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Total Number of Pages **146**

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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

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

December 18, 2003

Attention: Steve Trent

RECEIVED DEC 2003

SAF Number	:	F02-002
Date Samples Received	:	November 6, 2003
Number of Samples	:	Two (2)
Sample Type	:	Air
Data Deliverable	:	45 Day Data Package

I. Introduction

Two (2) air samples were received on November 6, 2003 by the STL Knoxville Laboratory for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Fluor Hanford, Inc. (FHI) specific ID:

STLKL ID#	FHI ID#	MATRIX	DATE OF RECEIPT
F4CF51AA	B17XM3	Air	11/06/03
F4CF61AA	B17XM4	Air	11/06/03

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.

Reviewed and approved:

Jamie McKinney
Project Manager

Sample Data Summary

FLUOR HANFORD IC

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

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF51AA Date Extracted:11/28/03
Dilution factor: 1.69 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	8.4	U
56-23-5	**Carbon tetrachloride**	**0.91**	
67-66-3	Chloroform	0.34	U
75-09-2	Methylene chloride	0.84	U
127-18-4	Tetrachloroethene	0.34	U
79-01-6	Trichloroethene	0.34	U
78-93-3	2-Butanone (MEK)	0.84	U

FLUOR HANFORD IC

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

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF61AA Date Extracted:11/28/03
Dilution factor: 149.55 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	750	U
56-23-5	**Carbon tetrachloride**	**2900**	
67-66-3	**Chloroform**	**39**	
75-09-2	Methylene chloride	75	U
127-18-4	Tetrachloroethene	30	U
79-01-6	Trichloroethene	30	U
78-93-3	2-Butanone (MEK)	75	U

FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3L020000 553
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/04/03
Work Order: F5V9T1AA Date Extracted:11/28/03
Dilution factor: 1 Date Analyzed: 11/29/03

QC Batch: 3336553

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: H3L020000 553
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/04/03
Work Order: F5V9T1AC Date Extracted: 11/28/03
Dilution factor: 1 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
79-01-6	Trichloroethene	9.5	
75-35-4	1,1-Dichloroethene	10	
71-43-2	Benzene	9.1	
108-88-3	Toluene	9.1	
108-90-7	Chlorobenzene	9.4	

FLUOR HANFORD IC

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

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF51AC Date Extracted:11/28/03
Dilution factor: 1.69 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM3 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	8.4	U
56-23-5	Carbon tetrachloride	0.93	
67-66-3	Chloroform	0.34	U
75-09-2	Methylene chloride	0.84	U
127-18-4	Tetrachloroethene	0.34	U
79-01-6	Trichloroethene	0.34	U
78-93-3	2-Butanone (MEK)	0.84	U

EPA-19 TO-14 SURROGATE RECOVERY

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

Lab Code: STLKNX SDG No:

Lot #: H3K070107

Extraction: XXS88JY01

	CLIENT ID.	SRG01	SRG02	SRG03	TOT OUT
01	B17XM3	105	103	113	00
02	B17XM4	109	107	115	00
03	METHOD BLK. F5V9T1AA	104	104	111	00
04	LCS F5V9T1AC	96	97	95	00
05	B17XM3 DUP	107	105	117	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:

Lot #: H3L020000 WO #: F5V9T1AC
BATCH: 3336553

COMPOUND	SPIKE ADDED (ppb(v)	SAMPLE CONCENT. (ppb(v)	% REC	QC LIMITS REC	QUAL
1,1-Dichloroethene	10	10	101	70- 130	
Benzene	10	9.1	91	70- 130	
Trichloroethene	10	9.5	95	70- 130	
Toluene	10	9.1	91	70- 130	
Chlorobenzene	10	9.4	94	70- 130	

NOTES(S):

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS:

FORM III

BLANK WORKORDER NO.

F5V9T1AA

EPA-19 TO-14 METHOD BLANK SUMMARY

Lab Name: Severn Trent Laboratories, Inc.

Lab Code: STLKNX

SDG Number:

Lab File ID: tbk1128c.

Lot Number: H3K070107

Date Analyzed: 11/29/03

Time Analyzed: 05:37

Matrix: AIR

Date Extracted:11/28/03

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	B17XM3	F4CF51AA	f4cf5.d	11/29/03	06:18
02	B17XM3 DUP	F4CF51AC X	f4cf5d.d	11/29/03	07:00
03	B17XM4	F4CF61AA	f4cf6b.d	11/29/03	19:09
04	CHECK SAMPLE	F5V9T1AC C	trf1128b.	11/29/03	03:31
05					
06					
07					
08					
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29					
30					

COMMENTS:

FORM IV

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: T112603I

Lab File ID: TBF1126 BFB Injection Date: 11/26/03

Instrument ID: MT BFB Injection Time: 1422

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	25.7
75	30.0 - 60.0% of mass 95	49.1
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 100.0% of mass 95	55.8
175	5.0 - 9.0% of mass 174	4.1 (7.3)1
176	95.0 - 101.0% of mass 174	53.9 (96.7)1
177	5.0 - 9.0% of mass 176	3.6 (6.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	0.5PPBV	IC7	TIC7K26	11/26/03	1928
02	0.2PPBV	IC6	TIC6K26	11/26/03	2010
03	30PPBV	IC5	TIC5K26B	11/26/03	2051
04	15PPBV	IC4	TIC4K26B	11/26/03	2134
05	10PPBV	IC3	TIC3K26B	11/26/03	2215
06	5PPBV	IC2	TIC2K26B	11/26/03	2257
07	1PPBV	IC1	TIC1K26C	11/26/03	2339
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 5
OTHER ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: H3K070107

Lab File ID: TBF1128C BFB Injection Date: 11/29/03

Instrument ID: MT BFB Injection Time: 0044

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	24.9
75	30.0 - 60.0% of mass 95	48.2
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	57.8
175	5.0 - 9.0% of mass 174	4.2 (7.3)1
176	95.0 - 101.0% of mass 174	56.0 (96.9)1
177	5.0 - 9.0% of mass 176	3.6 (6.5)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	TMD1128B	11/29/03	0208
02	LCS	F5V9T1AC	TRF1128B	11/29/03	0331
03	BLANK	F5V9T1AA	TBK1128C	11/29/03	0537
04	B17XM3	F4CF51AA	F4CF5	11/29/03	0618
05	B17XM3 DUP	F4CF51AC	F4CF5D	11/29/03	0700
06	B17XM4	F4CF61AA	F4CF6B	11/29/03	1909
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 8
OTHER INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Contract:

Lab Code: Case No.: SAS No.: SDG No.: H3K070107

Lab File ID (Standard): TMD1128B Date Analyzed: 11/29/03

Instrument ID: MT Time Analyzed: 0208

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	395409	9.83	1975448	11.94	1812817	16.52
	UPPER LIMIT	555550	10.16	2775504	12.27	2547008	16.85
	LOWER LIMIT	235268	9.50	1175392	11.61	1078626	16.19
	CLIENT SAMPLE NO.						
01	LCS	431440	9.84	2130793	11.94	1918740	16.52
02	BLANK	363658	9.82	1772286	11.94	1614197	16.52
03	B17XM3	346528	9.83	1737771	11.94	1583882	16.52
04	B17XM3 DUP	310529	9.82	1589734	11.94	1443216	16.52
05	B17XM4	361369	9.82	1778578	11.94	1564405	16.52
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

#3K070107

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-07	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. N/A	Field Logbook No. HNF-N-295	COA 119325ES10	Method of Shipment Federal Express		
Shipped To Severn Trent Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

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

Sample No.	Matrix *	Sample Date	Sample Time										
B17XM3	GASEOUS	11/5/03	0909	X								AS-	3
B17XM4	GASEOUS	11/5/03	0912	X								AS-	2

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: M.A. Baechler M.A. Baechler	1300 11/5/03	Received By/Stored In: A. Rhinehart A. Rhinehart	13:00 11/5/03
Relinquished By/Removed From: A. Rhinehart	14:30 11/5/03	Received By/Stored In: Anthony D. Zeller STL	11/6/03 09:10
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 Temp. Ambient
1 Box / FEDEX
T# 7910 5394 4700
ADF 11-06-03

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

A-6003-618(03/03)

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: STL-RICHLAND PROJECT: _____ Lot No.: H3K070107

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. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Andrew D. Flores DATE: 11-06-03

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 : _____ DATE: 11/10/03

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:

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF51AA Date Extracted:11/28/03
Dilution factor: 1.69 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	8.4	U
56-23-5	**Carbon tetrachloride**	**0.91**	
67-66-3	Chloroform	0.34	U
75-09-2	Methylene chloride	0.84	U
127-18-4	Tetrachloroethene	0.34	U
79-01-6	Trichloroethene	0.34	U
78-93-3	2-Butanone (MEK)	0.84	U

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/f4cf5.d
Lab Smp Id: F4CF51AA Client Smp ID: B17XM3
Inj Date : 29-NOV-2003 06:18
Operator : 0691 Inst ID: mt.i
Smp Info : F4CF51AA,1.69,0,,
Misc Info : T112803,LA,,,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 02-Dec-2003 20:57 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 1
Dil Factor: 1.69000
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	9.829	9.828	(1.000)	346528	10.0000	
* 2 1,4-Difluorobenzene	114	11.936	11.944	(1.000)	1737771	10.0000	
* 3 Chlorobenzene-d5	117	16.515	16.523	(1.000)	1583882	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.826	10.826	(0.907)	331372	10.5216	10.52
$ 5 Toluene-d8	98	14.486	14.485	(0.877)	1504235	10.2775	10.28
$ 6 4-Bromofluorobenzene	95	18.111	18.119	(1.097)	1037031	11.2905	11.29
20 Acetone	58	6.151	6.151	(0.626)	48382	2.82273	4.770
26 Methylene Chloride	84	7.157	7.166	(0.728)	14638	0.36654	0.6194
33 2-Butanone	72	9.057	9.039	(0.921)	8161	0.45898	0.7757
36 Chloroform	83	9.829	9.846	(1.000)	3629	0.04239	0.07163
42 Carbon Tetrachloride	117	11.459	11.459	(1.166)	40977	0.53974	0.9122
45 Trichloroethene	130	12.612	12.621	(1.057)	4494	0.07293	0.1232

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: f4cf5.d
Lab Smp Id: F4CF51AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML

Calibration Date: 29-NOV-2003
Calibration Time: 02:08
Client Smp ID: B17XM3
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	395409	235268	555550	346528	-12.36
2 1,4-Difluorobenze	1975448	1175392	2775504	1737771	-12.03
3 Chlorobenzene-d5	1812817	1078626	2547008	1583882	-12.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.83	0.00
2 1,4-Difluorobenze	11.94	11.61	12.27	11.94	-0.07
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112803.b/f4cf5.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

RECOVERY REPORT

Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: F4CF51AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML

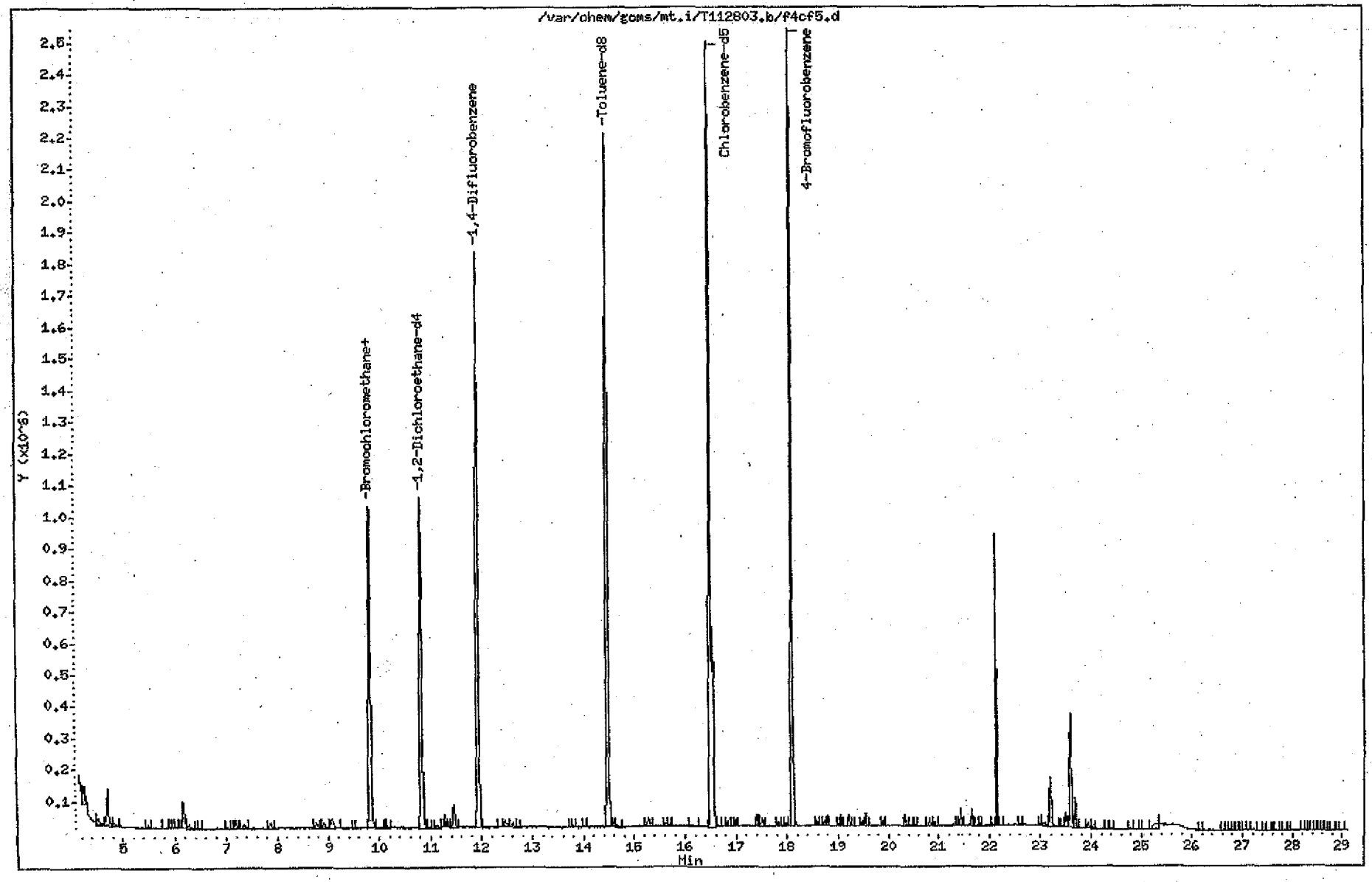
Client SDG: H3K070107
Fraction: OTHER
Client Smp ID: B17XM3
Operator: 0691
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.52	105.22	70-130
$ 5 Toluene-d8	10.00	10.28	102.78	70-130
$ 6 4-Bromofluorobenze	10.00	11.29	112.90	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d
Date : 29-NOV-2003 06:18
Client ID: B17XM3
Sample Info: F4CF51AA,1.69,0,,
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/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

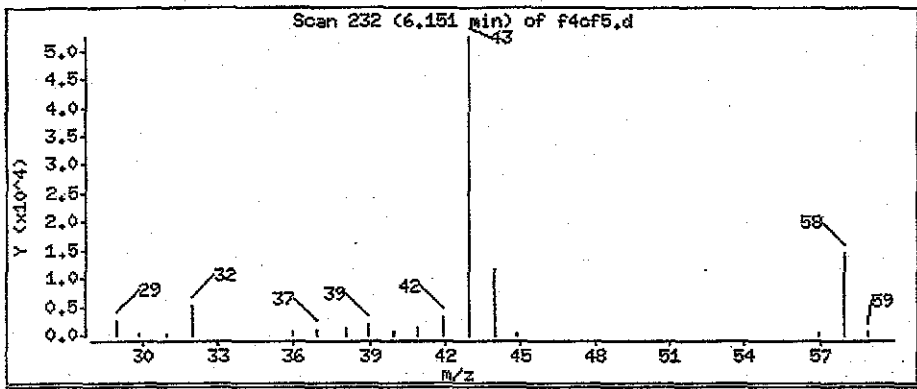
Client ID: B17XM3 Instrument: mt.i

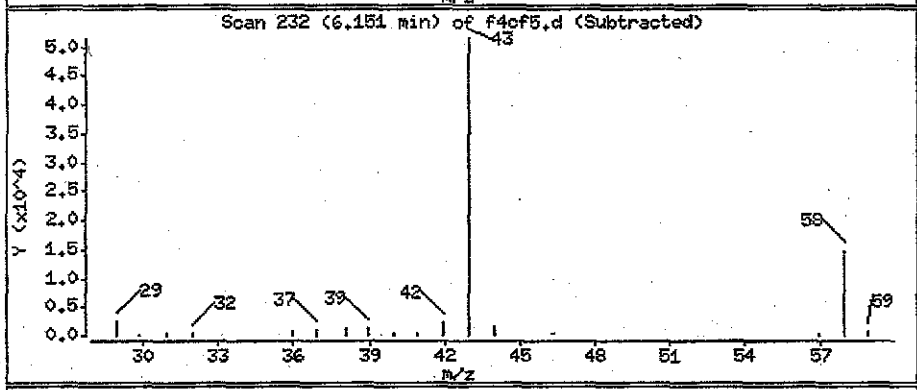
Sample Info: F4CF51AA,1.69,0,,

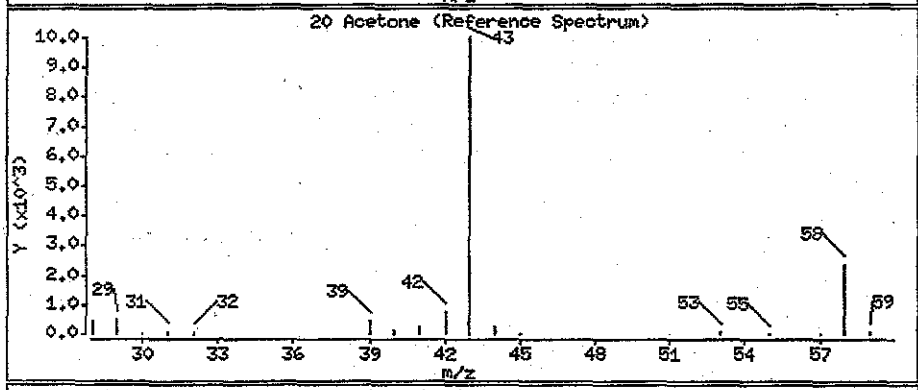
Volume Injected (uL): 500.0 Operator: 0691

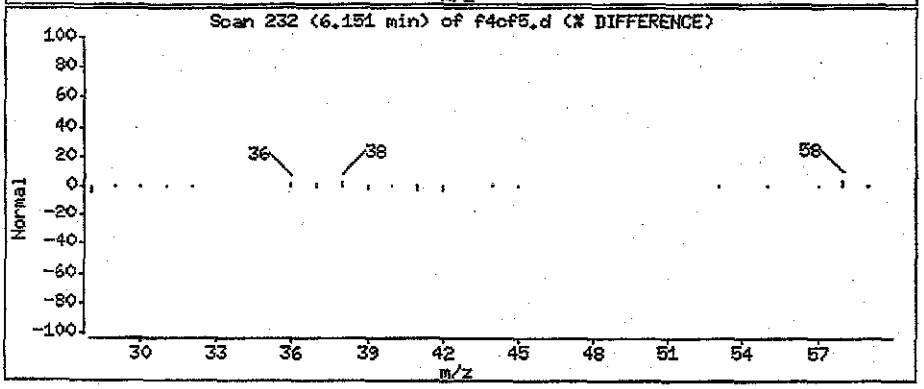
Column phase: DB-5 Column diameter: 0.32

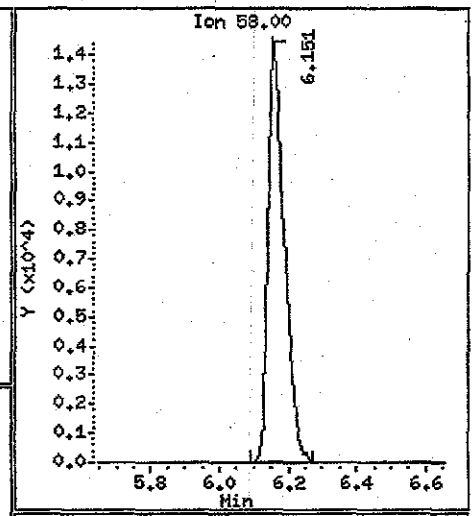
20 Acetone Concentration: 4.770 ppb(v/v)

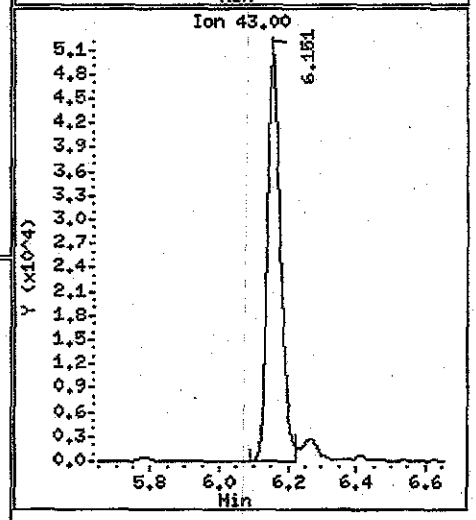












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

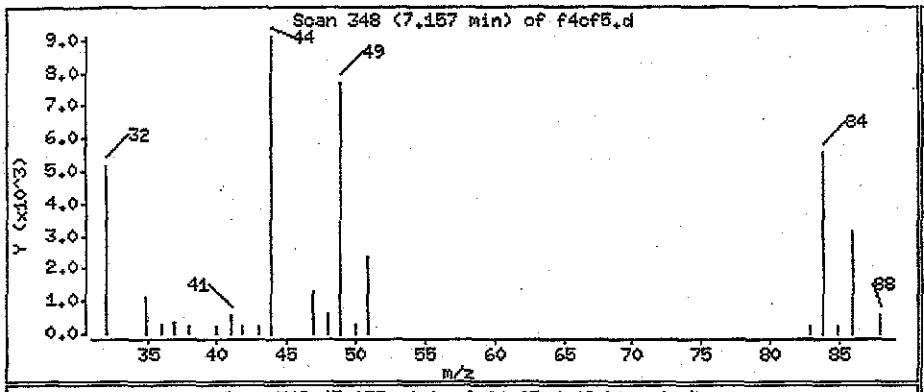
Client ID: B17XM3 Instrument: mt.i

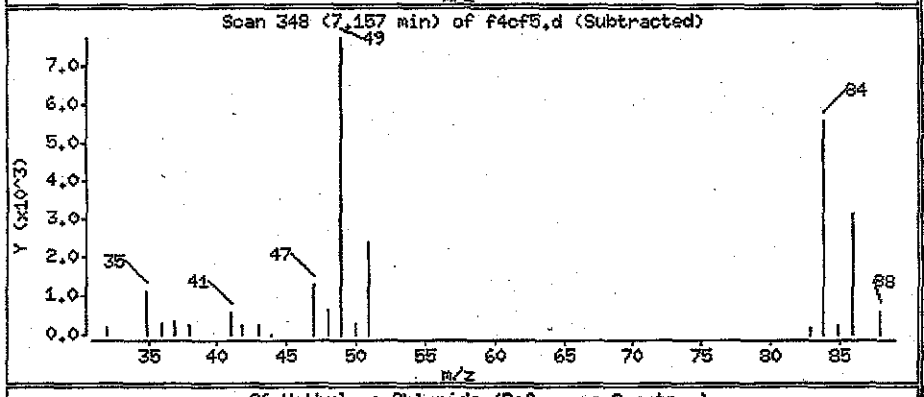
Sample Info: F4CF51AA,1.69,0,,

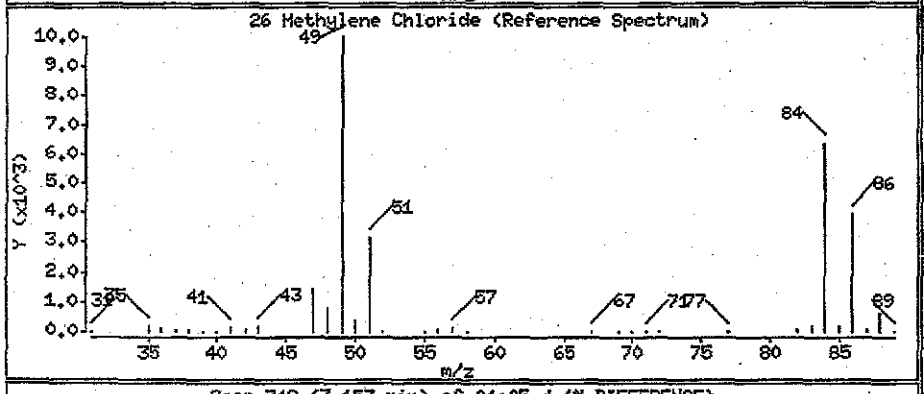
Volume Injected (uL): 500.0 Operator: 0691

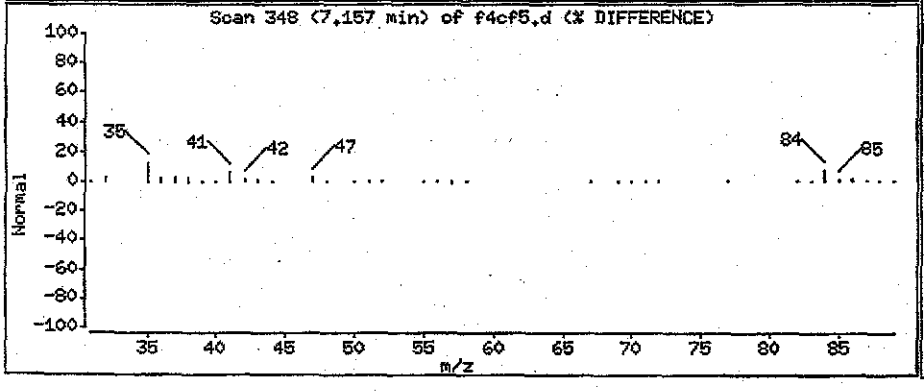
Column phase: DB-5 Column diameter: 0.32

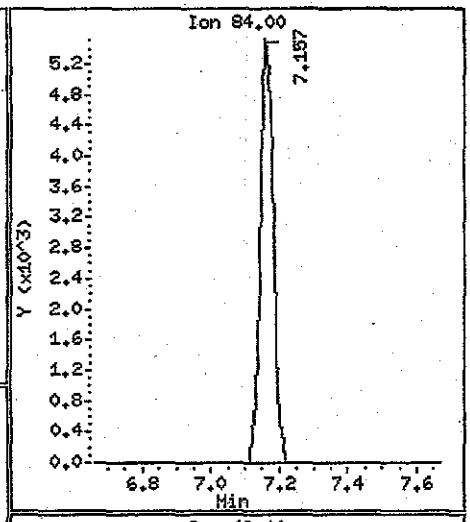
26 Methylene Chloride Concentration: 0.6194 ppb(v/v)

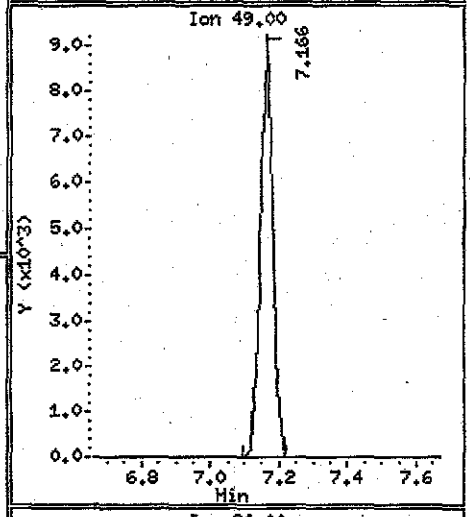


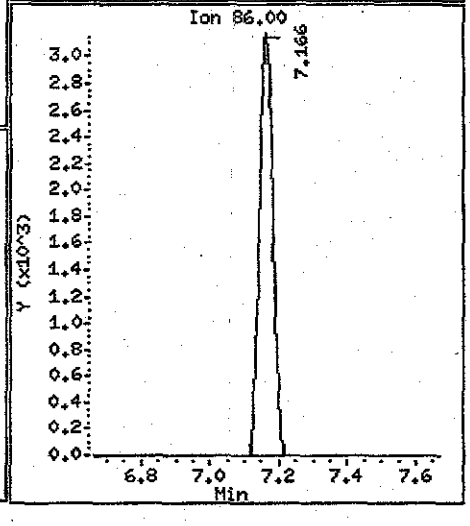












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

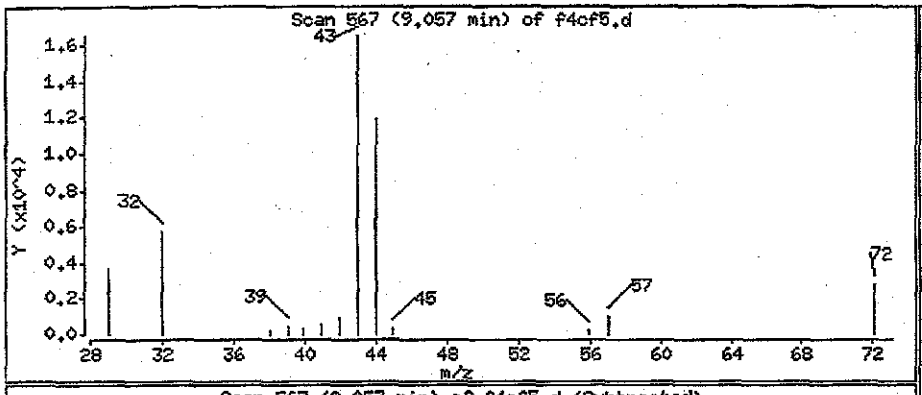
Client ID: B17XH3 | Instrument: mt.i

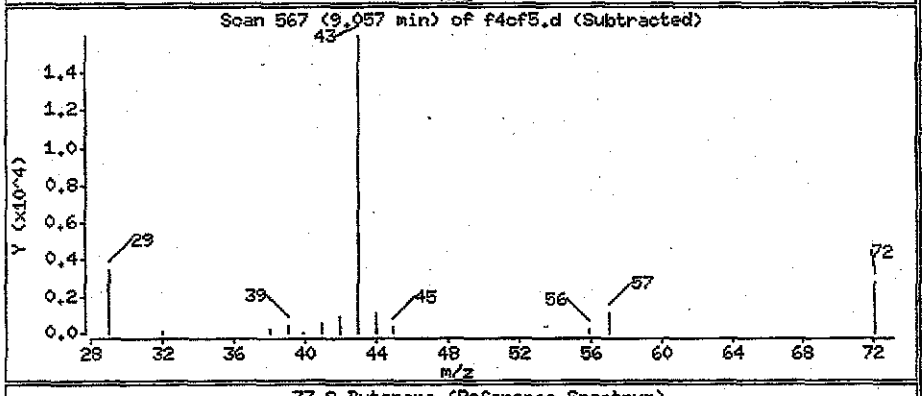
Sample Info: F4CF51AA,1.69,0,,

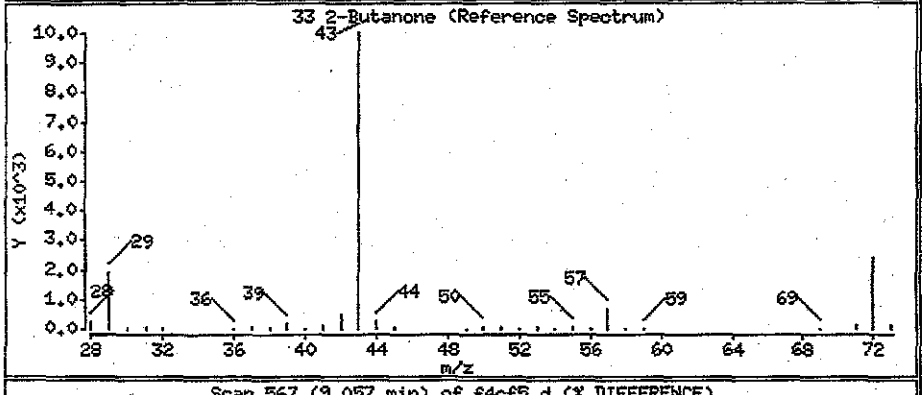
Volume Injected (uL): 500.0 | Operator: 0691

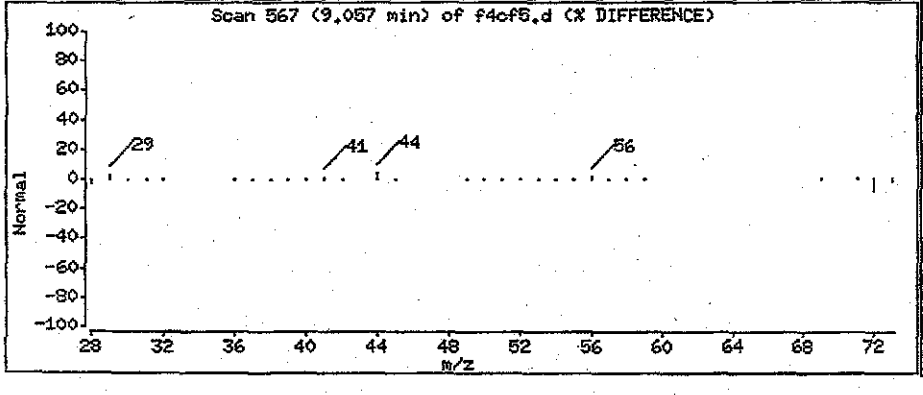
Column phase: DB-5 | Column diameter: 0.32

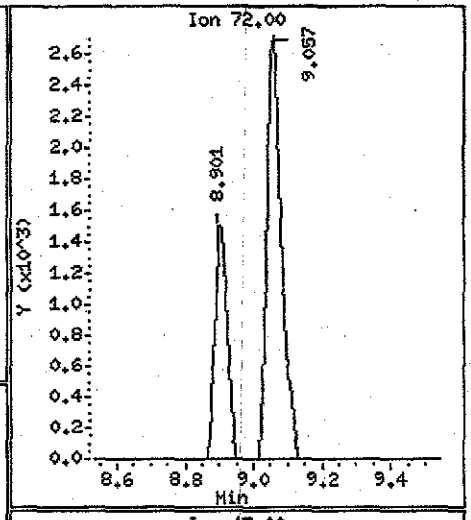
33 2-Butanone | Concentration: 0.7757 ppb(v/v)

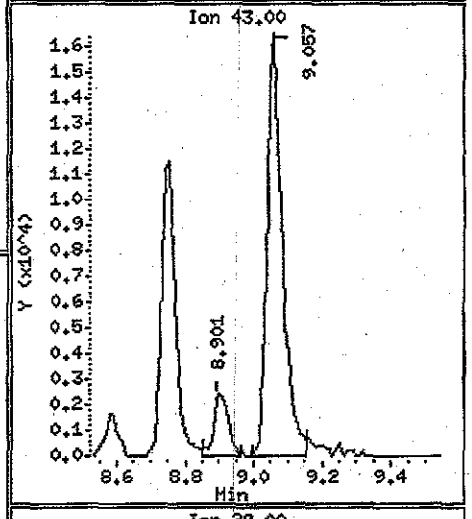


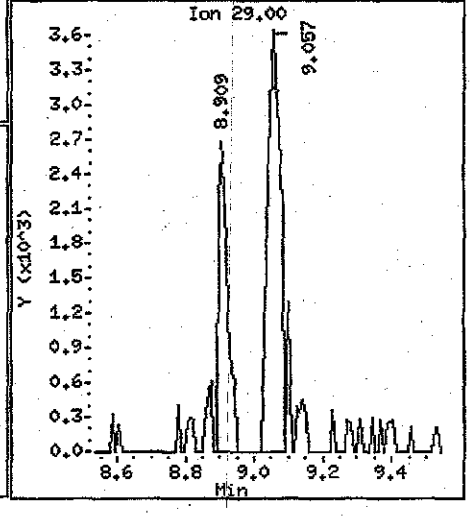












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

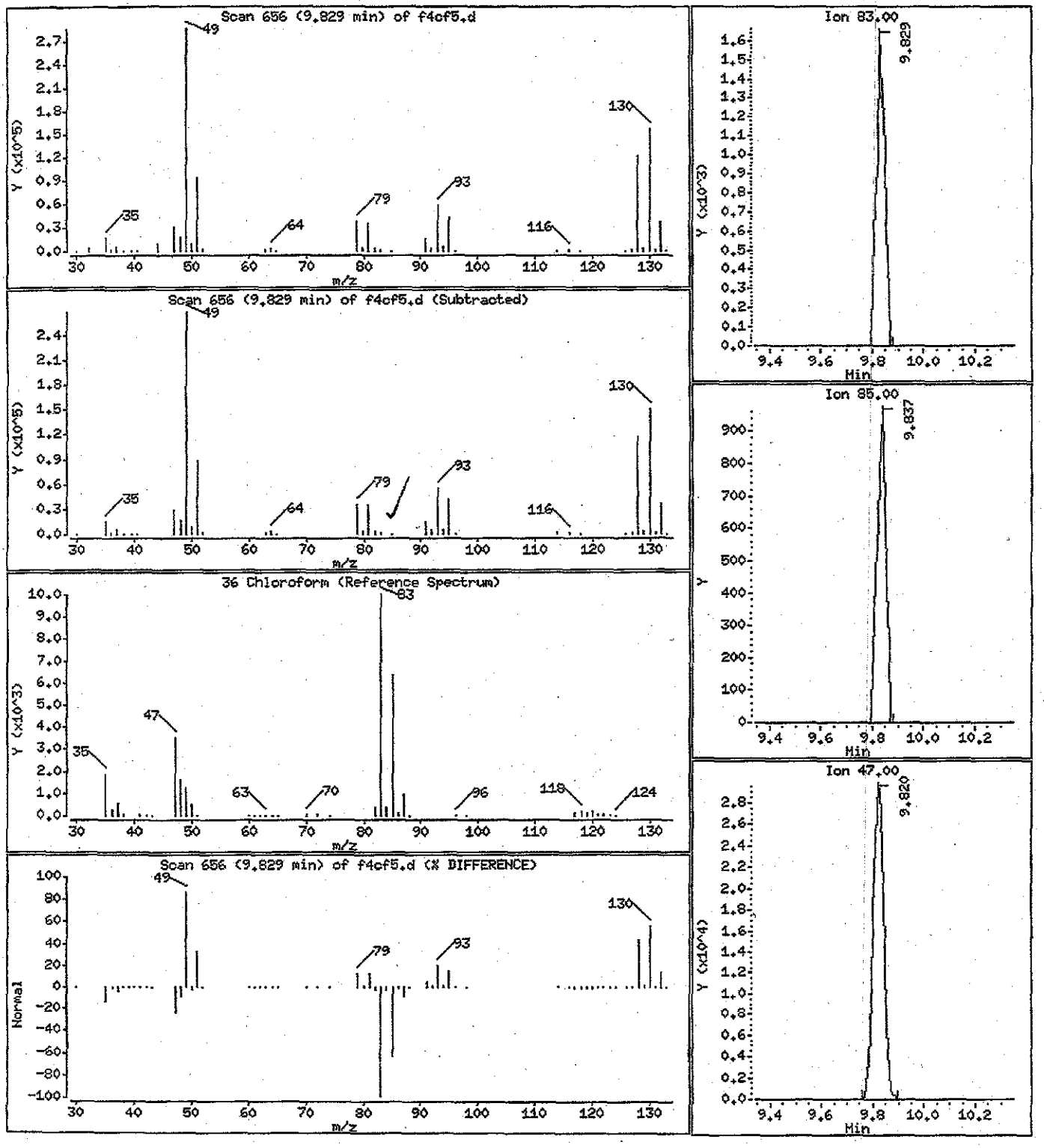
Client ID: B17XM3 Instrument: mt.i

Sample Info: F4CF51AA,1.69,0,,

Volume Injected (uL): 500.0 Operator: 0691

Column phase: DB-5 Column diameter: 0.32

36 Chloroform Concentration: 0.07163 ppb(v/v)



Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

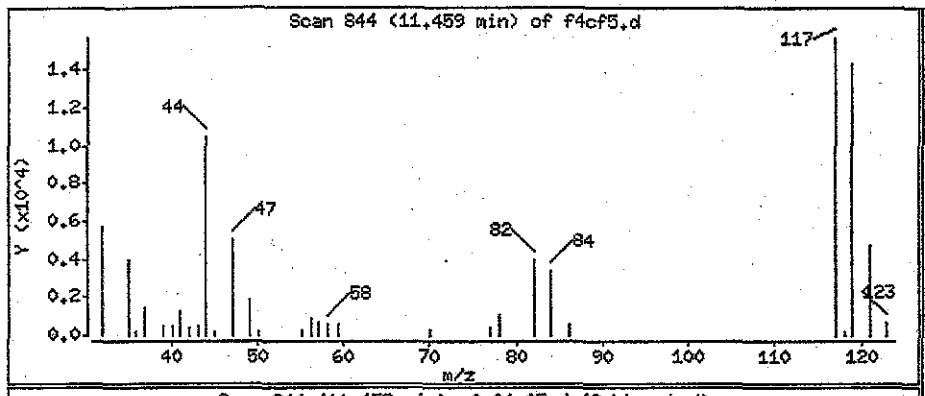
Client ID: B17XM3 | Instrument: mt.i

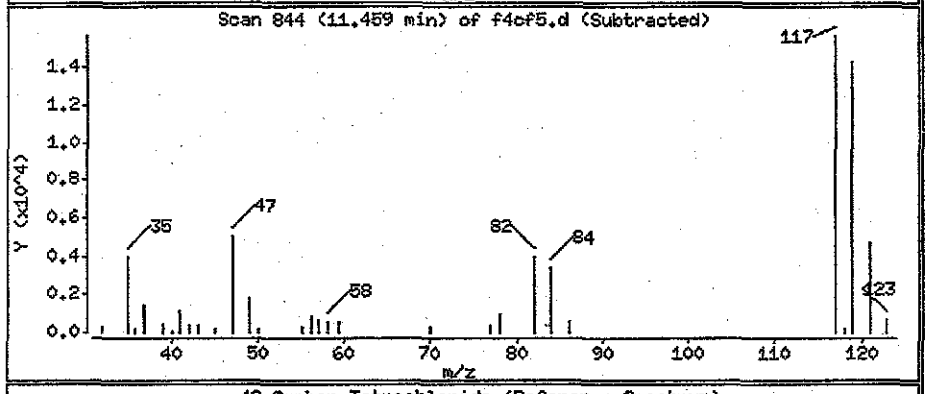
Sample Info: F4CF51AA,1.69,0,,

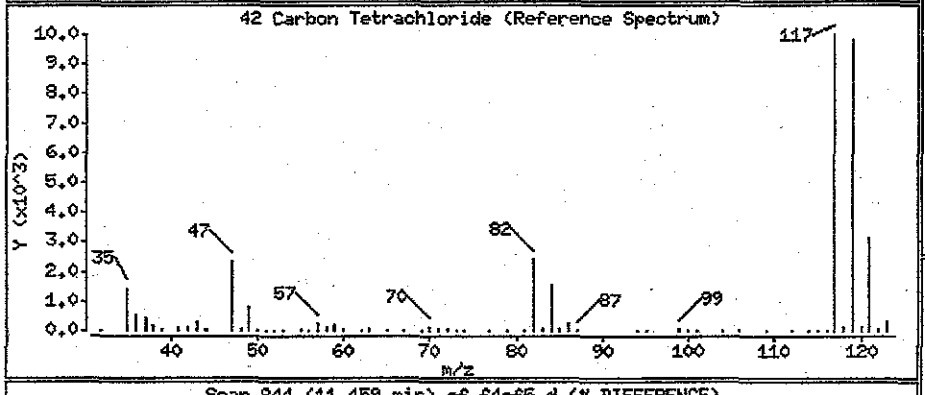
Volume Injected (uL): 500.0 | Operator: 0691

