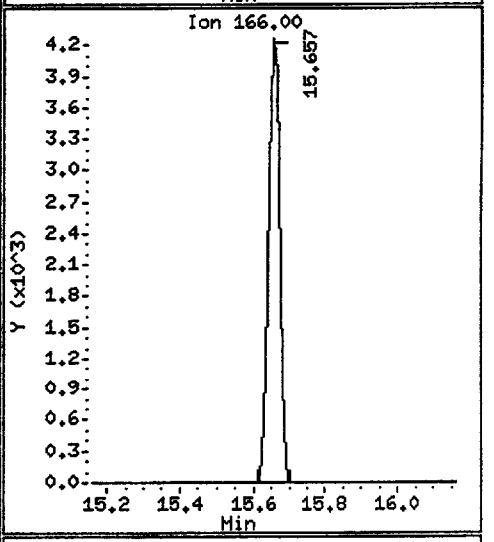


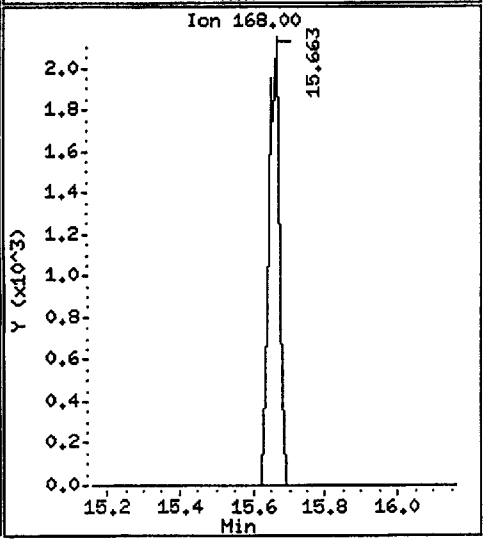












BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2G180110 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W731AA Date Extracted:08/09/02
Dilution factor: 688.67 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: B15377

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	3400	U
56-23-5	**Carbon tetrachloride**	**10000**	
67-66-3	Chloroform	140	U
75-09-2	Methylene chloride	340	U
127-18-4	Tetrachloroethene	140	U
79-01-6	Trichloroethene	140	U
78-93-3	2-Butanone (MEK)	340	U

0000048

Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d
Report Date: 12-Aug-2002 12:21

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080902.b/e4w73.d
Lab Smp Id: E4W731AA Client Smp ID: B15377
Inj Date : 09-AUG-2002 16:24
Operator : 60487 Inst ID: me.i
Smp Info : E4W731AA,688.67,0,,,
Misc Info : E080902,LA,,,,150ML OF SERIAL
Comment :
Method : /var/chem/gcms/me.i/E080902.b/LA.m
Meth Date : 12-Aug-2002 12:17 wilesd Quant Type: ISTD
Cal Date : 09-AUG-2002 13:26 Cal File: emd0809.d
Als bottle: 1
Dil Factor: 688.67000
Integrator: HP RTE Compound Sublist: g180110.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.761	9.761	(1.000)	602974	10.0000	
* 2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3210273	10.0000	
* 3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2695917	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.906)	658914	10.1589	10.16
$ 5 Toluene-d8	98	14.442	14.442	(0.877)	3136075	10.3888	10.39
$ 6 4-Bromofluorobenzene	95	18.062	18.067	(1.097)	1789326	10.2595	10.26
42 Carbon Tetrachloride	117	11.402	11.397	(1.168)	2672130	14.8418	10220
36 Chloroform	83	9.772	9.772	(1.001)	23621	0.14221	97.94
26 Methylene Chloride	84	7.093	7.077	(0.727)	9129	0.13467	92.74

Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d
Report Date: 12-Aug-2002 12:21

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: e4w73.d
Lab Smp Id: E4W731AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /var/chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,150ML OF SERIAL

Calibration Date: 09-AUG-2002
Calibration Time: 13:26
Client Smp ID: B15377
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	611867	364061	859673	602974	-1.45
2 1,4-Difluorobenze	3389435	2016714	4762156	3210273	-5.29
3 Chlorobenzene-d5	2876082	1711269	4040895	2695917	-6.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.76	9.26	10.26	9.76	0.00
2 1,4-Difluorobenze	11.89	11.39	12.39	11.89	0.00
3 Chlorobenzene-d5	16.47	15.97	16.97	16.47	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d
Report Date: 12-Aug-2002 12:21

STL Knoxville

RECOVERY REPORT

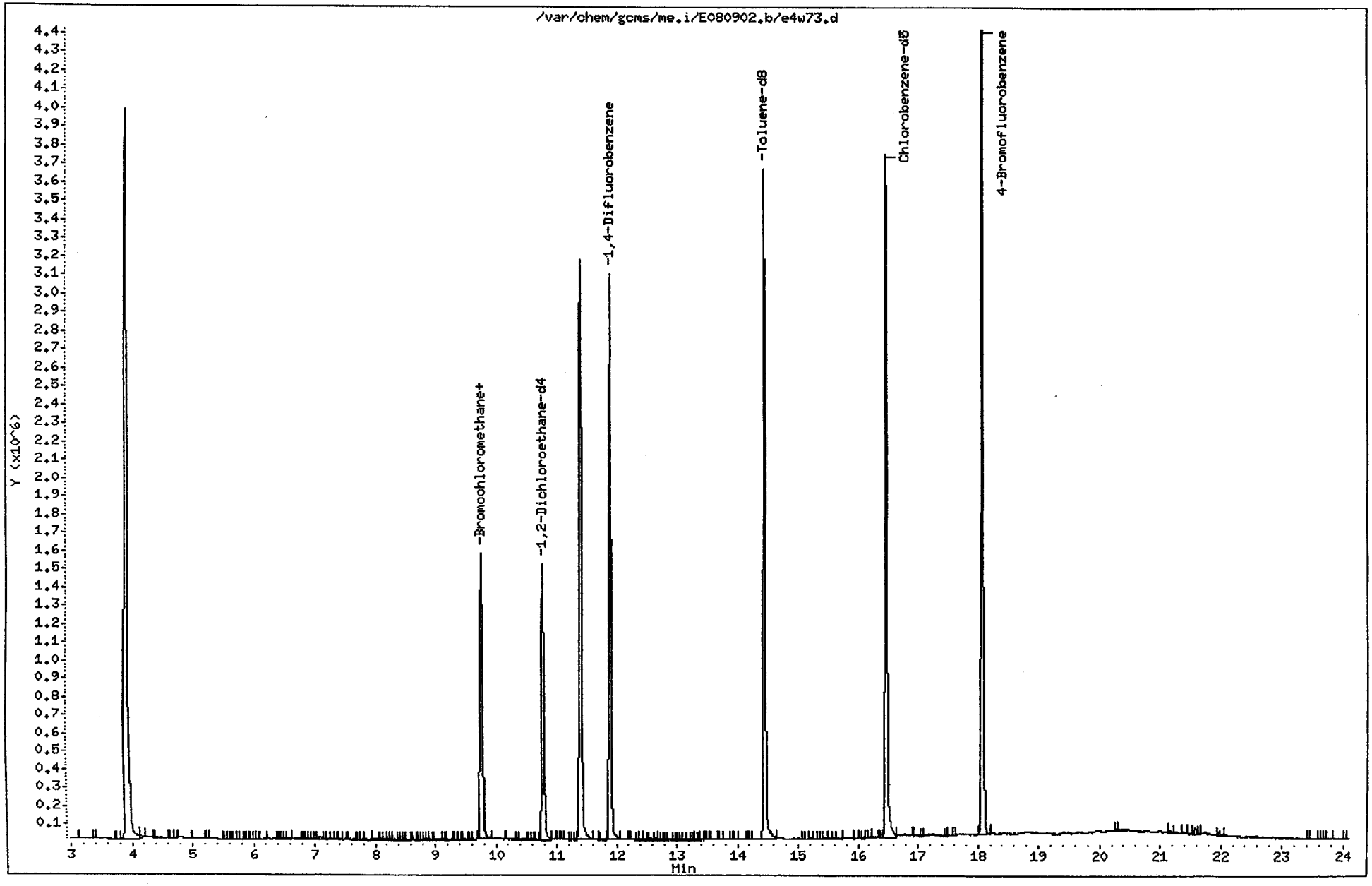
Client Name: BECHTEL HANFORD, INC18-JUL-2002 00:00 Client SDG: W03804
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: E4W731AA Client Smp ID: B15377
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: g180110.sub
Method File: /var/chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,150ML OF SERIAL

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.16	101.59	70-130
$ 5 Toluene-d8	10.00	10.39	103.89	70-130
$ 6 4-Bromofluorobenze	10.00	10.26	102.59	70-130

Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d
Date : 09-AUG-2002 16:24
Client ID: B15377
Sample Info: E4W731AA,688.67,0,,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



000052

Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d

Date : 09-AUG-2002 16:24

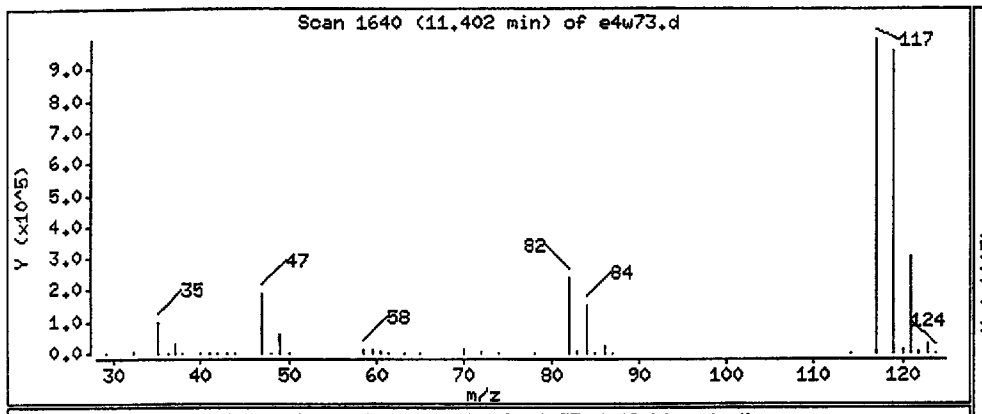
Client ID: B15377 Instrument: me.i

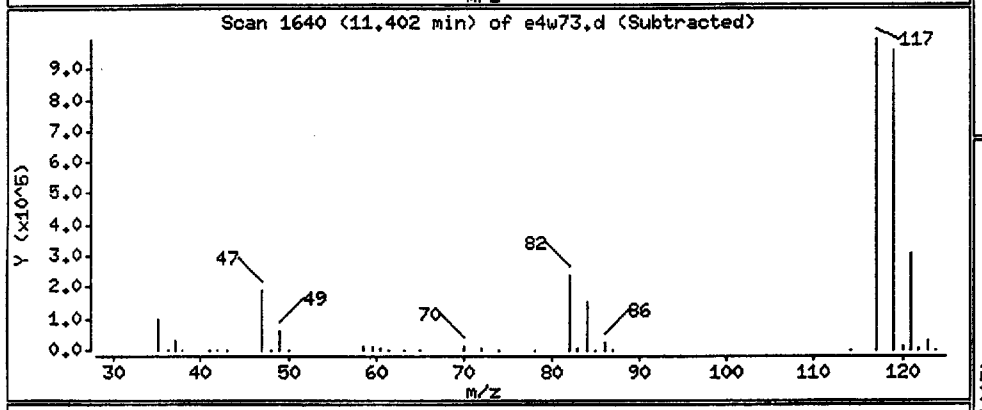
Sample Info: E4W731AA,688.67,0,,,

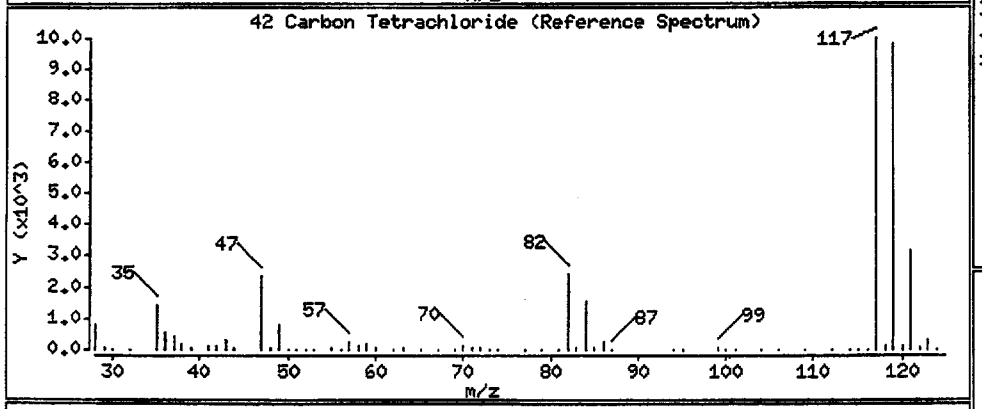
Volume Injected (uL): 500.0 Operator: 60487

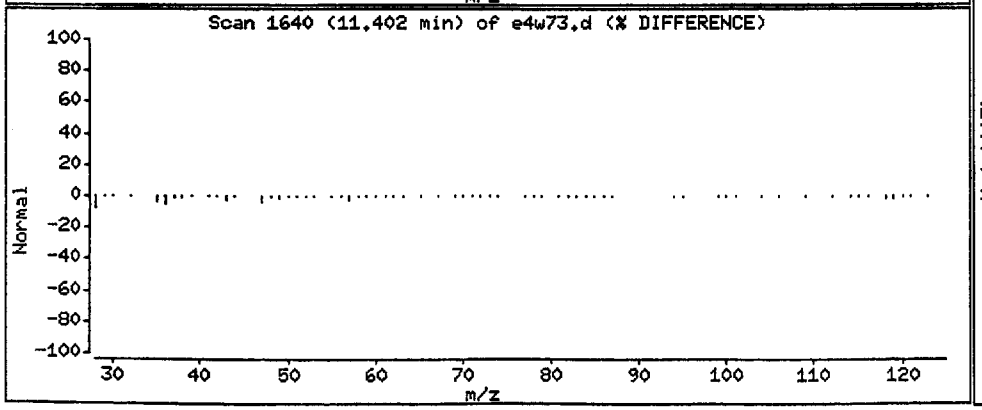
Column phase: DB-5 Column diameter: 0.32

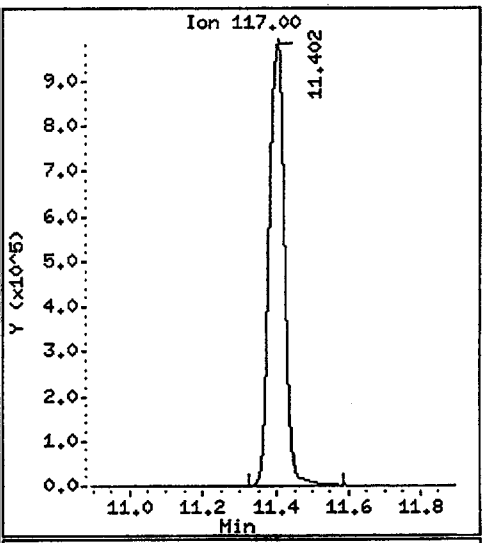
42 Carbon Tetrachloride Concentration: 10220 ppb(v/v)

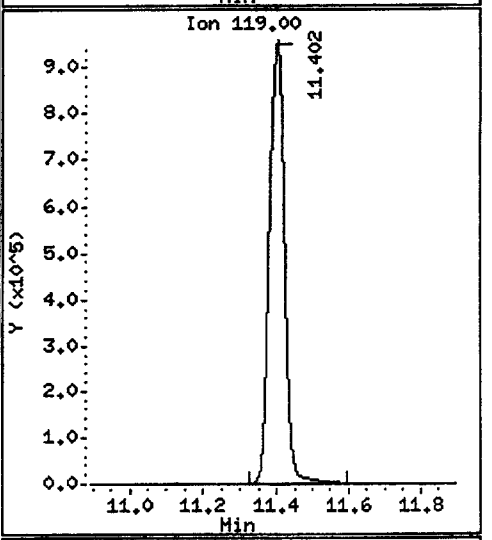


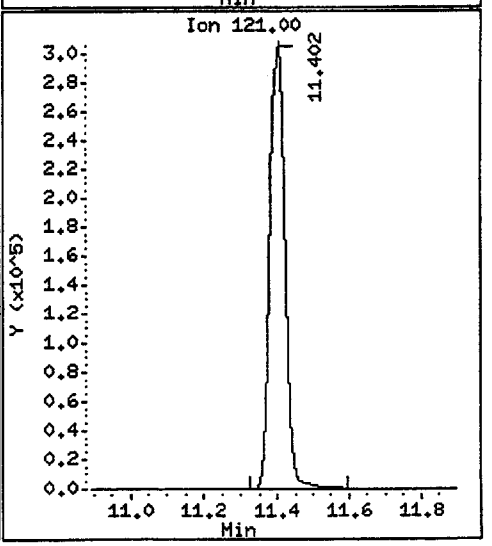












Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d

Date : 09-AUG-2002 16:24

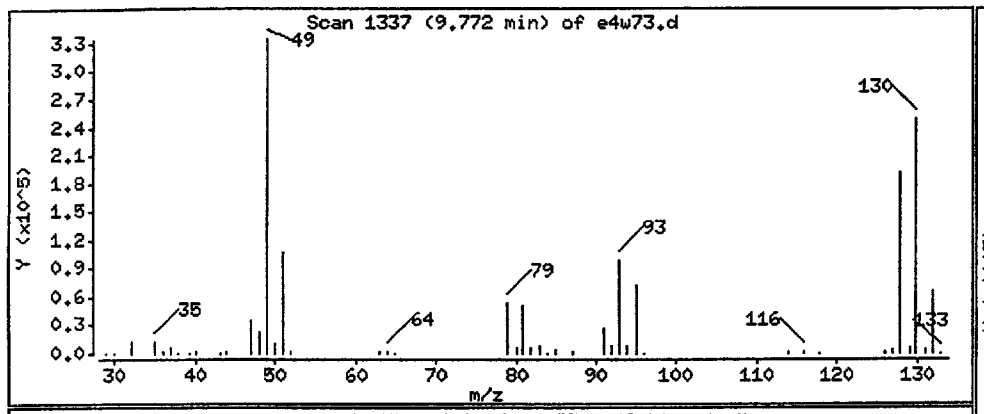
Client ID: B15377 Instrument: me.i

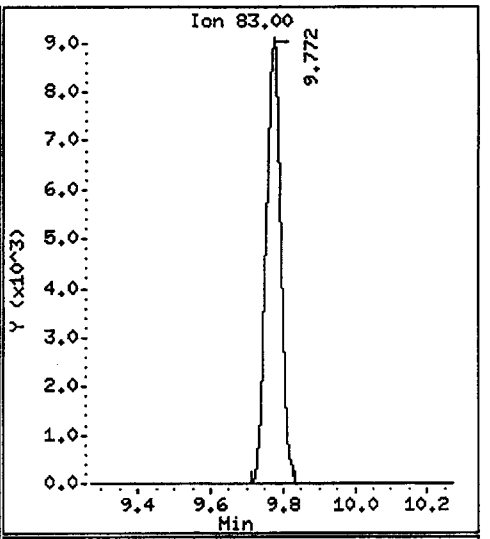
Sample Info: E4W731AA,688.67,0,,,

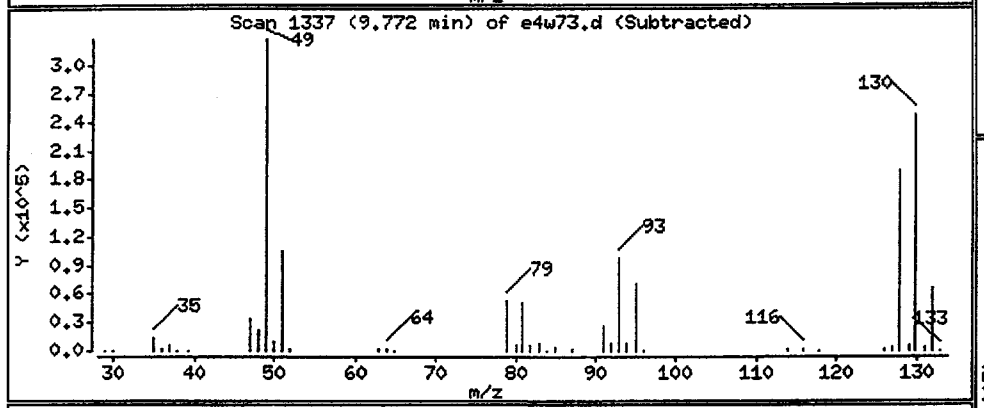
Volume Injected (uL): 500.0 Operator: 60487

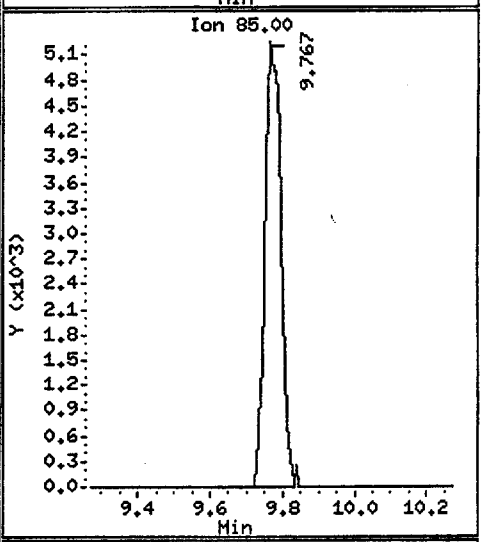
Column phase: DB-5 Column diameter: 0.32

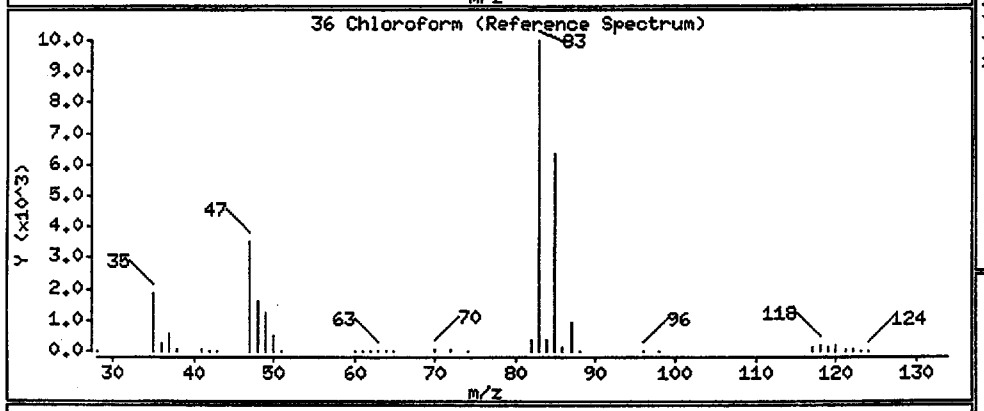
36 Chloroform Concentration: 97.94 ppb(v/v)

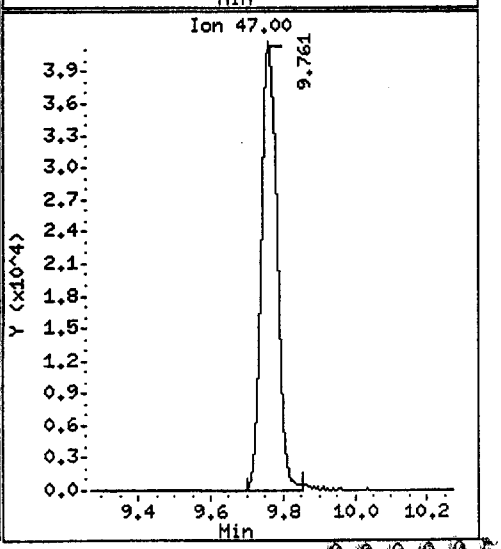


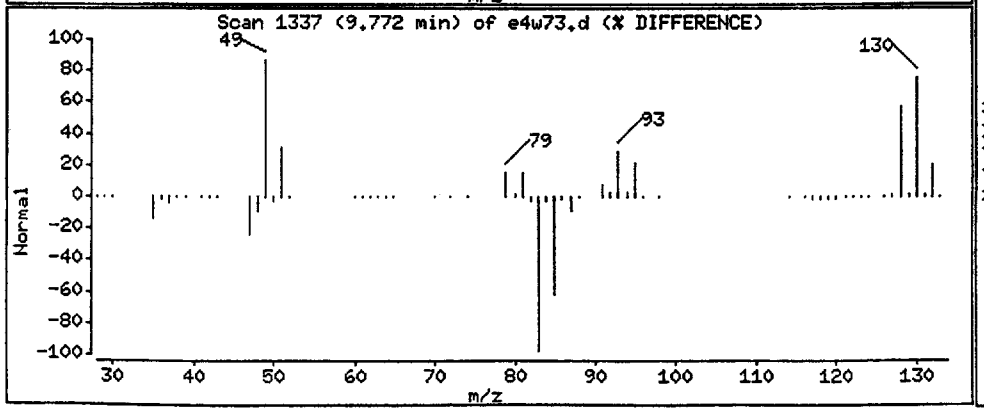












Data File: /var/chem/gcms/me.i/E080902.b/e4w73.d

Date : 09-AUG-2002 16:24

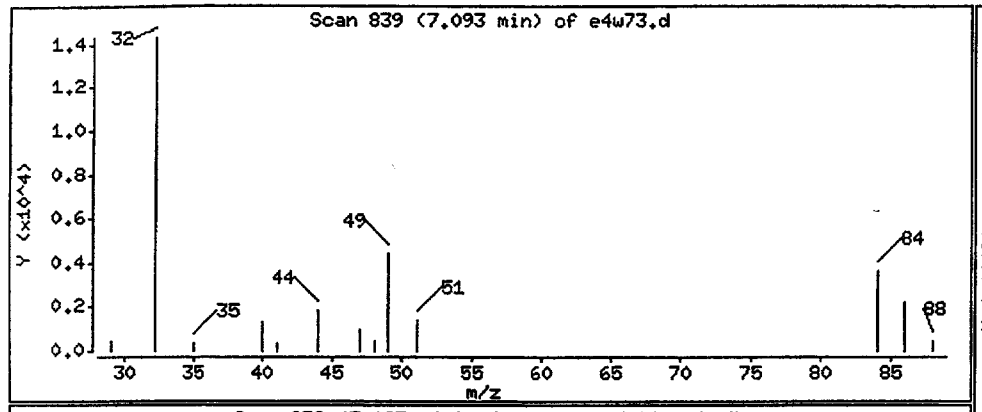
Client ID: B15377 Instrument: me.i

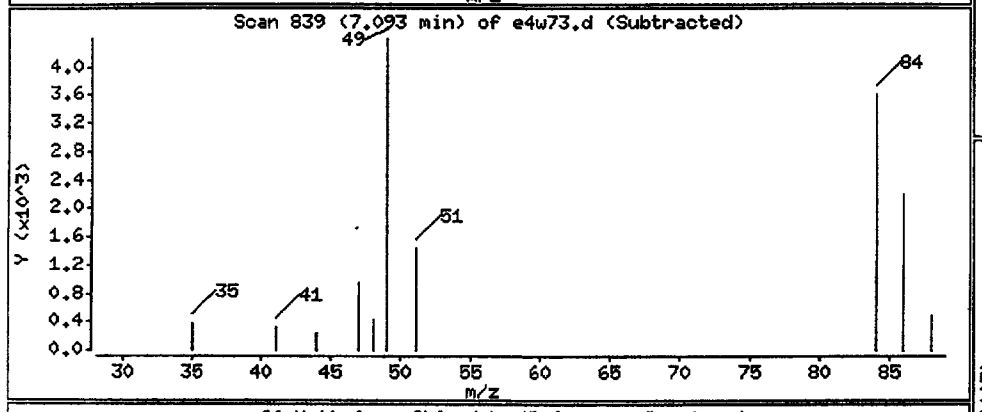
Sample Info: E4W731AA,688.67,0,,,

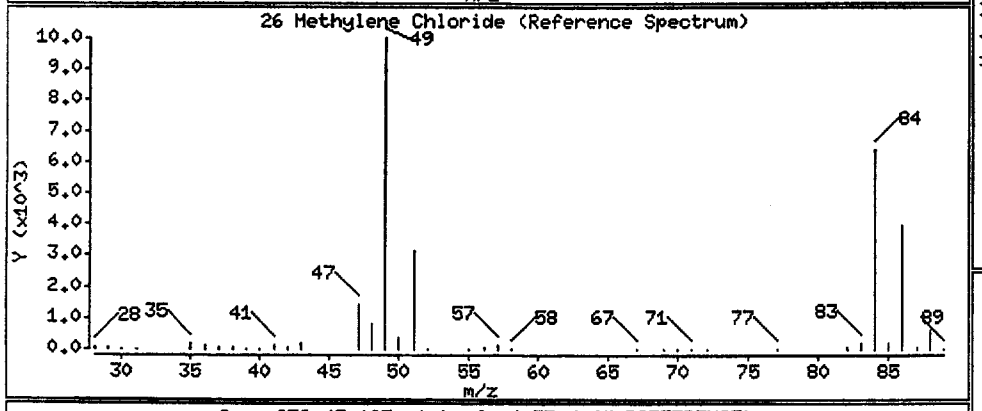
Volume Injected (uL): 500.0 Operator: 60487

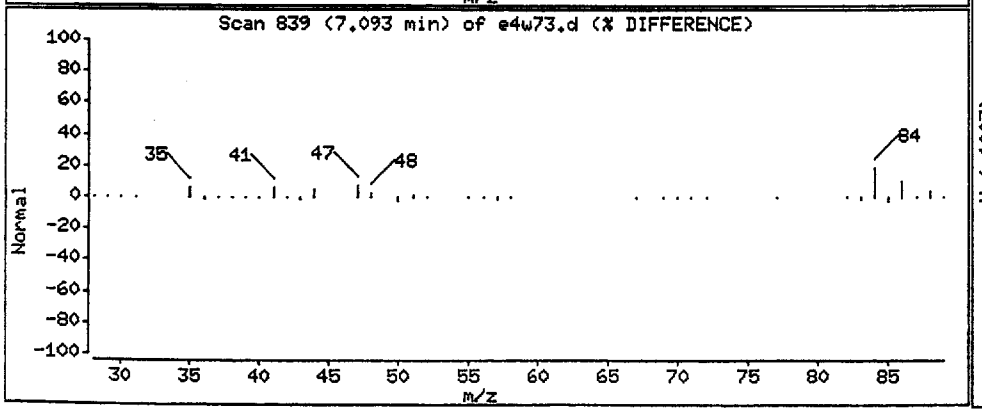
Column phase: DB-5 Column diameter: 0.32

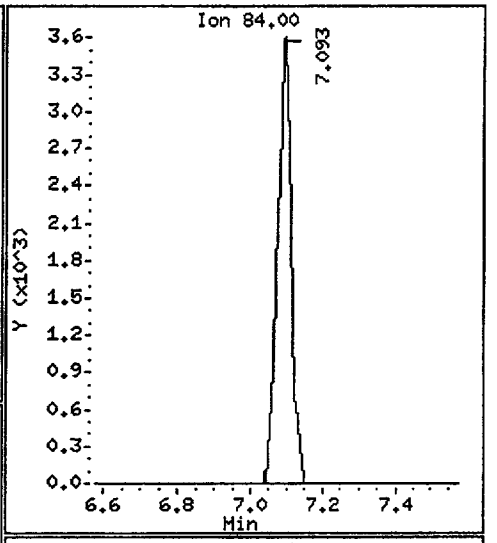
26 Methylene Chloride Concentration: 92.74 ppb(v/v)

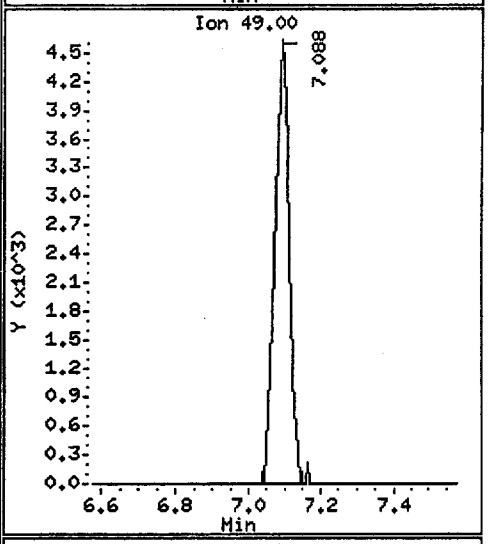


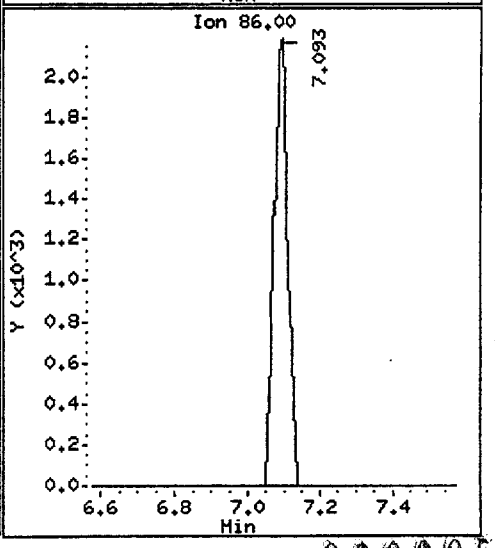












Standards Data

STL Knoxville GC/MS Air Initial Calibration Data Review / Narrative Checklist
Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 3

Analysis Date:	7/30/02	Instrument::	ME	ICAL Batch/Scan Name:	5073002F	Scanned ☐

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 24 hr of BFB?		✓			✓
3. Is the second source analysis of a reference standard within limits? (65-135% R; 20-180% for benzyl chloride)		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Were at least 5 levels of each compound analyzed?		✓			✓
6. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%)		✓			✓
7. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?		✓		Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	✓
8. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in ICAL summary?		✓			✓
9. Was ICAL summary form processed using correct result files? (Analyst and 2nd reviewer should compare 2-3 RFs from each standard quan report to ICAL summary.)		✓			✓
10. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
11. Elution order checked on isomeric pairs?					
• cis- and trans- isomers		✓		29,35 ; 49,50	✓
• ethyl benzene / m/p-xylene / o-xylene		✓		59, 60, 64	✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / 4-ethyl toluene		✓		69, 70, 73	✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓		74, 76, 77	✓
• vinyl acetate / hexane		✓		32, 34	✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane • dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓		17, 25 8, 10	✓
12. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				✓
13. Does the ICAL folder contain complete data in the following order? Data review checklist, a complete runlog, Entech report, ICAL summary, followed by [Quan reports, chromatograms, manual integrations] in increasing sample order, leak check report.		✓			✓

Analyst:	Date: 7/30/02	2nd Level Reviewer :	Date: 7/30/02
Comments:		Comments:	

0000057

STL Knoxville
TO-14 RUN LOG

GCMS Analysis: TO-14 Canisters

Inst: ME

Analyst: SGA

Preventive Maintenance Performed ☑

Date: 7/30/02 System Date ok (y/n): Y Reset Date (y/n): N IS #1 Area: NA

Time: 0801 System Time ok (y/n): Y Reset Time (y/n): N Batch: NA

ICAL Date: 7/30/02 Multiplier Setting (Volts): 1729 Surr/IS ID: CX-912

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
0801	BFB	EBF0730	—		—	100	13	✓	—
0801	ICAL	ICAL6	—	CX-916	—	100	13	✓	—
0835	↓	7	—	↓	—	250	13	✓	—
0910	↓	1	—	↓	—	500	13	✓	—
0944	↓	2	—	CX-914	—	50	Std	✓	—
1017	↓	3	—	↓	—	100	↓	✓	—
1052	↓	4	—	↓	—	150	↓	✓	—
1126	↓	5	—	↓	—	300	↓	✓	—
1258	ICV	ICV	—	CX-897	—	100	13	N	—
1406	↓	ICV2	—	↓	—	100	13	✓	—

SGA 7/30/02

Analyst: SGA Date: 7/30/02 Approved by: _____ Date: _____

0000058

STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB/ICAL6	101ml	13	7/30/02	8:02:27 AM
ICAL7	251ml	13	7/30/02	8:36:20 AM
ICAL1	500ml	13	7/30/02	9:10:54 AM
ICAL2	51ml	STD	7/30/02	9:44:43 AM
ICAL3	100ml	STD	7/30/02	10:18:39 AM
ICAL4	151ml	STD	7/30/02	10:52:42 AM
ICAL5	300ml	STD	7/30/02	11:26:46 AM
ICV	100ml	13	7/30/02	12:58:56 PM
ICV	100ml	13	7/30/02	2:07:07 PM

Data File: /var/chem/gcms/me.i/E073002I.b/ebf0730.d

Date : 30-JUL-2002 08:01

Client ID: BFB

Instrument: me.i

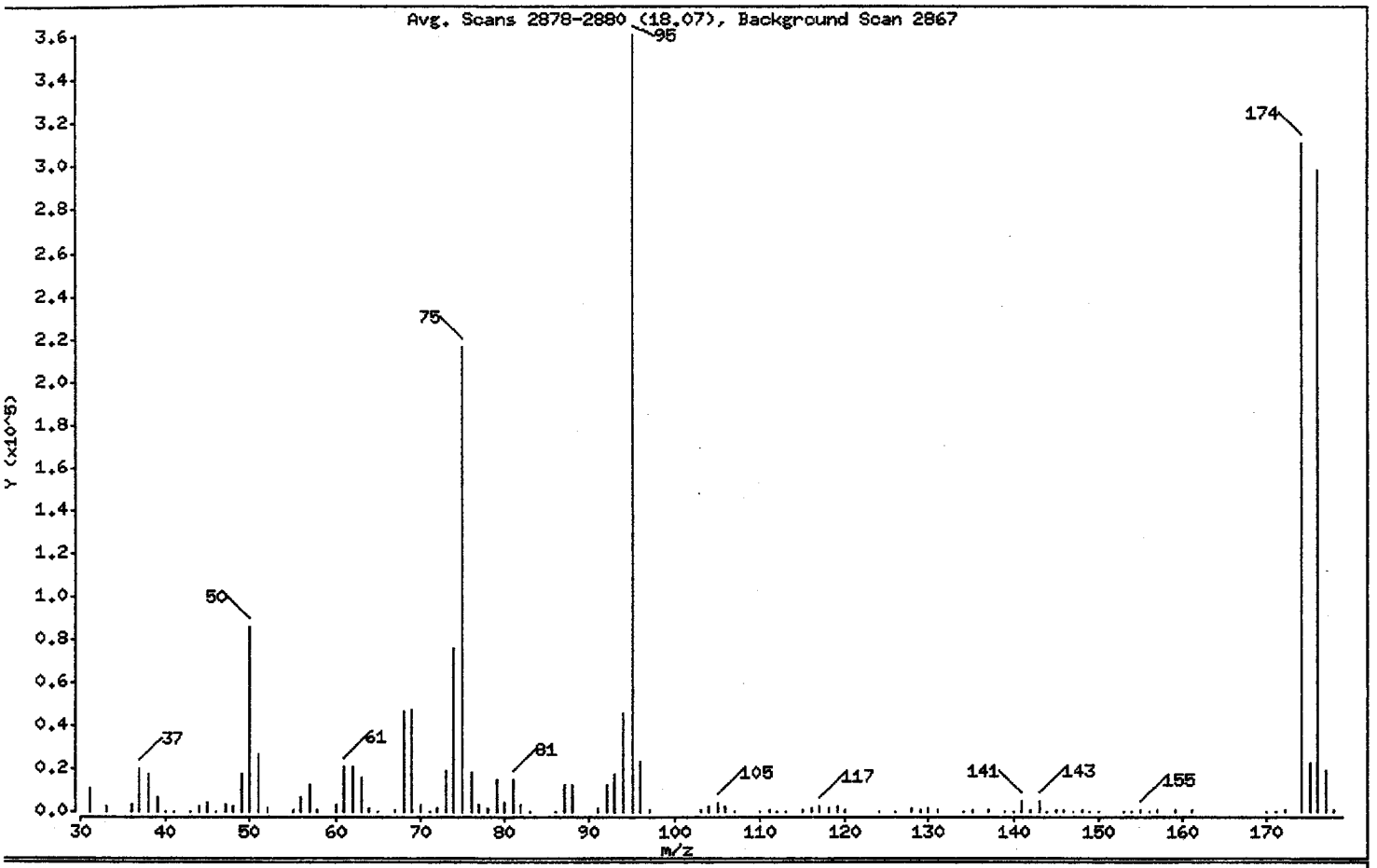
Sample Info: BFB,,3,,

Operator: 10648

Column phase: DB-5

Column diameter: 0.32

1 BFB



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.75
75	30.00 - 60.00% of mass 95	59.89
96	5.00 - 9.00% of mass 95	6.55
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	86.14
175	5.00 - 9.00% of mass 174	6.12 (7.10)
176	95.00 - 101.00% of mass 174	82.81 (96.13)
177	5.00 - 9.00% of mass 176	5.34 (6.45)

Data File: /var/chem/gcms/me.i/E073002I.b/ebf0730.d

Date : 30-JUL-2002 08:01

Client ID: BFB

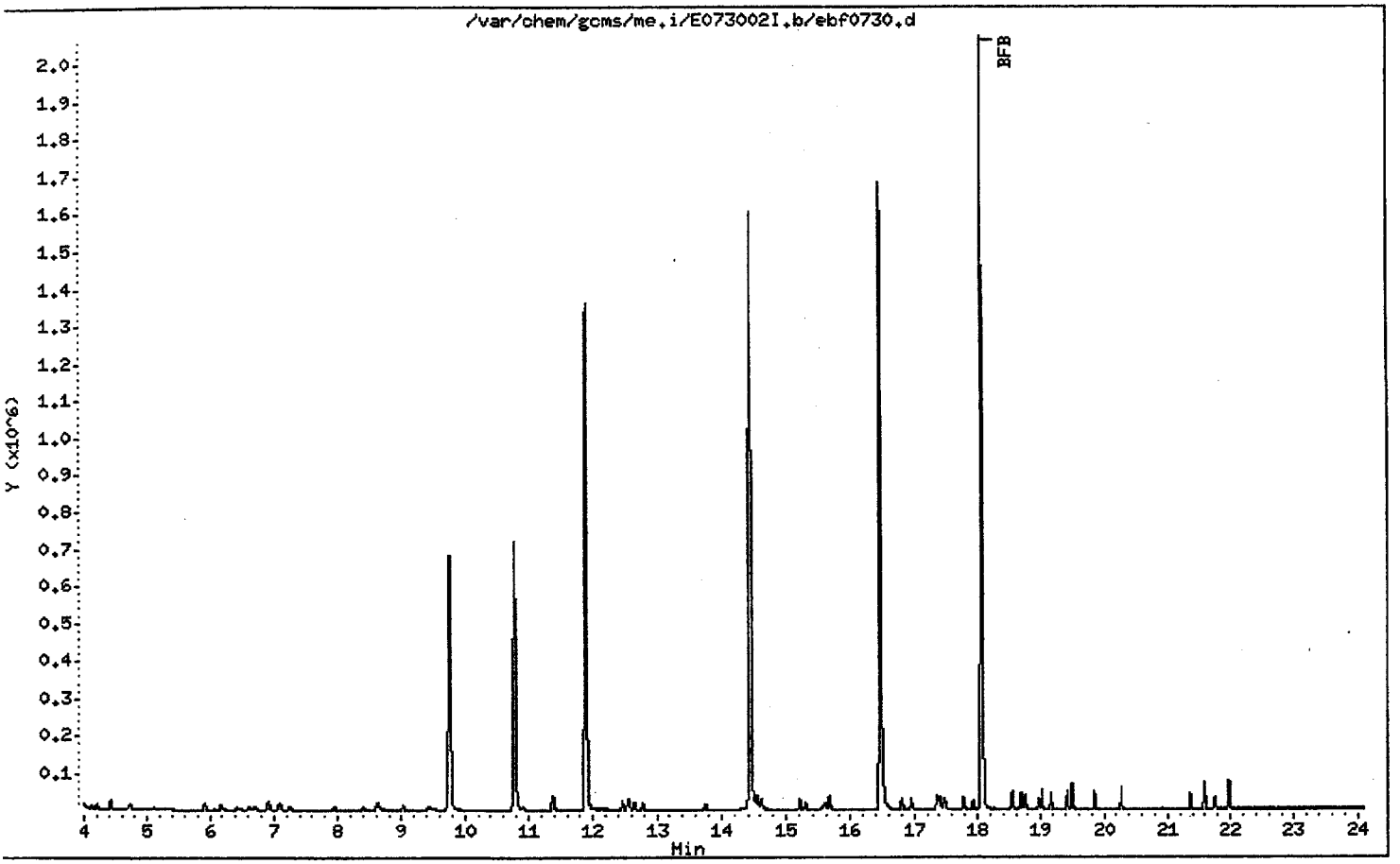
Instrument: me.i

Sample Info: BFB,,3,,

Operator: 10648

Column phase: DB-5

Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E073002I.b/ebf0730.d

Date : 30-JUL-2002 08:01

Client ID: BFB

Instrument: me.i

Sample Info: BFB,,3,,

Operator: 10648

Column phase: DB-5

Column diameter: 0.32

Data File: ebf0730.d

Spectrum: Avg. Scans 2878-2880 (18.07), Background Scan 2867

Location of Maximum: 95.00

Number of points: 106

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	10988	65.00	338	97.00	659	141.00	4956
33.00	2393	67.00	1103	103.00	677	142.00	605
36.00	3490	68.00	46568	104.00	2121	143.00	5259
37.00	19600	69.00	47568	105.00	4470	144.00	340
38.00	17776	70.00	3251	106.00	2267	145.00	418
39.00	6915	71.00	144	107.00	360	146.00	581
40.00	133	72.00	1988	110.00	338	147.00	221
41.00	90	73.00	19264	111.00	446	148.00	909
43.00	105	74.00	75688	112.00	352	149.00	169
44.00	2357	75.00	216256	113.00	392	150.00	371
45.00	3911	76.00	18392	115.00	532	153.00	86
46.00	186	77.00	2960	116.00	1422	154.00	217
47.00	3387	78.00	1538	117.00	2514	155.00	942
48.00	2346	79.00	14947	118.00	1713	156.00	84
49.00	17816	80.00	3887	119.00	2147	157.00	741
50.00	85768	81.00	14887	120.00	1036	159.00	446
51.00	26312	82.00	3009	124.00	259	161.00	520
52.00	1308	83.00	374	126.00	140	170.00	163
55.00	1170	86.00	384	128.00	1428	171.00	373
56.00	6929	87.00	12482	129.00	594	172.00	646
57.00	12776	88.00	12619	130.00	1350	174.00	311040
58.00	532	91.00	1858	131.00	593	175.00	22080
60.00	3504	92.00	12306	134.00	71	176.00	299008
61.00	20832	93.00	17848	135.00	816	177.00	19272
62.00	20680	94.00	46040	137.00	850	178.00	526
63.00	16023	95.00	361088	139.00	142		
64.00	1385	96.00	23640	140.00	221		

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcms/me.i/E073002I.b/ical1.d
Level 2: /var/chem/gcms/me.i/E073002I.b/ical2.d
Level 3: /var/chem/gcms/me.i/E073002I.b/ical3.d
Level 4: /var/chem/gcms/me.i/E073002I.b/ical4.d
Level 5: /var/chem/gcms/me.i/E073002I.b/ical5.d
Level 6: /var/chem/gcms/me.i/E073002I.b/ical6.d
Level 7: /var/chem/gcms/me.i/E073002I.b/ical7.d

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
7 Chlorodifluoromethane	2.00665	2.23036	2.11047	2.00487	1.84692	2.22228		
	1.97195						2.05621	6.787
8 Dichlorodifluoromethane	3.21376	3.55841	3.46511	3.31931	3.07589	3.44341		
	3.14818						3.31773	5.413
9 Chloromethane	0.27522	0.31384	0.28144	0.25080	0.22190	+++++		
	0.28522						0.27140	11.630
10 1,2-Dichlorotetrafluoroethane	1.87338	1.99493	1.89606	1.75184	1.60749	2.02817		
	1.81814						1.85286	7.784
11 Vinyl Chloride	0.95928	1.11587	1.05259	0.96367	0.86199	1.06616		
	0.92183						0.99163	9.040
12 Methanol	0.24551	0.29175	0.25917	0.24366	0.23173	+++++		
	+++++						0.25436	9.064

:eport Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

:tart Cal Date : 30-JUL-2002 08:01
:nd Cal Date : 30-JUL-2002 11:26
)uant Method : ISTD
)rigin : Disabled
:arget Version : 3.50
:ntegrator : HP RTE
lethod file : /var/chem/gcms/me.i/E073002I.b/LA.m
:al Date : 30-Jul-2002 13:47 wilesd
:urve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	___ RRF	% RSD
	0.50000 Level 7							
13 1,3-Butadiene	0.79395	0.88245	0.78383	0.73513	0.65919	0.76610		
	0.72071						0.76305	9.113
14 n-Butane	1.83963	1.94188	1.66485	1.54544	1.41130	2.44811		
	1.89837						1.82137	18.516
15 Bromomethane	1.09180	1.21702	1.15160	1.09311	0.96413	1.15455		
	1.03952						1.10168	7.553
16 Chloroethane	0.54309	0.60392	0.57314	0.54000	0.47902	0.57874		
	0.54198						0.55141	7.218
17 Trichlorofluoromethane	3.83196	4.11102	3.93586	3.71122	3.31848	4.18882		
	3.62501						3.81748	7.827
18 Acrolein	0.24033	0.35830	0.33933	0.31371	0.27814	0.23437		
	0.22482						0.28414	18.937
19 Acetonitrile	0.44232	0.38677	0.38812	0.36433	0.34121	+++++		
	0.46904						0.39863	12.078
20 Acetone	0.62367	0.52676	0.46558	0.43593	0.39097	+++++		
	+++++						0.48858	18.460
21 Pentane	0.32835	0.35205	0.29918	0.28195	0.26173	+++++		
	0.29692						0.30336	10.678

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1 / 0.50000 Level 7	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
22 Ethyl Ether	1.03374	1.23651	1.09006	1.00479	0.92583	0.96876		
	0.95613						1.03083	10.248
23 1,1-Dichloroethene	1.09925	1.19120	1.15351	1.10560	1.03894	1.04321		
	1.00820						1.09142	6.041
24 Acrylonitrile	0.64018	0.82203	0.79949	0.74072	0.69308	0.64565		
	0.62423						0.70934	11.242
25 1,1,2-Trichlorotrifluoroethan	2.56644	2.84030	2.64441	2.50622	2.29931	2.71307		
	2.56116						2.59013	6.568
26 Methylene Chloride	1.29702	1.17148	1.09880	1.03937	0.93168	+++++		
	1.37112						1.15158	14.188
27 3-Chloropropene	1.04672	1.21960	1.21437	1.19184	1.12801	1.06706		
	0.94363						1.11589	9.198
28 Carbon Disulfide	3.86324	4.13944	3.93383	3.72749	3.46339	3.99134		
	3.63923						3.82257	5.990
29 trans-1,2-Dichloroethene	1.01808	1.15884	1.14876	1.09592	1.02840	1.00273		
	0.91778						1.05293	8.211
30 Methyl-t-Butyl Ether	2.24842	3.10501	3.25012	3.23533	3.06341	+++++		
	2.20034 ✓						2.85044	17.209

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
31 1,1-Dichloroethane	2.35270	2.57443	2.55417	2.43061	2.30036	2.41347		
	2.25910						2.41212	4.972
32 Vinyl Acetate	2.04768	3.05124	2.91684	2.79452	2.61320	2.21160		
	1.94863						2.51196	17.564
33 2-Butanone	0.45701	0.57382	0.57109	0.55512	0.50426	+++++		
	0.38986						0.50853	14.478
34 Hexane	0.91285	1.02174	0.97652	0.94184	0.83637	0.84618		
	0.84193						0.91106	8.022
35 cis 1,2-Dichloroethene	1.20253	1.36806	1.32635	1.28414	1.20161	1.18762		
	1.10299						1.23904	7.382
36 Chloroform	2.87000	3.09117	2.98733	2.86391	2.69789	3.16203		
	2.82870						2.92872	5.491
37 1,1,1-Trichloroethane	2.72233	2.97552	3.06912	3.01162	2.84826	2.89099		
	2.68272						2.88579	5.039
38 1,2-Dichloroethane	0.35872	0.37481	0.39274	0.38306	0.35151	0.38869		
	0.36140						0.37299	4.296
39 Benzene	0.69991	0.71783	0.64748	0.58294	0.50095	0.73222		
	0.67121						0.65036	12.714

:eport Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

:tart Cal Date : 30-JUL-2002 08:01
:nd Cal Date : 30-JUL-2002 11:26
)uant Method : ISTD
)rigin : Disabled
:arget Version : 3.50
:ntegrator : HP RTE
!ethod file : /var/chem/gcms/me.i/E073002I.b/LA.m
:al Date : 30-Jul-2002 13:47 wilesd
:urve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
40 1-Butanol	0.06550	0.12703	0.12612	0.12070	0.11634	0.09856		
	0.07148						0.10368	24.965
41 Cyclohexane	0.09751	0.10576	0.09654	0.08750	0.07657	0.09547		
	0.08752						0.09241	10.167
42 Carbon Tetrachloride	2.32141	3.09453	3.12140	3.05723	2.73544	2.42089		
	2.12399						2.69641	15.254
43 Heptane	0.42388	0.46432	0.42040	0.38825	0.33700	0.42486		
	0.39260						0.40733	9.783
44 1,2-Dichloropropane	0.27068	0.27061	0.24794	0.22598	0.19097	0.29360		
	0.26437						0.25202	13.551
45 Trichloroethene	0.28629	0.28056	0.26566	0.24696	0.21652	0.29774		
	0.27259						0.26662	10.251
46 Dibromomethane	0.30284	0.32390	0.30710	0.28557	0.24971	0.36070		
	0.31380						0.30623	11.130
47 Bromodichloromethane	0.57384	0.64302	0.64133	0.60332	0.53553	0.59585		
	0.54084						0.59053	7.349
48 4-Methyl-2-pentanone	0.36338	0.54700	0.52070	0.47134	0.37386	+++++		
	0.46840						0.45745	16.408

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1 / 0.50000 Level 7	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
49 cis-1,3-Dichloropropene	0.46242	0.53002	0.53428	0.48600	0.39888	0.44662		
	0.42477						0.46900	10.904
50 trans-1,3-Dichloropropene	0.39293	0.43754	0.43997	0.42871	0.39467	0.41529		
	0.40143						0.41579	4.810
51 Toluene	1.11664	0.98325	0.93277	0.89702	0.80490	1.16371		
	1.07908						0.99676	12.956
52 1,1,2-Trichloroethane	0.35253	0.36906	0.34486	0.32799	0.28819	0.40517		
	0.34548						0.34761	10.323
53 2-Hexanone	✓ 0.23161	0.29734	0.30098	0.29582	0.27293	+++++		
	0.22956						0.27137	12.200
54 Octane	0.25508	0.30930	0.28623	0.27992	0.24882	0.24003		
	0.23392						0.26476	10.441
55 Dibromochloromethane	0.57410	0.65245	0.63202	0.61072	0.54441	0.59701		
	0.55598						0.59524	6.664
56 1,2-Dibromoethane	0.59224	0.56451	0.52807	0.50128	0.43847	0.60743		
	0.56612						0.54259	10.763
57 Tetrachloroethene	0.31998	0.32521	0.30574	0.29166	0.25959	0.34746		
	0.32109						0.31011	9.075

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
58 Chlorobenzene	0.81919	0.75207	0.70517	0.67592	0.60757	0.89103		
	0.78958						0.74865	12.674
59 Ethylbenzene	1.36518	1.36720	1.29802	1.24115	1.11025	1.26027		
	1.28973						1.27597	6.853
60 m-Xylene (For p-)	1.12211	1.10561	1.05131	1.00721	0.90481	1.02769		
	1.04938						1.03831	6.894
61 Bromoform	0.71384	0.71592	0.67746	0.64910	0.54494	0.72311		
	0.68990						0.67347	9.252
62 Nonane	0.59982	0.60692	0.54895	0.51193	0.43845	0.52660		
	0.56961						0.54318	10.688
63 Styrene	0.69492	0.75870	0.65583	0.61699	0.56088	0.57697		
	0.61818						0.64035	10.781
64 o-Xylene	1.19660	1.17042	1.08754	1.03614	0.92364	1.11453		
	1.12839						1.09390	8.377
65 1,1,2,2-Tetrachloroethane	0.91070	0.88041	0.77348	0.71173	0.61540	0.92532		
	0.86662						0.81195	14.260
66 1,2,3-Trichloropropane	0.18369	0.22195	0.20109	0.19253	0.16942	+++++		
	0.16753						0.18937	10.865

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
67 Cumene	1.43789	1.52017	1.38246	1.31005	1.16850	1.45098		
	1.36464						1.37638	8.274
68 n-Propylbenzene	2.21195	2.16107	1.92454	1.81898	1.56857	2.01827		
	2.03313						1.96236	11.145
69 4-Ethyltoluene	1.71967	1.65728	1.50758	1.43215	1.27434	1.53682		
	1.58758						1.53078	9.652
70 1,3,5-Trimethylbenzene	0.56836	0.55086	0.48207	0.46632	0.41766	0.52690		
	0.52091						0.50472	10.390
71 Alpha-Methylstyrene	0.48491	0.55875	0.51106	0.48672	0.43512	0.38572		
	0.42690						0.46988	12.362
72 Decane	0.94674	0.89529	0.76937	0.70983	0.59108	0.80722		
	0.82018						0.79139	14.886
73 1,2,4-Trimethylbenzene	1.32459	1.30622	1.19413	1.14007	0.99499	1.14669		
	1.20186						1.18694	9.364
74 1,3-Dichlorobenzene	1.02068	0.98156	0.86871	0.83048	0.73156	0.97077		
	0.95931						0.90901	11.305
75 Benzyl Chloride	1.18035	1.19688	1.10093	1.04121	0.83688	0.90760		
	1.01062						1.03921	12.890

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
76 1,4-Dichlorobenzene	1.05414	0.95552	0.83044	0.79005	0.67696	1.01077		
	0.98383						0.90024	15.232
77 1,2-Dichlorobenzene	0.96919	0.93020	0.82490	0.78310	0.68359	0.92611		
	0.92354						0.86295	11.918
78 Undecane	0.89759	0.90322	0.77015	0.70933	0.58235	0.78032		
	0.76732						0.77290	14.269
79 Dodecane	0.72136	0.58967	0.66815	0.63051	0.52176	0.60282		
	0.62625						0.62293	10.057
80 1,2,4-Trichlorobenzene	1.13515	0.75726	0.72165	0.68621	0.59880	1.10932		
	1.05540						0.86626	25.980
81 Napthalene	1.47287	1.91524	1.84834	1.72956	1.51216	1.20757		
	1.31076						1.57093	17.110
82 Hexachlorobutadiene	0.87652	1.00554	0.91952	0.86608	0.72345	0.85763		
	0.82182						0.86722	9.962
$ 4 1,2-Dichloroethane-d4	0.24910	0.24332	0.25405	0.25179	0.24282	0.25107		
	0.25007						0.24889	1.713
$ 5 Toluene-d8	1.15675	1.13504	1.13766	1.13757	1.11323	1.16814		
	1.16111						1.14421	1.653

Report Date : 30-Jul-2002 13:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 30-JUL-2002 08:01
End Cal Date : 30-JUL-2002 11:26
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E073002I.b/LA.m
Cal Date : 30-Jul-2002 13:47 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
$ 6 4-Bromofluorobenzene	0.76608	0.78686	0.74748	0.73790	0.71399	0.73370		
	0.75115						0.74816	3.140

0000072

)ata File: /var/chem/gcms/me.i/E073002I.b/ical6.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

)ata file : /var/chem/gcms/me.i/E073002I.b/ical6.d
Lab Smp Id: ICAL Client Smp ID: 0.2ppb
Inj Date : 30-JUL-2002 08:01
)perator : 10648 Inst ID: me.i
Smp Info : ICAL,,1,6,,0.2ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 20 Calibration Sample, Level: 6
)il Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICRL.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.767	(1.000)	222294	10.0000	
2 1,4-Difluorobenzene	114	11.891	11.897	(1.000)	1173692	10.0000	
3 Chlorobenzene-d5	117	16.470	16.475	(1.000)	1007598	10.0000	
4 1,2-Dichloroethane-d4	67	10.767	10.778	(0.905)	294674	10.0000	10.09
5 Toluene-d8	98	14.441	14.447	(0.877)	1177015	10.0000	10.21
6 4-Bromofluorobenzene	95	18.062	18.073	(1.097)	739275	10.0000	9.807
7 Chlorodifluoromethane	51	4.129	4.123	(0.423)	9880	0.20000	0.2162
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	15309	0.20000	0.2076
10 1,2-Dichlorotetrafluoroethane	135	4.430	4.425	(0.454)	9017	0.20000	0.2189
11 Vinyl Chloride	62	4.618	4.618	(0.473)	4740	0.20000	0.2150
13 1,3-Butadiene	54	4.737	4.721	(0.485)	3406	0.20000	0.2008
14 n-Butane	43	4.726	4.721	(0.484)	10884	0.20000	0.2688
15 Bromomethane	94	5.108	5.102	(0.523)	5133	0.20000	0.2096
16 Chloroethane	64	5.264	5.269	(0.539)	2573	0.20000	0.2100
17 Trichlorofluoromethane	101	5.926	5.926	(0.607)	18623	0.20000	0.2195
23 1,1-Dichloroethene	96	6.700	6.706	(0.686)	4638	0.20000	0.1912
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.915	(0.708)	12062	0.20000	0.2095
26 Methylene Chloride	84	7.088	7.082	(0.726)	7880	0.20000	0.3078
27 3-Chloropropene	39	7.104	7.109	(0.728)	4744	0.20000	0.1912
28 Carbon Disulfide	76	7.254	7.254	(0.743)	17745	0.20000	0.2088
29 trans-1,2-Dichloroethene	96	7.954	7.954	(0.815)	4458	0.20000	0.1905
31 1,1-Dichloroethane	63	8.400	8.406	(0.861)	10730	0.20000	0.2001

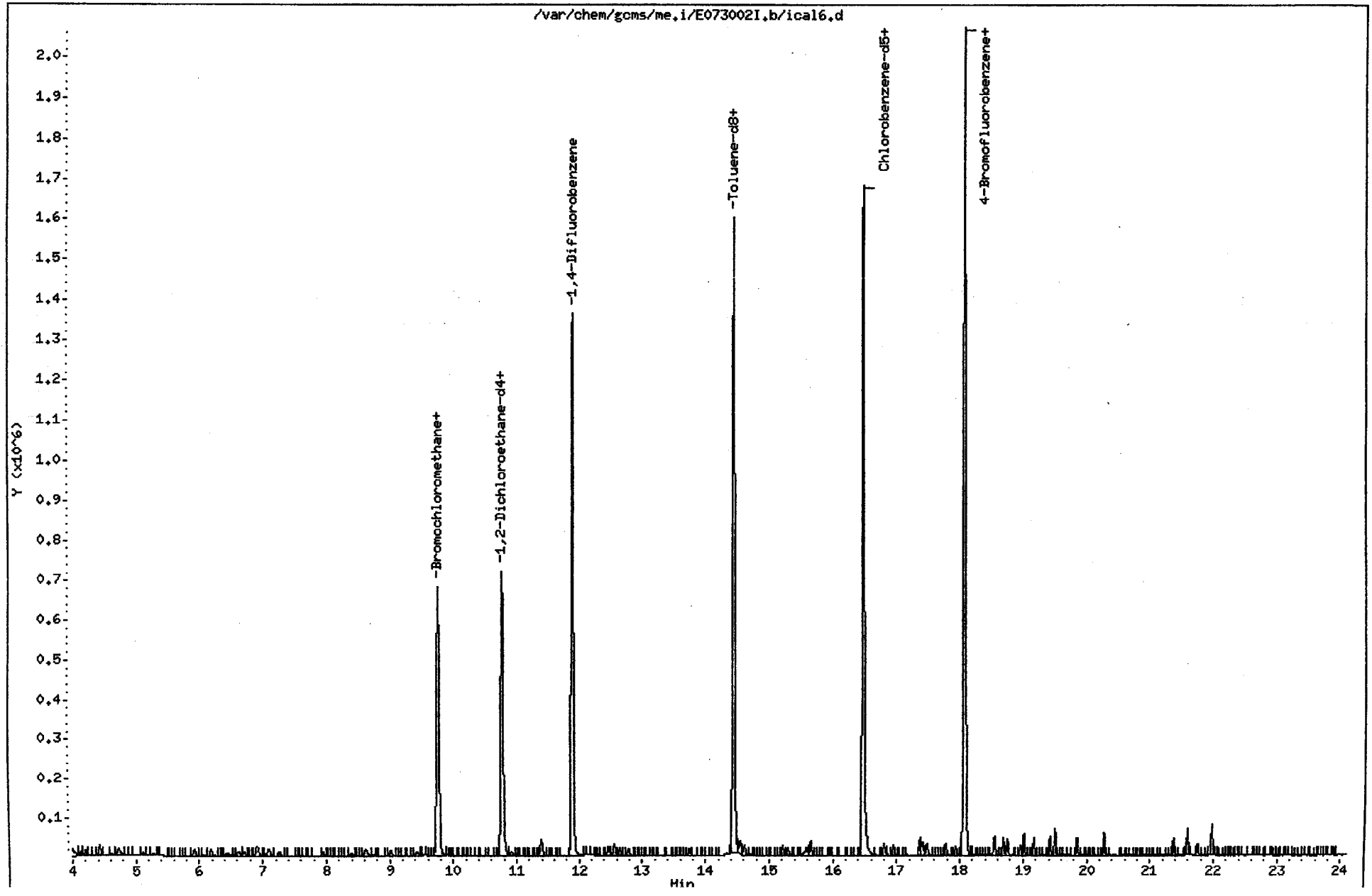
Data File: /var/chem/gcms/me.i/E073002I.b/ical6.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
34 Hexane	56	9.019	9.024	(0.924)	3762	0.20000	0.1858
35 cis 1,2-Dichloroethene	96	9.433	9.428	(0.966)	5280	0.20000	0.1917
36 Chloroform	83	9.767	9.783	(1.001)	14058	0.20000	0.2159
37 1,1,1-Trichloroethane	97	10.821	10.821	(1.109)	12853	0.20000	0.2004
38 1,2-Dichloroethane	62	10.918	10.923	(0.918)	9124	0.20000	0.2084
39 Benzene	78	11.386	11.386	(0.957)	17188	0.20000	0.2252
41 Cyclohexane	69	11.391	11.391	(0.958)	2241	0.20000	0.2066
42 Carbon Tetrachloride	117	11.397	11.407	(1.168)	10763	0.20000	0.1796
43 Heptane	43	12.467	12.467	(1.048)	9973	0.20000	0.2086
44 1,2-Dichloropropane	63	12.548	12.553	(1.055)	6892	0.20000	0.2330
45 Trichloroethene	130	12.575	12.575	(1.057)	6989	0.20000	0.2234
46 Dibromomethane	93	12.650	12.655	(1.064)	8467	0.20000	0.2356
47 Bromodichloromethane	83	12.779	12.790	(1.075)	13987	0.20000	0.2018
49 cis-1,3-Dichloropropene	75	13.747	13.753	(1.156)	10484	0.20000	0.1905
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.876)	8369	0.20000	0.1998
51 Toluene	91	14.549	14.554	(0.883)	23451	0.20000	0.2335
52 1,1,2-Trichloroethane	97	14.619	14.619	(0.888)	8165	0.20000	0.2331
54 Octane	85	15.211	15.216	(0.924)	4837	0.20000	0.1813
55 Dibromochloromethane	129	15.297	15.302	(0.929)	12031	0.20000	0.2006
56 1,2-Dibromoethane	107	15.587	15.598	(0.946)	12241	0.20000	0.2239
57 Tetrachloroethene	129	15.657	15.663	(0.951)	7002	0.20000	0.2241
58 Chlorobenzene	112	16.513	16.523	(1.003)	17956	0.20000	0.2380
59 Ethylbenzene	91	16.803	16.808	(1.020)	25397	0.20000	0.1975
60 m-Xylene (For p-)	91	16.954	16.959	(1.029)	20710	0.20000	0.1980
62 Nonane	57	17.363	17.368	(1.054)	10612	0.20000	0.1939
63 Styrene	104	17.411	17.422	(1.057)	11627	0.20000	0.1802
61 Bromoform	173	17.395	17.406	(1.056)	14572	0.20000	0.2148
64 o-Xylene	91	17.481	17.486	(1.061)	22460	0.20000	0.2038
65 1,1,2,2-Tetrachloroethane	83	17.782	17.788	(1.080)	18647	0.20000	0.2279
66 1,2,3-Trichloropropane	110	17.944	17.944	(1.089)	3671	0.20000	0.1924
67 Cumene	105	18.046	18.046	(1.096)	29240	0.20000	0.2108
68 n-Propylbenzene	91	18.546	18.546	(1.126)	40672	0.20000	0.2057
69 4-Ethyltoluene	105	18.686	18.691	(1.135)	30970	0.20000	0.2008
70 1,3,5-Trimethylbenzene	120	18.756	18.761	(1.139)	10618	0.20000	0.2088
71 Alpha-Methylstyrene	118	18.966	18.971	(1.152)	7773	0.20000	0.1642
72 Decane	57	19.019	19.025	(1.155)	16267	0.20000	0.2040
73 1,2,4-Trimethylbenzene	105	19.170	19.175	(1.164)	23108	0.20000	0.1932
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	19563	0.20000	0.2136
75 Benzyl Chloride	91	19.493	19.498	(1.184)	18290	0.20000	0.1747
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	20369	0.20000	0.2246
77 1,2-Dichlorobenzene	146	19.848	19.859	(1.205)	18663	0.20000	0.2146
78 Undecane	57	20.273	20.278	(1.231)	15725	0.20000	0.2019
79 Dodecane	57	21.370	21.376	(1.298)	12148	0.20000	0.1935
80 1,2,4-Trichlorobenzene	180	21.591	21.596	(1.311)	22355	0.20000	0.2561
81 Napthalene	128	21.752	21.758	(1.321)	24335	0.20000	0.1537
82 Hexachlorobutadiene	225	21.978	21.984	(1.334)	17283	0.20000	0.1978

000095

Data File: /var/chem/gcms/me.i/E073002I.b/ical6.d
Date : 30-JUL-2002 08:01
Client ID: 0.2ppb
Sample Info: ICAL,,1,6,,0.2ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 10648
Column diameter: 0.32



)ata File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

)ata file : /var/chem/gcms/me.i/E073002I.b/ical7.d
ab Smp Id: ICAL Client Smp ID: 0.5ppb
nj Date : 30-JUL-2002 08:35
)perator : 10648 Inst ID: me.i
mp Info : ICAL,,1,7,,0.5ppb
isc Info : E072902,LA,,,,
omment :
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eth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
al Date : 30-JUL-2002 10:17 Cal File: ical3.d
ls bottle: 21 Calibration Sample, Level: 7
)il Factor: 1.00000
ntegrator: HP RTE Compound Sublist: RTall.sub
arget Version: 3.50

oncentration Formula: Amt * DF * CpndVariable

pnd Variable Local Compound Variable

ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.767	(1.000)	237572	10.0000	
2 1,4-Difluorobenzene	114	11.891	11.897	(1.000)	1248101	10.0000	
3 Chlorobenzene-d5	117	16.469	16.475	(1.000)	1072768	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.778	(0.906)	312111	10.0000	10.05
5 Toluene-d8	98	14.441	14.447	(0.877)	1245598	10.0000	10.15
6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	805805	10.0000	10.04
7 Chlorodifluoromethane	51	4.123	4.123	(0.422)	23424	0.50000	0.4795
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	37396	0.50000	0.4744
9 Chloromethane	52	4.414	4.414	(0.452)	3388	0.50000	0.5254
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	21597	0.50000	0.4906
11 Vinyl Chloride	62	4.624	4.618	(0.474)	10950	0.50000	0.4648
12 Methanol	31	4.753	4.640	(0.487)	11805	2.00000	1.954
13 1,3-Butadiene	54	4.726	4.721	(0.484)	8561	0.50000	0.4722
14 n-Butane	43	4.720	4.721	(0.484)	22550	0.50000	0.5211
15 Bromomethane	94	5.102	5.102	(0.523)	12348	0.50000	0.4718
16 Chloroethane	64	5.275	5.269	(0.540)	6438	0.50000	0.4914
17 Trichlorofluoromethane	101	5.926	5.926	(0.607)	43060	0.50000	0.4748
18 Acrolein	56	6.049	5.958	(0.620)	5341	1.00000	0.7912
19 Acetonitrile	40	6.168	6.044	(0.632)	11143	1.00000	1.177(H)
20 Acetone	58	6.372	6.114	(0.653)	13650	1.00000	1.176(H)
21 Pentane	57	6.178	6.178	(0.633)	3527	0.50000	0.4894
22 Ethyl Ether	31	6.566	6.394	(0.673)	22715	1.00000	0.9275

Data File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.716	6.706	(0.688)	11976	0.50000	0.4619
24 Acrylonitrile	53	6.905	6.845	(0.707)	14830	1.00000	0.8800
25 1,1,2-Trichlorotrifluoroethane	101	6.915	6.915	(0.708)	30423	0.50000	0.4944
26 Methylene Chloride	84	7.088	7.082	(0.726)	16287	0.50000	0.5953
27 3-Chloropropene	39	7.109	7.109	(0.728)	11209	0.50000	0.4228
28 Carbon Disulfide	76	7.260	7.254	(0.744)	43229	0.50000	0.4760
29 trans-1,2-Dichloroethene	96	7.954	7.954	(0.815)	10902	0.50000	0.4358
30 Methyl-t-Butyl Ether	73	8.518	8.190	(0.873)	52274 ✓	1.00000	0.7719(M)
31 1,1-Dichloroethane	63	8.411	8.406	(0.862)	26835	0.50000	0.4683
32 Vinyl Acetate	43	8.605	8.535	(0.882)	46294	1.00000	0.7757(H)
33 2-Butanone	72	9.358	9.110	(0.959)	9262 ✓	1.00000	0.7666(M)
34 Hexane	56	9.019	9.024	(0.924)	10001	0.50000	0.4621
35 cis 1,2-Dichloroethene	96	9.422	9.428	(0.965)	13102	0.50000	0.4451
36 Chloroform	83	9.767	9.783	(1.001)	33601	0.50000	0.4829
37 1,1,1-Trichloroethane	97	10.816	10.821	(1.108)	31867	0.50000	0.4648
38 1,2-Dichloroethane	62	10.912	10.923	(0.918)	22553	0.50000	0.4845
39 Benzene	78	11.380	11.386	(0.957)	41887	0.50000	0.5160
40 1-Butanol	41	12.069	11.639	(1.015)	8922 ✓	1.00000	0.6895(MH)
41 Cyclohexane	69	11.380	11.391	(0.957)	5462	0.50000	0.4736
42 Carbon Tetrachloride	117	11.402	11.407	(1.168)	25230	0.50000	0.3938
43 Heptane	43	12.467	12.467	(1.048)	24500	0.50000	0.4819
44 1,2-Dichloropropane	63	12.553	12.553	(1.056)	16498	0.50000	0.5245
45 Trichloroethene	130	12.569	12.575	(1.057)	17011	0.50000	0.5112
46 Dibromomethane	93	12.645	12.655	(1.063)	19583	0.50000	0.5124
47 Bromodichloromethane	83	12.784	12.790	(1.075)	33751	0.50000	0.4579
48 4-Methyl-2-pentanone	43	14.199	13.807	(1.194)	58461 ✓	1.00000	1.024(M)
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.157)	26508	0.50000	0.4528
50 trans-1,3-Dichloropropene	75	14.414	14.420	(0.875)	21532	0.50000	0.4827
51 Toluene	91	14.554	14.554	(0.884)	57880	0.50000	0.5413
52 1,1,2-Trichloroethane	97	14.614	14.619	(0.887)	18531	0.50000	0.4969
53 2-Hexanone	58	15.469	15.087	(0.939)	24626 ✓	1.00000	0.8459(MH)
54 Octane	85	15.216	15.216	(0.924)	12547	0.50000	0.4418
55 Dibromochloromethane	129	15.297	15.302	(0.929)	29822	0.50000	0.4670
56 1,2-Dibromoethane	107	15.587	15.598	(0.946)	30366	0.50000	0.5217
57 Tetrachloroethene	129	15.657	15.663	(0.951)	17223	0.50000	0.5177
58 Chlorobenzene	112	16.518	16.523	(1.003)	42352	0.50000	0.5273
59 Ethylbenzene	91	16.803	16.808	(1.020)	69179	0.50000	0.5054
60 m-Xylene (For p-)	91	16.954	16.959	(1.029)	56287	0.50000	0.5053
61 Bromoform	173	17.400	17.406	(1.056)	37005	0.50000	0.5122
62 Nonane	57	17.362	17.368	(1.054)	30553	0.50000	0.5243
63 Styrene	104	17.416	17.422	(1.057)	33158	0.50000	0.4827
64 o-Xylene	91	17.481	17.486	(1.061)	60525	0.50000	0.5158
65 1,1,2,2-Tetrachloroethane	83	17.782	17.788	(1.080)	46484	0.50000	0.5337
66 1,2,3-Trichloropropane	110	17.938	17.944	(1.089)	8986	0.50000	0.4423
67 Cumene	105	18.046	18.046	(1.096)	73197	0.50000	0.4957
68 n-Propylbenzene	91	18.546	18.546	(1.126)	109054	0.50000	0.5180
69 4-Ethyltoluene	105	18.686	18.691	(1.135)	85155	0.50000	0.5186

Data File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Report Date: 30-Jul-2002 13:48

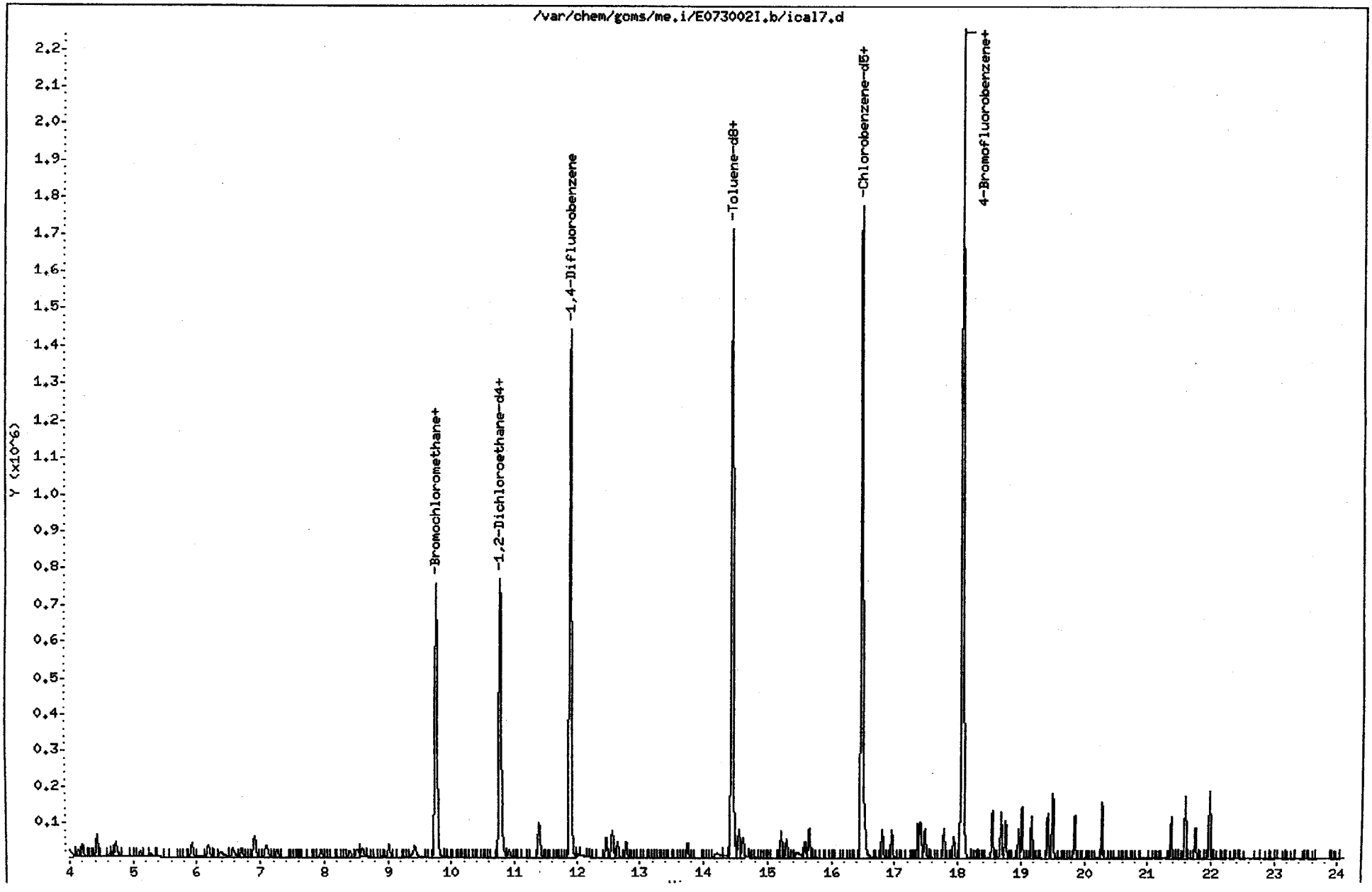
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.761	(1.139)	27941	0.50000	0.5160
71 Alpha-Methylstyrene	118	18.966	18.971	(1.152)	22898	0.50000	0.4542
72 Decane	57	19.019	19.025	(1.155)	43993	0.50000	0.5182
73 1,2,4-Trimethylbenzene	105	19.170	19.175	(1.164)	64466	0.50000	0.5063
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	51456	0.50000	0.5277
75 Benzyl Chloride	91	19.493	19.498	(1.184)	54208	0.50000	0.4862
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	52771	0.50000	0.5464
77 1,2-Dichlorobenzene	146	19.853	19.859	(1.205)	49537	0.50000	0.5351
78 Undecane	57	20.273	20.278	(1.231)	41158	0.50000	0.4964
79 Dodecane	57	21.370	21.376	(1.298)	33591	0.50000	0.5027
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	56610	0.50000	0.6092
81 Napthalene	128	21.752	21.758	(1.321)	70307	0.50000	0.4172
82 Hexachlorobutadiene	225	21.984	21.984	(1.335)	44081	0.50000	0.4738

QC Flag Legend

M - Compound response manually integrated.
I - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Date : 30-JUL-2002 08:35
Client ID: 0.5ppb
Sample Info: ICAL,,1,7,,0.5ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 10648
Column diameter: 0.32



