WO3888

0058743

SEVERN TRENT SERVICES

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921-5947

Tel: 865-291-3000
Fax: 865-584-4315
www.stl-inc.com

CERTIFICATE OF ANALYSIS

Flour Hanford, Inc.
P. O. Box 1000 T6-03
Richland, WA 99352

December 18, 2002

Attention: Steve Trent

RECEIVED
FEB 07 2003
EDMC

SAF Number	:	F02-002
Date Samples Received	:	October 25, 2002
Number of Samples	:	Two (2)
Sample Type	:	Air
Data Deliverable	:	45 Day Data Package

I. Introduction

Two (2) air samples were received on October 25, 2002 by the STL Knoxville Laboratory for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Fluro Hanford, Inc. (FHI) specific ID:

STLKL ID#	FHI ID#	MATRIX	DATE OF RECEIPT
FAQ63	B15T11	Air	10/25/02
FAQ65	B15T12	Air	10/25/02

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

DEC 2002
RECEIVED

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:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ631AA Date Extracted:11/06/02
Dilution factor: 1.4 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.0	U
56-23-5	**Carbon tetrachloride**	**0.49**	
67-66-3	Chloroform	0.28	U
75-09-2	Methylene chloride	0.70	U
127-18-4	Tetrachloroethene	0.28	U
79-01-6	Trichloroethene	0.28	U
78-93-3	2-Butanone (MEK)	0.70	U

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ651AA Date Extracted:11/06/02
Dilution factor: 844 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	4200	U
56-23-5	**Carbon tetrachloride**	**7100**	
67-66-3	Chloroform	170	U
75-09-2	Methylene chloride	420	U
127-18-4	Tetrachloroethene	170	U
79-01-6	Trichloroethene	170	U
78-93-3	2-Butanone (MEK)	420	U

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/01/02
Work Order: FCJMX1AA Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

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:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/01/02
Work Order: FCJMX1AC Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	21	
56-23-5	Carbon tetrachloride	10	
67-66-3	Chloroform	10	
75-09-2	Methylene chloride	10	
127-18-4	Tetrachloroethene	10	
79-01-6	Trichloroethene	10	
75-71-8	Dichlorodifluoromethane	10	
74-87-3	Chloromethane	10	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	11	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	11	
75-69-4	Trichlorofluoromethane	10	
75-35-4	1,1-Dichloroethene	11	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	10	
75-34-3	1,1-Dichloroethane	10	
156-59-2	cis-1,2-Dichloroethene	11	
71-55-6	1,1,1-Trichloroethane	11	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	10	
78-87-5	1,2-Dichloropropane	10	
10061-01-5	cis-1,3-Dichloropropene	11	
10061-02-6	trans-1,3-Dichloropropene	10	
108-88-3	Toluene	11	
79-00-5	1,1,2-Trichloroethane	11	
106-93-4	1,2-Dibromoethane (EDB)	11	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/01/02
Work Order: FCJMX1AC Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

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	10	
100-42-5	Styrene	10	
95-47-6	o-Xylene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-67-8	1,3,5-Trimethylbenzene	9.9	
95-63-6	1,2,4-Trimethylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
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	9.4	

BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ631AC Date Extracted:11/06/02
Dilution factor: 1.4 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T11 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.0	U
56-23-5	Carbon tetrachloride	0.49	
67-66-3	Chloroform	0.28	U
75-09-2	Methylene chloride	0.70	U
127-18-4	Tetrachloroethene	0.28	U
79-01-6	Trichloroethene	0.28	U
78-93-3	2-Butanone (MEK)	0.70	U

EPA-19 TO-14 SURROGATE RECOVERY

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

Lab Code: STLKNX SDG No: W03888

Lot #: H2J250151

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B15T11	100	97	102	00
02	B15T12	99	97	100	00
03	METHOD BLK. FCJMX1AA	100	101	99	00
04	LCS FCJMX1AC	100	101	97	00
05	B15T11 DUP	100	98	102	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: W03888

Lot #: H2K060000 WO #: FCJMX1AC
BATCH: 2310475

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	10	105	70- 130	
Chloromethane	10	10	101	70- 130	
1,2-Dichloro-1,1,2,2-tetr	10	11	105	70- 130	
Vinyl chloride	10	11	106	70- 130	
Bromomethane	10	11	106	70- 130	
Chloroethane	10	11	106	70- 130	
Trichlorofluoromethane	10	10	102	70- 130	
Acetone	20	21	104	70- 130	
1,1-Dichloroethene	10	11	105	70- 130	
1,1,2-Trichloro-1,2,2-tri	10	10	104	70- 130	
Methylene chloride	10	10	104	70- 130	
1,1-Dichloroethane	10	10	104	70- 130	
cis-1,2-Dichloroethene	10	11	105	70- 130	
Chloroform	10	10	105	70- 130	
1,1,1-Trichloroethane	10	11	106	70- 130	
1,2-Dichloroethane	10	10	104	70- 130	
Benzene	10	10	104	70- 130	
Carbon tetrachloride	10	10	105	70- 130	
1,2-Dichloropropane	10	10	103	70- 130	
Trichloroethene	10	10	104	70- 130	
cis-1,3-Dichloropropene	10	11	107	70- 130	
trans-1,3-Dichloropropene	10	10	105	70- 130	
Toluene	10	11	106	70- 130	
1,1,2-Trichloroethane	10	11	106	70- 130	
1,2-Dibromoethane (EDB)	10	11	105	70- 130	
Tetrachloroethene	10	10	104	70- 130	
Chlorobenzene	10	10	105	70- 130	
Ethylbenzene	10	10	105	70- 130	
m-Xylene & p-Xylene	10	10	104	70- 130	
Styrene	10	10	102	70- 130	
o-Xylene	10	10	104	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: W03888

Lot #: H2K060000 WO #: FCJMX1AC
BATCH: 2310475

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	10	104	70- 130	
1,3-Dichlorobenzene	10	10	102	70- 130	
Benzyl chloride	10	10	100	70- 130	
1,4-Dichlorobenzene	10	9.9	99	70- 130	
1,3,5-Trimethylbenzene	10	9.9	99	70- 130	
1,2,4-Trimethylbenzene	10	10	102	70- 130	
1,2-Dichlorobenzene	10	10	102	70- 130	
1,2,4-Trichlorobenzene	10	10	100	70- 130	
Hexachlorobutadiene	10	9.4	94	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

FCJMX1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:W03888

Lab File ID: ebk1106b.

Lot Number: H2J250151

Date Analyzed: 11/06/02

Time Analyzed: 12:02

Matrix: AIR

Date Extracted:11/06/02

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	B15T11	FAQ631AA	faq63.d	11/06/02	16:47
02	B15T11 DUP	FAQ631AC X	faq63d.d	11/06/02	17:24
03	B15T12	FAQ651AA	faq65r.d	11/06/02	21:46
04	CHECK SAMPLE	FCJMX1AC C	erf1106.d	11/06/02	10:50
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:

FORM IV

Sample Receipt Documentation

#2J25015)

FH - Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-002	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; Data Turnaround: 45 Days
Project Designation: 200-ZP-1 Pump and Treat Operational Monitoring	Sampling Location: 200-ZP-1	SAF No.: F02-002	Air Quality ☐
Ice Chest No.	Field Logbook No.: HNF-N-295; COA: 117523ES10	Method of Shipment: Government Vehicle	
Shipped To: Severn Trent Incorporated, Richland	Offsite Property No.	Bill of Lading/Air Bill No.	

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									
B15T11	GASEOUS	10/24/02	0849	X							AS-	3
B15T12	GASEOUS	10/24/02	0856	X							AS-	2

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. H. Baechler/M. H. Baechler	10/24/02 1115	T. Heidelberg / T. Heidelberg	10-24-02 1115
T. Heidelberg / T. Heidelberg	10/24/02 1692		

SPECIAL INSTRUCTIONS

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

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=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
	Matthew T. Hess	Sample Tech.	10/25/02 0910c
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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

Rec'd temp. Ambient 1 Box Federal
custody Seals intact 7906 16456095

Volatiles

QC Summary

EPA-19 TO-14 SURROGATE RECOVERY

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

Lab Code: STLKNX SDG No: W03888

Lot #: H2J250151

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B15T11	100	97	102	00
02	B15T12	99	97	100	00
03	METHOD BLK. FCJMX1AA	100	101	99	00
04	LCS FCJMX1AC	100	101	97	00
05	B15T11 DUP	100	98	102	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: W03888

Lot #: H2K060000 WO #: FCJMX1AC
BATCH: 2310475

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Dichlorodifluoromethane	10	10	105	70- 130	
Chloromethane	10	10	101	70- 130	
1,2-Dichloro-1,1,2,2-tetr	10	11	105	70- 130	
Vinyl chloride	10	11	106	70- 130	
Bromomethane	10	11	106	70- 130	
Chloroethane	10	11	106	70- 130	
Trichlorofluoromethane	10	10	102	70- 130	
Acetone	20	21	104	70- 130	
1,1-Dichloroethene	10	11	105	70- 130	
1,1,2-Trichloro-1,2,2-tri	10	10	104	70- 130	
Methylene chloride	10	10	104	70- 130	
1,1-Dichloroethane	10	10	104	70- 130	
cis-1,2-Dichloroethene	10	11	105	70- 130	
Chloroform	10	10	105	70- 130	
1,1,1-Trichloroethane	10	11	106	70- 130	
1,2-Dichloroethane	10	10	104	70- 130	
Benzene	10	10	104	70- 130	
Carbon tetrachloride	10	10	105	70- 130	
1,2-Dichloropropane	10	10	103	70- 130	
Trichloroethene	10	10	104	70- 130	
cis-1,3-Dichloropropene	10	11	107	70- 130	
trans-1,3-Dichloropropene	10	10	105	70- 130	
Toluene	10	11	106	70- 130	
1,1,2-Trichloroethane	10	11	106	70- 130	
1,2-Dibromoethane (EDB)	10	11	105	70- 130	
Tetrachloroethene	10	10	104	70- 130	
Chlorobenzene	10	10	105	70- 130	
Ethylbenzene	10	10	105	70- 130	
m-Xylene & p-Xylene	10	10	104	70- 130	
Styrene	10	10	102	70- 130	
o-Xylene	10	10	104	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: W03888

Lot #: H2K060000 WO #: FCJMX1AC
BATCH: 2310475

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1,2,2-Tetrachloroethane	10	10	104	70- 130	
1,3-Dichlorobenzene	10	10	102	70- 130	
Benzyl chloride	10	10	100	70- 130	
1,4-Dichlorobenzene	10	9.9	99	70- 130	
1,3,5-Trimethylbenzene	10	9.9	99	70- 130	
1,2,4-Trimethylbenzene	10	10	102	70- 130	
1,2-Dichlorobenzene	10	10	102	70- 130	
1,2,4-Trichlorobenzene	10	10	100	70- 130	
Hexachlorobutadiene	10	9.4	94	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 40 outside limits

COMMENTS:

FORM III

EPA-19 TO-14 METHOD BLANK SUMMARY

BLANK WORKORDER NO.
FCJMX1AA

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number: W03888

Lab File ID: ebk1106b.

Lot Number: H2J250151

Date Analyzed: 11/06/02

Time Analyzed: 12:02

Matrix: AIR

Date Extracted: 11/06/02

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	B15T11	FAQ631AA	faq63.d	11/06/02	16:47
02	B15T11 DUP	FAQ631AC X	faq63d.d	11/06/02	17:24
03	B15T12	FAQ651AA	faq65r.d	11/06/02	21:46
04	CHECK SAMPLE	FCJMX1AC C	erf1106.d	11/06/02	10:50
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:

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03888

Lab File ID: EBF1104 BFB Injection Date: 11/04/02

Instrument ID: ME BFB Injection Time: 0806

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	17.4
75	30.0 - 60.0% of mass 95	36.1
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	0.5 (0.5)1
174	50.0 - 100.0% of mass 95	90.9
175	5.0 - 9.0% of mass 174	6.6 (7.2)1
176	95.0 - 101.0% of mass 174	88.7 (97.6)1
177	5.0 - 9.0% of mass 176	5.9 (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	IC3	IC31104	11/04/02	0916
02	0.2PPBV	IC6	IC61104B	11/04/02	1102
03	0.5PPBV	IC7	IC71104	11/04/02	1137
04	1PPBV	IC1	IC11104	11/04/02	1213
05	5PPBV	IC2	IC21104B	11/04/02	1323
06	15PPBV	IC4	IC41104	11/04/02	1359
07	30PPBV	IC5	IC51104	11/04/02	1434
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03888

Lab File ID: EBF1106 BFB Injection Date: 11/06/02

Instrument ID: ME BFB Injection Time: 0839

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	20.6
75	30.0 - 60.0% of mass 95	36.4
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	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	90.4
175	5.0 - 9.0% of mass 174	6.4 (7.1)1
176	95.0 - 101.0% of mass 174	88.2 (97.6)1
177	5.0 - 9.0% of mass 176	5.8 (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	EMD1106B	11/06/02	0949
02	INTRA-LAB CH	FCJMX1AC	ERF1106	11/06/02	1050
03	INTRA-LAB BL	FCJMX1AA	EBK1106B	11/06/02	1202
04	B15T11	FAQ631AA	FAQ63	11/06/02	1647
05	B15T11	FAQ631AC	FAQ63D	11/06/02	1724
06	B15T12	FAQ651AA	FAQ65R	11/06/02	2146
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W03888

Lab File ID (Standard): EMD1106B Date Analyzed: 11/06/02

Instrument ID: ME Time Analyzed: 0949

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	913776	9.67	4360916	11.81	4186210	16.40
	UPPER LIMIT	1283855	10.17	6127087	12.31	5881625	16.90
	LOWER LIMIT	543697	9.17	2594745	11.31	2490795	15.90
	CLIENT SAMPLE NO.						
01	INTRA-LAB CH	974079	9.66	4651590	11.81	4411483	16.40
02	INTRA-LAB BL	894072	9.66	4362885	11.80	4072145	16.40
03	B15T11	620168	9.66	3112777	11.80	3121418	16.40
04	B15T11	604981	9.66	3036008	11.81	3016868	16.40
05	B15T12	719271	9.67	3572812	11.81	3524030	16.40
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:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 001
Method: EPA-19 TØ-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ631AA Date Extracted:11/06/02
Dilution factor: 1.4 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T11

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.0	U
56-23-5	**Carbon tetrachloride**	**0.49**	
67-66-3	Chloroform	0.28	U
75-09-2	Methylene chloride	0.70	U
127-18-4	Tetrachloroethene	0.28	U
79-01-6	Trichloroethene	0.28	U
78-93-3	2-Butanone (MEK)	0.70	U

Data File: /var/chem/gcms/me.i/E110602.b/faq63.d
Report Date: 06-Nov-2002 17:28

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110602.b/faq63.d
Lab Smp Id: FAQ631AA Client Smp ID: B15T11
Inj Date : 06-NOV-2002 16:47
Operator : 0691 Inst ID: me.i
Smp Info : FAQ631AA,1.4,0,,,
Misc Info : E110602,LA,Hanford.sub,,,,500 mL
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 15:37 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emdi106b.d
Als bottle: 7
Dil Factor: 1.40000
Integrator: HP RTE Compound Sublist: hanford.sub
Target Version: 3.50
Processing Host: qmidhp01

11/9/02

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	9.657	9.668	(1.000)	620168	10.0000	
* 2 1,4-Difluorobenzene	114	11.804	11.814	(1.000)	3112777	10.0000	
* 3 Chlorobenzene-d5	117	16.398	16.403	(1.000)	3121418	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.674	10.685	(0.904)	424214	9.99159	9.992
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	2914706	9.70194	9.702
$ 6 4-Bromofluorobenzene	95	18.001	18.006	(1.098)	2078359	10.1894	10.19
20 Acetone	58	6.236	6.021	(0.646)	48943	1.63020	2.282(H)
26 Methylene Chloride	84	6.984	6.984	(0.723)	21985	0.43781	0.6129
33 2-Butanone	72	8.861	9.006	(0.918)	13594	0.55355	~~0.7750~~
42 Carbon Tetrachloride	117	11.309	11.314	(1.171)	35794	0.34813	0.4874

DW 11-6-02

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E110602.b/faq63.d
Report Date: 06-Nov-2002 17:17

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: faq63.d
Lab Smp Id: FAQ631AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,Hanford.sub,,,,500 mL

Calibration Date: 06-NOV-2002
Calibration Time: 09:49
Client Smp ID: B15T11
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	913776	543697	1283855	620168	-32.13
2 1,4-Difluorobenze	4360916	2594745	6127087	3112777	-28.62
3 Chlorobenzene-d5	4186210	2490795	5881625	3121418	-25.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.66	-0.11
2 1,4-Difluorobenze	11.81	11.31	12.31	11.80	-0.09
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	-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/E110602.b/faq63.d
Report Date: 06-Nov-2002 17:17

STL Knoxville

RECOVERY REPORT

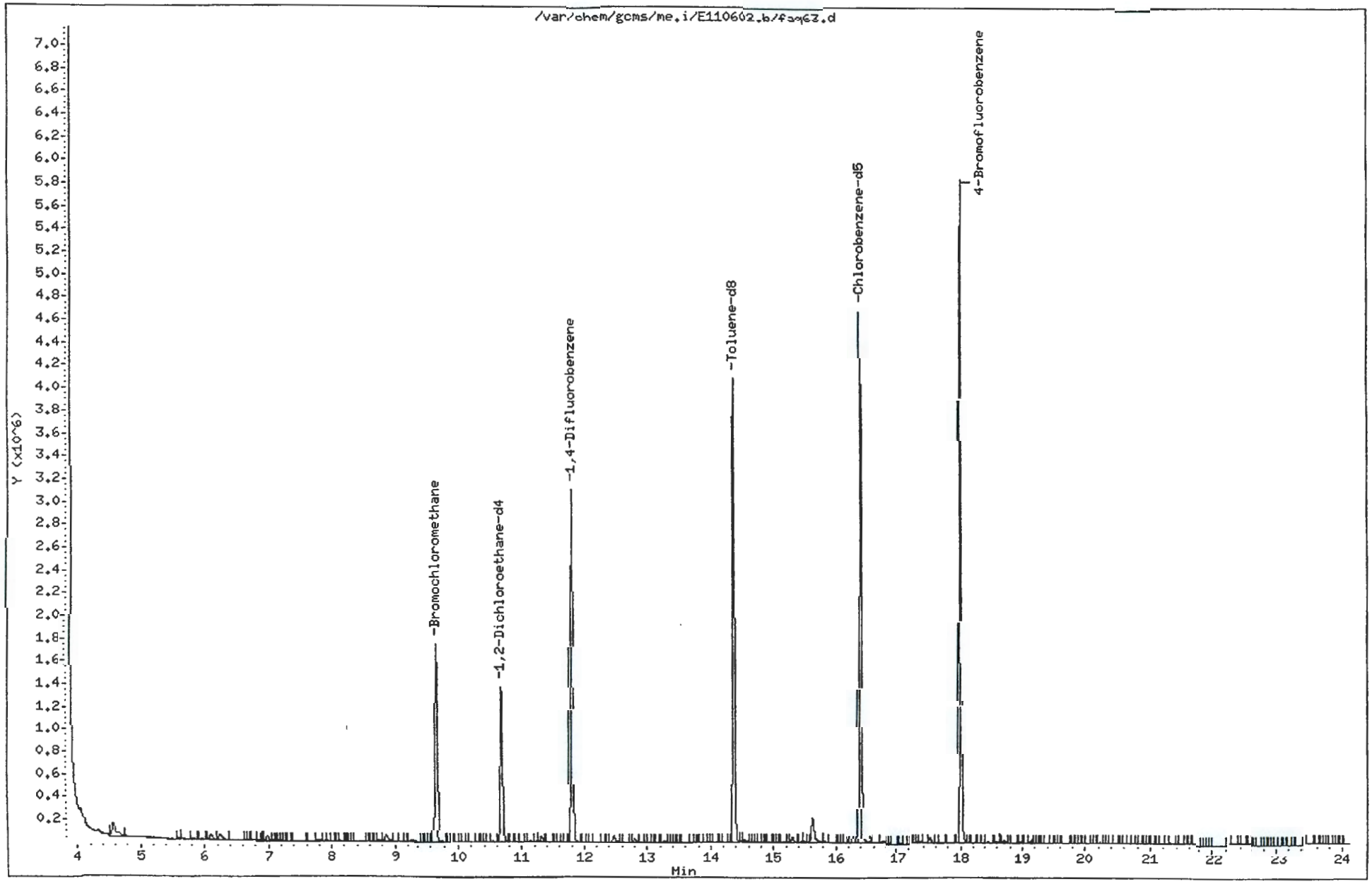
Client Name: BECHTEL HANFORD, INC25-OCT-2002 00:00 Client SDG: H2J250151
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: FAQ631AA Client Smp ID: B15T11
Level: LOW Operator: 0691
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: hanford.sub
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,Hanford.sub,,,,500 mL

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.992	99.92	70-130
$ 5 Toluene-d8	10.00	9.702	97.02	70-130
$ 6 4-Bromofluorobenze	10.00	10.19	101.89	70-130

Data File: /var/chem/gcms/me.i/E110602.b/faq63.d
Date : 06-NOV-2002 16:47
Client ID: B15T11
Sample Info: FAQ631AA,1.4,0,,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110602.b/faq63.d

Date : 06-NOV-2002 16:47

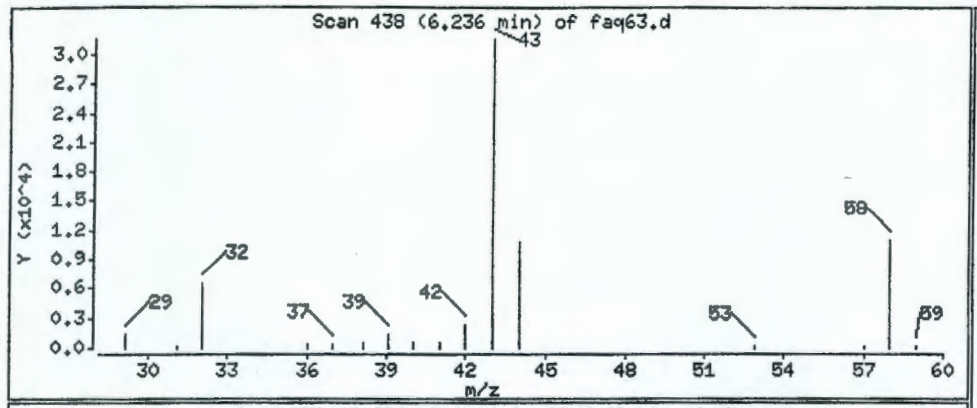
Client ID: B15T11 | Instrument: me.i

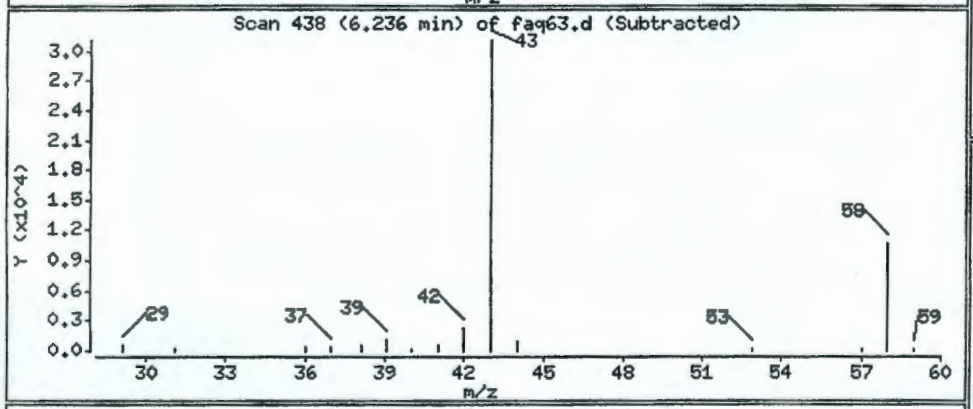
Sample Info: FAQ631AA,1.4,0,,,

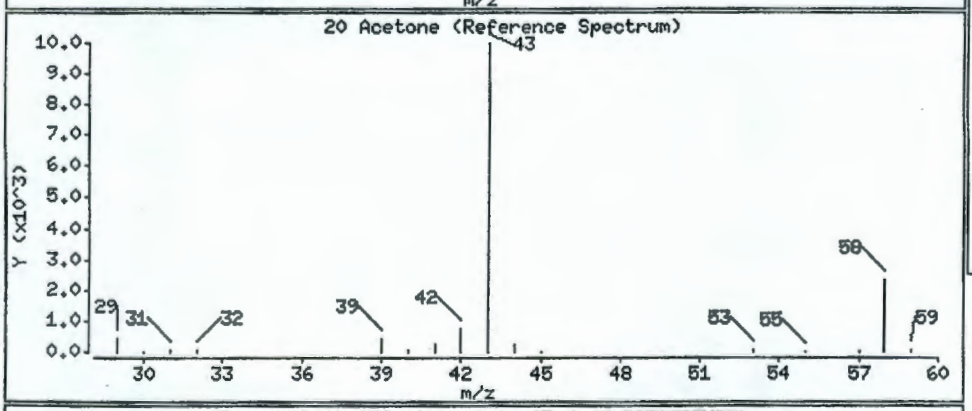
Volume Injected (uL): 500.0 | Operator: 0691

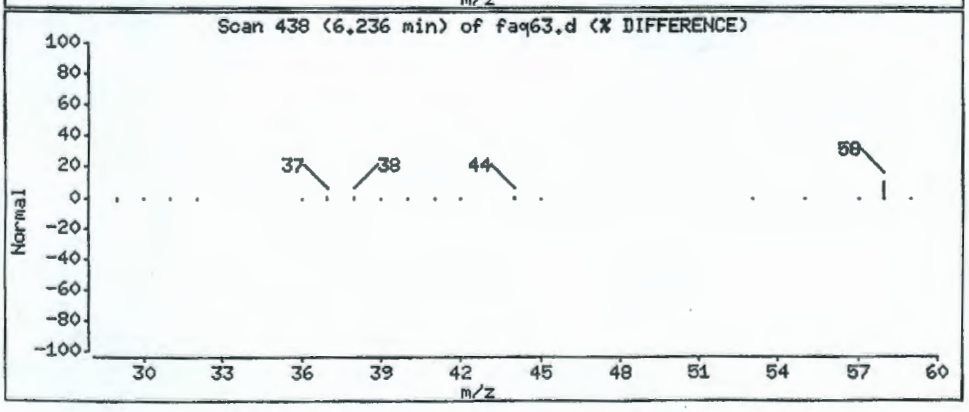
Column phase: DB-5 | Column diameter: 0.32

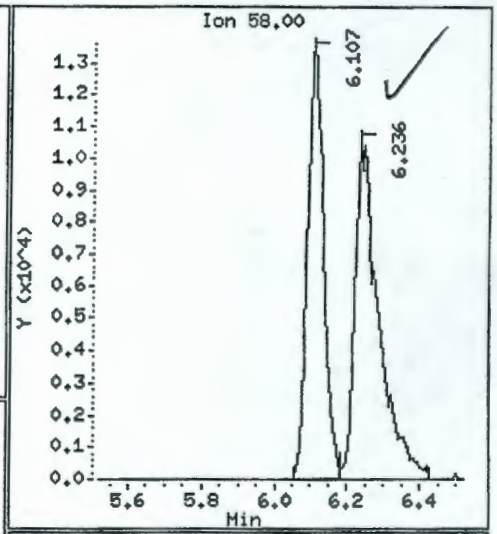
20 Acetone | Concentration: 2.282 ppb(v/v)

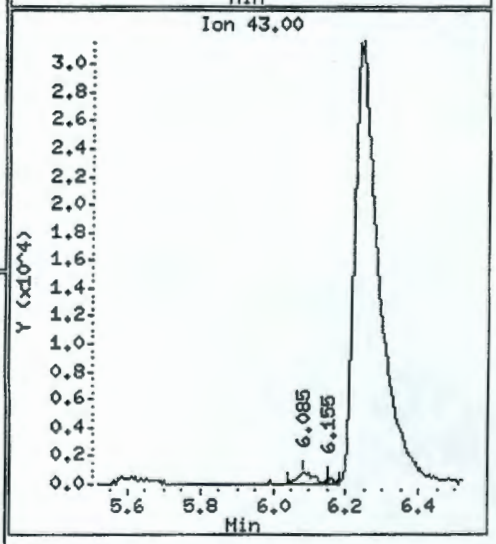












Data File: /var/chem/gcms/me.i/E110602.b/faq63.d

Date : 06-NOV-2002 16:47

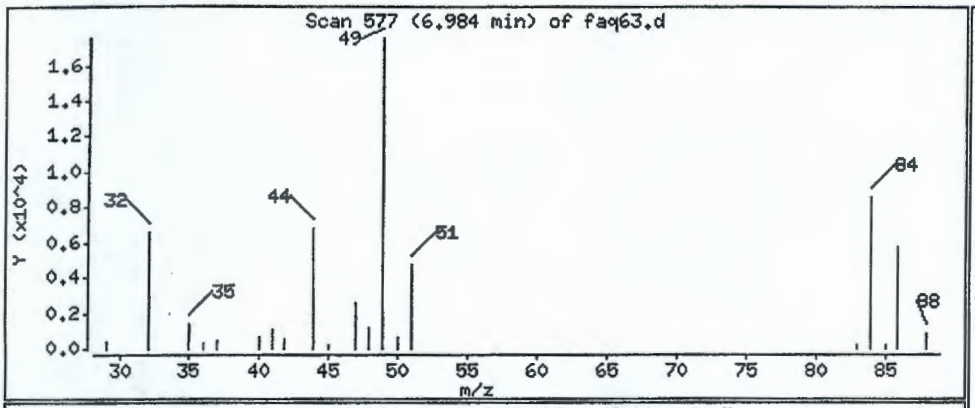
Client ID: B15T11 Instrument: me.i

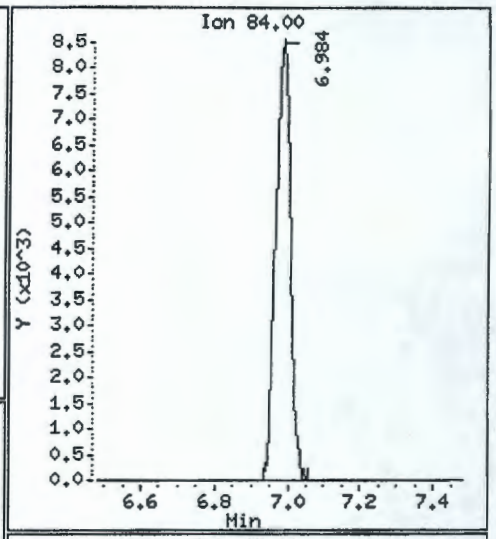
Sample Info: FAQ631AA,1.4,0,,,

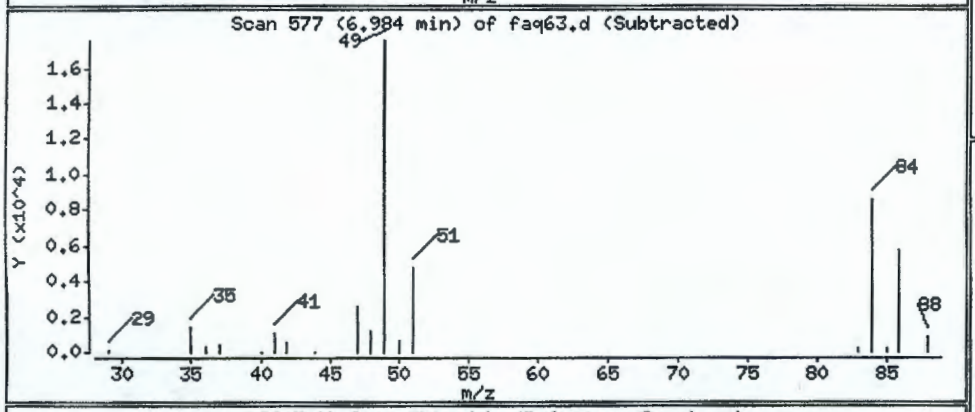
Volume Injected (uL): 500.0 Operator: 0691

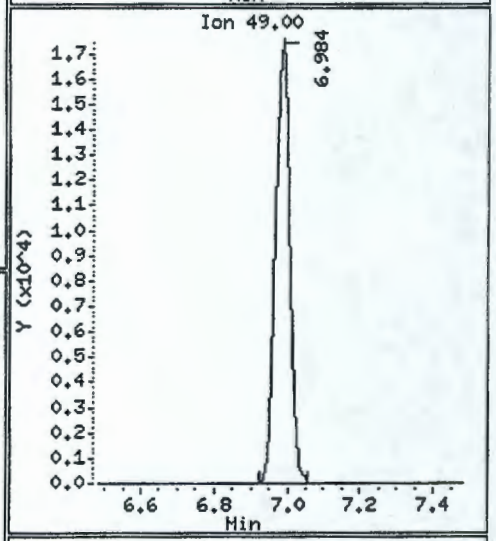
Column phase: DB-5 Column diameter: 0.32

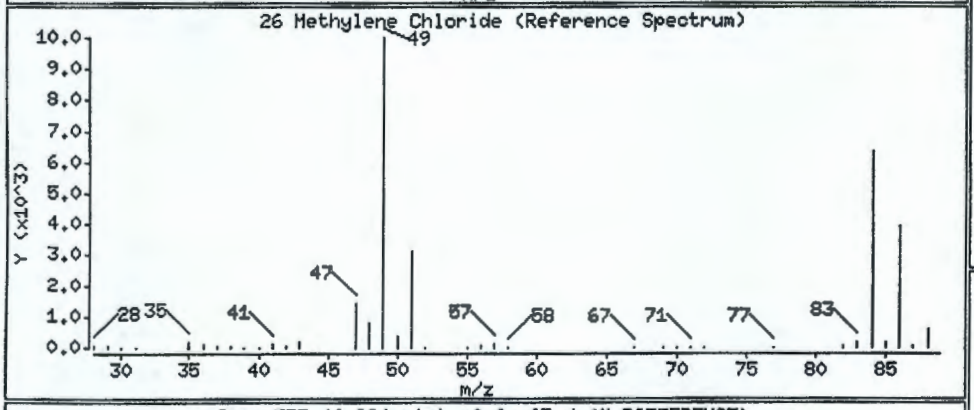
26 Methylene Chloride Concentration: 0.6130 ppb(v/v)

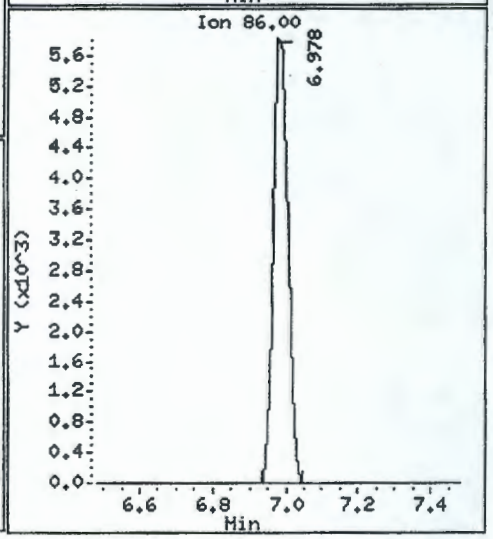


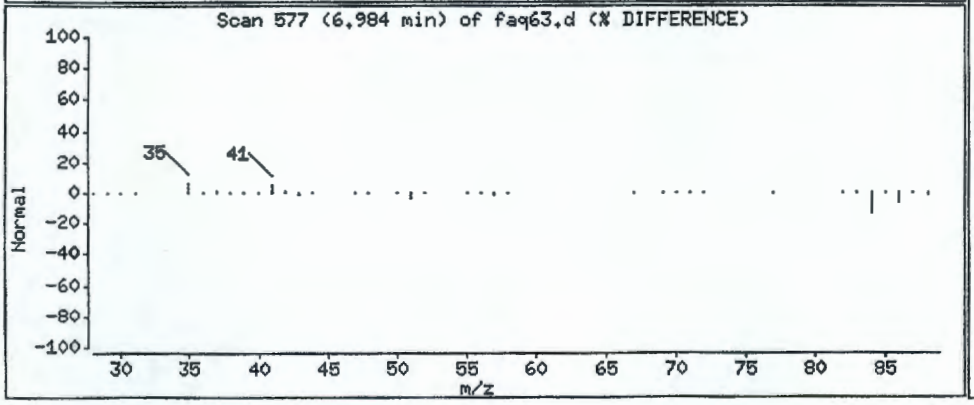












Data File: /var/chem/gcms/me.i/E110602.b/faq63.d

Date : 06-NOV-2002 16:47

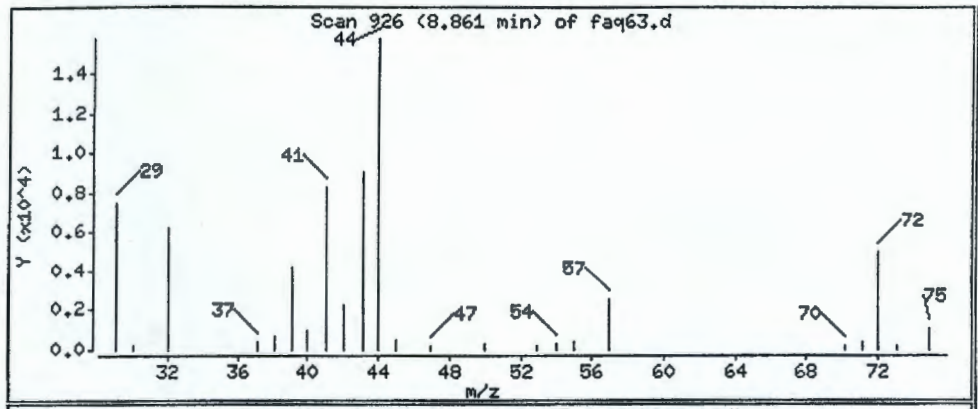
Client ID: B15T11 | Instrument: me.i

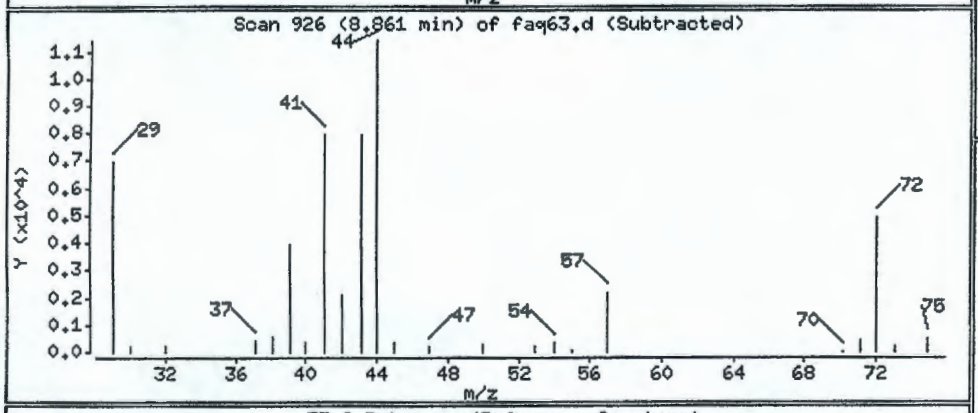
Sample Info: FAQ631AA,1.4,0,,,

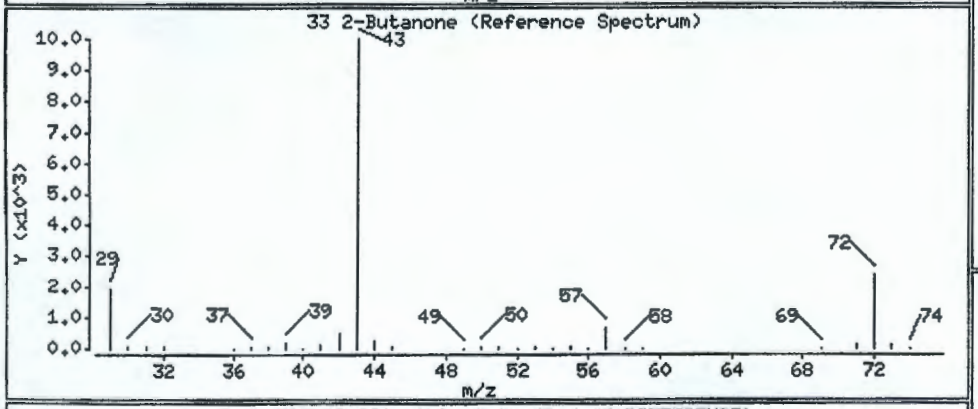
Volume Injected (uL): 500.0 | Operator: 0691