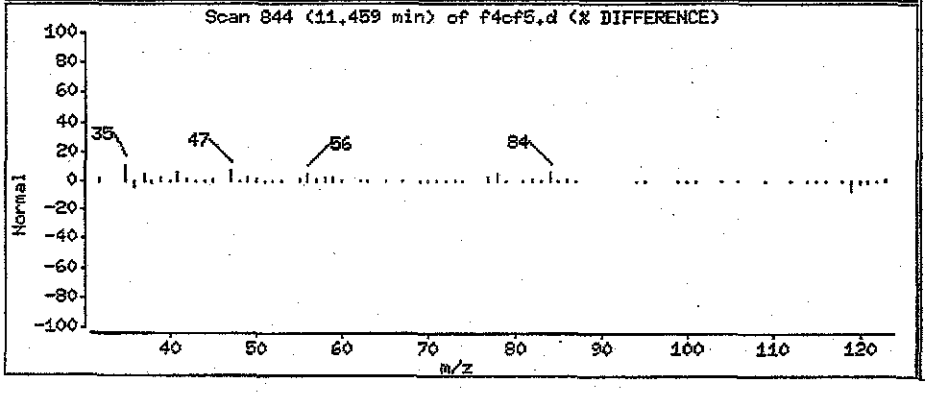
Column phase: DB-5 | Column diameter: 0.32

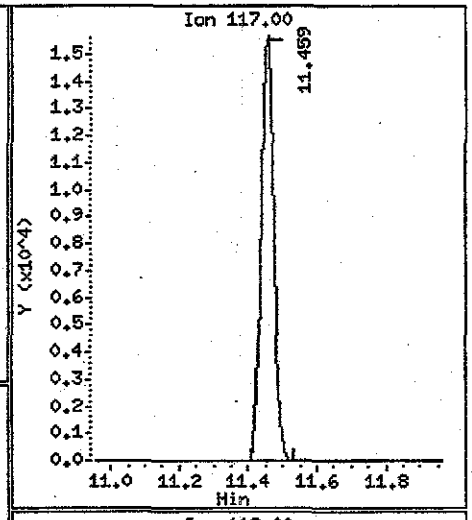
42 Carbon Tetrachloride | Concentration: 0.9122 ppb(v/v)

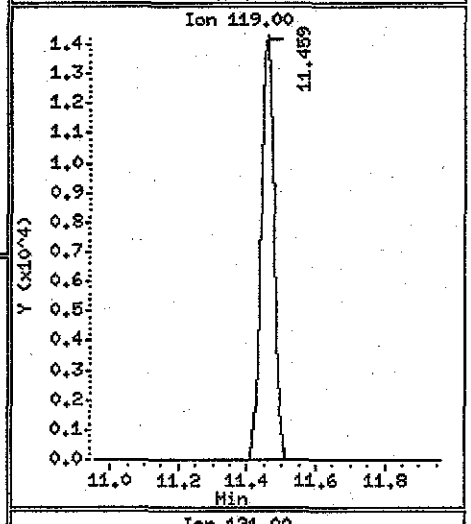


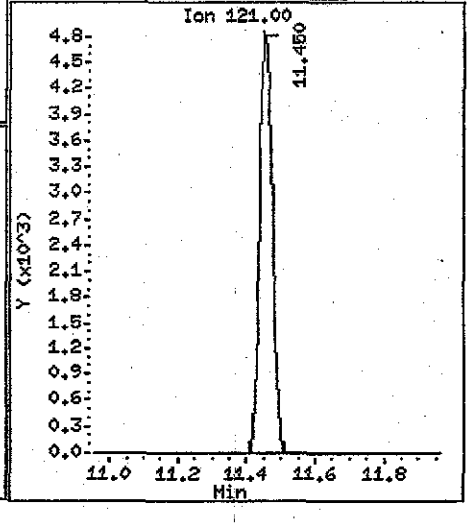












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5.d

Date : 29-NOV-2003 06:18

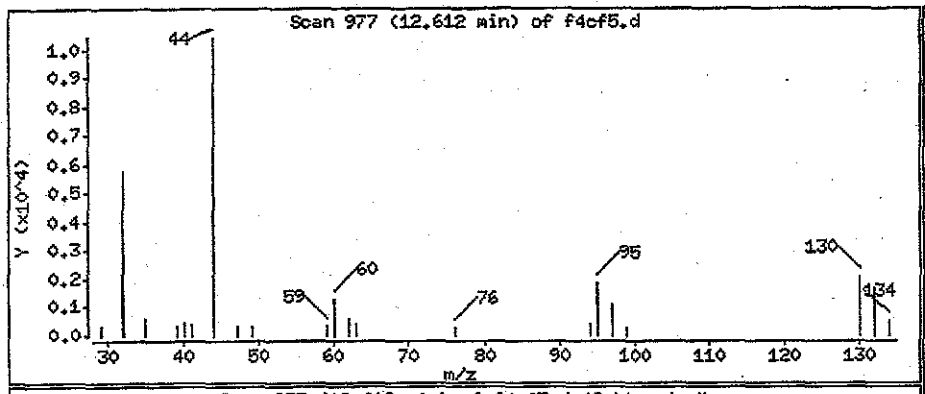
Client ID: B17XM3 Instrument: mt.i

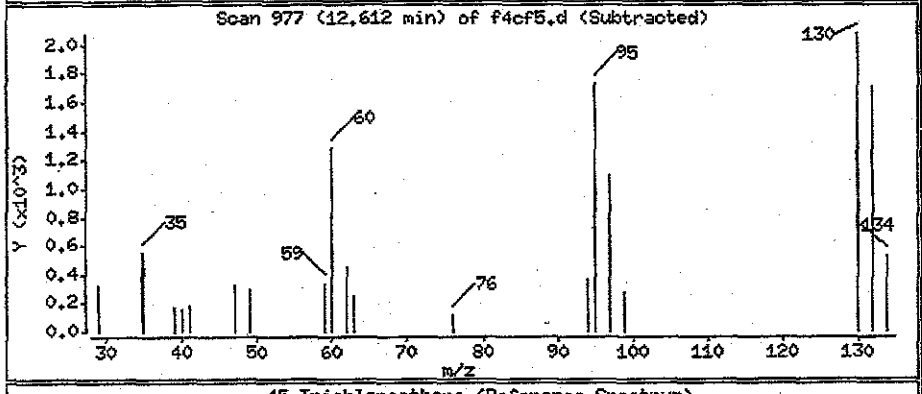
Sample Info: F4CF51AA,1.69,0,,

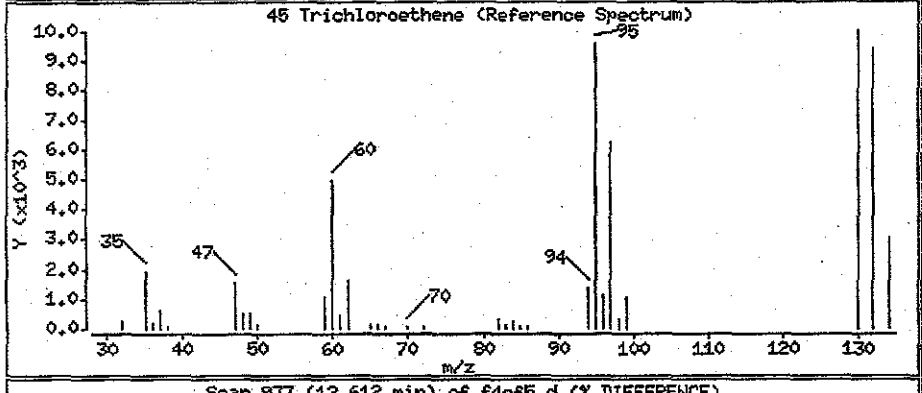
Volume Injected (uL): 500.0 Operator: 0691

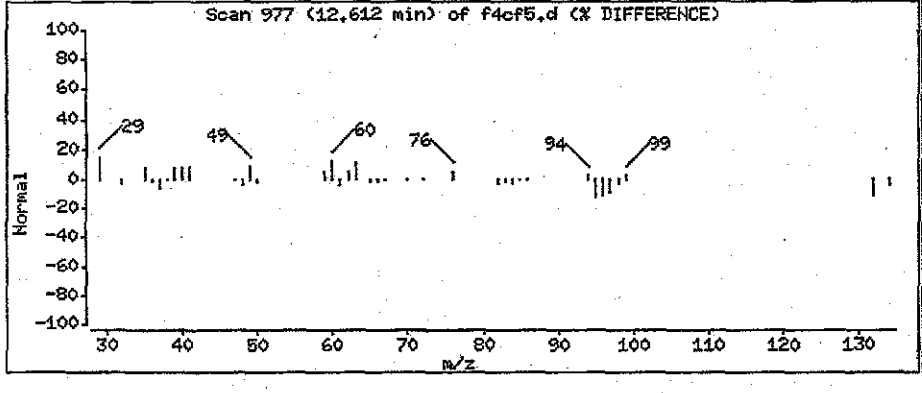
Column phase: DB-5 Column diameter: 0.32

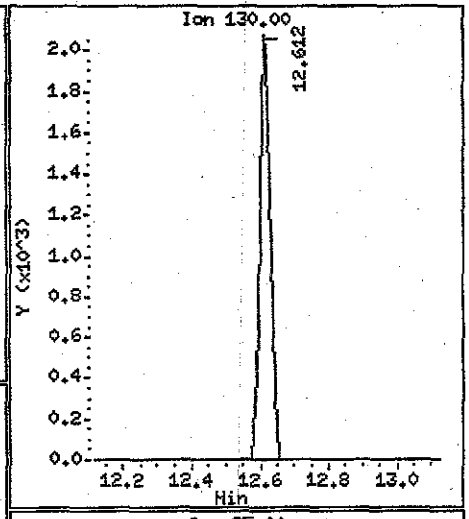
45 Trichloroethene Concentration: 0.1232 ppb(v/v)

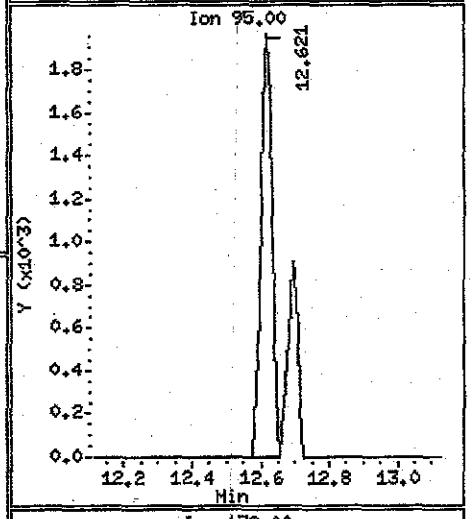


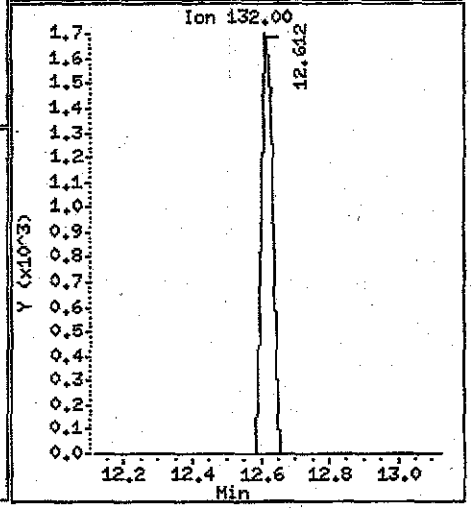












FLUOR HANFORD IC

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

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 001
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF51AC Date Extracted:11/28/03
Dilution factor: 1.69 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM3 DUP

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	8.4	U
56-23-5	Carbon tetrachloride	0.93	
67-66-3	Chloroform	0.34	U
75-09-2	Methylene chloride	0.84	U
127-18-4	Tetrachloroethene	0.34	U
79-01-6	Trichloroethene	0.34	U
78-93-3	2-Butanone (MEK)	0.84	U

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/f4cf5d.d
Lab Smp Id: F4CF51AC Client Smp ID: B17XM3 DUP
Inj Date : 29-NOV-2003 07:00
Operator : 0691 Inst ID: mt.i
Smp Info : F4CF51AC,1.69,0,,
Misc Info : T112803,LA,,,,,500ML DUP
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 02-Dec-2003 20:57 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 1 QC Sample: SAMPLE DUPLICATE
Dil Factor: 1.69000
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	9.823	9.828	(1.000)	310529	10.0000	
* 2 1,4-Difluorobenzene	114	11.939	11.944	(1.000)	1589734	10.0000	
* 3 Chlorobenzene-d5	117	16.518	16.523	(1.000)	1443216	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.820	10.826	(0.906)	307082	10.6583	10.66
$ 5 Toluene-d8	98	14.480	14.485	(0.877)	1398865	10.4891	10.49
$ 6 4-Bromofluorobenzene	95	18.114	18.119	(1.097)	979082	11.6985	11.70
20 Acetone	58	6.154	6.151	(0.627)	43647	2.84170	4.802
26 Methylene Chloride	84	7.160	7.166	(0.729)	11773	0.32900	0.5560
33 2-Butanone	72	9.060	9.039	(0.922)	6428	0.40343	0.6818
42 Carbon Tetrachloride	117	11.453	11.459	(1.166)	37433	0.55023	0.9299

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: f4cf5d.d
Lab Smp Id: F4CF51AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML DUP

Calibration Date: 29-NOV-2003
Calibration Time: 02:08
Client Smp ID: B17XM3 DUP
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	395409	235268	555550	310529	-21.47
2 1,4-Difluorobenze	1975448	1175392	2775504	1589734	-19.53
3 Chlorobenzene-d5	1812817	1078626	2547008	1443216	-20.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.82	-0.05
2 1,4-Difluorobenze	11.94	11.61	12.27	11.94	-0.05
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112803.b/f4cf5d.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

RECOVERY REPORT

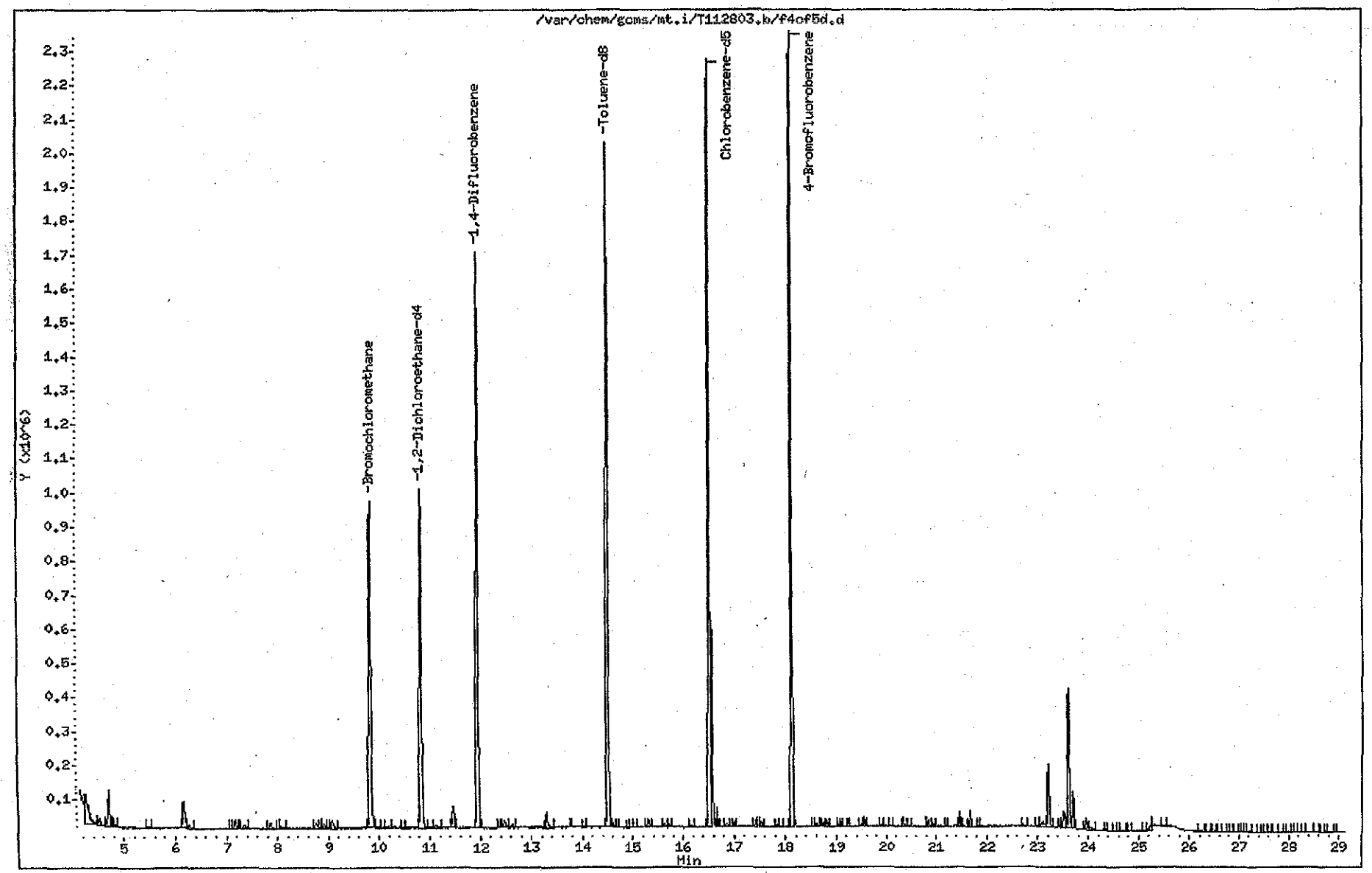
Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: F4CF51AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML DUP

Client SDG: H3K070107
Fraction: OTHER
Client Smp ID: B17XM3 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	10.66	106.58	70-130
$ 5 Toluene-d8	10.00	10.49	104.89	70-130
$ 6 4-Bromofluorobenze	10.00	11.70	116.99	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d
Date : 29-NOV-2003 07:00
Client ID: B17XM3 DUP
Sample Info: F4CF51AC,1.69,0,,
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/T112803.b/f4cf5d.d

Date : 29-NOV-2003 07:00

Client ID: B17XM3 DUP

Instrument: mt.i

Sample Info: F4CF51AC,1.69,0,,

Volume Injected (uL): 500.0

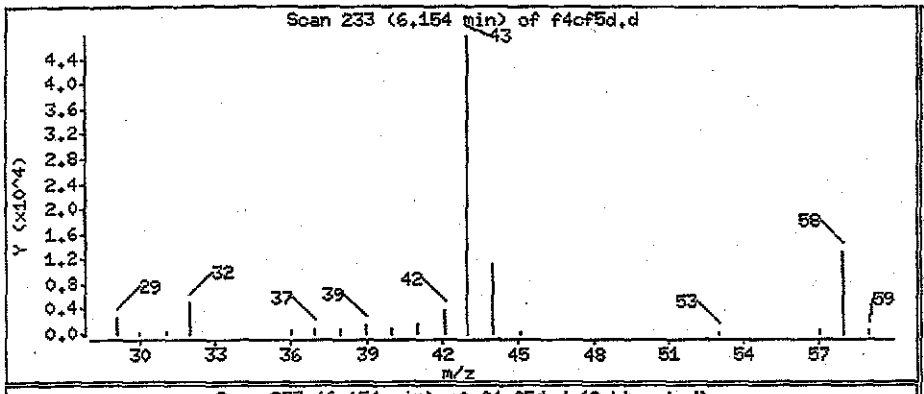
Operator: 0691

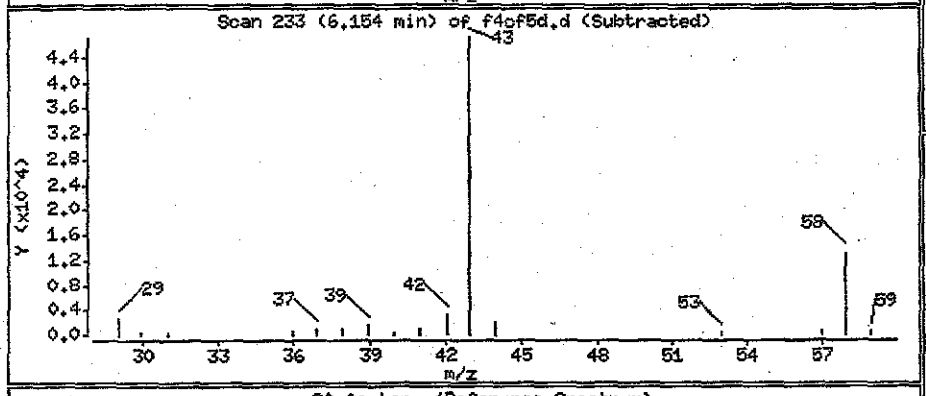
Column phase: DB-5

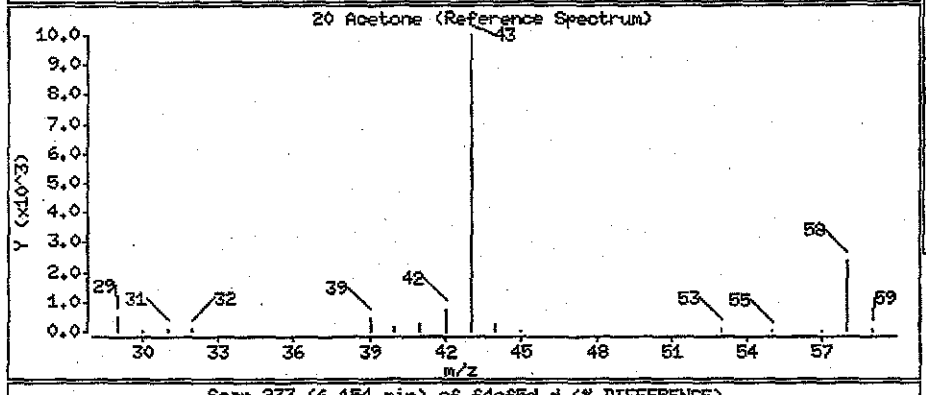
Column diameter: 0.32

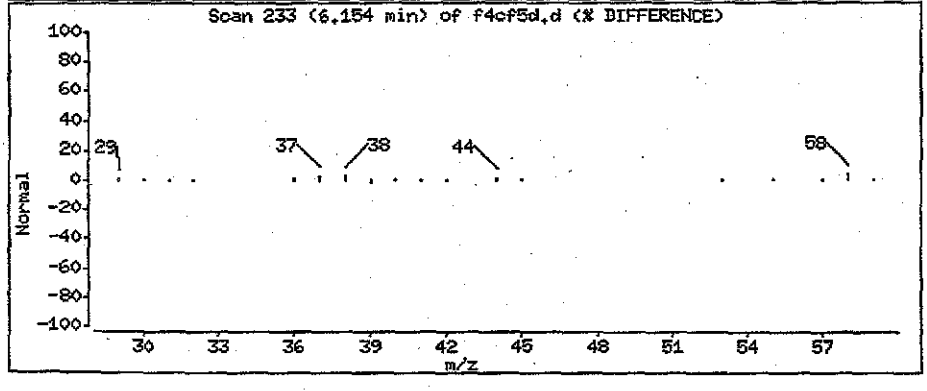
20 Acetone

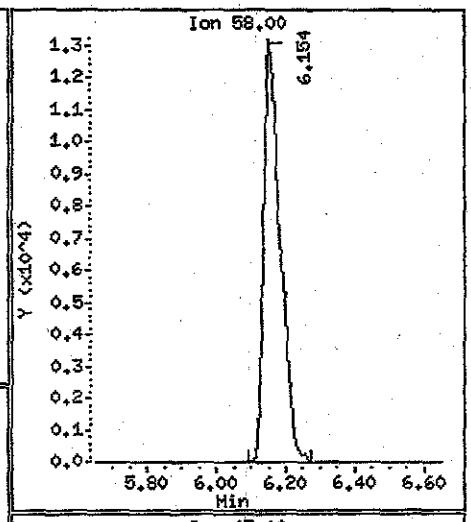
Concentration: 4.802 ppb(v/v)

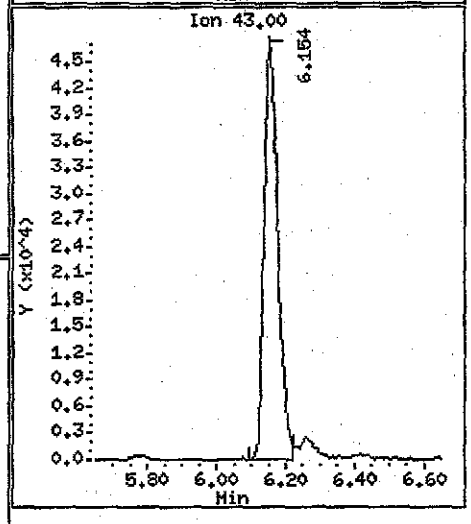












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d

Date : 29-NOV-2003 07:00

Client ID: B17XM3 DUP

Instrument: mt.i

Sample Info: F4CF51AC,1.69,0,,

Volume Injected (uL): 500.0

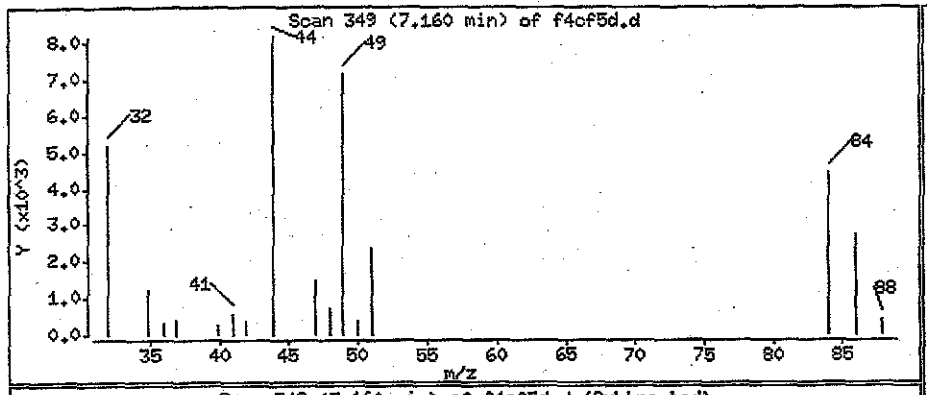
Operator: 0691

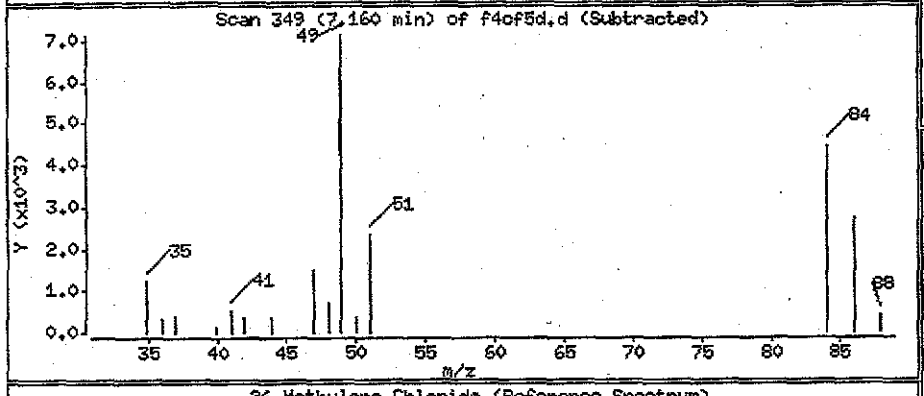
Column phase: DB-5

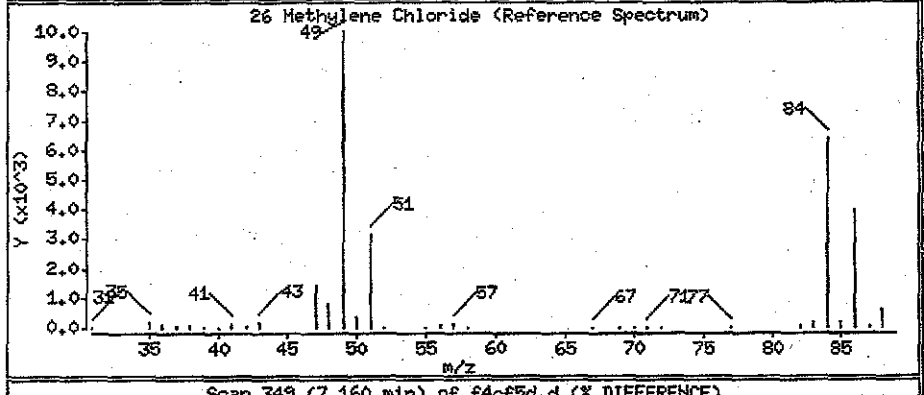
Column diameter: 0.32

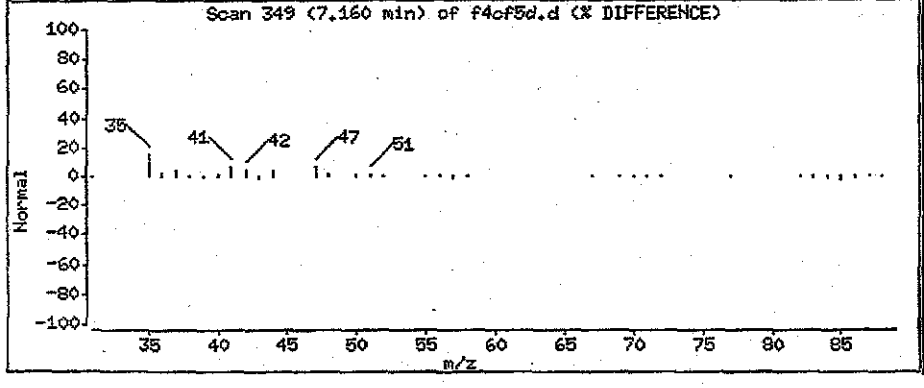
26 Methylene Chloride

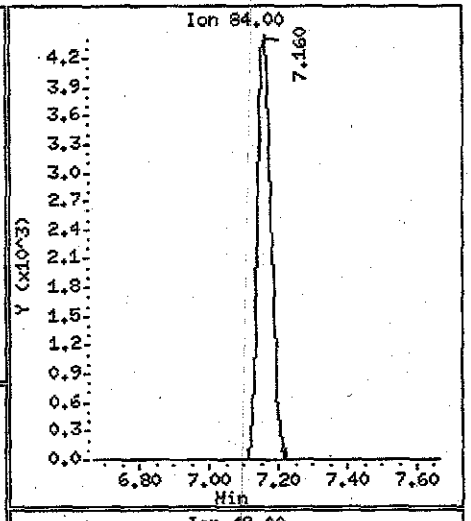
Concentration: 0.5560 ppb(w/v)

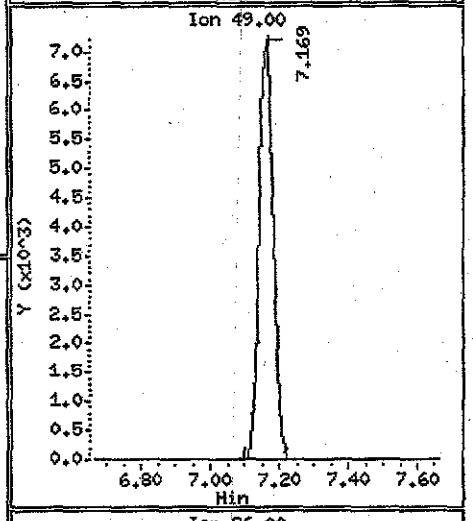


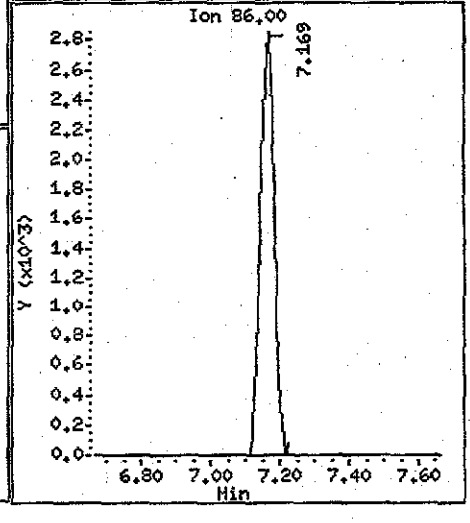












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d

Date : 29-NOV-2003 07:00

Client ID: B17XM3 DUP

Instrument: mt.i

Sample Info: F4CF51AC,1.69,0,,

Volume Injected (uL): 500.0

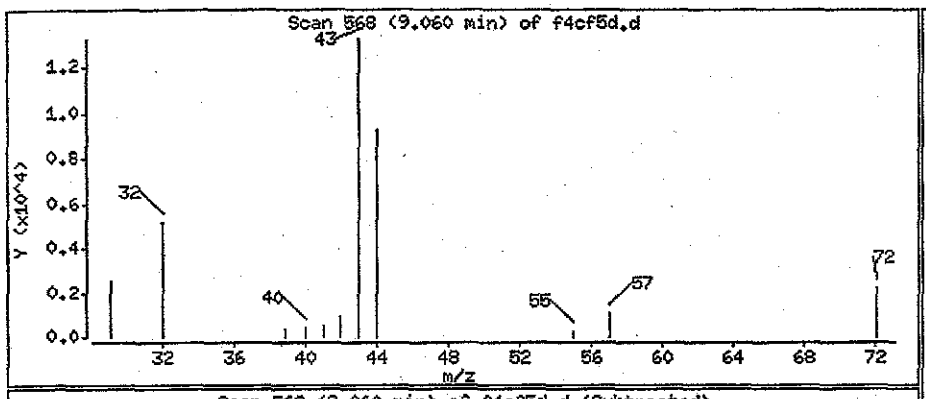
Operator: 0691

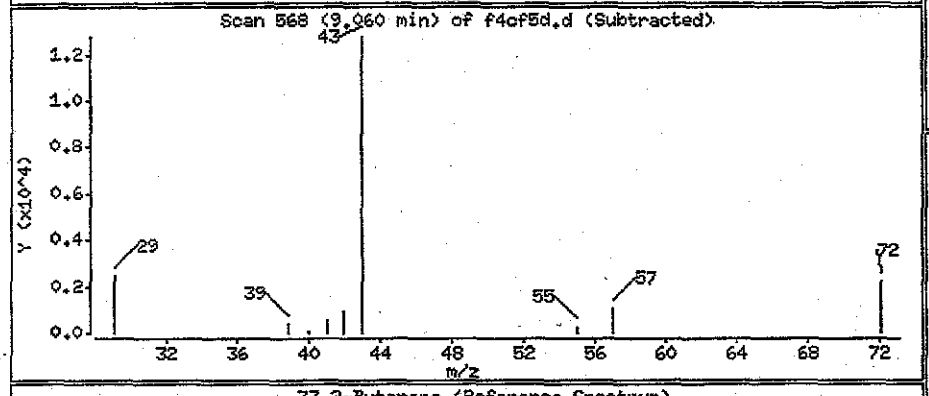
Column phase: DB-5

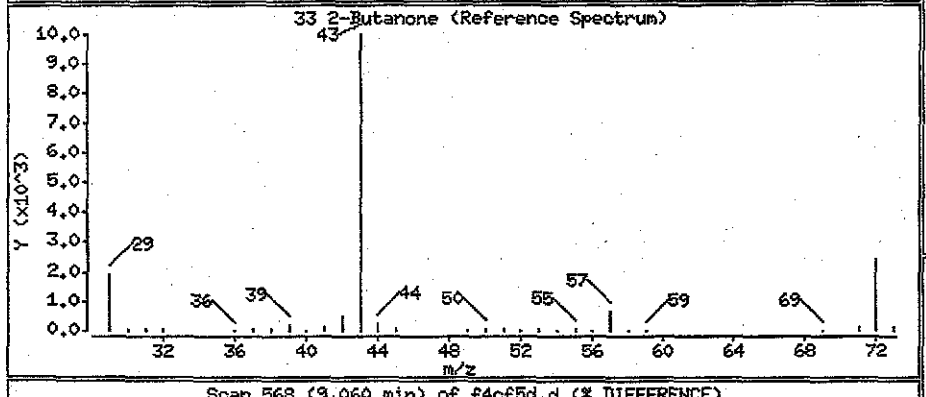
Column diameter: 0.32

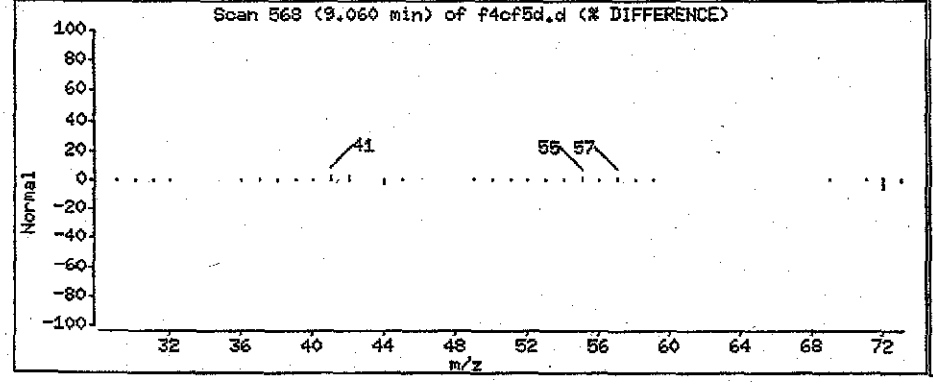
33 2-Butanone

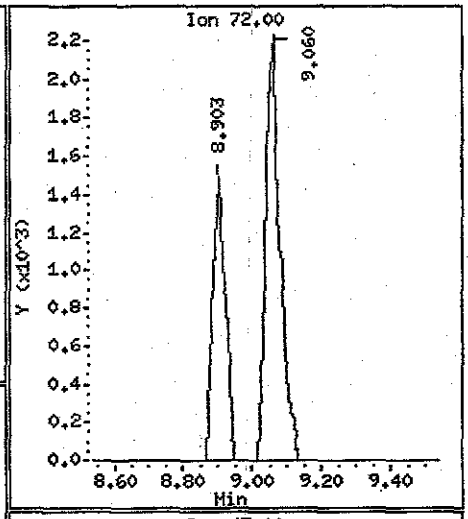
Concentration: 0.6818 ppb(v/v)

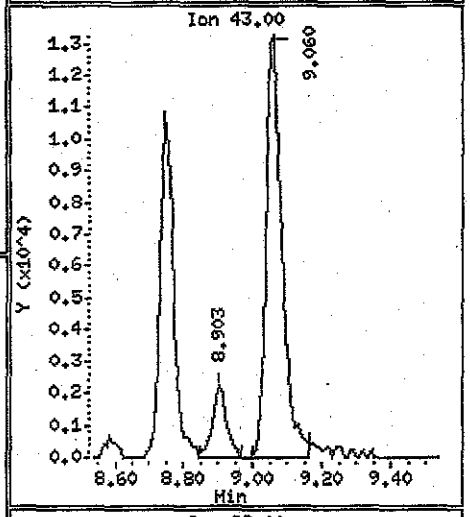


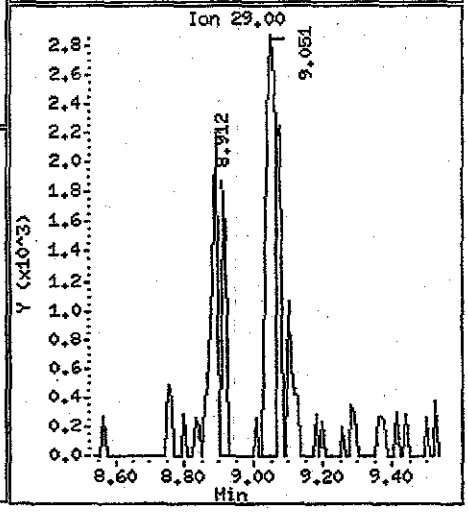












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf5d.d

Date : 29-NOV-2003 07:00

Client ID: B17XM3 DUP

Instrument: mt.i

Sample Info: F4CF51AC,1.69,0,,

Volume Injected (uL): 500.0

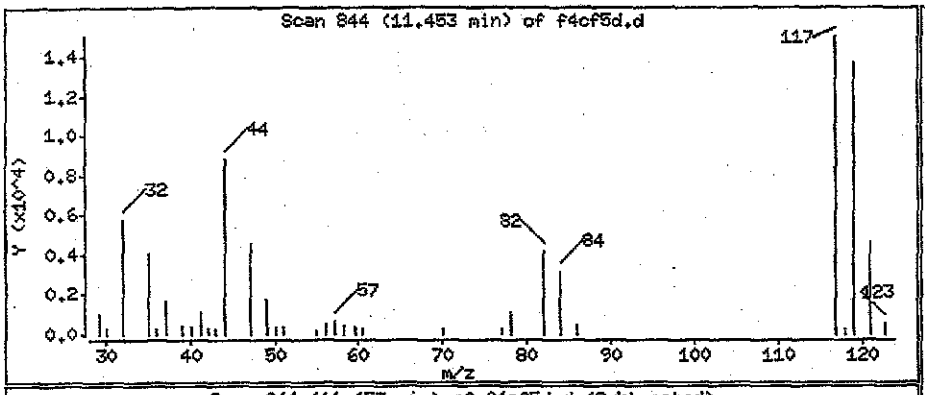
Operator: 0691

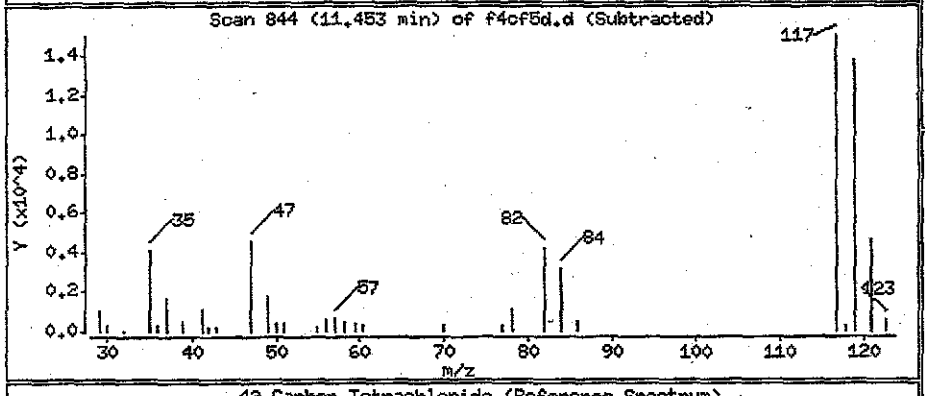
Column phase: DB-5

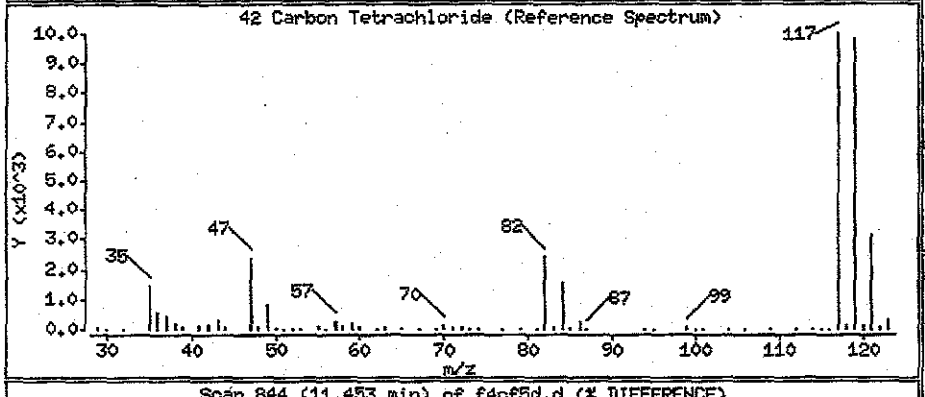
Column diameter: 0.32

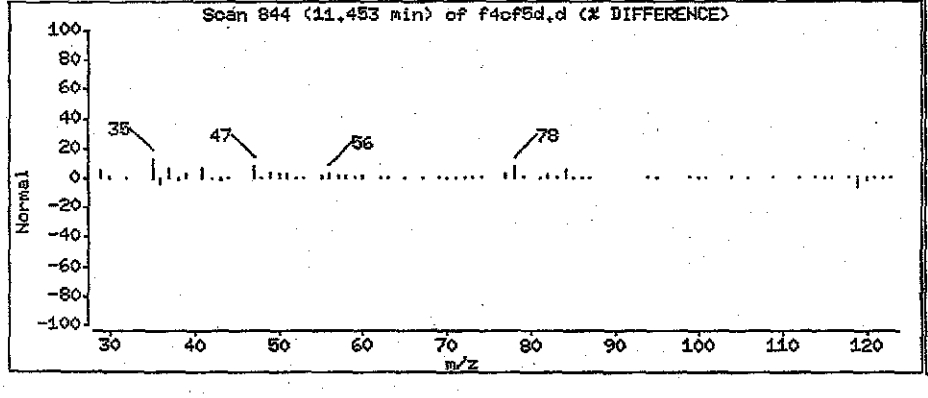
42 Carbon Tetrachloride

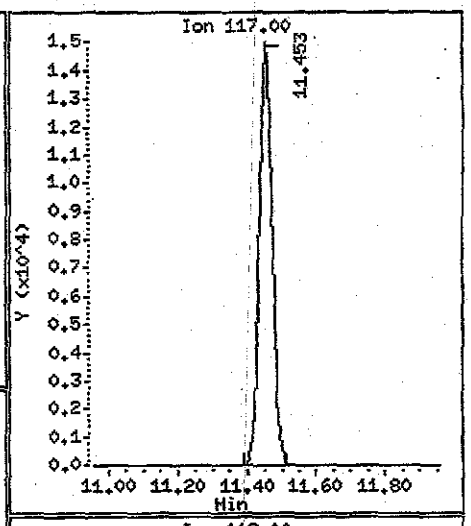
Concentration: 0.9299 ppb(v/v)