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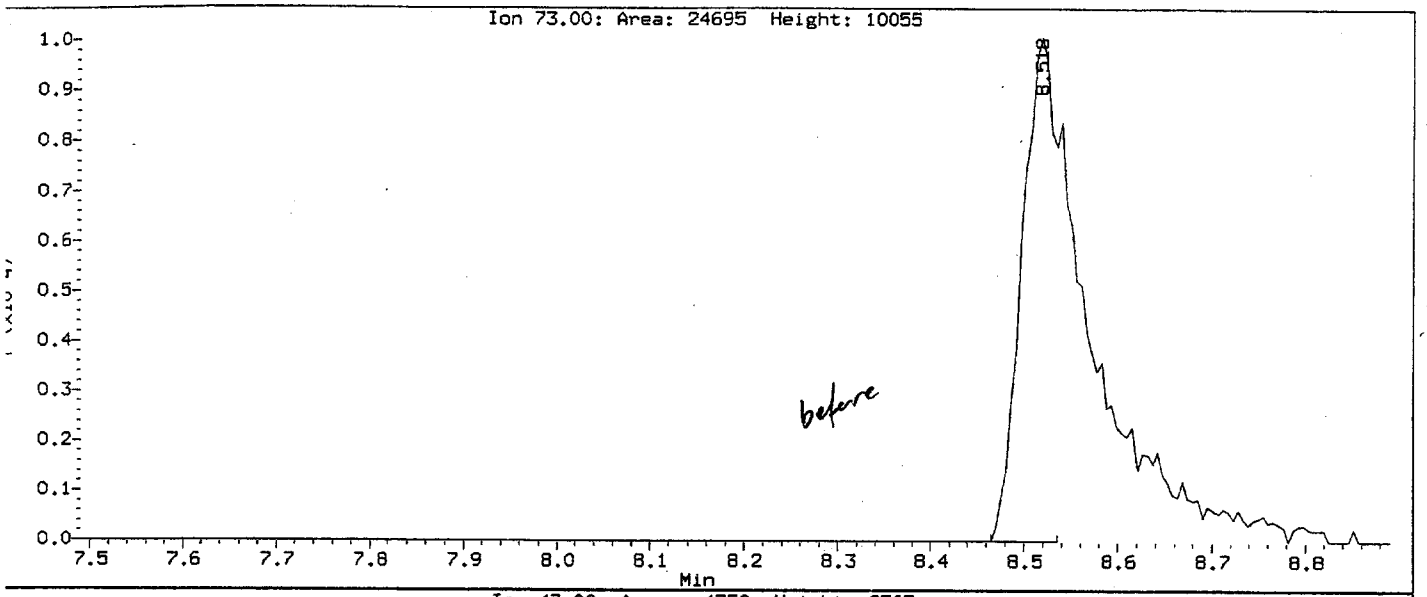
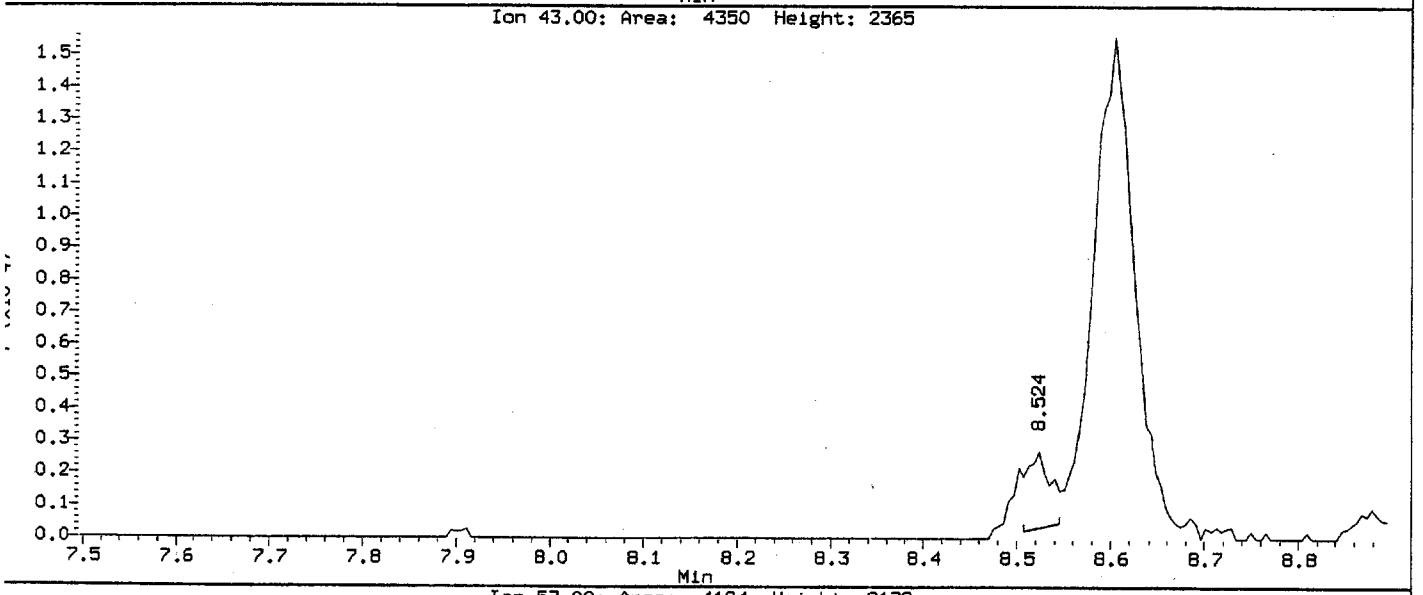
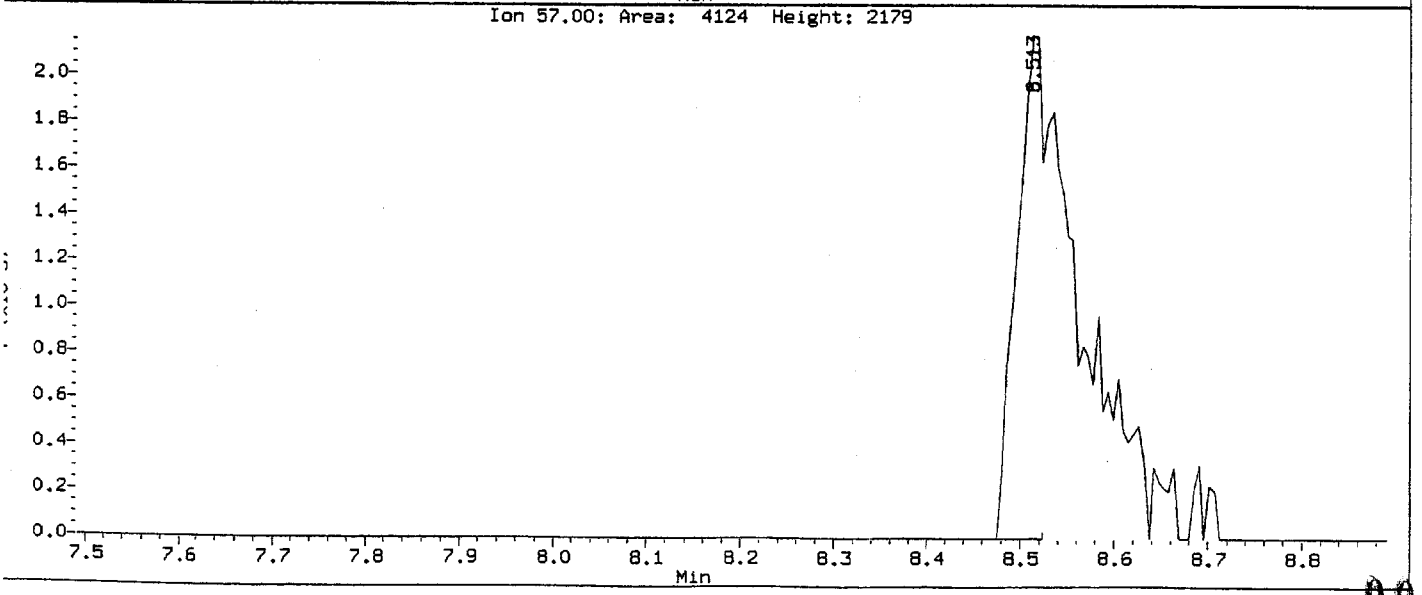
njection Date: 30-JUL-2002 08:35
nstrument: me.i
:lient Sample ID: 0.5ppb

:ompound: Methyl-t-Butyl Ether
:AS Number: 1634-04-4







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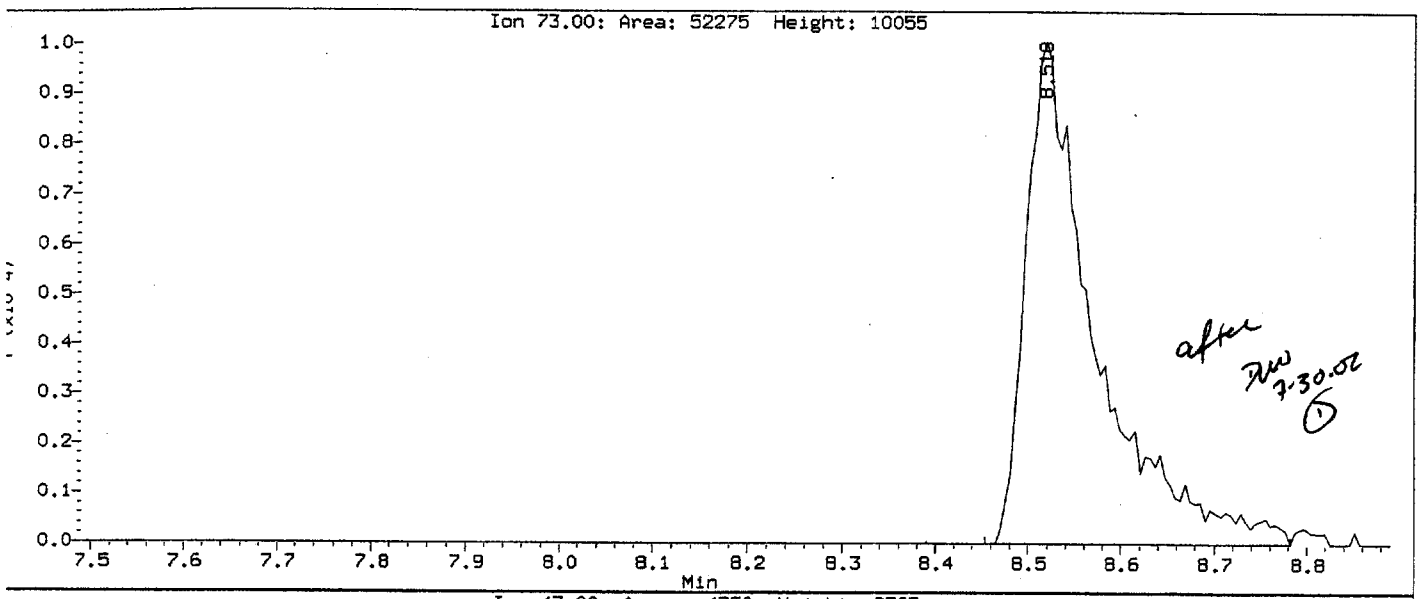
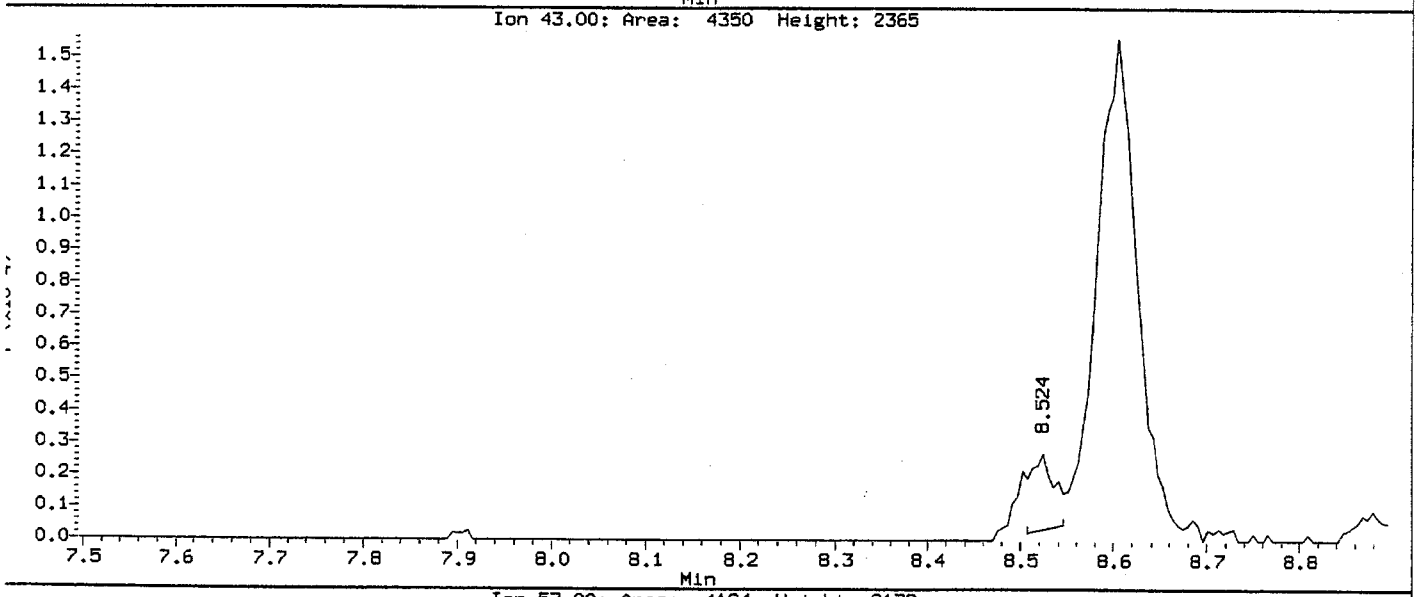
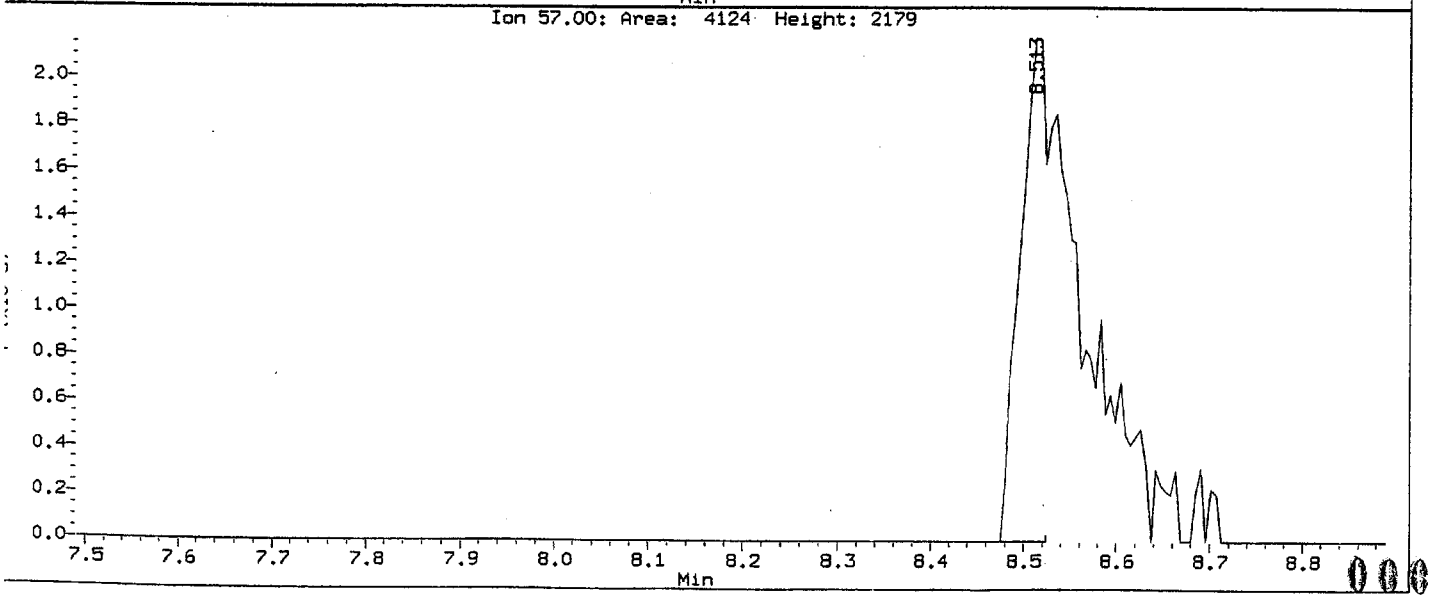
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: Methyl-t-Butyl Ether
CAS Number: 1634-04-4







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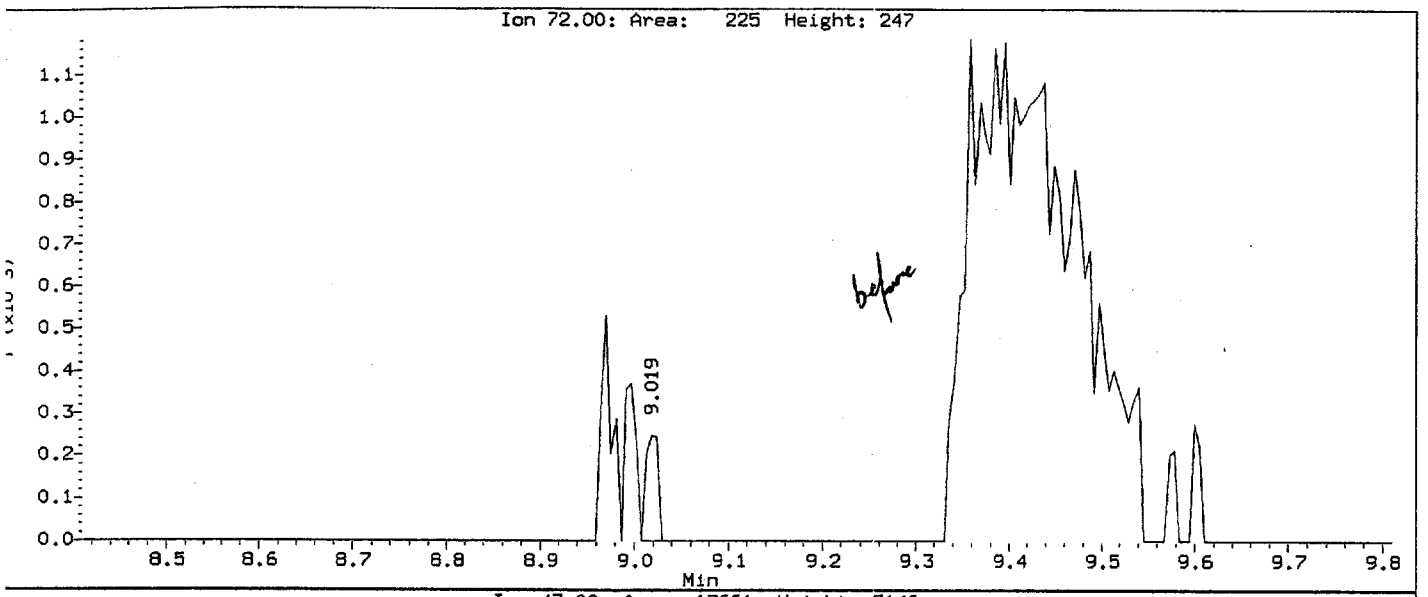
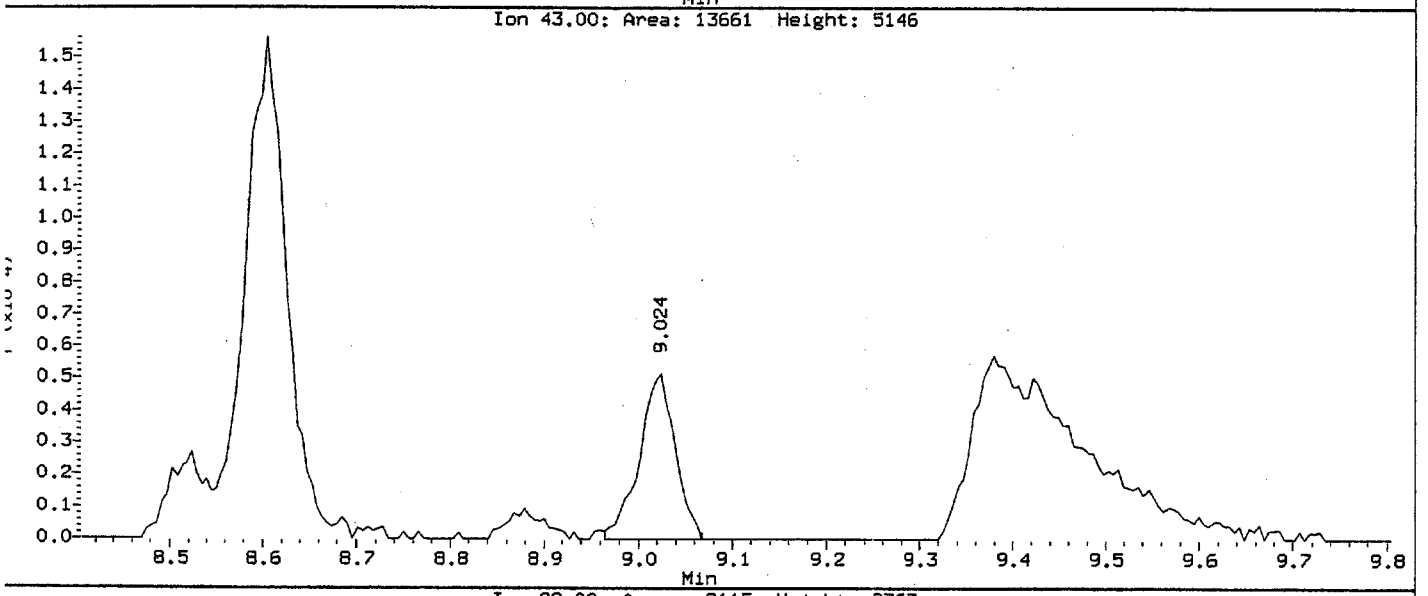
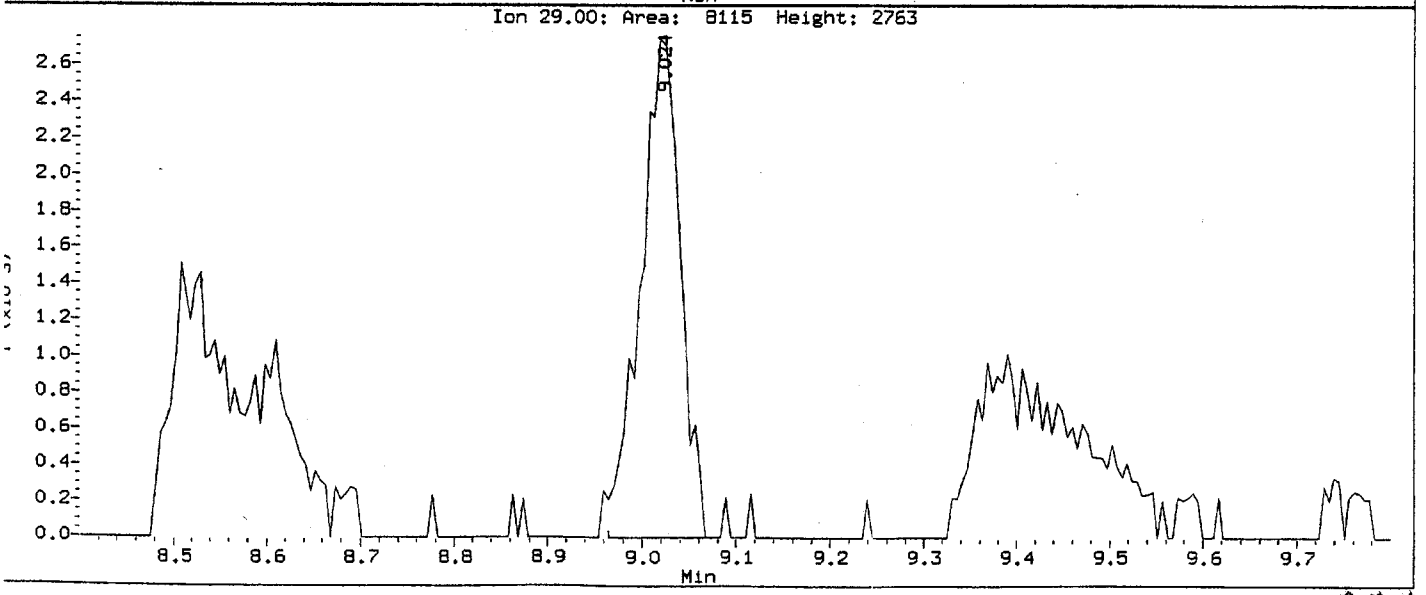
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Butanone
CAS Number: 78-93-3







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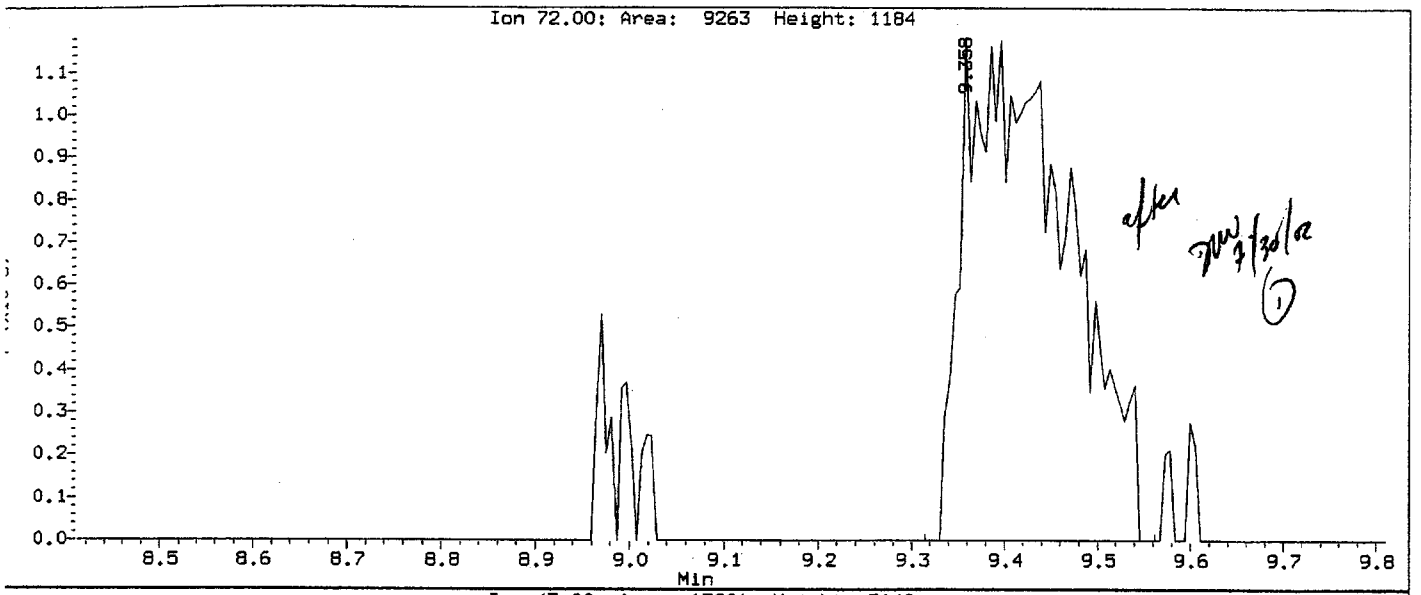
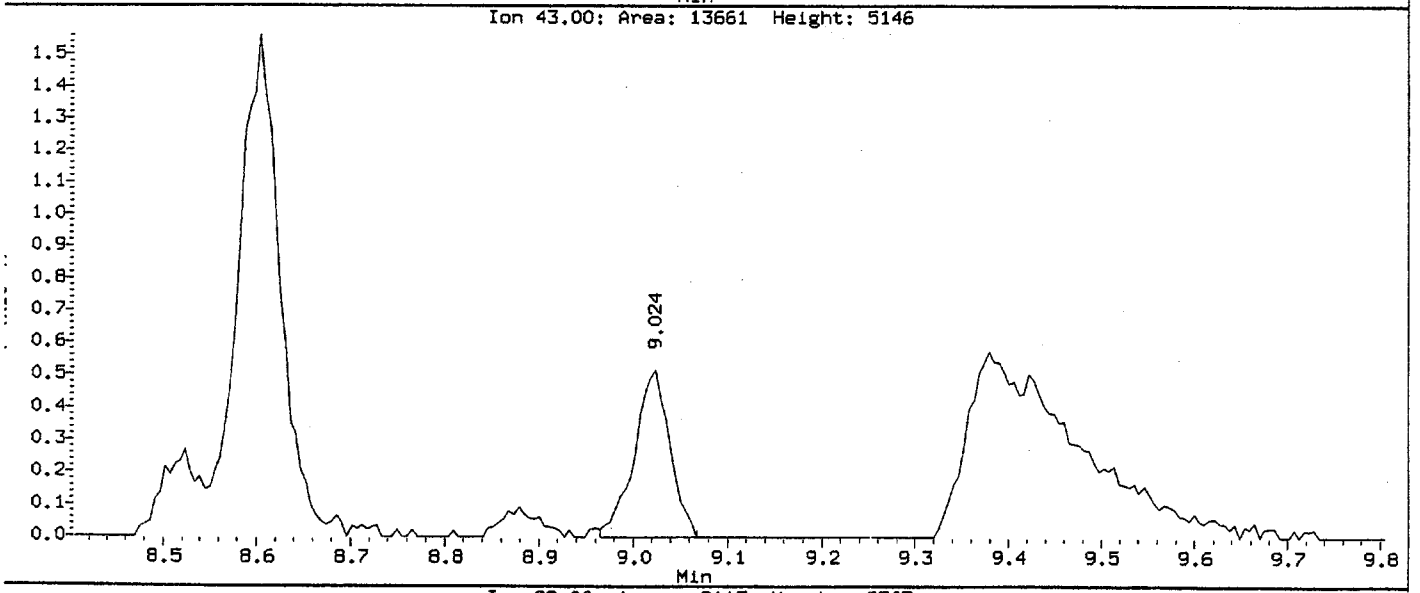
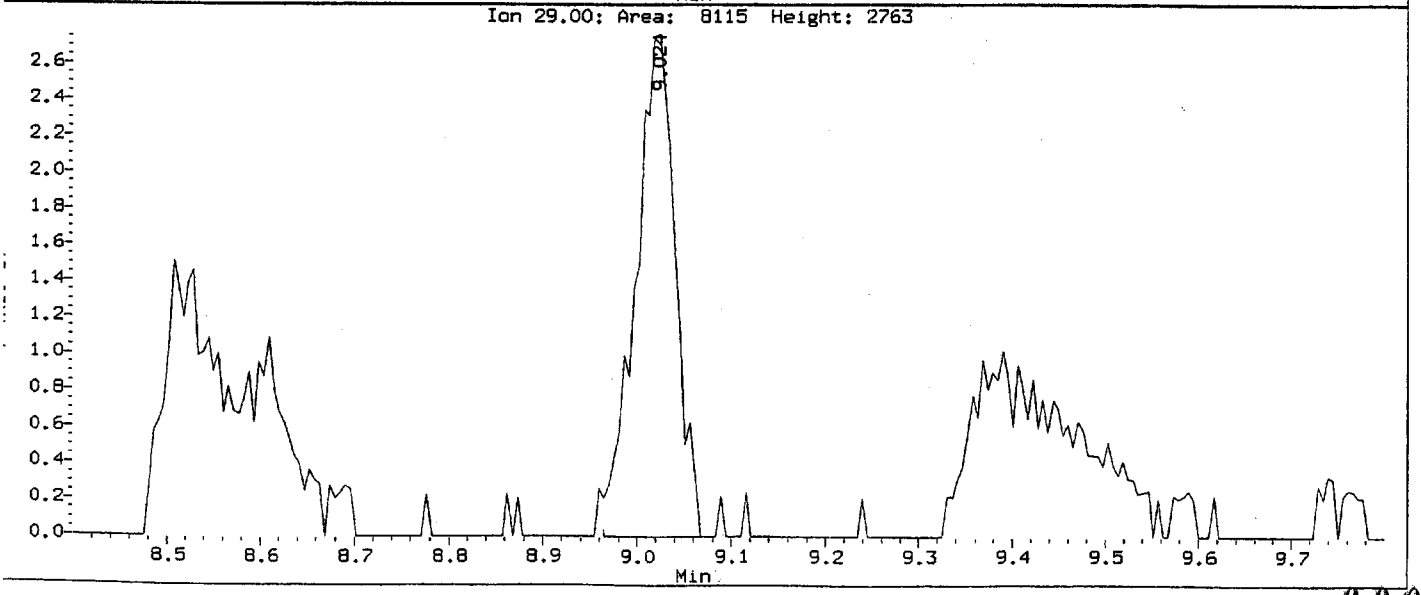
nstrument: me.i
lient Sample ID: 0.5ppb

ompound: 2-Butanone
AS Number: 78-93-3







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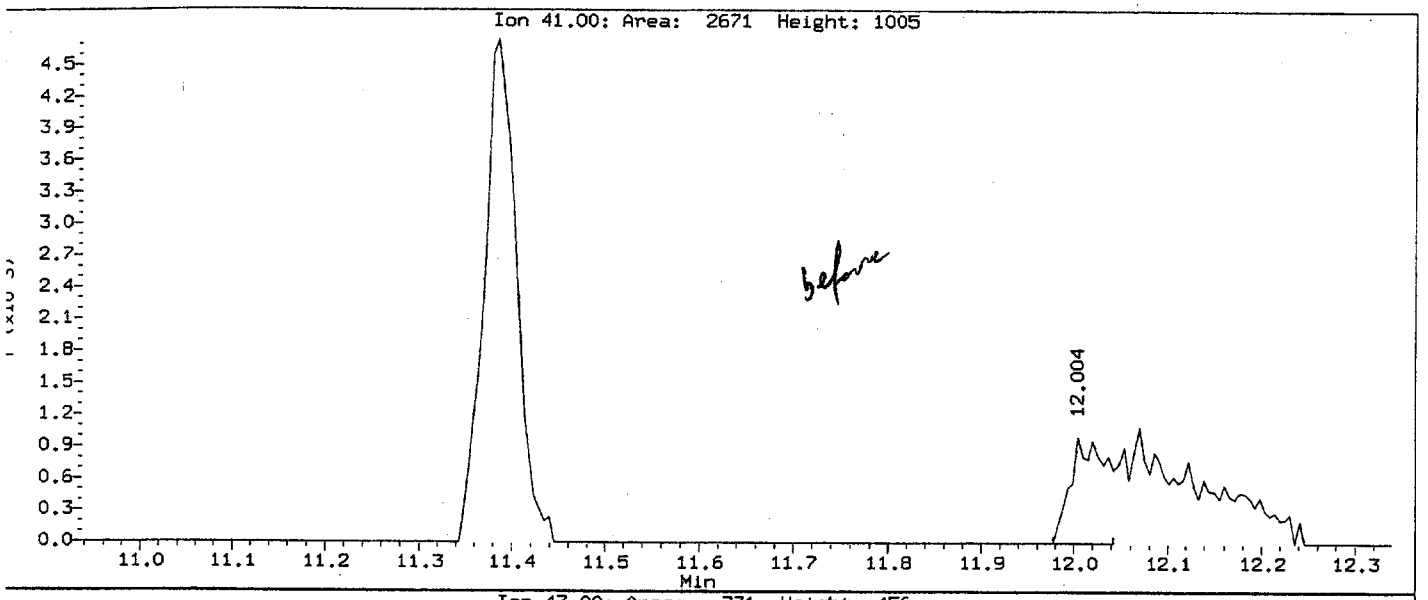
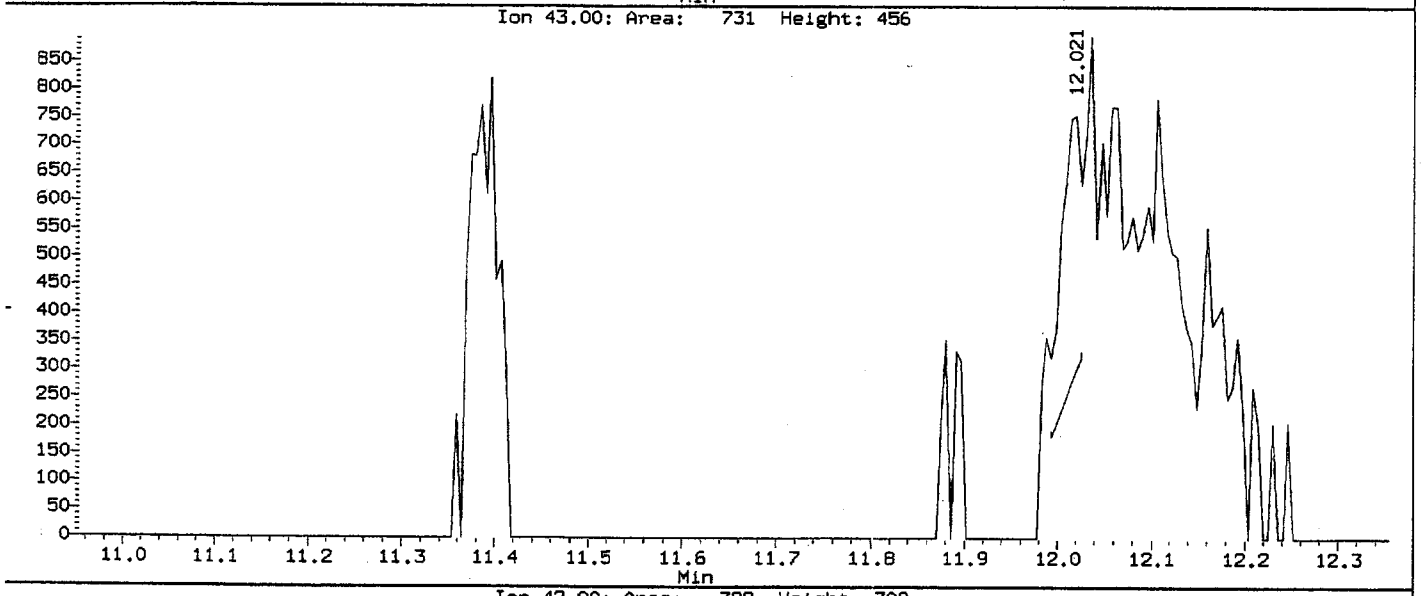
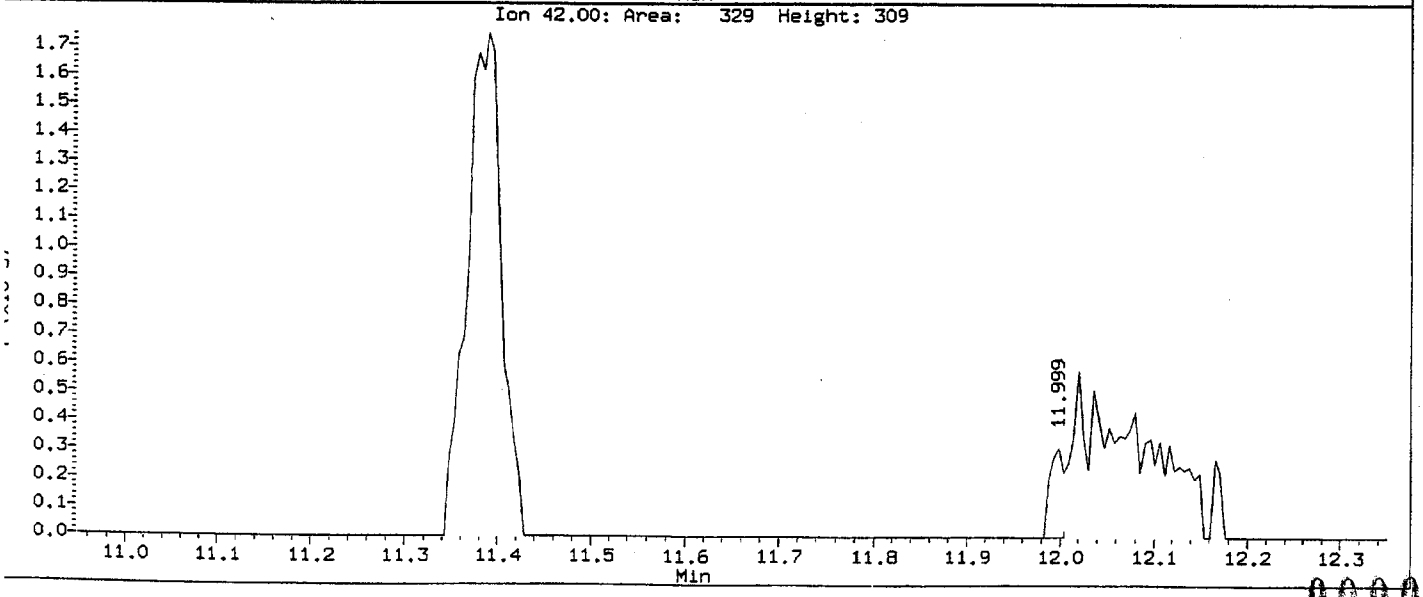
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 1-Butanol
CAS Number: 71-36-3







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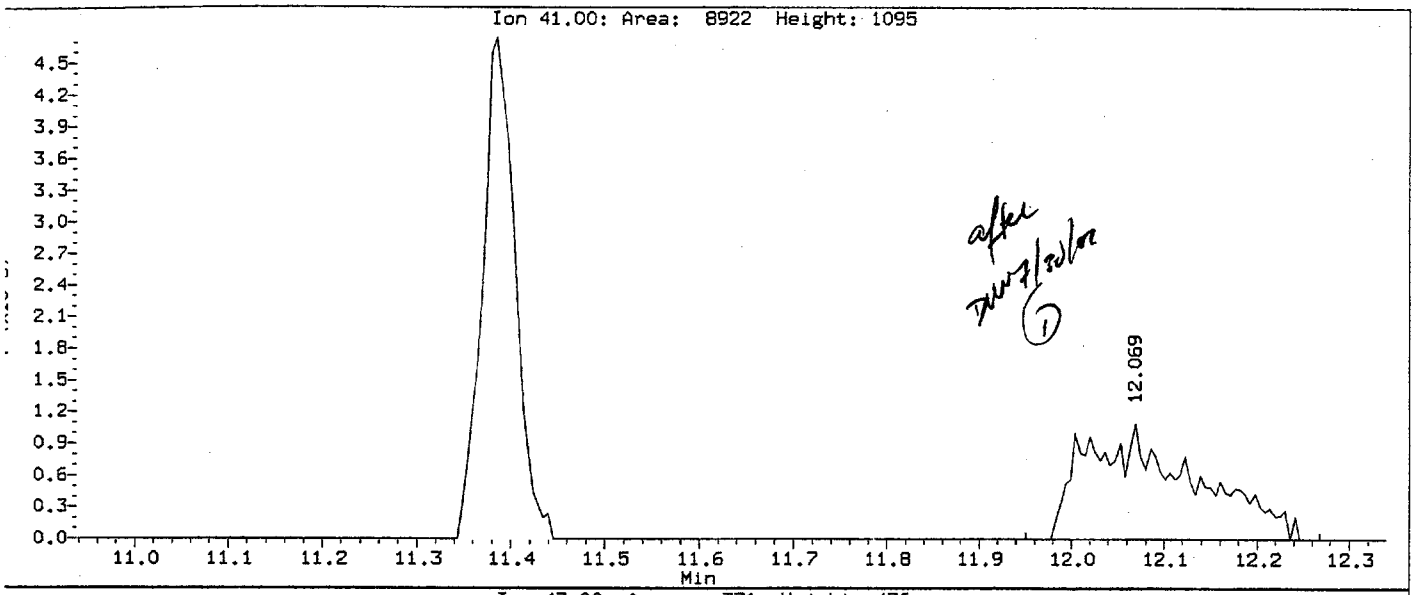
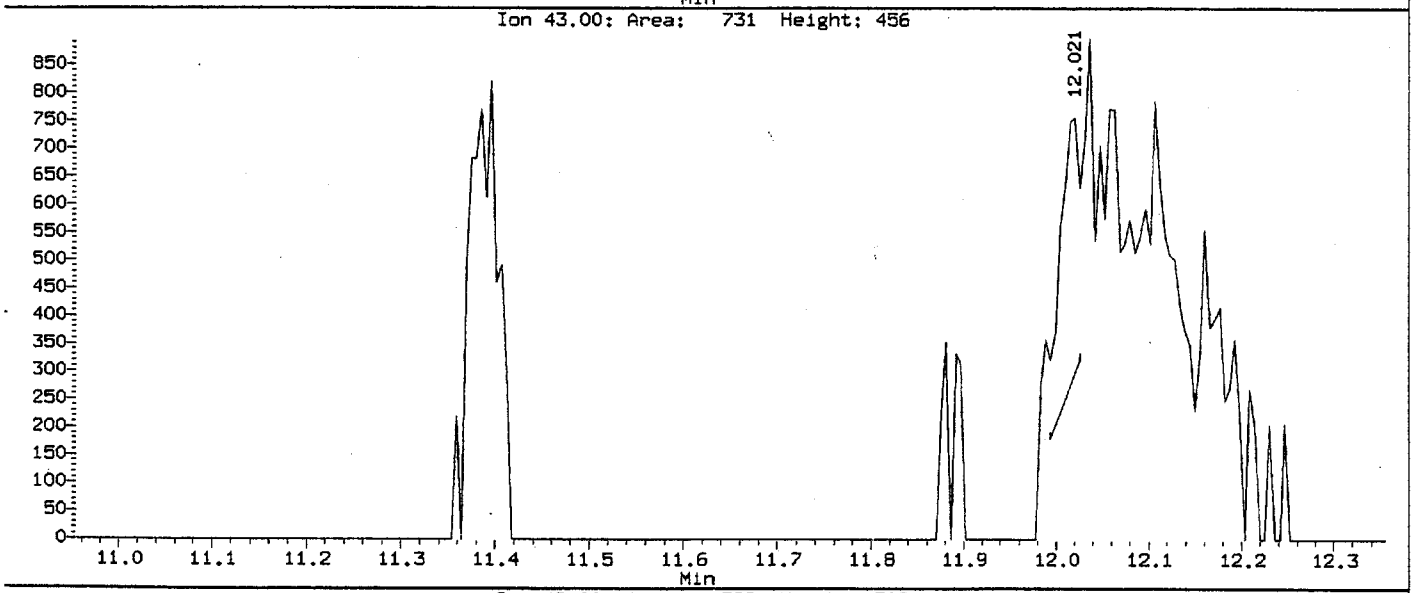
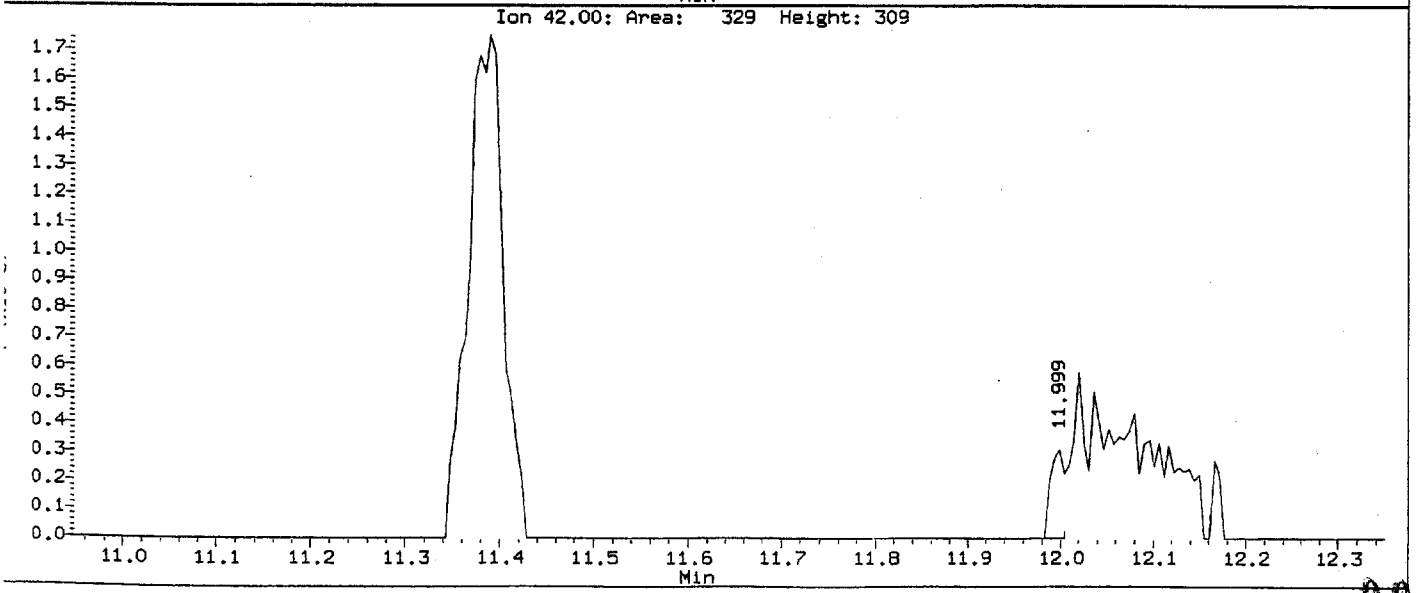
nstrument: me.i
lient Sample ID: 0.5ppb

ompound: 1-Butanol
AS Number: 71-36-3



after DW7/30/02 (1)





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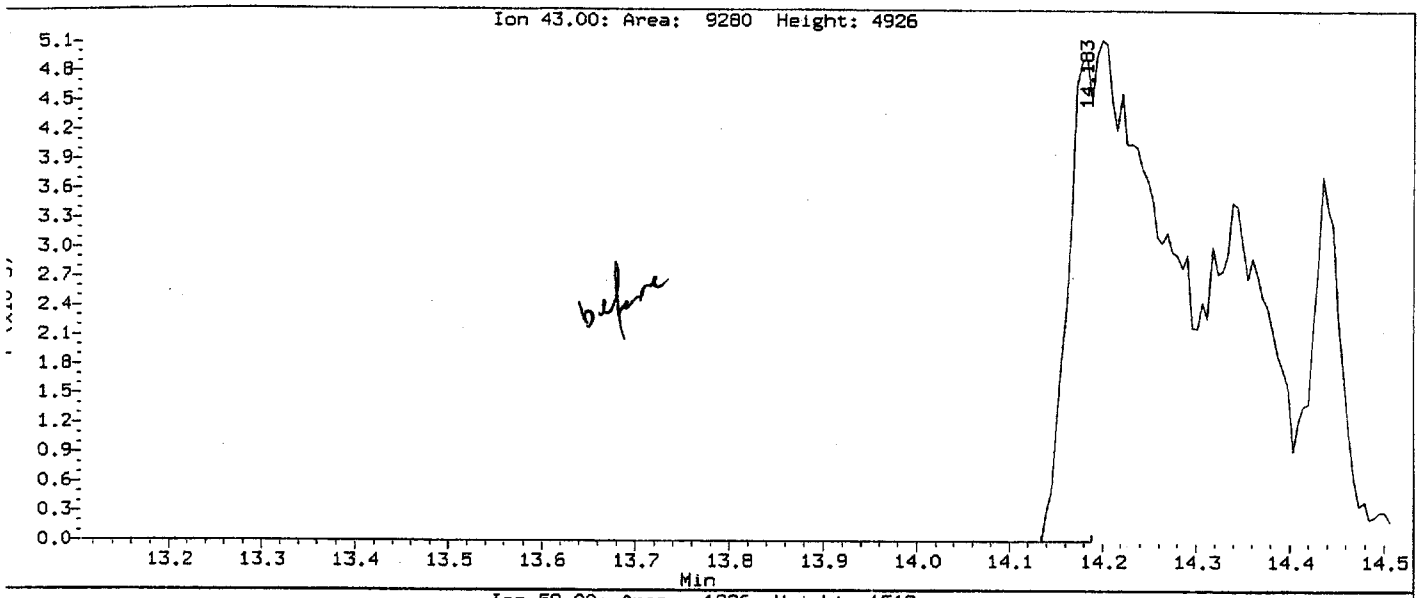
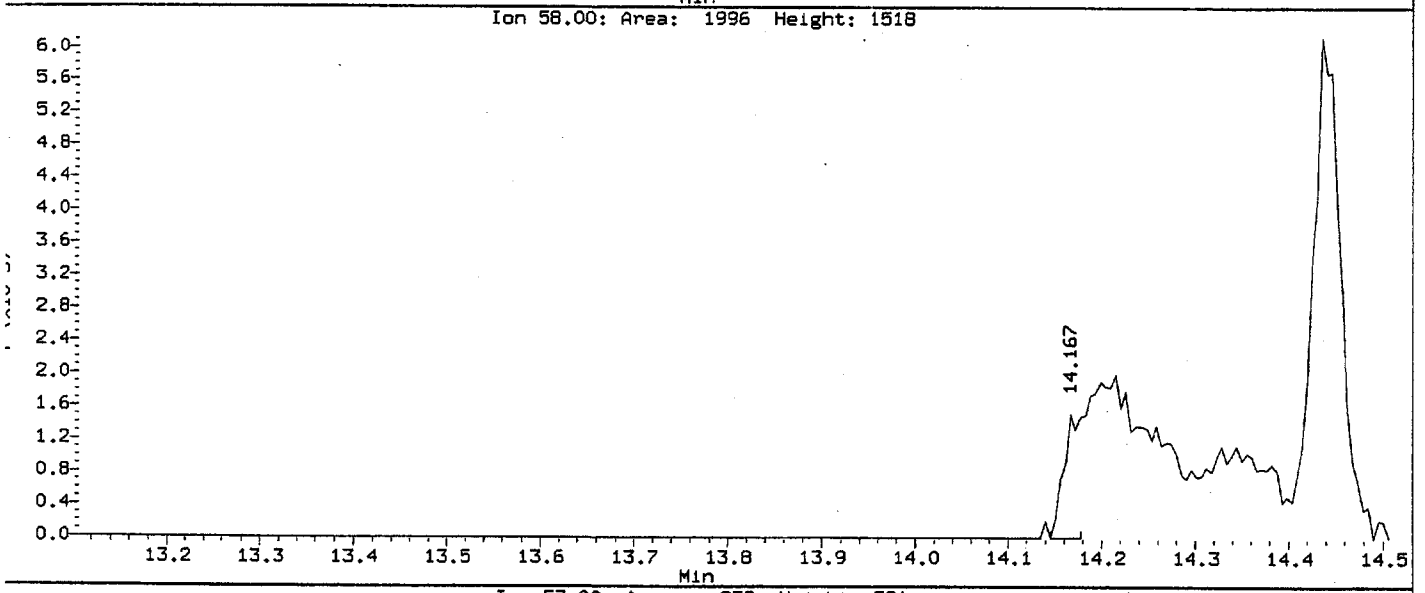
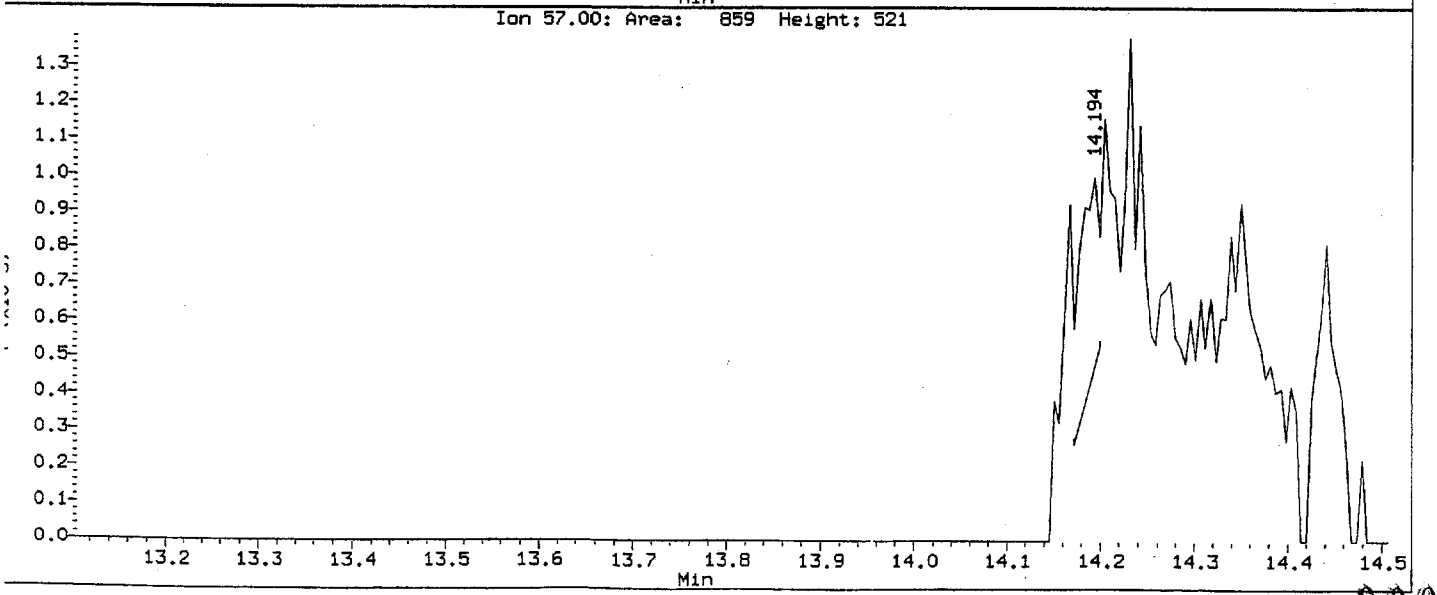
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1

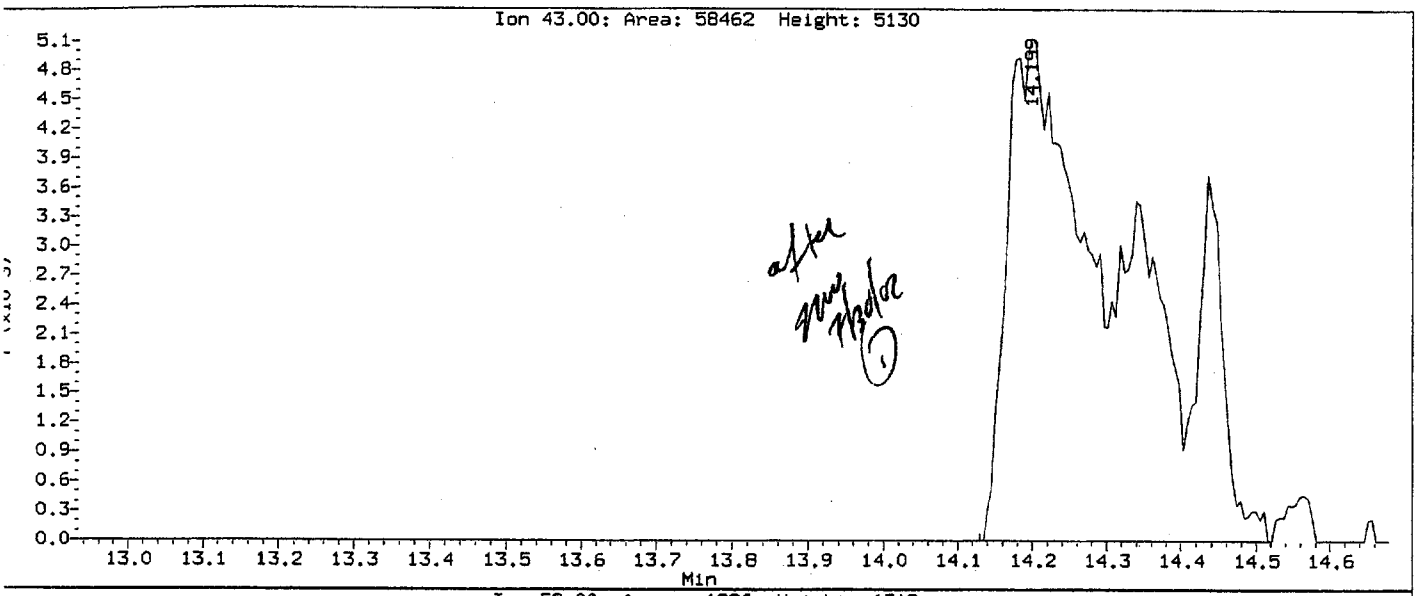


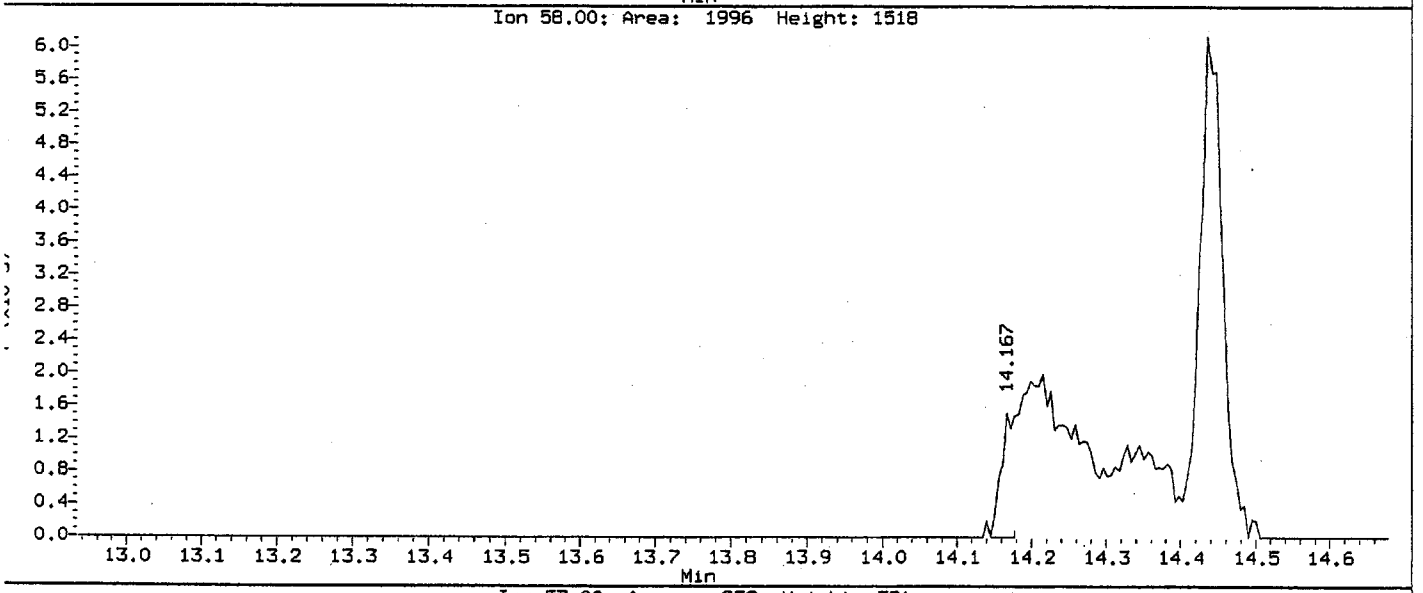


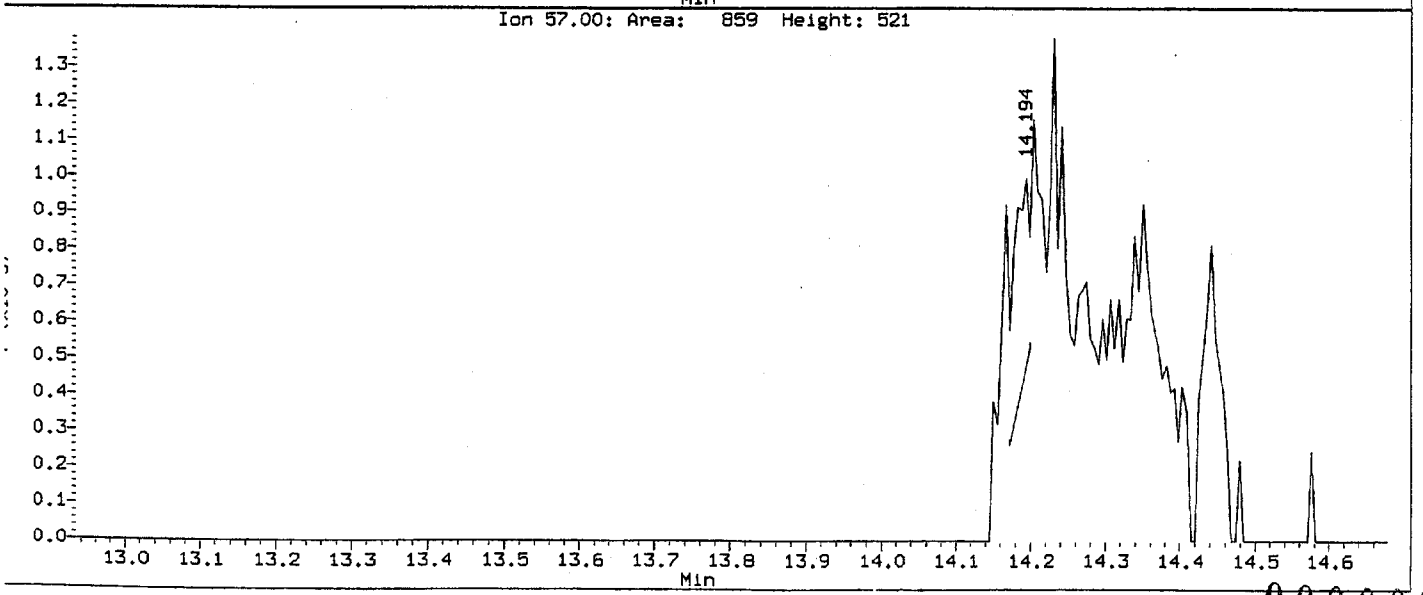


Data File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1

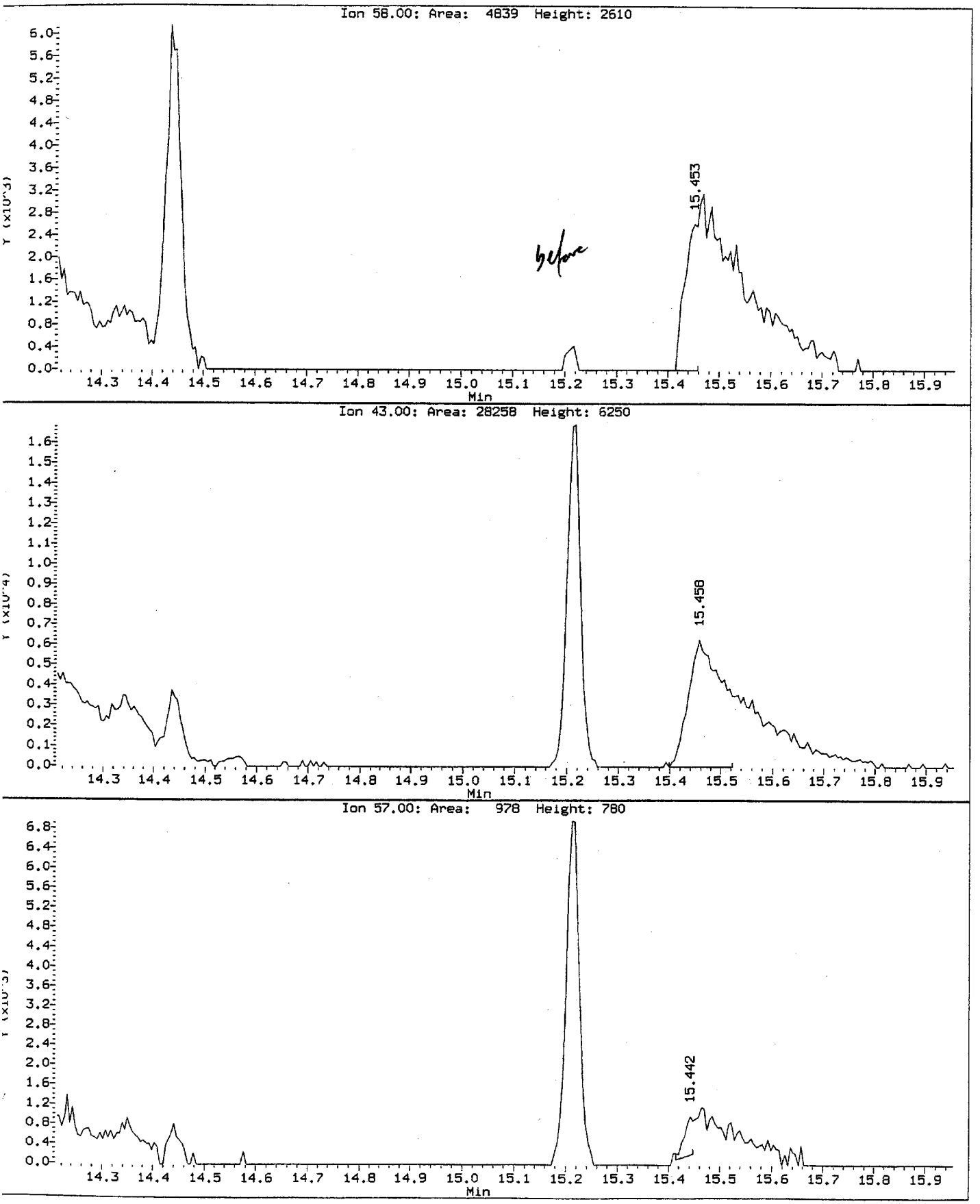






Data File: /var/chem/gcms/me.i/E073002I.b/ical7.d
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Hexanone
CAS Number: 591-78-6



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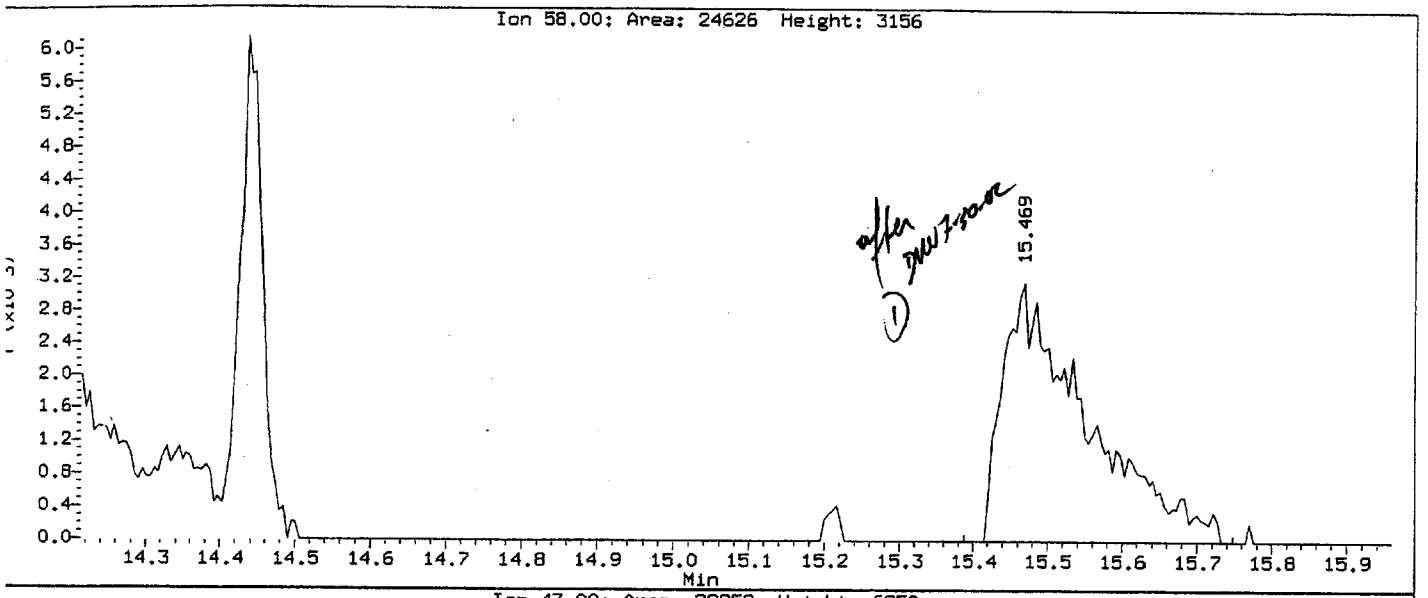
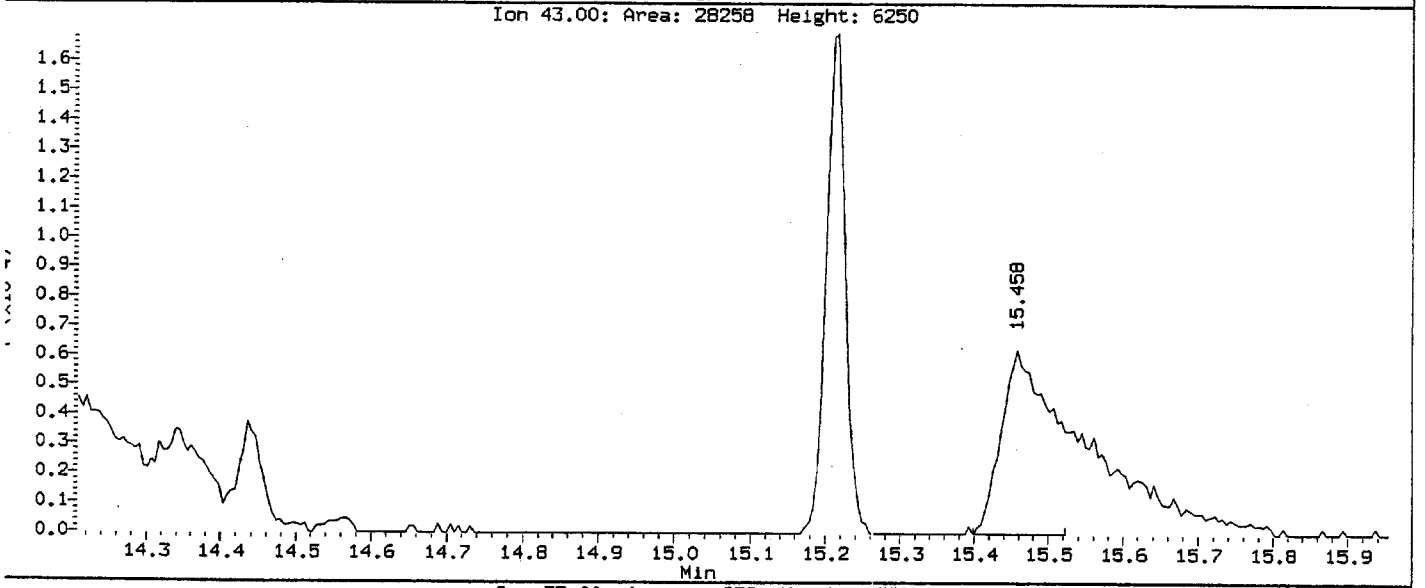
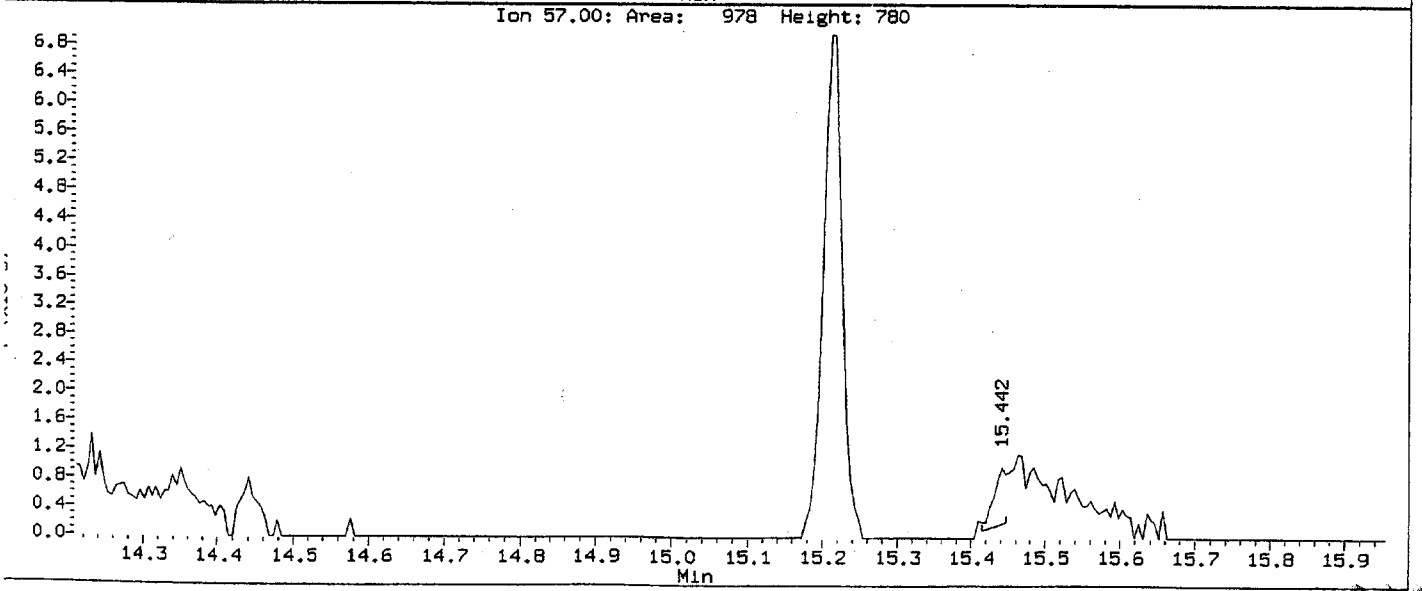
Injection Date: 30-JUL-2002 08:35
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Hexanone
CAS Number: 591-78-6







Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/ical1.d
Lab Smp Id: ICAL
Inj Date : 30-JUL-2002 09:10
Operator : 10648 Inst ID: me.i
Smp Info : ICAL,,1,1,,1ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 15 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.767	(1.000)	231122	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.897	(1.000)	1231134	10.0000	
3 Chlorobenzene-d5	117	16.470	16.475	(1.000)	1075577	10.0000	
4 1,2-Dichloroethane-d4	67	10.767	10.778	(0.905)	306678	10.0000	10.01
5 Toluene-d8	98	14.442	14.447	(0.877)	1244176	10.0000	10.11
6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	823981	10.0000	10.24
7 Chlorodifluoromethane	51	4.123	4.123	(0.422)	46378	1.00000	0.9759
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	74277	1.00000	0.9687
9 Chloromethane	52	4.414	4.414	(0.452)	6361	1.00000	1.014
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.425	(0.453)	43298	1.00000	1.011
11 Vinyl Chloride	62	4.613	4.618	(0.473)	22171	1.00000	0.9674
12 Methanol	31	4.726	4.640	(0.484)	22697	4.00000	3.861
13 1,3-Butadiene	54	4.721	4.721	(0.484)	18350	1.00000	1.040
14 n-Butane	43	4.721	4.721	(0.484)	42518	1.00000	1.010
15 Bromomethane	94	5.103	5.102	(0.523)	25234	1.00000	0.9910
16 Chloroethane	64	5.269	5.269	(0.540)	12552	1.00000	0.9849
17 Trichlorofluoromethane	101	5.926	5.926	(0.607)	88565	1.00000	1.004
18 Acrolein	56	6.001	5.958	(0.615)	11109	2.00000	1.692
19 Acetonitrile	40	6.130	6.044	(0.628)	20446	2.00000	2.733(H)
20 Acetone	58	6.302	6.114	(0.646)	28829	2.00000	2.553(H)
21 Pentane	57	6.184	6.178	(0.634)	7589	1.00000	1.082
22 Ethyl Ether	31	6.512	6.394	(0.667)	47784	2.00000	2.006

Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	25406	1.00000	1.007
24 Acrylonitrile	53	6.872	6.845	(0.704)	29592	2.00000	1.805
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.915	(0.708)	59316	1.00000	0.9908
26 Methylene Chloride	84	7.077	7.082	(0.725)	29977	1.00000	1.126
27 3-Chloropropene	39	7.109	7.109	(0.728)	24192	1.00000	0.9380
28 Carbon Disulfide	76	7.254	7.254	(0.743)	89288	1.00000	1.011
29 trans-1,2-Dichloroethene	96	7.948	7.954	(0.814)	23530	1.00000	0.9669
30 Methyl-t-Butyl Ether	73	8.406	8.190	(0.861)	103932	2.00000	1.692
31 1,1-Dichloroethane	63	8.400	8.406	(0.861)	54376	1.00000	0.9754
32 Vinyl Acetate	43	8.572	8.535	(0.878)	94653	2.00000	1.796
33 2-Butanone	72	9.277	9.110	(0.950)	21125	2.00000	2.053(H)
34 Hexane	56	9.019	9.024	(0.924)	21098	1.00000	1.002
35 cis 1,2-Dichloroethene	96	9.417	9.428	(0.965)	27793	1.00000	0.9705
36 Chloroform	83	9.767	9.783	(1.001)	66332	1.00000	0.9800
37 1,1,1-Trichloroethane	97	10.810	10.821	(1.107)	62919	1.00000	0.9434
38 1,2-Dichloroethane	62	10.918	10.923	(0.918)	44163	1.00000	0.9617
39 Benzene	78	11.381	11.386	(0.957)	86168	1.00000	1.076
40 1-Butanol	41	11.913	11.639	(1.002)	16127	2.00000	1.229(H)
41 Cyclohexane	69	11.381	11.391	(0.957)	12005	1.00000	1.055
42 Carbon Tetrachloride	117	11.397	11.407	(1.168)	53653	1.00000	0.8609
43 Heptane	43	12.462	12.467	(1.048)	52185	1.00000	1.041
44 1,2-Dichloropropane	63	12.543	12.553	(1.055)	33324	1.00000	1.074
45 Trichloroethene	130	12.569	12.575	(1.057)	35246	1.00000	1.074
46 Dibromomethane	93	12.645	12.655	(1.063)	37284	1.00000	0.9889
47 Bromodichloromethane	83	12.785	12.790	(1.075)	70648	1.00000	0.9717
48 4-Methyl-2-pentanone	43	14.038	13.807	(1.181)	89474	2.00000	1.855
49 cis-1,3-Dichloropropene	75	13.748	13.753	(1.156)	56930	1.00000	0.9860
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.876)	42263	1.00000	0.9450
51 Toluene	91	14.554	14.554	(0.884)	120103	1.00000	1.120
52 1,1,2-Trichloroethane	97	14.614	14.619	(0.887)	37917	1.00000	1.014
53 2-Hexanone	58	15.372	15.087	(0.933)	49822 ✓	2.00000	1.980(M)
54 Octane	85	15.216	15.216	(0.924)	27436	1.00000	0.9634
55 Dibromochloromethane	129	15.297	15.302	(0.929)	61749	1.00000	0.9645
56 1,2-Dibromoethane	107	15.587	15.598	(0.946)	63700	1.00000	1.092
57 Tetrachloroethene	129	15.657	15.663	(0.951)	34416	1.00000	1.032
58 Chlorobenzene	112	16.518	16.523	(1.003)	88110	1.00000	1.094
59 Ethylbenzene	91	16.803	16.808	(1.020)	146836	1.00000	1.070
60 m-Xylene (For p-)	91	16.954	16.959	(1.029)	120692	1.00000	1.081
61 Bromoform	173	17.395	17.406	(1.056)	76779	1.00000	1.060
62 Nonane	57	17.363	17.368	(1.054)	64515	1.00000	1.104
63 Styrene	104	17.411	17.422	(1.057)	74744	1.00000	1.085
64 o-Xylene	91	17.481	17.486	(1.061)	128704	1.00000	1.094
65 1,1,2,2-Tetrachloroethane	83	17.782	17.788	(1.080)	97953	1.00000	1.122
66 1,2,3-Trichloropropane	110	17.938	17.944	(1.089)	19757	1.00000	0.9700
67 Cumene	105	18.046	18.046	(1.096)	154656	1.00000	1.045
68 n-Propylbenzene	91	18.546	18.546	(1.126)	237912	1.00000	1.127
69 4-Ethyltoluene	105	18.686	18.691	(1.135)	184964	1.00000	1.123

Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.761	(1.139)	61131	1.00000	1.126
71 Alpha-Methylstyrene	118	18.966	18.971	(1.152)	52156	1.00000	1.032
72 Decane	57	19.020	19.025	(1.155)	101829	1.00000	1.196
73 1,2,4-Trimethylbenzene	105	19.165	19.175	(1.164)	142470	1.00000	1.116
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	109782	1.00000	1.123
75 Benzyl Chloride	91	19.493	19.498	(1.184)	126956	1.00000	1.136
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	113381	1.00000	1.171
77 1,2-Dichlorobenzene	146	19.853	19.859	(1.205)	104244	1.00000	1.123
78 Undecane	57	20.273	20.278	(1.231)	96543	1.00000	1.161
79 Dodecane	57	21.370	21.376	(1.298)	77588	1.00000	1.158
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	122094	1.00000	1.310
81 Napthalene	128	21.752	21.758	(1.321)	158418	1.00000	0.9376
82 Hexachlorobutadiene	225	21.984	21.984	(1.335)	94277	1.00000	1.011

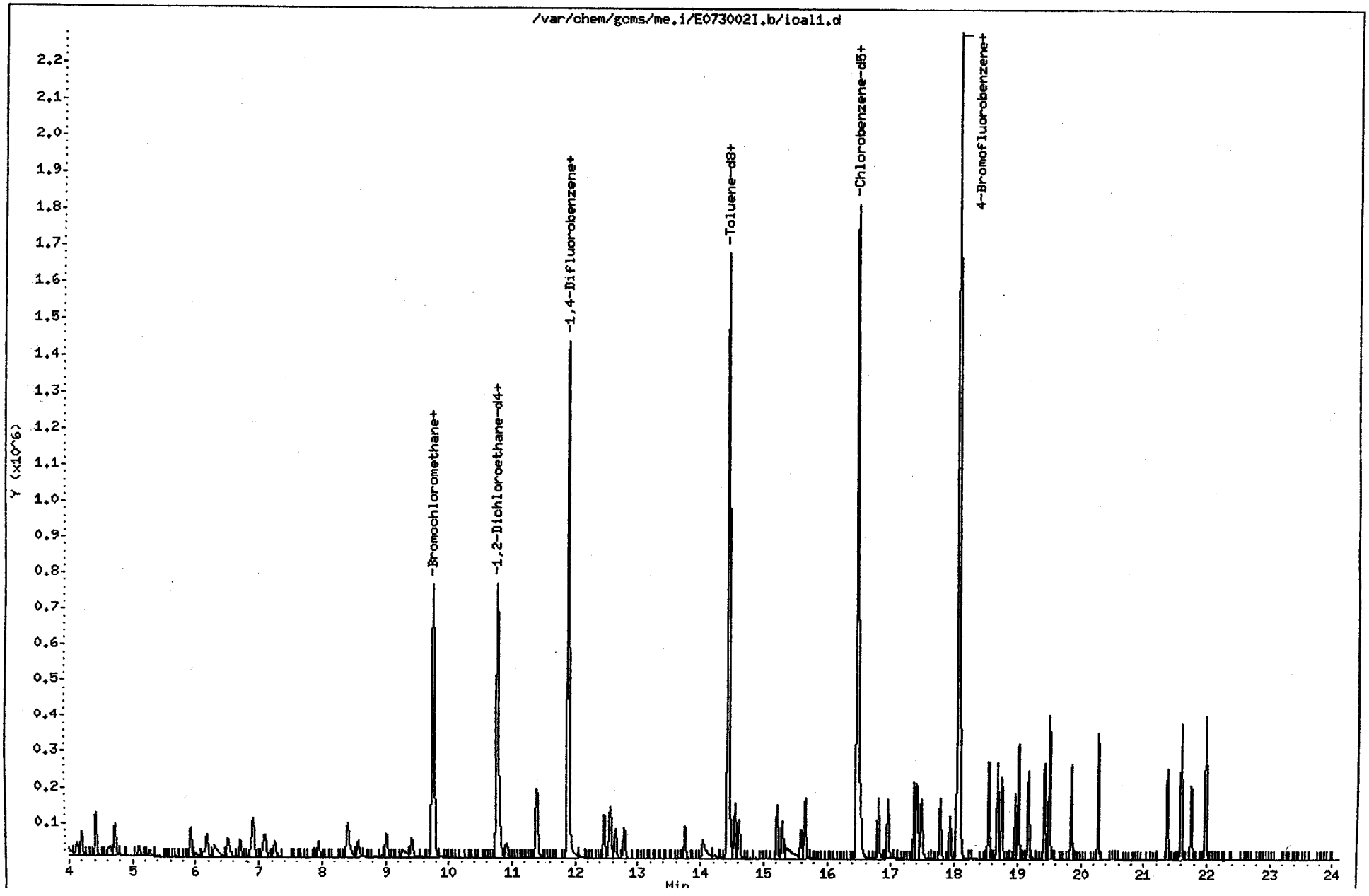
QC Flag Legend

M - Compound response manually integrated.
I - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Date : 30-JUL-2002 09:10
Client ID:
Sample Info: ICAL,,1,1,,1ppb
Volume Injected (uL): 500.0
Column phase: DB-5

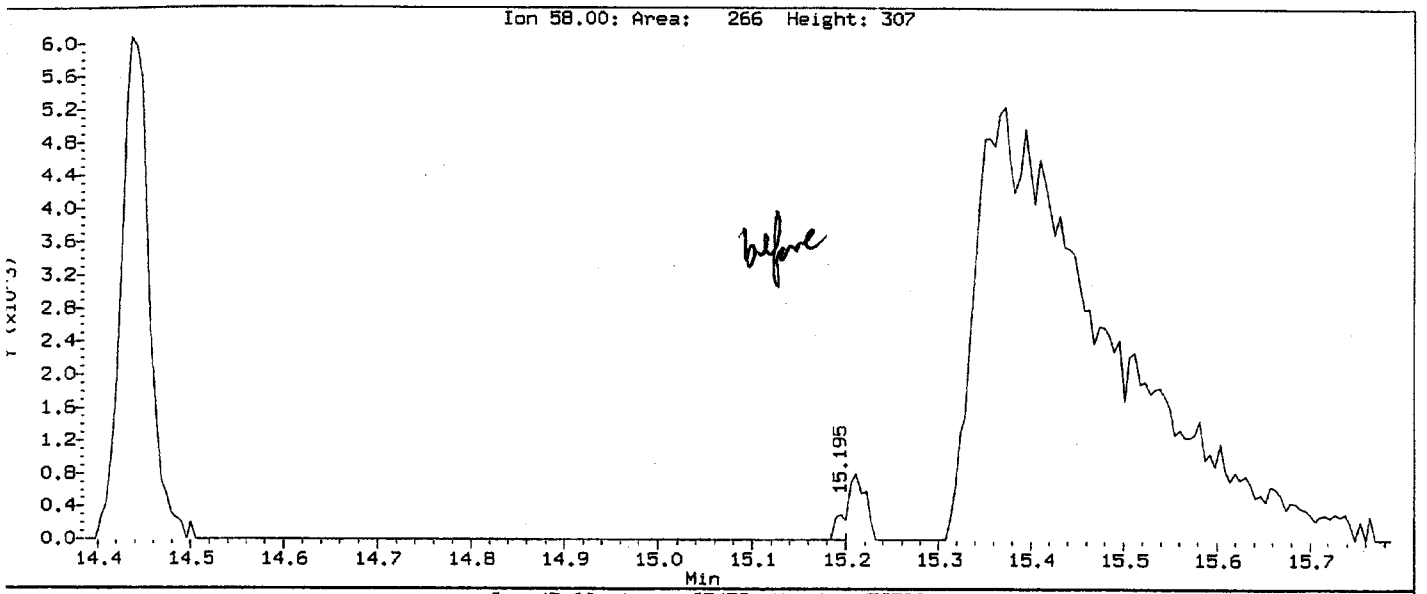
Instrument: me.i

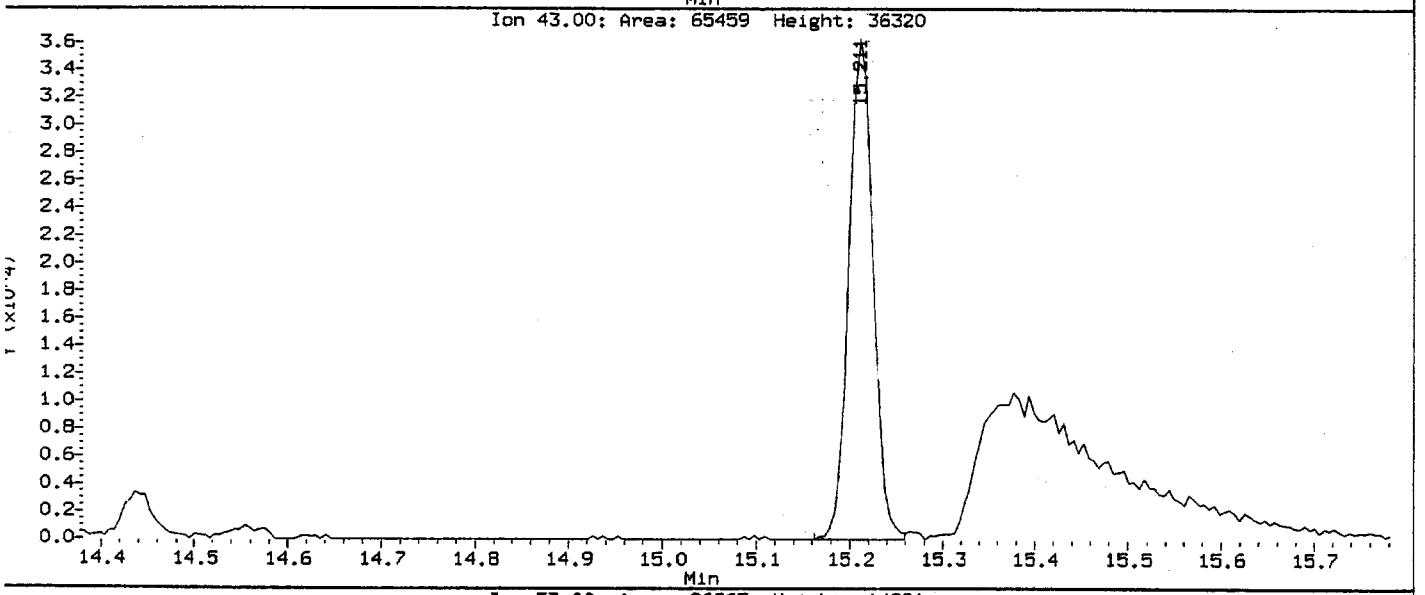
Operator: 10648
Column diameter: 0.32

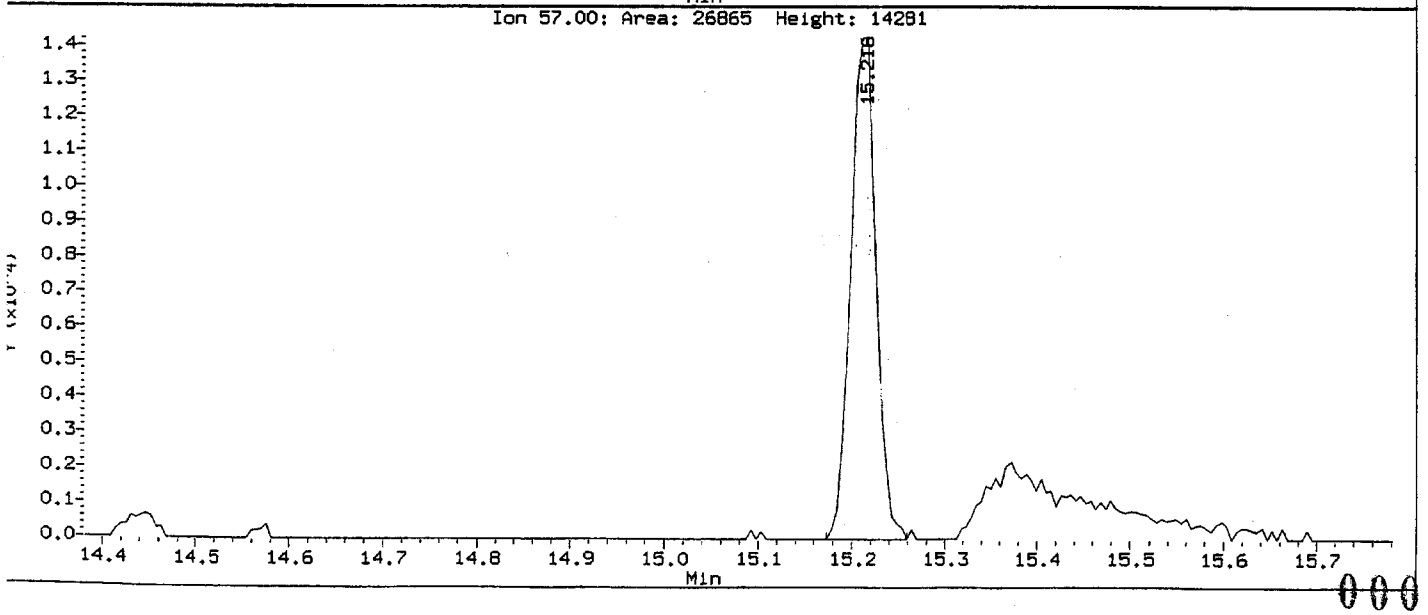


Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Injection Date: 30-JUL-2002 09:10
Instrument: me.i
Client Sample ID:

Compound: 2-Hexanone
CAS Number: 591-78-6

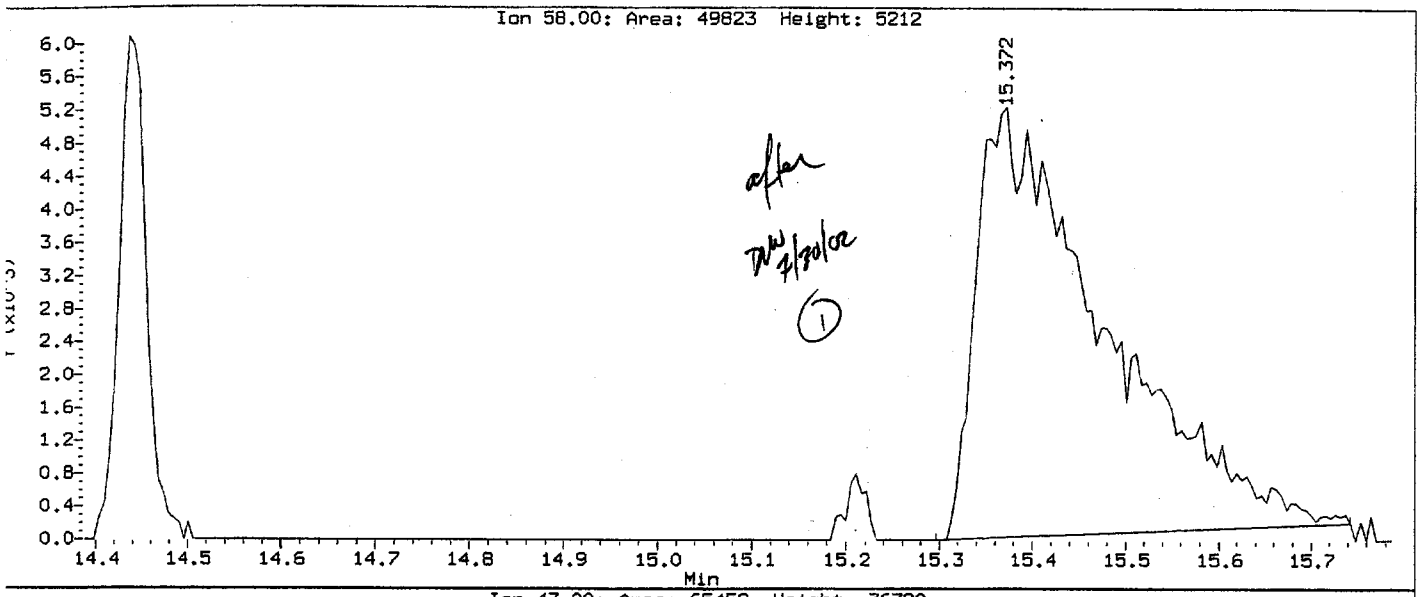


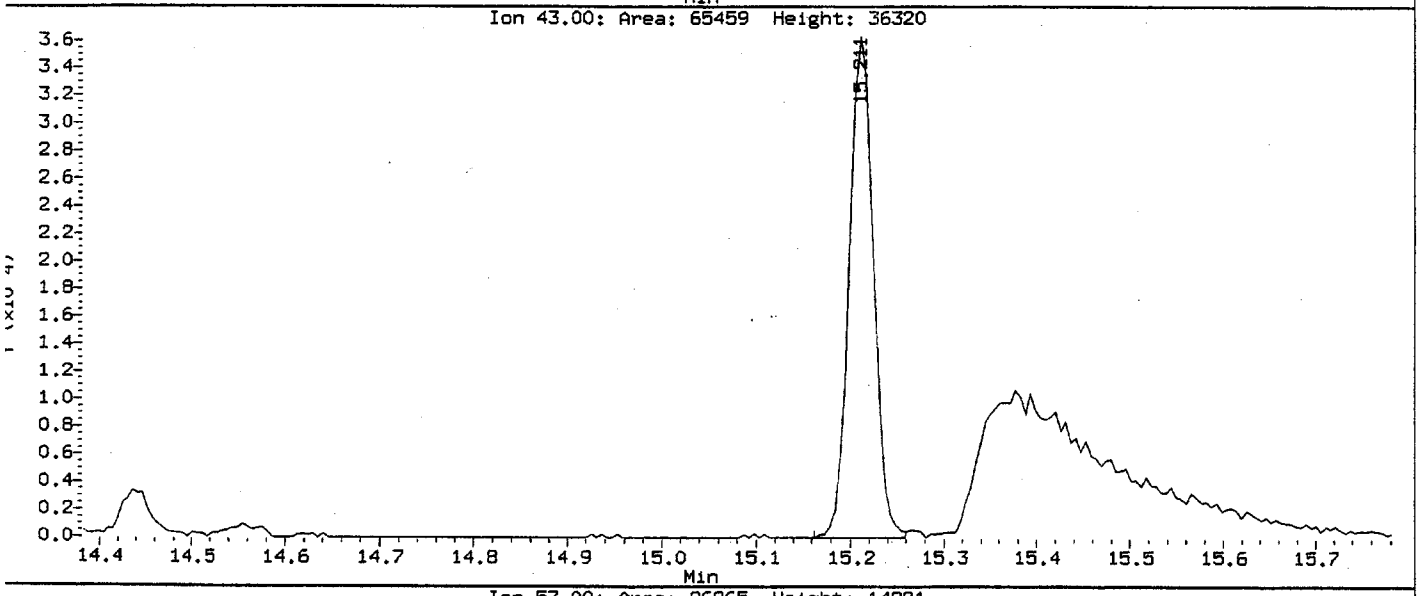


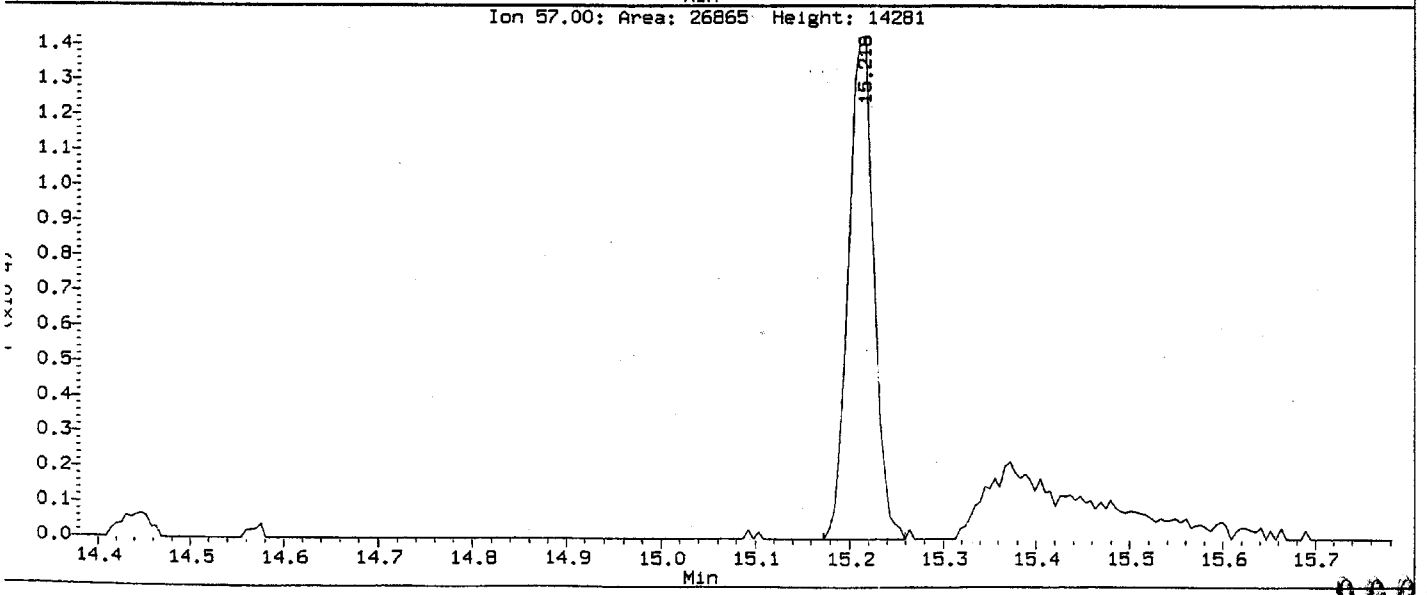


Data File: /var/chem/gcms/me.i/E073002I.b/ical1.d
Injection Date: 30-JUL-2002 09:10
Instrument: me.i
Client Sample ID:

Compound: 2-Hexanone
CAS Number: 591-78-6







Data File: /var/chem/gcms/me.i/E073002I.b/ical2.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/ical2.d
Lab Smp Id: ICAL Client Smp ID: 5ppb
Inj Date : 30-JUL-2002 09:44
Operator : 10648 Inst ID: me.i
Smp Info : ICAL,,1,2,,5ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 16 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.767	(1.000)	258210	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.897	(1.000)	1413951	10.0000	
3 Chlorobenzene-d5	117	16.470	16.475	(1.000)	1245961	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.778	(0.906)	344045	10.0000	9.776
5 Toluene-d8	98	14.441	14.447	(0.877)	1414211	10.0000	9.920
6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	980401	10.0000	10.52
7 Chlorodifluoromethane	51	4.118	4.123	(0.422)	287950	5.00000	5.423
8 Dichlorodifluoromethane	85	4.193	4.199	(0.430)	459409	5.00000	5.363
9 Chloromethane	52	4.409	4.414	(0.452)	40518	5.00000	5.782
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.425	(0.453)	257556	5.00000	5.383
11 Vinyl Chloride	62	4.613	4.618	(0.473)	144064	5.00000	5.626
12 Methanol	31	4.651	4.640	(0.476)	150664	20.0000	22.94
13 1,3-Butadiene	54	4.721	4.721	(0.484)	113929	5.00000	5.782
14 n-Butane	43	4.721	4.721	(0.484)	250706	5.00000	5.331
15 Bromomethane	94	5.097	5.102	(0.522)	157123	5.00000	5.523
16 Chloroethane	64	5.269	5.269	(0.540)	77969	5.00000	5.476
17 Trichlorofluoromethane	101	5.920	5.926	(0.606)	530753	5.00000	5.384
18 Acrolein	56	5.963	5.958	(0.611)	92517	10.0000	12.61
19 Acetonitrile	40	6.044	6.044	(0.619)	99869	10.0000	11.82
20 Acetone	58	6.152	6.114	(0.630)	136014	10.0000	13.79
21 Pentane	57	6.178	6.178	(0.633)	45452	5.00000	5.802
22 Ethyl Ether	31	6.404	6.394	(0.656)	319279	10.0000	12.00

Data File: /var/chem/gcms/me.i/E073002I.b/ical2.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	153790	5.00000	5.457
24 Acrylonitrile	53	6.840	6.845	(0.701)	212257	10.0000	11.59
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.915	(0.708)	366697	5.00000	5.483
26 Methylene Chloride	84	7.082	7.082	(0.726)	151244	5.00000	5.086
27 3-Chloropropene	39	7.104	7.109	(0.728)	157456	5.00000	5.465
28 Carbon Disulfide	76	7.254	7.254	(0.743)	534423	5.00000	5.414
29 trans-1,2-Dichloroethene	96	7.948	7.954	(0.814)	149612	5.00000	5.503
30 Methyl-t-Butyl Ether	73	8.228	8.190	(0.843)	801744	10.0000	11.69
31 1,1-Dichloroethane	63	8.400	8.406	(0.861)	332372	5.00000	5.336
32 Vinyl Acetate	43	8.535	8.535	(0.874)	787861	10.0000	13.38
33 2-Butanone	72	9.132	9.110	(0.936)	148166	10.0000	15.29
34 Hexane	56	9.019	9.024	(0.924)	131912	5.00000	5.607
35 cis 1,2-Dichloroethene	96	9.428	9.428	(0.966)	176623	5.00000	5.521
36 Chloroform	83	9.772	9.783	(1.001)	399085	5.00000	5.277
37 1,1,1-Trichloroethane	97	10.816	10.821	(1.108)	384154	5.00000	5.155
38 1,2-Dichloroethane	62	10.918	10.923	(0.918)	264979	5.00000	5.024
39 Benzene	78	11.380	11.386	(0.957)	507490	5.00000	5.519
40 1-Butanol	41	11.666	11.639	(0.981)	179613	10.0000	13.06
41 Cyclohexane	69	11.386	11.391	(0.957)	74768	5.00000	5.722
42 Carbon Tetrachloride	117	11.402	11.407	(1.168)	399519	5.00000	5.738
43 Heptane	43	12.462	12.467	(1.048)	328266	5.00000	5.700
44 1,2-Dichloropropane	63	12.548	12.553	(1.055)	191314	5.00000	5.369
45 Trichloroethene	130	12.575	12.575	(1.057)	198350	5.00000	5.261
46 Dibromomethane	93	12.650	12.655	(1.064)	228987	5.00000	5.288
47 Bromodichloromethane	83	12.785	12.790	(1.075)	454598	5.00000	5.444
48 4-Methyl-2-pentanone	43	13.866	13.807	(1.166)	773435	10.0000	13.96
49 cis-1,3-Dichloropropene	75	13.747	13.753	(1.156)	374711	5.00000	5.650
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.876)	272582	5.00000	5.262
51 Toluene	91	14.554	14.554	(0.884)	612547	5.00000	4.932
52 1,1,2-Trichloroethane	97	14.614	14.619	(0.887)	229918	5.00000	5.308
53 2-Hexanone	58	15.119	15.087	(0.918)	370473	10.0000	15.21
54 Octane	85	15.216	15.216	(0.924)	192685	5.00000	5.841
55 Dibromochloromethane	129	15.297	15.302	(0.929)	406461	5.00000	5.480
56 1,2-Dibromoethane	107	15.593	15.598	(0.947)	351676	5.00000	5.202
57 Tetrachloroethene	129	15.657	15.663	(0.951)	202599	5.00000	5.244
58 Chlorobenzene	112	16.518	16.523	(1.003)	468523	5.00000	5.023
59 Ethylbenzene	91	16.803	16.808	(1.020)	851738	5.00000	5.357
60 m-Xylene (For p-)	91	16.954	16.959	(1.029)	688776	5.00000	5.324
61 Bromoform	173	17.400	17.406	(1.056)	446004	5.00000	5.315
62 Nonane	57	17.363	17.368	(1.054)	378097	5.00000	5.587
63 Styrene	104	17.416	17.422	(1.057)	472658	5.00000	5.924
64 o-Xylene	91	17.481	17.486	(1.061)	729150	5.00000	5.350
65 1,1,2,2-Tetrachloroethane	83	17.782	17.788	(1.080)	548480	5.00000	5.422
66 1,2,3-Trichloropropane	110	17.938	17.944	(1.089)	138271	5.00000	5.860
67 Cumene	105	18.046	18.046	(1.096)	947039	5.00000	5.522
68 n-Propylbenzene	91	18.546	18.546	(1.126)	1346307	5.00000	5.506
69 4-Ethyltoluene	105	18.686	18.691	(1.135)	1032456	5.00000	5.413

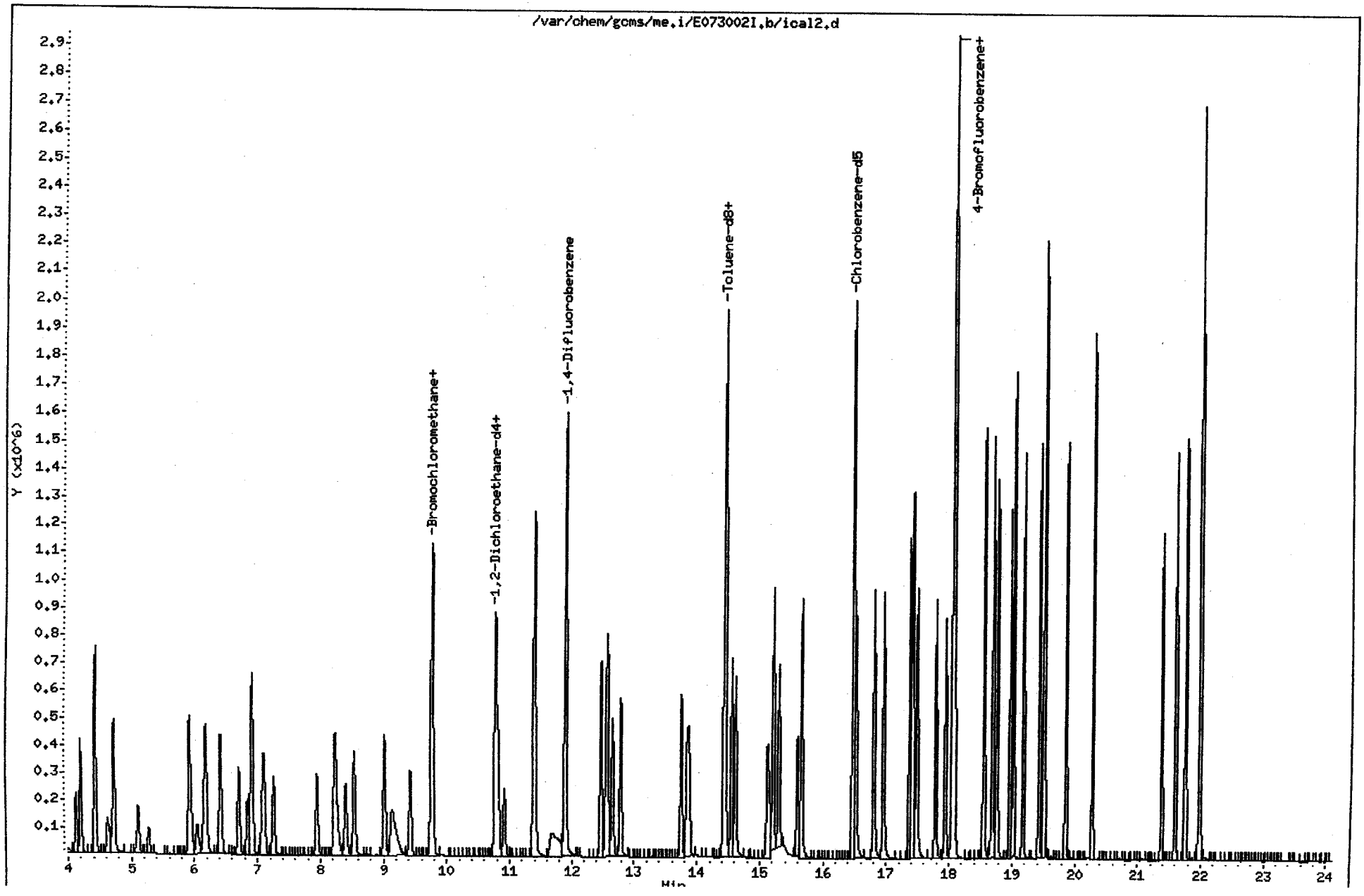
)ata File: /var/chem/gcms/me.i/E073002I.b/ical2.d
:eport Date: 30-Jul-2002 13:48

						AMOUNTS	
	QUANT SIG					CAL-AMT	ON-COL
ɔmpounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ppb(v/v))	(ppb(v/v))
==========	====	==	======	======	========	=======	=======
70 1,3,5-Trimethylbenzene	120	18.756	18.761	(1.139)	343174	5.00000	5.457
71 Alpha-Methylstyrene	118	18.966	18.971	(1.152)	348093	5.00000	5.946
72 Decane	57	19.019	19.025	(1.155)	557751	5.00000	5.656
73 1,2,4-Trimethylbenzene	105	19.170	19.175	(1.164)	813750	5.00000	5.502
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.180)	611491	5.00000	5.399
75 Benzyl Chloride	91	19.493	19.498	(1.184)	745631	5.00000	5.758
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.185)	595273	5.00000	5.307
77 1,2-Dichlorobenzene	146	19.853	19.859	(1.205)	579495	5.00000	5.390
78 Undecane	57	20.273	20.278	(1.231)	562691	5.00000	5.843
79 Dodecane	57	21.370	21.376	(1.298)	367350	5.00000	4.733
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	471757	5.00000	4.371
81 Napthalene	128	21.752	21.758	(1.321)	1193156	5.00000	6.096
82 Hexachlorobutadiene	225	21.984	21.984	(1.335)	626434	5.00000	5.797

Data File: /var/chem/gcms/me.i/E073002I.b/ical2.d
Date : 30-JUL-2002 09:44
Client ID: 5ppb
Sample Info: ICAL,,1,2,,5ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 10648
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E073002I.b/ical3.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/ical3.d
Lab Smp Id: ICAL Client Smp ID: 10ppb
Inj Date : 30-JUL-2002 10:17
Operator : 10648 Inst ID: me.i
Smp Info : ICAL,,1,3,,10ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 17 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.767	9.767	(1.000)	296011	10.0000	
2 1,4-Difluorobenzene	114	11.897	11.897	(1.000)	1622133	10.0000	
3 Chlorobenzene-d5	117	16.475	16.475	(1.000)	1424190	10.0000	
4 1,2-Dichloroethane-d4	67	10.778	10.778	(0.906)	412096	10.0000	10.21
5 Toluene-d8	98	14.447	14.447	(0.877)	1620242	10.0000	9.943
6 4-Bromofluorobenzene	95	18.073	18.073	(1.097)	1064547	10.0000	9.991
7 Chlorodifluoromethane	51	4.123	4.123	(0.422)	624723	10.0000	10.26
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	1025712	10.0000	10.44
9 Chloromethane	52	4.414	4.414	(0.452)	83309	10.0000	10.37
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	561254	10.0000	10.23
11 Vinyl Chloride	62	4.618	4.618	(0.473)	311579	10.0000	10.61
12 Methanol	31	4.640	4.640	(0.475)	306873	40.0000	40.76
13 1,3-Butadiene	54	4.721	4.721	(0.483)	232022	10.0000	10.27
14 n-Butane	43	4.721	4.721	(0.483)	492815	10.0000	9.141
15 Bromomethane	94	5.102	5.102	(0.522)	340885	10.0000	10.45
16 Chloroethane	64	5.269	5.269	(0.540)	169655	10.0000	10.39
17 Trichlorofluoromethane	101	5.926	5.926	(0.607)	1165057	10.0000	10.31
18 Acrolein	56	5.958	5.958	(0.610)	200889	20.0000	23.88
19 Acetonitrile	40	6.044	6.044	(0.619)	229778	20.0000	19.47
20 Acetone	58	6.114	6.114	(0.626)	275631	20.0000	19.06
21 Pentane	57	6.178	6.178	(0.633)	88561	10.0000	9.862
22 Ethyl Ether	31	6.394	6.394	(0.655)	645338	20.0000	21.15

Data File: /var/chem/gcms/me.i/E073002I.b/ical3.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	341453	10.0000	10.57
24 Acrylonitrile	53	6.845	6.845	(0.701)	473316	20.0000	22.54
25 1,1,2-Trichlorotrifluoroethane	101	6.915	6.915	(0.708)	782774	10.0000	10.21
26 Methylene Chloride	84	7.082	7.082	(0.725)	325257	10.0000	9.542
27 3-Chloropropene	39	7.109	7.109	(0.728)	359468	10.0000	10.88
28 Carbon Disulfide	76	7.254	7.254	(0.743)	1164457	10.0000	10.29
29 trans-1,2-Dichloroethene	96	7.954	7.954	(0.814)	340045	10.0000	10.91
30 Methyl-t-Butyl Ether	73	8.190	8.190	(0.839)	1924141	20.0000	22.80
31 1,1-Dichloroethane	63	8.406	8.406	(0.861)	756062	10.0000	10.59
32 Vinyl Acetate	43	8.535	8.535	(0.874)	1726832	20.0000	23.22
33 2-Butanone	72	9.110	9.110	(0.933)	338100	20.0000	22.46
34 Hexane	56	9.024	9.024	(0.924)	289060	10.0000	10.72
35 cis 1,2-Dichloroethene	96	9.428	9.428	(0.965)	392615	10.0000	10.70
36 Chloroform	83	9.783	9.783	(1.002)	884283	10.0000	10.20
37 1,1,1-Trichloroethane	97	10.821	10.821	(1.108)	908492	10.0000	10.64
38 1,2-Dichloroethane	62	10.923	10.923	(0.918)	637079	10.0000	10.53
39 Benzene	78	11.386	11.386	(0.957)	1050291	10.0000	9.956
40 1-Butanol	41	11.639	11.639	(0.978)	409175	20.0000	24.33
41 Cyclohexane	69	11.391	11.391	(0.957)	156604	10.0000	10.45
42 Carbon Tetrachloride	117	11.407	11.407	(1.168)	923969	10.0000	11.58
43 Heptane	43	12.467	12.467	(1.048)	681948	10.0000	10.32
44 1,2-Dichloropropane	63	12.553	12.553	(1.055)	402193	10.0000	9.838
45 Trichloroethene	130	12.575	12.575	(1.057)	430943	10.0000	9.964
46 Dibromomethane	93	12.655	12.655	(1.064)	498164	10.0000	10.03
47 Bromodichloromethane	83	12.790	12.790	(1.075)	1040320	10.0000	10.86
48 4-Methyl-2-pentanone	43	13.807	13.807	(1.161)	1689293	20.0000	22.76
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.156)	866681	10.0000	11.39
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.875)	626600	10.0000	10.58
51 Toluene	91	14.554	14.554	(0.883)	1328435	10.0000	9.358
52 1,1,2-Trichloroethane	97	14.619	14.619	(0.887)	491148	10.0000	9.921
53 2-Hexanone	58	15.087	15.087	(0.916)	857308	20.0000	22.18
54 Octane	85	15.216	15.216	(0.924)	407650	10.0000	10.81
55 Dibromochloromethane	129	15.302	15.302	(0.929)	900114	10.0000	10.62
56 1,2-Dibromoethane	107	15.598	15.598	(0.947)	752075	10.0000	9.732
57 Tetrachloroethene	129	15.663	15.663	(0.951)	435438	10.0000	9.859
58 Chlorobenzene	112	16.523	16.523	(1.003)	1004301	10.0000	9.419
59 Ethylbenzene	91	16.808	16.808	(1.020)	1848622	10.0000	10.17
60 m-Xylene (For p-)	91	16.959	16.959	(1.029)	1497269	10.0000	10.12
61 Bromoform	173	17.406	17.406	(1.056)	964828	10.0000	10.06
62 Nonane	57	17.368	17.368	(1.054)	781813	10.0000	10.11
63 Styrene	104	17.422	17.422	(1.057)	934020	10.0000	10.24
64 o-Xylene	91	17.486	17.486	(1.061)	1548862	10.0000	9.942
65 1,1,2,2-Tetrachloroethane	83	17.788	17.788	(1.080)	1101580	10.0000	9.526
66 1,2,3-Trichloropropane	110	17.944	17.944	(1.089)	286396	10.0000	10.62
67 Cumene	105	18.046	18.046	(1.095)	1968889	10.0000	10.04
68 n-Propylbenzene	91	18.546	18.546	(1.126)	2740907	10.0000	9.807
69 4-Ethyltoluene	105	18.691	18.691	(1.135)	2147079	10.0000	9.848

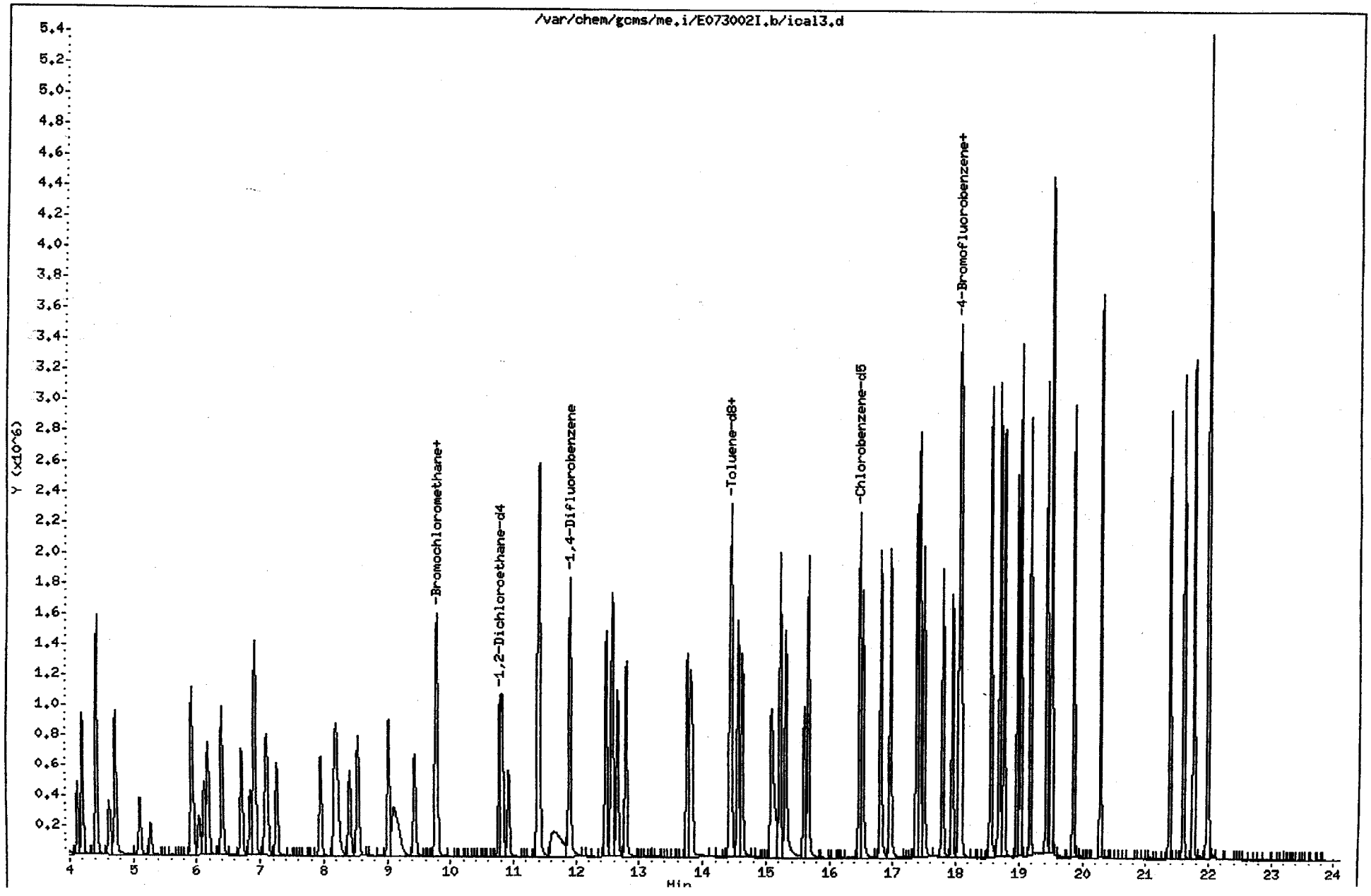
Data File: /var/chem/gcms/me.i/E073002I.b/ical3.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.761	18.761	(1.139)	686553	10.0000	9.551
71 Alpha-Methylstyrene	118	18.971	18.971	(1.151)	727852	10.0000	10.88
72 Decane	57	19.025	19.025	(1.155)	1095728	10.0000	9.722
73 1,2,4-Trimethylbenzene	105	19.175	19.175	(1.164)	1700667	10.0000	10.06
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.179)	1237211	10.0000	9.557
75 Benzyl Chloride	91	19.498	19.498	(1.184)	1567929	10.0000	10.59
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	1182703	10.0000	9.224
77 1,2-Dichlorobenzene	146	19.859	19.859	(1.205)	1174816	10.0000	9.559
78 Undecane	57	20.278	20.278	(1.231)	1096839	10.0000	9.964
79 Dodecane	57	21.376	21.376	(1.297)	951566	10.0000	10.72
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	1027770	10.0000	8.331
81 Napthalene	128	21.758	21.758	(1.321)	2632381	10.0000	11.76
82 Hexachlorobutadiene	225	21.984	21.984	(1.334)	1309570	10.0000	10.60

Data File: /var/chem/gcms/me.i/E073002I.b/ical3.d
Date : 30-JUL-2002 10:17
Client ID: 10ppb
Sample Info: ICAL,,1,3,,10ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 10648
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E073002I.b/ical4.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/ical4.d
Lab Smp Id: ICAL Client Smp ID: 15ppb
Inj Date : 30-JUL-2002 10:52
Operator : 10648 Inst ID: me.i
Smp Info : ICAL,,1,4,,15ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 18 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.772	9.767	(1.000)	329051	10.0000	
2 1,4-Difluorobenzene	114	11.902	11.897	(1.000)	1835989	10.0000	
3 Chlorobenzene-d5	117	16.475	16.475	(1.000)	1564996	10.0000	
4 1,2-Dichloroethane-d4	67	10.778	10.778	(0.906)	462284	10.0000	10.12
5 Toluene-d8	98	14.447	14.447	(0.877)	1780288	10.0000	9.942
6 4-Bromofluorobenzene	95	18.073	18.073	(1.097)	1154803	10.0000	9.863
7 Chlorodifluoromethane	51	4.123	4.123	(0.422)	989555	15.0000	14.62
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	1638333	15.0000	15.01
9 Chloromethane	52	4.414	4.414	(0.452)	123787	15.0000	13.86
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	864668	15.0000	14.18
11 Vinyl Chloride	62	4.618	4.618	(0.473)	475645	15.0000	14.58
12 Methanol	31	4.618	4.640	(0.473)	481055	60.0000	57.47
13 1,3-Butadiene	54	4.721	4.721	(0.483)	362841	15.0000	14.45
14 n-Butane	43	4.721	4.721	(0.483)	762793	15.0000	12.73
15 Bromomethane	94	5.103	5.102	(0.522)	539534	15.0000	14.88
16 Chloroethane	64	5.269	5.269	(0.539)	266533	15.0000	14.69
17 Trichlorofluoromethane	101	5.926	5.926	(0.606)	1831771	15.0000	14.58
18 Acrolein	56	5.952	5.958	(0.609)	309680	30.0000	33.12
19 Acetonitrile	40	6.033	6.044	(0.617)	359651	30.0000	33.39
20 Acetone	58	6.103	6.114	(0.625)	430329	30.0000	34.24
21 Pentane	57	6.178	6.178	(0.632)	139163	15.0000	13.94
22 Ethyl Ether	31	6.388	6.394	(0.654)	991882	30.0000	29.24

Data File: /var/chem/gcms/me.i/E073002I.b/ical4.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.706	(0.686)	545699	15.0000	15.19
24 Acrylonitrile	53	6.846	6.845	(0.701)	731204	30.0000	31.33
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.915	(0.707)	1237009	15.0000	14.51
26 Methylene Chloride	84	7.082	7.082	(0.725)	513011	15.0000	13.54
27 3-Chloropropene	39	7.109	7.109	(0.727)	588264	15.0000	16.02
28 Carbon Disulfide	76	7.254	7.254	(0.742)	1839803	15.0000	14.63
29 trans-1,2-Dichloroethene	96	7.954	7.954	(0.814)	540920	15.0000	15.61
30 Methyl-t-Butyl Ether	73	8.169	8.190	(0.836)	3193764	30.0000	36.53
31 1,1-Dichloroethane	63	8.411	8.406	(0.861)	1199693	15.0000	15.11
32 Vinyl Acetate	43	8.535	8.535	(0.873)	2758617	30.0000	36.78
33 2-Butanone	72	9.078	9.110	(0.929)	547987	30.0000	44.38
34 Hexane	56	9.024	9.024	(0.923)	464868	15.0000	15.51
35 cis 1,2-Dichloroethene	96	9.433	9.428	(0.965)	633820	15.0000	15.54
36 Chloroform	83	9.783	9.783	(1.001)	1413558	15.0000	14.67
37 1,1,1-Trichloroethane	97	10.821	10.821	(1.107)	1486463	15.0000	15.65
38 1,2-Dichloroethane	62	10.923	10.923	(0.918)	1054936	15.0000	15.40
39 Benzene	78	11.391	11.386	(0.957)	1605419	15.0000	13.44
40 1-Butanol	41	11.574	11.639	(0.972)	664796	30.0000	37.22
41 Cyclohexane	69	11.391	11.391	(0.957)	240961	15.0000	14.20
42 Carbon Tetrachloride	117	11.407	11.407	(1.167)	1508976	15.0000	17.01
43 Heptane	43	12.473	12.467	(1.048)	1069224	15.0000	14.30
44 1,2-Dichloropropane	63	12.553	12.553	(1.055)	622354	15.0000	13.45
45 Trichloroethene	130	12.580	12.575	(1.057)	680130	15.0000	13.89
46 Dibromomethane	93	12.655	12.655	(1.063)	786444	15.0000	13.99
47 Bromodichloromethane	83	12.790	12.790	(1.075)	1661543	15.0000	15.32
48 4-Methyl-2-pentanone	43	13.791	13.807	(1.159)	2596148	30.0000	36.09
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.155)	1338432	15.0000	15.54
50 trans-1,3-Dichloropropene	75	14.425	14.420	(0.876)	1006390	15.0000	15.46
51 Toluene	91	14.560	14.554	(0.884)	2105738	15.0000	13.50
52 1,1,2-Trichloroethane	97	14.624	14.619	(0.888)	769963	15.0000	14.15
53 2-Hexanone	58	15.066	15.087	(0.914)	1388849	30.0000	45.39
54 Octane	85	15.216	15.216	(0.924)	657109	15.0000	15.86
55 Dibromochloromethane	129	15.308	15.302	(0.929)	1433660	15.0000	15.39
56 1,2-Dibromoethane	107	15.598	15.598	(0.947)	1176753	15.0000	13.86
57 Tetrachloroethene	129	15.663	15.663	(0.951)	684665	15.0000	14.11
58 Chlorobenzene	112	16.523	16.523	(1.003)	1586719	15.0000	13.54
59 Ethylbenzene	91	16.808	16.808	(1.020)	2913598	15.0000	14.59
60 m-Xylene (For p-)	91	16.959	16.959	(1.029)	2364427	15.0000	14.55
61 Bromoform	173	17.406	17.406	(1.056)	1523751	15.0000	14.46
62 Nonane	57	17.368	17.368	(1.054)	1201754	15.0000	14.14
63 Styrene	104	17.422	17.422	(1.057)	1448390	15.0000	14.45
64 o-Xylene	91	17.486	17.486	(1.061)	2432343	15.0000	14.21
65 1,1,2,2-Tetrachloroethane	83	17.788	17.788	(1.080)	1670781	15.0000	13.15
66 1,2,3-Trichloropropane	110	17.944	17.944	(1.089)	451972	15.0000	15.25
67 Cumene	105	18.051	18.046	(1.096)	3075326	15.0000	14.28
68 n-Propylbenzene	91	18.551	18.546	(1.126)	4270036	15.0000	13.90
69 4-Ethyltoluene	105	18.691	18.691	(1.135)	3361973	15.0000	14.03

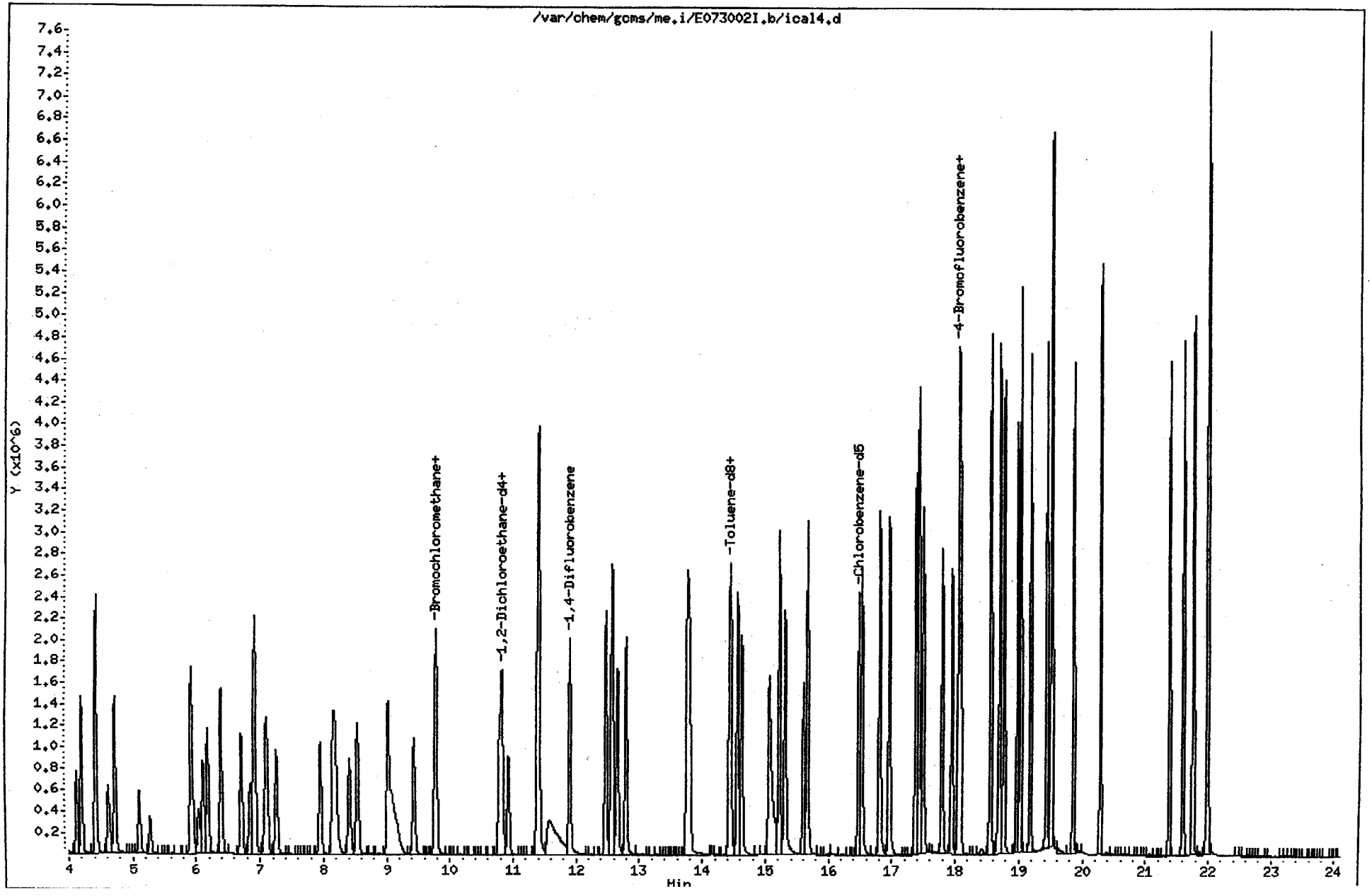
Data File: /var/chem/gcms/me.i/E073002I.b/ical4.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.761	18.761	(1.139)	1094690	15.0000	13.86
71 Alpha-Methylstyrene	118	18.971	18.971	(1.151)	1142580	15.0000	15.54
72 Decane	57	19.025	19.025	(1.155)	1666327	15.0000	13.45
73 1,2,4-Trimethylbenzene	105	19.175	19.175	(1.164)	2676300	15.0000	14.41
74 1,3-Dichlorobenzene	146	19.434	19.428	(1.180)	1949540	15.0000	13.70
75 Benzyl Chloride	91	19.498	19.498	(1.184)	2444239	15.0000	15.03
76 1,4-Dichlorobenzene	146	19.514	19.509	(1.184)	1854635	15.0000	13.16
77 1,2-Dichlorobenzene	146	19.859	19.859	(1.205)	1838312	15.0000	13.61
78 Undecane	57	20.278	20.278	(1.231)	1665139	15.0000	13.77
79 Dodecane	57	21.376	21.376	(1.297)	1480120	15.0000	15.18
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	1610878	15.0000	11.88
81 Napthalene	128	21.758	21.758	(1.321)	4060121	15.0000	16.51
82 Hexachlorobutadiene	225	21.984	21.984	(1.334)	2033125	15.0000	14.98

Data File: /var/chem/gcms/me.i/E073002I.b/ical4.d
Date : 30-JUL-2002 10:52
Client ID: 15ppb
Sample Info: ICAL,,1,4,,15ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 10648
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E073002I.b/ical5.d
Report Date: 30-Jul-2002 13:48

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/ical5.d
Lab Smp Id: ICAL
Client Smp ID: 30ppb
Inj Date : 30-JUL-2002 11:26
Operator : 10648
Inst ID: me.i
Smp Info : ICAL,,1,5,,30ppb
Misc Info : E072902,LA,,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:47 wilesd
Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17
Cal File: ical3.d
Als bottle: 19
Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.777	9.767	(1.000)	354037	10.0000	
2 1,4-Difluorobenzene	114	11.902	11.897	(1.000)	2066169	10.0000	
3 Chlorobenzene-d5	117	16.480	16.475	(1.000)	1750611	10.0000	
4 1,2-Dichloroethane-d4	67	10.789	10.778	(0.906)	501703	10.0000	9.756
5 Toluene-d8	98	14.452	14.447	(0.877)	1948828	10.0000	9.729
6 4-Bromofluorobenzene	95	18.078	18.073	(1.097)	1249915	10.0000	9.543
7 Chlorodifluoromethane	51	4.118	4.123	(0.421)	1961636	30.0000	26.95
8 Dichlorodifluoromethane	85	4.193	4.199	(0.429)	3266933	30.0000	27.81
9 Chloromethane	52	4.409	4.414	(0.451)	235686	30.0000	24.53
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.425	(0.452)	1707335	30.0000	26.03
11 Vinyl Chloride	62	4.613	4.618	(0.472)	915531	30.0000	26.08
12 Methanol	31	4.608	4.640	(0.471)	984482	120.000	109.3
13 1,3-Butadiene	54	4.721	4.721	(0.483)	700131	30.0000	25.92
14 n-Butane	43	4.721	4.721	(0.483)	1498955	30.0000	23.24
15 Bromomethane	94	5.097	5.102	(0.521)	1024015	30.0000	26.25
16 Chloroethane	64	5.269	5.269	(0.539)	508775	30.0000	26.06
17 Trichlorofluoromethane	101	5.920	5.926	(0.606)	3524599	30.0000	26.08
18 Acrolein	56	5.947	5.958	(0.608)	590828	60.0000	58.73
19 Acetonitrile	40	6.039	6.044	(0.618)	724812	60.0000	62.55(A)
20 Acetone	58	6.092	6.114	(0.623)	830508	60.0000	61.42(A)
21 Pentane	57	6.178	6.178	(0.632)	277983	30.0000	25.88
22 Ethyl Ether	31	6.378	6.394	(0.652)	1966675	60.0000	53.89

Data File: /var/chem/gcms/me.i/E073002I.b/ical5.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.706	(0.686)	1103467	30.0000	28.56
24 Acrylonitrile	53	6.851	6.845	(0.701)	1472255	60.0000	58.62
25 1,1,2-Trichlorotrifluoroethane	101	6.915	6.915	(0.707)	2442118	30.0000	26.63
26 Methylene Chloride	84	7.088	7.082	(0.725)	989552	30.0000	24.27
27 3-Chloropropene	39	7.109	7.109	(0.727)	1198070	30.0000	30.32(A)
28 Carbon Disulfide	76	7.254	7.254	(0.742)	3678501	30.0000	27.18
29 trans-1,2-Dichloroethene	96	7.959	7.954	(0.814)	1092272	30.0000	29.30
30 Methyl-t-Butyl Ether	73	8.131	8.190	(0.832)	6507368	60.0000	69.18(A)
31 1,1-Dichloroethane	63	8.411	8.406	(0.860)	2443235	30.0000	28.61
32 Vinyl Acetate	43	8.540	8.535	(0.873)	5551026	60.0000	68.78(A)
33 2-Butanone	72	9.051	9.110	(0.926)	1071166	60.0000	80.62(A)
34 Hexane	56	9.024	9.024	(0.923)	888319	30.0000	27.54
35 cis 1,2-Dichloroethene	96	9.438	9.428	(0.965)	1276248	30.0000	29.09
36 Chloroform	83	9.788	9.783	(1.001)	2865457	30.0000	27.64
37 1,1,1-Trichloroethane	97	10.826	10.821	(1.107)	3025171	30.0000	29.61
38 1,2-Dichloroethane	62	10.929	10.923	(0.918)	2178832	30.0000	28.27
39 Benzene	78	11.397	11.386	(0.958)	3105115	30.0000	23.11
40 1-Butanol	41	11.483	11.639	(0.965)	1442294	60.0000	71.76(A)
41 Cyclohexane	69	11.391	11.391	(0.957)	474596	30.0000	24.86
42 Carbon Tetrachloride	117	11.413	11.407	(1.167)	2905339	30.0000	30.43(A)
43 Heptane	43	12.473	12.467	(1.048)	2088915	30.0000	24.82
44 1,2-Dichloropropane	63	12.559	12.553	(1.055)	1183708	30.0000	22.73
45 Trichloroethene	130	12.580	12.575	(1.057)	1342111	30.0000	24.36
46 Dibromomethane	93	12.661	12.655	(1.064)	1547818	30.0000	24.46
47 Bromodichloromethane	83	12.795	12.790	(1.075)	3319498	30.0000	27.20
48 4-Methyl-2-pentanone	43	13.764	13.807	(1.156)	4634796	60.0000	57.26
49 cis-1,3-Dichloropropene	75	13.758	13.753	(1.156)	2472461	30.0000	25.51
50 trans-1,3-Dichloropropene	75	14.425	14.420	(0.875)	2072716	30.0000	28.48
51 Toluene	91	14.560	14.554	(0.883)	4227181	30.0000	24.22
52 1,1,2-Trichloroethane	97	14.624	14.619	(0.887)	1513504	30.0000	24.87
53 2-Hexanone	58	15.044	15.087	(0.913)	2866766	60.0000	83.75(A)
54 Octane	85	15.222	15.216	(0.924)	1306756	30.0000	28.19
55 Dibromochloromethane	129	15.313	15.302	(0.929)	2859154	30.0000	27.44
56 1,2-Dibromoethane	107	15.603	15.598	(0.947)	2302745	30.0000	24.24
57 Tetrachloroethene	129	15.668	15.663	(0.951)	1363349	30.0000	25.11
58 Chlorobenzene	112	16.529	16.523	(1.003)	3190834	30.0000	24.35
59 Ethylbenzene	91	16.808	16.808	(1.020)	5830852	30.0000	26.10
60 m-Xylene (For p-)	91	16.965	16.959	(1.029)	4751923	30.0000	26.14
61 Bromoform	173	17.411	17.406	(1.056)	2861951	30.0000	24.27
62 Nonane	57	17.368	17.368	(1.054)	2302678	30.0000	24.22
63 Styrene	104	17.427	17.422	(1.057)	2945637	30.0000	26.28
64 o-Xylene	91	17.492	17.486	(1.061)	4850822	30.0000	25.33
65 1,1,2,2-Tetrachloroethane	83	17.793	17.788	(1.080)	3231999	30.0000	22.74
66 1,2,3-Trichloropropane	110	17.949	17.944	(1.089)	889744	30.0000	26.84
67 Cumene	105	18.051	18.046	(1.095)	6136750	30.0000	25.47
68 n-Propylbenzene	91	18.551	18.546	(1.126)	8237877	30.0000	23.98
69 4-Ethyltoluene	105	18.697	18.691	(1.134)	6692639	30.0000	24.97

Data File: /var/chem/gcms/me.i/E073002I.b/ical5.d
Report Date: 30-Jul-2002 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.767	18.761	(1.139)	2193477	30.0000	24.82
71 Alpha-Methylstyrene	118	18.971	18.971	(1.151)	2285190	30.0000	27.78
72 Decane	57	19.030	19.025	(1.155)	3104258	30.0000	22.41
73 1,2,4-Trimethylbenzene	105	19.176	19.175	(1.164)	5225528	30.0000	25.15
74 1,3-Dichlorobenzene	146	19.434	19.428	(1.179)	3842022	30.0000	24.14
75 Benzyl Chloride	91	19.504	19.498	(1.183)	4395146	30.0000	24.16
76 1,4-Dichlorobenzene	146	19.514	19.509	(1.184)	3555292	30.0000	22.56
77 1,2-Dichlorobenzene	146	19.859	19.859	(1.205)	3590091	30.0000	23.76
78 Undecane	57	20.278	20.278	(1.230)	3058420	30.0000	22.60
79 Dodecane	57	21.370	21.376	(1.297)	2740216	30.0000	25.13
80 1,2,4-Trichlorobenzene	180	21.591	21.596	(1.310)	3144822	30.0000	20.74
81 Napthalene	128	21.752	21.758	(1.320)	7941621	30.0000	28.88
82 Hexachlorobutadiene	225	21.978	21.984	(1.334)	3799419	30.0000	25.03

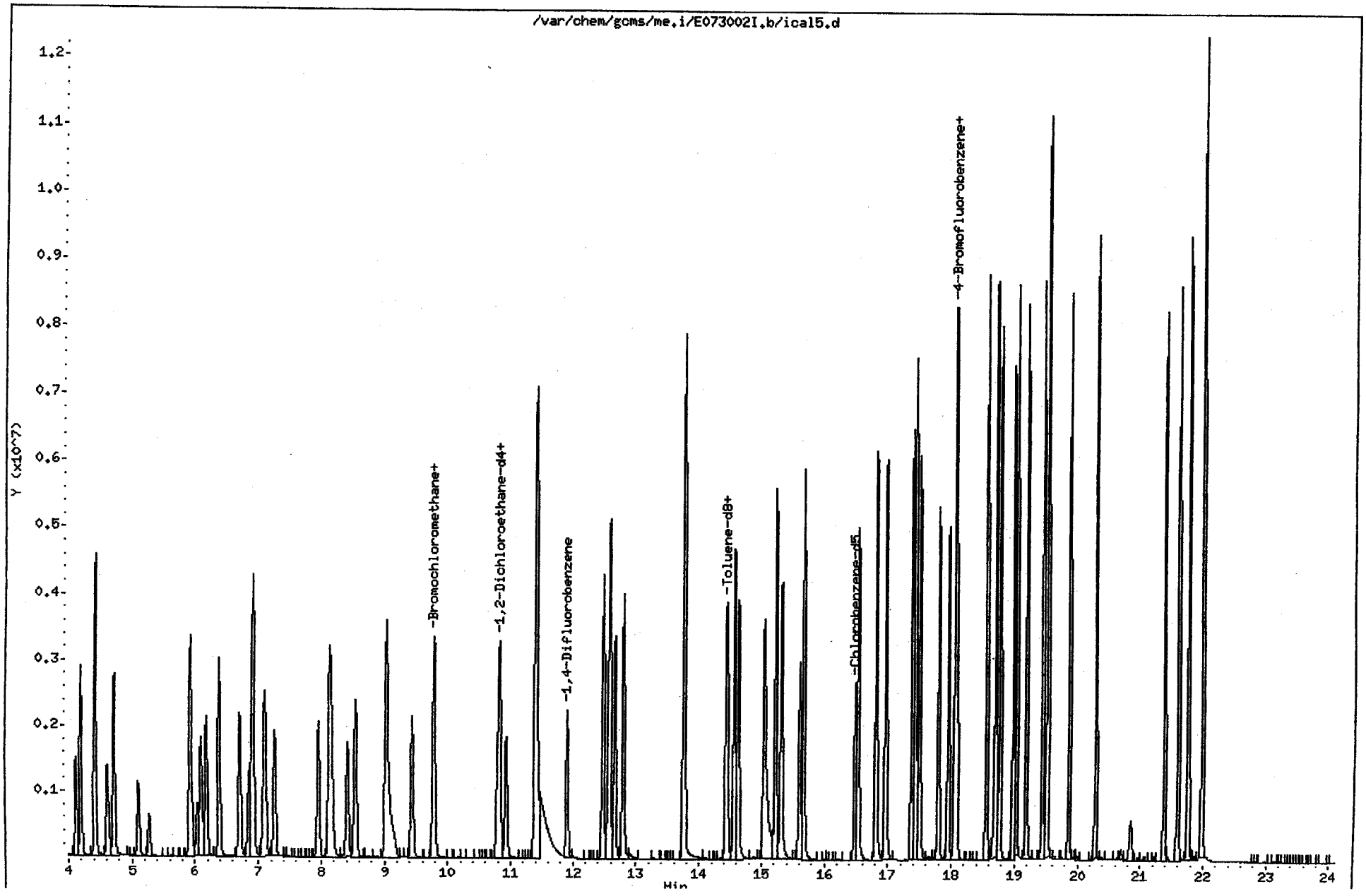
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/me.i/E073002I.b/ical5.d
Date : 30-JUL-2002 11:26
Client ID: 30ppb
Sample Info: ICAL,,1,5,,30ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 10648
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Report Date: 30-Jul-2002 14:57

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E073002I.b/icv2.d
Lab Smp Id: ICV
Inj Date : 30-JUL-2002 14:06
Operator : 10648 Inst ID: me.i
Smp Info : ICV,,3,,LCS
Misc Info : E073002,LA,TO14.sub,,,
Comment :
Method : /var/chem/gcms/me.i/E073002I.b/LA.m
Meth Date : 30-Jul-2002 13:49 wilesd Quant Type: ISTD
Cal Date : 30-JUL-2002 10:17 Cal File: ical3.d
Als bottle: 19 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.761	9.767	(1.000)	350768	10.0000	
* 2 1,4-Difluorobenzene	114	11.897	11.897	(1.000)	1954064	10.0000	
* 3 Chlorobenzene-d5	117	16.475	16.475	(1.000)	1672522	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.773	10.778	(0.905)	482659	9.72278	9.723
$ 5 Toluene-d8	98	14.447	14.447	(0.877)	1918376	10.0821	10.08
$ 6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	1228890	9.82979	9.830
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	1329480	10.9382	10.94
9 Chloromethane	52	4.408	4.414	(0.452)	104479	10.5834	10.58
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	742579	11.1653	11.16
11 Vinyl Chloride	62	4.613	4.618	(0.473)	410568	11.1200	11.12
15 Bromomethane	94	5.097	5.102	(0.522)	385638	9.54685	9.547
16 Chloroethane	64	5.269	5.269	(0.540)	206361	10.2648	10.26
17 Trichlorofluoromethane	101	5.920	5.926	(0.606)	1324904	9.59677	9.597
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	431568	10.6661	10.67
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.915	(0.708)	974853	10.5097	10.51
26 Methylene Chloride	84	7.082	7.082	(0.726)	406466	10.5460	10.54
31 1,1-Dichloroethane	63	8.406	8.406	(0.861)	897795	10.0209	10.02
35 cis 1,2-Dichloroethene	96	9.422	9.428	(0.965)	458753	9.86052	9.860
36 Chloroform	83	9.772	9.783	(1.001)	1084563	10.3503	10.35
37 1,1,1-Trichloroethane	97	10.816	10.821	(1.108)	1147701	10.6609	10.66
38 1,2-Dichloroethane	62	10.918	10.923	(0.918)	809991	10.5544	10.55

Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Report Date: 30-Jul-2002 14:57

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
39 Benzene	78	11.386	11.386	(0.957)	1368974	10.8201	10.82
42 Carbon Tetrachloride	117	11.402	11.407	(1.168)	1044508	9.53987	9.540
44 1,2-Dichloropropane	63	12.548	12.553	(1.055)	489729	10.1081	10.11
45 Trichloroethene	130	12.569	12.575	(1.057)	568671	10.9544	10.95
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.156)	885352	8.48017	8.480
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.875)	702013	9.54006	9.540
51 Toluene	91	14.554	14.554	(0.883)	1720628	11.0292	11.03
52 1,1,2-Trichloroethane	97	14.619	14.619	(0.887)	581770	10.0864	10.09
56 1,2-Dibromoethane	107	15.598	15.598	(0.947)	905130	10.2482	10.25
57 Tetrachloroethene	129	15.663	15.663	(0.951)	560365	10.9582	10.96
58 Chlorobenzene	112	16.523	16.523	(1.003)	1279132	10.8454	10.84
59 Ethylbenzene	91	16.803	16.808	(1.020)	2334474	10.7532	10.75
60 m-Xylene (For p-)	91	16.964	16.959	(1.030)	3592760	20.4326	20.43
63 Styrene	104	17.416	17.422	(1.057)	1185595	10.8088	10.81
64 o-Xylene	91	17.481	17.486	(1.061)	1895196	10.4193	10.42
65 1,1,2,2-Tetrachloroethane	83	17.782	17.788	(1.079)	1270161	9.81835	9.818
70 1,3,5-Trimethylbenzene	120	18.756	18.761	(1.138)	785131	9.73787	9.738
73 1,2,4-Trimethylbenzene	105	19.170	19.175	(1.164)	1912636	9.57655	9.576
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.179)	1446757	9.95744	9.957
75 Benzyl Chloride	91	19.498	19.498	(1.184)	609279	3.30892	3.309
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	1437688	10.3511	10.35
77 1,2-Dichlorobenzene	146	19.853	19.859	(1.205)	1369930	9.92943	9.929
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	1276112	10.5728	10.57
82 Hexachlorobutadiene	225	21.984	21.984	(1.334)	1223034	7.95254	7.952

Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Report Date: 30-Jul-2002 14:57

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: icv2.d
Lab Smp Id: ICV
Analysis Type: OTHER
Quant Type: ISTD
Operator: 10648
Method File: /var/chem/gcms/me.i/E073002I.b/LA.m
Misc Info: E073002,LA,TO14.sub,,,

Calibration Date: 30-JUL-2002
Calibration Time: 10:17

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	296011	176127	415895	350768	18.50
2 1,4-Difluorobenze	1622133	965169	2279097	1954064	20.46
3 Chlorobenzene-d5	1424190	847393	2000987	1672522	17.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.77	9.27	10.27	9.76	-0.06
2 1,4-Difluorobenze	11.90	11.40	12.40	11.90	0.00
3 Chlorobenzene-d5	16.47	15.97	16.97	16.47	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Report Date: 30-Jul-2002 14:57

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: ICV
Level: LOW
Data Type: MS DATA
SpikeList File: to14.spk
Sublist File: TO14.sub
Method File: /var/chem/gcms/me.i/E073002I.b/LA.m
Misc Info: E073002,LA,TO14.sub,,,

Client SDG: E073002
Fraction: OTHER

Operator: 10648
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
8 Dichlorodifluorome	10.00	10.94	109.38	65-135
9 Chloromethane	10.00	10.58	105.83	65-135
10 1,2-Dichlorotetraf	10.00	11.16	111.65	65-135
11 Vinyl Chloride	10.00	11.12	111.20	65-135
15 Bromomethane	10.00	9.547	95.47	65-135
16 Chloroethane	10.00	10.26	102.65	65-135
17 Trichlorofluoromet	10.00	9.597	95.97	65-135
23 1,1-Dichloroethene	10.00	10.67	106.66	65-135
25 1,1,2-Trichlorotri	10.00	10.51	105.10	65-135
26 Methylene Chloride	10.00	10.54	105.46	65-135
31 1,1-Dichloroethane	10.00	10.02	100.21	65-135
35 cis 1,2-Dichloroet	10.00	9.860	98.61	65-135
36 Chloroform	10.00	10.35	103.50	65-135
37 1,1,1-Trichloroeth	10.00	10.66	106.61	65-135
38 1,2-Dichloroethane	10.00	10.55	105.54	65-135
39 Benzene	10.00	10.82	108.20	65-135
42 Carbon Tetrachlori	10.00	9.540	95.40	65-135
44 1,2-Dichloropropan	10.00	10.11	101.08	65-135
45 Trichloroethene	10.00	10.95	109.54	65-135
49 cis-1,3-Dichloropr	10.00	8.480	84.80	65-135
50 trans-1,3-Dichloro	10.00	9.540	95.40	65-135
51 Toluene	10.00	11.03	110.29	65-135
52 1,1,2-Trichloroeth	10.00	10.09	100.86	65-135
56 1,2-Dibromoethane	10.00	10.25	102.48	65-135
57 Tetrachloroethene	10.00	10.96	109.58	65-135
58 Chlorobenzene	10.00	10.84	108.45	65-135
59 Ethylbenzene	10.00	10.75	107.53	65-135
60 m-Xylene (For p-)	20.00	20.43	102.16	65-135
63 Styrene	10.00	10.81	108.09	65-135
64 o-Xylene	10.00	10.42	104.19	65-135
65 1,1,2,2-Tetrachlor	10.00	9.818	98.18	65-135
70 1,3,5-Trimethylben	10.00	9.738	97.38	65-135
73 1,2,4-Trimethylben	10.00	9.576	95.77	65-135

Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Report Date: 30-Jul-2002 14:57

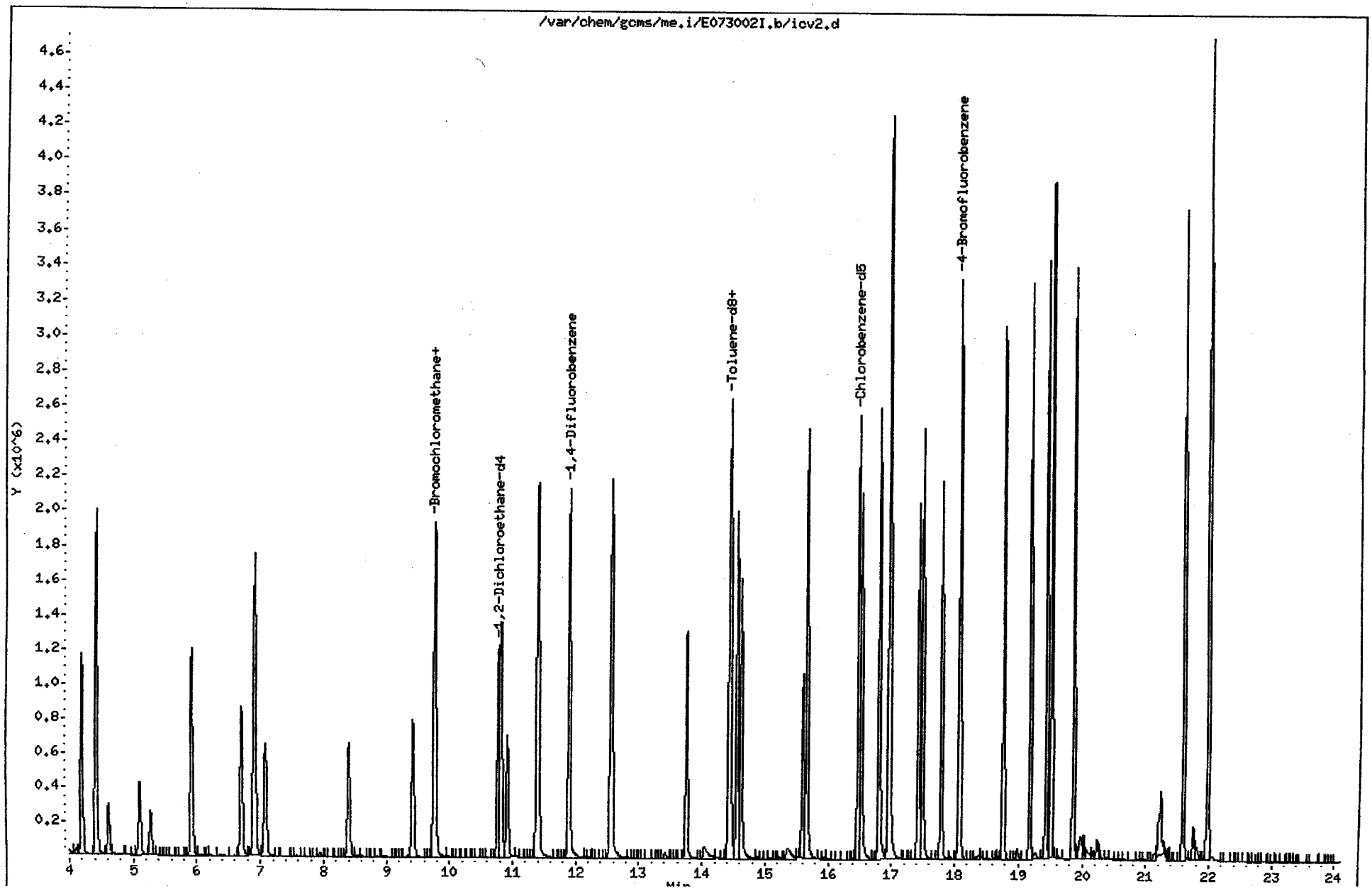
SPIKE COMPOUND	CONC ADDED ppb (v/v)	CONC RECOVERED ppb (v/v)	% RECOVERED	LIMITS
74 1,3-Dichlorobenzen	10.00	9.957	99.57	65-135
75 Benzyl Chloride	10.00	3.309	33.09	30-170
76 1,4-Dichlorobenzen	10.00	10.35	103.51	65-135
77 1,2-Dichlorobenzen	10.00	9.929	99.29	65-135
80 1,2,4-Trichloroben	10.00	10.57	105.73	65-135
82 Hexachlorobutadien	10.00	7.952	79.53	65-135

SURROGATE COMPOUND	CONC ADDED ppb (v/v)	CONC RECOVERED ppb (v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.723	97.23	70-130
$ 5 Toluene-d8	10.00	10.08	100.82	70-130
$ 6 4-Bromofluorobenze	10.00	9.830	98.30	70-130

Data File: /var/chem/gcms/me.i/E073002I.b/icv2.d
Date : 30-JUL-2002 14:06
Client ID:
Sample Info: ICV,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 10648
Column diameter: 0.32



STL Knoxville GC/MS Air Continuing Calibration Review / Narrative Checklist
Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 3

Analysis Date:	8/5/02	CCAL Batch/ Scan Name:	E080502	Instrument:	ME	ICAL Batch/ Scan Name:	E073002I	Scanned ☐

