



Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel. (909) 590-1828 Fax (909) 590-1498

December 8, 2003

GEOFON, Inc.

Attention: Brad Shojaee

22632 Golden Spring Dr Ste 270

Diamond Bar CA 91765

Dear Brad,

This package contains samples in our Service ID 03-6002 and your project : 04-4428.10 JPL
Enclosed please find:

- (1) Original analytical report.
- (2) Original Chain of Custody.
- (3) One diskette containing EDD deliverable.
- (4) One original Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova

Associate QA/QC Director

Applied P & Ch Laboratory

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Submitted to:

GEOFON, Inc.

Attention: Brad Shojaee

22632 Golden Spring Dr Ste 270

Diamond Bar CA 91765

Tel: (909) 396-7662 Fax: (909) 396-1455

APCL Analytical Report

Service ID #: 801-036002

Received: 11/06/03

Collected by:

Extracted: N/A

Collected on: 11/06/03

Tested: 11/06-12/03

Reported: 11/13/03

Sample Description: Water

Project Description: 04-4428.10 JPL GW Mon-4Q03

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				Dupe-7-4-Q03	MW-5
				03-06002-1	03-06002-2
CHROMIUM (VI)	7196	mg/L	0.01	< 0.01	< 0.01
Dilution Factor				1	1
PERCHLORATE	314.0	µg/L	4	20.2	< 4
VOLATILE ORGANIC COMPOUNDS					
Dilution Factor				1	1
BENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOFORM	524.2	µg/L	0.5	< 0.5	< 0.5
BROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
2-BUTANONE	524.2	µg/L	10	< 10	< 10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROFORM	524.2	µg/L	0.5	< 0.5	< 0.5
CHLOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	< 0.5	< 0.5
DIBROMOMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result	
				Dupe-7-4-Q03	MW-5
				03-06002-1	03-06002-2
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	< 0.5	< 0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	< 0.5	< 0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	< 0.5	< 0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	< 0.5	< 0.5
ETHYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	< 0.5	< 0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	< 0.5	< 0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	< 1	< 1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	< 10	< 10
NAPHTHALENE	524.2	µg/L	0.5	< 0.5	< 0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
STYRENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5
TOLUENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
TRICHLOROETHENE	524.2	µg/L	0.5	< 0.5	< 0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,1,2,2-TRICHLORO-1,2,2,2-TRIFLUOROETHANE	524.2	µg/L	0.5	< 0.5	< 0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	< 0.5	< 0.5
VINYL CHLORIDE	524.2	µg/L	0.5	< 0.5	< 0.5
O-XYLENE	524.2	µg/L	0.5	< 0.5	< 0.5
M/P-XYLENE	524.2	µg/L	0.5	< 0.5	< 0.5

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-8 03-06002-3	MW-10 03-06002-4	TB-11-6-03 03-06002-5
CHROMIUM (VI)	7196	mg/L	0.01	<0.01	<0.01	-
Dilution Factor				1	1	1
PERCHLORATE	314.0	µg/L	4	20.2	21.9	-
VOLATILE ORGANIC COMPOUNDS						
Dilution Factor				1	1	1
BENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	524.2	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE	524.2	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLORODIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	524.2	µg/L	0.5	<0.5	1.2	<0.5
CHLOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	0.9	<0.5
1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				MW-8	MW-10	TB-11-6-03
				03-06002-3	03-06002-4	03-06002-5
ETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	524.2	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
METHYL-T-BUTYL ETHER (MTBE)	524.2	µg/L	1	<1	<1	<1
4-METHYL-2-PENTANONE (MIBK)	524.2	µg/L	10	<10	<10	<10
NAPHTHALENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	524.2	µg/L	0.5	<0.5	1.5	<0.5
TOLUENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	524.2	µg/L	0.5	<0.5	10.8	<0.5
TRICHLOROFLUOROMETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2,3,3-HEXACHLORO-1,2-DICHLOROETHANE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
O-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5
M/P-XYLENE	524.2	µg/L	0.5	<0.5	<0.5	<0.5

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit

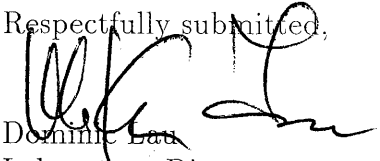
N.D.: Not Detected or less than the practical quantitation limit.

"-": Analysis is not required.

J: Reported between PQL and MDL.

Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,


Dominic Lau
Laboratory Director

Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 04-4428.10 JPL GW Mon-4Q03

APCL Service ID: 03-6002



Applied P & Ch Laboratory

13760 Magnolia Ave. Chino, CA 91710

Telephone (909)590-1828

Fax (909)590-1498

Case Narrative

Project: JPL GW Mon-4Q03/04-4428.10

For GEOFON, Inc.

APCL Service No: 03-6002

1. Sample Identification

The sample identifications are listed in the following table:

GEOFON, Inc. Sample ID	APCL Sample ID
MW-10	03-06002-4
MW-5	03-06002-2
MW-8	03-06002-3
Dupe-7-4-Q03	03-06002-1
TB-11-6-03	03-06002-5

2. Analytical Methodology

Samples are analyzed by EPA methods

524.2 (Volatile Organic Compounds),

7196 (Chromium (VI)),

314.0 (Perchlorate, low level),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Regina Kirakozova', written over the printed name.

Regina Kirakozova
Associate QA/QC Director
Applied P & Ch Laboratory


GEOFON
 INCORPORATED
 22632 GOLDEN SPRINGS DR., SUITE 270
 DIAMOND BAR, CA 91765 • (909) 396-7662 • FAX (909) 396-1455

CHAIN-OF-CUSTODY RECORD

PROJECT DATA MANAGER'S COPY

 GEOFON LAB COORDINATOR
 LAB COORDINATOR'S PHONE
 LAB COORDINATOR'S FAX

LAB COORDINATOR'S FAX

LABORATORY SERVICE ID

LABORATORY CONTACT

MAIL REPORT (COMPANY NAME)

PROJECT NAME

PROJECT LOCATION

PROJECT PHONE NUMBER

CITY, STATE AND ZIP CODE

PROJECT MANAGER'S PHONE

PROJECT MANAGER'S FAX

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6002
 CONTINUOUS

Signature

70

Item	Sample Identifier	Matrix	Date	Time	Preserved	# of Cont	QC Level	TAT	Analyses	LABORATORY PHONE	LABORATORY ADDRESS	CITY, STATE AND ZIP CODE	LABORATORY FAX	MAIL REPORT (COMPANY NAME)
1	11/10-10	11/10-10	6/28	10:30	5	III	11/10-10	X	X	X	X	X	X	X
2	11/10-5	11/10-5	10:37	10	5	III	11/10-5	X	X	X	X	X	X	X
3	11/10-8	11/10-8	10:31	5	5	III	11/10-8	X	X	X	X	X	X	X
4	11/10-1	11/10-1	10:31	5	5	III	11/10-1	X	X	X	X	X	X	X
5	11/10-7	11/10-7	10:37	10	5	III	11/10-7	X	X	X	X	X	X	X
6	11/10-11/10/03	11/10-11/10/03	10:37	10	5	III	11/10-11/10/03	X	X	X	X	X	X	X
7	11/10-11/10/03	11/10-11/10/03	10:37	10	5	III	11/10-11/10/03	X	X	X	X	X	X	X
8	11/10-11/10/03	11/10-11/10/03	10:37	10	5	III	11/10-11/10/03	X	X	X	X	X	X	X
9	11/10-11/10/03	11/10-11/10/03	10:37	10	5	III	11/10-11/10/03	X	X	X	X	X	X	X
10	11/10-11/10/03	11/10-11/10/03	10:37	10	5	III	11/10-11/10/03	X	X	X	X	X	X	X

SAMPLES COLLECTED BY:

COOLER AND AIR BIL NUMBER:

RECEIVED BY:

DATE:

TIME:

COOLER TEMPERATURE UPON RECEIPT:

SAMPLE'S CONDITION UPON RECEIPT:

Distribution: White - Laboratory (To be returned with Analytical Report); Goldendred - Project File; Yellow - Project Data Manager

Applied P & Ch Laboratory

13760 Magnolia Ave., Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID:

Client Name/Project:

6002

Geoson

1. Sample Arrival

Date/Time Received 11/6/03 11:45 Date/Time Opened 11/6/03 11:45 By (name): [Signature]
Custody Transfer: ☒ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☐ Client has Copy? ☒ Signed, dated? By: _____
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? # on Hold _____ # Received _____
☐ CoC/Docs Zip-Locked under lid? ☐ Compos. #: _____ ☒ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.9
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☒ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12
If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO₃⁻ 48hr ☐ BOD 48hr
☐ Cl₂ ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☒ Intact? ☐ Broken? ☐ Documented? Number: _____
Type: ☒ plastic ☒ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☒ Unique ID? ☒ Date/Time ☒ Preserved?

7. Turn Around Time

☒ RUSH TAT: _____ ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H₂O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H₂O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____) Date/Time: _____
Received/Checked by: [Signature] Printed: 6 Nov 2003 7:35 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.textfiles]smpacl.tex.

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Login: Check List

03-06002 (0470_ 188) (2202777_ 188)

11/06/03

Part 1: General Information

☐ Company Information	Name:	<i>GEOFON, Inc.</i>
	Address:	<i>22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765</i>
☐ Project Information	Project Description:	<i>JPL GW Mon-4Q03</i>
		<i>MW-10,5,8,7</i>
	Project #:	<i>04-4428.10</i>
☐ Billing Information	P.O. #:	
	Bill Address:	<i>22632 Golden Spring Dr Ste 270 ,Diamond Bar ,CA 91765</i>
	Lab Project ID:	
	Client Database #:	<i>3</i>
☐ Receiving Information	Who Received Sample?	<i>Hsin-Yi Lee</i>
	Receiving Date/Time:	<i>11/06/03 11:45AM</i>
	COC No.	<i>0070</i>
☐ Shipping Information	Shipping Company	<i>by Client</i>
	Packing Information:	<i>Cooler/Ice Chester</i>
	Cooler Temperature:	<i>3.9 °C</i>
☐ Container Information	Container Provider:	<i>Client</i>
☐ Sampling Information	Sampling Person:	
	Sampling Company:	<i>Client</i>
☐ Turn-Around-Time Option:		<i>Rush 5 working day(s)</i>
☐ QC Option:		<i>NEESA C</i>
☐ Disposal Option:		<i>Not specify</i>

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont- tainer	Preser- vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	MW-10	VOC	03-06002-4- α	W	V	C	40	3	G	110603	N	0	7 ☐
	MW-10	314/7296	03-06002-4- β	W	P		500	1	G	110603	N	0	7 ☐
2	MW-5	VOC	03-06002-2- α	W	V	C	40	6	G	110603	N	0	7 ☐
	MW-5	314/7296	03-06002-2- β	W	P		500	2	G	110603	N	0	7 ☐
3	MW-8	VOC	03-06002-3- α	W	V	C	40	3	G	110603	N	0	7 ☐
	MW-8	314/7296	03-06002-3- β	W	P		500	1	G	110603	N	0	7 ☐
4	Dupe-7-4-Q03	VOC	03-06002-1- α	W	V	C	40	3	G	110603	N	0	7 ☐
	Dupe-7-4-Q03	314/7296	03-06002-1- β	W	P		500	1	G	110603	N	0	7 ☐
5	TB-11-6-03	VOC	03-06002-5	W	V	C	40	3	G	110603	N	0	7 ☐

Part 3: Analysis Information

Test Items: ☐ 524.2 Volatile Organic Compounds
☐ 7196A Chromium (VI)
☐ 314.0/300.0 Perchlorate, low level

Seq. #	Client's Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	524.2	CHROMIUM	PERCH
1	MW-10	VOC	03-06002-4- α	W	X		☐
	MW-10	314/7296	03-06002-4- β	W		X	☐
2	MW-5	VOC	03-06002-2- α	W	X		☐
	MW-5	314/7296	03-06002-2- β	W		X	☐
3	MW-8	VOC	03-06002-3- α	W	X		☐
	MW-8	314/7296	03-06002-3- β	W		X	☐
4	Dupe-7-4-Q03	VOC	03-06002-1- α	W	X		☐
	Dupe-7-4-Q03	314/7296	03-06002-1- β	W		X	☐
5	TB-11-6-03	VOC	03-06002-5	W	X		☐

☐ Client's Requirement: RUN MS/MSD ON SAMPLE # 2

Login By Hsin Yi Lee

Check By HY

Level C Data Package Deliverables

Volatile Organics



Applied P & Ch Laboratory

Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/12/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: 03G4771-MB-01	Lab Sample ID: 03G4771-MB-01	Received Date: 11/12/2003
Sample Type: Method Blank	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: G4771K01	Prep. No: -	Anal. Time: 01:17
Methanol Vol. -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	< 0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	0.4	J
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	< 1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	< 10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	< 0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	< 0.5	U
46	STYRENE	100-42-5	µg/L	0.5	< 0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	< 0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	< 0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	< 0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	< 0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	< 0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	< 0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	< 0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	< 0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	< 0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	< 0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	< 0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	< 0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	< 0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	< 0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	< 0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	< 0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	< 0.5	U

Surrogates

Control Limit, % Surro. Rec. %

1	4-BROMO-FLUOROBENZENE (BFB)	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5
# of out-of-control		0

Internal Standard

Control Limit, % IS Rec. %

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROBENZENE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6
# of out-of-control		0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank

D - Diluted

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771K01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 12 01:17 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:52 2003
 Print Time : Wed Nov 12 09:52 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1408

Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Q1on	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
----	----------------	------	-----	------	------	----	---------	--------	-------	---------	------

Internal Standards

1	1 Fluorobenzene	7.64	7.64	0.000	96	70	650.041	10.00		0.00	
47	47 Chlorobenzene-d5	11.54	11.54	0.000	117	82	514.703	10.00		0.00	
62	62 1,4-Dichlorobenzene	13.84	13.85	0.000	152	150	313.855	10.00		0.00	

System Monitoring Compounds (Surrogate)

27	27 Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	340.959	22.34		22.3	111.69%
29	29 1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	311.077	22.88		22.9	114.41%
55	55 toluene-d8	9.91	9.91	0.000	98	100	1182.862	20.82		20.8	104.10%
70	70 4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	458.535	21.56		21.6	107.80%

Target Compounds

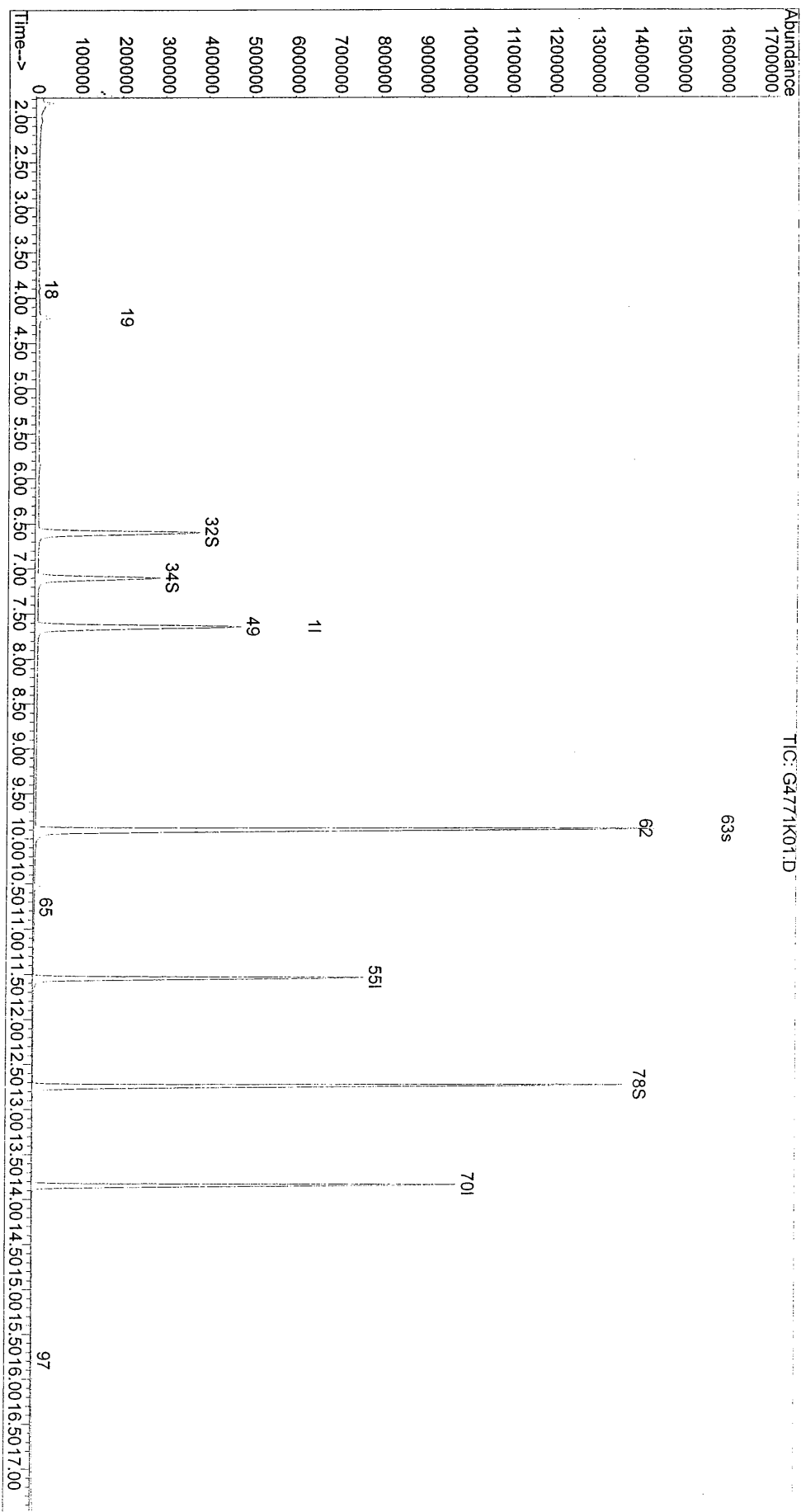
<<< I1 : ISTD ID = 1 >>>											
94	94 Isopropyl Alcohol	3.90	4.10	-0.025	45	43	0.169	1.27		1.3	100
18	18 methylene chlorid	4.21	4.22	0.000	84	49	18.425	0.40		0.4	78
101	101 TAME	7.64	7.41	0.029	73	43	8.959	1.12		1.1	46
<<< I2 : ISTD ID = 47 >>>											
54	54 MIBK	9.89	9.77	0.011	43	58	5.021	2.01		2.0	1
57	57 2-hexanone X5	10.76	10.76	0.000	43	58	0.338	5.06		5.1	22
<<< I3 : ISTD ID = 62 >>>											
88	88 naphthalene	15.80	15.78	0.000	128	129	2.479	1.18		1.2	71

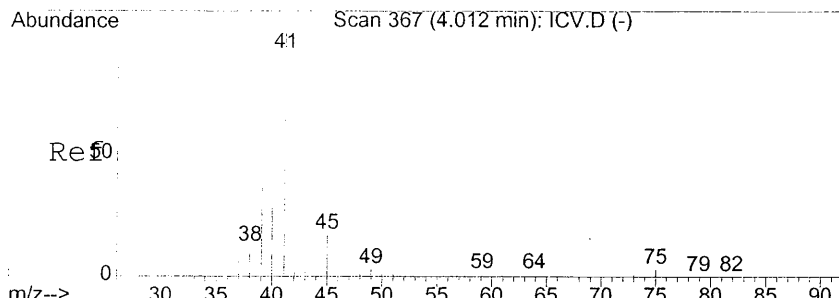
Qvalue

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

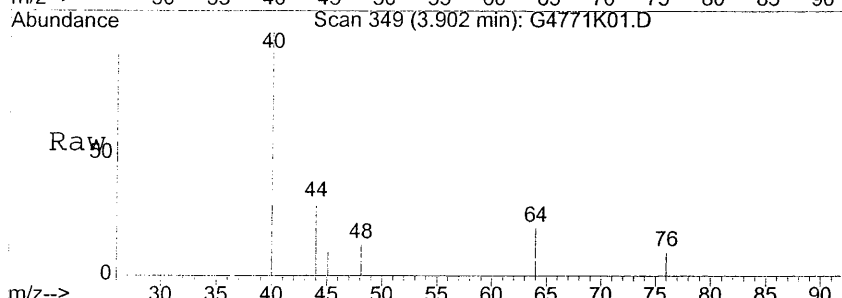
Quantitation Report: **Applied P & Ch Lab** EPA 524.2

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 Acq. Time : Nov 12 01:17 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:52 2003
 Print Time : Wed Nov 12 09:52 2003
 Miscellaneous :
 Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

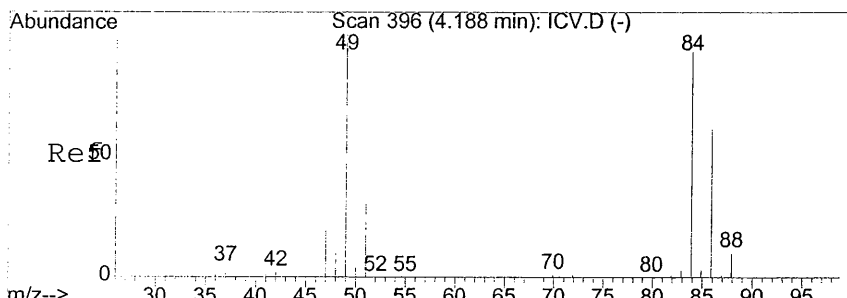
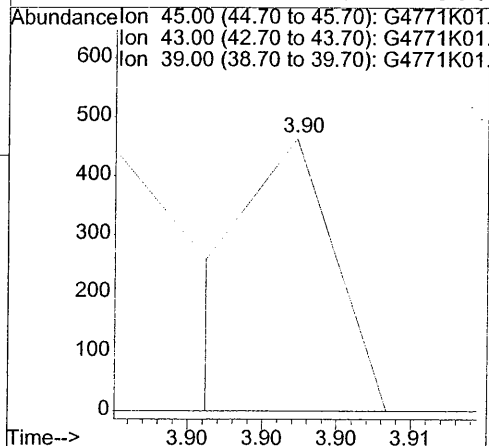
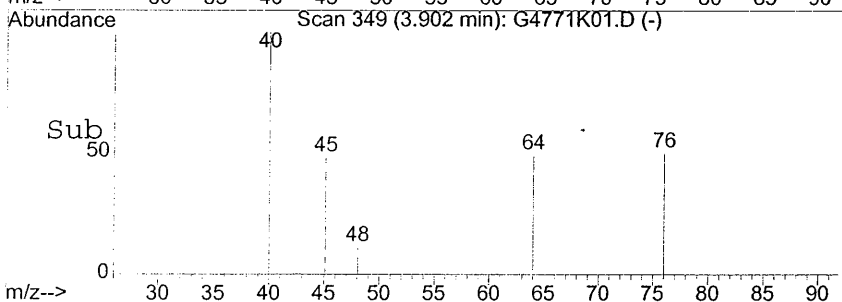




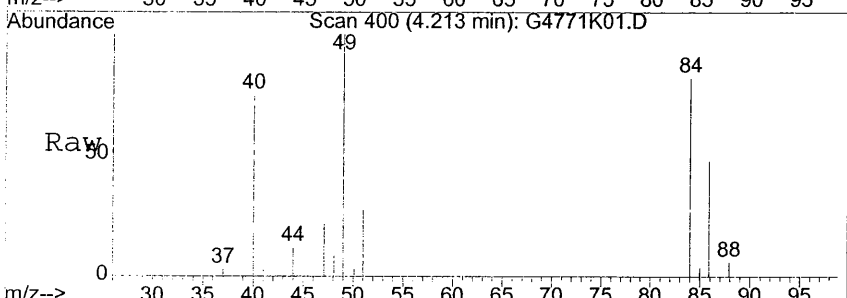
#18
 94 Isopropyl Alcoholx10
 Concen: 1.27 ppb
 RT: 3.90 min Scan# 349
 Delta R.T. -0.19 min
 Lab File: G4771K01.D
 Acq: 12 Nov 2003 1:17 am



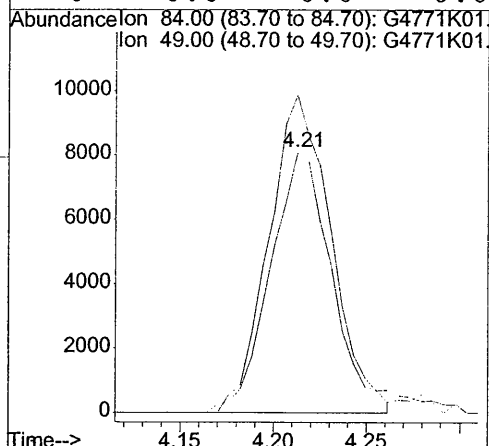
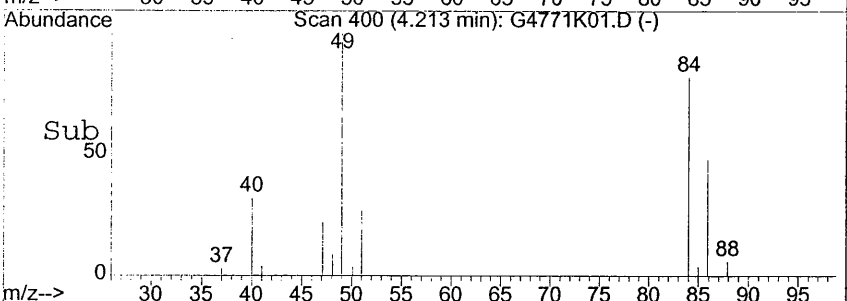
Tgt Ion:45 Resp: 169
 Ion Ratio Lower Upper
 45 100
 43 127.2 0.0 0.0#
 39 0.0 0.0 0.0
 0 0.0 0.0 0.0

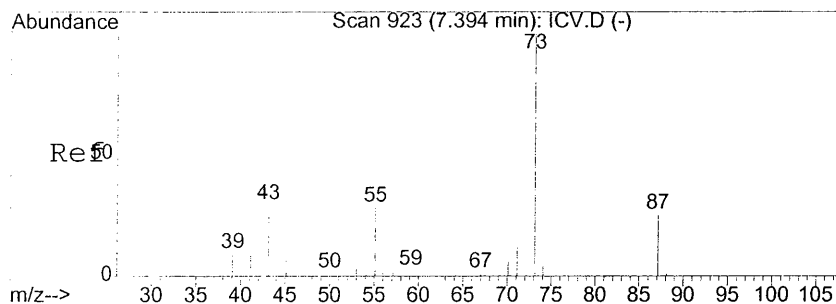


#19
 18 methylene chloride
 Concen: 0.40 ppb
 RT: 4.21 min Scan# 400
 Delta R.T. -0.01 min
 Lab File: G4771K01.D
 Acq: 12 Nov 2003 1:17 am

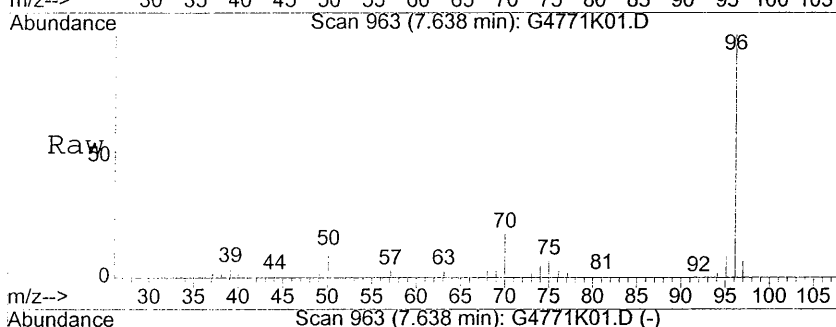


Tgt Ion:84 Resp: 18425
 Ion Ratio Lower Upper
 84 100
 49 122.5 80.4 120.4#
 0 0.0 0.0 0.0
 0 0.0 0.0 0.0

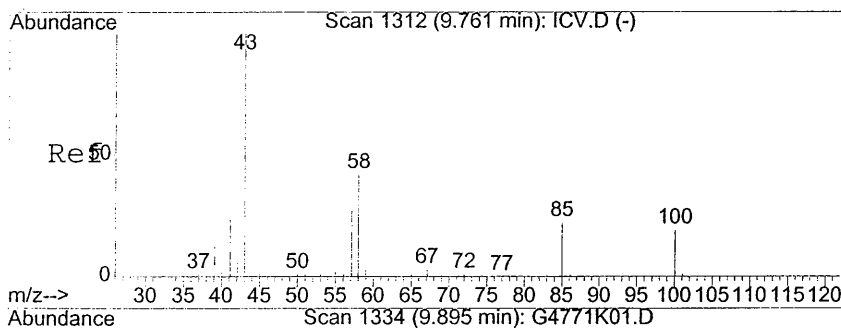
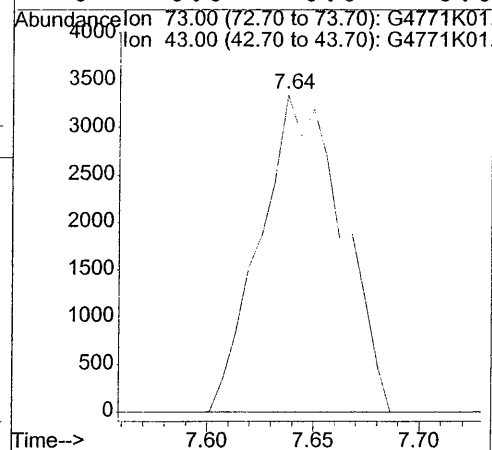
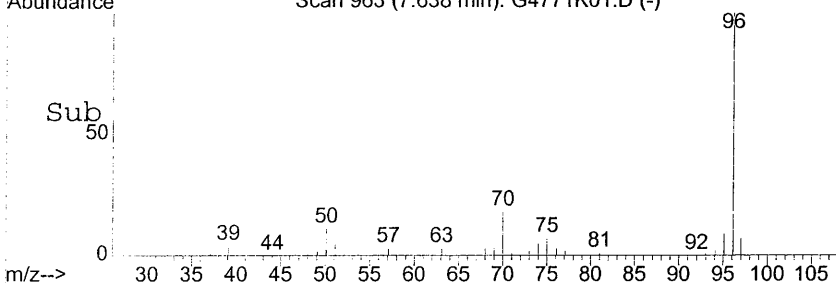




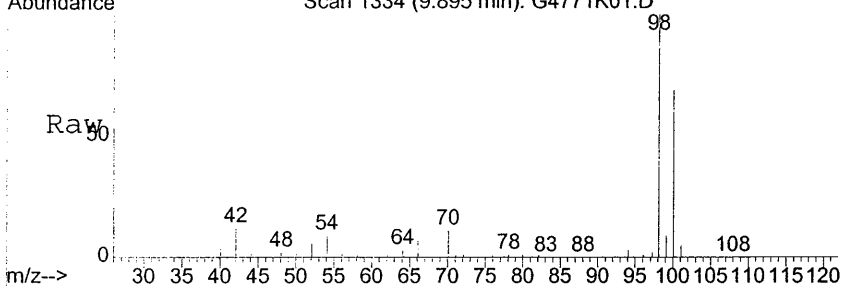
#49
101 TAME
Concen: 1.12 ppb
RT: 7.64 min Scan# 963
Delta R.T. 0.23 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am



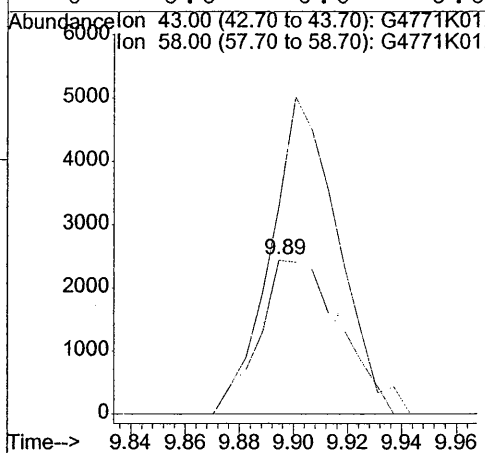
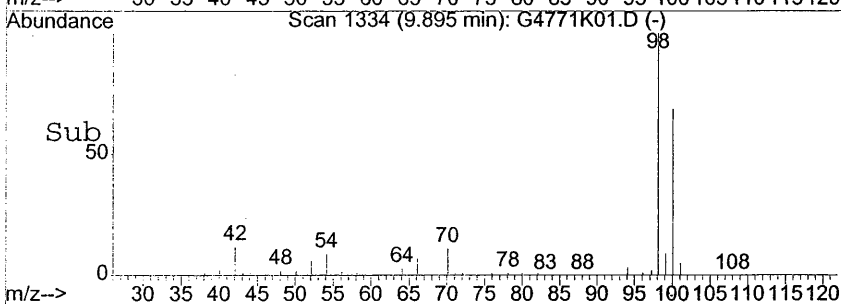
Tgt Ion:73 Resp: 8959
Ion Ratio Lower Upper
73 100
43 0.0 22.7 34.1#
0 0.0 0.0 0.0
0 0.0 0.0 0.0