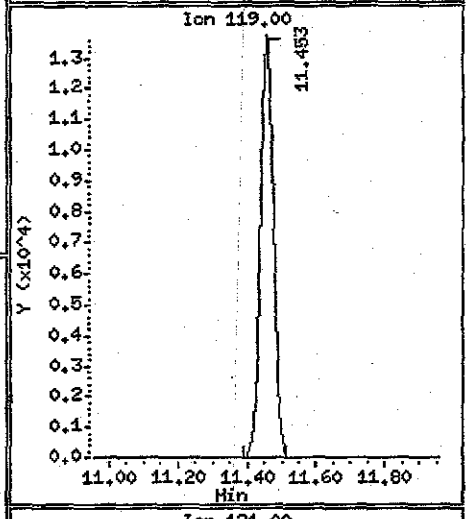


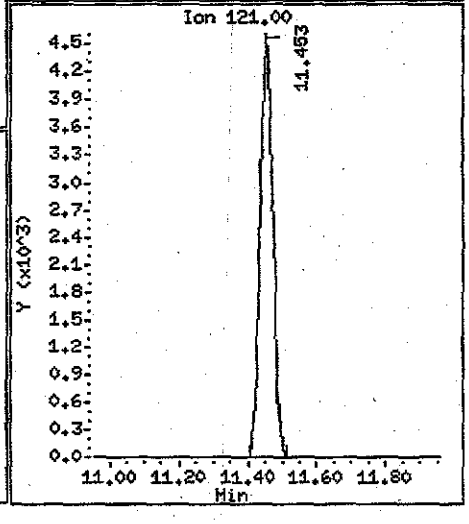












FLUOR HANFORD IC

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

Matrix: (soil/water) AIR Lab Sample ID:H3K070107 002
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/06/03
Work Order: F4CF61AA Date Extracted:11/28/03
Dilution factor: 149.55 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: B17XM4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
67-64-1	Acetone	750	U
56-23-5	Carbon tetrachloride	2900	
67-66-3	Chloroform	39	
75-09-2	Methylene chloride	75	U
127-18-4	Tetrachloroethene	30	U
79-01-6	Trichloroethene	30	U
78-93-3	2-Butanone (MEK)	75	U

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/f4cf6b.d
Lab Smp Id: F4CF61AA Client Smp ID: B17XM4
Inj Date : 29-NOV-2003 19:09
Operator : 0691 Inst ID: mt.i
Smp Info : F4CF61AA,,0,,
Misc Info : T112803,LA,,,,,22 ML IN-CAN
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 02-Dec-2003 20:57 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 2
Dil Factor: 149.55000
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	9.823	9.828	(1.000)	361369	10.0000	
* 2 1,4-Difluorobenzene	114	11.940	11.944	(1.000)	1778578	10.0000	
* 3 Chlorobenzene-d5	117	16.519	16.523	(1.000)	1564405	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.821	10.826	(0.906)	351912	10.9174	10.92
$ 5 Toluene-d8	98	14.481	14.485	(0.877)	1552242	10.7376	10.74
$ 6 4-Bromofluorobenzene	95	18.114	18.119	(1.097)	1042698	11.4935	11.49
20 Acetone	58	6.172	6.151	(0.628)	5641	0.31560	47.20
36 Chloroform	83	9.832	9.846	(1.001)	23543	0.26368	39.43
42 Carbon Tetrachloride	117	11.454	11.459	(1.166)	1531463	19.3438	2893
45 Trichloroethene	130	12.616	12.621	(1.057)	5334	0.08458	12.65

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: f4cf6b.d
Lab Smp Id: F4CF61AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,22 ML IN-CAN

Calibration Date: 29-NOV-2003
Calibration Time: 02:08
Client Smp ID: B17XM4
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	395409	235268	555550	361369	-8.61
2 1,4-Difluorobenze	1975448	1175392	2775504	1778578	-9.97
3 Chlorobenzene-d5	1812817	1078626	2547008	1564405	-13.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.82	-0.05
2 1,4-Difluorobenze	11.94	11.61	12.27	11.94	-0.04
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112803.b/f4cf6b.d
Report Date: 02-Dec-2003 21:01

STL Knoxville

RECOVERY REPORT

Client Name: FLUOR HANFORD IC
Sample Matrix: GAS
Lab Smp Id: F4CF61AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: FHI.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,22 ML IN-CAN

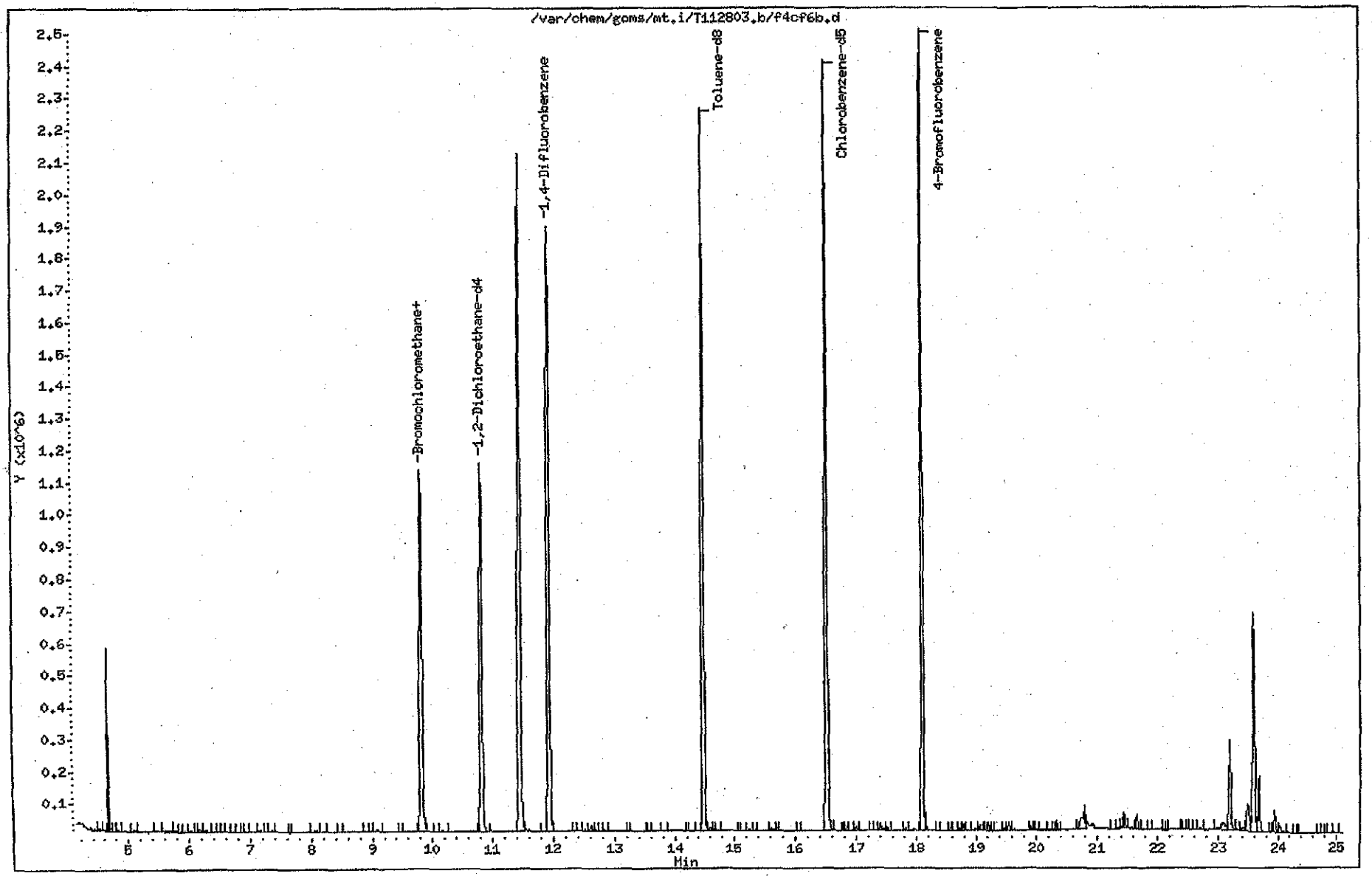
Client SDG: H3K070107
Fraction: OTHER
Client Smp ID: B17XM4
Operator: 0691
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.92	109.17	70-130
$ 5 Toluene-d8	10.00	10.74	107.38	70-130
$ 6 4-Bromofluorobenze	10.00	11.49	114.94	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d
Date : 29-NOV-2003 19:09
Client ID: B17XM4
Sample Info: F4CF61AA,,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/T112803.b/f4cf6b.d

Date : 29-NOV-2003 19:09

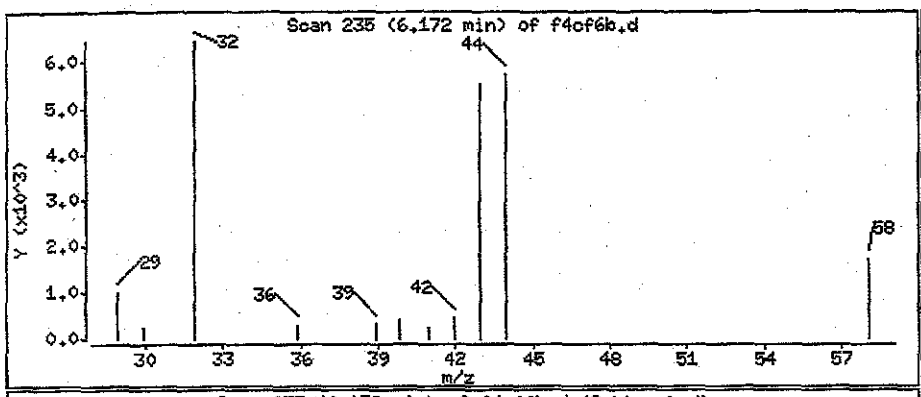
Client ID: B17XM4 Instrument: mt.i

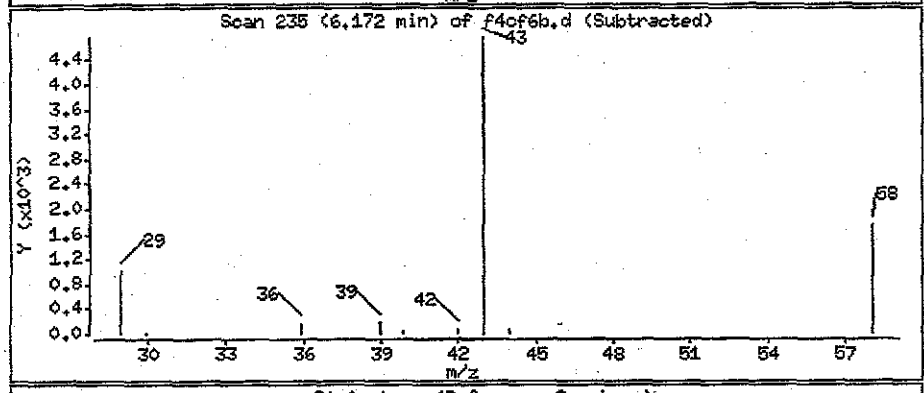
Sample Info: F4CF61AA,,0,,

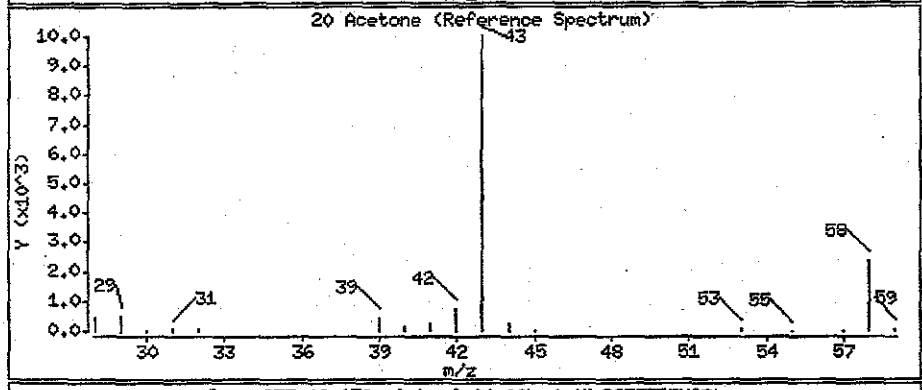
Volume Injected (uL): 500.0 Operator: 0691

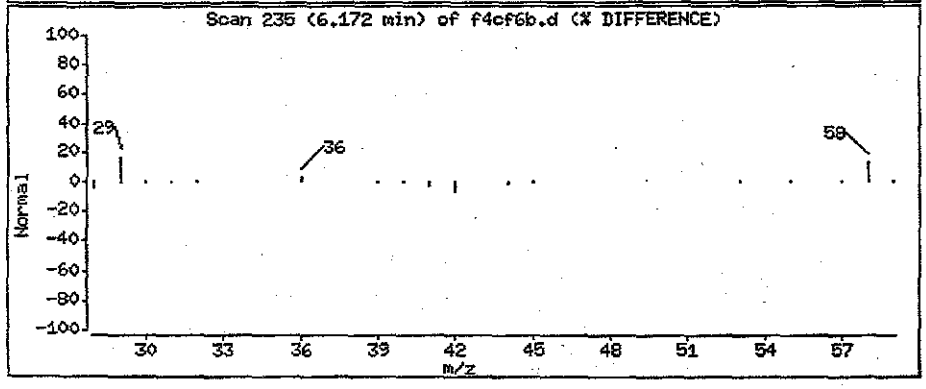
Column phase: DB-5 Column diameter: 0.32

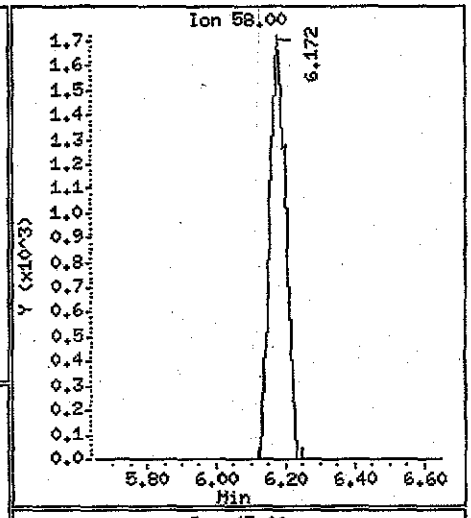
20 Acetone Concentration: 47.20 ppb(v/v)

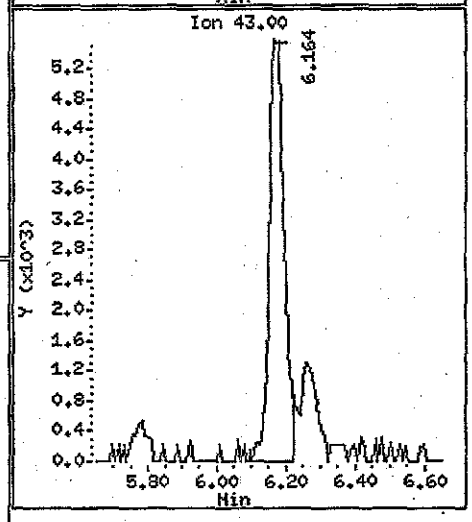












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d

Date : 29-NOV-2003 19:09

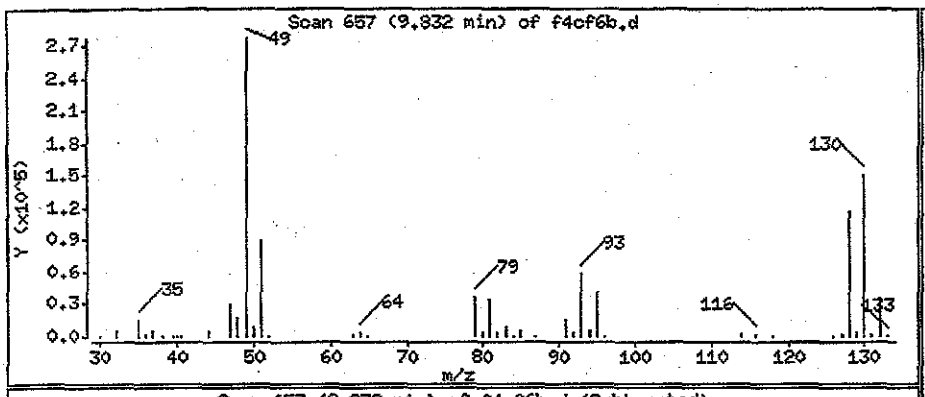
Client ID: B17XM4 | Instrument: mt.i

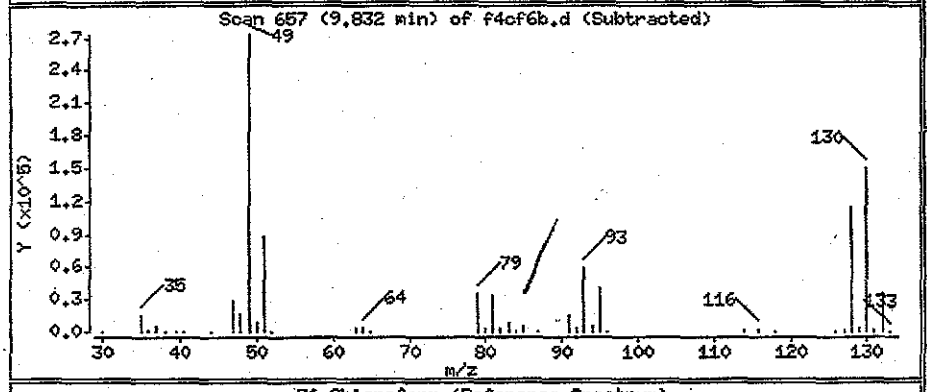
Sample Info: F4CF61AA,,0,,

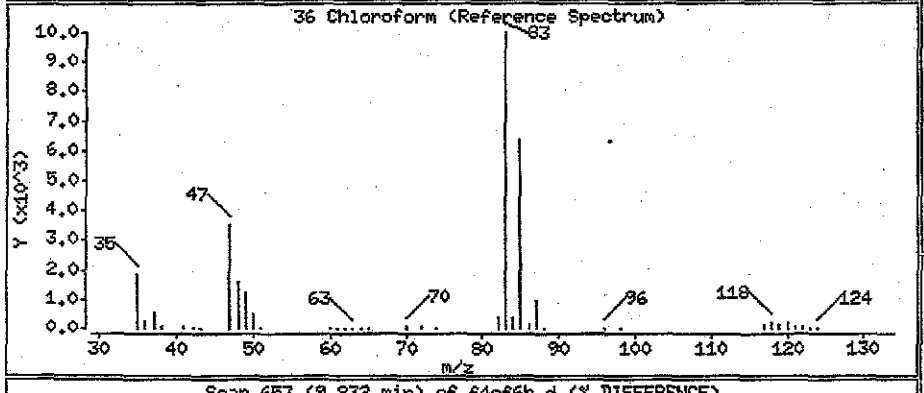
Volume Injected (uL): 500.0 | Operator: 0691

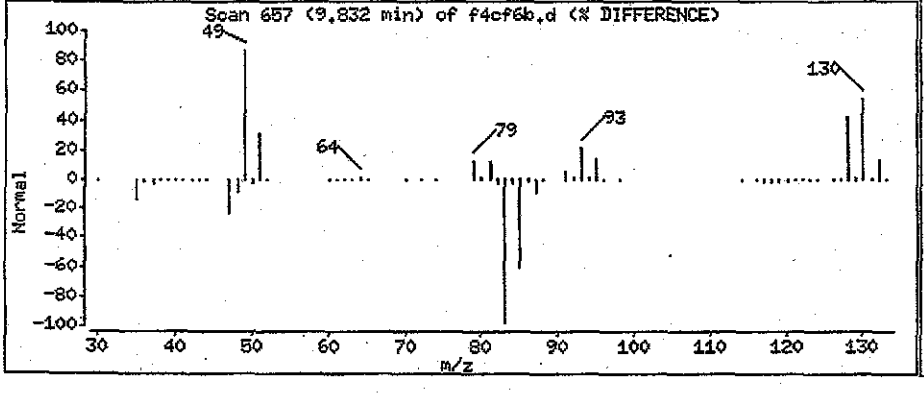
Column phase: DB-5 | Column diameter: 0.32

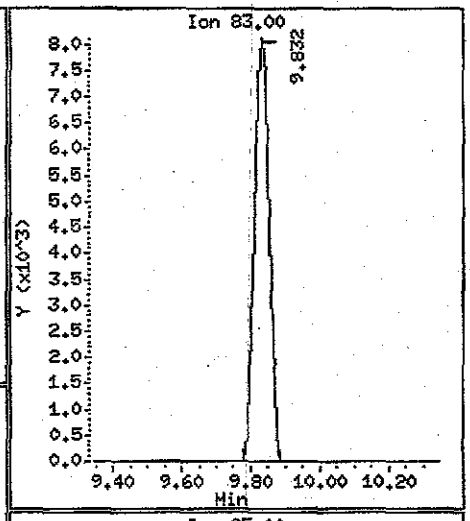
36 Chloroform | Concentration: 39.43 ppb(v/v)

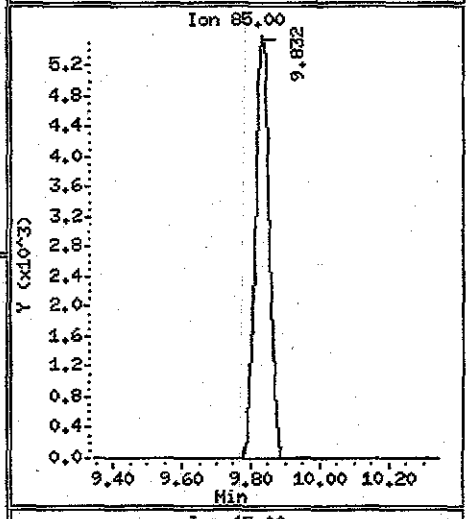


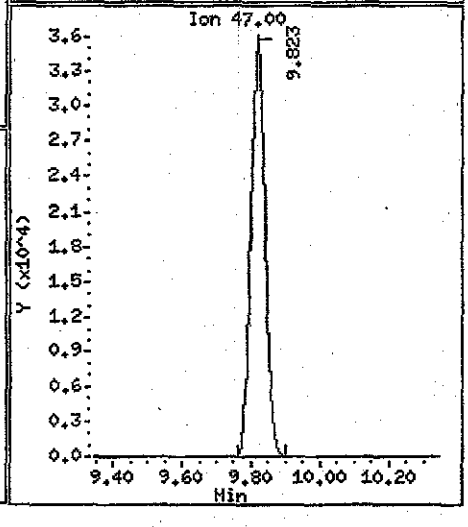












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d

Date : 29-NOV-2003 19:09

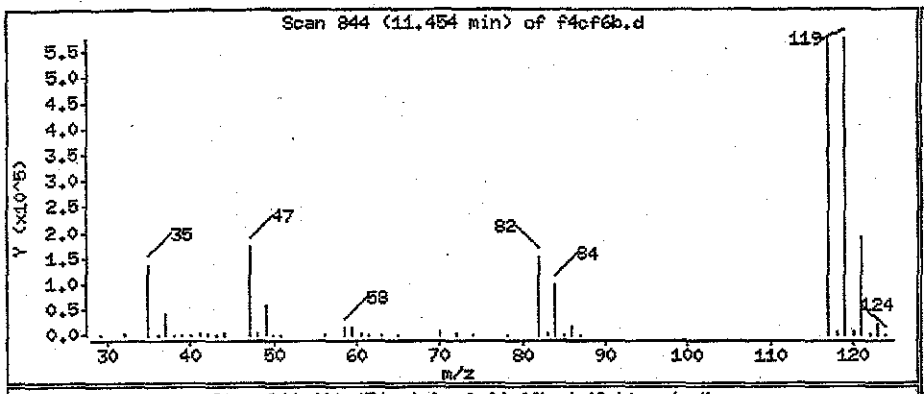
Client ID: B17XM4 Instrument: mt.i

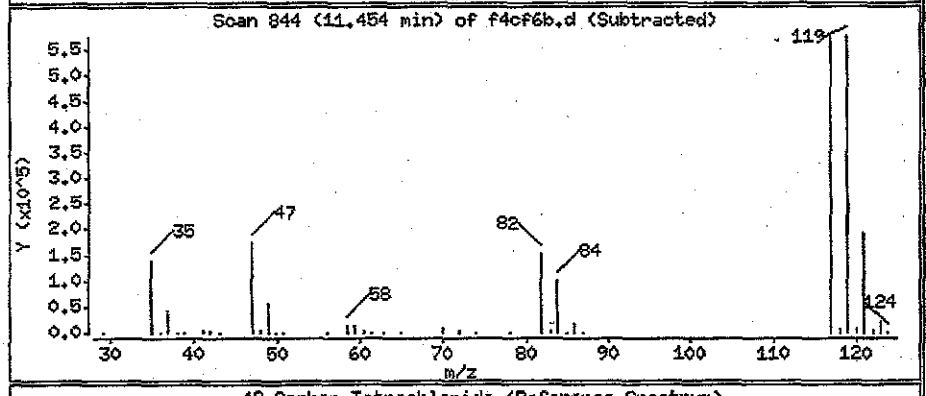
Sample Info: F4CF61AA,,0,,

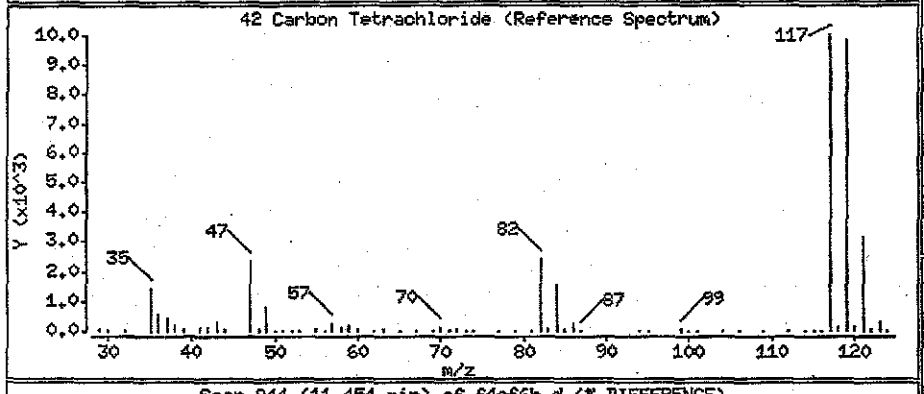
Volume Injected (uL): 500.0 Operator: 0691

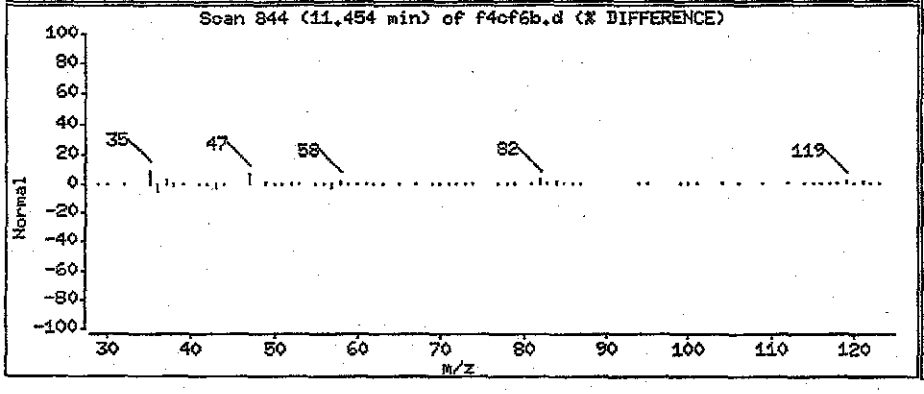
Column phase: DB-5 Column diameter: 0.32

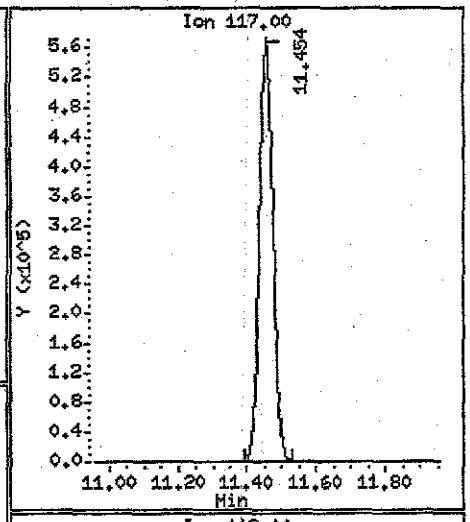
42 Carbon Tetrachloride Concentration: 2893 ppb(v/v)

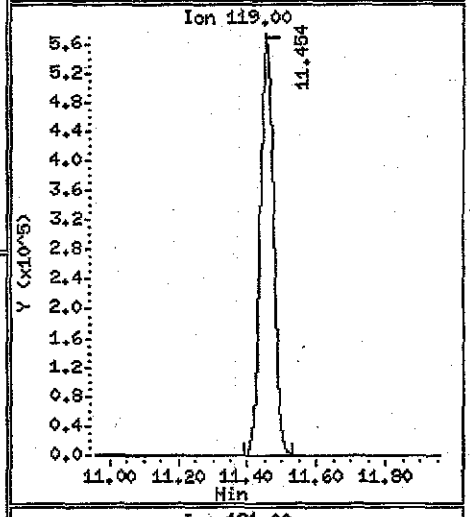


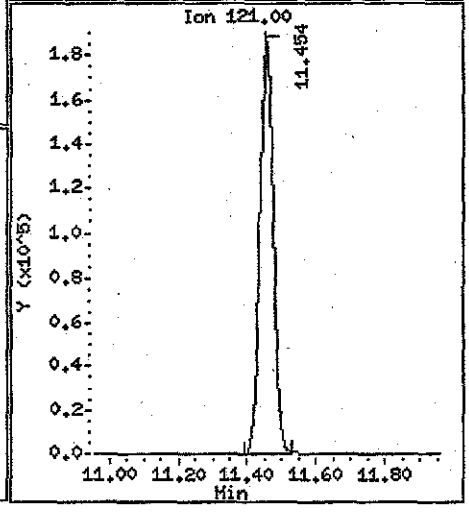












Data File: /var/chem/gcms/mt.i/T112803.b/f4cf6b.d

Date : 29-NOV-2003 19:09

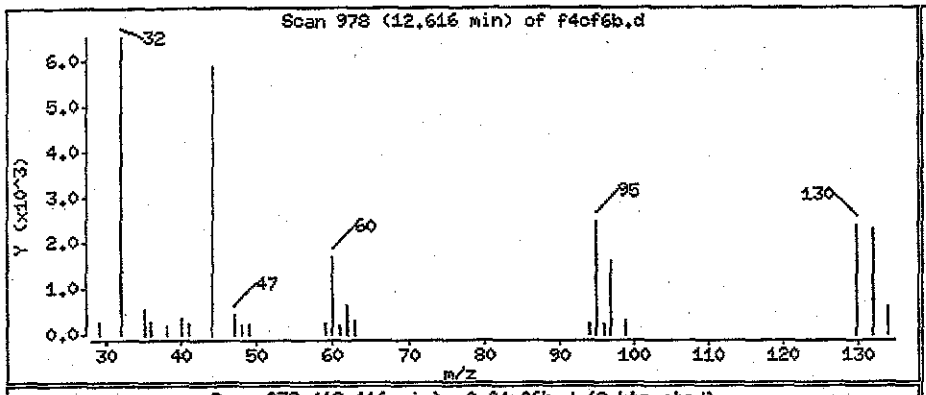
Client ID: B17XM4 Instrument: mt.i

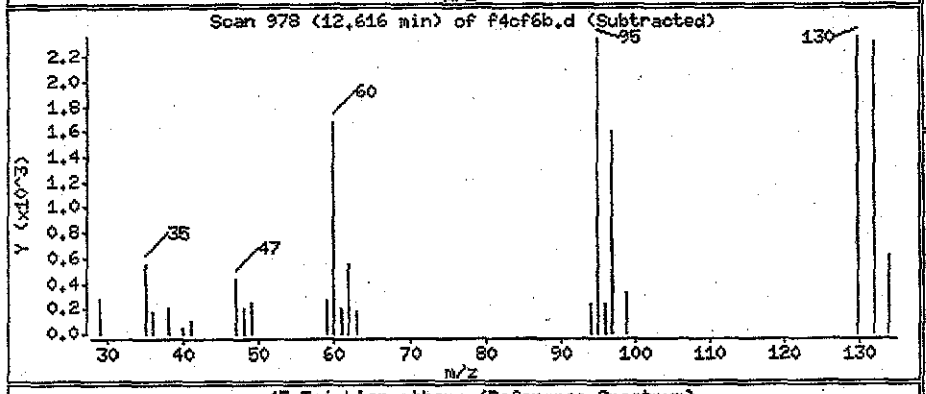
Sample Info: F4CF61AA,,0,,

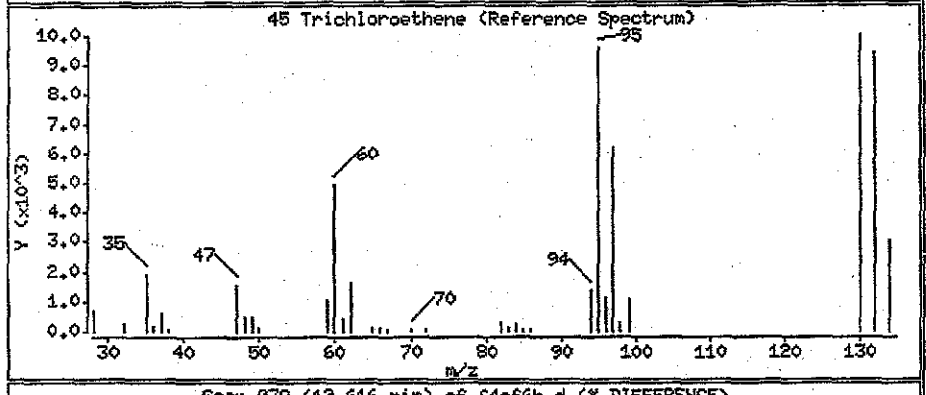
Volume Injected (uL): 500.0 Operator: 0691

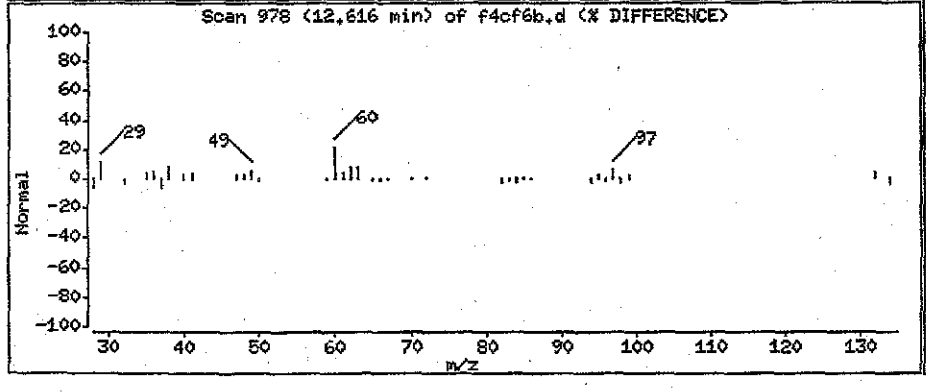
Column phase: DB-5 Column diameter: 0.32

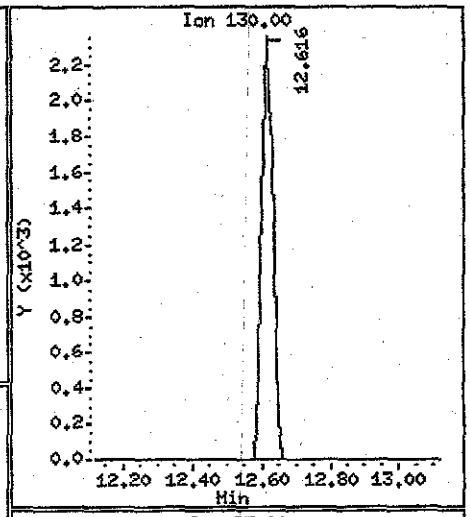
45 Trichloroethene Concentration: 12.65 ppb(v/v)

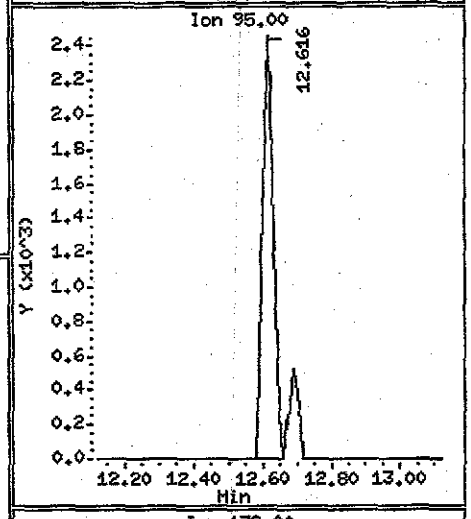


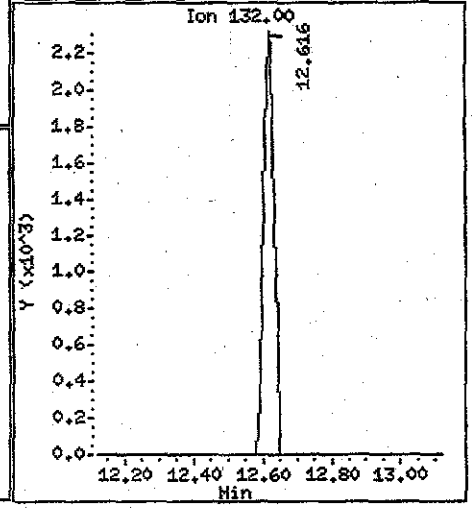












Standards Data

STL Knoxville GC/MS Air Initial Calibration Data Review / Narrative Checklist
Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 4

Analysis Date:	11/26/03	Instrument::	MT	ICAL Batch/Scan Name:	T112603i	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. Is low level std at or <RL and are the remaining points consecutive?		✓			✓
6. Were at least 5 levels of each compound analyzed?		✓			✓
7. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%)		✓			✓
8. Have all peaks been auto identified? If not, list:		✓			✓
9. If curves were used, is correlation coefficient ≥0.990?	✓				NA
10. At least 6 consecutive points used for quadratic curves, and at least 5 consecutive points for linear curves?	✓				NA
11. For linear or quadratic: is a tangent's slope to the curve entirely positive or negative and continuous.	✓				NA
12. For linear or quadratic: origin NOT included or forced?	✓				NA
13. Is the "Y" intercept less than the RL for each curve?	✓				NA
14. RT for each IS ±20 sec avg. RT?		✓			✓
15. Area for each IS ± 40% avg. area?		✓			✓
16. Each analyte ± 0.06 RRT of avg. RRT?		✓			✓
17. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
18. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in ICAL summary?	✓				NA
19. Was ICAL summary form processed using correct methods and files?		✓			✓
20. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
21. Elution order checked on isomeric pairs?		✓			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane					✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		✓			✓
• vinyl acetate / hexane		✓			✓
• cis- and trans- isomers		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• 4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
22. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
23. Does the ICAL folder contain complete data in the following order: Data review checklist, a complete runlog, Entech report, BFB info, ICAL summary, curves, followed by [Quan reports, chromatograms, manual integrations] in increasing amount order.		✓			✓

Analyst: CWJ	Date: 12/02/03	2nd Level Reviewer : JMW	Date: 12/3/03
Comments:		Comments:	

ICAL

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

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

Date: 11/26/03 System Date/Time ok (y/n): ✓ Target Batch: T112603i

BFB Time: 14:22 Surr/IS ID: CX-929 IS #1 Area: 406950 ICAL Batch: T112603i

Time	Lot No.	File ID	Can #	Comments	I/S	Pos	Vol* (ml)	Use	DUP
14:22	BFB	TBF1126	—	TUNE	—	16	100	✓	—
15:04	IC5	TIC5K26		CX-1087		STD	300	N	
15:46	IC4	TIC4K26				STD	150	N	
16:27	IC3	TIC3K26				STD	100	N	
17:09	IC2	TI2K26				STD	50	N	
17:51	IC1	TIC1K26	CWJ 12/2/03	CX-1089		1	500	N	
18:46	IC1B	TIC1K26B		CX-1089		1	500	N	
19:28	IC7	TIC7K26		CX-1090		1	250	✓	
20:10	IC6	TIC6K26				1	100	✓	
20:51	IC5B	TIC5K26B		CX-1087		STD	300	✓	
21:34	IC4B	TIC4K26B				STD	150	✓	
22:15	IC3B	TIC3K26B				STD	100	✓	
22:57	IC2B	TIC2K26B				STD	50	✓	
23:39	IC1C	TIC1K26C		CX-1090		1	500	✓	
00:21	ICV	TICVK26		CX-1031		2	100	✓	
1:03	ICVB	TICVK26B	✓	CX-1031	↓	2	100	N	✓