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 24 hr of BFB?		✓			✓
3. Did the LCS meet criteria (nonpolar target analytes 70-130%, with up to 2 nonpolars 60-140%; polar target analytes 60-140%, with up to 2 polars 45-155%)?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the CCAL compared to the correct ICAL?		✓			✓
6. Was a mid-level standard used for CCAL?		✓			✓
7. Is the %D ≤ 30% for all target analytes? (up to 4 target analytes %D ≤ 40%)		✓		(3 out but <40%)	✓
8. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
9. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
10. Is the first IS documented correctly on the log?		✓			✓
11. Is the ICAL date & time on the CCAL correct?		✓			✓
12. Elution order checked on isomeric pairs/coeluters?					
• cis- and trans- isomers		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / 4-ethyl toluene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
• vinyl acetate / hexane		✓			✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane • dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓			✓
13. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
14. Does the CCAL folder contain **complete** data in the following order: data review checklist, a **complete** runlog, Entech report, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram, manual integrations and leak check report.		✓			✓

Analyst: TPW	Date: 8/6/02	2nd Level Reviewer : [illegible]	Date: 8/8/02
Comments:		Comments:	

0000118

STL Knoxville
TO-14 RUN LOG

GCMS Analysis: TO-14 Canisters — Inst: ME

Analyst: DDF — Preventive Maintenance Performed ☐

Date: 8-5-02 — System Date ok (y/n): Y — Reset Date (y/n): NO — IS #1 Area: 229419

Time: 1424 — System Time ok (y/n): Y — Reset Time (y/n): NO — Batch: 2218255

ICAL Date: 7-30-02 — Multiplier Setting (Volts): 1729 — Surr/IS ID: CX912

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
1424	TUNE	EBF0805	—		—	100	15	✓	—
1458	CAL	EMD0805		CX-914	—		STD	✓	
1532	REF	ERF0805		CX-915 E50GFIAC	—		16	✓	
1607	BLK	EBK0805			—	500	15	N	
1642				E50GFIAA	—			✓	
1745	H2G260275	ESEVD	12444	~~149382~~ 149494 2nd 8-6-02	S	15	1	✓	6
1820	G180110	E4W71	1797	7.75 RR 500 ml	—	100	2	N	~~7~~ —
1854		73	~~00~~ 93261 8-5-02	1033	S		3	N	~~8~~ 7
1929	G310181	ESMQW	12636	2.09	—	500	4	✓	~~9~~ 8
2004		D					~~5~~ 4	✓	DUP
2039		ESMQ4	93140	2.12			~~6~~ 5	✓	~~10~~ 9
2114		5	1880	2.12			~~7~~ 6	✓	~~11~~ 10
2148		9	1830	2.06			~~8~~ 7	✓	~~12~~ 11
2223		RC	0143	2.13			~~9~~ 8	✓	~~13~~ 12
2258		RE	1885	2.7 RR 500 ml		400	~~10~~ 9	N	—
2332		RK	1753	151 RR 10 ml		15	~~11~~ 10	N	—
0007		RP	93115	2.01		500	~~12~~ 11	✓	~~14~~ 13
0042	G310124	E9	2047	2.35			12	✓	~~15~~ 14
0117		FD	93037	3.76			13	✓	~~16~~ 15
0153		FG	~~03841~~ 2045 8-5-02	3.56			14	✓	~~17~~ 16
0823		FH	03841	3.86 RR			1	N ~~X~~	~~18~~ ~~17~~ —
0858		FJ	1766	3.31			2	✓	~~19~~ ~~18~~ 17
0933		FK	0039	3.39			3	✓	~~19~~ 18
1008		FM	2044	4.44			4	✓	~~20~~ 19
1043		FN	12481	1.0			5	✓	~~1~~ 20
1118	H2G180110	E4W71R	1797			500	6	✓	~~2~~ 1
1153	H2G310181	ESMRER	1885			500	7	✓	~~3~~ 2
1227		KR	1753			~~10~~ 11	8	✓	~~4~~ 3
1303	H2G310124	ESMFHR	03841			500	1	✓	4
1349	H2G180110	E4W73D	93261		S	100	9	N	DUP

Analyst: [signature] Date: 8/6/02 Approved by: _____ Date: _____

020805
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB	101ml	15	8/5/02	2:25:20 PM
CCV	100ml	STD	8/5/02	2:59:41 PM
REF	100ml	16	8/5/02	3:34:05 PM
BLK	501ml	15	8/5/02	4:09:00 PM
BLK	500ml	15	8/5/02	4:43:34 PM
E5EVD	16ml	1	8/5/02	5:47:10 PM
E4W71	100ml	2	8/5/02	6:21:17 PM
E4W73	100ml	3	8/5/02	6:55:31 PM
E5MQW	500ml	4	8/5/02	7:30:22 PM
E5MQWD	501ml	4	8/5/02	8:05:29 PM
E5MQ4	499ml	5	8/5/02	8:40:20 PM
E5MQ5	500ml	6	8/5/02	9:15:25 PM
E5MQ5	501ml	7	8/5/02	9:50:11 PM
E5MRC	500ml	8	8/5/02	10:24:57 PM
E5MRE	400ml	9	8/5/02	10:59:15 PM
E5MRK	16ml	10	8/5/02	11:33:43 PM

020806
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
E5MRP	499ml	11	8/6/02	12:09:01 AM
E5ME9	500ml	12	8/6/02	12:44:09 AM
E5MFD	501ml	13	8/6/02	1:19:06 AM
E5MFG	500ml	14	8/6/02	1:54:36 AM
E5MFH	500ml	1	8/6/02	8:25:04 AM
E5MFJ	501ml	2	8/6/02	8:59:49 AM
E5MFK	500ml	3	8/6/02	9:34:29 AM
E5MFM	501ml	4	8/6/02	10:09:29 AM
E5MFN	500ml	5	8/6/02	10:44:24 AM
E4W71R	500ml	6	8/6/02	11:19:24 AM
E5MRER	501ml	7	8/6/02	11:54:20 AM
E5MRKR	11ml	8	8/6/02	12:29:01 PM
E5MFHR	502ml	1	8/6/02	1:04:36 PM

Data File: /var/chem/gcms/me.i/E080502.b/ebf0805.d

Date : 05-AUG-2002 14:24

Client ID:

Instrument: me.i

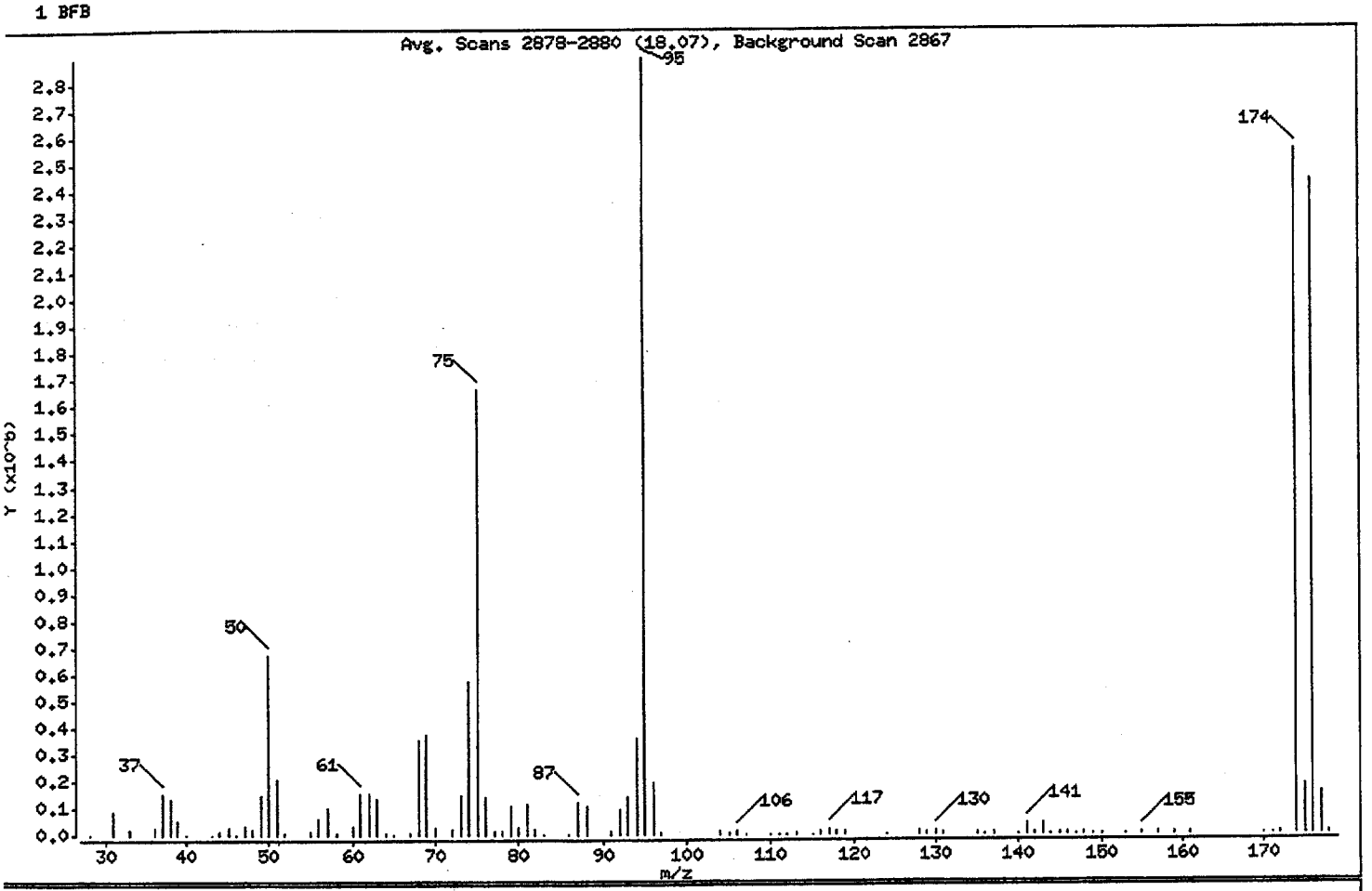
Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

1 BFB



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	23.12
75	30.00 - 60.00% of mass 95	57.39
96	5.00 - 9.00% of mass 95	6.58
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	88.08
175	5.00 - 9.00% of mass 174	6.13 (6.96)
176	95.00 - 101.00% of mass 174	84.03 (95.40)
177	5.00 - 9.00% of mass 176	5.20 (6.19)

Data File: /var/chem/gcms/me.i/E080502.b/ebf0805.d

Date : 05-AUG-2002 14:24

Client ID:

Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

Data File: ebf0805.d

Spectrum: Avg. Scans 2878-2880 (18.07), Background Scan 2867

Location of Maximum: 95.00

Number of points: 99

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	116	63.00	13014	94.00	36104	140.00	199
31.00	8599	64.00	978	95.00	289280	141.00	3977
33.00	1821	65.00	76	96.00	19032	142.00	342
36.00	2784	67.00	901	97.00	572	143.00	3911
37.00	15048	68.00	35448	104.00	1472	144.00	200
38.00	13485	69.00	36952	105.00	425	145.00	467
39.00	5355	70.00	2882	106.00	1542	146.00	454
40.00	85	72.00	1831	107.00	261	147.00	273
43.00	78	73.00	14958	110.00	256	148.00	666
44.00	1574	74.00	57360	111.00	321	149.00	169
45.00	2920	75.00	166016	112.00	274	150.00	305
46.00	265	76.00	14015	113.00	368	153.00	76
47.00	3464	77.00	1536	115.00	321	155.00	698
48.00	1891	78.00	1181	116.00	1115	157.00	491
49.00	14549	79.00	10880	117.00	2087	159.00	405
50.00	66864	80.00	2969	118.00	1254	161.00	439
51.00	20488	81.00	11407	119.00	1521	170.00	146
52.00	879	82.00	2255	124.00	93	171.00	67
55.00	1097	83.00	324	128.00	1042	172.00	528
56.00	5676	86.00	303	129.00	483	174.00	254784
57.00	10012	87.00	11692	130.00	1098	175.00	17728
58.00	401	88.00	10688	131.00	390	176.00	243072
60.00	3068	91.00	1299	135.00	640	177.00	15038
61.00	15623	92.00	9130	136.00	67	178.00	505
62.00	15490	93.00	13888	137.00	575		

Data File: /var/chem/gcms/me.i/E080502.b/ebf0805.d

Date : 05-AUG-2002 14:24

Client ID:

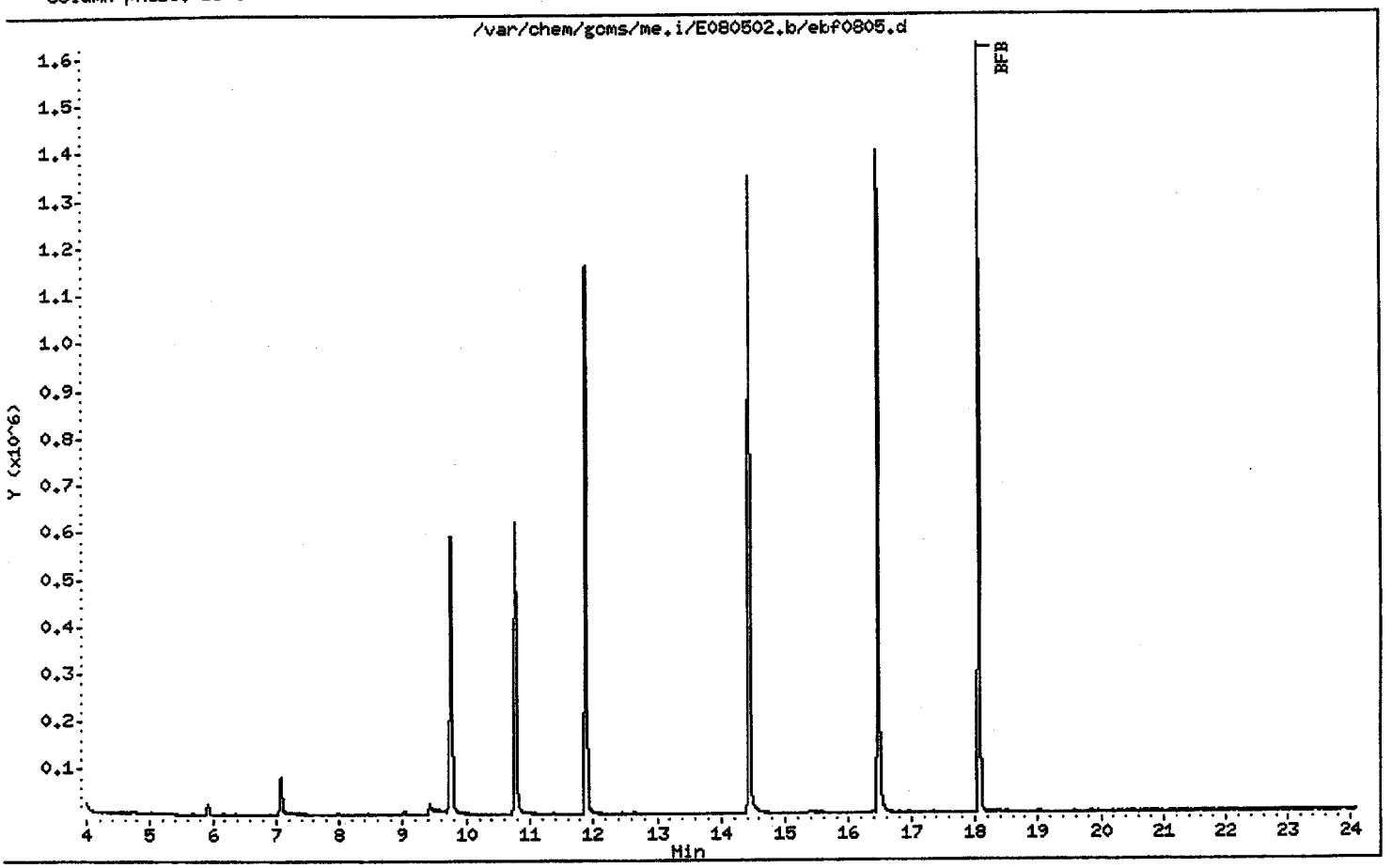
Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32



ata File: /chem/gcms/me.i/E080502.b/emd0805.d
eport Date: 05-Aug-2002 15:24

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

nstrument ID: me.i
ab File ID: emd0805.d
nalysis Type: AIR
ab Sample ID: CCV
ethod: /chem/gcms/me.i/E080502.b/LA.m

Injection Date: 05-AUG-2002 14:58
Init. Cal. Date(s): 30-JUL-2002 30-JUL-2002
Init. Cal. Times: 08:01 11:26
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 4 1,2-Dichloroethane-d4	0.24889	0.23979	0.000	3.65581	30.00000	Averaged	
$ 5 Toluene-d8	1.14421	1.12234	0.000	1.91143	30.00000	Averaged	
$ 6 4-Bromofluorobenzene	0.74816	0.77496	0.000	-3.58211	30.00000	Averaged	
7 Chlorodifluoromethane	2.05621	2.15429	0.000	-4.76989	30.00000	Averaged	
8 Dichlorodifluoromethane	3.31773	3.43888	0.000	-3.65171	30.00000	Averaged	
9 Chloromethane	0.27140	0.31729	0.000	-16.90893	30.00000	Averaged	
10 1,2-Dichlorotetrafluoroetha	1.85286	1.94350	0.000	-4.89185	30.00000	Averaged	
11 Vinyl Chloride	0.99163	1.13625	0.000	-14.58408	30.00000	Averaged	
12 Methanol	0.25436	0.31954	0.000	-25.62435	30.00000	Averaged	
13 1,3-Butadiene	0.76305	0.89509	0.000	-17.30445	30.00000	Averaged	
14 n-Butane	1.82137	1.91746	0.000	-5.27548	30.00000	Averaged	
15 Bromomethane	1.10168	1.22293	0.000	-11.00665	30.00000	Averaged	
16 Chloroethane	0.55141	0.61281	0.000	-11.13360	30.00000	Averaged	
17 Trichlorofluoromethane	3.81748	4.18873	0.000	-9.72495	30.00000	Averaged	
18 Acrolein	0.28414	0.37932	0.000	-33.49536	30.00000	Averaged	<-
19 Acetonitrile	0.39863	0.45200	0.000	-13.38644	30.00000	Averaged	
20 Acetone	0.48858	0.53707	0.000	-9.92400	30.00000	Averaged	
21 Pentane	0.30336	0.34014	0.000	-12.12203	30.00000	Averaged	
22 Ethyl Ether	1.03083	1.30400	0.000	-26.49942	30.00000	Averaged	
23 1,1-Dichloroethene	1.09142	1.25597	0.000	-15.07722	30.00000	Averaged	
24 Acrylonitrile	0.70934	0.89605	0.000	-26.32108	30.00000	Averaged	
25 1,1,2-Trichlorotrifluoroeth	2.59013	2.89617	0.000	-11.81554	30.00000	Averaged	
26 Methylene Chloride	1.15158	1.21020	0.000	-5.09015	30.00000	Averaged	
27 3-Chloropropene	1.11589	1.30259	0.000	-16.73132	30.00000	Averaged	
28 Carbon Disulfide	3.82257	4.29462	0.000	-12.34907	30.00000	Averaged	
29 trans-1,2-Dichloroethene	1.05293	1.22943	0.000	-16.76283	30.00000	Averaged	
30 Methyl-t-Butyl Ether	2.85044	3.39133	0.000	-18.97572	30.00000	Averaged	
31 1,1-Dichloroethane	2.41212	2.74928	0.000	-13.97759	30.00000	Averaged	
32 Vinyl Acetate	2.51196	3.29697	0.000	-31.25095	30.00000	Averaged	<-
33 2-Butanone	0.50853	0.62717	0.000	-23.32995	30.00000	Averaged	
34 Hexane	0.91106	1.08046	0.000	-18.59380	30.00000	Averaged	
35 cis 1,2-Dichloroethene	1.23904	1.46401	0.000	-18.15625	30.00000	Averaged	
36 Chloroform	2.92872	3.28937	0.000	-12.31445	30.00000	Averaged	
37 1,1,1-Trichloroethane	2.88579	3.17632	0.000	-10.06736	30.00000	Averaged	
38 1,2-Dichloroethane	0.37299	0.38716	0.000	-3.79865	30.00000	Averaged	

Data File: /chem/gcms/me.i/E080502.b/emd0805.d
Report Date: 05-Aug-2002 15:24

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd0805.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/me.i/E080502.b/LA.m

Injection Date: 05-AUG-2002 14:58
Init. Cal. Date(s): 30-JUL-2002 30-JUL-2002
Init. Cal. Times: 08:01 11:26
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
39 Benzene	0.65036	0.70222	0.000	-7.97368	30.00000	Averaged
40 1-Butanol	0.10368	0.13282	0.000	-28.10706	30.00000	Averaged
41 Cyclohexane	0.09241	0.10534	0.000	-13.98978	30.00000	Averaged
42 Carbon Tetrachloride	2.69641	3.34761	0.000	-24.15067	30.00000	Averaged
43 Heptane	0.40733	0.46521	0.000	-14.21027	30.00000	Averaged
44 1,2-Dichloropropane	0.25202	0.27924	0.000	-10.80165	30.00000	Averaged
45 Trichloroethene	0.26662	0.28404	0.000	-6.53449	30.00000	Averaged
46 Dibromomethane	0.30623	0.33357	0.000	-8.92729	30.00000	Averaged
47 Bromodichloromethane	0.59053	0.67127	0.000	-13.67183	30.00000	Averaged
48 4-Methyl-2-pentanone	0.45745	0.57229	0.000	-25.10471	30.00000	Averaged
49 cis-1,3-Dichloropropene	0.46900	0.56590	0.000	-20.66037	30.00000	Averaged
50 trans-1,3-Dichloropropene	0.41579	0.46637	0.000	-12.16397	30.00000	Averaged
51 Toluene	0.99676	1.01396	0.000	-1.72540	30.00000	Averaged
52 1,1,2-Trichloroethane	0.34761	0.37734	0.000	-8.55119	30.00000	Averaged
53 2-Hexanone	0.27137	0.33242	0.000	-22.49703	30.00000	Averaged
54 Octane	0.26476	0.31385	0.000	-18.54261	30.00000	Averaged
55 Dibromochloromethane	0.59524	0.68065	0.000	-14.34773	30.00000	Averaged
56 1,2-Dibromoethane	0.54259	0.58338	0.000	-7.51802	30.00000	Averaged
57 Tetrachloroethene	0.31011	0.32968	0.000	-6.31148	30.00000	Averaged
58 Chlorobenzene	0.74865	0.77516	0.000	-3.54149	30.00000	Averaged
59 Ethylbenzene	1.27597	1.42829	0.000	-11.93760	30.00000	Averaged
60 m-Xylene (For p-)	1.03831	1.14866	0.000	-10.62859	30.00000	Averaged
61 Bromoform	0.67347	0.74120	0.000	-10.05720	30.00000	Averaged
62 Nonane	0.54318	0.62039	0.000	-14.21303	30.00000	Averaged
63 Styrene	0.64035	0.73144	0.000	-14.22396	30.00000	Averaged
64 o-Xylene	1.09390	1.20690	0.000	-10.33054	30.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.81195	0.87278	0.000	-7.49132	30.00000	Averaged
66 1,2,3-Trichloropropane	0.18937	0.22493	0.000	-18.77977	30.00000	Averaged
67 Cumene	1.37638	1.53273	0.000	-11.35917	30.00000	Averaged
68 n-Propylbenzene	1.96236	2.17952	0.000	-11.06626	30.00000	Averaged
69 4-Ethyltoluene	1.53078	1.67198	0.000	-9.22442	30.00000	Averaged
70 1,3,5-Trimethylbenzene	0.50472	0.53338	0.000	-5.67704	30.00000	Averaged
71 Alpha-Methylstyrene	0.46988	0.56743	0.000	-20.75874	30.00000	Averaged
72 Decane	0.79139	0.86771	0.000	-9.64405	30.00000	Averaged
73 1,2,4-Trimethylbenzene	1.18694	1.32753	0.000	-11.84514	30.00000	Averaged

)ata File: /chem/gcms/me.i/E080502.b/emd0805.d
:eport Date: 05-Aug-2002 15:24

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

:nstrument ID: me.i
ıab File ID: emd0805.d
ınalysis Type: AIR
ıab Sample ID: CCV
ſethod: /chem/gcms/me.i/E080502.b/LA.m

Injection Date: 05-AUG-2002 14:58
Init. Cal. Date(s): 30-JUL-2002 30-JUL-2002
Init. Cal. Times: 08:01 11:26
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
74 1,3-Dichlorobenzene	0.90901	0.97951	0.000	-7.75542	30.00000	Averaged	
75 Benzyl Chloride	1.03921	1.25516	0.000	-20.78011	30.00000	Averaged	
76 1,4-Dichlorobenzene	0.90024	0.92740	0.000	-3.01686	30.00000	Averaged	
77 1,2-Dichlorobenzene	0.86295	0.92829	0.000	-7.57240	30.00000	Averaged	
78 Undecane	0.77290	0.88432	0.000	-14.41638	30.00000	Averaged	
79 Dodecane	0.62293	0.77659	0.000	-24.66671	30.00000	Averaged	
80 1,2,4-Trichlorobenzene	0.86626	0.81375	0.000	6.06153	30.00000	Averaged	
81 Napthalene	1.57093	2.09059	0.000	-33.07983	30.00000	Averaged	<-
82 Hexachlorobutadiene	0.86722	1.02900	0.000	-18.65406	30.00000	Averaged	

)ata File: /chem/gcms/me.i/E080502.b/emd0805.d
:eport Date: 05-Aug-2002 15:24

STL Knoxville

Modified Method TO-14

)ata file : /chem/gcms/me.i/E080502.b/emd0805.d
ıab Smp Id: CCV Client Smp ID: 10PPBV
:nj Date : 05-AUG-2002 14:58
)perator : 60487 Inst ID: me.i
ſmp Info : CCV,,2,3,,10PPBV
lisc Info : E080502,LA,,,,100ML
:omment :
lethod : /chem/gcms/me.i/E080502.b/LA.m
leth Date : 05-Aug-2002 15:24 chemist Quant Type: ISTD
:al Date : 05-AUG-2002 14:58 Cal File: emd0805.d
ıls bottle: 1 Continuing Calibration Sample
)il Factor: 1.00000
:ntegrator: HP RTE Compound Sublist: RTall.sub
:arget Version: 3.50
)rocessing Host: qmidhp01

:oncentration Formula: Amt * DF * CpndVariable

:pnd Variable Local Compound Variable

'ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.767	9.767	(1.000)	229419	10.0000	
2 1,4-Difluorobenzene	114	11.897	11.897	(1.000)	1302532	10.0000	
3 Chlorobenzene-d5	117	16.475	16.475	(1.000)	1151035	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.905)	312332	10.0000	9.634
5 Toluene-d8	98	14.447	14.447	(0.877)	1291855	10.0000	9.809
6 4-Bromofluorobenzene	95	18.073	18.073	(1.097)	892011	10.0000	10.36
7 Chlorodifluoromethane	51	4.123	4.123	(0.422)	494235	10.0000	10.48
8 Dichlorodifluoromethane	85	4.199	4.199	(0.430)	788944	10.0000	10.36
9 Chloromethane	52	4.409	4.409	(0.451)	72793	10.0000	11.69
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	445876	10.0000	10.49
11 Vinyl Chloride	62	4.613	4.613	(0.472)	260676	10.0000	11.46
12 Methanol	31	4.629	4.629	(0.474)	293236	40.0000	50.25
13 1,3-Butadiene	54	4.721	4.721	(0.483)	205351	10.0000	11.73
14 n-Butane	43	4.721	4.721	(0.483)	439900	10.0000	10.53
15 Bromomethane	94	5.103	5.103	(0.522)	280564	10.0000	11.10
16 Chloroethane	64	5.269	5.269	(0.540)	140589	10.0000	11.11
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	960974	10.0000	10.97
18 Acrolein	56	5.953	5.953	(0.609)	174044	20.0000	26.70
19 Acetonitrile	40	6.033	6.033	(0.618)	207393	20.0000	22.68
20 Acetone	58	6.109	6.109	(0.625)	246427	20.0000	21.98
21 Pentane	57	6.178	6.178	(0.633)	78034	10.0000	11.21

ata File: /chem/gcms/me.i/E080502.b/emd0805.d
eport Date: 05-Aug-2002 15:24

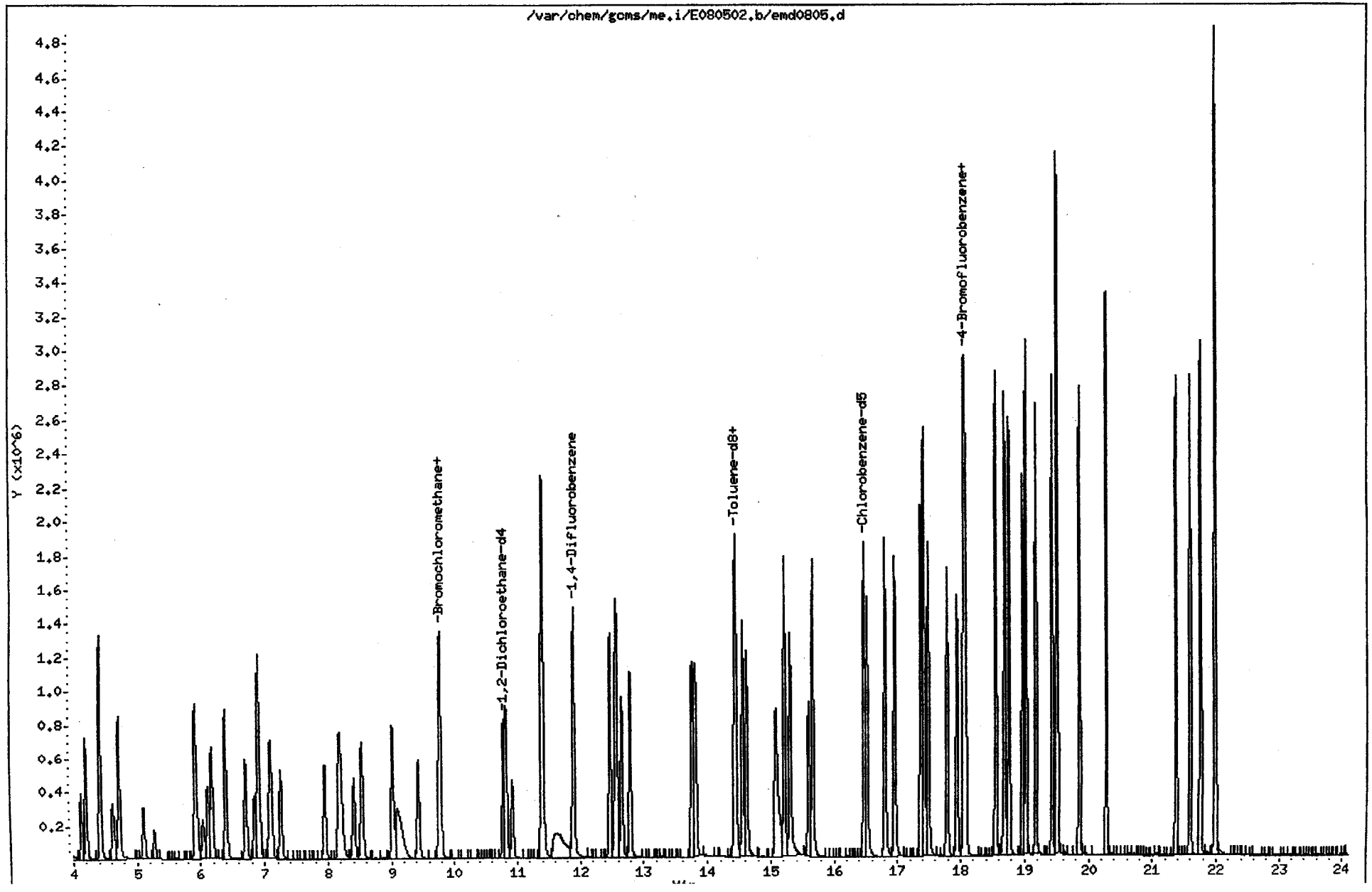
ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.388	6.388	(0.654)	598323	20.0000	25.30
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	288143	10.0000	11.51
24 Acrylonitrile	53	6.840	6.840	(0.700)	411140	20.0000	25.26
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	664435	10.0000	11.18
26 Methylene Chloride	84	7.082	7.082	(0.725)	277642	10.0000	10.51
27 3-Chloropropene	39	7.104	7.104	(0.727)	298839	10.0000	11.67
28 Carbon Disulfide	76	7.254	7.254	(0.743)	985267	10.0000	11.23
29 trans-1,2-Dichloroethene	96	7.954	7.954	(0.814)	282054	10.0000	11.68
30 Methyl-t-Butyl Ether	73	8.185	8.185	(0.838)	1556072	20.0000	23.80
31 1,1-Dichloroethane	63	8.406	8.406	(0.861)	630736	10.0000	11.40
32 Vinyl Acetate	43	8.535	8.535	(0.874)	1512776	20.0000	26.25
33 2-Butanone	72	9.094	9.094	(0.931)	287768	20.0000	24.66
34 Hexane	56	9.019	9.019	(0.923)	247878	10.0000	11.86
35 cis 1,2-Dichloroethene	96	9.433	9.433	(0.966)	335870	10.0000	11.82
36 Chloroform	83	9.777	9.777	(1.001)	754645	10.0000	11.23
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.107)	728707	10.0000	11.01
38 1,2-Dichloroethane	62	10.918	10.918	(0.918)	504284	10.0000	10.38
39 Benzene	78	11.386	11.386	(0.957)	914664	10.0000	10.80
40 1-Butanol	41	11.596	11.596	(0.975)	345993	20.0000	25.62
41 Cyclohexane	69	11.386	11.386	(0.957)	137205	10.0000	11.40
42 Carbon Tetrachloride	117	11.402	11.402	(1.167)	768006	10.0000	12.42
43 Heptane	43	12.467	12.467	(1.048)	605953	10.0000	11.42
44 1,2-Dichloropropane	63	12.553	12.553	(1.055)	363724	10.0000	11.08
45 Trichloroethene	130	12.575	12.575	(1.057)	369971	10.0000	10.65
46 Dibromomethane	93	12.650	12.650	(1.063)	434485	10.0000	10.89
47 Bromodichloromethane	83	12.785	12.785	(1.075)	874352	10.0000	11.37
48 4-Methyl-2-pentanone	43	13.801	13.801	(1.160)	1490852	20.0000	25.02
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.156)	737099	10.0000	12.07
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.875)	536807	10.0000	11.22
51 Toluene	91	14.555	14.555	(0.883)	1167107	10.0000	10.17
52 1,1,2-Trichloroethane	97	14.619	14.619	(0.887)	434327	10.0000	10.86
53 2-Hexanone	58	15.076	15.076	(0.915)	765258	20.0000	24.50
54 Octane	85	15.216	15.216	(0.924)	361251	10.0000	11.85
55 Dibromochloromethane	129	15.302	15.302	(0.929)	783447	10.0000	11.43
56 1,2-Dibromoethane	107	15.593	15.593	(0.946)	671492	10.0000	10.75
57 Tetrachloroethene	129	15.663	15.663	(0.951)	379470	10.0000	10.63
58 Chlorobenzene	112	16.523	16.523	(1.003)	892237	10.0000	10.35
59 Ethylbenzene	91	16.803	16.803	(1.020)	1644016	10.0000	11.19
60 m-Xylene (For p-)	91	16.959	16.959	(1.029)	1322151	10.0000	11.06
61 Bromoform	173	17.406	17.406	(1.056)	853145	10.0000	11.00
62 Nonane	57	17.363	17.363	(1.054)	714085	10.0000	11.42
63 Styrene	104	17.416	17.416	(1.057)	841908	10.0000	11.42
64 o-Xylene	91	17.481	17.481	(1.061)	1389187	10.0000	11.03
65 1,1,2,2-Tetrachloroethane	83	17.788	17.788	(1.080)	1004598	10.0000	10.75
66 1,2,3-Trichloropropane	110	17.944	17.944	(1.089)	258904	10.0000	11.88
67 Cumene	105	18.046	18.046	(1.095)	1764226	10.0000	11.14
68 n-Propylbenzene	91	18.546	18.546	(1.126)	2508703	10.0000	11.11

ata File: /chem/gcms/me.i/E080502.b/emd0805.d
eport Date: 05-Aug-2002 15:24

						AMOUNTS	
	QUANT SIG					CAL-AMT	ON-COL
ompounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ppb(v/v))	(ppb(v/v))
==========	====	==	======	======	========	=======	=======
69 4-Ethyltoluene	105	18.691	18.691	(1.135)	1924510	10.0000	10.92
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.138)	613937	10.0000	10.57
71 Alpha-Methylstyrene	118	18.971	18.971	(1.151)	653128	10.0000	12.08
72 Decane	57	19.020	19.020	(1.154)	998764	10.0000	10.96
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	1528034	10.0000	11.18
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.179)	1127448	10.0000	10.78
75 Benzyl Chloride	91	19.498	19.498	(1.184)	1444733	10.0000	12.08
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	1067475	10.0000	10.30
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	1068497	10.0000	10.76
78 Undecane	57	20.278	20.278	(1.231)	1017887	10.0000	11.44
79 Dodecane	57	21.370	21.370	(1.297)	893880	10.0000	12.47
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	936653	10.0000	9.394
81 Napthalene	128	21.758	21.758	(1.321)	2406340	10.0000	13.31
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	1184412	10.0000	11.86

Data File: /var/chem/gcms/me.i/E080502.b/emd0805.d
Date : 05-AUG-2002 14:58
Client ID: 10PPBV
Sample Info: CCV,,2,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 60487
Column diameter: 0.32



---------- Leak Check Report ----------

8/5/02 5:15:01 PM
Leak Check for C:\smart\E080502.seq
Report File: C:\smart\E080502.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 12
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1	Auto2	Start	End	Rate(PSI/Min.)
1	1	---	3.0	3.1	0.40
1	2	---	2.1	2.4	1.20
1	3	---	2.1	2.2	0.40
1	4	---	2.2	2.4	0.80
1	5	---	2.0	2.2	0.80
1	6	---	1.9	2.0	0.40
1	7	---	2.0	2.1	0.40
1	8	---	2.1	2.2	0.40
1	9	---	2.1	2.3	0.80
1	10	---	2.0	2.2	0.80
1	11	---	1.9	2.0	0.40
1	12	---	2.0	2.1	0.40
1	13	---	2.2	2.4	0.80
1	14	---	2.4	2.6	0.80

8/6/02 7:38:53 AM
Leak Check for C:\smart\E080502.seq
Report File: C:\smart\E080502.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 12
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample

00001132

E080502

Inlet	Auto1	Auto2	Start	End	Rate(PSI/Min.)
1	1	---	3.0	3.1	0.40
1	2	---	2.2	2.4	0.80
1	3	---	2.2	2.4	0.80
1	4	---	2.2	2.3	0.40
1	5	---	2.2	2.3	0.40

00001133

---------- Leak Check Report ----------

8/6/02 2:06:01 PM
Leak Check for C:\smart\E080502.seq
Report File: C:\smart\E080502.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 12
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1		Auto2	Start	End	Rate(psi/min)
1	6	---	18.7	20.3	6.40	-Recheck ok
1	7	---	2.4	2.6	0.80	
1	8	---	2.1	2.3	0.80	
1	1	---	2.7	2.9	0.80	
1	9	---	2.3	2.3	0.00	

---------- Leak Check Report ----------

8/6/02 2:09:58 PM
Leak Check for C:\smart\E080502.seq
Report File: C:\smart\E080502.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 12
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1	Auto2	Start	End	Rate(psi/min)
1	6	—	2.4	2.5	0.40

STL Knoxville GC/MS Air Initial Calibration Data Review / Narrative Checklist
Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 3

Analysis Date:	8/8/02	Instrument::	mE	ICAL Batch/Scan Name:	E080802I	Scanned ☐

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 24 hr of BFB?		✓			✓
3. Is the second source analysis of a reference standard within limits? (65-135% R; 20-180% for benzyl chloride)		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Were at least 5 levels of each compound analyzed?		✓			✓
6. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%)		✓		1 over 30% but < 40%	✓
7. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?		✓		Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	✓
8. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in ICAL summary?		✓			✓
9. Was ICAL summary form processed using correct result files? (Analyst and 2nd reviewer should compare 2-3 RFs from each standard quan report to ICAL summary.)		✓			✓
10. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
11. Elution order checked on isomeric pairs?					
• cis- and trans- isomers		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / 4-ethyl toluene		✓			✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene		✓			✓
• vinyl acetate / hexane		✓			✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane • dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓			✓
12. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
13. Does the ICAL folder contain complete data in the following order? Data review checklist, a complete runlog, Entech report, ICAL summary, followed by [Quan reports, chromatograms, manual integrations] in increasing sample order, ~~leak check report~~ DW 8.9.02		✓			✓

Analyst:	Date: 8/9/02	2nd Level Reviewer :	Date: 08/12/02
Comments:		Comments:	

0000136

020808
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB	101ml	15	8/8/02	5:44:14 PM
ICAL6	100ml	13	8/8/02	6:18:23 PM
ICAL7	252ml	13	8/8/02	6:52:27 PM
ICAL1	500ml	13	8/8/02	7:26:56 PM
ICAL2	51ml	STD	8/8/02	8:00:54 PM
ICAL3	100ml	STD	8/8/02	8:34:56 PM
ICAL4	152ml	STD	8/8/02	9:08:56 PM
ICAL5	300ml	STD	8/8/02	9:42:52 PM
BLKB	501ml	15	8/8/02	10:18:09 PM
ICV	101ml	14	8/8/02	10:52:03 PM

STL Knoxville
TO-14 RUN LOG

GCMS Analysis: TO-14 Canisters

Inst: ME

Analyst: DW

Preventive Maintenance Performed ☐

Date: 8/8/02 System Date ok (y/n): Y Reset Date (y/n): N IS #1 Area: 638377 (W13)

Time: 1742 System Time ok (y/n): Y Reset Time (y/n): N Batch: —

ICAL Date: 8/8/02 Multiplier Setting (Volts): 1753 Surr/IS ID: CX-912

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
1742	TUNE	EBF0808				100	15	✓ ~~100~~ DW 8-9-02	
1816	IC-6	ICEH086		CX-916		100	13	✓ ~~100~~ DW 8-9-02	
1850	7	7				250	13	✓	
1925	1	1				500	13	✓	
1959	2	2		CX-914		50	STD	✓	
2033	3	3				100		✓	
2108	4	4				150		✓	
2142	5	5				300		✓	
2217	BLK	EBK0808B				500	15	—	
2251	ICV	ICVH08		CX-897		100	14	✓	

DW 8/9/02

Analyst: DW Date: 8/9/02 Approved by: _____ Date: _____

Data File: /var/chem/gcms/me.i/E0808021.b/ebf0808.d

Date : 08-AUG-2002 17:42

Client ID:

Instrument: me.i

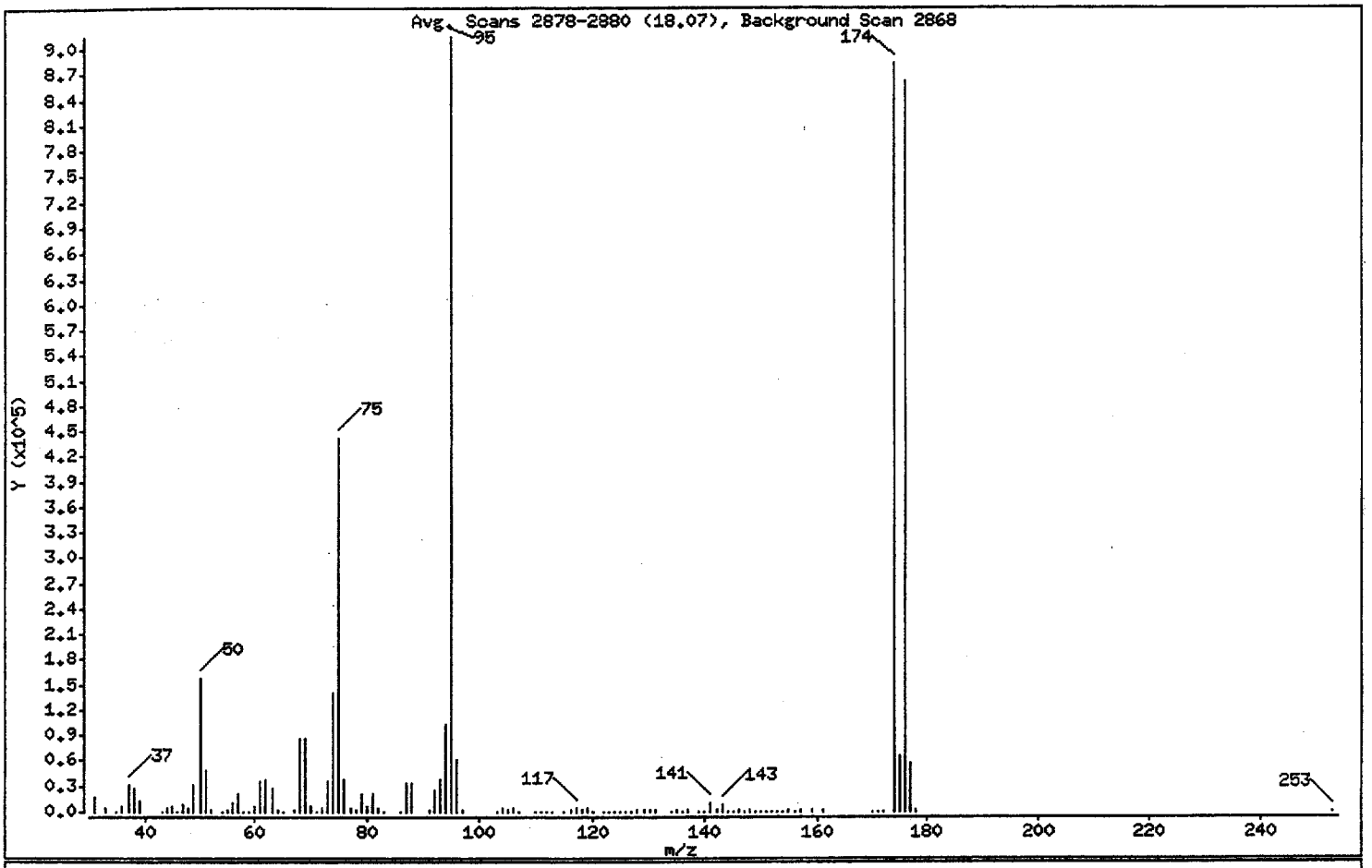
Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

1 BFB



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.35
75	30.00 - 60.00% of mass 95	48.39
96	5.00 - 9.00% of mass 95	6.74
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	96.54
175	5.00 - 9.00% of mass 174	7.12 (7.38)
176	95.00 - 101.00% of mass 174	94.16 (97.54)
177	5.00 - 9.00% of mass 176	6.20 (6.58)

Data File: /var/chem/gcms/me.i/E080802I.b/ebf0808.d

Date : 08-AUG-2002 17:42

Client ID:

Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

Data File: ebf0808.d

Spectrum: Avg. Scans 2878-2880 (18.07), Background Scan 2868

Location of Maximum: 95.00

Number of points: 115

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	16912	67.00	1823	105.00	1548	141.00	9805
33.00	3278	68.00	87296	106.00	3324	142.00	1144
35.00	71	69.00	86728	107.00	862	143.00	9375
36.00	5671	70.00	6464	110.00	345	144.00	577
37.00	32512	71.00	290	111.00	658	145.00	768
38.00	28352	72.00	4220	112.00	446	146.00	1313
39.00	11688	73.00	35424	113.00	649	147.00	638
43.00	162	74.00	141440	115.00	865	148.00	2052
44.00	3320	75.00	442752	116.00	2850	149.00	757
45.00	6758	76.00	38320	117.00	5033	150.00	1046
46.00	397	77.00	4524	118.00	2998	151.00	90
47.00	9100	78.00	3132	119.00	4387	152.00	465
48.00	4256	79.00	20040	120.00	243	153.00	679
49.00	31952	80.00	5734	122.00	212	154.00	566
50.00	158720	81.00	21336	123.00	278	155.00	2510
51.00	48560	82.00	4059	124.00	609	156.00	332
52.00	2254	83.00	557	125.00	253	157.00	1868
54.00	80	86.00	825	126.00	412	159.00	1077
55.00	1869	87.00	33096	127.00	275	161.00	1198
56.00	11229	88.00	33392	128.00	3084	170.00	478
57.00	20880	91.00	2893	129.00	1452	171.00	323
58.00	739	92.00	25288	130.00	2964	172.00	253
59.00	142	93.00	37848	131.00	1293	174.00	883392
60.00	6795	94.00	102360	134.00	188	175.00	65192
61.00	35480	95.00	915072	135.00	1549	176.00	861632
62.00	37360	96.00	61640	136.00	206	177.00	56696
63.00	27168	97.00	1536	137.00	1425	178.00	1584
64.00	2581	103.00	467	139.00	303	253.00	72
65.00	149	104.00	3669	140.00	753		

Data File: /var/chem/gcms/me.i/E080802I.b/ebf0808.d

Date : 08-AUG-2002 17:42

Client ID:

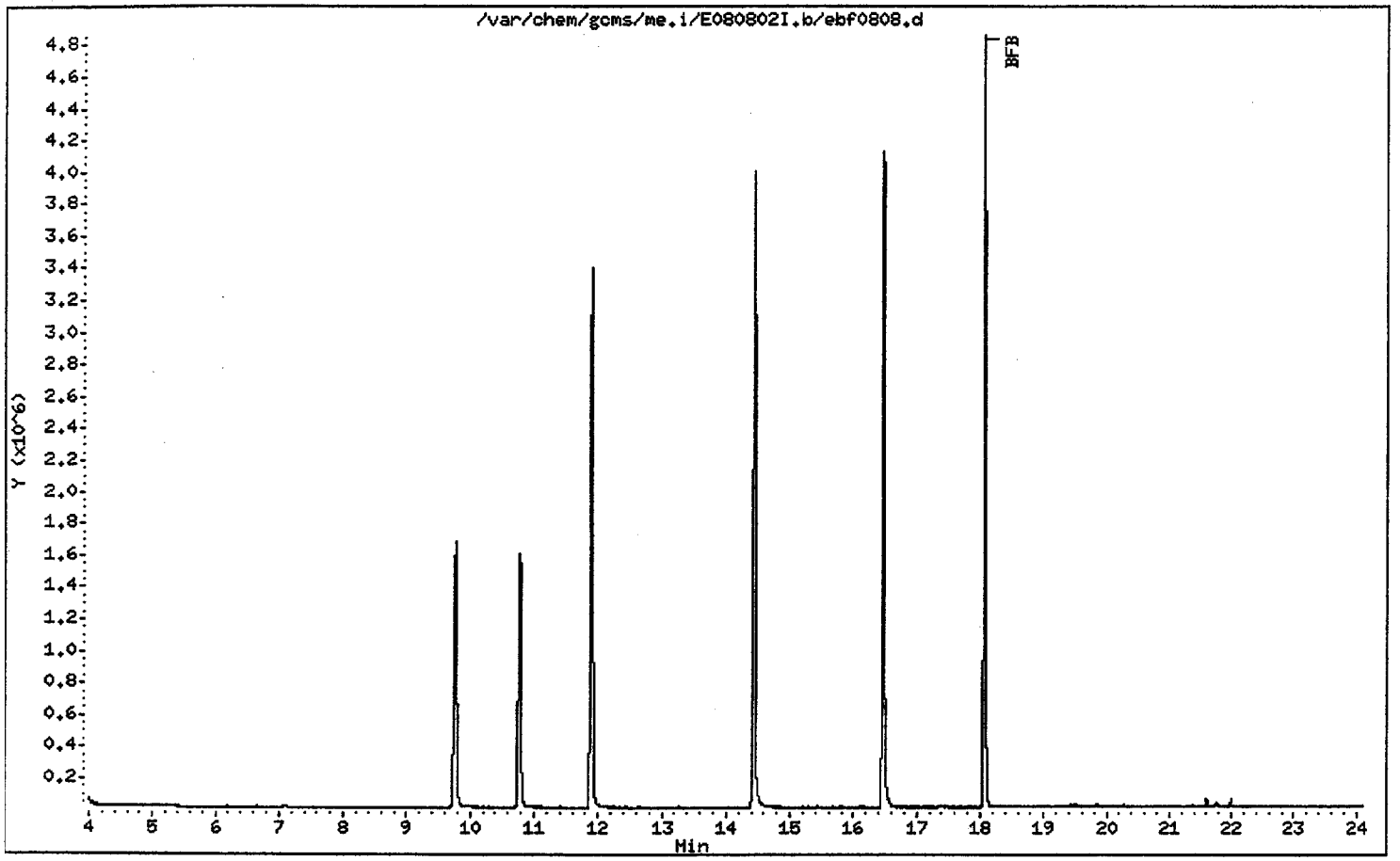
Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32



Report Date : 09-Aug-2002 12:53

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 08-AUG-2002 18:16
End Cal Date : 08-AUG-2002 21:42
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E080802I.b/LA.m
Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Level 2: /var/chem/gcms/me.i/E080802I.b/iceh082.d
Level 3: /var/chem/gcms/me.i/E080802I.b/iceh083.d
Level 4: /var/chem/gcms/me.i/E080802I.b/iceh084.d
Level 5: /var/chem/gcms/me.i/E080802I.b/iceh085.d
Level 6: /var/chem/gcms/me.i/E080802I.b/iceh086.d
Level 7: /var/chem/gcms/me.i/E080802I.b/iceh087.d

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
7 Chlorodifluoromethane	1.83563	2.14152	2.01264	1.94286	1.85440	1.98465		
	1.91968						1.95591	5.311
8 Dichlorodifluoromethane	3.05464	3.53295	3.30297	3.18906	3.01020	3.33521		
	3.15099						3.22514	5.590
9 Chloromethane	0.28860	0.32796	0.29782	0.27368	0.23843	+++++		
	0.31025						0.28946	10.746
10 1,2-Dichlorotetrafluoroethane	2.06566	2.33309	2.10795	2.02953	1.86096	2.29154		
	2.19893						2.12681	7.657
11 Vinyl Chloride	1.03331	1.21130	1.10750	1.05613	0.95047	1.10481		
	1.07479						1.07690	7.400
12 Methanol	0.22555	0.27689	0.26304	0.25251	0.23316	+++++		
	+++++						0.25023	8.430

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Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
13 1,3-Butadiene	0.85033	0.94491	0.83077	0.79049	0.71864	0.88474		
	0.88882						0.84410	8.739
14 n-Butane	1.93828	1.94994	1.75277	1.63446	1.46264	2.91160		
	2.74480						2.05635	27.027
15 Bromomethane	1.06019	1.23170	1.13656	1.10934	1.06719	1.09711		
	1.11330						1.11649	5.134
16 Chloroethane	0.51734	0.59894	0.56194	0.53662	0.52113	0.55679		
	0.54301						0.54797	5.099
17 Trichlorofluoromethane	3.30064	3.78027	3.47555	3.35142	3.13012	3.49699		
	3.38899						3.41771	5.885
18 Acrolein	0.24306	0.36943	0.33268	0.32813	0.29961	+++++		
	0.24797						0.30348	16.513
19 Acetonitrile	0.35817	0.36146	0.35704	0.34909	0.34309	+++++		
	0.37674						0.35760	3.225
20 Acetone	0.66488	0.52465	0.46256	0.43644	0.41854	+++++		
	+++++						0.50141	19.908
21 Pentane	0.37105	0.36410	0.30954	0.29969	0.28142	+++++		
	0.40786						0.33894	14.530

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
22 Ethyl Ether	0.97408	1.14718	1.02030	0.96513	0.84281	+++++		
	1.02819						0.99628	9.975
23 1,1-Dichloroethene	1.19162	1.36463	1.25929	1.20937	1.14906	1.27929		
	1.23640						1.24138	5.600
24 Acrylonitrile	0.70307	0.87405	0.81559	0.80051	0.75108	+++++		
	0.67227						0.76943	9.764
25 1,1,2-Trichlorotrifluoroethan	2.60228	2.93609	2.65816	2.56034	2.35358	2.77676		
	2.64841						2.64795	6.828
26 Methylene Chloride	1.29084	1.24932	1.13421	1.08171	1.00750	+++++		
	1.47842						1.20700	14.025
27 3-Chloropropene	1.03609	1.14828	1.06988	1.02630	0.95405	1.12822		
	1.02988						1.05610	6.266
28 Carbon Disulfide	3.76345	4.29807	3.94200	3.81465	3.63805	4.13698		
	3.88691						3.92573	5.757
29 trans-1,2-Dichloroethene	1.18283	1.34968	1.25054	1.20438	1.14387	1.30103		
	1.20820						1.23436	5.770
30 Methyl-t-Butyl Ether	2.90126	3.65920	3.42138	3.31214	3.13010	+++++		
	2.55024						3.16239	12.492

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
31 1,1-Dichloroethane	2.34446	2.66059	2.45694	2.36910	2.24402	2.47432		
	2.40508						2.42207	5.374
32 Vinyl Acetate	1.82868	3.10954	2.87585	2.75680	2.55728	+++++		
	2.44057						2.59479	17.082
33 2-Butanone	0.53969	0.64558	0.59819	0.58928	0.55152	+++++		
	0.56510						0.58156	6.598
34 Hexane	1.03782	1.16892	1.10392	1.04137	0.92757	1.07824		
	1.04952						1.05819	6.964
35 cis 1,2-Dichloroethene	1.33079	1.54523	1.43077	1.38685	1.32988	1.45444		
	1.39234						1.41004	5.357
36 Chloroform	2.65090	3.03002	2.82638	2.72619	2.61416	2.90820		
	2.73698						2.78469	5.283
37 1,1,1-Trichloroethane	2.91811	3.27978	3.10193	2.99598	2.86187	3.07474		
	3.00862						3.03443	4.499
38 1,2-Dichloroethane	0.36783	0.39649	0.36145	0.34168	0.31093	0.38427		
	0.37219						0.36212	7.847
39 Benzene	0.76120	0.77112	0.65804	0.60314	0.48844	0.80560		
	0.79099						0.69693	16.985

Report Date : 09-Aug-2002 12:53

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
40 1-Butanol	0.08928	0.14170	0.12837	0.12412	0.11721	+++++		
	0.08460						0.11421	19.818
41 Cyclohexane	0.11748	0.11635	0.10085	0.09186	0.07513	0.12492		
	0.11996						0.10665	16.984
42 Carbon Tetrachloride	2.27072	3.39396	3.10068	2.95193	2.64239	2.41664		
	2.30291						2.72560	15.898
43 Heptane	0.47055	0.49217	0.42882	0.38982	0.32552	0.53543		
	0.48685						0.44702	15.913
44 1,2-Dichloropropane	0.25884	0.26755	0.23087	0.21159	0.17521	0.28873		
	0.28144						0.24489	16.776
45 Trichloroethene	0.33529	0.33558	0.29556	0.27246	0.23561	0.37092		
	0.33566						0.31158	14.822
46 Dibromomethane	0.31146	0.32155	0.28375	0.26594	0.22861	0.35822		
	0.32301						0.29893	14.342
47 Bromodichloromethane	0.58657	0.65696	0.58870	0.55579	0.48840	0.60389		
	0.59453						0.58212	8.807
48 4-Methyl-2-pentanone	0.44675	0.54397	0.47346	0.42447	0.30758	+++++		
	0.49965						0.44931	18.023

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
49 cis-1,3-Dichloropropene	0.55436	0.59884	0.53030	0.47359	0.36610	0.58546		
	0.55982						0.52407	15.403
50 trans-1,3-Dichloropropene	0.43483	0.47434	0.43050	0.41314	0.37487	0.45971		
	0.44525						0.43324	7.513
51 Toluene	1.28450	1.12239	1.01485	0.96247	0.84760	1.36027		
	1.31493						1.12957	17.417
52 1,1,2-Trichloroethane	0.38513	0.40662	0.36136	0.34271	0.30288	0.42790		
	0.37805						0.37209	11.125
53 2-Hexanone	0.29116	0.31935	0.30966	0.30034	0.26990	+++++		
	0.29577						0.29770	5.697
54 Octane	0.34241	0.36930	0.32471	0.30023	0.26286	0.36912		
	0.36017						0.33269	11.968
55 Dibromochloromethane	0.68399	0.74483	0.66687	0.62927	0.55759	0.71443		
	0.69730						0.67061	9.196
56 1,2-Dibromoethane	0.65716	0.61733	0.54375	0.50813	0.44710	0.68311		
	0.66525						0.58883	15.323
57 Tetrachloroethene	0.40381	0.38146	0.33094	0.30861	0.26948	0.42948		
	0.41983						0.36337	16.810

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Method file : /var/chem/gcms/me.i/E080802I.b/LA.m
Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	0.50000 Level 7	RRF	% RSD
58 Chlorobenzene	0.94317	0.86752	0.77739	0.73526	0.65214	1.00507	0.96337	0.84913	15.465
59 Ethylbenzene	1.62900	1.51825	1.35419	1.28103	1.12140	1.74624	1.67665	1.47525	15.582
60 m-Xylene (For p-)	1.33041	1.21233	1.08677	1.02788	0.90415	1.42679	1.37444	1.19468	16.345
61 Bromoform	0.78654	0.75424	0.66169	0.62266	0.53433	0.79023	0.79419	0.70627	14.400
62 Nonane	0.73068	0.64156	0.55587	0.50977	0.40793	0.78159	0.74050	0.62399	22.136
63 Styrene	0.80617	0.84682	0.73291	0.67966	0.57199	0.83871	0.82115	0.75677	13.440
64 o-Xylene	1.37237	1.22885	1.10524	1.04311	0.90383	1.48393	1.39048	1.21826	17.297
65 1,1,2,2-Tetrachloroethane	0.91089	0.83844	0.73246	0.68447	0.58407	0.94975	0.92755	0.80395	17.362
66 1,2,3-Trichloropropane	0.20838	0.23365	0.20861	0.19786	0.17581	+++++	0.21776	0.20701	9.383

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
67 Cumene	1.65183	1.62942	1.45779	1.36556	1.17544	1.74100		
	1.68204						1.52901	13.359
68 n-Propylbenzene	2.46883	2.18501	1.92453	1.78867	1.48760	2.64377		
	2.53729						2.14796	20.086
69 4-Ethyltoluene	2.06667	1.81487	1.60469	1.49808	1.27245	2.17101		
	2.09638						1.78916	19.140
70 1,3,5-Trimethylbenzene	0.72370	0.63486	0.55500	0.52268	0.44288	0.77392		
	0.73181						0.62641	19.762
71 Alpha-Methylstyrene	0.51649	0.63617	0.56254	0.52607	0.45876	0.53578		
	0.53222						0.53829	9.935
72 Decane	0.95962	0.86752	0.73641	0.66059	0.50831	1.04577		
	0.99897						0.82531	23.934
73 1,2,4-Trimethylbenzene	1.55261	1.38988	1.22984	1.15258	0.98609	1.62648		
	1.54611						1.35480	17.654
74 1,3-Dichlorobenzene	1.11298	1.01376	0.87744	0.82379	0.71510	1.19799		
	1.14956						0.98437	18.550
75 Benzyl Chloride	1.32646	1.21125	1.04011	0.96862	0.75873	1.39990		
	1.33896						1.14915	20.442

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1 / 0.50000 Level 7	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	___ RRF	% RSD
76 1,4-Dichlorobenzene	1.10147	0.95912	0.82173	0.76030	0.65108	1.22454		
	1.14005						0.95119	22.561
77 1,2-Dichlorobenzene	1.04234	0.94941	0.81964	0.76688	0.66548	1.18465		
	1.10056						0.93271	20.325
78 Undecane	0.96716	0.86393	0.71896	0.67809	0.49122	1.10669		
	1.02021						0.83518	25.990
79 Dodecane	0.79930	0.62529	0.63547	0.58573	0.38332	0.89634		
	0.86964						0.68501	26.566
80 1,2,4-Trichlorobenzene	1.37644	0.87374	0.75297	0.73143	0.63428	1.63870		
	1.47373						1.06876	38.651 <-
81 Napthalene	1.86002	2.25262	1.92283	1.90901	1.58949	2.12627		
	1.95690						1.94531	10.763
82 Hexachlorobutadiene	1.04989	1.06519	0.87238	0.81991	0.66973	1.23866		
	1.11966						0.97649	20.135
5 4 1,2-Dichloroethane-d4	0.20441	0.20225	0.20139	0.19879	0.19114	0.19888		
	0.20343						0.20004	2.231
5 5 Toluene-d8	1.15314	1.13510	1.12784	1.11295	1.08079	1.14042		
	1.14653						1.12811	2.182

Report Date : 09-Aug-2002 12:53

STL Knoxville

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E080802I.b/LA.m
Cal Date : 09-Aug-2002 12:40 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
$ 6 4-Bromofluorobenzene	0.67266	0.66314	0.65408	0.64635	0.61690	0.66388		
	0.67148						0.65550	2.957

Data File: /var/chem/gcms/me.i/E080802I.b/iceh086.d
Report Date: 09-Aug-2002 11:38

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh086.d
Lab Smp Id: ICEH086 Client Smp ID: 0.2ppb
Inj Date : 08-AUG-2002 18:16
Operator : 60487 Inst ID: me.i
Smp Info : ICEH086,,1,6,,0.2ppb
Misc Info : E080802I,LA,ICRL.sub,,,100 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 13 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICRL.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.756	9.761	(1.000)	662283	10.0000	
2 1,4-Difluorobenzene	114	11.886	11.892	(1.000)	3545817	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2986421	10.0000	
4 1,2-Dichloroethane-d4	67	10.767	10.773	(0.906)	705182	10.0000	9.970
5 Toluene-d8	98	14.436	14.442	(0.877)	3405760	10.0000	10.14
6 4-Bromofluorobenzene	95	18.062	18.067	(1.097)	1982631	10.0000	10.17
7 Chlorodifluoromethane	51	4.124	4.118	(0.423)	26288	0.20000	0.2023
8 Dichlorodifluoromethane	85	4.194	4.194	(0.430)	44177	0.20000	0.2060
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.419	(0.454)	30353	0.20000	0.2167
11 Vinyl Chloride	62	4.619	4.613	(0.473)	14634	0.20000	0.2051
13 1,3-Butadiene	54	4.726	4.721	(0.484)	11719	0.20000	0.2115
14 n-Butane	43	4.721	4.721	(0.484)	38566	0.20000	0.2999
15 Bromomethane	94	5.097	5.097	(0.522)	14532	0.20000	0.1964
16 Chloroethane	64	5.280	5.269	(0.541)	7375	0.20000	0.2029
17 Trichlorofluoromethane	101	5.920	5.920	(0.607)	46320	0.20000	0.2044
23 1,1-Dichloroethene	96	6.700	6.700	(0.687)	16945	0.20000	0.2060
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	36780	0.20000	0.2097
26 Methylene Chloride	84	7.082	7.077	(0.726)	24894	0.20000	0.3261
27 3-Chloropropene	39	7.104	7.104	(0.728)	14944	0.20000	0.2128
28 Carbon Disulfide	76	7.255	7.254	(0.744)	54797	0.20000	0.2104
29 trans-1,2-Dichloroethene	96	7.949	7.948	(0.815)	17233	0.20000	0.2101
31 1,1-Dichloroethane	63	8.400	8.400	(0.861)	32774	0.20000	0.2041

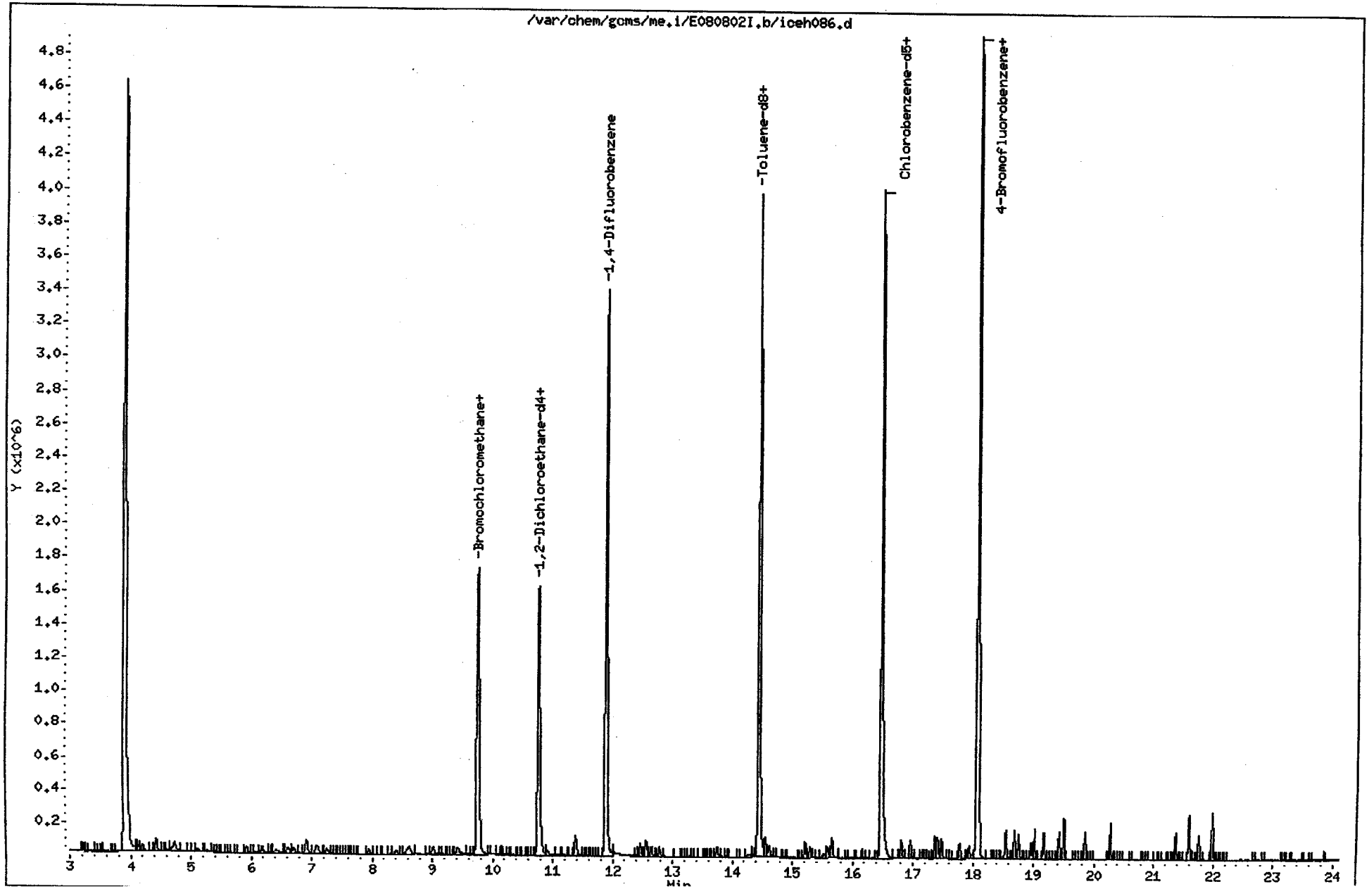
Data File: /var/chem/gcms/me.i/E080802I.b/iceh086.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
34 Hexane	56	9.014	9.019	(0.924)	14282	0.20000	0.2035
35 cis 1,2-Dichloroethene	96	9.417	9.422	(0.965)	19265	0.20000	0.2059
36 Chloroform	83	9.767	9.778	(1.001)	38521	0.20000	0.2083
37 1,1,1-Trichloroethane	97	10.810	10.816	(1.108)	40727	0.20000	0.2024
38 1,2-Dichloroethane	62	10.913	10.918	(0.918)	27251	0.20000	0.2132
39 Benzene	78	11.381	11.381	(0.957)	57130	0.20000	0.2365
41 Cyclohexane	69	11.375	11.386	(0.957)	8859	0.20000	0.2392
42 Carbon Tetrachloride	117	11.402	11.402	(1.169)	32010	0.20000	0.1729
43 Heptane	43	12.462	12.462	(1.048)	37971	0.20000	0.2432
44 1,2-Dichloropropane	63	12.548	12.548	(1.056)	20476	0.20000	0.2418
45 Trichloroethene	130	12.564	12.570	(1.057)	26304	0.20000	0.2412
46 Dibromomethane	93	12.645	12.650	(1.064)	25404	0.20000	0.2429
47 Bromodichloromethane	83	12.779	12.785	(1.075)	42826	0.20000	0.2082
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.157)	41519	0.20000	0.2260
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	27458	0.20000	0.2132
51 Toluene	91	14.549	14.555	(0.883)	81247	0.20000	0.2476
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	25558	0.20000	0.2306
54 Octane	85	15.206	15.211	(0.923)	22047	0.20000	0.2250
55 Dibromochloromethane	129	15.297	15.302	(0.929)	42672	0.20000	0.2145
56 1,2-Dibromoethane	107	15.588	15.593	(0.946)	40801	0.20000	0.2372
57 Tetrachloroethene	129	15.652	15.657	(0.950)	25652	0.20000	0.2427
58 Chlorobenzene	112	16.518	16.518	(1.003)	60031	0.20000	0.2422
59 Ethylbenzene	91	16.798	16.803	(1.020)	104300	0.20000	0.2422
60 m-Xylene (For p-)	91	16.949	16.954	(1.029)	85220	0.20000	0.2450
62 Nonane	57	17.363	17.363	(1.054)	46683	0.20000	0.2586
63 Styrene	104	17.411	17.417	(1.057)	50095	0.20000	0.2248
61 Bromoform	173	17.395	17.400	(1.056)	47199	0.20000	0.2285
64 o-Xylene	91	17.476	17.481	(1.061)	88633	0.20000	0.2495
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	56727	0.20000	0.2425
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	12935	0.20000	0.2114
67 Cumene	105	18.041	18.046	(1.095)	103987	0.20000	0.2316
68 n-Propylbenzene	91	18.541	18.546	(1.126)	157908	0.20000	0.2538
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	129671	0.20000	0.2498
70 1,3,5-Trimethylbenzene	120	18.751	18.756	(1.138)	46225	0.20000	0.2542
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	32001	0.20000	0.1987
72 Decane	57	19.014	19.020	(1.154)	62462	0.20000	0.2626
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	97147	0.20000	0.2459
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	71554	0.20000	0.2504
75 Benzyl Chloride	91	19.493	19.493	(1.184)	83614	0.20000	0.2505
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	73140	0.20000	0.2663
77 1,2-Dichlorobenzene	146	19.854	19.853	(1.205)	70757	0.20000	0.2619
78 Undecane	57	20.273	20.273	(1.231)	66101	0.20000	0.2752
79 Dodecane	57	21.371	21.370	(1.298)	53537	0.20000	0.2740
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	97877	0.20000	0.3273
81 Napthalene	128	21.758	21.763	(1.321)	126999	0.20000	0.2188
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	73983	0.20000	0.2600

Data File: /var/chem/gcms/me.i/E080802I.b/iceh086.d
Date : 08-AUG-2002 18:16
Client ID: 0.2ppb
Sample Info: ICEH086,,1,6,,0.2ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Report Date: 09-Aug-2002 11:38

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh087.d
Lab Smp Id: ICEH087 Client Smp ID: 0.5ppb
Inj Date : 08-AUG-2002 18:50
Operator : 60487 Inst ID: me.i
Smp Info : ICEH087,,1,7,,0.5ppb
Misc Info : E080802I,LA,,,,250 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 13 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.767	9.761	(1.000)	656892	10.0000	
2 1,4-Difluorobenzene	114	11.897	11.892	(1.000)	3491322	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2947970	10.0000	
4 1,2-Dichloroethane-d4	67	10.778	10.773	(0.906)	710237	10.0000	10.17
5 Toluene-d8	98	14.442	14.442	(0.877)	3379949	10.0000	10.16
6 4-Bromofluorobenzene	95	18.067	18.067	(1.097)	1979509	10.0000	10.24
7 Chlorodifluoromethane	51	4.123	4.118	(0.422)	63051	0.50000	0.4907
8 Dichlorodifluoromethane	85	4.193	4.194	(0.429)	103493	0.50000	0.4885
9 Chloromethane	52	4.414	4.409	(0.452)	10190	0.50000	0.5359
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.419	(0.453)	72223	0.50000	0.5170
11 Vinyl Chloride	62	4.618	4.613	(0.473)	35301	0.50000	0.4990
12 Methanol	31	4.812	4.635	(0.493)	30648	2.00000	1.864
13 1,3-Butadiene	54	4.726	4.721	(0.484)	29193	0.50000	0.5265
14 n-Butane	43	4.726	4.721	(0.484)	90152	0.50000	0.6674
15 Bromomethane	94	5.108	5.097	(0.523)	36566	0.50000	0.4986
16 Chloroethane	64	5.280	5.269	(0.541)	17835	0.50000	0.4955
17 Trichlorofluoromethane	101	5.926	5.920	(0.607)	111310	0.50000	0.4958
18 Acrolein	56	6.066	5.953	(0.621)	16289	1.00000	0.8171
19 Acetonitrile	40	6.200	6.033	(0.635)	24748	1.00000	1.054(H)
20 Acetone	58	6.421	6.109	(0.657)	47091	1.00000	1.430(M)
21 Pentane	57	6.178	6.179	(0.633)	13396	0.50000	0.6017
22 Ethyl Ether	31	6.603	6.388	(0.676)	67541	1.00000	1.032

Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.711	6.700	(0.687)	40609	0.50000	0.4980
24 Acrylonitrile	53	6.921	6.840	(0.709)	44161	1.00000	0.8737
25 1,1,2-Trichlorotrifluoroethane	101	6.915	6.910	(0.708)	86986	0.50000	0.5001
26 Methylene Chloride	84	7.093	7.077	(0.726)	48558	0.50000	0.6124
27 3-Chloropropene	39	7.115	7.104	(0.728)	33826	0.50000	0.4876
28 Carbon Disulfide	76	7.260	7.254	(0.743)	127664	0.50000	0.4950
29 trans-1,2-Dichloroethene	96	7.954	7.948	(0.814)	39683	0.50000	0.4894
30 Methyl-t-Butyl Ether	73	8.567	8.185	(0.877)	167523	1.00000	0.8064
31 1,1-Dichloroethane	63	8.406	8.400	(0.861)	78994	0.50000	0.4965
32 Vinyl Acetate	43	8.626	8.529	(0.883)	160319	1.00000	0.9406
33 2-Butanone	72	9.439	9.094	(0.966)	37121	1.00000	0.9717(MH) ✓
34 Hexane	56	9.024	9.019	(0.924)	34471	0.50000	0.4959
35 cis 1,2-Dichloroethene	96	9.428	9.422	(0.965)	45731	0.50000	0.4937
36 Chloroform	83	9.777	9.778	(1.001)	89895	0.50000	0.4914
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.107)	98817	0.50000	0.4957
38 1,2-Dichloroethane	62	10.923	10.918	(0.918)	64972	0.50000	0.5139
39 Benzene	78	11.386	11.381	(0.957)	138080	0.50000	0.5675
40 1-Butanol	41	12.150	11.596	(1.021)	29536	1.00000	0.7407(M) ✓
41 Cyclohexane	69	11.386	11.386	(0.957)	20941	0.50000	0.5624
42 Carbon Tetrachloride	117	11.402	11.402	(1.167)	75638	0.50000	0.4224
43 Heptane	43	12.467	12.462	(1.048)	84987	0.50000	0.5445
44 1,2-Dichloropropane	63	12.553	12.548	(1.055)	49130	0.50000	0.5746
45 Trichloroethene	130	12.575	12.570	(1.057)	58595	0.50000	0.5386
46 Dibromomethane	93	12.650	12.650	(1.063)	56387	0.50000	0.5403
47 Bromodichloromethane	83	12.785	12.785	(1.075)	103784	0.50000	0.5106
48 4-Methyl-2-pentanone	43	14.259	13.796	(1.198)	174443	1.00000	1.112(M) ✓
49 cis-1,3-Dichloropropene	75	13.753	13.748	(1.156)	97725	0.50000	0.5341
50 trans-1,3-Dichloropropene	75	14.420	14.415	(0.876)	65629	0.50000	0.5139
51 Toluene	91	14.554	14.555	(0.884)	193818	0.50000	0.5820
52 1,1,2-Trichloroethane	97	14.619	14.614	(0.888)	55724	0.50000	0.5080 ✓
53 2-Hexanone	58	15.469	15.071	(0.939)	87191	1.00000	0.9935(MH)
54 Octane	85	15.216	15.211	(0.924)	53089	0.50000	0.5413
55 Dibromochloromethane	129	15.297	15.302	(0.929)	102781	0.50000	0.5199
56 1,2-Dibromoethane	107	15.587	15.593	(0.946)	98057	0.50000	0.5649
57 Tetrachloroethene	129	15.657	15.657	(0.951)	61883	0.50000	0.5777
58 Chlorobenzene	112	16.518	16.518	(1.003)	142000	0.50000	0.5673
59 Ethylbenzene	91	16.803	16.803	(1.020)	247136	0.50000	0.5682
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	202590	0.50000	0.5752
61 Bromoform	173	17.400	17.400	(1.056)	117062	0.50000	0.5622
62 Nonane	57	17.363	17.363	(1.054)	109148	0.50000	0.5934
63 Styrene	104	17.416	17.417	(1.057)	121037	0.50000	0.5425
64 o-Xylene	91	17.481	17.481	(1.061)	204954	0.50000	0.5707
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	136719	0.50000	0.5769
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	32097	0.50000	0.5260
67 Cumene	105	18.046	18.046	(1.096)	247930	0.50000	0.5500
68 n-Propylbenzene	91	18.546	18.546	(1.126)	373993	0.50000	0.5906
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	309004	0.50000	0.5858

Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.139)	107867	0.50000	0.5841
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	78448	0.50000	0.4944
72 Decane	57	19.020	19.020	(1.155)	147247	0.50000	0.6052
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	227894	0.50000	0.5706
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	169443	0.50000	0.5839
75 Benzyl Chloride	91	19.493	19.493	(1.184)	197360	0.50000	0.5826
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	168042	0.50000	0.5993
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	162221	0.50000	0.5900
78 Undecane	57	20.273	20.273	(1.231)	150378	0.50000	0.6108
79 Dodecane	57	21.376	21.370	(1.298)	128183	0.50000	0.6348
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	217226	0.50000	0.6895
81 Napthalene	128	21.763	21.763	(1.321)	288444	0.50000	0.5030
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	165036	0.50000	0.5733