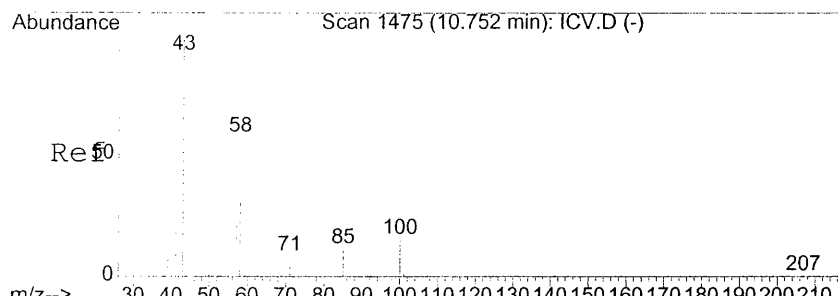


#62
54 MIBK
Concen: 2.01 ppb
RT: 9.89 min Scan# 1334
Delta R.T. 0.13 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am



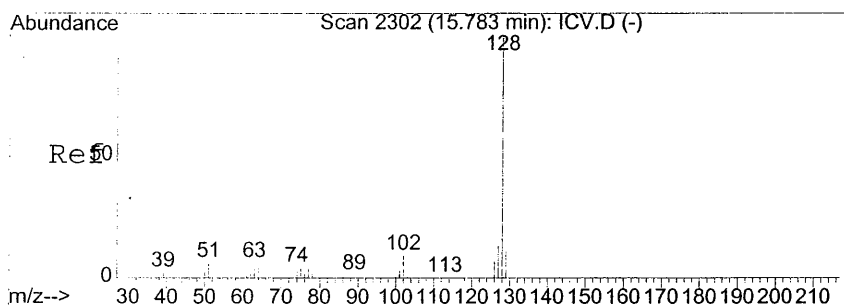
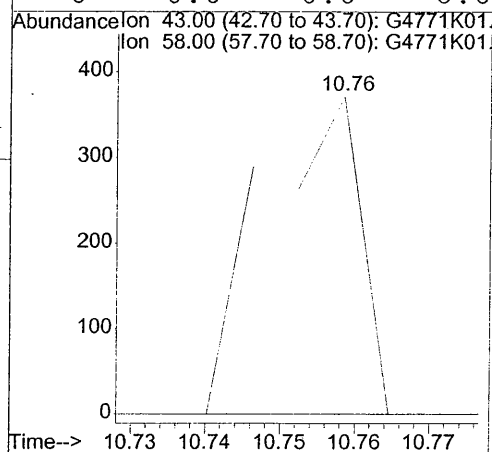
Tgt Ion:43 Resp: 5021
Ion Ratio Lower Upper
43 100
58 134.9 20.1 60.1#
0 0.0 0.0 0.0
0 0.0 0.0 0.0





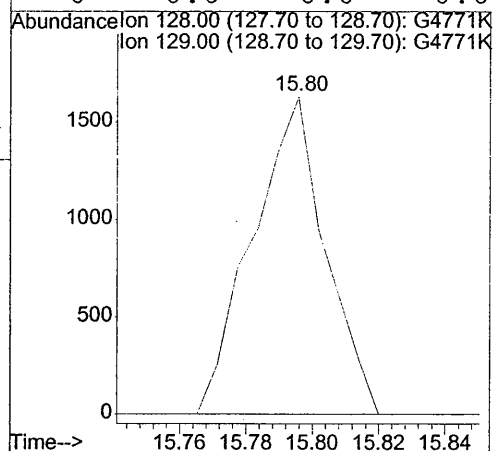
#65
57 2-hexanone X5
Concen: 5.06 ppb
RT: 10.76 min Scan# 1476
Delta R.T. 0.00 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion	Ratio	Lower	Upper
43	100		
58	0.0	38.4	78.4#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#97
88 naphthalene
Concen: 1.18 ppb
RT: 15.80 min Scan# 2304
Delta R.T. 0.01 min
Lab File: G4771K01.D
Acq: 12 Nov 2003 1:17 am

Tgt Ion	Ratio	Lower	Upper
128	100		
129	0.0	0.0	31.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0



Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/06/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: DUPE-7-4-Q03	Lab Sample ID: 03-6002-1	Received Date: 11/06/2003
Sample Type: Field Sample	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: 6002-01	Prep. No: -	Anal. Time: 03:59
Methanol Vol. -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	1,1,2,2-TETRACHLOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates

Control Limit, % Surro. Rec. %

1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL)	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5

70-129	107
70-129	116
70-122	112
73-129	104

of out-of-control

0

Internal Standard

Control Limit, % IS Rec. %

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROBENZENE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6

50-200	103
50-200	103
50-200	100

of out-of-control

0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank
D - Diluted

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6002-01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Acq. Time : Nov 12 03:59 2003

Method Update: Mon Oct 27 14:05 2003

Quant. Time : Nov 12 09:18 2003

Print Time : Wed Nov 12 09:18 2003

Miscellaneous :

Sample : f=1 dup
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1415

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
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Internal Standards

1	Fluorobenzene	7.65	7.64	0.000	96	70	647.057	10.00		0.00	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	510.780	10.00		0.00	
62	1,4-Dichlorobenze	13.85	13.85	0.000	152	150	315.596	10.00		0.00	

System Monitoring Compounds (Surrogate)

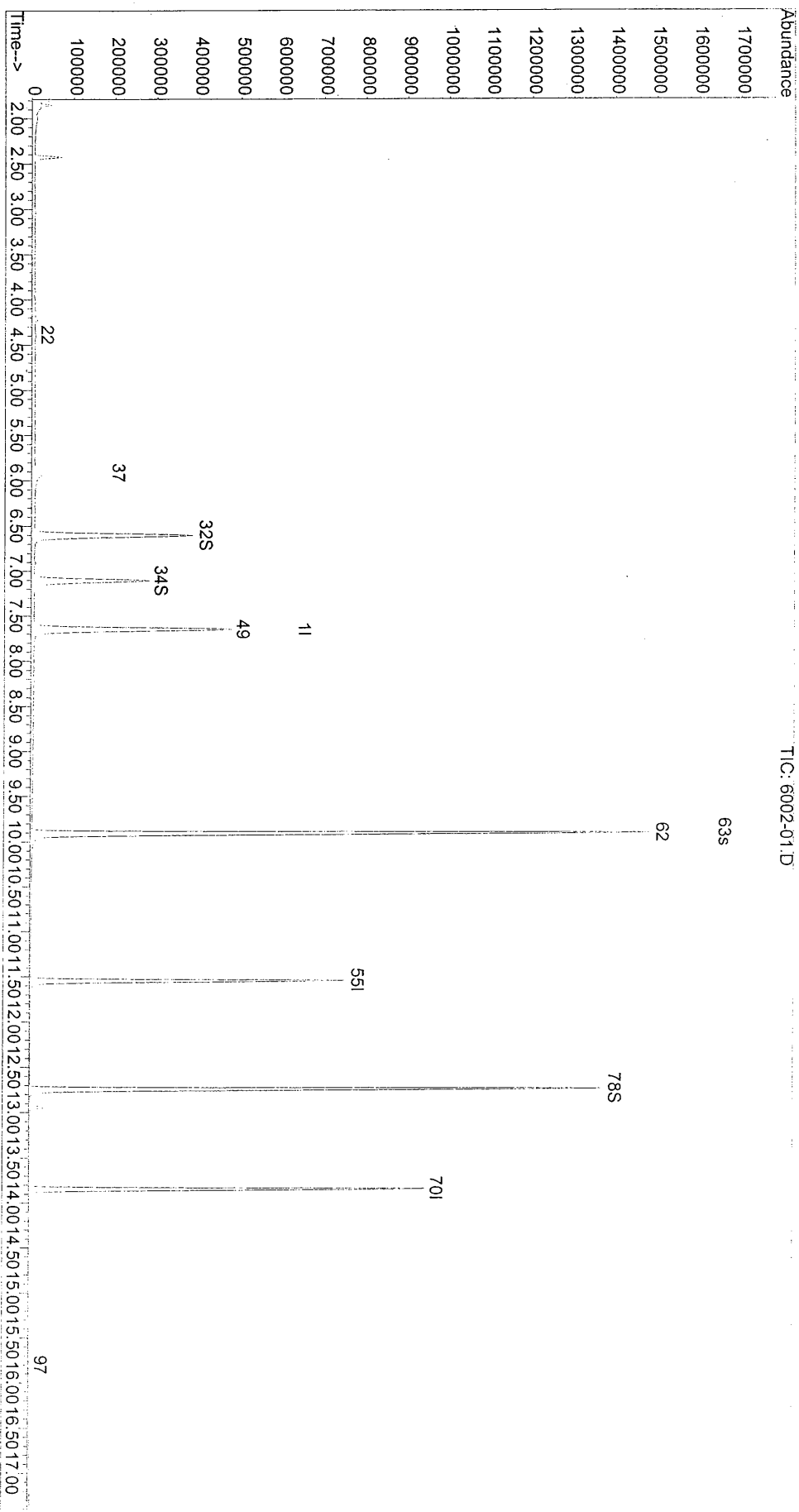
27	Di-Br-F-Me (sur)	6.60	6.60	0.000	111	113	339.787	22.36		22.4	111.82%
29	1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	313.640	23.18		23.2	115.88%
55	toluene-d8	9.91	9.91	0.000	98	100	1171.705	20.78		20.8	103.91%
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	456.337	21.34		21.3	106.69%

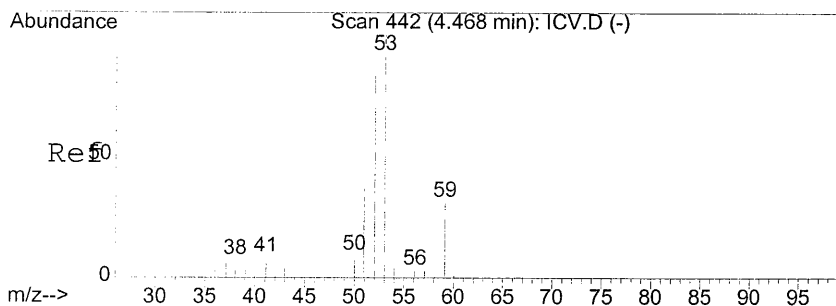
Target Compounds

<<< 11	: ISTD ID = 1 >>>										
95	95 Tert butyl alcoho	4.39	4.51	-0.016	59	57	0.856	2.02		2.0	100
92	92 Nitro Methane(x10	5.92	5.84	0.011	61	46	0.319	0.42		0.4	94
101	101 TAME	7.64	7.41	0.030	73	43	9.159	1.13		1.1	46
<<< 12	: ISTD ID = 47 >>>										
54	54 MIBK	9.90	9.77	0.012	43	58	4.890	2.01		2.0	1
<<< 13	: ISTD ID = 62 >>>										
88	88 naphthalene	15.80	15.78	0.001	128	129	0.913	1.15		1.1	71

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6002-01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 12 03:59 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:18 2003
 Print Time : Wed Nov 12 09:18 2003
 Miscellaneous :
 Sample : f=1 dup
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000





#22

95 Tert butyl alcoholx10

Concen: 2.02 ppb

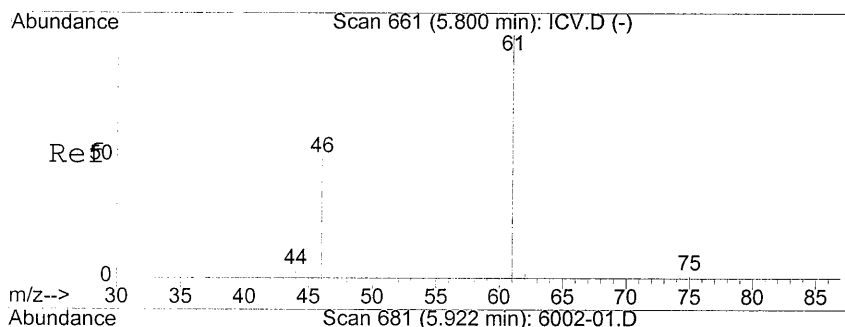
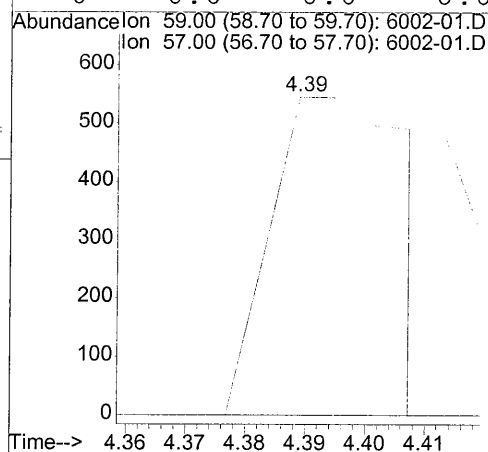
RT: 4.39 min Scan# 429

Delta R.T. -0.12 min

Lab File: 6002-01.D

Acq: 12 Nov 2003 3:59 am

Tgt Ion:59	Resp:	856
Ion Ratio	Lower	Upper
59	100	
57	0.0	0.0
0	0.0	0.0
0	0.0	0.0



#37

92 Nitro Methane(x10)

Concen: 0.42 ppb

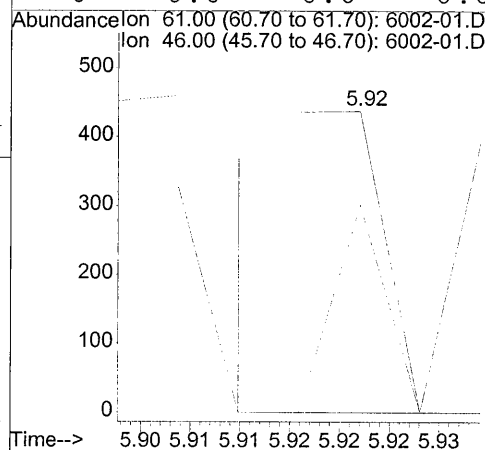
RT: 5.92 min Scan# 681

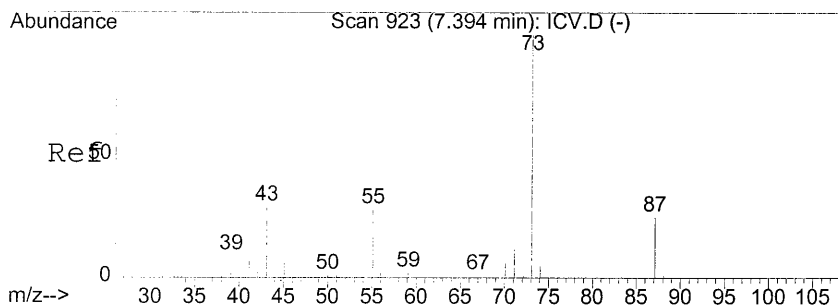
Delta R.T. 0.09 min

Lab File: 6002-01.D

Acq: 12 Nov 2003 3:59 am

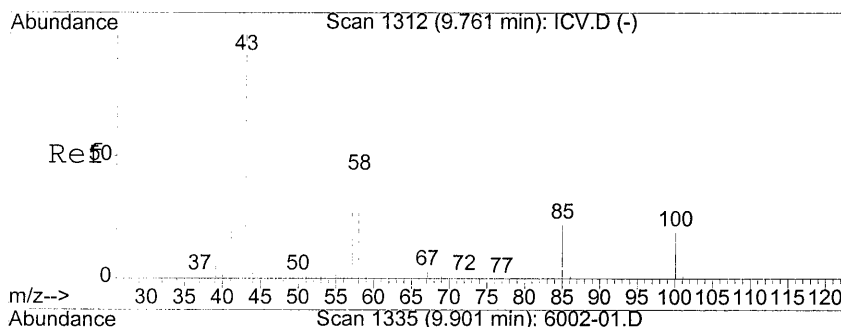
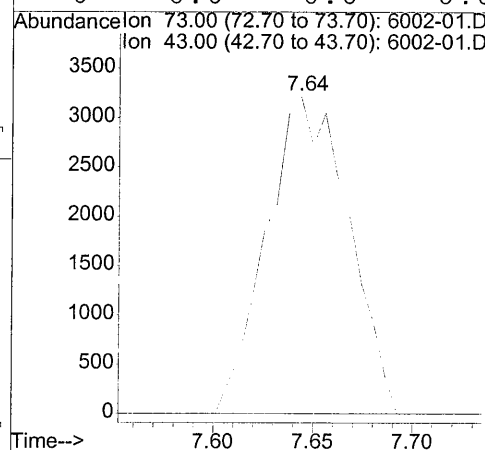
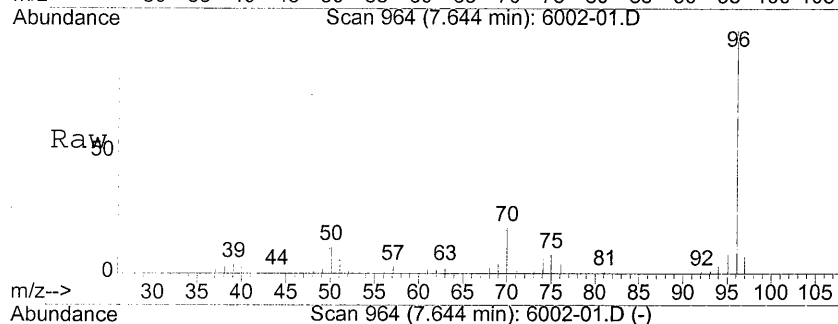
Tgt Ion:61	Resp:	319
Ion Ratio	Lower	Upper
61	100	
46	72.7	48.0
0	0.0	0.0
0	0.0	0.0





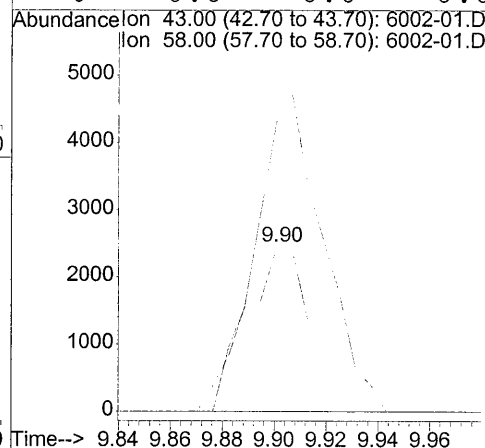
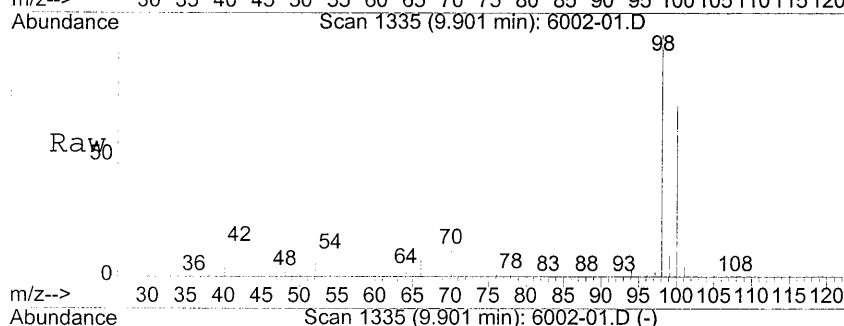
#49
101 TAME
Concen: 1.13 ppb
RT: 7.64 min Scan# 964
Delta R.T. 0.23 min
Lab File: 6002-01.D
Acq: 12 Nov 2003 3:59 am

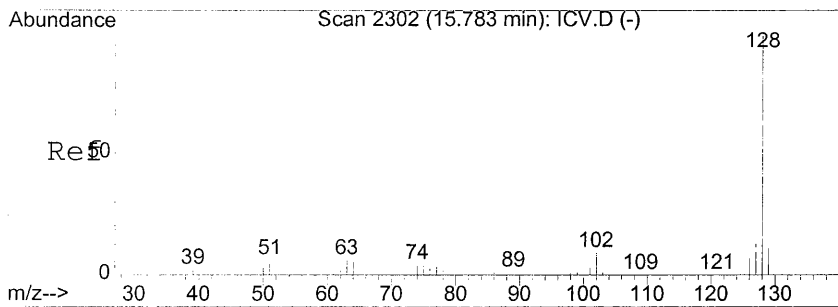
Tgt Ion	Ratio	Lower	Upper
73	100		
43	0.0	22.7	34.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0



#62
54 MIBK
Concen: 2.01 ppb
RT: 9.90 min Scan# 1335
Delta R.T. 0.13 min
Lab File: 6002-01.D
Acq: 12 Nov 2003 3:59 am

Tgt Ion	Ratio	Lower	Upper
43	100		
58	165.7	20.1	60.1#
0	0.0	0.0	0.0
0	0.0	0.0	0.0

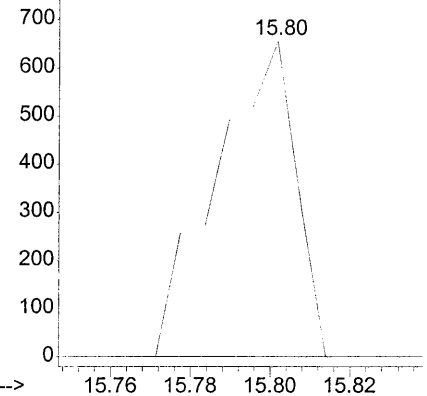




#97
 88 naphthalene
 Concen: 1.15 ppb
 RT: 15.80 min Scan# 2305
 Delta R.T. 0.02 min
 Lab File: 6002-01.D
 Acq: 12 Nov 2003 3:59 am

Tgt Ion:	128	Resp:	913
Ion Ratio	Lower	Upper	
128	100		
129	0.0	0.0	31.1
0	0.0	0.0	0.0
0	0.0	0.0	0.0

Abundance Ion 128.00 (127.70 to 128.70): 6002-01
 Ion 129.00 (128.70 to 129.70): 6002-01



Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/06/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: MW-5	Lab Sample ID: 03-6002-2	Received Date: 11/06/2003
Sample Type: Field Sample	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: 6002-02	Prep. No: -	Anal. Time: 03:33
Methanol Vol. -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates

Control Limit, %

Surro. Rec. %

1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL)	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5

70-129

105

70-129

114

70-122

112

73-129

102

of out-of-control

0

Internal Standard

Control Limit, %

IS Rec. %

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROETHANE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6

50-200

104

50-200

105

50-200

101

of out-of-control

0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank

D - Diluted

Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/06/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: MW-8	Lab Sample ID: 03-6002-3	Received Date: 11/06/2003
Sample Type: Field Sample	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: 6002-03	Prep. No: -	Anal. Time: 04:26
Methanol Vol. -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	112TRICHLORO-122TRIFLUOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates

Control Limit, %

Surro. Rec.%

1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5

70-129

107

70-129

115

70-122

113

73-129

104

of out-of-control

0

Internal Standard

Control Limit, %

IS Rec.%

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROBENZENE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6

50-200

104

50-200

104

50-200

100

of out-of-control

0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank

D - Diluted

Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/06/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: MW-10	Lab Sample ID: 03-6002-4	Received Date: 11/06/2003
Sample Type: Field Sample	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: 6002-04	Prep. No: -	Anal. Time: 04:52
Methanol Vol: -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	<0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	<10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	<0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	1.2	
16	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	0.9	
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	<0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	<0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	<0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	1.5	
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	10.8	
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	1,1,2,2-TETRACHLOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates

Control Limit, %

Surro. Rec.%

1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL)	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5

70-129

106

70-129

116

70-122

114

73-129

103

of out-of-control

0

Internal Standard

Control Limit, %

IS Rec.%

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROBENZENE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6

50-200

103

50-200

103

50-200

98

of out-of-control

0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank

D - Diluted

Applied P & Ch Laboratory
Organic Analysis Results for Method 524.2

Client Name: GEOFON, Inc.	Project No: 04-4428.10	Collection Date: 11/06/2003
Project ID: JPL GW Mon-4Q03	Service ID: 36002	Collected by:
Sample ID: TB-11-6-03	Lab Sample ID: 03-6002-5	Received Date: 11/06/2003
Sample Type: Field Sample	Sample Matrix: Water	Moisture %: -
Anal. Method: 524.2	Prep. Method: 5030	Instrument ID: GC/MS: A
Batch No: 03G4771	Prep. Date: 11/12/03	Anal. Date: 11/12/03
Data File Name: 6002-05	Prep. No: -	Anal. Time: 02:15
Methanol Vol. -	Sample Amount: 25.0 mL	Dilution Factor: 1
Test Level: Low	Sparge Size: 25 mL	Heated Purge: (Y/N) N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	BENZENE	71-43-2	µg/L	0.5	< 0.5	U
2	BROMOBENZENE	108-86-1	µg/L	0.5	< 0.5	U
3	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	< 0.5	U
4	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	< 0.5	U
5	BROMOFORM	75-25-2	µg/L	0.5	< 0.5	U
6	BROMOMETHANE	74-83-9	µg/L	0.5	< 0.5	U
7	N-BUTYLBENZENE	104-51-8	µg/L	0.5	< 0.5	U
8	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	< 0.5	U
9	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	< 0.5	U
10	2-BUTANONE	78-93-3	µg/L	10	< 10	U
11	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	< 0.5	U
12	CHLOROBENZENE	108-90-7	µg/L	0.5	< 0.5	U
13	CHLORODIBROMOMETHANE	124-48-1	µg/L	0.5	< 0.5	U
14	CHLOROETHANE	75-00-3	µg/L	0.5	< 0.5	U
15	CHLOROFORM	67-66-3	µg/L	0.5	< 0.5	U
16	CHLOROMETHANE	74-87-3	µg/L	0.5	< 0.5	U
17	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	< 0.5	U
18	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	< 0.5	U
19	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	< 0.5	U
20	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	< 0.5	U
21	DIBROMOMETHANE	74-95-3	µg/L	0.5	< 0.5	U
22	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	< 0.5	U
23	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	< 0.5	U
24	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	< 0.5	U
25	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	< 0.5	U
26	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	< 0.5	U
27	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	< 0.5	U
28	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	< 0.5	U
29	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	< 0.5	U
30	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	< 0.5	U
31	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	< 0.5	U
32	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	< 0.5	U
33	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	< 0.5	U
34	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	< 0.5	U
35	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	< 0.5	U
36	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	< 0.5	U
37	ETHYLBENZENE	100-41-4	µg/L	0.5	< 0.5	U
38	HEXACHLOROBUTADIENE	87-68-3	µg/L	0.5	< 0.5	U
39	ISOPROPYLBENZENE (CUMENE)	98-82-8	µg/L	0.5	< 0.5	U

#	Component Name	CAS No	Unit	RL	Result	Qualifier
40	P-ISOPROPYLTOLUENE	99-87-6	µg/L	0.5	<0.5	U
41	METHYLENE CHLORIDE	75-09-2	µg/L	0.5	<0.5	U
42	METHYL-T-BUTYL ETHER (MTBE)	1634-04-4	µg/L	1	<1	U
43	4-METHYL-2-PENTANONE (MIBK)	108-10-1	µg/L	10	<10	U
44	NAPHTHALENE	91-20-3	µg/L	0.5	<0.5	U
45	N-PROPYLBENZENE	103-65-1	µg/L	0.5	<0.5	U
46	STYRENE	100-42-5	µg/L	0.5	<0.5	U
47	1,1,1,2-TETRACHLOROETHANE	630-20-6	µg/L	0.5	<0.5	U
48	1,1,2,2-TETRACHLOROETHANE	79-34-5	µg/L	0.5	<0.5	U
49	TETRACHLOROETHENE	127-18-4	µg/L	0.5	<0.5	U
50	TOLUENE	108-88-3	µg/L	0.5	<0.5	U
51	1,2,3-TRICHLOROBENZENE	87-61-6	µg/L	0.5	<0.5	U
52	1,2,4-TRICHLOROBENZENE	120-82-1	µg/L	0.5	<0.5	U
53	1,1,1-TRICHLOROETHANE	71-55-6	µg/L	0.5	<0.5	U
54	1,1,2-TRICHLOROETHANE	79-00-5	µg/L	0.5	<0.5	U
55	TRICHLOROETHENE	79-01-6	µg/L	0.5	<0.5	U
56	TRICHLOROFLUOROMETHANE	75-69-4	µg/L	0.5	<0.5	U
57	1,2,3-TRICHLOROPROPANE	96-18-4	µg/L	0.5	<0.5	U
58	1,1,2,2-TETRACHLOROETHANE	76-13-1	µg/L	0.5	<0.5	U
59	1,2,4-TRIMETHYLBENZENE	95-63-6	µg/L	0.5	<0.5	U
60	1,3,5-TRIMETHYLBENZENE	108-67-8	µg/L	0.5	<0.5	U
61	VINYL CHLORIDE	75-01-4	µg/L	0.5	<0.5	U
62	O-XYLENE	95-47-6	µg/L	0.5	<0.5	U
63	M/P-XYLENE	108-38-3	µg/L	0.5	<0.5	U

Surrogates

Control Limit, %

Surro. Rec.%

1	1-BROMO-4-FLUOROBENZENE (4-BROMOFL)	460-00-4
2	1,2-DICHLOROETHANE-D4	17060-07-0
3	DIBROMOFLUOROMETHANE	1868-53-7
4	TOLUENE-D8	2037-26-5

70-129

107

70-129

114

70-122

111

73-129

102

of out-of-control

0

Internal Standard

Control Limit, %

IS Rec.%

1	CHLOROBENZENE-D5	3114-55-4
2	1,4-DICHLOROBENZENE-D4	3855-82-1
3	FLUOROBENZENE	462-06-6

50-200

106

50-200

104

50-200

102

of out-of-control

0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL

E - Exceed calibration range

J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)

B - A positive value was found in the method blank

D - Diluted

FORM-2A

Applied P & Ch Laboratory

Surrogate Recovery Summary for Method 524.2

Client Name: GEOFON, Inc.

Contract No:

Lab Code: APCL

Case No:

SAS No:

SDG Number: 036002

Project ID: JPL GW Mon-4Q03

Project No: 04-4428.10

Sample Matrix: Water

Batch No: 03G4771

#	Client Sample No	Lab Sample ID	S1 % #	S2 % #	S3 % #	S4 % #	TOT OUT
1	03G4771-LCS-01	03G4771-LCS-01	95	99	96	93	0
2	MW-5MS	03-6002-2MS	98	99	97	92	0
3	MW-5MSD	03-6002-2MSD	94	100	97	91	0
4	03G4771-MB-01	03G4771-MB-01	108	115	112	104	0
5	TB-11-6-03	03-6002-5	107	114	111	102	0
6	MW-5	03-6002-2	105	114	112	102	0
7	DUPE-7-4-Q03	03-6002-1	107	116	112	104	0
8	MW-8	03-6002-3	107	115	113	104	0
9	MW-10	03-6002-4	106	116	114	103	0
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

QC Control Limit

S1 = 1-BROMO-4-FLUOROBENZENE (4-BROMOFL

70-129

S2 = 1,2-DICHLOROETHANE-D4

70-129

S3 = DIBROMOFLUOROMETHANE

70-122

S4 = TOLUENE-D8

73-129

Column to be used to flag recovery values:

* - Values outside of contract required QC Limits

D - Surrogate diluted out

I - Matrix Interference

FORM-3A

Applied P & Ch Laboratory

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 524.2

Client Name: GEOFON, Inc.