Failed #5 Criteria

CWJ 12/2/03

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

Analyst: CWJ Date: 12/2/03

031126
STL-Knoxville
TO-14 Autosampler Log
'MT'

Sample	Volume	Position	Date	Time
BFB	102ml	16	11/26/2003	2:23:02 PM
IC5	299ml	STD	11/26/2003	3:04:53 PM
IC4	150ml	STD	11/26/2003	3:46:48 PM
IC3	99ml	STD	11/26/2003	4:28:43 PM
IC2	50ml	STD	11/26/2003	5:10:40 PM
IC1	500ml	1	11/26/2003	5:52:38 PM
IC1B	501ml	1	11/26/2003	6:47:04 PM
IC7	251ml	1	11/26/2003	7:28:53 PM
IC6	100ml	1	11/26/2003	8:10:53 PM
IC5B	299ml	STD	11/26/2003	8:52:48 PM
IC4B	150ml	STD	11/26/2003	9:34:50 PM
IC3B	99ml	STD	11/26/2003	10:16:40 PM
IC2B	49ml	STD	11/26/2003	10:58:37 PM
IC1C	502ml	1	11/26/2003	11:40:19 PM
ICV	101ml	2	11/27/2003	12:22:05 AM
ICVB	101ml	2	11/27/2003	1:04:00 AM

OK mf
12/2/03

Data File: /var/chem/gcms/mt.i/T112603I.b/tbf1126.d

Date : 26-NOV-2003 14:22

Client ID:

Instrument: mt.i

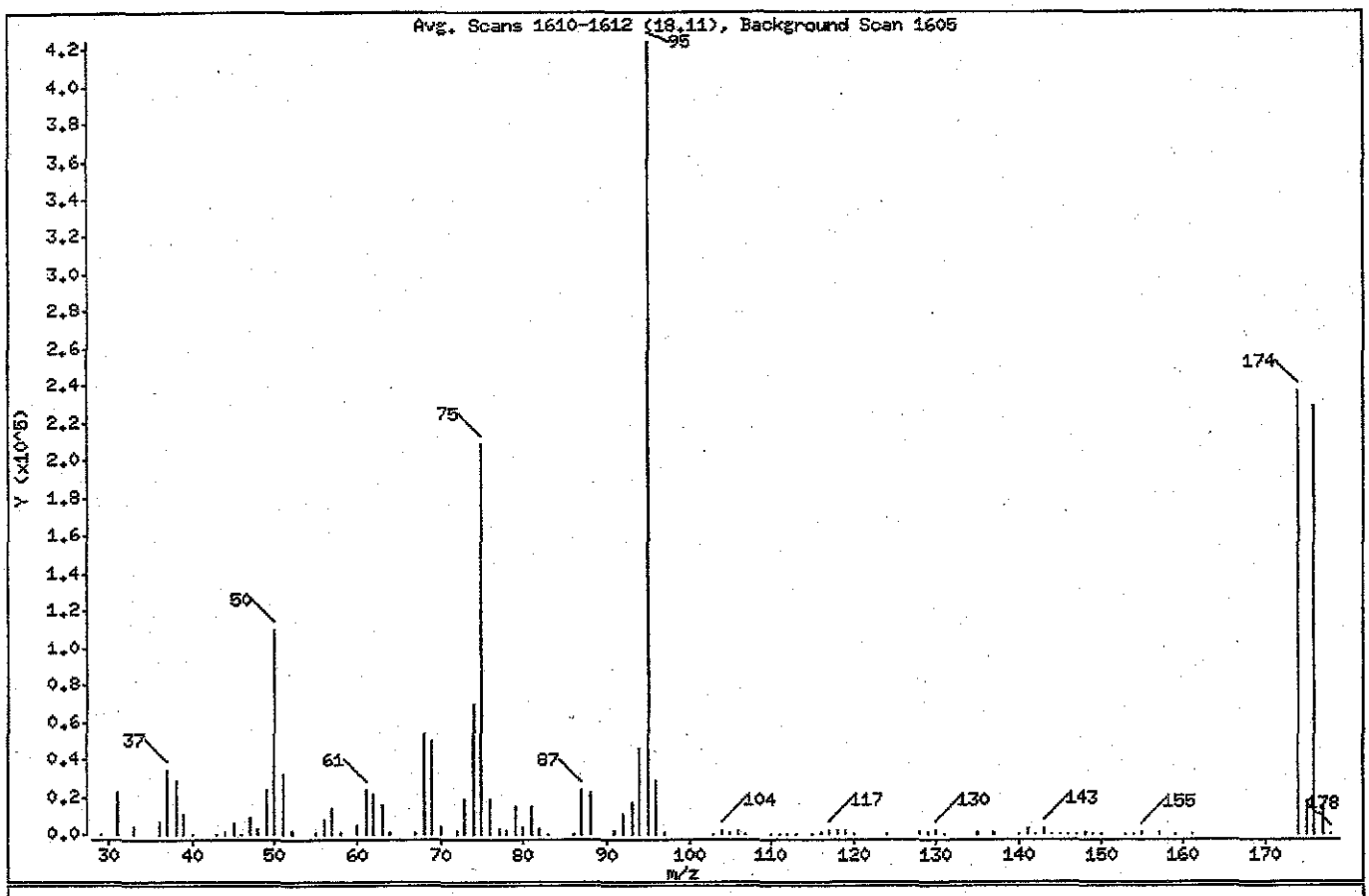
Sample Info: BFB,,3,,BFB

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	25.73
75	30.00 - 60.00% of mass 95	49.13
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	55.76
175	5.00 - 9.00% of mass 174	4.09 (7.33)
176	95.00 - 101.00% of mass 174	53.91 (96.69)
177	5.00 - 9.00% of mass 176	3.59 (6.67)

OK WJ
12/2/03

Data File: /var/chem/gcms/mt.i/T112603I.b/tbf1126.d

Date : 26-NOV-2003 14:22

Client ID: Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5 Column diameter: 0.32

Data File: tbf1126.d

Spectrum: Avg. Scans 1610-1612 (18.11), Background Scan 1605

Location of Maximum: 95.00

Number of points: 97

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	88	63.00	15489	95.00	424000	140.00	156
31.00	22952	64.00	1253	96.00	28352	141.00	3060
33.00	3868	67.00	1350	97.00	987	142.00	356
36.00	6566	68.00	53288	103.00	67	143.00	3098
37.00	33856	69.00	50040	104.00	1789	144.00	81
38.00	28520	70.00	3620	105.00	1361	145.00	200
39.00	10446	72.00	2364	106.00	1724	146.00	460
40.00	288	73.00	19040	107.00	407	147.00	186
43.00	320	74.00	69784	110.00	268	148.00	803
44.00	503	75.00	208256	111.00	288	149.00	180
45.00	5506	76.00	18200	112.00	170	150.00	188
46.00	260	77.00	2907	113.00	248	153.00	165
47.00	8716	78.00	2282	115.00	462	154.00	91
48.00	3341	79.00	14587	116.00	1425	155.00	814
49.00	23288	80.00	3672	117.00	2349	157.00	498
50.00	109080	81.00	14353	118.00	1536	159.00	297
51.00	32672	82.00	2757	119.00	1857	161.00	321
52.00	1466	83.00	186	120.00	160	174.00	236416
55.00	1436	86.00	463	124.00	175	175.00	17336
56.00	7764	87.00	23176	128.00	1358	176.00	228544
57.00	14114	88.00	22448	129.00	676	177.00	15240
58.00	681	91.00	1522	130.00	1563	178.00	388
60.00	4848	92.00	10668	131.00	466		
61.00	23064	93.00	16984	135.00	571		
62.00	21112	94.00	45720	137.00	538		

Data File: /var/chem/gcms/mt.i/T112603I.b/tbf1126.d

Date : 26-NOV-2003 14:22

Client ID:

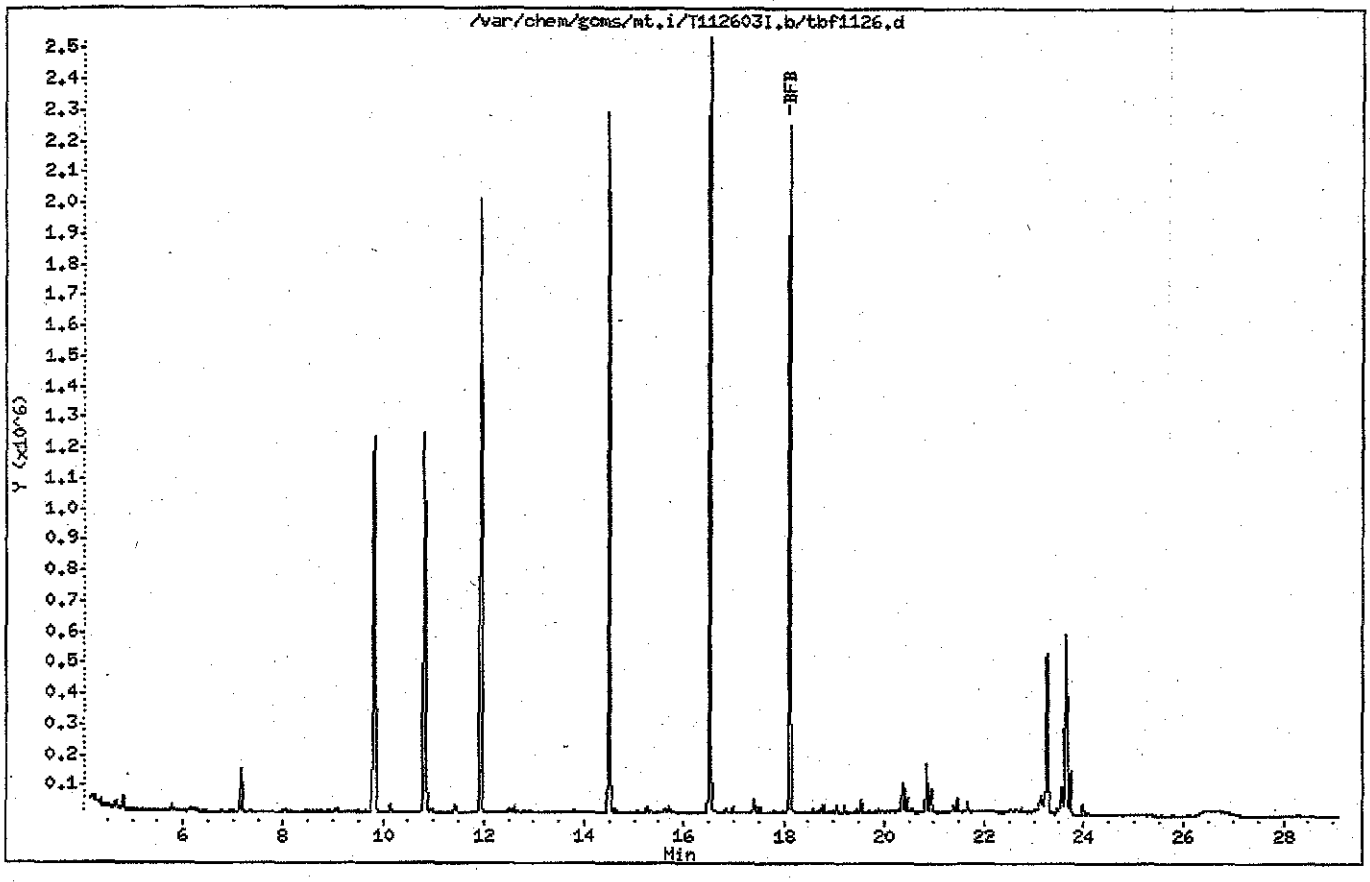
Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



OK Full list

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

OK wf 12/2/03

Calibration File Names:
Level 1: /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
Level 2: /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
Level 3: /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
Level 4: /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
Level 5: /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
Level 6: /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Level 7: /var/chem/gcms/mt.i/T112603I.b/tic7k26.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	3.05491	3.56583	3.39032	3.36948	3.27493	3.52733		
	3.34512						3.36113	5.036
8 Dichlorodifluoromethane	2.94633	3.28061	3.04492	2.97102	2.92237	3.58804		
	3.25543						3.14410	7.749
9 Chloromethane	0.45254	0.49506	0.45140	0.42803	0.38205	0.52556		
	0.54011						0.46782	11.947
10 1,2-Dichlorotetrafluoroethane	1.51185	1.69881	1.56457	1.51159	1.32603	1.57680		
	1.51566						1.52933	7.279
11 Vinyl Chloride	1.32403	1.52169	1.44114	1.40628	1.33837	1.45305		
	1.43881						1.41762	4.841
12 Methanol	0.55298	0.50777	0.48745	0.48280	0.47097	0.69900		
	+++++						0.53349	16.131

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
13 1,3-Butadiene	0.98488	1.10373	1.03409	0.98315	0.90359	1.08649		
	1.10353						1.02849	7.345
14 n-Butane	2.30550	2.58859	2.41868	2.26575	2.10565	2.79488		
	2.69642						2.45364	10.164
15 Bromomethane	1.21902	1.41904	1.34715	1.31829	1.18981	1.38216		
	1.32786						1.31476	6.320
16 Chloroethane	0.79255	0.94519	0.90431	0.88829	0.83337	0.90245		
	0.86814						0.87633	5.759
17 Trichlorofluoromethane	2.18296	2.53039	2.40991	2.33608	2.28494	2.49852		
	2.44862						2.38449	5.191
18 Acrolein	0.35695	0.35691	0.33129	0.31569	0.27517	0.38632		
	0.38418						0.34378	11.538
19 Acetonitrile	0.49179	0.49563	0.47749	0.46528	0.46348	0.57380		
	0.55571						0.50331	8.739
20 Acetone	0.55434	0.43303	0.40903	0.40518	0.38938	0.77684		<40%
	+++++						0.49463	30.448 <- ok wf 12/2/03
21 Pentane	0.30921	0.33259	0.31703	0.30270	0.29129	0.33477		
	0.33308						0.31724	5.373

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
22 Ethyl Ether	1.28748	1.23440	1.18528	1.14099	1.12922	1.39758		
	1.45640						1.26162	10.013
23 1,1-Dichloroethene	0.91399	1.09036	1.05031	1.01293	0.93437	0.96466		
	1.01271						0.99705	6.332
24 Acrylonitrile	0.64162	0.67321	0.66228	0.64903	0.63625	0.64187		
	0.68858						0.65612	2.946
25 1,1,2-Trichlorotrifluoroethan	1.98503	2.25586	2.11298	1.99856	1.77512	2.12424		
	2.14089						2.05610	7.490
26 Methylene Chloride	1.11689	1.10930	1.05274	1.02650	0.92483	1.54129		
	1.29558						1.15245	17.798
27 3-Chloropropene	0.96240	1.07587	1.05683	1.03329	1.04888	1.21602		
	1.19408						1.08391	8.332
28 Carbon Disulfide	3.89622	4.34087	4.13492	4.04693	3.70082	4.44437		
	4.29613						4.12289	6.389
29 trans-1,2-Dichloroethene	1.20030	1.42573	1.38138	1.34937	1.23879	1.27755		
	1.33006						1.31474	6.088
30 Methyl-t-Butyl Ether	2.34316	2.33926	2.24083	2.20066	2.09848	2.43382		
	2.58683						2.32044	6.919

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
31 1,1-Dichloroethane	2.44701	2.90082	2.81029	2.73092	2.61221	2.68132		
	2.75029						2.70469	5.398
32 Vinyl Acetate	2.94116	2.99951	2.88837	2.80321	2.77596	3.25382		
	3.43610						3.01402	8.105
33 2-Butanone	0.53094	0.51687	0.49577	0.48949	0.44932	0.52769		
	0.58189						0.51314	8.036
34 Hexane	1.21117	1.36617	1.28356	1.23813	1.13075	1.36592		
	1.40304						1.28553	7.682
35 cis 1,2-Dichloroethene	1.39241	1.72499	1.66244	1.61136	1.50606	1.43241		
	1.51609						1.54939	7.850
36 Chloroform	2.15812	2.56215	2.49437	2.46465	2.45594	2.60465		
	2.55587						2.47082	6.005
37 1,1,1-Trichloroethane	1.90706	2.25396	2.19434	2.15485	2.17570	2.27208		
	2.24175						2.17139	5.721
38 1,2-Dichloroethane	0.35540	0.39895	0.37263	0.36538	0.35111	0.42121		
	0.42151						0.38374	7.811
39 Benzene	0.85797	0.88505	0.76797	0.67705	0.49397	0.99952		
	0.97816						0.80853	22.092

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
40 1-Butanol	0.10095	0.17419	0.17067	0.16337	0.15618	0.13563		
	0.16834						0.15276	17.164
41 Cyclohexane	0.12918	0.13406	0.11656	0.10347	0.07695	0.14717		
	0.14702						0.12206	20.779
42 Carbon Tetrachloride	1.95232	2.30872	2.18166	2.08636	1.93019	2.48297		
	2.39379						2.19086	9.794
43 Heptane	0.66915	0.70977	0.63362	0.58111	0.48787	0.77202		
	0.78722						0.66297	16.032
44 1,2-Dichloropropane	0.31912	0.34299	0.30156	0.27765	0.22133	0.38129		
	0.36836						0.31604	17.515
45 Trichloroethene	0.36008	0.39198	0.35571	0.32329	0.25420	0.40220		
	0.39474						0.35460	14.728
46 Dibromomethane	0.31640	0.35812	0.32697	0.30243	0.25688	0.35952		
	0.36078						0.32587	11.746
47 Bromodichloromethane	0.60869	0.70662	0.65303	0.62080	0.53990	0.67325		
	0.71216						0.64492	9.415
48 4-Methyl-2-pentanone	0.61948	0.60615	0.55130	0.51550	0.43995	0.62313		
	0.70450						0.58000	14.798

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
49 cis-1,3-Dichloropropene	0.66051	0.75189	0.68947	0.64500	0.54772	0.72099		
	0.76976						0.68362	11.013
50 trans-1,3-Dichloropropene	0.46080	0.55399	0.52505	0.49887	0.45372	0.50897		
	0.50968						0.50158	6.992
51 Toluene	1.04827	1.06786	0.99527	0.92251	0.75550	1.22322		
	1.19893						1.03022	15.639
52 1,1,2-Trichloroethane	0.38068	0.42610	0.39670	0.36652	0.30803	0.40557		
	0.42040						0.38629	10.449
53 2-Hexanone	0.41781	0.41442	0.38699	0.35699	0.30336	0.39041		
	0.45846						0.38978	12.683
54 Octane	0.36286	0.40879	0.37232	0.33612	0.26219	0.39777		
	0.40833						0.36405	14.328
55 Dibromochloromethane	0.66037	0.76192	0.71377	0.65619	0.54865	0.71496		
	0.74220						0.68544	10.477
56 1,2-Dibromoethane	0.63944	0.67247	0.62294	0.57038	0.46512	0.77073		
	0.71282						0.63627	15.594
57 Tetrachloroethene	0.30004	0.32215	0.29414	0.26628	0.21091	0.35537		
	0.35542						0.30062	17.034

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
58 Chlorobenzene	0.87216	0.92109	0.84757	0.78461	0.63863	1.08853		
	0.99600						0.87837	16.569
59 Ethylbenzene	1.42527	1.45109	1.31837	1.22329	0.99432	1.70895		
	1.62097						1.39175	17.342
60 m-Xylene (For p-)	1.03171	1.04485	0.94614	0.87171	0.71969	1.32729		
	1.22937						1.02439	20.184
61 Bromoform	0.44079	0.47887	0.43667	0.40293	0.31049	0.47636		
	0.48590						0.43314	14.222
62 Nonane	0.86163	0.84549	0.70593	0.63268	0.47911	1.11527		
	1.03278						0.81041	27.523
63 Styrene	0.73301	0.82708	0.71832	0.64337	0.46956	0.76658		
	0.81470						0.71037	17.310
64 o-Xylene	1.05657	1.04294	0.92957	0.86100	0.70113	1.35993		
	1.26219						1.03047	22.074
65 1,1,2,2-Tetrachloroethane	0.95986	1.03975	0.93320	0.84138	0.66833	1.13941		
	1.11180						0.95624	17.149
66 1,2,3-Trichloropropane	0.29862	0.26490	0.25168	0.23596	0.20205	0.31819		
	0.33649						0.27256	17.502

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	0.50000 Level 7	RRF	% RSD
67 Cumene	1.42133	1.52365	1.35419	1.20418	0.92549	1.60749	1.59547	1.37597	17.766
68 n-Propylbenzene	1.94264	2.04880	1.77477	1.61829	1.24952	2.23500	2.22895	1.87114	18.980
69 4-Ethyltoluene	1.42954	1.62305	1.43252	1.27191	0.98438	1.72113	1.67936	1.44884	17.939
70 1,3,5-Trimethylbenzene	0.65717	0.66634	0.57652	0.51304	0.39075	0.85660	0.76704	0.63249	24.657
71 Alpha-Methylstyrene	0.52984	0.62582	0.56342	0.51451	0.39839	0.52527	0.58909	0.53519	13.471
72 Decane	0.97526	1.07795	0.89847	0.77521	0.55410	1.24999	1.20165	0.96180	25.443
73 1,2,4-Trimethylbenzene	1.13962	1.15514	1.01098	0.90037	0.69978	1.58754	1.42301	1.13092	26.721
74 1,3-Dichlorobenzene	0.79387	0.89532	0.79969	0.70166	0.52467	0.89205	0.87003	0.78247	16.973
75 Benzyl Chloride	1.16144	1.11659	0.95328	0.83793	0.61070	1.62692	1.45445	1.10876	31.597 <-

<40% OK
cwf
12/2/03

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	RRF	% RSD
	0.50000 Level 7							
76 1,4-Dichlorobenzene	0.75490	0.83963	0.71531	0.61450	0.43193	0.90432		
	0.83773						0.72833	22.211
77 1,2-Dichlorobenzene	0.75215	0.86751	0.76212	0.67556	0.50662	0.81729		
	0.81482						0.74230	16.227
78 Undecane	0.74336	1.17993	0.95549	0.82228	0.57981	1.09984		
	1.04104						0.91739	23.220
79 Dodecane	0.45380	1.10276	0.88174	0.78206	0.55834	0.94782		
	0.75068						0.78246	28.532
80 1,2,4-Trichlorobenzene	0.44431	0.54240	0.48515	0.44907	0.34629	0.78391		
	0.55785						0.51557	26.688
81 Napthalene	0.98462	1.76590	1.57029	1.43719	1.08605	0.98326		
	1.04988						1.26817	25.142
82 Hexachlorobutadiene	0.23478	0.29815	0.26654	0.24658	0.17768	0.22523		
	0.24632						0.24218	15.325
133 2,3-Dimethyl butane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
134 a-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Report Date : 27-Nov-2003 16:23

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 26-NOV-2003 19:28
End Cal Date : 26-NOV-2003 23:39
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mt.i/T112603I.b/LA.m
Cal Date : 27-Nov-2003 16:22 jarmanc
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	15.000 Level 4	30.000 Level 5	0.20000 Level 6	___ RRF	% RSD
	0.50000 Level 7							
135 Camphene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
136 b-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
137 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
138 d-Limonene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
139 4-tert-Butyltoluene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
140 Camphor	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 4 1,2-Dichloroethane-d4	0.17844	0.17627	0.17439	0.17685	0.18342	0.19026		
	0.18901						0.18123	3.528
$ 5 Toluene-d8	0.94453	0.92211	0.91766	0.89154	0.85996	0.96749		
	0.96520						0.92407	4.240
$ 6 4-Bromofluorobenzene	0.61005	0.57636	0.55484	0.53810	0.50385	0.64448		
	0.63166						0.57990	8.886

Report Date:11/27/2003

INITIAL CALIBRATION RT and RRT REPORT

STD 1 = /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
STD 2 = /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
STD 3 = /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
STD 4 = /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
STD 5 = /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
STD 6 = /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
STD 7 = /var/chem/gcms/mt.i/T112603I.b/tic7k26.d

OK ww 12/2/03

COMPOUND	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	STD 7	MEAN
Bromochloromethane	9.825	9.830	9.828	9.837	9.835	9.820	9.824	9.828
1,4-Difluorobenzene	11.941	11.946	11.944	11.944	11.951	11.936	11.941	11.943
Chlorobenzene-d5	16.520	16.516	16.524	16.523	16.521	16.515	16.520	16.520
1,2-Dichloroethane-d4	0.906	0.906	0.906	0.907	0.907	0.906	0.906	0.906
Toluene-d8	0.877	0.877	0.877	0.877	0.878	0.877	0.877	0.877
4-Bromofluorobenzene	1.096	1.097	1.096	1.096	1.097	1.097	1.096	1.096
Dichlorodifluoromethane	0.437	0.436	0.437	0.437	0.436	0.437	0.437	0.437
Chlorodifluoromethane	0.429	0.429	0.429	0.429	0.428	0.429	0.429	0.429
1,2-Dichlorotetrafluoroethan	0.461	0.460	0.460	0.460	0.459	0.460	0.460	0.460
Chloromethane	0.459	0.458	0.458	0.458	0.458	0.459	0.459	0.458
Vinyl Chloride	0.480	0.479	0.479	0.479	0.479	0.480	0.479	0.479
n-Butane	0.491	0.490	0.491	0.490	0.490	0.490	0.491	0.490
1,3-Butadiene	0.491	0.490	0.490	0.490	0.490	0.490	0.490	0.490
Bromomethane	0.529	0.529	0.529	0.528	0.528	0.528	0.529	0.528
Chloroethane	0.546	0.546	0.546	0.545	0.546	0.546	0.545	0.546
Trichlorofluoromethane	0.612	0.612	0.613	0.611	0.612	0.612	0.612	0.612
Pentane	0.638	0.637	0.638	0.638	0.638	0.638	0.637	0.638
1,1-Dichloroethene	0.692	0.691	0.691	0.690	0.691	0.691	0.691	0.691
1,1,2-Trichlorotrifluoroetha	0.712	0.711	0.712	0.712	0.712	0.712	0.712	0.712
Carbon Disulfide	0.748	0.747	0.748	0.747	0.747	0.747	0.748	0.747
3-Chloropropene	0.732	0.731	0.732	0.731	0.732	0.732	0.732	0.732
Methylene Chloride	0.729	0.729	0.729	0.728	0.729	0.730	0.729	0.729
trans-1,2-Dichloroethene	0.817	0.816	0.817	0.817	0.817	0.817	0.816	0.817
Hexane	0.925	0.925	0.925	0.924	0.925	0.926	0.925	0.925
1,1-Dichloroethane	0.862	0.862	0.862	0.862	0.862	0.862	0.862	0.862
cis 1,2-Dichloroethene	0.966	0.966	0.966	0.966	0.966	0.966	0.966	0.966
Chloroform	1.001	1.001	1.002	1.001	1.002	1.002	1.001	1.001
1,1,1-Trichloroethane	1.107	1.107	1.107	1.106	1.107	1.108	1.107	1.107
Cyclohexane	0.959	0.958	0.958	0.958	0.958	0.958	0.958	0.958
Carbon Tetrachloride	1.166	1.166	1.167	1.166	1.167	1.167	1.166	1.166
Benzene	0.958	0.957	0.958	0.958	0.957	0.958	0.958	0.958
1,2-Dichloroethane	0.919	0.919	0.919	0.919	0.919	0.919	0.919	0.919
Heptane	1.048	1.047	1.048	1.048	1.048	1.048	1.048	1.048
Trichloroethene	1.057	1.057	1.057	1.057	1.057	1.057	1.057	1.057
1,2-Dichloropropane	1.054	1.054	1.054	1.054	1.054	1.055	1.054	1.054
Dibromomethane	1.063	1.063	1.063	1.063	1.063	1.063	1.063	1.063
Bromodichloromethane	1.074	1.074	1.074	1.075	1.074	1.075	1.074	1.074
cis-1,3-Dichloropropene	1.155	1.155	1.155	1.155	1.154	1.155	1.155	1.155
Toluene	0.883	0.884	0.883	0.883	0.884	0.884	0.883	0.883

Evaluation Criteria
Internal Standard RT shift within 20 seconds of mean RT
Target compound RRT within 0.06 RRT of the RRT mean
Note: IS data is RT, SS and Target Compound Data is RRT.

Report Date:11/27/2003

INITIAL CALIBRATION RT and RRT REPORT

STD 1 = /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
STD 2 = /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
STD 3 = /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
STD 4 = /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
STD 5 = /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
STD 6 = /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
STD 7 = /var/chem/gcms/mt.i/T112603I.b/tic7k26.d

COMPOUND	STD 1	STD 2	STD 3	STD 4	STD 5	STD 6	STD 7	MEAN
Octane	0.923	0.924	0.923	0.923	0.924	0.924	0.923	0.923
trans-1,3-Dichloropropene	0.875	0.876	0.875	0.875	0.876	0.876	0.875	0.875
1,1,2-Trichloroethane	0.887	0.888	0.887	0.887	0.888	0.888	0.887	0.887
Tetrachloroethene	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951
Dibromochloromethane	0.929	0.929	0.929	0.929	0.930	0.929	0.929	0.929
1,2-Dibromoethane	0.946	0.947	0.946	0.946	0.947	0.946	0.946	0.946
Chlorobenzene	1.003	1.003	1.003	1.003	1.003	1.003	1.003	1.003
Ethylbenzene	1.020	1.020	1.020	1.020	1.020	1.020	1.020	1.020
m-Xylene (For p-)	1.029	1.029	1.029	1.029	1.029	1.029	1.029	1.029
Nonane	1.054	1.054	1.054	1.054	1.054	1.054	1.054	1.054
o-Xylene	1.061	1.061	1.061	1.061	1.061	1.061	1.061	1.061
Styrene	1.057	1.057	1.057	1.057	1.058	1.057	1.057	1.057
Bromoform	1.056	1.056	1.056	1.056	1.057	1.056	1.056	1.056
Cumene	1.095	1.095	1.095	1.095	1.096	1.095	1.095	1.095
1,1,2,2-Tetrachloroethane	1.079	1.079	1.079	1.079	1.080	1.079	1.079	1.079
n-Propylbenzene	1.125	1.125	1.125	1.125	1.126	1.126	1.125	1.125
1,3,5-Trimethylbenzene	1.138	1.138	1.138	1.138	1.138	1.138	1.138	1.138
Decane	1.154	1.154	1.154	1.154	1.155	1.154	1.154	1.154
Alpha-Methylstyrene	1.151	1.151	1.151	1.151	1.151	1.151	1.151	1.151
1,2,4-Trimethylbenzene	1.163	1.163	1.163	1.163	1.164	1.163	1.163	1.163
1,3-Dichlorobenzene	1.178	1.179	1.179	1.179	1.180	1.179	1.179	1.179
1,4-Dichlorobenzene	1.184	1.184	1.184	1.184	1.185	1.184	1.184	1.184
Benzyl Chloride	1.183	1.183	1.183	1.183	1.183	1.183	1.183	1.183
1,2-Dichlorobenzene	1.205	1.205	1.205	1.205	1.205	1.205	1.205	1.205
Undecane	1.231	1.231	1.230	1.231	1.231	1.231	1.231	1.231
Dodecane	1.298	1.299	1.298	1.299	1.299	1.299	1.299	1.299
1,2,4-Trichlorobenzene	1.311	1.312	1.311	1.311	1.312	1.312	1.311	1.311
Hexachlorobutadiene	1.335	1.336	1.335	1.335	1.335	1.336	1.335	1.335
Napthalene	1.321	1.321	1.321	1.321	1.321	1.321	1.321	1.321
Methanol	0.475	0.474	0.474	0.474	0.474	0.475	NA	0.474
Ethyl Ether	0.656	0.655	0.655	0.654	0.655	0.657	0.657	0.656
Acetone	0.627	0.625	0.626	0.625	0.626	0.627	NA	0.626
Acrylonitrile	0.702	0.703	0.703	0.702	0.704	0.702	0.702	0.702
Vinyl Acetate	0.873	0.873	0.873	0.873	0.874	0.874	0.873	0.873
2-Butanone	0.920	0.919	0.920	0.919	0.920	0.922	0.920	0.920
1-Butanol	0.950	0.949	0.950	0.950	0.951	0.951	0.950	0.950
4-Methyl-2-pentanone	1.150	1.150	1.150	1.150	1.150	1.151	1.150	1.150
2-Hexanone	0.909	0.910	0.909	0.909	0.910	0.910	0.910	0.910
Methyl-t-Butyl Ether	0.831	0.830	0.830	0.829	0.830	0.832	0.831	0.830

Evaluation Criteria
Internal Standard RT shift within 20 seconds of mean RT
Target compound RRT within 0.06 RRT of the RRT mean
Note: IS data is RT, SS and Target Compound Data is RRT.

Data File: /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Lab Smp Id: IC6 Client Smp ID: 0.2PPBV
Inj Date : 26-NOV-2003 20:10
Operator : 0691 Inst ID: mt.i
Smp Info : IC6,,1,6,,0.2PPBV
Misc Info : T112603I,LA,,,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 20:10 Cal File: tic6k26.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

OK WJ 12/2/03

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	9.820	9.828	(1.000)	363235	10.0000	
* 2 1,4-Difluorobenzene	114	11.936	11.944	(1.000)	1738432	10.0000	
* 3 Chlorobenzene-d5	117	16.515	16.524	(1.000)	1551770	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.817	10.826	(0.906)	330760	10.0000	10.50
$ 5 Toluene-d8	98	14.485	14.494	(0.877)	1501315	10.0000	10.64
$ 6 4-Bromofluorobenzene	95	18.111	18.119	(1.097)	1000087	10.0000	11.50
7 Chlorodifluoromethane	51	4.217	4.217	(0.429)	25625	0.20000	0.2081
8 Dichlorodifluoromethane	85	4.295	4.295	(0.437)	26066	0.20000	0.2292
9 Chloromethane	52	4.512	4.503	(0.459)	3818	0.20000	0.2353
10 1,2-Dichlorotetrafluoroethane	135	4.521	4.521	(0.460)	11455	0.20000	0.2110
11 Vinyl Chloride	62	4.711	4.711	(0.480)	10556	0.20000	0.2061
12 Methanol	31	4.668	4.659	(0.475)	20312	0.80000	1.045
13 1,3-Butadiene	54	4.815	4.815	(0.490)	7893	0.20000	0.2169
14 n-Butane	43	4.815	4.824	(0.490)	20304	0.20000	0.2333
15 Bromomethane	94	5.188	5.197	(0.528)	10041	0.20000	0.2111
16 Chloroethane	64	5.362	5.362	(0.546)	6556	0.20000	0.2046
17 Trichlorofluoromethane	101	6.012	6.021	(0.612)	18151	0.20000	0.2098
18 Acrolein	56	6.021	6.021	(0.613)	5613	0.40000	0.4724
19 Acetonitrile	40	6.090	6.099	(0.620)	8337	0.40000	0.4637
20 Acetone	58	6.160	6.151	(0.627)	11287	0.40000	0.6276
21 Pentane	57	6.264	6.272	(0.638)	2432	0.20000	0.2150

Data File: /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Report Date: 27-Nov-2003 16:22

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	6.455	6.437	(0.657)	20306	0.40000	0.4608
23 1,1-Dichloroethene	96	6.784	6.793	(0.691)	7008	0.20000	0.1948
24 Acrylonitrile	53	6.897	6.906	(0.702)	9326	0.40000	0.3966
25 1,1,2-Trichlorotrifluoroethane	101	6.992	7.001	(0.712)	15432	0.20000	0.2121
26 Methylene Chloride	84	7.166	7.166	(0.730)	11197	0.20000	0.2713
27 3-Chloropropene	39	7.183	7.192	(0.732)	8834	0.20000	0.2234
28 Carbon Disulfide	76	7.339	7.348	(0.747)	32287	0.20000	0.2178
29 trans-1,2-Dichloroethene	96	8.024	8.033	(0.817)	9281	0.20000	0.1948
30 Methyl-t-Butyl Ether	73	8.172	8.154	(0.832)	35362	0.40000	0.4339
31 1,1-Dichloroethane	63	8.467	8.475	(0.862)	19479	0.20000	0.1980
32 Vinyl Acetate	43	8.579	8.579	(0.874)	47276	0.40000	0.4442
33 2-Butanone	72	9.056	9.039	(0.922)	7667	0.40000	0.4303
34 Hexane	56	9.091	9.091	(0.926)	9923	0.20000	0.2177
35 cis 1,2-Dichloroethene	96	9.481	9.499	(0.966)	10406	0.20000	0.1845
36 Chloroform	83	9.837	9.846	(1.002)	18922	0.20000	0.2080
37 1,1,1-Trichloroethane	97	10.878	10.878	(1.108)	16506	0.20000	0.2066
38 1,2-Dichloroethane	62	10.964	10.973	(0.919)	14645	0.20000	0.2231
39 Benzene	78	11.433	11.441	(0.958)	34752	0.20000	0.2721
40 1-Butanol	31	11.355	11.346	(0.951)	9431	0.40000	0.3467
41 Cyclohexane	69	11.433	11.441	(0.958)	5117	0.20000	0.2651
42 Carbon Tetrachloride	117	11.459	11.467	(1.167)	18038	0.20000	0.2288
43 Heptane	43	12.508	12.517	(1.048)	26842	0.20000	0.2496
44 1,2-Dichloropropane	63	12.595	12.595	(1.055)	13257	0.20000	0.2581
45 Trichloroethene	130	12.621	12.621	(1.057)	13984	0.20000	0.2409
46 Dibromomethane	93	12.690	12.699	(1.063)	12500	0.20000	0.2309
47 Bromodichloromethane	83	12.829	12.829	(1.075)	23408	0.20000	0.2166
48 4-Methyl-2-pentanone	43	13.740	13.731	(1.151)	43331	0.40000	0.4681
49 cis-1,3-Dichloropropene	75	13.792	13.792	(1.155)	25068	0.20000	0.2216
50 trans-1,3-Dichloropropene	75	14.459	14.459	(0.876)	15796	0.20000	0.2050
51 Toluene	91	14.598	14.598	(0.884)	37963	0.20000	0.2511
52 1,1,2-Trichloroethane	97	14.659	14.659	(0.888)	12587	0.20000	0.2197
53 2-Hexanone	58	15.023	15.023	(0.910)	24233	0.40000	0.4345
54 Octane	85	15.257	15.257	(0.924)	12345	0.20000	0.2325
55 Dibromochloromethane	129	15.344	15.344	(0.929)	22189	0.20000	0.2172
56 1,2-Dibromoethane	107	15.630	15.639	(0.946)	23920	0.20000	0.2538
57 Tetrachloroethene	129	15.708	15.708	(0.951)	11029	0.20000	0.2523
58 Chlorobenzene	112	16.567	16.567	(1.003)	33783	0.20000	0.2592
59 Ethylbenzene	91	16.844	16.853	(1.020)	53038	0.20000	0.2607
60 m-Xylene (For p-)	91	17.001	17.001	(1.029)	41193	0.20000	0.2747
61 Bromoform	173	17.443	17.451	(1.056)	14784	0.20000	0.2343
62 Nonane	57	17.408	17.408	(1.054)	34613	0.20000	0.3042
63 Styrene	104	17.460	17.469	(1.057)	23791	0.20000	0.2361
64 o-Xylene	91	17.521	17.530	(1.061)	42206	0.20000	0.2825
65 1,1,2,2-Tetrachloroethane	83	17.824	17.824	(1.079)	35362	0.20000	0.2544
66 1,2,3-Trichloropropane	110	17.981	17.989	(1.089)	9875	0.20000	0.2526
67 Cumene	105	18.085	18.093	(1.095)	49889	0.20000	0.2526
68 n-Propylbenzene	91	18.588	18.596	(1.125)	69364	0.20000	0.2600

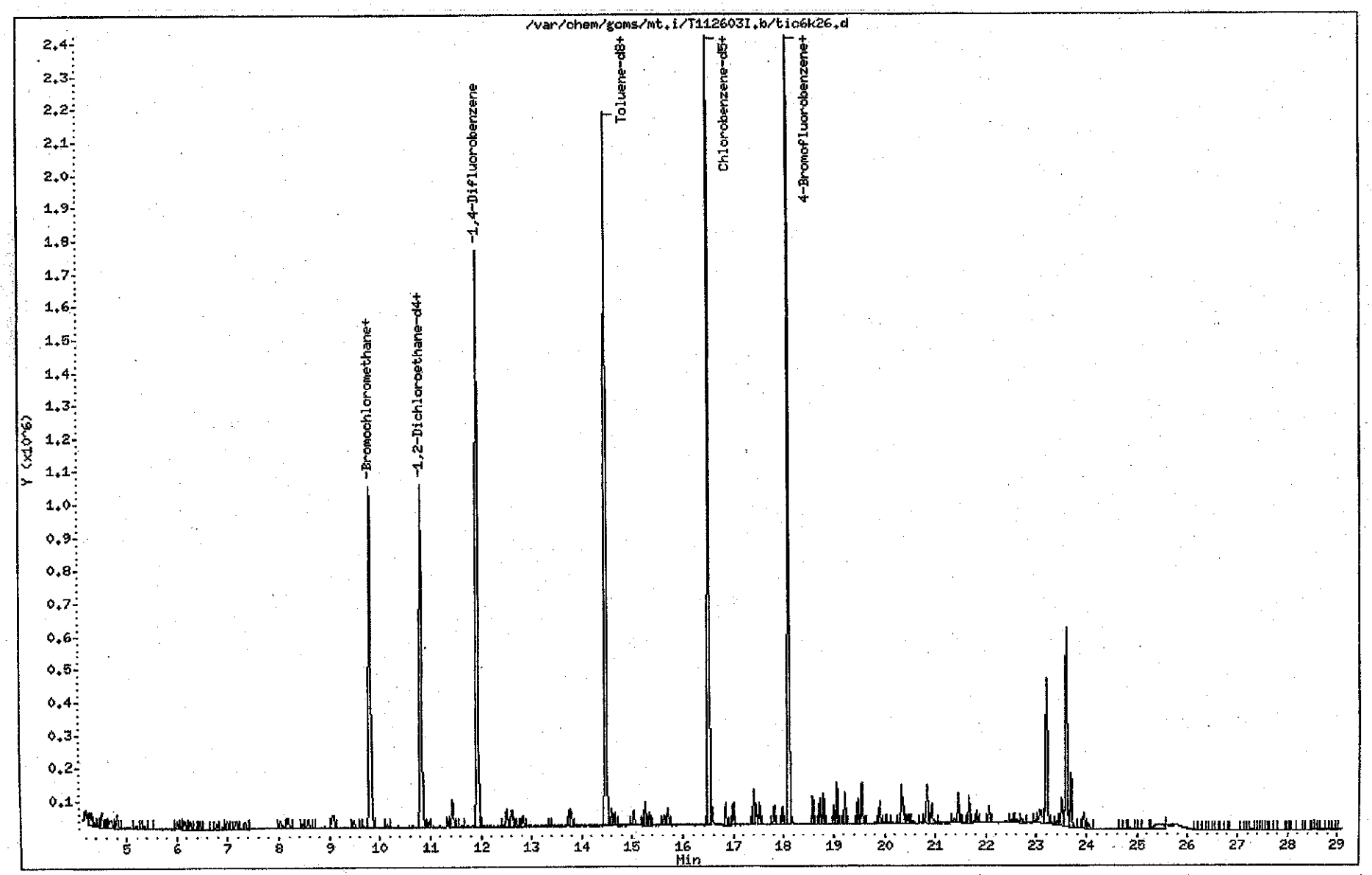
Data File: /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Report Date: 27-Nov-2003 16:22

