United States
Environmental Protection
Agency

Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

EPA-454/R-00-025G
May 2000

AIR

EPA

Final Report

Hot Mix Asphalt Plants
Truck Loading and Silo Filling
Manual Methods Testing

Asphalt Plant C
Los Angeles, California

Volume 7 of 8

FINAL REPORT

HOT MIX ASPHALT PLANTS
TRUCK LOADING AND SILO FILLING
MANUAL METHODS TESTING
ASPHALT PLANT C, LOS ANGELES, CALIFORNIA

VOLUME 7 OF 8
APPENDIX G.4

EPA Contract No. 68-D-98-004
Work Assignment No. 3-02

Prepared for:

Mr. Michael L. Toney (MD-19)
Work Assignment Manager
SMTG, EMC, OAQPS
U.S. Environmental Protection Agency
Research Triangle Park, NC 27711

May 2000

Submitted by

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DISCLAIMER

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TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONCLUDED)

LIST OF TABLES

LIST OF TABLES (CONTINUED)

LIST OF TABLES (CONCLUDED)

LIST OF FIGURES

GLOSSARY OF TERMS

ASTM – American Society for Testing and Materials
CEMS – Continuous Emissions Monitoring System
CTS – Calibration Transfer Standard
EMC – Emissions Measurement Center
EMAD – Emission Monitoring and Analysis Division
ESP – Electrostatic Precipitator
FID – Flame Ionization Detector
FTIR – Fourier Transform Infrared Spectroscopy
HAP – Hazardous Air Pollutant
MCEM – Methylene Chloride Extractable Matter
MRI – Midwest Research Institute
PES – Pacific Environmental Services
PM – Particulate Matter
PTE – Permanent Total Enclosure
RAP – Recycled Asphalt
RTFOT – Rolling Thin Film Oven Test
SED – Silo Exhaust Duct

SMTG – Source Measurement Technology Group
SVOHAP – Semi-Volatile Organic Hazardous Air Pollutant
TED – Tunnel Emissions Duct
TFOT – Thin Film Oven Test
THC – Total Hydrocarbons
VOHAP – Volatile Organic Hazardous Air Pollutant
VOST – Volatile Organic Sampling Train

VOLUME 7

APPENDIX G

ANALYTICAL DATA (CONTINUED)

G.4 VOHAPS DATA

APPENDIX G.4

VOHAPS DATA

1c

TRIANGLE LABS

CASE NARRATIVE

Analysis of Samples for the Presence of

Volatile Analytes by

High-Resolution Gas Chromatography / Low-Resolution Mass Spectrometry

METHOD 8260

Date : August 24, 1998

Client ID : Pacific Environmental Services

TLI Project Number : **46297**

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC *27713-4411*
919-544-5729

P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

Triangle Laboratories, Inc. **August 24, 1998**
Case Narrative **46297**

Objective: Analysis of four VOST tube pairs (T-V-l-l-A&-B, T-V-1-2-A&-B, T-V-1-3-A&-B, T-V-1-4-A&-B) for a client specified list of volatile compounds, using Method 8260.

Method:

Eight VOST tube pairs were received at Triangle Laboratories, Inc. on July 25, 1998 on ice at 6°C in good condition. The samples were stored in a refrigerator at 4°C prior to 'analysis. The VOST tube sample pairs were analyzed according to the guidelines of Methods 8260 and 5040. Per client request, the compounds 1,3-butadiene, vinyl bromide, methyl-t-butylether (MTBE), n-hexane, 1,2-epoxybutane, iso-octane, and ethyl acrylate were additional target compounds. A one point calibration was analyzed for these additional compounds and the resulting response factor used for quantitation. The internal standards and surrogate standards were added in the amount of 0.25 micrograms (ug) immediately prior to analysis by GC/MS. The internal standards are pentafluorobenzene, 1,4-difluorobenzene, and chlorobenzene-d_5 and 1,4-dichlorobenzene-d_4. The surrogate standards reported are dibromofluoromethane, toluene-d_8, and 4-bromofluorobenzene. The results reported relate only to the items tested.

The GC/MS analysis conditions are listed below:

Purge and trap:	Tekmar LSC-2000
Purge:	11 min.
Desorb Temperature:	250 c
Desorb Time:	4 min.

GC Conditions:

Column:	30 m x .53 mm x 0.3u J&W DB624 0 C hold .5 min, 10 C/min to 45C, 6 C/min to 90C, hold 1.5 min, 50 C/min to 200C.

MS Conditions:

Instrument:	VG-TRIO-1 Lab Base data system
Scan:	35-350 amu at .6s/scan
Interface:	Jet Separator, 200 C

Report:

Enclosed with the case narrative are copies of the sample identification index, the project summary sheets, client paperwork, sample log-in sheets, and log book pages. A sample identification index summarizes the client sample name, TLI sample number, and analytical file name for each sample and blank. The project summary lists the amounts for detected analytes in gray. The estimated detection limits will be listed in parentheses when the target analytes are not detected.

The data are reported as quantitation reports, chromatograms. interim reports, and spectra of detected target. The quantitation report header lists the TLI project number, analysis method,

instrument sample tile name, client sample name, client project number, TLI sample number, calibration tile, date received, and analysis date. The response factors used for all calculations are from the calibration file listed in the header. All initial and continuing calibration data are located in the back of the data package. The amount is reported in total ug for the VOST tubes. The retention time (RT) will be listed for all internal standards and analytes which are detected. If a target analyte is not detected, it will be flagged with a "U" and a detection limit will be listed. Estimated detection limits are calculated for all analytes which were not found in the samples by using an area of 2000. The estimated detection limits reported are the average detection limits achievable over time on an instrument type. The actual detection limit for a given compound on a given day may vary from the estimate reported. The quantitation limit for all analytes is half of the low point of the initial calibration. Below this point the calibration cannot be considered to be linear. Any amount reported at a level below the quantitation limit will be flagged with a "J" and should be considered estimated. If any compounds are found at a level above the upper calibration range, the analyte will be flagged with an "E" and the amounts reported should be considered estimated. If any target analytes found in the laboratory blanks are detected in the associated samples, they will be flagged with a "B" on each sample topsheet. All analytes are quantitated against the internal standard preceding them on the target analyte list. Surrogate standards are quantitated against the internal standard with the matching internal standard reference number. For example, toluene-d_8 has 2 in the IS Ref column and would be quantitated against the internal standard which has IS2 listed in the flag column. If an internal standard area is above or below the quality control limits as defined by the continuing calibration, it will be flagged with "High" or "Low" in the flag column.

RESULTS ARE POTENTIALLY BIASED HIGH

Results:

The VOST tube pairs were analyzed ten days outside the fourteen day sampling to analysis holding time. The VOST tubes were analyzed separately per client request.

The surrogate percent recoveries met all quality control criteria for all sample and blank analyses with the exception of samples T-V-1-1-A and T-V-l-2-A. 162 % 170 % ACCEPTABLE RANGE 50 - 150 %

The area for internal standard met quality control criteria for all sample and blank analyses with the exception of sample T-V-l-3-B. In this sample the area of pentafluorobenzene was high in comparison to the one point calibration standard.

Sample T-V-l-2-A was analyzed one minute outside the instrument's twelve hour tune time criteria. NO IMPACT ON RESULTS (ONE MINUTE OVER 720 MINUTE WINDOW)

No data was collected for sample T-V-1-4-A, due to GC oven shutting off and not ramping, during the acquisition.

The laboratory blanks contained several target analytes at amounts below the quantitation limit. The target analytes in the laboratory blank should not be considered as truly present in the native samples unless found at a level at least five times the amount found in the associated blank. In the event that the amount of a target analyte found in the samples is twenty times the amount found in the associated blank, the contribution from the blank can be considered negligible.

3

Sample Calculations:

Response Factor (RF) = $\frac{[\text{area analyte}) \times (\text{amt IS})}{(\text{area IS}) \times (\text{amt analyte})}$

Amount (ug) = $\frac{(\text{area analyte in sample}) \times (\text{amt IS})}{(\text{area IS}) \times (\text{avg ical RF})}$

Where:

amt IS = amount of internal standard = 0.25 ug
ical = initial calibration

The data in this package has been judged to be valid according to the guidelines of Methods 8260 and 5040 except as noted above. Should you have any questions, please feel free to contact our Project Scientist, Deb. Smith, at (919) 544-5729, ext. 267.

For Triangle Laboratories, Inc.,

Report Preparation:

Valgena Respass
Report Preparation Chemist

Quality Control:

Penny A. Brock
Report Preparation Chemist

The total number of pages in this data package is 203

Triangle Laboratories, Inc.
Sample Identification Index for Project: 46297

Client Id:	TLI Id:	File Name:
T-V-I-l-AT	214-1-6A	FX883
T-V-I-I-B TC	214-1-6B	FX879
T-V-1-2-A T	214-1-7A	FX895
T-V-l-2-B TC	214-l-78	FX880
T-V-l-3-A T	214-1-8A	HW713
T-V-l-3-B TC	214-l-88	FX882
T-V-1-4-B TC	214-1-9B	FX881
VOSTBLK081798	VOSTBLKO8179	FX878
VOSTBLK081898	VOSTBLK08189	FX894
VOSTBLK081998	VOSTBLK08199	HW705

Triangle Laboratories, Inc.

Project Summary for Project 46297

Client ID:	T-V-l-1-A T	T-V-l-I-B TC	T-V-1-2-A T	T-V-l-2-B TC	T-V-l-3-A T
Filename :	FX883	FX879	FX895	FX880	HW713
TLI Id :	214-1-6A	214-1-6B	214-1-7A	214-1-7B	214-1-8A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Chloromethane	(0.001)	0.075	(0.001)	0.080	(0.001)
Vinyl Chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromomethane	(0.001)	0.056	0.007	0.068	0.005
Chloroethane	(0.001)	(0.001)	(0.001)	(0.001)	0.007
Trichlorofluoromethane	0.008	(0.001)	(0.001)	(0.001)	0.009
1,1-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methylene chloride FIELD	0.303	0.153	0.078	0.248	0.058
trans-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chloroform	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,1-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Iodomethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Carbon disulfide	0.015	(0.001)	0.013	0.004	0.012
Acetone	0.137	(0.004)	0.204	0.039	0.589
Allyl chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acrylonitrile	(0.015)	(0.016)	(0.017)	(0.015)	(0.003)
Vinyl acetate	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)
2-Butanone	0.061	(0.004)	(0.004)	(0.004)	0.509
Carbon tetrachloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Benzene	0.106	(0.001)	0.129	(0.001)	0.516
1,2-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dichloropropane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromodichloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Toluene	0.360	0.020	0.377	0.059	0.455
trans-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2-Trichloroethane	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)
Methyl methacrylate	(0.005)	(0.006)	(0.006)	(0.006)	(0.001)
4-Methyl-2-pentanone	(0.004)	(0.004)	(0.005)	(0.004)	(0.001)
Tetrachloroethene	(0.001)	(0.001)	0.054	(0.001)	0.038
Dibromochloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dibromoethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chlorobenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

()-Estimated Detection Limit

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Triangle Laboratories, Inc.

Project Summary for Project 46297

Client ID:	T-V-1-1-A T	T-V-1-1-B TC	T-V-I-2-A T	T-V-I-2-B TC	T-V-l-3-A T
Filename :	FX883	FX879	FX895	FX880	HW713
TLI Id :	214-1-6A	214-1-6B	214-1-7A	214-1-7B	214-1-8A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Ethylbenzene	**0.137**	(0.001)	**0.128**	(0.001)	**0.105**
m-/p-Xylene	**0.720**	(0.001)	**0.677**	**0.001**	**0.758**
o-Xylene	**0.251**	(0.001)	**0.235**	(0.001)	**0.181**
Styrene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromoform	(0.002)	(0.003)	(0.003)	(0.003)	(0.001)
2-Hexanone	(0.005)	(0.006)	(0.006)	(0.006)	(0.001)
Cumene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2,2-Tetrachloroethane	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)

( )-Estimated Detection Limit

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Client ID:	T-V-l-3-B TC	T-V-l-4-B TC	VOSTBLK081 798	VOSTBLK081 898	VOSTBLK081 998
Filename :	FX882	FX881	FX878	FX894	HW705
TLI Id :	214-l-88	214-I-98	VOSTBLK08179	VOSTBLK08189	VOSTBLKD8199
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Chloromethane	0.083	0.073	(0.001)	(0.001)	0.003
Vinyl Chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromomethane	0.109	0.045	(0.001)	(0.001)	(0.001)
Chloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichlorofluoromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methylene chloride	0.026	0.048	(0.001)	(0.001)	0.002
trans-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chloroform	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,1-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Iodomethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Carbon disuifide	0.006	(0.001)	(0.001)	(0.001)	(0.001)
Acetone	0.077	0.092	(0.004)	(0.006)	(0.004)
Allyl chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acrylonitrile	(0.016)	(0.016)	(0.016)	(0.021)	(0.006)
Vinyl acetate	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)
2-Butanone	(0.004)	(0.004)	(0.004)	(0.005)	(0.003)
Carbon tetrachloride	(0.001)	(0.001)	(0.001)	(0.031)	(0.001)
Benzene	(0.001)	(0.001)	0.013	0.023	(0.001)
1,2-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dichloropropane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromodichloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Toluene	0.005	0.017	0.005	0.008	0.003
trans-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
1,1,2-Trichloroethane	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)
Methyl methacrylate	(0.006)	(0.006)	(0.006)	(0.007)	(0.002)
4-Methyl-2-pentanone	(0.005)	(0.005)	(0.004)	(0.006)	(0.001)
Tetrachloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Dibromochloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dibromoethane	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)
Chlorobenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

( )-Estimated Detection Limit

Triangle Laboratories, Inc.
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Client ID:	T-V-l-3-B TC	T-V-l-4-B TC	VOSTBLK081 798	VOSTBLK081 898	VOSTBLK081 998
Filename :	FX882	FX881	FX878	FX894	HW705
TLI Id :	214-l-88	214-1-9B	VOSTBLK08179	VOSTBLK08189	VOSTBLK08199
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Ethylbenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
m-/p-Xylene	(0.001)	(0.001)	(0.001)	(0.001)	0.001
o-Xylene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Styrene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromoform	(0.003)	(0.002)	(0.003)	(0.004)	(0.001)
2-Hexanone	(0.006)	(0.006)	(0.006)	(0.008)	(0.002)
Cumene	(0.001)	(0.001)	(0.001)	(0.001)	0.001
1,1,2,2-Tetrachloroethane	(0.003)	(0.002)	(0.003)	(0.004)	(0.001)

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Triangle Laboratories, Inc.

Project Summary for Project 46297

Client ID:	T-V-1-1-A TC	T-V-1-1-B TC	T-V-l-2-A T	T-V-l-2-B TC	T-V-l-3-A T
Filename :	FX883	FX879	FX895	FX880	Hw713
TLI Id :	214-1-6A	214-l-68	214-1-7A	214-l-78	214-1-8A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
1,3-Butadiene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Vinyl bromide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MTBE	(0.001)	(0.001)	(0.001)	(0.001)	0.019
n-Hexane	0.127	0.001	0.147	0.001	0.111
1,2-Epoxybutane	(0.010)	(0.011)	(0.015)	(0.010)	(0.011)
Iso-Octane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Ethyl acrylate	(0.002)	(0.003)	(0.004)	(0.002)	(0.001)

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10

Client ID:	T-V-l-3-B TC	T-V-l-4-B TC	VOSTBLK081 798	VOSTBLKO81 898	VOSTBLK081 998
Filename :	FX882	FX881	FX878	FX894	HW705
TLI Id :	214-l-88	214-1-9B	VOSTBLKO8179	VOSTBLK08189	VOSTBLK08199
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
1,3-Butadiene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Vinyl bromide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MTBE	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
n-Hexane	0.001	0.004	(0.001)	(0.001)	0.001
1,2-Epoxybutane	(0.011)	(0.011)	(0.011)	(0.020)	(0.017)
Iso-Octane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Ethyl acrylate	(0.003)	(0.003)	(0.002)	(0.004)	(0.001)

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[redacted] TRIANGLE LABS

TRIANGLE LABORATORIES, INC.

LIST OF CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

American Association for Laboratory Accreditation. Accredidation pending. Certificate Number 0226-01. Accreditation for technical competence in Environmental Testing. (Including Waste Water, Sol/Haz Waste, Pulp/Paper, and Air Matrices) Parameters are AOX/TOX, and Dioxin/Furan. Method 1613 for Drinking Water **Currently re-applying.**.

State of Alabama, Department of Environmental Management. Expires December 31, 1998. Laboratory I.D. # 40950. Dioxin in drinking water.

State of Alaska, Department of Environmental Conservation. Expires December 21, 1998. Certificate number OS-006-98. Dioxin in drinking water.

State of Arizona, Department of Health Services. Expires May 26, 1998. Certificate #AZ0423. Drinking Water for Dioxin, Dioxin in WW and S/H Waste. Currently appying for renewal.

State of Arkansas, Department of Pollution Control and Ecology. Expires February 19, 1999. Pulp/paper, soil, water, and Hazardous Waste for Dioxin/Furan; AOX/TOX, Volatiles, Semi-volatiles, and Metals.

State of California, Department of Health Services. Expires August 31, 1999. Certificate #1922. Selected Metals in Waste Water; Volatiles, Semi-volatiles, and Dioxin/furan in WW and Sol/Haz Waste. Dioxin in drinking water.

State of Connecticut, Department of Health Services. Expires September 30, 1999. Registration # PH-0117. Dioxin in drinking water.

Delaware Health and Social Services. Expires December 31, 1998. Certificate #NC 140. Dioxin in drinking water.

Florida Department of Health and Rehabilitative Services. Expires June 30, 1998. Dioxin in SDW. Drinking Water ID HRS# 87424. Pending new certificate.

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729
P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

Hawaii Department of Health. Expires March 1, 1999. Dioxin in drinking water. "Accepted" status for regulatory purposes.

Idaho Department of Health and Welfare. Expires December 31, 1998. Dioxin in drinking water.

State of Kansas, Department of Health and Environment. Expires January 31, 1999. Method 1613 for drinking water. ID #'s - Drinking water and/or pollution control - E-10215. Solid or Hazardous Waste - E-101209.

Commonwealth of Kentucky, Department for Environmental Protection. Expires December 31, 1998. ID#90060. Dioxin in drinking water.

Maryland Department of Health and Mental Hygiene. Expires September 30, 1998. Certification #235 Drinking water by Method 1613A. Currently applying for renewal.

State of Michigan, Department of Public Health. Expires June 30, 1999. Drinking water by Method 1613. Current certification is extended, based on New York certificate renewal.

Mississippi State Department of Health. No expiration date. Dioxin in drinking water.

Montana Department of Health and Environmental Services. Expires December 31, 1998. Dioxin in drinking water.

State of New Jersey, Department of Environmental Protection and Energy. Expires June 30, 1998. Extended until July 31, 1998 per letter dated May 29, 1998. ID #67851. BNAs and Volatiles. Dioxin in drinking water. Currently applying for renewal.

State of New Mexico, Environment Department. Still certified, awaiting information from A2LA Dioxin in drinking water.

New York State Department of Health. Received updated certificates. ID #11026. Environmental Analyses of potable water, non-potable Water, Solid and Hazardous Waste. Method 1613 in DW.

State of North Carolina, Department of Environment Health and Natural Resources Expires. August 31, 1998. Certificate # 37751. Dioxin in drinking water.

State of North Carolina, Department of Environment, Health, and Natural Resources, Division of Environmental Management. Expires December 31, 2000. Certificate # 485. Metals, pesticides & PCBs, semi-volatiles and volatiles; TCLP.

North Dakota State Department of Health and Consolidated Laboratories. Expires December 31, 1998. Certificate # R-076. Effective October 4, 1993. Dioxin in drinking water.

Oklahoma Department of Environmental Quality. Expires August 31, 1998. Laboratory #9612. Dioxin by 1613A, 8290 and 8280. Submitted renewal application 7/1.

State of South Carolina, Department of Health and Environmental Control. Expires June 30, 1998. Extended August 31, 1999. Certificate number #99040001 (drinking water). Expires August 31, 1999. Certificate number #99040002 (other parameters). Dioxin/Furans, BNA, Volatiles, and PCBs/pesticides under Clean Water Act, 2,3,7,8-TCDD for Drinking Water, and Organic extractables for Solid and Hazardous Waste.

State of Tennessee. Department of Environment and Conservation. Expires February 5, 1999. ID #02992. Method 1613 Drinking water only.

U.S. Department of Agriculture Soil Permit. Expires September 30, 2001. Permit No. S-3790. Under the authority of the Federal Plant Pest Act, permission is granted to receive foreign soil samples for use in laboratory analysis.

U.S. Army Corps of Engineers. Expires October 19, 1999. Validated to perform analyses for the Fort Belvoir, VA (Contract Number DACA31-97-D-0029), Vint Hill Farms Station, Vint Hill, VA (Contract Number DACA31-95-D-0083), and Selma Pressure Treating Superfund Site, Selma, CA (Contract number DACW45-94-D-0054).

U.S. EPA Region V. Expires November 14, 1999. Dioxin in drinking water.

U.S. EPA Region VIII, for the State of Wyoming. Expires November 12, 1998. Dioxin in drinking water.

State of Utah, Department of Health. Expires May 30,2000. Certificate Number E-166. Certification for the following parameters: Semi-Volatiles and Volatiles under RCRA; Volatiles under Clean Water Act; Dioxin/furans by Method 8280; Drinking water for Dioxin by Method 1613; Metals including Mercury and Microwave Digestion.

Commonwealth of Virginia, Department of General Services, Division of Consolidated Laboratory Services. Expires June 30, 1999. ID # 00341. Dioxin in drinking water.

State of Washington, Department of Ecology. Expires September 11, 1998. Lab Accreditation Number C067. Scope of Accreditation applies to water analyses for

Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans, BNA Extr (Semivolatile) Organics and Purgeable (Volatile) Organics.
State of Washington, Department of Health. Expires April 30, 1999. Dioxin in drinking water. Lab I.D. 129.

State of West Virginia, Department of Health. Expires December 31, 1998. Certificate No. 9923(C). Dioxin in drinking water.

State of Wisconsin, Department of Natural Resources. Expires August 31, 1998. Laboratory ID Number 999869530. Certification for the following categories of Organics: Purgeable, Base/Neutral, Acid, PCBs, and Dioxin. Expires November 14, 1999. Laboratory ID 999869530. Dioxin in drinking water.

PHARMACEUTICAL

Drug Enforcement Agency (DEA). Expires November 30, 1998. Registration number RT01195835. Controlled substance registration for schedules 1,2,3,3N,4,5.

N.C. Department of Human Resources. Expires October 31, 1998. Registration number NC-PT 0000 0031. North Carolina controlled substances registration. Application submitted for renewal.

Food & Drug Administration (FDA) Registration. Expires June 1998. ID #'s 001500 1053481. Annual registration of drug establishment.

OTHER

Clinical Laboratory Improvement Amendments (CLIA) Registration. Expires May 30, 1999. ID # 34D0705123. Department of Health & Human Services, Health Care Financing Administration.

U.S. EPA Large Quantity Hazardous Waste Generator. No expiration date. EPA ID #NCD982156879. Permit indicates that the laboratory is a large generator of hazardous waste.

North Carolina General License for Radiation Protection. No expiration date. No License. 032-875-OG. The general license applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with specific requirements.

TRIANGLE LABS

DOCUMENT CONTROL

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729

P.O. Box 13485
Research Triangle Park, NC 27709-34
Fax # 919-544-5491

PACIFIC ENVIRONMENTAL SERVICES, INC.

Central Park West
5001 South Miami Boulevard, P.O. Box 12077
Research Triangle Park, North Carolina 27709-2077
(919) 941-0333 FAX: (919) 941-0234

Sample Chain of Custody Record

Sample Identification	Collection Date	Collection Time	Sample Name	Number of Containers	Analytical Request: Volatile Organics PE/FP					Comments
S-V-1-1-A	7/24/98		Silo 2 Run 1 Set1	1	X					Tenax
S-V-1-1-B	7/24/98		Silo 2 Run 1 Set1	1	X					Tenax/Charcoal
S-V-1-2-A	7/24/98		Silo 2 Run 1 Set2	1	X					Tenax
S-V-1-2-B	7/24/98		Silo 2 Run 1 Set2	1	X					Tenax/Charcoal
S-V-1-3-A	7/24/98		Silo 2 Run 1 Set3	1	X					Tenax
S-V-1-3-B	7/24/98		Silo 2 Run 1 Set3	1	X					Tenax/Charcoal
S-V-1-4-A	7/24/98		Silo 2 Run 1 Set4	1	X					Tenax
S-V-1-4-B	7/24/98		Silo 2 Run 1 Set4	1	X					Tenax/Charcoal
T-V-1-1-A	7/24/98		Tunnel Run 1 Set 1	1	X					Tenax
T-V-1-1-B	7/24/98		Tunnel Run 1 Set 1	1	X					Tenax/Charcoal
T-V-1-2-A	7/24/98		Tunnel Run 1 Set 2	1	X					Tenax
T-V-1-2-B	7/24/98		Tunnel Run 1 Set 2	1	X					Tenax/Charcoal
T-V-1-3-A	7/24/98		Tunnel Run 1 Set 3	1	X					Tenax
T-V-1-3-B	7/24/98		Tunnel Run 1 Set 3	1	X					Tenax/Charcoal
T-V-1-4-A	7/24/98		Tunnel Run 1 Set 4	1	X					Tenax
T-V-1-4-B	7/24/98		Tunnel Run 1 Set 4	1	X					Tenax/Charcoal

Relinquished by:	Date	Time	Received by:
Mary Hearnsberger	7/24/98	1437	
Relinquished by:	Date	Time	Received for Lab by:
	7/25/98	0900	

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

COPY 7/25/98

Book 214

Page 1 of 1

Custody Seal : Absent
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Absent
Container...: Intact

TLI Project Number 46297
Client: PES03 - Pacific Environmental Services

Date Received 07/25/98 By

Carrier and Number FedEx/

Ice Chest ICE/ICE PACKS Temp 6.0 C

TLI Number.. / mR/H:CPM.	Client Sample ID..... / Client COC ID.....*		Matrix / Location.....	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-1-1A	S-V-1-1-A S-V-1-1-A		TENAX R03									
214-1-1B	S-V-1-1-B S-V-1-1-B		TNX/CHAR R03									
214-1-2A	S-V-1-2-A S-V-1-2-A		TENAX R03									
214-1-2B	S-V-1-2-B S-V-1-2-B		TNX/CHAR R03									
214-1-3A	S-V-1-3-A S-V-1-3-A		TENAX R03									
214-1-3B	S-V-1-3-B S-V-1-3-B		TNX/CHAR R03									
214-1-4A	S-V-1-4-A S-V-1-4-A		TENAX R03									
214-1-4B	S-V-1-4-B S-V-1-4-B		TNX/CHAR R03									
214-1-5A	S-V-1-3-A S-V-1-3-A	(Typed label) (Typed label)	TENAX R03									
214-1-5B	S-V-1-3-B S-V-1-3-B	(Typed label) (Typed label)	TNX/CHAR R03									
214-1-6A	T-V-1-1-A T-V-1-1-A		TENAX R03									
214-1-6B	T-V-1-1-B T-V-1-1-B		TNX/CHAR R03									
214-1-7A	T-V-1-2-A T-V-1-2-A		TENAX R03									
214-1-7B	T-V-1-2-B T-V-1-2-B		TNX/CHAR R03									

Receiving Remarks: 2 set of samples labelled S-V-1-3-A & S-V-1-3-B arrived.ID'S were hand printed on 1 set and Typed on the other.

Archive Remarks:

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Custody Seal : Absent
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Absent
Container...: Intact

TLI Project Number 46297
Client: PES03 - Pacific Environmental Services

Book 214

Date Received 07/25/98 By

Page 1

Carrier and Number FedEx/

Ice Chest ICE/ICE PACKS Temp 6.0 C

TLI Number.. mR/H:CPM.	Client Sample ID..... Client COC ID.....*	Matrix Location.....	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-1-8A	T-V-1-3-A	TENAX									
	T-V-1-3-A	R03									
214-1-8B	T-V-1-3-B	TNX/CHAR									
	T-V-1-3-B	R03									
214-1-9A	T-V-1-4-A	TENAX									
	T-V-1-4-A	R03									
214-1-9B	T-V-1-4-B	TNX/CHAR									
	T-V-1-4-B	R03									

Receiving Remarks: 2 set of samples labelled S-V-1-3-A & S-V-1-3-B arrived. ID`S were hand printed on 1 set and Typed on the other.

Archive Remarks:

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-3 exp. 8/22/98 @ 25ug/ml	VSG-92-2 exp. 8/20/98	

Extract / Sample volume _____ Circle unit µL mL

Tonya C. Stovall 8/11
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/12/98	13:39	—	2ml VSG-92-3 exp 8/22/98	BFB	FX850	N/A			16	
8/13/98	00:01	—	2ml VSG-92-3 exp 8/22/98	BFB	FX851	N/A	16 8/13/98		16	
8/13/98	00:40	—	10ml VSG-93-1 exp 8/22/98	VOSTD0.1U T/TC	FX852	N/A	16 8/13/98		16	
8/13/98	1:25	—	10ml VSG-93-1 exp 8/22/98	VOSTD0.10 T/TC	FX853	N/A	16 8/13/98		16	Ical pt.
8/13/98	3:02	—	10ml VSG-93-2 exp 8/22/98	VOSTD0.25 T/TC	FX854	N/A	16 8/13/98		16	Ical pt.
8/13/98	3:50	—	10ml VSG-93-3 exp 8/22/98	VOSTD0.50 T/TC	FX855	N/A	16 8/13/98		16	Ical pt.
8/13/98	4:51	—	10ml VSG-93-11 exp 8/22/98	VOSTD0.75 T/TC	FX856	N/A	16 8/13/98		16	Ical pt.
8/13/98	5:34	—	10ml VSG-94-1 exp 8/22/98	VOSTD1.00 T/TC	FX857	N/A	16 8/13/98		16	Ical pt.
8/13/98		—	10ml VSG-92-2 exp 8/20/98	VOSTBLK T/TC	FX858	N/A	16 8/13/98		16	
8/13/98		—	10ml VSG-94-1 exp 8/22/98	VOSTD1.00 F/TC	FX859	N/A	JL 8/13/98		JL	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6525663	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSS-92-3 exp. 8/22/98 @ 25ug/ml	VSS-92-2 exp. 8/20/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Tonya C. Harrell 8/17/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/17/98	08:58	—	2.0 µl VSS-92-3 exp 8/22/98	BFB	FX870	N/A	TH 8/17/98	TH 8/18/98	TH	only 95/175 ions displayed Raised multiplier 8/17/98
8/17/98	09:48	—	2.0 µl VSS-92-3 exp. 8/22/98	BFB	FX871	N/A	TH 8/17/98		TH	UK Scan # 483 TH 8/17/98
8/17/98	10:23	—	10 µl VSS-92-4 exp. 8/22/98	VOSTD0.25 T/TC	FX872	N/A	TH 8/17/98		TH	bb22TCA < .3 OK per D. Hansen 8/17/98 TH
8/17/98	11:24	—	10 µl VSS-92-3 exp. 8/22/98	VOSTD0.10 T/TC	FX873	N/A	TH 8/17/98		TH	TCAL pants not used
8/17/98	12:07	—	10 µl VSS-93-1 exp. 8/22/98	VOSTD 0.50 T/TC	FX874	N/A	TH 8/17/98		TH	TCAL Pants not used
8/17/98	13:33	—	10µl VSS-92-3 exp 8	VOSTBLK	FX875	N/A	MR 8/17/98		MR	heated during purge cycle
8/17/98	14:12	10 µl VSS-90-2 exp 8/26/98	10 µl VSS-94-3 exp. 8/26/98	Additionals VOSTD0.50	FX876	N/A	MR 8/17/98		TH	Single pt
8/17/98	15:01	—	10 µl VSS-94-3 exp. 8/26/98	VOSTBLK T/TC	FX877	N/A	TH 8/17/98		TH	
8/17/98	1551	—	10µl VSS-94-3 exp 8/26/98	VOSTBLK T/TC	FX878	N/A	MR 8/17/98		MR	
8/17/98	1647	46297	214-1-6B	T-V-1-1-B	FX879	N/A	MR 8/17/98	TH 8/18/98	MR	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	625624-3	8260	VOA	VOA3	8260B	8260BX

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-3 @25ug/ml exp 8/22/98	~~VSTD~~ 8/17/98 VSG-92-2 exp 8/20/98 @25ug/ml	

Extract / Sample volume _____ µL mL (Circle unit)

_____ Signature _____ Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/17/98	1730	46297	214-1-7B	T-V-1-2-B	FX880	N/A	MC 8/17/98	8/18/98	MC	
8/17/98	1830	46297	214-1-9B	T-V-1-4-B	FX881	N/A	MC 8/17/98		MC	
8/17/98	1917	46297	214-1-8B	T-V-1-3B	FX882	N/A	MC 8/17/98		MC	
8/17/98	1955	46297	214-1-6A	T-V-1-1-A	FX883	N/A	MC 8/17/98		16	
8/18/98	00:19	—	70ul VSG-92-3 exp 8/16/98	~~BFB~~ VBLK 8/18/98 (BB)	FX884	N/A	16 8/18/98		16	
8/18/98	00:47	—	10ul VSG-91-1 exp 8/17/98	VSTD200	FX885	N/A	16 8/18/98		16	
8/18/98	1:24	—	10ul VSG-92-3 exp 8/21/98	VBLK	FX886	N/A	16 8/18/98		16	
8/18/98	2:16	—	7ul VSG-92-3 exp 8/22/98	BFB	FX887	N/A	16 8/18/98		16	
8/18/98	3:02	—	10ul VSG-92-4 exp 8/22/98	VOSTD0.25 TITC	FX888	N/A	16 8/18/98		16	tube leak 16 8/20/98
8/18/98	3:52	—	10ul VSG-92-4 exp 8/22/98	VOSTD0.25 TITC	FX889	N/A	16 8/18/98	8/18/98	16	~~Goes for~~ 16 8/18/98 (BB) 8/18/98

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Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSA-92-3 exp 8/26/98 @ 25 ug/mL	VSA-94-3 exp 8/24/98 @ 25 ug/mL	

Extract / Sample volume _____ Circle unit µL mL

Larry Gall 8/18/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/18/98	4:44	—	10ul VSA-94-3 exp 8/26/98	VOSTBLK T/TC	FX840	N/A	LG 8/18/98	LG 8/18/98	LG	
8/18/98	5:26	10ul VSA-90-2 exp 8/22/98	10ul VSA-94-3 exp 8/26/98	Additionals VOSTD0.50 T/TC	FX841	N/A	LG 8/18/98		LG	
8/18/98	7:03	—	10ul VSA-94-3 exp 8/26/98	VOSTBLK T/TC	FX842	N/A	LG 8/18/98		LG	
8/18/98	7:47	—	10ul VSA-94-3 exp 8/26/98	VOSTBLK T/TC	FX843	N/A	LG 8/18/98		LG	
8/18/98	12:46	—	10ul VSA-94-3 exp 8/26/98	VOSTBLK T/TC	FX844	N/A	LG 8/18/98		LG	Had to replace fitting and line on cryo valve
8/18/98	14:17	46297	214-1-7A	@ 8/18/98 & T-V-1-2A T	FX845	N/A	LG 8/18/98	LG 8/18/98	LG	Check and instrument utc Analysis started 1 min outside of clock time LG 8/18/98
8/18/98	23:59	—	10ul VSA-94-3 exp 8/26/98	VBLK	FX846	N/A	LG 8/18/98	1	LG	
8/19/98	1:15	—	10ul VSA-94-1 exp 8/22/98	VSTD200	FX847	N/A	LG 8/19/98		LG	
8/19/98	1:46	—	2ul VSA-92-3 exp 8/22/98	BFB	FX848	N/A	LG 8/18/98		LG	
8/19/98	3:35	—	10ul VSA-92-4 exp 8/24/98	VOSTD0.25 T/TC	FX900	N/A	LG 8/19/98		LG	Sensitivity too Low LG 8/19/98

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Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	32740556	8260	VOA	VOA3	8260B	8260X

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-3 exp. 8/22/98 @ 25ug/ml	VSG-92-2 exp. 8/20/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Tonya C. Spruell 8/8/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/8/98	01:57	—	2.0ul VSG-92-3 exp. 8/22/98	BFB	HW549	N/A	TL 8/8/98	to 8/10/98	TL	
8/8/98	02:26	—	10ul VSG-92-4 exp. 8/22/98	VOSTD0.10 TITC	HW550	N/A	TL 8/8/98		TL	
8/8/98	03:17	—	10ul VSG-92-4 exp. 8/22/98	VOSTD0.10 TITC	HW551	N/A	TL 8/8/98		TL	
8/8/98	03:52	—	10ul VSG-93-1 exp. 8/22/98	VOSTD0.25 TITC	HW552	N/A	TL 8/8/98		TL	
8/8/98	04:23	—	10ul VSG-93-2 exp. 8/22/98	VOSTD0.50 TITC	HW553	N/A	TL 8/8/98		TL	
8/8/98	04:55	—	10ul VSG-93-3 exp. 8/22/98	VOSTD0.75 TITC	HW554	N/A	TL 8/8/98		TL	
8/8/98	05:27	—	10ul VSG-94-1 exp. 8/22/98	VOSTD1.00 TITC	HW555	N/A	TL 8/8/98		TL	
8/8/98	06:01	—	10ul VSG-92-2 exp. 8/20/98	VBIK	HW556	N/A	TL 8/8/98		TL	
8/8/98	06:40	—	10ul VSG-90-2 exp. 8/20/98	Addl. Hexane VOSTD0.50 TITC	HW557	N/A	TL 8/8/98		TL	Single Pt.
8/8/98	07:49	—	10ul VSG-92-2 exp. 8/20/98	VOSTBIK TITC	HW558	N/A	TL 8/8/98	to 8/10/98	TL	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	327 4056	8260	VOA	VOA3	F260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-3 exp. 8/22/98 @ 25ug/ml	VSG-94-3 exp. 8/26/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Tony C. Hamell 8/18/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/18/98	10:47	46415A	215-19-8A	Cont-M0030-TX-R2C	HW698	N/a	TH 8/18/98	TH 8/18/98	TH	moisture from Tube TH 8/18/98
8/18/98	12:22	—	10ul VSG 94-3 exp. 8/26/98	VOSTBLK T/TC	HW699	N/A	TH 8/18/98		TH	
8/18/98	13:45	46415A	215-19-8B	Cont-M0030-TX-R2D TC	HW700	N/A	TH 8/18/98		TH	Archive analysis TH 8/18/98 moisture from tube
8/18/98	14:25	46415A	215-19-8A	Cont-M0030-TX-R2D T	HW701	N/a	TH 8/18/98	TH 8/18/98	TH	Archive analysis moisture from reduction in flow
8/19/98	00:47	—	2ml VSG-92-3 exp 8/22/98	BFB	HW702	N/A	16 8/19/98	TH 8/19/98	16	
8/19/98	1:18	—	10ml VSG-93-2 exp 8/22/98	VOSTD0.25 T/TC	HW703	N/A	16 8/19/98		16	
8/19/98	1:57	—	10ml VSG 94-3 exp 8/26/98	VOSTBLK T/TC	HW704	N/A	16 8/19/98		16	
8/19/98	2:36	—	10ml VSG 94-3 exp 8/26/98	VOSTBLK T/TC	HW705	N/A	16 8/19/98		16	
8/19/98	3:58	5ml VSG-94-2 exp 8/23/98	10ml VSG-94-3 exp 8/26/98	LCS T/TC	HW706	N/A	16 8/19/98		16	
8/19/98		5ml VSG-94-2 exp 8/21/98	10ml VSG-94-3 exp 8/26/98	LCSD T/TC	HW707	N/A	16 8/19/98	TH 8/19/98	16	D.d not require TH 8/19/98

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	3274056	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSA-02-3 exp 8/22/98 @ 25ug/ml	VSA-04-3 exp 8/26/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

I may Gall 8/19/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/19/98	5:20	10ul VSA-04-2 exp 8/20/98	10ul VSA-04-3 exp 8/26/98	Additionals VOSTD0.50 T/TC	HW708	N/A	LG 8/19/98		LG	
8/19/98	6:27	5ml VSA-04-2 exp 8/23/98	10ul VSA-04-3 exp 8/26/98	LCSD T/TC	HW709	N/A	LG 8/19/98		LG	
8/19/98	07:17	5ml VSC-04-2 exp. 8/23/98	10 l VSS-04-3 exp. 8/26/98	LCSD T/TC	HW710	N/A	JL 8/19/98		JL	
8/19/98	08:14	—	10 l VSS-04-3 exp. 8/26/98	VOSTB/K T/TC	HW711	N/A	JL 8/19/98		JL	
8/19/98	08:55	—	10ul VSA-04-3 exp. 8/26/98	VOSTD/K T/TC	HW712	N/A	JL 8/19/98		JL	
8/19/98	10:06	46297	214-1-8A	T-V-1-3-A T	HW713	N/A	JL 8/19/98		JL	
8/19/98	10:56	46297	214-1-9A	T-V-1-4-A T	HW714	N/A	JL 8/19/98	JL 8/19/98	JL	aquisition default NO peaks for IS sample does not to internal standards JL 8/19/98

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

SAMPLE DATA

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729

P.O. Box 13485
Research Triangle Park, NC 27709-34
Fax # 919-544-5491

Pacific Environmental Services

Project Number: 46297
Sample File: FX883

Method 8260 VOST
Sample ID: T-V-1-1-A T

Client Project: Hotmix
TLI ID: 214-1-6A

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.008	J	2.03		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.015	J	2.77		0.05
Acetone	0.137		2.82		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.303		3.26		0.05
Acrylonitrile		U		0.015	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.061		4.75		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.106	B	5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 17:46 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX883

Method 8260 VOST
Sample ID: T-V-1-1-A T

Client Project: Hotmix
TLI ID: 214-1-6A

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.005	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.360	B	8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.005	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.137		10.68		0.05
m-/p-Xylene	0.720		10.92		0.10
o-Xylene	0.251		11.63		0.05
Styrene		U		0.001	0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.73		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.002	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 17:46 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX883

Method 8260 VOST
Sample ID: T-V-1-1-A T

Client Project: Hotmix
TLI ID: 214-1-6A

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.231	5.18	1	92
Toluene-d_8	0.339	8.00	2	136
4-Bromofluorobenzene	0.404	12.65	2	162

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46297
Sample File: FX883

Method 8260 VOST
Sample ID: T-V-1-1-A TC

Client Project: Hotmix
TLI ID: 214-1-6A

Date Received: 07/25/98

Date Analyzed : 08/17/98

Response File: ICALF817

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.127	J	3.88		0.25
1,2-Epoxybutane		U		0.010	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.002	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:00 08/24/1998

Data Review: MC
Date: 8/19/98

QUAN DB : FK88.D LAB-BASE QUAN 18-Aug-98 01:57

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	92	54	93	1	2785456	bb	5.301	168	Pentafluorobenzene
2	100	80	93	0	3023020	bv	6.071	114	1,4-Difluorobenzene
3	81	54	76	0	2569344	bv	10.351	117	Chlorobenzene-d5
4	57	15	77	2	1465755	bv	15.732	152	1,4-Dichlorobenzene-d4
5	93	50	99	0	1083228	bb	5.161	113	Dibromofluoromethane
6	95	68	87	1	4134235	bv	8.001	98	Toluene-d8
7	61	36	61	0	1659809	vv	12.651	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	0	0	0	0	0		0.000	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	0	0	0	0	0		0.000	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	38	40	35	-2	639552	bb	2.030	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	142	Iodomethane
16	78	51	73	0	141760	mb	2.270	76	Carbon disulfide
17	85	47	92	-1	70690	b	2.400	43	Acetone
18	0	0	0	0	7991060		0.000	41	Ethyl ether
19	20	45	66	-1	[illegible]	[illegible]	[illegible]	84	Methylene chloride
20	29	12	59	-4	[illegible]	[illegible]	[illegible]	53	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	59	44	53	2	333804	b	4.751	43	2-Butanone
27	0	0	0	0	0		0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	100	91	99	0	1253466	bv	5.521	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	47	45	56	-11	[illegible]	[illegible]	[illegible]	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	34	15	47	5	[illegible]	[illegible]	[illegible]	43	4-Methyl-2-pentanone
41	100	87	98	0	3128788	vv	8.091	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	42	24	64	-10	[illegible]	[illegible]	[illegible]	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

8/19/98 3,262

Data Review: MC
Date: 8/19/98

No.	MAT	FOR	REV	Delta	Area	P	Flags	RT	QM	Name
51	0	0	0	0	0			0.000	131	1,1,1,2-Tetrachloroethane
52	87	53	86	0	86107.0		bv	10.681	106	Ethylbenzene
53	97	66	89	0	556313.6		vv	10.921	106	m-/p-Xylene
54	92	61	89	0	161964.8		bv	11.651	106	o-Xylene
55	0	0	0	0	0			0.000	104	Styrene
56	0	0	0	0	0			0.000	173	Bromoform
57	0	0	0	0	0			0.000	105	Cumene
58	0	0	0	0	0			0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0			0.000	156	Bromobenzene
60	0	0	0	0	0			0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0			0.000	120	n-Propylbenzene
62	0	0	0	0	0			0.000	75	trans-1,4-Dichloro-2-butene
63	0	0	0	0	0			0.000	126	2-Chlorotoluene
64	0	0	0	0	0			0.000	126	4-Chlorotoluene
65	40	46	92	-24	997596.5		vv	13.571	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0			0.000	119	tert-Butylbenzene
67	90	51	93	0	1037942.0		vv	14.302	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0			0.000	105	sec-Butylbenzene
69	0	0	0	0	0			0.000	134	p-Isopropyltoluene
70	0	0	0	0	0			0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0			0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0			0.000	91	Benzyl chloride
73	0	0	0	0	0			0.000	91	n-Butylbenzene
74	0	0	0	0	0			0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0			0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0			0.000	180	1,2,4-Trichlorobenzene
77	0	0	0	0	0			0.000	225	Hexachlorobutadiene
78	0	0	0	0	0			0.000	128	Naphthalene
79	0	0	0	0	0			0.000	180	1,2,3-Trichlorobenzene

34

QUAN OR : FX083 LAB-BASE QUAN L3-Aug-98 01:55

No.	MAT	FOR	REV	Delta	Area	P.F	Lags	RT	QM	Name
1	92	54	93	1	2785456	bb		5.301	168	Pentafluorobenzene
2	100	80	93	0	3023020	bv		6.071	114	1,4-Difluorobenzene
3	81	54	76	-1	2569344	bv		10.351	117	Chlorobenzene-d5
4	58	15	77	0	1463755	bv		15.732	152	1,4-Dichlorobenzene-d4
5	93	50	99	0	1083228	bb		5.181	113	Dibromofluoromethane
6	97	68	87	0	4184235	bv		8.001	98	Toluene-d8
7	59	36	61	-1	1659809	vv		12.451	95	4-Bromofluorobenzene
8	65	41	72	5	~~51288~~	~~vb~~		~~1.270~~ FP	39	1,3-Butadiene
9	0	0	0	0	0			0.000	106	Vinyl bromide
10	68	50	59	0	~~1296148~~			~~3.540~~ FP	73	MTBE
11	100	96	99	0	1917848	bv		5.880	57	n-Hexane
12	54	40	57	7	~~2541379~~	~~bv~~		~~7.440~~ FP	42	1,2-Epoxybutane
13	61	43	54	0	~~2574113~~	~~n~~		~~5.791~~ FP	57	Iso-Octane
14	43	28	70	-13	~~2375336~~	~~vb~~		~~6.911~~ FP	55	Ethyl acrylate

M 8/19/98

Instrument Flight Procedures Chart
Effective 1 Nov 90 to 30 Nov 90

36

37

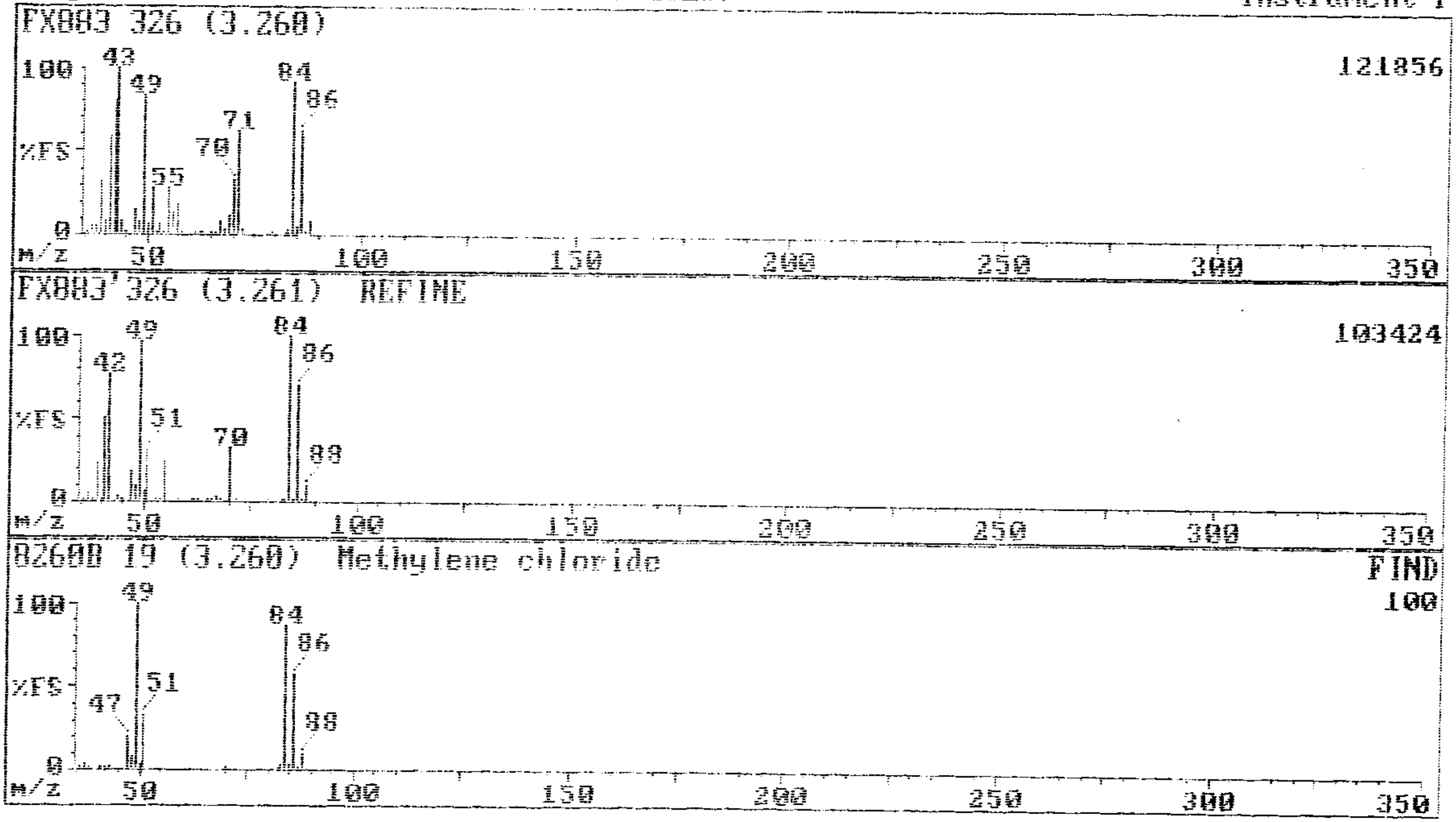
Instrument F
(972) 272-2007 (800) 541-5727
Texas, Inc.
Plano,
Tektronix
FIND
350
300
250
200
150
100
50
0
0809
0392
1001

38

17-Aug-98 19:55 Triangle Laboratories, Inc. (919) 544-5729

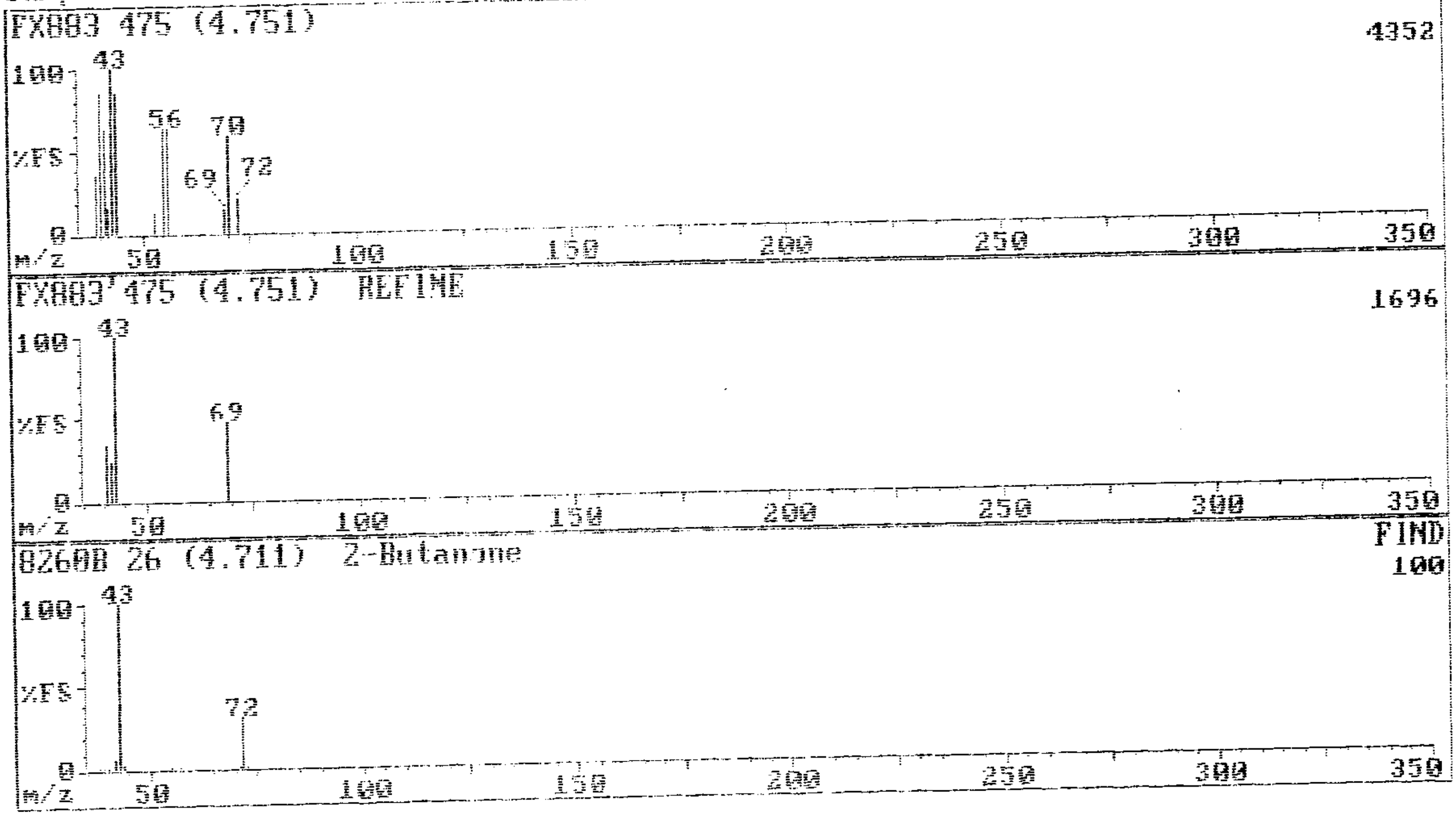
Sample: T-V-1-1-A T 214-1-60 TLI#46297

Instrument F



17-Aug-98 19:55 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-1-A T 214-1-6A TLI#46297 Instrument F

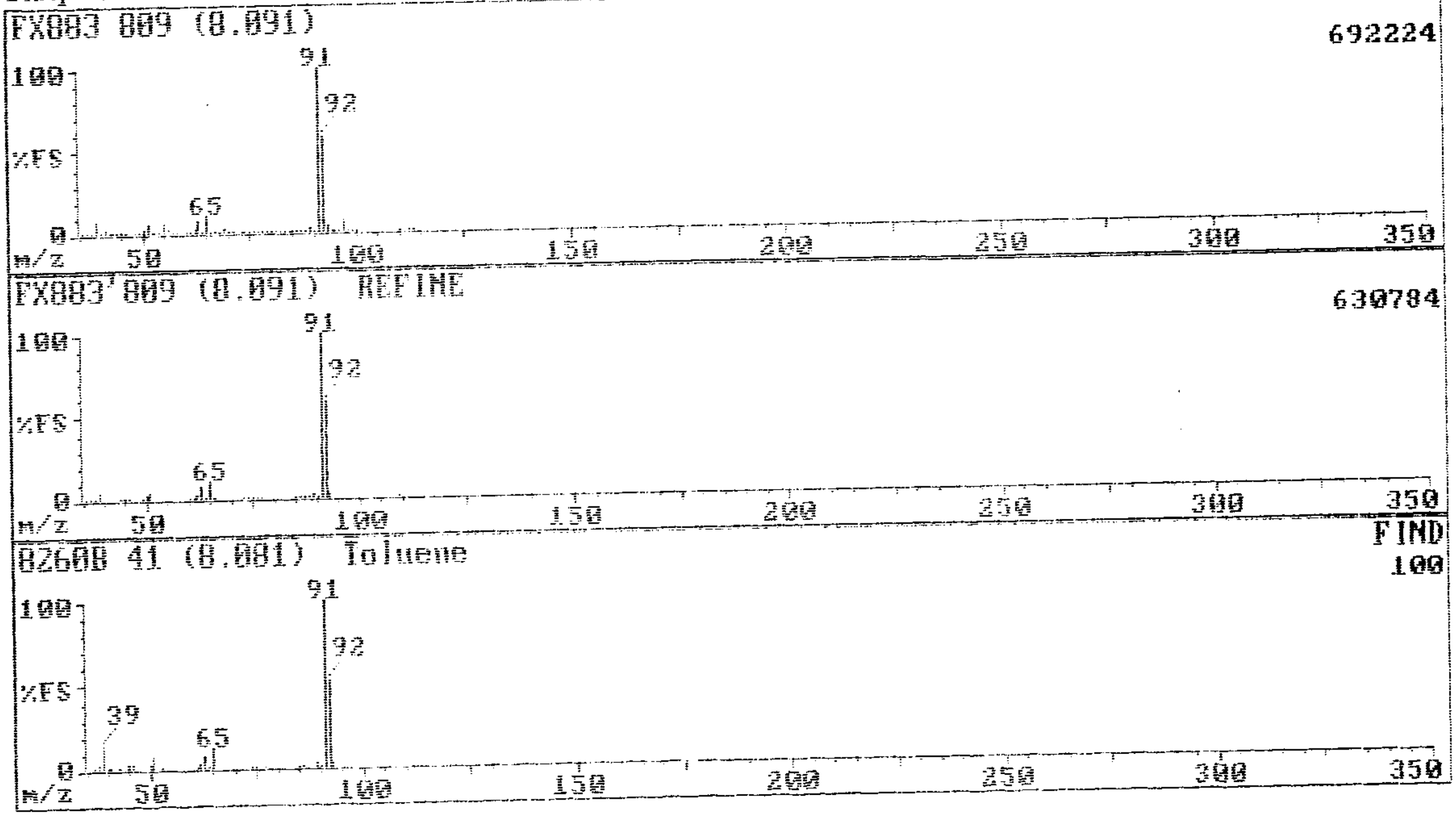


17-Aug-90 09:55
Sample: 1-A-1-A
Instrument
Environmental Laboratories, Inc.
Data Set: C:\CHEM32\1\DATA\081790\081702.D
Method: C:\CHEM32\1\METHODS\081790.M (Chemstation Integrator)
Title: 1-A-1-A
FVOC3 552 (5,524) 1
FVOC3 552 (5,524) 1
FVOC3 552 (5,524) 1
%/Z
%FS
100
50
0
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300

17-Aug-98 19:55 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-1-A T 214-1-6A TLI#46297

Instrument F

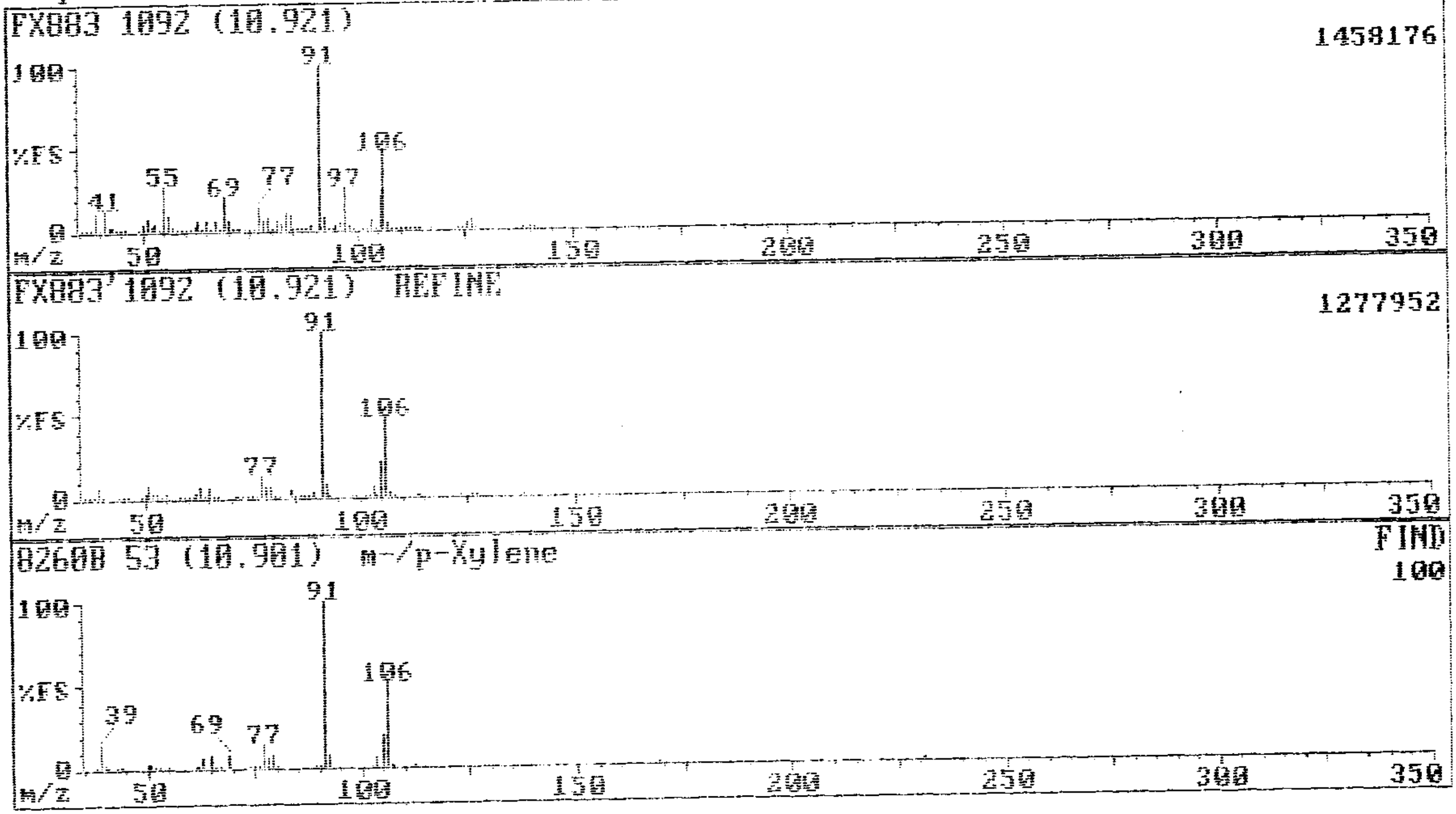


43

17-Aug-98 19:55 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-1-A T 214-1-6A TLI#46297

Instrument F



17-Aug-00 05:05
Sample: 11-14-1-4-1
Instrument F
FMOD1 COIL CONDI
4259
FMOD2 COIL CONDI
3645
FIND
100

45

46

Pacific Environmental Services

Project Number: 46297
Sample File: FX879

Method 8260 VOST
Sample ID: T-V-1-1-B TC

Client Project: Hotmix
TLI ID: 214-1-6B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.075		1.08		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.056		1.65		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.153		3.27		0.05
Acrylonitrile		U		0.016	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46297
Sample File: FX879

Method 8260 VOST
Sample ID: T-V-1-1-B TC

Client Project: Hotmix
TLI ID: 214-1-6B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.020	BJ	8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.002	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.003	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.71		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.003	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX879

Method 8260 VOST
Sample ID: T-V-1-1-B TC

Client Project: Hotmix
TLI ID: 214-1-68

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.249	5.18	1	100
Toluene-d_8	0.305	8.00	2	122
4-Bromofluorobenzene	0.282	12.65	2	113

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46297
Sample File: FX879

Method 8260 VOST
Sample ID: T-V-1-1-B TC

Client Project: Hotmix
TLI ID: 214-1-6B

Date Received: 07/25/98
Date Analyzed : 08/17/98

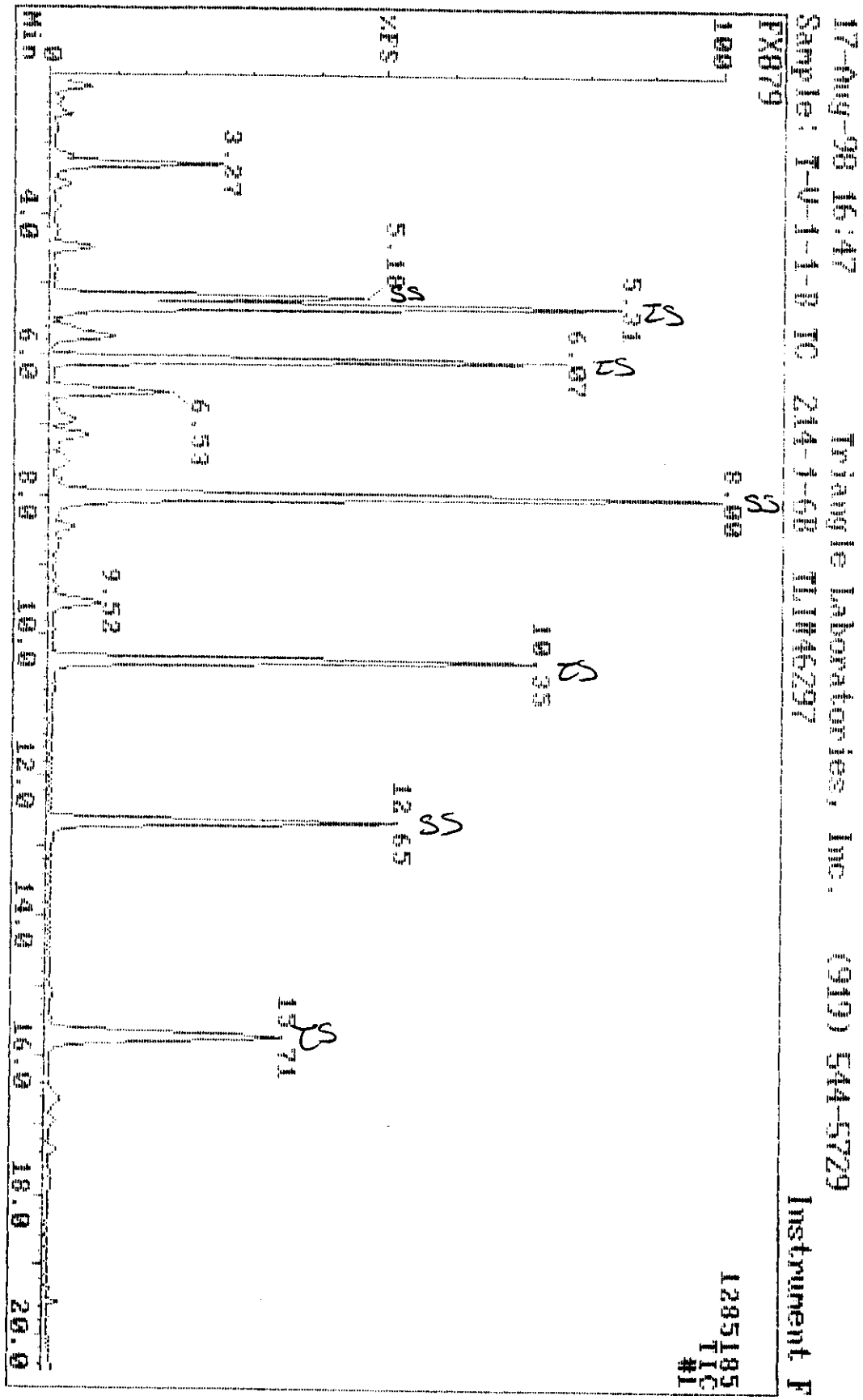
Response File: ICALF817

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.001	J	3.90		0.25
1,2-Epoxybutane		U		0.011	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.003	0.25

Reviewed by YB Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range



Data Review: MC
Date: 8/19/98

51

QUAN DB : FX879 LAB-BASE QUAN 17-Aug-98 17:25

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	78	99	1	2574448	bb	5.301	168	Pentafluorobenzene
2	100	97	99	0	2726140	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	0	2355716	bv	10.351	117	Chlorobenzene-d5
4	100	76	100	0	860176	bv	15.712	152	1,4-Dichlorobenzene-d4
5	100	84	99	0	1077964	bv	5.181	113	Dibromofluoromethane
6	100	91	97	1	3394004	bv	8.001	98	Toluene-d8
7	100	91	93	0	1044408	bv	12.651	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	97	77	82	1	263316	A	1.080	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	86	62	86	3	101590	bv	1.630	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	0	0	0	0	0		0.000	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	142	Iodomethane
16	0	0	0	0	0		0.000	76	Carbon disulfide
17	39	12	85	2	~~12408~~	A	~~2.130~~ FP	43	Acetone
18	0	0	0	0	0		0.000	41	Allyl chloride
19	100	76	89	0	572588	bv	3.270	84	Methylene chloride
20	7	2	9	-2	~~1500~~	A	~~2.130~~ FP	53	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	21	13	13	4	~~4402~~	A	~~2.130~~ FP	43	2-Butanone
27	0	0	0	0	0	MC 8/19/98	0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	0	0	0	0	0		0.000	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	0	0	0	0	0		0.000	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	36	4	61	5	~~21340~~	bb	~~3.911~~ FP	43	4-Methyl-2-pentanone
41	100	74	92	0	158852	bb	8.091	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	0	0	0	0	0		0.000	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

Data Review: JM
Date: 8/19/98

52

No.	MAT	FOR	REV	Delta	Area P.Flags	RT	QM	Name
51	0	0	0	0	0	0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0	0.000	106	Ethylbenzene
53	0	0	0	0	0	0.000	106	m-/p-Xylene
54	0	0	0	0	0	0.000	106	o-Xylene
55	0	0	0	0	0	0.000	104	Styrene
56	0	0	0	0	0	0.000	173	Bromoform
57	0	0	0	0	0	0.000	105	Cumene
58	0	0	0	0	0	0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0	0.000	156	Bromobenzene
60	0	0	0	0	0	0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0	0.000	120	n-Propylbenzene
62	0	0	0	0	0	0.000	75	trans-1,4-Dichloro-2-butan
63	0	0	0	0	0	0.000	126	2-Chlorotoluene
64	0	0	0	0	0	0.000	126	4-Chlorotoluene
65	0	0	0	0	0	0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0	0.000	119	tert-Butylbenzene
67	0	0	0	0	0	0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0	0.000	105	sec-Butylbenzene
69	0	0	0	0	0	0.000	119	p-Cymene
70	0	0	0	0	0	0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0	0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0	0.000	91	Benzyl chloride
73	0	0	0	0	0	0.000	91	n-Butylbenzene
74	0	0	0	0	0	0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0	0.000	75	1,2-Dibromo-3-chloroprop
76	0	0	0	0	0	0.000	180	1,2,4-Trichlorobenzene
77	78	50	87	-4	1.8948 bb	1.9492	225	Hexachlorobutadiene
78	0	0	0	0	0	0.000	128	Naphthalene
79	0	0	0	0	0	0.000	180	1,2,3-Trichlorobenzene

QUAN 08 : FX879 LAB-BASE QUAN 13-Aug-98 00:54

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	78	99	1	2574448	bb	5.301	168	Pentafluorobenzene
2	100	97	99	0	2726140	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	-1	2355716	bv	10.351	117	Chlorobenzene-d5
4	100	76	100	-2	860176	bv	15.712	152	1,4-Dichlorobenzene-d4
5	100	84	99	0	1077964	bv	5.181	113	Dibromofluoromethane
6	100	91	97	0	3394004	bv	8.001	98	Toluene-d8
7	100	91	93	-1	1044408	bv	12.651	95	4-Bromofluorobenzene
8	57	33	66	5	~~2661?~~	~~vv~~	~~1.220~~ FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	57	40	55	4	~~3612~~	~~M~~	~~3.650~~ FP	73	MTBE
11	69	37	59	2	1789?	bb	3.900	57	n-Hexane
12	55	48	62	13	~~2?09~~	~~?~~	~~1.170~~ FP	42	1,2-Epoxybutane
13	64	47	57	1	~~5?02~~	~~?~~	~~3.031~~ FP	57	Iso-Octane
14	44	28	69	-12	~~?8?4~~	~~bb~~	~~6.521~~ FP	55	Ethyl acrylate

WC81998

17-Aug-00 15:47
Sample: 1 1-1-1-0 to 1-1-1-0
TX8079 (600.0) 007 (1.000)
19200
1 Instrument
Agilent 54542C (DSO) : Ver. 1.00.00 [54542-97029]
Trigger Level: 1.47 V
Edge: Rising
Source: Channel 1
Coupling: DC
Reject: Off
Mode: Normal
Trigger Sweep: Auto
Acquisition Mode: Real Time
Interpolation: Sin(x)/x
Acquisition Memory: 32000 points
Sample Rate: 200 MSa/s
Time Reference: Center
Horizontal Scale: 200 ns/div
Horizontal Position: 0.0 s
Channel 1: 500 mV/div
Offset: 0.0 V
Probe Attenuation: 1.0:1
Channel 2: 500 mV/div
Offset: 0.0 V
Probe Attenuation: 1.0:1
Channel 3: 500 mV/div
Offset: 0.0 V
Probe Attenuation: 1.0:1
Channel 4: 500 mV/div
Offset: 0.0 V
Probe Attenuation: 1.0:1
Digital Channels
Bus 1: Off
Bus 2: Off
Measurement Statistics: Off
Measurement Setup
Measurement 1: Off
Measurement 2: Off
Measurement 3: Off
Measurement 4: Off
Measurement 5: Off
Measurement 6: Off
Measurement 7: Off
Measurement 8: Off
Measurement 9: Off
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Measurement 1000: Off

55

17-Aug-00 10:47
Instrument F
9600
7232
FIND
100

17-Aug-00 16:47
Sample: T-1-1-1-B to 2-1-1-1-B
Instrument F
60416
57856
WIND
100
350
300
250
200
150
100
50
0
M/Z
%FS
Methylene Chloride

57

17-Aug-95 16:47
Instrument Engineering Associates, Inc. (610) 544-5720
Sample: F-V-I-1-10 Zone-5-60 Turbidity/Color
FXR070 000 (0.001)
%FS
100
50
0
M/Z
350
400
450
500
339972
FXR070 000 (0.001) Turbidity
%FS
100
50
0
M/Z
350
400
450
500
339976
FXR070 000 (0.001) Color
%FS
100
50
0
M/Z
350
400
450
500
339980
FXR070 000 (0.001) Turbidity
%FS
100
50
0
M/Z
350
400
450
500
339984

58

INSTRUMENT
4736
(GAS-PAS (UNIT) ' CHEMICAL ASSOCIATES, Bowling Green, KY
(GAS-PAS (UNIT) ' CHEMICAL ASSOCIATES, Bowling Green, KY
(GAS-PAS (UNIT) ' CHEMICAL ASSOCIATES, Bowling Green, KY
2592
FIND
100

59

Pacific Environmental Services

Project Number: 46297
Sample File: FX895

Method 8260 VOST
Sample ID: T-V-1-2-A T

Client Project: Hotmix
TLI ID: 214-1-7A

Date Received: 07/25/98
Date Analyzed : 08/18/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.007	J	1.61		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.013	J	2.78		0.05
Acetone	0.204		2.82		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.078		3.27		0.05
Acrylonitrile		U		0.017	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.129	B	5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:03 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX895

Method 8260 VOST
Sample ID: T-V-1-2-A T

Client Project: Hotmix
TLI ID: 214-1-7A

Date Received: 07/25/98
Date Analyzed : 08/18/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.377	B	8.10		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.002	0.05
Chlorobenzene-d_5		IS 3	10.36		
Tetrachloroethene	0.054		8.93		0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.128		10.68		0.05
m-/p-Xylene	0.677		10.92		0.10
o-Xylene	0.235		11.64		0.05
Styrene		U		0.001	0.05
Bromoform		U		0.003	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.77		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.002	0.05

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IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46297
Sample File: FX895

Method 8260 VOST
Sample ID: T-V-1-2-A T

Client Project: Hotmix
TLI ID: 214-1-7A

Date Received: 07/25/98
Date Analyzed : 08/18/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.229	5.18	1	92
Toluene-d_8	0.350	8.00	2	140
4-Bromofluorobenzene	0.425	12.66	2	170

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Phone: (919) 544-5729 • Fax: (919) 544-5491

Pacific Environmental Services

Project Number: 46297
Sample File: FX895

Method 8260 VOST
Sample ID: T-V-1-2-A T

Client Project: Hotmix
TLI ID: 214-1-7A

Date Received: 07/25/98
Date Analyzed : 08/18/98

Response File: ICALF818

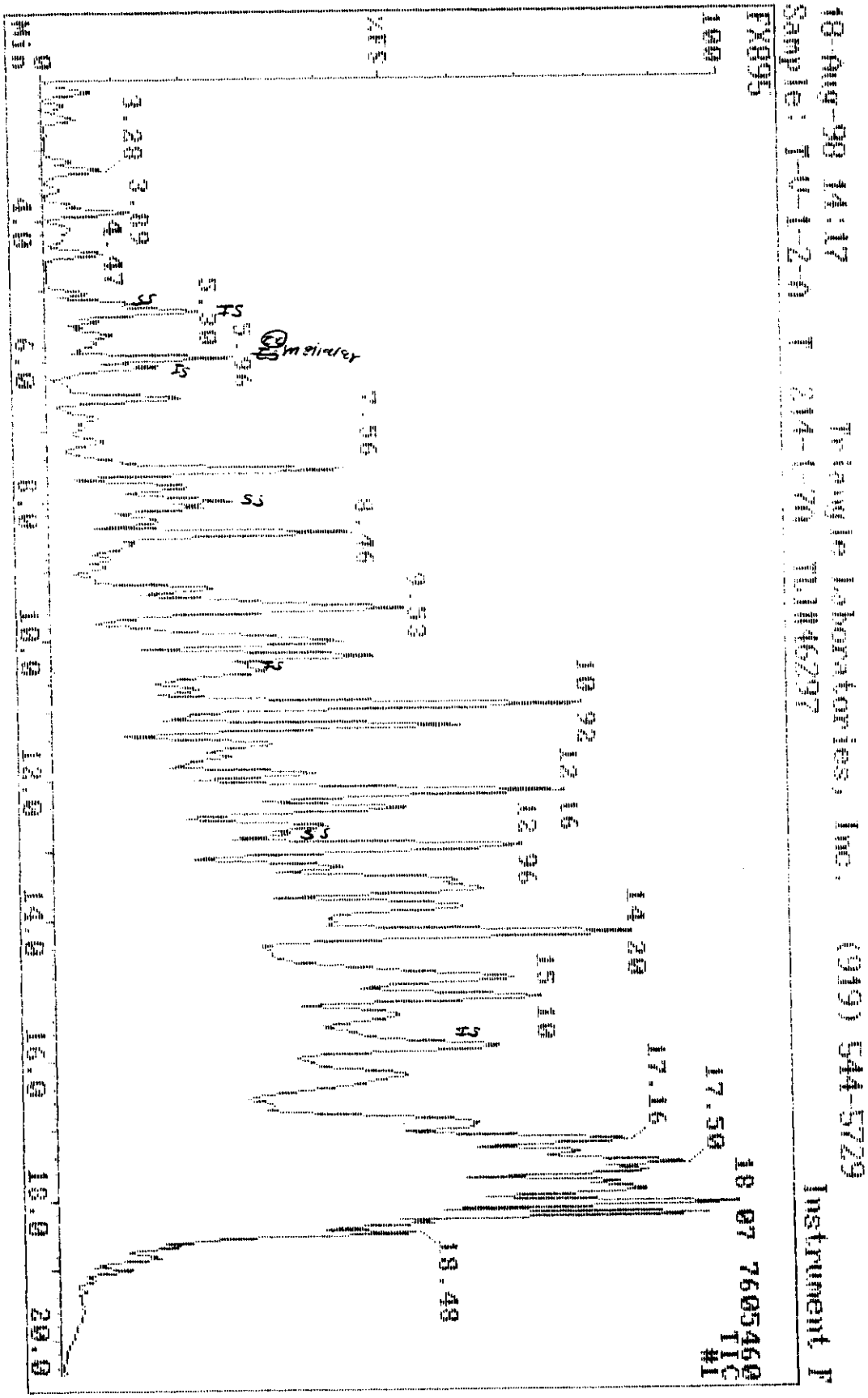
Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.147	J	3.89		0.25
1,2-Epoxybutane		U		0.015	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.004	0.25

Reviewed by VR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:00 08/24/1998



Data Review: YR
Date: 8/19/97

64

QUAN DB : FX895 LAB-BASE QUAN 13-Aug-98 12:47

No.	MAT	FOR	REV	Delta	Area	P.F	Lags	RT	QM	Name
1	95	96	94	1	2483712	bb		5.301	168	Pentafluorobenzene
2	100	83	95	0	2639904	bv		6.137	114	1,4-Difluorobenzene
3	83	57	79	1	2522196	bv		10.501	117	Chlorobenzene-d5
4	52	14	71	4	1211712	bv		15.772	152	1,4-Dichlorobenzene-d4
5	93	42	99	0	956260	bv		5.181	113	Dibromofluoromethane
6	96	70	88	1	3770622	bv		8.001	98	Toluene-d8
7	62	38	63	1	1525120	vv		12.461	95	4-Bromofluorobenzene
8	0	0	0	0	0			3.000	85	Dichlorodifluoromethane
9	0	0	0	0	0			3.000	50	Chloromethane
10	0	0	0	0	0			0.000	62	Vinyl Chloride
11	53	34	90	-1	1259	A		1.540	94	Bromomethane
12	0	0	0	0	0			0.000	64	Chloroethane
13	0	0	0	0	0			0.000	101	Trichlorofluoromethane
14	0	0	0	0	0			0.000	79	1,1-Dichloroethene
15	0	0	0	0	0			0.000	142	Iodomethane
16	67	40	74	1	1129	bb		2.230	76	Carbon disulfide
17	42	62	22	-1	9418	vv		3.220	43	Acetone
18	0	0	0	0	0			0.000	49	Methyl iodide
19	0	0	0	0	181336			327	84	Methylene chloride
20	30	1	29	-5				FP	63	Acrylonitrile
21	0	0	0	0	0			0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0			0.000	63	1,1-Dichloroethane
23	0	1	0	0	1			0.000	43	Vinyl acetate
24	0	0	0	0	0			0.000	73	2,2-Dichloropropane
25	0	1	0	0	0			0.000	96	cis-1,2-Dichloroethene
26	79	9	70	1	1660	bv		FP	43	2-Butanone
27	0	0	0	0	0			0.000	83	Chloroform
28	0	0	0	0	0			0.000	129	Bromochloromethane
29	0	0	0	0	0			0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0			0.000	117	Carbon tetrachloride
31	0	0	0	0	0			0.000	75	1,1-Dichloropropene
32	100	92	99	0	1323264	bv		5.521	78	Benzene
33	0	0	0	0	0			0.000	62	1,2-Dichloroethane
34	0	0	0	0	0			0.000	130	Trichloroethene
35	0	0	0	0	0			0.000	63	1,2-Dichloropropane
36	0	0	0	0	0			0.000	93	Dibromomethane
37	47	45	56	-11	9317			FP	41	Methyl methacrylate
38	0	0	0	0	0			0.000	83	Bromodichloromethane
39	0	0	0	0	0			0.000	75	cis-1,3-Dichloropropene
40	35	32	68	-19	1			FP	43	4-Methyl-2-pentanone
41	100	83	99	1	2860720	vv		8.101	92	Toluene
42	0	0	0	0	0			0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0			0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0			0.000	69	Ethyl methacrylate
45	67	65	77	-1	236300	bb		8.931	164	Tetrachloroethene
46	0	0	0	0	0			0.000	76	1,3-Dichloropropane
47	42	74	64	-10	1			FP	43	2-Hexanone
48	0	0	0	0	0			0.000	129	Dibromochloromethane
49	0	0	0	0	0			0.000	107	1,2-Dibromoethane
50	0	0	0	0	0			0.000	112	Chlorobenzene

Data Review: M
Date: 8/19/98

65

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	L31	1,1,1,2-Tetrachloroethane
52	85	54	86	-1	726255	bv	10.631	L06	Ethylbenzene
53	96	67	90	-1	1729632	vv	10.921	L06	m-/p-Xylene
54	92	62	89	0	1569024	bv	11.441	L06	o-Xylene
55	0	0	0	0	0		0.000	L04	Styrene
56	0	0	0	0	0		0.000	L31	Bromoform
57	0	0	0	0	0		0.000	L05	Cumene
58	0	0	0	0	0		0.000	L33	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	L56	Bromobenzene
60	0	0	0	0	0		0.000	L35	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	L20	n-Propylbenzene
62	0	0	0	0	0		0.000	L55	trans-1,4-Dichloro-2-butene
63	0	0	0	0	0		0.000	L56	2-Chlorotoluene
64	0	0	0	0	0		0.000	L56	4-Chlorotoluene
65	38	45	95	-25	3368411	vv	13.601	L05	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	L56	tert-Butylbenzene
67	87	52	94	-2	9113632	bv	14.255	L05	1,2,4-Trimethylbenzene
68	39	10	56	-2	[illegible]		[illegible]	L05	sec-Butylbenzene
69	0	0	0	0	0		0.000	L56	p-Isopropyltoluene
70	0	0	0	0	0		0.000	L56	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	L56	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	L56	n-Butylbenzene
73	0	0	0	0	0		0.000	L56	1,2-Dichlorobenzene
74	0	0	0	0	0		0.000	L56	1,2-Dibromo-3-chloropropane
75	0	0	0	0	0		0.000	L56	1,2,4-Trichlorobenzene
76	0	0	0	0	0		0.000	L60	Hexachlorobutadiene
77	0	0	0	0	0		0.000	L56	Naphthalene
78	0	0	0	0	0		0.000	L56	1,2,3-Trichlorobenzene
79	0	0	0	0	0		0.000	L30	1,2,3-Trichlorobenzene

FP

VR 8/19/98

QUAN DB : FX395 LAB-BASE QUAN 18-AUG-98 15:51

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	93	56	94	1	2483712	bb	5.301	168	Pentafluorobenzene
2	100	83	95	0	2639904	bv	6.071	114	1,4-Difluorobenzene
3	85	57	79	0	2322196	bv	10.361	117	Chlorobenzene-d5
4	52	14	71	3	1211712	bv	15.772	152	1,4-Dichlorobenzene-d4
5	93	49	99	0	956260	bv	5.181	113	Dibromofluoromethane
6	99	70	88	0	3770672	bv	8.001	98	Toluene-d8
7	63	38	63	0	1525120	vv	12.661	95	4-Bromofluorobenzene
8	55	56	63	7	20995[illegible]	[illegible]	1.140 FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	71	53	63	1	[illegible]	bb	[illegible] FP	73	MTBE
11	100	95	99	1	1696232	bb	3.390	57	n-Hexane
12	59	45	64	3	[illegible]	bv	[illegible] FP	42	1,2-Epoxybutane
13	62	45	57	2	[illegible]	[illegible]	[illegible] FP	57	Isooctane
14	43	28	70	-13	[illegible]	vb	[illegible] FP	99	Ethyl acrylate

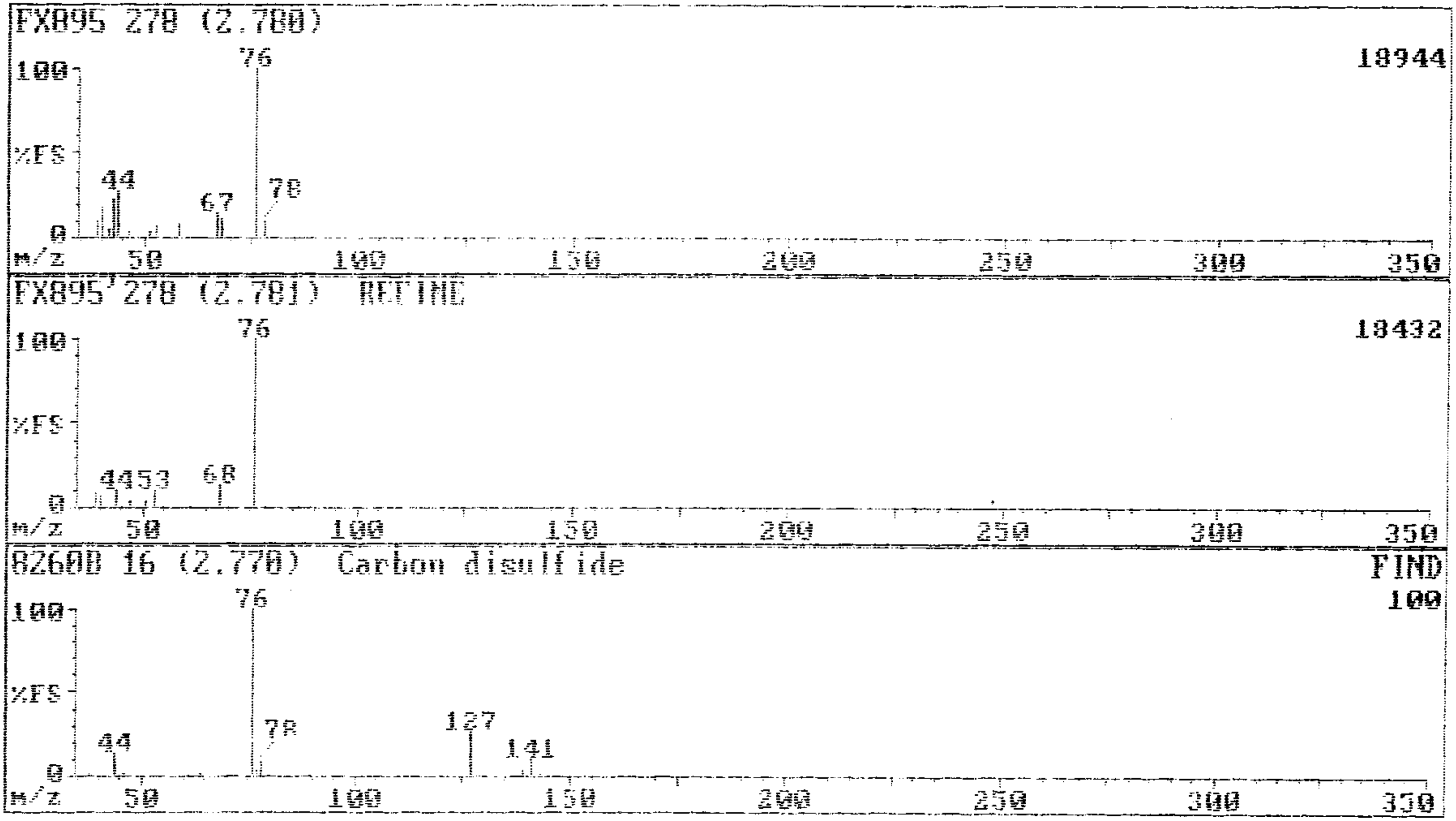
MR 8/19/98

67

Instrument 1
3440
1104
1100
Time (sec)
Pressure (psig)
Flow Rate (cc/sec)
Volume (cc)
Sample: 1-0-1-2-0
Test: 2-0-1-2-0
Time: 08:44:17
Pressure Decay Test, Temperature Compensated
Flow Rate (cc/min)
Pressure (psig)
Time (sec)
Volume (cc)
Sample: 1-0-1-2-0
Test: 2-0-1-2-0
Time: 08:44:17
Pressure Decay Test, Temperature Compensated

18-Aug-98 14:17 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-A T 214-1-7A TLI#46297 Instrument F



69

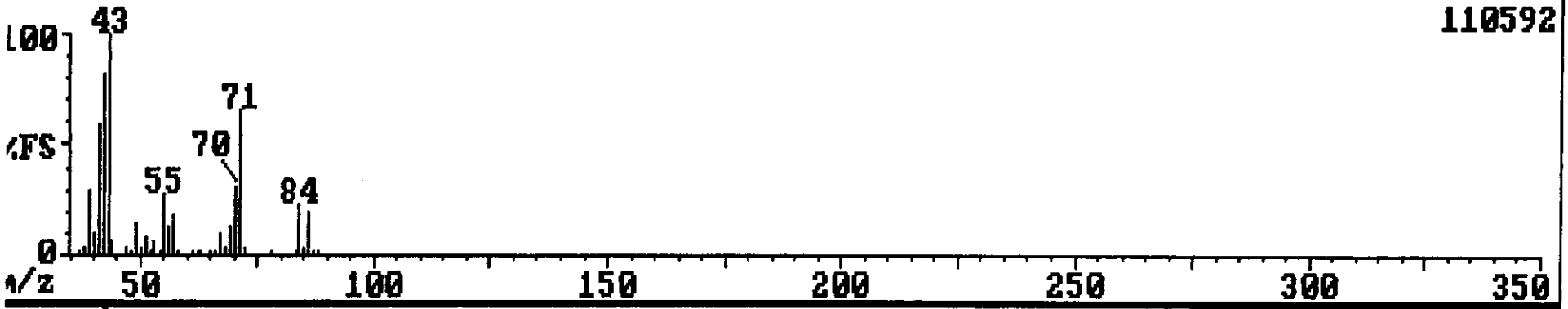
70

7

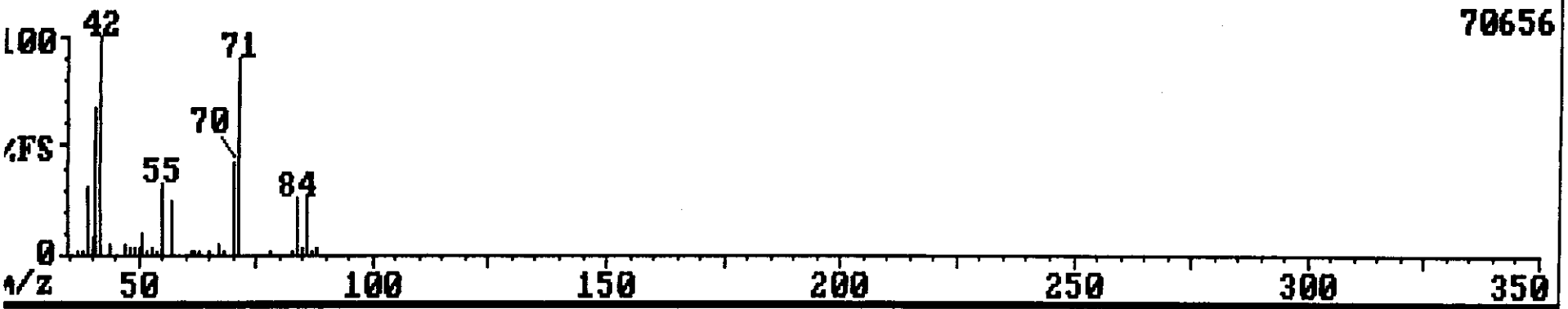
8-Aug-98 14:17 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-A T 214-1-7A TLI#46297 Instrument F

FX895 327 (3.270) 110592

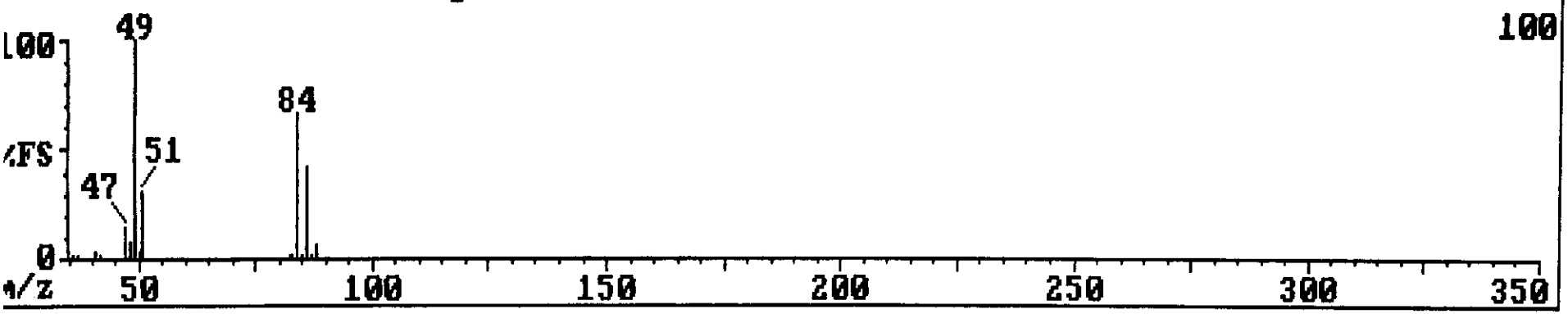


FX895 327 (3.271) REFINE 70656



MASTER 22 (3.590) Methylene chloride FIND

100



71

71

Instrument F
Sample: T-11-L-27 = 2-14-11-W-27
Trace 152 (5,524)
Trace 155 (5,527)
Trace 158 (5,530)
Wind
Deviated
Wind
Deviated
Wind
Deviated

72

08-AUG-85 14:47
Instrument Laboratories, Inc. (908) 549-7290
Sample: 1-A-1-2-4 = 2-A-1-1-A
Test Method
Analyte Quantitation Report
Instrument F
630784
350
300
250
200
150
100
50
0
Z/M
Analyte Quantitation Report
Test Method
Sample: 1-A-1-2-4 = 2-A-1-1-A
08-AUG-85 14:47
Instrument F
577536
350
300
250
200
150
100
50
0
Z/M
Analyte Quantitation Report
Test Method
Sample: 1-A-1-2-4 = 2-A-1-1-A
08-AUG-85 14:47
Instrument F
100

73

74

10-Aug-90 14:17
Sample: FW-12-90 2 Feb-90 Comment: Raw Water Influent
Instrument F
3972400
FINAL EFFLUENT 100
266240
FINAL EFFLUENT 100
3972400

76

77

77

78

Pacific Environmental Services

Project Number: 46297
Sample File: FX880

Method 8260 VOST
Sample ID: T-V-1-2-B TC

Client Project: Hotmix
TLI ID: 214-1-7B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.080		1.09		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.068		1.65		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.004	J	2.78		0.05
Acetone	0.039	J	2.86		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.248		3.27		0.05
Acrylonitrile		U		0.015	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46297
Sample File: FX880

Method 8260 VOST
Sample ID: T-V-1-2-B TC

Client Project: Hotmix
TLI ID: 214-1-7B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.059	B	8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene	0.001	J	10.91		0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.003	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.71		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.002	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX880

Method 8260 VOST
Sample ID: T-V-1-2-B TC

Client Project: Hotmix
TLI ID: 214-1-7B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.246	5.18	1	98
Toluene-d_8	0.315	8.00	2	126
4-Bromofluorobenzene	0.278	12.65	2	111

Reviewed by _____ Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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Pacific Environmental Services

Project Number: 46297
Sample File: FX880

Method 8260 VOST
Sample ID: T-V-1-2-B TC

Client Project: Hotmix **Date Received: 07/25/98** **Response File: ICALF817**
TLI ID: 214-1-7B
Date Analyzed : 08/17/98

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.001	J	3.90		0.25
1,2-Epoxybutane		U		0.010	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.002	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:00 08/24/1998

Instrument 1
Sample : 97-4-17-7 ug/ml 8270 Date : 4-17-97 10:47 AM
Data : 97-4-17-7 Operator : MS
Method : C:\HPCHEM\1\METHODS\8270.M Inst : Instrument 1
Title : 8270 Calibration Standards
Comment : 97-4-17-7 ug/ml 8270 Calibration Standards
Quantitation Report (QT Reviewed)
Data File : C:\HPCHEM\1\DATA\97-4-17-7.D
Acq On : 17-Apr-97 10:47 AM
Operator : MS
Sample : 97-4-17-7 ug/ml 8270
Misc : 97-4-17-7 ug/ml 8270 Calibration Standards
ALS Vial : 15 Sample Multiplier : 1
Integrator : RTE
Quant Time : Apr 17 11:36:39 1997
Quant Method : C:\HPCHEM\1\METHODS\8270.M
Quant Title : 8270 Calibration Standards
QC Sample : Yes
Data Type : Calibration
Internal Standard Report
Peak Name Ret Time Area Height
1 1,4-Dichlorobenzene-d4 5.127 1.0000 1.0000
2 Naphthalene-d8 6.747 1.0000 1.0000
3 Acenaphthene-d10 8.907 1.0000 1.0000
4 Phenanthrene-d10 10.907 1.0000 1.0000
5 Chrysene-d12 14.787 1.0000 1.0000
6 Perylene-d12 16.907 1.0000 1.0000
Target Compounds
1 Phenol 4.747 1.0000 1.0000
2 Aniline 5.127 1.0000 1.0000
3 Bis(2-chloroethyl)ether 5.127 1.0000 1.0000
4 2-Chlorophenol 5.127 1.0000 1.0000
5 1,3-Dichlorobenzene 5.127 1.0000 1.0000
6 1,4-Dichlorobenzene 5.127 1.0000 1.0000
7 Benzyl alcohol 5.127 1.0000 1.0000
8 1,2-Dichlorobenzene 5.127 1.0000 1.0000
9 2-Methylphenol 5.127 1.0000 1.0000
10 Bis(2-chloroisopropyl)ether 5.127 1.0000 1.0000
11 4-Methylphenol 5.127 1.0000 1.0000
12 N-Nitroso-di-n-propylamine 5.127 1.0000 1.0000
13 Hexachloroethane 5.127 1.0000 1.0000
14 Nitrobenzene 5.127 1.0000 1.0000
15 Isophorone 5.127 1.0000 1.0000
16 2-Nitrophenol 5.127 1.0000 1.0000
17 2,4-Dimethylphenol 5.127 1.0000 1.0000
18 Benzoic acid 5.127 1.0000 1.0000
19 Bis(2-chloroethoxy)methane 5.127 1.0000 1.0000
20 2,4-Dichlorophenol 5.127 1.0000 1.0000
21 1,2,4-Trichlorobenzene 5.127 1.0000 1.0000
22 Naphthalene 6.747 1.0000 1.0000
23 4-Chloroaniline 6.747 1.0000 1.0000
24 Hexachlorobutadiene 6.747 1.0000 1.0000
25 4-Chloro-3-methylphenol 6.747 1.0000 1.0000
26 2-Methylnaphthalene 6.747 1.0000 1.0000
27 Hexachlorocyclopentadiene 6.747 1.0000 1.0000
28 2,4,6-Trichlorophenol 6.747 1.0000 1.0000
29 2,4,5-Trichlorophenol 6.747 1.0000 1.0000
30 2-Chloronaphthalene 6.747 1.0000 1.0000
31 2-Nitroaniline 6.747 1.0000 1.0000
32 Dimethylphthalate 6.747 1.0000 1.0000
33 Acenaphthylene 6.747 1.0000 1.0000
34 2,6-Dinitrotoluene 6.747 1.0000 1.0000
35 3-Nitroaniline 6.747 1.0000 1.0000
36 Acenaphthene 8.907 1.0000 1.0000
37 2,4-Dinitrophenol 8.907 1.0000 1.0000
38 4-Nitrophenol 8.907 1.0000 1.0000
39 Dibenzofuran 8.907 1.0000 1.0000
40 2,4-Dinitrotoluene 8.907 1.0000 1.0000
41 Diethylphthalate 8.907 1.0000 1.0000
42 4-Chlorophenyl-phenylether 8.907 1.0000 1.0000
43 Fluorene 8.907 1.0000 1.0000
44 4-Nitroaniline 8.907 1.0000 1.0000
45 4,6-Dinitro-2-methylphenol 8.907 1.0000 1.0000
46 N-Nitrosodiphenylamine 8.907 1.0000 1.0000
47 4-Bromophenyl-phenylether 8.907 1.0000 1.0000
48 Hexachlorobenzene 8.907 1.0000 1.0000
49 Pentachlorophenol 8.907 1.0000 1.0000
50 Phenanthrene 10.907 1.0000 1.0000
51 Anthracene 10.907 1.0000 1.0000
52 Di-n-butylphthalate 10.907 1.0000 1.0000
53 Fluoranthene 10.907 1.0000 1.0000
54 Benzidine 10.907 1.0000 1.0000
55 Pyrene 10.907 1.0000 1.0000
56 Butylbenzylphthalate 10.907 1.0000 1.0000
57 3,3'-Dichlorobenzidine 10.907 1.0000 1.0000
58 Benzo(a)anthracene 14.787 1.0000 1.0000
59 Chrysene 14.787 1.0000 1.0000
60 Bis(2-ethylhexyl)phthalate 14.787 1.0000 1.0000
61 Di-n-octylphthalate 14.787 1.0000 1.0000
62 Benzo(b)fluoranthene 16.907 1.0000 1.0000
63 Benzo(k)fluoranthene 16.907 1.0000 1.0000
64 Benzo(a)pyrene 16.907 1.0000 1.0000
65 Indeno(1,2,3-cd)pyrene 16.907 1.0000 1.0000
66 Dibenz(a,h)anthracene 16.907 1.0000 1.0000
67 Benzo(g,h,i)perylene 16.907 1.0000 1.0000
Surrogate Compounds
1 2-Fluorophenol 5.127 1.0000 1.0000
2 Phenol-d5 4.747 1.0000 1.0000
3 Nitrobenzene-d5 5.127 1.0000 1.0000
4 2-Fluorobiphenyl 6.747 1.0000 1.0000
5 2,4,6-Tribromophenol 8.907 1.0000 1.0000
6 Terphenyl-d14 10.907 1.0000 1.0000
Page 1
Data Review: VK
Date: 8/19/98
83
83

QUAN OR - FX880 LAB-BASE QUAN 17-Aug-98 13:46

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	79	99	1	2703112	bb	5.301	168	Pentafluorobenzene
2	100	97	99	0	2784596	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	0	2355776	bv	10.351	117	Chlorobenzene-d5
4	100	77	99	0	947784	bv	15.712	152	1,4-Dichlorobenzene-d4
5	100	86	99	0	1120164	bv	5.181	113	Dibromofluoromethane
6	100	91	97	1	3581752	bv	8.001	98	Toluene-d8
7	100	91	93	0	1052804	bv	12.651	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	91	73	79	2	297726	A	1.090	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	84	59	85	3	129598	A	1.630	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	0	0	0	0	0		0.000	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	142	Iodomethane
16	60	41	57	1	34728	bb	2.780	76	Carbon disulfide
17	64	20	90	3	19264	bv	2.360	43	Acetone
18	0	0	0	0	0		0.000	41	Allyl chloride
19	100	86	95	0	636016	bb	3.270	84	Methylene chloride
20	7	2	10	-4	~~12538~~	~~bb~~	~~3.540~~ FP	53	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	15	13	17	8	~~5434~~	~~bb~~	~~4.201~~ FP	43	2-Butanone
27	0	0	0	0	0		0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	0	0	0	0	0		0.000	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	0	0	0	0	0		0.000	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	39	4	62	3	~~14293~~	~~bv~~	~~7.971~~ FP	43	4-Methyl-2-pentanone
41	100	88	98	0	473704	bb	8.091	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	0	0	0	0	0		0.000	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

Data Review: YM
Date: 8/19/98

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	20	34	34	23	~~37x3~~	~~A~~	~~10.551~~ FP	106	Ethylbenzene
53	0	0	0	0	10524	A	10.711	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Bromobenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	120	n-Propylbenzene
62	0	0	0	0	0		0.000	75	trans-1,4-Dichloro-2-butene
63	0	0	0	0	0		0.000	126	2-Chlorotoluene
64	0	0	0	0	0		0.000	126	4-Chlorotoluene
65	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	119	tert-Butylbenzene
67	0	0	0	0	0		0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.000	105	sec-Butylbenzene
69	0	0	0	0	0		0.000	119	p-Isopropyltoluene
70	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	91	Benzyl chloride
73	0	0	0	0	0		0.000	91	n-Butylbenzene
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0		0.000	180	1,2,4-Trichlorobenzene
77	46	22	37	-3	10468	bb	19.532	225	Hexachlorobutadiene
78	0	0	0	0	0		0.000	128	Naphthalene
79	0	0	0	0	0		0.000	180	1,2,3-Trichlorobenzene

VK8/19/98

85

QUAN 08 : FX880 LAB-BASE QUAN 18-Aug-98 01:03

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	79	99	1	2703112	bb	5.301	168	Pentafluorobenzene
2	100	97	99	0	2784596	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	-1	2355776	bv	10.351	117	Chlorobenzene-d5
4	100	77	99	-2	947784	bv	15.712	152	1,4-Dichlorobenzene-d4
5	100	86	99	0	1120164	bv	5.181	113	Dibromofluoromethane
6	100	91	97	0	3581752	bv	8.001	98	Toluene-d8
7	100	91	93	-1	1052804	bv	12.651	95	4-Bromofluorobenzene
8	56	32	64	4	~~[illegible]~~		~~1 [illegible]~~ FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	55	38	54	3	~~9899~~	bv	~~5.520~~	~~73~~	~~MTBE~~ FP
11	76	63	62	2	19408	bb	3.900	57	n-Hexane
12	55	40	61	8	~~[illegible]~~		~~4.478~~ FP	42	1,2-Epoxybutane
13	63	47	59	3	~~84596~~	bv	~~5.711~~ FP	57	Iso-Octane
14	43	27	69	0	~~22105~~	bb	~~4.534~~ FP	43	Ethyl acrylate

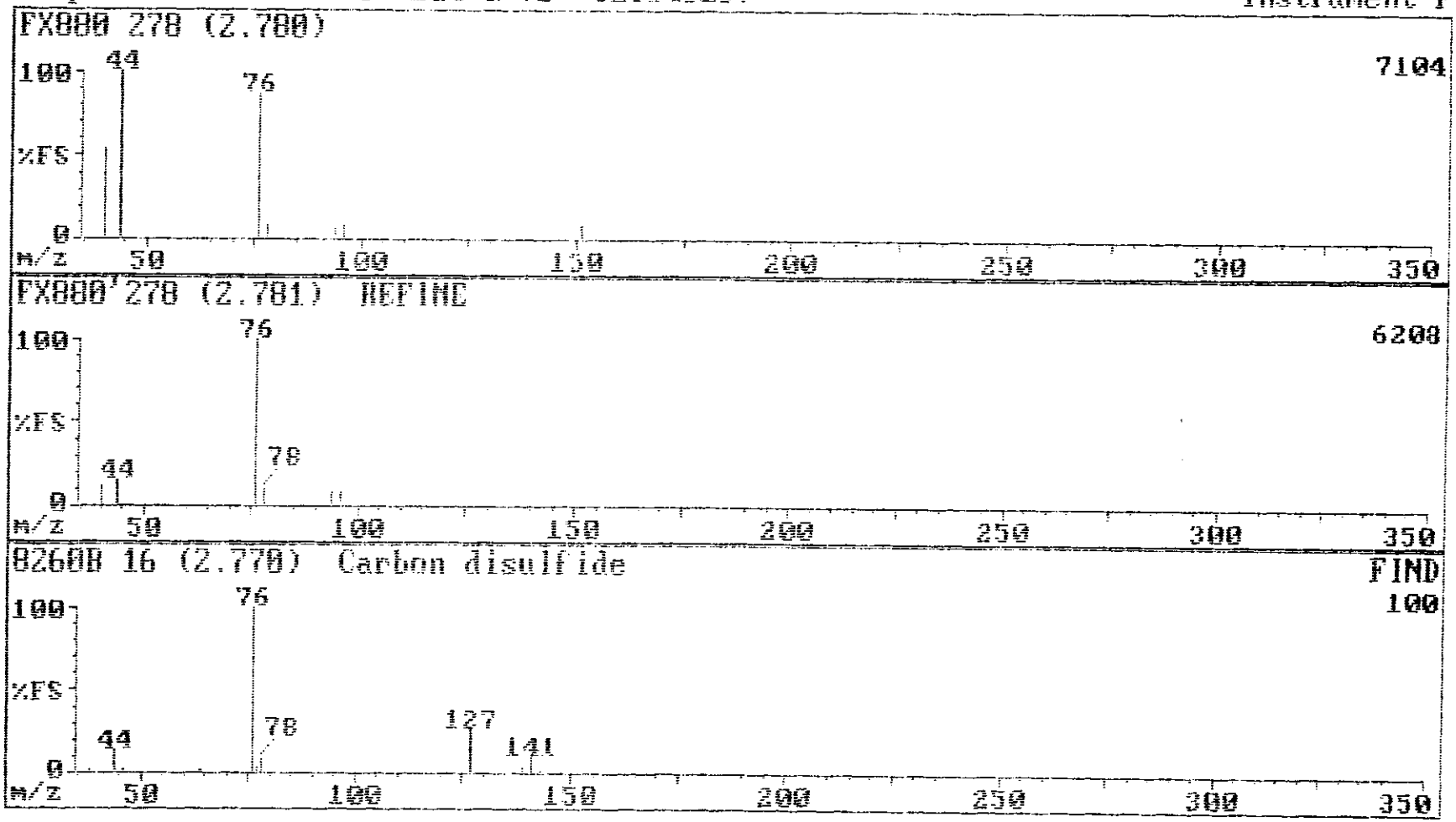
M8 19 98

17-Aug-90 17:46
Sample: T-V-T-Z-B-10
Instrument
18688
FIND
6464
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
Z/A
%TS
100
0
22
52
56
69
47
45
64

17-May-90 11:30
Sample: 1-0-1-2-18 EC 214-1-78 TIMEWAY27
P4000 165 (1,650)
100
%TS
0
M/Z
50
100
94
73
150
200
250
300
350
0096
P4000/165 (1,650) Instrument f
(800) 542-5729
P4000/165 (1,650) Instrument f
17-May-90 11:30
Sample: 1-0-1-2-18 EC 214-1-78 TIMEWAY27
P4000 165 (1,650)
100
%TS
0
M/Z
50
100
94
73
150
200
250
300
350
0096
P4000/165 (1,650) Instrument f
(800) 542-5729

