0060769

W04085 Sample Data Summary 1

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SEVERN TRENT STL

STL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921

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

August 26, 2003

Attention: Steve Trent

SEP 2003
RECEIVED

SAF Number	:	F02-002
Date Samples Received	:	July 24, 2003
Number of Samples	:	Two (2)
Sample Type	:	Air
Data Deliverable	:	45 Day Data Package

I. Introduction

Two (2) air samples were received on July 24, 2003 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
FT19D1AA	B17988	Air	07/24/03
FT19F1AA	B17989	Air	07/24/03

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

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.

The concentration of Carbon tetrachloride in sample B17989 exceeded the calibration level of the instrument. The sample was analyzed at a dilution to bring the concentration of the compound into the instrument calibration range. The results for both analyses are reported in order to provide the lowest possible reporting limits.

Reviewed and approved:

Jamie McKinney
Project Manager

Sample Data Summary

FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: FT19D1AA
Dilution factor: 1.92

Date Received: 07/24/03
Date Extracted:08/13/03
Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17988

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.6	U
56-23-5	**Carbon tetrachloride**	**4.6**	
67-66-3	Chloroform	0.38	U
75-09-2	**Methylene chloride**	**1.0**	
127-18-4	Tetrachloroethene	0.38	U
79-01-6	**Trichloroethene**	**0.54**	
78-93-3	2-Butanone (MEK)	0.96	U

FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/24/03
Work Order: FT19D1AC Date Extracted:08/13/03
Dilution factor: 1.92 Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17988 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.6	U
56-23-5	Carbon tetrachloride	5.4	
67-66-3	Chloroform	0.38	U
75-09-2	Methylene chloride	1.1	
127-18-4	Tetrachloroethene	0.38	U
79-01-6	Trichloroethene	0.54	
78-93-3	2-Butanone (MEK)	0.96	U

FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/24/03
Work Order: FT19F1AA Date Extracted:08/13/03
Dilution factor: 84.09 Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17989

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	420	U
56-23-5	**Carbon tetrachloride**	**7100**	**E**
67-66-3	**Chloroform**	**100**	
75-09-2	Methylene chloride	42	U
127-18-4	Tetrachloroethene	17	U
79-01-6	**Trichloroethene**	**38**	
78-93-3	2-Butanone (MEK)	42	U

FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/24/03
Work Order: FT19F2AA Date Extracted:08/14/03
Dilution factor: 454.5 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: B17989 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	6900	D

FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 477
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: FWG1N1AA
Dilution factor: 1

Date Received: 07/31/03
Date Extracted:08/13/03
Date Analyzed: 08/13/03

QC Batch: 3230477

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

FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 477
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/31/03
Work Order: FWG1N1AC Date Extracted:08/13/03
Dilution factor: 1 Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18.4	
56-23-5	Carbon tetrachloride	9.51	
67-66-3	Chloroform	9.60	
75-09-2	Methylene chloride	9.82	
127-18-4	Tetrachloroethene	9.43	
79-01-6	Trichloroethene	9.9	
75-35-4	1,1-Dichloroethene	9.7	
71-43-2	Benzene	10	
108-88-3	Toluene	9.6	
108-90-7	Chlorobenzene	9.5	

FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 533
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/31/03
Work Order: FWG6T1AA Date Extracted:08/14/03
Dilution factor: 1 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	0.20	U

FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 533
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/31/03
Work Order: FWG6T1AC Date Extracted:08/14/03
Dilution factor: 1 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	8.71	
79-01-6	Trichloroethene	8.2	

EPA-19 TO-14 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: FLUOR HANFORD IC

Lab Code: STLKNX SDG No: W04085

Lot #: H3G240298

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B17988	98	99	103	00
02	B17989	102	101	107	00
03	B17989 RE-1	95	102	107	00
04	B17988 DUP	104	101	108	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 SURROGATE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: FLUOR HANFORD IC

Lab Code: STLKNX SDG No: W04085

Lot #: H3G240298

Extraction: XXS88U601

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	METHOD BLK. FWG1N1AA	105	101	108	00
02	METHOD BLK. FWG6T1AA	104	103	111	00
03	LCS FWG1N1AC	97	98	98	00
04	LCS FWG6T1AC	102	99	105	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: FLUOR HANFORD IC

Lab Code: STLKNX SDG No: W04085

Lot #: H3H180000 WO #: FWG1N1AC
BATCH: 3230477

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1-Dichloroethene	10	9.7	97	70- 130	
Benzene	10	10	100	70- 130	
Trichloroethene	10	9.9	99	70- 130	
Toluene	10	9.6	96	70- 130	
Chlorobenzene	10	9.5	95	70- 130	
Acetone	20.0	18.4	92	70- 130	
Methylene chloride	10.0	9.82	98	70- 130	
Chloroform	10.0	9.60	96	70- 130	
Carbon tetrachloride	10.0	9.51	95	70- 130	
Tetrachloroethene	10.0	9.43	94	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS:

FORM III

EPA-19 TO-14 CHECK SAMPLE RECOVERY

Lab Name: Severn Trent Laboratories, Inc. Client: FLUOR HANFORD IC

Lab Code: STLKNX SDG No: W04085

Lot #: H3H180000 WO #: FWG6T1AC
BATCH: 3230533

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
Trichloroethene	10	8.2	82	70 - 130	
Carbon tetrachloride	10.0	8.71	87	70 - 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 2 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

FWG1N1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:W04085

Lab File ID: tbk0813h.

Lot Number: H3G240298

Date Analyzed: 08/13/03

Time Analyzed: 16:19

Matrix: AIR

Date Extracted:08/13/03

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: MT

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	B17988	FT19D1AA	ft19d.d	08/13/03	20:39
02	B17989	FT19F1AA	ft19f.d	08/13/03	22:02
03	CHECK SAMPLE	FWG1N1AC C	trf0813.d	08/13/03	09:41
04					
05					
06					
07					
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27					
28					
29					
30					

COMMENTS:

FORM IV

BLANK WORKORDER NO.

FWG6T1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:W04085

Lab File ID: tbk0814c.

Lot Number: H3G240298

Date Analyzed: 08/14/03

Time Analyzed: 21:40

Matrix: AIR

Date Extracted:08/14/03

GC Column: DB-5 ID: .32

Extraction Method: TO-14

Instrument ID: MT

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	B17989	FT19F2AA	ft19f.d	08/14/03	23:35
02	CHECK SAMPLE	FWG6T1AC C	trf0814b.	08/14/03	20:21
03					
04					
05					
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30					

COMMENTS:

FORM IV

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: T080203I

Lab File ID: TBF0802B BFB Injection Date: 08/02/03

Instrument ID: MT BFB Injection Time: 1224

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	21.6
75	30.0 - 60.0% of mass 95	44.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	67.2
175	5.0 - 9.0% of mass 174	5.0 (7.4)1
176	95.0 - 101.0% of mass 174	66.1 (98.4)1
177	5.0 - 9.0% of mass 176	4.6 (6.9)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	30PPBV	IC5	TIC5H02	08/02/03	1343
02	15PPBV	IC4	TIC4H02	08/02/03	1419
03	10PPBV	IC3	TIC3H02	08/02/03	1456
04	5PPBV	IC2	TIC2H02	08/02/03	1533
05	1PPBV	IC1	TIC1H02	08/02/03	1610
06	0.5PPBV	IC7	TIC7H02	08/02/03	1725
07	0.2PPBV	IC6	TIC6H02	08/02/03	1802
08					
09					
10					
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12					
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19					
20					
21					
22					

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: T081403I

Lab File ID: TBF0814 BFB Injection Date: 08/14/03

Instrument ID: MT BFB Injection Time: 0751

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	24.5
75	30.0 - 60.0% of mass 95	47.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	64.2
175	5.0 - 9.0% of mass 174	4.7 (7.3)1
176	95.0 - 101.0% of mass 174	64.2 (99.9)1
177	5.0 - 9.0% of mass 176	4.2 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	10PPBV	IC3	TIC30814	08/14/03	1035
02	30PPBV	IC5	TIC50814	08/14/03	1138
03	15PPBV	IC4	TIC40814	08/14/03	1216
04	5PPBV	IC2	TIC20814	08/14/03	1338
05	1PPBV	IC1	RIC10814	08/14/03	1745
06	0.5PPBV	IC7	RIC70814	08/14/03	1824
07	0.2PPBV	IC6	RIC60814	08/14/03	1904
08					
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FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W04085

Lab File ID: TBF0813 BFB Injection Date: 08/13/03

Instrument ID: MT BFB Injection Time: 0744

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	25.2
75	30.0 - 60.0% of mass 95	48.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	59.5
175	5.0 - 9.0% of mass 174	4.4 (7.4)1
176	95.0 - 101.0% of mass 174	58.9 (98.9)1
177	5.0 - 9.0% of mass 176	4.0 (6.8)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	TMD0813B	08/13/03	0903
02	INTRA-LAB CH	FWG1N1AC	TRF0813	08/13/03	0941
03	INTRA-LAB BL	FWG1N1AA	TBK0813H	08/13/03	1619
04	B17988	FT19D1AA	FT19D	08/13/03	2039
05	B17988 DUP	FT19D1AC	FT19DD	08/13/03	2123
06	B17989	FT19F1AA	FT19F	08/13/03	2202
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FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W04085

Lab File ID: TBF0814 BFB Injection Date: 08/14/03

Instrument ID: MT BFB Injection Time: 0751

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	24.5
75	30.0 - 60.0% of mass 95	47.3
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	64.2
175	5.0 - 9.0% of mass 174	4.7 (7.3)1
176	95.0 - 101.0% of mass 174	64.2 (99.9)1
177	5.0 - 9.0% of mass 176	4.2 (6.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	10PPBV	IC3	TIC30814	08/14/03	1035
02	INTRA-LAB CH	FWG6T1AC	TRF0814B	08/14/03	2021
03	INTRA-LAB BL	FWG6T1AA	TBK0814C	08/14/03	2140
04	B17989	FT19F2AA	FT19F	08/14/03	2335
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06					
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20					
21					
22					

FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W04085

Lab File ID (Standard): TMD0813B Date Analyzed: 08/13/03

Instrument ID: MT Time Analyzed: 0903

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	363584	9.73	1747786	11.86	1413217	16.42
	UPPER LIMIT	510836	10.06	2455639	12.19	1985570	16.75
	LOWER LIMIT	216332	9.40	1039933	11.53	840864	16.09
	CLIENT SAMPLE NO.						
01	INTRA-LAB CH	381175	9.73	1818439	11.86	1500508	16.43
02	INTRA-LAB BL	279441	9.75	1285134	11.86	1070560	16.43
03	B17988	400763	9.73	1821667	11.86	1544541	16.43
04	B17988 DUP	373733	9.74	1689614	11.87	1424540	16.43
05	B17989	362400	9.74	1701526	11.87	1405855	16.43
06							
07							
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09							
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19							
20							
21							
22							

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

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

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

FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: W04085

Lab File ID (Standard): TIC30814 Date Analyzed: 08/14/03

Instrument ID: MT Time Analyzed: 1035

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	338579	9.74	1568732	11.86	1278525	16.43
	UPPER LIMIT	475703	10.07	2204068	12.19	1796328	16.76
	LOWER LIMIT	201455	9.41	933396	11.53	760722	16.10
	CLIENT SAMPLE NO.						
01	INTRA-LAB CH	371491	9.74	1775096	11.87	1477026	16.43
02	INTRA-LAB BL	381884	9.74	1751811	11.87	1425486	16.43
03	B17989	427605	9.74	1954462	11.86	1584703	16.43
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

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

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

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

Sample Receipt Documentation

H3624098

FH-Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-006	Page 1 of 1

Collector M. Baechler/T. Johansen	Company Contact J. V. Borghese	Telephone No. 373-3804	Project Coordinator TRENT, SJ
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	Sampling Location 200-ZP-1		SAF No. F02-002
Ice Chest No.	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.

Price Code 9N

Data Turnaround 45 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

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

Sample No.	Matrix *	Sample Date	Sample Time										
B17988	GASEOUS	7/23/03	0633	X							AS-3		
B17989	GASEOUS	7/23/03	0637	X							AS-2		

CHAIN OF POSSESSION

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. H. Baechler/M. G. Baechler	7/23/03 1030	SL Quisenberry	A. Rhineheart 7/23/03 10:50
Quisenberry to A. Rhineheart	7/23/03 12:00	A. Rhineheart	7/24/03 09:15

Sign/Print Names

SPECIAL INSTRUCTIONS

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

Custody seals intact
received at ambient temp
BKD 7-24-03
1 box FEDX #
7914 4804 4557

Matrix *

S=Soil
SE=Sediment
SQ=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
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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

25

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: BEHTEL HANFORD PROJECT: _____ Lot No.: H3G240298

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

1. Sample Receipt:	YES	NO	NA
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)			✓
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		✓
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?	✓		✓
h. Were samples received in the appropriate containers?	✓		✓
i. Did you check for residual chlorine, if necessary?	✓		✓
j. Were samples received within 1/2 of the holding time?	✓		✓
k. Were samples screened for radioactivity?	✓		
l. Were client's sample documents (RFA/COC) received?	✓		
m. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
n. Are test/parameters listed for each sample?	✓		
o. Is the matrix of the samples noted?	✓		
p. Is the date/time of sample collection noted?	✓		
q. Is the client and project name/No. identified?	✓		
r. Was the sampler identified on the RFA/COC?	✓		

SAMPLE RECEIVING ASSOCIATE: [signature] DATE: 7-24-03

TO BE COMPLETED BY PROJECT MANAGER :

1. Project manager "Sample Greet":	YES	NO	NA
a. Quote number to be logged-in under 21911			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : [signature] DATE: 7/28/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action

☐ Client informed on _____ by _____. Person contacted: _____.
☐ Noted actions in comments section above.
☐ No action necessary; process as is.
Project Manager: _____ Date: _____

Volatiles

Raw Sample Data

FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: FT19D1AA
Dilution factor: 1.92

Date Received: 07/24/03
Date Extracted:08/13/03
Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17988

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.6	U
56-23-5	**Carbon tetrachloride**	**4.6**	
67-66-3	Chloroform	0.38	U
75-09-2	**Methylene chloride**	**1.0**	
127-18-4	Tetrachloroethene	0.38	U
79-01-6	**Trichloroethene**	**0.54**	
78-93-3	2-Butanone (MEK)	0.96	U

Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d
Report Date: 18-Aug-2003 16:39

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081303.b/ft19d.d
Lab Smp Id: FT19D1AA Client Smp ID: B17988
Inj Date : 13-AUG-2003 20:39
Operator : 0691 Inst ID: mt.i
Smp Info : FT19D1AA,1.92,0,,
Misc Info : T081303,LA,FHI.sub,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 16:08 wilesd Quant Type: ISTD
Cal Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
Als bottle: 4
Dil Factor: 1.92000
Integrator: HP RTE Compound Sublist: FHI.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	9.734	9.735	(1.000)	400763	10.0000	
* 2 1,4-Difluorobenzene	114	11.860	11.860	(1.000)	1821667	10.0000	
* 3 Chlorobenzene-d5	117	16.432	16.424	(1.000)	1544541	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.741	10.732	(0.906)	413818	9.84456	9.844
$ 5 Toluene-d8	98	14.411	14.402	(0.877)	1585133	9.89835	9.898
$ 6 4-Bromofluorobenzene	95	18.020	18.020	(1.097)	1087381	10.3387	10.34
20 Acetone	58	6.151	6.065	(0.632)	18945	1.44295	2.770
26 Methylene Chloride	84	7.071	7.062	(0.726)	24823	0.53350	1.024
33 2-Butanone	72	9.075	8.971	(0.932)	4693	0.23183	0.4451
42 Carbon Tetrachloride	117	11.374	11.374	(1.168)	186519	2.37906	4.568
45 Trichloroethene	130	12.545	12.537	(1.058)	13692	0.27917	0.5360

Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d
Report Date: 18-Aug-2003 16:39

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ft19d.d
Lab Smp Id: FT19D1AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,500ML

Calibration Date: 13-AUG-2003
Calibration Time: 09:03
Client Smp ID: B17988
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	363584	216332	510836	400763	10.23
2 1,4-Difluorobenze	1747786	1039933	2455639	1821667	4.23
3 Chlorobenzene-d5	1413217	840864	1985570	1544541	9.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.73	-0.01
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	0.00
3 Chlorobenzene-d5	16.42	16.09	16.75	16.43	0.05

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

Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d
Report Date: 18-Aug-2003 16:39

STL Knoxville

RECOVERY REPORT

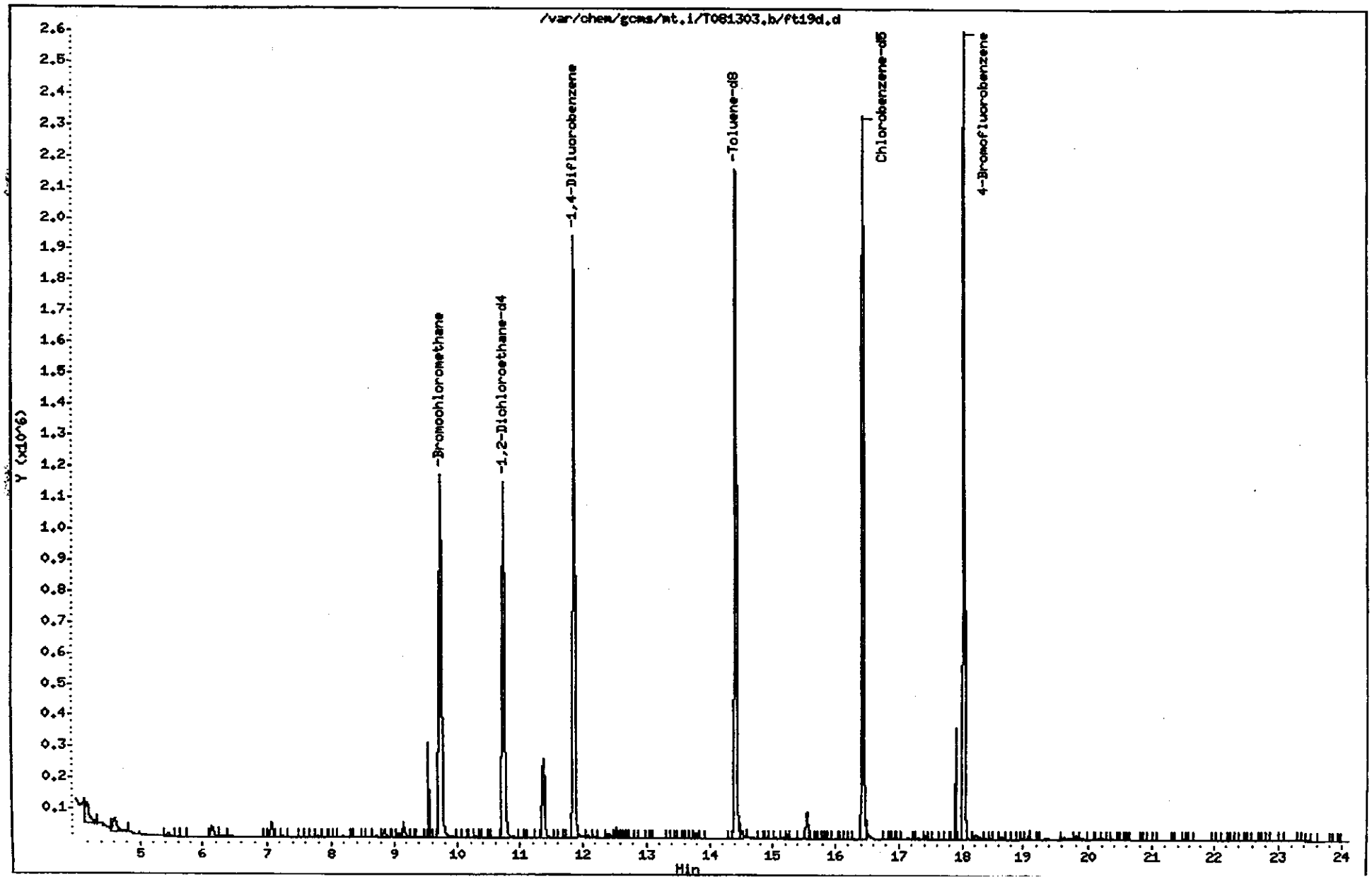
Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: FT19D1AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,500ML

Client SDG: W04085
Fraction: OTHER
Client Smp ID: B17988
Operator: 0691
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.844	98.45	70-130
$ 5 Toluene-d8	10.00	9.898	98.98	70-130
$ 6 4-Bromofluorobenze	10.00	10.34	103.39	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d
Date : 13-AUG-2003 20:39
Client ID: B17988
Sample Info: FT19D1AA,1.92,0,,
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d

Date : 13-AUG-2003 20:39

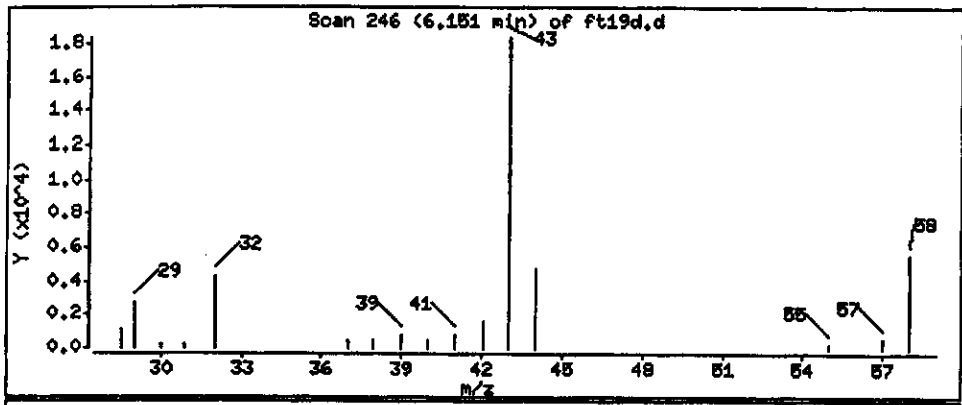
Client ID: B17988 Instrument: mt.i

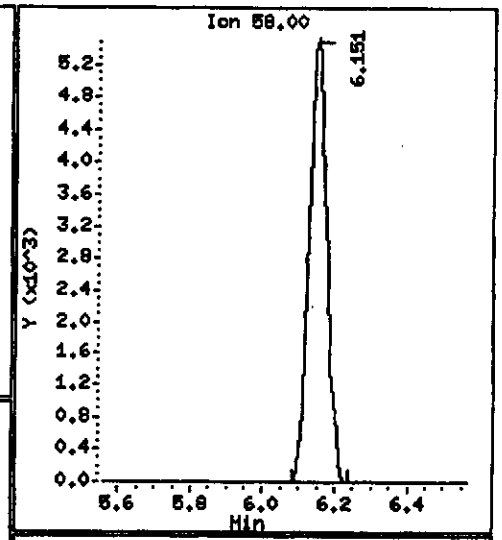
Sample Info: FT19D1AA,1.92,0,,

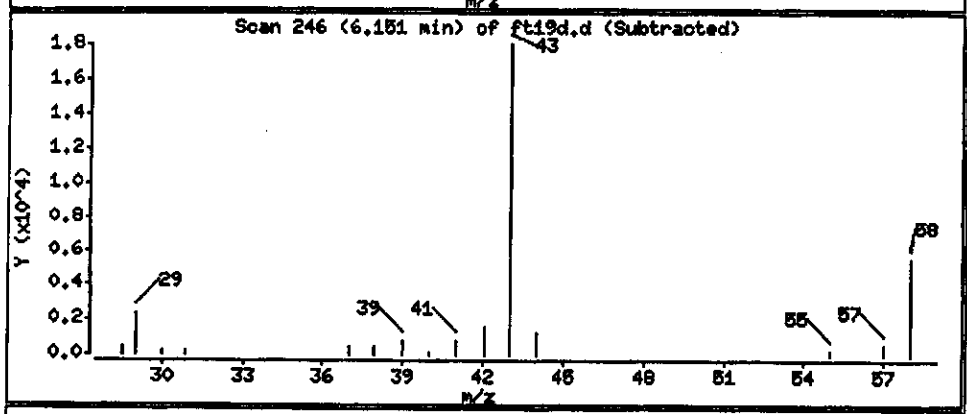
Volume Injected (uL): 500.0 Operator: 0691

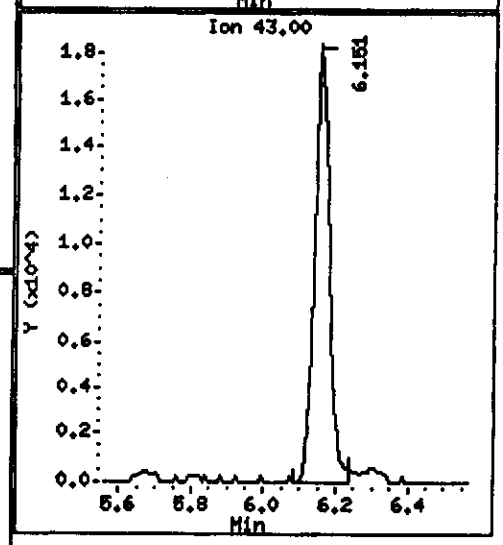
Column phase: DB-5 Column diameter: 0.32

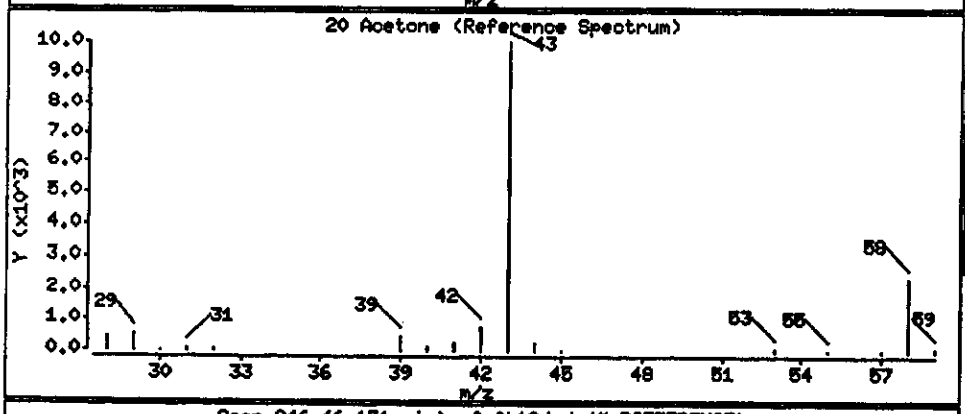
20 Acetone Concentration: 2.770 ppb(v/v)

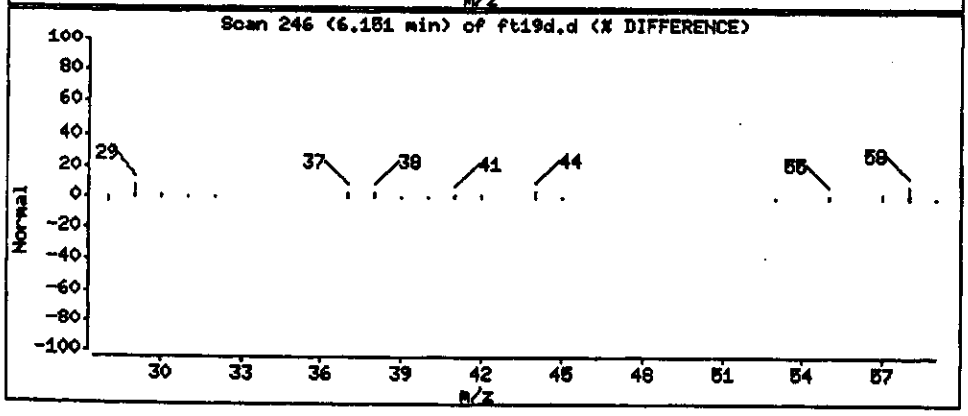












Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d

Date : 13-AUG-2003 20:39

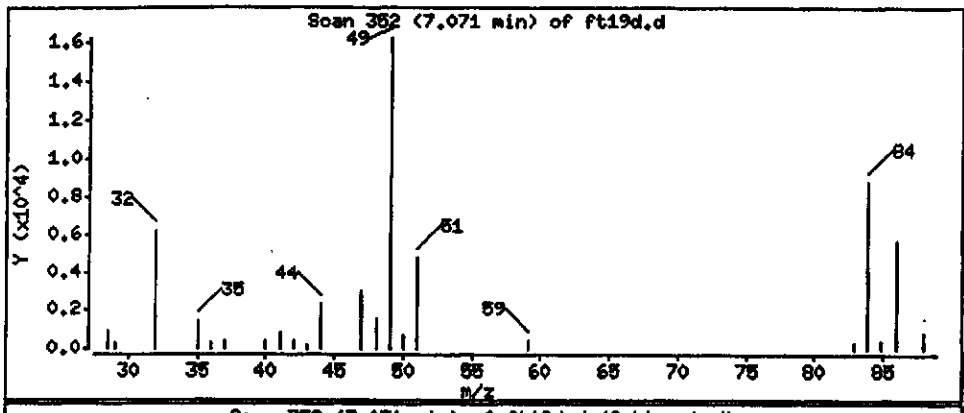
Client ID: B17988 Instrument: mt.i

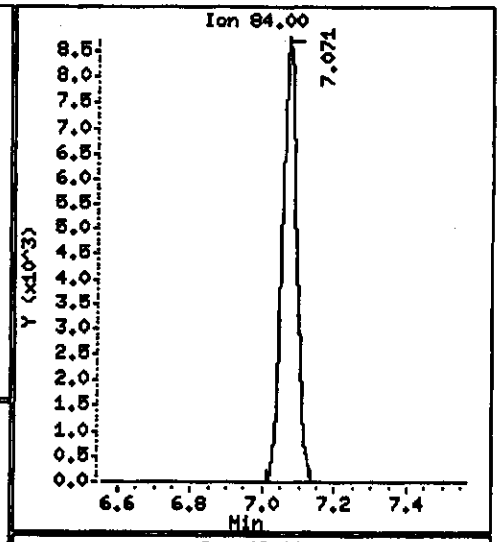
Sample Info: FT19D1AA,1.92,0,,

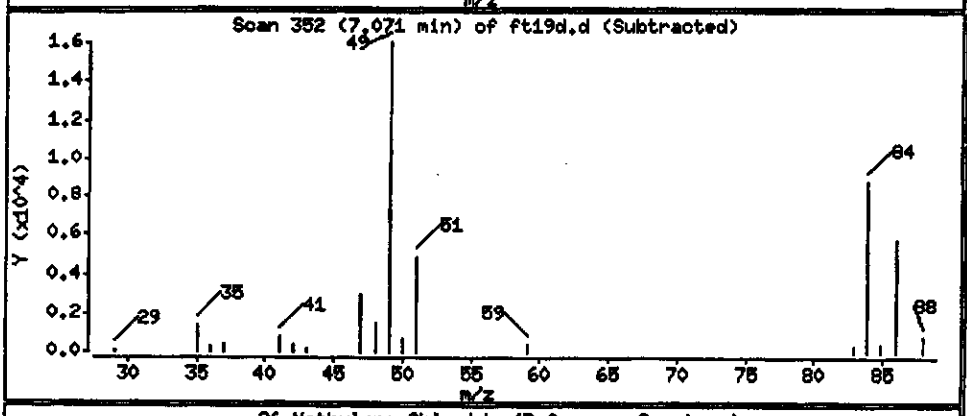
Volume Injected (uL): 500.0 Operator: 0691

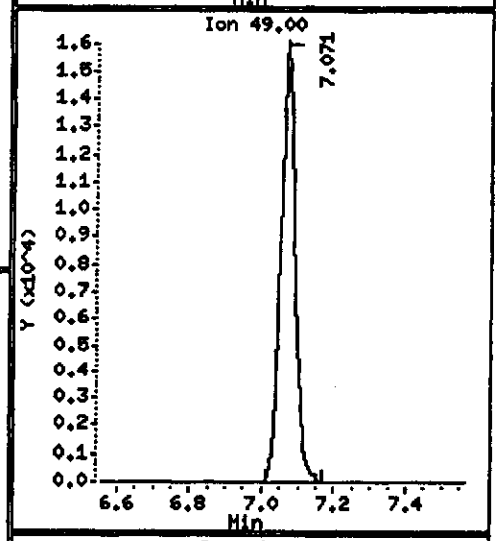
Column phase: DB-5 Column diameter: 0.32

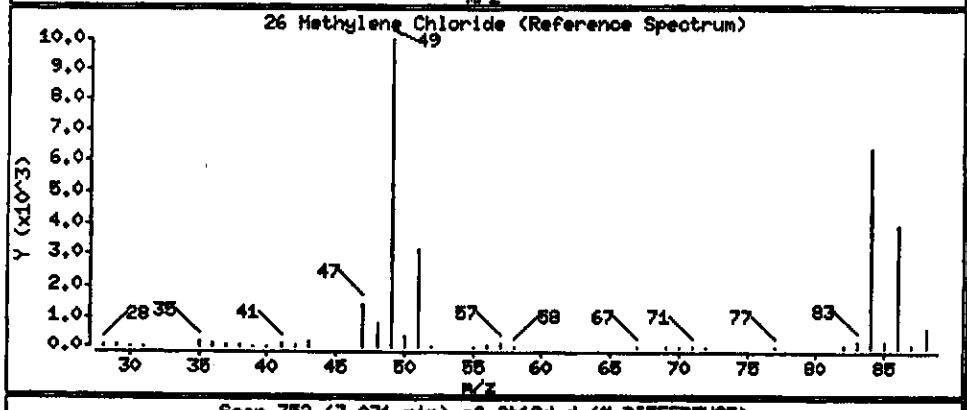
26 Methylene Chloride Concentration: 1.024 ppb(v/v)

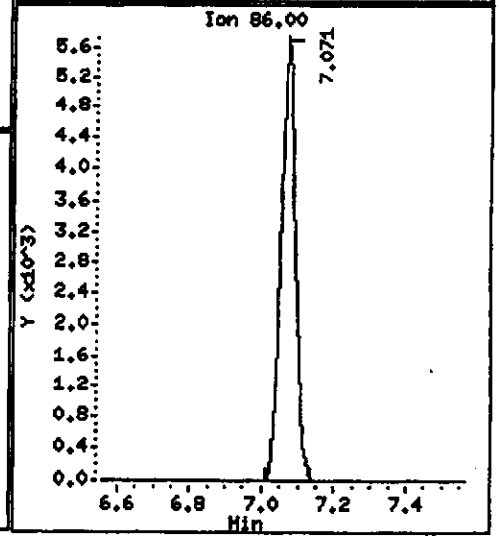


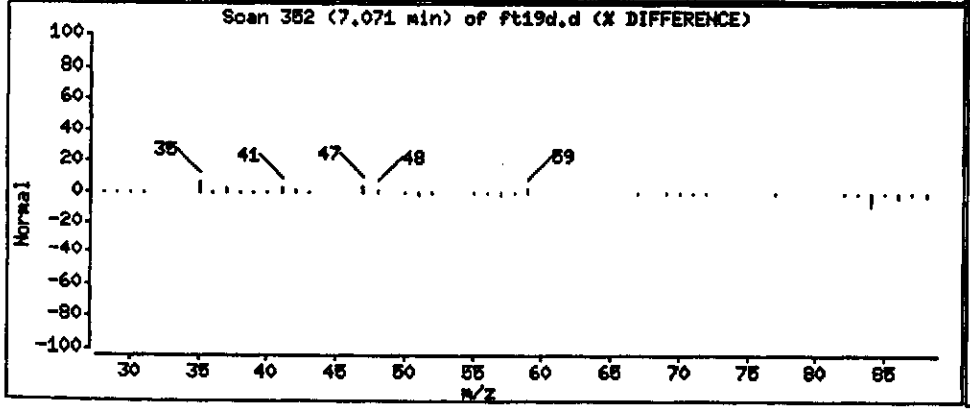












Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d

Date : 13-AUG-2003 20:39

Client ID: B17988

Instrument: mt.i

Sample Info: FT19D1AA,1.92,0,,

Volume Injected (uL): 500.0

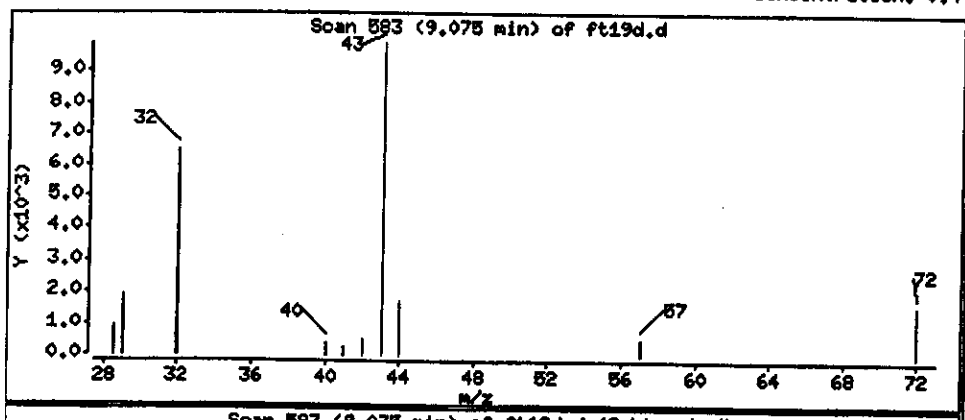
Operator: 0691

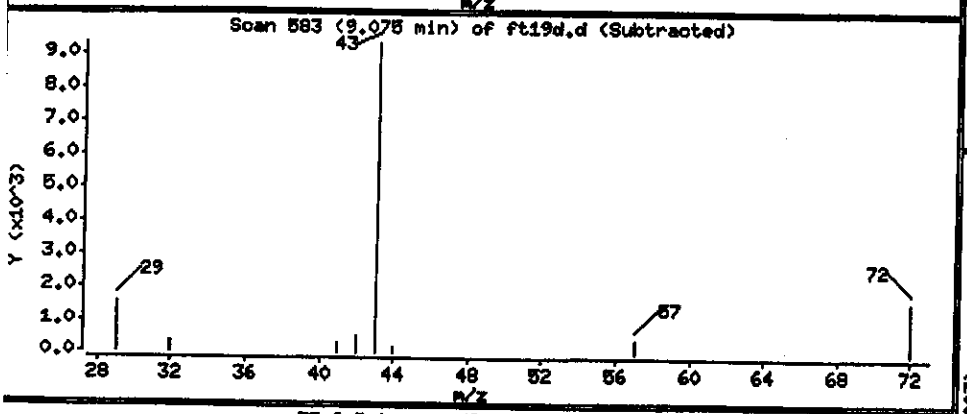
Column phase: DB-5

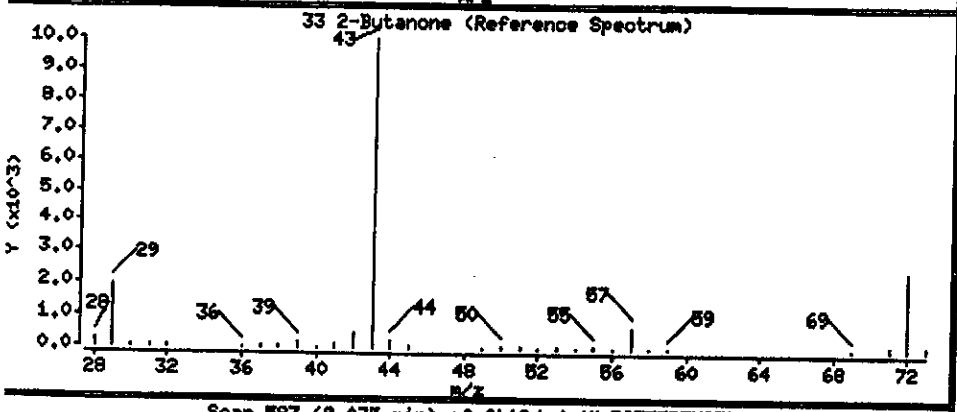
Column diameter: 0.32

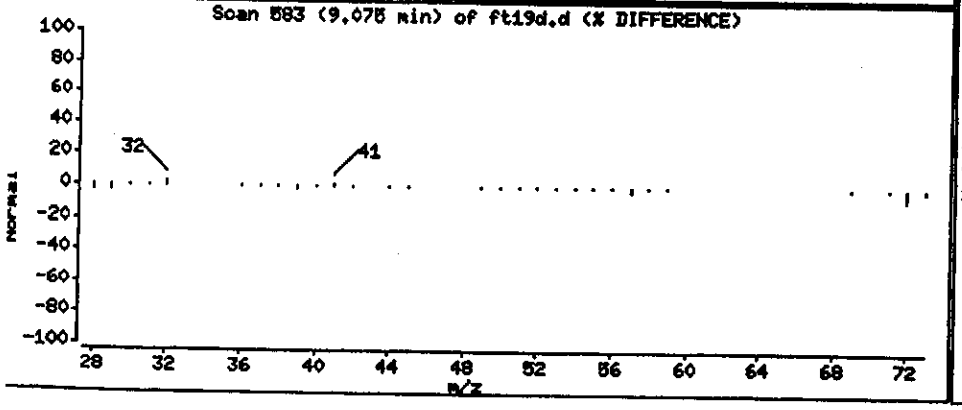
33 2-Butanone

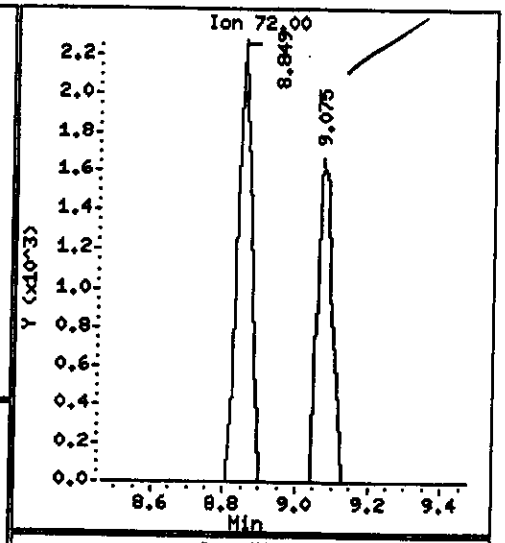
Concentration: 0.4451 ppb(v/v)

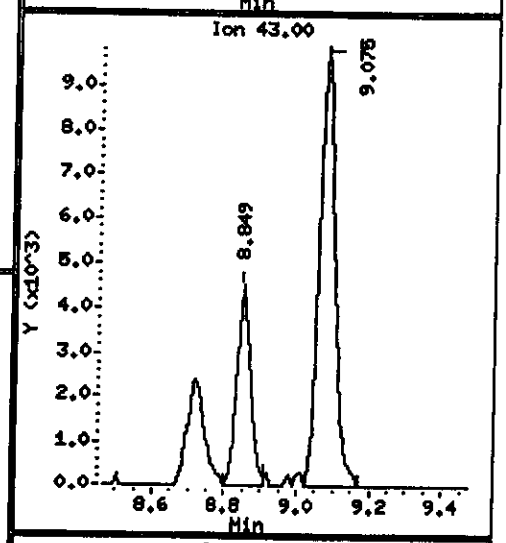


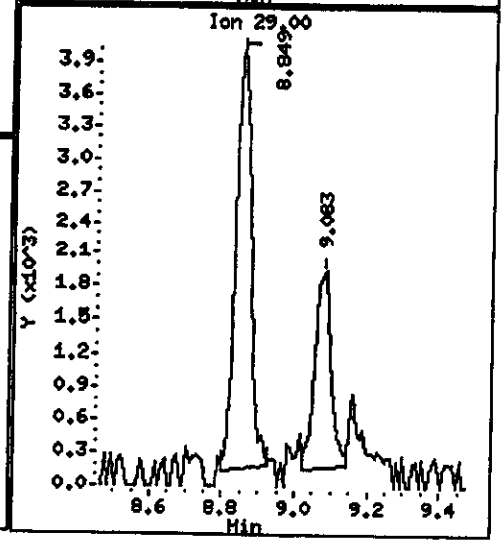












Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d

Date : 13-AUG-2003 20:39

Client ID: B17988

Instrument: mt.i

Sample Info: FT19D1AA,1.92,0,,

Volume Injected (uL): 500.0

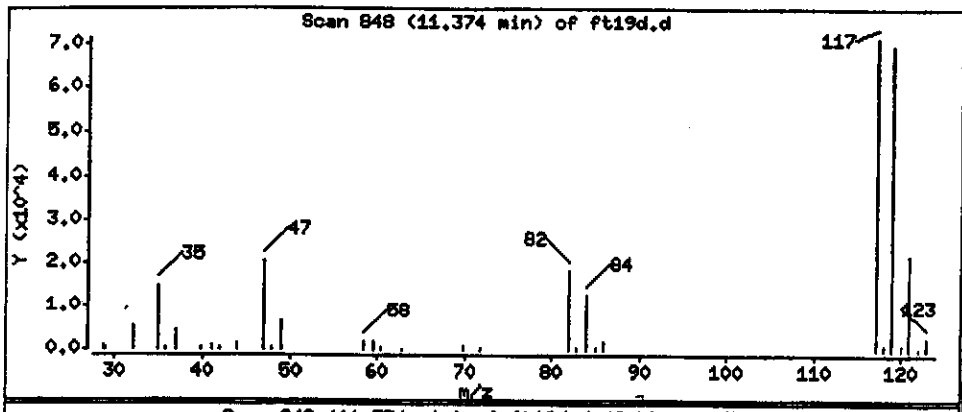
Operator: 0691

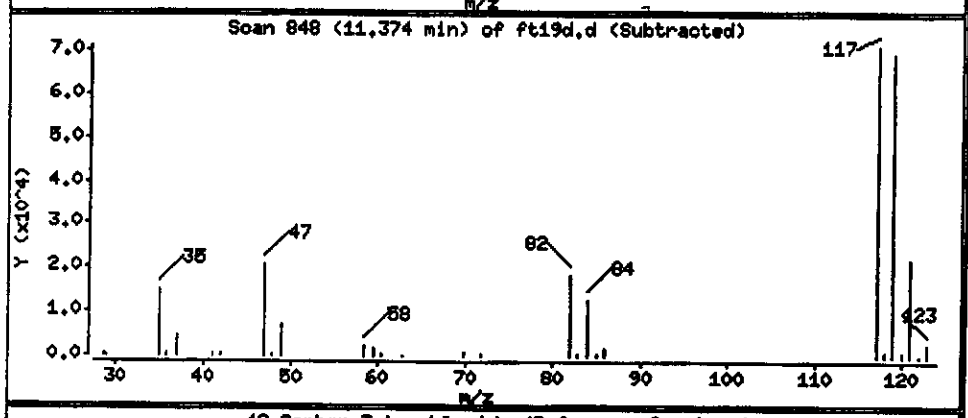
Column phase: DB-5

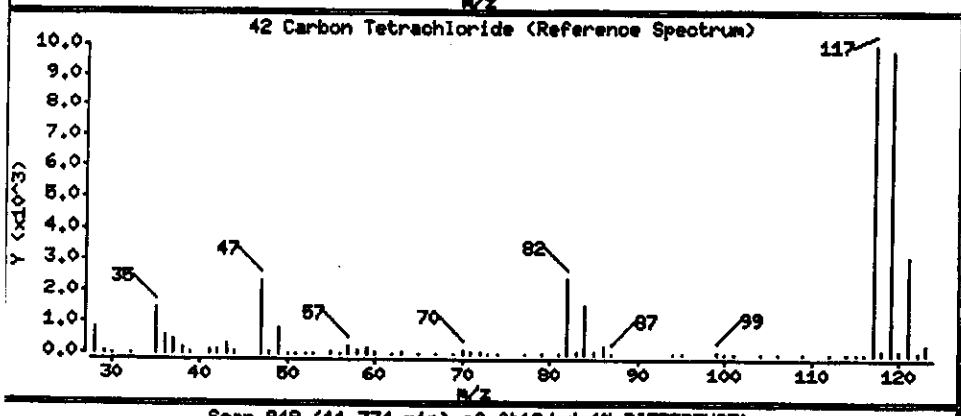
Column diameter: 0.32

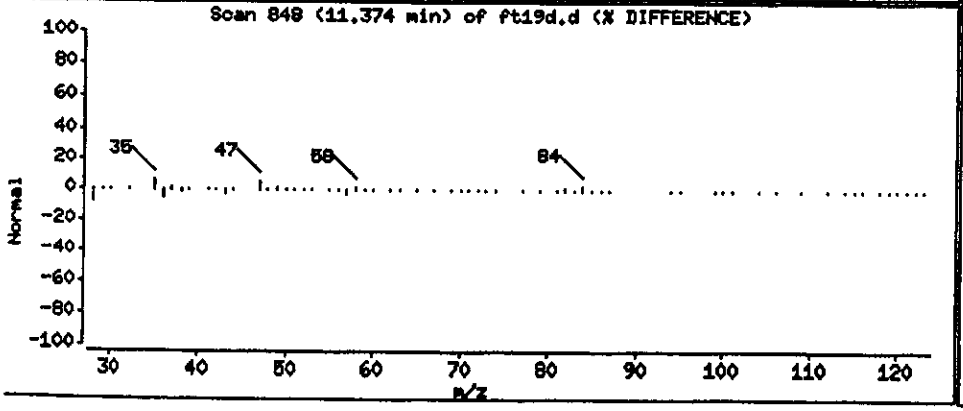
42 Carbon Tetrachloride

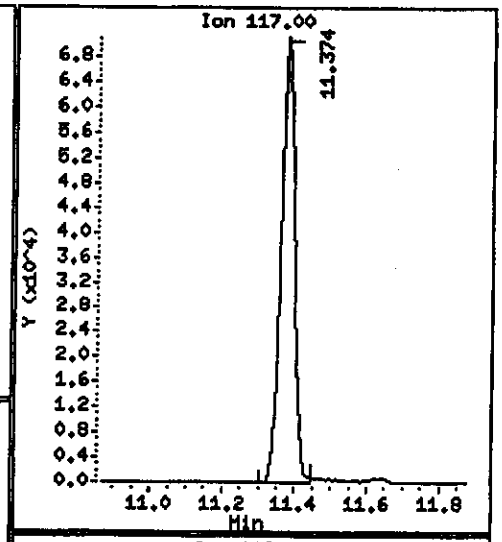
Concentration: 4.868 ppb(v/v)

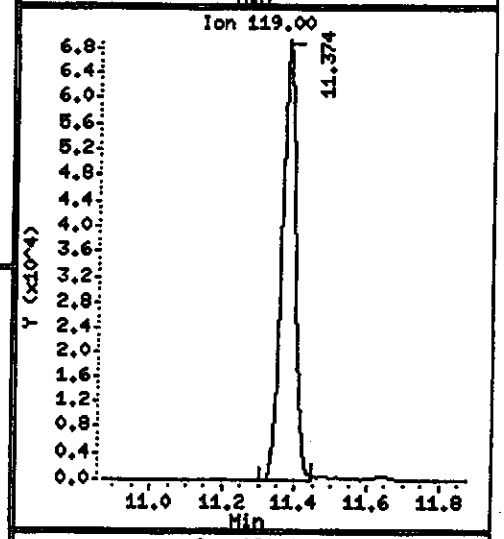


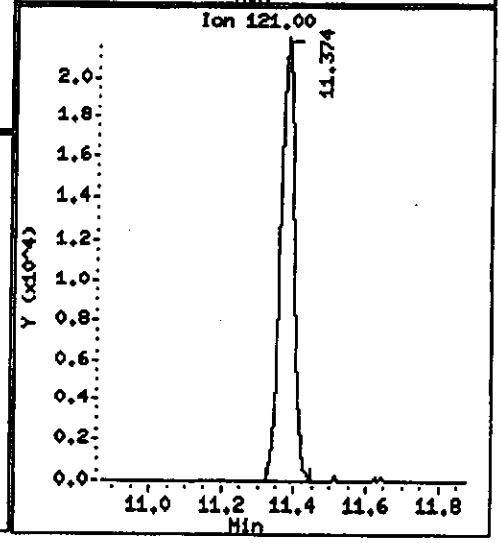












Data File: /var/chem/gcms/mt.i/T081303.b/ft19d.d

Date : 13-AUG-2003 20:39

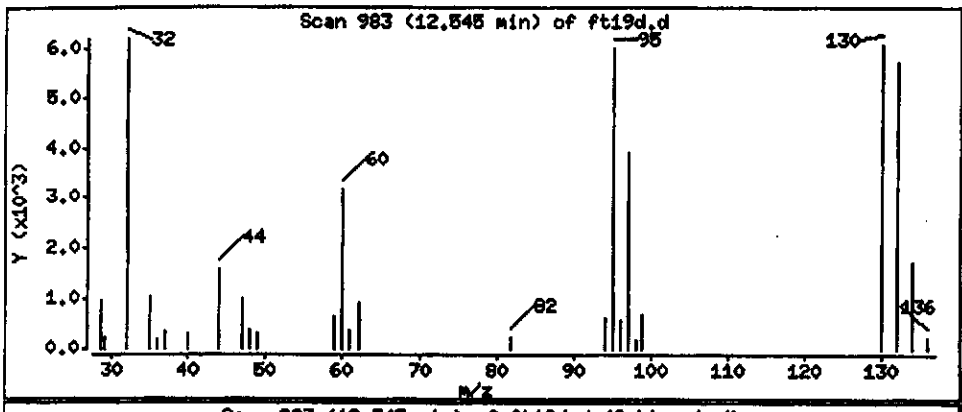
Client ID: B17988 Instrument: mt.i

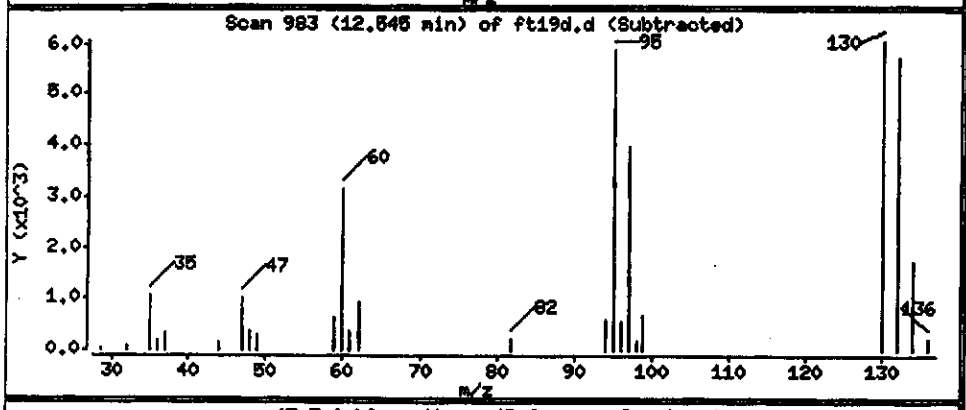
Sample Info: FT19D1AA,1.92,0,,

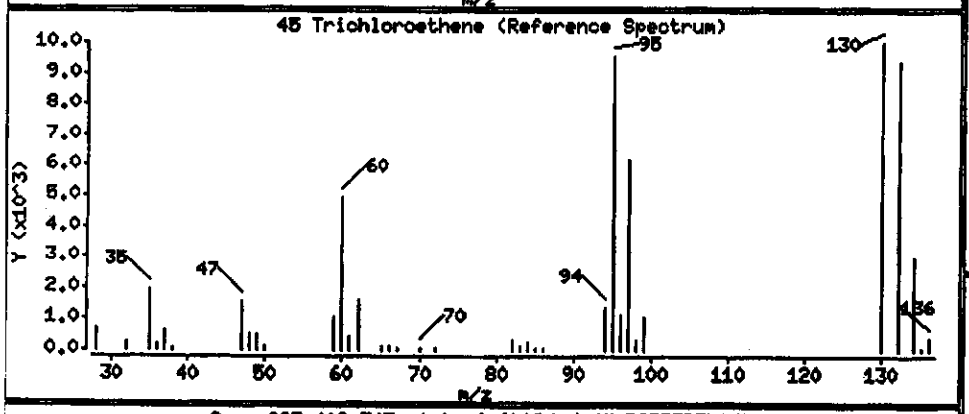
Volume Injected (uL): 500.0 Operator: 0691

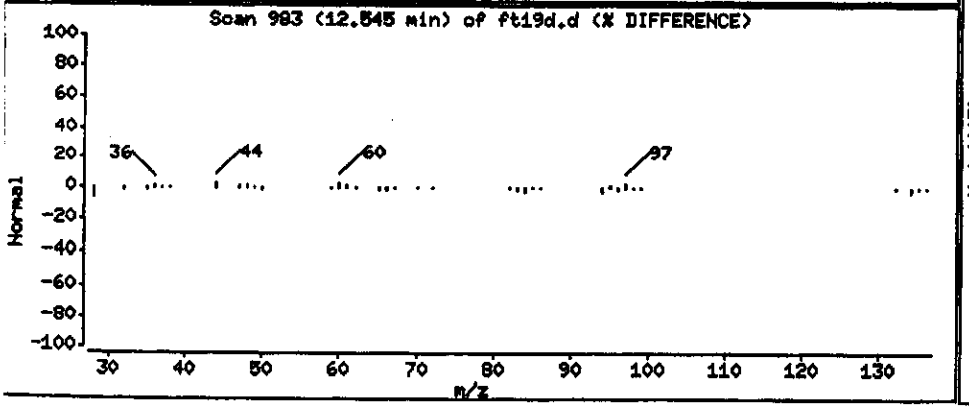
Column phase: DB-5 Column diameter: 0.32