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	18.726	18.735	(1.134)	53416	0.20000	0.2545
70 1,3,5-Trimethylbenzene	120	18.796	18.804	(1.138)	26585	0.20000	0.2932
71 Alpha-Methylstyrene	118	19.013	19.013	(1.151)	16302	0.20000	0.2093
72 Decane	57	19.065	19.073	(1.154)	38794	0.20000	0.2875
73 1,2,4-Trimethylbenzene	105	19.212	19.221	(1.163)	49270	0.20000	0.3025
74 1,3-Dichlorobenzene	146	19.472	19.481	(1.179)	27685	0.20000	0.2446
75 Benzyl Chloride	91	19.542	19.542	(1.183)	50492	0.20000	0.3230
76 1,4-Dichlorobenzene	146	19.559	19.559	(1.184)	28066	0.20000	0.2714
77 1,2-Dichlorobenzene	146	19.906	19.906	(1.205)	25365	0.20000	0.2368
78 Undecane	57	20.331	20.331	(1.231)	34134	0.20000	0.2545
79 Dodecane	57	21.450	21.450	(1.299)	29416	0.20000	0.2392
80 1,2,4-Trichlorobenzene	180	21.666	21.666	(1.312)	24329	0.20000	0.3038
81 Napthalene	128	21.822	21.823	(1.321)	30516	0.20000	0.1549
82 Hexachlorobutadiene	225	22.065	22.065	(1.336)	6990	0.20000	0.1967

Data File: /var/chem/gcms/mt.i/T112603I.b/tic6k26.d
Date : 26-NOV-2003 20:10
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/T112603I.b/tic7k26.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic7k26.d
Lab Smp Id: IC7 Client Smp ID: 0.5PPBV
Inj Date : 26-NOV-2003 19:28
Operator : 0691 Inst ID: mt.i
Smp Info : IC7,,1,7,,0.5PPBV
Misc Info : T112603I,LA,,,,,250ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 19:28 Cal File: tic7k26.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

OK cwf 12/2/03

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	9.825	9.828	(1.000)	372405	10.0000	
* 2 1,4-Difluorobenzene	114	11.941	11.944	(1.000)	1753809	10.0000	
* 3 Chlorobenzene-d5	117	16.520	16.524	(1.000)	1572352	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.822	10.826	(0.906)	331490	10.0000	10.34
$ 5 Toluene-d8	98	14.482	14.494	(0.877)	1517636	10.0000	10.49
$ 6 4-Bromofluorobenzene	95	18.116	18.119	(1.097)	993186	10.0000	10.99
7 Chlorodifluoromethane	51	4.213	4.217	(0.429)	62287	0.50000	0.4946
8 Dichlorodifluoromethane	85	4.291	4.295	(0.437)	60617	0.50000	0.5157
9 Chloromethane	52	4.508	4.503	(0.459)	10057	0.50000	0.5802
10 1,2-Dichlorotetrafluoroethane	135	4.517	4.521	(0.460)	28222	0.50000	0.5056
11 Vinyl Chloride	62	4.708	4.711	(0.479)	26791	0.50000	0.5082
12 Methanol	31	4.664	4.659	(0.475)	45397	2.00000	2.278
13 1,3-Butadiene	54	4.812	4.815	(0.490)	20548	0.50000	0.5398
14 n-Butane	43	4.820	4.824	(0.491)	50208	0.50000	0.5489
15 Bromomethane	94	5.193	5.197	(0.529)	24725	0.50000	0.5056
16 Chloroethane	64	5.358	5.362	(0.545)	16165	0.50000	0.4936
17 Trichlorofluoromethane	101	6.017	6.021	(0.612)	45594	0.50000	0.5111
18 Acrolein	56	6.017	6.021	(0.612)	14307	1.00000	1.135
19 Acetonitrile	40	6.095	6.099	(0.620)	20695	1.00000	1.096
20 Acetone	58	6.156	6.151	(0.627)	23516	1.00000	1.275
21 Pentane	57	6.260	6.272	(0.637)	6202	0.50000	0.5274

Data File: /var/chem/gcms/mt.i/T112603I.b/tic7k26.d
Report Date: 27-Nov-2003 16:22

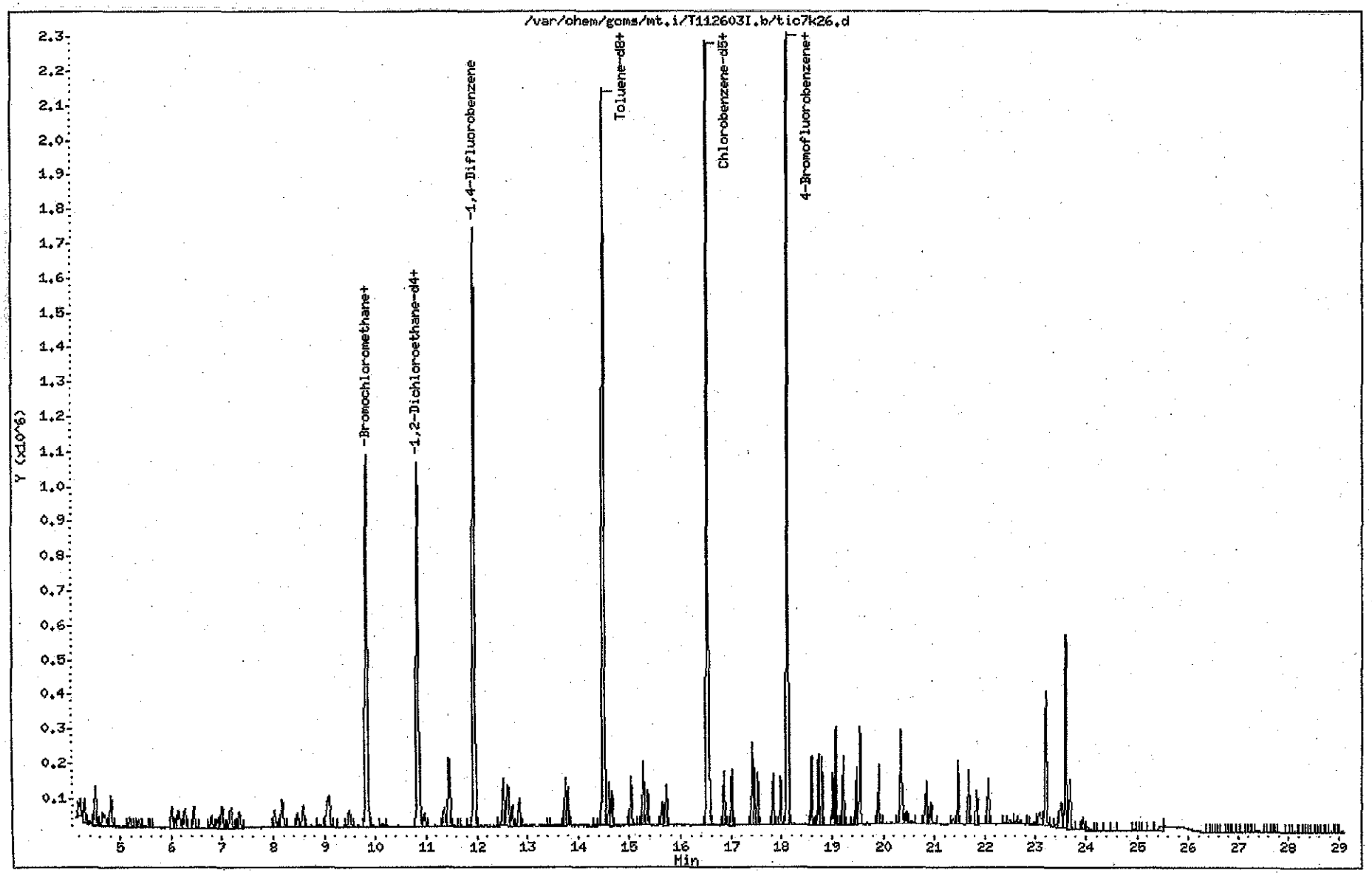
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.451	6.437	(0.657)	54237	1.00000	1.154
23 1,1-Dichloroethene	96	6.789	6.793	(0.691)	18857	0.50000	0.5089
24 Acrylonitrile	53	6.902	6.906	(0.702)	25643	1.00000	1.050
25 1,1,2-Trichlorotrifluoroethane	101	6.997	7.001	(0.712)	39864	0.50000	0.5272
26 Methylene Chloride	84	7.162	7.166	(0.729)	24124	0.50000	0.5545
27 3-Chloropropene	39	7.188	7.192	(0.732)	22234	0.50000	0.5380
28 Carbon Disulfide	76	7.344	7.348	(0.748)	79995	0.50000	0.5208
29 trans-1,2-Dichloroethene	96	8.021	8.033	(0.816)	24766	0.50000	0.5056
30 Methyl-t-Butyl Ether	73	8.168	8.154	(0.831)	96335	1.00000	1.119
31 1,1-Dichloroethane	63	8.472	8.475	(0.862)	51211	0.50000	0.5061
32 Vinyl Acetate	43	8.576	8.579	(0.873)	127962	1.00000	1.133
33 2-Butanone	72	9.044	9.039	(0.921)	21670	1.00000	1.144
34 Hexane	56	9.087	9.091	(0.925)	26125	0.50000	0.5462
35 cis 1,2-Dichloroethene	96	9.486	9.499	(0.966)	28230	0.50000	0.4904
36 Chloroform	83	9.833	9.846	(1.001)	47591	0.50000	0.5081
37 1,1,1-Trichloroethane	97	10.874	10.878	(1.107)	41742	0.50000	0.5077
38 1,2-Dichloroethane	62	10.969	10.973	(0.919)	36962	0.50000	0.5455
39 Benzene	78	11.438	11.441	(0.958)	85775	0.50000	0.6244
40 1-Butanol	31	11.342	11.346	(0.950)	29523	1.00000	1.060
41 Cyclohexane	69	11.446	11.441	(0.959)	12892	0.50000	0.6217
42 Carbon Tetrachloride	117	11.455	11.467	(1.166)	44573	0.50000	0.5404
43 Heptane	43	12.513	12.517	(1.048)	69032	0.50000	0.6034
44 1,2-Dichloropropane	63	12.591	12.595	(1.054)	32302	0.50000	0.5941
45 Trichloroethene	130	12.617	12.621	(1.057)	34615	0.50000	0.5704
46 Dibromomethane	93	12.695	12.699	(1.063)	31637	0.50000	0.5614
47 Bromodichloromethane	83	12.825	12.829	(1.074)	62450	0.50000	0.5565
48 4-Methyl-2-pentanone	43	13.736	13.731	(1.150)	123555	1.00000	1.243
49 cis-1,3-Dichloropropene	75	13.788	13.792	(1.155)	67501	0.50000	0.5705
50 trans-1,3-Dichloropropene	75	14.456	14.459	(0.875)	40070	0.50000	0.5104
51 Toluene	91	14.594	14.598	(0.883)	94257	0.50000	0.5882
52 1,1,2-Trichloroethane	97	14.655	14.659	(0.887)	33051	0.50000	0.5540
53 2-Hexanone	58	15.028	15.023	(0.910)	72086	1.00000	1.209
54 Octane	85	15.254	15.257	(0.923)	32102	0.50000	0.5746
55 Dibromochloromethane	129	15.340	15.344	(0.929)	58350	0.50000	0.5496
56 1,2-Dibromoethane	107	15.635	15.639	(0.946)	56040	0.50000	0.5672
57 Tetrachloroethene	129	15.705	15.708	(0.951)	27942	0.50000	0.5995
58 Chlorobenzene	112	16.563	16.567	(1.003)	78303	0.50000	0.5717
59 Ethylbenzene	91	16.849	16.853	(1.020)	127437	0.50000	0.5902
60 m-Xylene (For p-)	91	16.997	17.001	(1.029)	96650	0.50000	0.6033
61 Bromoform	173	17.448	17.451	(1.056)	38200	0.50000	0.5751
62 Nonane	57	17.413	17.408	(1.054)	81195	0.50000	0.6511
63 Styrene	104	17.456	17.469	(1.057)	64050	0.50000	0.5968
64 o-Xylene	91	17.526	17.530	(1.061)	99230	0.50000	0.6170
65 1,1,2,2-Tetrachloroethane	83	17.821	17.824	(1.079)	87407	0.50000	0.5921
66 1,2,3-Trichloropropane	110	17.977	17.989	(1.088)	26454	0.50000	0.6257
67 Cumene	105	18.090	18.093	(1.095)	125432	0.50000	0.5965
68 n-Propylbenzene	91	18.593	18.596	(1.125)	175235	0.50000	0.6119

Data File: /var/chem/gcms/mt.i/T112603I.b/tic7k26.d
Report Date: 27-Nov-2003 16:22

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	18.731	18.735	(1.134)	132027	0.50000	0.5922
70 1,3,5-Trimethylbenzene	120	18.801	18.804	(1.138)	60303	0.50000	0.6178
71 Alpha-Methylstyrene	118	19.009	19.013	(1.151)	46313	0.50000	0.5685
72 Decane	57	19.070	19.073	(1.154)	94471	0.50000	0.6420
73 1,2,4-Trimethylbenzene	105	19.217	19.221	(1.163)	111874	0.50000	0.6328
74 1,3-Dichlorobenzene	146	19.477	19.481	(1.179)	68400	0.50000	0.5742
75 Benzyl Chloride	91	19.538	19.542	(1.183)	114345	0.50000	0.6631
76 1,4-Dichlorobenzene	146	19.555	19.559	(1.184)	65860	0.50000	0.5977
77 1,2-Dichlorobenzene	146	19.902	19.906	(1.205)	64059	0.50000	0.5696
78 Undecane	57	20.336	20.331	(1.231)	81844	0.50000	0.5786
79 Dodecane	57	21.455	21.450	(1.299)	59017	0.50000	0.4787
80 1,2,4-Trichlorobenzene	180	21.663	21.666	(1.311)	43857	0.50000	0.5319
81 Napthalene	128	21.827	21.823	(1.321)	82539	0.50000	0.4284
82 Hexachlorobutadiene	225	22.062	22.065	(1.335)	19365	0.50000	0.5298

Data File: /var/chem/gcms/mt.i/T112603I.b/tic7k26.d
Date : 26-NOV-2003 19:28
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/T112603I.b/tic1k26c.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
Lab Smp Id: IC1 Client Smp ID: 1PPBV
Inj Date : 26-NOV-2003 23:39
Operator : 0691 Inst ID: mt.i
Smp Info : IC1,,1,1,,1PPBV
Misc Info : T112603I,LA,,,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.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

OK wd 12/2/03

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	9.825	9.828	(1.000)	469876	10.0000	
* 2 1,4-Difluorobenzene	114	11.941	11.944	(1.000)	2161556	10.0000	
* 3 Chlorobenzene-d5	117	16.520	16.524	(1.000)	1923628	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.822	10.826	(0.906)	385707	10.0000	9.846
$ 5 Toluene-d8	98	14.482	14.494	(0.877)	1816923	10.0000	10.22
$ 6 4-Bromofluorobenzene	95	18.116	18.119	(1.097)	1173511	10.0000	10.52
7 Chlorodifluoromethane	51	4.213	4.217	(0.429)	143543	1.00000	0.9089
8 Dichlorodifluoromethane	85	4.292	4.295	(0.437)	138441	1.00000	0.9371
9 Chloromethane	52	4.508	4.503	(0.459)	21264	1.00000	0.9673
10 1,2-Dichlorotetrafluoroethane	135	4.526	4.521	(0.461)	71038	1.00000	0.9886
11 Vinyl Chloride	62	4.716	4.711	(0.480)	62213	1.00000	0.9340
12 Methanol	31	4.664	4.659	(0.475)	103933	4.00000	4.146
13 1,3-Butadiene	54	4.821	4.815	(0.491)	46277	1.00000	0.9576
14 n-Butane	43	4.821	4.824	(0.491)	108330	1.00000	0.9396
15 Bromomethane	94	5.193	5.197	(0.529)	57279	1.00000	0.9272
16 Chloroethane	64	5.367	5.362	(0.546)	37240	1.00000	0.9044
17 Trichlorofluoromethane	101	6.017	6.021	(0.612)	102572	1.00000	0.9155
18 Acrolein	56	6.026	6.021	(0.613)	33544	2.00000	2.076
19 Acetonitrile	40	6.095	6.099	(0.620)	46216	2.00000	1.954
20 Acetone	58	6.156	6.151	(0.627)	52094	2.00000	2.241
21 Pentane	57	6.269	6.272	(0.638)	14529	1.00000	0.9747

Data File: /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
Report Date: 27-Nov-2003 16:22

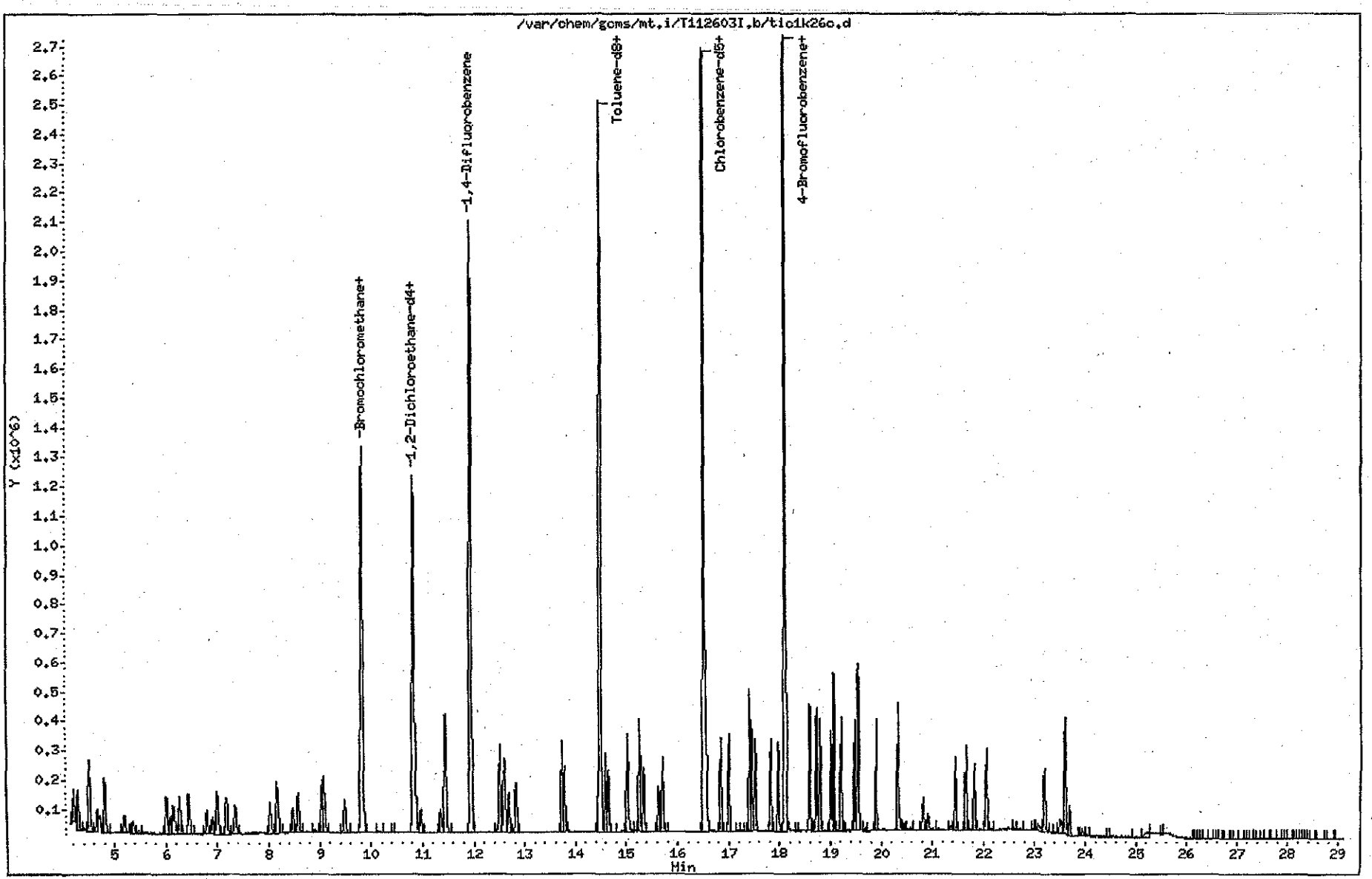
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.442	6.437	(0.656)	120991	2.00000	2.041
23 1,1-Dichloroethene	96	6.798	6.793	(0.692)	42946	1.00000	0.9167
24 Acrylonitrile	53	6.902	6.906	(0.703)	60296	2.00000	1.956
25 1,1,2-Trichlorotrifluoroethane	101	6.997	7.001	(0.712)	93272	1.00000	0.9654
26 Methylene Chloride	84	7.162	7.166	(0.729)	52480	1.00000	0.9691
27 3-Chloropropene	39	7.188	7.192	(0.732)	45221	1.00000	0.8879
28 Carbon Disulfide	76	7.344	7.348	(0.748)	183074	1.00000	0.9450
29 trans-1,2-Dichloroethene	96	8.029	8.033	(0.817)	56399	1.00000	0.9130
30 Methyl-t-Butyl Ether	73	8.168	8.154	(0.831)	220199	2.00000	2.020
31 1,1-Dichloroethane	63	8.472	8.475	(0.862)	114979	1.00000	0.9047
32 Vinyl Acetate	43	8.576	8.579	(0.873)	276396	2.00000	1.952
33 2-Butanone	72	9.044	9.039	(0.921)	49895	2.00000	2.069
34 Hexane	56	9.087	9.091	(0.925)	56910	1.00000	0.9422
35 cis 1,2-Dichloroethene	96	9.486	9.499	(0.966)	65426	1.00000	0.8987
36 Chloroform	83	9.833	9.846	(1.001)	101405	1.00000	0.8734
37 1,1,1-Trichloroethane	97	10.874	10.878	(1.107)	89608	1.00000	0.8783
38 1,2-Dichloroethane	62	10.969	10.973	(0.919)	76821	1.00000	0.9261
39 Benzene	78	11.438	11.441	(0.958)	185456	1.00000	1.061
40 1-Butanol	31	11.342	11.346	(0.950)	43640	2.00000	1.322
41 Cyclohexane	69	11.446	11.441	(0.959)	27924	1.00000	1.058
42 Carbon Tetrachloride	117	11.455	11.467	(1.166)	91735	1.00000	0.8911
43 Heptane	43	12.513	12.517	(1.048)	144641	1.00000	1.009
44 1,2-Dichloropropane	63	12.591	12.595	(1.054)	68979	1.00000	1.010
45 Trichloroethene	130	12.617	12.621	(1.057)	77834	1.00000	1.015
46 Dibromomethane	93	12.695	12.699	(1.063)	68392	1.00000	0.9709
47 Bromodichloromethane	83	12.825	12.829	(1.074)	131572	1.00000	0.9438
48 4-Methyl-2-pentanone	43	13.736	13.731	(1.150)	267807	2.00000	2.136
49 cis-1,3-Dichloropropene	75	13.788	13.792	(1.155)	142774	1.00000	0.9662
50 trans-1,3-Dichloropropene	75	14.456	14.459	(0.875)	88641	1.00000	0.9187
51 Toluene	91	14.595	14.598	(0.883)	201649	1.00000	1.018
52 1,1,2-Trichloroethane	97	14.655	14.659	(0.887)	73229	1.00000	0.9855
53 2-Hexanone	58	15.020	15.023	(0.909)	160744	2.00000	2.144
54 Octane	85	15.254	15.257	(0.923)	69801	1.00000	0.9967
55 Dibromochloromethane	129	15.340	15.344	(0.929)	127030	1.00000	0.9634
56 1,2-Dibromoethane	107	15.635	15.639	(0.946)	123004	1.00000	1.005
57 Tetrachloroethene	129	15.705	15.708	(0.951)	57717	1.00000	0.9981
58 Chlorobenzene	112	16.563	16.567	(1.003)	167771	1.00000	0.9929
59 Ethylbenzene	91	16.849	16.853	(1.020)	274168	1.00000	1.024
60 m-Xylene (For p-)	91	16.997	17.001	(1.029)	198462	1.00000	1.007
61 Bromoform	173	17.448	17.451	(1.056)	84792	1.00000	1.018
62 Nonane	57	17.405	17.408	(1.054)	165746	1.00000	1.063
63 Styrene	104	17.457	17.469	(1.057)	141003	1.00000	1.032
64 o-Xylene	91	17.526	17.530	(1.061)	203244	1.00000	1.025
65 1,1,2,2-Tetrachloroethane	83	17.821	17.824	(1.079)	184641	1.00000	1.004
66 1,2,3-Trichloropropane	110	17.977	17.989	(1.088)	57444	1.00000	1.096
67 Cumene	105	18.090	18.093	(1.095)	273411	1.00000	1.033
68 n-Propylbenzene	91	18.584	18.596	(1.125)	373691	1.00000	1.038

Data File: /var/chem/gcms/mt.i/T112603I.b/ticlk26c.d
Report Date: 27-Nov-2003 16:22

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	18.731	18.735	(1.134)	274991	1.00000	0.9867
70 1,3,5-Trimethylbenzene	120	18.801	18.804	(1.138)	126415	1.00000	1.039
71 Alpha-Methylstyrene	118	19.009	19.013	(1.151)	101921	1.00000	0.9900
72 Decane	57	19.061	19.073	(1.154)	187603	1.00000	1.014
73 1,2,4-Trimethylbenzene	105	19.217	19.221	(1.163)	219220	1.00000	1.008
74 1,3-Dichlorobenzene	146	19.469	19.481	(1.178)	152712	1.00000	1.014
75 Benzyl Chloride	91	19.538	19.542	(1.183)	223417	1.00000	1.048
76 1,4-Dichlorobenzene	146	19.555	19.559	(1.184)	145215	1.00000	1.036
77 1,2-Dichlorobenzene	146	19.902	19.906	(1.205)	144686	1.00000	1.013
78 Undecane	57	20.336	20.331	(1.231)	142994	1.00000	0.8103
79 Dodecane	57	21.446	21.450	(1.298)	87294	1.00000	0.5800
80 1,2,4-Trichlorobenzene	180	21.663	21.666	(1.311)	85469	1.00000	0.8618
81 Napthalene	128	21.819	21.823	(1.321)	189405	1.00000	0.7764
82 Hexachlorobutadiene	225	22.062	22.065	(1.335)	45163	1.00000	0.9694

Data File: /var/chem/gcms/mt.i/T112603I.b/tic1k26c.d
Date : 26-NOV-2003 23:39
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/T112603I.b/tic2k26b.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
Lab Smp Id: IC2 Client Smp ID: 5PPBV
Inj Date : 26-NOV-2003 22:57
Operator : 0691 Inst ID: mt.i
Smp Info : IC2,,1,2,,5PPBV
Misc Info : T112603I,LA,,,,,50ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 22:57 Cal File: tic2k26b.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

OK cwf 12/2/03

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	9.830	9.828	(1.000)	436973	10.0000	
* 2 1,4-Difluorobenzene	114	11.946	11.944	(1.000)	2056162	10.0000	
* 3 Chlorobenzene-d5	117	16.516	16.524	(1.000)	1835555	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.827	10.826	(0.906)	362448	10.0000	9.701
$ 5 Toluene-d8	98	14.487	14.494	(0.877)	1692581	10.0000	10.02
$ 6 4-Bromofluorobenzene	95	18.112	18.119	(1.097)	1057933	10.0000	10.02
7 Chlorodifluoromethane	51	4.218	4.217	(0.429)	779085	5.00000	5.225
8 Dichlorodifluoromethane	85	4.288	4.295	(0.436)	716768	5.00000	5.163
9 Chloromethane	52	4.505	4.503	(0.458)	108164	5.00000	5.262
10 1,2-Dichlorotetrafluoroethane	135	4.522	4.521	(0.460)	371167	5.00000	5.544
11 Vinyl Chloride	62	4.713	4.711	(0.479)	332468	5.00000	5.309
12 Methanol	31	4.661	4.659	(0.474)	443764	20.0000	19.18
13 1,3-Butadiene	54	4.817	4.815	(0.490)	241150	5.00000	5.328
14 n-Butane	43	4.817	4.824	(0.490)	565571	5.00000	5.222
15 Bromomethane	94	5.198	5.197	(0.529)	310040	5.00000	5.332
16 Chloroethane	64	5.363	5.362	(0.546)	206511	5.00000	5.308
17 Trichlorofluoromethane	101	6.014	6.021	(0.612)	552855	5.00000	5.232
18 Acrolein	56	6.022	6.021	(0.613)	155958	10.0000	10.45
19 Acetonitrile	40	6.092	6.099	(0.620)	216577	10.0000	9.810
20 Acetone	58	6.144	6.151	(0.625)	189222	10.0000	8.971
21 Pentane	57	6.265	6.272	(0.637)	72666	5.00000	5.220

Data File: /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
Report Date: 27-Nov-2003 16:22

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.439	6.437	(0.655)	539399	10.0000	9.818
23 1,1-Dichloroethene	96	6.794	6.793	(0.691)	238228	5.00000	5.393
24 Acrylonitrile	53	6.907	6.906	(0.703)	294176	10.0000	10.22
25 1,1,2-Trichlorotrifluoroethane	101	6.994	7.001	(0.711)	492876	5.00000	5.454
26 Methylene Chloride	84	7.167	7.166	(0.729)	242366	5.00000	4.788
27 3-Chloropropene	39	7.184	7.192	(0.731)	235062	5.00000	4.872
28 Carbon Disulfide	76	7.341	7.348	(0.747)	948421	5.00000	5.216
29 trans-1,2-Dichloroethene	96	8.026	8.033	(0.816)	311503	5.00000	5.344
30 Methyl-t-Butyl Ether	73	8.156	8.154	(0.830)	1022194	10.0000	10.10
31 1,1-Dichloroethane	63	8.477	8.475	(0.862)	633791	5.00000	5.279
32 Vinyl Acetate	43	8.581	8.579	(0.873)	1310705	10.0000	9.912
33 2-Butanone	72	9.032	9.039	(0.919)	225859	10.0000	10.13
34 Hexane	56	9.092	9.091	(0.925)	298489	5.00000	5.263
35 cis 1,2-Dichloroethene	96	9.491	9.499	(0.966)	376887	5.00000	5.474
36 Chloroform	83	9.838	9.846	(1.001)	559795	5.00000	5.078
37 1,1,1-Trichloroethane	97	10.879	10.878	(1.107)	492459	5.00000	5.087
38 1,2-Dichloroethane	62	10.974	10.973	(0.919)	410149	5.00000	5.135
39 Benzene	78	11.434	11.441	(0.957)	909901	5.00000	5.530
40 1-Butanol	31	11.339	11.346	(0.949)	358159	10.0000	10.79
41 Cyclohexane	69	11.443	11.441	(0.958)	137821	5.00000	5.545
42 Carbon Tetrachloride	117	11.460	11.467	(1.166)	504424	5.00000	5.175
43 Heptane	43	12.509	12.517	(1.047)	729700	5.00000	5.361
44 1,2-Dichloropropane	63	12.596	12.595	(1.054)	352619	5.00000	5.435
45 Trichloroethene	130	12.622	12.621	(1.057)	402987	5.00000	5.541
46 Dibromomethane	93	12.700	12.699	(1.063)	368176	5.00000	5.468
47 Bromodichloromethane	83	12.830	12.829	(1.074)	726460	5.00000	5.428
48 4-Methyl-2-pentanone	43	13.732	13.731	(1.150)	1246346	10.0000	10.57
49 cis-1,3-Dichloropropene	75	13.793	13.792	(1.155)	773001	5.00000	5.468
50 trans-1,3-Dichloropropene	75	14.461	14.459	(0.876)	508442	5.00000	5.448
51 Toluene	91	14.600	14.598	(0.884)	980062	5.00000	5.198
52 1,1,2-Trichloroethane	97	14.660	14.659	(0.888)	391066	5.00000	5.502
53 2-Hexanone	58	15.025	15.023	(0.910)	760688	10.0000	10.76
54 Octane	85	15.259	15.257	(0.924)	375176	5.00000	5.611
55 Dibromochloromethane	129	15.345	15.344	(0.929)	699273	5.00000	5.524
56 1,2-Dibromoethane	107	15.640	15.639	(0.947)	617176	5.00000	5.269
57 Tetrachloroethene	129	15.710	15.708	(0.951)	295660	5.00000	5.356
58 Chlorobenzene	112	16.568	16.567	(1.003)	845356	5.00000	5.237
59 Ethylbenzene	91	16.846	16.853	(1.020)	1331781	5.00000	5.234
60 m-Xylene (For p-)	91	17.002	17.001	(1.029)	958936	5.00000	5.106
61 Bromoform	173	17.444	17.451	(1.056)	439499	5.00000	5.544
62 Nonane	57	17.410	17.408	(1.054)	775970	5.00000	5.272
63 Styrene	104	17.462	17.469	(1.057)	759074	5.00000	5.852
64 o-Xylene	91	17.522	17.530	(1.061)	957188	5.00000	5.082
65 1,1,2,2-Tetrachloroethane	83	17.826	17.824	(1.079)	954257	5.00000	5.440
66 1,2,3-Trichloropropane	110	17.982	17.989	(1.089)	243116	5.00000	4.938
67 Cumene	105	18.086	18.093	(1.095)	1398376	5.00000	5.567
68 n-Propylbenzene	91	18.589	18.596	(1.125)	1880339	5.00000	5.510

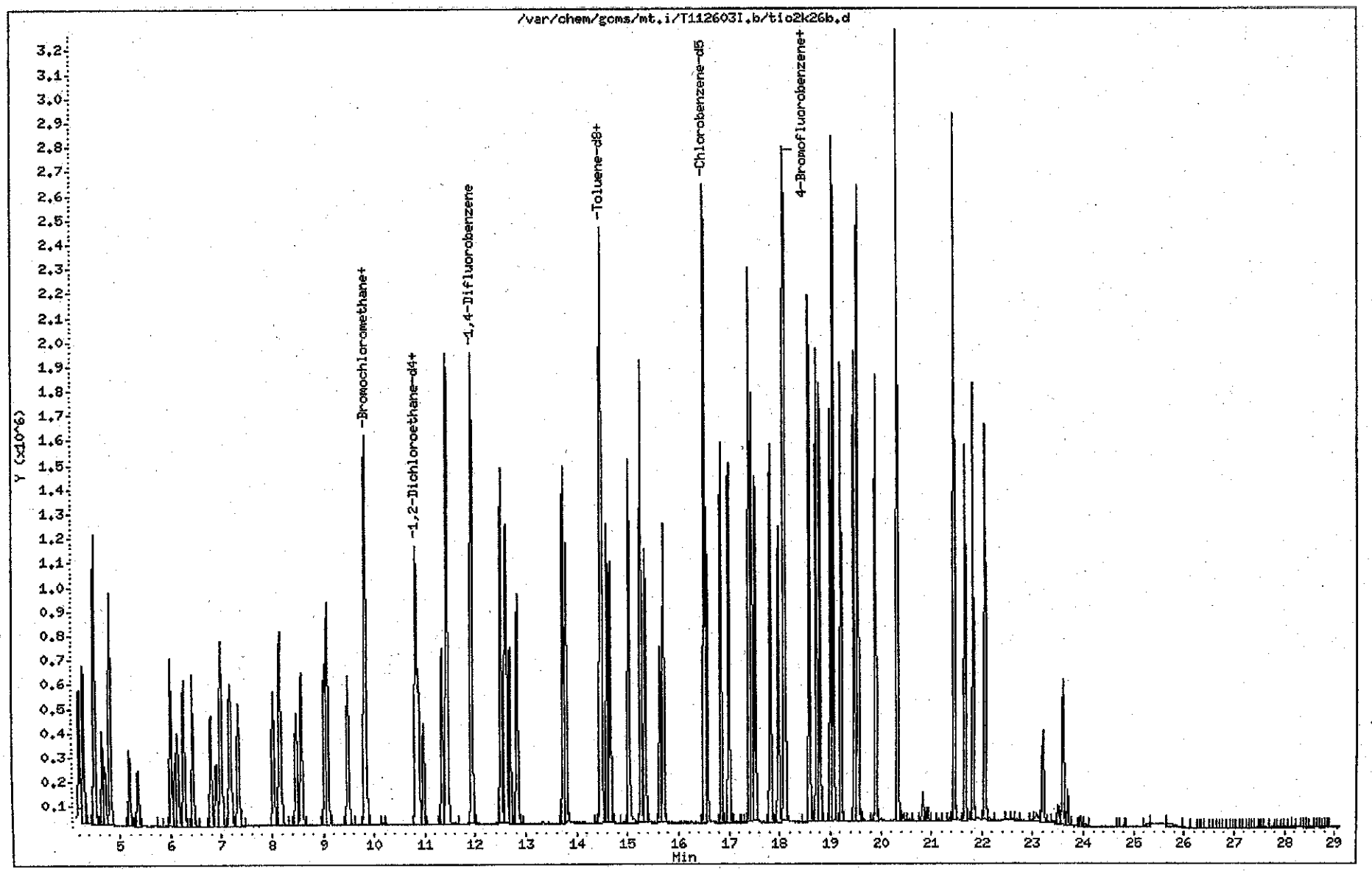
Data File: /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
Report Date: 27-Nov-2003 16:22

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	18.728	18.735	(1.134)	1489599	5.00000	5.589
70 1,3,5-Trimethylbenzene	120	18.797	18.804	(1.138)	611555	5.00000	5.302
71 Alpha-Methylstyrene	118	19.014	19.013	(1.151)	574365	5.00000	5.837
72 Decane	57	19.066	19.073	(1.154)	989319	5.00000	5.617
73 1,2,4-Trimethylbenzene	105	19.213	19.221	(1.163)	1060159	5.00000	5.114
74 1,3-Dichlorobenzene	146	19.474	19.481	(1.179)	821705	5.00000	5.735
75 Benzyl Chloride	91	19.543	19.542	(1.183)	1024777	5.00000	5.076
76 1,4-Dichlorobenzene	146	19.560	19.559	(1.184)	770597	5.00000	5.799
77 1,2-Dichlorobenzene	146	19.907	19.906	(1.205)	796185	5.00000	5.856
78 Undecane	57	20.332	20.331	(1.231)	1082915	5.00000	6.234
79 Dodecane	57	21.451	21.450	(1.299)	1012084	5.00000	6.586
80 1,2,4-Trichlorobenzene	180	21.668	21.666	(1.312)	497800	5.00000	5.142
81 Napthalene	128	21.824	21.823	(1.321)	1620706	5.00000	6.712
82 Hexachlorobutadiene	225	22.058	22.065	(1.336)	273638	5.00000	6.124

Data File: /var/chem/gcms/mt.i/T112603I.b/tic2k26b.d
Date : 26-NOV-2003 22:57
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/T112603I.b/tic3k26b.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
Lab Smp Id: IC3 Client Smp ID: 10PPBV
Inj Date : 26-NOV-2003 22:15
Operator : 0691 Inst ID: mt.i
Smp Info : IC3,,1,3,,10PPBV
Misc Info : T112603I,LA,,,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 22:15 Cal File: tic3k26b.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

OK wf 12/2/03

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	9.828	9.828	(1.000)	406950	10.0000	
* 2 1,4-Difluorobenzene	114	11.944	11.944	(1.000)	1964623	10.0000	
* 3 Chlorobenzene-d5	117	16.524	16.524	(1.000)	1745527	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.826	10.826	(0.906)	342610	10.0000	10.00
$ 5 Toluene-d8	98	14.494	14.494	(0.877)	1601803	10.0000	10.00
$ 6 4-Bromofluorobenzene	95	18.119	18.119	(1.097)	968489	10.0000	10.00
7 Chlorodifluoromethane	51	4.217	4.217	(0.429)	1379692	10.0000	10.00
8 Dichlorodifluoromethane	85	4.295	4.295	(0.437)	1239131	10.0000	10.00
9 Chloromethane	52	4.503	4.503	(0.458)	183698	10.0000	10.00
10 1,2-Dichlorotetrafluoroethane	135	4.521	4.521	(0.460)	636700	10.0000	10.00
11 Vinyl Chloride	62	4.711	4.711	(0.479)	586470	10.0000	10.00
12 Methanol	31	4.659	4.659	(0.474)	793472	40.0000	40.00
13 1,3-Butadiene	54	4.815	4.815	(0.490)	420824	10.0000	10.00
14 n-Butane	43	4.824	4.824	(0.491)	984283	10.0000	10.00
15 Bromomethane	94	5.197	5.197	(0.529)	548223	10.0000	10.00
16 Chloroethane	64	5.362	5.362	(0.546)	368008	10.0000	10.00
17 Trichlorofluoromethane	101	6.021	6.021	(0.613)	980714	10.0000	10.00
18 Acrolein	56	6.021	6.021	(0.613)	269633	20.0000	20.00
19 Acetonitrile	40	6.099	6.099	(0.621)	388631	20.0000	20.00
20 Acetone	58	6.151	6.151	(0.626)	332910	20.0000	20.00
21 Pentane	57	6.272	6.272	(0.638)	129014	10.0000	10.00

Data File: /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
Report Date: 27-Nov-2003 16:22