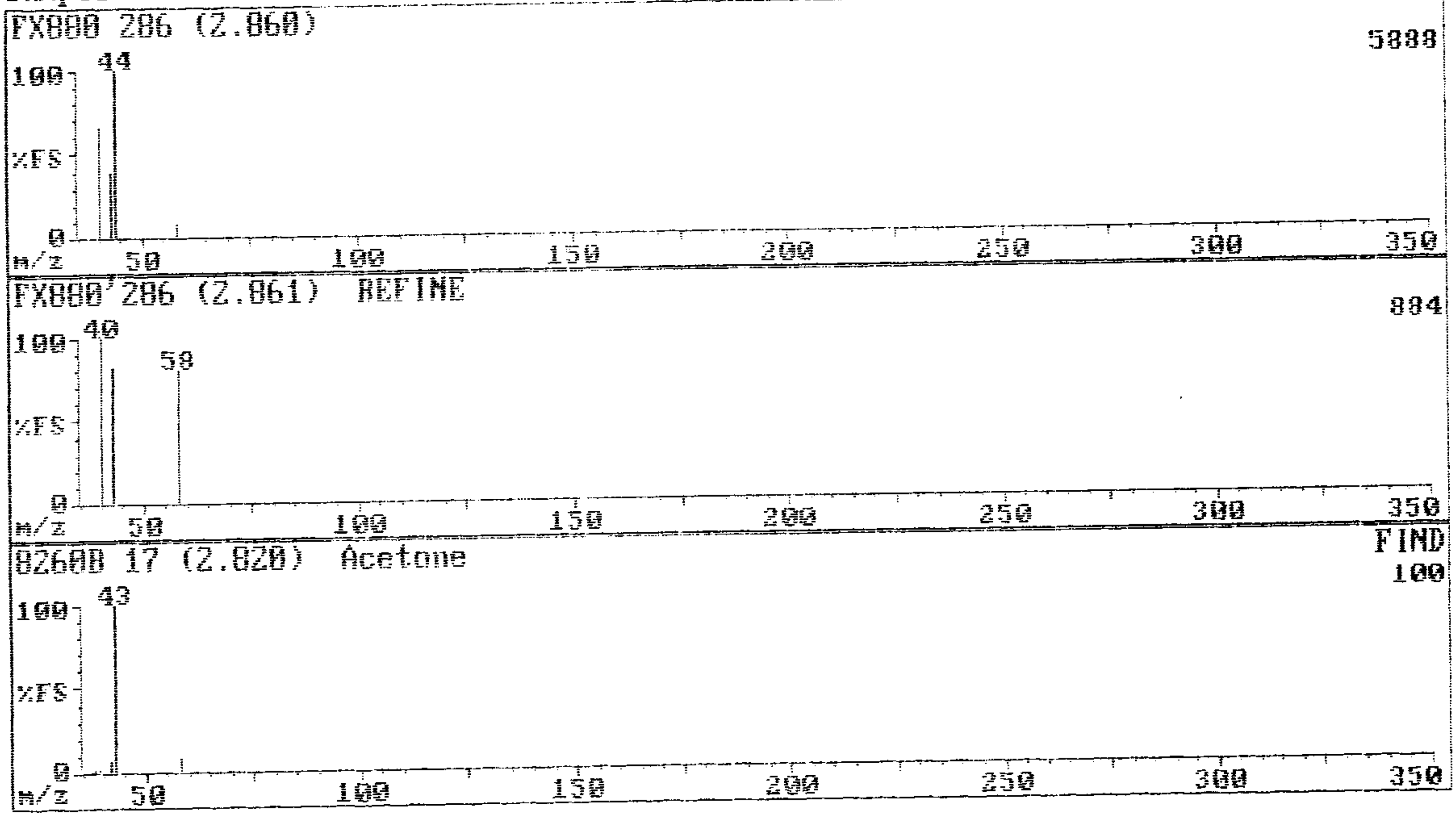
17-Aug-90 17:30 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-B TC 214-1-7B TLI#46297 Instrument F



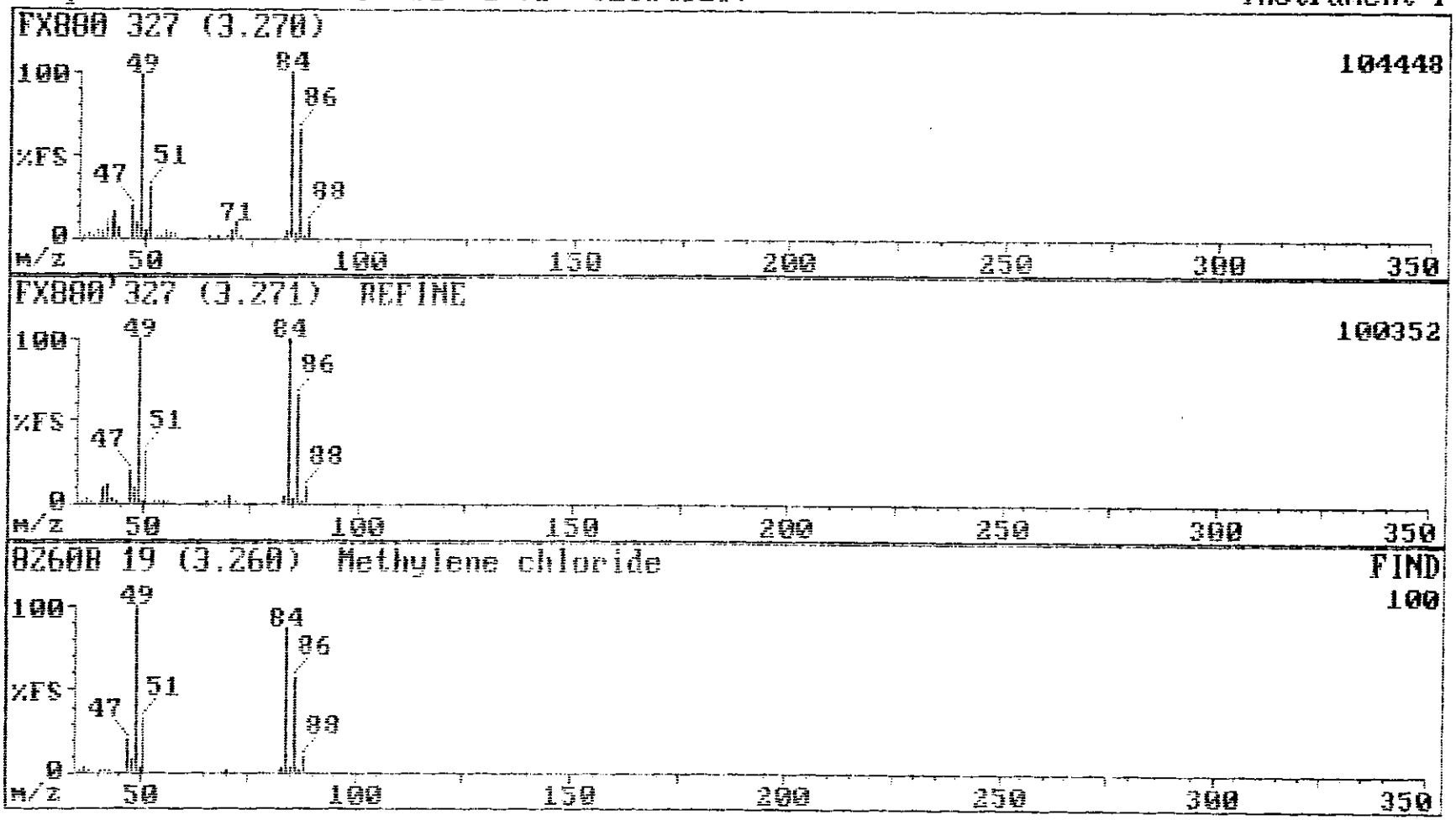
17-Aug-98 17:30 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-B TC 214-1-7B TLI#46297 Instrument F



17-Aug-98 17:30 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-B TC 214-1-7D TLI#46297 Instrument F

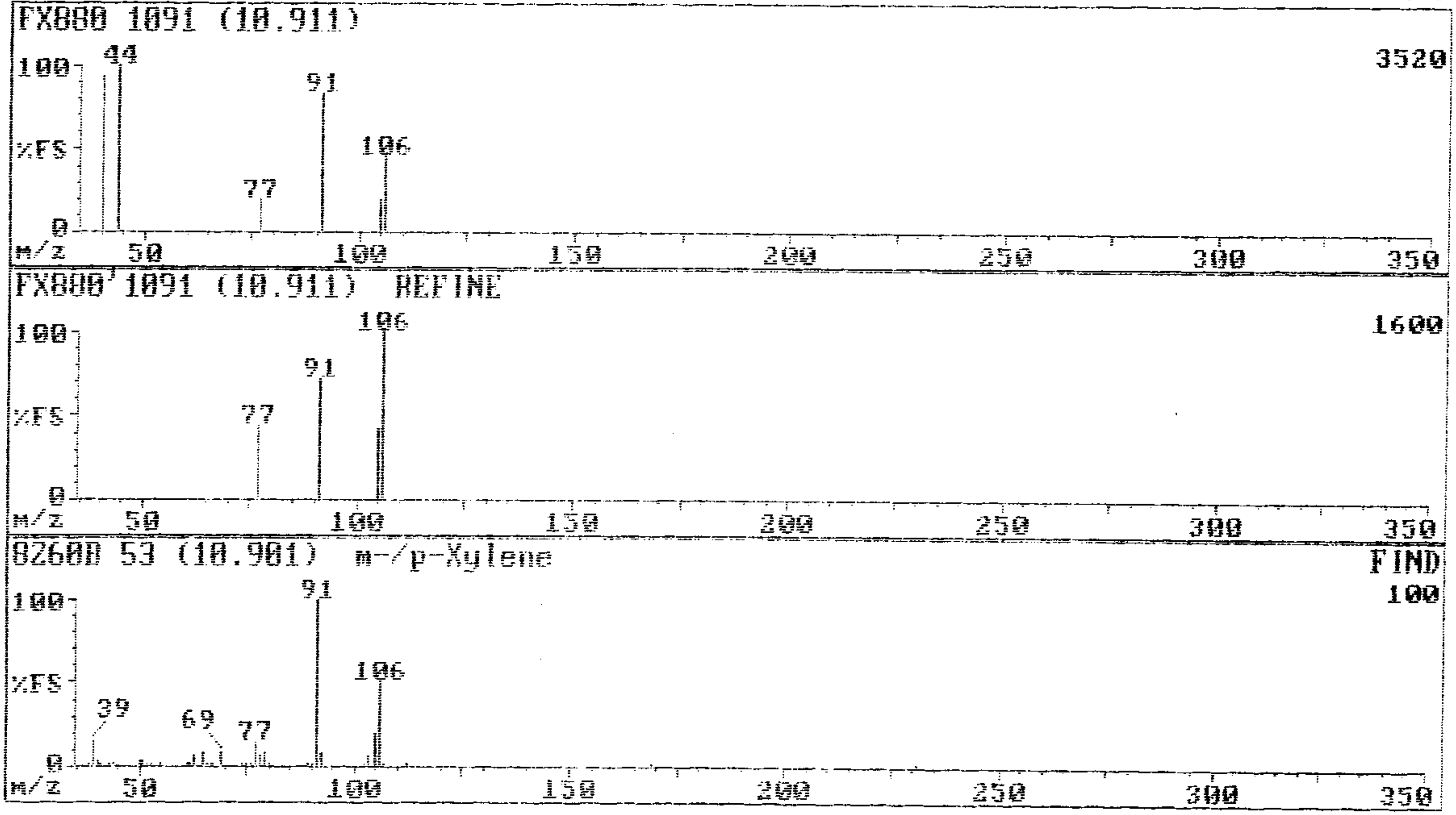


17-Aug-90 17:30
Instrument F
6275-SAM-525 (9149) , INC.
Sample: 1-V-1-Z-90
TYPOON 000 0(0.000)
1003424
9420B
TYPOON 000 0(0.001) 000 (0.001)
FIND
100
250
300
350
m/z
%FS
65
92
64
22
26
90
91
99

92

17-Aug-98 17:30 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-2-B TC 214-1-7B TLI#46297 Instrument F


FX800 1091 (10.911)

FX800 1091 (10.911) REFINE

8260B 53 (10.901) m-/p-Xylene

Instrument F
(910) 544-5729
Sandoz Pharmaceuticals Corp.
East Hanover, NJ 07936
Printed: 12-Jun-90 07:30
Printed: 12-Jun-90 07:30
Sandoz Pharmaceuticals Corp. (910) 544-5729
East Hanover, NJ 07936
Instrument F

Pacific Environmental Services

Project Number: 46297
Sample File: HW713

Method 8260 VOST
Sample ID: T-V-1-3-A T

Client Project: Holmix
TLI ID: 214-1-8A

Date Received: 07/25/98
Date Analyzed : 08/19/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.05		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.005	J	1.47		0.05
Chloroethane	0.007	J	1.59		0.05
Trichlorofluoromethane	0.009	J	1.89		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.012	J	2.58		0.05
Acetone	0.589		2.73		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.058	B	3.06		0.05
Acrylonitrile		U		0.003	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.509		4.52		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.78		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.516		5.25		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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Savar v3.7
Printed: 18:03 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: HW713

Method 8260 VOST
Sample ID: T-V-1-3-A T

Client Project: Hotmix
TLI ID: 214-1-8A

Date Received: 07/25/98
Date Analyzed : 08/19/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.001	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.455	B	7.76		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.00		
Tetrachloroethene	0.038	J	8.59		0.05
2-Hexanone		U		0.001	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.105		10.33		0.05
m-/p-Xylene	0.758	B	10.57		0.10
o-Xylene	0.181		11.28		0.05
Styrene		U		0.001	0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.18		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 18:03 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: HW713

Method 8260 VOST
Sample ID: T-V-1-3-A T

Client Project: Hotmix
TLI ID: 214-1-8A

Date Received: 07/25/98

Date Analyzed : 08/19/98

Response File: ICALH809

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.258	4.92	1	103
Toluene-d_8	0.338	7.67	2	135
4-Bromofluorobenzene	0.341	12.29	2	136

Reviewed by VR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 18:03 08/24/1998

~~97~~

Pacific Environmental Services

Project Number: 46297
Sample File: HW713

Method 8260 VOST
Sample ID: T-V-1-3-A T

Client Project: Hotmix
TLI ID: 214-1-8A

Date Received: 07/25/98
Date Analyzed : 08/19/98

Response File: ICALH819

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1 High	5.05		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.019	J	3.41		0.25
n-Hexane	0.111	BJ	3.67		0.25
1,2-Epoxybutane		U		0.011	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	5.78		
Ethyl acrylate		U		0.001	0.25

Reviewed by _____ Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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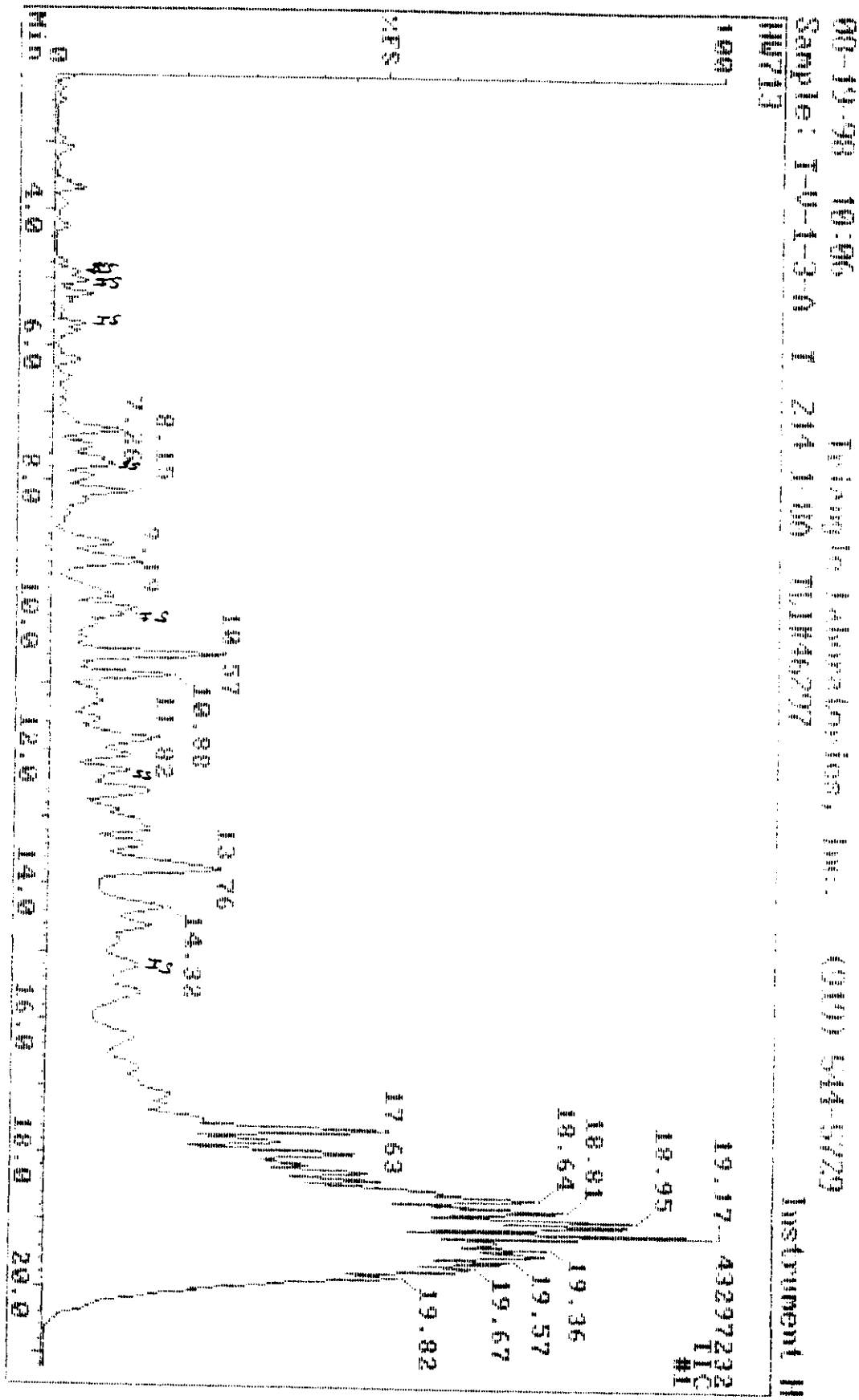
Printed: 18:34 08/24/1998

98



Data Review: MC
Date: 8/19/91

QUAN DB : HW715 LAB-BASE QUAN 08-09-08 10:52

No.	MAT	FOR	REV	Delta	Area	P/F	Flags	RT	QM	Name
1	99	64	96	1	388432	bv		5.05	168	Pentafluorobenzene
2	100	79	98	0	3448160	bv		5.78	114	1,4-Difluorobenzene
3	84	59	77	2	551064	bv		10.00	117	Chlorobenzene-d5
4	70	25	39	4	320114	bv		15.13	152	1,4-Dichlorobenzene-d4
5	100	65	99	0	2133723	bv		4.93	110	Dibromofluoromethane
6	98	71	89	1	526636	bb		7.67	98	Toluene-d8
7	73	40	75	2	353459	vv		12.29	95	4-Bromofluorobenzene
8	0	0	0	0	0			0.00	85	Dichlorodifluoromethane
9	0	0	0	0	0			0.00	50	Chloromethane
10	0	0	0	0	0			0.00	62	Vinyl Chloride
11	95	70	90	-2	31540	bb		1.47	94	Bromomethane
12	61	32	71	-3	29444	bb		1.59	64	Chloroethane
13	92	64	94	-2	41896	bb		1.89	101	Trichlorofluoromethane
14	0	0	0	0	0			0.00	96	1,1-Dichloroethene
15	0	0	0	0	0			0.00	140	Iodomethane
16	74	30	81	-1	109930	bb		2.63	76	Carbon disulfide
17	97	89	97	5	454469	vv		2.75	49	Acrolein
18	0	0	0	0	0			0.00	61	Acrylonitrile
19	0	0	0	0	0			0.00	84	Methylene chloride
20	28	10	38	-4	[illegible]			[illegible]	63	Acetonitrile
21	0	0	0	0	0			0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0			0.00	59	Methyl acetate
23	0	0	0	0	0			0.00	87	Vinyl acetate
24	0	0	0	0	0			0.00	77	2,2-Dichloropropane
25	0	0	0	0	0			0.00	96	cis-1,2-Dichloroethene
26	100	80	98	2	497637	bv		4.13	43	2-Butanone
27	0	0	0	0	0			0.00	63	Chloroform
28	0	0	0	0	0			0.00	129	Bromochloromethane
29	0	0	0	0	0			0.00	97	1,1,1-Trichloroethane
30	0	0	0	0	0			0.00	117	Carbon tetrachloride
31	0	0	0	0	0			0.00	75	1,1-Dichloropropene
32	100	97	99	1	1034602	bv		5.25	78	Benzene
33	0	0	0	0	0			0.00	62	1,2-Dichloroethane
34	0	0	0	0	0			0.00	130	Trichloroethene
35	0	0	0	0	0			0.00	63	1,2-Dichloropropane
36	0	0	0	0	0			0.00	93	Dibromomethane
37	42	44	56	-14	[illegible]	bv		[illegible]	41	Methyl methacrylate
38	0	0	0	0	0			0.00	83	Bromodichloromethane
39	0	0	0	0	0			0.00	75	cis-1,3-Dichloropropene
40	30	23	63	3	[illegible]	bb		[illegible]	43	4-Methyl-2-pentanone
41	100	98	99	0	637593	bb		7.76	92	Toluene
42	0	0	0	0	0			0.00	75	trans-1,3-Dichloropropene
43	0	0	0	0	0			0.00	97	1,1,2-Trichloroethane
44	0	0	0	0	0			0.00	69	Ethyl methacrylate
45	71	55	80	0	321332	bb		8.59	164	Tetrachloroethene
46	0	0	0	0	0			0.00	76	1,3-Dichloropropane
47	44	26	67	-10	[illegible]	bv		[illegible]	43	2-Hexanone
48	0	0	0	0	0			0.00	129	Dibromochloromethane
49	0	0	0	0	0			0.00	107	1,2-Dibromoethane
50	0	0	0	0	0			0.00	112	Chlorobenzene

3167360 m 306 FP

FP

FP

FP

Data Review: MM
Date: 8/19/08

100

107

No.	MAT	FOR	RFV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	130	1,1,1,2-Tetrachloroethan
52	98	57	98	-1	1249020	bv	10.33	106	Ethylbenzene
53	100	74	91	-1	1298750	vv	10.57	106	m-/p-Xylene
54	92	64	87	0	2551873	vv	11.28	106	o-Xylene
55	0	0	0	0	0		0.00	104	Styrene
56	0	0	0	0	0		0.00	173	Bromoform
57	0	0	0	0	0		0.00	105	Cumene
58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroethan
59	0	0	0	0	0		0.00	156	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.00	120	n-Propylbenzene
62	0	0	0	0	0		0.00	75	trans-1,4-Dichloro-2-but
63	0	0	0	0	0		0.00	126	2-Chlorotoluene
64	0	0	0	0	0		0.00	126	4-Chlorotoluene
65	41	54	72	-24	1284920	vv	13.12	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	96	59	95	0	1552700	vb	14.35	105	1,2,4-Trimethylbenzene
68	39	50	55	-2	1244100	bv	14.58	105	sec-Butylbenzene
69	65	51	74	-1	672600	vb	15.45	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	0	0	0	0	0		0.00	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	0	0	0	0	0		0.00	180	1,2,4-Trichlorobenzene
77	0	0	0	0	0		0.00	225	Hexachlorobutadiene
78	0	0	0	0	0		0.00	128	Naphthalene
79	0	0	0	0	0		0.00	180	1,2,3-Trichlorobenzene

FP

VR811915

101

QUAN DB : HW7L3 LAB-BASE QUAN 08-10-98 L7115

No.	MAT	FOR	REV	Delta	Area	P	Flags	RT	QM	Name
1	99	64	96	1	3884272	bb		5.05	168	Pentafluorobenzene
2	100	79	94	1	5448160	bv		5.78	114	1,4-Difluorobenzene
3	84	39	77	3	5310642	bv		10.00	117	Chlorobenzene-d5
4	69	25	89	7	3201178	bv		15.13	152	1,4-Dichlorobenzene-d4
5	98	63	99	1	2133728	bv		4.92	113	Dibromofluoromethane
6	100	71	89	0	6326836	bb		7.67	98	Toluene-d8
7	69	49	75	4	3534592	vv		10.29	95	4-Bromofluorobenzene
8	66	43	74	6	[illegible]	vv		[illegible]	39	1,3-Butadiene
9	0	0	0	0	0			0.00	106	Vinyl bromide
10	93	72	79	0	90520	bv		3.41	73	MTBE
11	100	97	100	0	3996291	vv		3.67	57	n-Hexane
12	82	59	75	-2	[illegible]	bv		[illegible]	42	1,2-Epoxybutane
13	70	51	64	1	[illegible]	bv		[illegible]	87	Trichlorofluoromethane
14	41	30	60	-14	[illegible]	bv		[illegible]	63	Ethyl ether

MC 8/19/98

Instrument H
11392
5632
1001

105

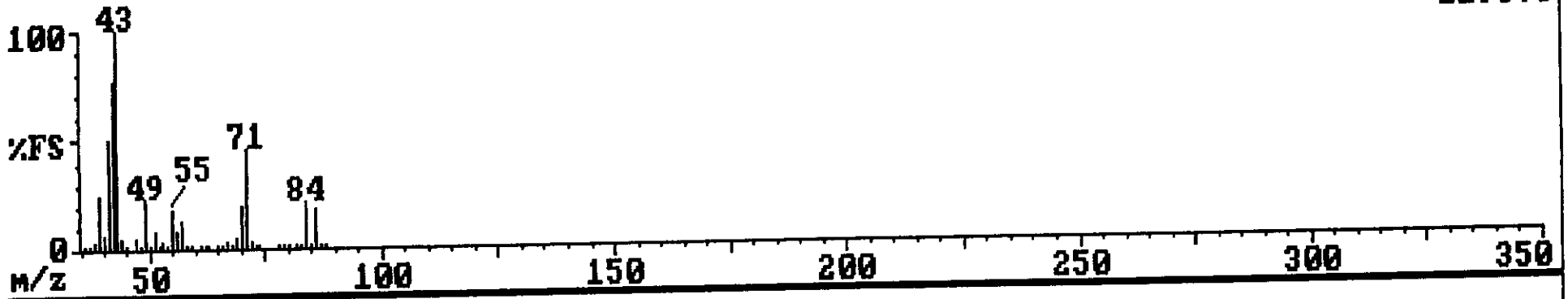
106

107

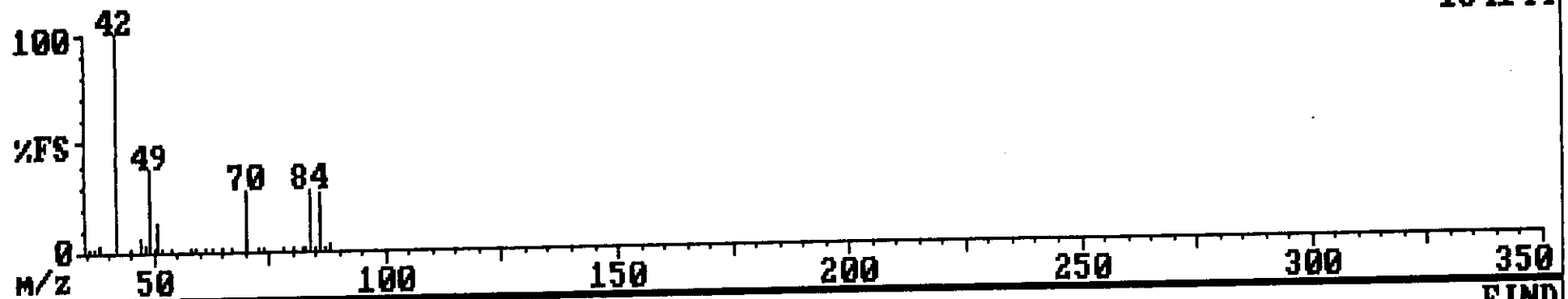
19-Aug-98 10:06 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-3-A T 214-1-8A TLI#46297 Instrument H

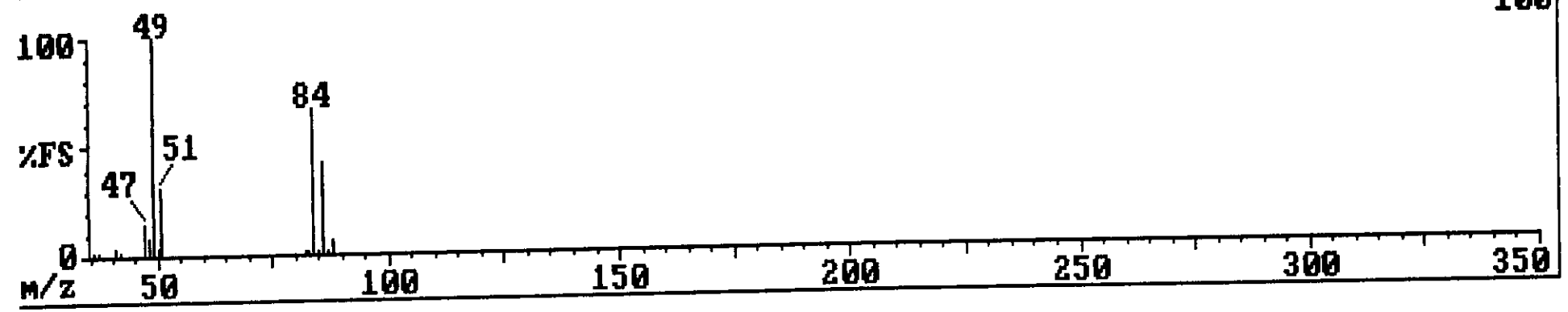
HW713 306 (3.060) 229376



HW713'306 (3.061) REFINE 134144



MASTER 22 (3.590) Methylene chloride FIND 100



Instrument H
Sample: 1-U-4-A-1 05-10-00
Operator: Unknown
Comment: Unknown
Method: Unknown
Run Time: 05-10-00 08:40
Sample ID: 1-U-4-A-1
Sample Type: Unknown
Sample Amount: 0.000 mg
Sample Volume: 0.000 µl
Sample Weight: 0.000 mg
Sample Density: 0.000 g/cm³
Sample Concentration: 0.000 mg/ml
Sample Mass: 0.000 mg
Sample Area: 0.000 mm²
Sample Thickness: 0.000 mm
Sample Temperature: 0.000 °C
Sample Pressure: 0.000 kPa
Sample Humidity: 0.000 %
Sample Flow Rate: 0.000 ml/min
Sample Viscosity: 0.000 cP
Sample Surface Tension: 0.000 mN/m
Sample Contact Angle: 0.000 °
Sample Wetting Angle: 0.000 °
Sample Spreading Coefficient: 0.000 mN/m
Sample Adhesion Energy: 0.000 mJ/m²
Sample Cohesion Energy: 0.000 mJ/m²
Sample Interfacial Energy: 0.000 mJ/m²
Sample Free Energy: 0.000 mJ/m²
Sample Entropy: 0.000 J/K
Sample Enthalpy: 0.000 J
Sample Heat Capacity: 0.000 J/K
Sample Thermal Conductivity: 0.000 W/m·K
Sample Thermal Diffusivity: 0.000 m²/s
Sample Thermal Expansion: 0.000 1/K
Sample Compressibility: 0.000 1/kPa
Sample Bulk Modulus: 0.000 kPa
Sample Shear Modulus: 0.000 kPa
Sample Young's Modulus: 0.000 kPa
Sample Poisson's Ratio: 0.000
Sample Refractive Index: 0.000
Sample Dielectric Constant: 0.000
Sample Conductivity: 0.000 S/m
Sample Resistivity: 0.000 Ω·m
Sample Capacitance: 0.000 F
Sample Inductance: 0.000 H
Sample Impedance: 0.000 Ω
Sample Phase Angle: 0.000 °
Sample Frequency: 0.000 Hz
Sample Wavelength: 0.000 nm
Sample Energy: 0.000 eV
Sample Momentum: 0.000 kg·m/s
Sample Velocity: 0.000 m/s
Sample Acceleration: 0.000 m/s²
Sample Force: 0.000 N
Sample Torque: 0.000 N·m
Sample Power: 0.000 W
Sample Work: 0.000 J
Sample Energy Density: 0.000 J/m³
Sample Power Density: 0.000 W/m³
Sample Mass Density: 0.000 g/cm³
Sample Molar Mass: 0.000 g/mol
Sample Molecular Weight: 0.000 g/mol
Sample Number of Moles: 0.000 mol
Sample Number of Molecules: 0.000
Sample Number of Atoms: 0.000
Sample Number of Electrons: 0.000
Sample Number of Protons: 0.000
Sample Number of Neutrons: 0.000
Sample Number of Isotopes: 0.000
Sample Number of Elements: 0.000
Sample Number of Compounds: 0.000
Sample Number of Phases: 0.000
Sample Number of Components: 0.000
Sample Number of Species: 0.000
Sample Number of Reactions: 0.000
Sample Number of Equilibria: 0.000
Sample Number of Constraints: 0.000
Sample Number of Variables: 0.000
Sample Number of Parameters: 0.000
Sample Number of Data Points: 0.000
Sample Number of Measurements: 0.000
Sample Number of Observations: 0.000
Sample Number of Trials: 0.000
Sample Number of Runs: 0.000
Sample Number of Cycles: 0.000
Sample Number of Iterations: 0.000
Sample Number of Steps: 0.000
Sample Number of Stages: 0.000
Sample Number of Phases: 0.000
Sample Number of Components: 0.000
Sample Number of Species: 0.000
Sample Number of Reactions: 0.000
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Sample Number of Trials: 0.000
Sample Number of Runs: 0.000
Sample Number of Cycles: 0.000
Sample Number of Iterations: 0.000
Sample Number of Steps: 0.000
Sample Number of Stages: 0.000

109

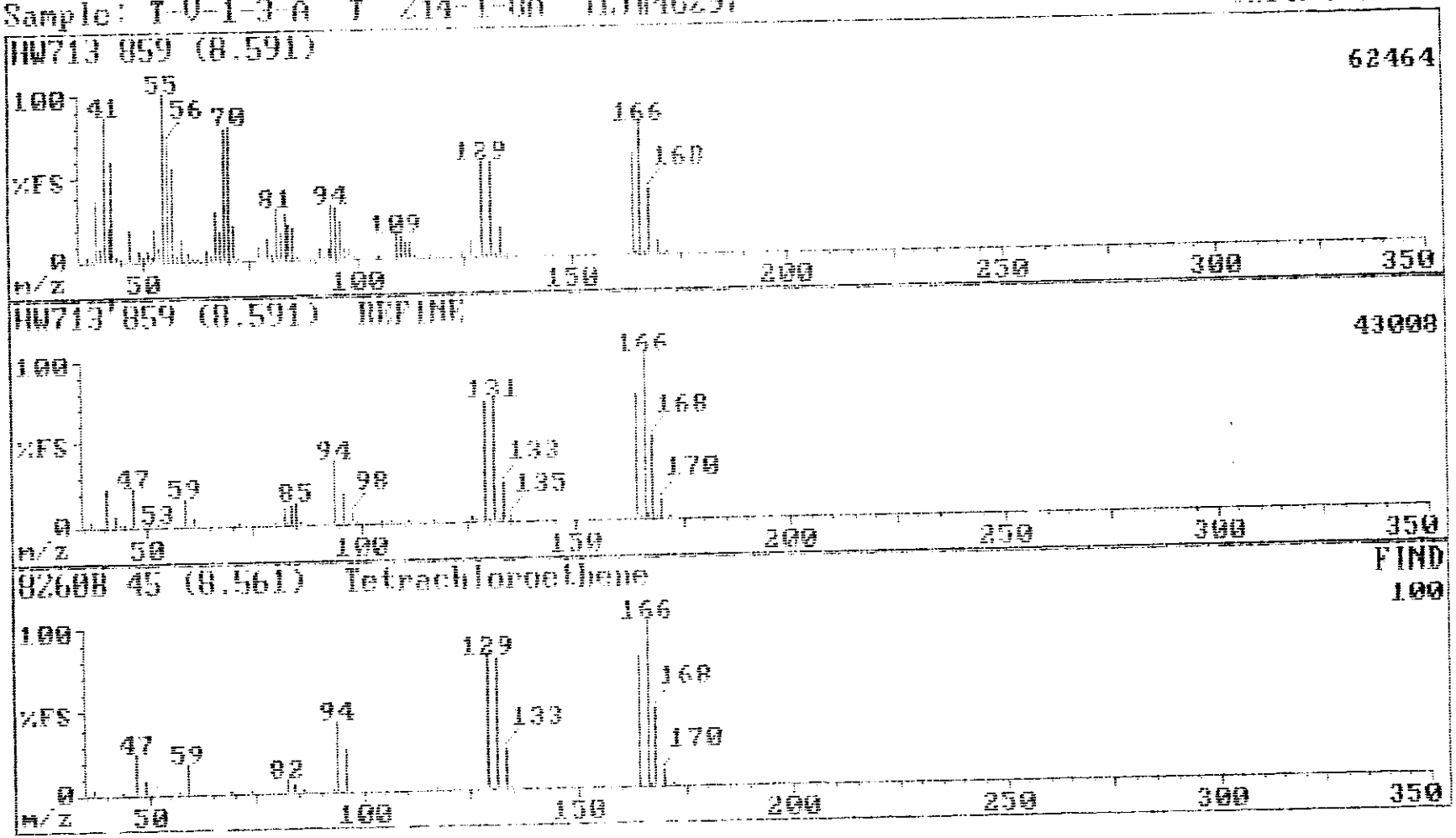
110

Instrument H
Sample: 1-U-1-A Unit: PSIA Temp: 70.00 DEG-F
Mid-Point Valve (1.7461) 1359872
Mid-Point Valve (1.7461) 1212416
Mid-Point Valve (1.7461) FIND
Left
Right
Left
Right
Left
Right
Z/A
STAT
DIFF
PRES
TEMP
350
350
350

///

08-19-98 10:06 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-3-A T Z14-1-00 TLI#40297 Instrument H



113

114

Instrument H
Sample: 1-V-1-A 7/7 Operator: DWE
Comment: Pre-Amp Gain Set at 1000
Run Time (Live, Real): 200 000
Preset: None
Fluor: None
Quench Curve: Ext. Std. H#
Region: 1 (2.00, 18.60)
Cursor: 9.00
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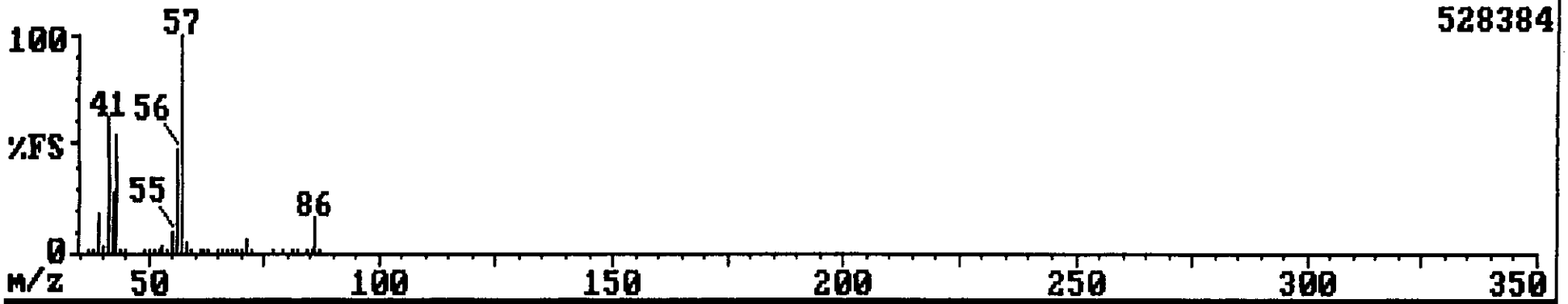
115

116

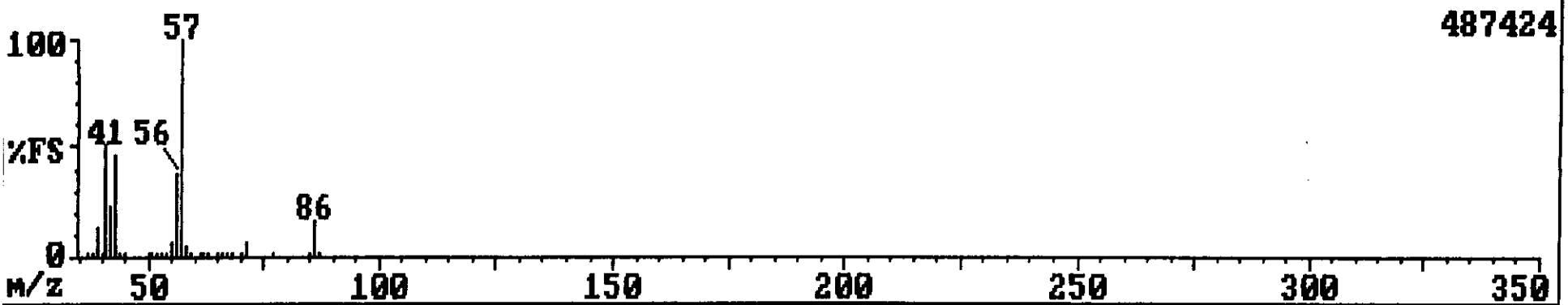
19-Aug-98 10:06 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-3-A T 214-1-8A TLI#46297 Instrument H

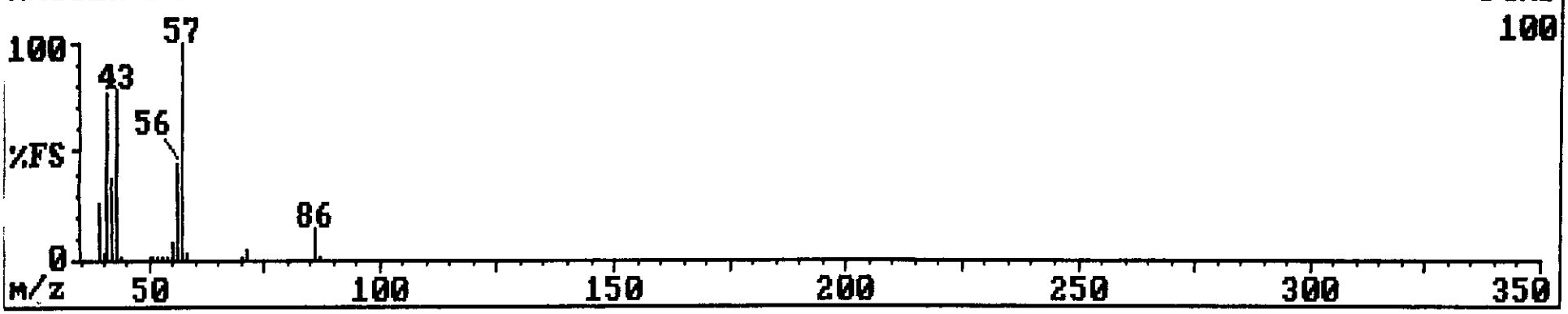
HW713 367 (3.670)



HW713 367 (3.671) REFINE



MASTER 26 (4.240) n-Hexane FIND



Pacific Environmental Services

Project Number: 46297
Sample File: FX882

Method 8260 VOST
Sample ID: T-V-1-3-B TC

Client Project: Hotmix
TLI ID: 214-1-8B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.083		1.12		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.109		1.64		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.006	J	2.76		0.05
Acetone	0.077		2.83		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.026	J	3.26		0.05
Acrylonitrile		U		0.016	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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Pacific Environmental Services

Project Number: 46297
Sample File: FX882

Method 8260 VOST
Sample ID: T-V-1-3-B TC

Client Project: Hotmix
TLI ID: 214-1-8B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.005	BJ	8.08		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.002	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.002	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.003	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.72		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.003	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX882

Method 8260 VOST
Sample ID: T-V-1-3-B TC

Client Project: Hotmix
TLI ID: 214-1-8B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.242	5.18	1	97
Toluene-d_8	0.312	8.00	2	125
4-Bromofluorobenzene	0.284	12.65	2	114

Reviewed by _____ Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46297
Sample File: FX882

Method 8260 VOST
Sample ID: T-V-1-3-B TC

Client Project: Hotmix
TLI ID: 214-1-8B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF817

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.001	J	3.88		0.25
1,2-Epoxybutane		U		0.011	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.003	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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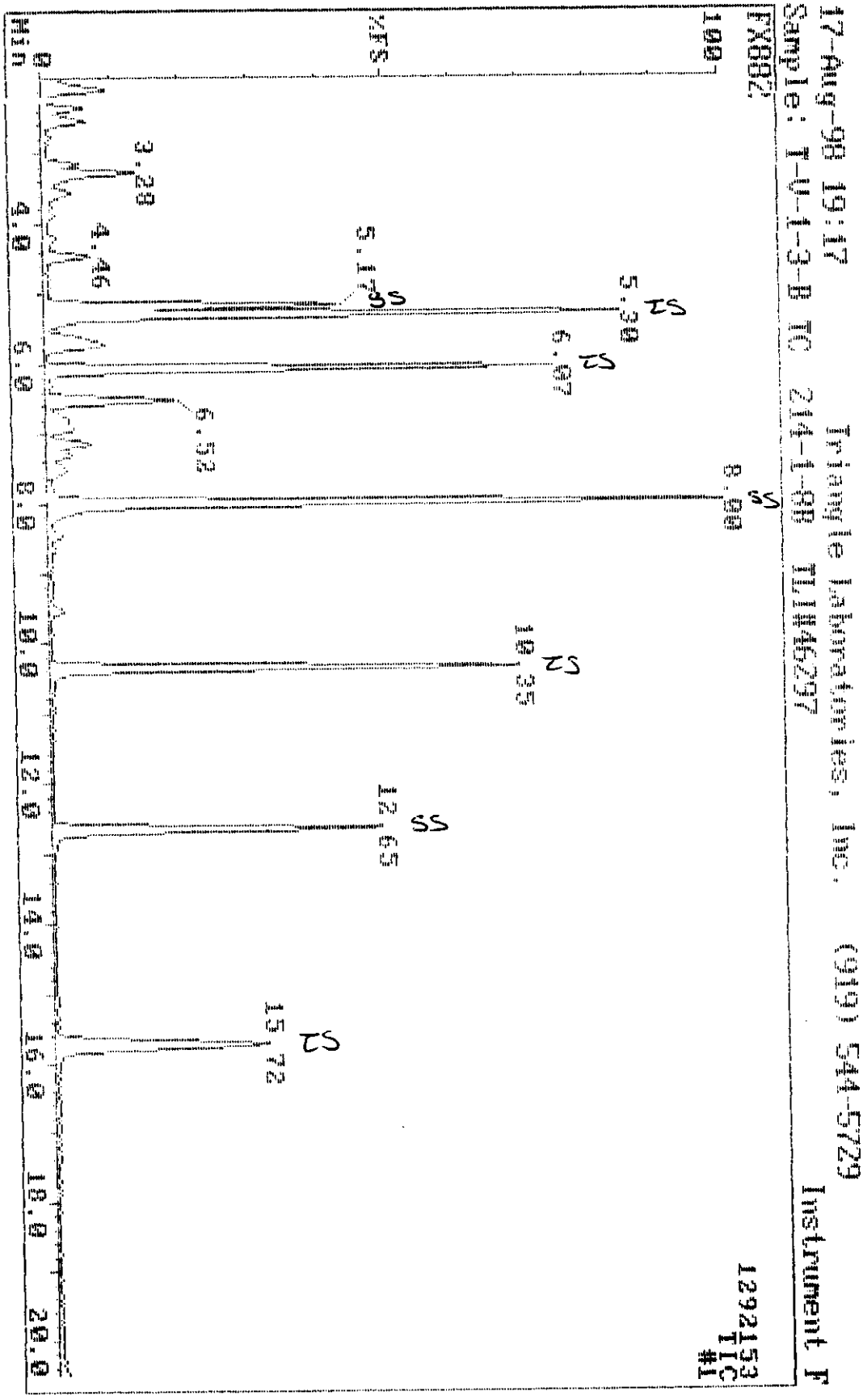
Savar v3.7
Printed: 18:00 08/24/1998



Data Review: YK
Date: 8/19/98

QUAN DR : FX382 LAB-BASE QUAN 17-Aug-98 20:10

No.	MAT	FOR	REV	Delta	Area	P/F	Flags	RT	QM	Name
1	100	77	99	1	2565532	bv		5.301	168	Pentafluorobenzene
2	100	97	99	0	2643408	bv		6.071	114	1,4-Difluorobenzene
3	100	95	93	0	2211964	bv		10.751	117	Chlorobenzene-d5
4	100	79	98	1	836188	bv		15.723	152	1,4-Dichlorobenzene-d4
5	100	87	99	0	1043964	bb		5.181	113	Dibromofluoromethane
6	100	92	97	1	3367004	bv		8.001	98	Toluene-d8
7	100	91	93	0	1021344	bv		12.651	95	4-Bromofluorobenzene
8	0	0	0	0	0			0.000	85	Dichlorodifluoromethane
9	0	0	0	0	291176	A		1.120	50	Chloromethane
10	0	0	0	0	0			0.000	62	Vinyl chloride
11	89	60	90	2	197520	A		1.645	94	Bromomethane
12	0	0	0	0	0			0.000	64	Chloroethane
13	0	0	0	0	0			0.000	101	Trichlorofluoromethane
14	0	0	0	0	0			0.000	96	1,1-Dichloroethene
15	0	0	0	0	0			0.000	142	Iodomethane
16	72	53	65	-1	53394	bb		2.750	76	Carbon disulfide
17	71	25	88	0	3629	A		2.813	43	Acetone
18	0	0	0	0	0			0.000	41	Allyl chloride
19	0	0	0	0	6344	m		3.26	84	Methylene chloride
20	2	1	9	-2	5[illegible]			[illegible]	FP	Acrylonitrile
21	0	0	0	0	0			0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0			0.000	63	1,1-Dichloroethane
23	0	0	0	0	0			0.000	43	Vinyl acetate
24	0	0	0	0	0			0.000	77	2,2-Dichloropropane
25	0	0	0	0	0			0.000	96	cis-1,2-Dichloroethene
26	18	16	20	8	1532	bv		1.[illegible]	FP	2-Butanone
27	0	0	0	0	0		MS/TKR	0.000	83	Chloroform
28	0	0	0	0	0			0.000	128	Bromochloromethane
29	0	0	0	0	0			0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0			0.000	117	Carbon tetrachloride
31	0	0	0	0	0			0.000	75	1,1-Dichloropropene
32	0	0	0	0	0			0.000	78	Benzene
33	0	0	0	0	0			0.000	62	1,2-Dichloroethane
34	0	0	0	0	0			0.000	130	Trichloroethene
35	0	0	0	0	0			0.000	63	1,2-Dichloropropane
36	0	0	0	0	0			0.000	93	Dibromomethane
37	0	0	0	0	0			0.000	41	Methyl methacrylate
38	0	0	0	0	0			0.000	83	Bromodichloromethane
39	0	0	0	0	0			0.000	75	cis-1,3-Dichloropropene
40	38	3	64	4	18990	A		3.001	FP	4-Methyl-2-pentanone
41	70	42	75	-1	41356	bb		8.081	92	Toluene
42	0	0	0	0	0			0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0			0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0			0.000	69	Ethyl methacrylate
45	0	0	0	0	0			0.000	164	Tetrachloroethene
46	0	0	0	0	0			0.000	76	1,3-Dichloropropane
47	0	0	0	0	0			0.000	43	2-Hexanone
48	0	0	0	0	0			0.000	129	Dibromochloromethane
49	0	0	0	0	0			0.000	107	1,2-Dibromoethane
50	0	0	0	0	0			0.000	112	Chlorobenzene

Data Review: YK
Date: 8/19/98

123

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0		0.000	106	Ethylbenzene
53	0	0	0	0	0		0.000	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Bromobenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	120	n-Propylbenzene
62	0	0	0	0	0		0.000	75	trans-1,4-Dichloro-2-butene
63	0	0	0	0	0		0.000	126	2-Chlorotoluene
64	0	0	0	0	0		0.000	126	4-Chlorotoluene
65	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	119	tert-Butylbenzene
67	0	0	0	0	0		0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.000	105	sec-Butylbenzene
69	0	0	0	0	0		0.000	119	p-Cymene
70	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	91	Benzyl chloride
73	0	0	0	0	0		0.000	91	n-Butylbenzene
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0		0.000	180	1,2,4-Trichlorobenzene
77	39	17	51	-4	4816	bb	19.572	225	Hexachlorobutadiene
78	0	0	0	0	0		0.000	128	Naphthalene
79	0	0	0	0	0		0.000	180	1,2,3-Trichlorobenzene

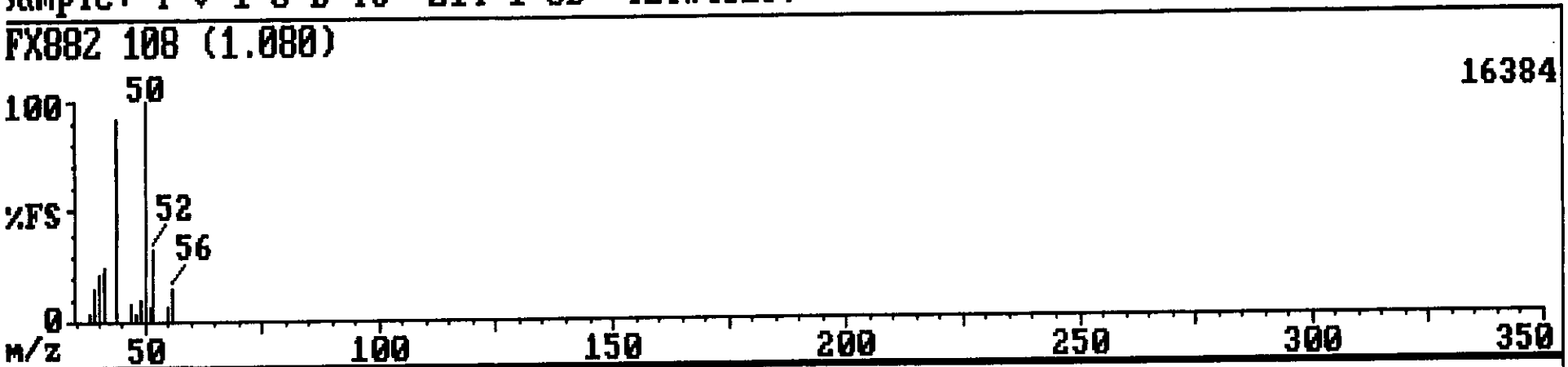
124

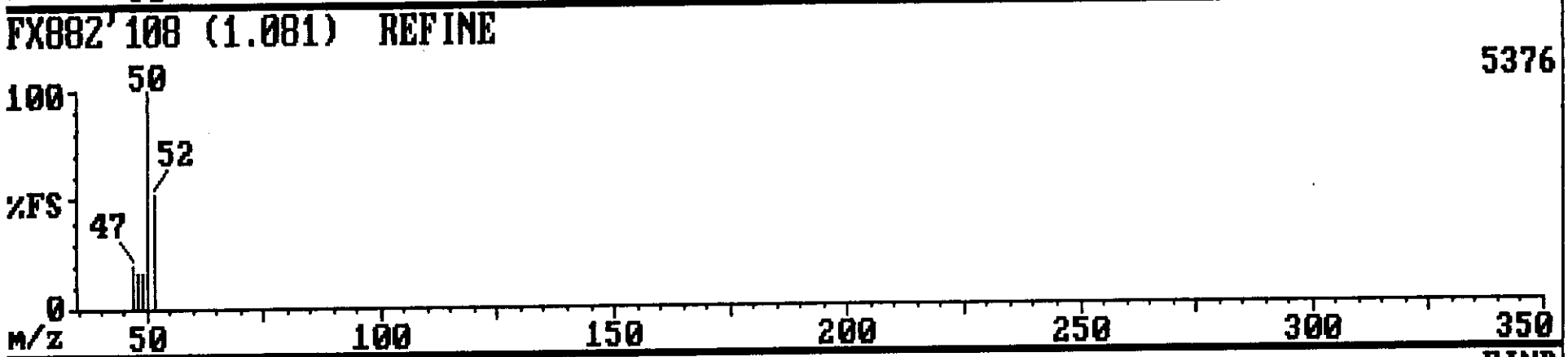
No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	77	99	1	2565532	bv	5.301	168	Pentafluorobenzene
2	100	97	99	0	2643408	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	-1	2211964	bv	10.351	117	Chlorobenzene-d5
4	100	79	98	-1	836188	bv	15.722	152	1,4-Dichlorobenzene-d4
5	100	87	99	0	1043964	bb	5.181	113	Dibromofluoromethane
6	100	92	97	0	3367004	bv	8.001	98	Toluene-d8
7	100	91	93	-1	1021344	bv	12.651	95	4-Bromofluorobenzene
8	66	40	73	4	~~49804~~	~~vv~~	~~1.260~~ FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	79	60	70	2	~~2[illegible]~~		~~3.611~~ FP	73	MTBE
11	83	64	69	0	17868	bv	3.880	57	n-Hexane
12	59	42	62	6	~~[illegible]~~	~~a~~	~~4.150~~ FP	42	1,2-Epoxybutane
13	86	64	76	-1	167952	bb	5.671	57	Iso-Octane
14	44	28	69	-13	~~[illegible]~~	~~bv~~	~~5.721~~ FP	55	Ethyl acrylate

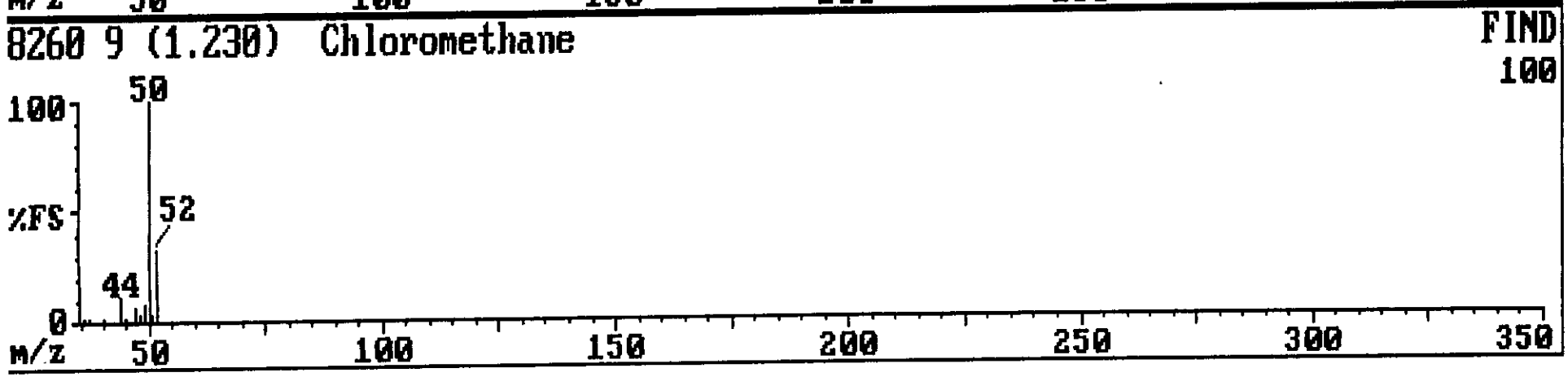
MC 8/19/98

17-Aug-98 19:17 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-3-B TC 214-1-8B TLI#46297 Instrument F







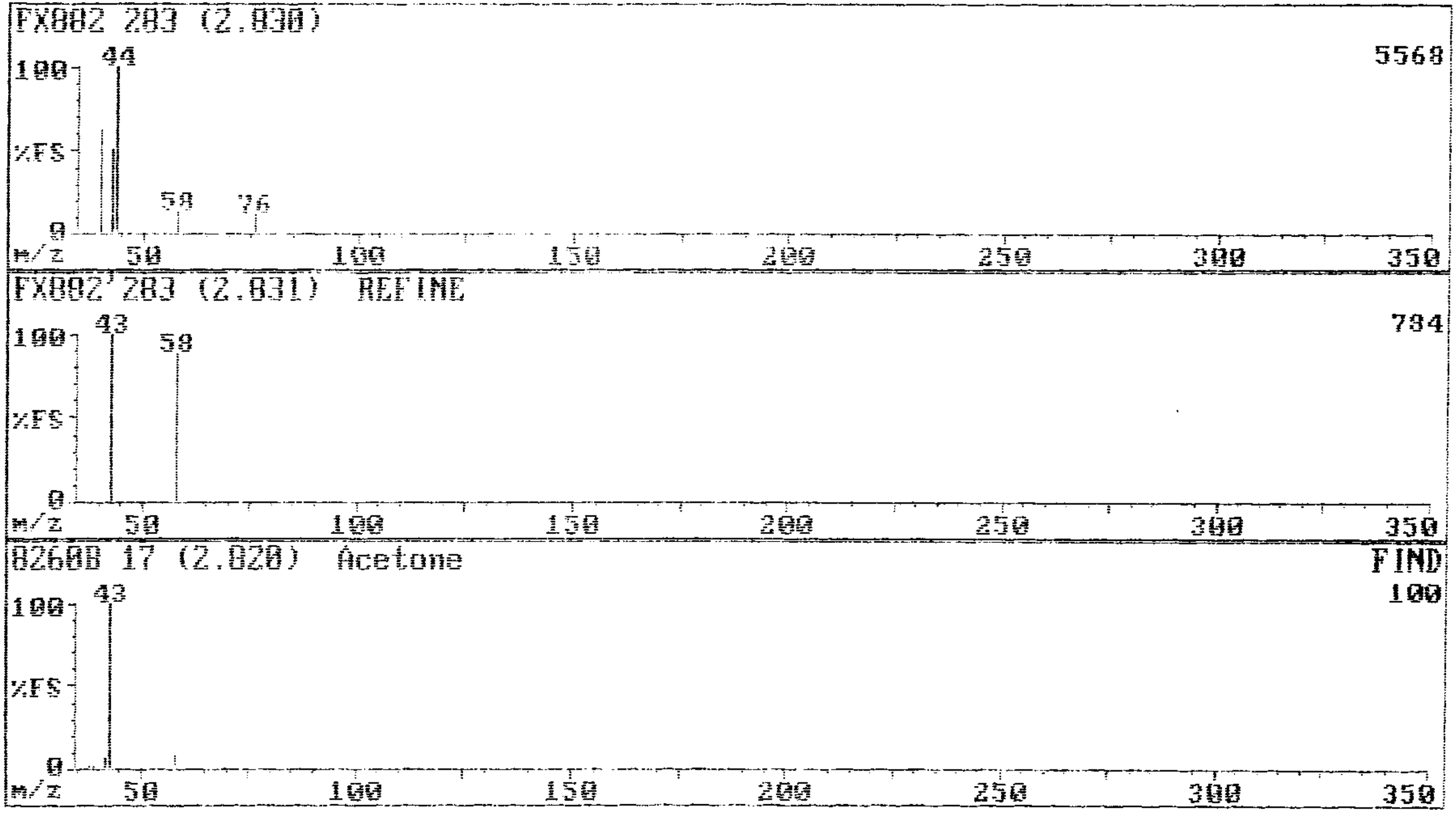
Instrument F
Sample: 1-U-1-3-1 (USD) Jul-Sep-96 17:49
Operator: Jul-Sep-96 17:49
Instrument: Instrument 1
Method: C:\METHODS\1-U-1-3-1.MET
Comment: Determine Fluoride
FIND
1000
6948
1000
6948
1000
6948
1000
6948

127

17-Aug-00 10:47
Sample: T-4-1-3-UE 20 2+4-T-10R-T-10R ET1M4Z7Z7
Instrument F
9856
9536
100
FIND

128

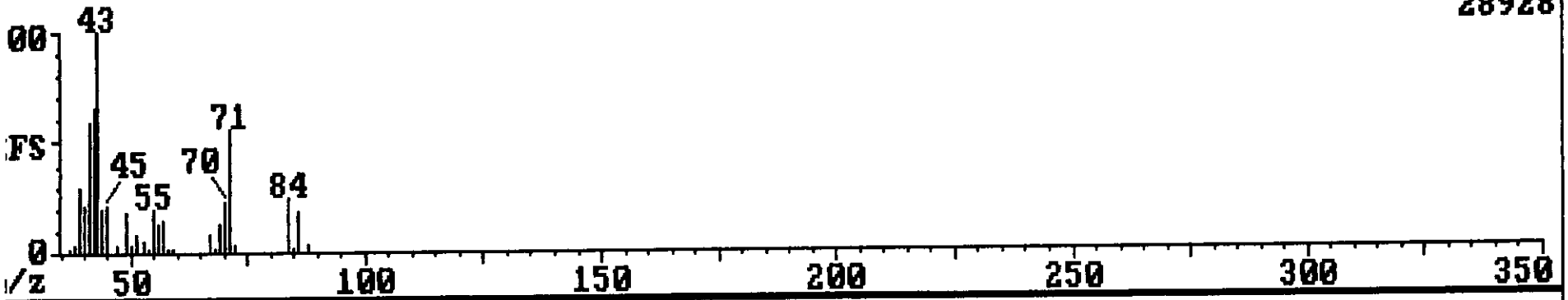
17-Aug-98 19:17 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-1-3-B TC 214-1-8B TLI#46297 Instrument F



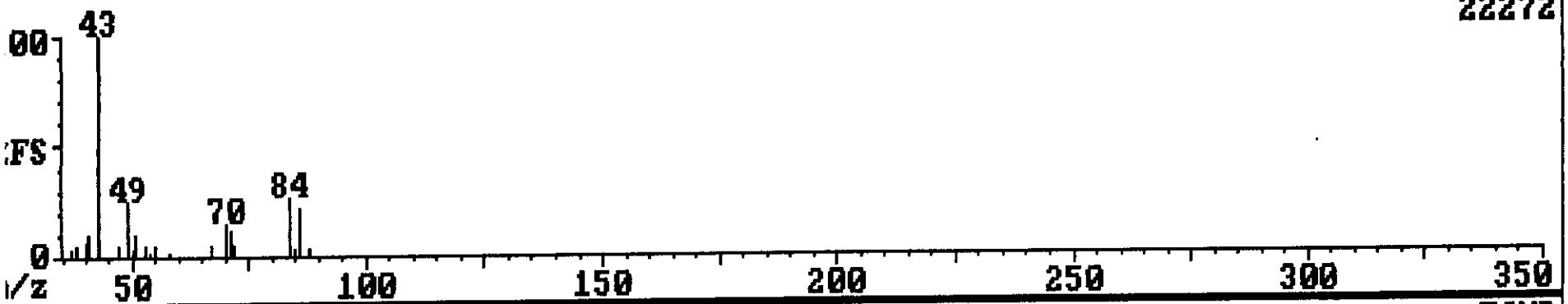
7-Aug-98 19:17 Triangle Laboratories, Inc. (919) 544-5729

ample: T-V-1-3-B TC 214-1-8B TLI#46297 Instrument F

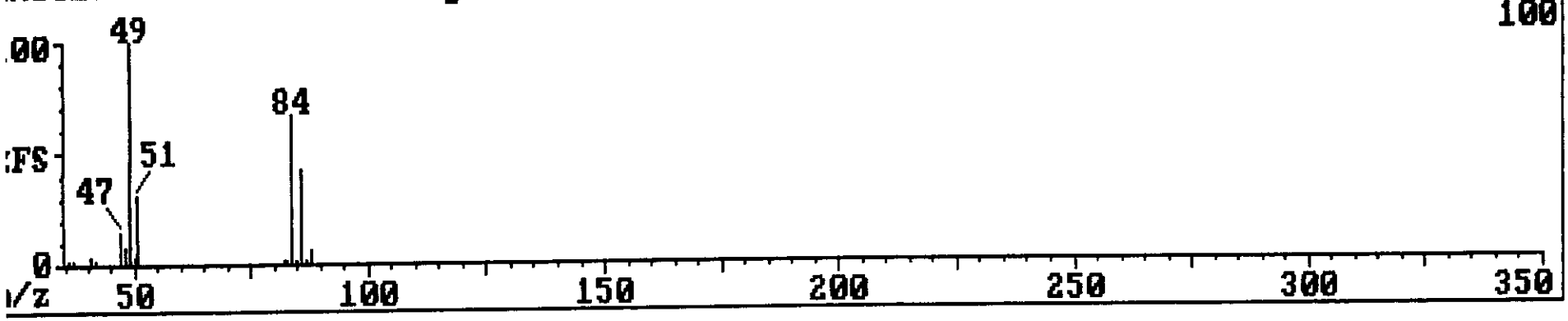
X882 326 (3.260)



X882'326 (3.261) REFINE



ASTER 22 (3.590) Methylene chloride FIND



17-Aug-90 08:47
Sample: T-H-C-B TO 7-4-1-0B Ambient Air, Tenax, GC/MS (GAS-PRO)
FIXED 0800 (0.000)
Instrument 1
1992
1.00
SIC
0
%
359
2400
2402
2404
2406
2408
2410
2412
2414
2416
2418
2420
2422
2424
2426
2428
2430
2432
2434
2436
2438
2440
2442
2444
2446
2448
2450
2452
2454
2456
2458
2460
359
%
0
SIC
1.00
4000
FIXED 0800 (0.000)
Ambient Air, Tenax, GC/MS (GAS-PRO)
359
%
0
SIC
1.00
0001
FIXED 0800 (0.000)
Toluene
FIND

17-Aug-90 09:47:47
Instrument Test (USA-USSR) Mic, Mic, Mic, Mic, Mic, Mic, Mic, Mic
Channels: 1-2-3-4-5-6-7-8
Time: 0:00:00.000
4160
2752
1344

132

Pacific Environmental Services

Project Number: 46297
Sample File: FX881

Method 8260 VOST
Sample ID: T-V-1-4-B TC

Client Project: Hotmix
TLI ID: 214-1-98

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
Chloromethane	0.073		1.08		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.045	J	1.64		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone	0.092		2.86		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.048	J	3.27		0.05
Acrylonitrile		U		0.016	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

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Pacific Environmental Services

Project Number: 46297 | **Method 8260 VOST**
Sample File: FX881 | **Sample ID: T-V-1-4-B TC**

Client Project: Hotmix | **Date Received: 07/25/98** | **Response File: ICALF814**
TLI ID: 214-1-9B
Date Analyzed : 08/17/98

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.017	BJ	8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.002	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.72		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.002	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Savar v3.7
Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX881

Method 8260 VOST
Sample ID: T-V-1-4-B TC

Client Project: Hotmix
TLI ID: 214-1-9B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.240	5.18	1	96
Toluene-d_8	0.320	8.00	2	128
4-Bromofluorobenzene	0.326	12.65	2	130

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
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Savar v3.7
Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX881

Method 8260 VOST
Sample ID: T-V-1-4-B TC

Client Project: Hotmix
TLI ID: 214-1-9B

Date Received: 07/25/98
Date Analyzed : 08/17/98

Response File: ICALF817

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.004	J	3.88		0.25
1,2-Epoxybutane		U		0.011	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.003	0.25

Reviewed by VR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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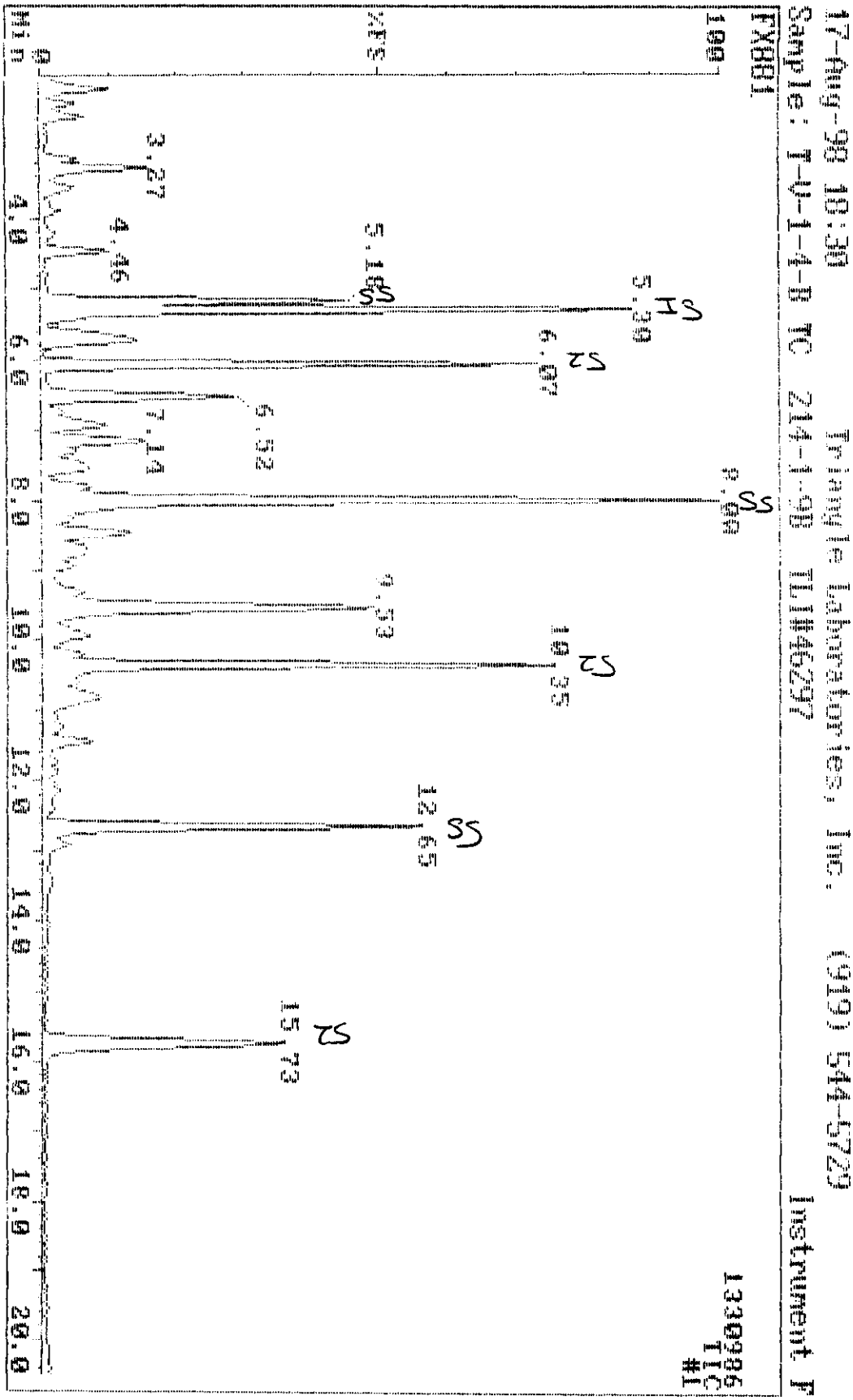
Savar v3.7
Printed: 18:00 08/24/1998


Sample : 1-Eng-05
Operator : Eng
Acquired : 05-Aug-94 07:47:45 using AQUIRE
Instrument : Instrument 1
Sample Name: 1-Eng-05
Misc Info : Eng-05
Vial: 1
Data File : C:\HPCHEM\1\DATA\080594\0507F0501.D
Method : C:\HPCHEM\1\METHODS\ENG-05.MTH
Title : Eng-05
Sample #: 1 Date: 8/5/94
Time of Injection: 8/5/94 07:47:45
Low Point : 0.00 High Point : 3.32
Plot Scale: 3.3 mV
FID1A (1\080594\0507F0501.D)
0.00
0.02
0.31
0.46
0.51
1.09
1.27
1.65
1.86
2.09
2.42
2.55
2.72
2.92
3.12
3.32
3.46
3.65
3.86
4.09
4.27
4.46
4.65
4.86
5.09
5.27
5.46
5.65
5.86
6.09
6.27
6.46
6.65
6.86
7.09
7.27
7.46
7.65
7.86
8.09
8.27
8.46
8.65
8.86
9.09
9.27
9.46
9.65
9.86
10.09
10.27
10.46
10.65
10.86
11.09
11.27

QUAN DB : FX881 LAB-BASE QUAN LP-Amig-98 L6:20

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	76	98	2	2628980	bb	5.311	168	Pentafluorobenzene
2	100	97	99	-1	2692040	bb	6.071	114	1,4-Difluorobenzene
3	100	94	96	0	2455926	bv	10.351	117	Chlorobenzene-d5
4	100	79	98	1	977776	A	15.722	152	1,4-Dichlorobenzene-d4
5	100	82	99	-1	1061712	bv	5.181	113	Dibromofluoromethane
6	100	90	97	1	3511416	bv	8.001	98	Toluene-d8
7	100	90	94	0	1195316	bv	12.651	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	95	75	82	1	264480	A	1.030	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	92	87	87	1	83621	bv	1.640	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	0	0	0	0	0		0.000	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	102	Iodomethane
16	0	0	0	0	0		0.000	54	Carbon disulfide
17	94	95	88	3	44600	A	2.800	43	Acetone
18	0	0	0	0	0		0.000	41	Allyl chloride
19	0	0	0	0	118388	m	3.27	49	Methylene chloride
20	10	4	13	0			FP	50	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	20	16	21	6			FP	43	2-Butanone
27	0	0	0	0	0		0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	0	0	0	0	0		0.000	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	0	0	0	0	0		0.000	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	35	5	57	4			FP	43	4-Methyl-2-pentanone
41	92	50	88	0	129620	A	8.091	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	0	0	0	0	0		0.000	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

Data Review: MC
Date: 8/19/98

No.	MAT	FOR	REV	Delta	Area	P	Flags	RT	QM	Name
51	0	0	0	0	0			0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0			0.000	106	Ethylbenzene
53	0	0	0	0	0			0.000	106	m-/p-Xylene
54	0	0	0	0	0			0.000	106	o-Xylene
55	0	0	0	0	0			0.000	104	Styrene
56	0	0	0	0	0			0.000	173	Bromoform
57	0	0	0	0	0			0.000	105	Cumene
58	0	0	0	0	0			0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0			0.000	156	Bromobenzene
60	0	0	0	0	0			0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0			0.000	120	n-Propylbenzene
62	43	10	69	-3	~~1409~~	A		~~12.65~~ FP	75	trans-1,4-Dichloro-2-butene
63	0	0	0	0	0			0.000	126	2-Chlorotoluene
64	0	0	0	0	0			0.000	126	4-Chlorotoluene
65	0	0	0	0	0			0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0			0.000	119	tert-Butylbenzene
67	0	0	0	0	0			0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0			0.000	105	sec-Butylbenzene
69	0	0	0	0	0			0.000	119	p-Cymene
70	0	0	0	0	0			0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0			0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0			0.000	91	Benzyl chloride
73	0	0	0	0	0			0.000	91	n-Butylbenzene
74	0	0	0	0	0			0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0			0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0			0.000	180	1,2,4-Trichlorobenzene
77	48	25	61	-4	8504	Nb		19.502	225	Hexachlorobutadiene
78	0	0	0	0	0			0.000	128	Naphthalene
79	0	0	0	0	0			0.000	180	1,2,3-Trichlorobenzene

M8/19/98

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0		0.000	106	Ethylbenzene
53	0	0	0	0	0		0.000	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Bromobenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	120	n-Propylbenzene
62	43	10	69	-8	~~9030~~	~~i~~	~~12.781~~ FP	75	trans-1,4-Dichloro-2-buten
63	0	0	0	0	0	M8/17/98	0.000	126	2-Chlorotoluene
64	0	0	0	0	0		0.000	126	4-Chlorotoluene
65	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	119	tert-Butylbenzene
67	0	0	0	0	0		0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.000	105	sec-Butylbenzene
69	0	0	0	0	0		0.000	119	p-Cymene
70	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	91	Benzyl chloride
73	0	0	0	0	0		0.000	91	n-Butylbenzene
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0		0.000	180	1,2,4-Trichlorobenzene
77	48	23	61	-4	8504	bb	19.532	225	Hexachlorobutadiene
78	0	0	0	0	0		0.000	128	Naphthalene
79	0	0	0	0	0		0.000	180	1,2,3-Trichlorobenzene

QUAN 08 : FX881 LAB-BASE QUAN 18-Aug-98 01:14

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	76	98	2	2628980	bb	5.311	168	Pentafluorobenzene
2	100	97	99	-1	2692040	bb	6.071	114	1,4-Difluorobenzene
3	100	94	96	-1	2455926	bv	10.351	117	Chlorobenzene-d5
4	100	79	98	-1	97777	A	15.722	152	1,4-Dichlorobenzene-d4
5	100	82	99	-1	1061712	bv	5.181	113	Dibromofluoromethane
6	100	90	97	0	3511416	bv	8.001	98	Toluene-d8
7	100	90	94	-1	1195316	bv	12.691	95	4-Bromofluorobenzene
8	60	35	67	4	~~25941~~	~~vb~~	~~1.260~~ FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	81	61	75	3	~~72652~~	~~bb~~	~~3.629~~ FP	73	MTBE
11	100	81	83	0	50692	bb	3.880	57	n-Hexane
12	56	38	61	6	~~42972~~	~~bv~~	~~4.160~~ FP	42	1,2-Epoxybutane
13	87	65	76	0	~~295728~~	~~bb~~	~~5.691~~ FP	57	Iso-Octane
14	41	28	70	-13	~~69208~~	~~bb~~	~~4.621~~ FP	55	Ethyl acrylate

M8/19/98

141

17-Aug-95 10:30
Sample: 1-4-4-1-4-1-4 FD 2747 Run 2707 Filter 2707
Instrument
(303) 544-5729

17-Dec-96 10:30
Sample: T-1-1-4-1 Lot: 2717-1-4B Operator: JMC (610) 644-5729
Instrument: TA Instruments, Inc. 2960 SDT V3.0B
PXD01 104 (1,040) TMA
PXD01 104 (1,040) DMA
B7608 11 (1,628) Bromomethane
FIND
100
%/Z
50
%TS
100
0
T/C
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
1450
1500
1550
1600
1650
1700
1750
1800
1850
1900
1950
2000
2050
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200
3250
3300
3350
8768
6400
94
73
61
44
94
95
61
94
97
61
94

143

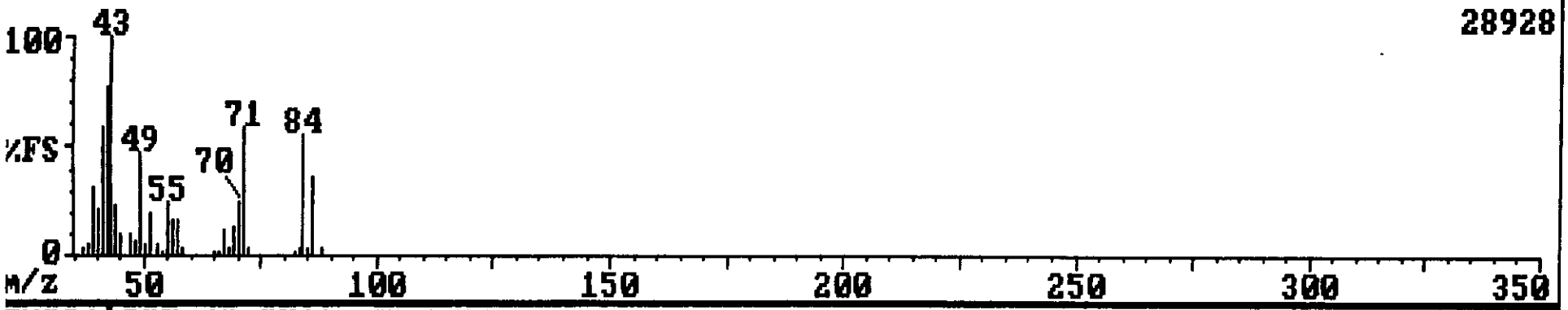
17-May-90 08:30
Sample: 1-1-1-4-4-4-H 10
Agilent Technologies 4294A
Instrument F
5294-5729 (5719) Fax
FIND
100
8029
100
50
55
100
41
(4000,2)
2005
FX004
100
0
50
100
150
200
250
300
350
M/Z
100
%FS
100
1088
100
45.58
100
43
(2000,2)
2005
FX004
100
0
50
100
150
200
250
300
350
M/Z
100
%FS
100
1088
100
43
(2000,2)
2005
FX004
100
0
50
100
150
200
250
300
350
M/Z
100
%FS
100
1088
Acetone

144

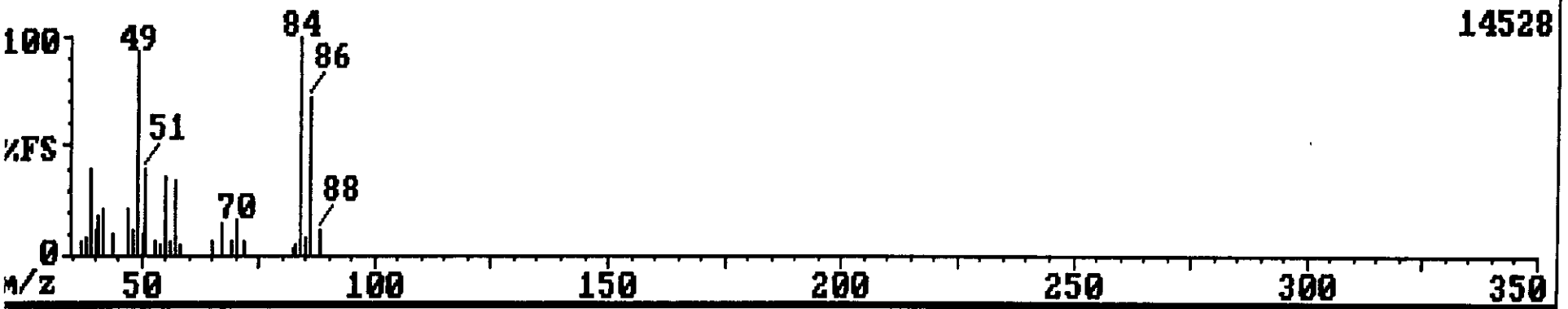
17-Aug-98 18:30 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-4-B TC 214-1-9B TLI#46297 Instrument F

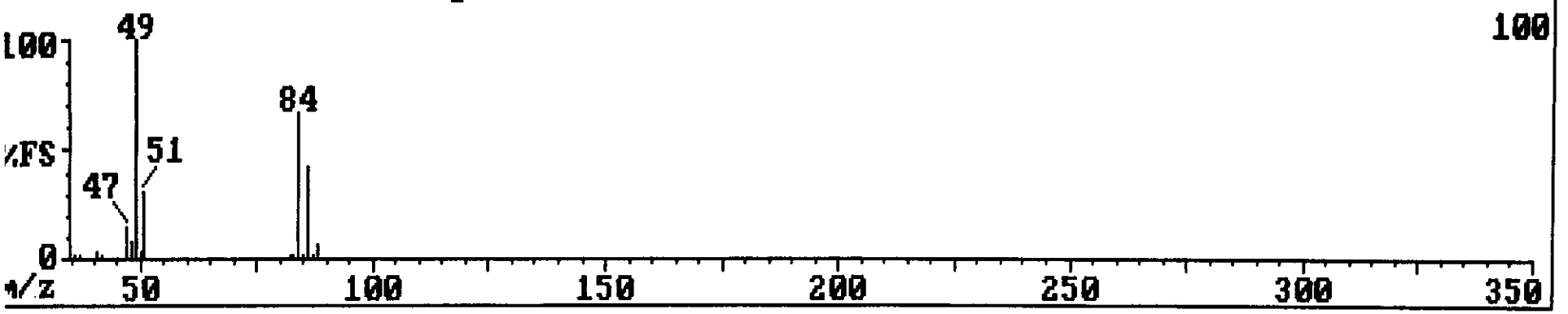
FX881 327 (3.270)



FX881 327 (3.271) REFINE



MASTER 22 (3.590) Methylene chloride FIND



145

17-Aug-05 10:38
Instrument F
Sample: T-U-T-A-D to Z-A-T-E-D
Instrument: Thermo Electron Corporation DSQ
Method: Aluminum Tubes
Comment: Aluminum Tubes, Inc. (0.0) CAM-5720
TYROOT 000 (0.0,0.091)
FIND
27648
FXROOT/000 (0.0,091)
25600
BZROOM AT (0.0,0.091)
100
25600
m/z
%TIC
Abundance
RELATIVE
350
300
250
200
150
100
50
0
65
92
55
69
44
73
91

17-Aug-90 10:38
Sample: 1-17-1-4-0 to 2-14-1-4-0
Instrument F
Model 200 (3,000) Mixture
Model 200 (3,000) Methane
Model 200 (3,000) Nitrogen
350
300
250
150
100
50
0
%/Z
%FS
100
57
55
56
95
84
7269
6969
6969
Nitrogen
Methane
Mixture
FIND

147

Pacific Environmental Services

Project Number: 46297
Sample File: FX878

Method 8260 VOST
Sample ID: VOSTBLK081798

Client Project: Hotmix
TLI ID: VOSTBLK081798

Date Received: / /
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.32		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride		U		0.001	0.05
Acrylonitrile		U		0.016	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.08		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.013	J	5.54		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX878

Method 8260 VOST
Sample ID: VOSTBLK081798

Client Project: Hotmix
TLI ID: VOSTBLK081798

Date Received: / /
Date Analyzed : 08/17/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.005	J	8.10		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.36		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.006	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.003	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.73		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.003	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46297
Sample File: FX878

Method 8260 VOST
Sample ID: VOSTBLK081798

Client Project: Hotmix
TLI ID: VOSTBLK081798

Date Received: / /

Date Analyzed : 08/17/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.267	5.19	1	107
Toluene-d_8	0.296	8.01	2	118
4-Bromofluorobenzene	0.256	12.66	2	102

Reviewed by VR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Pacific Environmental Services

Project Number: 46297
Sample File: FX878

Method 8260 VOST
Sample ID: VOSTBLK081798

Client Project: Hotmix
TLI ID: VOSTBLK081798

Date Received: / /

Date Analyzed : 08/17/98

Response File: ICALF817

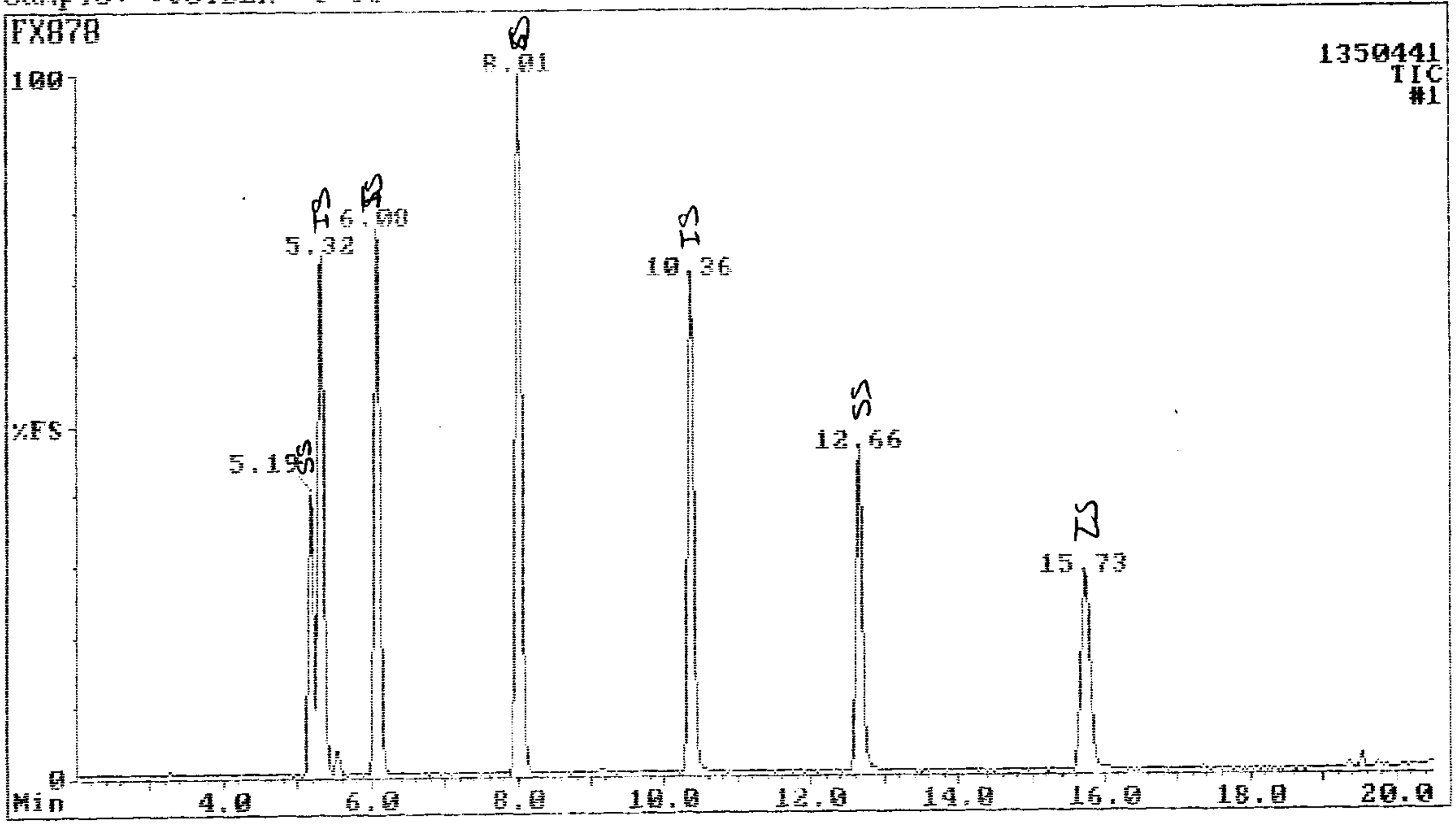
Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.32		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.011	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.08		
Ethyl acrylate		U		0.002	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

17-Aug-98 15:51 Triangle Laboratories, Inc. (919) 544-5729
Sample: VOSTBLK I/TC Instrument F



Data Review:
Date: 8/19/98

QUAN DB : FX878 LAB-BASE QUAN 17-Aug-98 16:31

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	99	3	2578248	bv	5.321	168	Pentafluorobenzene
2	100	97	99	-1	2921264	bv	6.081	114	1,4-Difluorobenzene
3	100	95	96	0	2423024	bv	10.361	117	Chlorobenzene-d5
4	100	79	98	0	799240	bv	15.732	152	1,4-Dichlorobenzene-d4
5	100	97	99	-1	1157096	bb	5.191	113	Dibromofluoromethane
6	100	92	97	0	3532432	bv	8.011	98	Toluene-d8
7	100	91	93	-1	1017440	bv	12.661	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	0	0	0	0	0		0.000	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	0	0	0	0	0		0.000	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	0	0	0	0	0		0.000	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	142	Iodomethane
16	0	0	0	0	0		0.000	76	Carbon disulfide
17	0	0	0	0	0		0.000	43	Acetone
18	0	0	0	0	0		0.000	41	Allyl chloride
19	0	0	0	0	0		0.000	84	Methylene chloride
20	0	0	0	0	0		0.000	53	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	17	15	15	3	~~1[illegible]~~	~~bb~~	~~4.771~~	43	2-Butanone FP
27	0	0	0	0	0		0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	100	79	95	1	146244	bb	5.541	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	0	0	0	0	0		0.000	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	39	3	66	4	~~14176~~	~~bv~~	~~8.021~~	43	4-Methyl-2-pentanone FP
41	66	34	72	-1	38868	bb	8.101	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	0	0	0	0	0		0.000	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

Data Review: MC
Date: 8/19/98

153

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0		0.000	106	Ethylbenzene
53	0	0	0	0	0		0.000	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	83	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Bromobenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	120	n-Propylbenzene
62	0	0	0	0	0		0.000	75	trans-1,4-Dichloro-2-buten
63	0	0	0	0	0		0.000	126	2-Chlorotoluene
64	0	0	0	0	0		0.000	126	4-Chlorotoluene
65	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	119	tert-Butylbenzene
67	0	0	0	0	0		0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.000	105	sec-Butylbenzene
69	0	0	0	0	0		0.000	119	p-Cymene
70	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	91	Benzyl chloride
73	0	0	0	0	0		0.000	91	n-Butylbenzene
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	75	1,2-Dibromo-3-chloropropan
76	57	33	65	-3	16904	bv	19.352	180	1,2,4-Trichlorobenzene
77	76	51	87	-5	17800	bb	19.532	225	Hexachlorobutadiene
78	0	0	0	0	0		0.000	128	Naphthalene
79	0	0	0	0	19356 ~~m~~		19.762 ~~0.000~~	180	1,2,3-Trichlorobenzene

MC 8/19/94

QUAN DB : FX878 LAB-BASE QUAN 17-Aug-98 13:04

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	78	99	1	2574448	bb	5.301	168	Pentafluorobenzene
2	100	97	99	0	2726140	bv	6.071	114	1,4-Difluorobenzene
3	100	95	95	-1	2355716	bv	10.351	117	Chlorobenzene-d5
4	100	76	100	-2	860176	bv	15.712	152	1,4-Dichlorobenzene-d4
5	100	84	99	0	1077964	bv	5.131	113	Dibromofluoromethane
6	100	91	97	0	3394004	bv	8.001	98	Toluene-d8
7	100	91	93	-1	1044408	bv	12.651	95	4-Bromofluorobenzene
8	~~57~~	~~33~~	~~44~~	~~5~~	~~26612~~	~~vv~~	~~1.270~~ FP	39	1,3-Butadiene
9	0	0	0	0	0		0.000	106	Vinyl bromide
10	57	40	55	4	~~3612~~	~~A~~	~~3.030~~ FP	73	MTBE
11	69	57	59	2	~~12896~~	~~bb~~	~~5.200~~ FP	57	n-Hexane
12	55	48	62	13	~~23488~~	~~A~~	~~4.470~~ FD	42	1,2-Epoxybutane
13	44	47	57	1	~~6~~	~~A~~	~~5.401~~ FD	57	Iso-Octane
14	44	28	69	-12	~~2667~~	~~bb~~	~~6.501~~ FD	55	Ethyl acrylate

MLB 19/98

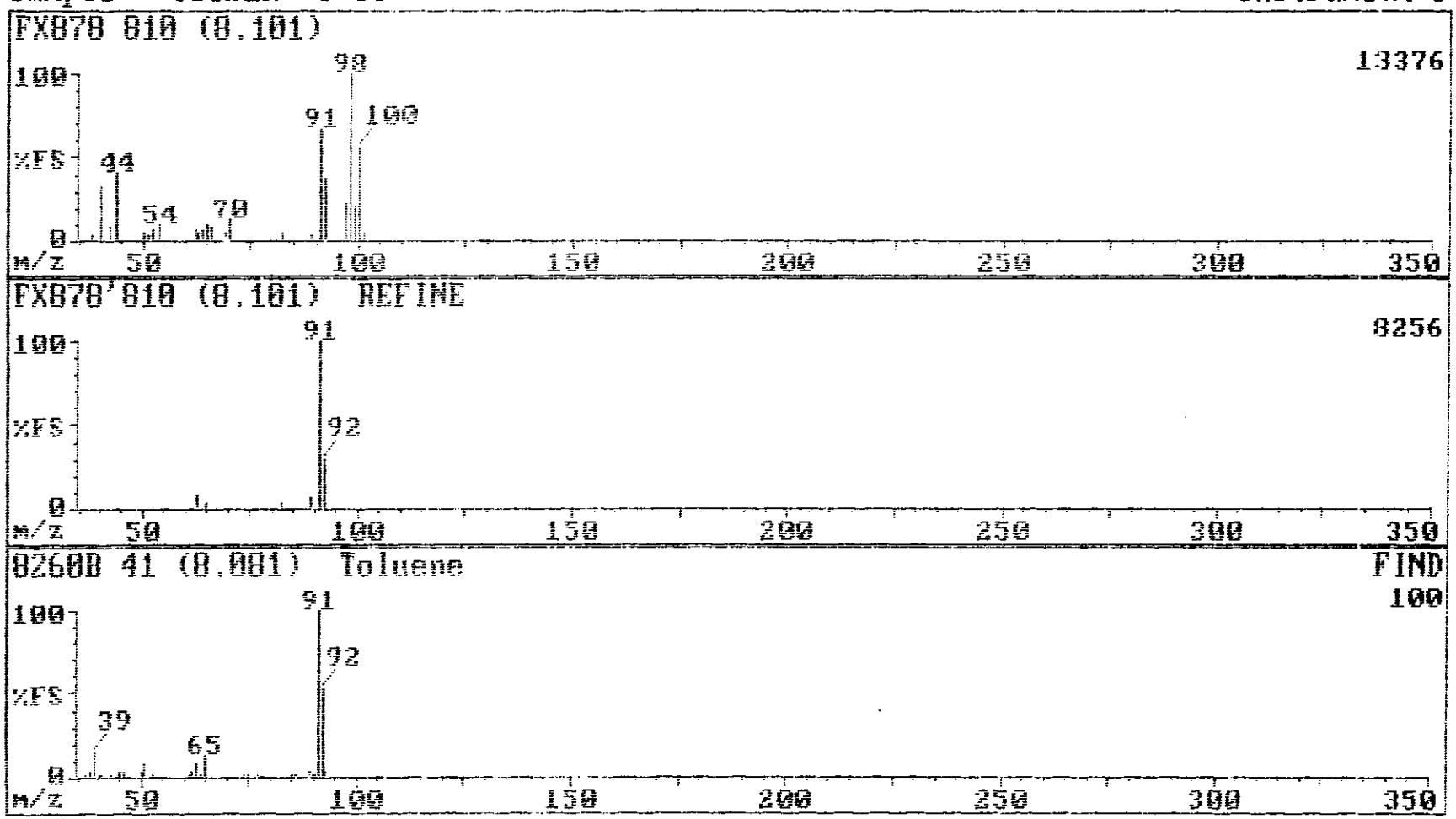
155

17-Aug-90 15:51
Sample: WOSTBLK #10
Environmental Laboratories, Inc. (305) 544-5729
Instrument F
FX8270 GC/MS (5.5417)
%FS
100
0
21760
M/Z
50
350
FX8270 GC/MS (5.5417) Methylene
%FS
100
0
220480
M/Z
50
350
FIND
100
0220000 22 (5.5417) Benzene
%FS
100
0
M/Z
50
350

156

17-Aug-98 15:51 Triangle Laboratories, Inc. (919) 544-5729

Sample: VOSTBLK T/TC Instrument F



Pacific Environmental Services

Project Number: 46297
Sample File: FX894

Method 8260 VOST
Sample ID: VOSTBLK081898

Client Project: Hotmix
TLI ID: VOSTBLK081898

Date Received: / /
Date Analyzed : 08/18/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.29		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.006	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride		U		0.001	0.05
Acrylonitrile		U		0.021	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.005	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.06		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.023	J	5.51		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX894

Method 8260 VOST
Sample ID: VOSTBLK081898

Client Project: Holmix
TLI ID: VOSTBLK081898

Date Received: / /

Date Analyzed : 08/18/98

Response File: ICALF814

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.007	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.006	0.05
Toluene	0.008	J	8.07		0.05
trans-1,3-Dichloropropene		U		0.002	0.05
1,1,2-Trichloroethane		U		0.002	0.05
Chlorobenzene-d_5		IS 3	10.33		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.002	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.004	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.67		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.004	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 17:44 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: FX894

Method 8260 VOST
Sample ID: VOSTBLK081898

Client Project: Hotmix
TLI ID: VOSTBLK081898

Date Received: / /
Date Analyzed : 08/18/98

Response File: ICALF814

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.255	5.16	1	102
Toluene-d_8	0.317	7.98	2	127
4-Bromofluorobenzene	0.265	12.63	2	106

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46297
Sample File: FX894

Method 8260 VOST
Sample ID: VOSTBLK081898

Client Project: Hotmix
TLI ID: VOSTBLK081898

Date Received: / /

Date Analyzed : 08/18/98

Response File: ICALF818

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.29		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.020	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.06		
Ethyl acrylate		U		0.004	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Savar v3.7
Printed: 18:00 08/24/1998

Data Review: MC
Date: 8/19/98

162

QUAN DB : FX894 LAB-BASE QUAN D:\Aliq-DB 14:14

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	99	0	1969692	bb	5.291	168	Pentafluorobenzene
2	100	97	98	0	2162904	bv	6.041	114	1,4-Difluorobenzene
3	100	95	95	0	1665360	bv	10.341	117	Chlorobenzene-d5
4	100	77	97	-1	600868	bv	15.677	152	1,4-Dichlorobenzene-d4
5	100	97	99	-1	846372	bb	5.161	113	Dibromofluoromethane
6	100	93	97	0	2796248	bv	7.961	98	Toluene-d8
7	100	91	93	0	778432	mv	12.631	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	85	Dichlorodifluoromethane
9	0	0	0	0	0		0.000	50	Chloromethane
10	0	0	0	0	0		0.000	62	Vinyl Chloride
11	0	0	0	0	0		0.000	94	Bromomethane
12	0	0	0	0	0		0.000	64	Chloroethane
13	0	0	0	0	0		0.000	101	Trichlorofluoromethane
14	0	0	0	0	0		0.000	96	1,1-Dichloroethene
15	0	0	0	0	0		0.000	149	Iodomethane
16	0	0	0	0	0		0.000	76	Carbon disulfide
17	60	15	35	2	~~3884~~	~~bb~~	~~2.561~~	43	Acetone FP
18	0	0	0	0	0		0.000	61	Allyl Chloride
19	0	0	0	0	0		0.000	84	Methylene chloride ✓
20	0	0	0	0	0		0.000	53	Acrylonitrile
21	0	0	0	0	0		0.000	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.000	63	1,1-Dichloroethane
23	0	0	0	0	0		0.000	43	Vinyl acetate
24	0	0	0	0	0		0.000	77	2,2-Dichloropropane
25	0	0	0	0	0		0.000	96	cis-1,2-Dichloroethene
26	0	0	0	0	0		0.000	43	2-Butanone
27	0	0	0	0	0		0.000	83	Chloroform
28	0	0	0	0	0		0.000	128	Bromochloromethane
29	0	0	0	0	0		0.000	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.000	117	Carbon tetrachloride
31	0	0	0	0	0		0.000	75	1,1-Dichloropropene
32	100	85	95	0	1920640	bb	5.511	78	Benzene
33	0	0	0	0	0		0.000	62	1,2-Dichloroethane
34	0	0	0	0	0		0.000	130	Trichloroethene
35	0	0	0	0	0		0.000	63	1,2-Dichloropropane
36	0	0	0	0	0		0.000	93	Dibromomethane
37	0	0	0	0	0		0.000	41	Methyl methacrylate
38	0	0	0	0	0		0.000	83	Bromodichloromethane
39	0	0	0	0	0		0.000	75	cis-1,3-Dichloropropene
40	35	2	33	3	~~9863~~	~~bb~~	~~7.961~~	43	4-Methyl-2-pentanone FP
41	70	39	73	-1	51592	bb	8.071	92	Toluene
42	0	0	0	0	0		0.000	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.000	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.000	69	Ethyl methacrylate
45	0	0	0	0	0		0.000	164	Tetrachloroethene
46	0	0	0	0	0		0.000	76	1,3-Dichloropropane
47	0	0	0	0	0		0.000	43	2-Hexanone
48	0	0	0	0	0		0.000	129	Dibromochloromethane
49	0	0	0	0	0		0.000	107	1,2-Dibromoethane
50	0	0	0	0	0		0.000	112	Chlorobenzene

Data Review: YK
Date: 8/19/96

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0		0.000	106	Ethylbenzene
53	0	0	0	0	0		0.000	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	85	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Bromobenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	120	n-Propylbenzene
62	0	0	0	0	0		0.000	75	trans-1,4-Trichloro-2-butene
63	0	0	0	0	0		0.000	136	2-Chlorotoluene
64	0	0	0	0	0		0.000	126	4-Chlorotoluene
65	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.000	119	tert-Butylbenzene
67	0	0	0	0	0		0.000	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.000	105	sec-Butylbenzene
69	0	0	0	0	0		0.000	112	p-Cymene
70	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.000	91	Benzyl chloride
73	0	0	0	0	0		0.000	134	n-Butylbenzene
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	75	1,2-Dibromo-3-chloropropane
76	0	0	0	0	0		0.000	180	1,2,4-Trichlorobenzene
77	0	0	0	0	0		0.000	225	Hexachlorobutadiene
78	0	0	0	0	0		0.000	128	Naphthalene
79	0	0	0	0	0		0.000	180	1,2,3-Trichlorobenzene

QUAN DB : FX894 LAB-BASE QUAN 18-Aug-98 14:36

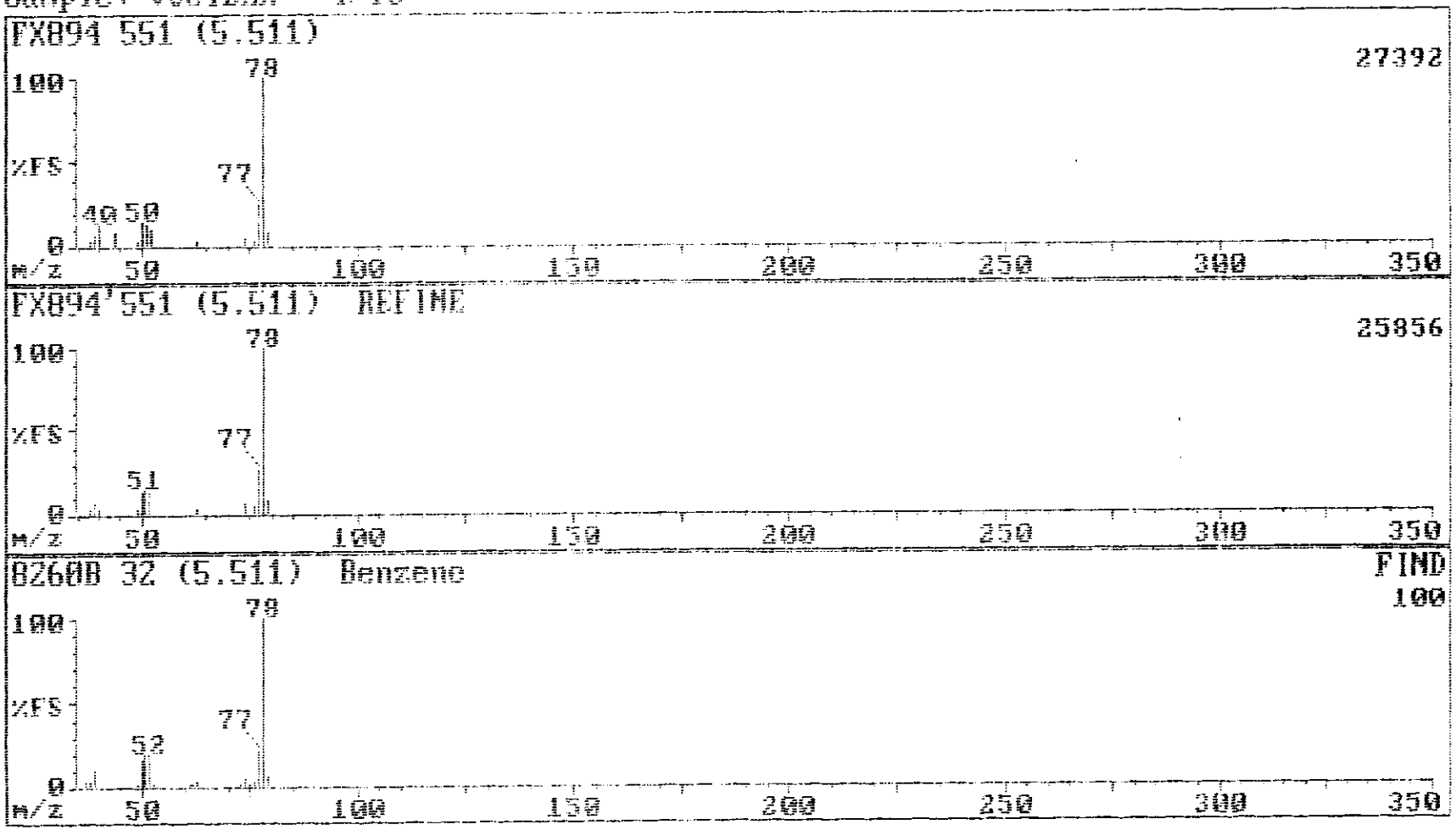
No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	99	0	1969692	bb	5.291	L68	Pentafluorobenzene
2	100	97	98	0	2162904	bv	6.061	L14	1,4-Difluorobenzene
3	100	95	95	-1	1663360	bv	10.331	L17	Chlorobenzene-d5
4	100	77	97	-3	600868	bv	15.672	L52	1,4-Dichlorobenzene-d4
5	100	97	99	-1	846376	bb	5.161	L13	Dibromofluoromethane
6	100	93	97	-1	2796248	bv	7.981	98	Toluene-d8
7	100	91	93	-1	778436	bv	12.631	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	39	1,3-Butadiene
9	0	0	0	0	0		0.000	L06	Vinyl bromide
10	0	0	0	0	0		0.000	75	MTBE
11	51	25	25	-1	[illegible]		[illegible] FP	57	n-Hexane
12	0	0	0	0	0		0.000	42	1,2-Epoxybutane
13	0	0	0	0	0		0.000	57	Iso-Octane
14	0	0	0	0	0		0.000	55	Ethyl acrylate

MS 8/19/98

165

18-Aug-90 12:46 Triangle Laboratories, Inc. (919) 544-5729

Sample: VOSTBLK T/TC Instrument F



10-May-90 12:40
Sample : VOLATILES
Instrument F
67/5-PAS (VOC) , Saturday, Jan
FIND
97992
11392

Pacific Environmental Services

Project Number: 46297 | **Method 8260 VOST**
Sample File: HW705 | **Sample ID: VOSTBLK081998**

Client Project: Hotmix | **Date Received: / /** | **Response File: ICALH809**
TLI ID: VOSTBLK081998 | **Date Analyzed : 08/19/98**

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
Chloromethane	0.003	J	0.96		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.002	J	3.06		0.05
Acrylonitrile		U		0.006	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.003	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.77		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 18:08 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: HW705

Method 8260 VOST
Sample ID: VOSTBLK081998

Client Project: Hotmix
TLI ID: VOSTBLK081998

Date Received: / /

Date Analyzed : 08/19/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.002	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.003	J	7.74		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.96		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene	0.001	J	10.56		0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.10		
Cumene	0.001	J	12.03		0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:08 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: HW705

Method 8260 VOST
Sample ID: VOSTBLK081998

Client Project: Hotmix
TLI ID: VOSTBLK081998

Date Received: / /

Date Analyzed : 08/19/98

Response File: ICALH809

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.273	4.92	1	109
Toluene-d_8	0.280	7.66	2	112
4-Bromofluorobenzene	0.293	12.25	2	117

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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Savar v3.7
Printed: 18:08 08/24/1998

Pacific Environmental Services

Project Number: 46297
Sample File: HW705

Method 8260 VOST
Sample ID: VOSTBLK081998

Client Project: Hotmix
TLI ID: VOSTBLK081998

Date Received: / /

Date Analyzed : 08/19/98

Response File: ICALH819

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane	0.001	J	3.67		0.25
1,2-Epoxybutane		U		0.017	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	5.77		
Ethyl acrylate		U		0.001	0.25

Reviewed by YR Date 8/24/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 18:00 08/24/1998

Data Review: VC
Date: 8/19/91

QUAN OR · HW705 LAB-BASE QUAN 08-12-98 01:56

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	98	0	2415996	bb	5.04	168	Pentafluorobenzene
2	100	97	99	0	2874730	bv	5.77	114	1,4-Difluorobenzene
3	100	95	95	0	4260740	bv	9.96	117	Chlorobenzene-d5
4	100	82	98	2	2872176	bv	15.10	152	1,4-Dichlorobenzene-d4
5	100	98	100	1	1407888	bb	4.92	113	Dibromofluoromethane
6	100	93	97	1	4508104	bv	7.66	98	Toluene-d8
7	100	89	93	0	2533348	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	85	Dichlorodifluoromethane
9	0	0	0	0	1054 m		0.96	50	Chloromethane
10	0	0	0	0	0		0.00	62	Vinyl Chloride
11	0	0	0	0	0		0.00	94	Bromomethane
12	0	0	0	0	0		0.00	64	Chloroethane
13	0	0	0	0	0		0.00	101	Trichlorofluoromethane
14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
15	0	0	0	0	0		0.00	142	Iodomethane
16	0	0	0	0	0		0.00	76	Carbon disulfide
17	92	18	35	8	[illegible]		[illegible] FP	43	Acetone
18	0	0	0	0	0		0.00	41	Allyl chloride
19	85	59	80	-1	6220	bb	3.06	84	Methylene chloride
20	0	0	0	0	0		0.00	53	Acrylonitrile
21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
23	0	0	0	0	0		0.00	43	Vinyl acetate
24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
26	0	0	0	0	0		0.00	43	2-Butanone
27	0	0	0	0	0		0.00	83	Chloroform
28	0	0	0	0	0		0.00	128	Bromochloromethane
29	0	0	0	0	0		0.00	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.00	117	Carbon tetrachloride
31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
32	0	0	0	0	0		0.00	78	Benzene
33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
34	0	0	0	0	0		0.00	130	Trichloroethene
35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
36	0	0	0	0	0		0.00	93	Dibromomethane
37	0	0	0	0	0		0.00	41	Methyl methacrylate
38	0	0	0	0	0		0.00	83	Bromodichloromethane
39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
40	43	3	70	2	[illegible]		[illegible] FP	43	4-Methyl-2-pentanone
41	76	43	81	-1	33028	bb	7.74	92	Toluene
42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropene
43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.00	69	Ethyl methacrylate
45	0	0	0	0	0		0.00	164	Tetrachloroethene
46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
47	0	0	0	0	0		0.00	43	2-Hexanone
48	0	0	0	0	0		0.00	129	Dibromochloromethane
49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
50	0	0	0	0	0		0.00	112	Chlorobenzene

173

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	L31	1,1,1,2-Tetrachloroethan
52	0	0	0	0	0		0.00 ✓	106	Ethylbenzene
53	51	43	43	2	3212	bb	10.56	106	m-/p-Xylene
54	0	0	0	0	0		0.00	106	o-Xylene
55	0	0	0	0	0		0.00	L04	Styrene
56	0	0	0	0	0		0.00	L73	Bromoform
57	63	45	59	0	12144	bb	12.03	L05	Cumene
58	0	0	0	0	0		0.00	33	1,1,2,2-Tetrachloroethan
59	0	0	0	0	0		0.00	L56	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	68	56	56	-2	~~3044~~	~~m~~	~~12.83~~ FP	L20	n-Propylbenzene
62	16	11	23	-15	~~450~~	~~bb~~	~~12.79~~ FP	75	trans-1,4-Dichloro-2-but
63	57	47	47	0	~~27~~	~~bb~~	~~FP~~	L26	2-Chlorotoluene
64	0	0	0	0	0		0.00	L26	4-Chlorotoluene
65	70	57	57	1	~~4779~~	~~m~~	~~13.36~~ FP	105	1,3,5-Trimethylbenzene
66	86	69	69	1	27038	a	14.13	L12	tert-Butylbenzene
67	63	52	52	0	12672	a	14.32	105	1,2,4-Trimethylbenzene
68	88	70	70	0	18350	bv	14.77	105	sec-Butylbenzene
69	52	31	52	0	45240	a	15.26	L12	p-Cymene
70	71	52	64	1	18108	a	15.87	146	1,3-Dichlorobenzene
71	0	0	0	0	24648 — m		15771	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	78	64	64	2	38504	a	16.39	91	n-Butylbenzene
74	63	54	54	2	15808	a	16.42	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	100	83	83	-2	34652	bb	19.13	180	1,2,4-Trichlorobenzene
77	89	58	95	-3	73944	bb	19.34	225	Hexachlorobutadiene
78	94	73	31	-1	55164	bv	19.34	L28	Naphthalene
79	100	88	88	-2	44124	bb	19.51	180	1,2,3-Trichlorobenzene

MC 8/19/98

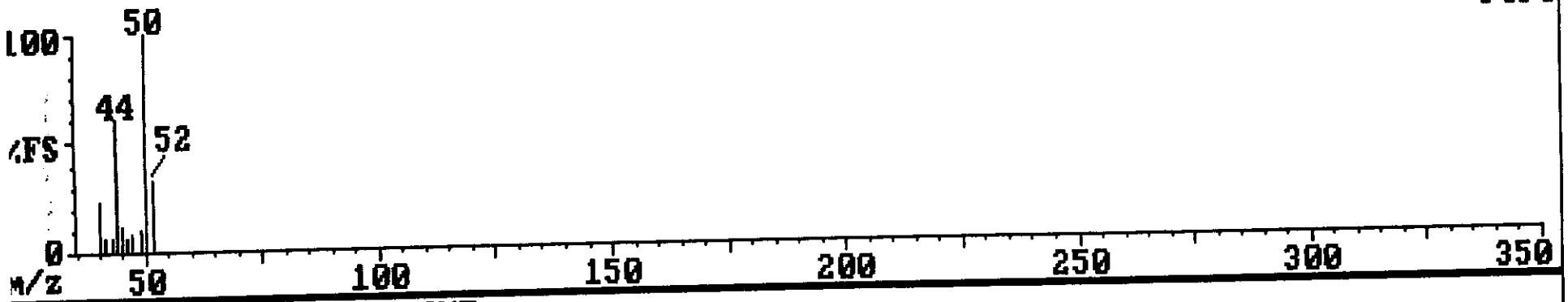
No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	98	0	2416996	bb	5.04	168	Pentafluorobenzene
2	100	97	99	1	2874780	bv	5.77	114	1,4-Difluorobenzene
3	100	95	95	0	4260740	bv	9.96	117	Chlorobenzene-d5
4	100	82	98	5	2872176	bv	15.10	152	1,4-Dichlorobenzene-d4
5	100	98	100	2	1407888	bb	4.92	113	Dibromofluoromethane
6	100	93	97	1	4508104	bv	7.66	98	Toluene-d8
7	100	89	93	2	2533348	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	0	0	0	0	0		0.00	73	MTBE
11	62	50	50	1	3692	bb	3.67	57	n-Hexane
12	0	0	0	0	0		0.00	42	1,2-Epoxybutane
13	0	0	0	0	0		0.00	57	Iso-Octane
14	0	0	0	0	0		0.00	55	Ethyl Acrylate

175

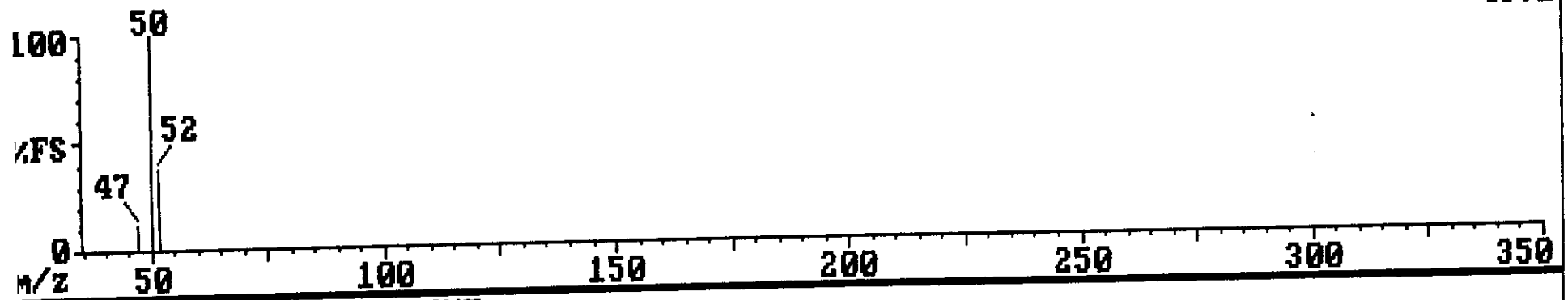
9-Aug-98 10:06 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-1-3-A T 214-1-8A TLI#46297 Instrument H

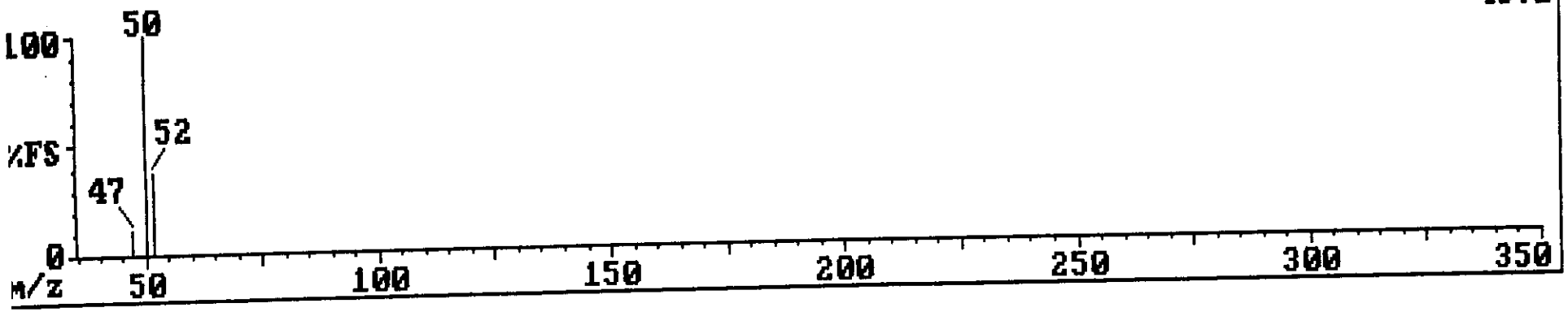
HW713 96 (0.960) 6464



HW713'96 (0.961) REFINE 4672



HW713'96 (0.961) REFINE 4672



Instrument II
Sample: Ambient Air
08-19-90 02:20 PM
m/z
%FS
Methylene Chloride
Toluene
Benzene
Chloroform
Carbon Tetrachloride
1,2-Dichloroethane
Trichloroethene
1,1,2-Trichloroethane
Tetrachloroethene
Chlorobenzene
Ethylbenzene
m,p-Xylene
o-Xylene
Styrene
1,1,2,2-Tetrachloroethane
1,3-Dichlorobenzene
1,4-Dichlorobenzene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene

177

00-10-00 02:30
Sample: WOSTBUK
HW705 77A (77,741)
T/C
Instrument 11
Trimble Navigation (619) 579-5720
Trimble Navigation (619) 579-5720
HW705 774 (77,741) MULTIPATH
HW705 774 (77,741) Polarimetric
UNIT 100
100
75
50
25
0
E/W
N/S
350
300
250
200
150
100
50
0
100
75
50
25
0
E/W
N/S
350
300
250
200
150
100
50
0
100
75
50
25
0
E/W
N/S
350
300
250
200
150
100
50
0
62742
088892

178

Instrument H
Sample: 80-19-00
Operator: WATKINSON
Comment: Ammonia Addition, Time
Ammonia (CH3)
Methyl Amine (CH3NH2)
Dimethyl Amine ((CH3)2NH)
Trimethyl Amine ((CH3)3N)
FIND

179

08-10-90 02:36
Sample: UNSEALED 1/10
Instrument
Instrument
1632
1632
1632
1632

180

181

TRIANGLE LABS

CALIBRATION DATA

Triangle Laboratories, Inc.
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Durham, NC 27713-4411
919-544-5729
P.O. Box 13485
Research Triangle Park, NC 27709-3485
Fax # 919-544-5491

182

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH809	Date of Analysis :08/09/98	Analyte List: 8260
RF.10 HW551	RF.25 HW552	RF.50 HW553
RF.75 HW554	RF1.00 HW555	

VOST Calibration.