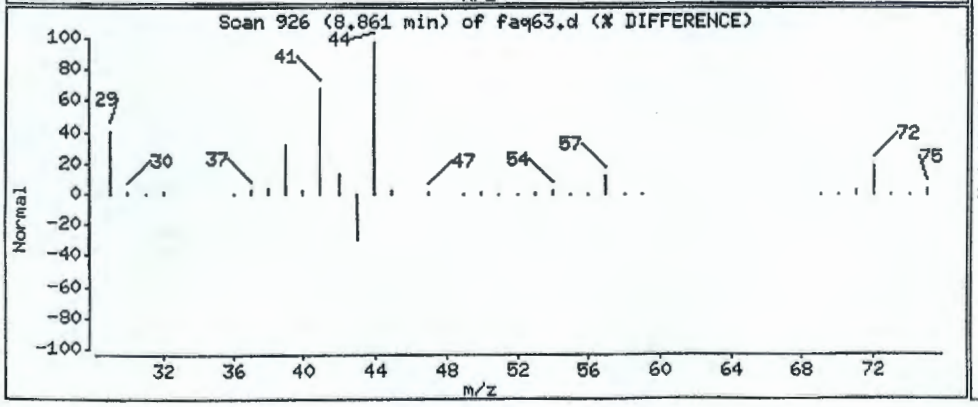
Column phase: DB-5 | Column diameter: 0.32

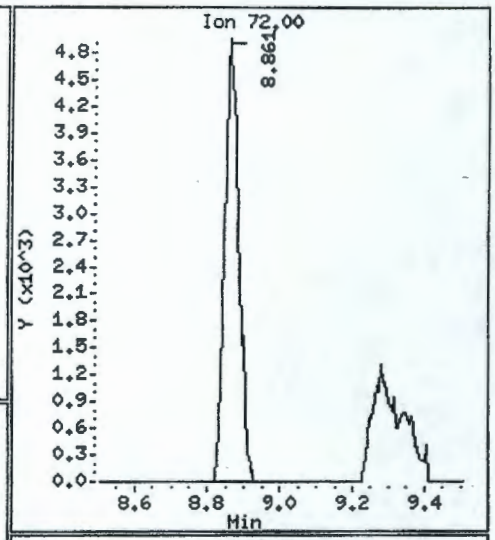
33 2-Butanone | Concentration: 0.7750 ppb(v/v)

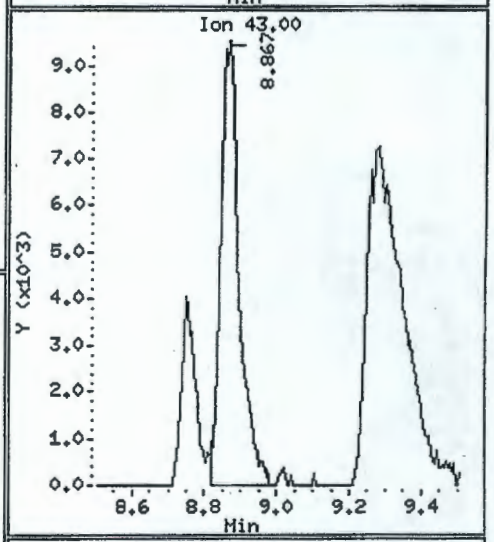


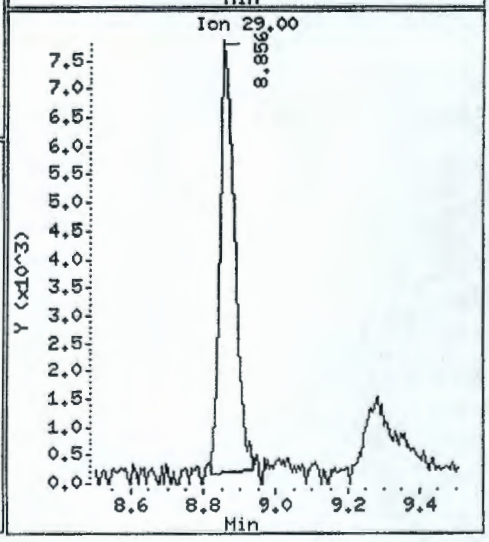












Data File: /var/chem/gcms/me.i/E110602.b/faq63.d

Date : 06-NOV-2002 16:47

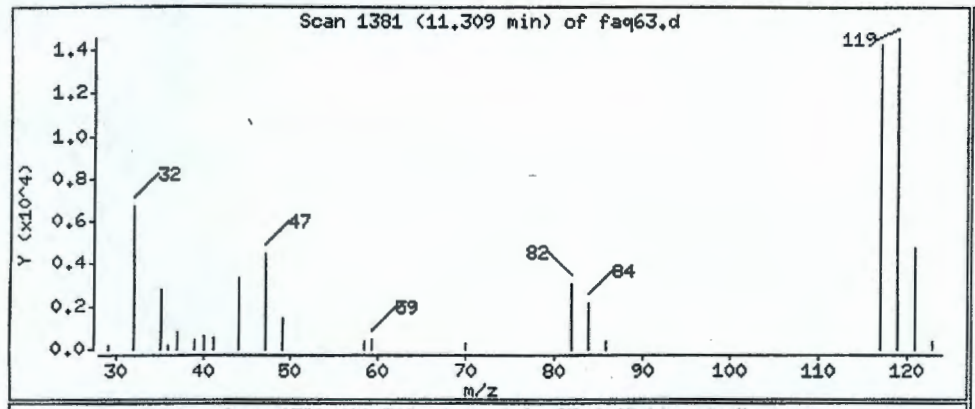
Client ID: B15T11 Instrument: me.i

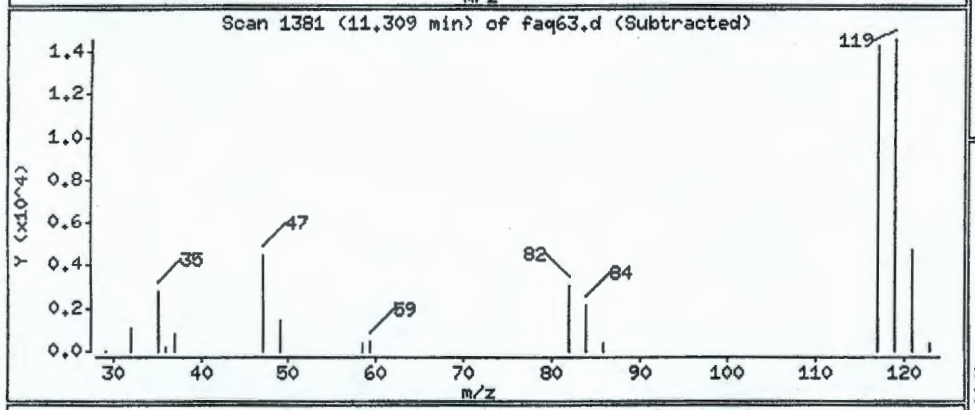
Sample Info: FAQ631AA,1.4,0,,,

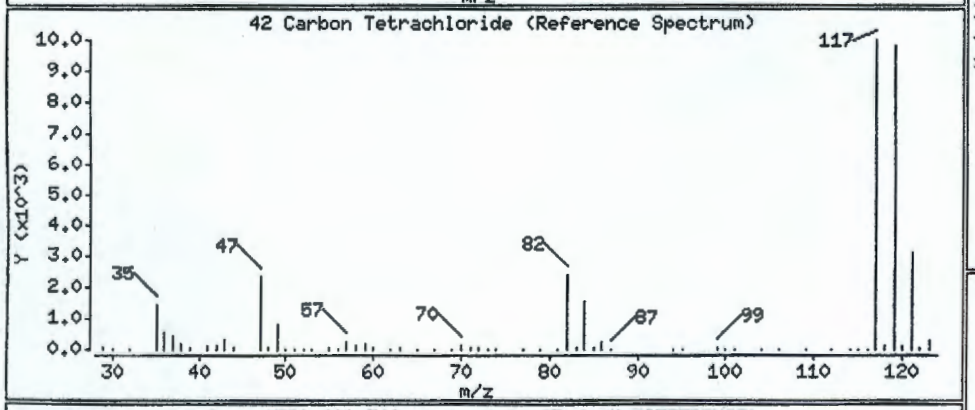
Volume Injected (uL): 500.0 Operator: 0691

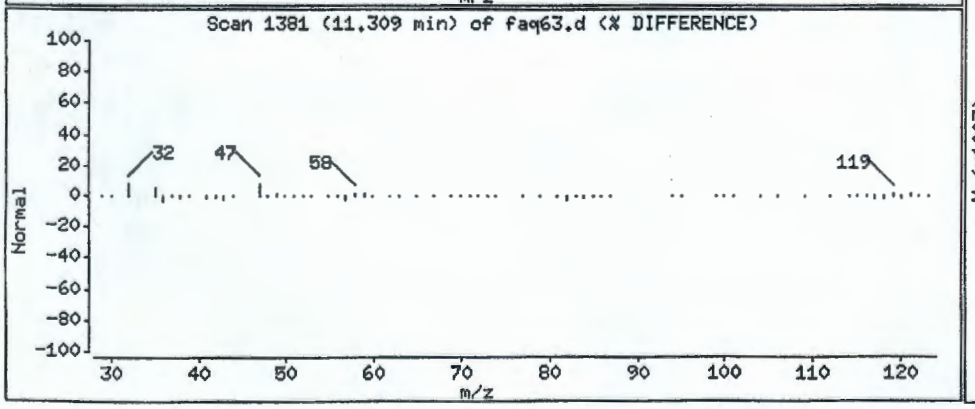
Column phase: DB-5 Column diameter: 0.32

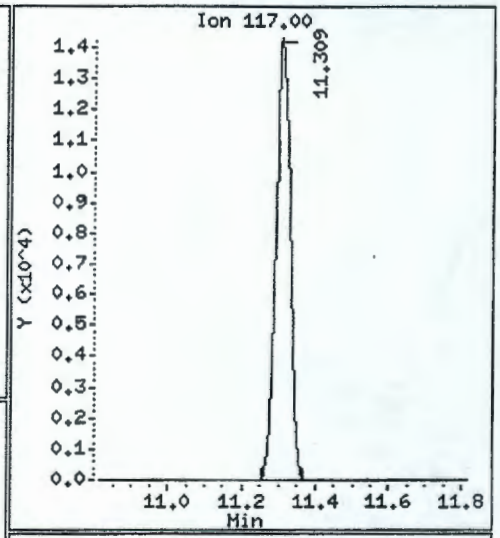
42 Carbon Tetrachloride Concentration: 0.4874 ppb(v/v)

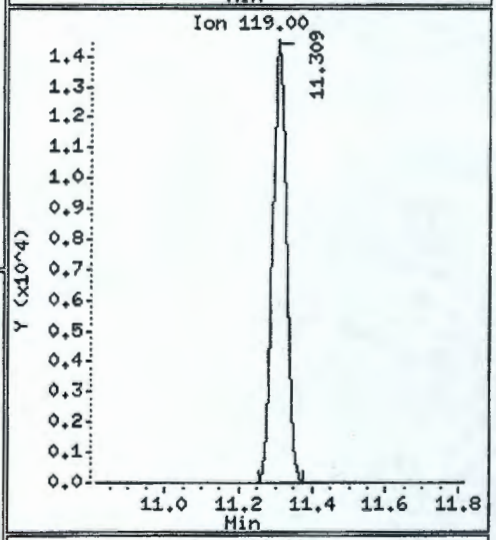


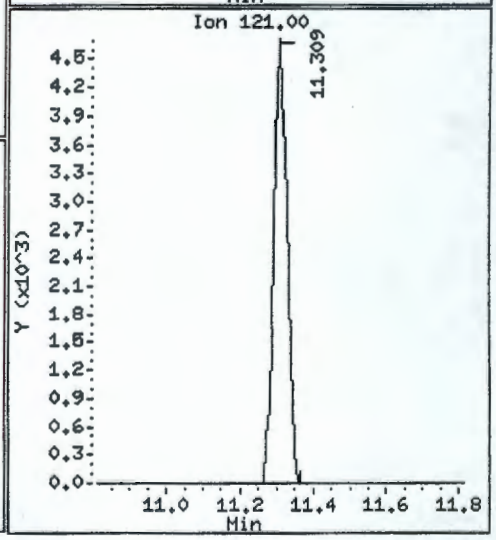












BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ651AA Date Extracted:11/06/02
Dilution factor: 844 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T12

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	4200	U
56-23-5	**Carbon tetrachloride**	**7100**	
67-66-3	Chloroform	170	U
75-09-2	Methylene chloride	420	U
127-18-4	Tetrachloroethene	170	U
79-01-6	Trichloroethene	170	U
78-93-3	2-Butanone (MEK)	420	U

Data File: /chem/gcms/me.i/E110602.b/faq65r.d
Report Date: 06-Nov-2002 22:13

STL Knoxville

Modified Method TO-14

Data file : /chem/gcms/me.i/E110602.b/faq65r.d
Lab Smp Id: FAQ651AA Client Smp ID: B15T12
Inj Date : 06-NOV-2002 21:46
Operator : 0691 Inst ID: me.i
Smp Info : FAQ651AA,844,0,,,
Misc Info : E110602,LA,hanford.sub,,,,200 ML SERIAL
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 19:19 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emd1106b.d
Als bottle: 1
Dil Factor: 844.00000
Integrator: HP RTE Compound Sublist: hanford.sub
Target Version: 3.50
Processing Host: qmidhp01

11/19/02

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	9.668	9.668	(1.000)	719271	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.814	(1.000)	3572812	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	3524030	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	480142	9.85276	9.853
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	3302979	9.73828	9.738
$ 6 4-Bromofluorobenzene	95	18.001	18.006	(1.097)	2310054	10.0314	10.03
42 Carbon Tetrachloride	117	11.314	11.314	(1.170)	999854	8.38473	7077

Data File: /chem/gcms/me.i/E110602.b/faq65r.d
Report Date: 06-Nov-2002 22:13

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: faq65r.d
Lab Smp Id: FAQ651AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,hanford.sub,,,,200 ML SERIAL

Calibration Date: 06-NOV-2002
Calibration Time: 09:49
Client Smp ID: B15T12
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	913776	543697	1283855	719271	-21.29
2 1,4-Difluorobenze	4360916	2594745	6127087	3572812	-18.07
3 Chlorobenzene-d5	4186210	2490795	5881625	3524030	-15.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.67	0.00
2 1,4-Difluorobenze	11.81	11.31	12.31	11.81	-0.04
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	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: /chem/gcms/me.i/E110602.b/faq65r.d
Report Date: 06-Nov-2002 22:13

STL Knoxville

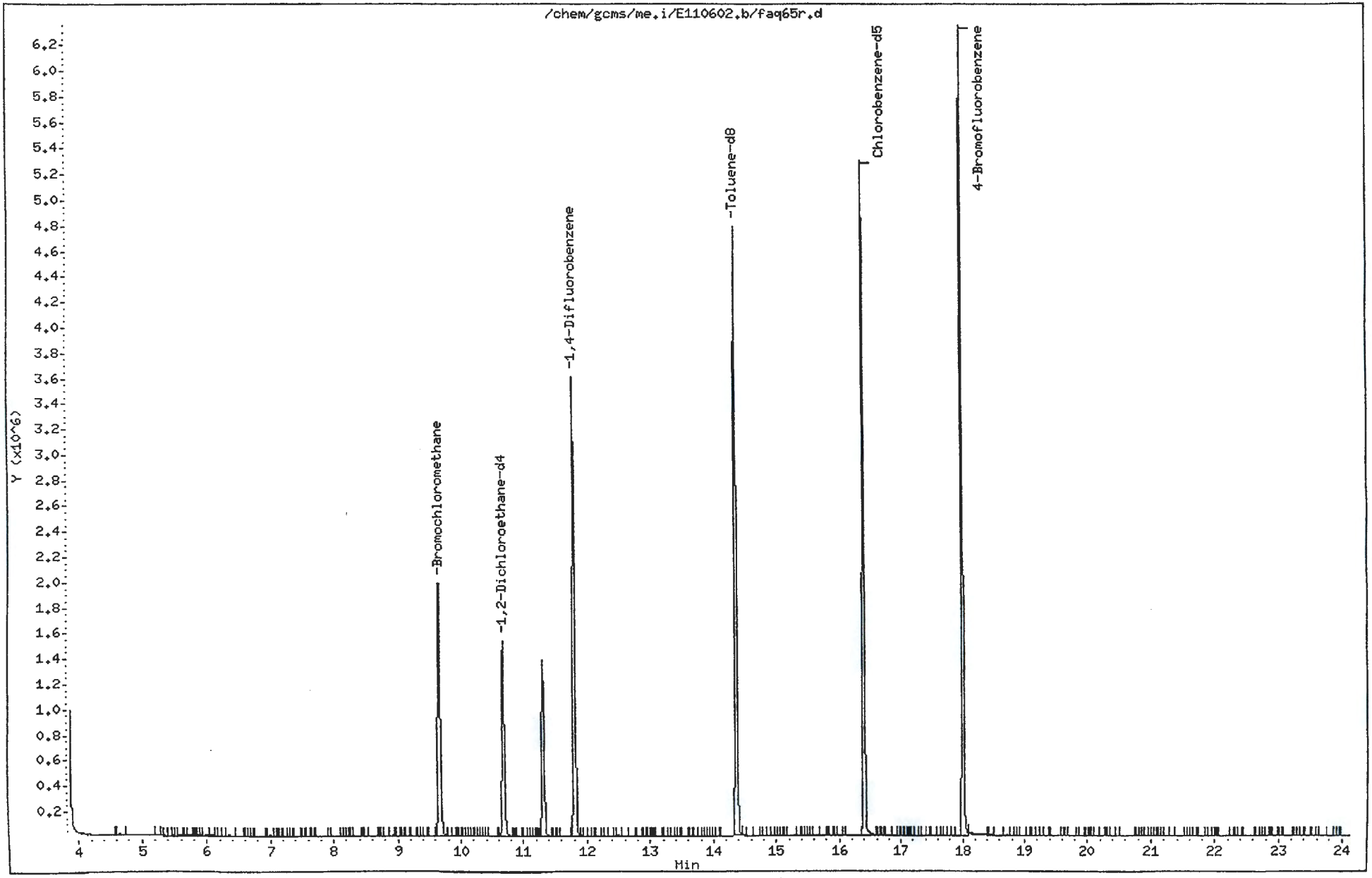
RECOVERY REPORT

Client Name: BECHTEL HANFORD, INC25-OCT-2002 00:00 Client SDG: W03888
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: FAQ651AA Client Smp ID: B15T12
Level: LOW Operator: 0691
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: hanford.sub
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,hanford.sub,,,,200 ML SERIAL

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.853	98.53	70-130
$ 5 Toluene-d8	10.00	9.738	97.38	70-130
$ 6 4-Bromofluorobenze	10.00	10.03	100.31	70-130

Data File: /chem/gcms/me.i/E110602.b/faq65r.d
Date : 06-NOV-2002 21:46
Client ID: B15T12
Sample Info: FAQ651AA,844,0,,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



Data File: /chem/gcms/me.i/E110602.b/faq65r.d

Date : 06-NOV-2002 21:46

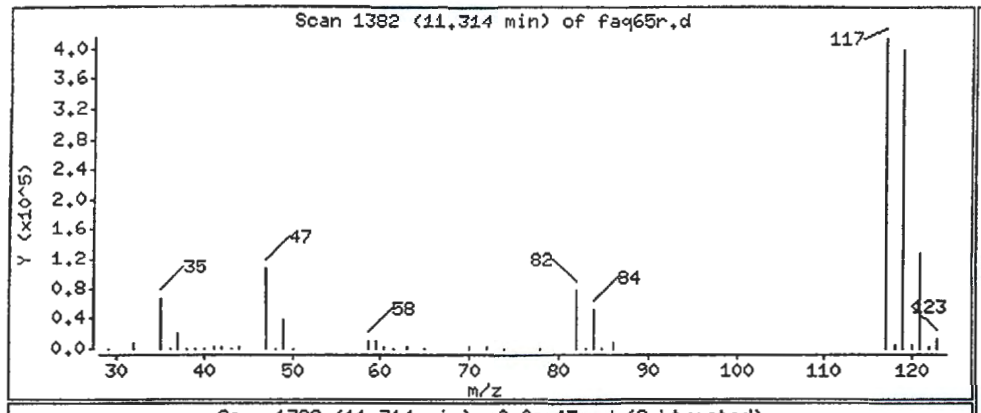
Client ID: B15T12 | Instrument: me.i

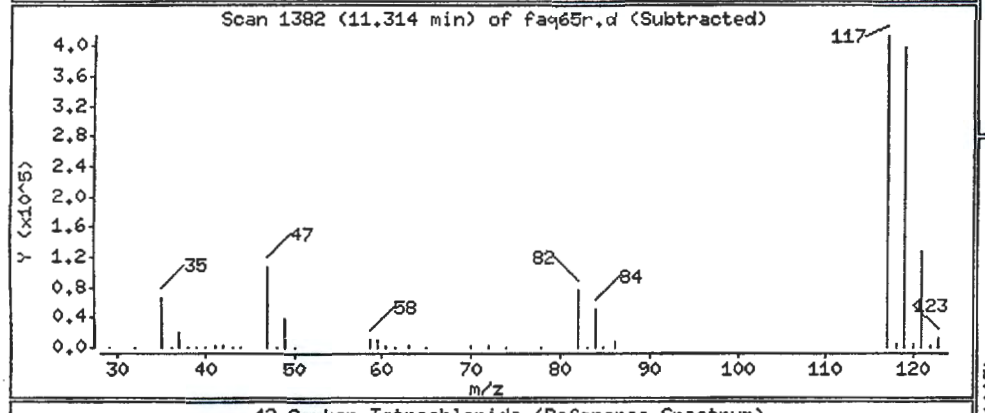
Sample Info: FAQ651AA,844,0,,,

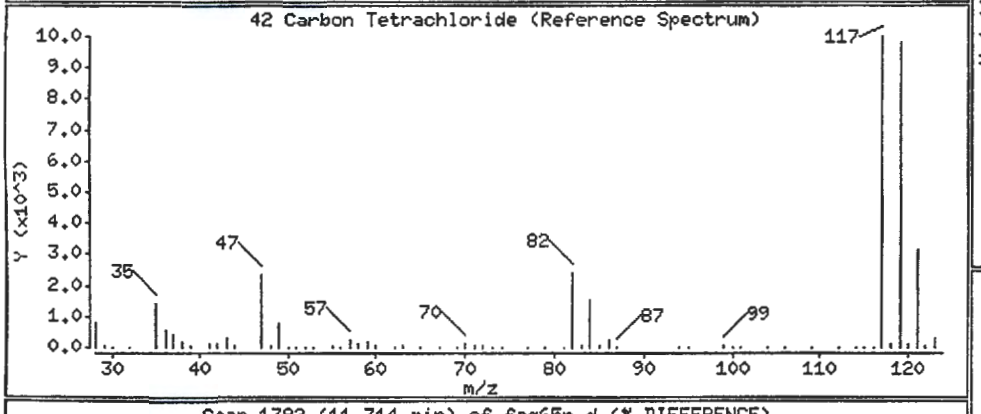
Volume Injected (uL): 500.0 | Operator: 0691

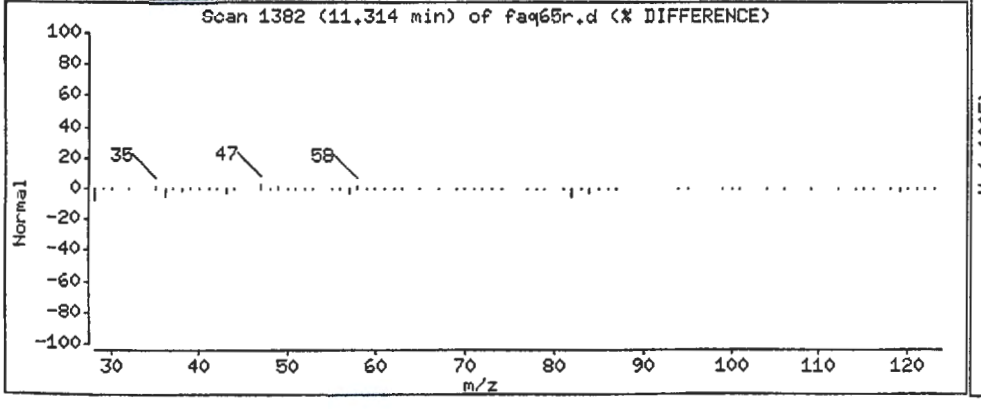
Column phase: DB-5 | Column diameter: 0.32

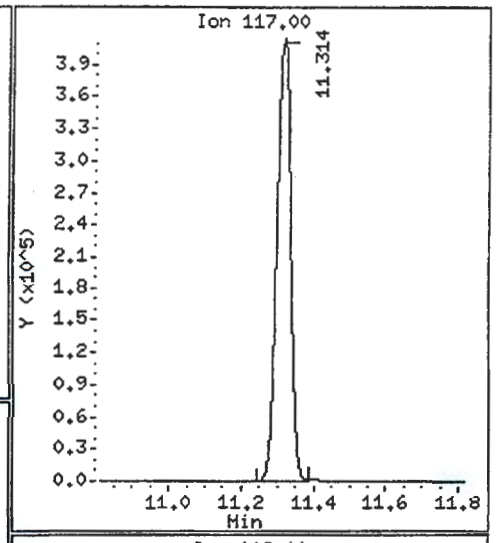
42 Carbon Tetrachloride | Concentration: 7077 ppb(v/v)

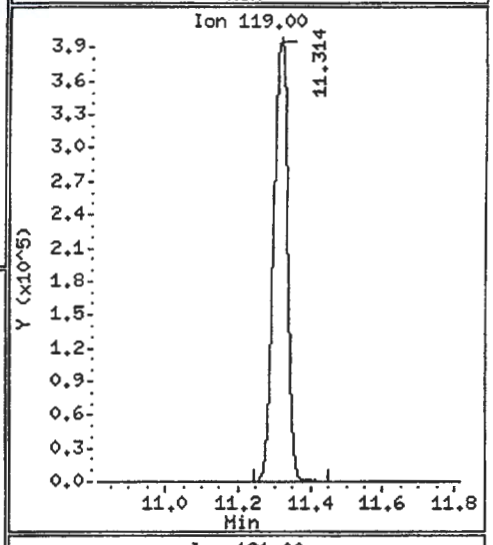


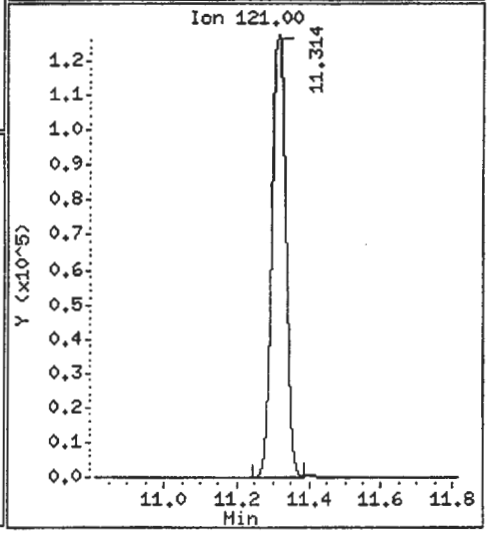












Standards Data

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

Analysis Date:	11/4/02	Instrument::	ME	ICAL Batch/Scan Name:	E110402i	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%)		✓		See note	✓
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~~. pcw 11-8-02		✓			✓

Analyst: CWJ	Date: 11/5/02	2nd Level Reviewer : [illegible]	Date: 11/5/02
Comments:		Comments:	

Note: The upper calibration limit for 1,3,5-Trimethylbenzene, Dodecane, and 1,2,4-Trichlorobenze is 15 ppbv.

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: ME

Analyst: CWJ Preventive Maintenance Performed NA

Date: 11/4/02 System Date/Time ok (y/n): ✓ Batch: ICAL / E110402I

BFB Time: 0806 Surr/IS ID: CX-929 IS #1 Area: 1/13: 1342814 ICAL Batch: E110402L'

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
0806	TUNE	EBF1104		TUNE		100	15	✓	
0916	STD-10	IC3 1104		CX-946		100	STD	✓	
1026	-0.2	IC6 1104		CX-948		100	1	N	
1102	-0.2	B				100	1	✓	
1137	-0.5	IC7 1104				250	1	✓	
1213	-1.0	IC1 1104				500	1	✓	
1248	-5.0	IC2 1104		CX-946		50	STD	N	
1323	-5.0	B				50	STD	✓	
1359	-15	IC4 1104				150	STD	✓	
1434	-30	IC5 1104				300	STD	✓	
1510	BCK	EBK1104				500	15	N	
1545	2nd Source	ICV1104		CX-897		100	2	✓	

11/5/02

Analyst: [illegible] Date: 11/5/02

021104
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB	100ml	15	11/4/02	8:09:48 AM
CCVB	100ml	STD	11/4/02	9:19:59 AM
IC6	100ml	1	11/4/02	10:30:07 AM
IC6B	101ml	1	11/4/02	11:05:47 AM
IC7	249ml	1	11/4/02	11:40:44 AM
IC1	499ml	1	11/4/02	12:16:56 PM
IC2	51ml	STD	11/4/02	12:52:05 PM
IC2B	51ml	STD	11/4/02	1:27:24 PM
IC4	151ml	STD	11/4/02	2:03:28 PM
IC5	299ml	STD	11/4/02	2:38:16 PM
BLK	500ml	15	11/4/02	3:14:18 PM
ICV	101ml	2	11/4/02	3:49:16 PM

Data File: /var/chem/gcms/me.i/E110402i.b/ebf1104.d

Date : 04-NOV-2002 08:06

Client ID: BFB

Instrument: me.i

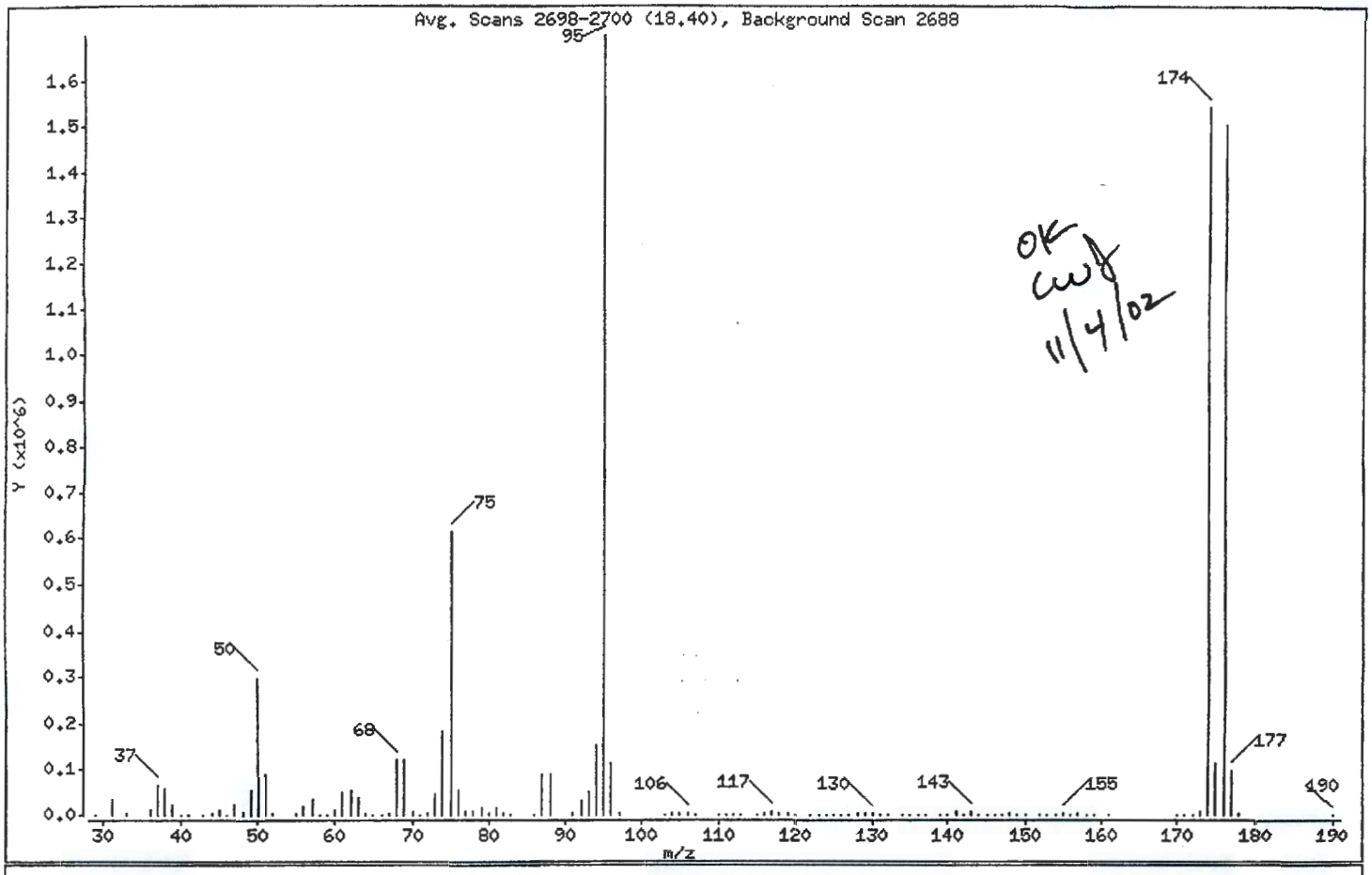
Sample Info: BFB,,3,,BFB

Operator: 0691

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	17.41
75	30.00 - 60.00% of mass 95	36.11
96	5.00 - 9.00% of mass 95	6.71
173	Less than 2.00% of mass 174	0.46 (0.50)
174	50.00 - 100.00% of mass 95	90.91
175	5.00 - 9.00% of mass 174	6.57 (7.22)
176	95.00 - 101.00% of mass 174	88.74 (97.62)
177	5.00 - 9.00% of mass 176	5.87 (6.61)

Data File: /var/chem/gcms/me.i/E110402i.b/ebf1104.d

Date : 04-NOV-2002 08:06

Client ID: BFB

Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32

Data File: ebf1104.d

Spectrum: Avg. Scans 2698-2700 (18.40), Background Scan 2688

Location of Maximum: 95.00

Number of points: 119

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	21	66.00	78	105.00	2113	141.00	8400
31.00	34280	67.00	2672	106.00	4325	142.00	1190
33.00	4375	68.00	122088	107.00	1279	143.00	9284
36.00	11024	69.00	121264	110.00	395	144.00	519
37.00	65360	70.00	8908	111.00	529	145.00	790
38.00	60440	71.00	372	112.00	377	146.00	1916
39.00	23744	72.00	5396	113.00	467	147.00	883
40.00	394	73.00	47136	115.00	1013	148.00	3131
41.00	143	74.00	182400	116.00	3417	149.00	965
43.00	284	75.00	612544	117.00	6590	150.00	1129
44.00	5520	76.00	53696	118.00	3835	152.00	694
45.00	13068	77.00	9388	119.00	5364	153.00	1173
46.00	486	78.00	6822	120.00	465	154.00	889
47.00	25272	79.00	16848	122.00	303	155.00	3475
48.00	7396	80.00	4921	123.00	355	156.00	405
49.00	56408	81.00	17552	124.00	720	157.00	2475
50.00	295296	82.00	3047	125.00	351	158.00	164
51.00	91784	83.00	371	126.00	399	159.00	1258
52.00	3983	86.00	1636	127.00	327	161.00	1276
55.00	3033	87.00	91720	128.00	4393	170.00	271
56.00	17664	88.00	88336	129.00	2055	171.00	237
57.00	35984	91.00	3209	130.00	4875	172.00	641
58.00	1400	92.00	31976	131.00	1597	173.00	7762
59.00	240	93.00	52344	132.00	273	174.00	1542144
60.00	10261	94.00	153472	134.00	283	175.00	111408
61.00	52064	95.00	1696256	135.00	1695	176.00	1505280
62.00	53304	96.00	113824	136.00	238	177.00	99520
63.00	39496	97.00	3204	137.00	1858	178.00	2915
64.00	3516	103.00	483	139.00	397	190.00	201
65.00	71	104.00	4063	140.00	699		

Data File: /var/chem/gcms/me.i/E110402i.b/ebf1104.d

Date : 04-NOV-2002 08:06

Client ID: BFB

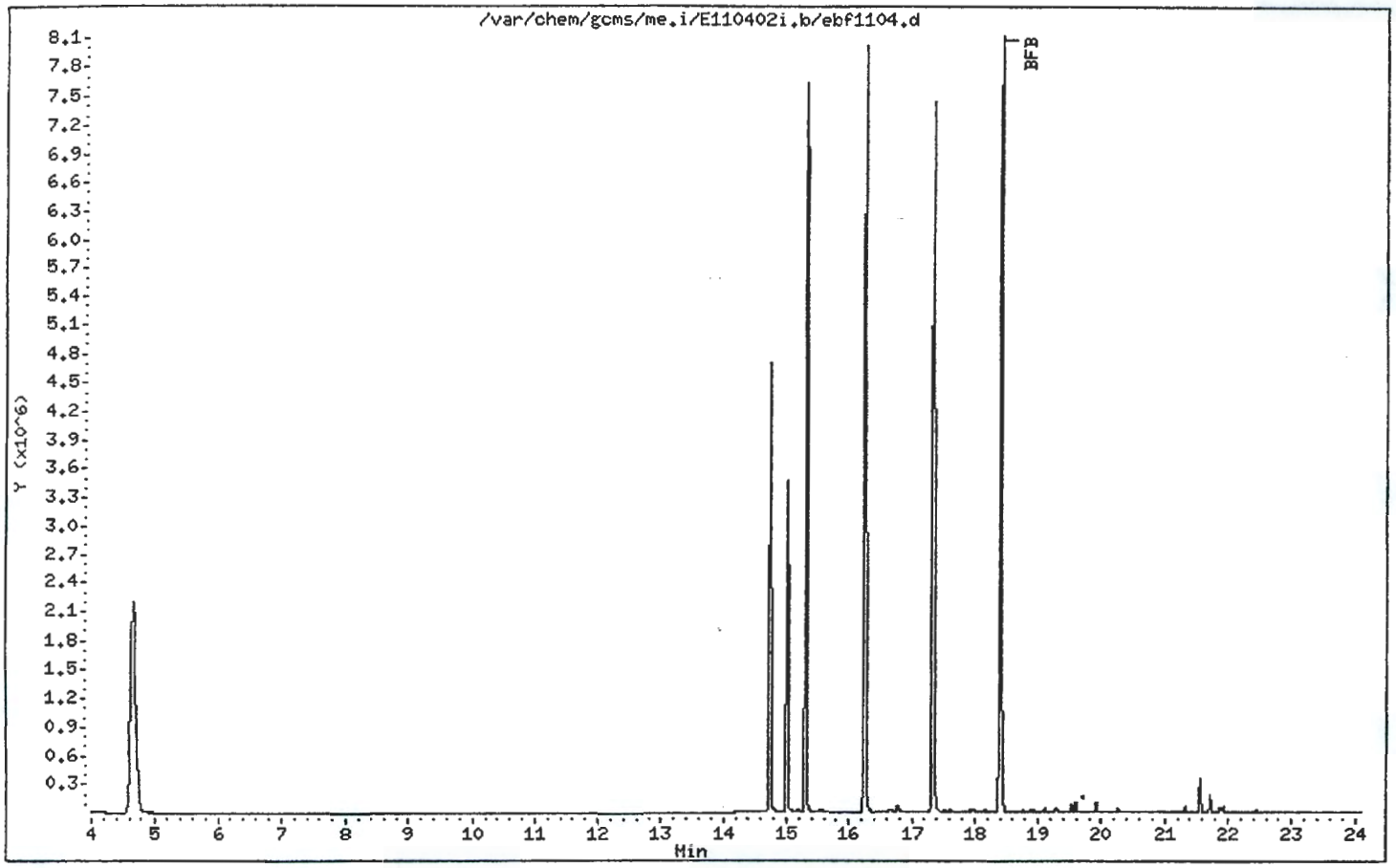
Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
Curve Type : Average