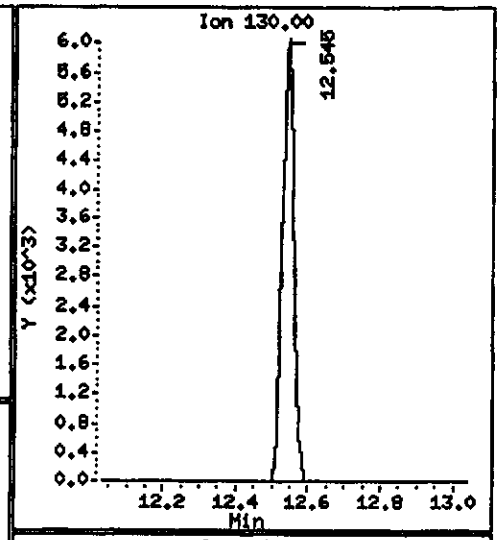
45 Trichloroethene Concentration: 0.5360 ppb(v/v)

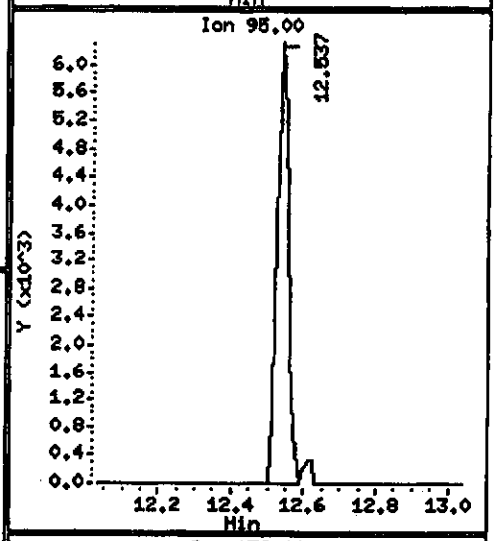


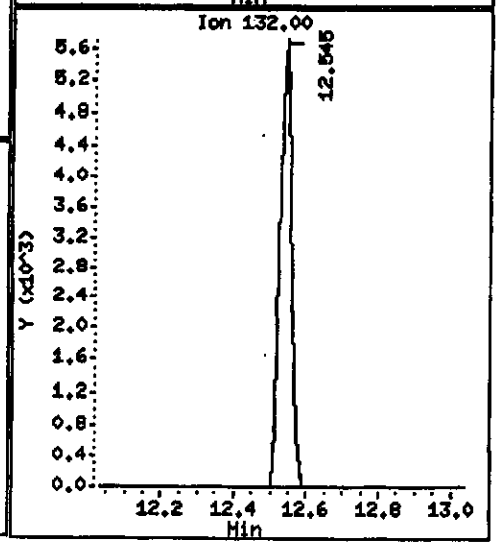












FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: FT19D1AC
Dilution factor: 1.92

Date Received: 07/24/03
Date Extracted:08/13/03
Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17988 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	9.6	U
56-23-5	Carbon tetrachloride	5.4	
67-66-3	Chloroform	0.38	U
75-09-2	Methylene chloride	1.1	
127-18-4	Tetrachloroethene	0.38	U
79-01-6	Trichloroethene	0.54	
78-93-3	2-Butanone (MEK)	0.96	U

Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d
Report Date: 18-Aug-2003 20:01

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081303.b/ft19dd.d
Lab Smp Id: FT19D1AC Client Smp ID: B17988 DUP
Inj Date : 13-AUG-2003 21:23
Operator : 0691 Inst ID: mt.i
Smp Info : FT19D1AC,1.92,0,,
Misc Info : T081303,LA,FHI.sub,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 19:02 jarmanc Quant Type: ISTD
Cal Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
Als bottle: 4 QC Sample: SAMPLE DUPLICATE
Dil Factor: 1.92000
Integrator: HP RTE Compound Sublist: FHI.sub
Target Version: 3.50
Processing Host: qmidhp01

OK WJ 8/18/03

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	9.739	9.735	(1.000)	373733	10.0000	
* 2 1,4-Difluorobenzene	114	11.865	11.860	(1.000)	1689614	10.0000	
* 3 Chlorobenzene-d5	117	16.429	16.424	(1.000)	1424540	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.737	10.732	(0.905)	406067	10.4152	10.42
$ 5 Toluene-d8	98	14.407	14.402	(0.877)	1491650	10.0992	10.10
$ 6 4-Bromofluorobenzene	95	18.016	18.020	(1.097)	1044220	10.7647	10.76
20 Acetone	58	6.147	6.065	(0.631)	17976	1.46823	2.819 2.770
26 Methylene Chloride	84	7.067	7.062	(0.726)	23828	0.54914	1.054
33 2-Butanone	72	9.071	8.971	(0.931)	4301	0.22784	0.4375
42 Carbon Tetrachloride	117	11.379	11.374	(1.168)	205763	2.81434	5.404 4.568 16.76%
45 Trichloroethene	130	12.542	12.537	(1.057)	12829	0.28202	0.5415

Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d
Report Date: 18-Aug-2003 20:01

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ft19dd.d
Lab Smp Id: FT19D1AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,500ML

Calibration Date: 13-AUG-2003
Calibration Time: 09:03
Client Smp ID: B17988 DUP
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	363584	216332	510836	373733	2.79
2 1,4-Difluorobenze	1747786	1039933	2455639	1689614	-3.33
3 Chlorobenzene-d5	1413217	840864	1985570	1424540	0.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.74	0.05
2 1,4-Difluorobenze	11.86	11.53	12.19	11.87	0.04
3 Chlorobenzene-d5	16.42	16.09	16.75	16.43	0.03

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

Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d
Report Date: 18-Aug-2003 20:01

STL Knoxville

RECOVERY REPORT

Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: FT19D1AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,500ML

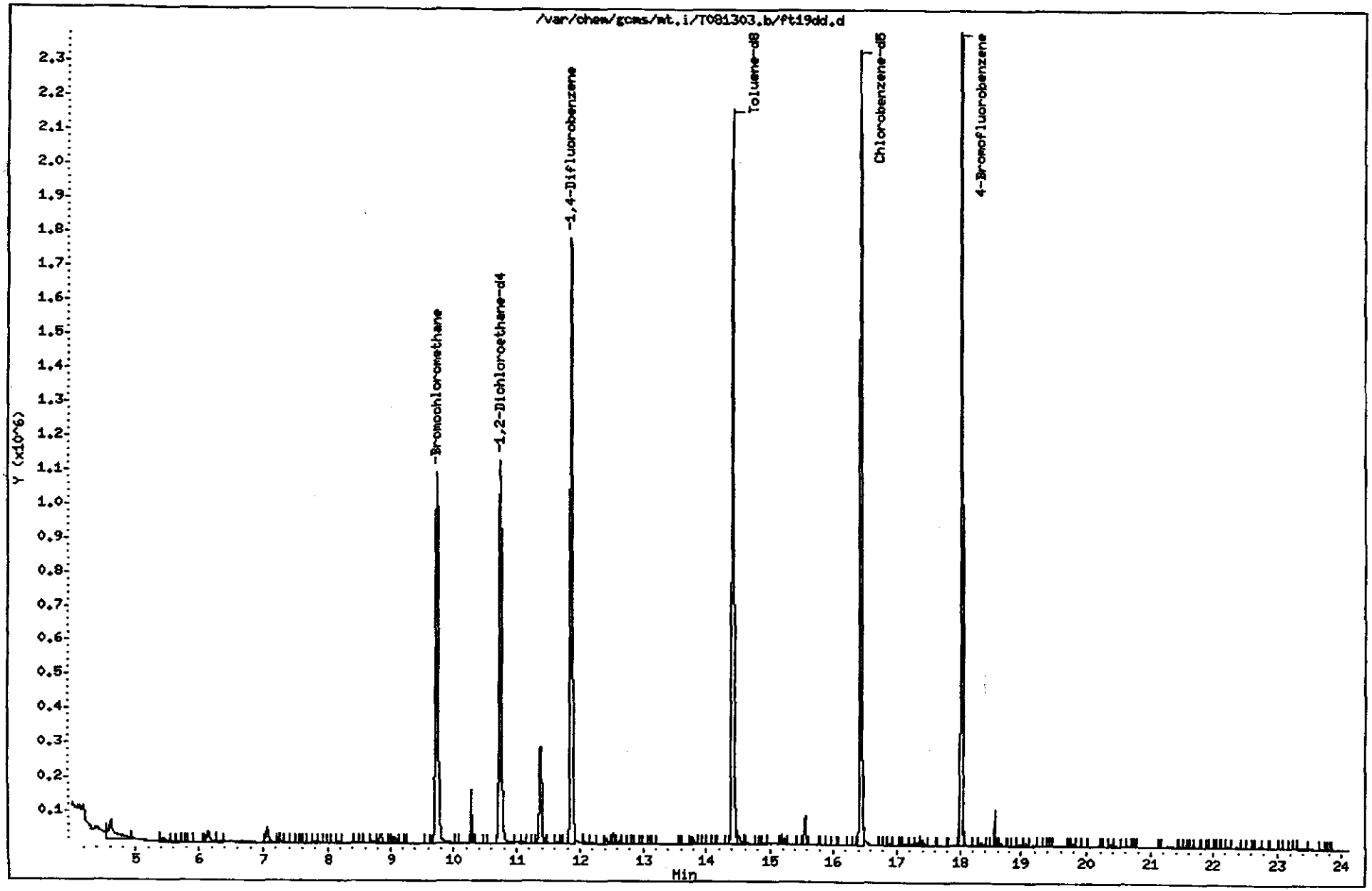
Client SDG: W04085
Fraction: OTHER
Client Smp ID: B17988 DUP
Operator: 0691
SampleType: SAMPLE DUPLICATE{♥╟ z·8 @
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.42	104.15	70-130
$ 5 Toluene-d8	10.00	10.10	100.99	70-130
$ 6 4-Bromofluorobenze	10.00	10.76	107.65	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d
Date : 13-AUG-2003 21:23
Client ID: B17988 DUP
Sample Info: FT19D1AC,1,92,0,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d

Date : 13-AUG-2003 21:23

Client ID: B17988 DUP

Instrument: mt.i

Sample Info: FT19D1AC,1.92,0,,

Volume Injected (uL): 500.0

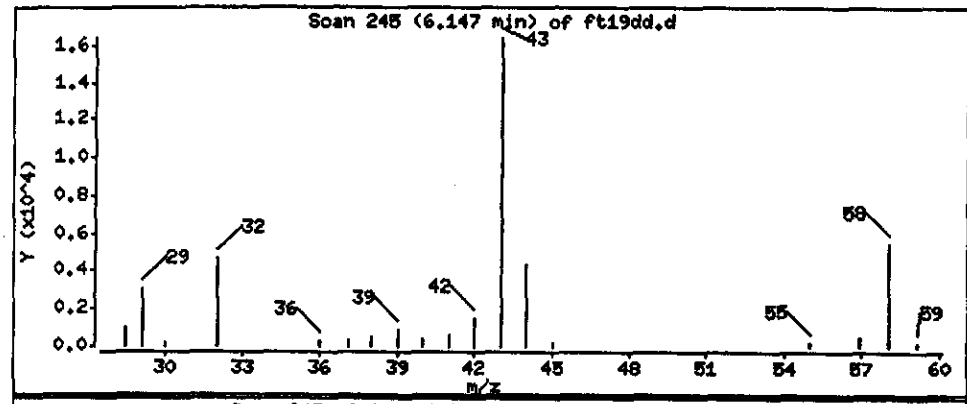
Operator: 0691

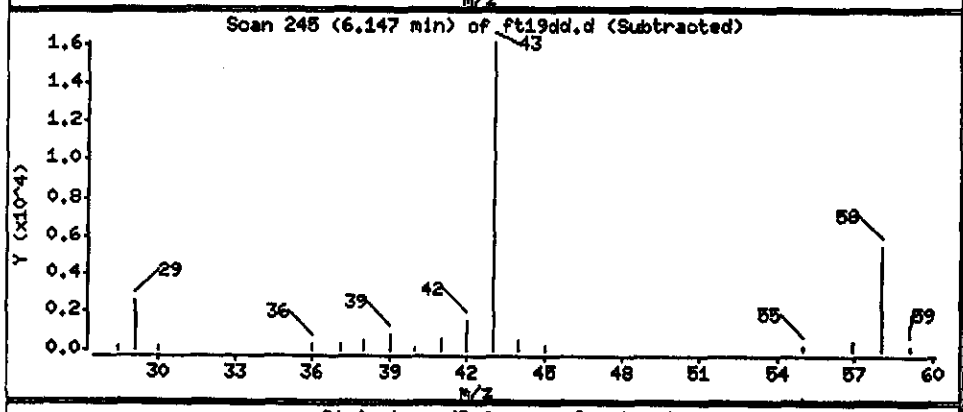
Column phase: DB-5

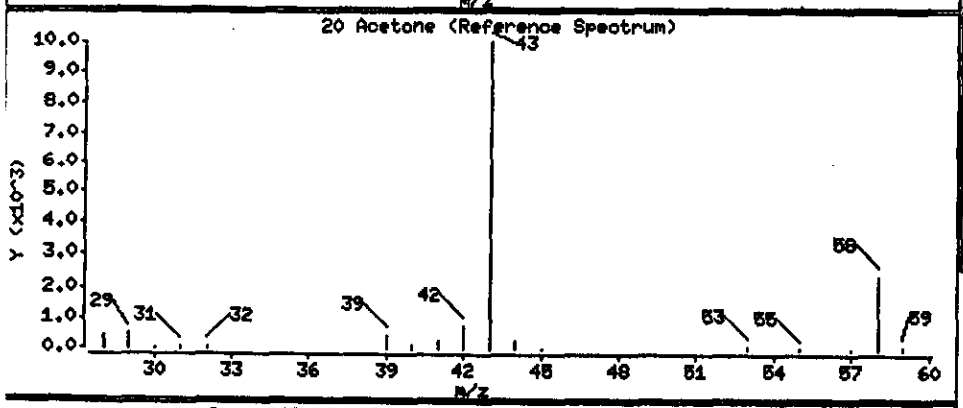
Column diameter: 0.32

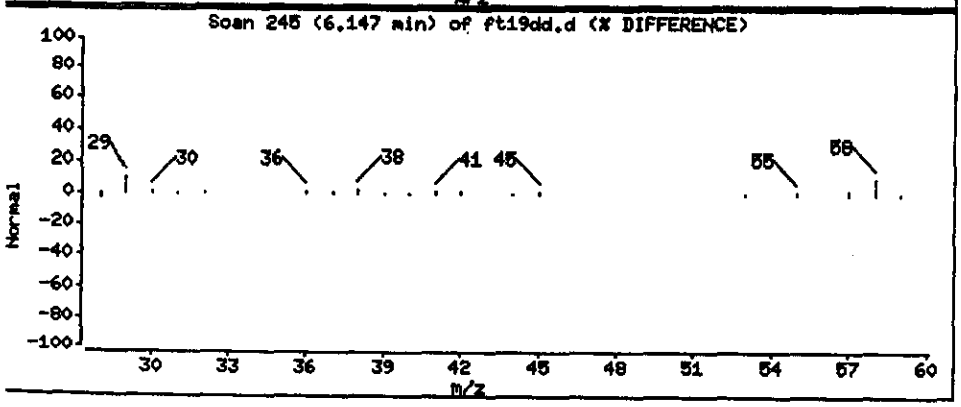
20 Acetone

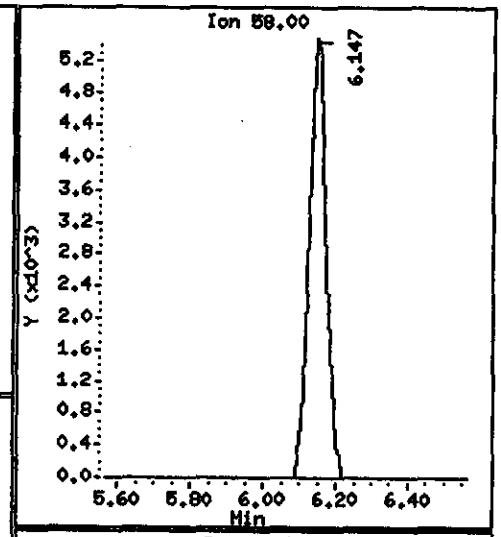
Concentration: 2.819 ppb(v/v)

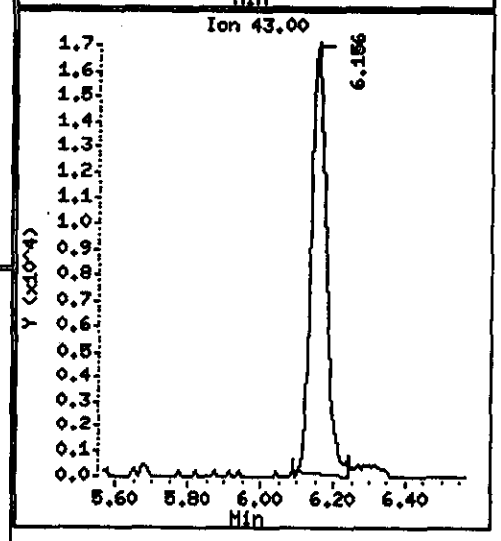












Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d

Date : 13-AUG-2003 21:23

Client ID: B17988 DUP

Instrument: mt.i

Sample Info: FT19D1AC,1.92,0,,

Volume Injected (uL): 500.0

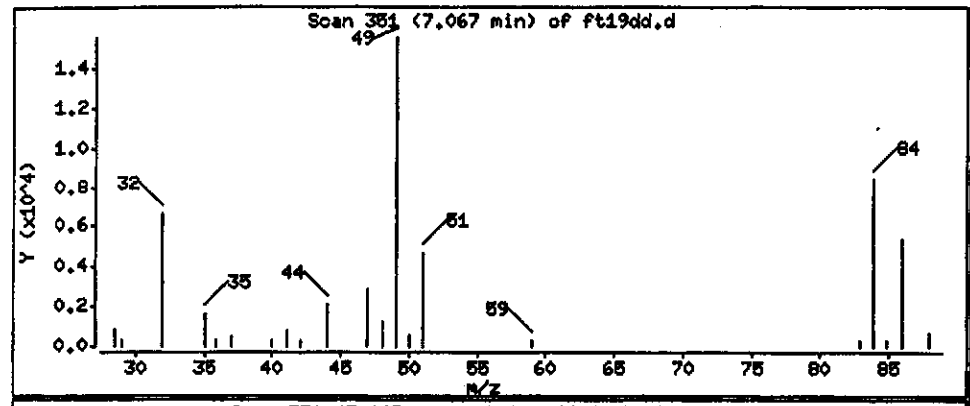
Operator: 0691

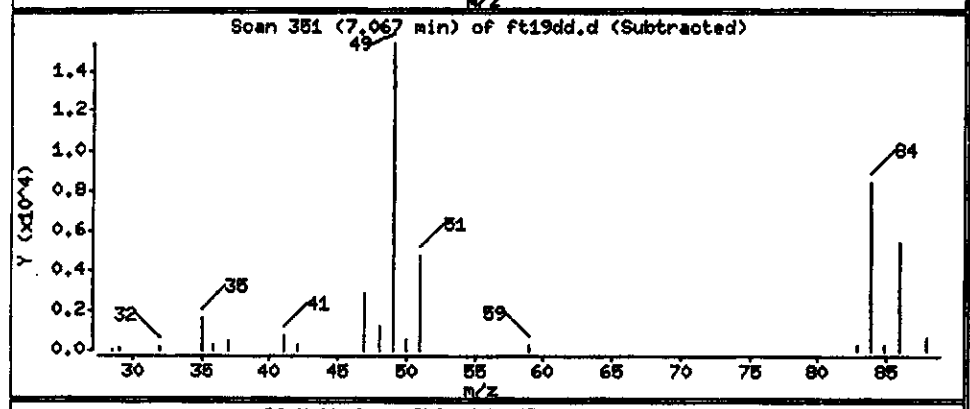
Column phase: DB-5

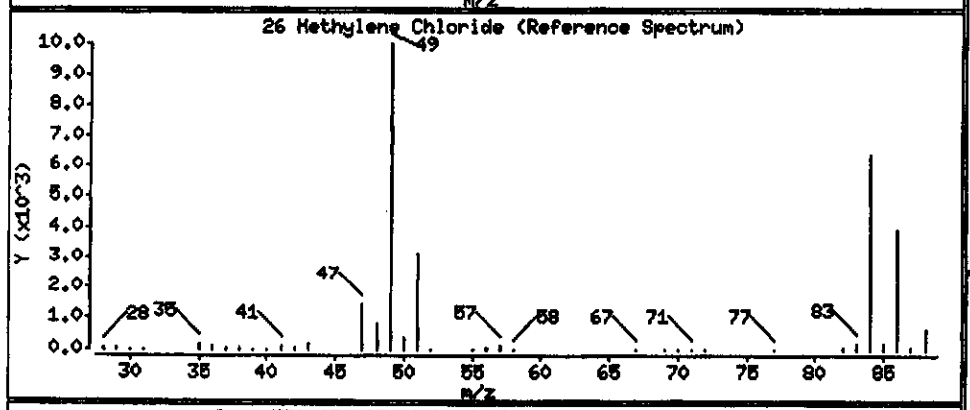
Column diameter: 0.32

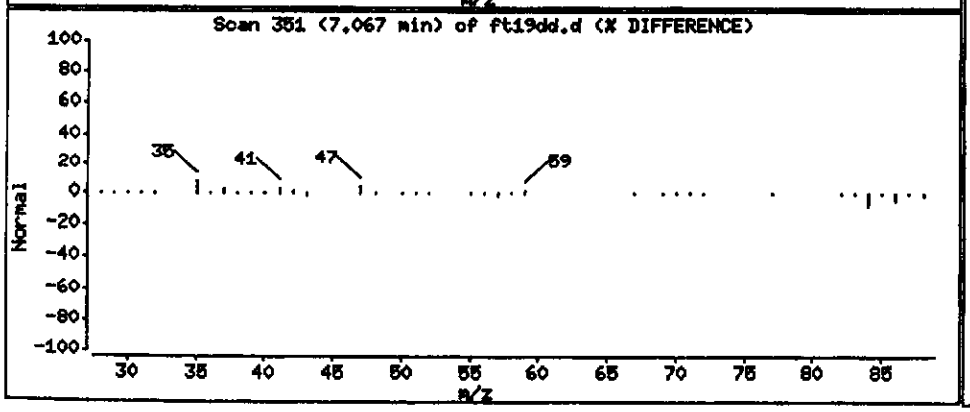
26 Methylene Chloride

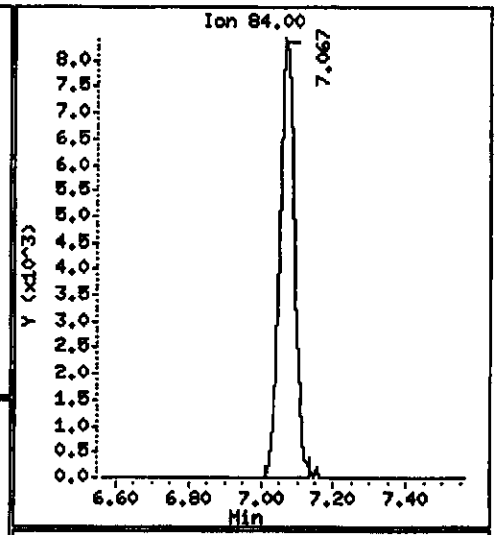
Concentration: 1.054 ppb(v/v)

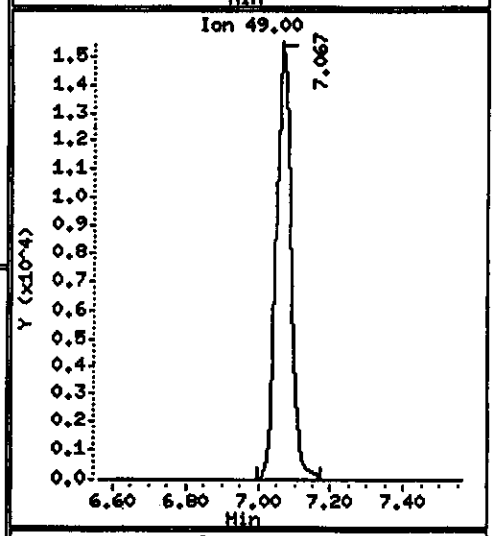


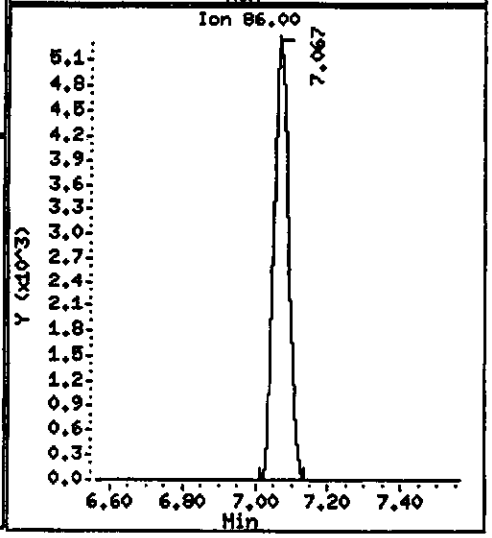












Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d

Date : 13-AUG-2003 21:23

Client ID: B17988 DUP

Instrument: mt.i

Sample Info: FT19D1AC,1.92,0,,

Volume Injected (uL): 500.0

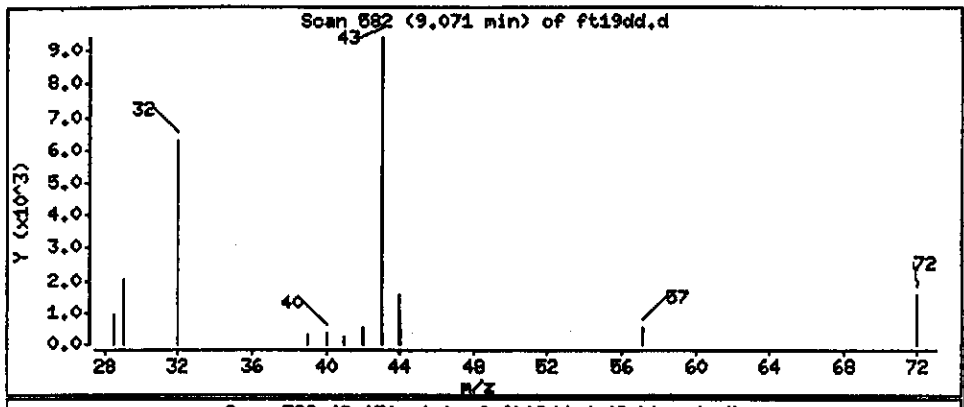
Operator: 0691

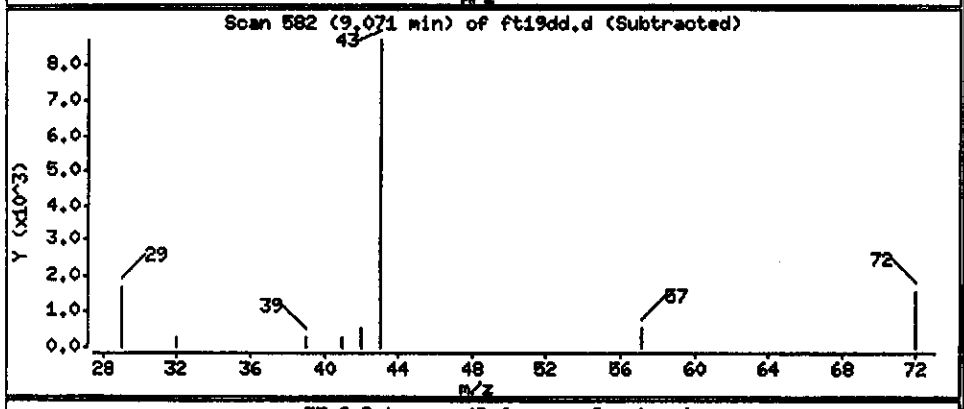
Column phase: DB-5

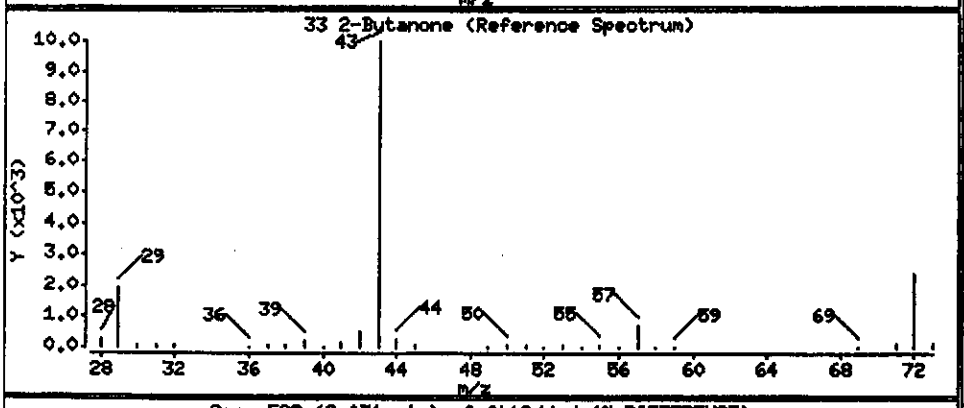
Column diameter: 0.32

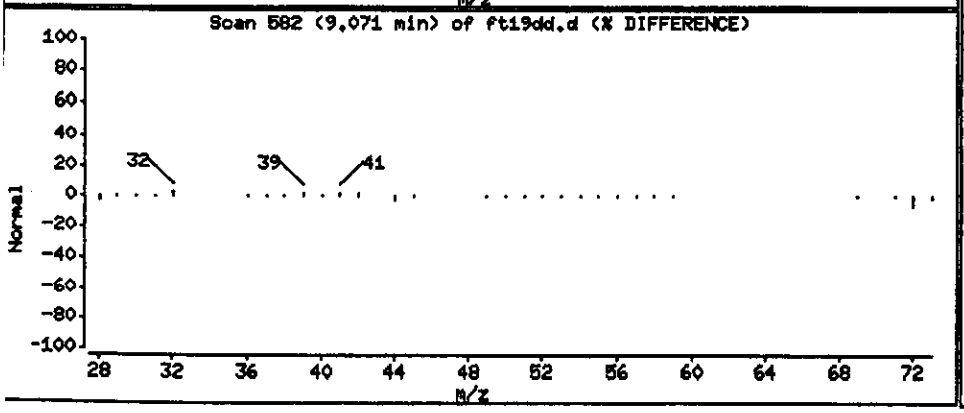
33 2-Butanone

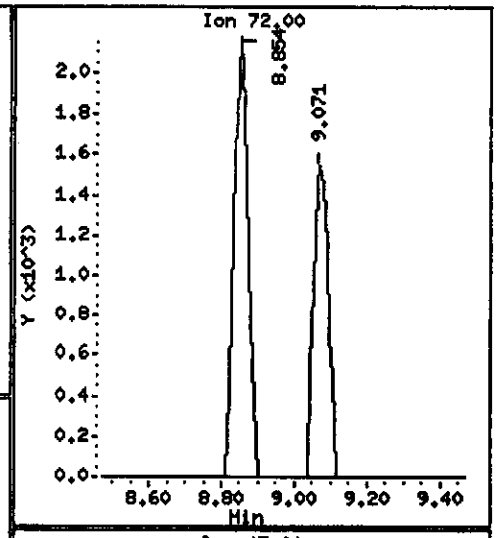
Concentration: 0.4376 ppb(v/v)

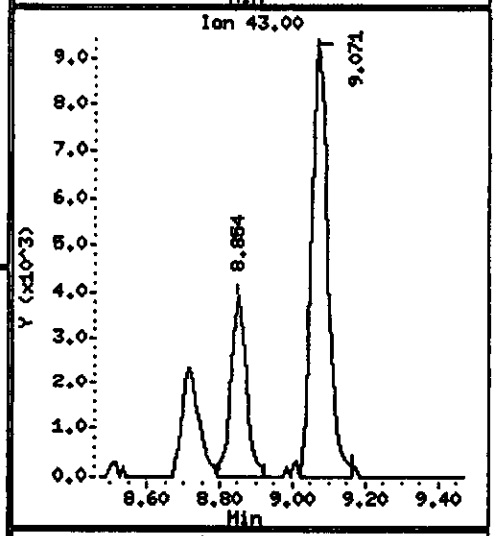


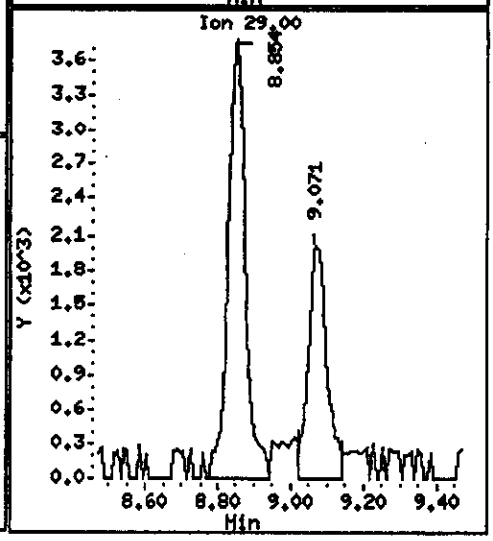












Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d

Date : 13-AUG-2003 21:23

Client ID: B17988 DUP

Instrument: mt.i

Sample Info: FT19D1AC,1.92,0,,

Volume Injected (uL): 500.0

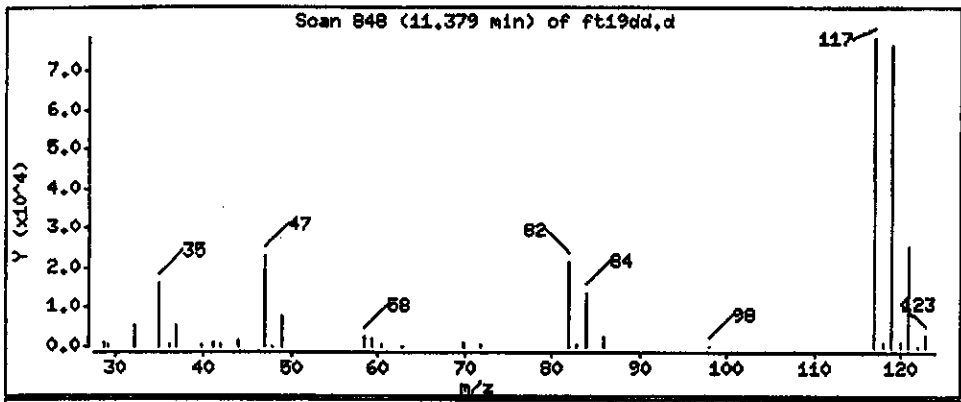
Operator: 0691

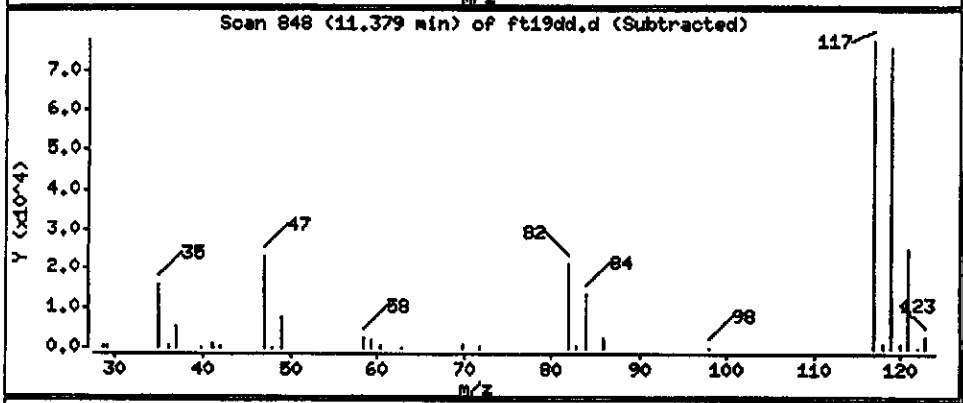
Column phase: DB-5

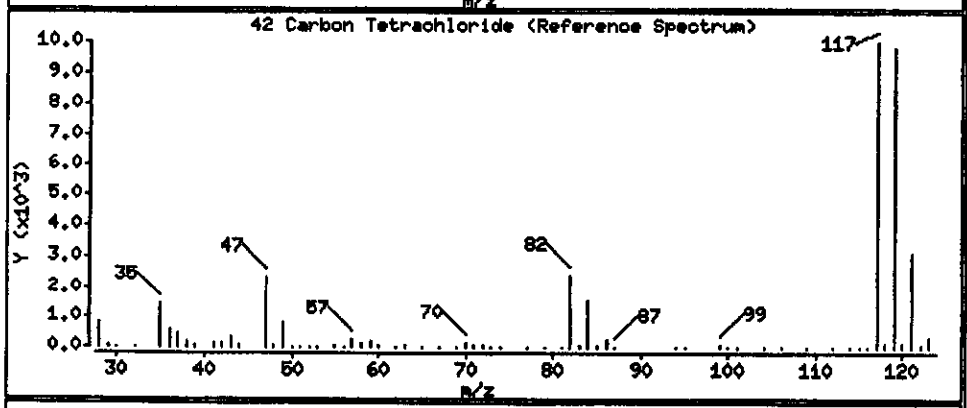
Column diameter: 0.32

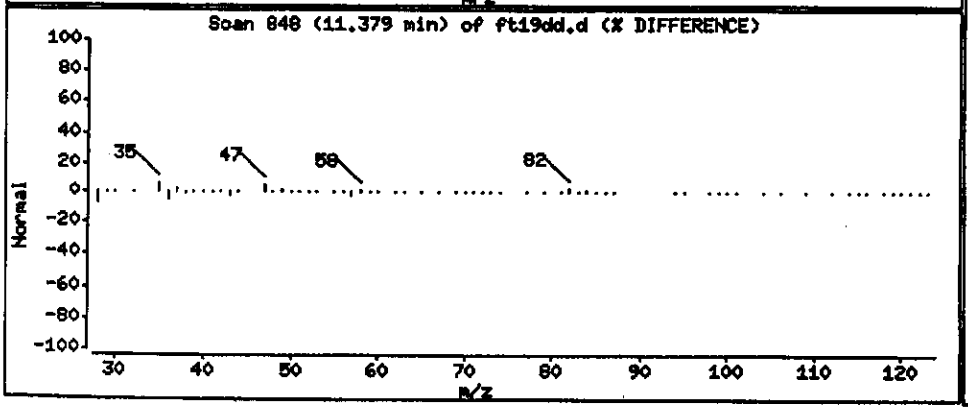
42 Carbon Tetrachloride

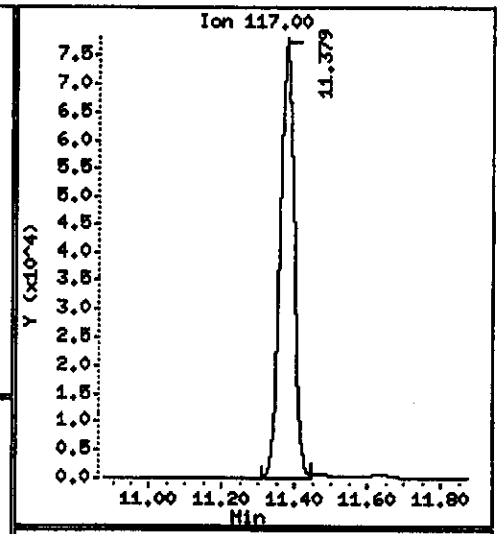
Concentration: 5.404 ppb(v/v)

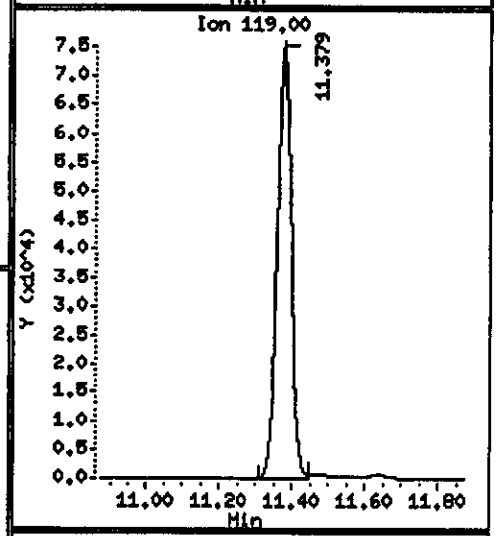


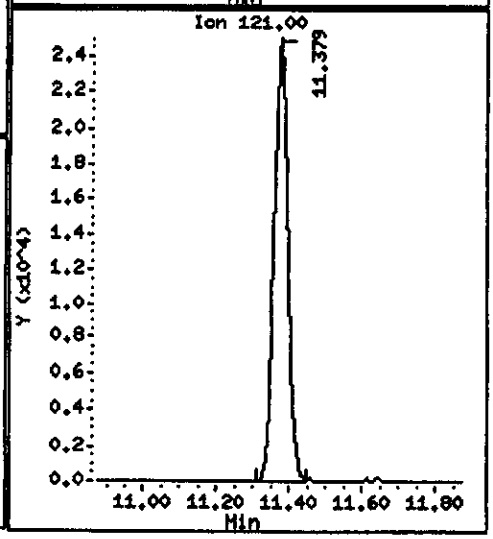












Data File: /var/chem/gcms/mt.i/T081303.b/ft19dd.d

Date : 13-AUG-2003 21:23

Client ID: B17988 DUP

Instrument: mt.i

Sample Info: FT19D1AC,1.92,0,,

Volume Injected (uL): 500.0

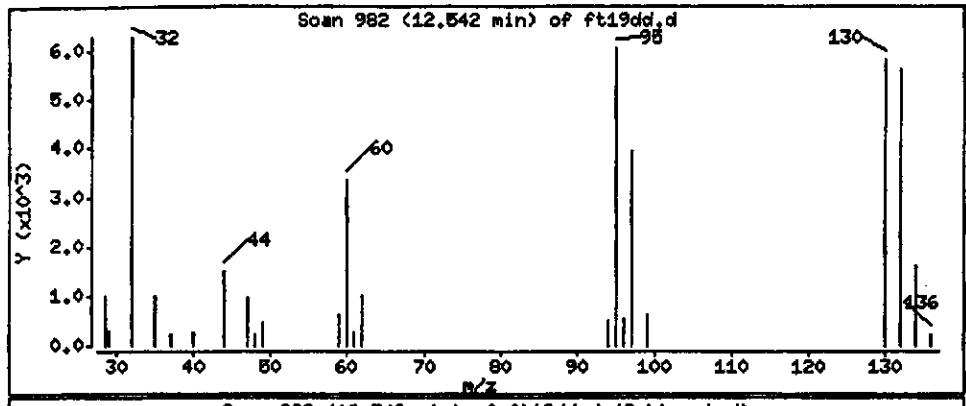
Operator: 0691

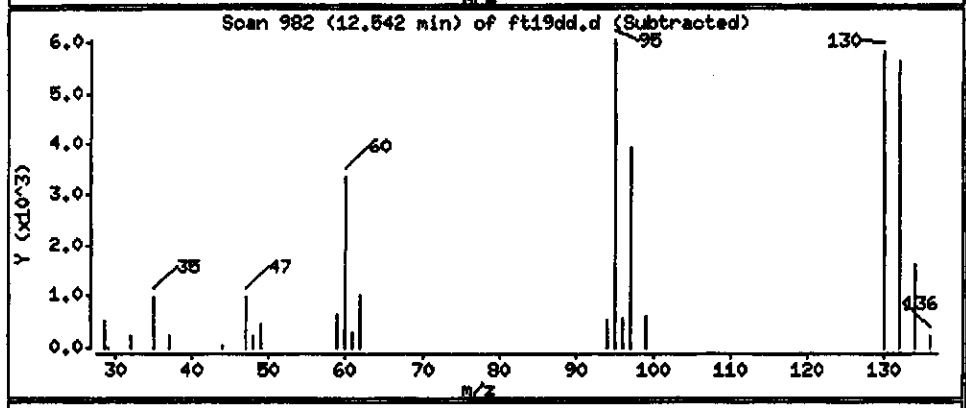
Column phase: DB-5

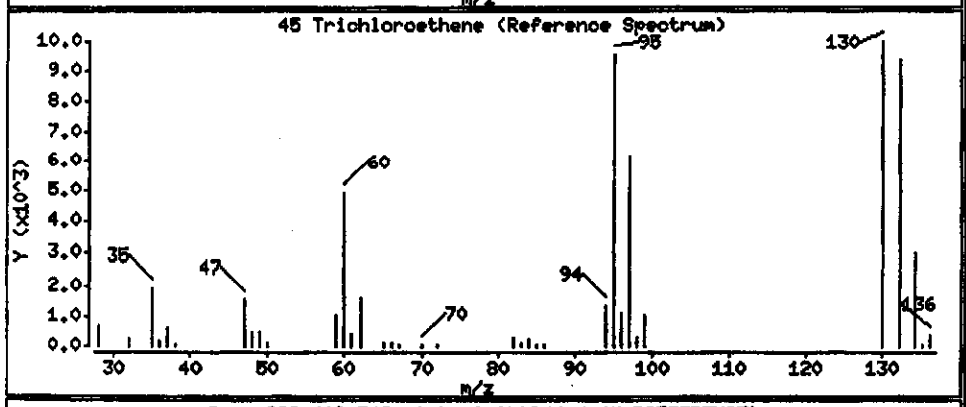
Column diameter: 0.32

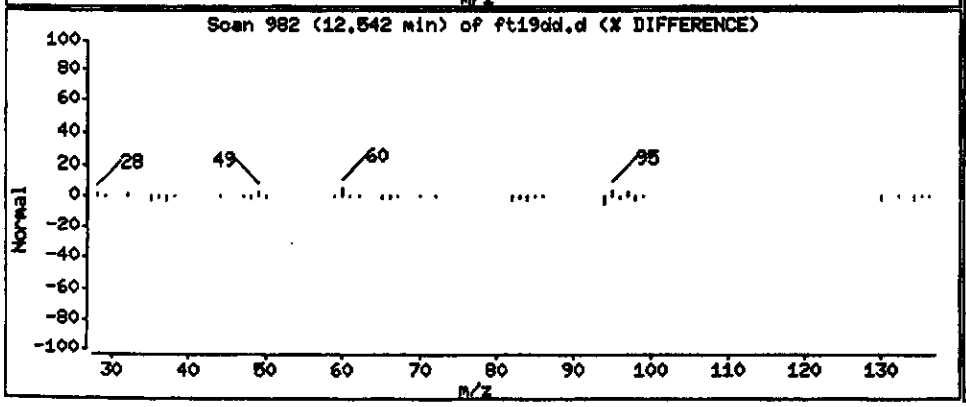
45 Trichloroethene

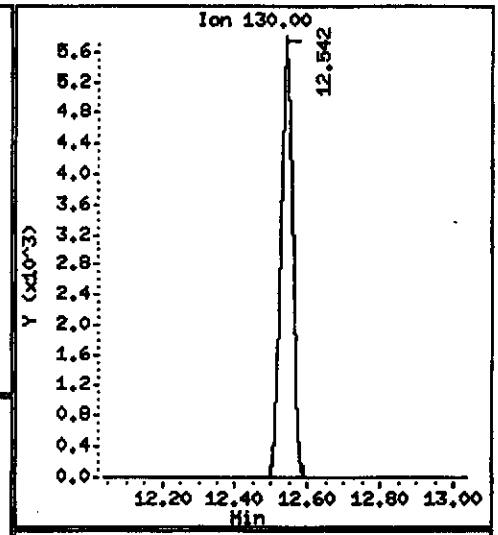
Concentration: 0.5415 ppb(v/v)

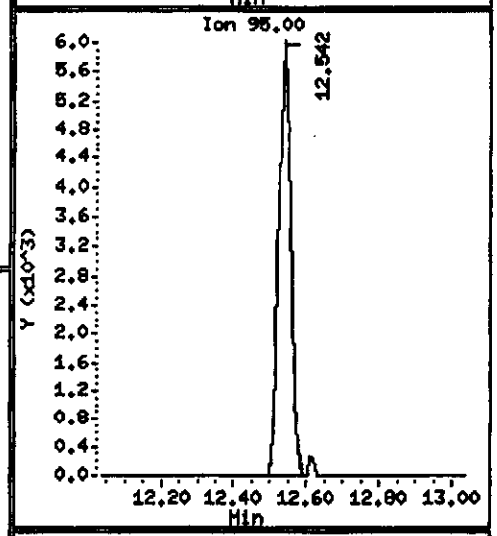


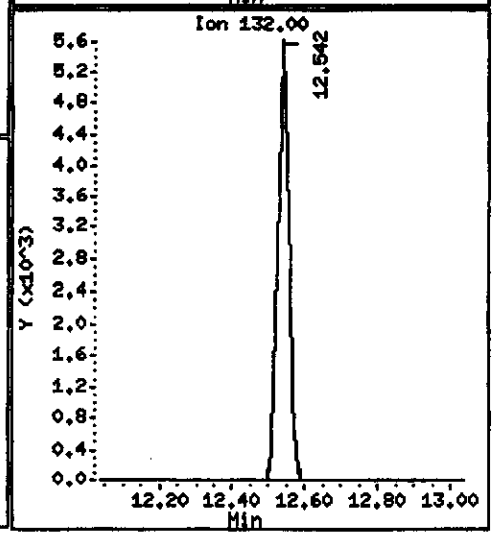












FLUOR HANFORD IC

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3G240298 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL
Work Order: FT19F1AA
Dilution factor: 84.09

Date Received: 07/24/03
Date Extracted:08/13/03
Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: B17989

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	420	U
56-23-5	Carbon tetrachloride	7100	E
67-66-3	Chloroform	100	
75-09-2	Methylene chloride	42	U
127-18-4	Tetrachloroethene	17	U
79-01-6	Trichloroethene	38	
78-93-3	2-Butanone (MEK)	42	U

Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d
Report Date: 18-Aug-2003 19:48

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081303.b/ft19f.d
Lab Smp Id: FT19F1AA Client Smp ID: B17989
Inj Date : 13-AUG-2003 22:02
Operator : 0691 Inst ID: mt.i
Smp Info : FT19F1AA,,0,,
Misc Info : T081303,LA,FHI.sub,,11ML
Comment :
Method : /var/chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 19:02 jarmanc Quant Type: ISTD
Cal Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
Als bottle: 5
Dil Factor: 84.09100
Integrator: HP RTE Compound Sublist: FHI.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	9.740	9.735	(1.000)	362400	10.0000	
* 2 1,4-Difluorobenzene	114	11.866	11.860	(1.000)	1701526	10.0000	
* 3 Chlorobenzene-d5	117	16.430	16.424	(1.000)	1405855	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.738	10.732	(0.905)	401737	10.2320	10.23
$ 5 Toluene-d8	98	14.408	14.402	(0.877)	1473542	10.1092	10.11
$ 6 4-Bromofluorobenzene	95	18.017	18.020	(1.097)	1021955	10.6752	10.68
20 Acetone	58	6.166	6.065	(0.633)	4123	0.34733	29.21
36 Chloroform	83	9.749	9.743	(1.001)	104083	1.22363	102.9
42 Carbon Tetrachloride	117	11.380	11.374	(1.168)	6026911	85.0108	7149(A) E
45 Trichloroethene	130	12.543	12.537	(1.057)	20462	0.44666	37.56

QC Flag Legend

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

Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d
Report Date: 18-Aug-2003 19:48

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ft19f.d
Lab Smp Id: FT19F1AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,11ML

Calibration Date: 13-AUG-2003
Calibration Time: 09:03
Client Smp ID: B17989
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	363584	216332	510836	362400	-0.33
2 1,4-Difluorobenze	1747786	1039933	2455639	1701526	-2.65
3 Chlorobenzene-d5	1413217	840864	1985570	1405855	-0.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.74	0.06
2 1,4-Difluorobenze	11.86	11.53	12.19	11.87	0.05
3 Chlorobenzene-d5	16.42	16.09	16.75	16.43	0.03

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

Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d
Report Date: 18-Aug-2003 19:48

STL Knoxville

RECOVERY REPORT

Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: FT19F1AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,FHI.sub,,11ML

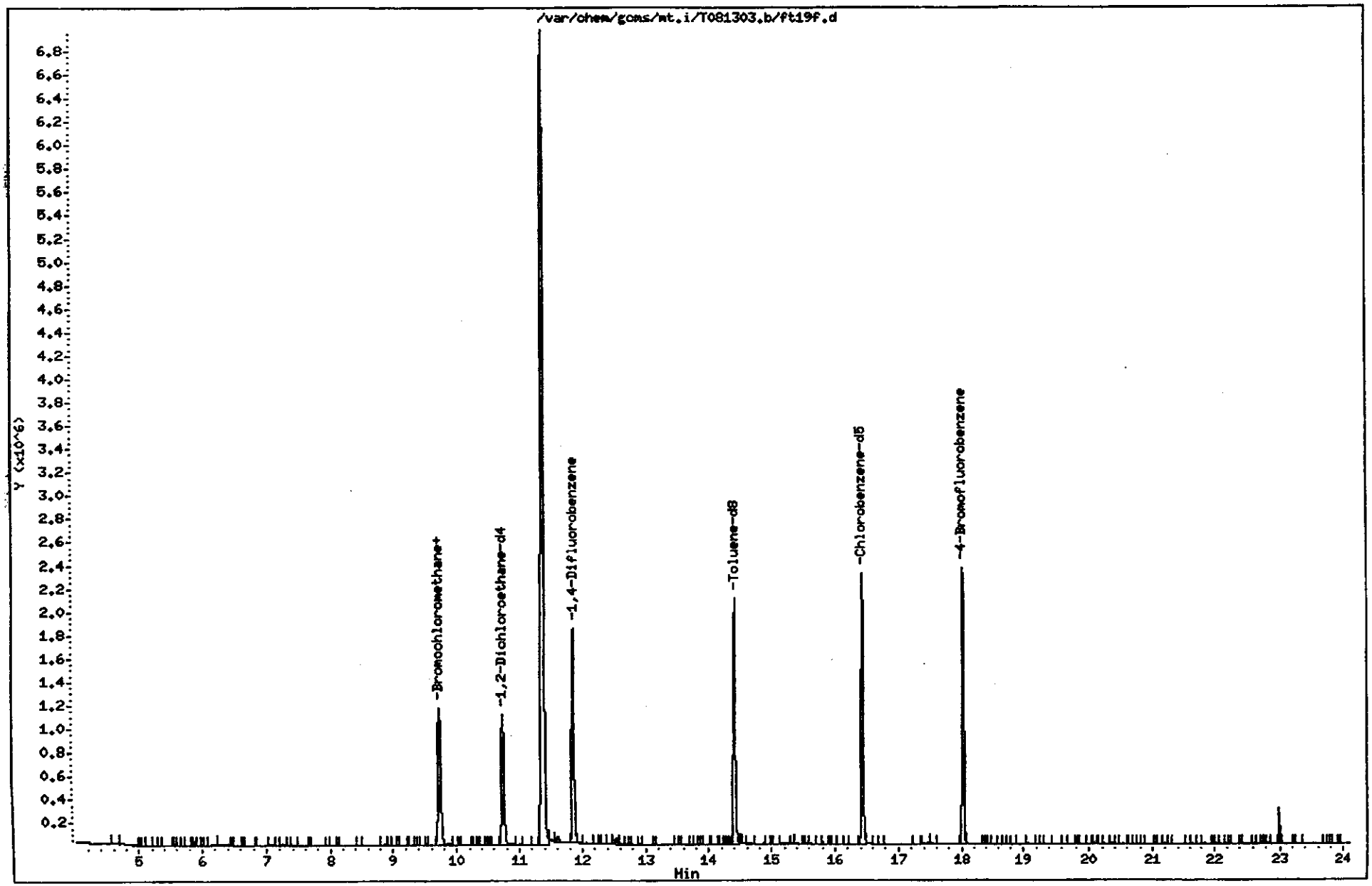
Client SDG: W04085
Fraction: OTHER
Client Smp ID: B17989
Operator: 0691
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.23	102.32	70-130
$ 5 Toluene-d8	10.00	10.11	101.09	70-130
$ 6 4-Bromofluorobenze	10.00	10.68	106.75	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d
Date : 13-AUG-2003 22:02
Client ID: B17989
Sample Info: FT19F1AA,,0,,
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d