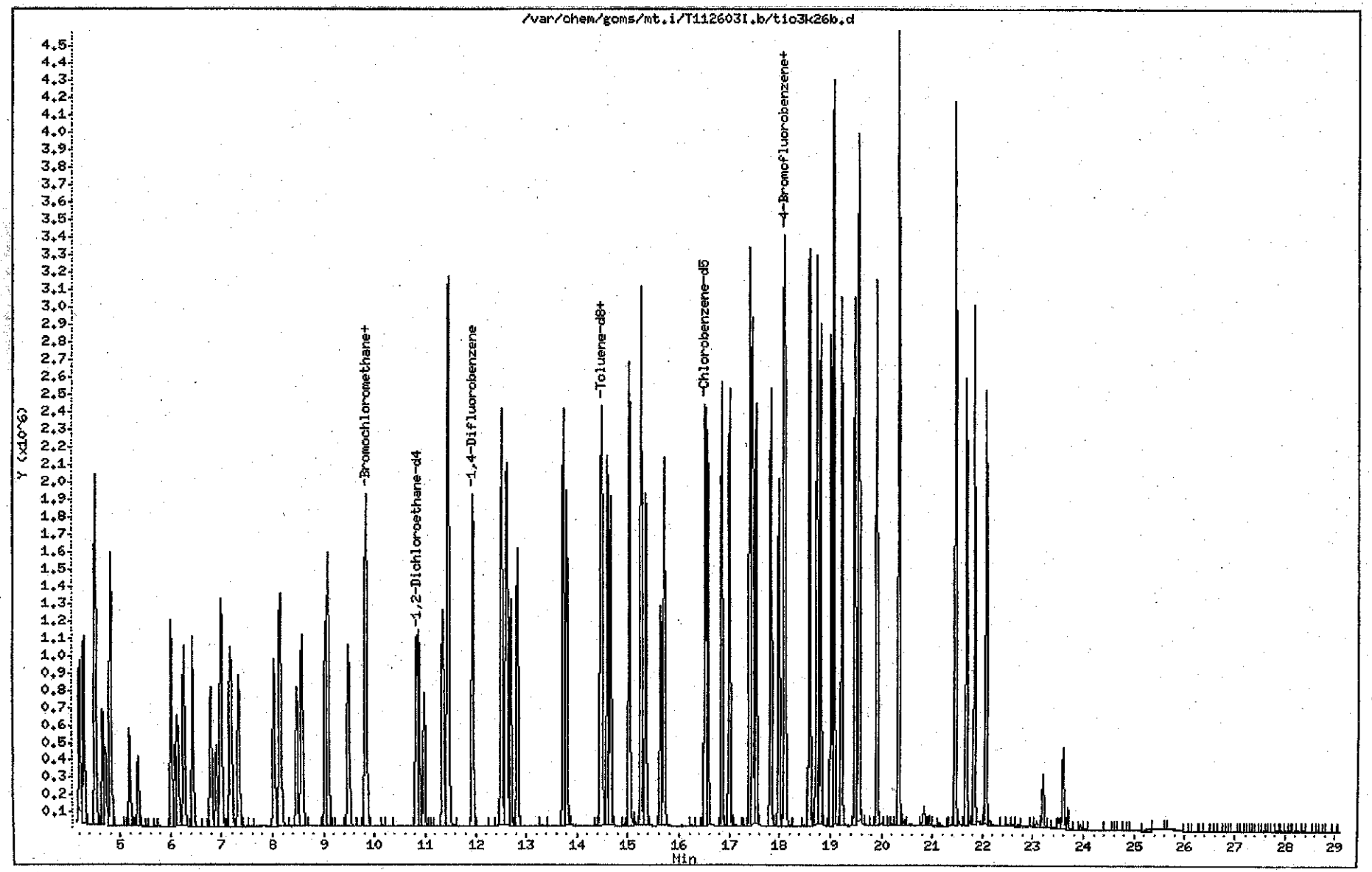
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.437	6.437	(0.655)	964697	20.0000	20.00
23 1,1-Dichloroethene	96	6.793	6.793	(0.691)	427422	10.0000	10.00
24 Acrylonitrile	53	6.906	6.906	(0.703)	539030	20.0000	20.00
25 1,1,2-Trichlorotrifluoroethane	101	7.001	7.001	(0.712)	859876	10.0000	10.00
26 Methylene Chloride	84	7.166	7.166	(0.729)	428413	10.0000	10.00
27 3-Chloropropene	39	7.192	7.192	(0.732)	430076	10.0000	10.00
28 Carbon Disulfide	76	7.348	7.348	(0.748)	1682705	10.0000	10.00
29 trans-1,2-Dichloroethene	96	8.033	8.033	(0.817)	562154	10.0000	10.00
30 Methyl-t-Butyl Ether	73	8.154	8.154	(0.830)	1823811	20.0000	20.00
31 1,1-Dichloroethane	63	8.475	8.475	(0.862)	1143647	10.0000	10.00
32 Vinyl Acetate	43	8.579	8.579	(0.873)	2350843	20.0000	20.00
33 2-Butanone	72	9.039	9.039	(0.920)	403511	20.0000	20.00
34 Hexane	56	9.091	9.091	(0.925)	522343	10.0000	10.00
35 cis 1,2-Dichloroethene	96	9.499	9.499	(0.966)	676528	10.0000	10.00
36 Chloroform	83	9.846	9.846	(1.002)	1015083	10.0000	10.00
37 1,1,1-Trichloroethane	97	10.878	10.878	(1.107)	892986	10.0000	10.00
38 1,2-Dichloroethane	62	10.973	10.973	(0.919)	732071	10.0000	10.00
39 Benzene	78	11.441	11.441	(0.958)	1508766	10.0000	10.00
40 1-Butanol	31	11.346	11.346	(0.950)	670592	20.0000	20.00
41 Cyclohexane	69	11.441	11.441	(0.958)	229000	10.0000	10.00
42 Carbon Tetrachloride	117	11.467	11.467	(1.167)	887827	10.0000	10.00
43 Heptane	43	12.517	12.517	(1.048)	1244824	10.0000	10.00
44 1,2-Dichloropropane	63	12.595	12.595	(1.054)	592449	10.0000	10.00
45 Trichloroethene	130	12.621	12.621	(1.057)	698844	10.0000	10.00
46 Dibromomethane	93	12.699	12.699	(1.063)	642375	10.0000	10.00
47 Bromodichloromethane	83	12.829	12.829	(1.074)	1282956	10.0000	10.00
48 4-Methyl-2-pentanone	43	13.731	13.731	(1.150)	2166206	20.0000	20.00
49 cis-1,3-Dichloropropene	75	13.792	13.792	(1.155)	1354540	10.0000	10.00
50 trans-1,3-Dichloropropene	75	14.459	14.459	(0.875)	916492	10.0000	10.00
51 Toluene	91	14.598	14.598	(0.883)	1737274	10.0000	10.00
52 1,1,2-Trichloroethane	97	14.659	14.659	(0.887)	692454	10.0000	10.00
53 2-Hexanone	58	15.023	15.023	(0.909)	1351001	20.0000	20.00
54 Octane	85	15.257	15.257	(0.923)	649898	10.0000	10.00
55 Dibromochloromethane	129	15.344	15.344	(0.929)	1245909	10.0000	10.00
56 1,2-Dibromoethane	107	15.639	15.639	(0.946)	1087360	10.0000	10.00
57 Tetrachloroethene	129	15.708	15.708	(0.951)	513430	10.0000	10.00
58 Chlorobenzene	112	16.567	16.567	(1.003)	1479451	10.0000	10.00
59 Ethylbenzene	91	16.853	16.853	(1.020)	2301259	10.0000	10.00
60 m-Xylene (For p-)	91	17.001	17.001	(1.029)	1651505	10.0000	10.00
61 Bromoform	173	17.451	17.451	(1.056)	762222	10.0000	10.00
62 Nonane	57	17.408	17.408	(1.054)	1232219	10.0000	10.00
63 Styrene	104	17.469	17.469	(1.057)	1253839	10.0000	10.00
64 o-Xylene	91	17.530	17.530	(1.061)	1622587	10.0000	10.00
65 1,1,2,2-Tetrachloroethane	83	17.824	17.824	(1.079)	1628921	10.0000	10.00
66 1,2,3-Trichloropropane	110	17.989	17.989	(1.089)	439317	10.0000	10.00
67 Cumene	105	18.093	18.093	(1.095)	2363781	10.0000	10.00
68 n-Propylbenzene	91	18.596	18.596	(1.125)	3097907	10.0000	10.00

Data File: /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
Report Date: 27-Nov-2003 16:22

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	18.735	18.735	(1.134)	2500505	10.0000	10.00
70 1,3,5-Trimethylbenzene	120	18.804	18.804	(1.138)	1006327	10.0000	10.00
71 Alpha-Methylstyrene	118	19.013	19.013	(1.151)	983473	10.0000	10.00
72 Decane	57	19.073	19.073	(1.154)	1568309	10.0000	10.00
73 1,2,4-Trimethylbenzene	105	19.221	19.221	(1.163)	1764687	10.0000	10.00
74 1,3-Dichlorobenzene	146	19.481	19.481	(1.179)	1395881	10.0000	10.00
75 Benzyl Chloride	91	19.542	19.542	(1.183)	1663973	10.0000	10.00
76 1,4-Dichlorobenzene	146	19.559	19.559	(1.184)	1248591	10.0000	10.00
77 1,2-Dichlorobenzene	146	19.906	19.906	(1.205)	1330296	10.0000	10.00
78 Undecane	57	20.331	20.331	(1.230)	1667831	10.0000	10.00
79 Dodecane	57	21.450	21.450	(1.298)	1539109	10.0000	10.00
80 1,2,4-Trichlorobenzene	180	21.666	21.666	(1.311)	846849	10.0000	10.00
81 Napthalene	128	21.823	21.823	(1.321)	2740975	10.0000	10.00
82 Hexachlorobutadiene	225	22.065	22.065	(1.335)	465245	10.0000	10.00

Data File: /var/chem/gcms/mt.i/T112603I.b/tic3k26b.d
Date : 26-NOV-2003 22:16
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/T112603I.b/tic4k26b.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
Lab Smp Id: IC4 Client Smp ID: 15PPBV
Inj Date : 26-NOV-2003 21:34
Operator : 0691 Inst ID: mt.i
Smp Info : IC4,,1,4,,15PPBV
Misc Info : T112603I,LA,,,,,150ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 21:34 Cal File: tic4k26b.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

OK wof 12/2/03

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	9.837	9.828	(1.000)	391018	10.0000	
* 2 1,4-Difluorobenzene	114	11.944	11.944	(1.000)	1914222	10.0000	
* 3 Chlorobenzene-d5	117	16.523	16.524	(1.000)	1698730	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.834	10.826	(0.907)	338529	10.0000	10.07
$ 5 Toluene-d8	98	14.494	14.494	(0.877)	1514481	10.0000	9.856
$ 6 4-Bromofluorobenzene	95	18.119	18.119	(1.097)	914080	10.0000	9.847
7 Chlorodifluoromethane	51	4.217	4.217	(0.429)	1976293	15.0000	14.95
8 Dichlorodifluoromethane	85	4.295	4.295	(0.437)	1742586	15.0000	14.82
9 Chloromethane	52	4.503	4.503	(0.458)	251051	15.0000	14.60
10 1,2-Dichlorotetrafluoroethane	135	4.520	4.521	(0.460)	886590	15.0000	14.74
11 Vinyl Chloride	62	4.711	4.711	(0.479)	824824	15.0000	14.82
12 Methanol	31	4.659	4.659	(0.474)	1132691	60.0000	59.71
13 1,3-Butadiene	54	4.815	4.815	(0.490)	576646	15.0000	14.62
14 n-Butane	43	4.815	4.824	(0.490)	1328923	15.0000	14.51
15 Bromomethane	94	5.197	5.197	(0.528)	773213	15.0000	14.84
16 Chloroethane	64	5.362	5.362	(0.545)	521006	15.0000	14.86
17 Trichlorofluoromethane	101	6.012	6.021	(0.611)	1370175	15.0000	14.77
18 Acrolein	56	6.021	6.021	(0.612)	370318	30.0000	29.28
19 Acetonitrile	40	6.099	6.099	(0.620)	545795	30.0000	29.61
20 Acetone	58	6.151	6.151	(0.625)	475301	30.0000	29.86
21 Pentane	57	6.272	6.272	(0.638)	177541	15.0000	14.65

Data File: /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
Report Date: 27-Nov-2003 16:22

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	6.437	6.437	(0.654)	1338443	30.0000	29.43
23 1,1-Dichloroethene	96	6.793	6.793	(0.691)	594111	15.0000	14.73
24 Acrylonitrile	53	6.905	6.906	(0.702)	761343	30.0000	29.70
25 1,1,2-Trichlorotrifluoroethane	101	7.001	7.001	(0.712)	1172211	15.0000	14.58
26 Methylene Chloride	84	7.165	7.166	(0.728)	602071	15.0000	14.81
27 3-Chloropropene	39	7.191	7.192	(0.731)	606055	15.0000	14.83
28 Carbon Disulfide	76	7.348	7.348	(0.747)	2373631	15.0000	14.84
29 trans-1,2-Dichloroethene	96	8.033	8.033	(0.817)	791444	15.0000	14.82
30 Methyl-t-Butyl Ether	73	8.154	8.154	(0.829)	2581488	30.0000	29.73
31 1,1-Dichloroethane	63	8.475	8.475	(0.862)	1601758	15.0000	14.78
32 Vinyl Acetate	43	8.588	8.579	(0.873)	3288312	30.0000	29.55
33 2-Butanone	72	9.039	9.039	(0.919)	574193	30.0000	29.81
34 Hexane	56	9.091	9.091	(0.924)	726199	15.0000	14.73
35 cis 1,2-Dichloroethene	96	9.498	9.499	(0.966)	945109	15.0000	14.77
36 Chloroform	83	9.845	9.846	(1.001)	1445585	15.0000	14.91
37 1,1,1-Trichloroethane	97	10.877	10.878	(1.106)	1263878	15.0000	14.86
38 1,2-Dichloroethane	62	10.973	10.973	(0.919)	1049120	15.0000	14.85
39 Benzene	78	11.441	11.441	(0.958)	1944027	15.0000	14.06
40 1-Butanol	31	11.346	11.346	(0.950)	938170	30.0000	29.34
41 Cyclohexane	69	11.441	11.441	(0.958)	297089	15.0000	14.11
42 Carbon Tetrachloride	117	11.467	11.467	(1.166)	1223708	15.0000	14.66
43 Heptane	43	12.516	12.517	(1.048)	1668554	15.0000	14.35
44 1,2-Dichloropropane	63	12.595	12.595	(1.054)	797220	15.0000	14.38
45 Trichloroethene	130	12.629	12.621	(1.057)	928277	15.0000	14.28
46 Dibromomethane	93	12.699	12.699	(1.063)	868370	15.0000	14.42
47 Bromodichloromethane	83	12.837	12.829	(1.075)	1782510	15.0000	14.62
48 4-Methyl-2-pentanone	43	13.739	13.731	(1.150)	2960354	30.0000	28.99
49 cis-1,3-Dichloropropene	75	13.800	13.792	(1.155)	1852005	15.0000	14.50
50 trans-1,3-Dichloropropene	75	14.459	14.459	(0.875)	1271171	15.0000	14.62
51 Toluene	91	14.598	14.598	(0.883)	2350655	15.0000	14.43
52 1,1,2-Trichloroethane	97	14.659	14.659	(0.887)	933933	15.0000	14.41
53 2-Hexanone	58	15.023	15.023	(0.909)	1819282	30.0000	28.79
54 Octane	85	15.257	15.257	(0.923)	856476	15.0000	14.23
55 Dibromochloromethane	129	15.352	15.344	(0.929)	1672034	15.0000	14.37
56 1,2-Dibromoethane	107	15.639	15.639	(0.946)	1453394	15.0000	14.34
57 Tetrachloroethene	129	15.708	15.708	(0.951)	678509	15.0000	14.25
58 Chlorobenzene	112	16.567	16.567	(1.003)	1999260	15.0000	14.42
59 Ethylbenzene	91	16.853	16.853	(1.020)	3117058	15.0000	14.44
60 m-Xylene (For p-)	91	17.000	17.001	(1.029)	2221211	15.0000	14.38
61 Bromoform	173	17.451	17.451	(1.056)	1026693	15.0000	14.40
62 Nonane	57	17.416	17.408	(1.054)	1612117	15.0000	14.18
63 Styrene	104	17.469	17.469	(1.057)	1639367	15.0000	14.17
64 o-Xylene	91	17.529	17.530	(1.061)	2193905	15.0000	14.42
65 1,1,2,2-Tetrachloroethane	83	17.833	17.824	(1.079)	2143912	15.0000	14.22
66 1,2,3-Trichloropropane	110	17.989	17.989	(1.089)	601247	15.0000	14.52
67 Cumene	105	18.093	18.093	(1.095)	3068375	15.0000	14.12
68 n-Propylbenzene	91	18.596	18.596	(1.125)	4123559	15.0000	14.31

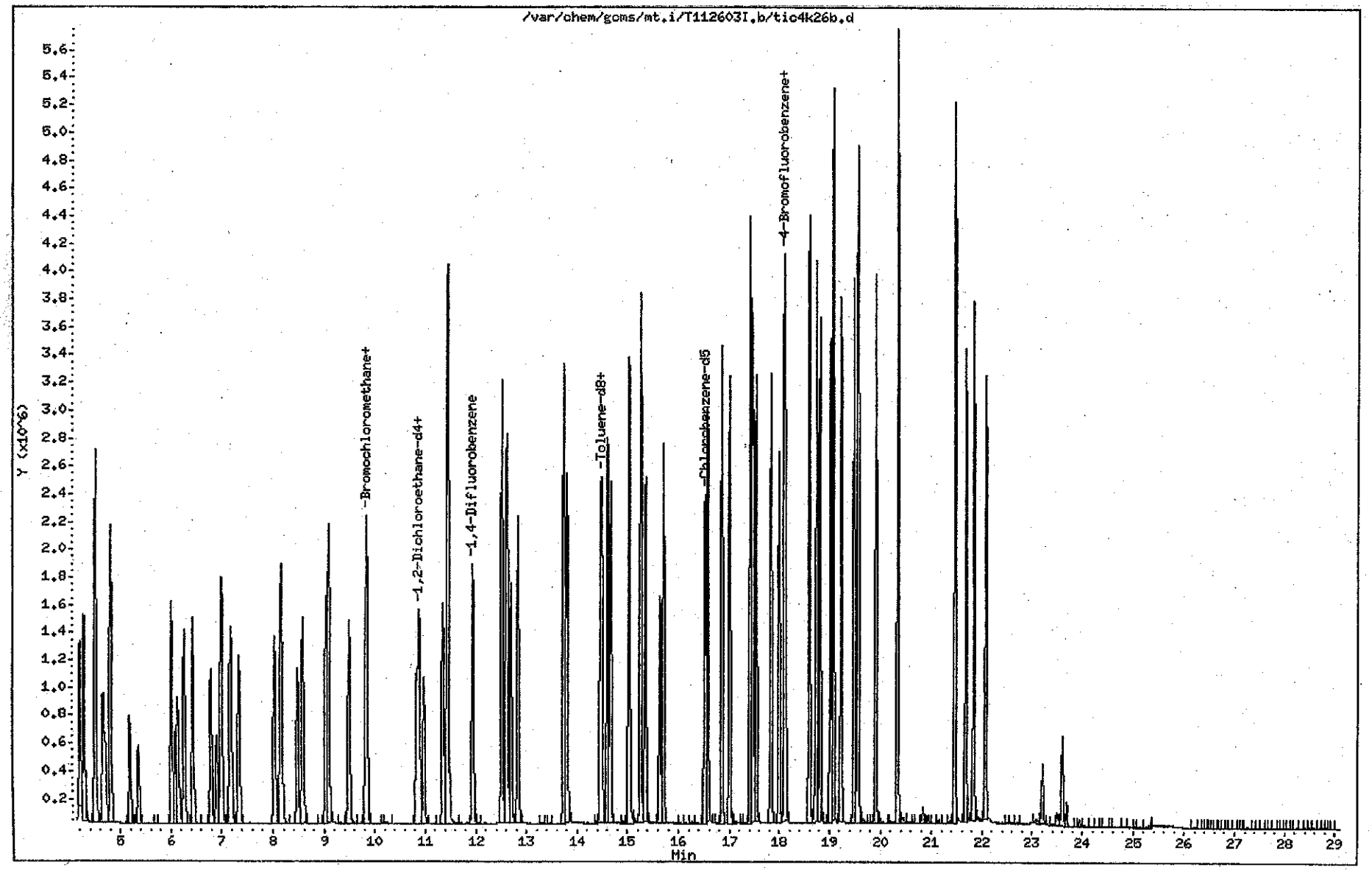
Data File: /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
Report Date: 27-Nov-2003 16:22

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	18.735	18.735	(1.134)	3240954	15.0000	14.11
70 1,3,5-Trimethylbenzene	120	18.804	18.804	(1.138)	1307262	15.0000	14.13
71 Alpha-Methylstyrene	118	19.021	19.013	(1.151)	1311023	15.0000	14.32
72 Decane	57	19.073	19.073	(1.154)	1975306	15.0000	13.90
73 1,2,4-Trimethylbenzene	105	19.220	19.221	(1.163)	2294232	15.0000	14.13
74 1,3-Dichlorobenzene	146	19.481	19.481	(1.179)	1787894	15.0000	14.02
75 Benzyl Chloride	91	19.550	19.542	(1.183)	2135114	15.0000	14.03
76 1,4-Dichlorobenzene	146	19.567	19.559	(1.184)	1565803	15.0000	13.86
77 1,2-Dichlorobenzene	146	19.906	19.906	(1.205)	1721380	15.0000	14.10
78 Undecane	57	20.339	20.331	(1.231)	2095242	15.0000	13.88
79 Dodecane	57	21.458	21.450	(1.299)	1992751	15.0000	14.10
80 1,2,4-Trichlorobenzene	180	21.666	21.666	(1.311)	1144265	15.0000	14.42
81 Napthalene	128	21.831	21.823	(1.321)	3662098	15.0000	14.34
82 Hexachlorobutadiene	225	22.065	22.065	(1.335)	628310	15.0000	14.42

Data File: /var/chem/gcms/mt.i/T112603I.b/tic4k26b.d
Date : 26-NOV-2003 21:34
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/T112603I.b/tic5k26b.d
Report Date: 27-Nov-2003 16:22

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
Lab Smp Id: IC5 Client Smp ID: 30PPBV
Inj Date : 26-NOV-2003 20:51
Operator : 0691 Inst ID: mt.i
Smp Info : IC5,,1,5,,30PPBV
Misc Info : T112603I,LA,,,,,300ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:22 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 20:51 Cal File: tic5k26b.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

OK wJ 12/2/03

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	9.835	9.828	(1.000)	333503	10.0000	
* 2 1,4-Difluorobenzene	114	11.951	11.944	(1.000)	1740833	10.0000	
* 3 Chlorobenzene-d5	117	16.521	16.524	(1.000)	1528871	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.841	10.826	(0.907)	319299	10.0000	10.29
$ 5 Toluene-d8	98	14.501	14.494	(0.878)	1314767	10.0000	9.666
$ 6 4-Bromofluorobenzene	95	18.126	18.119	(1.097)	770315	10.0000	9.466
7 Chlorodifluoromethane	51	4.215	4.217	(0.429)	3276601	30.0000	29.37
8 Dichlorodifluoromethane	85	4.293	4.295	(0.436)	2923853	30.0000	29.42
9 Chloromethane	52	4.501	4.503	(0.458)	382248	30.0000	27.26
10 1,2-Dichlorotetrafluoroethane	135	4.518	4.521	(0.459)	1326704	30.0000	27.11
11 Vinyl Chloride	62	4.709	4.711	(0.479)	1339053	30.0000	28.78
12 Methanol	31	4.666	4.659	(0.474)	1884855	120.000	117.6
13 1,3-Butadiene	54	4.822	4.815	(0.490)	904049	30.0000	27.84
14 n-Butane	43	4.822	4.824	(0.490)	2106720	30.0000	27.91
15 Bromomethane	94	5.195	5.197	(0.528)	1190418	30.0000	27.78
16 Chloroethane	64	5.368	5.362	(0.546)	833797	30.0000	28.56
17 Trichlorofluoromethane	101	6.019	6.021	(0.612)	2286104	30.0000	29.25
18 Acrolein	56	6.028	6.021	(0.613)	550611	60.0000	53.71
19 Acetonitrile	40	6.106	6.099	(0.621)	927422	60.0000	59.32
20 Acetone	58	6.158	6.151	(0.626)	779152	60.0000	58.23
21 Pentane	57	6.270	6.272	(0.638)	291434	30.0000	28.78

Data File: /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
Report Date: 27-Nov-2003 16:22

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	6.444	6.437	(0.655)	2259589	60.0000	58.82
23 1,1-Dichloroethene	96	6.799	6.793	(0.691)	934846	30.0000	28.05
24 Acrylonitrile	53	6.921	6.906	(0.704)	1273141	60.0000	58.80
25 1,1,2-Trichlorotrifluoroethane	101	6.999	7.001	(0.712)	1776022	30.0000	27.14
26 Methylene Chloride	84	7.172	7.166	(0.729)	925303	30.0000	27.71
27 3-Chloropropene	39	7.198	7.192	(0.732)	1049415	30.0000	30.07(A)
28 Carbon Disulfide	76	7.346	7.348	(0.747)	3702699	30.0000	28.03
29 trans-1,2-Dichloroethene	96	8.040	8.033	(0.817)	1239417	30.0000	28.09
30 Methyl-t-Butyl Ether	73	8.161	8.154	(0.830)	4199098	60.0000	57.76
31 1,1-Dichloroethane	63	8.482	8.475	(0.862)	2613543	30.0000	28.83
32 Vinyl Acetate	43	8.595	8.579	(0.874)	5554739	60.0000	59.01
33 2-Butanone	72	9.046	9.039	(0.920)	899104	60.0000	56.38
34 Hexane	56	9.098	9.091	(0.925)	1131325	30.0000	27.86
35 cis 1,2-Dichloroethene	96	9.505	9.499	(0.966)	1506830	30.0000	28.36
36 Chloroform	83	9.852	9.846	(1.002)	2457190	30.0000	29.81
37 1,1,1-Trichloroethane	97	10.884	10.878	(1.107)	2176811	30.0000	30.01(A)
38 1,2-Dichloroethane	62	10.980	10.973	(0.919)	1833695	30.0000	29.01
39 Benzene	78	11.439	11.441	(0.957)	2579765	30.0000	22.93
40 1-Butanol	31	11.370	11.346	(0.951)	1631290	60.0000	57.35
41 Cyclohexane	69	11.448	11.441	(0.958)	401851	30.0000	23.32
42 Carbon Tetrachloride	117	11.474	11.467	(1.167)	1931173	30.0000	28.03
43 Heptane	43	12.523	12.517	(1.048)	2547875	30.0000	25.79
44 1,2-Dichloropropane	63	12.601	12.595	(1.054)	1155904	30.0000	24.88
45 Trichloroethene	130	12.636	12.621	(1.057)	1327558	30.0000	24.52
46 Dibromomethane	93	12.705	12.699	(1.063)	1341579	30.0000	26.09
47 Bromodichloromethane	83	12.836	12.829	(1.074)	2819625	30.0000	26.79
48 4-Methyl-2-pentanone	43	13.746	13.731	(1.150)	4595297	60.0000	52.56
49 cis-1,3-Dichloropropene	75	13.798	13.792	(1.155)	2860465	30.0000	26.19
50 trans-1,3-Dichloropropene	75	14.466	14.459	(0.876)	2081055	30.0000	27.64
51 Toluene	91	14.605	14.598	(0.884)	3465180	30.0000	25.43
52 1,1,2-Trichloroethane	97	14.665	14.659	(0.888)	1412836	30.0000	25.88
53 2-Hexanone	58	15.038	15.023	(0.910)	2782776	60.0000	52.14
54 Octane	85	15.264	15.257	(0.924)	1202546	30.0000	24.31
55 Dibromochloromethane	129	15.359	15.344	(0.930)	2516448	30.0000	25.74
56 1,2-Dibromoethane	107	15.645	15.639	(0.947)	2133336	30.0000	25.24
57 Tetrachloroethene	129	15.715	15.708	(0.951)	967360	30.0000	24.61
58 Chlorobenzene	112	16.573	16.567	(1.003)	2929140	30.0000	25.31
59 Ethylbenzene	91	16.860	16.853	(1.020)	4560558	30.0000	25.31
60 m-Xylene (For p-)	91	17.007	17.001	(1.029)	3300935	30.0000	25.52
61 Bromoform	173	17.458	17.451	(1.057)	1424105	30.0000	24.30
62 Nonane	57	17.415	17.408	(1.054)	2197503	30.0000	23.72
63 Styrene	104	17.475	17.469	(1.058)	2153689	30.0000	23.08
64 o-Xylene	91	17.536	17.530	(1.061)	3215810	30.0000	25.32
65 1,1,2,2-Tetrachloroethane	83	17.840	17.824	(1.080)	3065350	30.0000	24.62
66 1,2,3-Trichloropropane	110	17.996	17.989	(1.089)	926745	30.0000	26.37
67 Cumene	105	18.100	18.093	(1.096)	4244844	30.0000	23.91
68 n-Propylbenzene	91	18.603	18.596	(1.126)	5731057	30.0000	24.22

Data File: /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
Report Date: 27-Nov-2003 16:22

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	18.742	18.735	(1.134)	4514964	30.0000	24.02
70 1,3,5-Trimethylbenzene	120	18.811	18.804	(1.139)	1792199	30.0000	23.76
71 Alpha-Methylstyrene	118	19.019	19.013	(1.151)	1827268	30.0000	24.29
72 Decane	57	19.080	19.073	(1.155)	2541429	30.0000	22.38
73 1,2,4-Trimethylbenzene	105	19.227	19.221	(1.164)	3209602	30.0000	24.12
74 1,3-Dichlorobenzene	146	19.487	19.481	(1.180)	2406455	30.0000	23.31
75 Benzyl Chloride	91	19.548	19.542	(1.183)	2801058	30.0000	22.88
76 1,4-Dichlorobenzene	146	19.574	19.559	(1.185)	1981075	30.0000	22.06
77 1,2-Dichlorobenzene	146	19.912	19.906	(1.205)	2323664	30.0000	23.45
78 Undecane	57	20.337	20.331	(1.231)	2659366	30.0000	22.13
79 Dodecane	57	21.456	21.450	(1.299)	2560879	30.0000	22.61
80 1,2,4-Trichlorobenzene	180	21.673	21.666	(1.312)	1588284	30.0000	24.34
81 Napthalene	128	21.829	21.823	(1.321)	4981275	30.0000	23.88
82 Hexachlorobutadiene	225	22.063	22.065	(1.335)	814950	30.0000	23.15

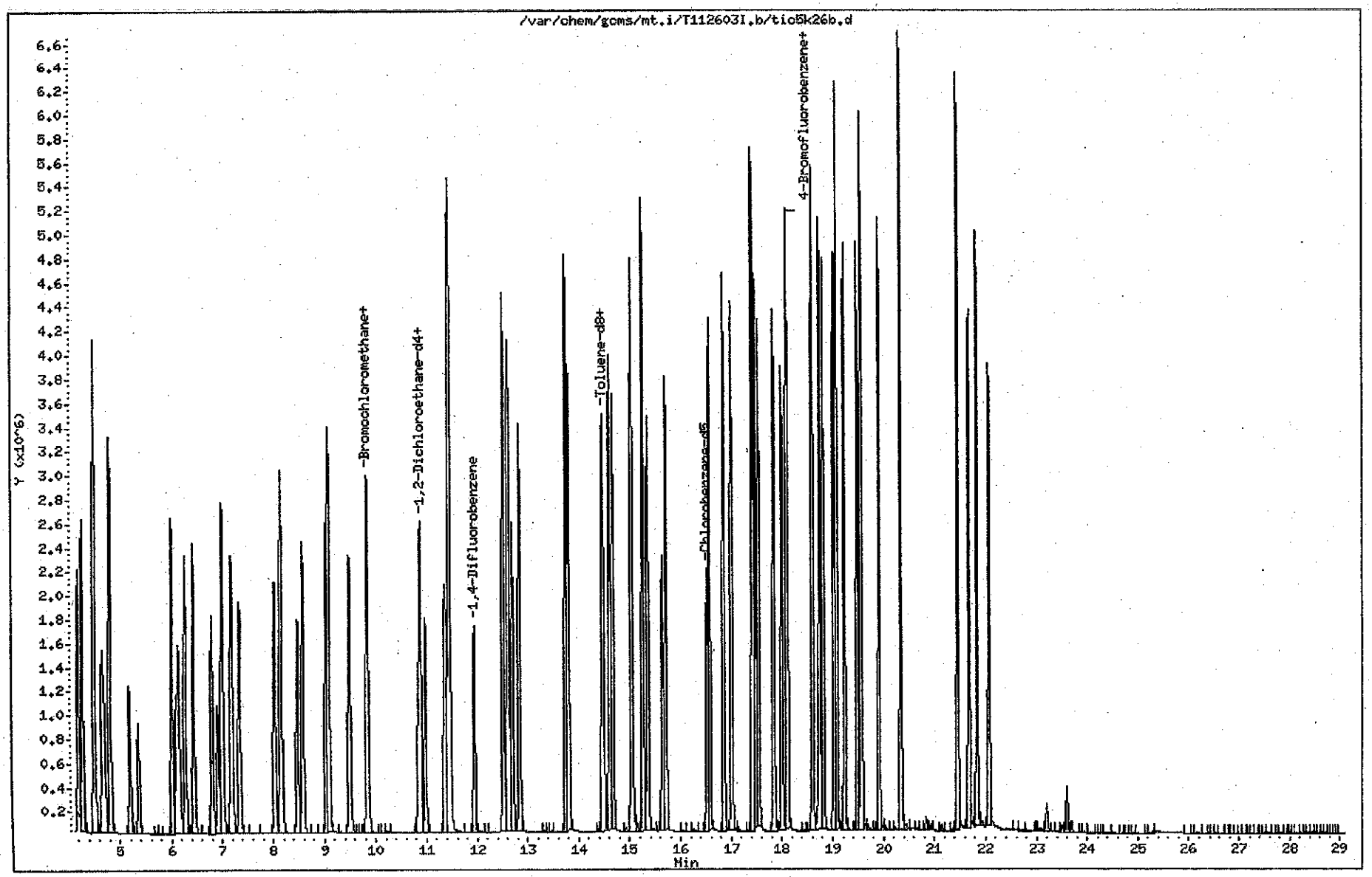
QC Flag Legend

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

Data File: /var/chem/gcms/mt.i/T112603I.b/tic5k26b.d
Date : 26-NOV-2003 20:51
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/T112603I.b/ticvk27.d
Report Date: 27-Nov-2003 16:35

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112603I.b/ticvk27.d
Lab Smp Id: ICV
Inj Date : 27-NOV-2003 00:21
Operator : 0691 Inst ID: mt.i
Smp Info : ICV,,3,,LCS
Misc Info : T112603I,LA,,,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T112603I.b/LA.m
Meth Date : 27-Nov-2003 16:24 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.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

OK wd 12/2/03

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	9.829	9.828	(1.000)	389286	10.0000	
* 2 1,4-Difluorobenzene	114	11.945	11.944	(1.000)	1913672	10.0000	
* 3 Chlorobenzene-d5	117	16.515	16.524	(1.000)	1722200	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.826	10.826	(0.906)	350054	10.0931	10.09
$ 5 Toluene-d8	98	14.486	14.494	(0.877)	1556125	9.77815	9.778
$ 6 4-Bromofluorobenzene	95	18.111	18.119	(1.097)	1090872	10.9228	10.92
8 Dichlorodifluoromethane	85	4.296	4.295	(0.437)	1350093	11.0306	11.03
9 Chloromethane	52	4.504	4.503	(0.458)	191631	10.5224	10.52
10 1,2-Dichlorotetrafluoroethane	135	4.521	4.521	(0.460)	660407	11.0928	11.09
11 Vinyl Chloride	62	4.712	4.711	(0.479)	642496	11.6423	11.64
15 Bromomethane	94	5.198	5.197	(0.529)	506135	9.88895	9.889
16 Chloroethane	64	5.362	5.362	(0.546)	366858	10.7538	10.75
17 Trichlorofluoromethane	101	6.013	6.021	(0.612)	942957	10.1584	10.16
23 1,1-Dichloroethene	96	6.793	6.793	(0.691)	416478	10.7302	10.73
25 1,1,2-Trichlorotrifluoroethane	101	6.993	7.001	(0.711)	840880	10.5056	10.50
26 Methylene Chloride	84	7.166	7.166	(0.729)	400713	8.93189	8.932
31 1,1-Dichloroethane	63	8.476	8.475	(0.862)	1079128	10.2491	10.25
35 cis 1,2-Dichloroethene	96	9.491	9.499	(0.966)	609689	10.1083	10.11
36 Chloroform	83	9.838	9.846	(1.001)	1034506	10.7553	10.76
37 1,1,1-Trichloroethane	97	10.878	10.878	(1.107)	920338	10.8878	10.89
38 1,2-Dichloroethane	62	10.974	10.973	(0.919)	766064	10.4318	10.43

Data File: /var/chem/gcms/mt.i/T112603I.b/ticvk27.d
Report Date: 27-Nov-2003 16:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
39 Benzene	78	11.433	11.441	(0.957)	1673858	10.8182	10.82
42 Carbon Tetrachloride	117	11.459	11.467	(1.166)	757792	8.88518	8.885
44 1,2-Dichloropropane	63	12.595	12.595	(1.054)	633760	10.4788	10.48
45 Trichloroethene	130	12.621	12.621	(1.057)	709927	10.4618	10.46
49 cis-1,3-Dichloropropene	75	13.792	13.792	(1.155)	1154076	8.82169	8.822
50 trans-1,3-Dichloropropene	75	14.460	14.459	(0.876)	823020	9.52759	9.528
51 Toluene	91	14.599	14.598	(0.884)	1777167	10.0164	10.02
52 1,1,2-Trichloroethane	97	14.660	14.659	(0.888)	662910	9.96462	9.965
56 1,2-Dibromoethane	107	15.640	15.639	(0.947)	1089825	9.94559	9.946
57 Tetrachloroethene	129	15.709	15.708	(0.951)	542293	10.4747	10.47
58 Chlorobenzene	112	16.568	16.567	(1.003)	1521305	10.0567	10.06
59 Ethylbenzene	91	16.845	16.853	(1.020)	2391386	9.97710	9.977
60 m-Xylene (For p-)	91	17.010	17.001	(1.030)	3031742	17.1847	17.18
63 Styrene	104	17.461	17.469	(1.057)	1327503	10.8509	10.85
64 o-Xylene	91	17.530	17.530	(1.061)	1726805	9.73022	9.730
65 1,1,2,2-Tetrachloroethane	83	17.825	17.824	(1.079)	1602957	9.73351	9.734
70 1,3,5-Trimethylbenzene	120	18.796	18.804	(1.138)	984369	9.03687	9.037
73 1,2,4-Trimethylbenzene	105	19.213	19.221	(1.163)	1808442	9.28516	9.285
74 1,3-Dichlorobenzene	146	19.473	19.481	(1.179)	1351676	10.0305	10.03
75 Benzyl Chloride	91	19.542	19.542	(1.183)	551773	2.88962	2.890
76 1,4-Dichlorobenzene	146	19.560	19.559	(1.184)	1299729	10.3619	10.36
77 1,2-Dichlorobenzene	146	19.906	19.906	(1.205)	1306519	10.2201	10.22
80 1,2,4-Trichlorobenzene	180	21.667	21.666	(1.312)	917918	10.3379	10.34
82 Hexachlorobutadiene	225	22.066	22.065	(1.336)	493861	11.8408	11.84

Data File: /var/chem/gcms/mt.i/T112603I.b/ticvk27.d
Report Date: 27-Nov-2003 16:35

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: ticvk27.d
Lab Smp Id: ICV
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112603I.b/LA.m
Misc Info: T112603I,LA,,,,,100ML

Calibration Date: 26-NOV-2003
Calibration Time: 22:15

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	406950	242135	571765	389286	-4.34
2 1,4-Difluorobenze	1964623	1168951	2760295	1913672	-2.59
3 Chlorobenzene-d5	1745527	1038589	2452465	1722200	-1.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.83	0.01
2 1,4-Difluorobenze	11.94	11.61	12.27	11.95	0.01
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112603I.b/ticvk27.d
Report Date: 27-Nov-2003 16:35

STL Knoxville

RECOVERY REPORT

2nd source ok wof 12/2/03

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/T112603I.b/LA.m
Misc Info: T112603I,LA,,,,,100ML

Client SDG: T112603I
Fraction: OTHER

Operator: 0691
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
8 Dichlorodifluorome	10.00	11.03	110.31	65-135
9 Chloromethane	10.00	10.52	105.22	65-135
10 1,2-Dichlorotetraf	10.00	11.09	110.93	65-135
11 Vinyl Chloride	10.00	11.64	116.42	65-135
15 Bromomethane	10.00	9.889	98.89	65-135
16 Chloroethane	10.00	10.75	107.54	65-135
17 Trichlorofluoromet	10.00	10.16	101.58	65-135
23 1,1-Dichloroethene	10.00	10.73	107.30	65-135
25 1,1,2-Trichlorotri	10.00	10.50	105.06	65-135
26 Methylene Chloride	10.00	8.932	89.32	65-135
31 1,1-Dichloroethane	10.00	10.25	102.49	65-135
35 cis 1,2-Dichloroet	10.00	10.11	101.08	65-135
36 Chloroform	10.00	10.76	107.55	65-135
37 1,1,1-Trichloroeth	10.00	10.89	108.88	65-135
38 1,2-Dichloroethane	10.00	10.43	104.32	65-135
39 Benzene	10.00	10.82	108.18	65-135
42 Carbon Tetrachlori	10.00	8.885	88.85	65-135
44 1,2-Dichloropropan	10.00	10.48	104.79	65-135
45 Trichloroethene	10.00	10.46	104.62	65-135
49 cis-1,3-Dichloropr	10.00	8.822	88.22	65-135
50 trans-1,3-Dichloro	10.00	9.528	95.28	65-135
51 Toluene	10.00	10.02	100.16	65-135
52 1,1,2-Trichloroeth	10.00	9.965	99.65	65-135
56 1,2-Dibromoethane	10.00	9.946	99.46	65-135
57 Tetrachloroethene	10.00	10.47	104.75	65-135
58 Chlorobenzene	10.00	10.06	100.57	65-135
59 Ethylbenzene	10.00	9.977	99.77	65-135
60 m-Xylene (For p-)	20.00	17.18	85.92	65-135
63 Styrene	10.00	10.85	108.51	65-135
64 o-Xylene	10.00	9.730	97.30	65-135
65 1,1,2,2-Tetrachlor	10.00	9.734	97.34	65-135
70 1,3,5-Trimethylben	10.00	9.037	90.37	65-135
73 1,2,4-Trimethylben	10.00	9.285	92.85	65-135

Data File: /var/chem/gcms/mt.i/T112603I.b/ticvk27.d
Report Date: 27-Nov-2003 16:35