OK aw
11/5/02

Calibration File Names:
Level 1: /var/chem/gcms/me.i/E110402i.b/ic11104.d
Level 2: /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Level 3: /var/chem/gcms/me.i/E110402i.b/ic31104.d
Level 4: /var/chem/gcms/me.i/E110402i.b/ic41104.d
Level 5: /var/chem/gcms/me.i/E110402i.b/ic51104.d
Level 6: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Level 7: /var/chem/gcms/me.i/E110402i.b/ic71104.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	1.77446	1.58838	1.44134	1.45564	1.51144	1.92041		
	1.94447						1.66231	12.962
8 Dichlorodifluoromethane	2.23178	1.70343	1.62136	1.67475	1.80619	2.39355		
	2.35465						1.96939	17.375
9 Chloromethane	0.43899	0.31843	0.27438	0.26537	0.23319	+++++		
	0.45630						0.33111	28.524
10 1,2-Dichlorotetrafluoroethane	2.12299	1.65782	1.54458	1.51116	1.32700	2.29892		
	2.21793						1.81149	21.612
11 Vinyl Chloride	1.34179	1.02435	0.95043	0.95026	0.93747	1.40983		
	1.41017						1.14633	19.911
12 Methanol	0.40005	0.35676	0.34013	0.32872	0.31125	+++++		
	+++++						0.34738	9.728

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	$\overline{RRF}$	% RSD
	0.50000 Level 7							
13 1,3-Butadiene	0.94581	0.84096	0.74253	0.73066	0.67211	1.04456		
	1.01440						0.85586	17.287
14 n-Butane	2.05907	1.73181	1.48733	1.45879	1.36688	2.65214		
	2.31348						1.86707	26.165
15 Bromomethane	1.28827	0.99818	0.93813	0.94894	0.97736	1.39389		
	1.36622						1.13014	18.446
16 Chloroethane	0.70975	0.52976	0.49840	0.49783	0.51871	0.69745		
	0.73225						0.59774	18.237
17 Trichlorofluoromethane	2.40515	1.81249	1.64894	1.65355	1.60948	2.46299		
	2.46723						2.00855	20.601
18 Acrolein	0.37092	0.35898	0.31718	0.30641	0.27816	0.34895		
	0.37603						0.33666	10.907
19 Acetonitrile	0.44235	0.39194	0.36312	0.36611	0.37455	+++++		
	0.45507						0.39886	10.053
20 Acetone	0.61016	0.44439	0.39274	0.38103	0.37178	+++++		
	+++++						0.44002	22.537
21 Pentane	0.36018	0.30436	0.25403	0.25209	0.24369	+++++		
	0.37386						0.29803	19.363

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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							
22 Ethyl Ether	1.40968	1.32666	1.19910	1.14580	1.04645	1.51678		
	1.53749						1.31171	14.378
23 1,1-Dichloroethene	1.20485	0.95097	0.91330	0.92753	0.99442	1.32306		
	1.25168						1.08083	15.987
24 Acrylonitrile	0.84426	0.81546	0.77358	0.76572	0.77566	0.90431		
	0.90592						0.82641	7.307
25 1,1,2-Trichlorotrifluoroethan	2.43554	1.90583	1.81440	1.80483	1.66853	2.60080		
	2.56262						2.11322	19.014
26 Methylene Chloride	1.31653	0.81996	0.78180	0.79167	0.82786	+++++		
	1.30038						0.97303	26.765
27 3-Chloropropene	0.87643	0.80559	0.75730	0.75878	0.77599	1.03274		
	0.96147						0.85262	12.744
28 Carbon Disulfide	3.16531	2.96321	2.82530	2.86939	3.11928	3.71062		
	3.51601						3.16702	10.524
29 trans-1,2-Dichloroethene	1.03049	0.95746	0.93178	0.94545	1.00541	1.18031		
	1.14058						1.02736	9.523
30 Methyl-t-Butyl Ether	1.80834	1.86433	1.85594	1.86767	2.00651	2.00286		
	2.02383						1.91850	4.639

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	2.38220	1.82623	1.75354	1.75311	1.85559	2.52159		
	2.47803						2.08147	17.243
32 Vinyl Acetate	2.40208	2.67460	2.47973	2.48141	2.45095	2.64188		
	2.62716						2.53683	4.259
33 2-Butanone	0.44370	0.42742	0.42535	0.42604	0.45446	+++++		
	0.49011						0.44452	5.673
34 Hexane	0.96826	0.88262	0.83412	0.82966	0.76320	1.05205		
	1.06303						0.91328	12.756
35 cis 1,2-Dichloroethene	1.30577	1.02959	1.00449	1.01546	1.09191	1.41705		
	1.38827						1.17894	15.627
36 Chloroform	2.12914	1.64945	1.56633	1.56986	1.63143	2.28695		
	2.22947						1.86609	17.746
37 1,1,1-Trichloroethane	1.72336	1.39176	1.37067	1.41204	1.52767	1.82713		
	1.79139						1.57772	12.583
38 1,2-Dichloroethane	0.26353	0.20681	0.19954	0.19754	0.19945	0.28933		
	0.27930						0.23364	17.849
39 Benzene	0.79083	0.64025	0.57860	0.51168	0.34588	0.87684		
	0.83896						0.65472	29.489

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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							
40 1-Butanol	0.08618	0.13440	0.13134	0.12871	0.12428	0.08271		
	0.07597						0.10908	23.874
41 Cyclohexane	0.09929	0.09567	0.08520	0.07687	0.05457	0.11559		
	0.11203						0.09132	23.216
42 Carbon Tetrachloride	1.58479	1.48679	1.45027	1.45909	1.29974	1.61906		
	1.61017						1.50141	7.590
43 Heptane	0.55561	0.51069	0.45305	0.42504	0.34842	0.62770		
	0.60013						0.50295	19.929
44 1,2-Dichloropropane	0.35278	0.27563	0.25208	0.23202	0.17279	0.38286		
	0.36957						0.29110	27.205
45 Trichloroethene	0.37089	0.30258	0.28419	0.26519	0.19273	0.40955		
	0.39426						0.31705	24.718
46 Dibromomethane	0.24098	0.22952	0.21691	0.20961	0.17068	0.29540		
	0.27379						0.23384	17.734
47 Bromodichloromethane	0.34319	0.33870	0.33719	0.33322	0.31131	0.38848		
	0.37736						0.34706	7.701
48 4-Methyl-2-pentanone	0.51967	0.55818	0.49927	0.43364	0.30384	0.48561		
	0.49371						0.47056	17.532

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	0.46257	0.39119	0.38471	0.34554	0.22858	0.50915		
	0.49212						0.40198	24.237
50 trans-1,3-Dichloropropene	0.32165	0.26294	0.25610	0.25172	0.24179	0.36331		
	0.34150						0.29129	16.985
51 Toluene	1.03916	0.81283	0.79535	0.76889	0.66645	1.20001		
	1.11932						0.91457	22.152
52 1,1,2-Trichloroethane	0.35334	0.28402	0.27781	0.27000	0.23872	0.40521		
	0.37885						0.31542	19.997
53 2-Hexanone	0.29199	0.28856	0.29843	0.29986	0.26117	0.33095 ✓		
	0.32460						0.29937	7.793
54 Octane	0.25431	0.25870	0.24231	0.22965	0.17692	0.30240		
	0.29140						0.25081	16.570
55 Dibromochloromethane	0.45564	0.48859	0.48366	0.46547	0.38969	0.51289		
	0.50705						0.47186	8.822
56 1,2-Dibromoethane	0.59210	0.47651	0.45955	0.43594	0.35588	0.67411		
	0.64106						0.51931	22.669
57 Tetrachloroethene	0.36271	0.28857	0.27084	0.24642	0.18517	0.40717		
	0.39322						0.30773	26.773

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	0.87605	0.68996	0.66776	0.63484	0.52154	0.98780		
	0.95040						0.76119	23.226
59 Ethylbenzene	1.27538	1.00478	0.97414	0.92326	0.75432	1.43263		
	1.37908						1.10623	23.184
60 m-Xylene (For p-)	1.15034	0.75978	0.73789	0.70268	0.57701	1.22649		
	1.17629						0.90435	29.762
61 Bromoform	0.39555	0.46284	0.41936	0.35704	0.24205	0.42014		
	0.42287						0.38855	18.544
62 Nonane	0.70212	0.61985	0.53138	0.46247	0.33398	0.80661		
	0.78754						0.60628	28.790
63 Styrene	0.70001	0.60039	0.54032	0.46282	0.32468	0.79533		
	0.76042						0.59771	28.330
64 o-Xylene	1.00077	0.77002	0.75040	0.71338	0.58815	1.09812		
	1.07379						0.85638	23.239
65 1,1,2,2-Tetrachloroethane	0.79097	0.63142	0.59737	0.55898	0.42789	0.86807		
	0.84956						0.67489	24.470
66 1,2,3-Trichloropropane	0.14351	0.15366	0.15127	0.14580	0.12302	+++++		
	0.16141						0.14645	8.940

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	1.17638	1.08278	0.96147	0.86052	0.64356	1.38783		
	1.33144						1.06342	24.822
68 n-Propylbenzene	1.49223	1.48127	1.37579	1.22018	0.90172	1.73656		
	1.67599						1.41196	20.131
69 4-Ethyltoluene	1.26149	1.26629	1.16980	1.04453	0.77048	1.46799		
	1.41502						1.19937	19.724
70 1,3,5-Trimethylbenzene	0.61764	0.49462	0.43220	0.37410	+++++	0.68836		
	0.66340						0.54505	23.825
71 Alpha-Methylstyrene	0.44384	0.50852	0.48502	0.44388	0.33237	0.49658		
	0.49690						0.45816	13.356
72 Decane	0.89170	0.83077	0.68776	0.58742	0.41852	0.95341		
	0.98563						0.76503	27.320
73 1,2,4-Trimethylbenzene	1.19297	0.93683	0.87421	0.78136	0.57988	1.28761		
	1.26793						0.98869	27.233
74 1,3-Dichlorobenzene	0.88509	0.73067	0.67295	0.59444	0.43034	0.98438		
	0.97031						0.75260	27.358
75 Benzyl Chloride	0.73186	0.73822	0.65282	0.57791	0.40469	0.72097		
	0.76622						0.65610	19.494

* 15 PPB/ UR

RW 11/5/02

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	0.91228	0.72722	0.59827	0.49549	0.33594	1.00388			
	0.96887						0.72028	35.499	<-
77 1,2-Dichlorobenzene	0.84154	0.69160	0.64024	0.57309	0.41174	0.92318			
	0.91037						0.71311	26.591	
78 Undecane	0.79054	0.81602	0.67826	0.57204	0.39796	0.98724			
	0.95059						0.74181	28.213	
79 Dodecane	0.66008	0.70026	0.60680	0.53664	+++++	0.91212			*
	0.83027						0.70770	19.840	
80 1,2,4-Trichlorobenzene	0.70734	0.58296	0.52185	0.45537	+++++	0.82323			*
	0.78278						0.64559	22.934	
81 Napthalene	1.33290	1.41885	1.33034	1.23697	0.89487	1.68942			
	1.64229						1.36366	19.509	
82 Hexachlorobutadiene	0.52467	0.42441	0.33950	0.29325	0.20865	0.59318			
	0.59621						0.42570	35.755	<-
$ 4 1,2-Dichloroethane-d4	0.13660	0.13769	0.13940	0.13926	0.13627	0.13859			
	0.13701						0.13783	0.925	
$ 5 Toluene-d8	0.98447	0.98519	0.98134	0.96349	0.90280	0.99838			
	0.99310						0.97268	3.362	

15 ppb/v upper range

Report Date : 05-Nov-2002 17:51

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 04-NOV-2002 09:16
End Cal Date : 04-NOV-2002 14:34
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/me.i/E110402i.b/LA.m
Cal Date : 04-Nov-2002 16:22 jarmanc
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	0.61290	0.59938	0.56728	0.55150	0.50027	0.60732		
	0.61103						0.57852	7.225

Data File: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Report Date: 04-Nov-2002 15:58

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Lab Smp Id: IC6 Client Smp ID: 0.2PPBV
Inj Date : 04-NOV-2002 11:02
Operator : 0691 Inst ID: me.i
Smp Info : IC6,,1,6,,0.2PPBV
Misc Info : E110402i,LA,,,100ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:58 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 11:02 Cal File: ic61104b.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICRLX.sub
Target Version: 3.50
Processing Host: qmidhp01

cwf 11/5/02

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	9.663	9.668	(1.000)	1336300	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6363440	10.0000	
* 3 Chlorobenzene-d5	117	16.398	16.403	(1.000)	5628007	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	881914	10.0000	10.00
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5618907	10.0000	10.00
$ 6 4-Bromofluorobenzene	95	18.001	18.007	(1.098)	3418026	10.0000	10.00
7 Chlorodifluoromethane	51	4.052	4.046	(0.419)	51325	0.20000	0.2000
8 Dichlorodifluoromethane	85	4.116	4.122	(0.426)	63970	0.20000	0.2000
10 1,2-Dichlorotetrafluoroethane	135	4.348	4.342	(0.450)	61441	0.20000	0.2000
11 Vinyl Chloride	62	4.536	4.536	(0.469)	37679	0.20000	0.2000
13 1,3-Butadiene	54	4.644	4.638	(0.481)	27917	0.20000	0.2000
14 n-Butane	43	4.638	4.638	(0.480)	70881	0.20000	0.2000
15 Bromomethane	94	5.020	5.009	(0.520)	37253	0.20000	0.2000
16 Chloroethane	64	5.187	5.182	(0.537)	18640	0.20000	0.2000
17 Trichlorofluoromethane	101	5.832	5.833	(0.604)	65826	0.20000	0.2000
18 Acrolein	56	5.956	5.859	(0.616)	18652	0.40000	0.4000
22 Ethyl Ether	31	6.473	6.295	(0.670)	81075	0.40000	0.4000
23 1,1-Dichloroethene	96	6.612	6.607	(0.684)	35360	0.20000	0.2000
24 Acrylonitrile	53	6.811	6.742	(0.705)	48337	0.40000	0.4000
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	69509	0.20000	0.2000
27 3-Chloropropene	39	7.021	7.011	(0.727)	27601	0.20000	0.2000

Data File: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Report Date: 04-Nov-2002 15:58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
28 Carbon Disulfide	76	7.156	7.156	(0.741)	99170	0.20000	0.2000
29 trans-1,2-Dichloroethene	96	7.855	7.850	(0.813)	31545	0.20000	0.2000
30 Methyl-t-Butyl Ether	73	8.393	8.076	(0.869)	107057	0.40000	0.4000
31 1,1-Dichloroethane	63	8.307	8.307	(0.860)	67392	0.20000	0.2000
32 Vinyl Acetate	43	8.506	8.431	(0.880)	141214	0.40000	0.4000(H)
34 Hexane	56	8.926	8.920	(0.924)	28117	0.20000	0.2000
35 cis 1,2-Dichloroethene	96	9.324	9.329	(0.965)	37872	0.20000	0.2000
36 Chloroform	83	9.668	9.679	(1.001)	61121	0.20000	0.2000
37 1,1,1-Trichloroethane	97	10.722	10.723	(1.110)	48832	0.20000	0.2000
38 1,2-Dichloroethane	62	10.830	10.830	(0.917)	36823	0.20000	0.2000
39 Benzene	78	11.293	11.293	(0.956)	111595	0.20000	0.2000
40 1-Butanol	41	11.879	11.524	(1.006)	21054	0.40000	0.4000(H)
41 Cyclohexane	69	11.298	11.298	(0.957)	14711	0.20000	0.2000
42 Carbon Tetrachloride	117	11.314	11.314	(1.171)	43271	0.20000	0.2000
43 Heptane	43	12.385	12.385	(1.049)	79887	0.20000	0.2000
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	48726	0.20000	0.2000
45 Trichloroethene	130	12.487	12.492	(1.057)	52123	0.20000	0.2000
46 Dibromomethane	93	12.568	12.568	(1.064)	37595	0.20000	0.2000
47 Bromodichloromethane	83	12.702	12.708	(1.076)	49442	0.20000	0.2000
48 4-Methyl-2-pentanone	43	14.063	13.714	(1.191)	123605	0.40000	0.4000(H)
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	64799	0.20000	0.2000
50 trans-1,3-Dichloropropene	75	14.343	14.348	(0.875)	40894	0.20000	0.2000
51 Toluene	91	14.477	14.483	(0.883)	135073	0.20000	0.2000
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	45611	0.20000	0.2000
53 2-Hexanone	58	15.338	14.999	(0.935)	74503	0.40000	0.4000(M)
54 Octane	85	15.144	15.145	(0.924)	34038	0.20000	0.2000
55 Dibromochloromethane	129	15.225	15.231	(0.928)	57731	0.20000	0.2000
56 1,2-Dibromoethane	107	15.521	15.521	(0.947)	75878	0.20000	0.2000
57 Tetrachloroethene	129	15.586	15.591	(0.950)	45831	0.20000	0.2000
58 Chlorobenzene	112	16.446	16.452	(1.003)	111187	0.20000	0.2000
59 Ethylbenzene	91	16.731	16.737	(1.020)	161257	0.20000	0.2000
60 m-Xylene (For p-)	91	16.887	16.888	(1.030)	138054	0.20000	0.2000
62 Nonane	57	17.296	17.296	(1.055)	90792	0.20000	0.2000
63 Styrene	104	17.345	17.350	(1.058)	89523	0.20000	0.2000
61 Bromoform	173	17.329	17.334	(1.057)	47291	0.20000	0.2000
64 o-Xylene	91	17.409	17.415	(1.062)	123605	0.20000	0.2000
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	97710	0.20000	0.2000
67 Cumene	105	17.979	17.980	(1.096)	156214	0.20000	0.2000
68 n-Propylbenzene	91	18.485	18.485	(1.127)	195467	0.20000	0.2000
69 4-Ethyltoluene	105	18.625	18.631	(1.136)	165237	0.20000	0.2000
70 1,3,5-Trimethylbenzene	120	18.695	18.700	(1.140)	77482	0.20000	0.2000
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	55895	0.20000	0.2000
72 Decane	57	18.964	18.964	(1.156)	107316	0.20000	0.2000
73 1,2,4-Trimethylbenzene	105	19.109	19.115	(1.165)	144934	0.20000	0.2000
74 1,3-Dichlorobenzene	146	19.367	19.368	(1.181)	110802	0.20000	0.2000
75 Benzyl Chloride	91	19.437	19.437	(1.185)	81153	0.20000	0.2000
76 1,4-Dichlorobenzene	146	19.448	19.454	(1.186)	112997	0.20000	0.2000

CWJ 11/5/02

Data File: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Report Date: 04-Nov-2002 15:58

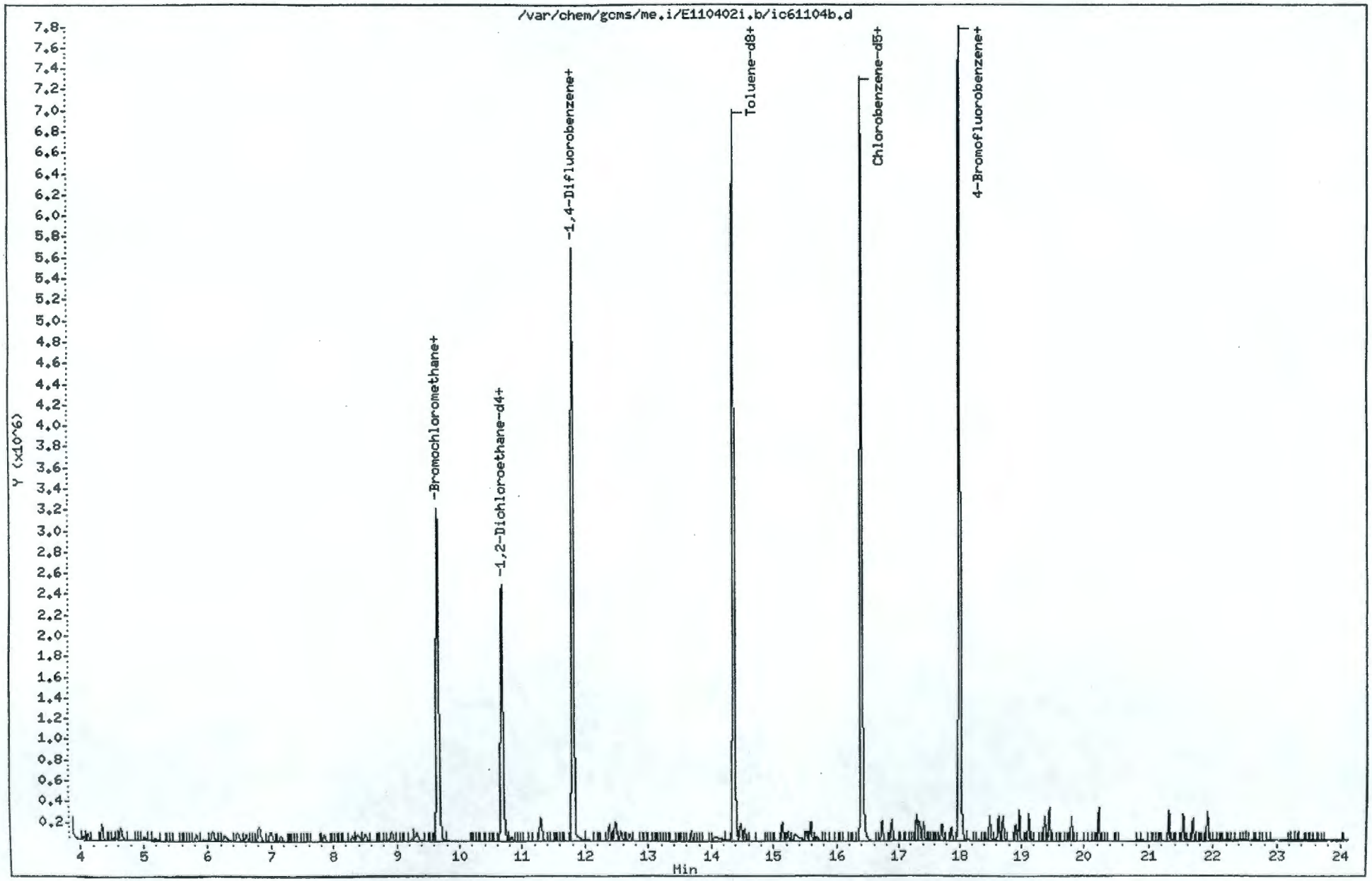
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	103913	0.20000	0.2000
78 Undecane	57	20.217	20.223	(1.233)	111124	0.20000	0.2000
79 Dodecane	57	21.309	21.310	(1.300)	102668	0.20000	0.2000
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.313)	92663	0.20000	0.2000
81 Napthalene	128	21.681	21.681	(1.322)	190161	0.20000	0.2000
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	66768	0.20000	0.2000

QC Flag Legend

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

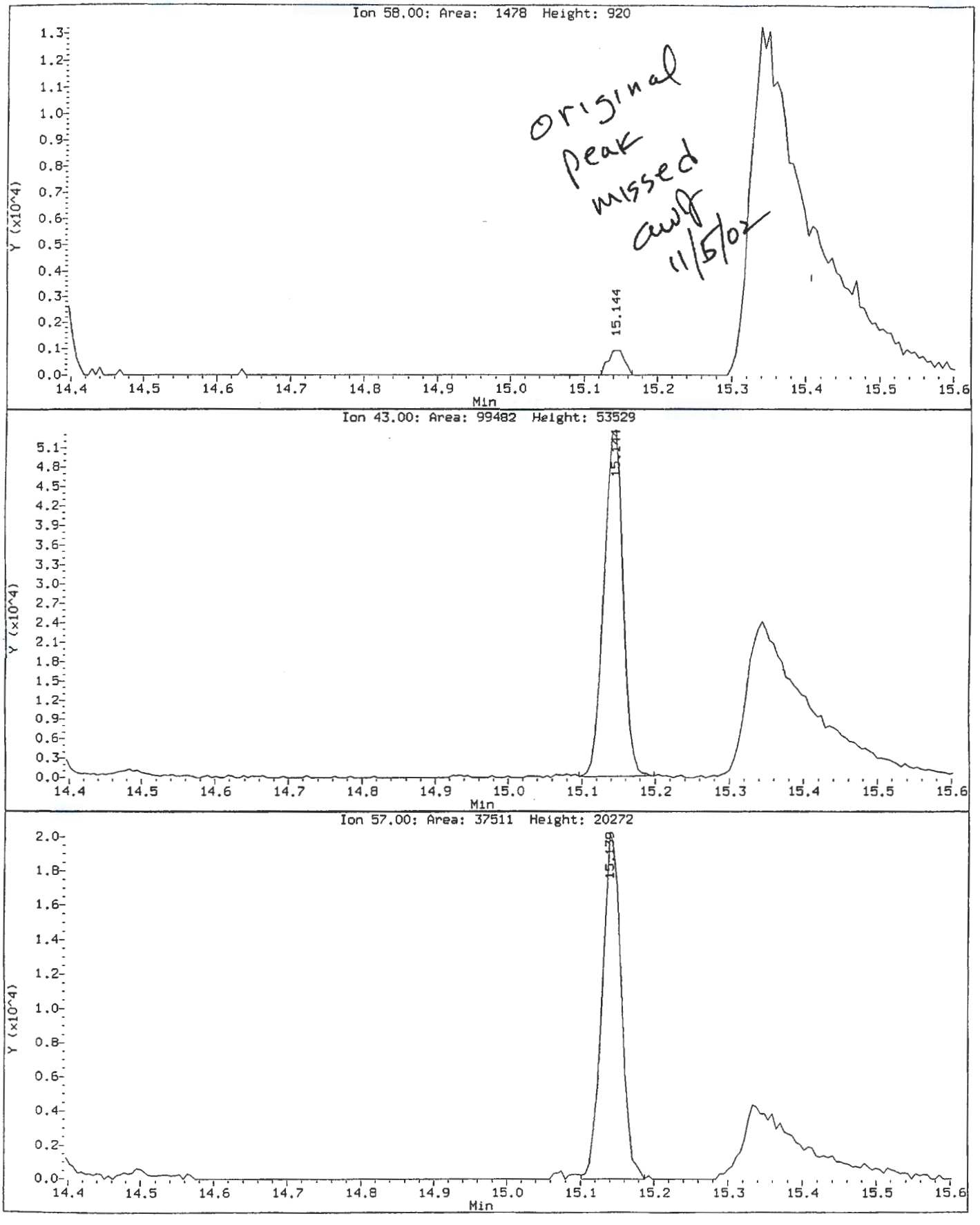
Data File: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Date : 04-NOV-2002 11:02
Client ID: 0.2PPBV
Sample Info: IC6,,1,6,,0.2PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



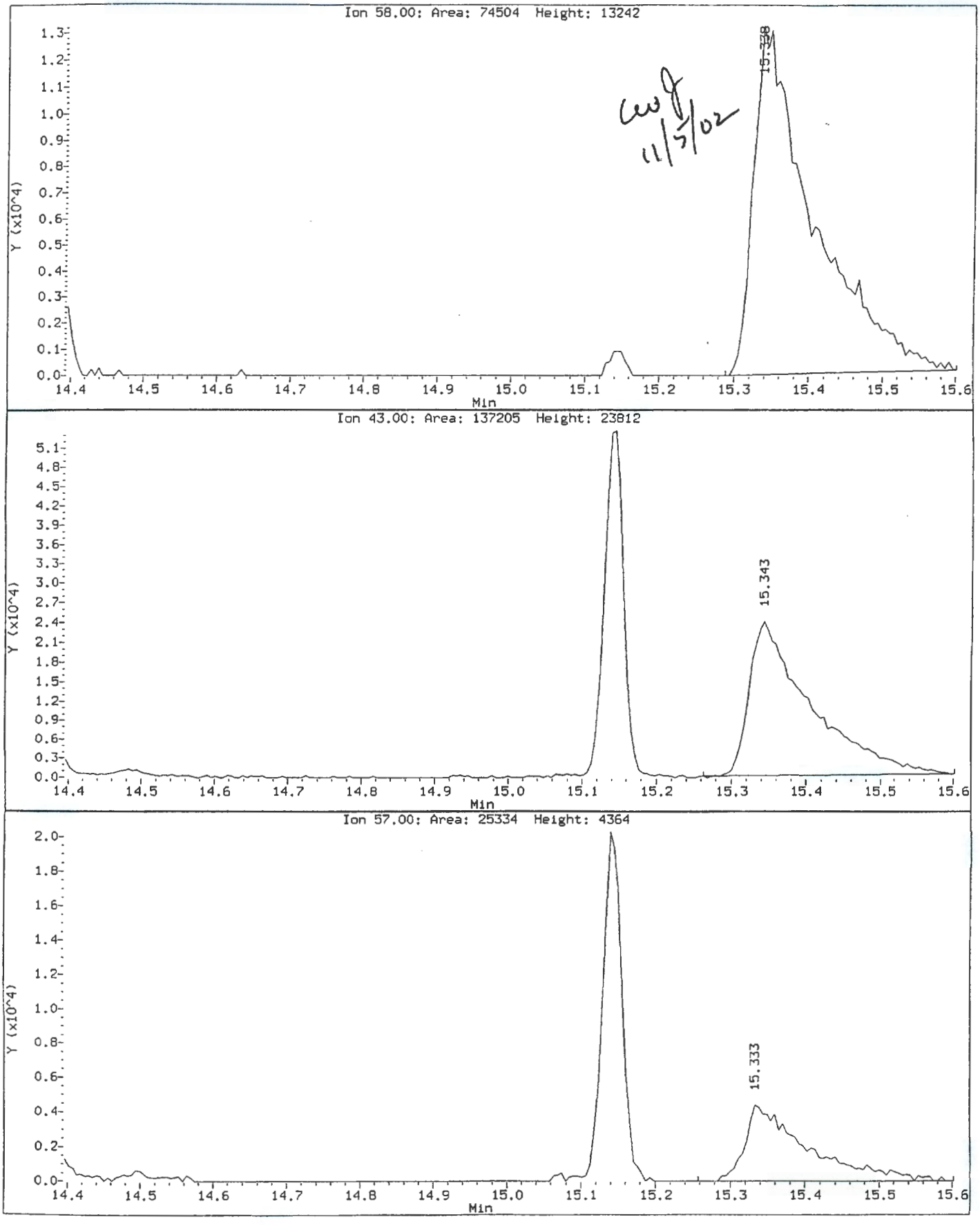
Data File: /var/chem/gcms/me.i/E1104021.b/1c61104b.d
Injection Date: 04-NOV-2002 11:02
Instrument: me.i
Client Sample ID: 0.2PPBV

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



Data File: /var/chem/gcms/me.i/E110402i.b/ic61104b.d
Injection Date: 04-NOV-2002 11:02
Instrument: me.i
Client Sample ID: 0.2PPBV

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



Data File: /var/chem/gcms/me.i/E110402i.b/ic71104.d
Report Date: 04-Nov-2002 15:58

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic71104.d
Lab Smp Id: IC7 Client Smp ID: 0.5PPBV
Inj Date : 04-NOV-2002 11:37
Operator : 0691 Inst ID: me.i
Smp Info : IC7,,1,7,,0.5PPBV
Misc Info : E110402i,LA,,,250ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:58 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 11:37 Cal File: ic71104.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

mw 11/5/02

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	9.663	9.668	(1.000)	1276750	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6129123	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5480537	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	839747	10.0000	9.943
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5442746	10.0000	9.973
$ 6 4-Bromofluorobenzene	95	18.001	18.007	(1.097)	3348757	10.0000	10.03
7 Chlorodifluoromethane	51	4.052	4.046	(0.419)	124130	0.50000	0.5031
8 Dichlorodifluoromethane	85	4.127	4.122	(0.427)	150315	0.50000	0.4959
9 Chloromethane	52	4.337	4.332	(0.449)	29129	0.50000	0.5000
10 1,2-Dichlorotetrafluoroethane	135	4.348	4.342	(0.450)	141587	0.50000	0.4910
11 Vinyl Chloride	62	4.541	4.536	(0.470)	90022	0.50000	0.5001
13 1,3-Butadiene	54	4.649	4.638	(0.481)	64757	0.50000	0.4927
14 n-Butane	43	4.644	4.638	(0.481)	147687	0.50000	0.4659
15 Bromomethane	94	5.020	5.009	(0.520)	87216	0.50000	0.4950
16 Chloroethane	64	5.192	5.182	(0.537)	46745	0.50000	0.5122
17 Trichlorofluoromethane	101	5.832	5.833	(0.604)	157502	0.50000	0.5004
18 Acrolein	56	5.929	5.859	(0.614)	48010	1.00000	1.037
19 Acetonitrile	40	6.064	5.940	(0.628)	58101	1.00000	1.000(H)
21 Pentane	57	6.091	6.085	(0.630)	23866	0.50000	0.5000
22 Ethyl Ether	31	6.440	6.295	(0.666)	196299	1.00000	1.007(H)
23 1,1-Dichloroethene	96	6.612	6.607	(0.684)	79904	0.50000	0.4861

Data File: /var/chem/gcms/me.i/E110402i.b/ic71104.d
Report Date: 04-Nov-2002 15:58

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
24 Acrylonitrile	53	6.790	6.742	(0.703)	115663	1.00000	1.001
25 1,1,2-Trichlorotrifluoroethane	101	6.822	6.812	(0.706)	163591	0.50000	0.4963
26 Methylene Chloride	84	6.989	6.984	(0.723)	83013	0.50000	0.5000
27 3-Chloropropene	39	7.016	7.011	(0.726)	61378	0.50000	0.4821
28 Carbon Disulfide	76	7.161	7.156	(0.741)	224453	0.50000	0.4865
29 trans-1,2-Dichloroethene	96	7.855	7.850	(0.813)	72812	0.50000	0.4914
30 Methyl-t-Butyl Ether	73	8.355	8.076	(0.865)	258392	1.00000	1.005
31 1,1-Dichloroethane	63	8.307	8.307	(0.860)	158191	0.50000	0.4956
32 Vinyl Acetate	43	8.490	8.431	(0.879)	335423	1.00000	0.9972
33 2-Butanone	72	9.259	8.990	(0.958)	62575	1.00000	1.000(H)
34 Hexane	56	8.926	8.920	(0.924)	67861	0.50000	0.5026
35 cis 1,2-Dichloroethene	96	9.329	9.329	(0.965)	88624	0.50000	0.4949
36 Chloroform	83	9.673	9.679	(1.001)	142324	0.50000	0.4936
37 1,1,1-Trichloroethane	97	10.722	10.723	(1.110)	114358	0.50000	0.4951
38 1,2-Dichloroethane	62	10.825	10.830	(0.917)	85593	0.50000	0.4912
39 Benzene	78	11.293	11.293	(0.956)	257104	0.50000	0.4890
40 1-Butanol	41	11.906	11.524	(1.008)	46560	1.00000	0.9575(H)
41 Cyclohexane	69	11.298	11.298	(0.957)	34331	0.50000	0.4922
42 Carbon Tetrachloride	117	11.314	11.314	(1.171)	102789	0.50000	0.4986
43 Heptane	43	12.385	12.385	(1.049)	183912	0.50000	0.4888
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	113257	0.50000	0.4912
45 Trichloroethene	130	12.487	12.492	(1.057)	120824	0.50000	0.4905
46 Dibromomethane	93	12.568	12.568	(1.064)	83905	0.50000	0.4810
47 Bromodichloromethane	83	12.702	12.708	(1.076)	115645	0.50000	0.4927
48 4-Methyl-2-pentanone	43	14.025	13.714	(1.188)	302602	1.00000	1.008(H)
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	150813	0.50000	0.4915
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	93579	0.50000	0.4845
51 Toluene	91	14.477	14.483	(0.883)	306723	0.50000	0.4826
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	103815	0.50000	0.4832
53 2-Hexanone	58	15.300	14.999	(0.933)	177897	1.00000	0.9903(H)
54 Octane	85	15.144	15.145	(0.923)	79852	0.50000	0.4907
55 Dibromochloromethane	129	15.225	15.231	(0.928)	138946	0.50000	0.4971
56 1,2-Dibromoethane	107	15.521	15.521	(0.946)	175668	0.50000	0.4874
57 Tetrachloroethene	129	15.586	15.591	(0.950)	107752	0.50000	0.4913
58 Chlorobenzene	112	16.446	16.452	(1.003)	260436	0.50000	0.4904
59 Ethylbenzene	91	16.731	16.737	(1.020)	377906	0.50000	0.4905
60 m-Xylene (For p-)	91	16.887	16.888	(1.030)	322334	0.50000	0.4896
61 Bromoform	173	17.329	17.334	(1.056)	115879	0.50000	0.5016
62 Nonane	57	17.296	17.296	(1.054)	215808	0.50000	0.4940
63 Styrene	104	17.345	17.350	(1.057)	208376	0.50000	0.4888
64 o-Xylene	91	17.409	17.415	(1.061)	294247	0.50000	0.4944
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	232801	0.50000	0.4946
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	44232	0.50000	0.5000
67 Cumene	105	17.979	17.980	(1.096)	364850	0.50000	0.4896
68 n-Propylbenzene	91	18.485	18.485	(1.127)	459267	0.50000	0.4911
69 4-Ethyltoluene	105	18.625	18.631	(1.135)	387754	0.50000	0.4908
70 1,3,5-Trimethylbenzene	120	18.695	18.700	(1.140)	181789	0.50000	0.4908

Data File: /var/chem/gcms/me.i/E110402i.b/ic71104.d
Report Date: 04-Nov-2002 15:58