Date : 13-AUG-2003 22:02

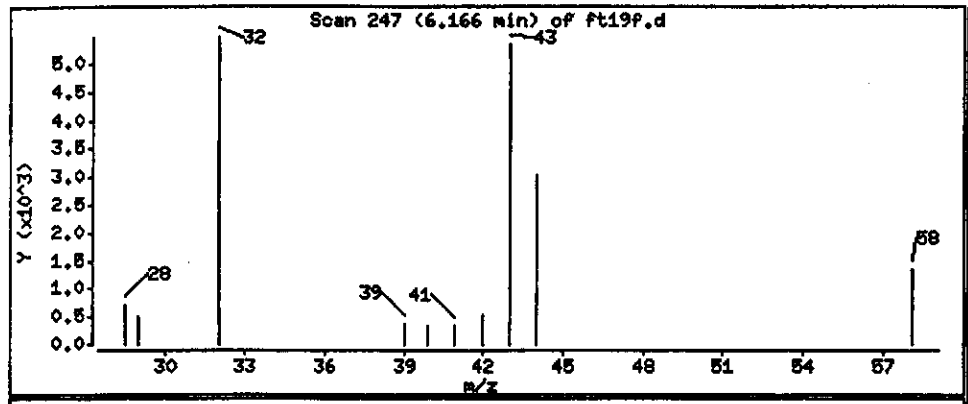
Client ID: B17989 | Instrument: mt.i

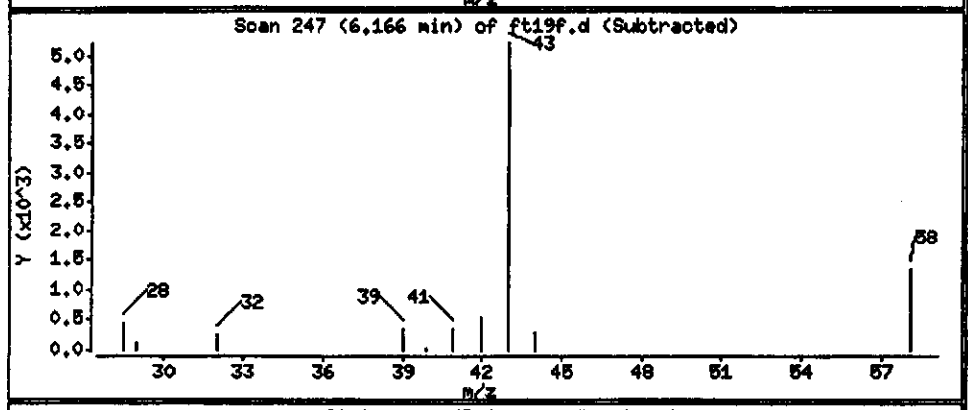
Sample Info: FT19F1AA,,0,,

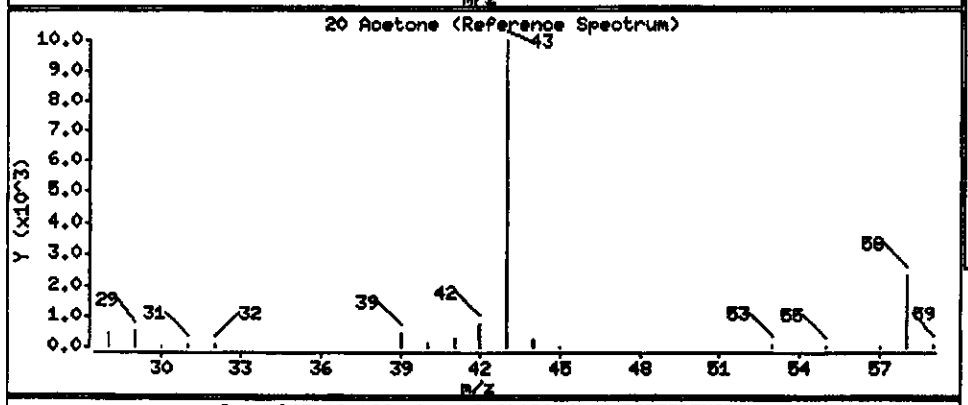
Volume Injected (uL): 500.0 | Operator: 0691

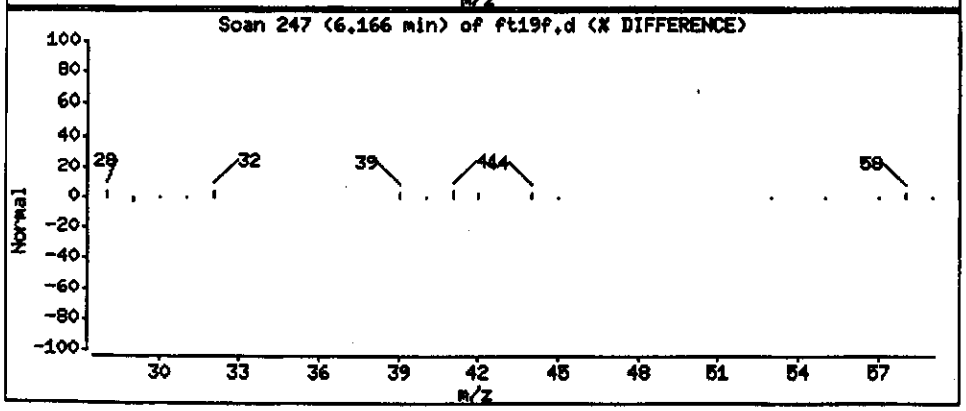
Column phase: DB-5 | Column diameter: 0.32

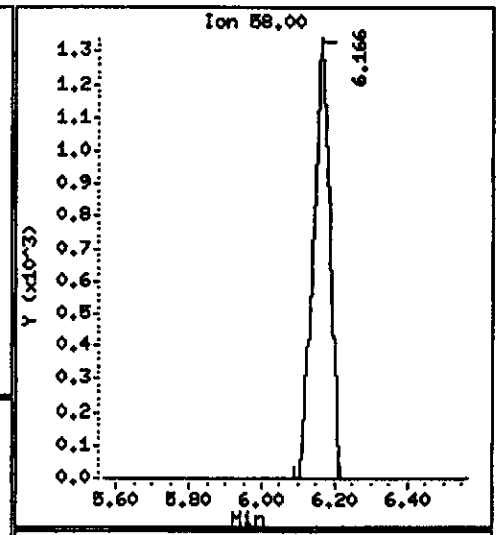
20 Acetone | Concentration: 29.21 ppb(v/v)

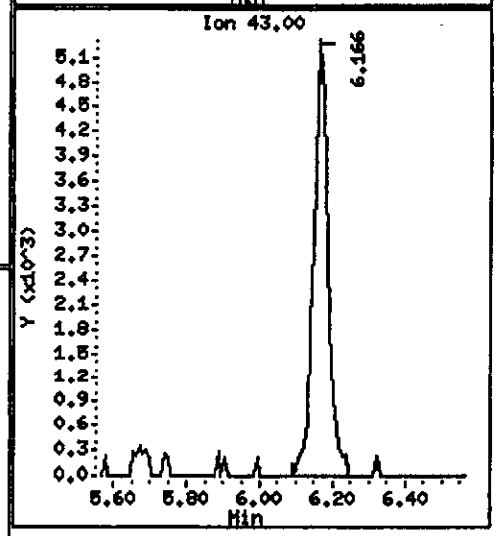












Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d

Date : 13-AUG-2003 22:02

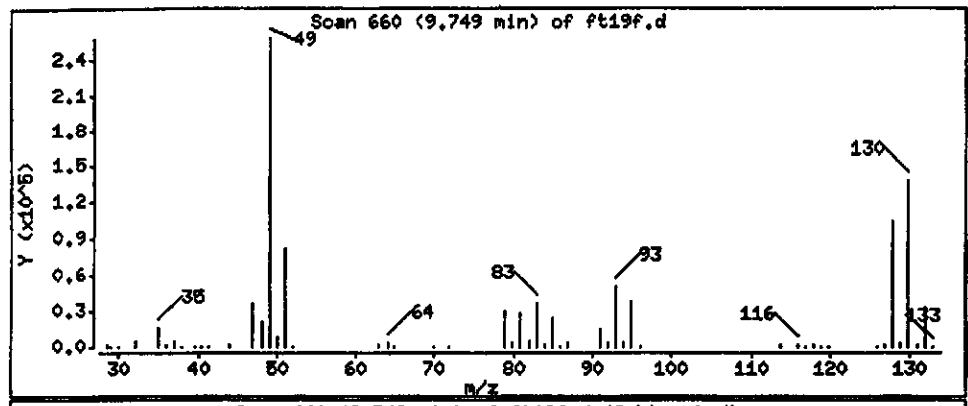
Client ID: B17989 | Instrument: mt.i

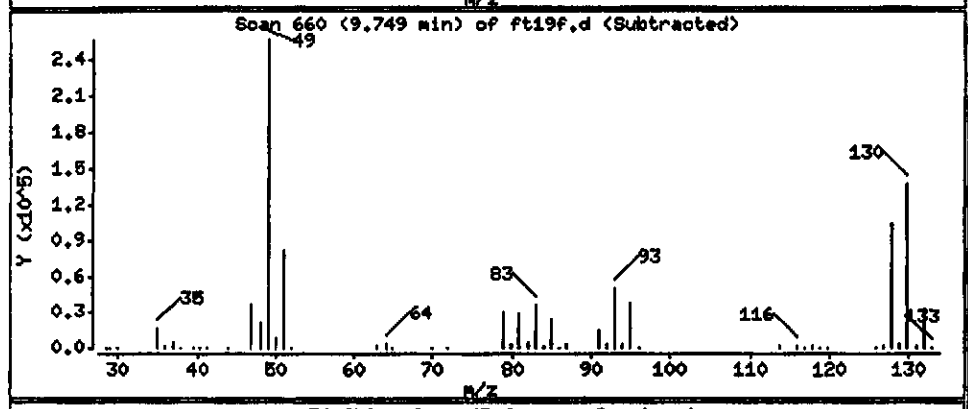
Sample Info: FT19F1AA,,0,,

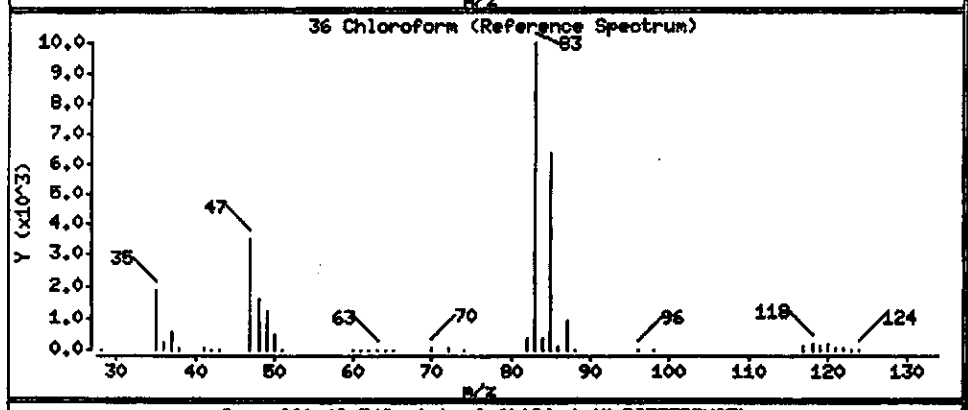
Volume Injected (uL): 500.0 | Operator: 0691

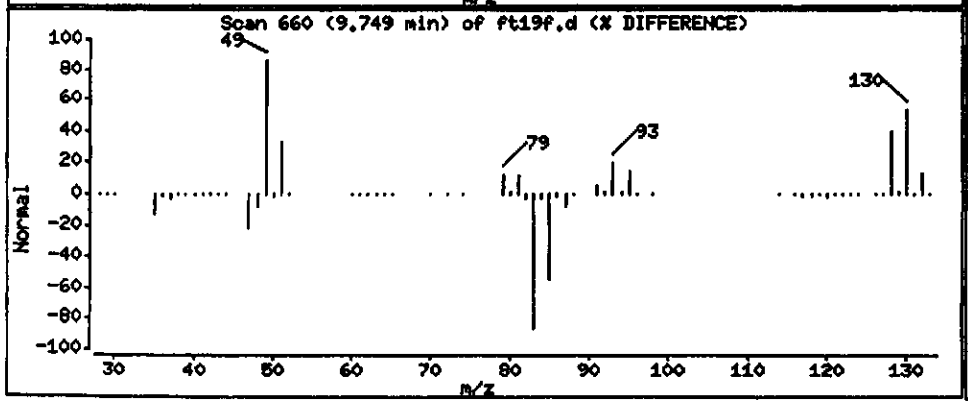
Column phase: DB-5 | Column diameter: 0.32

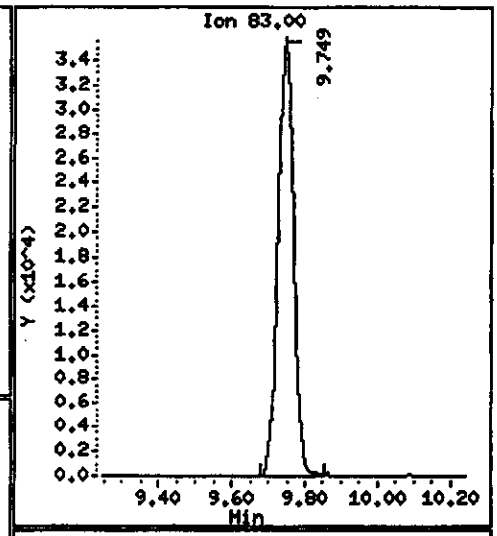
36 Chloroform | Concentration: 102.9 ppb(v/v)

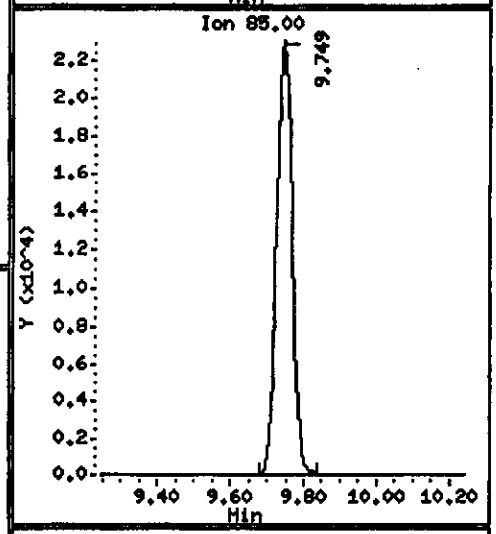


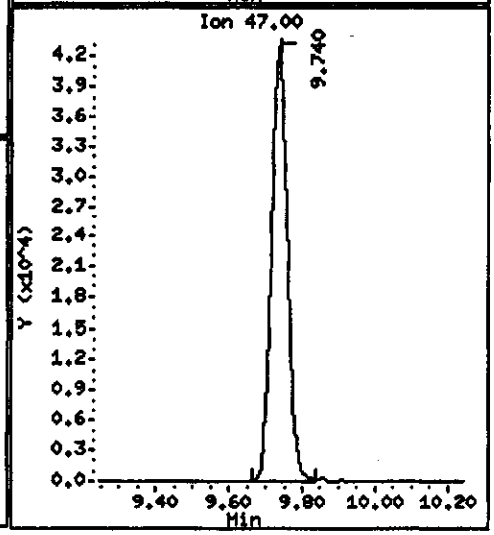












Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d

Date : 13-AUG-2003 22:02

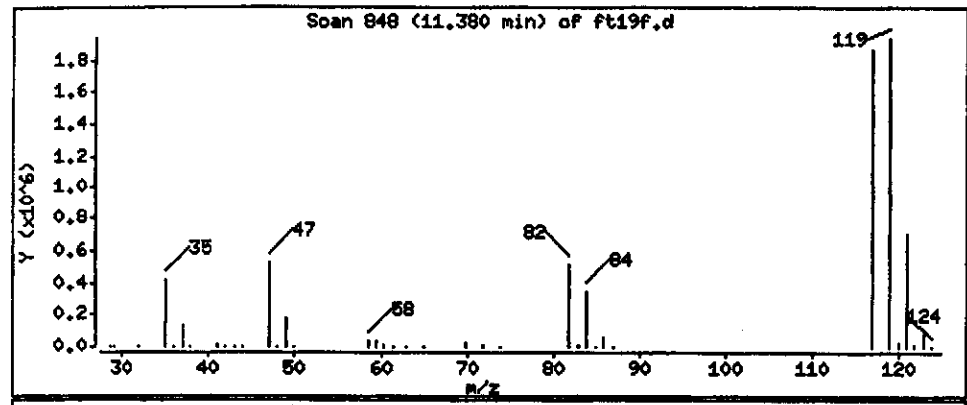
Client ID: B17989 | Instrument: mt.i

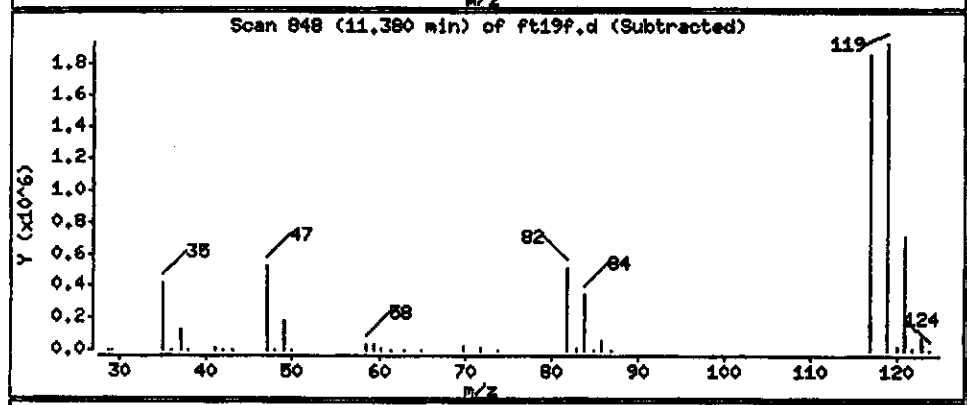
Sample Info: FT19F1AA,,0,,

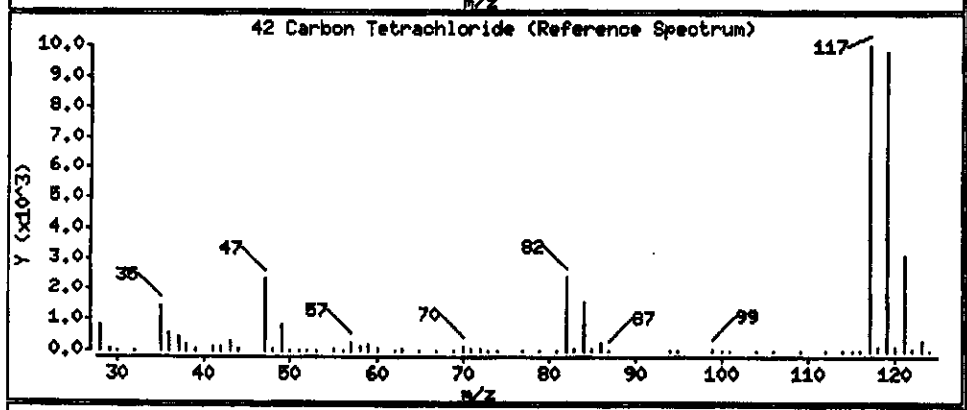
Volume Injected (uL): 500.0 | Operator: 0691

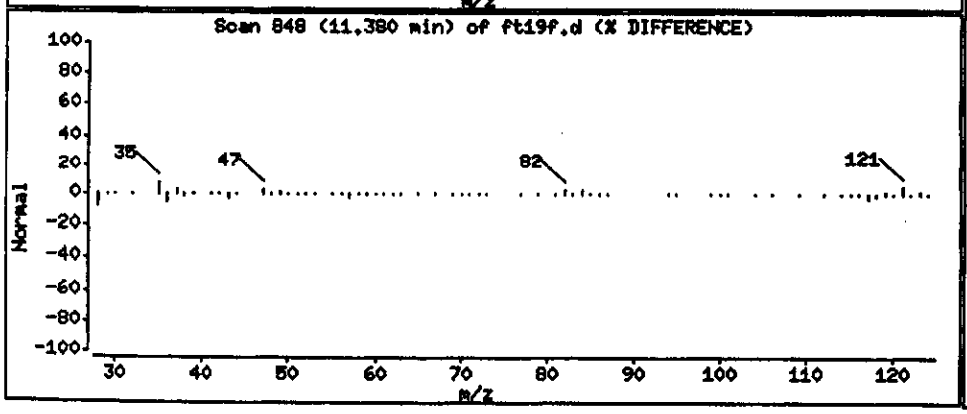
Column phase: DB-5 | Column diameter: 0.32

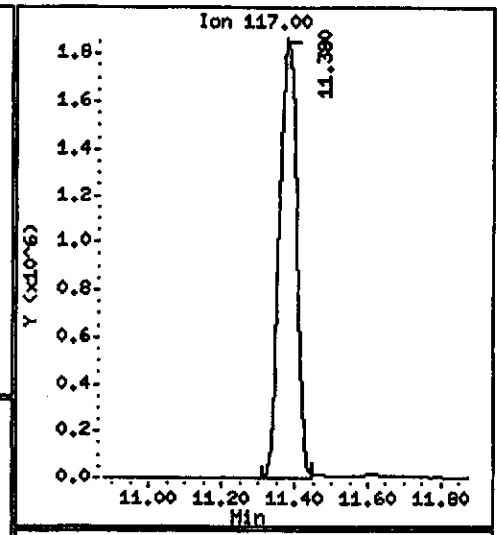
42 Carbon Tetrachloride | Concentration: 7149 ppb(v/v)

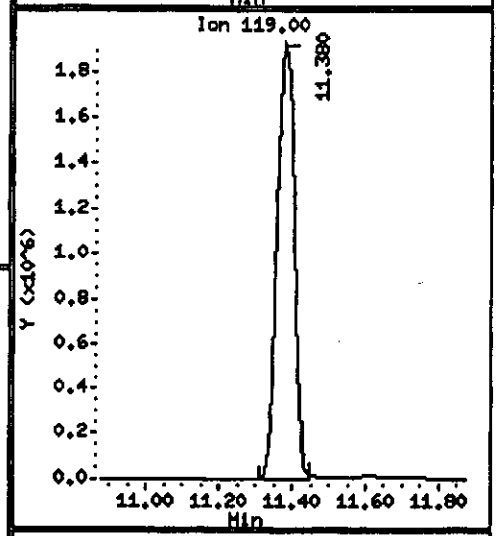


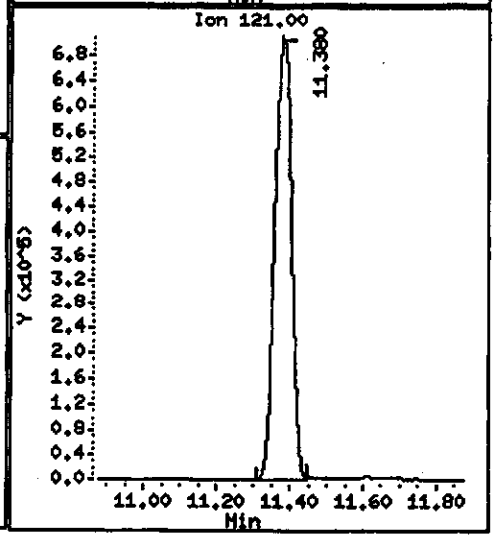












Data File: /var/chem/gcms/mt.i/T081303.b/ft19f.d

Date : 13-AUG-2003 22:02

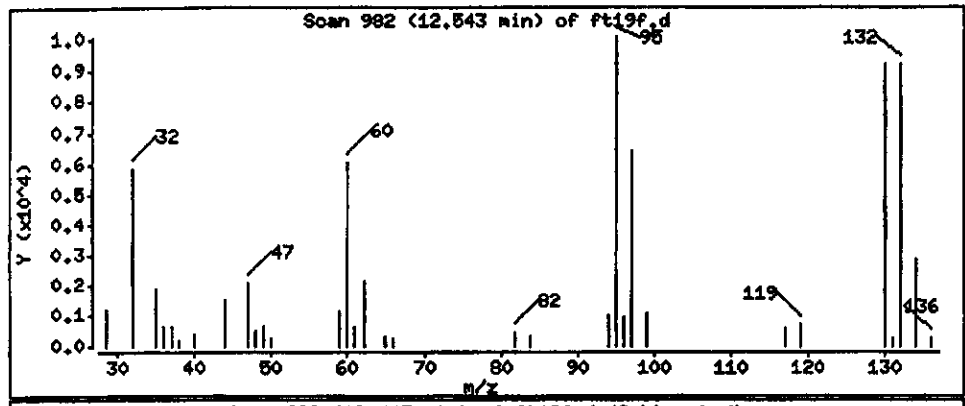
Client ID: B17989 | Instrument: mt.i

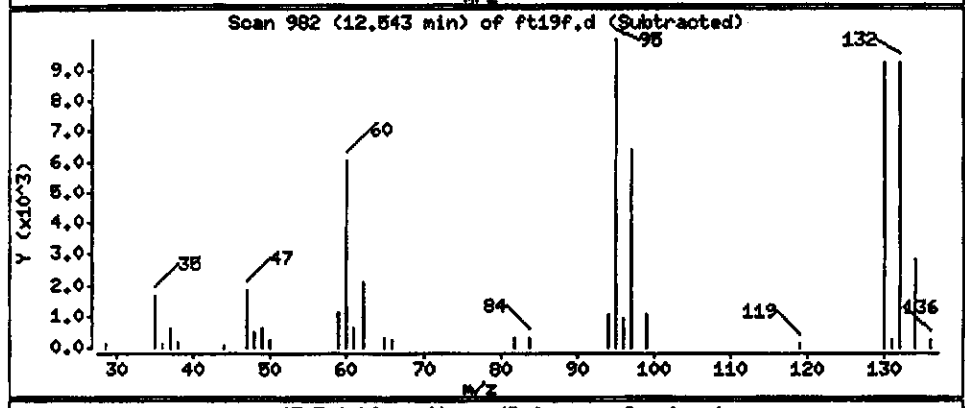
Sample Info: FT19F1AA,,0,,

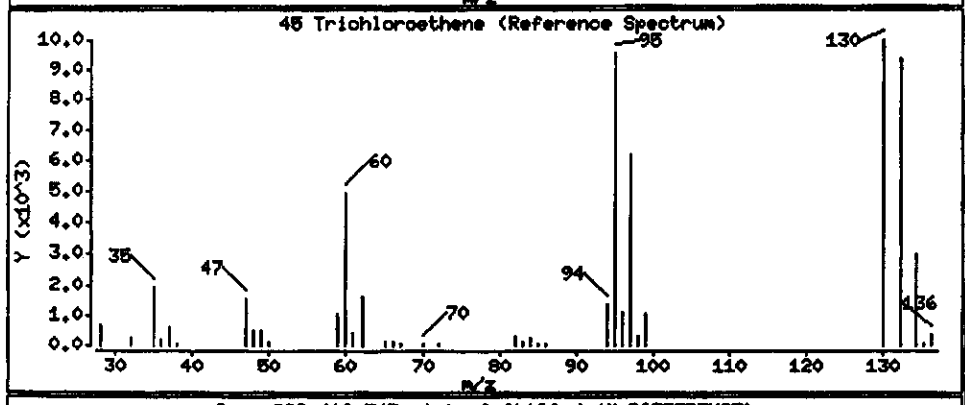
Volume Injected (uL): 500.0 | Operator: 0691

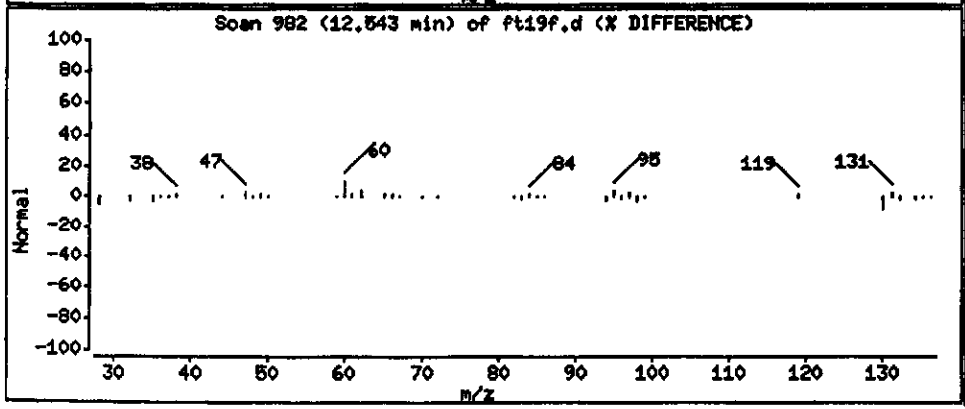
Column phase: DB-5 | Column diameter: 0.32

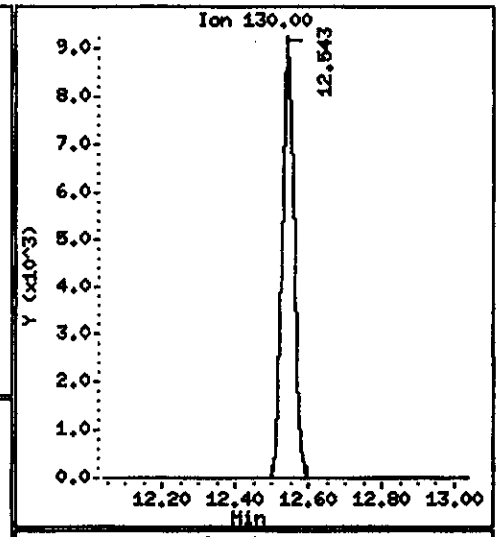
45 Trichloroethene | Concentration: 37.56 ppb(v/v)

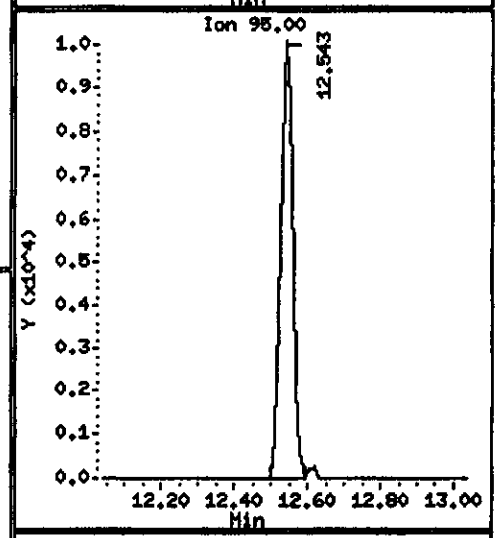


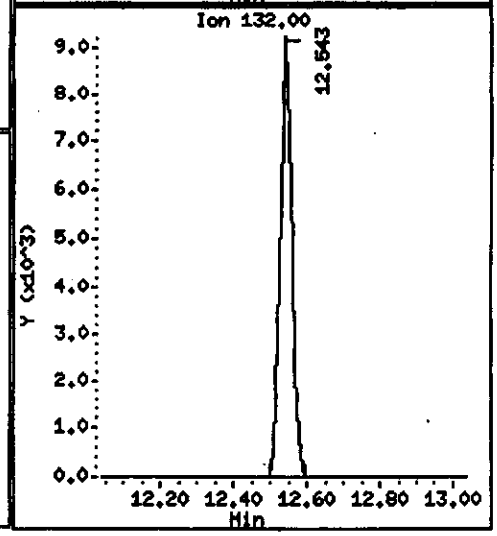












FLUOR HANFORD IC

Lab Name: Severn Trent Laboratories, Inc. SDG Number: W04085

Matrix: (soil/water) AIR Lab Sample ID: H3G240298 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/24/03
Work Order: FT19F2AA Date Extracted: 08/14/03
Dilution factor: 454.5 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: B17989 -RE 1

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	6900	D

Data File: /var/chem/gcms/mt.i/T081403i.b/ft19f.d
Report Date: 19-Aug-2003 15:21

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/ft19f.d
Lab Smp Id: FT19F2AA Client Smp ID: B17989
Inj Date : 14-AUG-2003 23:35
Operator : 0691 Inst ID: mt.i
Smp Info : FT19F2AA,,0,,
Misc Info : T081403i,LA,FHI.sub,,30ML (2X IN CAN)
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 19-Aug-2003 13:57 jarmanc Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 5
Dil Factor: 454.50000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

WJ 8/19/03

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	9.739	9.738	(1.000)	427605	10.0000	
* 2 1,4-Difluorobenzene	114	11.864	11.864	(1.000)	1954462	10.0000	
* 3 Chlorobenzene-d5	117	16.428	16.427	(1.000)	1584703	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.737	10.745	(0.905)	406858	9.51266	9.513
$ 5 Toluene-d8	98	14.407	14.406	(0.877)	1647039	10.1900	10.19
$ 6 4-Bromofluorobenzene	95	18.016	18.024	(1.097)	1090741	10.7284	10.73
42 Carbon Tetrachloride	117	11.379	11.378	(1.168)	1381564	15.0956	6861 D
45 Trichloroethene	130	12.541	12.541	(1.057)	4021	0.06250	28.40

Data File: /var/chem/gcms/mt.i/T081403i.b/ft19f.d
Report Date: 19-Aug-2003 15:21

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ft19f.d
Lab Smp Id: FT19F2AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,FHI.sub,,30ML (2X IN CAN)

Calibration Date: 14-AUG-2003
Calibration Time: 10:35
Client Smp ID: B17989
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	338579	201455	475703	427605	26.29
2 1,4-Difluorobenze	1568732	933396	2204068	1954462	24.59
3 Chlorobenzene-d5	1278525	760722	1796328	1584703	23.95

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.74	9.41	10.07	9.74	0.01
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	0.01
3 Chlorobenzene-d5	16.43	16.10	16.76	16.43	0.00

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

Data File: /var/chem/gcms/mt.i/T081403i.b/ft19f.d
Report Date: 19-Aug-2003 15:21

STL Knoxville

RECOVERY REPORT

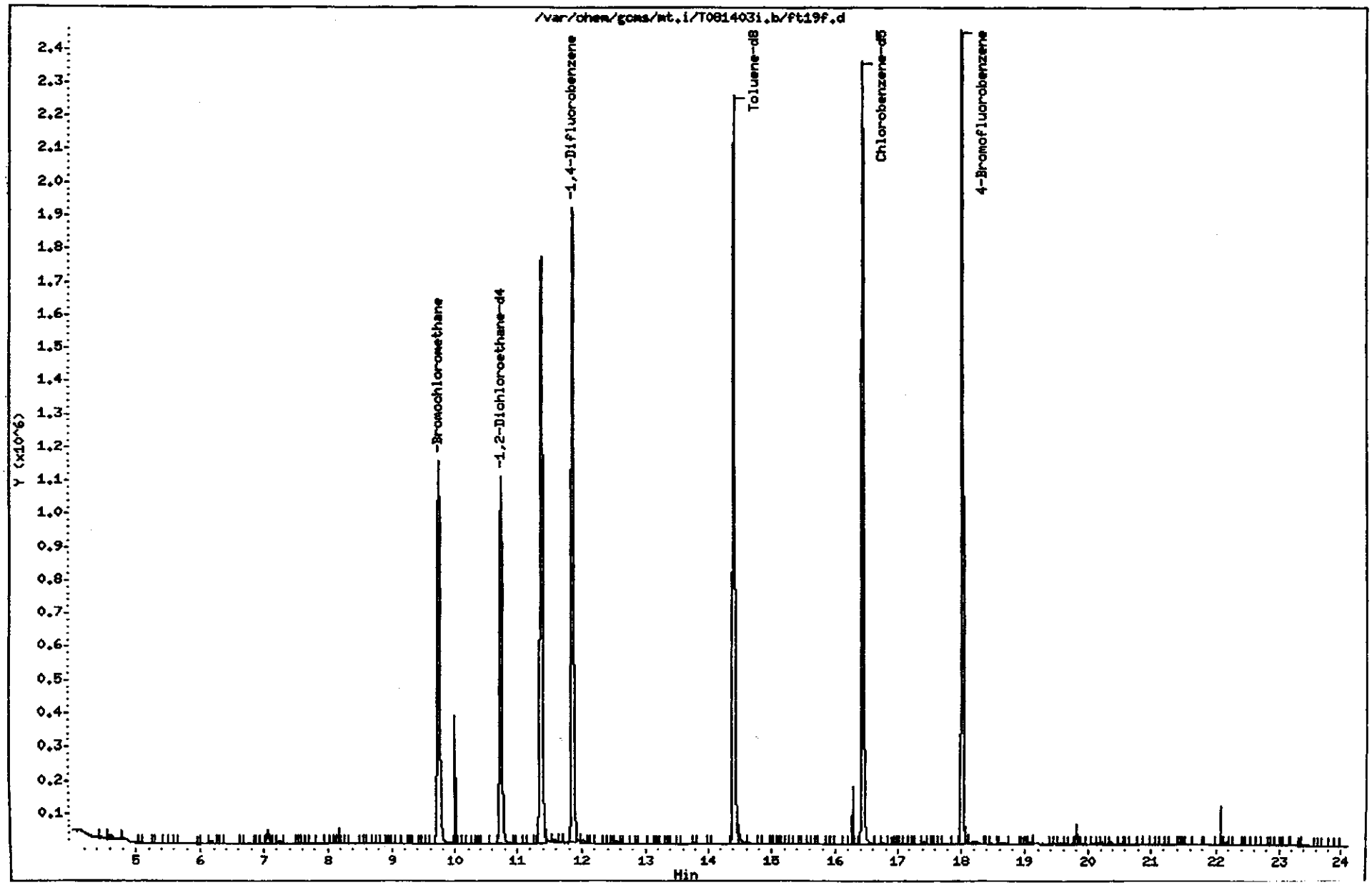
Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: FT19F2AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: e081403i.sub
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,FHI.sub,,30ML (2X IN CAN)

Client SDG: W04085
Fraction: OTHER
Client Smp ID: B17989
Operator: 0691
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.513	95.13	70-130
$ 5 Toluene-d8	10.00	10.19	101.90	70-130
$ 6 4-Bromofluorobenze	10.00	10.73	107.28	70-130

Data File: /var/chem/gcms/mt.i/T081403i.b/ft19f.d
Date : 14-AUG-2003 23:35
Client ID: B17989
Sample Info: FT19F2AA,,0,,
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T0814031.b/ft19f.d

Date : 14-AUG-2003 23:35

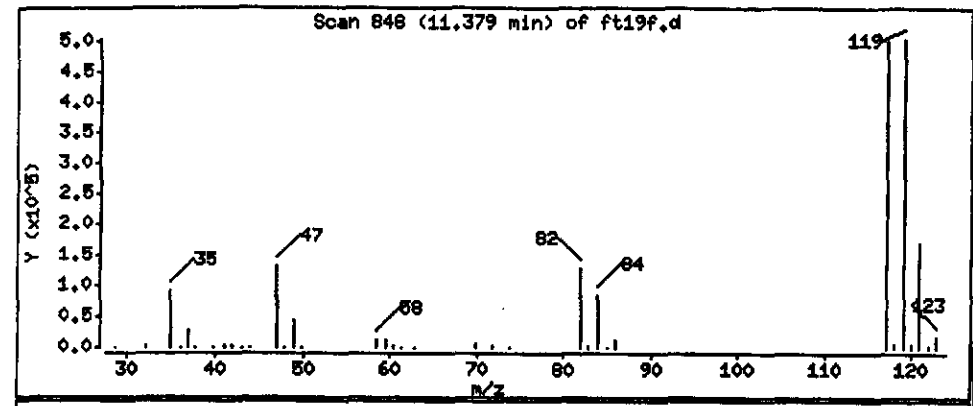
Client ID: B17989 Instrument: mt.i

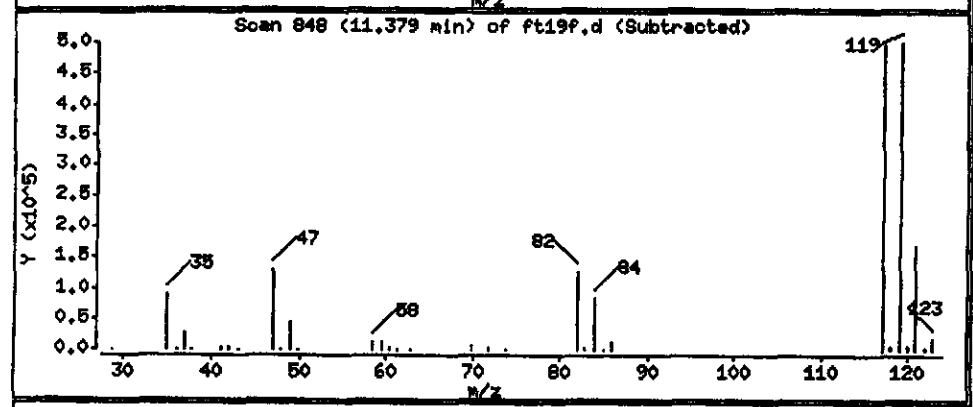
Sample Info: FT19F2AA,,0,,

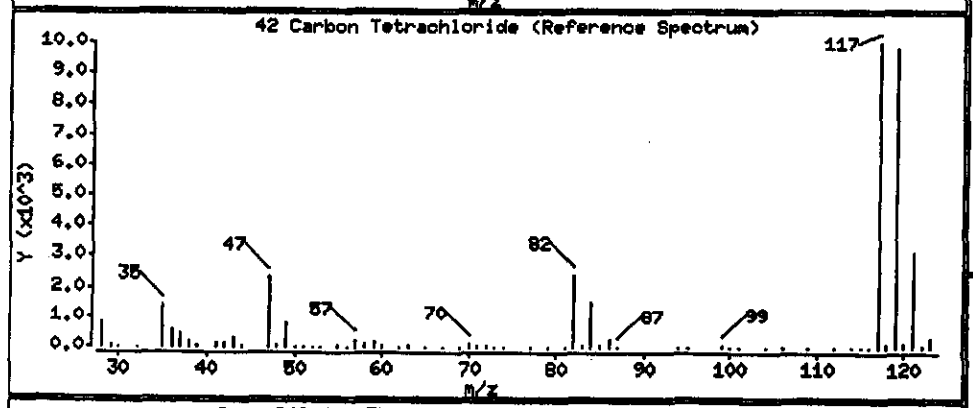
Volume Injected (uL): 500.0 Operator: 0691

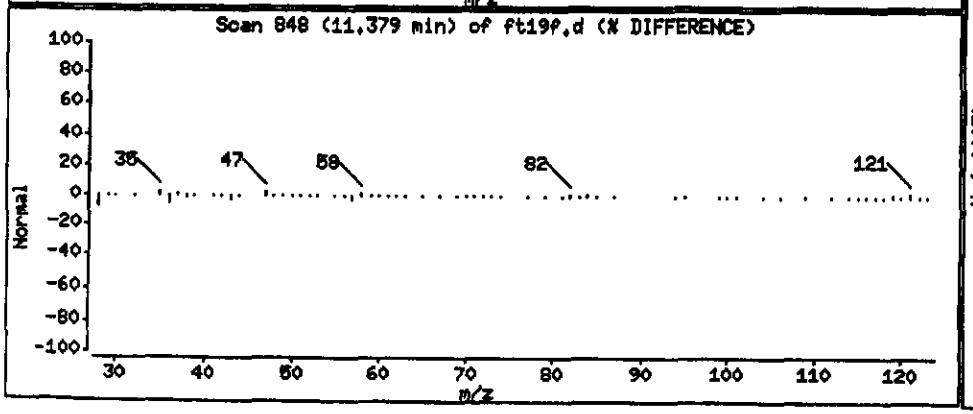
Column phase: DB-5 Column diameter: 0.32

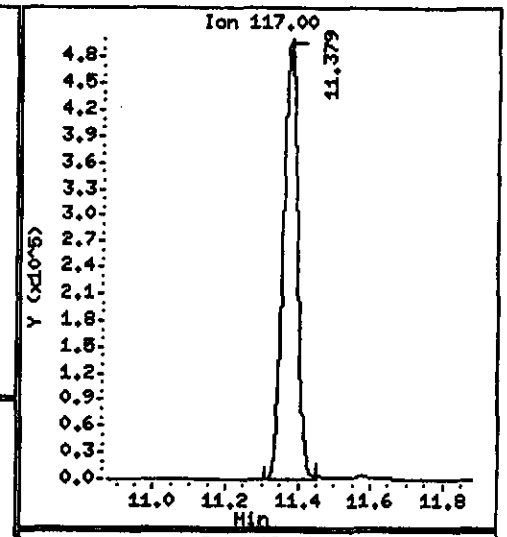
42 Carbon Tetrachloride Concentration: 6861 ppb(v/v)

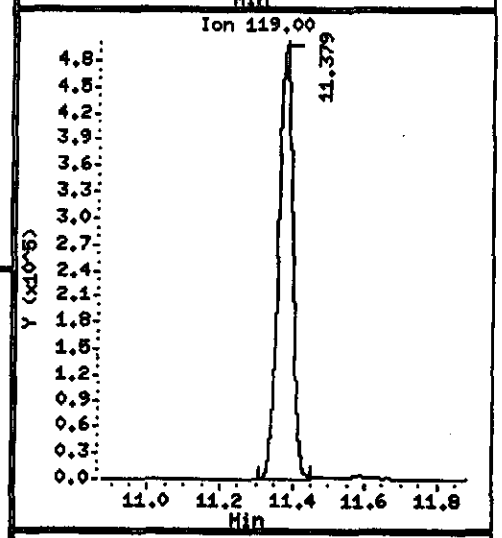


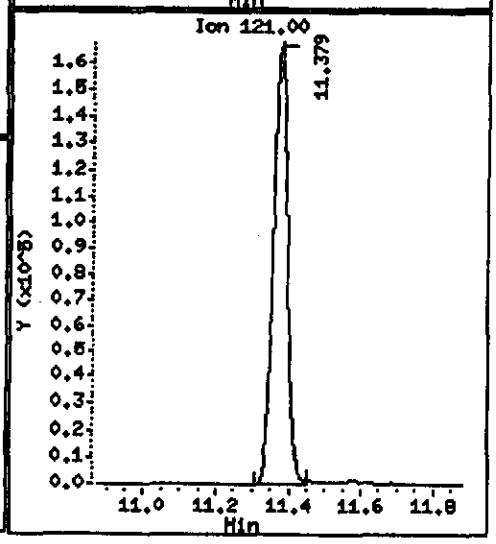












Standards Data

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

Analysis Date:	8/2/03	Instrument::	MT	ICAL Batch/Scan Name:	T080203i	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%)		✓		2 < 40%	✓
7. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NS
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?	✓				NS
13. Does the ICAL folder contain complete data in the following order? Data review checklist, a complete runlog, Entech report, ICAL summary, followed by [Quan reports, chromatograms, manual integrations] in increasing sample order, leak check report.		✓			✓

Analyst: CWJ	Date: 8/2/03	2nd Level Reviewer : [illegible]	Date: 080403
Comments:		Comments:	

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

Analyst: WJ Preventive Maintenance Performed ✓ Qtims Batch: N/A

Date: 8/2/03 System Date/Time ok (y/n): ✓ Target Batch: T080203c

BFB Time: 12:24 Surr/IS ID: CX-929 IS #1 Area: _____ ICAL Batch: T080203c

Time	Lot No.	File ID	Can #	Comments	I/S	Pos	Vol* (ml)	Use	DUP
11:47	BFB	TBF0802		TUNE	—	15	100	N	—
12:24	BFB	TBF0802B		TUNE	—	15	100	✓	—
13:05	TEST	TST		CX-1053	—	STD	300	N	—
13:43	IC5	TIC5H02			—	STD	300	✓	—
14:19	IC4	TIC4H02			—	STD	150	✓	—
14:56	IC3	TIC3H02			—	STD	100	✓	—
15:33	IC2	TIC2H02			—	STD	50	✓	—
16:10	IC1	TIC1H02			—	STD	10	✓	—
16:48	TST2	TST2		CX-1057	—	1	250	N	—
17:25	IC7	TIC7H02			—	1	250	✓	—
18:02	IC6	TIC6H02			—	1	100	✓	—
18:40	ICV	TICVH02		CX-1031	—	2	100	✓	—

WJ 8/2/03

* Entech programmed volume. If the Entech report amount differs from the programmed amount by >5%, the Entech report amount is used for calulations.

Analyst: WJ Date: 8/2/03

n = not used

030802
STL-Knoxville
TO-14 Autosampler Log
'MT'

Sample	Volume	Position	Date	Time
~BFB	102ml	15	8/2/2003	11:46:28 AM
BFB	102ml	15	8/2/2003	12:22:51 PM
~TST	299ml	STD	8/2/2003	1:04:24 PM
IC5	299ml	STD	8/2/2003	1:42:01 PM
IC4	151ml	STD	8/2/2003	2:18:45 PM
IC3	101ml	STD	8/2/2003	2:55:44 PM
IC2	51ml	STD	8/2/2003	3:32:39 PM
IC1	11ml	STD	8/2/2003	4:09:37 PM
~TST2	251ml	1	8/2/2003	4:46:59 PM
IC7	252ml	1	8/2/2003	5:24:16 PM
IC6	101ml	1	8/2/2003	6:01:30 PM
ICV	102ml	2	8/2/2003	6:38:46 PM

OK aw 8/2/03

Data File: /var/chem/gcms/mt.i/T0802031.b/tbf0802b.d

Date : 02-AUG-2003 12:24

Client ID:

Instrument: mt.i

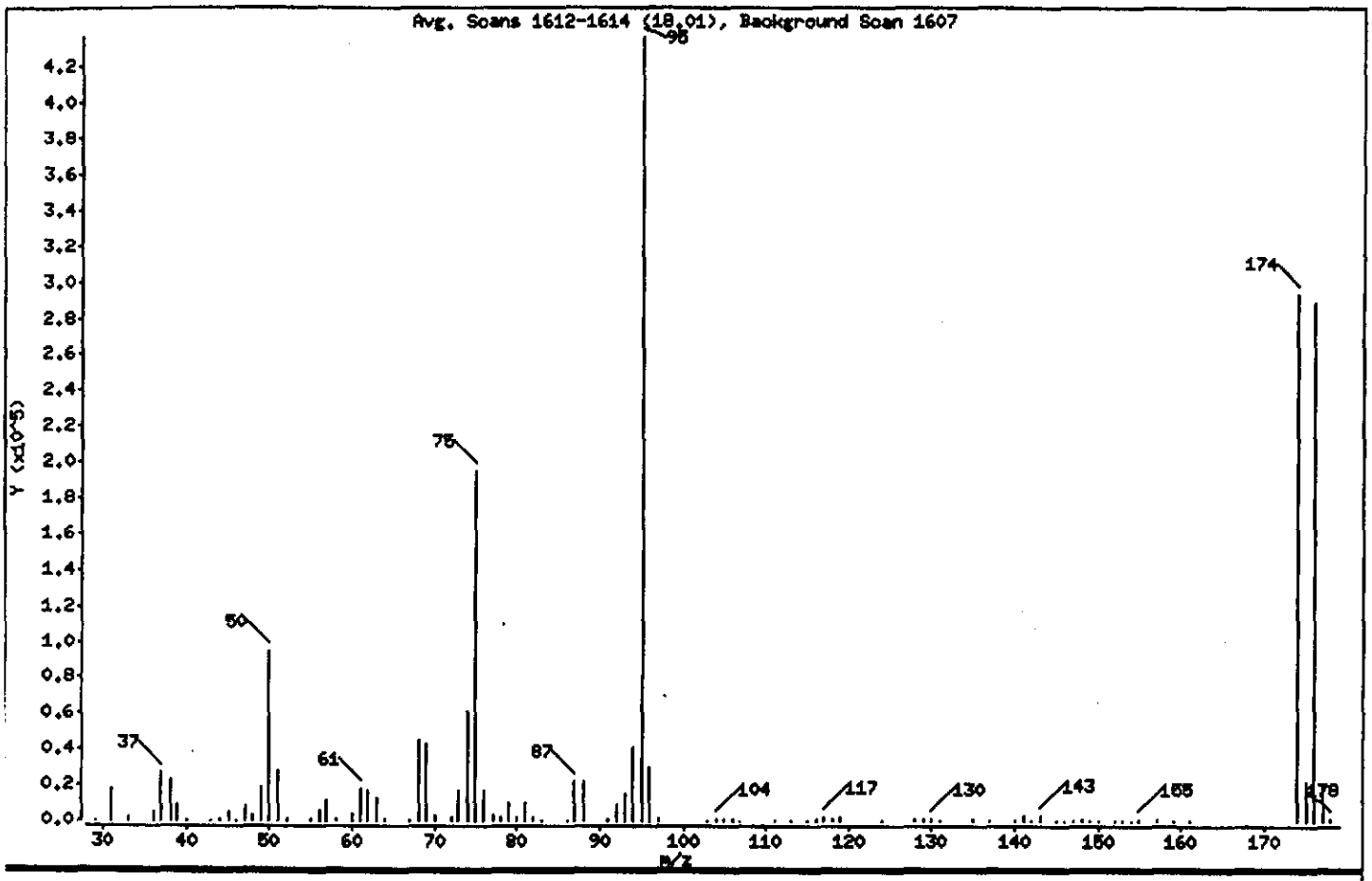
Sample Info: BFB,,3,,BFB

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	21.67
75	30.00 - 60.00% of mass 95	44.81
96	5.00 - 9.00% of mass 95	6.83
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	67.18
175	5.00 - 9.00% of mass 174	4.97 (7.40)
176	95.00 - 101.00% of mass 174	66.14 (98.44)
177	5.00 - 9.00% of mass 176	4.57 (6.91)

DF WJ 8/2/03

Data File: /var/chem/gcms/mt.i/T080203i.b/tbf0802b.d

Date : 02-AUG-2003 12:24

Client ID: Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5 Column diameter: 0.32

Data File: tbf0802b.d

Spectrum: Avg. Scans 1612-1614 (18.01), Background Scan 1607

Location of Maximum: 95.00

Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	69	62.00	17464	93.00	14944	140.00	150
31.00	18168	63.00	12999	94.00	40920	141.00	2608
33.00	2067	64.00	1129	95.00	436480	142.00	292
36.00	5529	67.00	1060	96.00	29792	143.00	2664
37.00	27312	68.00	45376	97.00	860	145.00	154
38.00	23136	69.00	43280	103.00	139	146.00	473
39.00	8667	70.00	3121	104.00	1443	147.00	187
40.00	266	72.00	2029	105.00	628	148.00	758
43.00	317	73.00	16656	106.00	1331	149.00	178
44.00	1388	74.00	60912	107.00	334	150.00	291
45.00	4703	75.00	195584	111.00	149	152.00	71
46.00	262	76.00	16752	113.00	147	153.00	164
47.00	8546	77.00	2804	115.00	375	154.00	81
48.00	2870	78.00	2010	116.00	1066	155.00	738
49.00	19368	79.00	9629	117.00	1950	157.00	544
50.00	94128	80.00	2345	118.00	1099	159.00	317
51.00	27728	81.00	9616	119.00	1553	161.00	239
52.00	1272	82.00	1781	124.00	182	174.00	293248
55.00	1144	83.00	67	128.00	1318	175.00	21696
56.00	6101	86.00	492	129.00	541	176.00	288640
57.00	11802	87.00	22600	130.00	1260	177.00	19944
58.00	553	88.00	22000	131.00	486	178.00	570
60.00	3855	91.00	1172	135.00	542		
61.00	18536	92.00	9367	137.00	476		

Data File: /var/chem/gcms/mt.i/T080203i.b/tbf0802b.d

Date : 02-AUG-2003 12:24

Client ID:

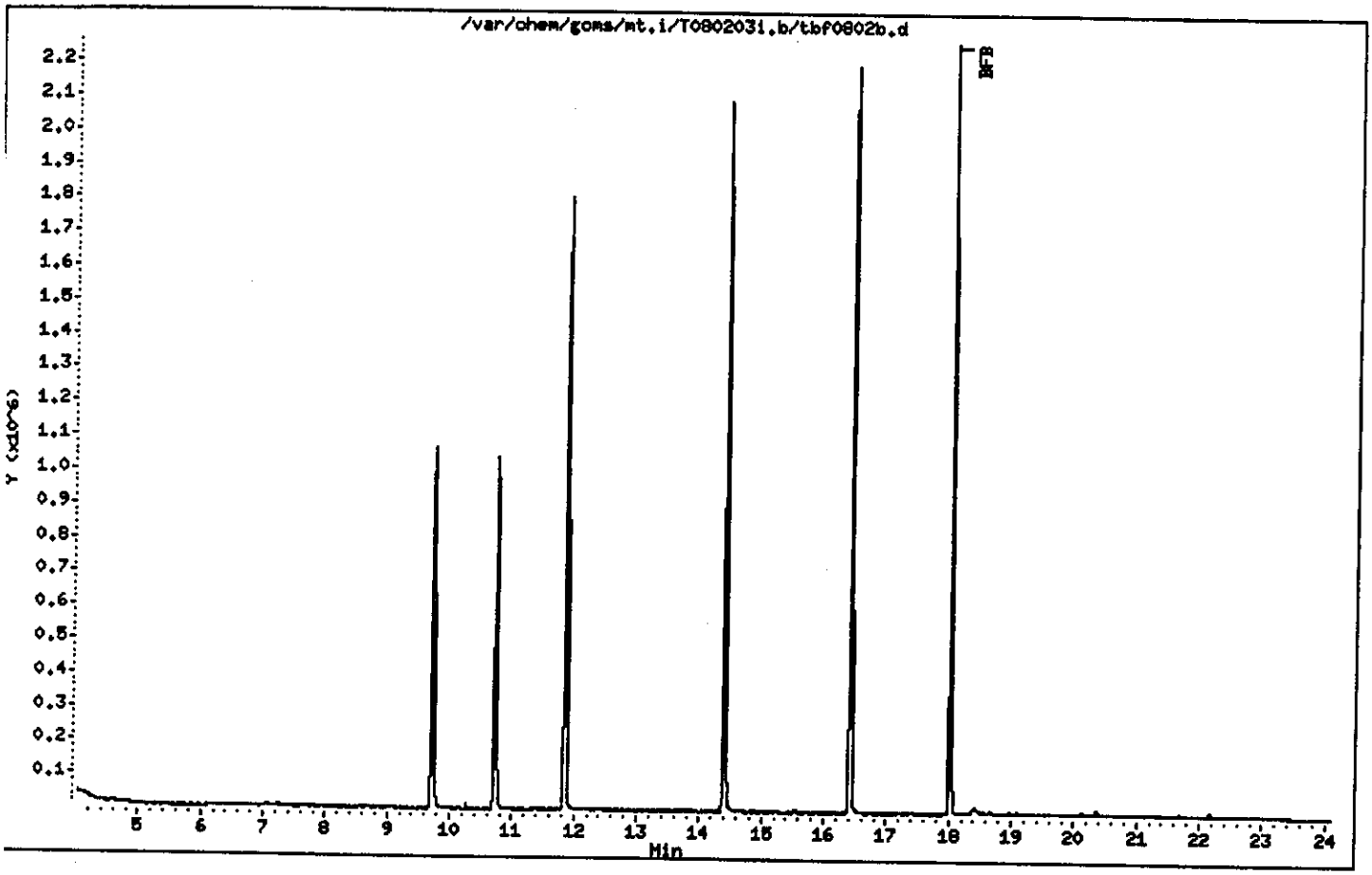
Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 jarmanc
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Level 2: /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Level 3: /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
Level 4: /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Level 5: /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Level 6: /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Level 7: /var/chem/gcms/mt.i/T080203i.b/tic7h02.d

OK WJS 8/2/03

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	1.72039	2.63135	2.40784	2.34415	2.25718	2.62119		
	2.32544						2.32965	13.100
8 Dichlorodifluoromethane	1.67642	2.62070	2.35955	2.30583	2.17041	2.64684		
	2.36459						2.30633	14.120
9 Chloromethane	0.20981	0.31248	0.27537	0.26953	0.24325	+++++		
	0.28590						0.26606	13.375
10 1,2-Dichlorotetrafluoroethane	0.94453	1.42409	1.27470	1.24760	1.15594	1.35438		
	1.24524						1.23521	12.475
11 Vinyl Chloride	0.62843	0.94587	0.87359	0.87507	0.83878	0.86095		
	0.82707						0.83568	11.847
12 Methanol	0.25449	0.40233	0.37636	0.37443	0.35275	+++++		
	+++++						0.35207	16.279

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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							
13 1,3-Butadiene	0.47425	0.70011	0.64968	0.64024	0.59339	0.65860		
	0.65264						0.62413	11.719
14 n-Butane	1.12278	1.67997	1.50389	1.48630	1.35329	1.65752		
	1.48536						1.46987	12.881
15 Bromomethane	0.58186	0.88033	0.81188	0.78969	0.74816	0.84502		
	0.78201						0.77699	12.391
16 Chloroethane	0.29554	0.47440	0.43553	0.42293	0.40728	0.40483		
	0.39526						0.40511	13.578
17 Trichlorofluoromethane	1.10816	1.70192	1.55771	1.49167	1.38234	1.61606		
	1.51984						1.48253	13.012
18 Acrolein	0.18431	0.25967	0.23788	0.22265	0.19622	0.27625		
	0.26187						0.23412	14.859
19 Acetonitrile	0.24353	0.34992	0.32675	0.31542	0.30034	+++++		
	0.35637						0.31539	12.988
20 Acetone	0.21007	0.29032	0.27358	0.26097	0.24937	+++++		
	+++++						0.25686	11.779
21 Pentane	0.19640	0.24723	0.22856	0.25102	0.24176	+++++		
	0.31929						0.24738	16.341

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	1.31162	1.91604	1.73114	1.62536	1.46312	1.94232		
	1.86309						1.69324	14.165
23 1,1-Dichloroethene	0.75068	1.13267	1.04214	1.00620	0.96897	1.08700		
	0.98039						0.99544	12.327
24 Acrylonitrile	0.62935	0.95954	0.89389	0.86508	0.82460	0.87144		
	0.86678						0.84438	12.232
25 1,1,2-Trichlorotrifluoroethan	1.55772	2.32038	2.11855	2.01721	1.86787	2.21624		
	2.07215						2.02430	12.398
26 Methylene Chloride	0.86954	1.13669	1.05978	1.02277	0.95369	+++++		
	1.26629						1.05146	13.244
27 3-Chloropropene	0.90633	1.28429	1.17748	1.14302	1.05948	1.31539		
	1.19256						1.15408	12.020
28 Carbon Disulfide	3.21189	4.28946	3.85890	3.73231	3.54543	5.88726		
	4.56081						4.15515	21.325
29 trans-1,2-Dichloroethene	0.77715	1.18985	1.10468	1.07178	1.01861	1.09931		
	1.03053						1.04170	12.442
30 Methyl-t-Butyl Ether	1.69794	2.57463	2.36623	2.27954	2.10418	2.49146		
	2.34906						2.26615	12.892

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	1.73375	2.61761	2.44412	2.35278	2.21273	2.46484		
	2.33882						2.30923	12.258
32 Vinyl Acetate	2.37309	3.57639	3.32929	3.13833	2.92785	3.55657		
	3.33388						3.17649	13.240
33 2-Butanone	0.34126	0.52317	0.48831	0.46338	0.44850	+++++		
	0.54990						0.46909	15.555
34 Hexane	0.79123	1.15444	1.02997	1.00131	0.91438	1.13001		
	1.06713						1.01264	12.489
35 cis 1,2-Dichloroethene	0.85909	1.33112	1.23336	1.18859	1.14325	1.23883		
	1.15217						1.16377	12.769
36 Chloroform	1.49730	2.24492	2.11043	2.06087	1.95894	2.10496		
	1.99707						1.99636	11.945
37 1,1,1-Trichloroethane	1.26743	1.96044	1.80335	1.76111	1.66488	1.79250		
	1.70463						1.70776	12.621
38 1,2-Dichloroethane	0.24582	0.36637	0.33481	0.32145	0.29703	0.35953		
	0.33376						0.32268	12.717
39 Benzene	0.53143	0.72955	0.64098	0.59943	0.48133	0.80599		
	0.74847						0.64817	18.415

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	0.16051	0.23959	0.21874	0.20207	0.18091	0.26154		
	0.22446						0.21255	16.219
41 Cyclohexane	0.08613	0.11708	0.10200	0.09542	0.07626	0.12508		
	0.11632						0.10261	17.435
42 Carbon Tetrachloride	1.31583	1.94344	1.77174	1.69589	1.51787	1.88513		
	1.75109						1.69728	12.773
43 Heptane	0.49360	0.70883	0.62223	0.58407	0.49425	0.77470		
	0.71286						0.62722	17.606
44 1,2-Dichloropropane	0.23372	0.33109	0.29515	0.27444	0.23655	0.34199		
	0.32568						0.29123	15.323
45 Trichloroethene	0.21838	0.31018	0.28239	0.26774	0.23510	0.32300		
	0.30527						0.27744	14.207
46 Dibromomethane	0.21955	0.31657	0.28986	0.27363	0.24179	0.34275		
	0.30072						0.28355	15.010
47 Bromodichloromethane	0.37381	0.55332	0.50302	0.48200	0.42747	0.54510		
	0.50482						0.48422	13.243
48 4-Methyl-2-pentanone	0.51628	0.72786	0.63562	0.57801	0.48696	0.77990		
	0.71953						0.63488	17.730

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	0.40920	0.57295	0.52587	0.50328	0.44701	0.59194		
	0.56039						0.51581	13.102
50 trans-1,3-Dichloropropene	0.32288	0.47465	0.43830	0.42182	0.37890	0.47145		
	0.43588						0.42055	12.784
51 Toluene	0.71724	1.01502	0.91903	0.86324	0.74962	1.10731		
	0.99835						0.90997	15.729
52 1,1,2-Trichloroethane	0.27104	0.38254	0.34682	0.33040	0.29226	0.40792		
	0.36947						0.34292	14.288
53 2-Hexanone	0.31226	0.45666	0.41217	0.37886	0.33236	0.46779		
	0.44007						0.40002	15.233
54 Octane	0.23546	0.33749	0.30348	0.28736	0.24886	0.33718		
	0.31157						0.29449	13.627
55 Dibromochloromethane	0.46659	0.69094	0.63294	0.59962	0.53552	0.64262		
	0.60768						0.59656	12.451
56 1,2-Dibromoethane	0.43415	0.62648	0.57301	0.53740	0.46734	0.65398		
	0.59467						0.55529	14.594
57 Tetrachloroethene	0.23373	0.32948	0.29500	0.28038	0.24044	0.32931		
	0.31460						0.28899	13.727

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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							
58 Chlorobenzene	0.55525	0.80575	0.74073	0.70206	0.61300	0.80390		
	0.75997						0.71152	13.435
59 Ethylbenzene	0.92392	1.31260	1.17372	1.09849	0.93309	1.36274		
	1.28281						1.15534	15.423
60 m-Xylene (For p-)	0.70812	0.99134	0.89093	0.83519	0.70906	1.10313		
	1.01075						0.89265	17.054
61 Bromoform	0.35092	0.52065	0.47335	0.44558	0.38288	0.50898		
	0.48779						0.45288	14.176
62 Nonane	0.62364	0.85798	0.74687	0.65693	0.52749	0.95583		
	0.90813						0.75384	21.189
63 Styrene	0.50495	0.72260	0.63753	0.59067	0.49098	0.77943		
	0.71336						0.63422	17.546
64 o-Xylene	0.70570	1.00307	0.90404	0.83096	0.71430	1.07769		
	1.00689						0.89181	16.516
65 1,1,2,2-Tetrachloroethane	0.65178	0.92712	0.82641	0.76268	0.63607	1.02106		
	0.95489						0.82572	18.188
66 1,2,3-Trichloropropane	0.11263	0.16914	0.15760	0.14942	0.13624	+++++		
	0.15403						0.14651	13.491

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	0.94635	1.31425	1.17344	1.08514	0.89593	1.46526		
	1.32233						1.17182	17.884
68 n-Propylbenzene	1.32398	1.85921	1.62647	1.48164	1.20229	2.15207		
	1.98300						1.66124	21.161
69 4-Ethyltoluene	1.05452	1.40935	1.30341	1.19505	0.97384	1.75596		
	1.62131						1.33049	21.572
70 1,3,5-Trimethylbenzene	0.37218	0.54441	0.48598	0.45701	0.38780	0.61297		
	0.56352						0.48913	18.459
71 Alpha-Methylstyrene	0.35847	0.54335	0.49829	0.46886	0.40468	0.59899		
	0.56460						0.49103	17.711
72 Decane	0.86564	1.11939	0.97898	0.86490	0.66094	1.44185		
	1.35432						1.04086	27.033
73 1,2,4-Trimethylbenzene	0.77088	1.09545	0.97764	0.89807	0.73926	1.30357		
	1.24153						1.00377	21.935
74 1,3-Dichlorobenzene	0.55461	0.79086	0.72182	0.66777	0.55662	0.90934		
	0.84066						0.72024	18.987
75 Benzyl Chloride	0.71635	1.03609	0.92464	0.82945	0.64078	1.17230		
	1.13445						0.92201	22.172

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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	
76 1,4-Dichlorobenzene	0.54828	0.75823	0.68414	0.62702	0.49191	0.90415	0.83622	0.69285	21.663	
77 1,2-Dichlorobenzene	0.51557	0.76105	0.67683	0.63366	0.52710	0.88101	0.80867	0.68627	20.246	
78 Undecane	0.84022	1.18936	1.01632	0.89081	0.65579	1.64128	1.43718	1.09585	31.832	<-
79 Dodecane	0.69262	1.01457	0.86186	0.70891	0.55613	1.46589	1.11918	0.91702	33.863	<-
80 1,2,4-Trichlorobenzene	0.32411	0.51757	0.48116	0.44461	0.38875	0.62854	0.55561	0.47719	21.477	
81 Napthalene	1.13791	1.77645	1.59716	1.47275	1.23843	1.94529	1.60606	1.53915	18.471	
82 Hexachlorobutadiene	0.34537	0.51888	0.45748	0.42366	0.32985	0.57213	0.50971	0.45101	20.108	
133 2,3-Dimethyl butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 a-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

<40%
ok
ow
8/2/03

Report Date : 02-Aug-2003 20:10

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 02-AUG-2003 13:43
End Cal Date : 02-AUG-2003 18:02
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T080203i.b/LA.m
Cal Date : 02-Aug-2003 20:10 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							
135 Camphene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
136 b-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
137 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
138 d-Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
139 4-tert-Butyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
140 Camphor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 4 1,2-Dichloroethane-d4	0.20268	0.20545	0.20404	0.20418	0.20182	0.20875		
	0.20559						0.20464	1.108
$ 5 Toluene-d8	1.05835	1.03666	1.02418	1.02096	0.99655	1.07278		
	1.04446						1.03628	2.443
$ 6 4-Bromofluorobenzene	0.66598	0.63711	0.62644	0.62477	0.59242	0.67393		
	0.66475						0.64077	4.560

Data File: /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Report Date: 02-Aug-2003 20:12

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Lab Smp Id: IC6 Client Smp ID: 0.2PPBV
Inj Date : 02-AUG-2003 18:02
Operator : 0691 Inst ID: mt.i
Smp Info : IC6,,1,6,,0.2PPBV
Misc Info : T080203i,LA,ICRLX.sub,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:12 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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

wd 8/2/03

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	9.733	9.734	(1.000)	385969	10.0000	
2 1,4-Difluorobenzene	114	11.859	11.859	(1.000)	1784822	10.0000	
3 Chlorobenzene-d5	117	16.422	16.432	(1.000)	1434826	10.0000	
4 1,2-Dichloroethane-d4	67	10.740	10.740	(0.906)	372583	10.0000	10.20
5 Toluene-d8	98	14.401	14.402	(0.877)	1539259	10.0000	10.35
6 4-Bromofluorobenzene	95	18.019	18.019	(1.097)	966978	10.0000	10.52
7 Chlorodifluoromethane	51	4.120	4.120	(0.423)	20234	0.20000	0.2250
8 Dichlorodifluoromethane	85	4.198	4.198	(0.431)	20432	0.20000	0.2295
10 1,2-Dichlorotetrafluoroethane	135	4.423	4.424	(0.454)	10455	0.20000	0.2193
11 Vinyl Chloride	62	4.614	4.615	(0.474)	6646	0.20000	0.2060
13 1,3-Butadiene	54	4.718	4.719	(0.485)	5084	0.20000	0.2110
14 n-Butane	43	4.718	4.719	(0.485)	12795	0.20000	0.2255
15 Bromomethane	94	5.100	5.092	(0.524)	6523	0.20000	0.2175
16 Chloroethane	64	5.265	5.266	(0.541)	3125	0.20000	0.1998
17 Trichlorofluoromethane	101	5.907	5.916	(0.607)	12475	0.20000	0.2180
18 Acrolein	56	5.942	5.925	(0.610)	4265	0.40000	0.4720
22 Ethyl Ether	31	6.401	6.350	(0.658)	29987	0.40000	0.4588
23 1,1-Dichloroethene	96	6.688	6.688	(0.687)	8391	0.20000	0.2184
24 Acrylonitrile	53	6.827	6.810	(0.701)	13454	0.40000	0.4128
25 1,1,2-Trichlorotrifluoroethane	101	6.896	6.897	(0.708)	17108	0.20000	0.2190
27 3-Chloropropene	39	7.087	7.088	(0.728)	10154	0.20000	0.2280

Data File: /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Report Date: 02-Aug-2003 20:12

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	7.243	7.244	(0.744)	45446	0.20000	0.2834
29 trans-1,2-Dichloroethene	96	7.928	7.929	(0.815)	8486	0.20000	0.2111
30 Methyl-t-Butyl Ether	73	8.180	8.094	(0.840)	38465	0.40000	0.4398
31 1,1-Dichloroethane	63	8.380	8.380	(0.861)	19027	0.20000	0.2135
32 Vinyl Acetate	43	8.501	8.484	(0.873)	54909	0.40000	0.4479
34 Hexane	56	8.996	8.996	(0.924)	8723	0.20000	0.2232
35 cis 1,2-Dichloroethene	96	9.395	9.395	(0.965)	9563	0.20000	0.2129
36 Chloroform	83	9.742	9.742	(1.001)	16249	0.20000	0.2109
37 1,1,1-Trichloroethane	97	10.783	10.784	(1.108)	13837	0.20000	0.2099
38 1,2-Dichloroethane	62	10.878	10.879	(0.917)	12834	0.20000	0.2228
39 Benzene	78	11.356	11.348	(0.958)	28771	0.20000	0.2487
40 1-Butanol	31	11.364	11.287	(0.958)	18672	0.40000	0.4922
41 Cyclohexane	69	11.364	11.356	(0.958)	4465	0.20000	0.2438
42 Carbon Tetrachloride	117	11.373	11.374	(1.168)	14552	0.20000	0.2221
43 Heptane	43	12.431	12.432	(1.048)	27654	0.20000	0.2470
44 1,2-Dichloropropane	63	12.509	12.510	(1.055)	12208	0.20000	0.2348
45 Trichloroethene	130	12.536	12.545	(1.057)	11530	0.20000	0.2328
46 Dibromomethane	93	12.614	12.614	(1.064)	12235	0.20000	0.2418
47 Bromodichloromethane	83	12.744	12.753	(1.075)	19458	0.20000	0.2251
48 4-Methyl-2-pentanone	43	13.733	13.664	(1.158)	55679	0.40000	0.4914
49 cis-1,3-Dichloropropene	75	13.707	13.707	(1.156)	21130	0.20000	0.2295
50 trans-1,3-Dichloropropene	75	14.375	14.376	(0.875)	13529	0.20000	0.2242
51 Toluene	91	14.514	14.514	(0.884)	31776	0.20000	0.2434
52 1,1,2-Trichloroethane	97	14.574	14.575	(0.887)	11706	0.20000	0.2379
53 2-Hexanone	58	15.008	14.957	(0.914)	26848	0.40000	0.4678
54 Octane	85	15.173	15.174	(0.924)	9676	0.20000	0.2290
55 Dibromochloromethane	129	15.260	15.260	(0.929)	18441	0.20000	0.2154
56 1,2-Dibromoethane	107	15.546	15.547	(0.947)	18767	0.20000	0.2355
57 Tetrachloroethene	129	15.616	15.616	(0.951)	9450	0.20000	0.2279
58 Chlorobenzene	112	16.474	16.475	(1.003)	23069	0.20000	0.2260
59 Ethylbenzene	91	16.752	16.753	(1.020)	39106	0.20000	0.2359
60 m-Xylene (For p-)	91	16.908	16.909	(1.030)	31656	0.20000	0.2472
62 Nonane	57	17.316	17.317	(1.054)	27429	0.20000	0.2536
63 Styrene	104	17.368	17.369	(1.058)	22367	0.20000	0.2458
61 Bromoform	173	17.351	17.351	(1.057)	14606	0.20000	0.2248
64 o-Xylene	91	17.429	17.430	(1.061)	30926	0.20000	0.2417
65 1,1,2,2-Tetrachloroethane	83	17.724	17.724	(1.079)	29301	0.20000	0.2473
67 Cumene	105	17.993	17.993	(1.096)	42048	0.20000	0.2501
68 n-Propylbenzene	91	18.496	18.497	(1.126)	61757	0.20000	0.2591
69 4-Ethyltoluene	105	18.635	18.635	(1.135)	50390	0.20000	0.2640
70 1,3,5-Trimethylbenzene	120	18.704	18.705	(1.139)	17590	0.20000	0.2506
71 Alpha-Methylstyrene	118	18.913	18.913	(1.152)	17189	0.20000	0.2440
72 Decane	57	18.973	18.974	(1.155)	41376	0.20000	0.2770
73 1,2,4-Trimethylbenzene	105	19.121	19.121	(1.164)	37408	0.20000	0.2597
74 1,3-Dichlorobenzene	146	19.372	19.382	(1.180)	26095	0.20000	0.2525
75 Benzyl Chloride	91	19.442	19.442	(1.184)	33641	0.20000	0.2543
76 1,4-Dichlorobenzene	146	19.459	19.460	(1.185)	25946	0.20000	0.2610

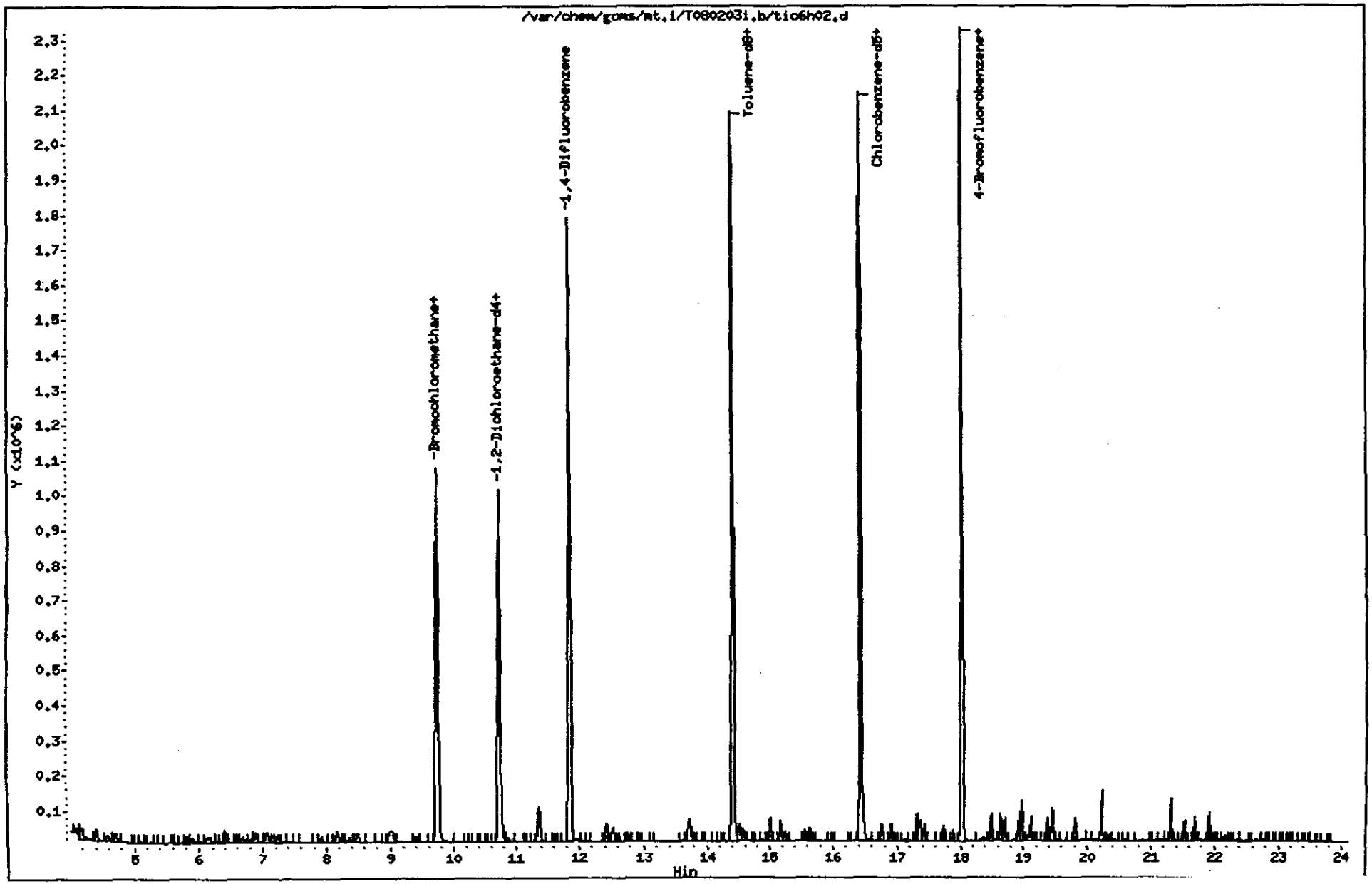
Data File: /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Report Date: 02-Aug-2003 20:12

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	19.806	19.807	(1.206)	25282	0.20000	0.2568
78 Undecane	57	20.223	20.223	(1.231)	47099	0.20000	0.2995
79 Dodecane	57	21.316	21.316	(1.298)	42066	0.20000	0.3197
80 1,2,4-Trichlorobenzene	180	21.533	21.533	(1.311)	18037	0.20000	0.2634
81 Napthalene	128	21.689	21.689	(1.321)	55823	0.20000	0.2528
82 Hexachlorobutadiene	225	21.914	21.915	(1.334)	16418	0.20000	0.2537

Data File: /var/chem/gcms/mt.i/T080203i.b/tic6h02.d
Date : 02-AUG-2003 18:02
Client ID: 0.2PPBV
Sample Info: IC6,,1,6,,0.2PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T080203i.b/tic7h02.d
Report Date: 02-Aug-2003 20:12

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic7h02.d
Lab Smp Id: IC7 Client Smp ID: 0.5PPBV
Inj Date : 02-AUG-2003 17:25
Operator : 0691 Inst ID: mt.i
Smp Info : IC7,,1,7,,0.5PPBV
Misc Info : T080203i,LA,,,250ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:12 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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

WJ 8/2/03

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	9.736	9.734	(1.000)	385725	10.0000	
* 2 1,4-Difluorobenzene	114	11.861	11.859	(1.000)	1780326	10.0000	
* 3 Chlorobenzene-d5	117	16.425	16.432	(1.000)	1450407	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.733	10.740	(0.905)	366019	10.0000	10.05
$ 5 Toluene-d8	98	14.403	14.402	(0.877)	1514896	10.0000	10.08
$ 6 4-Bromofluorobenzene	95	18.021	18.019	(1.097)	964159	10.0000	10.37
7 Chlorodifluoromethane	51	4.122	4.120	(0.423)	44849	0.50000	0.4991
8 Dichlorodifluoromethane	85	4.200	4.198	(0.431)	45604	0.50000	0.5126
9 Chloromethane	52	4.409	4.407	(0.453)	5514	0.50000	0.5373
10 1,2-Dichlorotetrafluoroethane	135	4.426	4.424	(0.455)	24016	0.50000	0.5040
11 Vinyl Chloride	62	4.617	4.615	(0.474)	15951	0.50000	0.4948
12 Methanol	31	4.582	4.563	(0.471)	32197	2.00000	2.371
13 1,3-Butadiene	54	4.721	4.719	(0.485)	12587	0.50000	0.5228
14 n-Butane	43	4.721	4.719	(0.485)	28647	0.50000	0.5053
15 Bromomethane	94	5.103	5.092	(0.524)	15082	0.50000	0.5032
16 Chloroethane	64	5.267	5.266	(0.541)	7623	0.50000	0.4878
17 Trichlorofluoromethane	101	5.910	5.916	(0.607)	29312	0.50000	0.5126
18 Acrolein	56	5.944	5.925	(0.611)	10101	1.00000	1.118
19 Acetonitrile	40	6.022	5.994	(0.619)	13746	1.00000	1.130
20 Acetone	58	6.118	6.064	(0.628)	15366	1.00000	1.551
21 Pentane	57	6.161	6.168	(0.633)	6158	0.50000	0.6454

Data File: /var/chem/gcms/mt.i/T080203i.b/tic7h02.d
Report Date: 02-Aug-2003 20:12

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	6.395	6.350	(0.657)	71864	1.00000	1.100
23 1,1-Dichloroethene	96	6.690	6.688	(0.687)	18908	0.50000	0.4924
24 Acrylonitrile	53	6.820	6.810	(0.701)	33434	1.00000	1.026
25 1,1,2-Trichlorotrifluoroethane	101	6.899	6.897	(0.709)	39964	0.50000	0.5118
26 Methylene Chloride	84	7.063	7.061	(0.726)	24422	0.50000	0.6022
27 3-Chloropropene	39	7.089	7.088	(0.728)	23000	0.50000	0.5167
28 Carbon Disulfide	76	7.246	7.244	(0.744)	87961	0.50000	0.5488
29 trans-1,2-Dichloroethene	96	7.931	7.929	(0.815)	19875	0.50000	0.4946
30 Methyl-t-Butyl Ether	73	8.165	8.094	(0.839)	90609	1.00000	1.036
31 1,1-Dichloroethane	63	8.382	8.380	(0.861)	45107	0.50000	0.5064
32 Vinyl Acetate	43	8.504	8.484	(0.873)	128596	1.00000	1.050
33 2-Butanone	72	9.016	8.970	(0.926)	21211	1.00000	1.172
34 Hexane	56	8.990	8.996	(0.923)	20581	0.50000	0.5269
35 cis 1,2-Dichloroethene	96	9.397	9.395	(0.965)	22221	0.50000	0.4950
36 Chloroform	83	9.744	9.742	(1.001)	38516	0.50000	0.5002
37 1,1,1-Trichloroethane	97	10.786	10.784	(1.108)	32876	0.50000	0.4991
38 1,2-Dichloroethane	62	10.881	10.879	(0.917)	29710	0.50000	0.5172
39 Benzene	78	11.349	11.348	(0.957)	66626	0.50000	0.5774
40 1-Butanol	31	11.358	11.287	(0.958)	39962	1.00000	1.056
41 Cyclohexane	69	11.358	11.356	(0.958)	10354	0.50000	0.5668
42 Carbon Tetrachloride	117	11.375	11.374	(1.168)	33772	0.50000	0.5158
43 Heptane	43	12.425	12.432	(1.048)	63456	0.50000	0.5683
44 1,2-Dichloropropane	63	12.512	12.510	(1.055)	28991	0.50000	0.5591
45 Trichloroethene	130	12.538	12.545	(1.057)	27174	0.50000	0.5502
46 Dibromomethane	93	12.616	12.614	(1.064)	26769	0.50000	0.5303
47 Bromodichloromethane	83	12.746	12.753	(1.075)	44937	0.50000	0.5213
48 4-Methyl-2-pentanone	43	13.727	13.664	(1.157)	128099	1.00000	1.133(H)
49 cis-1,3-Dichloropropene	75	13.709	13.707	(1.156)	49884	0.50000	0.5432
50 trans-1,3-Dichloropropene	75	14.377	14.376	(0.875)	31610	0.50000	0.5182
51 Toluene	91	14.516	14.514	(0.884)	72401	0.50000	0.5486
52 1,1,2-Trichloroethane	97	14.577	14.575	(0.887)	26794	0.50000	0.5387
53 2-Hexanone	58	15.002	14.957	(0.913)	63828	1.00000	1.100
54 Octane	85	15.167	15.174	(0.923)	22595	0.50000	0.5290
55 Dibromochloromethane	129	15.254	15.260	(0.929)	44069	0.50000	0.5093
56 1,2-Dibromoethane	107	15.549	15.547	(0.947)	43126	0.50000	0.5355
57 Tetrachloroethene	129	15.618	15.616	(0.951)	22815	0.50000	0.5443
58 Chlorobenzene	112	16.477	16.475	(1.003)	55113	0.50000	0.5340
59 Ethylbenzene	91	16.755	16.753	(1.020)	93030	0.50000	0.5552
60 m-Xylene (For p-)	91	16.902	16.909	(1.029)	73300	0.50000	0.5662
61 Bromoform	173	17.353	17.351	(1.057)	35375	0.50000	0.5385
62 Nonane	57	17.310	17.317	(1.054)	65858	0.50000	0.6023
63 Styrene	104	17.362	17.369	(1.057)	51733	0.50000	0.5624
64 o-Xylene	91	17.431	17.430	(1.061)	73020	0.50000	0.5645
65 1,1,2,2-Tetrachloroethane	83	17.726	17.724	(1.079)	69249	0.50000	0.5782
66 1,2,3-Trichloropropane	110	17.883	17.889	(1.089)	11170	0.50000	0.5256
67 Cumene	105	17.995	17.993	(1.096)	95896	0.50000	0.5642
68 n-Propylbenzene	91	18.490	18.497	(1.126)	143808	0.50000	0.5968

Data File: /var/chem/gcms/mt.i/T080203i.b/tic7h02.d
Report Date: 02-Aug-2003 20:12

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	18.637	18.635	(1.135)	117578	0.50000	0.6093
70 1,3,5-Trimethylbenzene	120	18.698	18.705	(1.138)	40867	0.50000	0.5760
71 Alpha-Methylstyrene	118	18.915	18.913	(1.152)	40945	0.50000	0.5749
72 Decane	57	18.967	18.974	(1.155)	98216	0.50000	0.6506
73 1,2,4-Trimethylbenzene	105	19.115	19.121	(1.164)	90036	0.50000	0.6184
74 1,3-Dichlorobenzene	146	19.375	19.382	(1.180)	60965	0.50000	0.5836
75 Benzyl Chloride	91	19.444	19.442	(1.184)	82271	0.50000	0.6152
76 1,4-Dichlorobenzene	146	19.462	19.460	(1.185)	60643	0.50000	0.6035
77 1,2-Dichlorobenzene	146	19.800	19.807	(1.205)	58645	0.50000	0.5892
78 Undecane	57	20.225	20.223	(1.231)	104225	0.50000	0.6557
79 Dodecane	57	21.310	21.316	(1.297)	81163	0.50000	0.6102
80 1,2,4-Trichlorobenzene	180	21.535	21.533	(1.311)	40293	0.50000	0.5822
81 Napthalene	128	21.691	21.689	(1.321)	116472	0.50000	0.5217
82 Hexachlorobutadiene	225	21.917	21.915	(1.334)	36964	0.50000	0.5651

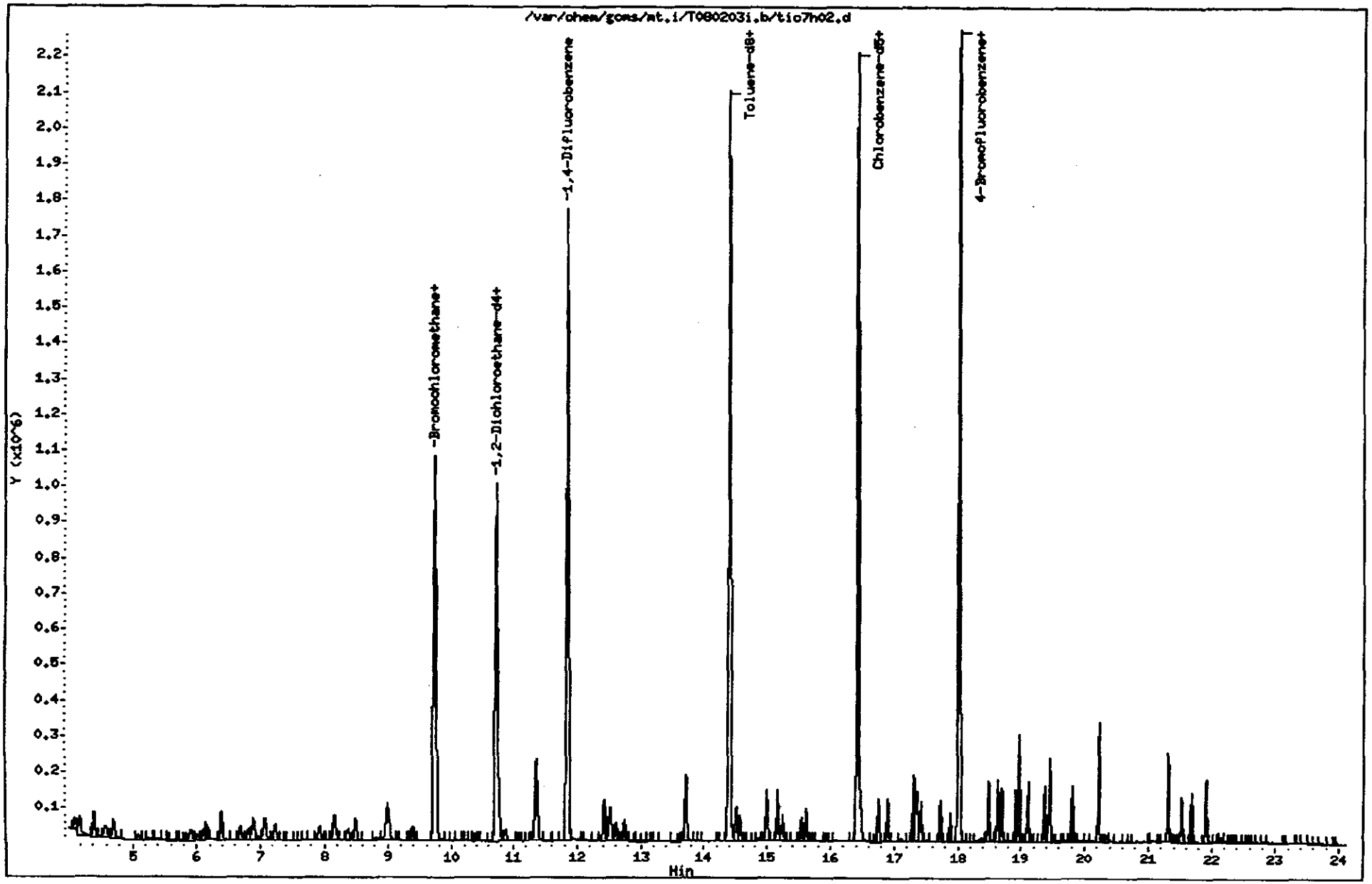
QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/mt.i/T080203i.b/tic7h02.d
Date : 02-AUG-2003 17:25
Client ID: 0.5PPBV
Sample Info: IC7,,1,7,,0.5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Report Date: 02-Aug-2003 20:13

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Lab Smp Id: IC1 Client Smp ID: 1PPBV
Inj Date : 02-AUG-2003 16:10
Operator : 0691 Inst ID: mt.i
Smp Info : IC1,,1,1,,1PPBV
Misc Info : T080203i,LA,,,10ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:13 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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 8/2/03

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	9.735	9.734	(1.000)	388447	10.0000	
2 1,4-Difluorobenzene	114	11.861	11.859	(1.000)	1804671	10.0000	
3 Chlorobenzene-d5	117	16.425	16.432	(1.000)	1436151	10.0000	
4 1,2-Dichloroethane-d4	67	10.733	10.740	(0.905)	365762	10.0000	9.904
5 Toluene-d8	98	14.403	14.402	(0.877)	1519953	10.0000	10.21
6 4-Bromofluorobenzene	95	18.021	18.019	(1.097)	956447	10.0000	10.39
7 Chlorodifluoromethane	51	4.122	4.120	(0.423)	66828	1.00000	0.7385
8 Dichlorodifluoromethane	85	4.200	4.198	(0.431)	65120	1.00000	0.7269
9 Chloromethane	52	4.417	4.407	(0.454)	8150	1.00000	0.7886
10 1,2-Dichlorotetrafluoroethane	135	4.426	4.424	(0.455)	36690	1.00000	0.7647
11 Vinyl Chloride	62	4.617	4.615	(0.474)	24411	1.00000	0.7520
12 Methanol	31	4.582	4.563	(0.471)	39542	4.00000	2.891
13 1,3-Butadiene	54	4.721	4.719	(0.485)	18422	1.00000	0.7598
14 n-Butane	43	4.721	4.719	(0.485)	43614	1.00000	0.7639
15 Bromomethane	94	5.094	5.092	(0.523)	22602	1.00000	0.7488
16 Chloroethane	64	5.267	5.266	(0.541)	11480	1.00000	0.7295
17 Trichlorofluoromethane	101	5.918	5.916	(0.608)	43046	1.00000	0.7475
18 Acrolein	56	5.944	5.925	(0.611)	14319	2.00000	1.574
19 Acetonitrile	40	6.013	5.994	(0.618)	18920	2.00000	1.544
20 Acetone	58	6.109	6.064	(0.627)	16320	2.00000	1.636
21 Pentane	57	6.170	6.168	(0.634)	7629	1.00000	0.7939

Data File: /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Report Date: 02-Aug-2003 20:13

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	6.350	(0.656)	101899	2.00000	1.549
23 1,1-Dichloroethene	96	6.690	6.688	(0.687)	29160	1.00000	0.7541
24 Acrylonitrile	53	6.820	6.810	(0.701)	48894	2.00000	1.491
25 1,1,2-Trichlorotrifluoroethane	101	6.898	6.897	(0.709)	60509	1.00000	0.7695
26 Methylene Chloride	84	7.072	7.061	(0.726)	33777	1.00000	0.8270
27 3-Chloropropene	39	7.089	7.088	(0.728)	35206	1.00000	0.7853
28 Carbon Disulfide	76	7.245	7.244	(0.744)	124765	1.00000	0.7730
29 trans-1,2-Dichloroethene	96	7.931	7.929	(0.815)	30188	1.00000	0.7460
30 Methyl-t-Butyl Ether	73	8.156	8.094	(0.838)	131912	2.00000	1.498
31 1,1-Dichloroethane	63	8.382	8.380	(0.861)	67347	1.00000	0.7508
32 Vinyl Acetate	43	8.503	8.484	(0.873)	184364	2.00000	1.494
33 2-Butanone	72	9.015	8.970	(0.926)	26512	2.00000	1.455
34 Hexane	56	8.998	8.996	(0.924)	30735	1.00000	0.7814
35 cis 1,2-Dichloroethene	96	9.397	9.395	(0.965)	33371	1.00000	0.7382
36 Chloroform	83	9.744	9.742	(1.001)	58162	1.00000	0.7500
37 1,1,1-Trichloroethane	97	10.785	10.784	(1.108)	49233	1.00000	0.7422
38 1,2-Dichloroethane	62	10.881	10.879	(0.917)	44362	1.00000	0.7618
39 Benzene	78	11.349	11.348	(0.957)	95905	1.00000	0.8199
40 1-Butanol	31	11.349	11.287	(0.957)	57933	2.00000	1.510
41 Cyclohexane	69	11.358	11.356	(0.958)	15543	1.00000	0.8393
42 Carbon Tetrachloride	117	11.375	11.374	(1.168)	51113	1.00000	0.7752
43 Heptane	43	12.425	12.432	(1.048)	89078	1.00000	0.7870
44 1,2-Dichloropropane	63	12.512	12.510	(1.055)	42178	1.00000	0.8025
45 Trichloroethene	130	12.538	12.545	(1.057)	39410	1.00000	0.7871
46 Dibromomethane	93	12.616	12.614	(1.064)	39621	1.00000	0.7743
47 Bromodichloromethane	83	12.746	12.753	(1.075)	67460	1.00000	0.7720
48 4-Methyl-2-pentanone	43	13.718	13.664	(1.157)	186342	2.00000	1.626
49 cis-1,3-Dichloropropene	75	13.709	13.707	(1.156)	73847	1.00000	0.7933
50 trans-1,3-Dichloropropene	75	14.377	14.376	(0.875)	46371	1.00000	0.7678
51 Toluene	91	14.516	14.514	(0.884)	103007	1.00000	0.7882
52 1,1,2-Trichloroethane	97	14.577	14.575	(0.887)	38926	1.00000	0.7904
53 2-Hexanone	58	14.993	14.957	(0.913)	89691	2.00000	1.561
54 Octane	85	15.175	15.174	(0.924)	33815	1.00000	0.7995
55 Dibromochloromethane	129	15.253	15.260	(0.929)	67010	1.00000	0.7821
56 1,2-Dibromoethane	107	15.548	15.547	(0.947)	62351	1.00000	0.7818
57 Tetrachloroethene	129	15.618	15.616	(0.951)	33567	1.00000	0.8088
58 Chlorobenzene	112	16.477	16.475	(1.003)	79742	1.00000	0.7804
59 Ethylbenzene	91	16.754	16.753	(1.020)	132689	1.00000	0.7997
60 m-Xylene (For p-)	91	16.902	16.909	(1.029)	101697	1.00000	0.7933
61 Bromoform	173	17.353	17.351	(1.057)	50397	1.00000	0.7748
62 Nonane	57	17.310	17.317	(1.054)	89564	1.00000	0.8273
63 Styrene	104	17.362	17.369	(1.057)	72519	1.00000	0.7962
64 o-Xylene	91	17.431	17.430	(1.061)	101349	1.00000	0.7913
65 1,1,2,2-Tetrachloroethane	83	17.726	17.724	(1.079)	93605	1.00000	0.7893
66 1,2,3-Trichloropropane	110	17.882	17.889	(1.089)	16175	1.00000	0.7687
67 Cumene	105	17.995	17.993	(1.096)	135910	1.00000	0.8076
68 n-Propylbenzene	91	18.498	18.497	(1.126)	190144	1.00000	0.7970

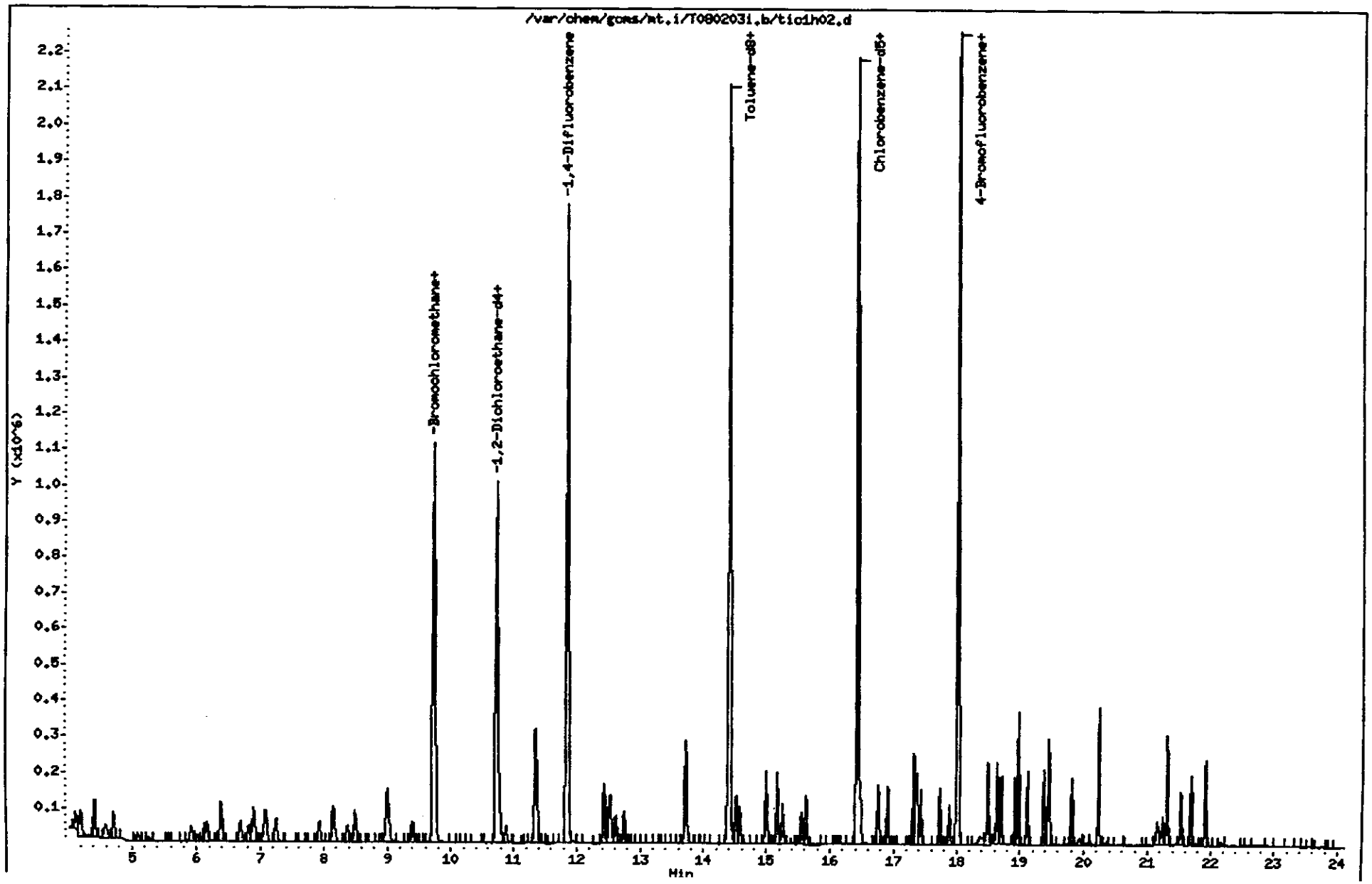
Data File: /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Report Date: 02-Aug-2003 20:13

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	18.637	18.635	(1.135)	151445	1.00000	0.7926
70 1,3,5-Trimethylbenzene	120	18.707	18.705	(1.139)	53451	1.00000	0.7609
71 Alpha-Methylstyrene	118	18.915	18.913	(1.152)	51481	1.00000	0.7300
72 Decane	57	18.967	18.974	(1.155)	124319	1.00000	0.8316
73 1,2,4-Trimethylbenzene	105	19.114	19.121	(1.164)	110710	1.00000	0.7680
74 1,3-Dichlorobenzene	146	19.375	19.382	(1.180)	79650	1.00000	0.7700
75 Benzyl Chloride	91	19.444	19.442	(1.184)	102879	1.00000	0.7769
76 1,4-Dichlorobenzene	146	19.461	19.460	(1.185)	78741	1.00000	0.7913
77 1,2-Dichlorobenzene	146	19.808	19.807	(1.206)	74043	1.00000	0.7512
78 Undecane	57	20.225	20.223	(1.231)	120668	1.00000	0.7667
79 Dodecane	57	21.309	21.316	(1.297)	99470	1.00000	0.7553
80 1,2,4-Trichlorobenzene	180	21.535	21.533	(1.311)	46547	1.00000	0.6792
81 Napthalene	128	21.691	21.689	(1.321)	163421	1.00000	0.7393
82 Hexachlorobutadiene	225	21.917	21.915	(1.334)	49601	1.00000	0.7658

Data File: /var/chem/gcms/mt.i/T080203i.b/tic1h02.d
Date : 02-AUG-2003 16:10
Client ID: 1PPBV
Sample Info: IC1,,1,1,,1PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Report Date: 02-Aug-2003 20:13

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Lab Smp Id: IC2 Client Smp ID: 5PPBV
Inj Date : 02-AUG-2003 15:33
Operator : 0691 Inst ID: mt.i
Smp Info : IC2,,1,2,,5PPBV
Misc Info : T080203i,LA,,,50ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:13 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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

cwf 8/2/03

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	9.732	9.734	(1.000)	386308	10.0000	
2 1,4-Difluorobenzene	114	11.857	11.859	(1.000)	1829518	10.0000	
3 Chlorobenzene-d5	117	16.430	16.432	(1.000)	1470399	10.0000	
4 1,2-Dichloroethane-d4	67	10.738	10.740	(0.906)	375866	10.0000	10.04
5 Toluene-d8	98	14.408	14.402	(0.877)	1524302	10.0000	10.00
6 4-Bromofluorobenzene	95	18.017	18.019	(1.097)	936802	10.0000	9.943
7 Chlorodifluoromethane	51	4.127	4.120	(0.424)	508256	5.00000	5.648
8 Dichlorodifluoromethane	85	4.196	4.198	(0.431)	506198	5.00000	5.682
9 Chloromethane	52	4.413	4.407	(0.453)	60357	5.00000	5.872
10 1,2-Dichlorotetrafluoroethane	135	4.422	4.424	(0.454)	275069	5.00000	5.764
11 Vinyl Chloride	62	4.613	4.615	(0.474)	182698	5.00000	5.659
12 Methanol	31	4.569	4.563	(0.470)	310850	20.0000	22.86
13 1,3-Butadiene	54	4.717	4.719	(0.485)	135229	5.00000	5.609
14 n-Butane	43	4.717	4.719	(0.485)	324493	5.00000	5.715
15 Bromomethane	94	5.098	5.092	(0.524)	170040	5.00000	5.665
16 Chloroethane	64	5.263	5.266	(0.541)	91633	5.00000	5.855
17 Trichlorofluoromethane	101	5.914	5.916	(0.608)	328733	5.00000	5.740
18 Acrolein	56	5.931	5.925	(0.610)	100312	10.0000	11.09
19 Acetonitrile	40	6.001	5.994	(0.617)	135178	10.0000	11.09
20 Acetone	58	6.070	6.064	(0.624)	112153	10.0000	11.30
21 Pentane	57	6.166	6.168	(0.634)	47753	5.00000	4.997

Data File: /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Report Date: 02-Aug-2003 20:13

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	6.365	6.350	(0.654)	740183	10.0000	11.32
23 1,1-Dichloroethene	96	6.695	6.688	(0.688)	218779	5.00000	5.689
24 Acrylonitrile	53	6.808	6.810	(0.700)	370677	10.0000	11.36
25 1,1,2-Trichlorotrifluoroethane	101	6.894	6.897	(0.708)	448190	5.00000	5.731
26 Methylene Chloride	84	7.068	7.061	(0.726)	219556	5.00000	5.405
27 3-Chloropropene	39	7.085	7.088	(0.728)	248065	5.00000	5.564
28 Carbon Disulfide	76	7.241	7.244	(0.744)	828527	5.00000	5.162
29 trans-1,2-Dichloroethene	96	7.927	7.929	(0.815)	229824	5.00000	5.711
30 Methyl-t-Butyl Ether	73	8.100	8.094	(0.832)	994600	10.0000	11.36
31 1,1-Dichloroethane	63	8.378	8.380	(0.861)	505601	5.00000	5.668
32 Vinyl Acetate	43	8.491	8.484	(0.872)	1381587	10.0000	11.26
33 2-Butanone	72	8.977	8.970	(0.922)	202103	10.0000	11.15
34 Hexane	56	8.994	8.996	(0.924)	222984	5.00000	5.700
35 cis 1,2-Dichloroethene	96	9.393	9.395	(0.965)	257112	5.00000	5.719
36 Chloroform	83	9.749	9.742	(1.002)	433615	5.00000	5.622
37 1,1,1-Trichloroethane	97	10.790	10.784	(1.109)	378667	5.00000	5.740
38 1,2-Dichloroethane	62	10.885	10.879	(0.918)	335136	5.00000	5.677
39 Benzene	78	11.354	11.348	(0.958)	667362	5.00000	5.628
40 1-Butanol	31	11.302	11.287	(0.953)	438330	10.0000	11.27
41 Cyclohexane	69	11.363	11.356	(0.958)	107099	5.00000	5.705
42 Carbon Tetrachloride	117	11.371	11.374	(1.169)	375383	5.00000	5.725
43 Heptane	43	12.430	12.432	(1.048)	648406	5.00000	5.650
44 1,2-Dichloropropane	63	12.508	12.510	(1.055)	302872	5.00000	5.684
45 Trichloroethene	130	12.543	12.545	(1.058)	283741	5.00000	5.590
46 Dibromomethane	93	12.612	12.614	(1.064)	289581	5.00000	5.582
47 Bromodichloromethane	83	12.751	12.753	(1.075)	506151	5.00000	5.713
48 4-Methyl-2-pentanone	43	13.679	13.664	(1.154)	1331633	10.0000	11.46
49 cis-1,3-Dichloropropene	75	13.714	13.707	(1.157)	524115	5.00000	5.554
50 trans-1,3-Dichloropropene	75	14.373	14.376	(0.875)	348960	5.00000	5.643
51 Toluene	91	14.512	14.514	(0.883)	746241	5.00000	5.577
52 1,1,2-Trichloroethane	97	14.573	14.575	(0.887)	281243	5.00000	5.578
53 2-Hexanone	58	14.963	14.957	(0.911)	671469	10.0000	11.42
54 Octane	85	15.171	15.174	(0.923)	248126	5.00000	5.730
55 Dibromochloromethane	129	15.258	15.260	(0.929)	507977	5.00000	5.791
56 1,2-Dibromoethane	107	15.553	15.547	(0.947)	460588	5.00000	5.641
57 Tetrachloroethene	129	15.623	15.616	(0.951)	242232	5.00000	5.700
58 Chlorobenzene	112	16.473	16.475	(1.003)	592386	5.00000	5.662
59 Ethylbenzene	91	16.751	16.753	(1.020)	965020	5.00000	5.680
60 m-Xylene (Por p-)	91	16.907	16.909	(1.029)	728836	5.00000	5.553
61 Bromoform	173	17.349	17.351	(1.056)	382781	5.00000	5.748
62 Nonane	57	17.314	17.317	(1.054)	630790	5.00000	5.691
63 Styrene	104	17.367	17.369	(1.057)	531257	5.00000	5.697
64 o-Xylene	91	17.427	17.430	(1.061)	737456	5.00000	5.624
65 1,1,2,2-Tetrachloroethane	83	17.731	17.724	(1.079)	681618	5.00000	5.614
66 1,2,3-Trichloropropane	110	17.887	17.889	(1.089)	124348	5.00000	5.772
67 Cumene	105	17.991	17.993	(1.095)	966237	5.00000	5.608
68 n-Propylbenzene	91	18.494	18.497	(1.126)	1366888	5.00000	5.596