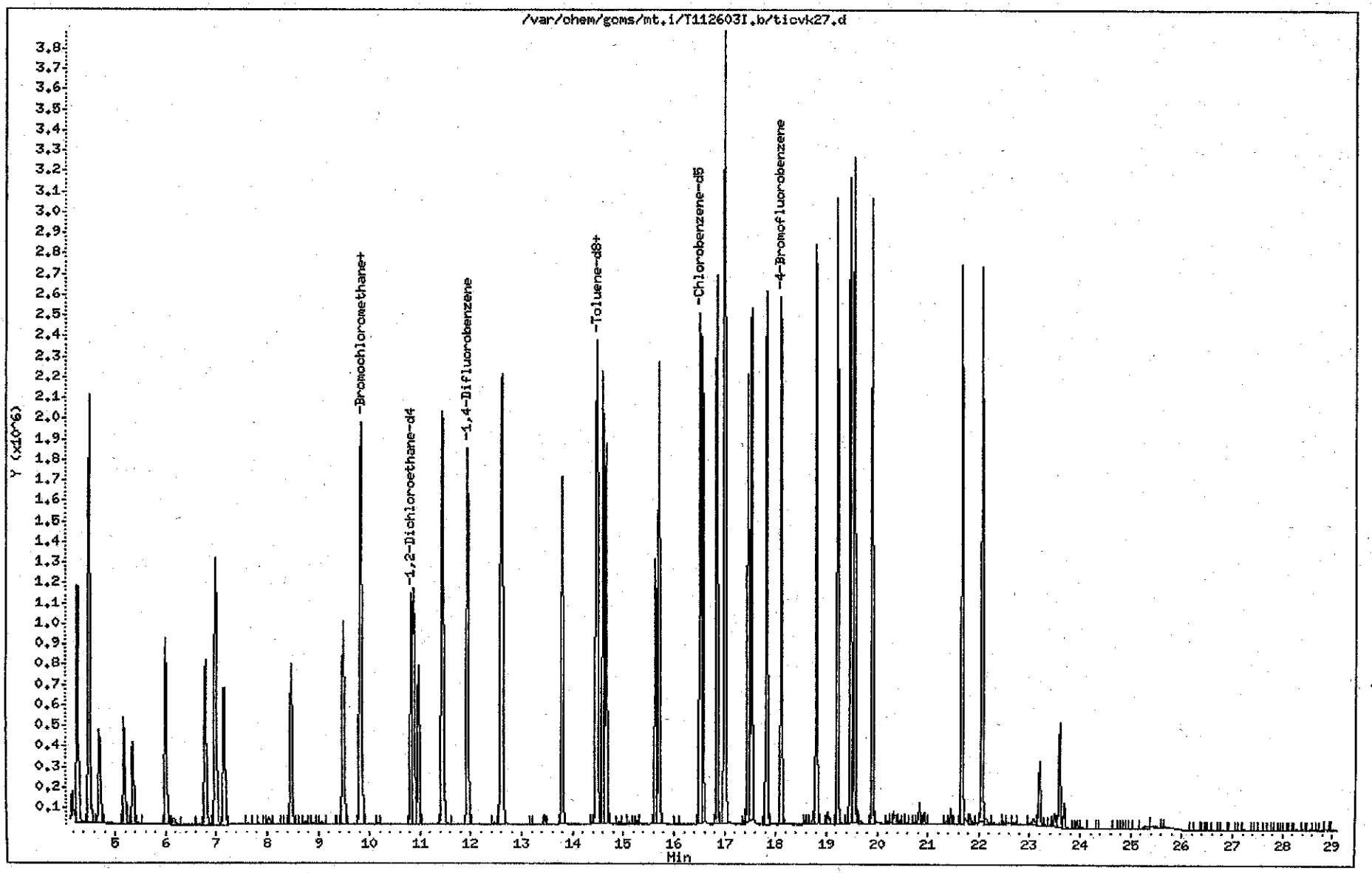
SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
74 1,3-Dichlorobenzen	10.00	10.03	100.30	65-135
75 Benzyl Chloride	10.00	2.890	28.90	20-180
76 1,4-Dichlorobenzen	10.00	10.36	103.62	65-135
77 1,2-Dichlorobenzen	10.00	10.22	102.20	65-135
80 1,2,4-Trichloroben	10.00	10.34	103.38	65-135
82 Hexachlorobutadien	10.00	11.84	118.41	65-135

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.09	100.93	70-130
$ 5 Toluene-d8	10.00	9.778	97.78	70-130
$ 6 4-Bromofluorobenze	10.00	10.92	109.23	70-130

Data File: /var/chem/gcms/mt.i/T112603I.b/tiovk27.d
Date : 27-NOV-2003 00:21
Client ID:
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 4

Analysis Date:	11/28/03	CCAL Batch/ Scan Name:	T112803	Instrument:	MT	ICAL Batch/ Scan Name:	T112603i	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 run 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 the 10 ppbv standard used for CCAL?		✓			✓
7. Is the %D ≤ 30% for all target analytes? Narrate up to 4 target analytes over 30% but ≤ 40% D.		✓			✓
8. Have all peaks been auto identified? If not, list:		✓			✓
9. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
10. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
11. Is the first IS documented correctly on the log?		✓			✓
12. Is the ICAL date & time on the CCAL correct?		✓			✓
24. Elution order checked on isomeric pairs?		✓			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		✓			✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		✓			✓
• vinyl acetate / hexane		✓			✓
• cis- and trans- isomers		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• 4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
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?	✓				NA
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: CWJ	Date: 12/2/03	2nd Level Reviewer : JW	Date: 12/3/03
Comments:		Comments:	

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

Analyst: CWJ | DF Preventive Maintenance Performed ✓ Qtims Batch: 3336553

Date: 11/28/03 – 11/29/03 System Date/Time ok (y/n): ✓ Target Batch: T112803

BFB Time: 00:44 Surr/IS ID: CX-929 IS #1 Area: 395409 ICAL Batch: T112603c

Time	Lot No.	File ID	Can #	Comments	I/S	Pos	Vol* (ml)	Use	DUP
23:20	BFB	TBF1128	—	TUNE	—	16	100	N	—
00:02	BFBB	TBF1128B	—	TUNE	—	16	100	N	—
00:44	BFBC	TBF1128C	—	TUNE	—	16	100	✓	—
1:26	CCV	TMD1128	—	CX-1087	—	STD	100	N	—
2:08	CCVB	TMD1128B	—	↓	—	STD	100	✓	—
2:49	REF	TRF1128	—	CX-1088	—	15	100	N	—
3:31	REFB	TRF1128B	—	↓	—	15	100	✓	—
4:13	BLK	TBK1128	—	not used	—	16	500	N	—
4:55	BLKB	TBK1128B	—	not used	—	16	500	N	—
5:37	BLKC	TBK1128C	—	F5V9T1A A	—	16	500	✓	—
6:18	K070107	F4CF5	12647	1.69 short list	—	1	500	✓	7
7:00	↓	F4CF5D	12647	AC 1.69	—	1	500	✓	Dup
7:42	↓	✓ ↓ F6	11367	1.69 ~~RR~~ RR 10 IN CAN	—	2	25	N	—
9:06	K040227	✓ F34GL	1829	need IN to 40 Run 10	I	~~48~~	10	N	—
9:48	↓	✓ ↓ 6T	1799	RR 75	I	~~54~~	~~15~~ 1354	N	—
10:30	K110158	✓ F4J3E	2047	AC not IN-can to 15	I	~~65~~	15	N	—
11:11	↓	✓ ↓ 3L	04404	AC IS 1.67 RR 50	—	~~76~~	500	N	—
11:53	K190115	F44W9	93265	GEI		~~87~~		✓	8
12:35		XC	12468			~~98~~		✓	9
13:17		XE	04190	wdj 12/2/03 ~~Rerun 11/30/03~~		~~109~~		✓	10
13:59		XF	04409	~~Rerun 11/30/03~~ ME		~~10~~ 11		✓	11
14:39	↓	✓ ↓ XG	03861	↓ RR IS ↓		~~11~~ 12		N	—
15:19	K130135	F4PWQ	93261	1.65 BTEXN		~~12~~ 13		✓	12
15:59	↓	↓ WØ	2956	1.61 ↓		~~13~~ 14	↓	✓	13
8:24	K110124	✓ F4JTN	3397	1.61 RR 20 16.1		~~14~~ 3	50	N	—
21:04	K130135	F4PW4	1819	IS ↓ BTEXN RP ME 12/2/03 MT		8	500	wdj 12/2/03 ~~N~~	~~20~~
21:44	↓	↓ W7	12308	1.65 ↓ wdj 12/2/03		9	500	✓	1
22:22	K040225	F34F6	0184	~~2.19~~ 127.9 ~~5139.5~~ 29.5	5	10	100	✓	2
23:01	↓	GD	1828	972.8 2432	5	11	200	✓	3

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

Analyst: CWJ Date: 12/2/03 see next page

STL Knoxville
TO-14/15 RUN LOG

GCMS Analysis: TO-14/15 Inst: MT

Analyst: CWJ Preventive Maintenance Performed ✓ Qtims Batch: 3336553

Date: 11/28-11/29/03 System Date/Time ok (y/n): ✓ Target Batch: T112803

BFB Time: 00:44 Surr/IS ID: CX-929 IS #1 Area: 395409 ICAL Batch: T112603c

Time	Lot No.	File ID	Can #	Comments		I/S	Pos	Vol* (ml)	Use	DUP
16:38	K110124	F4JTNB	3397	1.61 38.333	12	—	3	21	✓	14
17:15	K040227	F34GTB	1799	1.67 10.844	6	—	~~54~~	77	✓	15
17:53	K110158	F4J3LB	~~2047~~ 04404	1.67 16.373	3	—	7	51	✓	16
19:09	K070107	F4CF6B	11367	6.58 149.55	20	I	2	22	✓17	~~17~~ 18
19:47	K040227	F34GLB	1829	~~6.43~~ 25.8 158.82	15	I2	4	17	✓18	~~18~~ 19
20:24	K110158	F4J3EB	2047	~~6.6~~ 14.73 433.24	15	~~I2~~	~~6~~ 5	17	✓19	~~19~~ 20
18:33	K190115	F44XGB	03851	not used		—	12	500	✗	17

CWJ 12/2/03

CWJ 12/2/03

CWJ 12/2/03

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

Analyst: CWJ Date: 12/2/03

031129
STL-Knoxville
TO-14 Autosampler Log
'MT'

Sample	Volume	Position	Date	Time
BFB	102ml	16	11/29/2003	12:03:35 AM
BFB	101ml	16	11/29/2003	12:45:22 AM
CCV	99ml	STD	11/29/2003	1:27:12 AM
CCVb	100ml	STD	11/29/2003	2:08:56 AM
REF	102ml	15	11/29/2003	2:50:36 AM
REF	101ml	15	11/29/2003	3:32:20 AM
BLK	502ml	16	11/29/2003	4:14:00 AM
BLKB	501ml	16	11/29/2003	4:56:05 AM
BLKC	501ml	16	11/29/2003	5:38:01 AM
F4CF5	502ml	1	11/29/2003	6:19:55 AM
F4CF5D	502ml	1	11/29/2003	7:01:40 AM
F4CF6 RR	25ml	2	11/29/2003	7:43:23 AM
F4JTN RR	51ml	3	11/29/2003	8:25:16 AM
F34GL RR	10ml	4	11/29/2003	9:07:10 AM
F34GT RR	135ml	5	11/29/2003	9:49:10 AM
F4J3E RR	16ml	6	11/29/2003	10:31:03 AM
F4J3L RR	500ml	7	11/29/2003	11:12:46 AM
F44W9	501ml	8	11/29/2003	11:54:48 AM
F44XC	502ml	9	11/29/2003	12:36:30 PM
F44XE	501ml	10	11/29/2003	1:18:19 PM
F44XF	501ml	11	11/29/2003	2:00:06 PM
F44XG RR	501ml	12	11/29/2003	2:40:51 PM
F4PWQ	502ml	13	11/29/2003	3:20:23 PM
F4PW0	501ml	14	11/29/2003	4:00:36 PM
F4JTNB	21ml	3	11/29/2003	4:39:03 PM
F34GTB	77ml	5	11/29/2003	5:16:36 PM
F4J3LB	51ml	7	11/29/2003	5:54:02 PM
F44XGB	502ml	12	11/29/2003	6:33:37 PM
F4CF6B	22ml	2	11/29/2003	7:10:53 PM
F34GLB	17ml	4	11/29/2003	7:48:04 PM
F4J3EB	17ml	6	11/29/2003	8:25:19 PM
F4PW4 RR	500ml	8	11/29/2003	9:05:01 PM
F4PW7	502ml	9	11/29/2003	9:45:22 PM
F34F6	101ml	10	11/29/2003	10:23:39 PM
F34GD	201ml	11	11/29/2003	11:02:34 PM

OK mf
12/2/03

Data File: /var/chem/gcms/mt.i/T112803.b/tbf1128c.d

Date : 29-NOV-2003 00:44

Client ID:

Instrument: mt.i

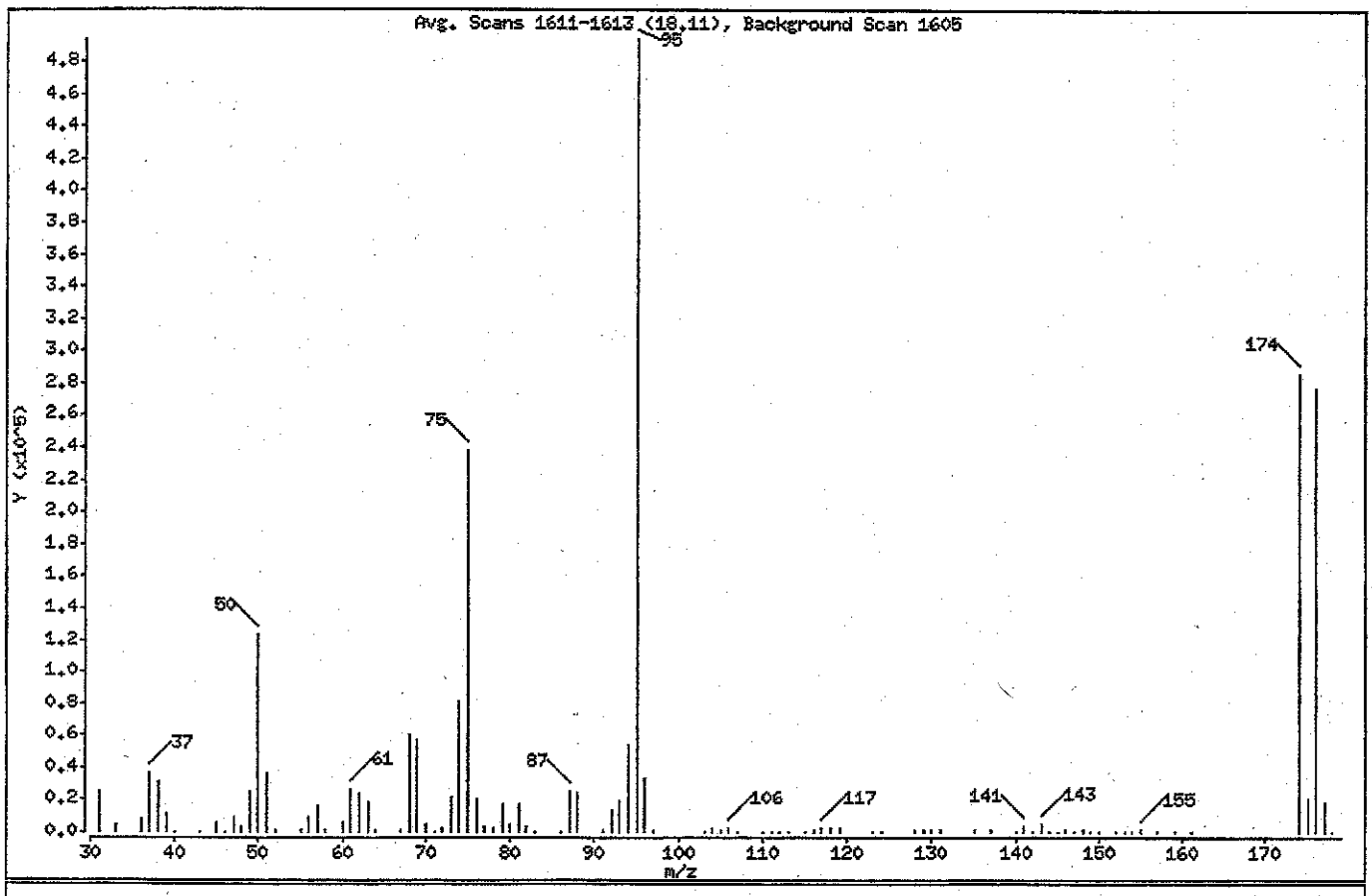
Sample Info: BFB,,3,,BFB

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	24.87
75	30.00 - 60.00% of mass 95	48.20
96	5.00 - 9.00% of mass 95	6.62
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	57.80
175	5.00 - 9.00% of mass 174	4.20 (7.26)
176	95.00 - 101.00% of mass 174	56.00 (96.90)
177	5.00 - 9.00% of mass 176	3.62 (6.47)

OK WJ 12/2/03

Data File: /var/chem/gcms/mt.i/T112803.b/tbf1128c.d

Date : 29-NOV-2003 00:44

Client ID:

Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32

Data File: tbf1128c.d

Spectrum: Avg. Scans 1611-1613 (18.11), Background Scan 1605

Location of Maximum: 95.00

Number of points: 97

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	25416	67.00	1311	96.00	32672	141.00	3712
33.00	4115	68.00	59808	97.00	916	142.00	389
36.00	7517	69.00	57000	103.00	153	143.00	4068
37.00	36576	70.00	4089	104.00	2071	144.00	239
38.00	30448	71.00	69	105.00	942	145.00	291
39.00	11783	72.00	2766	106.00	2126	146.00	588
40.00	87	73.00	21936	107.00	535	147.00	299
43.00	318	74.00	81352	110.00	188	148.00	877
45.00	5904	75.00	238016	111.00	370	149.00	206
46.00	373	76.00	20200	112.00	176	150.00	377
47.00	9481	77.00	3449	113.00	375	152.00	71
48.00	3966	78.00	2215	115.00	515	153.00	348
49.00	25568	79.00	17320	116.00	1690	154.00	219
50.00	122824	80.00	4128	117.00	2771	155.00	845
51.00	36096	81.00	17632	118.00	1769	157.00	563
52.00	1613	82.00	3188	119.00	2289	159.00	434
55.00	1578	83.00	214	123.00	71	161.00	425
56.00	8783	86.00	516	124.00	296	174.00	285376
57.00	16284	87.00	24856	128.00	1600	175.00	20720
58.00	647	88.00	24200	129.00	734	176.00	276544
60.00	5738	91.00	1639	130.00	1649	177.00	17888
61.00	26240	92.00	13107	131.00	649	178.00	472
62.00	23992	93.00	19720	135.00	768		
63.00	17776	94.00	53720	137.00	737		
64.00	1591	95.00	493824	140.00	265		

Data File: /var/chem/gcms/mt.i/T112803.b/tbf1128c.d

Date : 29-NOV-2003 00:44

Client ID:

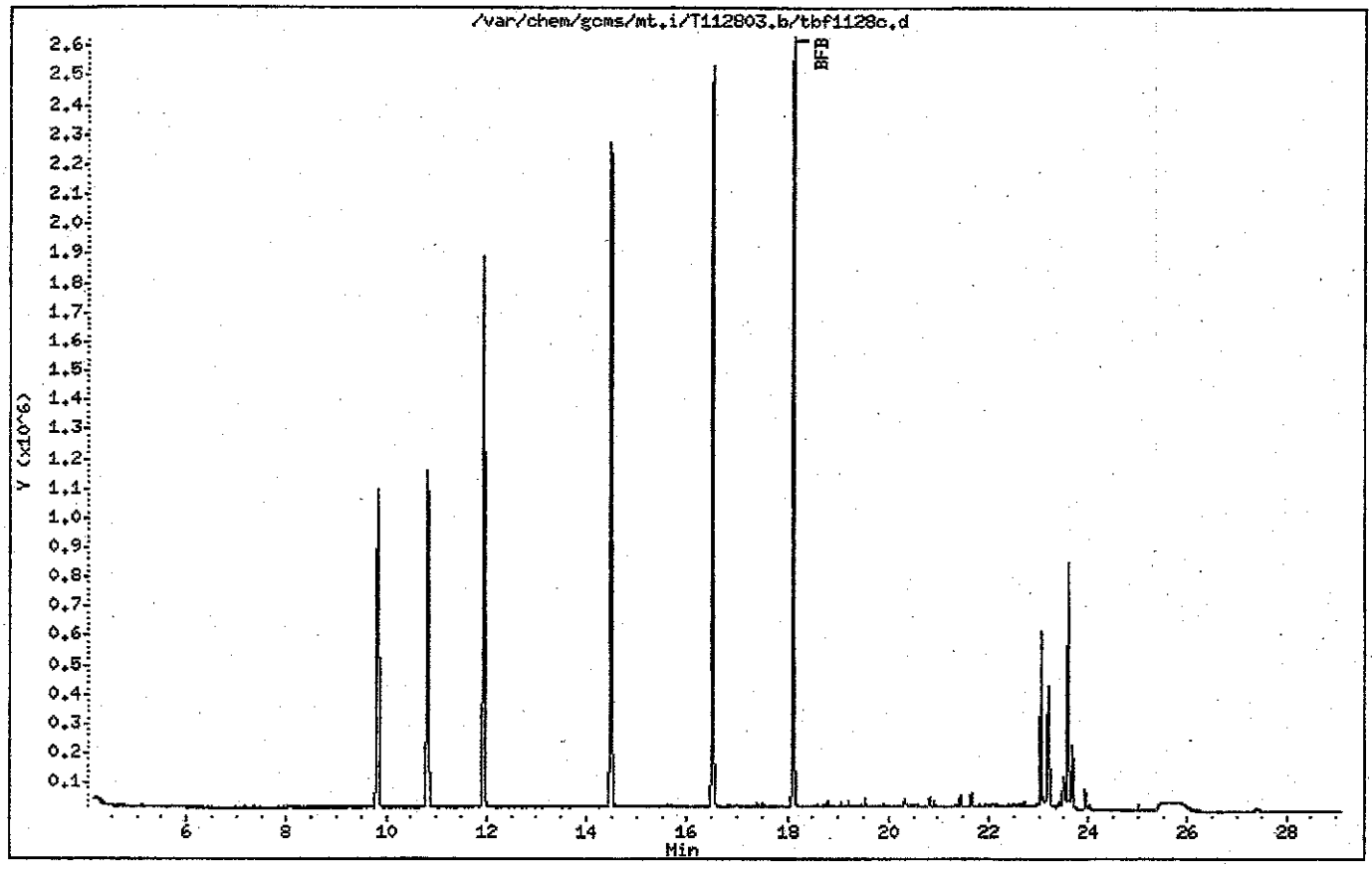
Instrument: mt.i

Sample Info: BFB,,3,,BFB

Operator: 0691

Column phase: DB-5

Column diameter: 0.32



Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd1128b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/mt.i/T112803.b/LA.m

Injection Date: 29-NOV-2003 02:08
Init. Cal. Date(s): 26-NOV-2003 26-NOV-2003
Init. Cal. Times: 19:28 23:39
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 1,2-Dichloroethane-d4	0.18123	0.18306	0.000	-1.00478	30.00000	Averaged
$ 5 Toluene-d8	0.92407	0.89944	0.000	2.66562	30.00000	Averaged
$ 6 4-Bromofluorobenzene	0.57990	0.57389	0.000	1.03704	30.00000	Averaged
7 Chlorodifluoromethane	3.36113	3.50713	0.000	-4.34366	30.00000	Averaged
8 Dichlorodifluoromethane	3.14410	3.03266	0.000	3.54462	30.00000	Averaged
9 Chloromethane	0.46782	0.47202	0.000	-0.89772	30.00000	Averaged
10 1,2-Dichlorotetrafluoroetha	1.52933	1.54022	0.000	-0.71190	30.00000	Averaged
11 Vinyl Chloride	1.41762	1.45620	0.000	-2.72097	30.00000	Averaged
12 Methanol	0.53349	0.51317	0.000	3.80885	30.00000	Averaged
13 1,3-Butadiene	1.02849	1.06876	0.000	-3.91536	30.00000	Averaged
14 n-Butane	2.45364	2.49037	0.000	-1.49710	30.00000	Averaged
15 Bromomethane	1.31476	1.37010	0.000	-4.20920	30.00000	Averaged
16 Chloroethane	0.87633	0.92061	0.000	-5.05350	30.00000	Averaged
17 Trichlorofluoromethane	2.38449	2.55150	0.000	-7.00415	30.00000	Averaged
18 Acrolein	0.34378	0.34305	0.000	0.21454	30.00000	Averaged
19 Acetonitrile	0.50331	0.50078	0.000	0.50366	30.00000	Averaged
20 Acetone	0.49463	0.42808	0.000	13.45578	30.00000	Averaged
21 Pentane	0.31724	0.32174	0.000	-1.41940	30.00000	Averaged
22 Ethyl Ether	1.26162	1.25665	0.000	0.39374	30.00000	Averaged
23 1,1-Dichloroethene	0.99705	1.04496	0.000	-4.80583	30.00000	Averaged
24 Acrylonitrile	0.65612	0.69704	0.000	-6.23758	30.00000	Averaged
25 1,1,2-Trichlorotrifluoroeth	2.05610	2.18007	0.000	-6.02928	30.00000	Averaged
26 Methylene Chloride	1.15245	1.05027	0.000	8.86635	30.00000	Averaged
27 3-Chloropropene	1.08391	1.11310	0.000	-2.69275	30.00000	Averaged
28 Carbon Disulfide	4.12289	3.97597	0.000	3.56355	30.00000	Averaged
29 trans-1,2-Dichloroethene	1.31474	1.32297	0.000	-0.62633	30.00000	Averaged
30 Methyl-t-Butyl Ether	2.32044	2.19895	0.000	5.23528	30.00000	Averaged
31 1,1-Dichloroethane	2.70469	2.84694	0.000	-5.25935	30.00000	Averaged
32 Vinyl Acetate	3.01402	3.02888	0.000	-0.49330	30.00000	Averaged
33 2-Butanone	0.51314	0.49152	0.000	4.21328	30.00000	Averaged
34 Hexane	1.28553	1.32461	0.000	-3.03995	30.00000	Averaged
35 cis 1,2-Dichloroethene	1.54939	1.62179	0.000	-4.67257	30.00000	Averaged
36 Chloroform	2.47082	2.55033	0.000	-3.21807	30.00000	Averaged
37 1,1,1-Trichloroethane	2.17139	2.23306	0.000	-2.84005	30.00000	Averaged
38 1,2-Dichloroethane	0.38374	0.38105	0.000	0.70161	30.00000	Averaged

OK WJ 12/2/03

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd1128b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/mt.i/T112803.b/LA.m

Injection Date: 29-NOV-2003 02:08
Init. Cal. Date(s): 26-NOV-2003 26-NOV-2003
Init. Cal. Times: 19:28 23:39
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
39 Benzene	0.80853	0.74882	0.000	7.38503	30.00000	Averaged
40 1-Butanol	0.15276	0.16917	0.000	-10.74581	30.00000	Averaged
41 Cyclohexane	0.12206	0.11506	0.000	5.73034	30.00000	Averaged
42 Carbon Tetrachloride	2.19086	2.32714	0.000	-6.22027	30.00000	Averaged
43 Heptane	0.66297	0.64433	0.000	2.81055	30.00000	Averaged
44 1,2-Dichloropropane	0.31604	0.30800	0.000	2.54536	30.00000	Averaged
45 Trichloroethene	0.35460	0.33275	0.000	6.16233	30.00000	Averaged
46 Dibromomethane	0.32587	0.32643	0.000	-0.17173	30.00000	Averaged
47 Bromodichloromethane	0.64492	0.64552	0.000	-0.09310	30.00000	Averaged
48 4-Methyl-2-pentanone	0.58000	0.57279	0.000	1.24359	30.00000	Averaged
49 cis-1,3-Dichloropropene	0.68362	0.68160	0.000	0.29556	30.00000	Averaged
50 trans-1,3-Dichloropropene	0.50158	0.51092	0.000	-1.86055	30.00000	Averaged
51 Toluene	1.03022	0.93224	0.000	9.51055	30.00000	Averaged
52 1,1,2-Trichloroethane	0.38629	0.37455	0.000	3.03902	30.00000	Averaged
53 2-Hexanone	0.38978	0.37485	0.000	3.83057	30.00000	Averaged
54 Octane	0.36405	0.35631	0.000	2.12705	30.00000	Averaged
55 Dibromochloromethane	0.68544	0.68605	0.000	-0.08950	30.00000	Averaged
56 1,2-Dibromoethane	0.63627	0.60412	0.000	5.05380	30.00000	Averaged
57 Tetrachloroethene	0.30062	0.27982	0.000	6.91689	30.00000	Averaged
58 Chlorobenzene	0.87837	0.81619	0.000	7.07907	30.00000	Averaged
59 Ethylbenzene	1.39175	1.25576	0.000	9.77095	30.00000	Averaged
60 m-Xylene (For p-)	1.02439	0.90515	0.000	11.63996	30.00000	Averaged
61 Bromoform	0.43314	0.41872	0.000	3.32897	30.00000	Averaged
62 Nonane	0.81041	0.72942	0.000	9.99372	30.00000	Averaged
63 Styrene	0.71037	0.72342	0.000	-1.83683	30.00000	Averaged
64 o-Xylene	1.03047	0.90517	0.000	12.15970	30.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.95624	0.91287	0.000	4.53590	30.00000	Averaged
66 1,2,3-Trichloropropane	0.27256	0.24470	0.000	10.22010	30.00000	Averaged
67 Cumene	1.37597	1.34448	0.000	2.28895	30.00000	Averaged
68 n-Propylbenzene	1.87114	1.75634	0.000	6.13526	30.00000	Averaged
69 4-Ethyltoluene	1.44884	1.41139	0.000	2.58523	30.00000	Averaged
70 1,3,5-Trimethylbenzene	0.63249	0.57564	0.000	8.98869	30.00000	Averaged
71 Alpha-Methylstyrene	0.53519	0.55328	0.000	-3.38007	30.00000	Averaged
72 Decane	0.96180	0.91352	0.000	5.01972	30.00000	Averaged
73 1,2,4-Trimethylbenzene	1.13092	0.99462	0.000	12.05189	30.00000	Averaged

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mt.i
Lab File ID: tmd1128b.d
Analysis Type: AIR
Lab Sample ID: CCV
Method: /var/chem/gcms/mt.i/T112803.b/LA.m

Injection Date: 29-NOV-2003 02:08
Init. Cal. Date(s): 26-NOV-2003 26-NOV-2003
Init. Cal. Times: 19:28 23:39
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
74 1,3-Dichlorobenzene	0.78247	0.76143	0.000	2.68924	30.00000	Averaged
75 Benzyl Chloride	1.10876	0.93913	0.000	15.29909	30.00000	Averaged
76 1,4-Dichlorobenzene	0.72833	0.70394	0.000	3.34858	30.00000	Averaged
77 1,2-Dichlorobenzene	0.74230	0.72957	0.000	1.71367	30.00000	Averaged
78 Undecane	0.91739	0.98967	0.000	-7.87857	30.00000	Averaged
79 Dodecane	0.78246	0.92064	0.000	-17.65985	30.00000	Averaged
80 1,2,4-Trichlorobenzene	0.51557	0.45827	0.000	11.11299	30.00000	Averaged
81 Napthalene	1.26817	1.54316	0.000	-21.68394	30.00000	Averaged
82 Hexachlorobutadiene	0.24218	0.25850	0.000	-6.73604	30.00000	Averaged

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Lab Smp Id: CCV Client Smp ID: 10PPBV
Inj Date : 29-NOV-2003 02:08
Operator : 0691 Inst ID: mt.i
Smp Info : CCV,,2,3,,10PPBV
Misc Info : T112803,LA,,,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 29-Nov-2003 12:10 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 99 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

OK wd 12/2/03

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	9.828	9.828	(1.000)	395409	10.0000	
* 2 1,4-Difluorobenzene	114	11.944	11.944	(1.000)	1975448	10.0000	
* 3 Chlorobenzene-d5	117	16.523	16.523	(1.000)	1812817	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.826	10.826	(0.906)	361617	10.0000	10.10
$ 5 Toluene-d8	98	14.485	14.485	(0.877)	1630515	10.0000	9.733
$ 6 4-Bromofluorobenzene	95	18.119	18.119	(1.097)	1040358	10.0000	9.896
7 Chlorodifluoromethane	51	4.217	4.217	(0.429)	1386753	10.0000	10.43
8 Dichlorodifluoromethane	85	4.295	4.295	(0.437)	1199141	10.0000	9.646
9 Chloromethane	52	4.503	4.503	(0.458)	186642	10.0000	10.09
10 1,2-Dichlorotetrafluoroethane	135	4.521	4.521	(0.460)	609016	10.0000	10.07
11 Vinyl Chloride	62	4.711	4.711	(0.479)	575794	10.0000	10.27
12 Methanol	31	4.659	4.659	(0.474)	811657	40.0000	38.48
13 1,3-Butadiene	54	4.815	4.815	(0.490)	422599	10.0000	10.39
14 n-Butane	43	4.824	4.824	(0.491)	984717	10.0000	10.15
15 Bromomethane	94	5.197	5.197	(0.529)	541751	10.0000	10.42
16 Chloroethane	64	5.362	5.362	(0.546)	364019	10.0000	10.50
17 Trichlorofluoromethane	101	6.021	6.021	(0.613)	1008889	10.0000	10.70
18 Acrolein	56	6.021	6.021	(0.613)	271287	20.0000	19.96
19 Acetonitrile	40	6.099	6.099	(0.621)	396023	20.0000	19.90
20 Acetone	58	6.151	6.151	(0.626)	338530	20.0000	17.31
21 Pentane	57	6.272	6.272	(0.638)	127218	10.0000	10.14

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

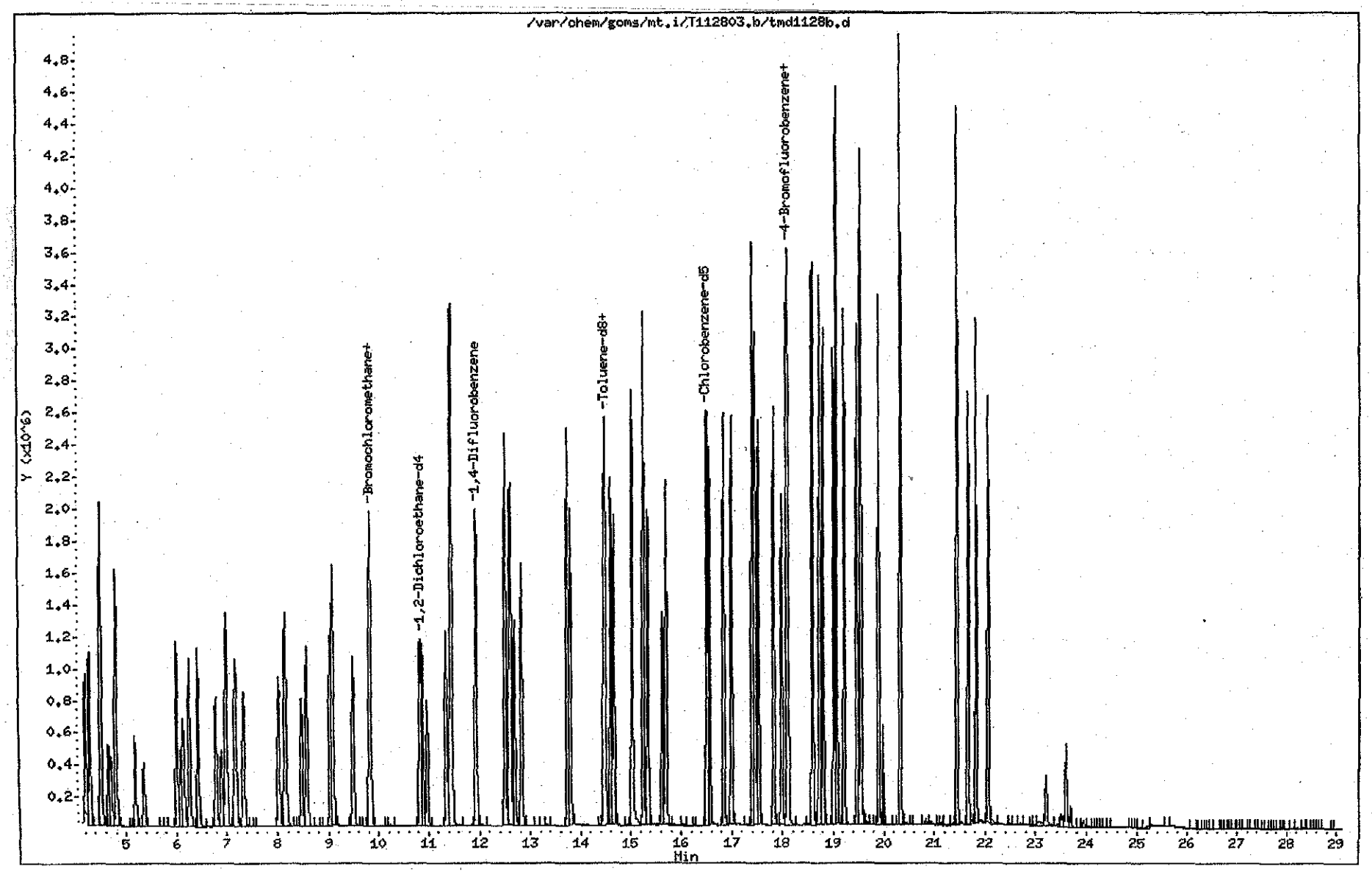
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	AMOUNTS ON-COL (ppb(v/v))
22 Ethyl Ether	31	6.437	6.437	(0.655)	993785	20.0000	19.92
23 1,1-Dichloroethene	96	6.793	6.793	(0.691)	413188	10.0000	10.48
24 Acrylonitrile	53	6.906	6.906	(0.703)	551236	20.0000	21.25
25 1,1,2-Trichlorotrifluoroethane	101	7.001	7.001	(0.712)	862020	10.0000	10.60
26 Methylene Chloride	84	7.166	7.166	(0.729)	415285	10.0000	9.113
27 3-Chloropropene	39	7.192	7.192	(0.732)	440129	10.0000	10.27
28 Carbon Disulfide	76	7.348	7.348	(0.748)	1572137	10.0000	9.644
29 trans-1,2-Dichloroethene	96	8.033	8.033	(0.817)	523116	10.0000	10.06
30 Methyl-t-Butyl Ether	73	8.154	8.154	(0.830)	1738975	20.0000	18.95
31 1,1-Dichloroethane	63	8.475	8.475	(0.862)	1125709	10.0000	10.52
32 Vinyl Acetate	43	8.579	8.579	(0.873)	2395301	20.0000	20.10
33 2-Butanone	72	9.039	9.039	(0.920)	388703	20.0000	19.16
34 Hexane	56	9.091	9.091	(0.925)	523765	10.0000	10.30
35 cis 1,2-Dichloroethene	96	9.490	9.490	(0.966)	641272	10.0000	10.47
36 Chloroform	83	9.846	9.846	(1.002)	1008427	10.0000	10.32
37 1,1,1-Trichloroethane	97	10.878	10.878	(1.107)	882973	10.0000	10.28
38 1,2-Dichloroethane	62	10.973	10.973	(0.919)	752739	10.0000	9.930
39 Benzene	78	11.441	11.441	(0.958)	1479248	10.0000	9.261
40 1-Butanol	31	11.346	11.346	(0.950)	668387	20.0000	22.15
41 Cyclohexane	69	11.441	11.441	(0.958)	227302	10.0000	9.427
42 Carbon Tetrachloride	117	11.459	11.459	(1.166)	920172	10.0000	10.62
43 Heptane	43	12.517	12.517	(1.048)	1272844	10.0000	9.719
44 1,2-Dichloropropane	63	12.595	12.595	(1.054)	608434	10.0000	9.745
45 Trichloroethene	130	12.621	12.621	(1.057)	657329	10.0000	9.384
46 Dibromomethane	93	12.699	12.699	(1.063)	644848	10.0000	10.02
47 Bromodichloromethane	83	12.829	12.829	(1.074)	1275194	10.0000	10.01
48 4-Methyl-2-pentanone	43	13.740	13.740	(1.150)	2263030	20.0000	19.75
49 cis-1,3-Dichloropropene	75	13.792	13.792	(1.155)	1346465	10.0000	9.970
50 trans-1,3-Dichloropropene	75	14.459	14.459	(0.875)	926198	10.0000	10.19
51 Toluene	91	14.598	14.598	(0.883)	1689989	10.0000	9.049
52 1,1,2-Trichloroethane	97	14.659	14.659	(0.887)	678987	10.0000	9.696
53 2-Hexanone	58	15.023	15.023	(0.909)	1359055	20.0000	19.23
54 Octane	85	15.257	15.257	(0.923)	645927	10.0000	9.787
55 Dibromochloromethane	129	15.344	15.344	(0.929)	1243684	10.0000	10.01
56 1,2-Dibromoethane	107	15.639	15.639	(0.946)	1095152	10.0000	9.495
57 Tetrachloroethene	129	15.708	15.708	(0.951)	507266	10.0000	9.308
58 Chlorobenzene	112	16.567	16.567	(1.003)	1479601	10.0000	9.292
59 Ethylbenzene	91	16.853	16.853	(1.020)	2276473	10.0000	9.023
60 m-Xylene (For p-)	91	17.000	17.000	(1.029)	1640879	10.0000	8.836
61 Bromoform	173	17.451	17.451	(1.056)	759072	10.0000	9.667
62 Nonane	57	17.408	17.408	(1.054)	1322311	10.0000	9.001
63 Styrene	104	17.469	17.469	(1.057)	1311430	10.0000	10.18
64 o-Xylene	91	17.529	17.529	(1.061)	1640911	10.0000	8.784
65 1,1,2,2-Tetrachloroethane	83	17.824	17.824	(1.079)	1654868	10.0000	9.546
66 1,2,3-Trichloropropane	110	17.989	17.989	(1.089)	443596	10.0000	8.978
67 Cumene	105	18.093	18.093	(1.095)	2437291	10.0000	9.771
68 n-Propylbenzene	91	18.596	18.596	(1.125)	3183921	10.0000	9.386

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Report Date: 29-Nov-2003 12:10

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ppb(v/v))	ON-COL (ppb(v/v))
69 4-Ethyltoluene	105	18.735	18.735	(1.134)	2558586	10.0000	9.741
70 1,3,5-Trimethylbenzene	120	18.804	18.804	(1.138)	1043531	10.0000	9.101
71 Alpha-Methylstyrene	118	19.012	19.012	(1.151)	1003000	10.0000	10.34
72 Decane	57	19.073	19.073	(1.154)	1656053	10.0000	9.498
73 1,2,4-Trimethylbenzene	105	19.221	19.221	(1.163)	1803068	10.0000	8.795
74 1,3-Dichlorobenzene	146	19.481	19.481	(1.179)	1380330	10.0000	9.731
75 Benzyl Chloride	91	19.541	19.541	(1.183)	1702464	10.0000	8.470
76 1,4-Dichlorobenzene	146	19.559	19.559	(1.184)	1276119	10.0000	9.665
77 1,2-Dichlorobenzene	146	19.906	19.906	(1.205)	1322586	10.0000	9.829
78 Undecane	57	20.331	20.331	(1.230)	1794090	10.0000	10.79
79 Dodecane	57	21.449	21.449	(1.298)	1668947	10.0000	11.76
80 1,2,4-Trichlorobenzene	180	21.666	21.666	(1.311)	830766	10.0000	8.889
81 Napthalene	128	21.822	21.822	(1.321)	2797467	10.0000	12.17
82 Hexachlorobutadiene	225	22.065	22.065	(1.335)	468605	10.0000	10.67

Data File: /var/chem/gcms/mt.i/T112803.b/tmd1128b.d
Date : 29-NOV-2003 02:08
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

11/28/2003 10:48:49 PM
Leak Check for C:\Smart\T112803.SEQ
Report File: C:\Smart\T112803.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	---	---	1.1	1.1	0.00
1	2	---	---	0.6	0.6	0.00
1	3	---	---	0.5	0.6	0.40
1	4	---	---	0.5	0.5	0.00
1	5	---	---	0.4	0.5	0.40
1	6	---	---	0.4	0.4	0.00
1	7	---	---	0.4	0.4	0.00
1	8	---	---	0.4	0.5	0.40
1	9	---	---	0.4	0.4	0.00
1	10	---	---	0.4	0.5	0.40
1	11	---	---	0.4	0.5	0.40
1	12	---	---	0.5	0.6	0.40
1	13	---	---	0.5	0.6	0.40
1	14	---	---	0.6	0.6	0.00

OK cwf
12/2/03

Leak Check Report

11/30/2003 9:21:31 AM
Leak Check for C:\Smart\T112803.SEQ
Report File: C:\Smart\T112803.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	2	---	---	0.8	0.8	0.00
1	4	---	---	0.5	0.5	0.00
1	6	---	---	0.4	0.4	0.00
1	8	---	---	0.5	0.5	0.00
1	11	---	---	0.6	0.6	0.00