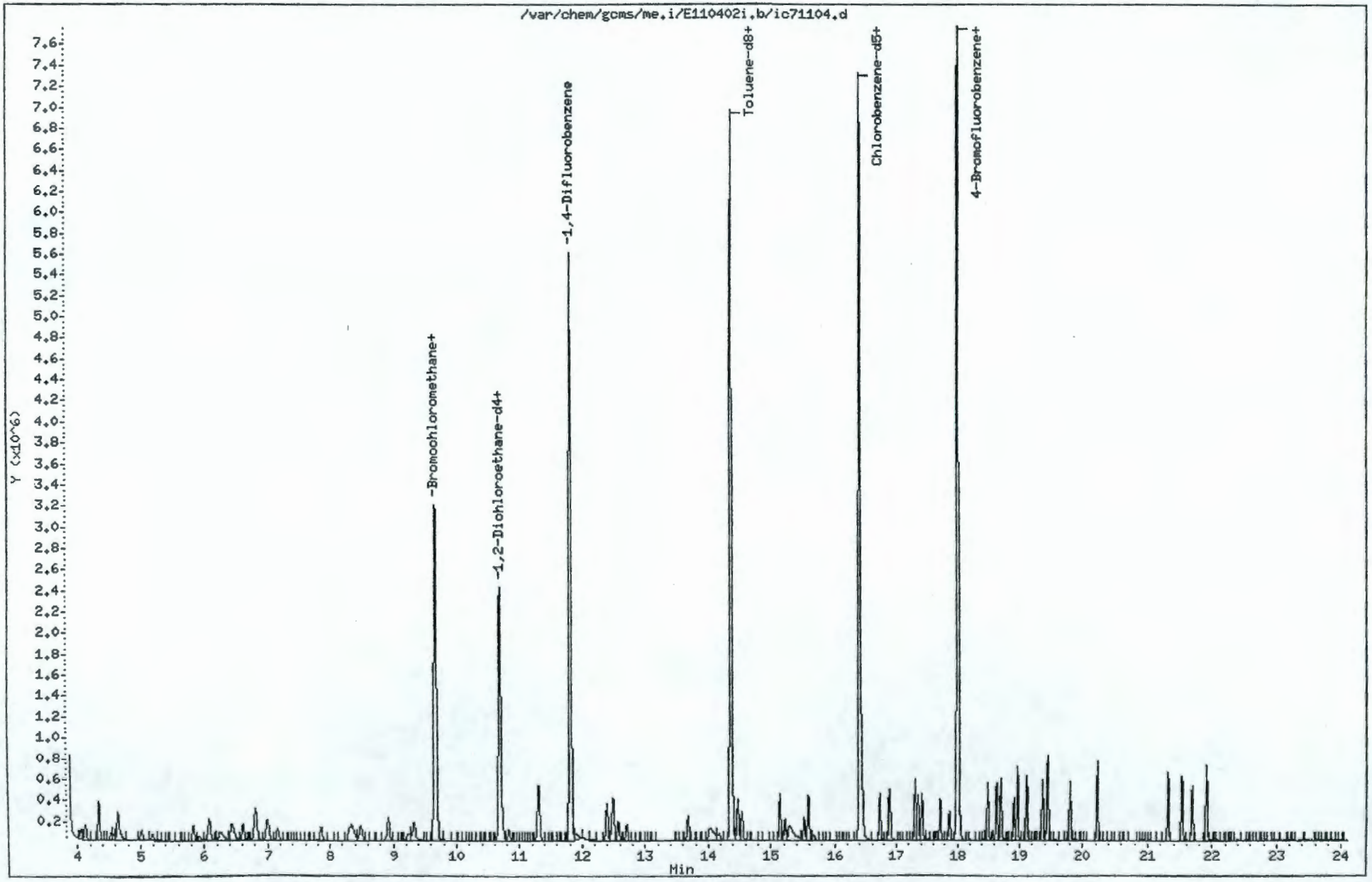
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
71 Alpha-Methylstyrene	118	18.905	18.910	(1.153)	136164	0.50000	0.5002
72 Decane	57	18.959	18.964	(1.156)	270090	0.50000	0.5083
73 1,2,4-Trimethylbenzene	105	19.109	19.115	(1.165)	347448	0.50000	0.4961
74 1,3-Dichlorobenzene	146	19.367	19.368	(1.181)	265892	0.50000	0.4964
75 Benzyl Chloride	91	19.437	19.437	(1.185)	209966	0.50000	0.5152
76 1,4-Dichlorobenzene	146	19.448	19.454	(1.186)	265497	0.50000	0.4911
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	249467	0.50000	0.4965
78 Undecane	57	20.223	20.223	(1.233)	260487	0.50000	0.4905
79 Dodecane	57	21.309	21.310	(1.299)	227515	0.50000	0.4765
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	214503	0.50000	0.4874
81 Napthalene	128	21.681	21.681	(1.322)	450031	0.50000	0.4929
82 Hexachlorobutadiene	225	21.907	21.912	(1.335)	163378	0.50000	0.5013

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E110402i.b/ic71104.d
Date : 04-NOV-2002 11:37
Client ID: 0.5PPBV
Sample Info: IC7,,1,7,,0.5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/ic11104.d
Report Date: 04-Nov-2002 15:59

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic11104.d
Lab Smp Id: IC1 Client Smp ID: 1PPBV
Inj Date : 04-NOV-2002 12:13
Operator : 0691 Inst ID: me.i
Smp Info : IC1,,1,1,,1PPBV
Misc Info : E110402i,LA,,,500ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:59 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 12:13 Cal File: ic11104.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

cwf 11/5/02

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	9.663	9.668	(1.000)	1259924	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6062380	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5525456	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	828123	10.0000	9.942
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5439661	10.0000	9.924
$ 6 4-Bromofluorobenzene	95	18.001	18.007	(1.097)	3386553	10.0000	10.04
7 Chlorodifluoromethane	51	4.046	4.046	(0.419)	223568	1.00000	0.9440
8 Dichlorodifluoromethane	85	4.122	4.122	(0.427)	281187	1.00000	0.9592
9 Chloromethane	52	4.337	4.332	(0.449)	55310	1.00000	0.9807
10 1,2-Dichlorotetrafluoroethane	135	4.348	4.342	(0.450)	267481	1.00000	0.9592
11 Vinyl Chloride	62	4.536	4.536	(0.469)	169055	1.00000	0.9672
12 Methanol	31	4.649	4.552	(0.481)	201611	4.00000	4.000(H)
13 1,3-Butadiene	54	4.643	4.638	(0.481)	119165	1.00000	0.9443
14 n-Butane	43	4.643	4.638	(0.481)	259427	1.00000	0.8794
15 Bromomethane	94	5.020	5.009	(0.520)	162312	1.00000	0.9546
16 Chloroethane	64	5.192	5.182	(0.537)	89423	1.00000	0.9952
17 Trichlorofluoromethane	101	5.832	5.833	(0.604)	303031	1.00000	0.9836
18 Acrolein	56	5.908	5.859	(0.611)	93467	2.00000	2.031
19 Acetonitrile	40	6.015	5.940	(0.623)	111465	2.00000	1.972(H)
20 Acetone	58	6.182	6.015	(0.640)	153750	2.00000	2.000(H)
21 Pentane	57	6.085	6.085	(0.630)	45380	1.00000	0.9814

Data File: /var/chem/gcms/me.i/E110402i.b/ic11104.d
Report Date: 04-Nov-2002 15:59

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	6.386	6.295	(0.661)	355218	2.00000	1.895(H)
23 1,1-Dichloroethene	96	6.612	6.607	(0.684)	151802	1.00000	0.9563
24 Acrylonitrile	53	6.774	6.742	(0.701)	212740	2.00000	1.908
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	306860	1.00000	0.9615
26 Methylene Chloride	84	6.989	6.984	(0.723)	165873	1.00000	1.006
27 3-Chloropropene	39	7.016	7.011	(0.726)	110423	1.00000	0.9159
28 Carbon Disulfide	76	7.161	7.156	(0.741)	398805	1.00000	0.9138
29 trans-1,2-Dichloroethene	96	7.855	7.850	(0.813)	129834	1.00000	0.9224
30 Methyl-t-Butyl Ether	73	8.275	8.076	(0.856)	455675	2.00000	1.859
31 1,1-Dichloroethane	63	8.307	8.307	(0.860)	300139	1.00000	0.9681
32 Vinyl Acetate	43	8.468	8.431	(0.876)	605288	2.00000	1.879
33 2-Butanone	72	9.157	8.990	(0.948)	111806	2.00000	1.901(H)
34 Hexane	56	8.920	8.920	(0.923)	121994	1.00000	0.9421
35 cis 1,2-Dichloroethene	96	9.324	9.329	(0.965)	164517	1.00000	0.9529
36 Chloroform	83	9.673	9.679	(1.001)	268256	1.00000	0.9612
37 1,1,1-Trichloroethane	97	10.722	10.723	(1.110)	217130	1.00000	0.9678
38 1,2-Dichloroethane	62	10.825	10.830	(0.917)	159764	1.00000	0.9500
39 Benzene	78	11.293	11.293	(0.956)	479433	1.00000	0.9465
40 1-Butanol	41	11.841	11.524	(1.003)	104486	2.00000	2.112(H)
41 Cyclohexane	69	11.303	11.298	(0.957)	60195	1.00000	0.9112
42 Carbon Tetrachloride	117	11.314	11.314	(1.171)	199671	1.00000	0.9876
43 Heptane	43	12.385	12.385	(1.049)	336833	1.00000	0.9346
44 1,2-Dichloropropane	63	12.465	12.471	(1.056)	213866	1.00000	0.9576
45 Trichloroethene	130	12.487	12.492	(1.057)	224846	1.00000	0.9472
46 Dibromomethane	93	12.562	12.568	(1.064)	146094	1.00000	0.8923
47 Bromodichloromethane	83	12.702	12.708	(1.076)	208052	1.00000	0.9283
48 4-Methyl-2-pentanone	43	13.945	13.714	(1.181)	630085	2.00000	2.080(H)
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	280429	1.00000	0.9480
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	177727	1.00000	0.9401
51 Toluene	91	14.477	14.483	(0.883)	574184	1.00000	0.9282
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	195235	1.00000	0.9320
53 2-Hexanone	58	15.241	14.999	(0.929)	322679	2.00000	1.849(H)
54 Octane	85	15.144	15.145	(0.923)	140518	1.00000	0.8996
55 Dibromochloromethane	129	15.225	15.231	(0.928)	251762	1.00000	0.9264
56 1,2-Dibromoethane	107	15.521	15.521	(0.946)	327164	1.00000	0.9313
57 Tetrachloroethene	129	15.586	15.591	(0.950)	200414	1.00000	0.9355
58 Chlorobenzene	112	16.446	16.452	(1.003)	484058	1.00000	0.9339
59 Ethylbenzene	91	16.731	16.737	(1.020)	704707	1.00000	0.9362
60 m-Xylene (For p-)	91	16.887	16.888	(1.030)	635614	1.00000	0.9713
61 Bromoform	173	17.329	17.334	(1.056)	218562	1.00000	0.9581
62 Nonane	57	17.296	17.296	(1.054)	387956	1.00000	0.9173
63 Styrene	104	17.345	17.350	(1.057)	386789	1.00000	0.9310
64 o-Xylene	91	17.409	17.415	(1.061)	552969	1.00000	0.9463
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	437048	1.00000	0.9459
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	79297	1.00000	0.9413
67 Cumene	105	17.979	17.980	(1.096)	650001	1.00000	0.9059
68 n-Propylbenzene	91	18.485	18.485	(1.127)	824523	1.00000	0.9127

Data File: /var/chem/gcms/me.i/E110402i.b/ic11104.d
Report Date: 04-Nov-2002 15:59

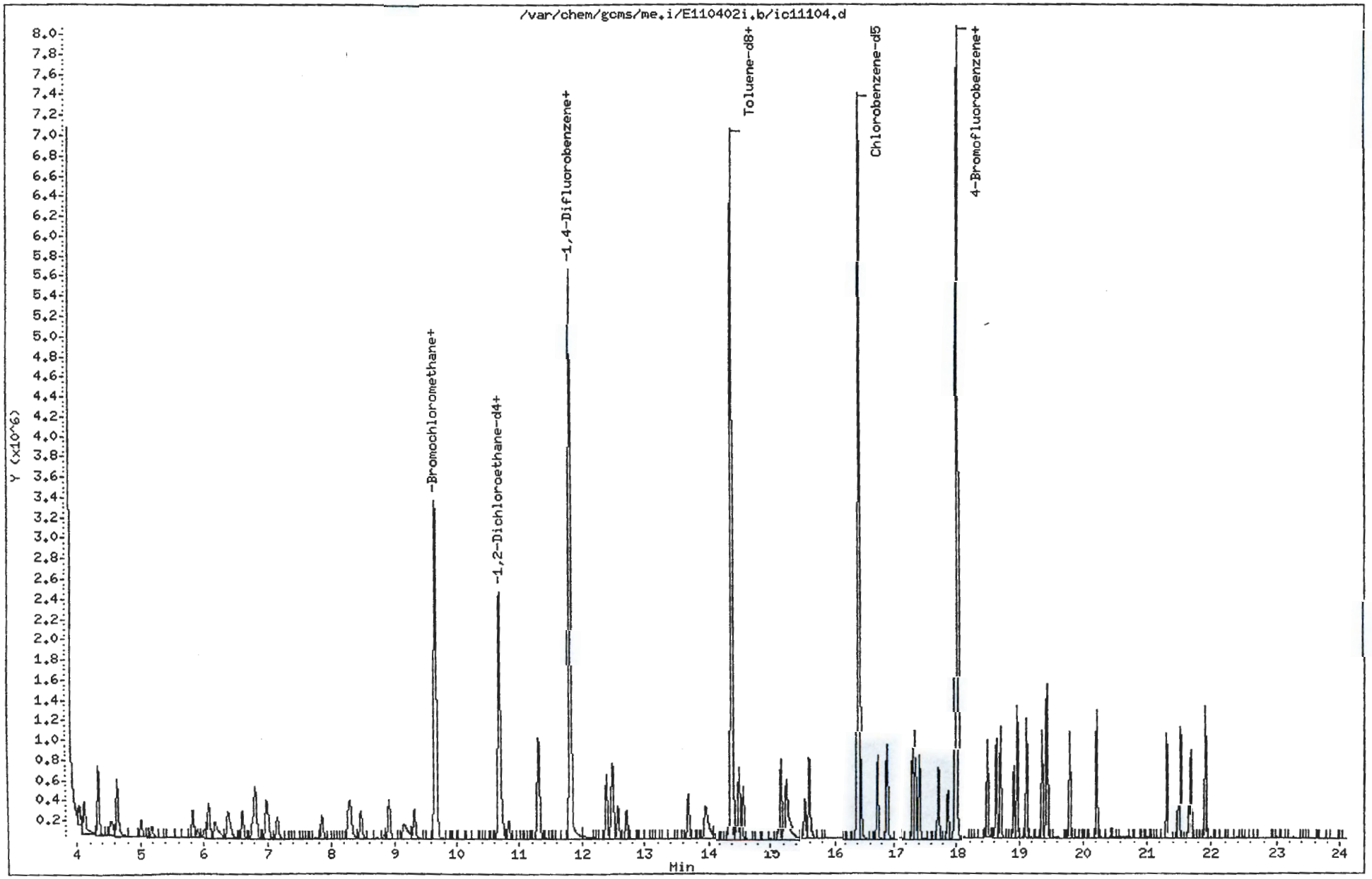
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
69 4-Ethyltoluene	105	18.625	18.631	(1.135)	697029	1.00000	0.9131
70 1,3,5-Trimethylbenzene	120	18.695	18.700	(1.140)	341274	1.00000	0.9408
71 Alpha-Methylstyrene	118	18.905	18.910	(1.153)	245242	1.00000	0.9264
72 Decane	57	18.964	18.964	(1.156)	492706	1.00000	0.9450
73 1,2,4-Trimethylbenzene	105	19.109	19.115	(1.165)	659172	1.00000	0.9548
74 1,3-Dichlorobenzene	146	19.367	19.368	(1.181)	489055	1.00000	0.9350
75 Benzyl Chloride	91	19.437	19.437	(1.185)	404387	1.00000	0.9894
76 1,4-Dichlorobenzene	146	19.448	19.454	(1.186)	504075	1.00000	0.9486
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	464988	1.00000	0.9437
78 Undecane	57	20.223	20.223	(1.233)	436808	1.00000	0.8692
79 Dodecane	57	21.309	21.310	(1.299)	364725	1.00000	0.8242
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	390839	1.00000	0.9173
81 Napthalene	128	21.681	21.681	(1.322)	736490	1.00000	0.8572
82 Hexachlorobutadiene	225	21.907	21.912	(1.335)	289906	1.00000	0.9183

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E110402i.b/ic11104.d
Date : 04-NOV-2002 12:13
Client ID: 1PPBV
Sample Info: IC1,,1,1,,1PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Report Date: 04-Nov-2002 15:59

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Lab Smp Id: IC2 Client Smp ID: 5PPBV
Inj Date : 04-NOV-2002 13:23
Operator : 0691 Inst ID: me.i
Smp Info : IC2,,1,2,,5PPBV
Misc Info : E110402i,LA,,,50ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:59 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 13:23 Cal File: ic21104b.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

WJ 11/5/02

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	9.668	9.668	(1.000)	1261027	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6009534	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5457346	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	827476	10.0000	10.02
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5376534	10.0000	9.948
$ 6 4-Bromofluorobenzene	95	18.006	18.007	(1.098)	3271008	10.0000	9.864
7 Chlorodifluoromethane	51	4.046	4.046	(0.419)	1001492	5.00000	4.395
8 Dichlorodifluoromethane	85	4.122	4.122	(0.426)	1074033	5.00000	3.923
9 Chloromethane	52	4.337	4.332	(0.449)	200774	5.00000	3.935
10 1,2-Dichlorotetrafluoroethane	135	4.348	4.342	(0.450)	1045280	5.00000	3.996
11 Vinyl Chloride	62	4.536	4.536	(0.469)	645868	5.00000	3.950
12 Methanol	31	4.584	4.552	(0.474)	899776	20.0000	18.86
13 1,3-Butadiene	54	4.644	4.638	(0.480)	530237	5.00000	4.373
14 n-Butane	43	4.644	4.638	(0.480)	1091927	5.00000	3.955
15 Bromomethane	94	5.015	5.009	(0.519)	629363	5.00000	3.956
16 Chloroethane	64	5.181	5.182	(0.536)	334023	5.00000	3.969
17 Trichlorofluoromethane	101	5.832	5.833	(0.603)	1142797	5.00000	3.963
18 Acrolein	56	5.865	5.859	(0.607)	452678	10.0000	9.870
19 Acetonitrile	40	5.951	5.940	(0.616)	494248	10.0000	9.119
20 Acetone	58	6.058	6.015	(0.627)	560385	10.0000	8.428
21 Pentane	57	6.085	6.085	(0.629)	191900	5.00000	4.396

Data File: /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Report Date: 04-Nov-2002 15:59

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	6.311	6.295	(0.653)	1672950	10.0000	9.164
23 1,1-Dichloroethene	96	6.612	6.607	(0.684)	599597	5.00000	4.020
24 Acrylonitrile	53	6.747	6.742	(0.698)	1028314	10.0000	9.400
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	1201654	5.00000	4.010
26 Methylene Chloride	84	6.989	6.984	(0.723)	516999	5.00000	3.579
27 3-Chloropropene	39	7.011	7.011	(0.725)	507937	5.00000	4.383
28 Carbon Disulfide	76	7.156	7.156	(0.740)	1868347	5.00000	4.438
29 trans-1,2-Dichloroethene	96	7.850	7.850	(0.812)	603693	5.00000	4.444
30 Methyl-t-Butyl Ether	73	8.129	8.076	(0.841)	2350965	10.0000	9.686
31 1,1-Dichloroethane	63	8.302	8.307	(0.859)	1151460	5.00000	3.966
32 Vinyl Acetate	43	8.436	8.431	(0.873)	3372746	10.0000	10.34
33 2-Butanone	72	9.039	8.990	(0.935)	538987	10.0000	9.420(H)
34 Hexane	56	8.926	8.920	(0.923)	556501	5.00000	4.451
35 cis 1,2-Dichloroethene	96	9.329	9.329	(0.965)	649171	5.00000	4.006
36 Chloroform	83	9.679	9.679	(1.001)	1040002	5.00000	3.977
37 1,1,1-Trichloroethane	97	10.722	10.723	(1.109)	877523	5.00000	4.134
38 1,2-Dichloroethane	62	10.825	10.830	(0.917)	621426	5.00000	3.981
39 Benzene	78	11.298	11.293	(0.957)	1923813	5.00000	4.069
40 1-Butanol	41	11.610	11.524	(0.983)	807676	10.0000	14.18(H)
41 Cyclohexane	69	11.298	11.298	(0.957)	287476	5.00000	4.528
42 Carbon Tetrachloride	117	11.314	11.314	(1.170)	937443	5.00000	4.719
43 Heptane	43	12.385	12.385	(1.049)	1534494	5.00000	4.452
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	828213	5.00000	3.992
45 Trichloroethene	130	12.492	12.492	(1.058)	909169	5.00000	4.096
46 Dibromomethane	93	12.568	12.568	(1.064)	689665	5.00000	4.415
47 Bromodichloromethane	83	12.707	12.708	(1.076)	1017702	5.00000	4.679
48 4-Methyl-2-pentanone	43	13.762	13.714	(1.165)	3354419	10.0000	10.85
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	1175426	5.00000	4.218
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	717485	5.00000	4.078
51 Toluene	91	14.483	14.483	(0.883)	2217955	5.00000	3.897
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	774994	5.00000	3.996
53 2-Hexanone	58	15.053	14.999	(0.918)	1574799	10.0000	9.338
54 Octane	85	15.144	15.145	(0.923)	705901	5.00000	4.675
55 Dibromochloromethane	129	15.231	15.231	(0.928)	1333199	5.00000	4.975
56 1,2-Dibromoethane	107	15.521	15.521	(0.946)	1300229	5.00000	3.998
57 Tetrachloroethene	129	15.591	15.591	(0.950)	787407	5.00000	3.976
58 Chlorobenzene	112	16.452	16.452	(1.003)	1882682	5.00000	3.938
59 Ethylbenzene	91	16.737	16.737	(1.020)	2741720	5.00000	3.947
60 m-Xylene (For p-)	91	16.887	16.888	(1.030)	2073184	5.00000	3.523
61 Bromoform	173	17.334	17.334	(1.057)	1262952	5.00000	5.441
62 Nonane	57	17.296	17.296	(1.054)	1691367	5.00000	4.251
63 Styrene	104	17.350	17.350	(1.058)	1638272	5.00000	4.204
64 o-Xylene	91	17.415	17.415	(1.062)	2101143	5.00000	3.906
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	1722945	5.00000	4.022
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	419297	5.00000	5.026
67 Cumene	105	17.979	17.980	(1.096)	2954543	5.00000	4.350
68 n-Propylbenzene	91	18.485	18.485	(1.127)	4041900	5.00000	4.639

Data File: /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Report Date: 04-Nov-2002 15:59

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	18.625	18.631	(1.135)	3455289	5.00000	4.681
70 1,3,5-Trimethylbenzene	120	18.695	18.700	(1.140)	1349659	5.00000	4.015
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	1387593	5.00000	5.227
72 Decane	57	18.964	18.964	(1.156)	2266906	5.00000	4.538
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	2556314	5.00000	3.999
74 1,3-Dichlorobenzene	146	19.367	19.368	(1.181)	1993761	5.00000	4.093
75 Benzyl Chloride	91	19.437	19.437	(1.185)	2014370	5.00000	4.992
76 1,4-Dichlorobenzene	146	19.453	19.454	(1.186)	1984356	5.00000	4.026
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	1887150	5.00000	4.108
78 Undecane	57	20.223	20.223	(1.233)	2226641	5.00000	4.604
79 Dodecane	57	21.309	21.310	(1.299)	1910789	5.00000	4.514
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	1590706	5.00000	4.026
81 Napthalene	128	21.686	21.681	(1.322)	3871581	5.00000	4.665
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	1158075	5.00000	3.969

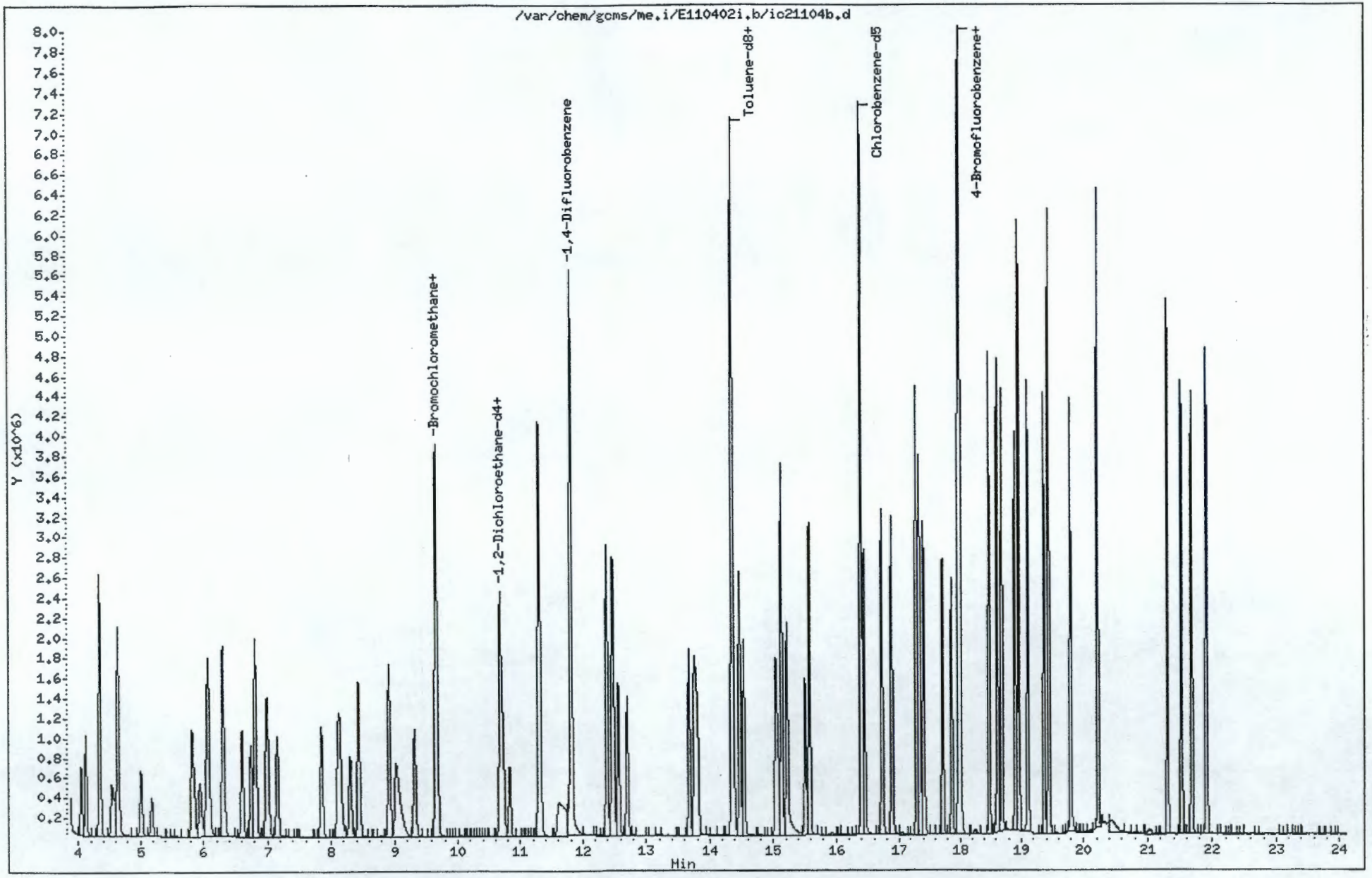
QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/me.i/E110402i.b/ic21104b.d
Date : 04-NOV-2002 13:23
Client ID: 5PPBV
Sample Info: IC2,,1,2,,5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/ic31104.d
Report Date: 04-Nov-2002 15:59

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic31104.d
Lab Smp Id: IC3 Client Smp ID: 10PPBV
Inj Date : 04-NOV-2002 09:16
Operator : 0691 Inst ID: me.i
Smp Info : IC3,,1,3,,10PPBV
Misc Info : E110402,LA,,,100ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:59 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 09:16 Cal File: ic31104.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

WJ 11/5/02

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	9.668	9.668	(1.000)	1342814	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6440634	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5804483	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.685	10.685	(0.905)	897854	10.0000	10.11
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5696163	10.0000	9.928
$ 6 4-Bromofluorobenzene	95	18.007	18.007	(1.098)	3292764	10.0000	9.461
7 Chlorodifluoromethane	51	4.046	4.046	(0.419)	1935450	10.0000	8.313
8 Dichlorodifluoromethane	85	4.122	4.122	(0.426)	2177190	10.0000	7.867
9 Chloromethane	52	4.332	4.332	(0.448)	368442	10.0000	7.375
10 1,2-Dichlorotetrafluoroethane	135	4.342	4.342	(0.449)	2074085	10.0000	7.847
11 Vinyl Chloride	62	4.536	4.536	(0.469)	1276256	10.0000	7.744
12 Methanol	31	4.552	4.552	(0.471)	1826905	40.0000	37.21
13 1,3-Butadiene	54	4.638	4.638	(0.480)	997083	10.0000	8.092
14 n-Butane	43	4.638	4.638	(0.480)	1997211	10.0000	7.260
15 Bromomethane	94	5.009	5.009	(0.518)	1259732	10.0000	7.838
16 Chloroethane	64	5.182	5.182	(0.536)	669263	10.0000	7.867
17 Trichlorofluoromethane	101	5.833	5.833	(0.603)	2214226	10.0000	7.636
18 Acrolein	56	5.859	5.859	(0.606)	851832	20.0000	17.90
19 Acetonitrile	40	5.940	5.940	(0.614)	975210	20.0000	17.58
20 Acetone	58	6.015	6.015	(0.622)	1054742	20.0000	16.28
21 Pentane	57	6.085	6.085	(0.629)	341113	10.0000	7.862

Data File: /var/chem/gcms/me.i/E110402i.b/ic31104.d
Report Date: 04-Nov-2002 15:59

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	6.295	6.295	(0.651)	3220348	20.0000	17.16
23 1,1-Dichloroethene	96	6.607	6.607	(0.683)	1226389	10.0000	8.091
24 Acrylonitrile	53	6.742	6.742	(0.697)	2077556	20.0000	18.23
25 1,1,2-Trichlorotrifluoroethane	101	6.812	6.812	(0.705)	2436399	10.0000	8.015
26 Methylene Chloride	84	6.984	6.984	(0.722)	1049810	10.0000	7.413
27 3-Chloropropene	39	7.011	7.011	(0.725)	1016915	10.0000	8.541
28 Carbon Disulfide	76	7.156	7.156	(0.740)	3793856	10.0000	8.731
29 trans-1,2-Dichloroethene	96	7.850	7.850	(0.812)	1251204	10.0000	8.890
30 Methyl-t-Butyl Ether	73	8.076	8.076	(0.835)	4984370	20.0000	19.42
31 1,1-Dichloroethane	63	8.307	8.307	(0.859)	2354675	10.0000	7.998
32 Vinyl Acetate	43	8.431	8.431	(0.872)	6659627	20.0000	19.33
33 2-Butanone	72	8.990	8.990	(0.930)	1142333	20.0000	19.05
34 Hexane	56	8.920	8.920	(0.923)	1120069	10.0000	8.689
35 cis 1,2-Dichloroethene	96	9.329	9.329	(0.965)	1348845	10.0000	8.173
36 Chloroform	83	9.679	9.679	(1.001)	2103296	10.0000	7.942
37 1,1,1-Trichloroethane	97	10.723	10.723	(1.109)	1840554	10.0000	8.456
38 1,2-Dichloroethane	62	10.830	10.830	(0.917)	1285171	10.0000	8.056
39 Benzene	78	11.293	11.293	(0.956)	3726552	10.0000	7.765
40 1-Butanol	41	11.524	11.524	(0.976)	1691835	20.0000	25.72
41 Cyclohexane	69	11.298	11.298	(0.957)	548766	10.0000	8.390
42 Carbon Tetrachloride	117	11.314	11.314	(1.170)	1947439	10.0000	9.355
43 Heptane	43	12.385	12.385	(1.049)	2917950	10.0000	8.246
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	1623542	10.0000	7.719
45 Trichloroethene	130	12.492	12.492	(1.058)	1830368	10.0000	8.067
46 Dibromomethane	93	12.568	12.568	(1.064)	1397050	10.0000	8.631
47 Bromodichloromethane	83	12.708	12.708	(1.076)	2171705	10.0000	9.445
48 4-Methyl-2-pentanone	43	13.714	13.714	(1.161)	6431280	20.0000	19.53
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	2477754	10.0000	8.588
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	1486506	10.0000	8.285
51 Toluene	91	14.483	14.483	(0.883)	4616622	10.0000	8.007
52 1,1,2-Trichloroethane	97	14.547	14.547	(0.887)	1612520	10.0000	8.174
53 2-Hexanone	58	14.999	14.999	(0.914)	3464492	20.0000	19.45
54 Octane	85	15.145	15.145	(0.923)	1406506	10.0000	8.980
55 Dibromochloromethane	129	15.231	15.231	(0.928)	2807400	10.0000	9.879
56 1,2-Dibromoethane	107	15.521	15.521	(0.946)	2667446	10.0000	8.081
57 Tetrachloroethene	129	15.591	15.591	(0.950)	1572072	10.0000	7.862
58 Chlorobenzene	112	16.452	16.452	(1.003)	3876008	10.0000	8.003
59 Ethylbenzene	91	16.737	16.737	(1.020)	5654374	10.0000	8.029
60 m-Xylene (For p-)	91	16.888	16.888	(1.030)	4283049	10.0000	7.305
61 Bromoform	173	17.334	17.334	(1.057)	2434167	10.0000	9.887
62 Nonane	57	17.296	17.296	(1.054)	3084409	10.0000	7.707
63 Styrene	104	17.350	17.350	(1.058)	3136265	10.0000	7.954
64 o-Xylene	91	17.415	17.415	(1.062)	4355677	10.0000	7.995
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	3467443	10.0000	7.992
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	878028	10.0000	9.921
67 Cumene	105	17.980	17.980	(1.096)	5580828	10.0000	8.093
68 n-Propylbenzene	91	18.485	18.485	(1.127)	7985744	10.0000	8.862

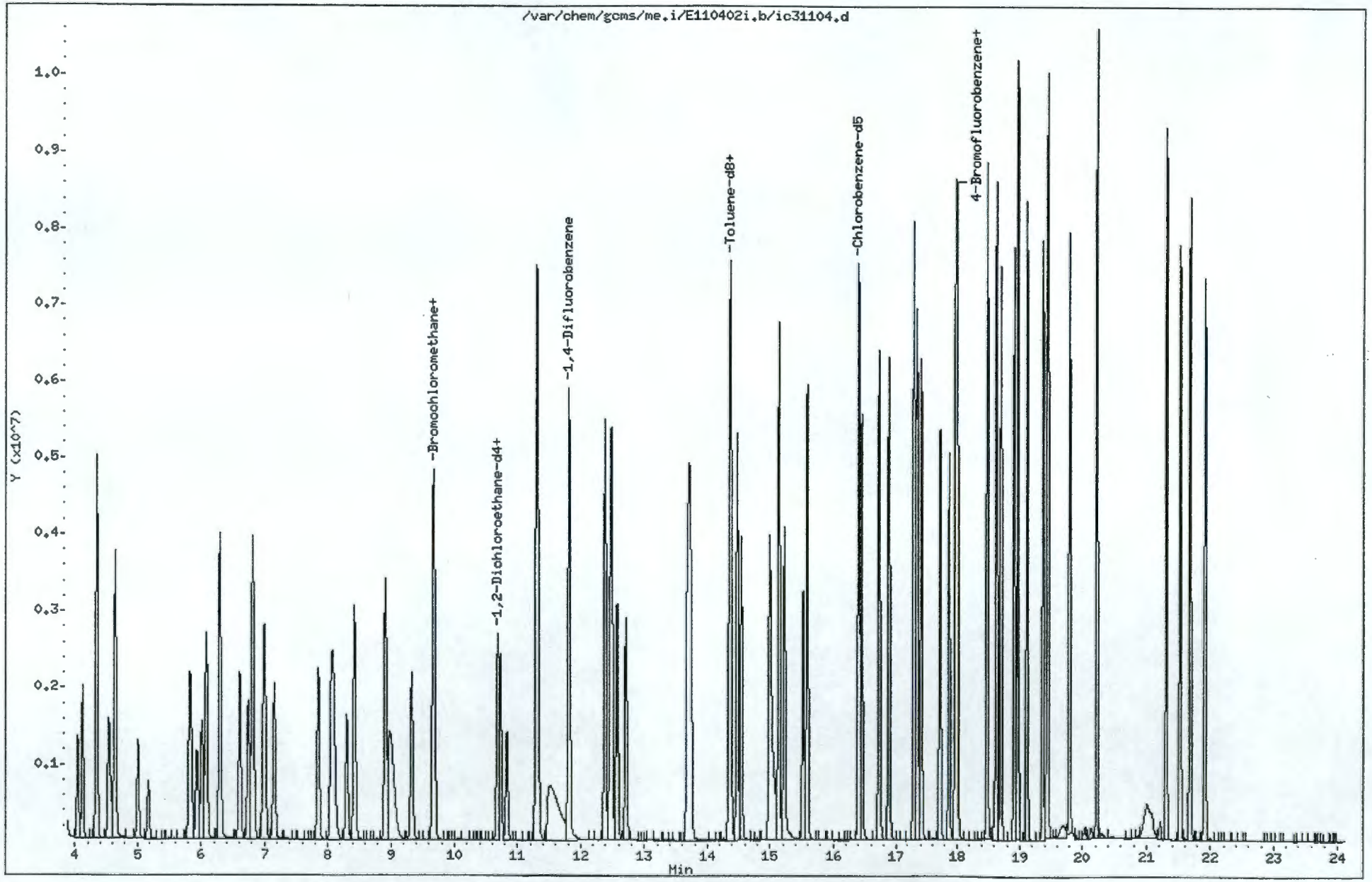
Data File: /var/chem/gcms/me.i/E110402i.b/ic31104.d
Report Date: 04-Nov-2002 15:59

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	18.631	18.631	(1.136)	6790108	10.0000	8.888
70 1,3,5-Trimethylbenzene	120	18.700	18.700	(1.140)	2508688	10.0000	7.461
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	2815296	10.0000	9.976
72 Decane	57	18.964	18.964	(1.156)	3992086	10.0000	7.906
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	5074312	10.0000	7.862
74 1,3-Dichlorobenzene	146	19.368	19.368	(1.181)	3906118	10.0000	7.929
75 Benzyl Chloride	91	19.437	19.437	(1.185)	3789281	10.0000	9.042
76 1,4-Dichlorobenzene	146	19.454	19.454	(1.186)	3472633	10.0000	7.104
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	3716270	10.0000	7.989
78 Undecane	57	20.223	20.223	(1.233)	3936938	10.0000	8.031
79 Dodecane	57	21.310	21.310	(1.299)	3522185	10.0000	8.179
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	3029052	10.0000	7.633
81 Napthalene	128	21.681	21.681	(1.322)	7721908	10.0000	8.972
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	1970603	10.0000	6.850

Data File: /var/chem/gcms/me.i/E110402i.b/ic31104.d
Date : 04-NOV-2002 09:16
Client ID: 10PPBV
Sample Info: IC3,,1,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/ic41104.d
Report Date: 04-Nov-2002 15:59

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic41104.d
Lab Smp Id: IC4 Client Smp ID: 15PPBV
Inj Date : 04-NOV-2002 13:59
Operator : 0691 Inst ID: me.i
Smp Info : IC4,,1,4,,15PPBV
Misc Info : E110402i,LA,,,150ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:59 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 09:16 Cal File: ic31104.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

cw 11/5/02

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	9.668	9.668	(1.000)	1263978	10.0000	
* 2 1,4-Difluorobenzene	114	11.814	11.809	(1.000)	6175368	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5577856	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.685	10.685	(0.904)	859976	10.0000	10.08
$ 5 Toluene-d8	98	14.375	14.370	(0.876)	5374205	10.0000	9.788
$ 6 4-Bromofluorobenzene	95	18.012	18.007	(1.098)	3076162	10.0000	9.323
7 Chlorodifluoromethane	51	4.046	4.046	(0.419)	2759854	15.0000	12.94
8 Dichlorodifluoromethane	85	4.122	4.122	(0.426)	3175267	15.0000	12.58
9 Chloromethane	52	4.331	4.332	(0.448)	503139	15.0000	11.35
10 1,2-Dichlorotetrafluoroethane	135	4.342	4.342	(0.449)	2865105	15.0000	11.98
11 Vinyl Chloride	62	4.536	4.536	(0.469)	1801654	15.0000	12.07
12 Methanol	31	4.536	4.552	(0.469)	2492997	60.0000	55.34
13 1,3-Butadiene	54	4.638	4.638	(0.480)	1385315	15.0000	12.36
14 n-Butane	43	4.638	4.638	(0.480)	2765812	15.0000	11.22
15 Bromomethane	94	5.009	5.009	(0.518)	1799167	15.0000	12.32
16 Chloroethane	64	5.181	5.182	(0.536)	943869	15.0000	12.22
17 Trichlorofluoromethane	101	5.832	5.833	(0.603)	3135085	15.0000	11.95
18 Acrolein	56	5.854	5.859	(0.605)	1161877	30.0000	26.54
19 Acetonitrile	40	5.940	5.940	(0.614)	1388280	30.0000	27.20
20 Acetone	58	6.005	6.015	(0.621)	1444835	30.0000	25.01
21 Pentane	57	6.085	6.085	(0.629)	477952	15.0000	12.24

Data File: /var/chem/gcms/me.i/E110402i.b/ic41104.d
Report Date: 04-Nov-2002 15:59