Contract No:

Lab Code: APCL

Case No:

SAS No:

Service ID: 36002

Project ID: JPL GW Mon-4Q03

Project No: 04-4428.10

Sample Matrix: Water

Batch No: 03G4771

LCS Filename: G4771L01

Date Analyzed: 111103

Time Analyzed: 20:46

LCSD Filename: -

Date Analyzed: -

Time Analyzed: -

Spiked Components	Unit	Spike Added	Concentration		LCS Rec% #	QC Limit, % REC
			Unspiked	LCS		
BENZENE	µg/L	20	0	17.0	85	65-120
CHLOROBENZENE	µg/L	20	0	18.5	93	65-134
1,1-DICHLOROETHENE	µg/L	20	0	20.4	102	65-127
TOLUENE	µg/L	20	0	17.2	86	65-134
TRICHLOROETHENE	µg/L	20	0	18.5	93	67-122
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1430

Acq. Time : Nov 11 20:46 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:42 2003
 Print Time : Wed Nov 12 09:42 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.64	7.64	0.000	96	70	677.978	10.00		0.00	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	508.521	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.85	0.000	152	150	312.840	10.00		0.00	
System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.60	0.000	111	113	306.992	19.28		19.3	%Recovery
29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	281.689	19.87		19.9	96.42%
55	toluene-d8	9.91	9.91	0.000	98	100	1038.885	18.51		18.5	99.33%
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	404.401	19.08		19.1	92.54%
											95.38%

Target Compounds											
<<< I1 : ISTD ID = 1 >>>											
3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	234.472	17.20		17.2	98
4	Chloromethane	2.11	2.11	0.000	50	52	162.291	11.99		12.0	97
2	F114	2.03	2.03	0.000	85	135	116.288	18.11		18.1	28
5	vinyl chloride	2.22	2.22	0.000	62	64	184.229	15.93		15.9	100
6	bromomethane	2.61	2.61	0.000	94	96	89.540	13.63		13.6	99
7	chloroethane	2.73	2.73	0.000	64	66	110.360	17.73		17.7	100
8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	435.826	22.80		22.8	100
91	Acetonitrile X10	4.07	4.07	0.000	41	40	479.813	164.26		164.3	90
9	acrolein X10	3.51	3.51	0.000	56	55	261.995	182.62		182.6	99
11	acetone X10	3.71	3.73	-0.002	43	58	467.414	215.80		215.8	78
12	ethyl ether X5	3.37	3.37	0.000	59	74	591.559	91.84		91.8	77
13	11-dichloroethene	3.64	3.64	0.000	61	96	327.682	20.35		20.3	80
14	Iodomethane	3.81	3.81	0.000	142	127	115.750	8.73		8.7	89
15	F-113	3.65	3.65	0.000	101	151	221.713	22.69		22.7	91
16	acrylonitrile X10	4.52	4.52	0.000	53	52	488.944	168.11		168.1	95
17	carbon disulfide	3.90	3.90	0.000	76	78	483.904	15.78		15.8	99
94	Isopropyl Alcohol	4.04	4.10	-0.007	45	43	77.917	561.32		561.3	100
18	methylene chlorid	4.22	4.22	0.000	84	49	246.721	17.08		17.1	79
19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	262.305	17.33		17.3	89

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Acq. Time : Nov 11 20:46 2003

Method Update: Mon Oct 27 14:05 2003

Quant. Time : Nov 12 09:42 2003

Print Time : Wed Nov 12 09:42 2003

Miscellaneous :

Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1431

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	531.044	19.94	19.9	97	?
95	Tert butyl alcoho	4.47	4.51	-0.005	59	57	146.641	329.62	329.6	100	me
94	allyl chloride	4.07	4.07	0.000	41	76	479.813	16.05	16.1	75	#21/11/13
21	11-dichloroethane	5.12	5.12	0.000	63	83	442.595	17.65	17.7	99	me
97	propionitrile	6.01	6.02	0.000	54	51	21.089	17.65	17.6	100	me
22	c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	278.663	17.65	17.6	86	?
23	22-Dichloropropan	5.92	5.92	0.000	77	97	372.521	23.28	23.3	98	?
24	Br-Cl-methane	6.25	6.25	0.000	128	130	139.290	17.45	17.4	95	?
25	chloroform	6.37	6.37	0.000	83	85	519.882	18.45	18.4	98	?
26	tetrahydrofuranX5	6.35	6.35	0.000	42	72	194.029	82.61	82.6	88	?
98	Diisopropyl ether	5.24	5.24	0.000	45	87	852.015	17.70	17.7	90	?
99	ETBE	5.74	5.74	0.000	59	87	636.237	20.96	21.0	92	?
30	12-dichloroethane	7.22	7.22	0.000	64	62	107.247	19.52	19.5	98	?
32	vinyl acetate X5	5.19	5.20	0.000	43	86	2234.927	95.14	95.1	92	?
92	Nitro Methane(X10	5.82	5.84	-0.002	61	46	73.443	92.75	92.8	16	me
33	2-butanoneMEK X10	5.94	5.95	0.000	43	72	646.571	182.79	182.8	84	21/11/13
93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	306.015	34.94	34.9	99	?
34	111-trichloroetha	6.65	6.65	0.000	97	99	519.899	21.94	21.9	97	?
35	11-Di-Cl-propene	6.91	6.90	0.000	75	110	351.068	19.62	19.6	90	?
36	benzene	7.21	7.21	0.000	78	52	974.814	17.00	17.0	91	?
37	CCl4	6.91	6.91	0.000	117	119	513.767	23.57	23.6	96	?
100	Isobutyl alcohol	7.41	7.41	0.000	43	42	176.729	202.99	203.0	94	?
38	thiophene	7.53	7.53	0.000	84	58	538.159	18.03	18.0	94	?
39	12-di-Cl-propane	8.56	8.56	0.000	63	76	223.944	17.07	17.1	85	?
40	trichloroethene	8.24	8.24	0.000	130	132	340.237	18.52	18.5	88	?
41	dibromomethane	8.73	8.73	0.000	174	172	169.114	18.53	18.5	99	?
101	TAME	7.41	7.41	0.000	73	43	511.947	18.35	18.3	88	#?
42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	389.998	18.88	18.9	96	?
43	Me-methacrylate	8.76	8.76	0.000	69	100	119.342	16.31	16.3	90	?
44	2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	276.998	124.56	124.6	81	?
45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	395.072	18.99	19.0	94	?
46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	347.283	18.70	18.7	92	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 20:46 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:42 2003
 Print Time : Wed Nov 12 09:42 2003
 Miscellaneous :

Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	202.432	17.98	18.0	90	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	312.506	18.09	18.1	99	?
50	Et methacrylate	10.38	10.37	0.000	69	99	257.001	16.39	16.4	85	
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	313.020	19.59	19.6	96	
52	bromoform	12.41	12.42	0.000	173	174	185.477	19.74	19.7	99	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	340.330	17.89	17.9	96	
54	MIBK	9.77	9.77	0.000	43	58	151.171	15.43	15.4	95	
56	toluene	9.99	9.99	0.000	91	92	1184.174	17.20	17.2	99	
57	2-hexanone X5	10.76	10.76	0.000	43	58	529.082	83.95	83.9	91	
58	12-dibromoethane	11.03	11.03	0.000	107	109	210.315	18.23	18.2	100	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	387.992	20.47	20.5	100	
60	chlorobenzene	11.58	11.57	0.000	112	77	867.143	18.45	18.5	91	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	354.515	20.27	20.3	99	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	140.480	19.66	19.7	59	#?
64	Et-Bz	11.70	11.70	0.000	91	106	1485.440	18.68	18.7	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2337.730	38.00	38.0	99	
66	styrene	12.24	12.24	0.000	104	78	960.915	18.55	18.6	100	?
67	o-xylene	12.22	12.22	0.000	91	106	1177.059	18.95	19.0	98	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	216.692	17.49	17.5	98	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	80.303	19.52	19.5	86	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1652.331	19.90	19.9	99	
72	bromobenzene	12.89	12.89	0.000	156	158	402.421	19.15	19.1	97	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	42.355	17.36	17.4	85	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	492.190	20.47	20.5	94	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	401.012	19.67	19.7	99	
75	4-Cl-Toluene	13.18	13.19	0.000	126	128	401.187	19.15	19.1	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1474.838	20.14	20.1	94	?
77	4-Iso-Pr-toluene	13.81	13.81	0.000	119	134	1618.336	20.52	20.5	99	?
78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1512.568	19.72	19.7	95	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1344.496	20.91	20.9	99	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771L01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 20:46 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:42 2003
 Print Time : Wed Nov 12 09:42 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

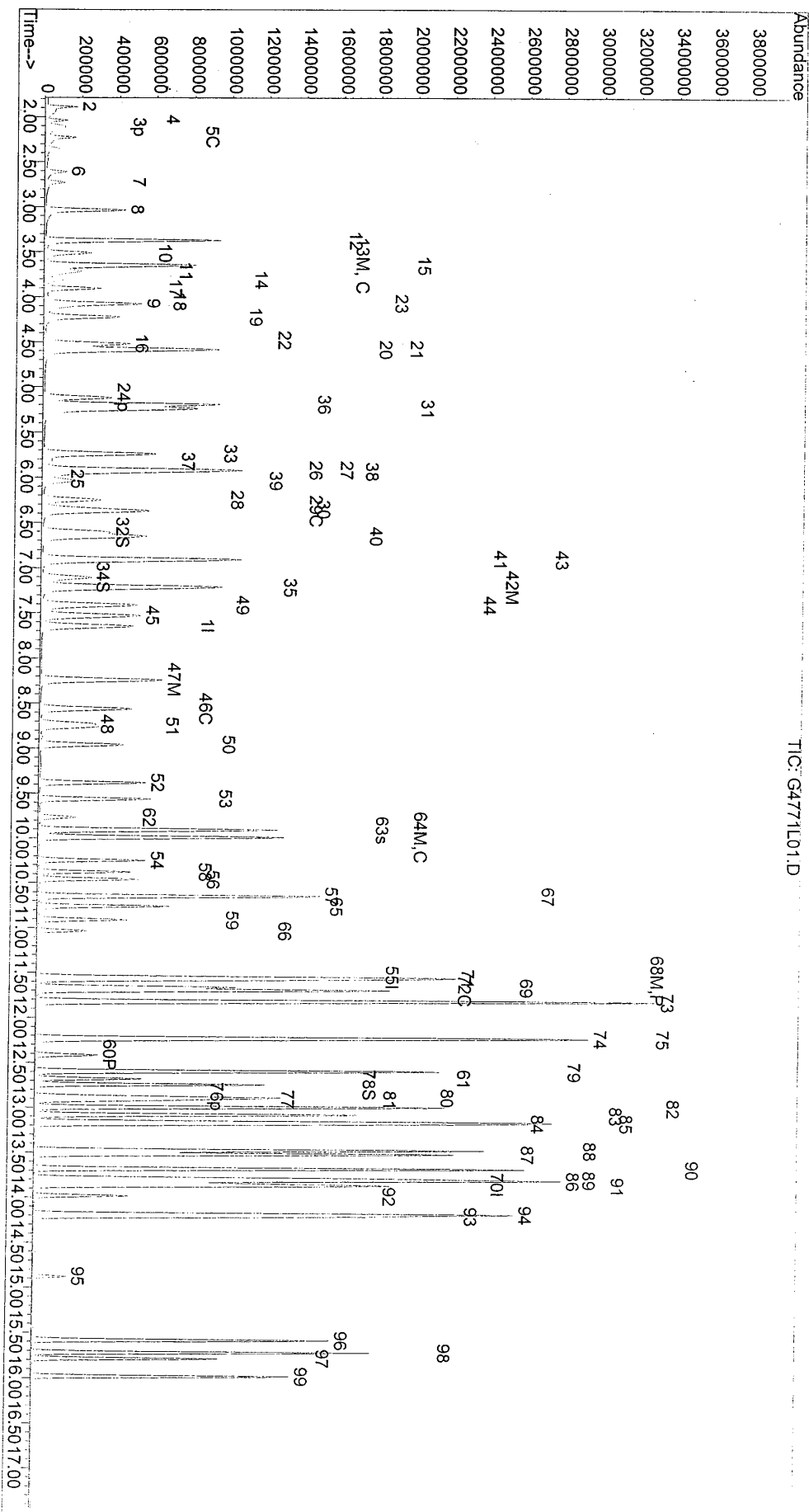
1433

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.79	0.000	146	148	840.811	19.25	19.3	97	?
81	81 sec-butylbenzene	13.68	13.68	0.000	105	134	1953.235	20.35	20.3	98	
82	14-DCB	13.87	13.87	0.000	146	148	846.372	18.52	18.5	98	
83	83 Cl-benzyl	13.98	13.98	0.000	126	91	80.883	17.32	17.3	82	#
84	12-DCB	14.21	14.21	0.000	146	148	755.831	18.90	18.9	99	?
85	85 n-butylbenzene	14.18	14.18	0.000	134	91	439.099	21.08	21.1	78	#?
86	86 12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	57.967	19.47	19.5	100	
87	87 124-tri-Cl-Bz	15.58	15.58	0.000	180	182	519.681	20.86	20.9	100	
88	88 naphthalene	15.78	15.78	0.000	128	129	826.963	18.05	18.0	99	
89	89 hx-Cl-butadiene	15.72	15.72	0.000	225	258	325.383	22.83	22.8	99	
90	90 123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	450.955	20.97	21.0	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771L01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 20:46 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:42 2003
 Print Time : Wed Nov 12 09:42 2003
 Miscellaneous :
 Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000



FORM-3A

Applied P & Ch Laboratory

Matrix Spike/Matrix Spike Duplicate Recovery for Method 524.2

Client Name: GEOFON, Inc.
Case No:
Project ID: JPL GW Mon-4Q03

Contract No:
SAS No:
Project No: 04-4428.10
Batch No: 03G4771

Lab Code: APCL
Service ID: 36002
Sample Matrix: Water

MS Filename: G4771M01
MSD Filename: G4771N01
MS Sample No: **MW-5**

Date Analyzed: 111103
Date Analyzed: 111103
Sample Lab ID: 03-6002-2
Time Analyzed: 21:38
Time Analyzed: 22:04

Spiked Components	Unit	Spike Added	Concentration		MS Rec% #	QC Limit, % REC
			Unspiked	MS		
BENZENE	µg/L	20	0	17.3	87	65-121
CHLOROBENZENE	µg/L	20	0	18.6	93	65-134
1,1-DICHLOROETHENE	µg/L	20	0	20.4	102	65-127
TOLUENE	µg/L	20	0	17.3	87	65-134
TRICHLOROETHENE	µg/L	20	0	18.8	94	65-125
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	MSD Concentration	MSD Rec% #	RPD% #	QC Limit, %	
						RPD	REC
BENZENE	µg/L	20	17.3	87	0	28	65-121
CHLOROBENZENE	µg/L	20	18.2	91	2	35	65-134
1,1-DICHLOROETHENE	µg/L	20	20.1	101	1	31	65-127
TOLUENE	µg/L	20	17.1	86	1	35	65-134
TRICHLOROETHENE	µg/L	20	18.9	95	1	30	65-125
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* - Values outside of contract required QC Limits

D - Spiked components diluted out

Comments: _____

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M01.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Nov 11 21:38 2003
Method Update: Mon Oct 27 14:05 2003
Quant. Time : Nov 12 09:44 2003
Print Time : Wed Nov 12 09:44 2003
Miscellaneous :

Sample : f=1 \$6002-02
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplr: 1.000000

1436

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
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Internal Standards											
1	Fluorobenzene	7.64	7.64	0.000	96	70	698.678	10.00		0.00	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	530.223	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.85	0.000	152	150	318.831	10.00		0.00	

System Monitoring Compounds (Surrogate)											
27	D1-Br-F-Me (surr)	6.60	6.60	0.000	111	113	318.406	19.41	19.4	97.04%	
29	1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	290.169	19.86	19.9	99.29%	
55	toluene-d8	9.91	9.91	0.000	98	100	1079.804	18.45	18.5	92.25%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	422.474	19.55	19.6	97.77%	

Target Compounds	<<< I1 : ISTD ID = 1 >>>	Qvalue
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3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	235.717	16.77	16.8	99	
4	Chloromethane	2.11	2.11	0.000	50	52	174.224	12.49	12.5	93	
2	F114	2.03	2.03	0.000	85	135	118.407	17.89	17.9	45	
5	vinyl chloride	2.22	2.22	0.000	62	64	194.078	16.29	16.3	99	
6	bromomethane	2.61	2.61	0.000	94	96	97.368	14.39	14.4	88	
7	chloroethane	2.73	2.73	0.000	64	66	124.586	19.42	19.4	96	
8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	457.117	23.21	23.2	99	
91	Acetonitrile X10	4.07	4.07	0.000	41	40	506.811	168.36	168.4	93	
9	acrolein X10	3.51	3.51	0.000	56	55	221.190	149.61	149.6	96	
11	acetone X10	3.71	3.73	-0.002	43	58	399.716	179.07	179.1	79	
12	ethyl ether X5	3.37	3.37	0.000	59	74	624.168	94.03	94.0	80	
13	11-dichloroethene	3.64	3.64	0.000	61	96	339.300	20.44	20.4	82	
14	Iodomethane	3.82	3.81	0.000	142	127	133.793	9.81	9.8	96	
15	F-113	3.65	3.65	0.000	101	151	226.332	22.48	22.5	85	
16	acrylonitrile X10	4.52	4.52	0.000	53	52	510.298	170.26	170.3	93	
17	carbon disulfide	3.90	3.90	0.000	76	78	502.090	15.88	15.9	99	
94	Isopropyl Alcohol	4.03	4.10	-0.009	45	43	52.078	364.06	364.1	100	
18	methylene chlorid	4.22	4.22	0.000	84	49	259.722	17.47	17.5	82	
19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	274.906	17.62	17.6	92	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 21:38 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:44 2003
 Print Time : Wed Nov 12 09:44 2003
 Miscellaneous :

Sample : F=1 \$6002-02
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	572.572	20.86	20.9	96	?
95	Tert butyl alcoho	4.46	4.51	-0.007	59	57	138.589	302.29	302.3	100	#
94	allyl chloride	4.07	4.07	0.000	41	76	506.811	16.45	16.5	74	#?
21	11-dichloroethane	5.12	5.12	0.000	63	83	467.096	18.08	18.1	97	#
97	propionitrile	6.01	6.02	-0.002	54	51	19.536	15.86	15.9	100	#
22	c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	297.012	18.25	18.3	87	?
23	22-Dichloropropan	5.92	5.92	0.000	77	97	385.970	23.41	23.4	96	?
24	Br-Cl-methane	6.25	6.25	0.000	128	130	147.953	17.98	18.0	97	?
25	chloroform	6.38	6.37	0.000	83	85	547.126	18.84	18.8	99	?
26	tetrahydrofuranX5	6.34	6.35	0.000	42	72	203.516	84.08	84.1	85	?
98	Diisopropyl ether	5.24	5.24	0.000	45	87	902.482	18.19	18.2	89	?
99	ETBE	5.74	5.74	0.000	59	87	691.465	22.11	22.1	92	?
30	12-dichloroethane	7.22	7.22	0.000	64	62	116.937	20.65	20.6	96	?
32	vinyl acetate X5	5.19	5.20	0.000	43	86	2190.005	90.46	90.5	93	?
92	Nitro Methane(X10	5.82	5.84	-0.002	61	46	69.454	85.12	85.1	89	?
33	2-butanoneMEK X10	5.94	5.95	0.000	43	72	625.982	171.72	171.7	86	?
93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	283.622	31.42	31.4	95	?
34	111-trichloroetha	6.65	6.65	0.000	97	99	535.424	21.92	21.9	98	?
35	11-Di-Cl-propene	6.90	6.90	0.000	75	110	373.355	20.25	20.3	97	?
36	benzene	7.21	7.21	0.000	78	52	1022.103	17.30	17.3	90	?
37	CCl4	6.91	6.91	0.000	117	119	531.889	23.68	23.7	100	?
100	Isobutyl alcohol	7.41	7.41	0.000	43	42	194.970	217.31	217.3	97	?
38	thiophene	7.53	7.53	0.000	84	58	563.926	18.33	18.3	97	?
39	12-di-Cl-propane	8.56	8.56	0.000	63	76	235.347	17.41	17.4	89	?
40	trichloroethene	8.24	8.24	0.000	130	132	356.078	18.81	18.8	90	?
41	dibromomethane	8.73	8.73	0.000	174	172	174.167	18.52	18.5	96	?
101	TAME	7.41	7.41	0.000	73	43	553.659	19.21	19.2	87	?
42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	406.932	19.12	19.1	99	?
43	Me-methacrylate	8.76	8.76	0.000	69	100	127.723	16.91	16.9	82	?
44	2-ClEt-Vi-ether10	9.56	9.38	0.024	63	43	1.946	11.03	11.0	28	?
45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	402.840	18.79	18.8	93	?
46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	361.159	18.86	18.9	90	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Sch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M01.D Sample : F=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 21:38 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:44 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:44 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	212.250	18.08	18.1	96	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	327.505	18.18	18.2	99	
50	Et methacrylate	10.37	10.37	0.000	69	99	279.062	17.02	17.0	89	?
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	325.517	19.54	19.5	98	
52	bromoform	12.42	12.42	0.000	173	174	192.604	19.66	19.7	100	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	362.784	18.28	18.3	97	
54	MIBK	9.77	9.77	0.000	43	58	159.949	15.63	15.6	95	
56	toluene	9.99	9.99	0.000	91	92	1240.185	17.27	17.3	100	
57	2-hexanone X5	10.76	10.76	0.000	43	58	551.158	83.87	83.9	92	
58	12-dibromoethane	11.03	11.03	0.000	107	109	220.300	18.31	18.3	95	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	396.888	20.08	20.1	92	
60	chlorobenzene	11.58	11.57	0.000	112	77	908.864	18.55	18.6	90	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	368.930	20.23	20.2	97	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	145.507	19.99	20.0	57	#?
64	Et-Bz	11.69	11.70	0.000	91	106	1538.482	18.98	19.0	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2415.390	38.53	38.5	99	
66	styrene	12.24	12.24	0.000	104	78	997.522	18.90	18.9	99	?
67	o-xylene	12.22	12.22	0.000	91	106	1231.291	19.45	19.5	98	
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	226.395	17.93	17.9	100	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	81.910	19.54	19.5	87	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1706.826	20.17	20.2	98	
72	bromobenzene	12.89	12.89	0.000	156	158	420.899	19.65	19.6	100	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	43.578	17.51	17.5	74	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	499.628	20.39	20.4	94	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	413.620	19.90	19.9	99	
75	4-Cl-Toluene	13.19	13.19	0.000	126	128	412.769	19.33	19.3	98	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1506.533	20.19	20.2	95	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1670.067	20.77	20.8	99	?
78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1535.817	19.65	19.7	96	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1413.137	21.57	21.6	99	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

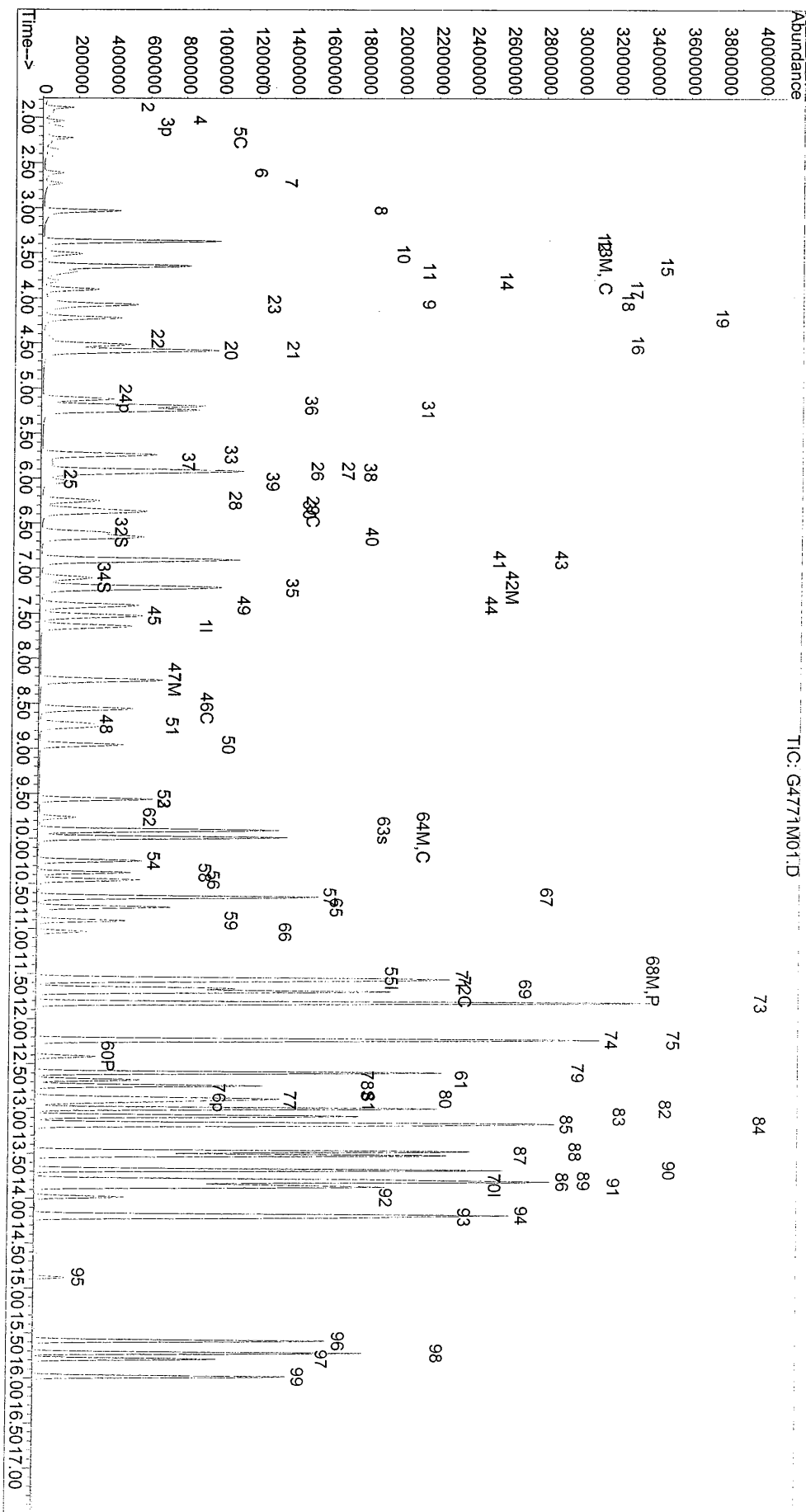
Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M01.D Sample : F=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 21:38 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:44 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:44 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.79	0.000	146	148	862.289	19.37	19.4	98	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	2003.661	20.48	20.5	99	
82	14-DCB	13.87	13.87	0.000	146	148	873.253	18.75	18.7	99	
83	Cl-benzyl	13.98	13.98	0.000	126	91	81.418	17.13	17.1	73	#
84	12-DCB	14.21	14.21	0.000	146	148	788.574	19.35	19.3	99	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	452.382	21.31	21.3	79	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	60.334	19.89	19.9	97	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	530.216	20.88	20.9	100	
88	naphthalene	15.78	15.78	0.000	128	129	860.796	18.41	18.4	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	328.849	22.64	22.6	98	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	468.042	21.36	21.4	96	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771M01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 21:38 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:44 2003
 Print Time : Wed Nov 12 09:44 2003
 Miscellaneous :
 Sample : F=1 \$6002-02
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000



Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Acq. Time : Nov 11 22:04 2003

Method Update: Mon Oct 27 14:05 2003

Quant. Time : Nov 12 09:46 2003

Print Time : Wed Nov 12 09:46 2003

Miscellaneous :

Sample : f=1 \$6002-02
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.65	7.64	0.000	96	70	703.511	10.00		0.00	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	536.120	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.85	0.000	152	150	334.375	10.00		0.00	
System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	321.766	19.48	19.5	97.39%	
29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	292.858	19.90	19.9	99.52%	
55	toluene-d8	9.91	9.91	0.000	98	100	1078.476	18.22	18.2	91.12%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	427.929	18.89	18.9	94.43%	

Target Compounds	<<< I1 : ISTD ID = 1 >>>									Qvalue	
3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	238.166	16.83	16.8	99	
4	Chloromethane	2.11	2.11	0.000	50	52	182.649	13.00	13.0	97	
2	F114	2.03	2.03	0.000	85	135	119.194	17.88	17.9	51	
5	vinyl chloride	2.22	2.22	0.000	62	64	194.695	16.23	16.2	99	
6	bromomethane	2.61	2.61	0.000	94	96	101.239	14.86	14.9	96	
7	chloroethane	2.73	2.73	0.000	64	66	106.201	16.44	16.4	94	
8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	437.024	22.03	22.0	97	
91	Acetonitrile X10	4.07	4.07	0.000	41	40	516.954	170.55	170.5	87	
9	acrolein X10	3.51	3.51	0.000	56	55	224.462	150.78	150.8	100	
11	acetone X10	3.72	3.73	0.000	43	58	393.237	174.96	175.0	80	
12	ethyl ether X5	3.37	3.37	0.000	59	74	621.484	92.98	93.0	80	
13	11-dichloroethene	3.63	3.64	0.000	61	96	335.663	20.08	20.1	79	
14	Iodomethane	3.81	3.81	0.000	142	127	150.007	10.95	10.9	86	
15	F-113	3.65	3.65	0.000	101	151	223.483	22.04	22.0	89	
16	acrylonitrile X10	4.52	4.52	0.000	53	52	530.527	175.79	175.8	93	
17	carbon disulfide	3.90	3.90	0.000	76	78	499.423	15.69	15.7	100	
94	Isopropyl Alcohol	4.10	4.10	0.000	45	43	55.774	387.22	387.2	100	
18	methylene chlorid	4.22	4.22	0.000	84	49	257.564	17.19	17.2	75	
19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	274.346	17.47	17.5	89	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P &Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N01.D Sample : F=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 22:04 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:46 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:46 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	580.103	20.99	21.0	94	?
95	Tert butyl alcoho	4.49	4.51	-0.002	59	57	170.554	369.46	369.5	100	me
94	allyl chloride	4.07	4.07	0.000	41	76	516.954	16.67	16.7	75	#? 11/12/03
21	11-dichloroethane	5.12	5.12	0.000	63	83	466.849	17.94	17.9	99	
97	propionitrile	6.02	6.02	0.000	54	51	23.127	18.65	18.6	100	me
22	c-12-di-Cl-ethene	5.92	5.92	0.000	96	61	296.091	18.07	18.1	98	?
23	22-Dichloropropan	5.92	5.92	0.000	77	97	383.105	23.08	23.1	99	?
24	Br-Cl-methane	6.24	6.25	0.000	128	130	148.520	17.93	17.9	97	?
25	chloroform	6.37	6.37	0.000	83	85	540.515	18.48	18.5	95	?
26	tetrahydrofuranX5	6.35	6.35	0.000	42	72	212.318	87.11	87.1	84	?
98	Disopropyl ether	5.24	5.24	0.000	45	87	904.466	18.10	18.1	91	?
99	ETBE	5.74	5.74	0.000	59	87	692.125	21.97	22.0	92	
30	12-dichloroethane	7.22	7.22	0.000	64	62	115.779	20.30	20.3	97	?
32	vinyl acetate X5	5.19	5.20	0.000	43	86	2189.370	89.82	89.8	93	
92	Nitro Methane(X10	5.83	5.84	0.000	61	46	64.551	78.56	78.6	90	
33	2-butanoneMEK X10	5.94	5.95	0.000	43	72	650.798	177.30	177.3	88	?
93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	308.852	33.98	34.0	98	?
34	111-trichloroetha	6.65	6.65	0.000	97	99	543.781	22.11	22.1	99	
35	11-Di-Cl-propene	6.90	6.90	0.000	75	110	374.228	20.16	20.2	92	?
36	benzene	7.21	7.21	0.000	78	52	1031.172	17.33	17.3	92	?
37	CCl4	6.91	6.91	0.000	117	119	534.585	23.64	23.6	97	?
100	Isobutyl alcohol	7.41	7.41	0.000	43	42	195.366	216.25	216.3	99	?
38	thiophene	7.53	7.53	0.000	84	58	560.991	18.11	18.1	95	
39	12-di-Cl-propane	8.56	8.56	0.000	63	76	235.811	17.32	17.3	85	
40	trichloroethene	8.24	8.24	0.000	130	132	360.431	18.91	18.9	94	
41	dibromomethane	8.73	8.73	0.000	174	172	176.662	18.65	18.7	100	
101	TAME	7.41	7.41	0.000	73	43	560.596	19.32	19.3	88	#?
42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	406.232	18.96	19.0	96	
43	Me-methacrylate	8.76	8.76	0.000	69	100	129.969	17.08	17.1	89	
44	2-ClEt-Vi-ether10	9.57	9.38	0.025	63	43	1.735	10.95	10.9	28	#?
45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	407.811	18.89	18.9	90	?
46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	368.548	19.11	19.1	93	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N01.D Sample : f=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 22:04 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:46 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:46 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Q Ion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	214.869	18.10	18.1	94	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	331.776	18.22	18.2	99	?
50	Et methacrylate	10.38	10.37	0.000	69	99	285.380	17.20	17.2	92	
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	323.468	19.21	19.2	99	
52	bromoform	12.41	12.42	0.000	173	174	197.230	19.91	19.9	98	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	364.999	18.19	18.2	97	
54	MIBK	9.76	9.77	0.000	43	58	169.295	16.29	16.3	97	
56	toluene	9.99	9.99	0.000	91	92	1241.968	17.11	17.1	99	
57	2-hexanone X5	10.76	10.76	0.000	43	58	576.311	86.57	86.6	90	
58	12-dibromoethane	11.03	11.03	0.000	107	109	221.636	18.22	18.2	99	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	407.853	20.41	20.4	97	
60	chlorobenzene	11.57	11.57	0.000	112	77	903.595	18.24	18.2	94	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	373.002	20.23	20.2	98	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	146.352	19.17	19.2	53	#?
64	Et-Bz	11.70	11.70	0.000	91	106	1551.038	18.25	18.2	96	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2429.567	36.95	37.0	99	
66	styrene	12.24	12.24	0.000	104	78	1002.120	18.10	18.1	99	?
67	o-xylene	12.22	12.22	0.000	91	106	1243.051	18.72	18.7	98	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	232.696	17.57	17.6	99	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	87.044	19.80	19.8	86	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1745.196	19.66	19.7	99	
72	bromobenzene	12.89	12.89	0.000	156	158	433.642	19.30	19.3	98	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	44.474	17.08	17.1	74	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	502.824	19.56	19.6	93	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	413.690	18.98	19.0	97	
75	4-Cl-Toluene	13.19	13.19	0.000	126	128	416.385	18.59	18.6	98	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1534.377	19.60	19.6	94	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1711.810	20.30	20.3	99	?
78	124-tri-Me-Benzen	13.51	13.52	0.000	105	120	1575.153	19.22	19.2	94	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1396.713	20.33	20.3	99	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