Analyte	Flag	RF.10	RF.25	RF.50	RF.75	RF1.00	MEAN	%RSD
Pentafluorobenzene	I							
Dichlorodifluoromethane		0.617	0.695	0.639	0.610	0.715	0.655	7.2
Chloromethane	P	0.387	0.407	0.363	0.343	0.388	0.377	6.6
Vinyl Chloride	C	0.439	0.497	0.449	0.438	0.517	0.468	7.8
Bromomethane		0.412	0.450	0.351	0.421	0.512	0.429	13.7
Chloroethane		0.248	0.276	0.215	0.239	0.292	0.254	11.9
Trichlorofluoromethane		1.009	1.058	0.965	1.028	1.245	1.061	10.2
1,1-Dichloroethene	C	0.442	0.502	0.482	0.381	0.515	0.464	11.7
Iodomethane		0.950	1.061	1.070	0.881	0.944	0.981	8.3
Carbon disulfide		1.060	1.160	1.129	0.896	1.018	1.053	9.9
Acetone		0.055	0.047	0.049	0.036	0.063	0.050	20.3
Allyl chloride		0.386	0.416	0.415	0.309	0.370	0.379	11.6
Methylene chloride		0.392	0.412	0.388	0.289	0.287	0.354	17.2
Acrylonitrile		0.045	0.039	0.041	0.035	0.026	0.037	19.7
trans-1,2-Dichloroethene		0.463	0.488	0.471	0.437	0.366	0.445	10.8
1,1-Dichloroethane	P	0.739	0.762	0.709	0.730	0.723	0.733	2.7
Vinyl acetate		0.409	0.391	0.405	0.395	0.391	0.398	2.1
2,2-Dichloropropane		0.631	0.686	0.667	0.662	0.686	0.667	3.4
cis-1,2-Dichloroethene		0.429	0.462	0.444	0.448	0.472	0.451	3.6
2-Butanone		0.073	0.059	0.061	0.060	0.064	0.063	8.8
Chloroform	C	0.756	0.799	0.759	0.751	0.790	0.771	2.8
Bromochloromethane		0.227	0.234	0.237	0.233	0.239	0.234	1.8
1,1,1-Trichloroethane		0.699	0.745	0.721	0.717	0.732	0.723	2.4
1,4-Difluorobenzene	I							
Carbon tetrachloride		0.641	0.532	0.501	0.628	0.704	0.601	13.9
1,1-Dichloropropene		0.659	0.513	0.491	0.606	0.673	0.589	14.2
Benzene		1.457	0.985	0.984	1.171	1.270	1.173	17.1
1,2-Dichloroethane		0.328	0.296	0.299	0.360	0.412	0.339	14.2
Trichloroethene		0.436	0.443	0.455	0.496	0.384	0.443	9.1
1,2-Dichloropropane	C	0.450	0.426	0.426	0.480	0.344	0.425	11.9
Dibromomethane		0.290	0.267	0.275	0.317	0.223	0.274	12.5
Methyl methacrylate		0.120	0.111	0.116	0.123	0.063	0.107	23.4
Bromodichloromethane		0.667	0.644	0.667	0.796	0.490	0.653	16.7
cis-1,3-Dichloropropene		0.635	0.623	0.609	0.712	0.509	0.618	11.8
4-Methyl-2-pentanone		0.204	0.150	0.159	0.179	0.166	0.172	12.1
Toluene	C	1.054	0.948	0.938	1.133	1.009	1.016	7.9
trans-1,3-Dichloropropene		0.522	0.462	0.461	0.539	0.552	0.507	8.5
1,1,2-Trichloroethane		0.381	0.321	0.305	0.364	0.362	0.347	9.2

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

Triangle Laboratories, Inc.
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Savar v3.7

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH809	Date of Analysis :08/09/98	Analyte List: 8260
RF.10 HW551	RF.25 HW552	RF.50 HW553
RF.75 HW554	RF1.00 HW555	

VOST Calibration.

Analyte	Flag	RF.10	RF.25	RF.50	RF.75	RF1.00	MEAN	%RSD
Ethyl methacrylate		0.394	0.326	0.335	0.387	0.434	0.375	11.9
Chlorobenzene-d5	I							
Tetrachloroethene		0.388	0.381	0.398	0.403	0.347	0.383	5.7
1,3-Dichloropropane		0.408	0.366	0.373	0.361	0.337	0.369	7.0
2-Hexanone	1	0.079	0.061	0.070	0.070	0.081	0.072	11.1
Dibromochloromethane		0.399	0.381	0.408	0.390	0.355	0.387	5.2
1,2-Dibromoethane		0.326	0.297	0.310	0.292	0.277	0.300	6.2
Chlorobenzene	P	0.930	0.929	0.979	0.960	0.978	0.955	2.6
1,1,1,2-Tetrachloroethane		0.393	0.394	0.423	0.429	0.436	0.415	4.9
Ethylbenzene	C	0.509	0.525	0.542	0.555	0.572	0.541	4.5
m-/p-Xylene		0.628	0.646	0.679	0.697	0.730	0.676	6.0
o-Xylene		0.601	0.605	0.641	0.653	0.701	0.640	6.4
Styrene		0.925	0.957	1.012	1.036	1.121	1.010	7.5
Bromoform	P	0.211	0.193	0.205	0.217	0.215	0.208	4.6
1,4-Dichlorobenzene-d4	I							
Cumene		3.195	2.902	3.063	3.038	2.980	3.036	3.6
1,1,2,2-Tetrachloroethane	P	0.518	0.357	0.362	0.368	0.390	0.399	17.0
Bromobenzene		0.853	0.789	0.832	0.838	0.831	0.828	2.9
1,2,3-Trichloropropane		0.369	0.133	0.247	0.241	0.255	0.249	33.7
n-Propylbenzene		0.929	0.879	0.938	0.966	0.994	0.941	4.6
trans-1,4-Dichloro-2-butene		0.363	0.249	0.247	0.241	0.255	0.271	19.0
2-Chlorotoluene		0.803	0.750	0.787	0.803	0.839	0.796	4.1
4-Chlorotoluene		0.784	0.737	0.755	0.759	0.781	0.763	2.5
1,3,5-Trimethylbenzene		2.403	2.315	2.356	2.339	2.414	2.365	1.8
tert-Butylbenzene		2.796	2.638	2.690	2.772	2.753	2.730	2.4
1,2,4-Trimethylbenzene		2.336	2.275	2.358	2.337	2.373	2.336	1.6
sec-Butylbenzene		3.659	3.447	3.569	3.661	3.663	3.600	2.6
p-Cymene		2.902	2.729	2.829	2.977	2.808	2.849	3.3
1,3-Dichlorobenzene		1.485	1.370	1.417	1.473	1.509	1.451	3.9
1,4-Dichlorobenzene		1.505	1.349	1.400	1.431	1.480	1.433	4.4
Benzyl chloride		0.504	0.409	0.452	0.494	0.521	0.476	9.5
n-Butylbenzene		2.839	2.762	2.859	2.978	2.994	2.886	3.4
1,2-Dichlorobenzene		1.223	1.061	1.091	1.149	1.170	1.139	5.6
1,2-Dibromo-3-chloropropane		0.076	0.037	0.040	0.048	0.049	0.050	31.4
1,2,4-Trichlorobenzene		1.195	0.588	0.615	0.767	0.791	0.791	30.7
Hexachlorobutadiene		1.011	0.760	0.911	1.099	1.062	0.969	14.1
Naphthalene		1.639	0.581	0.547	0.768	0.782	0.863	51.7
1,2,3-Trichlorobenzene		1.002	0.394	0.373	0.478	0.478	0.545	47.7
Average %RSD								10.6

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

Triangle Laboratories, Inc.
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Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH809	Date of Analysis :08/09/98	Analyte List: 8260
RF.10 HW551	RF.25 HW552	RF.50 HW553
RF.75 HW554	RF1.00 HW555	

VOST Calibration.

Surrogate	Flag	RF.10	RF.25	RF.50	RF.75	RF1.00	Mean	%RSD
Dibromofluoromethane	S	0.523	0.538	0.522	0.530	0.552	0.533	2.4
Toluene-d8	S	1.422	1.357	1.310	1.625	1.290	1.401	9.7
4-Bromofluorobenzene	S	0.702	0.656	0.636	0.788	0.974	0.751	18.3

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF814	Date of Analysis :08/13/98	Analyte List: 8260
RF.1 FX853	RF.25 FX854	RF.50 FX855
RF.75 FX856	RF1.0 FX857	

VOST Calibration.

Analyte	Flag	RF.1	RF.25	RF.50	RF.75	RF1.0	MEAN	%RSD
Pentafluorobenzene	I							
Dichlorodifluoromethane		0.354	0.432	0.385	0.326	0.267	0.353	17.5
Chloromethane	P	0.418	0.391	0.321	0.313	0.270	0.343	17.6
Vinyl Chloride	C	0.306	0.339	0.342	0.329	0.310	0.325	5.0
Bromomethane		0.161	0.169	0.197	0.175	0.181	0.176	7.7
Chloroethane		0.267	0.254	0.231	0.232	0.215	0.240	8.7
Trichlorofluoromethane		0.921	0.862	0.777	0.737	0.690	0.797	11.7
1,1-Dichloroethene	C	0.362	0.331	0.305	0.301	0.296	0.319	8.7
Iodomethane		0.559	0.549	0.520	0.535	0.523	0.537	3.1
Carbon disulfide		0.971	0.888	0.861	0.833	0.788	0.868	7.9
Acetone		0.024	0.019	0.028	0.046	0.111	0.046	82.9
Allyl chloride		0.414	0.398	0.421	0.430	0.435	0.420	3.5
Methylene chloride		0.277	0.253	0.230	0.217	0.209	0.237	11.8
Acrylonitrile		0.012	0.012	0.011	0.012	0.012	0.012	3.1
trans-1,2-Dichloroethene		0.387	0.361	0.350	0.335	0.336	0.354	6.0
1,1-Dichloroethane	P	0.827	0.793	0.752	0.731	0.710	0.763	6.2
Vinyl acetate		0.106	0.099	0.104	0.109	0.120	0.108	7.0
2,2-Dichloropropane		0.237	0.280	0.327	0.359	0.387	0.318	19.0
cis-1,2-Dichloroethene		0.340	0.346	0.339	0.331	0.331	0.337	1.9
2-Butanone		0.026	0.020	0.035	0.051	0.120	0.050	80.5
Chloroform	C	0.755	0.701	0.661	0.619	0.597	0.667	9.5
Bromochloromethane		0.148	0.144	0.141	0.129	0.126	0.138	7.1
1,1,1-Trichloroethane		0.777	0.784	0.775	0.743	0.741	0.764	2.7
1,4-Difluorobenzene	I							
Carbon tetrachloride		0.802	0.737	0.718	0.740	0.697	0.739	5.3
1,1-Dichloropropene		0.600	0.562	0.550	0.558	0.533	0.561	4.4
Benzene		0.941	1.001	0.989	1.014	0.923	0.974	4.1
1,2-Dichloroethane		0.271	0.295	0.304	0.281	0.255	0.281	6.9
Trichloroethene		0.402	0.460	0.505	0.520	0.505	0.478	10.1
1,2-Dichloropropane	C	0.285	0.307	0.328	0.329	0.315	0.313	5.8
Dibromomethane		0.105	0.105	0.112	0.101	0.096	0.104	5.8
Methyl methacrylate		0.028	0.028	0.032	0.032	0.033	0.031	8.5
Bromodichloromethane		0.353	0.367	0.386	0.375	0.355	0.367	3.7
cis-1,3-Dichloropropene		0.193	0.236	0.264	0.288	0.293	0.255	16.2
4-Methyl-2-pentanone		0.029	0.034	0.039	0.046	0.054	0.041	23.6
Toluene	C	0.672	0.740	0.725	0.742	0.711	0.718	4.0
trans-1,3-Dichloropropene		0.094	0.119	0.139	0.157	0.159	0.134	20.5
1,1,2-Trichloroethane		0.118	0.117	0.138	0.115	0.111	0.120	8.6

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

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Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF814	Date of Analysis :08/13/98	Analyte List: 8260
RF.1 FX853	RF.25 FX854	RF.50 FX855
RF.75 FX856	RF1.0 FX857	

VOST Calibration.

Analyte	Flag	RF.1	RF.25	RF.50	RF.75	RF1.0	MEAN	%RSD
Ethyl methacrylate		0.065	0.062	0.074	0.082	0.088	0.074	14.8
Chlorobenzene-d5	I							
Tetrachloroethene		0.401	0.455	0.462	0.533	0.515	0.473	11.1
1,3-Dichloropropane		0.221	0.240	0.251	0.246	0.238	0.239	4.8
2-Hexanone	1	0.009	0.010	0.020	0.040	0.103	0.037	107.5
Dibromochloromethane		0.222	0.228	0.238	0.248	0.240	0.235	4.4
1,2-Dibromoethane		0.143	0.143	0.148	0.147	0.144	0.145	1.6
Chlorobenzene	P	0.989	1.024	0.965	1.031	0.967	0.995	3.1
1,1,1,2-Tetrachloroethane		0.352	0.360	0.340	0.392	0.368	0.363	5.4
Ethylbenzene	C	0.538	0.619	0.611	0.661	0.636	0.613	7.5
m-/p-Xylene		0.700	0.776	0.741	0.817	0.725	0.752	6.1
o-Xylene		0.528	0.646	0.626	0.690	0.645	0.627	9.6
Styrene		0.690	0.840	0.814	0.874	0.847	0.813	8.9
Bromoform	P	0.082	0.074	0.086	0.087	0.083	0.082	6.4
1,4-Dichlorobenzene-d4	I							
Cumene		5.060	5.674	4.650	5.625	4.866	5.175	8.8
1,1,2,2-Tetrachloroethane	P	0.264	0.199	0.213	0.222	0.210	0.221	11.3
Bromobenzene		0.716	0.799	0.686	0.806	0.810	0.763	7.6
1,2,3-Trichloropropane		0.192	0.171	0.178	0.175	0.166	0.176	5.6
n-Propylbenzene		1.404	1.619	1.299	1.660	1.693	1.535	11.3
trans-1,4-Dichloro-2-butene		0.127	0.132	0.107	0.116	0.112	0.119	8.9
2-Chlorotoluene		1.064	1.181	0.884	1.135	1.140	1.081	10.9
4-Chlorotoluene		0.915	1.046	0.867	1.048	1.053	0.986	9.0
1,3,5-Trimethylbenzene		3.783	4.371	3.318	4.220	4.258	3.990	11.0
tert-Butylbenzene		3.908	5.199	3.798	4.955	5.436	4.659	16.2
1,2,4-Trimethylbenzene		3.367	3.736	3.006	3.756	3.798	3.533	9.7
sec-Butylbenzene		5.951	6.596	5.325	6.751	6.395	6.204	9.3
p-Cymene		4.811	5.375	4.431	5.686	5.714	5.203	10.8
1,3-Dichlorobenzene		1.602	1.707	1.427	1.712	1.695	1.629	7.4
1,4-Dichlorobenzene		1.584	1.553	1.360	1.557	1.519	1.514	5.9
Benzyl chloride		0.062	0.043	0.054	0.071	0.083	0.063	24.3
n-Butylbenzene		4.254	4.250	3.673	4.626	4.329	4.226	8.2
1,2-Dichlorobenzene		0.997	0.905	0.983	1.135	1.113	1.027	9.3
1,2-Dibromo-3-chloropropane		0.016	0.006	0.016	0.016	0.016	0.014	32.8
1,2,4-Trichlorobenzene		0.270	0.200	0.309	0.335	0.348	0.293	20.3
Hexachlorobutadiene		1.234	0.808	0.970	1.193	1.180	1.077	16.9
Naphthalene		0.161	0.101	0.191	0.204	0.249	0.181	30.2
1,2,3-Trichlorobenzene		0.157	0.107	0.186	0.203	0.212	0.173	24.5
Average %RSD								13.3

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF814	Date of Analysis :08/13/98	Analyte List: 8260
RF.1 FX853	RF.25 FX854	RF.50 FX855
RF.75 FX856	RF1.0 FX857	

VOST Calibration.

Surrogate	Flag	RF.1	RF.25	RF.50	RF.75	RF1.0	Mean	%RSD
Dibromofluoromethane	S	0.458	0.441	0.417	0.403	0.388	0.421	6.7
Toluene-d8	S	0.891	1.036	1.050	1.112	1.011	1.020	8.0
4-Bromofluorobenzene	S	0.308	0.344	0.366	0.354	0.329	0.340	6.7

Approved by: _____ Date 8/24/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX872	Date of Analysis :08/17/98	Analyte List: 8260
ICAL File: ICALF814		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Dichlorodifluoromethane		0.294	0.353	16.7
Chloromethane	P	0.247	0.343	28.0
Vinyl Chloride	C	0.284	0.325	12.6
Bromomethane		0.208	0.176	-18.2
Chloroethane		0.216	0.240	10.0
Trichlorofluoromethane		0.685	0.797	14.1
1,1-Dichloroethene	C	0.281	0.319	11.9
Iodomethane		0.457	0.537	14.9
Carbon disulfide		0.833	0.868	4.0
Acetone		0.019	0.046	58.7
Allyl chloride		0.283	0.420	32.6
Methylene chloride		0.246	0.237	-3.8
Acrylonitrile		0.009	0.012	25.0
trans-1,2-Dichloroethene		0.335	0.354	5.4
1,1-Dichloroethane	P	0.704	0.763	7.7
Vinyl acetate		0.082	0.108	24.1
2,2-Dichloropropane		0.289	0.318	9.1
cis-1,2-Dichloroethene		0.330	0.337	2.1
2-Butanone		0.017	0.050	66.0
Chloroform	C	0.650	0.667	2.5
Bromochloromethane		0.131	0.138	5.1
1,1,1-Trichloroethane		0.686	0.764	10.2
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.691	0.739	6.5
1,1-Dichloropropene		0.598	0.561	-6.6
Benzene		1.113	0.974	-14.3
1,2-Dichloroethane		0.276	0.281	1.8
Trichloroethene		0.447	0.478	6.5
1,2-Dichloropropane	C	0.341	0.313	-8.9
Dibromomethane		0.115	0.104	-10.6
Methyl methacrylate		0.026	0.031	16.1
Bromodichloromethane		0.415	0.367	-13.1
cis-1,3-Dichloropropene		0.294	0.255	-15.3
4-Methyl-2-pentanone		0.047	0.041	-14.6
Toluene	C	0.839	0.718	-16.9
trans-1,3-Dichloropropene		0.159	0.134	-18.7
1,1,2-Trichloroethane		0.144	0.120	-20.0

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX872	Date of Analysis :08/17/98	Analyte List: 8260
ICAL File: ICALF814		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Ethyl methacrylate		0.100	0.074	-35.1
Chlorobenzene-d5	I			
Tetrachloroethene		0.482	0.473	-1.9
1,3-Dichloropropane		0.281	0.239	-17.6
2-Hexanone	1	0.013	0.037	64.9
Dibromochloromethane		0.250	0.235	-6.4
1,2-Dibromoethane		0.157	0.145	-8.3
Chlorobenzene	P	1.006	0.995	-1.1
1,1,1,2-Tetrachloroethane		0.390	0.363	-7.4
Ethylbenzene	C	0.626	0.613	-2.1
m-/p-Xylene		0.812	0.752	-8.0
o-Xylene		0.666	0.627	-6.2
Styrene		0.931	0.813	-14.5
Bromoform	P	0.104	0.082	-26.8
1,4-Dichlorobenzene-d4	I			
Cumene		4.886	5.175	5.6
1,1,2,2-Tetrachloroethane	P	0.269	0.221	-21.7
Bromobenzene		0.803	0.763	-5.2
1,2,3-Trichloropropane		0.203	0.176	-15.3
n-Propylbenzene		1.359	1.535	11.5
trans-1,4-Dichloro-2-butene		0.098	0.119	17.6
2-Chlorotoluene		1.044	1.081	3.4
4-Chlorotoluene		0.901	0.986	8.6
1,3,5-Trimethylbenzene		3.746	3.990	6.1
tert-Butylbenzene		3.981	4.659	14.6
1,2,4-Trimethylbenzene		3.390	3.533	4.0
sec-Butylbenzene		5.714	6.204	7.9
p-Cymene		4.523	5.203	13.1
1,3-Dichlorobenzene		1.639	1.629	-0.6
1,4-Dichlorobenzene		1.545	1.514	-2.0
Benzyl chloride		0.082	0.063	-30.2
n-Butylbenzene		3.954	4.226	6.4
1,2-Dichlorobenzene		1.070	1.027	-4.2
1,2-Dibromo-3-chloropropane		0.012	0.014	14.3
1,2,4-Trichlorobenzene		0.303	0.293	-3.4
Hexachlorobutadiene		0.876	1.077	18.7
Naphthalene		0.124	0.181	31.5
1,2,3-Trichlorobenzene		0.174	0.173	-0.6

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX872	Date of Analysis :08/17/98	Analyte List: 8260
ICAL File: ICALF814		

VOST Calibration.

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.391	0.421	7.1
Toluene-d8	S	1.115	1.020	-9.3
4-Bromofluorobenzene	S	0.399	0.340	-17.4

Approved by: _____ Date 8/24/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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191

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX889	Date of Analysis :08/18/98	Analyte List: 8260
ICAL File: ICALF814		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Dichlorodifluoromethane		0.438	0.353	-24.1
Chloromethane	P	0.228	0.343	33.5
Vinyl Chloride	C	0.296	0.325	8.9
Bromomethane		0.207	0.176	-17.6
Chloroethane		0.197	0.240	17.9
Trichlorofluoromethane		0.668	0.797	16.2
1,1-Dichloroethene	C	0.312	0.319	2.2
Iodomethane		0.425	0.537	20.9
Carbon disulfide		0.896	0.868	-3.2
Acetone		0.015	0.046	67.4
Allyl chloride		0.227	0.420	46.0
Methylene chloride		0.242	0.237	-2.1
Acrylonitrile		0.006	0.012	50.0
trans-1,2-Dichloroethene		0.349	0.354	1.4
1,1-Dichloroethane	P	0.623	0.763	18.3
Vinyl acetate		0.050	0.108	53.7
2,2-Dichloropropane		0.379	0.318	-19.2
cis-1,2-Dichloroethene		0.318	0.337	5.6
2-Butanone		0.014	0.050	72.0
Chloroform	C	0.675	0.667	-1.2
Bromochloromethane		0.101	0.138	26.8
1,1,1-Trichloroethane		0.708	0.764	7.3
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.699	0.739	5.4
1,1-Dichloropropene		0.699	0.561	-24.6
Benzene		1.286	0.974	-32.0
1,2-Dichloroethane		0.264	0.281	6.0
Trichloroethene		0.463	0.478	3.1
1,2-Dichloropropane	C	0.301	0.313	3.8
Dibromomethane		0.113	0.104	-8.7
Methyl methacrylate		0.020	0.031	35.5
Bromodichloromethane		0.431	0.367	-17.4
cis-1,3-Dichloropropene		0.314	0.255	-23.1
4-Methyl-2-pentanone		0.031	0.041	24.4
Toluene	C	0.853	0.718	-18.8
trans-1,3-Dichloropropene		0.168	0.134	-25.4
1,1,2-Trichloroethane		0.139	0.120	-15.8

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX889	Date of Analysis :08/18/98	Analyte List: 8260
ICAL File: ICALF814		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Ethyl methacrylate		0.078	0.074	-5.4
Chlorobenzene-d5	I			
Tetrachloroethene		0.606	0.473	-28.1
1,3-Dichloropropane		0.312	0.239	-30.5
2-Hexanone	1	0.010	0.037	73.0
Dibromochloromethane		0.224	0.235	4.7
1,2-Dibromoethane		0.154	0.145	-6.2
Chlorobenzene	P	1.058	0.995	-6.3
1,1,1,2-Tetrachloroethane		0.355	0.363	2.2
Ethylbenzene	C	0.711	0.613	-16.0
m-/p-Xylene		0.914	0.752	-21.5
o-Xylene		0.740	0.627	-18.0
Styrene		0.968	0.813	-19.1
Bromoform	P	0.104	0.082	-26.8
1,4-Dichlorobenzene-d4	I			
Cumene		6.007	5.175	-16.1
1,1,2,2-Tetrachloroethane	P	0.266	0.221	-20.4
Bromobenzene		0.846	0.763	-10.9
1,2,3-Trichloropropane		0.219	0.176	-24.4
n-Propylbenzene		1.505	1.535	2.0
trans-1,4-Dichloro-2-butene		0.121	0.119	-1.7
2-Chlorotoluene		1.059	1.081	2.0
4-Chlorotoluene		0.925	0.986	6.2
1,3,5-Trimethylbenzene		4.471	3.990	-12.1
tert-Butylbenzene		4.863	4.659	-4.4
1,2,4-Trimethylbenzene		3.903	3.533	-10.5
sec-Butylbenzene		6.900	6.204	-11.2
p-Cymene		5.056	5.203	2.8
1,3-Dichlorobenzene		1.652	1.629	-1.4
1,4-Dichlorobenzene		1.517	1.514	-0.2
Benzyl chloride		0.063	0.063	0.0
n-Butylbenzene		5.115	4.226	-21.0
1,2-Dichlorobenzene		1.051	1.027	-2.3
1,2-Dibromo-3-chloropropane		0.019	0.014	-35.7
1,2,4-Trichlorobenzene		0.367	0.293	-25.3
Hexachlorobutadiene		1.188	1.077	-10.3
Naphthalene		0.158	0.181	12.7
1,2,3-Trichlorobenzene		0.218	0.173	-26.0

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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193

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX889 Date of Analysis :08/18/98 Analyte List: 8260
ICAL File: ICALF814
VOST Calibration.

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.332	0.421	21.1
Toluene-d8	S	1.041	1.020	-2.1
4-Bromofluorobenzene	S	0.399	0.340	-17.4

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW703	Date of Analysis :08/19/98	Analyte List: 8260
ICAL File: ICALH809		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Dichlorodifluoromethane		0.758	0.655	-15.7
Chloromethane	P	0.399	0.377	-5.8
Vinyl Chloride	C	0.515	0.468	-10.0
Bromomethane		0.453	0.429	-5.6
Chloroethane		0.304	0.254	-19.7
Trichlorofluoromethane		1.124	1.061	-5.9
1,1-Dichloroethene	C	0.524	0.464	-12.9
Iodomethane		1.009	0.981	-2.9
Carbon disulfide		1.285	1.053	-22.0
Acetone		0.046	0.050	8.0
Allyl chloride		0.354	0.379	6.6
Methylene chloride		0.453	0.354	-28.0
Acrylonitrile		0.028	0.037	24.3
trans-1,2-Dichloroethene		0.508	0.445	-14.2
1,1-Dichloroethane	P	0.770	0.733	-5.0
Vinyl acetate		0.216	0.398	45.7
2,2-Dichloropropane		0.580	0.667	13.0
cis-1,2-Dichloroethene		0.438	0.451	2.9
2-Butanone		0.030	0.063	52.4
Chloroform	C	0.798	0.771	-3.5
Bromochloromethane		0.226	0.234	3.4
1,1,1-Trichloroethane		0.735	0.723	-1.7
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.524	0.601	12.8
1,1-Dichloropropene		0.468	0.589	20.5
Benzene		0.949	1.173	19.1
1,2-Dichloroethane		0.265	0.339	21.8
Trichloroethene		0.451	0.443	-1.8
1,2-Dichloropropane	C	0.385	0.425	9.4
Dibromomethane		0.230	0.274	16.1
Methyl methacrylate		0.059	0.107	44.9
Bromodichloromethane		0.617	0.653	5.5
cis-1,3-Dichloropropene		0.535	0.618	13.4
4-Methyl-2-pentanone		0.101	0.172	41.3
Toluene	C	0.943	1.016	7.2
trans-1,3-Dichloropropene		0.376	0.507	25.8
1,1,2-Trichloroethane		0.289	0.347	16.7

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW703	Date of Analysis :08/19/98	Analyte List: 8260
ICAL File: ICALH809		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Ethyl methacrylate		0.195	0.375	48.0
Chlorobenzene-d5	I			
Tetrachloroethene		0.397	0.383	-3.7
1,3-Dichloropropane		0.314	0.369	14.9
2-Hexanone	1	0.031	0.072	56.9
Dibromochloromethane		0.353	0.387	8.8
1,2-Dibromoethane		0.250	0.300	16.7
Chlorobenzene	P	0.966	0.955	-1.2
1,1,1,2-Tetrachloroethane		0.409	0.415	1.4
Ethylbenzene	C	0.517	0.541	4.4
m-/p-Xylene		0.650	0.676	3.8
o-Xylene		0.628	0.640	1.9
Styrene		0.999	1.010	1.1
Bromoform	P	0.165	0.208	20.7
1,4-Dichlorobenzene-d4	I			
Cumene		3.129	3.036	-3.1
1,1,2,2-Tetrachloroethane	P	0.326	0.399	18.3
Bromobenzene		0.794	0.828	4.1
1,2,3-Trichloropropane		0.222	0.249	10.8
n-Propylbenzene		0.962	0.941	-2.2
trans-1,4-Dichloro-2-butene		0.222	0.271	18.1
2-Chlorotoluene		0.840	0.796	-5.5
4-Chlorotoluene		0.817	0.763	-7.1
1,3,5-Trimethylbenzene		2.649	2.365	-12.0
tert-Butylbenzene		2.895	2.730	-6.0
1,2,4-Trimethylbenzene		2.531	2.336	-8.3
sec-Butylbenzene		3.731	3.600	-3.6
p-Cymene		3.096	2.849	-8.7
1,3-Dichlorobenzene		1.518	1.451	-4.6
1,4-Dichlorobenzene		1.506	1.433	-5.1
Benzyl chloride		0.371	0.476	22.1
n-Butylbenzene		3.152	2.886	-9.2
1,2-Dichlorobenzene		1.146	1.139	-0.6
1,2-Dibromo-3-chloropropane		0.029	0.050	42.0
1,2,4-Trichlorobenzene		0.813	0.791	-2.8
Hexachlorobutadiene		1.211	0.969	-25.0
Naphthalene		0.484	0.863	43.9
1,2,3-Trichlorobenzene		0.474	0.545	13.0

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW703	Date of Analysis :08/19/98	Analyte List: 8260
ICAL File: ICALH809		

VOST Calibration.

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.544	0.533	-2.1
Toluene-d8	S	1.343	1.401	4.1
4-Bromofluorobenzene	S	0.697	0.751	7.2

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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197

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF817 Date of Analysis :08/17/98 Analyte List: 8260
RF.5 FX876

VOST Calibration.

Analyte	Flag	RF.5	MEAN	%RSD
Pentafluorobenzene	I			
1,3-Butadiene		0.385	0.385	0.0
Vinyl bromide		0.565	0.565	0.0
MTBE		0.599	0.599	0.0
n-Hexane		1.358	1.358	0.0
1,2-Epoxybutane		0.018	0.018	0.0
Iso-Octane		4.663	4.663	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.072	0.072	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			
Average %RSD				0.0

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF818 Date of Analysis :08/18/98 Analyte List: 8260
RF.5 FX891

VOST Calibration.

Analyte	Flag	RF.5	MEAN	%RSD
Pentafluorobenzene	I			
1,3-Butadiene		0.353	0.353	0.0
Vinyl bromide		0.610	0.610	0.0
MTBE		0.543	0.543	0.0
n-Hexane		1.159	1.159	0.0
1,2-Epoxybutane		0.013	0.013	0.0
Iso-Octane		4.217	4.217	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.052	0.052	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			
Average %RSD				0.0

Approved by: YR Date 8 / 24/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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199

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH819 Date of Analysis :08/19/98 Analyte List: 8260
RF.5 HW708

VOST Calibration.

Analyte	Flag	RF.5	MEAN	%RSD
Pentafluorobenzene	I			
1,3-Butadiene		1.582	1.582	0.0
Vinyl bromide		1.657	1.657	0.0
MTBE		0.314	0.314	0.0
n-Hexane		2.319	2.319	0.0
1,2-Epoxybutane		0.012	0.012	0.0
Iso-Octane		4.441	4.441	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.364	0.364	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			
Average %RSD				0.0

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX876	Date of Analysis :08/17/98	Analyte List: 8260
ICAL File: ICALF817		

VOST Calibration.

Analyte	Flag	RF0.50	RFMEAN	%D
Pentafluorobenzene	I			
1,3-Butadiene		0.385	0.385	0.0
Vinyl bromide		0.565	0.565	0.0
MTBE		0.599	0.599	0.0
n-Hexane		1.358	1.358	0.0
1,2-Epoxybutane		0.018	0.018	0.0
Iso-Octane		4.663	4.663	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.072	0.072	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			

Approved by: YR Date 8/24/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX891	Date of Analysis :08/18/98	Analyte List: 8260
ICAL File: ICALF818		

VOST Calibration.

Analyte	Flag	RF0.50	RFMEAN	%D
Pentafluorobenzene	I			
1,3-Butadiene		0.353	0.353	0.0
Vinyl bromide		0.610	0.610	0.0
MTBE		0.543	0.543	0.0
n-Hexane		1.159	1.159	0.0
1,2-Epoxybutane		0.013	0.013	0.0
Iso-Octane		4.217	4.217	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.052	0.052	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			

Approved by: YC Date 8/24/98

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW708 Date of Analysis :08/19/98 Analyte List: 8260
ICAL File: ICALH819
VOST Calibration.

Analyte	Flag	RF0.50	REMEAN	%D
Pentafluorobenzene	I			
1,3-Butadiene		1.582	1.582	0.0
Vinyl bromide		1.657	1.657	0.0
MTBE		0.314	0.314	0.0
n-Hexane		2.319	2.319	0.0
1,2-Epoxybutane		0.012	0.012	0.0
Iso-Octane		4.441	4.441	0.0
1,4-Difluorobenzene	I			
Ethyl acrylate		0.364	0.364	0.0
Chlorobenzene-d5	I			
1,4-Dichlorobenzene-d4	I			

Approved by: _____ Date 8/24/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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TRIANGLE LABS

CASE NARRATIVE

Analysis of Samples for the Presence of

Volatile Analytes by

High-Resolution Gas Chromatography / Low-Resolution Mass Spectrometry

METHOD 8260 (7/92)

Date : August 26, 1998

Client ID : Pacific Environmental Services

TLI Project Number : 46323

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204

Triangle Laboratories, Inc.
Case Narrative

August 26, 1998
46323

Objective: Analysis of twelve VOST tube pairs for a client-specified list of volatile compounds, using Method 8260.

Method:

Twenty three VOST tube pairs were received at Triangle Laboratories, Inc. on July 29, 1998 at 6°C. Analytical results reported in this data package pertain to the analysis of the "Tunnel" (T) samples. The VOST tube pairs were analyzed according to the guidelines of Methods 8260 and 5040. The internal standards and surrogate standards were added in the amount of 0.25 micrograms (ug) immediately prior to analysis by GC/MS. The internal standards are pentafluorobenzene, 1,4-difluorobenzene, chlorobenzene-d_5 , and 1,4-dichlorobenzene-d_4, and the surrogate standards reported are dibromofluoromethane, toluene-d_8, and 4-bromofluorobenzene. The results reported relate only to the items tested.

The GC/MS analysis conditions are listed below:

Purge and trap:	Tekmar LSC-2000
Purge:	11 min.
Desorb Temperature:	250 C
Desorb Time:	4 min.

GC Conditions:

Column:	30 m x .53 mm x 0.3*u* J&W DB624 0 C hold .5 min, 10 C/min to 45C, 6 C/min to 90C, hold 1.5 min, 50 C/min to 200C.

MS Conditions:

Instrument:	VG-TRIO-1 Lab Base data system
Scan:	35-350 amu at .6s/scan
Interface:	Jet Separator, 200 C

Report:

Enclosed with the case narrative are copies of the sample identification index, the project summary sheets, client paperwork, sample log-in sheets, and log book pages. A sample identification index summarizes the client sample name, TLI sample number, and analytical file name for each sample and blank. The project summary lists the amounts for detected analytes in gray. The estimated detection limits will be listed in parentheses when the target analytes are not detected.

The data are reported as quantitation reports, chromatograms, interim reports, and spectra of detected target analytes. The quantitation report header lists the TLI project number, analysis method, instrument sample file name, client sample name, client project number, TLI sample number, calibration file, date received, and analysis date. The response factors used for all calculations are from the calibration file listed in the header. All initial and continuing calibration

data are located in the back of the data package. The amount is reported in total ug for the VOST tubes. The retention time (RT) will be listed for all internal standards and analytes which are detected. If a target analyte is not detected, it will be flagged with a "U" and a detection limit will be listed. Estimated detection limits are calculated for all analytes which were not found in the samples by using an area of 2000. The estimated detection limits reported are the average detection limits achievable over time on an instrument type. The actual detection limit for a given compound on a given day may vary from the estimate reported. The quantitation limit for all analytes is half of the low point of the initial calibration. Below this point the calibration cannot be considered to be linear. Any amount reported at a level below the quantitation limit will be flagged with a "J" and should be considered estimated. If any compounds are found at a level above the upper calibration range, the analyte will be flagged with an "E" and the amounts reported should be considered estimated. If any target analytes found in the laboratory blanks are detected in the associated samples, they will be flagged with a "B" on each sample topsheet. All analytes are quantitated against the internal standard preceding them on the target analyte list. Surrogate standards are quantitated against the internal standard with the matching internal standard reference number. For example, toluene-d_8 has 2 in the IS Ref column and would be quantitated against the internal standard which has IS2 listed in the flag column. If an internal standard area is above or below the quality control limits as defined by the continuing calibration, it will be flagged with "High" or "Low" in the flag column.

Results:

Two of the VOST tube pairs were analyzed within the fourteen-day sampling to analysis holding time. The remainder of the samples were analyzed thirteen to sixteen days past the last day of the holding time.

As per client request, VOST tube pairs T-V-4-1-A and -B and T-V-4-2-A and -B were analyzed separately. All other VOST tube pairs were analyzed in tandem, with the exception of sample T-V-4-4-A, which was run separately because the tenax/charcoal portion was lost.

The following observations were made by the analyst. No data is available for sample T-V-4-3-A,B due to an acquisition failure. The tenax/charcoal tube, sample T-V-4-4-B, was found to be broken. The contents had leaked into the outer container and could not be salvaged.

COMMUNICATION PROBLEM BETWEEN PURGE & TRAP & DATA ACQUISITION SYSTEM

Each sample was processed twice, once against the calibrations containing compounds that are normally found in our Method 8260 standard solutions, and once against special single point calibrations containing seven compounds. Therefore, each sample reported contains two sets of topsheets and interim reports, as well as a chromatogram and spectra for all analytes. Please note that the surrogate standards have been reported only on the first target analyte list. Results for the seven analytes processed against single point calibrations should be considered estimates.

→ See Page # 13

Methylene chloride was found at an amount above the upper calibration limit of one microgram in sample T-V-4-2-B. This compound is flagged with "E" and the amount reported should be considered estimated. The field samples also contained very high levels of hydrocarbons.

All internal standard areas were within quality control limits for all samples and blanks, with the exception of a low area for 1,4-dichlorobenzene-d_4 in one laboratory blank.

Surrogate standard percent recoveries were within quality control limits, with the exception of one high recovery for 4-bromofluorobenzene in sample T-V-4-1-A.

The laboratory blanks contained several analytes at amounts below the quantitation limit. The target analytes in a laboratory blank should not be considered as truly present in the native samples unless found at a level at least five times the amount found in the associated blank. In the event that the amount of a target analyte found in the samples is twenty times the amount found in the associated blank, the contribution from the blank can be considered negligible.

Sample Calculations:

Response Factor (RF) = $\frac{\text{(area analyte) x (amt IS)}}{\text{(area IS) x (amt analyte)}}$

Amount (ug) = $\frac{\text{(area analyte in sample) x (amt IS)}}{\text{(area IS) x (avg ical RF)}}$

Where:

amt IS = amount of internal standard = 0.25 ug
ical = initial calibration

The data in this package has been judged to be valid according to the guidelines of Methods 8260 and 5040 except as noted above. Should you have any questions, please feel free to contact our Project Scientist, Deb Smith, at (919) 544-5729, ext. 267.

For Triangle Laboratories, Inc.,

Report Preparation:

Penny A. Brock

Penny A. Brock
Report Preparation Chemist

Quality Control:

Sarah A Hubbard

Sarah A. Hubbard
Report Preparation Chemist

The total number of pages in this data package is 357.

amended data
SAH 9/3/98

TRIANGLE LABORATORIES, INC.

LIST OF CERTIFICATIONS AND ACCREDITATIONS

ENVIRONMENTAL

American Association for Laboratory Accreditation. Accredidation pending. Certificate Number 0226-01. Accreditation for technical competence in Environmental Testing. (Including Waste Water, Sol/Haz Waste, Pulp/Paper, and Air Matrices) Parameters are AOX/TOX, and Dioxin/Furan. Method 1613 for Drinking Water **Currently re-applying.**.

State of Alabama, Department of Environmental Management. Expires December 31, 1998. Laboratory I.D. # 40950. Dioxin in drinking water.

State of Alaska, Department of Environmental Conservation. Expires December 21, 1998. Certificate number OS-006-98. Dioxin in drinking water.

State of Arizona, Department of Health Services. Expires May 26, 1998. Certificate #AZ0423. Drinking Water for Dioxin, Dioxin in WW and S/H Waste. Currently appying for renewal.

State of Arkansas, Department of Pollution Control and Ecology. Expires February 19, 1999. Pulp/paper, soil, water, and Hazardous Waste for Dioxin/Furan; AOX/TOX, Volatiles, Semi-volatiles, and Metals.

State of California, Department of Health Services. Expires August 31, 1999. Certificate #1922. Selected Metals in Waste Water; Volatiles, Semi-volatiles, and Dioxin/furan in WW and Sol/Haz Waste. Dioxin in drinking water.

State of Connecticut, Department of Health Services. Expires September 30, 1999. Registration # PH-0117. Dioxin in drinking water.

Delaware Health and Social Services. Expires December 31, 1998. Certificate #NC 140. Dioxin in drinking water.

Florida Department of Health and Rehabilitative Services. Expires June 30, 1998. Dioxin in SDW. Drinking Water ID HRS# 87424. Pending new certificate.

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Hawaii Department of Health. Expires March 1, 1999. Dioxin in drinking water. "Accepted" status for regulatory purposes.

Idaho Department of Health and Welfare. Expires December 31, 1998. Dioxin in drinking water.

State of Kansas, Department of Health and Environment. Expires January 31, 1999. Method 1613 for drinking water. ID #'s - Drinking water and/or pollution control - E-10215. Solid or Hazardous Waste - E-101209.

Commonwealth of Kentucky, Department for Environmental Protection. Expires December 31, 1998. ID#90060. Dioxin in drinking water.

Maryland Department of Health and Mental Hygiene. Expires September 30, 1998. Certification #235 Drinking water by Method 1613A. Currently applying for renewal.

State of Michigan, Department of Public Health. Expires June 30, 1999. Drinking water by Method 1613. Current certification is extended, based on New York certificate renewal.

Mississippi State Department of Health. No expiration date. Dioxin in drinking water.

Montana Department of Health and Environmental Services. Expires December 31, 1998. Dioxin in drinking water.

State of New Jersey, Department of Environmental Protection and Energy. Expires June 30, 1998. Extended until July 31, 1998 per letter dated May 29, 1998. ID #67851. BNAs and Volatiles. Dioxin in drinking water. Currently applying for renewal.

State of New Mexico, Environment Department. Still certified, awaiting information from A2LA Dioxin in drinking water.

New York State Department of Health. Received updated certificates. ID #11026. Environmental Analyses of potable water, non-potable Water, Solid and Hazardous Waste. Method 1613 in DW.

State of North Carolina, Department of Environment Health and Natural Resources Expires. August 31, 1998. Certificate # 37751. Dioxin in drinking water.

State of North Carolina, Department of Environment, Health, and Natural Resources, Division of Environmental Management. Expires December 31, 2000. Certificate # 485. Metals, pesticides & PCBs, semi-volatiles and volatiles; TCLP.

North Dakota State Department of Health and Consolidated Laboratories. Expires December 31, 1998. Certificate # R-076. Effective October 4, 1993. Dioxin in drinking water.

Oklahoma Department of Environmental Quality. Expires August 31, 1998. Laboratory #9612. Dioxin by 1613A, 8290 and 8280. Submitted renewal application 7/1.

State of South Carolina, Department of Health and Environmental Control. Expires June 30, 1998. Extended August 31, 1999. Certificate number #99040001 (drinking water). Expires August 31, 1999. Certificate number #99040002 (other parameters). Dioxin/Furans, BNA, Volatiles, and PCBs/pesticides under Clean Water Act, 2,3,7,8-TCDD for Drinking Water, and Organic extractables for Solid and Hazardous Waste.

State of Tennessee. Department of Environment and Conservation. Expires February 5, 1999. ID #02992. Method 1613 Drinking water only.

U.S. Department of Agriculture Soil Permit. Expires September 30, 2001. Permit No. S-3790. Under the authority of the Federal Plant Pest Act, permission is granted to receive foreign soil samples for use in laboratory analysis.

U.S. Army Corps of Engineers. Expires October 19, 1999. Validated to perform analyses for the Fort Belvoir, VA (Contract Number DACA31-97-D-0029), Vint Hill Farms Station, Vint Hill, VA (Contract Number DACA31-95-D-0083), and Selma Pressure Treating Superfund Site, Selma, CA (Contract number DACW45-94-D-0054).

U.S. EPA Region V. Expires November 14, 1999. Dioxin in drinking water.

U.S. EPA Region VIII, for the State of Wyoming. Expires November 12, 1998. Dioxin in drinking water.

State of Utah, Department of Health. Expires May 30,2000. Certificate Number E-166. Certification for the following parameters: Semi-Volatiles and Volatiles under RCRA; Volatiles under Clean Water Act; Dioxin/furans by Method 8280; Drinking water for Dioxin by Method 1613; Metals including Mercury and Microwave Digestion.

Commonwealth of Virginia, Department of General Services, Division of Consolidated Laboratory Services. Expires June 30, 1999. ID # 00341. Dioxin in drinking water.

State of Washington, Department of Ecology. Expires September 11, 1998. Lab Accreditation Number C067. Scope of Accreditation applies to water analyses for

Polychlorinated Dibenzo-p-dioxins and Polychlorinated Dibenzofurans, BNA Extr (Semivolatile) Organics and Purgeable (Volatile) Organics.
State of Washington, Department of Health. Expires April 30, 1999. Dioxin in drinking water. Lab I.D. 129.

State of West Virginia, Department of Health. Expires December 31, 1998. Certificate No. 9923(C). Dioxin in drinking water.

State of Wisconsin, Department of Natural Resources. Expires August 31, 1998. Laboratory ID Number 999869530. Certification for the following categories of Organics: Purgeable, Base/Neutral, Acid, PCBs, and Dioxin. Expires November 14, 1999. Laboratory ID 999869530. Dioxin in drinking water.

PHARMACEUTICAL

Drug Enforcement Agency (DEA). Expires November 30, 1998. Registration number RT01195835. Controlled substance registration for schedules 1,2,3,3N,4,5.

N.C. Department of Human Resources. Expires October 31, 1998. Registration number NC-PT 0000 0031. North Carolina controlled substances registration. Application submitted for renewal.

Food & Drug Administration (FDA) Registration. Expires June 1998. ID #'s 001500 1053481. Annual registration of drug establishment.

OTHER

Clinical Laboratory Improvement Amendments (CLIA) Registration. Expires May 30, 1999. ID # 34D0705123. Department of Health & Human Services, Health Care Financing Administration.

U.S. EPA Large Quantity Hazardous Waste Generator. No expiration date. EPA ID #NCD982156879. Permit indicates that the laboratory is a large generator of hazardous waste.

North Carolina General License for Radiation Protection. No expiration date. No License. 032-875-OG. The general license applies only to radioactive material contained in devices which have been manufactured and labeled in accordance with specific requirements.

TRIANGLE LABS

DOCUMENT CONTROL

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Durham, NC 27713-4411
919-544-5729

P.O. Box 13485
Research Triangle Park, NC 27709-34
Fax # 919-544-5491

212

Client Id:	TLI Id:	File Name:
T-V-2-1-A,B T/TC	214-27-5A,B	FX975
T-V-2-2-A,B T/TC	214-27-6A,B	FX976
T-V-2-3-A,B T/TC	214-27-7A,B	FX977
T-V-2-4-A,B T/TC	214-27-8A,B	FX978
T-V-3-1-A,B T/TC	214-27-16A,B	FX979
T-V-3-2-A,B T/TC	214-27-17A,B	FX980
T-V-3-3-A,B T/TC	214-27-18A,B	FX981
T-V-4-1-A T	214-27-20A	HW562
T-V-4-1-B TC	214-27-20B	HW560
T-V-4-2-A T	214-27-21A	HW563
T-V-4-2-B TC	214-27-21B	HW561
T-V-4-4-A T	214-27-23A	FX983
T-V-FB-A,B T/TC	214-27-9A,B	FX953
VOSTBLK 080998 T/TC	VOSTBLK 080998	HW559
VOSTBLK 082198 T/TC	VOSTBLK 082198	FX952
VOSTBLK 082498 T/TC	VOSTBLK 082498	FX974

Triangle Laboratories, Inc.

Project Summary for Project 46323

Client ID:	T-V-2-1-A, B T/TC	T-V-2-2-A, B T/TC	T-V-2-3-A, B T/TC	T-V-2-4-A, B T/TC	T-V-3-1-A, B T/TC
Filename :	FX975	FX976	FX977	FX978	FX979
TLI Id :	214-27-5A,B	214-27-6A,B	214-27-7A,B	214-27-8A,B	214-27-16A,B
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Chloromethane	0.056	0.092	0.042	0.040	0.030
Vinyl Chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromomethane	0.036	0.035	0.035	(0.001)	0.005
Chloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichlorofluoromethane	0.014	0.011	(0.001)	0.009	0.011
1,1-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methylene chloride	0.488	(0.001)	0.081	0.064	0.508
trans-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chloroform	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,1-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Iodomethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Carbon disulfide	0.104	0.093	0.026	0.044	0.015
Acetone	0.193	0.232	0.137	0.296	0.183
Allyl chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acrylonitrile	(0.026)	(0.024)	(0.021)	(0.021)	(0.020)
Vinyl acetate	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
2-Butanone	(0.005)	0.312	0.161	0.342	0.166
Carbon tetrachloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Benzene	0.263	0.238	0.156	0.108	0.096
1,2-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dichloropropane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromodichloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Toluene	0.132	0.247	0.218	0.144	0.212
trans-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methyl methacrylate	(0.008)	(0.007)	(0.006)	(0.006)	(0.006)
4-Methyl-2-pentanone	(0.006)	(0.005)	(0.005)	(0.005)	(0.004)
Tetrachloroethene	0.017	0.035	0.035	0.031	0.023
Dibromochloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dibromoethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chlorobenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

( )-Estimated Detection Limit

Triangle Laboratories, Inc.
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Client ID:	T-V-2-1-A, B T/TC	T-V-2-2-A, B T/TC	T-V-2-3-A, B T/TC	T-V-2-4-A, B T/TC	T-V-3-1-A, B T/TC
Filename :	FX975	FX976	FX977	FX978	FX979
TLI Id :	214-27-5A,B	214-27-6A,B	214-27-7A,B	214-27-8A,B	214-27-16A,B
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Ethylbenzene	**0.015**	**0.069**	**0.050**	**0.027**	**0.075**
m-/p-Xylene	**0.078**	**0.428**	**0.255**	**0.149**	**0.335**
o-Xylene	**0.012**	**0.119**	**0.088**	**0.042**	**0.131**
Styrene	(0.001)	**0.052**	**0.038**	**0.017**	**0.029**
Bromoform	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
2-Hexanone	(0.011)	(0.010)	(0.008)	(0.008)	(0.008)
Cumene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2,2-Tetrachloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

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Project Summary for Project 46323

Client ID:	T-V-2-1-A, B T/TC	T-V-2-2-A, B T/TC	T-V-2-3-A, B T/TC	T-V-2-4-A, B T/TC	T-V-3-1-A, B T/TC
Filename :	FX975	FX976	FX977	FX978	FX979
TLI Id :	214-27-5A,B	214-27-6A,B	214-27-7A,B	214-27-8A,B	214-27-16A,B
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
1,3-Butadiene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Vinyl bromide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MTBE	**0.033**	**0.022**	**0.039**	**0.036**	**0.028**
n-Hexane	**0.266**	**0.176**	**0.145**	**0.083**	**0.107**
1,2-Epoxybutane	(0.032)	(0.029)	(0.025)	(0.025)	(0.024)
Iso-Octane	**0.029**	**0.016**	**0.019**	**0.021**	**0.012**
Ethyl acrylate	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)

( )-Estimated Detection Limit Page 1

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216

Client ID:	T-V-3-2-A, B T/TC	T-V-3-3-A, B T/TC	T-V-4-1-A T	T-V-4-1-B TC	T-V-4-2-A T
Filename :	FX980	FX981	HW562	HW560	HW563
TLI Id :	214-27-17A,B	214-27-18A,B	214-27-20A	214-27-20B	214-27-21A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Chloromethane	(0.001)	**0.043**	**0.010**	**0.020**	**0.005**
Vinyl Chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromomethane	(0.001)	(0.001)	**0.010**	**0.003**	**0.006**
Chloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichlorofluoromethane	**0.011**	**0.006**	**0.009**	**0.015**	(0.001)
1,1-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methylene chloride	**0.828**	**0.049**	**0.038**	**0.327**	**0.674**
trans-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chloroform	(0.001)	(0.001)	**0.006**	(0.001)	(0.001)
1,1,1-Trichloroethane	(0.001)	(0.001)	**0.012**	(0.001)	(0.001)
Iodomethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Carbon disulfide	**0.017**	**0.020**	(0.001)	(0.001)	(0.001)
Acetone	(0.004)	(0.004)	**0.151**	**0.087**	**0.036**
Allyl chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acrylonitrile	(0.020)	(0.019)	(0.007)	(0.006)	(0.006)
Vinyl acetate	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
2-Butanone	(0.004)	(0.004)	**0.051**	(0.004)	(0.003)
Carbon tetrachloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Benzene	**0.131**	**0.129**	**0.091**	**0.010**	**0.034**
1,2-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichloroethene	(0.001)	(0.001)	**0.001**	(0.001)	(0.001)
1,2-Dichloropropane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromodichloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Toluene	**0.200**	**0.217**	**0.133**	**0.016**	**0.010**
trans-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methyl methacrylate	(0.006)	(0.006)	(0.003)	(0.002)	(0.002)
4-Methyl-2-pentanone	(0.005)	(0.004)	(0.002)	(0.001)	(0.001)
Tetrachloroethene	**0.015**	**0.028**	**0.016**	(0.001)	(0.001)
Dibromochloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dibromoethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chlorobenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

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Client ID:	T-V-3-2-A, B T/TC	T-V-3-3-A, B T/TC	T-V-4-1-A T	T-V-4-1-B TC	T-V-4-2-A T
Filename :	FX980	FX981	HW562	HW560	HW563
TLI Id :	214-27-17A,B	214-27-18A,B	214-27-20A	214-27-20B	214-27-21A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Ethylbenzene	**0.065**	**0.071**	**0.018**	**0.001**	(0.001)
m-/p-Xylene	**0.314**	**0.378**	**0.056**	**0.002**	(0.001)
o-Xylene	**0.118**	**0.124**	**0.024**	**0.001**	(0.001)
Styrene	**0.036**	**0.037**	**0.025**	**0.002**	**0.003**
Bromoform	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
2-Hexanone	(0.008)	(0.008)	(0.002)	(0.002)	(0.002)
Cumene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2,2-Tetrachloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

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Client ID:	T-V-3-2-A, B T/TC	T-V-3-3-A, B T/TC	T-V-4-1-A T	T-V-4-1-B TC	T-V-4-2-A T
Filename :	FX980	FX981	HW562	HW560	HW563
TLI Id :	214-27-17A,B	214-27-18A,B	214-27-20A	214-27-20B	214-27-21A
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
1,3-Butadiene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Vinyl bromide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MTBE	**0.022**	**0.015**	**0.114**	**0.014**	(0.002)
n-Hexane	**0.135**	**0.142**	**0.034**	**0.005**	**0.006**
1,2-Epoxybutane	(0.024)	(0.023)	(0.055)	(0.046)	(0.041)
Iso-Octane	(0.001)	(0.001)	**0.012**	**0.010**	(0.001)
Ethyl acrylate	(0.007)	(0.006)	(0.001)	(0.001)	(0.001)

( )-Estimated Detection Limit **Page 2**

Client ID:	T-V-4-2-B TC	T-V-4-4-A T	T-V-FB-A,B T/TC	VOSTBLK 08 0998 T/TC	VOSTBLK 08 2198 T/TC
Filename :	HW561	FX983	FX953	HW559	FX952
TLI Id :	214-27-21B	214-27-23A	214-27-9A,B	VOSTBLK 0809	VOSTBLK 0821
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Chloromethane	0.015	(0.001)	(0.001)	0.015	(0.001)
Vinyl Chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromomethane	0.004	(0.001)	(0.001)	0.010	(0.001)
Chloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichlorofluoromethane	0.003	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methylene chloride	1.666	0.009	0.054	0.001	(0.001)
trans-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,2-Dichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chloroform	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,1-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Iodomethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Carbon disulfide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acetone	0.033	(0.004)	(0.005)	(0.004)	(0.005)
Allyl chloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Acrylonitrile	(0.006)	(0.021)	(0.025)	(0.006)	(0.024)
Vinyl acetate	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)
2-Butanone	(0.004)	(0.004)	(0.005)	(0.003)	(0.004)
Carbon tetrachloride	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Benzene	0.015	0.071	0.006	0.048	0.039
1,2-Dichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Trichloroethene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dichloropropane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Bromodichloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
cis-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Toluene	0.007	0.158	0.006	0.003	(0.001)
trans-1,3-Dichloropropene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2-Trichloroethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Methyl methacrylate	(0.002)	(0.006)	(0.006)	(0.002)	(0.006)
4-Methyl-2-pentanone	(0.001)	(0.005)	(0.004)	(0.001)	(0.004)
Tetrachloroethene	(0.001)	0.022	(0.001)	(0.001)	(0.001)
Dibromochloromethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,2-Dibromoethane	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Chlorobenzene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

( )-Estimated Detection Limit

Triangle Laboratories, Inc.
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Client ID:	T-V-4-2-B TC	T-V-4-4-A T	T-V-FB-A,B T/TC	VOSTBLK 08 0998 T/TC	VOSTBLK 08 2198 T/TC
Filename :	HW561	FX983	FX953	HW559	FX952
TLI Id :	214-27-21B	214-27-23A	214-27-9A,B	VOSTBLK 0809	VOSTBLK 0821
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
Ethylbenzene	(0.001)	0.022	(0.001)	(0.001)	(0.001)
m-/p-Xylene	(0.001)	0.057	(0.001)	(0.001)	(0.001)
o-Xylene	(0.001)	0.024	(0.001)	(0.001)	(0.001)
Styrene	0.001	0.009	(0.001)	0.001	(0.001)
Bromoform	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)
2-Hexanone	(0.002)	(0.008)	(0.008)	(0.002)	(0.009)
Cumene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
1,1,2,2-Tetrachloroethane	(0.001)	(0.002)	(0.001)	(0.001)	(0.003)

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Triangle Laboratories, Inc.
Project Summary for Project 46323

Client ID:	T-V-4-2-B TC	T-V-4-4-B T	T-V-FB-A,B T/TC	VOSTBLK 08 0998 T/TC	VOSTBLK 08 2198 T/TC
Filename :	HW561	FX983	FX953	HW559	FX952
TLI Id :	214-27-21B	214-27-23A	214-27-9A,B	VOSTBLK 0809	VOSTBLK 0821
Matrix :	VOST	VOST	VOST	VOST	VOST
Units :	ug	ug	ug	ug	ug
1,3-Butadiene	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Vinyl bromide	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
MTBE	(0.002)	0.037	(0.001)	(0.002)	(0.001)
n-Hexane	0.003	0.041	(0.001)	(0.001)	(0.001)
1,2-Epoxybutane	(0.045)	(0.025)	(0.025)	(0.041)	(0.024)
Iso-Octane	(0.001)	0.010	(0.001)	(0.001)	(0.001)
Ethyl acrylate	(0.001)	(0.007)	(0.004)	(0.001)	(0.004)

( )-Estimated Detection Limit

Triangle Laboratories, Inc.
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Phone: (919) 544-5729 • Fax: (919) 544-5491

Client ID:	VOSTBLK 08 2498 T/TC
Filename :	FX974
TLI Id :	VOSTBLK 0824
Matrix :	VOST
Units :	ug

Chloromethane	(0.001)
Vinyl Chloride	(0.001)
Bromomethane	(0.001)
Chloroethane	(0.001)
Trichlorofluoromethane	(0.001)
1,1-Dichloroethene	(0.001)
Methylene chloride	(0.001)
trans-1,2-Dichloroethene	(0.001)
1,1-Dichloroethane	(0.001)
cis-1,2-Dichloroethene	(0.001)
Chloroform	(0.001)
1,1,1-Trichloroethane	(0.001)
Iodomethane	(0.001)
Carbon disulfide	(0.001)
Acetone	(0.006)
Allyl chloride	(0.001)
Acrylonitrile	(0.029)
Vinyl acetate	(0.002)
2-Butanone	(0.005)
Carbon tetrachloride	(0.001)
Benzene	(0.001)
1,2-Dichloroethane	(0.001)
Trichloroethene	(0.001)
1,2-Dichloropropane	(0.001)
Bromodichloromethane	(0.001)
cis-1,3-Dichloropropene	(0.001)
Toluene	(0.001)
trans-1,3-Dichloropropene	(0.001)
1,1,2-Trichloroethane	(0.001)
Methyl methacrylate	(0.008)
4-Methyl-2-pentanone	(0.006)
Tetrachloroethene	(0.001)
Dibromochloromethane	(0.001)
1,2-Dibromoethane	(0.001)
Chlorobenzene	(0.001)

( )-Estimated Detection Limit **Page 7**

Client ID:	VOSTBLK 08 2498 T/TC
Filename :	FX974
TLI Id :	VOSTBLK 0824
Matrix :	VOST
Units :	ug

Ethylbenzene	(0.001)
m-/p-Xylene	(0.001)
o-Xylene	(0.001)
Styrene	(0.001)
Bromoform	(0.003)
2-Hexanone	(0.013)
Cumene	(0.001)
1,1,2,2-Tetrachloroethane	(0.002)

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Client ID:	VOSTBLK 08 2498 T/TC
Filename :	FX974
TLI Id :	VOSTBLK 0824
Matrix :	VOST
Units :	ug

1,3-Butadiene	(0.001)
Vinyl bromide	(0.001)
MTBE	(0.001)
n-Hexane	(0.001)
1,2-Epoxybutane	(0.035)
Iso-Octane	(0.001)
Ethyl acrylate	(0.009)

( )-Estimated Detection Limit Page 4

PACIFIC ENVIRONMENTAL SERVICES, INC.

Central Park West
5001 South Miami Boulevard, P.O. Box 12077
Research Triangle Park, North Carolina 27709-2077
(919) 941-0333 FAX: (919) 941-0234

223

Sample Chain of Custody Record

PLANT: US EPA HOT MIX ASPHALT PLANT C	**PROJECT NO.:** R012.001
RECOVERY PERSON: Abernathy, Maret	**SAMPLERS:** Abernathy, Maret

Sample Identification	Collection Date	Collection Time	Sample Name	Number of Containers	Analytical Request					Comments
S-V-2-1-A	7/25/98		Silo 2 Run 2 Set 1	1						Tenax
S-V-2-1-B	7/25/98		Silo 2 Run 2 Set 1	1						Tenax/Charcoal
S-V-2-2-A	7/25/98		Silo 2 Run 2 Set 2	1						Tenax
S-V-2-2-B	7/25/98		Silo 2 Run 2 Set 2	1						Tenax/Charcoal
S-V-2-3-A	7/25/98		Silo 2 Run 2 Set 3	1						Tenax
S-V-2-3-B	7/25/98		Silo 2 Run 2 Set 3	1						Tenax/Charcoal
S-V-2-4-A	7/25/98		Silo 2 Run 2 Set 4	1						Tenax
S-V-2-4-B	7/25/98		Silo 2 Run 2 Set 4	1						Tenax/Charcoal
T-V-2-1-A	7/25/98		Tunnel Run 2 Set 1	1						Tenax
T-V-2-1-B	7/25/98		Tunnel Run 2 Set 1	1						Tenax/Charcoal
T-V-2-2-A	7/25/98		Tunnel Run 2 Set 2	1						Tenax
T-V-2-2-B	7/25/98		Tunnel Run 2 Set 2	1						Tenax/Charcoal
T-V-2-3-A	7/25/98		Tunnel Run 2 Set 3	1						Tenax
T-V-2-3-B	7/25/98		Tunnel Run 2 Set 3	1						Tenax/Charcoal
T-V-2-4-A	7/25/98		Tunnel Run 2 Set 4	1						Tenax
T-V-2-4-B	7/25/98		Tunnel Run 2 Set 4	1						Tenax/Charcoal
T-V-FB-A	7/25/98		Tunnel Field Blank	1						Tenax
T-V-FB-B	7/25/98		Tunnel Field Blank	1						Tenax/Charcoal
S-V-3-1-A	7/27/98		Silo 2 Run 3 Set 1	1						Tenax
S-V-3-1-B	7/27/98		Silo 2 Run 3 Set 1	1						Tenax/Charcoal
S-V-3-2-A	7/27/98		Silo 2 Run 3 Set 2	1						Tenax
S-V-3-2-B	7/27/98		Silo 2 Run 3 Set 2	1						Tenax/Charcoal
S-V-3-3-A	7/27/98		Silo 2 Run 3 Set 3	1						Tenax
S-V-3-3-B	7/27/98		Silo 2 Run 3 Set 3	1						Tenax/Charcoal
S-V-3-4-A	7/27/98		Silo 2 Run 3 Set 4	1						Tenax
S-V-3-4-B	7/27/98		Silo 2 Run 3 Set 4	1						Tenax/Charcoal
S-V-3-5-A	7/27/98		Silo 2 Run 3 Set 5	1						Tenax
S-V-3-5-B	7/27/98		Silo 2 Run 3 Set 5	1						Tenax/Charcoal
S-V-3-6-A	7/27/98		Silo 2 Run 3 Set 6	1						Tenax
S-V-3-6-B	7/27/98		Silo 2 Run 3 Set 6	1						Tenax/Charcoal
T-V-3-1-A	7/27/98		Tunnel Run 3 Set 1	1						Tenax

224

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5001 South Miami Boulevard, P.O. Box 12077
Research Triangle Park, North Carolina 27709-2077
(919) 941-0333 FAX: (919) 941-0234

224

Sample Chain of Custody Record

PLANT: US EPA HOT MIX ASPHALT PLANT C
RECOVERY PERSON: Abernathy, Maret

PROJECT NO.: R012.001
SAMPLERS: Abernathy, Maret

Sample Identification	Collection Date	Collection Time	Sample Name	Number of Containers	Analytical Request					Comments
T-V-3-1-B	7/27/98		Tunnel Run 3 Set 1	1						Tenax/Charcoal
T-V-3-2-A	7/27/98		Tunnel Run 3 Set 2	1						Tenax
T-V-3-2-B	7/27/98		Tunnel Run 3 Set 2	1						Tenax/Charcoal
T-V-3-3-A	7/27/98		Tunnel Run 3 Set 3	1						Tenax
T-V-3-3-B	7/27/98		Tunnel Run 3 Set 3	1						Tenax/Charcoal
S-V-FB-A	7/26/98		Silo Field Blank	1						Tenax
S-V-FB-B	7/26/98		Silo Field Blank	1						Tenax/Charcoal
T-V-4-1-A	7/26/98		Tunnel Run 4 Set 1	1						Tenax
T-V-4-1-B	7/26/98		Tunnel Run 4 Set 1	1						Tenax/Charcoal
T-V-4-2-A	7/26/98		Tunnel Run 4 Set 2	1						Tenax
T-V-4-2-B	7/26/98		Tunnel Run 4 Set 2	1						Tenax/Charcoal
T-V-4-3-A	7/26/98		Tunnel Run 4 Set 3	1						Tenax
T-V-4-3-B	7/26/98		Tunnel Run 4 Set 3	1						Tenax/Charcoal
T-V-4-4-A	7/26/98		Tunnel Run 4 Set 4	1						Tenax
T-V-4-4-B	7/26/98		Tunnel Run 4 Set 4	1						Tenax/Charcoal

Relinquished by: Michael D. Maret	Date 7/28/98 Time 1620	Received by:
Relinquished by:	Date 7/29/98 Time 1000	Received for Lab by: Bill Hunt

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Custody Seal : Absent
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Absent
Container...: Intact

COPY 7/26/98

TLI Project Number 46323
Client: PES03 - Pacific Environmental Services

Book 214
Page 27

Date Received 07/29/98 By

Ice Chest ICE PACKS Temp 6.0 C

Carrier and Number FedEx/

TLI Number.. ....Client Sample ID..... .....Matrix mR/H:CPM. .....Client COC ID.....* Location.....	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-27-1A S-V-2-1-A TENAX S-V-2-1-A R026									
214-27-1B S-V-2-1-B TNX/CHAR S-V-2-1-B R026									
214-27-2A S-V-2-2-A TENAX S-V-2-2-A R026									
214-27-2B S-V-2-2-B TNX/CHAR S-V-2-2-B R026									
214-27-3A S-V-2-3-A TENAX S-V-2-3-A R026									
214-27-3B S-V-2-3-B TNX/CHAR S-V-2-3-B R026									
214-27-4A S-V-2-4-A TENAX S-V-2-4-A R026									
214-27-4B S-V-2-4-B TNX/CHAR S-V-2-4-B R026									
214-27-5A T-V-2-1-A TENAX T-V-2-1-A R026									
214-27-5B T-V-2-1-B TNX/CHAR T-V-2-1-B R026									
214-27-6A T-V-2-2-A TENAX T-V-2-2-A R026									
214-27-6B T-V-2-2-B TNX/CHAR T-V-2-2-B R026									
214-27-7A T-V-2-3-A TENAX T-V-2-3-A R026									
214-27-7B T-V-2-3-B TNX/CHAR T-V-2-3-B R026									

Receiving Remarks:

Archive Remarks:

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Custody Seal : Absent
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Absent
Container...: Intact

TLI Project Number 46323
Client: PES03 - Pacific Environmental Services

Date Received 07/29/98 By

Carrier and Number FedEx/

Book 1 214 Page 27

Ice Chest ICE PACKS Temp 6.0 C

TLI Number.. mR/H:CPM.	Client Sample ID..... Client COC ID.....*	Location.....	Matrix	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-27-8A	T-V-2-4-A T-V-2-4-A	R026	TENAX									
214-27-8B	T-V-2-4-B T-V-2-4-B	R026	TNX/CHAR									
214-27-9A	T-V-FB-A T-V-FB-A	R026	TENAX									
214-27-9B	T-V-FB-B T-V-FB-B	R026	TNX/CHAR									
214-27-10A	S-V-3-1-A S-V-3-1-A	R026	TENAX									
214-27-10B	S-V-3-1-B S-V-3-1-B	R026	TNX/CHAR									
214-27-11A	S-V-3-2-A S-V-3-2-A	R026	TENAX									
214-27-11B	S-V-3-2-B S-V-3-2-B	R026	TNX/CHAR									
214-27-12A	S-V-3-3-A S-V-3-3-A	R026	TENAX									
214-27-12B	S-V-3-3-B S-V-3-3-B	R026	TNX/CHAR									
214-27-13A	S-V-3-4-A S-V-3-4-A	R026	TENAX									
214-27-13B	S-V-3-4-B S-V-3-4-B	R026	TNX/CHAR									
214-27-14A	S-V-3-5-A S-V-3-5-A	R026	TENAX									
214-27-14B	S-V-3-5-B S-V-3-5-B	R026	TNX/CHAR									

Receiving Remarks:

Archive Remarks:

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Custody Seal : Absent	Sample Seals: Absent	TLI Project Number 46323	Book 214
Chain of Custody : Present	Container...: Intact	Client: PES03 - Pacific Environmental Services	
Sample Tags : Absent			
Sample Tag Numbers: Not Listed on Chain of Custody			
SMO Forms : N/A		Date Received 07/29/98 By	Page 27
Ice Chest ICE PACKS Temp 6.0 C		Carrier and Number FedEx/	

TLI Number.. ....Client Sample ID..... .....Matrix mR/H:CPM. .....Client COC ID.....* Location.....	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-27-15A S-V-3-6 A TENAX S-V-3-6-A R026									
214-27-15B S-V-3-6-B TNX/CHAR S-V-3-6-B R026									
214-27-16A T-V-3-1-A TENAX T-V-3-1-A R026									
214-27-16B T-V-3-1-B TNX/CHAR T-V-3-1-B R026									
214-27-17A T-V-3-2-A TENAX T-V-3-2-A R026									
214-27-17B T-V-3-2-B TNX/CHAR T-V-3-2-B R026									
214-27-18A T-V-3-3-A TENAX T-V-3-3-A R026									
214-27-18B T-V-3-3-B TNX/CHAR T-V-3-3-B R026									
214-27-19A S-V-FB-A TENAX S-V-FB-A R026									
214-27-19B S-V-FB-B TNX/CHAR S-V-FB-B R026									
214-27-20A T-V-4-1-A TENAX T-V-4-1-A R026									
214-27-20B T-V-4-1-B TNX/CHAR T-V-4-1-B R026									
214-27-21A T-V-4-2-A TENAX T-V-4-2-A R026									
214-27-21B T-V-4-2-B TNX/CHAR T-V-4-2-B R026									

Receiving Remarks:

Archive Remarks:

27

230

TRIANGLE LABORATORIES, INC. -- LOG IN RECORD/CHAIN OF CUSTODY

Book 214 | Page 27

TLI Project Number 46323
Client: PES03 - Pacific Environmental Services

Date Received 07/29/98 | By

Carrier and Number FedEx/

Custody Seal : Absent
Chain of Custody : Present
Sample Tags : Absent
Sample Tag Numbers: Not Listed on Chain of Custody
SMO Forms : N/A

Sample Seals: Absent
Container...: Intact

Ice Chest ICE PACKS Temp 6.0 C

TLI Number.. / mR/H:CPM.	Client Sample ID..... / Client COC ID.....*	Matrix / Location.....	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	To LAB Date/Init	To STORAGE Date/Init	DISPOSED Date/Init
214-27-22A	T-V-4-3-A T-V-4-3-A	TENAX R026									
214-27-22B	T-V-4-3-B T-V-4-3-B	TNX/CHAR R026									
214-27-23A	T-V-4-4-A T-V-4-4-A	TENAX R026									
214-27-23B	T-V-4-4-B T-V-4-4-B	TNX/CHAR R026									

Receiving Remarks:

Archive Remarks:

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	327 4056	8260	VOA	VOA3	8260B	826BX

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSS-92-3 exp. 8/22/98 @ 25ug/ml	VSS-92-2 exp. 8/20/98 @ 25u/ml	

Extract / Sample volume _____ Circle unit µL mL

Tonya C. Hyndell 8/9/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/9/98	01:57	—	2.0ul VSS-92-3 exp 8/22/98	BFB	HW549	N/A	JL 8/9/98	to 8/10/98	JL	
8/9/98	02:26	—	10ul VSS-92-4 exp. 8/22/98	VOSTD0.10 TITC	HW550	N/A	JL 8/9/98		JL	
8/9/98	03:17	—	10ul VSS-92-4 exp. 8/22/98	VOSTD0.10 TITC	HW551	N/A	JL 8/9/98		JL	
8/9/98	03:52	—	10ul VSS-93-2 exp. 8/22/98	VOSTD0.25 TITC	HW552	N/A	JL 8/9/98		JL	
8/9/98	04:23	—	10ul VSS-93-2 exp. 8/22/98	VOSTD0.50 TITC	HW553	N/A	JL 8/9/98		JL	
8/9/98	04:55	—	10ul VSS-93-4 exp. 8/22/98	VOSTD0.75 TITC	HW554	N/A	JL 8/9/98		JL	
8/9/98	05:27	—	10ul VSS-94-1 exp 8/22/98	VOSTD1.00 TITC	HW555	N/A	JL 8/9/98		JL	
8/9/98	06:01	—	10ul VSS-92-2 exp. 8/20/98	VBLK	HW556	N/A	JL 8/9/98		JL	
8/9/98	06:40	—	10ul VSS-90-2 exp. 8/20/98	VOSTD0.50 TITC Additional	HW557	N/A	JL 8/9/98	↓	JL	Single Pt.
8/9/98	07:49	—	10ul VSS-92-2 exp. 8/20/98	VOSTBLK TITC	HW558	N/A	JL 8/9/98	to 8/10/98	JL	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	3274056	8260	VOA	VOA3	82606	8266X

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-2 exp. 8/22/98 @25ug/ml	VSG 92-2 exp 8/20/98 @25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/9/98	08:28	—	10ul VSG-92-2 exp. 8/20/98	VOSTBLK TIC	HW559	N/A	JcL 8/9/98	16 8/10/98	JcL	
8/9/98	09:11	46323	214-27-20B	T-V-4-1-B TIC	HW560	N/A	JcL 8/9/98		JcL	
8/9/98	09:46	46323	214-27-21B	T-V-4-2-B TIC	HW561	N/A	JcL 8/9/98		JcL	
8/9/98	10:37	46323	214-27-20A	T-V-4-1-A T	HW562	N/A	JcL 8/9/98		JcL	
8/9/98	11:11	46323	214-27-21A	T-V-4-2-A T	HW563	N/A	JcL 8/9/98	16 8/10/98	JcL	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-92-3 exp 8/22/98 @ 25ug/ml	VSG-44-3 exp 8/22/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Lenny Gall 8/21/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/21/98	5:22	—	10ul VSG-92-4 exp 8/22/98	VOSTD0.25 T/TC	FX941	N/A	LG 8/21/98		JL	low sensitivity 8/21/98
8/21/98	6:15	—	2ml VSG-92-3 exp 8/22/98	BFB	FX942	N/A	LG 8/21/98		JL	
8/21/98	6:48	—	10ul VSG-92-3 exp 8/22/98	VOSTD0.10 T/TC	FX943	N/A	LG 8/21/98		JL	ICal pt. JL 8/21/98
8/21/98	07:55	—	10ul VSG-92-2 exp 8/22/98	VOSTD0.25 T/TC	FX944	N/A	LG 8/21/98		JL	ICal pt. JL 8/21/98
8/21/98	08:58	—	10ul VSG-93-2 exp 8/22/98	VOSTD0.50 T/TC	FX945	N/A	JL 8/21/98		JL	ICal pt. JL 8/21/98
8/21/98	09:39	—	10ul VSG-93-1 exp 8/22/98	VOSTD0.75 T/TC	FX946	N/A	JL 8/21/98		JL	ICal pt. JL 8/21/98
8/21/98	10:22	—	10ul VSG-94-1 exp 8/22/98	VOSTD1.00 T/TC	FX947	N/A	JL 8/21/98		JL	
8/21/98	11:10	—	10ul VSG-95-1 exp 8/4/98	VOSTD1K T/TC	FX948	N/A	JL 8/21/98		JL	
8/21/98	11:56	—	10ul VSG-94-1 exp 8/22/98	VOSTD100 T/TC	FX949	N/A	JL 8/21/98		JL	ICal pt JL 8/21/98
8/21/98	12:50	10ul VSG-96-1 exp 9/4/98	10ul VSG-95-2 exp 8/4/98	Additionals VOSTD0.50 T/TC	FX950	N/A	JL 8/21/98		JL	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6251637	8260	VOA3	VOA3	8260A	8260X

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-93-2 exp 8/22/98 @ 25µg/ml	VSG-95-4 exp. 9/4/98 @ 75µg/ml	

Extract / Sample volume _____ Circle unit µL mL

Tony C. Hyndell 8/24/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/24/98	13:40	—	10µl VSG-95-4 exp 9/4/98	VOSTBLK T/TC	FX951	N/A	JL 8/21/98		JL	
8/21/98	14:23	—	10µl VSG-95-4 exp. 9/4/98	VOSTBLK T/TC	FX952	N/A	JL 8/21/98		JL	
8/24/98		46323	214-27-9AB	FV-FB-A,B T/TC	FX953	N/A	JL 8/21/98		JL	
8/27/98	00:36	—	2µl VSG-93-2 exp 9/22/98	BFB	FX954	N/A	16 8/22/98		16	Sensitivity low 16 8/22/98
8/27/98	00:55	—	2µl VSG-93-2 exp 9/22/98	BFB	FX955	N/A	16 8/22/98		16	
8/22/98	1:22	—	10µl VSG-92-4 exp 9/22/98	VOSTD0.25 T/TC	FX956	N/A	16 8/22/98		16	
8/22/98	2:12	—	10µl VSG-92-4 exp 9/22/98	VOSTD0.25 T/TC	FX957	N/A	16 8/22/98		16	
8/27/98	2:54	10µl VSG-96-1 exp 9/4/98	10µl VSG-92-4 exp 9/22/98	Additionals VOSTD0.50 T/TC	FX958	N/A	16 8/22/98		16	16 8/22/98 Sensitivity Dropped out
8/27/98	3:39	10µl VSG-96-1 exp 9/4/98	10µl VSG-92-4 exp 9/22/98	VOSTD0.50 T/TC	FX959	N/A	16 8/22/98		16	11 11 11 16 8/22/98 changed tube
8/22/98	4:20	—	10µl VSG-92-4 exp 9/22/98	VOSTBLK T/TC	FX960	N/A	16 8/22/98		16	

* Volatile Data Only ** Transcribed Data *** Dated Signature/Initials Required

Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260B	

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-93-2 exp 8/22/98 @ 25ug/ml	VSG-95-4 exp 9/4/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Lucy Gall 8/22/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/22/98	5:03	—	10ul VSG-95-11 exp 9/4/98	VOSTBLK T/TC	FX961	N/A	LG 8/22/98		LG	Changed lines 16 8/24/98 low sensitivity at end
8/22/98	6:24	—	10ul VSG-95-4 exp 9/4/98	VOSTBLK T/TC	FX962	N/A	LG 8/22/98		KG	checked tekmar - flow ok. maybe electronics 16 8/24/98
8/22/98	7:16	—	10ul VSG-95-4 exp 9/4/98	VOSTBLK T/TC	FX963	N/A	LG 8/22/98		LG	
8/23/98	23:52	—	2ul VSG-96-2 exp 9/3/98	BFB	FX964	N/A	LG 8/23/98		LG	
8/24/98	00:43	—	10ul VSG-95-3 exp 9/2/98	VOSTD0.25 T/TC	FX965	N/A	LG 8/24/98		LG	low sensitivity 16 8/24/98
8/24/98	1:34	—	10 ul VSG-95-3 exp 9/2/98	VOSTD0.25 T/TC	FX966	N/A	LG 8/24/98		LG	" " 16 8/24/98
8/24/98	2:28	—	2ul VSG-96-2 exp 9/3/98	BFB	FX967	N/A	LG 8/24/98		LG	
8/24/98	2:59	—	10ul VSG-95-3 exp 9/2/98	VOSTD0.25 T/TC	FX968	N/A	LG 8/24/98		LG	ketones missing 16 8/24/98
8/24/98	3:46	—	10 ul VSG-95-3 exp 9/4/98	VOSTD0.25 T/TC	FX969	N/A	LG 8/24/98		LG	
8/24/98	4:42	—	2ul VSG-96-2 exp 9/3/98	BFB	FX970	N/A	LG 8/24/98		LG	

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Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260B	8260BX

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSG-96-2 exp 9/7/98 @ 75 ug/ml	VSG-95-4 exp 9/4/98 @ 25 ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Signature _____ Date 8/24/98

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/24/98	5:12	———	10ul VSG-95-3 exp 9/2/98	VOSTD0.25 T/TC	FX971	W/A	LG 8/24/98		LG	
8/24/98	5:58	10ul VSG-96-1 exp 9/4/98	10ul VSG-95-4 exp 9/4/98	VOSTD0.50 T/TC Additionals	FX972	W/A	LG 8/24/98		LG	
8/24/98		10ul VSG-96-1 exp 9/4/98	10ul VSG-95-4 exp 9/4/98	Additionals VOSTD0.50 T/TC	FX973	W/A	LG 8/24/98		LG	
8/24/98	08:04	———	10ul VSG-95-4 exp 9/4/98	VOSTBLK T/TC	FX974	W/A	LG 8/24/98		JL	
8/24/98	09:15	46323	214-27-5A,B	T-V-2-1-A,B T/TC	FX975	N/A	JL 8/24/98		JL	
8/24/98	10:02	46323	214-27-6A,B	T-V-2-2-A,B T/TC	FX976	N/A	JL 8/24/98		JL	
8/24/98	10:49	46323	214-27-7A,B	T-V-2-3-A,B T/TC	FX977	N/A	JL 8/24/98		JL	
8/24/98	11:35	46323	214-27-8A,B	T-V-2-4A,B T/TC	FX978	N/A	JL 8/24/98		JL	
8/24/98	12:14	46323	214-27-16A,B	T-V-3-1-A,B T/TC	FX979	N/A	JL 8/24/98		JL	
8/24/98	13:02	46323	214-27-17A,B	T-V-3-2-A,B T/TC	FX980	N/A	JL 8/24/98		JL	

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Triangle Laboratories, Inc.
Run Log

Column Type	Column #	Analysis*	Acquisition Method	GC Method*	Find DBs*	Other*
DB624	6252663	8260	VOA	VOA3	8260A	826AX

Standards		
Internal / Surrogate / Recovery	Internal / Surrogate / Recovery	Analyte
VSS-96-2 Exp. 9/7/98 @ 25ug/ml	VSS-95-4 Exp. 9/4/98 @ 25ug/ml	

Extract / Sample volume _____ Circle unit µL mL

Lowery C. Hammell 8/24/98
Signature Date

Date**	Time**	Project	Sample#	Client ID	Filename	pH*	Operator/Date	Backup*	Proc	Comments***
8/24/98	13:52	46323	214-27-18A,B	T-V-3-3-A,B TITC	FX981	N/A	LH 8/24/98		LH	
8/24/98	not started	46323	214-27-22A,B	T-V-4-3 A,B TITC	FX982	N/A	LH 8/24/98		LH	Aquisition Failure NO DATA
8/24/98	15:31	46323	214-27-23A,B	T-V-4-4 A,B TITC	FX983	N/A	LH 8/24/98		LH	Tenax tube broken will change and reanalyze out in Cartridge LH 8/24/98 Results (Client eval only)

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TRIANGLE LABS

SAMPLE DATA

Triangle Laboratories, Inc.
801 Capitola Drive
Durham, NC 27713-4411
919-544-5729
P.O. Box 13485
Research Triangle Park, NC 27709-34
Fax # 919-544-5491

Pacific Environmental Services

Project Number: 46323
Sample File: FX975

Method 8260 VOST
Sample ID: T-V-2-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-5A,B

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.056		1.09		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.036	J	1.64		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.014	J	2.06		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.104		2.77		0.05
Acetone	0.193		2.87		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.488		3.26		0.05
Acrylonitrile		U		0.026	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.005	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.263		5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 16:48 08/25/1998

Pacific Environmental Services

Project Number: 46323
Sample File: FX975

Method 8260 VOST
Sample ID: T-V-2-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-5A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.008	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.006	0.05
Toluene	0.132		8.10		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.36		
Tetrachloroethene	0.017	J	8.92		0.05
2-Hexanone		U		0.011	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.015	J	10.69		0.05
m-/p-Xylene	0.078	J	10.93		0.10
o-Xylene	0.012	J	11.64		0.05
Styrene		U		0.001	0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.74		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX975

Method 8260 VOST
Sample ID: T-V-2-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-5A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.219	5.18	1	88
Toluene-d_8	0.277	8.00	2	111
4-Bromofluorobenzene	0.319	12.67	2	128

Reviewed by BAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX975

Method 8260 VOST
Sample ID: T-V-2-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-5A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.033	J	3.62		0.25
n-Hexane	0.266		3.87		0.25
1,2-Epoxybutane		U		0.032	0.25
Iso-Octane	0.029	J	5.68		0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.008	0.25

Reviewed by BAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

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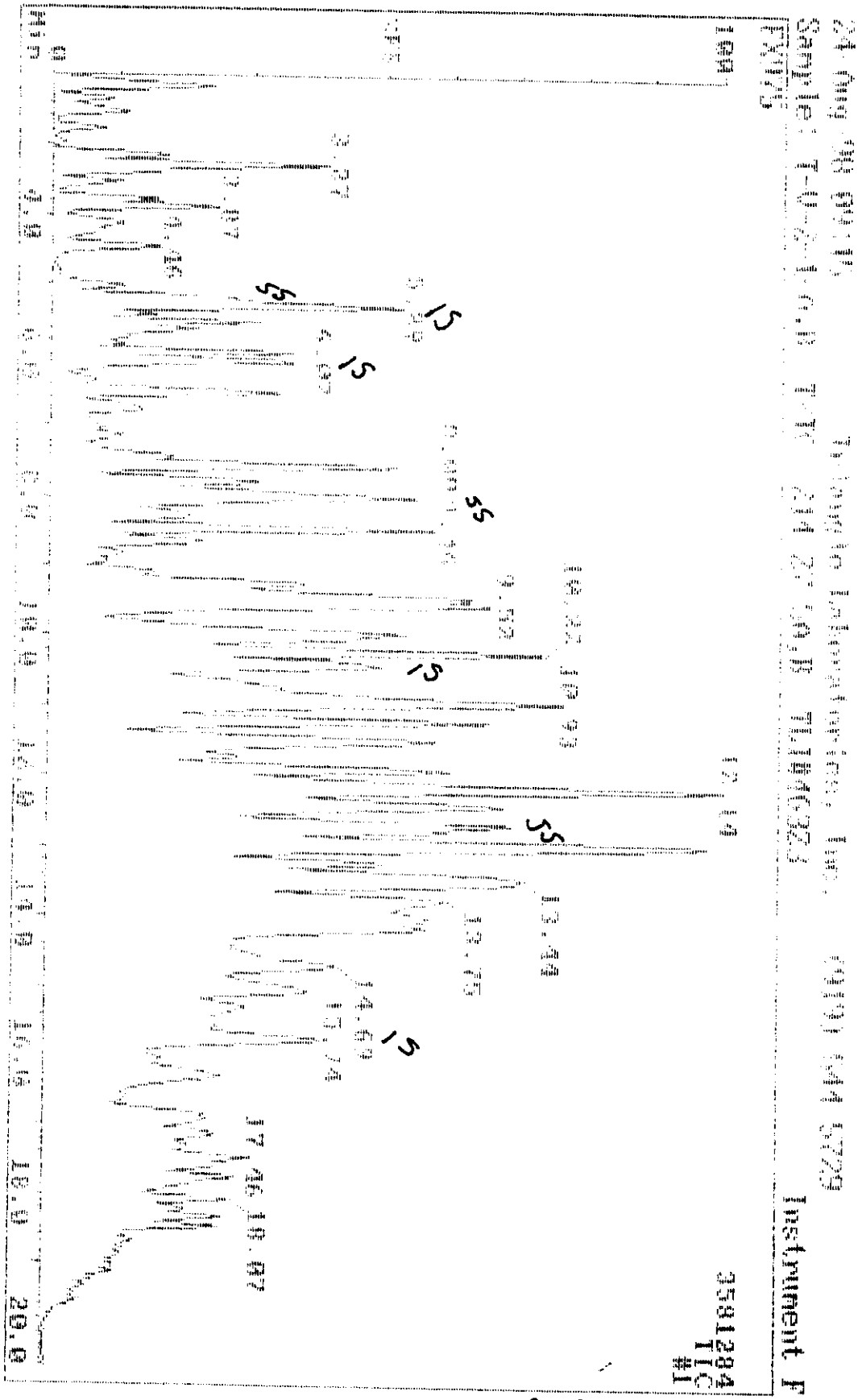
Printed: 17:21 08/25/1998

243



Data Review: GAB
Date: 8/24/98

QUAN OR - EXCEL LIST QUAN

No	40	50	90	Del	Rt	Name	Peak	RT	QM	Name
1	100	64	91	-5	315208	bv		5.301	166	Dibromofluoromethane
2	100	75	94	0	3295134	bv		6.127	114	1,4-Difluorobenzene
3	94	64	85	2	2620848	bv		6.301	117	Chlorobenzene-d5
4	83	52	95	-1	1520308			10.242	152	1,4-Dichlorobutane-d8
5	91	54	91	1	1085120	bv		9.181	117	Dibromofluoromethane
6	99	72	91	1	4222852	bv		8.901	98	Toluene-d8
7	80	62	70	1	1662804	bv		10.471	95	4-Bromofluorobenzene
8	0	0	0	0	0			0.000	85	Bis(2-chloroethoxy)methane
9	0	0	0	0	108609	M PAB	1.09	0.000	50	Dichlorodifluoromethane
10	0	0	0	0	0			0.000	62	Acrylonitrile
11	56	37	5	1	109068			0.000	98	Trichlorofluoromethane
12	0	0	0	0	0			0.000	58	Methacrylonitrile
13	0	0	0	0	140672	M PAB	2.06	0.000	101	Ethyl ether
14	0	0	0	0	0			0.000	94	Acrolein
15	0	0	0	0	0			0.000	147	Freon 113
16	84	64			1 1100					
17	79	58			2 112					
18	0	0	0	0	0					
19	27	0	0		1 2000					
20						PAB				
21			0	0						
22	0			0	0					
23	0	0	0	0	0					
24	0	0	0	0	0					
25	0	0	0	0	0	PAB				
26										
27	0	0	0	0	0			0.000	121	Dichlorofluoromethane
28	0	0	0	0	0			0.000	97	Chloroprene
29	0	0	0	0	0			0.000	130	Trichlorotrifluoroethane
30	0	0	0	0	0			0.000	63	1,2-Dichloroethene (cis)
31	0	0	0	0	0			0.000	95	Chloroacetonitrile
32	100	67	94	0	2763344	bv		9.301	78	Benzene
33	0	0	0	0	0			0.000	52	1,2-Dichloropropane
34	0	0	0	0	0			0.000	130	Trichloroethene
35	0	0	0	0	0			0.000	63	1,3-Dichloropropane
36	0	0	0	0	0			0.000	95	Dibromomethane
37	0	0	0	0	0			0.000	91	Methyl methacrylate
38	0	0	0	0	0			0.000	87	Bromochloromethane
39	0	0	0	0	0	PAB		0.000	75	2,2-Dichloropropane
40									43	Methacrylonitrile
41	100	55	90	1	1938552	bv		9.101	92	Chloroform
42	0	0	0	0	0			0.000	79	Bromochloromethane
43	0	0	0	0	0			0.000	97	1,1,1-Trichloroethane
44	0	0	0	0	0			0.000	60	Ethyl methacrylate
45	0	0	0	0	93520	M PAB	8.92	0.000	64	Tetrachloromethane
46	0	0	0	0	0			0.000	76	1,1-Dichloropropene
47						PAB			43	2-Hexanone
48	0	0	0	0	0			0.000	129	Dichloromethoxyethane
49	0	0	0	0	0			0.000	107	1,2-Dichloroethane
50	0	0	0	0	0			0.000	112	Chlorobenzene

Data Review: PAB
Date: 8/24/98

689472 — M PAB

92880 — M PAB

10.93

11.64

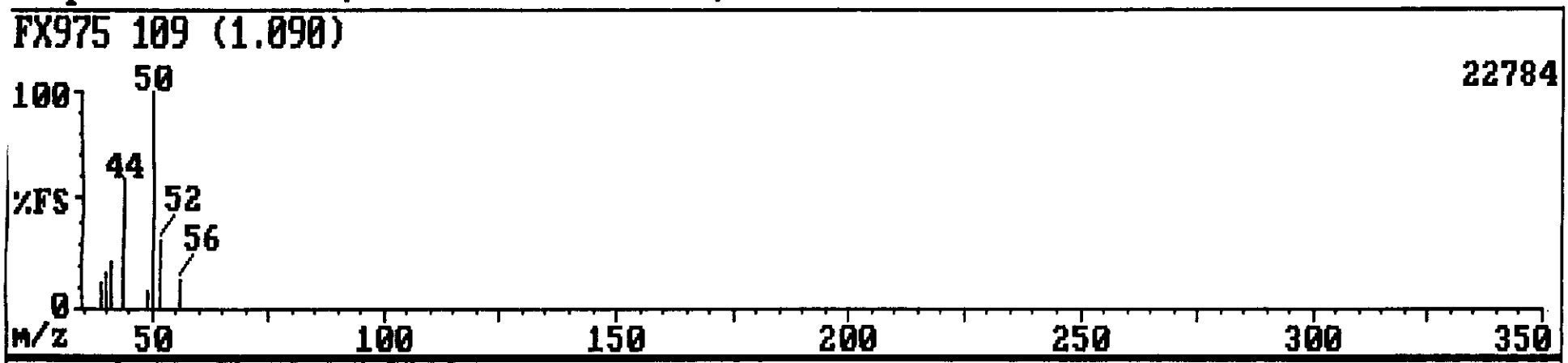
QUAN DB : FX275 LIBRARY QUAN 24-Aug-93 11:45

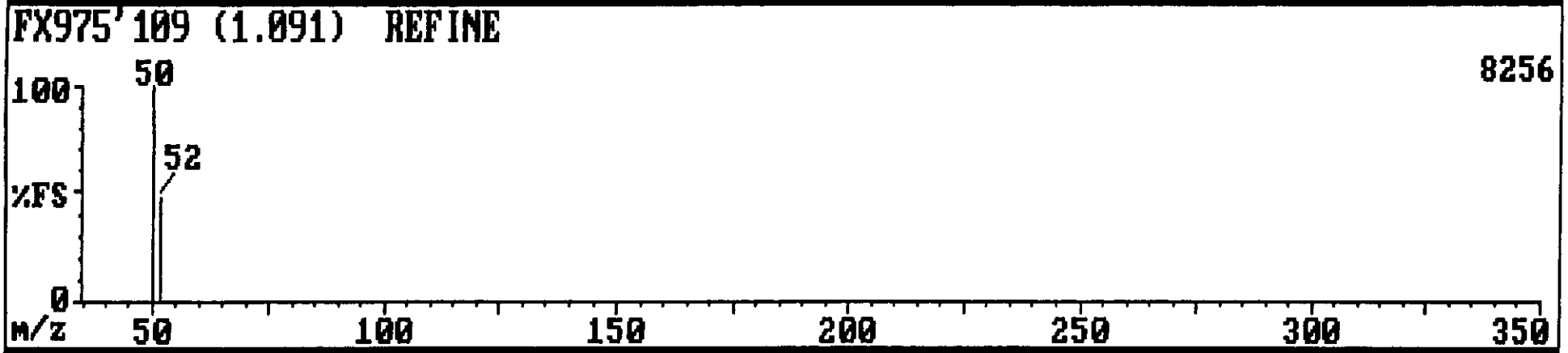
No.	MAT	FOR	REV	Delta	Area	P Flags	RT	QM	Name
1	100	64	97	1	21502008	bb	5.301	100	Benzotrifluoride
2	100	85	96	0	4294184	bv	6.071	114	1,3-Difluorobenzene
3	97	69	86	0	5600940	bv	10.464	117	Chlorobenzotrifluoride
4	92	57	95	0	1523568	A	15.762	132	1,4-Dichlorobenzotrifluoride
5	96	51	98	0	1015120	mb	5.101	111	Dibromofluoromethane
6	100	75	91	0	4277836	bv	8.701	96	Toluene-d8
7	75	46	70	1	1442274	vv	12.671	95	4-Bromofluorobenzene
8	64	42	54	1	4331553	A	PAB	59	1,2-Dichloroethane-d4
9	0	0	0	0	0		0.000	100	Methyl Benzoate
10	82	64	71	1	2768283	bm	5.420	78	Benzene
11	100	97	99	-1	1453420	bb	PAB 5.870	97	Trichloroethene
12	0	0	0	0	0		0.000	0	1,2-Dichloropropane
13	80	57	71	0	1113172	bv	PAB 5.693	77	Dibromomethane
14	0	0	0	0	0		0.000	0	Bromodichloromethane

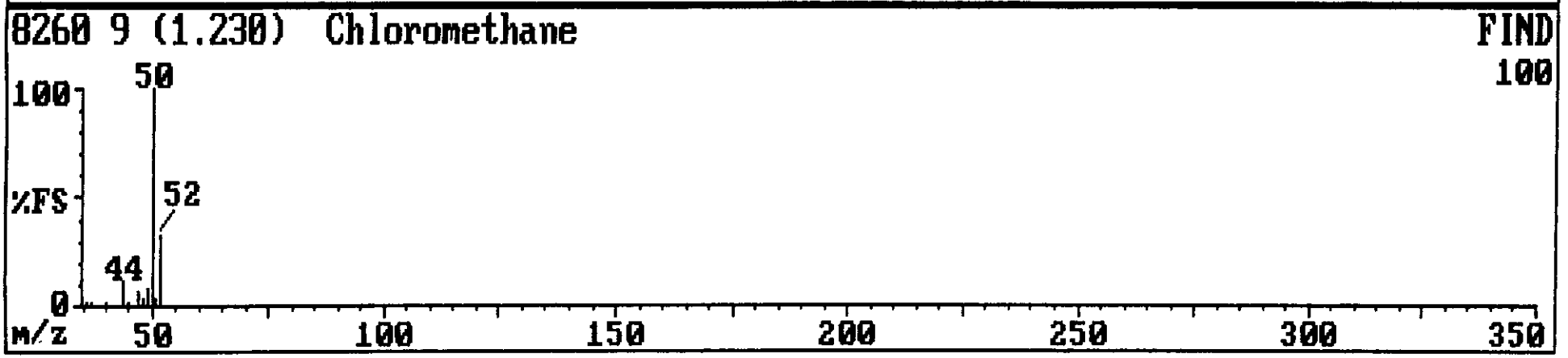
247

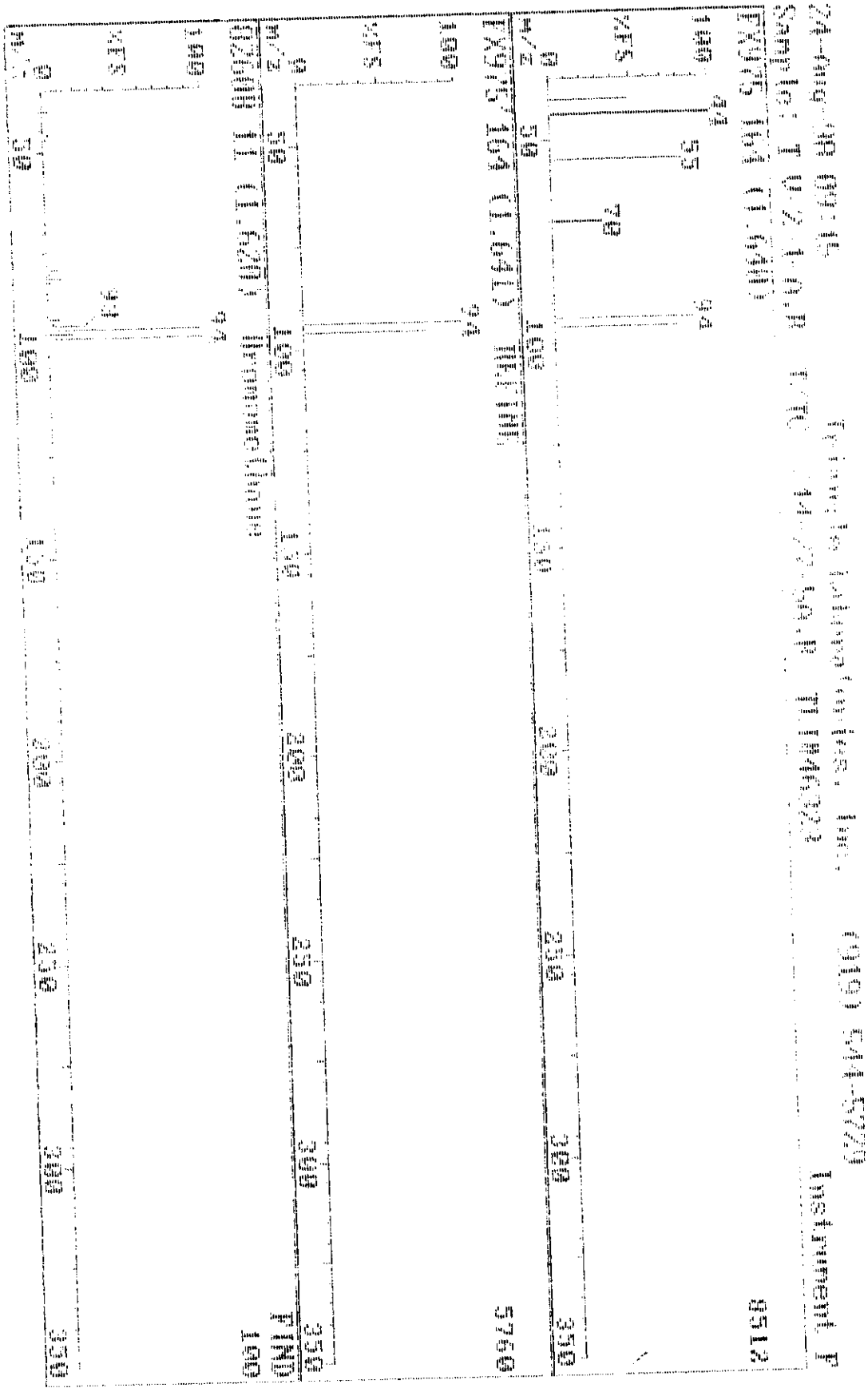
24-Aug-98 09:15 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-1-A,B T/TC 214-27-5A,B TLI#46323 Instrument F