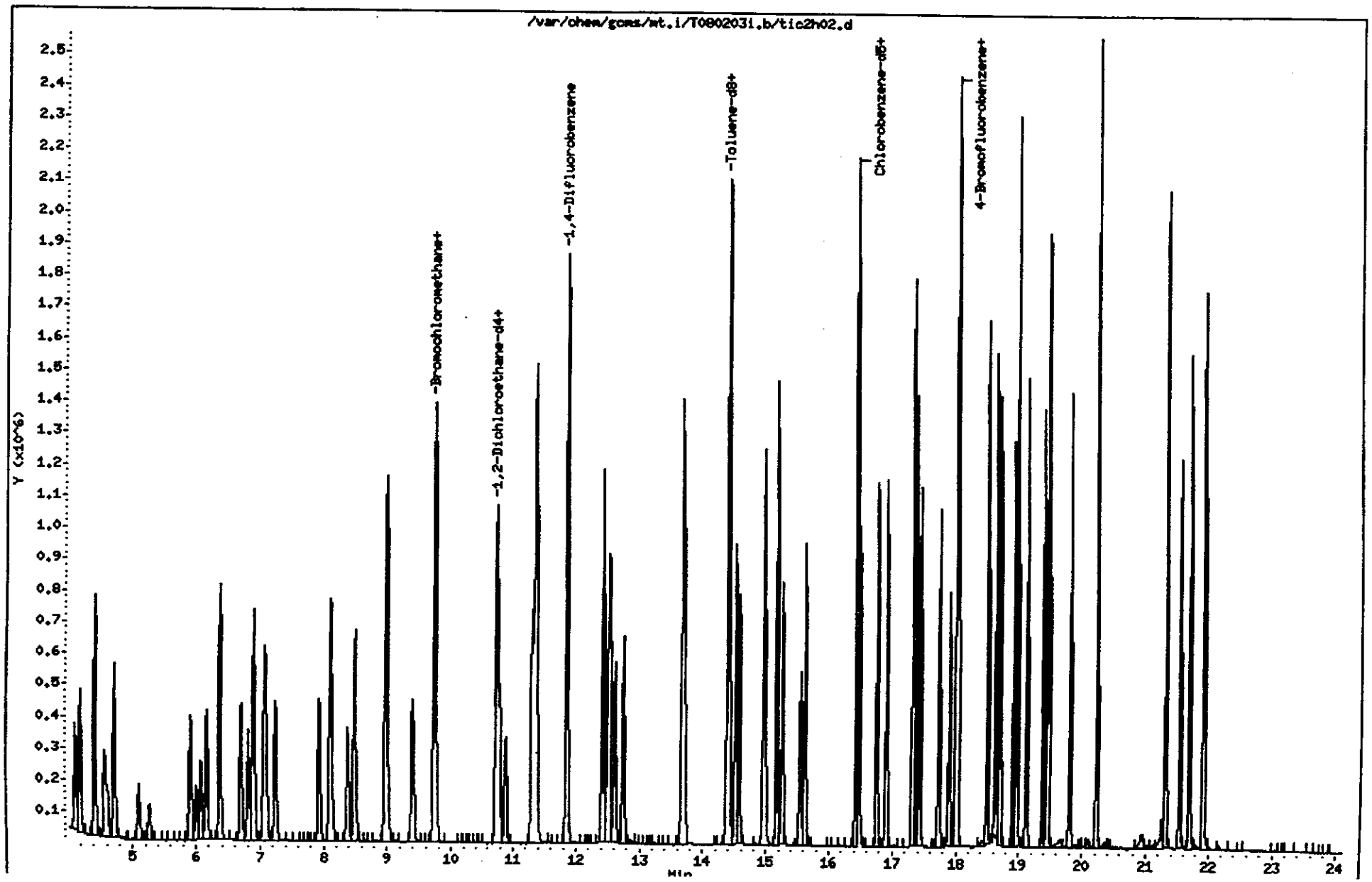
Data File: /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Report Date: 02-Aug-2003 20:13

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	18.633	18.635	(1.134)	1036157	5.00000	5.296
70 1,3,5-Trimethylbenzene	120	18.703	18.705	(1.138)	400252	5.00000	5.565
71 Alpha-Methylstyrene	118	18.911	18.913	(1.151)	399473	5.00000	5.533
72 Decane	57	18.972	18.974	(1.155)	822972	5.00000	5.377
73 1,2,4-Trimethylbenzene	105	19.119	19.121	(1.164)	805374	5.00000	5.457
74 1,3-Dichlorobenzene	146	19.379	19.382	(1.180)	581443	5.00000	5.490
75 Benzyl Chloride	91	19.440	19.442	(1.183)	761733	5.00000	5.619
76 1,4-Dichlorobenzene	146	19.457	19.460	(1.184)	557451	5.00000	5.472
77 1,2-Dichlorobenzene	146	19.805	19.807	(1.205)	559521	5.00000	5.545
78 Undecane	57	20.221	20.223	(1.231)	874418	5.00000	5.427
79 Dodecane	57	21.314	21.316	(1.297)	745913	5.00000	5.532
80 1,2,4-Trichlorobenzene	180	21.531	21.533	(1.310)	380519	5.00000	5.423
81 Napthalene	128	21.687	21.689	(1.320)	1306046	5.00000	5.771
82 Hexachlorobutadiene	225	21.913	21.915	(1.334)	381477	5.00000	5.752

Data File: /var/chem/gcms/mt.i/T080203i.b/tic2h02.d
Date : 02-AUG-2003 15:33
Client ID: 5PPBV
Sample Info: IC2,,1,2,,5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
Report Date: 02-Aug-2003 20:12

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
Lab Smp Id: IC3 Client Smp ID: 10PPBV
Inj Date : 02-AUG-2003 14:56
Operator : 0691 Inst ID: mt.i
Smp Info : IC3,,1,3,,10PPBV
Misc Info : T080203i,LA,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:12 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

cwb 8/2/03

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	9.734	9.734	(1.000)	383252	10.0000	
* 2 1,4-Difluorobenzene	114	11.859	11.859	(1.000)	1828103	10.0000	
* 3 Chlorobenzene-d5	117	16.432	16.432	(1.000)	1477621	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.740	10.740	(0.906)	373005	10.0000	9.970
$ 5 Toluene-d8	98	14.402	14.402	(0.876)	1513352	10.0000	9.883
$ 6 4-Bromofluorobenzene	95	18.019	18.019	(1.097)	925639	10.0000	9.776
7 Chlorodifluoromethane	51	4.120	4.120	(0.423)	922810	10.0000	10.34
8 Dichlorodifluoromethane	85	4.198	4.198	(0.431)	904304	10.0000	10.23
9 Chloromethane	52	4.407	4.407	(0.453)	105536	10.0000	10.35
10 1,2-Dichlorotetrafluoroethane	135	4.424	4.424	(0.454)	488533	10.0000	10.32
11 Vinyl Chloride	62	4.615	4.615	(0.474)	334807	10.0000	10.45
12 Methanol	31	4.563	4.563	(0.469)	576956	40.0000	42.76
13 1,3-Butadiene	54	4.719	4.719	(0.485)	248991	10.0000	10.41
14 n-Butane	43	4.719	4.719	(0.485)	576370	10.0000	10.23
15 Bromomethane	94	5.092	5.092	(0.523)	311154	10.0000	10.45
16 Chloroethane	64	5.266	5.266	(0.541)	166917	10.0000	10.75
17 Trichlorofluoromethane	101	5.916	5.916	(0.608)	596997	10.0000	10.51
18 Acrolein	56	5.925	5.925	(0.609)	182339	20.0000	20.32
19 Acetonitrile	40	5.994	5.994	(0.616)	250452	20.0000	20.72
20 Acetone	58	6.064	6.064	(0.623)	209703	20.0000	21.30
21 Pentane	57	6.168	6.168	(0.634)	87596	10.0000	9.239

)ata File: /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
(eport Date: 02-Aug-2003 20:12

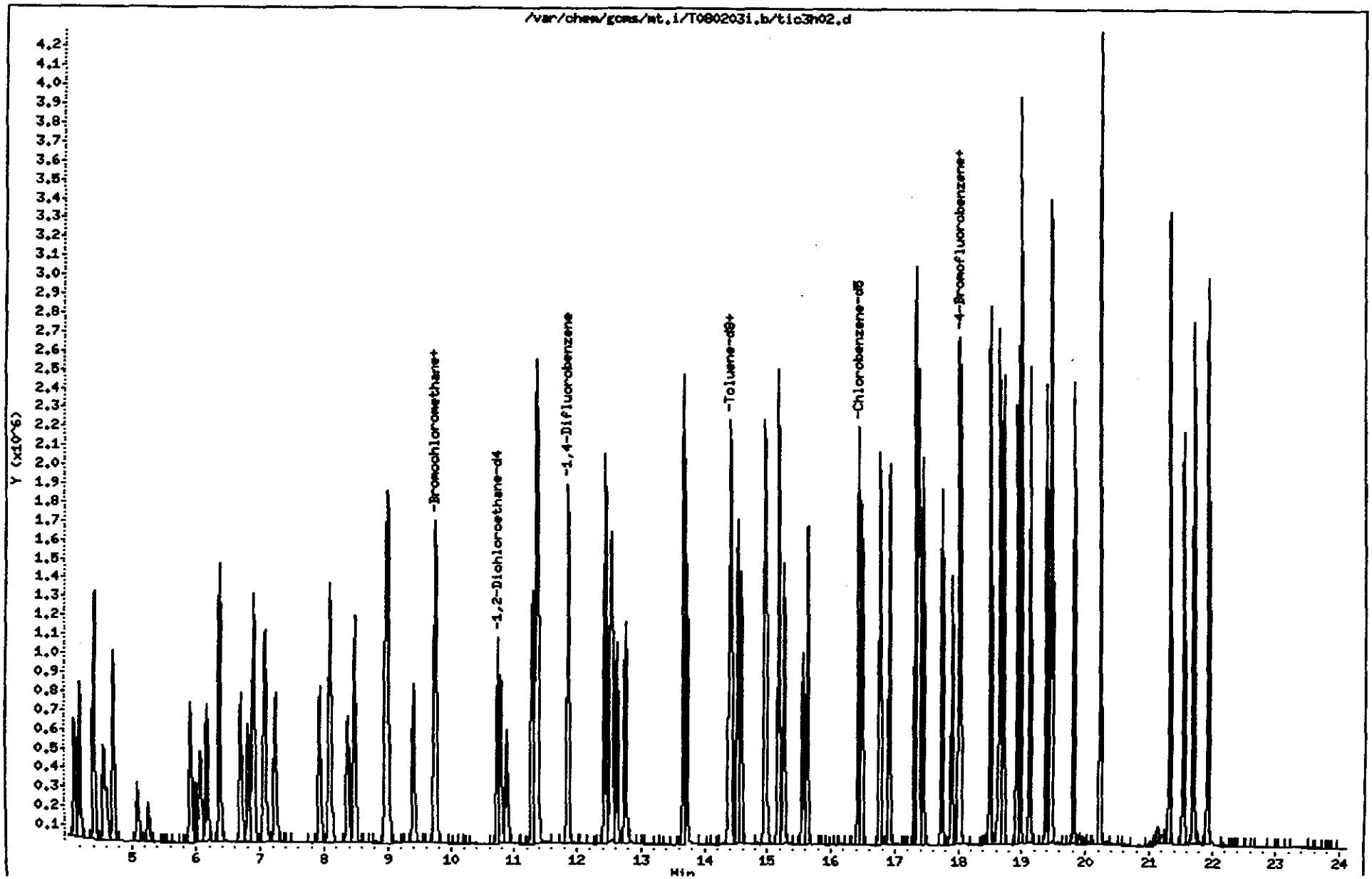
ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.350	6.350	(0.652)	1326928	20.0000	20.45
23 1,1-Dichloroethene	96	6.688	6.688	(0.687)	399402	10.0000	10.47
24 Acrylonitrile	53	6.810	6.810	(0.700)	685170	20.0000	21.17
25 1,1,2-Trichlorotrifluoroethane	101	6.897	6.897	(0.709)	811937	10.0000	10.46
26 Methylene Chloride	84	7.061	7.061	(0.725)	406163	10.0000	10.08
27 3-Chloropropene	39	7.088	7.088	(0.728)	451271	10.0000	10.20
28 Carbon Disulfide	76	7.244	7.244	(0.744)	1478931	10.0000	9.287
29 trans-1,2-Dichloroethene	96	7.929	7.929	(0.815)	423370	10.0000	10.60
30 Methyl-t-Butyl Ether	73	8.094	8.094	(0.832)	1813727	20.0000	20.88
31 1,1-Dichloroethane	63	8.380	8.380	(0.861)	936713	10.0000	10.58
32 Vinyl Acetate	43	8.484	8.484	(0.872)	2551916	20.0000	20.96
33 2-Butanone	72	8.970	8.970	(0.922)	374293	20.0000	20.82
34 Hexane	56	8.996	8.996	(0.924)	394737	10.0000	10.17
35 cis 1,2-Dichloroethene	96	9.395	9.395	(0.965)	472686	10.0000	10.60
36 Chloroform	83	9.742	9.742	(1.001)	808828	10.0000	10.57
37 1,1,1-Trichloroethane	97	10.784	10.784	(1.108)	691139	10.0000	10.56
38 1,2-Dichloroethane	62	10.879	10.879	(0.917)	612068	10.0000	10.38
39 Benzene	78	11.348	11.348	(0.957)	1171783	10.0000	9.889
40 1-Butanol	31	11.287	11.287	(0.952)	799758	20.0000	20.58
41 Cyclohexane	69	11.356	11.356	(0.958)	186473	10.0000	9.941
42 Carbon Tetrachloride	117	11.374	11.374	(1.168)	679022	10.0000	10.44
43 Heptane	43	12.432	12.432	(1.048)	1137508	10.0000	9.920
44 1,2-Dichloropropane	63	12.510	12.510	(1.055)	539573	10.0000	10.13
45 Trichloroethene	130	12.545	12.545	(1.058)	516241	10.0000	10.18
46 Dibromomethane	93	12.614	12.614	(1.064)	529890	10.0000	10.22
47 Bromodichloromethane	83	12.753	12.753	(1.075)	919575	10.0000	10.39
48 4-Methyl-2-pentanone	43	13.664	13.664	(1.152)	2323945	20.0000	20.02
49 cis-1,3-Dichloropropene	75	13.707	13.707	(1.156)	961349	10.0000	10.20
50 trans-1,3-Dichloropropene	75	14.376	14.376	(0.875)	647634	10.0000	10.42
51 Toluene	91	14.514	14.514	(0.883)	1357974	10.0000	10.10
52 1,1,2-Trichloroethane	97	14.575	14.575	(0.887)	512472	10.0000	10.11
53 2-Hexanone	58	14.957	14.957	(0.910)	1218068	20.0000	20.61
54 Octane	85	15.174	15.174	(0.923)	448432	10.0000	10.30
55 Dibromochloromethane	129	15.260	15.260	(0.929)	935249	10.0000	10.61
56 1,2-Dibromoethane	107	15.547	15.547	(0.946)	846688	10.0000	10.32
57 Tetrachloroethene	129	15.616	15.616	(0.950)	435903	10.0000	10.21
58 Chlorobenzene	112	16.475	16.475	(1.003)	1094517	10.0000	10.41
59 Ethylbenzene	91	16.753	16.753	(1.020)	1734309	10.0000	10.16
60 m-Xylene (For p-)	91	16.909	16.909	(1.029)	1316462	10.0000	9.981
61 Bromoform	173	17.351	17.351	(1.056)	699439	10.0000	10.45
62 Nonane	57	17.317	17.317	(1.054)	1103586	10.0000	9.908
63 Styrene	104	17.369	17.369	(1.057)	942021	10.0000	10.05
64 o-Xylene	91	17.430	17.430	(1.061)	1335830	10.0000	10.14
65 1,1,2,2-Tetrachloroethane	83	17.724	17.724	(1.079)	1221128	10.0000	10.01
66 1,2,3-Trichloropropane	110	17.889	17.889	(1.089)	232870	10.0000	10.76
67 Cumene	105	17.993	17.993	(1.095)	1733899	10.0000	10.01
68 n-Propylbenzene	91	18.497	18.497	(1.126)	2403305	10.0000	9.791

Data File: /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
Report Date: 02-Aug-2003 20:12

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	18.635	18.635	(1.134)	1925951	10.0000	9.796
70 1,3,5-Trimethylbenzene	120	18.705	18.705	(1.138)	718100	10.0000	9.936
71 Alpha-Methylstyrene	118	18.913	18.913	(1.151)	736278	10.0000	10.15
72 Decane	57	18.974	18.974	(1.155)	1446561	10.0000	9.405
73 1,2,4-Trimethylbenzene	105	19.121	19.121	(1.164)	1444582	10.0000	9.740
74 1,3-Dichlorobenzene	146	19.382	19.382	(1.180)	1066580	10.0000	10.02
75 Benzyl Chloride	91	19.442	19.442	(1.183)	1366262	10.0000	10.03
76 1,4-Dichlorobenzene	146	19.460	19.460	(1.184)	1010905	10.0000	9.874
77 1,2-Dichlorobenzene	146	19.807	19.807	(1.205)	1000104	10.0000	9.862
78 Undecane	57	20.223	20.223	(1.231)	1501737	10.0000	9.274
79 Dodecane	57	21.316	21.316	(1.297)	1273498	10.0000	9.398
80 1,2,4-Trichlorobenzene	180	21.533	21.533	(1.310)	710967	10.0000	10.08
81 Napthalene	128	21.689	21.689	(1.320)	2359997	10.0000	10.38
82 Hexachlorobutadiene	225	21.915	21.915	(1.334)	675988	10.0000	10.14

Data File: /var/chem/gcms/mt.i/T080203i.b/tic3h02.d
Date : 02-AUG-2003 14:56
Client ID: 10PPBV
Sample Info: IC3,,1,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Report Date: 02-Aug-2003 20:13

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Lab Smp Id: IC4 Client Smp ID: 15PPBV
Inj Date : 02-AUG-2003 14:19
Operator : 0691 Inst ID: mt.i
Smp Info : IC4,,1,4,,15PPBV
Misc Info : T080203i,LA,,,150ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:13 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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

WJ 8/2/03

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	9.730	9.734	(1.000)	380830	10.0000	
2 1,4-Difluorobenzene	114	11.856	11.859	(1.000)	1828558	10.0000	
3 Chlorobenzene-d5	117	16.428	16.432	(1.000)	1473822	10.0000	
4 1,2-Dichloroethane-d4	67	10.737	10.740	(0.906)	373359	10.0000	9.977
5 Toluene-d8	98	14.407	14.402	(0.877)	1504711	10.0000	9.852
6 4-Bromofluorobenzene	95	18.025	18.019	(1.097)	920795	10.0000	9.750
7 Chlorodifluoromethane	51	4.126	4.120	(0.424)	1339086	15.0000	15.09
8 Dichlorodifluoromethane	85	4.195	4.198	(0.431)	1317192	15.0000	15.00
9 Chloromethane	52	4.412	4.407	(0.453)	153965	15.0000	15.20
10 1,2-Dichlorotetrafluoroethane	135	4.421	4.424	(0.454)	712683	15.0000	15.15
11 Vinyl Chloride	62	4.612	4.615	(0.474)	499879	15.0000	15.71
12 Methanol	31	4.560	4.563	(0.469)	855555	60.0000	63.81
13 1,3-Butadiene	54	4.716	4.719	(0.485)	365732	15.0000	15.39
14 n-Butane	43	4.716	4.719	(0.485)	849041	15.0000	15.17
15 Bromomethane	94	5.097	5.092	(0.524)	451108	15.0000	15.24
16 Chloroethane	64	5.262	5.266	(0.541)	241598	15.0000	15.66
17 Trichlorofluoromethane	101	5.913	5.916	(0.608)	852110	15.0000	15.09
18 Acrolein	56	5.922	5.925	(0.609)	254374	30.0000	28.53
19 Acetonitrile	40	6.000	5.994	(0.617)	360361	30.0000	30.00
20 Acetone	58	6.061	6.064	(0.623)	298153	30.0000	30.48
21 Pentane	57	6.165	6.168	(0.634)	143393	15.0000	15.22

Data File: /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Report Date: 02-Aug-2003 20:13

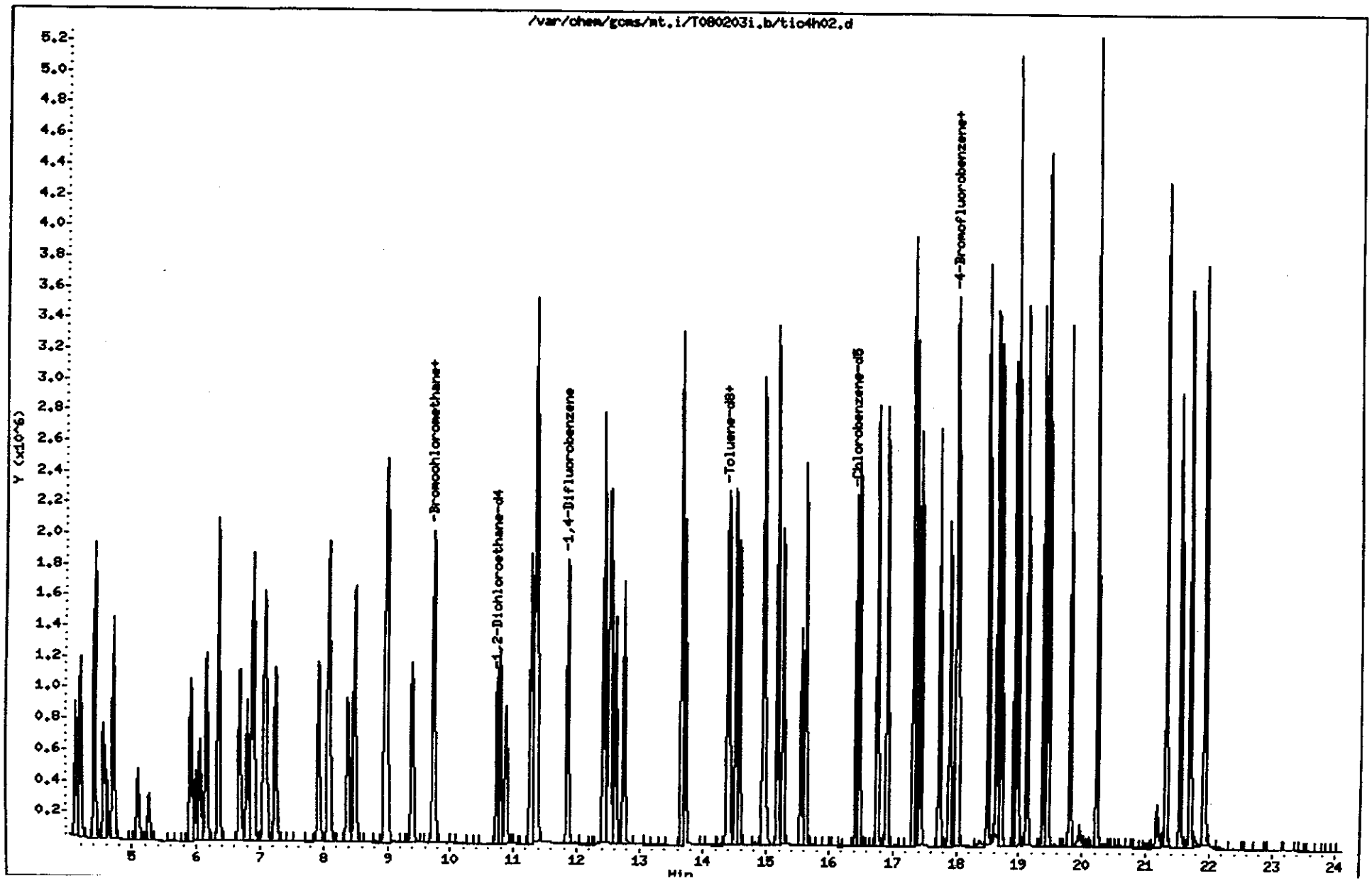
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.347	6.350	(0.652)	1856955	30.0000	28.80
23 1,1-Dichloroethene	96	6.694	6.688	(0.688)	574785	15.0000	15.16
24 Acrylonitrile	53	6.807	6.810	(0.700)	988343	30.0000	30.74
25 1,1,2-Trichlorotrifluoroethane	101	6.893	6.897	(0.708)	1152319	15.0000	14.95
26 Methylene Chloride	84	7.067	7.061	(0.726)	584251	15.0000	14.59
27 3-Chloropropene	39	7.084	7.088	(0.728)	652944	15.0000	14.86
28 Carbon Disulfide	76	7.240	7.244	(0.744)	2132064	15.0000	13.47
29 trans-1,2-Dichloroethene	96	7.935	7.929	(0.815)	612250	15.0000	15.43
30 Methyl-t-Butyl Ether	73	8.082	8.094	(0.831)	2604348	30.0000	30.18
31 1,1-Dichloroethane	63	8.377	8.380	(0.861)	1344013	15.0000	15.28
32 Vinyl Acetate	43	8.490	8.484	(0.872)	3585514	30.0000	29.64
33 2-Butanone	72	8.967	8.970	(0.922)	529408	30.0000	29.64
34 Hexane	56	8.993	8.996	(0.924)	571993	15.0000	14.83
35 cis 1,2-Dichloroethene	96	9.401	9.395	(0.966)	678974	15.0000	15.32
36 Chloroform	83	9.748	9.742	(1.002)	1177260	15.0000	15.48
37 1,1,1-Trichloroethane	97	10.789	10.784	(1.109)	1006025	15.0000	15.47
38 1,2-Dichloroethane	62	10.884	10.879	(0.918)	881696	15.0000	14.94
39 Benzene	78	11.353	11.348	(0.958)	1644131	15.0000	13.87
40 1-Butanol	31	11.284	11.287	(0.952)	1108499	30.0000	28.52
41 Cyclohexane	69	11.362	11.356	(0.958)	261710	15.0000	13.95
42 Carbon Tetrachloride	117	11.379	11.374	(1.169)	968768	15.0000	14.99
43 Heptane	43	12.429	12.432	(1.048)	1602012	15.0000	13.97
44 1,2-Dichloropropane	63	12.516	12.510	(1.056)	752751	15.0000	14.14
45 Trichloroethene	130	12.542	12.545	(1.058)	734362	15.0000	14.48
46 Dibromomethane	93	12.611	12.614	(1.064)	750510	15.0000	14.47
47 Bromodichloromethane	83	12.750	12.753	(1.075)	1322056	15.0000	14.93
48 4-Methyl-2-pentanone	43	13.661	13.664	(1.152)	3170783	30.0000	27.31
49 cis-1,3-Dichloropropene	75	13.713	13.707	(1.157)	1380425	15.0000	14.64
50 trans-1,3-Dichloropropene	75	14.372	14.376	(0.875)	932528	15.0000	15.04
51 Toluene	91	14.520	14.514	(0.884)	1908401	15.0000	14.23
52 1,1,2-Trichloroethane	97	14.572	14.575	(0.887)	730437	15.0000	14.45
53 2-Hexanone	58	14.954	14.957	(0.910)	1675137	30.0000	28.41
54 Octane	85	15.170	15.174	(0.923)	635269	15.0000	14.64
55 Dibromochloromethane	129	15.257	15.260	(0.929)	1325594	15.0000	15.08
56 1,2-Dibromoethane	107	15.552	15.547	(0.947)	1188052	15.0000	14.52
57 Tetrachloroethene	129	15.622	15.616	(0.951)	619845	15.0000	14.55
58 Chlorobenzene	112	16.472	16.475	(1.003)	1552069	15.0000	14.80
59 Ethylbenzene	91	16.758	16.753	(1.020)	2428473	15.0000	14.26
60 m-Xylene (For p-)	91	16.906	16.909	(1.029)	1846373	15.0000	14.03
61 Bromoform	173	17.348	17.351	(1.056)	985058	15.0000	14.76
62 Nonane	57	17.313	17.317	(1.054)	1452289	15.0000	13.07
63 Styrene	104	17.366	17.369	(1.057)	1305806	15.0000	13.97
64 o-Xylene	91	17.435	17.430	(1.061)	1837032	15.0000	13.98
65 1,1,2,2-Tetrachloroethane	83	17.730	17.724	(1.079)	1686073	15.0000	13.85
66 1,2,3-Trichloropropane	110	17.886	17.889	(1.089)	330331	15.0000	15.30
67 Cumene	105	17.999	17.993	(1.096)	2398948	15.0000	13.89
68 n-Propylbenzene	91	18.493	18.497	(1.126)	3275508	15.0000	13.38

Data File: /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Report Date: 02-Aug-2003 20:13

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	18.641	18.635	(1.135)	2641941	15.0000	13.47
70 1,3,5-Trimethylbenzene	120	18.702	18.705	(1.138)	1010319	15.0000	14.01
71 Alpha-Methylstyrene	118	18.919	18.913	(1.152)	1036533	15.0000	14.32
72 Decane	57	18.971	18.974	(1.155)	1912056	15.0000	12.46
73 1,2,4-Trimethylbenzene	105	19.118	19.121	(1.164)	1985392	15.0000	13.42
74 1,3-Dichlorobenzene	146	19.378	19.382	(1.180)	1476252	15.0000	13.91
75 Benzyl Chloride	91	19.448	19.442	(1.184)	1833691	15.0000	13.49
76 1,4-Dichlorobenzene	146	19.465	19.460	(1.185)	1386175	15.0000	13.57
77 1,2-Dichlorobenzene	146	19.804	19.807	(1.205)	1400845	15.0000	13.85
78 Undecane	57	20.229	20.223	(1.231)	1969333	15.0000	12.19
79 Dodecane	57	21.313	21.316	(1.297)	1567218	15.0000	11.60
80 1,2,4-Trichlorobenzene	180	21.530	21.533	(1.311)	982907	15.0000	13.98
81 Napthalene	128	21.686	21.689	(1.320)	3255856	15.0000	14.35
82 Hexachlorobutadiene	225	21.921	21.915	(1.334)	936591	15.0000	14.09

Data File: /var/chem/gcms/mt.i/T080203i.b/tic4h02.d
Date : 02-AUG-2003 14:19
Client ID: 15PPBV
Sample Info: IC4,,1,4,,15PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Report Date: 02-Aug-2003 20:13

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Lab Smp Id: IC5 Client Smp ID: 30PPBV
Inj Date : 02-AUG-2003 13:43
Operator : 0691 Inst ID: mt.i
Smp Info : IC5,,1,5,,30PPBV
Misc Info : T080203i,LA,,,300ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:13 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.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

WJ 8/2/03

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	9.736	9.734	(1.000)	371227	10.0000	
2 1,4-Difluorobenzene	114	11.861	11.859	(1.000)	1839513	10.0000	
3 Chlorobenzene-d5	117	16.425	16.432	(1.000)	1479520	10.0000	
4 1,2-Dichloroethane-d4	67	10.742	10.740	(0.906)	371246	10.0000	9.862
5 Toluene-d8	98	14.403	14.402	(0.877)	1474419	10.0000	9.617
6 4-Bromofluorobenzene	95	18.021	18.019	(1.097)	876498	10.0000	9.245
7 Chlorodifluoromethane	51	4.122	4.120	(0.423)	2513776	30.0000	29.07
8 Dichlorodifluoromethane	85	4.200	4.198	(0.431)	2417145	30.0000	28.23
9 Chloromethane	52	4.408	4.407	(0.453)	270905	30.0000	27.43
10 1,2-Dichlorotetrafluoroethane	135	4.426	4.424	(0.455)	1287344	30.0000	28.07
11 Vinyl Chloride	62	4.617	4.615	(0.474)	934138	30.0000	30.11(A)
12 Methanol	31	4.556	4.563	(0.468)	1571404	120.000	120.2(A)
13 1,3-Butadiene	54	4.721	4.719	(0.485)	660848	30.0000	28.52
14 n-Butane	43	4.721	4.719	(0.485)	1507133	30.0000	27.62
15 Bromomethane	94	5.094	5.092	(0.523)	833210	30.0000	28.89
16 Chloroethane	64	5.259	5.266	(0.540)	453584	30.0000	30.16(A)
17 Trichlorofluoromethane	101	5.909	5.916	(0.607)	1539490	30.0000	27.97
18 Acrolein	56	5.927	5.925	(0.609)	437046	60.0000	50.28
19 Acetonitrile	40	5.996	5.994	(0.616)	668975	60.0000	57.14
20 Acetone	58	6.057	6.064	(0.622)	555444	60.0000	58.25
21 Pentane	57	6.161	6.168	(0.633)	269241	30.0000	29.32

Data File: /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Report Date: 02-Aug-2003 20:13

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	6.343	6.350	(0.652)	3258905	60.0000	51.84
23 1,1-Dichloroethene	96	6.690	6.688	(0.687)	1079124	30.0000	29.20
24 Acrylonitrile	53	6.812	6.810	(0.700)	1836674	60.0000	58.59
25 1,1,2-Trichlorotrifluoroethane	101	6.890	6.897	(0.708)	2080213	30.0000	27.68
26 Methylene Chloride	84	7.063	7.061	(0.726)	1062109	30.0000	27.21
27 3-Chloropropene	39	7.089	7.088	(0.728)	1179927	30.0000	27.54
28 Carbon Disulfide	76	7.245	7.244	(0.744)	3948481	30.0000	25.60
29 trans-1,2-Dichloroethene	96	7.931	7.929	(0.815)	1134408	30.0000	29.34
30 Methyl-t-Butyl Ether	73	8.078	8.094	(0.830)	4686763	60.0000	55.71
31 1,1-Dichloroethane	63	8.382	8.380	(0.861)	2464277	30.0000	28.75
32 Vinyl Acetate	43	8.486	8.484	(0.872)	6521386	60.0000	55.30
33 2-Butanone	72	8.963	8.970	(0.921)	998970	60.0000	57.37
34 Hexane	56	8.998	8.996	(0.924)	1018325	30.0000	27.09
35 cis 1,2-Dichloroethene	96	9.397	9.395	(0.965)	1273219	30.0000	29.47
36 Chloroform	83	9.753	9.742	(1.002)	2181637	30.0000	29.44
37 1,1,1-Trichloroethane	97	10.785	10.784	(1.108)	1854149	30.0000	29.25
38 1,2-Dichloroethane	62	10.889	10.879	(0.918)	1639195	30.0000	27.62
39 Benzene	78	11.349	11.348	(0.957)	2656251	30.0000	22.28
40 1-Butanol	31	11.280	11.287	(0.951)	1996728	60.0000	51.07
41 Cyclohexane	69	11.358	11.356	(0.958)	420841	30.0000	22.30
42 Carbon Tetrachloride	117	11.384	11.374	(1.169)	1690419	30.0000	26.83
43 Heptane	43	12.434	12.432	(1.048)	2727546	30.0000	23.64
44 1,2-Dichloropropane	63	12.512	12.510	(1.055)	1305414	30.0000	24.37
45 Trichloroethene	130	12.547	12.545	(1.058)	1297409	30.0000	25.42
46 Dibromomethane	93	12.616	12.614	(1.064)	1334327	30.0000	25.58
47 Bromodichloromethane	83	12.755	12.753	(1.075)	2359024	30.0000	26.48
48 4-Methyl-2-pentanone	43	13.666	13.664	(1.152)	5374597	60.0000	46.02
49 cis-1,3-Dichloropropene	75	13.718	13.707	(1.157)	2466862	30.0000	26.00
50 trans-1,3-Dichloropropene	75	14.377	14.376	(0.875)	1681788	30.0000	27.03
51 Toluene	91	14.516	14.514	(0.884)	3327248	30.0000	24.71
52 1,1,2-Trichloroethane	97	14.577	14.575	(0.887)	1297194	30.0000	25.57
53 2-Hexanone	58	14.950	14.957	(0.910)	2950373	60.0000	49.85
54 Octane	85	15.175	15.174	(0.924)	1104592	30.0000	25.35
55 Dibromochloromethane	129	15.262	15.260	(0.929)	2376958	30.0000	26.93
56 1,2-Dibromoethane	107	15.557	15.547	(0.947)	2074320	30.0000	25.25
57 Tetrachloroethene	129	15.627	15.616	(0.951)	1067226	30.0000	24.96
58 Chlorobenzene	112	16.477	16.475	(1.003)	2720823	30.0000	25.84
59 Ethylbenzene	91	16.755	16.753	(1.020)	4141558	30.0000	24.23
60 m-Xylene (For p-)	91	16.911	16.909	(1.030)	3147193	30.0000	23.83
61 Bromoform	173	17.353	17.351	(1.057)	1699423	30.0000	25.36
62 Nonane	57	17.318	17.317	(1.054)	2341305	30.0000	20.99
63 Styrene	104	17.371	17.369	(1.058)	2179242	30.0000	23.22
64 o-Xylene	91	17.431	17.430	(1.061)	3170451	30.0000	24.03
65 1,1,2,2-Tetrachloroethane	83	17.735	17.724	(1.080)	2823235	30.0000	23.11
66 1,2,3-Trichloropropane	110	17.891	17.889	(1.089)	604698	30.0000	27.90
67 Cumene	105	17.995	17.993	(1.096)	3976652	30.0000	22.94
68 n-Propylbenzene	91	18.498	18.497	(1.126)	5336441	30.0000	21.71

Data File: /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Report Date: 02-Aug-2003 20:13

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	18.637	18.635	(1.135)	4322434	30.0000	21.96
70 1,3,5-Trimethylbenzene	120	18.707	18.705	(1.139)	1721288	30.0000	23.78
71 Alpha-Methylstyrene	118	18.915	18.913	(1.152)	1796191	30.0000	24.72
72 Decane	57	18.976	18.974	(1.155)	2933623	30.0000	19.05
73 1,2,4-Trimethylbenzene	105	19.123	19.121	(1.164)	3281228	30.0000	22.09
74 1,3-Dichlorobenzene	146	19.383	19.382	(1.180)	2470586	30.0000	23.18
75 Benzyl Chloride	91	19.444	19.442	(1.184)	2844120	30.0000	20.85
76 1,4-Dichlorobenzene	146	19.470	19.460	(1.185)	2183364	30.0000	21.30
77 1,2-Dichlorobenzene	146	19.809	19.807	(1.206)	2339579	30.0000	23.04
78 Undecane	57	20.225	20.223	(1.231)	2910742	30.0000	17.95
79 Dodecane	57	21.318	21.316	(1.298)	2468428	30.0000	18.19
80 1,2,4-Trichlorobenzene	180	21.535	21.533	(1.311)	1725501	30.0000	24.44
81 Napthalene	128	21.691	21.689	(1.321)	5496829	30.0000	24.14
82 Hexachlorobutadiene	225	21.917	21.915	(1.334)	1464062	30.0000	21.94

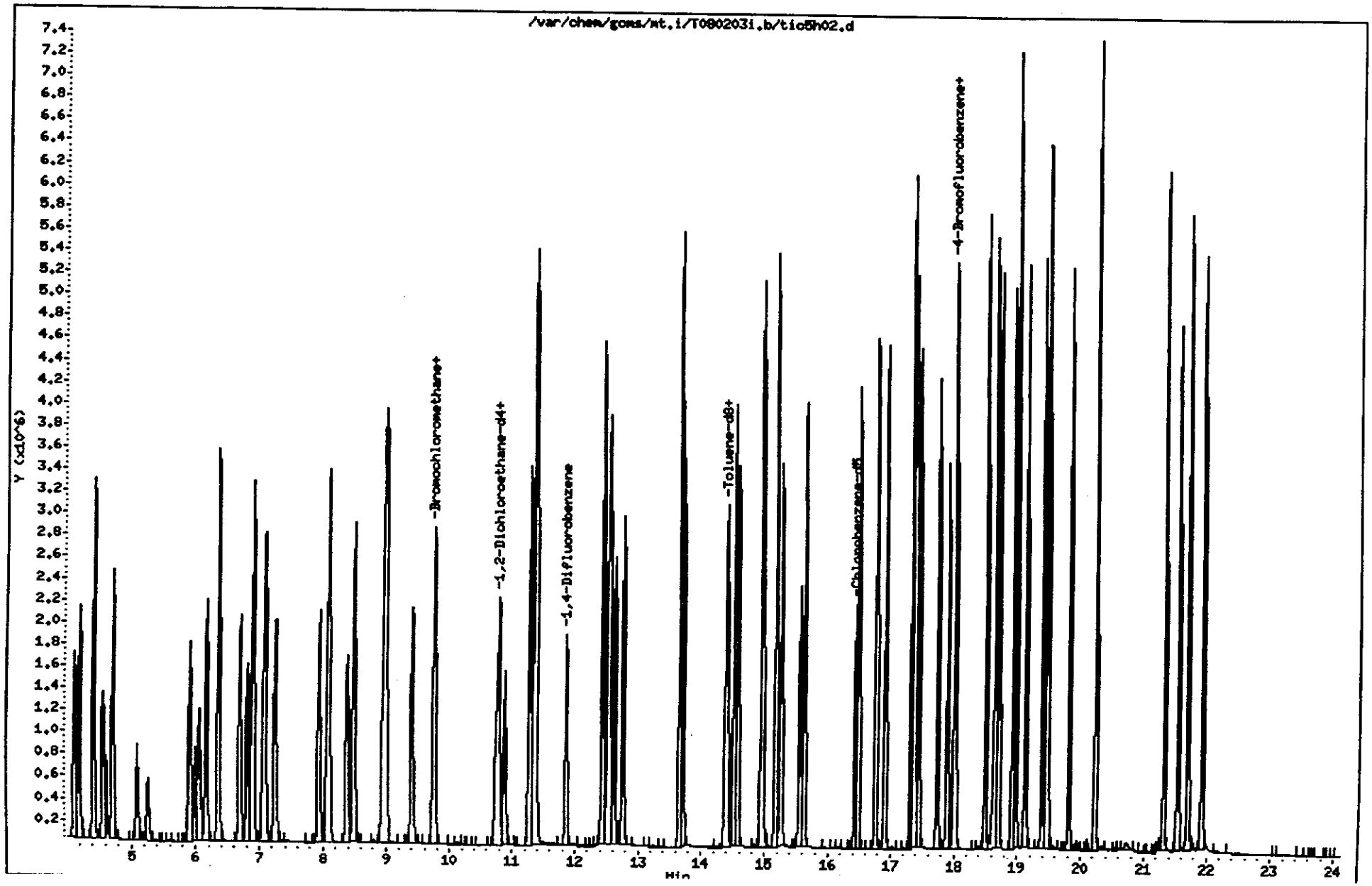
QC Flag Legend

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

Data File: /var/chem/gcms/mt.i/T080203i.b/tic5h02.d
Date : 02-AUG-2003 13:43
Client ID: 30PPBV
Sample Info: IC5,,1,5,,30PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Report Date: 02-Aug-2003 20:14

2nd source OK wd 8/2/03

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 02-AUG-2003 18:40
Operator : 0691 Inst ID: mt.i
Smp Info : ICV,,3,,LCS
Misc Info : T080203i,LA,to14.sub,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T080203i.b/LA.m
Meth Date : 02-Aug-2003 20:14 jarmanc Quant Type: ISTD
Cal Date : 02-AUG-2003 14:56 Cal File: tic3h02.d
Als bottle: 2 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: to14.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
* 1 Bromochloromethane	128	9.730	9.734	(1.000)	374088	10.0000	
* 2 1,4-Difluorobenzene	114	11.856	11.859	(1.000)	1800975	10.0000	
* 3 Chlorobenzene-d5	117	16.428	16.432	(1.000)	1458879	10.0000	
§ 4 1,2-Dichloroethane-d4	67	10.737	10.740	(0.906)	373341	10.1598	10.16
§ 5 Toluene-d8	98	14.407	14.402	(0.877)	1501950	10.0522	10.05
§ 6 4-Bromofluorobenzene	95	18.016	18.019	(1.097)	977477	10.6957	10.70
8 Dichlorodifluoromethane	85	4.195	4.198	(0.431)	970133	10.9908	10.99
9 Chloromethane	52	4.412	4.407	(0.453)	113777	11.0450	11.04
10 1,2-Dichlorotetrafluoroethane	135	4.421	4.424	(0.454)	534722	11.2136	11.21
11 Vinyl Chloride	62	4.611	4.615	(0.474)	375373	11.4863	11.49
15 Bromomethane	94	5.097	5.092	(0.524)	299460	9.85996	9.860
16 Chloroethane	64	5.262	5.266	(0.541)	170318	10.4537	10.45
17 Trichlorofluoromethane	101	5.913	5.916	(0.608)	599529	10.2884	10.29
23 1,1-Dichloroethene	96	6.694	6.688	(0.688)	409482	10.5035	10.50
25 1,1,2-Trichlorotrifluoroethane	101	6.893	6.897	(0.708)	854726	10.7849	10.78
26 Methylene Chloride	84	7.067	7.061	(0.726)	414822	10.4634	10.46
31 1,1-Dichloroethane	63	8.377	8.380	(0.861)	936376	10.2413	10.24
35 cis 1,2-Dichloroethene	96	9.392	9.395	(0.965)	460065	9.97144	9.971
36 Chloroform	83	9.739	9.742	(1.001)	823490	10.4307	10.43
37 1,1,1-Trichloroethane	97	10.789	10.784	(1.109)	716024	10.6139	10.61
38 1,2-Dichloroethane	62	10.884	10.879	(0.918)	627982	10.4146	10.41

Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Report Date: 02-Aug-2003 20:14

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
39 Benzene	78	11.353	11.348	(0.958)	1286296	11.1426	11.14
42 Carbon Tetrachloride	117	11.370	11.374	(1.169)	665080	10.0346	10.03
44 1,2-Dichloropropane	63	12.507	12.510	(1.055)	557579	10.4894	10.49
45 Trichloroethene	130	12.541	12.545	(1.058)	527746	10.3769	10.38
49 cis-1,3-Dichloropropene	75	13.713	13.707	(1.157)	851453	8.99026	8.990
50 trans-1,3-Dichloropropene	75	14.381	14.376	(0.875)	616741	9.64534	9.645
51 Toluene	91	14.511	14.514	(0.883)	1395799	10.4106	10.41
52 1,1,2-Trichloroethane	97	14.572	14.575	(0.887)	519447	10.2663	10.27
56 1,2-Dibromoethane	107	15.552	15.547	(0.947)	847930	10.1433	10.14
57 Tetrachloroethene	129	15.621	15.616	(0.951)	460191	10.6928	10.69
58 Chlorobenzene	112	16.472	16.475	(1.003)	1114244	10.3110	10.31
59 Ethylbenzene	91	16.758	16.753	(1.020)	1800182	10.5132	10.51
60 m-Xylene (For p-)	91	16.914	16.909	(1.030)	2442552	18.7923	18.79
63 Styrene	104	17.365	17.369	(1.057)	1045744	11.2437	11.24
64 o-Xylene	91	17.426	17.430	(1.061)	1352173	10.2524	10.25
65 1,1,2,2-Tetrachloroethane	83	17.730	17.724	(1.079)	1245073	10.3271	10.33
70 1,3,5-Trimethylbenzene	120	18.702	18.705	(1.138)	683978	9.64719	9.647
73 1,2,4-Trimethylbenzene	105	19.118	19.121	(1.164)	1398370	9.80446	9.804
74 1,3-Dichlorobenzene	146	19.378	19.382	(1.180)	1060863	10.0742	10.07
75 Benzyl Chloride	91	19.448	19.442	(1.184)	424139	3.14426	3.144
76 1,4-Dichlorobenzene	146	19.456	19.460	(1.184)	1036440	10.3843	10.38
77 1,2-Dichlorobenzene	146	19.803	19.807	(1.205)	1009228	10.2209	10.22
80 1,2,4-Trichlorobenzene	180	21.530	21.533	(1.311)	702195	10.0035	10.00
82 Hexachlorobutadiene	225	21.920	21.915	(1.334)	560919	8.40437	8.404

Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Report Date: 02-Aug-2003 20:14

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ticvh02.d
Lab Smp Id: ICV
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T080203i.b/LA.m
Misc Info: T080203i,LA,to14.sub,,100ML

Calibration Date: 02-AUG-2003
Calibration Time: 14:56
Client Smp ID: ICV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	383252	228035	538469	374088	-2.39
2 1,4-Difluorobenze	1828103	1087721	2568485	1800975	-1.48
3 Chlorobenzene-d5	1477621	879184	2076058	1458879	-1.27

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.73	-0.03
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	-0.03
3 Chlorobenzene-d5	16.43	16.10	16.76	16.43	-0.02

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

Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Report Date: 02-Aug-2003 20:14

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: ICV
Level: LOW
Data Type: MS DATA
SpikeList File: to14.spk
Sublist File: to14.sub
Method File: /var/chem/gcms/mt.i/T080203i.b/LA.m
Misc Info: T080203i,LA,to14.sub,,100ML

Client SDG: T080203i
Fraction: OTHER
Client Smp ID: ICV
Operator: 0691
SampleType: LCS
Quant Type: ISTD

2nd source OK wf 8/2/03

SPIKE	COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
8	Dichlorodifluorome	10.00	10.99	109.91	65-135
9	Chloromethane	10.00	11.04	110.45	65-135
10	1,2-Dichlorotetraf	10.00	11.21	112.14	65-135
11	Vinyl Chloride	10.00	11.49	114.86	65-135
15	Bromomethane	10.00	9.860	98.60	65-135
16	Chloroethane	10.00	10.45	104.54	65-135
17	Trichlorofluoromet	10.00	10.29	102.88	65-135
23	1,1-Dichloroethene	10.00	10.50	105.04	65-135
25	1,1,2-Trichlorotri	10.00	10.78	107.85	65-135
26	Methylene Chloride	10.00	10.46	104.63	65-135
31	1,1-Dichloroethane	10.00	10.24	102.41	65-135
35	cis 1,2-Dichloroet	10.00	9.971	99.71	65-135
36	Chloroform	10.00	10.43	104.31	65-135
37	1,1,1-Trichloroeth	10.00	10.61	106.14	65-135
38	1,2-Dichloroethane	10.00	10.41	104.15	65-135
39	Benzene	10.00	11.14	111.43	65-135
42	Carbon Tetrachlori	10.00	10.03	100.35	65-135
44	1,2-Dichloropropan	10.00	10.49	104.89	65-135
45	Trichloroethene	10.00	10.38	103.77	65-135
49	cis-1,3-Dichloropr	10.00	8.990	89.90	65-135
50	trans-1,3-Dichloro	10.00	9.645	96.45	65-135
51	Toluene	10.00	10.41	104.11	65-135
52	1,1,2-Trichloroeth	10.00	10.27	102.66	65-135
56	1,2-Dibromoethane	10.00	10.14	101.43	65-135
57	Tetrachloroethene	10.00	10.69	106.93	65-135
58	Chlorobenzene	10.00	10.31	103.11	65-135
59	Ethylbenzene	10.00	10.51	105.13	65-135
60	m-Xylene (For p-)	20.00	18.79	93.96	65-135
63	Styrene	10.00	11.24	112.44	65-135
64	o-Xylene	10.00	10.25	102.52	65-135
65	1,1,2,2-Tetrachlor	10.00	10.33	103.27	65-135
70	1,3,5-Trimethylben	10.00	9.647	96.47	65-135
73	1,2,4-Trimethylben	10.00	9.804	98.04	65-135

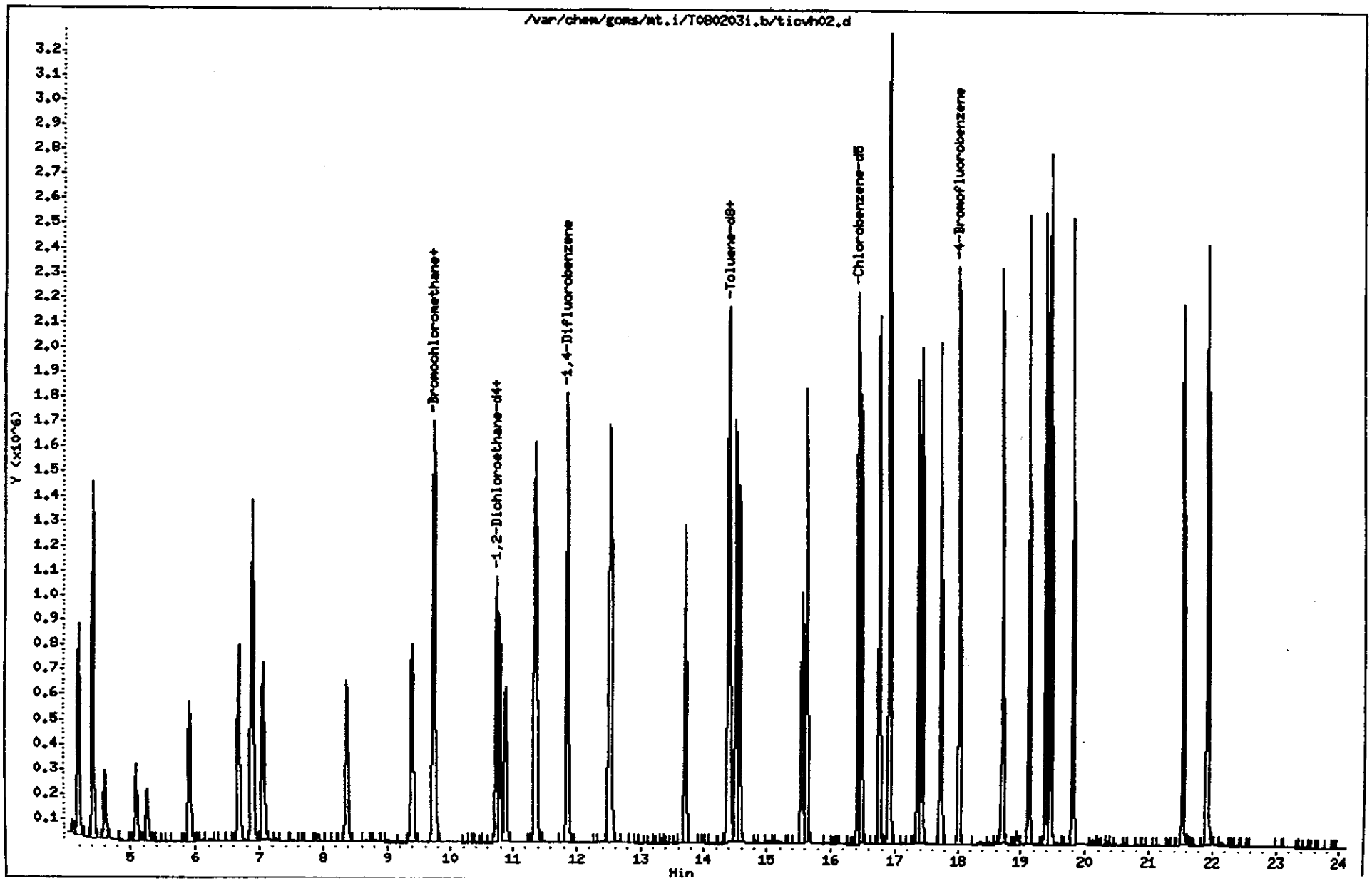
Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Report Date: 02-Aug-2003 20:14

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
74 1,3-Dichlorobenzen	10.00	10.07	100.74	65-135
75 Benzyl Chloride	10.00	3.144	31.44	30-170
76 1,4-Dichlorobenzen	10.00	10.38	103.84	65-135
77 1,2-Dichlorobenzen	10.00	10.22	102.21	65-135
80 1,2,4-Trichloroben	10.00	10.00	100.04	65-135
82 Hexachlorobutadien	10.00	8.404	84.04	65-135

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.16	101.60	70-130
$ 5 Toluene-d8	10.00	10.05	100.52	70-130
$ 6 4-Bromofluorobenze	10.00	10.70	106.96	70-130

Data File: /var/chem/gcms/mt.i/T080203i.b/ticvh02.d
Date : 02-AUG-2003 18:40
Client ID: ICV
Sample Info: ICV,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.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:	8/13/03	CCAL Batch/ Scan Name:	T081303	Instrument:	MT	ICAL Batch/ Scan Name:	T080203I	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. Have the Entech position no. & vol. been verified with ana log & sample vol. corrected if actual amount differs >5%?		✓			✓
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	NB
9. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NB
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. 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%)?		✓			✓
14. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NB
15. 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:	Date: 8/18/03	2nd Level Reviewer:	Date: 08/28/03
Comments:		Comments:	

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

Analyst: DDF/CWJ Preventive Maintenance Performed ✓ Qtims Batch: 3230477

Date: 8-13-03 System Date/Time ok (y/n): y Target Batch: T081303

BFB Time: 0744 Surr/IS ID: CX-929 IS #1 Area: 363584 ICAL Batch: T0802031

Time	Lot No.	File ID	Can #	Comments	I/S	Pos	Vol* (ml)	Use	DUP	
0744	BFB	TBF0813	—	TUNE	—	15	100	✓	—	
0823	CCV	MD0813		CX-1053		STD		N	—	
0903	↓	↓ B		↓		↓		✓	—	
0941	REF	RF0813		(FWGWIAC) CX-1054		16		✓	—	
1023	BLK	BK0813		$MeCl_2$ .6		15	500	N	—	
1104	↓	↓ B	↓	$MeCl_2$ .8	↓	↓	↓	N	—	
1237		TBK0813C	—	5 cycle Flush, leak check $MeCl_2$ 42	—	15	500	N	—	
1319		TBK0813D		$MeCl_2$ 1.5	—	15	500	N	—	
1404		TBK0813E		5 cycle Flush cans shut off.	—	15	500	N	—	
1444		TBK0813F			—	15	500	✓	—	
1525		TBK0813G		Flushed out pos. 15 for two minutes.	—	15	500	N	—	
1619		TBK0813H		Flushed out I/S line 15 minutes (FWGWIAA)	—	15	500	✓	—	
~~1841~~	DW 8-18-03	~~TBK0813I~~		~~FLUSHED OUT I/S LINE for 10 minutes~~ DF 8-18-03	—	15	500	N	—	DW 8-18-03
1800	H3H070134	FVR32	1927	E:39; 60; 64; 87 TO14Nobs.	—	1	~~10~~ 12	N	—	
1841	BLK	TBK0813I	—		—	15	500	—	—	
1919	H3G310228	FVEQG	92083	E:35 TO14Nobs.	—	2	~~20~~ 22	✓ N	16	
1958	↓	FVEQS	04390	↓	↓	3	~~25~~ 27	✓	16	17
2039	H3G240298	FT19D	04737	FHI.	—	4	500	✓	17	18
2123	↓	9ED	~~11367~~ DF 8-18-03	DW 8-18-03	↓	5	↓	✓	DUP	DW
2202	↓	9F	11367	E:35 42	↓	5	~~10~~ 11	✓ N	—	19
2242	H3H070131	FVR21	2979	E: 11; 35 TO14Nobs.	—	6	50	✓ N	—	20
2321	↓	26	3403	E: 35	↓	7	~~10~~ 12	✓ N	—	1
0000		29	2044			8	50	✓	18	2
0040	↓	3A	1798	E: 11; 35; 45	↓	9	75	✓	—	3
0122	H3A080146	FVW1N	02748	EXYGEN.	—	10	500	✓	19	4
0203	BLK	TBK0813J	—		—	15	500	—	—	

DW 8/18/03

* Entech programmed volume. If the Entech report amount differs from the programmed amount by >5%, the Entech report amount is used for calulations.