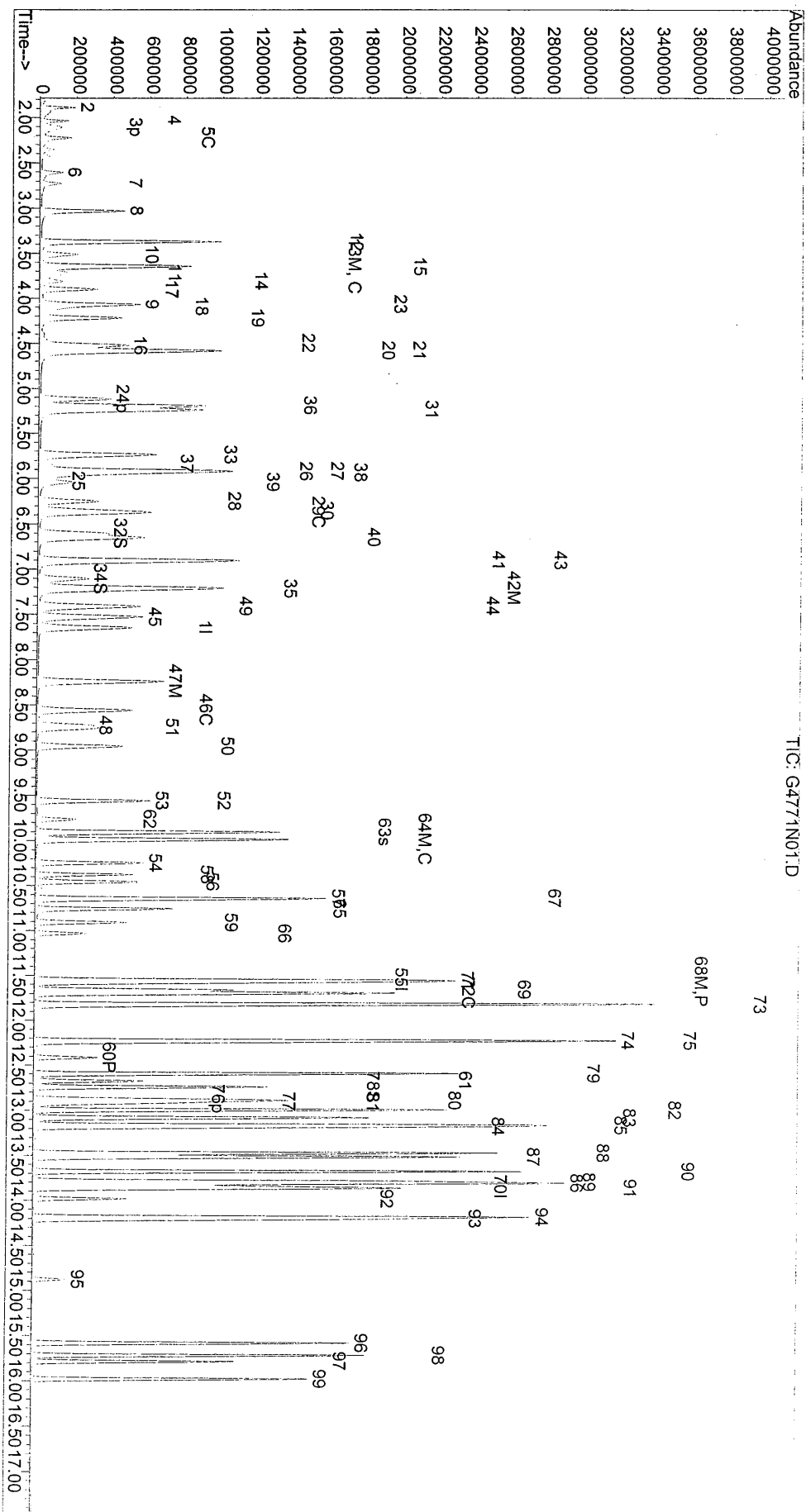
Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N01.D Sample : f=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 22:04 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:46 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:46 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.79	0.000	146	148	885.316	18.97	19.0	97	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	2039.141	19.87	19.9	97	
82	14-DCB	13.87	13.87	0.000	146	148	890.336	18.23	18.2	96	
83	Cl-benzyl	13.98	13.98	0.000	126	91	82.105	16.57	16.6	78	#
84	12-DCB	14.21	14.21	0.000	146	148	804.595	18.82	18.8	98	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	458.362	20.58	20.6	79	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	61.126	19.21	19.2	97	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	561.318	21.08	21.1	99	
88	naphthalene	15.78	15.78	0.000	128	129	919.078	18.72	18.7	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	340.076	22.32	22.3	98	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	488.264	21.24	21.2	99	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771N01.D Sample : F=1 \$6002-02
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 22:04 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:46 2003 Multiplier: 1.000000
 Print Time : Wed Nov 12 09:46 2003
 Miscellaneous :



Data Filename: C:\MSDCHEM\1\DATA\03G4771\6002-02.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Acq. Time : Nov 12 03:33 2003

Method Update: Mon Oct 27 14:05 2003

Quant. Time : Nov 12 09:31 2003

Print Time : Wed Nov 12 09:52 2003

Miscellaneous :

Sample : f=1 ms
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1446

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	CO,ppb	C,ppb	Quality	Note
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Internal Standards

1	Fluorobenzene	7.65	7.64	0.000	96	70	652.965	10.00		0.00	
47	Chlorobenzene-d5	11.55	11.54	0.000	117	82	517.098	10.00		0.00	
62	1,4-Dichlorobenzene	13.85	13.85	0.000	152	150	322.153	10.00		0.00	

System Monitoring Compounds (Surrogate)

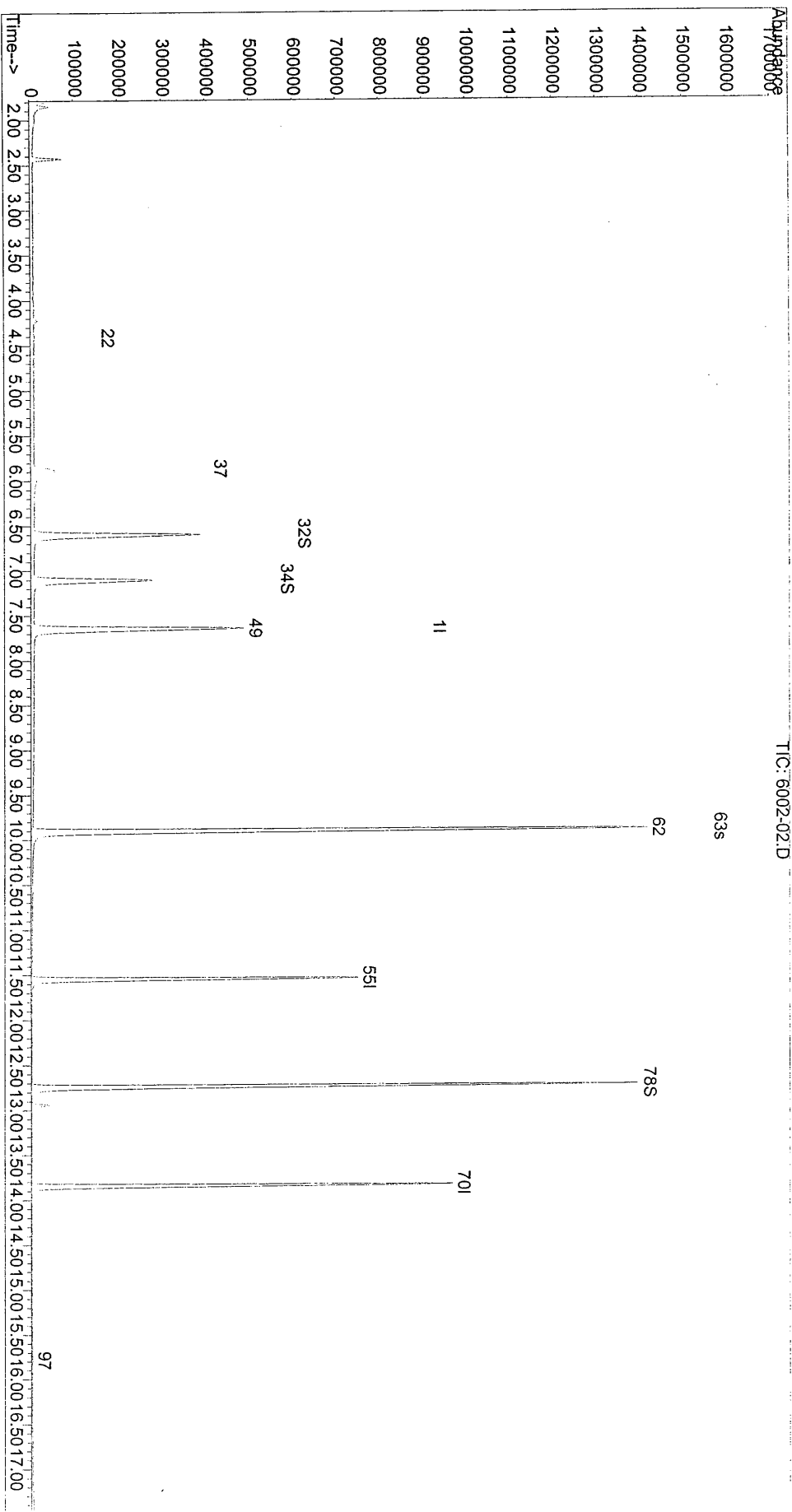
27	Di-Br-F-Me (surr)	6.60	6.60	0.000	111	113	341.489	22.27	22.3	111.37%	
29	1,2-Di-Cl-Et-d4 (	7.10	7.11	0.000	65	102	310.132	22.71	22.7	113.55%	
55	toluene-d8	9.91	9.91	0.000	98	100	1166.665	20.44	20.4	102.20%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	457.676	20.97	21.0	104.83%	

Target Compounds

<<< 11 :	ISTD ID = 1	>>>									
95	95 Tert butyl alcoho	4.42	4.51	-0.012	59	57	0.444	1.04	1.0	100	#
92	92 Nitro Methane(x10	5.87	5.84	0.005	61	46	1.440	1.89	1.9	34	#
101	101 TAME	7.65	7.41	0.031	73	43	8.941	1.12	1.1	46	#
<<< 12 :	ISTD ID = 47	>>>									
54	54 MIBK	9.91	9.77	0.013	43	58	4.943	2.01	2.0	1	#
<<< 13 :	ISTD ID = 62	>>>									
88	88 naphthalene	15.79	15.78	0.000	128	129	1.096	1.15	1.1	71	#

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\6002-02.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 12 03:33 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:31 2003
 Print Time : Wed Nov 12 09:52 2003
 Miscellaneous :
 Sample : f=1 ms
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000



FORM-4A

Applied P & Ch Laboratory

Method Blank Summary for Method 524.2

Client Name: GEOFON, Inc.
Case No:
Project ID: JPL GW Mon-4Q03

Contract No:
SAS No:
Project No: 04-4428.10
Sample Matrix: Water
Batch No: 03G4771
Data File Name: G4771K01
Heated Purge: (Y/N) N

Lab Code: APCL
Service ID: 36002
Analysis Date: 11/12/03
Analysis Time: 01:17
Instrument ID: GC/MS: A
GC Column: HP-VOC
Column ID: 0.20 mm

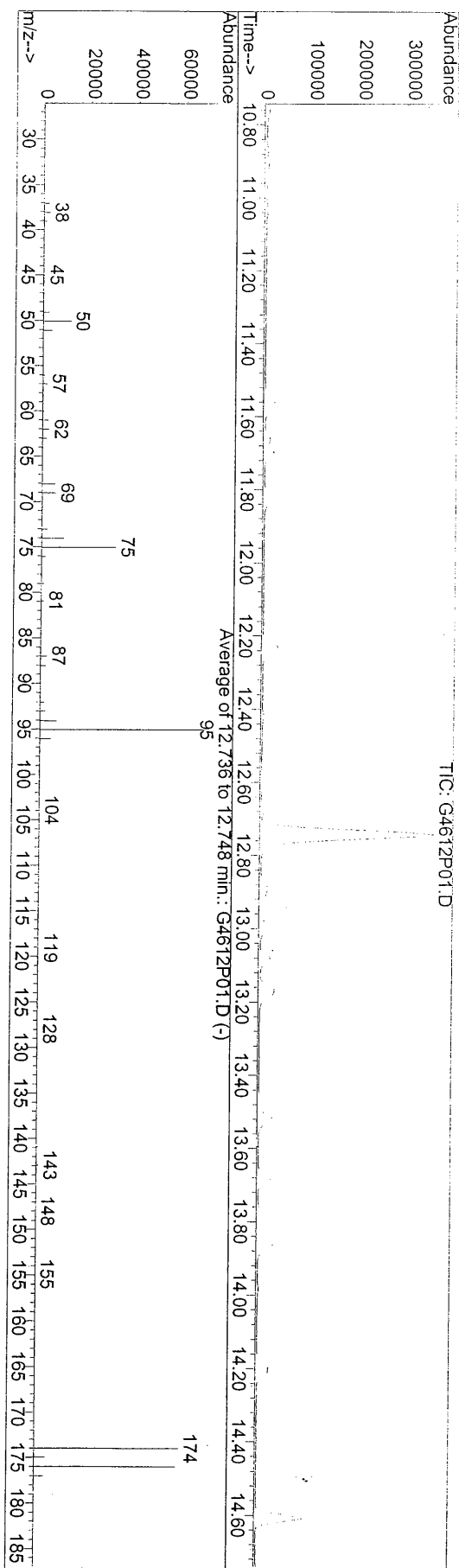
Sample ID: **03G4771-MB-01**
Lab Sample ID: 03G4771-MB-01

This Method Blank applies to the following samples and QC samples:

#	Client Sample No	Lab Sample ID	Sample Type	Data Filename	Analysis Date	Analysis Time
1	03G4771-LCS-01	03G4771-LCS-01	Lab Control Spike	G4771L01	11/11/03	20:46
2	MW-5MS	03-6002-2MS	Matrix Spike	G4771M01	11/11/03	21:38
3	MW-5MSD	03-6002-2MSD	Matrix Spike Duplicate	G4771N01	11/11/03	22:04
4	TB-11-6-03	03-6002-5	Field Sample	6002-05	11/12/03	02:15
5	MW-5	03-6002-2	Field Sample	6002-02	11/12/03	03:33
6	DUPE-7-4-Q03	03-6002-1	Field Sample	6002-01	11/12/03	03:59
7	MW-8	03-6002-3	Field Sample	6002-03	11/12/03	04:26
8	MW-10	03-6002-4	Field Sample	6002-04	11/12/03	04:52
9						
10						
11						
12						
13						
14						
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17						
18						
19						
20						
21						
22						
23						
24						
25						

Data File : C:\MSDCHEM\1\DATA\03G4612\G4612P01.D
 Acq On : 21 Oct 2003 9:14 am
 Sample : ##03g4565,w 50ng
 Misc :
 MS Integration Params: Lscint.p
 Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P &ch Lab** EPA 524.2

Vial: 1
 Operator: zou
 Inst : GCMS-A
 Multiplr: 1.00



Spectrum Information: Average of 12.736 to 12.748 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
50	95	15	40	17.0	11745	PASS
75	95	30	60	45.0	31162	PASS
95	95	100	100	100.0	69181	PASS
96	95	5	9	6.6	4558	PASS
173	174	0.00	2	0.5	275	PASS
174	95	50	100	87.4	60456	PASS
175	174	5	9	7.7	4634	PASS
176	174	95	101	98.1	59312	PASS
177	176	5	9	7.0	4135	PASS

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name : APPLIED P & CH LAB Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 036002
 Lab File ID: G 4612 P01 BFB Injection Date: 10/21/03
 Instrument ID: GCMS-A BFB Injection Time: 0914
 GC Column: HP-VOC ID: 0.20 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.0
75	30.0 - 60.0% of mass 95	45.0
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	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	87.4
175	5.0 - 9.0% of mass 174	6.7 (7.7)1
176	95.0 - 101.0% of mass 174	85.7 (98.1)1
177	5.0 - 9.0% of mass 176	6.0 (7.0)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	VSTD0003	3-A0003	3-A0003.D	10/21/03	1005
02	VSTD002	3-0002	3-0002.D	10/21/03	1031
03	VSTD010	3-0010	3-0010.D	10/21/03	1056
04	VSTD020	3-0020	3-0020.D	10/21/03	1122
05	VSTD040	3-0040	3-0040.D	10/21/03	1147
06	VSTD060	3-0060	3-0060.D	10/21/03	1214
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

INITIAL CALIBRATION SUMMARY

Method File

e524a003

Last Calibration Update

Mon Oct 27 13:56:31 2003

<u>Level 1 File Name</u>	3-A0003.D	<u>Level 1 ID</u>	3
<u>Level 2 File Name</u>	3-002.D	<u>Level 2 ID</u>	2
<u>Level 3 File Name</u>	3-0010.D	<u>Level 3 ID</u>	10
<u>Level 4 File Name</u>	3-0020.D	<u>Level 4 ID</u>	20
<u>Level 5 File Name</u>	3-0040.D	<u>Level 5 ID</u>	40
<u>Level 6 File Name</u>	3-0060.D	<u>Level 6 ID</u>	60
<u>Level 7 File Name</u>	3-0020.D	<u>Level 7 ID</u>	CC

<u>Compound</u>	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Level 4</u>	<u>Level 5</u>	<u>Level 6</u>	<u>Level 7</u>	<u>Coeff</u>	<u>Coeff</u>	<u>Coeff</u>	<u>R² /</u>
<u>Name</u>	<u>Response</u>	<u>Response</u>	<u>Response</u>	<u>Response</u>	<u>Response</u>	<u>Response</u>	<u>Response</u>	<u>X⁰</u>	<u>X¹ / ave RF</u>	<u>X²</u>	<u>RSD</u>
1 Fluorobenzene	920067	916201	919392	955116	907151	1006211	-1	-----	-----	-----	-----
3 di-Cl-di-F-methane	6437	39097	199979	303885	731076	1099511	-1	0.0000	0.2011	0.0000	0.1330
4 Chloromethane	6136	37417	181676	348991	739859	1132557	-1	0.0000	0.1997	0.0000	0.0704
2 F114	1527	19306	101058	155932	367886	551592	-1	0.0028	0.0932	0.0000	0.9919
5 vinyl chloride	4876	33446	161213	285451	640709	982033	-1	0.0000	0.1705	0.0000	0.0717
6 bromomethane	2539	18408	87613	168214	383891	601141	-1	0.0000	0.0969	0.0000	0.0659
7 chloroethane	2197	17752	90280	159905	376464	536590	-1	0.0000	0.0918	0.0000	0.1013
8 tri-Cl-F-methane	8394	56082	277768	461283	1030751	1532166	-1	0.0000	0.2819	0.0000	0.0992
91 Acetonitrile X10	10689	82041	382813	794170	1713507	2428244	-1	0.0000	0.0431	0.0000	0.0662
9 acrolein X10	5645	40130	201945	381523	807796	1232252	-1	0.0000	0.0212	0.0000	0.0467
11 acetone X10	-1	64324	288996	538495	1267205	1816586	-1	0.0000	0.0319	0.0000	0.0947
12 ethyl ether X5	13693	93915	436367	874255	1704647	2654028	-1	0.0000	0.0950	0.0000	0.0552
13 11-dichloroethene	6637	46215	229524	410040	877445	1367991	-1	0.0000	0.2376	0.0000	0.0605
14 Iodomethane	3461	29384	183879	356970	751141	1123042	-1	0.0038	0.1913	0.0000	0.9951
15 F-113	4492	28088	146108	224035	516639	784890	-1	0.0000	0.1441	0.0000	0.1231
16 acrylonitrile X10	10574	78358	419836	794346	1709905	2532493	-1	0.0000	0.0429	0.0000	0.0731
17 carbon disulfide	13839	85463	420250	772812	1671671	2561651	-1	0.0000	0.4524	0.0000	0.0750
94 Isopropyl Alcoholx10	331	1284	1238	28714	240070	128634	-1	0.0000	0.0020	0.0000	1.1427
18 methylene chloride	10278	48191	203033	407143	804880	1192483	-1	0.0203	0.2012	0.0000	0.9947
19 t-12-di-Cl-ethene	6615	45733	217854	407874	774111	1126298	-1	0.0000	0.2233	0.0000	0.1039
20 t-Bu-Me-ether	9529	70095	362056	751228	1592599	2437498	-1	0.0000	0.3929	0.0000	0.0773
95 Tert butyl alcoholx10	1332	4624	88338	76985	452680	251872	-1	0.0000	0.0066	0.0000	0.6496

94 allyl chloride	10689	82041	426268	794170	1724483	2428244	-1	0.0000	0.4409	0.0000	0.0706
21 1,1-dichloroethane	10035	71189	342138	689918	1398310	2101878	-1	0.0000	0.3698	0.0000	0.0415
97 propionitrile	103	3119	18745	29270	62391	109975	-1	0.0000	0.0176	0.0000	0.1055
22 c-12-di-Cl-ethene	6459	46844	225560	436935	845644	1210430	-1	0.0000	0.2329	0.0000	0.0801
23 2,2-Dichloropropene	5693	38859	218612	456844	979998	1513030	-1	0.0000	0.2360	0.0000	0.1011
24 Br-Cl-methane	3294	23046	109590	215148	438926	655419	-1	0.0000	0.1177	0.0000	0.0523
25 chloroform	13164	80631	375460	741683	1492648	2229387	-1	0.0000	0.4157	0.0000	0.0920
26 tetrahydrofuranX5	4044	28808	169729	317711	726346	1114014	-1	0.0000	0.0346	0.0000	0.1155
98 Diisopropyl ether	16931	136442	688556	1387177	2723439	4088155	-1	0.0000	0.7101	0.0000	0.0772
27 Di-Br-F-Me (sur)	6137	45047	218874	439096	880145	1314263	-1	0.0000	0.2348	0.0000	0.0481
99 ETBE	9591	74005	411030	879689	1934215	2984281	-1	0.0000	0.4477	0.0000	0.1468
29 1,2-Di-Cl-Et-d4 (S1)	5167	39287	192209	385356	801084	1206050	-1	0.0000	0.2091	0.0000	0.0418
30 12-dichloroethane	2318	14864	77221	146461	303955	463659	-1	0.0000	0.0811	0.0000	0.0434
32 vinyl acetate X5	36279	291623	1683396	3463521	7301957	11062661	-1	0.0000	0.3465	0.0000	0.1412
92 Nitro Methane(x10)	1574	10571	358371	95786	134103	298076	-1	0.0000	0.0117	0.0000	1.3083
33 2-butanoneMEK X10	14739	98541	459782	956754	2014463	3034414	-1	0.0000	0.0522	0.0000	0.0453
93 Ethyl Acetate x2	6463	37342	237607	465630	1199719	1687653	-1	0.0000	0.1292	0.0000	0.1682
34 1,1,1-trichloroethane	9393	63933	333945	629233	1352461	2070811	-1	0.0000	0.3496	0.0000	0.0454
35 1,1-Di-Cl-propene	6749	49362	260487	484228	1020849	1516179	-1	0.0000	0.2639	0.0000	0.0625
36 benzene	23536	167998	811668	1581767	3067808	4519766	-1	0.0000	0.8457	0.0000	0.0673
37 CC14	9052	59763	312695	555550	1228562	1842053	-1	0.0000	0.3215	0.0000	0.0608

Compound	Level 1		Level 2		Level 3		Level 4		Level 5		Level 6		Level 7		Coeff X^0	Coeff X^1 / ave RF	Coeff X^2	R^2 / RSD
	Name	Response	Name	Response	Name	Response	Name	Response	Name	Response	Name	Response	Name	Response				
100 Isobutyl alcoholx10		2932		21047		112031		247109		552842		880424		-1				
38 thiophene		10222		83170		428533		868274		1718044		2554816		-1	0.0000	0.4403	0.0000	0.0870
39 12-di-Cl-propane		4815		37555		178169		370946		752605		1124998		-1	0.0000	0.1935	0.0000	0.0628
40 trichloroethene		7696		50098		255616		501517		1020048		1520360		-1	0.0000	0.2710	0.0000	0.0423
41 dibromomethane		3770		26033		124373		247759		508912		747601		-1	0.0000	0.1346	0.0000	0.0506
101 TAME		7879		59032		335735		716981		1622049		2525816		-1	-0.0345	0.4304	0.0000	0.9963
42 Br-di-Cl-methane		9392		56733		274489		546104		1129675		1703118		-1	0.0000	0.3046	0.0000	0.0694
43 Me-methacrylate		1457		14747		87065		188318		435160		662734		-1	-0.0095	0.1138	0.0000	0.9946
44 2-ClEt-Vi-ether10		4887		45249		275793		591932		1294105		1950851		-1	-0.0367	0.0357	0.0000	0.9955
45 c-13-di-Cl-propene		6769		54923		293425		608486		1252896		1891415		-1	0.0000	0.3069	0.0000	0.1096
46 t-1,3-dichloropropene		5153		40425		231011		505285		1067475		1638452		-1	-0.0097	0.2792	0.0000	0.9968
47 Chlorobenzene-d5		745928		732691		724575		731811		659336		705610		-1	0.0000	1.0000	0.0000	0.0000

48 112-tri-Cl-Et	4896	31570	158039	308164	644393	936372	-1	0.0000	0.2214	0.0000	0.0533
49 13-di-Cl-propane	7569	48826	251096	479955	958048	1392110	-1	0.0000	0.3397	0.0000	0.0396
50 Et methacrylate	2785	29334	189197	404574	897662	1374874	-1	-0.0430	0.3345	0.0000	0.9960

Compound Name	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Coeff X ⁰	Coeff		Coeff X ²	R ² / RSD
	Response	Response	Response	Response	Response	Response	Response		X ¹ / ave RF			
51 di-Br-Cl-methane	7359	44728	219307	430191	895491	1332246	-1	0.0000	0.3141	0.0000	0.0548	
52 bromoform	4029	26611	127022	257402	537161	813031	-1	0.0000	0.1848	0.0000	0.0599	
53 1,4-dichlorobutane-2	7248	52525	270048	530472	1118631	1708578	-1	0.0000	0.3742	0.0000	0.0947	
54 MIBK	2727	20267	114402	244409	567049	883730	-1	-0.0334	0.2144	0.0000	0.9947	
55 toluene-d8	22176	162055	811859	1597728	3175057	4699033	-1	0.0000	1.1038	0.0000	0.0617	
56 toluene	32453	204349	957684	1867212	3679239	5453434	-1	0.0000	1.3542	0.0000	0.0513	
57 2-hexanone X5	8296	70148	400071	806303	1789801	2714840	-1	-0.0660	0.1318	0.0000	0.9958	
58 12-dibromoethane	4393	32436	159989	322735	683020	1029927	-1	0.0000	0.2269	0.0000	0.0954	
59 tetra-Cl-ethene	8603	59173	281865	498130	1001817	1436032	-1	0.0000	0.3728	0.0000	0.0719	
60 chlorobenzene	21200	144953	676974	1307160	2492370	3536493	-1	0.0000	0.9241	0.0000	0.0576	
61 1112-tetra-Cl-Et	7365	51367	249086	487380	969491	1437439	-1	0.0000	0.3439	0.0000	0.0403	
62 1,4-Dichlorobenzene-d4	436784	441685	431820	433290	398842	428493	-1	0.0000	1.0000	0.0000	0.0000	
63 1-chlorohexane	3125	20185	105292	181129	379300	546400	-1	0.0000	0.2284	0.0000	0.0636	
64 Et-Bz	31613	225200	1128701	2162672	4307205	6378701	-1	0.0000	2.5420	0.0000	0.0404	
65 m/p-Xylenes X2	51588	364290	1753788	3322945	6407191	9314343	-1	0.0000	1.9663	0.0000	0.0463	
66 styrene	19899	158986	755749	1448349	2712603	3842415	-1	0.0000	1.6558	0.0000	0.0748	
67 o-xylene	25030	181225	888564	1715323	3289680	4761198	-1	0.0000	1.9855	0.0000	0.0445	
68 1122-Tetra-Cl-Et	4786	35408	176142	333638	679431	1005365	-1	0.0000	0.3960	0.0000	0.0524	
69 123-tri-Cl-Pr	1463	11857	58506	111098	231129	345542	-1	0.0000	0.1315	0.0000	0.0844	
70 4-Br-1-F-Bz (S3)	9236	60769	292727	571173	1114624	1638683	-1	0.0000	0.6776	0.0000	0.0376	
71 isopropylbenzene	31809	228075	1204677	2257352	4576796	6821750	-1	0.0000	2.6544	0.0000	0.0592	
72 bromobenzene	8279	62596	299551	577972	1123002	1610222	-1	0.0000	0.6719	0.0000	0.0539	
92 t-1,4-dichloro-2-butene	370	3850	26890	58909	138278	214154	-1	-0.0139	0.0860	0.0000	0.9950	
73 n-propylbenzene	9091	70513	355352	656540	1290074	1877926	-1	0.0000	0.7686	0.0000	0.0653	
74 2-Cl-Toluene	7570	61543	297725	558317	1084812	1601091	-1	0.0000	0.6518	0.0000	0.0707	
75 4-Cl-Toluene	9182	64367	296683	566381	1062470	1497703	-1	0.0000	0.6698	0.0000	0.0750	
76 135-tri-Me-Benzene	28727	213694	1063069	2008540	3906361	5670674	-1	0.0000	2.3409	0.0000	0.0517	
77 4-iso-Pr-toluene	31720	226621	1149787	2111126	4215398	6174914	-1	0.0000	2.5215	0.0000	0.0463	
78 124-tri-Me-Benzene	29971	222021	1078747	2103275	4147713	6124395	-1	0.0000	2.4513	0.0000	0.0448	
79 tert-butylbenzene	24279	177466	929162	1736357	3598467	5289165	-1	0.0000	2.0550	0.0000	0.0671	

80 13-DCB	19447	131664	611576	1176380	2227519	3166301	-1	0.0000	1.3960	0.0000	0.0684
81 sec-butylbenzene	38627	268975	1387531	2530666	5231475	7732088	-1	0.0000	3.0688	0.0000	0.0475
82 14-DCB	21754	133604	619366	1184125	2334471	3417867	-1	0.0000	1.4610	0.0000	0.0806
83 Cl-benzyl	871	5857	44122	106539	268318	431461	-1	-0.0412	0.1731	0.0000	0.9920
84 12-DCB	17721	121367	559240	1055514	2046326	2953834	-1	0.0000	1.2785	0.0000	0.0657
85 n-butylbenzene	8164	59910	307483	567085	1127859	1596385	-1	0.0000	0.6659	0.0000	0.0599
86 12-diBr-2-Cl-Pra	1032	7477	40003	83208	177685	276212	-1	0.0000	0.0951	0.0000	0.1330
87 124-tri-Cl-Bz	9169	66792	354819	702123	1402301	2085639	-1	0.0000	0.7963	0.0000	0.0771
88 naphthalene	11079	87277	545491	1159824	2506296	3927146	-1	-0.1762	1.5623	0.0000	0.9976
89 hx-Cl-butadiene	6445	40287	205532	360400	746186	1096494	-1	0.0000	0.4557	0.0000	0.0644
90 123-Tri-Cl-Bz	7754	57941	307963	600915	1229181	1798500	-1	0.0000	0.6874	0.0000	0.0870