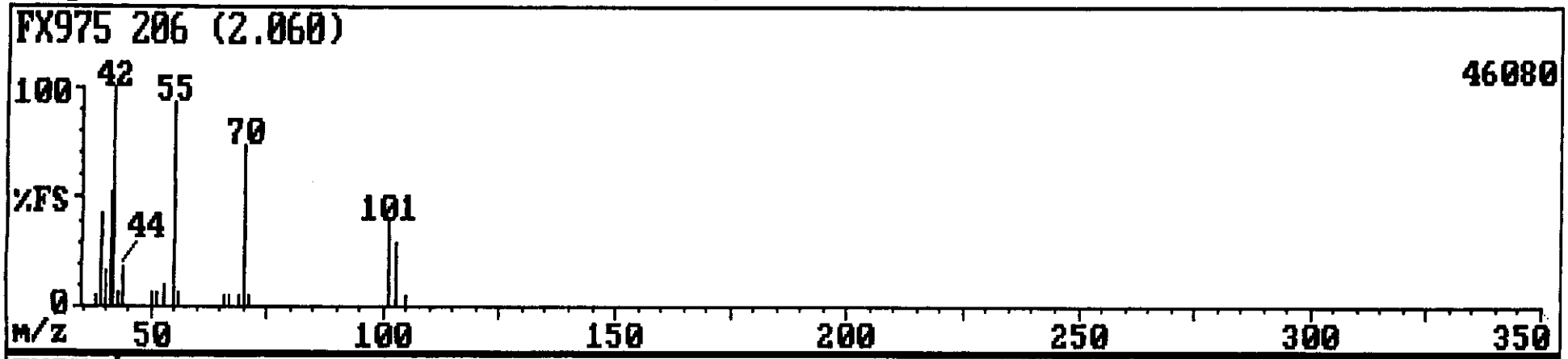


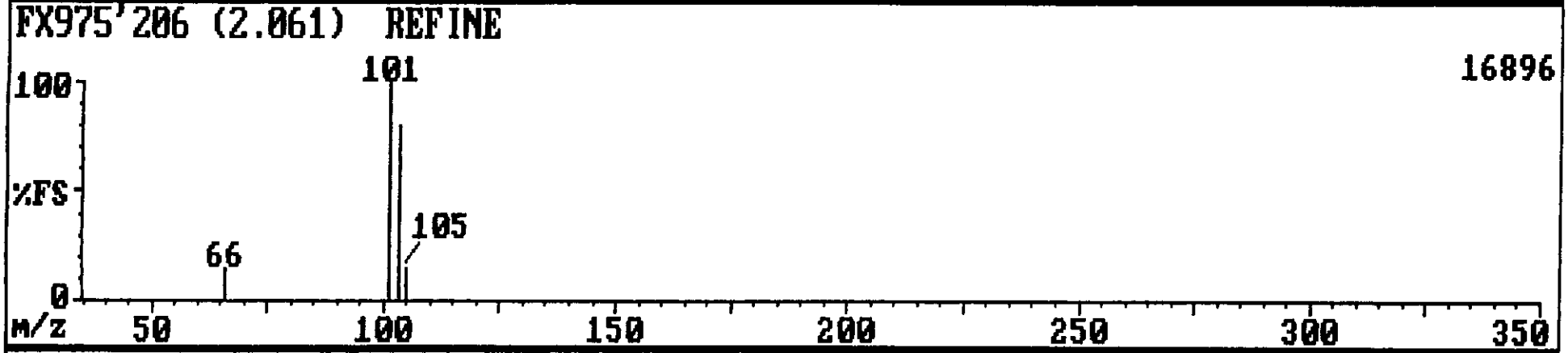


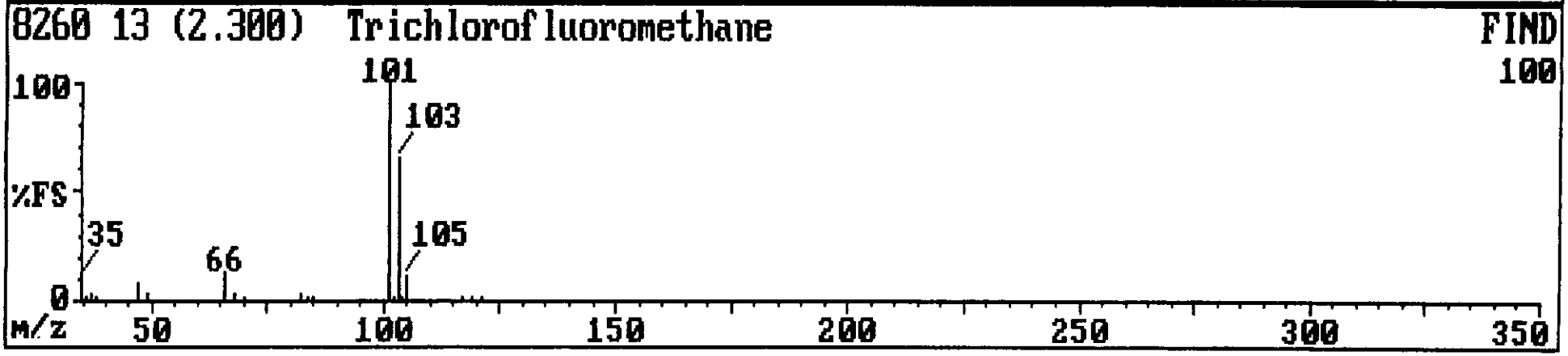
249

24-Aug-98 09:15 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-1-A,B T/TC 214-27-5A,B TLI#46323 Instrument F



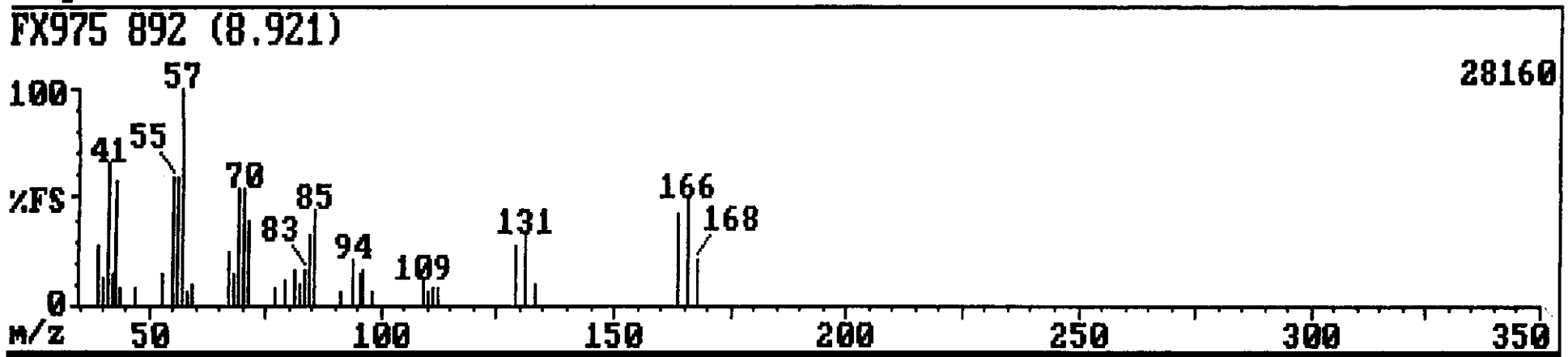


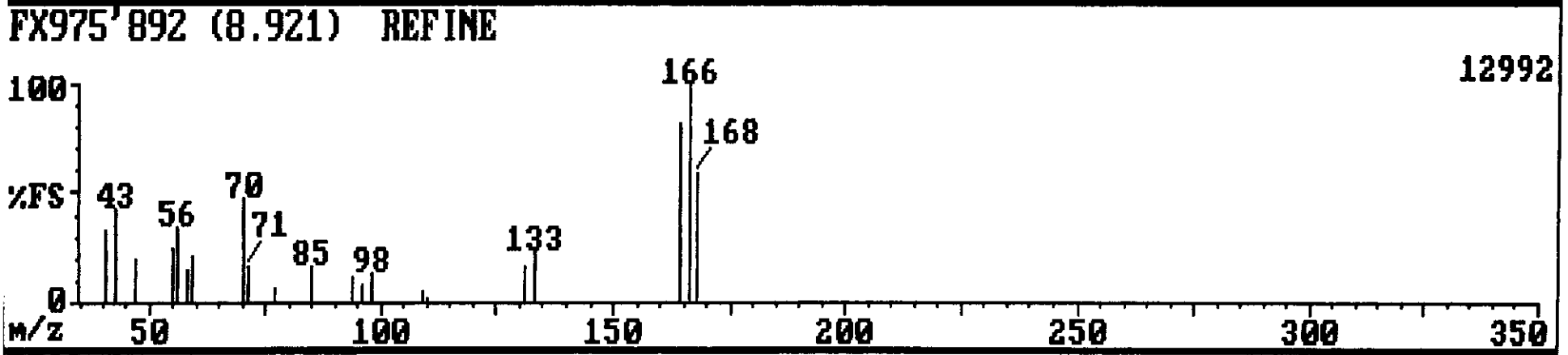


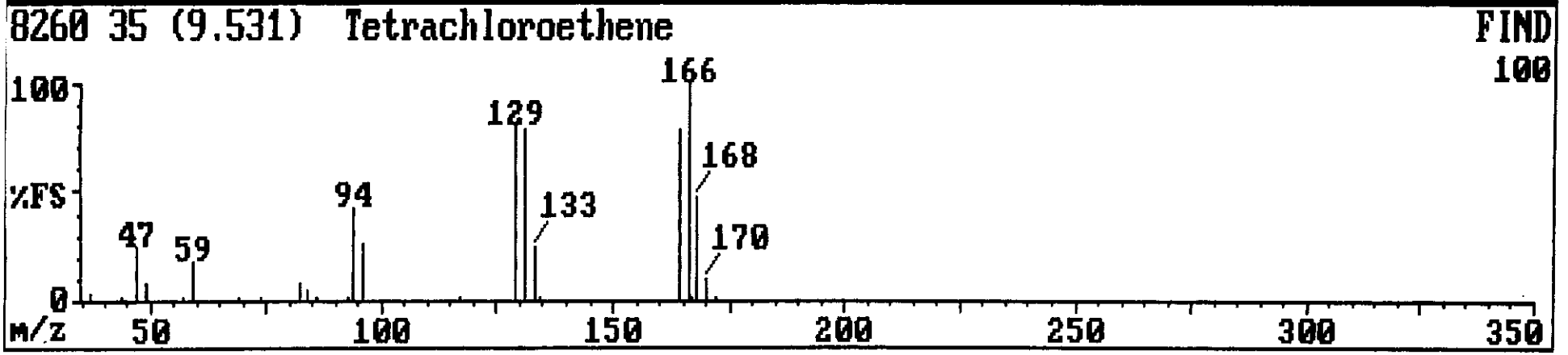
254

24-Aug-98 09:15 Triangle Laboratories, Inc. (919) 544-5729

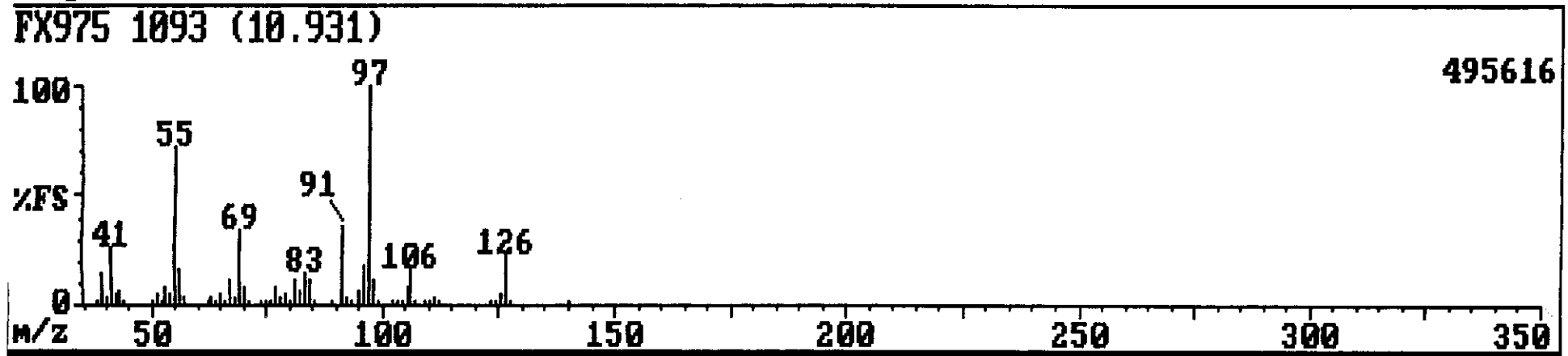
Sample: T-V-2-1-A,B T/TC 214-27-5A,B TLI#46323 Instrument F

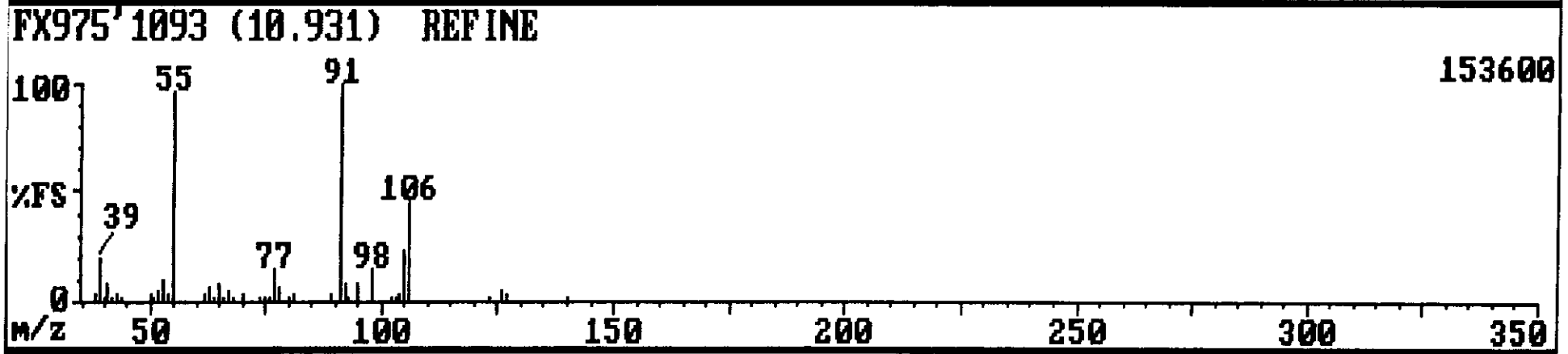


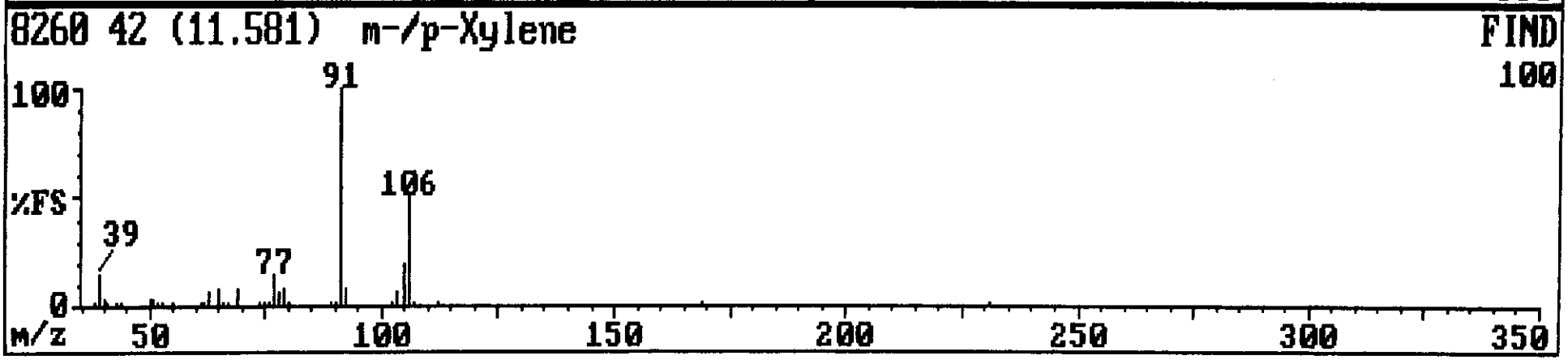




24-Aug-98 09:15 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-2-1-A,B T/TC 214-27-5A,B TLI#46323 Instrument F



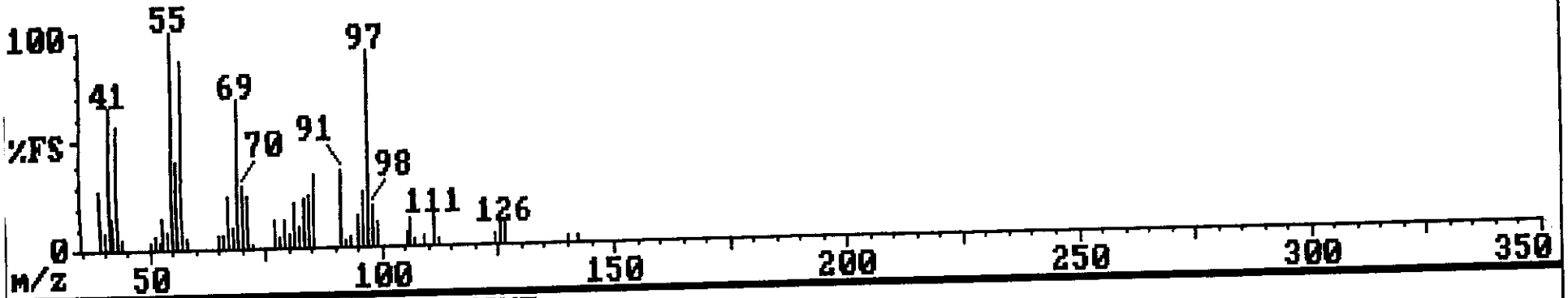




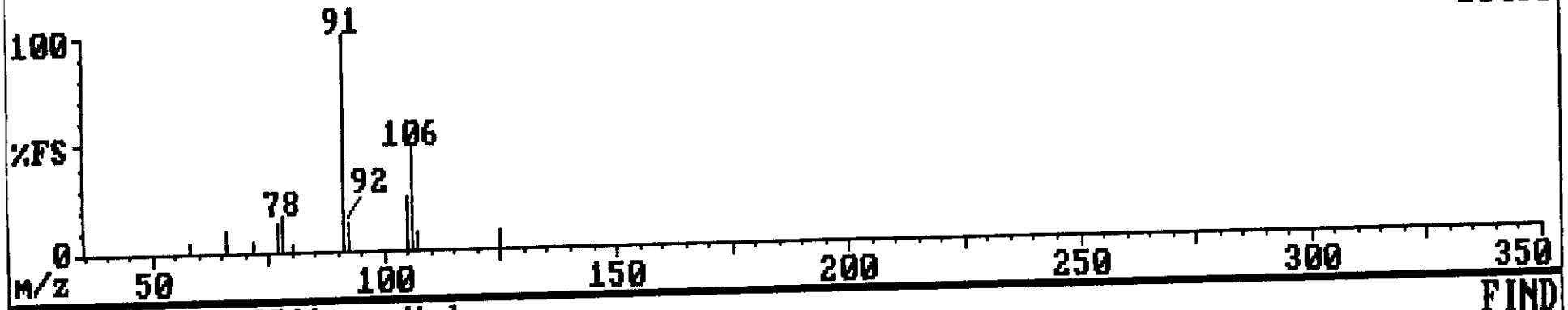
24-Aug-98 09:15 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-1-A,B T/TC 214-27-5A,B TLI#46323 Instrument F

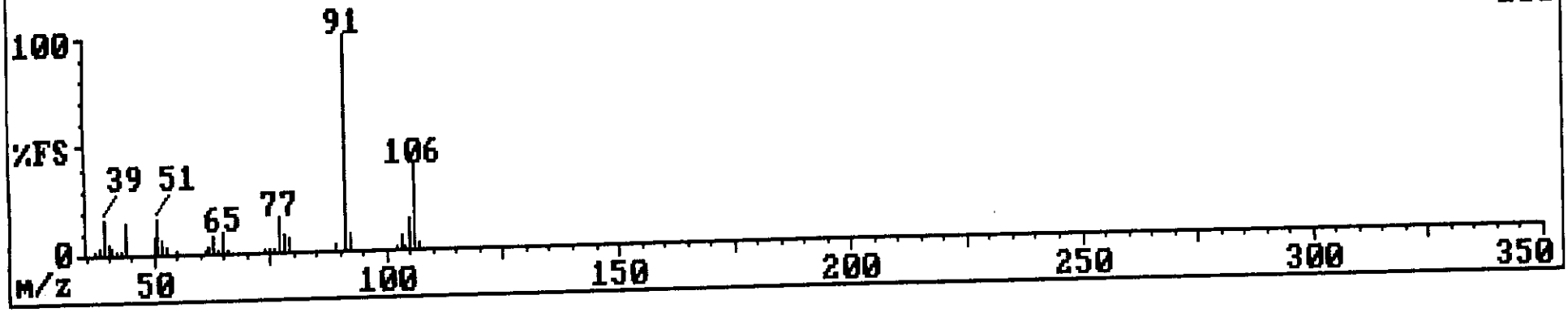
FX975 1164 (11.641) 77824

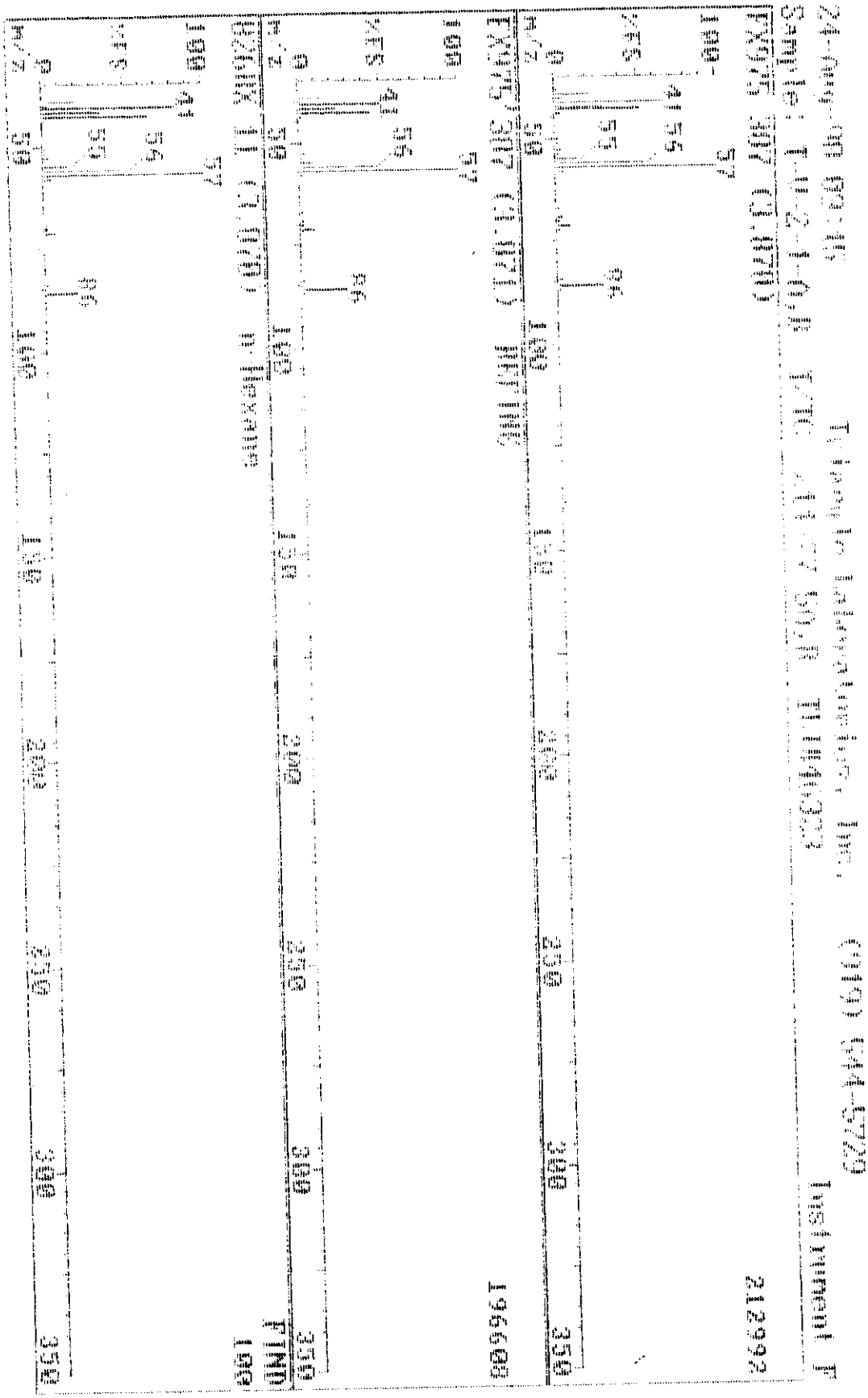


FX975 1164 (11.641) REFINE 20480



8260 43 (12.321) o-Xylene FIND 100





261

Pacific Environmental Services

Project Number: 46323
Sample File: FX976

Method 8260 VOST
Sample ID: T-V-2-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-6A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.32		
Chloromethane	0.092		1.09		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.035	J	1.66		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.011	J	2.07		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.093		2.79		0.05
Acetone	0.232		2.87		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride		U		0.001	0.05
Acrylonitrile		U		0.024	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.312		4.74		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.09		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.238		5.54		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: FX976

Method 8260 VOST
Sample ID: T-V-2-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-6A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.007	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.247		8.12		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.39		
Tetrachloroethene	0.035	J	8.96		0.05
2-Hexanone		U		0.010	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.069		10.72		0.05
m-/p-Xylene	0.428		10.95		0.10
o-Xylene	0.119		11.68		0.05
Styrene	0.052		11.73		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.81		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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264

Pacific Environmental Services

Project Number: 46323
Sample File: FX976

Method 8260 VOST
Sample ID: T-V-2-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-6A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.212	5.20	1	85
Toluene-d_8	0.268	8.03	2	107
4-Bromofluorobenzene	0.316	12.70	2	126

Reviewed by Pat Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX976

Method 8260 VOST
Sample ID: T-V-2-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-6A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.32		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.022	J	3.63		0.25
n-Hexane	0.176	J	3.90		0.25
1,2-Epoxybutane		U		0.029	0.25
Iso-Octane	0.016	J	5.70		0.25
1,4-Difluorobenzene		IS 2	6.09		
Ethyl acrylate		U		0.008	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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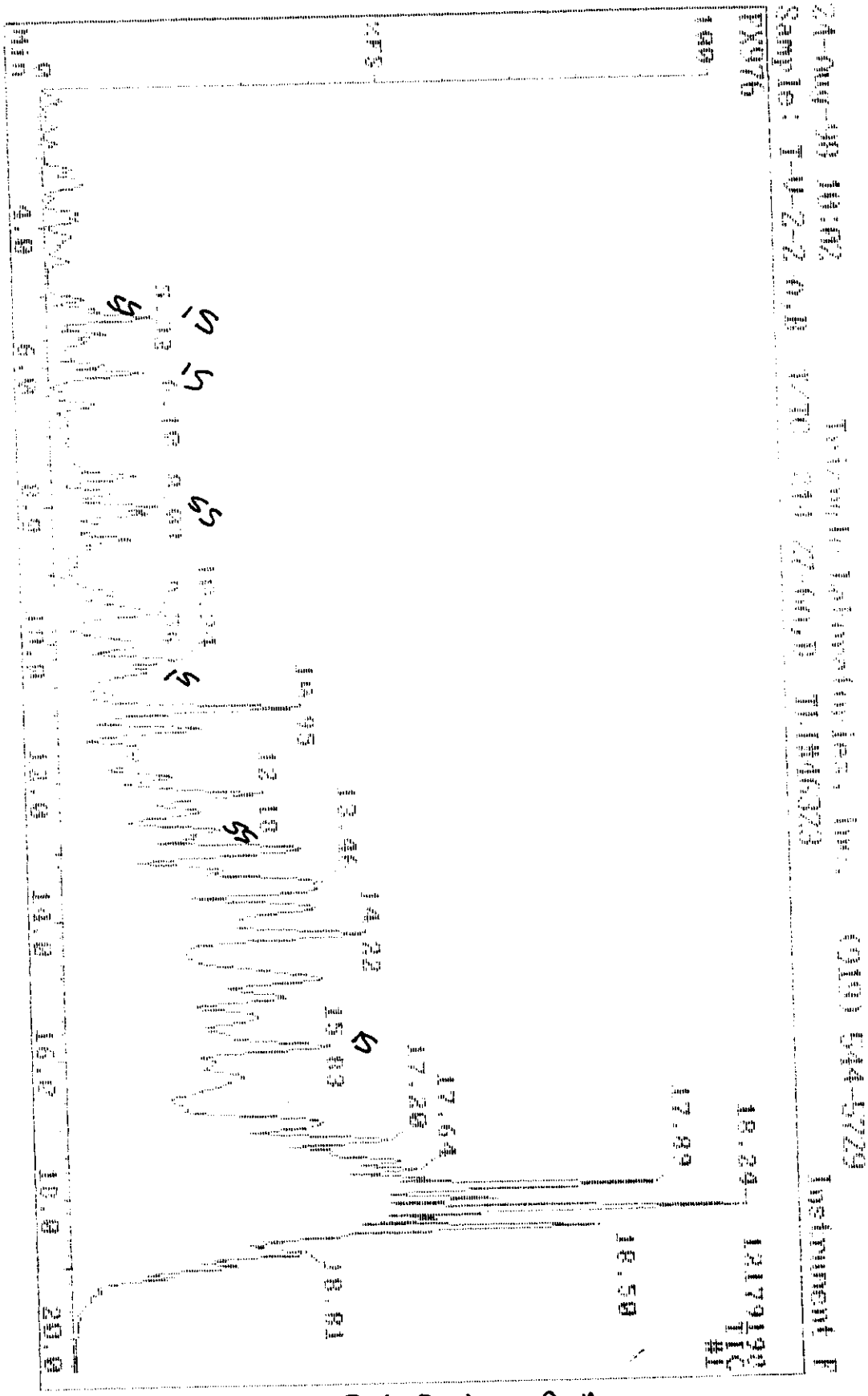
266



Data Review: PAB
Date: 8/24/98

196794 — (M) PAB — 1.09

117504 — (M) PAB — 2.07

(P) PAB

(P) PAB

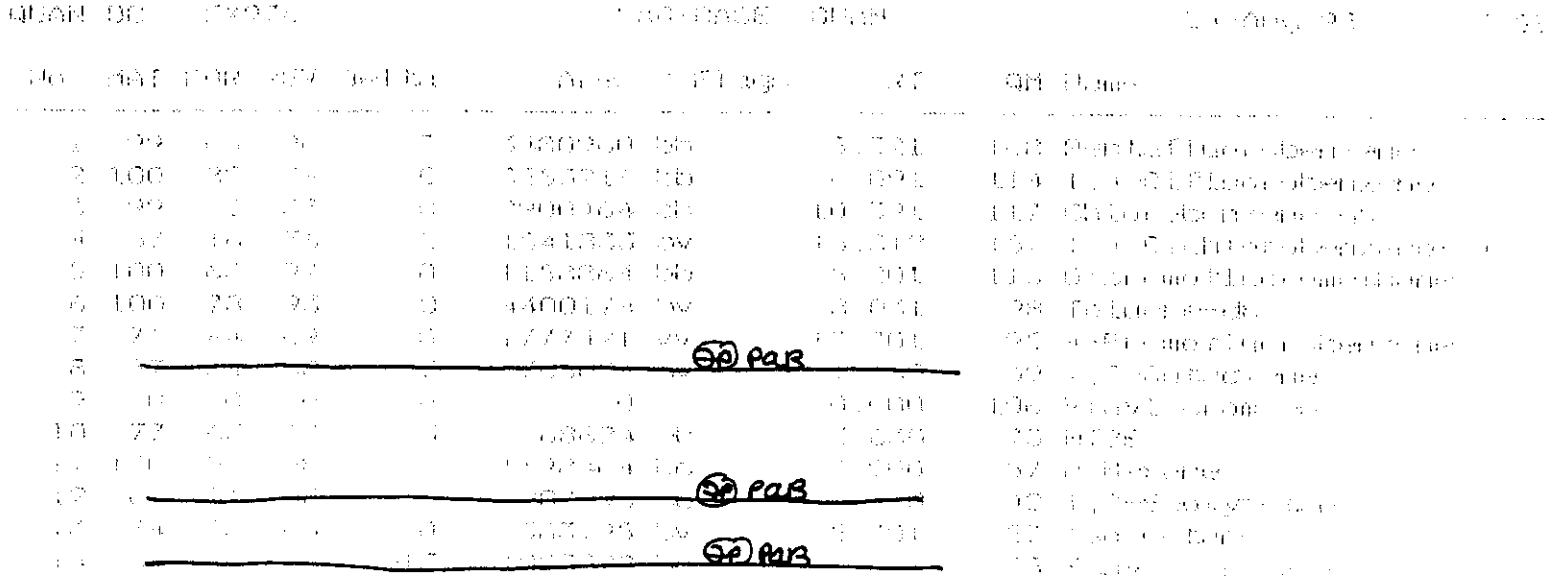
(P) PAB

Data Review: PAB
Date: 8/24/98

560928 — (N) PAB

11.73

269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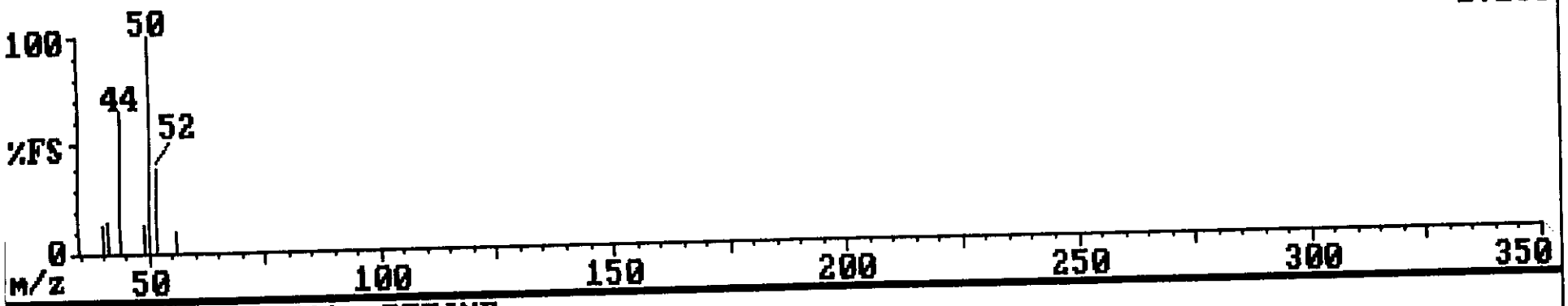
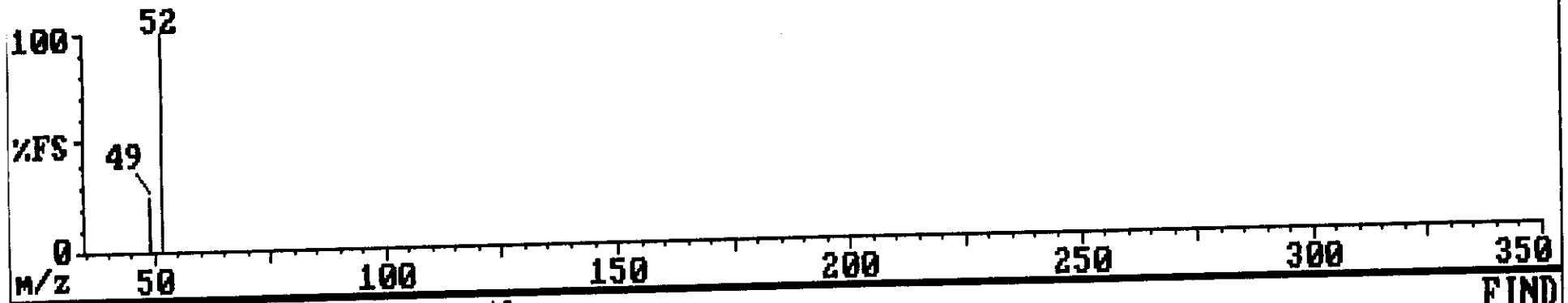
24-Aug-98 10:02 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-2-2-A,B T/TC 214-27-6A,B TLI#46323 Instrument F

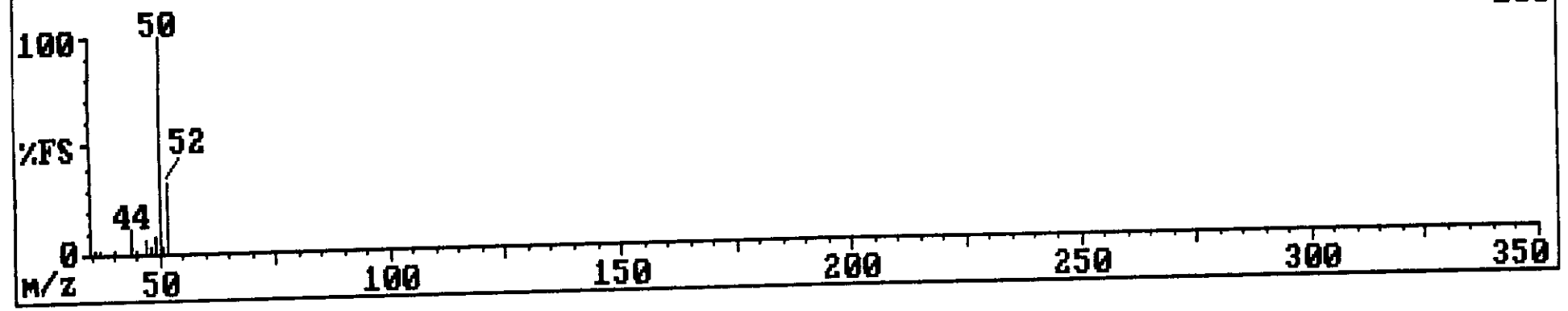
FX976 109 (1.090) 27136



FX976'109 (1.091) REFINE 7616



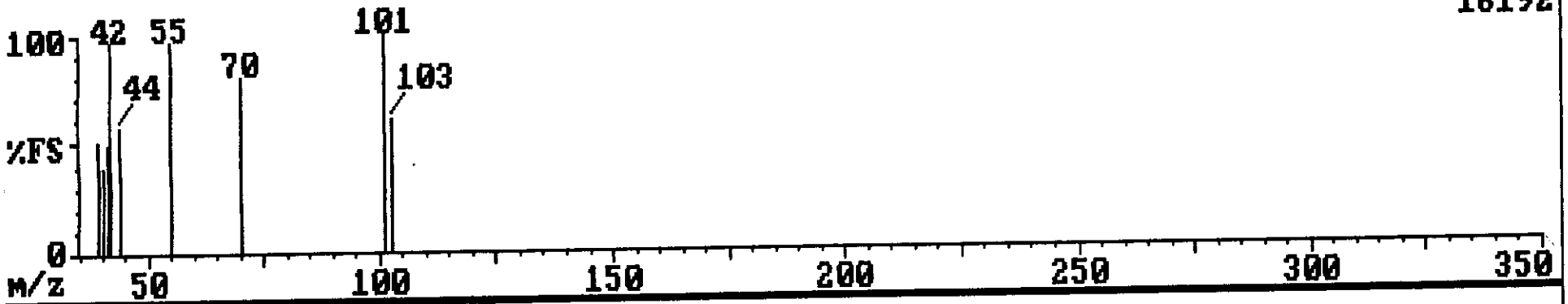
8260 9 (1.230) Chloromethane FIND 100



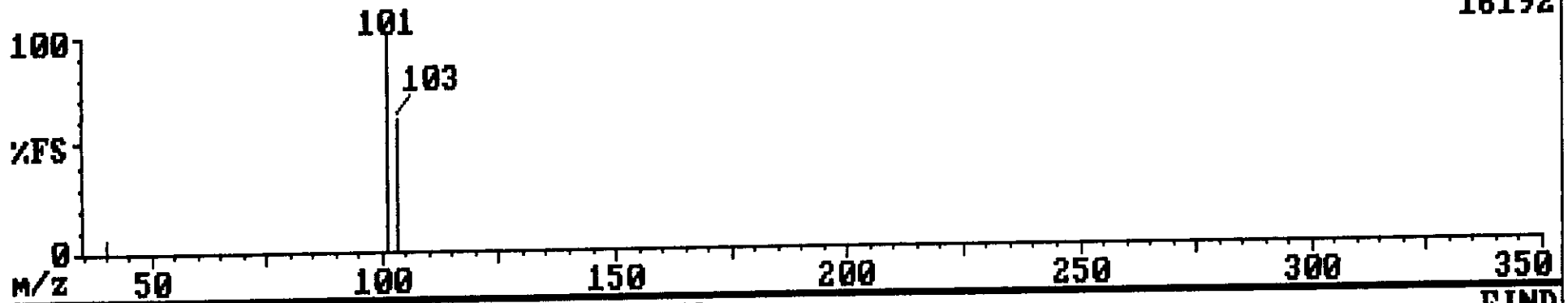
272

24-Aug-98 10:02 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-2-2-A,B T/TC 214-27-6A,B TLI#46323 Instrument F

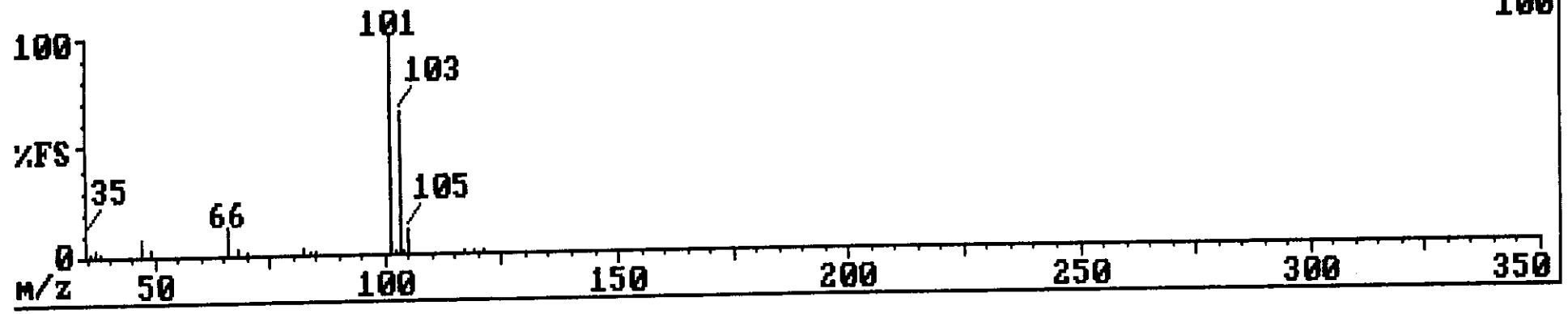
FX976 207 (2.070) 16192



FX976'207 (2.071) REFINE 16192

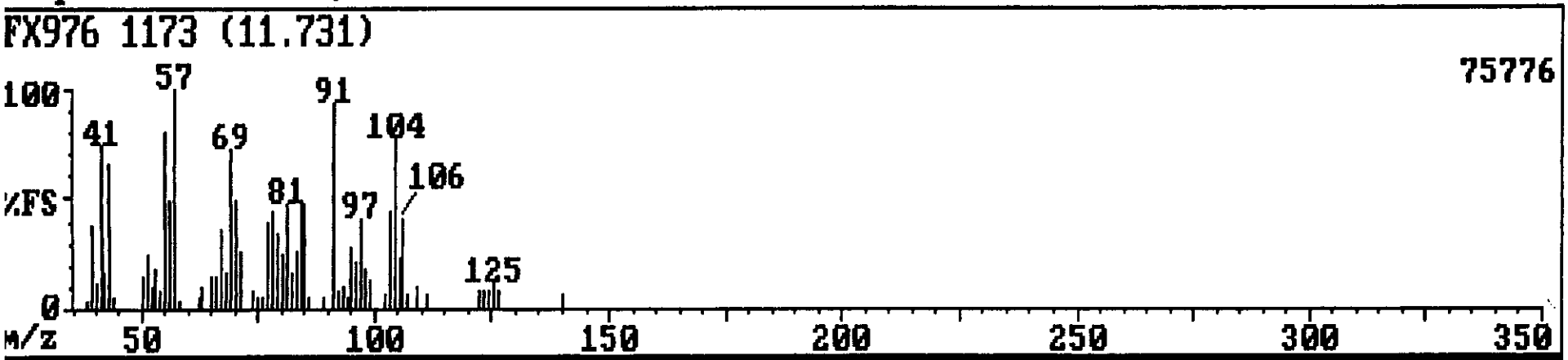


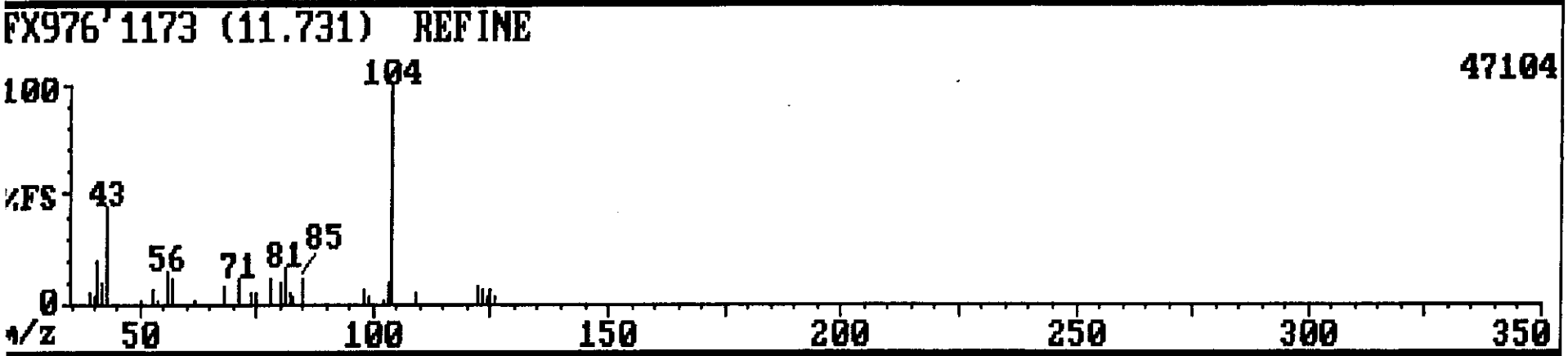
8260 13 (2.300) Trichlorofluoromethane FIND 100

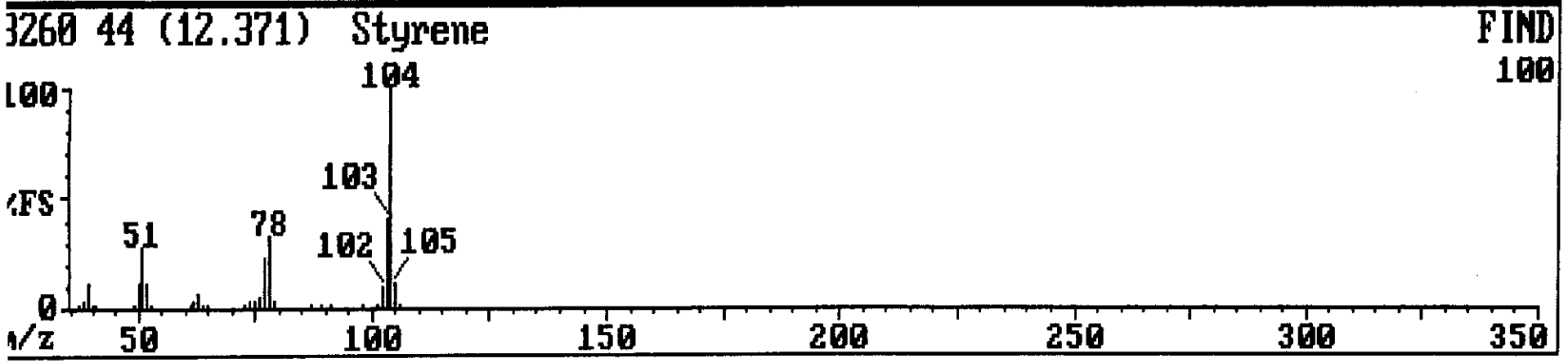


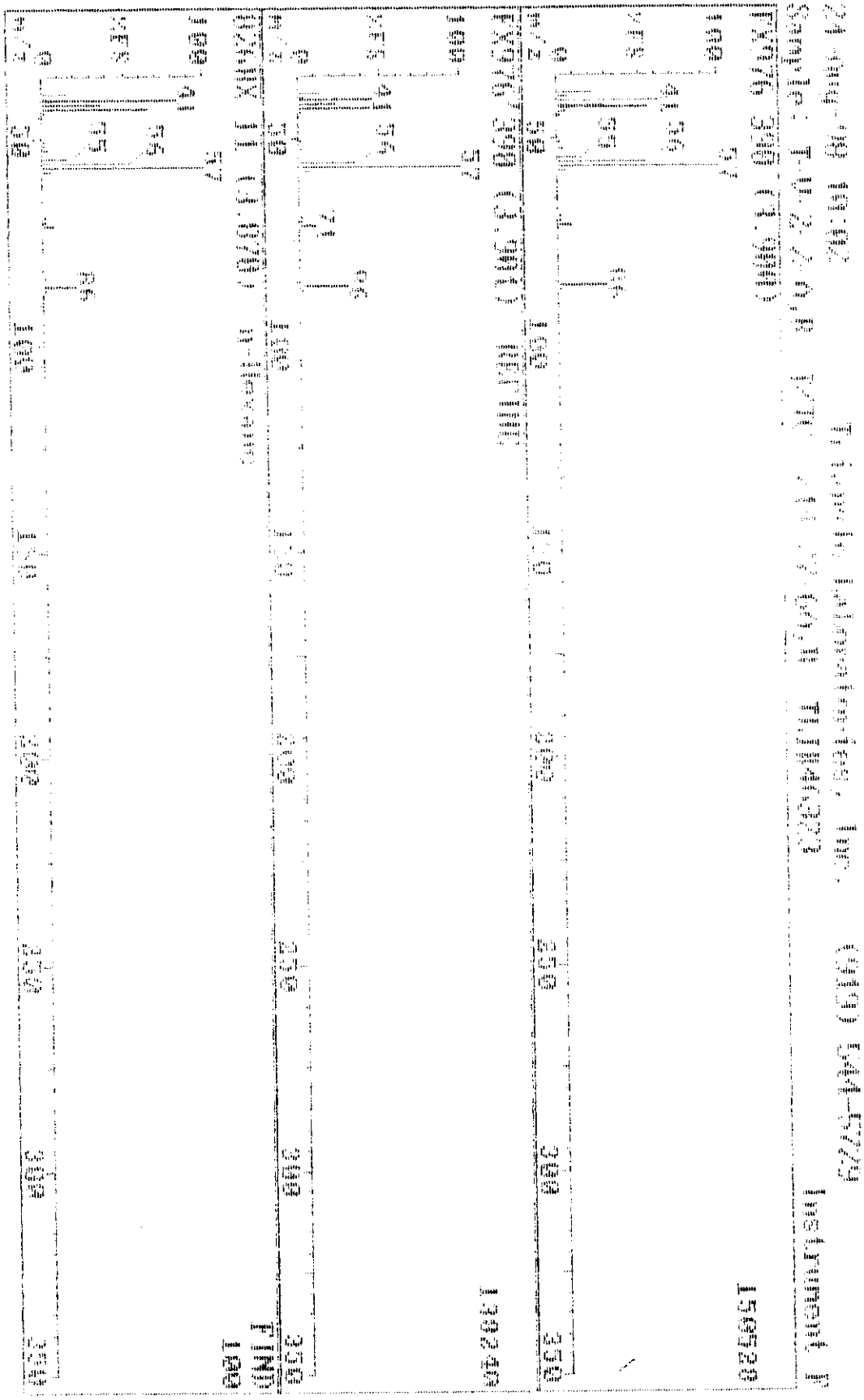
24-Aug-98 10:02 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-2-A,B T/TC 214-27-6A,B TLI#46323 Instrument F





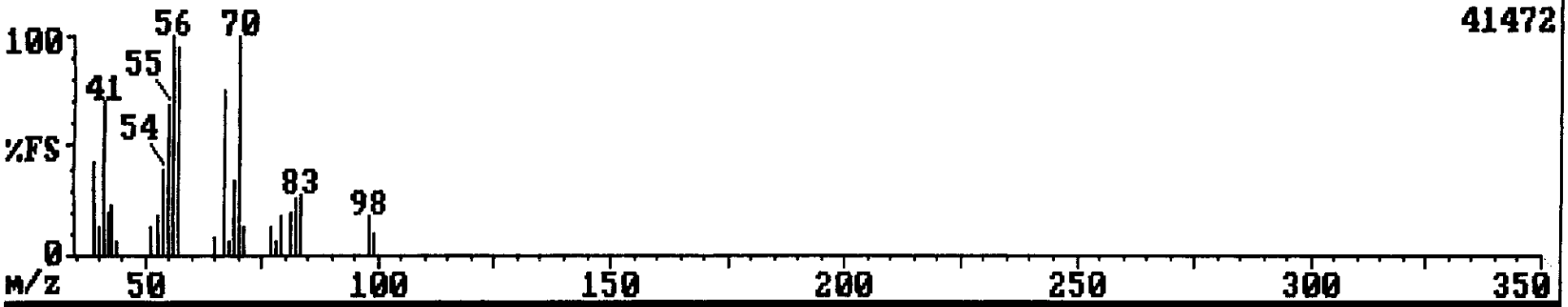




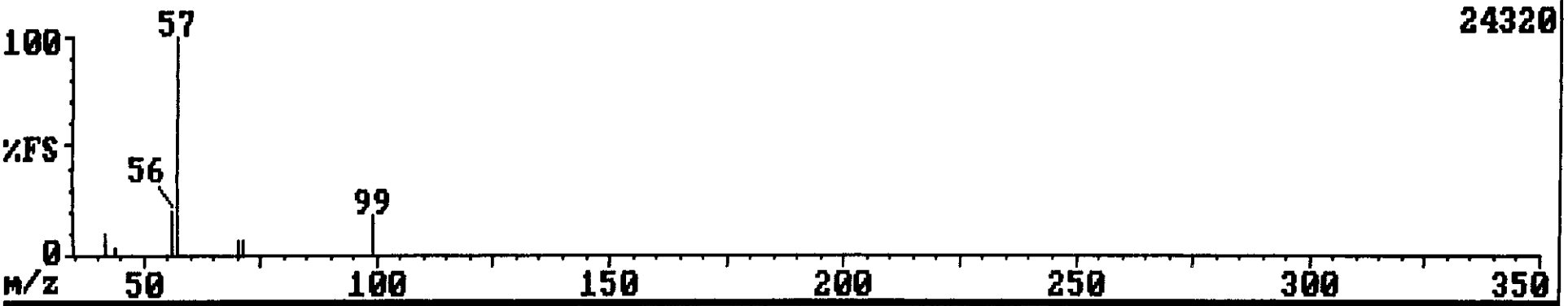
24-Aug-98 10:02 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-2-A,B T/TC 214-27-6A,B TLI#46323 Instrument F

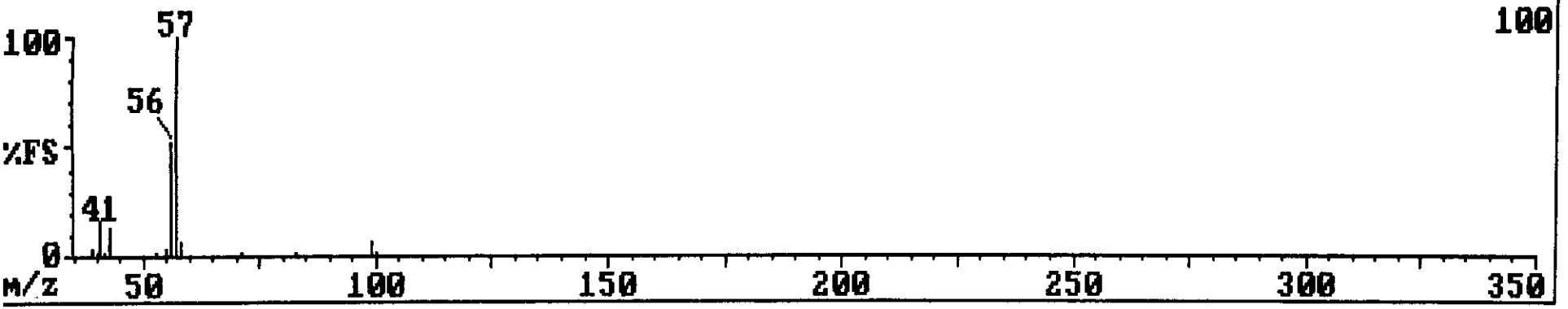
FX976 570 (5.701) 41472



FX976 570 (5.701) REFINE 24320



MASTER 32 (6.110) Isooctane FIND



Pacific Environmental Services

Project Number: 46323
Sample File: FX977

Method 8260 VOST
Sample ID: T-V-2-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-7A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.042	J	1.08		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.035	J	2.05		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.026	J	2.77		0.05
Acetone	0.137		2.87		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.081		3.26		0.05
Acrylonitrile		U		0.021	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.161		4.73		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.06		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.156		5.51		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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287

Pacific Environmental Services

Project Number: 46323 | **Method 8260 VOST**
Sample File: FX977 | **Sample ID: T-V-2-3-A,B T/TC**

Client Project: R012.001 | **Date Received: 07/29/98** | **Response File: ICALF821**
TLI ID: 214-27-7A,B
Date Analyzed : 08/24/98

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.218		8.08		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.33		
Tetrachloroethene	0.035	J	8.92		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.050		10.66		0.05
m-/p-Xylene	0.255		10.89		0.10
o-Xylene	0.088		11.62		0.05
Styrene	0.038	J	11.68		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.70		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: FX977

Method 8260 VOST
Sample ID: T-V-2-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-7A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.208	5.17	1	83
Toluene-d_8	0.261	7.99	2	104
4-Bromofluorobenzene	0.297	12.64	2	119

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX977

Method 8260 VOST
Sample ID: T-V-2-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-7A,B

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.039	J	3.60		0.25
n-Hexane	0.145	J	3.88		0.25
1,2-Epoxybutane		U		0.025	0.25
Iso-Octane	0.019	J	5.66		0.25
1,4-Difluorobenzene		IS 2	6.06		
Ethyl acrylate		U		0.007	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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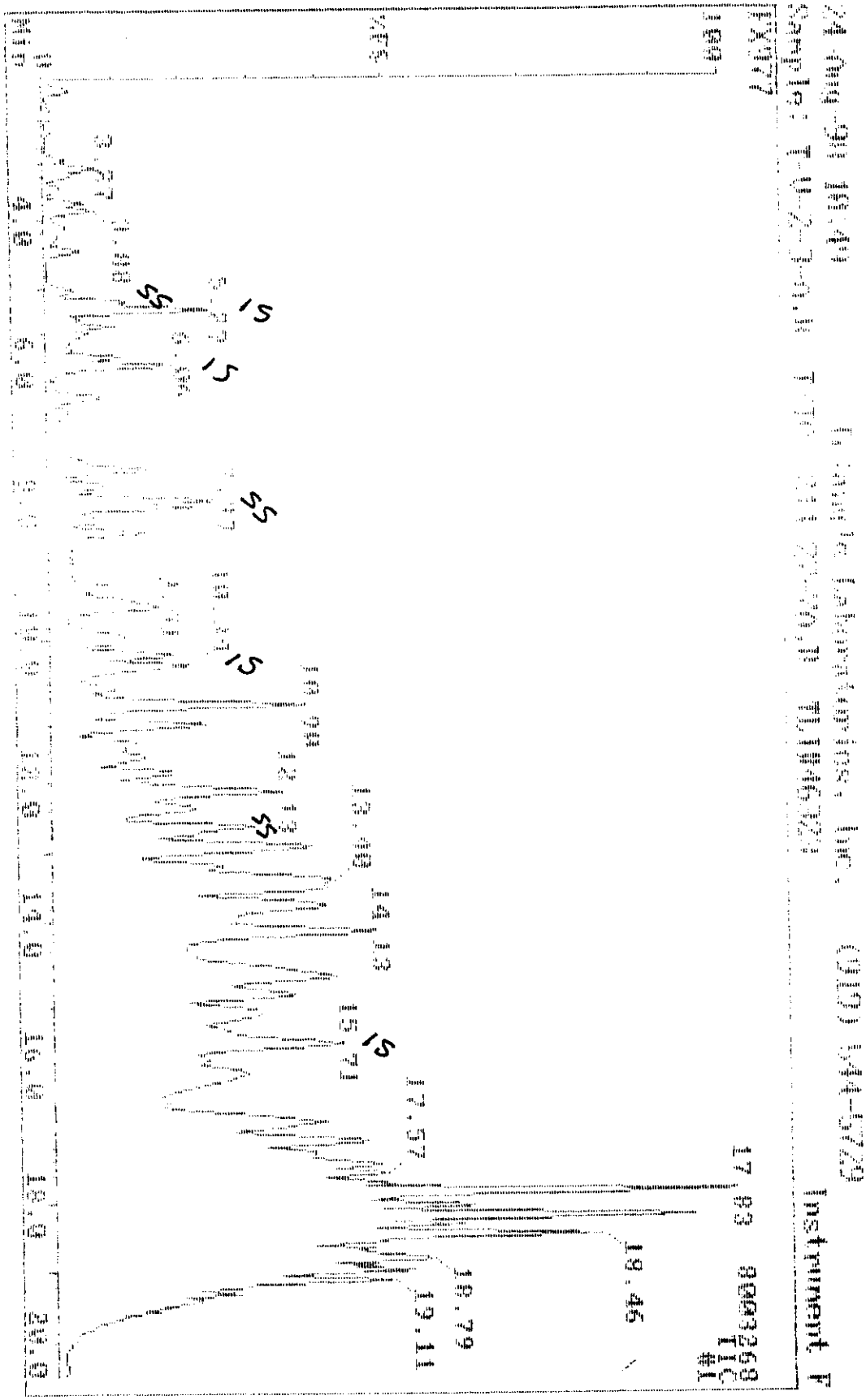

Data Review: PAB
Date: 8/24/98

GUAM 08 - F3277 LAB-PACE GUAM

No	MAT	FOR	REV	Delta	Qualifiers	PF	CAS Number
1	100	99	99	-1		1.000	
2	100	91	96	-1		1.000	
3	100	99	99	-1		1.000	
4	96	81	85	-11		1.000	
5	100	99	99	-1		1.000	
6	100	97	98	-1		1.000	
7	99	96	98	-1		1.000	
8	0	0	0	0		0.000	
9	0	0	0	0		0.000	
10	0	0	0	0		0.000	
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18	0	0	0	0		0.000	
19	0	0	0	0		0.000	
20	98	96	96	-2		1.000	
21	0	0	0	0		0.000	
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29	0	0	0	0		0.000	
30	0	0	0	0		0.000	
31	100	97	98	0		1.000	
32	100	97	98	0		1.000	
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35	0	0	0	0		0.000	
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37	0	0	0	0		0.000	
38	0	0	0	0		0.000	
39	0	0	0	0		0.000	
40	0	0	0	0		0.000	
41	100	97	98	0		1.000	
42	0	0	0	0		0.000	
43	0	0	0	0		0.000	
44	0	0	0	0		0.000	
45	96	93	93	-3		1.000	
46	0	0	0	0		0.000	
47	0	0	0	0		0.000	
48	0	0	0	0		0.000	
49	0	0	0	0		0.000	
50	0	0	0	0		0.000	

102440 — (M) PAB — 1.08

128512 — (M) PAB — 2.05

Keep PAB

336352 — (M) PAB — 326

(M) PAB

(M) PAB

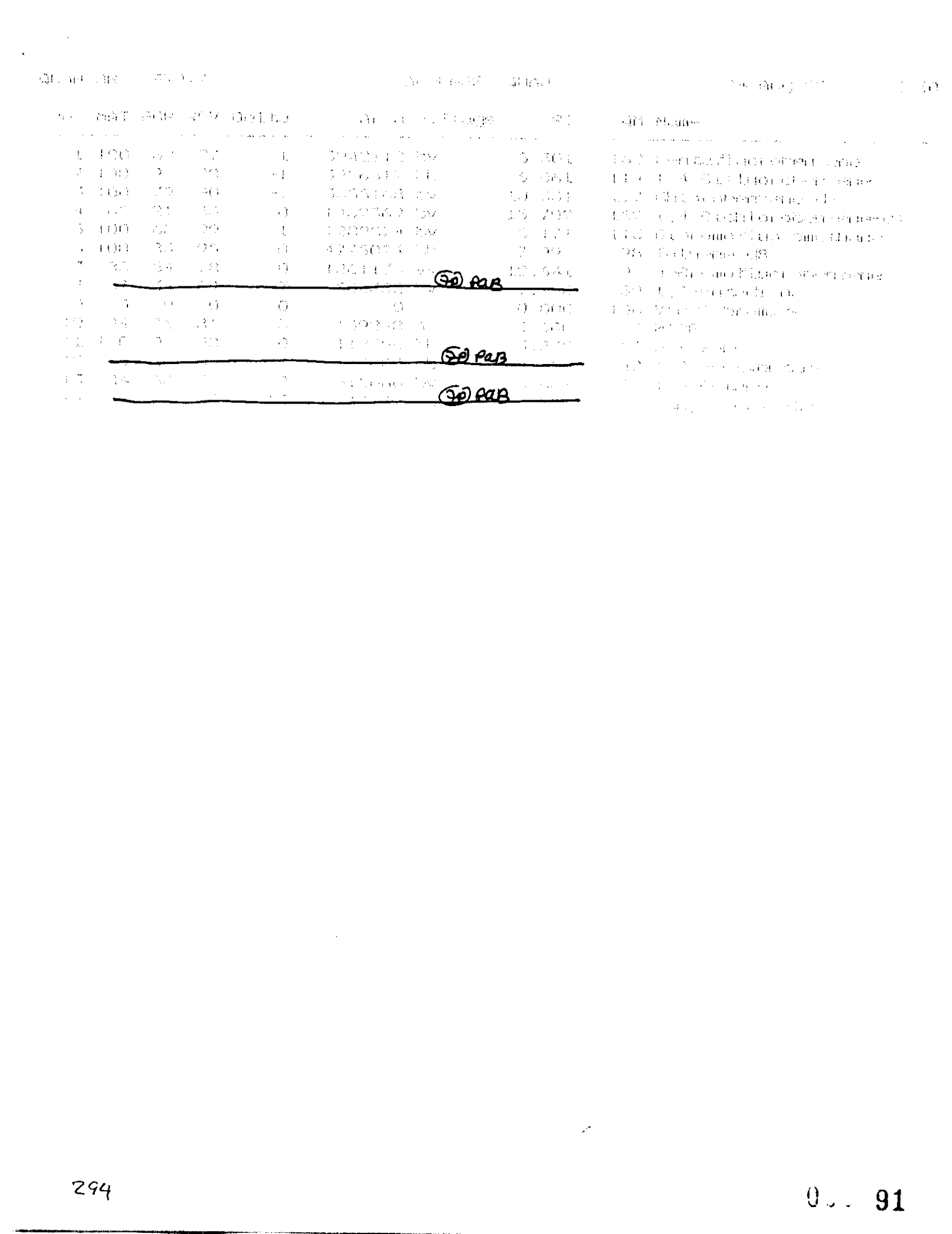
(M) PAB

No	CAS Number
1	Dichlorodifluoromethane
2	Chloromethane
3	Vinyl Chloride
4	Bromomethane
5	Chloroethane
6	Trichlorofluoromethane
7	Acetone
8	1,1-Dichloroethene
9	Methylene Chloride
10	Carbon Disulfide
11	trans-1,2-Dichloroethene
12	1,1-Dichloroethane
13	2-Butanone
14	cis-1,2-Dichloroethene
15	Chloroform
16	1,1,1-Trichloroethane
17	Carbon Tetrachloride
18	Benzene
19	1,2-Dichloroethane
20	Trichloroethene
21	1,2-Dichloropropane
22	Bromodichloromethane
23	4-Methyl-2-pentanone
24	Toluene
25	trans-1,3-Dichloropropene
26	1,1,2-Trichloroethane
27	Ethylmethacrylate
28	Tetrachloroethene
29	1,3-Dichloropropane
30	2-Hexanone
31	Dibromochloromethane
32	1,2-Dibromoethane
33	Chlorobenzene

Data Review: PAB
Date: 8/24/98

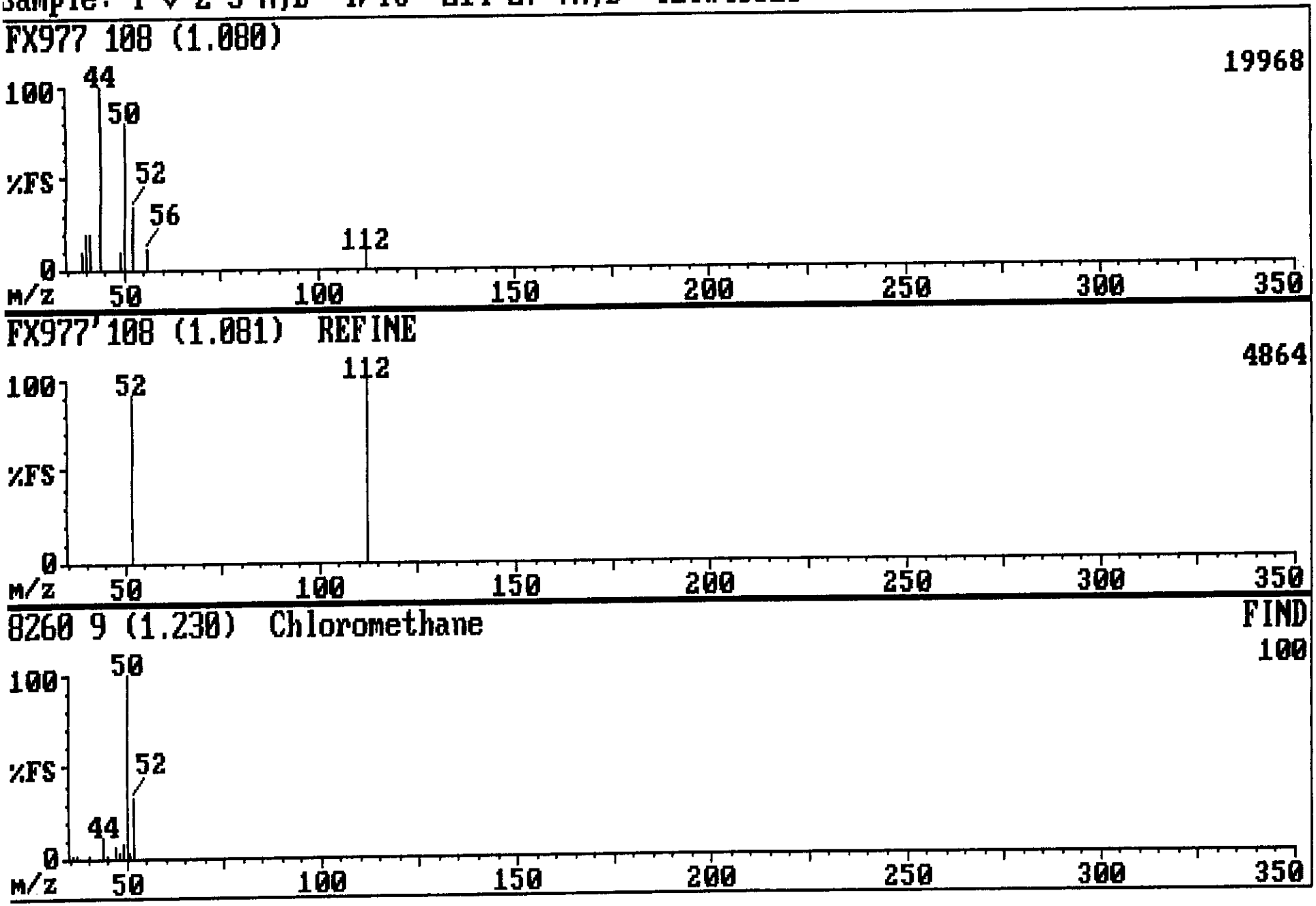
47454 → @ Pars

1168


PAB
PAB
PAB

24-Aug-98 10:49 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-3-A,B T/TC 214-27-7A,B TLI#46323 Instrument F



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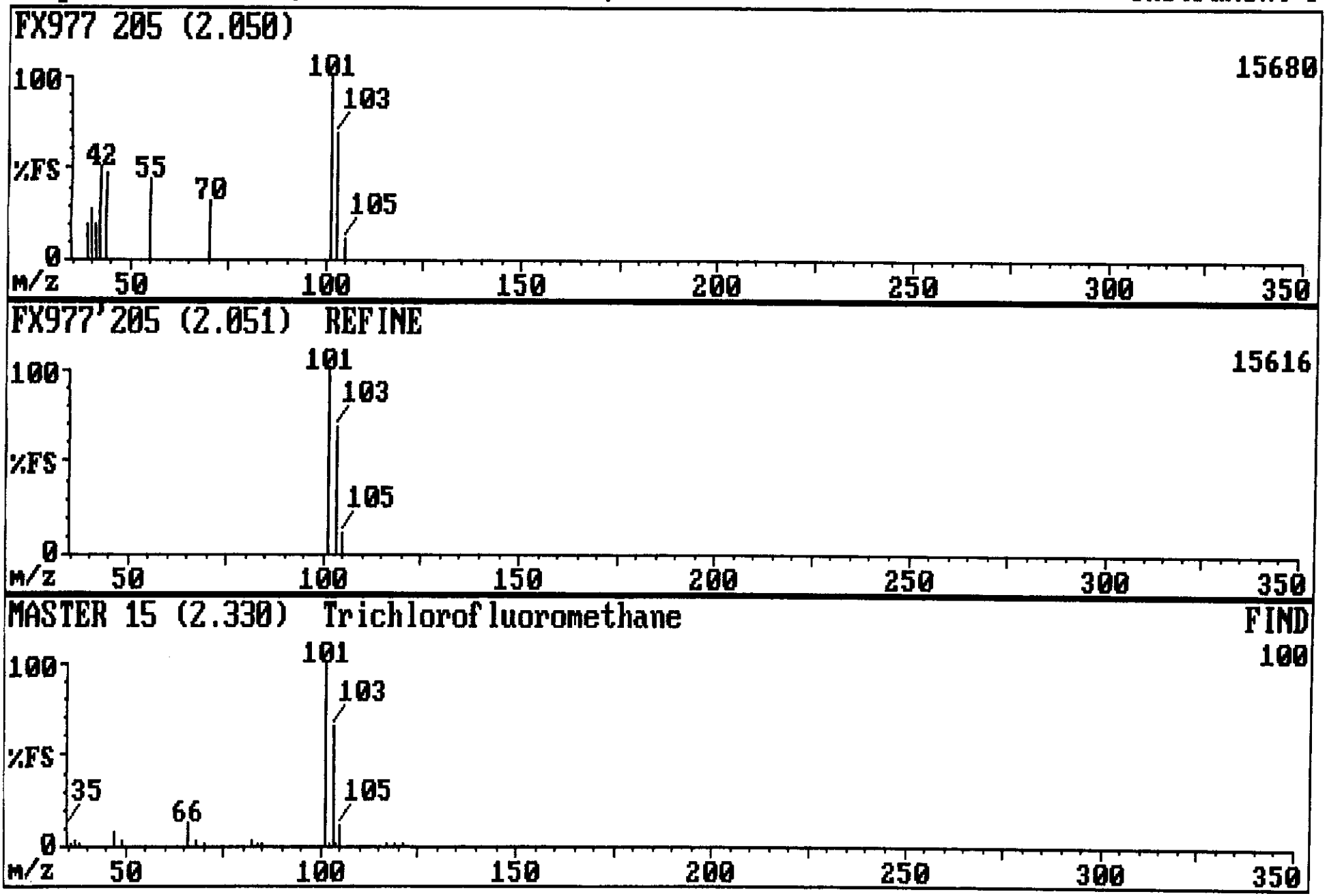
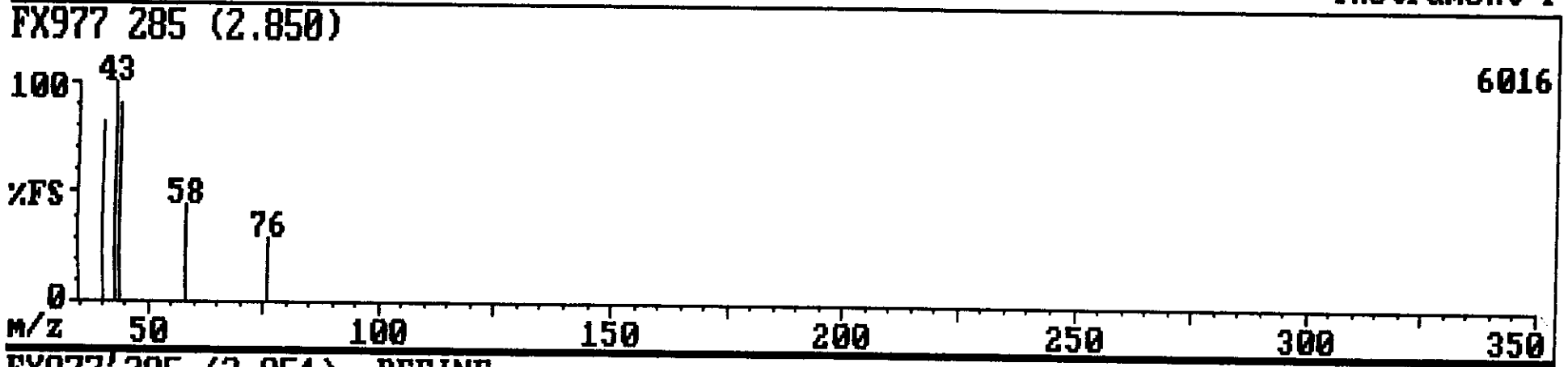
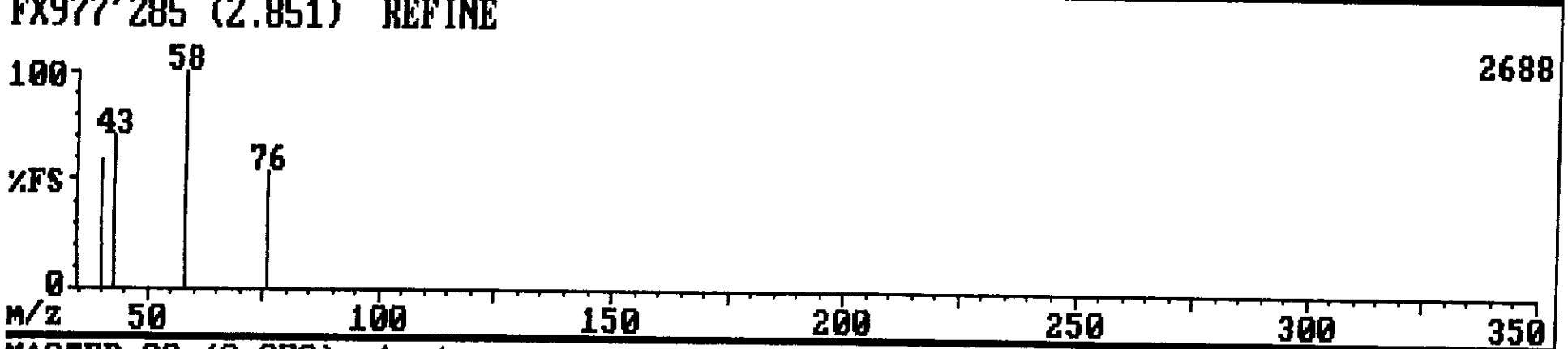
Sample: T-V-2-3-A,B T/TC 214-27-7A,B TLI#46323 Instrument F

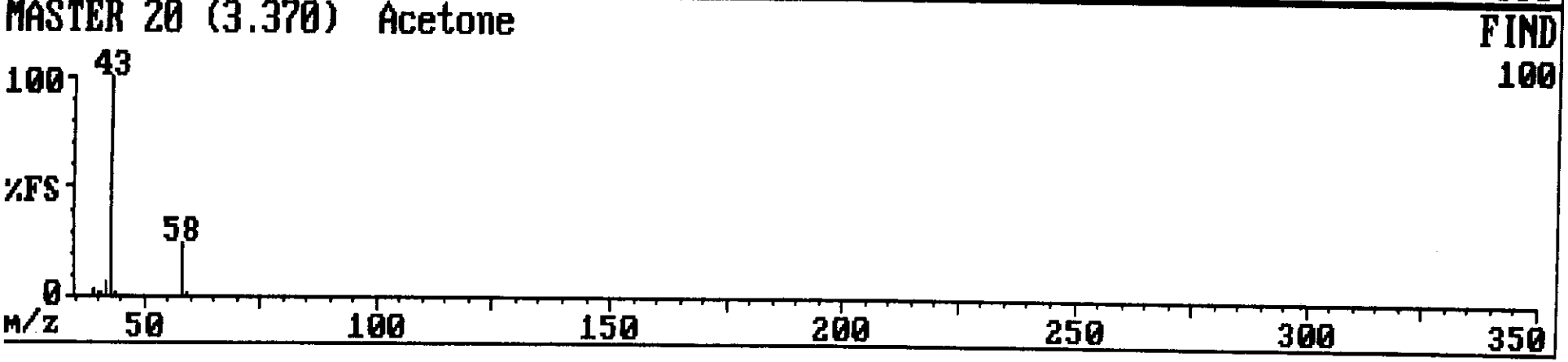


24-Aug-98 10:49 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-3-A,B T/TC 214-27-7A,B TLI#46323 Instrument F

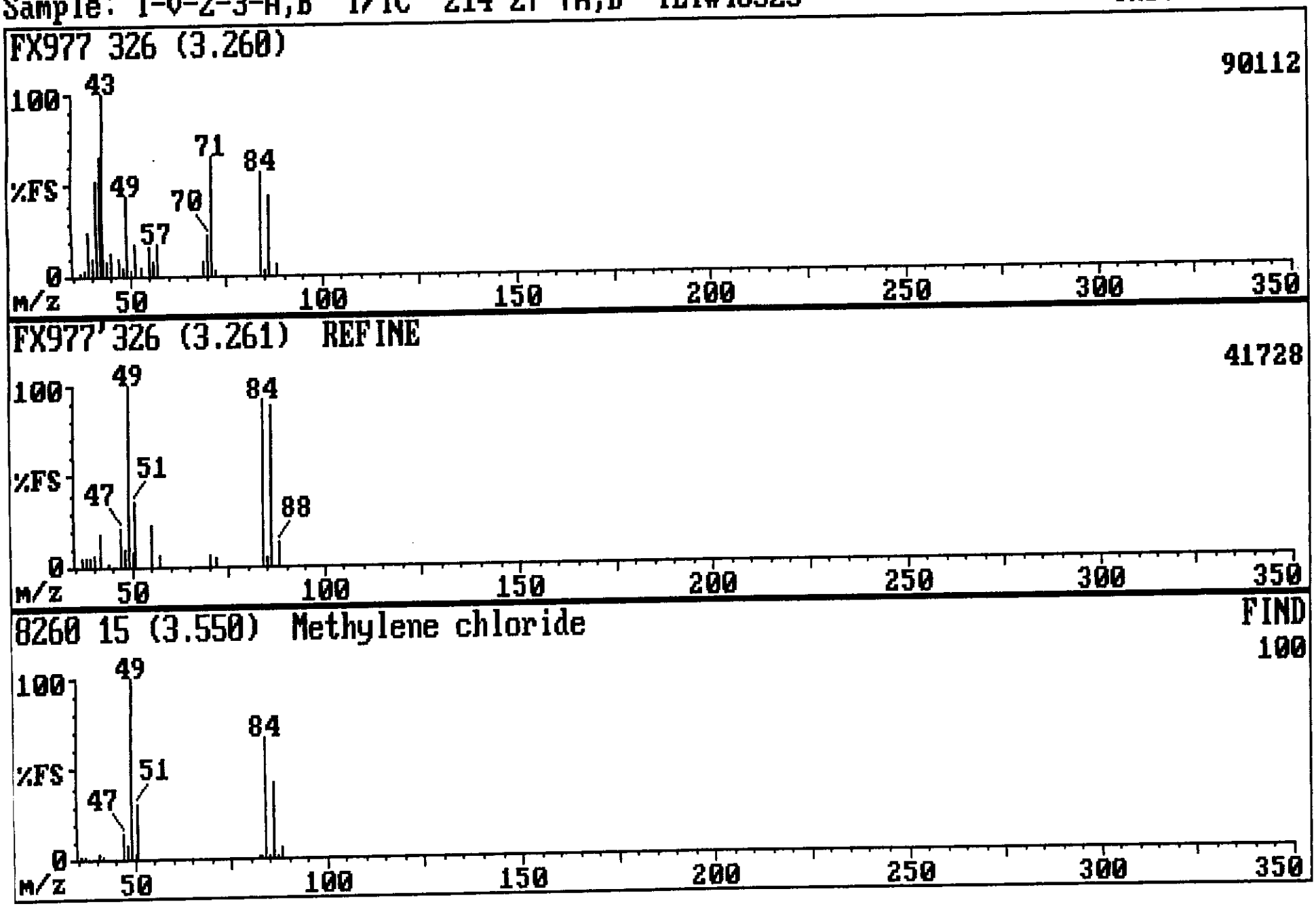






24-Aug-98 10:49 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-3-A,B T/TC 214-27-7A,B TLI#46323 Instrument F



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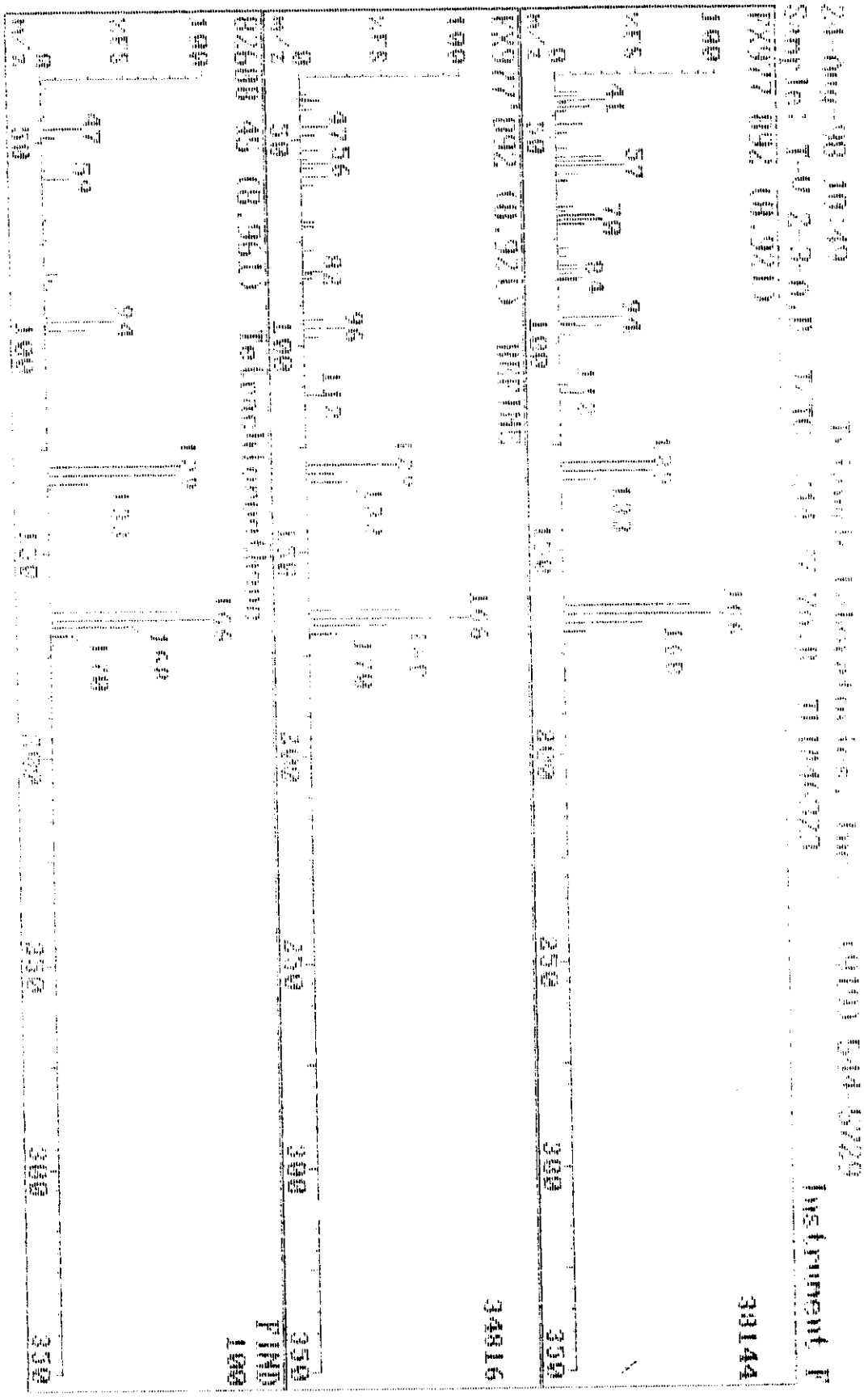

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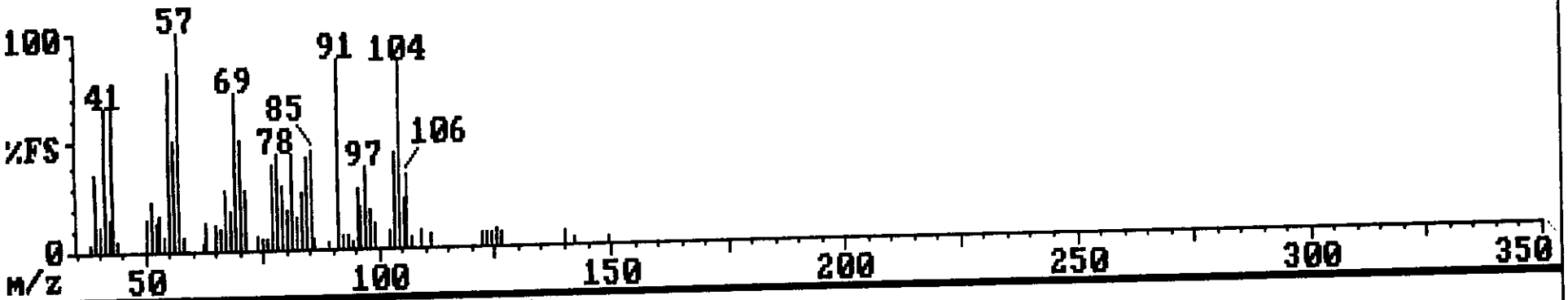
24-Aug-98 10:49 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-2-3-A,B T/TC 214-27-7A,B TLI#46323 Instrument F

FX977 1168 (11.681) 59136



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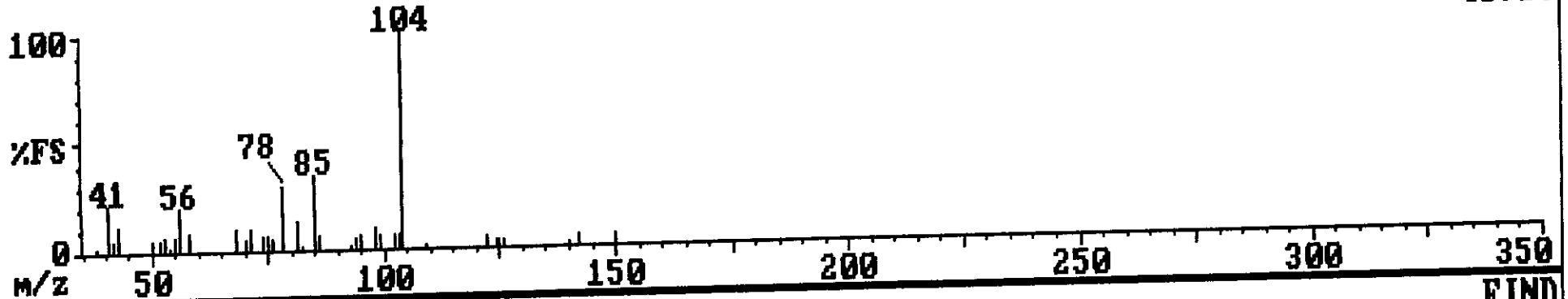
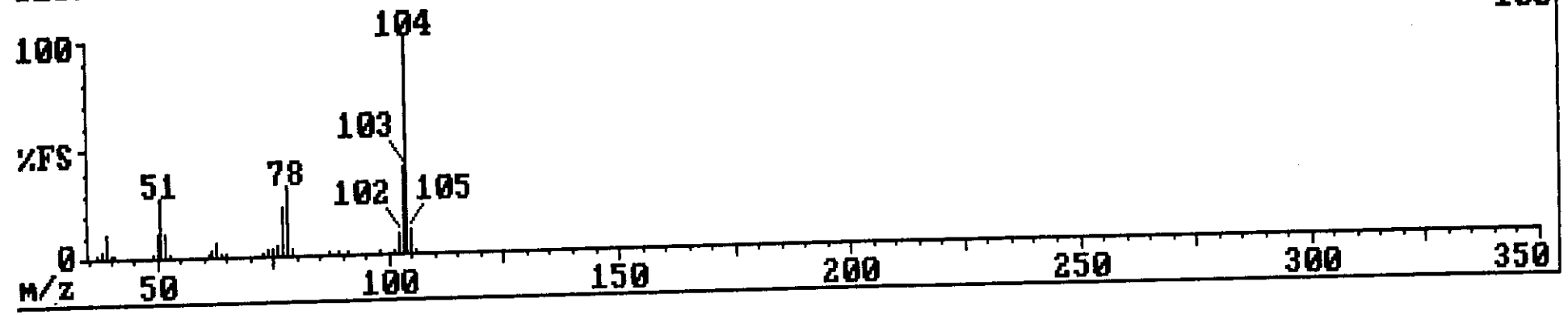
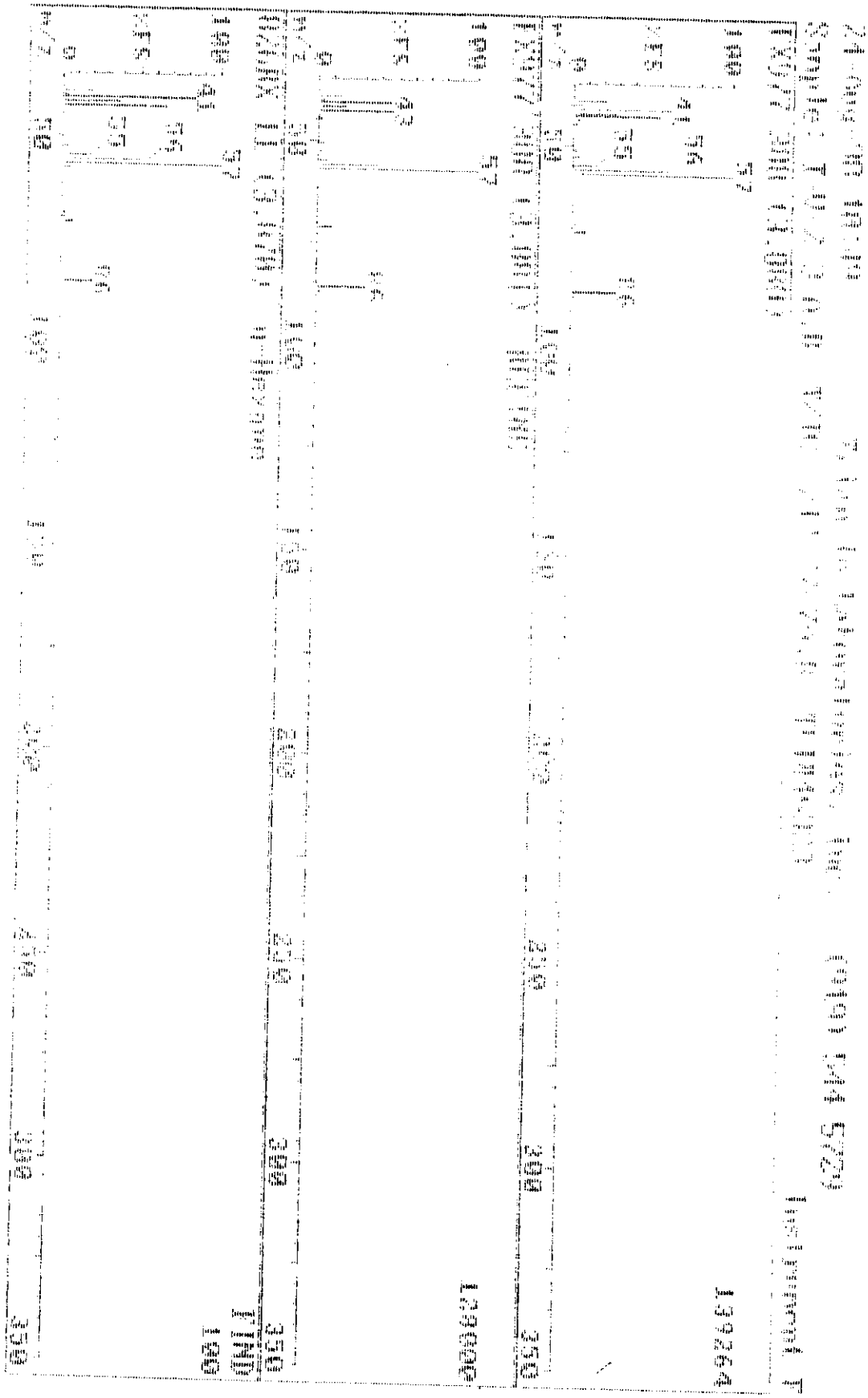


FIND
8260 44 (12.371) Styrene 100





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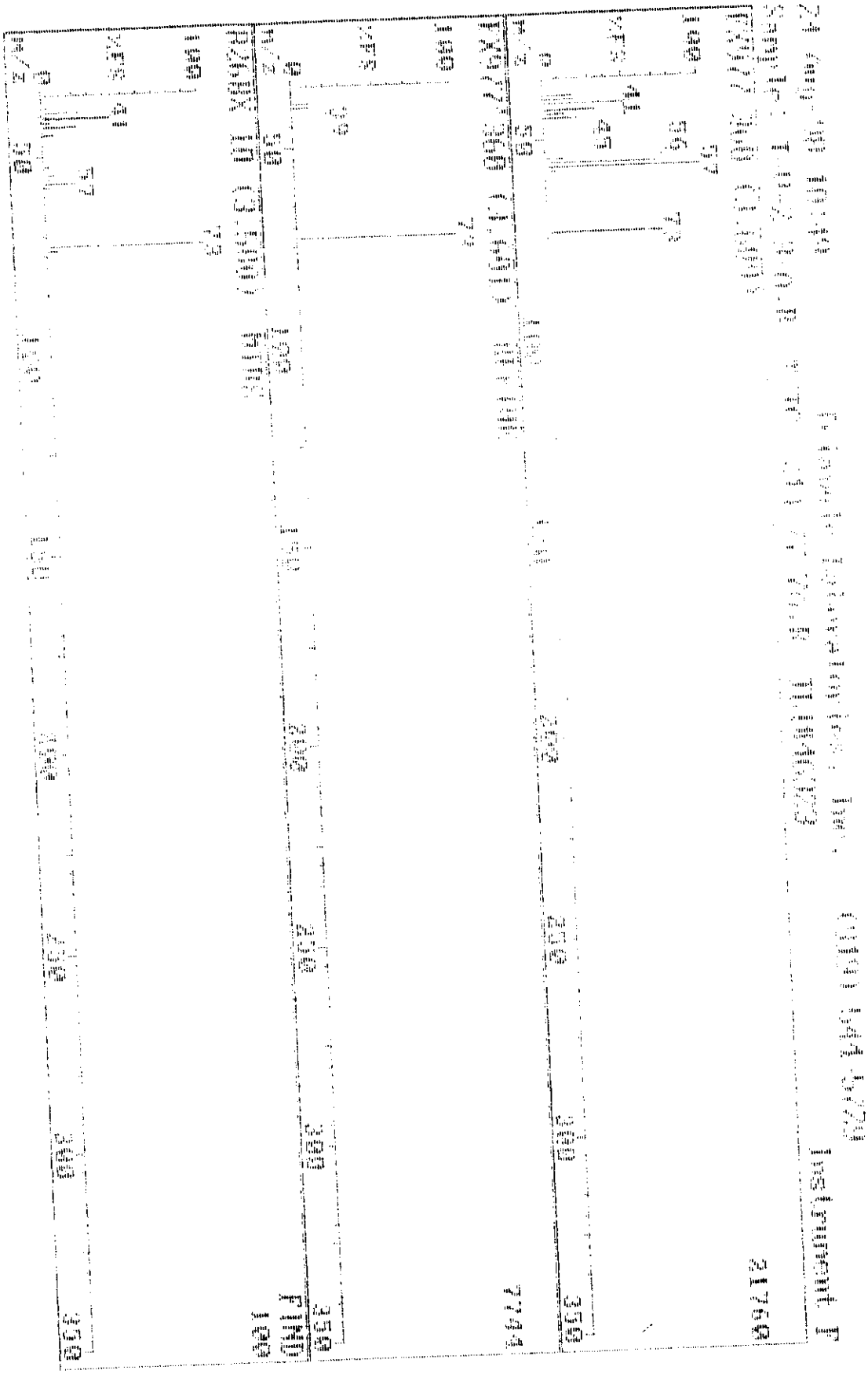

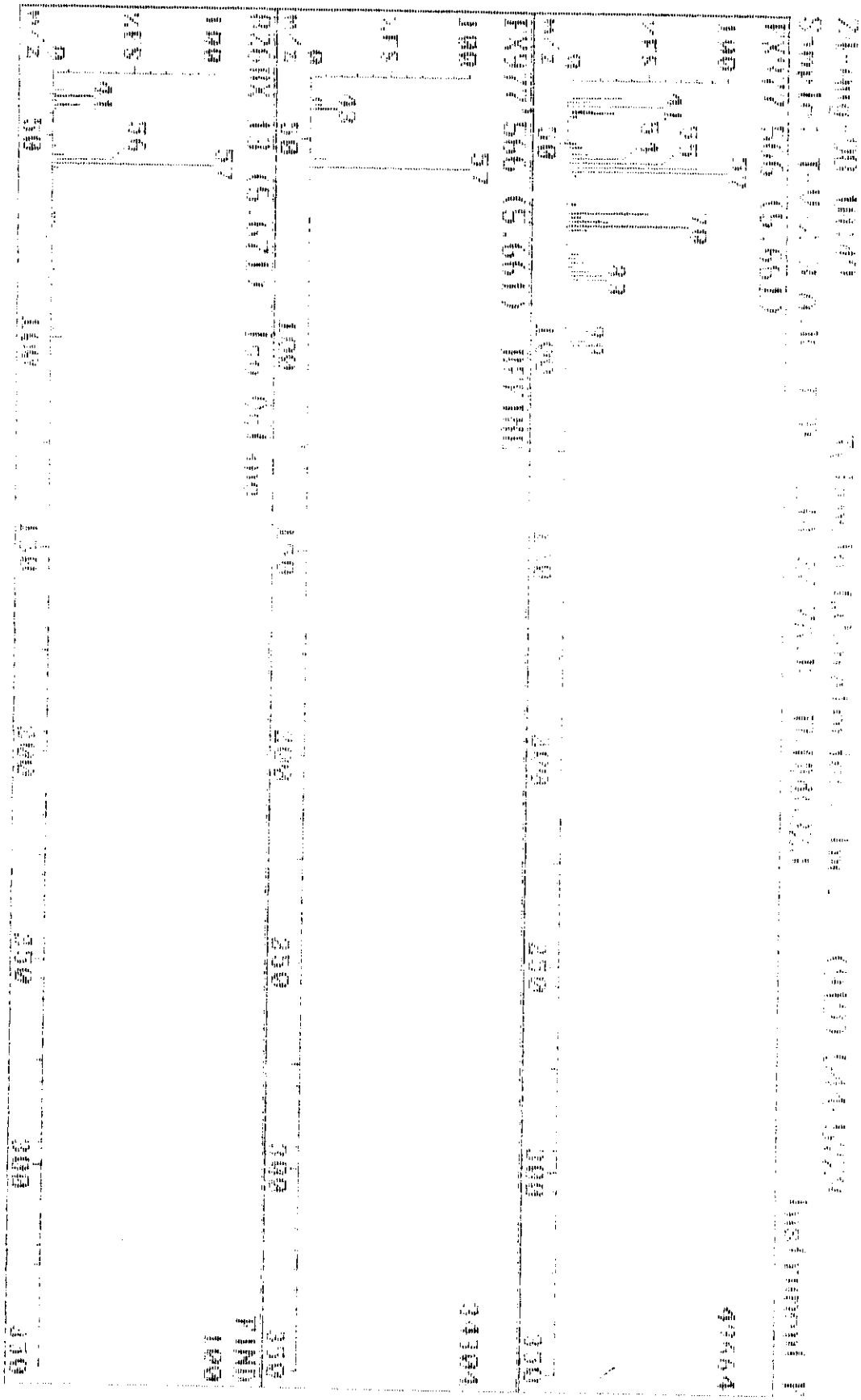

Pacific Environmental Services

Project Number: 46323
Sample File: FX978

Method 8260 VOST
Sample ID: T-V-2-4-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-8A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane	0.040	J	1.09		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.009	J	2.07		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.044	J	2.78		0.05
Acetone	0.296		2.86		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.064		3.27		0.05
Acrylonitrile		U		0.021	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.342		4.73		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.108		5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

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Method 8260 VOST
Sample ID: T-V-2-4-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-8A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.144		8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene	0.031	J	8.91		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.027	J	10.67		0.05
m-/p-Xylene	0.149		10.91		0.10
o-Xylene	0.042	J	11.63		0.05
Styrene	0.017	J	11.70		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.72		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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Pacific Environmental Services

Project Number: 46323
Sample File: FX978

Method 8260 VOST
Sample ID: T-V-2-4-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-8A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ng)	RT	IS Ref	%REC
Dibromofluoromethane	0.208	5.18	1	83
Toluene-d_8	0.259	8.00	2	104
4-Bromofluorobenzene	0.295	12.65	2	118

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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313

Pacific Environmental Services

Project Number: 46323
Sample File: FX978

Method 8260 VOST
Sample ID: T-V-2-4-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-8A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.036	J	3.61		0.25
n-Hexane	0.083	J	3.88		0.25
1,2-Epoxybutane		U		0.025	0.25
Iso-Octane	0.021	J	5.68		0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.007	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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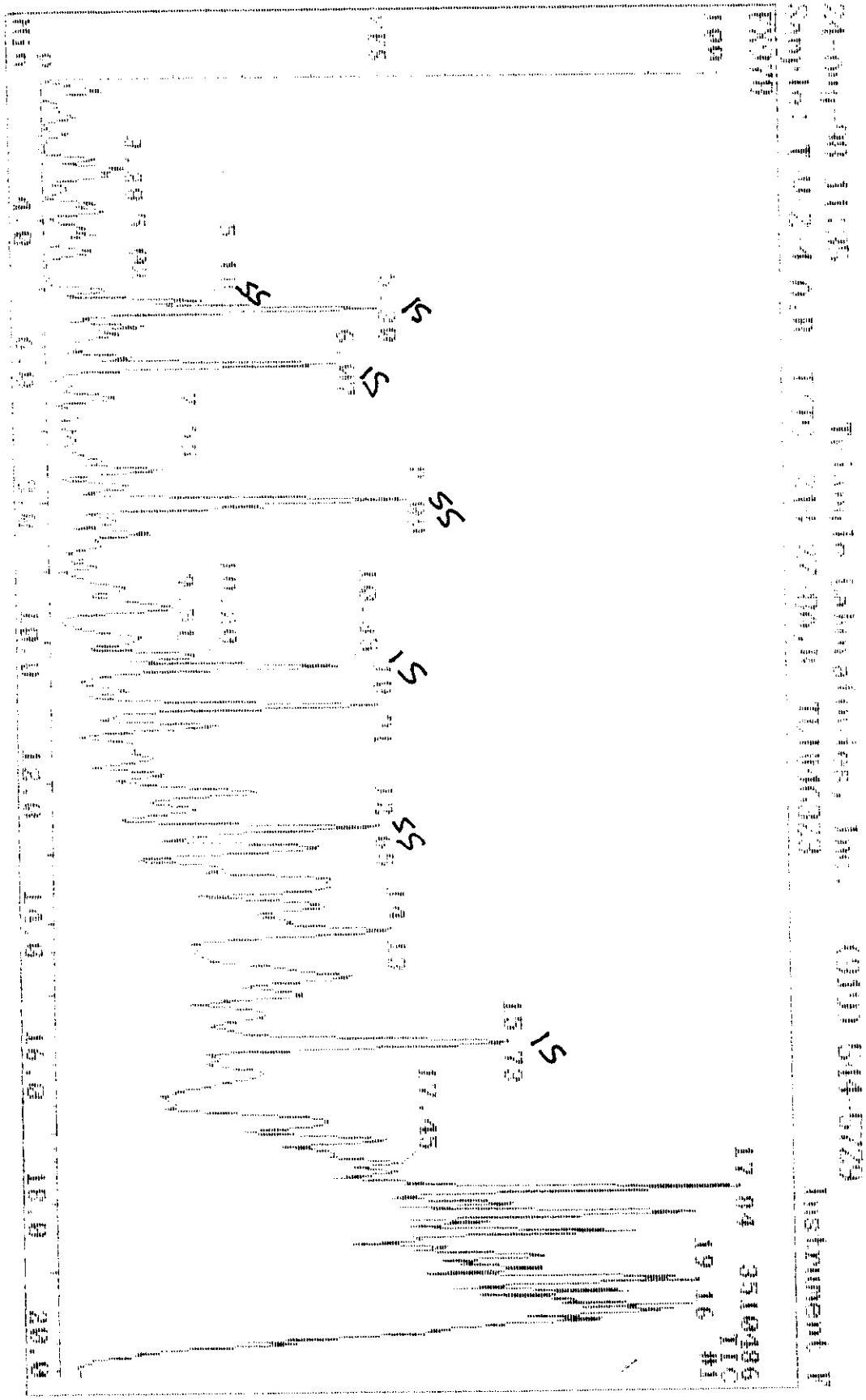
Savar v3.7
Printed: 17:21 08/25/1998



315

Data Review: DAB
Date: 8|24|98

98640 — (M) PAB — 1.09

116992 — (M) PAB — 2.07

271296 — (M) PAB — 3.27

(P) PAB

(P) PAB

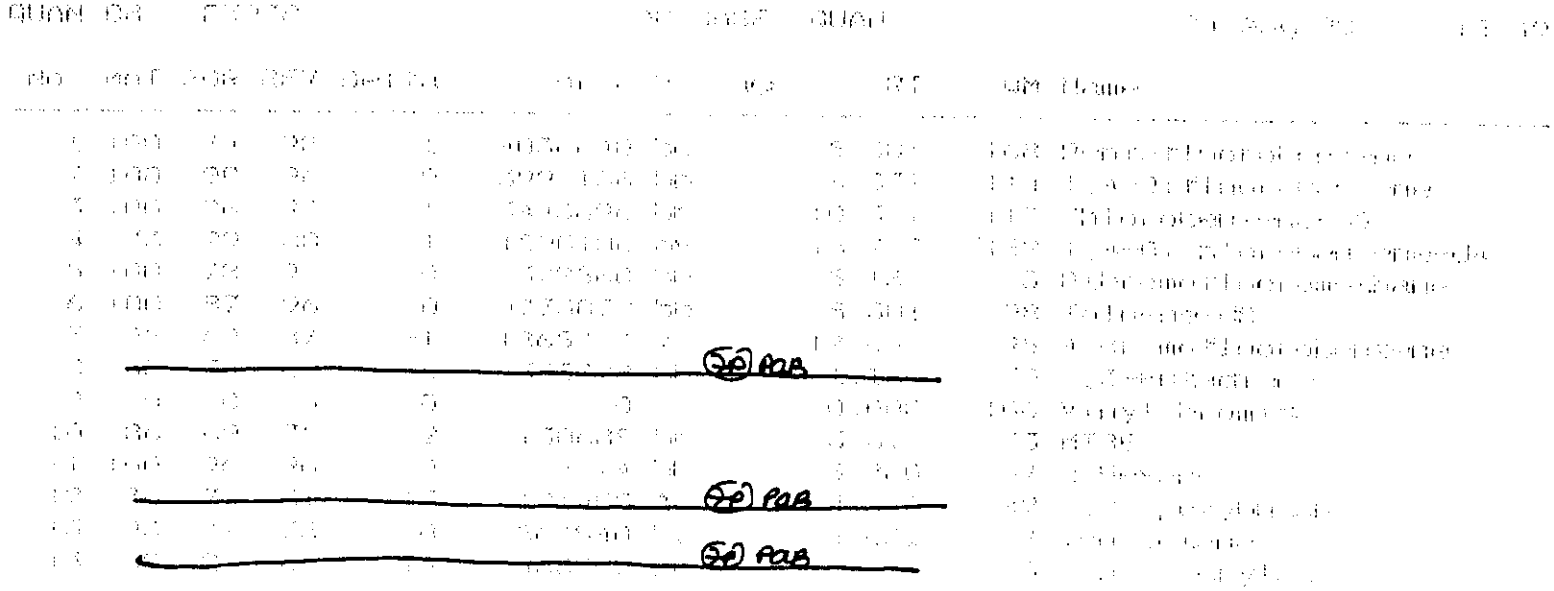
(P) PAB

(P) PAB

Data Review: PAB
Date: 8/24/98

3/6

214384 — (M) PAB — 11.70

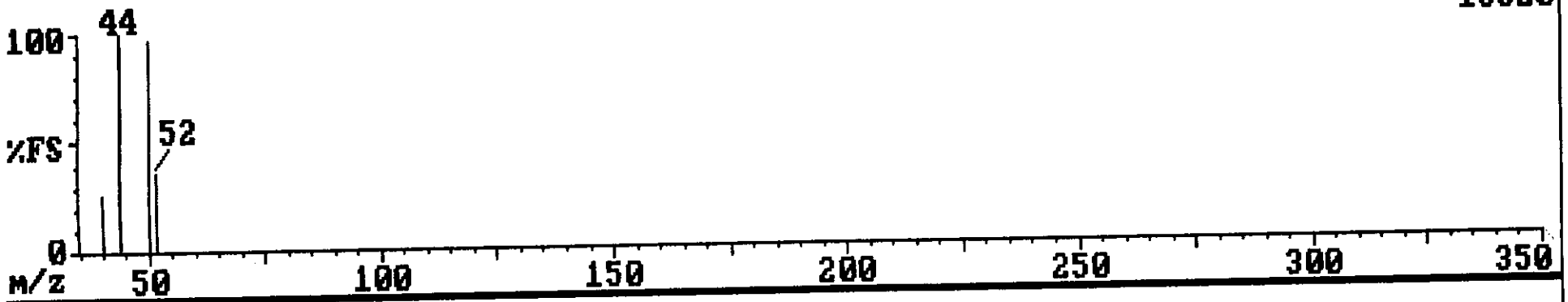


318

24-Aug-98 11:35 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-4-A,B T/TC 214-27-8A,B TLI#46323 Instrument F

FX978 109 (1.090) 16320



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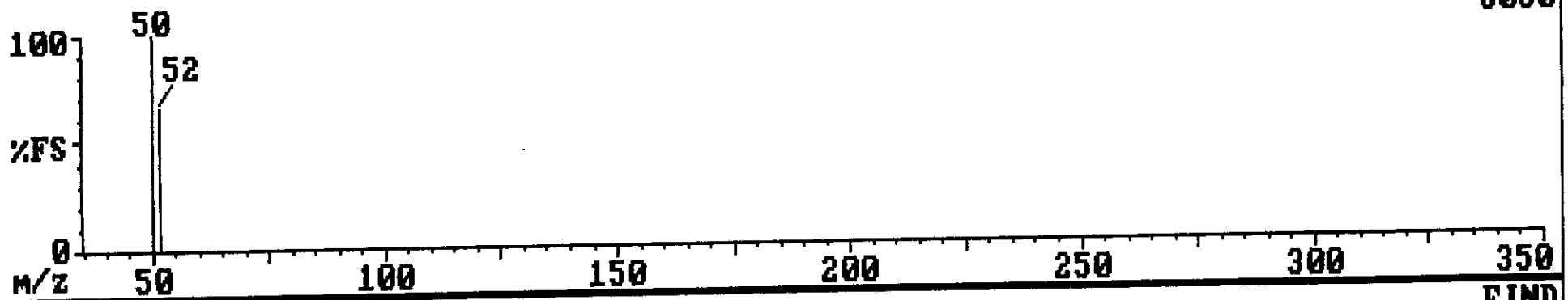
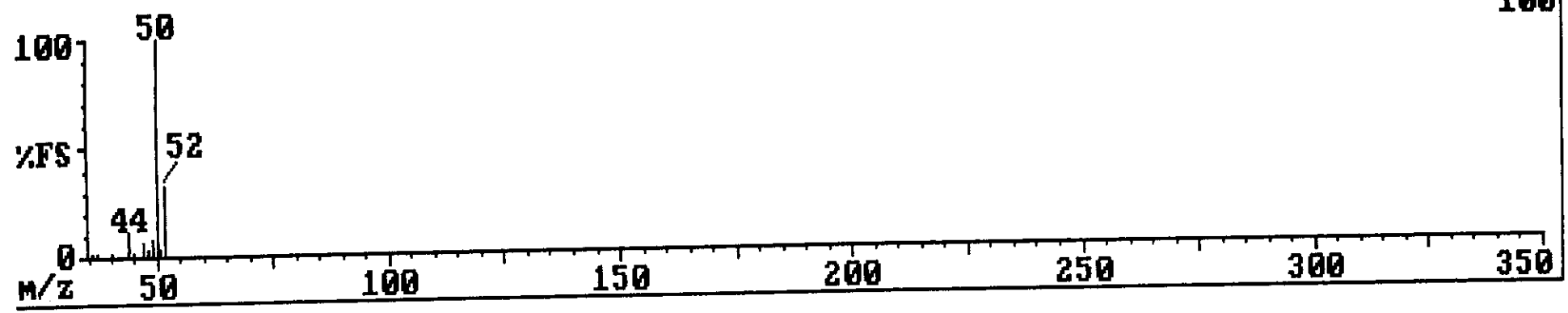