Analyst: [signature] Date: 8/18/03

030813
STL-Knoxville
TO-14 Autosampler Log
'MT'

Sample	Volume	Position	Date	Time
BFB	102ml	15	8/13/2003	7:42:59 AM
CCV	101ml	STD	8/13/2003	8:22:41 AM
CCVb	100ml	STD	8/13/2003	9:01:58 AM
REF	101ml	16	8/13/2003	9:40:43 AM
BLK	501ml	15	8/13/2003	10:21:51 AM
BLKb	501ml	15	8/13/2003	11:03:00 AM
BLKC	502ml	15	8/13/2003	12:36:43 PM
BLKE	502ml	15	8/13/2003	1:18:31 PM
BLKE	3ml	15	8/13/2003	2:03:17 PM
BLKF	501ml	15	8/13/2003	2:43:33 PM
BLKG	502ml	15	8/13/2003	3:24:23 PM
BLKH	502ml	15	8/13/2003	4:18:34 PM
FVR32	12ml	1	8/13/2003	5:59:05 PM
BLKI	502ml	15	8/13/2003	6:39:46 PM
FVEQG	22ml	2	8/13/2003	7:18:35 PM
FVEQJ	27ml	3	8/13/2003	7:57:35 PM
FT19D	502ml	4	8/13/2003	8:38:40 PM
FT19DD	501ml	4	8/13/2003	9:21:46 PM
FT19F	11ml	5	8/13/2003	10:01:11 PM
FVR21	52ml	6	8/13/2003	10:41:02 PM
FVR26	12ml	7	8/13/2003	11:19:58 PM
FVR29	52ml	8	8/13/2003	11:59:28 PM
FVR3A	77ml	9	8/14/2003	12:38:54 AM
FVWIN	501ml	10	8/14/2003	1:21:02 AM

Data File: /var/chem/gcms/mt.i/T081303.b/tbf0813.d

Date : 13-AUG-2003 07:44

Client ID:

Instrument: mt.i

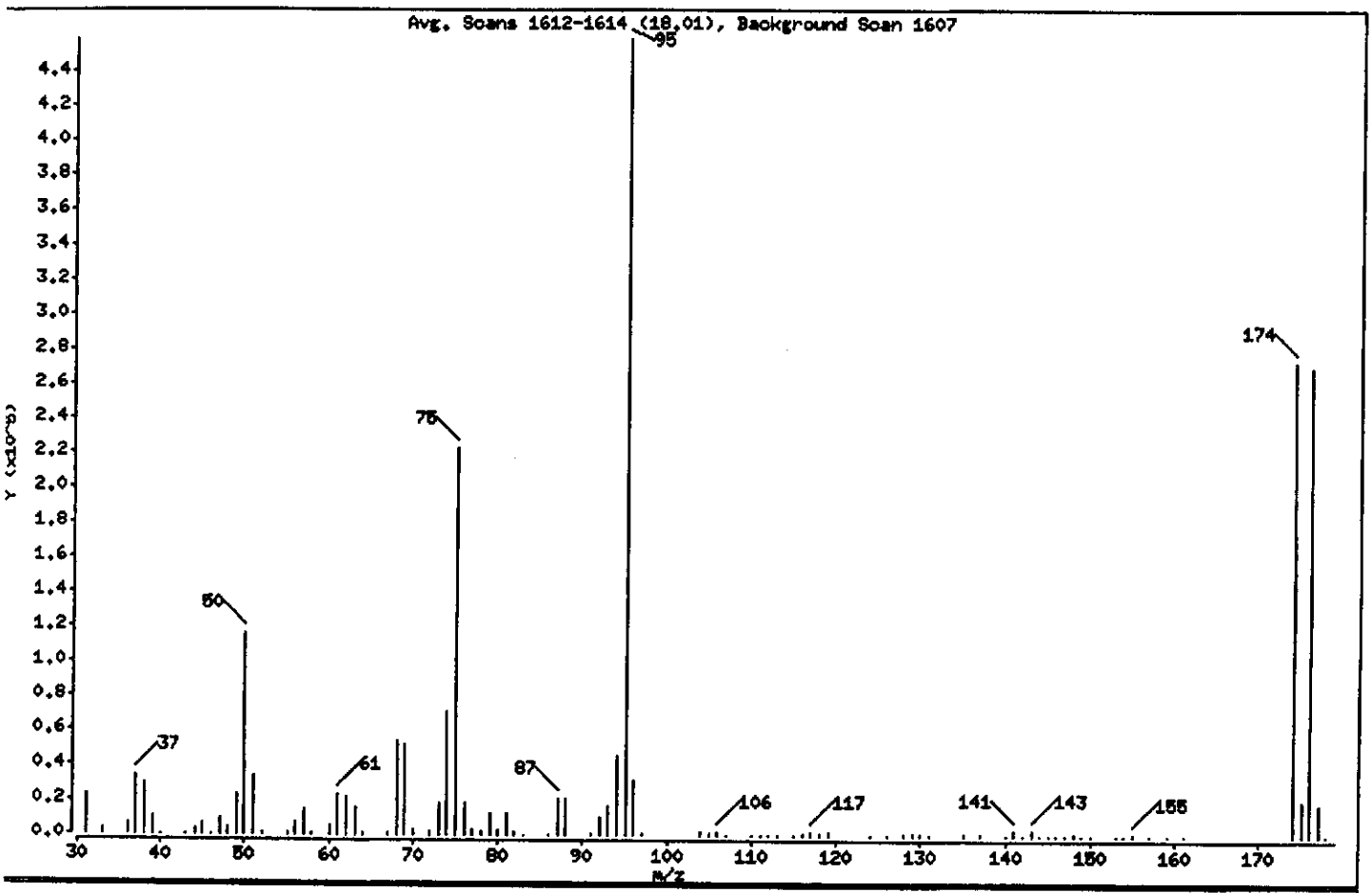
Sample Info: BFB,,3,,BFB

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	25.18
75	30.00 - 60.00% of mass 95	48.41
96	5.00 - 9.00% of mass 95	6.90
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	59.54
175	5.00 - 9.00% of mass 174	4.39 (7.36)
176	95.00 - 101.00% of mass 174	58.88 (98.89)
177	5.00 - 9.00% of mass 176	4.02 (6.82)

Data File: /var/chem/gcms/mt.i/T081303.b/tbf0813.d

Date : 13-AUG-2003 07:44

Client ID:

Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32

Data File: tbf0813.d
Spectrum: Avg. Scans 1612-1614 (18.01), Background Scan 1607
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	23360	63.00	16092	94.00	45464	137.00	654
33.00	2639	64.00	1417	95.00	457984	140.00	170
36.00	6832	67.00	1329	96.00	31592	141.00	3127
37.00	34160	68.00	53208	97.00	981	142.00	353
38.00	29224	69.00	51296	104.00	1675	143.00	3232
39.00	11048	70.00	3569	105.00	700	144.00	177
40.00	101	72.00	2287	106.00	1677	145.00	196
43.00	293	73.00	19232	107.00	408	146.00	495
44.00	3024	74.00	70824	110.00	73	147.00	164
45.00	5919	75.00	221696	111.00	279	148.00	782
46.00	122	76.00	18968	112.00	146	149.00	161
47.00	9165	77.00	2832	113.00	277	150.00	259
48.00	3784	78.00	1951	115.00	407	153.00	156
49.00	23480	79.00	12607	116.00	1268	154.00	175
50.00	115320	80.00	3028	117.00	2278	155.00	717
51.00	34088	81.00	12811	118.00	1249	157.00	512
52.00	1501	82.00	2203	119.00	1734	159.00	359
55.00	1410	83.00	149	124.00	195	161.00	343
56.00	7769	86.00	439	126.00	70	174.00	272640
57.00	14666	87.00	21168	128.00	1284	175.00	20080
58.00	559	88.00	20576	129.00	649	176.00	269632
60.00	4822	91.00	1424	130.00	1414	177.00	18392
61.00	23080	92.00	10721	131.00	467	178.00	525
62.00	21856	93.00	16552	135.00	582		

Data File: /var/chem/gcms/mt.i/T081303.b/tbf0813.d

Date : 13-AUG-2003 07:44

Client ID:

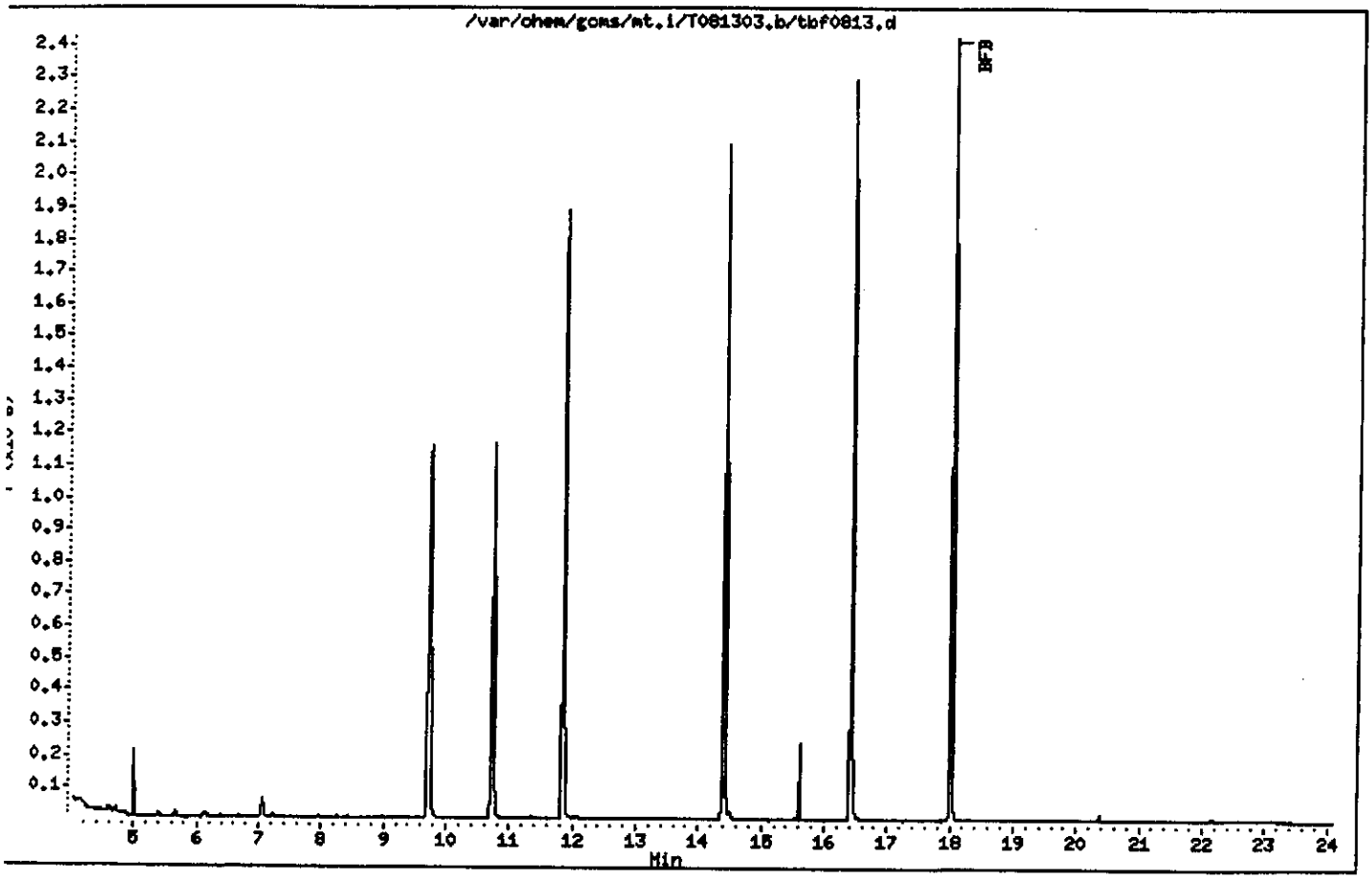
Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Data File: /chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 13-Aug-2003 09:26

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd0813b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/mt.i/T081303.b/LA.m

Injection Date: 13-AUG-2003 09:03
Init. Cal. Date(s): 02-AUG-2003 02-AUG-2003
Init. Cal. Times: 13:43 18:02
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 1,2-Dichloroethane-d4	0.20464	0.23075	0.000	-12.75795	30.00000	Averaged
$ 5 Toluene-d8	1.03628	1.03682	0.000	-0.05229	30.00000	Averaged
$ 6 4-Bromofluorobenzene	0.64077	0.68095	0.000	-6.27018	30.00000	Averaged
7 Chlorodifluoromethane	2.32965	2.95710	0.000	-26.93317	30.00000	Averaged
8 Dichlorodifluoromethane	2.30633	2.72189	0.000	-18.01802	30.00000	Averaged
9 Chloromethane	0.26606	0.32413	0.000	-21.82885	30.00000	Averaged
10 1,2-Dichlorotetrafluoroetha	1.23521	1.38558	0.000	-12.17326	30.00000	Averaged
11 Vinyl Chloride	0.83568	0.99755	0.000	-19.37046	30.00000	Averaged
12 Methanol	0.35207	0.43937	0.000	-24.79462	30.00000	Averaged
13 1,3-Butadiene	0.62413	0.76011	0.000	-21.78700	30.00000	Averaged
14 n-Butane	1.46987	1.75134	0.000	-19.14885	30.00000	Averaged
15 Bromomethane	0.77699	0.93884	0.000	-20.83042	30.00000	Averaged
16 Chloroethane	0.40511	0.50882	0.000	-25.60137	30.00000	Averaged
17 Trichlorofluoromethane	1.48253	1.89536	0.000	-27.84665	30.00000	Averaged
18 Acrolein	0.23412	0.27002	0.000	-15.33162	30.00000	Averaged
19 Acetonitrile	0.31539	0.38972	0.000	-23.56782	30.00000	Averaged
20 Acetone	0.25686	0.32761	0.000	-27.54330	30.00000	Averaged
21 Pentane	0.24738	0.28965	0.000	-17.08928	30.00000	Averaged
22 Ethyl Ether	1.69324	2.03840	0.000	-20.38443	30.00000	Averaged
23 1,1-Dichloroethene	0.99544	1.11542	0.000	-12.05323	30.00000	Averaged
24 Acrylonitrile	0.84438	1.03086	0.000	-22.08478	30.00000	Averaged
25 1,1,2-Trichlorotrifluoroeth	2.02430	2.29467	0.000	-13.35604	30.00000	Averaged
26 Methylene Chloride	1.05146	1.16103	0.000	-10.42116	30.00000	Averaged
27 3-Chloropropene	1.15408	1.42608	0.000	-23.56836	30.00000	Averaged
28 Carbon Disulfide	4.15515	4.19247	0.000	-0.89815	30.00000	Averaged
29 trans-1,2-Dichloroethene	1.04170	1.16170	0.000	-11.51999	30.00000	Averaged
30 Methyl-t-Butyl Ether	2.26615	2.53241	0.000	-11.74944	30.00000	Averaged
31 1,1-Dichloroethane	2.30923	2.69822	0.000	-16.84477	30.00000	Averaged
32 Vinyl Acetate	3.17649	3.81236	0.000	-20.01826	30.00000	Averaged
33 2-Butanone	0.46909	0.50513	0.000	-7.68426	30.00000	Averaged
34 Hexane	1.01264	1.13431	0.000	-12.01564	30.00000	Averaged
35 cis 1,2-Dichloroethene	1.16377	1.29598	0.000	-11.35992	30.00000	Averaged
36 Chloroform	1.99636	2.34715	0.000	-17.57193	30.00000	Averaged
37 1,1,1-Trichloroethane	1.70776	2.04579	0.000	-19.79322	30.00000	Averaged
38 1,2-Dichloroethane	0.32268	0.39226	0.000	-21.56112	30.00000	Averaged

Data File: /chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 13-Aug-2003 09:26

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd0813b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/mt.i/T081303.b/LA.m

Injection Date: 13-AUG-2003 09:03
Init. Cal. Date(s): 02-AUG-2003 02-AUG-2003
Init. Cal. Times: 13:43 18:02
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
39 Benzene	0.64817	0.66541	0.000	-2.65935	30.00000	Averaged
40 1-Butanol	0.21255	0.23613	0.000	-11.09400	30.00000	Averaged
41 Cyclohexane	0.10261	0.10497	0.000	-2.30034	30.00000	Averaged
42 Carbon Tetrachloride	1.69728	1.95628	0.000	-15.25958	30.00000	Averaged
43 Heptane	0.62722	0.69410	0.000	-10.66269	30.00000	Averaged
44 1,2-Dichloropropane	0.29123	0.31384	0.000	-7.76188	30.00000	Averaged
45 Trichloroethene	0.27744	0.26924	0.000	2.95348	30.00000	Averaged
46 Dibromomethane	0.28355	0.30753	0.000	-8.45615	30.00000	Averaged
47 Bromodichloromethane	0.48422	0.55397	0.000	-14.40495	30.00000	Averaged
48 4-Methyl-2-pentanone	0.63488	0.72457	0.000	-14.12750	30.00000	Averaged
49 cis-1,3-Dichloropropene	0.51581	0.55613	0.000	-7.81664	30.00000	Averaged
50 trans-1,3-Dichloropropene	0.42055	0.46772	0.000	-11.21512	30.00000	Averaged
51 Toluene	0.90997	0.93009	0.000	-2.21078	30.00000	Averaged
52 1,1,2-Trichloroethane	0.34292	0.35748	0.000	-4.24439	30.00000	Averaged
53 2-Hexanone	0.40002	0.43928	0.000	-9.81419	30.00000	Averaged
54 Octane	0.29449	0.30942	0.000	-5.07054	30.00000	Averaged
55 Dibromochloromethane	0.59656	0.65662	0.000	-10.06742	30.00000	Averaged
56 1,2-Dibromoethane	0.55529	0.59542	0.000	-7.22596	30.00000	Averaged
57 Tetrachloroethene	0.28899	0.30032	0.000	-3.91953	30.00000	Averaged
58 Chlorobenzene	0.71152	0.74099	0.000	-4.14187	30.00000	Averaged
59 Ethylbenzene	1.15534	1.23389	0.000	-6.79875	30.00000	Averaged
60 m-Xylene (For p-)	0.89265	0.93329	0.000	-4.55273	30.00000	Averaged
61 Bromoform	0.45288	0.45485	0.000	-0.43530	30.00000	Averaged
62 Nonane	0.75384	0.80338	0.000	-6.57210	30.00000	Averaged
63 Styrene	0.63422	0.66552	0.000	-4.93642	30.00000	Averaged
64 o-Xylene	0.89181	0.94003	0.000	-5.40695	30.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.82572	0.86530	0.000	-4.79427	30.00000	Averaged
66 1,2,3-Trichloropropane	0.14651	0.17014	0.000	-16.12835	30.00000	Averaged
67 Cumene	1.17182	1.23626	0.000	-5.49991	30.00000	Averaged
68 n-Propylbenzene	1.66124	1.72357	0.000	-3.75194	30.00000	Averaged
69 4-Ethyltoluene	1.33049	1.27657	0.000	4.05303	30.00000	Averaged
70 1,3,5-Trimethylbenzene	0.48913	0.48264	0.000	1.32549	30.00000	Averaged
71 Alpha-Methylstyrene	0.49103	0.49475	0.000	-0.75691	30.00000	Averaged
72 Decane	1.04086	1.05494	0.000	-1.35250	30.00000	Averaged
73 1,2,4-Trimethylbenzene	1.00377	1.03187	0.000	-2.79949	30.00000	Averaged

Data File: /chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 13-Aug-2003 09:26

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd0813b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /chem/gcms/mt.i/T081303.b/LA.m

Injection Date: 13-AUG-2003 09:03
Init. Cal. Date(s): 02-AUG-2003 02-AUG-2003
Init. Cal. Times: 13:43 18:02
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
74 1,3-Dichlorobenzene	0.72024	0.69957	0.000	2.86940	30.00000	Averaged
75 Benzyl Chloride	0.92201	0.97061	0.000	-5.27160	30.00000	Averaged
76 1,4-Dichlorobenzene	0.69285	0.67212	0.000	2.99163	30.00000	Averaged
77 1,2-Dichlorobenzene	0.68627	0.67503	0.000	1.63721	30.00000	Averaged
78 Undecane	1.09585	1.09914	0.000	-0.30005	30.00000	Averaged
79 Dodecane	0.91702	0.80592	0.000	12.11554	30.00000	Averaged
80 1,2,4-Trichlorobenzene	0.47719	0.46900	0.000	1.71785	30.00000	Averaged
81 Napthalene	1.53915	1.59597	0.000	-3.69162	30.00000	Averaged
82 Hexachlorobutadiene	0.45101	0.47637	0.000	-5.62390	30.00000	Averaged

)ata File: /var/chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 18-Aug-2003 16:10

STL Knoxville

Modified Method TO-14/TO-15

)ata file : /var/chem/gcms/mt.i/T081303.b/tmd0813b.d
.ab Smp Id: CCV Client Smp ID: 10PPBV
:nj Date : 13-AUG-2003 09:03
)perator : 0691 Inst ID: mt.i
3mp Info : CCV,,2,3,,10PPBV
Misc Info : T081303,LA,,,100ML
:omment :
Method : /chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 16:08 wilesd Quant Type: ISTD
:al Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
.ls bottle: 1 Continuing Calibration Sample
)il Factor: 1.00000
:ntegrator: HP RTE Compound Sublist: RTall.sub
'arget Version: 3.50
'rocessing Host: qmidhp01

:oncentration Formula: Amt * DF * CpndVariable

:pnd Variable Local Compound Variable

		QUANT SIG					AMOUNTS	
							CAL-AMT	ON-COL
	xmpounds	MASS	RT	EXP RT	REL RT	RESPONSE	(ppb(v/v))	(ppb(v/v))
1	Bromochloromethane	128	9.735	9.735	(1.000)	363584	10.0000	
2	1,4-Difluorobenzene	114	11.860	11.860	(1.000)	1747786	10.0000	
3	Chlorobenzene-d5	117	16.424	16.424	(1.000)	1413217	10.0000	
4	1,2-Dichloroethane-d4	67	10.732	10.732	(0.905)	403304	10.0000	11.28
5	Toluene-d8	98	14.402	14.402	(0.877)	1465252	10.0000	10.00
6	4-Bromofluorobenzene	95	18.020	18.020	(1.097)	962328	10.0000	10.63
7	Chlorodifluoromethane	51	4.121	4.121	(0.423)	1075156	10.0000	12.69
8	Dichlorodifluoromethane	85	4.191	4.191	(0.430)	989638	10.0000	11.80
9	Chloromethane	52	4.407	4.407	(0.453)	117850	10.0000	12.18
10	1,2-Dichlorotetrafluoroethane	135	4.416	4.416	(0.454)	503774	10.0000	11.22
11	Vinyl Chloride	62	4.607	4.607	(0.473)	362695	10.0000	11.94
12	Methanol	31	4.564	4.564	(0.469)	638986	40.0000	49.92
13	1,3-Butadiene	54	4.711	4.711	(0.484)	276364	10.0000	12.18
14	n-Butane	43	4.711	4.711	(0.484)	636759	10.0000	11.91
15	Bromomethane	94	5.093	5.093	(0.523)	341348	10.0000	12.08
16	Chloroethane	64	5.258	5.258	(0.540)	185000	10.0000	12.56
17	Trichlorofluoromethane	101	5.908	5.908	(0.607)	689126	10.0000	12.78
18	Acrolein	56	5.926	5.926	(0.609)	196347	20.0000	23.07
19	Acetonitrile	40	5.995	5.995	(0.616)	283391	20.0000	24.71
20	Acetone	58	6.065	6.065	(0.623)	238228	20.0000	25.51
21	Pentane	57	6.160	6.160	(0.633)	105312	10.0000	11.71

Data File: /var/chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 18-Aug-2003 16:10

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	6.351	6.351	(0.652)	1482263	20.0000	24.08
23 1,1-Dichloroethene	96	6.689	6.689	(0.687)	405548	10.0000	11.20
24 Acrylonitrile	53	6.802	6.802	(0.699)	749612	20.0000	24.42
25 1,1,2-Trichlorotrifluoroethane	101	6.889	6.889	(0.708)	834306	10.0000	11.34
26 Methylene Chloride	84	7.062	7.062	(0.725)	422134	10.0000	11.04
27 3-Chloropropene	39	7.088	7.088	(0.728)	518499	10.0000	12.36
28 Carbon Disulfide	76	7.236	7.236	(0.743)	1524319	10.0000	10.09
29 trans-1,2-Dichloroethene	96	7.930	7.930	(0.815)	422378	10.0000	11.15
30 Methyl-t-Butyl Ether	73	8.086	8.086	(0.831)	1841489	20.0000	22.35
31 1,1-Dichloroethane	63	8.373	8.373	(0.860)	981031	10.0000	11.68
32 Vinyl Acetate	43	8.485	8.485	(0.872)	2772235	20.0000	24.00
33 2-Butanone	72	8.971	8.971	(0.922)	367316	20.0000	21.54
34 Hexane	56	8.989	8.989	(0.923)	412418	10.0000	11.20
35 cis 1,2-Dichloroethene	96	9.396	9.396	(0.965)	471197	10.0000	11.14
36 Chloroform	83	9.743	9.743	(1.001)	853389	10.0000	11.76
37 1,1,1-Trichloroethane	97	10.784	10.784	(1.108)	743817	10.0000	11.98
38 1,2-Dichloroethane	62	10.880	10.880	(0.917)	685579	10.0000	12.16
39 Benzene	78	11.348	11.348	(0.957)	1162986	10.0000	10.26
40 1-Butanol	31	11.296	11.296	(0.952)	825395	20.0000	22.22
41 Cyclohexane	69	11.357	11.357	(0.958)	183469	10.0000	10.23
42 Carbon Tetrachloride	117	11.374	11.374	(1.168)	711274	10.0000	11.52
43 Heptane	43	12.433	12.433	(1.048)	1213135	10.0000	11.07
44 1,2-Dichloropropane	63	12.511	12.511	(1.055)	548523	10.0000	10.78
45 Trichloroethene	130	12.537	12.537	(1.057)	470579	10.0000	9.705
46 Dibromomethane	93	12.615	12.615	(1.064)	537494	10.0000	10.84
47 Bromodichloromethane	83	12.745	12.745	(1.075)	968222	10.0000	11.44
48 4-Methyl-2-pentanone	43	13.665	13.665	(1.152)	2532787	20.0000	22.82
49 cis-1,3-Dichloropropene	75	13.708	13.708	(1.156)	971989	10.0000	10.78
50 trans-1,3-Dichloropropene	75	14.376	14.376	(0.875)	660989	10.0000	11.12
51 Toluene	91	14.515	14.515	(0.884)	1314422	10.0000	10.22
52 1,1,2-Trichloroethane	97	14.576	14.576	(0.887)	505193	10.0000	10.42
53 2-Hexanone	58	14.958	14.958	(0.911)	1241608	20.0000	21.96
54 Octane	85	15.175	15.175	(0.924)	437275	10.0000	10.51
55 Dibromochloromethane	129	15.261	15.261	(0.929)	927943	10.0000	11.01
56 1,2-Dibromoethane	107	15.548	15.548	(0.947)	841453	10.0000	10.72
57 Tetrachloroethene	129	15.617	15.617	(0.951)	424416	10.0000	10.39
58 Chlorobenzene	112	16.476	16.476	(1.003)	1047181	10.0000	10.41
59 Ethylbenzene	91	16.754	16.754	(1.020)	1743750	10.0000	10.68
60 m-Xylene (For p-)	91	16.901	16.901	(1.029)	1318936	10.0000	10.46
61 Bromoform	173	17.352	17.352	(1.057)	642802	10.0000	10.04
62 Nonane	57	17.318	17.318	(1.054)	1135353	10.0000	10.66
63 Styrene	104	17.370	17.370	(1.058)	940531	10.0000	10.49
64 o-Xylene	91	17.430	17.430	(1.061)	1328462	10.0000	10.54
65 1,1,2,2-Tetrachloroethane	83	17.725	17.725	(1.079)	1222861	10.0000	10.48
66 1,2,3-Trichloropropane	110	17.890	17.890	(1.089)	240440	10.0000	11.61
67 Cumene	105	17.994	17.994	(1.096)	1747110	10.0000	10.55
68 n-Propylbenzene	91	18.498	18.498	(1.126)	2435774	10.0000	10.38

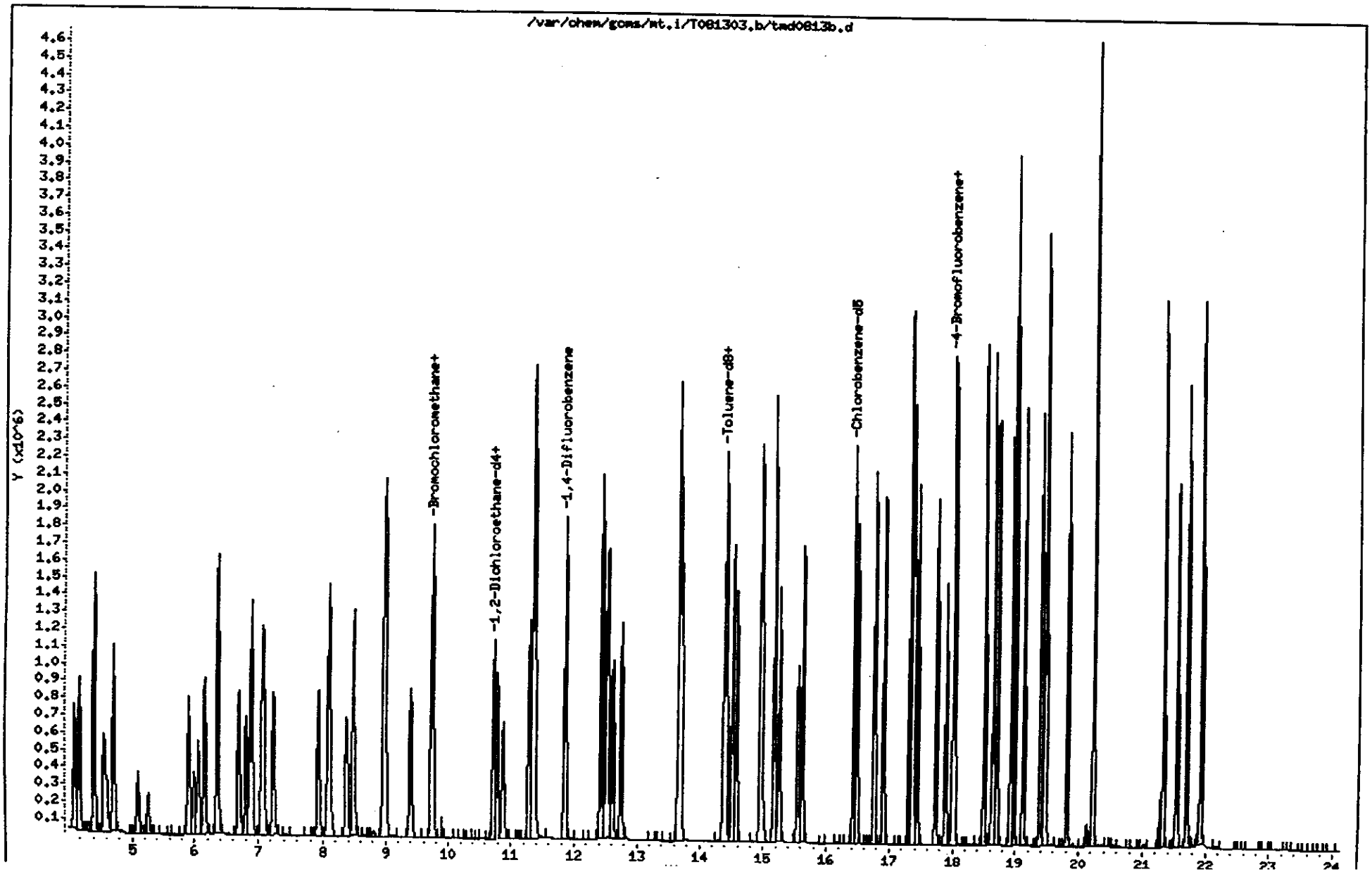
Data File: /var/chem/gcms/mt.i/T081303.b/tmd0813b.d
Report Date: 18-Aug-2003 16:10

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	18.636	(1.135)	1804067	10.0000	9.595
70 1,3,5-Trimethylbenzene	120	18.706	18.706	(1.139)	682078	10.0000	9.867
71 Alpha-Methylstyrene	118	18.914	18.914	(1.152)	699190	10.0000	10.08
72 Decane	57	18.966	18.966	(1.155)	1490855	10.0000	10.14
73 1,2,4-Trimethylbenzene	105	19.122	19.122	(1.164)	1458258	10.0000	10.28
74 1,3-Dichlorobenzene	146	19.374	19.374	(1.180)	988650	10.0000	9.713
75 Benzyl Chloride	91	19.443	19.443	(1.184)	1371687	10.0000	10.53
76 1,4-Dichlorobenzene	146	19.461	19.461	(1.185)	949856	10.0000	9.701
77 1,2-Dichlorobenzene	146	19.808	19.808	(1.206)	953969	10.0000	9.836
78 Undecane	57	20.224	20.224	(1.231)	1553322	10.0000	10.03
79 Dodecane	57	21.309	21.309	(1.297)	1138940	10.0000	8.788
80 1,2,4-Trichlorobenzene	180	21.534	21.534	(1.311)	662792	10.0000	9.828
81 Napthalene	128	21.690	21.690	(1.321)	2255451	10.0000	10.37
82 Hexachlorobutadiene	225	21.916	21.916	(1.334)	673220	10.0000	10.56

Data File: /var/chem/gcms/mt.i/T081303.b/tmd0813b.d
Date : 13-AUG-2003 09:03
Client ID: 10PPBV
Sample Info: CCV,,2,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Leak Check Report

8/13/2003 5:35:10 PM
Leak Check for C:\Smart\T081303.SEQ
Report File: C:\Smart\T081303.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 15
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1	Auto2	Auto3	Start	End	Rate(psi/min)
1	1	—	—	0.8	0.9	0.40
1	2	—	—	0.4	0.5	0.40
1	3	—	—	0.4	0.5	0.40
1	4	—	—	0.4	0.4	0.00
1	5	—	—	0.4	0.4	0.00
1	6	—	—	0.4	0.4	0.00
1	7	—	—	0.3	0.3	0.00
1	8	—	—	0.3	0.3	0.00
1	9	—	—	0.3	0.3	0.00
1	10	—	—	0.4	0.5	0.40

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

Analysis Date:	8/14/03	Instrument::	MT	ICAL Batch/Scan Name:	TO81403 I	Scanned ✓

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

Analyst:	Date: 8/18/03	2nd Level Reviewer :	Date: 08/18/03
Comments:		Comments:	

(*) NOTE : Curve is for analyte Numbers 11, 35, 42, 45 only.

(•) level 3 used as daily std.

- Curve will not pass for MeCl/Acetone

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

Analyst: DDF/CWS Preventive Maintenance Performed ✓ Qtims Batch: 3230533

Date: 8-14-03 System Date/Time ok (y/n): y Target Batch: TO81403I

BFB Time: 0751 Surr/IS ID: CX-929 IS #1 Area: 338 ICAL Batch: TO80203I

Time	Lot No.	File ID	Can #	Comments	I/S	Pos	Vol* (ml)	Use	DUP
0751	BFB	TBF0814	—		—	15	100	✓	—
0829	CCV	MD0814		CX-1053		STD		N	—
0906	↓	↓ B		↓		↓		N	—
0944	REF	RF0814		CX-1054		16	↓	N	—
	~~BLK~~	~~BK0814~~				~~15~~	~~500~~		
	↓	↓ B				↓	↓		
1035	CCV/IC3	~~MD0814R~~		filename: TIC30814	—	STD	100	✓	—
1138	IC5	TIC5084					300	✓	—
1216	IC4	TIC40814		<BLANK>			150	✓	—
1338	IC2	TIC20814					50	✓	—
1420	IC1	TIC10814				↓	10	N	—
1502	IEST	~~TEST~~ TST	2983	CX-1057		13	250	N	—
1543	IC1B	TIC1B					500	cont. N	—
1623	IC7	TIC70814					250		—
1704	IC6	TIC6084				↓	100		—
1942	ICV	TICV0814	04345	CX-1031		14	100	✓	—
2218	H3H070134	FVR32	1927	#: 45 60 57 64 59 33	—	1	100	N	—
2257	H3G310228	FVEQG	92083	(c.o./but ok #35)	2I	2	60	✓	5
2335	H3G240298	FT19F	11367	(42) FHI.		5	30	✓	6
	~~H3H070131~~	~~FVR21~~	~~2979~~	DF 8-14-03 TO14		~~6~~	~~100~~		
0012	H3H070131	FVR21	2979	(11; 35) TO14NO$_3$	2I	6	150	✓	7
0050		26	3403	(35)		7	50	✓	8
0128		3A	1798	(11, 35, 45)		8	180	✓	9
2021	REF	TRF0814B	—	(FWG6T1AC) CX-1054	—	16	100	✓	—
2100	BLK	TBK0814B		FW		15	500	N	—
2140		DC		(FWG6T1AA)				✓	—
1745	IC1	RIC10814		CX-1057 (low point conc moved to STD pos. due to cont. use)	—	STD	250 500	✓	—
1824	IC7	7					250	✓	—
1904	IC6	6					100	✓	—

* Entech programmed volume. If the Entech report amount differs from the programmed amount by >5%, the Entech report amount is used for calulations.

Analyst: [signature] Date: 8/8/03

030814
STL-Knoxville
TO-14 Autosampler Log
'MT'

Sample	Volume	Position	Date	Time
BFB	100ml	15	8/14/2003	7:50:23 AM
CCV	101ml	STD	8/14/2003	8:28:10 AM
CCVb	101ml	STD	8/14/2003	9:05:36 AM
REF	102ml	16	8/14/2003	9:43:15 AM
CCVR /ic3	101ml	STD	8/14/2003	10:33:50 AM
IC5	299ml	STD	8/14/2003	11:37:02 AM
IC4	149ml	STD	8/14/2003	12:15:22 PM
BLK	3ml	15	8/14/2003	12:58:18 PM
IC2	51ml	STD	8/14/2003	1:37:12 PM
IC1	11ml	STD	8/14/2003	2:18:54 PM
TST	251ml	13	8/14/2003	3:00:47 PM
IC1B	502ml	13	8/14/2003	3:41:53 PM
IC7	250ml	13	8/14/2003	4:22:26 PM
IC1R	499ml	STD	8/14/2003	5:43:46 PM
IC7R	250ml	STD	8/14/2003	6:23:37 PM
IC6R	100ml	STD	8/14/2003	7:02:48 PM
ICV	101ml	14	8/14/2003	7:41:30 PM
REFB	100ml	16	8/14/2003	8:19:47 PM
BLKB	500ml	15	8/14/2003	8:59:40 PM
BLKC	502ml	15	8/14/2003	9:39:14 PM
FVR32	101ml	1	8/14/2003	10:17:33 PM
FVEQG	62ml	2	8/14/2003	10:55:40 PM
FT19F	31ml	5	8/14/2003	11:33:42 PM
FVR21	152ml	6	8/15/2003	12:11:27 AM
FVR26	52ml	7	8/15/2003	12:49:07 AM
FVR3A	180ml	9	8/15/2003	1:26:42 AM

Data File: /var/chem/gcms/mt.i/T0814031.b/tbf0814.d

Date : 14-AUG-2003 07:51

Client ID: BFB

Instrument: mt.i

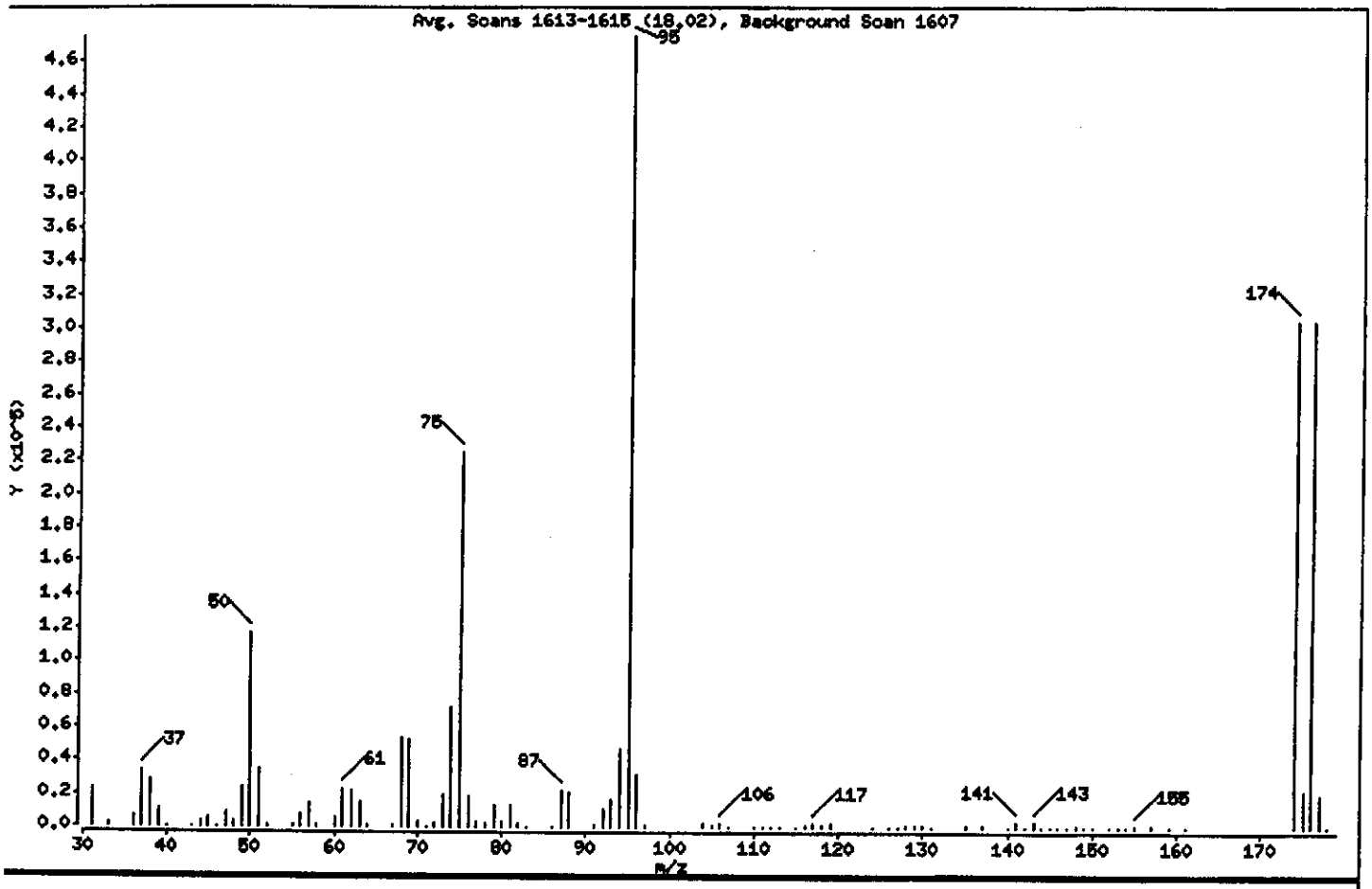
Sample Info: BFB,,3,,BFB

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	24.52
75	30.00 - 60.00% of mass 95	47.29
96	5.00 - 9.00% of mass 95	6.63
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	64.20
175	5.00 - 9.00% of mass 174	4.66 (7.25)
176	95.00 - 101.00% of mass 174	64.16 (99.93)
177	5.00 - 9.00% of mass 176	4.25 (6.62)

Data File: /var/ohem/gcms/mt.i/T081403i.b/tbf0814.d

Date : 14-AUG-2003 07:51

Client ID: BFB

Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32

Data File: tbf0814.d

Spectrum: Avg. Scans 1613-1615 (18.02), Background Scan 1607

Location of Maximum: 95.00

Number of points: 98

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	22864	64.00	1482	95.00	474496	140.00	85
33.00	2684	67.00	1366	96.00	31448	141.00	3320
36.00	6712	68.00	53992	97.00	885	142.00	432
37.00	33992	69.00	51960	104.00	1772	143.00	3508
38.00	28552	70.00	3675	105.00	630	144.00	167
39.00	10701	71.00	73	106.00	1648	145.00	189
40.00	181	72.00	2444	107.00	413	146.00	485
43.00	225	73.00	19496	110.00	69	147.00	255
44.00	2923	74.00	71832	111.00	282	148.00	825
45.00	5423	75.00	224384	112.00	181	149.00	211
46.00	214	76.00	18712	113.00	296	150.00	357
47.00	9253	77.00	2847	115.00	418	152.00	79
48.00	3668	78.00	1979	116.00	1401	153.00	257
49.00	23776	79.00	12586	117.00	2329	154.00	174
50.00	116328	80.00	2969	118.00	1308	155.00	817
51.00	34640	81.00	12828	119.00	1919	157.00	639
52.00	1442	82.00	2282	124.00	188	159.00	431
55.00	1380	83.00	180	126.00	72	161.00	394
56.00	7905	86.00	505	127.00	69	174.00	304640
57.00	14459	87.00	21888	128.00	1451	175.00	22088
58.00	595	88.00	21040	129.00	624	176.00	304384
60.00	5070	91.00	1482	130.00	1450	177.00	20144
61.00	22400	92.00	11199	131.00	530	178.00	485
62.00	21704	93.00	16616	135.00	636		
63.00	15675	94.00	47080	137.00	593		

Data File: /var/chem/gcms/mt.i/T0814031.b/tbf0814.d

Date : 14-AUG-2003 07:51

Client ID: BFB

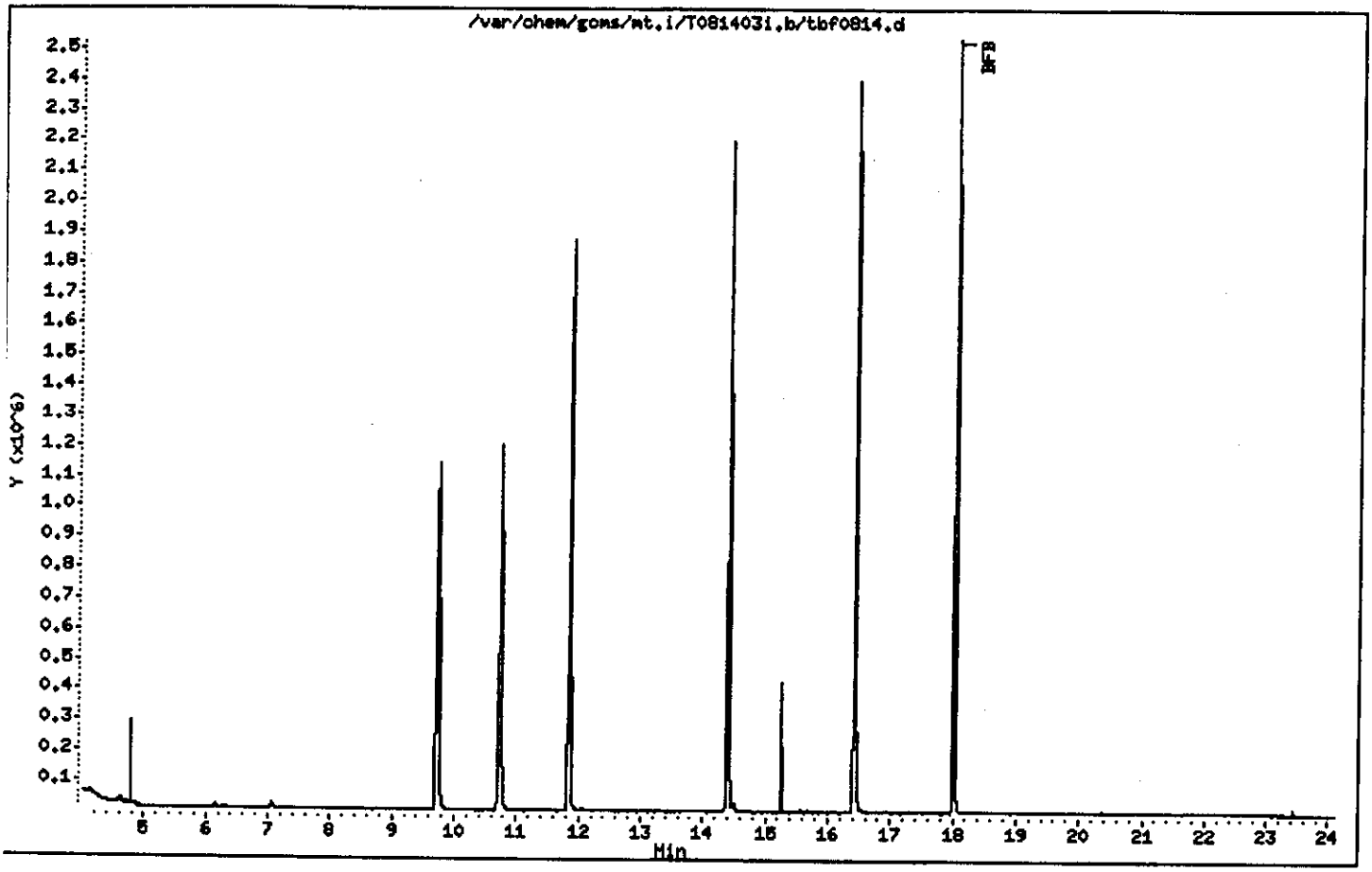
Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Report Date : 18-Aug-2003 17:02

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 14-AUG-2003 10:35
End Cal Date : 14-AUG-2003 19:04
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T081403i.b/LA.m
Cal Date : 18-Aug-2003 17:01 wilesd
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcms/mt.i/T081403i.b/ric10814.d
Level 2: /var/chem/gcms/mt.i/T081403i.b/tic20814.d
Level 3: /var/chem/gcms/mt.i/T081403i.b/tic30814.d
Level 4: /var/chem/gcms/mt.i/T081403i.b/tic40814.d
Level 5: /var/chem/gcms/mt.i/T081403i.b/tic50814.d
Level 6: /var/chem/gcms/mt.i/T081403i.b/ric60814.d
Level 7: /var/chem/gcms/mt.i/T081403i.b/ric70814.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	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
8 Dichlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
9 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
10 1,2-Dichlorotetrafluoroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
11 Vinyl Chloride	0.98727	1.07427	1.19771	0.99638	1.11349	1.16204		
	1.05442						1.08365	7.333
12 Methanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Report Date : 18-Aug-2003 17:02

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 14-AUG-2003 10:35
End Cal Date : 14-AUG-2003 19:04
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T081403i.b/LA.m
Cal Date : 18-Aug-2003 17:01 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	___ RRF	% RSD
	0.50000 Level 7							
31 1,1-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
32 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
33 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
34 Hexane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
35 cis 1,2-Dichloroethene	1.20005	1.38786	1.50199	1.24451	1.40816	1.42470		
	1.30007						1.35247	7.961
36 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
37 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
38 1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
39 Benzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Report Date : 18-Aug-2003 17:02

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 14-AUG-2003 10:35
End Cal Date : 14-AUG-2003 19:04
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T081403i.b/LA.m
Cal Date : 18-Aug-2003 17:01 wilesd
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	0.50000 Level 7	RRF	% RSD
40 1-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 Carbon Tetrachloride	1.05793	1.94089	2.14031	1.72015	1.89305	1.38396	1.20640	1.62038	25.207
43 Heptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 1,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 Trichloroethene	0.28225	0.31054	0.32922	0.26807	0.28428	0.33774	0.31235	0.30349	8.548
46 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 Bromodichloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
48 4-Methyl-2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Report Date : 18-Aug-2003 17:02

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 14-AUG-2003 10:35
End Cal Date : 14-AUG-2003 19:04
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T081403i.b/LA.m
Cal Date : 18-Aug-2003 17:01 wilesd
Curve Type : Average

Compound	1.000 Level 1 / 0.50000 Level 7	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
135 Camphene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
136 b-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
137 p-Cymene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
138 d-Limonene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
139 4-tert-Butyltoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 Camphor	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 1,2-Dichloroethane-d4	0.21796 / 0.22222	0.20823	0.21883	0.20699	0.20924	0.22279	0.21518	3.170
5 Toluene-d8	1.05370 / 1.05886	1.02413	1.01996	1.00792	0.98242	1.03915	1.02659	2.603
6 4-Bromofluorobenzene	0.69089 / 0.70524	0.65385	0.64156	0.63121	0.61112	0.70105	0.66213	5.600

Data File: /var/chem/gcms/mt.i/T081403i.b/tic30814.d
Report Date: 18-Aug-2003 17:07

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tic30814.d
Analysis Type: AIR
Lab Sample ID: IC3
Method: /var/chem/gcms/mt.i/T081403i.b/LA.m

Injection Date: 14-AUG-2003 10:35
Init. Cal. Date(s): 14-AUG-2003 14-AUG-2003
Init. Cal. Times: 10:35 19:04
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 4 1,2-Dichloroethane-d4	0.21518	0.21883	0.000	-1.69799	30.00000	Averaged	
$ 5 Toluene-d8	1.02659	1.01996	0.000	0.64592	30.00000	Averaged	
$ 6 4-Bromofluorobenzene	0.66213	0.64156	0.000	3.10703	30.00000	Averaged	
11 Vinyl Chloride	1.08365	1.19770	0.000	-10.52469	30.00000	Averaged	
35 cis 1,2-Dichloroethene	1.35247	1.50198	0.000	-11.05453	30.00000	Averaged	
42 Carbon Tetrachloride	1.62038	2.14031	0.000	-32.08652	30.00000	Averaged	<-
45 Trichloroethene	0.30349	0.32922	0.000	-8.47713	30.00000	Averaged	

Level 3 as daily Std.