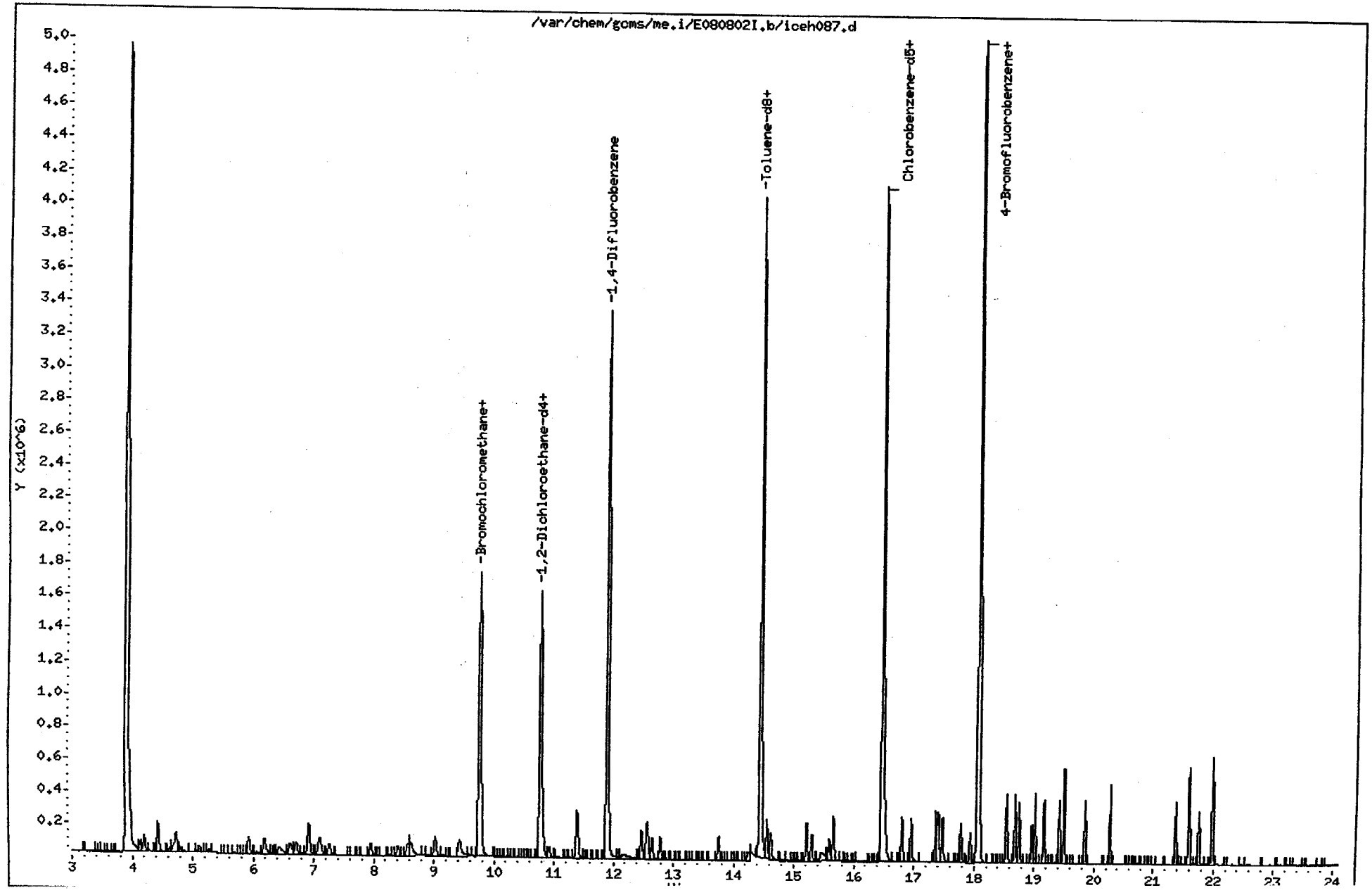
QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Date : 08-AUG-2002 18:50
Client ID: 0.5ppb
Sample Info: ICEH087,,1,7,,0.5ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



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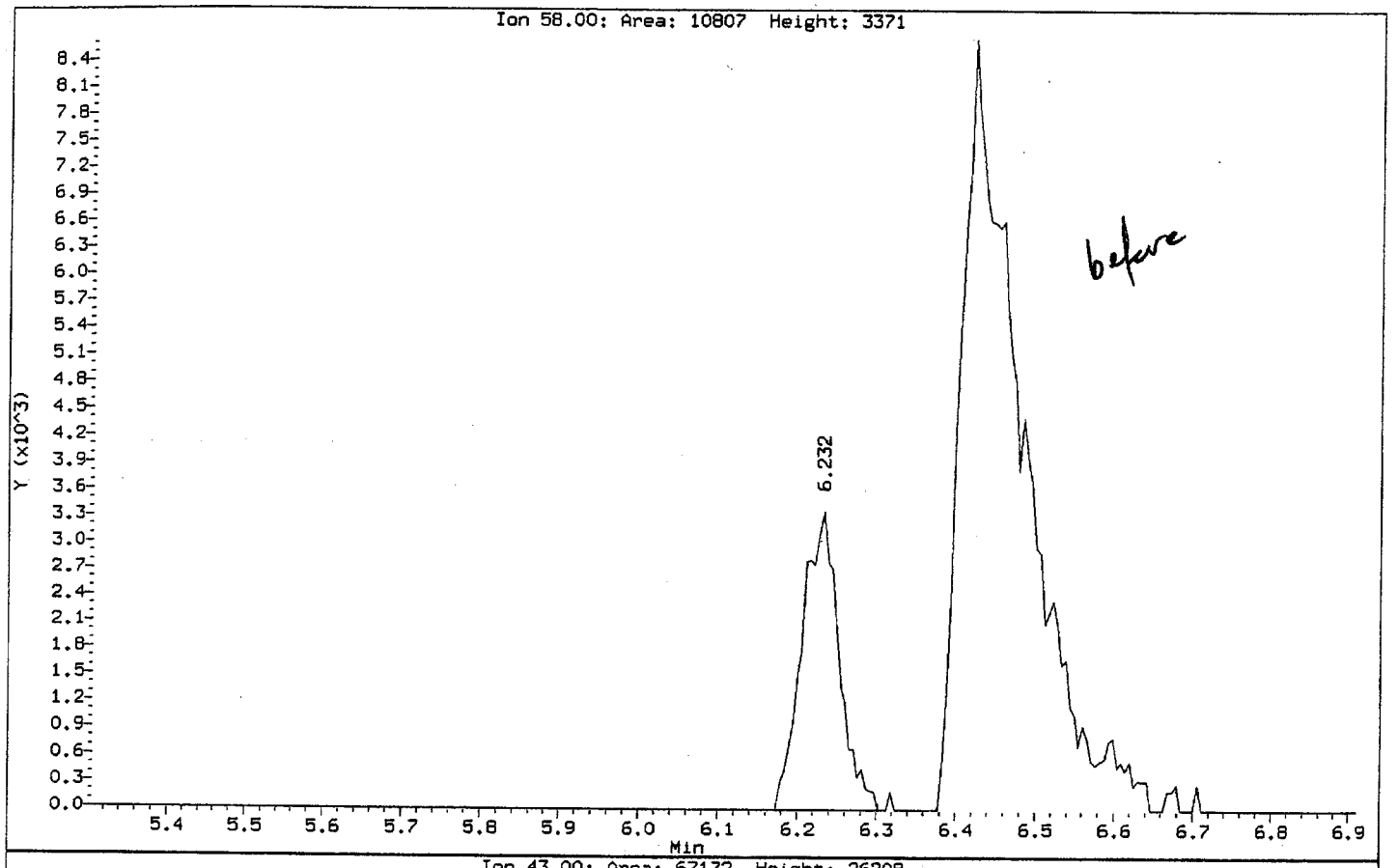
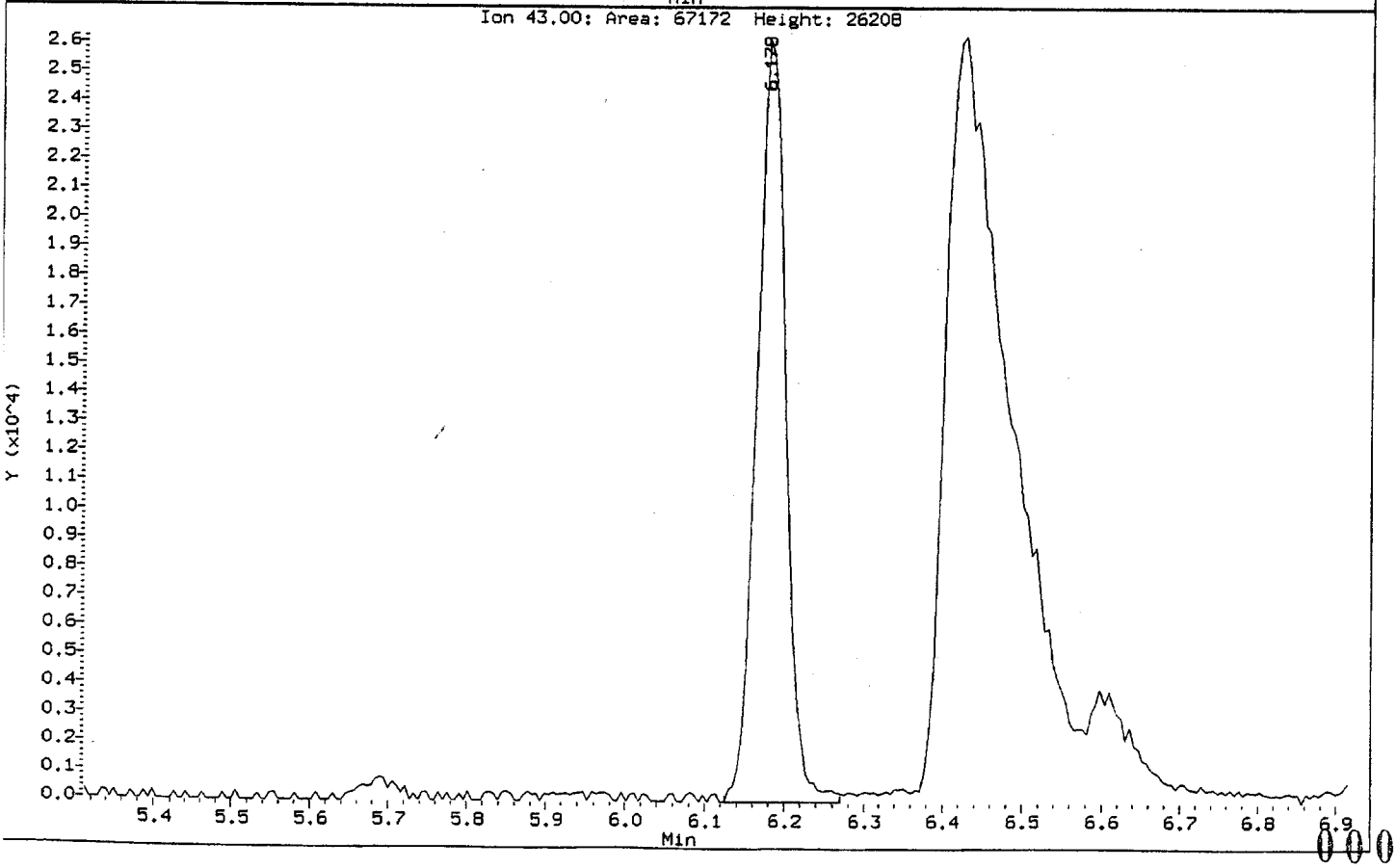
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: Acetone
CAS Number: 67-64-1





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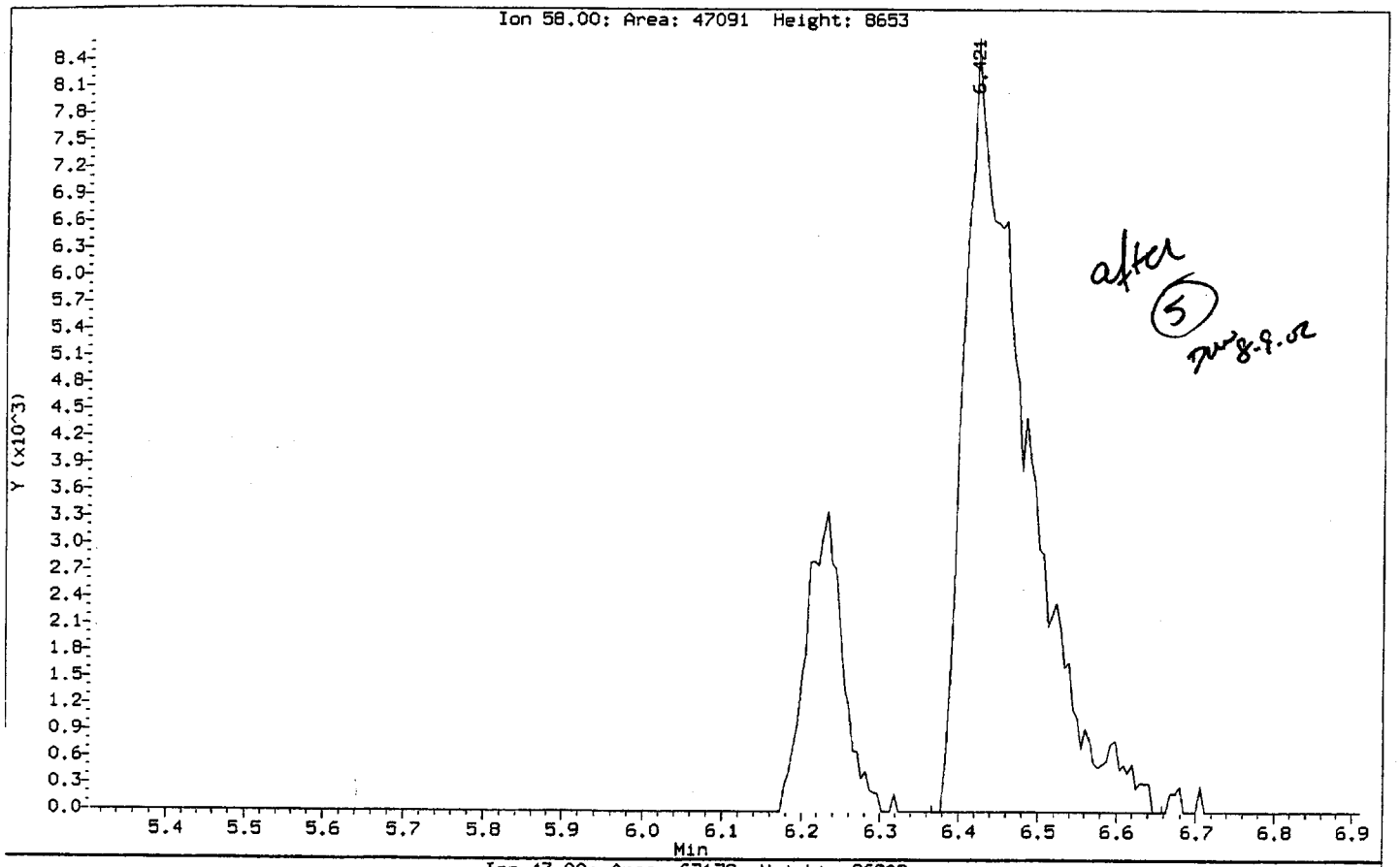
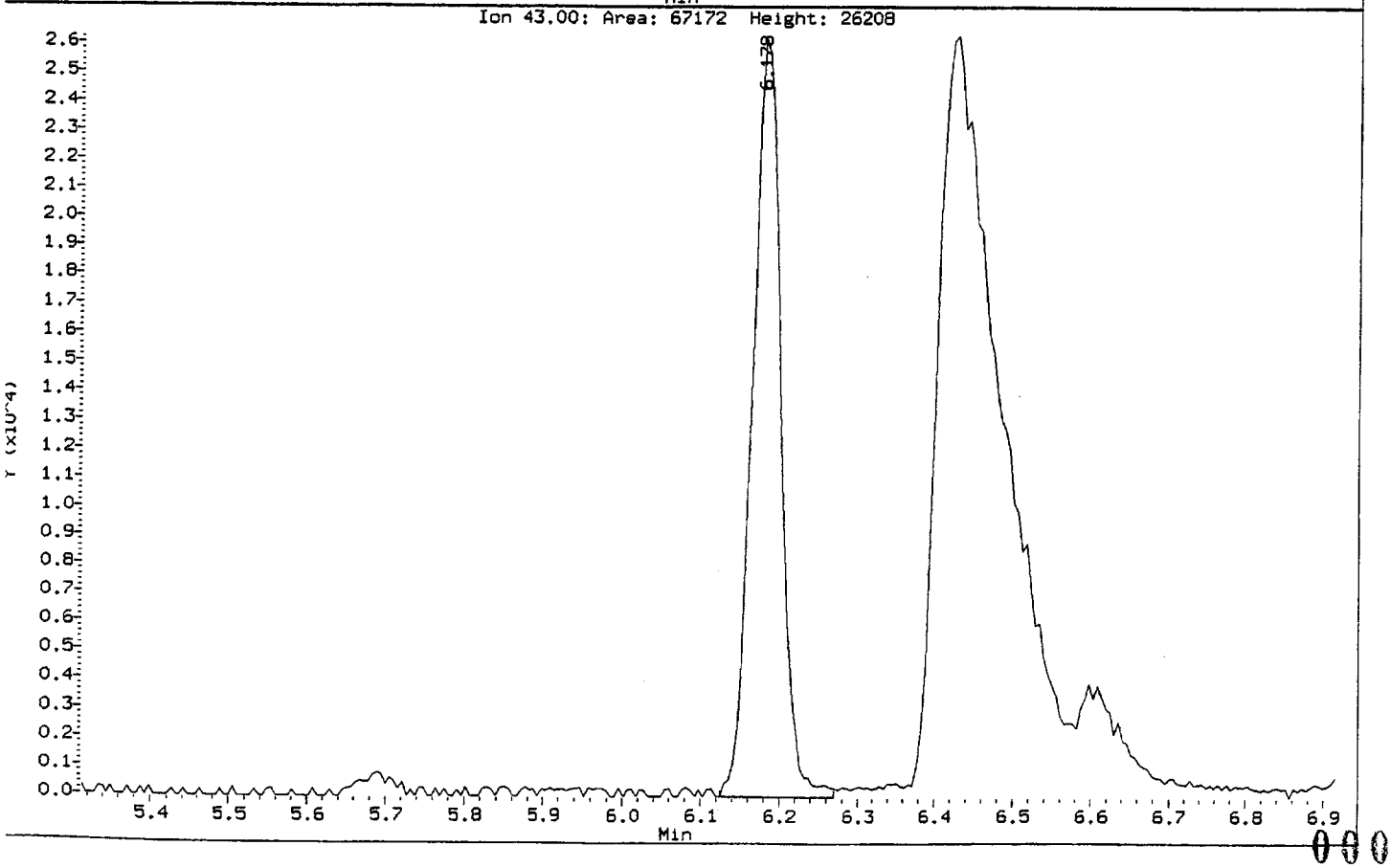
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: Acetone
CAS Number: 67-64-1





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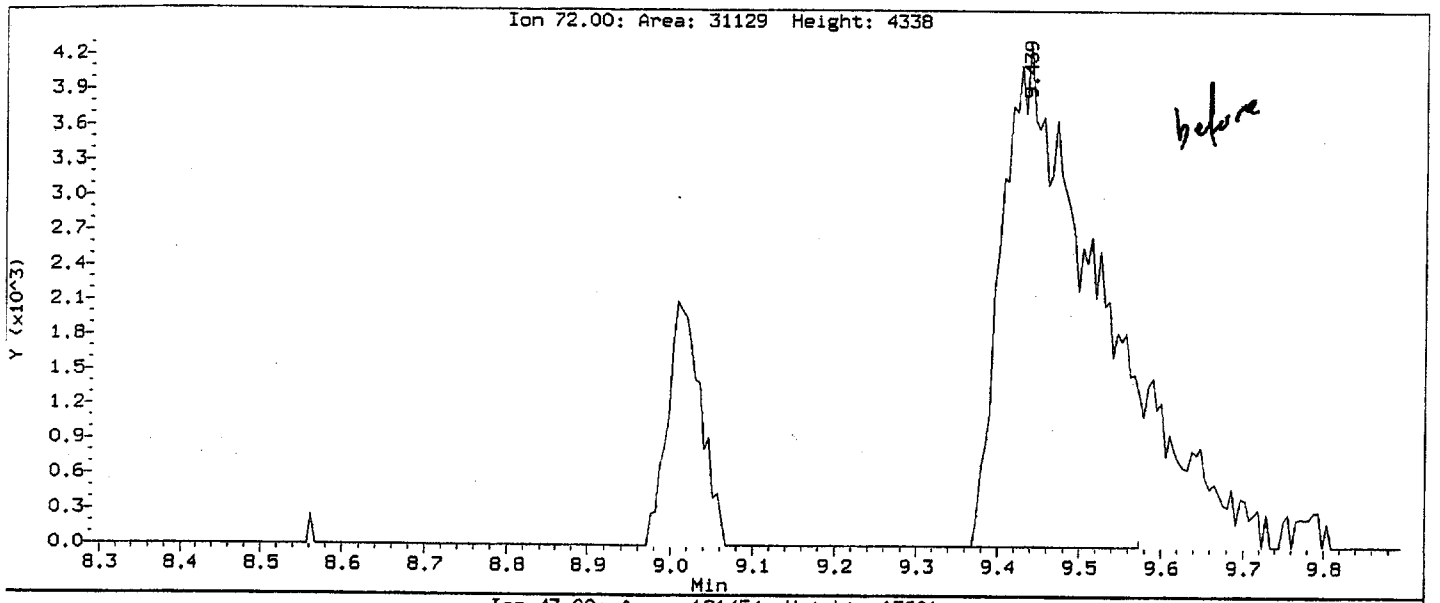
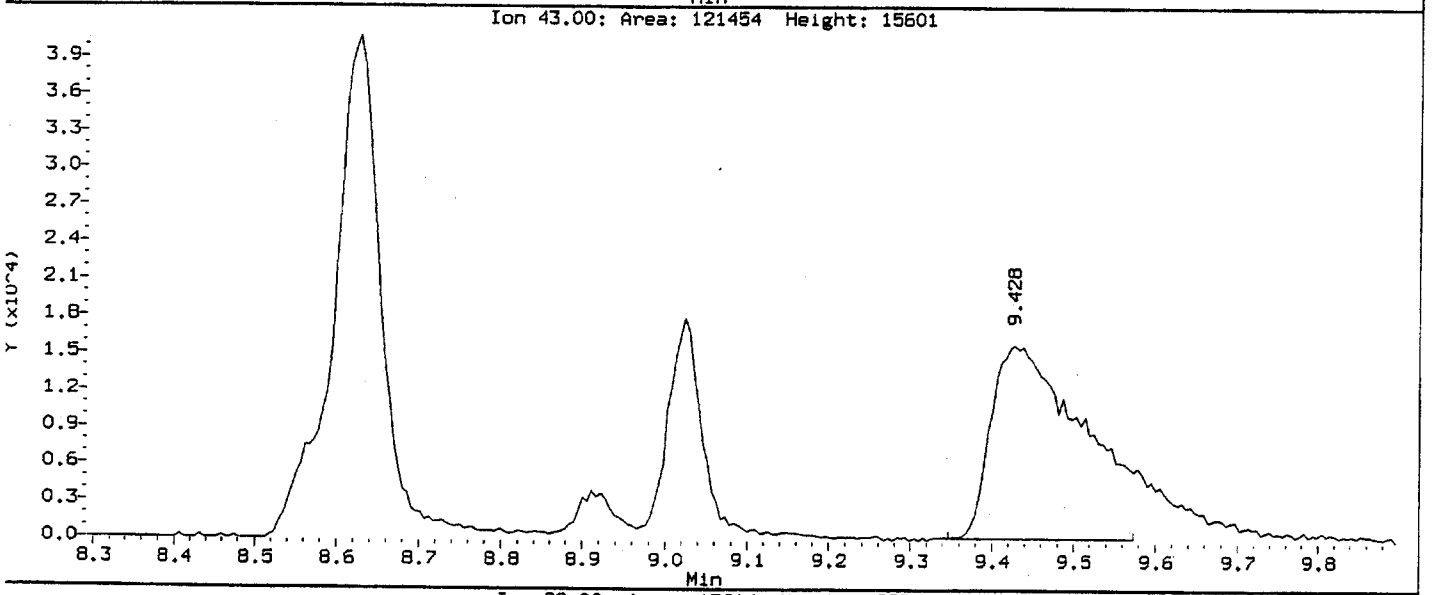
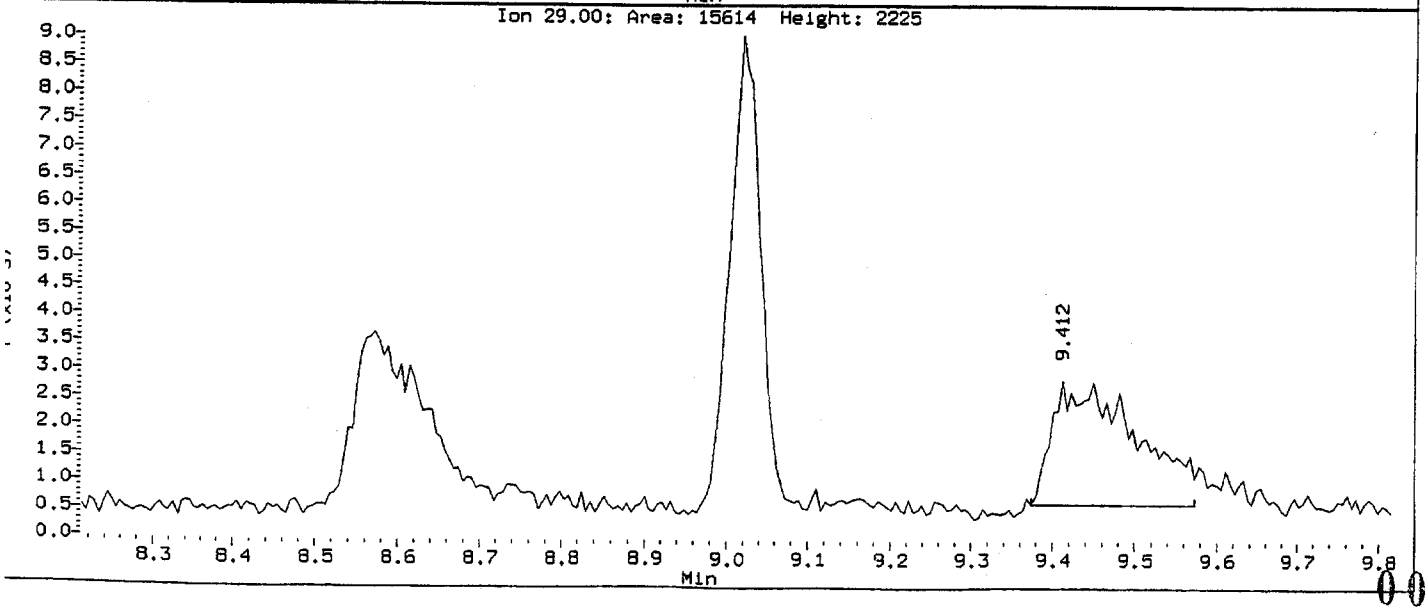
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Butanone
CAS Number: 78-93-3







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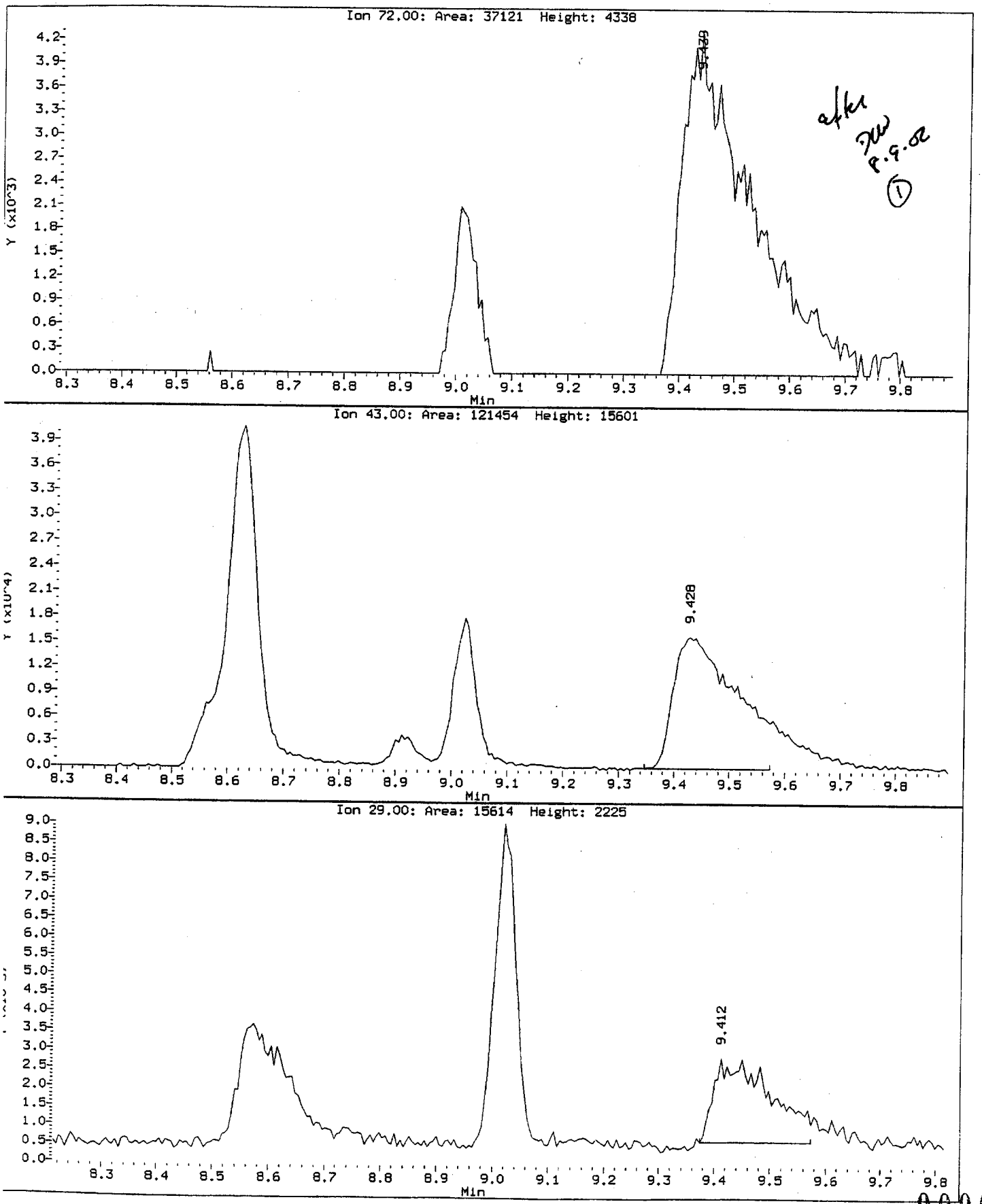
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Butanone
CAS Number: 78-93-3



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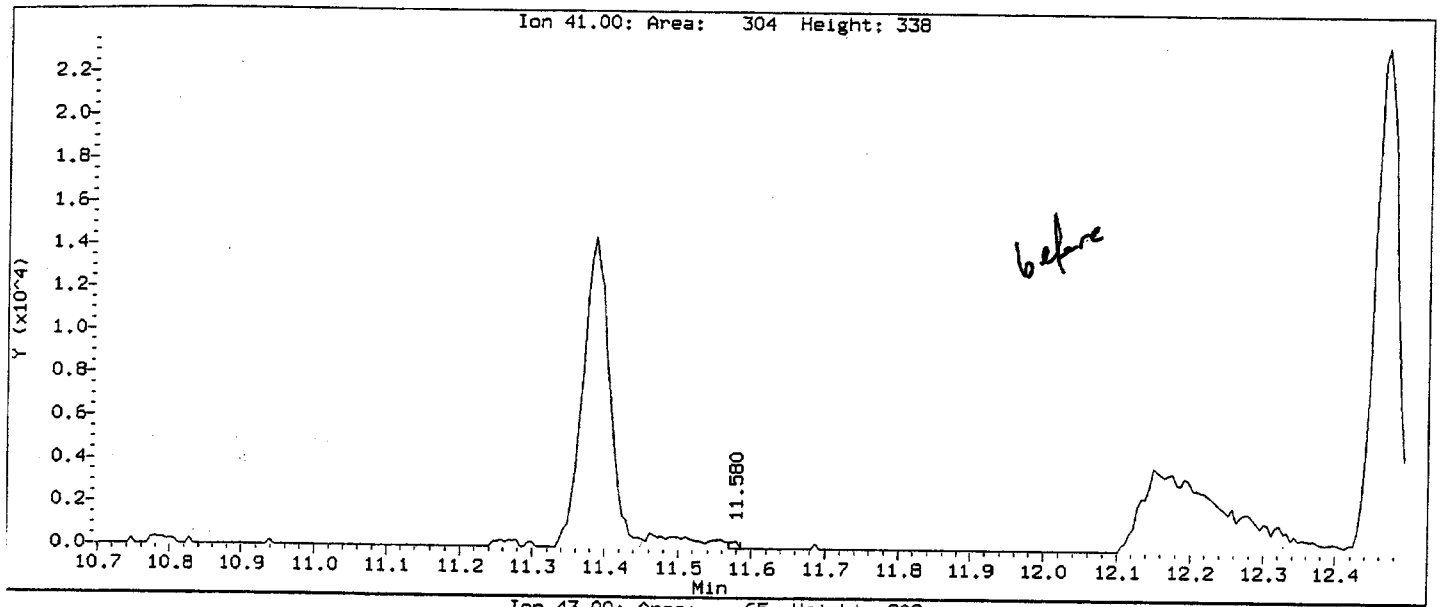
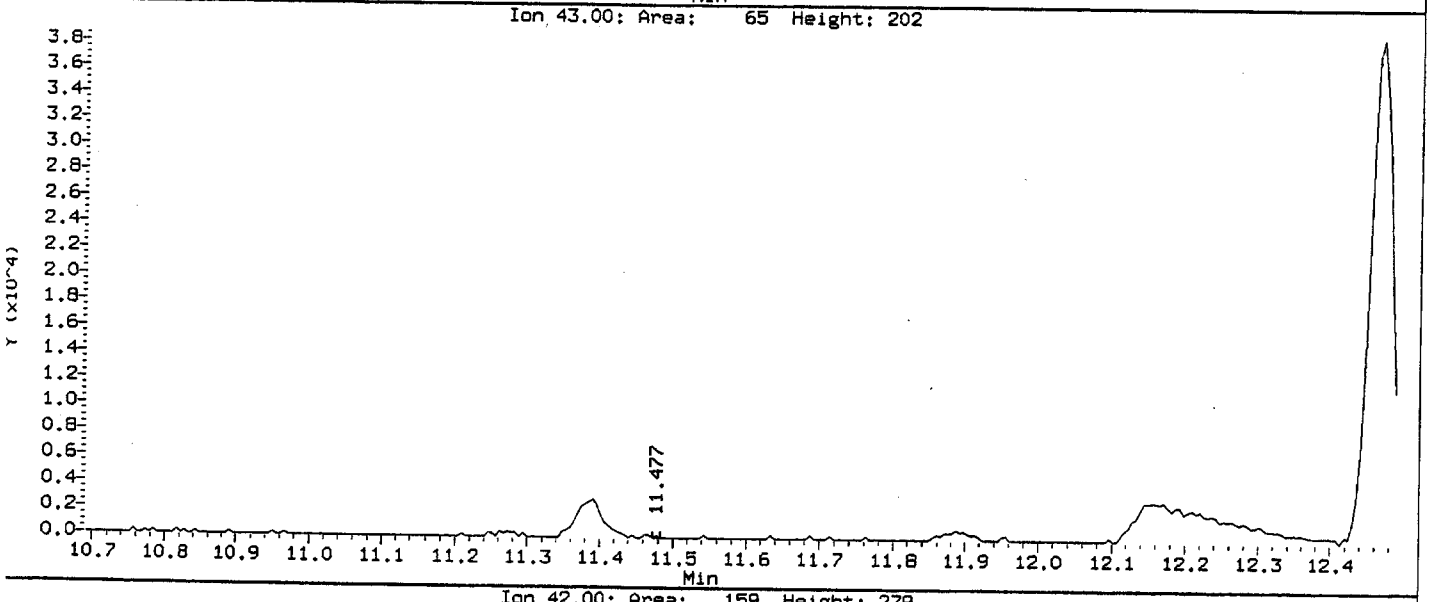
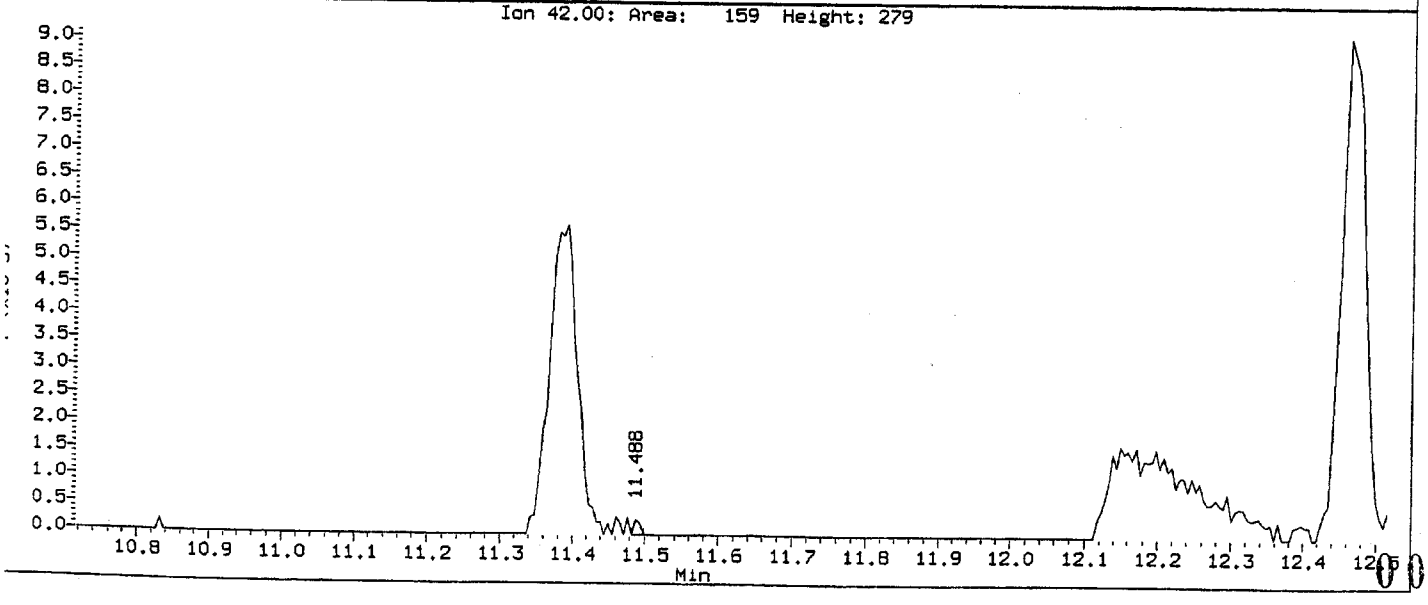
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 1-Butanol
CAS Number: 71-36-3







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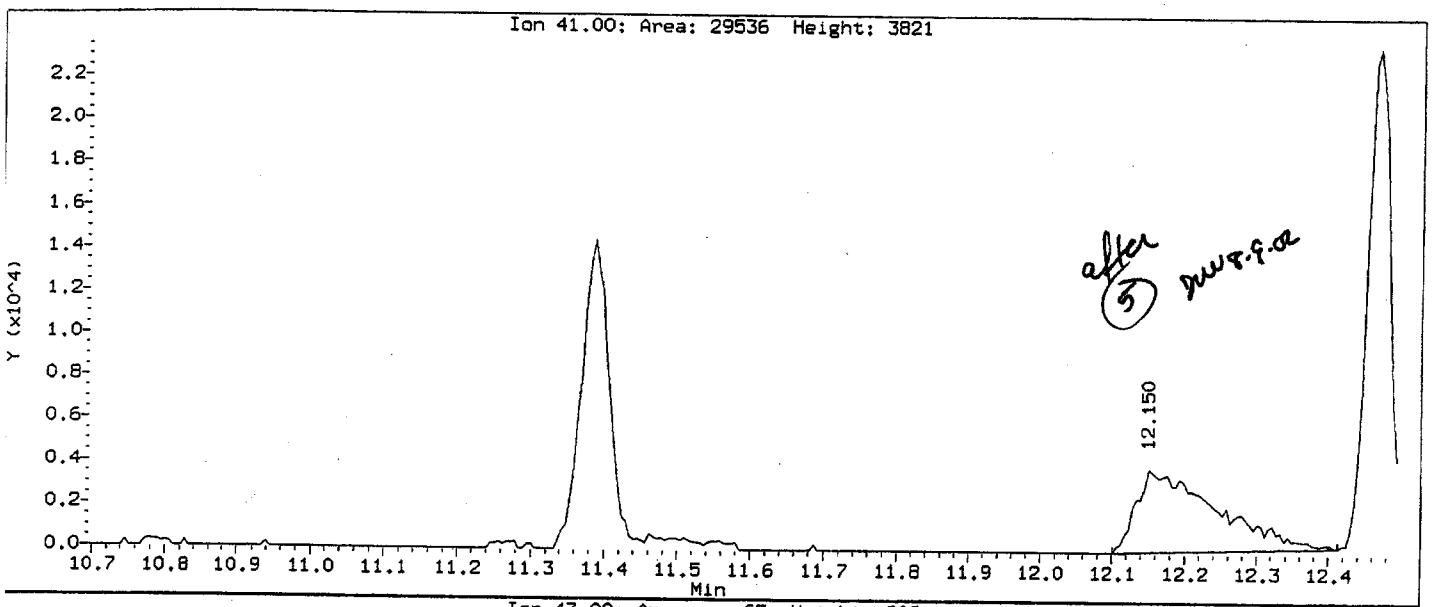
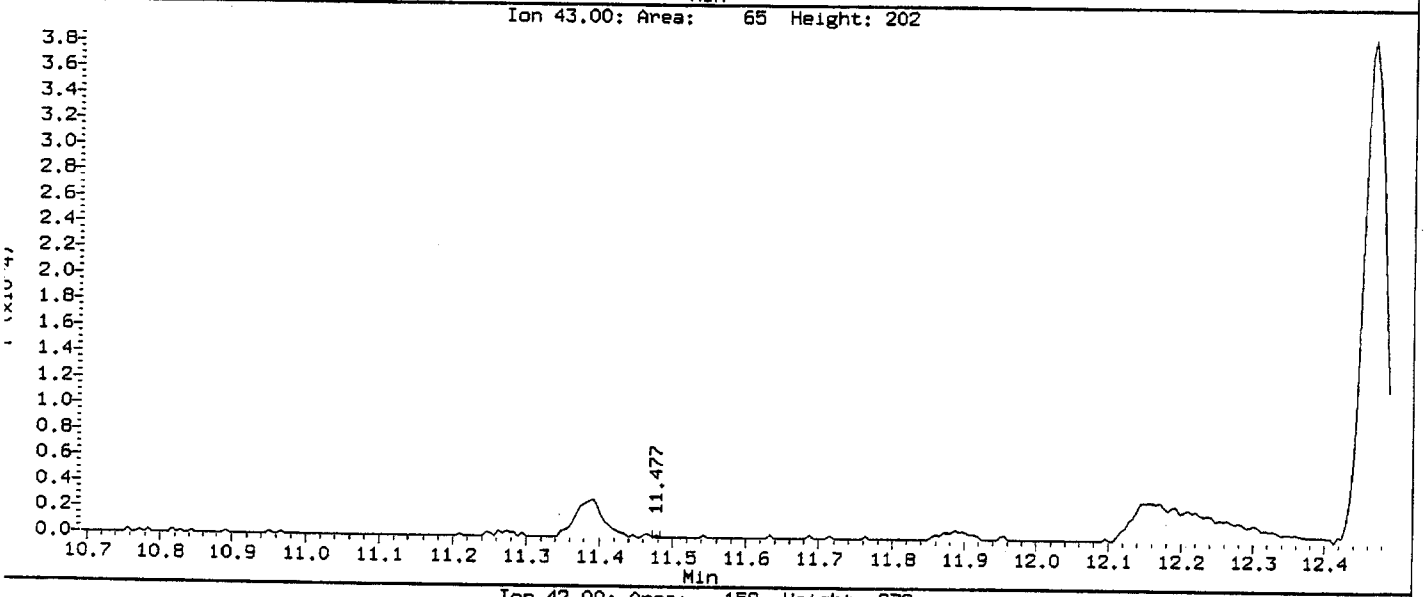
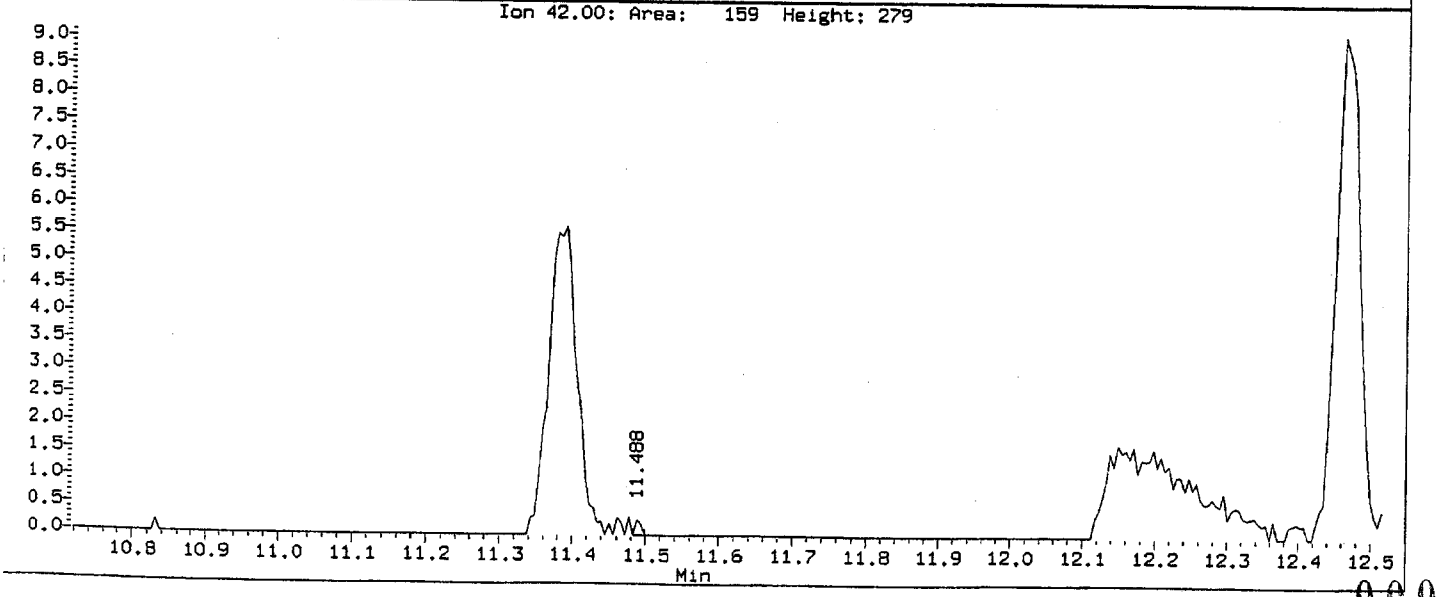
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 1-Butanol
CAS Number: 71-36-3



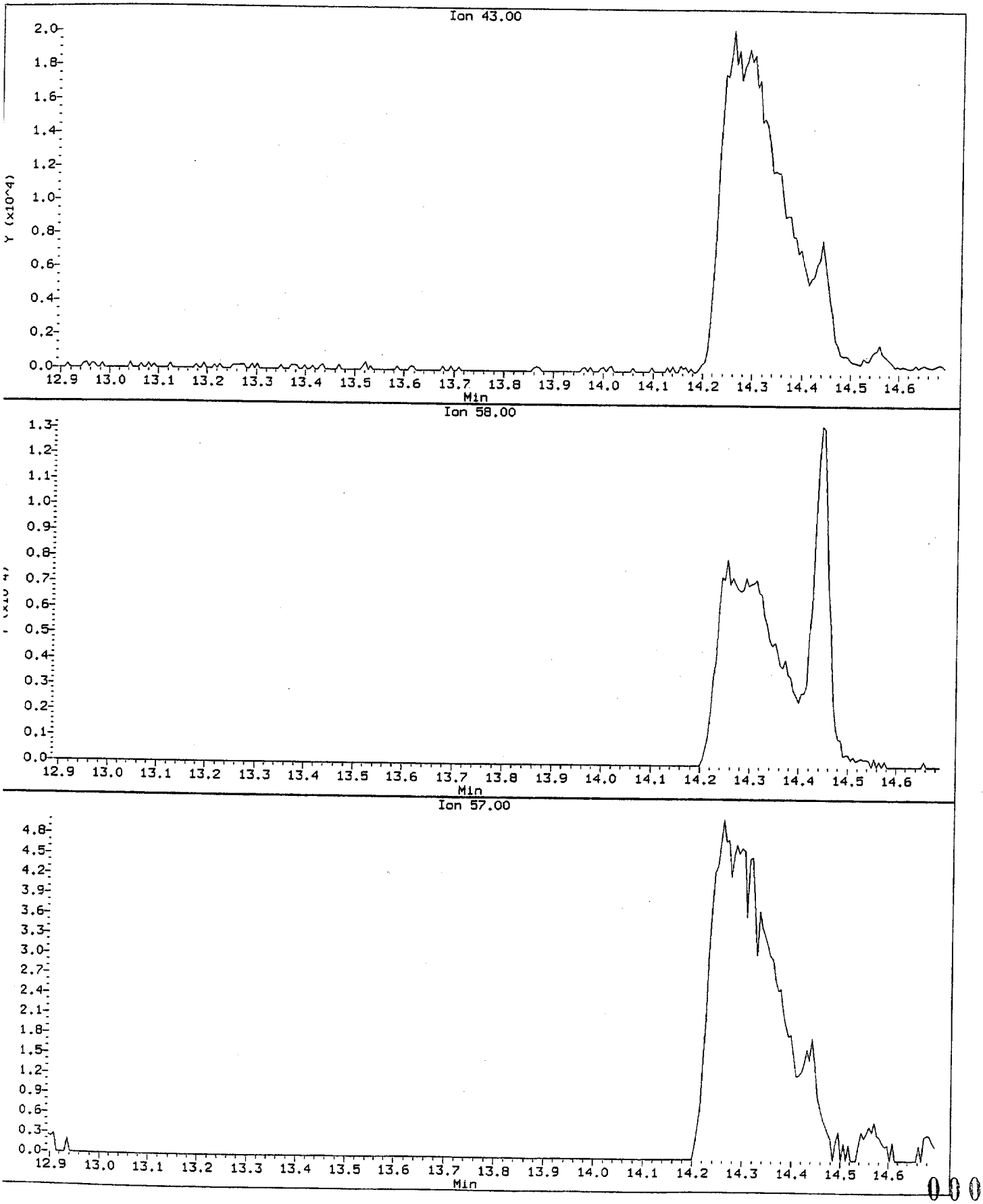




Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1

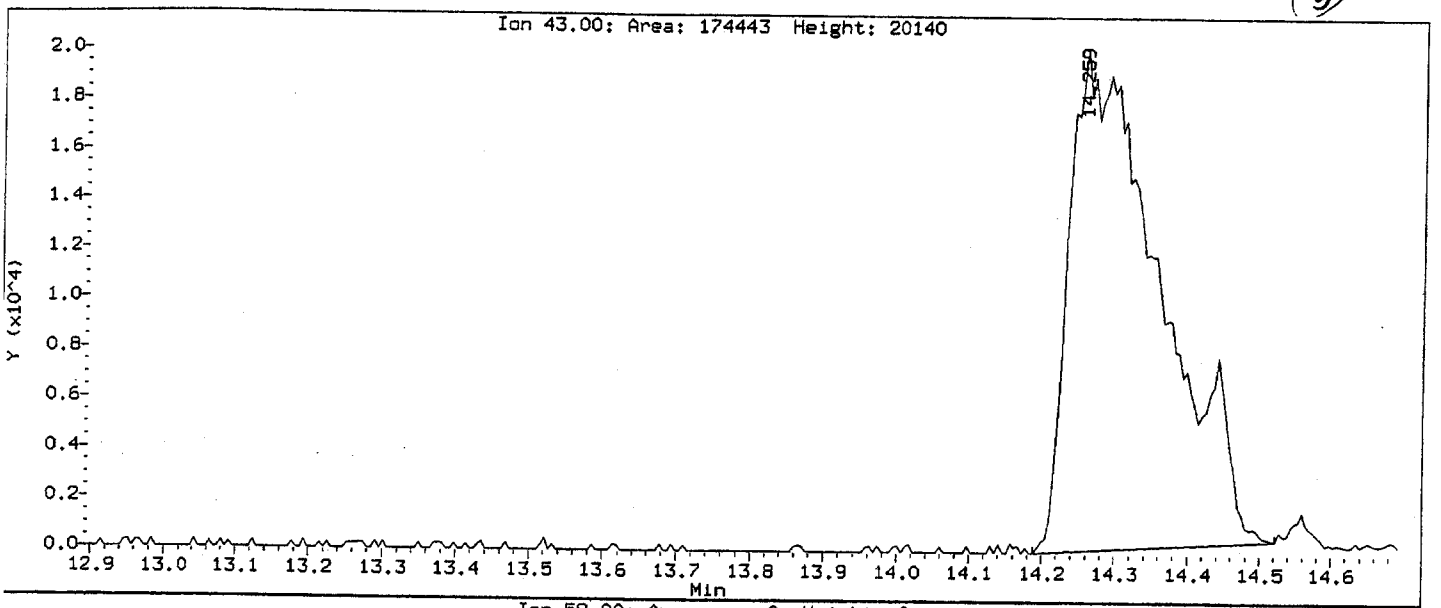
before

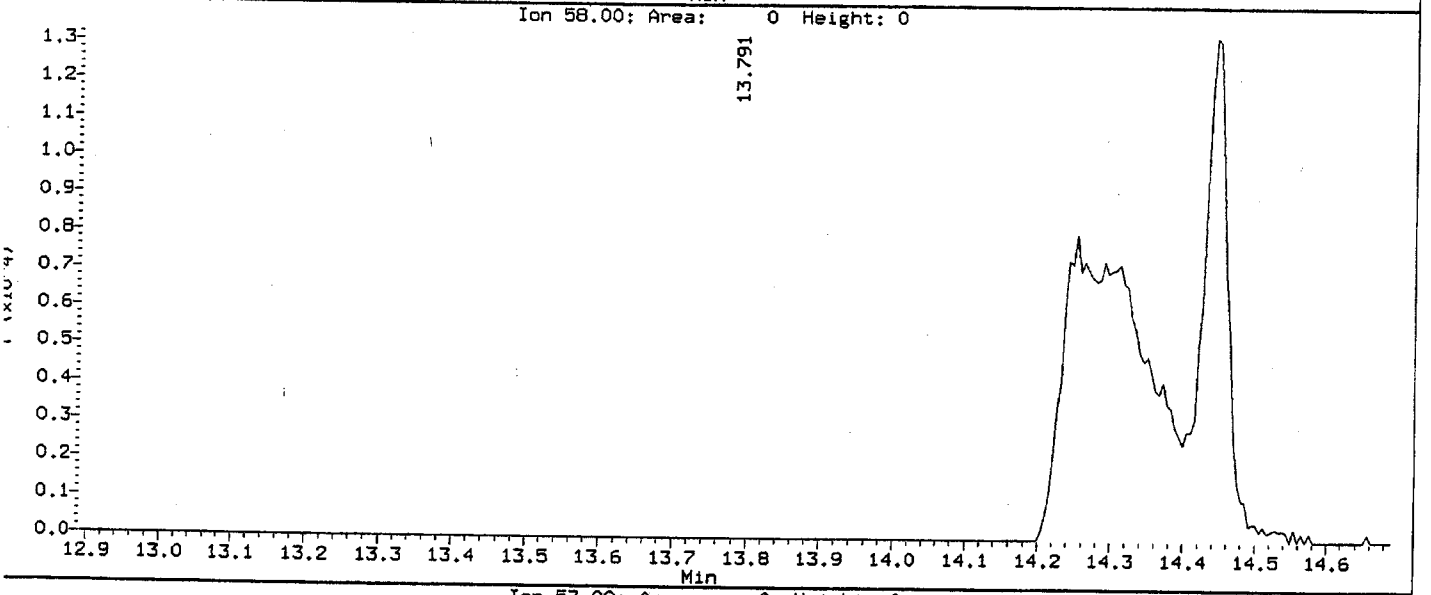


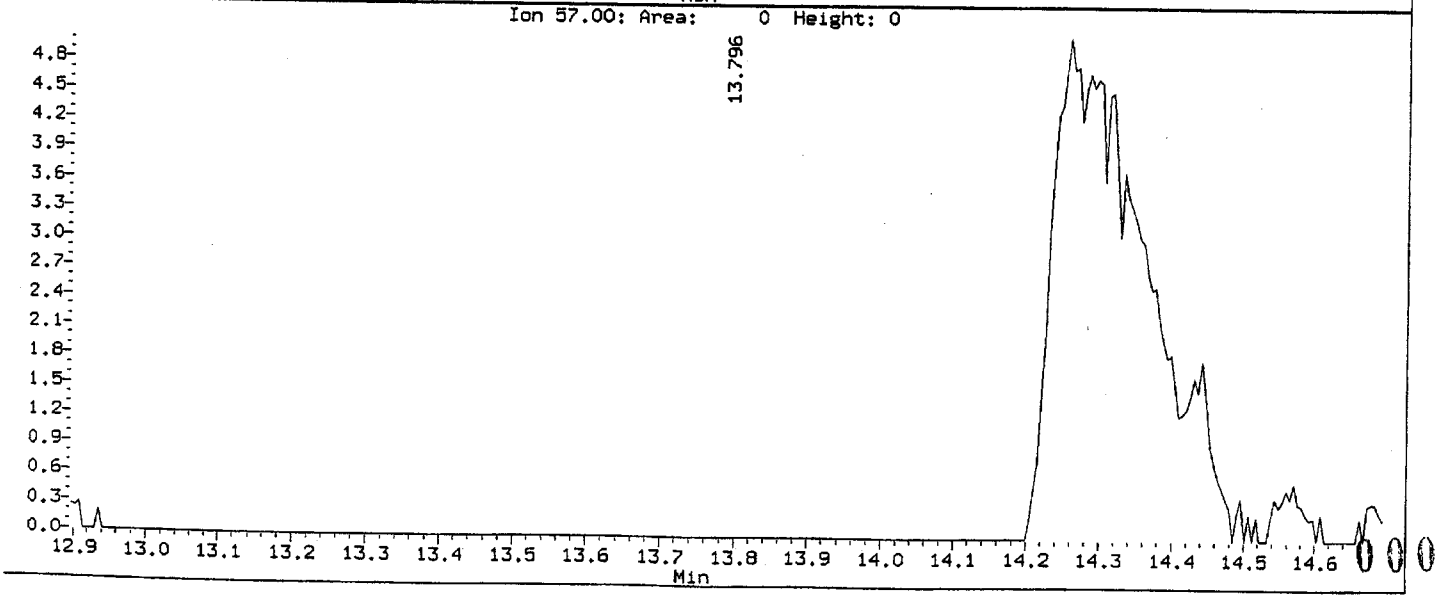
Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1

after PW 8.9.02 (5)



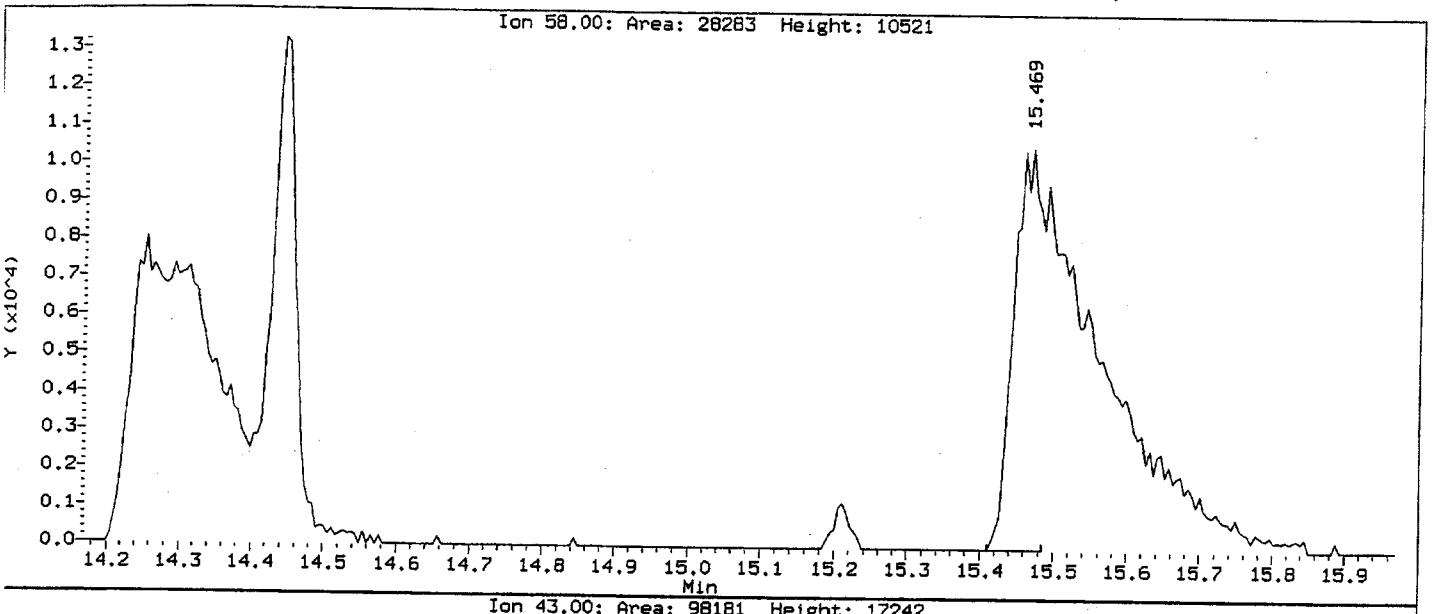


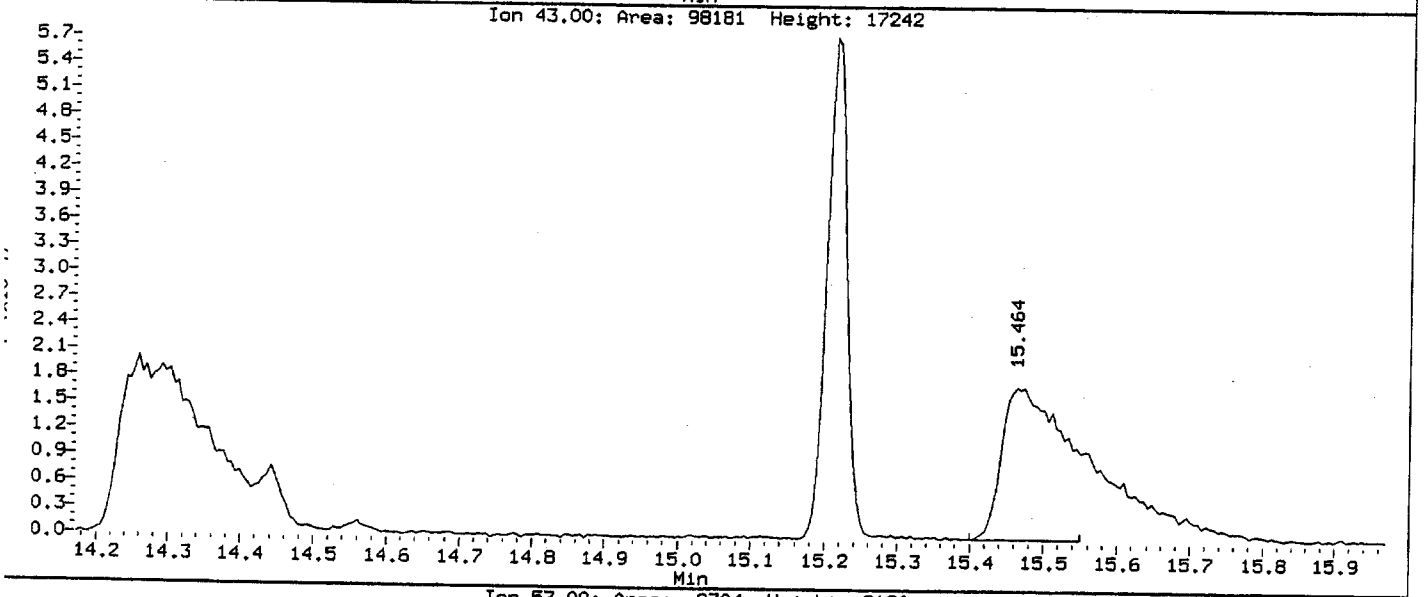


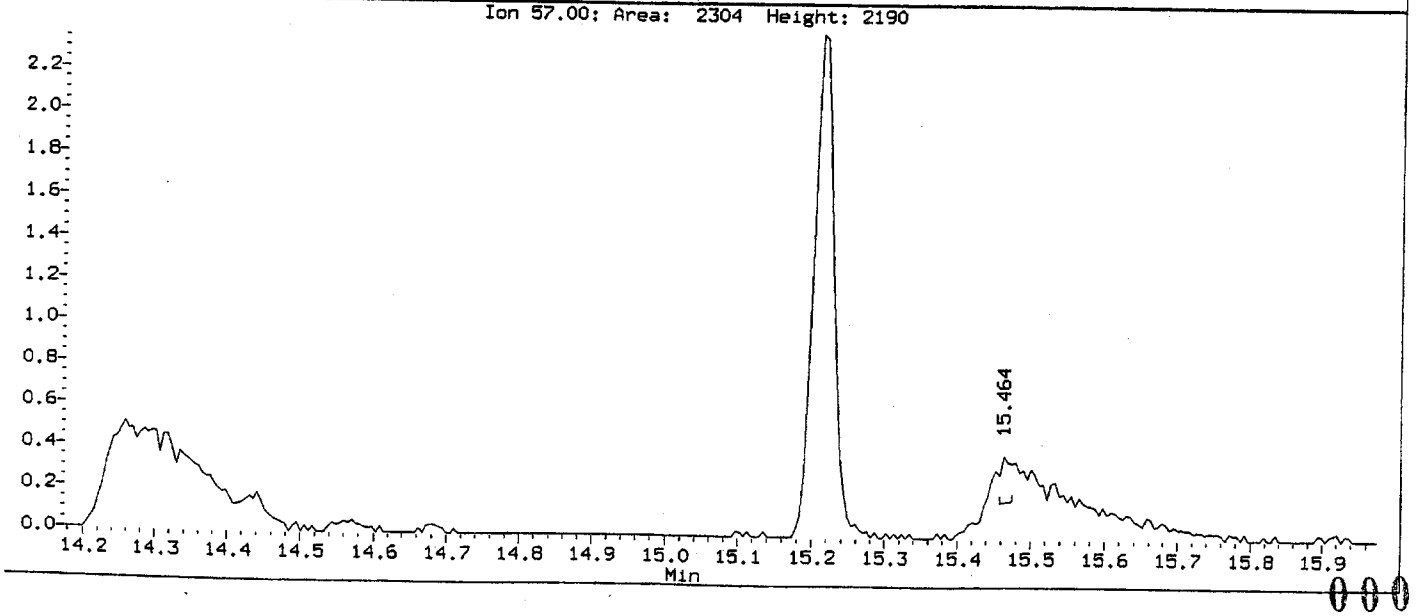
Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Hexanone
CAS Number: 591-78-6

before



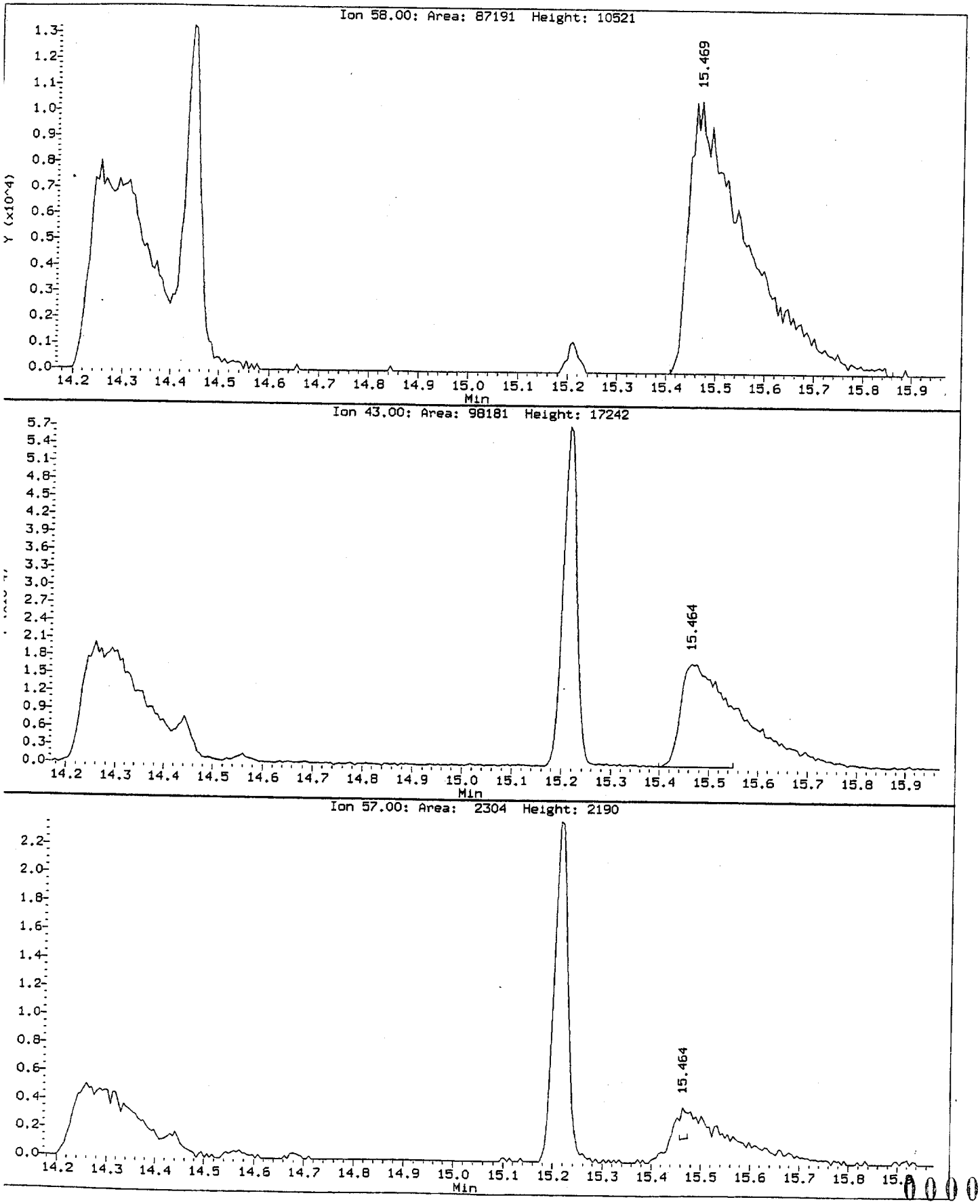




Data File: /var/chem/gcms/me.i/E080802I.b/iceh087.d
Injection Date: 08-AUG-2002 18:50
Instrument: me.i
Client Sample ID: 0.5ppb

Compound: 2-Hexanone
CAS Number: 591-78-6

after ① Dw std/cc



Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Report Date: 09-Aug-2002 11:38

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh081.d
Lab Smp Id: ICEH081 Client Smp ID: 1ppb
Inj Date : 08-AUG-2002 19:25
Operator : 60487 Inst ID: me.i
Smp Info : ICEH081,,1,1,,1ppb
Misc Info : E080802I,LA,,,,500 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 13 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.761	(1.000)	655242	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3458774	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2910852	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.906)	707006	10.0000	10.22
5 Toluene-d8	98	14.442	14.442	(0.877)	3356623	10.0000	10.22
6 4-Bromofluorobenzene	95	18.067	18.067	(1.097)	1958012	10.0000	10.26
7 Chlorodifluoromethane	51	4.124	4.118	(0.422)	120278	1.00000	0.9385
8 Dichlorodifluoromethane	85	4.194	4.194	(0.430)	200153	1.00000	0.9471
9 Chloromethane	52	4.409	4.409	(0.452)	18910	1.00000	0.9970
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.419	(0.453)	135351	1.00000	0.9712
11 Vinyl Chloride	62	4.618	4.613	(0.473)	67707	1.00000	0.9595
12 Methanol	31	4.758	4.635	(0.487)	59117	4.00000	3.606
13 1,3-Butadiene	54	4.726	4.721	(0.484)	55717	1.00000	1.007
14 n-Butane	43	4.721	4.721	(0.484)	127004	1.00000	0.9426
15 Bromomethane	94	5.103	5.097	(0.523)	69468	1.00000	0.9496
16 Chloroethane	64	5.275	5.269	(0.540)	33898	1.00000	0.9441
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	216272	1.00000	0.9657
18 Acrolein	56	6.017	5.953	(0.616)	31852	2.00000	1.602
19 Acetonitrile	40	6.146	6.033	(0.630)	46937	2.00000	2.416(H)
20 Acetone	58	6.329	6.109	(0.648)	87131	2.00000	2.652(H)
21 Pentane	57	6.179	6.179	(0.633)	24313	1.00000	1.095
22 Ethyl Ether	31	6.539	6.388	(0.670)	127651	2.00000	1.955(H)

Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.700	(0.687)	78080	1.00000	0.9599
24 Acrylonitrile	53	6.883	6.840	(0.705)	92136	2.00000	1.828
25 1,1,2-Trichlorotrifluoroethane	101	6.916	6.910	(0.708)	170512	1.00000	0.9828
26 Methylene Chloride	84	7.088	7.077	(0.726)	84581	1.00000	1.069
27 3-Chloropropene	39	7.115	7.104	(0.729)	67889	1.00000	0.9810
28 Carbon Disulfide	76	7.254	7.254	(0.743)	246597	1.00000	0.9587
29 trans-1,2-Dichloroethene	96	7.948	7.948	(0.814)	77504	1.00000	0.9582
30 Methyl-t-Butyl Ether	73	8.443	8.185	(0.865)	380206	2.00000	1.835
31 1,1-Dichloroethane	63	8.406	8.400	(0.861)	153619	1.00000	0.9680
32 Vinyl Acetate	43	8.583	8.529	(0.879)	239645	2.00000	1.410
33 2-Butanone	72	9.326	9.094	(0.955)	70725	2.00000	2.148(H)
34 Hexane	56	9.019	9.019	(0.924)	68002	1.00000	0.9807
35 cis 1,2-Dichloroethene	96	9.422	9.422	(0.965)	87199	1.00000	0.9438
36 Chloroform	83	9.772	9.778	(1.001)	173698	1.00000	0.9520
37 1,1,1-Trichloroethane	97	10.810	10.816	(1.107)	191207	1.00000	0.9617
38 1,2-Dichloroethane	62	10.918	10.918	(0.918)	127225	1.00000	1.016
39 Benzene	78	11.381	11.381	(0.957)	263283	1.00000	1.092
40 1-Butanol	41	12.021	11.596	(1.011)	61760	2.00000	1.781(M)
41 Cyclohexane	69	11.381	11.386	(0.957)	40633	1.00000	1.102
42 Carbon Tetrachloride	117	11.397	11.402	(1.168)	148787	1.00000	0.8331
43 Heptane	43	12.467	12.462	(1.048)	162753	1.00000	1.053
44 1,2-Dichloropropane	63	12.548	12.548	(1.055)	89526	1.00000	1.057
45 Trichloroethene	130	12.569	12.570	(1.057)	115970	1.00000	1.076
46 Dibromomethane	93	12.650	12.650	(1.064)	107728	1.00000	1.042
47 Bromodichloromethane	83	12.785	12.785	(1.075)	202881	1.00000	1.008
48 4-Methyl-2-pentanone	43	14.119	13.796	(1.187)	309043	2.00000	2.034(MH)
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	191739	1.00000	1.058
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	126573	1.00000	1.004
51 Toluene	91	14.549	14.555	(0.883)	373898	1.00000	1.137
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	112106	1.00000	1.035
53 2-Hexanone	58	15.388	15.071	(0.934)	169505	2.00000	2.334(MH)
54 Octane	85	15.216	15.211	(0.924)	99670	1.00000	1.029
55 Dibromochloromethane	129	15.297	15.302	(0.929)	199099	1.00000	1.020
56 1,2-Dibromoethane	107	15.587	15.593	(0.946)	191289	1.00000	1.116
57 Tetrachloroethene	129	15.657	15.657	(0.951)	117543	1.00000	1.111
58 Chlorobenzene	112	16.518	16.518	(1.003)	274542	1.00000	1.111
59 Ethylbenzene	91	16.803	16.803	(1.020)	474179	1.00000	1.104
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	387264	1.00000	1.114
61 Bromoform	173	17.395	17.400	(1.056)	228949	1.00000	1.114
62 Nonane	57	17.363	17.363	(1.054)	212691	1.00000	1.171
63 Styrene	104	17.416	17.417	(1.057)	234664	1.00000	1.065
64 o-Xylene	91	17.476	17.481	(1.061)	399478	1.00000	1.126
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	265148	1.00000	1.133
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	60657	1.00000	1.007
67 Cumene	105	18.041	18.046	(1.095)	480822	1.00000	1.080
68 n-Propylbenzene	91	18.541	18.546	(1.126)	718639	1.00000	1.149
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	601577	1.00000	1.155

Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.139)	210658	1.00000	1.155
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	150342	1.00000	0.9595
72 Decane	57	19.020	19.020	(1.155)	279330	1.00000	1.163
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	451942	1.00000	1.146
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	323972	1.00000	1.131
75 Benzyl Chloride	91	19.493	19.493	(1.184)	386112	1.00000	1.154
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	320621	1.00000	1.158
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	303410	1.00000	1.118
78 Undecane	57	20.273	20.273	(1.231)	281526	1.00000	1.158
79 Dodecane	57	21.376	21.370	(1.298)	232664	1.00000	1.167
80 1,2,4-Trichlorobenzene	180	21.602	21.596	(1.312)	400661	1.00000	1.288
81 Napthalene	128	21.763	21.763	(1.321)	541425	1.00000	0.9562
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	305608	1.00000	1.075

QC Flag Legend

M - Compound response manually integrated.
I - Operator selected an alternate compound hit.