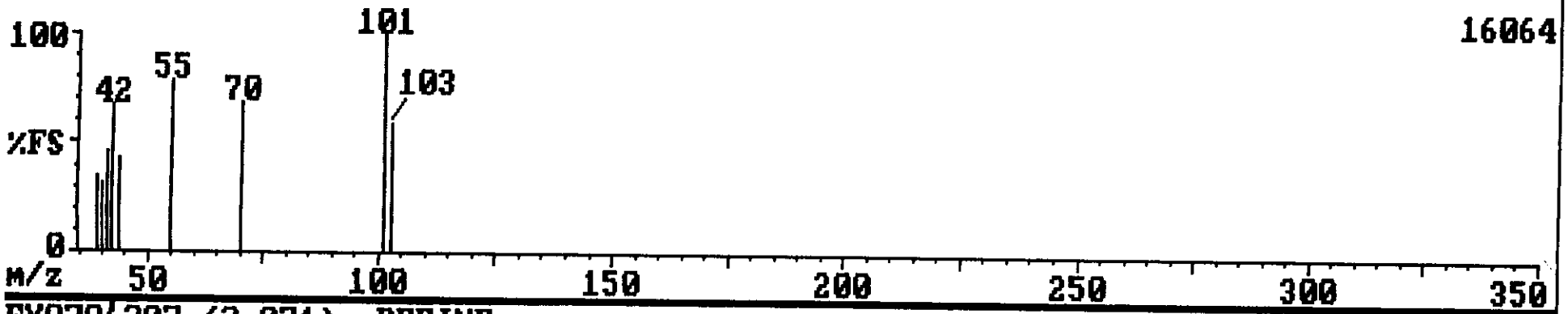
8260 9 (1.230) Chloromethane FIND 100



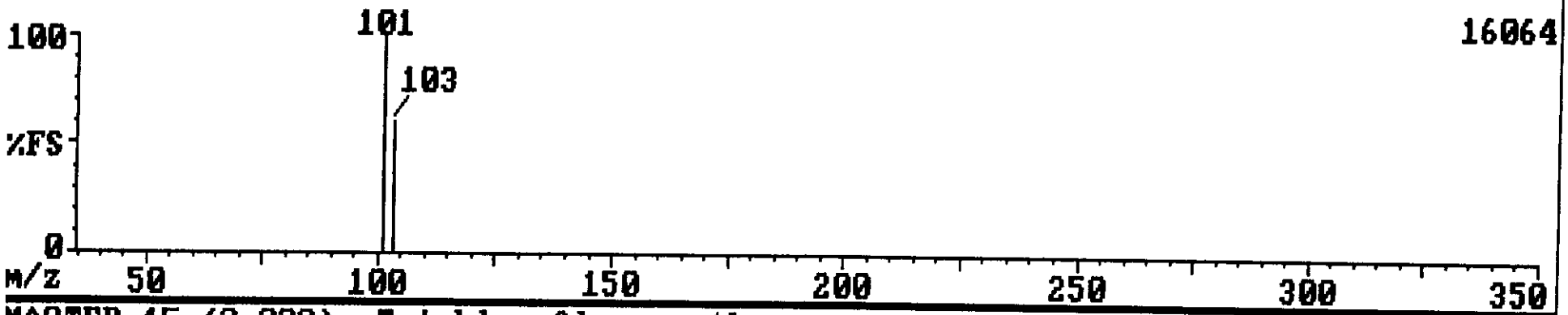
24-Aug-98 11:35 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-4-A,B T/TC 214-27-8A,B TLI#46323 Instrument F

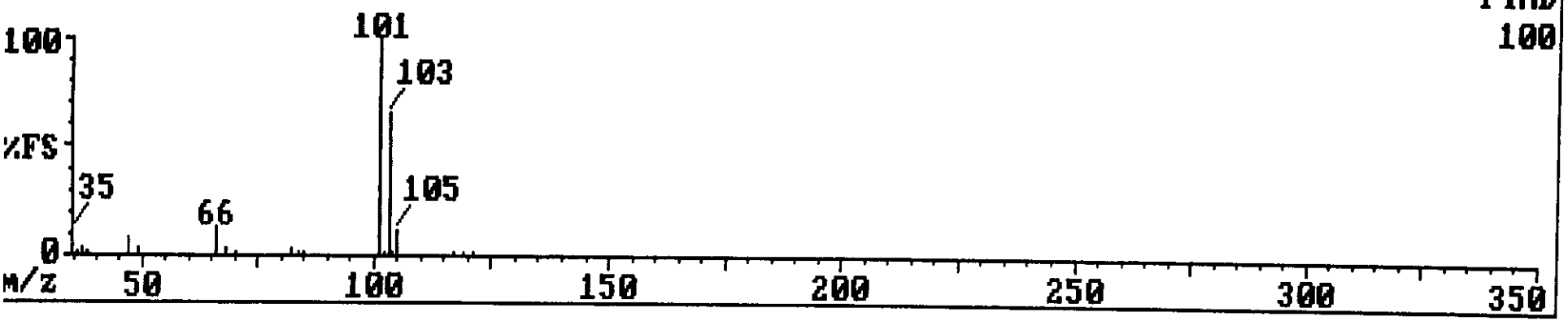
FX978 207 (2.070)



FX978 207 (2.071) REFINE

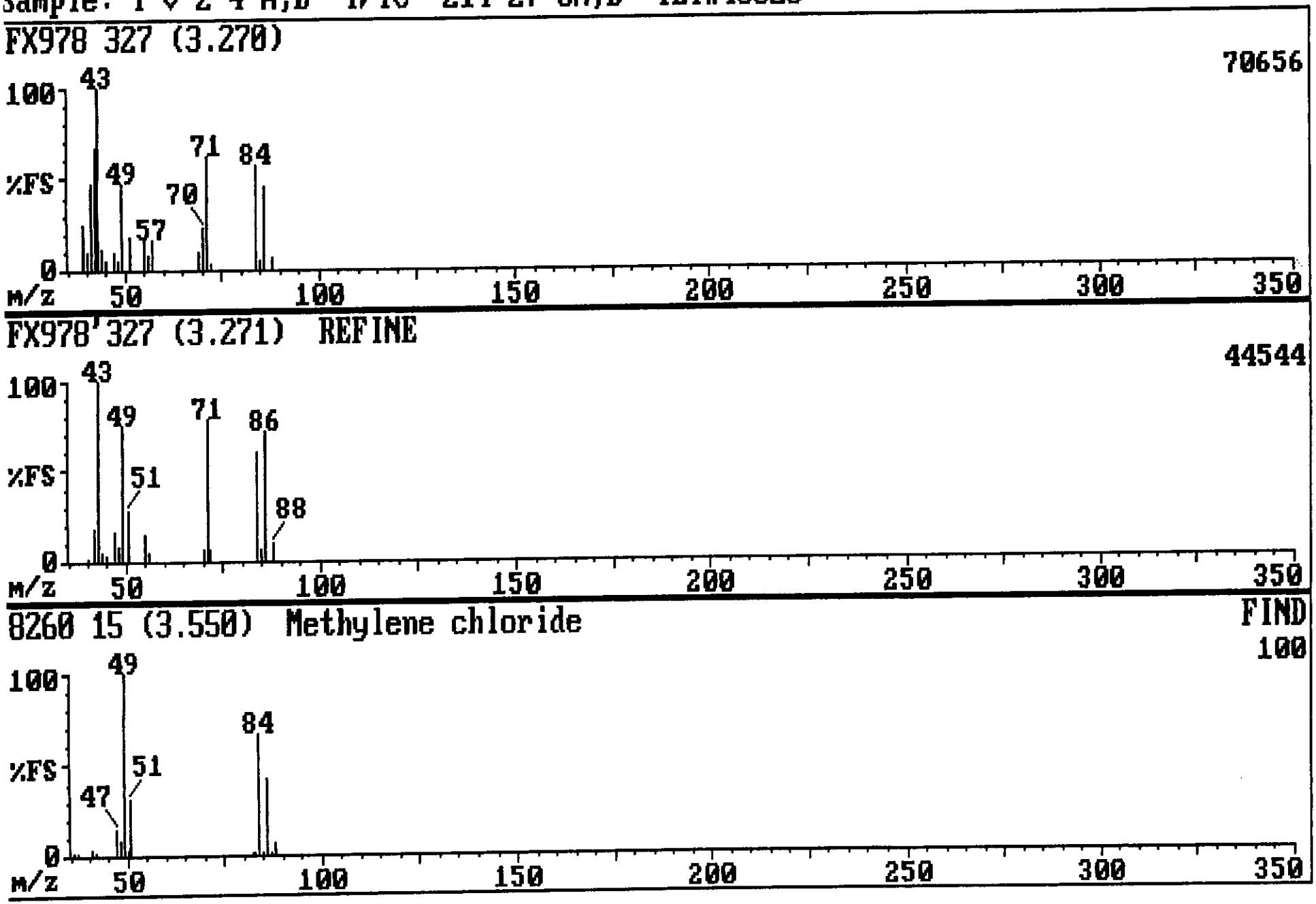


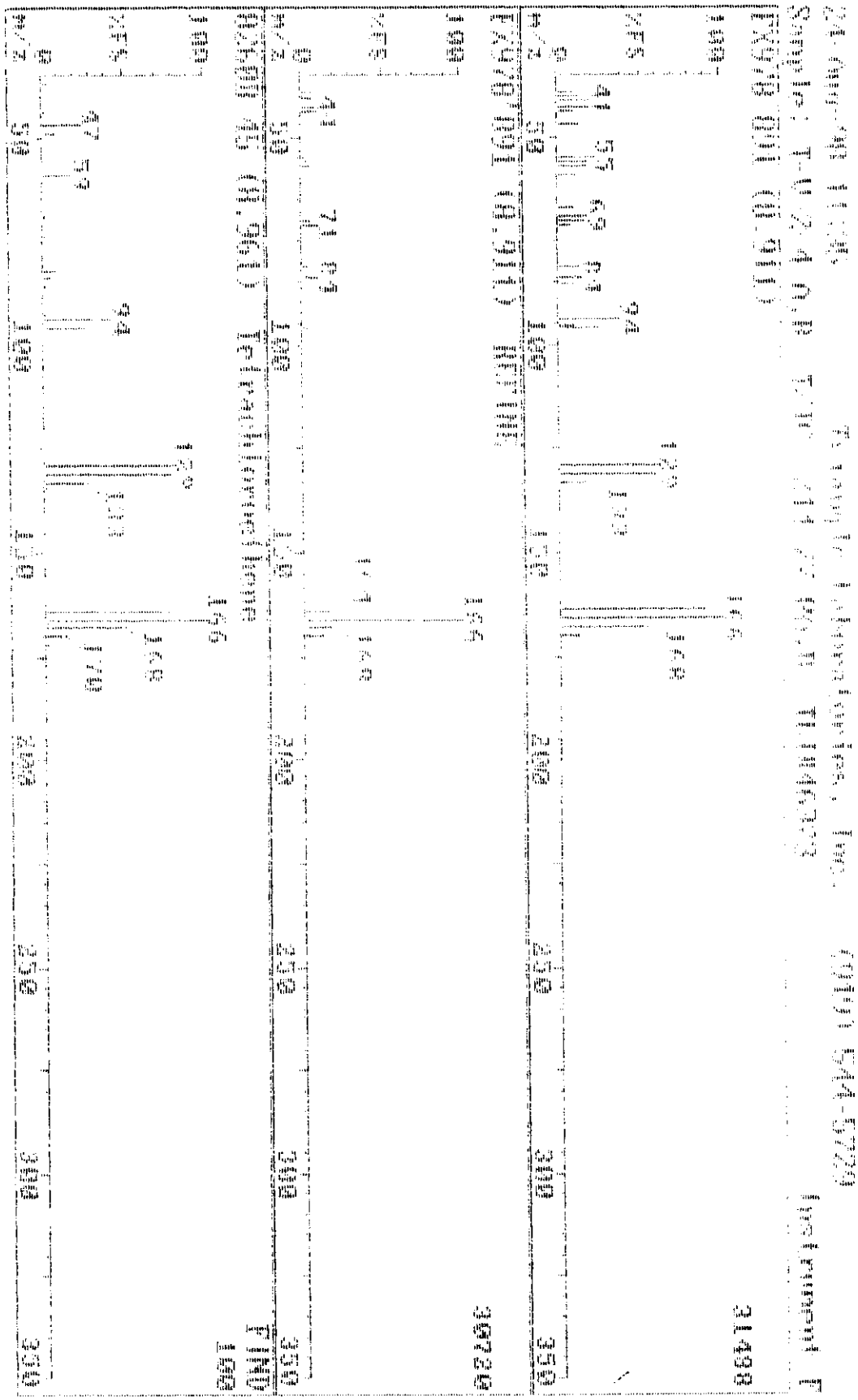
MASTER 15 (2.330) Trichlorofluoromethane FIND



24-Aug-98 11:35 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-2-4-A,B T/TC 214-27-8A,B TLI#46323 Instrument F



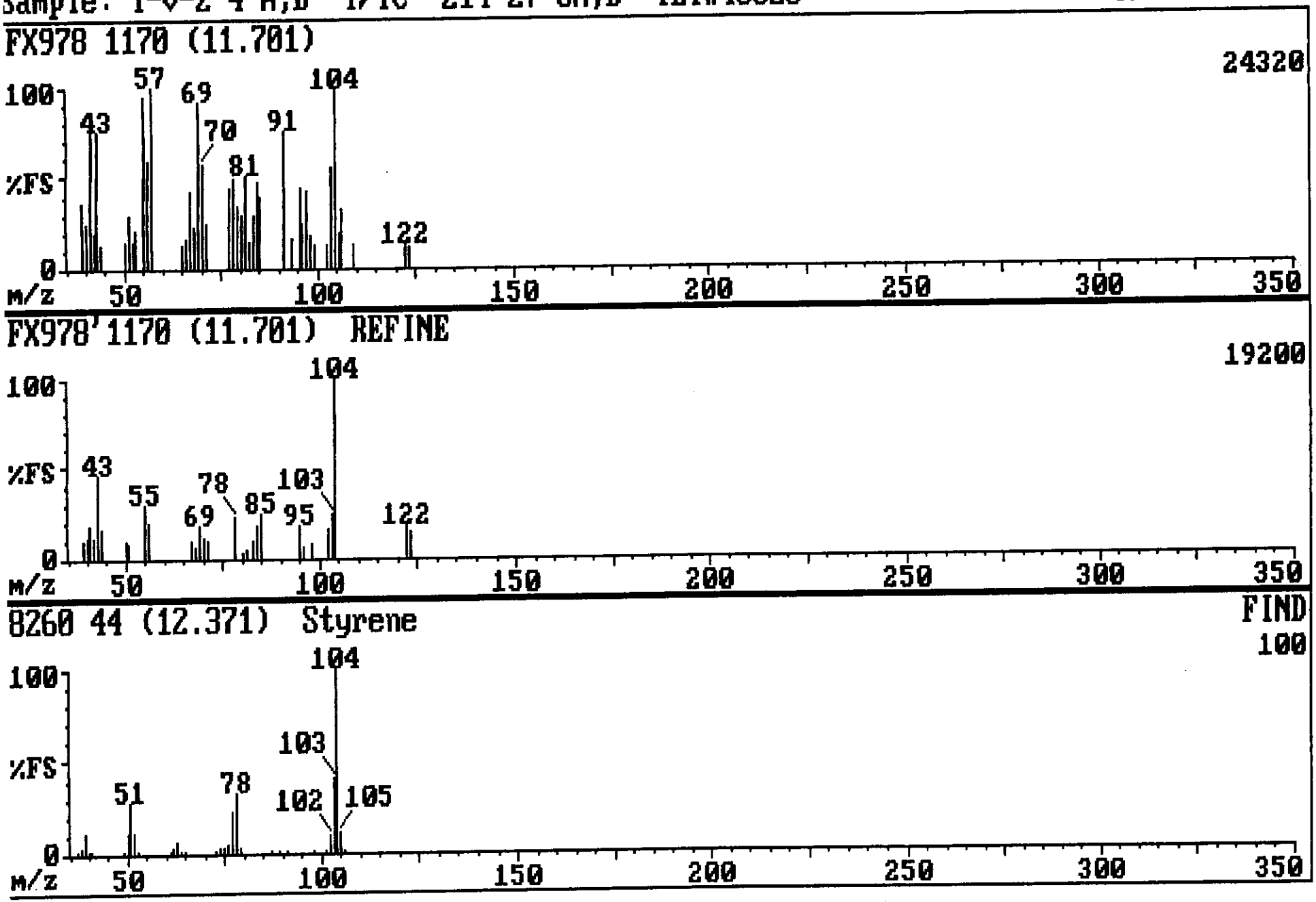


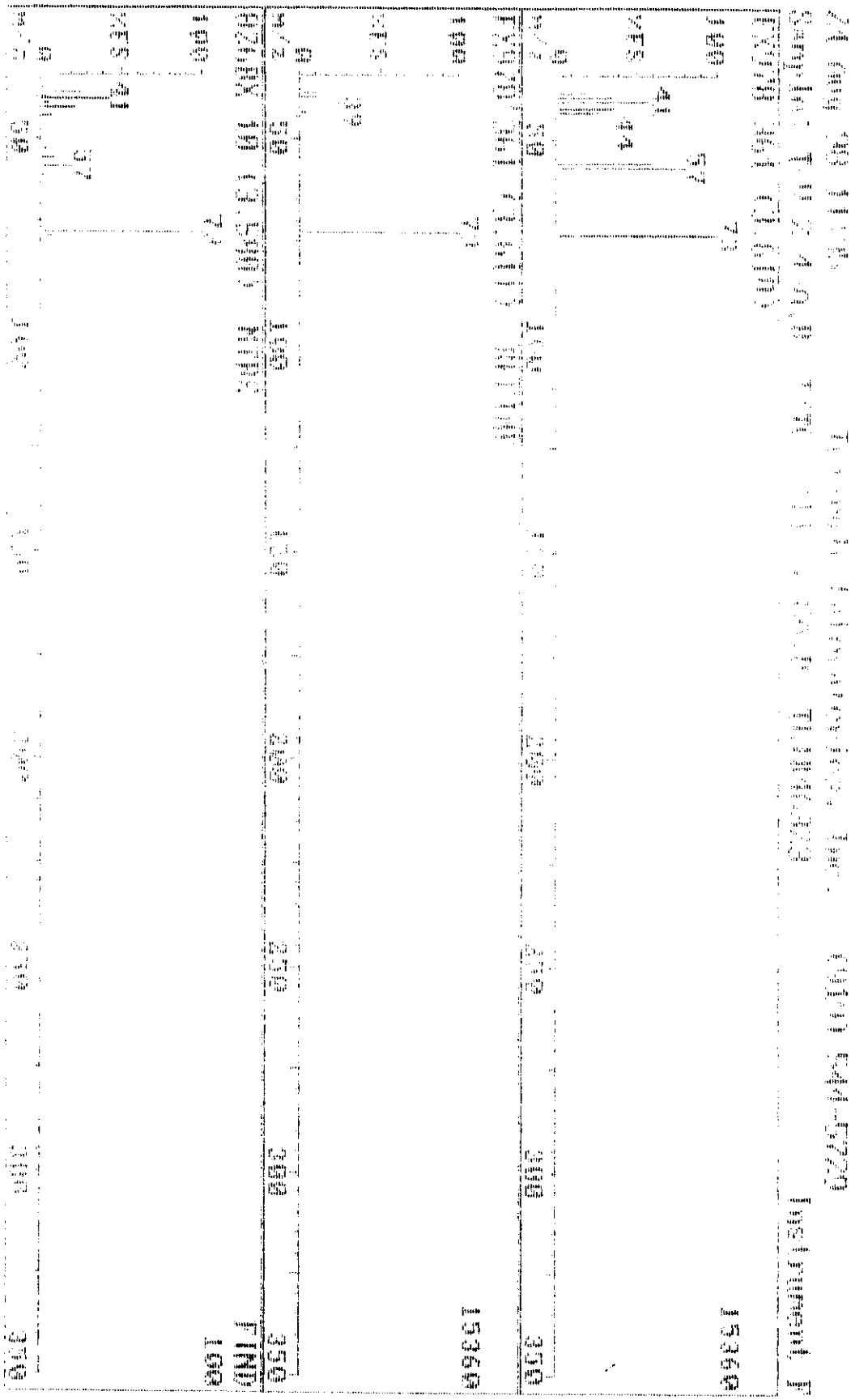
327

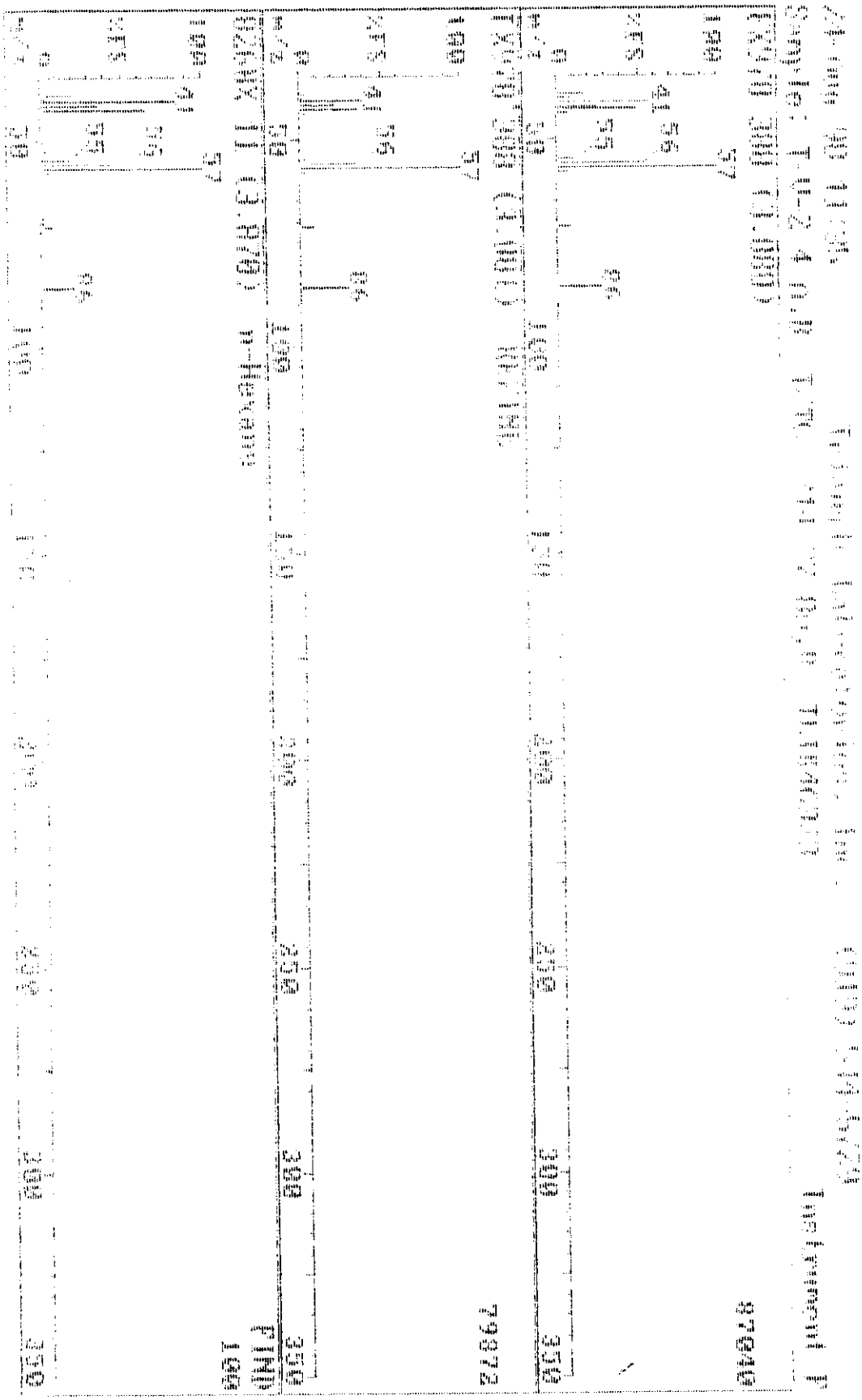
330

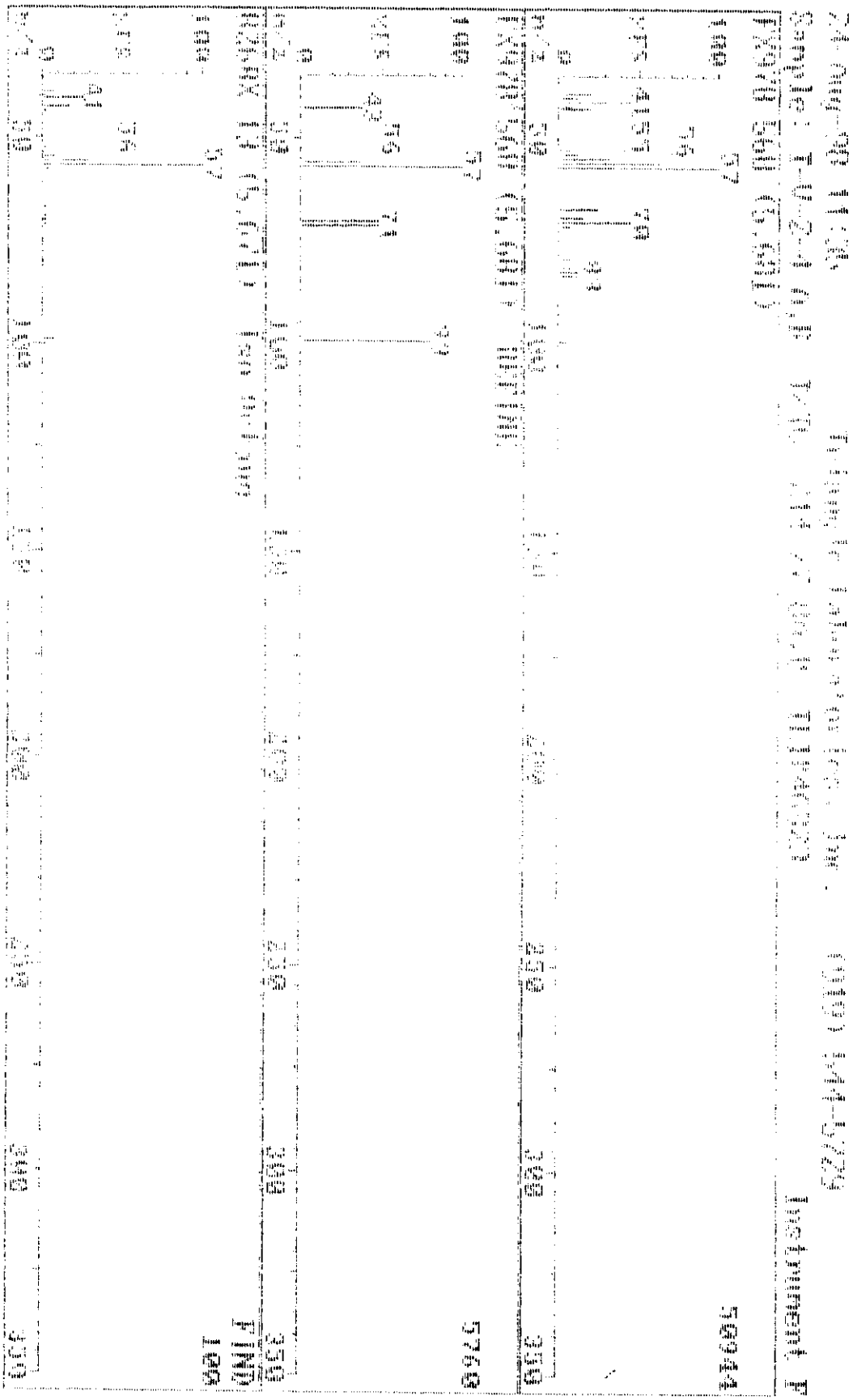
24-Aug-98 11:35 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-Z-4-A,B T/TC 214-27-8A,B TLI#46323 Instrument F









Pacific Environmental Services

Project Number: 46323
Sample File: FX979

Method 8260 VOST
Sample ID: T-V-3-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-16A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
Chloromethane	0.030	J	1.08		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.005	J	1.66		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.011	J	2.06		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.015	J	2.78		0.05
Acetone	0.183		2.87		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.508		3.27		0.05
Acrylonitrile		U		0.020	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.166		4.75		0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.08		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.096		5.53		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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335

Pacific Environmental Services

Project Number: 46323
Sample File: FX979

Method 8260 VOST
Sample ID: T-V-3-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-16A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.212		8.12		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.38		
Tetrachloroethene	0.023	J	8.96		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.075		10.71		0.05
m-/p-Xylene	0.335		10.94		0.10
o-Xylene	0.131		11.66		0.05
Styrene	0.029	J	11.72		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.78		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: FX979

Method 8260 VOST
Sample ID: T-V-3-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-16A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.209	5.19	1	84
Toluene-d_8	0.256	8.02	2	102
4-Bromofluorobenzene	0.283	12.69	2	113

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX979

Method 8260 VOST
Sample ID: T-V-3-1-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-16A,B

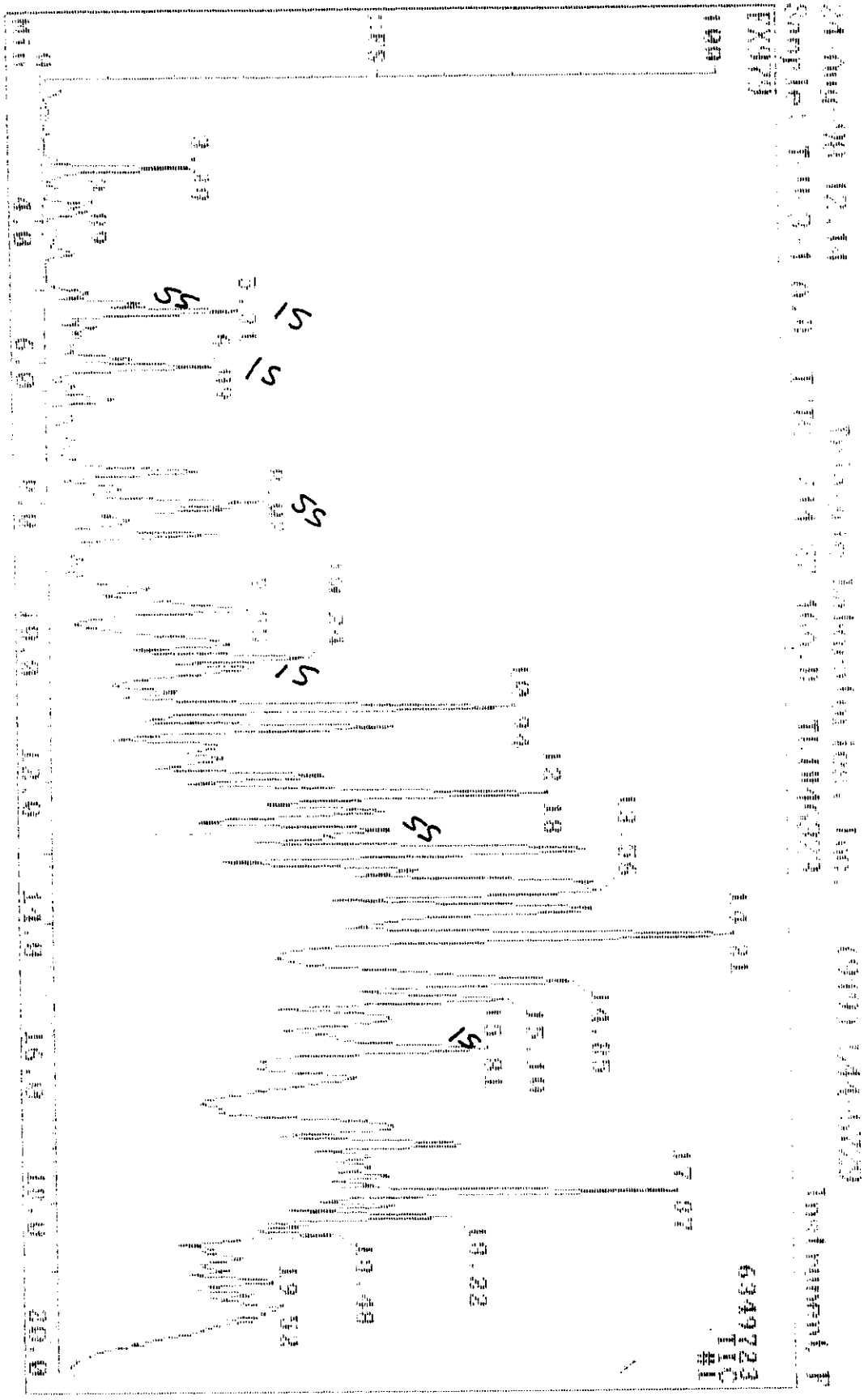
Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.028	J	3.61		0.25
n-Hexane	0.107	J	3.89		0.25
1,2-Epoxybutane		U		0.024	0.25
Iso-Octane	0.012	J	5.68		0.25
1,4-Difluorobenzene		IS 2	6.08		
Ethyl acrylate		U		0.007	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range



Data Review: PaB
Date: 8/24/98

77092 — PAB — 1.08

21136 — PAB — 1.66

PAB

PAB

PAB

PAB

Data Review: PAB
Date: 8/24/98

356320 — @ Pa13 —— 1172

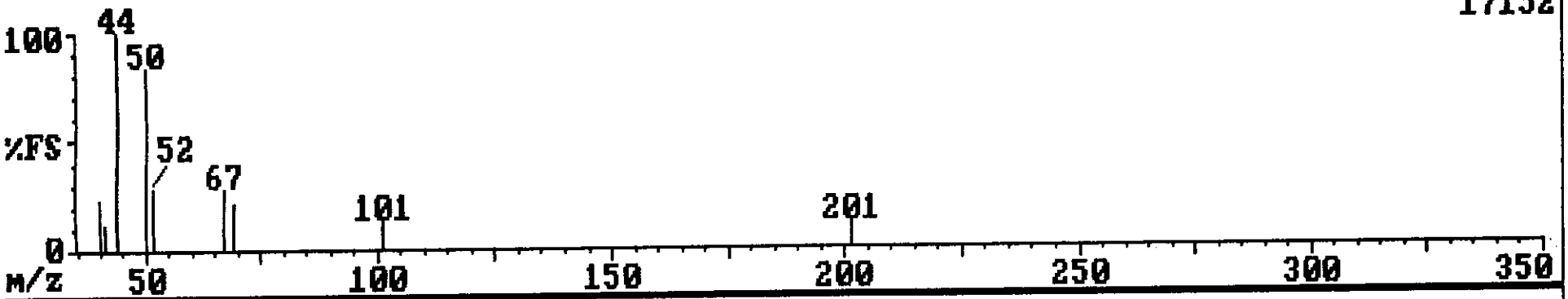
No.	Peak	FWHM	Sigma	Channel	Area	Flags	RT	Name
1	100	2.5	1.1	2	41243.5	BB	5.731	1-Methylfluorene
2	101	2.1	0.9	3	41643.7	BV	7.085	1-Methylphenanthrene
3	100	2.7	1.1	4	52.9	BV	11.621	Dibenzothiophene
4	1.1	1.9	0.8	1	1.2	BB	13.282	4,6-Dimethyldibenzothiophene
5	100	2.4	1.0	2	1.6	BV	15.171	Benzo[b]naphtho[2,1-d]thiophene
6	1.0	0.5	0.2	0	0.2	VV	17.021	Fluoranthene
7	70	1.5	0.6	1	1.6	VV	18.276	4-Methylbenzo[b]naphtho[2,1-d]thiophene
8								Pyrene
9	1	0	0	0	0		21.035	7-Methylbenz[a]anthracene
10	22	1.3	0.5	2	1.5		22.1	Chrysene
11	100	1.7	0.7	1	3.2		23.3	Benzo[b]fluoranthene
12								Benzo[k]fluoranthene
13	1	1.1	0.5	1	1.1			Benzo[e]pyrene
14								Benzo[a]pyrene

342

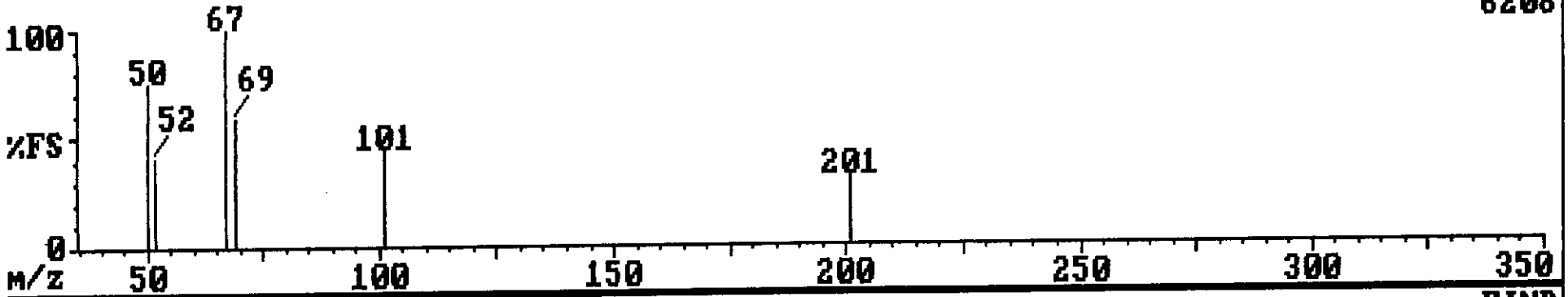
24-Aug-98 12:14 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-1-A,B T/TC 214-27-16A,B TLI#46323 Instrument F

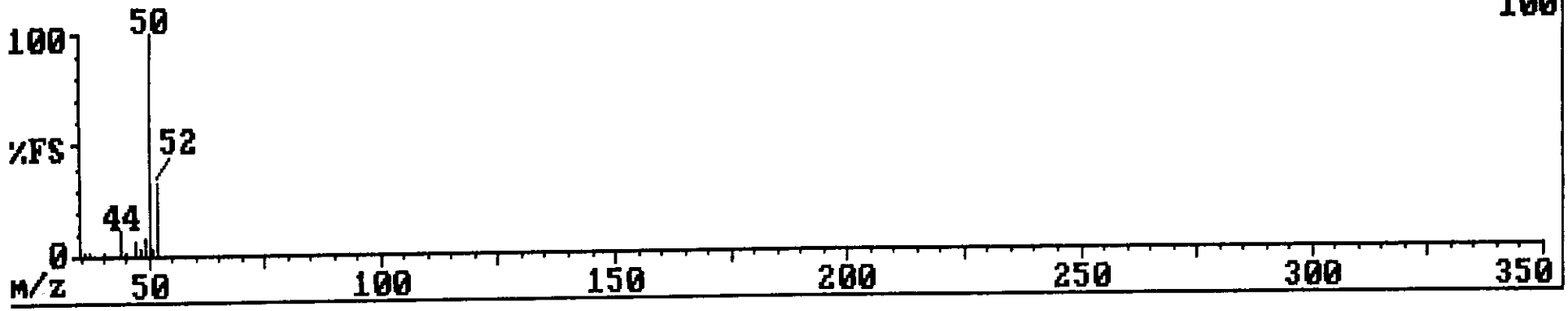
FX979 108 (1.080) 17152



FX979'108 (1.081) REFINE 6208

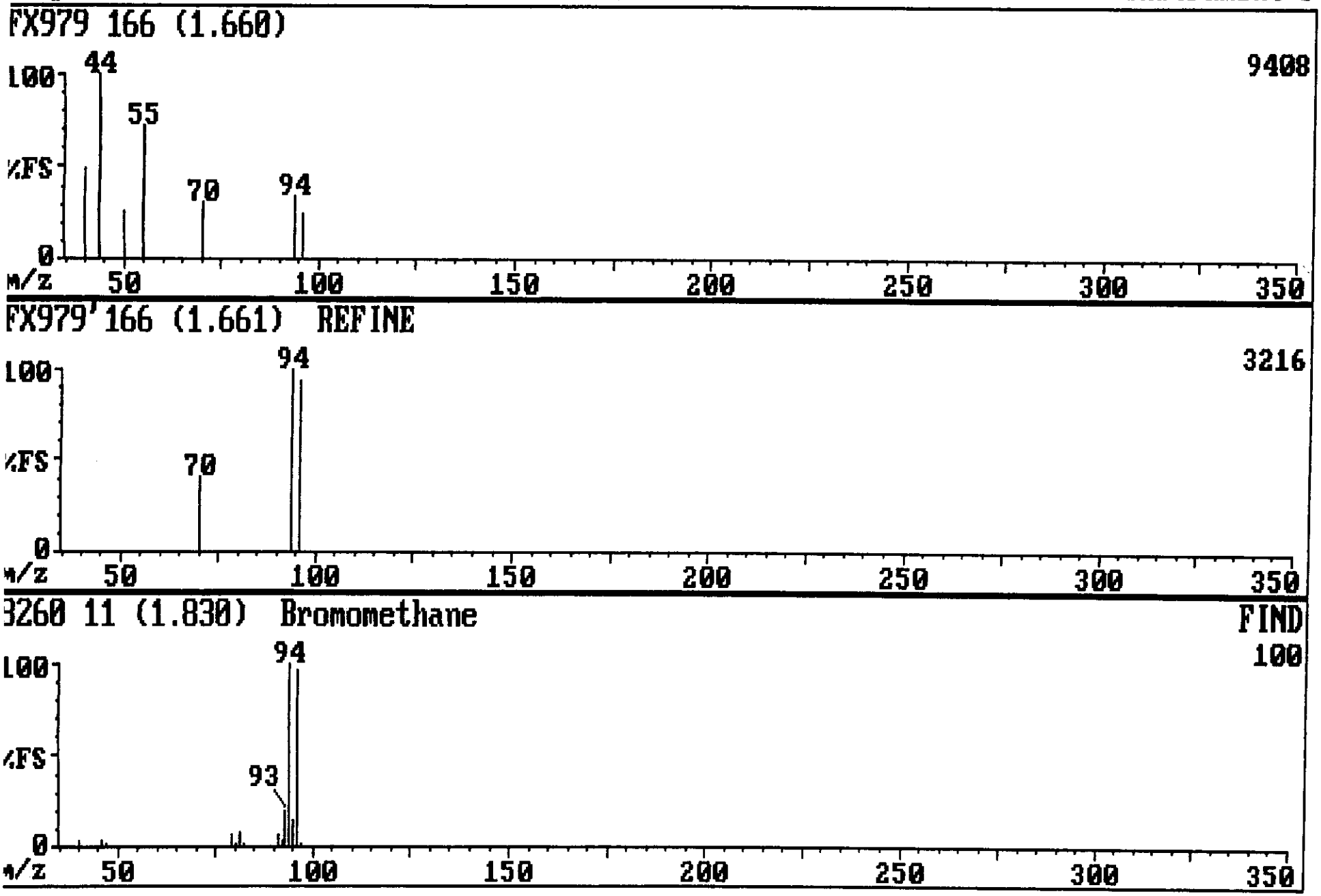


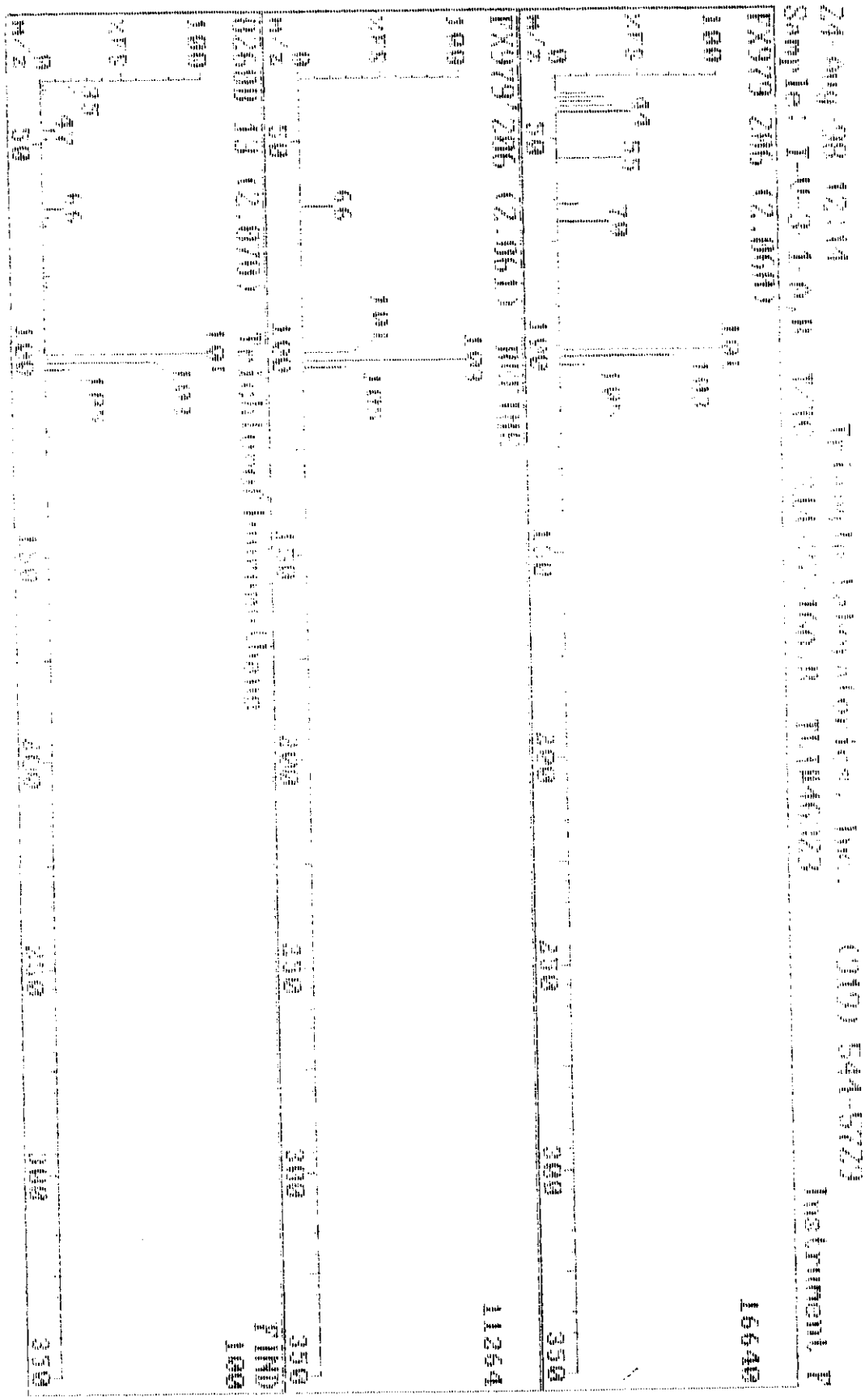
8260 9 (1.230) Chloromethane FIND 100

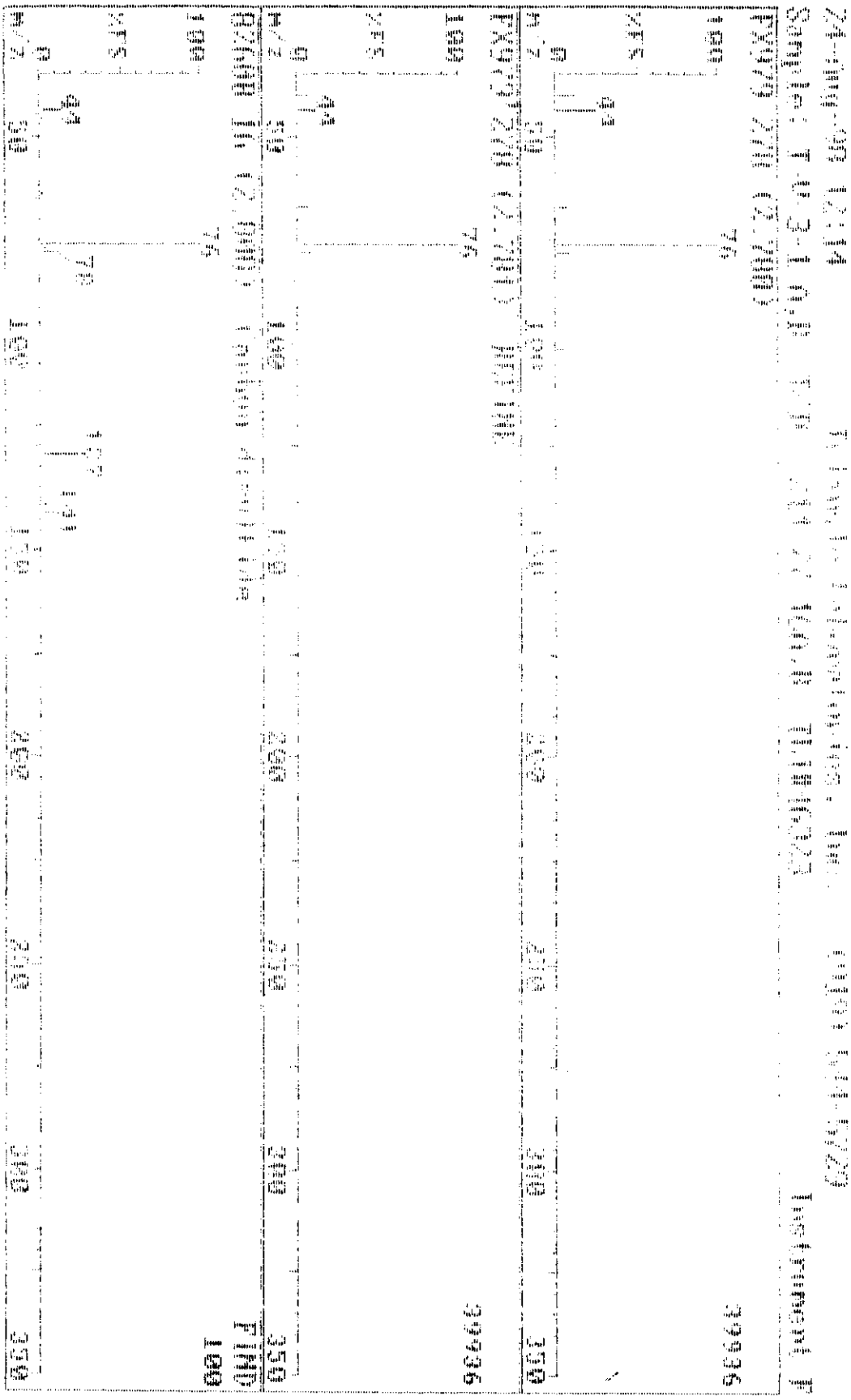


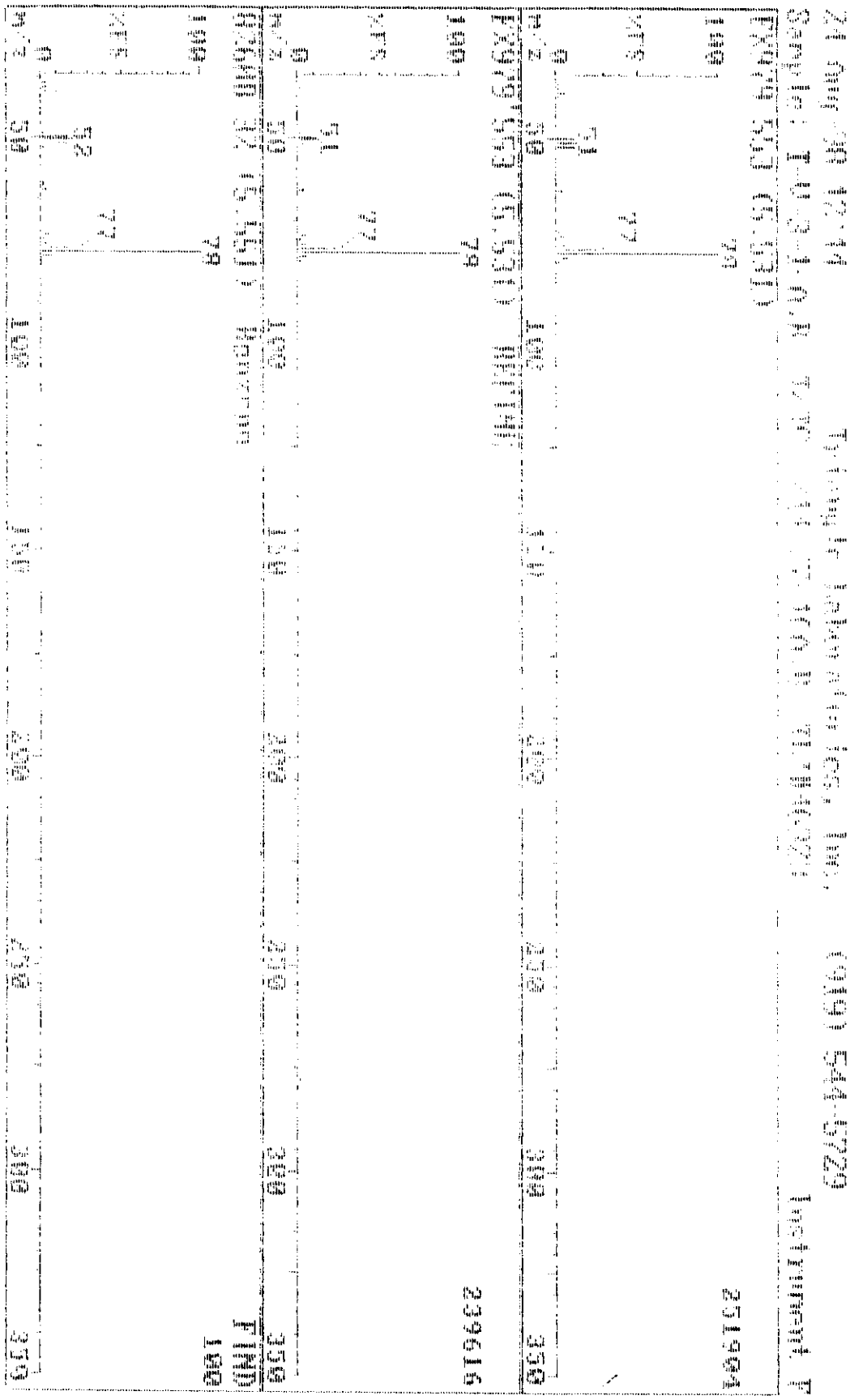
:4-Aug-98 12:14 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-1-A,B T/TC 214-27-16A,B TLI#46323 Instrument F







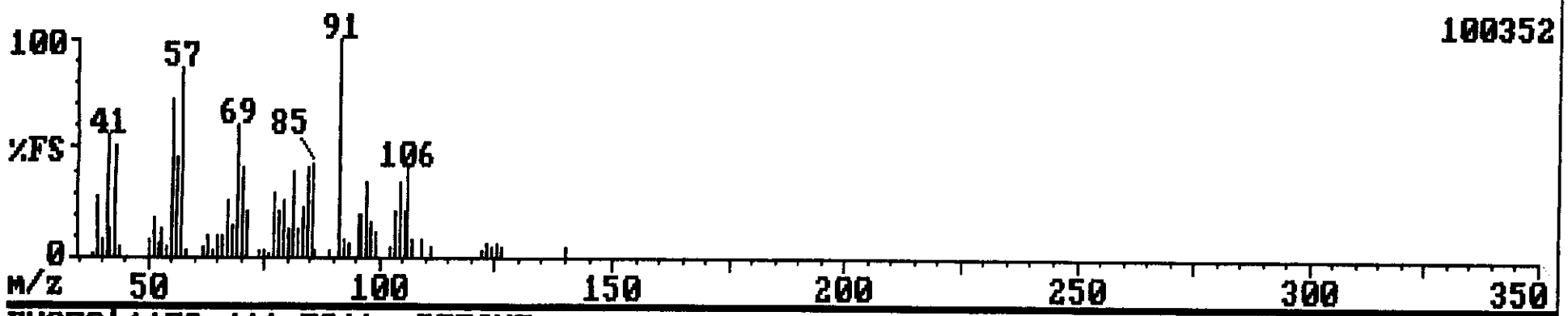


355

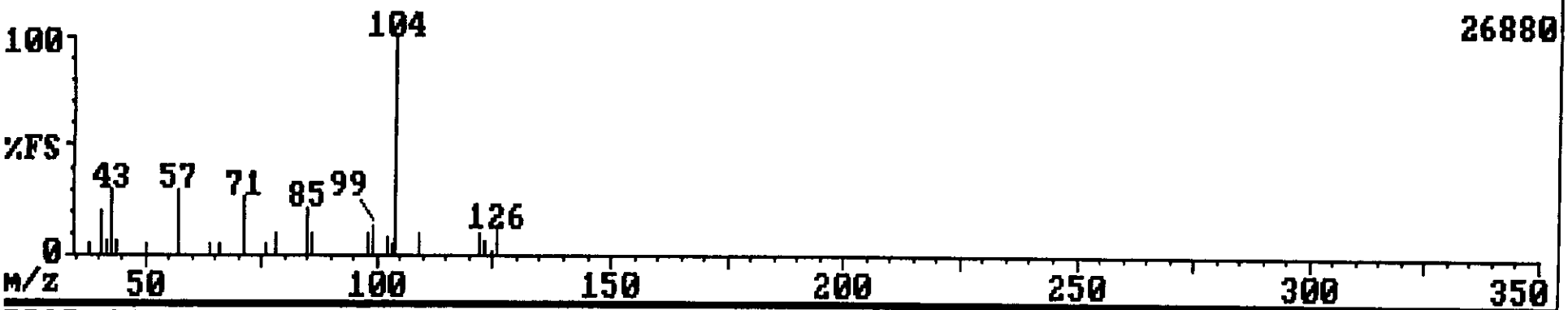
24-Aug-98 12:14 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-1-A,B T/TC 214-27-16A,B TLI#46323 Instrument F

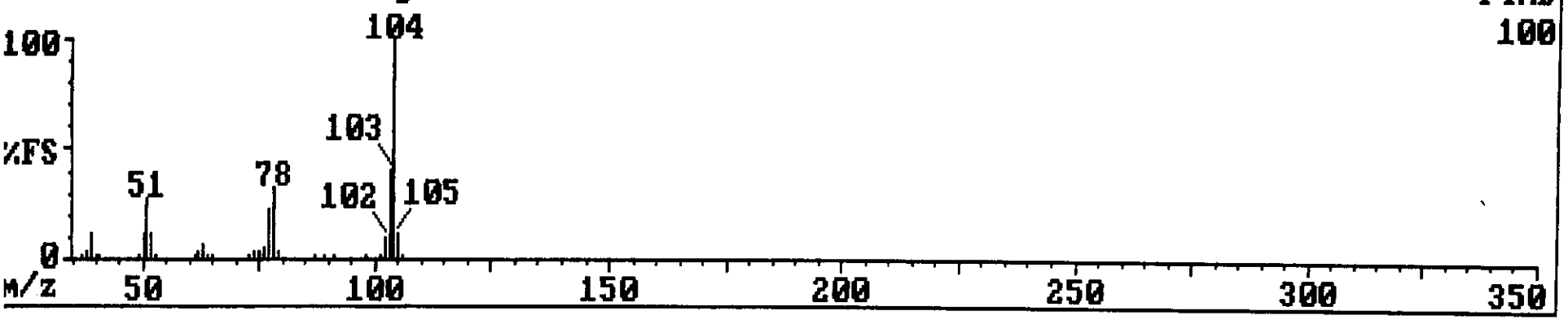
FX979 1172 (11.721)

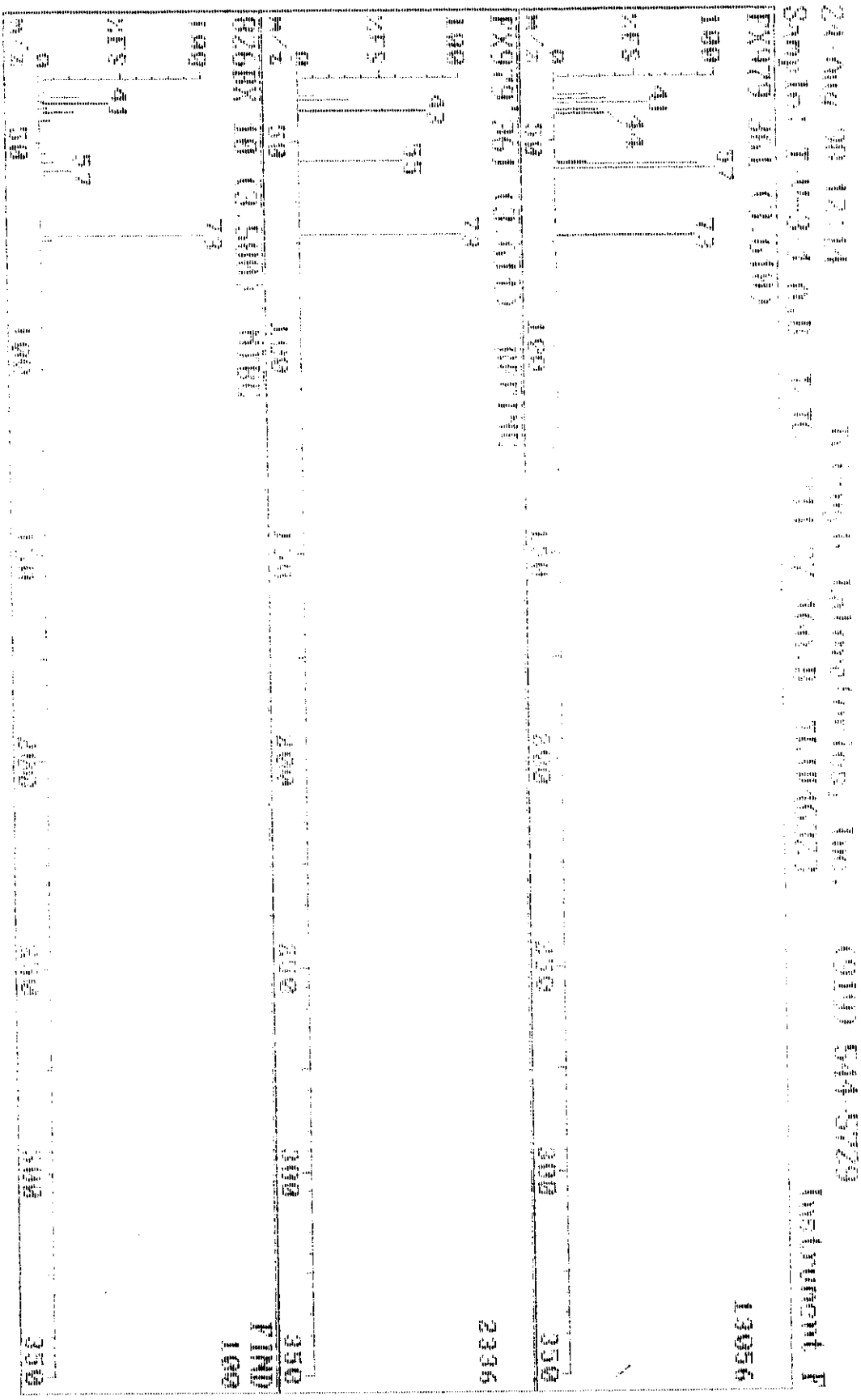


FX979' 1172 (11.721) REFINE

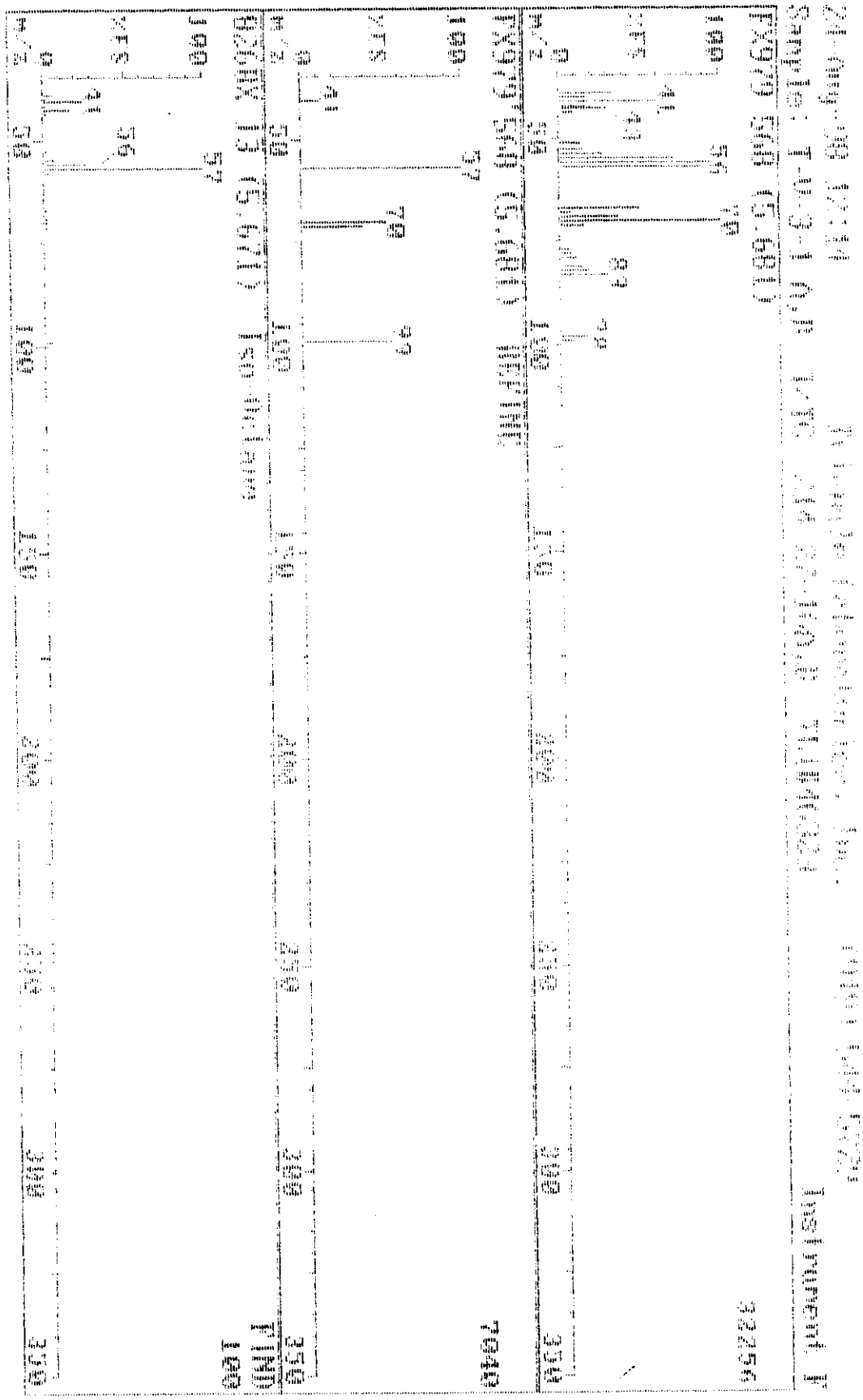


8260 44 (12.371) Styrene FIND





358



Pacific Environmental Services

Project Number: 46323
Sample File: FX980

Method 8260 VOST
Sample ID: T-V-3-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-17A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.011	J	2.07		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.017	J	2.78		0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.828		3.27		0.05
Acrylonitrile		U		0.020	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.131		5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323 | **Method 8260 VOST**
Sample File: FX980 | **Sample ID: T-V-3-2-A,B T/TC**

Client Project: R012.001 | **Date Received: 07/29/98** | **Response File: ICALF821**
TLI ID: 214-27-17A,B
Date Analyzed : 08/24/98

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.200		8.10		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene	0.015	J	8.93		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.065		10.67		0.05
m-/p-Xylene	0.314		10.91		0.10
o-Xylene	0.118		11.63		0.05
Styrene	0.036	J	11.69		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.73		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX980

Method 8260 VOST
Sample ID: T-V-3-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-17A,B

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ng)	RT	IS Ref	%REC
Dibromofluoromethane	0.205	5.18	1	82
Toluene-d_8	0.260	8.00	2	104
4-Bromofluorobenzene	0.333	12.66	2	133

Reviewed by RAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX980

Method 8260 VOST
Sample ID: T-V-3-2-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-17A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

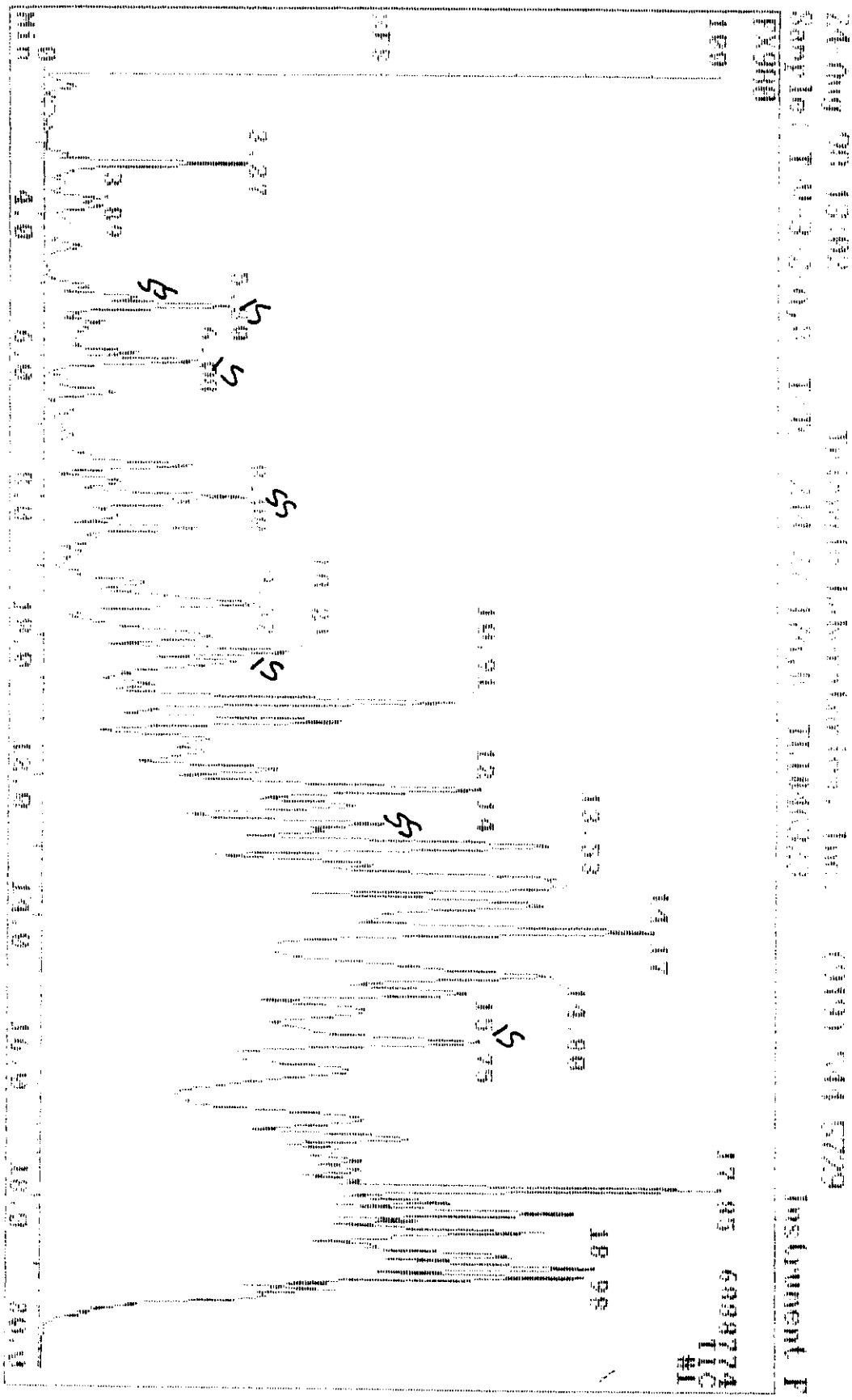
Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.022	J	3.60		0.25
n-Hexane	0.135	J	3.89		0.25
1,2-Epoxybutane		U		0.024	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.007	0.25

Reviewed by RAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range



Data Review: PAB
Date: 8/24/98

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Data Review: PAB
Date: 8/24/98

461056 ~ (M) POB ——— 1169

U 16*

No.	MAT	FOR	PRV	Select	Name	RT	QRY	Name
1	100	70	97	1	[illegible]	[illegible]	[illegible]	[illegible]
2	100	87	95	0	[illegible]	[illegible]	[illegible]	[illegible]
3	99	71	97	-1	[illegible]	[illegible]	[illegible]	[illegible]
4	99	90	89	9	[illegible]	[illegible]	[illegible]	[illegible]
5	100	61	94	0	[illegible]	[illegible]	[illegible]	[illegible]
6	100	83	94	0	[illegible]	[illegible]	[illegible]	[illegible]
7	[illegible]	42	91	0	[illegible]	[illegible]	[illegible]	[illegible]
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	41	0	0	0	0	[illegible]	[illegible]	[illegible]
10	60	50	45	1	[illegible]	[illegible]	[illegible]	[illegible]
11	100	91	91	1	[illegible]	[illegible]	[illegible]	[illegible]
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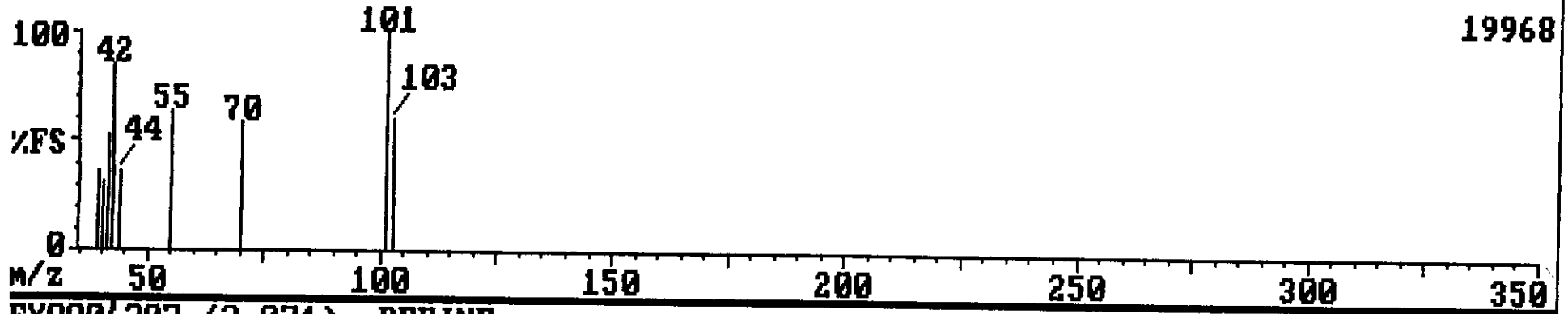
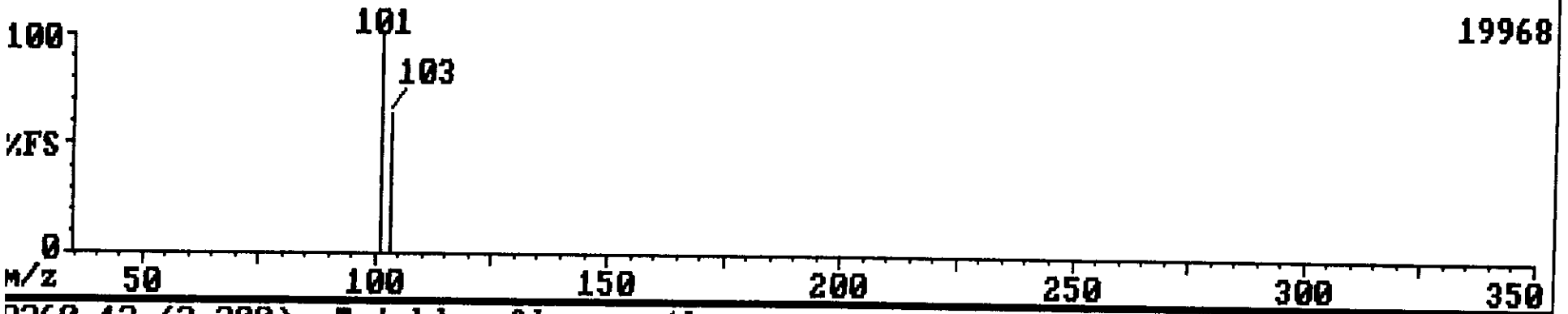
24-Aug-98 13:02 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-3-2-A,B T/TC 214-27-17A,B TLI#46323 Instrument F

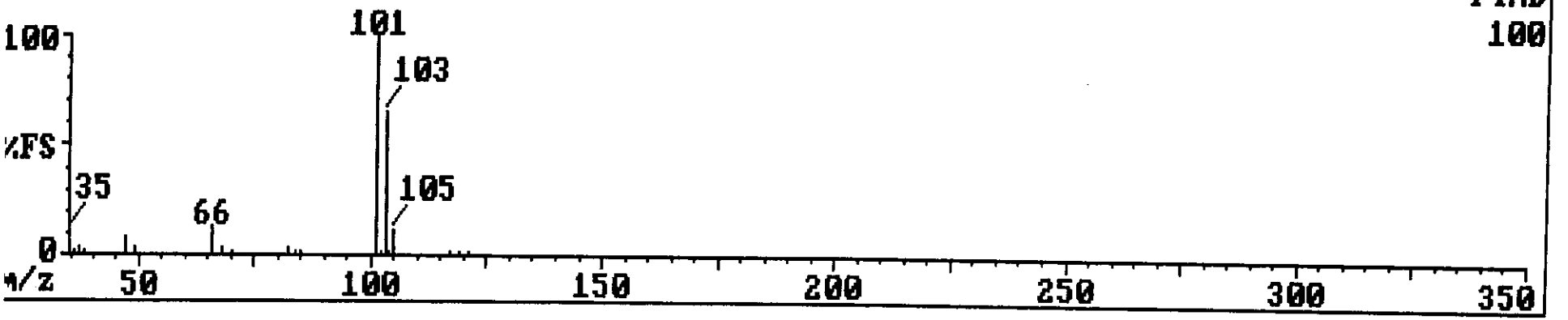
FX980 207 (2.070)

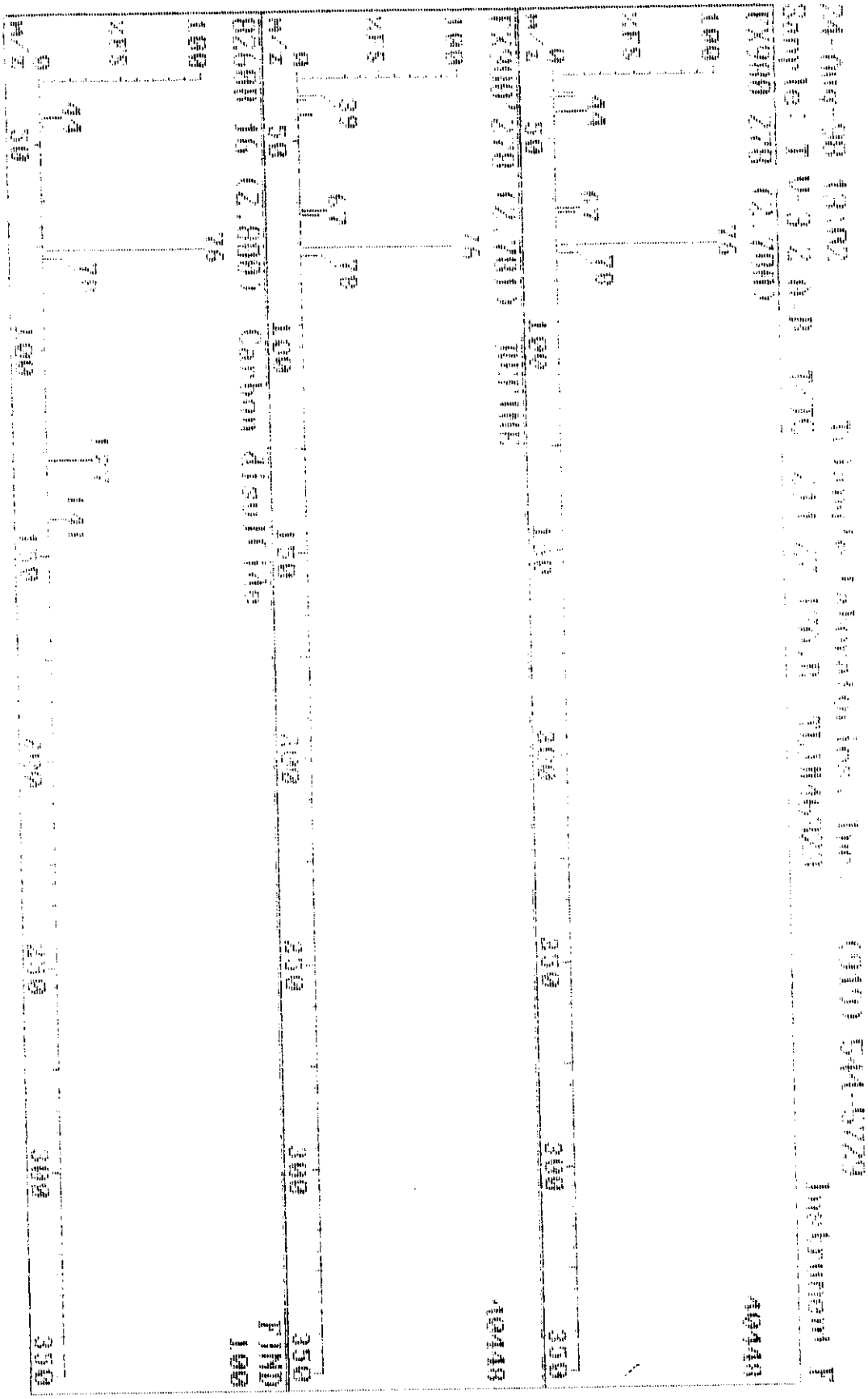


FX980 207 (2.071) REFINE

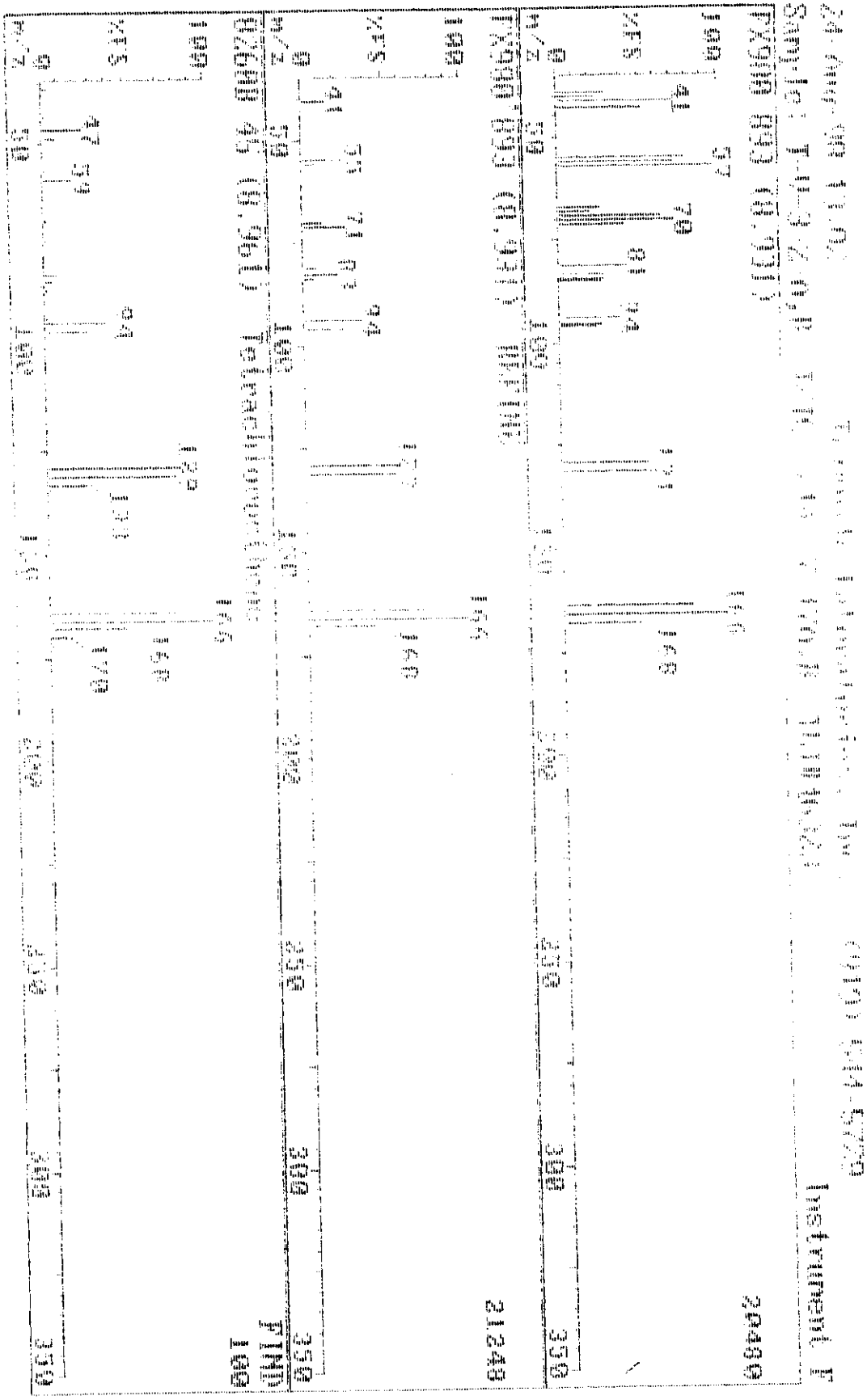


B260 13 (2.300) Trichlorofluoromethane FIND





372

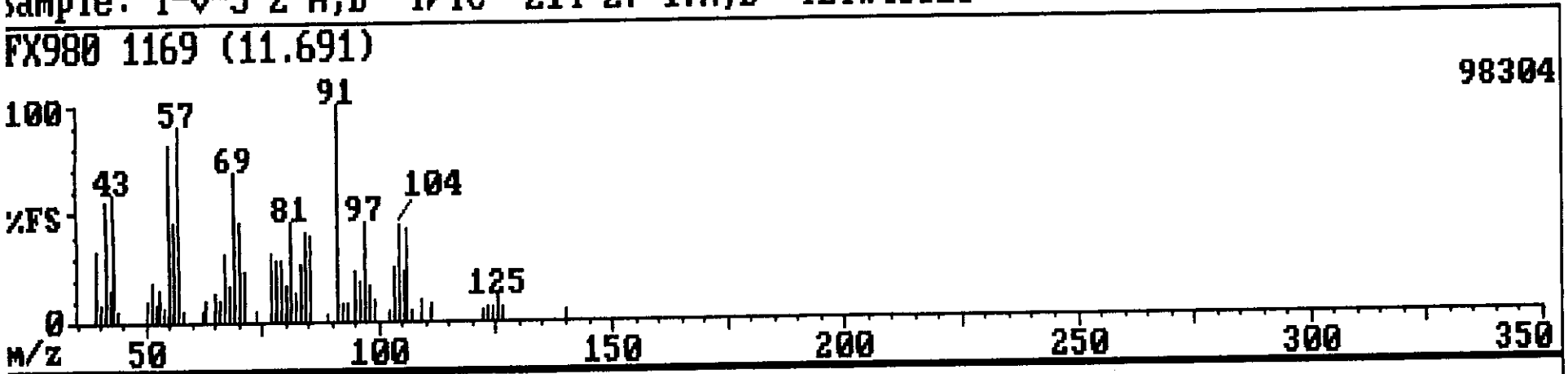


376

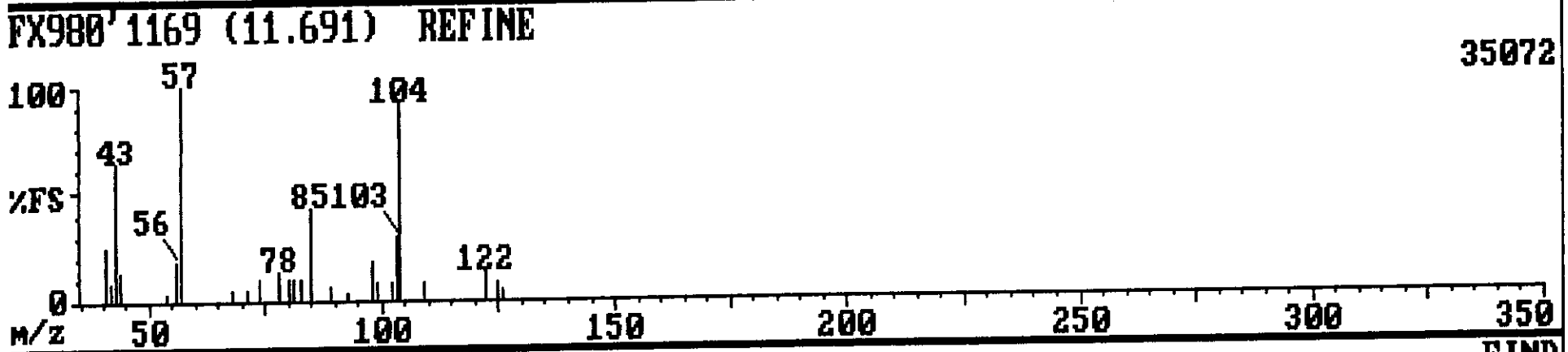
24-Aug-98 13:02 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-2-A,B T/TC 214-27-17A,B TLI#46323 Instrument F

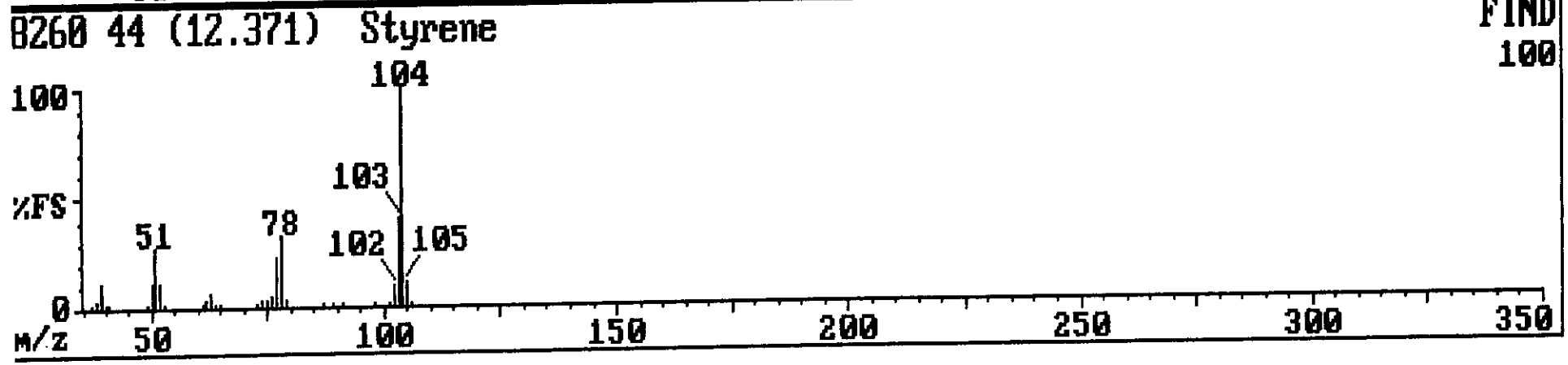
FX980 1169 (11.691)

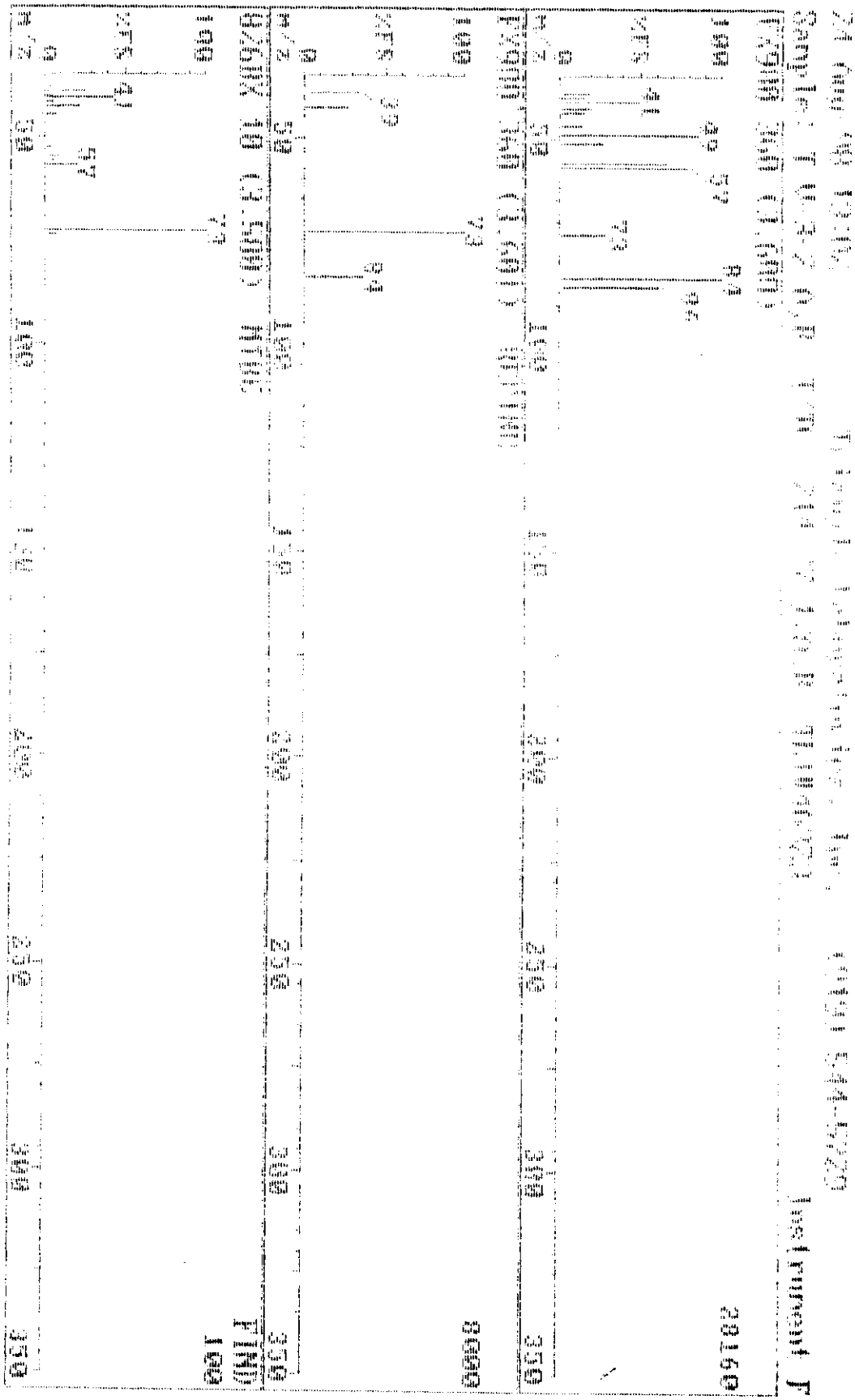


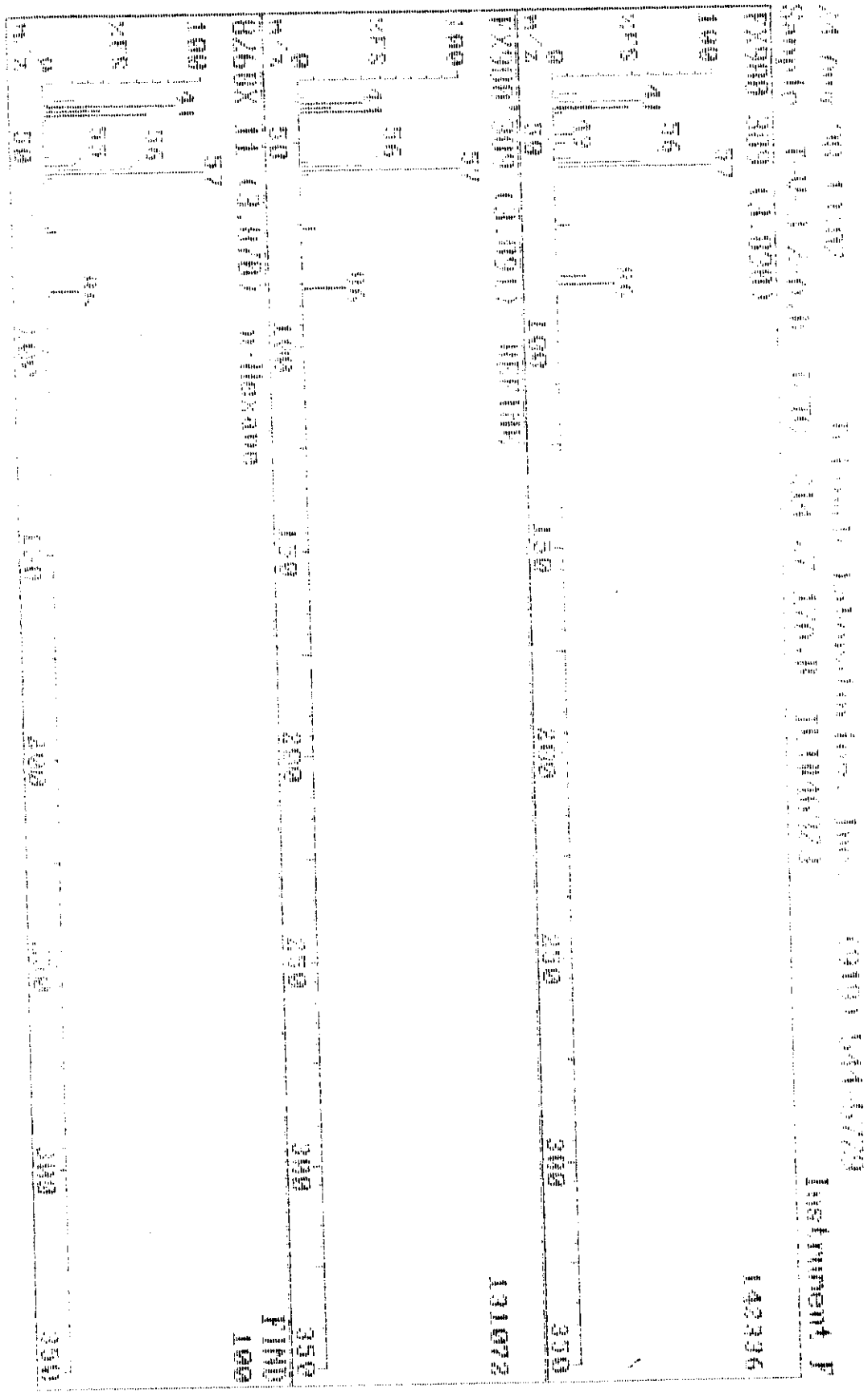
FX980 1169 (11.691) REFINE



8260 44 (12.371) Styrene FIND







Pacific Environmental Services

Project Number: 46323
Sample File: FX981

Method 8260 VOST
Sample ID: T-V-3-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-18A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
Chloromethane	0.043	J	1.09		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.006	J	2.08		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide	0.020	J	2.79		0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.049	J	3.28		0.05
Acrylonitrile		U		0.019	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.08		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.129		5.53		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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380

Pacific Environmental Services

Project Number: 46323
Sample File: FX981

Method 8260 VOST
Sample ID: T-V-3-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-18A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.217		8.11		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.38		
Tetrachloroethene	0.028	J	8.95		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.071		10.70		0.05
m-/p-Xylene	0.378		10.94		0.10
o-Xylene	0.124		11.66		0.05
Styrene	0.037	J	11.73		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.78		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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381

Pacific Environmental Services

Project Number: 46323
Sample File: FX981

Method 8260 VOST
Sample ID: T-V-3-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-18A,B

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.210	5.19	1	84
Toluene-d_8	0.265	8.02	2	106
4-Bromofluorobenzene	0.268	12.69	2	107

Reviewed by PAB Date 8/25/98

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382

Pacific Environmental Services

Project Number: 46323
Sample File: FX981

Method 8260 VOST
Sample ID: T-V-3-3-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-18A,B

Date Received: 07/29/98
Date Analyzed : 08/24/98

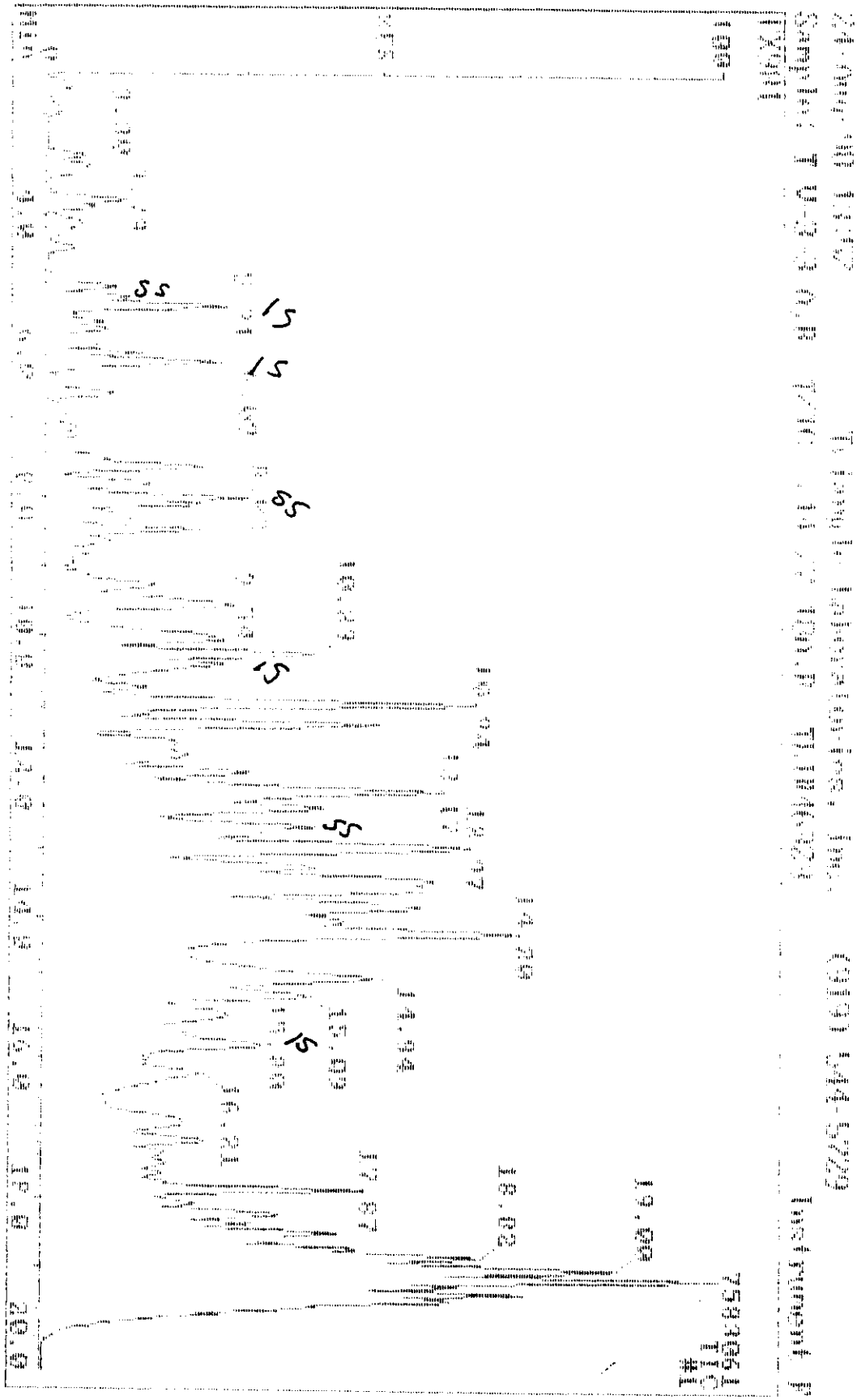
Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.015	J	3.63		0.25
n-Hexane	0.142	J	3.90		0.25
1,2-Epoxybutane		U		0.023	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.08		
Ethyl acrylate		U		0.006	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range



384

Data Review: PAB
Date: 8/24/98

114797 — (M) PAB — 1.09

88384 — (M) PAB — 2.08

(M) PAB

223744 — (M) PAB — 3.28

(M) PAB

(M) PAB

(M) PAB

(M) PAB

Data Review: PAB
Date: 8/24/98

471680—(20) pairs ——— 11.73

No.	MAT	FOR	REV	Delta	Area	RT	QM	Name
1	100	67	95	2	8302044	5.611	100	Pentafluorobenzene
2	100	80	91	0	4277304	6.101	114	1,4-Difluorobenzene
3	93	67	82	1	3495600	10.481	117	Chlorotrifluoroethene
4	45	39	33	1	1587450	15.382	152	1,1,2-Trichlorotrifluoroethane
5	100	66	45	0	1427977	5.191	113	Dibromodifluoromethane
6	100	81	94	0	2251272	8.021	93	Toluene-d8
7	70	44	68	1	1116322	12.021	95	1,1,2,2-Tetrachloroethane
8	[illegible]				[illegible]	[illegible]	39	1,3-Dichlorobenzene
9	0	0	0	0	0	0.000	106	Vinyl acetate
10	44	35	55	1	561756	7.450	91	MIBK
11	100	96	96	2	1703304	1.000	57	n-Hexane
12	[illegible]				[illegible]	[illegible]	62	1,2-Dichloropropane
13	[illegible]				[illegible]	[illegible]	52	Dibromochloromethane
14	[illegible]				[illegible]	[illegible]	75	1,1,2-Trichloroethane

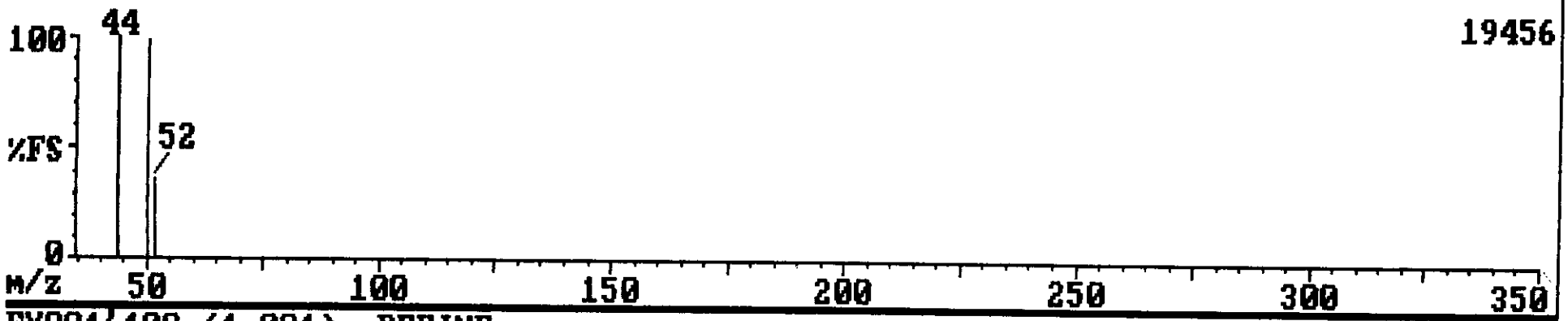
FD FAB

FD FAB

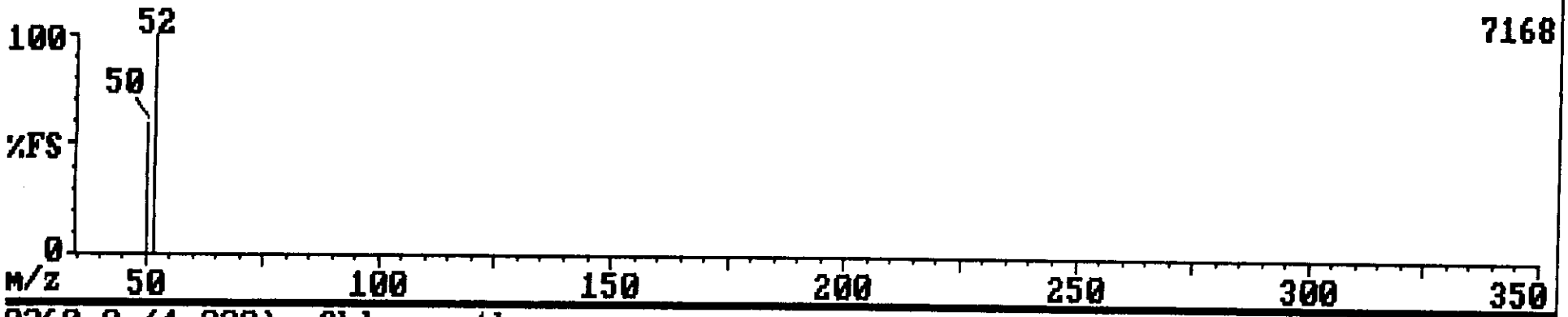
FD FAB

24-Aug-98 13:52 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-3-3-A,B T/TC 214-27-18A,B TLI#46323 Instrument F

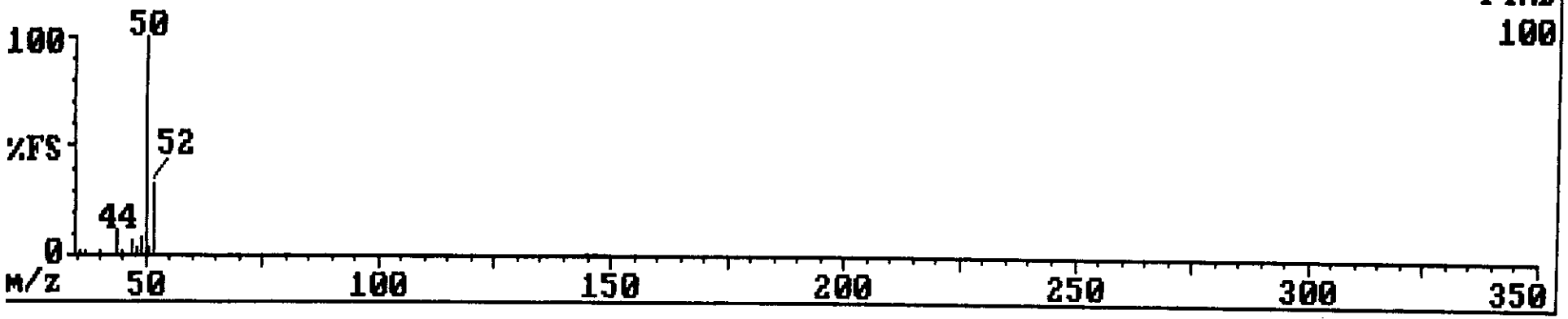
FX981 109 (1.090)



FX981 109 (1.091) REFINE



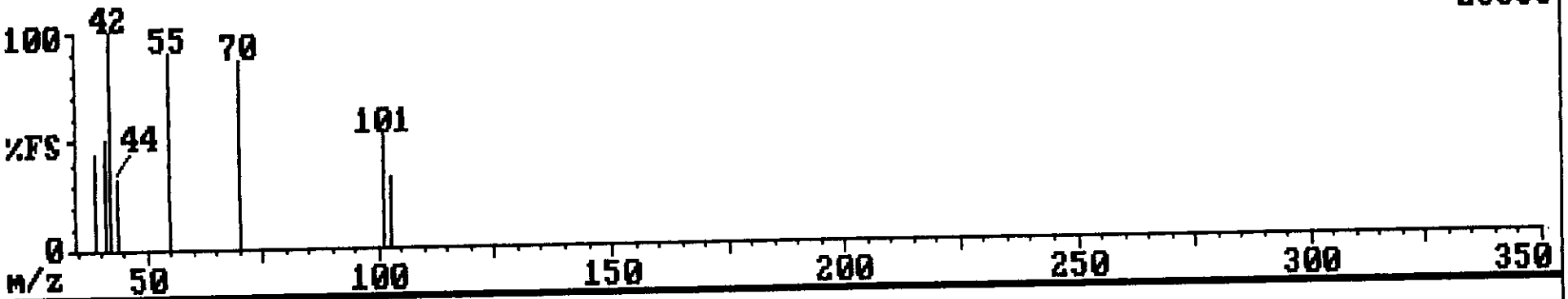
8260 9 (1.230) Chloromethane FIND



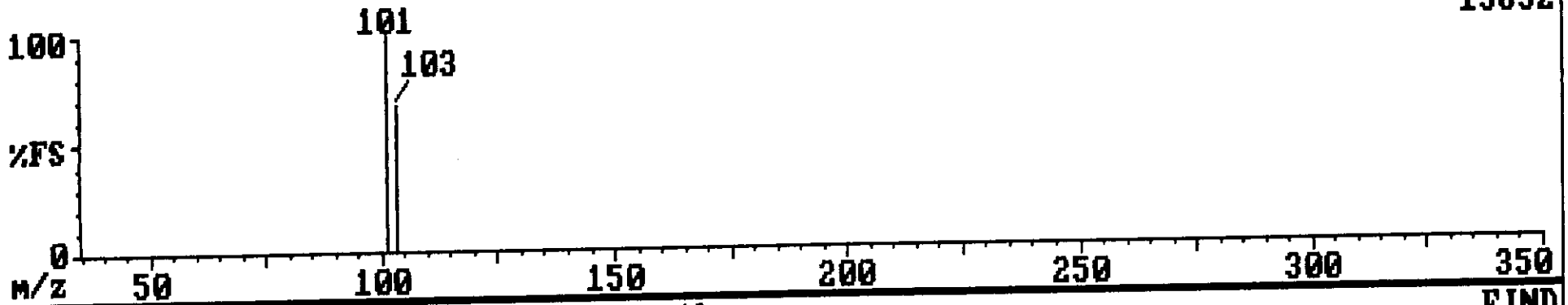
24-Aug-98 13:52 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-3-A,B T/TC 214-27-18A,B TLI#46323 Instrument F