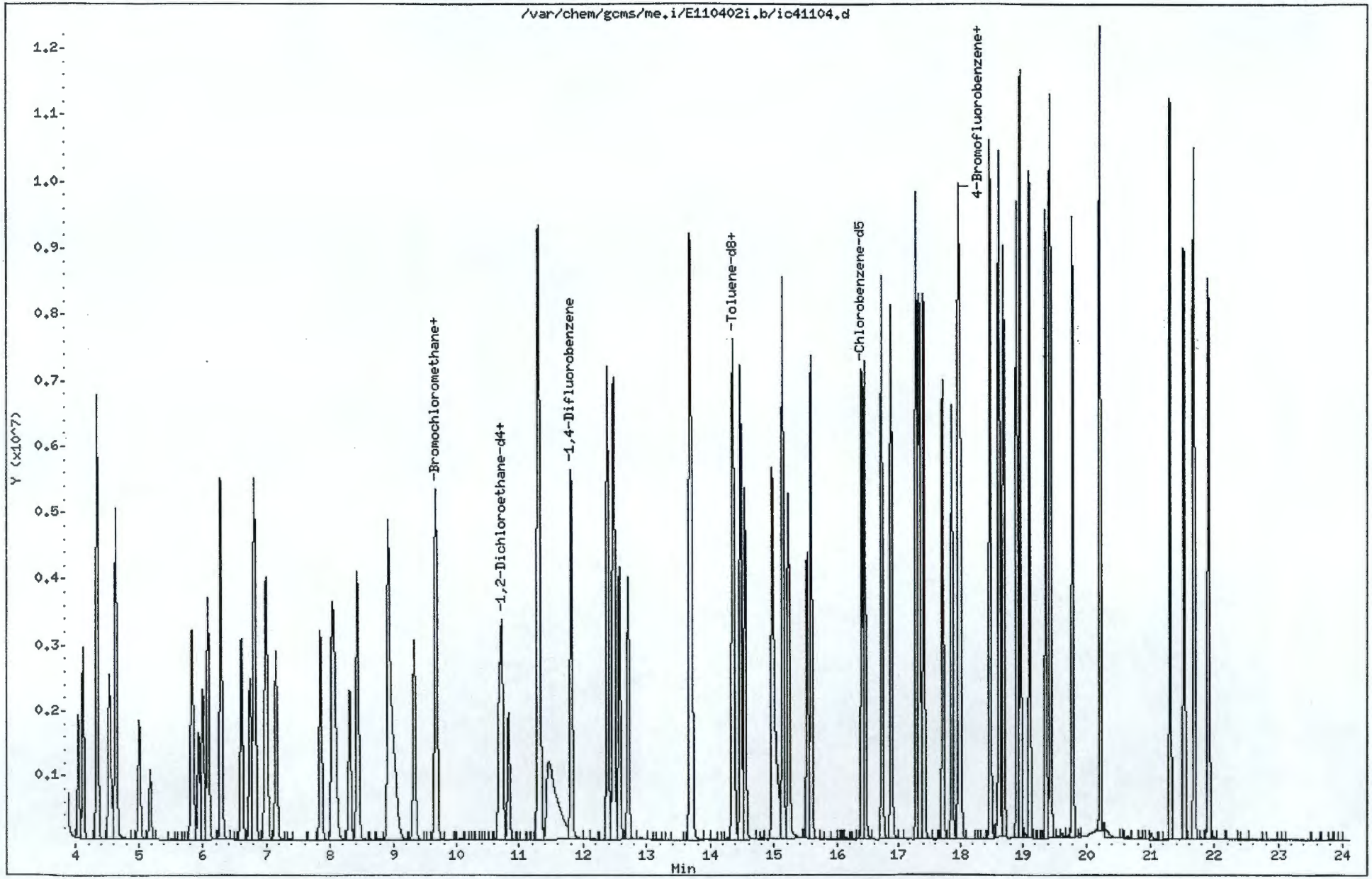
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.284	6.295	(0.650)	4344792	30.0000	25.35
23 1,1-Dichloroethene	96	6.612	6.607	(0.684)	1758560	15.0000	12.70
24 Acrylonitrile	53	6.747	6.742	(0.698)	2903553	30.0000	27.52
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	3421902	15.0000	12.38
26 Methylene Chloride	84	6.989	6.984	(0.723)	1500988	15.0000	11.85
27 3-Chloropropene	39	7.010	7.011	(0.725)	1438623	15.0000	13.15
28 Carbon Disulfide	76	7.156	7.156	(0.740)	5440277	15.0000	13.56
29 trans-1,2-Dichloroethene	96	7.855	7.850	(0.812)	1792547	15.0000	13.76
30 Methyl-t-Butyl Ether	73	8.043	8.076	(0.832)	7082082	30.0000	29.43
31 1,1-Dichloroethane	63	8.307	8.307	(0.859)	3323848	15.0000	12.41
32 Vinyl Acetate	43	8.431	8.431	(0.872)	9409353	30.0000	29.18
33 2-Butanone	72	8.963	8.990	(0.927)	1615527	30.0000	28.88
34 Hexane	56	8.926	8.920	(0.923)	1573010	15.0000	13.26
35 cis 1,2-Dichloroethene	96	9.334	9.329	(0.966)	1925286	15.0000	12.76
36 Chloroform	83	9.684	9.679	(1.002)	2976403	15.0000	12.36
37 1,1,1-Trichloroethane	97	10.728	10.723	(1.110)	2677172	15.0000	13.35
38 1,2-Dichloroethane	62	10.835	10.830	(0.917)	1829850	15.0000	12.38
39 Benzene	78	11.298	11.293	(0.956)	4739706	15.0000	10.87
40 1-Butanol	41	11.459	11.524	(0.970)	2384502	30.0000	36.24
41 Cyclohexane	69	11.298	11.298	(0.956)	712067	15.0000	11.83
42 Carbon Tetrachloride	117	11.320	11.314	(1.171)	2766390	15.0000	14.26
43 Heptane	43	12.390	12.385	(1.049)	3937129	15.0000	12.06
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	2149183	15.0000	11.20
45 Trichloroethene	130	12.498	12.492	(1.058)	2456477	15.0000	11.78
46 Dibromomethane	93	12.573	12.568	(1.064)	1941622	15.0000	12.87
47 Bromodichloromethane	83	12.707	12.708	(1.076)	3086593	15.0000	14.16
48 4-Methyl-2-pentanone	43	13.703	13.714	(1.160)	8033664	30.0000	26.10
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	3200796	15.0000	12.03
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	2106090	15.0000	12.60
51 Toluene	91	14.483	14.483	(0.883)	6433120	15.0000	12.06
52 1,1,2-Trichloroethane	97	14.547	14.547	(0.887)	2258990	15.0000	12.34
53 2-Hexanone	58	14.983	14.999	(0.913)	5017692	30.0000	29.42
54 Octane	85	15.144	15.145	(0.923)	1921460	15.0000	13.09
55 Dibromochloromethane	129	15.236	15.231	(0.929)	3894456	15.0000	14.38
56 1,2-Dibromoethane	107	15.526	15.521	(0.947)	3647425	15.0000	11.96
57 Tetrachloroethene	129	15.591	15.591	(0.950)	2061714	15.0000	11.26
58 Chlorobenzene	112	16.457	16.452	(1.003)	5311601	15.0000	11.89
59 Ethylbenzene	91	16.737	16.737	(1.020)	7724717	15.0000	11.89
60 m-Xylene (For p-)	91	16.893	16.888	(1.030)	5879166	15.0000	10.99
61 Bromoform	173	17.334	17.334	(1.057)	2987275	15.0000	12.97
62 Nonane	57	17.302	17.296	(1.055)	3869399	15.0000	10.64
63 Styrene	104	17.355	17.350	(1.058)	3872283	15.0000	10.79
64 o-Xylene	91	17.415	17.415	(1.062)	5968660	15.0000	11.88
65 1,1,2,2-Tetrachloroethane	83	17.721	17.716	(1.080)	4676853	15.0000	11.71
66 1,2,3-Trichloropropane	110	17.883	17.877	(1.090)	1219911	15.0000	14.47
67 Cumene	105	17.985	17.980	(1.096)	7199769	15.0000	11.39
68 n-Propylbenzene	91	18.491	18.485	(1.127)	10208987	15.0000	12.23

Data File: /var/chem/gcms/me.i/E110402i.b/ic41104.d
Report Date: 04-Nov-2002 15:59

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	18.630	18.631	(1.136)	8739347	15.0000	12.33
70 1,3,5-Trimethylbenzene	120	18.706	18.700	(1.140)	3130002	15.0000	10.30
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	3713810	15.0000	13.90
72 Decane	57	18.969	18.964	(1.156)	4914846	15.0000	10.71
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	6537460	15.0000	11.09
74 1,3-Dichlorobenzene	146	19.373	19.368	(1.181)	4973533	15.0000	11.06
75 Benzyl Chloride	91	19.437	19.437	(1.185)	4835227	15.0000	12.42
76 1,4-Dichlorobenzene	146	19.459	19.454	(1.186)	4145678	15.0000	9.476
77 1,2-Dichlorobenzene	146	19.803	19.798	(1.207)	4794902	15.0000	11.26
78 Undecane	57	20.223	20.223	(1.233)	4786125	15.0000	10.74
79 Dodecane	57	21.309	21.310	(1.299)	4489979	15.0000	11.37
80 1,2,4-Trichlorobenzene	180	21.530	21.525	(1.313)	3810004	15.0000	10.58
81 Napthalene	128	21.686	21.681	(1.322)	10349441	15.0000	12.87
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	2453551	15.0000	9.524

Data File: /var/chem/gcms/me.i/E110402i.b/ic41104.d
Date : 04-NOV-2002 13:59
Client ID: 15PPBV
Sample Info: IC4,,1,4,,15PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/ic51104.d
Report Date: 04-Nov-2002 15:59

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/ic51104.d
Lab Smp Id: IC5 Client Smp ID: 30PPBV
Inj Date : 04-NOV-2002 14:34
Operator : 0691 Inst ID: me.i
Smp Info : IC5,,1,5,,30PPBV
Misc Info : E110402i,LA,,,300ml
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 15:59 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 09:16 Cal File: ic31104.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

WD 11/5/02

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	9.674	9.668	(1.000)	1154906	10.0000	
* 2 1,4-Difluorobenzene	114	11.820	11.809	(1.000)	6150318	10.0000	
* 3 Chlorobenzene-d5	117	16.414	16.403	(1.000)	5464908	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.696	10.685	(0.905)	838077	10.0000	9.886
$ 5 Toluene-d8	98	14.381	14.370	(0.876)	4933702	10.0000	9.282
$ 6 4-Bromofluorobenzene	95	18.017	18.007	(1.098)	2733932	10.0000	8.647
7 Chlorodifluoromethane	51	4.046	4.046	(0.418)	5236724	30.0000	27.28
8 Dichlorodifluoromethane	85	4.122	4.122	(0.426)	6257929	30.0000	27.51
9 Chloromethane	52	4.326	4.332	(0.447)	807938	30.0000	21.13
10 1,2-Dichlorotetrafluoroethane	135	4.342	4.342	(0.449)	4597687	30.0000	21.98
11 Vinyl Chloride	62	4.536	4.536	(0.469)	3248057	30.0000	24.53
12 Methanol	31	4.525	4.552	(0.468)	4313582	120.000	107.5
13 1,3-Butadiene	54	4.638	4.638	(0.479)	2328680	30.0000	23.56
14 n-Butane	43	4.638	4.638	(0.479)	4735846	30.0000	21.96
15 Bromomethane	94	5.009	5.009	(0.518)	3386263	30.0000	25.94
16 Chloroethane	64	5.182	5.182	(0.536)	1797178	30.0000	26.03
17 Trichlorofluoromethane	101	5.827	5.833	(0.602)	5576379	30.0000	24.04
18 Acrolein	56	5.854	5.859	(0.605)	1927458	60.0000	49.57
19 Acetonitrile	40	5.945	5.940	(0.615)	2595442	60.0000	56.34
20 Acetone	58	5.994	6.015	(0.620)	2576238	60.0000	50.70
21 Pentane	57	6.085	6.085	(0.629)	844334	30.0000	24.53

Data File: /var/chem/gcms/me.i/E110402i.b/ic51104.d
Report Date: 04-Nov-2002 15:59

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	6.279	6.295	(0.649)	7251310	60.0000	47.87
23 1,1-Dichloroethene	96	6.613	6.607	(0.684)	3445381	30.0000	27.60
24 Acrylonitrile	53	6.752	6.742	(0.698)	5374854	60.0000	56.31
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	5780997	30.0000	23.69
26 Methylene Chloride	84	6.989	6.984	(0.722)	2868291	30.0000	25.52
27 3-Chloropropene	39	7.016	7.011	(0.725)	2688599	30.0000	27.30
28 Carbon Disulfide	76	7.161	7.156	(0.740)	10807424	30.0000	29.55
29 trans-1,2-Dichloroethene	96	7.861	7.850	(0.813)	3483452	30.0000	29.36
30 Methyl-t-Butyl Ether	73	8.027	8.076	(0.830)	13904008	60.0000	62.75(A)
31 1,1-Dichloroethane	63	8.312	8.307	(0.859)	6429103	30.0000	26.74
32 Vinyl Acetate	43	8.442	8.431	(0.873)	16983729	60.0000	57.97
33 2-Butanone	72	8.958	8.990	(0.926)	3149183	60.0000	61.34(A)
34 Hexane	56	8.926	8.920	(0.923)	2644286	30.0000	25.07
35 cis 1,2-Dichloroethene	96	9.340	9.329	(0.966)	3783154	30.0000	27.78
36 Chloroform	83	9.690	9.679	(1.002)	5652456	30.0000	26.23
37 1,1,1-Trichloroethane	97	10.733	10.723	(1.110)	5292933	30.0000	29.05
38 1,2-Dichloroethane	62	10.841	10.830	(0.917)	3680030	30.0000	25.61
39 Benzene	78	11.298	11.293	(0.956)	6381781	30.0000	15.85
40 1-Butanol	41	11.427	11.524	(0.967)	4586084	60.0000	68.36(A)
41 Cyclohexane	69	11.298	11.298	(0.956)	1006901	30.0000	17.93
42 Carbon Tetrachloride	117	11.330	11.314	(1.171)	4503222	30.0000	25.97
43 Heptane	43	12.390	12.385	(1.048)	6428687	30.0000	20.78
44 1,2-Dichloropropane	63	12.471	12.471	(1.055)	3188187	30.0000	17.81
45 Trichloroethene	130	12.509	12.492	(1.058)	3555967	30.0000	18.24
46 Dibromomethane	93	12.578	12.568	(1.064)	3149142	30.0000	21.90
47 Bromodichloromethane	83	12.713	12.708	(1.076)	5743962	30.0000	26.91
48 4-Methyl-2-pentanone	43	13.703	13.714	(1.159)	11212188	60.0000	38.74
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.157)	4217451	30.0000	17.06
50 trans-1,3-Dichloropropene	75	14.359	14.348	(0.875)	3964040	30.0000	24.90
51 Toluene	91	14.488	14.483	(0.883)	10926222	30.0000	20.92
52 1,1,2-Trichloroethane	97	14.553	14.547	(0.887)	3913817	30.0000	22.70
53 2-Hexanone	58	14.978	14.999	(0.912)	8563561	60.0000	52.34
54 Octane	85	15.150	15.145	(0.923)	2900514	30.0000	21.16
55 Dibromochloromethane	129	15.241	15.231	(0.929)	6388872	30.0000	24.78
56 1,2-Dibromoethane	107	15.537	15.521	(0.947)	5834593	30.0000	20.56
57 Tetrachloroethene	129	15.596	15.591	(0.950)	3035866	30.0000	18.05
58 Chlorobenzene	112	16.463	16.452	(1.003)	8550538	30.0000	20.55
59 Ethylbenzene	91	16.742	16.737	(1.020)	12366805	30.0000	20.46
60 m-Xylene (For p-)	91	16.898	16.888	(1.029)	9459962	30.0000	19.14
61 Bromoform	173	17.339	17.334	(1.056)	3968384	30.0000	18.69
62 Nonane	57	17.307	17.296	(1.054)	5475457	30.0000	16.52
63 Styrene	104	17.372	17.350	(1.058)	5322980	30.0000	16.30
64 o-Xylene	91	17.425	17.415	(1.062)	9642605	30.0000	20.60
65 1,1,2,2-Tetrachloroethane	83	17.727	17.716	(1.080)	7015087	30.0000	19.02
66 1,2,3-Trichloropropane	110	17.888	17.877	(1.090)	2016941	30.0000	25.20
67 Cumene	105	17.990	17.980	(1.096)	10551060	30.0000	18.16
68 n-Propylbenzene	91	18.496	18.485	(1.127)	14783475	30.0000	19.16

Data File: /var/chem/gcms/me.i/E110402i.b/ic51104.d
Report Date: 04-Nov-2002 15:59

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	18.636	18.631	(1.135)	12631882	30.0000	19.27
70 1,3,5-Trimethylbenzene	120	18.711	18.700	(1.140)	4356068	30.0000	15.78
71 Alpha-Methylstyrene	118	18.916	18.910	(1.152)	5449107	30.0000	21.76
72 Decane	57	18.975	18.964	(1.156)	6861495	30.0000	16.41
73 1,2,4-Trimethylbenzene	105	19.120	19.115	(1.165)	9507051	30.0000	17.60
74 1,3-Dichlorobenzene	146	19.378	19.368	(1.181)	7055372	30.0000	17.15
75 Benzyl Chloride	91	19.443	19.437	(1.185)	6634861	30.0000	18.50
76 1,4-Dichlorobenzene	146	19.470	19.454	(1.186)	5507709	30.0000	13.99
77 1,2-Dichlorobenzene	146	19.803	19.798	(1.206)	6750337	30.0000	17.32
78 Undecane	57	20.228	20.223	(1.232)	6524448	30.0000	16.09
79 Dodecane	57	21.315	21.310	(1.299)	4984612	30.0000	14.03
80 1,2,4-Trichlorobenzene	180	21.530	21.525	(1.312)	5345076	30.0000	16.30
81 Napthalene	128	21.686	21.681	(1.321)	14671169	30.0000	19.69
82 Hexachlorobutadiene	225	21.912	21.912	(1.335)	3420828	30.0000	14.70

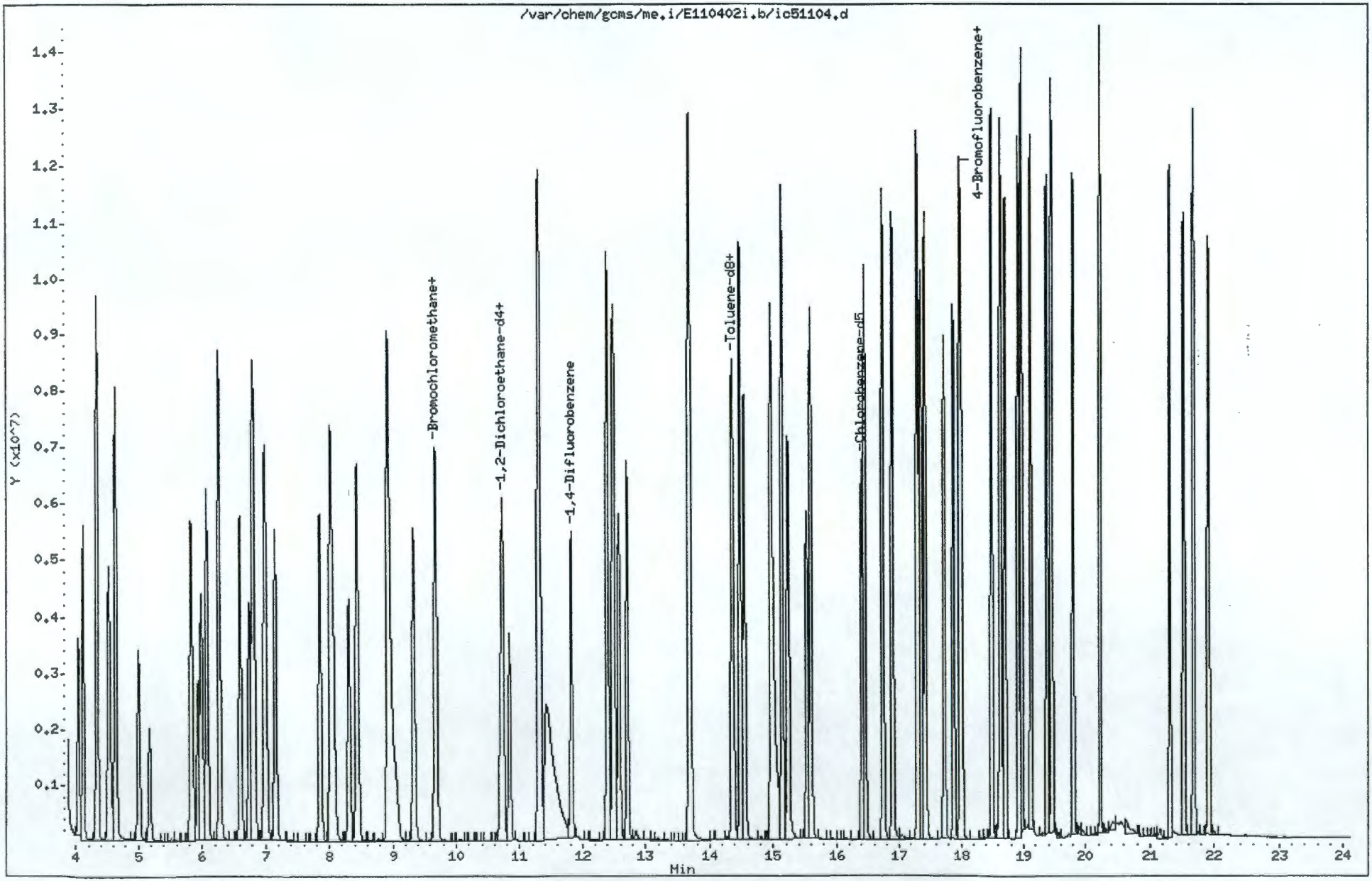
QC Flag Legend

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

Data File: /var/chem/gcms/me.i/E110402i.b/ic51104.d
Date : 04-NOV-2002 14:34
Client ID: 30PPBV
Sample Info: IC5,,1.5,,30PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110402i.b/icv1104.d
Report Date: 04-Nov-2002 16:23

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110402i.b/icv1104.d
Lab Smp Id: LCS Client Smp ID: 2ND SOURCE
Inj Date : 04-NOV-2002 15:45
Operator : 0691 Inst ID: me.i
Smp Info : LCS,,3,,LCS
Misc Info : E110402i,LA,,,100ml 2ND SOURCE
Comment :
Method : /var/chem/gcms/me.i/E110402i.b/LA.m
Meth Date : 04-Nov-2002 16:22 jarmanc Quant Type: ISTD
Cal Date : 04-NOV-2002 09:16 Cal File: ic31104.d
Als bottle: 2 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	9.663	9.668	(1.000)	1292837	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.809	(1.000)	6280868	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	5503519	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	875732	10.0017	10.00
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	5447177	10.0858	10.08
$ 6 4-Bromofluorobenzene	95	18.006	18.007	(1.098)	3305030	10.5861	10.59
7 Chlorodifluoromethane	51	4.030	4.046	(0.417)	53575	0.28751	0.2875
8 Dichlorodifluoromethane	85	4.122	4.122	(0.427)	2145570	10.2357	10.24
9 Chloromethane	52	4.332	4.332	(0.448)	340339	9.59436	9.594
10 1,2-Dichlorotetrafluoroethane	135	4.348	4.342	(0.450)	2007948	10.0554	10.06
11 Vinyl Chloride	62	4.536	4.536	(0.469)	1249525	10.1690	10.17
12 Methanol	31	4.342	4.552	(0.449)	287360	6.53495	6.535
14 n-Butane	43	4.638	4.638	(0.480)	37087	0.19287	0.1929
15 Bromomethane	94	5.015	5.009	(0.519)	1082094	8.92194	8.922
16 Chloroethane	64	5.182	5.182	(0.536)	596859	9.26291	9.263
17 Trichlorofluoromethane	101	5.832	5.833	(0.604)	2029248	9.51887	9.519
18 Acrolein	56	5.585	5.859	(0.578)	27437	0.66911	0.6691
20 Acetone	58	6.252	6.015	(0.647)	48885	0.96281	0.9628
21 Pentane	57	6.085	6.085	(0.630)	18002	0.54816	0.5482
23 1,1-Dichloroethene	96	6.607	6.607	(0.684)	1170203	9.91072	9.911
25 1,1,2-Trichlorotrifluoroethane	101	6.817	6.812	(0.705)	2376666	10.1319	10.13

Data File: /var/chem/gcms/me.i/E110402i.b/icv1104.d
Report Date: 04-Nov-2002 16:23

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
26 Methylene Chloride	84	6.984	6.984	(0.723)	1039571	10.2853	10.28
29 trans-1,2-Dichloroethene	96	7.855	7.850	(0.813)	35537	0.29500	0.2950
31 1,1-Dichloroethane	63	8.307	8.307	(0.860)	2207974	9.73947	9.739
33 2-Butanone	72	8.861	8.990	(0.917)	18776	0.34144	0.3414
34 Hexane	56	8.926	8.920	(0.924)	39267	0.36413	0.3641
35 cis 1,2-Dichloroethene	96	9.324	9.329	(0.965)	1264677	9.73845	9.738
36 Chloroform	83	9.673	9.679	(1.001)	1914247	9.45300	9.453
37 1,1,1-Trichloroethane	97	10.722	10.723	(1.110)	1737801	9.80672	9.807
38 1,2-Dichloroethane	62	10.825	10.830	(0.917)	1174134	9.36841	9.368
39 Benzene	78	11.293	11.293	(0.956)	3499854	9.63056	9.630
40 1-Butanol	41	11.616	11.524	(0.984)	33819	0.40996	0.4100
42 Carbon Tetrachloride	117	11.314	11.314	(1.171)	1634639	8.71827	8.718
43 Heptane	43	12.385	12.385	(1.049)	38255	0.13444	0.1344
44 1,2-Dichloropropane	63	12.465	12.471	(1.056)	1420580	8.97245	8.972
45 Trichloroethene	130	12.492	12.492	(1.058)	1679059	9.40668	9.407
48 4-Methyl-2-pentanone	43	13.961	13.714	(1.182)	351092	1.11960	1.120
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	1979797	8.19354	8.194
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	1316242	9.33883	9.339
51 Toluene	91	14.483	14.483	(0.883)	4402153	10.0569	10.06
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	1545932	10.1113	10.11
53 2-Hexanone	58	15.284	14.999	(0.932)	208071	1.26686	1.267
54 Octane	85	15.279	15.145	(0.931)	17591	0.13191	0.1319
56 1,2-Dibromoethane	107	15.521	15.521	(0.946)	2401399	9.49493	9.495
57 Tetrachloroethene	129	15.591	15.591	(0.950)	1465213	9.82995	9.830
58 Chlorobenzene	112	16.452	16.452	(1.003)	3583982	9.75224	9.752
59 Ethylbenzene	91	16.737	16.737	(1.020)	5264653	9.81993	9.820
60 m-Xylene (For p-)	91	16.893	16.888	(1.030)	7138656	17.5787	17.58
63 Styrene	104	17.350	17.350	(1.058)	2869654	9.65028	9.650
64 o-Xylene	91	17.415	17.415	(1.062)	3990924	9.66364	9.664
65 1,1,2,2-Tetrachloroethane	83	17.716	17.716	(1.080)	3275329	9.96251	9.962
66 1,2,3-Trichloropropane	110	17.872	17.877	(1.090)	5926	0.07118	0.07118
69 4-Ethyltoluene	105	18.695	18.631	(1.140)	3958512	6.14863	6.149
70 1,3,5-Trimethylbenzene	120	18.695	18.700	(1.140)	2125074	8.93409	8.934
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	4269544	8.87416	8.874
74 1,3-Dichlorobenzene	146	19.367	19.368	(1.181)	3587966	9.68782	9.688
75 Benzyl Chloride	91	19.437	19.437	(1.185)	1129805	3.14463	3.145
76 1,4-Dichlorobenzene	146	19.454	19.454	(1.186)	3463825	10.5201	10.52
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	3427823	9.72824	9.728
79 Dodecane	57	21.309	21.310	(1.299)	60067	0.17987	0.1799
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	2798039	9.74249	9.742
81 Napthalene	128	21.681	21.681	(1.322)	265728	0.36294	0.3629
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	1817049	9.72502	9.725

Data File: /var/chem/gcms/me.i/E110402i.b/icv1104.d
Report Date: 04-Nov-2002 16:23

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: icv1104.d
Lab Smp Id: LCS
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110402i.b/LA.m
Misc Info: E110402i,LA,,,100ml 2ND SOURCE

Calibration Date: 04-NOV-2002
Calibration Time: 09:16
Client Smp ID: 2ND SOURCE
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	1342814	798974	1886654	1292837	-3.72
2 1,4-Difluorobenze	6440634	3832177	9049091	6280868	-2.48
3 Chlorobenzene-d5	5804483	3453667	8155299	5503519	-5.19

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.66	-0.06
2 1,4-Difluorobenze	11.81	11.31	12.31	11.81	0.00
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	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/E110402i.b/icv1104.d
Report Date: 04-Nov-2002 16:23

OK wd
11/4/02

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: LCS
Level: LOW
Data Type: MS DATA
SpikeList File: to14.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/me.i/E110402i.b/LA.m
Misc Info: E110402i,LA,,,100ml 2ND SOURCE

Client SDG: E110402i
Fraction: OTHER
Client Smp ID: 2ND SOURCE
Operator: 0691
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
8 Dichlorodifluorome	10.00	10.24	102.36	65-135
9 Chloromethane	10.00	9.594	95.94	65-135
10 1,2-Dichlorotetraf	10.00	10.06	100.55	65-135
11 Vinyl Chloride	10.00	10.17	101.69	65-135
15 Bromomethane	10.00	8.922	89.22	65-135
16 Chloroethane	10.00	9.263	92.63	65-135
17 Trichlorofluoromet	10.00	9.519	95.19	65-135
23 1,1-Dichloroethene	10.00	9.911	99.11	65-135
25 1,1,2-Trichlorotri	10.00	10.13	101.32	65-135
26 Methylene Chloride	10.00	10.28	102.85	65-135
31 1,1-Dichloroethane	10.00	9.739	97.39	65-135
35 cis 1,2-Dichloroet	10.00	9.738	97.38	65-135
36 Chloroform	10.00	9.453	94.53	65-135
37 1,1,1-Trichloroeth	10.00	9.807	98.07	65-135
38 1,2-Dichloroethane	10.00	9.368	93.68	65-135
39 Benzene	10.00	9.630	96.31	65-135
42 Carbon Tetrachlori	10.00	8.718	87.18	65-135
44 1,2-Dichloropropan	10.00	8.972	89.72	65-135
45 Trichloroethene	10.00	9.407	94.07	65-135
49 cis-1,3-Dichloropr	10.00	8.194	81.94	65-135
50 trans-1,3-Dichloro	10.00	9.339	93.39	65-135
51 Toluene	10.00	10.06	100.57	65-135
52 1,1,2-Trichloroeth	10.00	10.11	101.11	65-135
56 1,2-Dibromoethane	10.00	9.495	94.95	65-135
57 Tetrachloroethene	10.00	9.830	98.30	65-135
58 Chlorobenzene	10.00	9.752	97.52	65-135
59 Ethylbenzene	10.00	9.820	98.20	65-135
60 m-Xylene (For p-)	20.00	17.58	87.89	65-135
63 Styrene	10.00	9.650	96.50	65-135
64 o-Xylene	10.00	9.664	96.64	65-135
65 1,1,2,2-Tetrachlor	10.00	9.962	99.63	65-135
70 1,3,5-Trimethylben	10.00	8.934	89.34	65-135
73 1,2,4-Trimethylben	10.00	8.874	88.74	65-135

Data File: /var/chem/gcms/me.i/E110402i.b/icv1104.d
Report Date: 04-Nov-2002 16:23

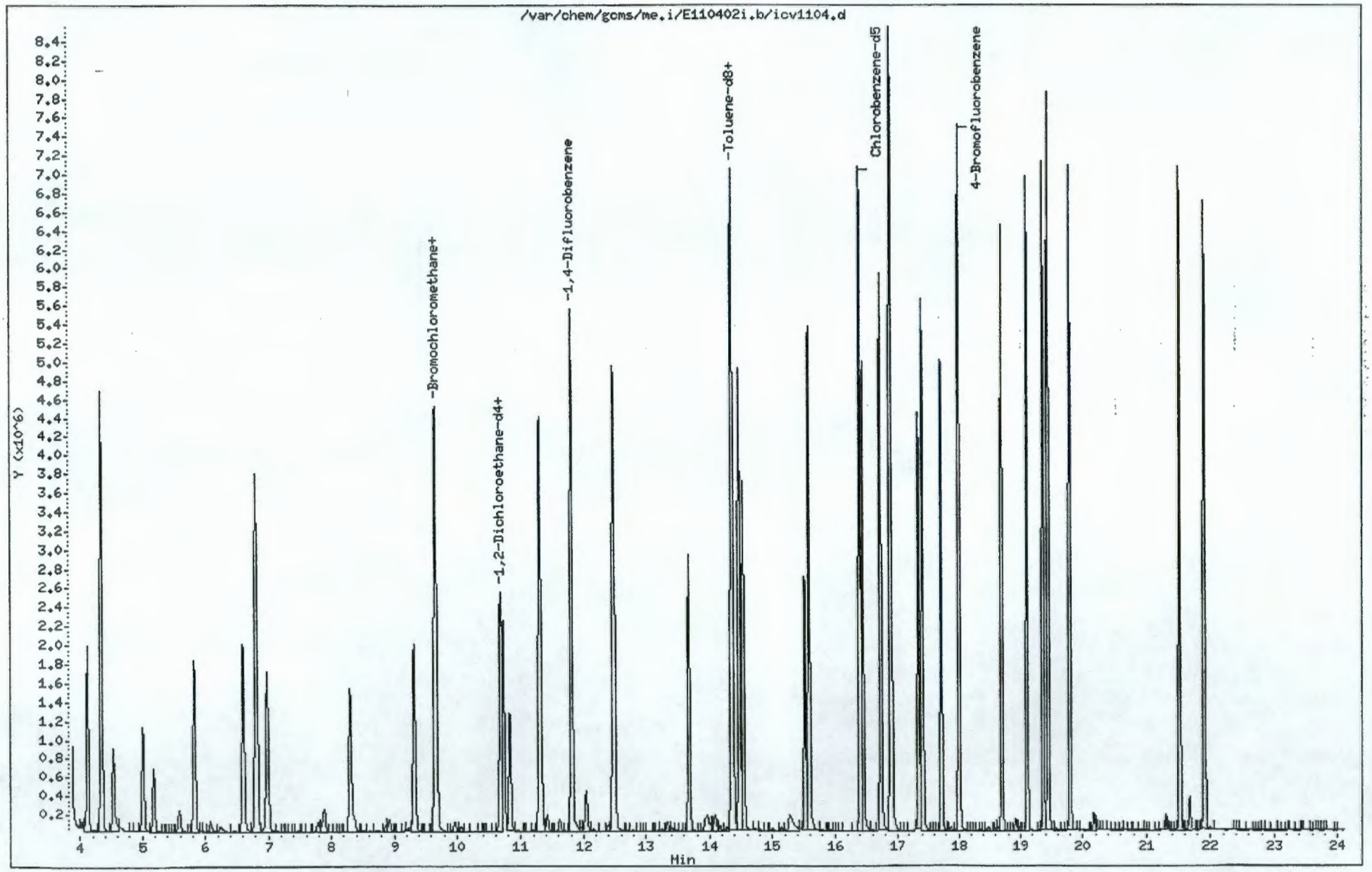
SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
74 1,3-Dichlorobenzen	10.00	9.688	96.88	65-135
75 Benzyl Chloride	10.00	3.145	31.45	30-170
76 1,4-Dichlorobenzen	10.00	10.52	105.20	65-135
77 1,2-Dichlorobenzen	10.00	9.728	97.28	65-135
80 1,2,4-Trichloroben	10.00	9.742	97.42	65-135
82 Hexachlorobutadien	10.00	9.725	97.25	65-135

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.00	100.02	70-130
$ 5 Toluene-d8	10.00	10.08	100.86	70-130
$ 6 4-Bromofluorobenze	10.00	10.59	105.86	70-130

Data File: /var/chem/gcms/me.i/E110402i.b/icv1104.d
Date : 04-NOV-2002 15:45
Client ID: 2ND SOURCE
Sample Info: LCS,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
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:	11/6/02	CCAL Batch/ Scan Name:	E110602	Instrument:	ME	ICAL Batch/ Scan Name:	E110402I	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: JLW	Date: 11/6/02	2nd Level Reviewer : CWJ	Date: 11/7/02
Comments:		Comments:	

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: ME

Analyst: DW Preventive Maintenance Performed n/A

Date: 11/6/02 System Date/Time ok (y/n): Y Batch: 2310475

BFB Time: 0839 Surr/IS ID: CX-929 IS #1 Area: 913776 ICAL Batch: E110402I

Time	Lot No.	File ID	Can #	Comments	I/S	Vol (ml)	Pos	Use	DUP
0839	TUNE	EBF1106			–	100	15	✓	–
0914	CCal	EMD1106		CX-947	–		STD	N	–
0949		B			–			✓	–
1050	Ref	ERF1106		CX-946	–		16	✓	–
1126	BCK	EBK1106			–	500	15	N	–
1202		B		FCJMX1AA	–			✓	–
1307	J250233	FARXZ1AA	12523	DW 11-6-02	– ~~2×I~~	50	1	✓	7
1342	J280181	FAXKZ1AA	1754	11 ml from Entech	2×I	10	2	✓	8
1417		FAXK71AA	1830		–	10	3	✓	9
1453		FAXK9	1753	RE 40 ml	–	80	4	N	–
1528		FAXK8	93241		3×I	10	5	✓	10
1611	J250151	FAQ65	04426	Need or SERR ICDL for CCC4	–	10	6	N	–
1647		3	12873		–	500	7	✓	11
1724		3D			–		7	✓	dup
1805	K010311	FA9QF	12636		I	10	8	✓	12
1840	K010285	FA9GA	04397		I	10	9	✓	13
1922	J310289	FA6LH	11343		–	20	10	✓	14
1958	K010285	FA9GE	6091	RE@ 100 ml	–	500	11	N	–
2034		D	1832	RE@ 25 ml	–		12	N	–
2110	J280181	FAXK9R	1753		–	40	4	✓	15
2146	J250151	FAQ65R	1793		S	200	6	✓	16
2222	Blank checks	4180	04339		–	500	14	ok	–
2258		R			–			ok	–
2333	K050190	FCE5N	12173	MC	–		2	✓	17
0009		P	11413		–		3	✓	18
0046		V	12266		–		7	✓	19
0122		O	12444		–		8	✓	20

DW 11/7/02

Analyst: DW Date: 11/7/02

021106
STL-Knoxville
TO-14 Autosampler Log
'ME'

Sample	Volume	Position	Date	Time
BFB	100ml	15	11/6/02	8:42:01 AM ✓
CCV	100ml	STD	11/6/02	9:16:48 AM
CCVC	100ml	STD	11/6/02	9:52:00 AM
REF	100ml	16	11/6/02	10:53:13 AM
BLK	500ml	15	11/6/02	11:29:19 AM
BLK	501ml	15	11/6/02	12:05:39 PM
FARX2	51ml	1	11/6/02	1:10:33 PM
FAXK2	11ml	2	11/6/02	1:45:15 PM
FAXK7	10ml	3	11/6/02	2:20:10 PM
FAXK9	79ml	4	11/6/02	2:55:52 PM
FAXK8	10ml	5	11/6/02	3:31:12 PM
FAQ65	10ml	6	11/6/02	4:13:55 PM
FAQ63	501ml	7	11/6/02	4:50:22 PM
FAQ63D	500ml	7	11/6/02	5:26:50 PM
FA9QF	10ml	8	11/6/02	6:08:23 PM
FA9GA	10ml	9	11/6/02	6:43:12 PM
FA6LH	20ml	10	11/6/02	7:25:15 PM
FA9GE	500ml	11	11/6/02	8:01:30 PM
FA9GD	499ml	12	11/6/02	8:37:44 PM
FAXK9R	41ml	4	11/6/02	9:13:22 PM
FAQ65R	200ml	6	11/6/02	9:49:10 PM
4180	500ml	14	11/6/02	10:25:29 PM
4180R	500ml	14	11/6/02	11:01:06 PM
FCE5N	502ml	2	11/6/02	11:36:39 PM
FCE5P	500ml	3	11/7/02	12:12:51 AM
FCE5V	500ml	7	11/7/02	12:49:03 AM
FCE50	501ml	8	11/7/02	1:25:11 AM ✓