OK WJ
12/2/03

Raw QC Data

FLUOR HANFORD IC
METHOD BLANK COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID: H3L020000 553
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: / mL Date Received: 11/04/03
Work Order: F5V9T1AA Date Extracted: 11/28/03
Dilution factor: 1 Date Analyzed: 11/29/03

QC Batch: 3336553

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/T112803.b/tbk1128c.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/tbk1128c.d
Lab Smp Id: F5V9T1AA Client Smp ID: BLANK
Inj Date : 29-NOV-2003 05:37
Operator : 0691 Inst ID: mt.i
Smp Info : F5V9T1AA,,3,,BLANK
Misc Info : T112803,LA,,,,,500ML
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 02-Dec-2003 20:57 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 16 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))	
* 1 Bromochloromethane	128	9.823	9.828	(1.000)	363658	10.0000		
* 2 1,4-Difluorobenzene	114	11.939	11.944	(1.000)	1772286	10.0000		
* 3 Chlorobenzene-d5	117	16.518	16.523	(1.000)	1614197	10.0000		
$ 4 1,2-Dichloroethane-d4	67	10.820	10.826	(0.906)	332608	10.3552	10.36	
$ 5 Toluene-d8	98	14.489	14.485	(0.877)	1544829	10.3567	10.36	
$ 6 4-Bromofluorobenzene	95	18.114	18.119	(1.097)	1042098	11.1326	11.13	
12 Methanol	31	4.680	4.659	(0.476)	3603	0.18574	0.1857	<10
~~14~~ n-Butane	43	4.697	4.824	(0.478)	4084	0.04578	~~0.04578~~	
20 Acetone	58	6.180	6.151	(0.629)	4347	0.24169	0.2417	<5
~~60~~ m-Xylene (For p-)	91	16.848	17.000	(1.020)	8281	0.05008	~~0.05008~~	
62 Nonane	57	17.412	17.408	(1.054)	6214	0.04750	0.04750	<0.2
64 o-Xylene	91	17.524	17.529	(1.061)	8343	0.05016	0.05016	<0.2
~~69~~ 4-Ethyltoluene	105	18.799	18.735	(1.138)	11942	0.05106	~~0.05106~~	
73 1,2,4-Trimethylbenzene	105	19.215	19.221	(1.163)	12807	0.07016	0.07016	<0.2
75 Benzyl Chloride	91	19.545	19.541	(1.183)	12855	0.07183	0.07183	<0.2
79 Dodecane	57	21.453	21.449	(1.299)	12960	0.10261	0.1026	<0.2
80 1,2,4-Trichlorobenzene	180	21.661	21.666	(1.311)	13039	0.15668	0.1567	<0.2 - J

ND

Data File: /var/chem/gcms/mt.i/T112803.b/tbk1128c.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: tbk1128c.d
Lab Smp Id: F5V9T1AA
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML

Calibration Date: 29-NOV-2003
Calibration Time: 02:08
Client Smp ID: BLANK
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	395409	235268	555550	363658	-8.03
2 1,4-Difluorobenze	1975448	1175392	2775504	1772286	-10.28
3 Chlorobenzene-d5	1812817	1078626	2547008	1614197	-10.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.82	-0.05
2 1,4-Difluorobenze	11.94	11.61	12.27	11.94	-0.04
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112803.b/tbk1128c.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

RECOVERY REPORT

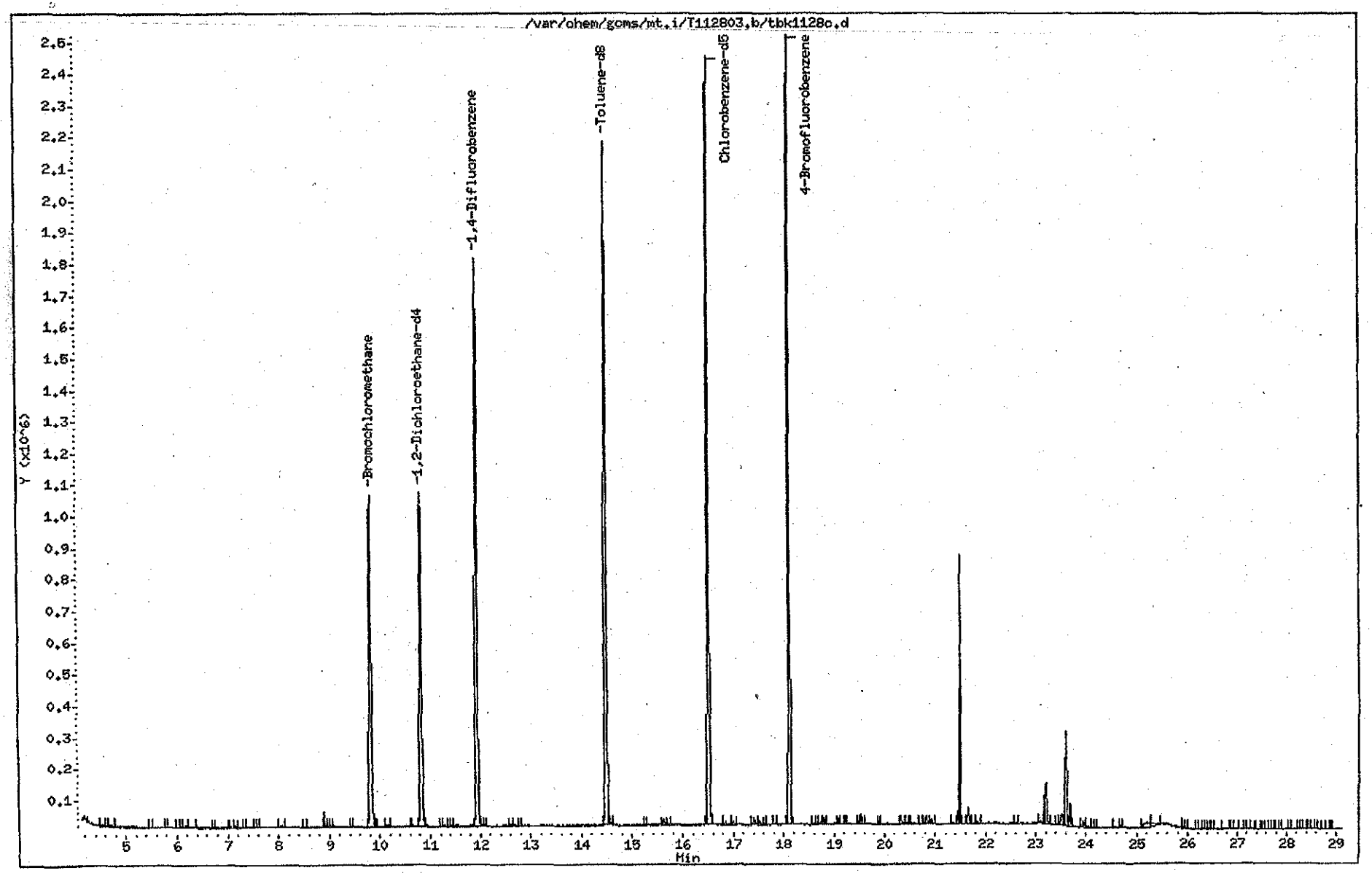
Client Name:
Sample Matrix: GAS
Lab Smp Id: F5V9T1AA
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,500ML

Client SDG: T112803
Fraction: OTHER
Client Smp ID: BLANK
Operator: 0691
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	10.36	103.55	70-130
$ 5 Toluene-d8	10.00	10.36	103.57	70-130
$ 6 4-Bromofluorobenze	10.00	11.13	111.33	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/tbk1128c.d
Date : 29-NOV-2003 05:37
Client ID: BLANK
Sample Info: F5V9T1AA,,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/T112903.b/tbk1128c.d

Date : 29-NOV-2003 05:37

Client ID: BLANK

Instrument: mt.i

Sample Info: F5V9T1AA,,3,,BLANK

Volume Injected (uL): 500.0

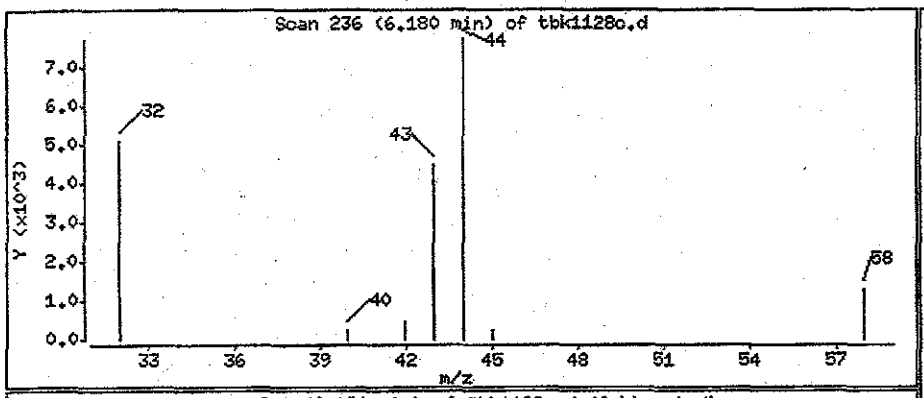
Operator: 0691

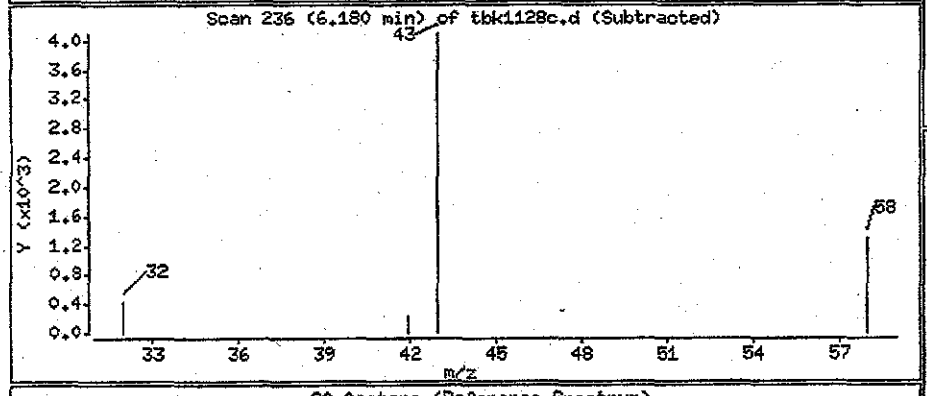
Column phase: DB-5

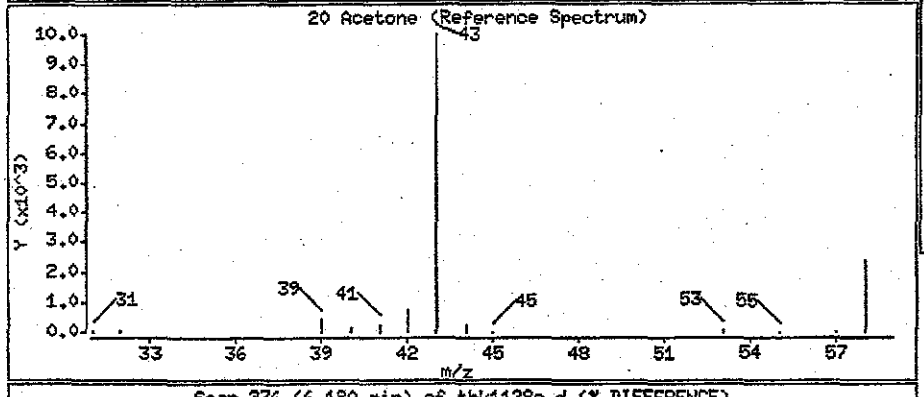
Column diameter: 0.32

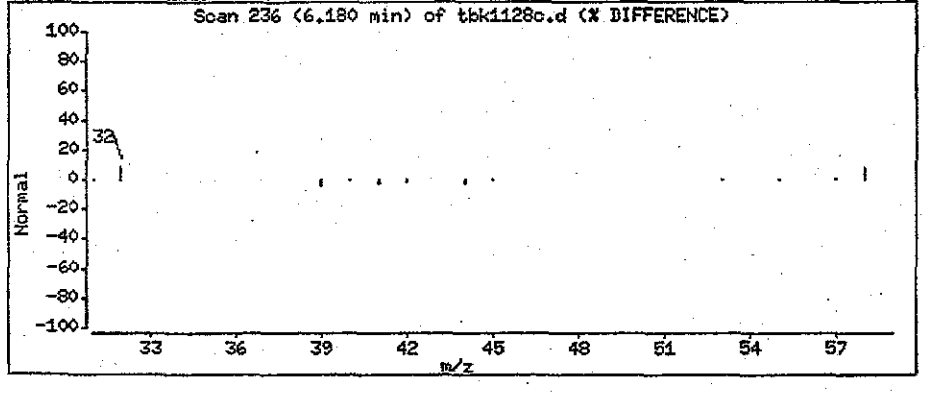
20 Acetone

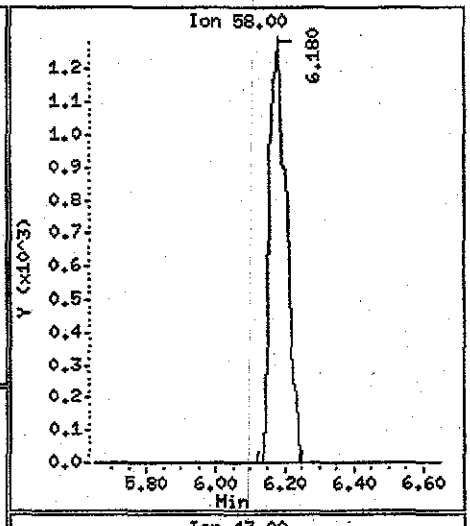
Concentration: 0.2417 ppb(v/v)

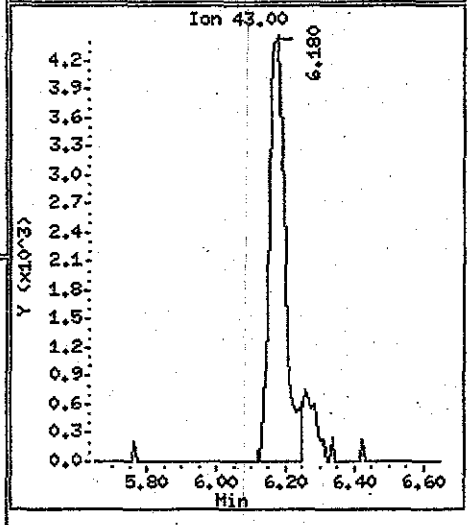












FLUOR HANFORD IC
CHECK SAMPLE COMPOUNDS

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

Matrix: (soil/water) AIR Lab Sample ID:H3L020000 553
Method: EPA-19 TO-14
Volatile Organics, (GCMS-TO14 Low Level) ppb(v/v)

Sample WT/Vol: 100 / mL Date Received: 11/04/03
Work Order: F5V9T1AC Date Extracted:11/28/03
Dilution factor: 1 Date Analyzed: 11/29/03

QC Batch: 3336553

Client Sample Id: CHECK SAMPLE

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ppb(v	Q
79-01-6	Trichloroethene	9.5	
75-35-4	1,1-Dichloroethene	10	
71-43-2	Benzene	9.1	
108-88-3	Toluene	9.1	
108-90-7	Chlorobenzene	9.4	

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

Modified Method TO-14/TO-15

Data file : /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Lab Smp Id: F5V9T1AC Client Smp ID: LCS
Inj Date : 29-NOV-2003 03:31
Operator : 0691 Inst ID: mt.i
Smp Info : F5V9T1AC,,3,,LCS
Misc Info : T112803,LA,,,,,100ML
Comment :
Method : /var/chem/gcms/mt.i/T112803.b/LA.m
Meth Date : 02-Dec-2003 20:57 jarmanc Quant Type: ISTD
Cal Date : 26-NOV-2003 23:39 Cal File: tic1k26c.d
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: RTall.sub
Target Version: 3.50
Processing Host: qmidhp01

12/4/03

OK WD 12/2/03

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	9.835	9.828	(1.000)	431440	10.0000	
* 2 1,4-Difluorobenzene	114	11.943	11.944	(1.000)	2130793	10.0000	
* 3 Chlorobenzene-d5	117	16.522	16.523	(1.000)	1918740	10.0000	
$ 4 1,2-Dichloroethane-d4	67	10.832	10.826	(0.907)	371778	9.62723	9.627
$ 5 Toluene-d8	98	14.492	14.485	(0.877)	1725026	9.72916	9.729
$ 6 4-Bromofluorobenzene	95	18.117	18.119	(1.097)	1061054	9.53598	9.536
7 Chlorodifluoromethane	51	4.215	4.217	(0.429)	1376963	9.49547	9.495
8 Dichlorodifluoromethane	85	4.293	4.295	(0.437)	1228006	9.05281	9.053
9 Chloromethane	52	4.501	4.503	(0.458)	189010	9.36450	9.364
10 1,2-Dichlorotetrafluoroethane	135	4.519	4.521	(0.459)	646223	9.79403	9.794
11 Vinyl Chloride	62	4.710	4.711	(0.479)	600995	9.82629	9.826
12 Methanol	31	4.666	4.659	(0.474)	920718	40.0015	40.00
13 1,3-Butadiene	54	4.814	4.815	(0.489)	433961	9.77978	9.780
14 n-Butane	43	4.822	4.824	(0.490)	961483	9.08261	9.083
15 Bromomethane	94	5.195	5.197	(0.528)	561332	9.89584	9.896
16 Chloroethane	64	5.360	5.362	(0.545)	384015	10.1569	10.16
17 Trichlorofluoromethane	101	6.019	6.021	(0.612)	978913	9.51543	9.515
18 Acrolein	56	6.019	6.021	(0.612)	323883	21.8365	21.84
19 Acetonitrile	40	6.097	6.099	(0.620)	441587	20.3357	20.34
20 Acetone	58	6.149	6.151	(0.625)	388967	18.2268	18.23
21 Pentane	57	6.271	6.272	(0.638)	131943	9.64018	9.640

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
22 Ethyl Ether	31	6.435	6.437	(0.654)	1133830	20.8305	20.83
23 1,1-Dichloroethene	96	6.791	6.793	(0.690)	434081	10.0910	10.09
24 Acrylonitrile	53	6.912	6.906	(0.703)	634762	22.4238	22.42
25 1,1,2-Trichlorotrifluoroethane	101	6.999	7.001	(0.712)	867918	9.78395	9.784
26 Methylene Chloride	84	7.164	7.166	(0.728)	416607	8.37888	8.379
27 3-Chloropropene	39	7.190	7.192	(0.731)	434059	9.28187	9.282
28 Carbon Disulfide	76	7.346	7.348	(0.747)	1701222	9.56398	9.564
29 trans-1,2-Dichloroethene	96	8.031	8.033	(0.817)	562951	9.92455	9.924
30 Methyl-t-Butyl Ether	73	8.161	8.154	(0.830)	2099808	20.9744	20.97
31 1,1-Dichloroethane	63	8.482	8.475	(0.862)	1120371	9.60116	9.601
32 Vinyl Acetate	43	8.586	8.579	(0.873)	2798817	21.5233	21.52
33 2-Butanone	72	9.037	9.039	(0.919)	474766	21.4449	21.44
34 Hexane	56	9.089	9.091	(0.924)	524680	9.46000	9.460
35 cis 1,2-Dichloroethene	96	9.497	9.490	(0.966)	664847	9.94580	9.946
36 Chloroform	83	9.844	9.846	(1.001)	1044650	9.79962	9.800
37 1,1,1-Trichloroethane	97	10.876	10.878	(1.106)	912539	9.74077	9.741
38 1,2-Dichloroethane	62	10.971	10.973	(0.919)	775210	9.48072	9.481
39 Benzene	78	11.439	11.441	(0.958)	1570598	9.11653	9.116
40 1-Butanol	31	11.344	11.346	(0.950)	808449	24.8374	24.84
41 Cyclohexane	69	11.448	11.441	(0.959)	239452	9.20685	9.207
42 Carbon Tetrachloride	117	11.466	11.459	(1.166)	898443	9.50508	9.505
43 Heptane	43	12.515	12.517	(1.048)	1309883	9.27258	9.272
44 1,2-Dichloropropane	63	12.593	12.595	(1.054)	631427	9.37641	9.376
45 Trichloroethene	130	12.628	12.621	(1.057)	718869	9.51412	9.514
46 Dibromomethane	93	12.697	12.699	(1.063)	647642	9.32711	9.327
47 Bromodichloromethane	83	12.836	12.829	(1.075)	1275552	9.28219	9.282
48 4-Methyl-2-pentanone	43	13.738	13.740	(1.150)	2682421	21.7048	21.70
49 cis-1,3-Dichloropropene	75	13.798	13.792	(1.155)	1367540	9.38823	9.388
50 trans-1,3-Dichloropropene	75	14.458	14.459	(0.875)	914909	9.50645	9.506
51 Toluene	91	14.596	14.598	(0.883)	1797409	9.09283	9.093
52 1,1,2-Trichloroethane	97	14.657	14.659	(0.887)	690533	9.31661	9.317
53 2-Hexanone	58	15.021	15.023	(0.909)	1659339	22.1872	22.19
54 Octane	85	15.255	15.257	(0.923)	644500	9.22657	9.226
55 Dibromochloromethane	129	15.351	15.344	(0.929)	1243836	9.45757	9.458
56 1,2-Dibromoethane	107	15.637	15.639	(0.946)	1148910	9.41081	9.411
57 Tetrachloroethene	129	15.706	15.708	(0.951)	537345	9.31593	9.316
58 Chlorobenzene	112	16.565	16.567	(1.003)	1576013	9.35119	9.351
59 Ethylbenzene	91	16.851	16.853	(1.020)	2431925	9.10693	9.107
60 m-Xylene (For p-)	91	16.999	17.000	(1.029)	1724986	8.77612	8.776
61 Bromoform	173	17.450	17.451	(1.056)	812677	9.77844	9.778
62 Nonane	57	17.415	17.408	(1.054)	1353170	8.70221	8.702
63 Styrene	104	17.467	17.469	(1.057)	1320106	9.68515	9.685
64 o-Xylene	91	17.528	17.529	(1.061)	1729767	8.74851	8.748
65 1,1,2,2-Tetrachloroethane	83	17.823	17.824	(1.079)	1659877	9.04671	9.047
66 1,2,3-Trichloropropane	110	17.987	17.989	(1.089)	561210	10.7313	10.73
67 Cumene	105	18.091	18.093	(1.095)	2409521	9.12652	9.126
68 n-Propylbenzene	91	18.594	18.596	(1.125)	3273907	9.11894	9.119

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb(v/v))	FINAL (ppb(v/v))
69 4-Ethyltoluene	105	18.733	18.735	(1.134)	2473061	8.89606	8.896
70 1,3,5-Trimethylbenzene	120	18.803	18.804	(1.138)	1059210	8.72790	8.728
71 Alpha-Methylstyrene	118	19.011	19.012	(1.151)	1027084	10.0018	10.00
72 Decane	57	19.071	19.073	(1.154)	1674030	9.07111	9.071
73 1,2,4-Trimethylbenzene	105	19.219	19.221	(1.163)	1858232	8.56352	8.564
74 1,3-Dichlorobenzene	146	19.479	19.481	(1.179)	1388127	9.24581	9.246
75 Benzyl Chloride	91	19.548	19.541	(1.183)	1806821	8.49304	8.493
76 1,4-Dichlorobenzene	146	19.557	19.559	(1.184)	1291955	9.24491	9.245
77 1,2-Dichlorobenzene	146	19.904	19.906	(1.205)	1317385	9.24953	9.250
78 Undecane	57	20.338	20.331	(1.231)	1807825	10.2704	10.27
79 Dodecane	57	21.456	21.449	(1.299)	1684405	11.2194	11.22
80 1,2,4-Trichlorobenzene	180	21.665	21.666	(1.311)	891078	9.00768	9.008
81 Napthalene	128	21.821	21.822	(1.321)	3119111	12.8185	12.82
82 Hexachlorobutadiene	225	22.063	22.065	(1.335)	510066	10.9766	10.98

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mt.i
Lab File ID: trf1128b.d
Lab Smp Id: F5V9T1AC
Analysis Type: OTHER
Quant Type: ISTD
Operator: 0691
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,100ML

Calibration Date: 29-NOV-2003
Calibration Time: 02:08
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	395409	235268	555550	431440	9.11
2 1,4-Difluorobenze	1975448	1175392	2775504	2130793	7.86
3 Chlorobenzene-d5	1812817	1078626	2547008	1918740	5.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Bromochloromethan	9.83	9.50	10.16	9.84	0.07
2 1,4-Difluorobenze	11.94	11.61	12.27	11.94	-0.01
3 Chlorobenzene-d5	16.52	16.19	16.85	16.52	-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/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: F5V9T1AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,100ML

Client SDG: T112803
Fraction: OTHER
Client Smp ID: LCS
Operator: 0691
SampleType: LCS
Quant Type: ISTD

OK cwj 12/2/03

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
7 Chlorodifluorometh	10.00	9.495	94.95	70-130
8 Dichlorodifluorome	10.00	9.053	90.53	70-130
9 Chloromethane	10.00	9.364	93.65	70-130
10 1,2-Dichlorotetraf	10.00	9.794	97.94	70-130
11 Vinyl Chloride	10.00	9.826	98.26	70-130
12 Methanol	40.00	40.00	100.00	60-140
13 1,3-Butadiene	10.00	9.780	97.80	70-130
14 n-Butane	10.00	9.083	90.83	70-130
15 Bromomethane	10.00	9.896	98.96	70-130
16 Chloroethane	10.00	10.16	101.57	70-130
17 Trichlorofluoromet	10.00	9.515	95.15	70-130
18 Acrolein	20.00	21.84	109.18	60-140
19 Acetonitrile	20.00	20.34	101.68	60-140
20 Acetone	20.00	18.23	91.13	60-140
21 Pentane	10.00	9.640	96.40	70-130
22 Ethyl Ether	20.00	20.83	104.15	60-140
23 1,1-Dichloroethene	10.00	10.09	100.91	70-130
24 Acrylonitrile	20.00	22.42	112.12	60-140
25 1,1,2-Trichlorotri	10.00	9.784	97.84	70-130
26 Methylene Chloride	10.00	8.379	83.79	70-130
27 3-Chloropropene	10.00	9.282	92.82	70-130
28 Carbon Disulfide	10.00	9.564	95.64	70-130
29 trans-1,2-Dichloro	10.00	9.924	99.25	70-130
30 Methyl-t-Butyl Eth	20.00	20.97	104.87	60-140
31 1,1-Dichloroethane	10.00	9.601	96.01	70-130
32 Vinyl Acetate	20.00	21.52	107.62	60-140
33 2-Butanone	20.00	21.44	107.22	60-140
34 Hexane	10.00	9.460	94.60	70-130
35 cis 1,2-Dichloroet	10.00	9.946	99.46	70-130
36 Chloroform	10.00	9.800	98.00	70-130
37 1,1,1-Trichloroeth	10.00	9.741	97.41	70-130
38 1,2-Dichloroethane	10.00	9.481	94.81	70-130
39 Benzene	10.00	9.116	91.17	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

SPIKE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
40 1-Butanol	20.00	24.84	124.19	60-140
41 Cyclohexane	10.00	9.207	92.07	70-130
42 Carbon Tetrachlori	10.00	9.505	95.05	70-130
43 Heptane	10.00	9.272	92.73	70-130
44 1,2-Dichloropropan	10.00	9.376	93.76	70-130
45 Trichloroethene	10.00	9.514	95.14	70-130
46 Dibromomethane	10.00	9.327	93.27	70-130
47 Bromodichlorometha	10.00	9.282	92.82	70-130
48 4-Methyl-2-pentano	20.00	21.70	108.52	60-140
49 cis-1,3-Dichloropr	10.00	9.388	93.88	70-130
50 trans-1,3-Dichloro	10.00	9.506	95.06	70-130
51 Toluene	10.00	9.093	90.93	70-130
52 1,1,2-Trichloroeth	10.00	9.317	93.17	70-130
53 2-Hexanone	20.00	22.19	110.94	60-140
54 Octane	10.00	9.226	92.27	70-130
55 Dibromochlorometha	10.00	9.458	94.58	70-130
56 1,2-Dibromoethane	10.00	9.411	94.11	70-130
57 Tetrachloroethene	10.00	9.316	93.16	70-130
58 Chlorobenzene	10.00	9.351	93.51	70-130
59 Ethylbenzene	10.00	9.107	91.07	70-130
60 m-Xylene (For p-)	10.00	8.776	87.76	70-130
61 Bromoform	10.00	9.778	97.78	70-130
62 Nonane	10.00	8.702	87.02	70-130
63 Styrene	10.00	9.685	96.85	70-130
64 o-Xylene	10.00	8.748	87.49	70-130
65 1,1,2,2-Tetrachlor	10.00	9.047	90.47	70-130
66 1,2,3-Trichloropro	10.00	10.73	107.31	70-130
67 Cumene	10.00	9.126	91.27	70-130
68 n-Propylbenzene	10.00	9.119	91.19	70-130
69 4-Ethyltoluene	10.00	8.896	88.96	70-130
70 1,3,5-Trimethylben	10.00	8.728	87.28	70-130
71 Alpha-Methylstyren	10.00	10.00	100.02	70-130
72 Decane	10.00	9.071	90.71	70-130
73 1,2,4-Trimethylben	10.00	8.564	85.64	70-130
74 1,3-Dichlorobenzen	10.00	9.246	92.46	70-130
75 Benzyl Chloride	10.00	8.493	84.93	70-130
76 1,4-Dichlorobenzen	10.00	9.245	92.45	70-130
77 1,2-Dichlorobenzen	10.00	9.250	92.50	70-130
78 Undecane	10.00	10.27	102.70	70-130
79 Dodecane	10.00	11.22	112.19	70-130
80 1,2,4-Trichloroben	10.00	9.008	90.08	70-130
81 Napthalene	10.00	12.82	128.18	70-130
82 Hexachlorobutadien	10.00	10.98	109.77	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Report Date: 02-Dec-2003 21:25

STL Knoxville

RECOVERY REPORT

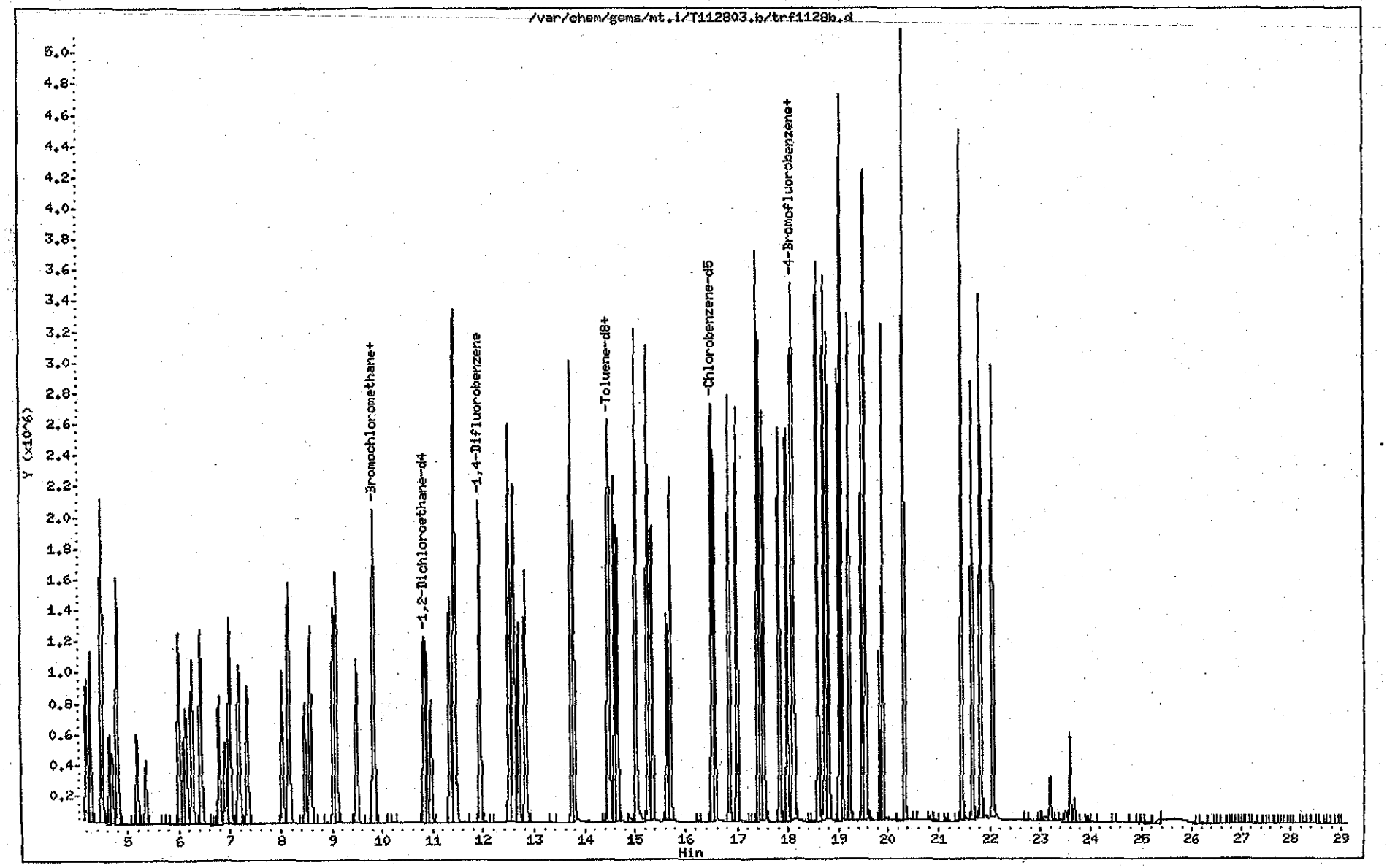
Client Name:
Sample Matrix: GAS
Lab Smp Id: F5V9T1AC
Level: LOW
Data Type: MS DATA
SpikeList File: RTALL.spk
Sublist File: RTall.sub
Method File: /var/chem/gcms/mt.i/T112803.b/LA.m
Misc Info: T112803,LA,,,,,100ML

Client SDG: T112803
Fraction: OTHER
Client Smp ID: LCS
Operator: 0691
SampleType: LCS
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ppb(v/v)	CONC RECOVERED ppb(v/v)	% RECOVERED	LIMITS
$ 4 1,2-Dichloroethane	10.00	9.627	96.27	70-130
$ 5 Toluene-d8	10.00	9.729	97.29	70-130
$ 6 4-Bromofluorobenze	10.00	9.536	95.36	70-130

Data File: /var/chem/gcms/mt.i/T112803.b/trf1128b.d
Date : 29-NOV-2003 03:31
Client ID: LCS
Sample Info: F5V9T1AC,,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

LOT/Project # H3K070107

Method: TO-14 and TO-15 - KNOX-MS-0001, Rev 5

Instrument:	MT	
Scanned File:	T 112603I	
	T112803	

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 ICAL 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/can prep information verified?		✓			✓
3. Have the can number & lab ID been verified between the analysis log & sample prep log?		✓			✓
4. Were samples received in cans?		✓		θ [Tedlar1] Samples rec'd on (date) in Tedlar bags & ana by TO-14 (TO-15) within 72 hours from sampling. θ [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:* _____		✓		θ [ht2] Client requested analysis after HT expired. θ Other: _____	✓
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 _____ _____ _____ _____ _____ _____ _____ _____		✓		θ [sur1] DUP surr. %R demonstrated same effect. θ [sur2] Reanalysis demonstrated same effect. θ **[sur5] At client's request, data was flagged as estimated & released without further investigation.*** θ **[is1] Per client, reanalysis was not performed *** θ [is2] Reanalysis confirmed a matrix effect. θ Obvious matrix effect	✓
7. Were positive hits evaluated using qualitative identification criteria and technical judgement?		✓			✓
8. For dilutions, is highest concentration hit ≥ 20% cal range and not above calibration range? *List samples and reason (e.g.,* elev1*):* Sample Reason Sample Reason _____ _____ _____ _____ _____ _____ _____ _____		✓		θ [elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. θ [elev3] Elevated RLs for all analytes due to difficult sample matrix. θ [elev5] Elevated RLs for all analytes due to presence of non-target compounds.	✓
9. 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
10. Have alternate hits/manual integrations been verified as correct?	✓				NB
11. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, analysis dates correct.)		✓			✓
12. Was a narrative prepared and all deviations noted?		✓			✓
13. Analytes >30% D, ≤ 40% D on CCAL noted in narrative?	✓			θ [ccal] The calib. verify. exhibited a %D from the ICAL >30% but ≤40% for the following analytes: _____	NB
C. Preparation QC					
1. System blank run every 24 hours prior to samples?		✓			✓
2. System blank surrogate recoveries within QC limits (70-130% R). ?		✓		θ **[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:* _____		✓		θ **[mb3] No analyte > RL in associated samples.*** θ **[mb4] Sample results > 20x higher than blank.**	✓
4. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, ≤25% RPD; 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?	✓				NB
2. Were the standards scanned properly?		✓			✓

Analyst: [signature]	**Date:** 12/3/03	**2nd Level Reviewer:** [signature]	**Date:** 12/4/03
Comments:		**Comments:**	

* Such action must be taken in consultation with client.

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/03/03
Time: 7:46:18

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: 3336553 *
****

PREP DATE: 11/28/03
COMP DATE: 11/28/03

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	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	11/19/03	H3K040225-001 F34F6-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/19/03	H3K040225-002 F34GD-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/01/03	H3K040227-001 F34GL-1-AA		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/01/03	H3K040227-002 F34GT-1-AA		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/18/03	H3K070107-001 F4CF5-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/18/03	H3K070107-001 F4CF5-1-ACX		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/18/03	H3K070107-002 F4CF6-1-AA		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/03/03
Time: 7:46:18

****
* QC BATCH: 3336553 *
****

PREP DATE: 11/28/03
COMP DATE: 11/28/03

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	11/28/03	H3K110124-002 F4JJN-1-AA	D	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/01/03	H3K110158-001 F4J3E-1-AC		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	12/01/03	H3K110158-002 F4J3L-1-AC		88	U6	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K130135-001 F4PWQ-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K130135-002 F4PW0-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K130135-004 F4PW7-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K190115-001 F44W9-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K190115-002 F44XC-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K190115-003 F44XE-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	11/20/03	H3K190115-004 F44XF-1-AA	DR	88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/03/03
Time: 7:46:18

****
* QC BATCH: 3336553 *
****

PREP DATE: 11/28/03
COMP DATE: 11/28/03

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	0/00/00	H3L020000-553 F5V9T-1-AAB		88	JY	AIR	mL	NA	NA	NA		.0		.0	CX-929
COMMENTS:															
0/00/00	0/00/00	H3L020000-553 F5V9T-1-ACC		88	JY	AIR	100mL 100.00mL	NA	NA	NA		.0		.0	CX-1088 CX-929
COMMENTS:															

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

NUMBER OF WORK ORDERS IN BATCH: 19

STL-Knoxville Initial Canister Dilution

Analyst: DDF

Barometer: 30.24 inches Hg at sea level
737.996 mm Hg at Knoxville

Date: 11/7/2003

Lot #	W/O #	P init inches	P init Abs,mm	P final psig	P final Abs,mm	Dilution Factor	
H3K070107	F4C F5	0.0	738.0	9.8	1244.8	1.69	(F5)
	F4C F6	0.0	738.0	9.9	1250.0	1.69	(F6)

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: CWJ

Barometer: 30.25 inches Hg at sea level
738.25 mm Hg at Knoxville

Date: 11/29/2003

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)	
H3K070107	F4C F5	0.0	738.3					
	F4C F6	0.0	738.3	41.2	2868.9	3.8861	***6.58***	(F6) (*1.6937)

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	11-7-03	NA	30.24	H3K070131	F4CVL	12820	0	9.9										
					VN	0063	0	10.5										
					VP	04419	0	10.1										
					VR	93143	-14.7 psi	NA										
		NA		H3K070107	F4CFS	12647	0	9.8										
					F6	11367	0	9.9	CWJ	11/29/03	30.25	41.2						
	11-11-03	NA	NA	H3K080117	F4FJR	04165	11 psi	NA										
					JL	93209	13											
					JE	12326	14											
					JG	12446	12											
					JH	92073	15											
		NA	NA	H3K080118	F4FJV	12257	11 psi	NA										
					JW	04748	11											
					JX	04758	12											
					J1	8815B	VAC	11										
		NA	30.27	H3K050129	F351Q	92009	0	9.8										
					1T	1795	0	9.2										
					1V	04177	NA	14.5										
					1W	12179	0	9.4										
													DF 11-11-03					

Updated: **11:53 AM EST on November 07, 2003**
Observed at **Knoxville, Tennessee**

Temperature	**57** °F / **14** °C
Humidity	**82%**
Dew Point	**52** °F / **11** °C
Wind	**NNE** at **7** mph / **11.3** km/h
Wind Gust	-
Pressure	**30.24** in

Updated: **5:53 PM EST on November 29, 2003**
Observed at **Knoxville, Tennessee**

Temperature	**36** °F / **2** °C
Windchill	**29** °F / **-2** °C
Humidity	**65%**
Dew Point	**25** °F / **-4** °C
Wind	**SSW** at **9** mph / **14.5** km/h
Wind Gust	-
Pressure	**30.25** in / **1024** hPa **(Steady)**

Sample Receipt Documentation

H3K070607

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-07	Page 1 of 1

Collector M. Baechler/T. Johansen	Company Contact J. V. Borghese	Telephone No. 373-3804	Project Coordinator TRENT, SJ
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	Sampling Location 200-ZP-1		SAF No. F02-002
Ice Chest No. N/A	Field Logbook No. HNF-N-295	COA 119325ES10	Method of Shipment Federal Express
Shipped To Severn Trent Incorporated, Richland	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

Price Code 9N

Air Quality ☐

Data Turnaround 45 Days

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										
B17XM3	GASEOUS	11/5/03	0909	X								AS-	3
B17XM4	GASEOUS	11/5/03	0912	X								AS-	2

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M.A. Baechler M.A. Baechler	11/5/03 1300	A. Rhinehart	11/5/03 13:00
A. Rhinehart	11/5/03 14:30	Andrew D. Zelenz SR	11/6/03 09:10

SPECIAL INSTRUCTIONS

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

Custody Seals Intact
Received Temp. Ambient
1 Box / FEDEX
T# 7910 5394 4700
ADF 11-06-03

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

A-6003-618(03/03)

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: STL-RICHLAND PROJECT: _____ Lot No.: #3k07007

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. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Andrew D. Flores DATE: 11-06-03

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 : _____ DATE: 11/10/03

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

#3K070107

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F02-002-07	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	**Air Quality** ☐	
Project Designation 200-ZP-1 Pump and Treat Operational Monitoring	**Sampling Location** 200-ZP-1	**SAF No.** F02-002	
Ice Chest No. N/A	**Field Logbook No.** HNF-N-295	**COA** 119325ES10	**Method of Shipment** Federal Express
Shipped To Severn Trent Incorporated, Richland	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None										
Type of Container	Summa Canister										
No. of Container(s)	1										
Volume	6L										
SAMPLE ANALYSIS	See item (1) in Special Instructions.										
Sample No.	Matrix *	Sample Date	Sample Time								
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B17XM4	GASEOUS	11/5/03	0912	X						AS-	2

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SPECIAL INSTRUCTIONS

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Custody Seals Intact
Received Temp. Ambient
1 Box / FEDEX
T# 7910 5394 4700
ADF 11-06-03

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

A-6003-618(03/03)