1454

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 13:56:31 2003
 Response via : Initial Calibration

Calibration Files
 .3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
 20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

Compound		.3	2	10	20	40	60	Avg	%RSD
1) I	1 Fluorobenzene	0.233	0.213	0.218	0.159	0.201	0.182	0.201	13.30
2) 3	di-Cl-di-F-m	0.222	0.204	0.198	0.183	0.204	0.188	0.200	7.04
3) P	4 Chloromethan	0.055	0.105	0.110	0.082	0.101	0.091	0.091	22.20
4) 2	F114	0.177	0.183	0.175	0.149	0.177	0.163	0.171	7.17
5) C	5 vinyl chlori	0.092	0.100	0.095	0.088	0.106	0.100	0.097	6.59
6) 6	bromomethane	0.092	0.100	0.095	0.088	0.106	0.100	0.097	6.59
7) 7	chloroethane	0.080	0.097	0.098	0.084	0.104	0.089	0.092	10.13
8) 8	tri-Cl-F-met	0.304	0.306	0.302	0.241	0.284	0.254	0.282	9.92
9) 9	Acetonitrile	0.045	0.045	0.042	0.042	0.047	0.040	0.043	6.62
10) 9	acrolein	0.020	0.022	0.022	0.020	0.022	0.020	0.021	4.67
11) 11	acetone X	0.035	0.035	0.031	0.028	0.035	0.030	0.032	9.47
12) 12	ethyl ether	0.099	0.103	0.095	0.092	0.094	0.088	0.095	5.52
13) M, C13	11-dichloroe	0.240	0.252	0.250	0.215	0.242	0.227	0.238	6.05#
14) 14	Iodomethane	0.125	0.160	0.200	0.187	0.207	0.186	0.178	16.98
15) 15	F-113	0.163	0.153	0.159	0.117	0.142	0.130	0.144	12.31
16) 16	acrylonitril	0.038	0.043	0.046	0.042	0.047	0.042	0.043	7.31
17) 17	carbon disul	0.501	0.466	0.457	0.405	0.461	0.424	0.452	7.50
18) 18	Isopropyl Al	0.001	0.001	0.000	0.002	0.007	0.002	0.002	114.27
19) 19	ethylene ch	0.372	0.263	0.221	0.213	0.222	0.198	0.248	26.04
20) 20	t-12-di-Cl-e	0.240	0.250	0.237	0.214	0.213	0.187	0.223	10.39
21) 21	t-Bu-Me-ethe	0.345	0.383	0.394	0.393	0.439	0.404	0.393	7.73
22) 22	Tert butyl a	0.003	0.003	0.010	0.004	0.012	0.004	0.007	64.96
23) 23	allyl chlori	0.448	0.448	0.464	0.416	0.475	0.402	0.441	7.06
24) 24	11-dichloroe	0.364	0.389	0.372	0.361	0.385	0.348	0.370	4.15
25) 25	P propionitril	0.017	0.017	0.020	0.015	0.017	0.018	0.018	10.55
26) 26	c-12-di-Cl-e	0.234	0.256	0.245	0.229	0.233	0.200	0.233	8.01
27) 27	22-Dichlorop	0.206	0.212	0.238	0.239	0.270	0.251	0.236	10.11
28) 28	Br-Cl-methan	0.119	0.126	0.119	0.113	0.121	0.109	0.118	5.23

(#) = Out of Range
 E524A003.M

Mon Oct 27 13:57:06 2003

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Sch Lab** EPA 524.2
 Last Update : Mon Oct 27 13:56:31 2003
 Response via : Initial Calibration

Calibration Files
 .3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
 20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

Compound	.3	2	10	20	40	60	Avg	%RSD
29) C 25 chloroform	0.477	0.440	0.408	0.388	0.411	0.369	0.416	9.20
30) 26 tetrahydrofu	0.029	0.031	0.037	0.033	0.040	0.037	0.035	11.55
31) 98 Disopropyl	0.613	0.745	0.749	0.726	0.751	0.677	0.710	7.72
32) S 27 Di-Br-F-Me (	0.246	0.238	0.230	0.243	0.243	0.218	0.235	4.81
33) 99 ETBE	0.347	0.404	0.447	0.461	0.533	0.494	0.448	14.68
34) S 29 1,2-Di-Cl-Et	0.214	0.209	0.202	0.221	0.221	0.200	0.209	4.18
35) 30 12-dichloroe	0.084	0.081	0.084	0.077	0.084	0.077	0.081	4.34
36) 32 vinyl acetat	0.263	0.318	0.366	0.363	0.402	0.366	0.346	14.12
37) 92 Nitro Methan	0.006	0.039	0.005	0.005	0.004	0.005	0.012	130.83
38) 33 2-butanoneME	0.053	0.054	0.050	0.050	0.056	0.050	0.052	4.53
39) 93 Ethyl Acetat	0.117	0.102	0.129	0.122	0.165	0.140	0.129	16.82
40) 34 111-trichlor	0.340	0.349	0.363	0.329	0.373	0.343	0.350	4.54
41) 35 11-Di-Cl-pro	0.245	0.269	0.283	0.253	0.281	0.251	0.264	6.25
42) M 36 benzene	0.853	0.917	0.883	0.828	0.845	0.749	0.846	6.73
43) 37 CCl4	0.328	0.326	0.340	0.291	0.339	0.305	0.321	6.08
44) 100 Isobutyl al	0.011	0.011	0.012	0.013	0.015	0.015	0.013	13.92
45) 38 thiophene	0.370	0.454	0.466	0.455	0.473	0.423	0.440	8.70
46) C 39 12-di-Cl-pro	0.174	0.205	0.194	0.194	0.207	0.186	0.194	6.28#
47) M 40 trichloroeth	0.279	0.273	0.278	0.263	0.281	0.252	0.271	4.23
48) 41 dibromometha	0.137	0.142	0.135	0.130	0.140	0.124	0.135	5.06
49) 101 TAME	0.285	0.322	0.365	0.375	0.447	0.418	0.369	16.15
50) 42 Br-di-Cl-met	0.340	0.310	0.299	0.286	0.311	0.282	0.305	6.94
51) 43 Me-methacryl	0.053	0.080	0.095	0.099	0.120	0.110	0.093	25.59
52) 44 2-ClEt-Vi-et	0.018	0.025	0.030	0.031	0.036		0.028	24.68
53) 45 c-13-di-Cl-p	0.245	0.300	0.319	0.319	0.345	0.313	0.307	10.96
54) 46 t-1,3-dichlo	0.187	0.221	0.251	0.265	0.294	0.271	0.248	15.58
55) I 47 Chlorobezene-d5	0.219	0.215	0.218	0.211	0.244	0.221	0.221	5.33
56) 48 112-tri-Cl-E	0.219	0.215	0.218	0.211	0.244	0.221	0.221	5.33

0.145
 0.044
 0.043
 0.044

(#) = Out of Range
 E524A003.M

Mon Oct 27 13:57:07 2003

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 13:56:31 2003
 Response via : Initial Calibration

Calibration Files
 .3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
 20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

Compound	.3	2	10	20	40	60	Avg	%RSD
57) 49 13-di-Cl-pro	0.338	0.333	0.347	0.328	0.363	0.329	0.340	3.96
58) 50 Et methacryl	0.124	0.200	0.261	0.276	0.340	0.325	0.255	31.77
59) 51 di-Br-Cl-met	0.329	0.305	0.303	0.294	0.340	0.315	0.314	5.48
60) P 52 bromoform	0.180	0.182	0.175	0.176	0.204	0.192	0.185	5.99
61) 53 1,4-dichloro	0.324	0.358	0.373	0.362	0.424	0.404	0.374	9.47
62) 54 MIBK	0.122	0.138	0.158	0.167	0.215	0.209	0.168	22.23
63) S 55 toluene-d8	0.991	1.106	1.120	1.092	1.204	1.110	1.104	6.17
64) M,C 56 toluene	1.450	1.395	1.322	1.276	1.395	1.288	1.354	5.13
65) 57 2-hexanone X	0.074	0.096	0.110	0.110	0.136	0.128	0.109	20.41
66) 58 12-dibromoet	0.196	0.221	0.221	0.221	0.259	0.243	0.227	9.54
67) 59 tetra-Cl-eth	0.384	0.404	0.389	0.340	0.380	0.339	0.373	7.19
68) M,P 60 chlorobenzen	0.947	0.989	0.934	0.893	0.945	0.835	0.924	5.76
69) 61 1112-tetra-C	0.329	0.351	0.344	0.333	0.368	0.340	0.344	4.03
70) I 62 1,4-Dichlorobenzen	0.238	0.228	0.244	0.209	0.238	0.213	0.228	6.36
71) 63 1-chlorohexa	2.413	2.549	2.614	2.496	2.700	2.481	2.542	4.04#
72) C 64 Et-Bz	1.968	2.062	2.031	1.917	2.008	1.811	1.966	4.63
73) 65 m/p-Xylenes	1.519	1.800	1.750	1.671	1.700	1.495	1.656	7.48
74) 66 styrene	1.910	2.052	2.058	1.979	2.062	1.852	1.985	4.45
75) 67 o-xylene	0.365	0.401	0.408	0.385	0.426	0.391	0.396	5.24
76) P 68 1122-Tetra-C	0.112	0.134	0.135	0.128	0.145	0.134	0.131	8.44
77) 69 123-tri-Cl-P	0.705	0.688	0.678	0.659	0.699	0.637	0.678	3.76
78) S 70 4-Br-1-F-Bz	2.428	2.582	2.790	2.605	2.869	2.653	2.654	5.92
79) 71 isopropylben	0.632	0.709	0.694	0.667	0.704	0.626	0.672	5.39
80) 72 bromobenzene	0.028	0.044	0.062	0.068	0.087	0.083	0.062	36.62
81) 92 t-1,4-dichlo	0.694	0.798	0.823	0.758	0.809	0.730	0.769	6.53
82) 73 n-propylbenz	0.578	0.697	0.689	0.644	0.680	0.623	0.652	7.07
83) 74 2-Cl-Toluene	0.701	0.729	0.687	0.654	0.666	0.583	0.670	7.50
84) 75 4-Cl-Toluene								

(#) = Out of Range
 E524A003.M

Mon Oct 27 13:57:07 2003

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied F &Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 13:56:31 2003
 Response via : Initial Calibration

Calibration Files
 .3 =3-A0003.D 2 =3-002.D 10 =3-0010.D
 20 =3-0020.D 40 =3-0040.D 60 =3-0060.D

Compound	.3	2	10	20	40	60	Avg	%RSD
85) 76 135-tri-Me-B	2.192	2.419	2.462	2.318	2.449	2.206	2.341	5.17
86) 77 4-iso-Pr-tol	2.421	2.565	2.663	2.436	2.642	2.402	2.522	4.63
87) 78 124-tri-Me-B	2.287	2.513	2.498	2.427	2.600	2.382	2.451	4.48
88) 79 tert-butylbe	1.853	2.009	2.152	2.004	2.256	2.057	2.055	6.71
89) 80 13-DCB	1.484	1.490	1.416	1.357	1.396	1.232	1.396	6.84
90) 81 sec-butylben	2.948	3.045	3.213	2.920	3.279	3.007	3.069	4.75
91) 82 14-DCB	1.660	1.512	1.434	1.366	1.463	1.329	1.461	8.06
92) 83 Cl-benzyl	0.066	0.066	0.102	0.123	0.168	0.168	0.116	39.76
93) 84 12-DCB	1.352	1.374	1.295	1.218	1.283	1.149	1.278	6.57
94) 85 n-butylbenze	0.623	0.678	0.712	0.654	0.707	0.621	0.666	5.99
95) 86 12-diBr-2-Cl	0.079	0.085	0.093	0.096	0.111	0.107	0.095	13.30
96) 87 124-tri-Cl-B	0.700	0.756	0.822	0.810	0.879	0.811	0.796	7.71
97) 88 naphthalene	0.845	0.988	1.263	1.338	1.571	1.528	1.256	23.09
98) 89 hx-Cl-butadi	0.492	0.456	0.476	0.416	0.468	0.426	0.456	6.44
99) 90 123-Tri-Cl-B	0.592	0.656	0.713	0.693	0.770	0.700	0.687	8.70

0.989

0.997

(#) = Out of Range
 E524A003.M

Mon Oct 27 13:57:08 2003

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:05 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:33 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1459

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.64	7.63	0.002	96	70	920.067	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	745.928	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.84	0.000	152	150	436.784	10.00		0.00	

System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.58	0.002	111	113	6.137	0.27	0.3	1.34%	
29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	5.167	0.28	0.3	1.39%	
55	toluene-d8	9.90	9.89	0.000	98	100	22.176	0.24	0.2	1.18%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	9.236	0.26	0.3	1.28%	

Target Compounds											
<<< 11 : ISTD ID = 1 >>>											
3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	6.437	0.28	0.3	96	
4	Chloromethane	2.11	2.07	0.006	50	52	6.136	0.28	0.3	85	
2	F114	2.04	2.00	0.006	85	135	1.527	0.13	0.1	99	
5	vinyl chloride	2.23	2.19	0.005	62	64	4.876	0.22	0.2	74	
6	bromomethane	2.60	2.58	0.003	94	96	2.539	0.24	0.2	69	
7	chloroethane	2.72	2.70	0.003	64	66	2.197	0.17	0.2	0	
8	tri-Cl-F-methane	3.03	3.00	0.004	101	103	8.394	0.25	0.3	100	
91	Acetonitrile X10	4.07	4.04	0.003	41	40	10.689	2.65	2.6	80	
9	acrolein X10	3.52	3.48	0.006	56	55	5.645	2.22	2.2	0	
11	acetone X10	3.71	3.69	0.002	43	58	18.756	4.78	4.8	80	
12	ethyl ether X5	3.37	3.34	0.005	59	74	13.693	1.17	1.2	79	
13	11-dichloroethene	3.63	3.60	0.004	61	96	6.637	0.25	0.3	0	
14	Iodomethane	3.81	3.78	0.004	142	127	3.461	0.15	0.1	95	
15	F-113	3.65	3.62	0.004	101	151	4.492	0.22	0.2	0	
16	acrylonitrile X10	4.52	4.49	0.003	53	52	10.574	2.57	2.6	85	
17	carbon disulfide	3.90	3.87	0.004	76	78	13.839	0.21	0.2	99	
94	Isopropyl Alcohol	4.04	4.01	0.003	45	43	0.331	0.47	0.5	100	
18	methylene chlorid	4.22	4.19	0.004	84	49	10.278	0.24	0.2	72	
19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	6.615	0.27	0.3	88	

Handwritten signature
 10/27/03

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:05 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:33 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1460

ID	Component Name	R.T.	RT0	DRRT	QIon	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	9.529	0.23	0.2	67	?
95	Tert butyl alcoho	4.45	4.47	-0.002	59	57	1.332	1.21	1.2	100	#
94	allyl chloride	4.07	4.04	0.003	41	76	10.689	0.30	0.3	56	#?
21	11-dichloroethane	5.12	5.09	0.005	63	83	10.035	0.25	0.3	97	
22	c-12-di-Cl-ethene	5.93	5.89	0.005	96	61	6.459	0.26	0.3	86	
23	22-Dichloropropan	5.92	5.89	0.004	77	97	5.693	0.20	0.2	90	
24	Br-Cl-methane	6.26	6.23	0.004	128	130	3.294	0.27	0.3	87	
25	chloroform	6.37	6.35	0.003	83	85	13.164	0.30	0.3	82	
26	tetrahydrofuranX5	6.35	6.32	0.004	42	72	4.044	1.34	1.3	73	
98	Disopropyl ether	5.24	5.22	0.003	45	87	16.931	0.28	0.3	93	#?
99	ETBE	5.73	5.72	0.002	59	87	9.591	0.20	0.2	95	
30	12-dichloroethane	7.23	7.20	0.004	64	62	2.318	0.32	0.3	46	m?
32	vinyl acetate X5	5.20	5.17	0.004	43	86	36.279	1.26	1.3	95	m?
92	Nitro Methane(x10	5.81	5.80	0.000	61	46	1.574	3.08	3.1	16	m
33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	14.739	3.08	3.1	87	m?
93	Ethyl Acetate x2	6.04	6.02	0.003	43	61	6.463	0.57	0.6	79	#
34	111-trichloroetha	6.65	6.63	0.002	97	99	9.393	0.25	0.3	85	
35	11-Di-Cl-propene	6.91	6.88	0.004	75	110	6.749	0.24	0.2	89	
36	benzene	7.21	7.19	0.002	78	52	23.536	0.25	0.3	87	
37	CCl4	6.91	6.89	0.002	117	119	9.052	0.26	0.3	90	
100	Isobutyl alcohol	7.42	7.39	0.003	43	42	2.932	7.75	7.8	61	#?
38	thiophene	7.54	7.51	0.004	84	58	10.222	0.22	0.2	75	
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	4.815	0.23	0.2	95	
40	trichloroethene	8.25	8.23	0.002	130	132	7.696	0.26	0.3	95	
41	dibromomethane	8.72	8.71	0.000	174	172	3.770	0.28	0.3	83	m
101	TAME	7.41	7.39	0.002	73	43	7.879	0.19	0.2	52	m?
42	Br-di-Cl-methane	8.95	8.95	0.000	83	85	9.392	0.31	0.3	94	
43	Me-methacrylate	8.76	8.75	0.002	69	100	1.457	0.15	0.2	34	m
44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	4.887	2.69	2.7	93	
45	c-13-di-Cl-propen	9.57	9.55	0.002	75	110	6.769	0.22	0.2	89	
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	5.153	0.21	0.2	89	

10/27/03

Data File Name: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 10:05 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:33 2003
Print Time : Mon Oct 27 13:50 2003
Miscellaneous :
Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplier: 1.000000

1461

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
49	13-di-Cl-propane	10.65	10.64	0.001	76	78	7.569	0.27	0.3	85	?
50	Et methacrylate	10.38	10.37	0.000	69	99	2.785	0.14	0.1	83	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	7.359	0.30	0.3	83	
52	bromoform	12.41	12.41	0.000	173	174	4.029	0.29	0.3	95	
53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	7.248	0.27	0.3	90	
54	MIBK	9.77	9.76	0.001	43	58	2.727	0.25	0.3	63	
56	toluene	9.99	9.98	0.001	91	92	32.453	0.30	0.3	96	
57	2-hexanone X5	10.76	10.75	0.001	43	58	8.296	1.13	1.1	89	
58	12-dibromoethane	11.03	11.03	0.000	107	109	4.393	0.25	0.2	83	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	8.603	0.27	0.3	96	
60	chlorobenzene	11.57	11.57	0.000	112	77	21.200	0.28	0.3	95	
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	7.365	0.27	0.3	93	
<<< 13 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	3.125	0.22	0.2	17	#?
64	Et-Bz	11.70	11.69	0.000	91	106	31.613	0.23	0.2	94	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	51.588	0.50	0.5	98	
66	styrene	12.24	12.23	0.000	104	78	19.899	0.25	0.3	94	
67	O-xylene	12.22	12.22	0.000	91	106	25.030	0.24	0.2	96	
68	1122-Tetra-Cl-Et	12.88	12.87	0.000	83	85	4.786	0.21	0.2	86	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	1.463	0.21	0.2	75	
71	isopropylbenzene	12.60	12.59	0.000	105	120	31.809	0.24	0.2	99	
72	bromobenzene	12.89	12.89	0.000	156	158	8.279	0.23	0.2	74	
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	0.370	0.11	0.1	84	#?
73	n-propylbenzene	13.00	12.99	0.000	120	78	9.091	0.22	0.2	91	#?
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	7.570	0.21	0.2	93	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	9.182	0.25	0.2	95	
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	28.727	0.25	0.3	90	
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	31.720	0.25	0.2	99	
78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	29.971	0.25	0.3	99	
79	tert-butylbenzene	13.48	13.47	0.000	119	91	24.279	0.22	0.2	91	
80	13-DCB	13.79	13.78	0.000	146	148	19.447	0.26	0.3	91	
81	sec-butylbenzene	13.68	13.68	0.000	105	134	38.627	0.25	0.3	96	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

mbr
10/27/93

Data File Name: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:05 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:33 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

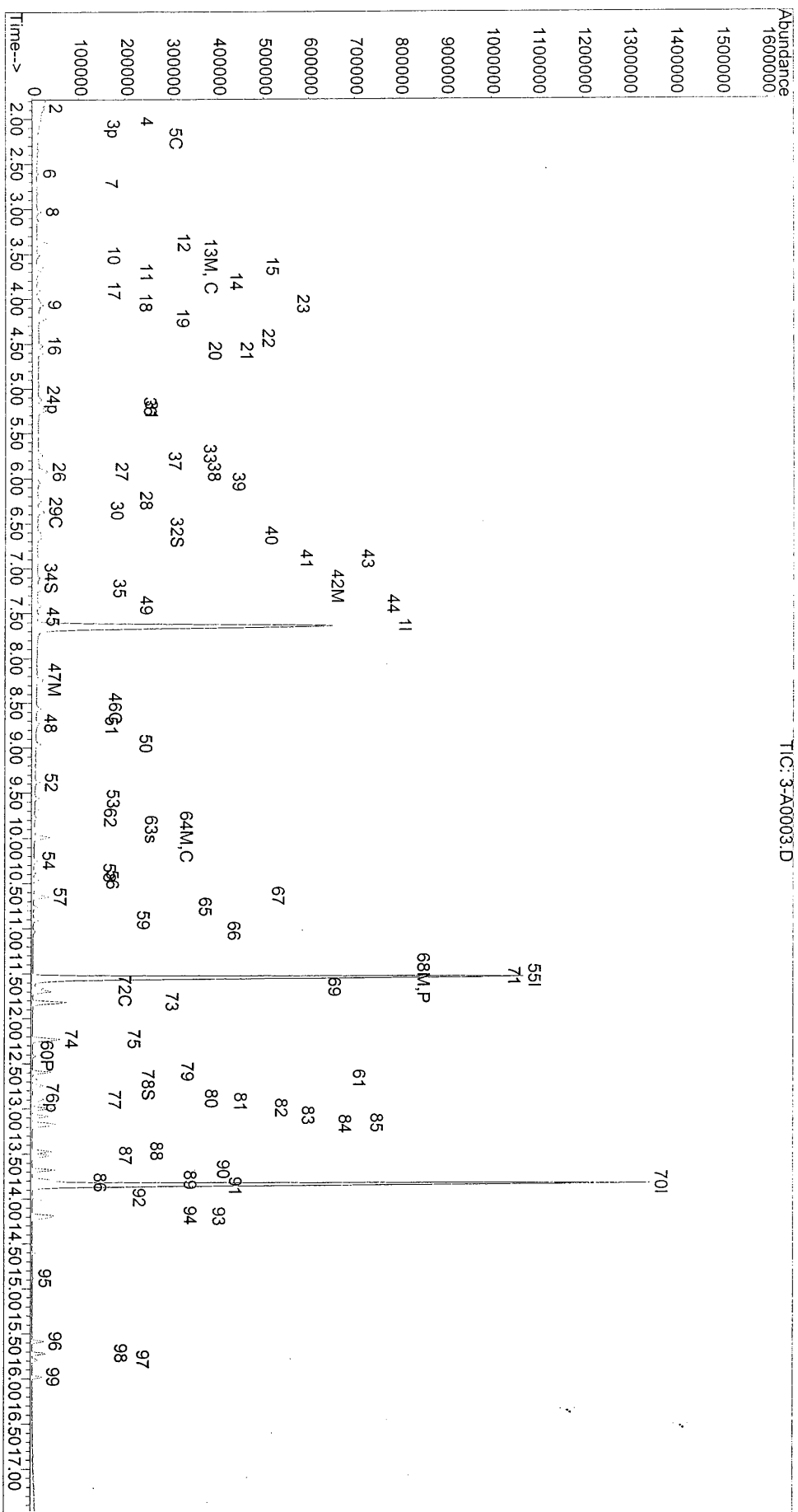
Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1462

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
82	14-DCB	13.87	13.87	0.000	146	148	21.754	0.28	0.3	84	
83	Cl-benzyl	13.98	13.98	0.000	126	91	0.871	0.12	0.1	35	#
84	12-DCB	14.21	14.21	0.000	146	148	17.721	0.27	0.3	90	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	8.164	0.24	0.2	80	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	1.032	0.22	0.2	75	#
87	124-tri-Cl-Bz	15.59	15.58	0.000	180	182	9.169	0.21	0.2	96	
88	naphthalene	15.79	15.78	0.000	128	129	11.079	0.14	0.1	91	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	6.445	0.25	0.2	81	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	7.754	0.20	0.2	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-A0003.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:05 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:33 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000



Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:31 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:36 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1464

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.65	7.63	0.003	96	70	916.201	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	732.691	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.84	0.000	152	150	441.685	10.00		0.00	

System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.58	0.002	111	113	45.047	1.97		2.0	9.86%
29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	39.287	2.12		2.1	10.62%
55	toluene-d8	9.91	9.89	0.000	98	100	162.055	1.75		1.8	8.77%
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	60.769	1.66		1.7	8.32%

Target Compounds											
<<< 11	: ISTD ID = 1	>>>									
3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	39.097	1.70		1.7	95
4	Chloromethane	2.11	2.07	0.005	50	52	37.417	1.74		1.7	92
2	F114	2.03	2.00	0.005	85	135	19.306	1.61		1.6	55
5	vinyl chloride	2.22	2.19	0.004	62	64	33.446	1.51		1.5	95
6	bromomethane	2.61	2.58	0.005	94	96	18.408	1.73		1.7	96
7	chloroethane	2.73	2.70	0.004	64	66	17.752	1.34		1.3	88
8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	56.082	1.70		1.7	99
91	Acetonitrile X10	4.07	4.04	0.004	41	40	82.041	20.41		20.4	96
9	acrolein X10	3.52	3.48	0.006	56	55	40.130	15.88		15.9	98
11	acetone X10	3.71	3.69	0.002	43	58	64.324	16.47		16.5	79
12	ethyl ether X5	3.37	3.34	0.005	59	74	93.915	8.07		8.1	81
13	11-dichloroethene	3.64	3.60	0.005	61	96	46.215	1.76		1.8	85
14	Iodomethane	3.82	3.78	0.005	142	127	29.384	1.27		1.3	99
15	F-113	3.65	3.62	0.004	101	151	28.088	1.36		1.4	90
16	acrylonitrile X10	4.52	4.49	0.004	53	52	78.358	19.13		19.1	95
17	carbon disulfide	3.91	3.87	0.005	76	78	85.463	1.28		1.3	99
94	Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.284	1.83		1.8	100
18	methylene chlorid	4.22	4.19	0.005	84	49	48.191	1.13		1.1	94
19	t-12-di-Cl-ethene	4.58	4.55	0.005	96	61	45.733	1.85		1.8	96

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

10/27/23

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:31 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:36 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1465

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	70.095	1.70	1.7	90	?
95	Tert butyl alcoho	4.46	4.47	0.000	59	57	4.624	4.22	4.2	100	#
94	allyl chloride	4.07	4.04	0.004	41	76	82.041	2.28	2.3	71	#?
21	11-dichloroethane	5.12	5.09	0.004	63	83	71.189	1.79	1.8	96	m ³ /2/27/13
97	propionitrile	6.03	5.99	0.004	54	51	3.119	2.03	2.0	100	?
22	c-12-di-Cl-ethene	5.91	5.89	0.002	96	61	46.844	1.88	1.9	91	?
23	22-Dichloropropan	5.92	5.89	0.003	77	97	38.859	1.37	1.4	94	?
24	Br-Cl-methane	6.25	6.23	0.003	128	130	23.046	1.90	1.9	96	?
25	chloroform	6.38	6.35	0.003	83	85	80.631	1.84	1.8	95	?
26	tetrahydrofuranX5	6.35	6.32	0.003	42	72	28.808	9.57	9.6	83	?
98	Disopropyl ether	5.25	5.22	0.004	45	87	136.442	2.23	2.2	88	?
99	ETBE	5.74	5.72	0.003	59	87	74.005	1.58	1.6	93	?
30	12-dichloroethane	7.22	7.20	0.002	64	62	14.864	2.08	2.1	93	?
32	vinyl acetate X5	5.20	5.17	0.004	43	86	291.623	10.20	10.2	95	?
92	Nitro Methane(X10	5.82	5.80	0.002	61	46	10.571	20.78	20.8	63	#
33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	98.541	20.66	20.7	83	?
93	Ethyl Acetate x2	6.05	6.02	0.004	43	61	37.342	3.29	3.3	91	#?
34	111-trichloroetha	6.65	6.63	0.002	97	99	63.933	1.73	1.7	97	?
35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	49.362	1.77	1.8	85	?
36	benzene	7.21	7.19	0.003	78	52	167.998	1.81	1.8	94	?
37	CCl4	6.91	6.89	0.002	117	119	59.763	1.76	1.8	98	?
100	Isobutyl alcohol	7.42	7.39	0.003	43	42	21.047	55.87	55.9	81	#?
38	thiophene	7.53	7.51	0.003	84	58	83.170	1.80	1.8	95	?
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	37.555	1.80	1.8	93	?
40	trichloroethene	8.24	8.23	0.002	130	132	50.098	1.73	1.7	82	?
41	dibromomethane	8.73	8.71	0.002	174	172	26.033	1.97	2.0	87	?
101	TAME	7.42	7.39	0.004	73	43	59.032	1.46	1.5	92	m?
42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	56.733	1.89	1.9	97	?
43	Me-methacrylate	8.76	8.75	0.002	69	100	14.747	1.57	1.6	91	?
44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	45.249	24.99	25.0	84	?
45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	54.923	1.82	1.8	94	?
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	40.425	1.68	1.7	98	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:31 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:36 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< 12 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	31.570	1.79	1.8	94	
49	13-di-Cl-propane	10.65	10.64	0.000	76	78	48.826	1.75	1.8	84	
50	Et methacrylate	10.38	10.37	0.000	69	99	29.334	1.47	1.5	96	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	44.728	1.88	1.9	100	
52	bromoform	12.42	12.41	0.000	173	174	26.611	1.96	2.0	98	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	52.525	2.02	2.0	98	
54	MIBK	9.77	9.76	0.000	43	58	20.267	1.90	1.9	91	
56	toluene	9.99	9.98	0.000	91	92	204.349	1.93	1.9	97	
57	2-hexanone X5	10.76	10.75	0.000	43	58	70.148	9.69	9.7	85	
58	12-dibromoethane	11.03	11.03	0.000	107	109	32.436	1.86	1.9	94	
59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	59.173	1.87	1.9	98	
60	chlorobenzene	11.57	11.57	0.000	112	77	144.953	1.92	1.9	94	
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	51.367	1.90	1.9	98	
<<< 13 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	20.185	1.40	1.4	69	#?
64	Et-Bz	11.70	11.69	0.000	91	106	225.200	1.63	1.6	92	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	364.290	3.49	3.5	99	
66	styrene	12.24	12.23	0.000	104	78	158.986	2.00	2.0	95	
67	o-xylene	12.22	12.22	0.000	91	106	181.225	1.73	1.7	92	
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	35.408	1.52	1.5	99	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	11.857	1.70	1.7	94	
71	isopropylbenzene	12.60	12.59	0.000	105	120	228.075	1.70	1.7	97	
72	bromobenzene	12.89	12.89	0.000	156	158	62.596	1.74	1.7	97	
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	3.850	1.13	1.1	71	#?
73	n-propylbenzene	13.00	12.99	0.000	120	78	70.513	1.68	1.7	96	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	61.543	1.66	1.7	96	
75	4-Cl-Toluene	13.18	13.18	0.000	126	128	64.367	1.70	1.7	100	
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	213.694	1.85	1.8	96	
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	226.621	1.76	1.8	97	
78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	222.021	1.84	1.8	99	
79	tert-butylbenzene	13.48	13.47	0.000	119	91	177.466	1.61	1.6	90	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-002.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:31 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:36 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.78	0.000	146	148	131.664	1.74	1.7	94	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	268.975	1.73	1.7	95	
82	14-DCB	13.87	13.87	0.000	146	148	133.604	1.73	1.7	94	
83	Cl-benzyl	13.98	13.98	0.000	126	91	5.857	0.80	0.8	61	#
84	12-DCB	14.21	14.21	0.000	146	148	121.367	1.80	1.8	96	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	59.910	1.74	1.7	82	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	7.477	1.57	1.6	89	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	66.792	1.53	1.5	94	
88	naphthalene	15.79	15.78	0.000	128	129	87.277	1.10	1.1	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	40.287	1.52	1.5	96	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	57.941	1.48	1.5	93	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

EPA 524.2

```
Sample : f=1
Inst.  : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplier: 1.000000
```



Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D Sample : f=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Oct 21 10:56 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 13:48 2003 Operator: zou
Quant. Time : Oct 27 13:38 2003 Multiplier: 1.000000
Print Time : Mon Oct 27 13:50 2003
Miscellaneous :

1469

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.65	7.63	0.003	96	70	919.392	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	724.575	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.84	0.000	152	150	431.820	10.00		0.00	
System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.58	0.002	111	113	218.874	9.55		9.6	47.76%
29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	192.209	10.36		10.4	51.79%
55	toluene-d8	9.91	9.89	0.000	98	100	811.859	8.89		8.9	44.45%
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	292.727	8.20		8.2	40.98%

Target Compounds	<<< 11 : ISTD ID = 1 >>>									Qvalue	
3 di-Cl-di-F-methan	1.89	1.85	0.005	85	87	199.979	8.66	8.7	93		<i>m</i> _{10/2}
4 Chloromethane	2.11	2.07	0.005	50	52	181.676	8.40	8.4	99		
2 F114	2.03	2.00	0.005	85	135	101.058	8.37	8.4	67		
5 vinyl chloride	2.23	2.19	0.005	62	64	161.213	7.23	7.2	98		<i>m</i>
6 bromomethane	2.61	2.58	0.005	94	96	87.613	8.18	8.2	98		<i>m</i>
7 chloroethane	2.73	2.70	0.004	64	66	90.280	6.81	6.8	100		
8 tri-Cl-F-methane	3.04	3.00	0.006	101	103	277.768	8.41	8.4	98		
91 Acetonitrile X10	4.07	4.04	0.004	41	40	382.813	94.91	94.9	92	?	
9 acrolein X10	3.52	3.48	0.006	56	55	201.945	79.64	79.6	100		
11 acetone X10	3.75	3.69	0.008	43	58	288.996	73.75	73.8	0	<i>m</i>	
12 ethyl ether X5	3.37	3.34	0.005	59	74	436.367	37.37	37.4	80		
13 11-dichloroethene	3.64	3.60	0.005	61	96	229.524	8.71	8.7	83	?	
14 Iodomethane	3.82	3.78	0.005	142	127	183.879	7.89	7.9	97		
15 F-113	3.65	3.62	0.005	101	151	146.108	7.05	7.1	89	?	
16 acrylonitrile X10	4.53	4.49	0.005	53	52	419.836	102.15	102.1	98		
17 carbon disulfide	3.90	3.87	0.004	76	78	420.250	6.27	6.3	99		
94 Isopropyl Alcohol	4.04	4.01	0.004	45	43	1.238	1.76	1.8	100	#	
18 methylene chlorid	4.22	4.19	0.004	84	49	203.033	4.73	4.7	78	#	
19 t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	217.854	8.77	8.8	93	?	

# = qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06											

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:56 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:38 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1470

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.60	4.56	0.005	73	57	362.056	8.76	8.8	94	
95	Tert butyl alcoho	4.58	4.47	0.015	59	57	88.338	80.34	80.3	100	m? <i>10/27/03</i>
94	allyl chloride	4.07	4.04	0.004	41	76	426.268	11.79	11.8	75	m?
21	11-dichloroethane	5.12	5.09	0.005	63	83	342.138	8.58	8.6	99	
97	propionitrile	6.04	5.99	0.006	54	51	18.745	12.15	12.2	100	m?
22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	225.560	9.01	9.0	93	?
23	22-Dichloropropan	5.92	5.89	0.004	77	97	218.612	7.67	7.7	98	?
24	Br-Cl-methane	6.25	6.23	0.003	128	130	109.590	9.03	9.0	100	
25	chloroform	6.38	6.35	0.003	83	85	375.460	8.54	8.5	96	?
26	tetrahydrofuranX5	6.36	6.32	0.005	42	72	169.729	56.21	56.2	82	m?
98	Disopropyl ether	5.24	5.22	0.003	45	87	688.556	11.22	11.2	90	
99	ETBE	5.74	5.72	0.003	59	87	411.030	8.76	8.8	90	
30	12-dichloroethane	7.22	7.20	0.003	64	62	77.221	10.78	10.8	91	?
32	vinyl acetate X5	5.20	5.17	0.004	43	86	1683.396	58.68	58.7	93	
92	Nitro Methane (x10	5.92	5.80	0.015	61	46	358.371	701.91	701.9	16	#?
33	2-butanoneMEK X10	5.96	5.92	0.005	43	72	459.782	96.08	96.1	86	
93	Ethyl Acetate x2	6.05	6.02	0.004	43	61	237.607	20.85	20.8	100	?
34	111-trichloroetha	6.65	6.63	0.002	97	99	333.945	9.02	9.0	98	
35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	260.487	9.31	9.3	88	?
36	benzene	7.21	7.19	0.003	78	52	811.668	8.70	8.7	93	?
37	CCl4	6.91	6.89	0.002	117	119	312.695	9.16	9.2	95	?
100	Isobutyl alcohol	7.42	7.39	0.003	43	42	112.031	296.35	296.4	81	#?
38	thiophene	7.53	7.51	0.003	84	58	428.533	9.24	9.2	98	
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	178.169	8.53	8.5	97	
40	trichloroethene	8.24	8.23	0.002	130	132	255.616	8.79	8.8	93	
41	dibromomethane	8.72	8.71	0.000	174	172	124.373	9.39	9.4	96	
101	TAME	7.41	7.39	0.002	73	43	335.735	8.25	8.3	91	?
42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	274.489	9.12	9.1	98	
43	Me-methacrylate	8.76	8.75	0.002	69	100	87.065	9.25	9.3	97	
44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	275.793	151.78	151.8	84	
45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	293.425	9.67	9.7	91	
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	231.011	9.57	9.6	91	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:56 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:38 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1471

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	158.039	9.04	9.0	98	
49	13-di-Cl-propane	10.65	10.64	0.000	76	78	251.096	9.10	9.1	100	?
50	Et methacrylate	10.37	10.37	0.000	69	99	189.197	9.56	9.6	95	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	219.307	9.33	9.3	95	
52	bromoform	12.42	12.41	0.000	173	174	127.022	9.46	9.5	100	
53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	270.048	10.52	10.5	94	
54	MIBK	9.77	9.76	0.000	43	58	114.402	10.84	10.8	95	
56	toluene	9.99	9.98	0.000	91	92	957.684	9.13	9.1	98	
57	2-hexanone X5	10.76	10.75	0.000	43	58	400.071	55.86	55.9	90	
58	12-dibromoethane	11.03	11.03	0.000	107	109	159.989	9.27	9.3	95	
59	tetra-Cl-ethene	10.65	10.64	0.001	166	168	281.865	8.99	9.0	97	?
60	chlorobenzene	11.58	11.57	0.000	112	77	676.974	9.05	9.1	90	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	249.086	9.33	9.3	98	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	105.292	7.48	7.5	60	#?
64	Et-Bz	11.70	11.69	0.000	91	106	1128.701	8.35	8.4	94	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	1753.788	17.17	17.2	97	
66	styrene	12.24	12.23	0.000	104	78	755.749	9.73	9.7	95	?
67	o-xylene	12.22	12.22	0.000	91	106	888.564	8.67	8.7	95	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	176.142	7.72	7.7	100	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	58.506	8.57	8.6	97	?
71	isopropylbenzene	12.60	12.59	0.000	105	120	1204.677	9.18	9.2	99	
72	bromobenzene	12.89	12.89	0.000	156	158	299.551	8.50	8.5	98	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	26.890	8.11	8.1	75	#?
73	n-propylbenzene	13.00	12.99	0.000	120	78	355.352	8.64	8.6	92	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	297.725	8.19	8.2	100	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	296.683	8.03	8.0	98	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1063.069	9.41	9.4	98	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1149.787	9.11	9.1	97	?
78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	1078.747	9.17	9.2	98	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	929.162	8.61	8.6	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:56 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:38 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

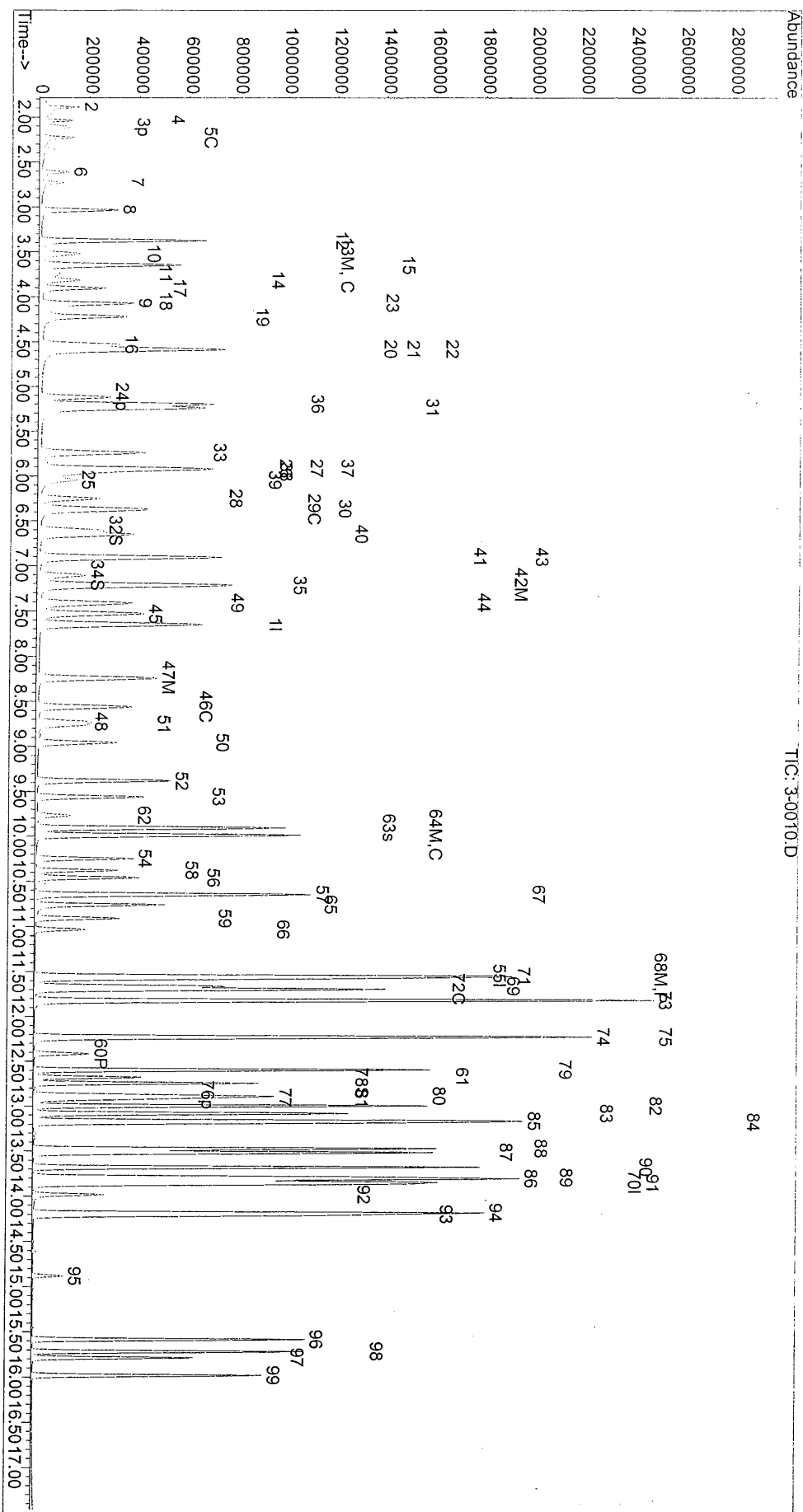
1472

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.78	0.000	146	148	611.576	8.25	8.3	97	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	1387.531	9.14	9.1	98	
82	14-DCB	13.87	13.87	0.000	146	148	619.366	8.20	8.2	96	
83	Cl-benzyl	13.98	13.98	0.000	126	91	44.122	6.18	6.2	94	
84	12-DCB	14.21	14.21	0.000	146	148	559.240	8.47	8.5	99	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	307.483	9.14	9.1	90	
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	40.003	8.61	8.6	96	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	354.819	8.30	8.3	98	
88	naphthalene	15.78	15.78	0.000	128	129	545.491	7.03	7.0	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	205.532	7.94	7.9	99	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	307.963	8.03	8.0	97	

#?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0010.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 10:56 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:38 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000



Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:22 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:40 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1474

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.65	7.63	0.003	96	70	955.116	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	731.811	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.84	0.000	152	150	433.290	10.00		0.00	

System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	439.096	18.45	18.4	92.24%	
29	1,2-Di-Cl-Et-d4 (	7.10	7.08	0.001	65	102	385.356	19.99	20.0	99.95%	
55	toluene-d8	9.91	9.89	0.000	98	100	1597.728	17.32	17.3	86.62%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	571.173	15.94	15.9	79.69%	

Target Compounds											
<<<	11 : ISTD ID = 1	>>>	Qvalue								
3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	303.885	12.67	12.7	98	m
4	Chloromethane	2.11	2.07	0.006	50	52	348.991	15.53	15.5	98	m
2	F114	2.03	2.00	0.005	85	135	155.932	12.44	12.4	59	m
5	vinyl chloride	2.22	2.19	0.004	62	64	285.451	12.33	12.3	100	m
6	bromomethane	2.61	2.58	0.005	94	96	168.214	15.12	15.1	95	m
7	chloroethane	2.73	2.70	0.004	64	66	159.905	11.60	11.6	0	m
8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	461.283	13.45	13.5	99	m
91	Acetonitrile X10	4.07	4.04	0.004	41	40	794.170	189.53	189.5	97	m
9	acrolein X10	3.51	3.48	0.005	56	55	381.523	144.83	144.8	99	?
11	acetone X10	3.71	3.69	0.003	43	58	538.495	132.28	132.3	0	m
12	ethyl ether X5	3.37	3.34	0.005	59	74	874.255	72.07	72.1	79	?
13	11-dichloroethene	3.64	3.60	0.005	61	96	410.040	14.98	15.0	80	?
14	Iodomethane	3.81	3.78	0.004	142	127	356.970	14.75	14.7	94	?
15	F-113	3.65	3.62	0.005	101	151	224.035	10.41	10.4	95	?
16	acrylonitrile X10	4.52	4.49	0.004	53	52	794.346	186.04	186.0	97	?
17	carbon disulfide	3.90	3.87	0.004	76	78	772.812	11.10	11.1	100	#
94	Isopropyl Alcohol	4.01	4.01	0.000	45	43	28.714	39.30	39.3	100	#
18	methylene chlorid	4.22	4.19	0.004	84	49	407.143	9.14	9.1	76	#
19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	407.874	15.81	15.8	89	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

10/27/03

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:22 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:40 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1475

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	751.228	17.49	17.5	93	?
95	Tert butyl alcoho	4.47	4.47	0.000	59	57	76.985	67.40	67.4	100	#
94	allyl chloride	4.07	4.04	0.004	41	76	794.170	21.14	21.1	75	#?
21	11-dichloroethane	5.12	5.09	0.004	63	83	689.918	16.66	16.7	98	
97	propionitrile	6.01	5.99	0.002	54	51	29.270	18.27	18.3	100	#
22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	436.935	16.80	16.8	90	?
23	22-Dichloropropan	5.92	5.89	0.004	77	97	456.844	15.42	15.4	97	?
24	Br-Cl-methane	6.25	6.23	0.003	128	130	215.148	17.06	17.1	93	?
25	chloroform	6.37	6.35	0.003	83	85	741.683	16.23	16.2	99	
26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	317.711	101.28	101.3	84	
98	Disopropyl ether	5.24	5.22	0.003	45	87	1387.177	21.76	21.8	89	
99	ETBE	5.74	5.72	0.003	59	87	879.689	18.05	18.1	91	
30	12-dichloroethane	7.22	7.20	0.002	64	62	146.461	19.69	19.7	97	?
32	vinyl acetate X5	5.19	5.17	0.003	43	86	3463.521	116.23	116.2	93	
92	Nitro Methane(x10	5.81	5.80	0.002	61	46	95.786	180.59	180.6	50	#
33	2-butanoneMEK X10	5.94	5.92	0.003	43	72	956.754	192.46	192.5	86	?
93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	465.630	39.33	39.3	97	
34	111-trichloroetha	6.65	6.63	0.002	97	99	629.233	16.35	16.4	100	
35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	484.228	16.65	16.7	89	?
36	benzene	7.21	7.19	0.003	78	52	1581.767	16.32	16.3	90	?
37	CCl4	6.91	6.89	0.002	117	119	555.550	15.66	15.7	98	?
100	Isobutyl alcohol	7.41	7.39	0.002	43	42	247.109	629.22	629.2	82	#?
38	thiophene	7.53	7.51	0.002	84	58	868.274	18.02	18.0	92	
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	370.946	17.10	17.1	99	
40	trichloroethene	8.24	8.23	0.002	130	132	501.517	16.60	16.6	90	
41	dibromomethane	8.73	8.71	0.002	174	172	247.759	18.01	18.0	99	
101	TAME	7.41	7.39	0.002	73	43	716.981	16.97	17.0	89	#?
42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	546.104	17.46	17.5	99	
43	Me-methacrylate	8.76	8.75	0.000	69	100	188.318	19.26	19.3	88	
44	2-ClEt-Vi-ether10	9.38	9.37	0.000	63	43	591.932	313.58	313.6	85	
45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	608.486	19.30	19.3	91	
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	505.285	20.16	20.2	93	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

Acq. Time : Oct 21 11:22 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:40 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< 12 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.45	10.45	0.000	97	83	308.164	17.45	17.4	96	
49	13-di-Cl-propane	10.65	10.64	0.000	76	78	479.955	17.23	17.2	99	?
50	Et methacrylate	10.38	10.37	0.000	69	99	404.574	20.25	20.2	91	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	430.191	18.11	18.1	99	
52	bromoform	12.41	12.41	0.000	173	174	257.402	18.99	19.0	100	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	530.472	20.46	20.5	97	
54	MIBK	9.77	9.76	0.000	43	58	244.409	22.93	22.9	97	
56	toluene	9.99	9.98	0.000	91	92	1867.212	17.62	17.6	99	
57	2-hexanone X5	10.76	10.75	0.000	43	58	806.303	111.46	111.5	96	
58	12-dibromethane	11.03	11.03	0.000	107	109	322.735	18.52	18.5	93	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	498.130	15.73	15.7	97	?
60	chlorobenzene	11.58	11.57	0.000	112	77	1307.160	17.31	17.3	92	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	487.380	18.07	18.1	99	
<<< 13 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	181.129	12.82	12.8	74	#?
64	Et-Bz	11.70	11.69	0.000	91	106	2162.672	15.95	16.0	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	3322.945	32.42	32.4	97	
66	styrene	12.24	12.23	0.000	104	78	1448.349	18.59	18.6	95	?
67	o-xylene	12.22	12.22	0.000	91	106	1715.323	16.68	16.7	97	
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	333.638	14.58	14.6	99	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	111.098	16.21	16.2	97	?
71	isopropylbenzene	12.60	12.59	0.000	105	120	2257.352	17.14	17.1	99	
72	bromobenzene	12.89	12.89	0.000	156	158	577.972	16.34	16.3	99	
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	58.909	17.70	17.7	85	?
73	n-propylbenzene	13.00	12.99	0.000	120	78	656.540	15.91	15.9	94	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	558.317	15.31	15.3	100	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	566.381	15.27	15.3	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	2008.540	17.71	17.7	96	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	2111.126	16.67	16.7	98	?
78	124-tri-Me-Benzen	13.51	13.51	0.000	105	120	2103.275	17.81	17.8	97	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1736.357	16.03	16.0	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

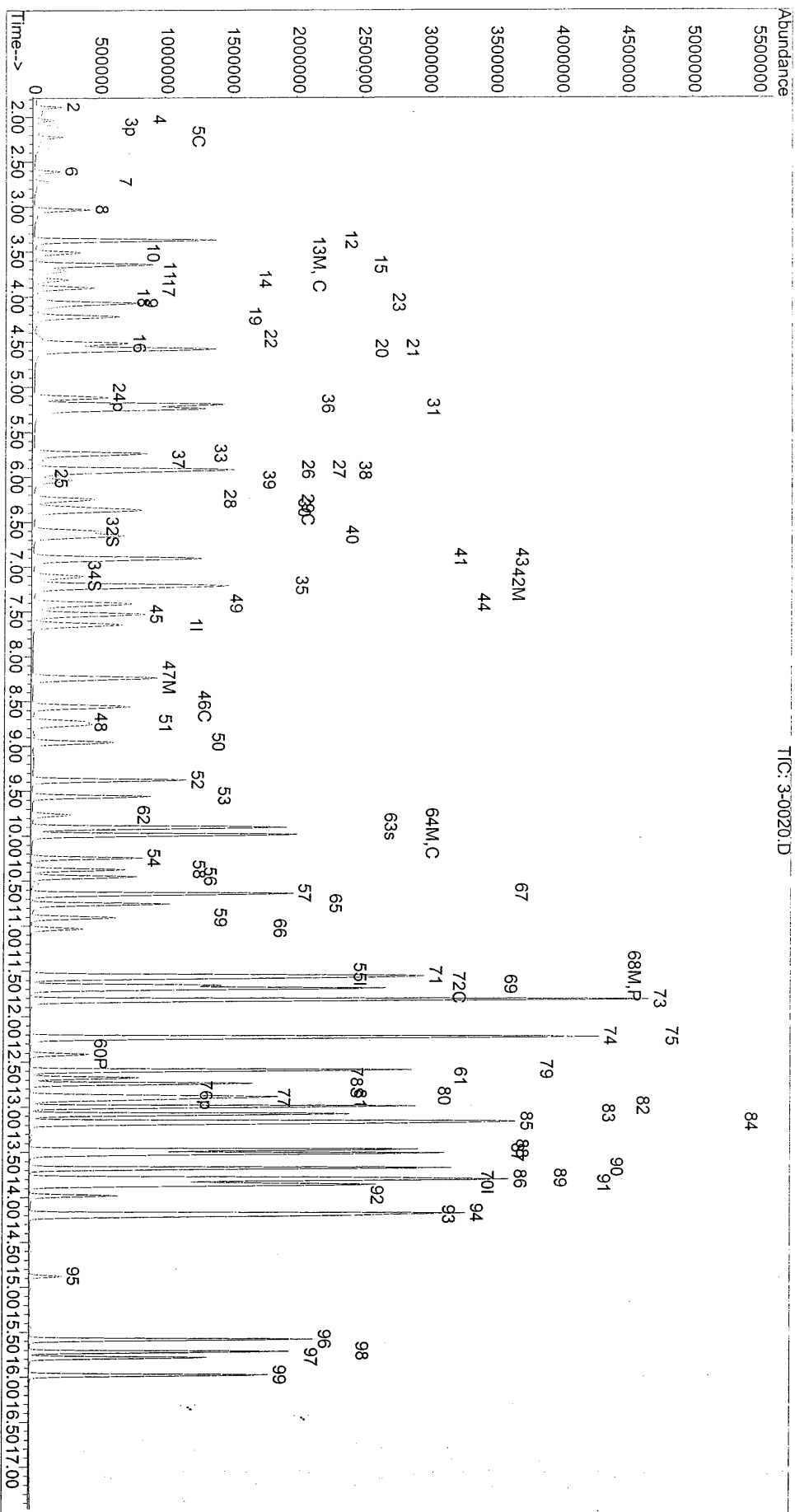
Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:22 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:40 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.78	0.000	146	148	1176.380	15.82	15.8	97	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	2530.666	16.61	16.6	98	
82	14-DCB	13.87	13.87	0.000	146	148	1184.125	15.62	15.6	96	
83	Cl-benzyl	13.98	13.98	0.000	126	91	106.539	14.86	14.9	84	#
84	12-DCB	14.21	14.21	0.000	146	148	1055.514	15.94	15.9	97	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	567.085	16.79	16.8	82	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	83.208	17.84	17.8	98	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	702.123	16.37	16.4	99	
88	naphthalene	15.78	15.78	0.000	128	129	1159.824	14.90	14.9	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	360.400	13.88	13.9	98	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	600.915	15.62	15.6	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0020.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:22 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:40 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000



Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M

Acq. Time : Oct 21 11:47 2003

Method Update: Mon Oct 27 13:48 2003

Quant. Time : Oct 27 13:43 2003

Print Time : Mon Oct 27 13:50 2003

Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1479

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
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Internal Standards

1	Fluorobenzene	7.65	7.63	0.003	96	70	907.151	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	659.336	10.00		0.00	
62	1,4-Dichlorobenzene	13.85	13.84	0.000	152	150	398.842	10.00		0.00	

Dev(Min)

System Monitoring Compounds (Surrogate)

27	Di-Br-F-Me (surr)	6.60	6.58	0.002	111	113	880.145	38.93	38.9	194.66%	
29	1,2-Di-Cl-Et-d4 (	7.11	7.08	0.002	65	102	801.084	43.75	43.8	218.76%	
55	toluene-d8	9.91	9.89	0.000	98	100	3175.057	38.21	38.2	191.05%	
70	4-Br-1-F-Bz (S3)	12.75	12.74	0.000	174	95	1114.624	33.79	33.8	168.94%	

%Recovery

Target Compounds

<<< I1 : ISTD ID = 1 >>>

Qvalue

3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	731.076	32.10	32.1	99	m
4	Chloromethane	2.11	2.07	0.006	50	52	739.859	34.67	34.7	99	m
2	F114	2.03	2.00	0.005	85	135	367.886	30.90	30.9	51	m
5	vinyl chloride	2.23	2.19	0.005	62	64	640.709	29.14	29.1	99	
6	bromomethane	2.61	2.58	0.005	94	96	383.891	36.34	36.3	98	m
7	chloroethane	2.73	2.70	0.004	64	66	376.464	28.76	28.8	0	
8	tri-Cl-F-methane	3.04	3.00	0.006	101	103	1030.751	31.64	31.6	98	
91	Acetonitrile X10	4.07	4.04	0.004	41	40	1713.507	430.55	430.5	92	?
9	acrolein X10	3.52	3.48	0.006	56	55	807.796	322.86	322.9	0	m
11	acetone X10	3.74	3.69	0.006	43	58	1267.205	327.75	327.8	0	m
12	ethyl ether X5	3.37	3.34	0.005	59	74	1704.647	147.96	148.0	74	#
13	11-dichloroethene	3.64	3.60	0.005	61	96	877.445	33.74	33.7	80	?
14	Iodomethane	3.82	3.78	0.005	142	127	751.141	32.68	32.7	94	
15	F-113	3.65	3.62	0.005	101	151	516.639	25.27	25.3	91	?
16	acrylonitrile X10	4.53	4.49	0.005	53	52	1709.905	421.65	421.6	93	
17	carbon disulfide	3.90	3.87	0.004	76	78	1671.671	25.29	25.3	98	m
94	Isopropyl Alcohol	4.16	4.01	0.020	45	43	240.070	345.94	345.9	100	#
18	methylene chlorid	4.22	4.19	0.005	84	49	804.880	19.01	19.0	77	
19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	774.111	31.59	31.6	88	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:47 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:43 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1480

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.60	4.56	0.005	73	57	1592.599	39.05	39.0	94	
95	Tert butyl alcoho	4.58	4.47	0.014	59	57	452.680	417.24	417.2	100	
94	allyl chloride	4.07	4.04	0.004	41	76	1724.483	48.32	48.3	72	
21	11-dichloroethane	5.12	5.09	0.004	63	83	1398.310	35.56	35.6	99	
97	propionitrile	6.03	5.99	0.004	54	51	62.391	41.00	41.0	100	
22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	845.644	34.23	34.2	94	
23	22-Dichloropropan	5.92	5.89	0.004	77	97	979.998	34.83	34.8	100	
24	Br-Cl-methane	6.25	6.23	0.003	128	130	438.926	36.64	36.6	96	
25	chloroform	6.38	6.35	0.003	83	85	1492.648	34.39	34.4	99	
26	tetrahydrofuranX5	6.35	6.32	0.003	42	72	726.346	243.80	243.8	81	
98	Disopropyl ether	5.24	5.22	0.003	45	87	2723.439	44.98	45.0	88	
99	ETBE	5.74	5.72	0.003	59	87	1934.215	41.79	41.8	90	
30	12-dichloroethane	7.22	7.20	0.003	64	62	303.955	43.02	43.0	92	
32	vinyl acetate X5	5.20	5.17	0.004	43	86	7301.957	257.99	258.0	91	
92	Nitro Methane(X10	5.84	5.80	0.006	61	46	134.103	266.20	266.2	67	
33	2-butanoneMEK X10	5.95	5.92	0.004	43	72	2014.463	426.65	426.7	85	
93	Ethyl Acetate x2	6.04	6.02	0.003	43	61	1199.719	106.69	106.7	99	
34	111-trichloroetha	6.65	6.63	0.002	97	99	1352.461	37.01	37.0	99	
35	11-Di-Cl-propene	6.90	6.88	0.002	75	110	1020.849	36.97	37.0	92	
36	benzene	7.21	7.19	0.003	78	52	3067.808	33.32	33.3	92	
37	CCl4	6.91	6.89	0.003	117	119	1228.562	36.46	36.5	99	
100	Isobutyl alcohol	7.41	7.39	0.002	43	42	552.842	1482.14	1482.1	86	
38	thiophene	7.53	7.51	0.003	84	58	1718.044	37.54	37.5	92	
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	752.605	36.53	36.5	96	
40	trichloroethene	8.24	8.23	0.002	130	132	1020.048	35.54	35.5	90	
41	dibromomethane	8.73	8.71	0.002	174	172	508.912	38.94	38.9	100	
101	TAME	7.41	7.39	0.002	73	43	1622.049	40.42	40.4	89	
42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	1129.675	38.03	38.0	100	
43	Me-methacrylate	8.76	8.75	0.002	69	100	435.160	46.87	46.9	88	
44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1294.105	721.80	721.8	82	
45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1252.896	41.84	41.8	91	
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	1067.475	44.83	44.8	93	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:47 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:43 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1481

ID	Component Name	R.T.	RT0	DRRT	Q1on	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	644.393	40.50	40.5	94	
49	13-di-Cl-propane	10.65	10.64	0.001	76	78	958.048	38.17	38.2	100	?
50	Et methacrylate	10.37	10.37	0.000	69	99	897.662	49.86	49.9	91	
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	895.491	41.85	41.8	99	
52	bromoform	12.42	12.41	0.000	173	174	537.161	43.98	44.0	100	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	1118.631	47.88	47.9	96	
54	MIBK	9.77	9.76	0.000	43	58	567.049	59.05	59.1	97	
55	toluene	9.99	9.98	0.001	91	92	3679.239	38.53	38.5	100	
56	2-hexanone X5	10.76	10.75	0.000	43	58	1789.801	274.61	274.6	92	
57	12-dibromoethane	11.03	11.03	0.000	107	109	683.020	43.51	43.5	98	
58	tetra-Cl-ethene	10.65	10.64	0.001	166	168	1001.817	35.11	35.1	98	
59	chlorobenzene	11.58	11.57	0.000	112	77	2492.370	36.63	36.6	93	
60	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	969.491	39.89	39.9	97	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	379.300	29.16	29.2	63	#?
64	Et-Bz	11.70	11.69	0.000	91	106	4307.205	34.51	34.5	97	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	6407.191	67.91	67.9	98	
66	styrene	12.24	12.23	0.000	104	78	2712.603	37.82	37.8	99	
67	O-xylene	12.22	12.22	0.000	91	106	3289.680	34.76	34.8	100	
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	679.431	32.25	32.2	98	
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	231.129	36.65	36.6	92	
70	isopropylbenzene	12.60	12.59	0.000	105	120	4576.796	37.74	37.7	96	
71	bromobenzene	12.89	12.89	0.000	156	158	1123.002	34.48	34.5	98	
72	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	138.278	45.13	45.1	84	#?
73	n-propylbenzene	13.00	12.99	0.000	120	78	1290.074	33.97	34.0	96	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1084.812	32.32	32.3	98	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1062.470	31.12	31.1	99	
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	3906.361	37.42	37.4	94	
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	4215.398	36.16	36.2	99	
78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	4147.713	38.15	38.2	94	
79	tert-butylbenzene	13.48	13.47	0.000	119	91	3598.467	36.10	36.1	96	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-004v.D
Method : C:\MSDCHEM\1\METHODS\E524A003.M
Acq. Time : Oct 21 11:47 2003
Method Update: Mon Oct 27 13:48 2003
Quant. Time : Oct 27 13:43 2003
Print Time : Mon Oct 27 13:50 2003
Miscellaneous :