CK
DW 8/18/03

)ata File: /var/chem/gcms/mt.i/T081403i.b/ric60814.d
:eport Date: 18-Aug-2003 16:55

STL Knoxville

Modified Method TO-14/TO-15

)ata file : /var/chem/gcms/mt.i/T081403i.b/ric60814.d
ıab Smp Id: IC6 Client Smp ID: 0.2PPBV
:nj Date : 14-AUG-2003 19:04
)perator : 0691 Inst ID: mt.i
ɜmp Info : IC6,,1,6,,0.2PPBV
ſisc Info : T081403i,LA,ICRLX.sub,,100ML
:omment :
ſethod : /var/chem/gcms/mt.i/T081403i.b/LA.m
ſeth Date : 18-Aug-2003 16:55 wilesd Quant Type: ISTD
:al Date : 14-AUG-2003 19:04 Cal File: ric60814.d
ıls bottle: 99 Calibration Sample, Level: 6
)il Factor: 1.00000
:ntegrator: HP RTE Compound Sublist: e081403i.sub
:arget Version: 3.50
'rocessing Host: qmidhp01

:oncentration Formula: Amt * DF * CpndVariable

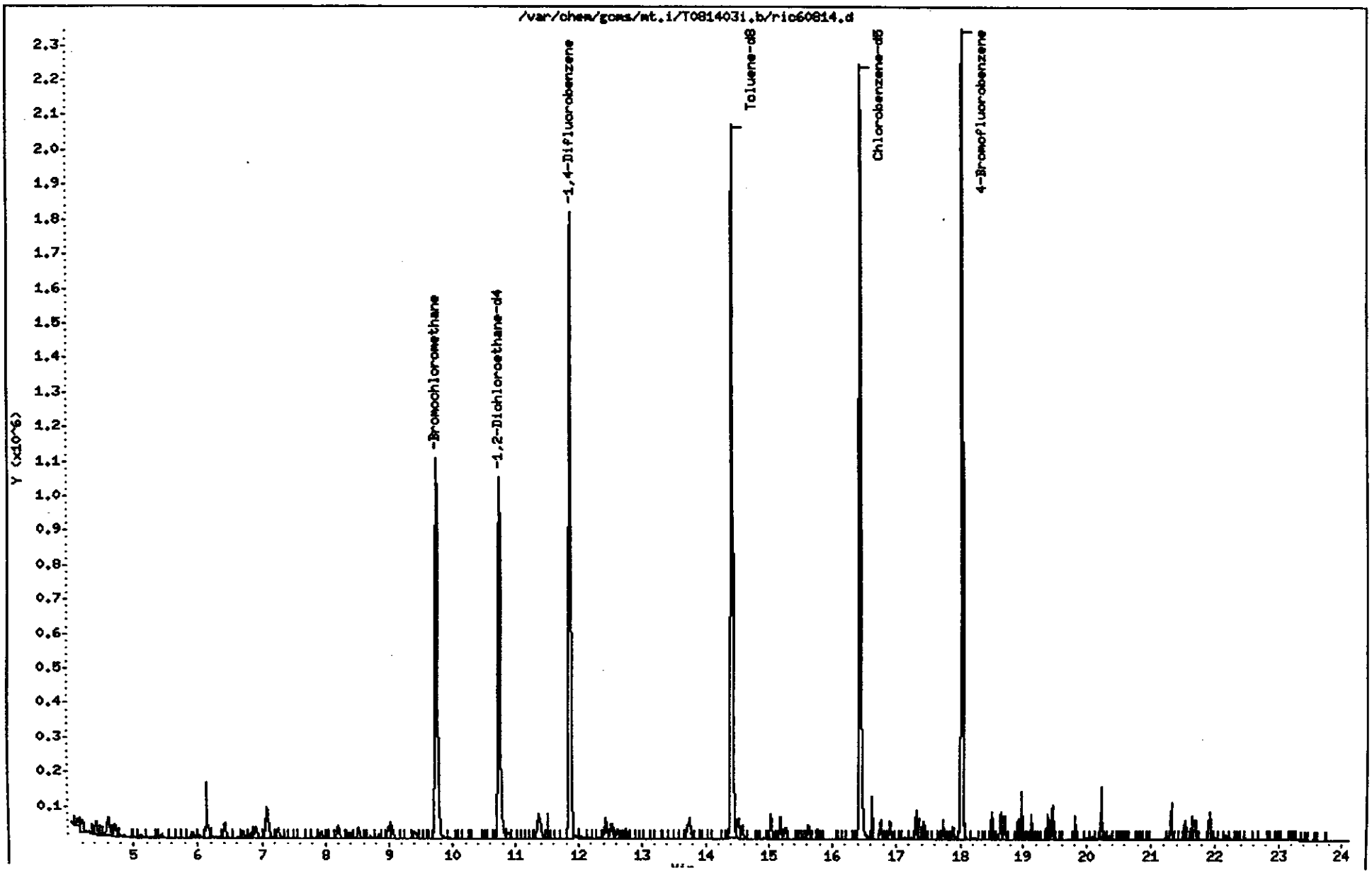
:pnd Variable Local Compound Variable

ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.739	9.738	(1.000)	375589	10.0000	
2 1,4-Difluorobenzene	114	11.864	11.864	(1.000)	1748987	10.0000	
3 Chlorobenzene-d5	117	16.428	16.427	(1.000)	1427865	10.0000	
4 1,2-Dichloroethane-d4	67	10.745	10.745	(0.906)	389650	10.0000	10.11
5 Toluene-d8	98	14.406	14.406	(0.877)	1483768	10.0000	9.930
6 4-Bromofluorobenzene	95	18.024	18.024	(1.097)	1001009	10.0000	10.07
11 Vinyl Chloride	62	4.620	4.611	(0.474)	8729	0.20000	0.2163
35 cis 1,2-Dichloroethene	96	9.400	9.400	(0.965)	10702	0.20000	0.2171
42 Carbon Tetrachloride	117	11.370	11.378	(1.167)	10396	0.20000	0.2267
45 Trichloroethene	130	12.541	12.541	(1.057)	11814	0.20000	0.2179

Data File: /var/chem/gcms/mt.i/T0814031.b/ric60814.d
Date : 14-AUG-2003 19:04
Client ID: 0.2PPBV
Sample Info: IC6,,1,6,,0.2PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



ata File: /var/chem/gcms/mt.i/T081403i.b/ric70814.d
eport Date: 18-Aug-2003 16:56

STL Knoxville

Modified Method TO-14/TO-15

ata file : /var/chem/gcms/mt.i/T081403i.b/ric70814.d
ab Smp Id: IC7 Client Smp ID: 0.5PPBV
nj Date : 14-AUG-2003 18:24
perator : 0691 Inst ID: mt.i
mp Info : IC7,,1,7,,0.5PPBV
isc Info : T081403i,LA,,,250ML
omment :
ethod : /var/chem/gcms/mt.i/T081403i.b/LA.m
eth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
al Date : 14-AUG-2003 18:24 Cal File: ric70814.d
ls bottle: 99 Calibration Sample, Level: 7
il Factor: 1.00000
ntegrator: HP RTE Compound Sublist: e081403i.sub
arget Version: 3.50
rocessing Host: qmidhp01

oncentration Formula: Amt * DF * CpndVariable

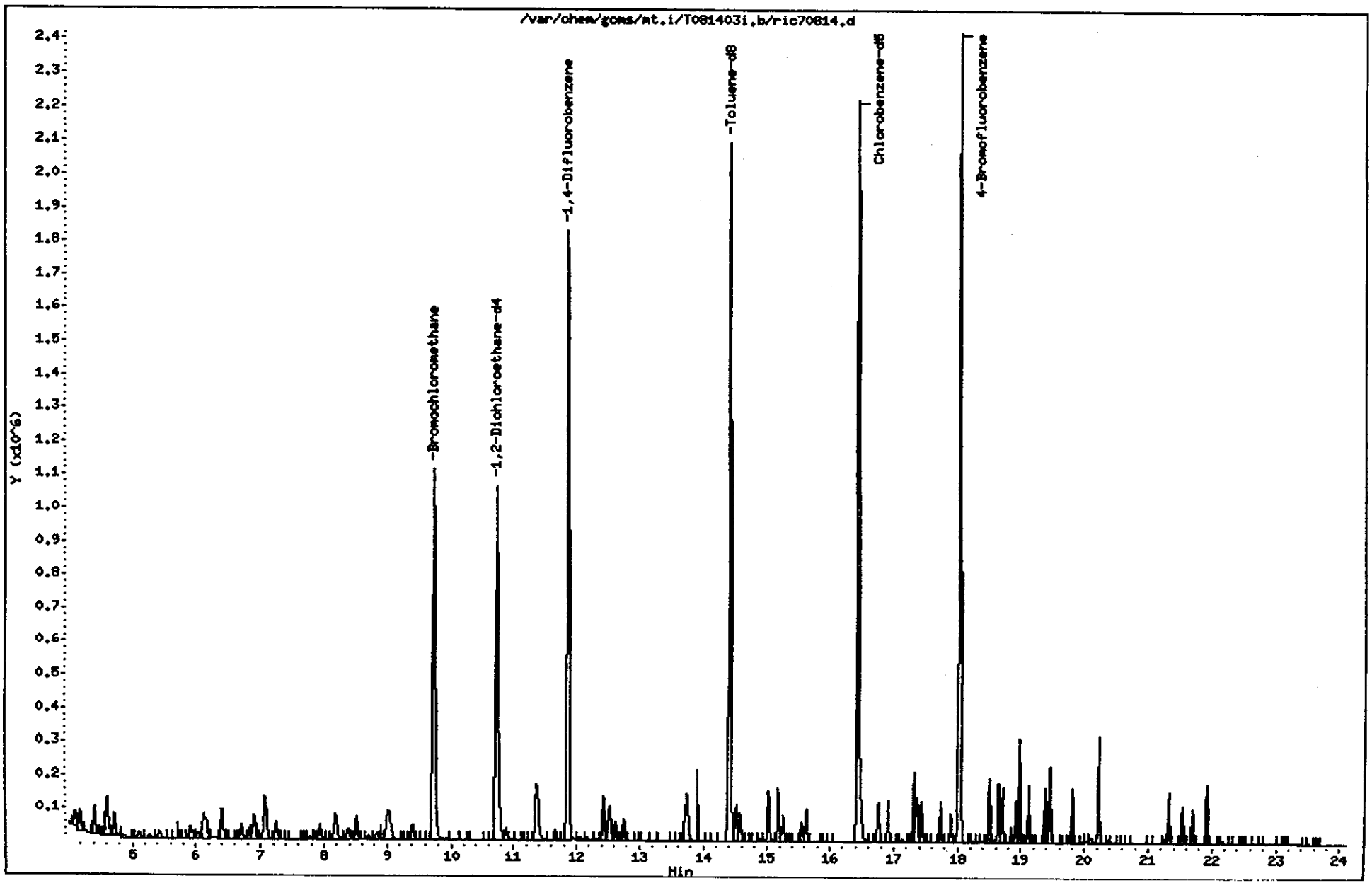
pnd Variable Local Compound Variable

ompounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.742	9.738	(1.000)	378748	10.0000	
2 1,4-Difluorobenzene	114	11.859	11.864	(1.000)	1747701	10.0000	
3 Chlorobenzene-d5	117	16.431	16.427	(1.000)	1420173	10.0000	
4 1,2-Dichloroethane-d4	67	10.739	10.745	(0.906)	388375	10.0000	10.06
5 Toluene-d8	98	14.409	14.406	(0.877)	1503761	10.0000	10.08
6 4-Bromofluorobenzene	95	18.019	18.024	(1.097)	1001567	10.0000	10.09
11 Vinyl Chloride	62	4.614	4.611	(0.474)	19968	0.50000	0.4937
35 cis 1,2-Dichloroethene	96	9.403	9.400	(0.965)	24620	0.50000	0.4969
42 Carbon Tetrachloride	117	11.381	11.378	(1.168)	22846	0.50000	0.4960
45 Trichloroethene	130	12.544	12.541	(1.058)	27295	0.50000	0.5025

Data File: /var/chem/gcms/mt.i/T081403i.b/ric70814.d
Date : 14-AUG-2003 18:24
Client ID: 0.5PPBV
Sample Info: IC7,,1,7,,0.5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T081403i.b/ric10814.d
Report Date: 18-Aug-2003 16:55

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/ric10814.d
Lab Smp Id: IC1 Client Smp ID: 1PPBV
Inj Date : 14-AUG-2003 17:45
Operator : 0691 Inst ID: mt.i
Smp Info : IC1,,1,1,,1PPBV
Misc Info : T081403i,LA,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:55 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 17:45 Cal File: ric10814.d
Als bottle: 99 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

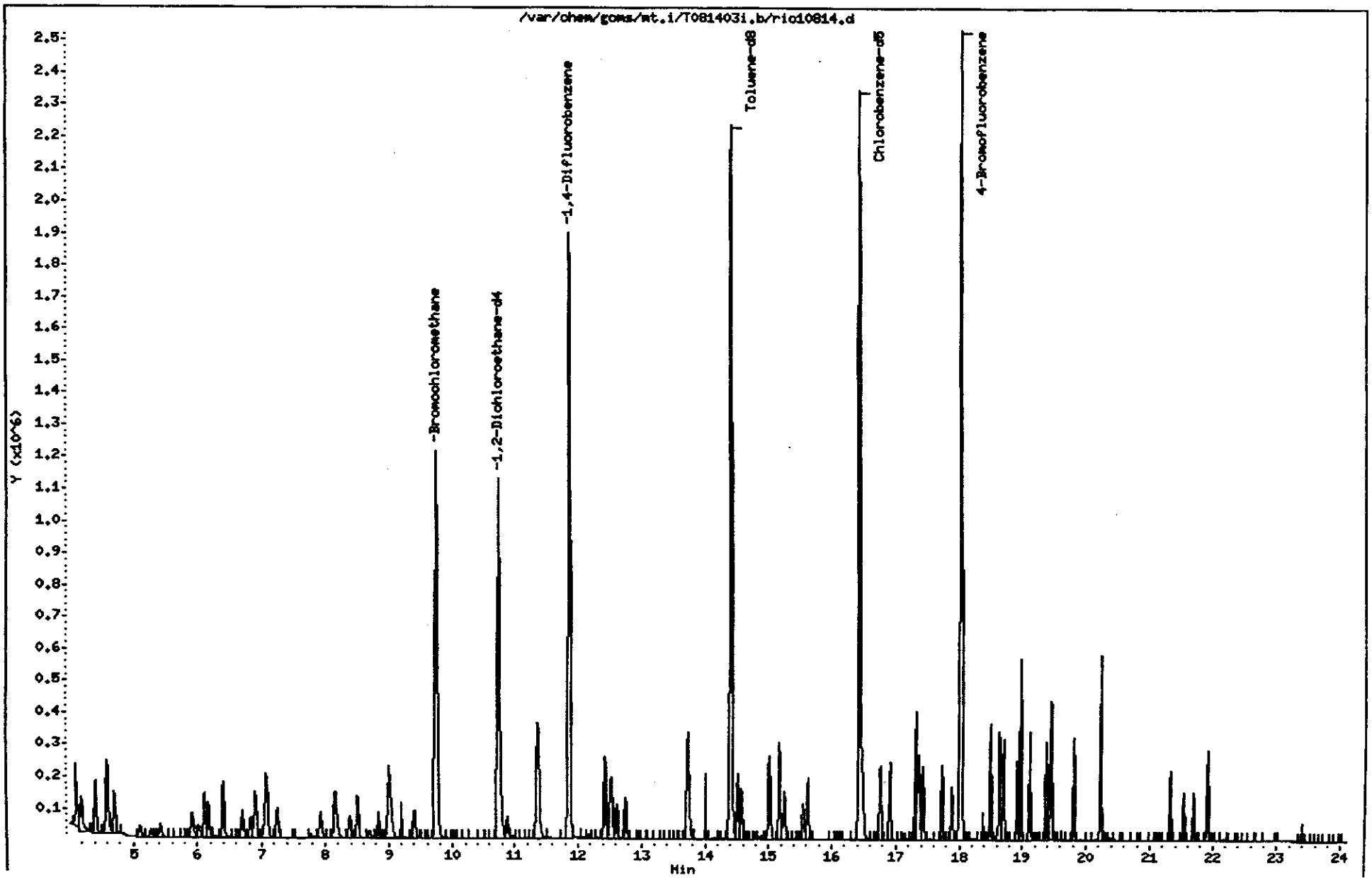
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
* 1 Bromochloromethane	128	9.734	9.738	(1.000)	398251	10.0000	
* 2 1,4-Difluorobenzene	114	11.860	11.864	(1.000)	1841227	10.0000	
* 3 Chlorobenzene-d5	117	16.432	16.427	(1.000)	1505144	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.741	10.745	(0.906)	401317	10.0000	10.00
$ 5 Toluene-d8	98	14.411	14.406	(0.877)	1585963	10.0000	10.00
$ 6 4-Bromofluorobenzene	95	18.020	18.024	(1.097)	1039886	10.0000	10.00
11 Vinyl Chloride	62	4.615	4.611	(0.474)	39318	1.00000	1.000
35 cis 1,2-Dichloroethene	96	9.405	9.400	(0.966)	47792	1.00000	1.000
42 Carbon Tetrachloride	117	11.374	11.378	(1.168)	42132	1.00000	1.000
45 Trichloroethene	130	12.545	12.541	(1.058)	51968	1.00000	1.000

Data File: /var/chem/gcms/mt.i/T081403i.b/ric10814.d
Date : 14-AUG-2003 17:46
Client ID: 1PPBV
Sample Info: IC1,,1,1,,1PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081403i.b/tic20814.d
Report Date: 18-Aug-2003 16:56

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/tic20814.d
Lab Smp Id: IC2 Client Smp ID: 5PPBV
Inj Date : 14-AUG-2003 13:38
Operator : 0691 Inst ID: mt.i
Smp Info : IC2,,1,2,,5PPBV
Misc Info : T081403i,LA,,,50ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 13:38 Cal File: tic20814.d
Als bottle: 99 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

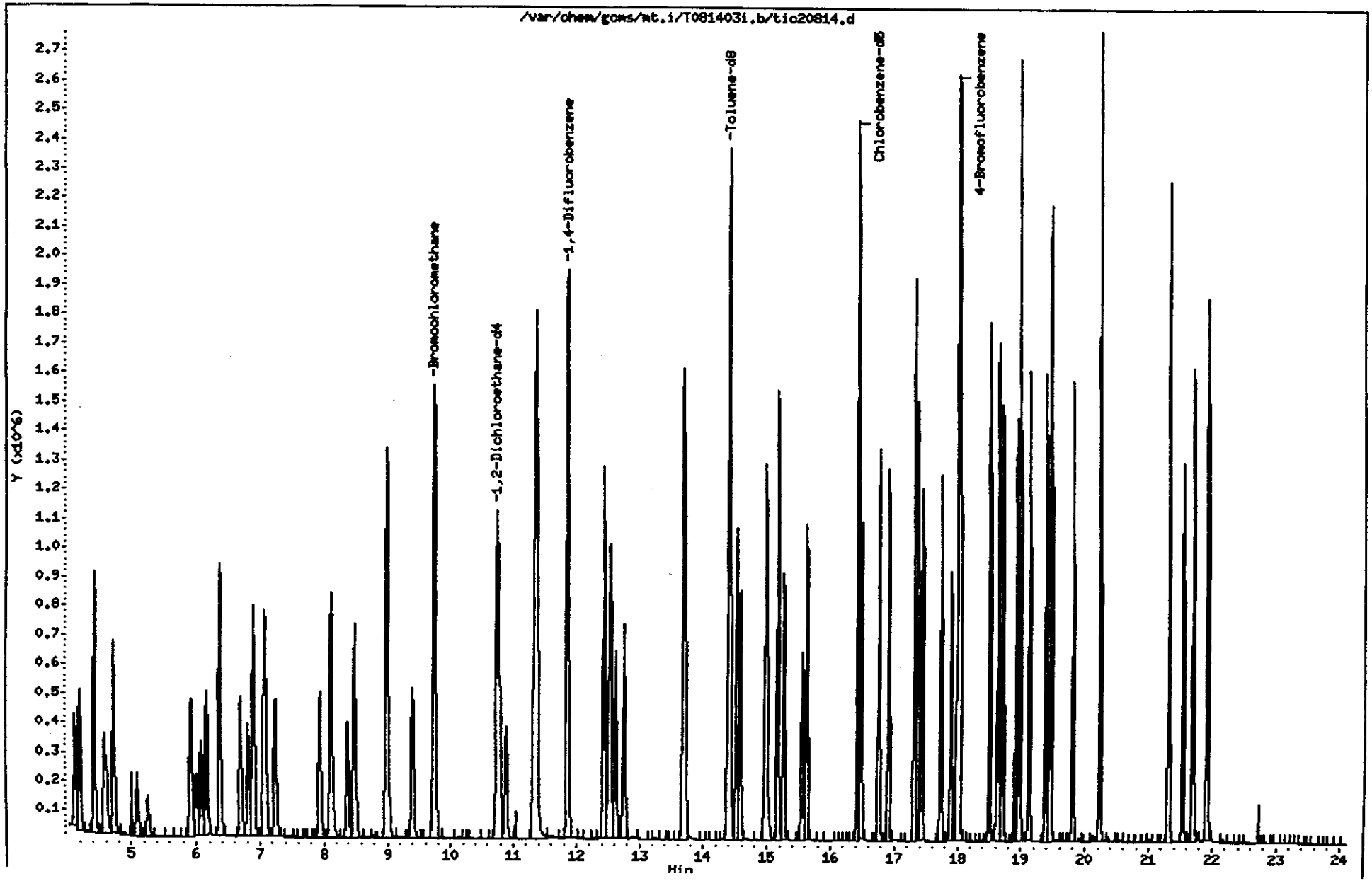
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.740	9.738	(1.000)	412884	10.0000	
2 1,4-Difluorobenzene	114	11.865	11.864	(1.000)	1936116	10.0000	
3 Chlorobenzene-d5	117	16.429	16.427	(1.000)	1598170	10.0000	
4 1,2-Dichloroethane-d4	67	10.737	10.745	(0.905)	403154	10.0000	9.560
5 Toluene-d8	98	14.407	14.406	(0.877)	1636733	10.0000	9.810
6 4-Bromofluorobenzene	95	18.025	18.024	(1.097)	1044968	10.0000	9.507
11 Vinyl Chloride	62	4.612	4.611	(0.474)	221774	5.00000	5.022
35 cis 1,2-Dichloroethene	96	9.401	9.400	(0.965)	286512	5.00000	5.225
42 Carbon Tetrachloride	117	11.379	11.378	(1.168)	400681	5.00000	6.945
45 Trichloroethene	130	12.542	12.541	(1.057)	300624	5.00000	4.997

Data File: /var/chem/gcms/mt.i/T0814031.b/tic20814.d
Date : 14-AUG-2003 13:38
Client ID: 5PPBV
Sample Info: IC2,,1,2,,5PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T081403i.b/tic30814.d
Report Date: 18-Aug-2003 16:56

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/tic30814.d
Lab Smp Id: IC3 Client Smp ID: 10PPBV
Inj Date : 14-AUG-2003 10:35
Operator : 0691 Inst ID: mt.i
Smp Info : IC3,,1,3,,10PPBV
Misc Info : T081403i,LA,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 99 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

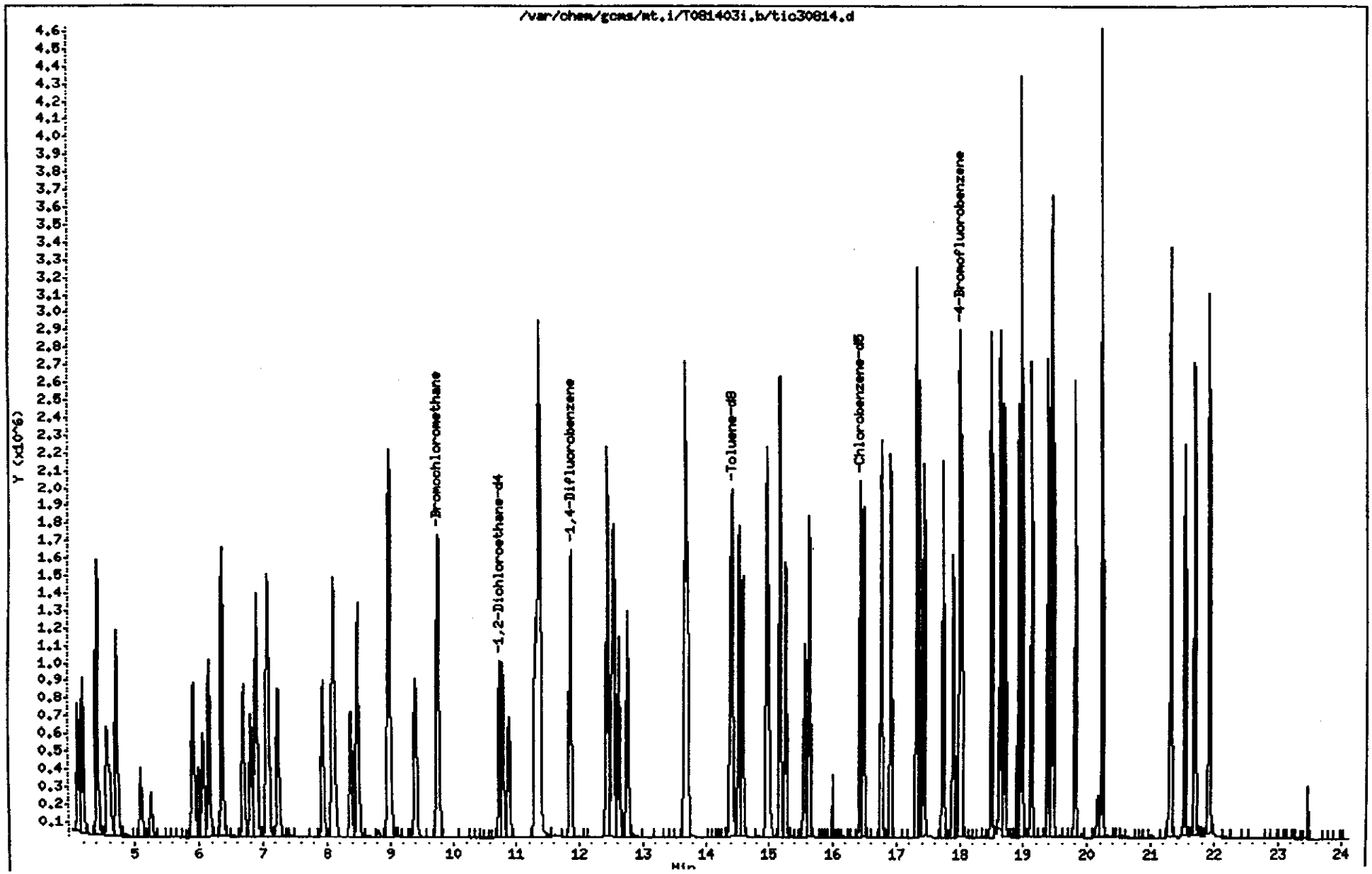
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
* 1 Bromochloromethane	128	9.738	9.738	(1.000)	338579	10.0000	
* 2 1,4-Difluorobenzene	114	11.864	11.864	(1.000)	1568732	10.0000	
* 3 Chlorobenzene-d5	117	16.427	16.427	(1.000)	1278525	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.745	10.745	(0.906)	343291	10.0000	10.04
$ 5 Toluene-d8	98	14.406	14.406	(0.877)	1304045	10.0000	9.815
$ 6 4-Bromofluorobenzene	95	18.024	18.024	(1.097)	820251	10.0000	9.455
11 Vinyl Chloride	62	4.611	4.611	(0.473)	405518	10.0000	10.94
35 cis 1,2-Dichloroethene	96	9.400	9.400	(0.965)	508541	10.0000	11.02
42 Carbon Tetrachloride	117	11.378	11.378	(1.168)	724664	10.0000	13.84
45 Trichloroethene	130	12.541	12.541	(1.057)	516458	10.0000	10.47

Data File: /var/chem/gcms/mt.i/T0814031.b/tic30814.d
Date : 14-AUG-2003 10:35
Client ID: 10PPBV
Sample Info: IC3,,1,3,,10PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081403i.b/tic40814.d
Report Date: 18-Aug-2003 16:56

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/tic40814.d
Lab Smp Id: IC4 Client Smp ID: 15PPBV
Inj Date : 14-AUG-2003 12:16
Operator : 0691 Inst ID: mt.i
Smp Info : IC4,,1,4,,15PPBV
Misc Info : T081403i,LA,,,150ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 99 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

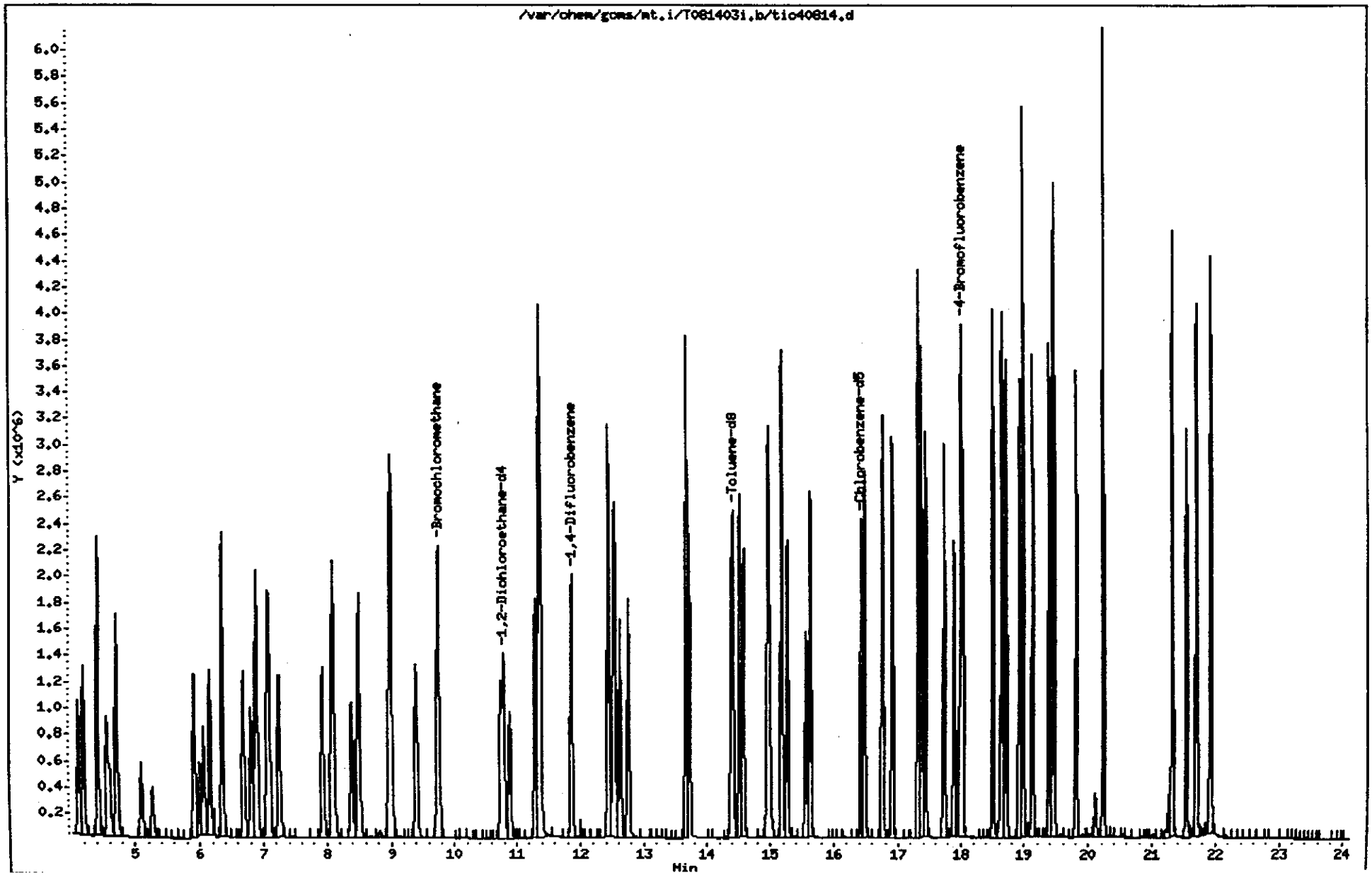
Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.739	9.738	(1.000)	406390	10.0000	
2 1,4-Difluorobenzene	114	11.865	11.864	(1.000)	1955401	10.0000	
3 Chlorobenzene-d5	117	16.429	16.427	(1.000)	1596343	10.0000	
4 1,2-Dichloroethane-d4	67	10.746	10.745	(0.906)	404757	10.0000	9.576
5 Toluene-d8	98	14.407	14.406	(0.877)	1608989	10.0000	9.748
6 4-Bromofluorobenzene	95	18.025	18.024	(1.097)	1007633	10.0000	9.412
11 Vinyl Chloride	62	4.612	4.611	(0.474)	607381	15.0000	13.86
35 cis 1,2-Dichloroethene	96	9.401	9.400	(0.965)	758635	15.0000	13.90
42 Carbon Tetrachloride	117	11.379	11.378	(1.168)	1048579	15.0000	16.38
45 Trichloroethene	130	12.542	12.541	(1.057)	786291	15.0000	13.11

Data File: /var/chem/gcms/mt.i/T081403i.b/tic40814.d
Date : 14-AUG-2003 12:16
Client ID: 15PPBV
Sample Info: IC4,,1,4,,15PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081403i.b/tic50814.d
Report Date: 18-Aug-2003 16:56

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/tic50814.d
Lab Smp Id: IC5 Client Smp ID: 30PPBV
Inj Date : 14-AUG-2003 11:38
Operator : 0691 Inst ID: mt.i
Smp Info : IC5,,1,5,,30PPBV
Misc Info : T081403i,LA,,,300ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 99 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

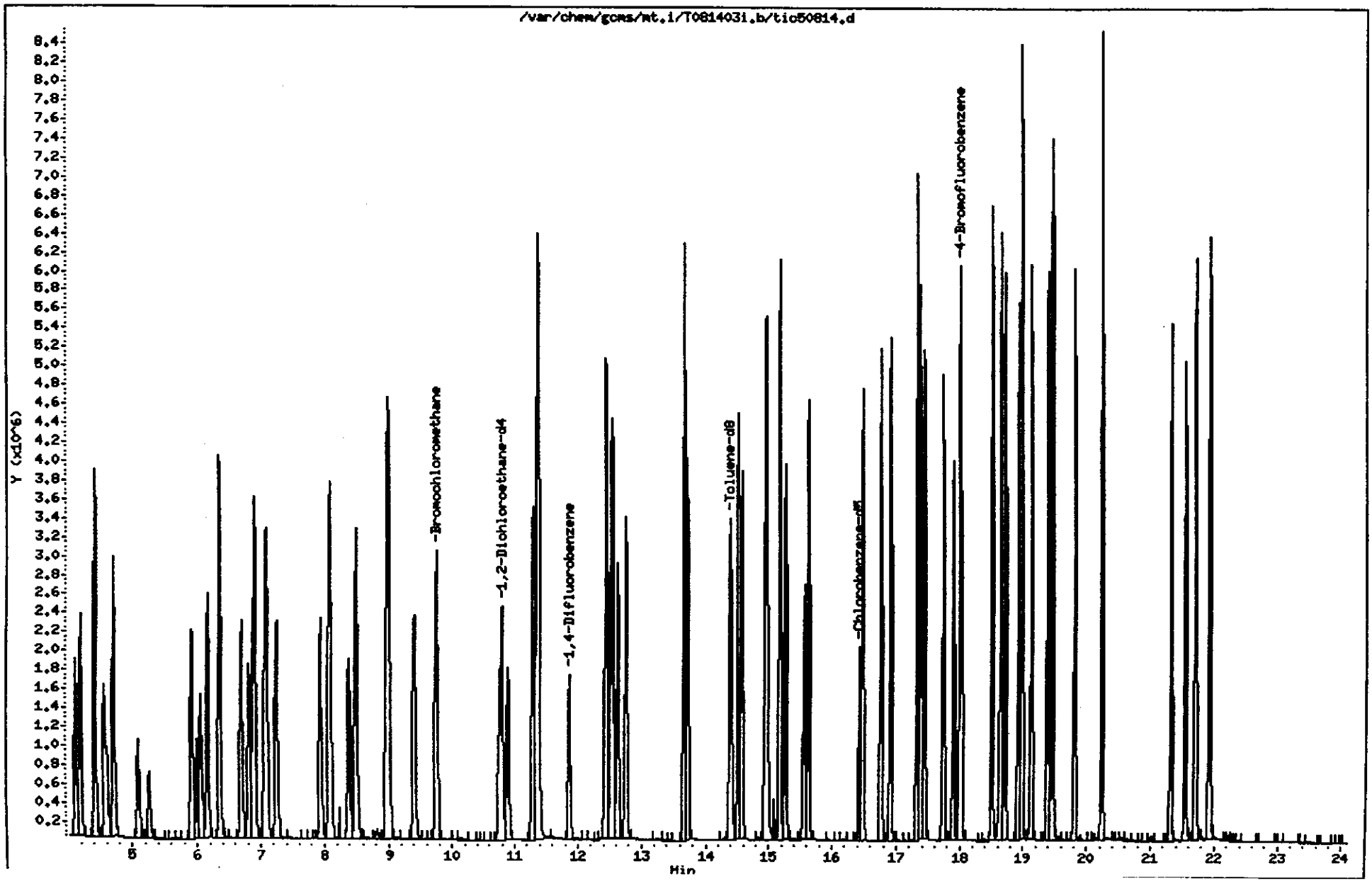
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
1 Bromochloromethane	128	9.747	9.738	(1.000)	333381	10.0000	
2 1,4-Difluorobenzene	114	11.864	11.864	(1.000)	1642840	10.0000	
3 Chlorobenzene-d5	117	16.437	16.427	(1.000)	1354177	10.0000	
4 1,2-Dichloroethane-d4	67	10.745	10.745	(0.906)	343740	10.0000	9.724
5 Toluene-d8	98	14.415	14.406	(0.877)	1330372	10.0000	9.570
6 4-Bromofluorobenzene	95	18.024	18.024	(1.097)	827566	10.0000	9.230
11 Vinyl Chloride	62	4.611	4.611	(0.473)	1113647	30.0000	30.82(A)
35 cis 1,2-Dichloroethene	96	9.409	9.400	(0.965)	1408357	30.0000	31.24(A)
42 Carbon Tetrachloride	117	11.387	11.378	(1.168)	1893319	30.0000	35.05(A)
45 Trichloroethene	130	12.550	12.541	(1.058)	1401056	30.0000	28.10

QC Flag Legend

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

Data File: /var/chem/gcms/mt.i/T0814031.b/tic50814.d
Date : 14-AUG-2003 11:38
Client ID: 30PPBV
Sample Info: IC5,,1,5,,30PPBV
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081403i.b/ticv0814.d
Report Date: 18-Aug-2003 16:59

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/ticv0814.d
Lab Smp Id: ICV Client Smp ID: 2nd source
Inj Date : 14-AUG-2003 19:42
Operator : 0691 Inst ID: mt.i
Smp Info : ICV,,3,,LCS
Misc Info : T081403i,LA,to14.sub,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 16:56 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 ✓ Cal File: tic30814.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.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	9.734	9.738	(1.000)	369842	10.0000	
2 1,4-Difluorobenzene	114	11.860	11.864	(1.000)	1745997	10.0000	
3 Chlorobenzene-d5	117	16.432	16.427	(1.000)	1447617	10.0000	
4 1,2-Dichloroethane-d4	67	10.741	10.745	(0.906)	393197	10.2909	10.29
5 Toluene-d8	98	14.411	14.406	(0.877)	1484385	10.0533	10.05
6 4-Bromofluorobenzene	95	18.020	18.024	(1.097)	1045642	11.2588	11.26
11 Vinyl Chloride	62	4.615	4.611	(0.474)	444627	10.0376	10.04
35 cis 1,2-Dichloroethene	96	9.405	9.400	(0.966)	465831	8.38583	8.386
42 Carbon Tetrachloride	117	11.383	11.378	(1.169)	673285	8.50561	8.506 ✓
45 Trichloroethene	130	12.545	12.541	(1.058)	508750	8.85064	8.851

Data File: /var/chem/gcms/mt.i/T081403i.b/ticv0814.d
Report Date: 18-Aug-2003 16:59

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ticv0814.d
Lab Smp Id: ICV
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,to14.sub,,100ML

Calibration Date: 14-AUG-2003
Calibration Time: 10:35
Client Smp ID: 2nd source
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	338579	201455	475703	369842	9.23
2 1,4-Difluorobenze	1568732	933396	2204068	1745997	11.30
3 Chlorobenzene-d5	1278525	760722	1796328	1447617	13.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.74	9.41	10.07	9.73	-0.04
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	-0.03
3 Chlorobenzene-d5	16.43	16.10	16.76	16.43	0.03

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

Data File: /var/chem/gcms/mt.i/T081403i.b/ticv0814.d
Report Date: 18-Aug-2003 17:01

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: ICV
Level: LOW
Data Type: MS DATA
SpikeList File: e081403i.spk
Sublist File: e081403i.sub
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,to14.sub,,100ML

Client SDG: T081403i
Fraction: OTHER
Client Smp ID: 2nd source
Operator: 0691
SampleType: LCS
Quant Type: ISTD

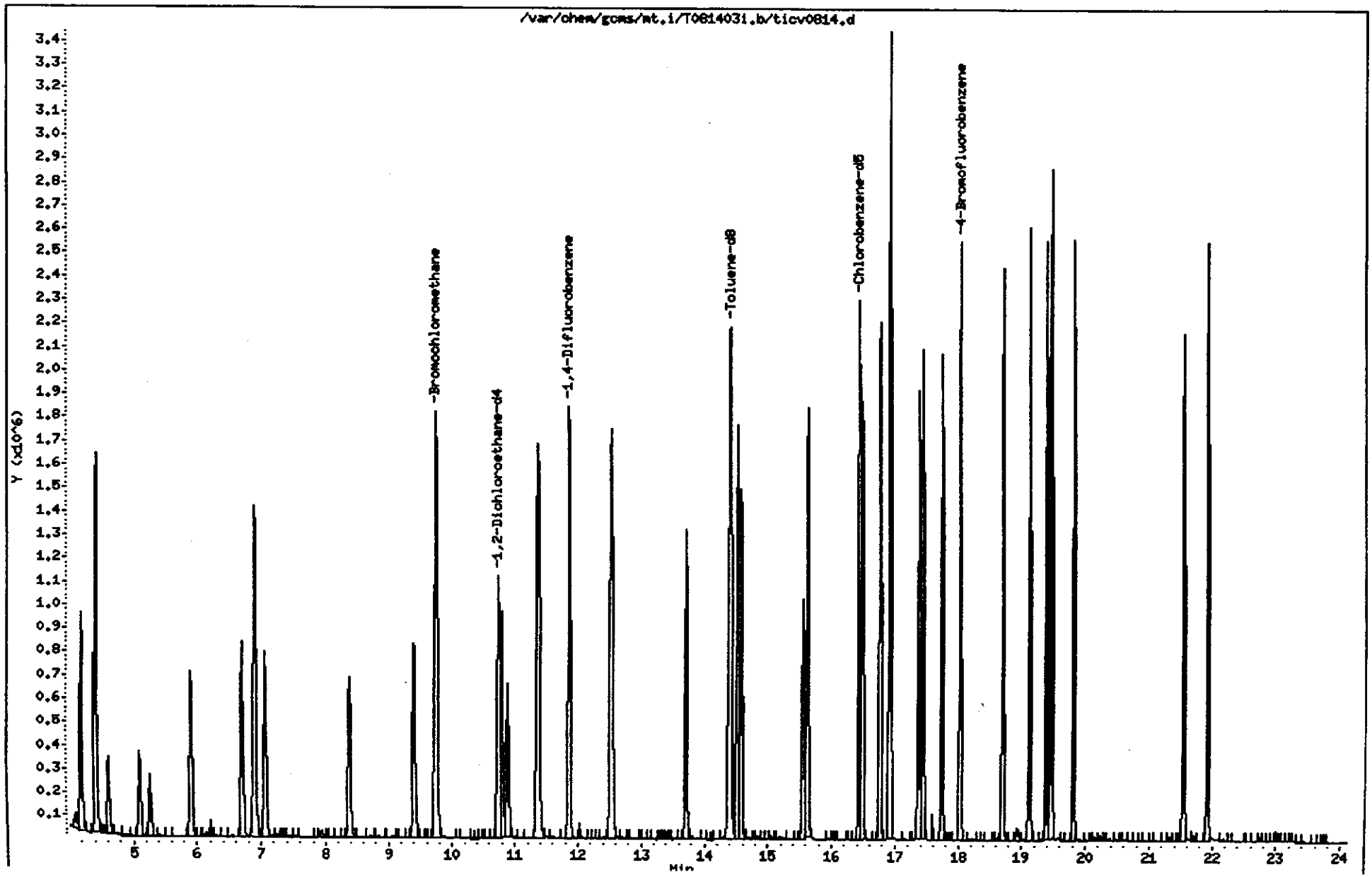
SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
11 Vinyl Chloride	10.00	10.04	100.38	70-130
35 cis 1,2-Dichloroet	10.00	8.386	83.86	70-130
42 Carbon Tetrachlori	10.00	8.506	85.06	70-130
45 Trichloroethene	10.00	8.851	88.51	70-130

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.29	102.91	70-130
$ 5 Toluene-d8	10.00	10.05	100.53	70-130
$ 6 4-Bromofluorobenze	10.00	11.26	112.59	70-130

Data File: /var/chem/gcms/mt.i/T0814031.b/ticv0814.d
Date : 14-AUG-2003 19:42
Client ID: 2nd source
Sample Info: ICV,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



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

8/14/2003 4:40:23 PM
Leak Check for C:\Smart\T081403i.SEQ
Report File: C:\Smart\T081403i.LCR
Leak Check Method: Evacuation
Pressurize/Evacuate time(sec) 15
Equilibration time(sec) 12
Maintanance time(sec) 15

Sample Inlet	Auto1	Auto2	Auto3	Start	End	Rate(psi/min)
1	1	—	—	0.8	0.8	0.00
1	2	—	—	0.4	0.4	0.00
1	5	—	—	0.5	0.5	0.00
1	6	—	—	0.3	0.4	0.40
1	7	—	—	0.3	0.4	0.40
1	9	—	—	0.5	0.6	0.40

Raw QC Data

FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 477
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/31/03
Work Order: FWG1N1AA Date Extracted:08/13/03
Dilution factor: 1 Date Analyzed: 08/13/03

QC Batch: 3230477

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/mt.i/T081303.b/tbk0813h.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081303.b/tbk0813h.d
Lab Smp Id: FWG1N1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 13-AUG-2003 16:19
Operator : 0691 Inst ID: mt.i
Smp Info : FWG1N1AA,,3,,BLANK
Misc Info : T081303,LA,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 16:08 wilesd Quant Type: ISTD
Cal Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
Als bottle: 15 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

08/18/03

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	9.747	9.735	(1.000)	279441	10.0000	
2 1,4-Difluorobenzene	114	11.864	11.860	(1.000)	1285134	10.0000	
3 Chlorobenzene-d5	117	16.428	16.424	(1.000)	1070560	10.0000	
4 1,2-Dichloroethane-d4	67	10.745	10.732	(0.906)	312446	10.5362	10.54
5 Toluene-d8	98	14.407	14.402	(0.877)	1121985	10.1082	10.11
6 4-Bromofluorobenzene	95	18.016	18.020	(1.097)	789394	10.8285	10.83
12 Methanol	31	4.620	4.564	(0.474)	4818	0.39244	0.3924
14 n-Butane	43	4.637	4.711	(0.476)	4348	0.08885	~~0.08885~~
19 Acetonitrile	40	5.982	5.995	(0.614)	1764	0.16206	~~0.1620~~
20 Acetone	58	6.164	6.065	(0.632)	4082	0.44593	0.4459
26 Methylene Chloride	84	7.084	7.062	(0.727)	9771	0.30119	0.3012
28 Carbon Disulfide	76	7.249	7.236	(0.744)	6164	0.05262	0.05262 - NA

NA

FW 8/18/03

Data File: /var/chem/gcms/mt.i/T081303.b/tbk0813h.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: tbk0813h.d
Lab Smp Id: FWG1N1AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,,,500ML

Calibration Date: 13-AUG-2003
Calibration Time: 09:03
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	363584	216332	510836	279441	-23.14
2 1,4-Difluorobenze	1747786	1039933	2455639	1285134	-26.47
3 Chlorobenzene-d5	1413217	840864	1985570	1070560	-24.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.75	0.13
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	0.03
3 Chlorobenzene-d5	16.42	16.09	16.75	16.43	0.03

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

Data File: /var/chem/gcms/mt.i/T081303.b/tbk0813h.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

RECOVERY REPORT

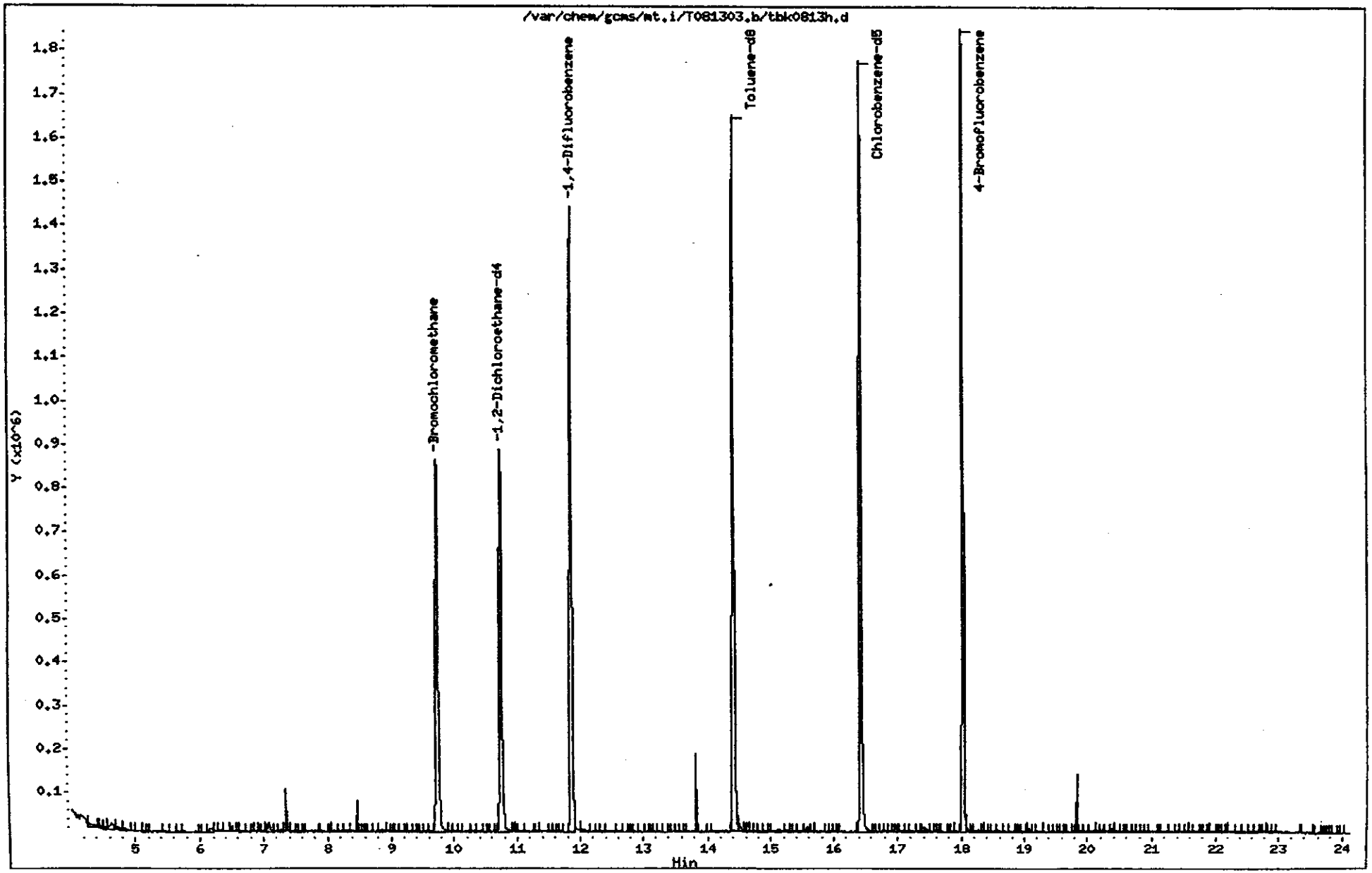
Client Name:
Sample Matrix: GAS
Lab Smp Id: FWG1N1AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,,,500ML

Client SDG: H3H180000
Fraction: OTHER
Client Smp ID: INTRA-LAB BLANK
Operator: 0691
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.54	105.36	70-130
$ 5 Toluene-d8	10.00	10.11	101.08	70-130
$ 6 4-Bromofluorobenze	10.00	10.83	108.29	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/tbk0813h.d
Date : 13-AUG-2003 16:19
Client ID: INTRA-LAB BLANK
Sample Info: FWG1N1AA,,3,,BLANK
Volume Injected (uL): 500.0
Column phase: DB-5

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



Data File: /var/chem/gcms/mt.i/T081303.b/tbk0813h.d

Date : 13-AUG-2003 16:19

Client ID: INTRA-LAB BLANK

Instrument: mt.i

Sample Info: FWG1N1AA,,3,,BLANK

Volume Injected (uL): 500.0

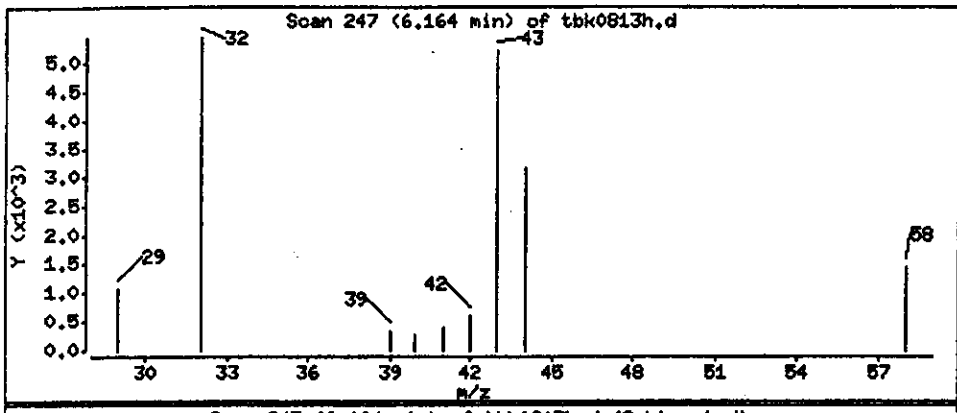
Operator: 0691

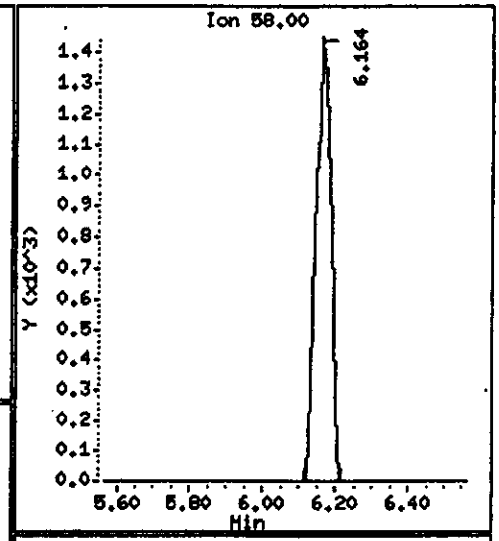
Column phase: DB-5

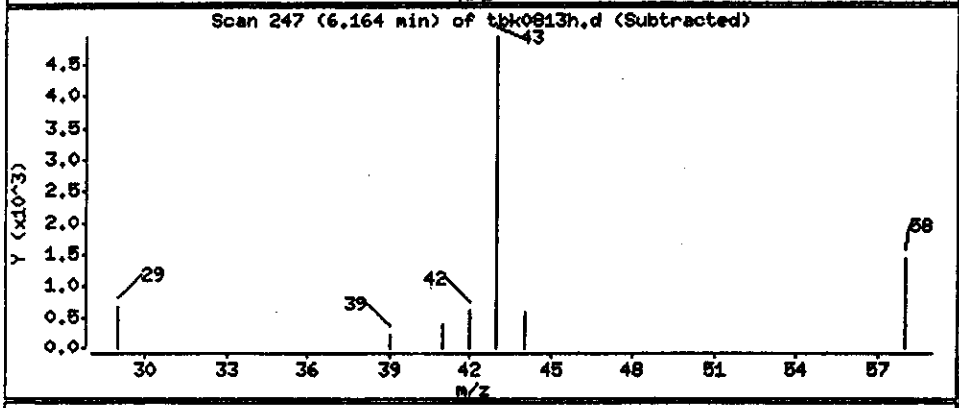
Column diameter: 0.32

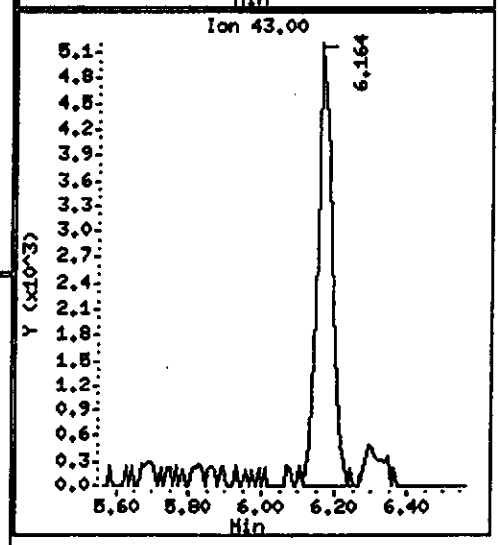
20 Acetone

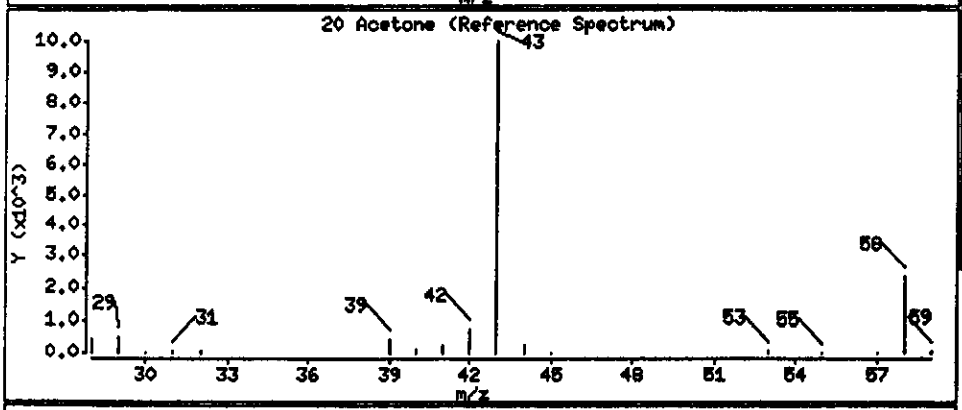
Concentration: 0.4459 ppb(v/v)