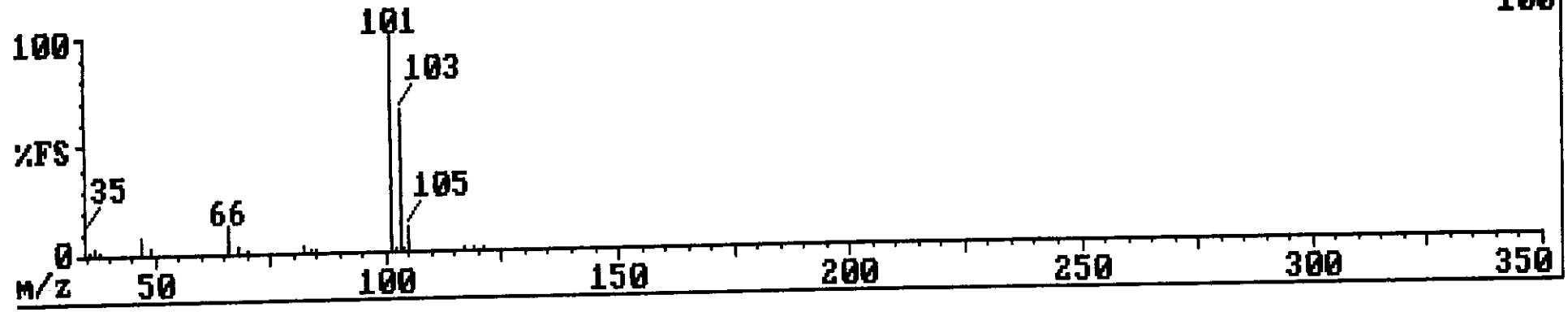
FX981 208 (2.080) 26368



FX981'208 (2.081) REFINE 13632



8260 13 (2.300) Trichlorofluoromethane FIND 100

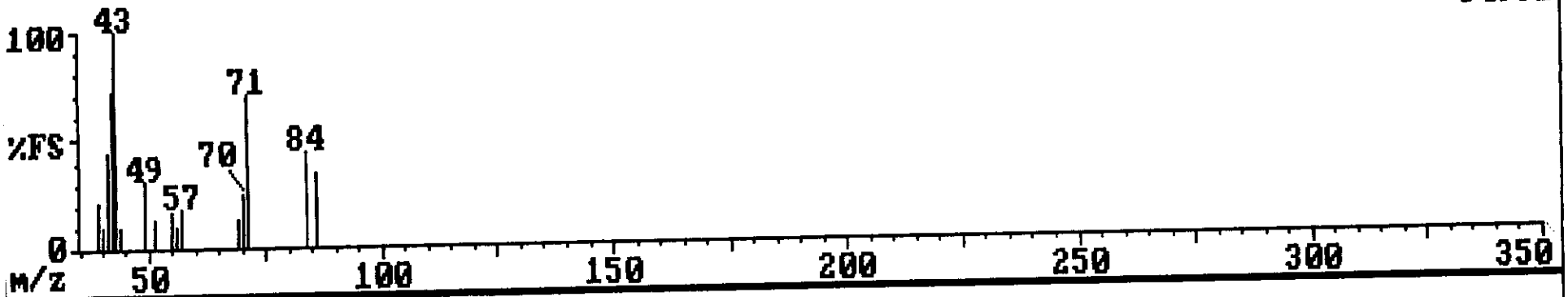


390

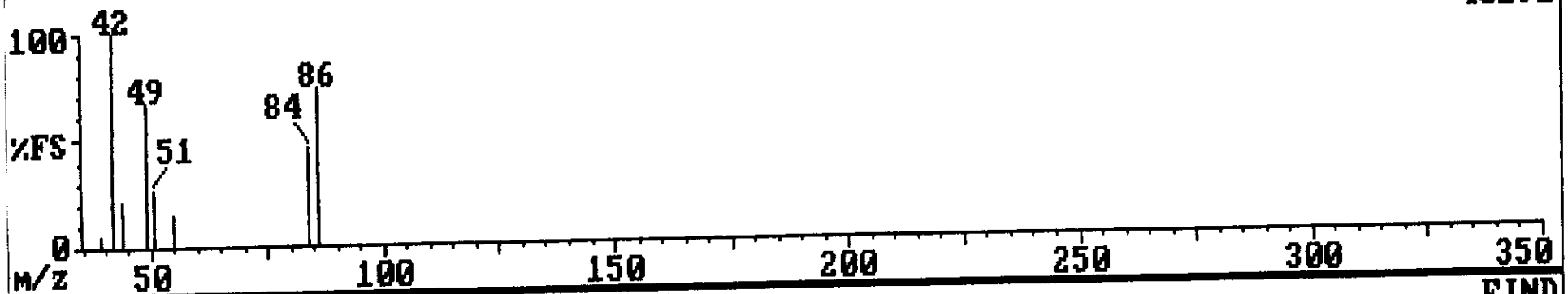
24-Aug-98 13:52 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-3-A,B T/TC 214-27-18A,B TLI#46323 Instrument F

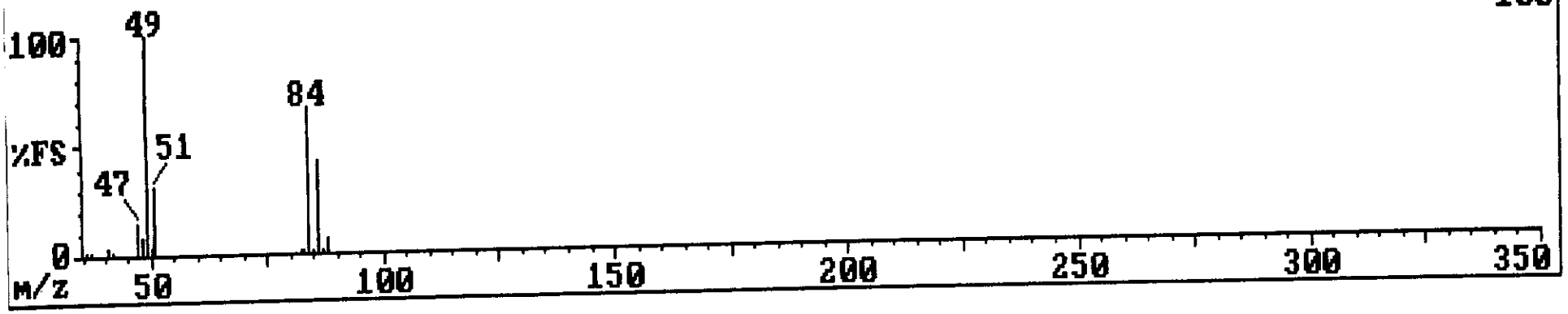
FX981 328 (3.280) 84992



FX981 328 (3.281) REFINE 40192

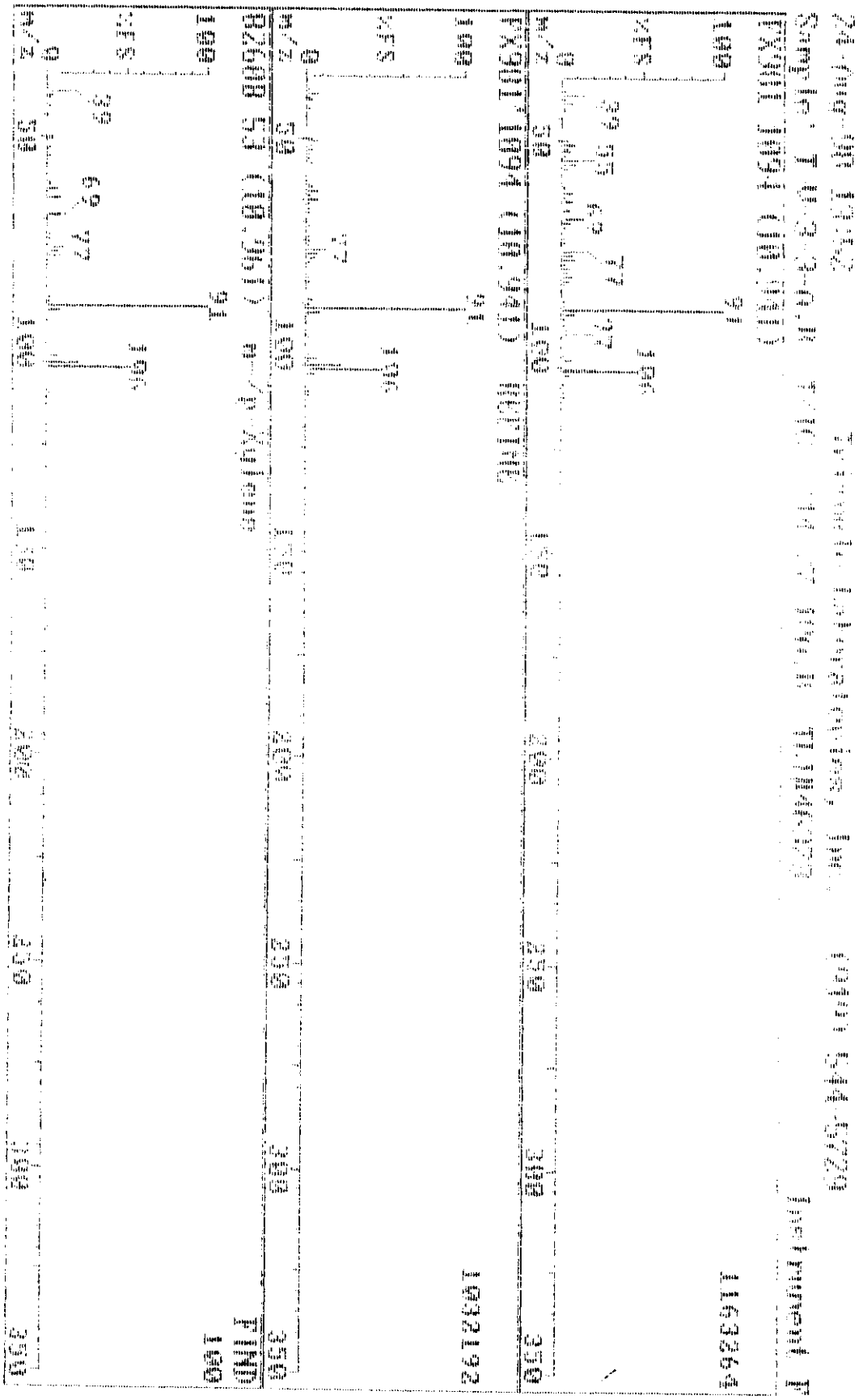


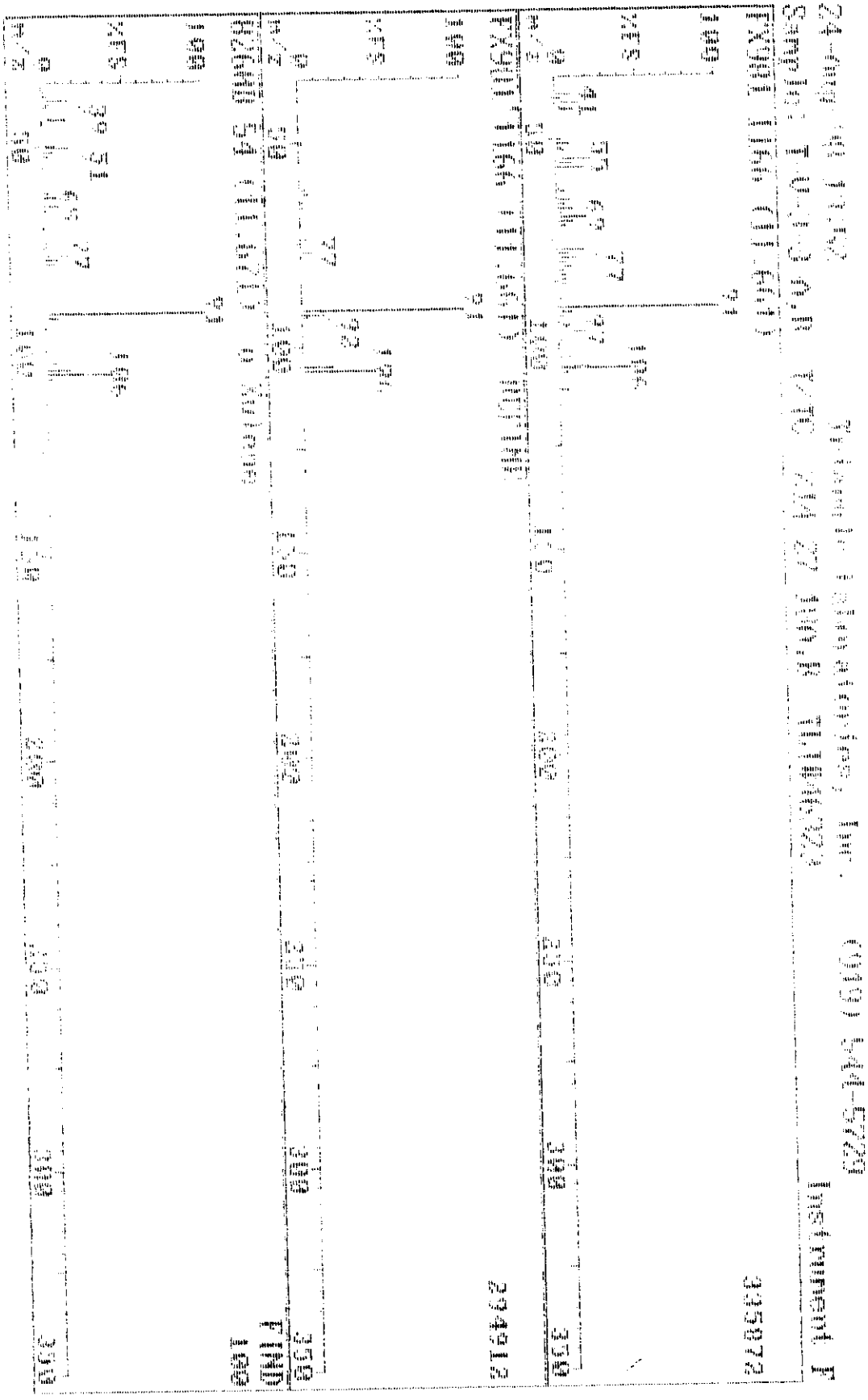
8260 15 (3.550) Methylene chloride FIND 100



392

394

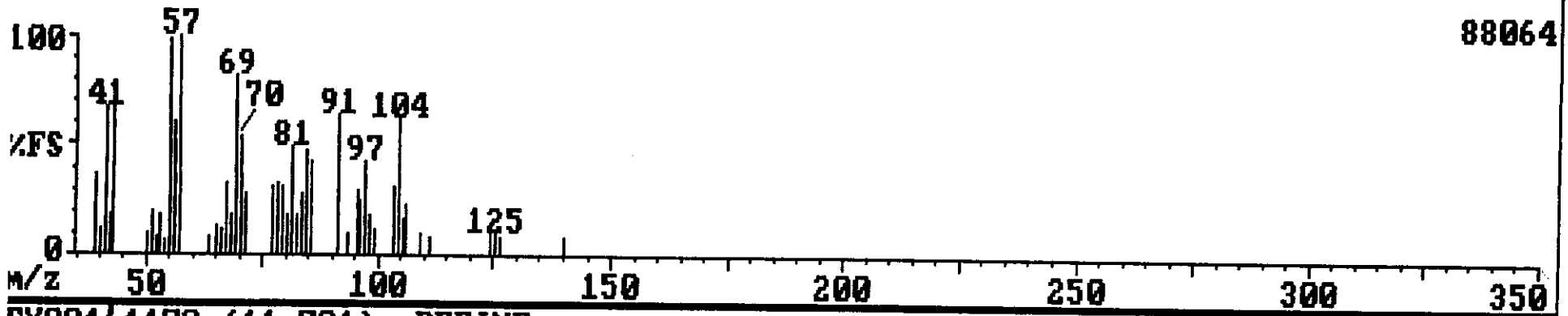




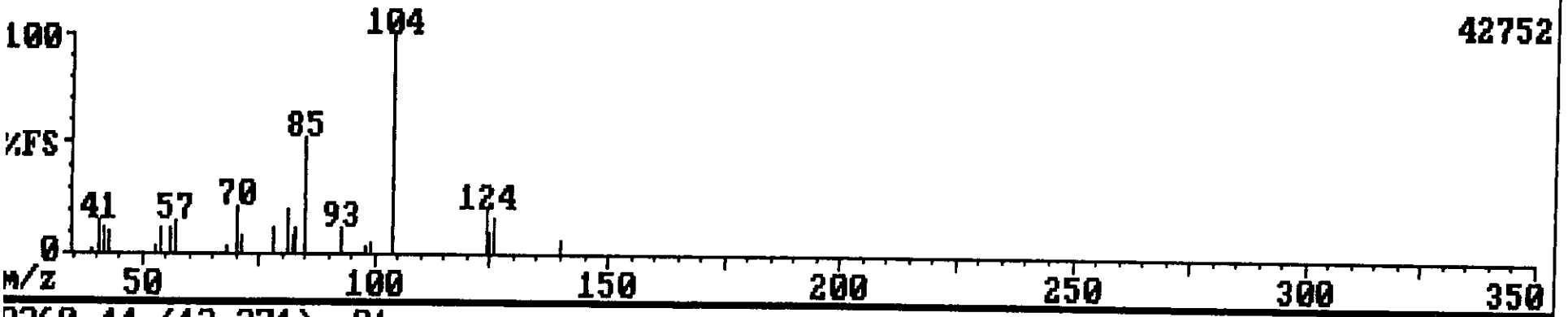
24-Aug-98 13:52 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-3-3-A,B T/TC 214-27-18A,B TLI#46323 Instrument F

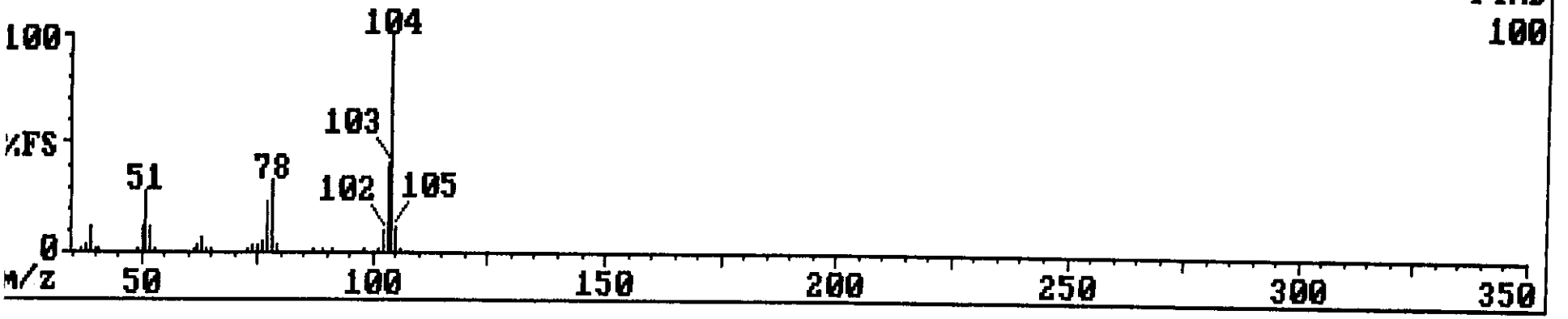
FX981 1173 (11.731)

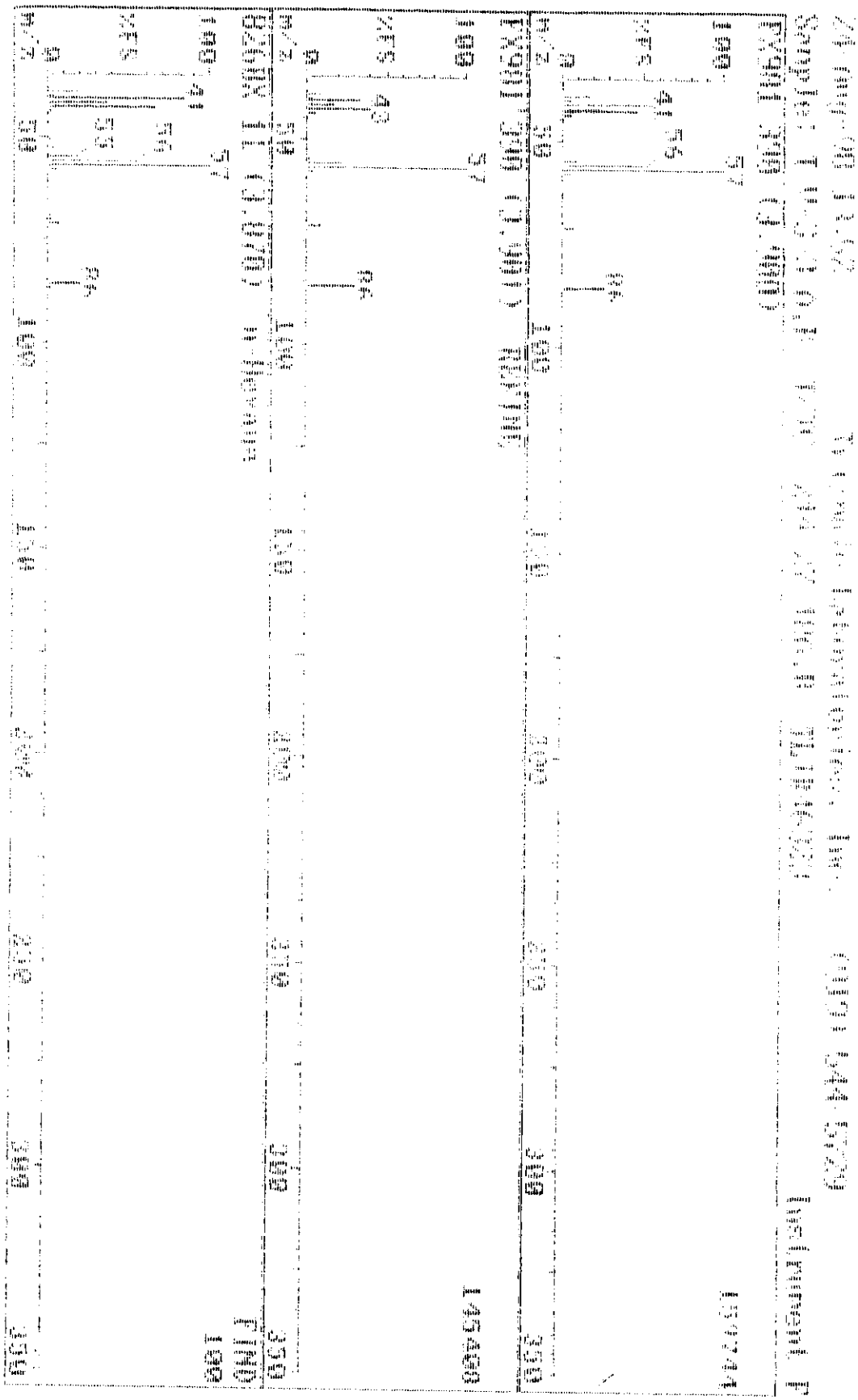


FX981 1173 (11.731) REFINE



8260 44 (12.371) Styrene FIND





Pacific Environmental Services

Project Number: 46323
Sample File: HW562

Method 8260 VOST
Sample ID: T-V-4-1-A T

Client Project: R012.001
TLI ID: 214-27-20A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.03		
Chloromethane	0.010	BJ	0.97		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.010	BJ	1.48		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.009	J	1.91		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone	0.151		2.74		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.038	BJ	3.06		0.05
Acrylonitrile		U		0.007	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone	0.051		4.51		0.05
Chloroform	0.006	J	4.75		0.05
1,1,1-Trichloroethane	0.012	J	4.84		0.05
1,4-Difluorobenzene		IS 2	5.75		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.091	B	5.22		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene	0.001	J	5.99		0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW562

Method 8260 VOST
Sample ID: T-V-4-1-A T

Client Project: R012.001
TLI ID: 214-27-20A

Date Received: 07/29/98

Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.003	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.002	0.05
Toluene	0.133	B	7.70		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.94		
Tetrachloroethene	0.016	J	8.53		0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.018	J	10.28		0.05
m-/p-Xylene	0.056	J	10.52		0.10
o-Xylene	0.024	J	11.23		0.05
Styrene	0.025	BJ	11.28		0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.07		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW562

Method 8260 VOST
Sample ID: T-V-4-1-A T

Client Project: R012.001
TLI ID: 214-27-20A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.262	4.91	1	105
Toluene-d_8	0.282	7.60	2	113
4-Bromofluorobenzene	0.384	12.24	2	154

1 of PAB 8/10/98

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: HW562

Method 8260 VOST
Sample ID: T-V-4-1-A T

Client Project: R012.001
TLI ID: 214-27-20A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.03		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.114	J	3.41		0.25
n-Hexane	0.034	J	3.66		0.25
1,2-Epoxybutane		U		0.055	0.25
Iso-Octane	0.012	J	5.38		0.25
1,4-Difluorobenzene		IS 2	5.75		
Ethyl acrylate		U		0.001	0.25

Reviewed by _____ Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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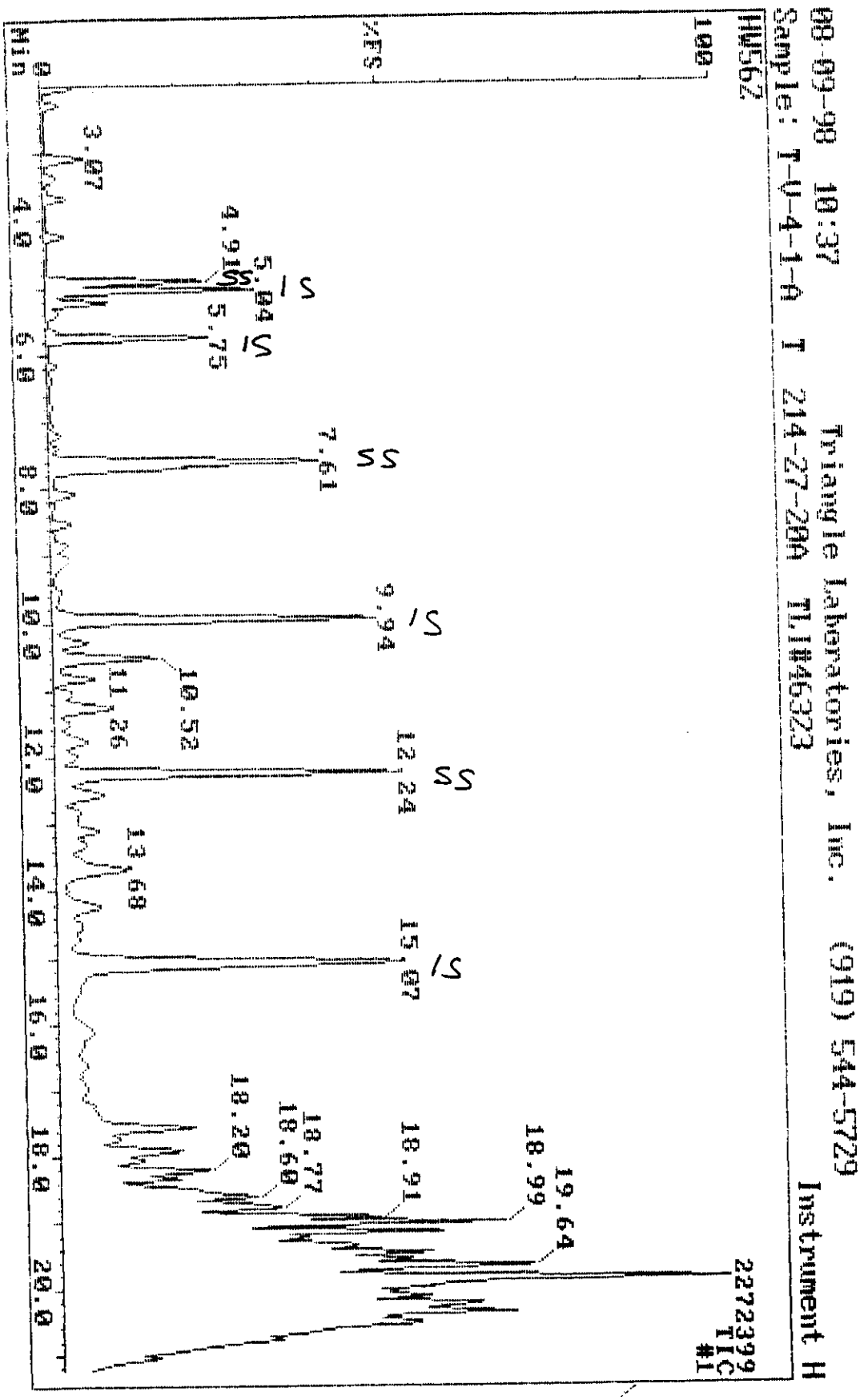


Data Review: GAB
Date: 8/10/98

405

QUAN DB : HW562 LAB-BASE QUAN 08-09-98 11:14

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	84	99	-6	1824832	bb	5.03	168	Pentafluorobenzene
2	100	97	98	-1	1672116	bv	5.75	114	1,4-Difluorobenzene
3	100	94	95	4	3173136	bv	9.94	117	Chlorobenzene-d5
4	100	75	99	-4	2324848	bv	15.07	152	1,4-Dichlorobenzene-d4
5	100	94	100	1	1018220	bv	4.91	113	Dibromofluoromethane
6	100	91	98	-1	2642836	bv	7.60	98	Toluene-d8
7	96	89	94	7	1931123	vv	12.24	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	85	Dichlorodifluoromethane
9	100	82	82	-1	26264	bv	0.97	50	Chloromethane
10	0	0	0	0	0		0.00	62	Vinyl Chloride
11	100	78	91	0	30116	bv	1.48	94	Bromomethane
12	0	0	0	0	0		0.00	64	Chloroethane
13	100	77	91	0	70572	bb	1.91	101	Trichlorofluoromethane
14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
15	0	0	0	0	0		0.00	142	Iodomethane
16	0	0	0	0	0		0.00	76	Carbon disulfide
17	85	74	93	8	55188	bv	2.74	43	Acetone
18	0	0	0	0	0		0.00	41	Allyl chloride
19	81	58	71	0	97924	bv	3.06	84	Methylene chloride
20	~~2~~	~~1~~	~~16~~	~~5~~	~~368~~	~~bb~~	~~3.55~~	53	Acrylonitrile
21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
23	0	0	0	0	0		0.00	43	Vinyl acetate
24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
26	100	87	87	2	23632	bv	4.51	43	2-Butanone
27	100	82	92	0	32932	bb	4.75	83	Chloroform
28	0	0	0	0	0		0.00	128	Bromochloromethane
29	81	58	78	-1	65932	bb	4.84	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.00	117	Carbon tetrachloride
31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
32	100	96	98	0	711096	bv	5.22	78	Benzene
33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
34	81	66	66	-1	1604	bb	5.99	130	Trichloroethene
35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
36	0	0	0	0	0		0.00	93	Dibromomethane
37	0	0	0	0	0		0.00	41	Methyl methacrylate
38	0	0	0	0	0		0.00	83	Bromodichloromethane
39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
40	~~50~~	~~2~~	~~73~~	~~1~~	~~38864~~	~~bv~~	~~7.61~~	43	4-Methyl-2-pentanone
41	100	94	99	0	900812	bv	7.70	92	Toluene
42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropen
43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
44	62	51	51	-1	9220	A	8.43	69	Ethyl methacrylate
45	100	84	96	-2	75744	bb	8.53	164	Tetrachloroethene
46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
47	~~34~~	~~15~~	~~56~~	~~-11~~	~~32192~~	~~vv~~	~~8.86~~	43	2-Hexanone
48	0	0	0	0	0		0.00	129	Dibromochloromethane
49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
50	0	0	0	0	0		0.00	112	Chlorobenzene

FP) FAB 8/10/98

FP) FAB 8/10/98

FP) FAB 8/10/98

Data Review: FAB
Date: 8/10/98

406

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	131	1,1,1,2-Tetrachloroethan
52	100	80	93	0	125776	bv	10.28	106	Ethylbenzene
53	100	83	93	2	480652	vv	10.52	106	m-/p-Xylene
54	100	82	87	1	194588	bv	11.23	106	o-Xylene
55	98	77	88	1	326848	bb	11.28	104	Styrene
56	0	0	0	0	0		0.00	173	Bromoform
57	0	0	0	0	0		0.00	105	Cumene
58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroethan
59	0	0	0	0	0		0.00	156	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	61	38	72	6	37644	bb	12.87	120	n-Propylbenzene
62	0	0	0	0	0		0.00	75	trans-1,4-Dichloro-2-but
63	0	0	0	0	0		0.00	126	2-Chlorotoluene
64	0	0	0	0	0		0.00	126	4-Chlorotoluene
65	61	71	92	-17	512200	bv	13.11	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	96	69	93	2	447208	bv	14.23	105	1,2,4-Trimethylbenzene
68	46	12	61	-1	53228	A	14.72	105	sec-Butylbenzene
69	71	41	75	0	209044	bv	15.32	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	61	35	72	4	110413	vv	16.85	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	0	0	0	0	0		0.00	180	1,2,4-Trichlorobenzene
77	0	0	0	0	0		0.00	225	Hexachlorobutadiene
78	0	0	0	0	0		0.00	128	Naphthalene
79	0	0	0	0	0		0.00	180	1,2,3-Trichlorobenzene

QUAN DB : HW562 LAB-BASE QUAN 08-10-98 14:26

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	84	99	-1	1824832	bb	5.03	168	Pentafluorobenzene
2	100	97	98	0	1672116	bv	5.75	114	1,4-Difluorobenzene
3	100	94	95	2	3173136	bv	9.94	117	Chlorobenzene-d5
4	100	75	99	5	2324848	bv	15.07	152	1,4-Dichlorobenzene-d4
5	100	94	100	2	1018220	bv	4.91	113	Dibromofluoromethane
6	100	91	98	-3	2642836	bv	7.60	98	Toluene-d8
7	100	89	94	5	1931123	vv	12.24	95	4-Bromofluorobenzene
8	~~75~~	~~43~~	~~77~~	2	~~55292~~	~~h~~ PAB	~~1.06~~	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	100	87	90	2	103404	bb	3.41	73	MTBE
11	100	98	98	1	169304	bb	3.66	57	n-Hexane
12	~~62~~	~~44~~	~~57~~	~~-2~~	~~55172~~	~~bb~~ PAB	~~4.22~~	42	1,2-Epoxybutane
13	100	84	87	0	137300	bv	5.38	57	Iso-Octane
14	~~40~~	~~33~~	~~56~~	~~15~~	~~45472~~	~~bb~~ PAB	~~9.17~~	55	Ethyl acrylate

Data Review: PAB
Date: 8/10/98

08-09-96 10:37
Sample: T-V-4-1-V T
Triangle Laboratories, Inc. (919) 544-5729
214-27-2004 TL#49323
Instrument H
HW562 97 (0.970)
100
%S
50
44
52
m/z
0
50
100
150
200
250
300
350
4864
HW562797 (0.971) REAGENT
4288
02608 9 (0.950) Chloromethane
FIND
100

08-09-90 10:27
Sample: T-U-4-1-A T 214-27-2BN TU1#46023
Instrument H
(919) 544-5729
Triangle Laboratories, Inc.
HW562 148 (1,400)
%FS
m/z
HW562 148 (1,481) REFINE
%FS
m/z
02600 11 (1,500) Bromomethane
%FS
m/z
FIND

410

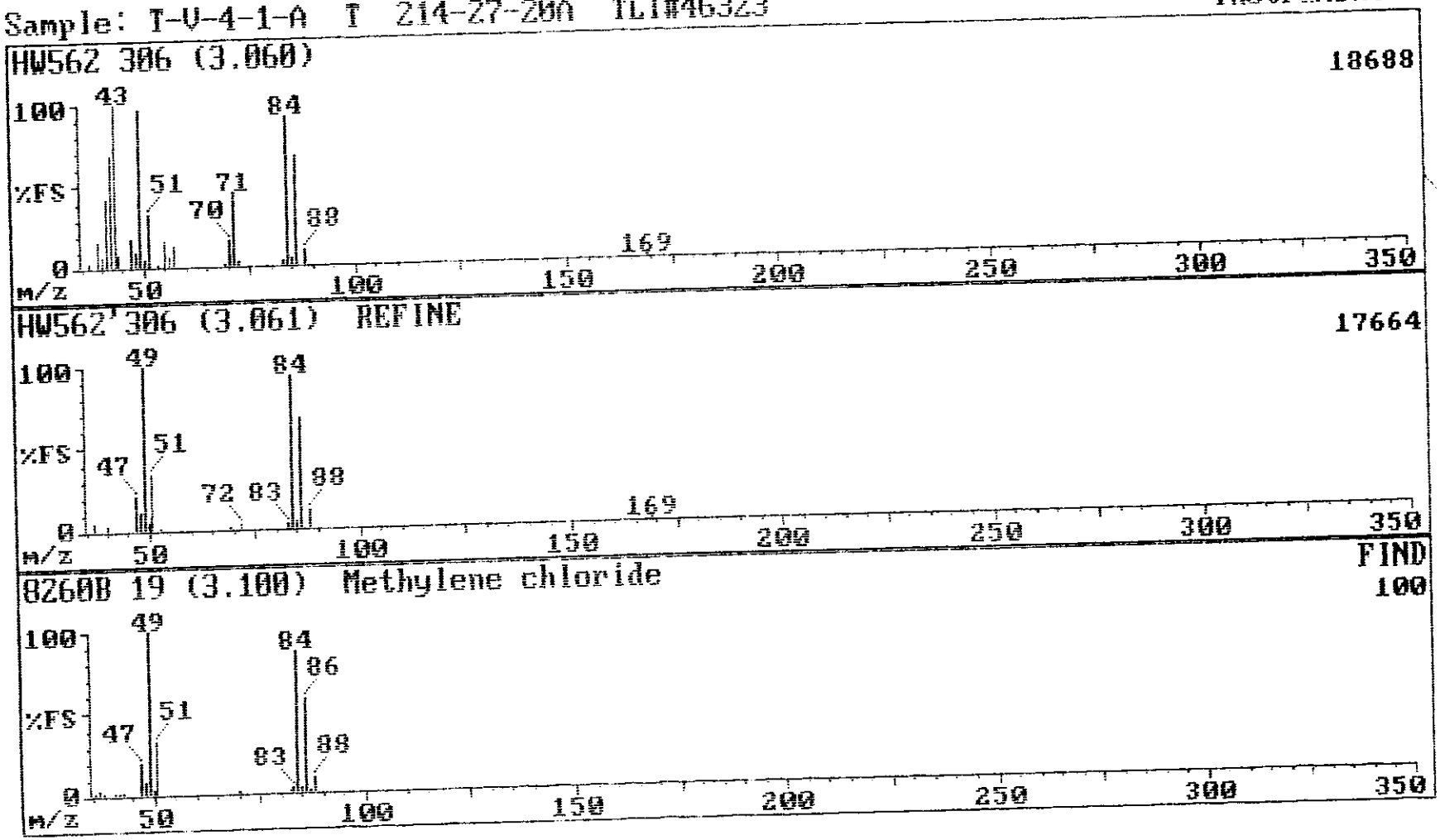
00-00-00 10:37
Sample: T-U-4-1-A T 214-27-2004 TLI#46323 Inc. (919) 544-5729
HW562 191 (1,910)
%FS
100
99
82
70
66
55
47
44
28
105
103
101
m/z
0
50
150
250
350
9216
Instrument H
HW562 191 (1,911) REFINE
8512
Trichlorofluoromethane
02600 13 (1,930)
FIND

08-09-98 10:37
Sample: T-U-4-1-0 T 214-27-20A TLI#40323
HW562 274 (2,740)
m/z
%FS
100
43
58
50
100
150
200
250
300
350
5760
Instrument H
Triangle Laboratories, Inc. (919) 544-5729
HW562 274 (2,741) REFINE
4928
HW562 274 (2,690) Acetone
9260B 17
FIND
100

412

08-09-90 10:37 Triangle Laboratories, Inc. (919) 544-5729

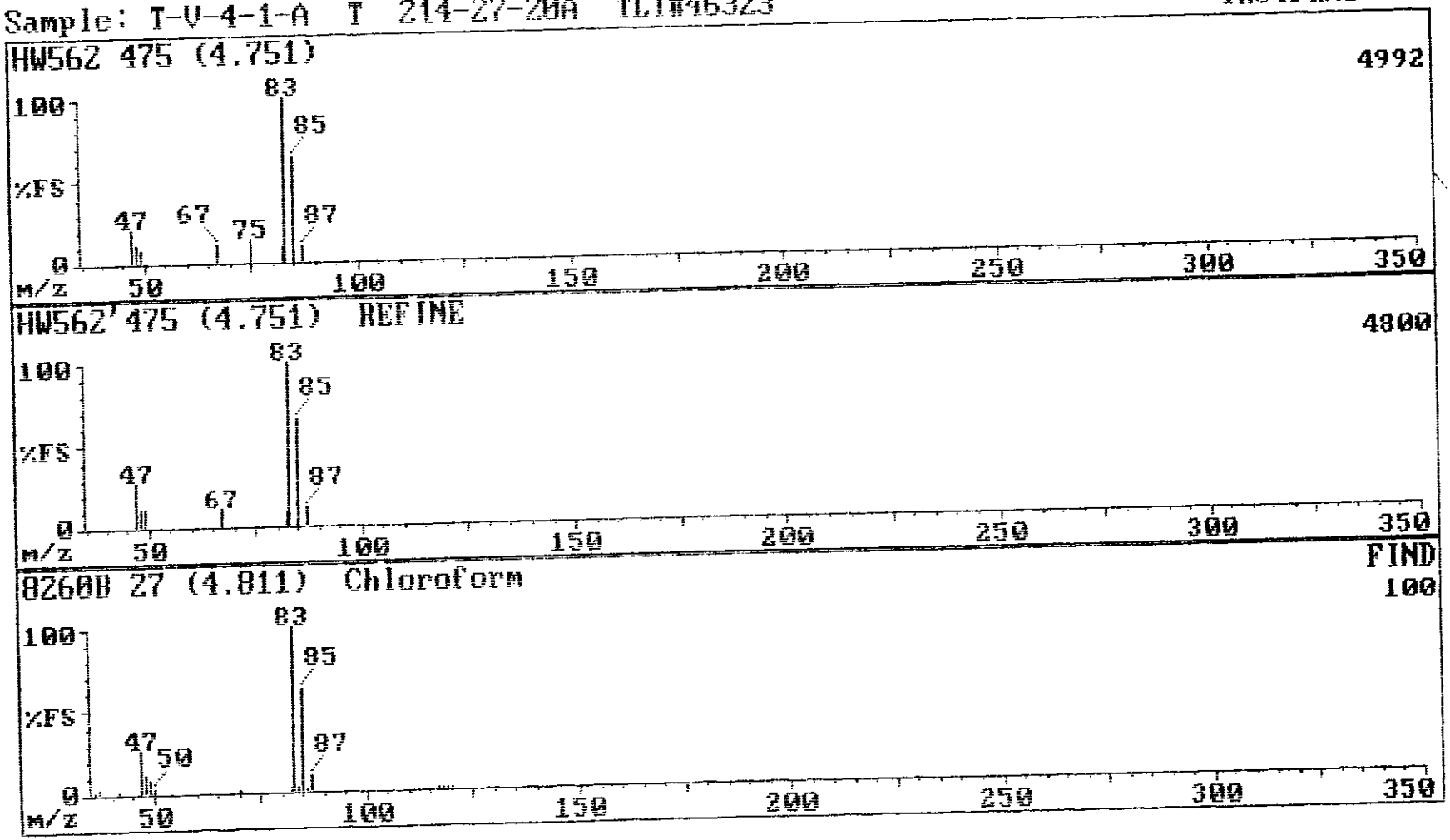
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



Instrument H
Sample: T-U-4-1-A T 214-27-20A TLI#46323 Trilogy Laboratories, Inc. (919) 544-5729
08-09-98 10:37
HW562 451 (4.510)
HW562/451 (4.511) DEFINE
02608 26 (4.541) 2-Butanone
FIND

08-09-98 10:37 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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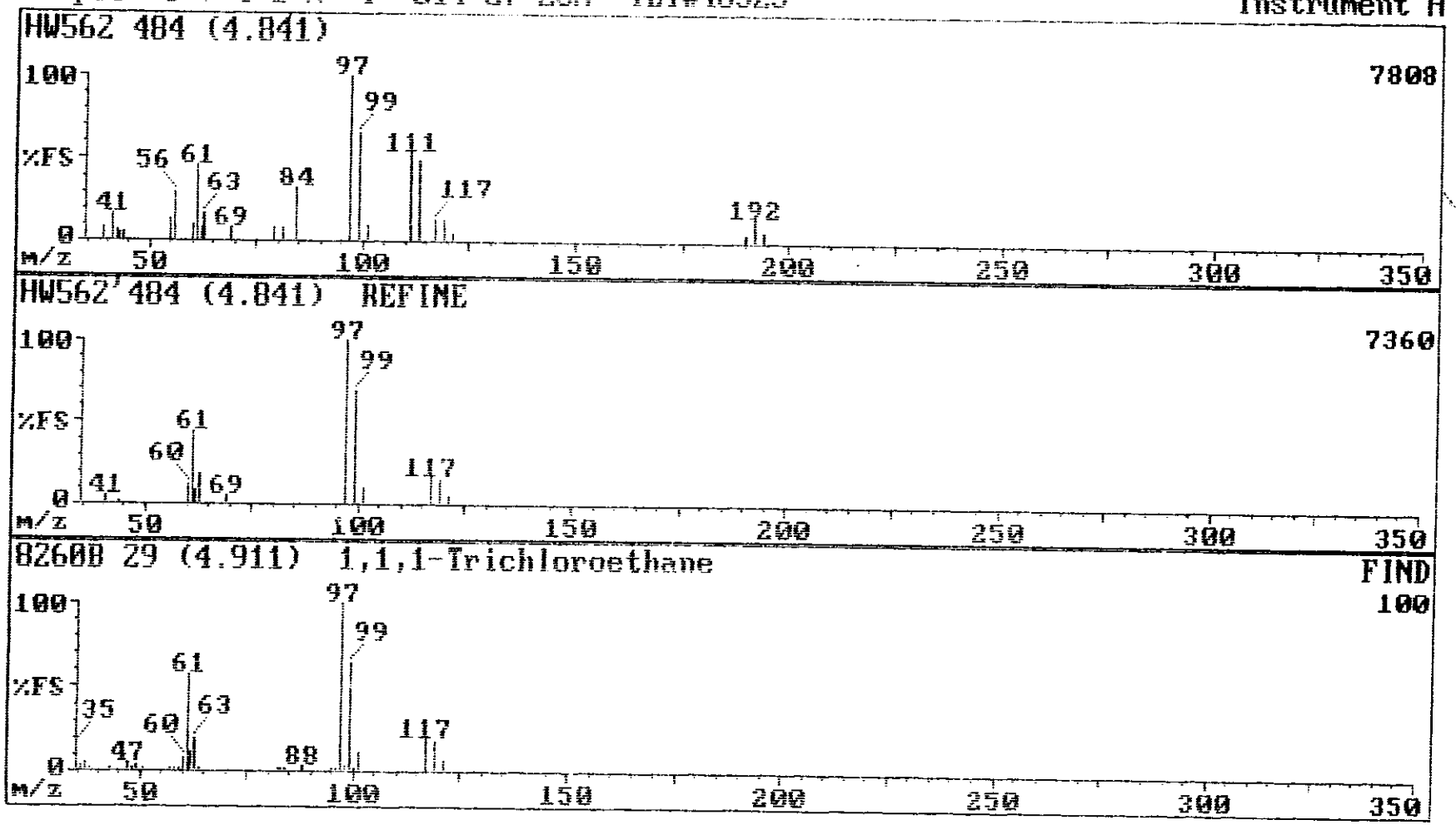
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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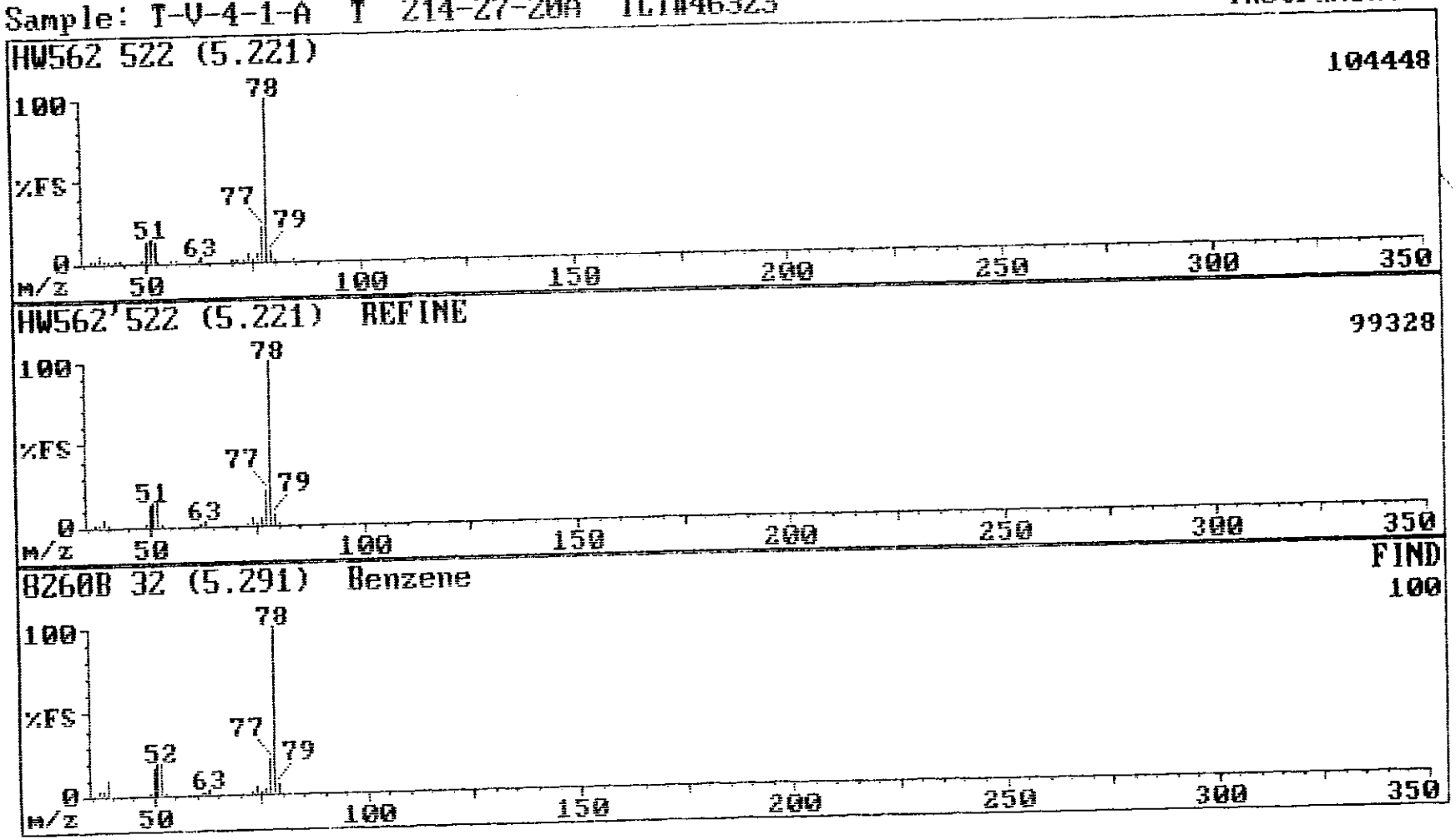
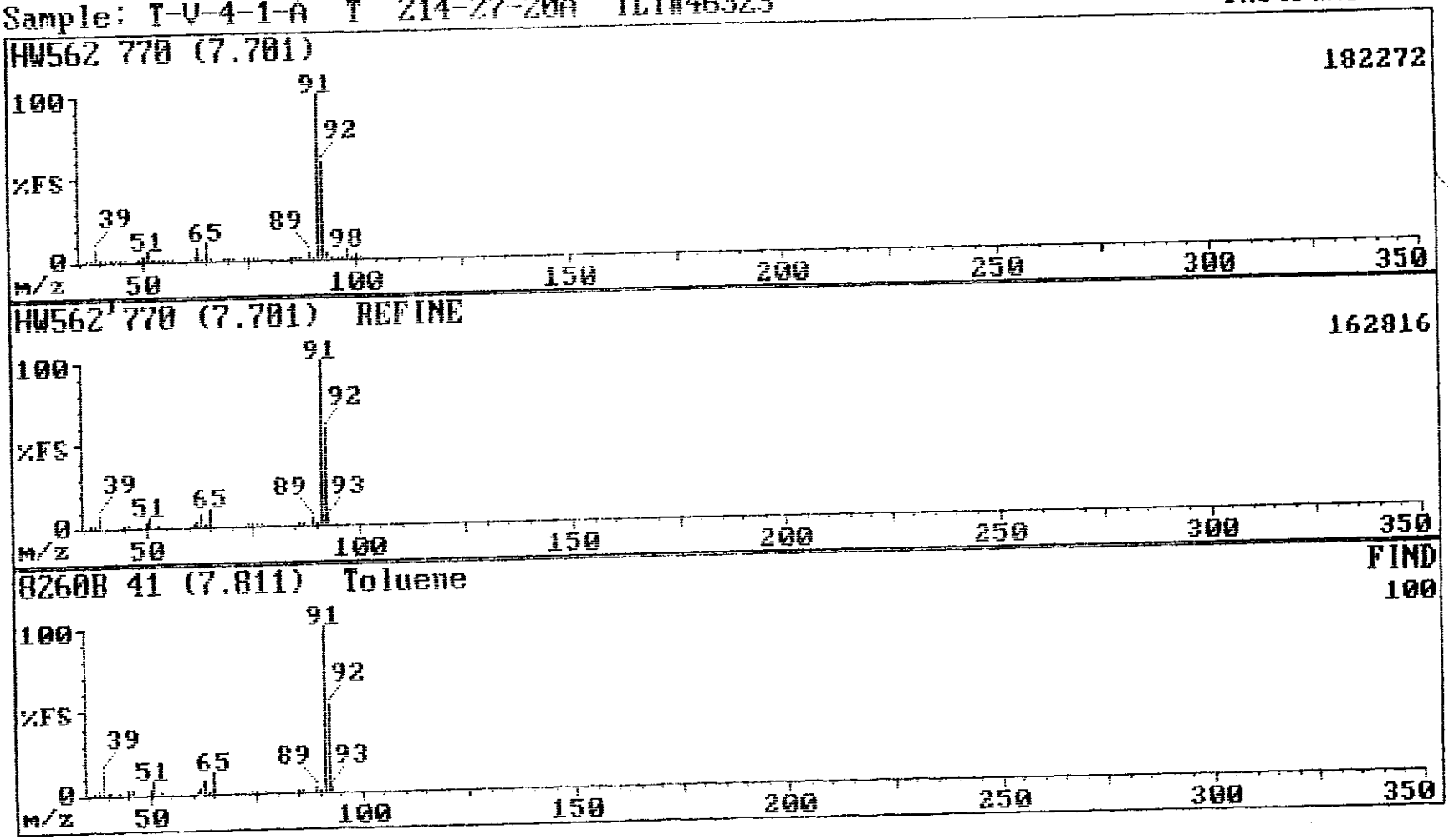
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



00-00-00 10:37
Sample: T-U-4-1-A T 214-27-2001 TLI#46323
Triangle Laboratories, Inc. (919) 544-5729
HW562 599 (5,991)
HW562,599 (5,991) REFINE
82000 34 (6.001) Trichloroethene
FIND
m/z
%FS
100
50
0
150
200
250
300
350
95
97
130
776
Instrument H

08-09-98 10:37 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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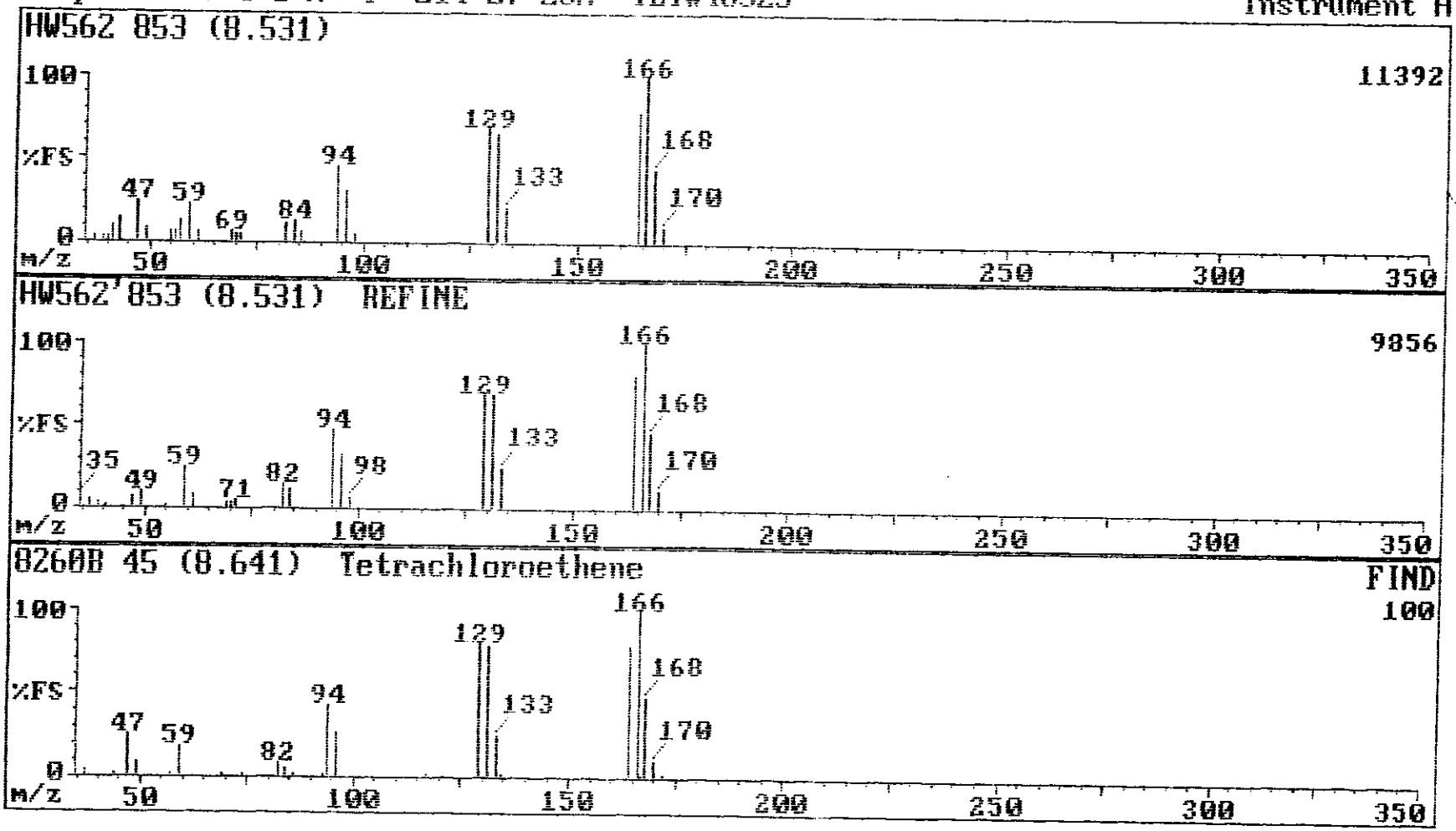
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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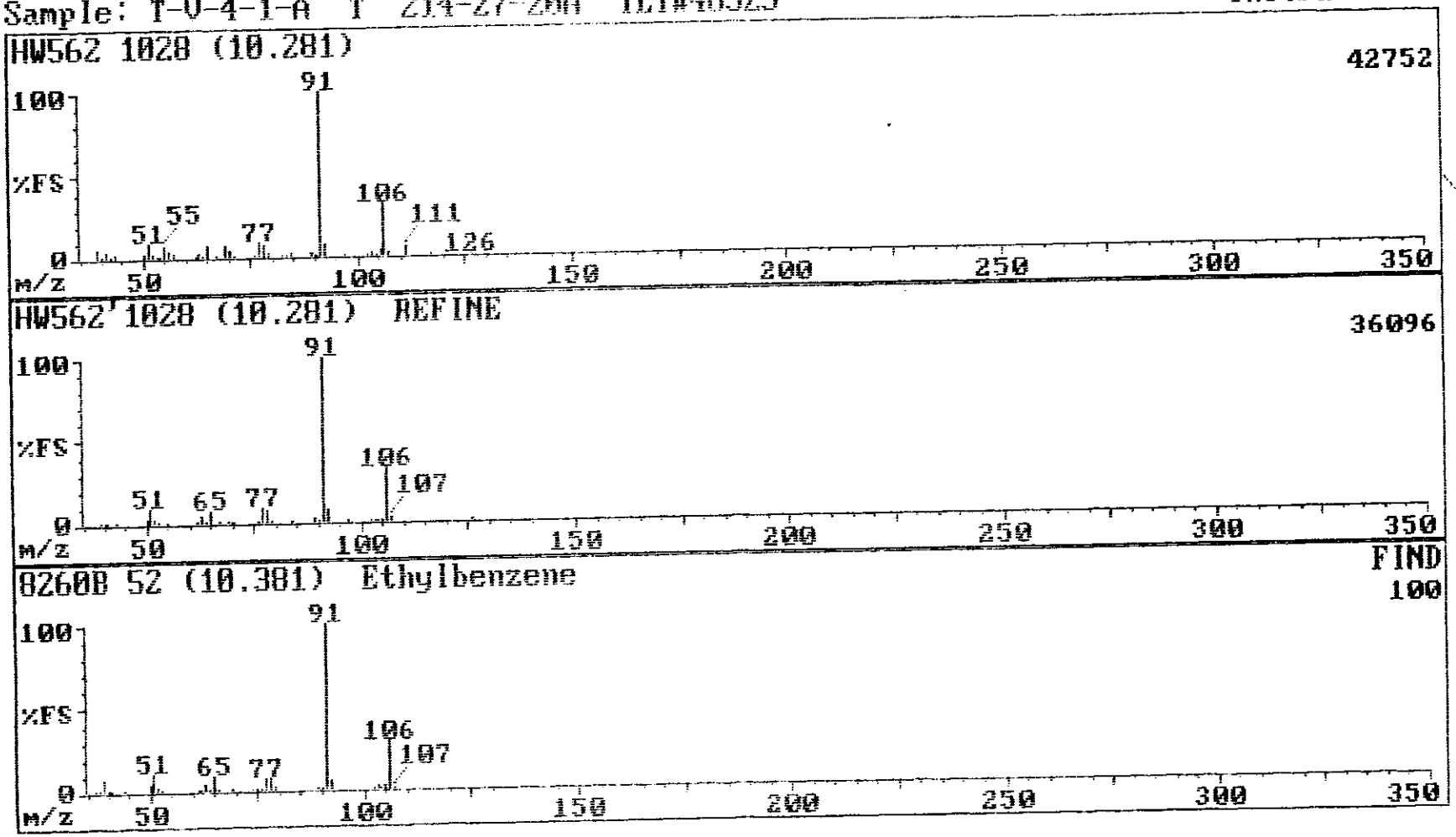
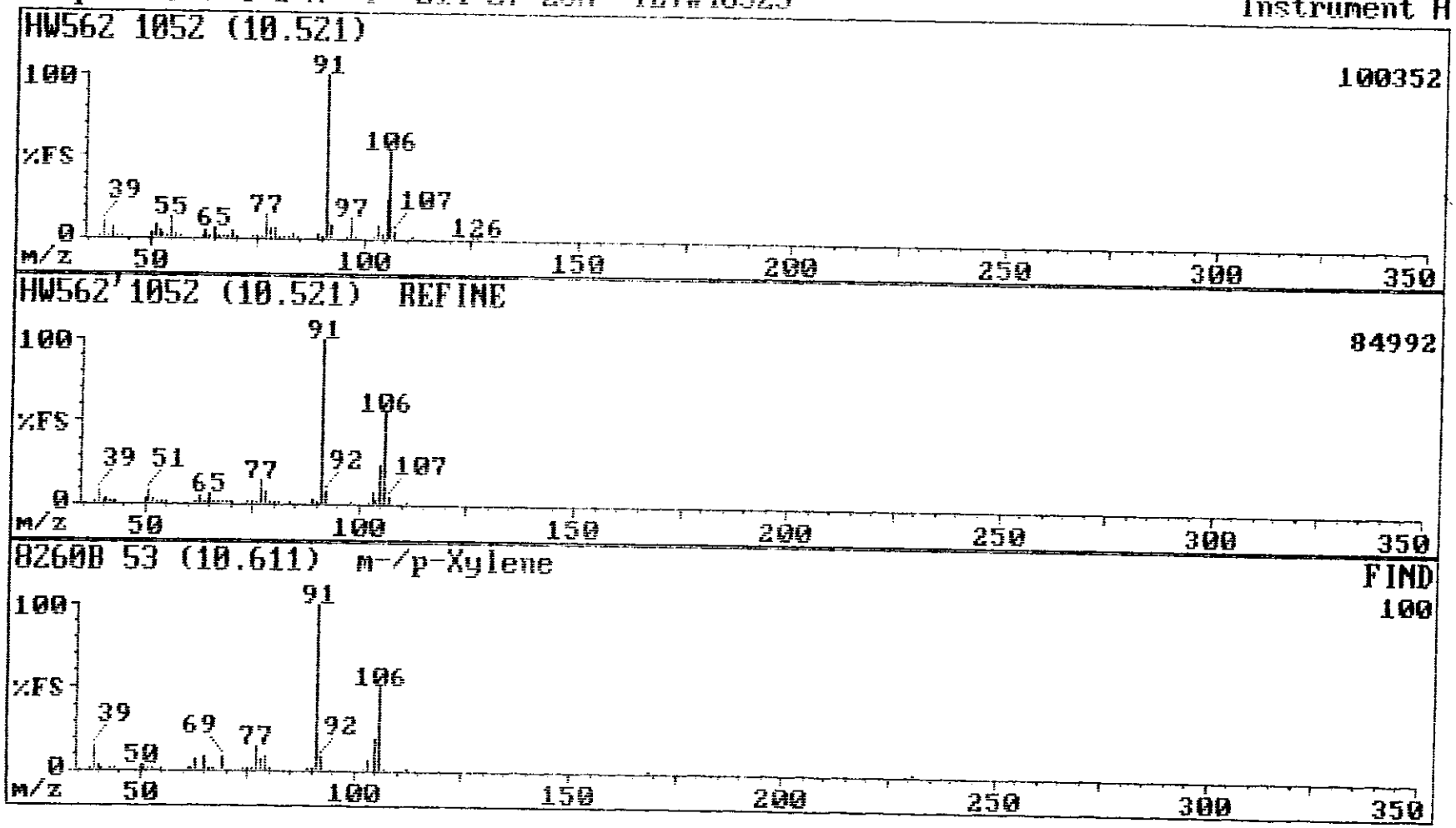
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



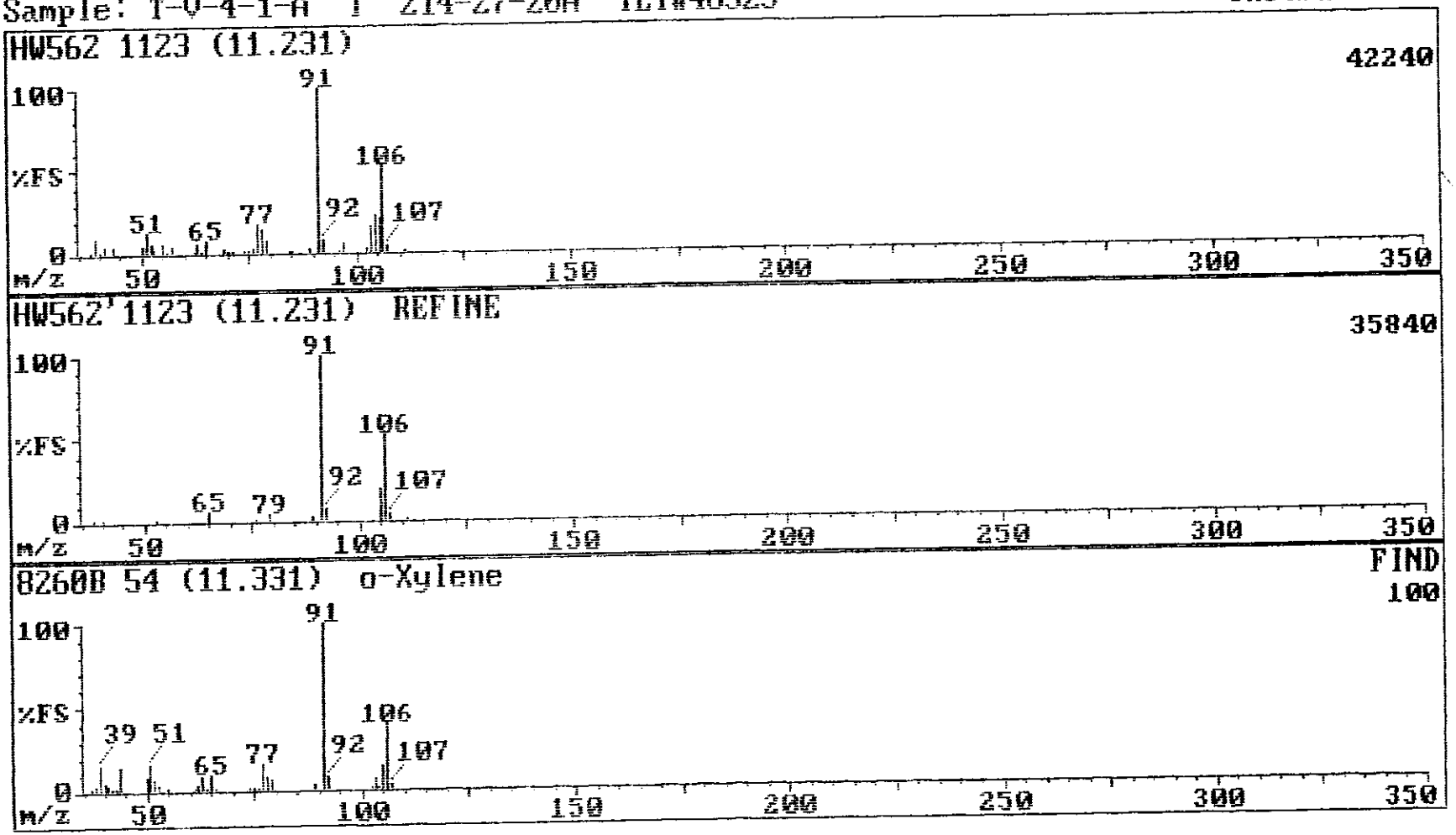
08-09-98 10:37 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



08-09-98 10:37 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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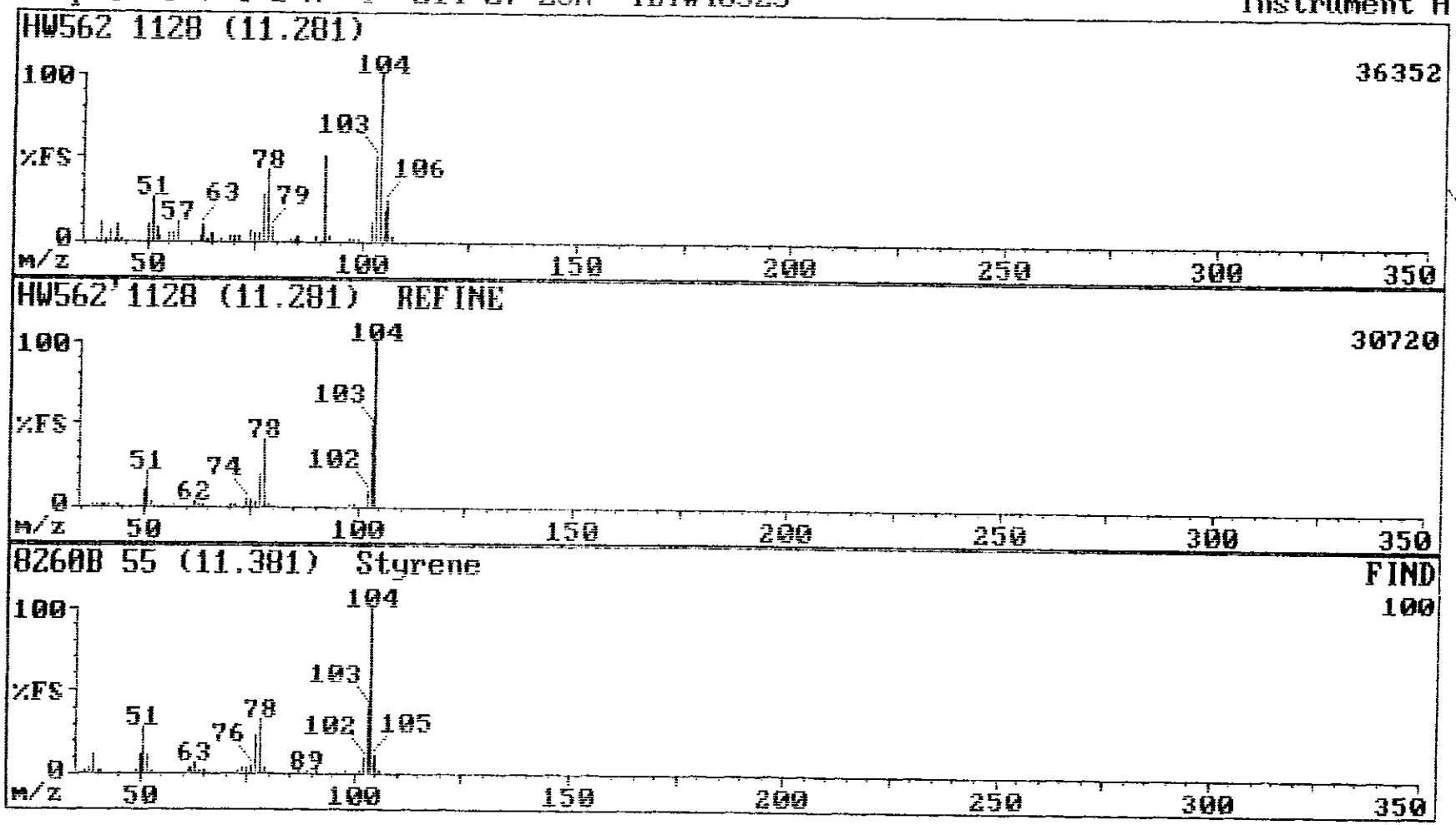
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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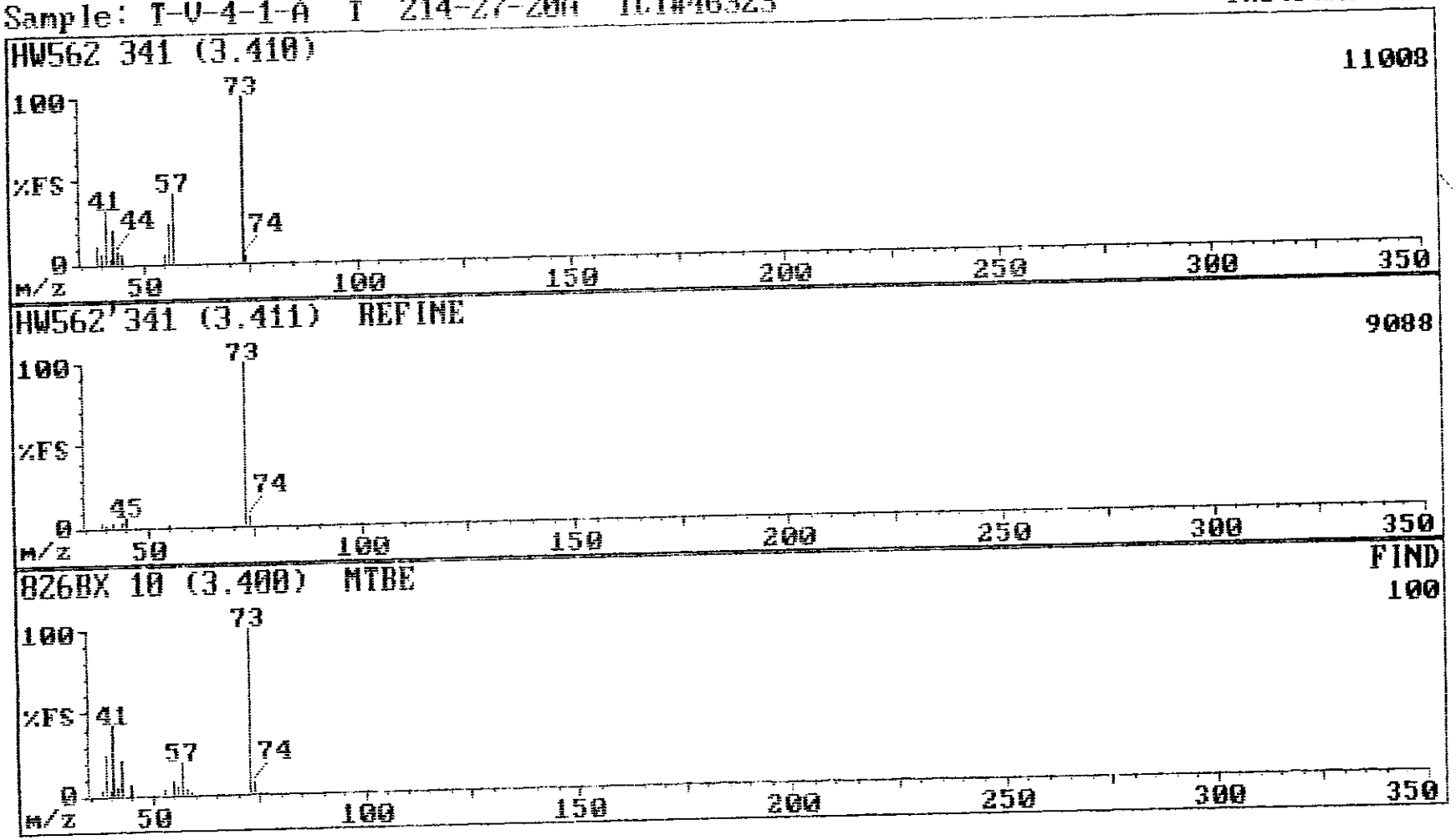
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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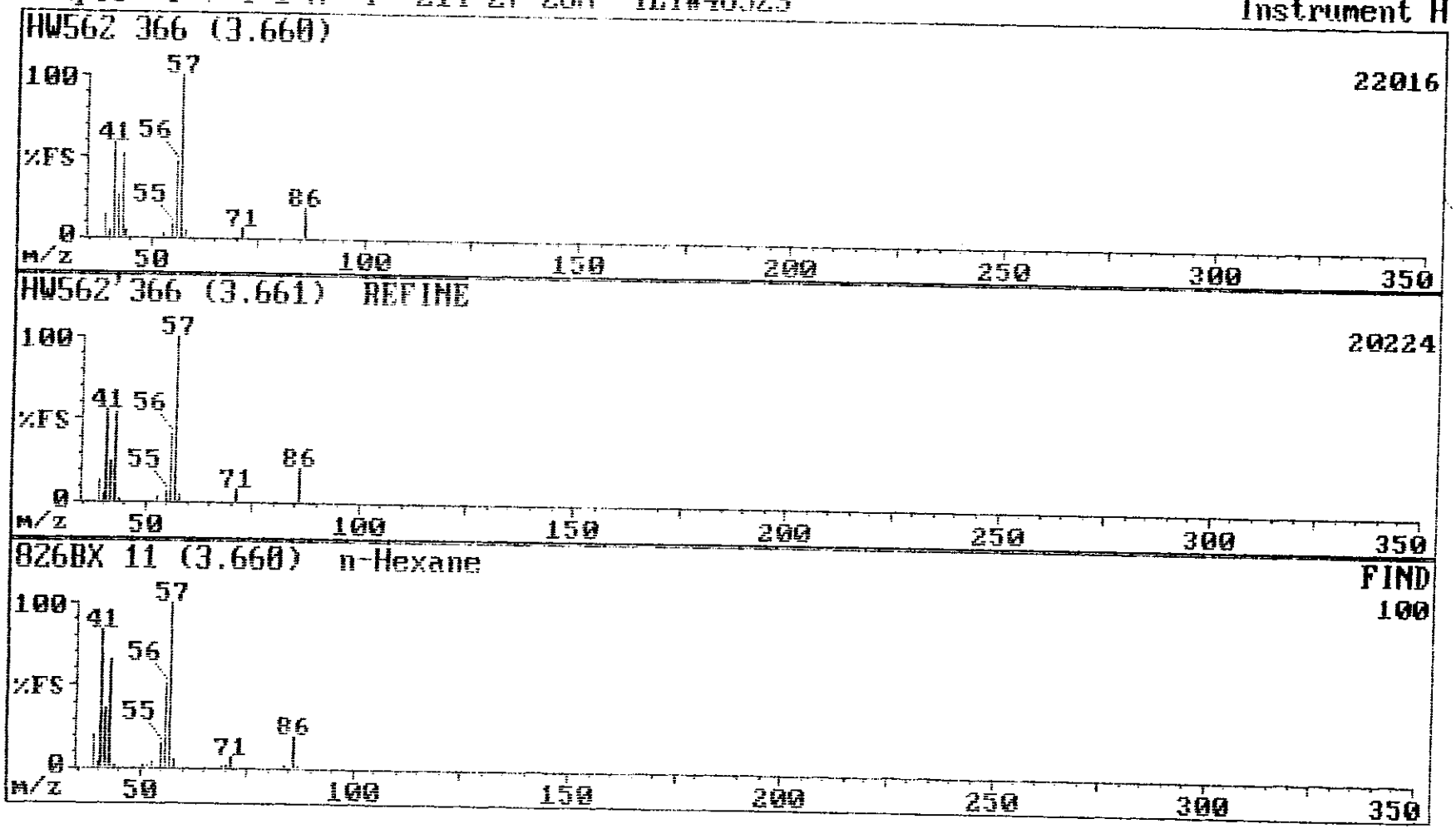
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



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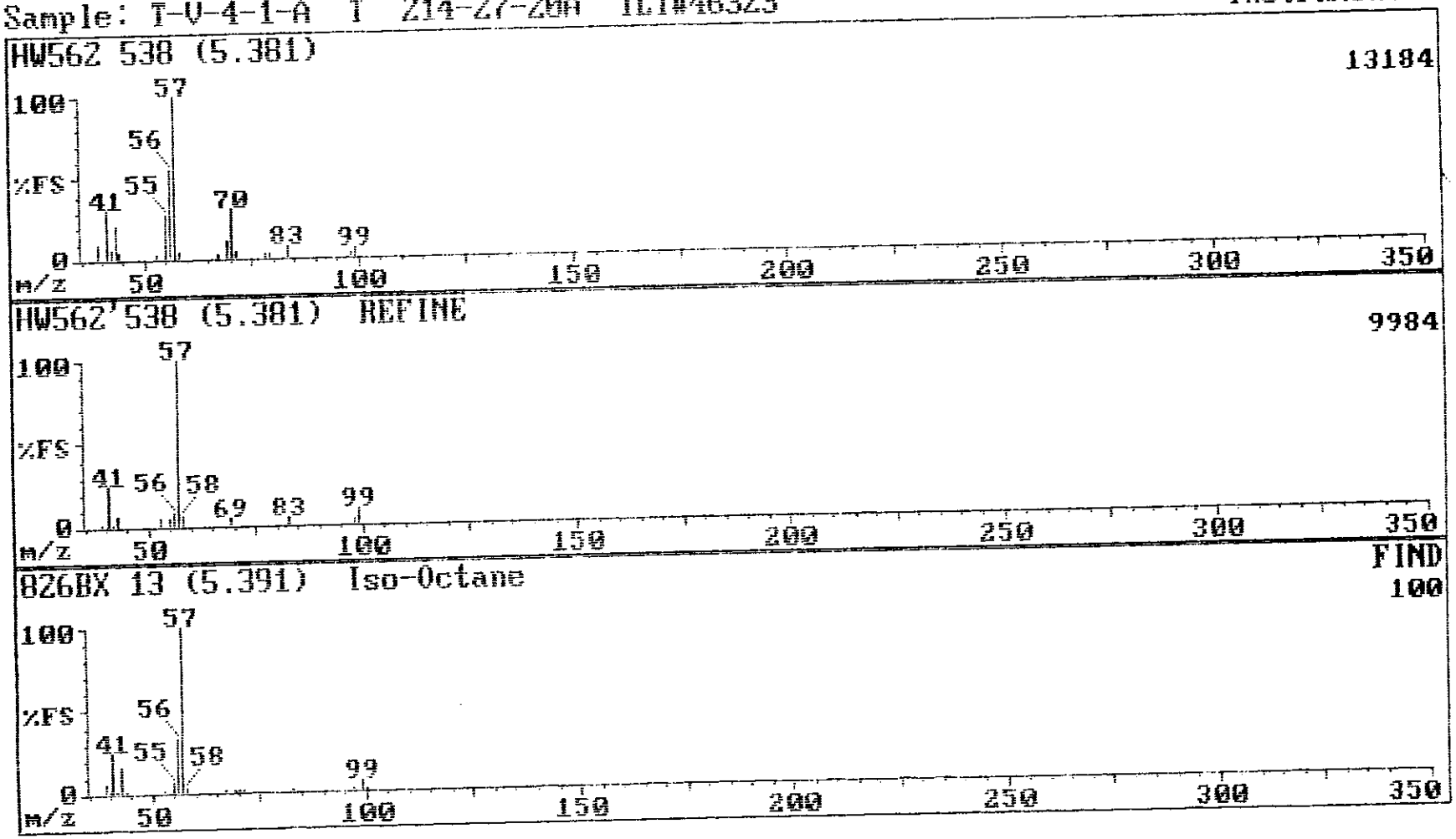
Sample: T-V-4-1-A T 214-27-20A TLI#46323 Instrument H



Pacific Environmental Services

Project Number: 46323
Sample File: HW560

Method 8260 VOST
Sample ID: T-V-4-1-B TC

Client Project: R012.001
TLI ID: 214-27-20B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
Chloromethane	0.020	BJ	0.97		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.003	BJ	1.48		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.015	J	1.90		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone	0.087		2.77		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.327	B	3.06		0.05
Acrylonitrile		U		0.006	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.77		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.010	BJ	5.24		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

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Printed: 16:11 08/10/1998

Pacific Environmental Services

Project Number: 46323
Sample File: HW560

Method 8260 VOST
Sample ID: T-V-4-1-B TC

Client Project: R012.001
TLI ID: 214-27-20B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.002	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.016	BJ	7.74		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.96		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.001	J	10.31		0.05
m-/p-Xylene	0.002	J	10.54		0.10
o-Xylene	0.001	J	11.26		0.05
Styrene	0.002	BJ	11.31		0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.08		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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429

Pacific Environmental Services

Project Number: 46323
Sample File: HW560

Method 8260 VOST
Sample ID: T-V-4-1-B TC

Client Project: R012.001
TLI ID: 214-27-20B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Surrogate Summary	Amount (ng)	RT	IS Ref	%REC
Dibromofluoromethane	0.257	4.91	1	103
Toluene-d_8	0.289	7.65	2	116
4-Bromofluorobenzene	0.291	12.25	2	116

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW560

Method 8260 VOST
Sample ID: T-V-4-1-B TC

Client Project: R012.001
TLI ID: 214-27-20B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.014	J	3.41		0.25
n-Hexane	0.005	J	3.67		0.25
1,2-Epoxybutane		U		0.046	0.25
Iso-Octane	0.010	J	5.40		0.25
1,4-Difluorobenzene		IS 2	5.77		
Ethyl acrylate		U		0.001	0.25

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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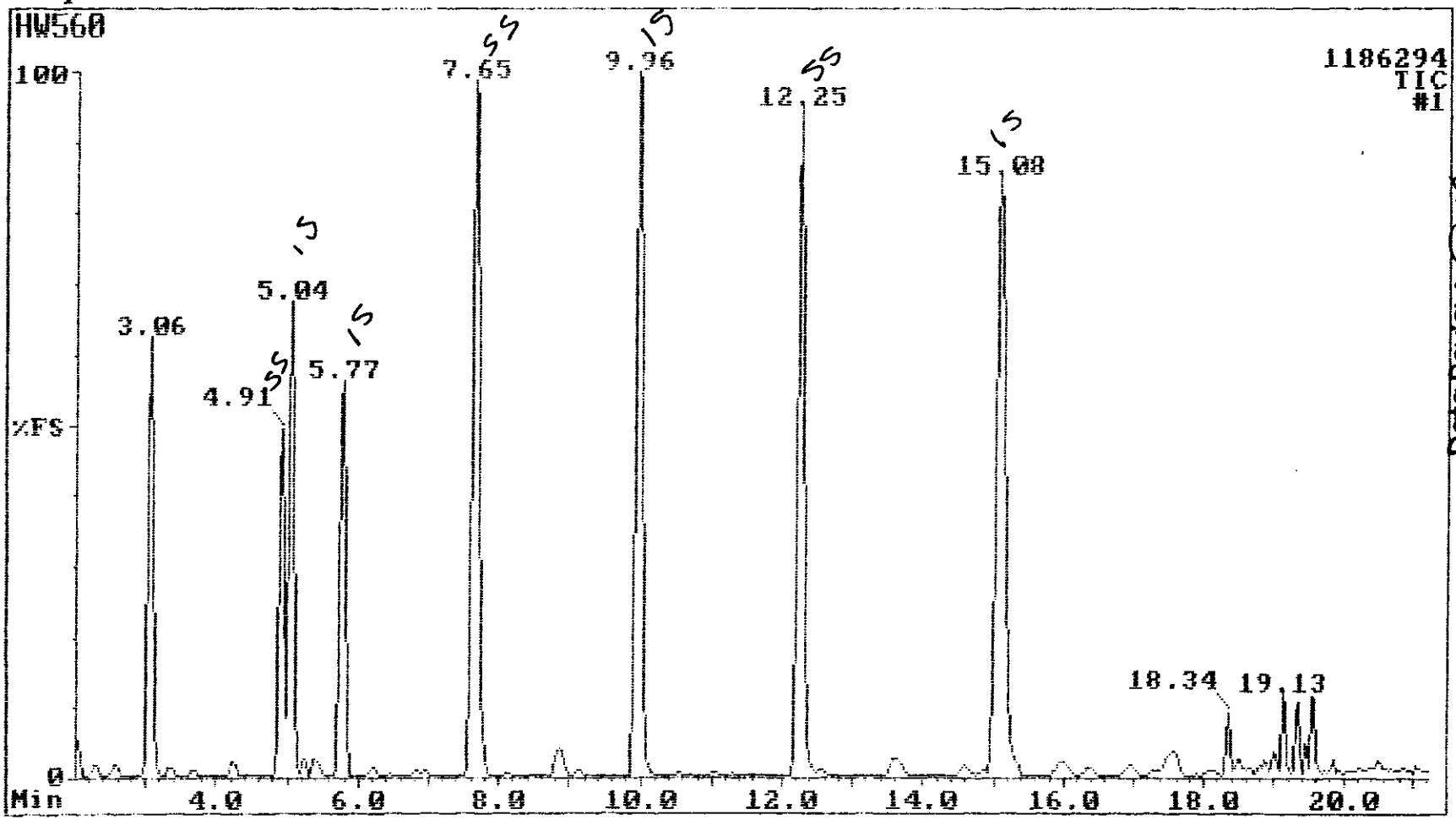
431

08-09-98 09:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



QUAN DB : HW560 LAB-BASE QUAN 08-09-98 09:57

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	99	-5	2171720	bb	5.04	168	Pentafluorobenzene
2	100	97	98	0	2135508	bv	5.77	114	1,4-Difluorobenzene
3	100	95	95	2	3400236	bv	9.96	117	Chlorobenzene-d5
4	100	81	99	-6	2191016	bv	15.08	152	1,4-Dichlorobenzene-d4
5	100	97	100	0	1187804	bv	4.91	113	Dibromofluoromethane
6	100	93	97	1	3458992	bv	7.65	98	Toluene-d8
7	100	90	93	4	1869376	bv	12.25	95	4-Bromofluorobenzene
8	88	44	96	-1	621716	bv	0.75	85	Dichlorodifluoromethane
9	100	85	90	-1	67132	vv	0.97	50	Chloromethane
10	0	0	0	0	0		0.00	62	Vinyl Chloride
11	71	39	74	0	12992	bv	1.48	94	Bromomethane
12	0	0	0	0	0		0.00	64	Chloroethane
13	100	87	96	-1	135796	bb	1.90	101	Trichlorofluoromethane
14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
15	0	0	0	0	0		0.00	142	Iodomethane
16	0	0	0	0	0		0.00	76	Carbon disulfide
17	63	52	34	11	37590	A	2.77	43	Acetone
18	0	0	0	0	0		0.00	41	Allyl chloride
19	100	98	99	-1	1006848	bv	3.06	84	Methylene chloride
20	0	0	0	0	0		0.00	53	Acrylonitrile
21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
23	0	0	0	0	0		0.00	43	Vinyl acetate
24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
26	~~37~~	~~49~~	~~49~~	~~3~~	~~3284~~	~~bb~~	~~4.53~~	43	2-Butanone
27	0	0	0	0	0		0.00	83	Chloroform
28	0	0	0	0	0		0.00	128	Bromochloromethane
29	0	0	0	0	0		0.00	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.00	117	Carbon tetrachloride
31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
32	100	89	92	0	101484	bb	5.24	78	Benzene
33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
34	0	0	0	0	0		0.00	130	Trichloroethene
35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
36	0	0	0	0	0		0.00	93	Dibromomethane
37	0	0	0	0	0		0.00	41	Methyl methacrylate
38	0	0	0	0	0		0.00	83	Bromodichloromethane
39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
40	~~45~~	~~4~~	~~70~~	~~1~~	~~20560~~	~~A~~	~~7.64~~	43	4-Methyl-2-pentanone
41	100	86	95	1	139400	bb	7.74	92	Toluene
42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropen
43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.00	69	Ethyl methacrylate
45	0	0	0	0	0		0.00	164	Tetrachloroethene
46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
47	~~23~~	~~10~~	~~40~~	~~11~~	~~11248~~	~~A~~	~~9.13~~	43	2-Hexanone
48	0	0	0	0	0		0.00	129	Dibromochloromethane
49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
50	0	0	0	0	0		0.00	112	Chlorobenzene

FP PAB 8/10/98

FP PAB 8/10/98

FP PAB 8/10/98

Data Review: PAB
Date: 8/10/98

453

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	131	1,1,1,2-Tetrachloroethan
52	55	36	56	1	4492	A	10.31	106	Ethylbenzene
53	85	68	72	1	17724	bb	10.54	106	m-/p-Xylene
54	58	49	49	2	5568	A	11.26	106	o-Xylene
55	81	68	68	2	24040	bb	11.31	104	Styrene
56	0	0	0	0	0		0.00	173	Bromoform
57	~~46~~	~~44~~	~~44~~	~~7~~	~~4404~~	~~bb~~	~~12.04~~	105	Cumene
58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroetnan
59	0	0	0	0	0		0.00	156	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.00	120	n-Propylbenzene
62	0	0	0	0	0		0.00	75	trans-1,4-Dichloro-2-but
63	0	0	0	0	0		0.00	126	2-Chlorotoluene
64	0	0	0	0	0		0.00	126	4-Chlorotoluene
65	~~61~~	~~57~~	~~57~~	~~5~~	~~7204~~	~~A~~	~~13.54~~	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	33	41	48	3	20336	A	14.25	105	1,2,4-Trimethylbenzene
68	37	16	46	1	12136	A	14.75	105	sec-Butylbenzene
69	0	0	0	0	0		0.00	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	0	0	0	0	0		0.00	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	69	86	97	17	108488	bv	19.13	180	1,2,4-Trichlorobenzene
77	39	20	89	17	14820	bb	19.34	225	Hexachlorobutadiene
78	57	68	84	17	221824	bv	19.33	128	Naphthalene
79	69	88	96	17	105276	bv	19.54	180	1,2,3-Trichlorobenzene

FP PAB 8/10/98

FP PAB 8/10/98

434

QUAN DB : HW560 LAB-BASE QUAN 08-10-98 14:37

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	85	99	0	2171720	bb	5.04	168	Pentafluorobenzene
2	100	97	98	1	2135508	bv	5.77	114	1,4-Difluorobenzene
3	100	95	95	0	3400236	bv	9.96	117	Chlorobenzene-d5
4	100	81	99	3	2191016	bv	15.08	152	1,4-Dichlorobenzene-d4
5	100	97	100	1	1187804	bv	4.91	113	Dibromofluoromethane
6	100	93	97	0	3458992	bv	7.65	98	Toluene-d8
7	100	90	93	2	1869376	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	81	61	72	1	14804	bb	3.41	73	MTBE
11	100	89	89	1	27508	bb	3.67	57	n-Hexane
12	~~74~~	~~55~~	~~69~~	~~1~~	~~15396~~	~~bb~~ QD PAB	~~4.24~~	42	1,2-Epoxybutane
13	100	91	92	1	133384	bb QD PAB	5.40	57	Iso-Octane
14	~~35~~	~~26~~	~~53~~	~~17~~	~~30256~~	~~n~~	~~6.19~~	55	Ethyl acrylate

Data Review: PAB
Date: 8/10/98

435

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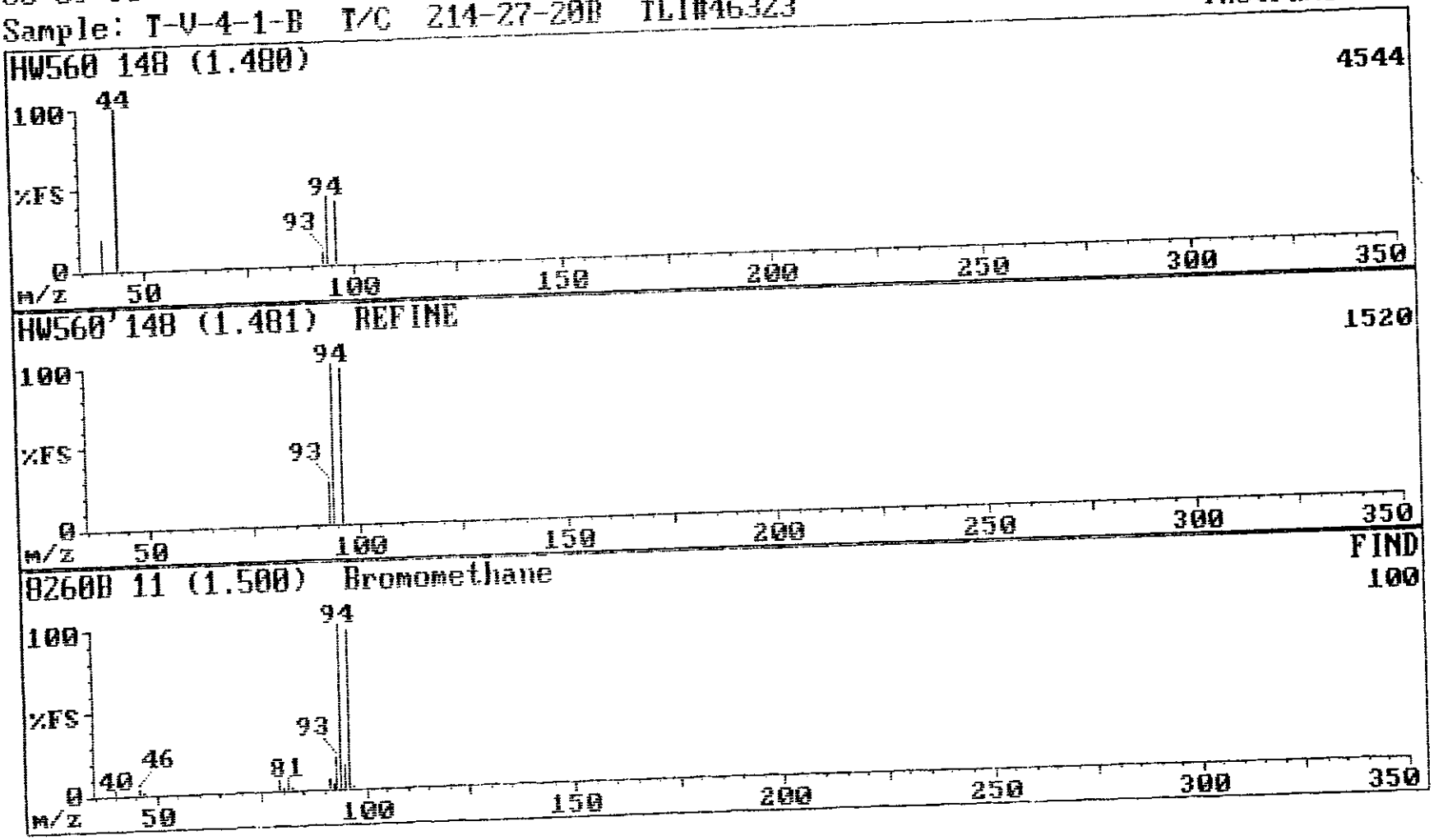
436

08-09-98 09:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



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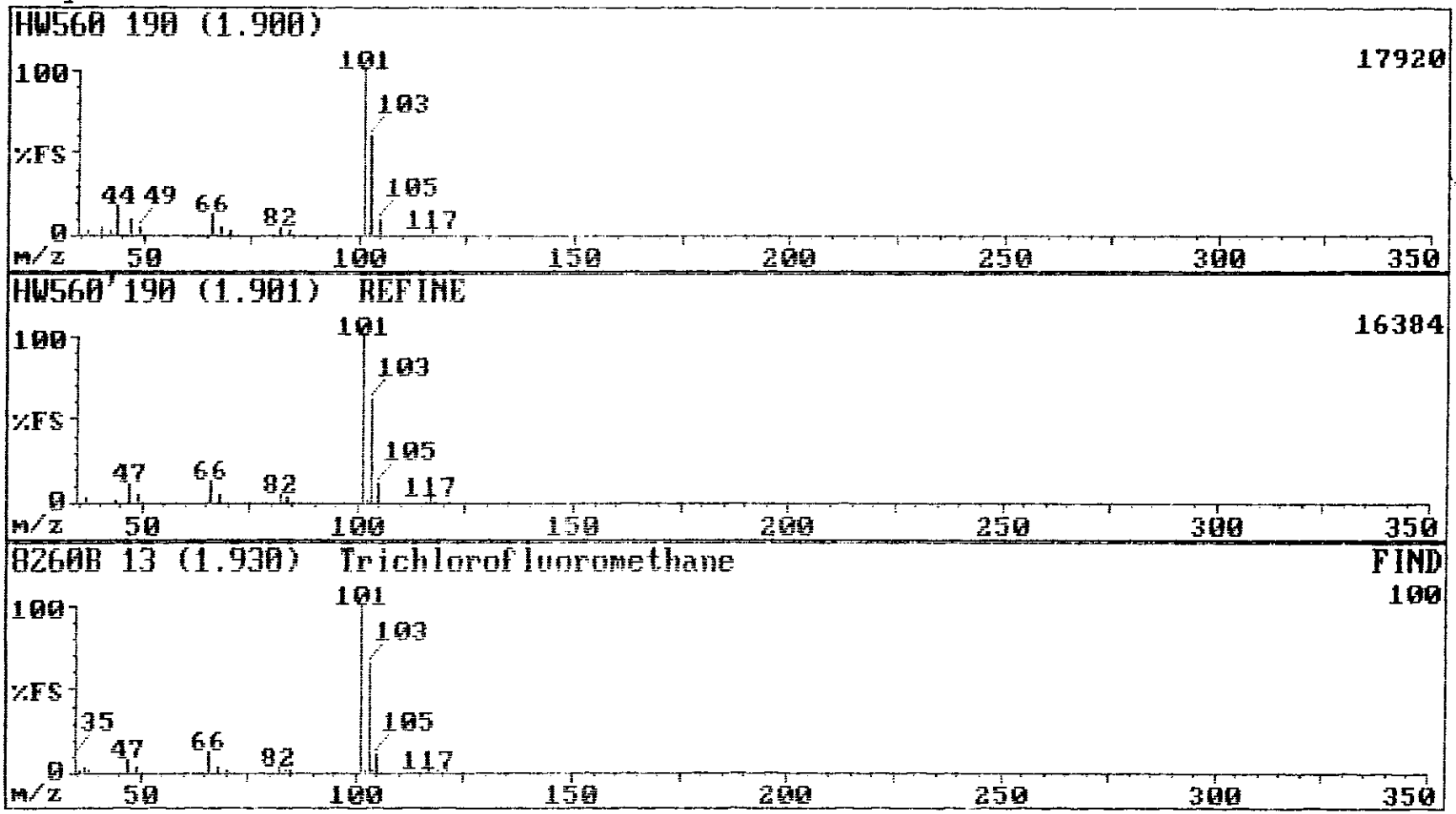
Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



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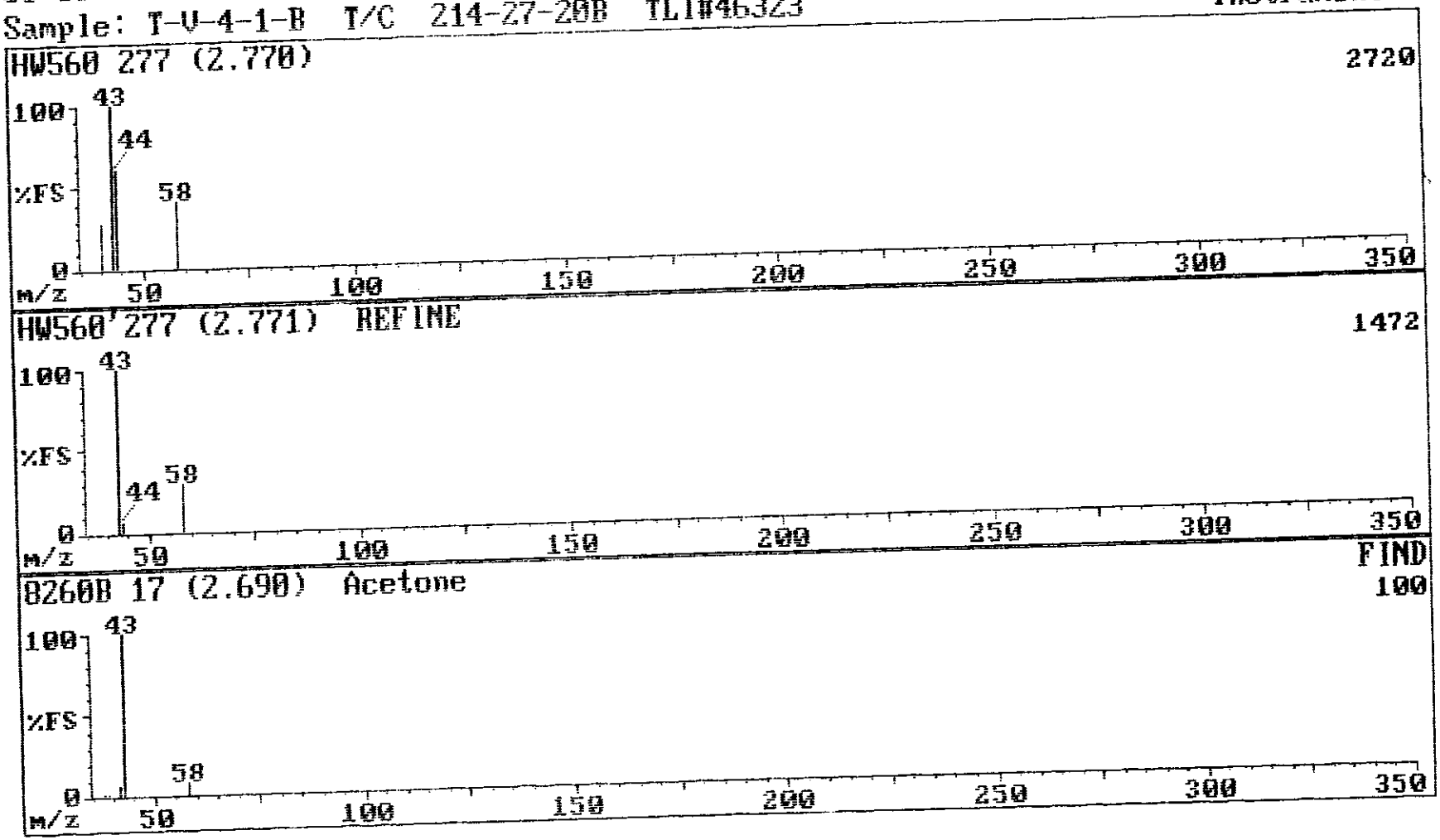

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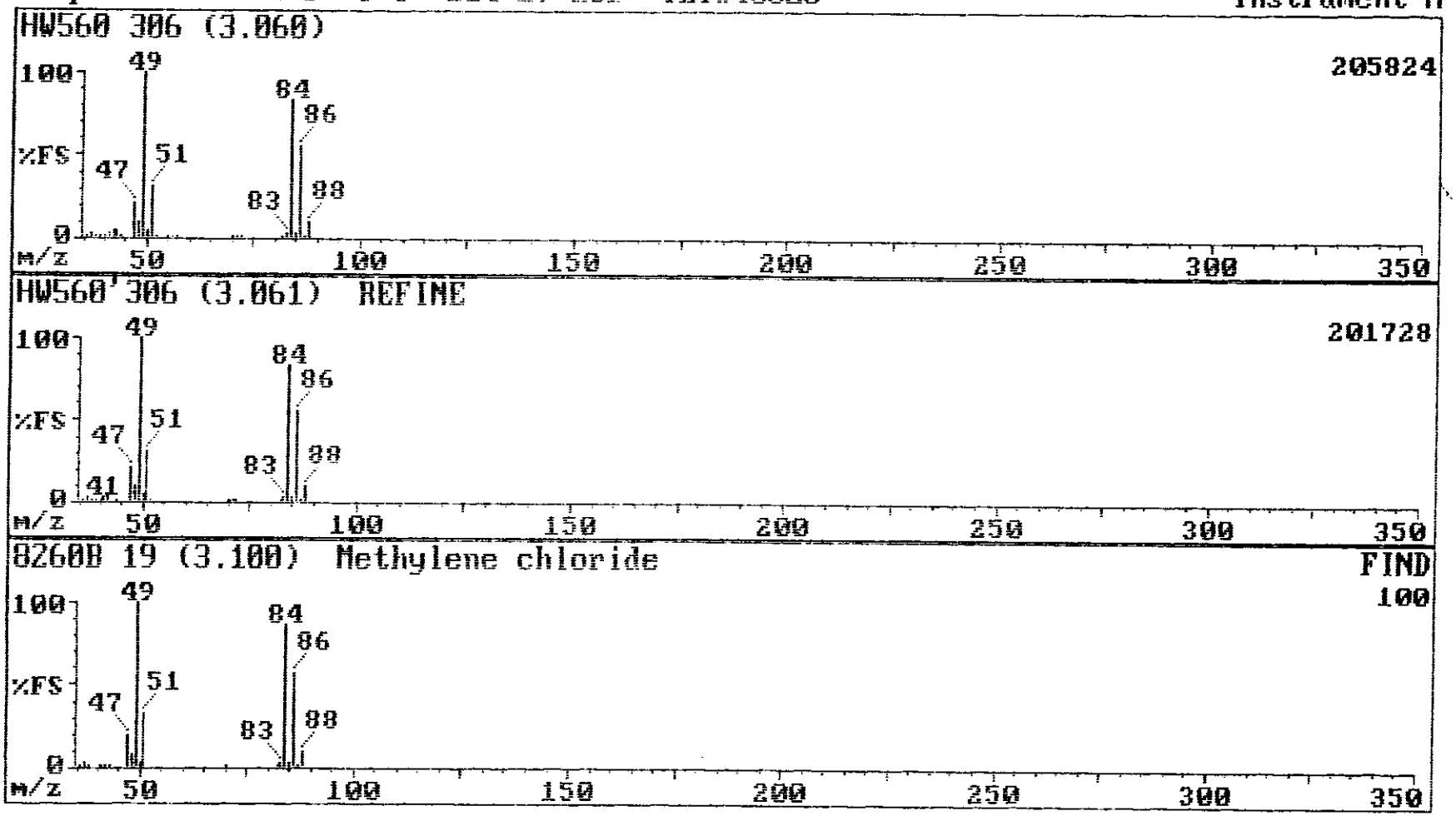
Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



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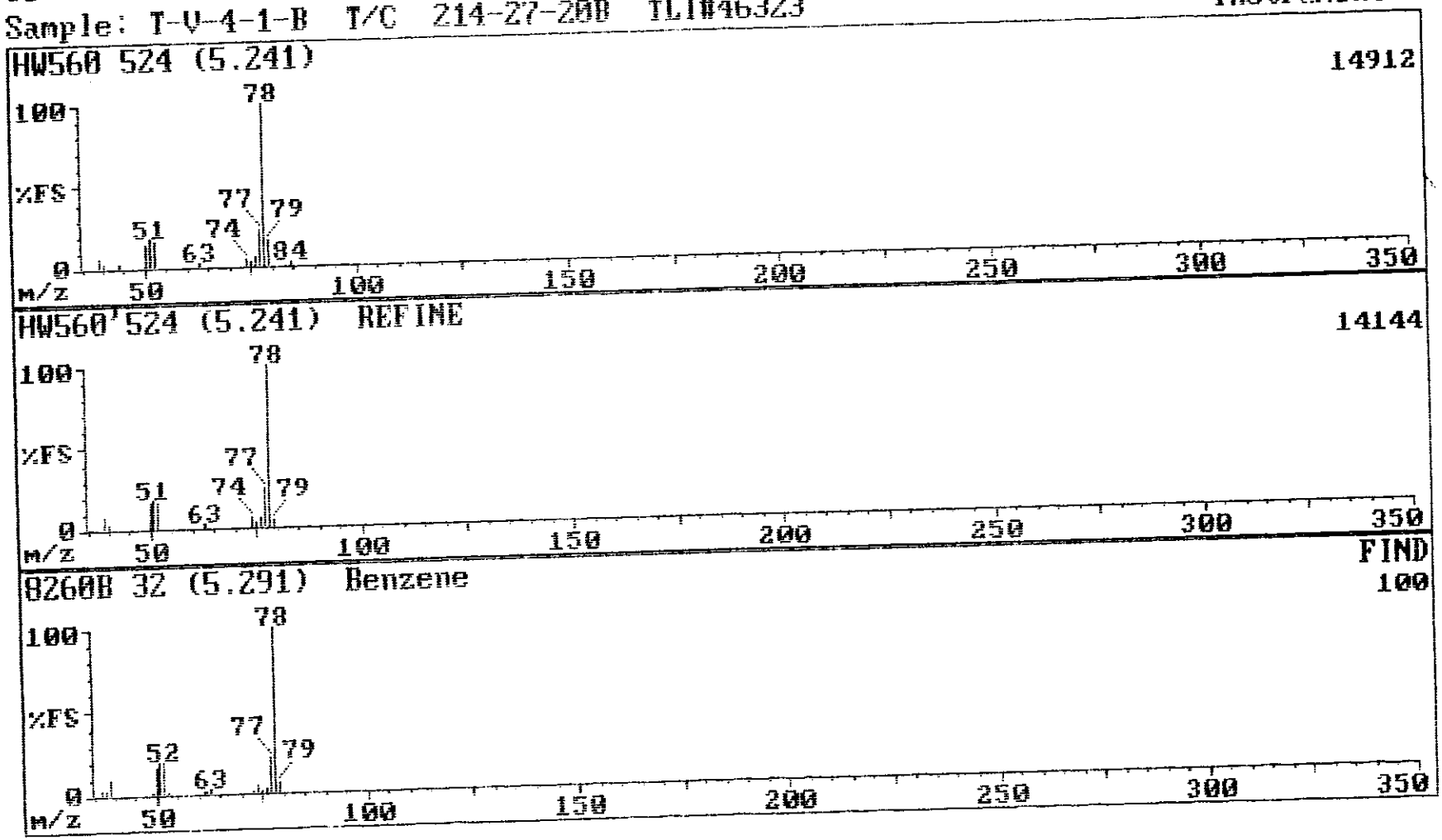

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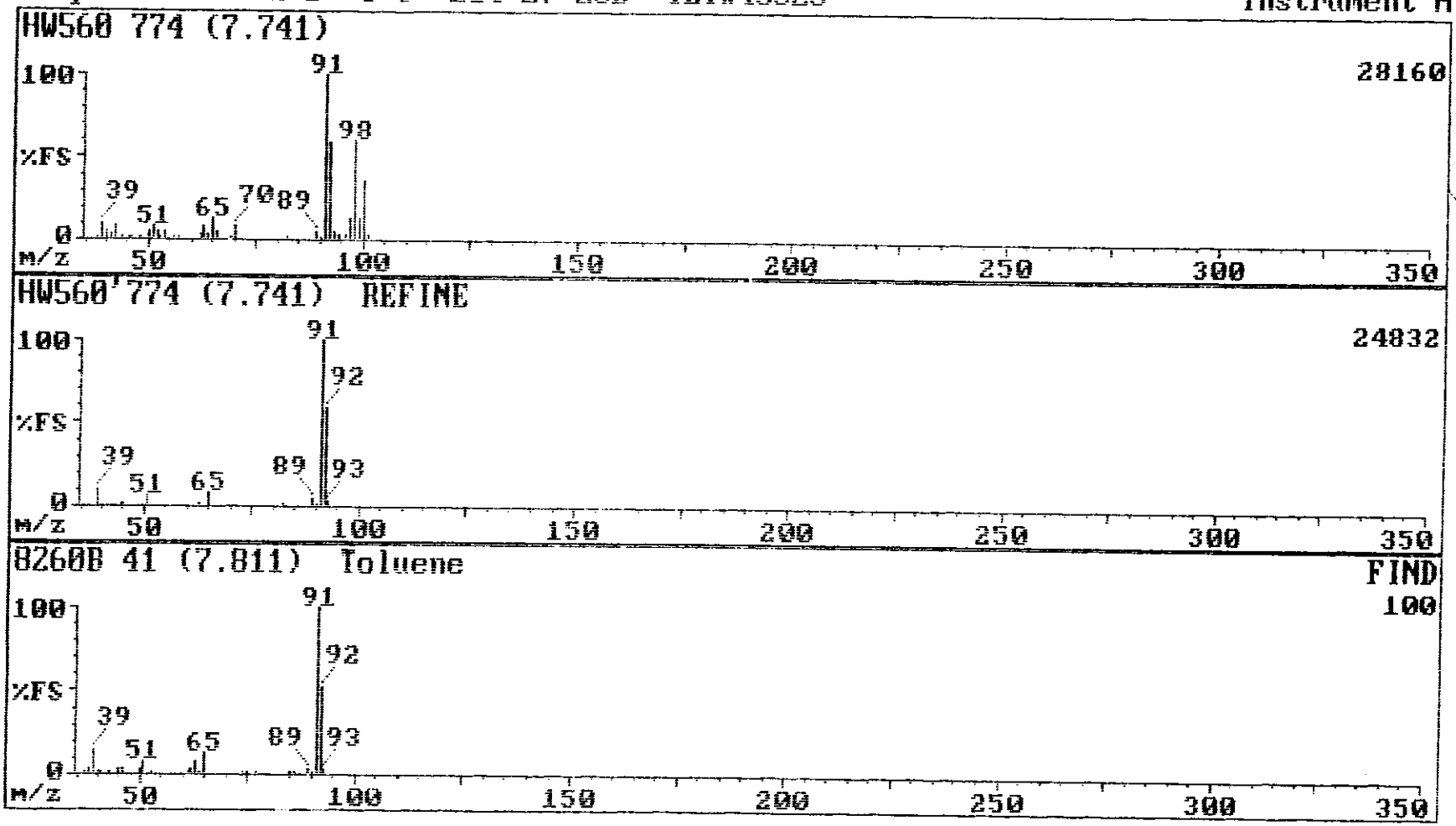