OK wf
11/7/02

Data File: /var/chem/gcms/me.i/E110602.b/ebf1106.d

Date : 06-NOV-2002 08:39

Client ID:

Instrument: me.i

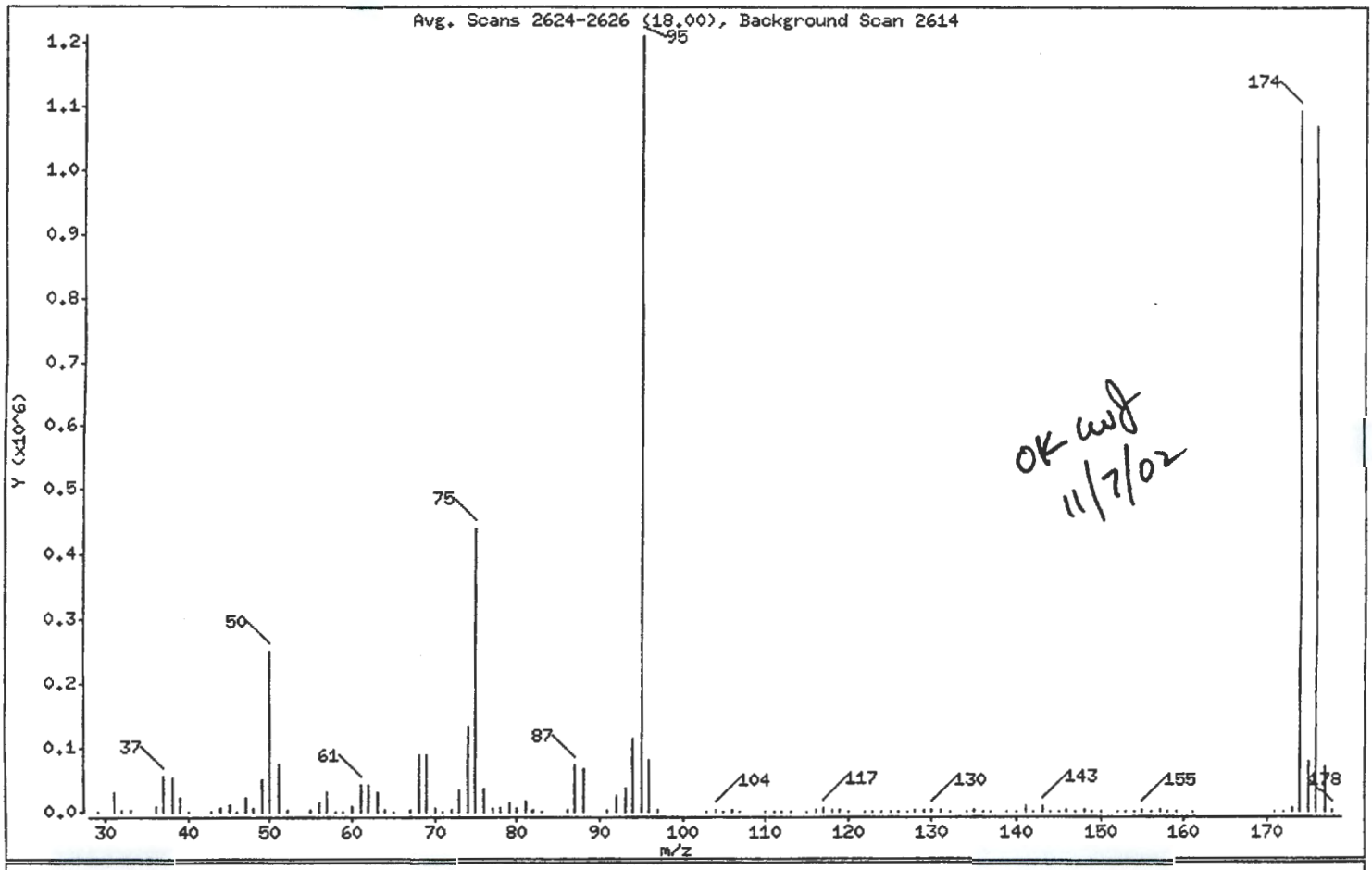
Sample Info: BFB,,3,,BFB

Operator: 0691

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	20.59
75	30.00 - 60.00% of mass 95	36.38
96	5.00 - 9.00% of mass 95	6.66
173	Less than 2.00% of mass 174	0.45 (0.49)
174	50.00 - 100.00% of mass 95	90.45
175	5.00 - 9.00% of mass 174	6.39 (7.07)
176	95.00 - 101.00% of mass 174	88.24 (97.56)
177	5.00 - 9.00% of mass 176	5.85 (6.63)

Data File: /var/chem/gcms/me.i/E110602.b/ebf1106.d

Date : 06-NOV-2002 08:39

Client ID: Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5 Column diameter: 0.32

Data File: ebf1106.d
Spectrum: Avg. Scans 2624-2626 (18.00), Background Scan 2614
Location of Maximum: 95.00
Number of points: 116

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	65	67.00	2141	106.00	3182	142.00	1030
31.00	30856	68.00	90456	107.00	1023	143.00	7478
32.00	1613	69.00	89144	110.00	418	144.00	462
33.00	3951	70.00	6327	111.00	571	145.00	674
36.00	9639	71.00	261	112.00	414	146.00	1506
37.00	54944	72.00	3846	113.00	542	147.00	693
38.00	52256	73.00	33808	115.00	777	148.00	2340
39.00	21408	74.00	132416	116.00	3015	149.00	667
40.00	597	75.00	440448	117.00	5685	150.00	793
43.00	431	76.00	37320	118.00	3038	152.00	478
44.00	5626	77.00	6897	119.00	4142	153.00	823
45.00	11413	78.00	5349	120.00	90	154.00	677
46.00	444	79.00	14800	122.00	76	155.00	2509
47.00	22968	80.00	4480	123.00	247	156.00	413
48.00	6434	81.00	15329	124.00	611	157.00	1760
49.00	49080	82.00	3034	125.00	279	158.00	93
50.00	249280	83.00	357	126.00	353	159.00	779
51.00	76392	86.00	1424	127.00	233	161.00	984
52.00	3156	87.00	71208	128.00	3339	171.00	197
55.00	2433	88.00	65784	129.00	1454	172.00	684
56.00	14640	91.00	2790	130.00	3867	173.00	5408
57.00	29536	92.00	23880	131.00	1476	174.00	1095168
58.00	1109	93.00	36928	132.00	77	175.00	77384
59.00	72	94.00	114096	134.00	84	176.00	1068032
60.00	8051	95.00	1210880	135.00	1448	177.00	70832
61.00	42024	96.00	80616	136.00	171	178.00	1910
62.00	41968	97.00	2458	137.00	1346		
63.00	30360	103.00	391	139.00	391		
64.00	2589	104.00	3466	140.00	491		
65.00	279	105.00	1275	141.00	7196		

Data File: /var/chem/gcms/me.i/E110602.b/ebf1106.d

Date : 06-NOV-2002 08:39

Client ID:

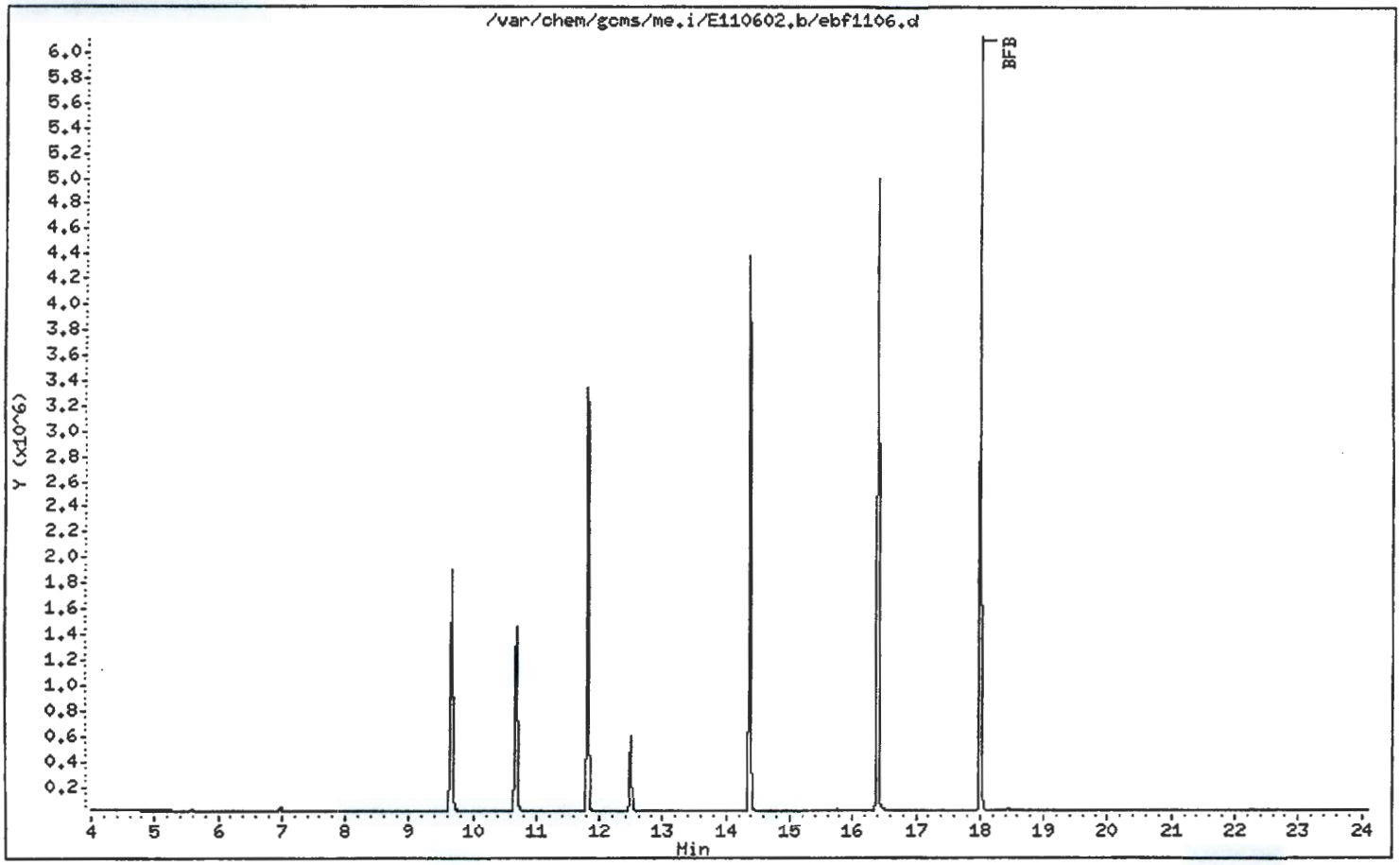
Instrument: me.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd1106b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/me.i/E110602.b/LA.m

Injection Date: 06-NOV-2002 09:49
Init. Cal. Date(s): 04-NOV-2002 04-NOV-2002
Init. Cal. Times: 09:16 14:34
Quant Type: ISTD

OK cwf 11/7/02

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 1,2-Dichloroethane-d4	0.13783	0.13640	0.000	1.04159	30.00000	Averaged
$ 5 Toluene-d8	0.97268	0.96246	0.000	1.05061	30.00000	Averaged
$ 6 4-Bromofluorobenzene	0.57852	0.65346	0.000	-12.95325	30.00000	Averaged
7 Chlorodifluoromethane	1.66231	1.73547	0.000	-4.40113	30.00000	Averaged
8 Dichlorodifluoromethane	1.96939	1.75294	0.000	10.99052	30.00000	Averaged
9 Chloromethane	0.33111	0.35013	0.000	-5.74288	30.00000	Averaged
10 1,2-Dichlorotetrafluoroetha	1.81149	1.69870	0.000	6.22642	30.00000	Averaged
11 Vinyl Chloride	1.14633	1.04173	0.000	9.12464	30.00000	Averaged
12 Methanol	0.34738	0.37818	0.000	-8.86627	30.00000	Averaged
13 1,3-Butadiene	0.85586	0.92235	0.000	-7.76795	30.00000	Averaged
14 n-Butane	1.86707	1.94847	0.000	-4.35985	30.00000	Averaged
15 Bromomethane	1.13014	1.00521	0.000	11.05448	30.00000	Averaged
16 Chloroethane	0.59774	0.53862	0.000	9.88982	30.00000	Averaged
17 Trichlorofluoromethane	2.00855	1.99167	0.000	0.84038	30.00000	Averaged
18 Acrolein	0.33666	0.39386	0.000	-16.99152	30.00000	Averaged
19 Acetonitrile	0.39886	0.46619	0.000	-16.88001	30.00000	Averaged
20 Acetone	0.44002	0.48411	0.000	-10.01963	30.00000	Averaged
21 Pentane	0.29803	0.32571	0.000	-9.28460	30.00000	Averaged
22 Ethyl Ether	1.31171	1.38888	0.000	-5.88307	30.00000	Averaged
23 1,1-Dichloroethene	1.08083	0.93012	0.000	13.94349	30.00000	Averaged
24 Acrylonitrile	0.82641	0.81181	0.000	1.76656	30.00000	Averaged
25 1,1,2-Trichlorotrifluoroeth	2.11322	1.96020	0.000	7.24141	30.00000	Averaged
26 Methylene Chloride	0.97303	0.80972	0.000	16.78407	30.00000	Averaged
27 3-Chloropropene	0.85262	0.88648	0.000	-3.97177	30.00000	Averaged
28 Carbon Disulfide	3.16702	2.88485	0.000	8.90957	30.00000	Averaged
29 trans-1,2-Dichloroethene	1.02736	0.93571	0.000	8.92006	30.00000	Averaged
30 Methyl-t-Butyl Ether	1.91850	1.73873	0.000	9.37033	30.00000	Averaged
31 1,1-Dichloroethane	2.08147	1.83312	0.000	11.93165	30.00000	Averaged
32 Vinyl Acetate	2.53683	2.79551	0.000	-10.19684	30.00000	Averaged
33 2-Butanone	0.44452	0.39599	0.000	10.91751	30.00000	Averaged
34 Hexane	0.91328	0.91552	0.000	-0.24558	30.00000	Averaged
35 cis 1,2-Dichloroethene	1.17894	1.02164	0.000	13.34249	30.00000	Averaged
36 Chloroform	1.86609	1.68733	0.000	9.57957	30.00000	Averaged
37 1,1,1-Trichloroethane	1.57772	1.41796	0.000	10.12578	30.00000	Averaged
38 1,2-Dichloroethane	0.23364	0.21037	0.000	9.95963	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd1106b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/me.i/E110602.b/LA.m

Injection Date: 06-NOV-2002 09:49
Init. Cal. Date(s): 04-NOV-2002 04-NOV-2002
Init. Cal. Times: 09:16 14:34
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
39 Benzene	0.65472	0.65834	0.000	-0.55202	30.00000	Averaged
40 1-Butanol	0.10908	0.13479	0.000	-23.56761	30.00000	Averaged
41 Cyclohexane	0.09132	0.09714	0.000	-6.37640	30.00000	Averaged
42 Carbon Tetrachloride	1.50141	1.65788	0.000	-10.42153	30.00000	Averaged
43 Heptane	0.50295	0.54186	0.000	-7.73656	30.00000	Averaged
44 1,2-Dichloropropane	0.29110	0.28905	0.000	0.70692	30.00000	Averaged
45 Trichloroethene	0.31705	0.31061	0.000	2.03231	30.00000	Averaged
46 Dibromomethane	0.23384	0.23898	0.000	-2.19698	30.00000	Averaged
47 Bromodichloromethane	0.34706	0.35304	0.000	-1.72231	30.00000	Averaged
48 4-Methyl-2-pentanone	0.47056	0.58006	0.000	-23.27052	30.00000	Averaged
49 cis-1,3-Dichloropropene	0.40198	0.40162	0.000	0.09039	30.00000	Averaged
50 trans-1,3-Dichloropropene	0.29129	0.26419	0.000	9.30140	30.00000	Averaged
51 Toluene	0.91457	0.79013	0.000	13.60658	30.00000	Averaged
52 1,1,2-Trichloroethane	0.31542	0.27532	0.000	12.71310	30.00000	Averaged
53 2-Hexanone	0.29937	0.29100	0.000	2.79317	30.00000	Averaged
54 Octane	0.25081	0.25046	0.000	0.13919	30.00000	Averaged
55 Dibromochloromethane	0.47186	0.50638	0.000	-7.31731	30.00000	Averaged
56 1,2-Dibromoethane	0.51931	0.47526	0.000	8.48170	30.00000	Averaged
57 Tetrachloroethene	0.30773	0.28694	0.000	6.75435	30.00000	Averaged
58 Chlorobenzene	0.76119	0.67783	0.000	10.95249	30.00000	Averaged
59 Ethylbenzene	1.10623	1.00159	0.000	9.45894	30.00000	Averaged
60 m-Xylene (For p-)	0.90435	0.76405	0.000	15.51367	30.00000	Averaged
61 Bromoform	0.38855	0.48104	0.000	-23.80255	30.00000	Averaged
62 Nonane	0.60628	0.63275	0.000	-4.36666	30.00000	Averaged
63 Styrene	0.59771	0.60019	0.000	-0.41537	30.00000	Averaged
64 o-Xylene	0.85638	0.77262	0.000	9.77993	30.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.67489	0.63804	0.000	5.46081	30.00000	Averaged
66 1,2,3-Trichloropropane	0.14645	0.13892	0.000	5.13947	30.00000	Averaged
67 Cumene	1.06342	1.12790	0.000	-6.06341	30.00000	Averaged
68 n-Propylbenzene	1.41196	1.46042	0.000	-3.43228	30.00000	Averaged
69 4-Ethyltoluene	1.19937	1.24734	0.000	-3.99935	30.00000	Averaged
70 1,3,5-Trimethylbenzene	0.54505	0.50719	0.000	6.94587	30.00000	Averaged
71 Alpha-Methylstyrene	0.45816	0.49540	0.000	-8.12859	30.00000	Averaged
72 Decane	0.76503	0.81510	0.000	-6.54497	30.00000	Averaged
73 1,2,4-Trimethylbenzene	0.98869	0.96526	0.000	2.36920	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: me.i
Lab File ID: emd1106b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/me.i/E110602.b/LA.m

Injection Date: 06-NOV-2002 09:49
Init. Cal. Date(s): 04-NOV-2002 04-NOV-2002
Init. Cal. Times: 09:16 14:34
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
74 1,3-Dichlorobenzene	0.75260	0.74325	0.000	1.24201	30.00000	Averaged
75 Benzyl Chloride	0.65610	0.80245	0.000	-22.30602	30.00000	Averaged
76 1,4-Dichlorobenzene	0.72028	0.71687	0.000	0.47408	30.00000	Averaged
77 1,2-Dichlorobenzene	0.71311	0.71094	0.000	0.30470	30.00000	Averaged
78 Undecane	0.74181	0.80104	0.000	-7.98579	30.00000	Averaged
79 Dodecane	0.70770	0.67207	0.000	5.03364	30.00000	Averaged
80 1,2,4-Trichlorobenzene	0.64559	0.59945	0.000	7.14653	30.00000	Averaged
81 Napthalene	1.36366	1.75183	0.000	-28.46501	30.00000	Averaged
82 Hexachlorobutadiene	0.42570	0.43001	0.000	-1.01355	30.00000	Averaged

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110602.b/emd1106b.d
Lab Smp Id: CCV Client Smp ID: 10PPBV
Inj Date : 06-NOV-2002 09:49
Operator : 0691 Inst ID: me.i
Smp Info : CCV,,2,3,,10PPBV
Misc Info : E110602,LA,,,100ml
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 15:37 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emd1106b.d ✓
Als bottle: 1 Continuing Calibration Sample ✓
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub ✓
Target Version: 3.50

cwf 11/7/02

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	9.668	9.668	(1.000)	913776	10.0000	
* 2 1,4-Difluorobenzene	114	11.814	11.814	(1.000)	4360916	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	4186210	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.685	10.685	(0.904)	594812	10.0000	9.896
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	4029074	10.0000	9.895
$ 6 4-Bromofluorobenzene	95	18.006	18.006	(1.098)	2735532	10.0000	11.30
7 Chlorodifluoromethane	51	4.046	4.046	(0.419)	1585827	10.0000	10.44
8 Dichlorodifluoromethane	85	4.116	4.116	(0.426)	1601795	10.0000	8.901
9 Chloromethane	52	4.331	4.331	(0.448)	319937	10.0000	10.57
10 1,2-Dichlorotetrafluoroethane	135	4.342	4.342	(0.449)	1552228	10.0000	9.377
11 Vinyl Chloride	62	4.531	4.531	(0.469)	951907	10.0000	9.088
12 Methanol	31	4.552	4.552	(0.471)	1382294	40.0000	43.55
13 1,3-Butadiene	54	4.638	4.638	(0.480)	842818	10.0000	10.78
14 n-Butane	43	4.638	4.638	(0.480)	1780467	10.0000	10.44
15 Bromomethane	94	5.009	5.009	(0.518)	918535	10.0000	8.894
16 Chloroethane	64	5.181	5.181	(0.536)	492179	10.0000	9.011
17 Trichlorofluoromethane	101	5.827	5.827	(0.603)	1819940	10.0000	9.916
18 Acrolein	56	5.859	5.859	(0.606)	719807	20.0000	23.40
19 Acetonitrile	40	5.940	5.940	(0.614)	851977	20.0000	23.38
20 Acetone	58	6.021	6.021	(0.623)	884729	20.0000	22.00
21 Pentane	57	6.080	6.080	(0.629)	297621	10.0000	10.93
22 Ethyl Ether	31	6.295	6.295	(0.651)	2538246	20.0000	21.18

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

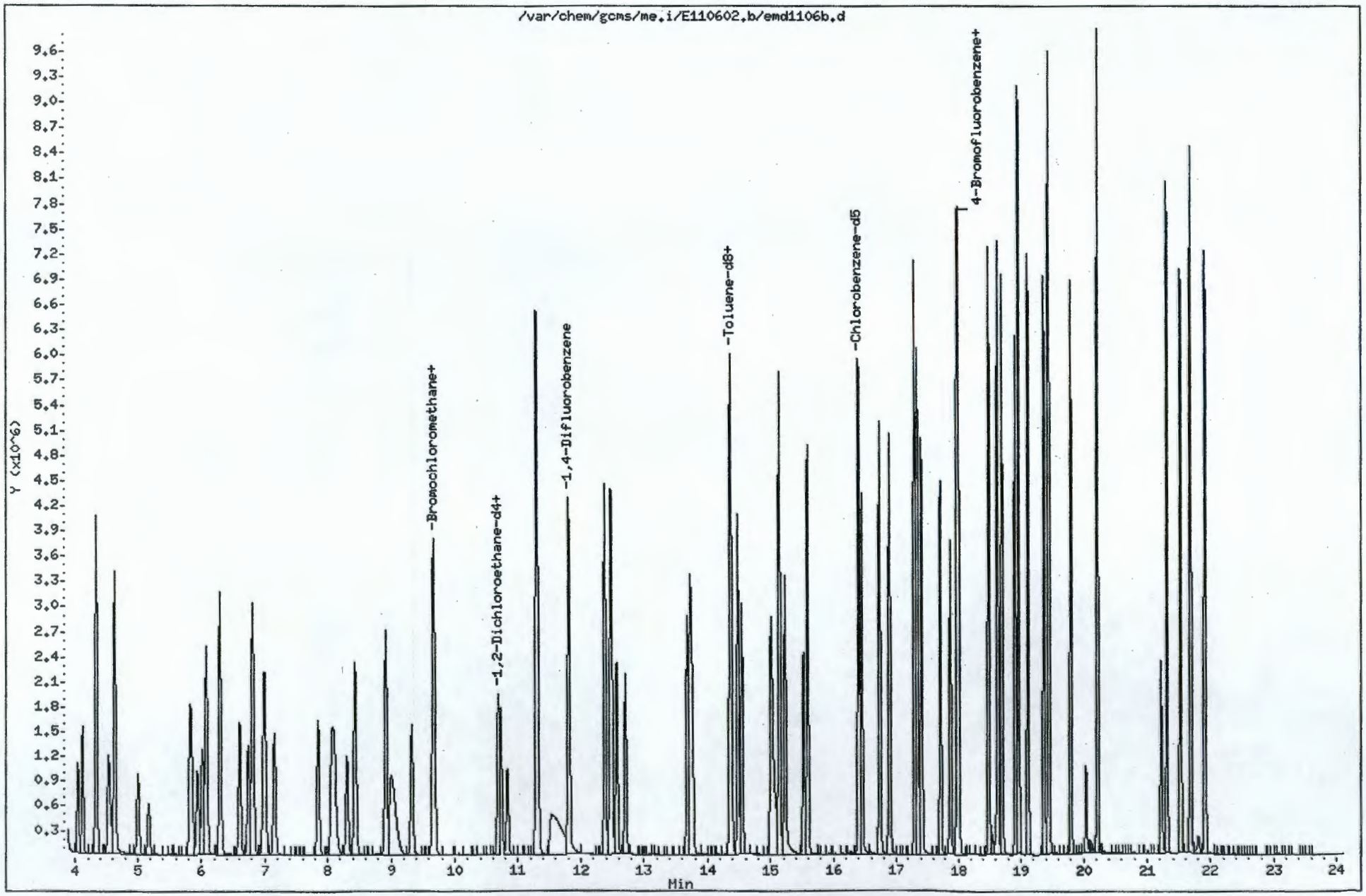
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
23 1,1-Dichloroethene	96	6.607	6.607	(0.683)	849924	10.0000	8.606
24 Acrylonitrile	53	6.742	6.742	(0.697)	1483633	20.0000	19.65
25 1,1,2-Trichlorotrifluoroethane	101	6.811	6.811	(0.705)	1791180	10.0000	9.276
26 Methylene Chloride	84	6.984	6.984	(0.722)	739902	10.0000	8.322
27 3-Chloropropene	39	7.005	7.005	(0.725)	810043	10.0000	10.40
28 Carbon Disulfide	76	7.156	7.156	(0.740)	2636108	10.0000	9.109
29 trans-1,2-Dichloroethene	96	7.850	7.850	(0.812)	855033	10.0000	9.108
30 Methyl-t-Butyl Ether	73	8.076	8.076	(0.835)	3177617	20.0000	18.12
31 1,1-Dichloroethane	63	8.307	8.307	(0.859)	1675057	10.0000	8.807
32 Vinyl Acetate	43	8.436	8.436	(0.873)	5108940	20.0000	22.04
33 2-Butanone	72	9.006	9.006	(0.932)	723683	20.0000	17.82
34 Hexane	56	8.920	8.920	(0.923)	836580	10.0000	10.02
35 cis 1,2-Dichloroethene	96	9.329	9.329	(0.965)	933546	10.0000	8.666
36 Chloroform	83	9.679	9.679	(1.001)	1541841	10.0000	9.042
37 1,1,1-Trichloroethane	97	10.722	10.722	(1.109)	1295698	10.0000	8.987
38 1,2-Dichloroethane	62	10.830	10.830	(0.917)	917425	10.0000	9.004
39 Benzene	78	11.298	11.298	(0.956)	2870944	10.0000	10.06
40 1-Butanol	41	11.556	11.556	(0.978)	1175630	20.0000	24.71
41 Cyclohexane	69	11.298	11.298	(0.956)	423624	10.0000	10.64
42 Carbon Tetrachloride	117	11.314	11.314	(1.170)	1514936	10.0000	11.04
43 Heptane	43	12.385	12.385	(1.048)	2363001	10.0000	10.77
44 1,2-Dichloropropane	63	12.471	12.471	(1.056)	1260504	10.0000	9.929
45 Trichloroethene	130	12.492	12.492	(1.057)	1354548	10.0000	9.797
46 Dibromomethane	93	12.568	12.568	(1.064)	1042170	10.0000	10.22
47 Bromodichloromethane	83	12.707	12.707	(1.076)	1539580	10.0000	10.17
48 4-Methyl-2-pentanone	43	13.724	13.724	(1.162)	5059202	20.0000	24.65
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	1751414	10.0000	9.991
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	1105964	10.0000	9.070
51 Toluene	91	14.483	14.483	(0.883)	3307652	10.0000	8.639
52 1,1,2-Trichloroethane	97	14.547	14.547	(0.887)	1152551	10.0000	8.729
53 2-Hexanone	58	15.015	15.015	(0.915)	2436409	20.0000	19.44
54 Octane	85	15.144	15.144	(0.923)	1048495	10.0000	9.986
55 Dibromochloromethane	129	15.230	15.230	(0.928)	2119824	10.0000	10.73
56 1,2-Dibromoethane	107	15.526	15.526	(0.947)	1989544	10.0000	9.152
57 Tetrachloroethene	129	15.591	15.591	(0.950)	1201201	10.0000	9.324
58 Chlorobenzene	112	16.452	16.452	(1.003)	2837518	10.0000	8.905
59 Ethylbenzene	91	16.737	16.737	(1.020)	4192866	10.0000	9.054
60 m-Xylene (For p-)	91	16.887	16.887	(1.030)	3198493	10.0000	8.449
61 Bromoform	173	17.334	17.334	(1.057)	2013724	10.0000	12.38
62 Nonane	57	17.302	17.302	(1.055)	2648841	10.0000	10.44
63 Styrene	104	17.350	17.350	(1.058)	2512533	10.0000	10.04
64 o-Xylene	91	17.415	17.415	(1.062)	3234361	10.0000	9.022
65 1,1,2,2-Tetrachloroethane	83	17.721	17.721	(1.080)	2670966	10.0000	9.454
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	581552	10.0000	9.486
67 Cumene	105	17.985	17.985	(1.096)	4721642	10.0000	10.61
68 n-Propylbenzene	91	18.485	18.485	(1.127)	6113644	10.0000	10.34
69 4-Ethyltoluene	105	18.630	18.630	(1.136)	5221623	10.0000	10.40

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Report Date: 06-Nov-2002 15:37

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	18.700	18.700	(1.140)	2123221	10.0000	9.305
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	2073849	10.0000	10.81
72 Decane	57	18.964	18.964	(1.156)	3412190	10.0000	10.65
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	4040791	10.0000	9.763
74 1,3-Dichlorobenzene	146	19.373	19.373	(1.181)	3111405	10.0000	9.876
75 Benzyl Chloride	91	19.443	19.443	(1.185)	3359228	10.0000	12.23
76 1,4-Dichlcrobenzene	146	19.453	19.453	(1.186)	3000947	10.0000	9.952
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	2976124	10.0000	9.970
78 Undecane	57	20.223	20.223	(1.233)	3353342	10.0000	10.80
79 Dodecane	57	21.309	21.309	(1.299)	2813438	10.0000	9.497
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	2509430	10.0000	9.285
81 Napthalene	128	21.686	21.686	(1.322)	7333522	10.0000	12.85
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	1800114	10.0000	10.10

Data File: /var/chem/gcms/me.i/E110602.b/emd1106b.d
Date : 06-NOV-2002 09:49
Client ID: 10PPBV
Sample Info: CCV,,2,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i
Operator: 0691
Column diameter: 0.32



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

11/6/02 12:52:10 PM
Leak Check for C:\smart\E110602.seq
Report File: C:\smart\E110602.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 15
Equilibration time(sec) 15
Maintanance time(sec) 15

Sample Inlet	Auto1		Auto2	Start	End	Rate(psi/min)
1	1	---	2.8	3.1	1.20	
1	2	---	2.3	2.6	1.20	
1	3	---	2.3	2.6	1.20	
1	4	---	2.3	2.7	1.60	

OK ewt
11/7/02

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

11/6/02 3:55:23 PM
Leak Check for C:\smart\E110602.seq
Report File: C:\smart\E110602.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 15
Equilibration time(sec) 15
Maintanance time(sec) 15

Sample Inlet	Auto1		Auto2	Start	End	Rate(psi/min)
1	5	---	2.8	3.3	2.00	
1	6	---	2.3	2.6	1.20	
1	7	---	2.2	2.6	1.60	
1	8	---	2.2	2.5	1.20	
1	9	---	2.1	2.5	1.60	
1	10	---	2.2	2.4	0.80	
1	11	---	2.1	2.4	1.20	
1	12	---	2.1	2.4	1.20	

OK wlf
11/7/02

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

11/6/02 7:08:14 PM
Leak Check for C:\smart\E110602.seq
Report File: C:\smart\E110602.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 15
Equilibration time(sec) 15
Maintanance time(sec) 15

Sample Inlet	Auto1	Auto2	Start	End	Rate(psi/min)
1	6	---	2.9	3.5	2.40
1	14	---	3.1	4.1	4.00
1	2	---	2.6	3.1	2.00
1	3	---	2.4	3.0	2.40
1	7	---	2.3	2.6	1.20
1	8	---	2.3	2.9	2.40

OK cwd
11/7/02

Raw QC Data

BECHTEL HANFORD, INC.
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/01/02
Work Order: FCJMX1AA Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

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

Data File: /var/chem/gcms/me.i/E110602.b/ebk1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110602.b/ebk1106b.d
Lab Smp Id: BLANK
Inj Date : 06-NOV-2002 12:02
Operator : 0691 Inst ID: me.i
Smp Info : BLANK,,3,,BLANK
Misc Info : E110602,LA,,,500ML
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 15:37 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emd1106b.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

cwf 11/7/02

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	9.657	9.668	(1.000)	894072	10.0000	
* 2 1,4-Difluorobenzene	114	11.804	11.814	(1.000)	4362885	10.0000	
* 3 Chlorobenzene-d5	117	16.398	16.403	(1.000)	4072145	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.674	10.685	(0.904)	595689	10.0102	10.01
$ 5 Toluene-d8	98	14.364	14.370	(0.876)	3952894	10.0857	10.08
$ 6 4-Bromofluorobenzene	95	18.001	18.006	(1.098)	2626335	9.86975	9.870
26 Methylene Chloride	84	6.978	6.984	(0.723)	6296	0.08697	0.08697
52 1,1,2-Trichloroethane	97	14.381	14.547	(0.877)	274334	2.44691	~~2.447~~

DW 11/6/02

Data File: /var/chem/gcms/me.i/E110602.b/ebk1106b.d
Report Date: 06-Nov-2002 15:37

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: ebk1106b.d
Lab Smp Id: BLANK
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,,,500ML

Calibration Date: 06-NOV-2002
Calibration Time: 09:49

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	913776	543697	1283855	894072	-2.16
2 1,4-Difluorobenze	4360916	2594745	6127087	4362885	0.05
3 Chlorobenzene-d5	4186210	2490795	5881625	4072145	-2.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.66	-0.11
2 1,4-Difluorobenze	11.81	11.31	12.31	11.80	-0.09
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	-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/E110602.b/ebk1106b.d
Report Date: 06-Nov-2002 15:37

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/E110602.b/LA.m
Misc Info: E110602,LA,,,500ML

Client SDG: E110602
Fraction: OTHER

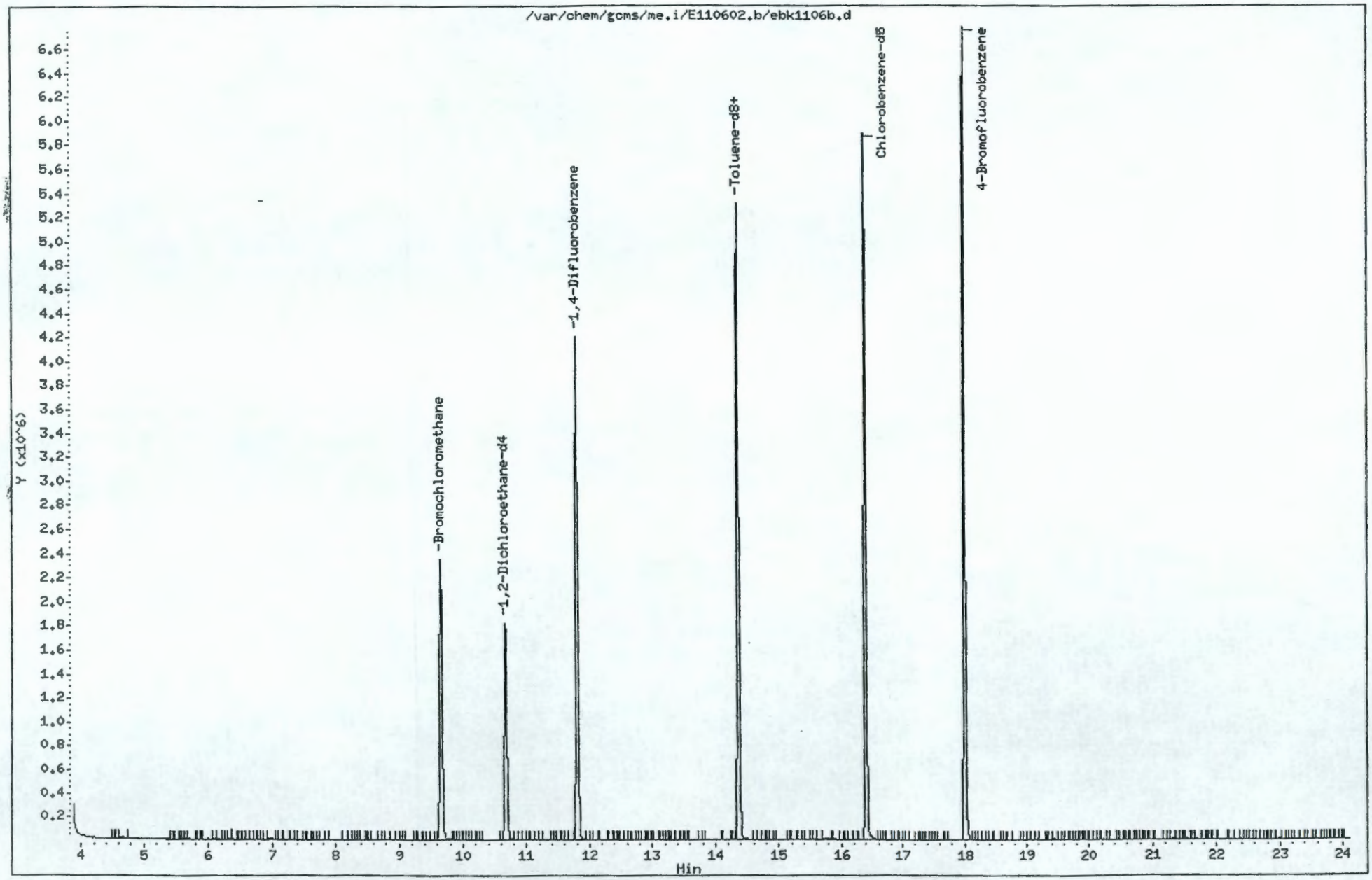
Operator: 0691
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.01	100.10	70-130
$ 5 Toluene-d8	10.00	10.08	100.86	70-130
$ 6 4-Bromofluorobenze	10.00	9.870	98.70	70-130

Data File: /var/chem/gcms/me.i/E110602.b/ebk1106b.d
Date : 06-NOV-2002 12:02
Client ID:
Sample Info: BLANK,,3,,BLANK
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110602.b/ebk1106b.d

Date : 06-NOV-2002 12:02

Client ID:

Instrument: me.i

Sample Info: BLANK,,3,,BLANK

Volume Injected (uL): 500.0

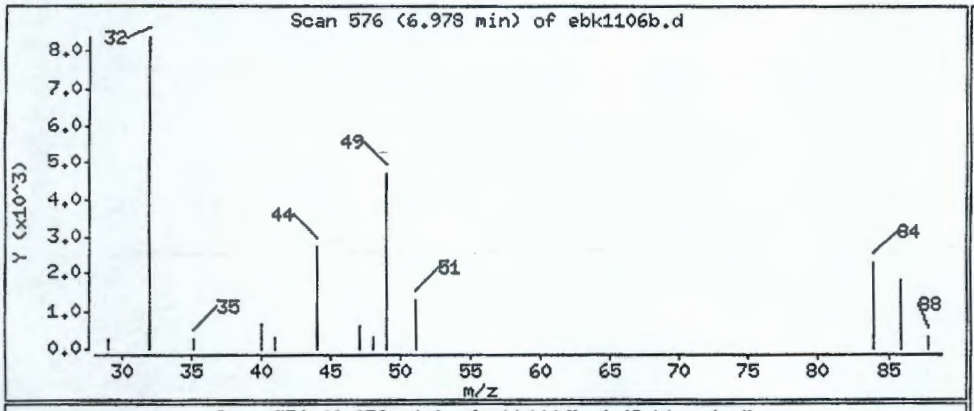
Operator: 0691

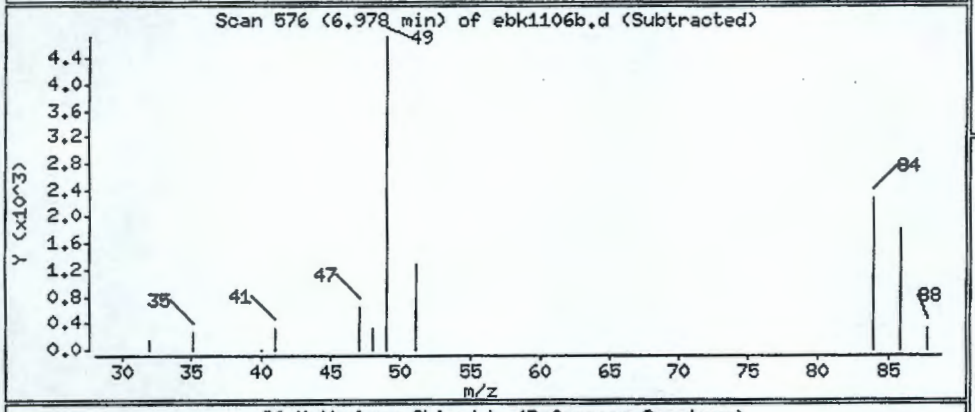
Column phase: DB-5

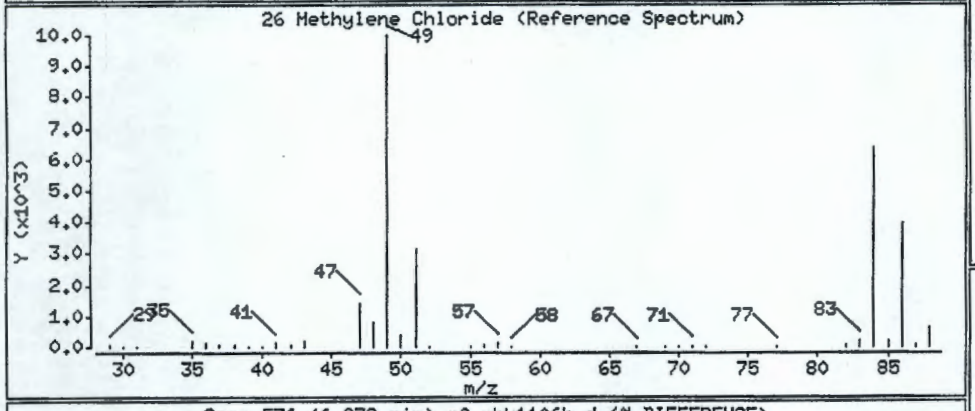
Column diameter: 0.32

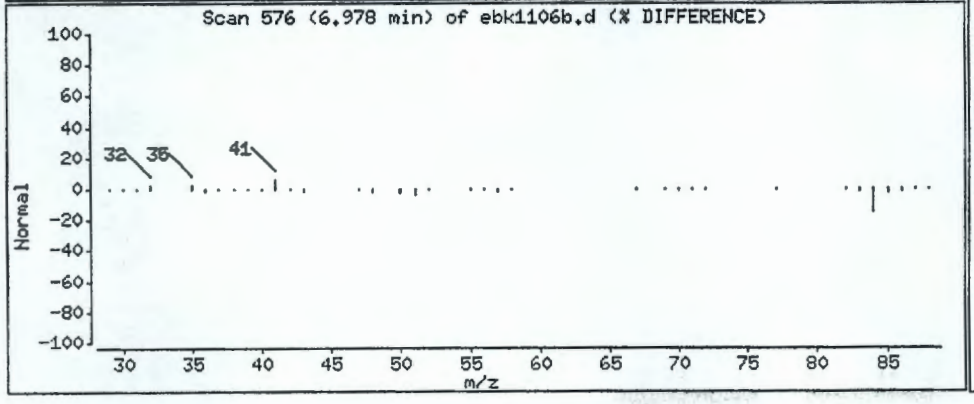
26 Methylene Chloride

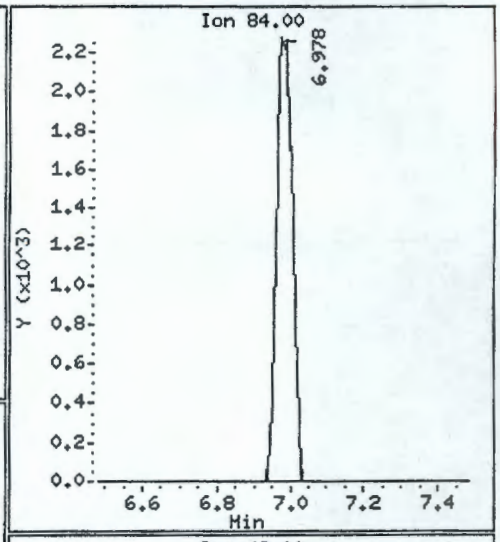
Concentration: 0.08697 ppb(v/v)

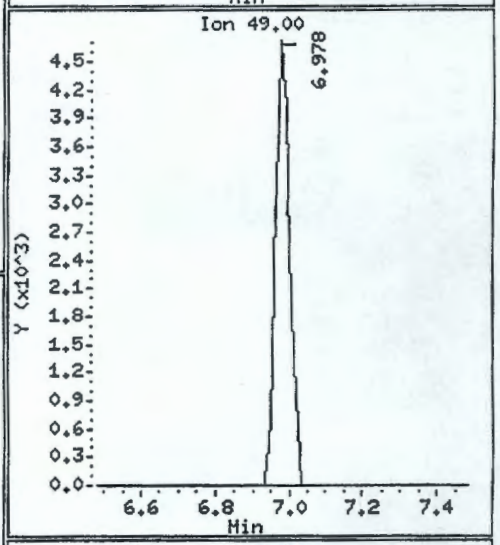


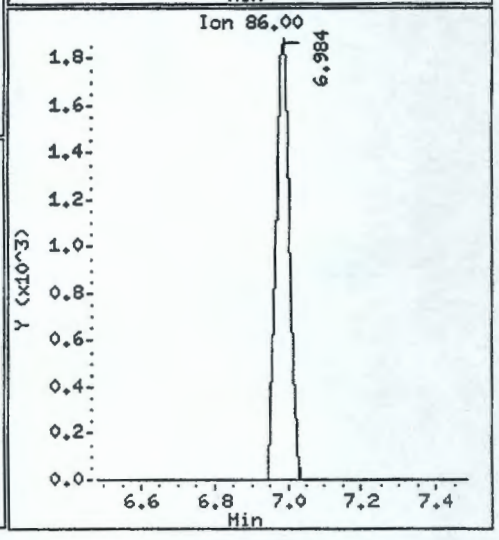












Data File: /var/chem/gcms/me.i/E110602.b/ebk1106b.d

Date : 06-NOV-2002 12:02

Client ID:

Instrument: me.i

Sample Info: BLANK,,3,,BLANK

Volume Injected (uL): 500.0

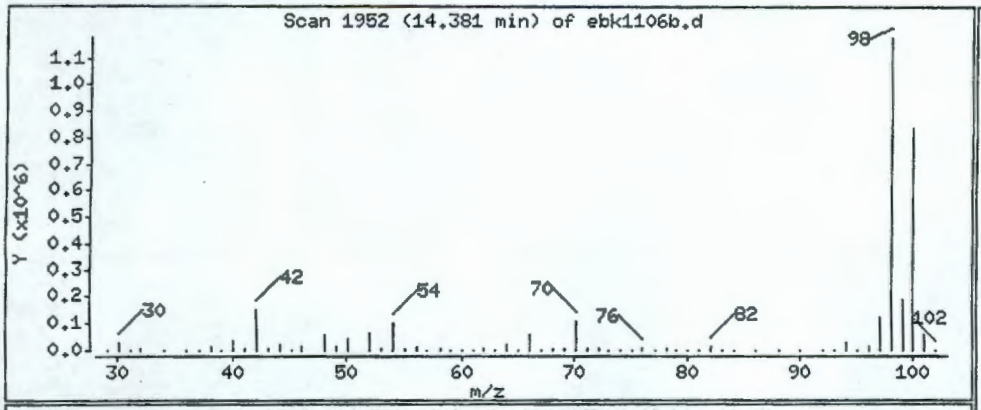
Operator: 0691

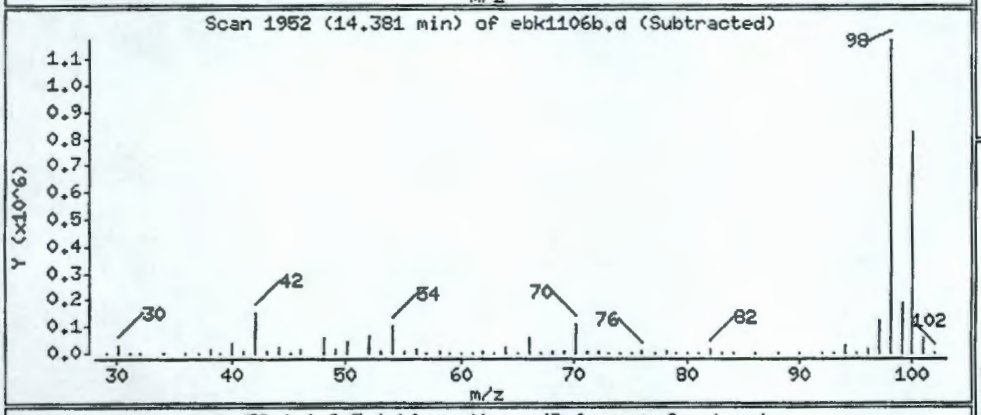
Column phase: DB-5

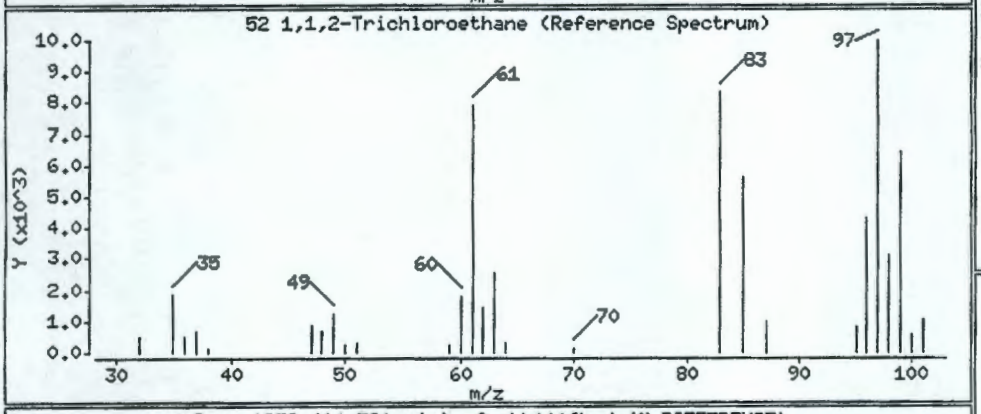
Column diameter: 0.32

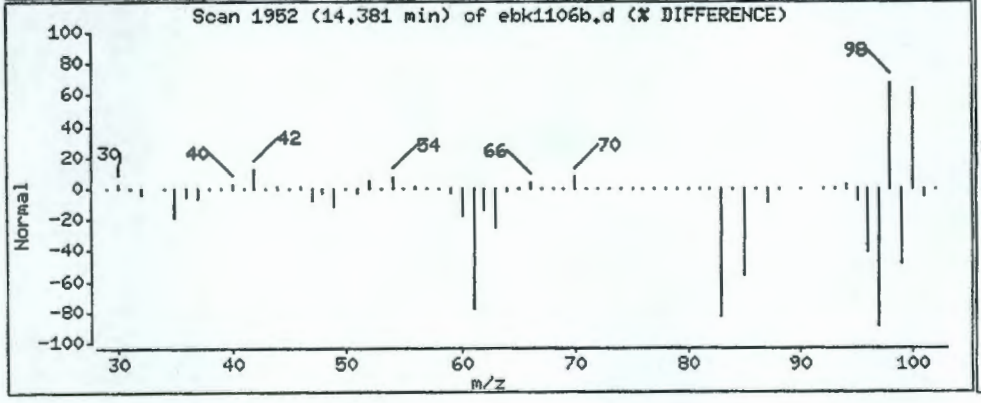
52 1,1,2-Trichloroethane

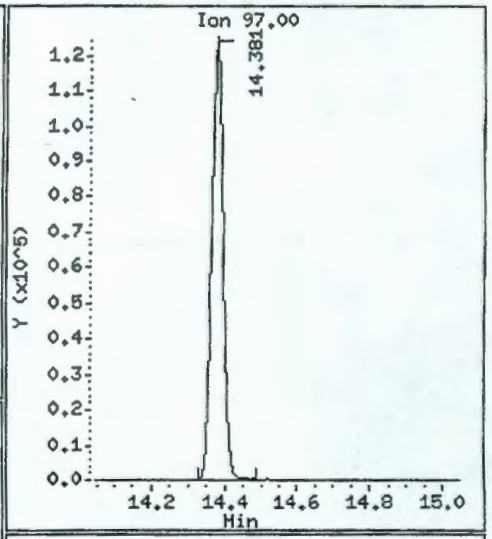
Concentration: 2.447 ppb(v/v)

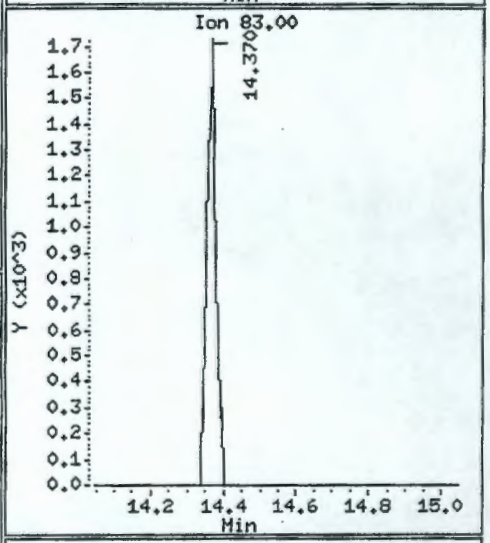


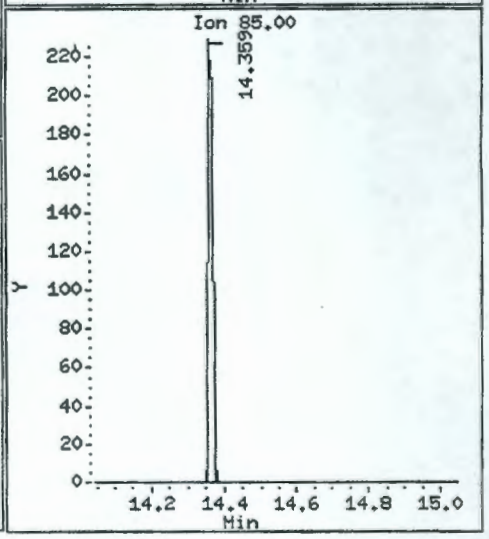












BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/01/02
Work Order: FCJMX1AC Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	21	
56-23-5	Carbon tetrachloride	10	
67-66-3	Chloroform	10	
75-09-2	Methylene chloride	10	
127-18-4	Tetrachloroethene	10	
79-01-6	Trichloroethene	10	
75-71-8	Dichlorodifluoromethane	10	
74-87-3	Chloromethane	10	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	11	
75-01-4	Vinyl chloride	11	
74-83-9	Bromomethane	11	
75-00-3	Chloroethane	11	
75-69-4	Trichlorofluoromethane	10	
75-35-4	1,1-Dichloroethene	11	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	10	
75-34-3	1,1-Dichloroethane	10	
156-59-2	cis-1,2-Dichloroethene	11	
71-55-6	1,1,1-Trichloroethane	11	
107-06-2	1,2-Dichloroethane	10	
71-43-2	Benzene	10	
78-87-5	1,2-Dichloropropane	10	
10061-01-5	cis-1,3-Dichloropropene	11	
10061-02-6	trans-1,3-Dichloropropene	10	
108-88-3	Toluene	11	
79-00-5	1,1,2-Trichloroethane	11	
106-93-4	1,2-Dibromoethane (EDB)	11	
108-90-7	Chlorobenzene	10	
100-41-4	Ethylbenzene	10	

BECHTEL HANFORD, INC.
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2K060000 475
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/01/02
Work Order: FCJMX1AC Date Extracted:11/06/02
Dilution factor: 1 Date Analyzed: 11/06/02

QC Batch: 2310475

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	10	
100-42-5	Styrene	10	
95-47-6	o-Xylene	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	
108-67-8	1,3,5-Trimethylbenzene	9.9	
95-63-6	1,2,4-Trimethylbenzene	10	
541-73-1	1,3-Dichlorobenzene	10	
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	9.4	

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110602.b/erf1106.d
Lab Smp Id: LCS
Inj Date : 06-NOV-2002 10:50
Operator : 0691 Inst ID: me.i
Smp Info : LCS,,3,,LCS
Misc Info : E110602,LA,,,100ML
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 15:37 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emd1106b.d
Als bottle: 16 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50

OK WJ 11/7/02

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	9.663	9.668	(1.000)	974079	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.814	(1.000)	4651590	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	4411483	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.679	10.685	(0.904)	635302	10.0133	10.01
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	4278517	10.0768	10.08
$ 6 4-Bromofluorobenzene	95	18.006	18.006	(1.098)	2787587	9.66992	9.670
7 Chlorodifluoromethane	51	4.041	4.046	(0.418)	1715581	10.1485	10.15
8 Dichlorodifluoromethane	85	4.116	4.116	(0.426)	1790455	10.4858	10.48
9 Chloromethane	52	4.326	4.331	(0.448)	344224	10.0931	10.09
10 1,2-Dichlorotetrafluoroethane	135	4.342	4.342	(0.449)	1740978	10.5216	10.52
11 Vinyl Chloride	62	4.531	4.531	(0.469)	1071357	10.5581	10.56
12 Methanol	31	4.541	4.552	(0.470)	1599109	43.4094	43.41
13 1,3-Butadiene	54	4.633	4.638	(0.479)	906520	10.0900	10.09
14 n-Butane	43	4.633	4.638	(0.479)	1889970	9.95787	9.958
15 Bromomethane	94	5.009	5.009	(0.518)	1033313	10.5531	10.55
16 Chloroethane	64	5.176	5.181	(0.536)	554731	10.5732	10.57
17 Trichlorofluoromethane	101	5.827	5.827	(0.603)	1974396	10.1771	10.18
18 Acrolein	56	5.854	5.859	(0.606)	819384	21.3573	21.36
19 Acetonitrile	40	5.935	5.940	(0.614)	939445	20.6880	20.69
20 Acetone	58	6.010	6.021	(0.622)	981060	20.8047	20.80
21 Pentane	57	6.080	6.080	(0.629)	314138	9.90152	9.902
22 Ethyl Ether	31	6.284	6.295	(0.650)	2884787	21.3234	21.32

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
23 1,1-Dichloroethene	96	6.607	6.607	(0.684)	952237	10.5102	10.51
24 Acrylonitrile	53	6.736	6.742	(0.697)	1725154	21.8161	21.82
25 1,1,2-Trichlorotrifluoroethane	101	6.812	6.811	(0.705)	1976906	10.3536	10.35
26 Methylene Chloride	84	6.984	6.984	(0.723)	818574	10.3784	10.38
27 3-Chloropropene	39	7.005	7.005	(0.725)	878767	10.1768	10.18
28 Carbon Disulfide	76	7.150	7.156	(0.740)	2981652	10.6106	10.61
29 trans-1,2-Dichloroethene	96	7.850	7.850	(0.812)	965844	10.5967	10.60
30 Methyl-t-Butyl Ether	73	8.070	8.076	(0.835)	3827098	22.5966	22.60
31 1,1-Dichloroethane	63	8.302	8.307	(0.859)	1859070	10.4115	10.41
32 Vinyl Acetate	43	8.431	8.436	(0.872)	5889797	21.6294	21.63
33 2-Butanone	72	8.990	9.006	(0.930)	871920	22.6049	22.60
34 Hexane	56	8.915	8.920	(0.923)	920846	10.3258	10.32
35 cis 1,2-Dichloroethene	96	9.324	9.329	(0.965)	1046236	10.5133	10.51
36 Chloroform	83	9.674	9.679	(1.001)	1721477	10.4739	10.47
37 1,1,1-Trichloroethane	97	10.723	10.722	(1.110)	1468741	10.6338	10.63
38 1,2-Dichloroethane	62	10.825	10.830	(0.917)	1018956	10.4127	10.41
39 Benzene	78	11.293	11.298	(0.956)	3170713	10.3540	10.35
40 1-Butanol	41	11.508	11.556	(0.974)	1409998	22.4882	22.49
41 Cyclohexane	69	11.298	11.298	(0.957)	466967	10.3343	10.33
42 Carbon Tetrachloride	117	11.314	11.314	(1.171)	1690209	10.4663	10.47
43 Heptane	43	12.385	12.385	(1.049)	2593335	10.2890	10.29
44 1,2-Dichloropropane	63	12.466	12.471	(1.056)	1383989	10.2935	10.29
45 Trichloroethene	130	12.492	12.492	(1.058)	1498011	10.3680	10.37
46 Dibromomethane	93	12.568	12.568	(1.064)	1146807	10.3164	10.32
47 Bromodichloromethane	83	12.708	12.707	(1.076)	1737833	10.5823	10.58
48 4-Methyl-2-pentanone	43	13.708	13.724	(1.161)	5782288	21.4301	21.43
49 cis-1,3-Dichloropropene	75	13.676	13.676	(1.158)	1999199	10.7015	10.70
50 trans-1,3-Dichloropropene	75	14.348	14.348	(0.875)	1219351	10.4622	10.46
51 Toluene	91	14.483	14.483	(0.883)	3699159	10.6125	10.61
52 1,1,2-Trichloroethane	97	14.542	14.547	(0.887)	1284944	10.5794	10.58
53 2-Hexanone	58	14.999	15.015	(0.914)	2846369	22.1721	22.17
54 Octane	85	15.145	15.144	(0.923)	1166893	10.5609	10.56
55 Dibromochloromethane	129	15.231	15.230	(0.928)	2363760	10.5813	10.58
56 1,2-Dibromoethane	107	15.521	15.526	(0.946)	2203129	10.5081	10.51
57 Tetrachloroethene	129	15.591	15.591	(0.950)	1321919	10.4430	10.44
58 Chlorobenzene	112	16.452	16.452	(1.003)	3139316	10.4986	10.50
59 Ethylbenzene	91	16.737	16.737	(1.020)	4627838	10.4738	10.47
60 m-Xylene (For p-)	91	16.888	16.887	(1.030)	3522736	10.4513	10.45
61 Bromoform	173	17.334	17.334	(1.057)	2238708	10.5495	10.55
62 Nonane	57	17.296	17.302	(1.054)	2766583	9.91116	9.911
63 Styrene	104	17.350	17.350	(1.058)	2694719	10.1774	10.18
64 o-Xylene	91	17.415	17.415	(1.062)	3557276	10.4368	10.44
65 1,1,2,2-Tetrachloroethane	83	17.721	17.721	(1.080)	2932062	10.4170	10.42
66 1,2,3-Trichloropropane	110	17.877	17.877	(1.090)	709710	11.5805	11.58
67 Cumene	105	17.980	17.985	(1.096)	5029327	10.1077	10.11
68 n-Propylbenzene	91	18.485	18.485	(1.127)	6830264	10.6017	10.60
69 4-Ethyltoluene	105	18.631	18.630	(1.136)	5837449	10.6085	10.61

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
70 1,3,5-Trimethylbenzene	120	18.700	18.700	(1.140)	2216807	9.90761	9.908
71 Alpha-Methylstyrene	118	18.910	18.910	(1.153)	2359254	10.7953	10.80
72 Decane	57	18.964	18.964	(1.156)	3640154	10.1233	10.12
73 1,2,4-Trimethylbenzene	105	19.115	19.115	(1.165)	4356369	10.2304	10.23
74 1,3-Dichlorobenzene	146	19.373	19.373	(1.181)	3358997	10.2445	10.24
75 Benzyl Chloride	91	19.437	19.443	(1.185)	3532982	9.98018	9.980
76 1,4-Dichlorobenzene	146	19.454	19.453	(1.186)	3130123	9.89782	9.898
77 1,2-Dichlorobenzene	146	19.798	19.798	(1.207)	3204878	10.2187	10.22
78 Undecane	57	20.223	20.223	(1.233)	3563023	10.0827	10.08
79 Dodecane	57	21.310	21.309	(1.299)	3145921	10.6108	10.61
80 1,2,4-Trichlorobenzene	180	21.525	21.525	(1.312)	2645507	10.0039	10.00
81 Napthalene	128	21.686	21.686	(1.322)	6754372	8.73995	8.740
82 Hexachlorobutadiene	225	21.912	21.912	(1.336)	1791387	9.44335	9.443

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: erf1106.d
Lab Smp Id: LCS
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,,,100ML

Calibration Date: 06-NOV-2002
Calibration Time: 09:49

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	913776	543697	1283855	974079	6.60
2 1,4-Difluorobenze	4360916	2594745	6127087	4651590	6.67
3 Chlorobenzene-d5	4186210	2490795	5881625	4411483	5.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.66	-0.05
2 1,4-Difluorobenze	11.81	11.31	12.31	11.81	-0.04
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	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/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

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: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,,,100ML

Client SDG: E110602
Fraction: OTHER

Operator: 0691
SampleType: LCS
Quant Type: ISTD

OK cwd 11/7/02

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
7 Chlorodifluorometh	10.00	10.15	101.48	70-130
8 Dichlorodifluorome	10.00	10.48	104.86	70-130
9 Chloromethane	10.00	10.09	100.93	70-130
10 1,2-Dichlorotetraf	10.00	10.52	105.22	70-130
11 Vinyl Chloride	10.00	10.56	105.58	70-130
12 Methanol	40.00	43.41	108.52	60-140
13 1,3-Butadiene	10.00	10.09	100.90	70-130
14 n-Butane	10.00	9.958	99.58	70-130
15 Bromomethane	10.00	10.55	105.53	70-130
16 Chloroethane	10.00	10.57	105.73	70-130
17 Trichlorofluoromet	10.00	10.18	101.77	70-130
18 Acrolein	20.00	21.36	106.79	60-140
19 Acetonitrile	20.00	20.69	103.44	60-140
20 Acetone	20.00	20.80	104.02	60-140
21 Pentane	10.00	9.902	99.02	70-130
22 Ethyl Ether	20.00	21.32	106.62	60-140
23 1,1-Dichloroethene	10.00	10.51	105.10	70-130
24 Acrylonitrile	20.00	21.82	109.08	60-140
25 1,1,2-Trichlorotri	10.00	10.35	103.54	70-130
26 Methylene Chloride	10.00	10.38	103.78	70-130
27 3-Chloropropene	10.00	10.18	101.77	70-130
28 Carbon Disulfide	10.00	10.61	106.11	70-130
29 trans-1,2-Dichloro	10.00	10.60	105.97	70-130
30 Methyl-t-Butyl Eth	20.00	22.60	112.98	60-140
31 1,1-Dichloroethane	10.00	10.41	104.11	70-130
32 Vinyl Acetate	20.00	21.63	108.15	60-140
33 2-Butanone	20.00	22.60	113.02	60-140
34 Hexane	10.00	10.32	103.26	70-130
35 cis 1,2-Dichloroet	10.00	10.51	105.13	70-130
36 Chloroform	10.00	10.47	104.74	70-130
37 1,1,1-Trichloroeth	10.00	10.63	106.34	70-130
38 1,2-Dichloroethane	10.00	10.41	104.13	70-130
39 Benzene	10.00	10.35	103.54	70-130

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

SPIKE	COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
40	1-Butanol	20.00	22.49	112.44	60-140
41	Cyclohexane	10.00	10.33	103.34	70-130
42	Carbon Tetrachlori	10.00	10.47	104.66	70-130
43	Heptane	10.00	10.29	102.89	70-130
44	1,2-Dichloropropan	10.00	10.29	102.94	70-130
45	Trichloroethene	10.00	10.37	103.68	70-130
46	Dibromomethane	10.00	10.32	103.16	70-130
47	Bromodichlorometha	10.00	10.58	105.82	70-130
48	4-Methyl-2-pentano	20.00	21.43	107.15	60-140
49	cis-1,3-Dichloropr	10.00	10.70	107.01	70-130
50	trans-1,3-Dichloro	10.00	10.46	104.62	70-130
51	Toluene	10.00	10.61	106.13	70-130
52	1,1,2-Trichloroeth	10.00	10.58	105.79	70-130
53	2-Hexanone	20.00	22.17	110.86	60-140
54	Octane	10.00	10.56	105.61	70-130
55	Dibromochlorometha	10.00	10.58	105.81	70-130
56	1,2-Dibromoethane	10.00	10.51	105.08	70-130
57	Tetrachloroethene	10.00	10.44	104.43	70-130
58	Chlorobenzene	10.00	10.50	104.99	70-130
59	Ethylbenzene	10.00	10.47	104.74	70-130
60	m-Xylene (For p-)	10.00	10.45	104.51	70-130
61	Bromoform	10.00	10.55	105.50	70-130
62	Nonane	10.00	9.911	99.11	70-130
63	Styrene	10.00	10.18	101.77	70-130
64	o-Xylene	10.00	10.44	104.37	70-130
65	1,1,2,2-Tetrachlor	10.00	10.42	104.17	70-130
66	1,2,3-Trichloropro	10.00	11.58	115.81	70-130
67	Cumene	10.00	10.11	101.08	70-130
68	n-Propylbenzene	10.00	10.60	106.02	70-130
69	4-Ethyltoluene	10.00	10.61	106.08	70-130
70	1,3,5-Trimethylben	10.00	9.908	99.08	70-130
71	Alpha-Methylstyren	10.00	10.80	107.95	70-130
72	Decane	10.00	10.12	101.23	70-130
73	1,2,4-Trimethylben	10.00	10.23	102.30	70-130
74	1,3-Dichlorobenzen	10.00	10.24	102.44	70-130
75	Benzyl Chloride	10.00	9.980	99.80	70-130
76	1,4-Dichlorobenzen	10.00	9.898	98.98	70-130
77	1,2-Dichlorobenzen	10.00	10.22	102.19	70-130
78	Undecane	10.00	10.08	100.83	70-130
79	Dodecane	10.00	10.61	106.11	70-130
80	1,2,4-Trichloroben	10.00	10.00	100.04	70-130
81	Napthalene	10.00	8.740	87.40	70-130
82	Hexachlorobutadien	10.00	9.443	94.43	70-130

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Report Date: 06-Nov-2002 15:38

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: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,,,100ML

Client SDG: E110602
Fraction: OTHER

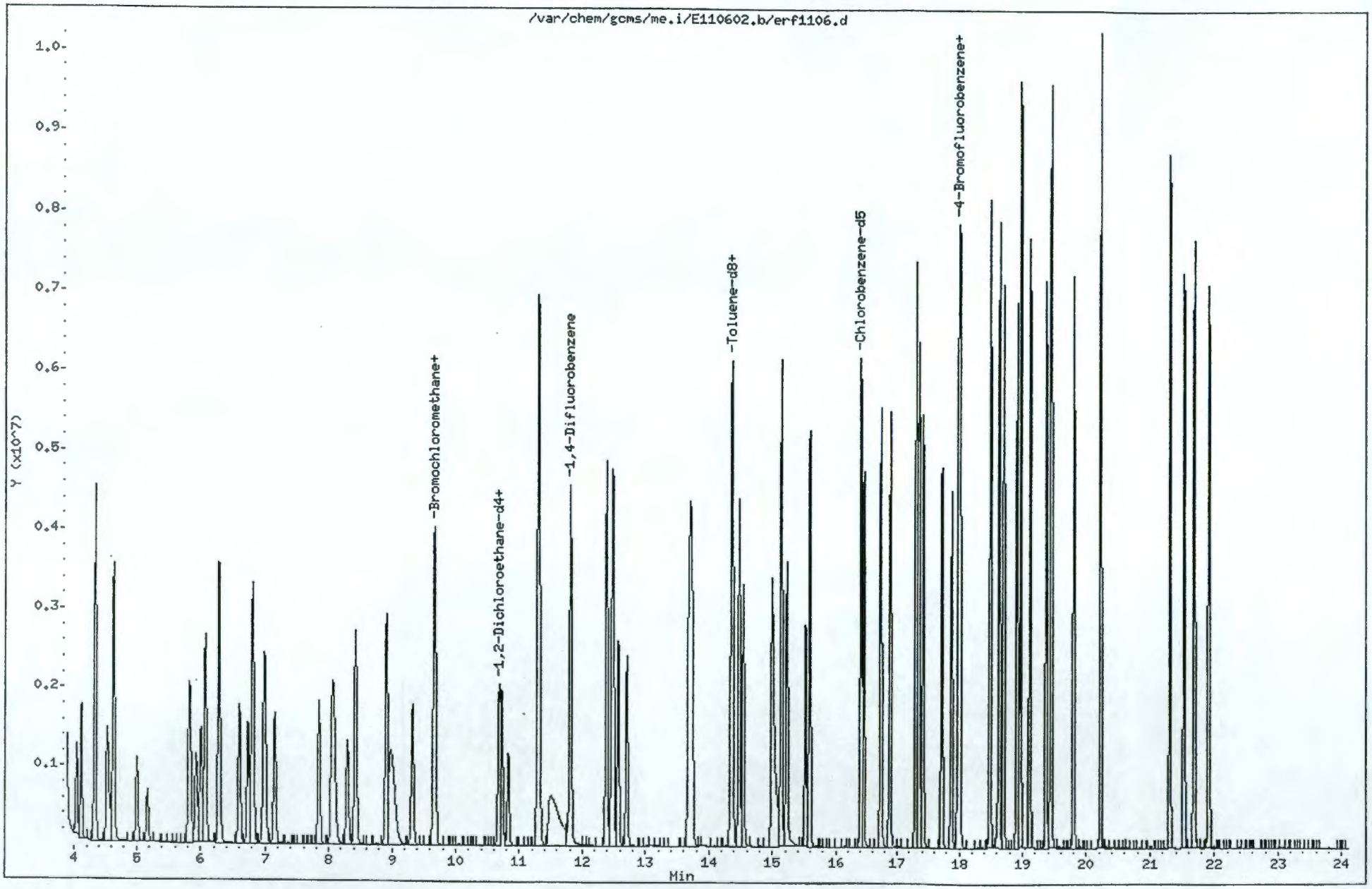
Operator: 0691
SampleType: LCS
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.01	100.13	70-130
$ 5 Toluene-d8	10.00	10.08	100.77	70-130
$ 6 4-Bromofluorobenze	10.00	9.670	96.70	70-130

Data File: /var/chem/gcms/me.i/E110602.b/erf1106.d
Date : 06-NOV-2002 10:50
Client ID:
Sample Info: LCS,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



BECHTEL HANFORD, INC.

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W03888

Matrix: (soil/water) AIR Lab Sample ID:H2J250151 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 10/25/02
Work Order: FAQ631AC Date Extracted:11/06/02
Dilution factor: 1.4 Date Analyzed: 11/06/02

QC Batch: 2310475

Client Sample Id: B15T11 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	7.0	U
56-23-5	Carbon tetrachloride	0.49	
67-66-3	Chloroform	0.28	U
75-09-2	Methylene chloride	0.70	U
127-18-4	Tetrachloroethene	0.28	U
79-01-6	Trichloroethene	0.28	U
78-93-3	2-Butanone (MEK)	0.70	U

Data File: /var/chem/gcms/me.i/E110602.b/faq63d.d
Report Date: 06-Nov-2002 17:54

STL Knoxville

Modified Method TO-14

Data file : /var/chem/gcms/me.i/E110602.b/faq63d.d
Lab Smp Id: FAQ631AA c Client Smp ID: B15T11
Inj Date : 06-NOV-2002 17:24
Operator : 0691 Inst ID: me.i
Smp Info : FAQ631AA c,1.4,0,,,
Misc Info : E110602,LA,hanford.sub,,,,500 mL dup
Comment :
Method : /var/chem/gcms/me.i/E110602.b/LA.m
Meth Date : 06-Nov-2002 15:37 wilesd Quant Type: ISTD
Cal Date : 06-NOV-2002 09:49 Cal File: emd1106b.d
Als bottle: 1
Dil Factor: 1.40000
Integrator: HP RTE Compound Sublist: hanford.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	9.657	9.668	(1.000)	604981	10.0000	
* 2 1,4-Difluorobenzene	114	11.809	11.814	(1.000)	3036008	10.0000	
* 3 Chlorobenzene-d5	117	16.403	16.403	(1.000)	3016868	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.674	10.685	(0.904)	414702	10.0145	10.01
$ 5 Toluene-d8	98	14.370	14.370	(0.876)	2835634	9.76584	9.766
$ 6 4-Bromofluorobenzene	95	18.001	18.006	(1.097)	2007866	10.1849	10.18
20 Acetone	58	6.268	6.021	(0.649)	44253	1.51101	2.115(M)
26 Methylene Chloride	84	6.984	6.984	(0.723)	24095	0.49187	0.6886
33 2-Butanone	72	8.877	9.006	(0.919)	13826	0.57713	~~0.8080~~
42 Carbon Tetrachloride	117	11.309	11.314	(1.171)	35459	0.35353	0.4949

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem/gcms/me.i/E110602.b/faq63d.d
Report Date: 06-Nov-2002 17:51

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: me.i
Lab File ID: faq63d.d
Lab Smp Id: FAQ631AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,hanford.sub,,,,500 mL dup

Calibration Date: 06-NOV-2002
Calibration Time: 09:49
Client Smp ID: B15T11
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	913776	543697	1283855	604981	-33.79
2 1,4-Difluorobenze	4360916	2594745	6127087	3036008	-30.38
3 Chlorobenzene-d5	4186210	2490795	5881625	3016868	-27.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.67	9.17	10.17	9.66	-0.11
2 1,4-Difluorobenze	11.81	11.31	12.31	11.81	-0.04
3 Chlorobenzene-d5	16.40	15.90	16.90	16.40	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: /chem/gcms/me.i/E110602.b/faq63d.d
Report Date: 06-Nov-2002 17:51

STL Knoxville

RECOVERY REPORT

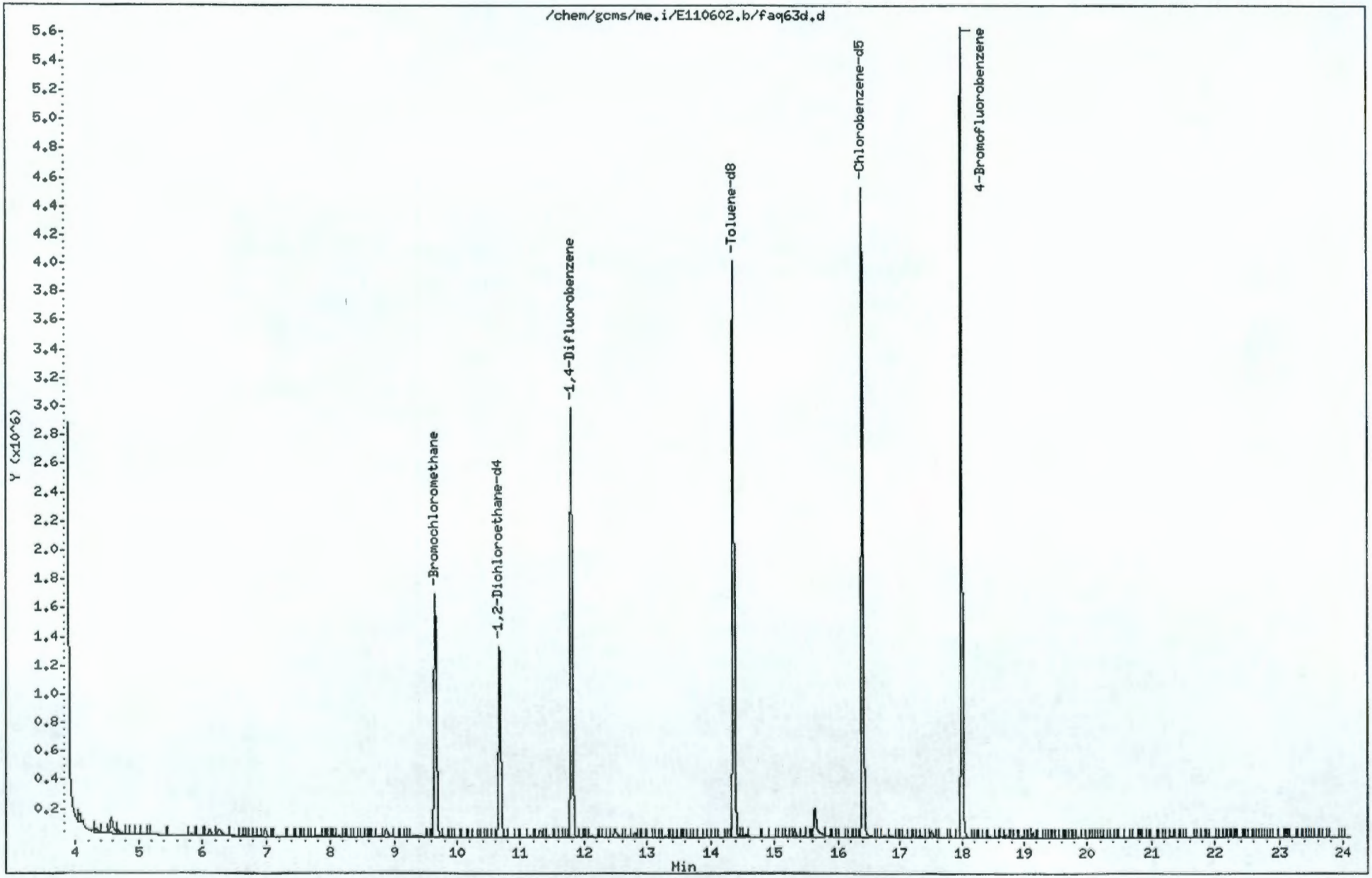
Client Name: BECHTEL HANFORD, INC25-OCT-2002 00:00 Client SDG: H2J250151
Sample Matrix: GAS Fraction: OTHER
Lab Smp Id: FAQ631AA Client Smp ID: B15T11
Level: LOW Operator: 0691
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: RTALL.spk Quant Type: ISTD
Sublist File: hanford.sub
Method File: /var/chem/gcms/me.i/E110602.b/LA.m
Misc Info: E110602,LA,hanford.sub,,,,500 mL dup

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.01	100.15	70-130
$ 5 Toluene-d8	10.00	9.766	97.66	70-130
$ 6 4-Bromofluorobenze	10.00	10.18	101.85	70-130

Data File: /chem/gcms/me.i/E110602.b/faq63d.d
Date : 06-NOV-2002 17:24
Client ID: B15T11
Sample Info: FAQ631AA,1.4,0,,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: me.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/me.i/E110602.b/faq63d.d

Date : 06-NOV-2002 17:24

Client ID: B15T11

Instrument: me.i

Sample Info: FAQ631AA,1.4,0,,,

Volume Injected (uL): 500.0

Operator: 0691

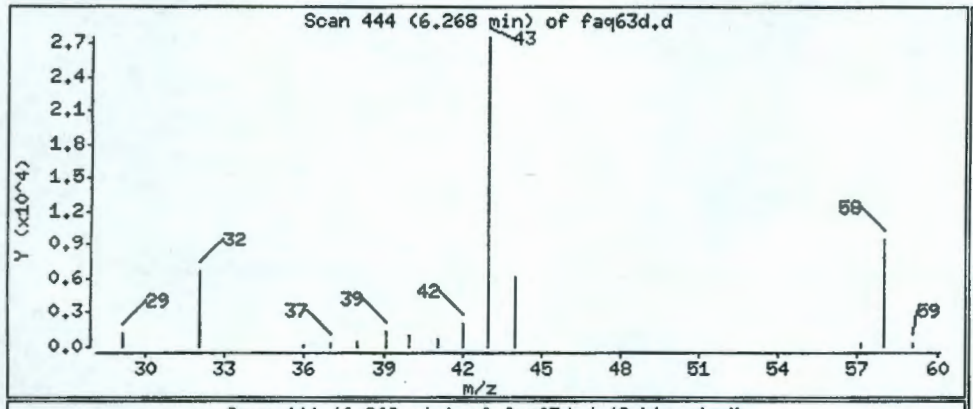
Column phase: DB-5

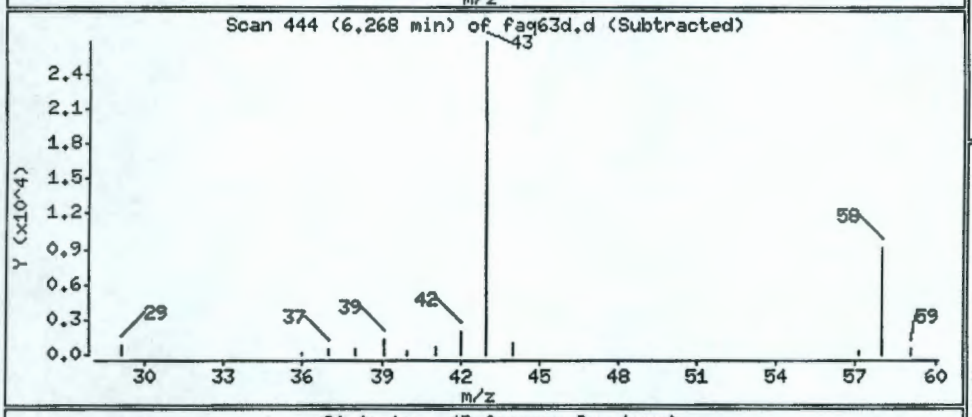
Column diameter: 0.32

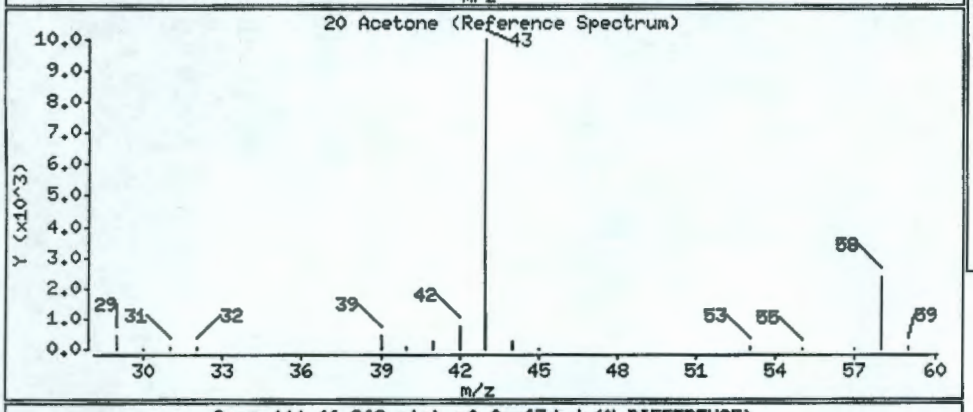
20 Acetone

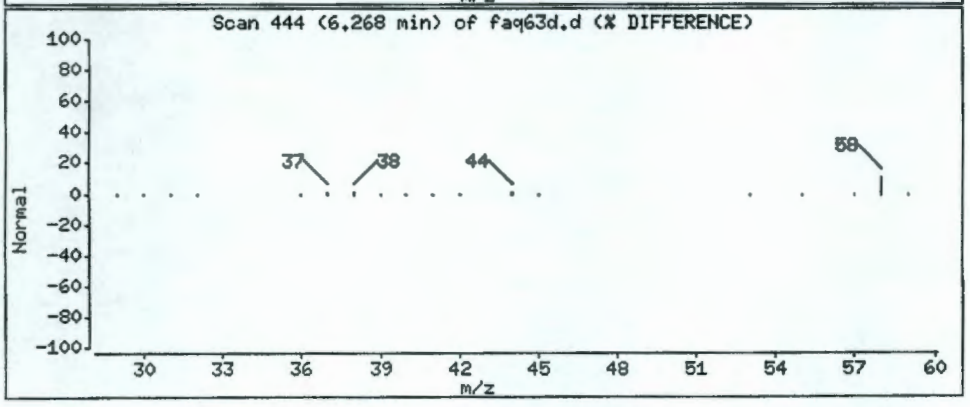
Concentration: 2.115 ppb(v/v)

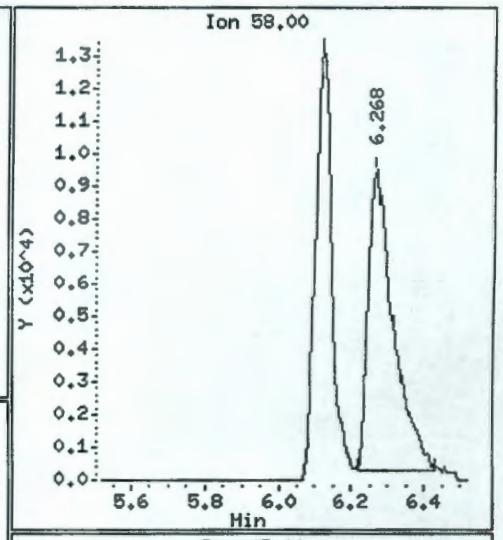
pw 11/6/02 (4)

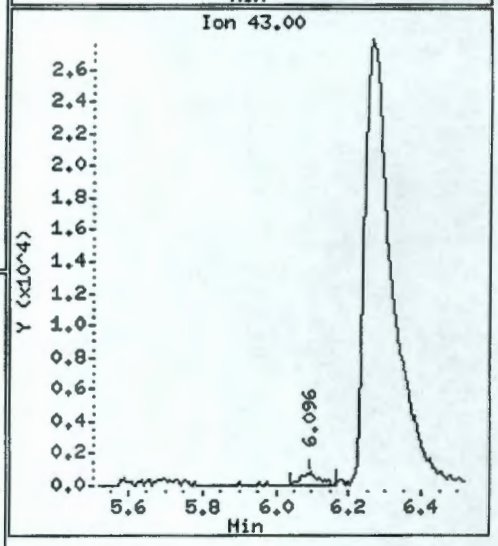












Data File: /chem/gcms/me.i/E110602.b/faq63d.d

Date : 06-NOV-2002 17:24

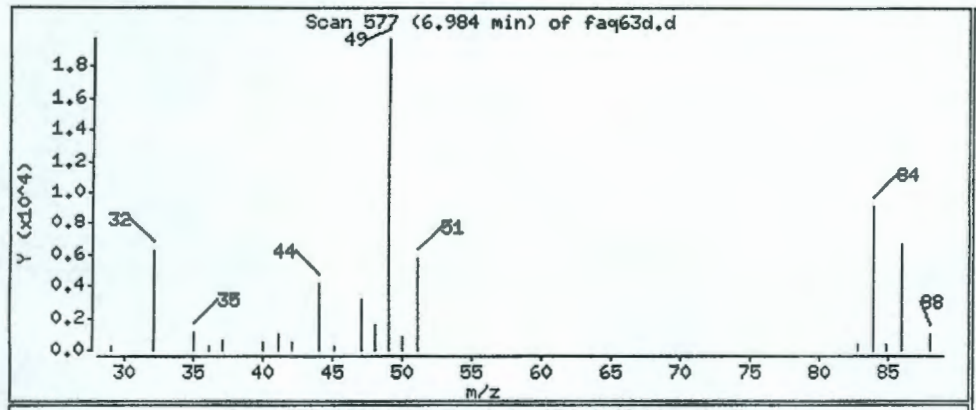
Client ID: B15T11 Instrument: me.i

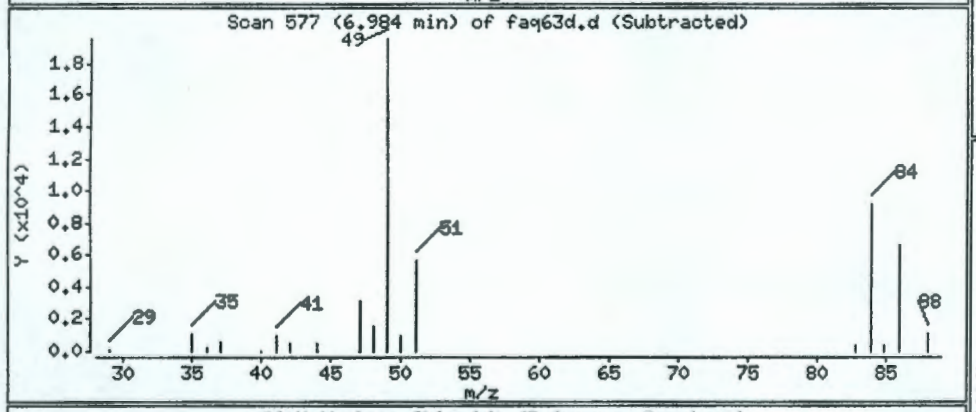
Sample Info: FAQ631AA,1.4,0,,,

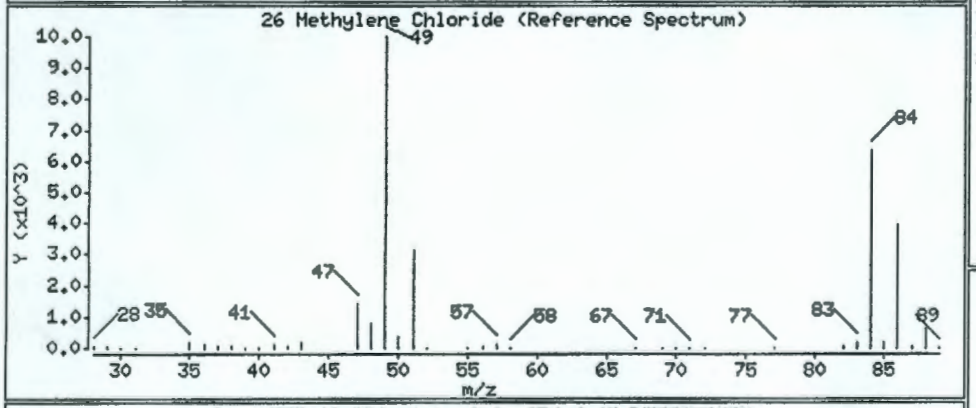
Volume Injected (uL): 500.0 Operator: 0691

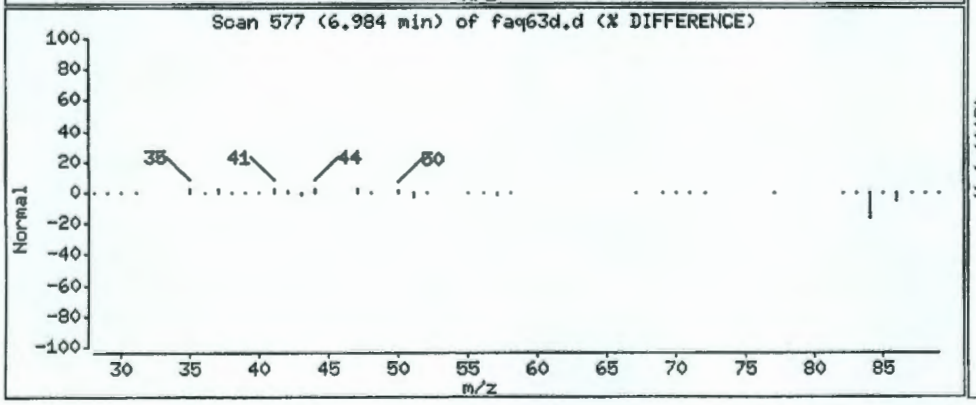
Column phase: DB-5 Column diameter: 0.32

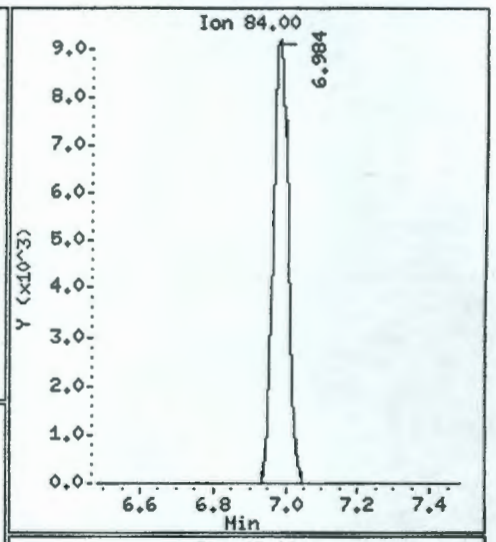
26 Methylene Chloride Concentration: 0.6886 ppb(v/v)

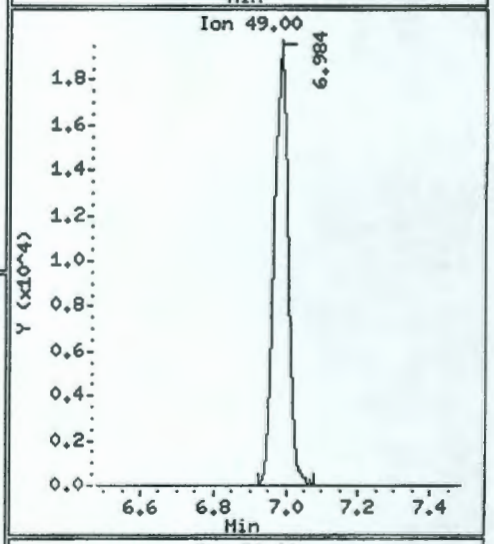


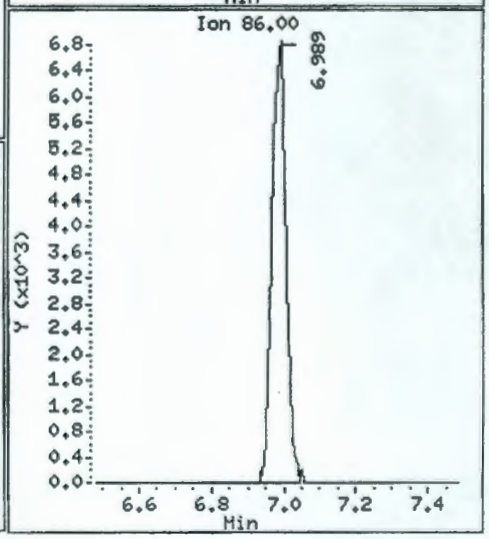












Data File: /chem/gcms/me.i/E110602.b/faq63d.d

Date : 06-NOV-2002 17:24

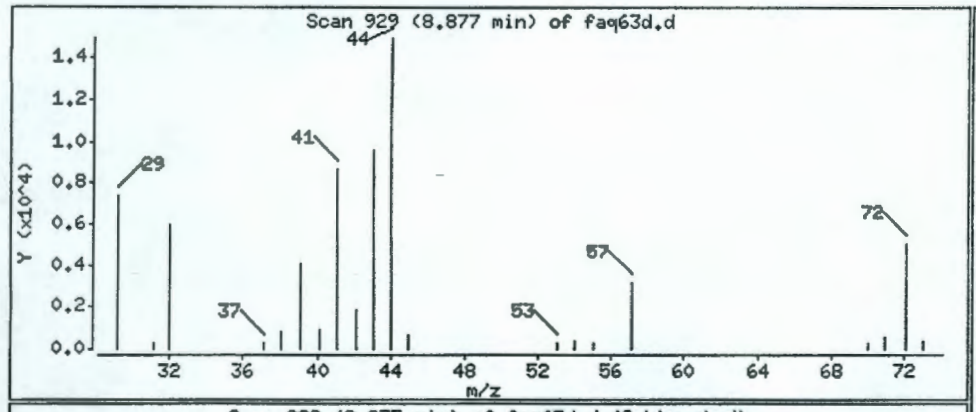
Client ID: B15T11 | Instrument: me.i

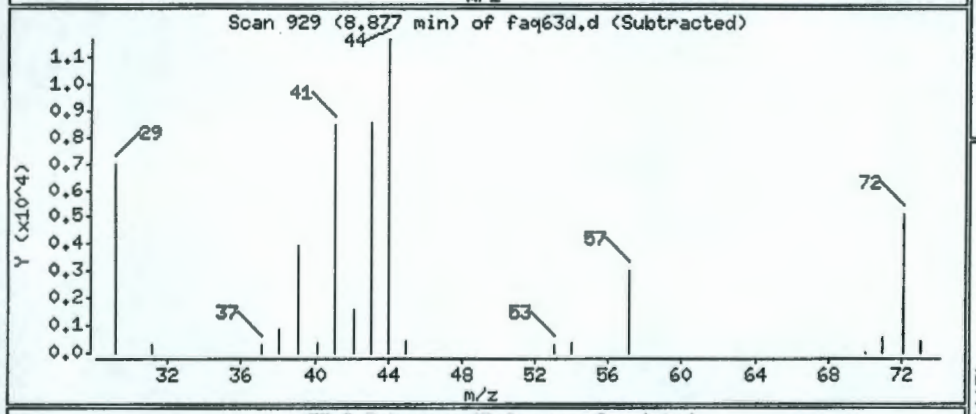
Sample Info: FAQ631AA,1.4,0,,,

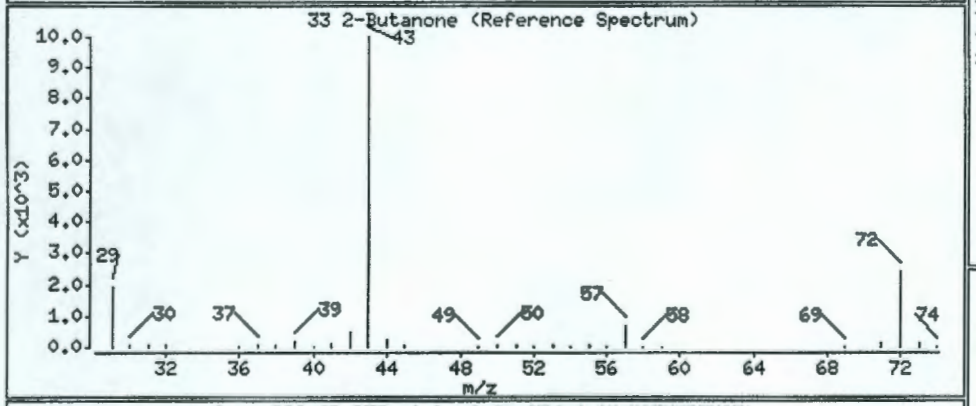
Volume Injected (uL): 500.0 | Operator: 0691

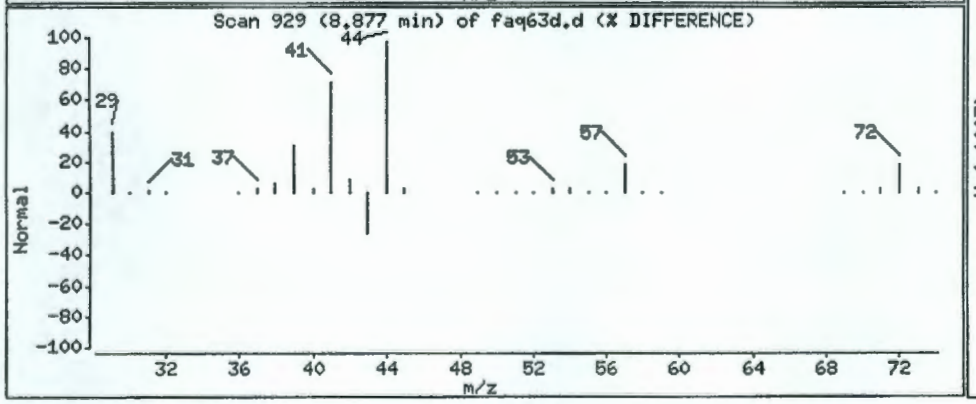
Column phase: DB-5 | Column diameter: 0.32

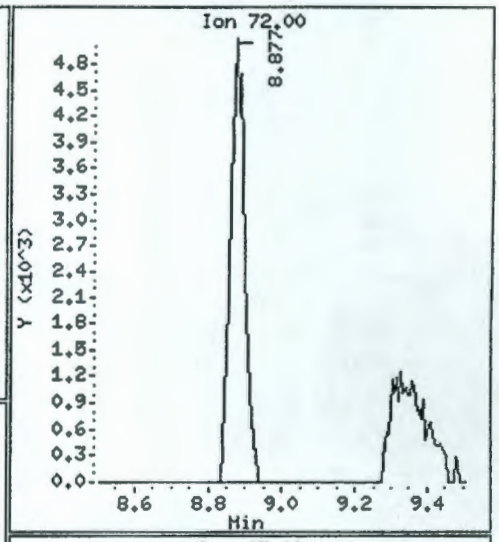
33 2-Butanone | Concentration: 0.8080 ppb(v/v)

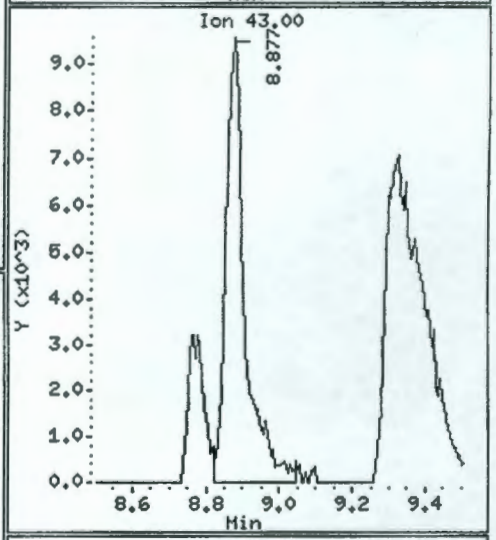


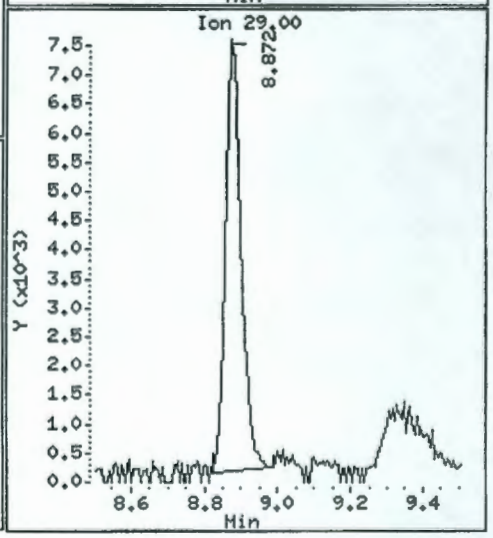












Data File: /chem/gcms/me.i/E110602.b/faq63d.d

Date : 06-NOV-2002 17:24

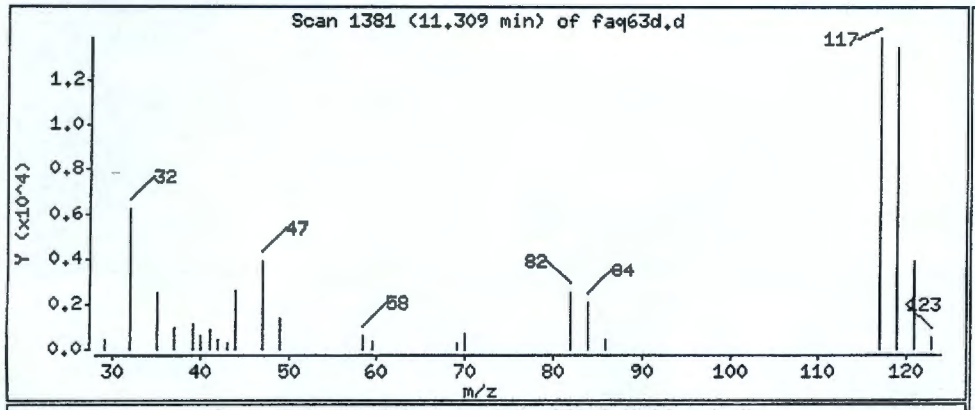
Client ID: B15T11 Instrument: me.i

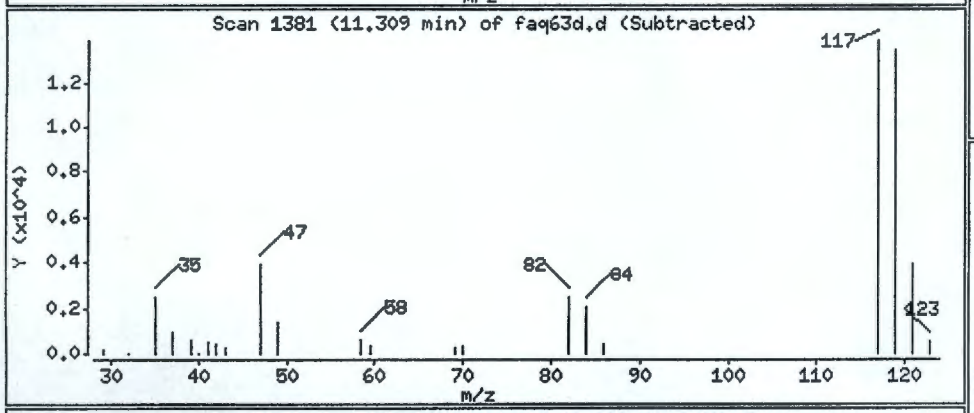
Sample Info: FAQ631AA,1.4,0,,,

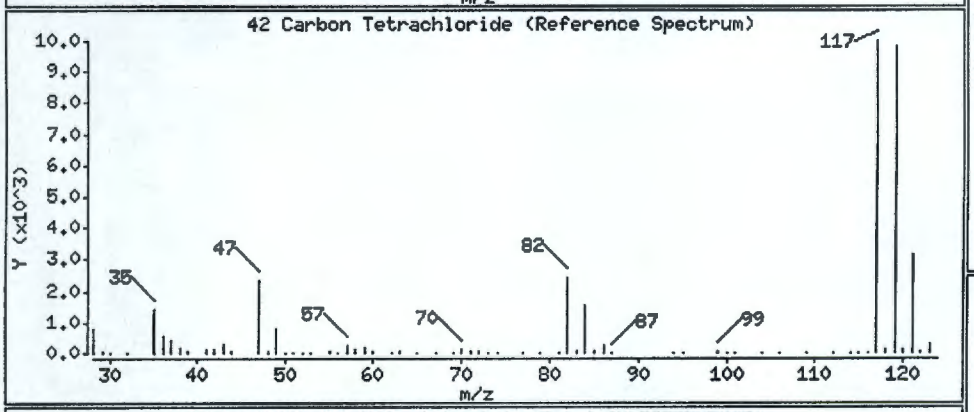
Volume Injected (uL): 500.0 Operator: 0691

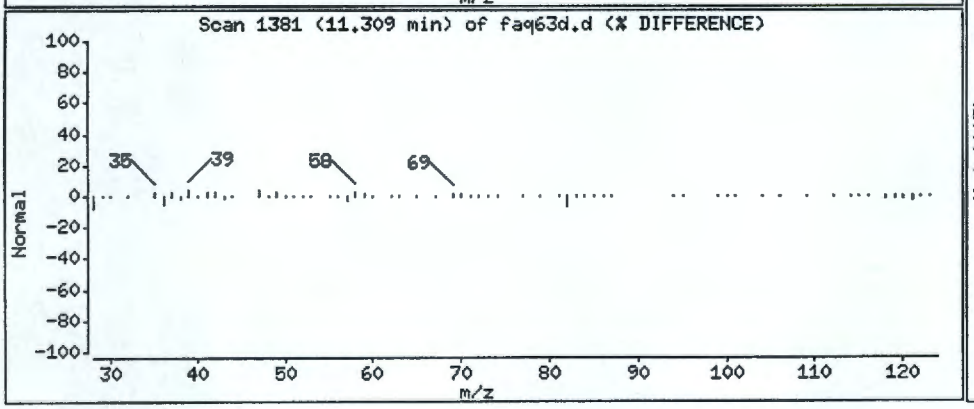
Column phase: DB-5 Column diameter: 0.32

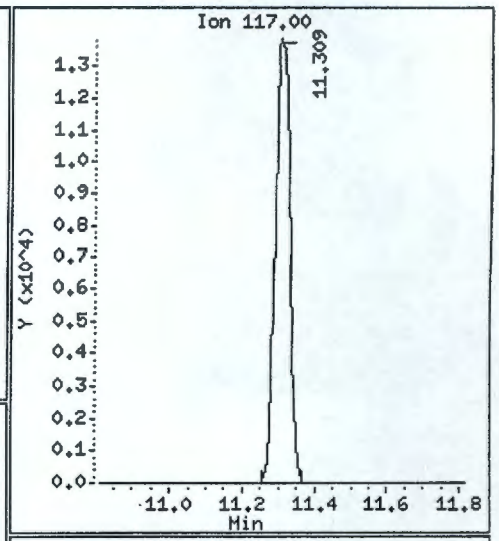
42 Carbon Tetrachloride Concentration: 0.4949 ppb(v/v)

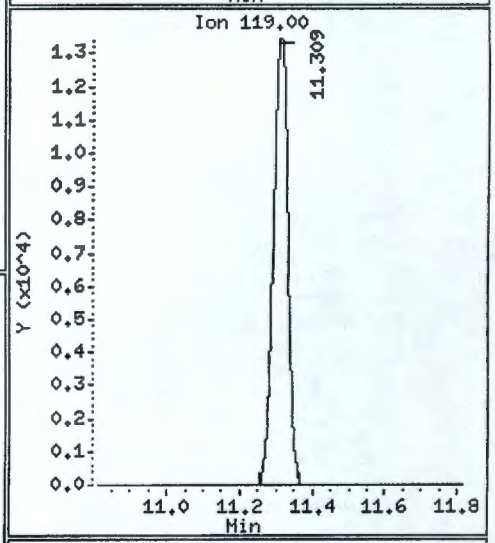


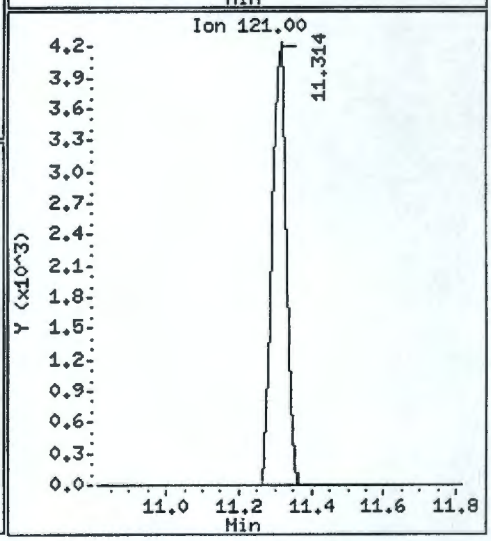












Miscellaneous Data

STL Knoxville GC/MS Air Data Review / Narrative Checklist

LOT/Project # H2J250151

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

Instrument:	ME	
Scanned File Names:	E110402I	
	E110602	

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	✓
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: JW	**Date:** 11/6/02	**2nd Level Reviewer:**	**Date:** 11/19/02
Comments:		**Comments:**	

* Such action must be taken in consultation with client.

139 (6)

ME 11/6/02

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 11/07/02
Time: 8:33:48

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: _____

****
* QC BATCH: 2310475 *
****

PREP DATE: 11/06/02
COMP DATE: 11/06/02

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 ADJ1	ADJ2	EXTRACTION	SOLVENTS VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	12/06/02	H2J250151-001 FAQ63-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/06/02	H2J250151-001 FAQ63-1-ACX		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/06/02	H2J250151-002 FAQ65-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/12/02	H2J250233-002 FARX2-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/15/02	H2J280181-001 FAXK2-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/15/02	H2J280181-004 FAXK7-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/15/02	H2J280181-005 FAXK8-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 11/07/02
Time: 8:23:48

QC BATCH: 2310475

PREP DATE: 11/06/02
COMP DATE: 11/06/02

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJI	PH"S ADJ2	SOLVENTS EXTRACTION VOL	SOLVENTS EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	11/15/02	H2J280181-006 **FAXK9-1-AA**	D	88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/18/02	H2J310289-001 **FA6LH-1-AA**	D	88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/19/02	H2K010285-001 **FA9GA-1-AA**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/18/02	H2K010311-001 **FA9QF-1-AA**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/19/02	H2K050190-001 **FCE5N-1-AC**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/19/02	H2K050190-002 **FCE5P-1-AC**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/19/02	H2K050190-003 **FCE5V-1-AC**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	11/19/02	H2K050190-004 **FCE50-1-AC**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	0/00/00	H2K060000-475 **FCJMX-1-AAB**		88	JY	AIR	mL	NA	NA	NA	.0		.0	CX-929
COMMENTS:														
0/00/00	0/00/00	H2K060000-475 **FCJMX-1-ACC**		88	JY	AIR	**100mL** 100.00mL	NA	NA	NA	.0		.0	CX-946 CX-929
COMMENTS:														

STL-Knoxville Initial Canister Dilution

Analyst: DDF

Barometer: 29.83 inches Hg at sea level Date: 10/29/02
727.582 mm Hg at Knoxville

Lot #	W/O #	P init inches	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor	
H2J250151	FAQ 63	0.0	727.6	5.6	1017.2	1.40	(63)
	FAQ 65	0.0	727.6	5.6	1017.2	1.40	(65)

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: dlw

Barometer: 29.94 inches Hg at sea level
730.376 mm Hg at Knoxville

Date: 11/6/02

Lot #	W/O #	Initial Volume (ml)	P final (psig)	P final Abs,mm	Dilution Factor (Serial)	Dilution Factor **(Total)**		
H2J250151	FAQ 63							
	FAQ 65	50	14.3	1469.9	241.5	***337.6***	(65) (*1.398)	df*5=1688.1

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

3

TO-14/TO-15 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	10-29-02	29.83	J280156	FAW7E	11289	-10.9	5.3										
				7H	2045	-12.1	4.4										
				7K	1752	-10.1	4.6										
				7L	04177	0	5.4										
		29.83	J250151	FAQ63	12873	0	5.6										
				65	04426	0	5.6					DLW	11/6/02	29.94	1793	50	14.3
		NA	J290118	FAOVW	12729	20 psi	DA										
				V3	12212	13											
				V5	12187	18											
				V6	11414	20											
				V7	12327	14											
				V8	12303	18											
				V9	12455	21											
				WC	05717	14											
				WD	12437	22											
				WF	12180	15											
				WG	04730	19											
				WJ	92068	19											
				WM	121605	12											
				WP	93112	14											

Updated: **8:53 AM EST on October 29, 2002** Observed at **Knoxville, Tennessee**	
Temperature	**64** °F / **18** °C
Humidity	**100%**
Dew Point	**64** °F / **18** °C
Wind	**SSE** at **3** mph / **4.8** km/h
Wind Gust	-
Pressure	**29.83** in

Updated: **10:53 AM EST on November 06, 2002** Observed at **Knoxville, Tennessee**	
Temperature	**48** °F / **9** °C
Windchill	**42** °F / **5** °C
Humidity	**77%**
Dew Point	**41** °F / **5** °C
Wind	**West** at **17** mph / **27.4** km/h
Wind Gust	**22** mph / **35** km/h
Pressure	**29.94** in / **1013** hPa **(Rising**

Sample Receipt Documentation

H-2-525015)

FH - Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-002	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.	Field Logbook No. HNF-N-295	COA 117523ES10	Method of Shipment Government Vehicle		
Shipped To Severn Trent Incorporated, Richland	Offsite Property No.		Bill of Lading/Air Bill No.		

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										
B15T11	GASEOUS	10/24/02	0849	X								AS-3	
B15T12	GASEOUS	10/24/02	0856	X								AS-2	

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From M.H. Baechler/M.H. Baechler	Date/Time 1115 10/24/02	Received By/Stored In T. Heidelberg	Date/Time 10-24-02 1115
Relinquished By/Removed From T. Heidelberg	Date/Time 1694 10/24/02	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
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}

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=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 Matthew T. Hand	Title Sample Tech.	Date/Time 10/25/02 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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

Rec'd temp- Ambient custody Seals intact

1 Box Fedex# 7906 16456095

147