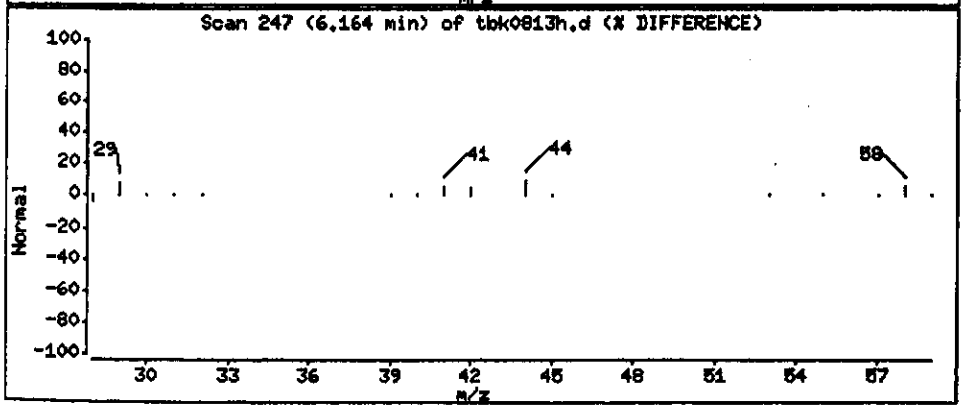












Data File: /var/chem/gcms/mt.i/T081303.b/tbk0813h.d

Date : 13-AUG-2003 16:19

Client ID: INTRA-LAB BLANK

Instrument: mt.i

Sample Info: FWG1N1AA,,3,,BLANK

Volume Injected (uL): 500.0

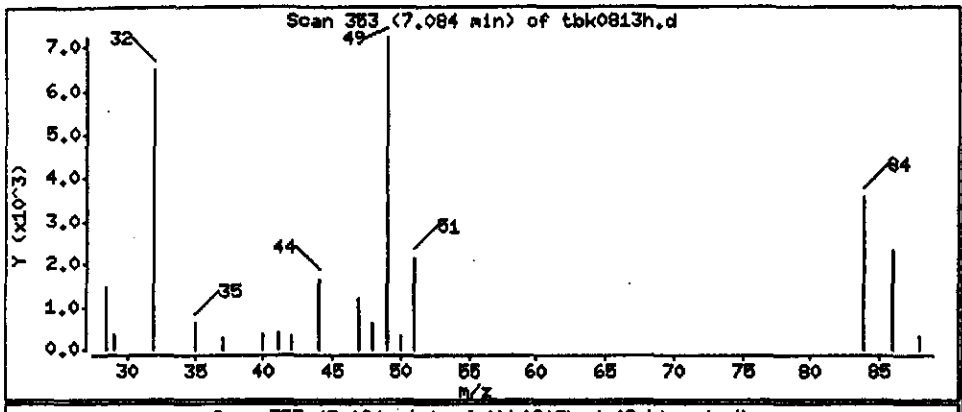
Operator: 0691

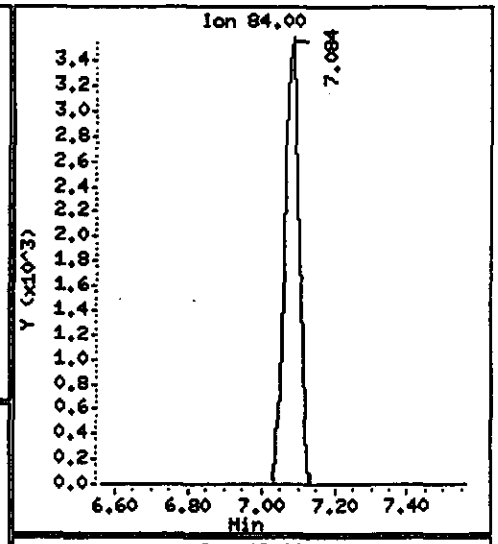
Column phase: DB-5

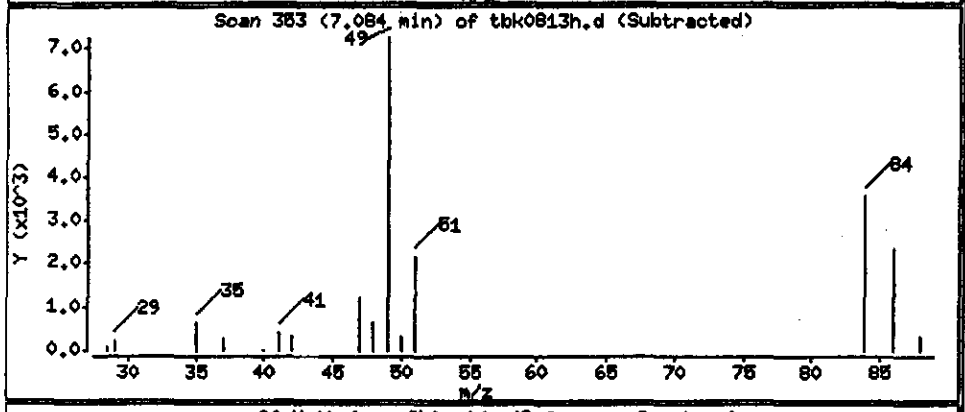
Column diameter: 0.32

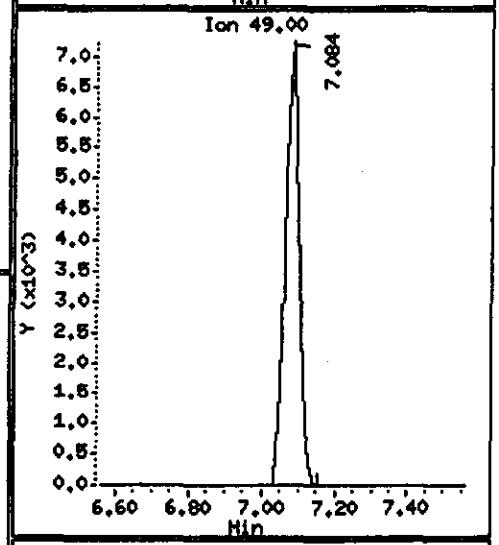
26 Methylene Chloride

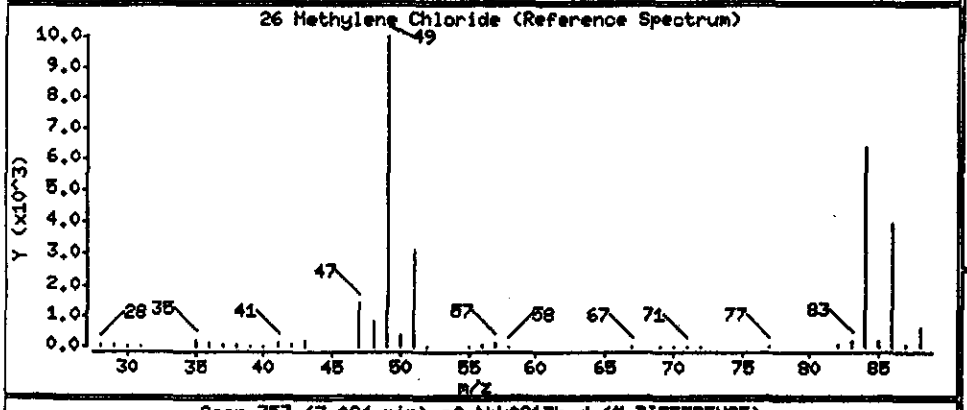
Concentration: 0.3012 ppb(v/v)

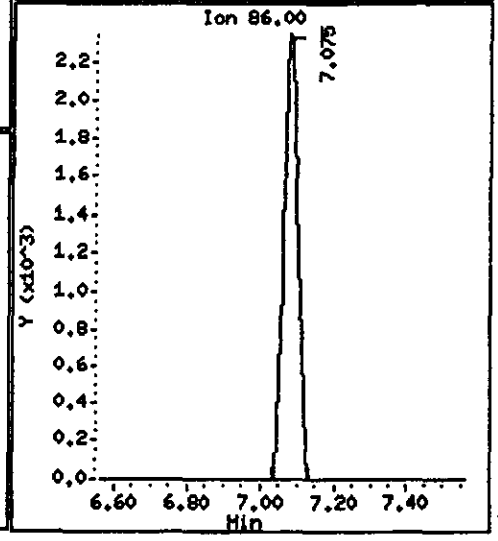


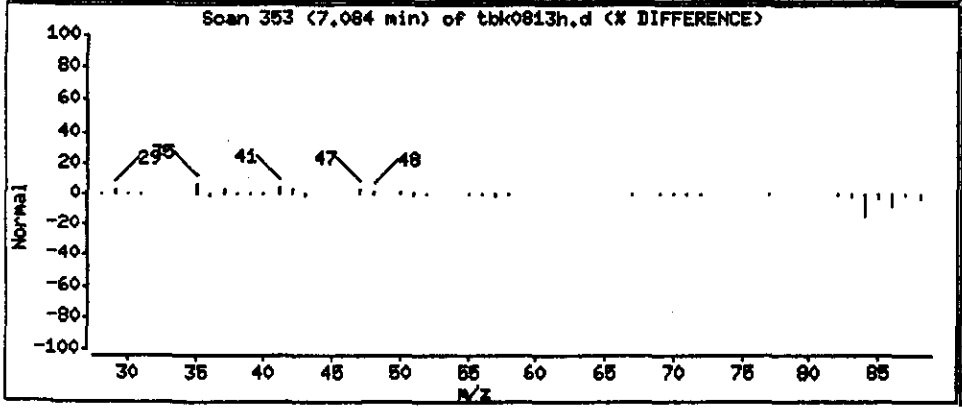












FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 477
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/31/03
Work Order: FWG1N1AC Date Extracted:08/13/03
Dilution factor: 1 Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18	
56-23-5	Carbon tetrachloride	9.5	
67-66-3	Chloroform	9.6	
75-09-2	Methylene chloride	9.8	
127-18-4	Tetrachloroethene	9.4	
79-01-6	Trichloroethene	9.9	
75-71-8	Dichlorodifluoromethane	9.5	
74-87-3	Chloromethane	9.5	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafl	9.6	
75-01-4	Vinyl chloride	9.6	
74-83-9	Bromomethane	9.5	
75-00-3	Chloroethane	9.5	
75-69-4	Trichlorofluoromethane	9.4	
75-35-4	1,1-Dichloroethene	9.7	
76-13-1	1,1,2-Trichloro-1,2,2-triflu	9.7	
75-34-3	1,1-Dichloroethane	9.6	
156-59-2	cis-1,2-Dichloroethene	9.7	
71-55-6	1,1,1-Trichloroethane	9.6	
107-06-2	1,2-Dichloroethane	9.5	
71-43-2	Benzene	10	
78-87-5	1,2-Dichloropropane	9.8	
10061-01-5	cis-1,3-Dichloropropene	9.7	
10061-02-6	trans-1,3-Dichloropropene	9.5	
108-88-3	Toluene	9.6	
79-00-5	1,1,2-Trichloroethane	9.7	
106-93-4	1,2-Dibromoethane (EDB)	9.4	
108-90-7	Chlorobenzene	9.5	
100-41-4	Ethylbenzene	9.4	

FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 477
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/31/03
Work Order: FWG1N1AC Date Extracted:08/13/03
Dilution factor: 1 Date Analyzed: 08/13/03

QC Batch: 3230477

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	18.4	
56-23-5	Carbon tetrachloride	9.51	
67-66-3	Chloroform	9.60	
75-09-2	Methylene chloride	9.82	
127-18-4	Tetrachloroethene	9.43	
79-01-6	Trichloroethene	9.9	
75-35-4	1,1-Dichloroethene	9.7	
71-43-2	Benzene	10	
108-88-3	Toluene	9.6	
108-90-7	Chlorobenzene	9.5	

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081303.b/trf0813.d
Lab Smp Id: FWG1N1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 13-AUG-2003 09:41
Operator : 0691 Inst ID: mt.i
Smp Info : FWG1N1AC,,3,,LCS
Misc Info : T081303,LA,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T081303.b/LA.m
Meth Date : 18-Aug-2003 16:08 wilesd Quant Type: ISTD
Cal Date : 13-AUG-2003 09:03 Cal File: tmd0813b.d
Als bottle: 16 QC Sample: METHOD SPIKE
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	9.731	9.735	(1.000)	381175	10.0000	
* 2 1,4-Difluorobenzene	114	11.857	11.860	(1.000)	1818439	10.0000	
* 3 Chlorobenzene-d5	117	16.429	16.424	(1.000)	1500508	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.738	10.732	(0.906)	406252	9.68173	9.682
$ 5 Toluene-d8	98	14.408	14.402	(0.877)	1530342	9.83664	9.837
$ 6 4-Bromofluorobenzene	95	18.017	18.020	(1.097)	998821	9.77542	9.775
7 Chlorodifluoromethane	51	4.118	4.121	(0.423)	1066860	9.46492	9.465
8 Dichlorodifluoromethane	85	4.196	4.191	(0.431)	985085	9.49464	9.495
9 Chloromethane	52	4.404	4.407	(0.453)	117956	9.54710	9.547
10 1,2-Dichlorotetrafluoroethane	135	4.421	4.416	(0.454)	507604	9.61101	9.611
11 Vinyl Chloride	62	4.612	4.607	(0.474)	366764	9.64552	9.646
12 Methanol	31	4.560	4.564	(0.469)	624190	37.2706	37.27
13 1,3-Butadiene	54	4.716	4.711	(0.485)	272838	9.41684	9.417
14 n-Butane	43	4.716	4.711	(0.485)	628001	9.40732	9.407
15 Bromomethane	94	5.089	5.093	(0.523)	340828	9.52395	9.524
16 Chloroethane	64	5.254	5.258	(0.540)	183771	9.47514	9.475
17 Trichlorofluoromethane	101	5.905	5.908	(0.607)	681782	9.43686	9.437
18 Acrolein	56	5.922	5.926	(0.609)	196831	19.1240	19.12
19 Acetonitrile	40	5.992	5.995	(0.616)	268773	18.0930	18.09
20 Acetone	58	6.061	6.065	(0.623)	229569	18.3836	18.38
21 Pentane	57	6.157	6.160	(0.633)	89305	8.08868	8.089

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
22 Ethyl Ether	31	6.347	6.351	(0.652)	1474247	18.9739	18.97
23 1,1-Dichloroethene	96	6.686	6.689	(0.687)	414050	9.73847	9.738
24 Acrylonitrile	53	6.807	6.802	(0.700)	750070	19.0887	19.09
25 1,1,2-Trichlorotrifluoroethane	101	6.885	6.889	(0.708)	846676	9.67994	9.680
26 Methylene Chloride	84	7.059	7.062	(0.725)	434527	9.81854	9.818
27 3-Chloropropene	39	7.085	7.088	(0.728)	509415	9.37140	9.371
28 Carbon Disulfide	76	7.241	7.236	(0.744)	1557262	9.74465	9.745
29 trans-1,2-Dichloroethene	96	7.926	7.930	(0.815)	429160	9.69168	9.692
30 Methyl-t-Butyl Ether	73	8.091	8.086	(0.831)	1832448	18.9834	18.98
31 1,1-Dichloroethane	63	8.378	8.373	(0.861)	991028	9.63571	9.636
32 Vinyl Acetate	43	8.482	8.485	(0.872)	2778650	19.1212	19.12
33 2-Butanone	72	8.968	8.971	(0.922)	375135	19.4831	19.48
34 Hexane	56	8.994	8.989	(0.924)	422427	9.76999	9.770
35 cis 1,2-Dichloroethene	96	9.393	9.396	(0.965)	479937	9.71545	9.715
36 Chloroform	83	9.740	9.743	(1.001)	859243	9.60394	9.604
37 1,1,1-Trichloroethane	97	10.781	10.784	(1.108)	746900	9.57806	9.578
38 1,2-Dichloroethane	62	10.885	10.880	(0.918)	680090	9.53452	9.534
39 Benzene	78	11.345	11.348	(0.957)	1210589	10.0049	10.00
40 1-Butanol	31	11.293	11.296	(0.952)	795299	18.5220	18.52
41 Cyclohexane	69	11.354	11.357	(0.958)	188771	9.88922	9.889
42 Carbon Tetrachloride	117	11.371	11.374	(1.169)	709391	9.51326	9.513
43 Heptane	43	12.429	12.433	(1.048)	1205194	9.54855	9.548
44 1,2-Dichloropropane	63	12.508	12.511	(1.055)	559656	9.80655	9.806
45 Trichloroethene	130	12.542	12.537	(1.058)	487041	9.94770	9.948
46 Dibromomethane	93	12.612	12.615	(1.064)	545600	9.75642	9.756
47 Bromodichloromethane	83	12.750	12.745	(1.075)	973677	9.66562	9.666
48 4-Methyl-2-pentanone	43	13.670	13.665	(1.153)	2479494	18.8185	18.82
49 cis-1,3-Dichloropropene	75	13.713	13.708	(1.157)	978263	9.67350	9.673
50 trans-1,3-Dichloropropene	75	14.373	14.376	(0.875)	670086	9.54788	9.548
51 Toluene	91	14.512	14.515	(0.883)	1342931	9.62254	9.622
52 1,1,2-Trichloroethane	97	14.572	14.576	(0.887)	520915	9.71136	9.711
53 2-Hexanone	58	14.963	14.958	(0.911)	1247280	18.9226	18.92
54 Octane	85	15.171	15.175	(0.923)	442447	9.52967	9.530
55 Dibromochloromethane	129	15.258	15.261	(0.929)	938358	9.52397	9.524
56 1,2-Dibromoethane	107	15.553	15.548	(0.947)	838186	9.38170	9.382
57 Tetrachloroethene	129	15.622	15.617	(0.951)	424972	9.43062	9.431
58 Chlorobenzene	112	16.473	16.476	(1.003)	1054983	9.48843	9.488
59 Ethylbenzene	91	16.759	16.754	(1.020)	1745273	9.42649	9.426
60 m-Xylene (For p-)	91	16.906	16.901	(1.029)	1333516	9.52237	9.522
61 Bromoform	173	17.349	17.352	(1.056)	652603	9.56186	9.562
62 Nonane	57	17.314	17.318	(1.054)	1139991	9.45674	9.457
63 Styrene	104	17.366	17.370	(1.057)	963884	9.65212	9.652
64 o-Xylene	91	17.427	17.430	(1.061)	1351732	9.58324	9.583
65 1,1,2,2-Tetrachloroethane	83	17.731	17.725	(1.079)	1256549	9.67772	9.678
66 1,2,3-Trichloropropane	110	17.887	17.890	(1.089)	251172	9.83864	9.839
67 Cumene	105	17.991	17.994	(1.095)	1794799	9.67534	9.675
68 n-Propylbenzene	91	18.494	18.498	(1.126)	2496919	9.65469	9.655

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	CONCENTRATIONS FINAL (ppb(v/v))
69 4-Ethyltoluene	105	18.633	18.636	(1.134)	1908272	9.96227	9.962
70 1,3,5-Trimethylbenzene	120	18.702	18.706	(1.138)	708620	9.78475	9.785
71 Alpha-Methylstyrene	118	18.919	18.914	(1.152)	743621	10.0168	10.02
72 Decane	57	18.971	18.966	(1.155)	1511116	9.54626	9.546
73 1,2,4-Trimethylbenzene	105	19.119	19.122	(1.164)	1473353	9.51575	9.516
74 1,3-Dichlorobenzene	146	19.379	19.374	(1.180)	1015720	9.67614	9.676
75 Benzyl Chloride	91	19.448	19.443	(1.184)	1364038	9.36574	9.366
76 1,4-Dichlorobenzene	146	19.457	19.461	(1.184)	970576	9.62371	9.624
77 1,2-Dichlorobenzene	146	19.804	19.808	(1.205)	974569	9.62163	9.622
78 Undecane	57	20.221	20.224	(1.231)	1565483	9.49200	9.492
79 Dodecane	57	21.314	21.309	(1.297)	1137594	9.40712	9.407
80 1,2,4-Trichlorobenzene	180	21.531	21.534	(1.311)	615310	8.74355	8.744
81 Napthalene	128	21.687	21.690	(1.320)	1716621	7.16823	7.168
82 Hexachlorobutadiene	225	21.912	21.916	(1.334)	518889	7.25918	7.259

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: trf0813.d
Lab Smp Id: FWG1N1AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,,,100ML

Calibration Date: 13-AUG-2003
Calibration Time: 09:03
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	363584	216332	510836	381175	4.84
2 1,4-Difluorobenze	1747786	1039933	2455639	1818439	4.04
3 Chlorobenzene-d5	1413217	840864	1985570	1500508	6.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.73	9.40	10.06	9.73	-0.04
2 1,4-Difluorobenze	11.86	11.53	12.19	11.86	-0.03
3 Chlorobenzene-d5	16.42	16.09	16.75	16.43	0.03

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

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: FWG1N1AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,,,100ML

Client SDG: H3H180000
Fraction: OTHER
Client Smp ID: INTRA-LAB CHECK
Operator: 0691
SampleType: METHOD SPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
7 Chlorodifluorometh	10.00	9.465	94.65	70-130
8 Dichlorodifluorome	10.00	9.495	94.95	70-130
9 Chloromethane	10.00	9.547	95.47	70-130
10 1,2-Dichlorotetraf	10.00	9.611	96.11	70-130
11 Vinyl Chloride	10.00	9.646	96.46	70-130
12 Methanol	40.00	37.27	93.18	60-140
13 1,3-Butadiene	10.00	9.417	94.17	70-130
14 n-Butane	10.00	9.407	94.07	70-130
15 Bromomethane	10.00	9.524	95.24	70-130
16 Chloroethane	10.00	9.475	94.75	70-130
17 Trichlorofluoromet	10.00	9.437	94.37	70-130
18 Acrolein	20.00	19.12	95.62	60-140
19 Acetonitrile	20.00	18.09	90.46	60-140
20 Acetone	20.00	18.38	91.92	60-140
21 Pentane	10.00	8.089	80.89	70-130
22 Ethyl Ether	20.00	18.97	94.87	60-140
23 1,1-Dichloroethene	10.00	9.738	97.38	70-130
24 Acrylonitrile	20.00	19.09	95.44	60-140
25 1,1,2-Trichlorotri	10.00	9.680	96.80	70-130
26 Methylene Chloride	10.00	9.818	98.19	70-130
27 3-Chloropropene	10.00	9.371	93.71	70-130
28 Carbon Disulfide	10.00	9.745	97.45	70-130
29 trans-1,2-Dichloro	10.00	9.692	96.92	70-130
30 Methyl-t-Butyl Eth	20.00	18.98	94.92	60-140
31 1,1-Dichloroethane	10.00	9.636	96.36	70-130
32 Vinyl Acetate	20.00	19.12	95.61	60-140
33 2-Butanone	20.00	19.48	97.42	60-140
34 Hexane	10.00	9.770	97.70	70-130
35 cis 1,2-Dichloroet	10.00	9.715	97.15	70-130
36 Chloroform	10.00	9.604	96.04	70-130
37 1,1,1-Trichloroeth	10.00	9.578	95.78	70-130
38 1,2-Dichloroethane	10.00	9.534	95.35	70-130
39 Benzene	10.00	10.00	100.05	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
40 1-Butanol	20.00	18.52	92.61	60-140
41 Cyclohexane	10.00	9.889	98.89	70-130
42 Carbon Tetrachlori	10.00	9.513	95.13	70-130
43 Heptane	10.00	9.548	95.49	70-130
44 1,2-Dichloropropan	10.00	9.806	98.07	70-130
45 Trichloroethene	10.00	9.948	99.48	70-130
46 Dibromomethane	10.00	9.756	97.56	70-130
47 Bromodichlorometha	10.00	9.666	96.66	70-130
48 4-Methyl-2-pentano	20.00	18.82	94.09	60-140
49 cis-1,3-Dichloropr	10.00	9.673	96.73	70-130
50 trans-1,3-Dichloro	10.00	9.548	95.48	70-130
51 Toluene	10.00	9.622	96.23	70-130
52 1,1,2-Trichloroeth	10.00	9.711	97.11	70-130
53 2-Hexanone	20.00	18.92	94.61	60-140
54 Octane	10.00	9.530	95.30	70-130
55 Dibromochlorometha	10.00	9.524	95.24	70-130
56 1,2-Dibromoethane	10.00	9.382	93.82	70-130
57 Tetrachloroethene	10.00	9.431	94.31	70-130
58 Chlorobenzene	10.00	9.488	94.88	70-130
59 Ethylbenzene	10.00	9.426	94.26	70-130
60 m-Xylene (For p-)	10.00	9.522	95.22	70-130
61 Bromoform	10.00	9.562	95.62	70-130
62 Nonane	10.00	9.457	94.57	70-130
63 Styrene	10.00	9.652	96.52	70-130
64 o-Xylene	10.00	9.583	95.83	70-130
65 1,1,2,2-Tetrachlor	10.00	9.678	96.78	70-130
66 1,2,3-Trichloropro	10.00	9.839	98.39	70-130
67 Cumene	10.00	9.675	96.75	70-130
68 n-Propylbenzene	10.00	9.655	96.55	70-130
69 4-Ethyltoluene	10.00	9.962	99.62	70-130
70 1,3,5-Trimethylben	10.00	9.785	97.85	70-130
71 Alpha-Methylstyren	10.00	10.02	100.17	70-130
72 Decane	10.00	9.546	95.46	70-130
73 1,2,4-Trimethylben	10.00	9.516	95.16	70-130
74 1,3-Dichlorobenzen	10.00	9.676	96.76	70-130
75 Benzyl Chloride	10.00	9.366	93.66	70-130
76 1,4-Dichlorobenzen	10.00	9.624	96.24	70-130
77 1,2-Dichlorobenzen	10.00	9.622	96.22	70-130
78 Undecane	10.00	9.492	94.92	70-130
79 Dodecane	10.00	9.407	94.07	70-130
80 1,2,4-Trichloroben	10.00	8.744	87.44	70-130
81 Napthalene	10.00	7.168	71.68	70-130
82 Hexachlorobutadien	10.00	7.259	72.59	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Report Date: 18-Aug-2003 16:16

STL Knoxville

RECOVERY REPORT

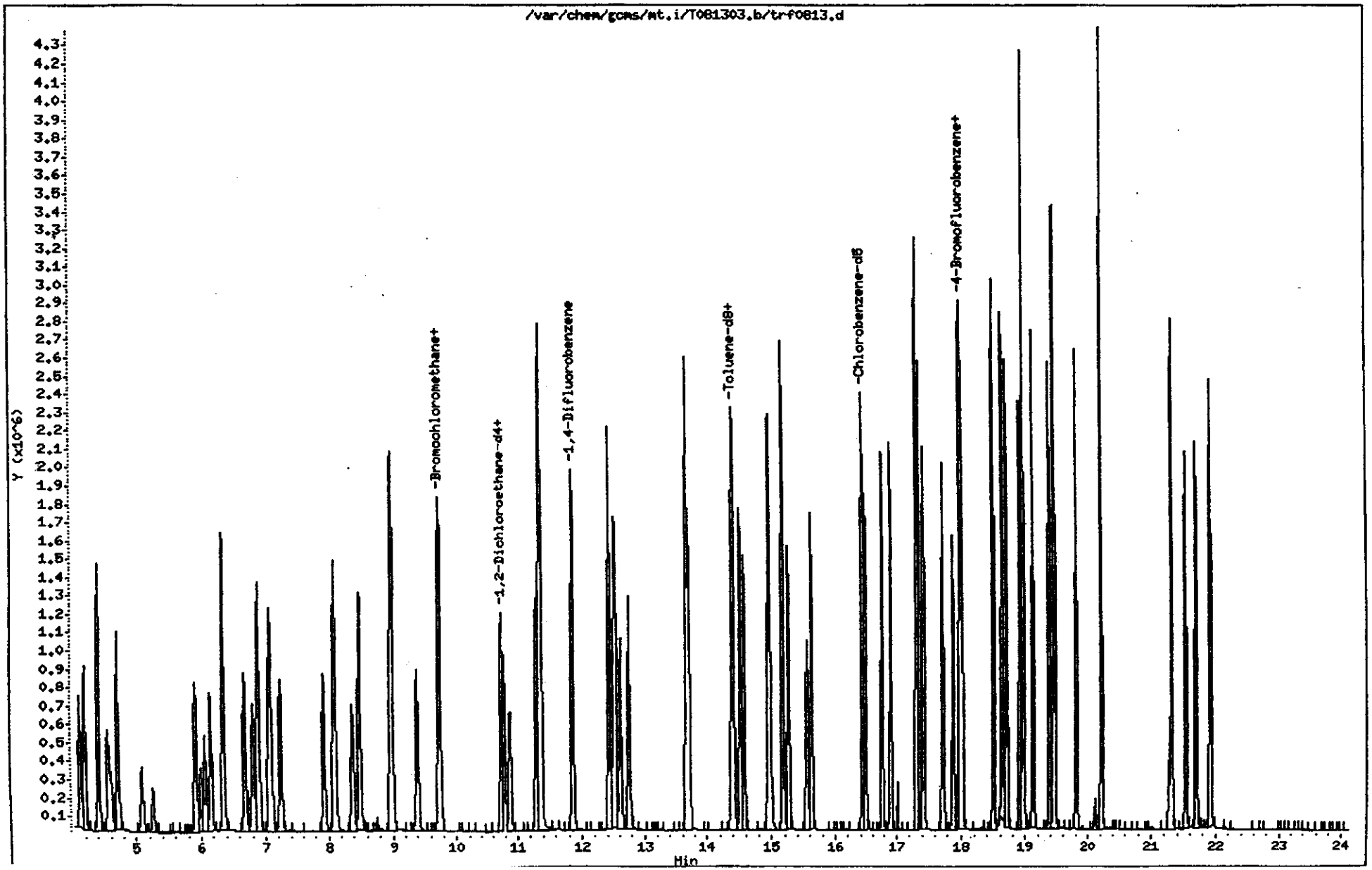
Client Name:
Sample Matrix: GAS
Lab Smp Id: FWG1N1AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T081303.b/LA.m
Misc Info: T081303,LA,,,100ML

Client SDG: H3H180000
Fraction: OTHER
Client Smp ID: INTRA-LAB CHECK
Operator: 0691
SampleType: METHOD SPIKE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.682	96.82	70-130
$ 5 Toluene-d8	10.00	9.837	98.37	70-130
$ 6 4-Bromofluorobenze	10.00	9.775	97.75	70-130

Data File: /var/chem/gcms/mt.i/T081303.b/trf0813.d
Date : 13-AUG-2003 09:41
Client ID: INTRA-LAB CHECK
Sample Info: FWG1N1AC,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

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



FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

Lab Name:Severn Trent Laboratories, Inc. SDG Number:W04085

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 533
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 07/31/03
Work Order: FWG6T1AA Date Extracted:08/14/03
Dilution factor: 1 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: INTRA-LAB BLANK

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	0.20	U

Data File: /var/chem/gcms/mt.i/T081403i.b/tbk0814c.d
Report Date: 18-Aug-2003 17:28

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/tbk0814c.d
Lab Smp Id: FWG6T1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 14-AUG-2003 21:40
Operator : 0691 Inst ID: mt.i
Smp Info : FWG6T1AA,,3,,BLANK
Misc Info : T081403i,LA,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 17:07 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 15 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: e081403i.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	9.740	9.738	(1.000)	381884	10.0000	
* 2 1,4-Difluorobenzene	114	11.866	11.864	(1.000)	1751811	10.0000	
* 3 Chlorobenzene-d5	117	16.430	16.427	(1.000)	1425486	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.738	10.745	(0.905)	398511	10.3953	10.40
$ 5 Toluene-d8	98	14.408	14.406	(0.877)	1494461	10.2787	10.28
$ 6 4-Bromofluorobenzene	95	18.017	18.024	(1.097)	1016569	11.1157	11.12

Data File: /var/chem/gcms/mt.i/T081403i.b/tbk0814c.d
Report Date: 18-Aug-2003 17:28

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: tbk0814c.d
Lab Smp Id: FWG6T1AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,,,500ML

Calibration Date: 14-AUG-2003
Calibration Time: 10:35
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	338579	201455	475703	381884	12.79
2 1,4-Difluorobenze	1568732	933396	2204068	1751811	11.67
3 Chlorobenzene-d5	1278525	760722	1796328	1425486	11.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.74	9.41	10.07	9.74	0.02
2 1,4-Difluorobenze	11.86	11.53	12.19	11.87	0.02
3 Chlorobenzene-d5	16.43	16.10	16.76	16.43	0.01

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

Data File: /var/chem/gcms/mt.i/T081403i.b/tbk0814c.d
Report Date: 18-Aug-2003 17:28

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: FWG6T1AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: e081403i.sub
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403i,LA,,,500ML

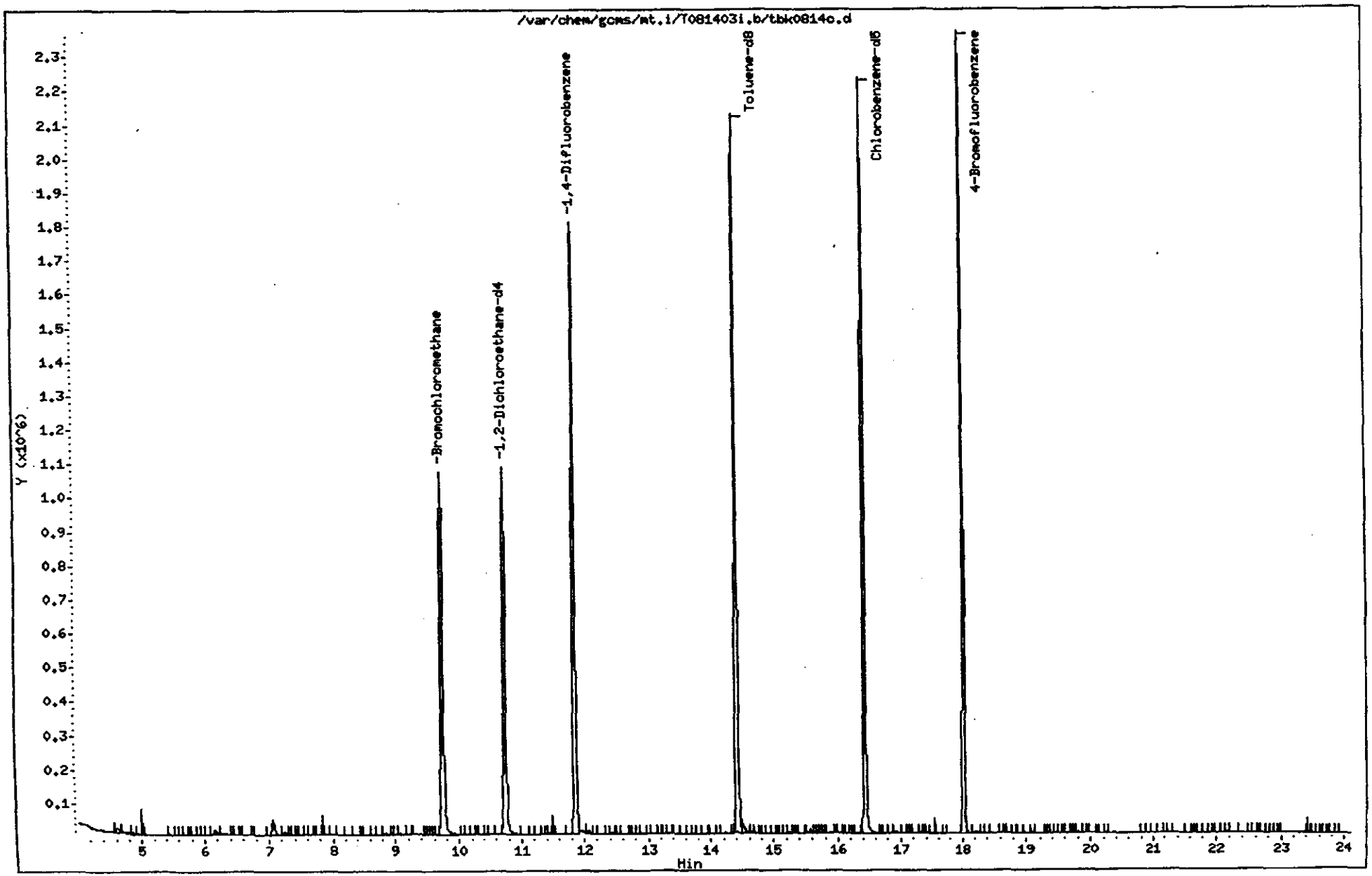
Client SDG: H3H180000
Fraction: OTHER
Client Smp ID: INTRA-LAB BLANK
Operator: 0691
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.40	103.95	70-130
$ 5 Toluene-d8	10.00	10.28	102.79	70-130
$ 6 4-Bromofluorobenze	10.00	11.12	111.16	70-130

Data File: /var/chem/gcms/mt.i/T0814031.b/tbk0814c.d
Date : 14-AUG-2003 21:40
Client ID: INTRA-LAB BLANK
Sample Info: FWG6T1AA,,3,,BLANK
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3H180000 533
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 07/31/03
Work Order: FWG6T1AC Date Extracted:08/14/03
Dilution factor: 1 Date Analyzed: 08/14/03

QC Batch: 3230533

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
56-23-5	Carbon tetrachloride	8.71	
79-01-6	Trichloroethene	8.2	

Data File: /var/chem/gcms/mt.i/T081403i.b/trf0814b.d
Report Date: 18-Aug-2003 17:24

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T081403i.b/trf0814b.d
Lab Smp Id: FWG6T1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 14-AUG-2003 20:21
Operator : 0691 Inst ID: mt.i
Smp Info : FWG6T1AC,,3,,LCS
Misc Info : T081403,LA,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T081403i.b/LA.m
Meth Date : 18-Aug-2003 17:07 wilesd Quant Type: ISTD
Cal Date : 14-AUG-2003 10:35 Cal File: tic30814.d
Als bottle: 16 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

08/18/03

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	9.741	9.738	(1.000)	371491	10.0000	
* 2 1,4-Difluorobenzene	114	11.866	11.864	(1.000)	1775096	10.0000	
* 3 Chlorobenzene-d5	117	16.430	16.427	(1.000)	1477026	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.747	10.745	(0.906)	395559	10.1830	10.18
$ 5 Toluene-d8	98	14.408	14.406	(0.877)	1496237	9.93183	9.932
$ 6 4-Bromofluorobenzene	95	18.026	18.024	(1.097)	996456	10.5156	10.52
11 Vinyl Chloride	62	4.613	4.611	(0.474)	387580	8.71091	8.711
35 cis 1,2-Dichloroethene	96	9.402	9.400	(0.965)	469359	8.41185	8.412
42 Carbon Tetrachloride	117	11.380	11.378	(1.168)	692343	8.70756	8.708
45 Trichloroethene	130	12.543	12.541	(1.057)	481826	8.24483	8.245

Data File: /var/chem/gcms/mt.i/T081403i.b/trf0814b.d
Report Date: 18-Aug-2003 17:24

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: trf0814b.d
Lab Smp Id: FWG6T1AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403,LA,,,100ML

Calibration Date: 14-AUG-2003
Calibration Time: 10:35
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	338579	201455	475703	371491	9.72
2 1,4-Difluorobenze	1568732	933396	2204068	1775096	13.15
3 Chlorobenzene-d5	1278525	760722	1796328	1477026	15.53

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.74	9.41	10.07	9.74	0.02
2 1,4-Difluorobenze	11.86	11.53	12.19	11.87	0.02
3 Chlorobenzene-d5	16.43	16.10	16.76	16.43	0.01

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

Data File: /var/chem/gcms/mt.i/T081403i.b/trf0814b.d
Report Date: 18-Aug-2003 17:24

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: FWG6T1AC
Level: LOW
Data Type: MS DATA
SpikeList File: e081403i.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T081403i.b/LA.m
Misc Info: T081403,LA,,,100ML

Client SDG: H3H180000
Fraction: OTHER
Client Smp ID: INTRA-LAB CHECK
Operator: 0691
SampleType: METHOD SPIKE
Quant Type: ISTD

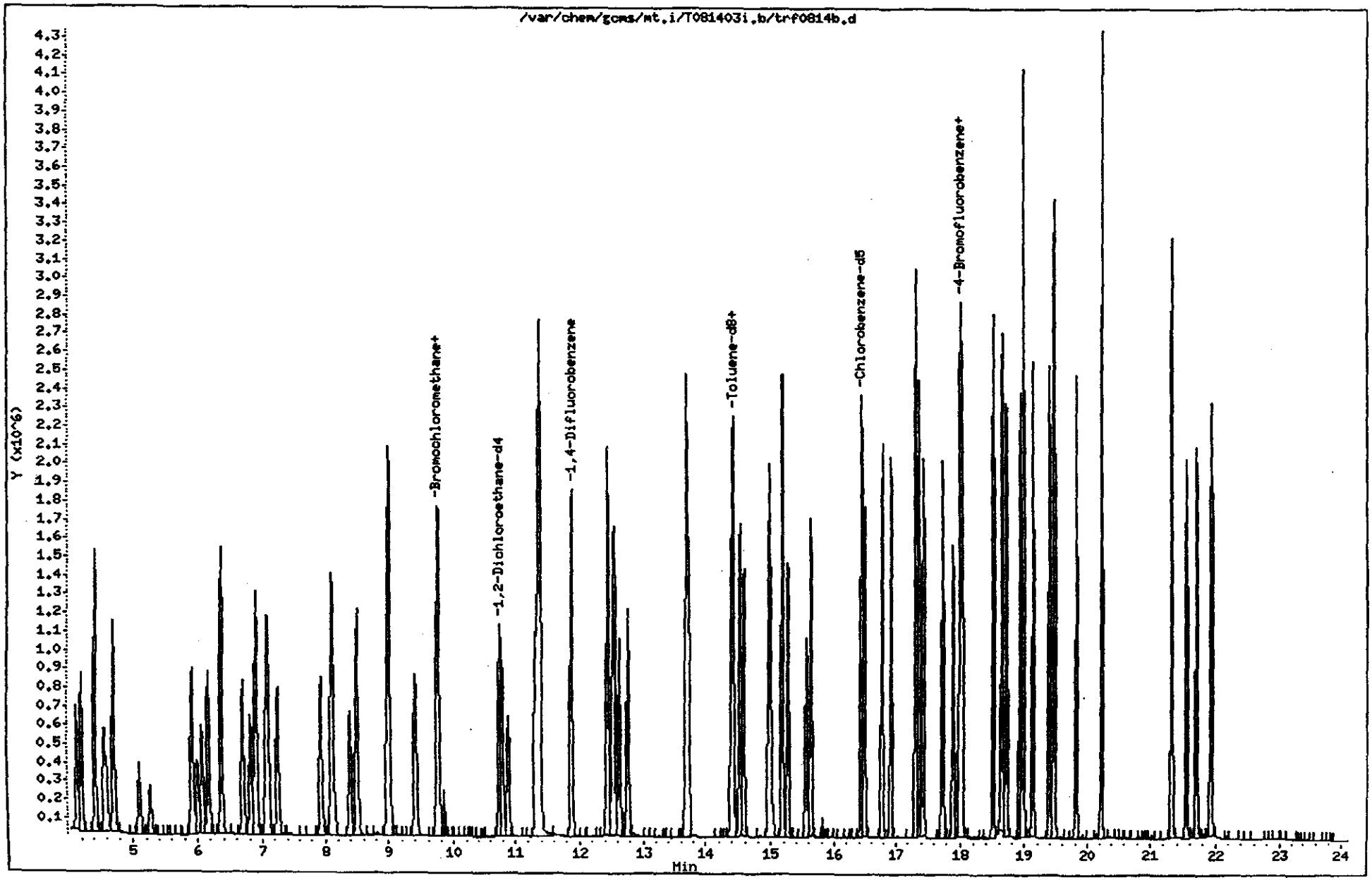
SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
11 Vinyl Chloride	10.00	8.711	87.11	70-130
35 cis 1,2-Dichloroet	10.00	8.412	84.12	70-130
42 Carbon Tetrachlori	10.00	8.708	87.08	70-130
45 Trichloroethene	10.00	8.245	82.45	70-130

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.18	101.83	70-130
$ 5 Toluene-d8	10.00	9.932	99.32	70-130
$ 6 4-Bromofluorobenze	10.00	10.52	105.16	70-130

Data File: /var/chem/gcms/mt.i/T081403i.b/trf0814b.d
Date : 14-AUG-2003 20:21
Client ID: INTRA-LAB CHECK
Sample Info: FWG6T1AC,,3,,LCS
Volume Injected (uL): 500.0
Column phase: DB-5

Instrument: mt.i

Operator: 0691
Column diameter: 0.32



Miscellaneous Data

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

LOT/Project # H3G240298 188

Instrument:	MT
Scanned File:	T080203c
	T081303
	T081403c

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. Have the can number & lab ID been verified between the analysis log & sample prep log?		✓			✓
4. Were samples received in cans?		✓		☐ [Tedlar1] Samples rec'd on (date) in Tedlar bags & ana by TO-14 (TO-15) within 72 hours from sampling. ☐ [Tedlar2] Samples rec'd on (date) in Tedlar bags & transferred into Summa canisters within 72 hours*.	✓
5. Sample analyses done within analytical holding time (HT)? *If no, list samples:* _____		✓		☐ [ht2] Client requested analysis after HT expired	✓
6. 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.	✓
7. Were positive hits evaluated using qualitative identification criteria and technical judgement?		✓			✓
8. Are positive results within calibration range?		✓			✓
9. 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.	✓
10. 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	
11. Have alternate hits/manual integrations been verified as correct?	✓				
12. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, analysis dates correct.)		✓			✓
13. 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?		✓			

Analyst:	Date: 8/19/03	2nd Level Reviewer:	Date: 08/21/03
Comments:		Comments:	

* Such action must be taken in consultation with client.

MT 8/13

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/19/03
Time: 15:37:12

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: 3230477 *
****

PREP DATE: 8/13/03
COMP DATE: 8/13/03

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	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	9/04/03	H3G240298-001 FT19D-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	9/04/03	H3G240298-001 FT19D-1-ACX		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	9/04/03	H3G240298-002 FT19F-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/15/03	H3G310228-001 FVBQG-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/15/03	H3G310228-002 FVBQJ-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/22/03	H3H070131-001 FVR21-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/22/03	H3H070131-002 FVR26-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/19/03
Time: 15:37:12

****
* QC BATCH: 3230477 *
****

PREP DATE: 8/13/03
COMP DATE: 8/13/03

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	8/22/03	H3H070131-003 FVR29-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/22/03	H3H070131-004 FVR3A-1-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	8/20/03	H3H080146-001 FVW1N-1-AA	R	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	0/00/00	H3H180000-477 FWG1N-1-AAB		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	0/00/00	H3H180000-477 FWG1N-1-ACC		88	U6	AIR	100mL 100.00mL	NA	NA	NA		.0		.0	CX-1054 CX-929
COMMENTS:															

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

NUMBER OF WORK ORDERS IN BATCH: 12

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MT 8/14 2

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 8/18/03
Time: 15:16:18

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: 3230533 *
****

PREP DATE: 8/14/03
COMP DATE: 8/14/03

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 ADJT	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00 COMMENTS:	9/04/03	H3G240298-002 FT19F-2-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	8/15/03	H3G310228-001 FVEQG-2-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	8/22/03	H3H070131-001 FVR21-2-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	8/22/03	H3H070131-002 FVR26-2-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	8/22/03	H3H070131-004 FVR3A-2-AA	D	88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	0/00/00	H3H180000-533 FWG6T-1-AAB		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
0/00/00 COMMENTS:	0/00/00	H3H180000-533 FWG6T-1-ACC		88	U6	AIR	100mL 100.00mL	NA	NA	NA		.0		.0	CX-1054 CX-929

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)

NUMBER OF WORK ORDERS IN BATCH: 7

STL-Knoxville Initial Canister Dilution

Analyst: DDF

Barometer: 30.22 Inches Hg at sea level
737.488 mm Hg at Knoxville

Date: 7/25/03

Lot #	W/O #	P init inches	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor	
H3G240298	FT1 9D	- 1.1	709.5	12.1	1363.2	1.92	(9D)
	FT1 9F	- 0.3	729.9	11.9	1352.9	1.85	(9F)

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 In-Can Dilution

Analyst: DDF

Barometer: 30.37 inches Hg at sea level
741.3 mm Hg at Knoxville

Date: 8/14/03

Lot #	Work Order #	P init inches Hg	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor (In-Can)	Dilution Factor (Total)	
H3G240298	FT1 9D	0.0	741.3					
	FT1 9F	0.0	741.3	40.7	2846.1	3.8393	*7.12*	(9F) (*1.8536)

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 Second In-Can Dilution

Analyst: DDF

Barometer: 30.37 inches Hg at sea level
741.3 mm Hg at Knoxville

Date: 8/14/03

Lot #	Work Order #	P init inches Hg	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor (In-Can)	Dilution Factor (Total)	
H3G240298	FT1 9D	0.0	741.3					
	FT1 9F	0.0	741.3	40.6	2840.9	3.8323	**27.27**	(9F) (*7.1166)

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
TO-14/TO-15 Canister Dilution Log

Initial Dilution									In-Can Dilution				Serial Dilution					
Analyst	Date	Tedlar Bag Time	Pbarr (in)	Lot #	Work Order #	Can #	Initial Press Pi (in)	Final Press. Pf (psig)	Analyst	Date	Pbarr (in)	Final Press. Pf (psig)	Analyst	Date	Pbarr (in)	To Can #	Volume	Final Press. Pf (psig)
DDF	7-25-03	NA	30.22	H3G240298	FT19D	04737	-1.1	12.1										
					9F	11367	-0.3	11.9	DDF	8-14-03	30.37	40.7	DDF	8-14-03	30.37	—	—	40.6
		NA	30.22	H3G240285	FT165	2987	-13.3	11.4										
					7G	93044	-0.6	11.5										
					7H	1819	-8.7	11.4										
		NA	30.22	H3G240306	FT2DD	3369	-1.3	11.5	DDF	8-6-03	29.94	40.0						
					DF	2955	-1.7	12.1										
					DG	1770	-1.5	15.1										
		NA	30.22	H3G240307	FT2DQ	11195	-1.1	11.5	DDF	8-6-03	29.94	39.9	DDF	8-6-03	29.94	—	—	41.3
		NA	NA	H3G250128	FT3EO	93232	12 psi	NA										
					E1	93187	12											
					E2	93063	14											
					E3	93219	17											
					E5	0073	12											
		NA	30.22	H3G250150	FT3MD	0091	-1.3	11.7										
					MF	2964	-1.4	12.2										
					ML	1776	-1.2	11.2										
					MM	2959	-0.3	10.8										
		NA	30.22	H3G250151	FT3M1	12816	-0.8	11.8										
					M2	92041	-0.5	12.2										
					M3	3389	0	11.7										

Updated: **7:53 AM EDT on July 25, 2003**
Observed at **Knoxville, Tennessee**

Temperature	**65 °F / 18 °C**
Humidity	**90%**
Dew Point	**62 °F / 17 °C**
Wind	**NE at 7 mph / 11.3 km/h**
Wind Gust	-
Pressure	**30.22 in**

Updated: **6:53 AM EDT on August 14, 2003**
Observed at **Knoxville, Tennessee**

Temperature	**72 °F / 22 °C**
Humidity	**94%**
Dew Point	**70 °F / 21 °C**
Wind	**Calm**
Wind Gust	-
Pressure	**30.37** in

Sample Receipt Documentation

H3624D298

FH-Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-006	Page 1 of 1

Collector M. Baechler/T. Johansen	Company Contact J. V. Borghese	Telephone No. 373-3804	Project Coordinator TRENT, SJ
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	Sampling Location 200-ZP-1		SAF No. F02-002
Ice Chest No.	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.

Price Code 9N

Data Turnaround 45 Days

Air Quality ☐

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

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

Sample No.	Matrix *	Sample Date	Sample Time										
B17988	GASEOUS	7/23/03	0633	X							AS-3		
B17989	GASEOUS	7/23/03	0637	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	7/23/03 1050	SL Quintana	A. Rhineheart 7/23/03 10:50
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Original Signed A. Rhineheart 7/23/03	15:00	Bryan Dawson	7-24-03 09:15
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

Custody seals intact
received at ambient temp
BKD 7-24-03
1 box FEDX #
7914 4804 4557

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
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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

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STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: BECHTEL HANFORD PROJECT: _____ Lot No.: H3G290298

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

1. Sample Receipt:	YES	NO	NA
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)			✓
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		✓
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?	✓		✓
h. Were samples received in the appropriate containers?	✓		✓
i. Did you check for residual chlorine, if necessary?	✓		✓
j. Were samples received within 1/2 of the holding time?	✓		✓
k. Were samples screened for radioactivity?	✓		
l. Were client's sample documents (RFA/COC) received?	✓		
m. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
n. Are test/parameters listed for each sample?	✓		
o. Is the matrix of the samples noted?	✓		
p. Is the date/time of sample collection noted?	✓		
q. Is the client and project name/No. identified?	✓		
r. Was the sampler identified on the RFA/COC?	✓		

SAMPLE RECEIVING ASSOCIATE: [signature] DATE: 7-24-03

TO BE COMPLETED BY PROJECT MANAGER :

1. Project manager "Sample Greet":	YES	NO	NA
a. Quote number to be logged-in under 21911			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : [signature] DATE: 7/28/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action

☐ Client informed on _____ by _____. Person contacted: _____.
☐ Noted actions in comments section above.
☐ No action necessary; process as is.
Project Manager: _____ Date: _____

Original Chain of Custody Documentation

H36240298

FH-Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-006	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										
B17988	GASEOUS	7/23/03	0633	X							AS-3		
B17989	GASEOUS	7/23/03	0637	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. G. Pulchlis	7/23/03 1050	SL Gunderson / A. Rhineheart	7/23/03 10:50
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Gunderson / A. Rhineheart	12:00 7/23/03	Burgin Dawson	7/24/03 09:15
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

Custody seals intact
received at ambient temp
POD 7-24-03
1 BOX FEDX #
7914 4804 4557

Matrix *

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

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

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