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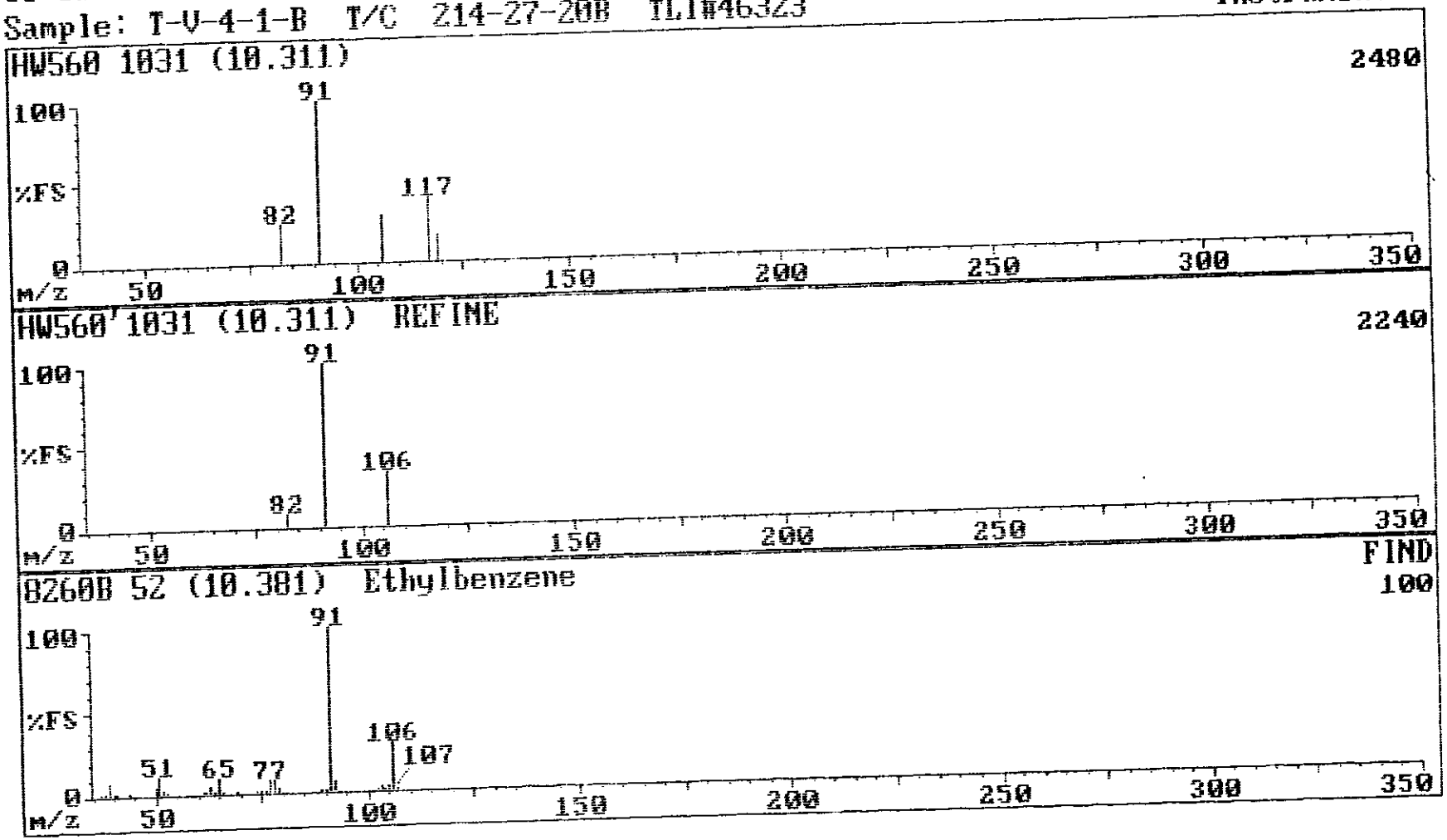
Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



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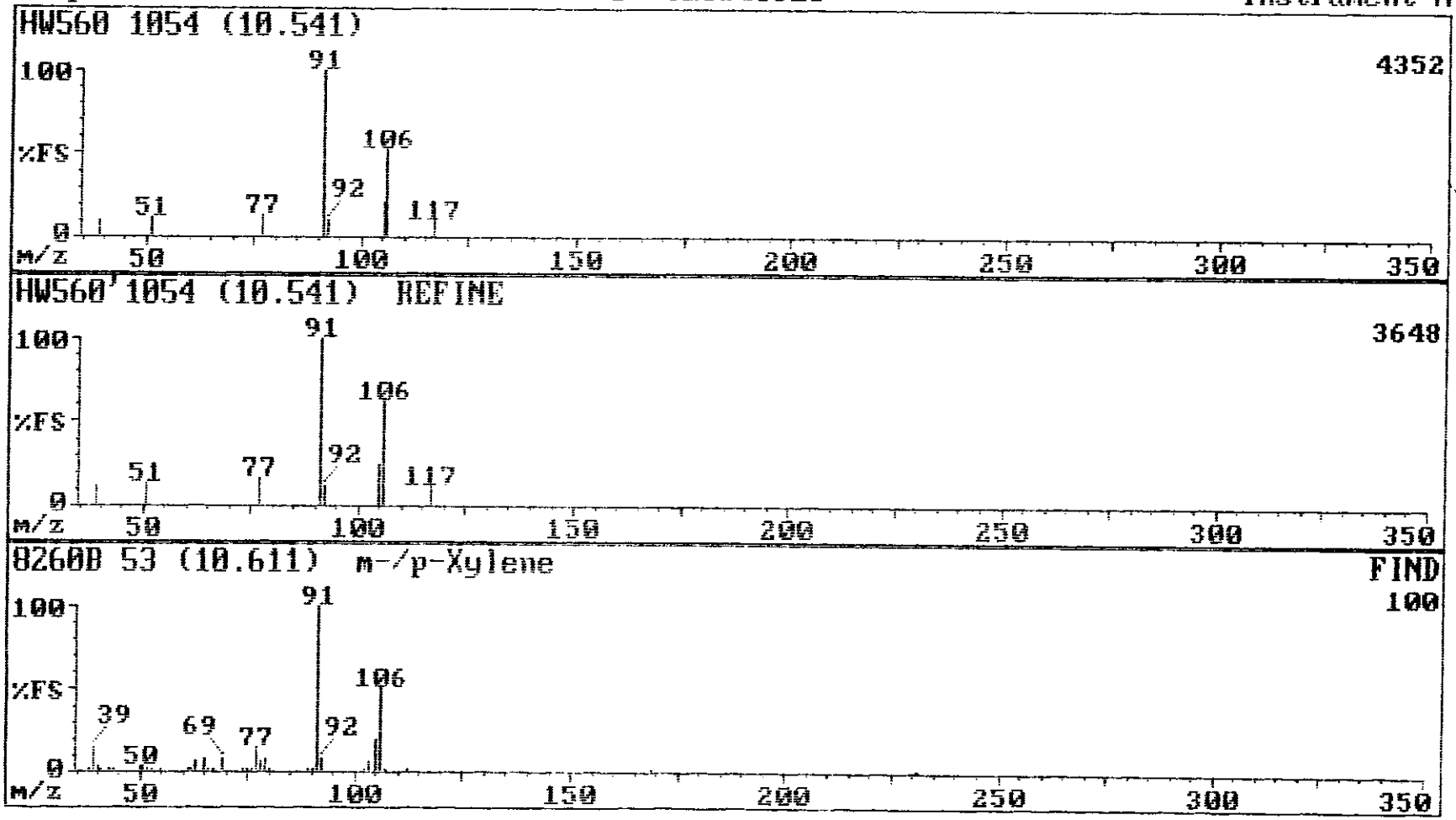
Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



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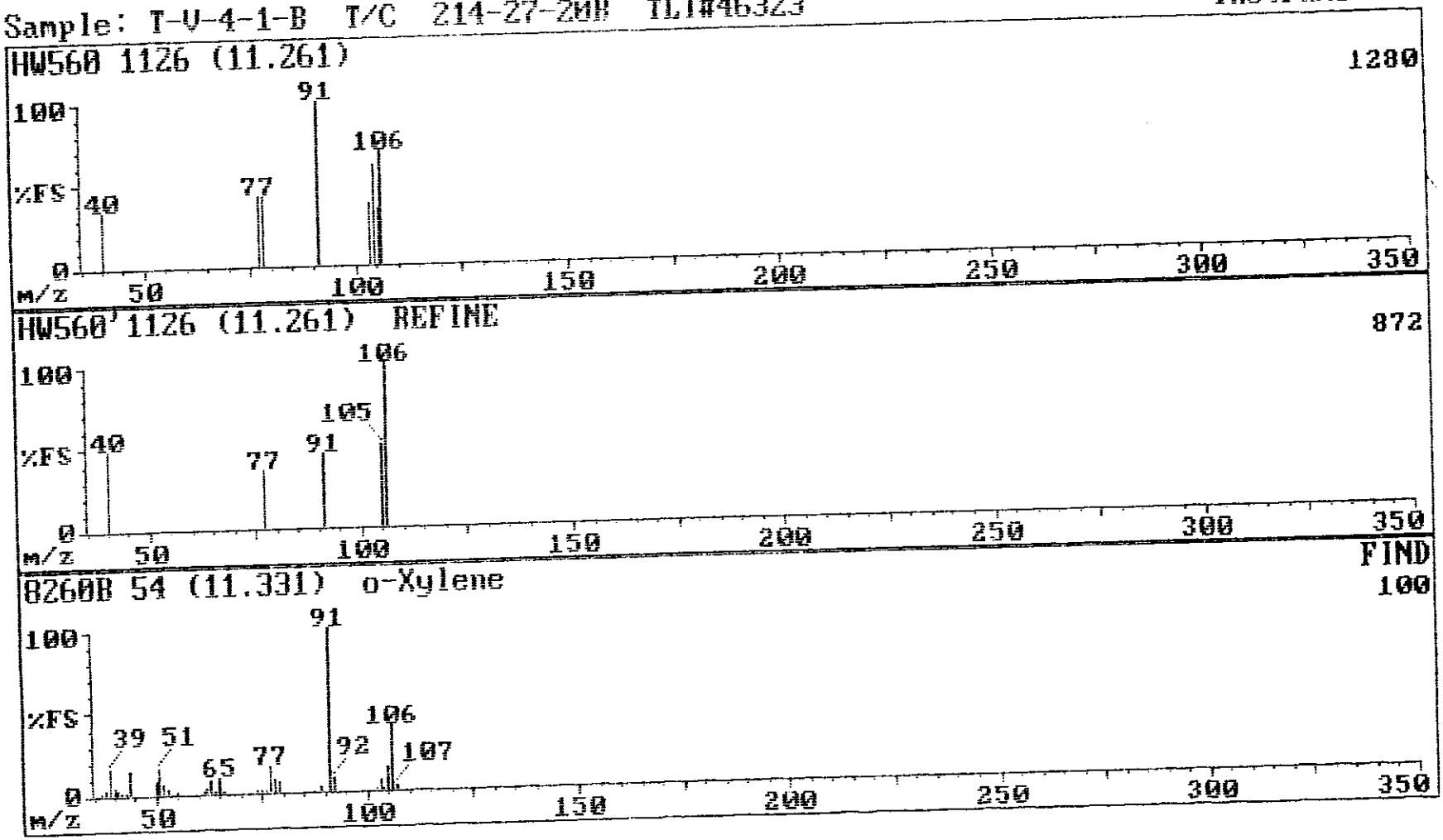
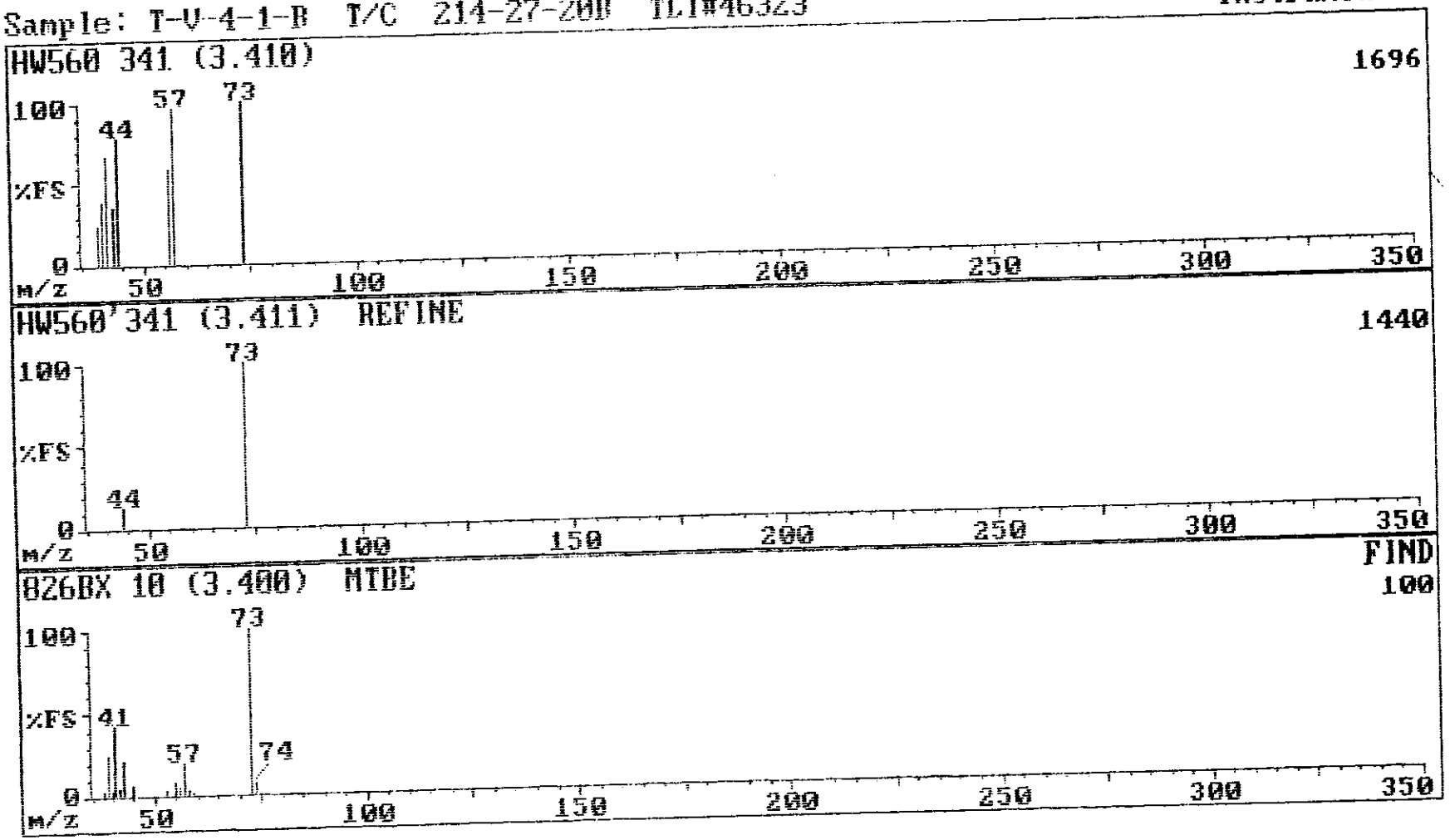
Sample: T-V-4-1-B T/C 214-27-20B TLI#46323 Instrument H



08-09-88 09:11
Sample: T-U-4-1-B T/C 214-27-20B TLI#46323
Triangle Laboratories, Inc. (919) 544-5729
Instrument H
HW560 1131 (11.311)
HW560 1131 (11.311) REFIND
02608 55 (11.304) Styrene
FIND
m/z
%FS
2880
2576
100
104
103
102
101
78
51
50
150
200
250
300
350

08-09-98 09:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-1-B T/C 214-27-20D TLI#46323 Instrument H



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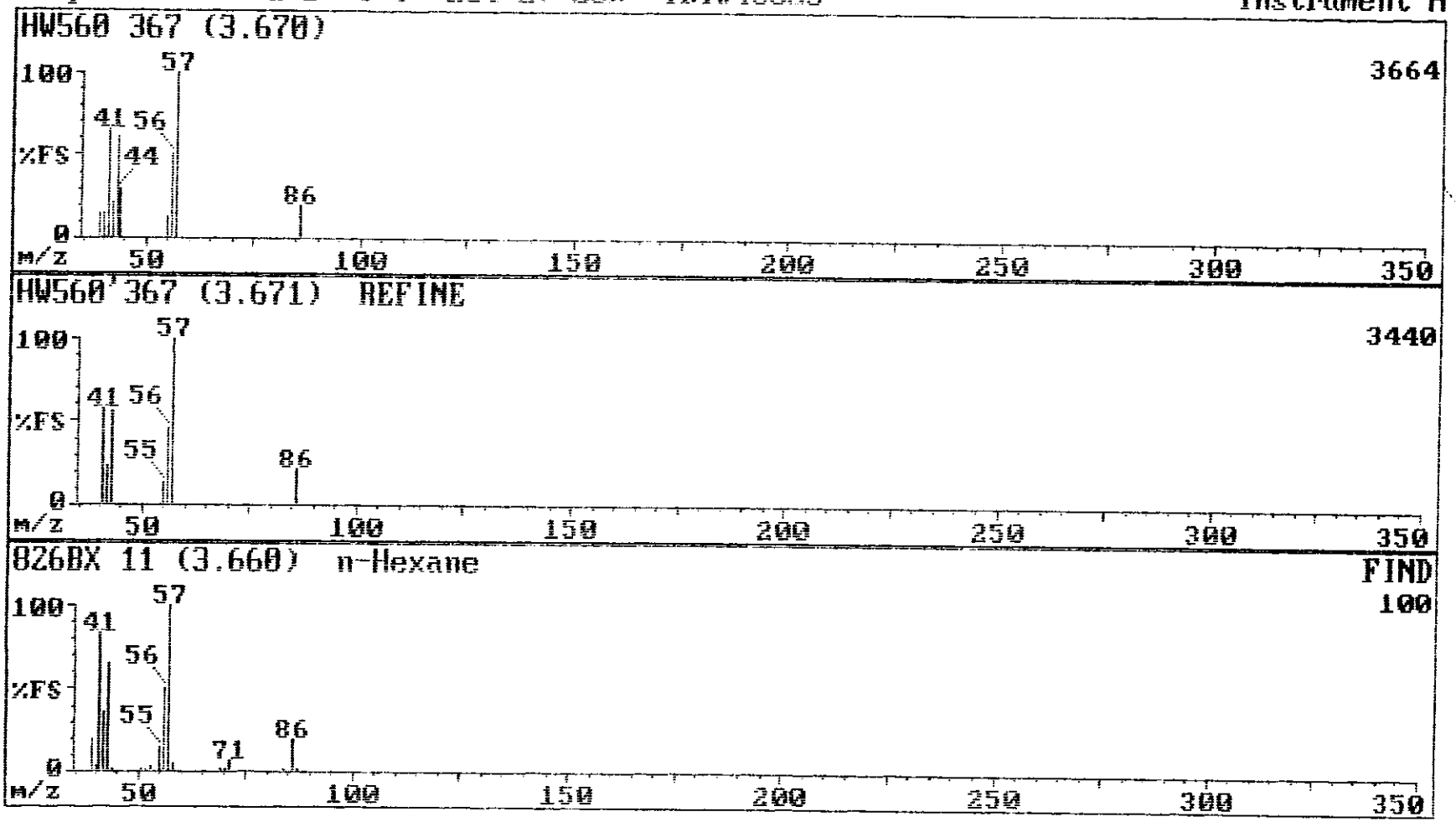

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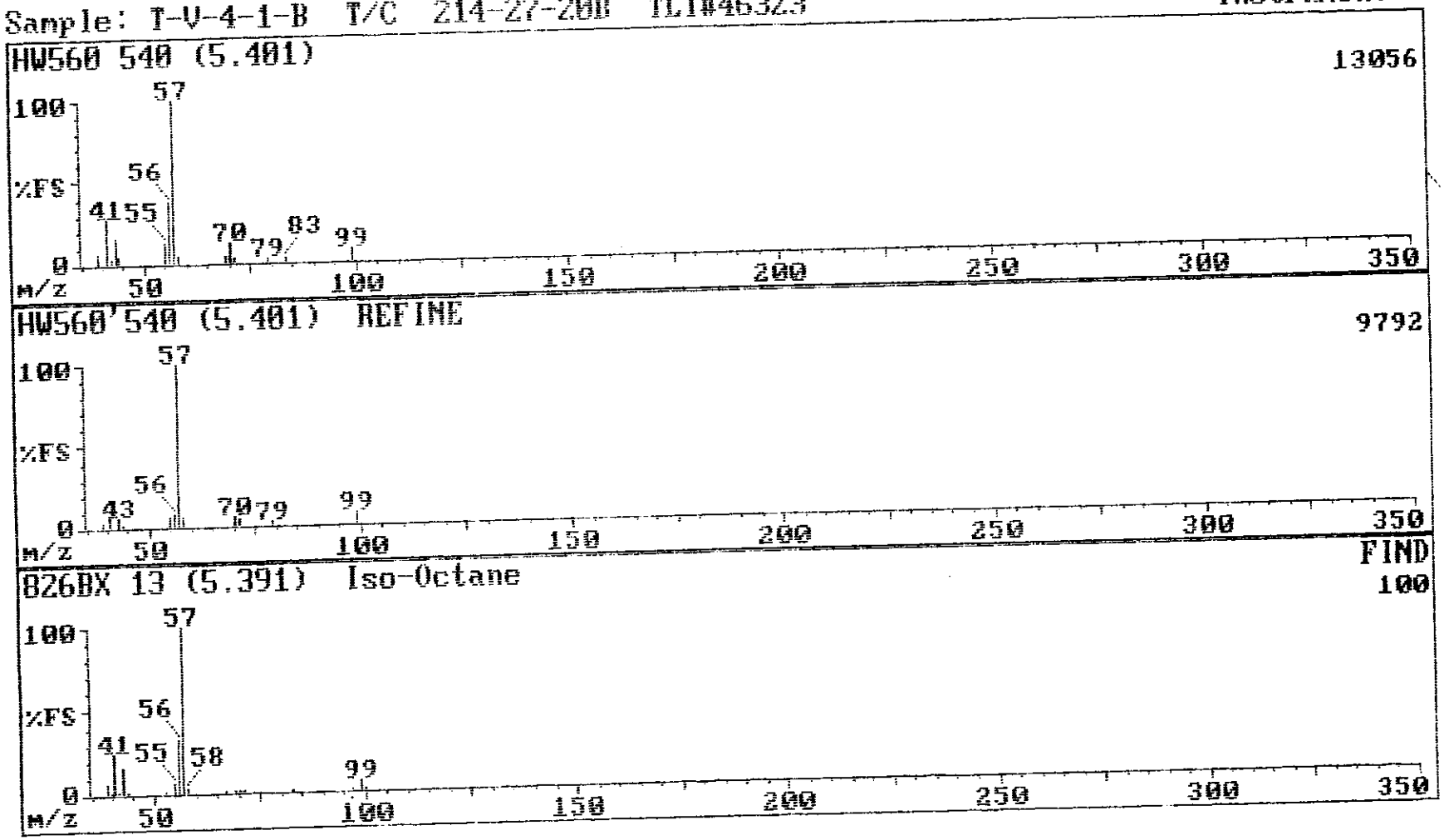
Sample: T-V-4-1-B T/C 214-27-20D TLI#46323 Instrument H



Pacific Environmental Services

Project Number: 46323
Sample File: HW563

Method 8260 VOST
Sample ID: T-V-4-2-A T

Client Project: R012.001
TLI ID: 214-27-21A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.02		
Chloromethane	0.005	BJ	0.93		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.006	BJ	1.43		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone	0.036	J	2.69		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.674	B	3.01		0.05
Acrylonitrile		U		0.006	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.003	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.74		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.034	BJ	5.21		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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450

Pacific Environmental Services

Project Number: 46323
Sample File: HW563

Method 8260 VOST
Sample ID: T-V-4-2-A T

Client Project: R012.001
TLI ID: 214-27-21A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.002	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.010	BJ	7.71		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.95		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene	0.003	BJ	11.30		0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.08		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW563

Method 8260 VOST
Sample ID: T-V-4-2-A T

Client Project: R012.001
TLI ID: 214-27-21A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.242	4.89	1	97
Toluene-d_8	0.244	7.62	2	98
4-Bromofluorobenzene	0.271	12.25	2	108

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW563

Method 8260 VOST
Sample ID: T-V-4-2-A T

Client Project: R012.001
TLI ID: 214-27-21A

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.02		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.002	0.25
n-Hexane	0.006	J	3.63		0.25
1,2-Epoxybutane		U		0.041	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	5.74		
Ethyl acrylate		U		0.001	0.25

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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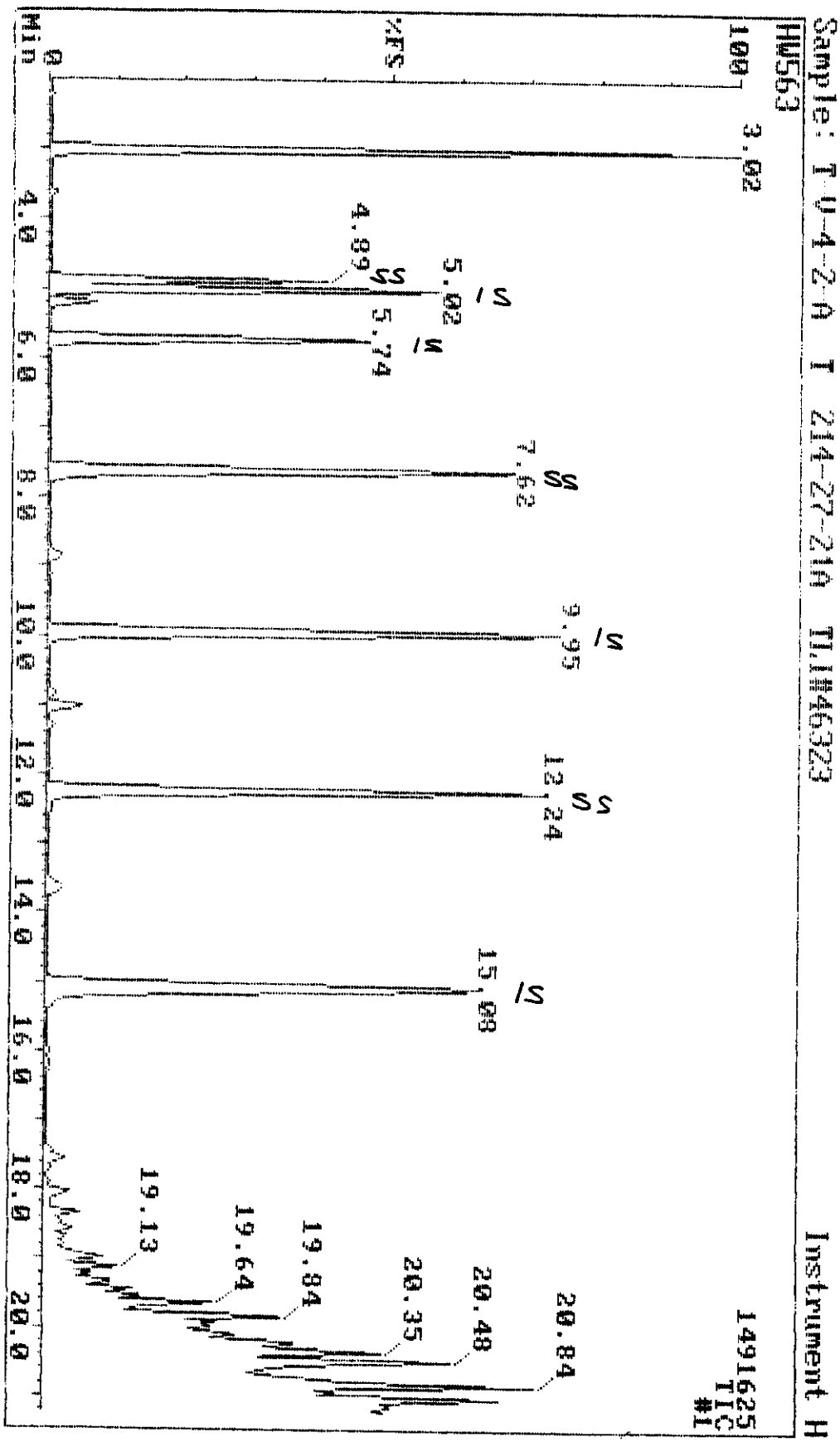
Printed: 16:39 08/10/1998



Data Review: CaB
Date: 8/10/98

454

QUAN DB : HW563 LAB-BASE QUAN 08-10-98 03:12

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	-7	2423308	bv	5.02	168	Pentafluorobenzene
2	100	97	98	-1	2207752	bb	5.74	114	1,4-Difluorobenzene
3	100	94	94	7	3233076	bv	9.95	117	Chlorobenzene-d5
4	100	82	98	-4	2122609	bv	15.08	152	1,4-Dichlorobenzene-d4
5	100	98	100	0	1249872	bv	4.89	113	Dibromofluoromethane
6	100	94	98	2	3014892	bv	7.62	98	Toluene-d8
7	87	90	93	10	1794012	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	85	Dichlorodifluoromethane
9	76	69	69	-5	17996	bb	0.93	50	Chloromethane
10	0	0	0	0	0		0.00	62	Vinyl Chloride
11	88	70	86	-5	24592	bb	1.43	94	Bromomethane
12	0	0	0	0	0		0.00	64	Chloroethane
13	0	0	0	0	0		0.00	101	Trichlorofluoromethane
14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
15	~~59~~	~~42~~	~~52~~	0	~~3036~~	~~bb~~	~~2.56~~	142	Iodomethane
16	0	0	0	0	0		0.00	76	Carbon disulfide
17	80	55	87	4	17292	bv	2.69	43	Acetone
18	0	0	0	0	0		0.00	41	Allyl chloride
19	100	99	100	-5	2311952	bv	3.01	84	Methylene chloride
20	0	0	0	0	0		0.00	53	Acrylonitrile
21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
23	0	0	0	0	0		0.00	43	Vinyl acetate
24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
26	~~79~~	~~56~~	~~56~~	0	~~8592~~	~~A~~	~~4.45~~	43	2-Butanone
27	0	0	0	0	0		0.00	83	Chloroform
28	0	0	0	0	0		0.00	128	Bromochloromethane
29	0	0	0	0	0		0.00	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.00	117	Carbon tetrachloride
31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
32	100	97	97	0	355744	bv	5.21	78	Benzene
33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
34	0	0	0	0	0		0.00	130	Trichloroethene
35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
36	0	0	0	0	0		0.00	93	Dibromomethane
37	0	0	0	0	0		0.00	41	Methyl methacrylate
38	0	0	0	0	0		0.00	83	Bromodichloromethane
39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
40	~~44~~	~~1~~	~~73~~	~~2~~	~~30293~~	~~A~~	~~7.61~~	43	4-Methyl-2-pentanone
41	98	78	90	2	87876	bb	7.71	92	Toluene
42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropen
43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.00	69	Ethyl methacrylate
45	0	0	0	0	0		0.00	164	Tetrachloroethene
46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
47	~~56~~	~~51~~	~~51~~	~~5~~	~~14958~~	~~A~~	~~9.11~~	43	2-Hexanone
48	0	0	0	0	0		0.00	129	Dibromochloromethane
49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
50	0	0	0	0	0		0.00	112	Chlorobenzene

(FP) PaB 8/10/98

(FP) PaB 8/10/98

(FP) PaB 8/10/98

(FP) PaB 8/10/98

Data Review: PaB
Date: 8/10/98

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	131	1,1,1,2-Tetrachloroethan
52	~~89~~	~~53~~	~~53~~	~~24~~	~~2628~~	~~bb~~	~~10.53~~	106	Ethylbenzene
53	~~63~~	~~52~~	~~52~~	~~1~~	~~2628~~	~~bb~~	~~10.53~~	106	m-/p-Xylene
54	0	0	0	0	0		0.00	106	o-Xylene
55	98	78	83	2	39804	bb	11.30	104	Styrene
56	0	0	0	0	0		0.00	173	Bromoform
57	0	0	0	0	0		0.00	105	Cumene
58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroethan
59	0	0	0	0	0		0.00	156	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.00	120	n-Propylbenzene
62	23	10	46	-23	932608	A	12.25	75	trans-1,4-Dichloro-2-but
63	0	0	0	0	0		0.00	126	2-Chlorotoluene
64	0	0	0	0	0		0.00	126	4-Chlorotoluene
65	30	39	39	-16	880	bb	13.13	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	54	39	50	2	28548	A	14.21	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.00	105	sec-Butylbenzene
69	0	0	0	0	0		0.00	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	0	0	0	0	0		0.00	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	0	0	0	0	0		0.00	180	1,2,4-Trichlorobenzene
77	0	0	0	0	0		0.00	225	Hexachlorobutadiene
78	41	31	73	16	101048	bv	19.32	128	Naphthalene
79	0	0	0	0	0		0.00	180	1,2,3-Trichlorobenzene

DC Rec 8/6/98

DC Rec 8/6/98

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	-2	2423308	bv	5.02	168	Pentafluorobenzene
2	100	97	98	0	2207752	bb	5.74	114	1,4-Difluorobenzene
3	100	94	94	4	3233076	bv	9.95	117	Chlorobenzene-d5
4	100	82	98	4	2122609	bv	15.08	152	1,4-Dichlorobenzene-d4
5	100	98	100	1	1249872	bv	4.89	113	Dibromofluoromethane
6	100	94	98	1	3014892	bv	7.62	98	Toluene-d8
7	93	90	93	8	1794012	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	0	0	0	0	0		0.00	73	MTBE
11	100	94	94	-1	38900	bb	3.63	57	n-Hexane
12	0	0	0	0	0		0.00	42	1,2-Epoxybutane
13	0	0	0	0	0		0.00	57	Iso-Octane
14	0	0	0	0	0		0.00	55	Ethyl acrylate

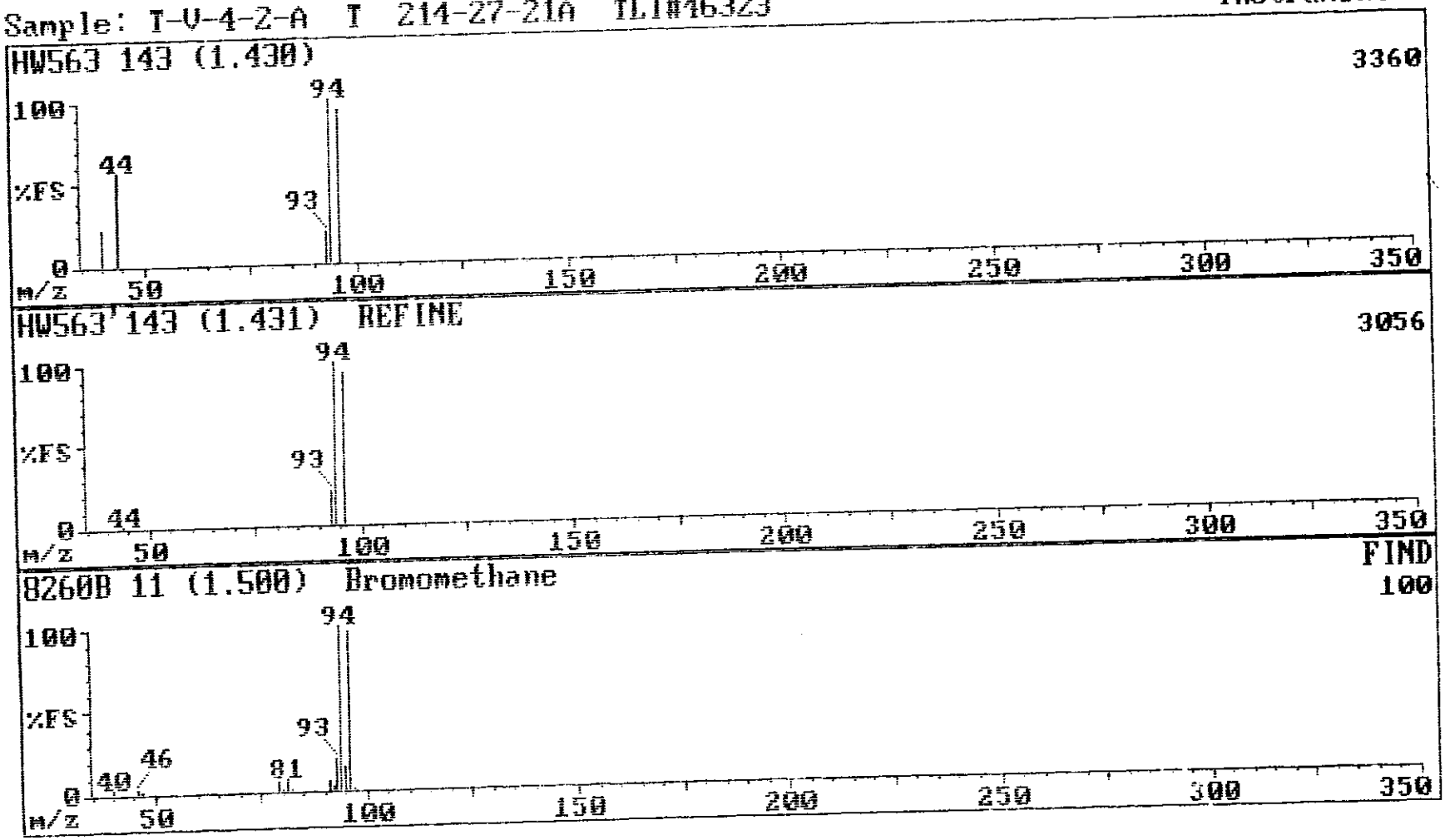
Data Review: PaB
Date: 8/10/98

00-00-00 11:11
Sample: T-U-4-2-A I 214-27-210 TLI#49323
Triangle Laboratories, Inc. (919) 544-5729
HW563 93 (0.930)
Instrument H
2352
HW563 93 (0.931) REFINE
2016
82608 9 (0.990) Chloromethane
FIND
100
%FS
m/z
350
300
250
200
150
100
50
0
52
44

458

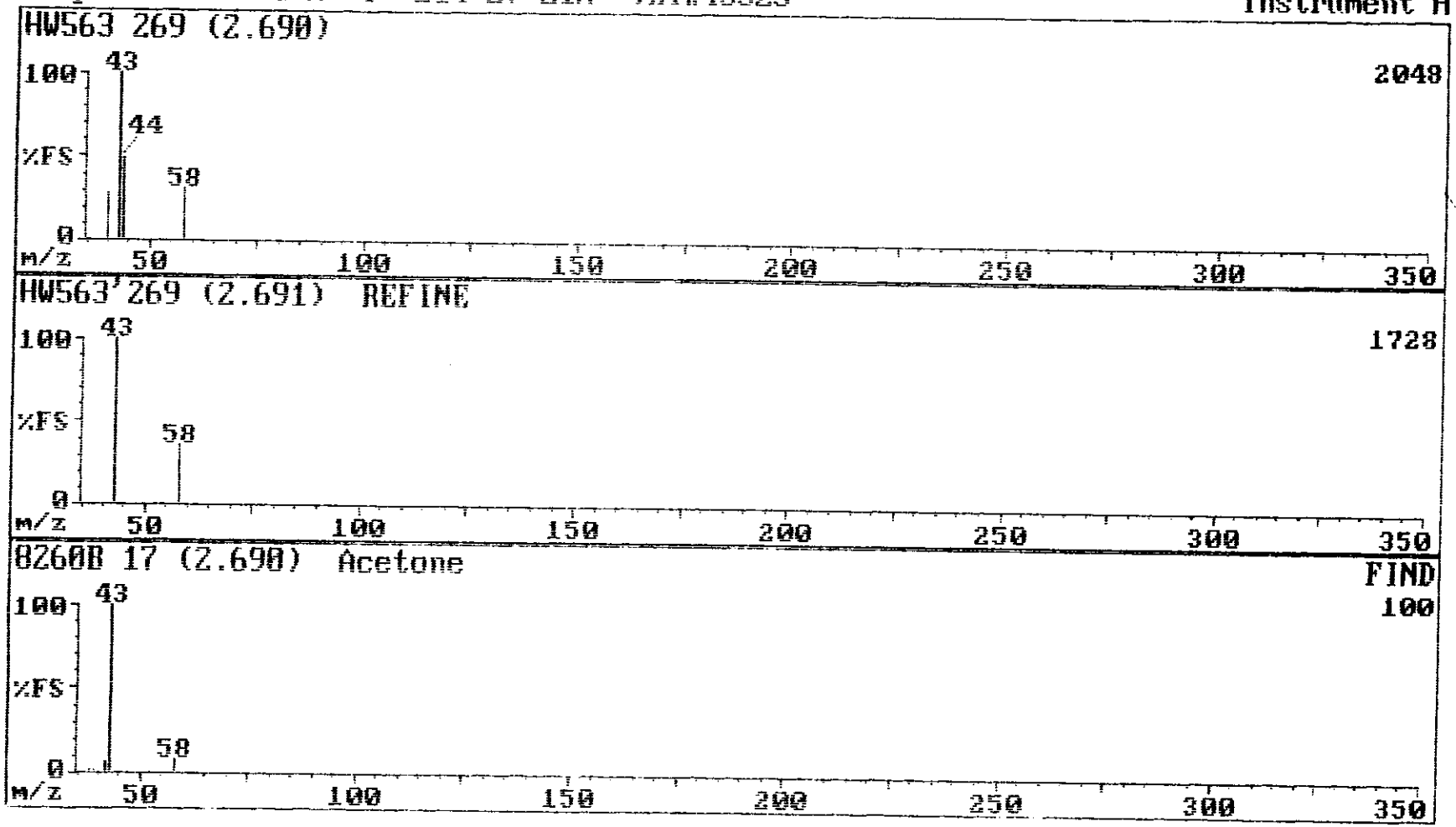
08-09-98 11:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-Z-A T 214-27-21A TLI#46323 Instrument H



08-09-98 11:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-2-A T 214-27-21A TLI#46323 Instrument H

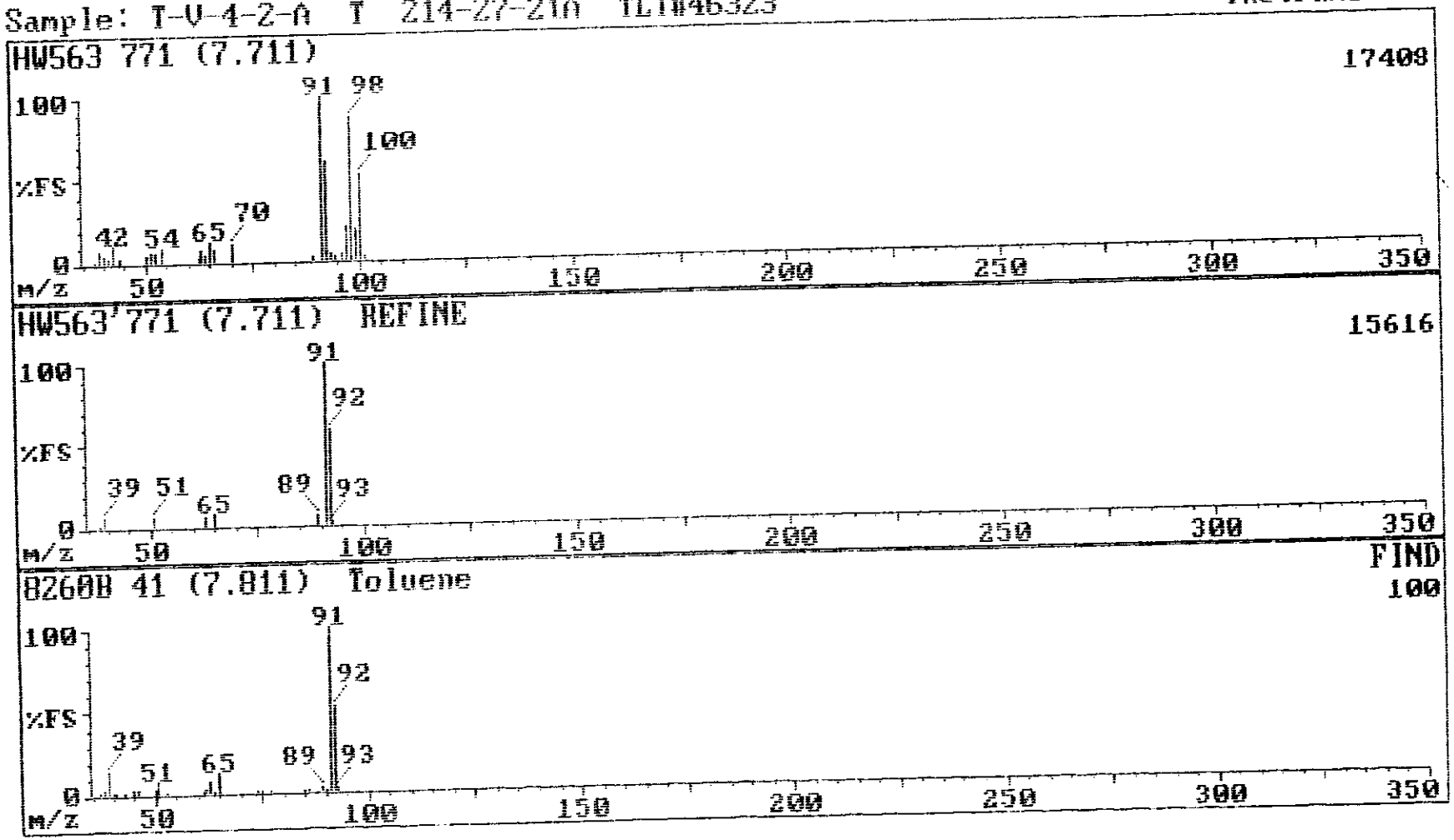


Instrument H
Triangle Laboratories, Inc. 214-27-2140 T 11:11 08-09-88
Sample: T-U-4-2-A FILM#63Z3 (919) 544-5729
HW563 301 (3,010)
%FS
100
50
0
47
51
49
83
88
84
86
M/Z
35
50
100
150
200
250
300
350
401408
HW563 301 (3,011) REFINE
%FS
100
50
0
47
51
49
83
88
84
86
M/Z
35
50
100
150
200
250
300
350
393216
02608 19 (3,100) Methylene chloride
%FS
100
50
0
47
51
49
83
88
84
86
M/Z
35
50
100
150
200
250
300
350
FIND
100

08-09-90 11:11
Sample: T-U-4-2-A
214-27-210
Triangle Laboratories, Inc.
(919) 544-5729
Instrument H
HWE63 521 (5,211)
HWS63 521 (5,211) REFINE
Benzene
FIND
m/z
%FS
49920
52224

462

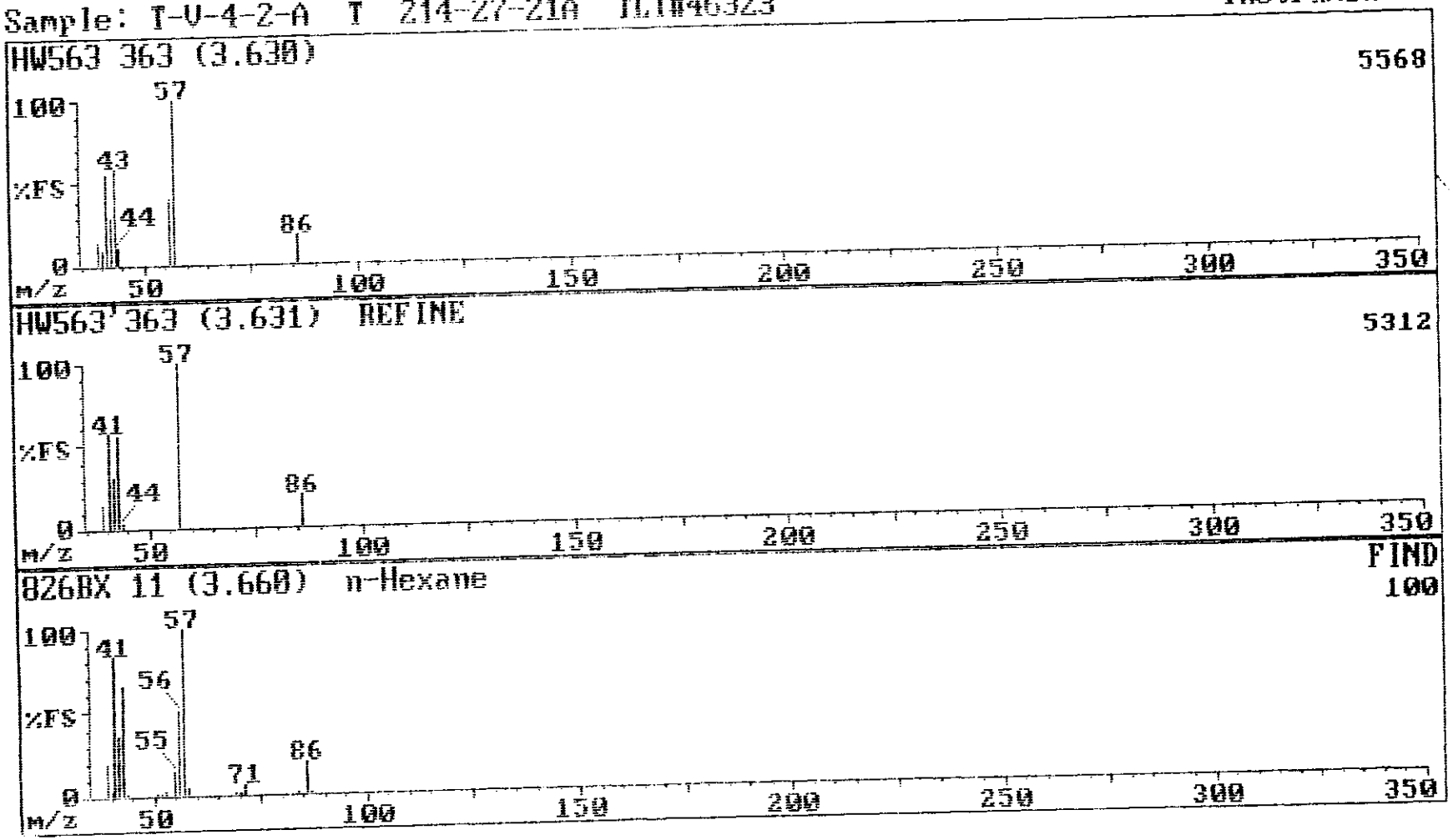
08-09-98 11:11 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-4-2-A T 214-27-21A TLI#46323 Instrument H



00-00-00 11:11
Sample: T-U-4-2-A T 214-27-21A TLI#4323
Instrument H
HW563 1130 (11.30I)
m/z
%FS
Tentative Laboratories, Inc. (919) 544-5729
HW563 1130 (11.30I) REFINED
B2608 55 (11.30I) Styrene
FIND

08-09-98 11:11 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-2-A T 214-27-21A TLI#46323 Instrument H



Pacific Environmental Services

Project Number: 46323
Sample File: HW561

Method 8260 VOST
Sample ID: T-V-4-2-B TC

Client Project: R012.001
TLI ID: 214-27-21B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
Chloromethane	0.015	BJ	0.97		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.004	BJ	1.46		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane	0.003	J	1.90		0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone	0.033	J	2.79		0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	1.666	BE	3.06		0.05
Acrylonitrile		U		0.006	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.77		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.015	BJ	5.23		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Printed: 16:11 08/10/1998

Pacific Environmental Services

Project Number: 46323
Sample File: HW561

Method 8260 VOST
Sample ID: T-V-4-2-B TC

Client Project: R012.001
TLI ID: 214-27-21B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.002	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.007	BJ	7.75		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.96		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene	0.001	BJ	11.31		0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.07		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW561

Method 8260 VOST
Sample ID: T-V-4-2-B TC

Client Project: R012.001
TLI ID: 214-27-21B

Date Received: 07/29/98

Date Analyzed : 08/09/98

Response File: ICALH809

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.252	4.91	1	101
Toluene-d_8	0.267	7.65	2	107
4-Bromofluorobenzene	0.268	12.24	2	107

Reviewed by RAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Savar v3.7
Printed: 16:11 08/10/1998

468

Pacific Environmental Services

Project Number: 46323
Sample File: HW561

Method 8260 VOST
Sample ID: T-V-4-2-B TC

Client Project: R012.001
TLI ID: 214-27-21B

Date Received: 07/29/98
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.002	0.25
n-Hexane	0.003	J	3.67		0.25
1,2-Epoxybutane		U		0.045	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	5.77		
Ethyl acrylate		U		0.001	0.25

Reviewed by BAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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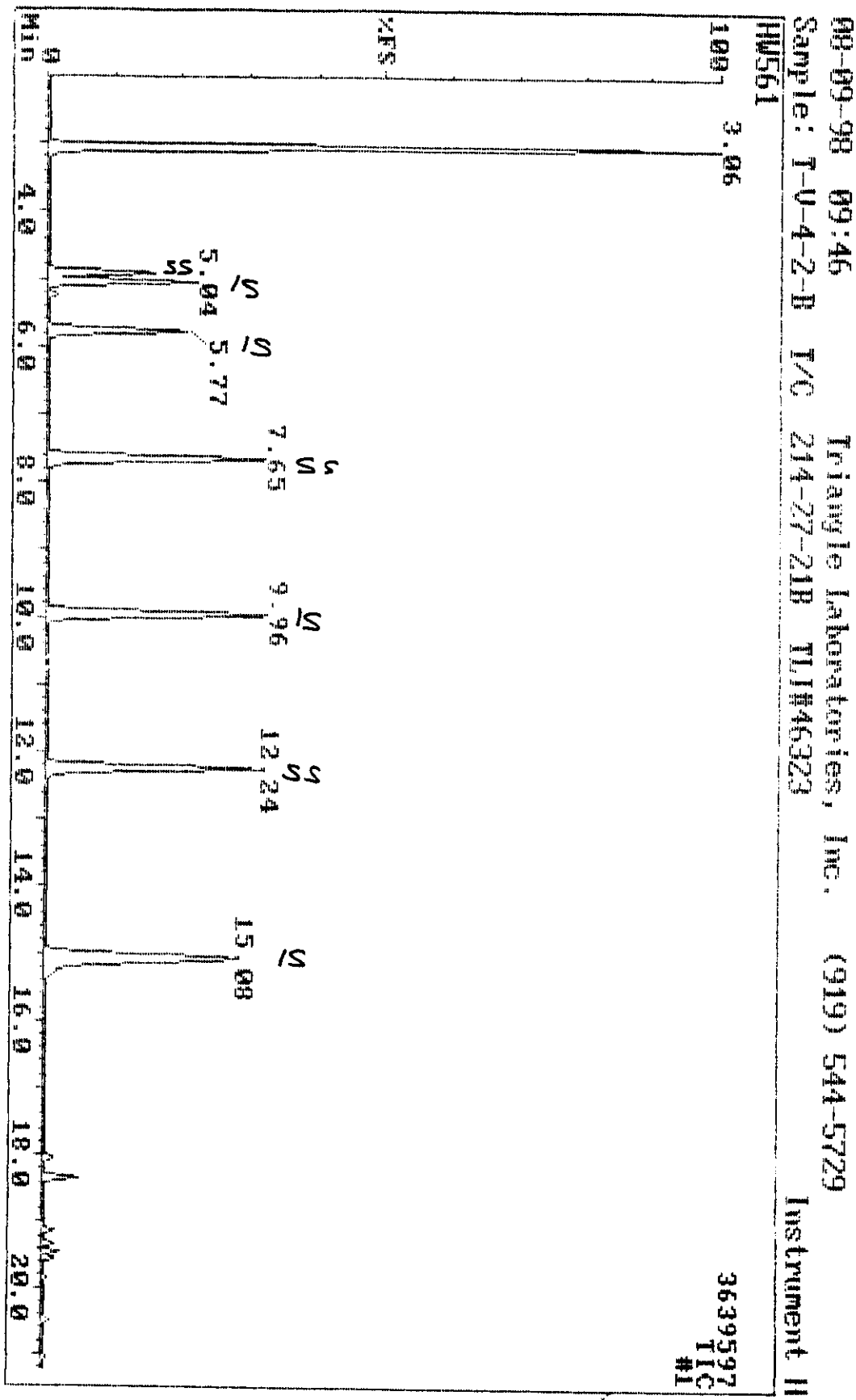


Data Review: PAB
Date: 8/6/98

470

QUAN DB : HW561 LAB-BASE QUAN 08-09-98 10:40

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	-5	2231920	bv	5.04	168	Pentafluorobenzene
2	100	97	98	0	2360532	bv	5.77	114	1,4-Difluorobenzene
3	100	94	94	2	3394483	bv	9.96	117	Chlorobenzene-d5
4	100	82	98	-7	2297468	bv	15.07	152	1,4-Dichlorobenzene-d4
5	100	98	100	0	1196840	bv	4.91	113	Dibromofluoromethane
6	100	93	98	1	3536848	bv	7.65	98	Toluene-d8
7	100	89	92	3	1901224	bv	12.24	95	4-Bromofluorobenzene
8	100	65	99	-1	1172140	vv	0.75	85	Dichlorodifluoromethane
9	100	84	87	-1	49364	bv	0.97	50	Chloromethane
10	0	0	0	0	0		0.00	62	Vinyl Chloride
11	76	50	78	-2	14012	bb	1.46	94	Bromomethane
12	0	0	0	0	0		0.00	64	Chloroethane
13	87	59	83	-1	30852	bb	1.90	101	Trichlorofluoromethane
14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
15	0	0	0	0	0		0.00	142	Iodomethane
16	~~69~~	~~53~~	~~60~~	~~-1~~	~~17572~~	~~bb~~	~~2.53~~	76	Carbon disulfide
17	~~56~~	~~31~~	~~84~~	~~15~~	~~14906~~	~~a~~	~~2.79~~	43	Acetone
18	0	0	0	0	0		0.00	41	Allyl chloride
19	100	99	100	-1	5265536	bv	3.06	84	Methylene chloride
20	0	0	0	0	0		0.00	53	Acrylonitrile
21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
23	0	0	0	0	0		0.00	43	Vinyl acetate
24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
26	~~65~~	~~57~~	~~57~~	~~3~~	~~6092~~	~~bv~~	~~4.53~~	43	2-Butanone
27	0	0	0	0	0		0.00	83	Chloroform
28	0	0	0	0	0		0.00	128	Bromochloromethane
29	0	0	0	0	0		0.00	97	1,1,1-Trichloroethane
30	0	0	0	0	0		0.00	117	Carbon tetrachloride
31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
32	100	95	95	-1	166824	bb	5.23	78	Benzene
33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
34	0	0	0	0	0		0.00	130	Trichloroethene
35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
36	0	0	0	0	0		0.00	93	Dibromomethane
37	0	0	0	0	0		0.00	41	Methyl methacrylate
38	0	0	0	0	0		0.00	83	Bromodichloromethane
39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
40	~~44~~	~~3~~	~~71~~	~~2~~	~~16480~~	~~bb~~	~~7.65~~	43	4-Methyl-2-pentanone
41	98	74	90	2	65004	bb	7.75	92	Toluene
42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropen
43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
44	0	0	0	0	0		0.00	69	Ethyl methacrylate
45	0	0	0	0	0		0.00	164	Tetrachloroethene
46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
47	~~23~~	~~12~~	~~44~~	~~14~~	~~14352~~	~~bb~~	~~9.13~~	43	2-Hexanone
48	0	0	0	0	0		0.00	129	Dibromochloromethane
49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
50	0	0	0	0	0		0.00	112	Chlorobenzene

PAB 8/10/98

OK PAB 8/10/98 (keep)

PAB 8/10/98

PAB 8/10/98

PAB 8/10/98

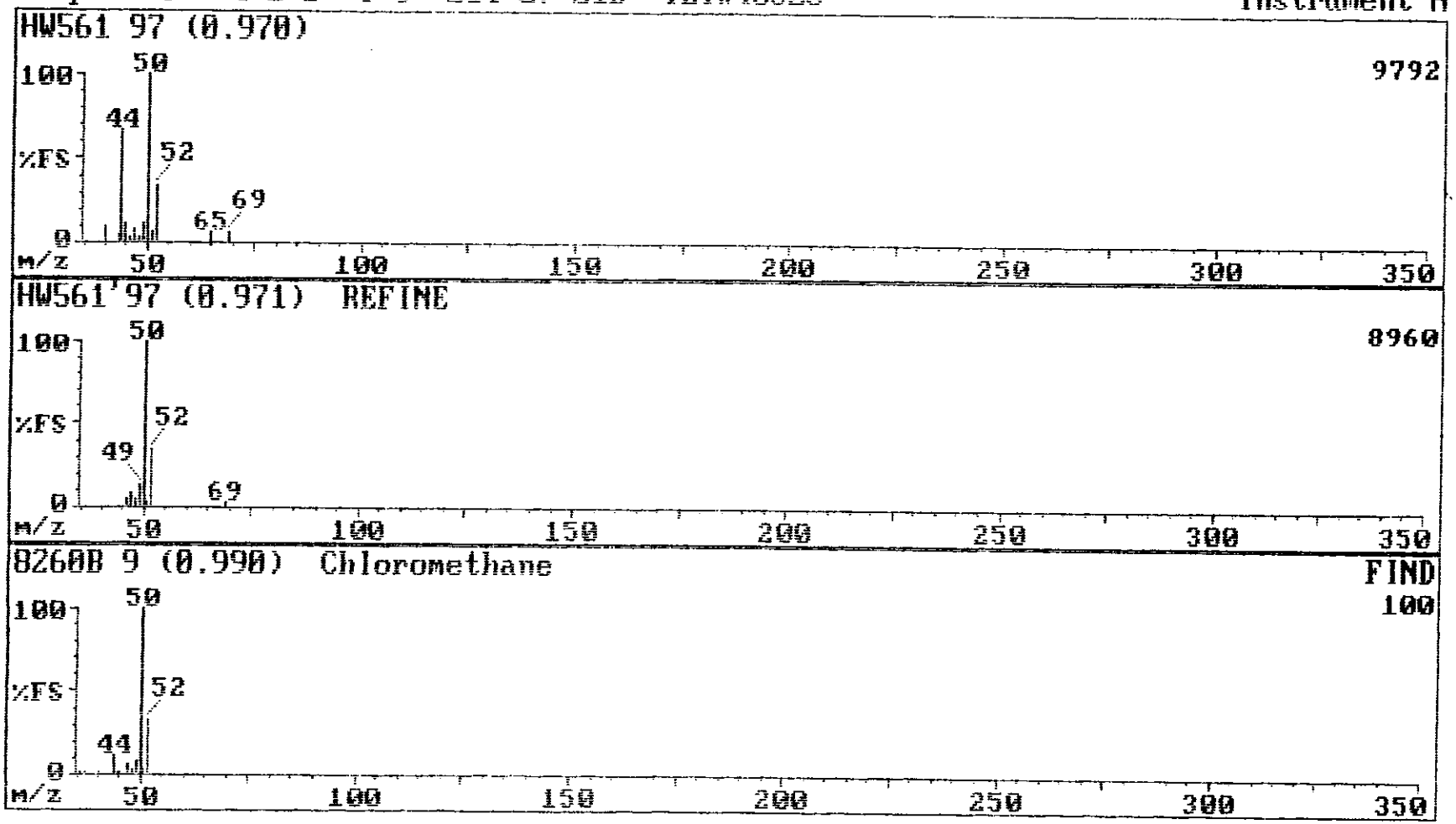
Data Review: PAB
Date: 8/10/98

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
51	0	0	0	0	0		0.00	131	1,1,1,2-Tetrachloroethan
52	~~29~~	~~54~~	~~54~~	~~23~~	~~2152~~	~~A~~ (5P) PAR 8/10/98	~~10.52~~	106	Ethylbenzene
53	~~63~~	~~52~~	~~52~~	~~1~~	~~2152~~	~~A~~ (3P) PAR 8/10/98	~~10.52~~	106	m-/p-Xylene
54	0	0	0	0	0		0.00	106	o-Xylene
55	83	70	70	2	15088	bb	11.31	104	Styrene
56	0	0	0	0	0		0.00	173	Bromoform
57	0	0	0	0	0		0.00	105	Cumene
58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroethan
59	0	0	0	0	0		0.00	156	Bromobenzene
60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.00	120	n-Propylbenzene
62	0	0	0	0	0		0.00	75	trans-1,4-Dichloro-2-but
63	0	0	0	0	0		0.00	126	2-Chlorotoluene
64	0	0	0	0	0		0.00	126	4-Chlorotoluene
65	30	39	39	-16	1164	bb	13.12	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	60	53	53	4	15736	A	14.21	105	1,2,4-Trimethylbenzene
68	64	54	54	2	408	bb	14.75	105	sec-Butylbenzene
69	0	0	0	0	0		0.00	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	0	0	0	0	0		0.00	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
76	62	81	91	18	56220	bb	19.13	180	1,2,4-Trichlorobenzene
77	31	10	75	18	6272	bb	19.34	225	Hexachlorobutadiene
78	53	68	78	18	135676	bv	19.33	128	Naphthalene
79	61	79	90	18	53196	bb	19.54	180	1,2,3-Trichlorobenzene

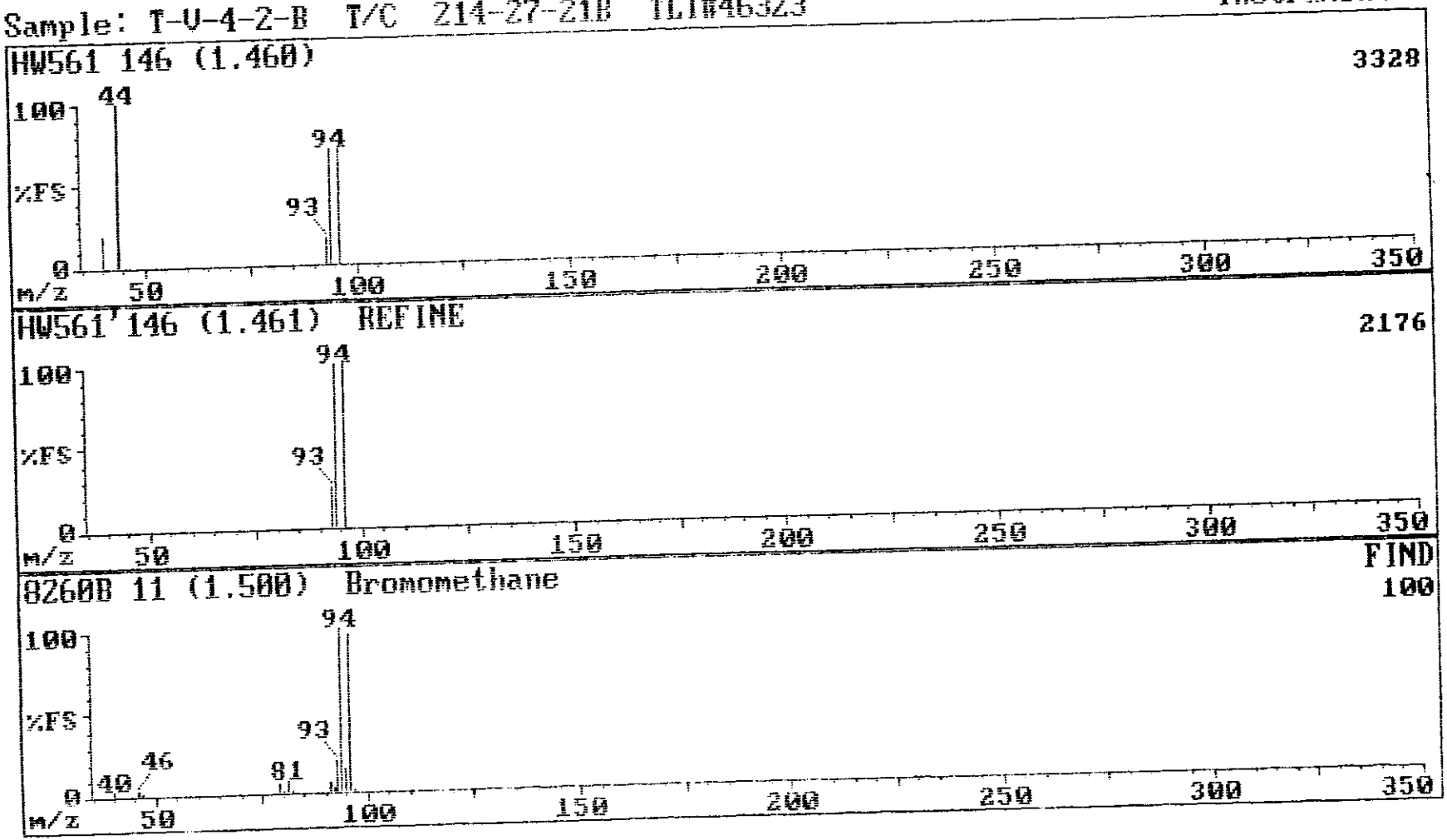
No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	0	2231920	bv	5.04	168	Pentafluorobenzene
2	100	97	98	1	2360532	bv	5.77	114	1,4-Difluorobenzene
3	100	94	94	0	3394483	bv	9.96	117	Chlorobenzene-d5
4	100	82	98	2	2297468	bv	15.07	152	1,4-Dichlorobenzene-d4
5	100	98	100	1	1196840	bv	4.91	113	Dibromofluoromethane
6	100	93	98	0	3536848	bv	7.65	98	Toluene-d8
7	100	89	92	1	1901224	bv	12.24	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	0	0	0	0	0		0.00	73	MTBE
11	100	84	84	1	19384	bb	3.67	57	n-Hexane
12	0	0	0	0	0		0.00	42	1,2-Epoxybutane
13	0	0	0	0	0		0.00	57	Iso-Octane
14	0	0	0	0	0		0.00	55	Ethyl acrylate

08-09-98 09:46 Triangle Laboratories, Inc. (919) 544-5729

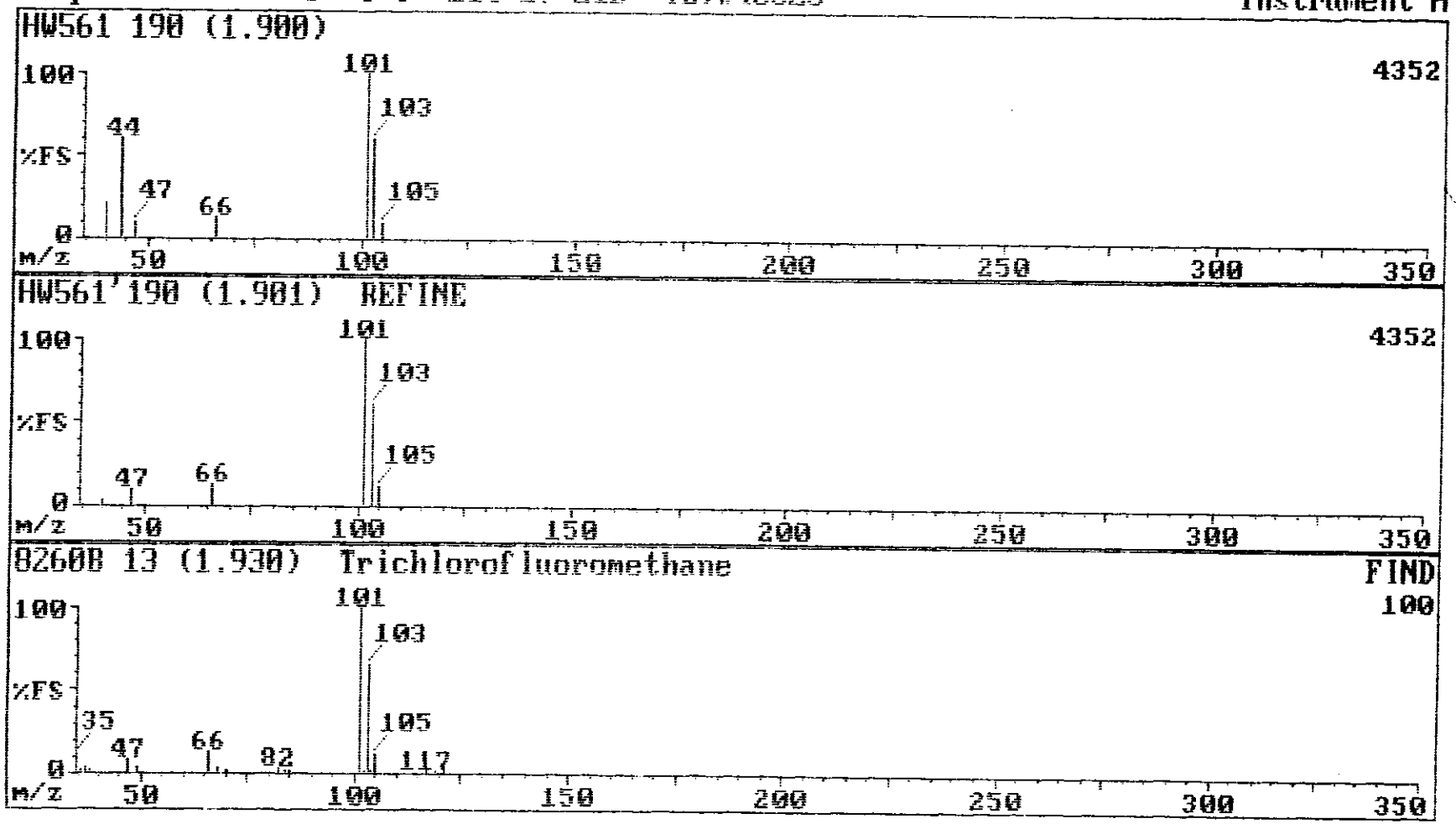
Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H



08-09-98 09:46 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H

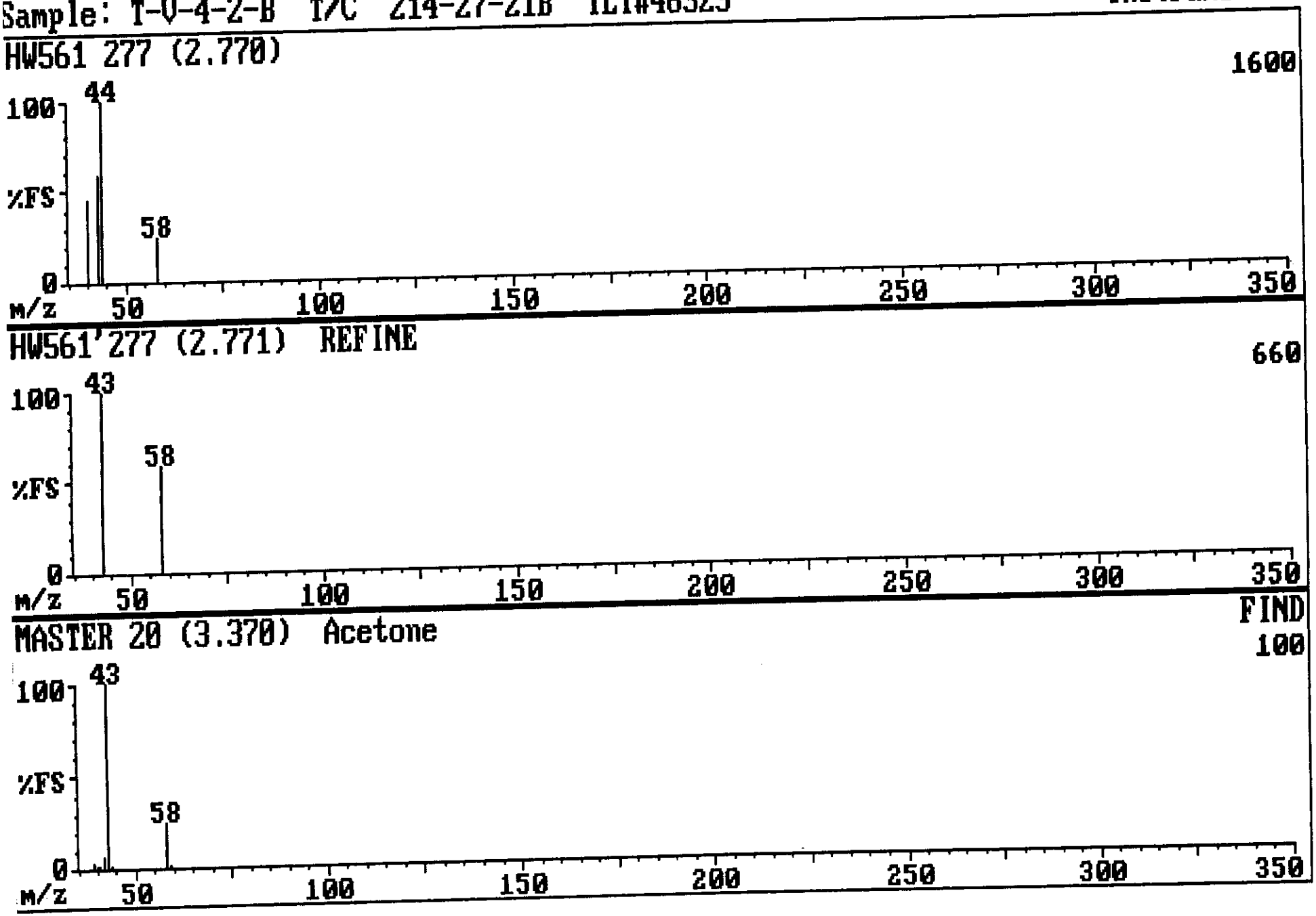


08-09-90 09:46 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-4-2-B T/C 214-27-21B TLJ#46323 Instrument H



09-Aug-98 09:46 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H

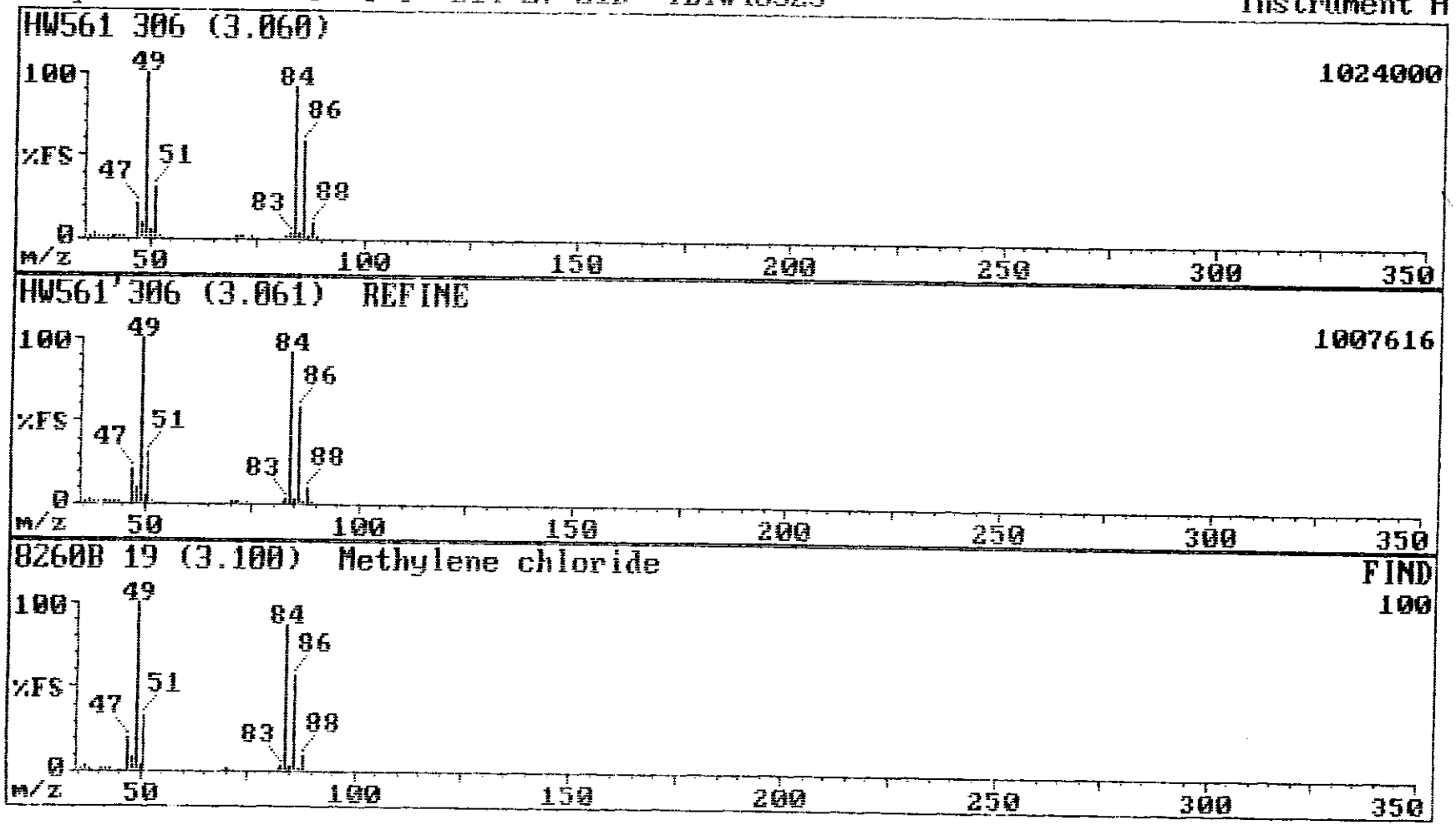


274

477

08-09-98 09:46 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H



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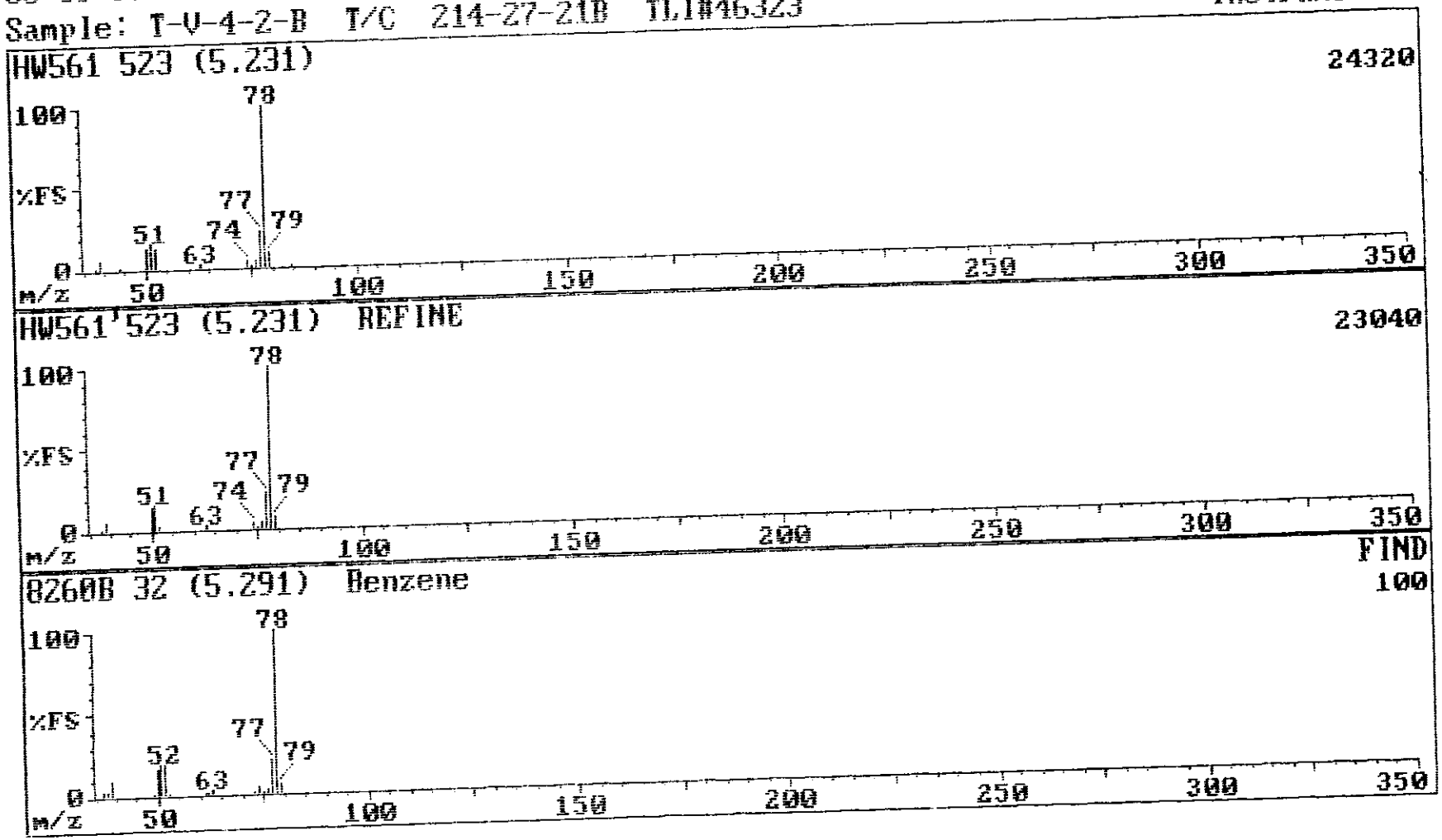
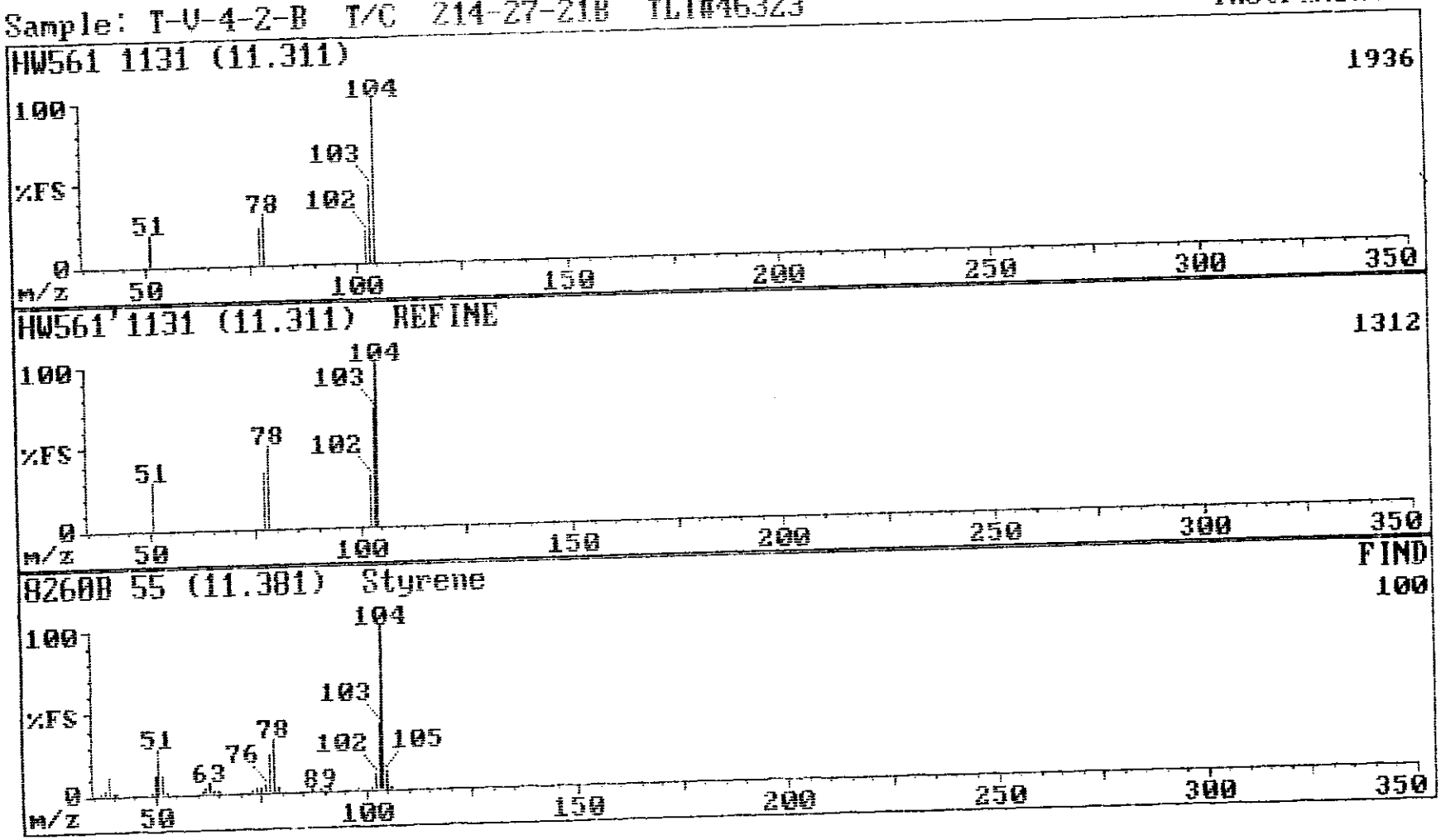
Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H



00-00-00 00:46
Sample: T-0-4-2-0 F/O 214-27-2IN TUI#6323
Instrument Laboratories, Inc. (919) 544-5229
HW561 775 (7,751)
Instrument H
13184
%FS
m/z
100
50
150
200
250
300
350
91
92
93
99
60
65
51
39
HW561 775 (7,751) REFINED
11584
%FS
m/z
100
50
150
200
250
300
350
91
92
93
99
60
63
51
39
026DB 41 (7,811) Toluene
11584
%FS
m/z
100
50
150
200
250
300
350
100
101
70
65
54
42
FIND

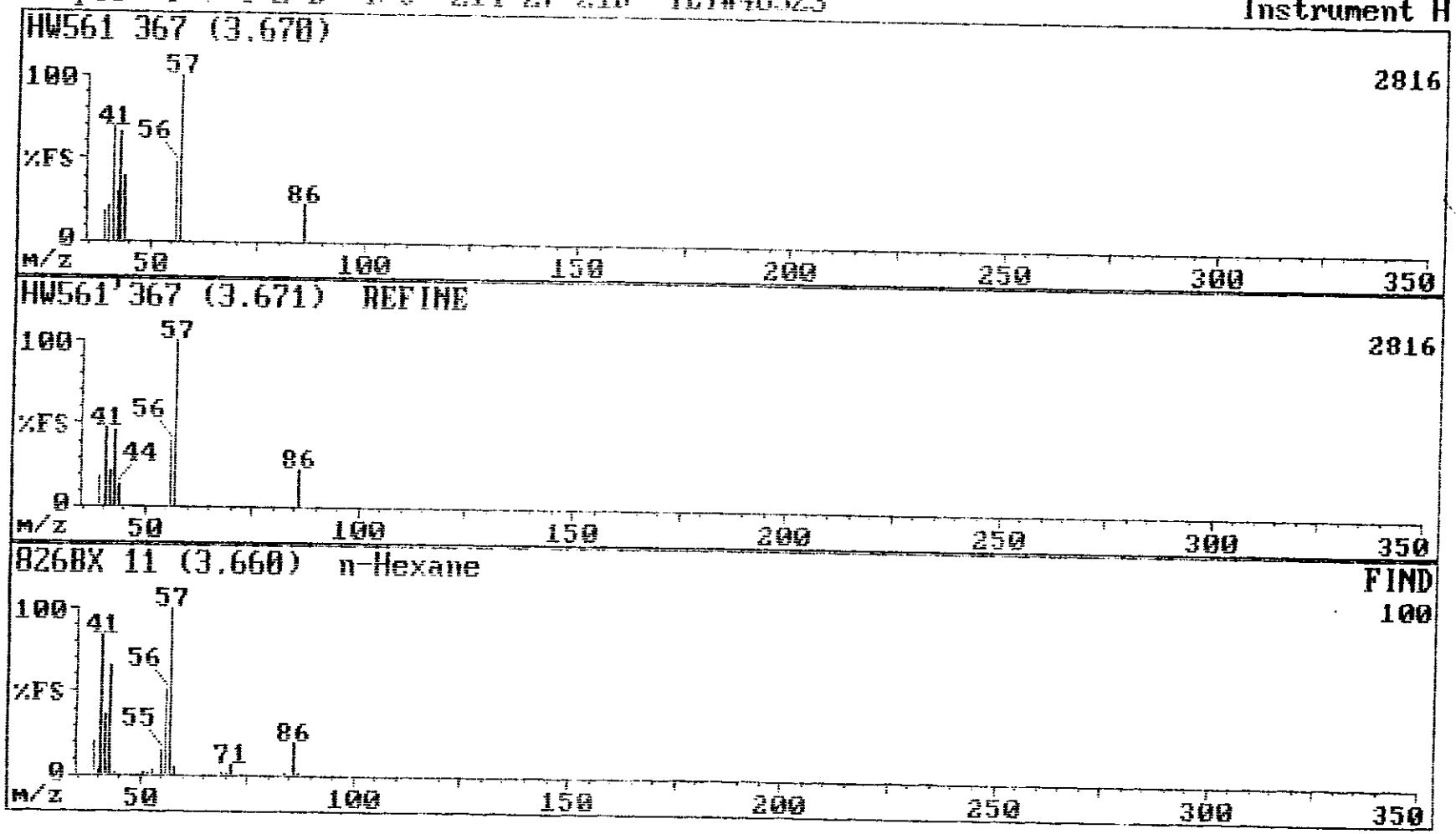
480

08-09-98 09:46 Triangle Laboratories, Inc. (919) 544-5729
Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H



08-09-98 09:46 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-2-B T/C 214-27-21B TLI#46323 Instrument H



Pacific Environmental Services

Project Number: 46323
Sample File: FX983

Method 8260 VOST
Sample ID: T-V-4-4-A T

Client Project: R012.001
TLI ID: 214-27-23A

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.004	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.009	J	3.28		0.05
Acrylonitrile		U		0.021	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.004	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.071		5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX983

Method 8260 VOST
Sample ID: T-V-4-4-A T

Client Project: R012.001
TLI ID: 214-27-23A

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.005	0.05
Toluene	0.158		8.09		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.35		
Tetrachloroethene	0.022	J	8.92		0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene	0.022	J	10.67		0.05
m-/p-Xylene	0.057	J	10.91		0.10
o-Xylene	0.024	J	11.62		0.05
Styrene	0.009	J	11.69		0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.71		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.002	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

Savar v3.7
Printed: 16:49 08/25/1998

Pacific Environmental Services

Project Number: 46323
Sample File: FX983

Method 8260 VOST
Sample ID: T-V-4-4-A T

Client Project: R012.001
TLI ID: 214-27-23A

Date Received: 07/29/98

Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.208	5.18	1	83
Toluene-d_8	0.259	8.00	2	104
4-Bromofluorobenzene	0.256	12.65	2	102

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Savar v3.7
Printed: 16:49 08/25/1998

Pacific Environmental Services

Project Number: 46323
Sample File: FX983

Method 8260 VOST
Sample ID: T-V-4-3-4AT (mc)

Client Project: R012.001
TLI ID: 214-27-23A

Date Received: 07/29/98
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE	0.037	J	3.63		0.25
n-Hexane	0.041	J	3.90		0.25
1,2-Epoxybutane		U		0.025	0.25
Iso-Octane	0.010	J	5.67		0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.007	0.25

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
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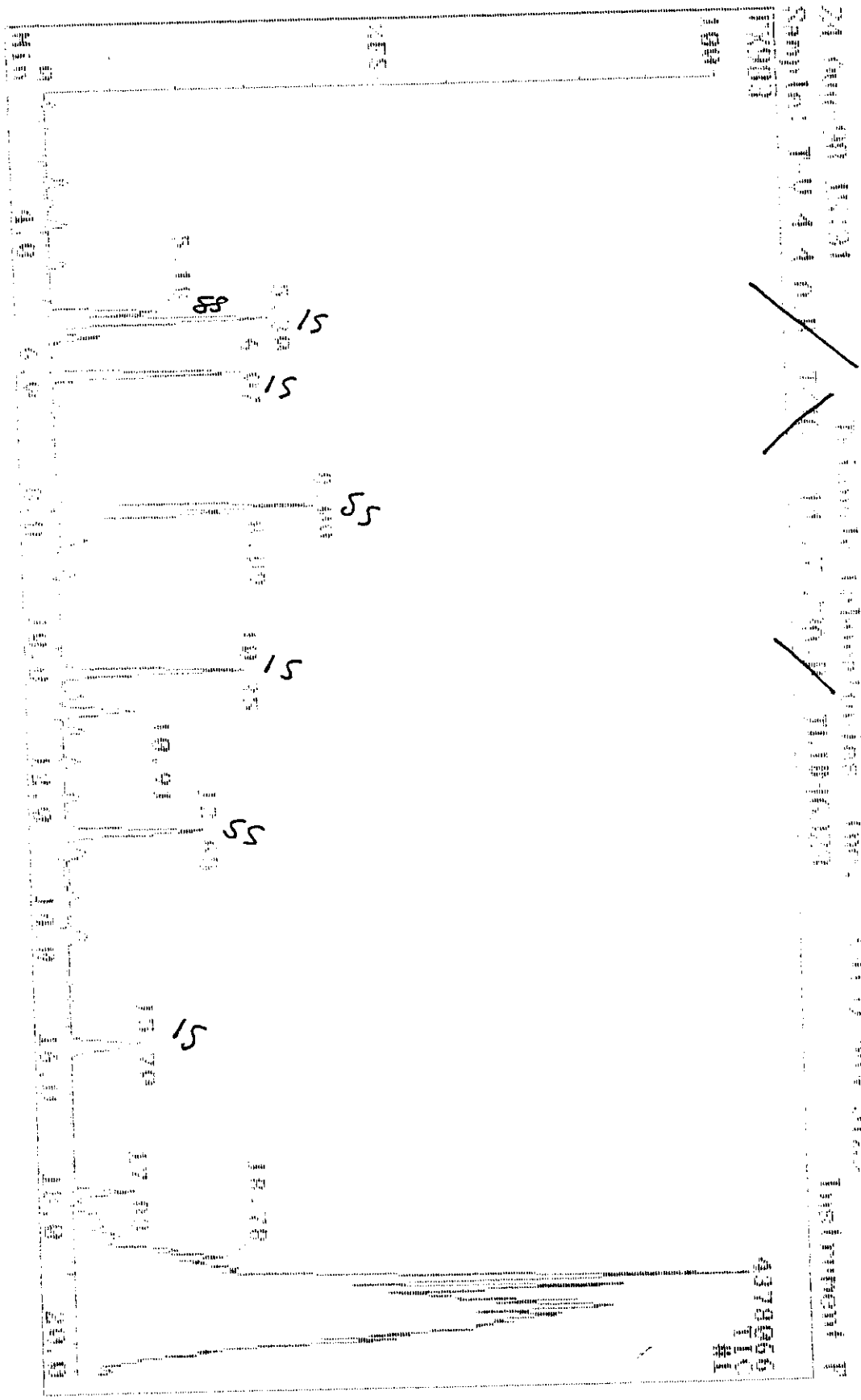
Savar v3.7
Printed: 17:27 08/25/1998

486



tmax only PaB 8/24/98

487

Data Review: PaB
Date: 8/24/98

234

PAB

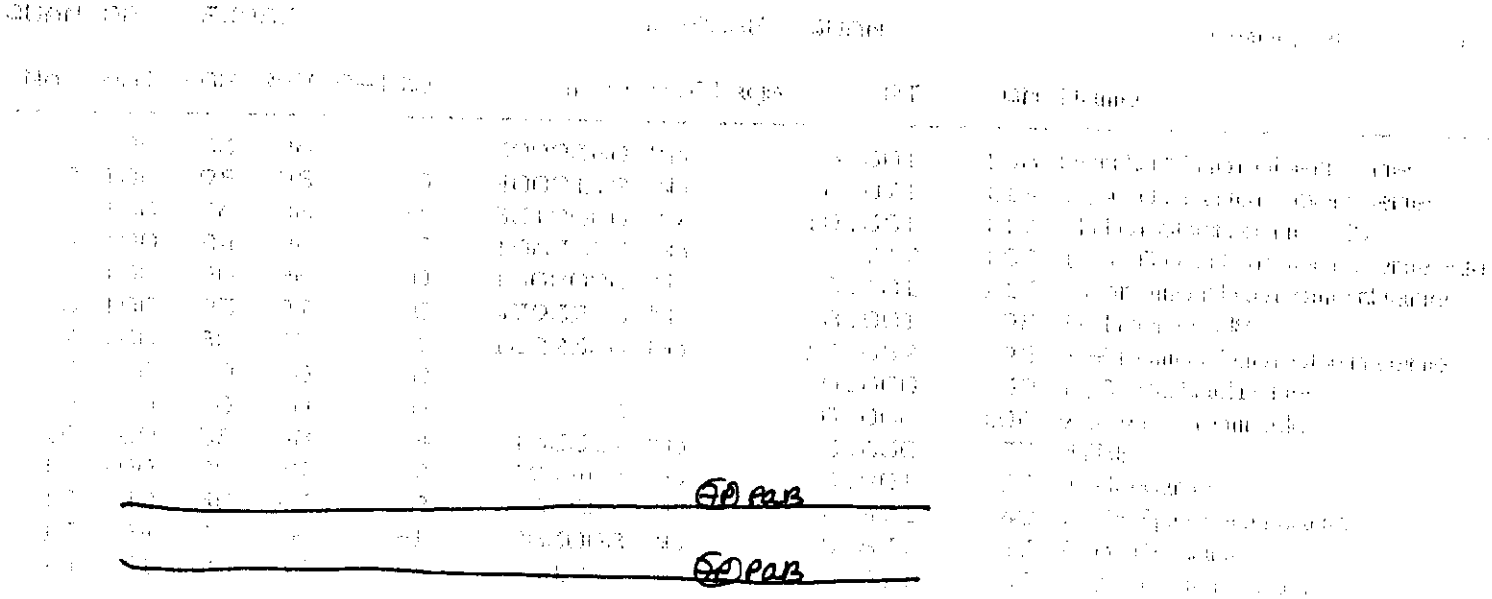
39168 — PAB —— 3.28

PAB

Data Review: PAB
Date: 8/24/98

115136 — 80 pairs

—— 11.69

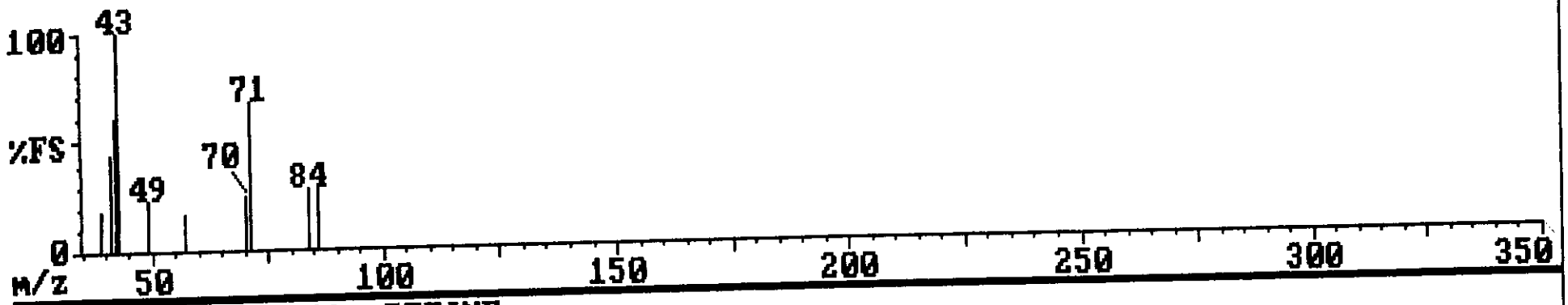


490

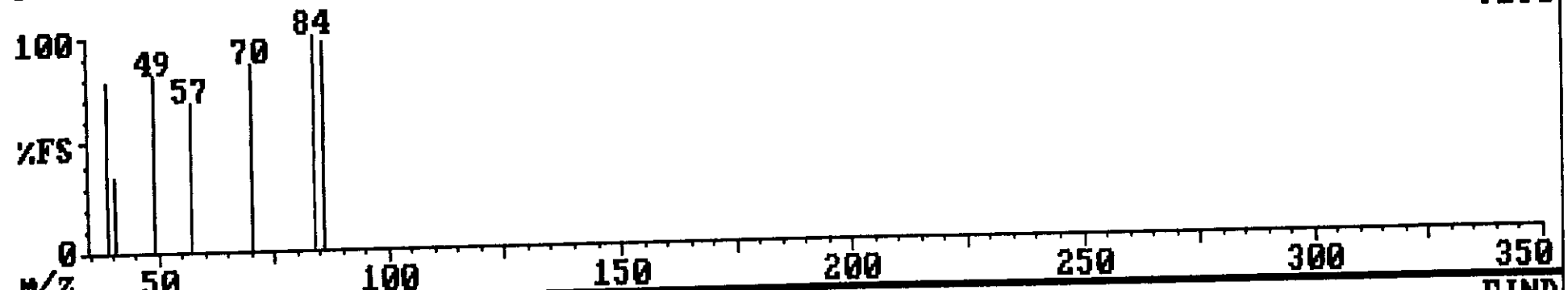
24-Aug-98 15:31 Triangle Laboratories, Inc. (919) 544-5729

Sample: T-V-4-4-A,B T/TC 214-27-23A,B TLI#46323 Instrument F

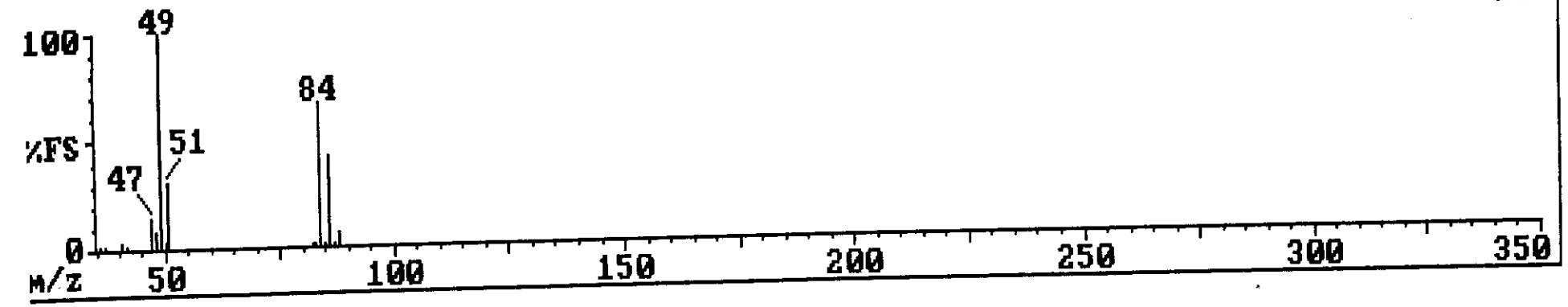
FX983 328 (3.281) tenax only Pab 8/25/98 33280

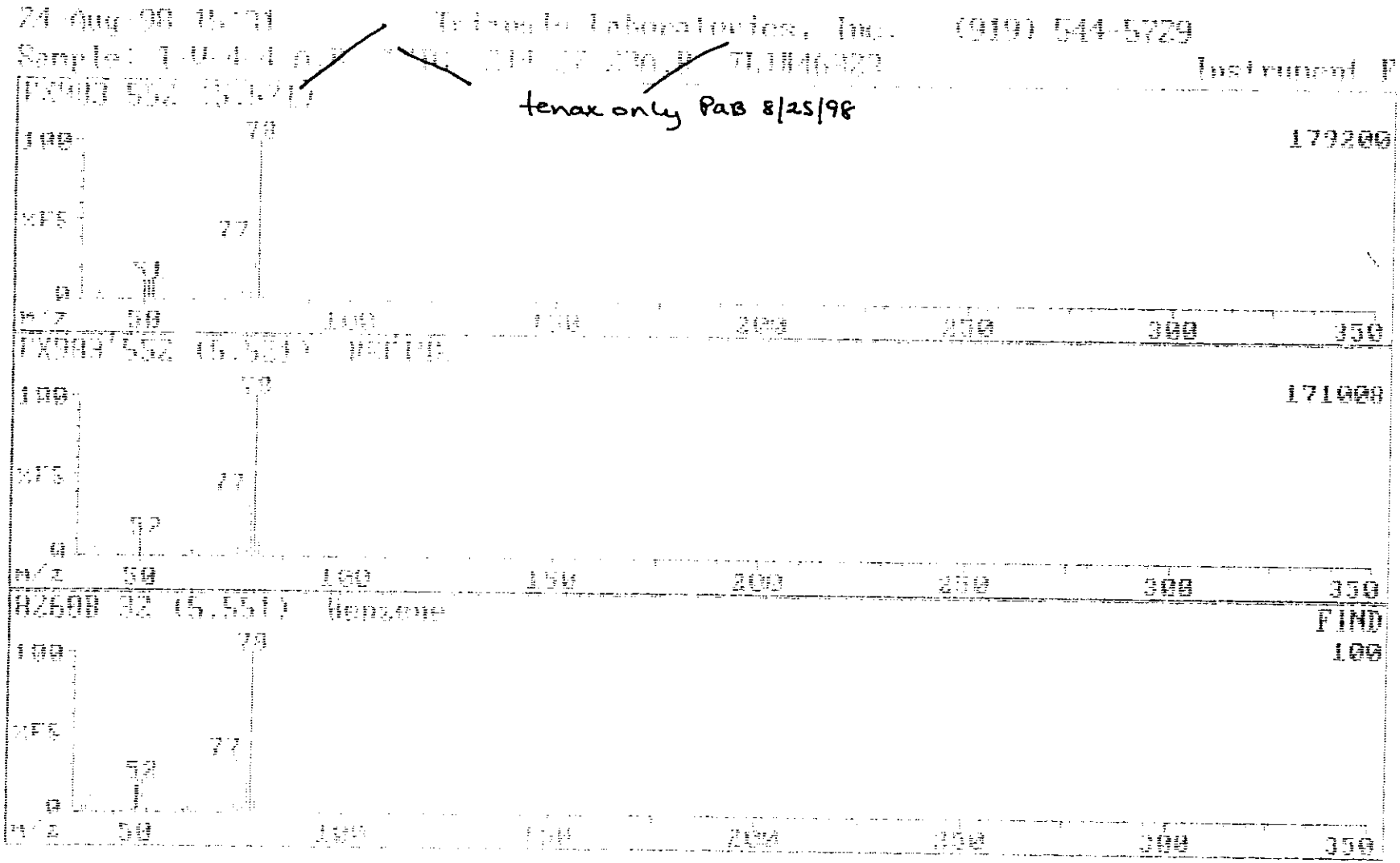


FX983 328 (3.281) REFINE 9280



8260 15 (3.550) Methylene chloride FIND 100



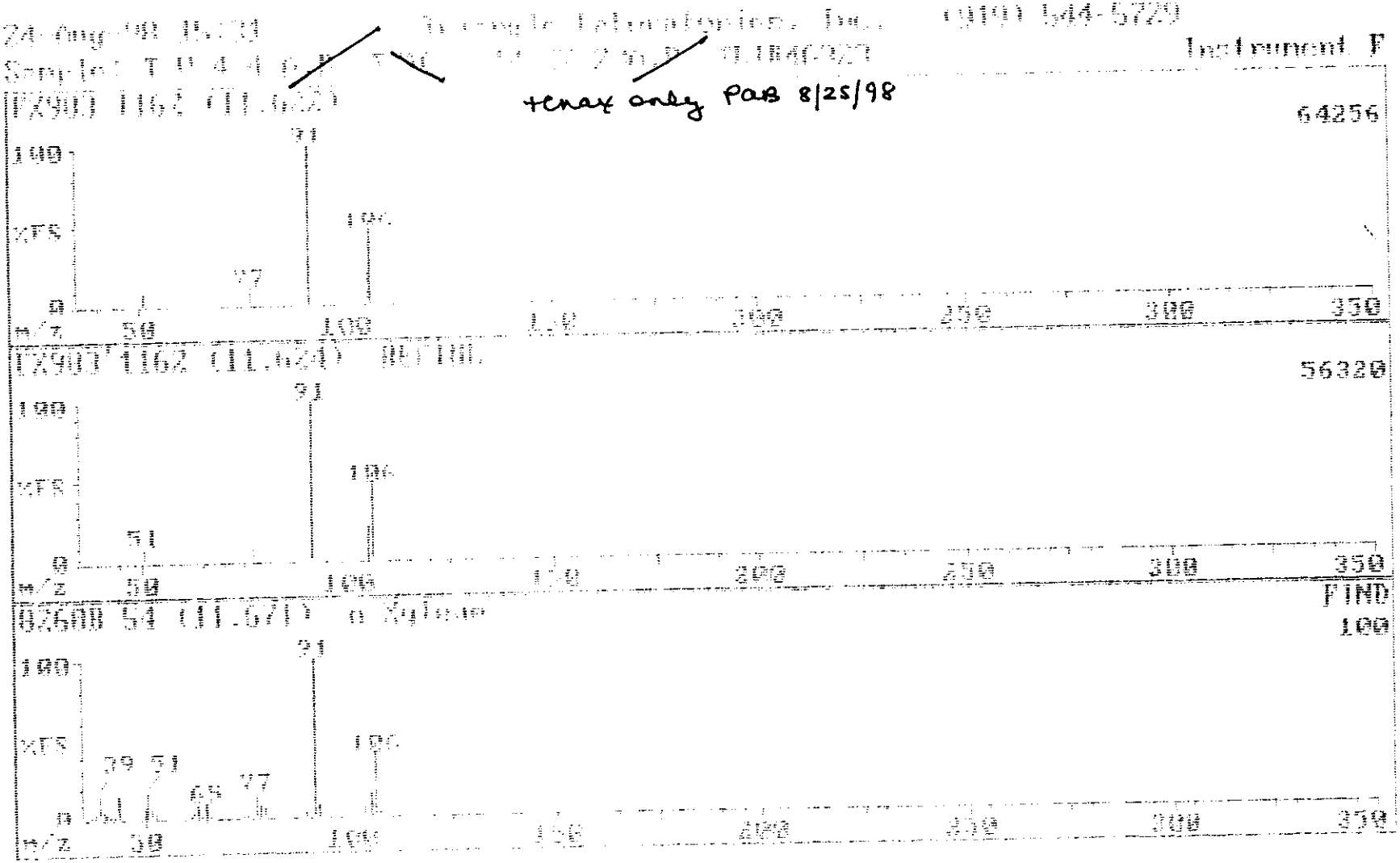

tenax only PAB 8/25/98
179200
171000
FIND
100
350

tenant only Pass 8/25/98

414

tenant entry Pad 8/25/98

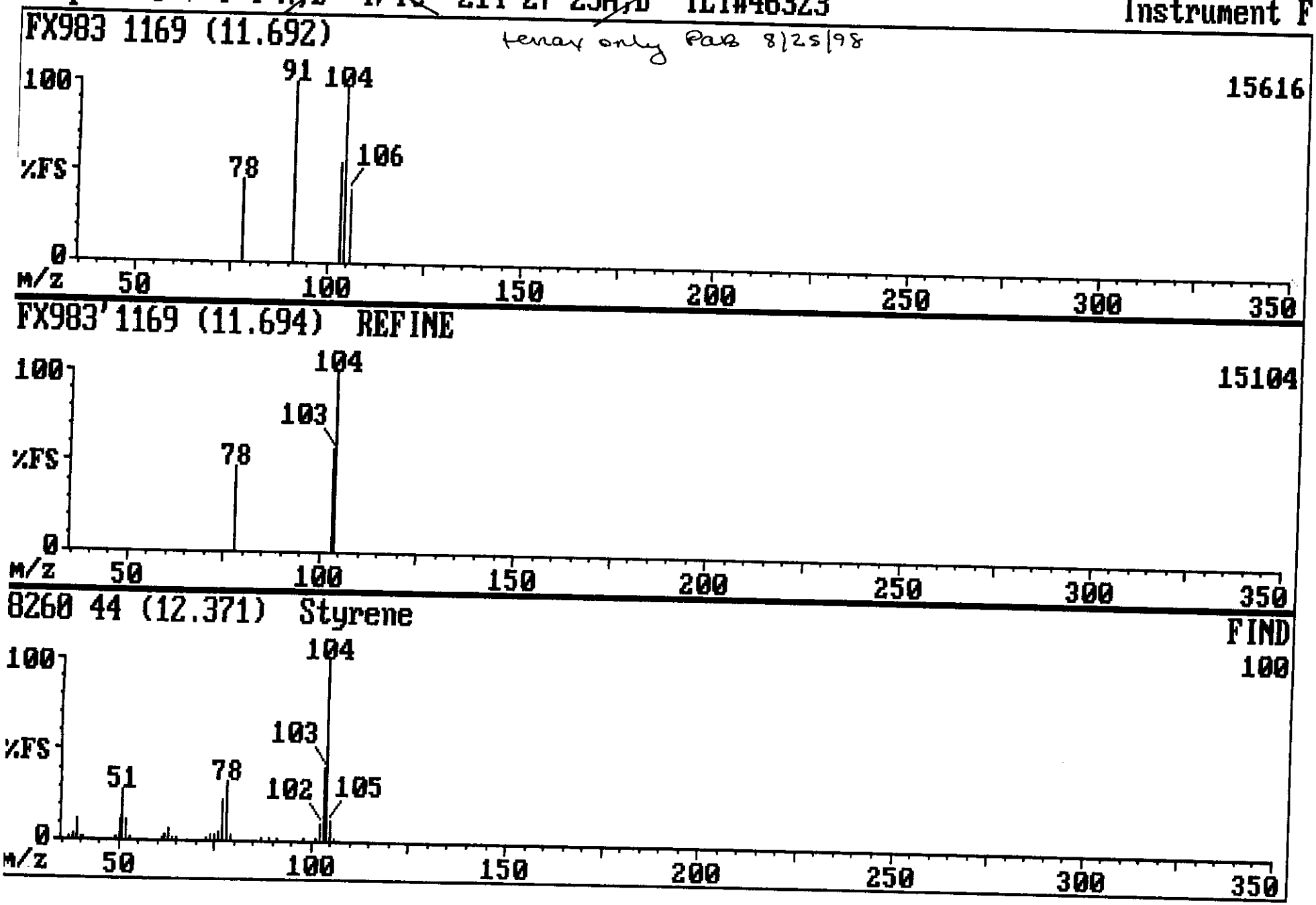
Tenax only PAB 8/25/98


Instrument F
tenax only PAB 8/25/98
64256
56320
FIND
100
m/z
50
100
150
200
250
300
350
KTS
0

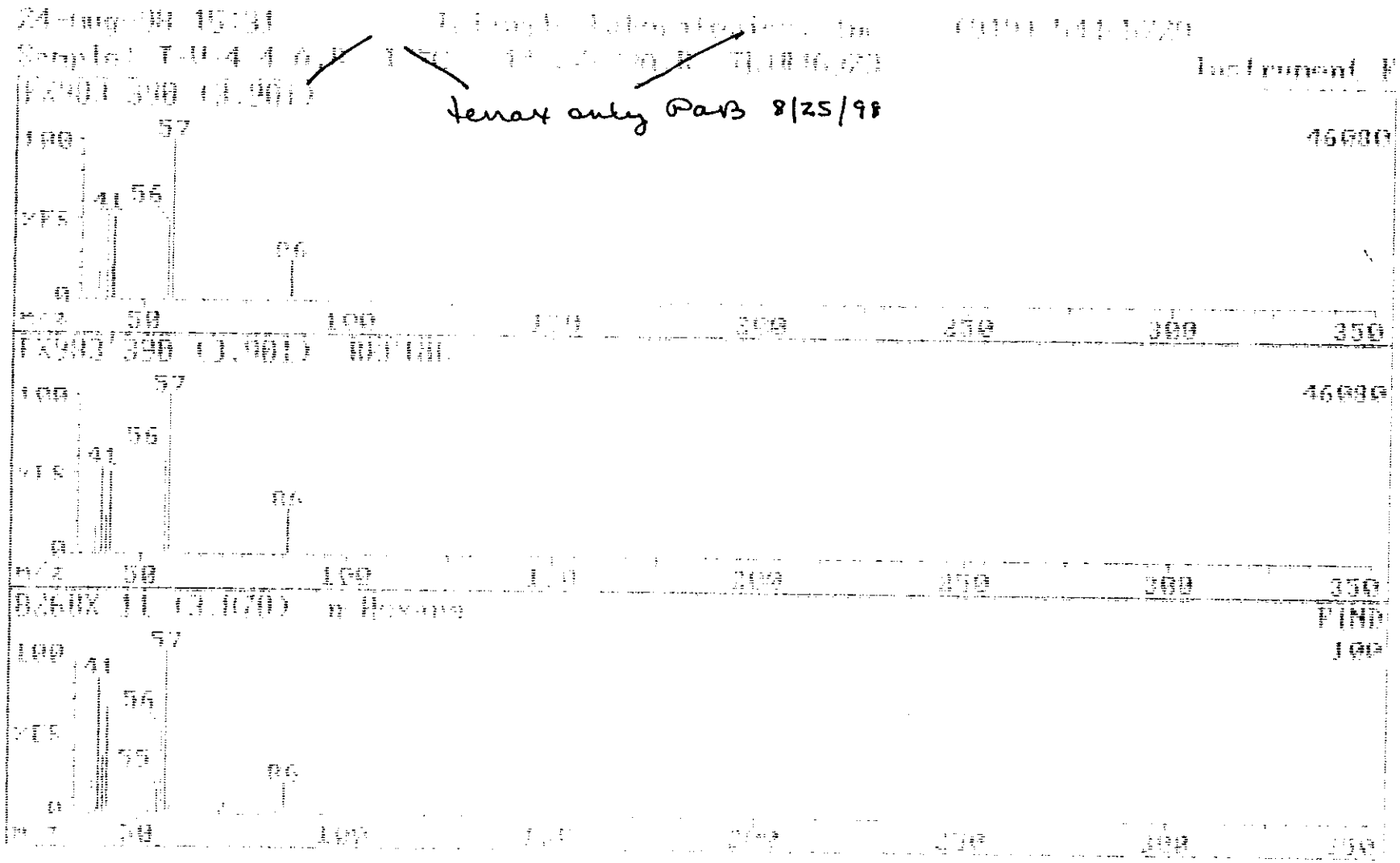
24-Aug-98 15:31 Triangle Laboratories, Inc. (919) 544-5729

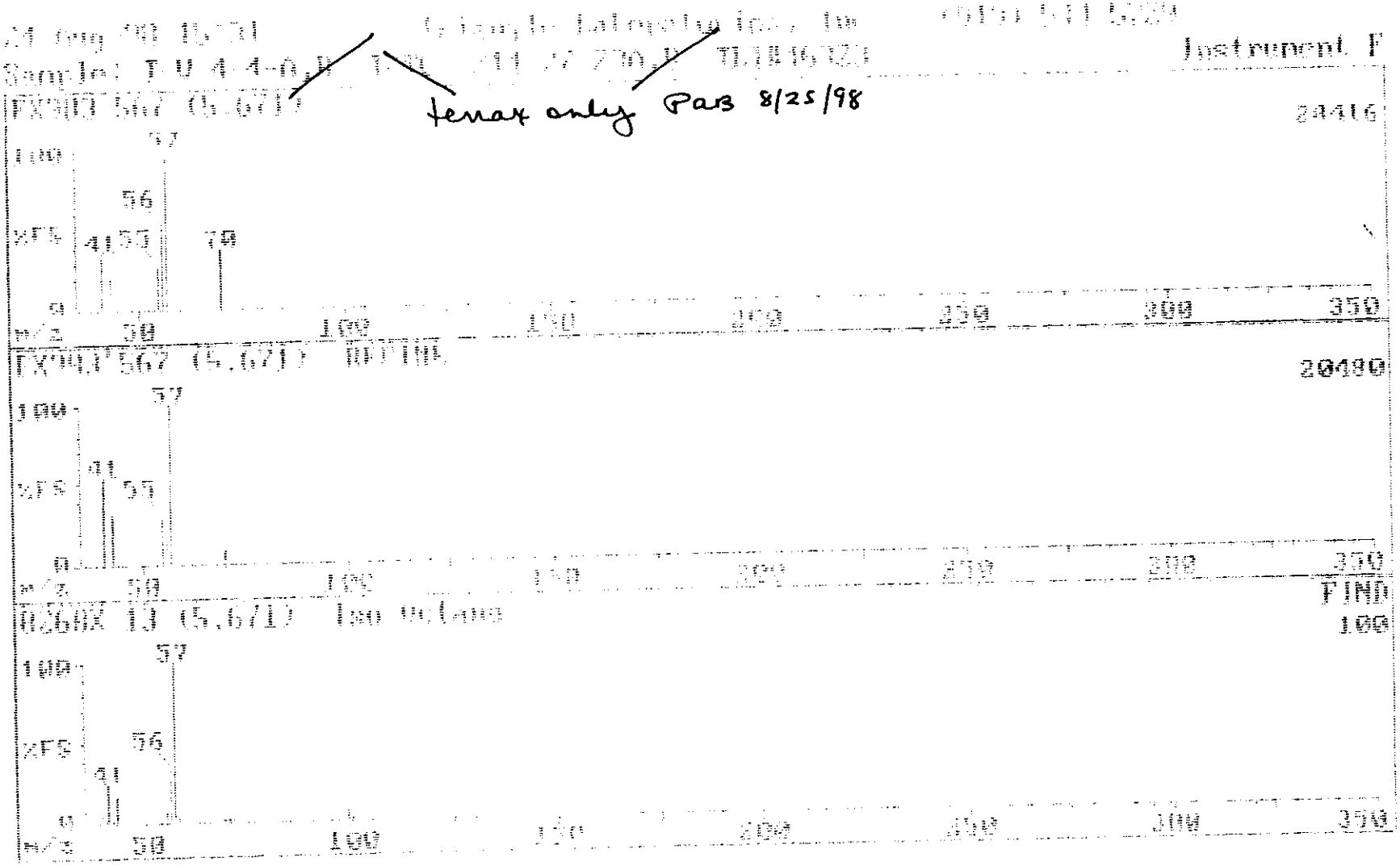
Sample: ~~T-V-4-4-A,B~~ ~~T/TC~~ 214-27-23A,B TLI#46323 Instrument F

ternary only PAB 8/25/98



tenant entry
Pass 8/25/98


Terrain only PAB 8/25/98
57
55
41
96
50
100
150
200
250
300
350
FIND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24416
20490
FIND
100
Texas only PAB 8/25/98

Pacific Environmental Services

Project Number: 46323
Sample File: FX953

Method 8260 VOST
Sample ID: T-V-FB-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-9A,B

Date Received: 07/29/98
Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.005	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride	0.054		3.27		0.05
Acrylonitrile		U		0.025	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.005	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.07		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.006	BJ	5.52		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: FX953

Method 8260 VOST
Sample ID: T-V-FB-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-9A,B

Date Received: 07/29/98
Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene	0.006	J	8.08		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.36		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.008	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.74		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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Pacific Environmental Services

Project Number: 46323
Sample File: FX953

Method 8260 VOST
Sample ID: T-V-FB-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-9A,B

Date Received: 07/29/98
Date Analyzed : 08/21/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.293	5.18	1	117
Toluene-d_8	0.263	8.00	2	105
4-Bromofluorobenzene	0.238	12.66	2	95

Reviewed by PAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX953

Method 8260 VOST
Sample ID: T-V-FB-A,B T/TC

Client Project: R012.001
TLI ID: 214-27-9A,B

Date Received: 07/29/98
Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.30		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.025	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.07		
Ethyl acrylate		U		0.004	0.25

Reviewed by RAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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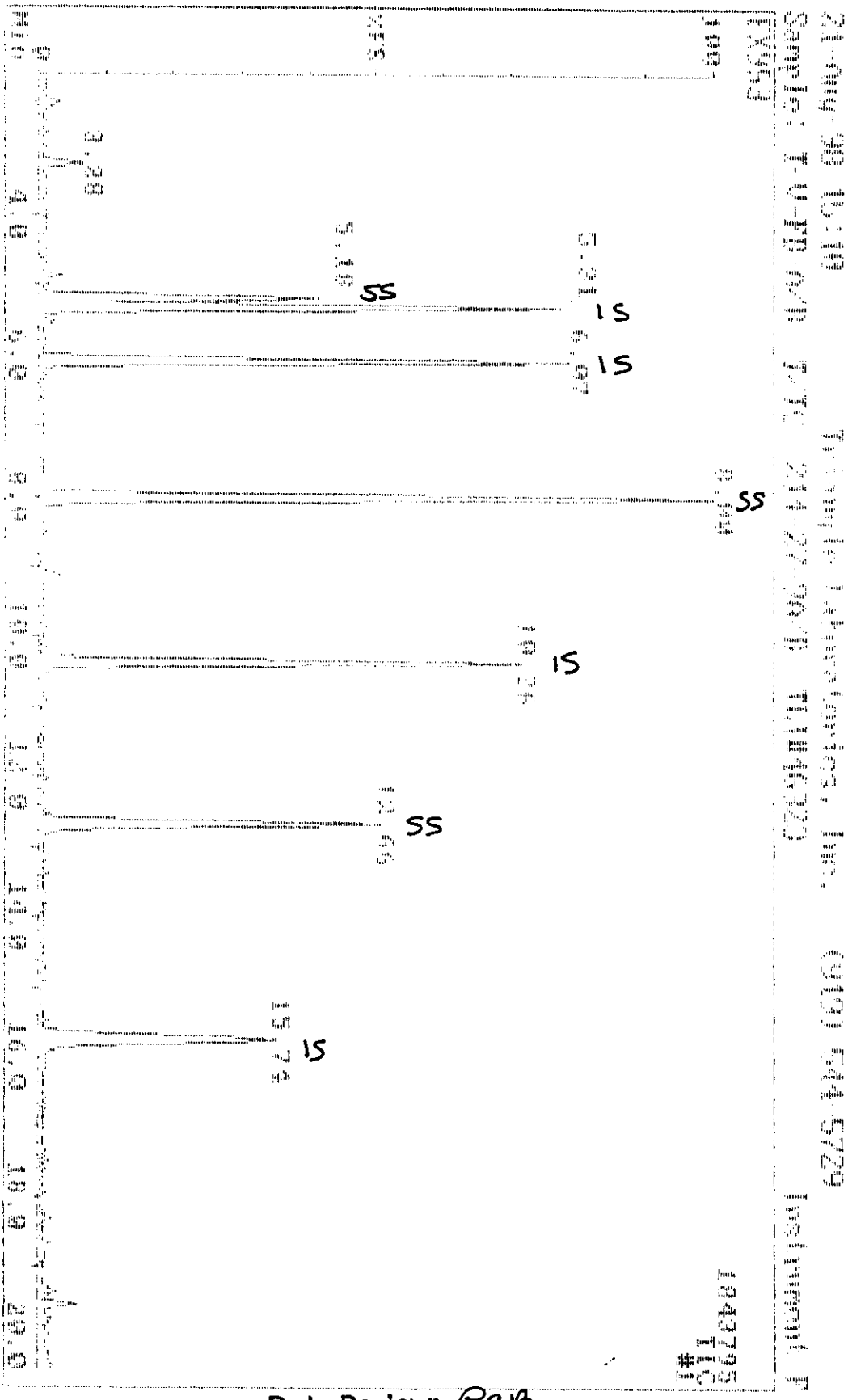

Data Review: PAB
Date: 8/24/98

506

QUAN-SD [illegible]

LAB-BASE QUANT

No.	MAT	FOR	REV	Delta	Area	Flags	RT	QM Name
1	100	85	99	-1	3296328	bv	5.301	1,1,2-Trichloro-1,2,2-trifluoroethane
2	100	92	99	0	4214224	bv	6.071	1,1-Dichloroethene
3	100	99	99	1	3383024	bv	10.041	Carbon disulfide
4	100	98	98	0	1794752	bv	11.243	trans-1,2-Dichloroethene
5	100	92	99	1	2520248	bv	11.881	1,1-Dichloroethane
6	100	95	97	0	1134280	bv	13.001	Methyl acetate
7	100	91	96	0	1892134	bv	13.246	Cyclohexane
8	0	0	0	0	0		13.503	Methyl tert-butyl ether
9	0	0	0	0	0		14.000	2,2-Dimethylbutane
10	0	0	0	0	0		14.081	n-Butanol
11	0	0	0	0	0		14.303	2,3-Dimethylbutane
12	0	0	0	0	0		15.045	2-Methylpentane
13	0	0	0	0	0		15.246	3-Methylpentane
14	0	0	0	0	0		15.441	2-Propanol
15	0	0	0	0	0		15.600	1,2-Dichloroethene
16	0	0	0	0	0		15.841	Hexane
17	0	0	0	0	0		16.000	Methylcyclopentane
18	100	0	0	0	1134280	bv	16.241	2,4-Dimethylpentane
19	0	0	0	0	0		16.441	Ethyl acetate
20	0	0	0	0	0		16.600	Methylcyclohexane
21	0	0	0	0	0		16.800	Chloroform
22	0	0	0	0	0		17.000	1,1,1-Trichloroethane
23	0	0	0	0	0		17.200	Cyclohexane
24	0	0	0	0	0		17.400	2,3,4-Trimethylpentane
25	0	0	0	0	0		17.600	2,3,3-Trimethylpentane
26	0	0	0	0	0		17.800	Carbon tetrachloride
27	0	0	0	0	0		18.000	2,3-Dimethylhexane
28	0	0	0	0	0		18.200	2-Methylheptane
29	0	0	0	0	0		18.400	4-Methylheptane
30	0	0	0	0	0		18.600	3,4-Dimethylhexane
31	0	0	0	0	0		18.800	3-Methylheptane
32	96	97	97	0	1156680	bb	19.000	1,2-Dichloropropane
33	0	0	0	0	0		19.200	Methylcyclohexane
34	0	0	0	0	0		19.400	Dibromomethane
35	0	0	0	0	0		19.600	Bromodichloromethane
36	0	0	0	0	0		19.800	2,2,4-Trimethylpentane
37	0	0	0	0	0		20.000	2,5-Dimethylhexane
38	0	0	0	0	0		20.200	2,4-Dimethylheptane
39	0	0	0	0	0		20.400	4-Methyloctane
40							20.600	2-Methyloctane
41	81	90	79	1	3259416		20.800	1,3,5-Trimethylbenzene
42	0	0	0	0	0		21.000	3,3-Dimethylheptane
43	0	0	0	0	0		21.200	2,6-Dimethylheptane
44	0	0	0	0	0		21.400	2,4,4-Trimethylheptane
45	0	0	0	0	0		21.600	1,2,4-Trimethylbenzene
46	0	0	0	0	0		21.800	2,3,4-Trimethylheptane
47	0	0	0	0	0		22.000	2,3,3-Trimethylheptane
48	0	0	0	0	0		22.200	1,2,3-Trimethylbenzene
49	0	0	0	0	0		22.400	1,3-Diethylbenzene
50	0	0	0	0	0		22.600	1,4-Diethylbenzene

PAB

PAB

Data Review: PAB
Date: 8/24/98

304

507

No	MNT	FOR	NEV	Collect	Area	Flags	RT	MW	Name
51	0	0	0	0	0		0.000	131	1,1,1,2-Tetrachloroethane
52	0	0	0	0	0		0.000	106	Ethylbenzene
53	0	0	0	0	0		0.000	106	m-/p-Xylene
54	0	0	0	0	0		0.000	106	o-Xylene
55	0	0	0	0	0		0.000	104	Styrene
56	0	0	0	0	0		0.000	173	Bromoform
57	0	0	0	0	0		0.000	105	Cumene
58	0	0	0	0	0		0.000	168	1,1,2,2-Tetrachloroethane
59	0	0	0	0	0		0.000	156	Propylbenzene
60	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
61	0	0	0	0	0		0.000	119	4-Ethyltoluene
62	0	0	0	0	0		0.000	105	1,3,5-Trimethylbenzene
63	0	0	0	0	0		0.000	120	Tert-butylbenzene
64	0	0	0	0	0		0.000	119	1,2,4-Trimethylbenzene
65	0	0	0	0	0		0.000	146	Sec-butylbenzene
66	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
67	0	0	0	0	0		0.000	146	4-Isopropyltoluene
68	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
69	0	0	0	0	0		0.000	146	n-Butylbenzene
70	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
71	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
72	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
73	0	0	0	0	0		0.000	146	Hexachlorobutadiene
74	0	0	0	0	0		0.000	146	Naphthalene
75	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
76	0	0	0	0	0		0.000	146	Hexachloroethane
77	0	0	0	0	0		0.000	146	Bromochloromethane
78	0	0	0	0	0		0.000	146	2,2-Dichloropropane
79	0	0	0	0	0		0.000	146	1,2-Dibromoethane

QUAN OR : PEAK : BASE QUAN

No	MAT	ADJ	DEV	Delta	Quan	Units	RT	Qlt	Compound
1	100	85	99	1	3397x622	bv	5.301	100	Pentafluorobenzene
2	100	97	99	0	621242	bv	6.071	100	1,4-Difluorobenzene
3	100	95	96	0	1301624	bv	10.561	100	Chlorobenzene-d5
4	100	79	98	0	1243492	bv	15.742	100	1,4-Dichlorobenzene-d4
5	100	97	99	0	1560640	bv	5.181	100	Dibromofluoromethane
6	100	95	97	0	5131680	bv	8.001	93	Toluene-d8
7	100	91	94	0	1992176	bv	12.661	95	4-Bromofluorobenzene
8	0	0	0	0	0		6.000	00	1,2-Dichloroethane
9	0	0	0	0	0		6.000	00	Vinyl bromide
10	0	0	0	0	0		6.000	00	MTBE
11	[illegible]						[illegible]	00	n-Hexane
12	[illegible]						[illegible]	00	1,2,4-Trimethylbenzene
13	[illegible]						[illegible]	00	Isopropylbenzene
14	0	0	0	0	0		0.000	00	n-Propylbenzene

FAB FAB FAB

509

510

512

303

Pacific Environmental Services

Project Number: 46323
Sample File: HW559

Method 8260 VOST
Sample ID: VOSTBLK 080998 T/TC

Client Project: R012.001
TLI ID: VOSTBLK080998

Date Received: / /
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
Chloromethane	0.015	J	0.97		0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane	0.010	J	1.47		0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.004	0.05
Acetone		U		0.001	0.05
Allyl chloride		U			0.05
Methylene chloride	0.001	J	3.06		0.05
Acrylonitrile		U		0.006	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.003	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	5.76		
Carbon tetrachloride		U		0.001	0.05
Benzene	0.048	J	5.24		0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW559

Method 8260 VOST
Sample ID: VOSTBLK 080998 T/TC

Client Project: R012.001
TLI ID: VOSTBLK080998

Date Received: / /
Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.002	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.001	0.05
Toluene	0.003	J	7.75		0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	9.97		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.002	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene	0.001	J	11.32		0.05
Bromoform		U		0.001	0.05
1,4-Dichlorobenzene-d_4		IS 4	15.09		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.001	0.05

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Pacific Environmental Services

Project Number: 46323
Sample File: HW559

Method 8260 VOST
Sample ID: VOSTBLK 080998 T/TC

Client Project: R012.001
TLI ID: VOSTBLK080998

Date Received: / /
Date Analyzed : 08/09/98

Response File: ICALH809

Surrogate Summary	Amount (ng)	RT	IS Ref	%REC
Dibromofluoromethane	0.247	4.92	1	99
Toluene-d_8	0.259	7.65	2	104
4-Bromofluorobenzene	0.273	12.25	2	109

Reviewed by PaB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: HW559

Method 8260 VOST
Sample ID: VOSTBLK 080998 T/TC

Client Project: R012.001
TLI ID: VOSTBLK080998

Date Received: / /

Date Analyzed : 08/09/98

Response File: ICALH809

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.04		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.002	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.041	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	5.76		
Ethyl acrylate		U		0.001	0.25

Reviewed by PAB Date 8/10/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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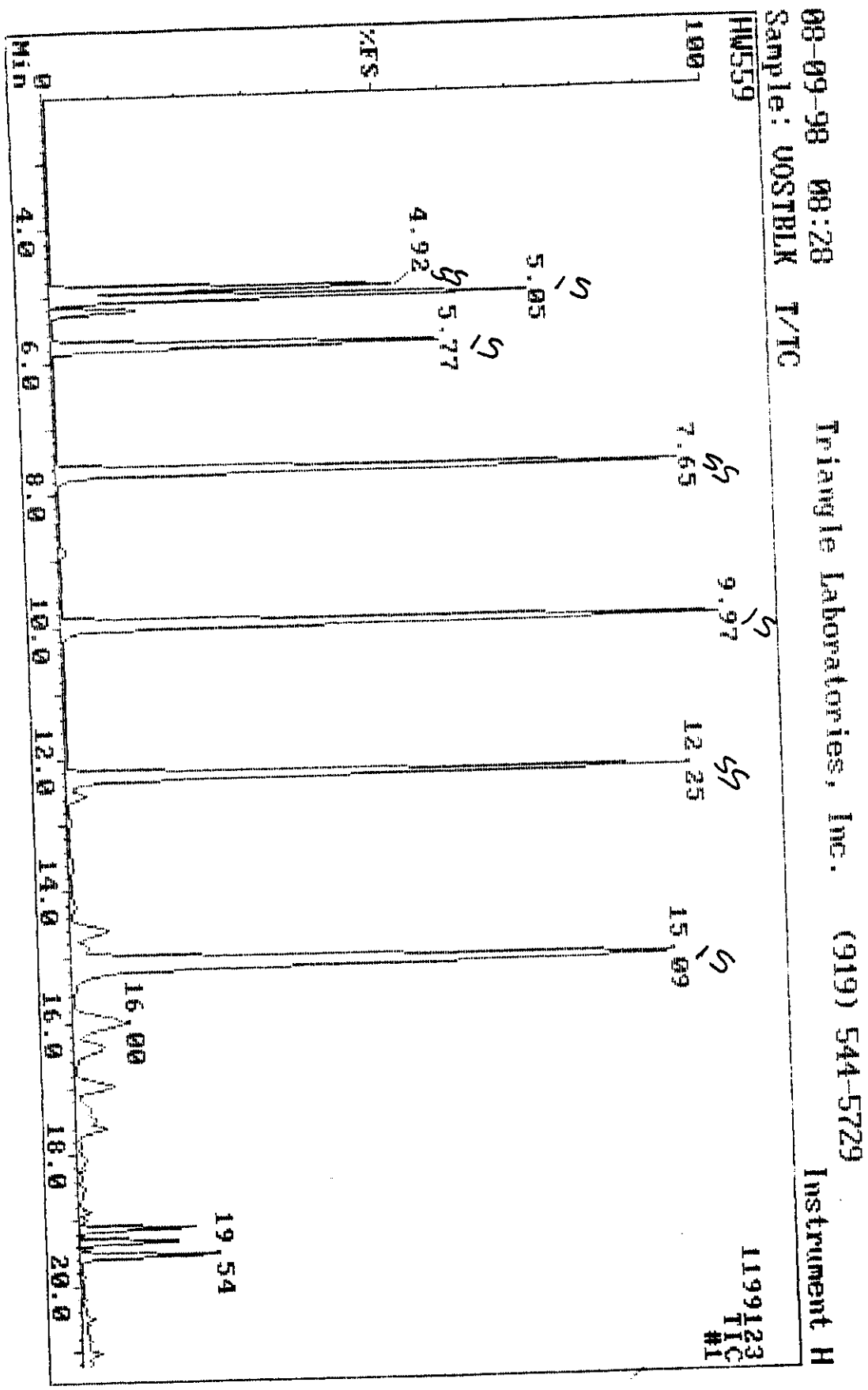
516



Data Review: QA B
Date: 8/10/98

QUAN DB : HW559 LAB-BASE QUAN 08-09-98 09:06

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	-5	2448904	bv	5.04	168	Pentafluorobenzene
2	100	97	98	-1	2301120	bv	5.76	114	1,4-Difluorobenzene
3	100	94	95	5	3459840	bv	9.97	117	Chlorobenzene-d5
4	100	73	98	-6	2223264	bv	15.09	152	1,4-Dichlorobenzene-d4
5	100	98	100	1	1291580	bb	4.92	113	Dibromofluoromethane
6	100	93	98	2	3344656	bv	7.65	98	Toluene-d8
7	97	89	92	6	1884336	bv	12.25	95	4-Bromofluorobenzene
* 8	0	0	0	0	0		0.00	85	Dichlorodifluoromethane
✓ 9	100	83	89	-1	57172	bb	0.97	50	Chloromethane
✓ 10	0	0	0	0	0		0.00	62	Vinyl Chloride
✓ 11	100	86	94	-1	41628	bb	1.47	94	Bromomethane
✓ 12	0	0	0	0	0		0.00	64	Chloroethane
✓ 13	0	0	0	0	0		0.00	101	Trichlorofluoromethane
✓ 14	0	0	0	0	0		0.00	96	1,1-Dichloroethene
✓ 15	~~64~~	~~47~~	~~60~~	~~2~~	~~6663~~	~~bb~~	~~2.57~~	142	Iodomethane —
✓ 16	0	0	0	0	0		0.00	76	Carbon disulfide —
✓ 17	~~59~~	~~32~~	~~35~~	~~3~~	~~3524~~	~~A~~	~~2.71~~	43	Acetone —
✓ 18	0	0	0	0	0		0.00	41	Allyl chloride —
✓ 19	73	49	71	-1	3620	bb	3.06	84	Methylene chloride
✓ 20	0	0	0	0	0		0.00	53	Acrylonitrile —
✓ 21	0	0	0	0	0		0.00	96	trans-1,2-Dichloroethene
✓ 22	0	0	0	0	0		0.00	63	1,1-Dichloroethane
✓ 23	0	0	0	0	0		0.00	43	Vinyl acetate —
* 24	0	0	0	0	0		0.00	77	2,2-Dichloropropane
✓ 25	0	0	0	0	0		0.00	96	cis-1,2-Dichloroethene
✓ 26	~~52~~	~~45~~	~~45~~	~~0~~	~~1453~~	~~bb~~	~~4.55~~	43	2-Butanone —
✓ 27	0	0	0	0	0		0.00	83	Chloroform
* 28	0	0	0	0	0		0.00	128	Bromochloromethane
✓ 29	0	0	0	0	0		0.00	97	1,1,1-Trichloroethane
✓ 30	0	0	0	0	0		0.00	117	Carbon tetrachloride
* 31	0	0	0	0	0		0.00	75	1,1-Dichloropropene
✓ 32	100	98	98	1	522048	bb	5.24	78	Benzene
✓ 33	0	0	0	0	0		0.00	62	1,2-Dichloroethane
✓ 34	0	0	0	0	0		0.00	130	Trichloroethene
✓ 35	0	0	0	0	0		0.00	63	1,2-Dichloropropane
* 36	0	0	0	0	0		0.00	93	Dibromomethane
✓ 37	0	0	0	0	0		0.00	41	Methyl methacrylate —
✓ 38	0	0	0	0	0		0.00	83	Bromodichloromethane
✓ 39	0	0	0	0	0		0.00	75	cis-1,3-Dichloropropene
✓ 40	~~40~~	~~3~~	~~69~~	~~4~~	~~16648~~	~~bb~~	~~7.66~~	43	4-Methyl-2-pentanone —
✓ 41	63	32	79	3	30300	bb	7.75	92	Toluene
✓ 42	0	0	0	0	0		0.00	75	trans-1,3-Dichloropropen
✓ 43	0	0	0	0	0		0.00	97	1,1,2-Trichloroethane
* 44	0	0	0	0	0		0.00	69	Ethyl methacrylate
✓ 45	0	0	0	0	0		0.00	164	Tetrachloroethene
* 46	0	0	0	0	0		0.00	76	1,3-Dichloropropane
✓ 47	0	0	0	0	0		0.00	43	2-Hexanone
✓ 48	0	0	0	0	0		0.00	129	Dibromochloromethane
✓ 49	0	0	0	0	0		0.00	107	1,2-Dibromoethane
✓ 50	0	0	0	0	0		0.00	112	Chlorobenzene

Data Review: FAB
Date: 8/10/98

518

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
x 51	0	0	0	0	0		0.00	131	1,1,1,2-Tetrachloroethan
✓52	0	0	0	0	0		0.00	106	Ethylbenzene
✓53	0	0	0	0	0		0.00	106	m-/p-Xylene
✓54	0	0	0	0	0		0.00	106	o-Xylene
✓55	62	52	52	2	9172	A	11.32	104	Styrene
✓56	0	0	0	0	0		0.00	173	Bromoform
✓57	~~47~~	~~44~~	~~44~~	~~6~~	~~364~~	~~bb~~	~~12.03~~	105	Cumene
✓58	0	0	0	0	0		0.00	83	1,1,2,2-Tetrachloroethan
x 59	0	0	0	0	0		0.00	156	Bromobenzene
x 60	0	0	0	0	0		0.00	75	1,2,3-Trichloropropane
x 61	0	0	0	0	0		0.00	120	n-Propylbenzene
x 62	~~13~~	~~12~~	~~18~~	~~4~~	~~816~~	~~bb~~	~~12.69~~	75	trans-1,4-Dichloro-2-but
x 63	0	0	0	0	0		0.00	126	2-Chlorotoluene
x 64	~~45~~	~~30~~	~~54~~	~~8~~	~~1280~~	~~bb~~	~~13.21~~	126	4-Chlorotoluene
x 65	~~65~~	~~57~~	~~57~~	~~4~~	~~5100~~	~~A~~	~~13.32~~	105	1,3,5-Trimethylbenzene
66	0	0	0	0	0		0.00	119	tert-Butylbenzene
67	0	0	0	0	0		0.00	105	1,2,4-Trimethylbenzene
68	0	0	0	0	0		0.00	105	sec-Butylbenzene
69	0	0	0	0	0		0.00	119	p-Cymene
70	0	0	0	0	0		0.00	146	1,3-Dichlorobenzene
71	0	0	0	0	0		0.00	146	1,4-Dichlorobenzene
72	0	0	0	0	0		0.00	91	Benzyl chloride
73	0	0	0	0	0		0.00	91	n-Butylbenzene
74	0	0	0	0	0		0.00	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.00	75	1,2-Dibromo-3-chloroprop
x 76	81	95	98	14	193788	bv	19.12	180	1,2,4-Trichlorobenzene
x 77	44	21	91	16	26148	bb	19.34	225	Hexachlorobutadiene
x 78	67	84	88	15	339164	bv	19.32	128	Naphthalene
x 79	75	95	98	16	197024	bv	19.54	180	1,2,3-Trichlorobenzene

QUAN DB : HW559 LAB-BASE QUAN 08-10-98 14:31

No.	MAT	FOR	REV	Delta	Area	P.Flags	RT	QM	Name
1	100	86	98	0	2448904	bv	5.04	168	Pentafluorobenzene
2	100	97	98	0	2301120	bv	5.76	114	1,4-Difluorobenzene
3	100	94	95	3	3459840	bv	9.97	117	Chlorobenzene-d5
4	100	73	98	2	2223264	bv	15.09	152	1,4-Dichlorobenzene-d4
5	100	98	100	2	1291580	bb	4.92	113	Dibromofluoromethane
6	100	93	98	1	3344656	bv	7.65	98	Toluene-d8
7	100	89	92	4	1884336	bv	12.25	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.00	39	1,3-Butadiene
9	0	0	0	0	0		0.00	106	Vinyl bromide
10	0	0	0	0	0		0.00	73	MTBE
11	~~89~~	~~71~~	~~71~~	~~1~~	~~3568~~	~~bb~~	~~3.67~~	57	n-Hexane
12	0	0	0	0	0		0.00	42	1,2-Epoxybutane
13	0	0	0	0	0		0.00	57	Iso-Octane
14	0	0	0	0	0		0.00	55	Ethyl acrylate

(7r) PAB 8/10/98

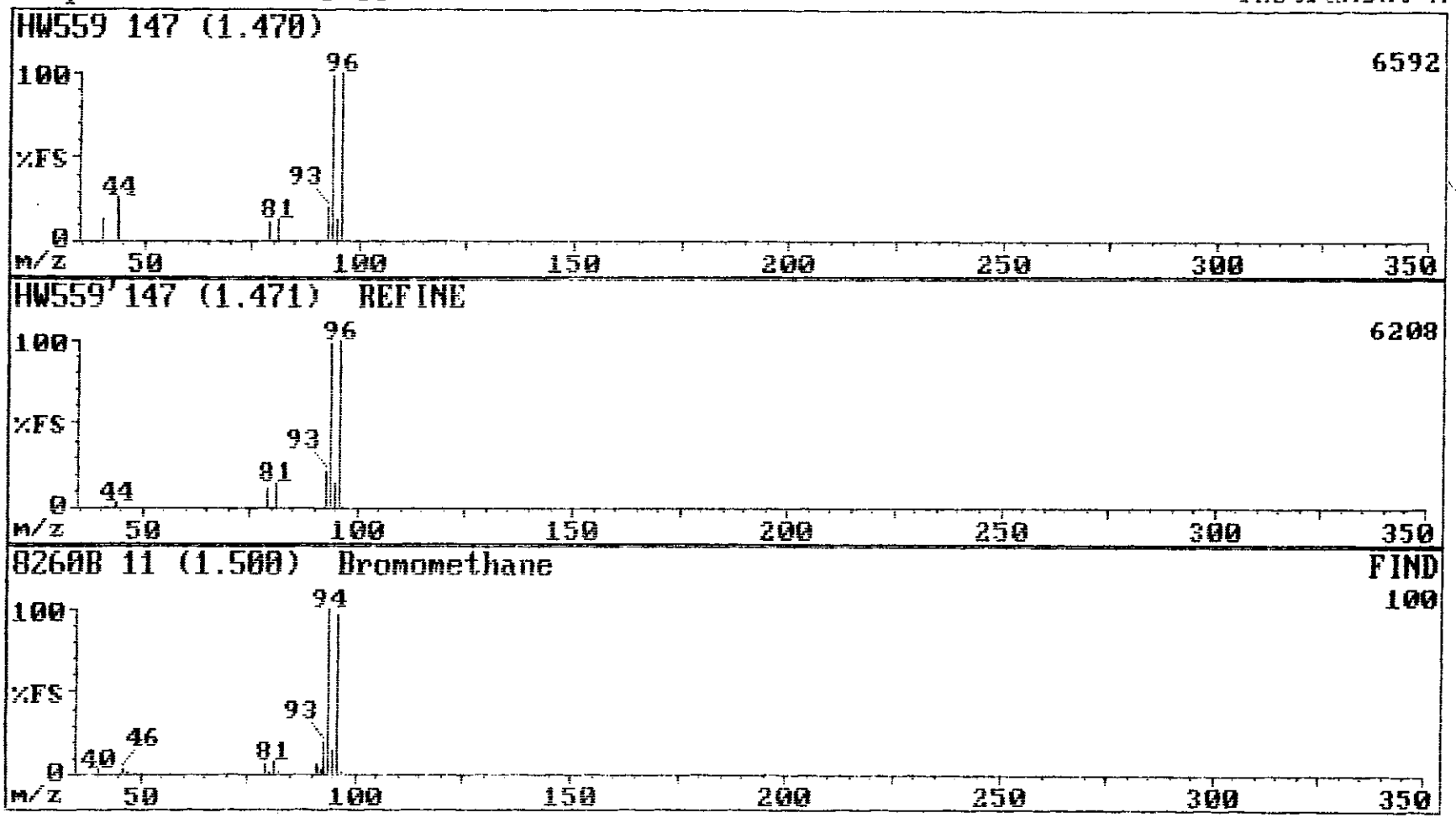
Data Review: PAB
Date: 8/10/98

520

08-09-98 08:28
Triangle Laboratories, Inc. (919) 544-5729
Instrument H
Sample: VOSTBLK T/TC
HW559 97 (0.970)
11456
m/z
%FS
100
50
0
50
52
50
100
150
200
250
300
350
HW559 97 (0.971) REFINE
11136
02608 6 (0.990) Chloromethane
FIND

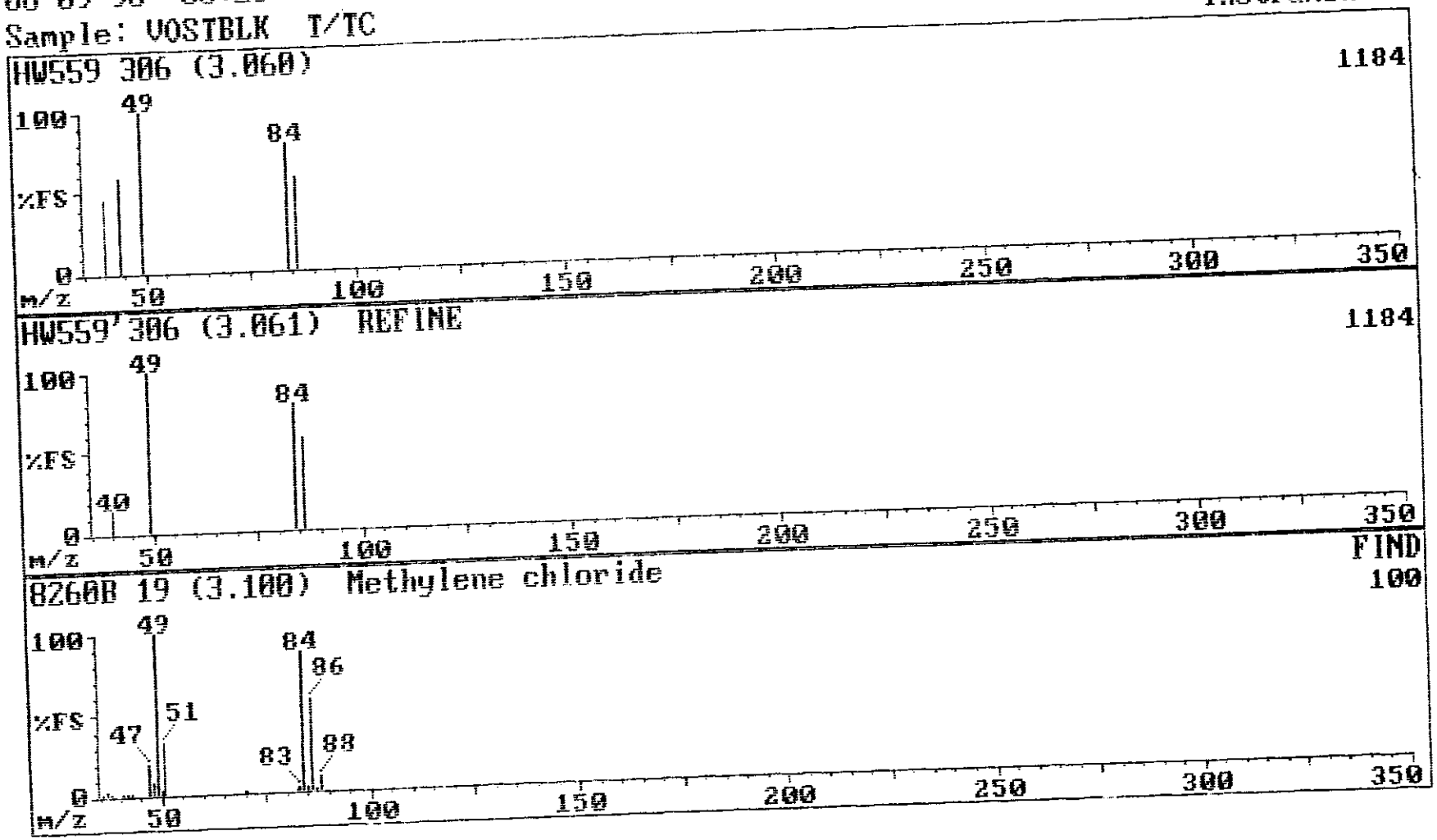
08-09-98 08:28 Triangle Laboratories, Inc. (919) 544-5729

Sample: VOSTBLK T/TC Instrument H



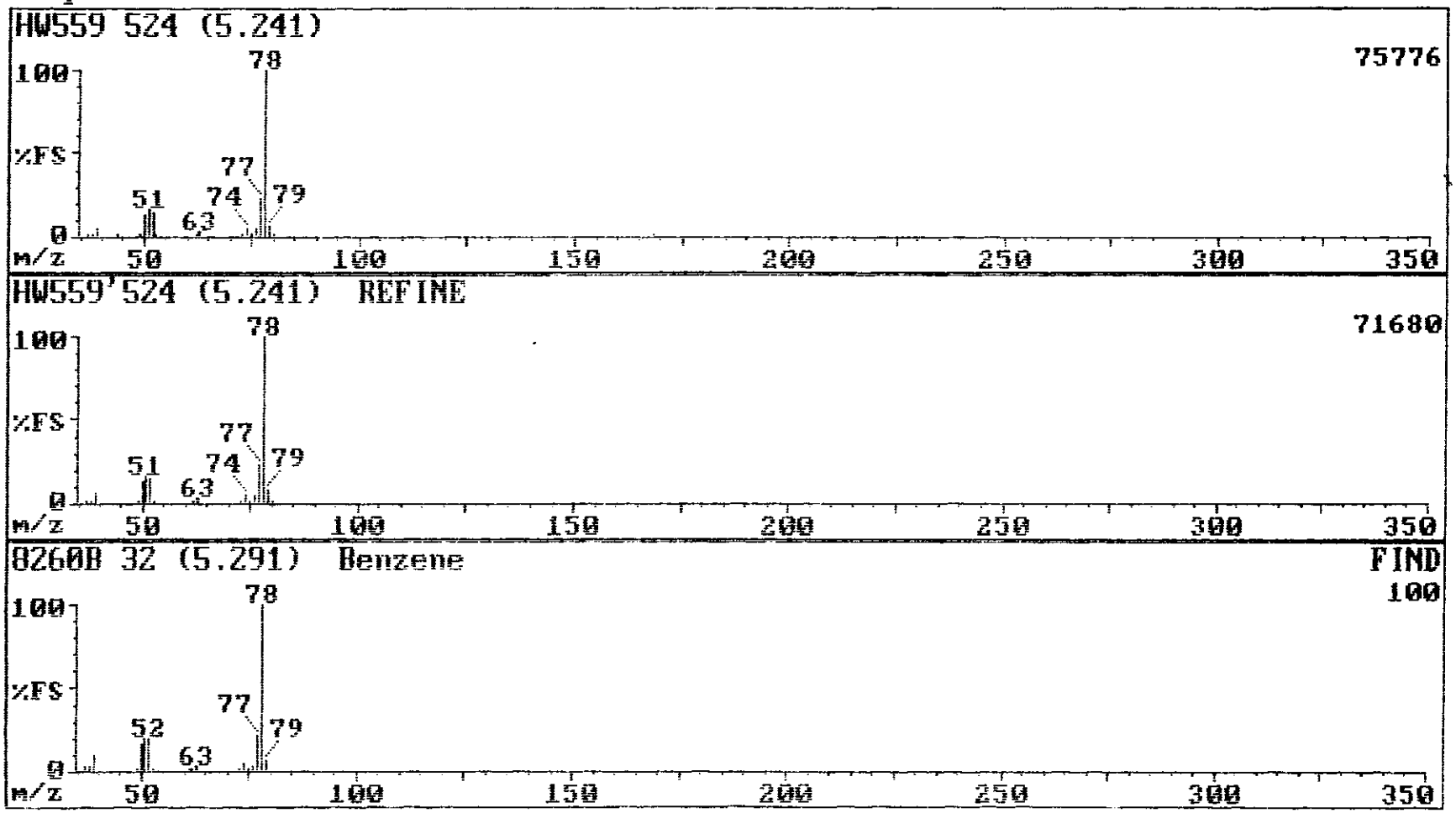
08-09-98 08:28 Triangle Laboratories, Inc. (919) 544-5729 Instrument H

Sample: VOSTBLK T/TC



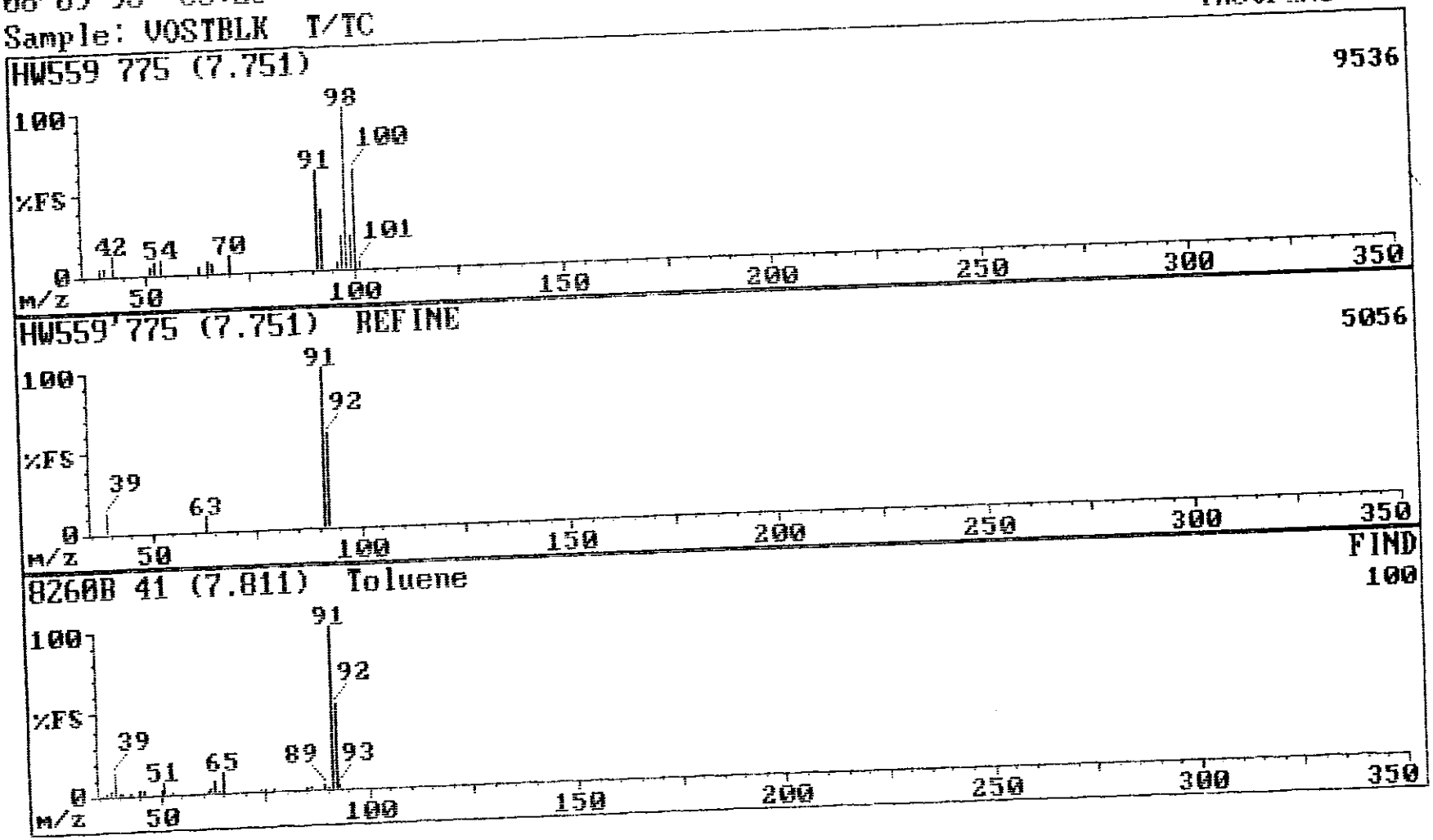
08-09-98 08:28 Triangle Laboratories, Inc. (919) 544-5729

Sample: VOSTBLK T/TC Instrument H



08-09-98 08:28 Triangle Laboratories, Inc. (919) 544-5729 Instrument H

Sample: VOSTBLK T/TC



Instrument H
Sample: VOSTBLK TIC
08-09-90 08:28
HW559 1132 (11.321)
%FS
100
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1 02
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HW559 1132 (11.321) REFINE
1 94
1 03
78
1216
HW559 1132 (11.381) Styrene
1 94
1 03
1 02
1 01
1 00
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90
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FIND
1216

Pacific Environmental Services

Project Number: 46323
Sample File: FX952

Method 8260 VOST
Sample ID: VOSTBLK 082198 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082198

Date Received: / /
Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.005	0.05
Acetone		U		0.001	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride		U		0.024	0.05
Acrylonitrile		U		0.001	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.002	0.05
Vinyl acetate		U		0.001	0.05
cis-1,2-Dichloroethene		U		0.004	0.05
2-Butanone		U		0.001	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		IS 2	6.08		
1,4-Difluorobenzene		U		0.001	0.05
Carbon tetrachloride	0.039	J	5.66		0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane					

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
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527

Pacific Environmental Services

Project Number: 46323
Sample File: FX952

Method 8260 VOST
Sample ID: VOSTBLK 082198 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082198

Date Received: / /

Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate		U		0.006	0.05
Bromodichloromethane		U		0.001	0.05
cis-1,3-Dichloropropene		U		0.001	0.05
4-Methyl-2-pentanone		U		0.004	0.05
Toluene		U		0.001	0.05
trans-1,3-Dichloropropene		U		0.001	0.05
1,1,2-Trichloroethane		U		0.001	0.05
Chlorobenzene-d_5		IS 3	10.36		
Tetrachloroethene		U		0.001	0.05
2-Hexanone		U		0.009	0.05
Dibromochloromethane		U		0.001	0.05
1,2-Dibromoethane		U		0.001	0.05
Chlorobenzene		U		0.001	0.05
Ethylbenzene		U		0.001	0.05
m-/p-Xylene		U		0.001	0.10
o-Xylene		U		0.001	0.05
Styrene		U		0.001	0.05
Bromoform		U		0.002	0.05
1,4-Dichlorobenzene-d_4		IS 4 Low	15.73		
Cumene		U		0.001	0.05
1,1,2,2-Tetrachloroethane		U		0.003	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Savar v3.7
Printed: 12:31 08/25/1998

528

Pacific Environmental Services

Project Number: 46323
Sample File: FX952

Method 8260 VOST
Sample ID: VOSTBLK 082198 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082198

Date Received: / /
Date Analyzed : 08/21/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.272	5.18	1	109
Toluene-d_8	0.260	8.00	2	104
4-Bromofluorobenzene	0.203	12.66	2	81

Reviewed by GAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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529

Pacific Environmental Services

Project Number: 46323
Sample File: FX952

Method 8260 VOST
Sample ID: VOSTBLK 082198 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082198

Date Received: / /

Date Analyzed : 08/21/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.31		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.024	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.08		
Ethyl acrylate		U		0.004	0.25

Reviewed by CAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
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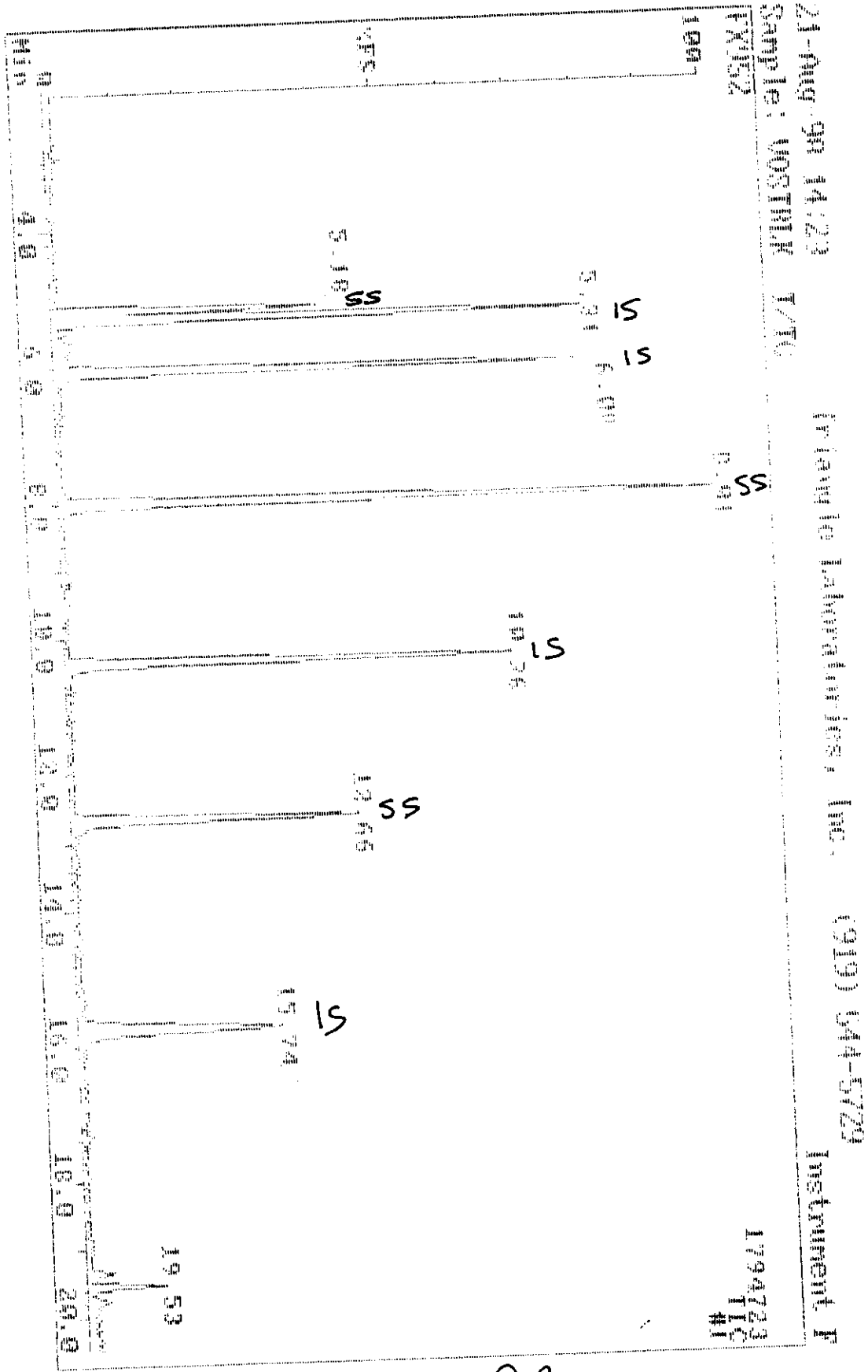
Savar v3.7
Printed: 17:21 08/25/1998

530



Data Review: PAB
Date: 8/24/98

PAB

PAB

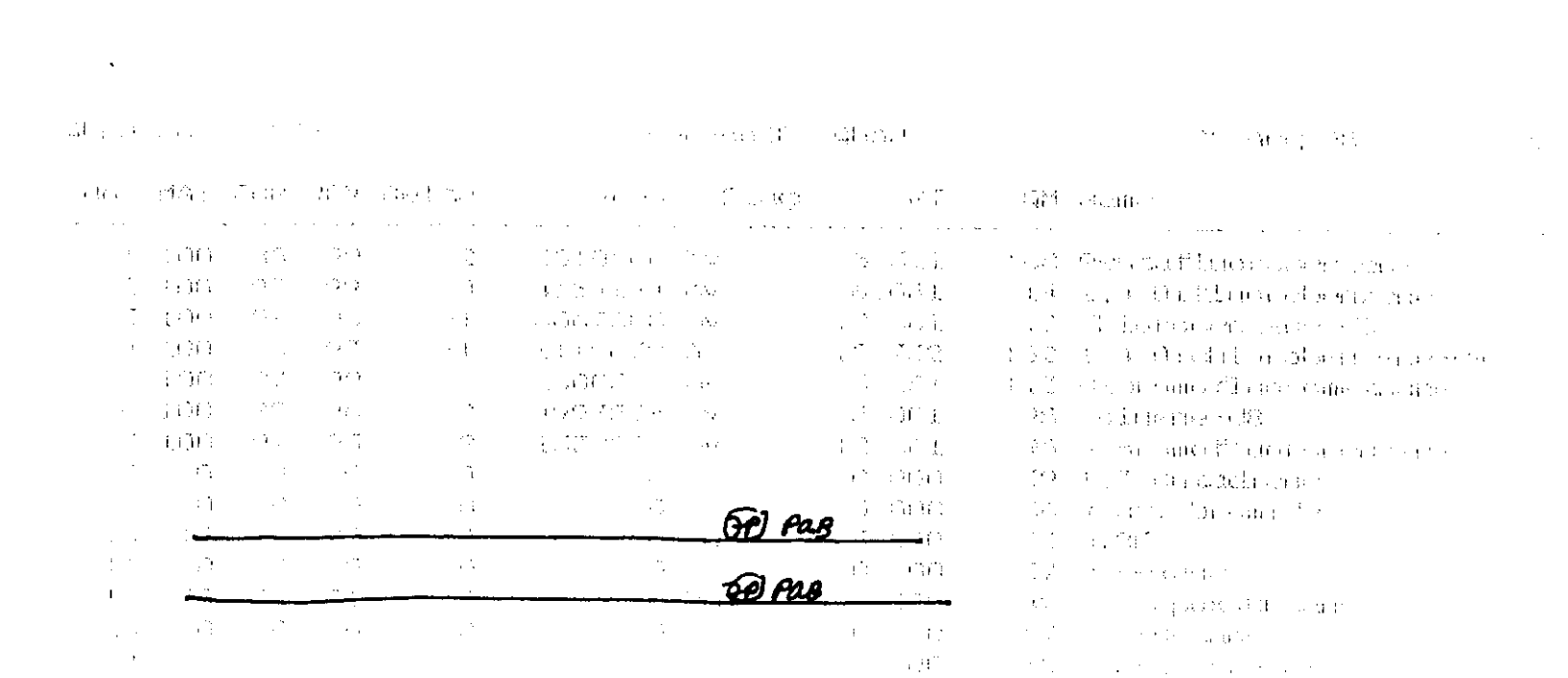
PAB

Data Review: PAB
Date: 8/24/98

532

329

Sa...	Met...	Cond...	25%	Dec...	Area	Ratio	RT	qual	Name
54	0	0	0	0	0		0.000	150	1,1,1,2-Tetrachloroethane
55	0	0	0	0	0		0.000	105	Ethylbenzene
56	0	0	0	0	0		0.000	106	m/p-Xylene
57	0	0	0	0	0		0.000	106	o-Xylene
58	0	0	0	0	0		0.000	104	Styrene
59	0	0	0	0	0		0.000	83	Bromoform
60	0	0	0	0	0		0.000	105	Cumene
61	0	0	0	0	0		0.000	83	1,1,2,2-Tetrachloroethane
62	0	0	0	0	0		0.000	156	Bromobenzene
63	0	0	0	0	0		0.000	75	1,2,3-Trichloropropane
64	0	0	0	0	0		0.000	120	n-Propylbenzene
65	0	0	0	0	0		0.000	75	2-Chlorotoluene
66	0	0	0	0	0		0.000	126	1,3,5-Trimethylbenzene
67	0	0	0	0	0		0.000	126	4-Chlorotoluene
68	0	0	0	0	0		0.000	134	tert-Butylbenzene
69	0	0	0	0	0		0.000	119	1,2,4-Trimethylbenzene
70	0	0	0	0	0		0.000	134	sec-Butylbenzene
71	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
72	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
73	0	0	0	0	0		0.000	4-Isopropyltoluene	
74	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
75	0	0	0	0	0		0.000	134	n-Butylbenzene
76	0	0	0	0	0		0.000	146	1,2-Dichloroethane
77	0	0	0	0	0		0.000	146	1,2-Dichloropropane
78	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
79	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
80	0	0	0	0	0		0.000	146	Hexachlorobutadiene
81	0	0	0	0	0		0.000	146	Naphthalene
82	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
83	0	0	0	0	0		0.000	146	1,3-Dichloropropane
84	0	0	0	0	0		0.000	146	Tetrachloroethene
85	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
86	0	0	0	0	0		0.000	146	Dibromochloromethane
87	0	0	0	0	0		0.000	146	1,2-Dibromoethane
88	0	0	0	0	0		0.000	146	Chlorobenzene
89	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
90	0	0	0	0	0		0.000	146	Ethylbenzene
91	0	0	0	0	0		0.000	146	m/p-Xylene
92	0	0	0	0	0		0.000	146	o-Xylene
93	0	0	0	0	0		0.000	146	Styrene
94	0	0	0	0	0		0.000	146	Bromoform
95	0	0	0	0	0		0.000	146	Cumene
96	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
97	0	0	0	0	0		0.000	146	Bromobenzene
98	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
99	0	0	0	0	0		0.000	146	n-Propylbenzene
100	0	0	0	0	0		0.000	146	2-Chlorotoluene
101	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
102	0	0	0	0	0		0.000	146	4-Chlorotoluene
103	0	0	0	0	0		0.000	146	tert-Butylbenzene
104	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
105	0	0	0	0	0		0.000	146	sec-Butylbenzene
106	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
107	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
108	0	0	0	0	0		0.000	146	p-Isopropyltoluene
109	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
110	0	0	0	0	0		0.000	146	n-Butylbenzene
111	0	0	0	0	0		0.000	146	1,2-Dichloroethane
112	0	0	0	0	0		0.000	146	1,2-Dichloropropane
113	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
114	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
115	0	0	0	0	0		0.000	146	Hexachlorobutadiene
116	0	0	0	0	0		0.000	146	Naphthalene
117	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
118	0	0	0	0	0		0.000	146	1,3-Dichloropropane
119	0	0	0	0	0		0.000	146	Tetrachloroethene
120	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
121	0	0	0	0	0		0.000	146	Dibromochloromethane
122	0	0	0	0	0		0.000	146	1,2-Dibromoethane
123	0	0	0	0	0		0.000	146	Chlorobenzene
124	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
125	0	0	0	0	0		0.000	146	Ethylbenzene
126	0	0	0	0	0		0.000	146	m/p-Xylene
127	0	0	0	0	0		0.000	146	o-Xylene
128	0	0	0	0	0		0.000	146	Styrene
129	0	0	0	0	0		0.000	146	Bromoform
130	0	0	0	0	0		0.000	146	Cumene
131	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
132	0	0	0	0	0		0.000	146	Bromobenzene
133	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
134	0	0	0	0	0		0.000	146	n-Propylbenzene
135	0	0	0	0	0		0.000	146	2-Chlorotoluene
136	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
137	0	0	0	0	0		0.000	146	4-Chlorotoluene
138	0	0	0	0	0		0.000	146	tert-Butylbenzene
139	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
140	0	0	0	0	0		0.000	146	sec-Butylbenzene
141	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
142	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
143	0	0	0	0	0		0.000	146	p-Isopropyltoluene
144	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
145	0	0	0	0	0		0.000	146	n-Butylbenzene
146	0	0	0	0	0		0.000	146	1,2-Dichloroethane
147	0	0	0	0	0		0.000	146	1,2-Dichloropropane
148	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
149	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
150	0	0	0	0	0		0.000	146	Hexachlorobutadiene
151	0	0	0	0	0		0.000	146	Naphthalene
152	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
153	0	0	0	0	0		0.000	146	1,3-Dichloropropane
154	0	0	0	0	0		0.000	146	Tetrachloroethene
155	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
156	0	0	0	0	0		0.000	146	Dibromochloromethane
157	0	0	0	0	0		0.000	146	1,2-Dibromoethane
158	0	0	0	0	0		0.000	146	Chlorobenzene
159	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
160	0	0	0	0	0		0.000	146	Ethylbenzene
161	0	0	0	0	0		0.000	146	m/p-Xylene
162	0	0	0	0	0		0.000	146	o-Xylene
163	0	0	0	0	0		0.000	146	Styrene
164	0	0	0	0	0		0.000	146	Bromoform
165	0	0	0	0	0		0.000	146	Cumene
166	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
167	0	0	0	0	0		0.000	146	Bromobenzene
168	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
169	0	0	0	0	0		0.000	146	n-Propylbenzene
170	0	0	0	0	0		0.000	146	2-Chlorotoluene
171	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
172	0	0	0	0	0		0.000	146	4-Chlorotoluene
173	0	0	0	0	0		0.000	146	tert-Butylbenzene
174	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
175	0	0	0	0	0		0.000	146	sec-Butylbenzene
176	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
177	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
178	0	0	0	0	0		0.000	146	p-Isopropyltoluene
179	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
180	0	0	0	0	0		0.000	146	n-Butylbenzene
181	0	0	0	0	0		0.000	146	1,2-Dichloroethane
182	0	0	0	0	0		0.000	146	1,2-Dichloropropane
183	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
184	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
185	0	0	0	0	0		0.000	146	Hexachlorobutadiene
186	0	0	0	0	0		0.000	146	Naphthalene
187	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
188	0	0	0	0	0		0.000	146	1,3-Dichloropropane
189	0	0	0	0	0		0.000	146	Tetrachloroethene
190	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
191	0	0	0	0	0		0.000	146	Dibromochloromethane
192	0	0	0	0	0		0.000	146	1,2-Dibromoethane
193	0	0	0	0	0		0.000	146	Chlorobenzene
194	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
195	0	0	0	0	0		0.000	146	Ethylbenzene
196	0	0	0	0	0		0.000	146	m/p-Xylene
197	0	0	0	0	0		0.000	146	o-Xylene
198	0	0	0	0	0		0.000	146	Styrene
199	0	0	0	0	0		0.000	146	Bromoform
200	0	0	0	0	0		0.000	146	Cumene
201	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
202	0	0	0	0	0		0.000	146	Bromobenzene
203	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
204	0	0	0	0	0		0.000	146	n-Propylbenzene
205	0	0	0	0	0		0.000	146	2-Chlorotoluene
206	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
207	0	0	0	0	0		0.000	146	4-Chlorotoluene
208	0	0	0	0	0		0.000	146	tert-Butylbenzene
209	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
210	0	0	0	0	0		0.000	146	sec-Butylbenzene
211	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
212	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
213	0	0	0	0	0		0.000	146	p-Isopropyltoluene
214	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
215	0	0	0	0	0		0.000	146	n-Butylbenzene
216	0	0	0	0	0		0.000	146	1,2-Dichloroethane
217	0	0	0	0	0		0.000	146	1,2-Dichloropropane
218	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
219	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
220	0	0	0	0	0		0.000	146	Hexachlorobutadiene
221	0	0	0	0	0		0.000	146	Naphthalene
222	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
223	0	0	0	0	0		0.000	146	1,3-Dichloropropane
224	0	0	0	0	0		0.000	146	Tetrachloroethene
225	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
226	0	0	0	0	0		0.000	146	Dibromochloromethane
227	0	0	0	0	0		0.000	146	1,2-Dibromoethane
228	0	0	0	0	0		0.000	146	Chlorobenzene
229	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
230	0	0	0	0	0		0.000	146	Ethylbenzene
231	0	0	0	0	0		0.000	146	m/p-Xylene
232	0	0	0	0	0		0.000	146	o-Xylene
233	0	0	0	0	0		0.000	146	Styrene
234	0	0	0	0	0		0.000	146	Bromoform
235	0	0	0	0	0		0.000	146	Cumene
236	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
237	0	0	0	0	0		0.000	146	Bromobenzene
238	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
239	0	0	0	0	0		0.000	146	n-Propylbenzene
240	0	0	0	0	0		0.000	146	2-Chlorotoluene
241	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
242	0	0	0	0	0		0.000	146	4-Chlorotoluene
243	0	0	0	0	0		0.000	146	tert-Butylbenzene
244	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
245	0	0	0	0	0		0.000	146	sec-Butylbenzene
246	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
247	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
248	0	0	0	0	0		0.000	146	p-Isopropyltoluene
249	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
250	0	0	0	0	0		0.000	146	n-Butylbenzene
251	0	0	0	0	0		0.000	146	1,2-Dichloroethane
252	0	0	0	0	0		0.000	146	1,2-Dichloropropane
253	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
254	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
255	0	0	0	0	0		0.000	146	Hexachlorobutadiene
256	0	0	0	0	0		0.000	146	Naphthalene
257	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
258	0	0	0	0	0		0.000	146	1,3-Dichloropropane
259	0	0	0	0	0		0.000	146	Tetrachloroethene
260	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
261	0	0	0	0	0		0.000	146	Dibromochloromethane
262	0	0	0	0	0		0.000	146	1,2-Dibromoethane
263	0	0	0	0	0		0.000	146	Chlorobenzene
264	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
265	0	0	0	0	0		0.000	146	Ethylbenzene
266	0	0	0	0	0		0.000	146	m/p-Xylene
267	0	0	0	0	0		0.000	146	o-Xylene
268	0	0	0	0	0		0.000	146	Styrene
269	0	0	0	0	0		0.000	146	Bromoform
270	0	0	0	0	0		0.000	146	Cumene
271	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
272	0	0	0	0	0		0.000	146	Bromobenzene
273	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
274	0	0	0	0	0		0.000	146	n-Propylbenzene
275	0	0	0	0	0		0.000	146	2-Chlorotoluene
276	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
277	0	0	0	0	0		0.000	146	4-Chlorotoluene
278	0	0	0	0	0		0.000	146	tert-Butylbenzene
279	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
280	0	0	0	0	0		0.000	146	sec-Butylbenzene
281	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
282	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
283	0	0	0	0	0		0.000	146	p-Isopropyltoluene
284	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
285	0	0	0	0	0		0.000	146	n-Butylbenzene
286	0	0	0	0	0		0.000	146	1,2-Dichloroethane
287	0	0	0	0	0		0.000	146	1,2-Dichloropropane
288	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
289	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
290	0	0	0	0	0		0.000	146	Hexachlorobutadiene
291	0	0	0	0	0		0.000	146	Naphthalene
292	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
293	0	0	0	0	0		0.000	146	1,3-Dichloropropane
294	0	0	0	0	0		0.000	146	Tetrachloroethene
295	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
296	0	0	0	0	0		0.000	146	Dibromochloromethane
297	0	0	0	0	0		0.000	146	1,2-Dibromoethane
298	0	0	0	0	0		0.000	146	Chlorobenzene
299	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
300	0	0	0	0	0		0.000	146	Ethylbenzene
301	0	0	0	0	0		0.000	146	m/p-Xylene
302	0	0	0	0	0		0.000	146	o-Xylene
303	0	0	0	0	0		0.000	146	Styrene
304	0	0	0	0	0		0.000	146	Bromoform
305	0	0	0	0	0		0.000	146	Cumene
306	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
307	0	0	0	0	0		0.000	146	Bromobenzene
308	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
309	0	0	0	0	0		0.000	146	n-Propylbenzene
310	0	0	0	0	0		0.000	146	2-Chlorotoluene
311	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
312	0	0	0	0	0		0.000	146	4-Chlorotoluene
313	0	0	0	0	0		0.000	146	tert-Butylbenzene
314	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
315	0	0	0	0	0		0.000	146	sec-Butylbenzene
316	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
317	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
318	0	0	0	0	0		0.000	146	p-Isopropyltoluene
319	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
320	0	0	0	0	0		0.000	146	n-Butylbenzene
321	0	0	0	0	0		0.000	146	1,2-Dichloroethane
322	0	0	0	0	0		0.000	146	1,2-Dichloropropane
323	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
324	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
325	0	0	0	0	0		0.000	146	Hexachlorobutadiene
326	0	0	0	0	0		0.000	146	Naphthalene
327	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
328	0	0	0	0	0		0.000	146	1,3-Dichloropropane
329	0	0	0	0	0		0.000	146	Tetrachloroethene
330	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
331	0	0	0	0	0		0.000	146	Dibromochloromethane
332	0	0	0	0	0		0.000	146	1,2-Dibromoethane
333	0	0	0	0	0		0.000	146	Chlorobenzene
334	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
335	0	0	0	0	0		0.000	146	Ethylbenzene
336	0	0	0	0	0		0.000	146	m/p-Xylene
337	0	0	0	0	0		0.000	146	o-Xylene
338	0	0	0	0	0		0.000	146	Styrene
339	0	0	0	0	0		0.000	146	Bromoform
340	0	0	0	0	0		0.000	146	Cumene
341	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
342	0	0	0	0	0		0.000	146	Bromobenzene
343	0	0	0	0	0		0.000	146	1,2,3-Trichloropropane
344	0	0	0	0	0		0.000	146	n-Propylbenzene
345	0	0	0	0	0		0.000	146	2-Chlorotoluene
346	0	0	0	0	0		0.000	146	1,3,5-Trimethylbenzene
347	0	0	0	0	0		0.000	146	4-Chlorotoluene
348	0	0	0	0	0		0.000	146	tert-Butylbenzene
349	0	0	0	0	0		0.000	146	1,2,4-Trimethylbenzene
350	0	0	0	0	0		0.000	146	sec-Butylbenzene
351	0	0	0	0	0		0.000	146	1,3-Dichlorobenzene
352	0	0	0	0	0		0.000	146	1,4-Dichlorobenzene
353	0	0	0	0	0		0.000	146	p-Isopropyltoluene
354	0	0	0	0	0		0.000	146	1,2-Dichlorobenzene
355	0	0	0	0	0		0.000	146	n-Butylbenzene
356	0	0	0	0	0		0.000	146	1,2-Dichloroethane
357	0	0	0	0	0		0.000	146	1,2-Dichloropropane
358	0	0	0	0	0		0.000	146	1,2-Dibromo-3-chloropropane
359	0	0	0	0	0		0.000	146	1,2,4-Trichlorobenzene
360	0	0	0	0	0		0.000	146	Hexachlorobutadiene
361	0	0	0	0	0		0.000	146	Naphthalene
362	0	0	0	0	0		0.000	146	1,2,3-Trichlorobenzene
363	0	0	0	0	0		0.000	146	1,3-Dichloropropane
364	0	0	0	0	0		0.000	146	Tetrachloroethene
365	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
366	0	0	0	0	0		0.000	146	Dibromochloromethane
367	0	0	0	0	0		0.000	146	1,2-Dibromoethane
368	0	0	0	0	0		0.000	146	Chlorobenzene
369	0	0	0	0	0		0.000	146	1,1,1,2-Tetrachloroethane
370	0	0	0	0	0		0.000	146	Ethylbenzene
371	0	0	0	0	0		0.000	146	m/p-Xylene
372	0	0	0	0	0		0.000	146	o-Xylene
373	0	0	0	0	0		0.000	146	Styrene
374	0	0	0	0	0		0.000	146	Bromoform
375	0	0	0	0	0		0.000	146	Cumene
376	0	0	0	0	0		0.000	146	1,1,2,2-Tetrachloroethane
377	0	0	0



534

535

Pacific Environmental Services

Project Number: 46323
Sample File: FX974

Method 8260 VOST
Sample ID: VOSTBLK 082498 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082498

Date Received: / /
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.33		
Chloromethane		U		0.001	0.05
Vinyl Chloride		U		0.001	0.05
Bromomethane		U		0.001	0.05
Chloroethane		U		0.001	0.05
Trichlorofluoromethane		U		0.001	0.05
1,1-Dichloroethene		U		0.001	0.05
Iodomethane		U		0.001	0.05
Carbon disulfide		U		0.001	0.05
Acetone		U		0.006	0.05
Allyl chloride		U		0.001	0.05
Methylene chloride		U		0.001	0.05
Acrylonitrile		U		0.029	0.05
trans-1,2-Dichloroethene		U		0.001	0.05
1,1-Dichloroethane		U		0.001	0.05
Vinyl acetate		U		0.002	0.05
cis-1,2-Dichloroethene		U		0.001	0.05
2-Butanone		U		0.005	0.05
Chloroform		U		0.001	0.05
1,1,1-Trichloroethane		U		0.001	0.05
1,4-Difluorobenzene		IS 2	6.10		
Carbon tetrachloride		U		0.001	0.05
Benzene		U		0.001	0.05
1,2-Dichloroethane		U		0.001	0.05
Trichloroethene		U		0.001	0.05
1,2-Dichloropropane		U		0.001	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Triangle Laboratories, Inc.
801 Capitola Drive • Durham, North Carolina 27713
Phone: (919) 544-5729 • Fax: (919) 544-5491

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Pacific Environmental Services

Project Number: 46323
Sample File: FX974

Method 8260 VOST
Sample ID: VOSTBLK 082498 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082498

Date Received: / /
Date Analyzed : 08/24/98

Response File: ICALF821

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Methyl methacrylate	U			0.008	0.05
Bromodichloromethane	U			0.001	0.05
cis-1,3-Dichloropropene	U			0.001	0.05
4-Methyl-2-pentanone	U			0.006	0.05
Toluene	U			0.001	0.05
trans-1,3-Dichloropropene	U			0.001	0.05
1,1,2-Trichloroethane	U			0.001	0.05
Chlorobenzene-d_5	IS 3		10.39		
Tetrachloroethene	U			0.001	0.05
2-Hexanone	U			0.013	0.05
Dibromochloromethane	U			0.001	0.05
1,2-Dibromoethane	U			0.001	0.05
Chlorobenzene	U			0.001	0.05
Ethylbenzene	U			0.001	0.05
m-/p-Xylene	U			0.001	0.10
o-Xylene	U			0.001	0.05
Styrene	U			0.001	0.05
Bromoform	U			0.003	0.05
1,4-Dichlorobenzene-d_4	IS 4		15.79		
Cumene	U			0.001	0.05
1,1,2,2-Tetrachloroethane	U			0.002	0.05

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

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Pacific Environmental Services

Project Number: 46323
Sample File: FX974

Method 8260 VOST
Sample ID: VOSTBLK 082498 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082498

Date Received: / /

Date Analyzed : 08/24/98

Response File: ICALF821

Surrogate Summary	Amount (ug)	RT	IS Ref	%REC
Dibromofluoromethane	0.232	5.21	1	93
Toluene-d_8	0.256	8.03	2	102
4-Bromofluorobenzene	0.198	12.69	2	79

Reviewed by RAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit
IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Pacific Environmental Services

Project Number: 46323
Sample File: FX974

Method 8260 VOST
Sample ID: VOSTBLK 082498 T/TC

Client Project: R012.001
TLI ID: VOSTBLK082498

Date Received: / /
Date Analyzed : 08/24/98

Response File: ICALF824

Analyte	Amount ug	FLAG	RT	Det. Limit ug	Quan. Limit ug
Pentafluorobenzene		IS 1	5.33		
1,3-Butadiene		U		0.001	0.25
Vinyl bromide		U		0.001	0.25
MTBE		U		0.001	0.25
n-Hexane		U		0.001	0.25
1,2-Epoxybutane		U		0.035	0.25
Iso-Octane		U		0.001	0.25
1,4-Difluorobenzene		IS 2	6.10		
Ethyl acrylate		U		0.009	0.25

Reviewed by RAB Date 8/25/98

NA- Not Applicable; Det. Limit: Detection Limit; Quan. Limit: Quantitation Limit

IS: Internal Standard; U: Undetected; B: Present In Blank; J: Estimated- Below Quantitation Limit; E: Estimated- Above Calibration Range

Savar v3.7

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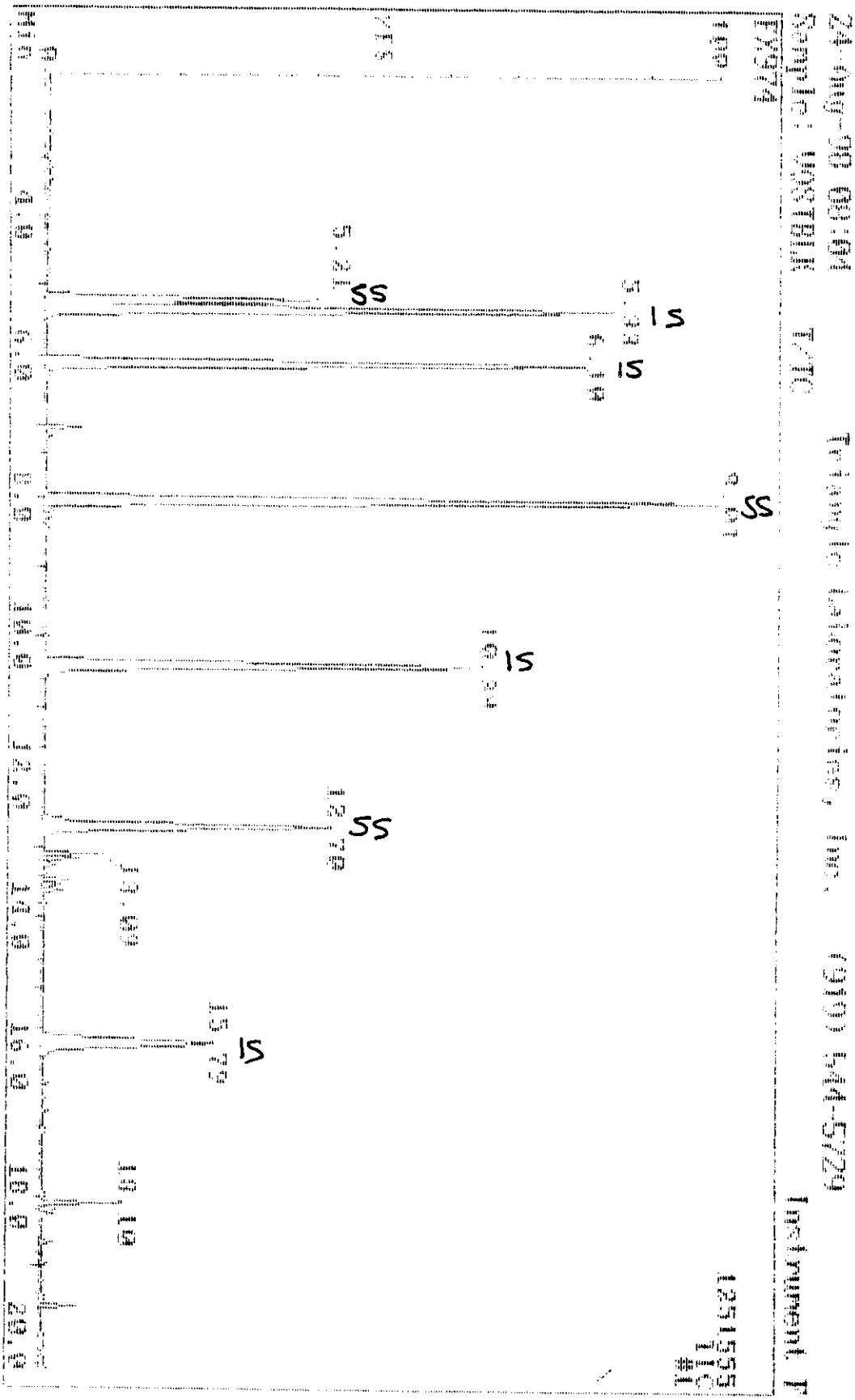
Printed: 17:21 08/25/1998



Data Review: PaB
Date: 8/24/98

Data Review: PAB
Date: 8/24/98

No.	Mol.	BOR	SEV	Occ/Ca	Area	Value	RT	Name
51	0	0	0	0	0	0.0000	1.24	[illegible]
52	0	0	0	0	0	0.0000	1.27	[illegible]
53	0	0	0	0	0	0.0000	1.30	[illegible]
54	0	0	0	0	0	0.0000	1.33	[illegible]
55	0	0	0	0	0	0.0000	1.36	[illegible]
56	0	0	0	0	0	0.0000	1.39	[illegible]
57	0	0	0	0	0	0.0000	1.42	[illegible]
58	0	0	0	0	0	0.0000	1.45	[illegible]
59	0	0	0	0	0	0.0000	1.48	[illegible]
60	0	0	0	0	0	0.0000	1.51	[illegible]
61	0	0	0	0	0	0.0000	1.54	[illegible]
62	0	0	0	0	0	0.0000	1.57	[illegible]
63	0	0	0	0	0	0.0000	1.60	[illegible]
64	0	0	0	0	0	0.0000	1.63	[illegible]
65	0	0	0	0	0	0.0000	1.66	[illegible]
66	0	0	0	0	0	0.0000	1.69	[illegible]
67	0	0	0	0	0	0.0000	1.72	[illegible]
68	0	0	0	0	0	0.0000	1.75	[illegible]
69	0	0	0	0	0	0.0000	1.78	[illegible]
70	0	0	0	0	0	0.0000	1.81	[illegible]
71	0	0	0	0	0	0.0000	1.84	[illegible]
72	0	0	0	0	0	0.0000	1.87	[illegible]
73	0	0	0	0	0	0.0000	1.90	[illegible]
74	0	0	0	0	0	0.0000	1.93	[illegible]
75	0	0	0	0	0	0.0000	1.96	[illegible]
76	0	0	0	0	0	0.0000	1.99	[illegible]
77	0	0	0	0	0	0.0000	2.02	[illegible]
78	0	0	0	0	0	0.0000	2.05	[illegible]
79	0	0	0	0	0	0.0000	2.08	[illegible]
80	0	0	0	0	0	0.0000	2.11	[illegible]

542

QUAN DB : FX974

LAB-BASE QUAN

No.	MAT	FOR	REV	Delta	Area	Flags	RT	QM	Name
1	100	88	90	0	29479952	bb	5.351	100	Pentafluorobenzene
2	100	97	97	-1	30103304	bb	6.101	100	1,4-difluorobenzene
3	100	88	88	-2	21027232	bv	10.291	100	Chlorobenzene-d5
4	100	85	94	0	7485992	bv	15.792	100	1,4-dichlorobenzene-d4
5	100	96	92	0	10390224	bb	9.241	100	Bromofluorobenzene
6	100	94	96	-1	25651592	bb	8.031	98	Toluene-d8
7	100	92	95	-2	24370720	bb	12.691	95	4-Bromofluorobenzene
8	0	0	0	0	0		0.000	39	(...) Butadiene
9	0	0	0	0	0		0.000	100	Vinyl Chloride
10	0	0	0	0	0		0.000	87	MTBE
11	0	0	0	0	0		0.000	91	Chloroethane
12	0	0	0	0	0		0.000	47	[illegible]
13	0	0	0	0	0		0.000	2	[illegible]
14	0	0	0	0	0		0.000	91	[illegible]

543

310

TRIANGLE LABS

CALIBRATION DATA

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544

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH809	Date of Analysis :08/09/98	Analyte List: special
RF0.10 HW551	RF0.25 HW552	RF0.50 HW553
RF0.75 HW554	RF1.00 HW555	

VOST Calibration.

Analyte	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	MEAN	%RSD
Pentafluorobenzene	I							
Chloromethane	P	0.387	0.407	0.363	0.343	0.388	0.377	6.6
Vinyl Chloride	C	0.439	0.497	0.449	0.438	0.517	0.468	7.8
Bromomethane		0.412	0.450	0.351	0.421	0.512	0.429	13.7
Chloroethane		0.248	0.276	0.215	0.239	0.292	0.254	11.9
Trichlorofluoromethane		1.009	1.058	0.965	1.028	1.245	1.061	10.2
1,1-Dichloroethene	C	0.442	0.502	0.482	0.381	0.515	0.464	11.7
Iodomethane		0.950	1.061	1.070	0.881	0.944	0.981	8.3
Carbon disulfide		1.060	1.160	1.129	0.896	1.018	1.053	9.9
Acetone		0.055	0.047	0.049	0.036	0.063	0.050	20.3
Allyl chloride		0.386	0.416	0.415	0.309	0.370	0.379	11.6
Methylene chloride		0.392	0.412	0.388	0.289	0.287	0.354	17.2
Acrylonitrile		0.045	0.039	0.041	0.035	0.026	0.037	19.7
trans-1,2-Dichloroethene		0.463	0.488	0.471	0.437	0.366	0.445	10.8
1,1-Dichloroethane	P	0.739	0.762	0.709	0.730	0.723	0.733	2.7
Vinyl acetate		0.409	0.391	0.405	0.395	0.391	0.398	2.1
cis-1,2-Dichloroethene		0.429	0.462	0.444	0.448	0.472	0.451	3.6
2-Butanone		0.073	0.059	0.061	0.060	0.064	0.063	8.8
Chloroform	C	0.756	0.799	0.759	0.751	0.790	0.771	2.8
1,1,1-Trichloroethane		0.699	0.745	0.721	0.717	0.732	0.723	2.4
1,4-Difluorobenzene	I							
Carbon tetrachloride		0.641	0.532	0.501	0.628	0.704	0.601	13.9
Benzene		1.457	0.985	0.984	1.171	1.270	1.173	17.1
1,2-Dichloroethane		0.328	0.296	0.299	0.360	0.412	0.339	14.2
Trichloroethene		0.436	0.443	0.455	0.496	0.384	0.443	9.1
1,2-Dichloropropane	C	0.450	0.426	0.426	0.480	0.344	0.425	11.9
Methyl methacrylate		0.120	0.111	0.116	0.123	0.063	0.107	23.4
Bromodichloromethane		0.667	0.644	0.667	0.796	0.490	0.653	16.7
cis-1,3-Dichloropropene		0.635	0.623	0.609	0.712	0.509	0.618	11.8
4-Methyl-2-pentanone		0.204	0.150	0.159	0.179	0.166	0.172	12.1
Toluene	C	1.054	0.948	0.938	1.133	1.009	1.016	7.9
trans-1,3-Dichloropropene		0.522	0.462	0.461	0.539	0.552	0.507	8.5
1,1,2-Trichloroethane		0.381	0.321	0.305	0.364	0.362	0.347	9.2
Chlorobenzene-d5	I							
Tetrachloroethene		0.388	0.381	0.398	0.403	0.347	0.383	5.7
2-Hexanone	1	0.079	0.061	0.070	0.070	0.081	0.072	11.1
Dibromochloromethane		0.399	0.381	0.408	0.390	0.355	0.387	5.2
1,2-Dibromoethane		0.326	0.297	0.310	0.292	0.277	0.300	6.2

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

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545

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALH809	Date of Analysis :08/09/98	Analyte List: special
RF0.10 HW551	RF0.25 HW552	RF0.50 HW553
RF0.75 HW554	RF1.00 HW555	

VOST Calibration.

Analyte	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	MEAN	%RSD
Chlorobenzene	P	0.930	0.929	0.979	0.960	0.978	0.955	2.6
Ethylbenzene	C	0.509	0.525	0.542	0.555	0.572	0.541	4.5
m-/p-Xylene		0.628	0.646	0.679	0.697	0.730	0.676	6.0
o-Xylene		0.601	0.605	0.641	0.653	0.701	0.640	6.4
Styrene		0.925	0.957	1.012	1.036	1.121	1.010	7.5
Bromoform	P	0.211	0.193	0.205	0.217	0.215	0.208	4.6
1,4-Dichlorobenzene-d4	I							
Cumene		3.195	2.902	3.063	3.038	2.980	3.036	3.6
1,1,2,2-Tetrachloroethane	P	0.518	0.357	0.362	0.368	0.390	0.399	17.0
Average %RSD								9.7

Surrogate	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	Mean	%RSD
Dibromofluoromethane	S	0.523	0.538	0.522	0.530	0.552	0.533	2.4
Toluene-d8	S	1.422	1.357	1.310	1.625	1.290	1.401	9.7
4-Bromofluorobenzene	S	0.702	0.656	0.636	0.788	0.974	0.751	18.3

Approved by: RAB Date 8/10/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW552 Date of Analysis :08/09/98 Analyte List: special
ICAL File: ICALH809
VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Chloromethane	P	0.407	0.377	-8.0
Vinyl Chloride	C	0.497	0.468	-6.2
Bromomethane		0.450	0.429	-4.9
Chloroethane		0.276	0.254	-8.7
Trichlorofluoromethane		1.058	1.061	0.3
1,1-Dichloroethene	C	0.502	0.464	-8.2
Iodomethane		1.061	0.981	-8.2
Carbon disulfide		1.160	1.053	-10.2
Acetone		0.047	0.050	6.0
Allyl chloride		0.416	0.379	-9.8
Methylene chloride		0.412	0.354	-16.4
Acrylonitrile		0.039	0.037	-5.4
trans-1,2-Dichloroethene		0.488	0.445	-9.7
1,1-Dichloroethane	P	0.762	0.733	-4.0
Vinyl acetate		0.391	0.398	1.8
cis-1,2-Dichloroethene		0.462	0.451	-2.4
2-Butanone		0.059	0.063	6.3
Chloroform	C	0.799	0.771	-3.6
1,1,1-Trichloroethane		0.745	0.723	-3.0
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.532	0.601	11.5
Benzene		0.985	1.173	16.0
1,2-Dichloroethane		0.296	0.339	12.7
Trichloroethene		0.443	0.443	0.0
1,2-Dichloropropane	C	0.426	0.425	-0.2
Methyl methacrylate		0.111	0.107	-3.7
Bromodichloromethane		0.644	0.653	1.4
cis-1,3-Dichloropropene		0.623	0.618	-0.8
4-Methyl-2-pentanone		0.150	0.172	12.8
Toluene	C	0.948	1.016	6.7
trans-1,3-Dichloropropene		0.462	0.507	8.9
1,1,2-Trichloroethane		0.321	0.347	7.5
Chlorobenzene-d5	I			
Tetrachloroethene		0.381	0.383	0.5
2-Hexanone	1	0.061	0.072	15.3
Dibromochloromethane		0.381	0.387	1.6
1,2-Dibromoethane		0.297	0.300	1.0

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW552	Date of Analysis :08/09/98	Analyte List: special
ICAL File: ICALH809		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Chlorobenzene	P	0.929	0.955	2.7
Ethylbenzene	C	0.525	0.541	3.0
m-/p-Xylene		0.646	0.676	4.4
o-Xylene		0.605	0.640	5.5
Styrene		0.957	1.010	5.2
Bromoform	P	0.193	0.208	7.2
1,4-Dichlorobenzene-d4	I			
Cumene		2.902	3.036	4.4
1,1,2,2-Tetrachloroethane	P	0.357	0.399	10.5

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.538	0.533	-0.9
Toluene-d8	S	1.357	1.401	3.1
4-Bromofluorobenzene	S	0.656	0.751	12.6

Approved by: _____ Date 8/10/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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Savar v3.7

548

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF821	Date of Analysis :08/21/98	Analyte List: special
RF0.10 FX943	RF0.25 FX944	RF0.50 FX945
RF0.75 FX946	RF1.00 FX949	

VOST Calibration.

Analyte	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	MEAN	%RSD
Pentafluorobenzene	I							
Chloromethane	P	0.135	0.191	0.176	0.154	0.115	0.154	19.9
Vinyl Chloride	C	0.184	0.230	0.231	0.226	0.185	0.211	11.6
Bromomethane		0.292	0.238	0.237	0.224	0.188	0.236	15.8
Chloroethane		0.166	0.186	0.177	0.166	0.143	0.168	9.5
Trichlorofluoromethane		0.827	0.854	0.831	0.773	0.673	0.792	9.2
1,1-Dichloroethene	C	0.356	0.369	0.361	0.337	0.311	0.347	6.7
Iodomethane		0.457	0.443	0.462	0.463	0.441	0.453	2.3
Carbon disulfide		0.900	0.869	0.888	0.849	0.709	0.843	9.2
Acetone		0.014	0.017	0.038	0.035	0.051	0.031	50.5
Allyl chloride		0.245	0.276	0.290	0.265	0.240	0.263	8.0
Methylene chloride		0.271	0.268	0.270	0.258	0.252	0.264	3.1
Acrylonitrile		0.002	0.006	0.009	0.007	0.008	0.006	39.9
trans-1,2-Dichloroethene		0.416	0.429	0.409	0.395	0.361	0.402	6.4
1,1-Dichloroethane	P	0.581	0.592	0.596	0.572	0.540	0.576	3.9
Vinyl acetate		0.064	0.069	0.091	0.099	0.104	0.085	21.1
cis-1,2-Dichloroethene		0.346	0.369	0.376	0.371	0.360	0.365	3.2
2-Butanone		0.017	0.015	0.031	0.035	0.062	0.032	58.6
Chloroform	C	0.761	0.739	0.744	0.721	0.678	0.729	4.4
1,1,1-Trichloroethane		0.848	0.861	0.844	0.832	0.772	0.831	4.2
1,4-Difluorobenzene	I							
Carbon tetrachloride		0.812	0.729	0.709	0.724	0.686	0.732	6.5
Benzene		1.077	1.127	1.136	1.120	0.972	1.086	6.2
1,2-Dichloroethane		0.220	0.231	0.253	0.256	0.252	0.242	6.6
Trichloroethene		0.404	0.426	0.431	0.436	0.434	0.426	3.1
1,2-Dichloropropane	C	0.216	0.225	0.245	0.262	0.264	0.242	8.9
Methyl methacrylate		0.016	0.015	0.020	0.023	0.026	0.020	23.1
Bromodichloromethane		0.383	0.403	0.428	0.462	0.466	0.428	8.4
cis-1,3-Dichloropropene		0.224	0.267	0.307	0.370	0.386	0.311	22.0
4-Methyl-2-pentanone		0.013	0.026	0.035	0.026	0.032	0.027	31.9
Toluene	C	0.822	0.901	0.900	0.920	0.872	0.883	4.4
trans-1,3-Dichloropropene		0.118	0.147	0.174	0.229	0.230	0.180	27.7
1,1,2-Trichloroethane		0.117	0.123	0.133	0.146	0.150	0.134	10.5
Chlorobenzene-d5	I							
Tetrachloroethene		0.515	0.532	0.516	0.521	0.526	0.522	1.3
2-Hexanone	1	0.002	0.004	0.016	0.011	0.058	0.018	127.2
Dibromochloromethane		0.200	0.201	0.215	0.227	0.246	0.218	8.8
1,2-Dibromoethane		0.147	0.151	0.163	0.187	0.181	0.166	10.7

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

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549

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF821	Date of Analysis :08/21/98	Analyte List: special
RF0.10 FX943	RF0.25 FX944	RF0.50 FX945
RF0.75 FX946	RF1.00 FX949	

VOST Calibration.

Analyte	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	MEAN	%RSD
Chlorobenzene	P	1.092	1.046	1.061	1.063	1.032	1.059	2.1
Ethylbenzene	C	0.660	0.721	0.727	0.719	0.687	0.703	4.1
m-/p-Xylene		0.880	0.897	0.897	0.855	0.731	0.852	8.2
o-Xylene		0.649	0.712	0.755	0.747	0.725	0.718	5.8
Styrene		0.800	0.901	0.946	0.982	0.983	0.922	8.2
Bromoform	P	0.082	0.077	0.084	0.078	0.091	0.082	7.1
1,4-Dichlorobenzene-d4	I							
Cumene		7.662	6.642	6.797	6.157	4.138	6.279	20.9
1,1,2,2-Tetrachloroethane	P	0.360	0.255	0.254	0.267	0.225	0.272	18.9
Average %RSD								15.6

Surrogate	Flag	RF0.10	RF0.25	RF0.50	RF0.75	RF1.00	Mean	%RSD
Dibromofluoromethane	S	0.394	0.391	0.392	0.397	0.392	0.393	0.6
Toluene-d8	S	1.020	1.146	1.236	1.260	1.112	1.155	8.4
4-Bromofluorobenzene	S	0.377	0.362	0.414	0.399	0.427	0.396	6.7

Approved by: PAB Date 8/26/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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556

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Continuing Calibration Curve

CCAL File: FX944 Date of Analysis :08/21/98 Analyte List: special
ICAL File: ICALF821

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Chloromethane	P	0.191	0.154	-24.0
Vinyl Chloride	C	0.230	0.211	-9.0
Bromomethane		0.238	0.236	-0.8
Chloroethane		0.186	0.168	-10.7
Trichlorofluoromethane		0.854	0.792	-7.8
1,1-Dichloroethene	C	0.369	0.347	-6.3
Iodomethane		0.443	0.453	2.2
Carbon disulfide		0.869	0.843	-3.1
Acetone		0.017	0.031	45.2
Allyl chloride		0.276	0.263	-4.9
Methylene chloride		0.268	0.264	-1.5
Acrylonitrile		0.006	0.006	0.0
trans-1,2-Dichloroethene		0.429	0.402	-6.7
1,1-Dichloroethane	P	0.592	0.576	-2.8
Vinyl acetate		0.069	0.085	18.8
cis-1,2-Dichloroethene		0.369	0.365	-1.1
2-Butanone		0.015	0.032	53.1
Chloroform	C	0.739	0.729	-1.4
1,1,1-Trichloroethane		0.861	0.831	-3.6
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.729	0.732	0.4
Benzene		1.127	1.086	-3.8
1,2-Dichloroethane		0.231	0.242	4.5
Trichloroethene		0.426	0.426	0.0
1,2-Dichloropropane	C	0.225	0.242	7.0
Methyl methacrylate		0.015	0.020	25.0
Bromodichloromethane		0.403	0.428	5.8
cis-1,3-Dichloropropene		0.267	0.311	14.1
4-Methyl-2-pentanone		0.026	0.027	3.7
Toluene	C	0.901	0.883	-2.0
trans-1,3-Dichloropropene		0.147	0.180	18.3
1,1,2-Trichloroethane		0.123	0.134	8.2
Chlorobenzene-d5	I			
Tetrachloroethene		0.532	0.522	-1.9
2-Hexanone	1	0.004	0.018	77.8
Dibromochloromethane		0.201	0.218	7.8
1,2-Dibromoethane		0.151	0.166	9.0

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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557

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CCAL File: FX944	Date of Analysis :08/21/98	Analyte List: special
ICAL File: ICALF821		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Chlorobenzene	P	1.046	1.059	1.2
Ethylbenzene	C	0.721	0.703	-2.6
m-/p-Xylene		0.897	0.852	-5.3
o-Xylene		0.712	0.718	0.8
Styrene		0.901	0.922	2.3
Bromoform	P	0.077	0.082	6.1
1,4-Dichlorobenzene-d4	I			
Cumene		6.642	6.279	-5.8
1,1,2,2-Tetrachloroethane	P	0.255	0.272	6.2

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.391	0.393	0.5
Toluene-d8	S	1.146	1.155	0.8
4-Bromofluorobenzene	S	0.362	0.396	8.6

Approved by: RAB Date 8/26/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX971 Date of Analysis :08/24/98 Analyte List: special
ICAL File: ICALF821
VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Pentafluorobenzene	I			
Chloromethane	P	0.123	0.154	20.1
Vinyl Chloride	C	0.212	0.211	-0.5
Bromomethane		0.233	0.236	1.3
Chloroethane		0.166	0.168	1.2
Trichlorofluoromethane		0.616	0.792	22.2
1,1-Dichloroethene	C	0.306	0.347	11.8
Iodomethane		0.567	0.453	-25.2
Carbon disulfide		1.007	0.843	-19.5
Acetone		0.014	0.031	54.8
Allyl chloride		0.226	0.263	14.1
Methylene chloride		0.234	0.264	11.4
Acrylonitrile		0.005	0.006	16.7
trans-1,2-Dichloroethene		0.326	0.402	18.9
1,1-Dichloroethane	P	0.561	0.576	2.6
Vinyl acetate		0.050	0.085	41.2
cis-1,2-Dichloroethene		0.297	0.365	18.6
2-Butanone		0.008	0.032	75.0
Chloroform	C	0.605	0.729	17.0
1,1,1-Trichloroethane		0.643	0.831	22.6
1,4-Difluorobenzene	I			
Carbon tetrachloride		0.802	0.732	-9.6
Benzene		1.365	1.086	-25.7
1,2-Dichloroethane		0.260	0.242	-7.4
Trichloroethene		0.514	0.426	-20.7
1,2-Dichloropropane	C	0.261	0.242	-7.9
Methyl methacrylate		0.016	0.020	20.0
Bromodichloromethane		0.433	0.428	-1.2
cis-1,3-Dichloropropene		0.312	0.311	-0.3
4-Methyl-2-pentanone		0.029	0.027	-7.4
Toluene	C	0.967	0.883	-9.5
trans-1,3-Dichloropropene		0.162	0.180	10.0
1,1,2-Trichloroethane		0.130	0.134	3.0
Chlorobenzene-d5	I			
Tetrachloroethene		0.773	0.522	-48.1
2-Hexanone	1	0.003	0.018	83.3
Dibromochloromethane		0.276	0.218	-26.6
1,2-Dibromoethane		0.184	0.166	-10.8

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

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CCAL File: FX971	Date of Analysis :08/24/98	Analyte List: special
ICAL File: ICALF821		

VOST Calibration.

Analyte	Flag	RF0.25	RFMEAN	%D
Chlorobenzene	P	1.149	1.059	-8.5
Ethylbenzene	C	0.791	0.703	-12.5
m-/p-Xylene		0.986	0.852	-15.7
o-Xylene		0.801	0.718	-11.6
Styrene		0.998	0.922	-8.2
Bromoform	P	0.109	0.082	-32.9
1,4-Dichlorobenzene-d4	I			
Cumene		6.434	6.279	-2.5
1,1,2,2-Tetrachloroethane	P	0.257	0.272	5.5

Surrogate	Flag	RF0.25	RFMEAN	%D
Dibromofluoromethane	S	0.308	0.393	21.6
Toluene-d8	S	1.230	1.155	-6.5
4-Bromofluorobenzene	S	0.379	0.396	4.3

Approved by: PAB Date 8/26/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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554

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Initial Calibration Curve

ICAL File: ICALH809 Date of Analysis :08/09/98 Analyte List: short
RF0.50 HW557

VOST Calibration.

Analyte	Flag	RF0.50	MEAN	%RSD	
Pentafluorobenzene	I				
1,3-Butadiene		0.446	0.446	0.0	
Vinyl bromide		0.502	0.502	0.0	
MTBE		0.124	0.124	0.0	
n-Hexane		0.692	0.692	0.0	
1,2-Epoxybutane		0.005	0.005	0.0	<<
Iso-Octane		1.536	1.536	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.230	0.230	0.0	
Average %RSD				0.0	

Approved by: EWB Date 8/10/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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588

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: HW557	Date of Analysis :08/09/98	Analyte List: short
ICAL File: ICALH809		

VOST Calibration.

Analyte	Flag	RF0.50	RFMEAN	%D	
Pentafluorobenzene	I				
1,3-Butadiene		0.446	0.446	0.0	
Vinyl bromide		0.502	0.502	0.0	
MTBE		0.124	0.124	0.0	
n-Hexane		0.692	0.692	0.0	
1,2-Epoxybutane		0.005	0.005	0.0	<<
Iso-Octane		1.536	1.536	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.230	0.230	0.0	

Approved by: Gab Date 8/10/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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Initial Calibration Curve

ICAL File: ICALF821 Date of Analysis :08/21/98 Analyte List: short
RF0.50 FX950

VOST Calibration.

Analyte	Flag	RF0.50	MEAN	%RSD	
Pentafluorobenzene	I				
1,3-Butadiene		0.163	0.163	0.0	
Vinyl bromide		0.321	0.321	0.0	
MTBE		0.362	0.362	0.0	
n-Hexane		0.500	0.500	0.0	
1,2-Epoxybutane		0.006	0.006	0.0	<<
Iso-Octane		1.726	1.726	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.032	0.032	0.0	
Average %RSD				0.0	

Approved by: PaB Date 8/25/98

*- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF

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557

Triangle Laboratories, Inc.
Continuing Calibration Curve

CCAL File: FX950	Date of Analysis :08/21/98	Analyte List: short
ICAL File: ICALF821		

VOST Calibration.

Analyte	Flag	RF0.50	RFMEAN	%D	
Pentafluorobenzene	I				
1,3-Butadiene		0.163	0.163	0.0	
Vinyl bromide		0.321	0.321	0.0	
MTBE		0.362	0.362	0.0	
n-Hexane		0.500	0.500	0.0	
1,2-Epoxybutane		0.006	0.006	0.0	<<
Iso-Octane		1.726	1.726	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.032	0.032	0.0	
Chlorobenzene-d5	I				
1,4-Dichlorobenzene-d4	I				

Surrogate	Flag	RF0.50	RFMEAN	%D
Dibromofluoromethane	S	0.202	0.202	0.0
Toluene-d8	S	0.593	0.593	0.0
4-Bromofluorobenzene	S	0.091	0.091	0.0

Approved by: PAB Date 8/25/98

*- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF

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558

Triangle Laboratories, Inc.
Initial Calibration Curve

ICAL File: ICALF824 Date of Analysis :08/24/98 Analyte List: short
RF0.50 FX972

VOST Calibration.

Analyte	Flag	RF0.50	MEAN	%RSD	
Pentafluorobenzene	I				
1,3-Butadiene		0.140	0.140	0.0	
Vinyl bromide		0.272	0.272	0.0	
MTBE		0.225	0.225	0.0	
n-Hexane		0.488	0.488	0.0	
1,2-Epoxybutane		0.005	0.005	0.0	<<
Iso-Octane		1.687	1.687	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.018	0.018	0.0	
Average %RSD				0.0	

Approved by: GAB Date 8/25/98

***- Fails QC Criteria for %RSD; << - RF less than minimum QC RF; >> - RF greater than maximum QC RF**

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Continuing Calibration Curve

CCAL File: FX972	Date of Analysis :08/24/98	Analyte List: short
ICAL File: ICALF824		

VOST Calibration.

Analyte	Flag	RF0.50	RFMEAN	%D	
Pentafluorobenzene	I				
1,3-Butadiene		0.140	0.140	0.0	
Vinyl bromide		0.272	0.272	0.0	
MTBE		0.225	0.225	0.0	
n-Hexane		0.488	0.488	0.0	
1,2-Epoxybutane		0.005	0.005	0.0	<<
Iso-Octane		1.687	1.687	0.0	
1,4-Difluorobenzene	I				
Ethyl acrylate		0.018	0.018	0.0	

Approved by: PaB Date 8/25/98

***- Fails QC Criteria for %D; << - Rf less than minimum QC RF; >>- RF greater than maximum QC RF**

TECHNICAL REPORT DATA

Please read instructions on the reverse before completing

1. REPORT NO. EPA-454/R-00-025G	2.	3. RECIPIENT'S ACCESSION NO.
4. TITLE AND SUBTITLE Final Report Hot Mix Asphalt Plants, Truck Loading and Silo Filling, Manual Methods Testing, Asphalt Plant C, Los Angeles, California Volume 7 of 8		5. REPORT DATE May 2000 6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) Frank J. Phoenix		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS Pacific Environmental Services, Inc. Post Office Box 12077 Research Triangle Park, North Carolina 27709-2077		10. PROGRAM ELEMENT NO. 11. CONTRACT/GRANT NO. 68-D-98004
12. SPONSORING AGENCY NAME AND ADDRESS U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Emissions, Monitoring and Analysis Division Research Triangle Park, North Carolina 27711		13. TYPE OF REPORT AND PERIOD COVERED Final 14. SPONSORING AGENCY CODE EPA/200/04

15. SUPPLEMENTARY NOTES

16. ABSTRACT

The United States Environmental Protection Agency (EPA) Office of Air Quality Planning and Standards (OAQPS) is investigating hot mix asphalt plants to identify and quantify particulate matter (PM), methylene chloride extractable matter (MCEM), and organic hazardous air pollutant (HAP) emissions during asphalt concrete loading operations. In support of this investigation, the OAQPS issued Pacific Environmental Services, Inc. (PES) a series of work assignments to conduct emissions testing at a hot mix asphalt plant during load-out operations.

The primary objective of the emissions testing was to characterize the uncontrolled emissions of PM, MCEM, polynuclear aromatic hydrocarbons (PAHs), semi-volatile organic hazardous air pollutants (SVOHAPS), and volatile organic hazardous air pollutants (VOHAPS) from a hox mix production plant during loading operations. An asphalt plant south of Los Angeles, California was selected by EPA as the host facility. Testing was performed over five consecutive days beginning on July 24, 1998. Testing was performed under two conditions. Under normal operations, testing was performed to characterize load-out emissions from the tunnel exhaust and load-in emissions from the asphalt concrete storage silo. Under background conditions, testing was performed to characterize emissions from the combustion of diesel fuel in transport trucks.

The entire report consists of eight volumes totaling 4,234 pages, Vol. 1 (388 pages), Vol. 2 (308 pages), Vol. 3 (573 pages), Vol. 4 (694 pages), Vol. 5 (606 pages), Vol. 6 (564 pages), Vol. 7 (570 pages), and Vol. 8 (531 pages).

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTIONS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COASTI Field/Group
Hazardous Air Pollutants Methylene Chloride Extractable Matter Particulate Matter Polynuclear Aromatic Hydrocarbons Semi-volatile Organic Hazardous Air Pollutants Volatile Organic Hazardous Air Pollutants		
18. DISTRIBUTION STATEMENT Unlimited	19. SECURITY CLASS *(This Report)* Unclassified 20. SECURITY CLASS *(This page)* Unclassified	21. NO. OF PAGES Vol. 7 - 570 22. PRICE