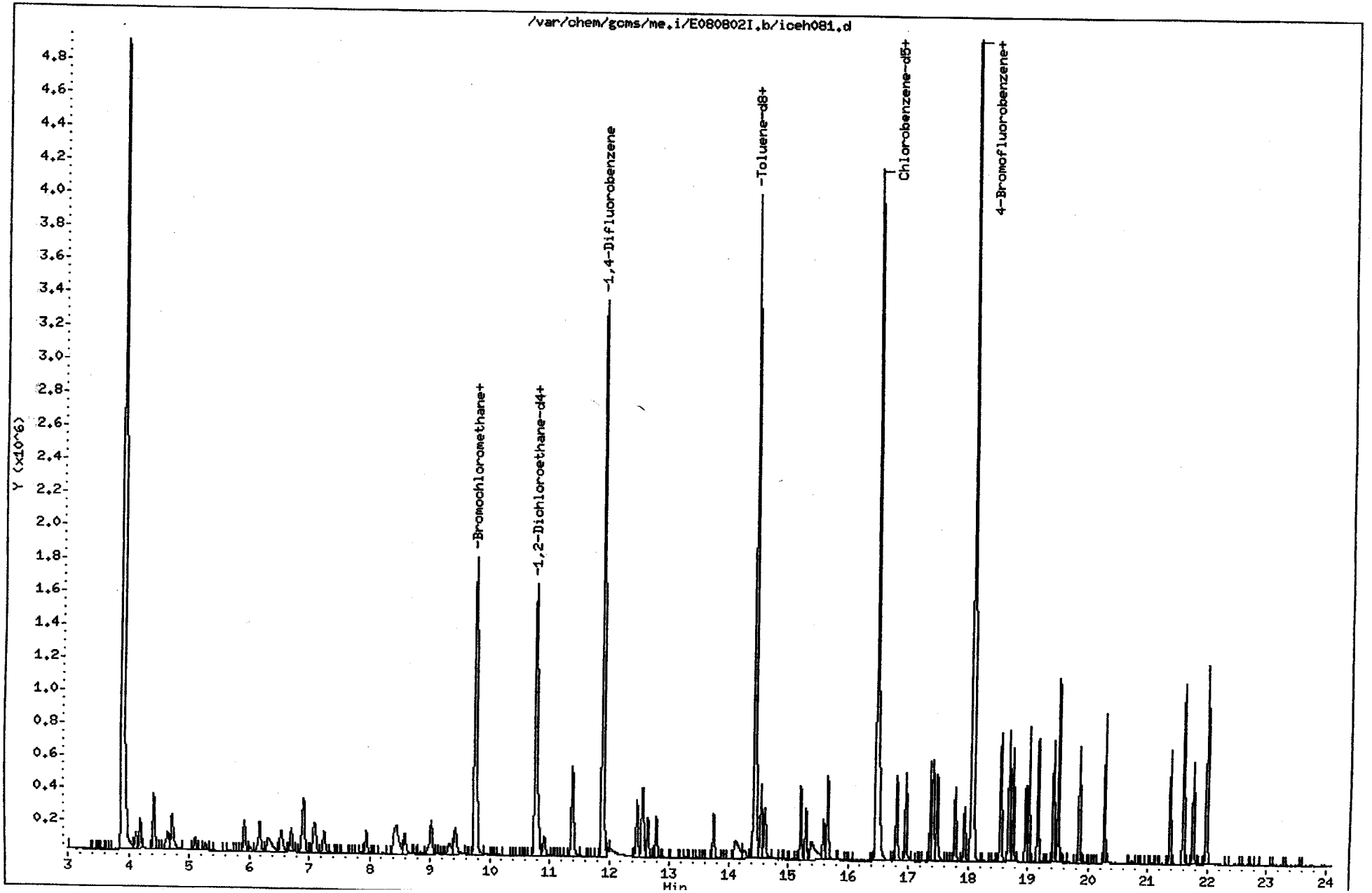
171

0000172

Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Date : 08-AUG-2002 19:25
Client ID: 1ppb
Sample Info: ICEH081,,1,1,,1ppb
Volume Injected (uL): 500.0
Column phase: DB-5

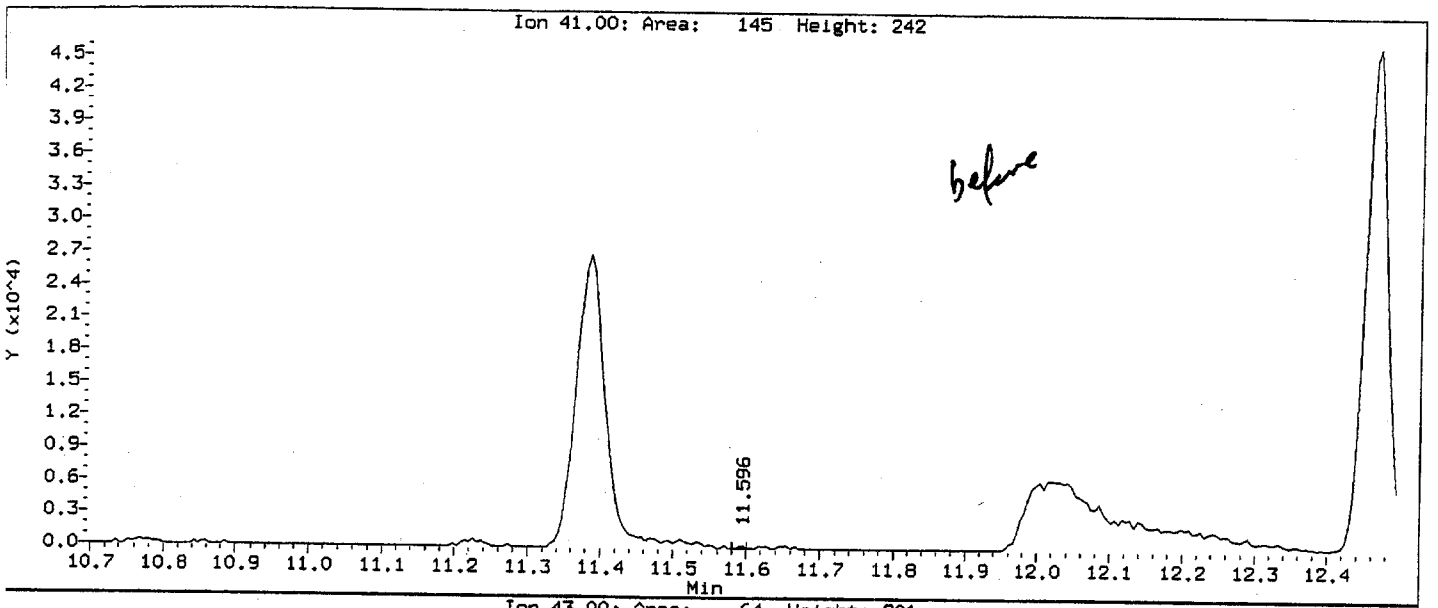
Instrument: me.i

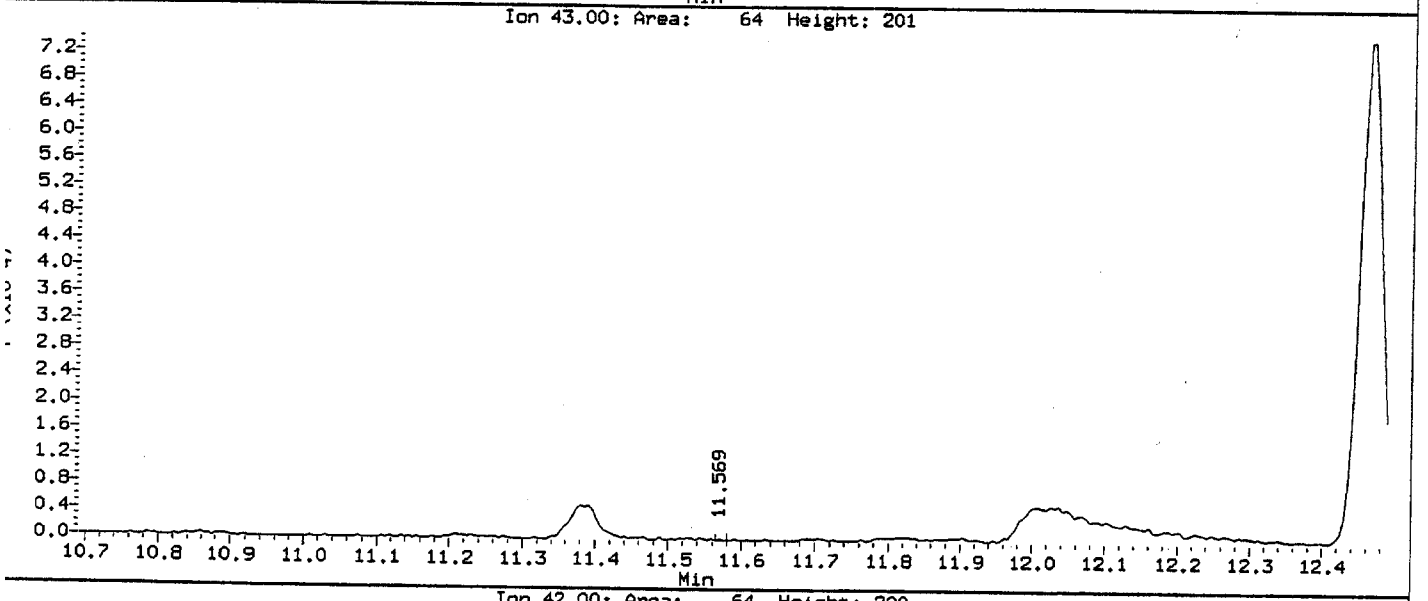
Operator: 60487
Column diameter: 0.32

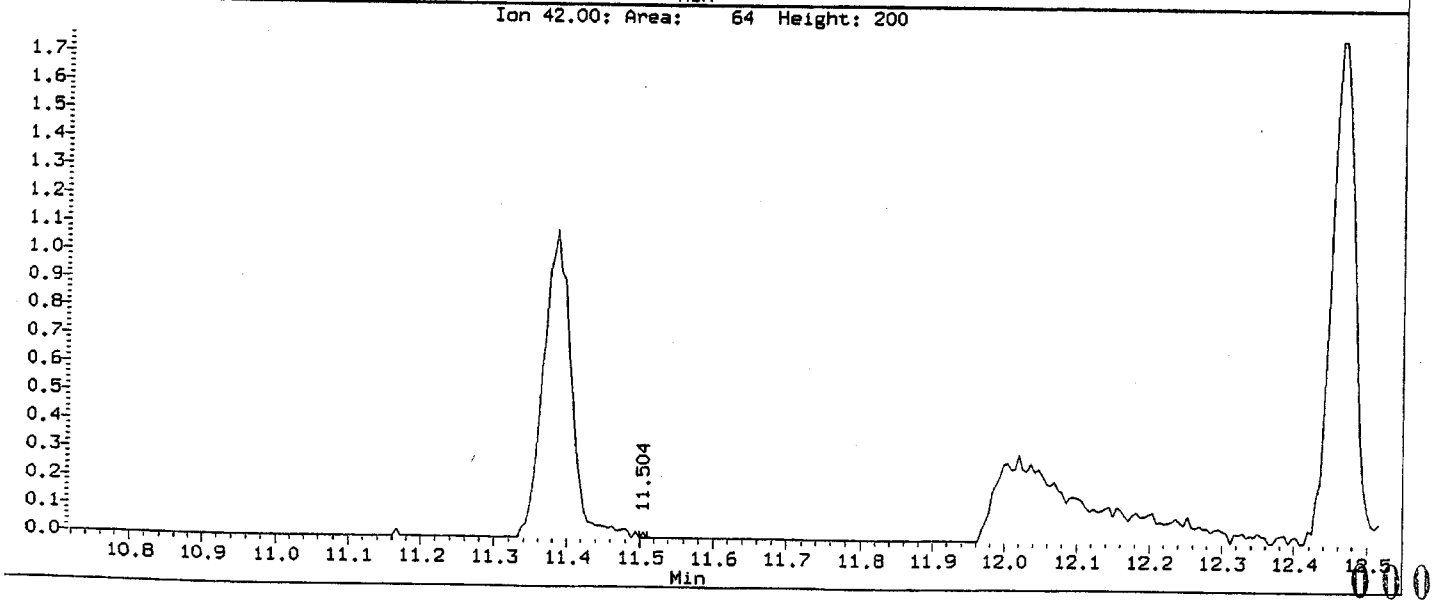


Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

Compound: 1-Butanol
CAS Number: 71-36-3

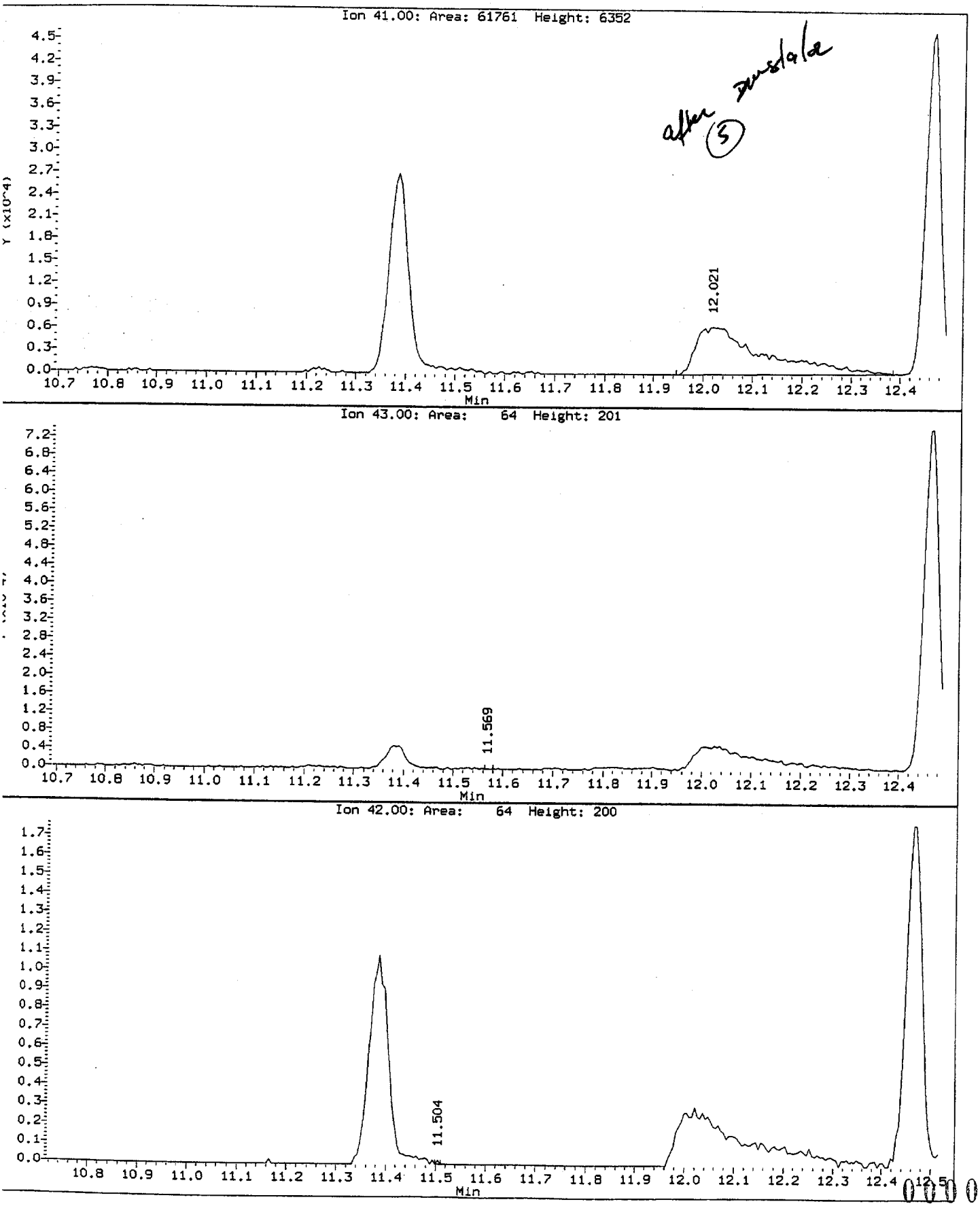






Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

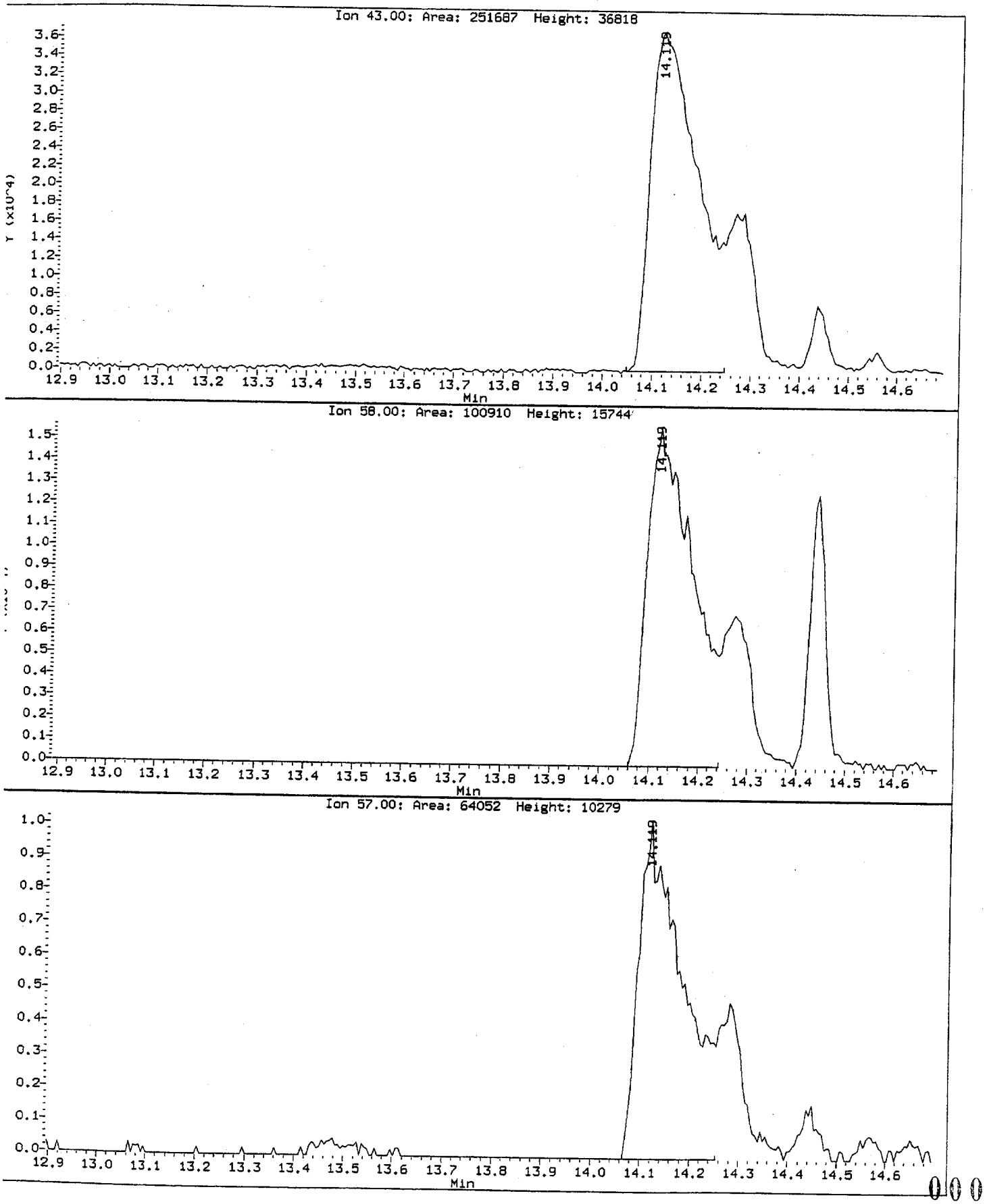
Compound: 1-Butanol
CAS Number: 71-36-3



Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

before

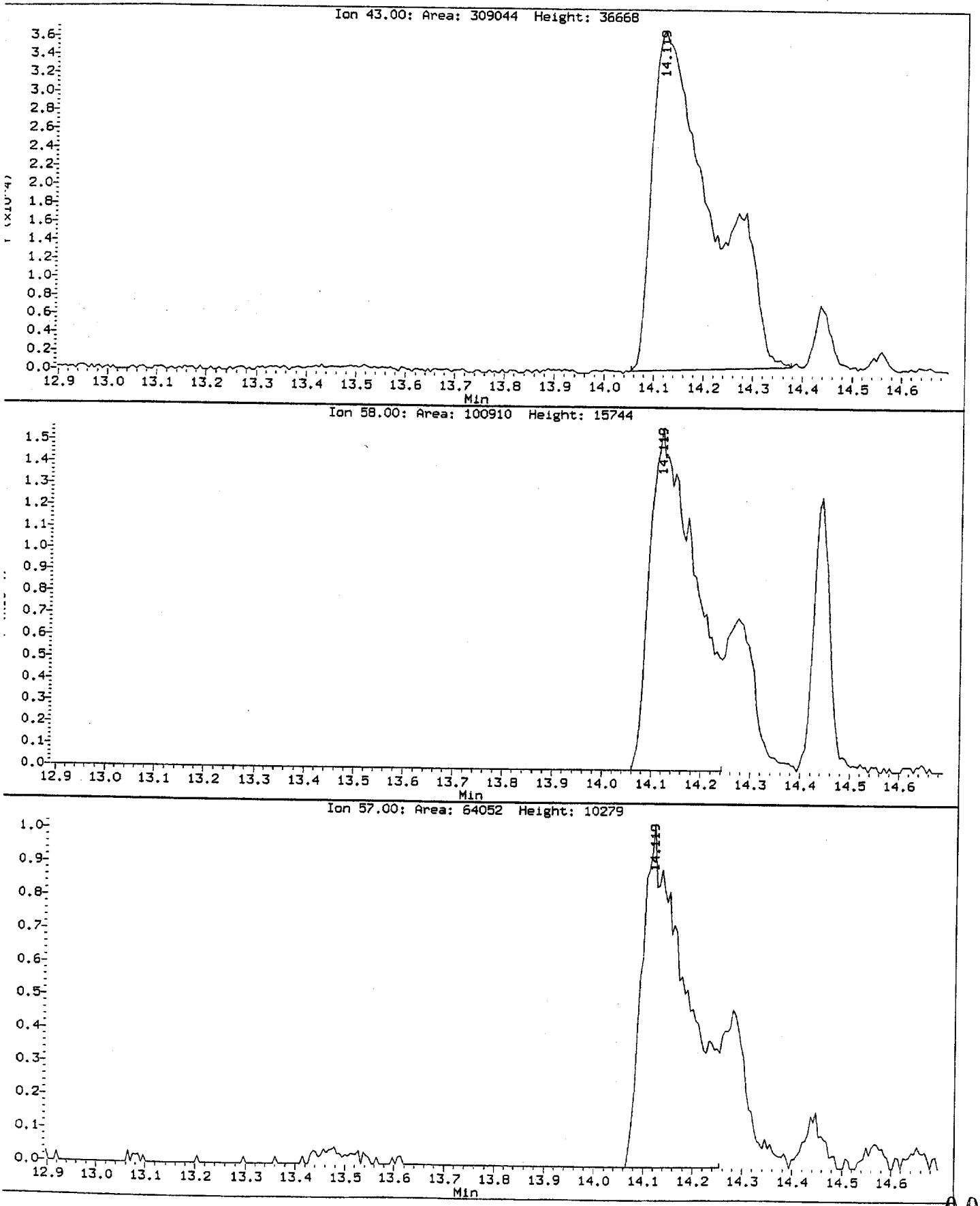
Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1



Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

Compound: 4-Methyl-2-pentanone
CAS Number: 108-10-1

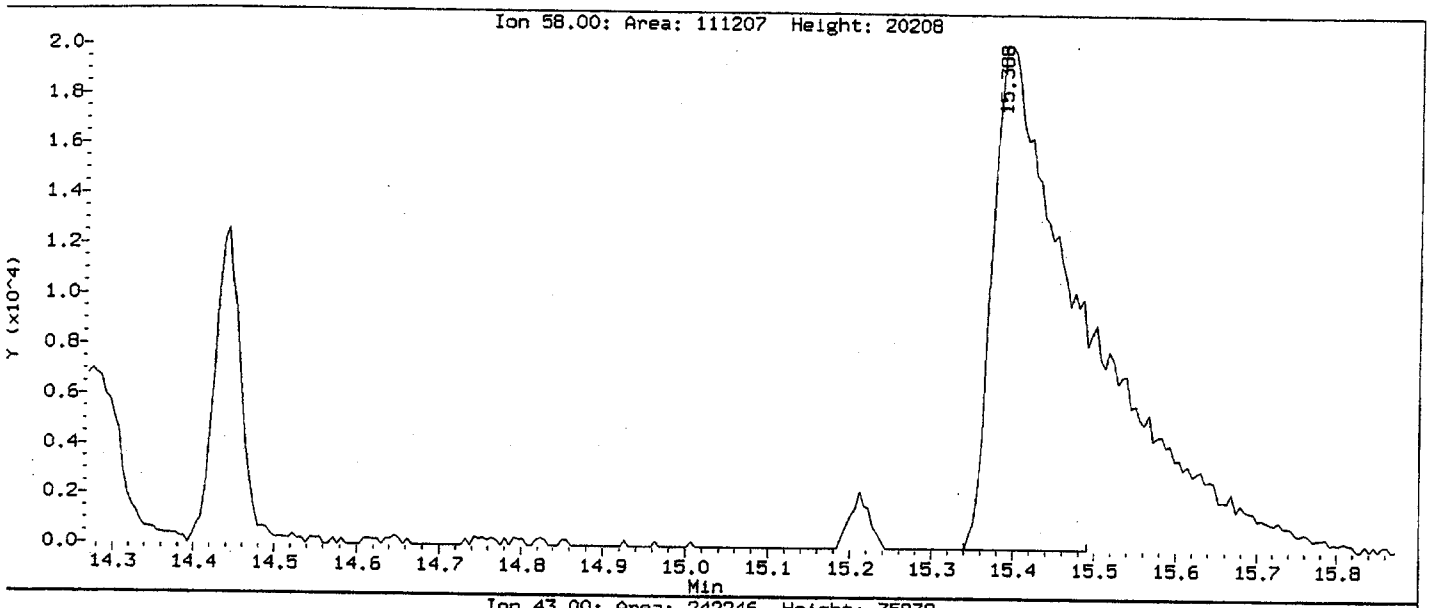
after 6 MW 8.9.02

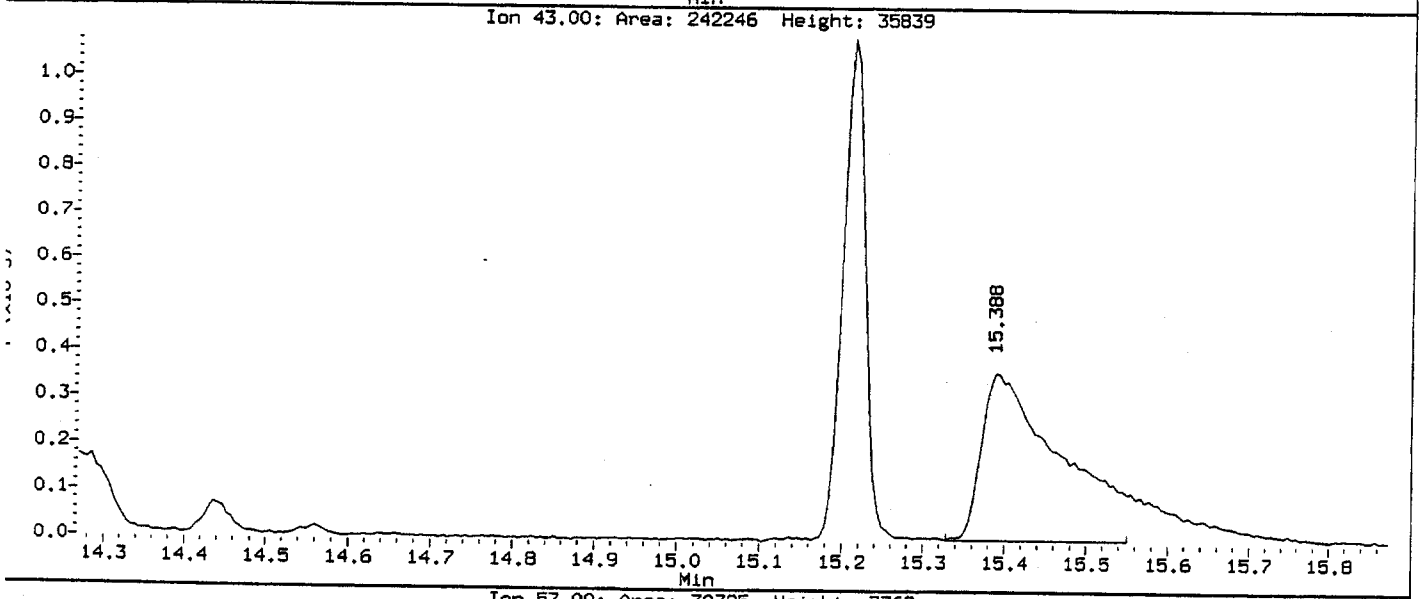


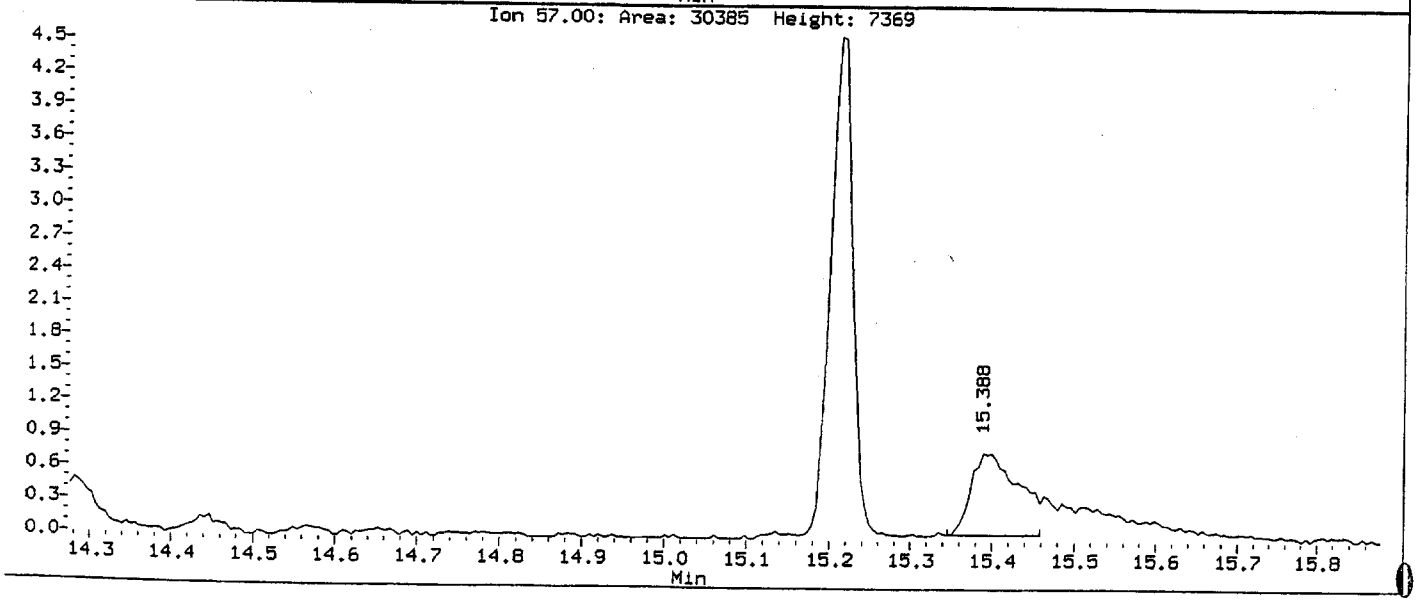
Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

Compound: 2-Hexanone
CAS Number: 591-78-6

before



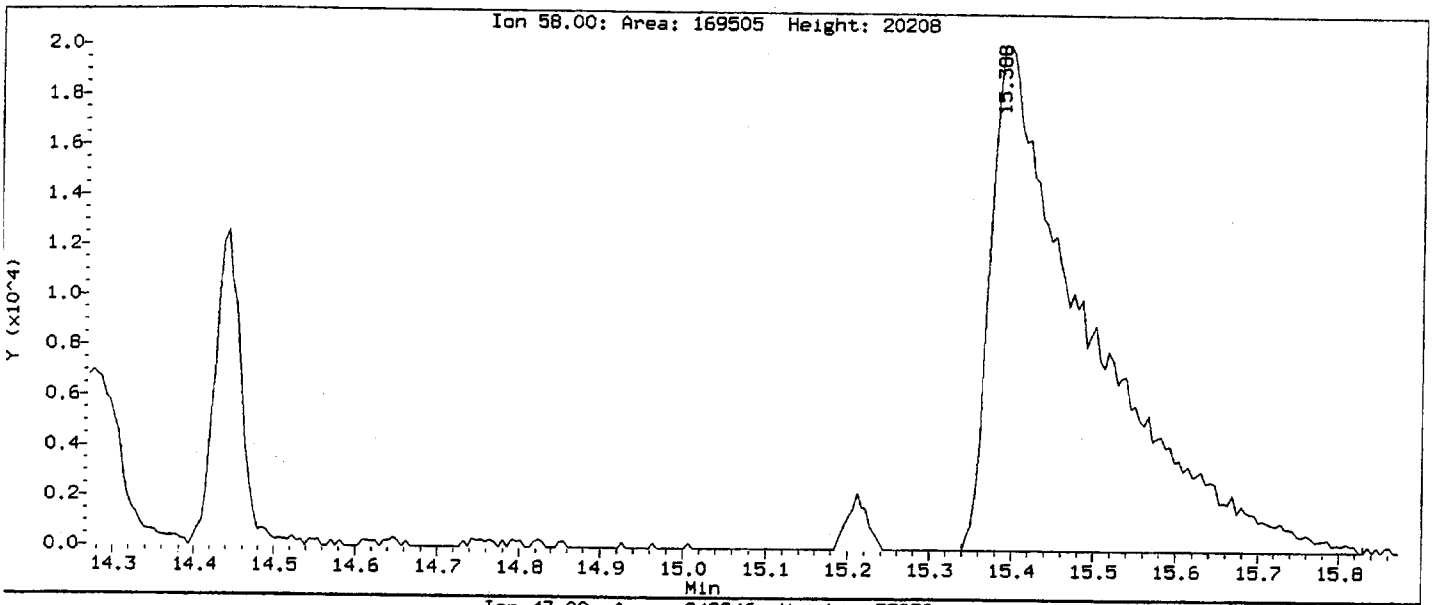


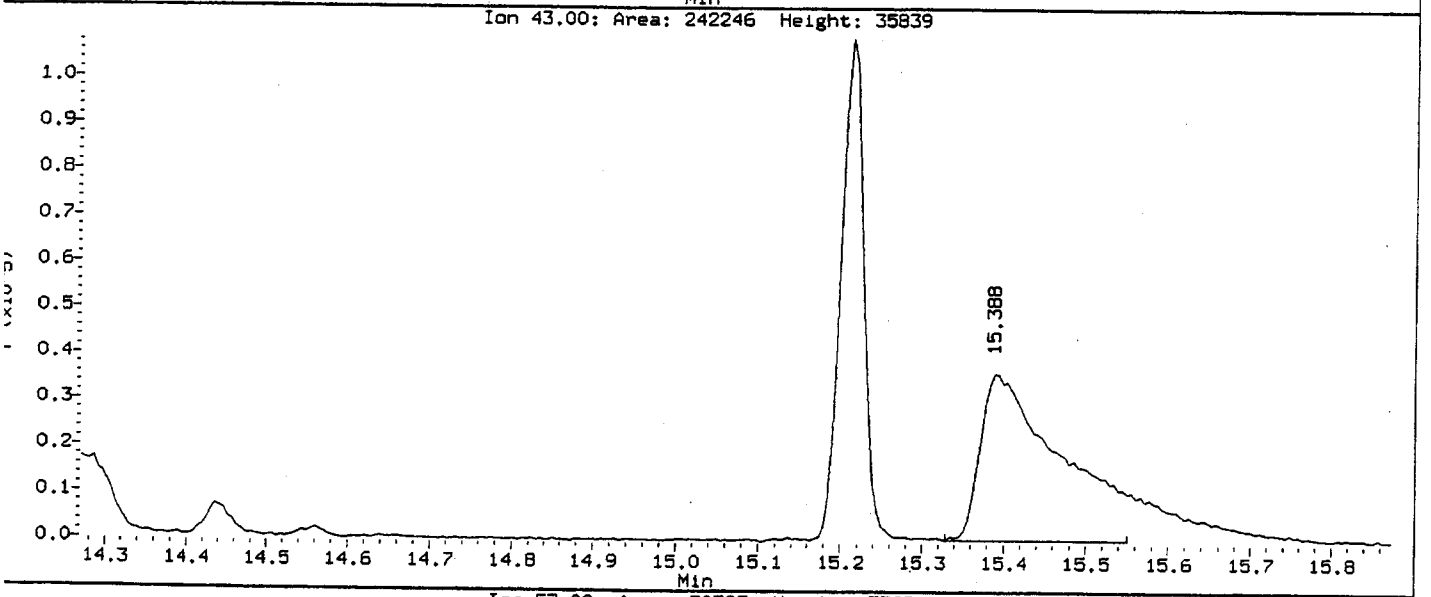


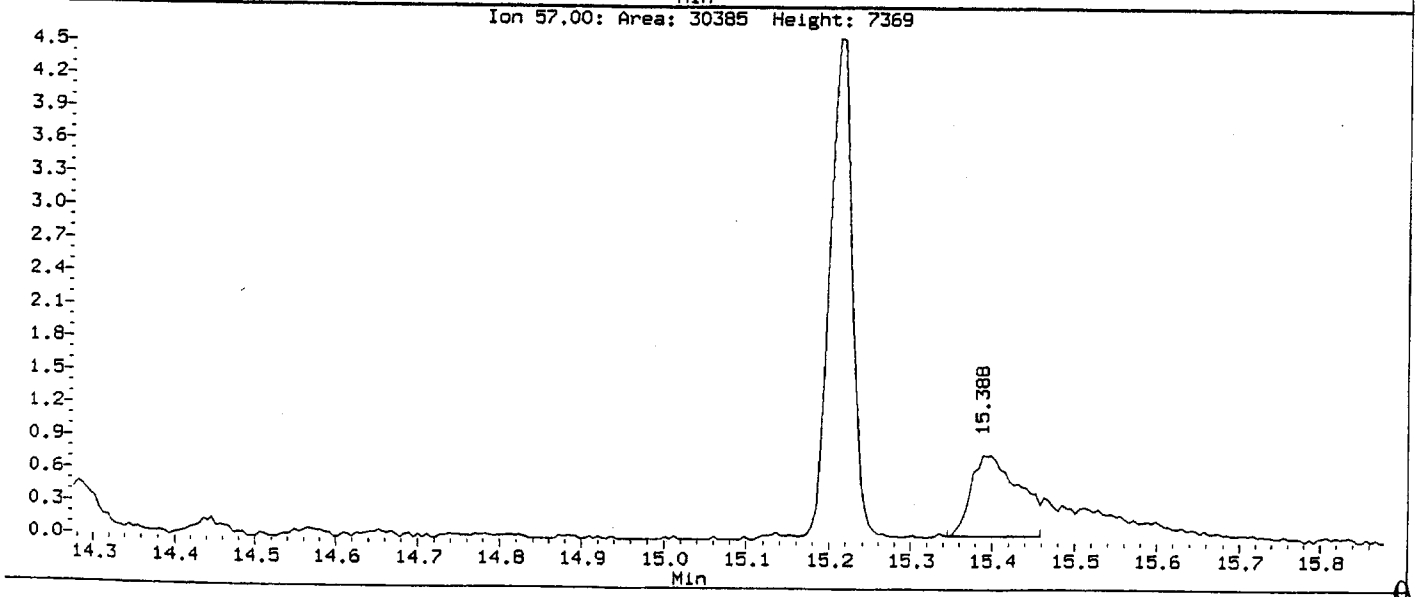
Data File: /var/chem/gcms/me.i/E080802I.b/iceh081.d
Injection Date: 08-AUG-2002 19:25
Instrument: me.i
Client Sample ID: 1ppb

Compound: 2-Hexanone
CAS Number: 591-78-6

alk ① DW 8/9/02







Data File: /var/chem/gcms/me.i/E080802I.b/iceh082.d
Report Date: 09-Aug-2002 11:38

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh082.d
Lab Smp Id: ICEH082 Client Smp ID: 5ppb
Inj Date : 08-AUG-2002 19:59
Operator : 60487 Inst ID: me.i
Smp Info : ICEH082,,1,2,,5ppb
Misc Info : E080802I,LA,,,,50 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 99 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.761	(1.000)	638377	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3457211	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2931766	10.0000	
4 1,2-Dichloroethane-d4	67	10.767	10.773	(0.905)	699217	10.0000	10.11
5 Toluene-d8	98	14.442	14.442	(0.877)	3327834	10.0000	10.06
6 4-Bromofluorobenzene	95	18.067	18.067	(1.097)	1944184	10.0000	10.12
7 Chlorodifluoromethane	51	4.118	4.118	(0.422)	683548	5.00000	5.474
8 Dichlorodifluoromethane	85	4.194	4.194	(0.430)	1127676	5.00000	5.477
9 Chloromethane	52	4.409	4.409	(0.452)	104681	5.00000	5.665
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.419	(0.453)	744695	5.00000	5.485
11 Vinyl Chloride	62	4.613	4.613	(0.473)	386634	5.00000	5.624
12 Methanol	31	4.656	4.635	(0.477)	353516	20.0000	22.13
13 1,3-Butadiene	54	4.721	4.721	(0.484)	301603	5.00000	5.597
14 n-Butane	43	4.721	4.721	(0.484)	622398	5.00000	4.741
15 Bromomethane	94	5.097	5.097	(0.522)	393145	5.00000	5.516
16 Chloroethane	64	5.269	5.269	(0.540)	191176	5.00000	5.465
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	1206620	5.00000	5.530
18 Acrolein	56	5.958	5.953	(0.610)	235834	10.0000	12.17
19 Acetonitrile	40	6.044	6.033	(0.619)	230748	10.0000	15.19
20 Acetone	58	6.157	6.109	(0.631)	334925	10.0000	13.20
21 Pentane	57	6.173	6.179	(0.632)	116215	5.00000	5.371
22 Ethyl Ether	31	6.405	6.388	(0.656)	732332	10.0000	13.75

Data File: /var/chem/gcms/me.i/E080802I.b/iceh082.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.700	6.700	(0.686)	435574	5.00000	5.496
24 Acrylonitrile	53	6.840	6.840	(0.701)	557976	10.0000	11.36
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	937166	5.00000	5.544
26 Methylene Chloride	84	7.077	7.077	(0.725)	398770	5.00000	5.175
27 3-Chloropropene	39	7.104	7.104	(0.728)	366519	5.00000	5.436
28 Carbon Disulfide	76	7.249	7.254	(0.743)	1371896	5.00000	5.474
29 trans-1,2-Dichloroethene	96	7.948	7.948	(0.814)	430801	5.00000	5.467
30 Methyl-t-Butyl Ether	73	8.228	8.185	(0.843)	2335947	10.0000	11.57
31 1,1-Dichloroethane	63	8.400	8.400	(0.861)	849229	5.00000	5.492
32 Vinyl Acetate	43	8.535	8.529	(0.874)	1985059	10.0000	11.98
33 2-Butanone	72	9.132	9.094	(0.936)	412126	10.0000	15.12
34 Hexane	56	9.019	9.019	(0.924)	373106	5.00000	5.523
35 cis 1,2-Dichloroethene	96	9.422	9.422	(0.965)	493220	5.00000	5.479
36 Chloroform	83	9.772	9.778	(1.001)	967148	5.00000	5.440
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.108)	1046869	5.00000	5.404
38 1,2-Dichloroethane	62	10.913	10.918	(0.918)	685379	5.00000	5.474
39 Benzene	78	11.381	11.381	(0.957)	1332967	5.00000	5.532
40 1-Butanol	41	11.693	11.596	(0.983)	489892	10.0000	16.59(H)
41 Cyclohexane	69	11.381	11.386	(0.957)	201119	5.00000	5.455
42 Carbon Tetrachloride	117	11.402	11.402	(1.168)	1083314	5.00000	6.226
43 Heptane	43	12.462	12.462	(1.048)	850766	5.00000	5.505
44 1,2-Dichloropropane	63	12.543	12.548	(1.055)	462490	5.00000	5.463
45 Trichloroethene	130	12.570	12.570	(1.057)	580082	5.00000	5.385
46 Dibromomethane	93	12.645	12.650	(1.063)	555835	5.00000	5.378
47 Bromodichloromethane	83	12.785	12.785	(1.075)	1135628	5.00000	5.643
48 4-Methyl-2-pentanone	43	13.861	13.796	(1.166)	1880606	10.0000	15.54(H)
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	1035151	5.00000	5.713
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	695333	5.00000	5.474
51 Toluene	91	14.549	14.555	(0.883)	1645298	5.00000	4.968
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	596062	5.00000	5.464
53 2-Hexanone	58	15.119	15.071	(0.918)	936269	10.0000	15.81(H)
54 Octane	85	15.211	15.211	(0.924)	541353	5.00000	5.550
55 Dibromochloromethane	129	15.297	15.302	(0.929)	1091830	5.00000	5.553
56 1,2-Dibromoethane	107	15.587	15.593	(0.946)	904936	5.00000	5.242
57 Tetrachloroethene	129	15.657	15.657	(0.951)	559180	5.00000	5.249
58 Chlorobenzene	112	16.518	16.518	(1.003)	1271681	5.00000	5.108
59 Ethylbenzene	91	16.798	16.803	(1.020)	2225581	5.00000	5.146
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	1777127	5.00000	5.074
61 Bromoform	173	17.395	17.400	(1.056)	1105625	5.00000	5.340
62 Nonane	57	17.363	17.363	(1.054)	940457	5.00000	5.141
63 Styrene	104	17.417	17.417	(1.057)	1241339	5.00000	5.595
64 o-Xylene	91	17.476	17.481	(1.061)	1801357	5.00000	5.043
65 1,1,2,2-Tetrachloroethane	83	17.777	17.782	(1.079)	1229062	5.00000	5.214
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	342499	5.00000	5.643
67 Cumene	105	18.041	18.046	(1.095)	2388532	5.00000	5.328
68 n-Propylbenzene	91	18.541	18.546	(1.126)	3202976	5.00000	5.086
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	2660384	5.00000	5.072

Data File: /var/chem/gcms/me.i/E080802I.b/iceh082.d
Report Date: 09-Aug-2002 11:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.139)	930637	5.00000	5.068
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	932546	5.00000	5.909
72 Decane	57	19.020	19.020	(1.155)	1271677	5.00000	5.256
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	2037401	5.00000	5.129
74 1,3-Dichlorobenzene	146	19.423	19.428	(1.179)	1486054	5.00000	5.149
75 Benzyl Chloride	91	19.493	19.493	(1.184)	1775558	5.00000	5.270
76 1,4-Dichlorobenzene	146	19.504	19.509	(1.184)	1405963	5.00000	5.042
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	1391731	5.00000	5.090
78 Undecane	57	20.273	20.273	(1.231)	1266425	5.00000	5.172
79 Dodecane	57	21.371	21.370	(1.298)	916604	5.00000	4.564
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	1280800	5.00000	4.088
81 Napthalene	128	21.758	21.763	(1.321)	3302084	5.00000	5.790
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	1561439	5.00000	5.454

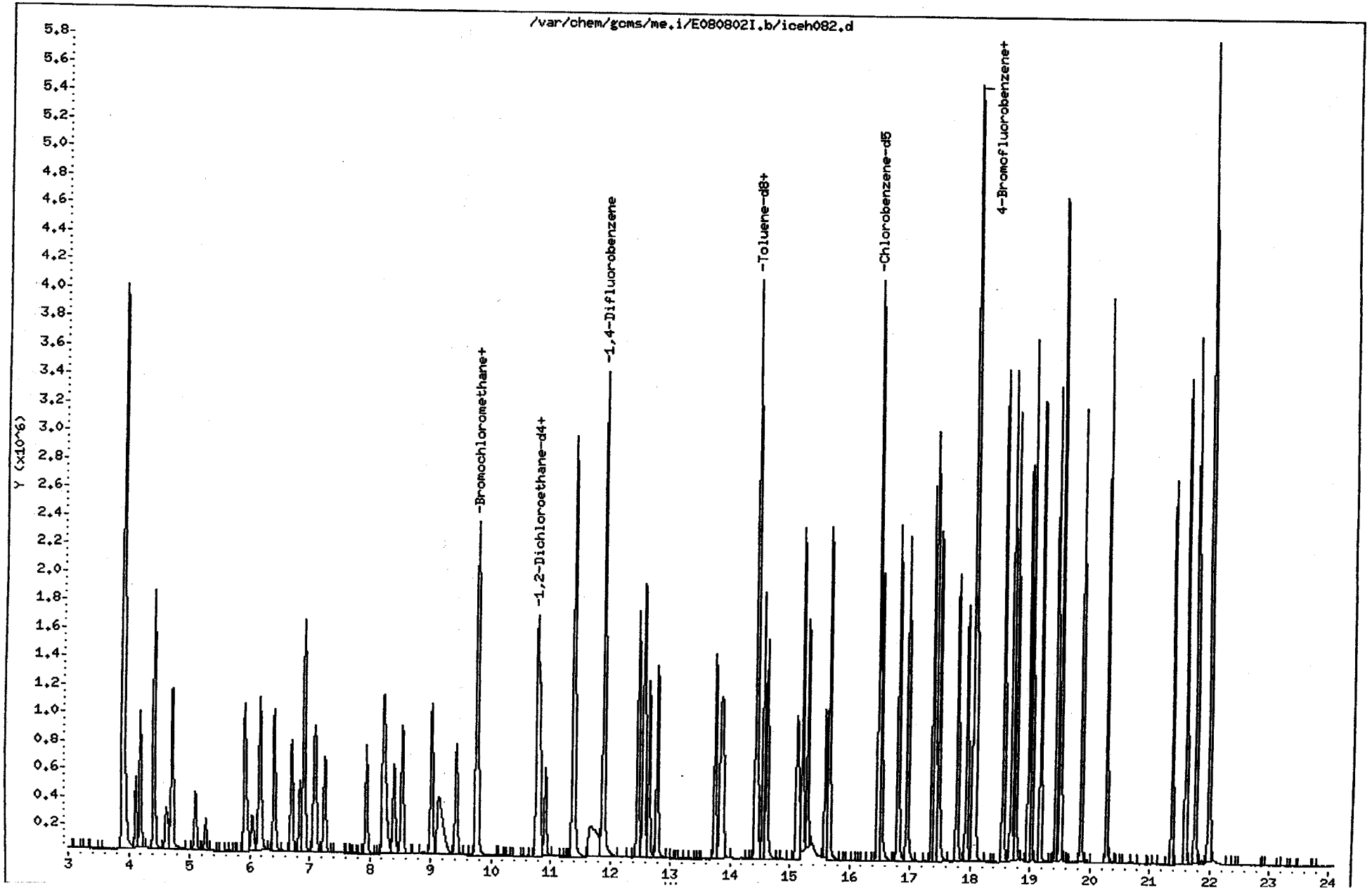
QC Flag Legend

I - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E080802I.b/iceh082.d
Date : 08-AUG-2002 19:59
Client ID: 5ppb
Sample Info: ICEH082,,1,2,,5ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080802I.b/iceh083.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh083.d
Lab Smp Id: ICEH083 Client Smp ID: 10ppb
Inj Date : 08-AUG-2002 20:33
Operator : 60487 Inst ID: me.i
Smp Info : ICEH083,,1,3,,10ppb
Misc Info : E080802I,LA,,,,100 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 99 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.761	(1.000)	632504	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3528268	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2986737	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.906)	710572	10.0000	10.00
5 Toluene-d8	98	14.442	14.442	(0.877)	3368574	10.0000	10.00
6 4-Bromofluorobenzene	95	18.067	18.067	(1.097)	1953573	10.0000	10.00
7 Chlorodifluoromethane	51	4.118	4.118	(0.422)	1273001	10.0000	10.00
8 Dichlorodifluoromethane	85	4.194	4.194	(0.430)	2089141	10.0000	10.00
9 Chloromethane	52	4.409	4.409	(0.452)	188371	10.0000	10.00
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.419	(0.453)	1333285	10.0000	10.00
11 Vinyl Chloride	62	4.613	4.613	(0.473)	700499	10.0000	10.00
12 Methanol	31	4.635	4.635	(0.475)	665494	40.0000	40.00
13 1,3-Butadiene	54	4.721	4.721	(0.484)	525464	10.0000	10.00
14 n-Butane	43	4.721	4.721	(0.484)	1108631	10.0000	10.00
15 Bromomethane	94	5.097	5.097	(0.522)	718881	10.0000	10.00
16 Chloroethane	64	5.269	5.269	(0.540)	355428	10.0000	10.00
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	2198301	10.0000	10.00
18 Acrolein	56	5.953	5.953	(0.610)	420846	20.0000	20.00
19 Acetonitrile	40	6.033	6.033	(0.618)	451658	20.0000	20.00
20 Acetone	58	6.109	6.109	(0.626)	585141	20.0000	20.00
21 Pentane	57	6.179	6.179	(0.633)	195786	10.0000	10.00
22 Ethyl Ether	31	6.388	6.388	(0.654)	1290691	20.0000	20.00

Data File: /var/chem/gcms/me.i/E080802I.b/iceh083.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.700	6.700	(0.686)	796503	10.0000	10.00
24 Acrylonitrile	53	6.840	6.840	(0.701)	1031725	20.0000	20.00
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	1681297	10.0000	10.00
26 Methylene Chloride	84	7.077	7.077	(0.725)	717390	10.0000	10.00
27 3-Chloropropene	39	7.104	7.104	(0.728)	676704	10.0000	10.00
28 Carbon Disulfide	76	7.254	7.254	(0.743)	2493332	10.0000	10.00
29 trans-1,2-Dichloroethene	96	7.948	7.948	(0.814)	790972	10.0000	10.00
30 Methyl-t-Butyl Ether	73	8.185	8.185	(0.839)	4328072	20.0000	20.00
31 1,1-Dichloroethane	63	8.400	8.400	(0.861)	1554022	10.0000	10.00
32 Vinyl Acetate	43	8.529	8.529	(0.874)	3637968	20.0000	20.00
33 2-Butanone	72	9.094	9.094	(0.932)	756709	20.0000	20.00
34 Hexane	56	9.019	9.019	(0.924)	698234	10.0000	10.00
35 cis 1,2-Dichloroethene	96	9.422	9.422	(0.965)	904969	10.0000	10.00
36 Chloroform	83	9.778	9.778	(1.002)	1787698	10.0000	10.00
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.108)	1961984	10.0000	10.00
38 1,2-Dichloroethane	62	10.918	10.918	(0.918)	1275293	10.0000	10.00
39 Benzene	78	11.381	11.381	(0.957)	2321732	10.0000	10.00
40 1-Butanol	41	11.596	11.596	(0.975)	905847	20.0000	20.00
41 Cyclohexane	69	11.386	11.386	(0.957)	355825	10.0000	10.00
42 Carbon Tetrachloride	117	11.402	11.402	(1.168)	1961193	10.0000	10.00
43 Heptane	43	12.462	12.462	(1.048)	1513002	10.0000	10.00
44 1,2-Dichloropropane	63	12.548	12.548	(1.055)	814578	10.0000	10.00
45 Trichloroethene	130	12.570	12.570	(1.057)	1042810	10.0000	10.00
46 Dibromomethane	93	12.650	12.650	(1.064)	1001129	10.0000	10.00
47 Bromodichloromethane	83	12.785	12.785	(1.075)	2077103	10.0000	10.00
48 4-Methyl-2-pentanone	43	13.796	13.796	(1.160)	3340986	20.0000	20.00
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	1871041	10.0000	10.00
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	1285805	10.0000	10.00
51 Toluene	91	14.555	14.555	(0.884)	3031085	10.0000	10.00
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	1079279	10.0000	10.00
53 2-Hexanone	58	15.071	15.071	(0.915)	1849741	20.0000	20.00
54 Octane	85	15.211	15.211	(0.924)	969828	10.0000	10.00
55 Dibromochloromethane	129	15.302	15.302	(0.929)	1991767	10.0000	10.00
56 1,2-Dibromoethane	107	15.593	15.593	(0.947)	1624024	10.0000	10.00
57 Tetrachloroethene	129	15.657	15.657	(0.951)	988425	10.0000	10.00
58 Chlorobenzene	112	16.518	16.518	(1.003)	2321862	10.0000	10.00
59 Ethylbenzene	91	16.803	16.803	(1.020)	4044617	10.0000	10.00
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	3245908	10.0000	10.00
61 Bromoform	173	17.400	17.400	(1.056)	1976302	10.0000	10.00
62 Nonane	57	17.363	17.363	(1.054)	1660249	10.0000	10.00
63 Styrene	104	17.417	17.417	(1.057)	2188996	10.0000	10.00
64 o-Xylene	91	17.481	17.481	(1.061)	3301066	10.0000	10.00
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	2187666	10.0000	10.00
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	623056	10.0000	10.00
67 Cumene	105	18.046	18.046	(1.096)	4354042	10.0000	10.00
68 n-Propylbenzene	91	18.546	18.546	(1.126)	5748060	10.0000	10.00
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	4792782	10.0000	10.00

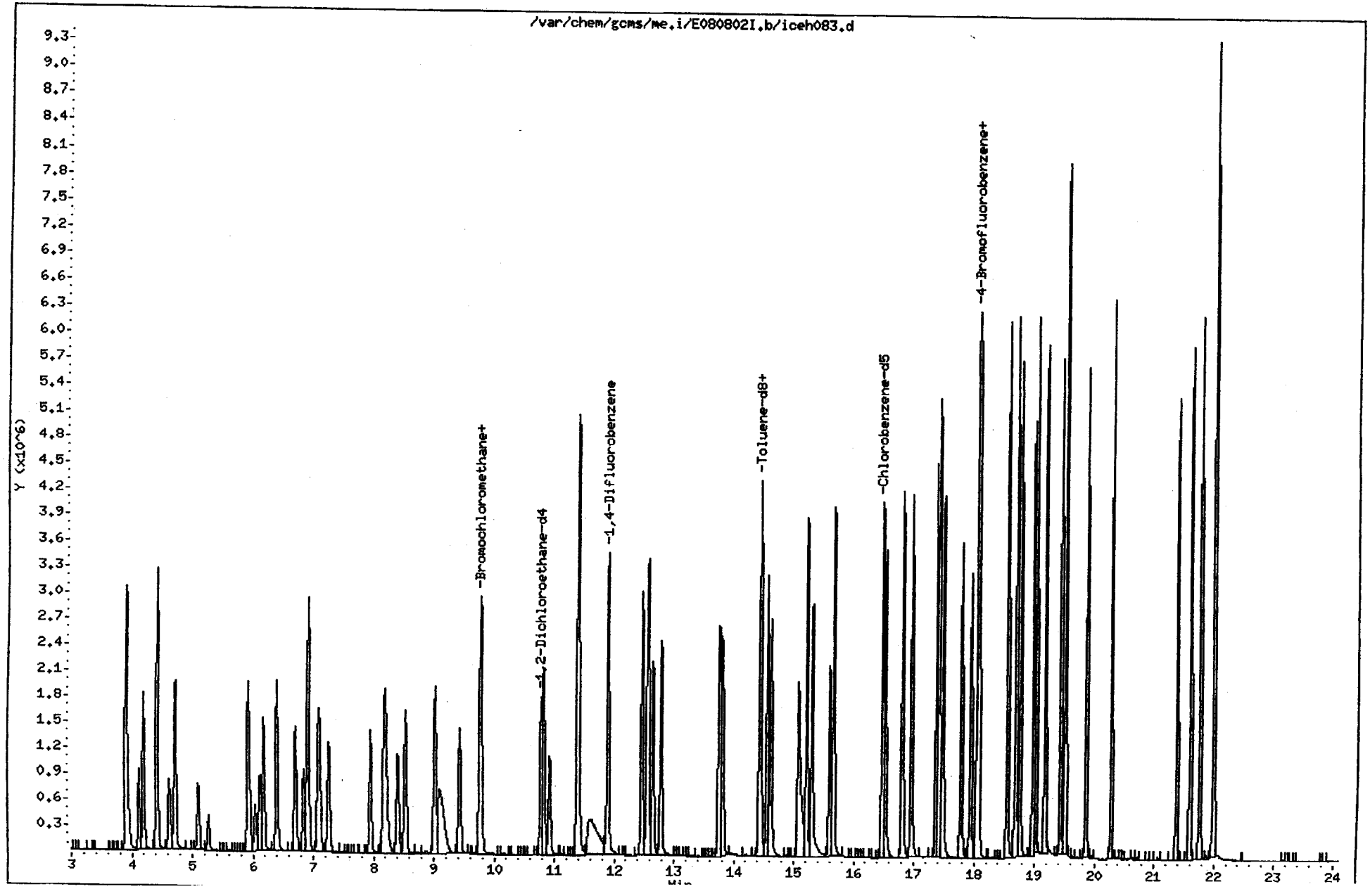
Data File: /var/chem/gcms/me.i/E080802I.b/iceh083.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.139)	1657639	10.0000	10.00
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	1680165	10.0000	10.00
72 Decane	57	19.020	19.020	(1.155)	2199457	10.0000	10.00
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	3673218	10.0000	10.00
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.180)	2620679	10.0000	10.00
75 Benzyl Chloride	91	19.493	19.493	(1.184)	3106543	10.0000	10.00
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.185)	2454297	10.0000	10.00
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	2448059	10.0000	10.00
78 Undecane	57	20.273	20.273	(1.231)	2147358	10.0000	10.00
79 Dodecane	57	21.370	21.370	(1.298)	1897990	10.0000	10.00
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	2248925	10.0000	10.00
81 Napthalene	128	21.763	21.763	(1.321)	5742999	10.0000	10.00
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	2605573	10.0000	10.00

Data File: /var/chem/gcms/me.i/E080802I.b/iceh083.d
Date : 08-AUG-2002 20:33
Client ID: 10ppb
Sample Info: ICEH083,,1,3,,10ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080802I.b/iceh084.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh084.d
Lab Smp Id: ICEH084 Client Smp ID: 15ppb
Inj Date : 08-AUG-2002 21:08
Operator : 60487 Inst ID: me.i
Smp Info : ICEH084,,1,4,,15ppb
Misc Info : E080802I,LA,,,,150 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 99 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.767	9.761	(1.000)	629080	10.0000	
2 1,4-Difluorobenzene	114	11.897	11.892	(1.000)	3569141	10.0000	
3 Chlorobenzene-d5	117	16.475	16.470	(1.000)	3011287	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.905)	709502	10.0000	9.855
5 Toluene-d8	98	14.447	14.442	(0.877)	3351397	10.0000	9.829
6 4-Bromofluorobenzene	95	18.073	18.067	(1.097)	1946344	10.0000	9.807
7 Chlorodifluoromethane	51	4.118	4.118	(0.422)	1833317	15.0000	14.70
8 Dichlorodifluoromethane	85	4.194	4.194	(0.429)	3009257	15.0000	14.63
9 Chloromethane	52	4.409	4.409	(0.451)	258254	15.0000	13.82
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.419	(0.452)	1915107	15.0000	14.26
11 Vinyl Chloride	62	4.613	4.613	(0.472)	996590	15.0000	14.37
12 Methanol	31	4.618	4.635	(0.473)	953091	60.0000	59.53
13 1,3-Butadiene	54	4.721	4.721	(0.483)	745926	15.0000	13.88
14 n-Butane	43	4.721	4.721	(0.483)	1542307	15.0000	13.48
15 Bromomethane	94	5.097	5.097	(0.522)	1046798	15.0000	14.67
16 Chloroethane	64	5.264	5.269	(0.539)	506366	15.0000	14.54
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	3162466	15.0000	14.46
18 Acrolein	56	5.947	5.953	(0.609)	619252	30.0000	30.92
19 Acetonitrile	40	6.033	6.033	(0.618)	658820	30.0000	38.98
20 Acetone	58	6.103	6.109	(0.625)	823675	30.0000	33.39
21 Pentane	57	6.173	6.179	(0.632)	282796	15.0000	13.38
22 Ethyl Ether	31	6.383	6.388	(0.654)	1821425	30.0000	36.96

Data File: /var/chem/gcms/me.i/E080802I.b/iceh084.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.700	6.700	(0.686)	1141184	15.0000	14.44
24 Acrylonitrile	53	6.840	6.840	(0.700)	1510761	30.0000	30.08
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	2415988	15.0000	14.28
26 Methylene Chloride	84	7.082	7.077	(0.725)	1020727	15.0000	13.65
27 3-Chloropropene	39	7.104	7.104	(0.727)	968439	15.0000	14.38
28 Carbon Disulfide	76	7.254	7.254	(0.743)	3599576	15.0000	14.47
29 trans-1,2-Dichloroethene	96	7.948	7.948	(0.814)	1136481	15.0000	14.49
30 Methyl-t-Butyl Ether	73	8.164	8.185	(0.836)	6250807	30.0000	29.90
31 1,1-Dichloroethane	63	8.406	8.400	(0.861)	2235526	15.0000	14.46
32 Vinyl Acetate	43	8.529	8.529	(0.873)	5202749	30.0000	31.30
33 2-Butanone	72	9.067	9.094	(0.928)	1112112	30.0000	36.83
34 Hexane	56	9.019	9.019	(0.923)	982658	15.0000	14.36
35 cis 1,2-Dichloroethene	96	9.428	9.422	(0.965)	1308655	15.0000	14.61
36 Chloroform	83	9.783	9.778	(1.002)	2572486	15.0000	14.56
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.107)	2827066	15.0000	14.62
38 1,2-Dichloroethane	62	10.923	10.918	(0.918)	1829269	15.0000	13.97
39 Benzene	78	11.386	11.381	(0.957)	3229060	15.0000	12.95
40 1-Butanol	41	11.547	11.596	(0.971)	1328994	30.0000	58.94
41 Cyclohexane	69	11.386	11.386	(0.957)	491794	15.0000	12.92
42 Carbon Tetrachloride	117	11.402	11.402	(1.167)	2785497	15.0000	15.12
43 Heptane	43	12.467	12.462	(1.048)	2086990	15.0000	13.13
44 1,2-Dichloropropane	63	12.548	12.548	(1.055)	1132814	15.0000	13.10
45 Trichloroethene	130	12.575	12.570	(1.057)	1458656	15.0000	13.20
46 Dibromomethane	93	12.650	12.650	(1.063)	1423756	15.0000	13.49
47 Bromodichloromethane	83	12.785	12.785	(1.075)	2975528	15.0000	13.96
48 4-Methyl-2-pentanone	43	13.775	13.796	(1.158)	4545033	30.0000	56.70
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	2535446	15.0000	13.17
50 trans-1,3-Dichloropropene	75	14.420	14.415	(0.875)	1866115	15.0000	14.14
51 Toluene	91	14.555	14.555	(0.883)	4347432	15.0000	13.17
52 1,1,2-Trichloroethane	97	14.619	14.614	(0.887)	1547988	15.0000	13.75
53 2-Hexanone	58	15.050	15.071	(0.913)	2713248	30.0000	58.46
54 Octane	85	15.216	15.211	(0.924)	1356133	15.0000	13.48
55 Dibromochloromethane	129	15.302	15.302	(0.929)	2842383	15.0000	13.86
56 1,2-Dibromoethane	107	15.593	15.593	(0.946)	2295175	15.0000	13.10
57 Tetrachloroethene	129	15.663	15.657	(0.951)	1393959	15.0000	13.00
58 Chlorobenzene	112	16.523	16.518	(1.003)	3321127	15.0000	13.27
59 Ethylbenzene	91	16.803	16.803	(1.020)	5786336	15.0000	13.29
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	4642879	15.0000	13.24
61 Bromoform	173	17.400	17.400	(1.056)	2812492	15.0000	13.22
62 Nonane	57	17.363	17.363	(1.054)	2302594	15.0000	12.55
63 Styrene	104	17.422	17.417	(1.057)	3069979	15.0000	13.30
64 o-Xylene	91	17.481	17.481	(1.061)	4711652	15.0000	13.18
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.079)	3091682	15.0000	12.97
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	893719	15.0000	13.99
67 Cumene	105	18.046	18.046	(1.095)	6168138	15.0000	13.42
68 n-Propylbenzene	91	18.546	18.546	(1.126)	8079320	15.0000	12.83
69 4-Ethyltoluene	105	18.686	18.686	(1.134)	6766737	15.0000	12.87

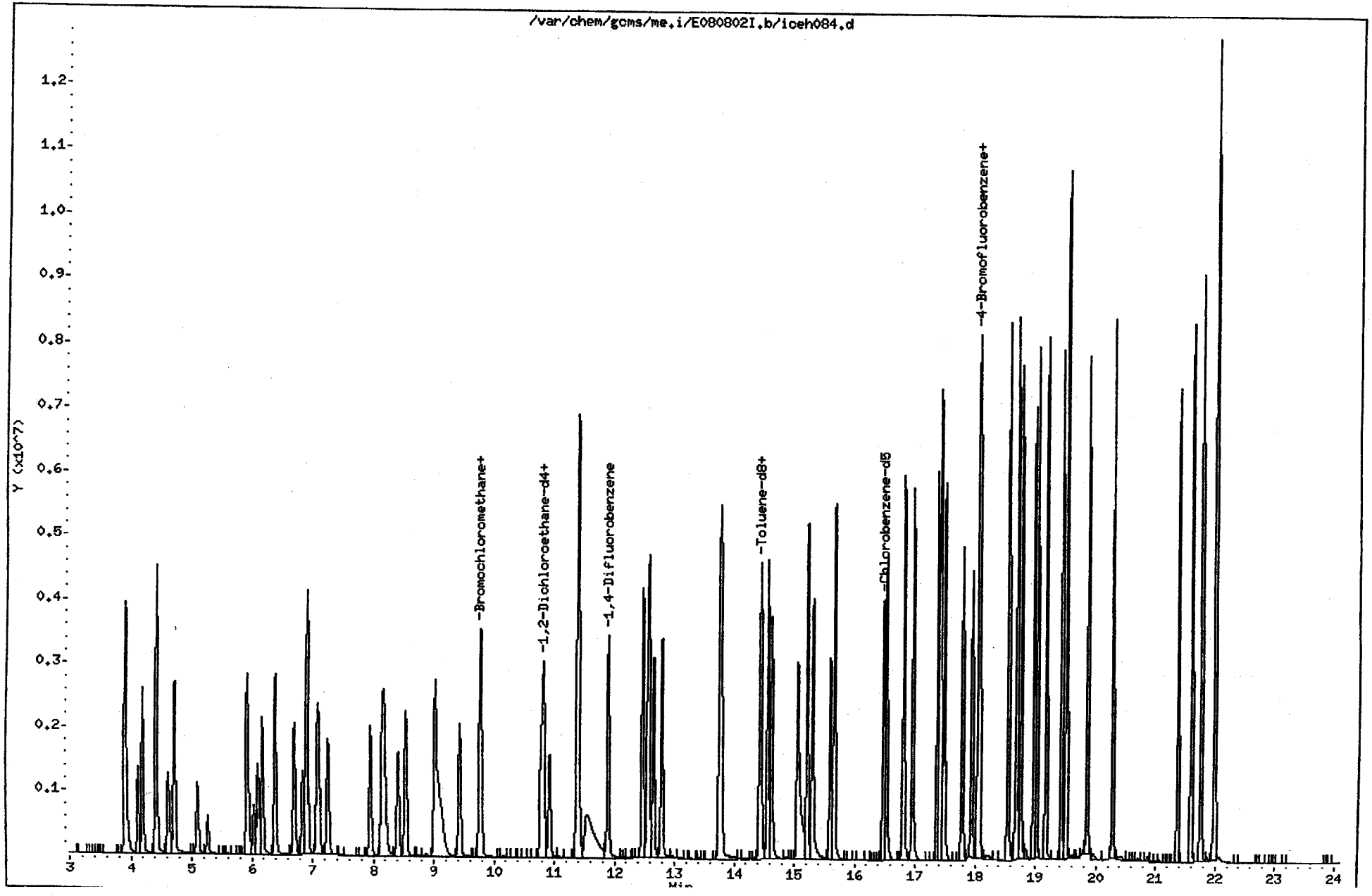
Data File: /var/chem/gcms/me.i/E080802I.b/iceh084.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.138)	2360907	15.0000	12.87
71 Alpha-Methylstyrene	118	18.966	18.966	(1.151)	2376237	15.0000	14.08
72 Decane	57	19.020	19.020	(1.154)	2983857	15.0000	12.29
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	5206107	15.0000	12.99
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.179)	3721011	15.0000	12.91
75 Benzyl Chloride	91	19.498	19.493	(1.184)	4375186	15.0000	12.78
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	3434230	15.0000	12.52
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	3463945	15.0000	12.86
78 Undecane	57	20.273	20.273	(1.231)	3062898	15.0000	12.60
79 Dodecane	57	21.370	21.370	(1.297)	2645723	15.0000	13.28
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	3303822	15.0000	11.75
81 Napthalene	128	21.763	21.763	(1.321)	8622850	15.0000	14.42
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	3703463	15.0000	12.92

Data File: /var/chem/gcms/me.i/E080802I.b/iceh084.d
Date : 08-AUG-2002 21:08
Client ID: 15ppb
Sample Info: ICEH084,,1,4,,15ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080802I.b/iceh085.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/iceh085.d
Lab Smp Id: ICEH085 Client Smp ID: 30ppb
Inj Date : 08-AUG-2002 21:42
Operator : 60487 Inst ID: me.i
Smp Info : ICEH085,,1,5,,30ppb
Misc Info : E080802I,LA,,,,300 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 99 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.772	9.761	(1.000)	608084	10.0000	
2 1,4-Difluorobenzene	114	11.903	11.892	(1.000)	3640035	10.0000	
3 Chlorobenzene-d5	117	16.481	16.470	(1.000)	3055226	10.0000	
4 1,2-Dichloroethane-d4	67	10.784	10.773	(0.906)	695741	10.0000	9.576
5 Toluene-d8	98	14.452	14.442	(0.877)	3302048	10.0000	9.633
6 4-Bromofluorobenzene	95	18.078	18.067	(1.097)	1884759	10.0000	9.482
7 Chlorodifluoromethane	51	4.118	4.118	(0.421)	3382902	30.0000	28.42
8 Dichlorodifluoromethane	85	4.194	4.194	(0.429)	5491364	30.0000	28.06
9 Chloromethane	52	4.403	4.409	(0.451)	434961	30.0000	25.07
10 1,2-Dichlorotetrafluoroethane	135	4.420	4.419	(0.452)	3394862	30.0000	26.85
11 Vinyl Chloride	62	4.613	4.613	(0.472)	1733902	30.0000	26.60
12 Methanol	31	4.613	4.635	(0.472)	1701387	120.000	111.8
13 1,3-Butadiene	54	4.715	4.721	(0.483)	1310973	30.0000	26.07
14 n-Butane	43	4.721	4.721	(0.483)	2668227	30.0000	25.11
15 Bromomethane	94	5.097	5.097	(0.522)	1946826	30.0000	28.56
16 Chloroethane	64	5.264	5.269	(0.539)	950675	30.0000	28.57
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	5710128	30.0000	27.56
18 Acrolein	56	5.947	5.953	(0.609)	1093134	60.0000	57.14
19 Acetonitrile	40	6.039	6.033	(0.618)	1251777	60.0000	72.60(A)
20 Acetone	58	6.093	6.109	(0.623)	1527039	60.0000	63.18(A)
21 Pentane	57	6.179	6.179	(0.632)	513390	30.0000	25.96
22 Ethyl Ether	31	6.378	6.388	(0.653)	3074987	60.0000	63.59(A)

Data File: /var/chem/gcms/me.i/E080802I.b/iceh085.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.706	6.700	(0.686)	2096181	30.0000	27.92
24 Acrylonitrile	53	6.851	6.840	(0.701)	2740317	60.0000	57.13
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.707)	4293531	30.0000	26.93
26 Methylene Chloride	84	7.088	7.077	(0.725)	1837939	30.0000	26.22
27 3-Chloropropene	39	7.109	7.104	(0.728)	1740431	30.0000	27.34
28 Carbon Disulfide	76	7.255	7.254	(0.742)	6636728	30.0000	28.05
29 trans-1,2-Dichloroethene	96	7.954	7.948	(0.814)	2086700	30.0000	27.98
30 Methyl-t-Butyl Ether	73	8.131	8.185	(0.832)	11420200	60.0000	57.17
31 1,1-Dichloroethane	63	8.411	8.400	(0.861)	4093667	30.0000	27.88
32 Vinyl Acetate	43	8.540	8.529	(0.874)	9330256	60.0000	58.44
33 2-Butanone	72	9.057	9.094	(0.927)	2012210	60.0000	66.94(A)
34 Hexane	56	9.024	9.019	(0.923)	1692130	30.0000	26.35
35 cis 1,2-Dichloroethene	96	9.433	9.422	(0.965)	2426039	30.0000	28.40
36 Chloroform	83	9.788	9.778	(1.002)	4768892	30.0000	28.32
37 1,1,1-Trichloroethane	97	10.821	10.816	(1.107)	5220767	30.0000	28.32
38 1,2-Dichloroethane	62	10.929	10.918	(0.918)	3395388	30.0000	26.22
39 Benzene	78	11.391	11.381	(0.957)	5333765	30.0000	22.32
40 1-Butanol	41	11.499	11.596	(0.966)	2559993	60.0000	95.06(A)
41 Cyclohexane	69	11.386	11.386	(0.957)	820385	30.0000	22.46
42 Carbon Tetrachloride	117	11.413	11.402	(1.168)	4820384	30.0000	27.60
43 Heptane	43	12.473	12.462	(1.048)	3554658	30.0000	23.18
44 1,2-Dichloropropane	63	12.553	12.548	(1.055)	1913293	30.0000	22.97
45 Trichloroethene	130	12.580	12.570	(1.057)	2572881	30.0000	23.97
46 Dibromomethane	93	12.661	12.650	(1.064)	2496404	30.0000	24.30
47 Bromodichloromethane	83	12.796	12.785	(1.075)	5333431	30.0000	25.47
48 4-Methyl-2-pentanone	43	13.769	13.796	(1.157)	6717567	60.0000	76.52(A)
49 cis-1,3-Dichloropropene	75	13.753	13.748	(1.155)	3997814	30.0000	21.76
50 trans-1,3-Dichloropropene	75	14.426	14.415	(0.875)	3435900	30.0000	26.43
51 Toluene	91	14.560	14.555	(0.883)	7768836	30.0000	24.30
52 1,1,2-Trichloroethane	97	14.625	14.614	(0.887)	2776122	30.0000	25.26
53 2-Hexanone	58	15.044	15.071	(0.913)	4947586	60.0000	91.34(A)
54 Octane	85	15.216	15.211	(0.923)	2409260	30.0000	24.65
55 Dibromochloromethane	129	15.308	15.302	(0.929)	5110690	30.0000	25.48
56 1,2-Dibromoethane	107	15.604	15.593	(0.947)	4097944	30.0000	24.18
57 Tetrachloroethene	129	15.663	15.657	(0.950)	2470003	30.0000	23.86
58 Chlorobenzene	112	16.529	16.518	(1.003)	5977335	30.0000	24.61
59 Ethylbenzene	91	16.809	16.803	(1.020)	10278405	30.0000	24.36
60 m-Xylene (For p-)	91	16.959	16.954	(1.029)	8287148	30.0000	24.38
61 Bromoform	173	17.411	17.400	(1.056)	4897490	30.0000	23.86
62 Nonane	57	17.368	17.363	(1.054)	3738911	30.0000	21.50
63 Styrene	104	17.427	17.417	(1.057)	5242662	30.0000	23.59
64 o-Xylene	91	17.487	17.481	(1.061)	8284193	30.0000	23.98
65 1,1,2,2-Tetrachloroethane	83	17.793	17.782	(1.080)	5353379	30.0000	23.36
66 1,2,3-Trichloropropane	110	17.949	17.938	(1.089)	1611463	30.0000	25.75
67 Cumene	105	18.051	18.046	(1.095)	10773728	30.0000	24.22
68 n-Propylbenzene	91	18.552	18.546	(1.126)	13634845	30.0000	22.64
69 4-Ethyltoluene	105	18.692	18.686	(1.134)	11662848	30.0000	23.12

Data File: /var/chem/gcms/me.i/E080802I.b/iceh085.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.761	18.756	(1.138)	4059306	30.0000	23.07
71 Alpha-Methylstyrene	118	18.971	18.966	(1.151)	4204810	30.0000	25.49
72 Decane	57	19.025	19.020	(1.154)	4658963	30.0000	20.43
73 1,2,4-Trimethylbenzene	105	19.176	19.170	(1.164)	9038211	30.0000	23.44
74 1,3-Dichlorobenzene	146	19.434	19.428	(1.179)	6554354	30.0000	23.61
75 Benzyl Chloride	91	19.498	19.493	(1.183)	6954311	30.0000	21.45
76 1,4-Dichlorobenzene	146	19.515	19.509	(1.184)	5967554	30.0000	22.74
77 1,2-Dichlorobenzene	146	19.859	19.853	(1.205)	6099591	30.0000	23.52
78 Undecane	57	20.279	20.273	(1.230)	4502381	30.0000	19.81
79 Dodecane	57	21.376	21.370	(1.297)	3513415	30.0000	18.98
80 1,2,4-Trichlorobenzene	180	21.602	21.596	(1.311)	5813574	30.0000	21.78
81 Napthalene	128	21.763	21.763	(1.321)	14568719	30.0000	25.01
82 Hexachlorobutadiene	225	21.995	21.989	(1.335)	6138501	30.0000	22.44

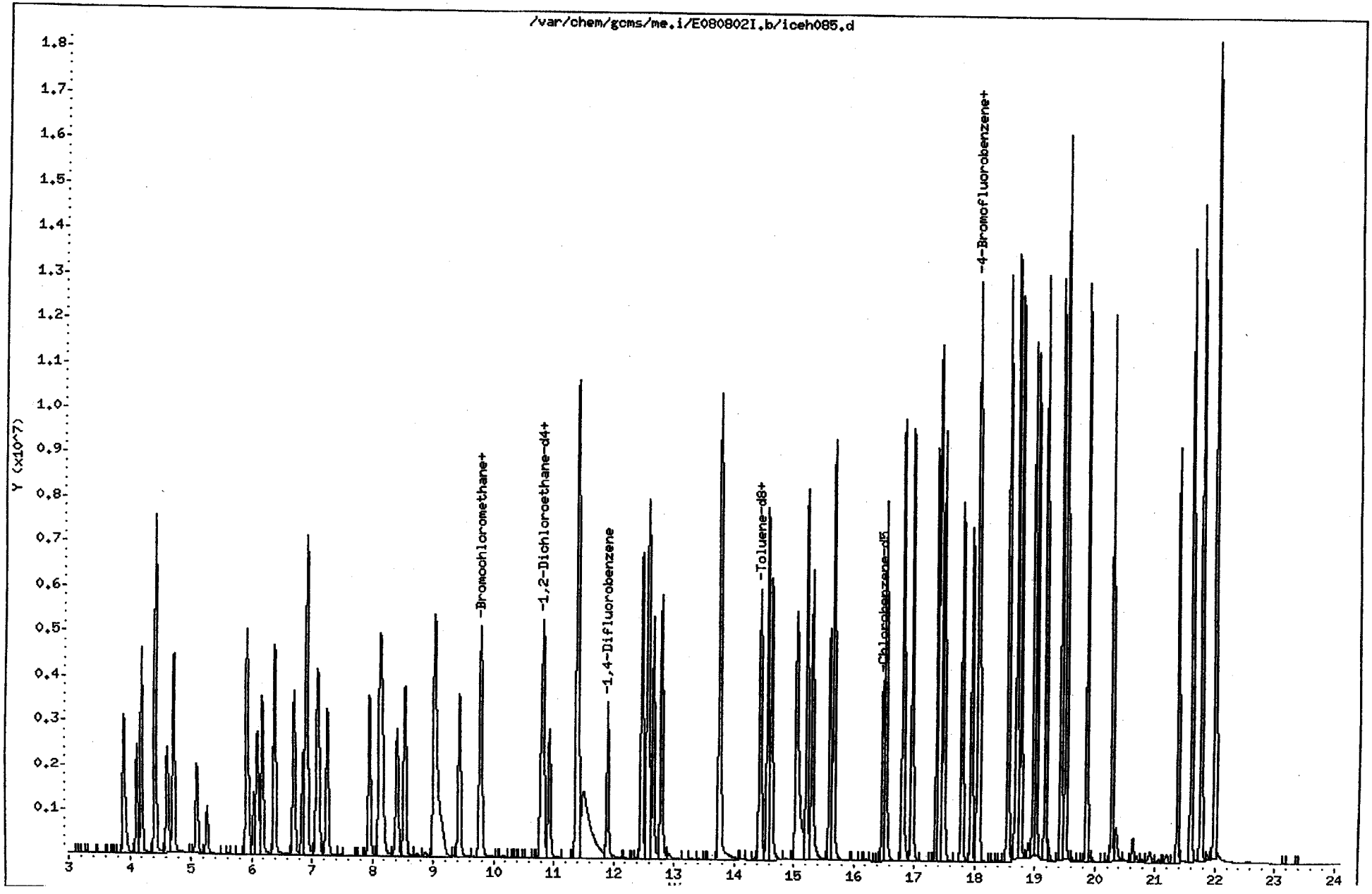
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/me.i/E080802I.b/iceh085.d
Date : 08-AUG-2002 21:42
Client ID: 30ppb
Sample Info: ICEH085,,1,5,,30ppb
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080802I.b/icvh08.d
Lab Smp Id: ICVH08
Inj Date : 08-AUG-2002 22:51
Operator : 60487 Inst ID: me.i
Smp Info : ICVH08,,3,,LCS
Misc Info : E080802I,LA,TO14.sub,,,100 ML
Comment :
Method : /var/chem/gcms/me.i/E080802I.b/LA.m
Meth Date : 09-Aug-2002 11:38 wilesd Quant Type: ISTD
Cal Date : 08-AUG-2002 20:33 Cal File: iceh083.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TO14.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
1 Bromochloromethane	128	9.767	9.761	(1.000)	622176	10.0000	
2 1,4-Difluorobenzene	114	11.897	11.892	(1.000)	3518358	10.0000	
3 Chlorobenzene-d5	117	16.475	16.470	(1.000)	2958691	10.0000	
4 1,2-Dichloroethane-d4	67	10.778	10.773	(0.906)	682419	9.63084	9.631
5 Toluene-d8	98	14.447	14.442	(0.877)	3316299	9.93814	9.938
6 4-Bromofluorobenzene	95	18.068	18.067	(1.097)	1995775	10.3129	10.31
8 Dichlorodifluoromethane	85	4.194	4.194	(0.429)	2286719	11.1274	11.13
9 Chloromethane	52	4.409	4.409	(0.451)	205768	11.1049	11.10
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.419	(0.453)	1514223	11.5456	11.54
11 Vinyl Chloride	62	4.613	4.613	(0.472)	811778	11.7809	11.78
15 Bromomethane	94	5.097	5.097	(0.522)	729164	10.3114	10.31
16 Chloroethane	64	5.270	5.269	(0.540)	384350	10.9932	10.99
17 Trichlorofluoromethane	101	5.926	5.920	(0.607)	2250788	10.4087	10.41
23 1,1-Dichloroethene	96	6.706	6.700	(0.687)	836999	10.6829	10.68
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	1803350	10.9040	10.90
26 Methylene Chloride	84	7.083	7.077	(0.725)	754210	10.6878	10.69
31 1,1-Dichloroethane	63	8.406	8.400	(0.861)	1588644	10.3925	10.39
35 cis 1,2-Dichloroethene	96	9.428	9.422	(0.965)	901821	10.1306	10.13
36 Chloroform	83	9.772	9.778	(1.001)	1886766	10.7294	10.73
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.107)	2083912	10.7978	10.80
38 1,2-Dichloroethane	62	10.924	10.918	(0.918)	1314033	10.3328	10.33

Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Report Date: 09-Aug-2002 11:39

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
39 Benzene	78	11.386	11.381	(0.957)	2576212	11.1273	11.13
42 Carbon Tetrachloride	117	11.402	11.402	(1.167)	1875276	9.72064	9.721
44 1,2-Dichloropropane	63	12.554	12.548	(1.055)	861483	10.6056	10.60
45 Trichloroethene	130	12.570	12.570	(1.057)	1125876	10.8270	10.83
49 cis-1,3-Dichloropropene	75	13.753	13.748	(1.156)	1653171	8.86045	8.860
50 trans-1,3-Dichloropropene	75	14.420	14.415	(0.875)	1258164	9.87779	9.878
51 Toluene	91	14.555	14.555	(0.883)	3363055	11.2004	11.20
52 1,1,2-Trichloroethane	97	14.619	14.614	(0.887)	1130652	10.5753	10.58
56 1,2-Dibromoethane	107	15.593	15.593	(0.946)	1737939	10.8029	10.80
57 Tetrachloroethene	129	15.658	15.657	(0.950)	1097987	11.2137	11.21
58 Chlorobenzene	112	16.518	16.518	(1.003)	2523581	10.9718	10.97
59 Ethylbenzene	91	16.803	16.803	(1.020)	4419815	11.0312	11.03
60 m-Xylene (For p-)	91	16.965	16.954	(1.030)	6558893	20.3982	20.40
63 Styrene	104	17.417	17.417	(1.057)	2476179	11.4192	11.42
64 o-Xylene	91	17.481	17.481	(1.061)	3521327	10.7684	10.77
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.079)	2316118	10.6875	10.69
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.138)	1622177	9.87884	9.879
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	3710970	10.1985	10.20
74 1,3-Dichlorobenzene	146	19.429	19.428	(1.179)	2706942	10.4271	10.43
75 Benzyl Chloride	91	19.493	19.493	(1.183)	1156878	3.75931	3.759
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	2630836	10.8209	10.82
77 1,2-Dichlorobenzene	146	19.854	19.853	(1.205)	2526996	10.4203	10.42
80 1,2,4-Trichlorobenzene	180	21.597	21.596	(1.311)	2488032	11.1681	11.17
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	2220984	8.60478	8.605

Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: icvh08.d
Lab Smp Id: ICVH08
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /var/chem/gcms/me.i/E080802I.b/LA.m
Misc Info: E080802I,LA,TO14.sub,,,100 ML

Calibration Date: 08-AUG-2002
Calibration Time: 20:33

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	632504	376340	888668	622176	-1.63
2 1,4-Difluorobenze	3528268	2099319	4957217	3518358	-0.28
3 Chlorobenzene-d5	2986737	1777109	4196365	2958691	-0.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.76	9.26	10.26	9.77	0.06
2 1,4-Difluorobenze	11.89	11.39	12.39	11.90	0.05
3 Chlorobenzene-d5	16.47	15.97	16.97	16.48	0.03

REA UPPER LIMIT = + 40% of internal standard area.
REA LOWER LIMIT = - 40% of internal standard area.
T UPPER LIMIT = + 0.50 minutes of internal standard RT.
T LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Report Date: 09-Aug-2002 11:39

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: ICVH08
Level: LOW
Data Type: MS DATA
SpikeList File: to14.spk
Sublist File: TO14.sub
Method File: /var/chem/gcms/me.i/E080802I.b/LA.m
Misc Info: E080802I,LA,TO14.sub,,,100 ML

Client SDG: E080802I
Fraction: OTHER

Operator: 60487
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
8 Dichlorodifluorome	10.00	11.13	111.27	65-135
9 Chloromethane	10.00	11.10	111.05	65-135
10 1,2-Dichlorotetraf	10.00	11.54	115.46	65-135
11 Vinyl Chloride	10.00	11.78	117.81	65-135
15 Bromomethane	10.00	10.31	103.11	65-135
16 Chloroethane	10.00	10.99	109.93	65-135
17 Trichlorofluoromet	10.00	10.41	104.09	65-135
23 1,1-Dichloroethene	10.00	10.68	106.83	65-135
25 1,1,2-Trichlorotri	10.00	10.90	109.04	65-135
26 Methylene Chloride	10.00	10.69	106.88	65-135
31 1,1-Dichloroethane	10.00	10.39	103.92	65-135
35 cis 1,2-Dichloroet	10.00	10.13	101.31	65-135
36 Chloroform	10.00	10.73	107.29	65-135
37 1,1,1-Trichloroeth	10.00	10.80	107.98	65-135
38 1,2-Dichloroethane	10.00	10.33	103.33	65-135
39 Benzene	10.00	11.13	111.27	65-135
42 Carbon Tetrachlori	10.00	9.721	97.21	65-135
44 1,2-Dichloropropan	10.00	10.60	106.06	65-135
45 Trichloroethene	10.00	10.83	108.27	65-135
49 cis-1,3-Dichloropr	10.00	8.860	88.60	65-135
50 trans-1,3-Dichloro	10.00	9.878	98.78	65-135
51 Toluene	10.00	11.20	112.00	65-135
52 1,1,2-Trichloroeth	10.00	10.58	105.75	65-135
56 1,2-Dibromoethane	10.00	10.80	108.03	65-135
57 Tetrachloroethene	10.00	11.21	112.14	65-135
58 Chlorobenzene	10.00	10.97	109.72	65-135
59 Ethylbenzene	10.00	11.03	110.31	65-135
60 m-Xylene (For p-)	20.00	20.40	101.99	65-135
63 Styrene	10.00	11.42	114.19	65-135
64 o-Xylene	10.00	10.77	107.68	65-135
65 1,1,2,2-Tetrachlor	10.00	10.69	106.88	65-135
70 1,3,5-Trimethylben	10.00	9.879	98.79	65-135
73 1,2,4-Trimethylben	10.00	10.20	101.99	65-135

Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Report Date: 09-Aug-2002 11:39

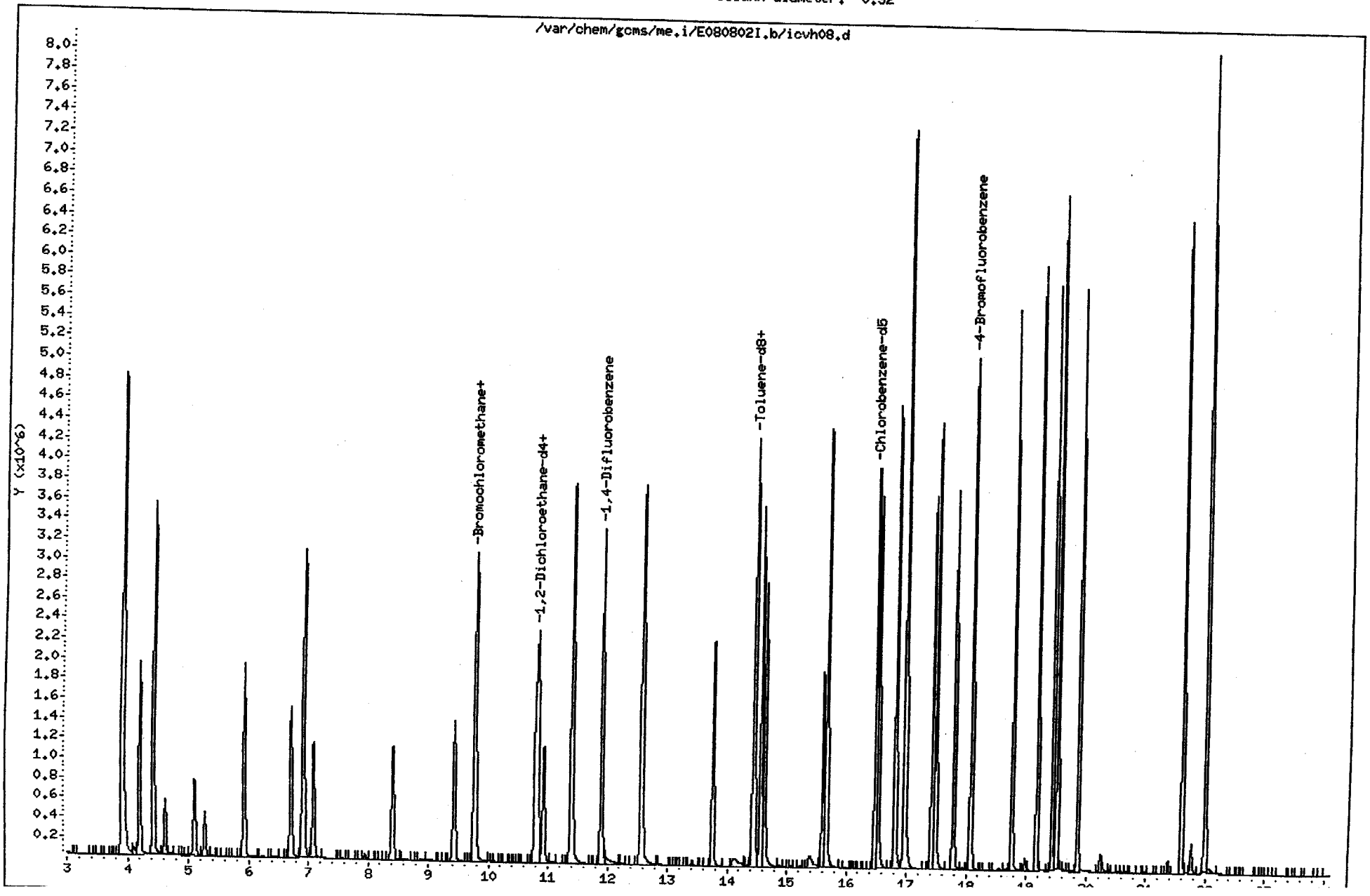
SPIKE COMPOUND	CONC ADDED ppb (v/v)	CONC RECOVERED ppb (v/v)	% RECOVERED	LIMITS
74 1,3-Dichlorobenzen	10.00	10.43	104.27	65-135
75 Benzyl Chloride	10.00	3.759	37.59	30-170
76 1,4-Dichlorobenzen	10.00	10.82	108.21	65-135
77 1,2-Dichlorobenzen	10.00	10.42	104.20	65-135
80 1,2,4-Trichloroben	10.00	11.17	111.68	65-135
82 Hexachlorobutadien	10.00	8.605	86.05	65-135

SURROGATE COMPOUND	CONC ADDED ppb (v/v)	CONC RECOVERED ppb (v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.631	96.31	70-130
$ 5 Toluene-d8	10.00	9.938	99.38	70-130
$ 6 4-Bromofluorobenze	10.00	10.31	103.13	70-130

Data File: /var/chem/gcms/me.i/E080802I.b/icvh08.d
Date : 08-AUG-2002 22:51
Client ID:
Sample Info: ICVH08,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



STL Knoxville GC/MS Air Continuing Calibration Review / Narrative Checklist
Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 3

Analysis Date:	8/9/02	CCAL Batch/ Scan Name:	E080902	Instrument:	MG	ICAL Batch/ Scan Name:	E080802 I	Scanned ☐

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 24 hr of BFB?		✓			✓
3. Did the LCS meet criteria (nonpolar target analytes 70-130%, with up to 2 nonpolars 60-140%; polar target analytes 60-140%, with up to 2 polars 45-155%)?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the CCAL compared to the correct ICAL?		✓			✓
6. Was a mid-level standard used for CCAL?		✓			✓
7. Is the %D ≤ 30% for all target analytes? (up to 4 target analytes %D ≤ 40%)		✓			✓
8. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
9. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
10. Is the first IS documented correctly on the log?		✓			✓
11. Is the ICAL date & time on the CCAL correct?		✓			✓
12. Elution order checked on isomeric pairs/coeluters?					
• cis- and trans- isomers		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / 4-ethyl toluene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
• vinyl acetate / hexane		✓			✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane • dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓			✓
13. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
14. Does the CCAL folder contain **complete** data in the following order: data review checklist, a **complete** runlog, Entech report, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram, manual integrations and leak check report.		✓			✓

Analyst: JMW	Date: 8/12/02	2nd Level Reviewer : [illegible]	Date: 081302
Comments:		Comments:	

STL Knoxville
TO-14 RUN LOG

GCMS Analysis: TO-14 Canisters — Inst: ME

Analyst: DW — Preventive Maintenance Performed ☐

Date: 8/9/02 — System Date ok (y/n): y — Reset Date (y/n): N — IS #1 Area: 6118 67

Time: 1252 — System Time ok (y/n): y — Reset Time (y/n): N — Batch: 2224250

ICAL Date: 8/8/02 — Multiplier Setting (Volts): 1753 — Surr/IS ID: CX-912

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
1252	TUNE	EBF0809	—		—	100	15	✓	—
1326	C.Cal	EMD0809		CX-914			STD	✓	
1400	Ref	ERF0809		CX-915 E6AR51AC			16	✓	
1434	BK	EBK0809				500	15	—	
1510	BLK	B		E6AR51AA			15	✓	
1550	H060185	E5ORG	93026	15.475		200	2	N	X
1624	G180110	E4W73	93261	(1AA) 688.67	S	150	1	✓	X1
1658		D		(1AC)	S		1	✓	Dup
1733	G310166	E5MN9	12821	11.25	—	100	3	RR 75 ml	—
1807		PA	1769	21.4		50	4	RR 30 ml	—
1841		PC	04719	72.67		15	5	IN-Can	—
1915		PD	93132	69.67		15	6	RR in Can	—
1949		PG	12639	(INJ 11 ml) 104.5		10(11)	7	RR in Can	—
2023		PH	12825	110		10(11)	8	RR in Can	—
2058		PK	1887	43.8		25	9	RR 20 ml	—
2132	H060185	E5ORQ	0008			500	10	RR 300 ml	—
2208		T	1762				11	RR 2,000 ml	—
2243		W	1756				12	RR 300 ml	—
2319		O	93046				13	RR 100 ml	—
2354		3	1886				14	RR 500 ml	—
0028		GR	93026				2	RR 250 ml	—

DW 8/12/02

Analyst: DW — Date: 8/12/02 — Approved by: _____ — Date: _____

0000202

MS027R7.DOC, 7/3/01

020809
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB	101ml	15	8/9/02	12:52:45 PM
CCV	100ml	STD	8/9/02	1:26:42 PM
REF	100ml	16	8/9/02	2:00:56 PM
BLK	500ml	15	8/9/02	2:35:35 PM
BLK	499ml	15	8/9/02	3:10:59 PM
E50RG	201ml	2	8/9/02	3:50:42 PM
E4W73	152ml	1	8/9/02	4:25:06 PM
E4W73D	151ml	1	8/9/02	4:59:25 PM
E5MN9	100ml	3	8/9/02	5:33:50 PM
E5MPA	49ml	4	8/9/02	6:08:15 PM
E5MPC	16ml	5	8/9/02	6:42:29 PM
E5MPD	16ml	6	8/9/02	7:16:16 PM
E5MPG	11ml	7	8/9/02	7:50:25 PM
E5MPH	11ml	8	8/9/02	8:24:38 PM
E5MPK	26ml	9	8/9/02	8:58:54 PM
E50RQ	501ml	10	8/9/02	9:33:34 PM
E50RT	501ml	11	8/9/02	10:09:12 PM
E50RW	500ml	12	8/9/02	10:44:10 PM
E50R0	500ml	13	8/9/02	11:19:57 PM
E50R3	499ml	14	8/9/02	11:55:03 PM
E50RGR	501ml	2	8/10/02	12:29:37 AM

Data File: /var/chem/gcms/me.i/E080902.b/ebf0809.d

Date : 09-AUG-2002 12:52

Client ID:

Instrument: me.i

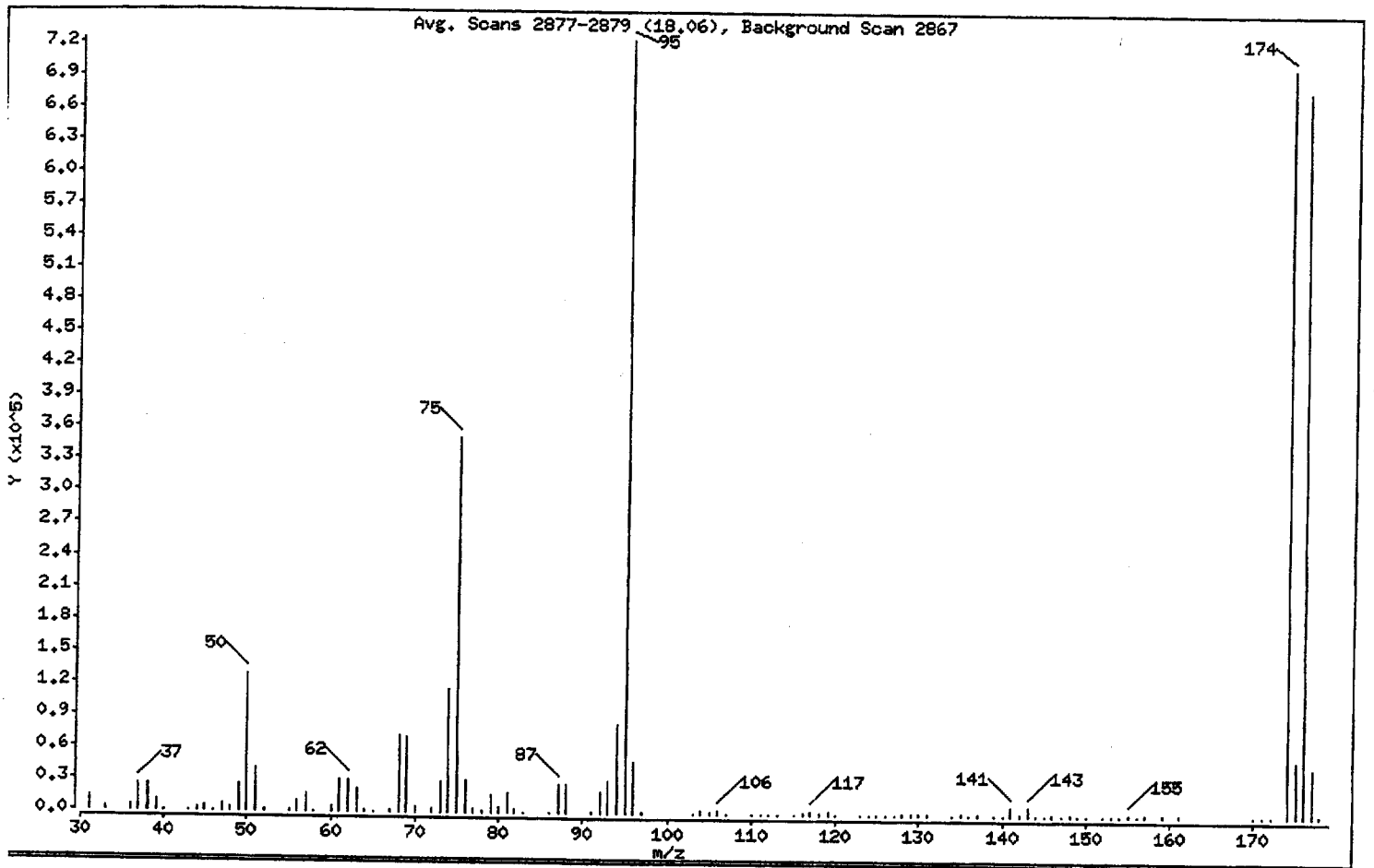
Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

1 BFB



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.62
75	30.00 - 60.00% of mass 95	48.54
96	5.00 - 9.00% of mass 95	6.59
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	96.83
175	5.00 - 9.00% of mass 174	7.17 (7.41)
176	95.00 - 101.00% of mass 174	93.75 (96.82)
177	5.00 - 9.00% of mass 176	6.15 (6.56)

Data File: /var/chem/gcms/me.i/E080902.b/ebf0809.d

Date : 09-AUG-2002 12:52

Client ID:

Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32

Data File: ebf0809.d

Spectrum: Avg. Scans 2877-2879 (18.06), Background Scan 2867

Location of Maximum: 95.00

Number of points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	13414	68.00	71520	106.00	2782	142.00	982
33.00	2676	69.00	69680	107.00	675	143.00	8304
36.00	4507	70.00	5077	110.00	363	144.00	417
37.00	25744	72.00	3265	111.00	477	145.00	601
38.00	24200	73.00	28344	112.00	344	146.00	1112
39.00	9344	74.00	114384	113.00	481	147.00	452
40.00	19	75.00	350656	115.00	687	148.00	1995
43.00	234	76.00	30512	116.00	2228	149.00	490
44.00	2618	77.00	3315	117.00	3754	150.00	812
45.00	5244	78.00	2438	118.00	2261	152.00	373
46.00	355	79.00	16384	119.00	3421	153.00	469
47.00	7221	80.00	4599	120.00	197	154.00	505
48.00	3544	81.00	17440	123.00	67	155.00	1919
49.00	25664	82.00	3522	124.00	426	156.00	84
50.00	127328	83.00	406	125.00	177	157.00	1505
51.00	39136	86.00	675	126.00	306	159.00	869
52.00	1713	87.00	26176	127.00	184	161.00	955
55.00	1521	88.00	25816	128.00	2403	170.00	274
56.00	9291	91.00	2424	129.00	1289	171.00	368
57.00	16712	92.00	19832	130.00	2433	172.00	612
58.00	675	93.00	29176	131.00	954	174.00	699584
60.00	5454	94.00	83264	134.00	82	175.00	51832
61.00	29096	95.00	722496	135.00	1160	176.00	677312
62.00	29608	96.00	47616	136.00	194	177.00	44424
63.00	21608	97.00	1441	137.00	1395	178.00	1386
64.00	2018	103.00	343	139.00	99		
65.00	87	104.00	2774	140.00	357		
67.00	1830	105.00	1494	141.00	7862		

Data File: /var/chem/gcms/me.i/E080902.b/ebf0809.d

Date : 09-AUG-2002 12:52

Client ID:

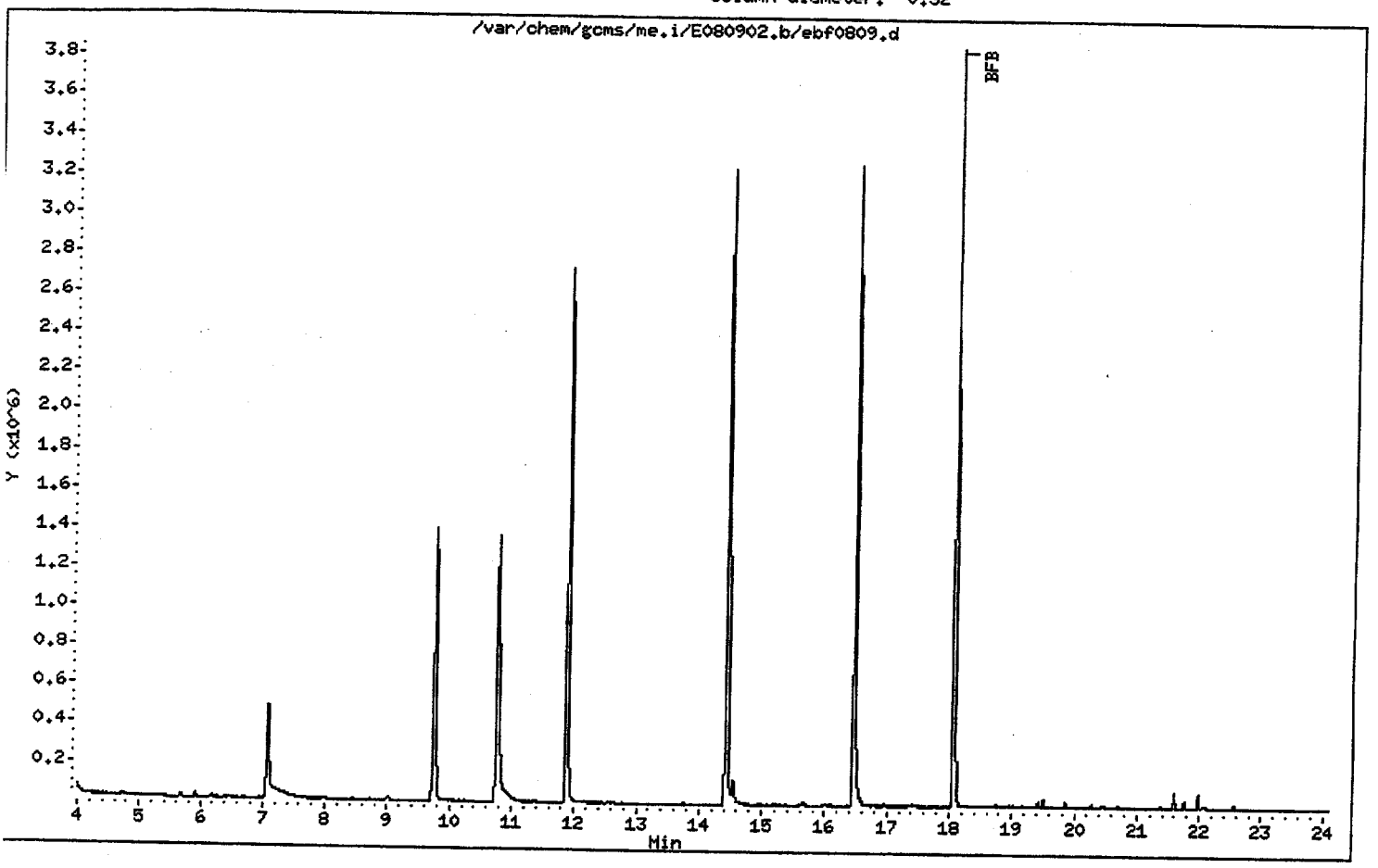
Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 60487

Column phase: DB-5

Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd0809.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/me.i/E080902.b/LA.m

Injection Date: 09-AUG-2002 13:26
Init. Cal. Date(s): 08-AUG-2002 08-AUG-2002
Init. Cal. Times: 18:16 21:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 1,2-Dichloroethane-d4	0.20004	0.20204	0.000	-1.00053	30.00000	Averaged
$ 5 Toluene-d8	1.12811	1.11974	0.000	0.74203	30.00000	Averaged
$ 6 4-Bromofluorobenzene	0.65550	0.64693	0.000	1.30719	30.00000	Averaged
7 Chlorodifluoromethane	1.95591	1.97258	0.000	-0.85217	30.00000	Averaged
8 Dichlorodifluoromethane	3.22514	3.24708	0.000	-0.68018	30.00000	Averaged
9 Chloromethane	0.28946	0.28858	0.000	0.30200	30.00000	Averaged
10 1,2-Dichlorotetrafluoroetha	2.12681	2.08667	0.000	1.88746	30.00000	Averaged
11 Vinyl Chloride	1.07690	1.08003	0.000	-0.28992	30.00000	Averaged
12 Methanol	0.25023	0.24835	0.000	0.75113	30.00000	Averaged
13 1,3-Butadiene	0.84410	0.81900	0.000	2.97377	30.00000	Averaged
14 n-Butane	2.05635	1.66326	0.000	19.11605	30.00000	Averaged
15 Bromomethane	1.11649	1.12165	0.000	-0.46207	30.00000	Averaged
16 Chloroethane	0.54797	0.53427	0.000	2.49885	30.00000	Averaged
17 Trichlorofluoromethane	3.41771	3.39203	0.000	0.75151	30.00000	Averaged
18 Acrolein	0.30348	0.32578	0.000	-7.34949	30.00000	Averaged
19 Acetonitrile	0.35760	0.33974	0.000	4.99535	30.00000	Averaged
20 Acetone	0.50141	0.44010	0.000	12.22809	30.00000	Averaged
21 Pentane	0.33894	0.31859	0.000	6.00503	30.00000	Averaged
22 Ethyl Ether	0.99628	1.00854	0.000	-1.23077	30.00000	Averaged
23 1,1-Dichloroethene	1.24138	1.22195	0.000	1.56477	30.00000	Averaged
24 Acrylonitrile	0.76943	0.80151	0.000	-4.16997	30.00000	Averaged
25 1,1,2-Trichlorotrifluoroeth	2.64795	2.63685	0.000	0.41919	30.00000	Averaged
26 Methylene Chloride	1.20700	1.12433	0.000	6.84883	30.00000	Averaged
27 3-Chloropropene	1.05610	1.04196	0.000	1.33904	30.00000	Averaged
28 Carbon Disulfide	3.92573	3.87000	0.000	1.41972	30.00000	Averaged
29 trans-1,2-Dichloroethene	1.23436	1.20760	0.000	2.16782	30.00000	Averaged
30 Methyl-t-Butyl Ether	3.16239	3.32434	0.000	-5.12133	30.00000	Averaged
31 1,1-Dichloroethane	2.42207	2.38814	0.000	1.40118	30.00000	Averaged
32 Vinyl Acetate	2.59479	2.77562	0.000	-6.96913	30.00000	Averaged
33 2-Butanone	0.58156	0.58288	0.000	-0.22630	30.00000	Averaged
34 Hexane	1.05819	1.06045	0.000	-0.21318	30.00000	Averaged
35 cis 1,2-Dichloroethene	1.41004	1.40960	0.000	0.03133	30.00000	Averaged
36 Chloroform	2.78469	2.75469	0.000	1.07729	30.00000	Averaged
37 1,1,1-Trichloroethane	3.03443	3.00441	0.000	0.98958	30.00000	Averaged
38 1,2-Dichloroethane	0.36212	0.35581	0.000	1.74284	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd0809.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/me.i/E080902.b/LA.m

Injection Date: 09-AUG-2002 13:26
Init. Cal. Date(s): 08-AUG-2002 08-AUG-2002
Init. Cal. Times: 18:16 21:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
39 Benzene	0.69693	0.64783	0.000	7.04529	30.00000	Averaged
40 1-Butanol	0.11421	0.12440	0.000	-8.91411	30.00000	Averaged
41 Cyclohexane	0.10665	0.09951	0.000	6.69402	30.00000	Averaged
42 Carbon Tetrachloride	2.72560	2.98587	0.000	-9.54891	30.00000	Averaged
43 Heptane	0.44702	0.42018	0.000	6.00426	30.00000	Averaged
44 1,2-Dichloropropane	0.24489	0.22720	0.000	7.22269	30.00000	Averaged
45 Trichloroethene	0.31158	0.29306	0.000	5.94577	30.00000	Averaged
46 Dibromomethane	0.29893	0.27987	0.000	6.37741	30.00000	Averaged
47 Bromodichloromethane	0.58212	0.57366	0.000	1.45379	30.00000	Averaged
48 4-Methyl-2-pentanone	0.44931	0.47683	0.000	-6.12343	30.00000	Averaged
49 cis-1,3-Dichloropropene	0.52407	0.51951	0.000	0.86950	30.00000	Averaged
50 trans-1,3-Dichloropropene	0.43324	0.42325	0.000	2.30593	30.00000	Averaged
51 Toluene	1.12957	0.99121	0.000	12.24880	30.00000	Averaged
52 1,1,2-Trichloroethane	0.37209	0.35891	0.000	3.54370	30.00000	Averaged
53 2-Hexanone	0.29770	0.30170	0.000	-1.34483	30.00000	Averaged
54 Octane	0.33269	0.32755	0.000	1.54433	30.00000	Averaged
55 Dibromochloromethane	0.67061	0.64423	0.000	3.93442	30.00000	Averaged
56 1,2-Dibromoethane	0.58883	0.53239	0.000	9.58563	30.00000	Averaged
57 Tetrachloroethene	0.36337	0.32264	0.000	11.20862	30.00000	Averaged
58 Chlorobenzene	0.84913	0.75976	0.000	10.52519	30.00000	Averaged
59 Ethylbenzene	1.47525	1.32986	0.000	9.85549	30.00000	Averaged
60 m-Xylene (For p-)	1.19468	1.07366	0.000	10.12986	30.00000	Averaged
61 Bromoform	0.70627	0.64074	0.000	9.27751	30.00000	Averaged
62 Nonane	0.62399	0.54032	0.000	13.40753	30.00000	Averaged
63 Styrene	0.75677	0.71911	0.000	4.97662	30.00000	Averaged
64 o-Xylene	1.21826	1.08132	0.000	11.24024	30.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.80395	0.72196	0.000	10.19804	30.00000	Averaged
66 1,2,3-Trichloropropane	0.20701	0.20603	0.000	0.47189	30.00000	Averaged
67 Cumene	1.52901	1.42414	0.000	6.85871	30.00000	Averaged
68 n-Propylbenzene	2.14796	1.89241	0.000	11.89728	30.00000	Averaged
69 4-Ethyltoluene	1.78916	1.57380	0.000	12.03730	30.00000	Averaged
70 1,3,5-Trimethylbenzene	0.62641	0.54605	0.000	12.82889	30.00000	Averaged
71 Alpha-Methylstyrene	0.53829	0.55325	0.000	-2.77903	30.00000	Averaged
72 Decane	0.82531	0.72614	0.000	12.01665	30.00000	Averaged
73 1,2,4-Trimethylbenzene	1.35480	1.21495	0.000	10.32263	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd0809.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/me.i/E080902.b/LA.m

Injection Date: 09-AUG-2002 13:26
Init. Cal. Date(s): 08-AUG-2002 08-AUG-2002
Init. Cal. Times: 18:16 21:42
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
74 1,3-Dichlorobenzene	0.98437	0.87120	0.000	11.49687	30.00000	Averaged
75 Benzyl Chloride	1.14915	1.02842	0.000	10.50561	30.00000	Averaged
76 1,4-Dichlorobenzene	0.95119	0.81270	0.000	14.55951	30.00000	Averaged
77 1,2-Dichlorobenzene	0.93271	0.81809	0.000	12.28868	30.00000	Averaged
78 Undecane	0.83518	0.71994	0.000	13.79835	30.00000	Averaged
79 Dodecane	0.68501	0.64560	0.000	5.75371	30.00000	Averaged
80 1,2,4-Trichlorobenzene	1.06876	0.76028	0.000	28.86352	30.00000	Averaged
81 Napthalene	1.94531	1.95335	0.000	-0.41356	30.00000	Averaged
82 Hexachlorobutadiene	0.97649	0.89554	0.000	8.28943	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080902.b/emd0809.d
Lab Smp Id: CCV
Inj Date : 09-AUG-2002 13:26
Operator : 60487
Smp Info : CCV,,2,3,,10PPBV
Misc Info : E080902,LA,,,,100ML
Comment :
Method : /chem/gcms/me.i/E080902.b/LA.m
Meth Date : 09-Aug-2002 13:51 chemist
Cal Date : 09-AUG-2002 13:26
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50
Processing Host: qmidhp01

Client Smp ID: 10PPBV

Inst ID: me.i

Quant Type: ISTD
Cal File: emd0809.d
Continuing Calibration Sample

Compound Sublist: RTall.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.761	9.761	(1.000)	611867	10.0000	
2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3389435	10.0000	
3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2876082	10.0000	
4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.906)	684807	10.0000	10.10
5 Toluene-d8	98	14.442	14.442	(0.877)	3220458	10.0000	9.926
6 4-Bromofluorobenzene	95	18.067	18.067	(1.097)	1860626	10.0000	9.869
7 Chlorodifluoromethane	51	4.118	4.118	(0.422)	1206956	10.0000	10.08
8 Dichlorodifluoromethane	85	4.194	4.194	(0.430)	1986784	10.0000	10.07
9 Chloromethane	52	4.409	4.409	(0.452)	176574	10.0000	9.970
10 1,2-Dichlorotetrafluoroethane	135	4.419	4.419	(0.453)	1276764	10.0000	9.811
11 Vinyl Chloride	62	4.613	4.613	(0.473)	660833	10.0000	10.03
12 Methanol	31	4.629	4.629	(0.474)	607831	40.0000	39.70
13 1,3-Butadiene	54	4.715	4.715	(0.483)	501118	10.0000	9.703
14 n-Butane	43	4.721	4.721	(0.484)	1017695	10.0000	8.088
15 Bromomethane	94	5.097	5.097	(0.522)	686298	10.0000	10.05
16 Chloroethane	64	5.264	5.264	(0.539)	326905	10.0000	9.750
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	2075473	10.0000	9.925
18 Acrolein	56	5.947	5.947	(0.609)	398672	20.0000	21.47
19 Acetonitrile	40	6.033	6.033	(0.618)	415746	20.0000	19.00
20 Acetone	58	6.109	6.109	(0.626)	538566	20.0000	17.55
21 Pentane	57	6.173	6.173	(0.632)	194935	10.0000	9.399

Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.388	6.388	(0.654)	1234188	20.0000	20.25
23 1,1-Dichloroethene	96	6.700	6.700	(0.686)	747674	10.0000	9.844
24 Acrylonitrile	53	6.835	6.835	(0.700)	980841	20.0000	20.83
25 1,1,2-Trichlorotrifluoroethane	101	6.905	6.905	(0.707)	1613401	10.0000	9.958
26 Methylene Chloride	84	7.077	7.077	(0.725)	687944	10.0000	9.315
27 3-Chloropropene	39	7.104	7.104	(0.728)	637541	10.0000	9.866
28 Carbon Disulfide	76	7.249	7.249	(0.743)	2367926	10.0000	9.858
29 trans-1,2-Dichloroethene	96	7.943	7.943	(0.814)	738893	10.0000	9.783
30 Methyl-t-Butyl Ether	73	8.180	8.180	(0.838)	4068117	20.0000	21.02
31 1,1-Dichloroethane	63	8.400	8.400	(0.861)	1461223	10.0000	9.860
32 Vinyl Acetate	43	8.524	8.524	(0.873)	3396625	20.0000	21.39
33 2-Butanone	72	9.089	9.089	(0.931)	713285	20.0000	20.04
34 Hexane	56	9.014	9.014	(0.923)	648855	10.0000	10.02
35 cis 1,2-Dichloroethene	96	9.422	9.422	(0.965)	862489	10.0000	9.997
36 Chloroform	83	9.772	9.772	(1.001)	1685506	10.0000	9.892
37 1,1,1-Trichloroethane	97	10.810	10.810	(1.107)	1838299	10.0000	9.901
38 1,2-Dichloroethane	62	10.913	10.913	(0.918)	1205995	10.0000	9.826
39 Benzene	78	11.381	11.381	(0.957)	2195784	10.0000	9.295
40 1-Butanol	41	11.607	11.607	(0.976)	843259	20.0000	21.78
41 Cyclohexane	69	11.381	11.381	(0.957)	337282	10.0000	9.330
42 Carbon Tetrachloride	117	11.397	11.397	(1.168)	1826957	10.0000	10.95
43 Heptane	43	12.462	12.462	(1.048)	1424181	10.0000	9.400
44 1,2-Dichloropropane	63	12.543	12.543	(1.055)	770091	10.0000	9.278
45 Trichloroethene	130	12.570	12.570	(1.057)	993293	10.0000	9.405
46 Dibromomethane	93	12.645	12.645	(1.063)	948601	10.0000	9.362
47 Bromodichloromethane	83	12.785	12.785	(1.075)	1944377	10.0000	9.855
48 4-Methyl-2-pentanone	43	13.796	13.796	(1.160)	3232346	20.0000	21.22
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	1760840	10.0000	9.913
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	1217288	10.0000	9.769
51 Toluene	91	14.549	14.549	(0.883)	2850813	10.0000	8.775
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	1032248	10.0000	9.646
53 2-Hexanone	58	15.071	15.071	(0.915)	1735428	20.0000	20.27
54 Octane	85	15.211	15.211	(0.924)	942057	10.0000	9.846
55 Dibromochloromethane	129	15.297	15.297	(0.929)	1852850	10.0000	9.606
56 1,2-Dibromoethane	107	15.587	15.587	(0.946)	1531191	10.0000	9.041
57 Tetrachloroethene	129	15.657	15.657	(0.951)	927951	10.0000	8.879
58 Chlorobenzene	112	16.518	16.518	(1.003)	2185129	10.0000	8.947
59 Ethylbenzene	91	16.798	16.798	(1.020)	3824786	10.0000	9.014
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	3087941	10.0000	8.987
61 Bromoform	173	17.400	17.400	(1.056)	1842828	10.0000	9.072
62 Nonane	57	17.357	17.357	(1.054)	1554017	10.0000	8.659
63 Styrene	104	17.417	17.417	(1.057)	2068223	10.0000	9.502
64 o-Xylene	91	17.476	17.476	(1.061)	3109977	10.0000	8.876
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	2076416	10.0000	8.980
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	592572	10.0000	9.953
67 Cumene	105	18.041	18.041	(1.095)	4095942	10.0000	9.314
68 n-Propylbenzene	91	18.541	18.541	(1.126)	5442723	10.0000	8.810

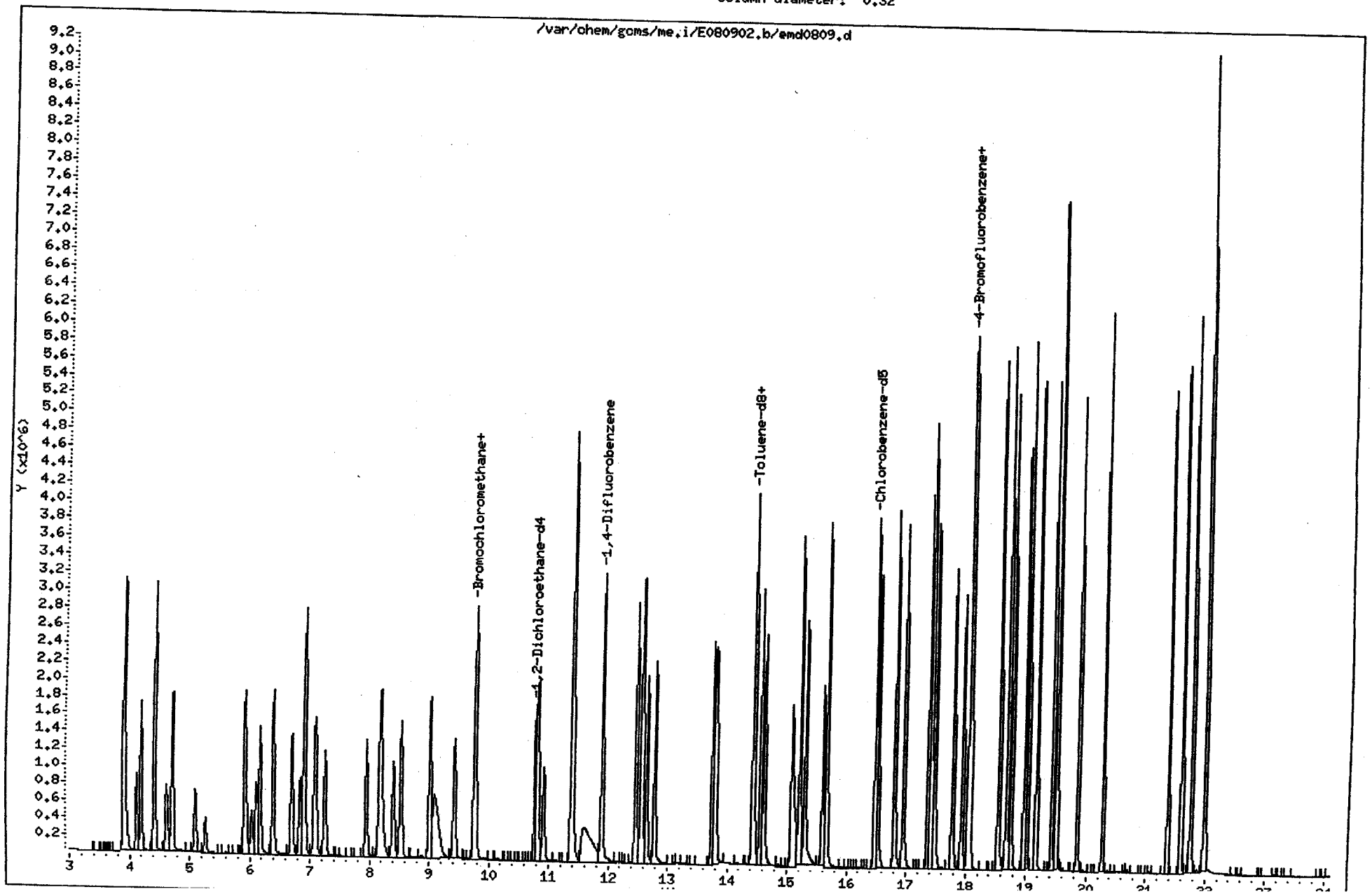
Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Report Date: 09-Aug-2002 14:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	4526370	10.0000	8.796
70 1,3,5-Trimethylbenzene	120	18.751	18.751	(1.138)	1570472	10.0000	8.717
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	1591185	10.0000	10.28
72 Decane	57	19.020	19.020	(1.155)	2088428	10.0000	8.798
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	3494289	10.0000	8.968
74 1,3-Dichlorobenzene	146	19.423	19.423	(1.179)	2505646	10.0000	8.850
75 Benzyl Chloride	91	19.493	19.493	(1.184)	2957829	10.0000	8.949
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.185)	2337384	10.0000	8.544
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	2352899	10.0000	8.771
78 Undecane	57	20.273	20.273	(1.231)	2070610	10.0000	8.620
79 Dodecane	57	21.370	21.370	(1.298)	1856798	10.0000	9.425
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	2186613	10.0000	7.114
81 Napthalene	128	21.758	21.758	(1.321)	5618000	10.0000	10.04
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	2575651	10.0000	9.171

Data File: /var/chem/gcms/me.i/E080902.b/emd0809.d
Date : 09-AUG-2002 13:26
Client ID: 10PPBV
Sample Info: CCV,,2,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



---------- Leak Check Report ----------

8/9/02 3:33:47 PM
Leak Check for C:\smart\E080902.seq
Report File: C:\smart\E080902.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 12
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1		Auto2	Start	End	Rate(psi/min)
1	2	—	2.7	3.0	1.20	
1	1	—	2.7	3.0	1.20	
1	3	—	2.0	2.1	0.40	
1	4	—	1.9	2.1	0.80	
1	5	—	1.9	2.1	0.80	
1	6	—	1.9	2.0	0.40	
1	7	—	1.8	1.9	0.40	
1	8	—	1.9	2.1	0.80	
1	9	—	1.9	2.1	0.80	
1	10	—	1.9	2.1	0.80	
1	11	—	1.9	2.0	0.40	
1	12	—	1.9	2.1	0.80	
1	13	—	2.2	2.4	0.80	
1	14	—	2.2	2.3	0.40	

Raw QC Data

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: E50GF1AA
Dilution factor: 1

Date Received: 07/26/02
Date Extracted:08/05/02
Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.50	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

FORM I

Data File: /var/chem/gcms/me.i/E080502.b/ebk0805b.d
Report Date: 05-Aug-2002 17:17

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080502.b/ebk0805b.d
Lab Smp Id: BLANK
Inj Date : 05-AUG-2002 16:42 E50GFIAA
Operator : 60487 Inst ID: me.i
Smp Info : BLANK,,3,,BLANK
Misc Info : E080502,LA,,,,500ML
Comment :
Method : /var/chem/gcms/me.i/E080502.b/LA.m
Meth Date : 05-Aug-2002 17:16 wilesd Quant Type: ISTD
Cal Date : 05-AUG-2002 14:58 Cal File: emd0805.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.761	9.767	(1.000)	269939	10.0000	
* 2 1,4-Difluorobenzene	114	11.891	11.897	(1.000)	1430793	10.0000	
* 3 Chlorobenzene-d5	117	16.469	16.475	(1.000)	1187808	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.767	10.773	(0.905)	360798	10.5162	10.52
$ 5 Toluene-d8	98	14.441	14.447	(0.877)	1380778	10.3574	10.36
$ 6 4-Bromofluorobenzene	95	18.067	18.073	(1.097)	854302	9.28076	9.281
26 Methylene Chloride	84	7.082	7.082	(0.726)	3282	0.10050	0.1005

Data File: /var/chem/gcms/me.i/E080502.b/ebk0805b.d
Report Date: 05-Aug-2002 17:17

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: ebk0805b.d
Lab Smp Id: BLANK
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /var/chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,500ML

Calibration Date: 05-AUG-2002
Calibration Time: 14:58

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	229419	136504	322334	269939	17.66
2 1,4-Difluorobenze	1302532	775007	1830057	1430793	9.85
3 Chlorobenzene-d5	1151035	684866	1617204	1187808	3.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.77	9.27	10.27	9.76	-0.06
2 1,4-Difluorobenze	11.90	11.40	12.40	11.89	-0.05
3 Chlorobenzene-d5	16.48	15.98	16.98	16.47	-0.03

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080502.b/ebk0805b.d
Report Date: 05-Aug-2002 17:17

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: BLANK
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,500ML

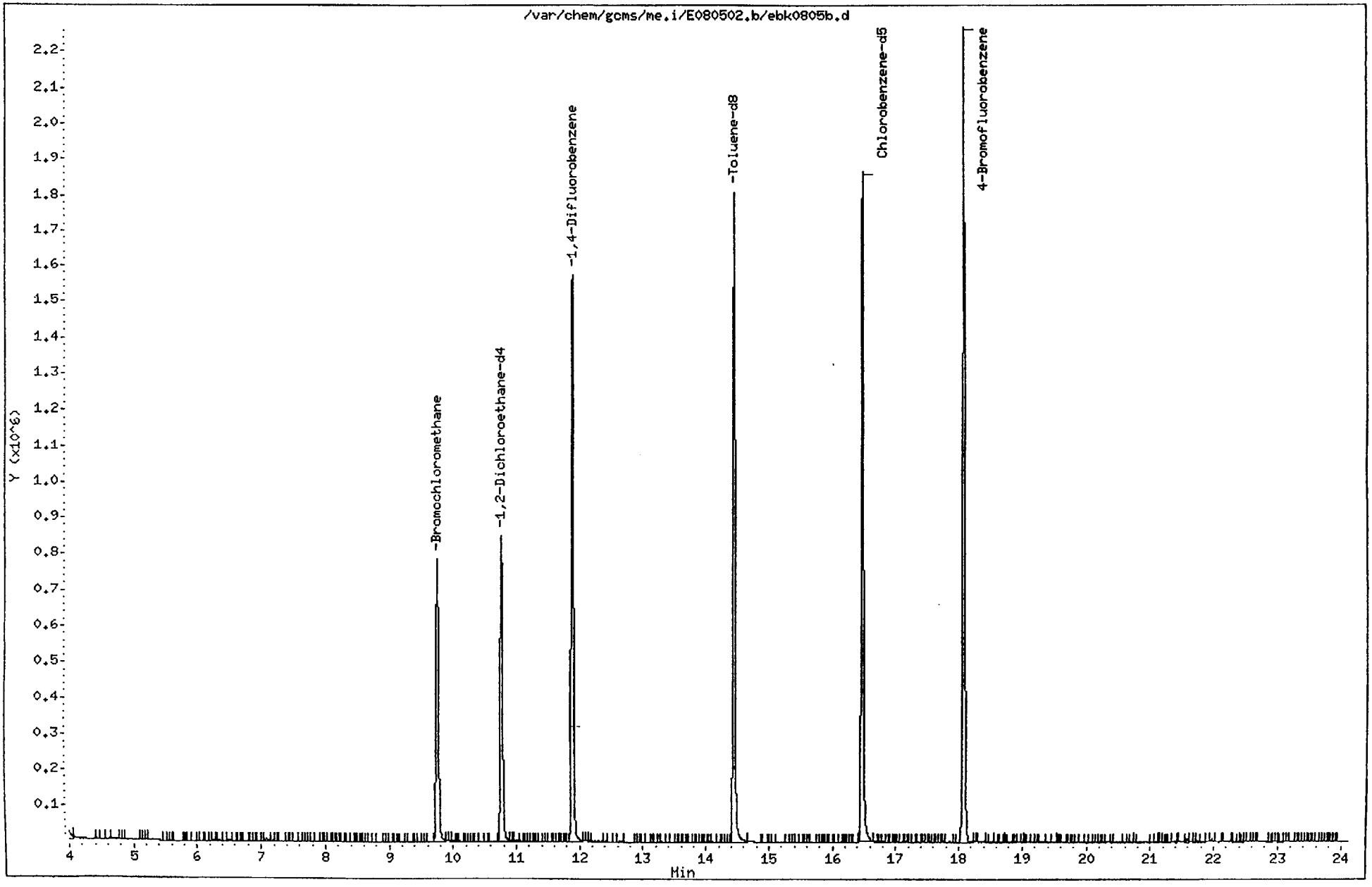
Client SDG: E080502
Fraction: OTHER

Operator: 60487
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.52	105.16	70-130
$ 5 Toluene-d8	10.00	10.36	103.57	70-130
$ 6 4-Bromofluorobenze	10.00	9.281	92.81	70-130

Data File: /var/chem/gcms/me.i/E080502.b/ebk0805b.d
Date : 05-AUG-2002 16:42
Client ID:
Sample Info: BLANK,,3,,BLANK
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080502.b/ebk0805b.d

Date : 05-AUG-2002 16:42

Client ID:

Instrument: me.i

Sample Info: BLANK,,3,,BLANK

Volume Injected (uL): 500.0

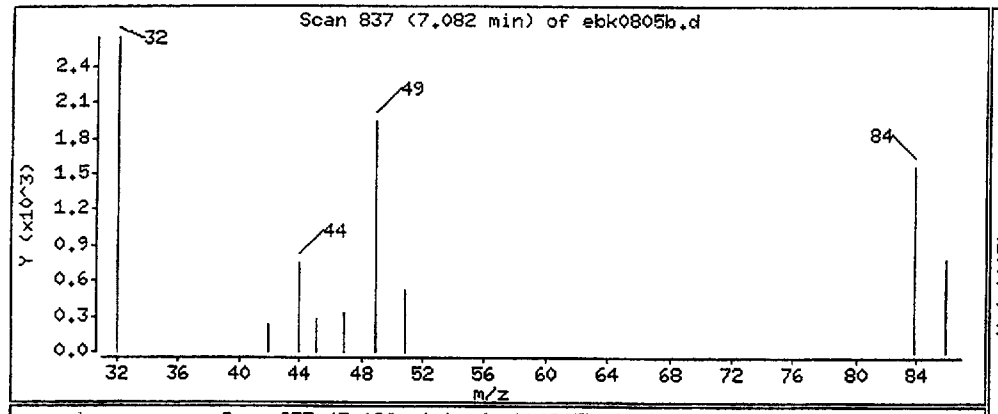
Operator: 60487

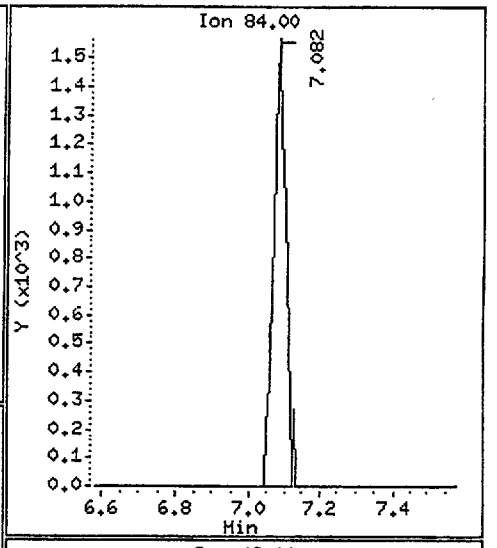
Column phase: DB-5

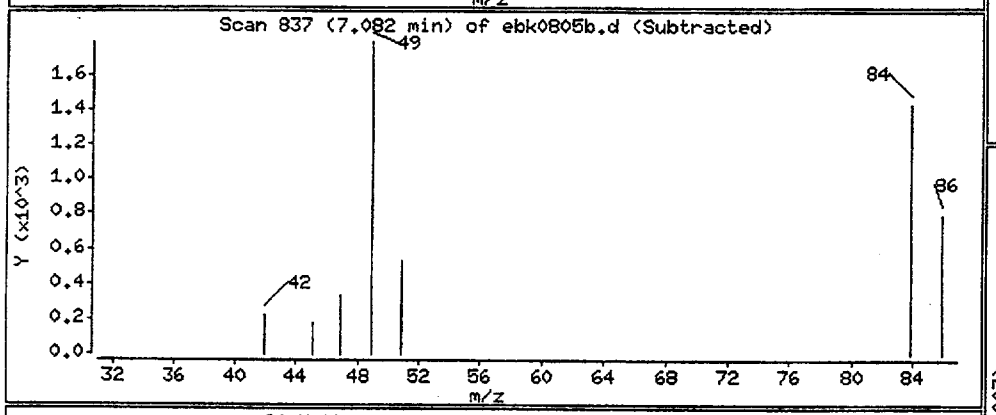
Column diameter: 0.32

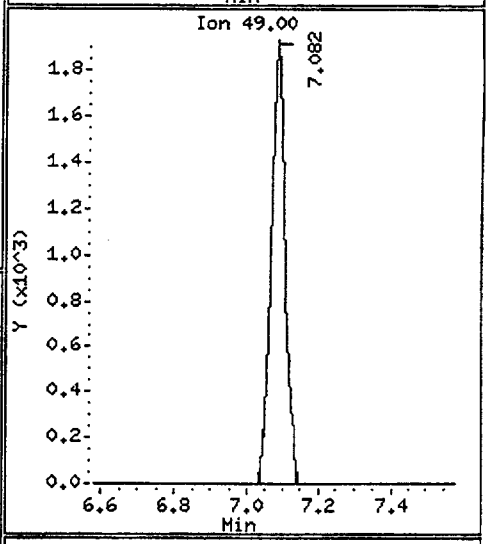
26 Methylene Chloride

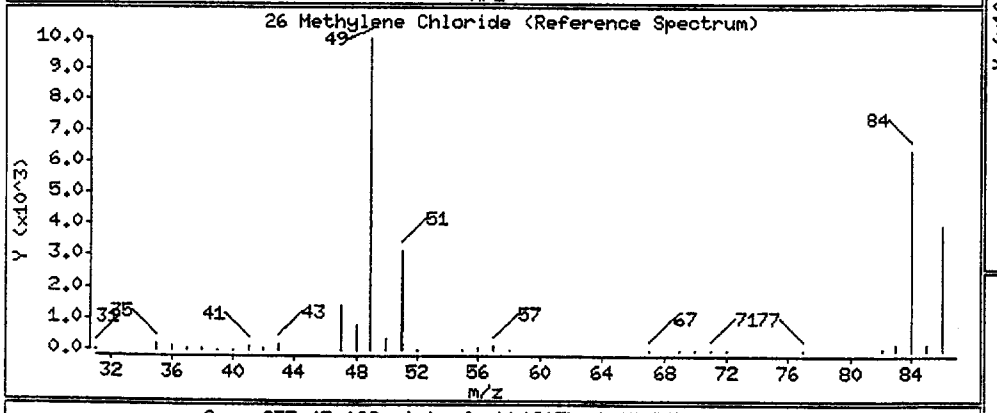
Concentration: 0.1005 ppb(v/v)

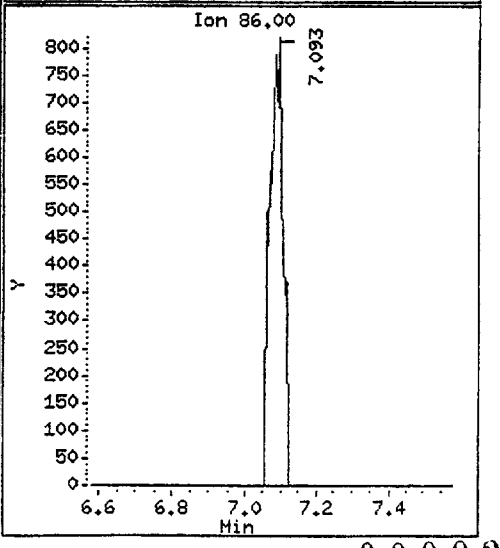


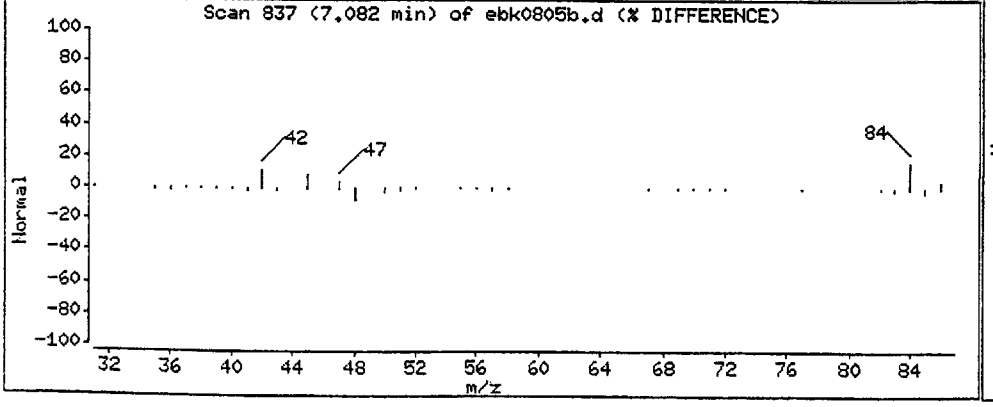












BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/26/02
Work Order: E50GF1AC Date Extracted:08/05/02
Dilution factor: 1 Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18	
56-23-5	Carbon tetrachloride	9.9	
67-66-3	Chloroform	9.7	
75-09-2	Methylene chloride	9.6	
127-18-4	Tetrachloroethene	9.7	
79-01-6	Trichloroethene	10	
75-71-8	Dichlorodifluoromethane	11	
74-87-3	Chloromethane	9.2	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	10	
75-01-4	Vinyl chloride	9.8	
74-83-9	Bromomethane	9.9	
75-00-3	Chloroethane	9.9	
75-69-4	Trichlorofluoromethane	9.8	
75-35-4	1,1-Dichloroethene	9.9	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	9.8	
75-34-3	1,1-Dichloroethane	9.9	
156-59-2	cis-1,2-Dichloroethene	9.8	
71-55-6	1,1,1-Trichloroethane	10	
107-06-2	1,2-Dichloroethane	11	
71-43-2	Benzene	9.6	
78-87-5	1,2-Dichloropropane	9.3	
10061-01-5	cis-1,3-Dichloropropene	9.9	
10061-02-6	trans-1,3-Dichloropropene	10	
108-88-3	Toluene	9.8	
79-00-5	1,1,2-Trichloroethane	9.7	
106-93-4	1,2-Dibromoethane (EDB)	9.6	
108-90-7	Chlorobenzene	9.7	
100-41-4	Ethylbenzene	9.6	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H060000 255
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/26/02
Work Order: E50GF1AC Date Extracted:08/05/02
Dilution factor: 1 Date Analyzed: 08/05/02

QC Batch: 2218255

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
136777-61-2	m-Xylene & p-Xylene	9.7	
100-42-5	Styrene	9.4	
95-47-6	o-Xylene	9.4	
79-34-5	1,1,2,2-Tetrachloroethane	9.2	
108-67-8	1,3,5-Trimethylbenzene	9.6	
95-63-6	1,2,4-Trimethylbenzene	9.3	
541-73-1	1,3-Dichlorobenzene	9.3	
100-44-7	Benzyl chloride	9.4	
106-46-7	1,4-Dichlorobenzene	9.4	
95-50-1	1,2-Dichlorobenzene	9.4	
120-82-1	1,2,4-Trichlorobenzene	9.9	
87-68-3	Hexachlorobutadiene	8.2	

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080502.b/erf0805.d
Lab Smp Id: LCS
Inj Date : 05-AUG-2002 15:32
Operator : 60487
Smp Info : LCS,,3,,LCS
Misc Info : E080502,LA,,,,100ML
Comment :
Method : /chem/gcms/me.i/E080502.b/LA.m
Meth Date : 05-Aug-2002 15:24 chemist
Cal Date : 05-AUG-2002 14:58
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50
Processing Host: qmidhp01

E50GF1Ac
Inst ID: me.i

Quant Type: ISTD
Cal File: emd0805.d
QC Sample: LCS

Compound Sublist: RTall.sub

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.767	9.767	(1.000)	270995	10.0000	
* 2 1,4-Difluorobenzene	114	11.897	11.897	(1.000)	1510982	10.0000	
* 3 Chlorobenzene-d5	117	16.475	16.475	(1.000)	1299743	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.905)	382874	10.5674	10.57
$ 5 Toluene-d8	98	14.447	14.447	(0.877)	1481420	10.1554	10.16
$ 6 4-Bromofluorobenzene	95	18.073	18.073	(1.097)	965428	9.58475	9.585
7 Chlorodifluoromethane	51	4.118	4.123	(0.422)	609766	10.4447	10.44
8 Dichlorodifluoromethane	85	4.193	4.199	(0.429)	993561	10.6615	10.66
9 Chloromethane	52	4.409	4.409	(0.451)	79022	9.19019	9.190
10 1,2-Dichlorotetrafluoroethane	135	4.425	4.425	(0.453)	536009	10.1772	10.18
11 Vinyl Chloride	62	4.618	4.613	(0.473)	301956	9.80642	9.806
12 Methanol	31	4.635	4.629	(0.475)	283268	32.7121	32.71
13 1,3-Butadiene	54	4.721	4.721	(0.483)	226884	9.35350	9.354
14 n-Butane	43	4.721	4.721	(0.483)	482471	9.28506	9.285
15 Bromomethane	94	5.097	5.103	(0.522)	327413	9.87943	9.879
16 Chloroethane	64	5.264	5.269	(0.539)	164882	9.92863	9.929
17 Trichlorofluoromethane	101	5.920	5.920	(0.606)	1110264	9.78099	9.781
18 Acrolein	56	5.953	5.953	(0.609)	182614	17.7652	17.76
19 Acetonitrile	40	6.039	6.033	(0.618)	199603	16.2956	16.30
20 Acetone	58	6.114	6.109	(0.626)	257105	17.6652	17.66
21 Pentane	57	6.173	6.178	(0.632)	90605	9.82959	9.830

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
22 Ethyl Ether	31	6.394	6.388	(0.655)	598105	16.9254	16.92
23 1,1-Dichloroethene	96	6.706	6.706	(0.687)	338466	9.94429	9.944
24 Acrylonitrile	53	6.840	6.840	(0.700)	429820	17.7009	17.70
25 1,1,2-Trichlorotrifluoroethane	101	6.910	6.910	(0.708)	771823	9.83406	9.834
26 Methylene Chloride	84	7.082	7.082	(0.725)	316475	9.64988	9.650
27 3-Chloropropene	39	7.104	7.104	(0.727)	348123	9.86196	9.862
28 Carbon Disulfide	76	7.254	7.254	(0.743)	1155901	9.93196	9.932
29 trans-1,2-Dichloroethene	96	7.948	7.954	(0.814)	332319	9.97448	9.974
30 Methyl-t-Butyl Ether	73	8.196	8.185	(0.839)	1792936	19.5089	19.51
31 1,1-Dichloroethane	63	8.406	8.406	(0.861)	736346	9.88331	9.883
32 Vinyl Acetate	43	8.535	8.535	(0.874)	1587488	17.7678	17.77
33 2-Butanone	72	9.105	9.094	(0.932)	316253	18.6076	18.61
34 Hexane	56	9.019	9.019	(0.923)	284035	9.70065	9.701
35 cis 1,2-Dichloroethene	96	9.428	9.433	(0.965)	387371	9.76389	9.764
36 Chloroform	83	9.777	9.777	(1.001)	861400	9.66341	9.663
37 1,1,1-Trichloroethane	97	10.816	10.816	(1.107)	884019	10.2701	10.27
38 1,2-Dichloroethane	62	10.918	10.918	(0.918)	623894	10.6651	10.66
39 Benzene	78	11.386	11.386	(0.957)	1018928	9.60309	9.603
40 1-Butanol	41	11.650	11.596	(0.979)	379949	18.9329	18.93
41 Cyclohexane	69	11.386	11.386	(0.957)	152333	9.57090	9.571
42 Carbon Tetrachloride	117	11.402	11.402	(1.167)	894063	9.85533	9.855
43 Heptane	43	12.467	12.467	(1.048)	663889	9.44464	9.445
44 1,2-Dichloropropane	63	12.553	12.553	(1.055)	393772	9.33258	9.332
45 Trichloroethene	130	12.575	12.575	(1.057)	428471	9.98350	9.984
46 Dibromomethane	93	12.650	12.650	(1.063)	482196	9.56704	9.567
47 Bromodichloromethane	83	12.785	12.785	(1.075)	999026	9.84962	9.850
48 4-Methyl-2-pentanone	43	13.807	13.801	(1.161)	1556217	17.9968	18.00
49 cis-1,3-Dichloropropene	75	13.753	13.753	(1.156)	846801	9.90340	9.903
50 trans-1,3-Dichloropropene	75	14.420	14.420	(0.875)	604261	9.96868	9.969
51 Toluene	91	14.554	14.555	(0.883)	1293777	9.81702	9.817
52 1,1,2-Trichloroethane	97	14.619	14.619	(0.887)	474054	9.66588	9.666
53 2-Hexanone	58	15.087	15.076	(0.916)	782366	18.1077	18.11
54 Octane	85	15.216	15.216	(0.924)	395570	9.69718	9.697
55 Dibromochloromethane	129	15.302	15.302	(0.929)	853213	9.64449	9.644
56 1,2-Dibromoethane	107	15.598	15.593	(0.947)	725048	9.56218	9.562
57 Tetrachloroethene	129	15.663	15.663	(0.951)	415044	9.68606	9.686
58 Chlorobenzene	112	16.523	16.523	(1.003)	978761	9.71466	9.715
59 Ethylbenzene	91	16.803	16.803	(1.020)	1781346	9.59563	9.596
60 m-Xylene (For p-)	91	16.959	16.959	(1.029)	1446593	9.68939	9.689
61 Bromoform	173	17.406	17.406	(1.056)	908618	9.43170	9.432
62 Nonane	57	17.363	17.363	(1.054)	753018	9.33870	9.339
63 Styrene	104	17.422	17.416	(1.057)	893876	9.40251	9.402
64 o-Xylene	91	17.481	17.481	(1.061)	1479269	9.43013	9.430
65 1,1,2,2-Tetrachloroethane	83	17.788	17.788	(1.080)	1043368	9.19764	9.198
66 1,2,3-Trichloropropane	110	17.944	17.944	(1.089)	255346	8.73416	8.734
67 Cumene	105	18.046	18.046	(1.095)	1871552	9.39462	9.395
68 n-Propylbenzene	91	18.546	18.546	(1.126)	2624619	9.26506	9.265

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
69 4-Ethyltoluene	105	18.691	18.691	(1.135)	2028964	9.33653	9.336
70 1,3,5-Trimethylbenzene	120	18.756	18.756	(1.138)	663391	9.56923	9.569
71 Alpha-Methylstyrene	118	18.971	18.971	(1.151)	687887	9.32717	9.327
72 Decane	57	19.025	19.020	(1.155)	1055808	9.36167	9.362
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	1597949	9.26107	9.261
74 1,3-Dichlorobenzene	146	19.428	19.428	(1.179)	1188233	9.33332	9.333
75 Benzyl Chloride	91	19.498	19.498	(1.184)	1534345	9.40517	9.405
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.184)	1135109	9.41697	9.417
77 1,2-Dichlorobenzene	146	19.853	19.853	(1.205)	1134855	9.40586	9.406
78 Undecane	57	20.273	20.278	(1.231)	1030303	8.96390	8.964
79 Dodecane	57	21.370	21.370	(1.297)	899641	8.91295	8.913
80 1,2,4-Trichlorobenzene	180	21.596	21.596	(1.311)	1048767	9.91588	9.916
81 Napthalene	128	21.758	21.758	(1.321)	2228809	8.20252	8.202
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	1098971	8.21703	8.217

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: erf0805.d
Lab Smp Id: LCS
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,100ML

Calibration Date: 05-AUG-2002
Calibration Time: 14:58

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	229419	136504	322334	270995	18.12
2 1,4-Difluorobenze	1302532	775007	1830057	1510982	16.00
3 Chlorobenzene-d5	1151035	684866	1617204	1299743	12.92

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.77	9.27	10.27	9.77	0.00
2 1,4-Difluorobenze	11.90	11.40	12.40	11.90	0.00
3 Chlorobenzene-d5	16.48	15.98	16.98	16.48	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,100ML

Client SDG: E080502
Fraction: OTHER

Operator: 60487
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
7 Chlorodifluorometh	10.00	10.44	104.45	70-130
8 Dichlorodifluorome	10.00	10.66	106.61	70-130
9 Chloromethane	10.00	9.190	91.90	70-130
10 1,2-Dichlorotetraf	10.00	10.18	101.77	70-130
11 Vinyl Chloride	10.00	9.806	98.06	70-130
12 Methanol	40.00	32.71	81.78	60-140
13 1,3-Butadiene	10.00	9.354	93.54	70-130
14 n-Butane	10.00	9.285	92.85	70-130
15 Bromomethane	10.00	9.879	98.79	70-130
16 Chloroethane	10.00	9.929	99.29	70-130
17 Trichlorofluoromet	10.00	9.781	97.81	70-130
18 Acrolein	20.00	17.76	88.83	60-140
19 Acetonitrile	20.00	16.30	81.48	60-140
20 Acetone	20.00	17.66	88.33	60-140
21 Pentane	10.00	9.830	98.30	70-130
22 Ethyl Ether	20.00	16.92	84.63	60-140
23 1,1-Dichloroethene	10.00	9.944	99.44	70-130
24 Acrylonitrile	20.00	17.70	88.50	60-140
25 1,1,2-Trichlorotri	10.00	9.834	98.34	70-130
26 Methylene Chloride	10.00	9.650	96.50	70-130
27 3-Chloropropene	10.00	9.862	98.62	70-130
28 Carbon Disulfide	10.00	9.932	99.32	70-130
29 trans-1,2-Dichloro	10.00	9.974	99.74	70-130
30 Methyl-t-Butyl Eth	20.00	19.51	97.54	60-140
31 1,1-Dichloroethane	10.00	9.883	98.83	70-130
32 Vinyl Acetate	20.00	17.77	88.84	60-140
33 2-Butanone	20.00	18.61	93.04	60-140
34 Hexane	10.00	9.701	97.01	70-130
35 cis 1,2-Dichloroet	10.00	9.764	97.64	70-130
36 Chloroform	10.00	9.663	96.63	70-130
37 1,1,1-Trichloroeth	10.00	10.27	102.70	70-130
38 1,2-Dichloroethane	10.00	10.66	106.65	70-130
39 Benzene	10.00	9.603	96.03	70-130

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
40 1-Butanol	20.00	18.93	94.66	60-140
41 Cyclohexane	10.00	9.571	95.71	70-130
42 Carbon Tetrachlori	10.00	9.855	98.55	70-130
43 Heptane	10.00	9.445	94.45	70-130
44 1,2-Dichloropropan	10.00	9.332	93.33	70-130
45 Trichloroethene	10.00	9.984	99.84	70-130
46 Dibromomethane	10.00	9.567	95.67	70-130
47 Bromodichlorometha	10.00	9.850	98.50	70-130
48 4-Methyl-2-pentano	20.00	18.00	89.98	60-140
49 cis-1,3-Dichloropr	10.00	9.903	99.03	70-130
50 trans-1,3-Dichloro	10.00	9.969	99.69	70-130
51 Toluene	10.00	9.817	98.17	70-130
52 1,1,2-Trichloroeth	10.00	9.666	96.66	70-130
53 2-Hexanone	20.00	18.11	90.54	60-140
54 Octane	10.00	9.697	96.97	70-130
55 Dibromochlorometha	10.00	9.644	96.44	70-130
56 1,2-Dibromoethane	10.00	9.562	95.62	70-130
57 Tetrachloroethene	10.00	9.686	96.86	70-130
58 Chlorobenzene	10.00	9.715	97.15	70-130
59 Ethylbenzene	10.00	9.596	95.96	70-130
60 m-Xylene (For p-)	10.00	9.689	96.89	70-130
61 Bromoform	10.00	9.432	94.32	70-130
62 Nonane	10.00	9.339	93.39	70-130
63 Styrene	10.00	9.402	94.03	70-130
64 o-Xylene	10.00	9.430	94.30	70-130
65 1,1,2,2-Tetrachlor	10.00	9.198	91.98	70-130
66 1,2,3-Trichloropro	10.00	8.734	87.34	70-130
67 Cumene	10.00	9.395	93.95	70-130
68 n-Propylbenzene	10.00	9.265	92.65	70-130
69 4-Ethyltoluene	10.00	9.336	93.37	70-130
70 1,3,5-Trimethylben	10.00	9.569	95.69	70-130
71 Alpha-Methylstyren	10.00	9.327	93.27	70-130
72 Decane	10.00	9.362	93.62	70-130
73 1,2,4-Trimethylben	10.00	9.261	92.61	70-130
74 1,3-Dichlorobenzen	10.00	9.333	93.33	70-130
75 Benzyl Chloride	10.00	9.405	94.05	70-130
76 1,4-Dichlorobenzen	10.00	9.417	94.17	70-130
77 1,2-Dichlorobenzen	10.00	9.406	94.06	70-130
78 Undecane	10.00	8.964	89.64	70-130
79 Dodecane	10.00	8.913	89.13	70-130
80 1,2,4-Trichloroben	10.00	9.916	99.16	70-130
81 Napthalene	10.00	8.202	82.03	70-130
82 Hexachlorobutadien	10.00	8.217	82.17	70-130

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Report Date: 05-Aug-2002 16:00

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /chem/gcms/me.i/E080502.b/LA.m
Misc Info: E080502,LA,,,,100ML

Client SDG: E080502
Fraction: OTHER

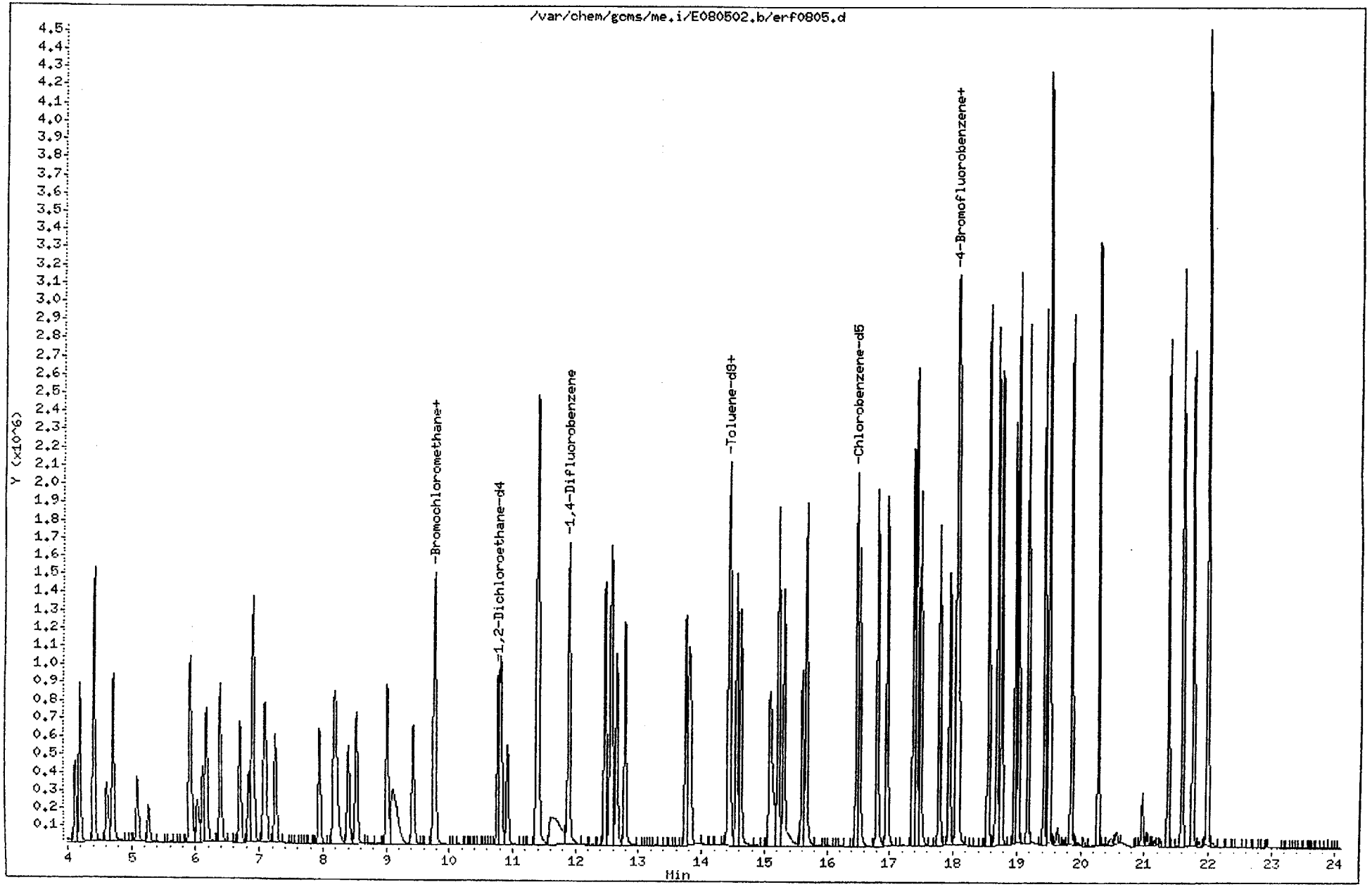
Operator: 60487
SampleType: LCS
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.57	105.67	70-130
$ 5 Toluene-d8	10.00	10.16	101.55	70-130
$ 6 4-Bromofluorobenze	10.00	9.585	95.85	70-130

Data File: /var/chem/gcms/me.i/E080502.b/erf0805.d
Date : 05-AUG-2002 15:32
Client ID:
Sample Info: LCS,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name: Severn Trent Laboratories, Inc. SDG Number: W03804

Matrix: (soil/water) AIR Lab Sample ID: H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E6AR51AA Date Extracted: 08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	5.0	U
56-23-5	Carbon tetrachloride	0.20	U
67-66-3	Chloroform	0.20	U
75-09-2	Methylene chloride	0.50	U
127-18-4	Tetrachloroethene	0.20	U
79-01-6	Trichloroethene	0.20	U
78-93-3	2-Butanone (MEK)	0.50	U

FORM I

Data File: /var/chem/gcms/me.i/E080902.b/ebk0809b.d
Report Date: 09-Aug-2002 15:41

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080902.b/ebk0809b.d
Lab Smp Id: BLANK
Inj Date : 09-AUG-2002 15:10 E6AR51AA
Operator : 60487 Inst ID: me.i
Smp Info : BLANK,,3,,BLANK
Misc Info : E080902,LA,,,,500ML
Comment :
Method : /chem/gcms/me.i/E080902.b/LA.m
Meth Date : 09-Aug-2002 13:51 chemist Quant Type: ISTD
Cal Date : 09-AUG-2002 13:26 Cal File: emd0809.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.756	9.761	(1.000)	620914	10.0000	
* 2 1,4-Difluorobenzene	114	11.886	11.892	(1.000)	3290461	10.0000	
* 3 Chlorobenzene-d5	117	16.465	16.470	(1.000)	2790489	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.768	10.773	(0.906)	663090	9.97412	9.974
$ 5 Toluene-d8	98	14.436	14.442	(0.877)	3199099	10.2384	10.24
$ 6 4-Bromofluorobenzene	95	18.062	18.067	(1.097)	1843269	10.2106	10.21
26 Methylene Chloride	84	7.083	7.077	(0.726)	7765	0.11123	0.1112