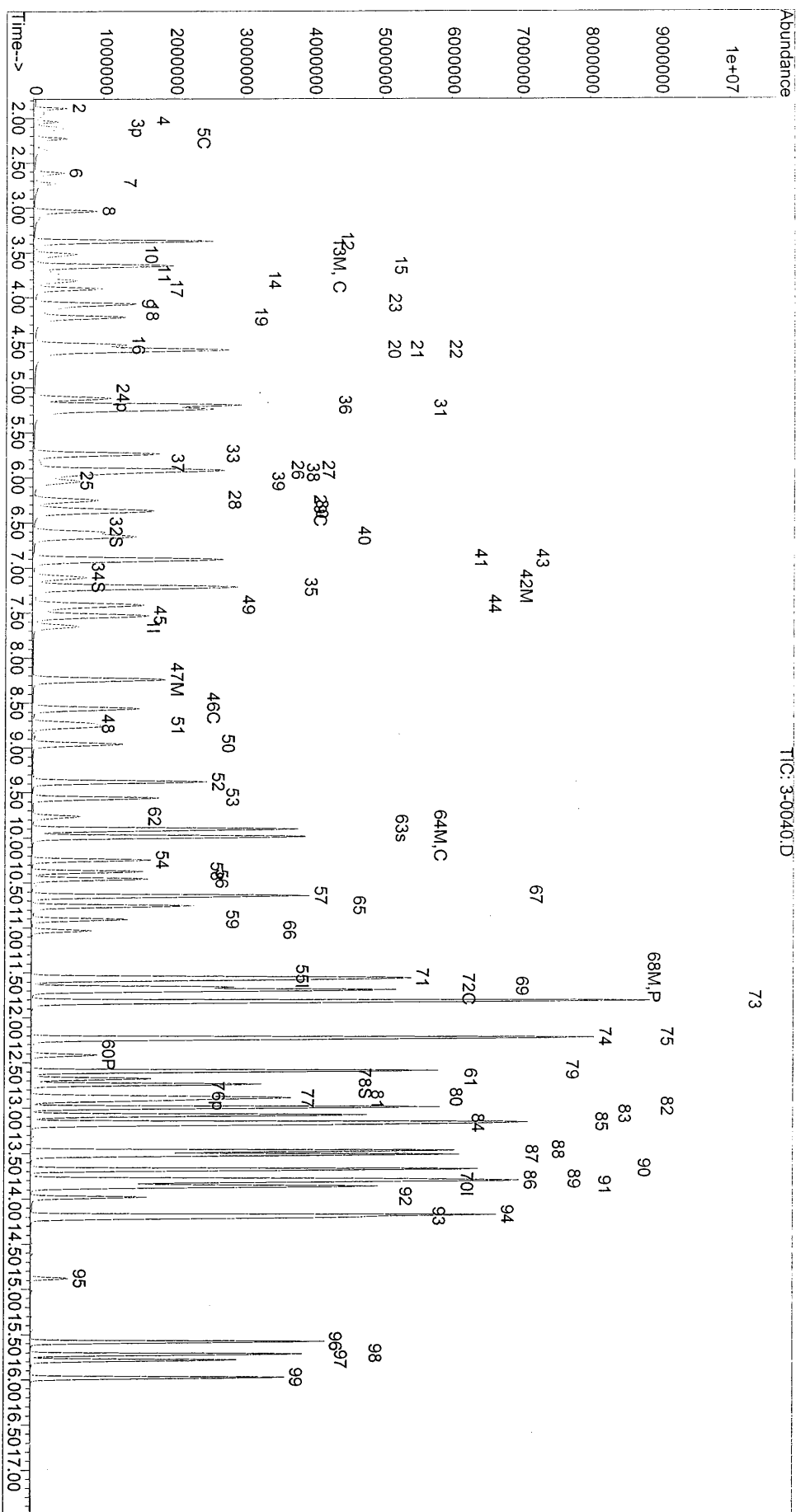
Sample : f=1
Inst. : GCMS-A
RF via : Multiple Level Calibration
Operator: zou
Multiplier: 1.000000

1482

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.78	0.000	146	148	2227.519	32.53	32.5	98	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	5231.475	37.29	37.3	100	
82	14-DCB	13.87	13.87	0.000	146	148	2334.471	33.46	33.5	96	
83	Cl-benzyl	13.98	13.98	0.000	126	91	268.318	40.67	40.7	84	#
84	12-DCB	14.21	14.21	0.000	146	148	2046.326	33.56	33.6	99	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	1127.859	36.28	36.3	87	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	177.685	41.39	41.4	99	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	1402.301	35.52	35.5	100	
88	naphthalene	15.78	15.78	0.000	128	129	2506.296	34.99	35.0	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	746.186	31.22	31.2	97	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1229.181	34.70	34.7	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0040.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 11:47 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:43 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : F=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000



Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-006v.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 12:14 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:45 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

1484

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
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Internal Standards											
1	Fluorobenzene	7.65	7.63	0.003	96	70	1006.211	10.00		0.02	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	705.610	10.00		0.00	
62	1,4-Dichlorobenzene	13.85	13.84	0.000	152	150	428.493	10.00		0.00	

System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.58	0.002	111	113	1314.263	52.41	52.4	262.06%	
29	1,2-Di-Cl-Et-d4	7.11	7.08	0.002	65	102	1206.050	59.38	59.4	296.92%	
55	toluene-d8	9.91	9.89	0.000	98	100	4699.033	52.84	52.8	264.21%	
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	1638.683	46.24	46.2	231.18%	

Target Compounds
 <<< 11 : ISTD ID = 1 >>>
 Qvalue

3	di-Cl-di-F-methan	1.89	1.85	0.005	85	87	1099.511	43.53	43.5	100	
4	Chloromethane	2.11	2.07	0.005	50	52	1132.557	54.69	54.7	98	
2	F114	2.03	2.00	0.005	85	135	551.592	41.76	41.8	32	
5	vinyl chloride	2.22	2.19	0.004	62	64	982.033	40.26	40.3	99	
6	bromomethane	2.61	2.58	0.005	94	96	601.141	51.30	51.3	98	
7	chloroethane	2.73	2.70	0.004	64	66	536.590	36.96	37.0	0	
8	tri-Cl-F-methane	3.03	3.00	0.005	101	103	1532.166	42.41	42.4	99	
91	Acetonitrile X10	4.07	4.04	0.004	41	40	2428.244	550.07	550.1	95	
9	acrolein X10	3.51	3.48	0.005	56	55	1232.252	535.84	535.8	100	
11	acetone X10	3.72	3.69	0.004	43	58	1816.586	837.75	837.8	0	
12	ethyl ether X5	3.37	3.34	0.004	59	74	2654.028	257.12	257.1	77	
13	11-dichloroethene	3.64	3.60	0.005	61	96	1367.991	47.43	47.4	0	
14	Iodomethane	3.81	3.78	0.004	142	127	1123.042	44.04	44.0	95	
15	F-113	3.65	3.62	0.005	101	151	784.890	40.46	40.5	86	
16	acrylonitrile X10	4.52	4.49	0.004	53	52	2532.493	563.01	563.0	97	
17	carbon disulfide	3.90	3.87	0.004	76	78	2561.651	34.93	34.9	100	
94	Isopropyl Alcohol	4.05	4.01	0.006	45	43	128.634	203.26	203.3	100	
18	methylene chlorid	4.22	4.19	0.004	84	49	1192.483	48.64	48.6	74	
19	t-12-di-Cl-ethene	4.58	4.55	0.004	96	61	1126.298	41.44	41.4	84	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 12:14 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:45 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1485

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.56	0.004	73	57	2437.498	53.88	53.9	92	?
95	Tert butyl alcoho	4.48	4.47	0.002	59	57	251.872	209.71	209.7	100	#
94	allyl chloride	4.07	4.04	0.004	41	76	2428.244	61.34	61.3	72	#?
21	11-dichloroethane	5.12	5.09	0.004	63	83	2101.878	48.19	48.2	100	#?
97	propionitrile	6.01	5.99	0.002	54	51	109.975	65.15	65.2	100	#?
22	c-12-di-Cl-ethene	5.92	5.89	0.003	96	61	1210.430	44.17	44.2	93	?
23	22-Dichloropropan	5.92	5.89	0.003	77	97	1513.030	56.27	56.3	98	?
24	Br-Cl-methane	6.25	6.23	0.003	128	130	655.419	49.32	49.3	97	?
25	chloroform	6.37	6.35	0.002	83	85	2229.387	54.70	54.7	99	?
26	tetrahydrofuranX5	6.34	6.32	0.002	42	72	1114.014	337.11	337.1	81	#
98	Disopropyl ether	5.24	5.22	0.003	45	87	4088.155	60.87	60.9	87	#
99	ETBE	5.74	5.72	0.003	59	87	2984.281	58.13	58.1	90	#
30	12-dichloroethane	7.22	7.20	0.003	64	62	463.659	65.98	66.0	99	?
32	vinyl acetate X5	5.20	5.17	0.004	43	86	11062.661	352.38	352.4	90	?
92	Nitro Methane(X10	5.82	5.80	0.002	61	46	298.076	533.44	533.4	95	?
33	2-butanoneMEK X10	5.95	5.92	0.003	43	72	3034.414	734.41	734.4	85	?
93	Ethyl Acetate x2	6.04	6.02	0.002	43	61	1687.653	154.04	154.0	98	?
34	111-trichloroetha	6.65	6.63	0.002	97	99	2070.811	51.08	51.1	98	?
35	11-Di-Cl-propene	6.91	6.88	0.003	75	110	1516.179	49.50	49.5	88	?
36	benzene	7.21	7.19	0.003	78	52	4519.766	44.25	44.3	90	?
37	CCl4	6.91	6.89	0.003	117	119	1842.053	49.28	49.3	99	?
100	Isobutyl alcohol	7.41	7.39	0.002	43	42	880.424	1806.00	1806.0	99	?
38	thiophene	7.53	7.51	0.003	84	58	2554.816	50.32	50.3	93	?
39	12-di-Cl-propane	8.56	8.54	0.002	63	76	1124.998	49.23	49.2	97	?
40	trichloroethene	8.24	8.23	0.002	130	132	1520.360	47.76	47.8	92	?
41	dibromomethane	8.73	8.71	0.002	174	172	747.601	51.57	51.6	99	?
101	TAME	7.41	7.39	0.002	73	43	2525.816	56.74	56.7	88	?
42	Br-di-Cl-methane	8.96	8.95	0.002	83	85	1703.118	57.00	57.0	99	?
43	Me-methacrylate	8.76	8.75	0.002	69	100	662.734	54.98	55.0	88	?
44	2-ClEt-Vi-ether10	9.38	9.37	0.002	63	43	1950.851	684.59	684.6	82	?
45	c-13-di-Cl-propen	9.56	9.55	0.002	75	110	1891.415	56.95	57.0	94	?
46	t-1,3-dichloropro	10.25	10.24	0.000	75	110	1638.452	62.04	62.0	94	?

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 12:14 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:45 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplier: 1.000000

1486

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	936.372	54.99	55.0	95	
49	13-di-Cl-propane	10.65	10.64	0.001	76	78	1392.110	51.83	51.8	100	
50	Et methacrylate	10.38	10.37	0.000	69	99	1374.874	61.96	62.0	92	?
51	di-Br-Cl-methane	10.91	10.90	0.000	129	127	1332.246	61.52	61.5	99	
52	bromoform	12.41	12.41	0.000	173	174	813.031	62.20	62.2	100	
53	1,4-dichlorobutan	12.68	12.67	0.000	55	41	1708.578	68.33	68.3	98	
54	MIBK	9.77	9.76	0.000	43	58	883.730	86.00	86.0	98	
56	toluene	9.99	9.98	0.001	91	92	5453.434	53.36	53.4	99	
57	2-hexanone X5	10.76	10.75	0.000	43	58	2714.840	389.23	389.2	91	
58	12-dibromoethane	11.03	11.03	0.000	107	109	1029.927	61.31	61.3	98	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	1436.032	47.03	47.0	97	?
60	chlorobenzene	11.58	11.57	0.000	112	77	3536.493	53.79	53.8	95	
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	1437.439	55.27	55.3	95	?
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	546.400	39.10	39.1	57	#?
64	Et-Bz	11.70	11.69	0.000	91	106	6378.701	47.58	47.6	98	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	9314.343	91.90	91.9	94	
66	styrene	12.24	12.23	0.000	104	78	3842.415	49.86	49.9	98	?
67	o-xylene	12.22	12.22	0.000	91	106	4761.198	46.82	46.8	98	
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	1005.365	44.41	44.4	99	?
69	123-tri-Cl-Pr	12.91	12.91	0.000	110	97	345.542	51.00	51.0	95	
71	isopropylbenzene	12.60	12.59	0.000	105	120	6821.750	52.36	52.4	95	
72	bromobenzene	12.89	12.89	0.000	156	158	1610.222	46.02	46.0	100	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	214.154	53.26	53.3	84	#?
73	n-propylbenzene	13.00	12.99	0.000	120	78	1877.926	46.02	46.0	95	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	1601.091	44.40	44.4	98	
75	4-Cl-Toluene	13.19	13.18	0.000	126	128	1497.703	40.83	40.8	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	5670.674	50.56	50.6	91	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	6174.914	49.30	49.3	97	?
78	124-tri-Me-Benzen	13.52	13.51	0.000	105	120	6124.395	52.44	52.4	93	?
79	tert-butylbenzene	13.48	13.47	0.000	119	91	5289.165	49.39	49.4	98	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

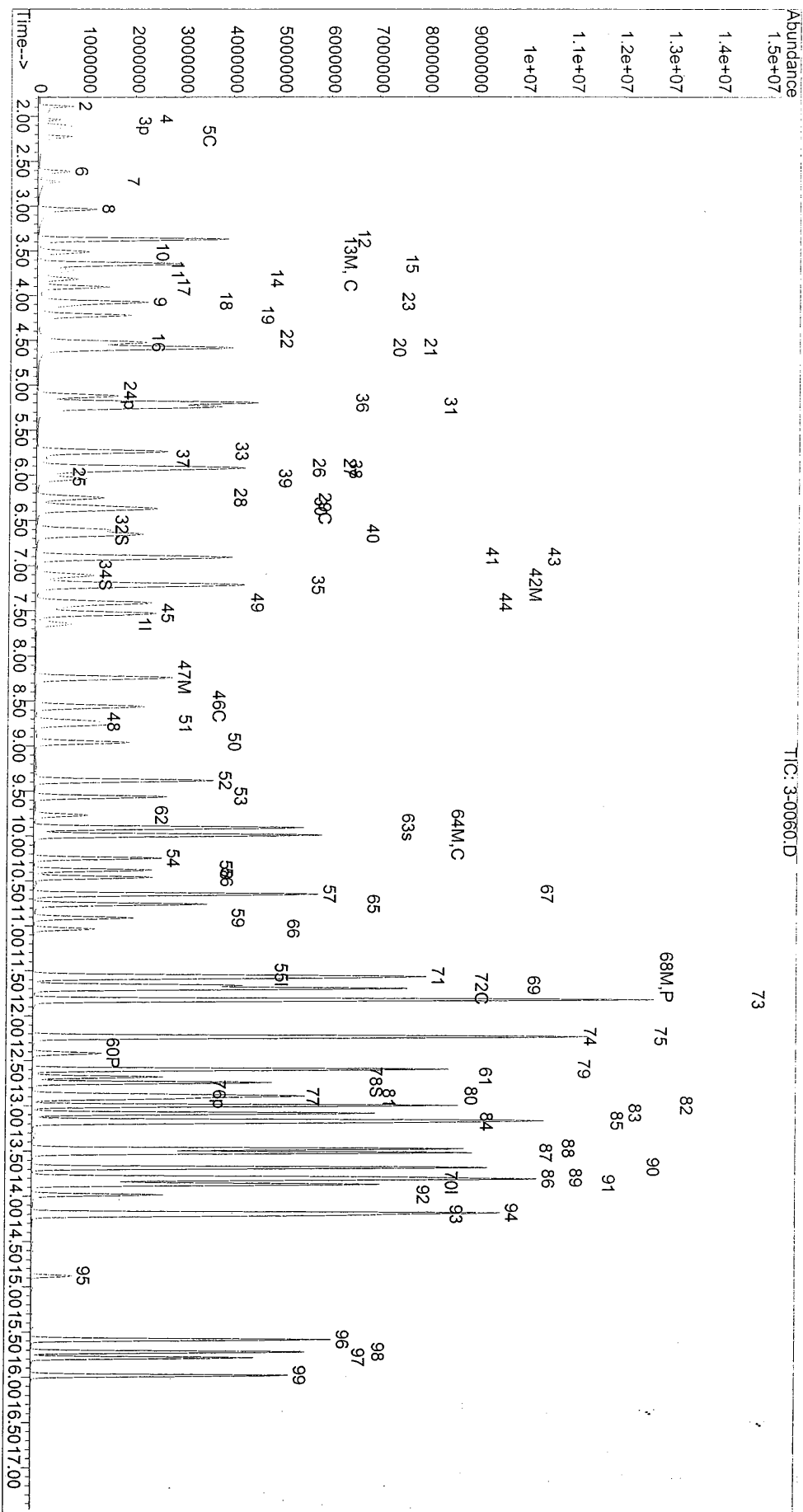
Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 12:14 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:45 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :
 Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.78	0.000	146	148	3166.301	43.04	43.0	97	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	7732.088	51.30	51.3	99	
82	14-DCB	13.87	13.87	0.000	146	148	3417.867	48.86	48.9	95	
83	Cl-benzyl	13.98	13.98	0.000	126	91	431.461	60.87	60.9	98	
84	12-DCB	14.21	14.21	0.000	146	148	2953.834	45.10	45.1	97	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	1596.385	43.23	43.2	93	?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	276.212	59.89	59.9	99	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	2085.639	49.18	49.2	96	
88	naphthalene	15.78	15.78	0.000	128	129	3927.146	51.03	51.0	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	1096.494	42.70	42.7	100	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	1798.500	47.26	47.3	99	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

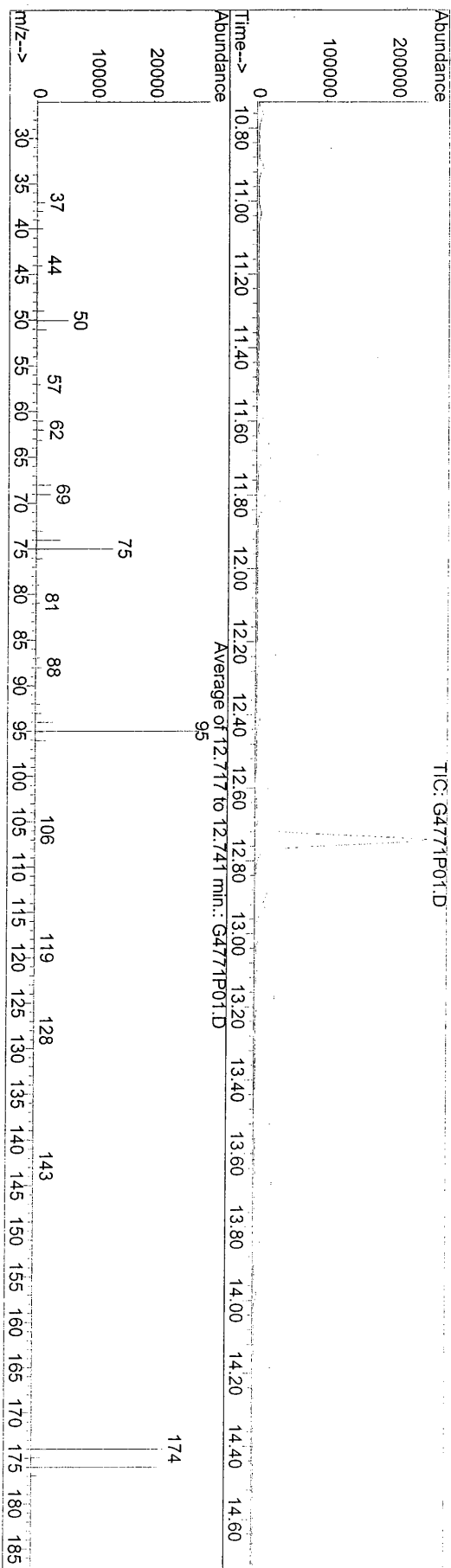
Data Filename: C:\MSDCHEM\1\DATA\03G4612\3-0060.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Oct 21 12:14 2003
 Method Update: Mon Oct 27 13:48 2003
 Quant. Time : Oct 27 13:45 2003
 Print Time : Mon Oct 27 13:50 2003
 Miscellaneous :

Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000



Data File : C:\MSDCHEM\1\DATA\03G4771\G4771P01.D
 Acq On : 11 Nov 2003 7:55 pm
 Sample : ##03g4771, w 50 ng
 Misc :
 MS Integration Params: Lscint.p
 Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2

Vial: 1
 Operator: zou
 Inst : GCMS-A
 Multiplr: 1.00



Spectrum Information: Average of 12.717 to 12.741 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result
50	95	15	40	18.9	5344	PASS
75	95	30	60	46.0	13021	PASS
95	95	100	100	100.0	28294	PASS
96	95	5	9	6.3	1780	PASS
173	174	0.00	2	0.4	86	PASS
174	95	50	100	79.6	22535	PASS
175	174	5	9	9.0	2018	PASS
176	174	95	101	96.5	21748	PASS
177	176	5	9	6.5	1404	PASS

FORM-5A

Applied P & Ch Laboratory

Volatile Organic Instrument Performance Check for Method 524.2

Bromofluorobenzene (BFB), Part II

Client Name: GEOFON, Inc.
Case No:
Project ID: JPL GW Mon-4Q03
Project No: 04-4428.10
Data File Name: G4771P01

Contract No:
SAS No:
BFB Inj. Date: 11/11/03
BFB Inj. Time: 19:55
Instrument ID: A
Heated Purge: (Y/N) N

Lab Code: APCL
Service ID: 036002
Batch No: 03G4771
Sequence No: 03G4771
GC Column: HP-VOC
Column ID: 0.20 mm

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

#	Client Sample No	Lab Sample ID	Data File Name	Date Analyzed	Time Analyzed
1	03G4771-CCV-01	03G4771-CCV-01	G4771Q01	11/11/03	20:21
2	03G4771-LCS-01	03G4771-LCS-01	G4771L01	11/11/03	20:46
3	MW-5MS	03-6002-2MS	G4771M01	11/11/03	21:38
4	MW-5MSD	03-6002-2MSD	G4771N01	11/11/03	22:04
5	03G4771-MB-01	03G4771-MB-01	G4771K01	11/12/03	01:17
6	TB-11-6-03	03-6002-5	6002-05	11/12/03	02:15
7	MW-5	03-6002-2	6002-02	11/12/03	03:33
8	DUPE-7-4-Q03	03-6002-1	6002-01	11/12/03	03:59
9	MW-8	03-6002-3	6002-03	11/12/03	04:26
10	MW-10	03-6002-4	6002-04	11/12/03	04:52
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Continuing Calibration Concentration Summary

Data File G4771Q01

Method File E524A003

<u>Compound Name</u>	<u>Amount</u>	<u>Actual</u>	<u>Units</u>	<u>%Dev</u>	<u>Target Response</u>
1 Fluorobenzene	10	10.00	ppb	0.00	648705
3 di-Cl-di-F-methane	20	18.09	ppb	9.55	236014
4 Chloromethane	20	12.06	ppb	39.69	156277
2 F114	20	19.43	ppb	2.86	119259
5 vinyl chloride	20	16.30	ppb	18.51	180287
6 bromomethane	20	12.56	ppb	37.19	78937
7 chloroethane	20	17.87	ppb	10.66	106450
8 tri-Cl-F-methane	20	22.87	ppb	14.34	418258
91 Acetonitrile X10	200	171.16	ppb	14.42	478387
9 acrolein X10	200	182.44	ppb	8.78	250437
11 acetone X10	200	175.87	ppb	12.06	364495
12 ethyl ether X5	100	92.37	ppb	7.63	569304
13 11-dichloroethene	20	20.68	ppb	3.40	318706
14 Iodomethane	20	7.98	ppb	60.10	101487
15 F-113	20	23.06	ppb	15.28	215535
16 acrylonitrile X10	200	172.76	ppb	13.62	480760
17 carbon disulfide	20	15.85	ppb	20.77	465029
94 Isopropyl Alcoholx10	200	523.05	ppb	161.52	69469
18 methylene chloride	20	17.58	ppb	12.09	242614
19 t-12-di-Cl-ethene	20	17.76	ppb	11.19	257248
20 t-Bu-Me-ether	20	20.53	ppb	2.63	523188
95 Tert butyl alcoholx10	200	329.22	ppb	64.61	140138
94 allyl chloride	20	16.73	ppb	16.37	478387
21 11-dichloroethane	20	18.46	ppb	7.69	442921
97 propionitrile	20	17.58	ppb	12.08	20109
22 c-12-di-Cl-ethene	20	18.48	ppb	7.60	279184
23 22-Dichloropropane	20	24.66	ppb	23.28	377449
24 Br-Cl-methane	20	18.45	ppb	7.76	140909
25 chloroform	20	19.56	ppb	2.19	527523
26 tetrahydrofuranX5	100	83.11	ppb	16.89	186784
98 Diisopropyl ether	20	18.23	ppb	8.87	839624
27 Di-Br-F-Me (surr)	20	20.13	ppb	0.63	306557
99 ETBE	20	21.57	ppb	7.87	626611
29 1,2-Di-Cl-Et-d4 (S1)	20	20.91	ppb	4.57	283742
30 12-dichloroethane	20	21.32	ppb	6.59	112093
32 vinyl acetate X5	100	98.35	ppb	1.65	2210560
92 Nitro Methane(x10)	200	82.27	ppb	58.87	62329
33 2-butanoneMEK X10	200	175.13	ppb	12.43	592745
93 Ethyl Acetate x2	40	35.79	ppb	10.51	299980
34 111-trichloroethane	20	23.08	ppb	15.42	523515
35 11-Di-Cl-propene	20	20.45	ppb	2.26	350064
36 benzene	20	17.72	ppb	11.40	972148
37 CCl4	20	24.90	ppb	24.52	519310

<u>Compound Name</u>	<u>Amount</u>	<u>Actual</u>	<u>Units</u>	<u>%Dev</u>	<u>Target Response</u>
100 Isobutyl alcoholx10	200	212.46	ppb	6.23	176984
38 thiophene	20	18.91	ppb	5.45	540056
39 12-di-Cl-propane	20	17.67	ppb	11.66	221801
40 trichloroethene	20	19.51	ppb	2.45	342927
41 dibromomethane	20	19.52	ppb	2.41	170442
101 TAME	20	19.08	ppb	4.59	510416
42 Br-di-Cl-methane	20	20.01	ppb	0.05	395417
43 Me-methacrylate	20	16.67	ppb	16.63	116871
44 2-ClEt-Vi-ether10	200	134.62	ppb	32.69	288370
45 c-13-di-Cl-propene	20	19.84	ppb	0.82	394857
46 t-1,3-dichloropropene	20	19.64	ppb	1.82	349316
47 Chlorobezene-d5	10	10.00	ppb	0.00	495670
48 112-tri-Cl-Et	20	18.53	ppb	7.33	203392
49 13-di-Cl-propane	20	19.07	ppb	4.64	321083
50 Et methacrylate	20	16.71	ppb	16.43	255825

<u>Compound Name</u>	<u>Amount</u>	<u>Actual</u>	<u>Units</u>	<u>%Dev</u>	<u>Target Response</u>
51 di-Br-Cl-methane	20	20.18	ppb	0.90	314220
52 bromoform	20	20.71	ppb	3.56	189669
53 1,4-dichlorobutane-2	20	18.67	ppb	6.63	346373
54 MIBK	20	15.55	ppb	22.23	148712
55 toluene-d8	20	19.10	ppb	4.52	1044814
56 toluene	20	17.85	ppb	10.74	1198320
57 2-hexanone X5	100	82.13	ppb	17.87	503832
58 12-dibromoethane	20	18.70	ppb	6.48	210321
59 tetra-Cl-ethene	20	21.31	ppb	6.55	393755
60 chlorobenzene	20	19.29	ppb	3.57	883342
61 1112-tetra-Cl-Et	20	21.35	ppb	6.77	364035
62 1,4-Dichlorobenzene-d4	10	10.00	ppb	0.00	306638
63 1-chlorohexane	20	20.18	ppb	0.88	141280
64 Et-Bz	20	19.32	ppb	3.40	1505927
65 m/p-Xylenes X2	40	39.08	ppb	2.30	2356272
66 styrene	20	19.51	PPB	2.47	990373
67 o-xylene	20	19.76	ppb	1.18	1203304
68 1122-Tetra-Cl-Et	20	17.90	ppb	10.48	217397
69 123-tri-Cl-Pr	20	20.01	ppb	0.04	80664
70 4-Br-1-F-Bz (S3)	20	20.08	ppb	0.42	417338
71 isopropylbenzene	20	20.75	ppb	3.75	1688975
72 bromobenzene	20	20.16	ppb	0.79	415302
92 t-1,4-dichloro-2-butene	20	18.21	ppb	8.93	43762
73 n-propylbenzene	20	21.17	ppb	5.83	498861
74 2-Cl-Toluene	20	20.38	ppb	1.91	407381
75 4-Cl-Toluene	20	19.97	ppb	0.15	410131
76 135-tri-Me-Benzene	20	20.98	ppb	4.91	1506141
77 4-iso-Pr-toluene	20	21.59	ppb	7.96	1669502
78 124-tri-Me-Benzene	20	20.69	ppb	3.47	1555566
79 tert-butylbenzene	20	21.68	ppb	8.38	1365888
80 13-DCB	20	20.03	ppb	0.13	857264
81 sec-butylbenzene	20	21.36	ppb	6.80	2010030

82 14-DCB	20	19.10	ppb	4.52	855464
83 Cl-benzyl	20	18.26	ppb	8.69	84303
84 12-DCB	20	19.73	ppb	1.35	773523
85 n-butylbenzene	20	21.96	ppb	9.80	448411
86 12-diBr-2-Cl-Pra	20	19.32	ppb	3.39	56374
87 124-tri-Cl-Bz	20	21.50	ppb	7.48	524901
88 naphthalene	20	19.34	ppb	3.29	872593
89 hx-Cl-butadiene	20	23.94	ppb	19.71	334524
90 123-Tri-Cl-Bz	20	21.70	ppb	8.49	457343

Average D % 11.558642

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
 Acq On : 11 Nov 2003 8:21 pm Operator: zou
 Sample : f=1 Inst : GCMS-A
 Misc : Multiplr: 1.00
 MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 14:05:06 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area#	Dev(min)
1 I 1 Fluorobenzene	1.000	1.000	0.0	68	0.00
2 3 di-Cl-di-F-methane	0.201	0.182	9.5	78	0.00
3 P 4 Chloromethane	0.200	0.120	40.0#	45#	0.00
4 2 F114	0.091	0.092	-1.1	76	0.00
5 C 5 vinyl chloride	0.171	0.139	18.7	63	0.00
6 bromomethane	0.097	0.061	37.1#	47#	0.00
7 chloroethane	0.092	0.082	10.9	67	0.00
8 tri-Cl-F-methane	0.282	0.322	-14.2	91	0.00
9 91 Acetonitrile X10	0.043	0.037	14.0	60	0.00
10 9 acrolein X10	0.021	0.019	9.5	66	0.00
11 11 acetone X10	0.032	0.028	12.5	68	0.00
12 12 ethyl ether X5	0.095	0.088	7.4	65	0.00
13 M, C 13 11-dichloroethene	0.238	0.246	-3.4	78	0.00
14 14 Iodomethane	0.178	0.078	56.2#	28#	0.00
15 15 F-113	0.144	0.166	-15.3	96	0.00
16 16 acrylonitrile X10	0.043	0.037	14.0	61	0.00
17 17 carbon disulfide	0.452	0.358	20.8#	60	0.00
18 94 Isopropyl Alcoholx10	0.002	0.005	-150.0#	242#	0.00
19 18 methylene chloride	0.248	0.187	24.6#	60	0.00
20 19 t-12-di-Cl-ethene	0.223	0.198	11.2	63	0.00
21 20 t-Bu-Me-ether	0.393	0.403	-2.5	70	0.00
22 95 Tert butyl alcoholx10	0.007	0.011	-57.1#	182	-0.01
23 94 allyl chloride	0.441	0.369	16.3	60	0.00
24 P 21 11-dichloroethane	0.370	0.341	7.8	64	0.00
25 97 propionitrile	0.018	0.015	16.7	69	0.00
26 22 c-12-di-Cl-ethene	0.233	0.215	7.7	64	0.00