Data File: /var/chem/gcms/me.i/E080902.b/ebk0809b.d
Report Date: 09-Aug-2002 15:41

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: ebk0809b.d
Lab Smp Id: BLANK
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,500ML

Calibration Date: 09-AUG-2002
Calibration Time: 13:26

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	611867	364061	859673	620914	1.48
2 1,4-Difluorobenze	3389435	2016714	4762156	3290461	-2.92
3 Chlorobenzene-d5	2876082	1711269	4040895	2790489	-2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.76	9.26	10.26	9.76	-0.05
2 1,4-Difluorobenze	11.89	11.39	12.39	11.89	-0.04
3 Chlorobenzene-d5	16.47	15.97	16.97	16.46	-0.03

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080902.b/ebk0809b.d
Report Date: 09-Aug-2002 15:41

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: BLANK
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,500ML

Client SDG: E080902
Fraction: OTHER

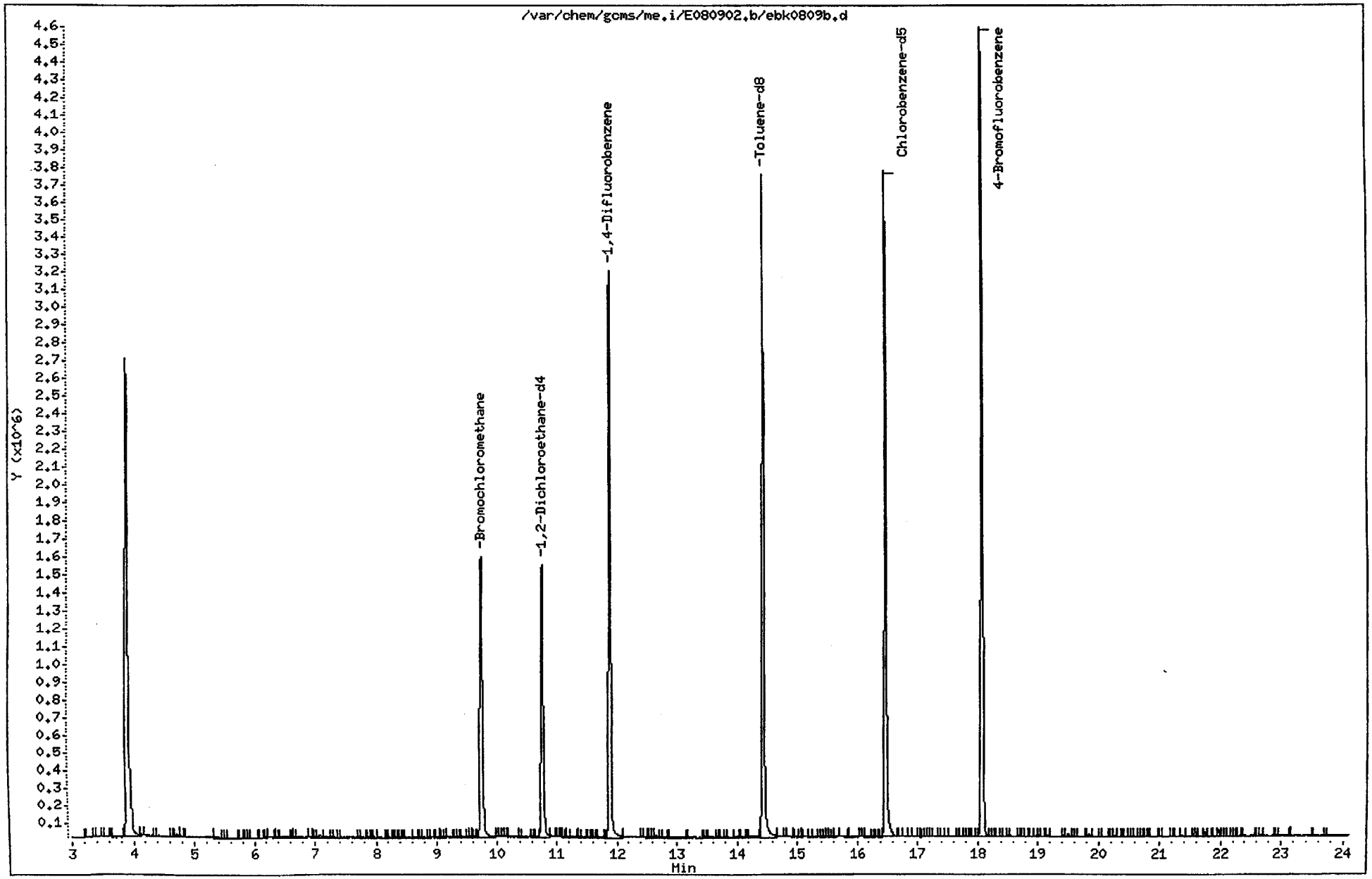
Operator: 60487
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.974	99.74	70-130
$ 5 Toluene-d8	10.00	10.24	102.38	70-130
$ 6 4-Bromofluorobenze	10.00	10.21	102.11	70-130

Data File: /var/chem/gcms/me.i/E080902.b/ebk0809b.d
Date : 09-AUG-2002 15:10
Client ID:
Sample Info: BLANK,,3,,BLANK
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080902.b/ebk0809b.d

Date : 09-AUG-2002 15:10

Client ID:

Instrument: me.i

Sample Info: BLANK,,3,,BLANK

Volume Injected (uL): 500.0

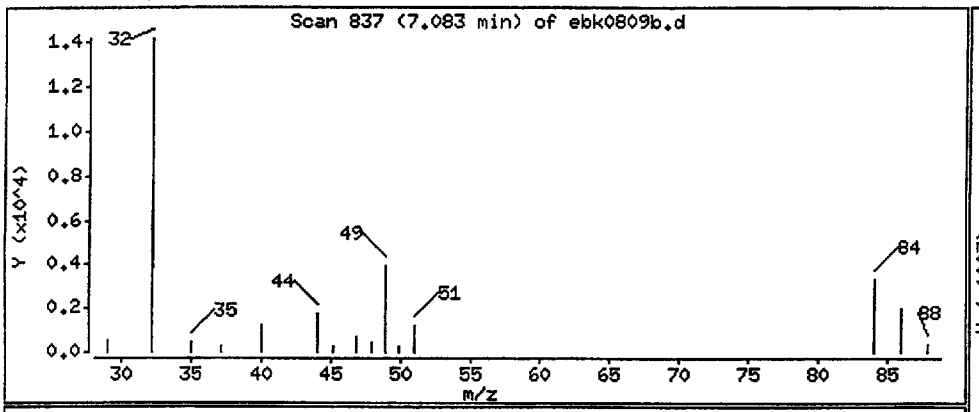
Operator: 60487

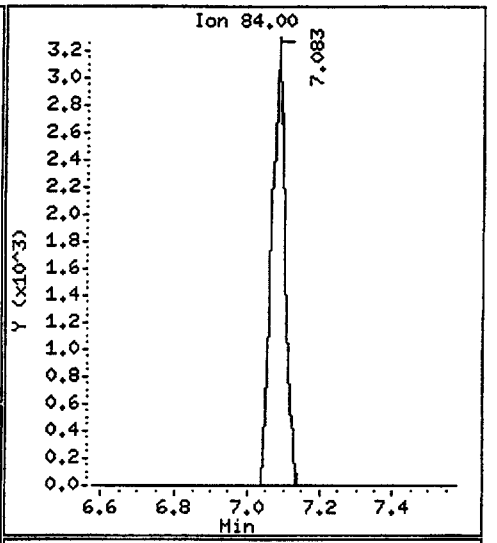
Column phase: DB-5

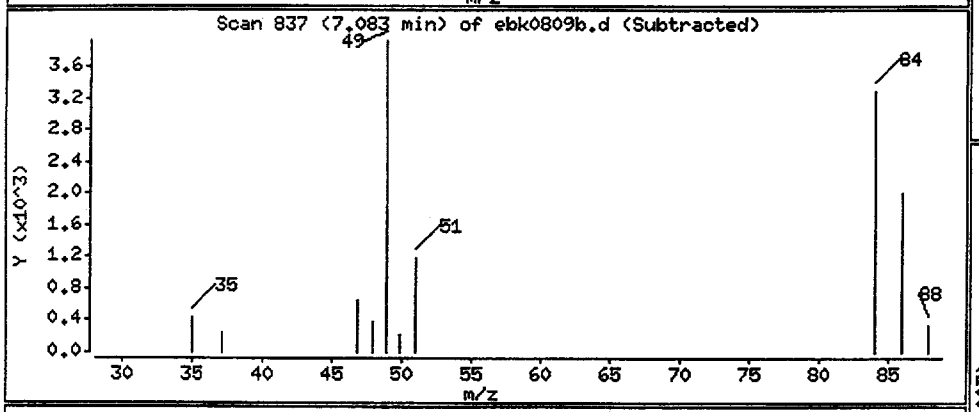
Column diameter: 0.32

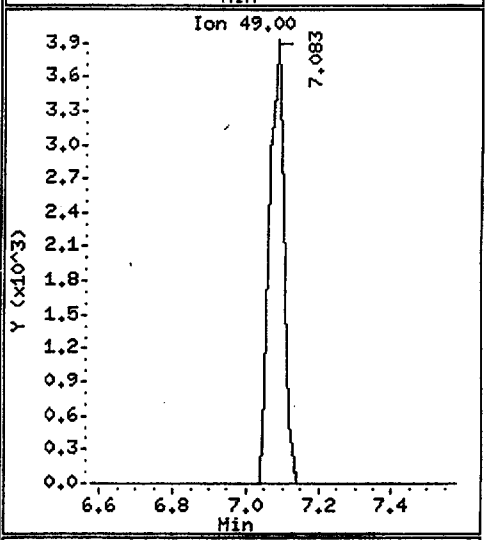
26 Methylene Chloride

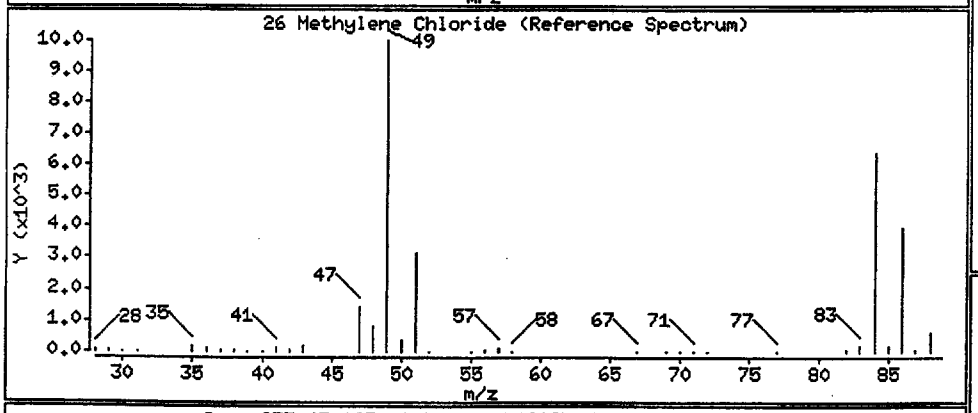
Concentration: 0.1112 ppb(v/v)

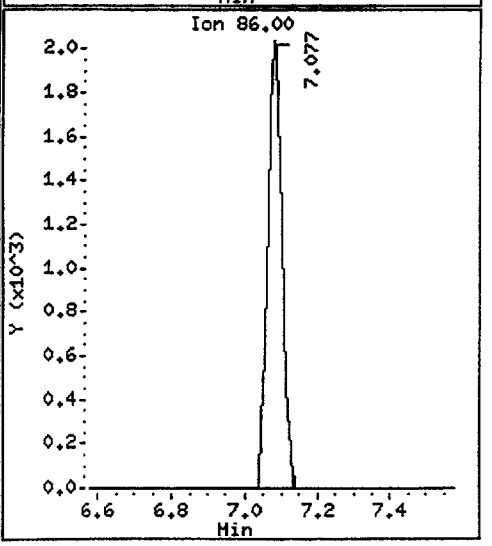


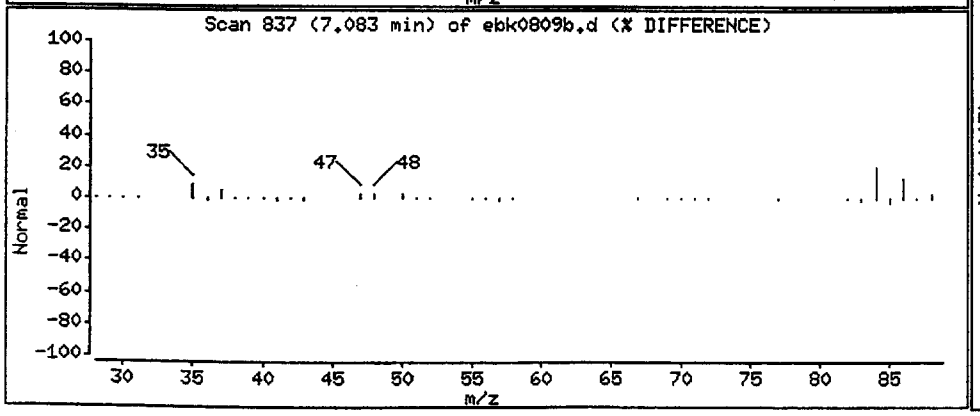












BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/18/02
Work Order: E6AR51AC Date Extracted:08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18	
56-23-5	Carbon tetrachloride	9.9	
67-66-3	Chloroform	9.8	
75-09-2	Methylene chloride	9.7	
127-18-4	Tetrachloroethene	10	
79-01-6	Trichloroethene	9.8	
75-71-8	Dichlorodifluoromethane	9.7	
74-87-3	Chloromethane	9.7	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	9.8	
75-01-4	Vinyl chloride	9.8	
74-83-9	Bromomethane	9.8	
75-00-3	Chloroethane	9.8	
75-69-4	Trichlorofluoromethane	9.8	
75-35-4	1,1-Dichloroethene	9.8	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	9.8	
75-34-3	1,1-Dichloroethane	9.9	
156-59-2	cis-1,2-Dichloroethene	9.9	
71-55-6	1,1,1-Trichloroethane	9.8	
107-06-2	1,2-Dichloroethane	9.8	
71-43-2	Benzene	10	
78-87-5	1,2-Dichloropropane	10	
10061-01-5	cis-1,3-Dichloropropene	9.9	
10061-02-6	trans-1,3-Dichloropropene	9.9	
108-88-3	Toluene	10	
79-00-5	1,1,2-Trichloroethane	9.8	
106-93-4	1,2-Dibromoethane (EDB)	10	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2H120000 250
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/18/02
Work Order: E6AR51AC Date Extracted:08/09/02
Dilution factor: 1 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
136777-61-2	m-Xylene & p-Xylene	9.9	
100-42-5	Styrene	10	
95-47-6	o-Xylene	10	
79-34-5	1,1,2,2-Tetrachloroethane	9.9	
108-67-8	1,3,5-Trimethylbenzene	10	
95-63-6	1,2,4-Trimethylbenzene	10	
541-73-1	1,3-Dichlorobenzene	9.9	
100-44-7	Benzyl chloride	10	
106-46-7	1,4-Dichlorobenzene	9.9	
95-50-1	1,2-Dichlorobenzene	10	
120-82-1	1,2,4-Trichlorobenzene	10	
87-68-3	Hexachlorobutadiene	8.7	

FORM I

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:36

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080902.b/erf0809.d
Lab Smp Id: LCS
Inj Date : 09-AUG-2002 14:00 E6AR51AC
Operator : 60487 Inst ID: me.i
Smp Info : LCS,,3,,LCS
Misc Info : E080902,LA,,,,100ML
Comment :
Method : /chem/gcms/me.i/E080902.b/LA.m
Meth Date : 09-Aug-2002 13:51 chemist Quant Type: ISTD
Cal Date : 09-AUG-2002 13:26 Cal File: emd0809.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.762	9.761	(1.000)	616082	10.0000	
* 2 1,4-Difluorobenzene	114	11.892	11.892	(1.000)	3398155	10.0000	
* 3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2874008	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.773	10.773	(0.906)	683088	9.94930	9.949
$ 5 Toluene-d8	98	14.442	14.442	(0.877)	3234332	10.0503	10.05
$ 6 4-Bromofluorobenzene	95	18.068	18.067	(1.097)	1859305	10.0001	10.00
7 Chlorodifluoromethane	51	4.118	4.118	(0.422)	1195579	9.83796	9.838
8 Dichlorodifluoromethane	85	4.188	4.194	(0.429)	1942845	9.71194	9.712
9 Chloromethane	52	4.409	4.409	(0.452)	172299	9.69117	9.691
10 1,2-Dichlorotetrafluoroethane	135	4.420	4.419	(0.453)	1258193	9.78713	9.787
11 Vinyl Chloride	62	4.608	4.613	(0.472)	652023	9.79917	9.799
12 Methanol	31	4.629	4.629	(0.474)	577229	37.7263	37.73
13 1,3-Butadiene	54	4.715	4.715	(0.483)	492079	9.75244	9.752
14 n-Butane	43	4.715	4.721	(0.483)	1016437	9.91930	9.919
15 Bromomethane	94	5.097	5.097	(0.522)	674254	9.75728	9.757
16 Chloroethane	64	5.264	5.264	(0.539)	322461	9.79659	9.796
17 Trichlorofluoromethane	101	5.915	5.920	(0.606)	2047495	9.79770	9.798
18 Acrolein	56	5.947	5.947	(0.609)	367968	18.3334	18.33
19 Acetonitrile	40	6.028	6.033	(0.618)	382722	18.2853	18.28
20 Acetone	58	6.109	6.109	(0.626)	490790	18.1011	18.10
21 Pentane	57	6.173	6.173	(0.632)	192176	9.79101	9.791

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:36

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
22 Ethyl Ether	31	6.389	6.388	(0.654)	1143937	18.4106	18.41
23 1,1-Dichloroethene	96	6.701	6.700	(0.686)	740953	9.84230	9.842
24 Acrylonitrile	53	6.835	6.835	(0.700)	917662	18.5837	18.58
25 1,1,2-Trichlorotrifluoroethane	101	6.905	6.905	(0.707)	1592921	9.80551	9.806
26 Methylene Chloride	84	7.077	7.077	(0.725)	672652	9.71082	9.711
27 3-Chloropropene	39	7.099	7.104	(0.727)	626090	9.75320	9.753
28 Carbon Disulfide	76	7.249	7.249	(0.743)	2361830	9.90602	9.906
29 trans-1,2-Dichloroethene	96	7.943	7.943	(0.814)	739310	9.93719	9.937
30 Methyl-t-Butyl Ether	73	8.185	8.180	(0.839)	3811231	18.6089	18.61
31 1,1-Dichloroethane	63	8.400	8.400	(0.861)	1457442	9.90589	9.906
32 Vinyl Acetate	43	8.530	8.524	(0.874)	3198286	18.7033	18.70
33 2-Butanone	72	9.089	9.089	(0.931)	673620	18.7586	18.76
34 Hexane	56	9.014	9.014	(0.923)	641647	9.82125	9.821
35 cis 1,2-Dichloroethene	96	9.423	9.422	(0.965)	855562	9.85181	9.852
36 Chloroform	83	9.772	9.772	(1.001)	1669883	9.83953	9.840
37 1,1,1-Trichloroethane	97	10.816	10.810	(1.108)	1818631	9.82533	9.825
38 1,2-Dichloroethane	62	10.913	10.913	(0.918)	1185796	9.80728	9.807
39 Benzene	78	11.381	11.381	(0.957)	2194747	9.96963	9.970
40 1-Butanol	41	11.564	11.607	(0.972)	802255	18.9786	18.98
41 Cyclohexane	69	11.381	11.381	(0.957)	336779	9.95944	9.959
42 Carbon Tetrachloride	117	11.402	11.397	(1.168)	1829306	9.94436	9.944
43 Heptane	43	12.462	12.462	(1.048)	1412169	9.89022	9.890
44 1,2-Dichloropropane	63	12.548	12.543	(1.055)	779018	10.0900	10.09
45 Trichloroethene	130	12.570	12.570	(1.057)	977541	9.81616	9.816
46 Dibromomethane	93	12.645	12.645	(1.063)	936279	9.84478	9.845
47 Bromodichloromethane	83	12.785	12.785	(1.075)	1942824	9.96637	9.966
48 4-Methyl-2-pentanone	43	13.796	13.796	(1.160)	2958300	18.2574	18.26
49 cis-1,3-Dichloropropene	75	13.748	13.748	(1.156)	1755684	9.94513	9.945
50 trans-1,3-Dichloropropene	75	14.415	14.415	(0.875)	1207718	9.92855	9.928
51 Toluene	91	14.549	14.549	(0.883)	2836725	9.95776	9.958
52 1,1,2-Trichloroethane	97	14.614	14.614	(0.887)	1011939	9.81033	9.810
53 2-Hexanone	58	15.071	15.071	(0.915)	1645541	18.9778	18.98
54 Octane	85	15.211	15.211	(0.924)	893202	9.48825	9.488
55 Dibromochloromethane	129	15.297	15.297	(0.929)	1855742	10.0228	10.02
56 1,2-Dibromoethane	107	15.588	15.587	(0.946)	1529051	9.99323	9.993
57 Tetrachloroethene	129	15.658	15.657	(0.951)	927678	10.0043	10.00
58 Chlorobenzene	112	16.518	16.518	(1.003)	2192063	10.0390	10.04
59 Ethylbenzene	91	16.803	16.798	(1.020)	3817064	9.98701	9.987
60 m-Xylene (For p-)	91	16.954	16.954	(1.029)	3066827	9.93879	9.939
61 Bromoform	173	17.401	17.400	(1.056)	1839139	9.98718	9.987
62 Nonane	57	17.363	17.357	(1.054)	1570983	10.1165	10.12
63 Styrene	104	17.417	17.417	(1.057)	2068890	10.0104	10.01
64 o-Xylene	91	17.476	17.476	(1.061)	3097395	9.96673	9.967
65 1,1,2,2-Tetrachloroethane	83	17.782	17.782	(1.080)	2060117	9.92866	9.929
66 1,2,3-Trichloropropane	110	17.938	17.938	(1.089)	547434	9.24495	9.245
67 Cumene	105	18.041	18.041	(1.095)	4093107	10.0003	10.00
68 n-Propylbenzene	91	18.541	18.541	(1.126)	5384492	9.90015	9.900

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:36

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
69 4-Ethyltoluene	105	18.686	18.686	(1.135)	4463277	9.86772	9.868
70 1,3,5-Trimethylbenzene	120	18.756	18.751	(1.139)	1568800	9.99656	9.996
71 Alpha-Methylstyrene	118	18.966	18.966	(1.152)	1564863	9.84167	9.842
72 Decane	57	19.020	19.020	(1.155)	2045000	9.79912	9.799
73 1,2,4-Trimethylbenzene	105	19.170	19.170	(1.164)	3479984	9.96625	9.966
74 1,3-Dichlorobenzene	146	19.429	19.423	(1.180)	2491128	9.94923	9.949
75 Benzyl Chloride	91	19.493	19.493	(1.184)	2996678	10.1387	10.14
76 1,4-Dichlorobenzene	146	19.509	19.509	(1.185)	2311179	9.89502	9.895
77 1,2-Dichlorobenzene	146	19.854	19.853	(1.205)	2343100	9.96554	9.966
78 Undecane	57	20.273	20.273	(1.231)	1961932	9.48198	9.482
79 Dodecane	57	21.371	21.370	(1.298)	1694181	9.13079	9.131
80 1,2,4-Trichlorobenzene	180	21.597	21.596	(1.311)	2251024	10.3020	10.30
81 Napthalene	128	21.758	21.758	(1.321)	4872277	8.67888	8.679
82 Hexachlorobutadiene	225	21.989	21.989	(1.335)	2251790	8.74891	8.749

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:36

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: erf0809.d
Lab Smp Id: LCS
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,100ML

Calibration Date: 09-AUG-2002
Calibration Time: 13:26

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	611867	364061	859673	616082	0.69
2 1,4-Difluorobenze	3389435	2016714	4762156	3398155	0.26
3 Chlorobenzene-d5	2876082	1711269	4040895	2874008	-0.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.76	9.26	10.26	9.76	0.00
2 1,4-Difluorobenze	11.89	11.39	12.39	11.89	0.00
3 Chlorobenzene-d5	16.47	15.97	16.97	16.47	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:37

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,100ML

Client SDG: E080902
Fraction: OTHER

Operator: 60487
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
7 Chlorodifluorometh	10.00	9.838	98.38	70-130
8 Dichlorodifluorome	10.00	9.712	97.12	70-130
9 Chloromethane	10.00	9.691	96.91	70-130
10 1,2-Dichlorotetraf	10.00	9.787	97.87	70-130
11 Vinyl Chloride	10.00	9.799	97.99	70-130
12 Methanol	40.00	37.73	94.32	60-140
13 1,3-Butadiene	10.00	9.752	97.52	70-130
14 n-Butane	10.00	9.919	99.19	70-130
15 Bromomethane	10.00	9.757	97.57	70-130
16 Chloroethane	10.00	9.796	97.97	70-130
17 Trichlorofluoromet	10.00	9.798	97.98	70-130
18 Acrolein	20.00	18.33	91.67	60-140
19 Acetonitrile	20.00	18.28	91.43	60-140
20 Acetone	20.00	18.10	90.51	60-140
21 Pentane	10.00	9.791	97.91	70-130
22 Ethyl Ether	20.00	18.41	92.05	60-140
23 1,1-Dichloroethene	10.00	9.842	98.42	70-130
24 Acrylonitrile	20.00	18.58	92.92	60-140
25 1,1,2-Trichlorotri	10.00	9.806	98.06	70-130
26 Methylene Chloride	10.00	9.711	97.11	70-130
27 3-Chloropropene	10.00	9.753	97.53	70-130
28 Carbon Disulfide	10.00	9.906	99.06	70-130
29 trans-1,2-Dichloro	10.00	9.937	99.37	70-130
30 Methyl-t-Butyl Eth	20.00	18.61	93.04	60-140
31 1,1-Dichloroethane	10.00	9.906	99.06	70-130
32 Vinyl Acetate	20.00	18.70	93.52	60-140
33 2-Butanone	20.00	18.76	93.79	60-140
34 Hexane	10.00	9.821	98.21	70-130
35 cis 1,2-Dichloroet	10.00	9.852	98.52	70-130
36 Chloroform	10.00	9.840	98.40	70-130
37 1,1,1-Trichloroeth	10.00	9.825	98.25	70-130
38 1,2-Dichloroethane	10.00	9.807	98.07	70-130
39 Benzene	10.00	9.970	99.70	70-130

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:37

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
40 1-Butanol	20.00	18.98	94.89	60-140
41 Cyclohexane	10.00	9.959	99.59	70-130
42 Carbon Tetrachlori	10.00	9.944	99.44	70-130
43 Heptane	10.00	9.890	98.90	70-130
44 1,2-Dichloropropan	10.00	10.09	100.90	70-130
45 Trichloroethene	10.00	9.816	98.16	70-130
46 Dibromomethane	10.00	9.845	98.45	70-130
47 Bromodichlorometha	10.00	9.966	99.66	70-130
48 4-Methyl-2-pentano	20.00	18.26	91.29	60-140
49 cis-1,3-Dichloropr	10.00	9.945	99.45	70-130
50 trans-1,3-Dichloro	10.00	9.928	99.29	70-130
51 Toluene	10.00	9.958	99.58	70-130
52 1,1,2-Trichloroeth	10.00	9.810	98.10	70-130
53 2-Hexanone	20.00	18.98	94.89	60-140
54 Octane	10.00	9.488	94.88	70-130
55 Dibromochlorometha	10.00	10.02	100.23	70-130
56 1,2-Dibromoethane	10.00	9.993	99.93	70-130
57 Tetrachloroethene	10.00	10.00	100.04	70-130
58 Chlorobenzene	10.00	10.04	100.39	70-130
59 Ethylbenzene	10.00	9.987	99.87	70-130
60 m-Xylene (For p-)	10.00	9.939	99.39	70-130
61 Bromoform	10.00	9.987	99.87	70-130
62 Nonane	10.00	10.12	101.16	70-130
63 Styrene	10.00	10.01	100.10	70-130
64 o-Xylene	10.00	9.967	99.67	70-130
65 1,1,2,2-Tetrachlor	10.00	9.929	99.29	70-130
66 1,2,3-Trichloropro	10.00	9.245	92.45	70-130
67 Cumene	10.00	10.00	100.00	70-130
68 n-Propylbenzene	10.00	9.900	99.00	70-130
69 4-Ethyltoluene	10.00	9.868	98.68	70-130
70 1,3,5-Trimethylben	10.00	9.996	99.97	70-130
71 Alpha-Methylstyren	10.00	9.842	98.42	70-130
72 Decane	10.00	9.799	97.99	70-130
73 1,2,4-Trimethylben	10.00	9.966	99.66	70-130
74 1,3-Dichlorobenzen	10.00	9.949	99.49	70-130
75 Benzyl Chloride	10.00	10.14	101.39	70-130
76 1,4-Dichlorobenzen	10.00	9.895	98.95	70-130
77 1,2-Dichlorobenzen	10.00	9.966	99.66	70-130
78 Undecane	10.00	9.482	94.82	70-130
79 Dodecane	10.00	9.131	91.31	70-130
80 1,2,4-Trichloroben	10.00	10.30	103.02	70-130
81 Napthalene	10.00	8.679	86.79	70-130
82 Hexachlorobutadien	10.00	8.749	87.49	70-130

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Report Date: 09-Aug-2002 14:37

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,100ML

Client SDG: E080902
Fraction: OTHER

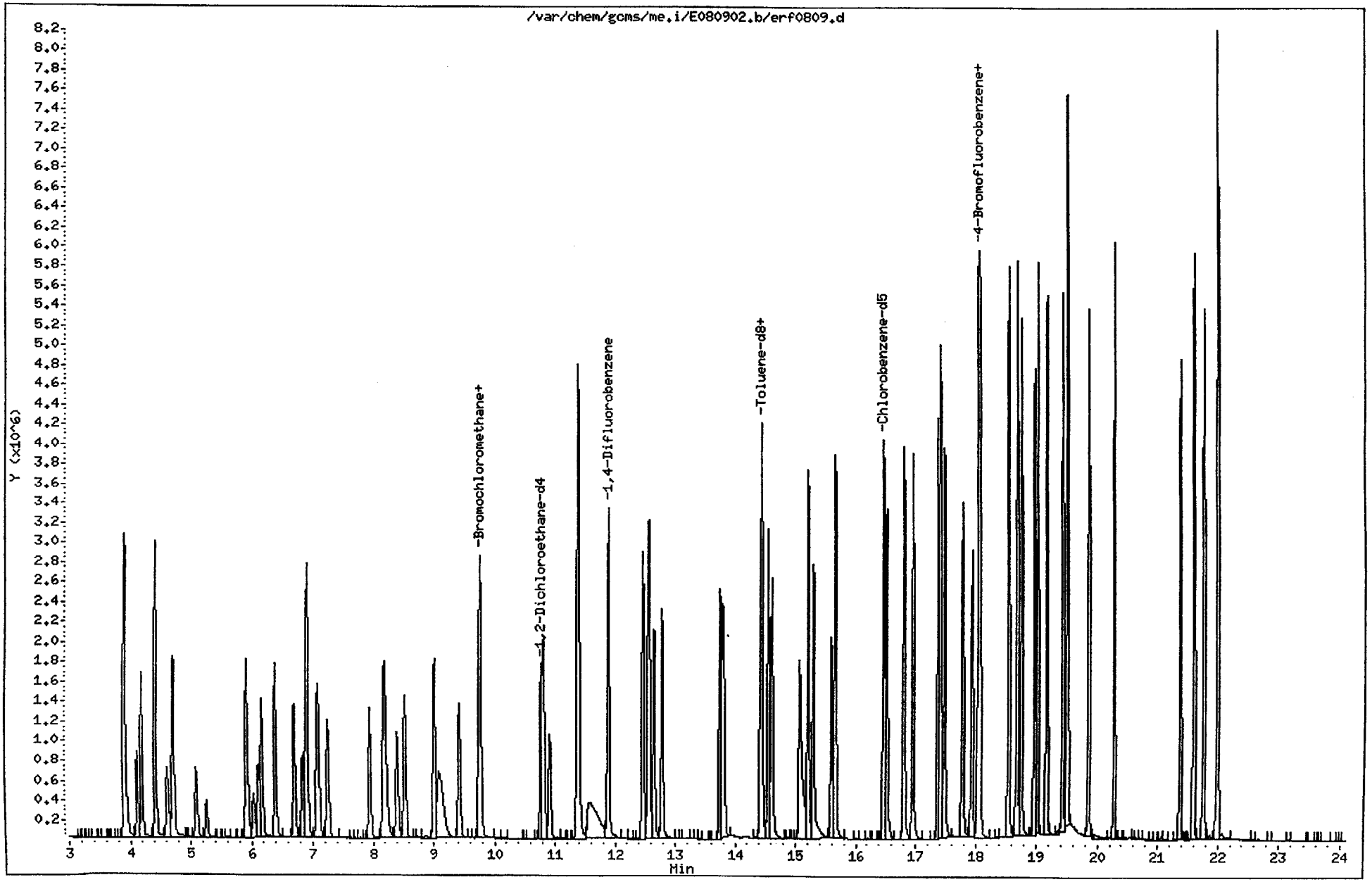
Operator: 60487
SampleType: LCS
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.949	99.49	70-130
$ 5 Toluene-d8	10.00	10.05	100.50	70-130
$ 6 4-Bromofluorobenze	10.00	10.00	100.00	70-130

Data File: /var/chem/gcms/me.i/E080902.b/erf0809.d
Date : 09-AUG-2002 14:00
Client ID:
Sample Info: LCS,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 60487
Column diameter: 0.32



BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03804

Matrix: (soil/water) AIR Lab Sample ID:H2G180110 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/18/02
Work Order: E4W731AC Date Extracted:08/09/02
Dilution factor: 688.67 Date Analyzed: 08/09/02

QC Batch: 2224250

Client Sample Id: B15377 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	3400	U
56-23-5	Carbon tetrachloride	9700	
67-66-3	Chloroform	140	U
75-09-2	Methylene chloride	340	U
127-18-4	Tetrachloroethene	140	U
79-01-6	Trichloroethene	140	U
78-93-3	2-Butanone (MEK)	340	U

FORM I

Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d
Report Date: 12-Aug-2002 12:24

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E080902.b/e4w73d.d
Lab Smp Id: E4W731AC Client Smp ID: B15377 DUP
Inj Date : 09-AUG-2002 16:58
Operator : 60487 Inst ID: me.i
Smp Info : E4W731AC,688.67,0,,,
Misc Info : E080902,LA,,,,150ML OF SERIAL
Comment :
Method : /var/chem/gcms/me.i/E080902.b/LA.m
Meth Date : 12-Aug-2002 12:17 wilesd Quant Type: ISTD
Cal Date : 09-AUG-2002 13:26 Cal File: emd0809.d
Als bottle: 1 QC Sample: SAMPLE DUPLICATE
Dil Factor: 688.67000
Integrator: HP RTE Compound Sublist: g180110.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))	
* 1 Bromochloromethane	128	9.767	9.761	(1.000)	622413	10.0000		
* 2 1,4-Difluorobenzene	114	11.897	11.892	(1.000)	3274684	10.0000		
* 3 Chlorobenzene-d5	117	16.470	16.470	(1.000)	2757124	10.0000		
$ 4 1,2-Dichloroethane-d4	67	10.778	10.773	(0.906)	667762	10.0928	10.09	
$ 5 Toluene-d8	98	14.442	14.442	(0.877)	3208911	10.3941	10.39	
$ 6 4-Bromofluorobenzene	95	18.068	18.067	(1.097)	1836184	10.2944	10.29	
42 Carbon Tetrachloride	117	11.402	11.397	(1.167)	2612450	14.0572	9681	14.8418 = 5.4%
36 Chloroform	83	9.778	9.772	(1.001)	23736	0.13844	95.34	
26 Methylene Chloride	84	7.088	7.077	(0.726)	8506	0.12155	83.71	

Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d
Report Date: 12-Aug-2002 12:24

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: e4w73d.d
Lab Smp Id: E4W731AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 60487
Method File: /var/chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,150ML OF SERIAL

Calibration Date: 09-AUG-2002
Calibration Time: 13:26
Client Smp ID: B15377 DUP
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	611867	364061	859673	622413	1.72
2 1,4-Difluorobenze	3389435	2016714	4762156	3274684	-3.39
3 Chlorobenzene-d5	2876082	1711269	4040895	2757124	-4.14

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.76	9.26	10.26	9.77	0.06
2 1,4-Difluorobenze	11.89	11.39	12.39	11.90	0.05
3 Chlorobenzene-d5	16.47	15.97	16.97	16.47	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d
Report Date: 12-Aug-2002 12:24

STL Knoxville

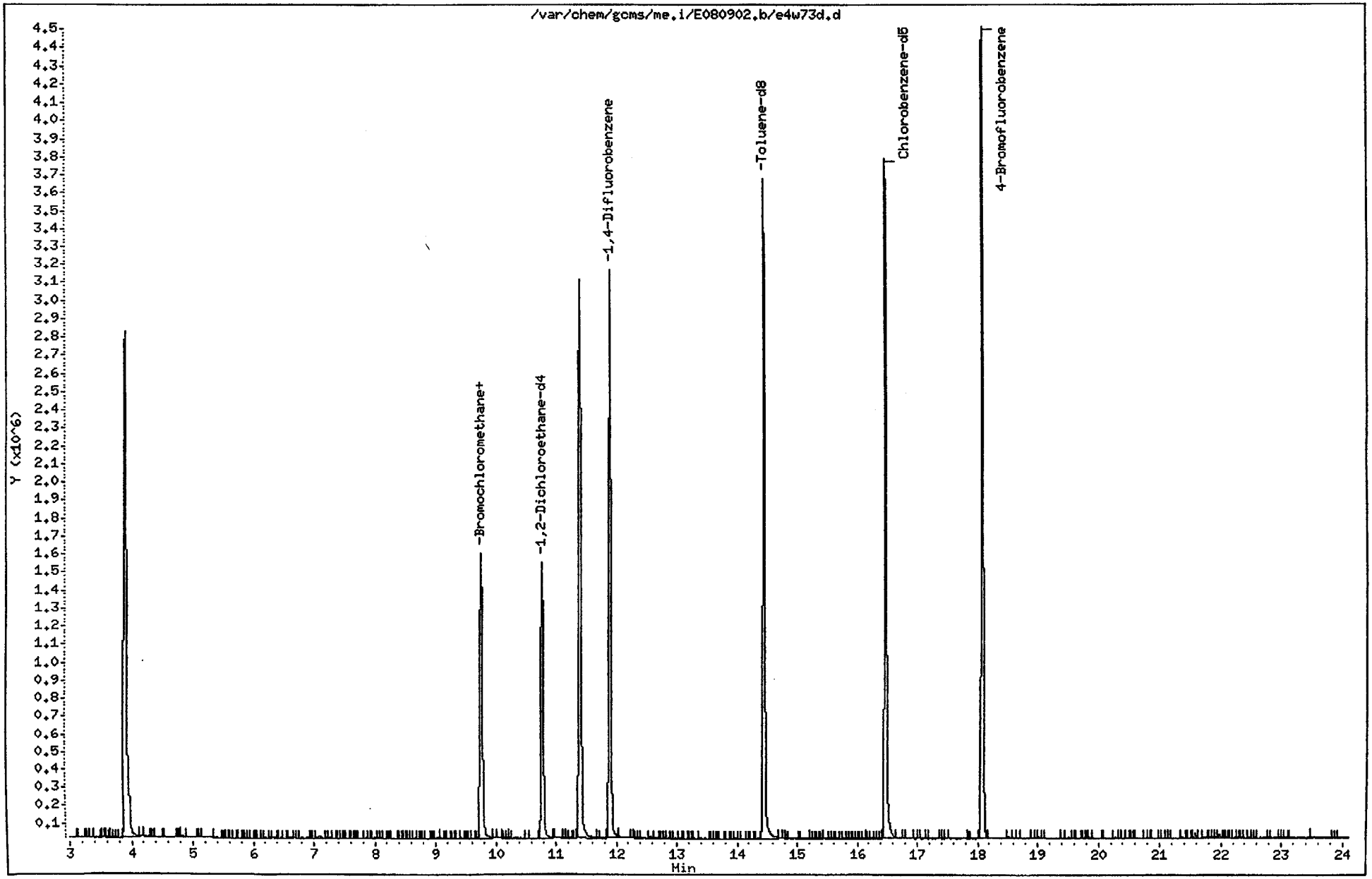
RECOVERY REPORT

Client Name: BECHTEL HANFORD, INC18-JUL-2002 00:00 Client SDG: W03804
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: E4W731AC Client Smp ID: B15377 DUP
Level: LOW Operator: 60487
Data Type: MS DATA SampleType: SAMPLE DUPLICATE{♥╟Hz·8 @
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: g180110.sub
Method File: /var/chem/gcms/me.i/E080902.b/LA.m
Misc Info: E080902,LA,,,,150ML OF SERIAL

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.09	100.93	70-130
$ 5 Toluene-d8	10.00	10.39	103.94	70-130
$ 6 4-Bromofluorobenze	10.00	10.29	102.94	70-130

Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d
Date : 09-AUG-2002 16:58
Client ID: B15377 DUP
Sample Info: E4W731AC,688.67,0,,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 60487
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d

Date : 09-AUG-2002 16:58

Client ID: B15377 DUP

Instrument: me.i

Sample Info: E4W731AC,688.67,0,,,

Volume Injected (uL): 500.0

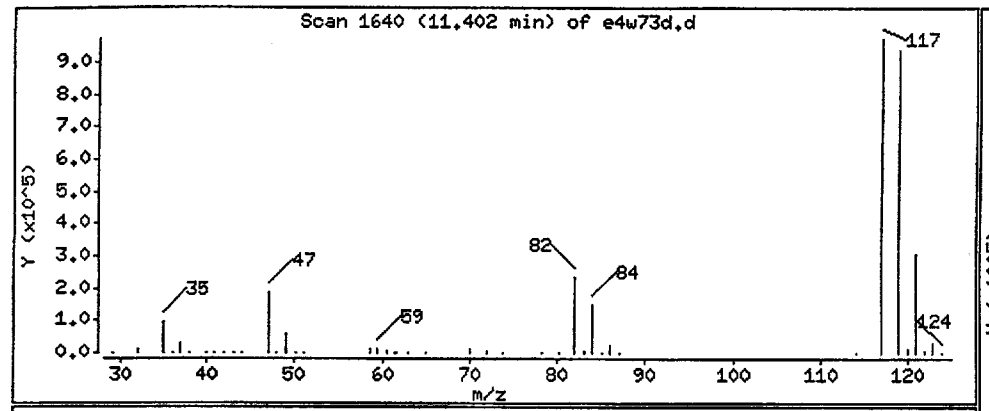
Operator: 60487

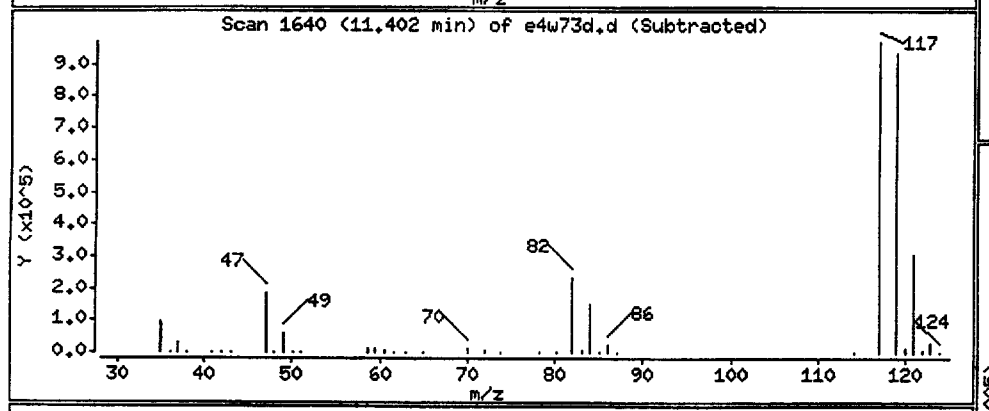
Column phase: DB-5

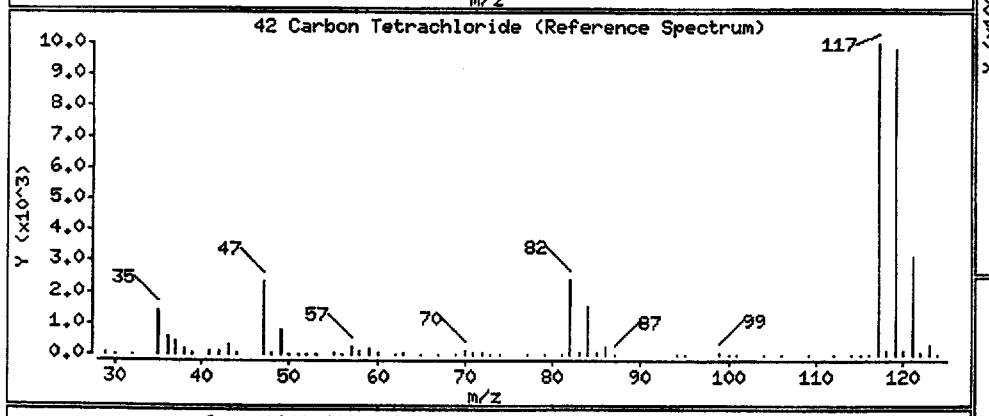
Column diameter: 0.32

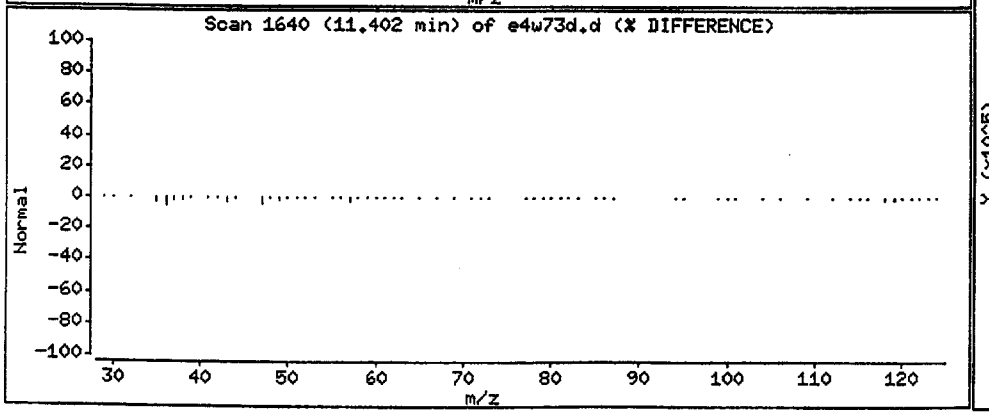
42 Carbon Tetrachloride

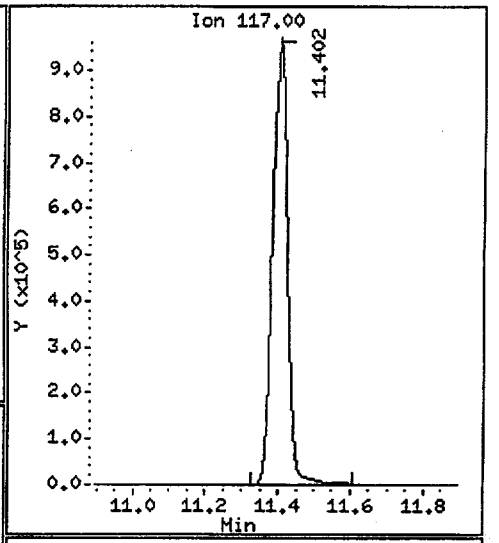
Concentration: 9681 ppb(v/v)

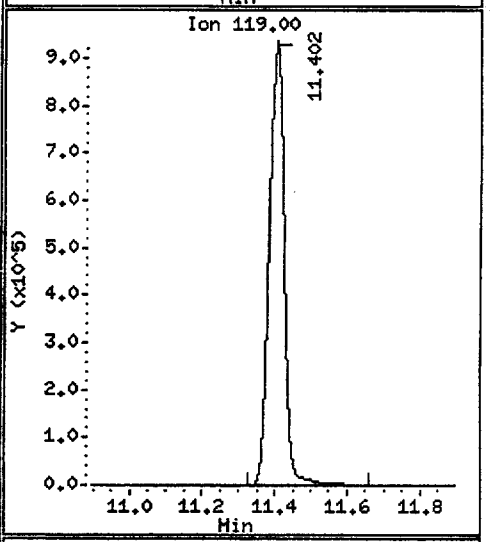


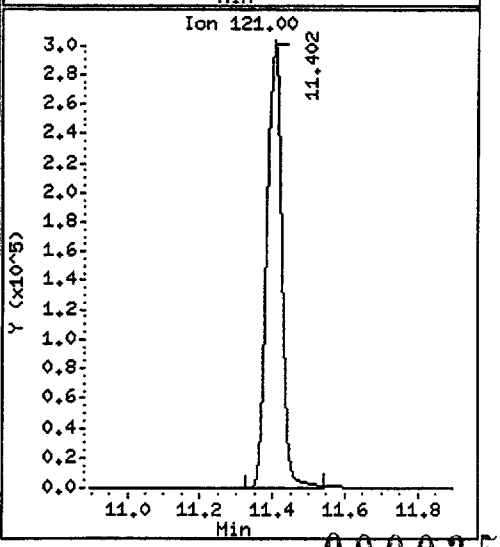












Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d

Date : 09-AUG-2002 16:58

Client ID: B15377 DUP

Instrument: me.i

Sample Info: E4W731AC,688.67,0,,,

Volume Injected (uL): 500.0

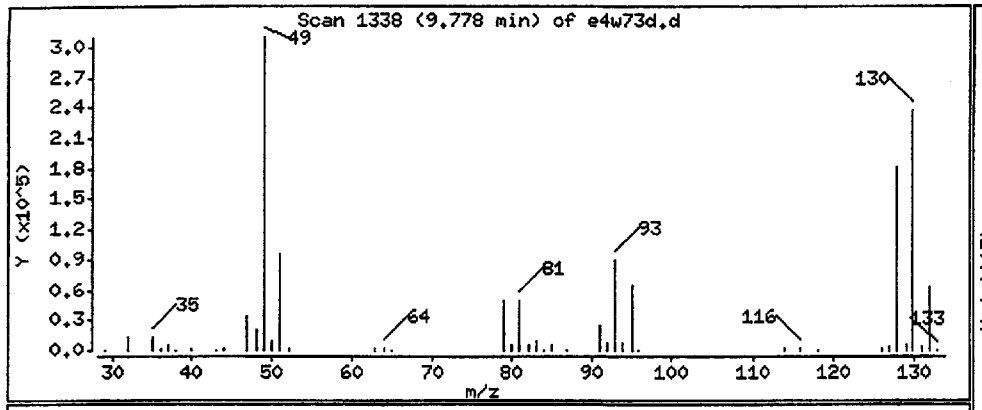
Operator: 60487

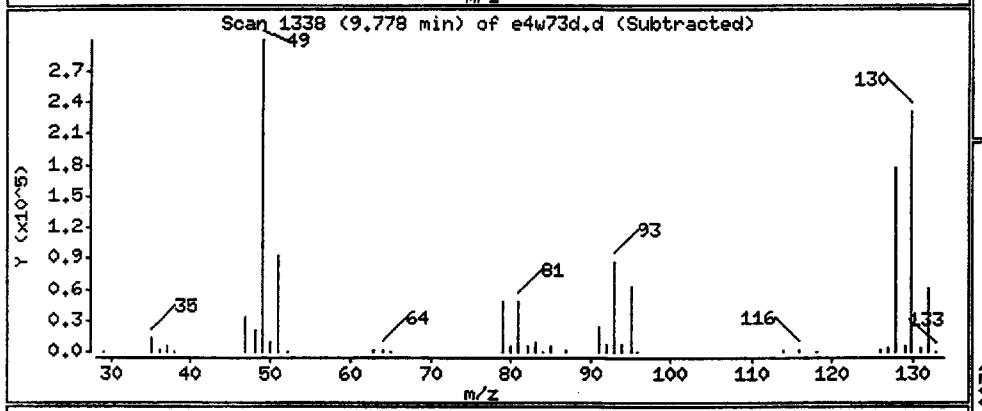
Column phase: DB-5

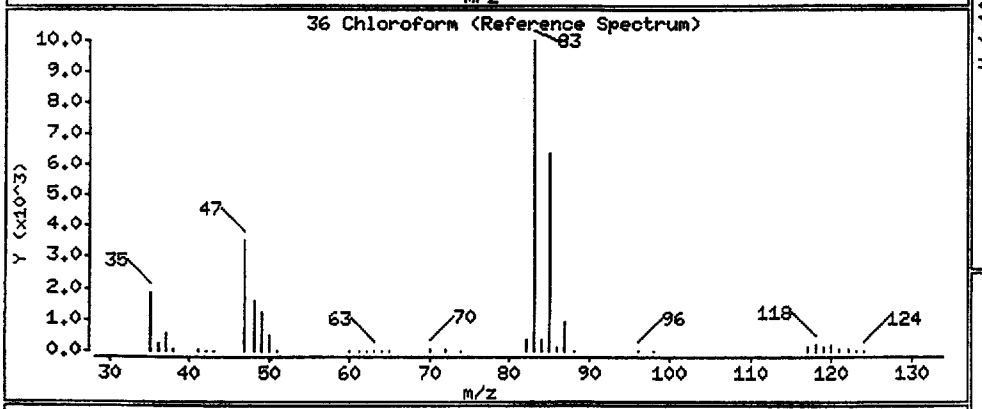
Column diameter: 0.32

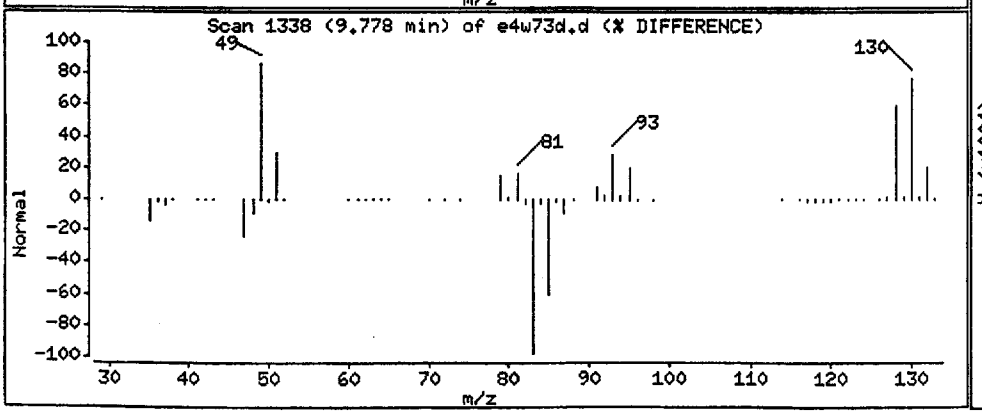
36 Chloroform

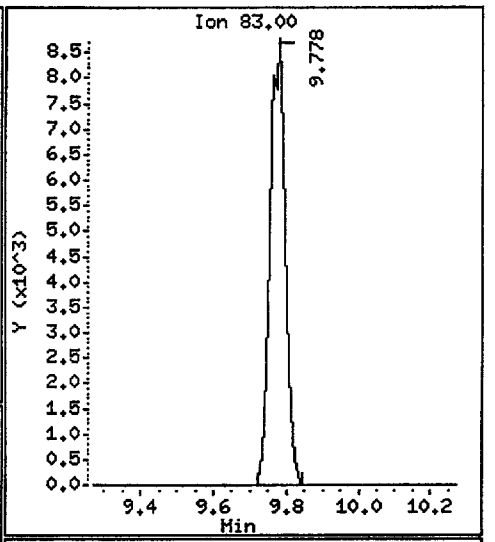
Concentration: 95.34 ppb(v/v)

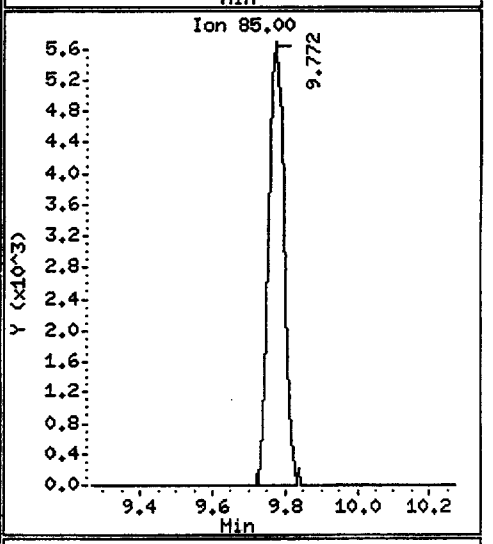


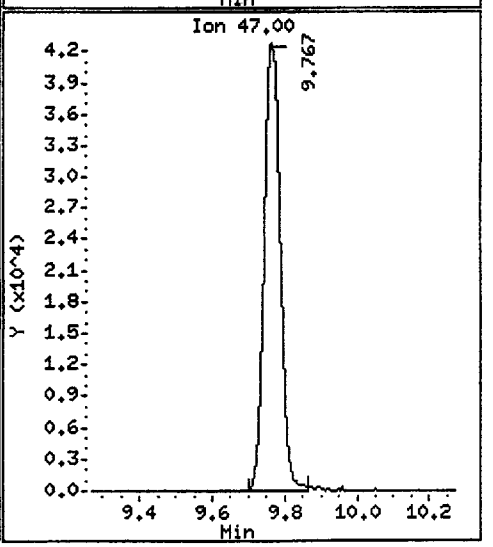












Data File: /var/chem/gcms/me.i/E080902.b/e4w73d.d

Date : 09-AUG-2002 16:58

Client ID: B15377 DUP

Instrument: me.i

Sample Info: E4W731AC,688.67,0,,,

Volume Injected (uL): 500.0

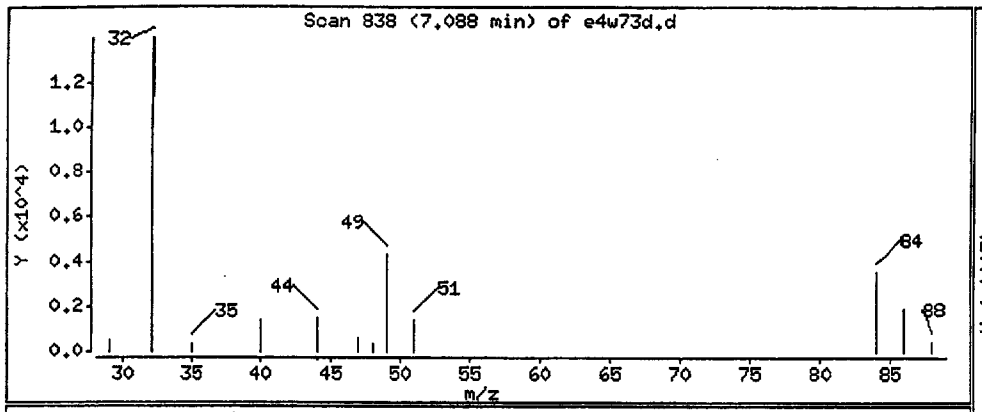
Operator: 60487

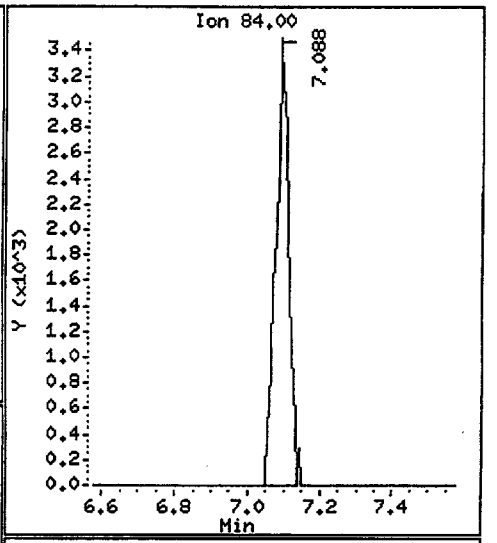
Column phase: DB-5

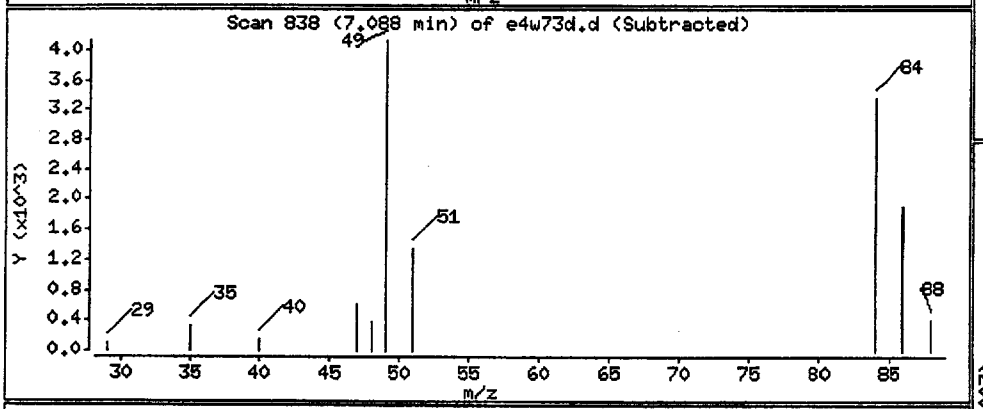
Column diameter: 0.32

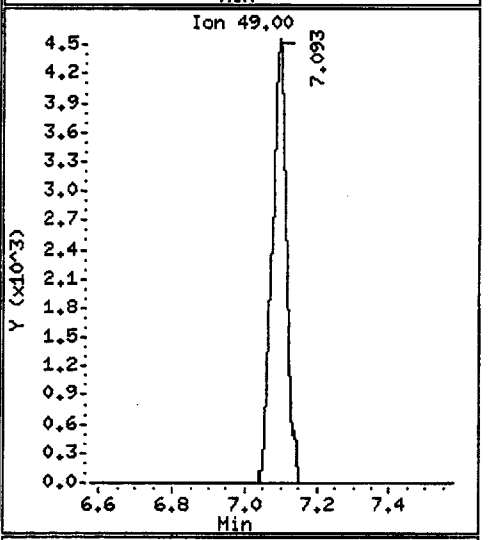
26 Methylene Chloride

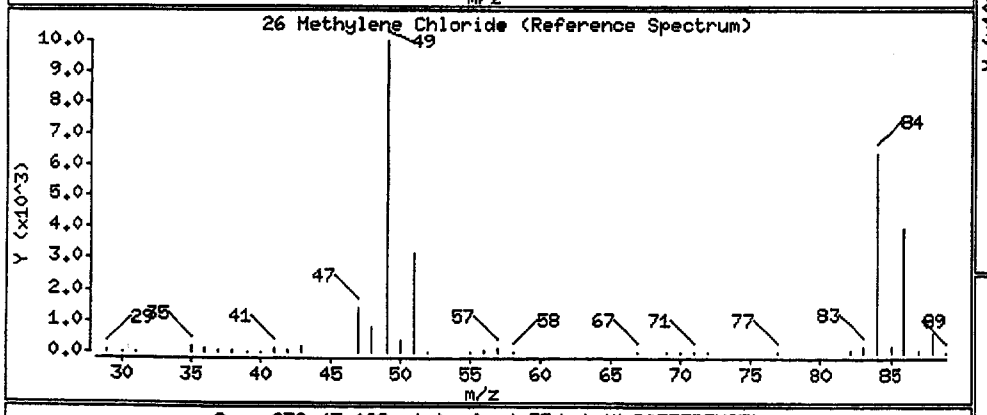
Concentration: 83.71 ppb(v/v)

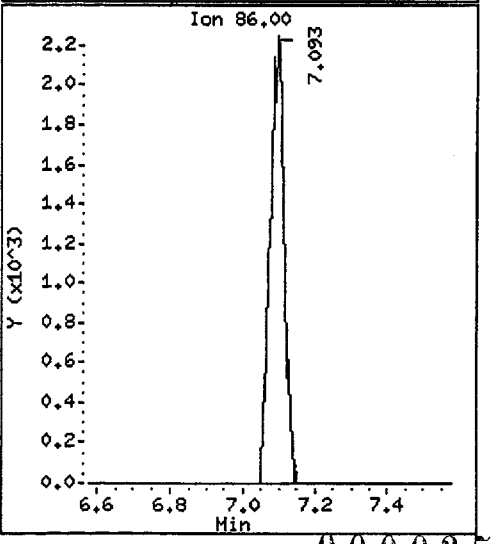


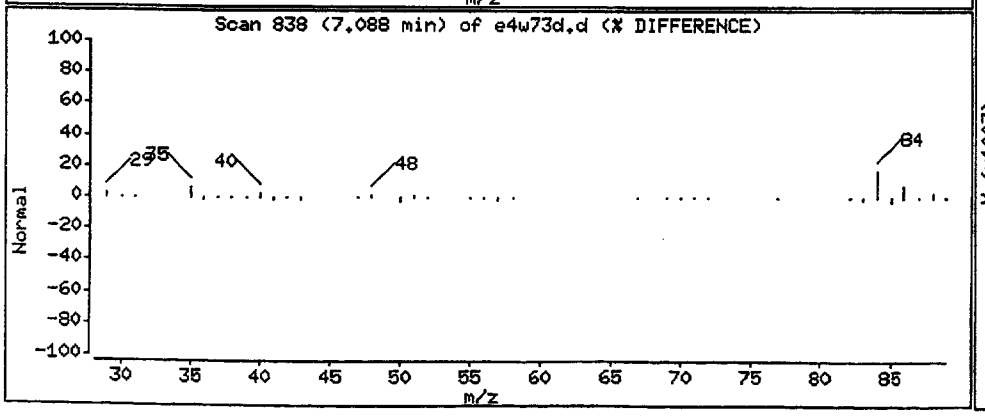












Miscellaneous Data

STL Knoxville GC/MS Air Data Review / Narrative Checklist

LOT/Project # H2618011 0

Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 3

Instrument:	ME	
Scanned File Names:	E073002 I	
	E080502	
	E080802 I	
	E080902	

Review Items **A. Tune / Continuing Calibration**	N/A	Yes	No	Why is data reportable?	2nd ✓
1. Were all samples injected within 24 hr of BFB?		✓			✓
2. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			✓
3. Was the correct CCAL used for quantitation?		✓			✓
B. CLIENT SAMPLE AND QC SAMPLE Results	N/A	Yes	No	Why is data reportable?	
1. Were all special project requirements met?		✓			✓
2. Were dilution factors/header information verified?		✓			✓
3. Are surrogates and internal standards within QC limits? (70-130% R for surr.; 60-140%R from CCAL for IS) *If no, list samples/reason (e.g.,* **sur1***):* Sample / Reason / Sample / Reason		✓		[sur1] DUP surr. %R demonstrated same effect. [sur2] Reanalysis demonstrated same effect. **[sur5] At client's request, data was flagged as estimated & released without further investigation.*** **[is1] Per client, reanalysis was not performed *** [is2] Reanalysis confirmed a matrix effect.	✓
4. Were positive hits evaluated using qualitative identification criteria and technical judgement?		✓			✓
5. Are positive results within calibration range?		✓			✓
6. For dilutions, is highest concentration hit ≥ 5 ppb? *List samples and reason (e.g.,* elev1*):* Sample / Reason / Sample / Reason		✓		[elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. [elev3] Elevated RLs for all analytes due to difficult sample matrix. [elev5] Elevated RLs for all analytes due to presence of non-target compounds.	✓
7. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NS
8. Have alternate hits/manual integrations been verified as correct?		✓			✓
9. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, analysis dates correct.)		✓			✓
10. Was a narrative prepared and all deviations noted?		✓			✓
C. Preparation QC					
1. System blank run every 24 hours prior to samples?		✓			✓
2. System blank surrogate recoveries within QC limits (70-130% R) ?		✓		**[mb1] All sample surrogates OK and there is no analyte >RL in samples associated with blank.***	✓
3. Are all analytes present in the system blank < RL? *If no, list blank ID:*		✓		**[mb3] No analyte > RL in associated samples.*** **[mb4] Sample results > 20x higher than blank.** **[mb6]** Common lab contaminant (methylene chloride/Freon) ≤2x RL.*	✓
4. DUP done per 20 samples and are all RPDs within limits? (for analytes >5x RL, ≤30 RPD for nonpolars; ≤40 RPD for polars; no criteria for methanol and n-butanol) *If no, list DUP ID:*		✓			✓
D. Other					
1. Are all nonconformances documented appropriately and copy included with deliverable?	✓				NS

Analyst: [signature]	Date: 8/12/02	2nd Level Reviewer: [signature]	Date: 08/13/02
Comments:		Comments:	

0000257

* Such action must be taken in consultation with client.

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/06/02
Time: 13:22:35

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
					computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGro
_ Bench Sheet Copied per COC

Extractionist: _____

Concentrationist: _____

****
* QC BATCH: 2218255 *
****

PREP DATE: 8/05/02
COMP DATE: 8/05/02

Reviewer/Date: _____ / 0/00/00

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	8/29/02	H2G180110-001 **E4W71-1-AA**		88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/13/02	H2G260275-007 **E5EVD-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/14/02	H2G310124-001 **E5ME9-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/14/02	H2G310124-002 **E5MFD-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/14/02	H2G310124-003 **E5MFG-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/14/02	H2G310124-004 **E5MFH-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/14/02	H2G310124-005 **E5MFJ-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/06/02
Time: 13:22:35

QC BATCH: 2218255

PREP DATE: 8/05/02
COMP DATE: 8/05/02

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00 COMMENTS:	8/14/02	H2G310124-006 **E5MFK-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/14/02	H2G310124-007 **E5MFM-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/14/02	H2G310124-008 **E5MFN-1-AA**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-001 **E5MQW-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-002 **E5MQ4-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-003 **E5MQ5-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-004 **E5MQ9-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-005 **E5MRC-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-006 **E5MRE-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
0/00/00 COMMENTS:	8/16/02	H2G310181-007 **E5MRK-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	

000025 9

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/06/02
Time: 13:22:35

QC BATCH: 2218255

PREP DATE: 8/05/02
COMP DATE: 8/05/02

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	8/16/02	H2G310181-008 **E5MRP-1-AC**	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H2H060000-255 **E50GF-1-AAB**		88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H2H060000-255 **E50GF-1-ACC**		88	JY	AIR	**100mL** 100.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
‡

NUMBER OF WORK ORDERS IN BATCH: 20

000026 0

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/12/02
Time: 11:23:02

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____
_____
Concentrationist: _____
_____

Reviewer/Date: _____ / 0/00/00

QC BATCH: 2224250

PREP DATE: 8/09/02
COMP DATE: 8/09/02

Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJT	ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	8/29/02	H2G180110-002 **E4W73-1-AA**		88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	8/29/02	H2G180110-002 **E4W73-1-ACX**		88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H2H120000-250 **E6AR5-1-AAB**		88	JY	AIR	mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H2H120000-250 **E6AR5-1-ACC**		88	JY	AIR	**100mL** 100.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
‡

NUMBER OF WORK ORDERS IN BATCH: 4

000026 1

STL-Knoxville Initial Canister Dilution

Analyst: DDF

Barometer: 30.13 inches Hg at sea level Date: 7/24/02
735.202 mm Hg at Knoxville

Lot #	W/O #	P init inches	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor	
H2G180110	E4W 71	0.0	735.2	7.8	1138.6	1.55	(71)
	E4W 73	0.0	735.2	10.2	1262.7	1.72	(73)

1 psig = 2.036 inch Hg
Pinit(Abs,mm)=(Pinit(inch)*25.4mm/inch)+Pbar(mm)
Pfinal(Abs,mm)=(Pfinal(psig)*2.036 (inch Hg/psig)*25.4 (mm/inch))+Pbar(mm)
dilution factor = Pfinal(Abs,mm)/Pinit(Abs,mm)
barometer: correction factor for 300 m altitude of Knoxville = 30.1 from Handbook of Chem and Physics
pressure in mm Hg = [(pressure at sea level in inches*25.4 mm/in) - 30.1]

cjcandil.xls
rev.03

STL-Knoxville Serial Dilution

Analyst: DDF

Barometer: 30.15 inches Hg at sea level
735.71 mm Hg at Knoxville

Date: 8/5/2002

Lot #	W/O #	Initial Volume (ml)	P final (psig)	P final Abs,mm	Dilution Factor (Serial)	Dilution Factor **(Total)**		
H2G180110	E4W 71							
	E4W 73	100	14.3	1475.2	120.3	***206.6***	(73) (*1.7175)	df*5=1033.1

1 psig = 2.036 inch Hg
Pinit(Abs,mm)=(Pinit(inch)*25.4mm/inch)+Pbar(mm)
Pfinal(Abs,mm)=(Pfinal(psig)*2.036 (inch Hg/psig)*25.4 (mm/inch))+Pbar(mm)
dilution factor = Pfinal(Abs,mm)/[(initial vol.)(Pbar(mmHg))/6000]
barometer: correction factor for 300 m altitude of Knoxville = 30.1 from Handbook of Chem and Physics
pressure in mm Hg = [(pressure at sea level in inches*25.4 mm/in) - 30.1]

cjcandil.xls
rev.03

STL-Knoxville

TO-14 Canister Dilution Log

Initial Dilution								In-Can Dilution				Serial Dilution					
Analyst	Date	Pbarr (in.)	Lot #	Work Order #	Can #	Initial Pressure Pi (in.)	Final Pressure Pf (psig)	Analyst	Date	Pbarr (in.)	Final Pressure Pf (psig)	Analyst	Date	Pbarr (in.)	To Can #	Volume (ml)	Final Pressure Pf (psig)
DDF	7/21/02	30.11	G190133	E41D6	93045	20 psi	NA										
				D7	12425	13											
				D8	92017	18											
				D9	9461B	13											
			G200103	E43F6	93297	19											
				F7	11290	18											
				F8	12818	14											
				F9	04727	18											
				GA	12882	18											
				GC	04333	20											
				GD	04169	-13.6	1.8										
				GE	11339	18 psi	NA										
				GF	12153	Vacuum	21										
			G200104	E43GG	11411	19 psi	NA										
				GH	04727	12											
				GJ	12161	16											
				GK	12728	13											
DDF	7-24-02	30.13	G180110	E4W71	1797	0	7.8										
				73	0049	0	10.2					DDF	8-5-02	30.14 15 DF 8-5-02	93261	100ml	14.3

DF 7-24

MS038R0.xls, 10/16/00

Updated: **8:53 AM EDT on July 24, 2002** Observed at **Knoxville, Tennessee**	
Temperature	**72°** F / **22°** C
Humidity	**93%**
Dew Point	**70°** F / **21°** C
Wind	**SE** at **5** mph / **8.0** km/h
Wind Gust	-
Pressure	**30.13** in

0000265

Updated: **9:53 AM EDT on August 05, 2002** Observed at **Knoxville, Tennessee**	
Temperature	**79°** F
Humidity	**74%**
Dew Point	**70°** F
Wind	**Variable** at **3** mph
Wind Gust	-
Pressure	**30.15** in

Sample Receipt Documentation

#2626000

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947
Phone: (865) 291-3000
Fax: (865) 584-4315

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 7633
Page 1 of ____

Project Name/No. 1 Bottle orde#2062
Sample Team Members 2
Profit Center No. 3 140
Project Manager 4
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 07-16-02
Lab Destination 8 STL- Richland
Lab Contact 9 Barbara Gillespie
Project Contact/Phone 12
Carrier/Waybill No. 13

Bill to: 5 Jamie McKinney STL-knox
Report to: 10 Jamie McKinney STL-knox

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
Can# 1797	Air	NA	Summa	6L	None			
0049	↓	↓	↓	↓	↓		FOR LAB USE ONLY	
						Custody seals intact,		
						received at ambient temp		
						BKD 7-18-02	FOR LAB USE ONLY	
						1 BOX FEDX# 792071255260		

Special Instructions: 23

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25
Return to Client ☒ Disposal by Lab ☐ Archive (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☐

QC Level: 27
I. ☐ II. ☐ III. ☐ Project Specific (specify):

1. Relinquished by 28 (Signature/Affiliation) Matthew T. Howard	Date: 07-12-02 Time: 08:21	1. Received by 28 (Signature/Affiliation) April Rhonhead	Date: 7-16-02 Time: 10:00
2. Relinquished by (Signature/Affiliation) April Rhonhead	Date: 7-17-02 Time: 14:00	2. Received by (Signature/Affiliation) Bryan K. Vannoy	Date: 7-18-02 Time: 08:45
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

Tuyes 9/3/02 000268

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/91

INSTRUCTIONS FOR COMPLETING THIS FORM

1. **Project Name/Number:** Record the name of the project or client/site location, and the billing number of the project (Example - 613215; XYZ Chemical Co. WA).
2. **Sample Team Members:** List the names of all the members of the team taking these samples; team leader's name first.
3. **Profit Center Number:** For intra company work, indicate the originating profit center number.
4. **Project Manger:** Record the project manager's name.
5. **Bill to:** Non-Quanterra personnel should indicate the correct billing address and the person to whom the invoice should be sent. Quanterra personnel and Quanterra subcontractors should fill in Quanterra office responsible for project accounting (if known).
6. **Purchase Order No.:** Non-Quanterra personnel should use this space to record the purchase order number authorizing the analysis of these samples. Quanterra personnel and Quanterra subcontractors should leave this space blank if a project number has been given for billing.
7. **Samples Shipment Date:** Indicate the date these samples are shipped to the laboratory.
8. **Lab Destination:** Indicate the laboratory designated for sample shipment. Do not list more than one lab on this form. Be certain before sending samples that the laboratory you are designating is aware of the shipment and is capable of accepting these sample types and has available capacity.
9. **Lab Contact:** Give the name of the laboratory contact (typically the Lab Project Manager).
0. **Send Lab Report to:** Give the name, address and phone number of the person to receive the data report for these samples.
1. **Required Report Date:** Record the date which you and the laboratory contact have determined the results will be reported (include verbal or final report as appropriate).
2. **Project Contact/Phone:** Indicate the name of the project person to be contacted in case of any questions regarding these samples and the phone number where the contact may be reached the day the samples arrive in the laboratory.
3. **Carrier/Waybill Number:** If you are sending the samples by a commercial carrier such as Airborne or Federal Express, record the courier company name and the waybill or airbill number under which these samples will be shipped (Example - Fed-Ex/ #513631771).
4. **Sample Number:** List the complete, unique, identification number of each sample. These numbers must correspond with the identification numbers on the sample containers and the field sample collection document(s).
5. **Sample Description/Type:** Provide a short physical description of the sample and the sample type such as soil, sediment, sludge, water, wipe, air, concentrated waste or bulk.
6. **Date/Time Collected:** Record date and exact time each sample was collected. Use a 24-hour clock; i.e., 1645 not 4:45 p.m.
7. **Container Type:** Indicate the volume, color and type of the sample container used (Example - 1 gallon amber glass, 1 liter clear plastic, 40 milliliter clear glass).
8. **Sample Volume:** Estimate the amount of sample in the container. For air samples, indicate the volume of air sampled.
9. **Preservation:** Indicate what type of preservative, if any, has been used for the samples (Examples - ice to 4°C nitric acid, hydrochloric acid).
0. **Requested Testing Program:** List the analyses to be performed on each sample by method number.
1. **Condition on Receipt:** Before a custody-transfer, the intended recipient should verify all samples are present and in good condition. This column may be used by the recipient to record any abnormalities found at the time of transfer (Examples - jar lid cracked, sample bottle leaking).
2. **Disposal Record No.:** Used by the laboratory to record requisite disposal information. Not used when samples are returned to client.
3. **Special Instructions:** Use this space to record any special instructions to the lab regarding the processing of these samples.
4. **Possible Hazard Identification:** Indicate all hazard classes associated with the sample(s).
5. **Sample Disposal:** Indicate how the samples should be disposed of following analysis. All samples are held six weeks and then disposed of unless other arrangements for storage have been previously requested. Lab will charge for packing, additional archiving and disposal.
6. **Turnaround Time Required:** Check "Normal" or "Rush" as determined by the Project Manager and the laboratory contact. Rush samples are subject to a surcharge.
7. **QC Level:** These are Quanterra QC levels and should not be confused with USEPA Analytical Levels.
   - **Level I:** Quanterra standard practice. Use available analytical procedures. Fifteen percent quality control (QC) samples (blank/spike/ duplicate) for every 20 samples. QC samples may not be performed for a specific project but as part of compiled sets of samples. QC data not reported with analytical results. Quanterra published rates apply to client samples tested.
   - **Level II:** Use available analytical methods. Fifteen percent QC samples minimum (blank/duplicate/spike or duplicate spike) QC samples are project or client-specific. QC summary report include with analytical results. No raw data are included. Each QC sample billed as real analytical sample.
   - **Level III:** Uses referenced regulatory procedures, and/or established/verified procedures using confirmatory techniques. Method blank plus 20 percent or two QC summary minimum per each matrix. QC summary report supplied with supporting data. Where applicable this is USEPA Contract Laboratory Program (CLP) package. Surcharge is added and/or QC samples are billed at sample rates. Costs based on analytical program required.

Project-specific: Defined in QAPjP, Work Plan, or other specific plan or procedure. Project documentation must be submitted to the laboratory before beginning work. Project requirements for QC samples cannot be less than Level I.

8. **Signatures:** When releasing custody of these samples, use the "Relinquished By" space to sign your full legal name, company name, date and time of release. After verifying that all samples are present, the person receiving the samples must sign the "Received By" space to take custody of the samples.
9. **Comments:** Provide any additional explanatory information that may be required (Example - samples stored overnight in temperature controlled, secure refrigerator).

DEayres 9/3/02 00268A

FH - Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-01	Page 1 of 1

Collector M. Baechler/T. Johansen	**Company Contact** J. V. Borghese	**Telephone No.** 373-3804	**Project Coordinator** TRENT, SJ
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	**Sampling Location** 200-ZP-1		**SAF No.** F02-002
Ice Chest No. N/A	**Field Logbook No.** HNF-N-295	**COA** 117523ES10	**Method of Shipment** Government Vehicle
Shipped To Severn Trent Incorporated, Richland	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** N/A

Price Code 9N **Data Turnaround** 45 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	Summa Canister										
No. of Container(s)	1										
Volume	6L										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										

Sample No.	Matrix *	Sample Date	Sample Time										
B15376	GASEOUS	7/17/02	0942	X									AS-3
B15377	GASEOUS	7/17/02	0948	X									AS-2

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From	Date/Time 7/17/02 1345	Received By/Stored In STL	Date/Time 7/17/02 13:45
Relinquished By/Removed From STL	Date/Time 7/17/02 13:45	Received By/Stored In STL	Date/Time 7-18-02 08:45
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) VOA - T0-14 {2-Butanone, Acetone, Carbon tetrachloride, Chloroform, Methylenechloride, Tetrachloroethene, Trichloroethene}

Custody seals intact
received at ambient temp
DIO 7-18-02
1 BOX FEDX # 7920 7125 2760

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wl=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (03/01/2002)

9/3/02 000269