(#) = Out of Range

G4771Q01.D E524A003.M Wed Nov 12 09:40:10 2003

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
 Acq On : 11 Nov 2003 8:21 pm
 Sample : f=1
 Misc :
 MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 14:05:06 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AvgRF	CCRF	%Dev	Area#	Dev(min)
27 23 22-Dichloropropane	0.236	0.291	-23.3#	83	0.00
28 24 Br-Cl-methane	0.118	0.109	7.6	65	0.00
29 C 25 chloroform	0.416	0.407	2.2	71	0.00
30 26 tetrahydrofuranX5	0.035	0.029	17.1	59	0.00
31 98 Diisopropyl ether	0.710	0.647	8.9	61	0.00
32 S 27 Di-Br-F-Me (surr)	0.235	0.236	-0.4	70	0.00
33 99 ETBE	0.448	0.483	-7.8	71	0.00
34 S 29 1,2-Di-Cl-Et-d4 (S1)	0.209	0.219	-4.8	74	0.00
35 30 12-dichloroethane	0.081	0.086	-6.2	77	0.00
36 32 vinyl acetate X5	0.346	0.341	1.4	64	0.00
37 92 Nitro Methane(x10)	0.012	0.005	58.3#	65	-0.02
38 33 2-butanoneMEK X10	0.052	0.046	11.5	62	0.00
39 93 Ethyl Acetate x2	0.129	0.116	10.1	64	0.00
40 34 111-trichloroethane	0.350	0.404	-15.4	83	0.00
41 35 11-Di-Cl-propene	0.264	0.270	-2.3	72	0.00
42 M 36 benzene	0.846	0.749	11.5	61	0.00
43 37 CCl4	0.321	0.400	-24.6#	93	0.00
44 100 Isobutyl alcoholx10	0.013	0.014	-7.7	72	0.00
45 38 thiophene	0.440	0.416	5.5	62	0.00
46 C 39 12-di-Cl-propane	0.194	0.171	11.9	60	0.00
47 M 40 trichloroethene	0.271	0.264	2.6	68	0.00
48 41 dibromomethane	0.135	0.131	3.0	69	0.00
49 101 TAME	0.369	0.393	-6.5	71	0.00
50 42 Br-di-Cl-methane	0.305	0.305	0.0	72	0.00
51 43 Me-methacrylate	0.093	0.090	3.2	62	0.00
52 44 2-ClEt-Vi-ether10	0.028	0.022	21.4#	49#	0.00

(#) = Out of Range

G4771Q01.D E524A003.M Wed Nov 12 09:40:10 2003

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Vial: 2
 Acq On : 11 Nov 2003 8:21 pm Operator: zou
 Sample : f=1 Inst : GCMS-A
 Misc : Multiplr: 1.00
 MS Integration Params: Lscint.p

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P &Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 14:05:06 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	Avgrf	CCRF	%Dev	Area%	Dev(min)
53 45 c-13-di-Cl-propene	0.307	0.304	1.0	65	0.00
54 46 t-1,3-dichloropropene	0.248	0.269	-8.5	69	0.00
55 I 47 Chlorobezene-d5	1.000	1.000	0.0	68	0.00
56 48 112-tri-Cl-Et	0.221	0.205	7.2	66	0.00
57 49 13-di-Cl-propane	0.340	0.324	4.7	67	0.00
58 50 Et methacrylate	0.255	0.258	-1.2	63	0.00
59 51 di-Br-Cl-methane	0.314	0.317	-1.0	73	0.00
60 P 52 bromoform	0.185	0.191	-3.2	74	0.00
61 53 1,4-dichlorobutane-2	0.374	0.349	6.7	65	0.00
62 54 MIBK	0.168	0.150	10.7	61	0.00
63 S 55 toluene-d8	1.104	1.054	4.5	65	0.00
64 M,C 56 toluene	1.354	1.209	10.7	64	0.00
65 57 2-hexanone X5	0.109	0.102	6.4	62	0.00
66 58 12-dibromoethane	0.227	0.212	6.6	65	0.00
67 59 tetra-Cl-ethene	0.373	0.397	-6.4	79	0.00
68 M,P 60 chlorobenzene	0.924	0.891	3.6	68	0.00
69 61 1112-tetra-Cl-Et	0.344	0.367	-6.7	75	0.00
70 I 62 1,4-Dichlorobenzene-d4	1.000	1.000	0.0	71	0.00
71 63 1-chlorohexane	0.228	0.230	-0.9	78	0.00
72 C 64 Et-Bz	2.542	2.456	3.4	70	0.00
73 65 m/p-Xylenes X2	1.966	1.921	2.3	71	0.00
74 66 styrene	1.656	1.615	2.5	68	0.00
75 67 o-xylene	1.985	1.962	1.2	70	0.00
76 P 68 1122-Tetra-Cl-Et	0.396	0.354	10.6	65	0.00

(#) = Out of Range

G4771Q01.D E524A003.M

Wed Nov 12 09:40:10 2003

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
 Acq On : 11 Nov 2003 8:21 pm
 Sample : f=1
 Misc :
 MS Integration Params: Lscint.p

Vial: 2
 Operator: zou
 Inst : GCMS-A
 Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\E524A003.M (RTE Integrator)
 Title : **Applied P & Ch Lab** EPA 524.2
 Last Update : Mon Oct 27 14:05:06 2003
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 20% Max. Rel. Area : 200%

Compound	AVGRF	CCRF	%Dev Area	% Dev (min)
77 69 123-tri-Cl-Pr	0.131	0.132	-0.8	73 0.00
78 S 70 4-Br-1-F-Bz (S3)	0.678	0.681	-0.4	73 0.00
79 71 isopropylbenzene	2.654	2.754	-3.8	75 0.00
80 72 bromobenzene	0.672	0.677	-0.7	72 0.00
81 92 t-1,4-dichloro-2-butene	0.062	0.071	-14.5	74 0.00
82 73 n-propylbenzene	0.769	0.813	-5.7	76 0.00
83 74 2-Cl-Toluene	0.652	0.664	-1.8	73 0.00
84 75 4-Cl-Toluene	0.670	0.669	0.1	72 0.00
85 76 135-tri-Me-Benzene	2.341	2.456	-4.9	75 0.00
86 77 4-iso-Pr-toluene	2.522	2.722	-7.9	79 0.00
87 78 124-tri-Me-Benzene	2.451	2.536	-3.5	74 0.00
88 79 tert-butylbenzene	2.055	2.227	-8.4	79 0.00
89 80 13-DCB	1.396	1.398	-0.1	73 0.00
90 81 sec-butylbenzene	3.069	3.278	-6.8	79 0.00
91 82 14-DCB	1.461	1.395	4.5	72 0.00
92 83 Cl-benzyl	0.116	0.137	-18.1	79 0.00
93 84 12-DCB	1.278	1.261	1.3	73 0.00
94 85 n-butylbenzene	0.666	0.731	-9.8	79 0.00
95 86 12-diBr-2-Cl-Pra	0.095	0.092	3.2	68 0.00
96 87 124-tri-Cl-Bz	0.796	0.856	-7.5	75 0.00
97 88 naphthalene	1.256	1.423	-13.3	75 0.00
98 89 hx-Cl-butadiene	0.456	0.545	-19.5	93 0.00
99 90 123-Tri-Cl-Bz	0.687	0.746	-8.6	76 0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0
 G4771Q01.D E524A003.M Wed Nov 12 09:40:11 2003

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Sample : F=1
Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
Acq. Time : Nov 11 20:21 2003 RF via : Multiple Level Calibration
Method Update: Mon Oct 27 14:05 2003 Operator: zou
Quant. Time : Nov 12 09:38 2003 Multiplr: 1.000000
Print Time : Wed Nov 12 09:38 2003
Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
Internal Standards											
1	Fluorobenzene	7.64	7.64	0.000	96	70	648.705	10.00		0.00	
47	Chlorobenzene-d5	11.54	11.54	0.000	117	82	495.670	10.00		0.00	
62	1,4-Dichlorobenzene	13.84	13.85	0.000	152	150	306.638	10.00		0.00	
System Monitoring Compounds (Surrogate)											
27	Di-Br-F-Me (sur)	6.60	6.60	0.000	111	113	306.557	20.13		20.1	100.63%
29	1,2-Di-Cl-Et-d4 (	7.11	7.11	0.000	65	102	283.742	20.91		20.9	104.57%
55	toluene-d8	9.91	9.91	0.000	98	100	1044.814	19.10		19.1	95.48%
70	4-Br-1-F-Bz (S3)	12.74	12.74	0.000	174	95	417.338	20.08		20.1	100.42%

Target Compounds	<<< I1 : ISTD ID = 1 >>>									Qvalue	
3	di-Cl-di-F-methan	1.89	1.89	0.000	85	87	236.014	18.09		18.1	99
4	Chloromethane	2.11	2.11	0.000	50	52	156.277	12.06		12.1	100
2	F114	2.03	2.03	0.000	85	135	119.259	19.43		19.4	31
5	vinyl chloride	2.22	2.22	0.000	62	64	180.287	16.30		16.3	97
6	bromomethane	2.61	2.61	0.000	94	96	78.937	12.56		12.6	91
7	chloroethane	2.73	2.73	0.000	64	66	106.450	17.87		17.9	94
8	tri-Cl-F-methane	3.03	3.03	0.000	101	103	418.258	22.87		22.9	99
91	Acetonitrile X10	4.07	4.07	0.000	41	40	478.387	171.16		171.2	91
9	acrolein X10	3.51	3.51	0.000	56	55	250.437	182.44		182.4	100
11	acetone X10	3.72	3.73	0.000	43	58	364.495	175.87		175.9	78
12	ethyl ether X5	3.37	3.37	0.000	59	74	569.304	92.37		92.4	78
13	11-dichloroethene	3.63	3.64	0.000	61	96	318.706	20.68		20.7	79
14	Iodomethane	3.81	3.81	0.000	142	127	101.487	7.98		8.0	86
15	F-113	3.65	3.65	0.000	101	151	215.535	23.06		23.1	85
16	acrylonitrile X10	4.52	4.52	0.000	53	52	480.760	172.76		172.8	92
17	carbon disulfide	3.90	3.90	0.000	76	78	465.029	15.85		15.8	98
94	Isopropyl Alcohol	4.10	4.10	0.000	45	43	69.469	523.05		523.0	100
18	methylene chlorid	4.22	4.22	0.000	84	49	242.614	17.58		17.6	73
19	t-12-di-Cl-ethene	4.58	4.58	0.000	96	61	257.248	17.76		17.8	89

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Quantitation Report: **Applied P & Ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Sample : f=1
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 20:21 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:38 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:39 2003

1499

Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
20	t-Bu-Me-ether	4.59	4.59	0.000	73	57	523.188	20.53	20.5	93	?
95	Tert butyl alcoho	4.50	4.51	-0.002	59	57	140.138	329.22	329.2	100	m?
94	allyl chloride	4.07	4.07	0.000	41	76	478.387	16.73	16.7	75	#?
21	11-dichloroethane	5.12	5.12	0.000	63	83	442.921	18.46	18.5	97	m?
97	propionitrile	6.02	6.02	0.000	54	51	20.109	17.58	17.6	100	m?
22	c-12-di-Cl-ethene	5.91	5.92	0.000	96	61	279.184	18.48	18.5	90	?
23	22-Dichloropropan	5.92	5.92	0.000	77	97	377.449	24.66	24.7	96	?
24	Br-Cl-methane	6.25	6.25	0.000	128	130	140.909	18.45	18.4	98	?
25	chloroform	6.37	6.37	0.000	83	85	527.523	19.56	19.6	96	
26	tetrahydrofuranX5	6.34	6.35	0.000	42	72	186.784	83.11	83.1	84	
98	Disopropyl ether	5.24	5.24	0.000	45	87	839.624	18.23	18.2	90	
99	ETBE	5.74	5.74	0.000	59	87	626.611	21.57	21.6	93	
30	12-dichloroethane	7.22	7.22	0.000	64	62	112.093	21.32	21.3	98	?
32	vinyl acetate X5	5.19	5.20	0.000	43	86	2210.560	98.35	98.3	93	
92	Nitro Methane(x10	5.82	5.84	-0.002	61	46	62.329	82.27	82.3	56	#
33	2-butanoneMEK X10	5.95	5.95	0.000	43	72	592.745	175.13	175.1	85	
93	Ethyl Acetate x2	6.04	6.04	0.000	43	61	299.980	35.79	35.8	98	?
34	111-trichloroetha	6.65	6.65	0.000	97	99	523.515	23.08	23.1	90	
35	11-Di-Cl-propene	6.90	6.90	0.000	75	110	350.064	20.45	20.5	90	
36	benzene	7.21	7.21	0.000	78	52	972.148	17.72	17.7	89	?
37	CCl4	6.91	6.91	0.000	117	119	519.310	24.90	24.9	99	?
100	Isobutyl alcohol	7.41	7.41	0.000	43	42	176.984	212.46	212.5	94	?
38	thiophene	7.53	7.53	0.000	84	58	540.056	18.91	18.9	99	
39	12-di-Cl-propane	8.56	8.56	0.000	63	76	221.801	17.67	17.7	86	
40	trichloroethene	8.24	8.24	0.000	130	132	342.927	19.51	19.5	93	
41	dibromomethane	8.73	8.73	0.000	174	172	170.442	19.52	19.5	99	
101	TAME	7.42	7.41	0.000	73	43	510.416	19.08	19.1	88	#?
42	Br-di-Cl-methane	8.96	8.96	0.000	83	85	395.417	20.01	20.0	98	
43	Me-methacrylate	8.76	8.76	0.000	69	100	116.871	16.67	16.7	92	
44	2-ClEt-Vi-ether10	9.38	9.38	0.000	63	43	288.370	134.62	134.6	82	
45	c-13-di-Cl-propen	9.56	9.56	0.000	75	110	394.857	19.84	19.8	92	
46	t-1,3-dichloropro	10.25	10.25	0.000	75	110	349.316	19.64	19.6	93	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Sample : f=1
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 20:21 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:38 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:39 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
<<< I2 : ISTD ID = 47 >>>											
48	112-tri-Cl-Et	10.46	10.45	0.000	97	83	203.392	18.53	18.5	92	
49	13-di-Cl-propane	10.65	10.65	0.000	76	78	321.083	19.07	19.1	97	
50	Et methacrylate	10.37	10.37	0.000	69	99	255.825	16.71	16.7	87	?
51	di-Br-Cl-methane	10.91	10.91	0.000	129	127	314.220	20.18	20.2	98	
52	bromoform	12.41	12.42	0.000	173	174	189.669	20.71	20.7	98	
53	1,4-dichlorobutan	12.67	12.67	0.000	55	41	346.373	18.67	18.7	96	
54	MIBK	9.76	9.77	0.000	43	58	148.712	15.55	15.6	95	
56	toluene	9.99	9.99	0.000	91	92	1198.320	17.85	17.9	100	
57	2-hexanone X5	10.75	10.76	0.000	43	58	503.832	82.13	82.1	91	
58	12-dibromoethane	11.03	11.03	0.000	107	109	210.321	18.70	18.7	94	
59	tetra-Cl-ethene	10.64	10.64	0.000	166	168	393.755	21.31	21.3	99	?
60	chlorobenzene	11.57	11.57	0.000	112	77	883.342	19.29	19.3	95	?
61	1112-tetra-Cl-Et	11.66	11.66	0.000	131	133	364.035	21.35	21.4	97	
<<< I3 : ISTD ID = 62 >>>											
63	1-chlorohexane	11.56	11.56	0.000	93	55	141.280	20.18	20.2	62	#?
64	Et-Bz	11.70	11.70	0.000	91	106	1505.927	19.32	19.3	95	
65	m/p-Xylenes X2	11.82	11.82	0.000	91	106	2356.272	39.08	39.1	98	
66	styrene	12.24	12.24	0.000	104	78	990.373	19.51	19.5	100	?
67	o-xylene	12.22	12.22	0.000	91	106	1203.304	19.76	19.8	100	?
68	1122-Tetra-Cl-Et	12.87	12.87	0.000	83	85	217.397	17.90	17.9	97	
69	123-tri-Cl-Pr	12.91	12.92	0.000	110	97	80.664	20.01	20.0	93	?
71	isopropylbenzene	12.60	12.60	0.000	105	120	1688.975	20.75	20.8	97	
72	bromobenzene	12.89	12.89	0.000	156	158	415.302	20.16	20.2	98	?
92	t-1,4-dichloro-2-	12.92	12.92	0.000	89	53	43.762	18.21	18.2	84	#?
73	n-propylbenzene	13.00	13.00	0.000	120	78	498.861	21.17	21.2	95	
74	2-Cl-Toluene	13.08	13.08	0.000	126	128	407.381	20.38	20.4	100	
75	4-Cl-Toluene	13.19	13.19	0.000	126	128	410.131	19.97	20.0	99	?
76	135-tri-Me-Benzen	13.16	13.16	0.000	105	120	1506.141	20.98	21.0	95	?
77	4-iso-Pr-toluene	13.81	13.81	0.000	119	134	1669.502	21.59	21.6	99	?
78	124-tri-Me-Benzen	13.52	13.52	0.000	105	120	1555.566	20.69	20.7	97	
79	tert-butylbenzene	13.47	13.47	0.000	119	91	1365.888	21.68	21.7	100	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

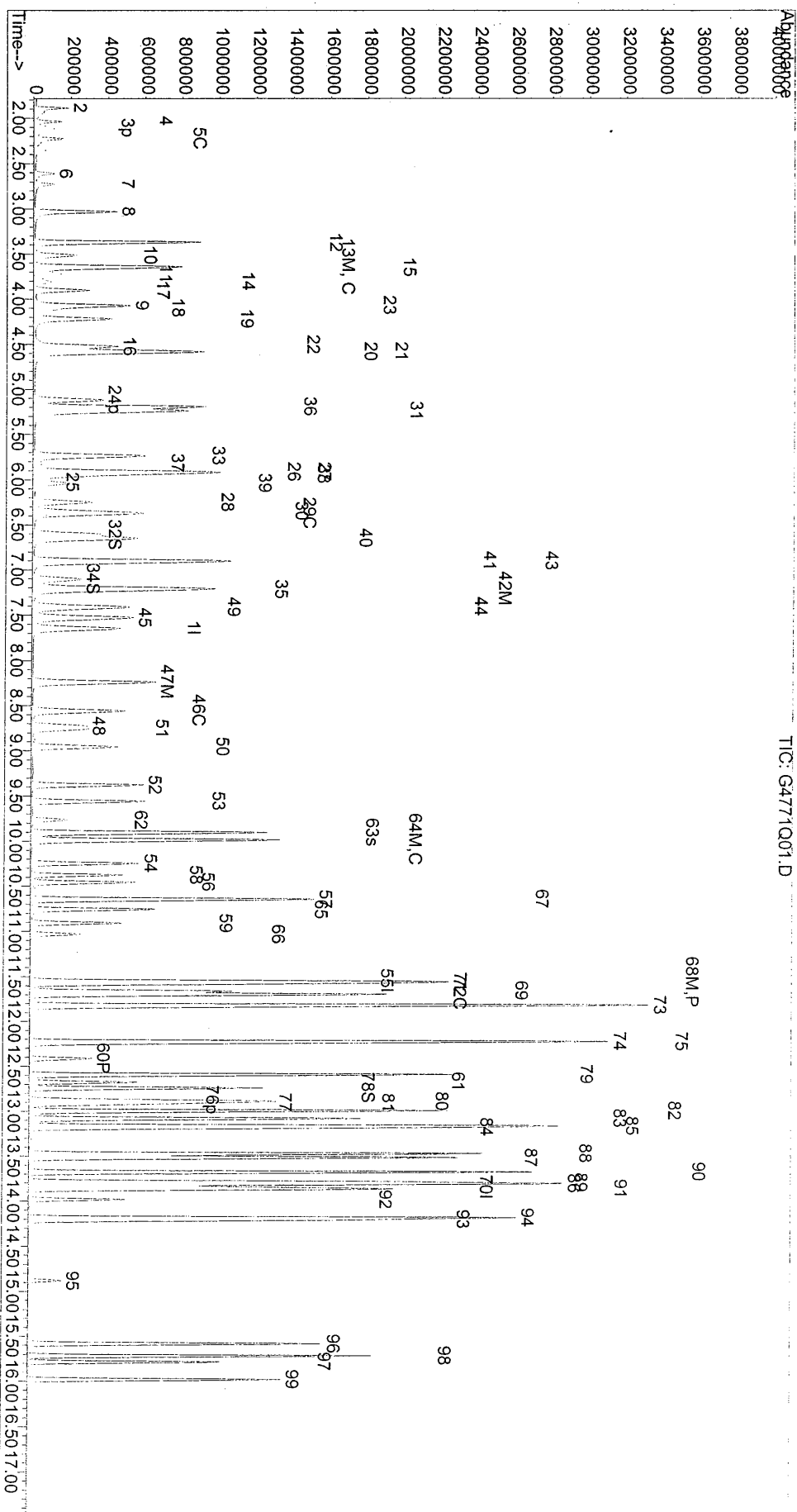
Quantitation Report: **Applied P &ch Lab** EPA 524.2

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D Sample : f=1
 Method : C:\MSDCHEM\1\METHODS\E524A003.M Inst. : GCMS-A
 Acq. Time : Nov 11 20:21 2003 RF via : Multiple Level Calibration
 Method Update: Mon Oct 27 14:05 2003 Operator: zou
 Quant. Time : Nov 12 09:38 2003 Multiplr: 1.000000
 Print Time : Wed Nov 12 09:39 2003
 Miscellaneous :

ID	Component Name	R.T.	RT0	DRRT	Qion	Q1	RF/1000	C0,ppb	C,ppb	Quality	Note
80	13-DCB	13.79	13.79	0.000	146	148	857.264	20.03	20.0	98	?
81	sec-butylbenzene	13.68	13.68	0.000	105	134	2010.030	21.36	21.4	98	
82	14-DCB	13.87	13.87	0.000	146	148	855.464	19.10	19.1	98	
83	Cl-benzyl	13.98	13.98	0.000	126	91	84.303	18.26	18.3	88	#
84	12-DCB	14.21	14.21	0.000	146	148	773.523	19.73	19.7	99	?
85	n-butylbenzene	14.18	14.18	0.000	134	91	448.411	21.96	22.0	82	#?
86	12-diBr-2-Cl-Pra	14.88	14.88	0.000	157	155	56.374	19.32	19.3	98	
87	124-tri-Cl-Bz	15.58	15.58	0.000	180	182	524.901	21.50	21.5	97	
88	naphthalene	15.78	15.78	0.000	128	129	872.593	19.34	19.3	99	
89	hx-Cl-butadiene	15.72	15.72	0.000	225	258	334.524	23.94	23.9	100	
90	123-Tri-Cl-Bz	15.98	15.98	0.000	180	182	457.343	21.70	21.7	97	

= qualifier out of range, m = manual integration, ? = RT coelution, * = DRRT > 0.06

Data Filename: C:\MSDCHEM\1\DATA\03G4771\G4771Q01.D
 Method : C:\MSDCHEM\1\METHODS\E524A003.M
 Acq. Time : Nov 11 20:21 2003
 Method Update: Mon Oct 27 14:05 2003
 Quant. Time : Nov 12 09:38 2003
 Print Time : Wed Nov 12 09:39 2003
 Miscellaneous :
 Sample : f=1
 Inst. : GCMS-A
 RF via : Multiple Level Calibration
 Operator: zou
 Multiplr: 1.000000



FORM-8A

Applied P & Ch Laboratory

Internal Standard Area and RT Summary for Method 524.2

Client Name: GEOFON, Inc.

Contract No:

Lab Code: APCL

Case No:

SAS No:

Service ID: 036002

Project ID: JPL GW Mon-4Q03

Project No: 04-4428.10

Sample Matrix: Water

CCV Data File: G4771Q01

Instrument ID: A

Batch No: 03G4771

#	Client Sample No	Lab Sample ID	Analysis Date & Time	IS-1 Area #	IS-1 RT #	IS-2 Area #	IS-2 RT #	IS-3 Area #	IS-3 RT #
	12 Hour CCV STD		11/11/03 20:21	648705	7.64	495670	11.54	306638	13.84
	CCV Upper Limit			1297410	8.14	991340	12.04	613276	14.34
	CCV Lower Limit			324352	7.14	247835	11.04	153319	13.34
1	03G4771-LCS-01	03G4771-LCS-01	11/11/03 20:46	677978	7.64	508521	11.54	312840	13.84
2	MW-5MS	03-6002-2MS	11/11/03 21:38	698678	7.64	530223	11.54	318831	13.84
3	MW-5MSD	03-6002-2MSD	11/11/03 22:04	703511	7.65	536120	11.54	334375	13.84
4	03G4771-MB-01	03G4771-MB-01	11/12/03 01:17	650041	7.64	514703	11.54	313855	13.84
5	TB-11-6-03	03-6002-5	11/12/03 02:15	658867	7.65	525349	11.54	319336	13.85
6	MW-5	03-6002-2	11/12/03 03:33	652965	7.65	517098	11.55	322153	13.85
7	DUPE-7-4-Q03	03-6002-1	11/12/03 03:59	647057	7.65	510780	11.54	315596	13.85
8	MW-8	03-6002-3	11/12/03 04:26	651732	7.65	517601	11.54	320276	13.84
9	MW-10	03-6002-4	11/12/03 04:52	636107	7.65	512599	11.55	315138	13.85
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									

IS-1 = FLUOROBENZENE

IS-2 = CHLOROBENZENE-D5

IS-3 = 1,4-DICHLOROBENZENE-D4

Area Upper Limit = +100% of CCV internal standard area

Area Lower Limit = - 50% of CCV internal standard area

RT Upper Limit = +0.50 minutes of CCV internal standard RT

RT Lower Limit = - 0.50 minutes of CCV internal standard RT

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

* Values outside of QC limits

Applied P & Ch Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

VOC Analysis General Logbook

Sequence # 0364612 Batch # 0364612 Matrix: W Date: 10/21/03 Analyst: Eddie

Lot #: IS/Surrogate: GC1514/1515 Methanol(mark-M): _____ PEG (mark-PEG): _____ Defoaming(mark-DF): _____

☒ Calib. + Ini. Batch - ☐ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study Datafile Path: _____

Op. #	Type	Sample ID	Method	V/X=f ₁	V _f /V _i =f ₂	V _{peg} /V _{inj} =f ₃	F	A-#	Datafile	Note	pH
4201	SP	64612P01	ES24A	25/25 = 1	/ =	/ =	1		64612P01	10/21/03 9:14 am	
4202	Calib	3-A003	003	/ =	/ =	/ =			3-A003	gc15731	
4203		3-002		/ =	/ =	/ =			3-002		
4204		3-0010		/ =	/ =	/ =			3-0010		
4205		3-0020		/ =	/ =	/ =			3-0020		
4206		3-0040		/ =	/ =	/ =			3-0040		
4207		3-0060		/ =	/ =	/ =			3-0060		
4208	ILV	ILV		/ =	/ =	/ =			ILV	gc15732	
4209				/ =	/ =	/ =					
4210				/ =	/ =	/ =					
4211				/ =	/ =	/ =					
4212				/ =	/ =	/ =					
4213				/ =	/ =	/ =					
4214				/ =	/ =	/ =					
4215				/ =	/ =	/ =					
4216				/ =	/ =	/ =					
4217				/ =	/ =	/ =					
4218				/ =	/ =	/ =					
4219				/ =	/ =	/ =					
4220				/ =	/ =	/ =					
4221				/ =	/ =	/ =					
4222				/ =	/ =	/ =					
4223				/ =	/ =	/ =					
4224				/ =	/ =	/ =					
4225				/ =	/ =	/ =					
4226				/ =	/ =	/ =					
4227				/ =	/ =	/ =					
4228				/ =	/ =	/ =					
4229				/ =	/ =	/ =					
4230				/ =	/ =	/ =					
4231				/ =	/ =	/ =					
4232				/ =	/ =	/ =					

Type	Op #	STD Lot #	C _{std} (ng/μL) × V _{std} (μL) / X(g or mL) = T	Op #	STD Lot #	C _{std} (ng/μL) × V _{std} (μL) / X(g or mL) = T
LCS/LCSD		GC-	x /X= ppb		GC-	x /X= ppb
MS/MSD		GC-	x /X= ppb		GC-	x /X= ppb

Footnote/Anomaly:

1504

Applied P & Ch Laboratory

15760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1498

VOC Analysis General Logbook

Sequence # 0394771 Batch # 0394771 Matrix: W Date: 11/11/03 Analyst: ZouLot #: IS/Surrogate: GC-15761/15762 Methanol(mark-M): _____ PEG (mark-PEG): _____ Defoaming(mark-DF): _____☐ Calib. + Ini. Batch ☒ Initial Batch; ☐ Middle Batch; ☐ Final Batch. ☐ Internal Study

Datafile Path: _____

Op. #	Type	Sample ID	Method	$V/X=f_1$	$V_f/V_i=f_2$	$V_{spg}/V_{inj}=f_3$	F	A-#	Datafile	Note	pH
4905	SP	G4771P01	ES4A 003	25/25 = 1	/ =	/ =	1	15761/15762	G4771P01	11/11/03	19:55
4906	CCV	Q01		/ =	/ =	/ =			Q01	gc15811	
4907	LCS	L01		/ =	/ =	/ =			L01		
4908	MS	M01		/ =	/ =	/ =			M01	\$602-02	<2
4909	MSD	N01		/ =	/ =	/ =			N01	↓	↓
4910	MS	M02		/ =	/ =	/ =			M02	\$6034-03	↓
4911	MSD	N02		/ =	/ =	/ =			N02	↓	↓
4912	MB	✓ K01		/ =	/ =	/ =			✓ K01		
4913	Sample	6047-04		/ =	/ =	/ =			6047-04	tb	<2
4914		6002-05		/ =	/ =	/ =			6002-05	tb	
4915		6034-05		/ =	/ =	/ =			6034-05	tb	
4916		↓ 03		/ =	/ =	/ =			↓ 03	ms	
4917		6002-02		/ =	/ =	/ =			6002-02	ms	
4918		↓ 01		/ =	/ =	/ =			↓ 01		
4919		↓ 03		/ =	/ =	/ =			↓ 03		
4920		↓ 04		/ =	/ =	/ =			↓ 04		
4921		6034-01		/ =	/ =	/ =			6034-01		
4922		↓ 02		/ =	/ =	/ =			↓ 02		
4923		↓ 04		/ =	/ =	/ =			↓ 04		
4924		6047-01		/ =	/ =	/ =			6047-01		
4925		↓ 02		/ =	/ =	/ =			↓ 02		
4926	✓	↓ 03	✓	✓ / = ✓	/ =	/ =	✓		↓ 03		✓
4927				/ =	/ =	/ =					
4928				/ =	/ =	/ =					
4929				/ =	/ =	/ =					
4930				/ =	/ =	/ =					
4931				/ =	/ =	/ =					
4932				/ =	/ =	/ =					
4933				/ =	/ =	/ =					
4934				/ =	/ =	/ =					
4935				/ =	/ =	/ =					
4936				/ =	/ =	/ =					

Type	Op #	STD Lot #	$C_{std}(ng/\mu L) \times V_{std}(\mu L) / X(g \text{ or } mL) = T$				Op #	STD Lot #	$C_{std}(ng/\mu L) \times V_{std}(\mu L) / X(g \text{ or } mL) = T$			
LCS/LCSD	4907	GC-15812	200	x	2.5	/X = 20	ppb		GC-	x	/X =	ppb
MS/MSD	4908/4909	GC-15812	200	x	2.5	/X = 20	ppb	4910/4911	GC-15812	200	x 2.5	/X = 20 ppb

Footnote/Anomaly: