YPLSF
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HONGWEST
& ASSOCIATES, INC.

Geotechnical Engineering
Hydrogeology
Geoenvironmental Services
Testing & Inspection

LETTER OF TRANSMITTAL

To: Debbie Yamamoto
US EPA Region 10
Hazardous Waste Division
1200 6th Ave. (HW-113)
Seattle, Wa. 98101

Date: 10/12/92

Project #: 90042

We are sending you: Information for the file on Yakima Agricultural Research Laboratory as per Lynda Priddy's request.

Copies	Date	Description
1	10/92	Data Packages + Validation summary for soil confirmatory samples from Yard
1	3/92	Data Evaluation for ground water data

X For your use ____ For approval ____ As requested

Remarks:

Copy: USDA, Albany, Ca

Signed: Doug Gellar

For:

pt. 1 of 2
3.7.a

USEPA SF
1599721

19730-64th Ave. W.
Lynnwood, WA 98036-590-
Tel. 206-774-0106
Fax. 206-775-7506

MEMORANDUM

TO: Doug Geller DATE: October 1, 1992

FROM: Gerritt Rosenthal and Richard Jacobs

RE: Data Validation Report for VOC, pesticides and PCBs, chlorinated herbicides, and organophosphorus pesticides analyses of samples from Yakima Agricultural Research Laboratory

Attached are the analytical data packages and data validation review performed by EMCON Associates at the request of Hong West Associates for volatile organic compounds, pesticides and PCBs, chlorinated herbicides, and organophosphorus pesticides.

If you have any questions, please call Gerritt Rosenthal at (503) 624-7200.

Gerritt Rosenthal
VP/Director of Environmental Services

P/YAR/GELLER-M.O01-92 CE:1
0525-001.11

PRIVILEGED AND CONFIDENTIAL
EPA Region 10
Deemed Releasable

Fleming, Sheila
Digitally signed by Fleming, Sheila
Date: 2023.05.17 16:12:15 -07'00'

DATA VALIDATION REPORT
YAKIMA AGRICULTURAL RESEARCH LABORATORY

The following report presents a summary of the data validation review of analytical results for 45 soil samples, 2 water samples, and 2 wipe samples from the Yakima Agricultural Research Laboratory in Yakima, Washington. Samples were collected during 1990, 1991, and 1992. Samples were analyzed by Biospherics, Inc., of Beltsville, Maryland, and North Creek Analytical of Bothell, Washington. Sample numbers, collection dates (if available), and analyses conducted on each sample are shown in tables 1, 2, and 3.

DATA QUALIFICATIONS

Analytical results were reviewed following procedures presented in *Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses* (USEPA, 1988a) and *Laboratory Data Validation Functional Guidelines for Evaluating Pesticides and PCBs Analyses* (USEPA, 1988b).

Timeliness

All samples listed in table 1 were extracted (if appropriate) and analyzed within EPA holding time criteria, except for those noted below. The VOC analysis performed on 8/19/92 for sample DP-5 was the initial analysis performed outside of holding time. The VOC analyses performed on 8/19/92 and 8/26/92 for samples DP-4 and DP-5, respectively, were the reanalyses.

Sample Number	Date Collected	Analysis	Date Extracted	Date Analyzed	Holding Time	Holding Time Criteria
DP-4	7/27/92	VOCs	--	8/19/92	23 days	14 days
DP-5	7/27/92	VOCs	--	8/19/92	23 days	14 days
DP-5	7/27/92	VOCs	--	8/26/92	30 days	14 days

Table 1
Sample Summary - July 1992
Yakima Agricultural Research Laboratory

Sample Number	Date Collected	Matrix	Analyses[1]
DP-1	7/27/92	Soil	8080, 8240, 8150, 8140
DP-2	7/27/92	Soil	8080, 8240, 8150, 8140
DP-3	7/27/92	Soil	8080, 8240, 8150, 8140
DP-4	7/27/92	Water	8080, 8240
DP-5	7/27/92	Water	8080, 8240
DF-6	7/27/92	Soil	8080, 8240, 8150, 8140
DF-7	7/27/92	Soil	8080, 8240, 8150, 8140
DF-8	7/27/92	Soil	8080, 8240, 8150, 8140
DF-9	7/27/92	Soil	8080, 8240, 8150, 8140
DF-10	7/27/92	Soil	8080, 8240, 8150, 8140
DF-11	7/27/92	Soil	8080, 8240, 8150, 8140
DF-12	7/27/92	Soil	8080, 8240, 8150, 8140
DF-13	7/27/92	Soil	8080, 8240, 8150, 8140
DP-6MS	7/27/92	Soil	8080, 8240, 8150, 8140
DF-6MDS	7/27/92	Soil	8080, 8240, 8150, 8140

1. EPA methods 8080 = Pesticides and PCBs; 8240 = volatile organic compounds (VOCs); 8150 = chlorinated herbicides; 8140 = organophosphorus pesticides. These analyses were performed by North Creek Analytical, Inc., Bothell, Washington.

Table 2
Sample Summary - June 1991
Yakima Agricultural Research Laboratory

Sample Number	Date Analyzed[1]	Matrix	Analyses
91061008-1	6/26/91	Soil	8080[2]
91061008-2	6/26/91	Soil	8080[2]
91061205-1	6/26/91	Soil	8080[2]
91061205-2	6/26/91	Soil	8080[2]
91061205-3	6/26/91	Soil	8080[2]
91061302-5	6/26/91	Soil	8080[2]
91061302-6	6/26/91	Soil	8080[2]
91061321-1	6/29/91	Soil	8080[2]
91061321-2	6/29/91	Soil	8080[2]
91061204-1	6/29/91	Soil	8080[2]
91061204-2	6/29/91	Soil	8080[2]
91061302-1	6/29/91	Soil	8080[2]
91061302-2	6/29/91	Soil	8080[2]
91061302-3	6/29/91	Soil	8080[2]
91061302-4	6/29/91	Soil	8080[2]
61008-1MS	6/25/91	Soil	8080[2]
61008-1MSD	6/26/91	Soil	8080[2]
61302-4MS	6/26/91	Soil	8080[2]
61302-4MSD	6/26/91	Soil	8080[2]

1. Sample collection date is not known.
2. EPA methods 8080 = Pesticides and PCBs. These analyses were performed by Biospherics, Inc., Beltsville, Maryland.

Table 3
Sample Summary - October 1990
Yakima Agricultural Research Laboratory

Sample Number	Date Analyzed[1]	Matrix	Analyses
9019695,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019696,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019697,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019698,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019707,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019560,40,2.04	10/29/90	Soil	8080 (PCBs only)[2]
9019699,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019700,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019701,20,1	10/29/90	Soil	8080 (PCBs only)[2]
9019702,20,1	10/29/90	Soil	8080 (PCBs only)[2]
90102903-3	10/29/90	Soil	8080 (PCBs only)[2]
90102903-1	10/30/90	Soil	8080 (PCBs only)[2]
9019339	10/30/90	Soil	8080 (PCBs only)[2]
9019340	10/30/90	Soil	8080 (PCBs only)[2]
9019341	10/30/90	Soil	8080 (PCBs only)[2]
9019548	10/30/90	Soil	8080 (PCBs only)[2]
9019549	10/31/90	Soil	8080 (PCBs only)[2]
9019554	10/31/90	Wipe	8080 (PCBs only)[2]
9019555	10/31/90	Wipe	8080 (PCBs only)[2]

1. Sample collection date is not known.
2. EPA methods 8080 = PCBs only. These analyses were performed by Biospherics, Inc., Beltsville, Maryland.

An estimated data qualifier (J) was assigned to the results for VOCs and an estimated data qualifier (UJ) was assigned to the detection limits in samples DP-4 and DP-5 based on exceedance of holding time criteria.

Holding times could not be assessed for the samples listed in tables 2 and 3 because sample collection dates were not available.

GC/MS Tuning

Raw data and summary forms for EPA method 8240 for gas chromatography/mass spectrometry (GC/MS) instrument tuning were evaluated for compliance with USEPA QC requirements. All ion abundance criteria for bromofluorobenzene (BFB) were within USEPA QC criteria (USEPA, 1991).

Calibration

Raw data and summary forms for initial and continuing calibration of VOCs, pesticides and PCBs, chlorinated herbicides, and organophosphorus pesticides analyses were reviewed to evaluate frequency, average response factors (RFs) for initial and continuing calibration, percent relative standard deviation (%RSD) between initial calibration RFs, and percent difference (%D) between initial calibration average RF and continuing calibration RF.

Initial calibration QC criteria for VOCs, pesticides and PCBs, chlorinated herbicides, and organophosphorus pesticides were within USEPA QC criteria (USEPA, 1988a and 1988b), with the following exceptions.

The EPA method 8240 initial calibration average RFs for dichlorodifluoromethane (0.003; calibration on August 7, 1992) and acetone (0.004; calibration on August 19, 1992) were less than the minimum QC criteria of 0.05. All detected results for acetone (EPA method 8240) for the July 1992 data were assigned an estimated data qualifier (J), and all non-detected results for dichlorodifluoromethane were assigned an unusable data qualifier (R) in accordance with USEPA data validation procedures (USEPA, 1988a). The initial calibration %RSD for the 1992 data for acetone also exceeded the maximum QC criteria of 30% RSD.

The initial calibration %RSD for DDT (EPA method 8080) for the July 1992 data exceeded the 10% QC criteria. All detected results for DDT were assigned an estimated data qualifier (J).

The initial calibration %RSD for endrin, DDT, b-BHC, d-BHC, heptachlor epoxide, endosulfan I, DDE, dieldrin, endosulfan II, DDD, endrin aldehyde, endosulfan sulfate, endrin ketone, methoxychlor (MOC), dibutylchlorendate (DBC), and tetrachloro-meta-xylene (TCM) for the June 1991 data exceeded the 10% QC criteria. All detected results for these compounds were assigned an estimated data qualifier (J).

Continuing calibration QC criteria for VOCs, pesticides and PCBs, chlorinated herbicides, and organophosphorus pesticides were within USEPA QC criteria (USEPA, 1988a and 1988b), with the following exceptions.

The EPA method 8240 continuing calibration RFs for acetone and dibromomethane (0.04 and 0.003; calibration on August 19, 1992) were less than the minimum QC criteria of 0.05. All detected results for acetone (analyzed on August 19, 1992) were assigned an estimated data qualifier (J), and all nondetected results for dibromomethane (analyzed on August 19, 1992) were assigned an unusable data qualifier (R). The %D for acetone (for August 10, 1992) exceeded the maximum QC criteria of 25%. Acetone results for August 10, 1992 were assigned an estimated data qualifier (J).

The EPA method 8080 continuing calibration standard analyzed on August 20, 1992 did not contain DDE and DDT, which were detected in the samples.

The EPA method 8080 continuing calibration %D for June 26, 1991 exceeded the 15% QC criteria for all pesticides except a-BHC, b-BHC, lindane, aldrin, dieldrin, and endrin aldehyde. For June 28 and 29, 1991, the %D exceeded the 15% QC criteria for all pesticides except a-BHC, b-BHC, lindane, and endrin ketone. For June 29, 1991, the % difference exceeded the 15% QC criteria for all pesticides, except a-BHC. All detected results for these compounds were assigned an estimated data qualifier (J).

Method Blank Results

Laboratory method blank analyses were conducted at the required frequency for all analytical methods. No compounds were detected in method blanks at concentrations greater than quantitation limits, with the following exceptions.

Blank Identification	Analysis	Compound	Blank Concentration (µg/kg)	Associated Samples	Sample Concentration (µg/kg)
BLK081092	VOCs	Acetone	15	DP-1	7.0U
				DP-2	4.2U
				DP-3	2.5U
				DF-6	2.0U
				DF-7	1.5U
				DF-8	1.4U
				DF-9	1.3U
				DF-11	1.2U
				DF-12	1.0U
				DF-13	0.96U
		2-butanone	0.56	DP-2	0.58U
				DP-3	0.55U
				DF-6	0.52U
				DF-7	0.54U
				DF-10	0.68U
				DF-12	0.54U
				DF-13	0.56U

The concentrations of acetone and 2-butanone in the associated samples listed above were less than ten times the acetone and 2-butanone concentrations in method blank BLK081092. In accordance with USEPA data validation procedures (USEPA, 1988a), an undetected data qualifier (U) was assigned to the results for acetone and 2-butanone in the samples listed above.

Sample preparation logs showing amounts of sample extracted were not available for the EPA method 8080 analyses performed in 1990 and 1991. Therefore, conclusive comparison of method blank analyte levels to sample analyte levels were not made.

Matrix Spike/Matrix Spike Duplicate Results

All matrix spike/matrix spike duplicate (MS/MSD) results were within QC criteria for percent recovery (%R) and percent relative percent difference (%RPD) between MS and MSD results with the following exceptions:

					QC Limits	
Sample Number	Compound	MS %R	MSD %r	%RPD	%R	%RPD
DF-13	1,1-Dichloroethene (1,1-DCE)	38	48	22	43-98	19
DF-6	DDT	224	241	2	38-127	27
DF-6	Heptachlor	90	102	13	84-115	19
DF-6	Endrin	106	124	21	56-121	21
61008-1	Endrin	78	120	42	(not provided)	(not provided)
61302-4	Dieldrin	500	400	22	(not provided)	(not provided)
61302-4	DDT	160	150	6	(not provided)	(not provided)

No data qualifiers were assigned to sample results based on MS/MSD analyses. However, MS/MSD recovery results for DDT for soils collected in 1991 and 1992, and for dieldrin for soils collected in 1991, indicate that sample results maybe biased high.

Surrogate Recoveries

Raw data and summary forms for surrogate compounds were evaluated for compliance with USEPA and method QC criteria.

For samples listed in table 2, the laboratory did not report the amounts of the surrogate added; therefore, surrogate recoveries were not calculated. The samples listed in table 3 did not contain an identified surrogate compound.

The percent recoveries for surrogate compounds in the remaining samples (table 1) were within QC criteria for all analyses with the following exceptions:

Sample Number	Analysis	Surrogate Compound	%R
DP-4	Pesticides/PCBs	tetrachloro-m-xylene	25
DP-5	Pesticides/PCBs	tetrachloro-m-xylene	15
BLK080392 W	Pesticides/PCBs	tetrachloro-m-xylene	34
DP-1	Chlorinated Herbicides	2,4-Dichlorophenyl Acetic Acid	27

In accordance with USEPA data validation guidelines (USEPA, 1988b), an estimated data qualifier (J) was assigned to the affected sample results greater than the quantitation limits and an estimated data qualifier (UJ) was assigned to sample quantitation limits in all pesticides and PCBs in samples DP-4 and DP-5 based on low surrogate recoveries for these samples and the method blank. The laboratory did not reanalyze the samples because there was not enough sample volume to reextract.

Internal Standards Performance

Raw data and summary forms for internal standards (IS) retention times and area counts for VOC analyses were evaluated for compliance with USEPA QC criteria (USEPA, 1991). All IS retention times and area counts were within QC limits.

Identification, Quantitation, Verification, and Reporting Limits

Mass spectra, quantitation reports, and quantitation limits for VOC analyses performed in 1992 were reviewed for compliance with QC criteria (USEPA, 1988a, 1991). No errors were found with compound identification, quantitation, or reporting.

Retention times for detected pesticides were compared with retention time windows for the July 1992 data. Detected compounds were outside the retention time window for the primary column in several samples. However, the detected compounds outside the retention time window for the primary column were within the retention time windows for either the confirmation column, the diluted reanalyzed sample, or both except for DDT in samples DP-4, DP-5, and DF-6, and DDE in

sample DF-6. Qualifiers were not assigned because these compounds were marginally outside the retention time windows.

Retention time windows were not provided by the laboratory for pesticides and PCB analyses for the 1990 and 1991 data.

OVERALL ASSESSMENT OF DATA

Data precision was evaluated by a comparison of MS/MSD results with method QC criteria. The precision of the VOCs, pesticides and PCBs, chlorinated herbicide, and organophosphorus pesticides data for July 1992 were judged to be acceptable for the intended use in site characterization. Accuracy of these sample data was evaluated using MS/MSD and blank sample results. The accuracy of the July 1992 analyses was judged to meet the method QC criteria.

The following information required for data validation according to the USEPA Functional Guidelines (1988a and 1988b) were not available for the pesticides and PCBs analyses performed in 1990 and 1991 (tables 2 and 3): chains-of-custodies, retention time window summaries, sample preparation logs, and identification of primary and secondary columns. Therefore, the data could not be validated according to the EPA Functional Guidelines and no judgement is made regarding the acceptability of the data for its intended use.

The data obtained in 1992 (table 1) are judged to be acceptable for their intended use. The usefulness of the results may be modified by assignment of the following data qualifiers to individual compounds and sample results:

J—The associated numerical value is an estimated quantity.

U—The material was analyzed for, but was not detected at a concentration greater than the associated value. The associated numerical value is the sample quantitation limit or sample detection limit.

UJ—The material was analyzed for, but was not detected. The associated numerical value is the estimated quantitation limit.

R—The data are unusable (analyte may or may not be present). Resampling and reanalysis are necessary for verification.

N—Presumptive evidence of the presence of material.

LIST OF REFERENCES

U.S. Environmental Protection Agency. 1986. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. USEPA, Office of Solid Waste and Emergency Response. EPA 530/SW-846.

U.S. Environmental Protection Agency. 1988a. Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses. Prepared for the Hazardous Site Evaluating Division, U.S. Environmental Protection Agency. Prepared by the USEPA Data Review Work Group.

U.S. Environmental Protection Agency. 1988b. Laboratory Data Validation Functional Guidelines for Evaluating Pesticides and PCBs Analyses. Prepared for the Hazardous Site Evaluation Division, US. Environmental Protection Agency. Prepared by the USEPA Data Review Work Group.

U.S. Environmental Protection Agency. 1991. U.S. Environmental Protection Agency Contract Laboratory Program, Statement of Work for Inorganics and Organics Analyses, Multi-media, Multi-concentration. USEPA, Washington, D.C.

EMCON
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October 6, 1992
Project 0525-001.11

Doug Geller
Hong West & Associates
19730 64th Avenue W
Lynnwood, Washington 98036-5504

Re: Data Validation for Yakima Agricultural Research Laboratory (YARL)

Dear Doug:

I have reviewed the Data Validation Report— Yakima Agricultural Research Laboratory prepared by Richard Jacobs of our San Jose office. The report and a complete copy of the data package are enclosed.

Two items are of note. The first concerns the absence of holding times for the Biospherics data (1991, 1990). Richard Jacobs (San Jose) called Biospherics (calls to Dan Carey on September 15 and 16, 1992) to obtain that information but the phone calls were not returned. Although extension past the holding times is unlikely to compromise the results for dieldrin, I suggest that you may want to perform an independent review of holding times for that portion of the data if you feel it is important.

The second issue relates to the use of the 1990/1991 (Biospherics) soils data in combination with 1992 (North Creek) soils data in determining the average confirmation sample concentration for dieldrin. As noted in the "overall assessment," the 1992 data are "judged to be acceptable for their intended use." A similar conclusion could not be reached using the strict CLP criteria for the 1990/1991 data. However, the report does note (page 8) that MS/MSD recovery results for "dieldrin for soils collected in 1991, indicate that sample results may be high." This statement applies to samples A, B, C and D from the second overexcavation of the wash down pad (Closure Certification Report, Volume I Appendix A) and implies that detected concentrations are overestimates. Specific calibration, method blank, and MS/MSD difficulties were not reported for the 1990 confirmation samples (TP101 through TP106, see Appendix A, ibid).

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We therefore conclude that the data from 1990 and 1991 is of marginal quality with the possibility that the concentrations were overestimates. This means that these data may be used with some qualification in calculating the average confirmation soil levels (i.e., combined with 1992 soil data) for dieldrin.

If we assume, as suggested by EPA during our September 29, 1992 phone conversation (Lynda Priddy, Superfund Branch, Region 10) that the representative site concentration for dieldrin is represented by the average of all confirmation sample concentrations (from the washdown pad, tank, and sink drainage areas), then the resultant dieldrin concentration can be calculated from the following data:

Source	Date	Sample No.	Dieldrin Concentration (μg/kg)
First Overexcavation	October 23, 1990	TP101	11
Tank and Wash Down Pad	October 23, 1990	TP102	32
Tank and Wash Down Pad	October 23, 1990	TP103	4.2
Tank and Wash Down Pad	October 23, 1990	TP104	4.9
Tank and Wash Down Pad	October 23, 1990	TP105	5.7
Tank and Wash Down Pad	October 23, 1990	TP106	<1
Second Overexcavation	June 11, 1991	A	<.2
Washdown Pad	June 11, 1991	B	<.2
Washdown Pad	June 11, 1991	C	<.2
Washdown Pad	June 11, 1991	D	42
Removal of Sink Drainline	July 27, 1992	DP-1	31
Removal of Sink Drainline	July 27, 1992	DP-2	110
Removal of Sink Drainline	July 27, 1992	DP-3	130
Mean			28.6
Sample Standard Deviation			43.1
Action Level for Dieldrin: FR July 27, 1990			44

Note: The mean value is calculated using one half the reported detection limit for non-detections.

The calculated mean value for the site is, therefore, below the regulatory criteria of 44 μg/kg (ppb).

Please call if you have any questions or comments.

Sincerely,

EMCON Northwest, Inc.

Gerritt Rosenthal
Director of Environmental Services

Enclosures: Data Validation Report
Data Package

EMCON
Northwest, Inc.

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RECEIVED
MAR 31 1992
HONG WEST & ASSOC.

March 25, 1992
Project W2501.12

Mr. Larry West
Principal Ground Water Geologist
Hong West and Associates
P.O. Box 596
Lynnwood, Washington 98041

Re: Yakima Agricultural Research Laboratory (YARL)
Quarterly Ground Water Monitoring Validation Review

Dear Larry:

We have reviewed the quarterly ground water data reports for conformance with the YARL Project Plan and for acceptability for the purpose of site closure actions. Our review indicates that the analyses and reporting were in conformance with the project plan and are generally acceptable for the purpose of ground water evaluation related to site closure. A copy of this review is attached.

Please call me if you have any questions or concerns.

Sincerely,

EMCON Northwest, Inc.

Gerritt Rosenthal
Director of Environmental Services

Enclosure

P/YARLQT-L.324-92/CE:1
W2501.12

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YAKIMA AGRICULTURAL RESEARCH LABORATORY QUARTERLY GROUND WATER COMPLIANCE MONITORING DATA VALIDATION SUMMARY

Purpose

This report presents a summary of the data validation review of sample results for samples collected during quarterly ground water monitoring at Yakima Agricultural Research Laboratory (YARL) for five periods from August 1990 through October 1991. Each quarter sampling is the subject of a quarterly report (HWA, August 1990; November 1990; April 1990; May 1990; and October 1990).

The Sampling and Analysis Plan (HWA, 1990) presents the data quality objectives (DQOs) for requisite levels of precision and accuracy for the compliance monitoring data. The DQOs established for precision and accuracy of the laboratory analyses are those promulgated by U.S. Environmental Protection Agency (EPA) for the specified analytical methods.

Scope of Review

This review focuses on the adequacy of the quarterly ground water monitoring data to satisfy compliance monitoring requirements. Holding times, detection limits, and blank results were assessed, together with the laboratory's non-conformance summaries, to determine the acceptability of the data.

All sample analyses were performed by Biospherics, Inc., using EPA SW-846 methods (EPA, 1986). Analyses were conducted on each well sample for EPA target compound list (TCL) metals (EPA Methods 6010 and 7000 series), organochlorine pesticides/PCBs (EPA Method 8080), organophosphorus pesticides (EPA Method 8140), and chlorinated herbicides (EPA Method 8150). Data provided by Biospherics for each quarterly monitoring event included summary data forms and tables with sample, field blank, and trip blank results, an analytical methodology/sample chronicle, and a non-conformance summary. The

non-conformance summary presented only those results which did not meet quality assurance/quality control (QA/QC) guidelines or DQOs. It was not possible to evaluate the data in reference to EPA Data Validation Functional Guidelines (EPA, 1988a, b) because the laboratory did not provide sufficient backup data to determine the following:

- Instrument tuning
- Calibration
- Method blanks
- Surrogate recovery for volatile organic compound (VOC) analyses
- Internal standards response
- Compound identification and quantitation
- ICP interferences

FIRST QUARTER

Date Samples Collected:	August 7, 1990
No. Samples:	Seven wells, four samples per well
Field QA/QC Samples:	One field blank, one trip blank

Holding Times

Holding times were acceptable for all sample analyses except the following:

- Organophosphorus pesticides, samples 90042-890-D3, E2, and E4
- Organochlorine pesticides, sample 90042-890-E4
- Chlorinated herbicides, samples 90042-890-A4, B3, B4, D2, D3, D4, E1, E2, E3, E4, F1, F2, F3, F4, G1, G2, G3, and G4

The non-conformance summary states that these samples were reextracted after the holding times expired because the original analyses showed low surrogate recoveries. Organic constituents tested were not detected in any of the test samples.

Detection Limits

The detection limits and quantitation limits reported were equivalent to those proposed in the DQOs.

Blanks

No organic compounds were reported in the blanks. Zinc was reported in the process (method) blanks, in the trip blank, and in the field blank. Mercury and lead were also reported in the trip blank, and calcium was reported in the field blank.

Assessment

Overall, the first quarter ground water monitoring compliance data are judged to be **ACCEPTABLE**. The quality control (QC) data indicate that accuracy and precision were within EPA guidelines for the analytical methods used. The methods selected are suitable for determining the presence and concentration of contaminants in ground water. An evaluation of the percent relative standard deviation for the four replicate sample analyses indicates the precision for detected inorganic analytes was better than ± 15 percent. Matrix spike/matrix spike duplicate (MS/MSD) results and surrogate recoveries for organics analyses indicate the precision and accuracy of the organics data were within EPA QC criteria.

Several samples did not meet holding time criteria. However, analytes were not detected in any of the four replicate sample analyses, so it does not appear the extended holding times impacted the data. Quantitation limits for the sample analyses that exceeded holding time limits should be considered estimates.

Mercury, lead, and zinc were detected in samples at concentrations similar to the concentrations reported for blanks. All mercury, lead, and zinc concentrations reported in field samples collected for the first quarter monitoring should be considered non-detected. It appears that the laboratory experienced problems with zinc contamination, and that mercury and lead cross-contamination of samples occurred either during field sampling or laboratory analysis. Quantitation limits for the sample analyses that exceeded holding time limits should be considered estimates.

Trichlorofluoromethane and 2-chloroethyl vinyl ether were not reported with the Method 8240 (VOC) analyses, PCBs were not reported with the Method 8080 analyses, and cyanide analyses were not reported.

SECOND QUARTER

Date Samples Collected:	November 14, 1990
No. Samples:	Seven wells, one sample per well
Field QA/QC Samples:	One field blank, one trip blank, one field duplicate

Holding Times

Holding times were acceptable for all sample analyses except the following:

- Organophosphorus pesticides, all samples
- Chlorinated herbicides, sample 90042-1190-G1

The non-conformance summary states that the sample for chlorinated herbicides and the organophosphorus pesticide samples were reextracted after the holding times expired because the original analyses showed low surrogate recoveries.

Detection Limits

The detection limits and quantitation limits reported were equivalent to those proposed in the DQOs with the exception of thallium and tin. The thallium (200 μg/L verses 20 μg/L) and tin (50 μg/L verses 30 μg/L) detection limits were greater than proposed.

Blanks

No analytes were reported in any blanks.

Assessment

The second quarter ground water monitoring compliance data are judged to be **ACCEPTABLE** for their intended use of determining the presence and concentrations of contaminants. Accuracy and precision of the data meet EPA Method QC criteria.

Samples which exceeded their holding time limits were originally extracted within time limits. The extended holding times do not appear to have adversely impacted the results. Quantitation limits for the sample analyses that exceeded holding time limits should be considered estimates. Trichlorofluoromethane and 2-chloroethyl vinyl ether were not reported with

the Method 8240 (VOC) analyses, and cyanide analyses were not reported. The elevated detection limits for thallium and tin do not adversely impact the data since these elements were not detected in any of the other quarterly monitoring samples at the proposed (lower) detection limits.

THIRD QUARTER

Date Samples Collected:	March 13, 1991
No. Samples:	Seven wells, one sample per well
Field QA/QC Samples:	One field blank, one trip blank, one field duplicate

Holding Times

Holding times were acceptable for all sample analyses except the following:

- Chlorinated pesticides/PCBs, all samples.

The non-conformance summary states that the aldrin and heptachlor spike sample analyses yielded low recoveries, therefore samples were reextracted after the holding times expired.

Detection Limits

The detection limits and quantitation limits reported were equivalent to those proposed in the DQOs with the exception of thallium and tin. The thallium (200 μg/L verses 20 μg/L) and tin (50 μg/L verses 30 μg/L) detection limits were greater than proposed.

Blanks

No analytes were reported in any blanks.

Assessment

The third quarter ground water monitoring compliance data are judged to be **ACCEPTABLE** for their intended use of determining the presence and concentration of contaminants. Accuracy and precision of the data were within EPA QC criteria for the methods.

Extended holding times for samples do not appear to have impacted the data. Quantitation limits for the sample analyses that exceeded holding time

limits should be considered as estimated. Cyanide analyses were not reported. The elevated detection limits for thallium and tin do not adversely impact the data since these elements were not detected in any of the other quarterly monitoring samples at the proposed (lower) detection limits.

FOURTH QUARTER

Date Samples Collected:	May 6, 1991
No. Samples:	Seven wells, one sample per well
Field QA/QC Samples:	One field blank, one trip blank, one field duplicate

Holding Times

Holding times were acceptable for all sample analyses.

Detection Limits

The detection limits and quantitation limits reported were equivalent to those proposed in the DQOs.

Blanks

The only analyte reported in the blanks was zinc at a concentration of 23 μg/L in the field blank.

Assessment

The fourth quarter ground water monitoring compliance data are judged to be **ACCEPTABLE** for their intended use of determining the presence and concentration of contaminants. Accuracy and precision of the analyses were within EPA QC guidelines for the methods.

Cyanide analyses were not reported. Zinc concentrations reported in samples from wells A, B, C, D, and F should be considered as nondetected based on the field blank contamination.

FIFTH QUARTER

Date Samples Collected:	August 16, 1991 (metals only), October 1, 1991
No. Samples:	Seven wells, one sample per well
Field QA/QC Samples:	One field blank, one trip blank, one field duplicate

Holding Times

Holding times were acceptable for all sample analyses

Detection Limits

The detection limits and quantitation limits reported were equivalent to those proposed in the DQOs.

Blanks

No analytes were reported in any blanks.

Assessment

The fifth quarter ground water monitoring compliance data are judged to be **ACCEPTABLE** for their intended use of determining the presence and concentration of contaminants. Accuracy and precision of the data were within EPA QC guidelines for the methods.

Sample containers for VOC and pesticide/herbicide analyses collected on August 16 were received broken and/or warm at the laboratory, therefore only the metals analyses were conducted. The VOC and pesticide/herbicide sample containers collected on October 1 from wells A1, E1, and the field blank were broken in transit to the laboratory, therefore these analyses were not conducted.

OVERALL DATA EVALUATION

A review of data presented in five quarterly monitoring reports showed conformance with the EPA approved Project Plan (HWA 1990) for the YARL site.

The data are judged to be suitable for the purpose of determining the presence and concentrations of contaminants in ground water for site closure. The accuracy and precision of the data were within the data quality objectives established for the project. The completeness of the data was 100 percent for metals, and approximately 95 percent for other parameters. Replicate and matrix spike/matrix spike duplicate results indicated precisions within acceptable EPA limits. Surrogate recoveries indicate acceptable accuracies. The detection and quantitation limits met project objectives and were low enough to determine if contamination of ground water had occurred. Occurrences of nonconformance were judged to be nonsubstantial in frequency and degree and do not appear to compromise the acceptability of the data.

REFERENCES

Hong West and Associates. 1991. Quarterly Ground Water Monitoring Report, Yakima Agricultural Research Laboratory, Prepared for USDA Quarter No. 5. October. (November 1, 1991). Project No. 90042.

Hong West and Associates. 1991. Quarterly Ground Water Monitoring Report, Yakima Agricultural Research Laboratory, Prepared for USDA Quarter No. 4. May. (July 30, 1991). Project No. 90042.

Hong West and Associates. 1991. Quarterly Ground Water Monitoring Report, Yakima Agricultural Research Laboratory, Prepared for USDA Quarter No. 3. April. (May 3, 1991). Project No. 90042.

Hong West and Associates. 1990. Quarterly Ground Water Monitoring Report, Yakima Agricultural Research Laboratory, Prepared for USDA Quarter No. 2. November. (January 23, 1991). Project No. 90042.

Hong West and Associates. 1990. Quarterly Ground Water Monitoring Report, Yakima Agricultural Research Laboratory, Prepared for USDA Quarter No. 1. August. (October 10, 1990). Project No. 90042.

Hong West and Associates. 1990. Disposal of the Hazardous Waste Septic System, in Yakima, Washington. Project Plan. Exhibit B, Sampling and Analysis Plan. Prepared by Hong West and Associates.

U.S. Environmental Protection Agency. 1988a. Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses. Prepared for the Hazardous Sites Evaluation Division by the USEPA Data Review Work Group.

U.S. Environmental Protection Agency. 1988b. Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses. Prepared for the Hazardous Sites Evaluation Division by the USEPA Data Review Work Group.

U.S. Environmental Protection Agency. 1986. Test Methods for Evaluating Solid Waste Physical/Chemical Methods. SW-846. USEPA Office of Solid Waste and Emergency Response, Washington D.C.

DATA PACKAGE
VOLATILE ORGANICS - METHOD 8240

CLIENT: HONG WEST & ASSOCIATES

CASE #: 207/1501-1514

Prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell, WA 98011

VOLATILE ORGANICS - METHOD 8240
CASE NARRATIVE

CLIENT: Hong West & Associates
CASE #: 207/1501-1514

Eleven soil and two water samples were analyzed for Volatile Organics by EPA Method 8240. All soil samples were extracted and analyzed within method hold times .

Water sample #207/1505 was analyzed within hold time on 8/7/92 but had to be diluted and reanalyzed outside of hold time on 8/19/92 because of a high concentration of Acetone in the sample. The results of both the original and reanalysis have been included in the data package.

Water sample #207/1506 was originally shot into the GCMS within hold time on 8/7/92. The analysis on 8/7/92 ,however,was not completed because the excessive amount of Acetone in the sample saturated the Mass detector and caused the Mass Spec filament to burn out. The sample was reanalyzed outside of hold time on 8/19/92. The results for Acetone were offscale on 8/19/92 and the sample was diluted and reanalyzed on 8/26/92. The results for both reanalyses have been included in the data package.

Water QC results for the soil samples were within acceptable limits.

Soil QC results were within acceptable limits with the exception of low recoveries for the 1,1-DCE Matrix Spikes. All other spikes were acceptable.

The data package has been designed to provide sufficient information for stand-alone data validation under SW 846 Method 8240.

" I certify that this data package is in compliance with the Method stated above both technically and for completeness,for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Dennis D. Wells ,QA Director

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HONG WEST & ASS.

ADDRESS:

PHONE: 774-0106 FAX: 775-7506

PROJECT NAME: YARL

PROJECT NUMBER: 90042

SAMPLED BY: D. KOVANEN

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pest. 8080	8240	Cl. Herb. 8150	8140	TCLP Extraction	TCLP Volatile Extraction				COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DP-1	2-27-92/1330	S	3	X	X	X	X	X	X	DK			8140 contained	2071501
2 DP-2	1340	S	3	X	X	X	X	X	X	DK			in 4 oz.	1502
3 DP-3	1420	S	3	X	X	X	X	X	X	D			bottles.	1503
4 DP-3 A	1410	S	2					X	X		DK			1504
5 DP-4	1400	W	3	X	X	X	X	X	X	DK.				1505
6 DP-5	1430	W	3	X	X	X	X	X	X	DK.				1506
7 DF-6/MS/MSD	1540	S	3	X	X	X	X	X	X	DK				1507
8 DF-7	1538	S	3	X	X	X	X	X	X	DK				1508
9 DF-8	1535	S	3	X	X	X	X	X	X	DK			TOTAL # OF CONTAINERS	1509
10 DF-9	1530	S	3	X	X	X	X	X	X	DK			RECEIVED?	1510

RELINQUISHED BY: D. Kovanen DATE: 7-28-92
FIRM: HWA TIME: 1510

RECEIVED BY: P. O'Neill DATE: 07-28-92
FIRM: NCA TIME: 3:10

RELINQUISHED BY: DATE:
FIRM: TIME:

RECEIVED BY: DATE:
FIRM: TIME:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

PAGE 1 OF 2

Ice was melted DM

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CHAIN OF CUSTODY REPORT

CLIENT: HWA

ADDRESS:

PHONE: 774-0106 FAX:

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

SAME DAY (2-8 HR.) RUSH	(+150%)	
NEXT DAY RUSH	(+100%)	
2 DAY RUSH	(+80%)	
3 DAY RUSH	(+60%)	
5 DAY RUSH	(+40%)	
10 DAY STANDARD	(LIST PRICE)	X

PROJECT NAME:

PROJECT NUMBER: 90042

SAMPLED BY: D.K.

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pet. 8080	8240	8150	8270						COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DF-10	7-27-92/1525	S	3	X	X	X	X							202011
2 DF-11	1520			X	X	X	X							1512
3 DF-12	1510			X	X	X	X							1513
4 DF-13	1500			X	X	X	X							1514
5														
6														
7														
8														
9													TOTAL # OF CONTAINERS RECEIVED?	
10														

RELINQUISHED BY: D. Kovanen DATE: 7-28-92
FIRM: HWA TIME: 1510

RECEIVED BY: B. Nelly DATE: 07-28-92
FIRM: NCA TIME: 310

RELINQUISHED BY: DATE:
FIRM: TIME:

RECEIVED BY: DATE:
FIRM: TIME:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

PAGE 2 OF 2

Ice was melted DH

SAMPLE RESULTS

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-1	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1501	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	7.0
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	N.D.
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	94
Toluene-d8	91
4-Bromofluorobenzene	87

QUANT REPORT

Operator ID: GLEN
Output File: ^H1007::A6
Data File: >H1007::A1
Name: 100ul 2071501
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 13:04
Injected at: 920810 12:34
Dilution Factor: 1.00000
Instrument ID: MS-1

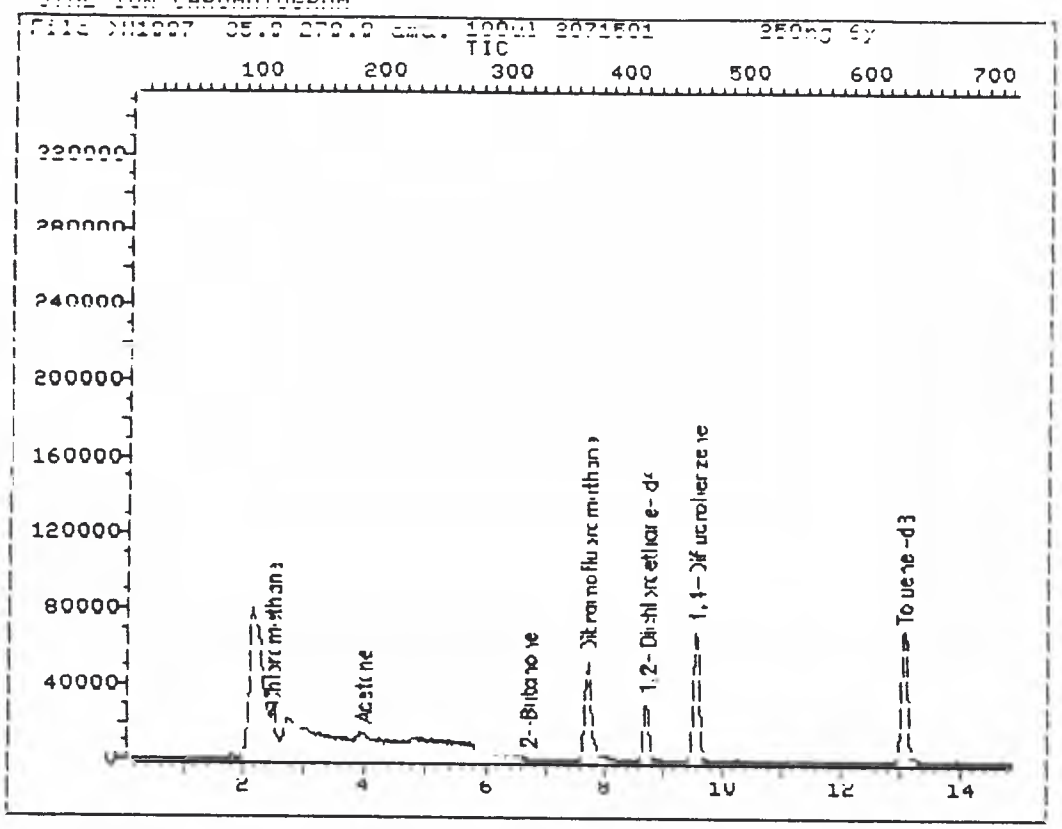
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.71	371	122468	250.00	ng	94
3)	Chloromethane	2.48	116	1160	~~6.93~~	~~ng~~ ND	92
4)	1,2-Dichloroethane-d4	8.73	421	78087	234.81	ng	94
9)	Acetone	3.98	189	30485	703.21	ng 70 ug/kg	92
19)	2-Butanone	6.69	321	2283	~~41.73~~	~~ng~~ ND	88
28)	*1,4-Difluorobenzene	9.56	462	183827	250.00	ng	97
37)	Toluene-d8	13.07	634	167206	226.47	ng	92
38)	*Chlorobenzene-d5	16.91	823	153568	250.00	ng	98
57)	4-Bromofluorobenzene	20.05	977	94924	216.18	ng	85
58)	*1,4-Dichlorobenzene-d4	21.99	1072	96034	250.00	ng	99
75)	1-Fluoronaphthalene	26.67	1302	224961	251.91	ng	100

* Compound is ISTD

NV 5/22

TOTAL ION CHROMOTOGRAM



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Misc: 250ng 6v

Quant Output File: ^H1007::A6
Instrument ID: MS-1

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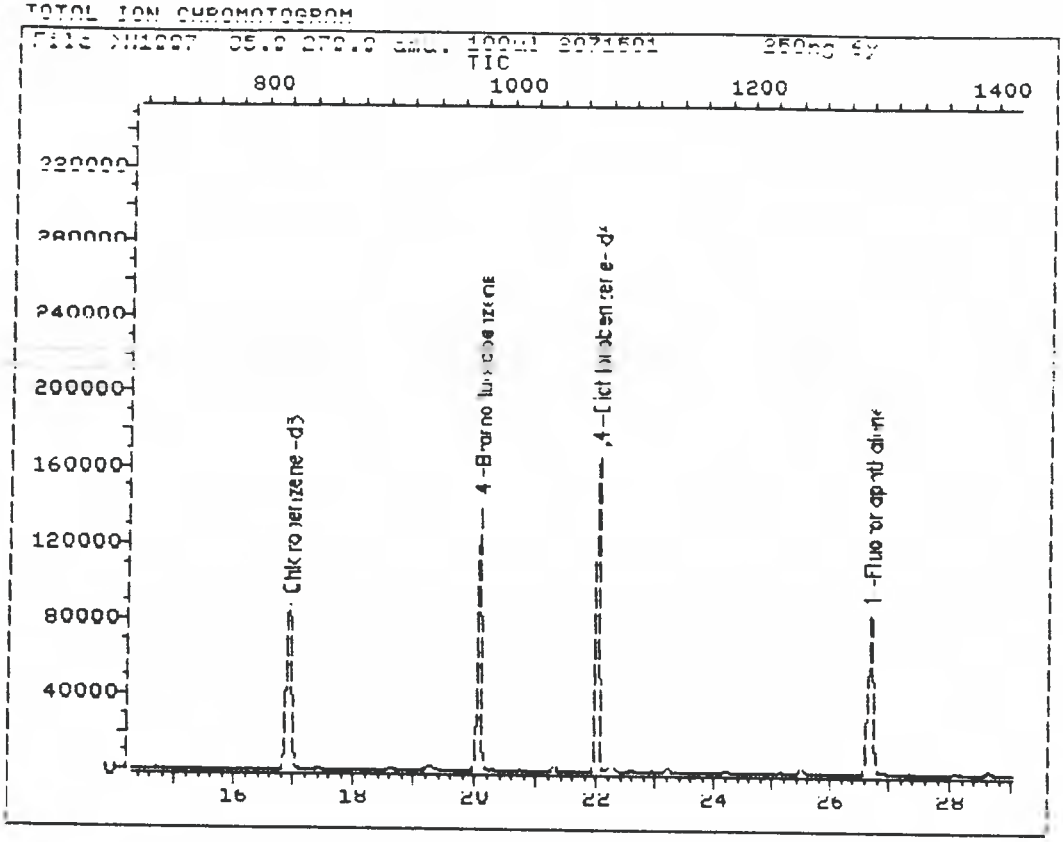
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 13:04
Injected at: 920810 12:34

TOTAL ION CHROMOTOGRAM



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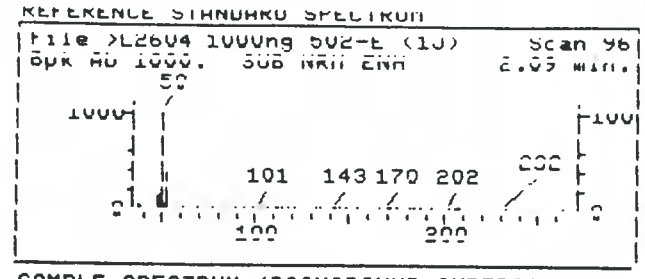
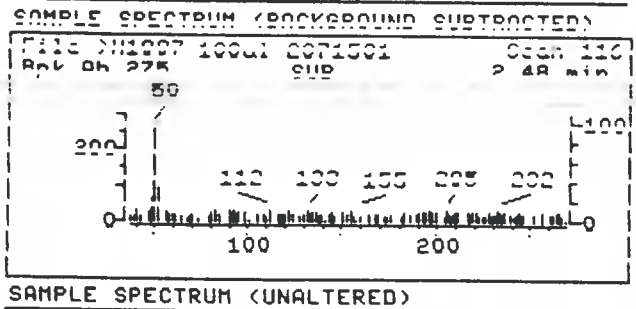
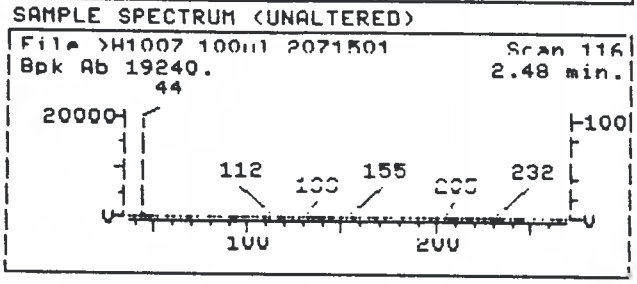
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

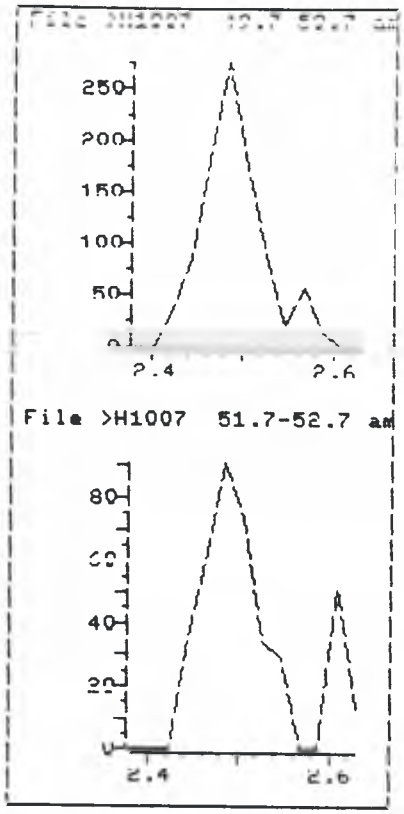
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 13:04
Injected at: 920810 12:34









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Injected at: 920810 12:34
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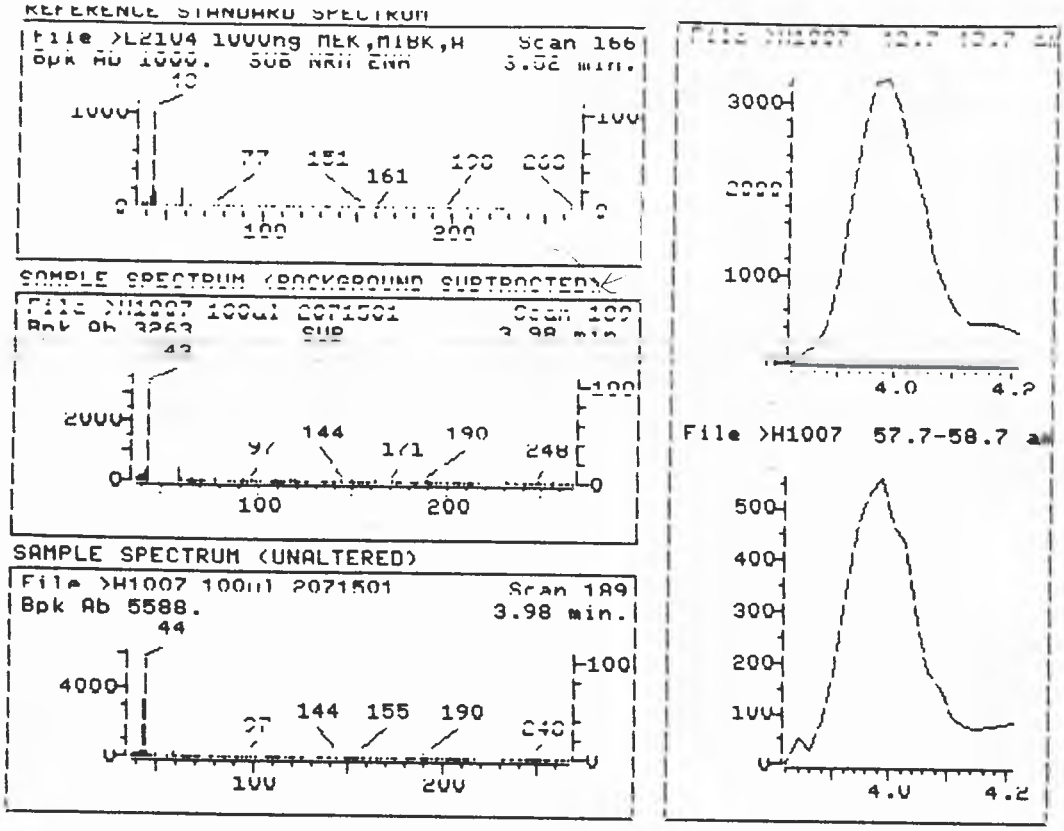
Quant Output File: ^H1007::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 3
Compound Name : Chloromethane
Scan Number : 116
Retention Time: 2.48 min.
Quant Ion : 50.0
Area : 1160
Concentration : 6.93 ng
q-value : 92



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Injected at: 920810 12:34
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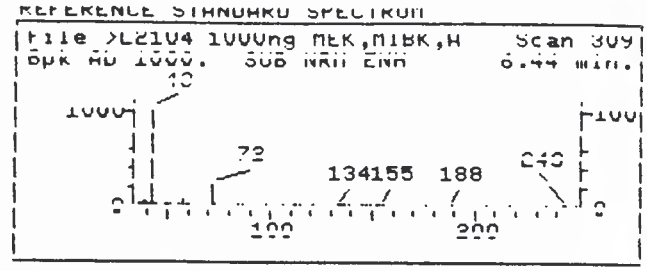
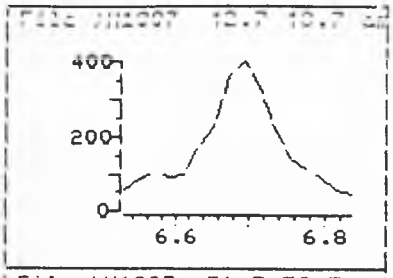
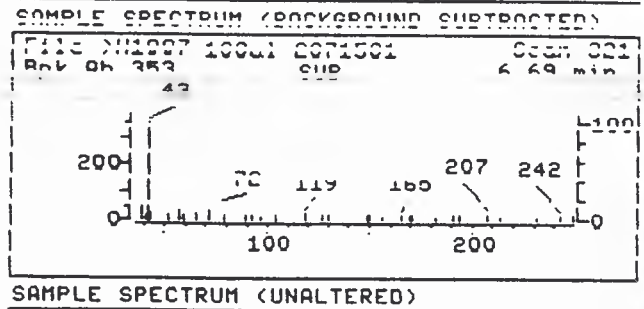
Quant Output File: ^H1007::A6
Instrument ID: MS-1

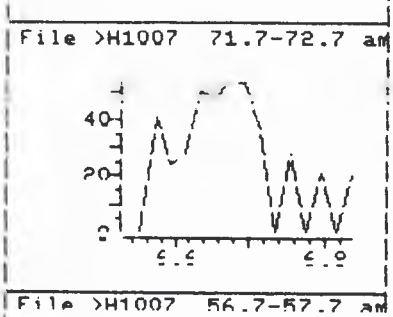
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

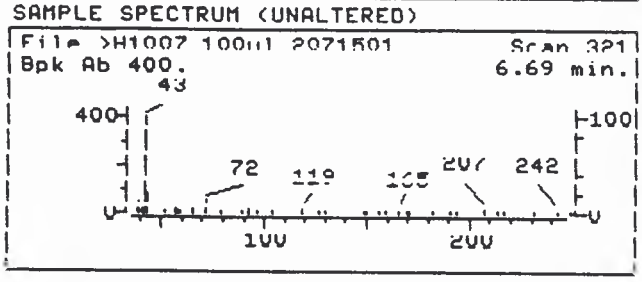
Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 30485
Concentration : 703.21 ng
q-value : 92

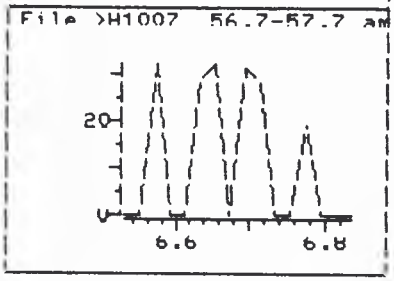












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Misc: 250ng 6v
Quant Time: 920810 13:04
Injected at: 920810 12:34
Last Qcal Time: <none>

Quant Output File: ^H1007::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 321
Retention Time: 6.69 min.
Quant Ion : 43.0
Area : 2283
Concentration : 41.73 ng
q-value : 88

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	DP-2	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1502	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	4.2
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.58
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	95
Toluene-d8	91
4-Bromofluorobenzene	87

QUANT REPORT

Operator ID: GLEN
Output File: ^H1008::A6
Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v

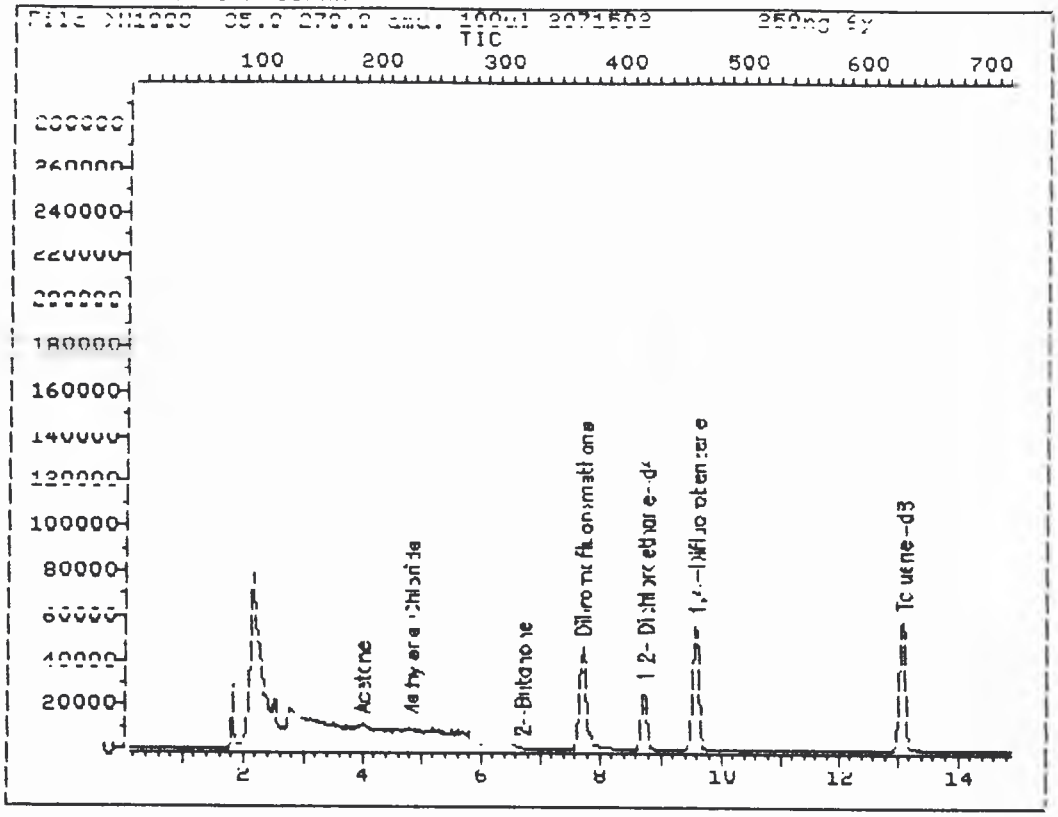
Quant Rev: 7
Quant Time: 920810 13:38
Injected at: 920810 13:08
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.71	371	100856	250.00	ng	94
4)	1,2-Dichloroethane-d4	8.73	421	64703	236.25	ng	95
9)	Acetone	3.98	189	14868	416.46	ng	4.2mg/kg 99
14)	Methylene Chloride	4.83	230	1980	~~10.00 ng~~	ND	80
19)	2-Butanone	6.69	321	2624	58.24	ng	0.58mg/kg 95
28)	*1,4-Difluorobenzene	9.56	462	151180	250.00	ng	95
37)	Toluene-d8	13.09	635	138427	227.97	ng	94
38)	*Chlorobenzene-d5	16.91	823	128085	250.00	ng	97
57)	4-Bromofluorobenzene	20.05	977	79876	218.10	ng	91
58)	*1,4-Dichlorobenzene-d4	21.98	1072	79741	250.00	ng	98
75)	1-Fluoronaphthalene	26.67	1302	179979	242.72	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v

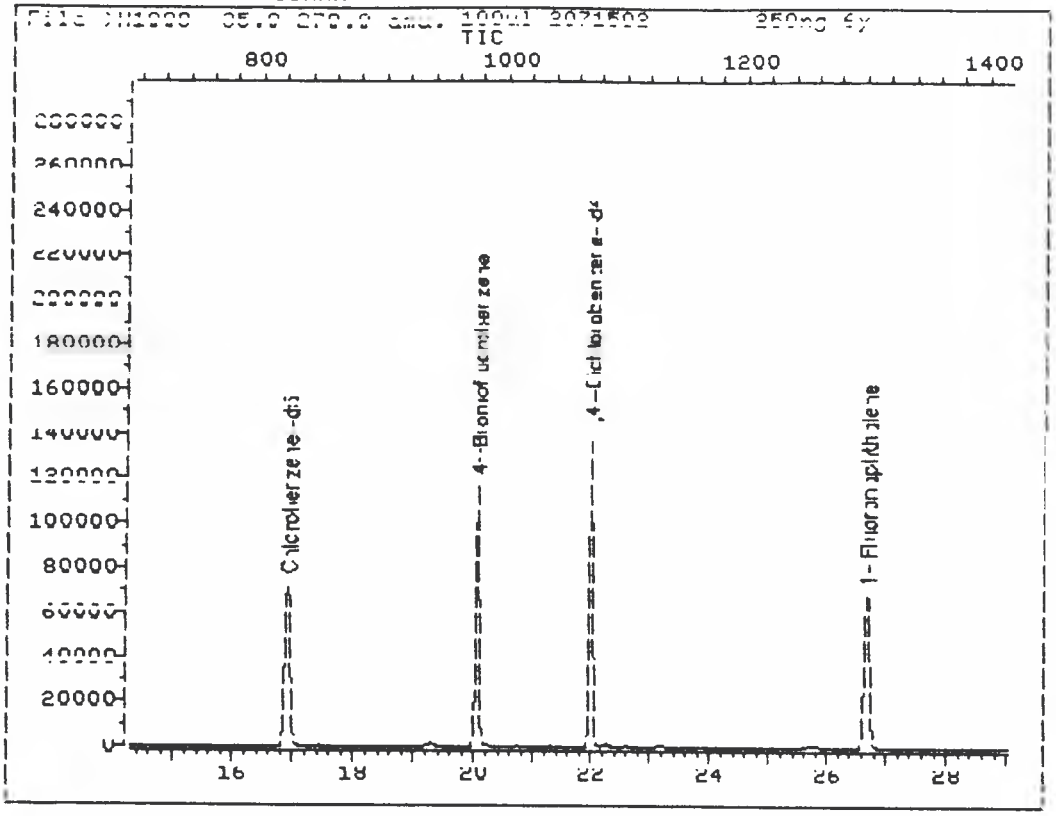
Quant Output File: ^H1008::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 13:38
Injected at: 920810 13:08

TOTAL ION CHROMOTOGRAM



Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v

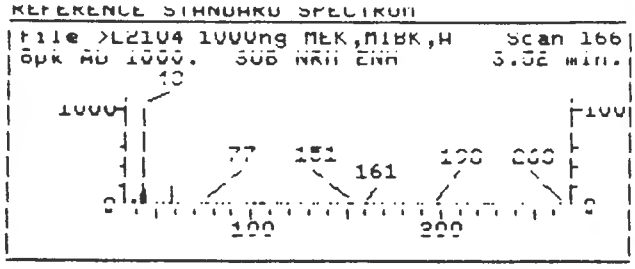
Quant Output File: ^H1008::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

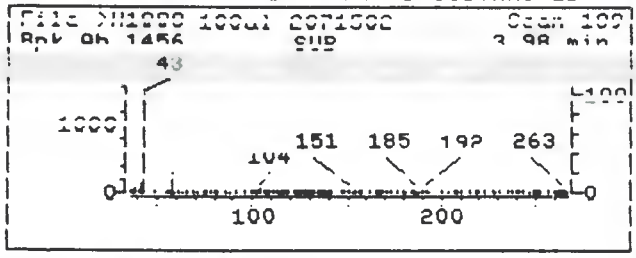
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 13:38
Injected at: 920810 13:08

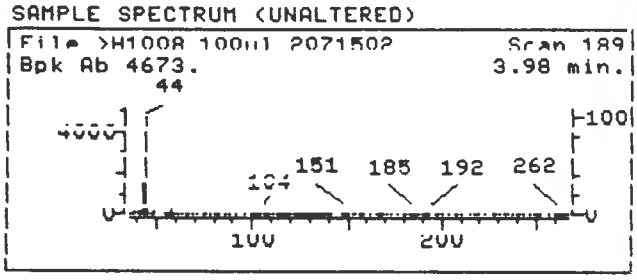
REFERENCE STANDARD SPECTRUM

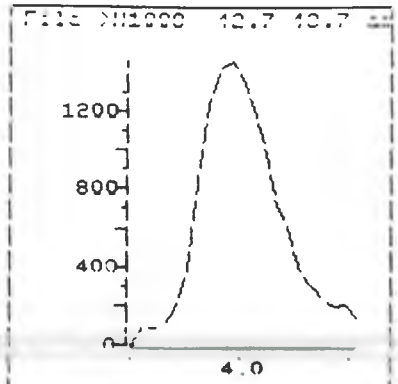


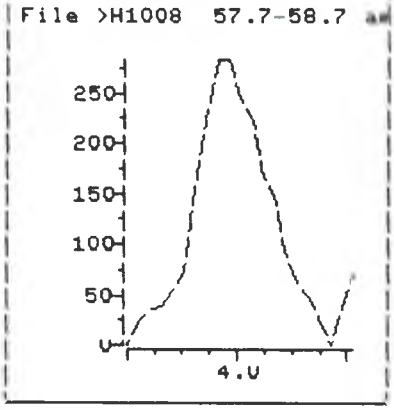
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





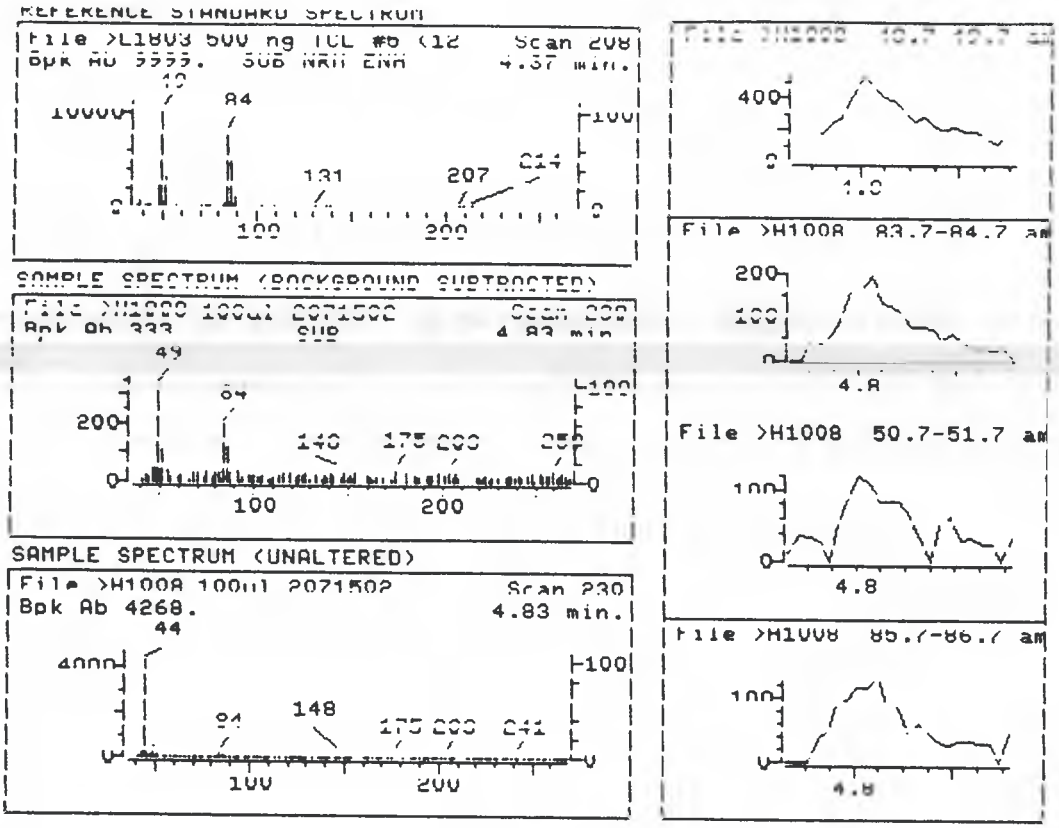


Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v
Quant Time: 920810 13:38
Injected at: 920810 13:08
Last Qcal Time: <none>

Quant Output File: ^H1008::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 14868
Concentration : 416.46 ng
q-value : 99

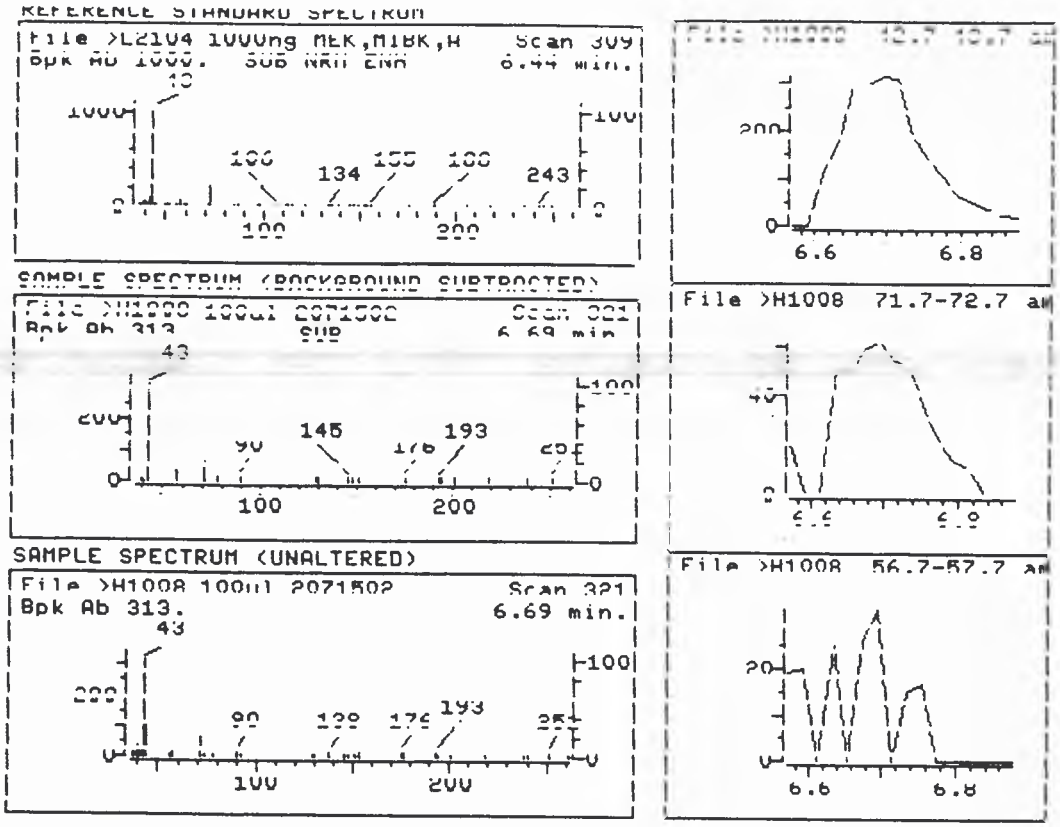


Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v
Quant Time: 920810 13:38
Injected at: 920810 13:08
Last Qcal Time: <none>

Quant Output File: ^H1008::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 230
Retention Time: 4.83 min.
Quant Ion : 84.0
Area : 1980
Concentration : 10.00 ng
q-value : 80



Data File: >H1008::A1
Name: 100ul 2071502
Misc: 250ng 6v
Quant Time: 920810 13:38
Injected at: 920810 13:08
Last Qcal Time: <none>

Quant Output File: ^H1008::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 321
Retention Time: 6.69 min.
Quant Ion : 43.0
Area : 2624
Concentration : 58.24 ng
q-value : 95

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-3	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1503	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	2.5
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.55
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	0.22
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	0.13

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	94
Toluene-d8	90
4-Bromofluorobenzene	88

2071501.HWA <20>

QUANT REPORT

Operator ID: GLEN
Output File: ^H1009::A6
Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v

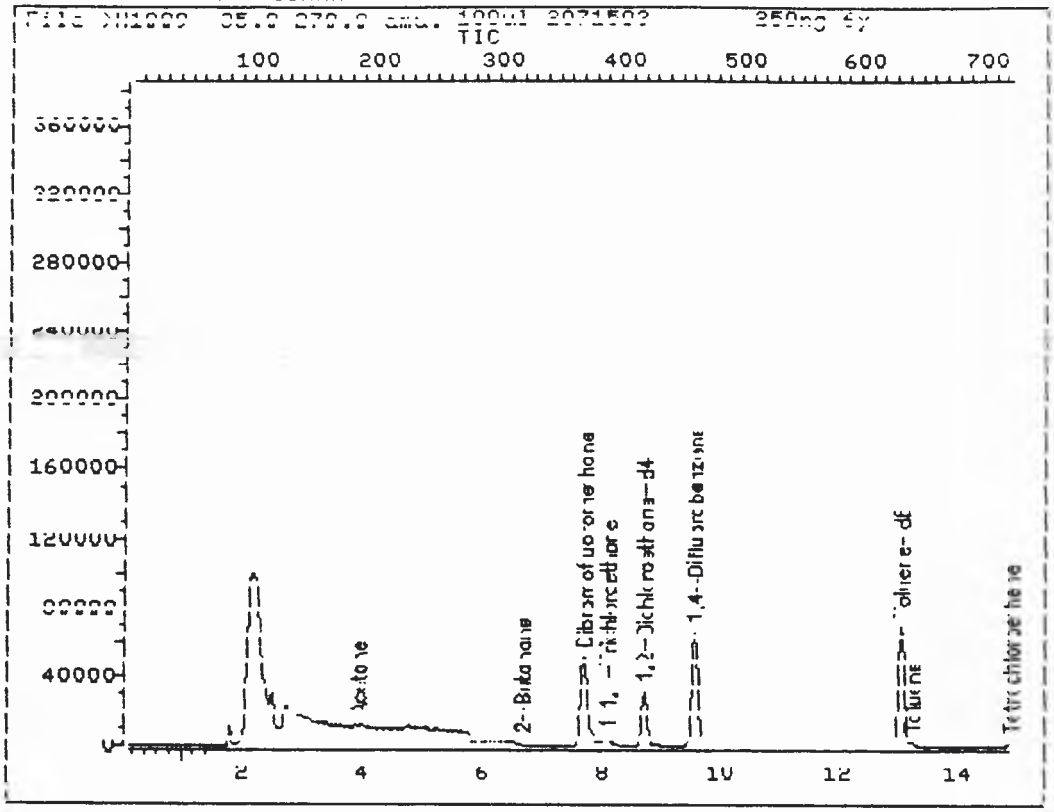
Quant Rev: 7
Quant Time: 920810 14:12
Injected at: 920810 13:42
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.72	371	121759	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.72	420	77843	235.44	ng	94
9)	Acetone	3.95	187	10785	250.23	ng 2.5 mg/kg	98
19)	2-Butanone	6.68	320	3027	55.65	ng 0.35 mg/kg	91
24)	1,1,1-Trichloroethane	8.11	390	12343	22.56	ng 0.22 mg/kg	92
28)	*1,4-Difluorobenzene	9.55	461	181269	250.00	ng	95
37)	Toluene-d8	13.08	634	164621	226.11	ng	94
38)	*Chlorobenzene-d5	16.91	822	151451	250.00	ng	95
39)	Toluene	13.26	643	2570	~~6.11 ng~~	ND	96
44)	Tetrachloroethene	14.89	723	1856	~~6.44 ng~~	ND	96
50)	m,p-Xylene	17.41	847	4530	13.52	ng 0.13 mg/kg	96
51)	o-Xylene	18.58	904	1788	~~5.14 ng~~	ND	81
57)	4-Bromofluorobenzene	20.06	977	94807	218.93	ng	95
58)	*1,4-Dichlorobenzene-d4	22.00	1072	94150	250.00	ng	99
75)	1-Fluoronaphthalene	26.66	1301	213498	243.86	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v

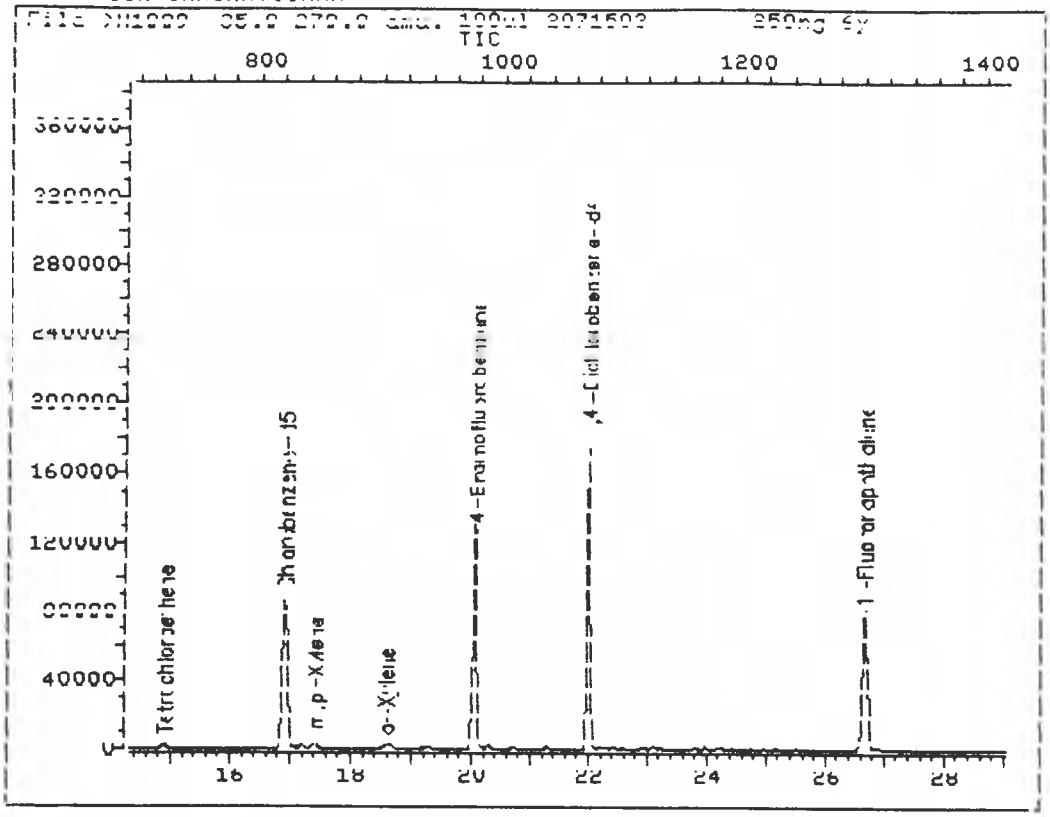
Quant Output File: ^H1009::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 14:12
Injected at: 920810 13:42

TOTAL ION CHROMATOGRAM



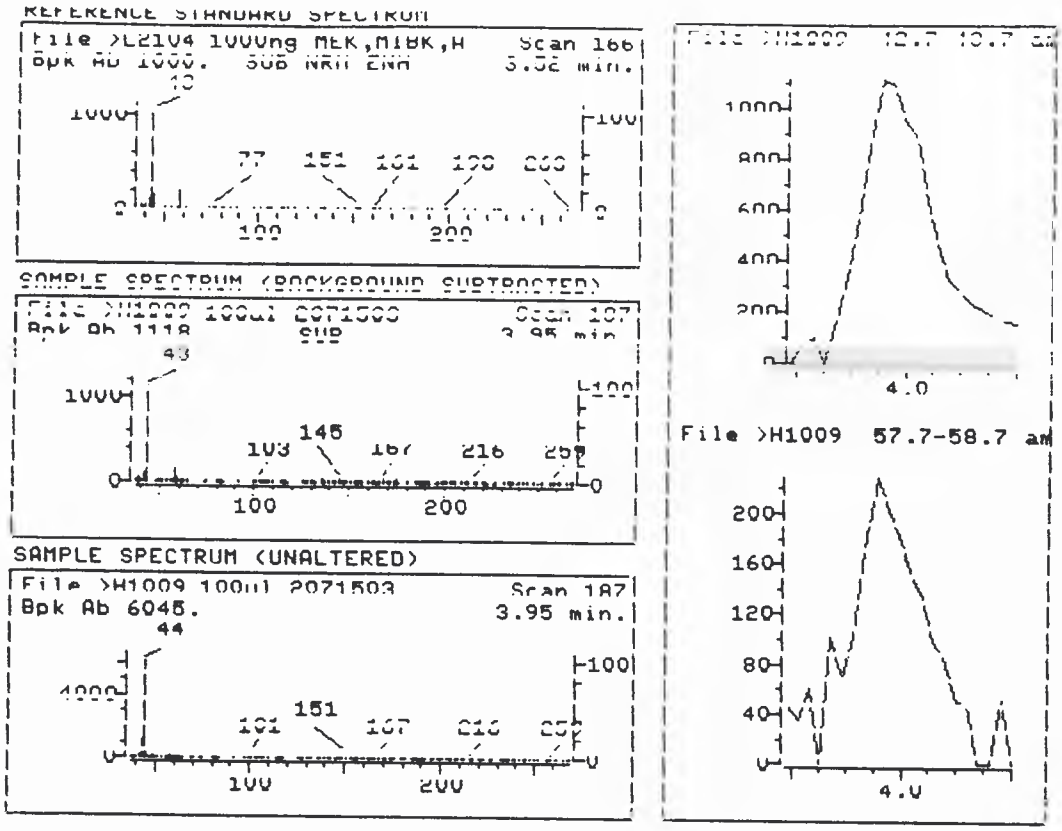
Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 14:12
Injected at: 920810 13:42

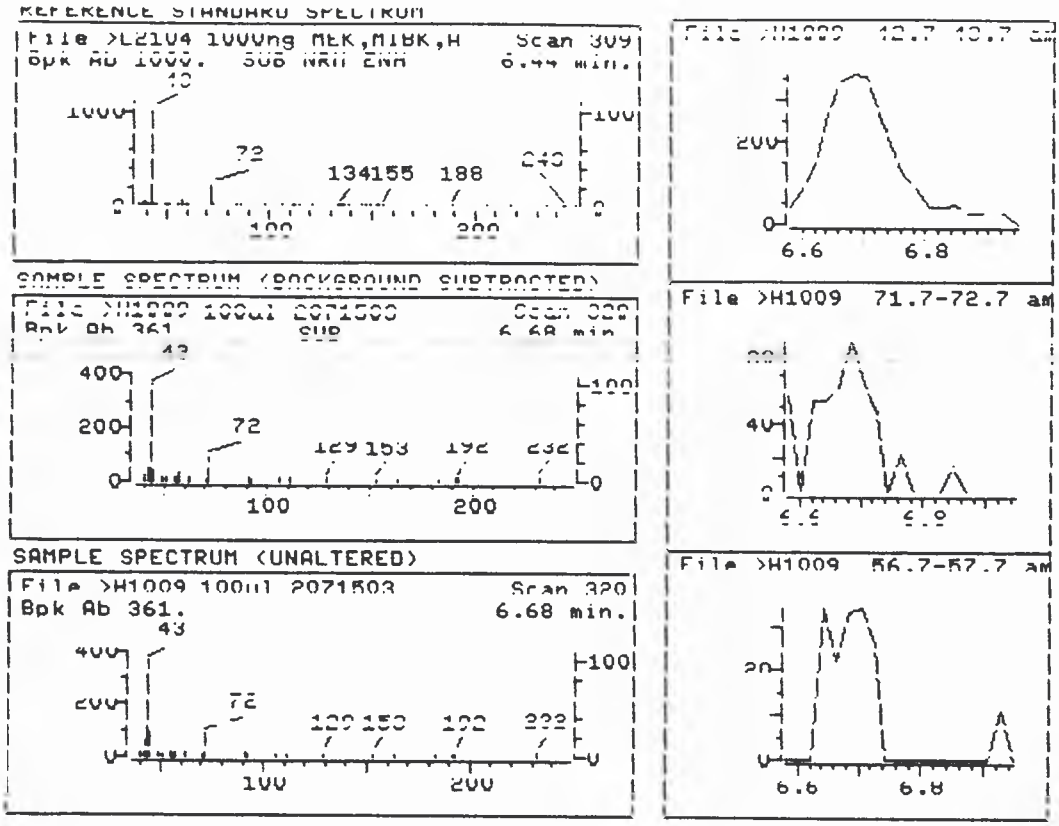


Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.95 min.
Quant Ion : 43.0
Area : 10785
Concentration : 250.23 ng
q-value : 98

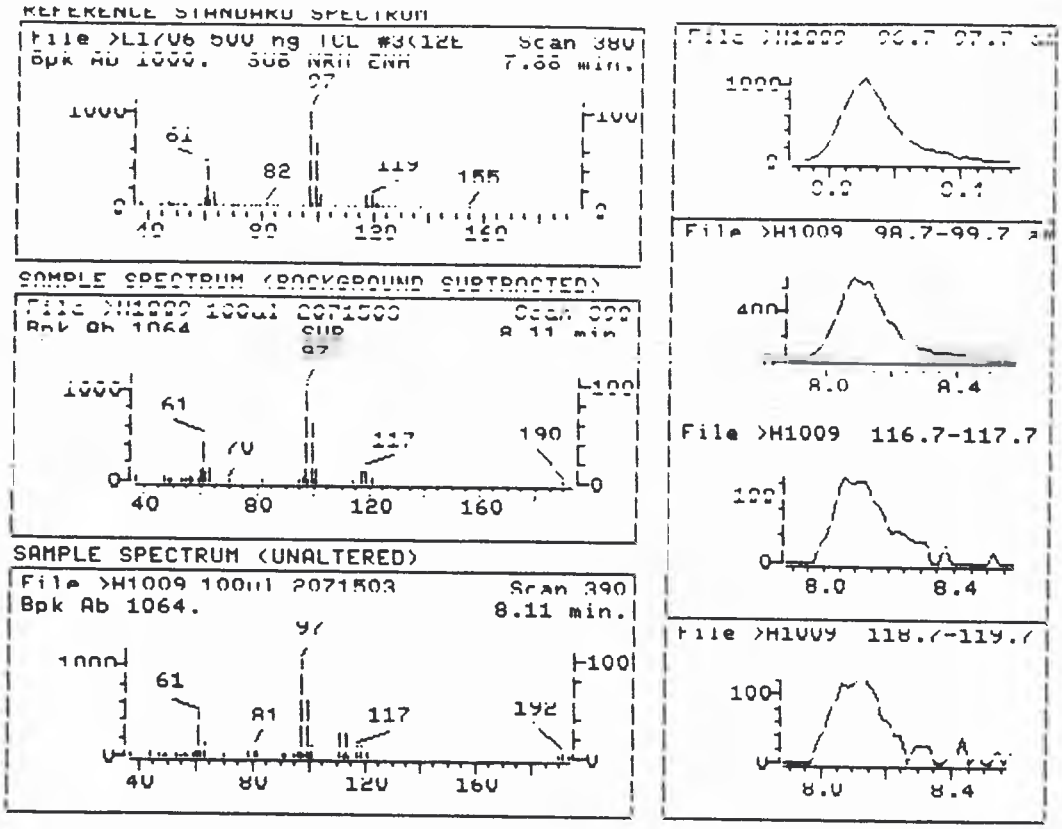


Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 320
Retention Time: 6.68 min.
Quant Ion : 43.0
Area : 3027
Concentration : 55.65 ng
q-value : 91

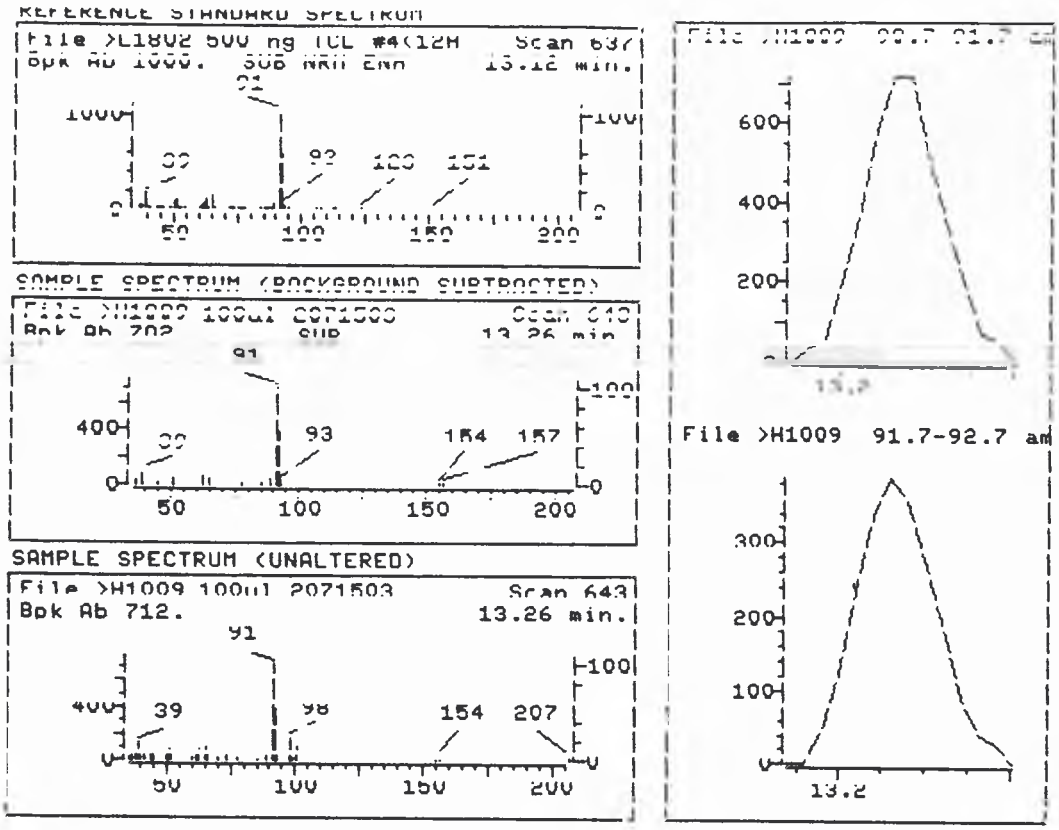


Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 24
Compound Name : 1,1,1-Trichloroethane
Scan Number : 390
Retention Time: 8.11 min.
Quant Ion : 97.0
Area : 12343
Concentration : 22.56 ng
q-value : 92



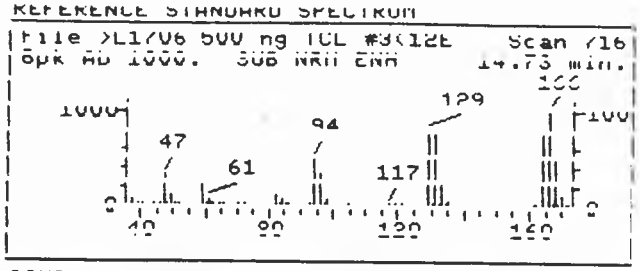
Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

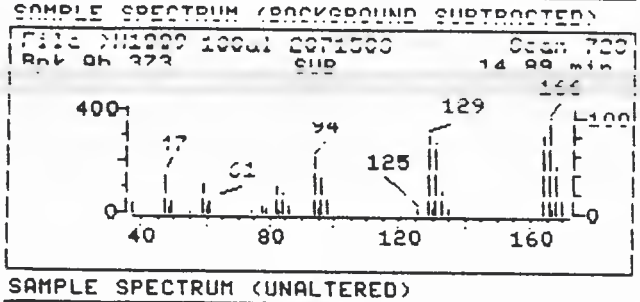
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 39
Compound Name : Toluene
Scan Number : 643
Retention Time: 13.26 min.
Quant Ion : 92.0
Area : 2570
Concentration : 6.11 ng
q-value : 96

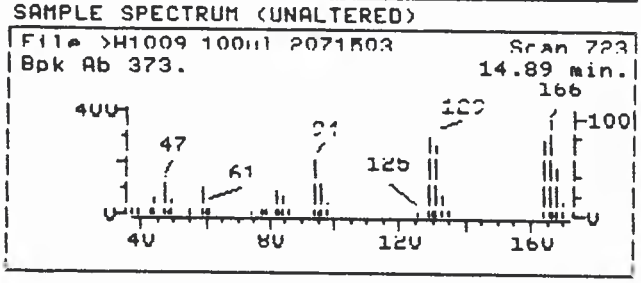
REFERENCE STANDARD SPECTRUM

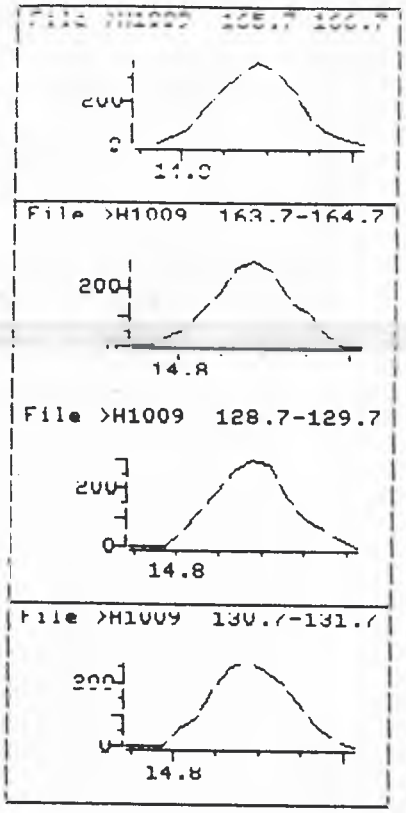


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



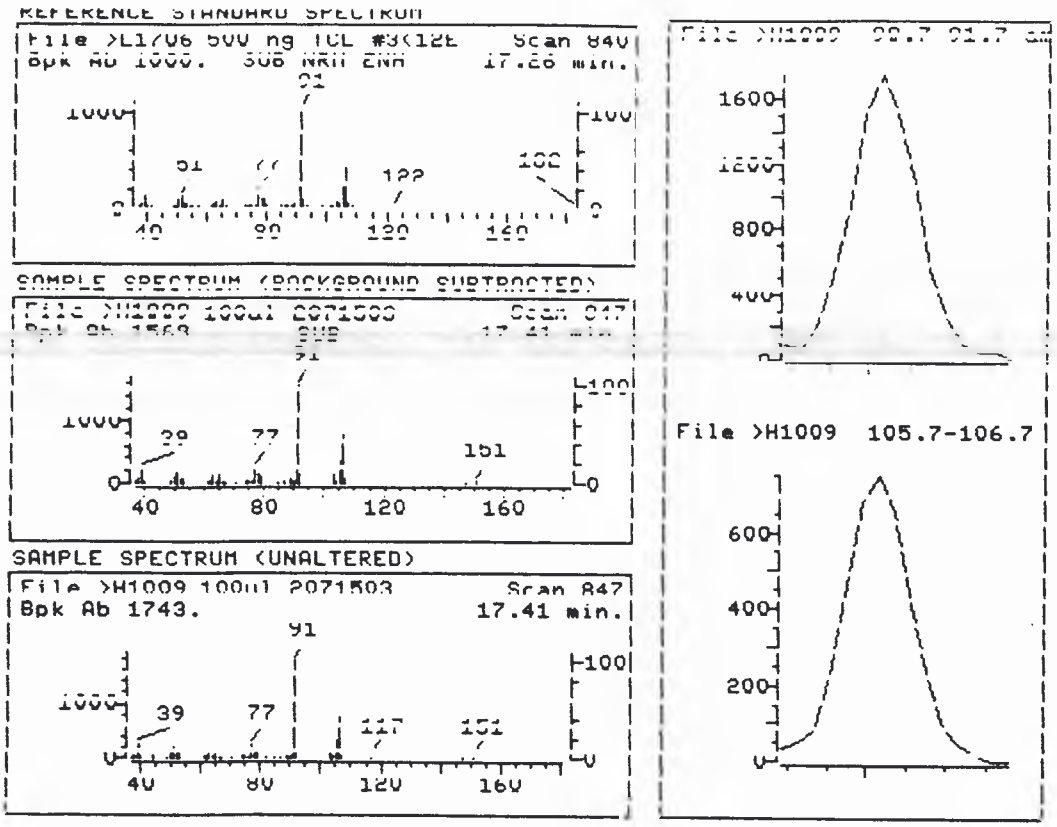


Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 44
Compound Name : Tetrachloroethene
Scan Number : 723
Retention Time: 14.89 min.
Quant Ion : 164.0
Area : 1856
Concentration : 6.44 ng
q-value : 96



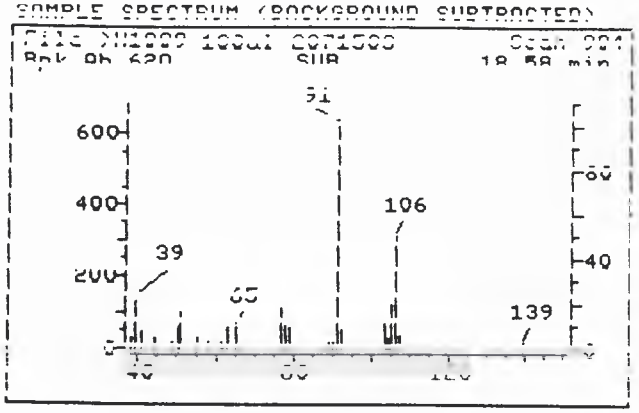
Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

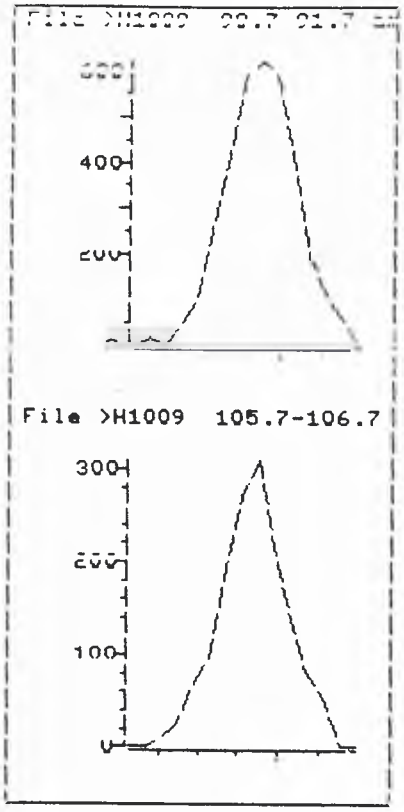
Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

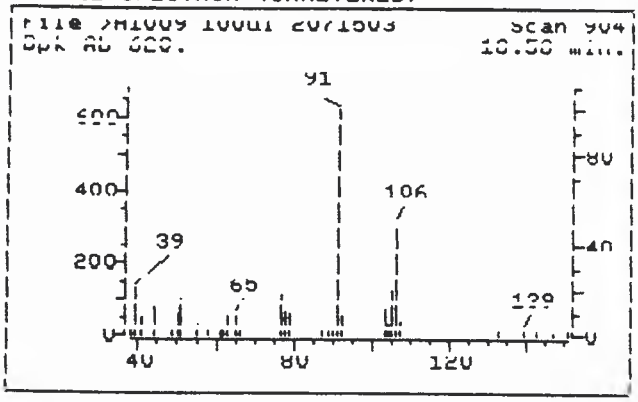
Compound No : 50
Compound Name : m,p-Xylene
Scan Number : 847
Retention Time: 17.41 min.
Quant Ion : 106.0
Area : 4530
Concentration : 13.52 ng
q-value : 96

SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)



Data File: >H1009::A1
Name: 100ul 2071503
Misc: 250ng 6v
Quant Time: 920810 14:12
Injected at: 920810 13:42
Last Qcal Time: <none>

Quant Output File: ^H1009::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 51
Compound Name : o-Xylene
Scan Number : 904
Retention Time: 18.58 min.
Quant Ion : 106.0
Area : 1788
Concentration : 5.14 ng
q-value : 81

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Water, DP-4	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 7, 1992
Attention: Doug Geller	Sample Number:	207-1505	Reported:	Aug 24, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit ug/l (ppb)	Sample Results ug/l (ppb)
Acetone	10	8,400
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis 1,2-Dichloroethene	2.0	N.D.
trans 1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis 1,3-Dichloropropene	2.0	N.D.
trans 1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	10	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	101
Toluene-d8	97
4-Bromofluorobenzene	94

Scot Cocanour
Laboratory Director

2071502.HWA <22>

QUANT REPORT

Operator ID: GLEN
Output File: ^H0719::A6
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920807 21:27
Injected at: 920807 20:57
Dilution Factor: 1.00000
Instrument ID: MS-1

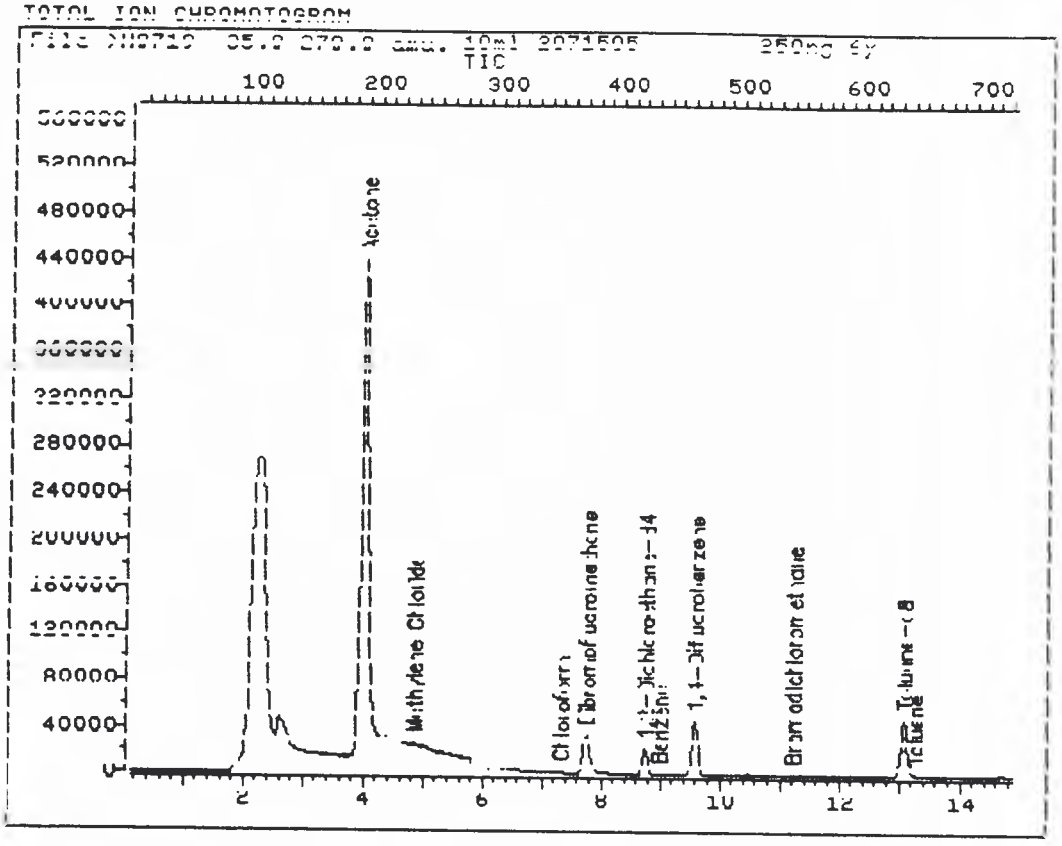
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: (none)

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.75	373	77442	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.74	422	53083	252.43	ng 101%	90
9)	Acetone	3.98	189	2315239	84457.92	ng 8445 ug/L	78
14)	Methylene Chloride	4.84	231	2074	~~13.64 ng~~	ND	77
22)	Chloroform	7.32	352	1863	~~5.25 ng~~	ND	90
28)	*1,4-Difluorobenzene	9.58	463	111679	250.00	ng	96
30)	Benzene	8.99	434	676	~~1.72 ng~~	ND	100
33)	Bromodichloromethane	11.21	543	1763	~~5.32 ng~~	ND	84
37)	Toluene-d8	13.08	635	109127	243.29	ng 97%	93
38)	*Chlorobenzene-d5	16.91	823	97556	250.00	ng	97
39)	Toluene	13.26	644	290	~~1.07 ng~~	ND	99
57)	4-Bromofluorobenzene	20.06	978	65778	235.82	ng 94%	90
58)	*1,4-Dichlorobenzene-d4	22.00	1073	59755	250.00	ng	98
75)	1-Fluoronaphthalene	26.68	1303	149680	269.37	ng	100

* Compound is ISTD

8/25/92

TOTAL ION CHROMATOGRAM



Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v

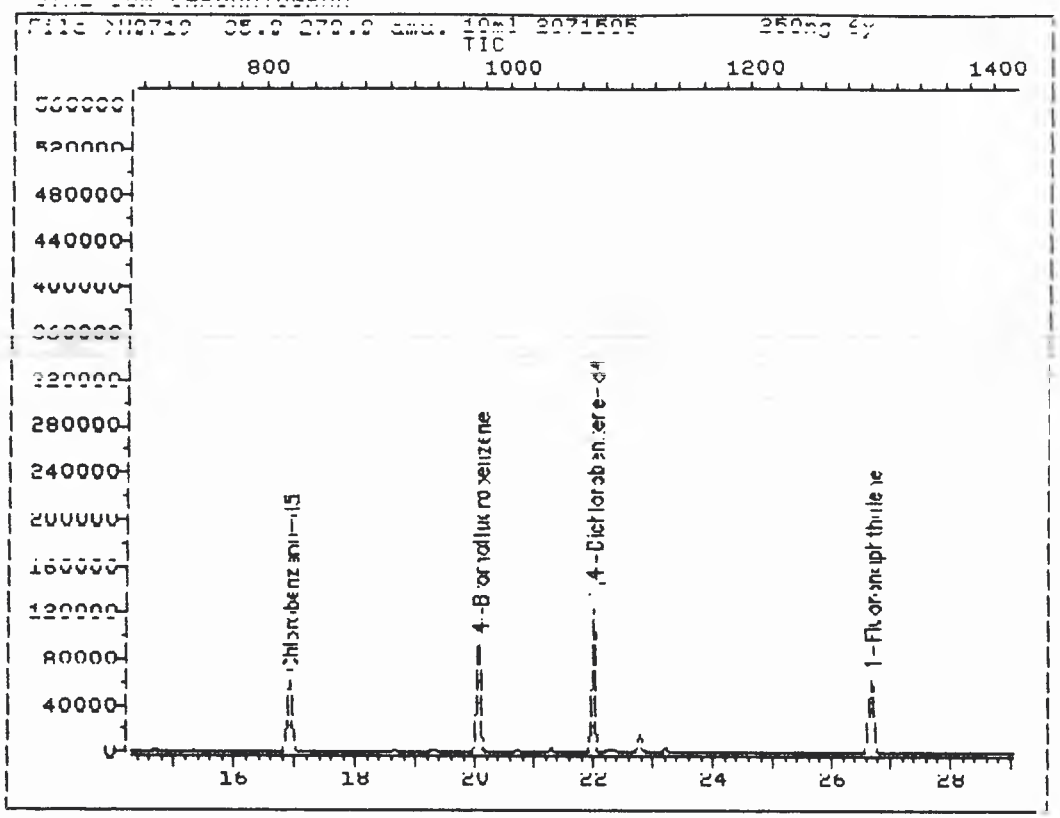
Quant Output File: ^H0719::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920807 21:27
Injected at: 920807 20:57

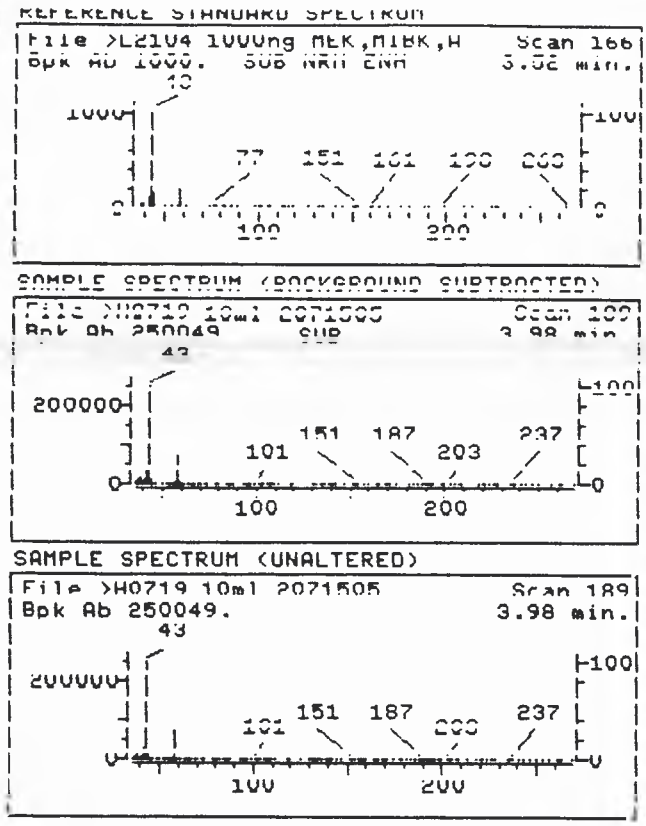
TOTAL ION CHROMOTOGRAM

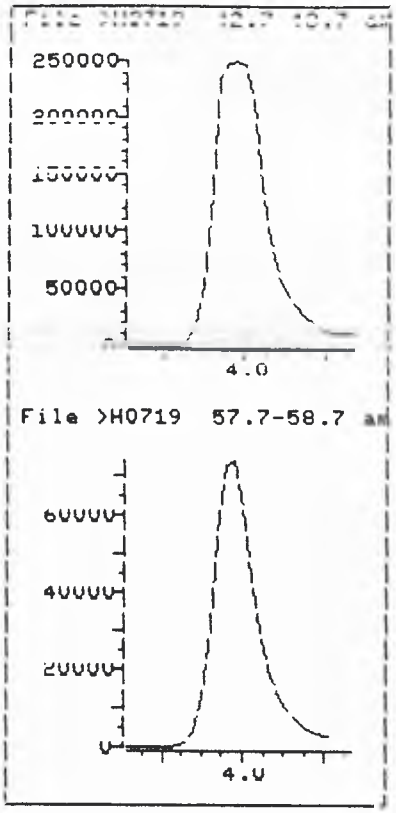


Data File: >H0719::A1 Quant Output File: ^H0719::A6
Name: 10ml 2071505 Instrument ID: MS-1
Misc: 250ng 6y

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920807 21:27
Injected at: 920807 20:57



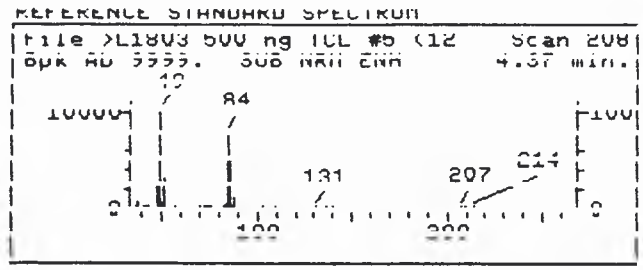


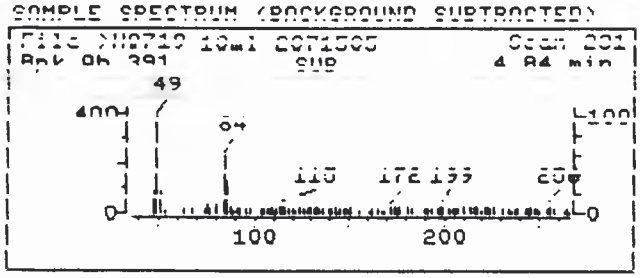
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

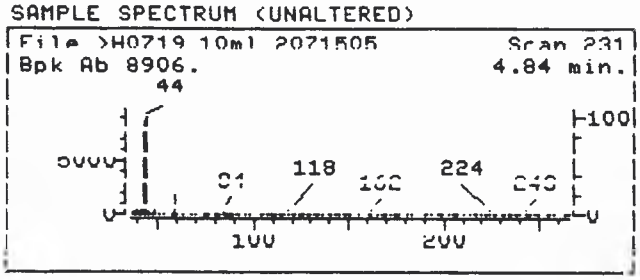
Quant Output File: ^H0719::A6
Instrument ID: MS-1

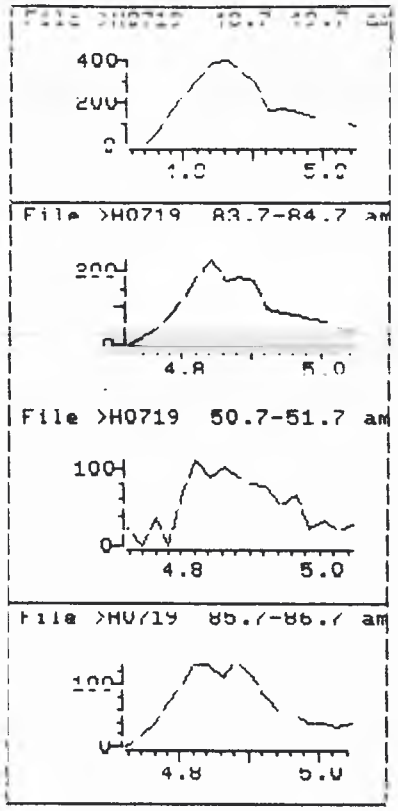
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 2315239
Concentration : 84457.92 ng
q-value : 78







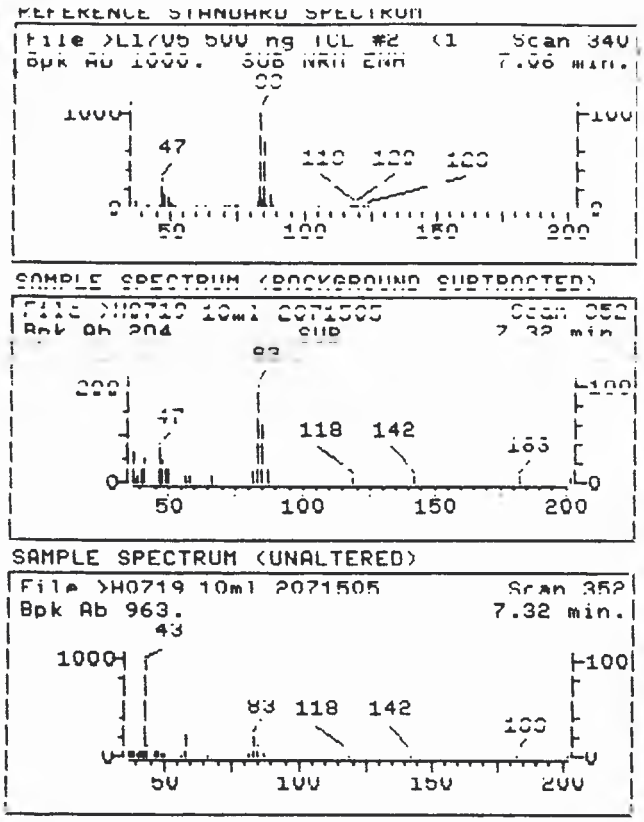


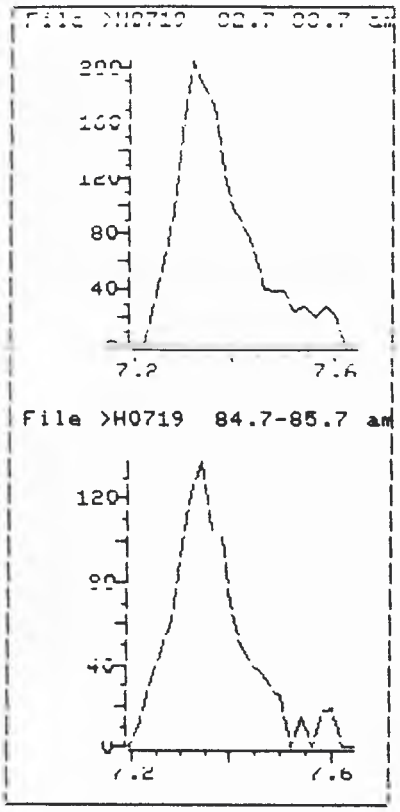
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

Quant Output File: ^H0719::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 231
Retention Time: 4.84 min.
Quant Ion : 84.0
Area : 2074
Concentration : 13.64 ng
q-value : 77





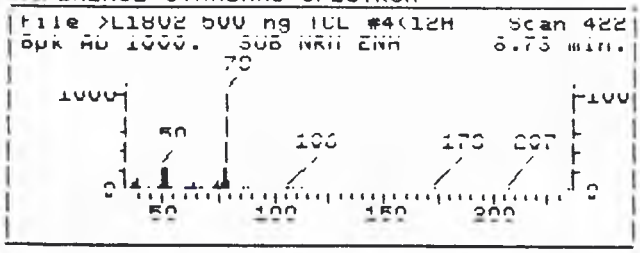
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

Quant Output File: ^H0719::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 22
Compound Name : Chloroform
Scan Number : 352
Retention Time: 7.32 min.
Quant Ion : 83.0
Area : 1863
Concentration : 5.25 ng
q-value : 90

REFERENCE STANDARD SPECTRUM



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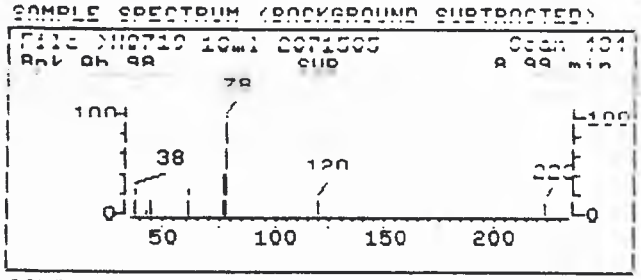

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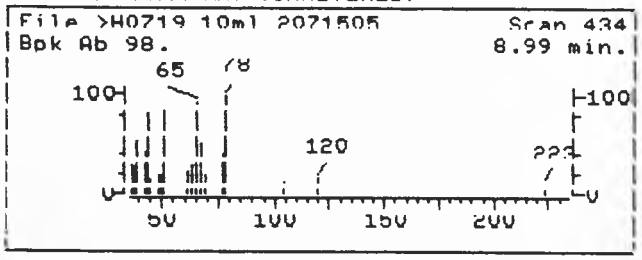
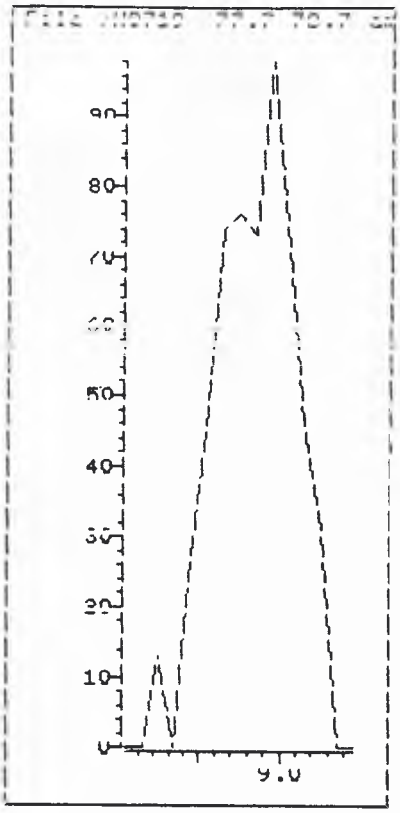


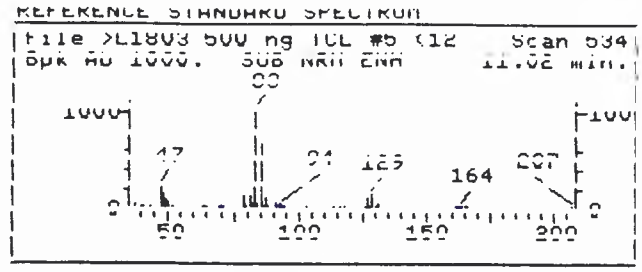


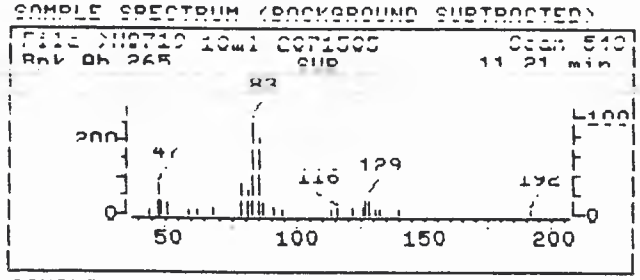
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

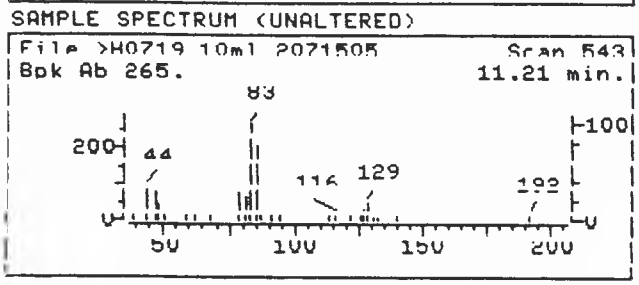
Quant Output File: ^H0719::A6
Instrument ID: MS-1

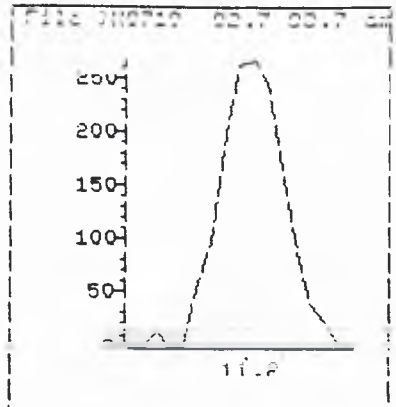
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

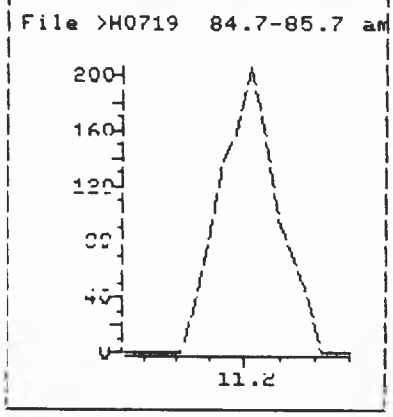
Compound No : 30
Compound Name : Benzene
Scan Number : 434
Retention Time: 8.99 min.
Quant Ion : 78.0
Area : 676
Concentration : 1.72 ng
q-value : 100









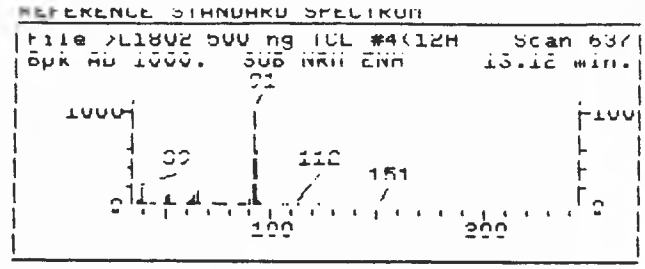


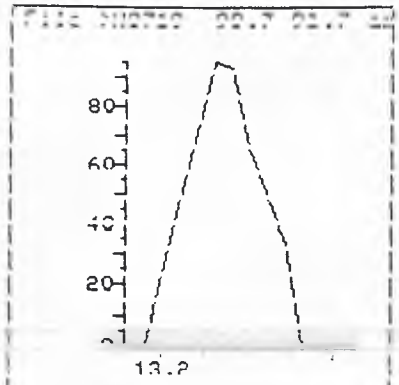
Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

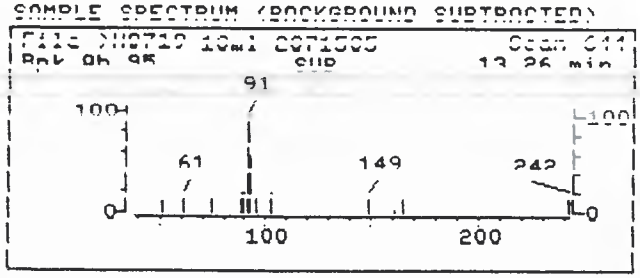
Quant Output File: ^H0719::A6
Instrument ID: MS-1

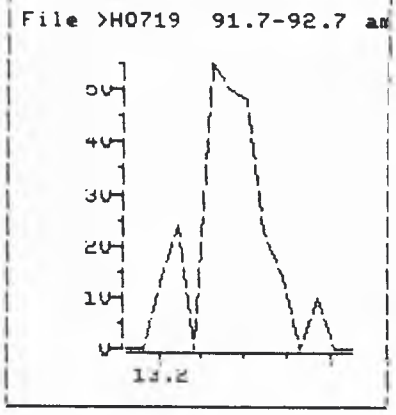
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

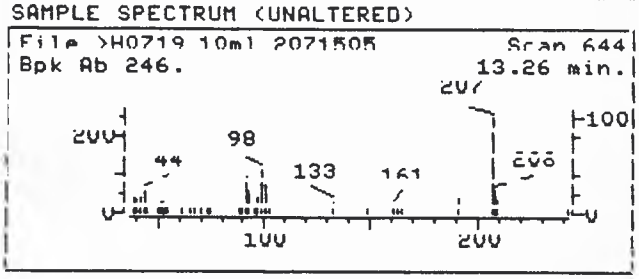
Compound No : 33
Compound Name : Bromodichloromethane
Scan Number : 543
Retention Time: 11.21 min.
Quant Ion : 83.0
Area : 1763
Concentration : 5.32 ng
q-value : 84











Data File: >H0719::A1
Name: 10ml 2071505
Misc: 250ng 6v
Quant Time: 920807 21:27
Injected at: 920807 20:57
Last Qcal Time: <none>

Quant Output File: ^H0719::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 39
Compound Name : Toluene
Scan Number : 644
Retention Time: 13.26 min.
Quant Ion : 92.0
Area : 290
Concentration : 1.07 ng
q-value : 99

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Water, DP-4	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 19, 1992
Attention: Doug Geller	Sample Number:	207-1505 (D.1.5 [illegible])	Reported:	Aug 24, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit ug/l (ppb)	Sample Results ug/l (ppb)
Acetone	2,000	10,000
Benzene	400	N.D.
Bromodichloromethane	400	N.D.
Bromoform	400	N.D.
Bromomethane	400	N.D.
2-Butanone	2,000	N.D.
Carbon disulfide	400	N.D.
Carbon tetrachloride	400	N.D.
Chlorobenzene	400	N.D.
Chloroethane	400	N.D.
2-Chloroethyl vinyl ether	2,000	N.D.
Chloroform	400	N.D.
Chloromethane	400	N.D.
Dibromochloromethane	400	N.D.
1,1-Dichloroethane	400	N.D.
1,2-Dichloroethane	400	N.D.
1,1-Dichloroethene	400	N.D.
cis 1,2-Dichloroethene	400	N.D.
trans 1,2-Dichloroethene	400	N.D.
1,2-Dichloropropane	400	N.D.
cis 1,3-Dichloropropene	400	N.D.
trans 1,3-Dichloropropene	400	N.D.
Ethylbenzene	400	N.D.
2-Hexanone	2,000	N.D.
Methylene chloride	2,000	N.D.
4-Methyl-2-pentanone	2,000	N.D.
Styrene	400	N.D.
1,1,2,2-Tetrachloroethane	400	N.D.
Tetrachloroethene	400	N.D.
Toluene	400	N.D.
1,1,1-Trichloroethane	400	N.D.
1,1,2-Trichloroethane	400	N.D.
Trichloroethene	400	N.D.
Trichlorofluoromethane	400	N.D.
Vinyl chloride	400	N.D.
Total Xylenes	400	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

NORTH CREEK ANALYTICAL inc

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	103
Toluene-d8	102
4-Bromofluorobenzene	94

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H1918::A6
Data File: >H1918::A1
Name: 50ul 1071505
Misc: 250ng 6v

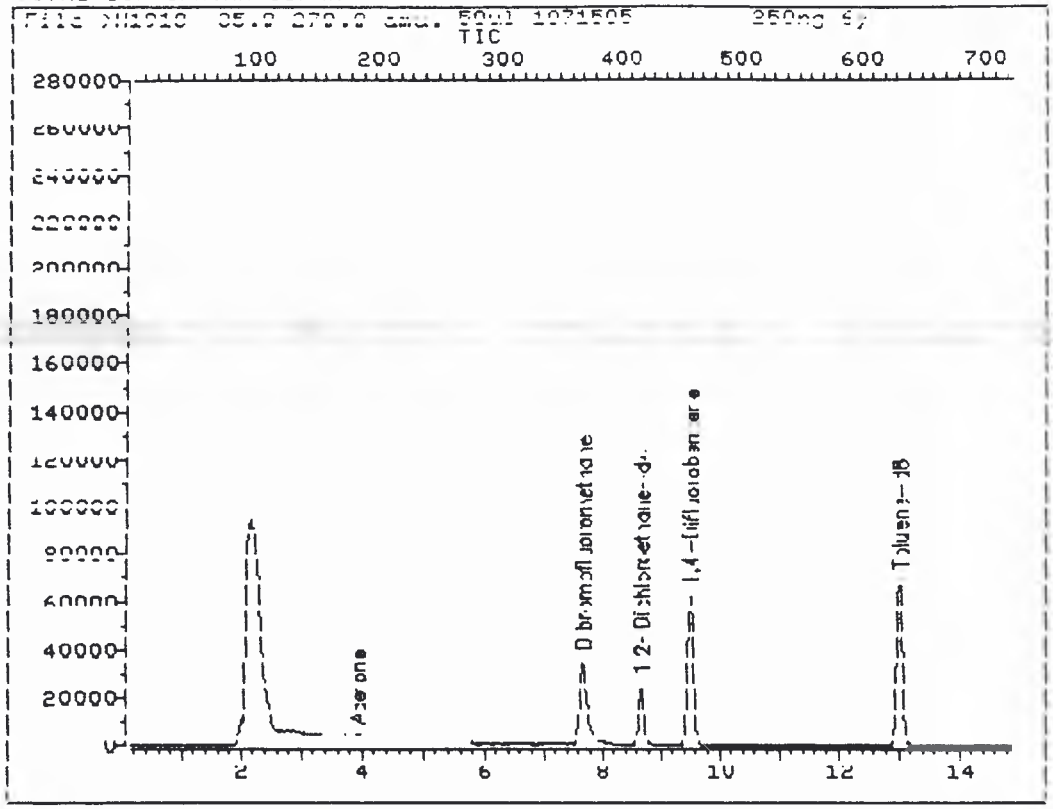
Quant Rev: 7
Quant Time: 920819 21:18
Injected at: 920819 20:47
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.67	370	98658	250.00	ng	97
4)	1,2-Dichloroethane-d4	8.66	419	62170	257.78	ng	92
9)	Acetone	3.93	187	7728	518.72	ng 10,374 µg/L	94
28)	*1,4-Difluorobenzene	9.50	460	183625	250.00	ng	95
37)	Toluene-d8	13.02	633	169834	251.37	ng	95
38)	*Chlorobenzene-d5	16.84	821	147217	250.00	ng	93
57)	4-Bromofluorobenzene	20.01	977	88821	233.67	ng	90
58)	*1,4-Dichlorobenzene-d4	21.95	1072	84640	250.00	ng	97
75)	1-Fluoronaphthalene	26.61	1301	196419	253.95	ng	100

* Compound is ISTD

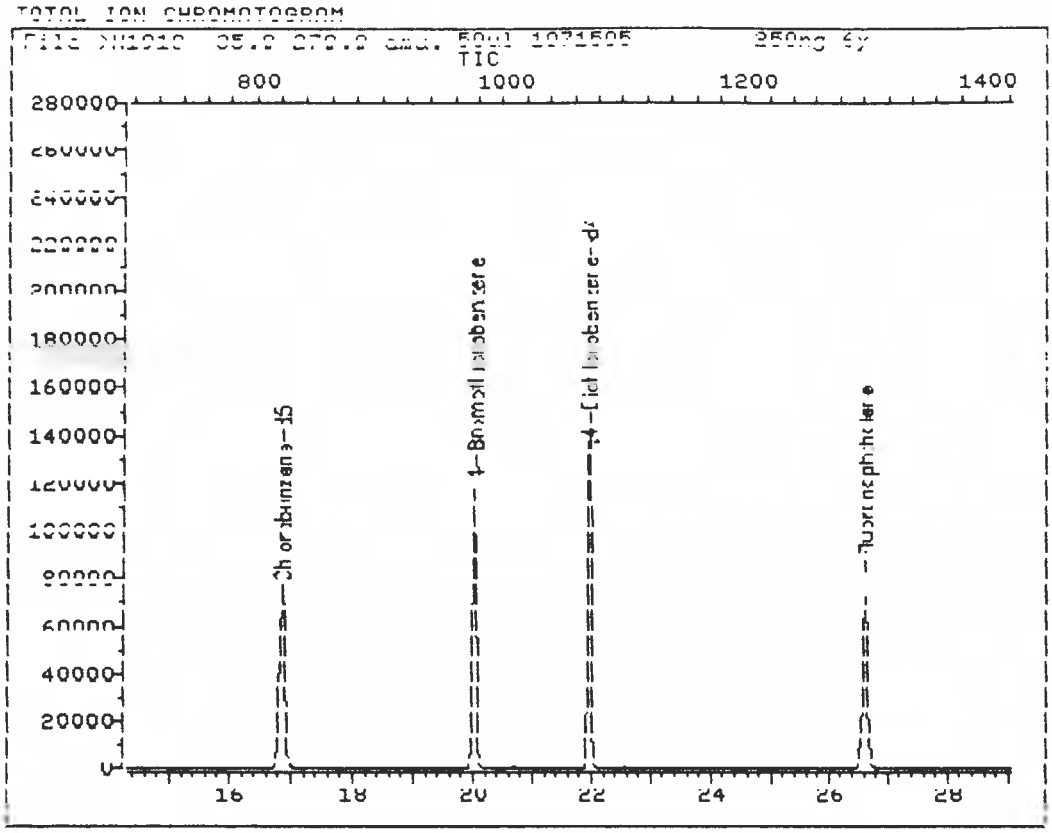
TOTAL ION CHROMATOGRAM



Data File: >H1918::A1 Quant Output File: ^H1918::A6
Name: 50ul 1071505 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

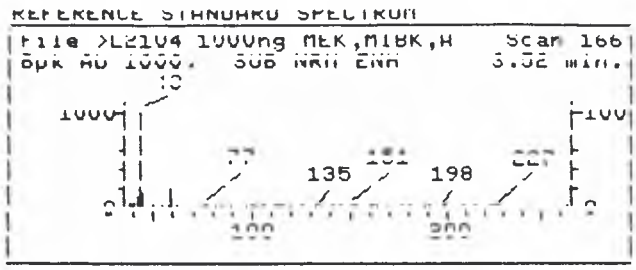
Operator ID: GLEN
Quant Time : 920819 21:18
Injected at: 920819 20:47

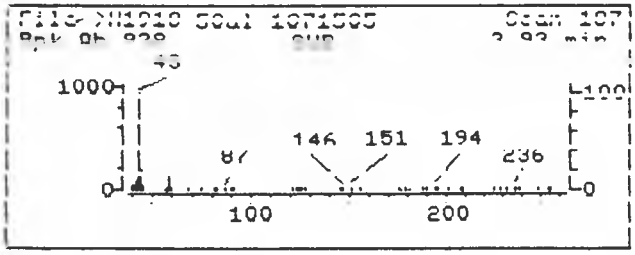


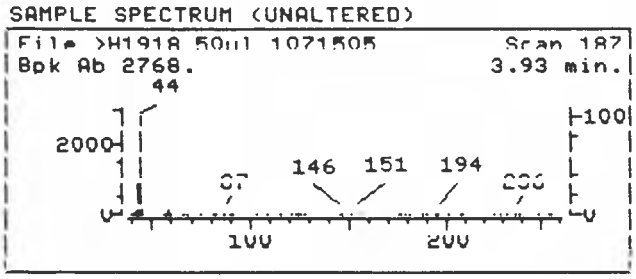
Data File: >H1918::A1 Quant Output File: ^H1918::A6
Name: 50ul 1071505 Instrument ID: MS-1
Misc: 250ng 6v

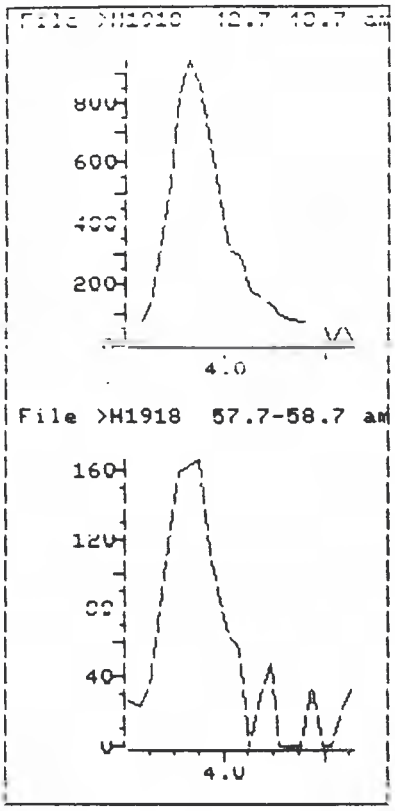
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 21:18
Injected at: 920819 20:47









Data File: >H1918::A1
Name: 50ul 1071505
Misc: 250ng 6v
Quant Time: 920819 21:18
Injected at: 920819 20:47
Last Qcal Time: <none>

Quant Output File: ^H1918::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.93 min.
Quant Ion : 43.0
Area : 7728
Concentration : 518.72 ng
q-value : 94

Operator ID: GLEN
Output File: ^H2004::A6
Data File: >H2004::A2
Name: 2ul 2071506
Misc: 250ng 6v

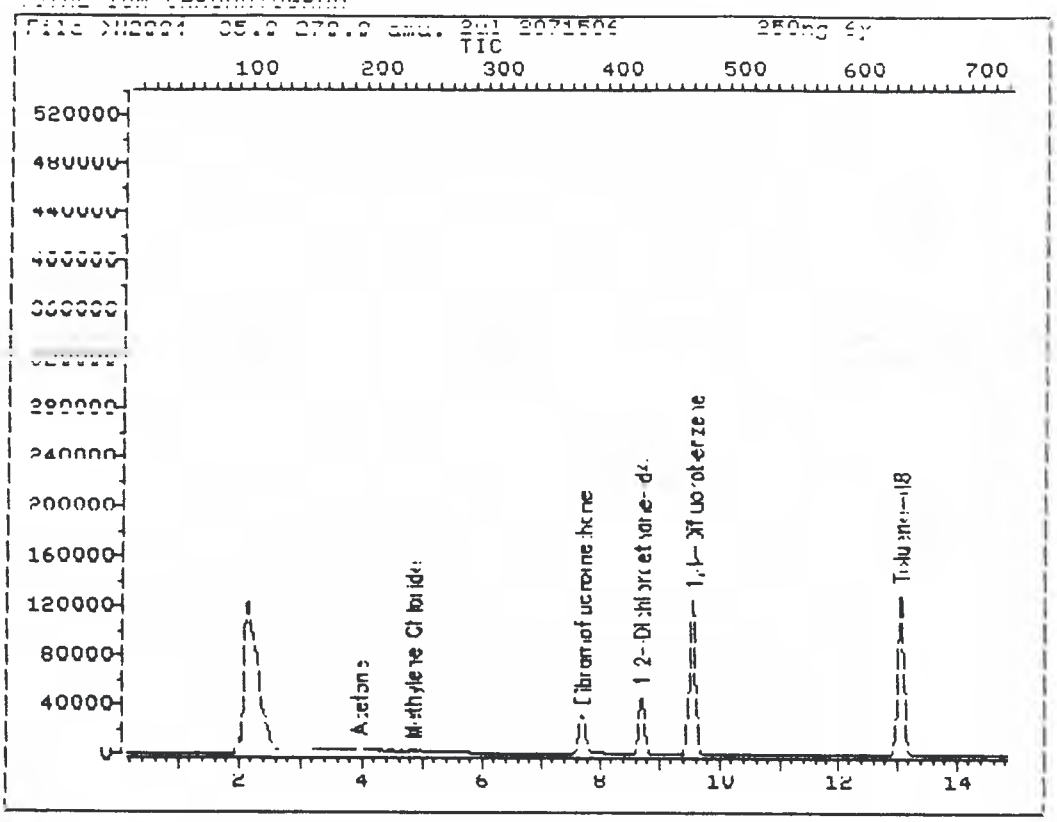
Quant Rev: 7
Quant Time: 920820 15:26
Injected at: 920820 14:56
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	372	66905	250.00	ng	98
4)	1,2-Dichloroethane-d4	8.70	421	115036	703.36	ng	89
9)	Acetone	3.95	188	25347	2508.82	ng	99
14)	Methylene Chloride	4.83	231	1166	31.23	ng	82
28)	*1,4-Difluorobenzene	9.55	463	384386	250.00	ng	94
37)	Toluene-d8	13.05	635	341865	241.72	ng	98
38)	*Chlorobenzene-d5	16.90	824	304060	250.00	ng	95
58)	*1,4-Dichlorobenzene-d4	21.96	1073	175403	250.00	ng	98
75)	1-Fluoronaphthalene	26.65	1303	367055	229.00	ng	100

* Compound is ISTD

TOTOL ION CHROMOTOGROM

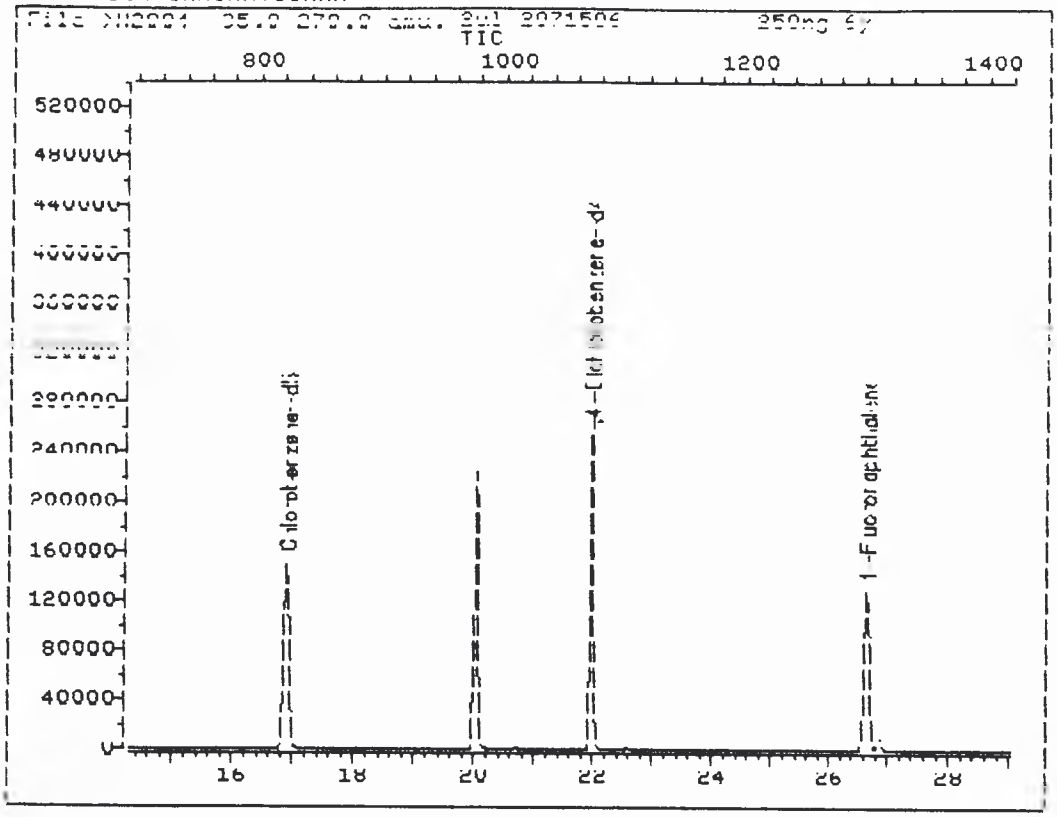


Data File: >H2004::A2 Quant Output File: ^H2004::A6
Name: 2ul 2071506 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 15:26
Injected at: 920820 14:56

TOTAL ION CHROMATOGRAM



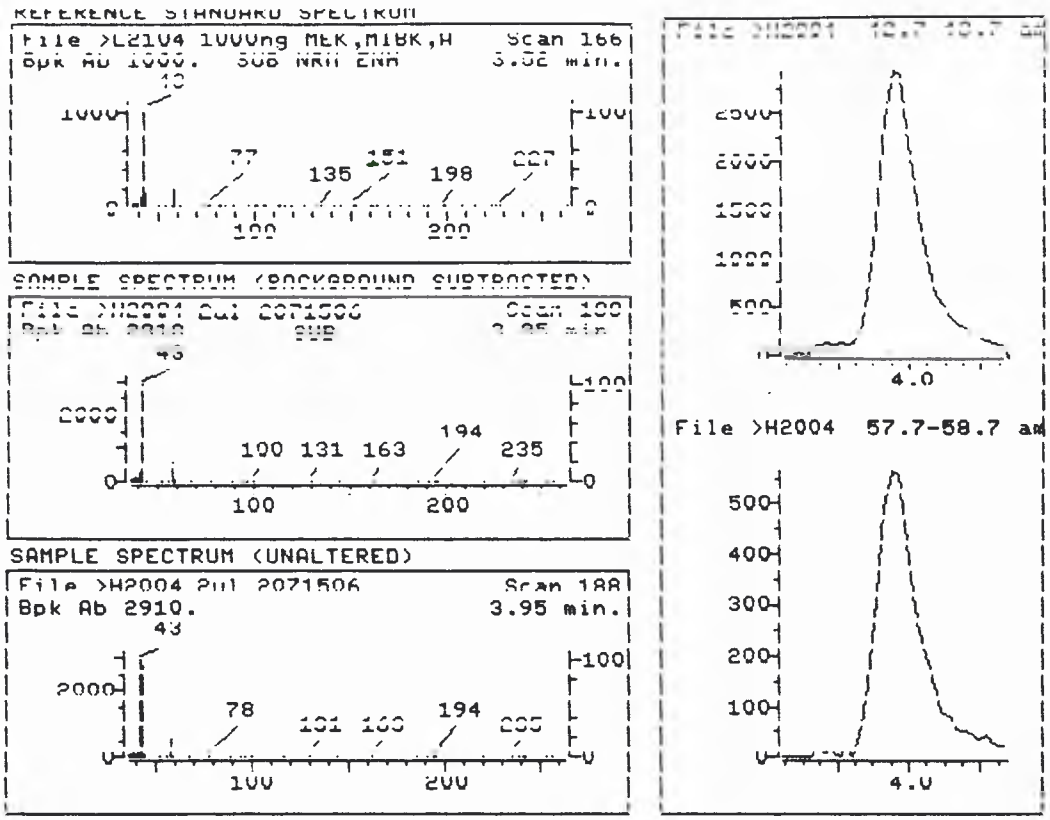
Data File: >H2004::A2
Name: 2ul 2071506
Misc: 250ng 6v

Quant Output File: ^H2004::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 15:26
Injected at: 920820 14:56

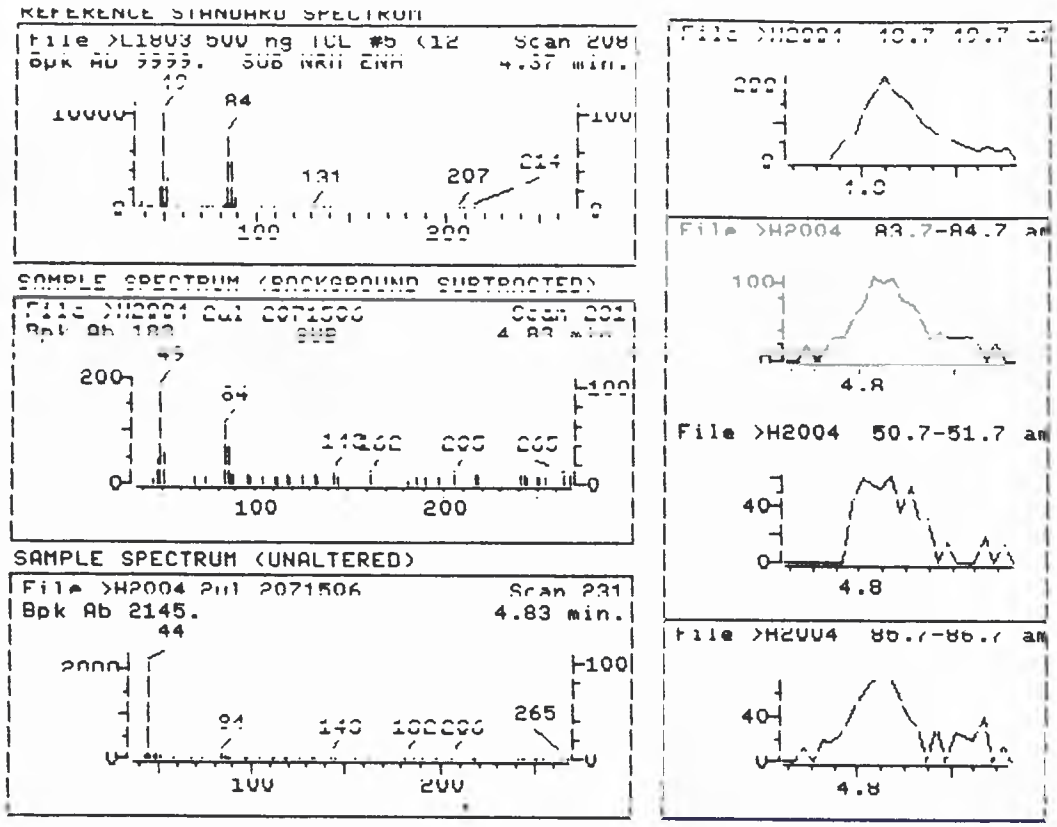


Data File: >H2004::A2
Name: 2ul 2071506
Misc: 250ng 6v
Quant Time: 920820 15:26
Injected at: 920820 14:56
Last Qcal Time: <none>

Quant Output File: ^H2004::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 9
Compound Name : Acetone
Scan Number : 188
Retention Time: 3.95 min.
Quant Ion : 43.0
Area : 25347
Concentration : 2508.82 ng
q-value : 99



Data File: >H2004::A2
Name: 2ul 2071506
Misc: 250ng 6v
Quant Time: 920820 15:26
Injected at: 920820 14:56
Last Qcal Time: <none>

Quant Output File: ^H2004::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 231
Retention Time: 4.83 min.
Quant Ion : 84.0
Area : 1166
Concentration : 31.23 ng
q-value : 82

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Water, DP-5		Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260		Analyzed:	Aug 19, 1992
Attention: Doug Geller	Sample Number:	207-1506		Reported:	Aug 26, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit ug/L (ppb)	Sample Results ug/L (ppb)
Acetone	100	290,000
Benzene	20	N.D.
Bromodichloromethane	20	N.D.
Bromoform	20	N.D.
Bromomethane	20	N.D.
2-Butanone	100	N.D.
Carbon disulfide	20	N.D.
Carbon tetrachloride	20	N.D.
Chlorobenzene	20	N.D.
Chloroethane	20	N.D.
2-Chloroethyl vinyl ether	100	N.D.
Chloroform	20	N.D.
Chloromethane	20	N.D.
Dibromochloromethane	20	N.D.
1,1-Dichloroethane	20	N.D.
1,2-Dichloroethane	20	N.D.
1,1-Dichloroethene	20	N.D.
cis 1,2-Dichloroethene	20	N.D.
trans 1,2-Dichloroethene	20	N.D.
1,2-Dichloropropane	20	N.D.
cis 1,3-Dichloropropene	20	N.D.
trans 1,3-Dichloropropene	20	N.D.
Ethylbenzene	20	N.D.
2-Hexanone	100	N.D.
Methylene chloride	100	N.D.
4-Methyl-2-pentanone	100	N.D.
Styrene	20	N.D.
1,1,2,2-Tetrachloroethane	20	N.D.
Tetrachloroethene	20	N.D.
Toluene	20	N.D.
1,1,1-Trichloroethane	20	N.D.
1,1,2-Trichloroethane	20	N.D.
Trichloroethene	20	N.D.
Trichlorofluoromethane	20	N.D.
Vinyl chloride	20	N.D.
Total Xylenes	20	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

NORTH CREEK ANALYTICAL inc

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	101
Toluene-d8	100
4-Bromofluorobenzene	97

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H1907::A6
Data File: >H1907::A5
Name: 1ml 2071506
Misc: 250ng 6v

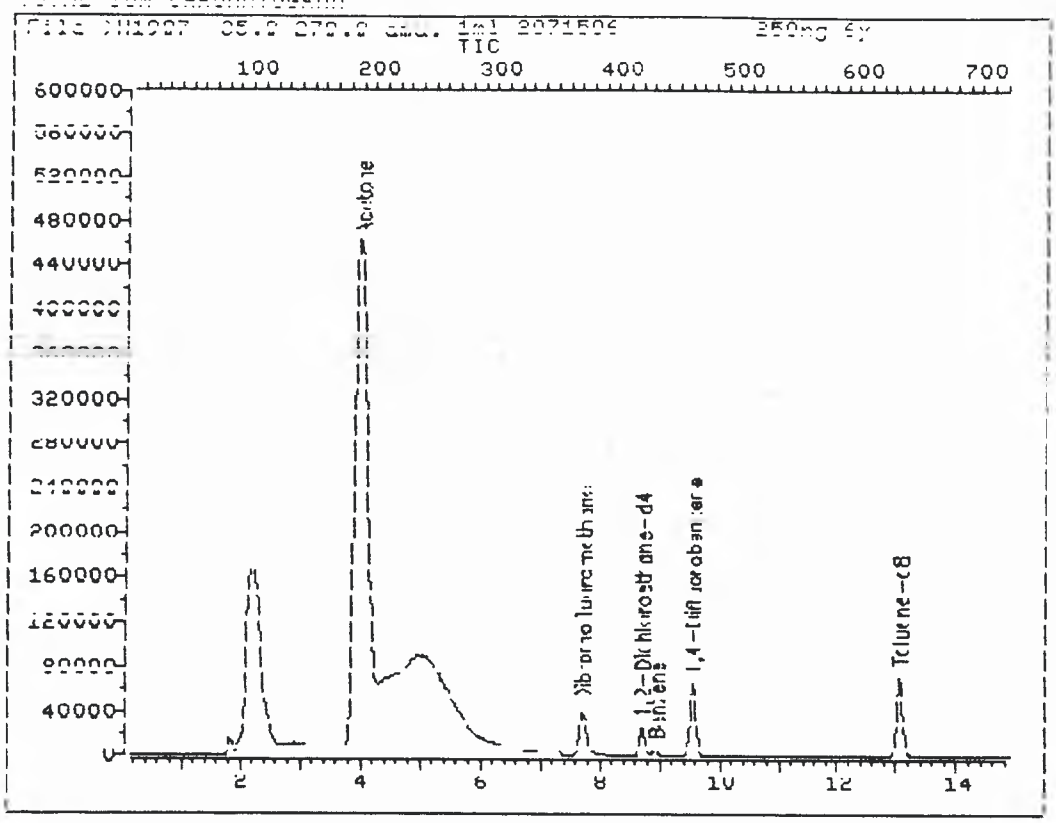
Quant Rev: 7
Quant Time: 920819 13:18
Injected at: 920819 12:47
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.71	372	102586	250.00	ng	98
4)	1,2-Dichloroethane-d4	8.71	421	63024	251.32	ng	92
9)	Acetone	3.98	189	4452246	287404.2	ng = µg/L	87
28)	*1,4-Difluorobenzene	9.54	462	193729	250.00	ng	95
30)	Benzene	8.95	433	15209	20.44	ng	100
37)	Toluene-d8	13.06	635	178191	249.98	ng	95
38)	*Chlorobenzene-d5	16.89	823	159897	250.00	ng	96
57)	4-Bromofluorobenzene	20.04	978	99804	241.74	ng	81
58)	*1,4-Dichlorobenzene-d4	21.98	1073	102853	250.00	ng	97
75)	1-Fluoronaphthalene	26.66	1303	220356	234.45	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1907::A5
Name: 1ml 2071506
Misc: 250ng 6y

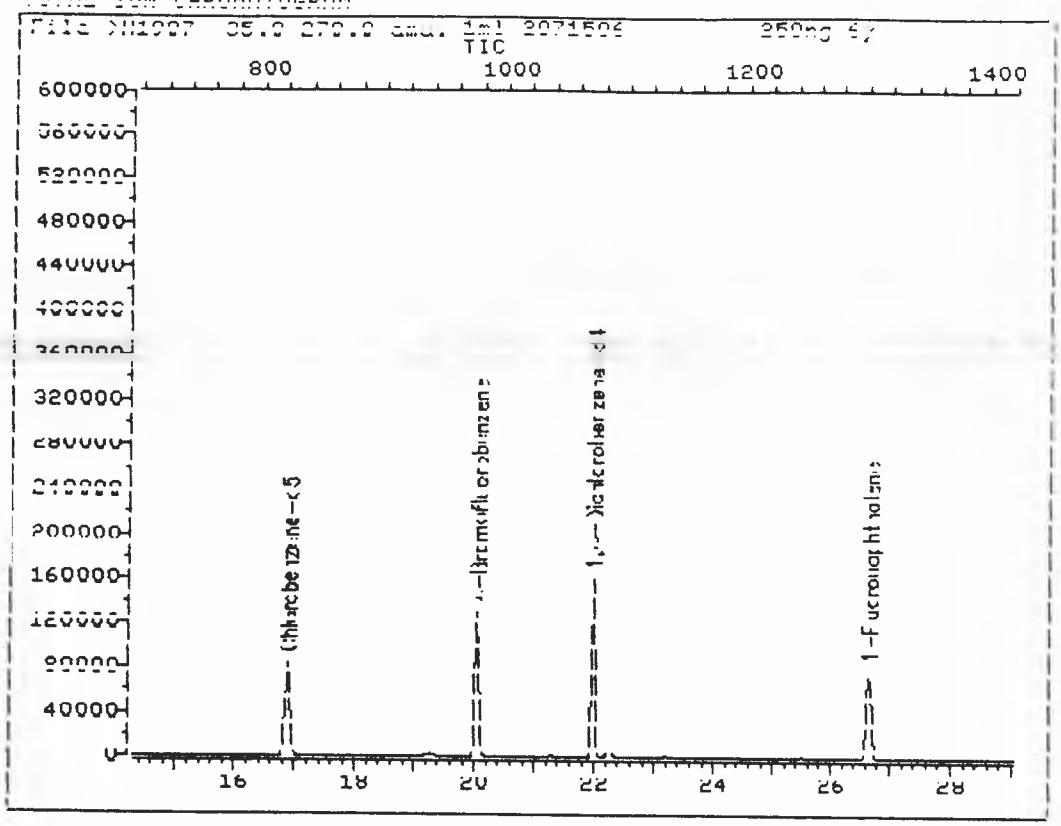
Quant Output File: ^H1907::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 13:18
Injected at: 920819 12:47

TOTAL ION CHROMOTOGRAM



Data File: >H1907::A5
Name: 1ml 2071506
Misc: 250ng 6v

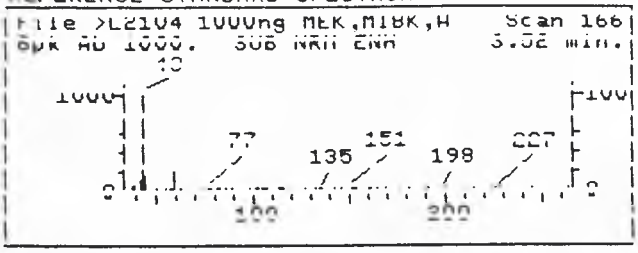
Quant Output File: ^H1907::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

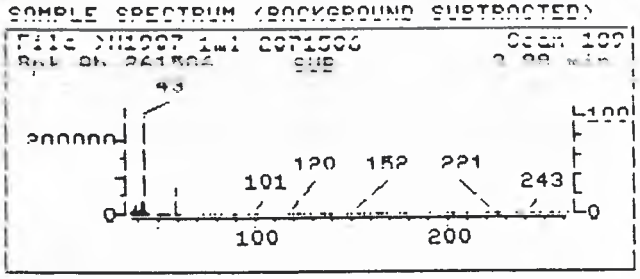
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 13:18
Injected at: 920819 12:47

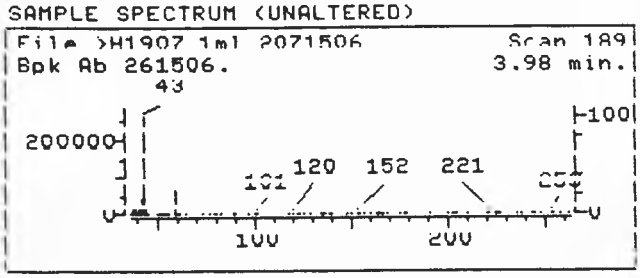
REFERENCE STANDARD SPECTRUM

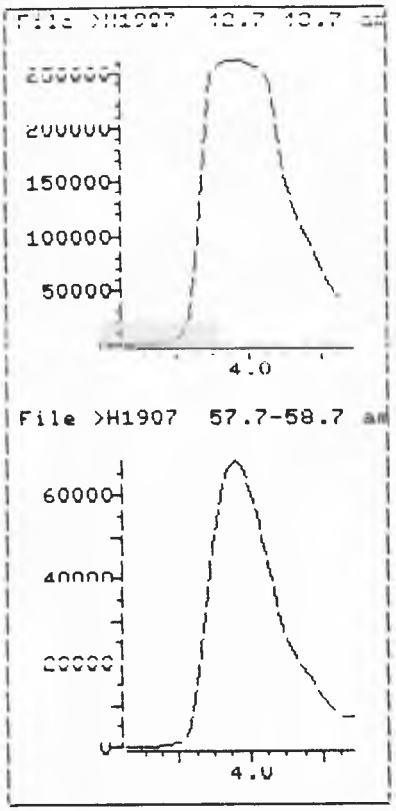


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



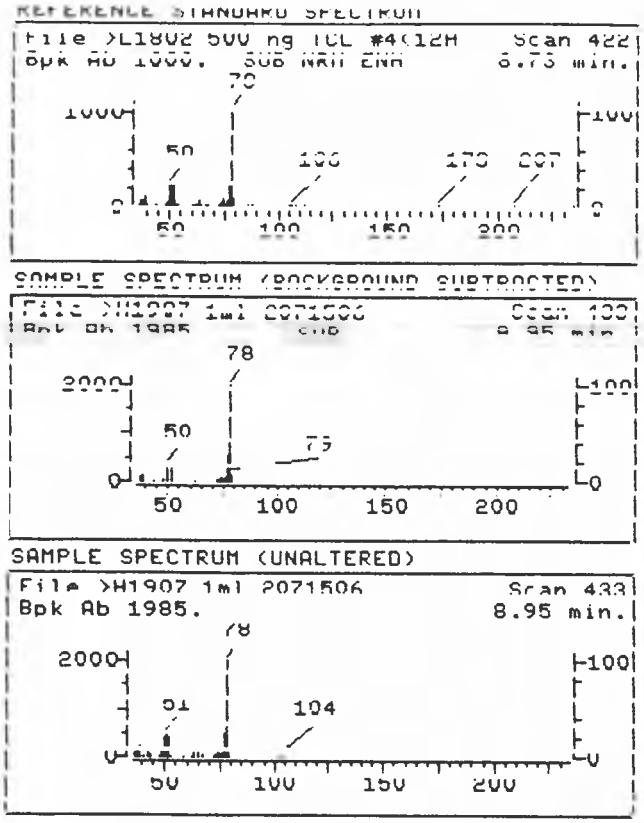


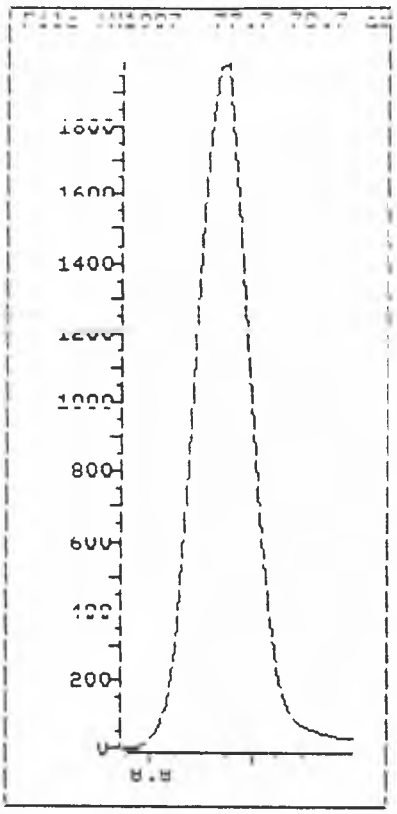
Data File: >H1907::A5
Name: 1ml 2071506
Misc: 250ng 6v
Quant Time: 920819 13:18
Injected at: 920819 12:47
Last Qcal Time: <none>

Quant Output File: ^H1907::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 4452246
Concentration : 287404.2 ng
q-value : 87





Data File: >H1907::A5
Name: 1ml 2071506
Misc: 250ng 6v
Quant Time: 920819 13:18
Injected at: 920819 12:47
Last Qcal Time: <none>

Quant Output File: ^H1907::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 30
Compound Name : Benzene
Scan Number : 433
Retention Time: 8.95 min.
Quant Ion : 78.0
Area : 15209
Concentration : 20.44 ng
q-value : 100

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Water, DP-5	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 26, 1992
Attention: Doug Geller	Sample Number:	207-1506 (Diluted)	Reported:	Aug 26, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Acetone	**25,000**	**150,000**
Benzene	5,000	N.D.
Bromodichloromethane	5,000	N.D.
Bromoform	5,000	N.D.
Bromomethane	5,000	N.D.
2-Butanone	25,000	N.D.
Carbon disulfide	5,000	N.D.
Carbon tetrachloride	5,000	N.D.
Chlorobenzene	5,000	N.D.
Chloroethane	5,000	N.D.
2-Chloroethyl vinyl ether	25,000	N.D.
Chloroform	5,000	N.D.
Chloromethane	5,000	N.D.
Dibromochloromethane	5,000	N.D.
1,1-Dichloroethane	5,000	N.D.
1,2-Dichloroethane	5,000	N.D.
1,1-Dichloroethene	5,000	N.D.
cis 1,2-Dichloroethene	5,000	N.D.
trans 1,2-Dichloroethene	5,000	N.D.
1,2-Dichloropropane	5,000	N.D.
cis 1,3-Dichloropropene	5,000	N.D.
trans 1,3-Dichloropropene	5,000	N.D.
Ethylbenzene	5,000	N.D.
2-Hexanone	25,000	N.D.
Methylene chloride	25,000	N.D.
4-Methyl-2-pentanone	25,000	N.D.
Styrene	5,000	N.D.
1,1,2,2-Tetrachloroethane	5,000	N.D.
Tetrachloroethene	5,000	N.D.
Toluene	5,000	N.D.
1,1,1-Trichloroethane	5,000	N.D.
1,1,2-Trichloroethane	5,000	N.D.
Trichloroethene	5,000	N.D.
Trichlorofluoromethane	5,000	N.D.
Vinyl chloride	5,000	N.D.
Total Xylenes	5,000	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	105
Toluene-d8	100
4-Bromofluorobenzene	95

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H2603::A6
Data File: >H2603::A2
Name: 100ul 1071506 50x
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920826 08:48
Injected at: 920826 08:18
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33

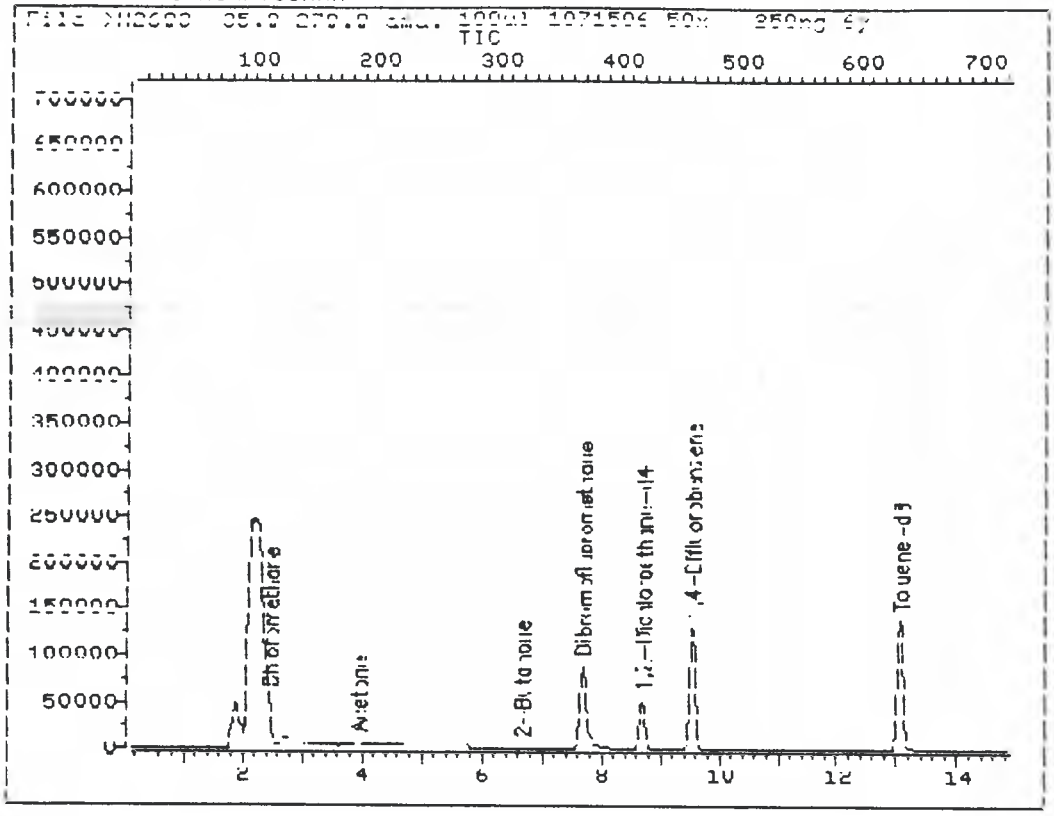
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.68	370	224058	250.00	ng	95
3)	Chloromethane	2.45	114	895	6.77	ng	87
4)	1,2-Dichloroethane-d4	8.70	420	144154	262.93	ng	99
9)	Acetone	3.95	187	22104	303.48	ng 151,000	87
19)	2-Butanone	6.66	320	3740	~~32.61~~	ng NDµg/L	84
28)	*1,4-Difluorobenzene	9.53	461	375866	250.00	ng	94
37)	Toluene-d8	13.05	634	349921	250.09	ng	94
38)	*Chlorobenzene-d5	16.90	823	303453	250.00	ng	98
57)	4-Bromofluorobenzene	20.05	978	181236	236.91	ng	98
58)	*1,4-Dichlorobenzene-d4	21.99	1073	177509	250.00	ng	98
75)	1-Fluoronaphthalene	26.65	1302	371835	241.37	ng	100

* Compound is ISTD

DV

TOTAL ION CHROMOTOGRAM

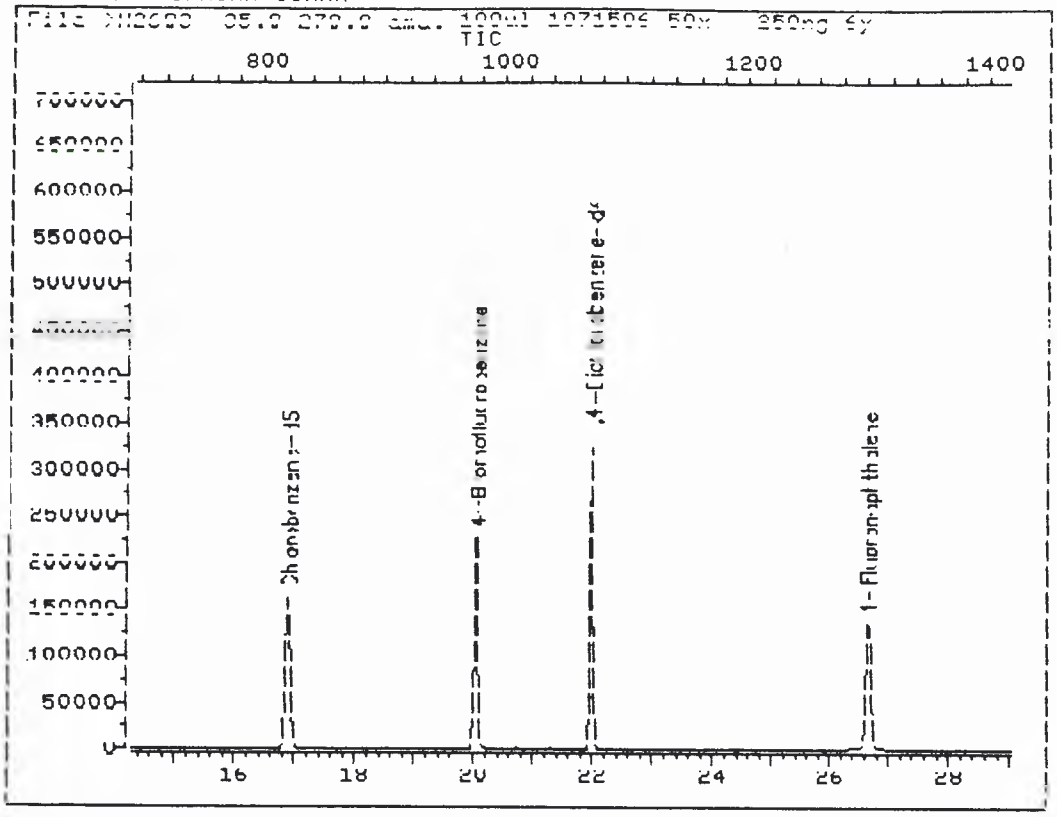


Data File: >H2603::A2 Quant Output File: ^H2603::A6
Name: 100ul 1071506 50x Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 08:48
Injected at: 920826 08:18

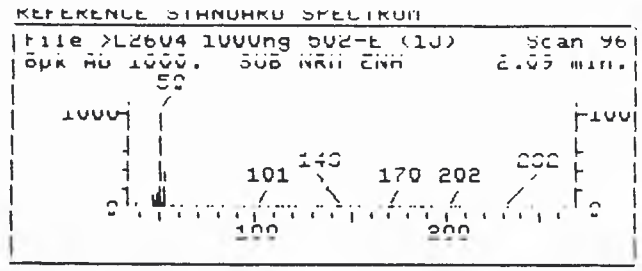
TOTAL ION CHROMATOGRAM

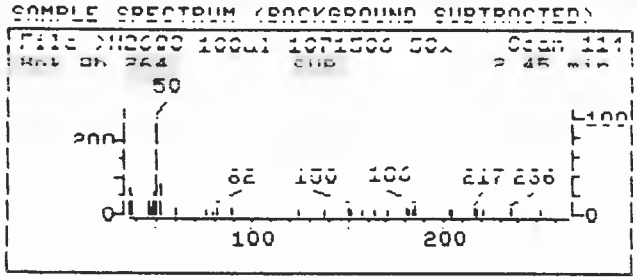


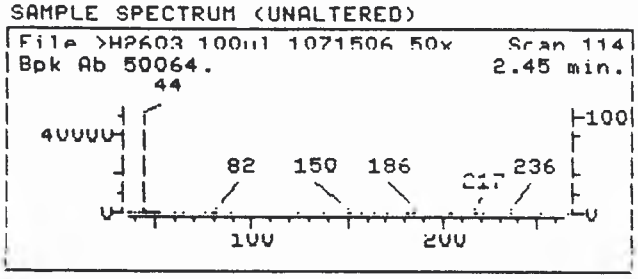
Data File: >H2603::A2 Quant Output File: ^H2603::A6
Name: 100ul 1071506 50x Instrument ID: MS-1
Misc: 250ng 6y

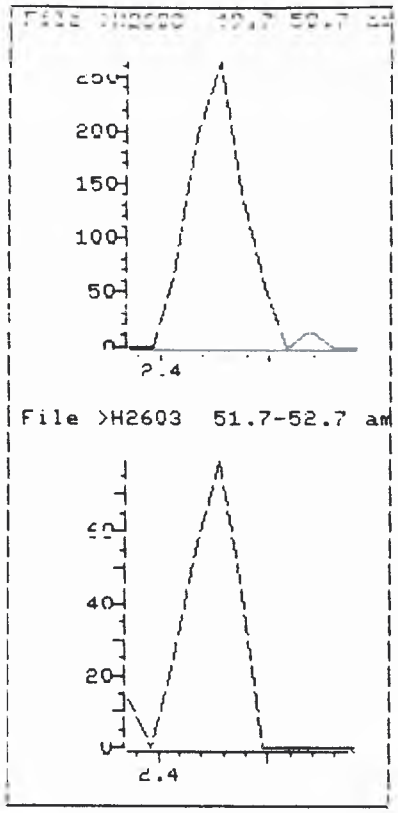
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 08:48
Injected at: 920826 08:18







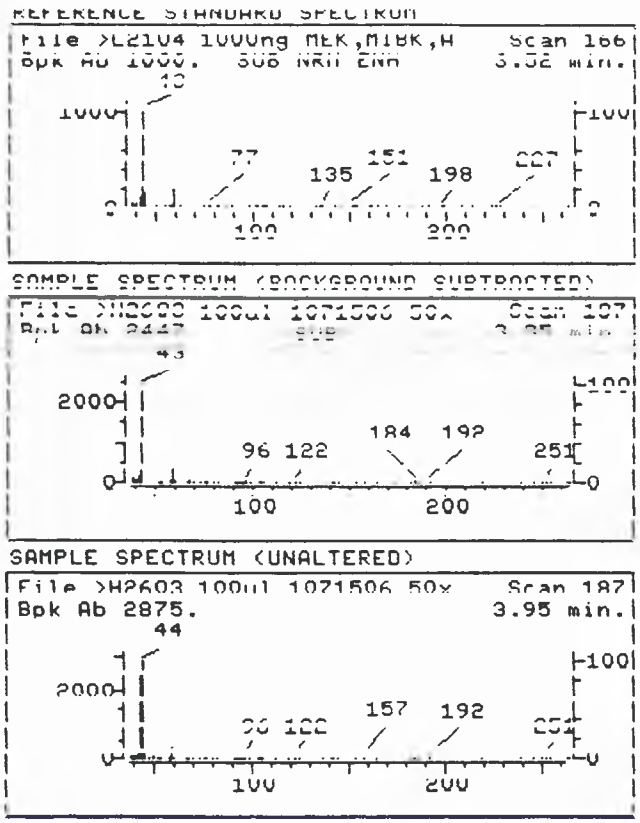


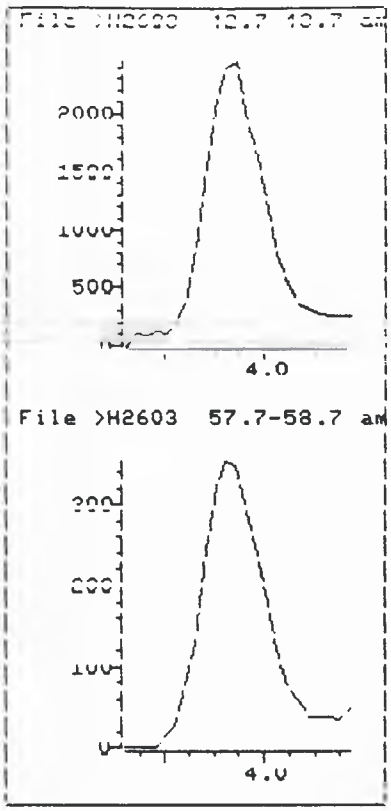
Data File: >H2603::A2
Name: 100ul 1071506 50x
Misc: 250ng 6v
Quant Time: 920826 08:48
Injected at: 920826 08:18
Last Qcal Time: <none>

Quant Output File: ^H2603::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920826 08:33

Compound No : 3
Compound Name : Chloromethane
Scan Number : 114
Retention Time: 2.45 min.
Quant Ion : 50.0
Area : 895
Concentration : 6.77 ng
q-value : 87



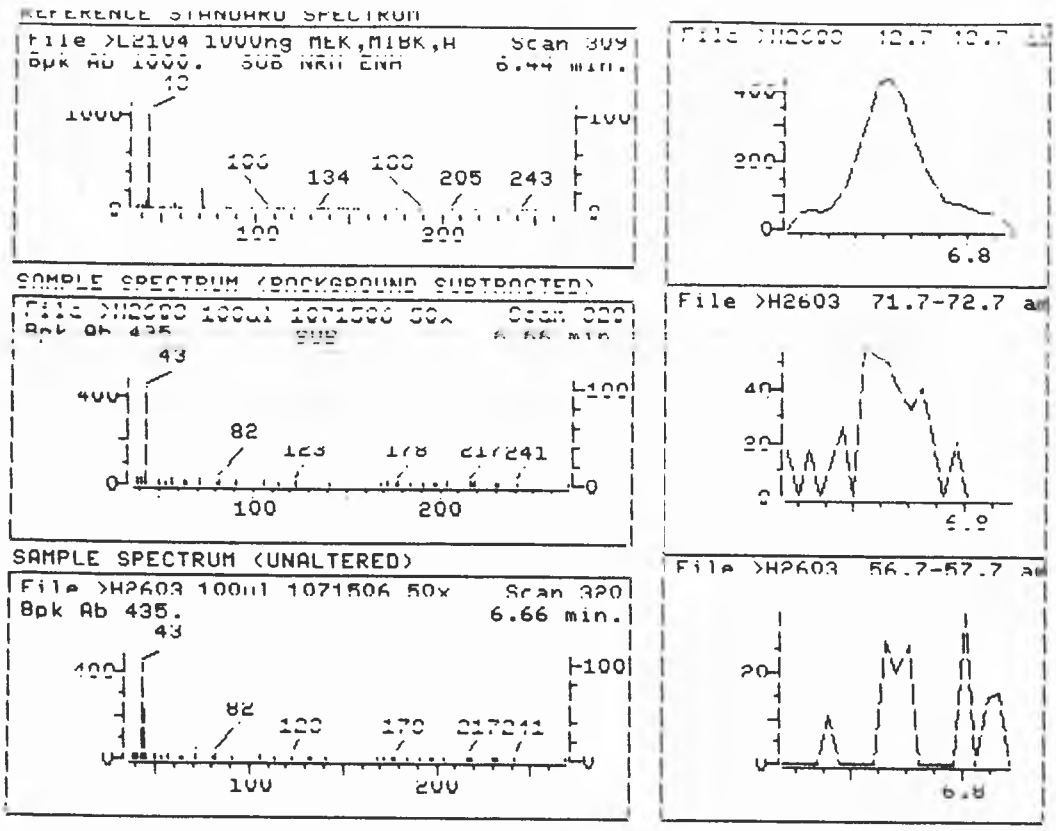


Data File: >H2603::A2
Name: 100ul 1071506 50x
Misc: 250ng 6v
Quant Time: 920826 08:48
Injected at: 920826 08:18
Last Qcal Time: <none>

Quant Output File: ^H2603::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920826 08:33

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.95 min.
Quant Ion : 43.0
Area : 22104
Concentration : 303.48 ng
q-value : 87



Data File: >H2603::A2
Name: 100ul 1071506 50x
Misc: 250ng 6v
Quant Time: 920826 08:48
Injected at: 920826 08:18
Last Qcal Time: <none>

Quant Output File: ^H2603::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920826 08:33

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 320
Retention Time: 6.66 min.
Quant Ion : 43.0
Area : 3740
Concentration : 32.61 ng
q-value : 84

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-6/MS/MSD	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	203-1507	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	2.0
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.52
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	0.26
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	91
Toluene-d8	92
4-Bromofluorobenzene	85

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H1010::A6
Data File: >H1010::A1
Name: 100ul 2071507
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 14:47
Injected at: 920810 14:17
Dilution Factor: 1.00000
Instrument ID: MS-1

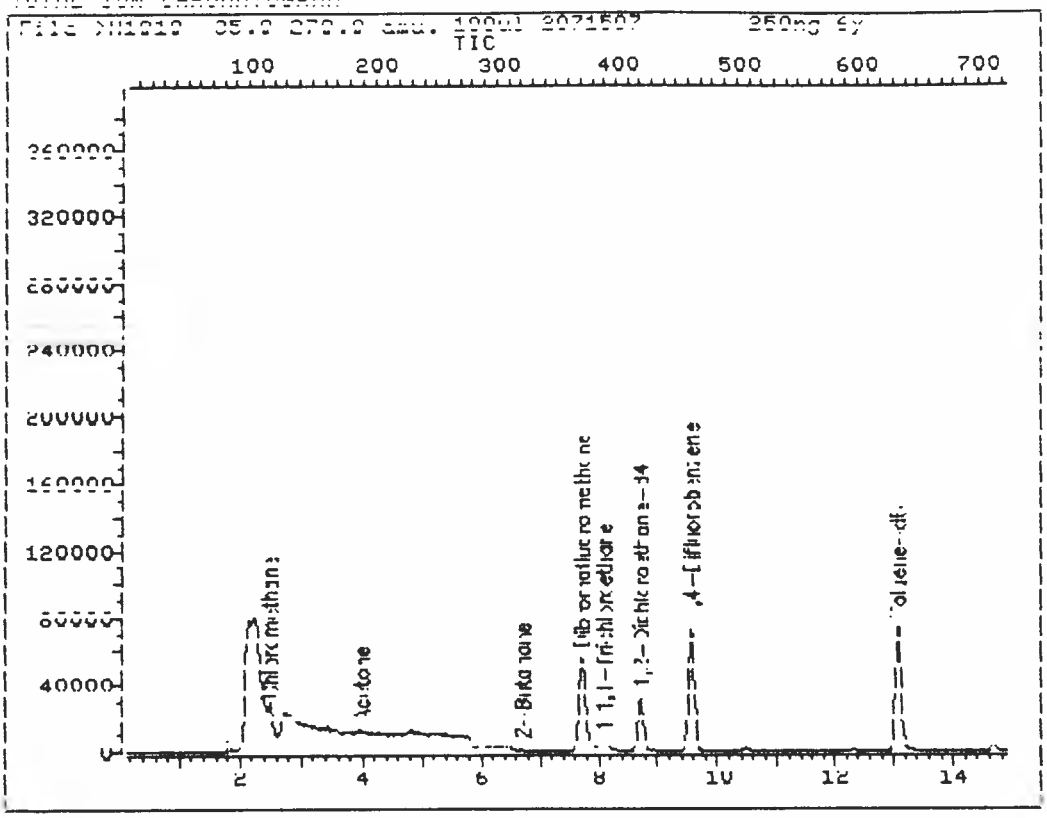
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.71	371	129970	250.00	ng	94
3)	Chloromethane	2.48	116	1926	~~10.85 ng~~ ND		92
4)	1,2-Dichloroethane-d4	8.73	421	80313	227.56	ng	95
9)	Acetone	3.98	189	9257	201.21	ng 2.0 mg/kg	92
19)	2-Butanone	6.69	321	3040	52.36	ng 0.52 mg/kg	95
24)	1,1,1-Trichloroethane	8.10	390	15090	25.83	ng 0.26 mg/kg	98
28)	*1,4-Difluorobenzene	9.56	462	194649	250.00	ng	96
37)	Toluene-d8	13.07	634	179137	229.14	ng	95
38)	*Chlorobenzene-d5	16.91	823	165694	250.00	ng	97
57)	4-Bromofluorobenzene	20.05	977	100828	212.82	ng	89
58)	*1,4-Dichlorobenzene-d4	21.99	1072	102527	250.00	ng	99
75)	1-Fluoronaphthalene	26.67	1302	228903	240.09	ng	100

* Compound is ISTD

8/26/92

TOTAL ION CHROMATOGRAM

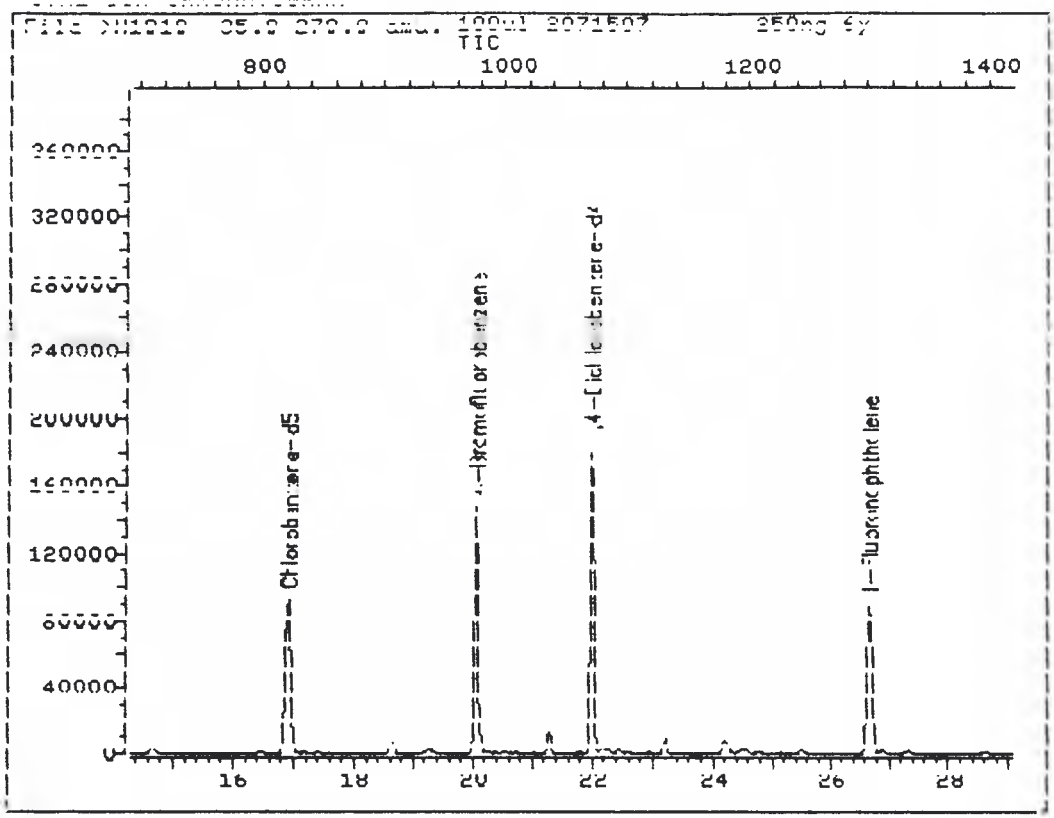


Data File: >H1010::A1 Quant Output File: ^H1010::A6
Name: 100ul 2071507 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 14:47
Injected at: 920810 14:17

TOTAL ION CHROMATOGRAM

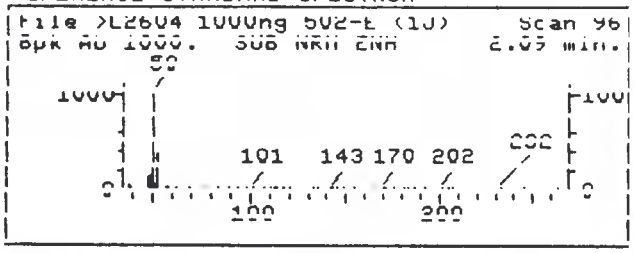


Data File: >H1010::A1 Quant Output File: ^H1010::A6
Name: 100ul 2071507 Instrument ID: MS-1
Misc: 250ng 6v

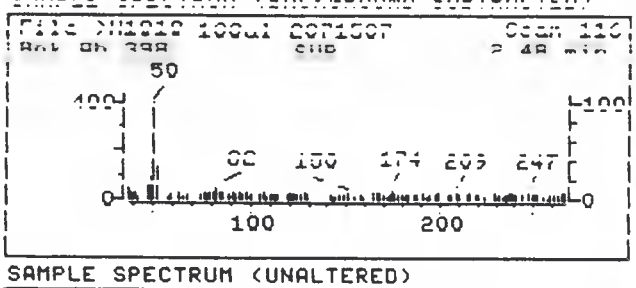
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 14:47
Injected at: 920810 14:17

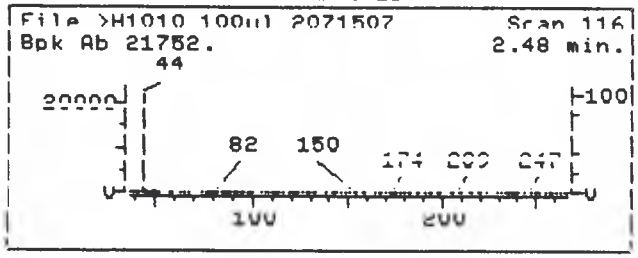
REFERENCE STANDARD SPECTRUM

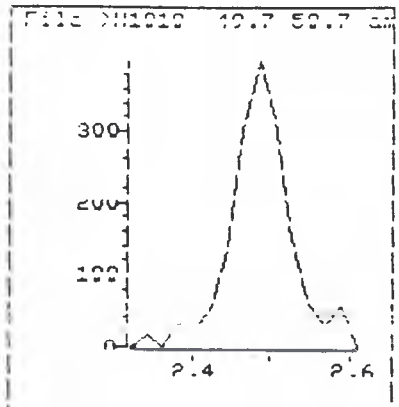


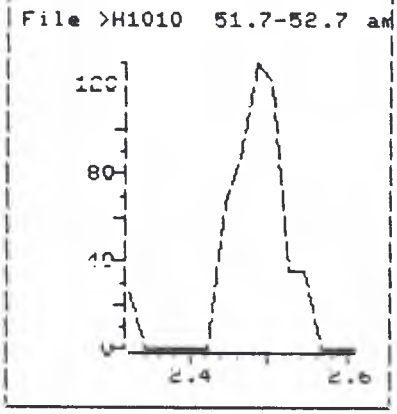
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





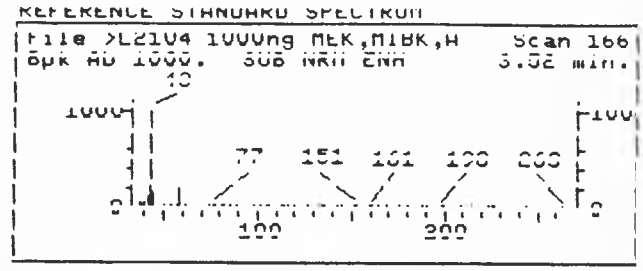


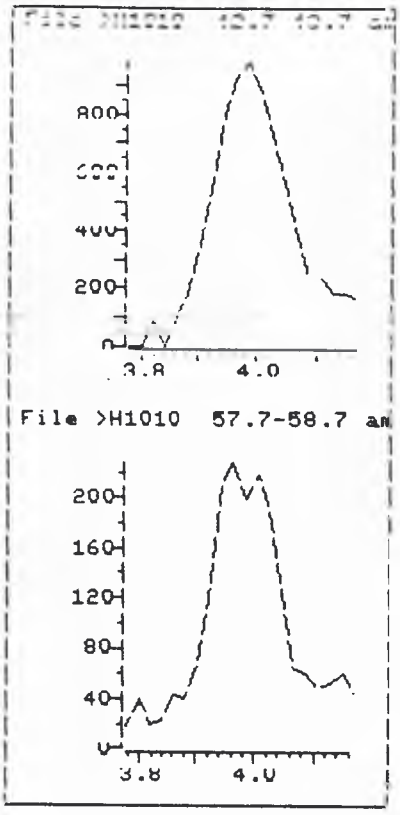
Data File: >H1010::A1
Name: 100ul 2071507
Misc: 250ng 6v
Quant Time: 920810 14:47
Injected at: 920810 14:17
Last Qcal Time: <none>

Quant Output File: ^H1010::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 3
Compound Name : Chloromethane
Scan Number : 116
Retention Time: 2.48 min.
Quant Ion : 50.0
Area : 1926
Concentration : 10.85 ng
q-value : 92



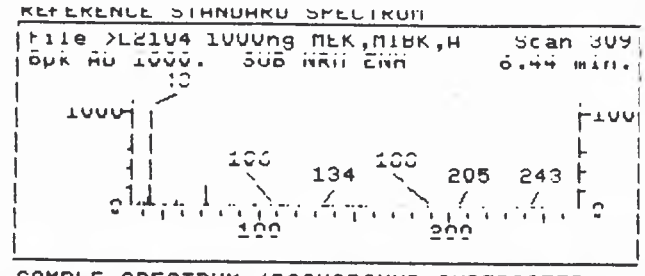


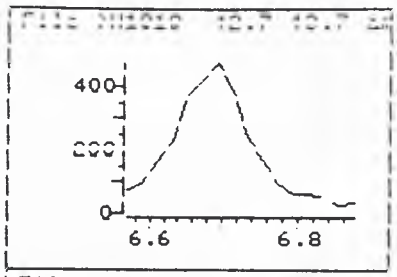
Data File: >H1010::A1
Name: 100ul 2071507
Misc: 250ng 6v
Quant Time: 920810 14:47
Injected at: 920810 14:17
Last Qcal Time: <none>

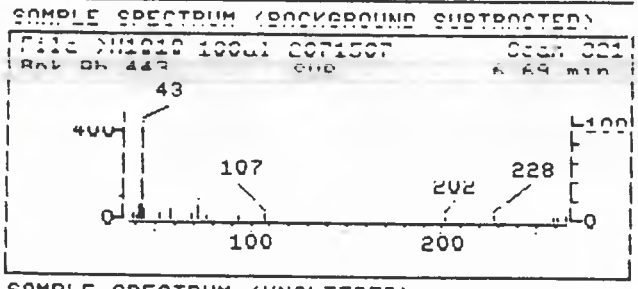
Quant Output File: ^H1010::A6
Instrument ID: MS-1

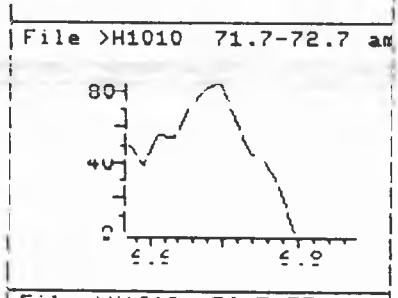
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

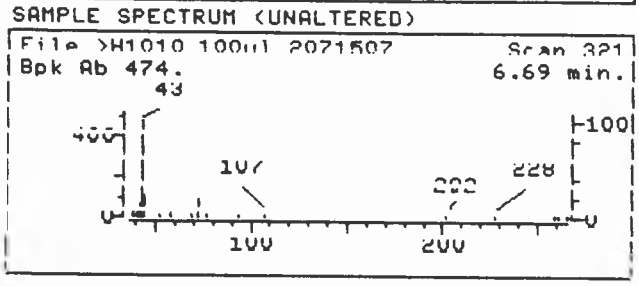
Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 9257
Concentration : 201.21 ng
q-value : 92

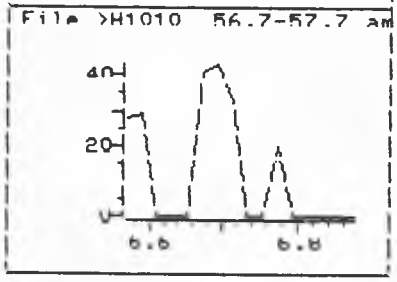










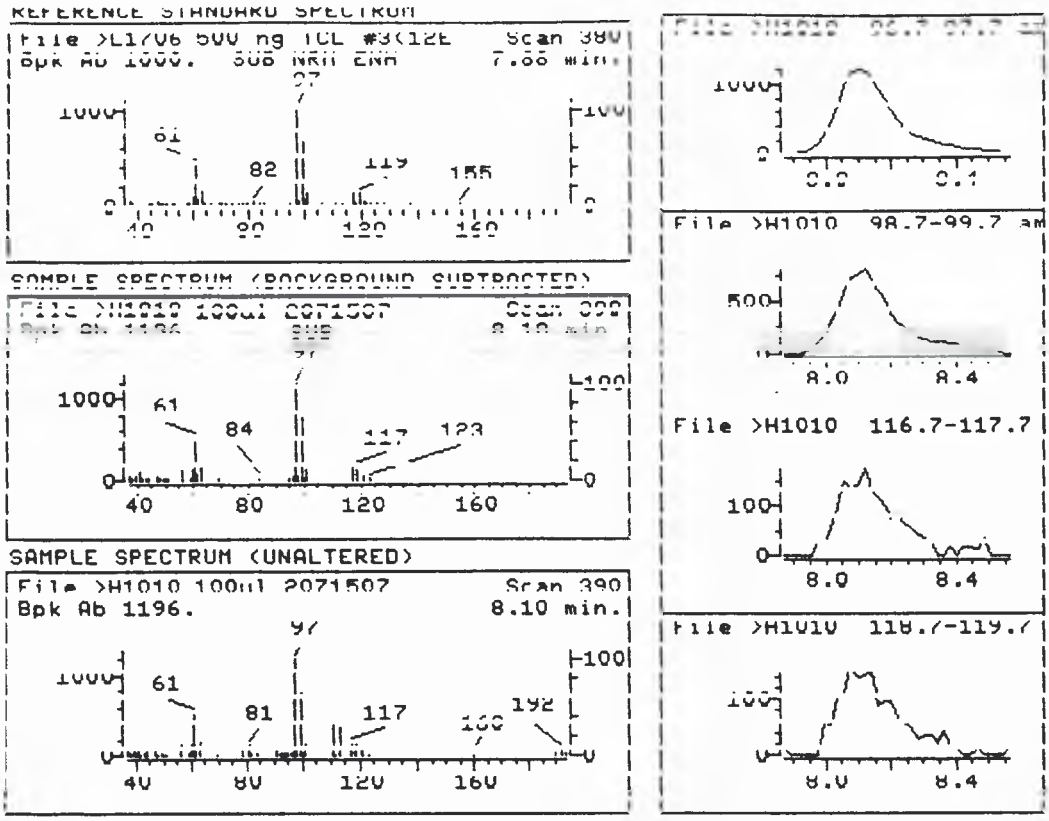


Data File: >H1010::A1
Name: 100ul 2071507
Misc: 250ng 6v
Quant Time: 920810 14:47
Injected at: 920810 14:17
Last Qcal Time: <none>

Quant Output File: ^H1010::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 321
Retention Time: 6.69 min.
Quant Ion : 43.0
Area : 3040
Concentration : 52.36 ng
q-value : 95



Data File: >H1010::A1
Name: 100ul 2071507
Misc: 250ng 6v
Quant Time: 920810 14:47
Injected at: 920810 14:17
Last Qcal Time: <none>

Quant Output File: ^H1010::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 24
Compound Name : 1,1,1-Trichloroethane
Scan Number : 390
Retention Time: 8.10 min.
Quant Ion : 97.0
Area : 15090
Concentration : 25.83 ng
q-value : 98

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-7	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1508	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	1.5
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.54
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	91
Toluene-d8	92
4-Bromofluorobenzene	86

2071501.HWA <22>

QUANT REPORT

Operator ID: GLEN
Output File: ^H1011::A6
Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v

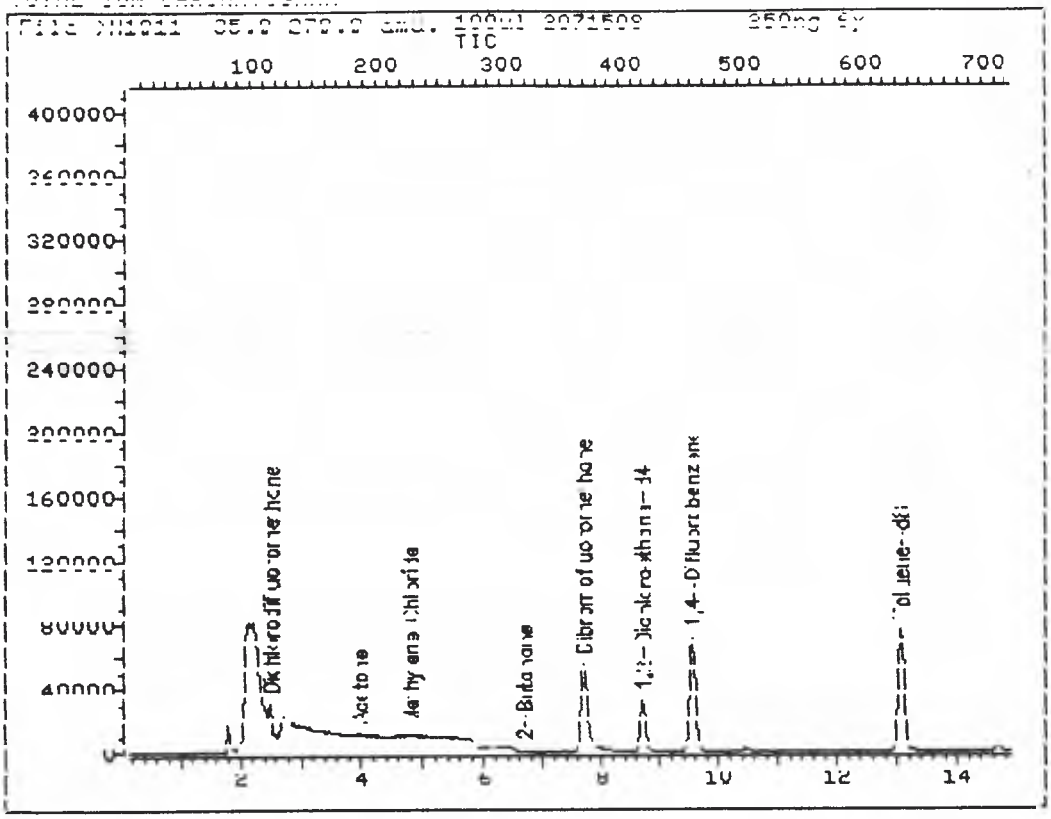
Quant Rev: 7
Quant Time: 920810 15:21
Injected at: 920810 14:51
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	370	131172	250.00	ng	94
2)	Dichlorodifluoromethane	2.52	117	215	156.58	ng	89
4)	1,2-Dichloroethane-d4	8.72	420	80867	227.03	ng	96
9)	Acetone	3.97	188	7068	152.22	ng 1.5 mg/kg	91
14)	Methylene Chloride	4.79	228	2874	~~11.16 ng~~ <ND		78
19)	2-Butanone	6.68	320	3149	53.74	ng 0.54 mg/kg	90
28)	*1,4-Difluorobenzene	9.55	461	196352	250.00	ng	97
37)	Toluene-d8	13.08	634	181623	230.30	ng	92
38)	*Chlorobenzene-d5	16.90	822	168624	250.00	ng	98
57)	4-Bromofluorobenzene	20.04	976	103405	214.47	ng	84
58)	*1,4-Dichlorobenzene-d4	22.00	1072	104437	250.00	ng	99
75)	1-Fluoronaphthalene	26.66	1301	239965	247.09	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v

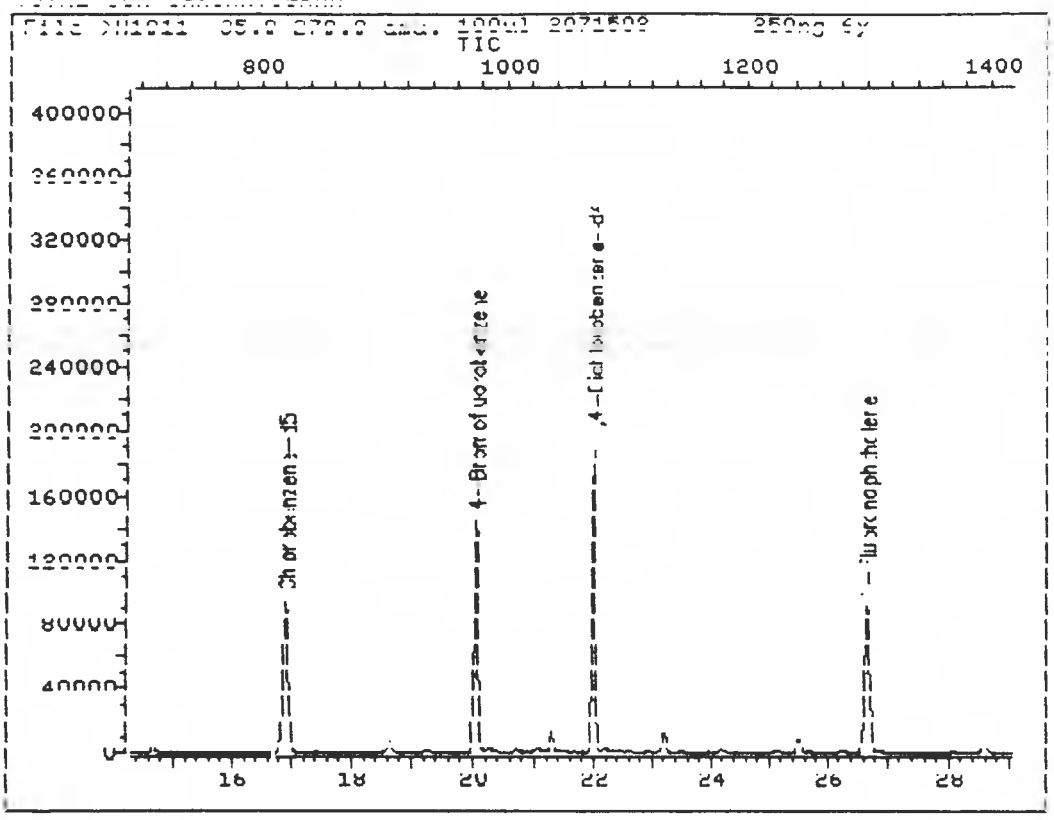
Quant Output File: ^H1011::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 15:21
Injected at: 920810 14:51

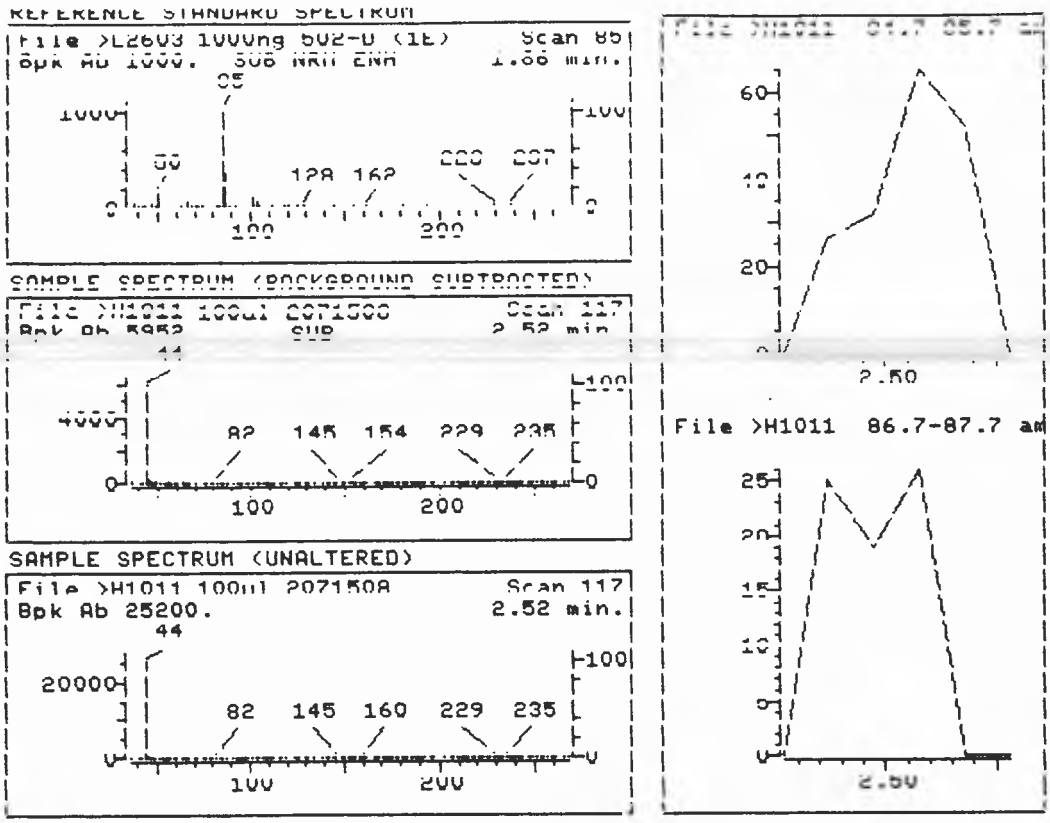
TOTAL ION CHROMATOGRAM



Data File: >H1011::A1 Quant Output File: ^H1011::A6
Name: 100ul 2071508 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 15:21
Injected at: 920810 14:51

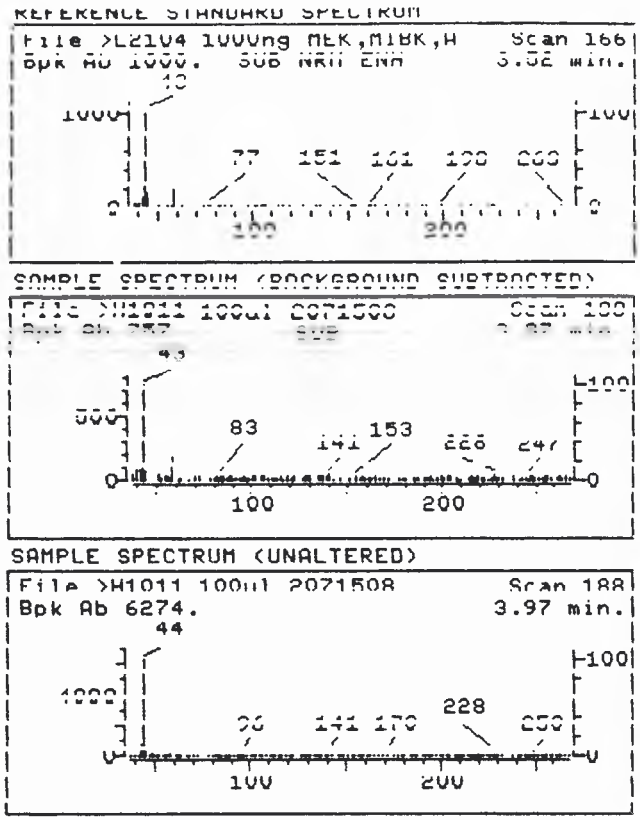


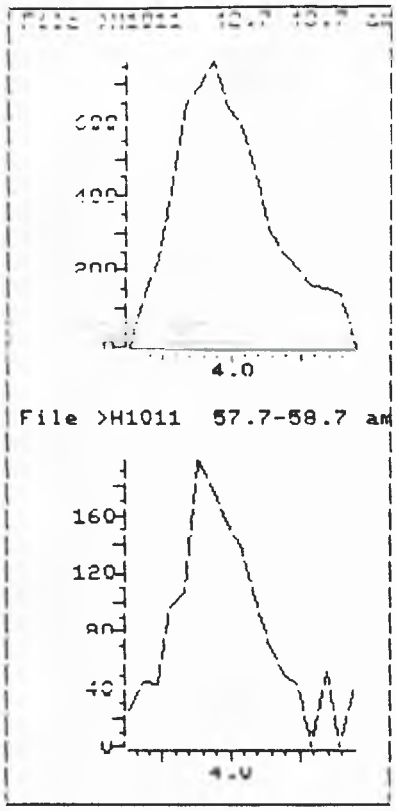
Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v
Quant Time: 920810 15:21
Injected at: 920810 14:51
Last Qcal Time: <none>

Quant Output File: ^H1011::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 2
Compound Name : Dichlorodifluoromethane
Scan Number : 117
Retention Time: 2.52 min.
Quant Ion : 85.0
Area : 215
Concentration : 156.58 ng
q-value : 89



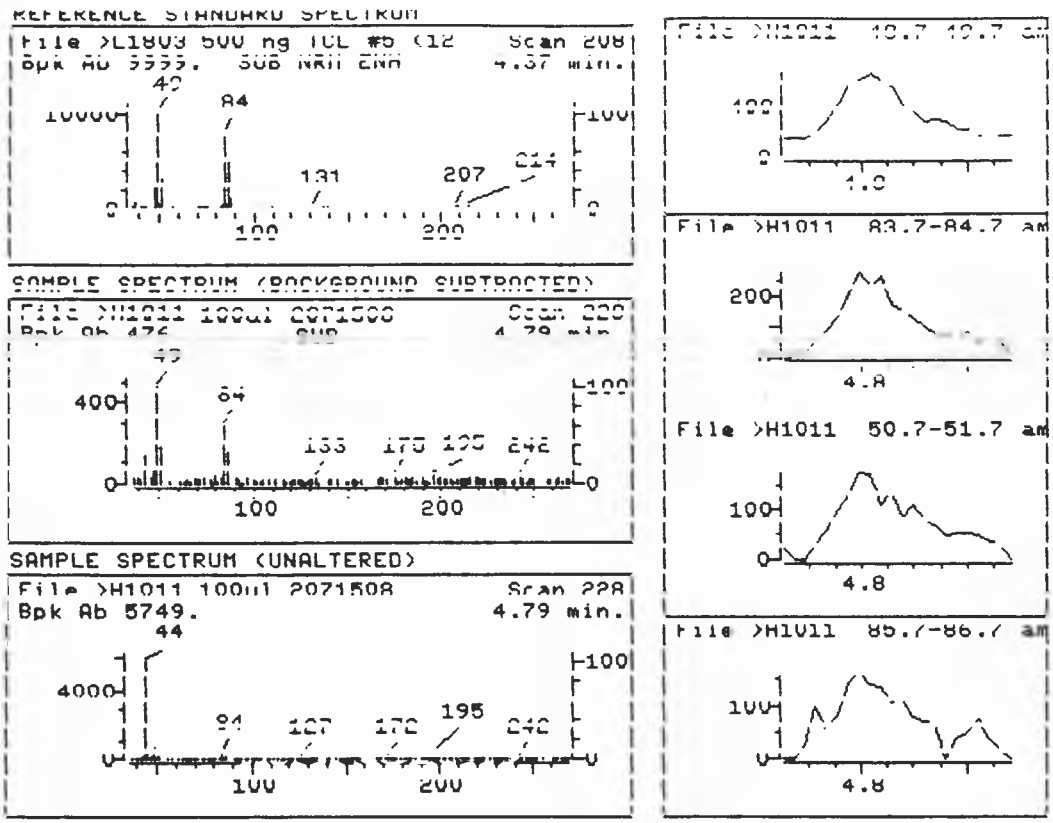


Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v
Quant Time: 920810 15:21
Injected at: 920810 14:51
Last Qcal Time: <none>

Quant Output File: ^H1011::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

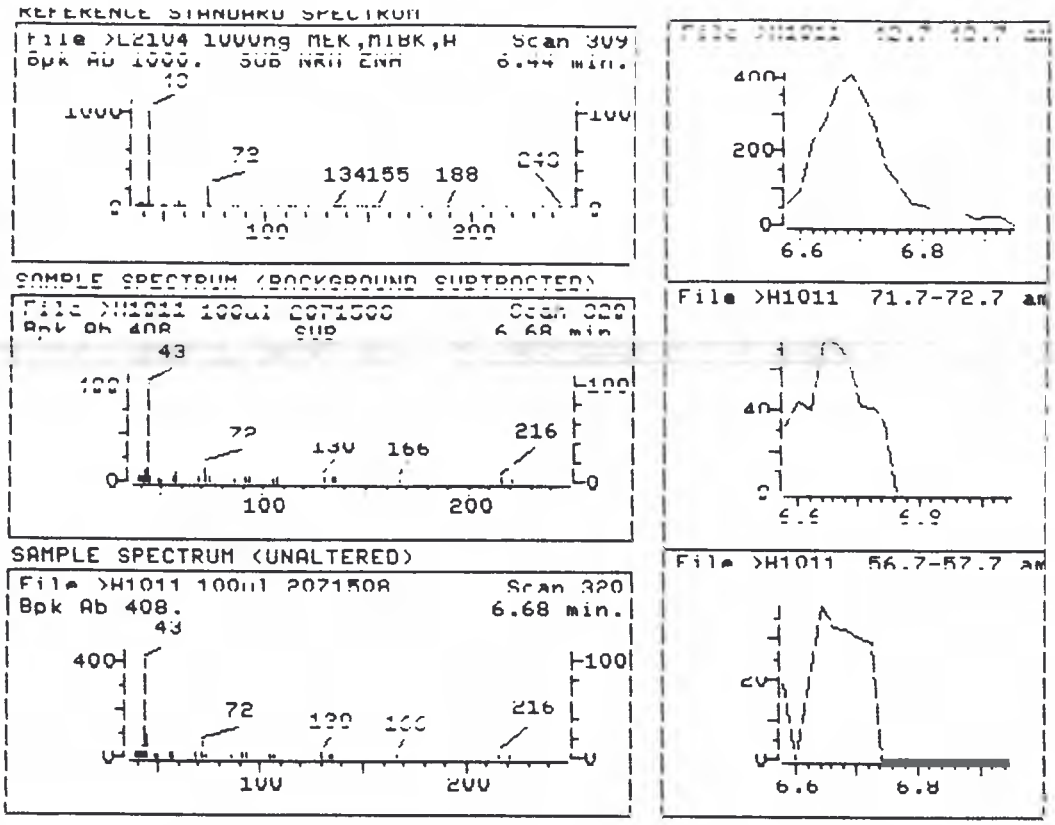
Compound No : 9
Compound Name : Acetone
Scan Number : 188
Retention Time: 3.97 min.
Quant Ion : 43.0
Area : 7068
Concentration : 152.22 ng
q-value : 91



Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v
Quant Time: 920810 15:21
Injected at: 920810 14:51
Last Qcal Time: <none>

Quant Output File: ^H1011::A6
Instrument ID: MS-1
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 228
Retention Time: 4.79 min.
Quant Ion : 84.0
Area : 2874
Concentration : 11.16 ng
q-value : 78



Data File: >H1011::A1
Name: 100ul 2071508
Misc: 250ng 6v
Quant Time: 920810 15:21
Injected at: 920810 14:51
Last Qcal Time: <none>

Quant Output File: ^H1011::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 320
Retention Time: 6.68 min.
Quant Ion : 43.0
Area : 3149
Concentration : 53.74 ng
q-value : 90

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-8		Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260		Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1509		Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	1.4
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	N.D.
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scott Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	92
Toluene-d8	91
4-Bromofluorobenzene	86

QUANT REPORT

Operator ID: GLEN
Output File: ^H1012::A6
Data File: >H1012::A1
Name: 100ul 2071509
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 15:55
Injected at: 920810 15:25
Dilution Factor: 1.00000
Instrument ID: MS-1

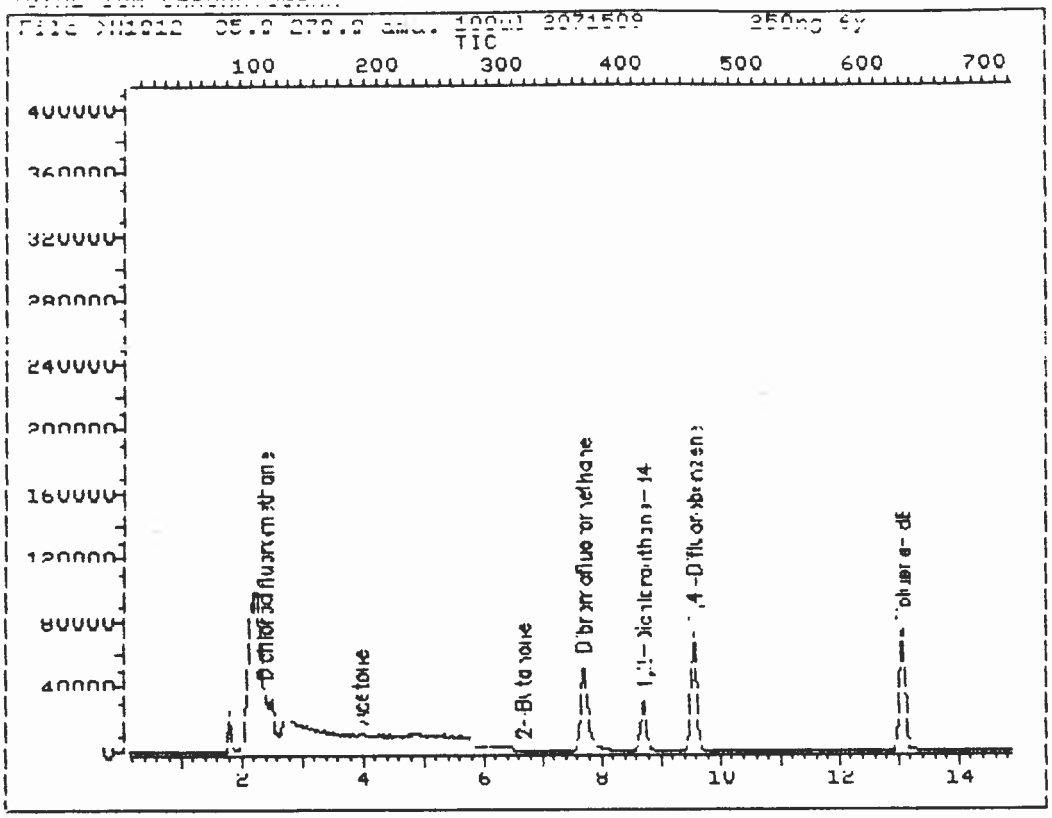
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: (none)

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	370	132825	250.00	ng	93
2)	Dichlorodifluoromethane	2.37	110	356	256.05	ng	91
4)	1,2-Dichloroethane-d4	8.72	420	83274	230.88	ng	98
9)	Acetone	3.95	187	6583	140.01	ng 14 mg/kg	93
19)	2-Butanone	6.66	319	1867	~~31.46 ng~~ (ND		94
28)	*1,4-Difluorobenzene	9.55	461	199330	250.00	ng	95
37)	Toluene-d8	13.07	634	182254	227.65	ng	94
38)	*Chlorobenzene-d5	16.90	822	168056	250.00	ng	96
57)	4-Bromofluorobenzene	20.04	976	103449	215.29	ng	85
58)	*1,4-Dichlorobenzene-d4	21.99	1072	103280	250.00	ng	96
75)	1-Fluoronaphthalene	26.66	1301	238402	248.23	ng	100

* Compound is ISTD

8/20/92

TOTAL ION CHROMATOGRAM

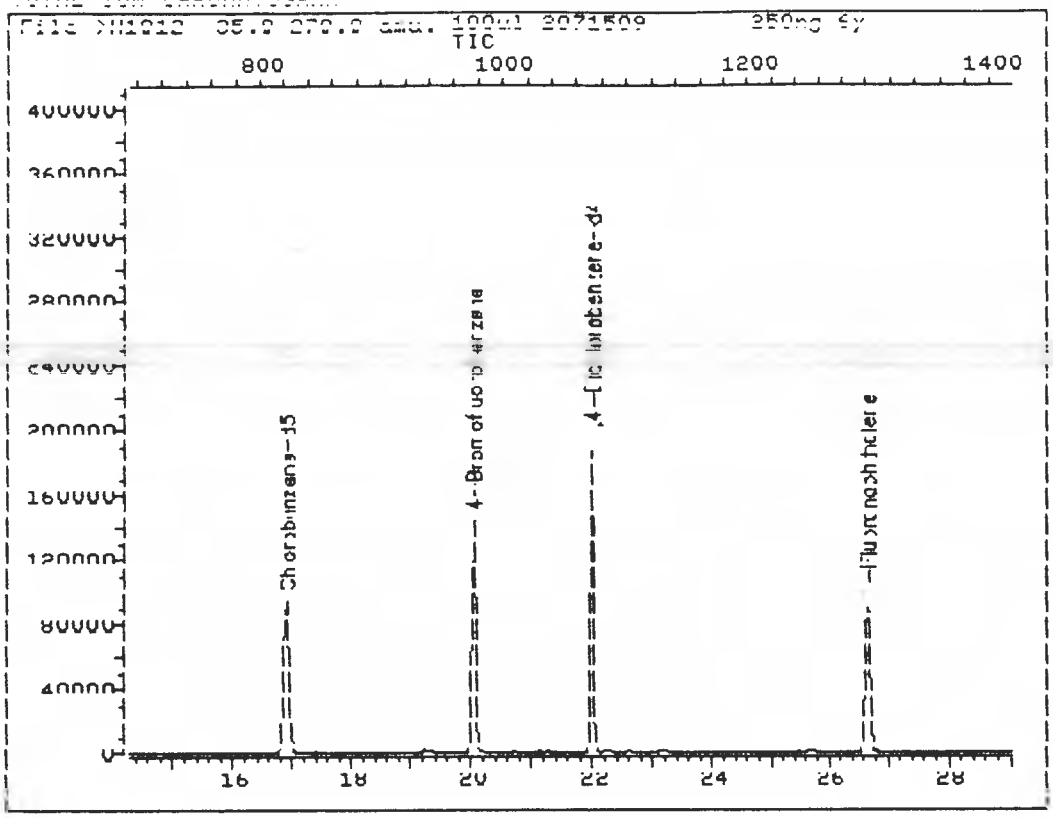


Data File: >H1012::A1 Quant Output File: ^H1012::A6
Name: 100ul 2071509 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 15:55
Injected at: 920810 15:25

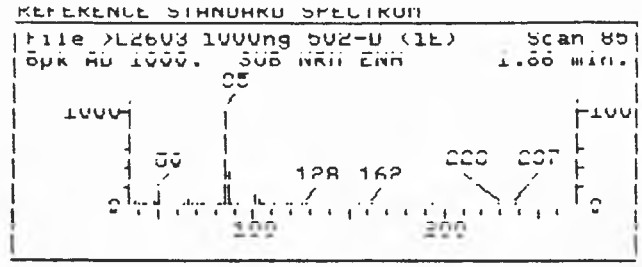
TOTAL ION CHROMATOGRAM

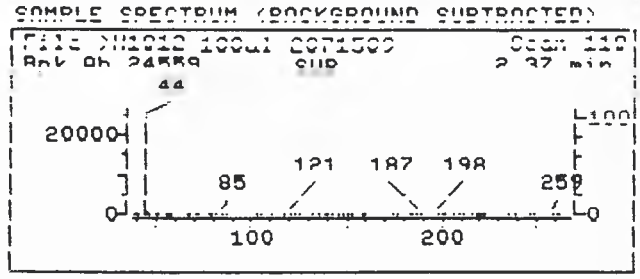


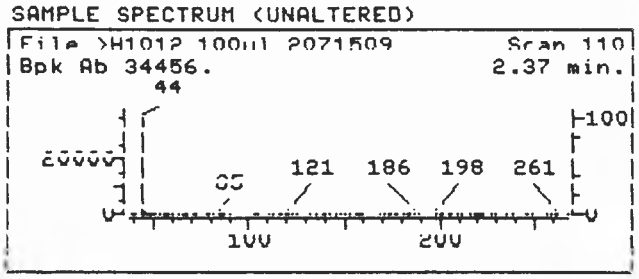
Data File: >H1012::A1 Quant Output File: ^H1012::A6
Name: 100ul 2071509 Instrument ID: MS-1
Misc: 250ng 6v

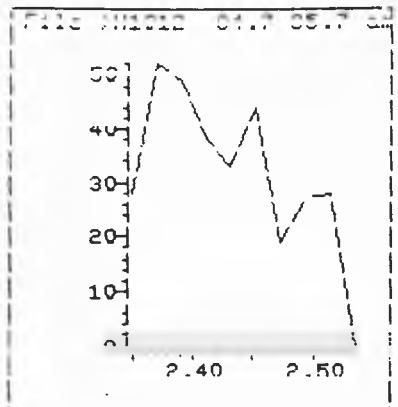
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

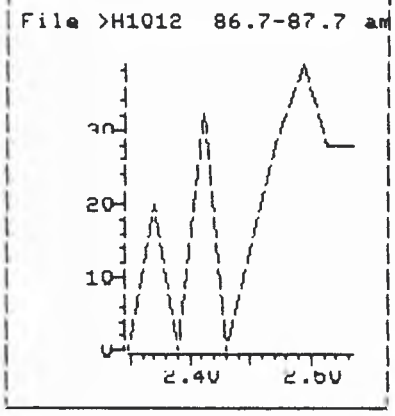
Operator ID: GLEN
Quant Time : 920810 15:55
Injected at: 920810 15:25









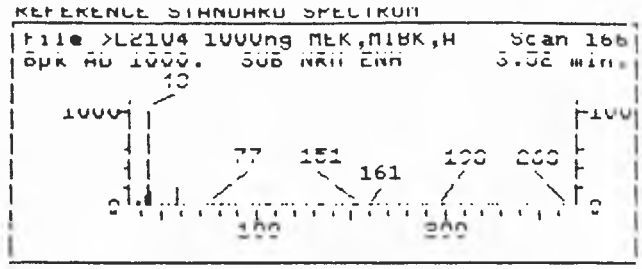


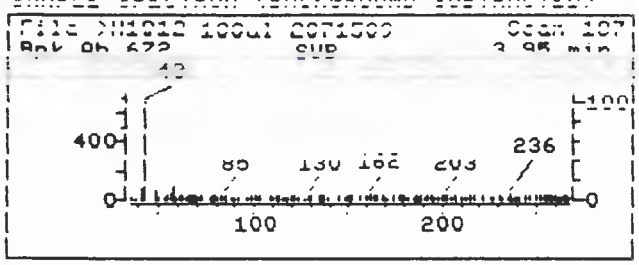
Data File: >H1012::A1
Name: 100ul 2071509
Misc: 250ng 6v
Quant Time: 920810 15:55
Injected at: 920810 15:25
Last Qcal Time: <none>

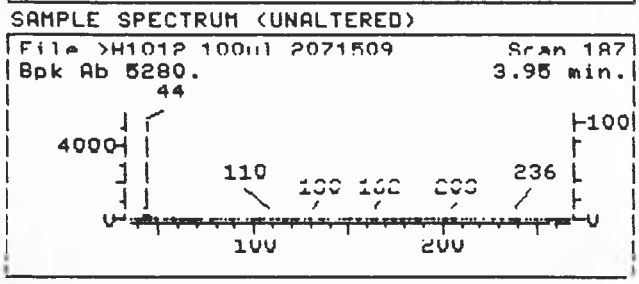
Quant Output File: ^H1012::A6
Instrument ID: MS-1

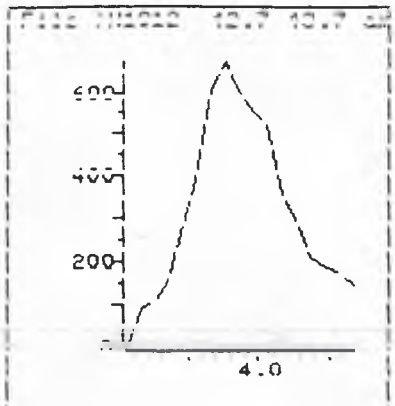
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

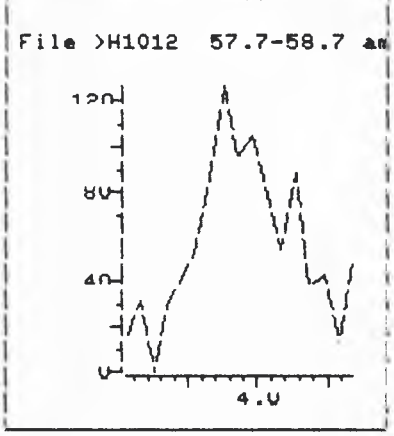
Compound No : 2
Compound Name : Dichlorodifluoromethane
Scan Number : 110
Retention Time: 2.37 min.
Quant Ion : 85.0
Area : 356
Concentration : 256.05 ng
q-value : 91









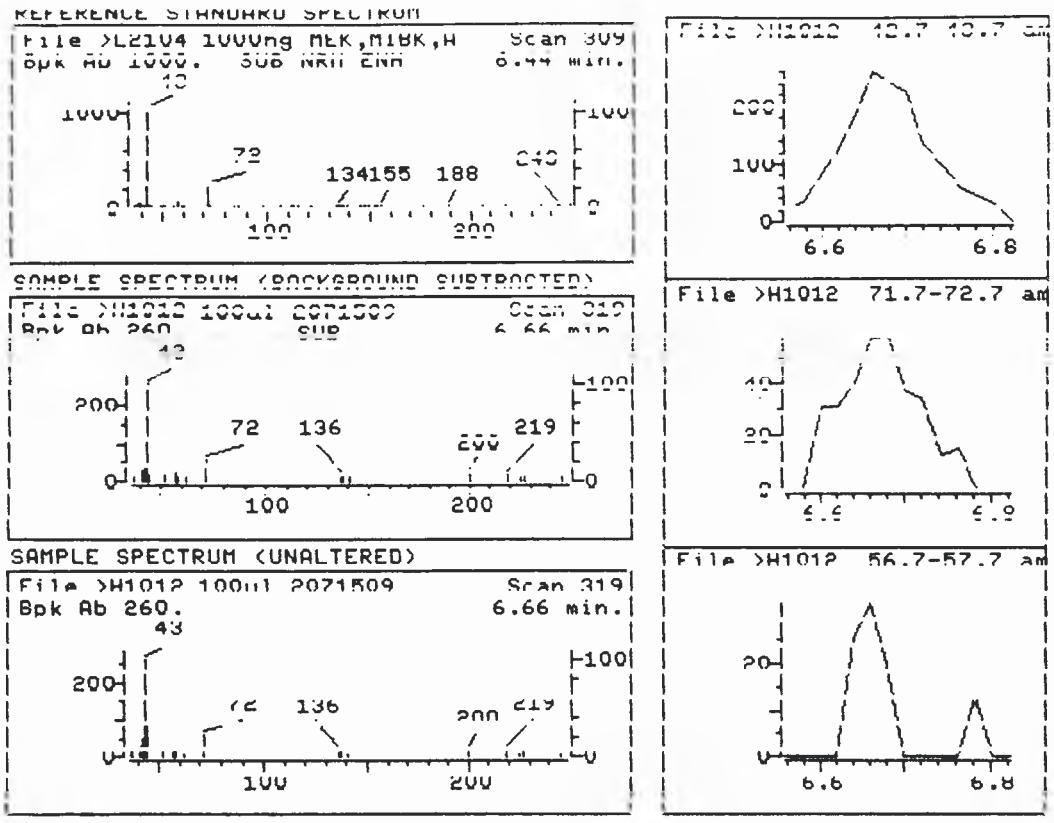


Data File: >H1012::A1
Name: 100ul 2071509
Misc: 250ng 6v
Quant Time: 920810 15:55
Injected at: 920810 15:25
Last Qcal Time: <none>

Quant Output File: ^H1012::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.95 min.
Quant Ion : 43.0
Area : 6583
Concentration : 140.01 ng
q-value : 93



Data File: >H1012::A1
Name: 100ul 2071509
Misc: 250ng 6v
Quant Time: 920810 15:55
Injected at: 920810 15:25
Last Qcal Time: <none>

Quant Output File: ^H1012::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 319
Retention Time: 6.66 min.
Quant Ion : 43.0
Area : 1867
Concentration : 31.46 ng
q-value : 94

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-9		Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260		Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1510		Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	1.3
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	N.D.
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	92
Toluene-d8	92
4-Bromofluorobenzene	84

2071501.HWA <24>

Operator ID: GLEN
Output File: ^H1013::A6
Data File: >H1013::A1
Name: 100ul 2071510
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 16:29
Injected at: 920810 15:59
Dilution Factor: 1.00000
Instrument ID: MS-1

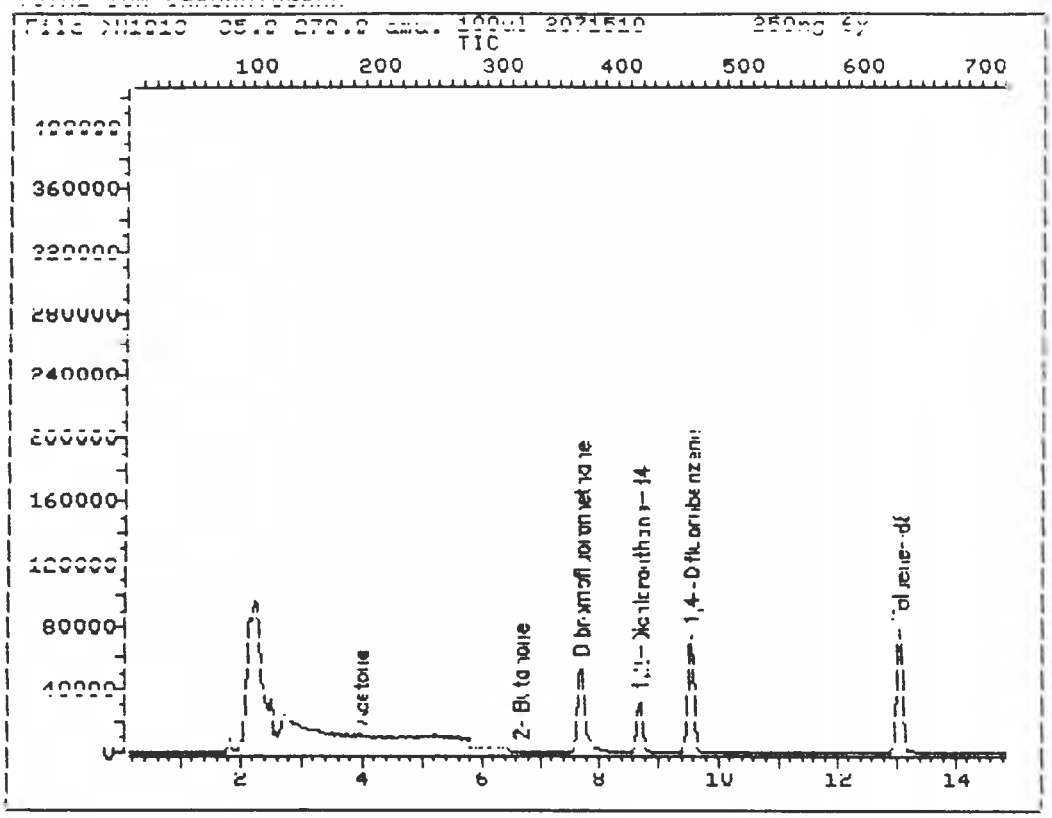
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.69	370	137482	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.71	420	85912	230.12	ng	94
9)	Acetone	3.97	188	6329	130.05	ng 1.3 mg/kg	83
19)	2-Butanone	6.65	319	1935	~~31.50 ng~~ <ND		96
28)	*1,4-Difluorobenzene	9.55	461	206594	250.00	ng	95
37)	Toluene-d8	13.07	634	189719	228.64	ng	93
38)	*Chlorobenzene-d5	16.90	822	175066	250.00	ng	95
57)	4-Bromofluorobenzene	20.03	976	105383	210.53	ng	84
58)	*1,4-Dichlorobenzene-d4	21.99	1072	105475	250.00	ng	98
75)	1-Fluoronaphthalene	26.65	1301	239581	244.27	ng	100

* Compound is ISTD

6/2/92

TOTAL ION CHROMATOGRAM

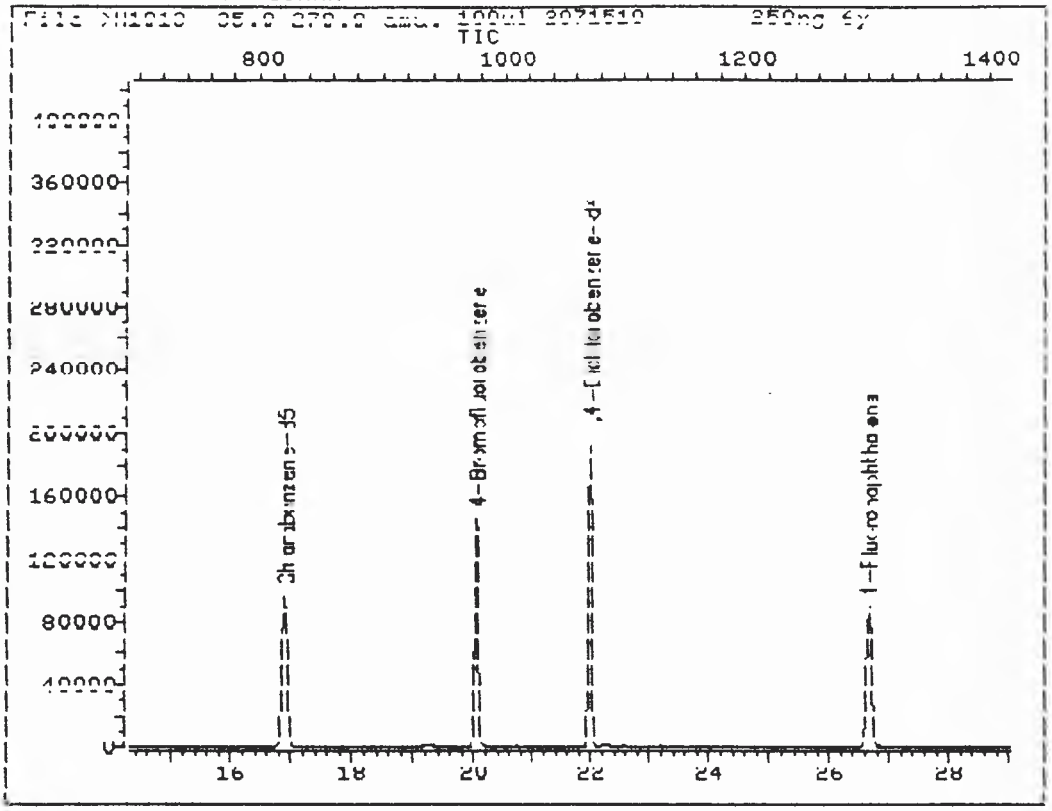


Data File: >H1013::A1 Quant Output File: ^H1013::A6
Name: 100ul 2071510 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 16:29
Injected at: 920810 15:59

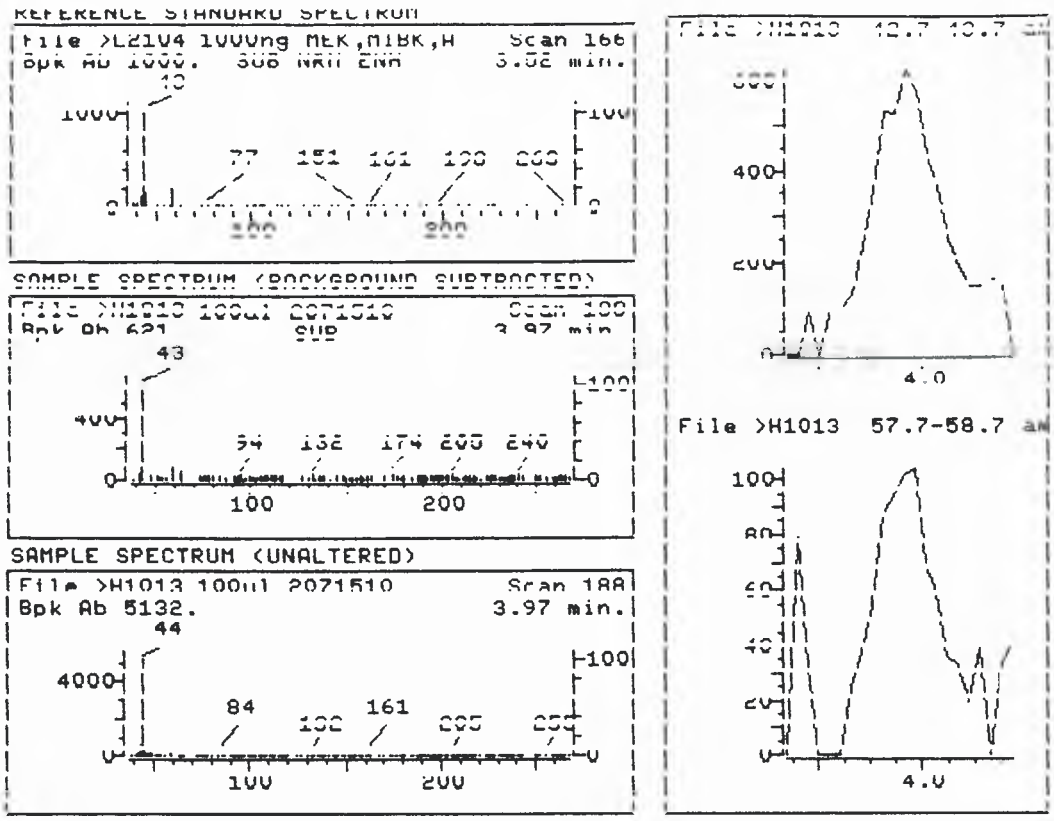
TOTAL ION CHROMATOGRAM



Data File: >H1013::A1 Quant Output File: ^H1013::A6
Name: 100ul 2071510 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 16:29
Injected at: 920810 15:59

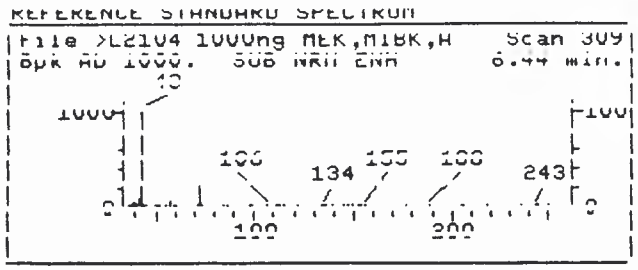


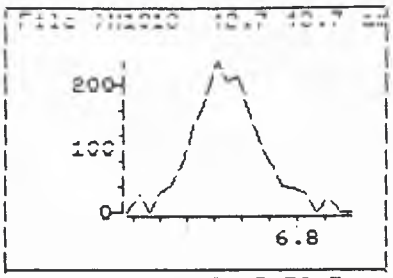
Data File: >H1013::A1
Name: 100ul 2071510
Misc: 250ng 6v
Quant Time: 920810 16:29
Injected at: 920810 15:59
Last Qcal Time: <none>

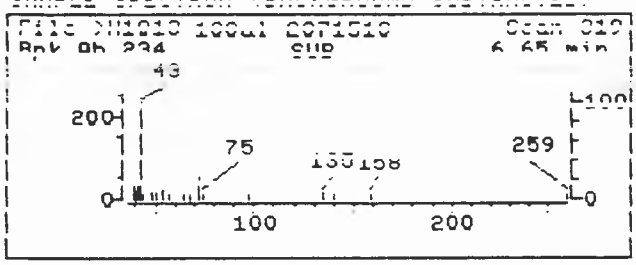
Quant Output File: ^H1013::A6
Instrument ID: MS-1

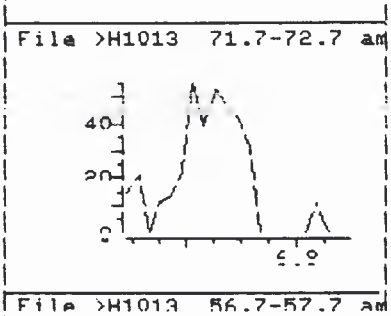
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

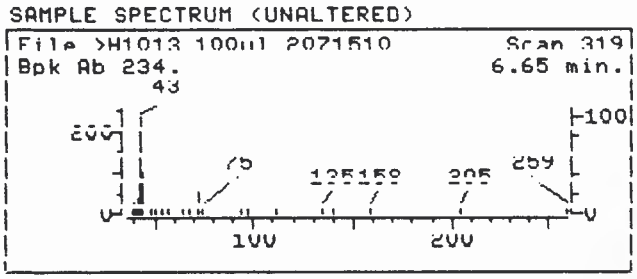
Compound No : 9
Compound Name : Acetone
Scan Number : 188
Retention Time: 3.97 min.
Quant Ion : 43.0
Area : 6329
Concentration : 130.05 ng
q-value : 83

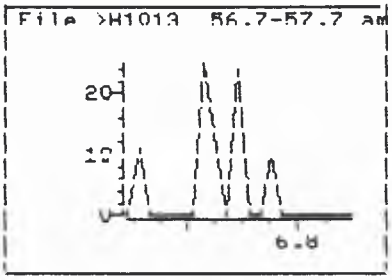












Data File: >H1013::A1
Name: 100ul 2071510
Misc: 250ng 6v
Quant Time: 920810 16:29
Injected at: 920810 15:59
Last Qcal Time: <none>

Quant Output File: ^H1013::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 319
Retention Time: 6.65 min.
Quant Ion : 43.0
Area : 1935
Concentration : 31.50 ng
q-value : 96

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-10	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10-11, 1992
Attention: Doug Geller	Sample Number:	207-1511	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	N.D.
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.68
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	99
Toluene-d8	91
4-Bromofluorobenzene	89

Scot Cocanour
Laboratory Director

2071501.HWA <25>

QUANT REPORT

Operator ID: GLEN
Output File: ^H1015::A6
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v

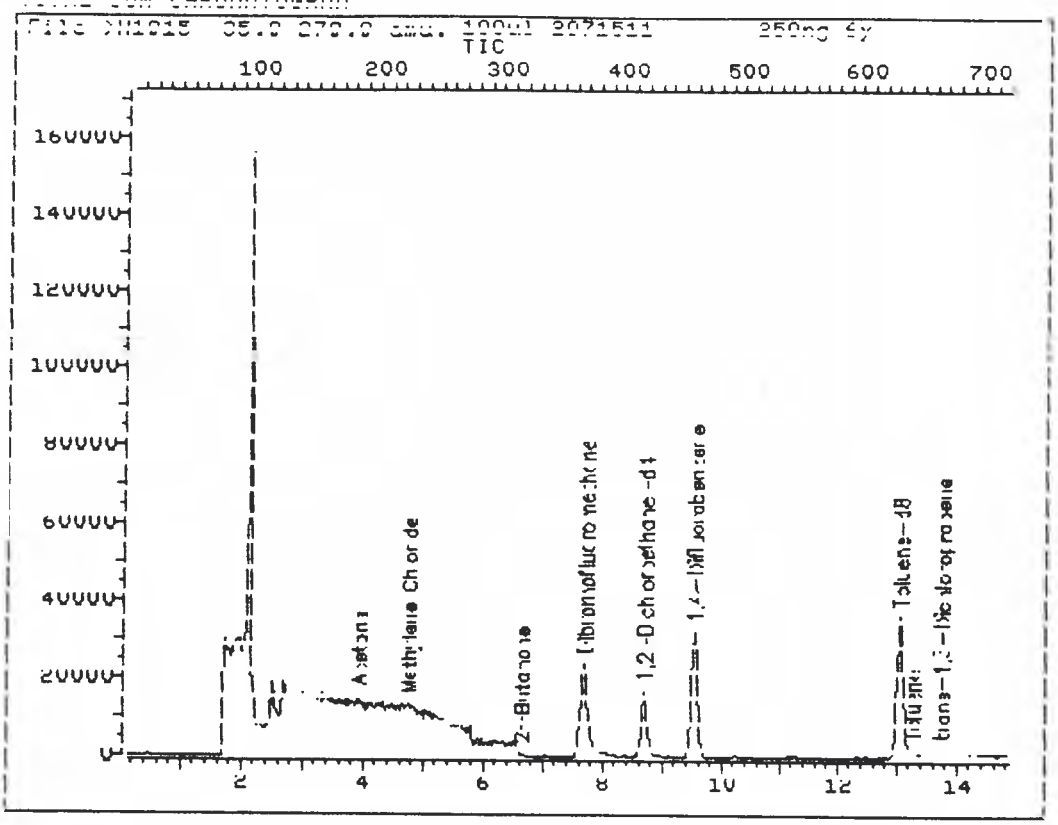
Quant Rev: 7
Quant Time: 920810 17:34
Injected at: 920810 17:04
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	370	54683	250.00	ng	87
4)	1,2-Dichloroethane-d4	8.69	419	40124	270.21	ng	90
9)	Acetone	3.93	186	5751	297.11	ng	96
14)	Methylene Chloride	4.75	226	2731	~~25.44 ng~~ <ND		78
19)	2-Butanone	6.64	318	1656	67.79	ng 68 ng/kg	88
28)	*1,4-Difluorobenzene	9.53	460	73985	250.00	ng	94
37)	Toluene-d8	13.05	633	72634	244.43	ng	96
38)	*Chlorobenzene-d5	16.88	821	65224	250.00	ng	98
39)	Toluene	13.26	643	1341	~~7.41 ng~~ <ND		97
40)	trans-1,3-Dichloropropene	13.74	667	898	~~5.85 ng~~ <ND		93
50)	m,p-Xylene	17.39	846	1063	~~7.37 ng~~ <ND		98
57)	4-Bromofluorobenzene	20.04	976	44517	238.71	ng	81
58)	*1,4-Dichlorobenzene-d4	21.97	1071	35965	250.00	ng	99
75)	1-Fluoronaphthalene	26.66	1301	83025	248.25	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v

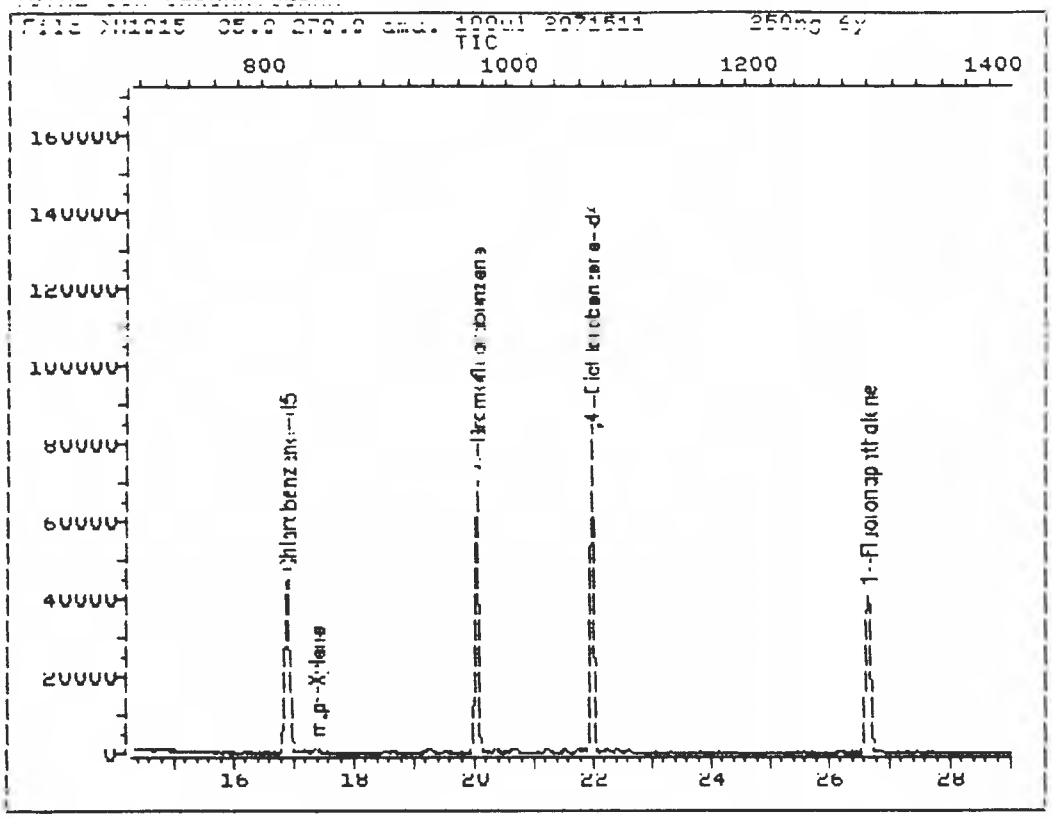
Quant Output File: ^H1015::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 17:34
Injected at: 920810 17:04

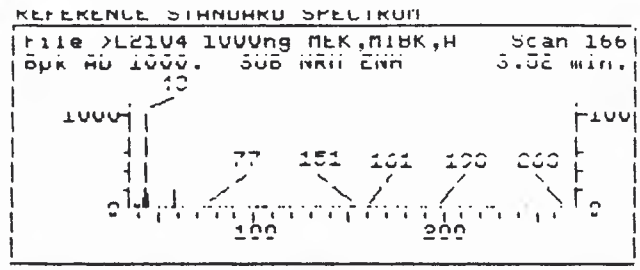
TOTAL ION CHROMOTOGRAM

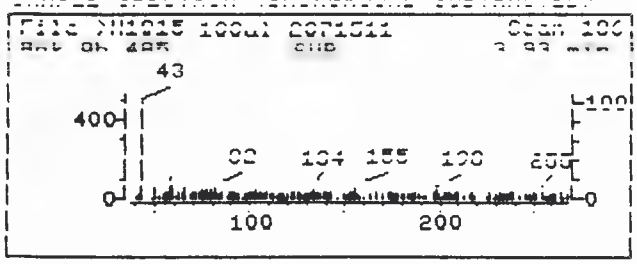


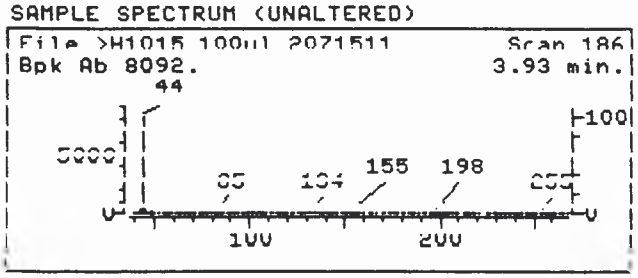
Data File: >H1015::A5 Quant Output File: ^H1015::A6
Name: 100ul 2071511 Instrument ID: MS-1
Misc: 250ng 6v

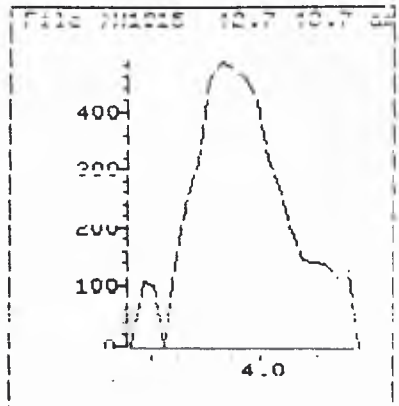
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

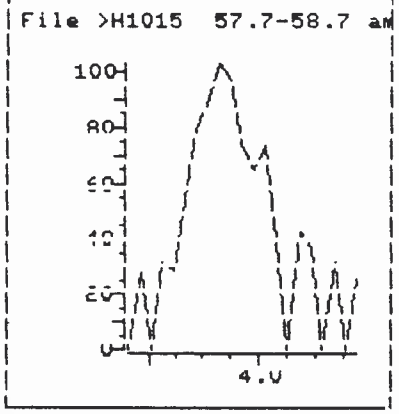
Operator ID: GLEN
Quant Time : 920810 17:34
Injected at: 920810 17:04









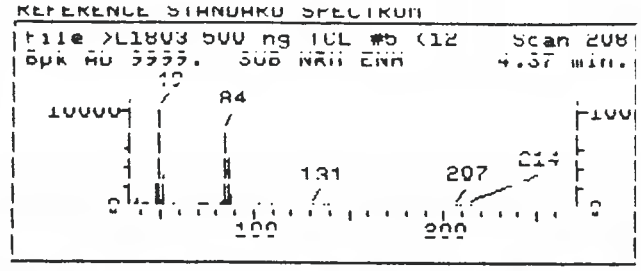


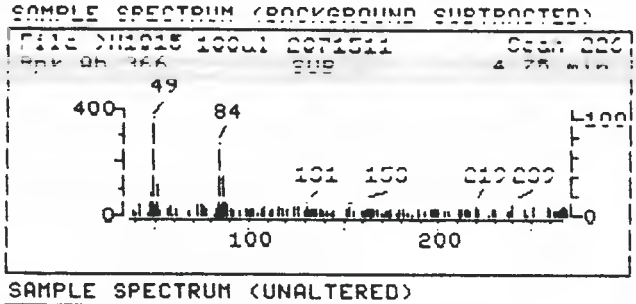
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

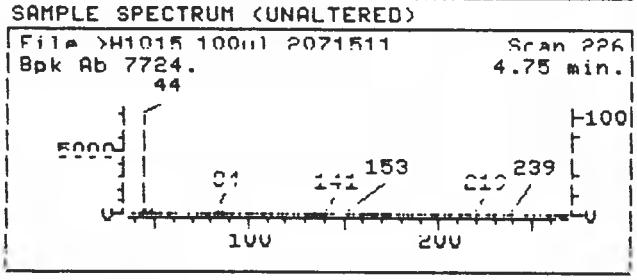
Quant Output File: ^H1015::A6
Instrument ID: MS-1

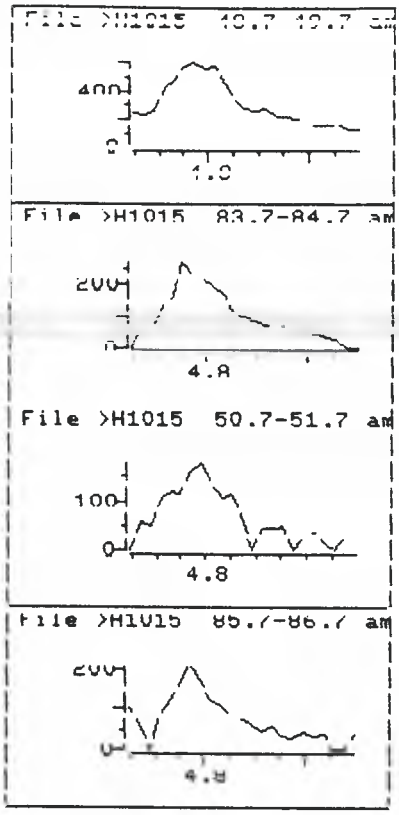
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 186
Retention Time: 3.93 min.
Quant Ion : 43.0
Area : 5751
Concentration : 297.11 ng
q-value : 96









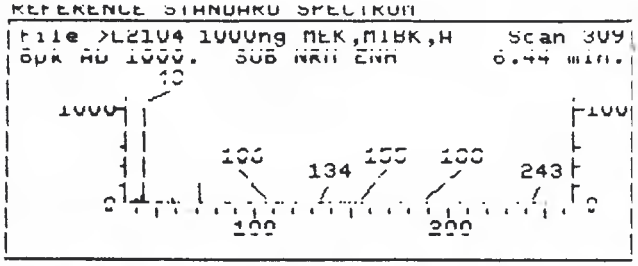
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

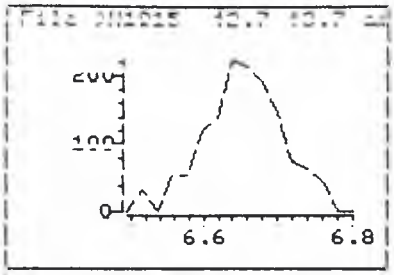
Quant Output File: ^H1015::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

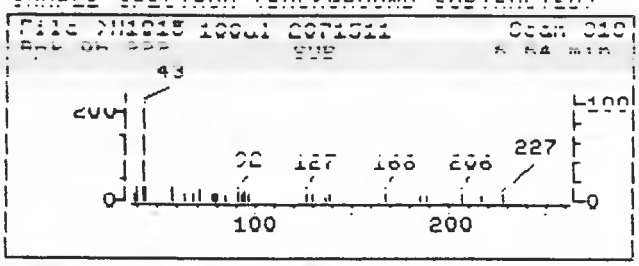
Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 226
Retention Time: 4.75 min.
Quant Ion : 84.0
Area : 2731
Concentration : 25.44 ng
q-value : 78

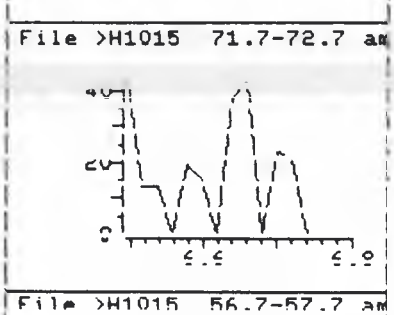
REFERENCE STANDARD SPECTRUM



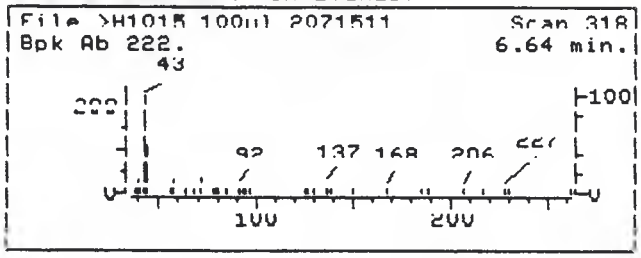


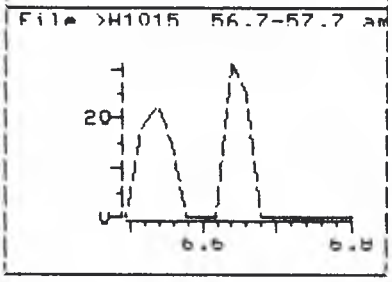
SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)





SAMPLE SPECTRUM (UNALTERED)



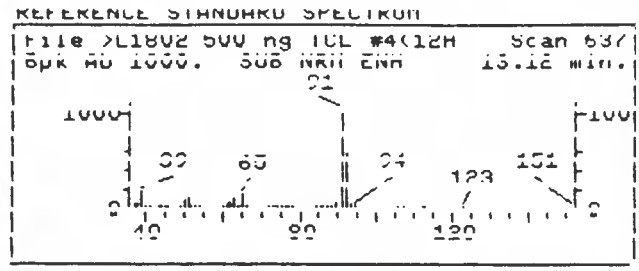


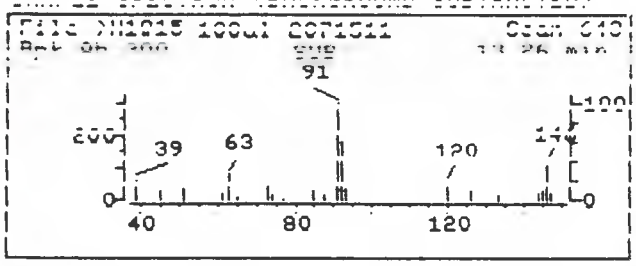
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

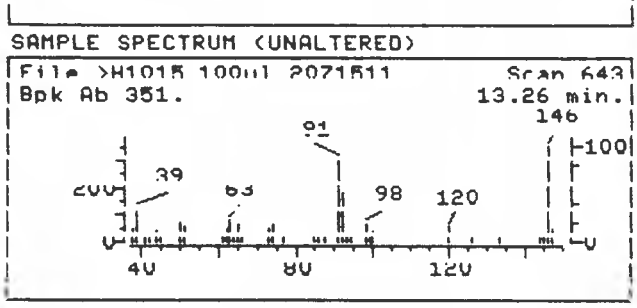
Quant Output File: ^H1015::A6
Instrument ID: MS-1

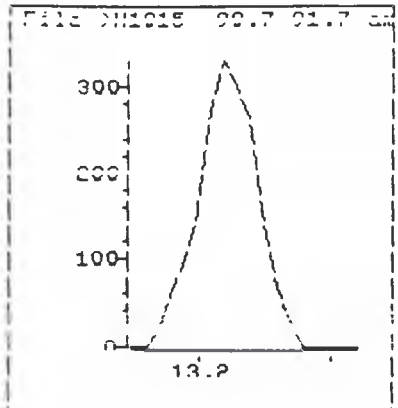
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

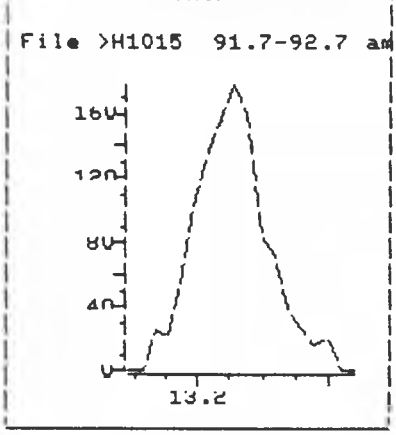
Compound No : 19
Compound Name : 2-Butanone
Scan Number : 318
Retention Time: 6.64 min.
Quant Ion : 43.0
Area : 1656
Concentration : 67.79 ng
q-value : 88









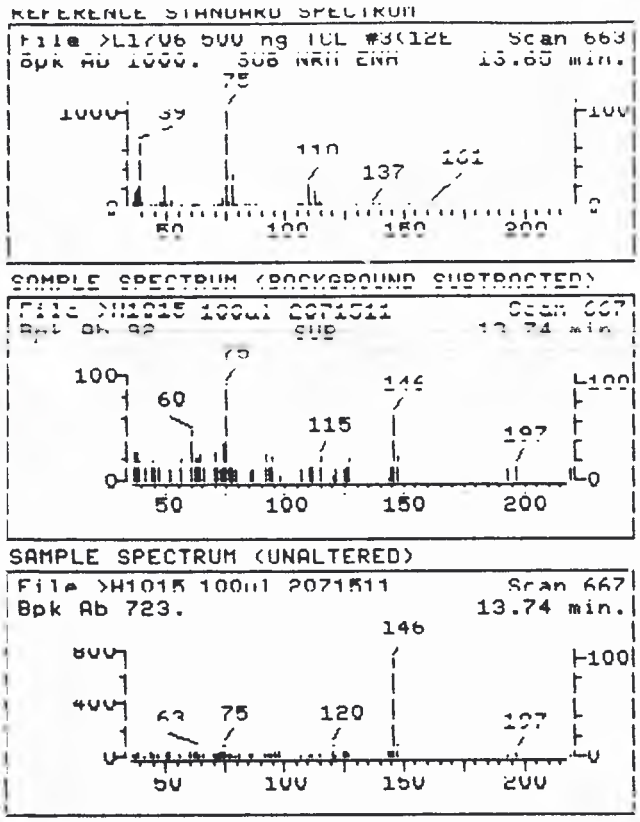


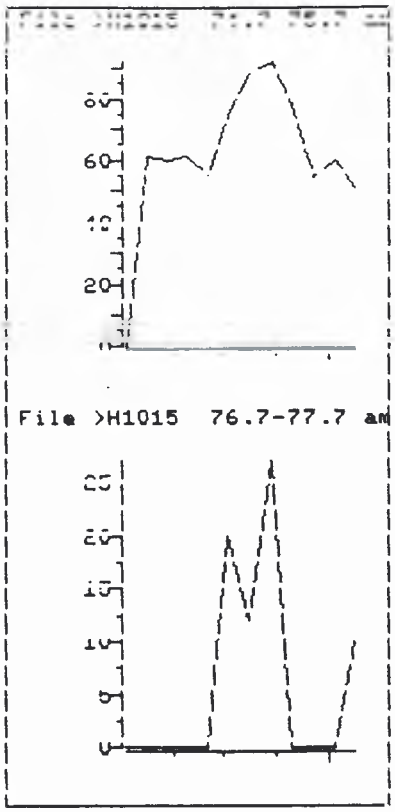
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

Quant Output File: ^H1015::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 39
Compound Name : Toluene
Scan Number : 643
Retention Time: 13.26 min.
Quant Ion : 92.0
Area : 1341
Concentration : 7.41 ng
q-value : 97

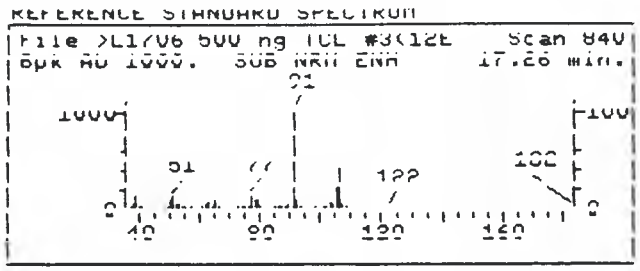


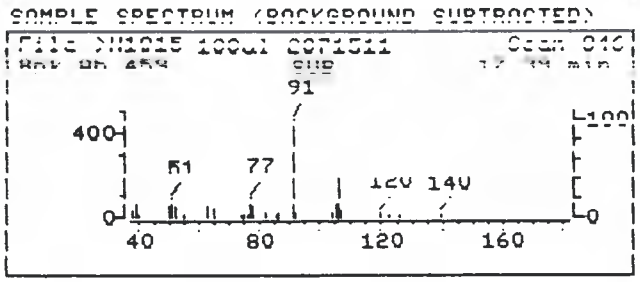


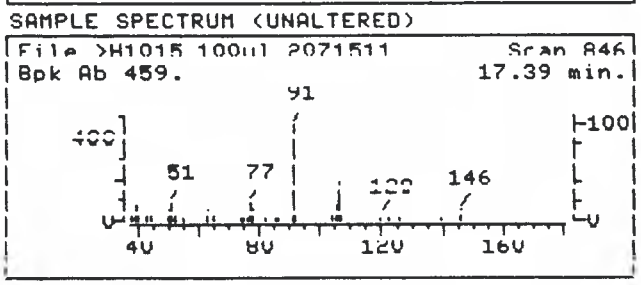
Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

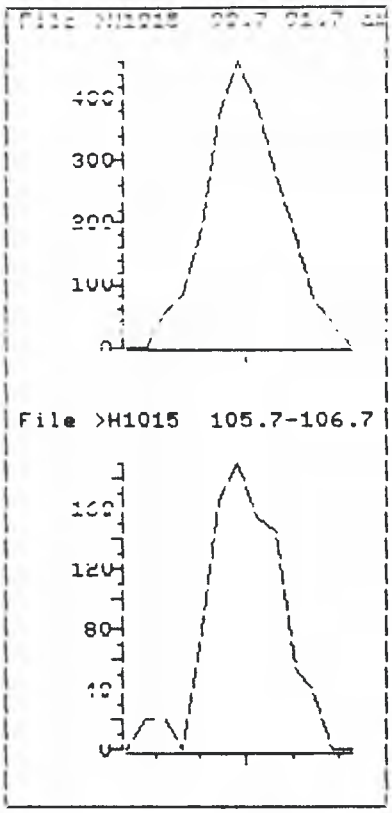
Quant Output File: ^H1015::A6
Instrument ID: MS-1
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 40
Compound Name : trans-1,3-Dichloropropene
Scan Number : 667
Retention Time: 13.74 min.
Quant Ion : 75.0
Area : 898
Concentration : 5.85 ng
q-value : 93









Data File: >H1015::A5
Name: 100ul 2071511
Misc: 250ng 6v
Quant Time: 920810 17:34
Injected at: 920810 17:04
Last Qcal Time: <none>

Quant Output File: ^H1015::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 50
Compound Name : m,p-Xylene
Scan Number : 846
Retention Time: 17.39 min.
Quant Ion : 106.0
Area : 1063
Concentration : 7.37 ng
q-value : 98

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-11	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1512	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	1.2
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	N.D.
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	97
Toluene-d8	93
4-Bromofluorobenzene	87

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H1016::A6
Data File: >H1016::A5
Name: 100ul 2071512
Misc: 250ng 6v

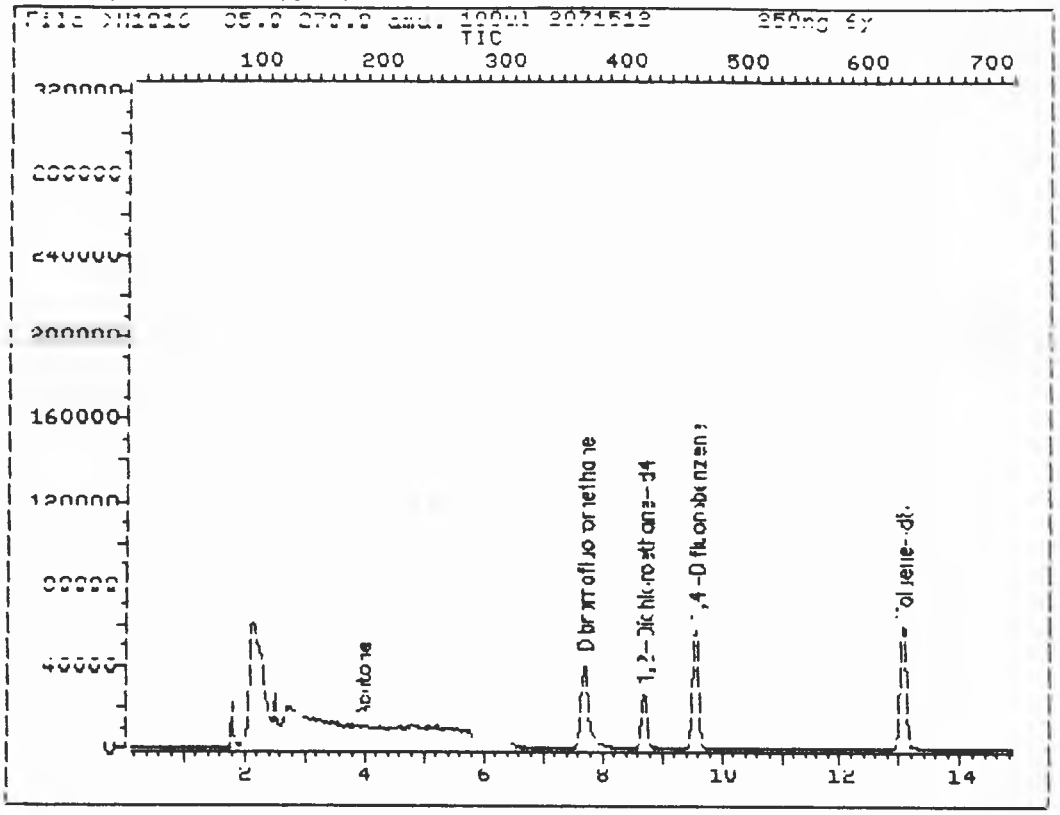
Quant Rev: 7
Quant Time: 920810 18:08
Injected at: 920810 17:38
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: (none)

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	370	102348	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.70	419	67198	241.79	ng	95
9)	Acetone	3.97	188	4240	117.03	ng	89
28)	*1,4-Difluorobenzene	9.55	461	147128	250.00	ng	98
37)	Toluene-d8	13.05	633	137434	232.57	ng	95
38)	*Chlorobenzene-d5	16.88	821	126115	250.00	ng	97
57)	4-Bromofluorobenzene	20.04	976	78822	218.59	ng	94
58)	*1,4-Dichlorobenzene-d4	21.99	1072	75593	250.00	ng	97
75)	1-Fluoronaphthalene	26.66	1301	171089	243.39	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

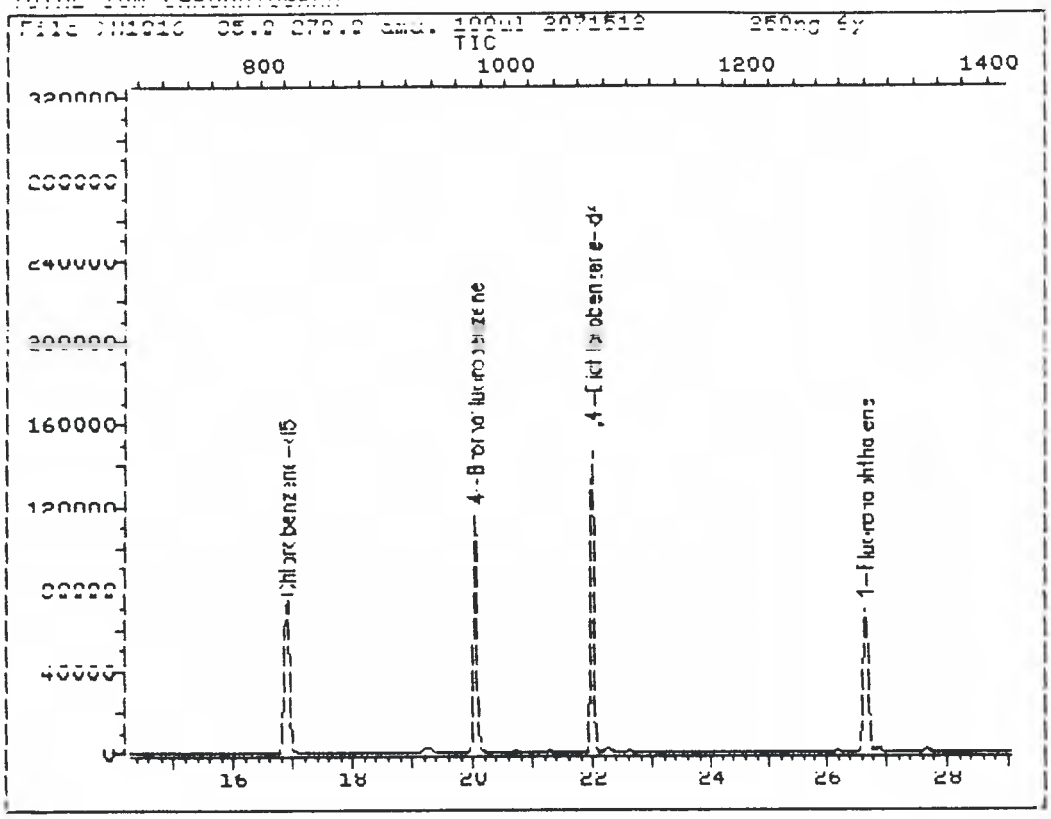


Data File: >H1016::A5 Quant Output File: ^H1016::A6
Name: 100ul 2071512 Instrument ID: MS-1
Misc: 250ng 6y

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 18:08
Injected at: 920810 17:38

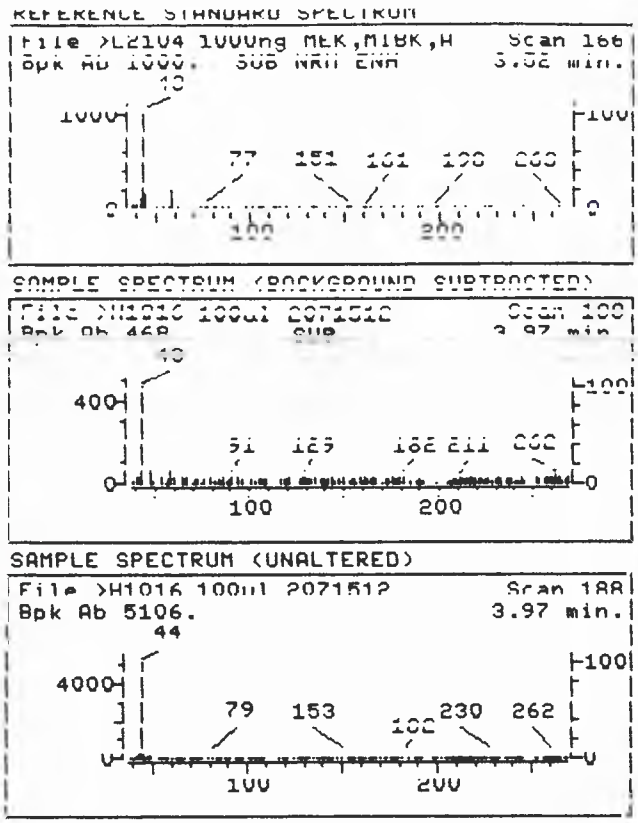
TOTAL ION CHROMATOGRAM

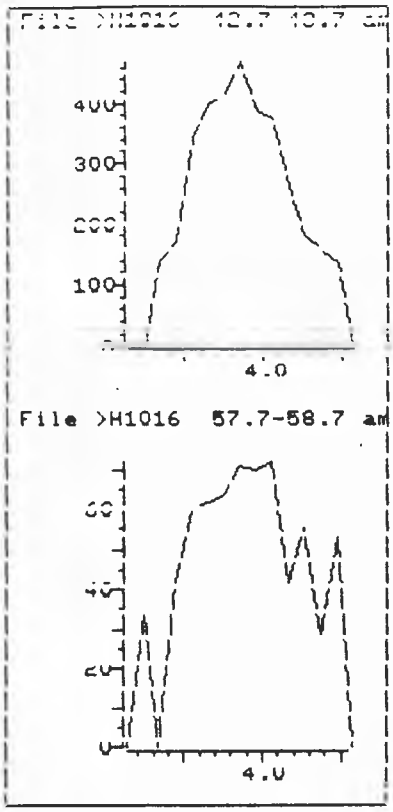


Data File: >H1016::A5 Quant Output File: ^H1016::A6
Name: 100ul 2071512 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 18:08
Injected at: 920810 17:38





Data File: >H1016::A5
Name: 100ul 2071512
Misc: 250ng 6v
Quant Time: 920810 18:08
Injected at: 920810 17:38
Last Qcal Time: <none>

Quant Output File: ^H1016::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 188
Retention Time: 3.97 min.
Quant Ion : 43.0
Area : 4240
Concentration : 117.03 ng
q-value : 89

CC108

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-12	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1513	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	1.0
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.54
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	97
Toluene-d8	90
4-Bromofluorobenzene	87

Scot Cocanour
Laboratory Director

2071501.HWA <27>

QUANT REPORT

Operator ID: GLEN
Output File: ^H1017::A6
Data File: >H1017::A5
Name: 100ul 2071513
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 18:42
Injected at: 920810 18:12
Dilution Factor: 1.00000
Instrument ID: MS-1

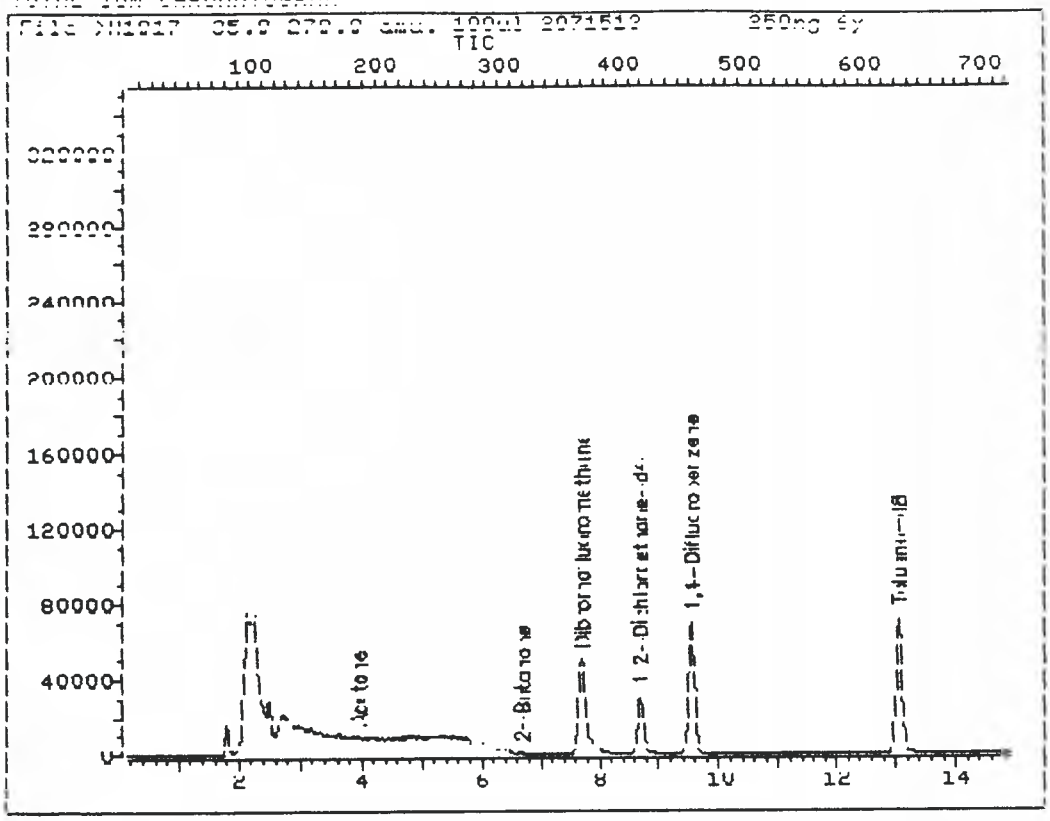
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qual Time: (none)

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	370	126597	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.69	419	83278	242.25	ng	94
9)	Acetone	3.95	187	4626	103.23	ng 1.0mg/kg	59
19)	2-Butanone	6.68	320	3069	54.26	ng 0.54mg/kg	95
28)	*1,4-Difluorobenzene	9.55	461	188903	250.00	ng	97
37)	Toluene-d8	13.05	633	170137	224.24	ng	95
38)	*Chlorobenzene-d5	16.88	821	150735	250.00	ng	96
57)	4-Bromofluorobenzene	20.03	976	93996	218.09	ng	96
58)	*1,4-Dichlorobenzene-d4	21.97	1071	90629	250.00	ng	96
75)	1-Fluoronaphthalene	26.65	1301	214765	254.83	ng	100

* Compound is ISTD

8/12/92

TOTAL ION CHROMATOGRAM

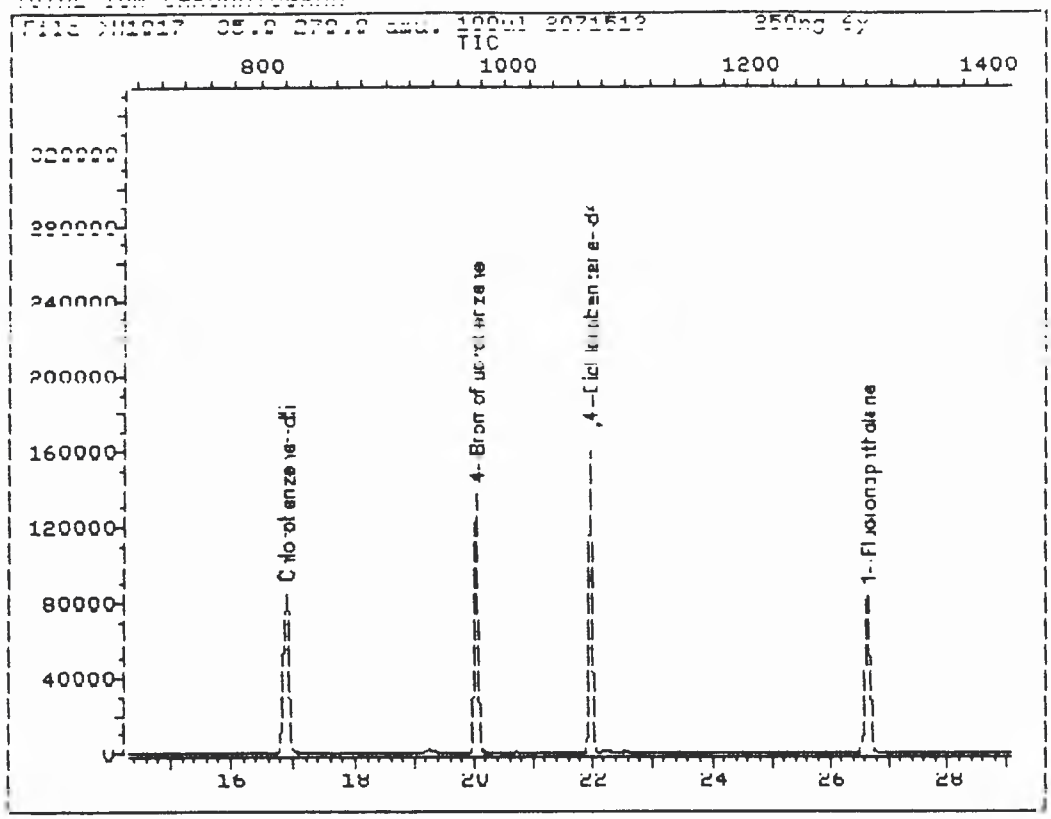


Data File: >H1017::A5 Quant Output File: ^H1017::A6
Name: 100ul 2071513 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 18:42
Injected at: 920810 18:12

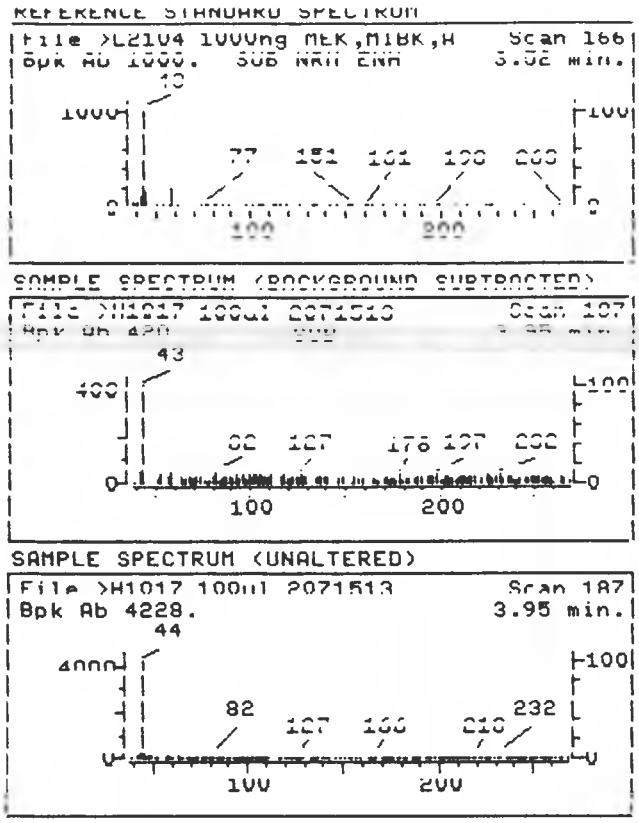
TOTAL ION CHROMOTOGRAM

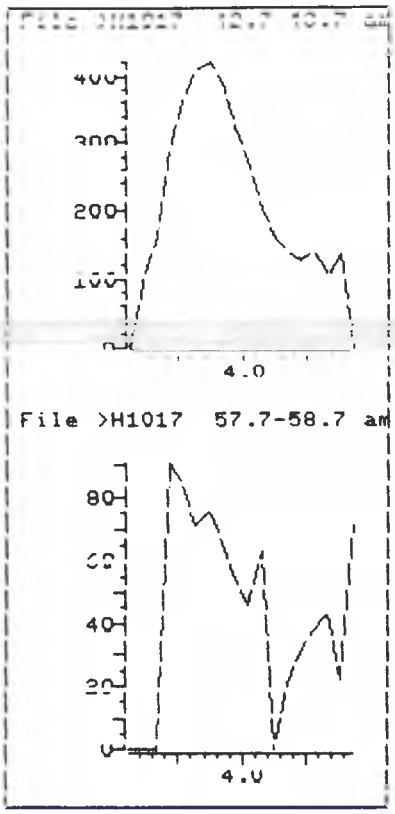


Data File: >H1017::A5 Quant Output File: ^H1017::A6
Name: 100ul 2071513 Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 18:42
Injected at: 920810 18:12



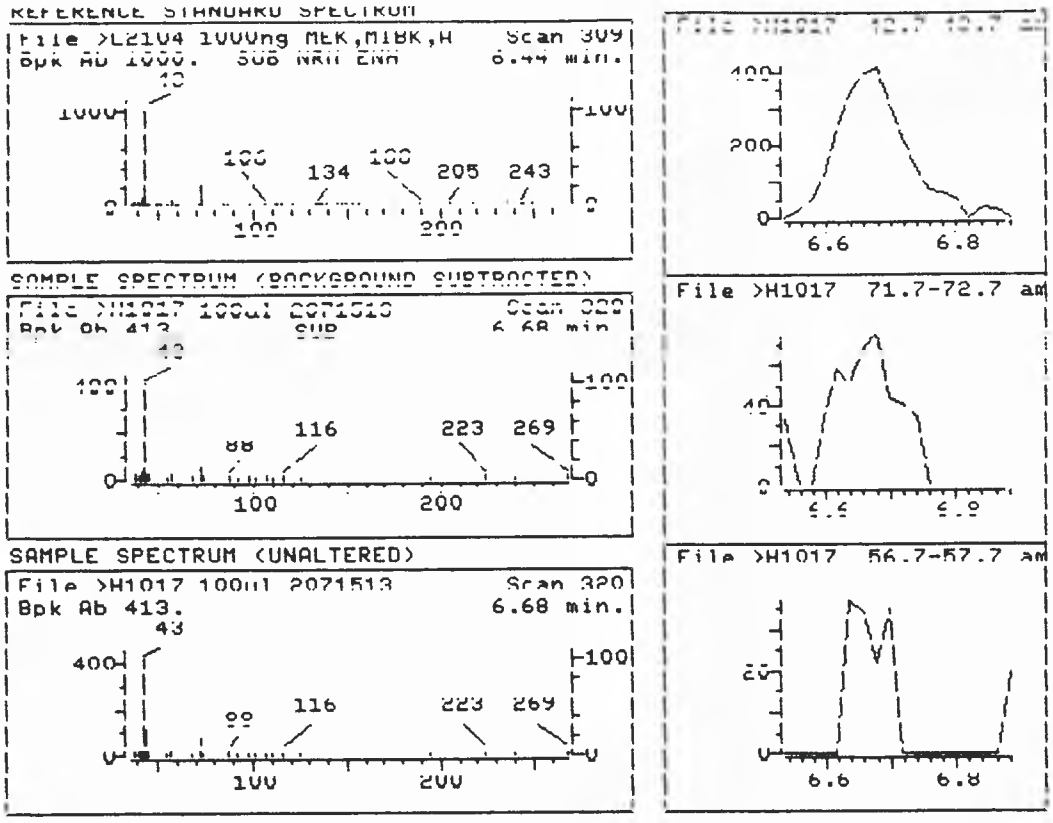


Data File: >H1017::A5
Name: 100ul 2071513
Misc: 250ng 6v
Quant Time: 920810 18:42
Injected at: 920810 18:12
Last Qcal Time: <none>

Quant Output File: ^H1017::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.95 min.
Quant Ion : 43.0
Area : 4626
Concentration : 103.23 ng
q-value : 59



Data File: >H1017::A5
Name: 100ul 2071513
Misc: 250ng 6v
Quant Time: 920810 18:42
Injected at: 920810 18:12
Last Qcal Time: <none>

Quant Output File: ^H1017::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 320
Retention Time: 6.68 min.
Quant Ion : 43.0
Area : 3069
Concentration : 54.26 ng
q-value : 95

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-13	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	207-1514	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	**0.50**	**0.96**
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	**0.50**	**0.56**
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	97
Toluene-d8	91
4-Bromofluorobenzene	88

2071501.HWA <28>

QUANT REPORT

Operator ID: GLEN
Output File: ^H1018::A6
Data File: >H1018::A5
Name: 100ul 2071514
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 19:17
Injected at: 920810 18:47
Dilution Factor: 1.00000
Instrument ID: MS-1

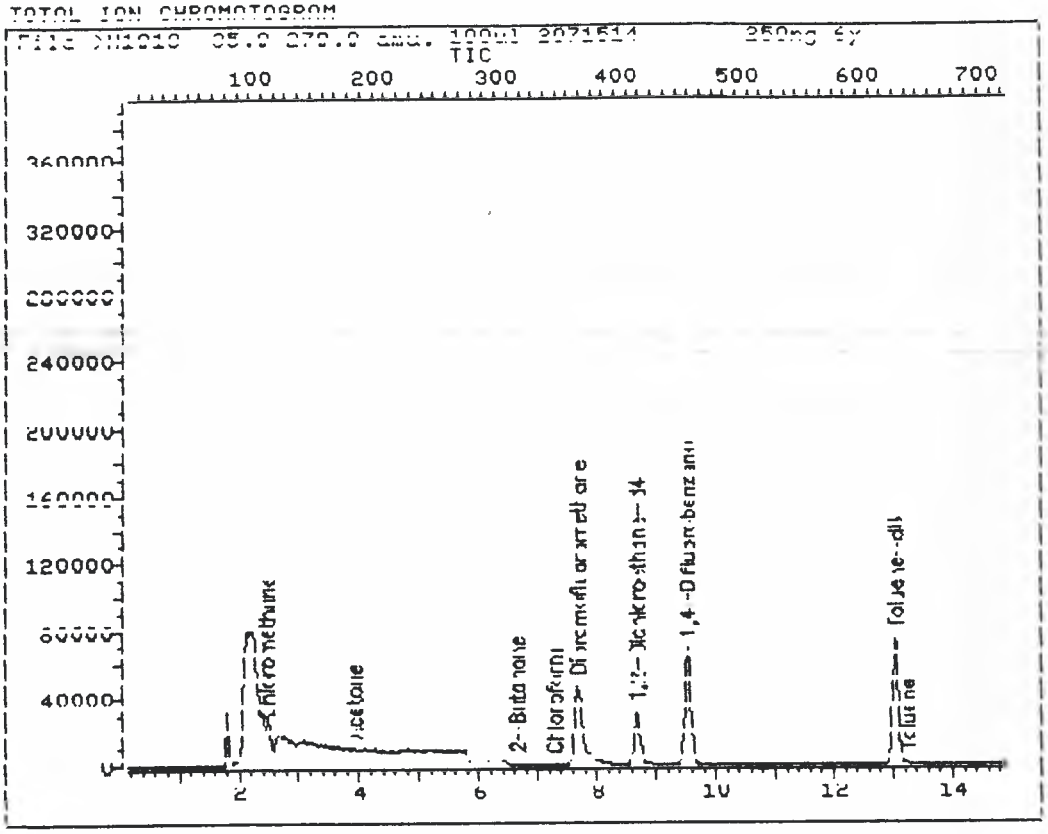
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.68	369	126715	250.00	ng	93
3)	Chloromethane	2.46	114	454	~~2.62 ng~~	<ND	91
4)	1,2-Dichloroethane-d4	8.68	418	83723	243.32	ng	93
9)	Acetone	3.92	185	4317	96.24	ng 0.96 mg/kg	94
19)	2-Butanone	6.65	318	3169	55.98	ng 0.56 mg/kg	97
22)	Chloroform	7.28	349	228	~~.393 ng~~	<ND	92
28)	*1,4-Difluorobenzene	9.52	459	187054	250.00	ng	96
37)	Toluene-d8	13.04	632	171641	228.46	ng	99
38)	*Chlorobenzene-d5	16.87	820	156921	250.00	ng	96
39)	Toluene	13.24	642	1220	~~2.80 ng~~	<ND	98
50)	m,p-Xylene	17.38	845	656	~~1.89 ng~~	<ND	93
51)	o-Xylene	18.54	902	342	~~.949 ng~~	<ND	81
57)	4-Bromofluorobenzene	20.02	975	99105	220.88	ng	86
58)	*1,4-Dichlorobenzene-d4	21.98	1071	94827	250.00	ng	99
75)	1-Fluoronaphthalene	26.64	1300	230838	261.78	ng	100

* Compound is ISTD

8/25/92

TOTAL ION CHROMOTOGRAM



Data File: >H1018::A5
Name: 100ul 2071514
Misc: 250ng 6v

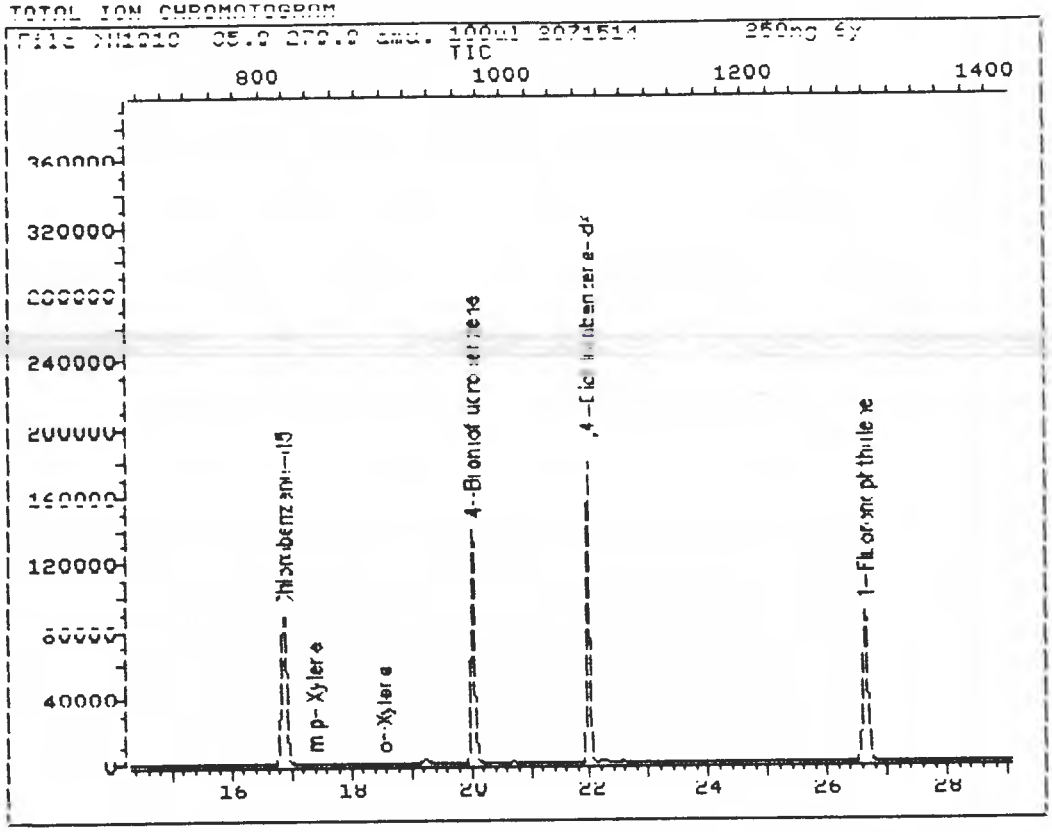
Quant Output File: ^H1018::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 19:17
Injected at: 920810 18:47

TOTAL ION CHROMATOGRAM



Data File: >H1018::A5
Name: 100ul 2071514
Misc: 250ng 6v

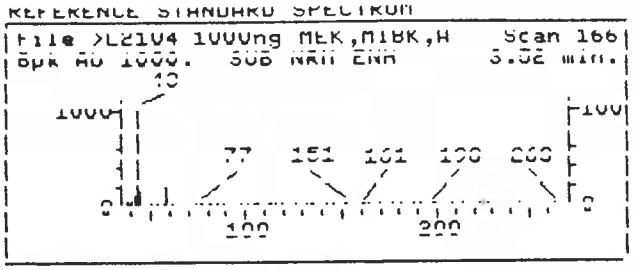
Quant Output File: ^H1018::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

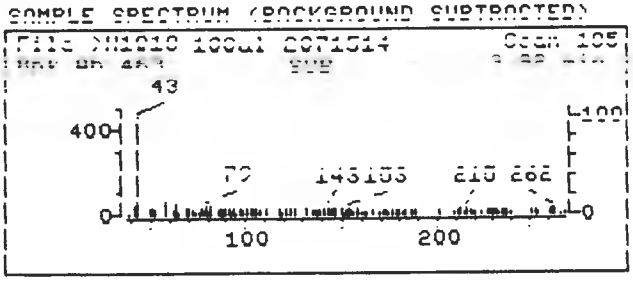
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 19:17
Injected at: 920810 18:47

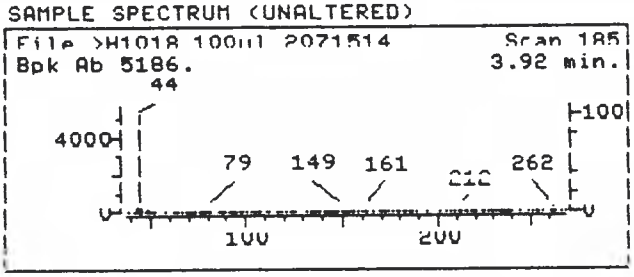
REFERENCE STANDARD SPECTRUM

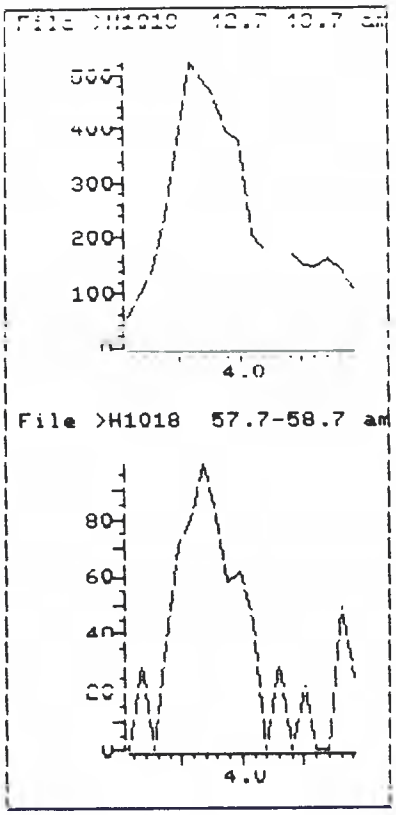


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)



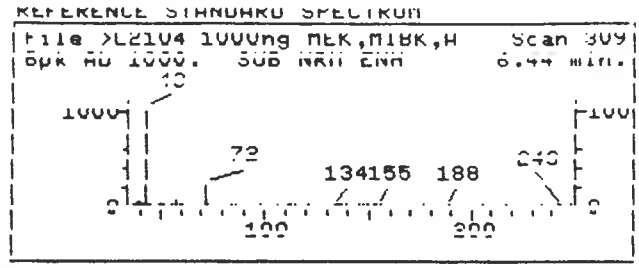


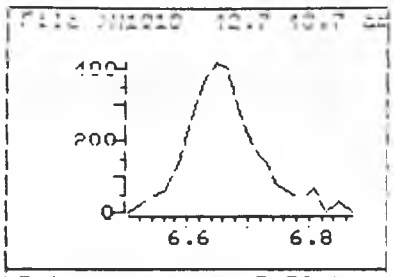
Data File: >H1018::A5
Name: 100ul 2071514
Misc: 250ng 6v
Quant Time: 920810 19:17
Injected at: 920810 18:47
Last Qcal Time: <none>

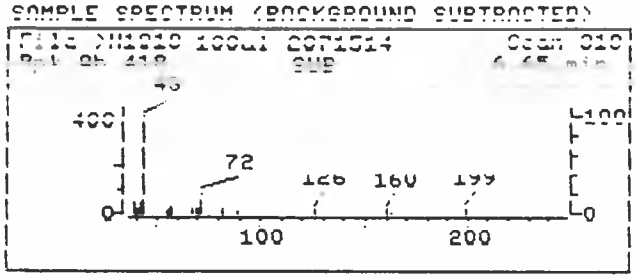
Quant Output File: ^H1018::A6
Instrument ID: MS-1

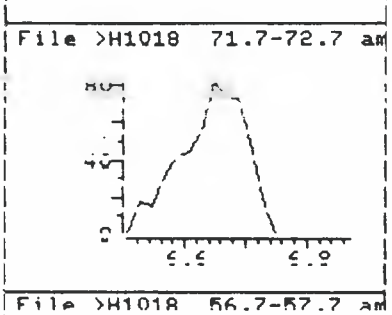
Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

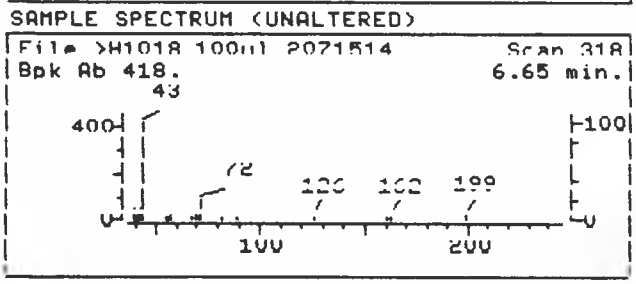
Compound No : 9
Compound Name : Acetone
Scan Number : 185
Retention Time: 3.92 min.
Quant Ion : 43.0
Area : 4317
Concentration : 96.24 ng
q-value : 94

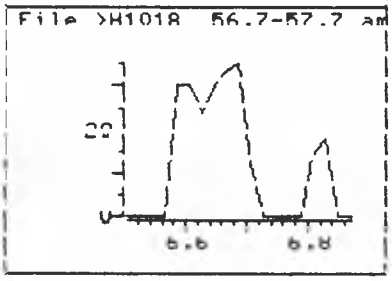












Data File: >H1018::A5
Name: 100ul 2071514
Misc: 250ng 6v
Quant Time: 920810 19:17
Injected at: 920810 18:47
Last Qcal Time: <none>

Quant Output File: ^H1018::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 318
Retention Time: 6.65 min.
Quant Ion : 43.0
Area : 3169
Concentration : 55.98 ng
q-value : 97

QC RESULTS

BLANK DATA

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Sample Descript:	Method Blank		
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 10, 1992
Attention: Doug Geller	Sample Number:	BLK081092	Reported:	Aug 17, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Acetone	0.50	15
Benzene	0.10	N.D.
Bromodichloromethane	0.10	N.D.
Bromoform	0.10	N.D.
Bromomethane	0.10	N.D.
2-Butanone	0.50	0.56
Carbon disulfide	0.10	N.D.
Carbon tetrachloride	0.10	N.D.
Chlorobenzene	0.10	N.D.
Chloroethane	0.10	N.D.
2-Chloroethyl vinyl ether	0.50	N.D.
Chloroform	0.10	N.D.
Chloromethane	0.10	N.D.
Dibromochloromethane	0.10	N.D.
1,1-Dichloroethane	0.10	N.D.
1,2-Dichloroethane	0.10	N.D.
1,1-Dichloroethene	0.10	N.D.
cis 1,2-Dichloroethene	0.10	N.D.
trans 1,2-Dichloroethene	0.10	N.D.
1,2-Dichloropropane	0.10	N.D.
cis 1,3-Dichloropropene	0.10	N.D.
trans 1,3-Dichloropropene	0.10	N.D.
Ethylbenzene	0.10	N.D.
2-Hexanone	0.50	N.D.
Methylene chloride	0.50	N.D.
4-Methyl-2-pentanone	0.50	N.D.
Styrene	0.10	N.D.
1,1,2,2-Tetrachloroethane	0.10	N.D.
Tetrachloroethene	0.10	N.D.
Toluene	0.10	N.D.
1,1,1-Trichloroethane	0.10	N.D.
1,1,2-Trichloroethane	0.10	N.D.
Trichloroethene	0.10	N.D.
Trichlorofluoromethane	0.10	N.D.
Vinyl chloride	0.10	N.D.
Total Xylenes	0.10	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Please Note:
The Acetone and 2-Butanone in this analytical batch are suspected laboratory contaminants.

QUANT REPORT

Operator ID: GLEN
Output File: ^H1004::A6
Data File: >H1004::A1
Name: 100ul meoh blank
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 11:23
Injected at: 920810 10:53
Dilution Factor: 1.00000
Instrument ID: MS-1

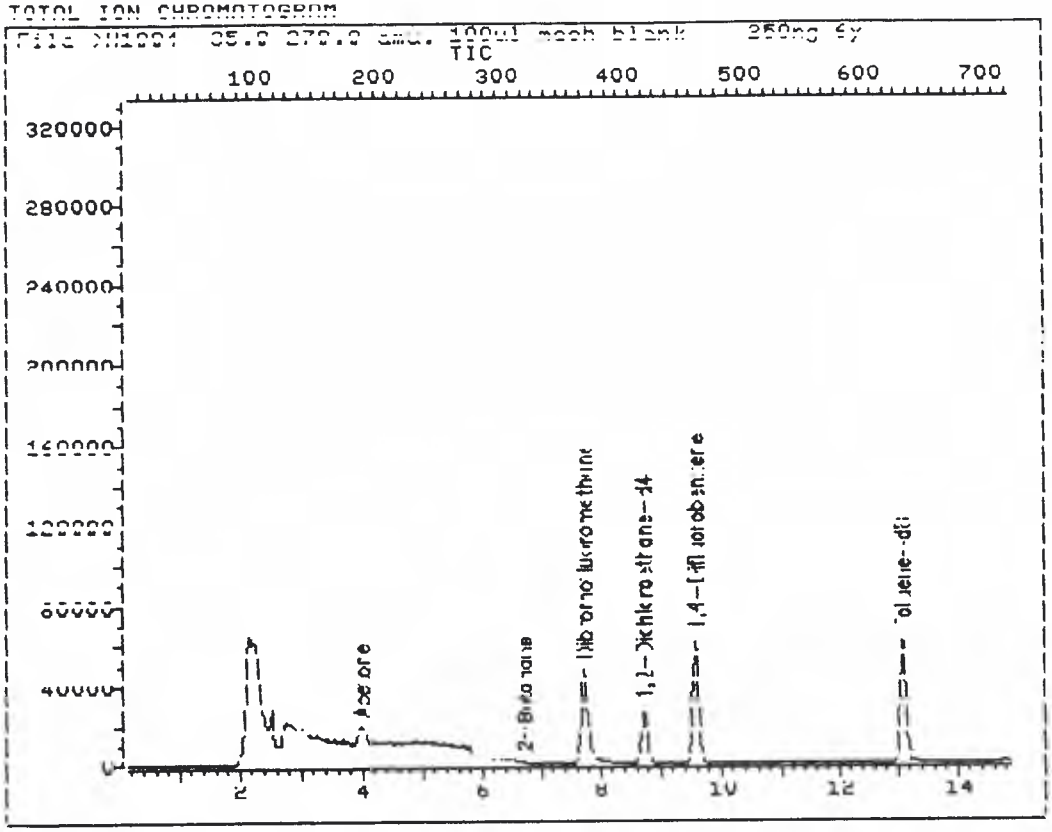
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.73	372	104936	250.00	ng	93
4)	1,2-Dichloroethane-d4	8.73	421	68421	240.12	ng	94
9)	Acetone	3.98	189	57259	1541.49	ng	93
19)	2-Butanone	6.71	322	2648	56.48	ng	87
28)	*1,4-Difluorobenzene	9.58	463	155954	250.00	ng	98
37)	Toluene-d8	13.09	635	144639	230.91	ng	95
38)	*Chlorobenzene-d5	16.93	824	130688	250.00	ng	98
57)	4-Bromofluorobenzene	20.07	978	82103	219.72	ng	92
58)	*1,4-Dichlorobenzene-d4	22.00	1073	79758	250.00	ng	99
75)	1-Fluoronaphthalene	26.69	1303	180939	243.96	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1004::A1
Name: 100ul meoh blank
Misc: 250ng 6v

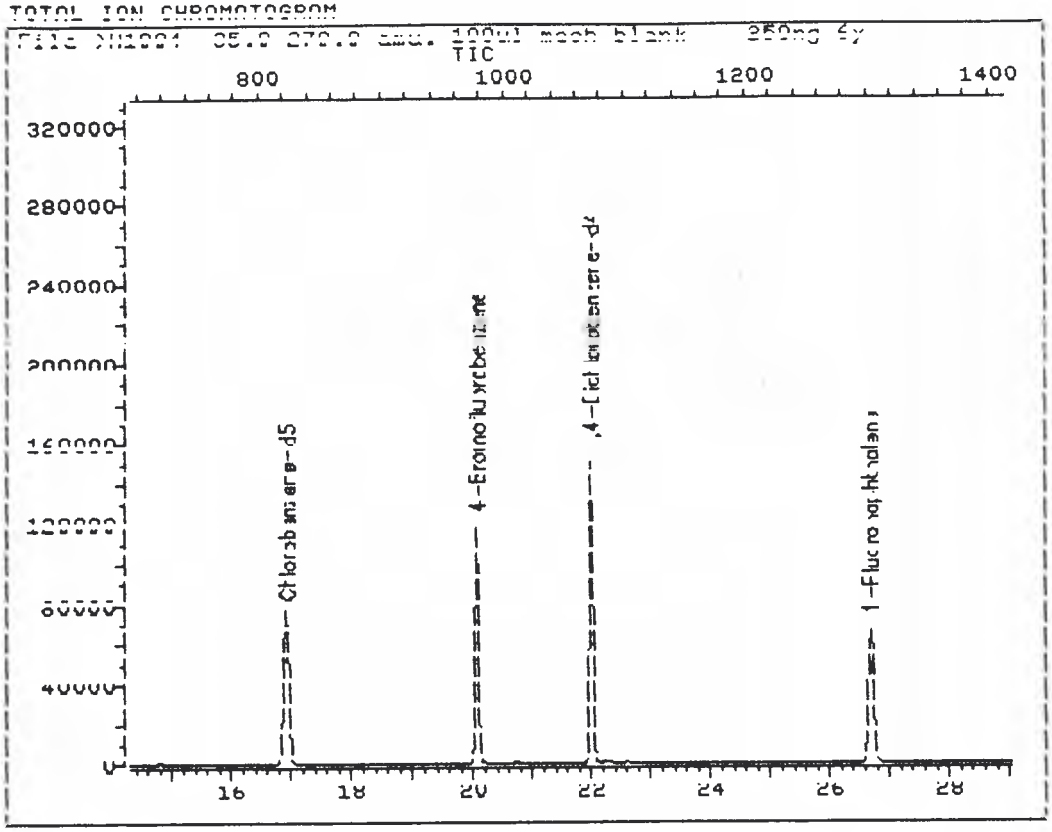
Quant Output File: ^H1004::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 11:23
Injected at: 920810 10:53

TOTAL ION CHROMATOGRAM



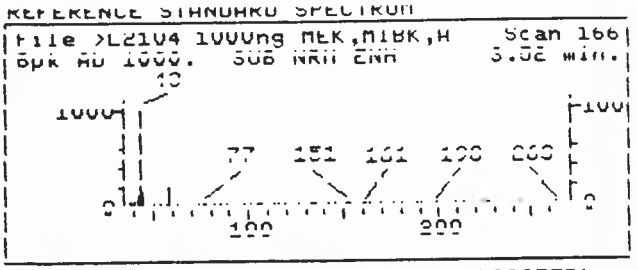
Data File: >H1004::A1
Name: 100ul meoh blank
Misc: 250ng 6v

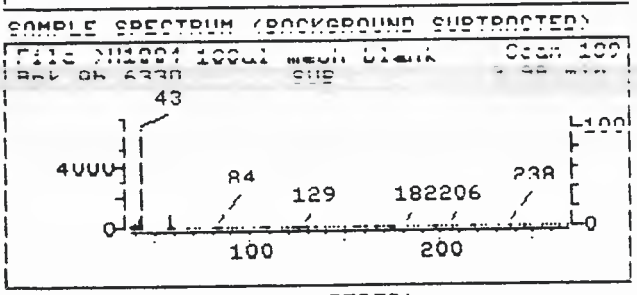
Quant Output File: ^H1004::A6
Instrument ID: MS-1

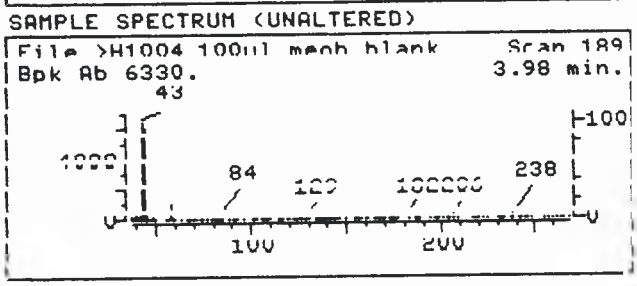
Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

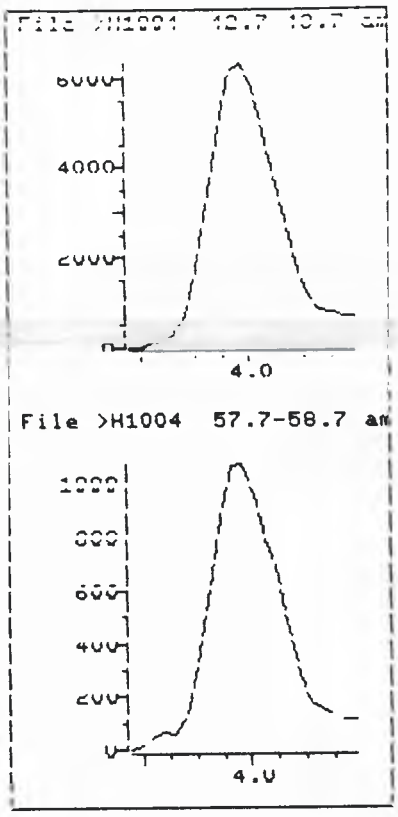
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 11:23
Injected at: 920810 10:53







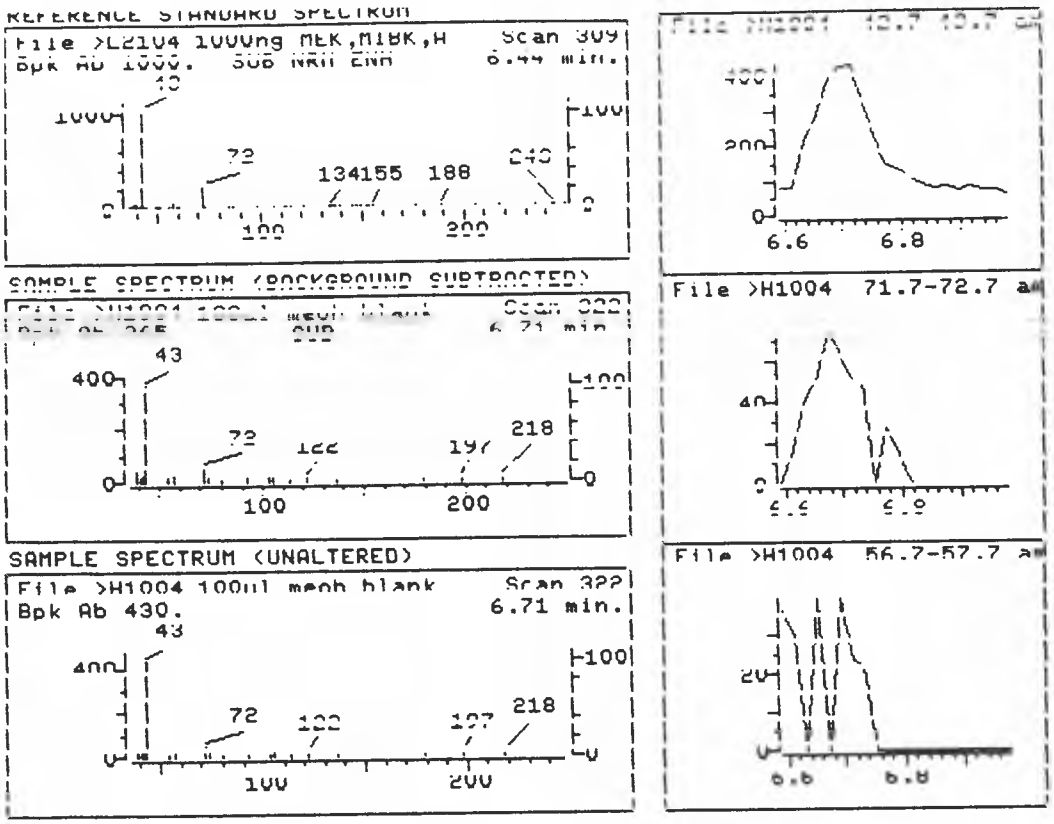


Data File: >H1004::A1
Name: 100ul meoh blank
Misc: 250ng 6v
Quant Time: 920810 11:23
Injected at: 920810 10:53
Last Qcal Time: <none>

Quant Output File: ^H1004::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 9
Compound Name : Acetone
Scan Number : 189
Retention Time: 3.98 min.
Quant Ion : 43.0
Area : 57259
Concentration : 1541.49 ng
q-value : 93



Data File: >H1004::A1
Name: 100ul meoh blank
Misc: 250ng 6v
Quant Time: 920810 11:23
Injected at: 920810 10:53
Last Qcal Time: <none>

Quant Output File: ^H1004::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920807 17:43

Compound No : 19
Compound Name : 2-Butanone
Scan Number : 322
Retention Time: 6.71 min.
Quant Ion : 43.0
Area : 2648
Concentration : 56.48 ng
q-value : 87

NORTH CREEK ANALYTICAL

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Sample Descript:	Method Blank		
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 19, 1992
Attention: Doug Geller	Sample Number:	BLK081992	Reported:	Aug 24, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit µg/L (ppb)	Sample Results µg/L (ppb)
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis 1,2-Dichloroethene	2.0	N.D.
trans 1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis 1,3-Dichloropropene	2.0	N.D.
trans 1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	10	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	96
Toluene-d8	98
4-Bromofluorobenzene	94

Scot Cocanour
Laboratory Director

QUANT REPORT

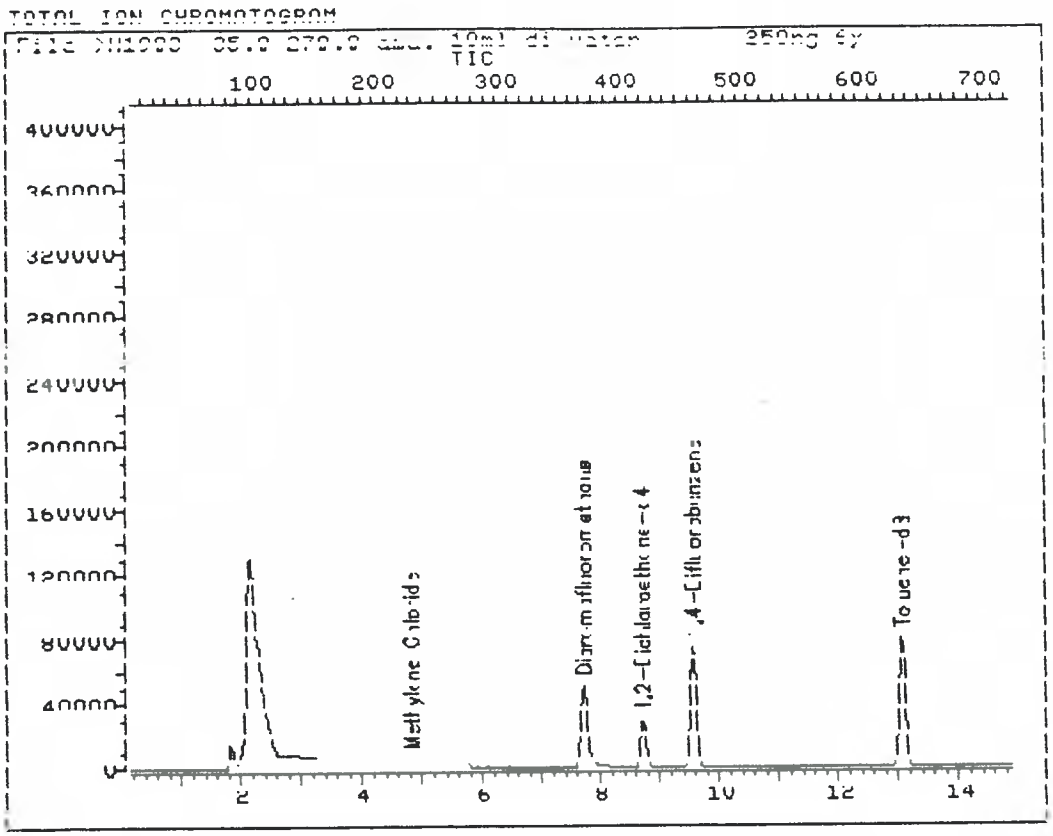
Operator ID: GLEN
Output File: ^H1903::A6
Data File: >H1903::A1
Name: 10ml di water
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920819 10:53
Injected at: 920819 10:23
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.72	372	118651	250.00	ng	99
4)	1,2-Dichloroethane-d4	8.72	421	69268	238.82	ng	93
14)	Methylene Chloride	4.82	230	1783	26.92	ng	85
28)	*1,4-Difluorobenzene	9.57	463	220411	250.00	ng	96
37)	Toluene-d8	13.07	635	198404	244.65	ng	96
38)	*Chlorobenzene-d5	16.90	823	178340	250.00	ng	94
57)	4-Bromofluorobenzene	20.05	978	107702	233.89	ng	81
58)	*1,4-Dichlorobenzene-d4	21.98	1073	114642	250.00	ng	98
75)	1-Fluoronaphthalene	26.64	1302	233227	222.63	ng	100

* Compound is ISTD



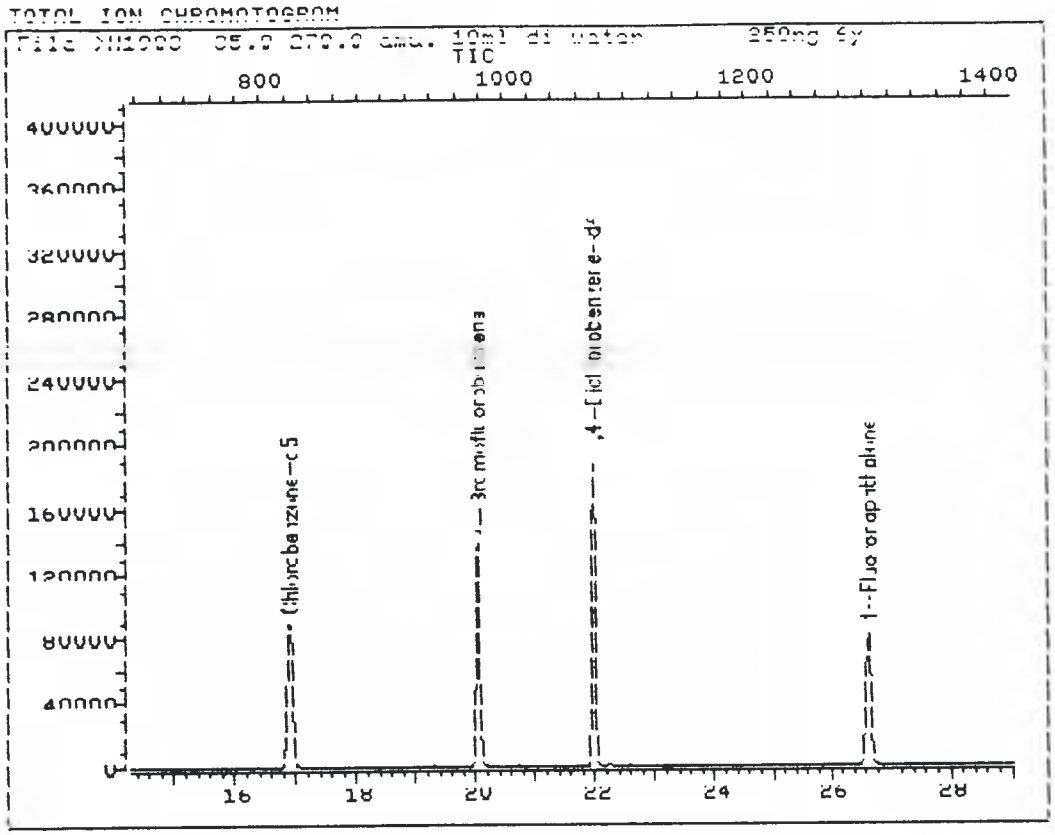
Data File: >H1903::A1
Name: 10ml di water
Misc: 250ng 6v

Quant Output File: ^H1903::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 10:53
Injected at: 920819 10:23



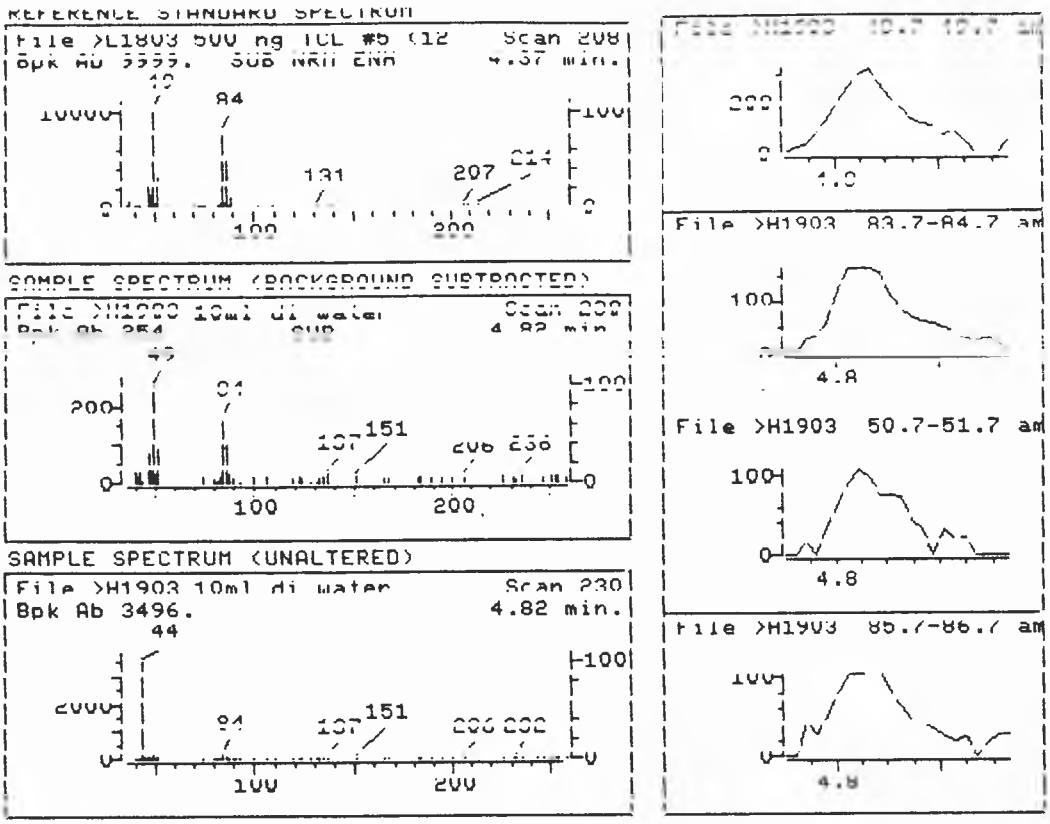
Data File: >H1903::A1
Name: 10ml di water
Misc: 250ng 6v

Quant Output File: ^H1903::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 10:53
Injected at: 920819 10:23



Data File: >H1903::A1
Name: 10ml di water
Misc: 250ng 6v
Quant Time: 920819 10:53
Injected at: 920819 10:23
Last Qcal Time: <none>

Quant Output File: ^H1903::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 14
Compound Name : Methylene Chloride
Scan Number : 230
Retention Time: 4.82 min.
Quant Ion : 84.0
Area : 1783
Concentration : 26.92 ng
q-value : 85

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Sample Descript:	Method Blank		
Lynnwood, WA 98036	Analysis Method:	EPA 8240/8260	Analyzed:	Aug 26, 1992
Attention: Doug Geller	Sample Number:	BLK082692	Reported:	Aug 26, 1992

VOLATILE ORGANICS by GC/MS (EPA 8240/8260)

Analyte	Detection Limit ug/L (ppb)	Sample Results ug/L (ppb)
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis 1,2-Dichloroethene	2.0	N.D.
trans 1,2-Dichloroethene	2.0	N.D.
1,2-Dichloropropane	2.0	N.D.
cis 1,3-Dichloropropene	2.0	N.D.
trans 1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	10	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

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Surrogate Standards Percent Recovery:	
1,2-Dichloroethane-d4	108
Toluene-d8	99
4-Bromofluorobenzene	95

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H2604::A6
Data File: >H2604::A2
Name: 10ml di water
Misc: 250ng 6v

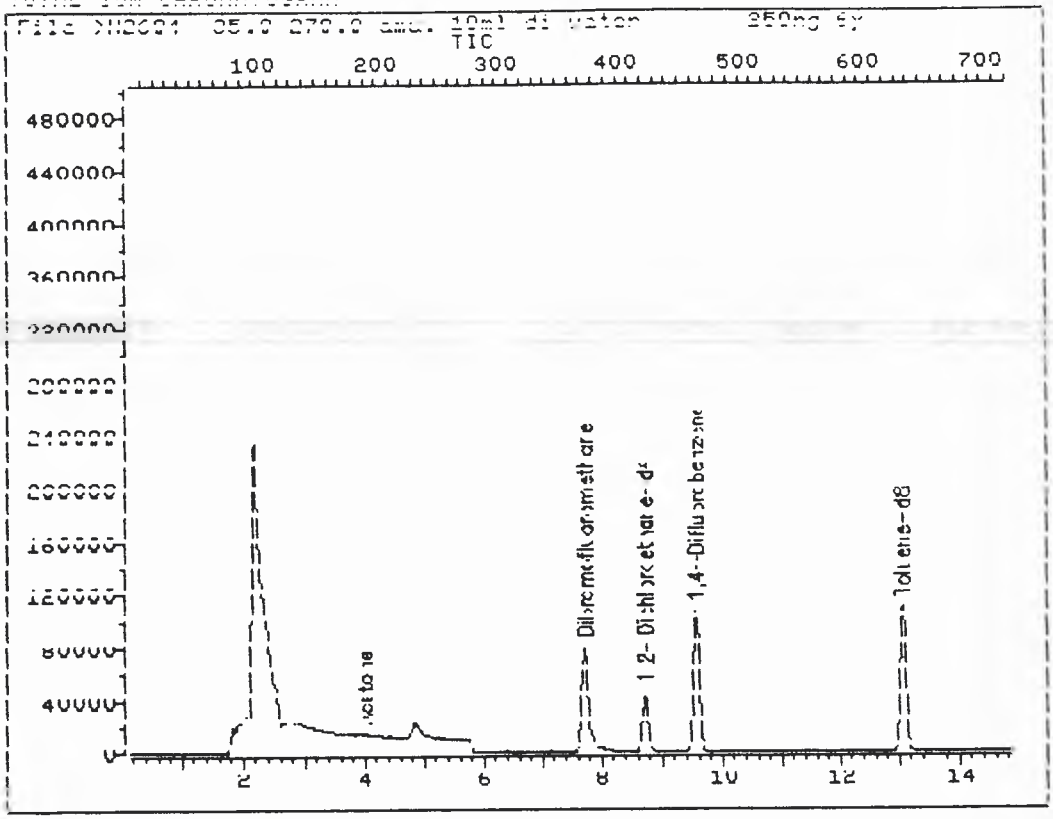
Quant Rev: 7
Quant Time: 920826 09:21
Injected at: 920826 08:51
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.73	373	185763	250.00	ng	95
4)	1,2-Dichloroethane-d4	8.72	422	123119	270.86	ng	93
9)	Acetone	3.99	190	5014	83.03	ng	96
28)	*1,4-Difluorobenzene	9.56	463	292340	250.00	ng	95
37)	Toluene-d8	13.06	635	270381	248.46	ng	93
38)	*Chlorobenzene-d5	16.90	824	237043	250.00	ng	98
57)	4-Bromofluorobenzene	20.04	978	142079	237.75	ng	79
58)	*1,4-Dichlorobenzene-d4	21.97	1073	146609	250.00	ng	99
75)	1-Fluoronaphthalene	26.65	1303	295558	232.29	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



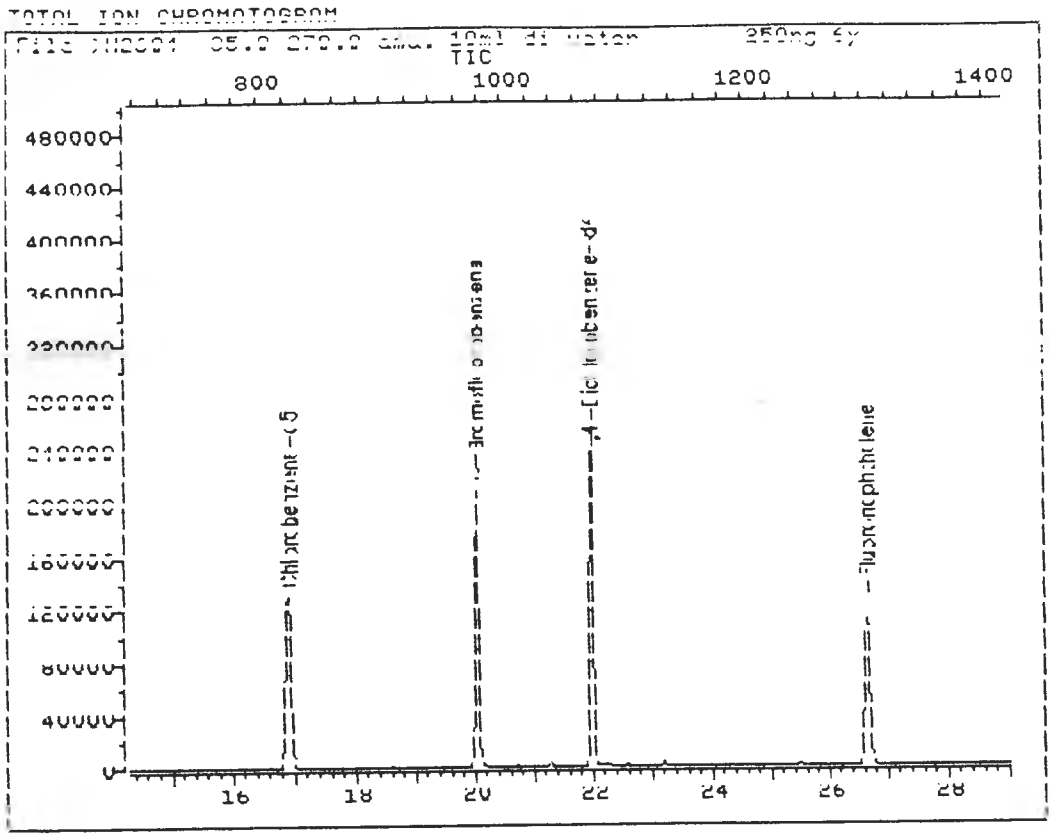
Data File: >H2604::A2
Name: 10ml di water
Misc: 250ng 6V

Quant Output File: ^H2604::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 09:21
Injected at: 920826 08:51



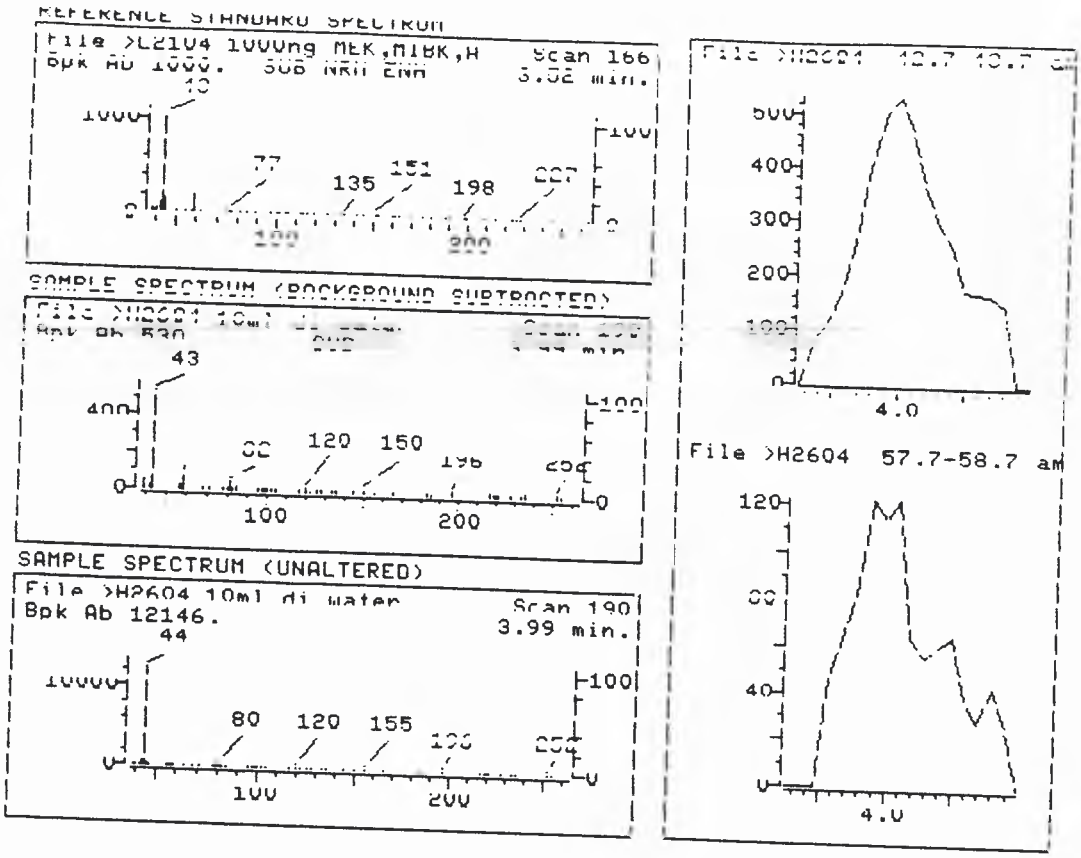
Data File: >H2604::A2
Name: 10ml di water
Misc: 250ng 6v

Quant Output File: ^H2604::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 09:21
Injected at: 920826 08:51



Data File: >H2604::A2
Name: 10ml di water
Misc: 250ng 6v
Quant Time: 920826 09:21
Injected at: 920826 08:51
Last Qcal Time: <none>

Quant Output File: ^H2604::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920826 08:33

Compound No : 9
Compound Name : Acetone
Scan Number : 190
Retention Time: 3.99 min.
Quant Ion : 43.0
Area : 5014
Concentration : 83.03 ng
q-value : 96

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Hong West & Associates, Inc. 19730 64th Avenue W. Lynnwood, WA 98036 Attention: Doug Geller	Client Project ID: Yarl, #90042 EPA Method: 8240 Sample Matrix : Water Units: µg/L (ppb) QC Sample #: BLK081992	Analyst: J. Kimball Analyzed: Aug 19, 1992 Reported: Aug 27, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-DCE	Benzene	TCE	Toluene	Chloro-benzene
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	10	10
Conc. Matrix Spike:	8.8	10	9.8	9.9	10
Matrix Spike % Recovery:	88%	100%	98%	99%	100%
Conc. Matrix Spike Dup.:	8.4	10	9.7	9.8	9.9
Matrix Spike Duplicate % Recovery:	84%	100%	97%	98%	99%
Upper Control Limit %:	107	118	106	122	111
Lower Control Limit %:	69	83	81	66	86
Relative % Difference:	5.0%	0.0%	1.0%	1.0%	1.0%
Maximum RPD:	17	9.0	13	10	7.0

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% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

Scot Cocanour
Laboratory Director

QUANT REPORT

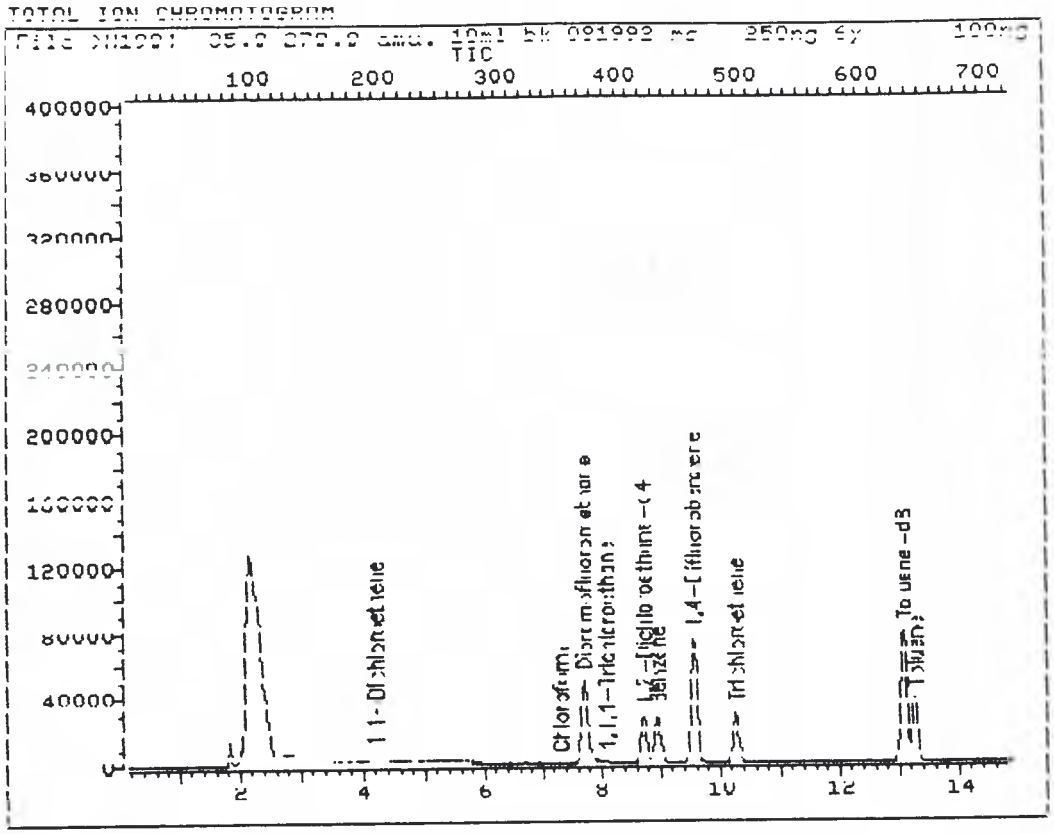
Operator ID: GLEN
Output File: ^H1904::A6
Data File: >H1904::A5
Name: 10ml bk 081992 ms
Misc: 250ng 6y 100ng 7n

Quant Rev: 7
Quant Time: 920819 11:36
Injected at: 920819 11:06
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Quant Time: (none)

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.70	372	113207	250.00	ng	96
4)	1,2-Dichloroethane-d4	8.72	422	67241	242.98	ng	92
11)	1,1-Dichloroethene	4.20	200	4058	88.46	ng	82
22)	Chloroform	7.30	352	247	.525	ng	90
24)	1,1,1-Trichloroethane	8.09	391	1085	2.87	ng	90
28)	*1,4-Difluorobenzene	9.56	463	215898	250.00	ng	96
30)	Benzene	8.95	433	86290	104.08	ng	100
31)	Trichloroethene	10.27	498	36743	97.89	ng	95
37)	Toluene-d8	13.08	636	197058	248.06	ng	98
38)	*Chlorobenzene-d5	16.90	824	176983	250.00	ng	95
39)	Toluene	13.26	645	54524	99.35	ng	99
47)	Chlorobenzene	17.00	829	72895	100.55	ng	98
50)	m,p-Xylene	17.41	849	372	.990	ng	95
57)	4-Bromofluorobenzene	20.04	978	107499M	235.24	ng	
58)	*1,4-Dichlorobenzene-d4	21.99	1074	112655	250.00	ng	97
75)	1-Fluoronaphthalene	26.65	1303	223355	216.97	ng	100

* Compound is ISTD

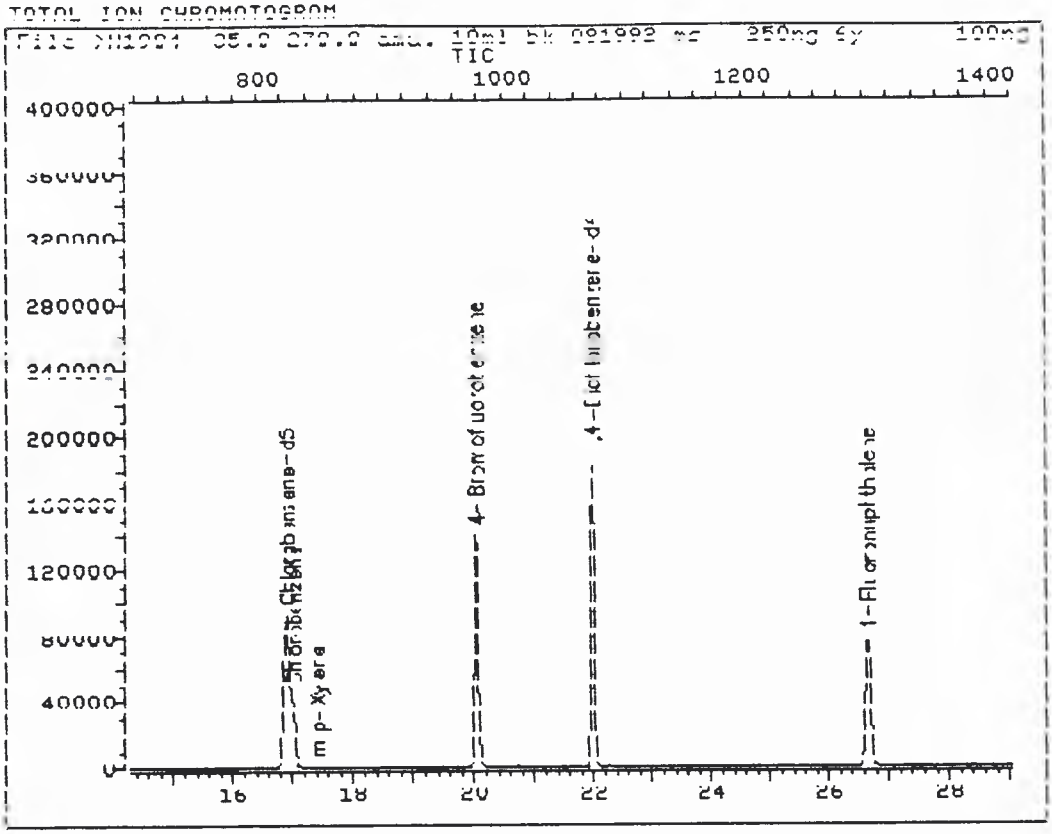


Data File: >H1904::A5 Quant Output File: ^H1904::A6
Name: 10ml bk 081992 ms Instrument ID: MS-1
Misc: 250ng 6v 100ng 7n

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 11:36
Injected at: 920819 11:06

TOTAL ION CHROMOTOGRAM



Data File: >H1904::A5 Quant Output File: ^H1904::A6
Name: 10ml bk 081992 ms Instrument ID: MS-1
Misc: 250ng 6y 100ng 7n

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 11:36
Injected at: 920819 11:06

QUANT REPORT

Operator ID: GLEN
Output File: ^H1905::A6
Data File: >H1905::A5
Name: 10ml bk081992 msd
Misc: 250ng 6v

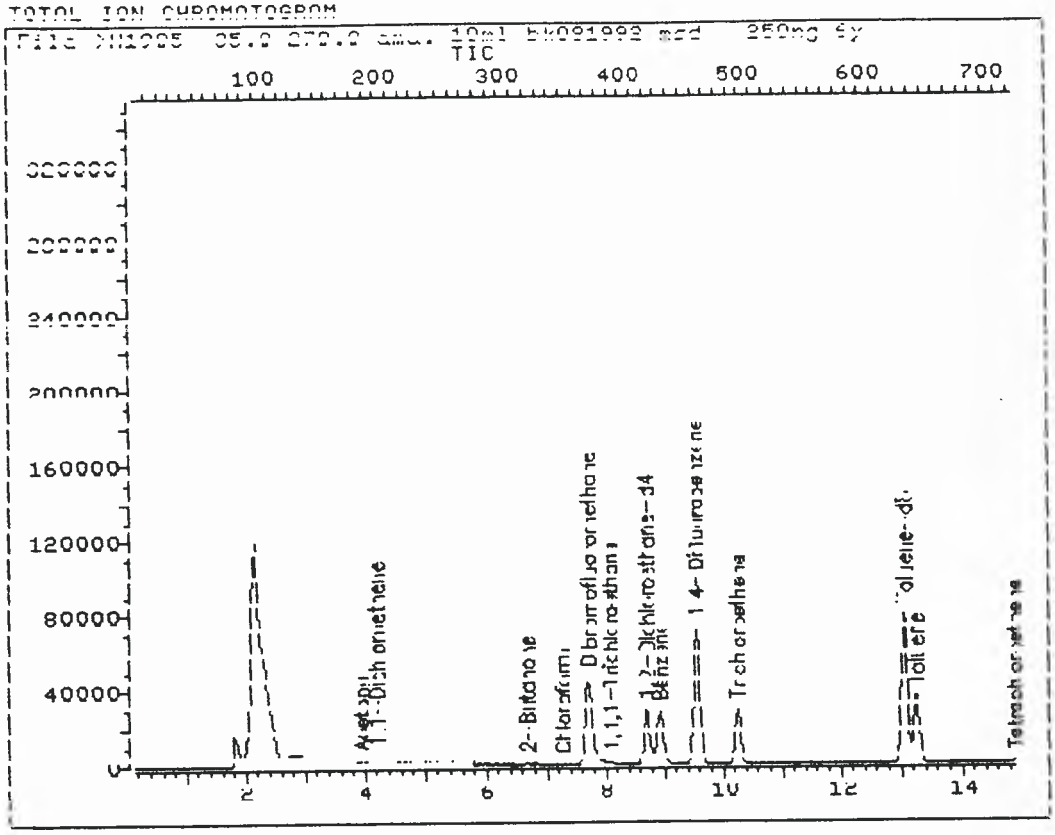
Quant Rev: 7
Quant Time: 920819 12:10
Injected at: 920819 11:40
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.71	372	112440	250.00	ng	99
4)	1,2-Dichloroethane-d4	8.70	421	69792	253.91	ng	95
9)	Acetone	3.93	187	321	18.91	ng	65
11)	1,1-Dichloroethene	4.20	200	3810	83.62	ng	89
19)	2-Butanone	6.67	321	1184	31.06	ng	93
22)	Chloroform	7.26	350	307	.657	ng	75
24)	1,1,1-Trichloroethane	8.07	390	1000	2.66	ng	90
28)	*1,4-Difluorobenzene	9.54	462	215612	250.00	ng	96
30)	Benzene	8.93	432	84454	102.00	ng	100
31)	Trichloroethene	10.25	497	36270	96.76	ng	95
37)	Toluene-d8	13.06	635	197098	248.44	ng	95
38)	*Chlorobenzene-d5	16.88	823	174966	250.00	ng	96
39)	Toluene	13.24	644	53166	98.00	ng	99
44)	Tetrachloroethene	14.87	724	808	2.15	ng	84
47)	Chlorobenzene	16.98	828	70943	98.98	ng	96
49)	Ethylbenzene	17.19	838	407	1.24	ng	91
50)	m,p-Xylene	17.39	848	1251	3.37	ng	87
51)	o-Xylene	18.57	906	488	1.24	ng	77
52)	Styrene	18.65	910	747	1.08	ng	94
57)	4-Bromofluorobenzene	20.04	978	108819M	240.87	ng	
58)	*1,4-Dichlorobenzene-d4	21.97	1073	112112	250.00	ng	98
75)	1-Fluoronaphthalene	26.65	1303	232844	227.28	ng	100

* Compound is ISTD

TOTAL ION CHROMOTOGRAM



Data File: >H1905::A5
Name: 10ml bk081992 msd
Misc: 250ng 6v

Quant Output File: ^H1905::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

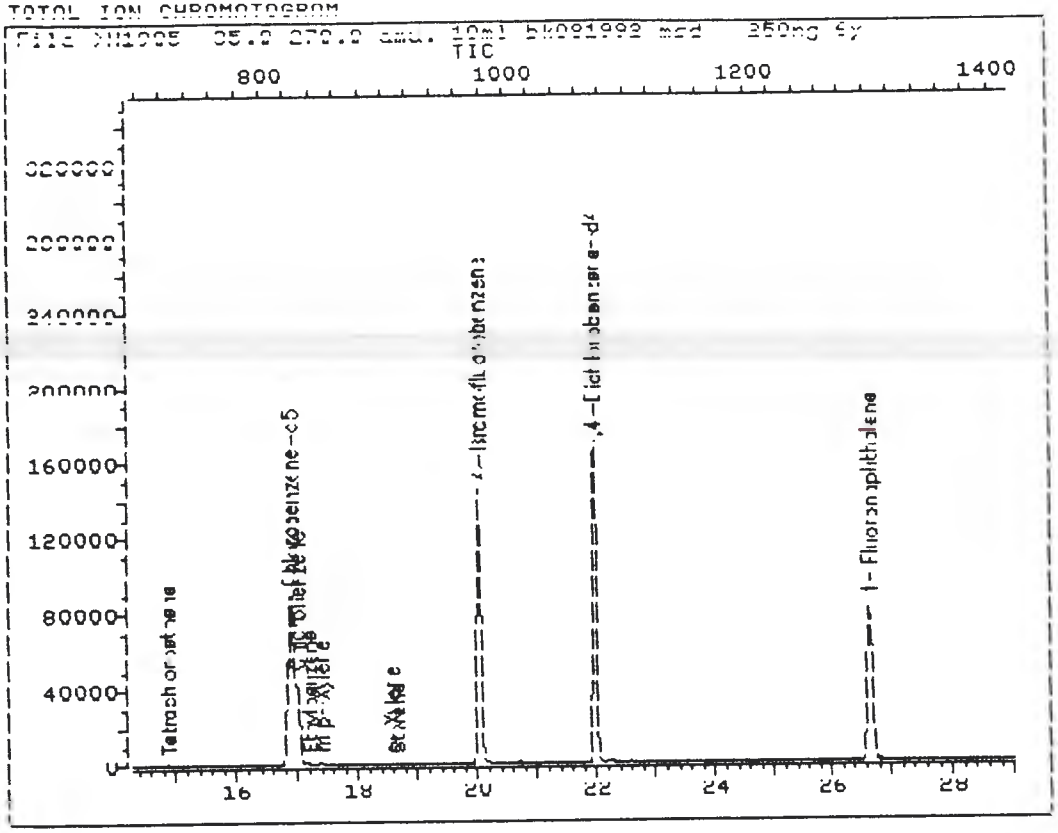
Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 12:10
Injected at: 920819 11:40

TOTAL ION CHROMOTOGRAM

File >H1905 35.0 270.0 amu. 10ml bk081992 msd 250ng 6v

TIC



Data File: >H1905::A5
Name: 10ml bk081992 msd
Misc: 250ng 6v

Quant Output File: ^H1905::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 12:10
Injected at: 920819 11:40

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc. 19730 64th Avenue W. Lynnwood, WA 98036 Attention: Doug Geller	Client Project ID: Yarl, #90042 EPA Method: 8240 Sample Matrix : Soil Units: mg/kg (ppm) QC Sample #: 207-1514	Analyst: J. Kimball Analyzed: Aug 19, 1992 Reported: Aug 26, 1992

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-DCE	Benzene	TCE	Toluene	Chloro-benzene
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	2.0	2.0	2.0	2.0	2.0
Conc. Matrix Spike:	0.76	1.8	1.6	1.7	1.8
Matrix Spike % Recovery:	38	90	80	85	90
Conc. Matrix Spike Dup.:	0.95	1.8	1.8	1.9	1.8
Matrix Spike Duplicate % Recovery:	48	90	90	95	90
Upper Control Limit %:	98	107	112	107	105
Lower Control Limit %:	43	69	58	71	69
Relative % Difference:	22	0	12	11	0
Maximum RPD:	19	8.1	9.8	9.6	9.4

NORTH CREEK ANALYTICAL inc

% Recovery: $\frac{\text{Conc. of M.S. - Conc. of Sample}}{\text{Spike Conc. Added}} \times 100$

Relative % Difference: $\frac{\text{Conc. of M.S. - Conc. of M.S.D.}}{\text{(Conc. of M.S. + Conc. of M.S.D.) / 2}} \times 100$

Scot Cocanour
Laboratory Director

QUANT REPORT

Operator ID: GLEN
Output File: ^H1920::A6
Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x

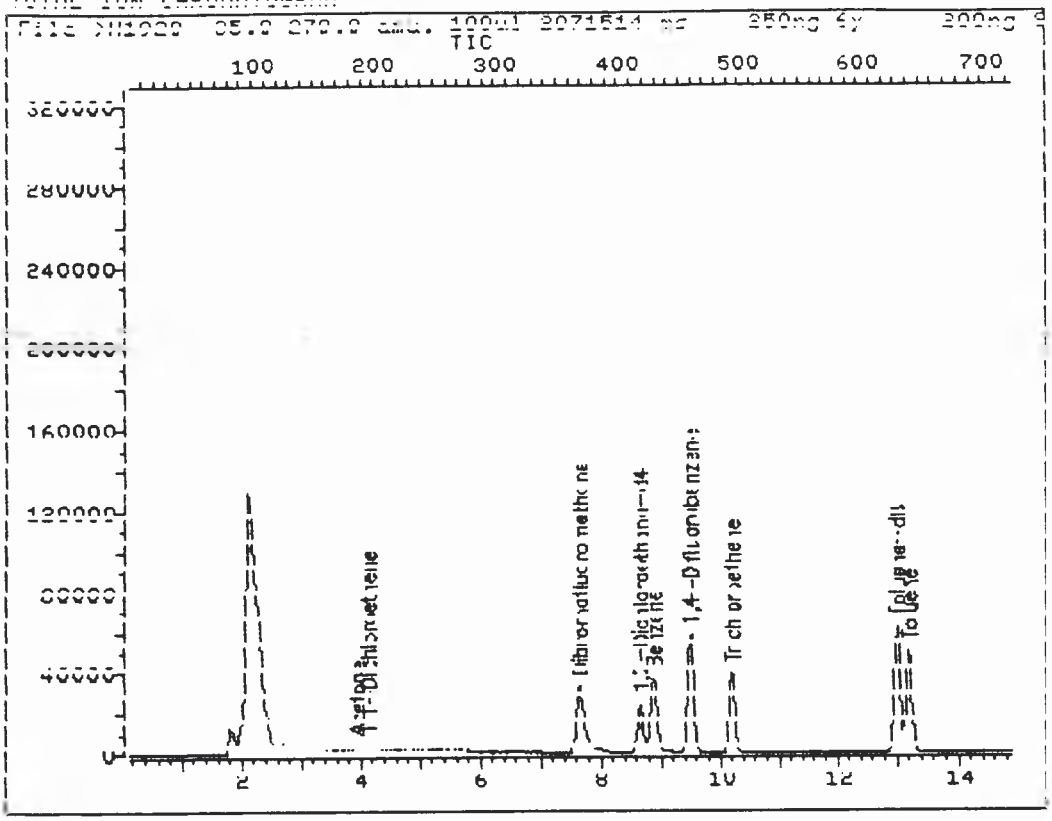
Quant Rev: 7
Quant Time: 920820 08:23
Injected at: 920819 21:56
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.65	369	92752	250.00	ng	97
4)	1,2-Dichloroethane-d4	8.65	418	60529	266.96	ng	92
9)	Acetone	3.93	187	13060	932.44	ng	90
11)	1,1-Dichloroethene	4.12	196	2855	75.96	ng	82
28)	*1,4-Difluorobenzene	9.48	459	171043	250.00	ng	96
30)	Benzene	8.87	429	115442	175.75	ng	100
31)	Trichloroethene	10.19	494	48729	163.87	ng	96
37)	Toluene-d8	13.00	632	155624	247.28	ng	96
38)	*Chlorobenzene-d5	16.85	821	136416	250.00	ng	98
39)	Toluene	13.20	642	73063	172.73	ng	98
47)	Chlorobenzene	16.95	826	97488	174.46	ng	98
58)	*1,4-Dichlorobenzene-d4	21.95	1072	87681	250.00	ng	99
75)	1-Fluoronaphthalene	26.61	1301	209274	261.19	ng	100

* Compound is ISTD

TOTAL ION CHROMOTOGRAM



Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x

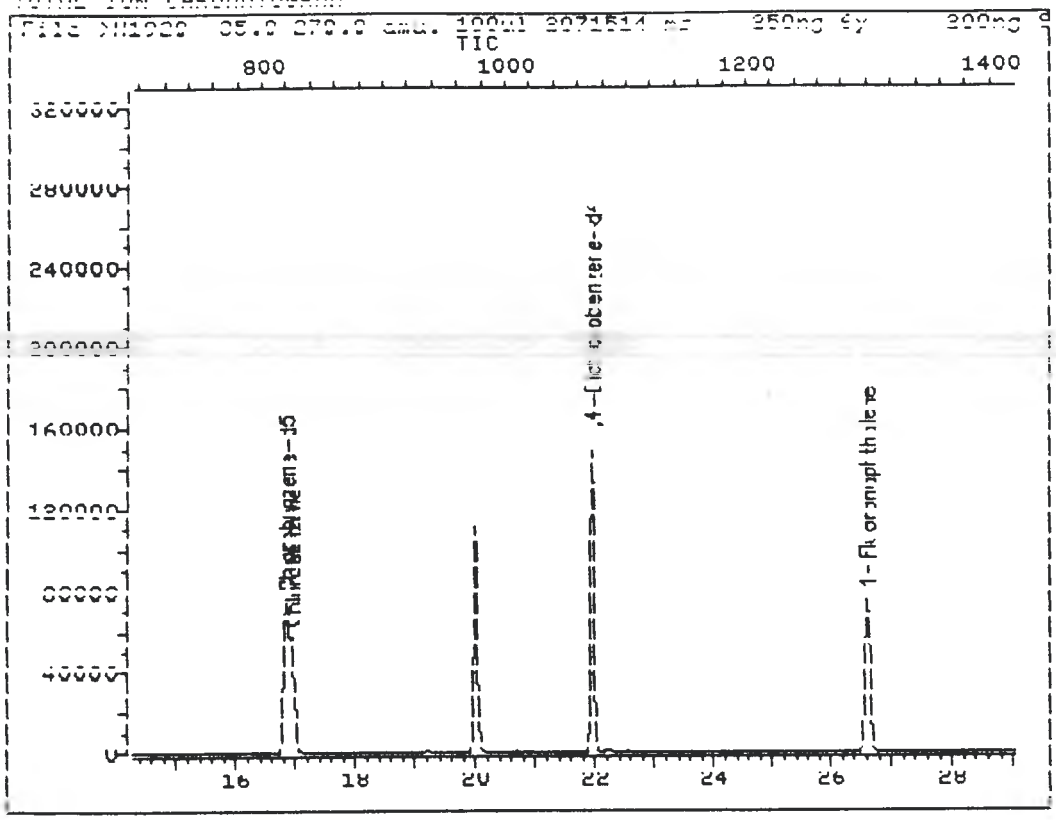
Quant Output File: ^H1920::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 08:23
Injected at: 920819 21:56

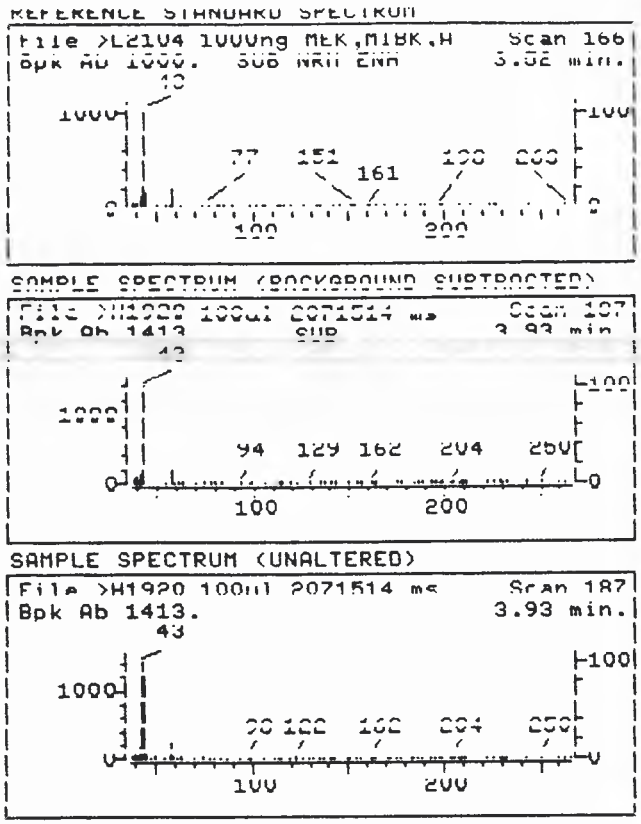
TOTAL ION CHROMOTOGRAM

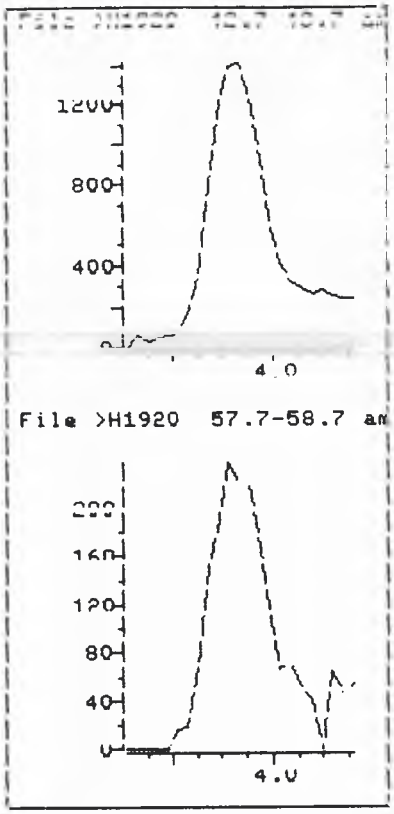


Data File: >H1920::A1 Quant Output File: ^H1920::A6
Name: 100ul 2071514 ms Instrument ID: MS-1
Misc: 250ng 6v 200ng 8x

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 08:23
Injected at: 920819 21:56



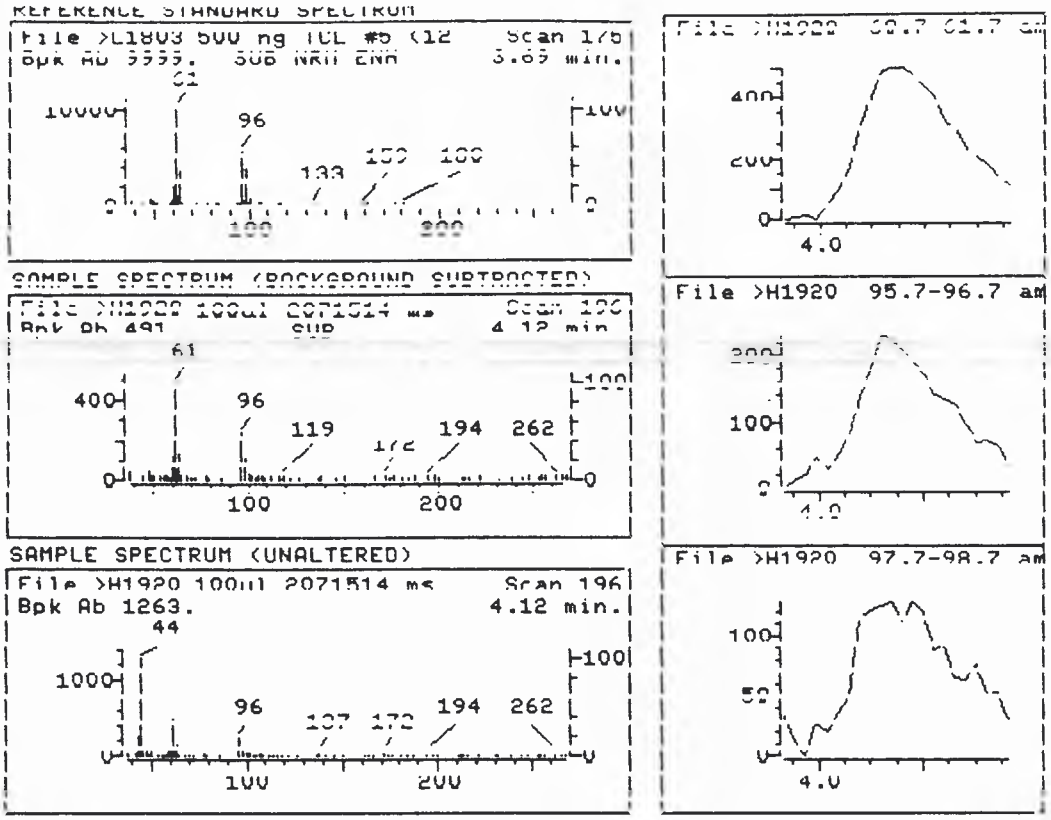


Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

Quant Output File: ^H1920::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 9
Compound Name : Acetone
Scan Number : 187
Retention Time: 3.93 min.
Quant Ion : 43.0
Area : 13060
Concentration : 932.44 ng
q-value : 90

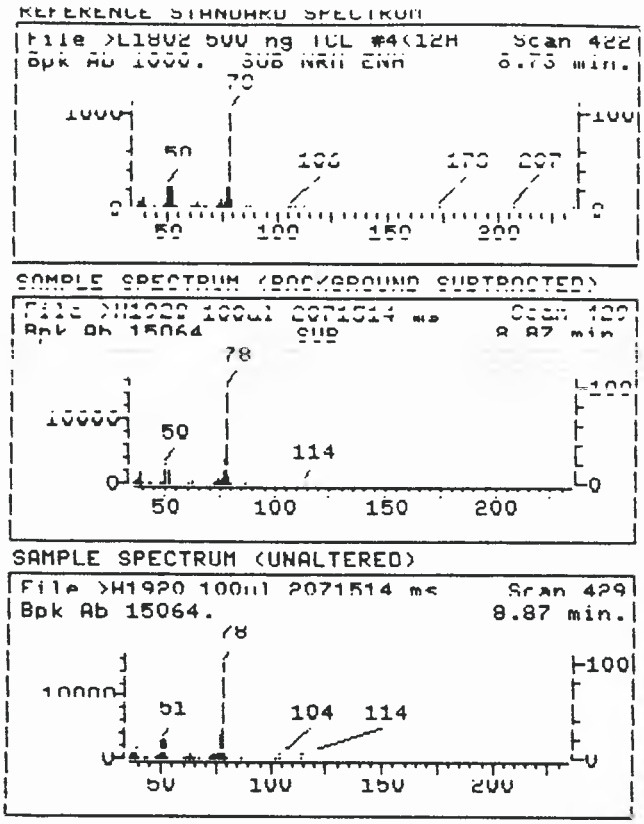


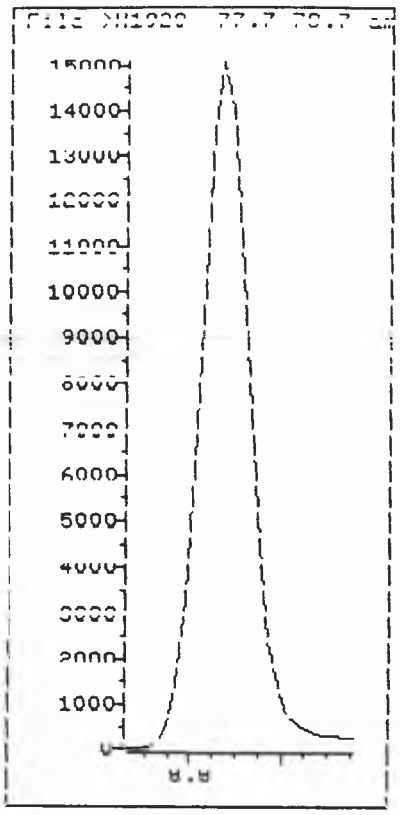
Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

Quant Output File: ^H1920::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 11
Compound Name : 1,1-Dichloroethene
Scan Number : 196
Retention Time: 4.12 min.
Quant Ion : 96.0
Area : 2855
Concentration : 75.96 ng
q-value : 82



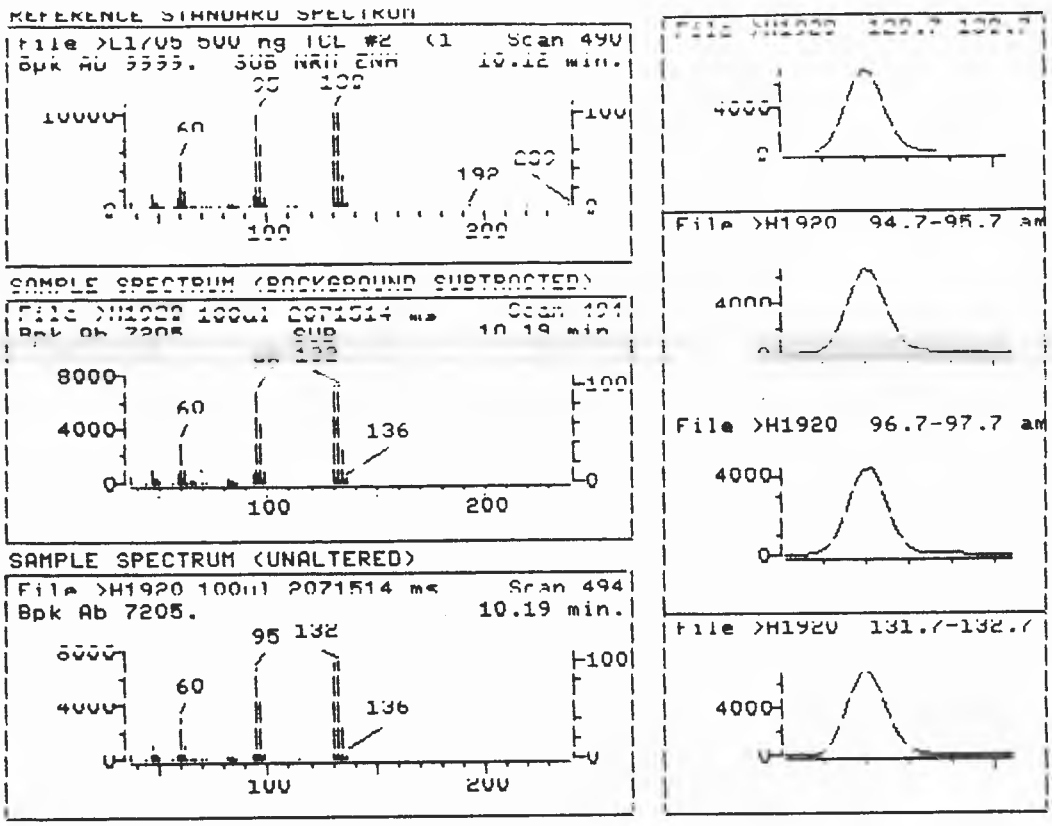


Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

Quant Output File: ^H1920::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 30
Compound Name : Benzene
Scan Number : 429
Retention Time: 8.87 min.
Quant Ion : 78.0
Area : 115442
Concentration : 175.75 ng
q-value : 100



Data File: >H1920::A1
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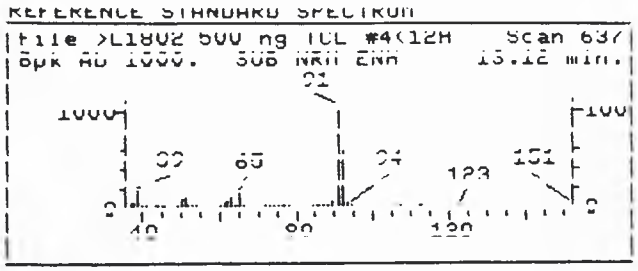
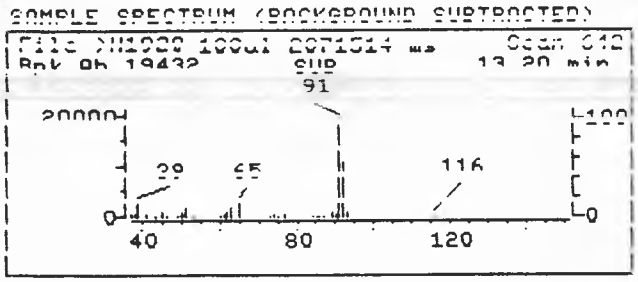
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

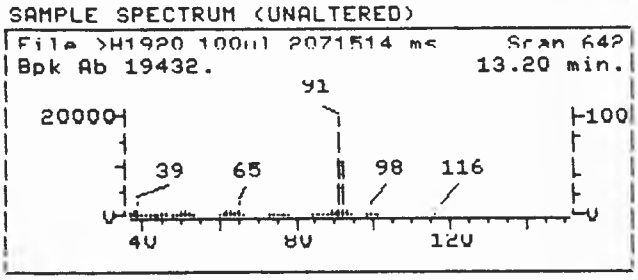
Quant Output File: ^H1920::A6
Instrument ID: MS-1

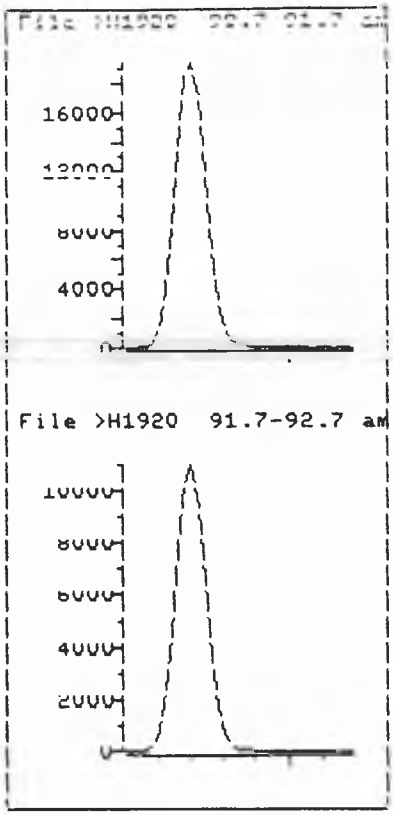
Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 31
Compound Name : Trichloroethene
Scan Number : 494
Retention Time: 10.19 min.
Quant Ion : 130.0
Area : 48729
Concentration : 163.87 ng
q-value : 96







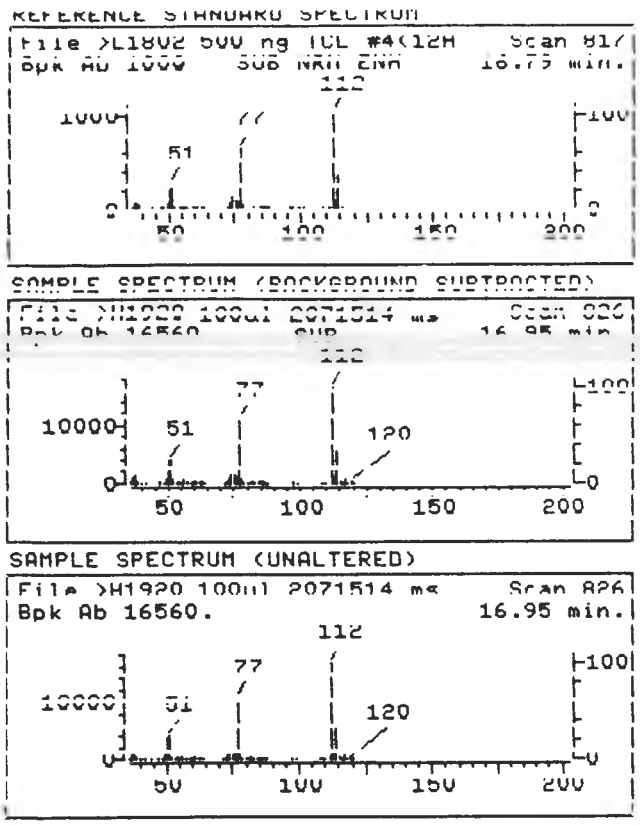


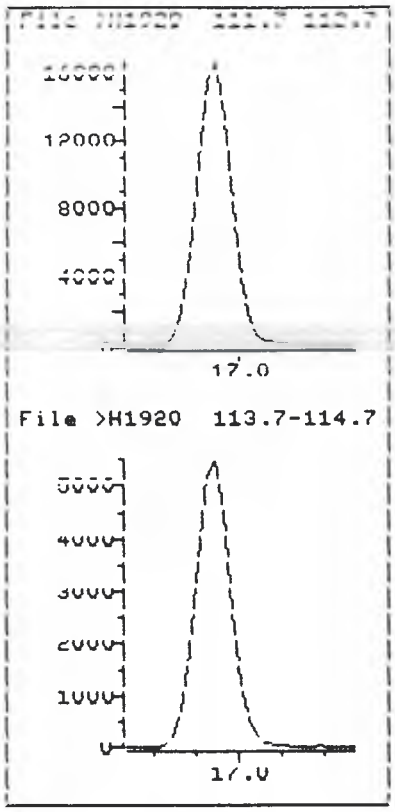
Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

Quant Output File: ^H1920::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 39
Compound Name : Toluene
Scan Number : 642
Retention Time: 13.20 min.
Quant Ion : 92.0
Area : 73063
Concentration : 172.73 ng
q-value : 98





Data File: >H1920::A1
Name: 100ul 2071514 ms
Misc: 250ng 6v 200ng 8x
Quant Time: 920820 08:23
Injected at: 920819 21:56
Last Qcal Time: <none>

Quant Output File: ^H1920::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 47
Compound Name : Chlorobenzene
Scan Number : 826
Retention Time: 16.95 min.
Quant Ion : 112.0
Area : 97488
Concentration : 174.46 ng
q-value : 98

QUANT REPORT

Operator ID: GLEN
Output File: ^H1921::A6
Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x

Quant Rev: 7
Quant Time: 920820 08:28
Injected at: 920819 22:31
Dilution Factor: 1.00000
Instrument ID: MS-1

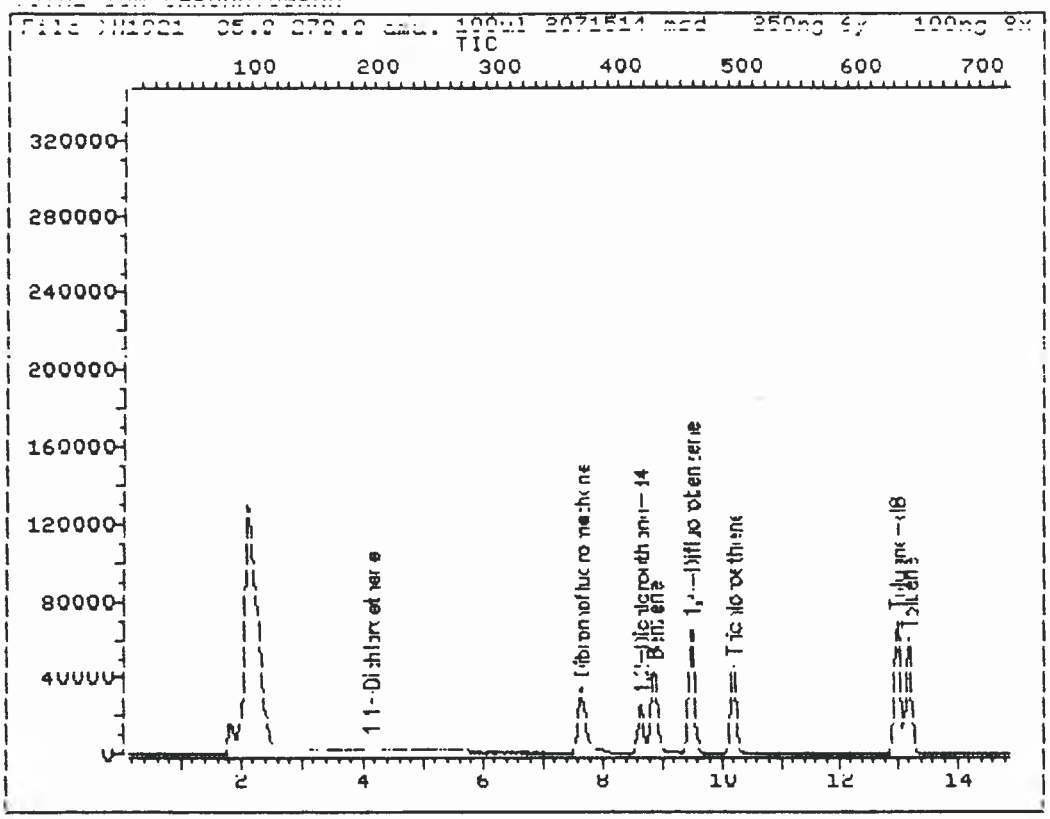
ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.65	369	96337	250.00	ng	99
4)	1,2-Dichloroethane-d4	8.65	418	66063	280.52	ng	97
11)	1,1-Dichloroethene	4.14	197	3722	95.34	ng	82
28)	*1,4-Difluorobenzene	9.48	459	188812	250.00	ng	97
30)	Benzene	8.87	429	137905	190.19	ng	100
31)	Trichloroethene	10.19	494	57532	175.26	ng	96
37)	Toluene-d8	13.00	632	176003	253.34	ng	94
38)	*Chlorobenzene-d5	16.85	821	149029	250.00	ng	99
39)	Toluene	13.20	642	86827	187.89	ng	98
47)	Chlorobenzene	16.95	826	111794	183.13	ng	96
58)	*1,4-Dichlorobenzene-d4	21.95	1072	93588	250.00	ng	99
75)	1-Fluoronaphthalene	26.61	1301	218104	255.03	ng	100

* Compound is ISTD

TOTAL ION CHROMOTOGRAM

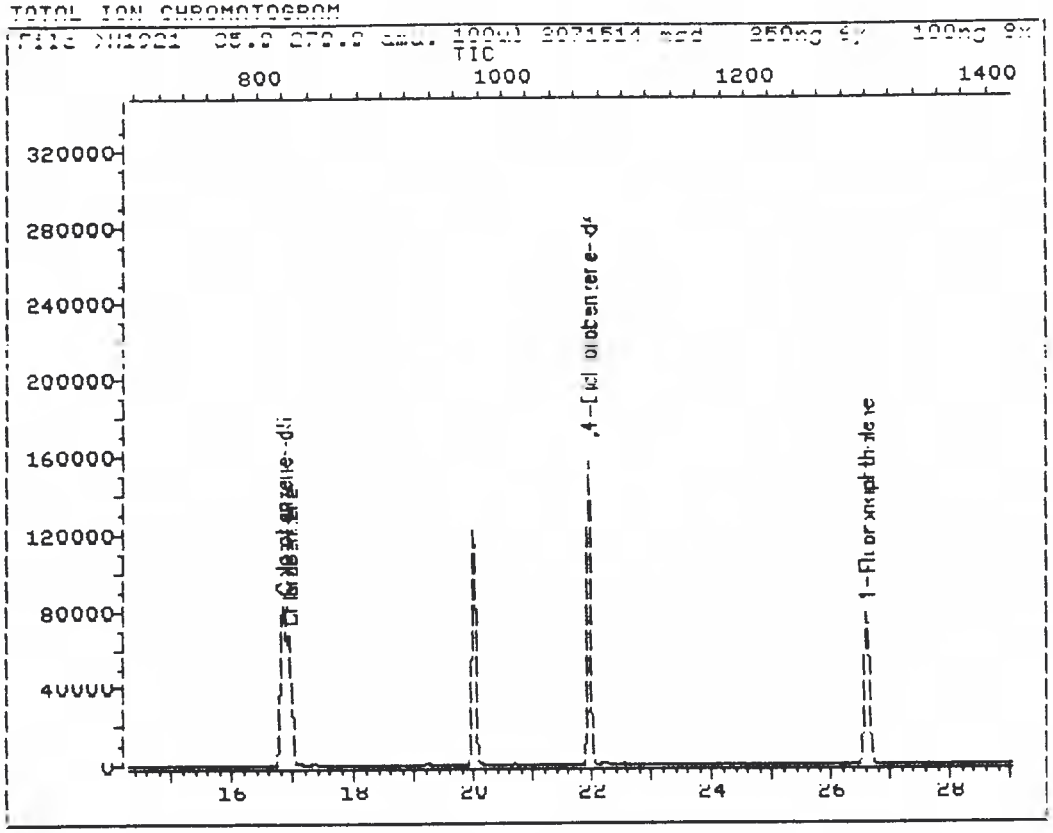


Data File: >H1921::A1 Quant Output File: ^H1921::A6
Name: 100ul 2071514 msd Instrument ID: MS-1
Misc: 250ng 6v 100ng 8x

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 08:28
Injected at: 920819 22:31

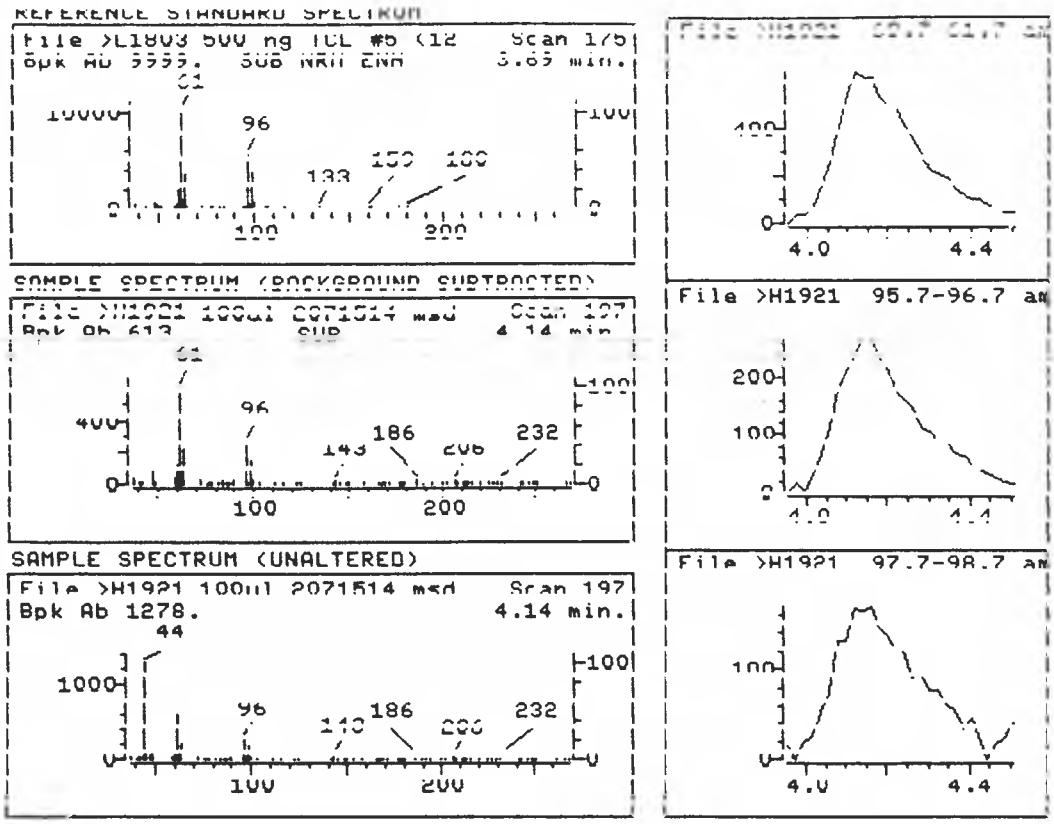
TOTAL ION CHROMATOGRAM



Data File: >H1921::A1 Quant Output File: ^H1921::A6
Name: 100ul 2071514 msd Instrument ID: MS-1
Misc: 250ng 6v 100ng 8x

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920820 08:28
Injected at: 920819 22:31

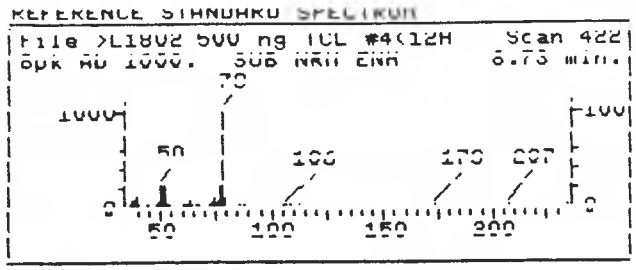


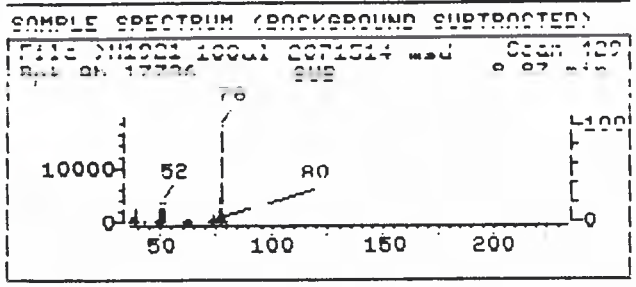
Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x
Quant Time: 920820 08:28
Injected at: 920819 22:31
Last Qcal Time: <none>

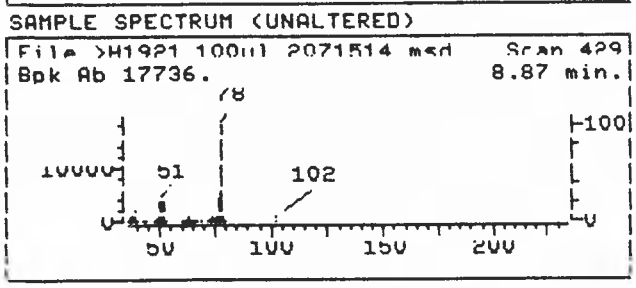
Quant Output File: ^H1921::A6
Instrument ID: MS-1

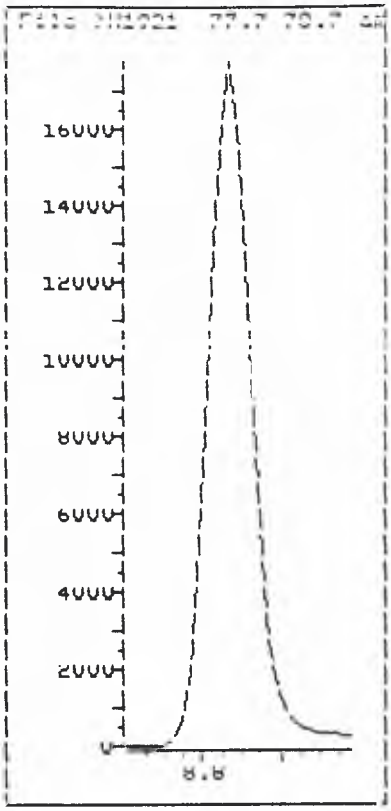
Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 11
Compound Name : 1,1-Dichloroethene
Scan Number : 197
Retention Time: 4.14 min.
Quant Ion : 96.0
Area : 3722
Concentration : 95.34 ng
q-value : 82







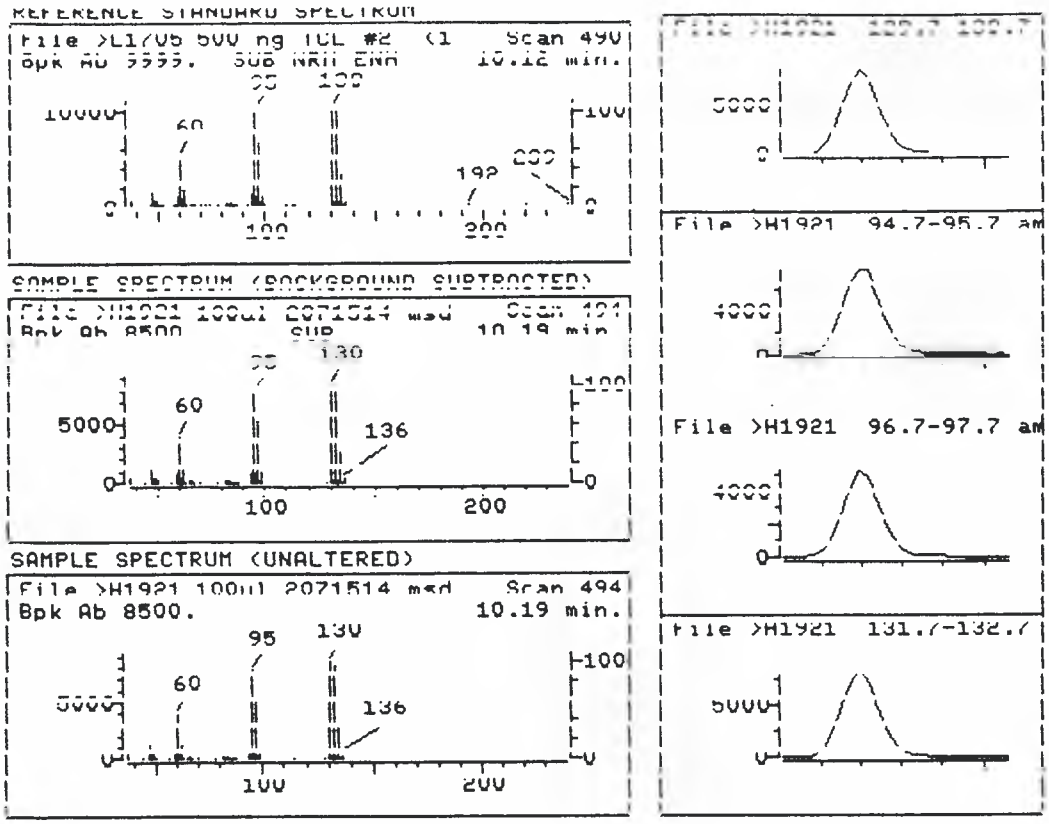


Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x
Quant Time: 920820 08:28
Injected at: 920819 22:31
Last Qcal Time: <none>

Quant Output File: ^H1921::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 30
Compound Name : Benzene
Scan Number : 429
Retention Time: 8.87 min.
Quant Ion : 78.0
Area : 137905
Concentration : 190.19 ng
q-value : 100

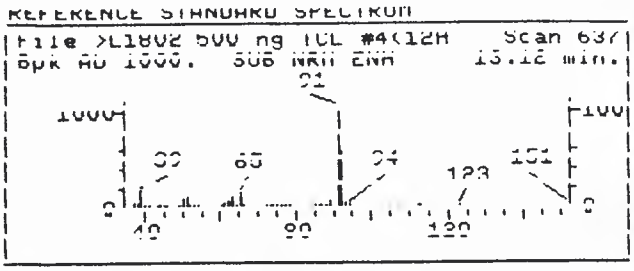


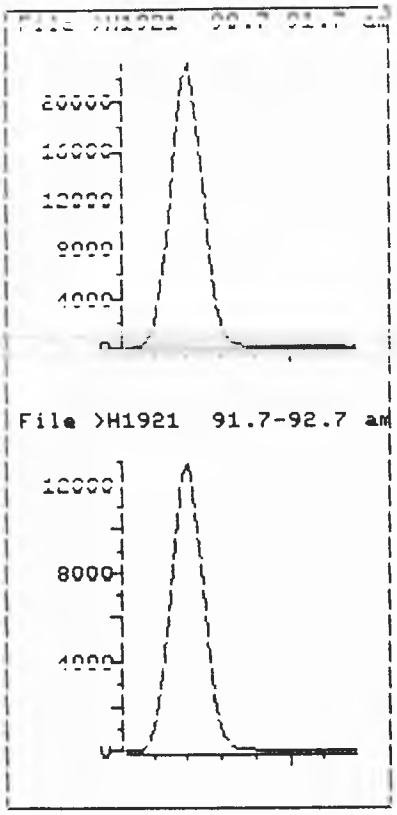
Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x
Quant Time: 920820 08:28
Injected at: 920819 22:31
Last Qcal Time: <none>

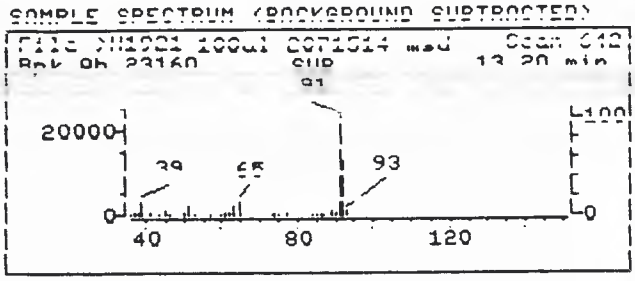
Quant Output File: ^H1921::A6
Instrument ID: MS-1

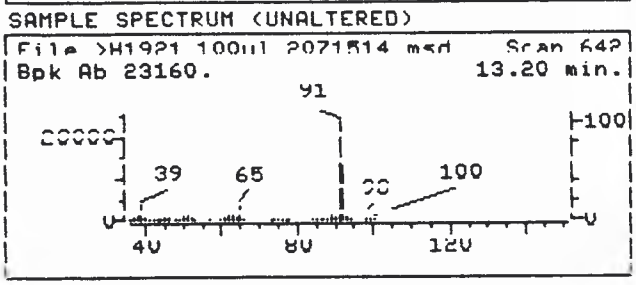
Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 31
Compound Name : Trichloroethene
Scan Number : 494
Retention Time: 10.19 min.
Quant Ion : 130.0
Area : 57532
Concentration : 175.26 ng
q-value : 96









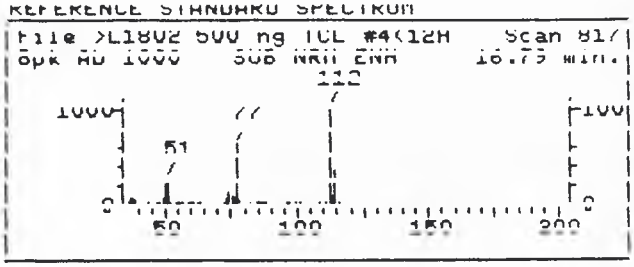
Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x
Quant Time: 920820 08:28
Injected at: 920819 22:31
Last Qcal Time: <none>

Quant Output File: ^H1921::A6
Instrument ID: MS-1

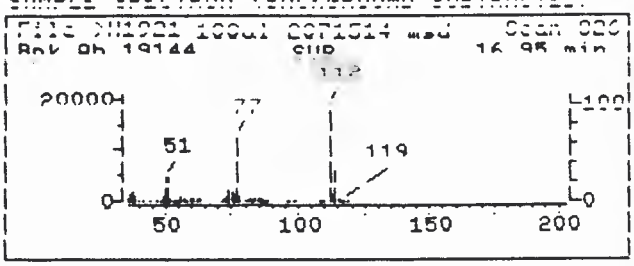
Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 39
Compound Name : Toluene
Scan Number : 642
Retention Time: 13.20 min.
Quant Ion : 92.0
Area : 86827
Concentration : 187.89 ng
a-value : 98

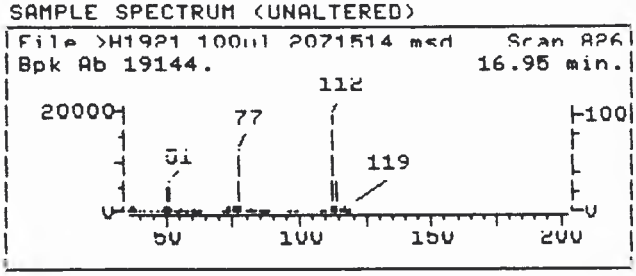
REFERENCE STANDARD SPECTRUM

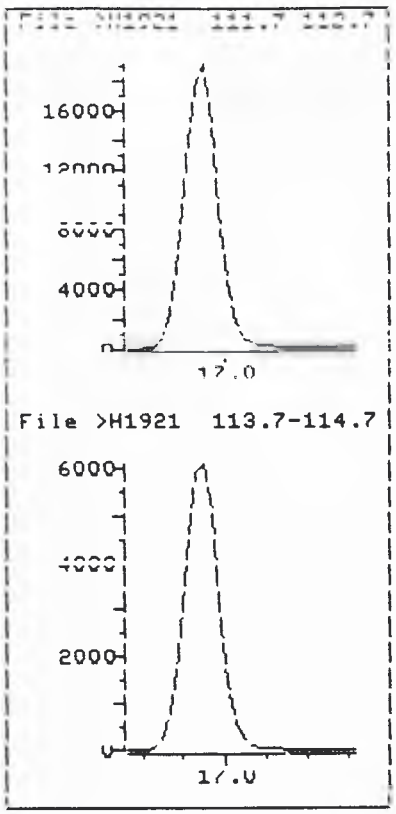


SAMPLE SPECTRUM (BACKGROUND SUBTRACTED)



SAMPLE SPECTRUM (UNALTERED)





Data File: >H1921::A1
Name: 100ul 2071514 msd
Misc: 250ng 6v 100ng 8x
Quant Time: 920820 08:28
Injected at: 920819 22:31
Last Qcal Time: <none>

Quant Output File: ^H1921::A6
Instrument ID: MS-1

Quant ID File: ID 624::D2
Last Calibration: 920819 09:58

Compound No : 47
Compound Name : Chlorobenzene
Scan Number : 826
Retention Time: 16.95 min.
Quant Ion : 112.0
Area : 111794
Concentration : 183.13 ng
q-value : 96

CALIBRATIONS

(INITIAL & CONTINUING)

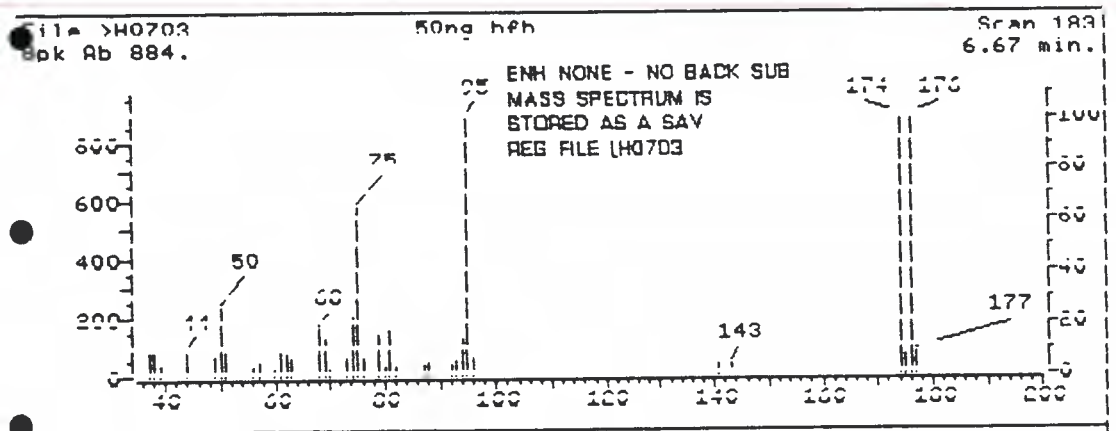
INITIAL CALIBRATIONS

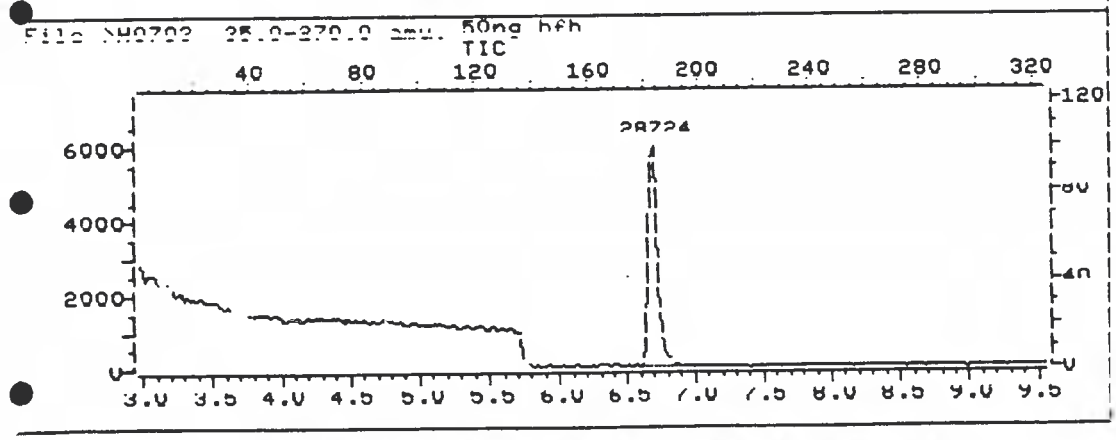
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	26.58	26.58	Ok
75	30-66% of mass 95	65.27	65.27	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.33	6.33	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-120% of mass 95	98.87	98.87	Ok
175	4-9% of mass 174	7.58	7.67	Ok
176	93-101% of mass 174	98.98	100.11	Ok
177	5-9% of mass 176	7.81	7.89	Ok

Injection Date: 08/07/92
Injection Time: 10:27
Data File: >H0703
Scan: 183





EI 624
8/7/92
ABK
Calibration
w/ new
fet separator

[illegible] Calibration Data
[illegible]

Case No: [illegible] Instrument ID: [illegible]

Contractor: North Creek Analyt. Calibration Date: 08/07/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	RF 25.00 (HX0704)	RF 50.00 (HX0705)	RF 100.00 (HX0706)	RF 250.00 (HX0707)	RF 500.00 (HX0708)	RF 1000.0 (HX0709)	RF 2000.0 (HX0710)	$\overline{RF}$	% RSD	CORR1	CCC	SPCC
1)	Dichlorodifluoromethane	-	-	-	.00481	.00202	.00102	-	.00262	75.049	.727364		
2)	Chloromethane	.41904	.50705	.38545	.39624	.30085	.22352	.15856	.34153	35.336	.966273		**
3)	1,2-Dichloroethane-d4	.71126	.72825	.71511	.70026	.67934	.63894	.57891	.67887	7.805	-		(Con
4)	Vinyl Chloride	.67096	.64654	.57628	.53014	.50541	.48115	.34164	.53602	20.692	.980820	*	
5)	Bromomethane	.65375	.72780	.54291	.57327	.56704	.54175	.28938	.55656	24.433	.924373		
6)	Chloroethane	.35349	.41433	.24943	.29187	.29870	.30577	.26577	.31134	18.010	.997309		
7)	Trichlorofluoromethane	-	-	-	-	-	-	-	-	-	-		
8)	Acetone	-	-	.09950	.09476	.09460	.09092	.06270	.08850	16.656	.972718		
9)	Freon 113	-	-	-	-	-	-	-	-	-	-		
10)	1,1-Dichloroethene	.56072	.65339	.49790	.54092	.51334	.45513	.24213	.49479	25.749	.917936	*	
11)	tert-Butanol	-	-	-	-	-	-	-	-	-	-		
12)	Carbon Disulfide	1.53889	1.50710	1.26692	1.44459	1.45766	1.49726	1.13362	1.40658	10.621	.988215		
13)	Methylene Chloride	-	-	.57763	.58369	.51646	.47999	.29636	.49083	23.836	.949257		
14)	Methyl t-butyl ether	-	-	-	-	-	-	-	-	-	-		
15)	trans-1,2-Dichloroethene	.55803	.52748	.42140	.46813	.47477	.48916	.37872	.47396	12.785	.990330		
16)	1,1-Dichloroethane	.85292	.85713	.70388	.74673	.79369	.89876	.89449	.82109	9.134	.999512		**
17)	Vinyl Acetate	-	-	-	-	-	-	-	-	-	-		
18)	2-Butanone	-	-	.13610	.10994	.11028	.10886	.10127	.11169	12.871	.999814		
19)	2,2-Dichloropropane	-	-	-	-	-	-	-	-	-	-		
20)	cis-1,2-Dichloroethene	.56356	.49252	.45784	.44898	.39599	.40123	.40970	.45283	13.259	.999795		
21)	Chloroform	1.37446	1.27891	1.14570	1.11848	1.00032	1.03745	1.05666	1.14457	11.915	.999788	*	
22)	Tetrahydrofuran	-	-	-	-	-	-	-	-	-	-		
23)	1,1,1-Trichloroethane	1.40116	1.51938	1.04548	1.04375	.91574	.96528	.97405	1.12355	21.087	.999698		
24)	iso-Octane	-	-	-	-	-	-	-	-	-	-		
25)	1,1-Dichloropropene	-	-	-	-	-	-	-	-	-	-		
26)	Carbon Tetrachloride	1.18050	1.49919	1.03463	1.08808	.99938	1.07042	1.08642	1.13695	14.886	.999685		
27)	1,2-Dichloroethane	.69611	.66998	.51499	.56476	.49587	.50348	.49602	.57732	14.659	.999891		
28)	Benzene	1.14687	1.08575	.87378	.85660	.70444	.65894	.72735	.87910	22.071	.998236		
29)	Trichloroethene	.54753	.50841	.45540	.41305	.35539	.33557	.32037	.41982	20.882	.999489		
30)	1,2-Dichloropropane	.43702	.43391	.37865	.34971	.29369	.27727	.24975	.34572	21.715	.998320	*	

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

[illegible] DATA
[illegible] COMPOUNDS

Case No: Instrument ID: MS-1

Contractor: North Creek Analyt. Calibration Date: 08/07/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	RF 2000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
	Laboratory ID:	>H0704	>H0705	>H0706	>H0707	>H0708	>H0709	>H0710						
31)	Bromodichloromethane	.87352	.84411	.76210	.74273	.65314	.66621	.65394	.74225	12.240	.999885			
32)	Dibromomethane	-	-	-	-	-	-	-	-	-	-			
33)	4-Methyl-2-pentanone	.31247	.34556	.31554	.29441	.25248	.23721	.19755	.27932	18.607	.994765			
34)	cis-1,3-Dichloropropene	.64742	.64062	.56933	.53667	.46148	.45803	.45543	.53843	15.641	.999852			
35)	Toluene-d8	1.00243	1.02697	1.00926	1.02391	.99647	.98591	.98379	1.00411	1.699	-			(Con
36)	Toluene	.86352	.81456	.71761	.66331	.57891	.56782	.65266	.69406	16.178	.997407	*		
37)	trans-1,3-Dichloropropene	.65037	.63702	.58865	.58028	.52931	.54596	.58428	.58798	7.471	.999242			
38)	1,1,2-Trichloroethane	.36968	.37259	.33489	.31882	.28587	.27881	.27604	.31953	12.934	.999907			
39)	2-Hexanone	.24889	.26606	.23948	.22798	.20513	.19396	.17012	.22166	15.151	.997407			
40)	1,3-Dichloropropane	-	-	-	-	-	-	-	-	-	-			
41)	Tetrachloroethene	.61003	.56084	.50397	.47977	.40932	.39524	.37089	.47572	18.796	.999364			
42)	Dibromochloromethane	.85768	.84900	.78712	.78487	.72709	.72867	.69310	.77536	8.107	.999698			
43)	1,2-Dibromoethane	-	-	-	-	-	-	-	-	-	-			(Con
44)	Chlorobenzene	1.23567	1.15838	1.01188	.94228	.81450	.73931	.88195	.97771	17.178	.998505		**	
45)	1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-	-			
46)	Ethylbenzene	.59317	.54384	.48021	.44109	.37521	.35968	.43867	.46170	17.406	.996214	*		
47)	m,p-Xylene	.68531	.63566	.54856	.48050	.39997	.47178	.64967	.55306	19.386	.988133			(Con
48)	o-Xylene	.71071	.67706	.58366	.53014	.45091	.46600	.60070	.57417	17.250	.992503			
49)	Styrene	1.23174	1.16606	1.01681	.93173	.79323	.84943	1.17881	1.02397	16.896	.988625			
50)	Bromoform	.57901	.58275	.58213	.61416	.57282	.57884	.54457	.57918	3.313	.999498		**	
51)	Isopropylbenzene	-	-	-	-	-	-	-	-	-	-			
52)	1,1,2,2-Tetrachloroethane	.54800	.55347	.51648	.47623	.41713	.33730	.36220	.46726	16.322	.998713		**	
53)	4-Bromofluorobenzene	.68087	.69037	.69022	.70535	.72783	.75822	.75084	.71481	4.348	-			(Con
54)	1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-	-			
55)	Bromobenzene	-	-	-	-	-	-	-	-	-	-			
56)	n-Propylbenzene	-	-	-	-	-	-	-	-	-	-			
57)	2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-			
58)	1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-			
59)	4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-			
60)	tert-Butylbenzene	-	-	-	-	-	-	-	-	-	-			

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: Instrument ID: MS-1

Contractor: North Creek Analyt. Calibration Date: 08/07/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	Laboratory ID: >H0704 RF 25.00	>H0705 RF 50.00	>H0706 RF 100.00	>H0707 RF 250.00	>H0708 RF 500.00	>H0709 RF 1000.0	>H0710 RF 2000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC
61)	1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-		
62)	sec-Butylbenzene	-	-	-	-	-	-	-	-	-	-		
63)	p-Isopropyltoluene	-	-	-	-	-	-	-	-	-	-		
64)	1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-		
65)	1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-		
66)	n-Butylbenzene	-	-	-	-	-	-	-	-	-	-		
67)	1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-		
68)	1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-		
69)	1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-		
70)	1-Fluoronaphthalene	2.29270	2.37915	2.42041	2.37987	2.40535	2.30901	2.08690	2.32477	4.951	-		(Con
71)	Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-		
72)	Naphthalene	-	-	-	-	-	-	-	-	-	-		
73)	1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-		
74)	2-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-		
75)	1-Methylnaphthalene	-	-	-	-	-	-	-	-	-	-		

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

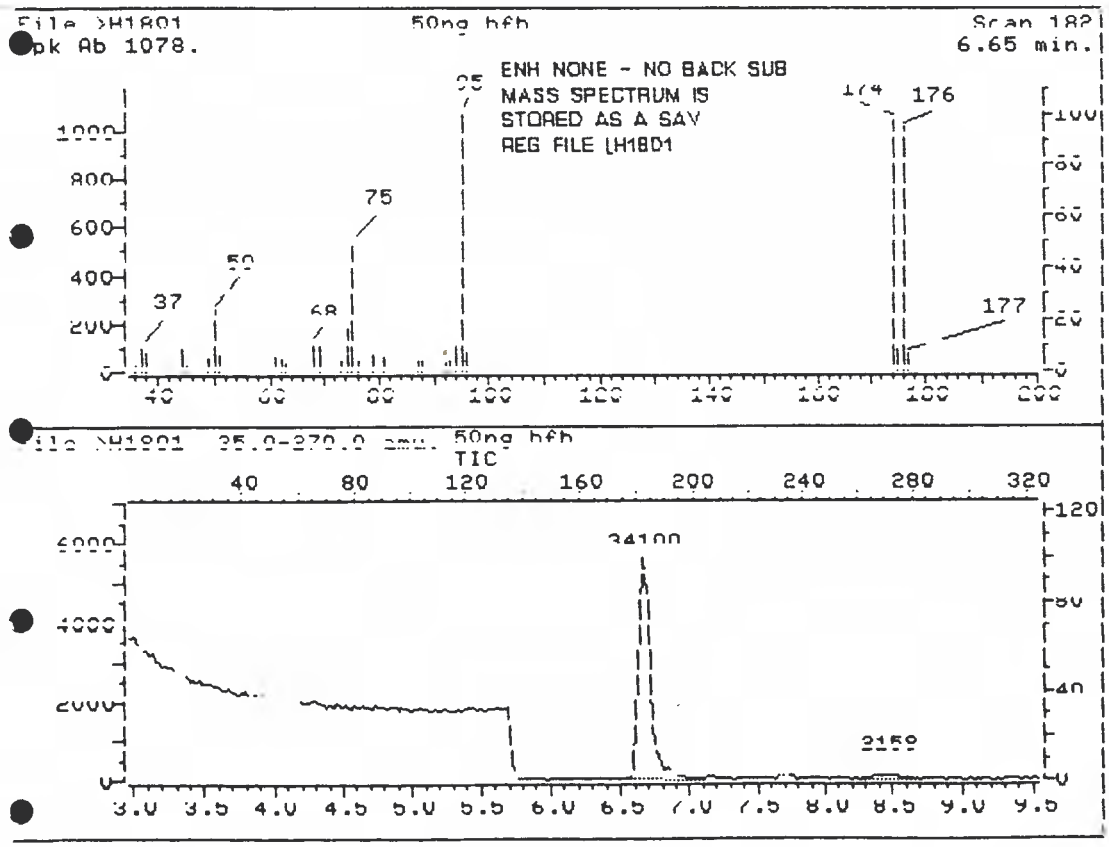
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	24.12	24.12	Ok
75	30-66% of mass 95	48.79	48.79	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.61	7.61	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-120% of mass 95	97.40	97.40	Ok
175	4-9% of mass 174	7.88	8.10	Ok
176	93-101% of mass 174	94.62	97.14	Ok
177	5-9% of mass 176	6.49	6.86	Ok

Injection Date: 08/18/92
Injection Time: 09:05
Data File: >H1801
Scan: 182



Instrument ID: MS-1 Analyzed on: 8/18/92 9:05

Calibration
8/18/92
[illegible]

Initial Calibration Data
VOC Compounds

Lab No: Instrument ID: MS-1

Contractor: North Creek Analyt. Calibration Date: 08/19/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	$\overline{RF}$	% RSD	CORR	CCC	SPCC
	Laboratory ID:	XH1812	XH1813	XH1814	XH1815	XH1816	XH1817					
1)	Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-		
2)	Chloromethane	.11167	.12689	.08431	.06985	.06170	.05550	.08499	33.733	.998475		**
3)	1,2-Dichloroethane-d4	.63763	.60634	.61680	.60149	.60100	.60356	.61114	2.326	-		Conc=250.0,
4)	Vinyl Chloride	.13815	.13271	.12853	.11605	.10037	.08855	.11739	16.661	.996818	*	
5)	Bromomethane	.16751	.15075	.13423	.10976	.09372	.08012	.12268	27.638	.995942		
6)	Chloroethane	.09854	.12412	.11483	.09325	.08135	.07026	.09706	20.757	.995836		
7)	Trichlorofluoromethane	-	-	-	-	-	-	-	-	-		
8)	Acetone	.05683	.04644	.03839	.03013	.02707	.02765	.03775	31.656	.999444		
9)	Freon 113	-	-	-	-	-	-	-	-	-		
10)	1,1-Dichloroethene	.11496	.12232	.10895	.09698	.08504	.07959	.10131	16.758	.998883	*	
11)	tert-Butanol	-	-	-	-	-	-	-	-	-		
12)	Carbon Disulfide	.11446	.15957	.22116	.25935	.25423	.27550	.21404	29.826	.999531		
13)	Methylene Chloride	.24604	.16243	.13249	.11058	.09271	.09294	.13953	41.937	.999428		
14)	Methyl t-butyl ether	-	-	-	-	-	-	-	-	-		
15)	trans-1,2-Dichloroethene	.15945	.12297	.11510	.10900	.09981	.10313	.11824	18.467	.999669		
16)	1,1-Dichloroethane	.32497	.29671	.26545	.26813	.25300	.26817	.27941	9.497	.999486		**
17)	Vinyl Acetate	-	-	-	-	-	-	-	-	-		
18)	2-Butanone	.11347	.08867	.07731	.07754	.07087	.08071	.08476	17.940	.997735		
19)	2,2-Dichloropropane	-	-	-	-	-	-	-	-	-		
20)	cis-1,2-Dichloroethene	.21111	.39203	.29689	.23968	.43250	.25065	.31214	27.031	.945035		
21)	Chloroform	.57091	1.21633	1.16584	1.12397	1.10755	1.04879	1.03890	22.724	.999345	*	
22)	Tetrahydrofuran	-	-	-	-	-	-	-	-	-		
23)	1,1,1-Trichloroethane	.92883	.82610	.81785	.84655	.80813	.77360	.83434	6.161	.999709		
24)	iso-Octane	-	-	-	-	-	-	-	-	-		
25)	1,1-Dichloropropene	-	-	-	-	-	-	-	-	-		
26)	Carbon Tetrachloride	.71991	.69432	.75268	.85104	.84188	.82887	.78145	8.670	.999956		
27)	1,2-Dichloroethane	.48401	.44919	.44826	.42952	.40435	.39438	.43495	7.554	.999821		
28)	Benzene	1.14289	1.02380	.98920	.93741	.86401	.80306	.96006	12.562	.999109		
29)	Trichloroethene	.50234	.45959	.45118	.43444	.40087	.35939	.43464	11.404	.998051		
30)	1,2-Dichloropropane	.39288	.35895	.35858	.35280	.33785	.33413	.35586	5.886	.999938	*	

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Calibration Data
Compounds

Case No: Instrument ID: MS-1

Contractor: North Creek Analyt. Calibration Date: 08/19/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
	Laboratory ID:	>H1812	>H1813	>H1814	>H1815	>H1816	>H1817						
31)	Bromodichloromethane	.47827	.48176	.52581	.53930	.52510	.51887	.51153	4.952	.999912			
32)	Dibromomethane	-	-	-	-	-	-	-	-	-			
33)	4-Methyl-2-pentanone	.25591	.23060	.25206	.27763	.27903	.28852	.26396	8.189	.999885			
34)	cis-1,3-Dichloropropene	.45850	.44414	.46810	.47167	.45515	.44191	.45658	2.658	.999794			
35)	Toluene-d8	.91245	.90564	.91997	.92298	.93094	.92716	.91986	1.023	-			(Conc=250.0,
36)	Toluene	.91357	.83763	.78869	.76573	.69856	.64702	.77520	12.322	.998939	*		
37)	trans-1,3-Dichloropropene	.42636	.44093	.48344	.51454	.49386	.50140	.47675	7.384	.999913			
38)	1,1,2-Trichloroethane	.39294	.37006	.35845	.36350	.34089	.32863	.35908	6.284	.999669			
39)	2-Hexanone	.20453	.20605	.22214	.24462	.24216	.25739	.22948	9.535	.999653			
40)	1,3-Dichloropropane	-	-	-	-	-	-	-	-	-			
41)	Tetrachloroethene	.62964	.58448	.53442	.53359	.49929	.44516	.53776	11.967	.997999			
42)	Dibromochloromethane	.44004	.51425	.60521	.67191	.65571	.63279	.58665	15.482	.999573			
43)	1,2-Dibromoethane	-	-	-	-	-	-	-	-	-			(Conc=20.0,4
44)	Chlorobenzene	1.22045	1.10120	1.06003	1.00482	.92590	.83199	1.02407	13.297	.998209		**	
45)	1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-			
46)	Ethylbenzene	.56468	.50244	.49128	.46300	.42127	.37753	.47003	13.933	.998002	*		
47)	m,p-Xylene	.67469	.61480	.58562	.51905	.43327	.35629	.53062	22.437	.992415			(Conc=50.0,1
48)	o-Xylene	.67861	.60677	.59701	.55683	.49321	.43601	.56141	15.418	.997204			
49)	Styrene	1.16775	1.07103	1.04991	.98083	.87514	.77336	.98634	14.472	.997256			
50)	Bromoform	.25138	.31090	.42707	.52687	.54729	.54405	.43459	29.489	.999863		**	
51)	Isopropylbenzene	-	-	-	-	-	-	-	-	-			
52)	1,1,2,2-Tetrachloroethane	.52865	.47381	.50155	.49947	.47806	.47565	.49287	4.331	.999926		**	
53)	4-Bromofluorobenzene	.60306	.61220	.63174	.64684	.66330	.71591	.64551	6.340	-			(Conc=250.0,
54)	1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-			
55)	Bromobenzene	-	-	-	-	-	-	-	-	-			
56)	n-Propylbenzene	-	-	-	-	-	-	-	-	-			
57)	2-Chlorotoluene	-	-	-	-	-	-	-	-	-			
58)	1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-			
59)	4-Chlorotoluene	-	-	-	-	-	-	-	-	-			
60)	tert-Butylbenzene	-	-	-	-	-	-	-	-	-			

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: Instrument ID: MS-1

Contractor: North Creek Analyt. Calibration Date: 08/19/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Laboratory ID: XH1812 XH1813 XH1814 XH1815 XH1816 XH1817

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	$\overline{RF}$	% RSD	CORR1	CCC SPCC	
61)	1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-		
62)	sec-Butylbenzene	-	-	-	-	-	-	-	-	-		
63)	p-Isopropyltoluene	-	-	-	-	-	-	-	-	-		
64)	1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-		
65)	1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-		
66)	n-Butylbenzene	-	-	-	-	-	-	-	-	-		
67)	1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-		
68)	1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-		
69)	1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-		
70)	1-Fluoronaphthalene	2.18178	2.16047	2.26937	2.39062	2.36225	2.34252	2.28450	4.237	-		(Conc=250.0,
71)	Hexachlorobutadiene	-	-	-	-	-	-	-	-	-		
72)	Naphthalene	-	-	-	-	-	-	-	-	-		
73)	1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-		
74)	2-Methylnaphthalene	-	-	-	-	-	-	-	-	-		
75)	1-Methylnaphthalene	-	-	-	-	-	-	-	-	-		

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

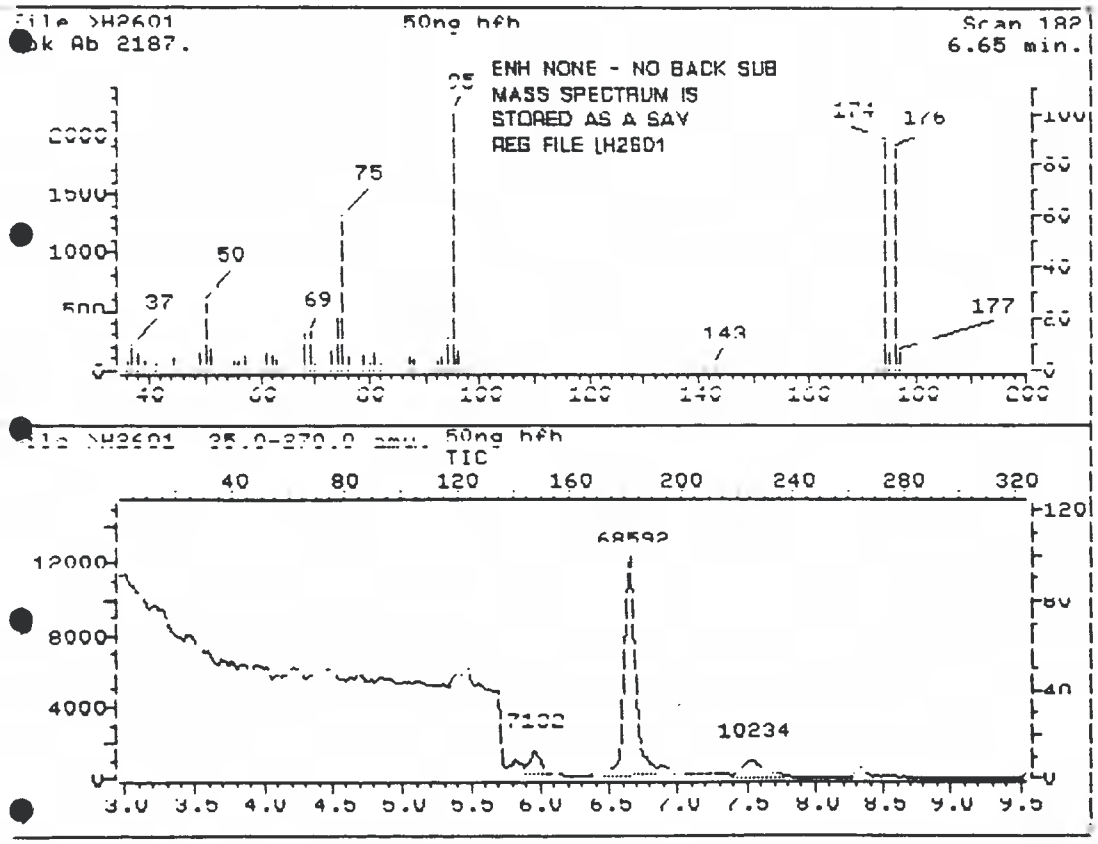
CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	26.20	26.20	Ok
75	30-66% of mass 95	57.98	57.98	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.27	7.27	Ok
173	Less than 2% of mass 174	1.01	1.14	Ok
174	50-120% of mass 95	88.43	88.43	Ok
175	4-9% of mass 174	6.68	7.55	Ok
176	93-101% of mass 174	86.19	97.47	Ok
177	5-9% of mass 176	6.49	7.53	Ok

Injection Date: 08/26/92
Injection Time: 07:18
Data File: >H2601
Scan: 182



Instrument ID: MS-1 Analyzed on: 8/26/92 7:18

Calibration 624
8/26/92

Initial Calibration Data
-VOA Compounds

Case No: Instrument ID: MS-4

Contractor: North Creek Analyt. Calibration Date: 08/26/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 30%

Comp No.	Compound	Laboratory ID: >H2515 RF 25.00	>H2516 RF 50.00	>H2517 RF 100.00	>H2518 RF 250.00	>H2519 RF 500.00	>H2520 RF 1000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
1)	Dichlorodifluoromethane	-	-	-	-	-	-	-	-	-			
2)	Chloromethane	.19503	.19465	.19503	.19038	.19047	.09195	.14759	28.780	.992271		**	
3)	1,2-Dichloroethane-d4	.72408	.68343	.71909	.68253	.66772	.19355	.61173	33.685	.823422			(Conc=250.0.
4)	Vinyl Chloride	.22273	.21525	.22442	.21303	.18850	.13867	.20043	16.409	.982057	*		
5)	Bromomethane	.21133	.21992	.20379	.20254	.16280	.10735	.18462	23.101	.960649			
6)	Chloroethane	.12785	.10920	.12675	.12693	.15337	.07156	.11928	22.895	.882904			
7)	Trichlorofluoromethane	-	-	-	-	-	-	-	-	-			
8)	Acetone	.14496	.09328	.07272	.07983	.05610	.04073	.08127	44.546	.971147			
9)	Freon 113	-	-	-	-	-	-	-	-	-			
10)	1,1-Dichloroethene	.20036	.16398	.16322	.16283	.13143	.09285	.15244	23.915	.973309	*		(Conc=25.0.5
11)	tert-Butanol	-	-	-	-	-	-	-	-	-			
12)	Carbon Disulfide	.70709	.49267	.50797	.56467	.51774	.45250	.54044	16.538	.996578			
13)	Methylene Chloride	.64857	.34412	.32699	.21033	.18795	.13061	.30809	60.387	.980834			
14)	Methyl t-butyl ether	-	-	-	-	-	-	-	-	-			
15)	trans-1,2-Dichloroethene	.24731	.19190	.18748	.19841	.17560	.14308	.19063	17.823	.992197			
16)	1,1-Dichloroethane	.59123	.44543	.48919	.50463	.47778	.47535	.49727	10.053	.999860		**	
17)	Vinyl Acetate	-	-	-	-	-	-	-	-	-			
18)	2-Butanone	.14781	.13897	.12655	.12677	.11753	.11008	.12795	10.755	.999252			
19)	2,2-Dichloropropane	-	-	-	-	-	-	-	-	-			
20)	cis-1,2-Dichloroethene	.37425	.56543	.39356	.37289	.37658	.41128	.41566	18.006	.998480			
21)	Chloroform	.82203	1.27600	1.22569	1.23605	1.19466	1.20382	1.15971	14.475	.999905	*		
22)	Tetrahydrofuran	-	-	-	-	-	-	-	-	-			
23)	1,1,1-Trichloroethane	1.12894	.99115	.99217	.99089	.96558	.96661	1.00256	6.280	.999979			
24)	iso-Octane	-	-	-	-	-	-	-	-	-			
25)	1,1-Dichloropropene	-	-	-	-	-	-	-	-	-			
26)	Carbon Tetrachloride	.99819	.99375	.95688	1.05733	1.07388	1.08314	1.01053	7.424	.999962			
27)	1,2-Dichloroethane	.62870	.56705	.56573	.59395	.52936	.49755	.56707	8.337	.998829			
28)	Benzene	1.05952	.92551	.98508	.93072	.88881	.95026	.93998	6.782	.999431			
29)	Trichloroethene	.51935	.45643	.44968	.44723	.43216	.41642	.45338	7.791	.999797			
30)	1,2-Dichloropropane	.31500	.29516	.28769	.30014	.29103	.30589	.29915	3.379	.999696	*		

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Lab Name: [illegible] Instrument ID: [illegible]

Contractor: North Creek Analyt. Calibration Date: 08/26/9[illegible]

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25.

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
	Laboratory ID:	WH2515	WH2516	WH2517	WH2518	WH2519	WH2520						
31)	Bromodichloromethane	.69267	.66160	.67441	.70801	.67496	.66103	.67878	2.709	.999812			
32)	Dibromomethane	-	-	-	-	-	-	-	-	-			
33)	4-Methyl-2-pentanone	.16397	.16696	.18108	.18854	.17245	.15923	.17204	6.415	.998439			
34)	cis-1,3-Dichloropropene	.48101	.45964	.46218	.49262	.47504	.49772	.47637	2.812	.999893			
35)	Toluene-d8	.92043	.92545	.93307	.93275	.93295	.93911	.93062	.711	-			(Conc=250.0,
36)	Toluene	.86432	.75784	.73553	.74201	.72836	.75359	.76361	6.619	.999830	*		
37)	trans-1,3-Dichloropropene	.52513	.51344	.53029	.57446	.55934	.56121	.54398	4.456	.999948			
38)	1,1,2-Trichloroethane	.38765	.36243	.35526	.36610	.34510	.33992	.35941	4.744	.999846			
39)	2-Hexanone	.15076	.15067	.15609	.16582	.15338	.13938	.15269	5.630	.998104			
40)	1,3-Dichloropropane	-	-	-	-	-	-	-	-	-			
41)	Tetrachloroethene	.63442	.55532	.53349	.52874	.49253	.46156	.53434	11.082	.999283			
42)	Dibromochloromethane	.73395	.73761	.77202	.83220	.78571	.75076	.76871	4.807	.999416			
43)	1,2-Dibromoethane	-	-	-	-	-	-	-	-	-			(Conc=20.0,4
44)	Chlorobenzene	1.21853	1.07320	1.03939	1.04653	1.01329	1.00671	1.06627	7.349	.999973		**	
45)	1,1,1,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-			
46)	Ethylbenzene	.54990	.48191	.46478	.46733	.45610	.45891	.47982	7.396	.999979	*		
47)	m,p-Xylene	.66569	.58895	.57039	.57535	.55548	.49415	.57504	9.649	.998010			(Conc=50.0,1
48)	o-Xylene	.65711	.58135	.56314	.57236	.55781	.54911	.58023	6.776	.999950			
49)	Styrene	1.14641	1.01791	.99165	1.01504	.99620	.97798	1.02420	6.025	.999942			
50)	Bromoform	.47886	.51315	.56378	.63592	.60372	.56204	.55958	10.257	.998766		**	
51)	Isopropylbenzene	-	-	-	-	-	-	-	-	-			
52)	1,1,2,2-Tetrachloroethane	.48112	.45666	.45599	.47990	.44194	.43359	.45820	4.225	.999666		**	
53)	4-Bromofluorobenzene	.63197	.63807	.63388	.62933	.62771	.62851	.63025	.950	-			Conc=250.0,
54)	1,2,3-Trichloropropane	-	-	-	-	-	-	-	-	-			
55)	Bromobenzene	-	-	-	-	-	-	-	-	-			
56)	n-Propylbenzene	-	-	-	-	-	-	-	-	-			
57)	2-Chlorotoluene	-	-	-	-	-	-	-	-	-			
58)	1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-			
59)	4-Chlorotoluene	-	-	-	-	-	-	-	-	-			
60)	tert-Butylbenzene	-	-	-	-	-	-	-	-	-			

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: Instrument ID: MS-4

Contractor: North Creek Analyt. Calibration Date: 08/26/92

Contract No: None

Minimum $\overline{RF}$ for SPCC is .3 Maximum % RSD for CCC is 25%

Comp No.	Compound	RF 25.00	RF 50.00	RF 100.00	RF 250.00	RF 500.00	RF 1000.0	$\overline{RF}$	% RSD	CORR1	CCC	SPCC	
61)	1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-			
62)	sec-Butylbenzene	-	-	-	-	-	-	-	-	-			
63)	p-Isopropyltoluene	-	-	-	-	-	-	-	-	-			
64)	1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-			
65)	1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-			
66)	n-Butylbenzene	-	-	-	-	-	-	-	-	-			
67)	1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-			
68)	1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-			
69)	1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-			
70)	1-Fluoronaphthalene	2.10487	2.21311	2.23448	2.22840	2.14691	2.09008	2.16964	2.958	-			(Conc=250.0,
71)	Hexachlorobutadiene	-	-	-	-	-	-	-	-	-			
72)	Naphthalene	-	-	-	-	-	-	-	-	-			
73)	1,2,3-Trichlorobenzene	-	-	-	-	-	-	-	-	-			
74)	2-Methylnaphthalene	-	-	-	-	-	-	-	-	-			
75)	1-Methylnaphthalene	-	-	-	-	-	-	-	-	-			

RF - Response Factor (Subscript is amount in ng)

$\overline{RF}$ - Average Response Factor

CRSD - Percent Relative Standard Deviation

CORRn - Coefficient of Correlation (nth degree)

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

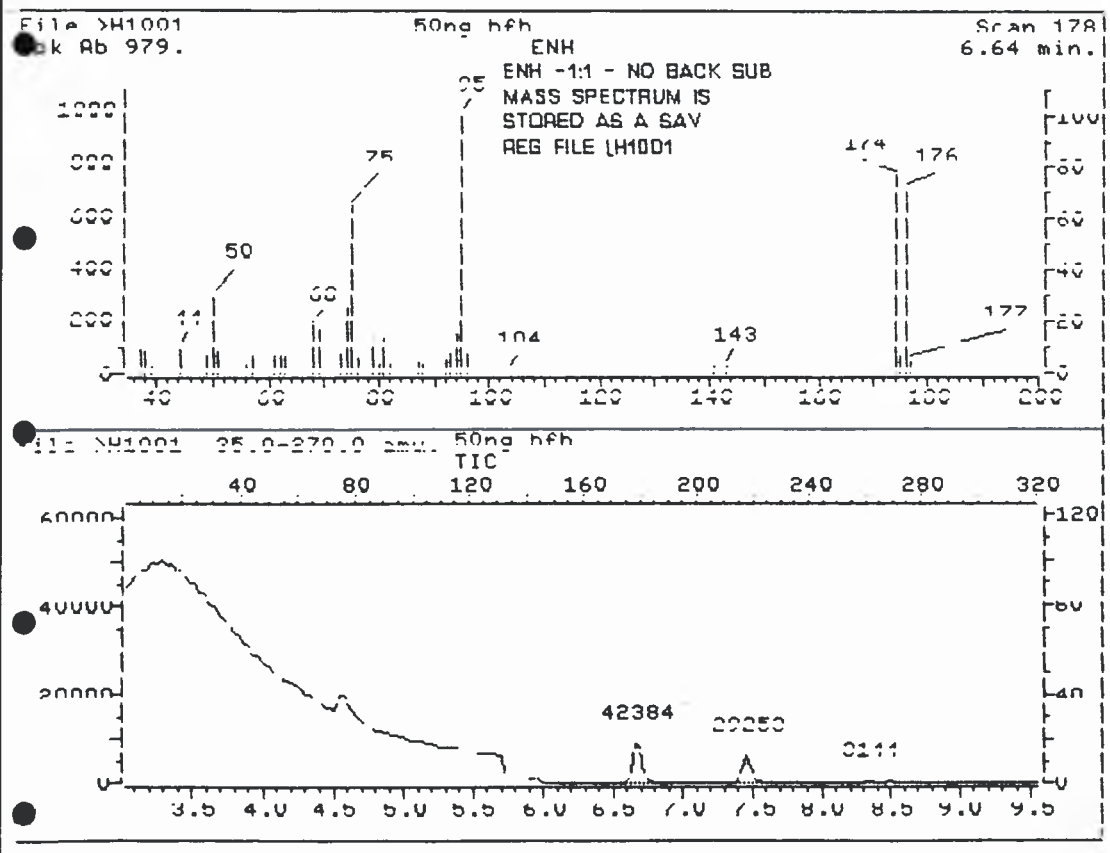
CONTINUING CALIBRATIONS

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	29.21	29.21	Ok
75	30-66% of mass 95	65.03	65.03 ✓	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.66	7.66	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-120% of mass 95	76.88	76.88	Ok
175	4-9% of mass 174	6.20	8.06 ✓	Ok
176	93-101% of mass 174	71.71	93.27 ✓	Ok
177	5-9% of mass 176	4.32	6.03	Ok

Injection Date: 08/10/92
Injection Time: 09:15
Data File: >H1001
Scan: 178



Instrument ID: MS 1 Analyzed on: 8/10/92 9:15

Continuing Calibration Check
-GC Compounds

Case No: | Calibration Date: 08/10/92

Contractor: North Creek Analyt. | Time: 09:42

Contract No: None | Laboratory ID: SH1002

Instrument ID: MS-1 | Initial Calibration Date: 08/07/92

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	.00262	-	-		
Chloromethane	.34153	.37293	9.19		**
1,2-Dichloroethane-d4	.67887	.64977	4.29		
Vinyl Chloride	.53602	.57067	6.47	*	
Bromomethane	.55656	.62407	12.13		
Chloroethane	.31134	.33379	7.21		
Trichlorofluoromethane	-	-	-		
Acetone	.08850	1.83315	1971.47		
Freon 113	-	-	-		
1,1-Dichloroethene	.49479	.53279	7.68	*	
tert-Butanol	-	-	-		
Carbon Disulfide	1.40658	1.38870	1.27		
Methylene Chloride	.49083	-	-		
Methyl t-butyl ether	-	-	-		
trans-1,2-Dichloroethene	.47396	.45765	3.44		
1,1-Dichloroethane	.82109	.73586	10.38		**
Vinyl Acetate	-	-	-		
2-Butanone	.11169	.08786	21.34		
2,2-Dichloropropane	-	-	-		
cis-1,2-Dichloroethene	.45283	.37957	16.19		
Chloroform	1.14457	1.11350	2.71	*	
Tetrahydrofuran	-	-	-		
1,1,1-Trichloroethane	1.12355	1.08727	3.23		
iso-Octane	-	-	-		
1,1-Dichloropropene	-	-	-		
Carbon Tetrachloride	1.13695	1.17442	3.30		
1,2-Dichloroethane	.57732	.54313	5.92		
Benzene	.87910	.87139	.88		
Trichloroethene	.41982	.44327	5.59		
1,2-Dichloropropane	.34572	.32619	5.65	*	
Bromodichloromethane	.74225	.73461	1.03		
Dibromomethane	-	-	-		

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: Calibration Date: 09/10/92

Contractor: North Creek Analyt. Time: 09:42

Contract No: None Laboratory ID: AH002

Instrument ID: MS-1 Initial Calibration Date: 08/07/92

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
4-Methyl-2-pentanone	.27932	.24049	13.90			
cis-1,3-Dichloropropene	.53843	.52271	2.92			
Toluene-d8	1.00411	.98220	2.18			
Toluene	.69406	.68969	.63	*		
trans-1,3-Dichloropropene	.58798	.54912	6.61			
1,1,2-Trichloroethane	.31953	.31343	1.91			
2-Hexanone	.22166	.19100	13.83			
1,3-Dichloropropane	-	-	-			
Tetrachloroethene	.47572	.49276	3.58			
Dibromochloromethane	.77536	.79196	2.14			
1,2-Dibromoethane	-	-	-			(Conc=100.00)
Chlorobenzene	.97771	.98627	.87		**	
1,1,1,2-Tetrachloroethane	-	-	-			
Ethylbenzene	.46170	.45759	.89	*		
m,p-Xylene	.55306	.49331	10.80			(Conc=500.00)
o-Xylene	.57417	.55655	3.07			
Styrene	1.02397	.95145	7.08			
Bromoform	.57918	.53750	7.20		**	
Isopropylbenzene	-	-	-			
1,1,2,2-Tetrachloroethane	.46726	.43969	5.90		**	
4-Bromofluorobenzene	.71481	.68021	4.84			
1,2,3-Trichloropropane	-	-	-			
Bromobenzene	-	-	-			
n-Propylbenzene	-	-	-			
2-Chlorotoluene	-	-	-			
1,3,5-Trimethylbenzene	-	-	-			
4-Chlorotoluene	-	-	-			
tert-Butylbenzene	-	-	-			
1,2,4-Trimethylbenzene	-	-	-			
sec-Butylbenzene	-	-	-			
p-Isopropyltoluene	-	-	-			
1,3-Dichlorobenzene	-	-	-			

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

MS-1
End
8-10-92

...e No: Calibration Date: 08/10/92

...tractor: North Creek Analyt. Time: 09:42

...ntract No: None Laboratory ID: WA1902

...strument ID: MS-1 Initial Calibration Date: 08/07/92

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
...-Dichlorobenzene	-	-	-		
...butylbenzene	-	-	-		
...-Dichlorobenzene	-	-	-		
...-Dibromo-3-chloropropane	-	-	-		
...4-Trichlorobenzene	-	-	-		
...luoronaphthalene	2.32477	2.55272	9.81		
...exachlorobutadiene	-	-	-		
...aphthalene	-	-	-		
...3-Trichlorobenzene	-	-	-		
...ethylnaphthalene	-	-	-		
...ethylnaphthalene	-	-	-		

- Response Factor from daily standard file at 250.00 ng

- Average Response Factor from Initial Calibration Form VI

- % Difference from original average or curve

- Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

QUANT REPORT

Operator ID: GLEN
Output File: ^H1002::A6
Data File: >H1002::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920810 10:12
Injected at: 920810 09:42
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.75	373	75259	250.00	ng	93
3)	Chloromethane	2.57	120	28066	272.98	ng	89
4)	1,2-Dichloroethane-d4	8.75	422	48901	239.28	ng	96
5)	Vinyl Chloride	2.79	131	42948	266.16	ng	98
6)	Bromomethane	3.10	146	46967	280.33	ng	94
7)	Chloroethane	3.14	148	25121	268.03	ng	95
9)	Acetone	3.98	189	137961	5178.68	ng	89
11)	1,1-Dichloroethene	4.23	201	40097	269.20	ng	90
13)	Carbon Disulfide	5.07	242	104512	246.82	ng	98
16)	trans-1,2-Dichloroethene	5.31	254	34442	241.40	ng	89
17)	1,1-Dichloroethane	5.97	286	55380	224.05	ng	97
19)	2-Butanone	6.69	321	6612	196.66	ng	96
21)	cis-1,2-Dichloroethene	7.04	338	28566	209.55	ng	91
22)	Chloroform	7.34	353	83801	243.21	ng	94
24)	1,1,1-Trichloroethane	8.14	392	81827	241.93	ng	97
27)	Carbon Tetrachloride	8.67	418	88386	258.24	ng	93
28)	*1,4-Difluorobenzene	9.58	463	114622	250.00	ng	96
29)	1,2-Dichloroethane	8.93	431	62255	235.20	ng	98
30)	Benzene	8.97	433	99881	247.81	ng	100
31)	Trichloroethene	10.30	498	50809	263.97	ng	98
32)	1,2-Dichloropropane	10.68	517	37388	235.88	ng	98
33)	Bromodichloromethane	11.21	543	84202	247.42	ng	98
35)	4-Methyl-2-pentanone	12.09	586	27565	215.25	ng	89
36)	cis-1,3-Dichloropropene	12.52	607	59914	242.70	ng	97
37)	Toluene-d8	13.11	636	112582	244.55	ng	95
38)	*Chlorobenzene-d5	16.94	824	102590	250.00	ng	99
39)	Toluene	13.29	645	70755	248.43	ng	98
40)	trans-1,3-Dichloropropene	13.76	668	56334	233.48	ng	98
41)	1,1,2-Trichloroethane	14.13	686	32155	245.23	ng	96
42)	2-Hexanone	14.25	692	19595	215.42	ng	92
44)	Tetrachloroethene	14.90	724	50552	258.95	ng	95
45)	Dibromochloromethane	15.39	748	81247	255.35	ng	95
47)	Chlorobenzene	17.02	828	101181	252.19	ng	97
49)	Ethylbenzene	17.22	838	46944	247.78	ng	98
50)	m,p-Xylene	17.45	849	101218	445.98	ng	95
51)	o-Xylene	18.59	905	57096	242.33	ng	97
52)	Styrene	18.69	910	97609	232.29	ng	90
53)	Bromoform	19.46	948	55142	232.01	ng	98
56)	1,1,2,2-Tetrachloroethane	19.93	971	45108	235.25	ng	98
57)	4-Bromofluorobenzene	20.08	978	69783	237.90	ng	96

QUANT REPORT

Operator ID: GLEN
Output File: ^H1002::A6
Data File: >H1002::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

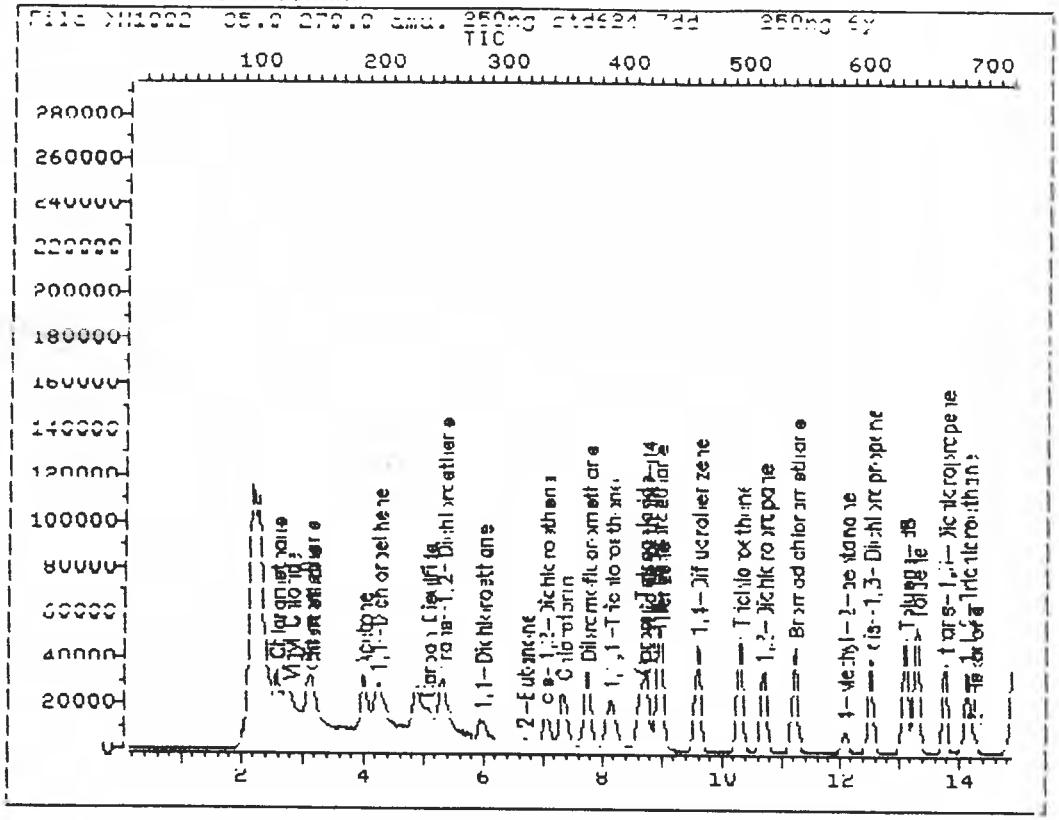
Quant Rev: 7
Quant Time: 920810 10:12
Injected at: 920810 09:42
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
58)	*1,4-Dichlorobenzene-d4	22.01	1073	65967	250.00	ng	95
75)	1-Fluoronaphthalene	26.70	1303	168395	274.51	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Data File: >H1002::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

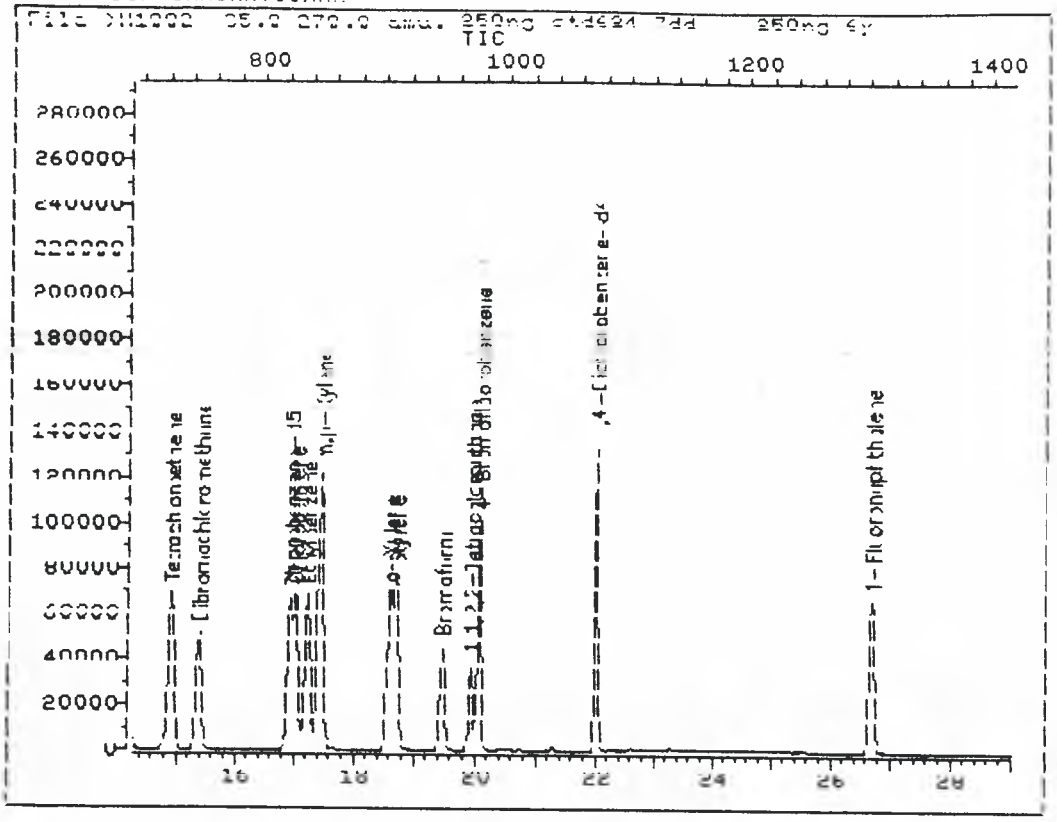
Quant Output File: ^H1002::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920810 10:12
Injected at: 920810 09:42

TOTAL ION CHROMATOGRAM



Data File: >H1002::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

Quant Output File: ^H1002::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920807 17:43

Last Qcal Time: <none>

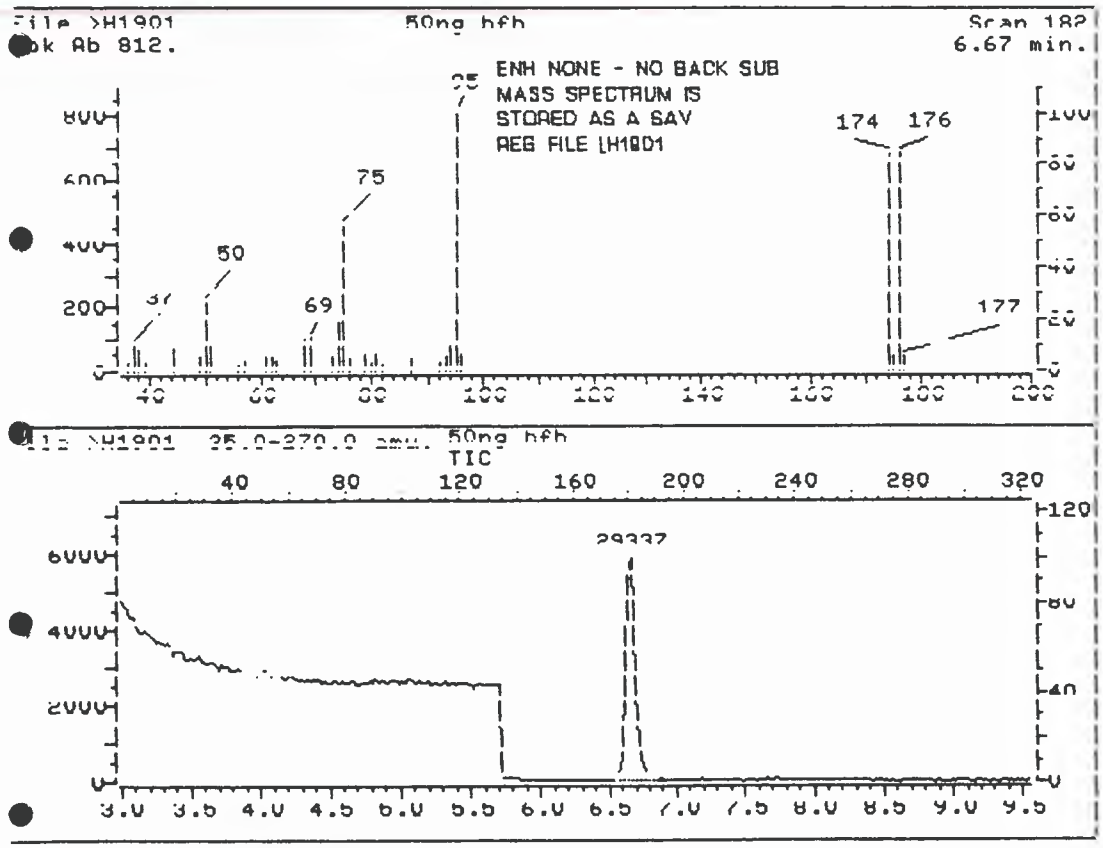
Operator ID: GLEN
Quant Time : 920810 10:12
Injected at: 920810 09:42

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	26.85	26.85	Ok
75	30-66% of mass 95	56.28	56.28	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	6.65	6.65	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	50-120% of mass 95	83.74	83.74	Ok
175	4-9% of mass 174	5.67	6.76	Ok
176	93-101% of mass 174	84.36	100.74	Ok
177	5-9% of mass 176	5.30	6.28	Ok

Injection Date: 08/19/92
Injection Time: 08:48
Data File: >H1901
Scan: 182



Continuing Calibration Check
-8L Compounds

Case No: | Calibration Date: 08/19/92

Contractor: North Creek Analyt. | Time: 09:49

Contract No: None | Laboratory ID: >H1902

Instrument ID: MS-1 | Initial Calibration Date: 08/19/92

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	-	-	-		
Chloromethane	.08499	.10937	28.69		**
1,2-Dichloroethane-d4	.61114	.56065	8.26		
Vinyl Chloride	.11739	.13238	12.77	*	
Bromomethane	.12268	.16199	32.04		
Chloroethane	.09706	.09689	.17		
Trichlorofluoromethane	-	-	-		
Acetone	.03775	.03712	1.69		
Freon 113	-	-	-		
1,1-Dichloroethene	.10131	.13633	34.57	*	
tert-Butanol	-	-	-		
Carbon Disulfide	.21404	.41214	92.55		
Methylene Chloride	.13953	-	-		
Methyl t-butyl ether	-	-	-		
trans-1,2-Dichloroethene	.11824	.14776	24.97		
1,1-Dichloroethane	.27941	.33268	19.07		**
Vinyl Acetate	-	-	-		
2-Butanone	.08476	.07476	11.79		
2,2-Dichloropropane	-	-	-		
cis-1,2-Dichloroethene	.31214	.33804	8.30		
Chloroform	1.03890	1.15171	10.86	*	
Tetrahydrofuran	-	-	-		
1,1,1-Trichloroethane	.83434	.88664	6.27		
iso-Octane	-	-	-		
1,1-Dichloropropene	-	-	-		
Carbon Tetrachloride	.78145	.93891	20.15		
1,2-Dichloroethane	.43495	.39078	10.16		
Benzene	.96006	.96517	.53		
Trichloroethene	.43464	.43708	.56		
1,2-Dichloropropane	.35586	.32315	9.19	*	
Bromodichloromethane	.51153	.52354	2.35		
Dibromomethane	-	.00256	-		

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
-SL Compounds

Case No: | Calibration Date: 08/19/92

Contractor: North Creek Analyt. | Time: 09:49

Contract No: None | Laboratory ID: SH1902

Instrument ID: MS-1 | Initial Calibration Date: 08/19/92

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
4-Methyl-2-pentanone	.26396	.18761	28.92			
cis-1,3-Dichloropropene	.45658	.45113	1.19			
Toluene-d8	.91986	.88487	3.80			
Toluene	.77520	.76075	1.86	*		
trans-1,3-Dichloropropene	.47675	.46806	1.82			
1,1,2-Trichloroethane	.35908	.31085	13.43			
2-Hexanone	.22948	.16525	27.99			
1,3-Dichloropropane	-	-	-			
Tetrachloroethene	.53776	.57834	7.55			
Dibromochloromethane	.58665	.65126	11.01			
1,2-Dibromoethane	-	-	-			(Conc=100.00)
Chlorobenzene	1.02407	1.01830	.56		**	
1,1,1,2-Tetrachloroethane	-	-	-			
Ethylbenzene	.47003	.45727	2.71	*		
m,p-Xylene	.53062	.52013	1.98			(Conc=500.00)
o-Xylene	.56141	.54976	2.07			
Styrene	.98634	.96428	2.24			
Bromoform	.43459	.53606	23.35		**	
Isopropylbenzene	-	-	-			
1,1,2,2-Tetrachloroethane	.49287	.39375	20.11		**	
4-Bromofluorobenzene	.94551	-	-			
1,2,3-Trichloropropane	-	-	-			
Bromobenzene	-	-	-			
n-Propylbenzene	-	-	-			
2-Chlorotoluene	-	-	-			
1,3,5-Trimethylbenzene	-	-	-			
4-Chlorotoluene	-	-	-			
tert-Butylbenzene	-	-	-			
1,2,4-Trimethylbenzene	-	-	-			
sec-Butylbenzene	-	-	-			
p-Isopropyltoluene	-	-	-			
1,3-Dichlorobenzene	-	-	-			

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
PSL Compounds

Lab Name: | Calibration Date: 08/19/92

Contractor: North Creek Analyt. | Time: 09:49

Contract No: None | Laboratory ID: XH1902

Instrument ID: MS-1 | Initial Calibration Date: 08/19/92

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
1,4-Dichlorobenzene	-	-	-		
n-Butylbenzene	-	-	-		
1,2-Dichlorobenzene	-	-	-		
1,2-Dibromo-3-chloropropane	-	-	-		
1,2,4-Trichlorobenzene	-	-	-		
1-fluoronaphthalene	2.28450	1.95247	14.53		
Hexachlorobutadiene	-	-	-		
Naphthalene	-	-	-		
1,2,3-Trichlorobenzene	-	-	-		
2-Methylnaphthalene	-	-	-		
1-Methylnaphthalene	-	-	-		

RF - Response factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

QUANT REPORT

Operator ID: GLEN
Output File: ^H1902::A6
Data File: >H1902::A1
Name: 250ng std624 7dd
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920819 10:19
Injected at: 920819 09:49
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58

Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.73	373	116098	250.00	ng	97
3)	Chloromethane	2.53	118	12698	321.74	ng	90
4)	1,2-Dichloroethane-d4	8.75	423	65090	229.35	ng	91
5)	Vinyl Chloride	2.81	132	15369	281.92	ng	92
6)	Bromomethane	3.08	145	18807	330.10	ng	97
7)	Chloroethane	3.16	149	11249	249.57	ng	98
9)	Acetone	3.98	189	4309	245.78	ng	98
11)	1,1-Dichloroethene	4.24	202	15828	336.44	ng	87
13)	Carbon Disulfide	5.06	242	47849	481.38	ng	98
16)	trans-1,2-Dichloroethene	5.32	255	17155	312.42	ng	81
17)	1,1-Dichloroethane	5.98	287	38624	297.67	ng	96
19)	2-Butanone	6.69	322	8680	220.51	ng	93
21)	cis-1,2-Dichloroethene	7.08	341	39246	270.74	ng	91
22)	Chloroform	7.34	354	133711	277.15	ng	96
24)	1,1,1-Trichloroethane	8.14	393	102937	265.67	ng	95
27)	Carbon Tetrachloride	8.65	418	109006	300.38	ng	97
28)	*1,4-Difluorobenzene	9.58	464	218393	250.00	ng	95
29)	1,2-Dichloroethane	8.93	432	85343	224.61	ng	97
30)	Benzene	8.97	434	210787	251.33	ng	100
31)	Trichloroethene	10.28	498	95456	251.41	ng	94
32)	1,2-Dichloropropane	10.68	518	70574	227.02	ng	97
33)	Bromodichloromethane	11.19	543	114338	255.87	ng	99
34)	Dibromomethane	11.31	549	559^	559.00	NO CALIB	90
35)	4-Methyl-2-pentanone	12.09	587	40973	177.69	ng	95
36)	cis-1,3-Dichloropropene	12.52	608	98523	247.02	ng	98
37)	Toluene-d8	13.09	636	193249	240.49	ng	98
38)	*Chlorobenzene-d5	16.91	824	174797	250.00	ng	94
39)	Toluene	13.27	645	132977	245.34	ng	98
40)	trans-1,3-Dichloropropene	13.76	669	81815	245.44	ng	99
41)	1,1,2-Trichloroethane	14.12	687	54336	216.42	ng	95
42)	2-Hexanone	14.25	693	28885	180.02	ng	93
44)	Tetrachloroethene	14.90	725	101092	268.86	ng	86
45)	Dibromochloromethane	15.37	748	113838	277.53	ng	94
47)	Chlorobenzene	17.02	829	177996	248.59	ng	98
49)	Ethylbenzene	17.22	839	79930	243.21	ng	97
50)	m,p-Xylene	17.42	849	181834	490.12	ng	94
51)	o-Xylene	18.58	906	96096	244.81	ng	96
52)	Styrene	18.69	911	168553	244.41	ng	99
53)	Bromoform	19.46	949	93701	308.37	ng	97
56)	1,1,2,2-Tetrachloroethane	19.93	972	68827	199.73	ng	96

Operator ID: GLEN
Output File: ^H1902::A6
Data File: >H1902::A1
Name: 250ng std624 7dd
Misc: 250ng 6v

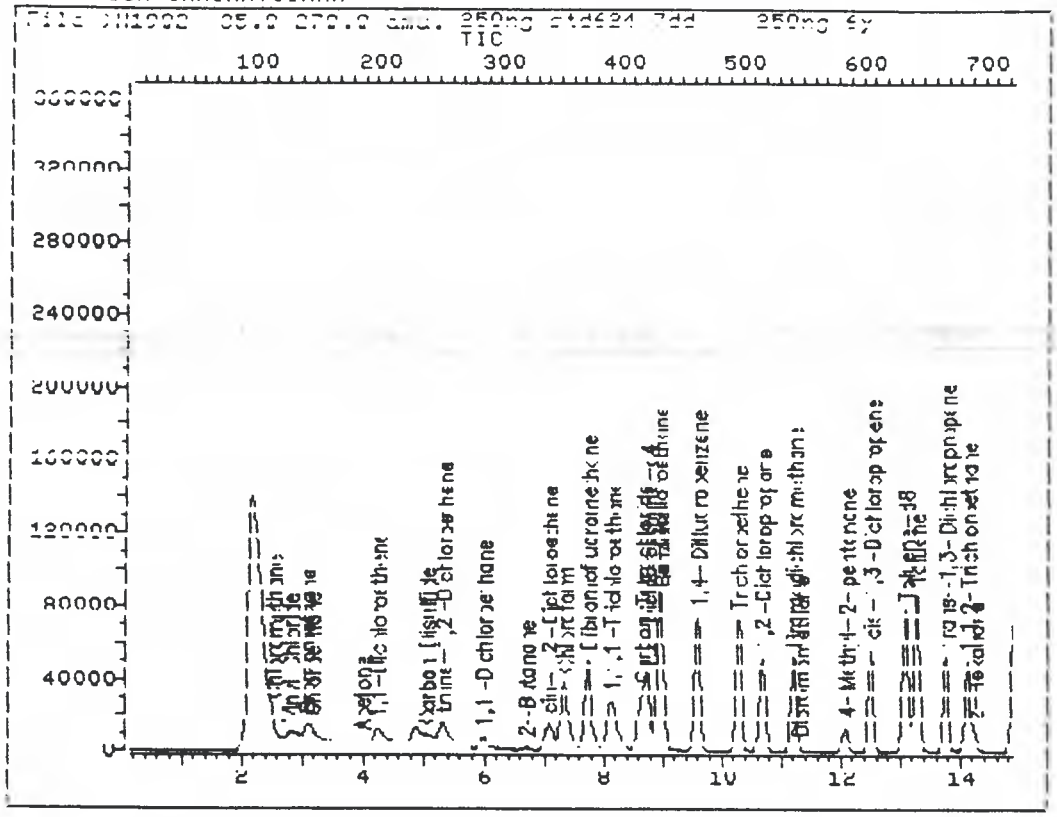
Quant Rev: 7
Quant Time: 920819 10:19
Injected at: 920819 09:49
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
58)	*1,4-Dichlorobenzene-d4	21.98	1073	112011	250.00	ng	99
75)	1-Fluoronaphthalene	26.67	1303	218698	213.66	ng	100

* Compound is ISTD

TOTAL ION CHROMATOGRAM

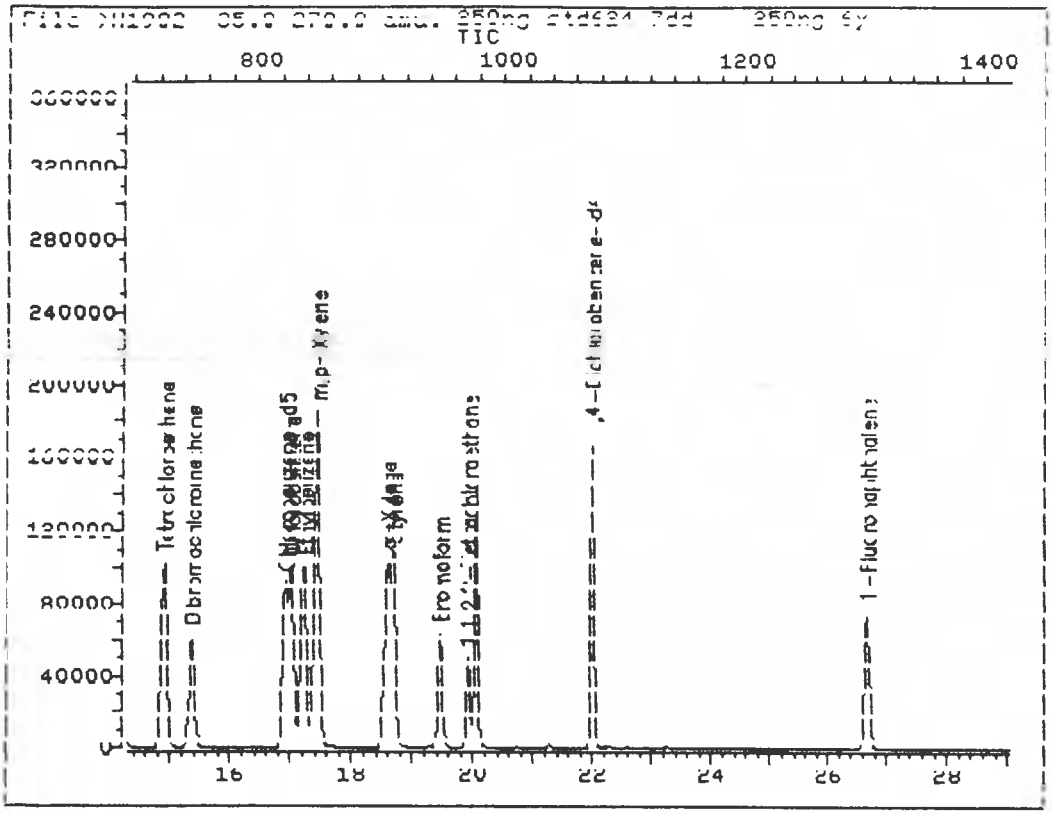


Data File: >H1902::A1 Quant Output File: ^H1902::A6
Name: 250ng std624 7dd Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920819 10:19
Injected at: 920819 09:49

TOTAL ION CHROMATOGRAM



Data File: >H1902::A1 Quant Output File: ^H1902::A6
Name: 250ng std624 7dd Instrument ID: MS-1
Misc: 250ng 6v

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920819 09:58 Last Qcal Time: <none>

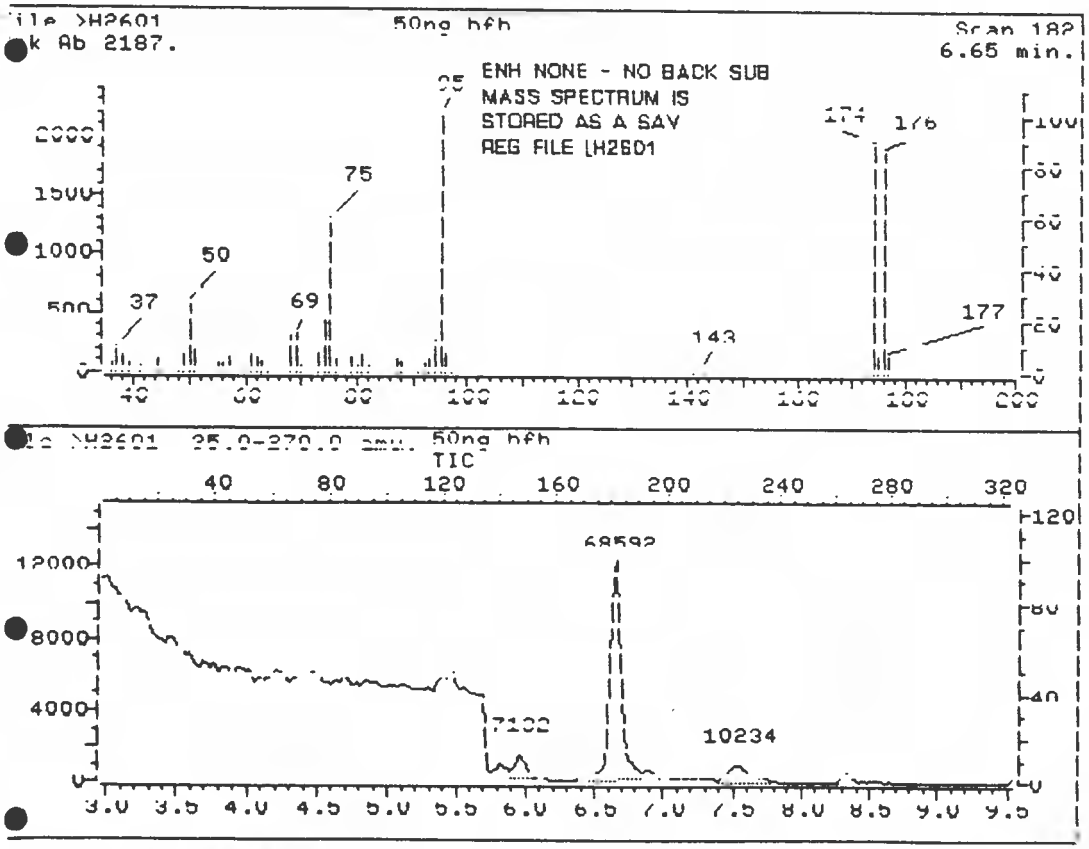
Operator ID: GLEN
Quant Time : 920819 10:19
Injected at: 920819 09:49

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	8-40% of mass 95	26.20	26.20	Ok
75	30-66% of mass 95	57.98	57.98	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.27	7.27	Ok
173	Less than 2% of mass 174	1.01	1.14	Ok
174	50-120% of mass 95	88.43	88.43	Ok
175	4-9% of mass 174	6.68	7.55	Ok
176	93-101% of mass 174	86.19	97.47	Ok
177	5-9% of mass 176	6.49	7.53	Ok

Injection Date: 08/26/92
Injection Time: 07:18
Data File: >H2601
Scan: 182



Instrument ID: MS-1 Analyzed on: 8/26/92 7:18

Continuing Calibration Check
ASL Compounds

Case No: | Calibration Date: 08/26/92

Contractor: North Creek Analyt. | Time: 10:16

Contract No: None | Laboratory ID: AH2606

Instrument ID: MS-1 | Initial Calibration Date: 08/26/92

Minimum $\overline{RF}$ for SPCC is .3 | Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
Dichlorodifluoromethane	-	-	-		
Chloromethane	.14759	.18925	28.23		**
1,2-Dichloroethane-d4	.61173	.64488	5.42		
Vinyl Chloride	.20043	.23900	19.24	*	
Bromomethane	.18462	.30263	63.92		
Chloroethane	.11928	.17507	46.78		
Trichlorofluoromethane	-	-	-		
Acetone	.08127	.07846	3.45		
Freon 113	-	-	-		
1,1-Dichloroethene	.15244	.17482	14.68	*	
tert-Butanol	-	-	-		
Carbon Disulfide	.54044	.80134	48.28		
Methylene Chloride	.30809	-	-		
Methyl t-butyl ether	-	-	-		
trans-1,2-Dichloroethene	.19063	.27528	44.41		
1,1-Dichloroethane	.49727	.61299	23.25		**
Vinyl Acetate	-	-	-		
2-Butanone	.12795	.10773	15.80		
2,2-Dichloropropane	-	-	-		
cis-1,2-Dichloroethene	.41566	.51910	24.89		
Chloroform	1.15971	1.22764	5.86	*	
Tetrahydrofuran	-	-	-		
1,1,1-Trichloroethane	1.00256	1.02646	2.38		
iso-Octane	-	-	-		
1,1-Dichloropropene	-	-	-		
Carbon Tetrachloride	1.01053	1.16710	15.49		
1,2-Dichloroethane	.56707	.54331	4.19		
Benzene	.93998	.90084	4.16		
Trichloroethene	.45338	.44567	1.70		
1,2-Dichloropropane	.28915	.27474	8.16	*	
Bromodichloromethane	.67878	.68901	1.51		
Dibromomethane	-	-	-		

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Continuing Calibration Check
VOC Compounds

Case No: Calibration Date: 08/26/92

Contractor: North Creek Analyt. Time: 10:16

Contract No: None Laboratory ID: CH2606

Instrument ID: MS-1 Initial Calibration Date: 08/26/92

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC	
4-Methyl-2-pentanone	.17204	.13629	20.78			
cis-1,3-Dichloropropene	.47637	.47018	1.30			
Toluene-d8	.93062	.93032	.03			
Toluene	.76361	.72908	4.52	*		
trans-1,3-Dichloropropene	.54398	.52542	3.41			
1,1,2-Trichloroethane	.35941	.31183	13.24			
2-Hexanone	.15269	.11740	23.11			
1,3-Dichloropropane	-	-	-			
Tetrachloroethene	.53434	.54335	1.68			
Dibromochloromethane	.76871	.76226	.84			
1,2-Dibromoethane	-	-	-			(Conc=100.00)
Chlorobenzene	1.06627	1.03620	2.82		**	
1,1,1,2-Tetrachloroethane	-	-	-			
Ethylbenzene	.47982	.46792	2.48	*		
m,p-Xylene	.57504	.57472	.05			(Conc=500.00)
o-Xylene	.58023	.56748	2.20			
Styrene	1.02420	.99123	3.22			
Bromoform	.55958	.54599	2.43		**	
Isopropylbenzene	-	-	-			
1,1,2,2-Tetrachloroethane	.45820	.36858	19.56		**	
4-Bromofluorobenzene	.63025	.60800	3.53			
1,2,3-Trichloropropane	-	-	-			
Bromobenzene	-	-	-			
n-Propylbenzene	-	-	-			
2-Chlorotoluene	-	-	-			
1,3,5-Trimethylbenzene	-	-	-			
4-Chlorotoluene	-	-	-			
tert-Butylbenzene	-	-	-			
1,2,4-Trimethylbenzene	-	-	-			
sec-Butylbenzene	-	-	-			
p-Isopropyltoluene	-	-	-			
1,3-Dichlorobenzene	-	-	-			

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

Case No: Calibration Date: 08/26/92

Contractor: North Creek Analyt. Time: 10:16

Contract No: None Laboratory ID: XH2606

Instrument ID: MS-1 Initial Calibration Date: 08/26/92

Minimum $\overline{RF}$ for SPCC is .3 Maximum % Diff for CCC is 25%

Compound	$\overline{RF}$	RF	%Diff	CCC	SPCC
1,4-Dichlorobenzene	-	-	-		
n-Butylbenzene	-	-	-		
1,2-Dichlorobenzene	-	-	-		
1,2-Dibromo-3-chloropropane	-	-	-		
1,2,4-Trichlorobenzene	-	-	-		
1-Fluoronaphthalene	2.16964	1.93332	10.89		
Hexachlorobutadiene	-	-	-		
Naphthalene	-	-	-		
1,2,3-Trichlorobenzene	-	-	-		
2-Methylnaphthalene	-	-	-		
1-Methylnaphthalene	-	-	-		

RF - Response Factor from daily standard file at 250.00 ng

$\overline{RF}$ - Average Response Factor from Initial Calibration Form VI

%Diff - % Difference from original average or curve

CCC - Calibration Check Compounds (*) SPCC - System Performance Check Compounds (**)

QUANT REPORT

Operator ID: GLEN
Output File: ^H2606::A6
Data File: >H2606::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

Quant Rev: 7
Quant Time: 920826 10:46
Injected at: 920826 10:16
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Dibromofluoromethane	7.72	373	172056	250.00	ng	96
3)	Chloromethane	2.52	118	32562	320.58	ng	92
4)	1,2-Dichloroethane-d4	8.72	422	110955	263.55	ng	96
5)	Vinyl Chloride	2.81	132	41121	298.10	ng	97
6)	Bromomethane	3.07	145	52070	409.80	ng	96
7)	Chloroethane	3.13	148	30122	366.94	ng	92
9)	Acetone	3.97	189	13500	241.37	ng	99
11)	1,1-Dichloroethene	4.22	201	30079M	286.70	ng	86
13)	Carbon Disulfide	5.07	243	137875	370.69	ng	97
16)	trans-1,2-Dichloroethene	5.30	254	47364	361.02	ng	80
17)	1,1-Dichloroethane	5.97	287	105452	308.13	ng	96
19)	2-Butanone	6.68	322	18536	210.50	ng	96
21)	cis-1,2-Dichloroethene	7.03	339	89315	312.21	ng	98
22)	Chloroform	7.32	353	211223	264.64	ng	98
24)	1,1,1-Trichloroethane	8.11	392	176609	255.96	ng	98
27)	Carbon Tetrachloride	8.64	418	200807	288.74	ng	97
28)	*1,4-Difluorobenzene	9.56	463	273062	250.00	ng	94
29)	1,2-Dichloroethane	8.93	432	148357	239.53	ng	99
30)	Benzene	8.95	433	245984	239.59	ng	100
31)	Trichloroethene	10.27	498	121695	245.75	ng	98
32)	1,2-Dichloropropane	10.68	518	75022	229.60	ng	98
33)	Bromodichloromethane	11.19	543	188143	253.77	ng	97
35)	4-Methyl-2-pentanone	12.08	587	37216	198.05	ng	96
36)	cis-1,3-Dichloropropene	12.49	607	128387	246.75	ng	99
37)	Toluene-d8	13.06	635	254034	249.92	ng	93
38)	*Chlorobenzene-d5	16.91	824	226958	250.00	ng	97
39)	Toluene	13.26	645	165470	238.69	ng	95
40)	trans-1,3-Dichloropropene	13.73	668	119249	241.47	ng	98
41)	1,1,2-Trichloroethane	14.10	686	70772	216.90	ng	96
42)	2-Hexanone	14.22	692	26644	192.22	ng	98
44)	Tetrachloroethene	14.87	724	123317	254.21	ng	92
45)	Dibromochloromethane	15.36	748	173002	247.90	ng	97
47)	Chlorobenzene	16.99	828	235174	242.95	ng	97
49)	Ethylbenzene	17.19	838	106198	243.80	ng	98
50)	m,p-Xylene	17.42	849	260876	499.73	ng	98
51)	o-Xylene	18.56	905	128793	244.50	ng	99
52)	Styrene	18.66	910	224967	241.95	ng	95
53)	Bromoform	19.43	948	123916	243.93	ng	99
56)	1,1,2,2-Tetrachloroethane	19.90	971	83653	201.10	ng	99
57)	4-Bromofluorobenzene	20.05	978	137990	241.17	ng	96

QUANT REPORT

Operator ID: GLEN
Output File: ^H2606::A6
Data File: >H2606::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

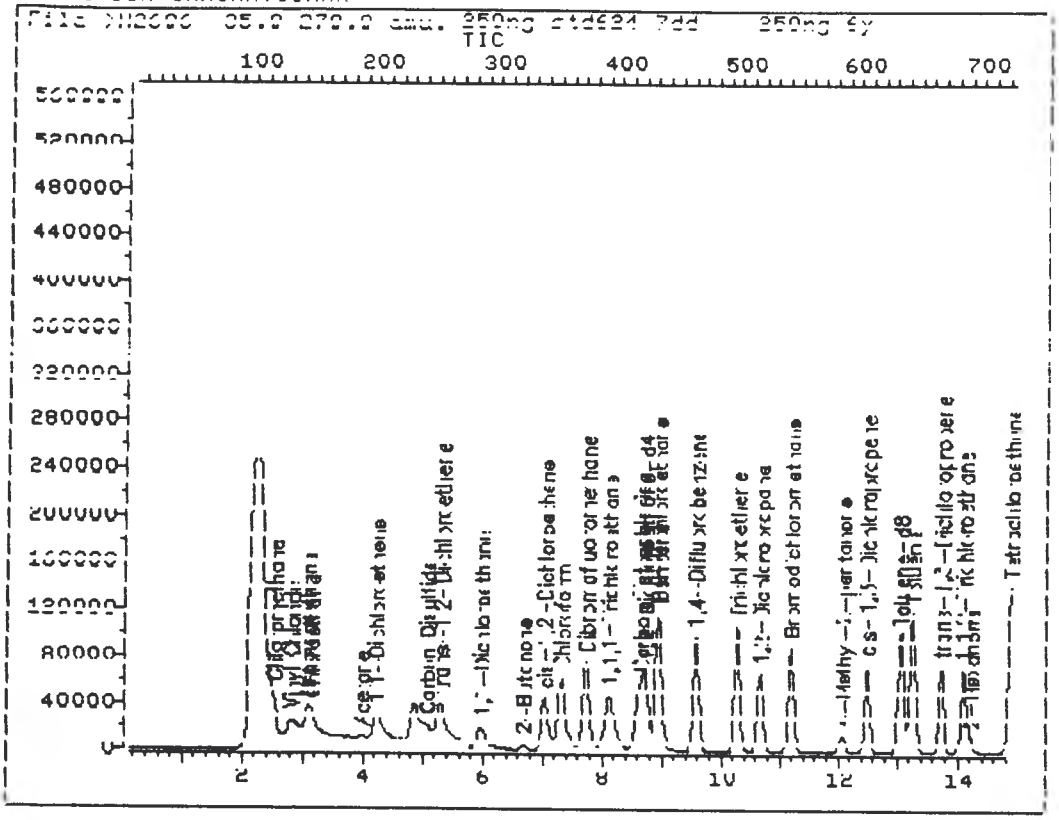
Quant Rev: 7
Quant Time: 920826 10:46
Injected at: 920826 10:16
Dilution Factor: 1.00000
Instrument ID: MS-1

ID File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33
Last Qcal Time: <none>

	Compound	R.T.	Scan#	Area	Conc	Units	q
58)	*1,4-Dichlorobenzene-d4	21.98	1073	140244	250.00	ng	99
75)	1-Fluoronaphthalene	26.62	1301	271137	222.77	ng	100

* Compound is ISTD

TOTAL ION CHROMOTOGRAM



Data File: >H2606::A2
Name: 250ng std624 7dd
Misc: 250ng 6v

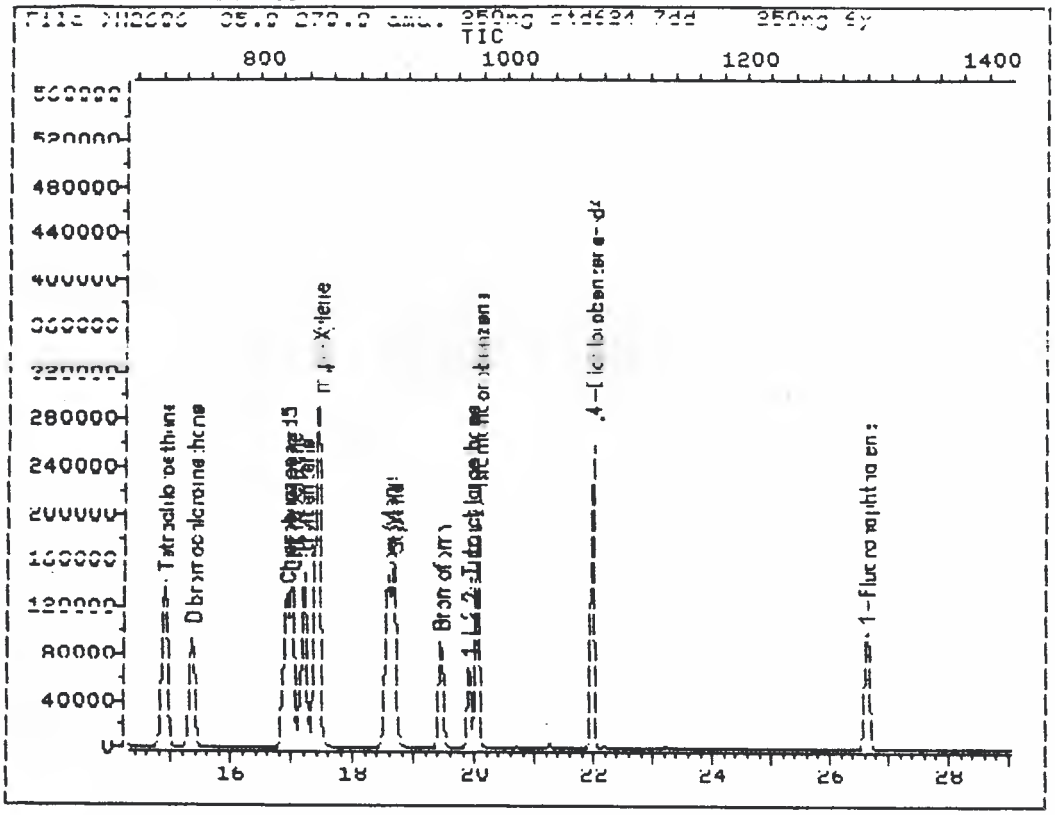
Quant Output File: ^H2606::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 10:46
Injected at: 920826 10:16

TOTAL ION CHROMATOGRAM



Data File: >H2606::A2
Name: 250ng std624 7dd
Misc: 250ng 6y

Quant Output File: ^H2606::A6
Instrument ID: MS-1

Id File: ID 624::D2
Title: Volatile Organic Compounds
Last Calibration: 920826 08:33

Last Qcal Time: <none>

Operator ID: GLEN
Quant Time : 920826 10:46
Injected at: 920826 10:16

DATA PACKAGE
HERBICIDES - METHOD 8150

CLIENT: HONG WEST & ASSOCIATES

CASE #: 207/1501-1514

Prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell, WA 98011

NORTH CREEK ANALYTICAL

HERBICIDES - METHOD 8150
CASE NARRATIVE

CLIENT: Hong West & Associates
CASE#: 207/1501-1514

Eleven soils samples were analyzed for Herbicides by EPA Method 8150. All samples were extracted and analyzed within method holding times.

All QC results were within acceptable limits. There were no notable problems with the analysis.

" I certify that this data package is in compliance with the Method stated above both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Lab Director or his designee, as verified by the following signature."

Dennis D. Wells QA Director

Pag 1 of 2

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HONG WEST & ASS.
ADDRESS:
PHONE: 774-0106 FAX
PROJECT NAME: YARL
PROJECT NUMBER: 90042
SAMPLED BY: D. KOVANEN

REPORT TO: D. Geller
BILLING TO:
P.O. NUMBER: 90042
NCA QUOTE #:

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLE DATE	SAMPLE TIME	MATRIX (W,S,O)	# OF CONT.	Pest 8080	8240	Cl. Herb 8150	8140	TCLP Extraction	Metal Digestion				COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DP-1	7-27-92	530	S	3	X	X	X	X	X	X	—	DK		8140 contained	2071501
2 DP-2		540	S	3	X	X	X	X	X	X	—	DK		in 4 oz.	1502
3 DP-3		720	S	3	X	X	X	X	X	X	—	D		bottles.	1503
4 DP-3 A		710	S	2					X	X	—		DK		~~1504~~
5 DP-4		900	W	3	X	X	X	X	X	X	—	DK			1505
6 DP-5		920	W	3	X	X	X	X	X	X	—	DK			1506
7 DF-6 /MS/MSD		540	S	3	X	X	X	X	X	X	—	DK			1507
8 DF-7		536	S	3	X	X	X	X	X	X	—	DK			1508
9 DF-8		535	S	3	X	X	X	X	X	X	—	DK		TOTAL # OF CONTAINERS	1509
10 DF-9		530	S	3	X	X	X	X	X	X	—	DK		RECEIVED?	1510

RELINQUISHED BY: D. Kovanen DATE: 7-28-92 TIME: 1510
FIRM: HWA
RECEIVED BY: P. Nelly DATE: 07-28-92 TIME: 3:10
FIRM: NCA

RELINQUISHED BY: DATE: TIME:
FIRM:
RECEIVED BY: DATE: TIME:
FIRM:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO
CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES? NO YES: DESCRIBE ON BACK

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HWA

ADDRESS:

PHONE: 774-0106

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

PROJECT NAME:

PROJECT NUMBER: 90042

SAMPLED BY: D.K.

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pet. 8080	8240	8150	0418						COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DF-10	7-27-92 / 1525	S	3	X	X	X	X							207511
2 DF-11	1520			X	X	X	X							1512
3 DF-12	1510			X	X	X	X							1513
4 DF-13	1500			X	X	X	X							1514
5														
6														
7														
8														
9													TOTAL # OF CONTAINERS RECEIVED?	
10														

RELINQUISHED BY: D. Kramer DATE: 7-28-92 TIME: 1510
FIRM: HWA

RECEIVED BY: B. Neely DATE: 07·28·92 TIME: 1510
FIRM: NCA

RELINQUISHED BY: DATE: TIME:
FIRM:

RECEIVED BY: DATE: TIME:
FIRM:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NO USE HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

SAMPLE RESULTS

Data reports
and
Raw Data for
Samples 207-1501 thru 207-1514

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-1	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: Doug Geller	Sample Number:	207-1501	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 27
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

==========

Area Percent Report

==========

Column RTX 35 (PRIM)

Data File Name : C:\HPCHEM\2\DATA\AUG07\065F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 06:14 PM
Report Created on: 13 Aug 92 08:04 PM

Page Number : 1
Vial Number : 65
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

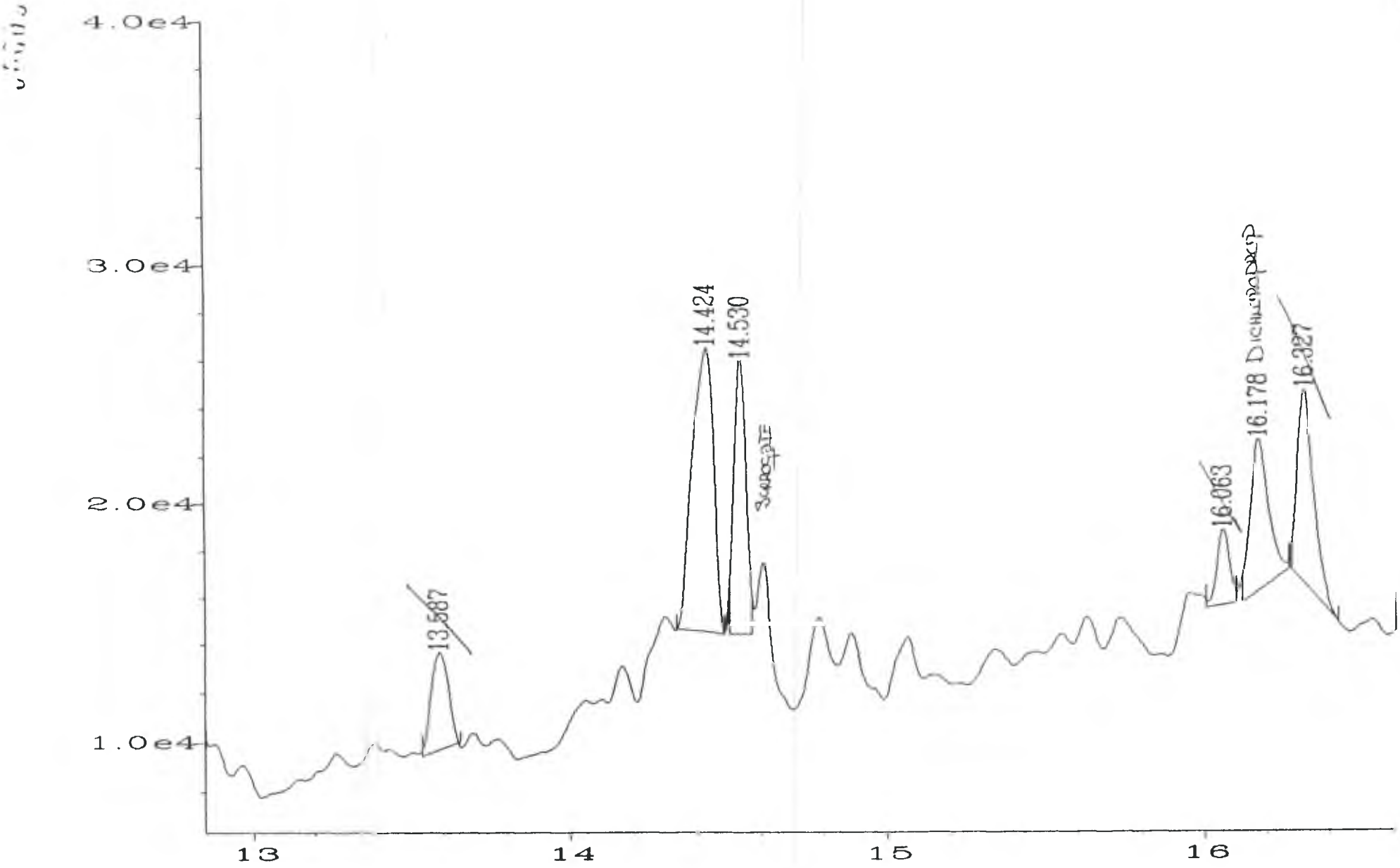
Sig. 1 in C:\HPCHEM\2\DATA\AUG07\065F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.640	815724	267414	MM	0.051	26.9426
2	4.012	69942	28059	MM	0.042	2.3101
3	4.228	63702	16072	MM	0.066	2.1040
4	4.352	23664	9742	MM	0.040	0.7816
5	4.453	11745	5173	MM	0.038	0.3879
6	4.554	41721	13220	MM	0.053	1.3780
7	4.691	18718	6629	MM	0.047	0.6182
8	4.816	105126	35057	MM	0.050	3.4722
9	5.267	102750	29411	MM	0.058	3.3937
10	5.734	30728	10416	MM	0.049	1.0149
11	6.411	7944	2794	MM	0.047	0.2624
12	6.793	235733	74564	MM	0.053	7.7860
13	8.150	69992	24174	MM	0.048	2.3118
14	9.397	15632	4888	MM	0.053	0.5163
15	9.758	10914	2920	MM	0.062	0.3605
16	9.887	17196	4160	MM	0.069	0.5680
17	10.631	24695	8769	MM	0.047	0.8156
18	11.690	22502	5722	MM	0.066	0.7432
19	11.894	47813	14942	MM	0.053	1.5792
20	12.006	15756	5011	MM	0.052	0.5204
21	12.251	634958	198657	MM	0.053	20.9721
22	13.587	14574	3954	MM	0.061	0.4814
23	14.424	54893	12042	MM	0.076	1.8131
24	14.530 SURROGATE	30399	11838	MM	0.043	1.0041
25	16.063	8949	3235	MM	0.046	0.2956
26	16.178	26410	6453	MM	0.068	0.8723
27	16.327	29348	8238	MM	0.059	0.9693
28	16.883 ~~5,4,2~~	231673	66633	MM	0.058	7.6519
29	18.993 ~~2,4,5 T~~	244436	76064	MM	0.054	8.0735

Total area = 3027636

User Modified

==========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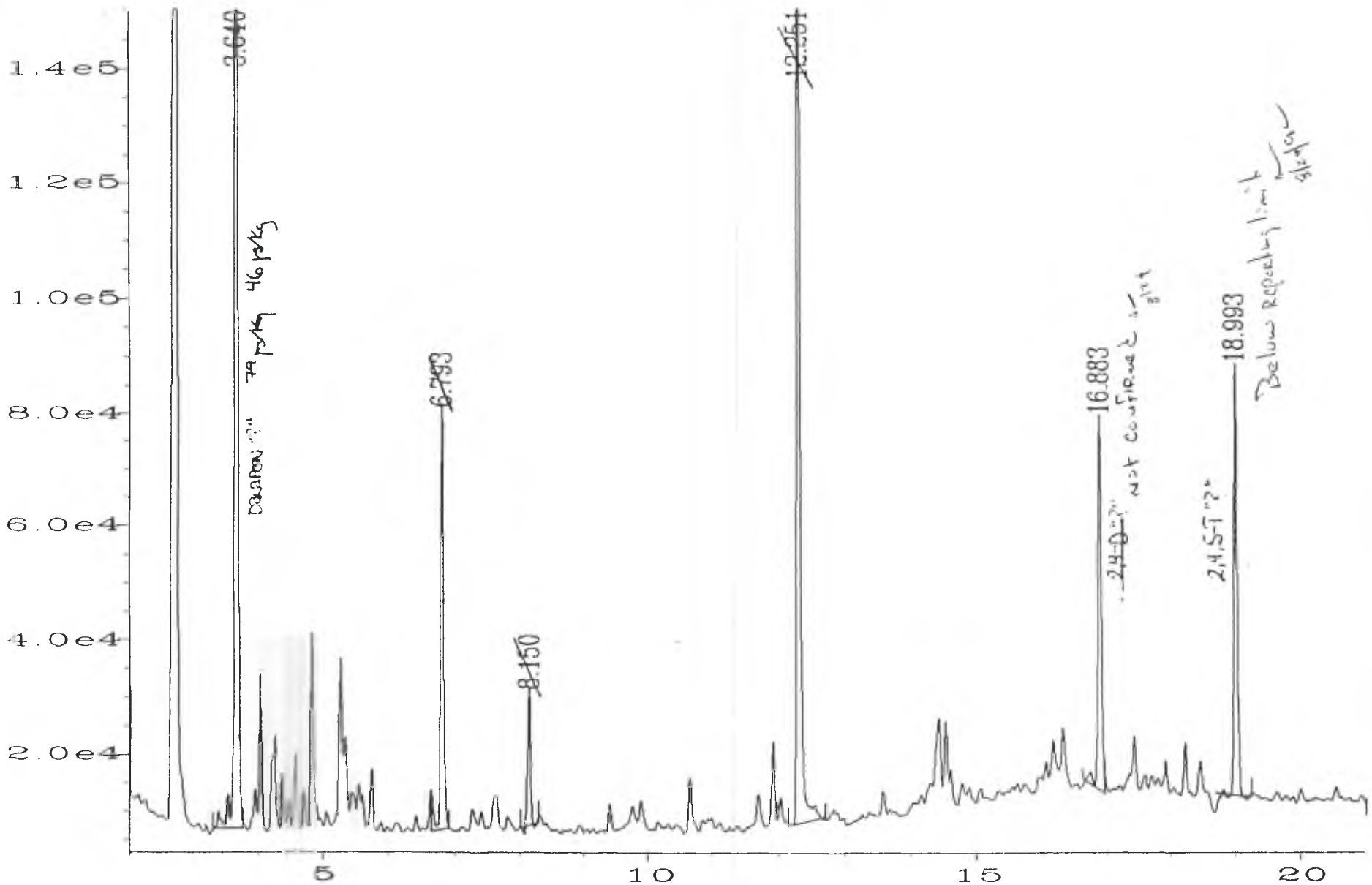
2.0e4
1.0e4
13
14
15
16
13.587
14.424
14.530
16.063
16.178
16.327


1.4e5
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1.0e5
8.0e4
6.0e4
4.0e4
2.0e4
5
10
15
20
3.640
6.793
8.150
12.351
16.883
18.993
79 peaks
46 peaks
24-D?
24,5-T "?"
Below reporting limit

==========

Area Percent Report

==========

(Column: XTi-5 (Confirm)

Data File Name : C:\HPCHEM\2\DATA\AUG07\065R1301.D

Operator : MARCIA BENDER

Instrument : NIALL

Sample Name : 207-1501 11X

Run Time Bar Code:

Acquired on : 10 Aug 92 08:28 PM

Report Created on: 13 Aug 92 08:24 PM

Page Number : 1

Vial Number : 65

Injection Number : 1

Sequence Line : 13

Instrument Method: HERB1.MTH

Analysis Method : DEFAULT.MTH

Sig. 2 in C:\HPCHEM\2\DATA\AUG07\065R1301.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	12.006	21522	6692	MM	0.054	4.0756
2	12.365	23857	6144	MM	0.065	4.5178
3	12.526	20345	5849	MM	0.058	3.8527
4	13.178	30581	10708	MM	0.048	5.7911
5	14.634	20786	6772	MM	0.051	3.9362
6	15.241	150078	47167	MM	0.053	28.4202
7	16.448	55945	10668	MM	0.087	10.5942
8	17.008	26675	8209	MM	0.054	5.0515
9	17.430	178279	53315	MM	0.056	33.7607

Total area = 528067

User Modified

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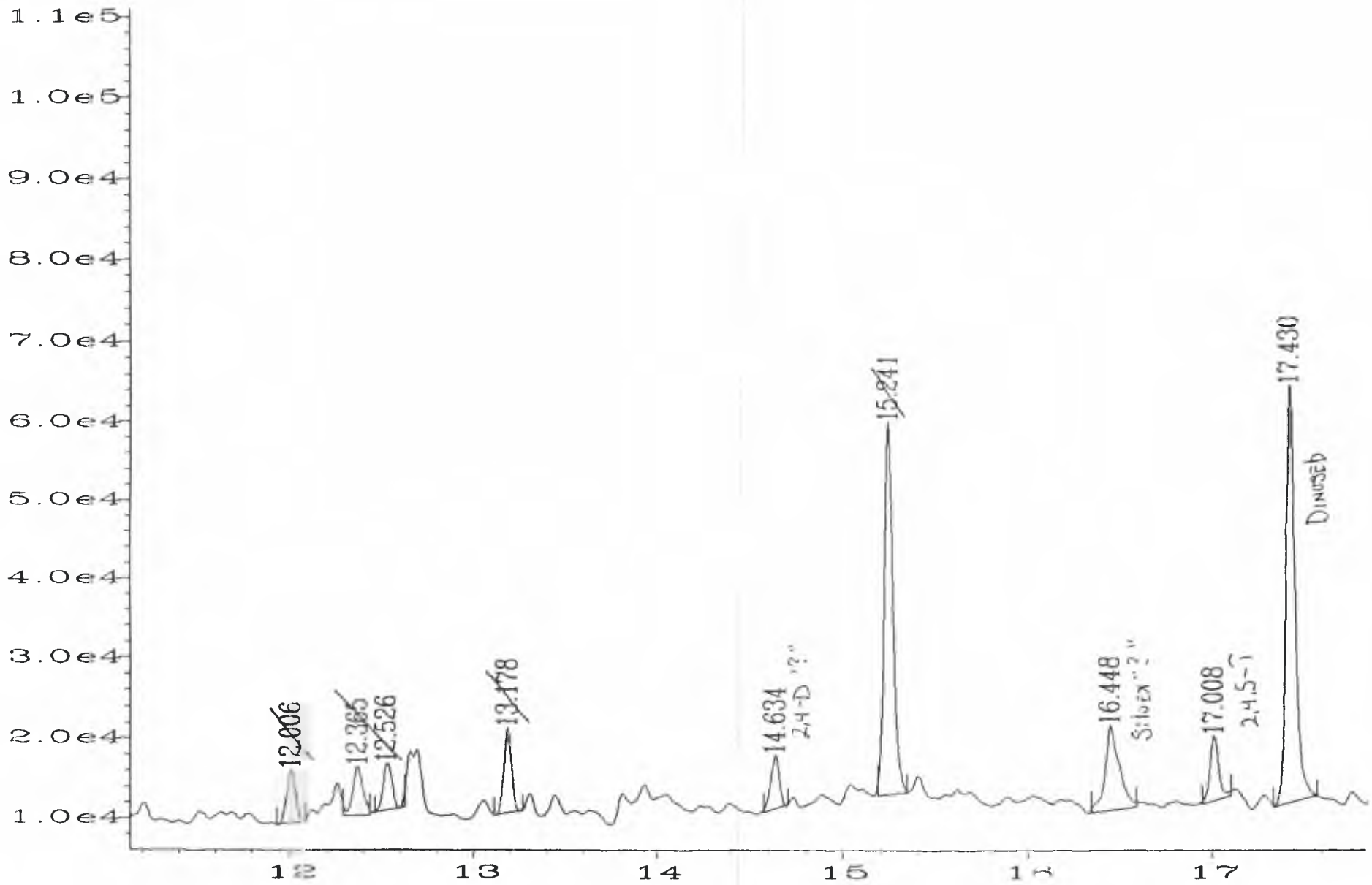
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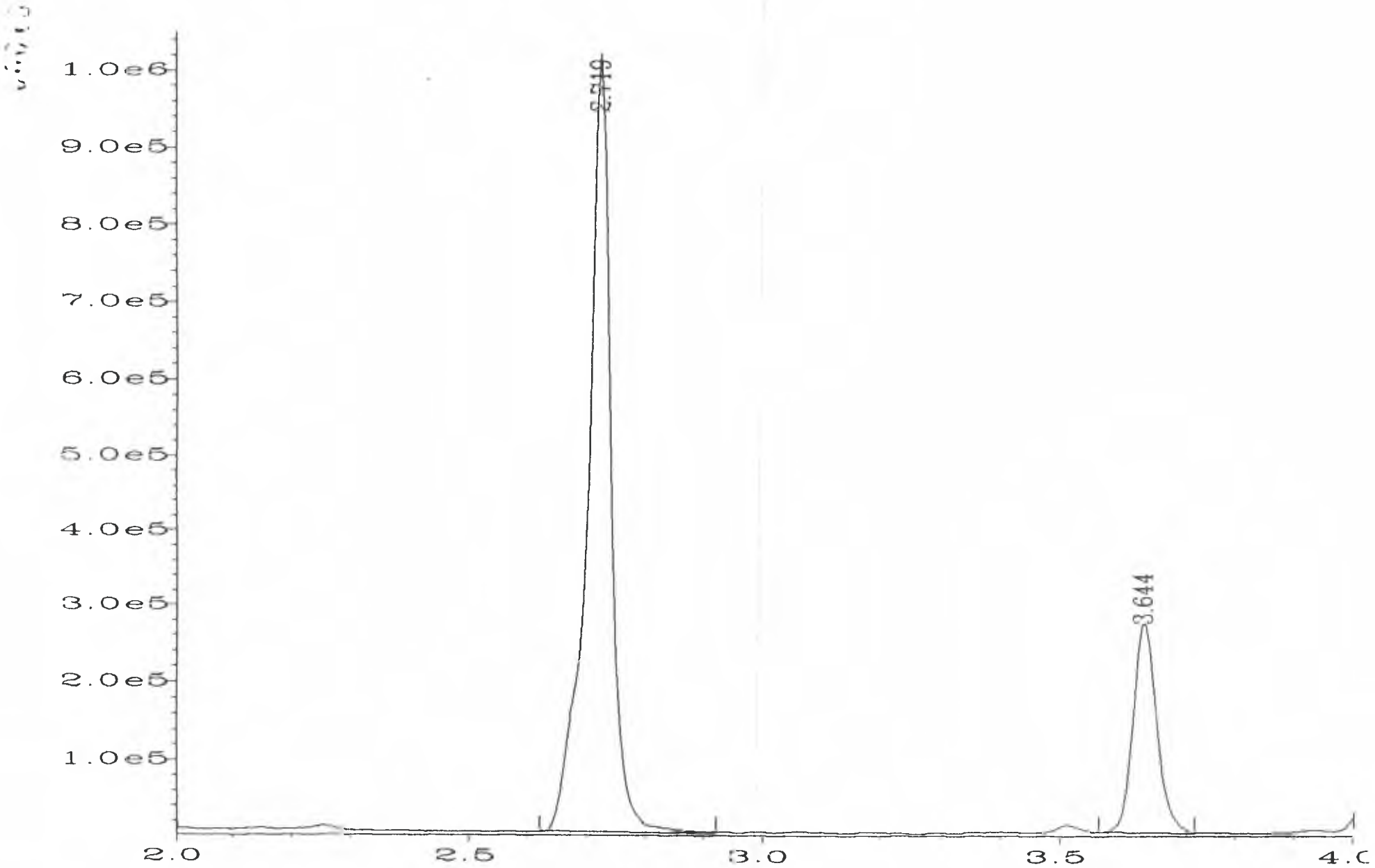
7.0e4
6.0e4
5.0e4
4.0e4
3.0e4
2.0e4
1.0e4
12.006
12.365
12.526
13.178
14.634
2,4-D "?"
15.241
16.448
Silvex "?"
17.008
2,4,5-T
17.430
Dinoseb
12
13
14
15
17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9.0e5
8.0e5
7.0e5
6.0e5
5.0e5
4.0e5
3.0e5
2.0e5
1.0e5
2.719
3.644
2.0
2.5
3.0
3.5

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-2	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: Doug Geller	Sample Number:	207-1502	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 44
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

==========

Area Percent Report

==========

Column: RTX-35 (PRIMARY)

Data File Name : C:\HPCHEM\2\DATA\AUG07\066F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1502 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 07:01 PM
Report Created on: 13 Aug 92 09:38 PM

Page Number : 1
Vial Number : 66
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

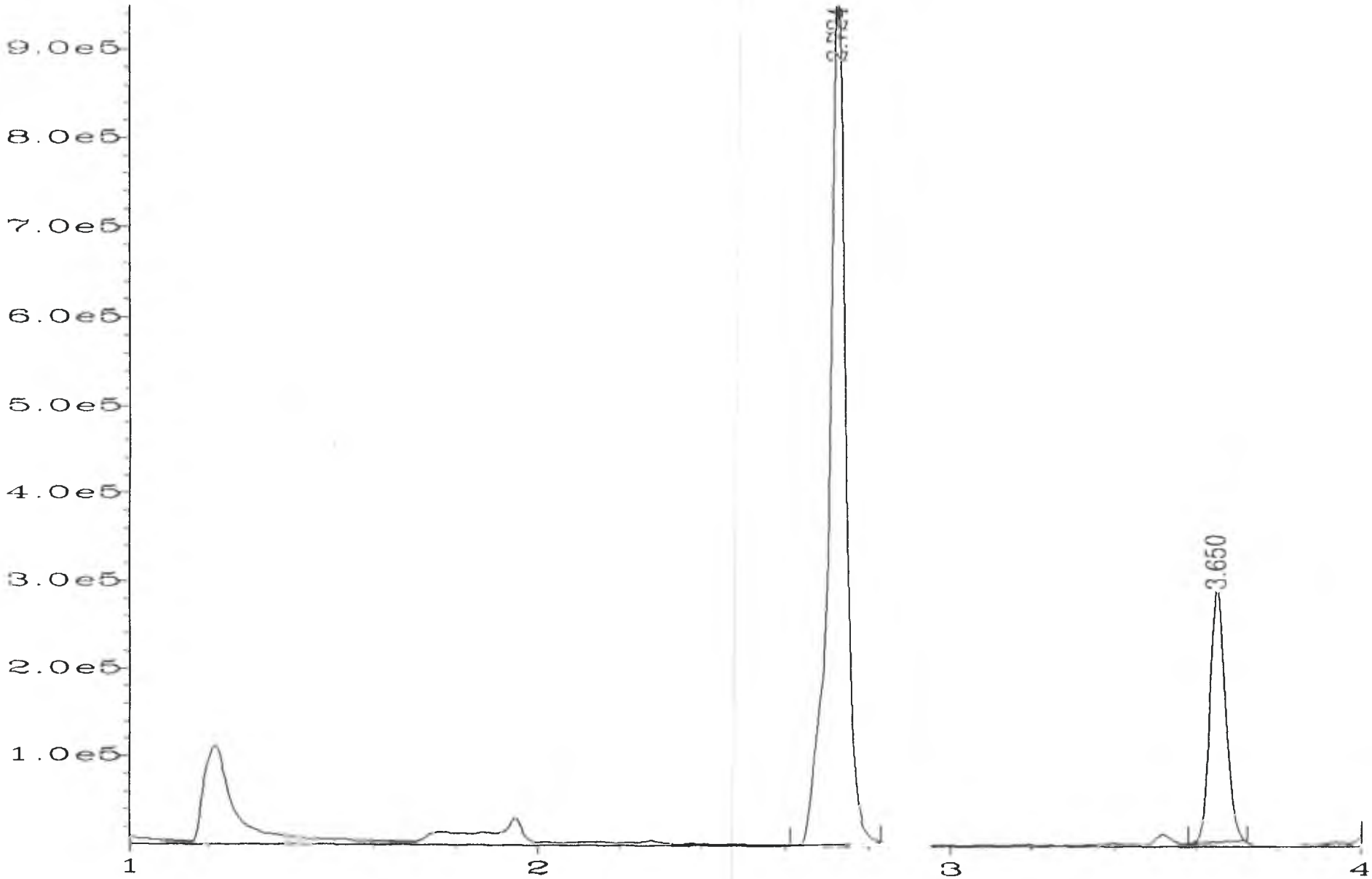
Sig. 1 in C:\HPCHEM\2\DATA\AUG07\066F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.719	2736119	1027372	MM	0.044	76.3594
2	3.644	761742	275721	MM	0.046	21.2567
3	14.536 Surrogate	48716	14626	MM	0.056	1.3595
4	17.423	36962	11379	MM	0.054	1.0314

Total area = 3583540

User Modified

==========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6.0e5
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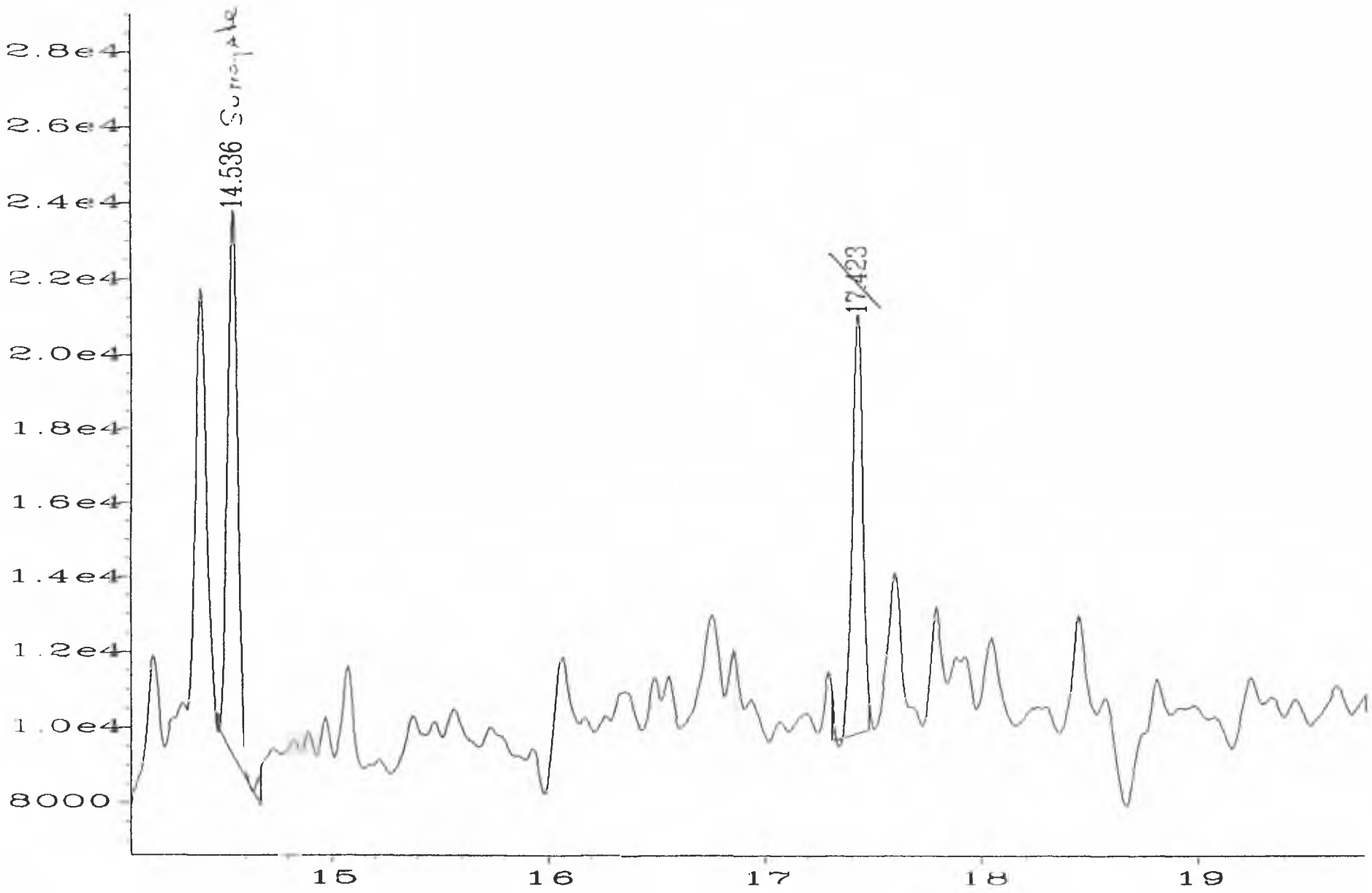
3.650
1
2
3
4


14.536 Surrogate
17.423
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2.2e4
2.0e4
1.8e4
1.6e4
1.4e4
1.2e4
1.0e4
8000
15
16
17
18
19

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-3	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: Doug Geller	Sample Number:	207-1503	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 43
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

2071501.HWA <35>

==========

Area Percent Report

==========

(Column: RTX-35 (PRIMARY))

Data File Name : C:\HPCHEM\2\DATA\AUG07\070F1401.D

Operator : MARCIA BENDER

Instrument : NIALL

Sample Name : 207-1503 11X

Run Time Bar Code:

Acquired on : 10 Aug 92 10:00 PM

Report Created on: 13 Aug 92 09:47 PM

Page Number : 1

Vial Number : 70

Injection Number : 1

Sequence Line : 14

Instrument Method: HERB1.MTH

Analysis Method : DEFAULT.MTH

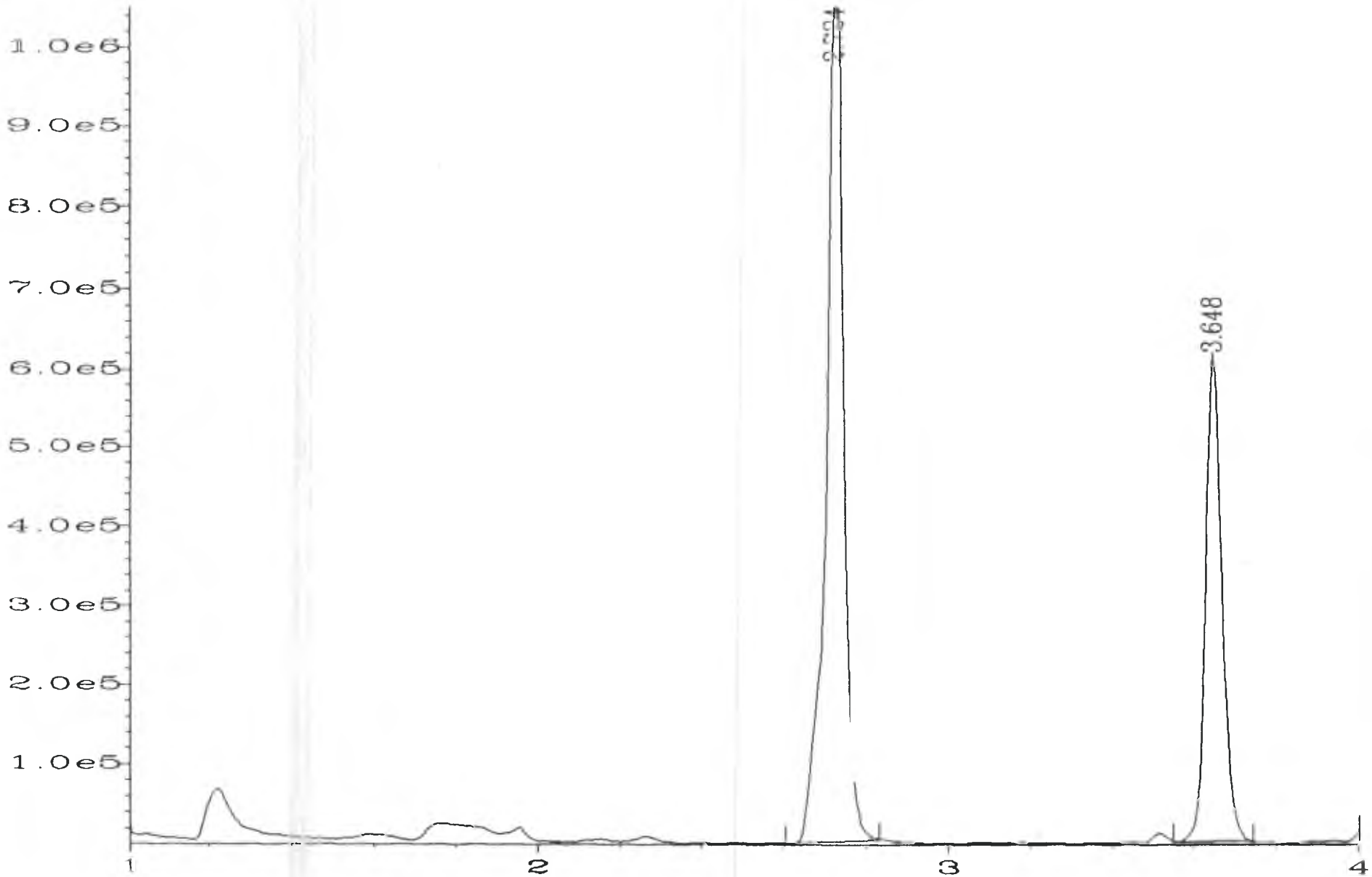
Sig. 1 in C:\HPCHEM\2\DATA\AUG07\070F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.724	2732161	1051964	MM	0.043	75.6552
2	3.650	757497	290923	MM	0.043	20.9756
3	14.399	42835	13235	MM	0.054	1.1861
4	14.547 Surrogate	48109	14739	MM	0.054	1.3322
5	17.436	30730	9434	MM	0.054	0.8509

Total area = 3611332

User Modified

==========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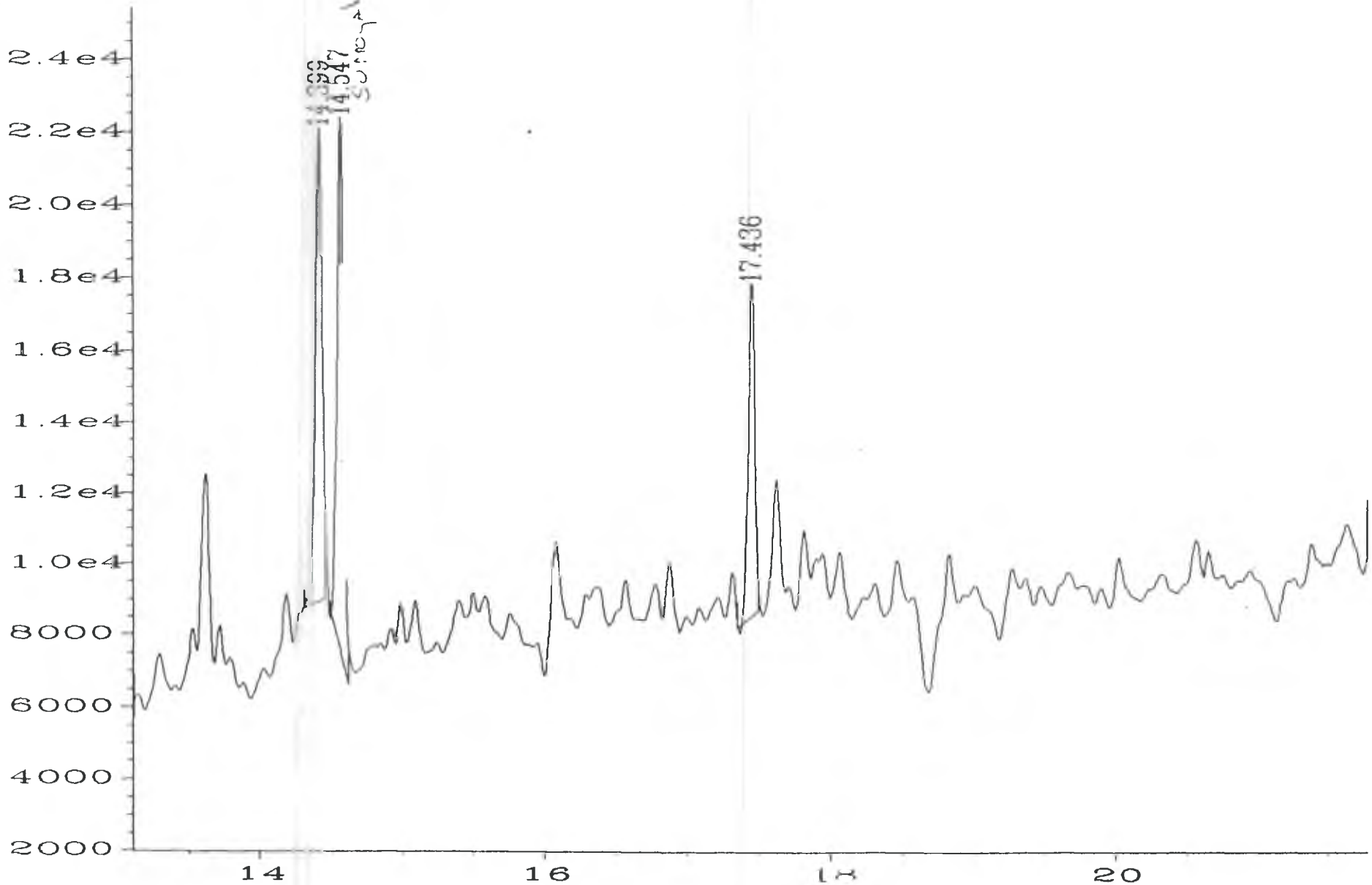
1
2
3
4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1.8e4
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1.4e4
1.2e4
1.0e4
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6000
4000
2000
14
16
18
20
14.547
17.436

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-6/MS/MSD	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1507	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 42
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

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(Column: RTX-35 (Primary)

Data File Name : C:\HPCHEM\2\DATA\AUG07\069F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1507 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 09:14 PM
Report Created on: 13 Aug 92 09:57 PM

Page Number : 1
Vial Number : 69
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\069F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.724	3291425	1268668	MM	0.043	64.2459
2	3.648	1691199	618807	MM	0.046	33.0108
3	14.397	65851	18699	MM	0.059	1.2854
4	14.545 Surr.	46822	14417	MM	0.054	0.9139
5	17.432	27868	8872	MM	0.052	0.5440

Total area = 5123166

User Modified

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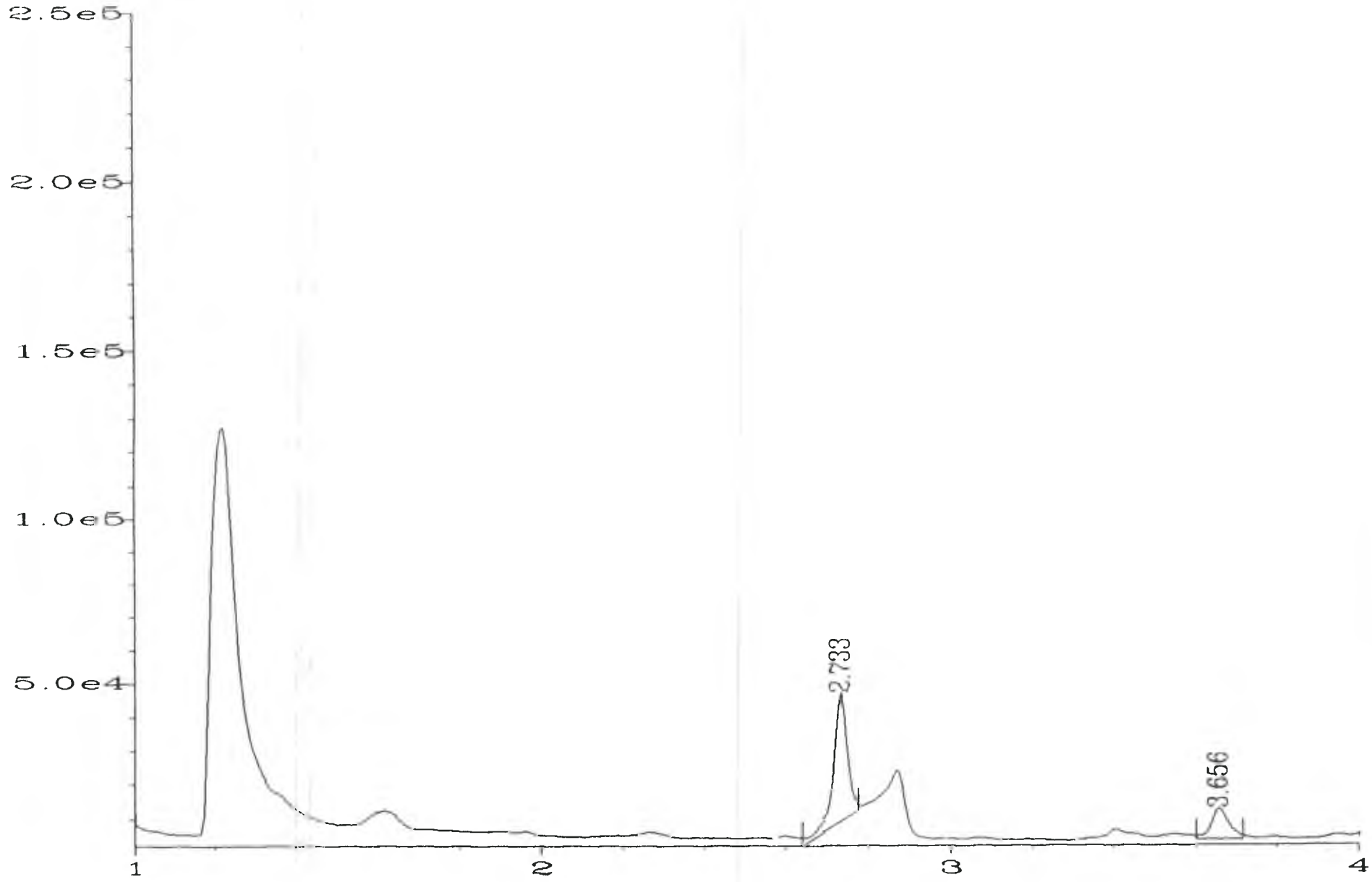
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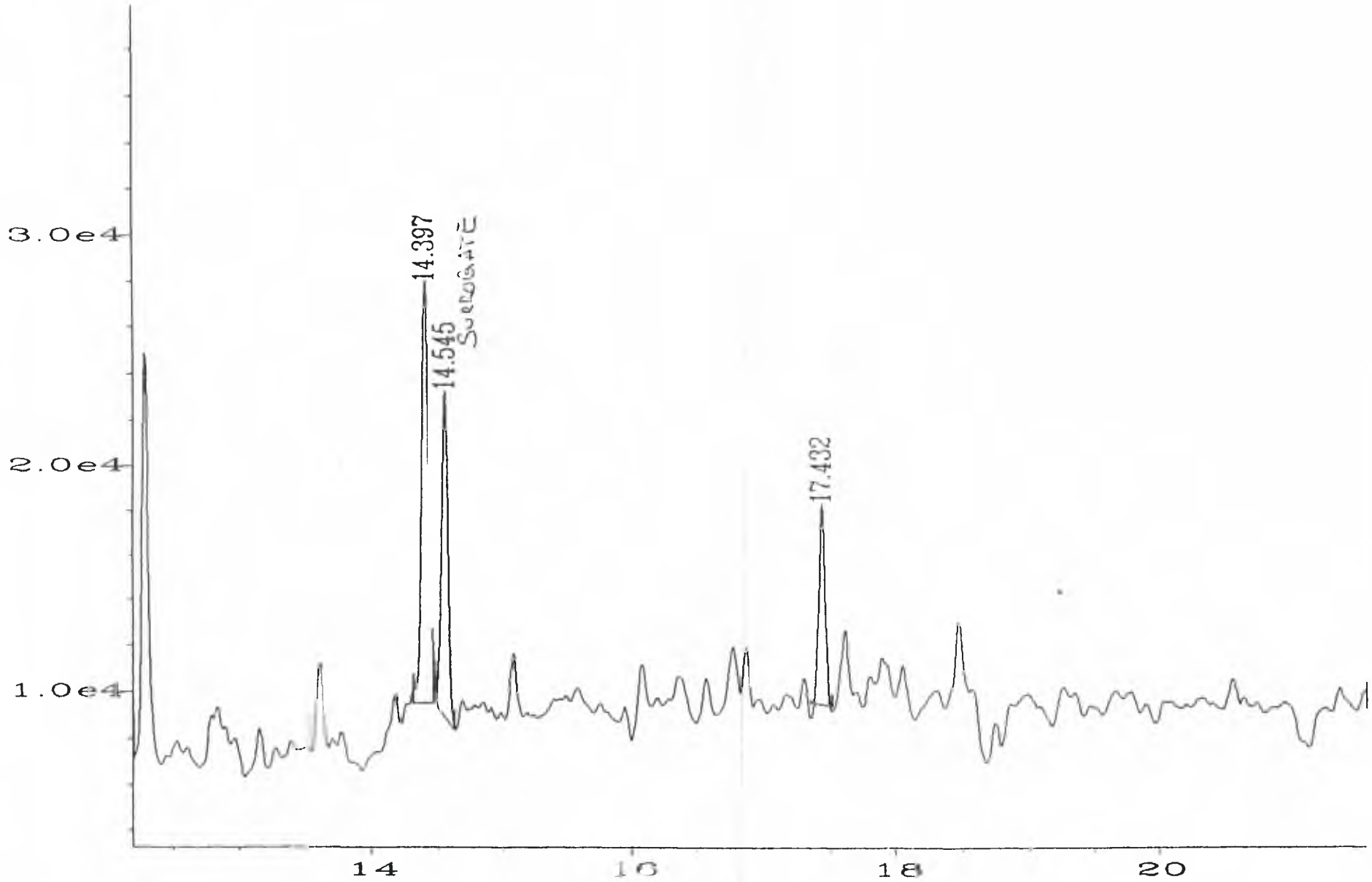
1
2
3
4


3.0e4
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14.397
14.545
Surrogate
17.432
14
16
18
20

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-7	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1508	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 42
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\075F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1508 11X
Run Time Bar Code:
Acquired on : 11 Aug 92 01:41 AM
Report Created on: 13 Aug 92 10:04 PM

Page Number : 1
Vial Number : 75
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\075F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.733	88100	38231	MM	0.038	24.8336
2	3.656	27920	9224	MM	0.050	7.8699
3	12.284	51722	15494	MM	0.056	14.5793
4	14.413	49281	16503	MM	0.050	13.8913
5	14.560 SURR	46558	14388	MM	0.054	13.1236
6	16.872 2,4-D	58153 - BELOW REPORTING LIMIT	16309	MM	0.059	16.3922
7	17.451	33028	10091	MM	0.055	9.3100

SC 8-24-92

Total area = 354762

User Modified

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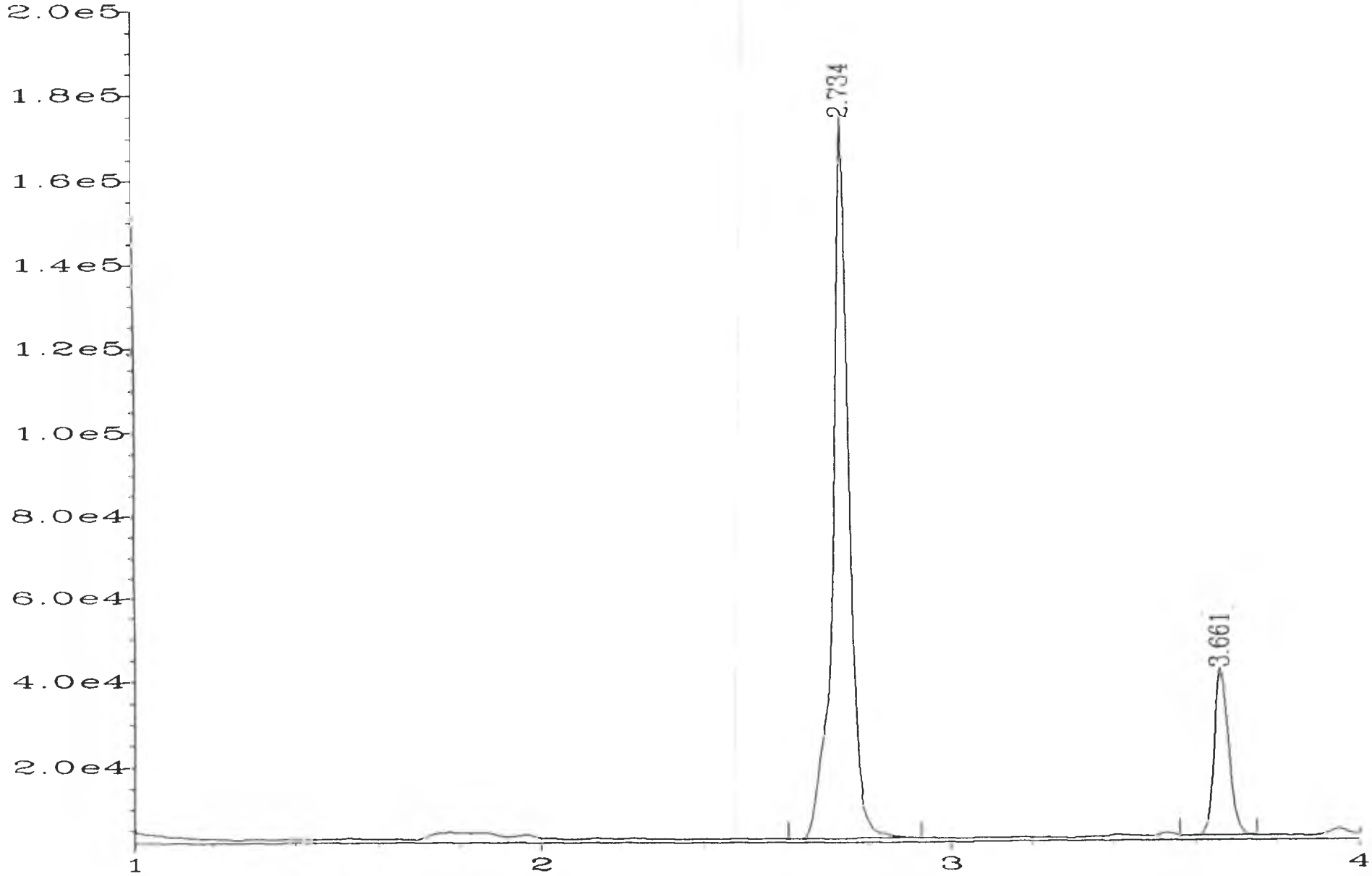
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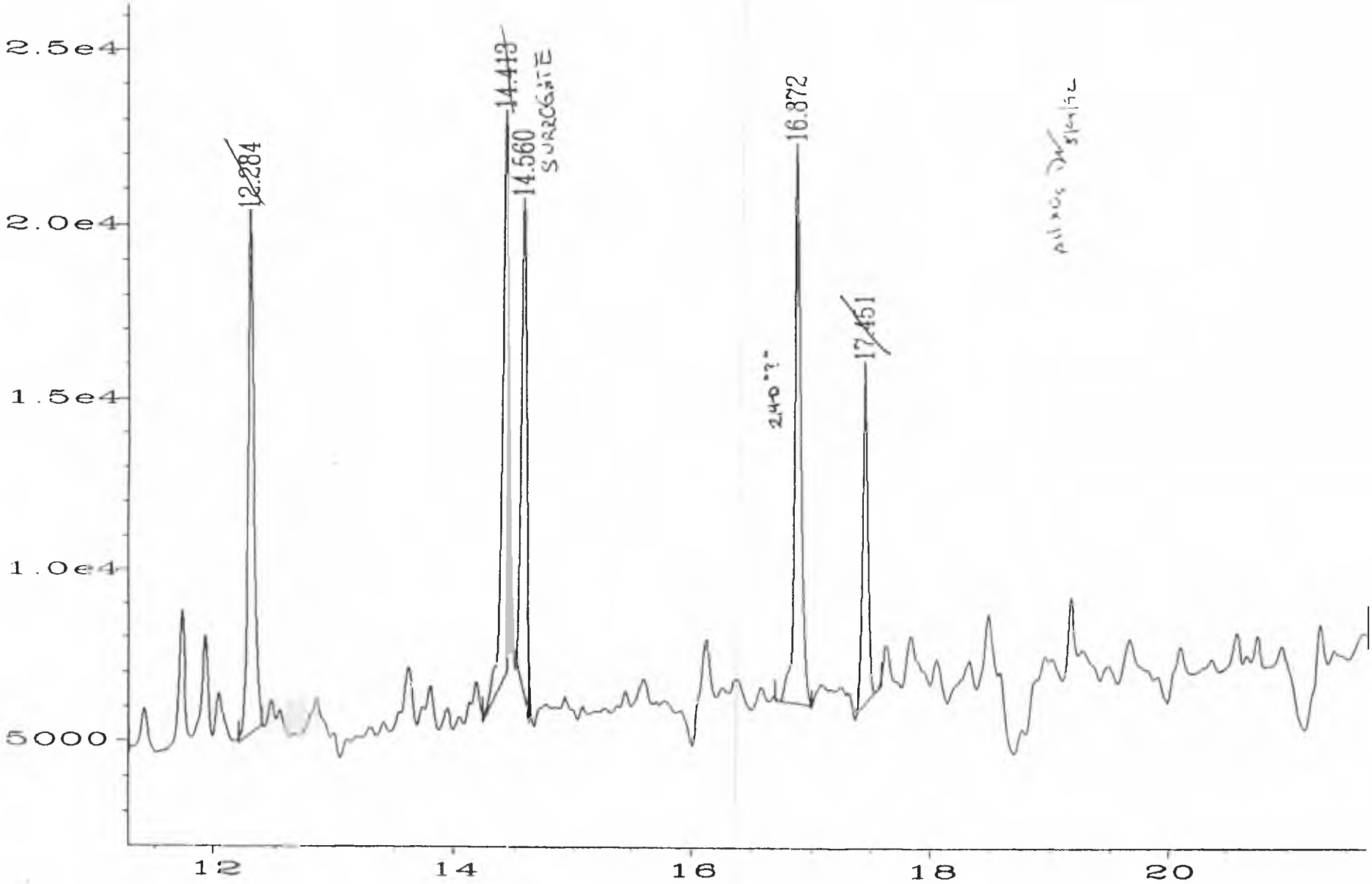
3
4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14
16
18
20
12.284
14.413
14.560
SURROGATE
16.872
17.951

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-8	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1509	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 70
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

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Column RTX-35 (Rim)

Data File Name : C:\HPCHEM\2\DATA\AUG07\074F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1509 101X
Run Time Bar Code:
Acquired on : 11 Aug 92 00:57 AM
Report Created on: 13 Aug 92 10:14 PM

Page Number : 1
Vial Number : 74
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\074F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.734	460256	172837	MM	0.044	70.1612
2	3.661	98004	39781	MM	0.041	14.9396
3	11.641	14827	3976	MM	0.062	2.2602
4	12.289	10453	2674	MM	0.065	1.5935
5	13.128	13141	2409	MM	0.091	2.0032
6	14.416	11119	3267	MM	0.057	1.6950
7	14.561 SURR	8551	2387	MM	0.060	1.3034
8	17.447	39647	11878	MM	0.056	6.0437

Total area = 655997

User Modified

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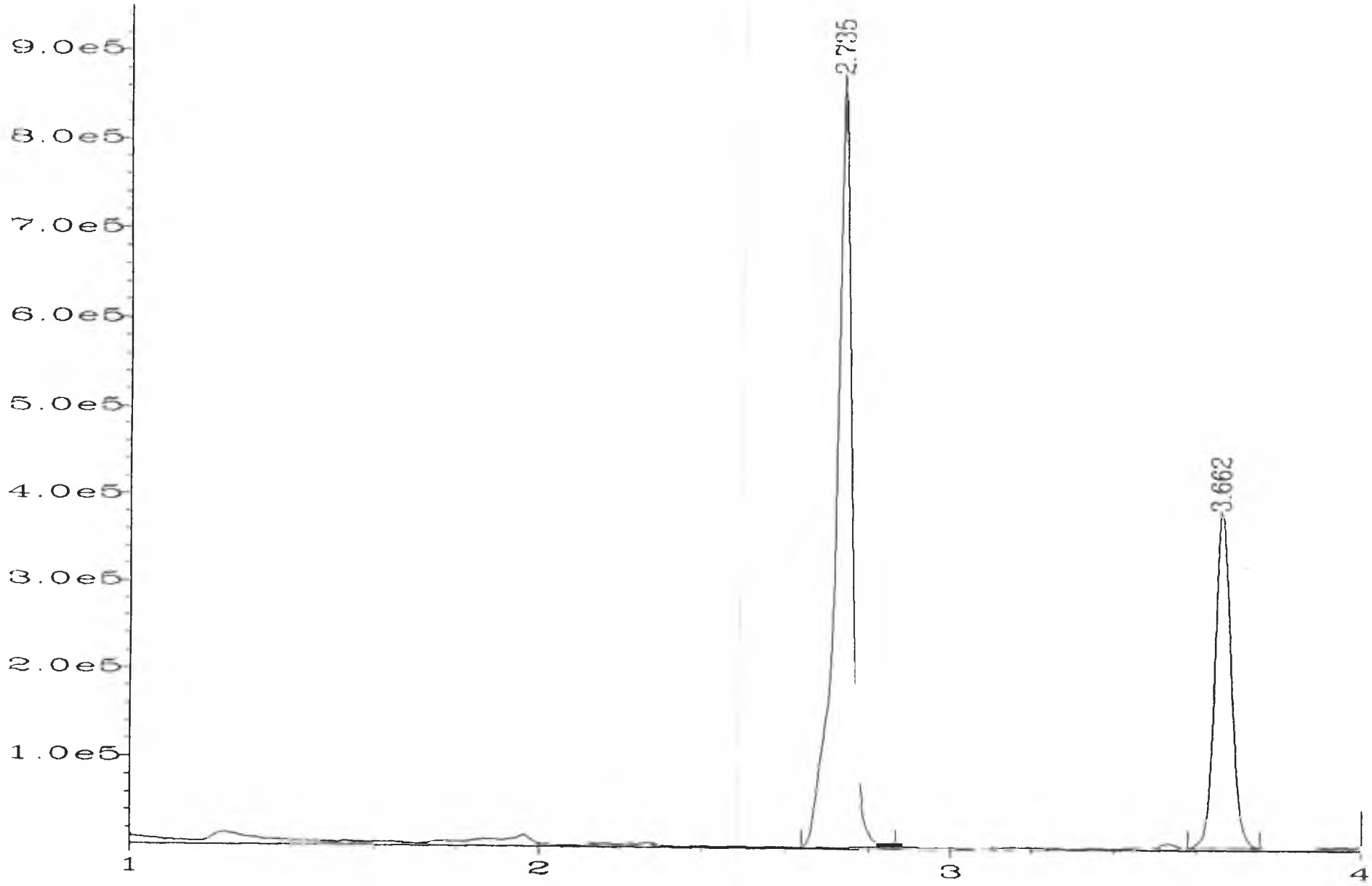
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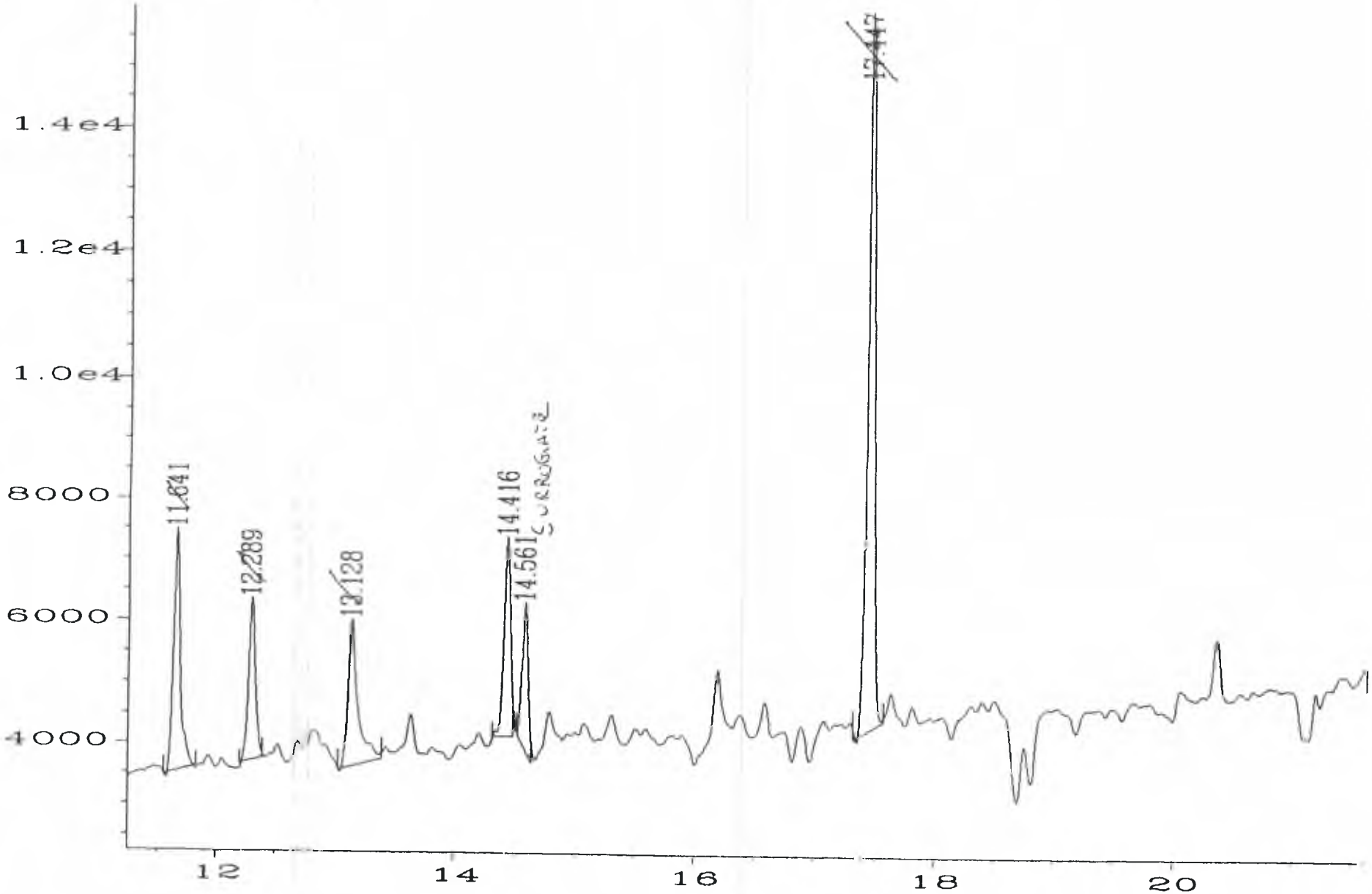
1
2
3
4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6000
4000
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12.289
12.128
14.416
14.561
CORRIGATE
17.417
12
14
16
18
20

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-9	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1510	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 43
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report 0.035

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Column: RTX-35

Data File Name : C:\HPCHEM\2\DATA\AUG07\078F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1510 11X
Run Time Bar Code:
Acquired on : 11 Aug 92 03:55 AM
Report Created on: 13 Aug 92 10:31 PM

Page Number : 1
Vial Number : 78
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\078F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.735	2316215	890968	MM	0.043	65.8297
2	3.662	1056499	386565	MM	0.046	30.0270
3	14.419	33717	10704	MM	0.053	0.9583
4	14.567 S-OR	48566	13874	MM	0.058	1.3803
5	17.455	26343	9010	MM	0.049	0.7487
6	18.481	37156	8363	MM	0.074	1.0560

Total area = 3518496

User Modified

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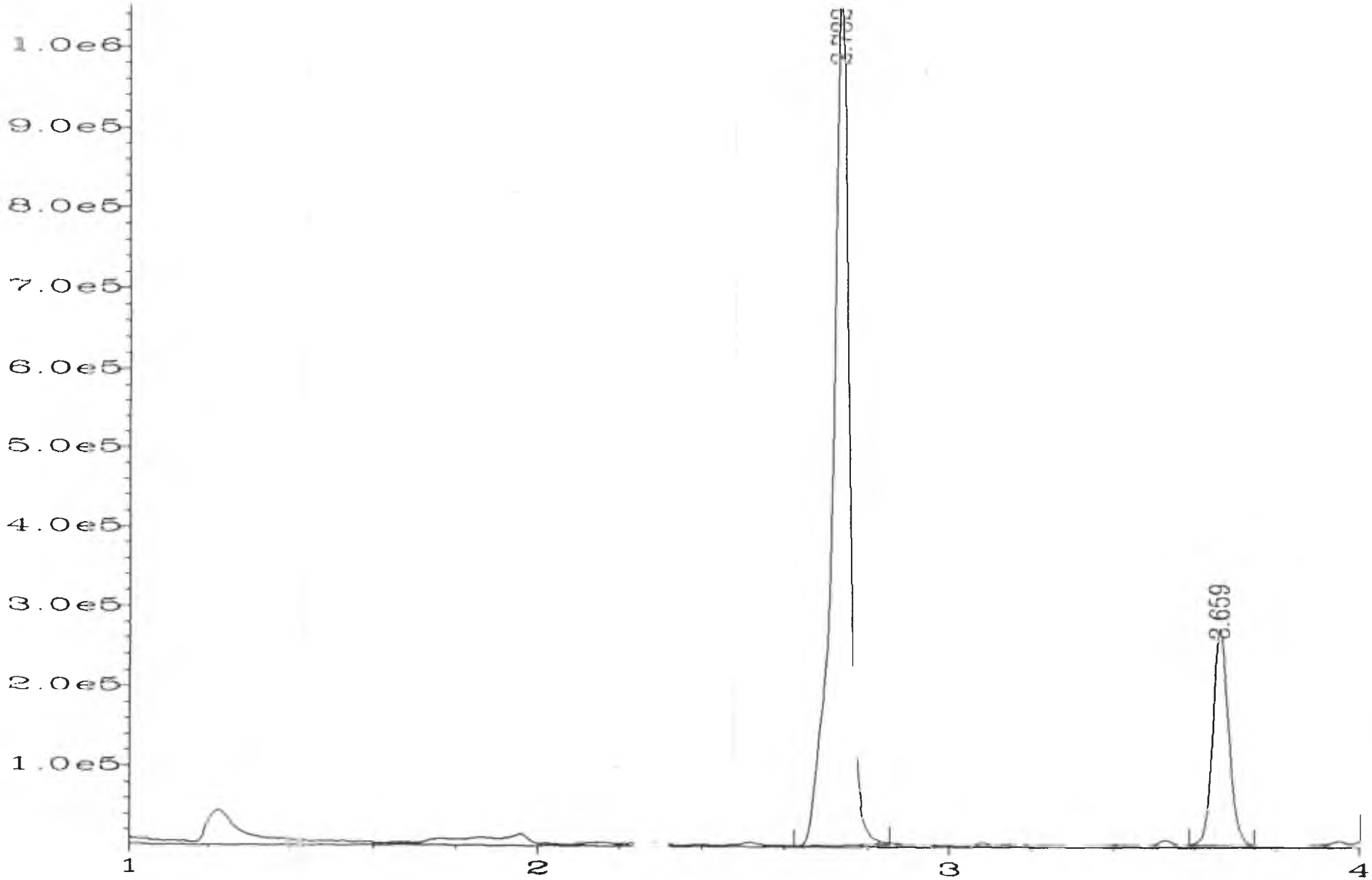
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1
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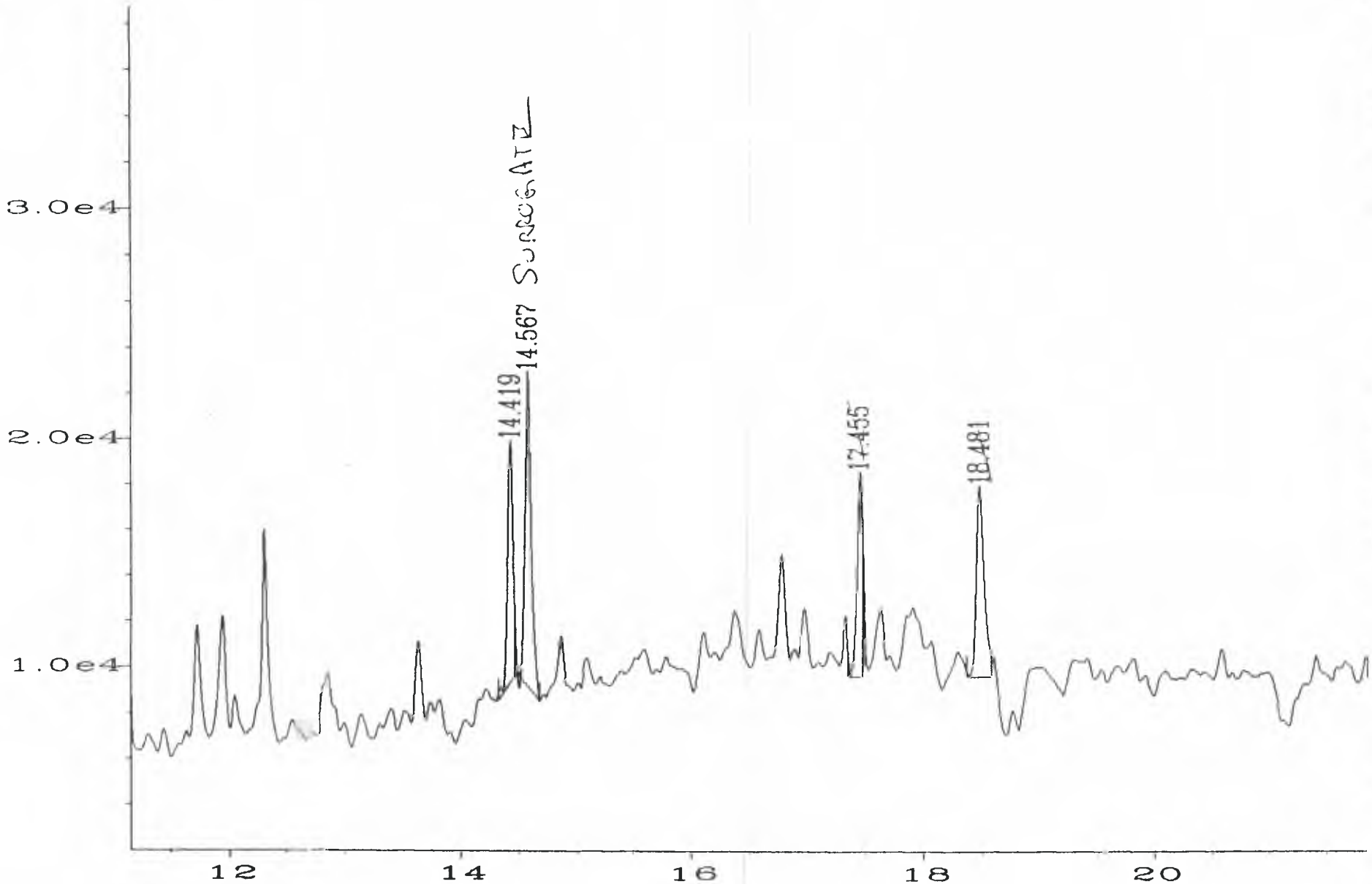
3
4
2.659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1.0e4
12
14
16
18
20
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14.567
SURROGATE
17.455
18.481

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-10	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1511	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 42
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

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Column = RTX-35

Data File Name : C:\HPCHEM\2\DATA\AUG07\079F1401.D

Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 79
Sample Name	: 207-1511 11X	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 14
Acquired on	: 11 Aug 92 04:41 AM	Instrument Method	: HERB1.MTH
Report Created on	: 13 Aug 92 10:36 PM	Analysis Method	: DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\079F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.732	3031322	1161033	MM	0.044	75.6081
2	3.659	733437	272615	MM	0.045	18.2936
3	12.287	44679	11308	MM	0.066	1.1144
4	13.625	18577	3839	MM	0.081	0.4634
5	14.417	48829	11793	MM	0.069	1.2179
6	14.563 SURR	47473	14166	MM	0.056	1.1841
7	16.392	24872	4812	MM	0.086	0.6204
8	16.768	23141	5600	MM	0.069	0.5772
9	16.971	13808	4000	MM	0.058	0.3444
10	17.451	23117	8045	MM	0.048	0.5766

Total area = 4009257

User Modified

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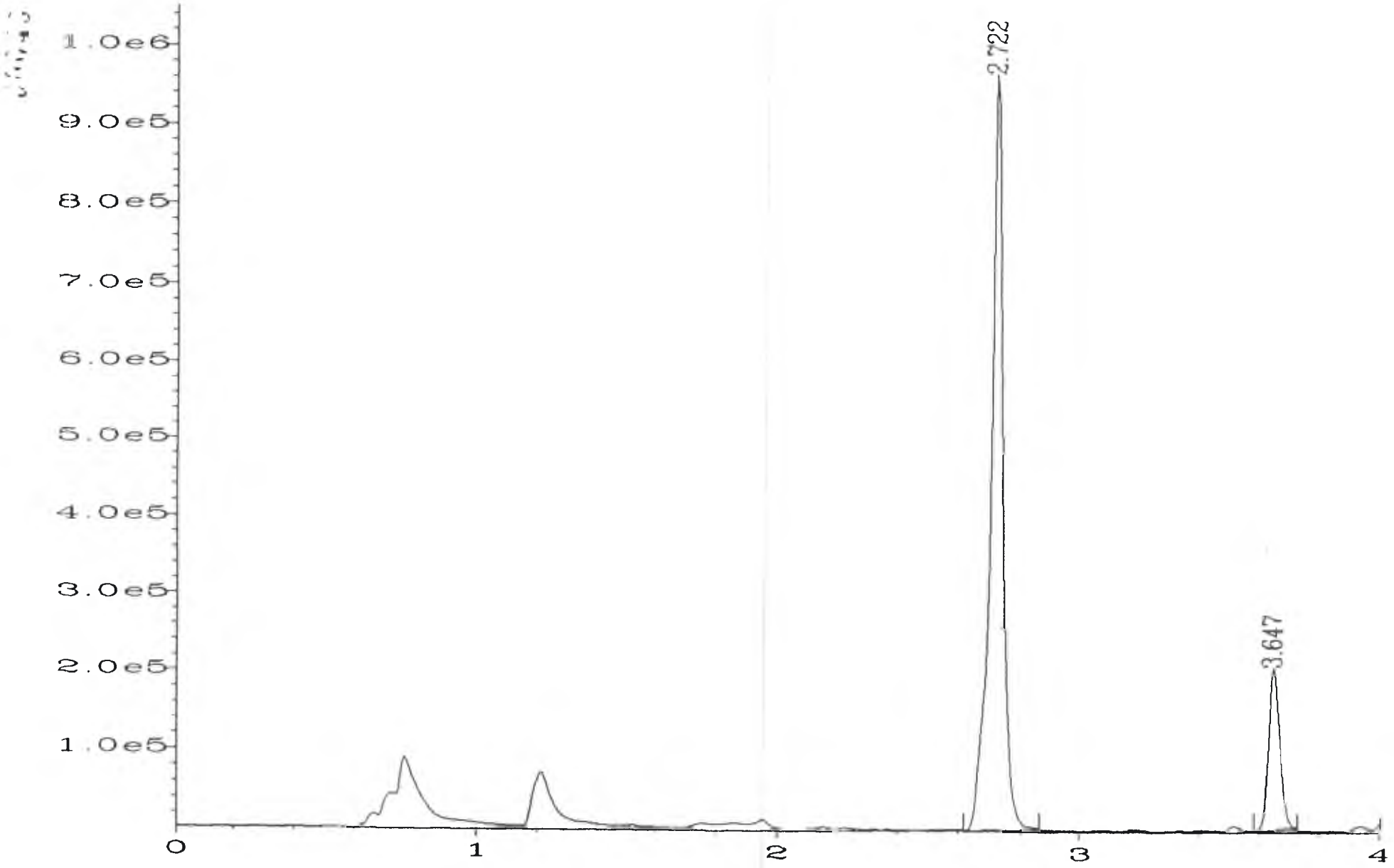
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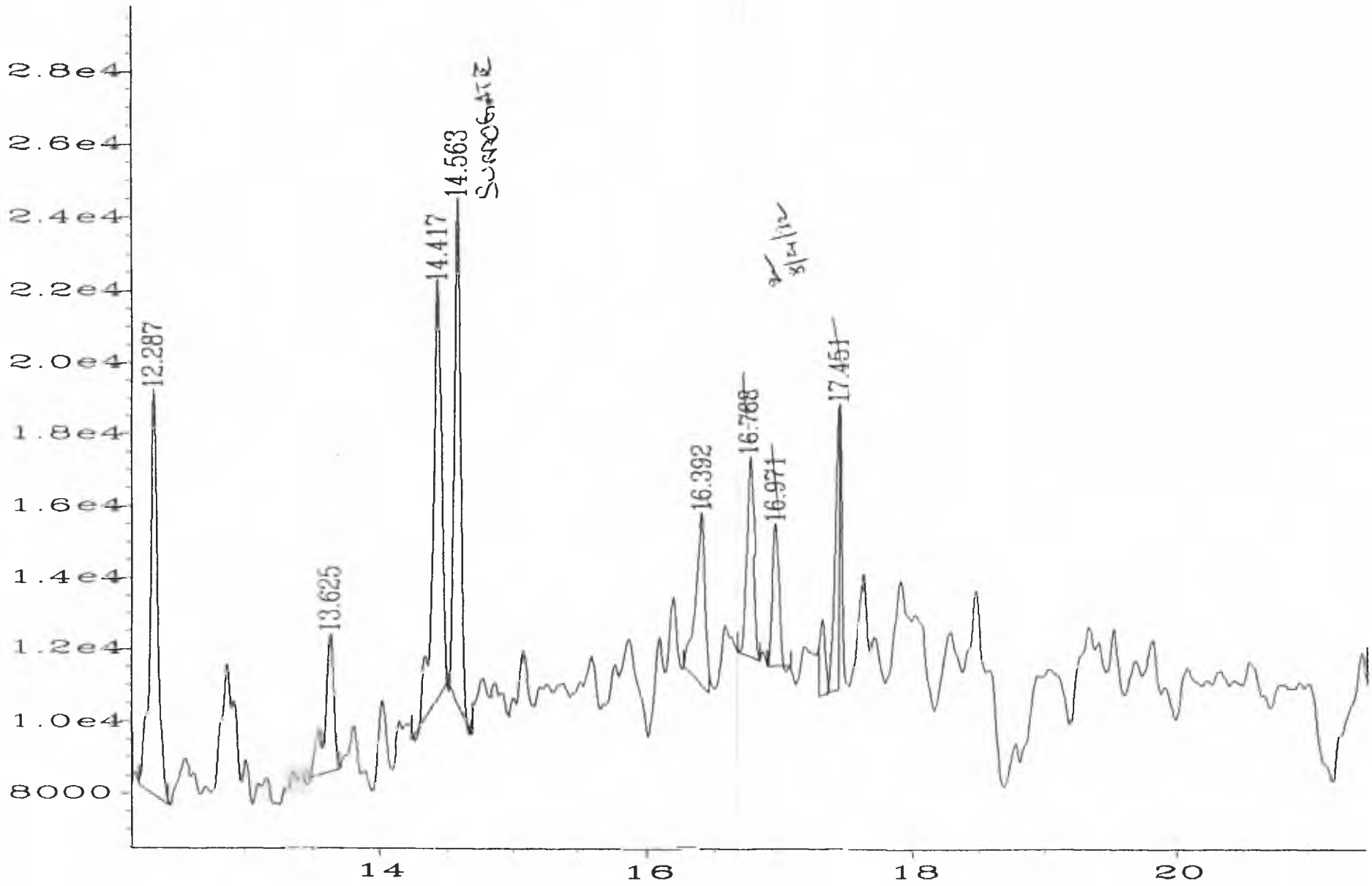
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17.451
14
16
18
20

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-11	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1512	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 42
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scott Cocanour
Laboratory Director

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Area Percent Report

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Column: RTX-5 (30m)

Data File Name : C:\HPCHEM\2\DATA\AUG07\083F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1512 11X
Run Time Bar Code:
Acquired on : 11 Aug 92 07:40 AM
Report Created on: 13 Aug 92 10:42 PM

Page Number : 1
Vial Number : 83
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\083F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.722	2538827	978402	MM	0.043	78.1104
2	3.647	525567	203925	MM	0.043	16.1698
3	12.265	32251	9927	MM	0.054	0.9922
4	13.606	17262	5382	MM	0.053	0.5311
5	14.393	53127	21299	MM	0.042	1.6345
6	14.540 SOR	46947	14146	MM	0.055	1.4444
7	17.426	36326	11207	MM	0.054	1.1176

Total area = 3250308

User Modified

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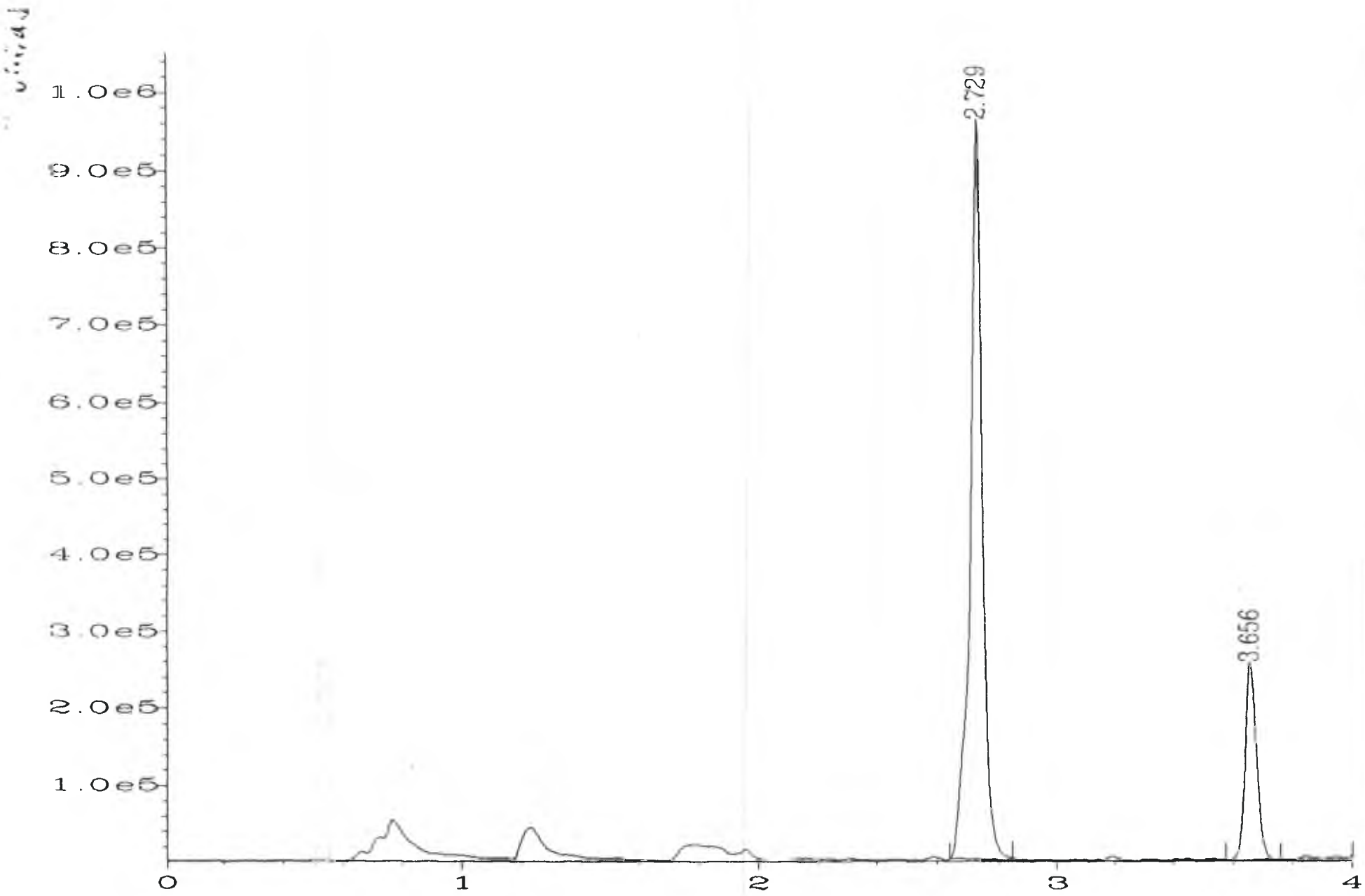
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4.0e5
3.0e5
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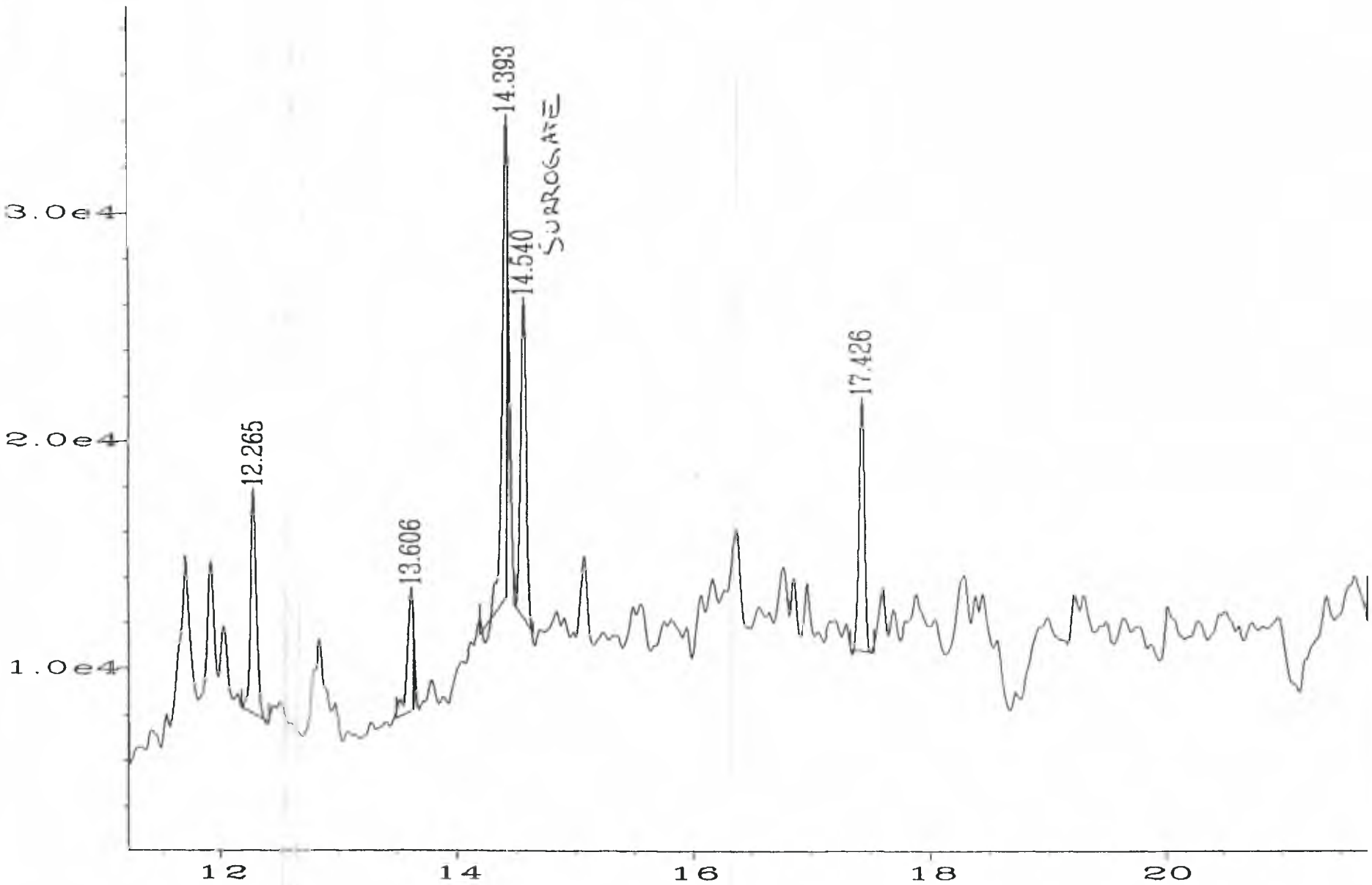
1.0e5
0
1
2
3
4
2.729
3.656


3.0e4
2.0e4
1.0e4
12.265
13.606
14.393
14.540
SURROGATE
17.426
12
14
16
18
20

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-12	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1513	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 42
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scott Cocanour
Laboratory Director

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\082F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1513 11X
Run Time Bar Code:
Acquired on : 11 Aug 92 06:54 AM
Report Created on: 13 Aug 92 10:47 PM

Page Number : 1
Vial Number : 82
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\082F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.729	2578992	981290	MM	0.044	72.3258
2	3.656	687417	258752	MM	0.044	19.2781
3	12.277	41634	11761	MM	0.059	1.1676
4	13.779	99777	31753	MM	0.052	2.7982
5	14.402	77717	25027	MM	0.052	2.1795
6	14.553 SURR	47398	14526	MM	0.054	1.3293
7	17.441	32860	9502	MM	0.058	0.9215

Total area = 3565795

User Modified

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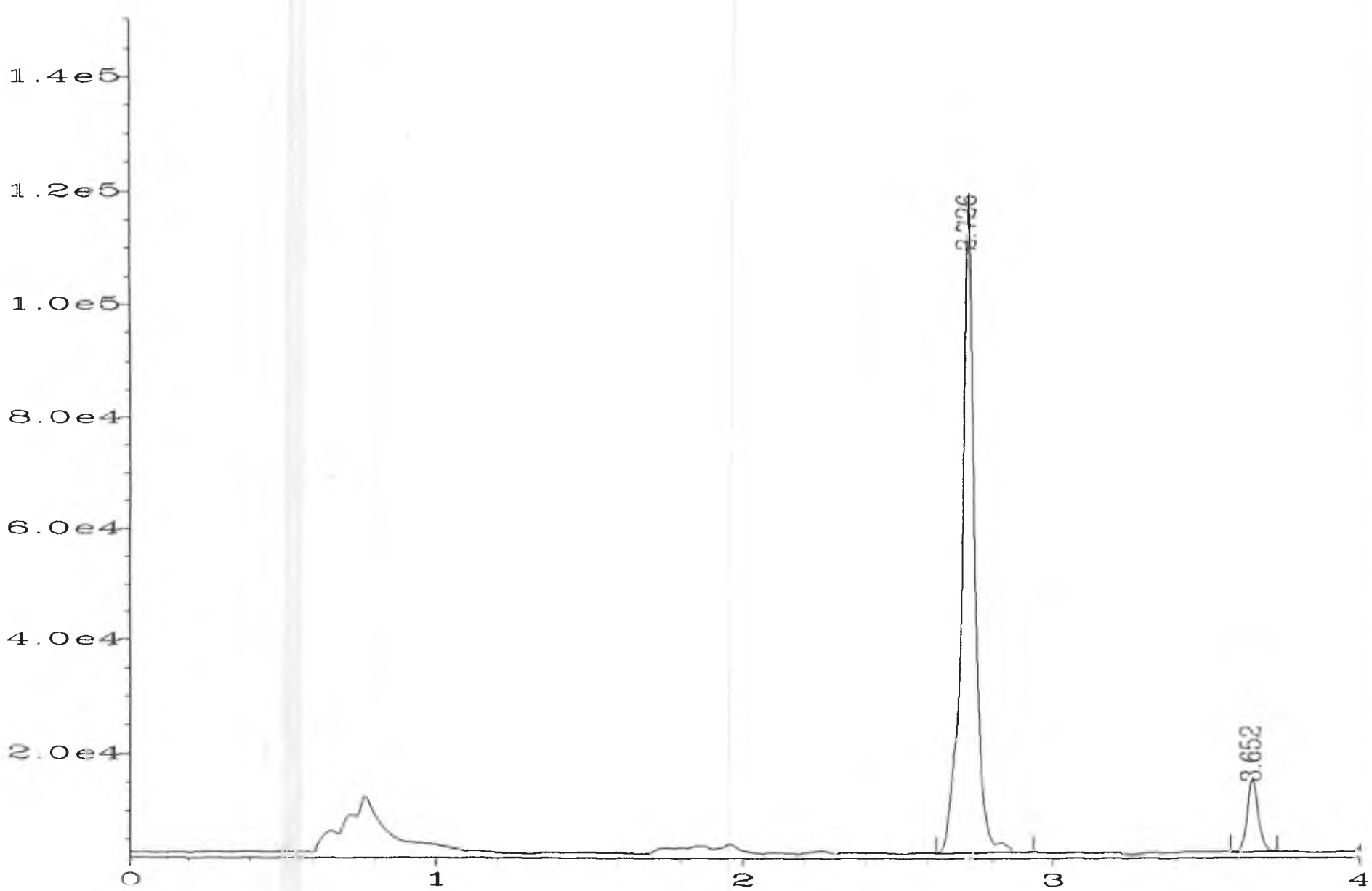
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4.0e4
2.0e4
2.726
3.652
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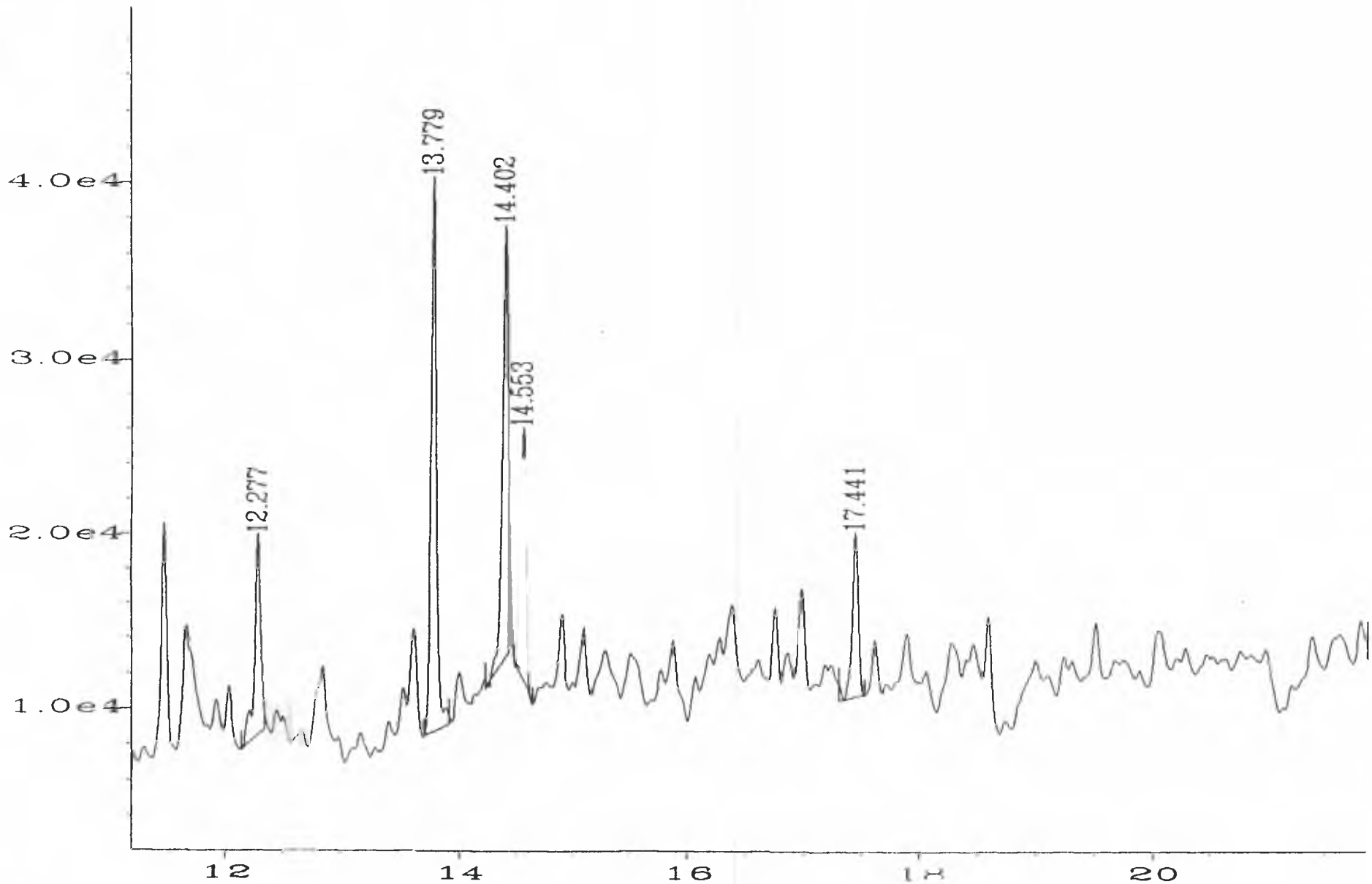
1
2
3
4


4.0e4
3.0e4
2.0e4
1.0e4
12.277
13.779
14.402
14.553
17.441
12
14
16
20

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-13	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	207-1514	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 59
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

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Column: RTX-35 (Primary)

Data File Name : C:\HPCHEM\2\DATA\AUG07\088F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1514 101X
Run Time Bar Code:
Acquired on : 11 Aug 92 11:21 AM
Report Created on: 13 Aug 92 10:53 PM

Page Number : 1
Vial Number : 88
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\088F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.726	318938	117971	MM	0.045	70.8900
2	3.652	32768	13268	MM	0.041	7.2834
3	11.626	15961	4551	MM	0.058	3.5477
4	12.274	18101	4722	MM	0.064	4.0234
5	14.400	15113	4125	MM	0.061	3.3592
6	14.547 Sure	7150	2038	MM	0.058	1.5893
7	17.431	41873	12615	MM	0.055	9.3070

Total area = 449905

User Modified

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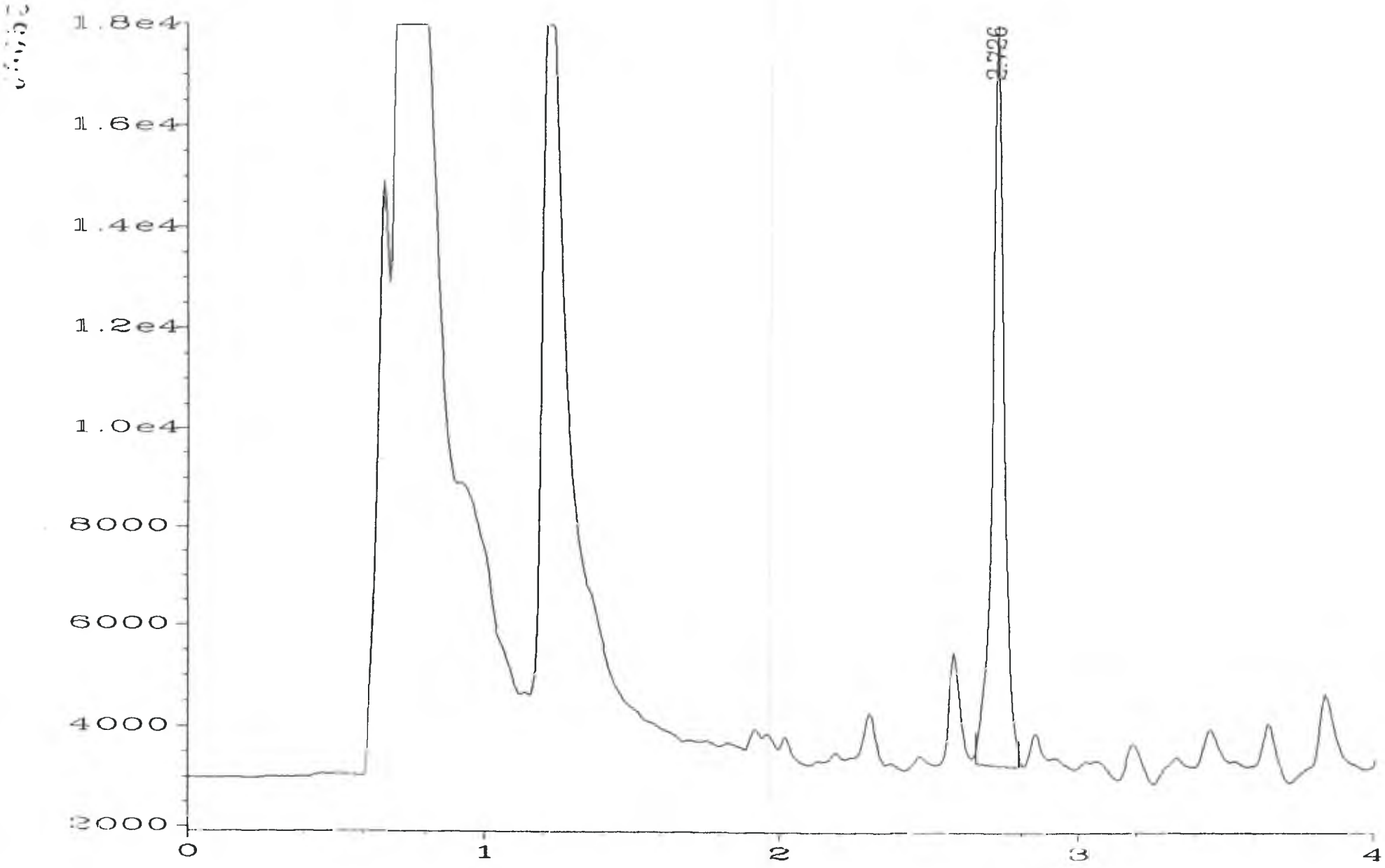
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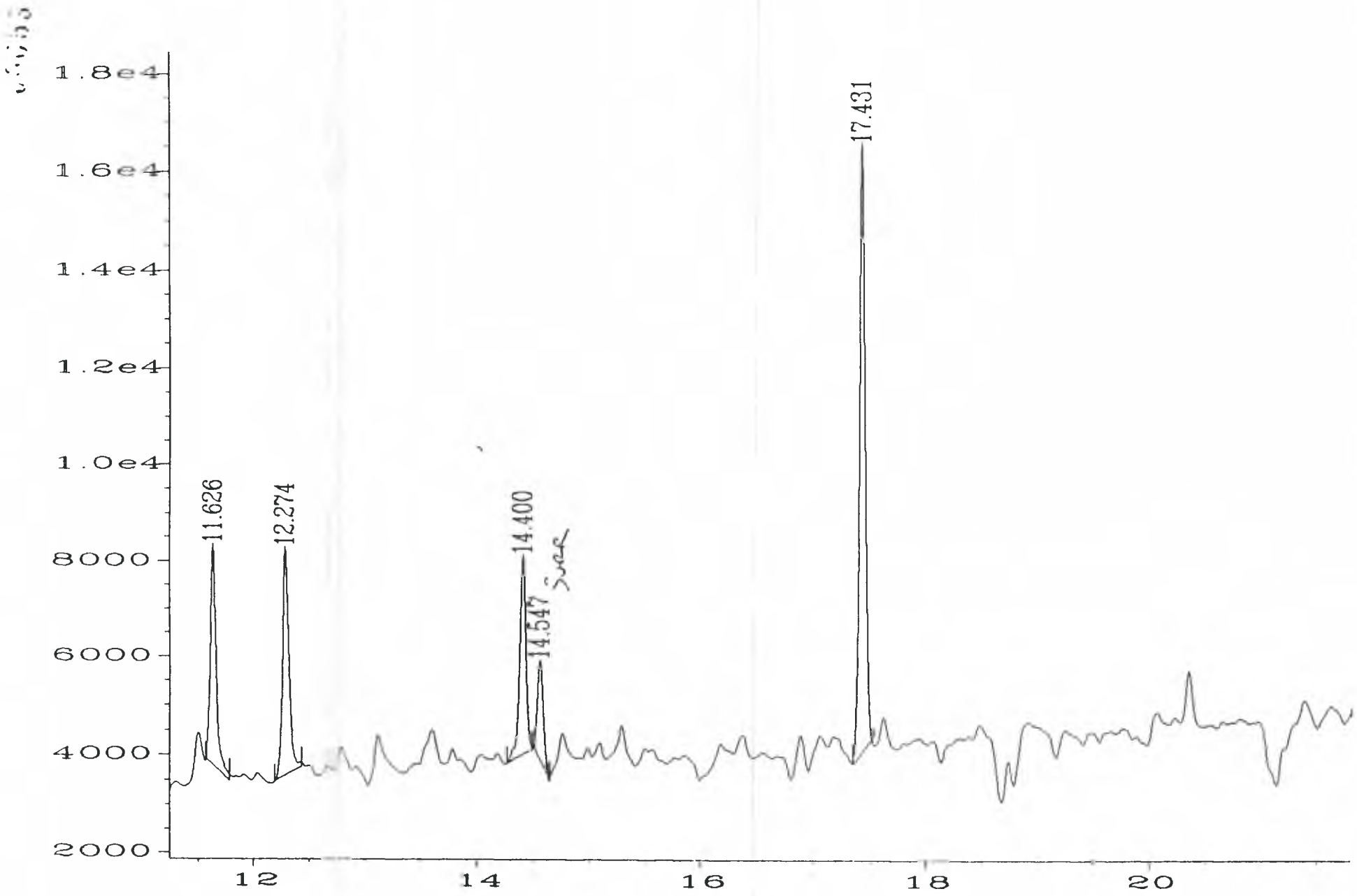
1.2e4
1.0e4
8000
6000
4000
2000
0
1
2
3
4
2.726


1.8e4
1.6e4
1.4e4
1.2e4
1.0e4
8000
6000
4000
2000
12
14
16
18
20
11.626
12.274
14.400
14.547
17.431

QC RESULTS

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Sample Descript:	Method Blank		
Lynnwood, WA 98036	Analysis Method:	EPA 8150	Extracted:	Aug 3, 1992
Attention: D. Geller	Sample Number:	BLK080392	Analyzed:	Aug 10, 1992
			Reported:	Aug 17, 1992

CHLORINATED HERBICIDES (EPA 8150)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
2,4-D	1.0	N.D.
2,4-DB	1.0	N.D.
2,4,5-T	0.20	N.D.
2,4,5-TP (Silvex)	0.20	N.D.
Dalapon	5.0	N.D.
Dicamba	0.25	N.D.
Dichloroprop	0.50	N.D.
Dinoseb	0.20	N.D.
MCPA	200	N.D.
MCPP	200	N.D.

2, 4-Dichlorophenyl Acetic Acid Surrogate Recovery, %: 46
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

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Area Percent Report

==========

Column: DTX-35

Data File Name : C:\HPCHEM\2\DATA\AUG07\089F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : BLK S 8/3/92 11X
Run Time Bar Code:
Acquired on : 11 Aug 92 12:06 PM
Report Created on: 13 Aug 92 10:58 PM

Page Number : 1
Vial Number : 89
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\089F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.726	37948	14844	MM	0.043	14.6586
2	11.448	57094	17533	MM	0.054	22.0547
3	12.271	34896	10425	MM	0.056	13.4800
4	13.773	22315	7262	MM	0.051	8.6199
5	14.545 Surr	51479	14371	MM	0.060	19.8858
6	17.433	34845	9841	MM	0.059	13.4602
7	18.580	20298	5525	MM	0.061	7.8409

Total area = 258876

User Modified

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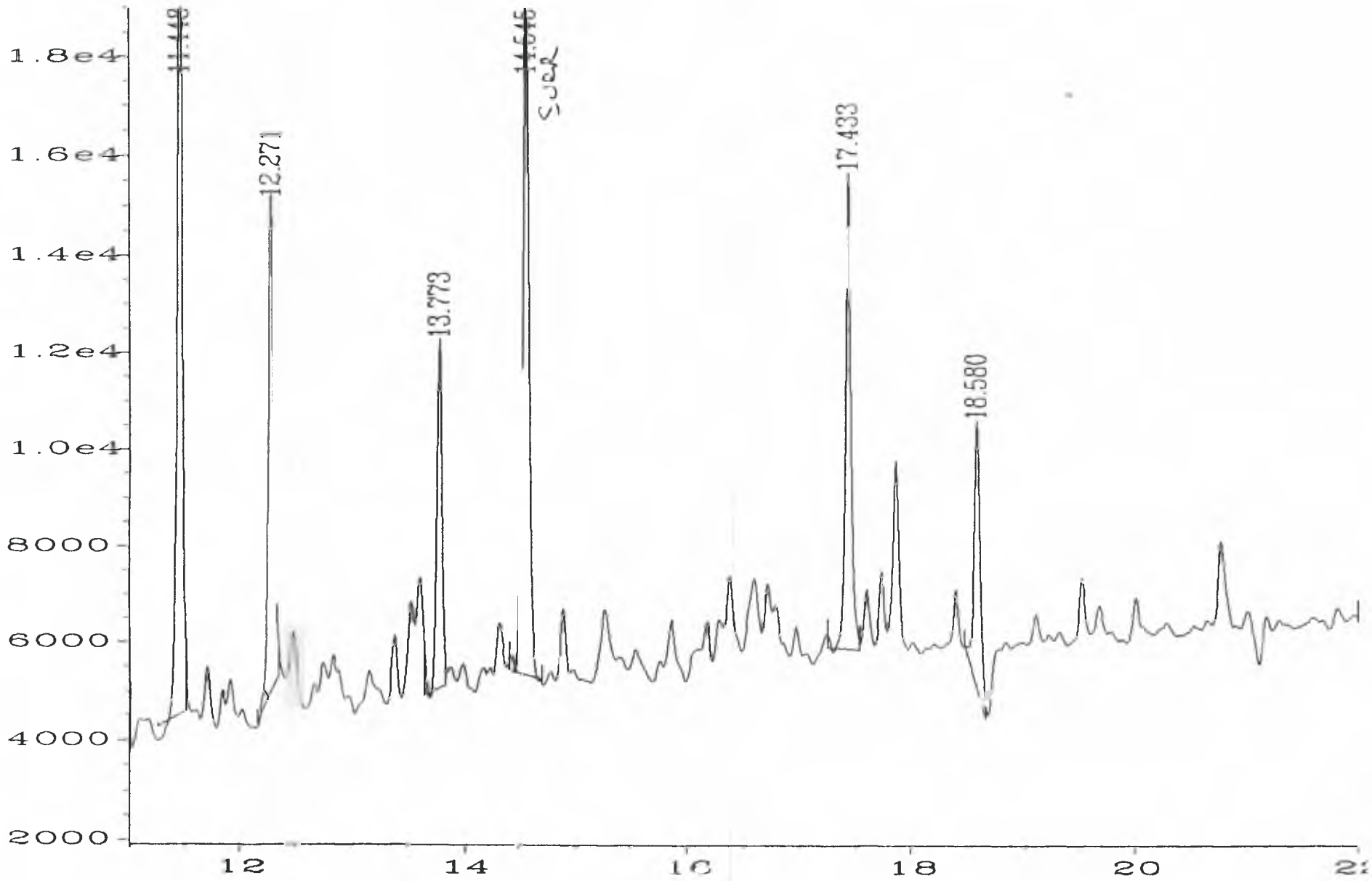
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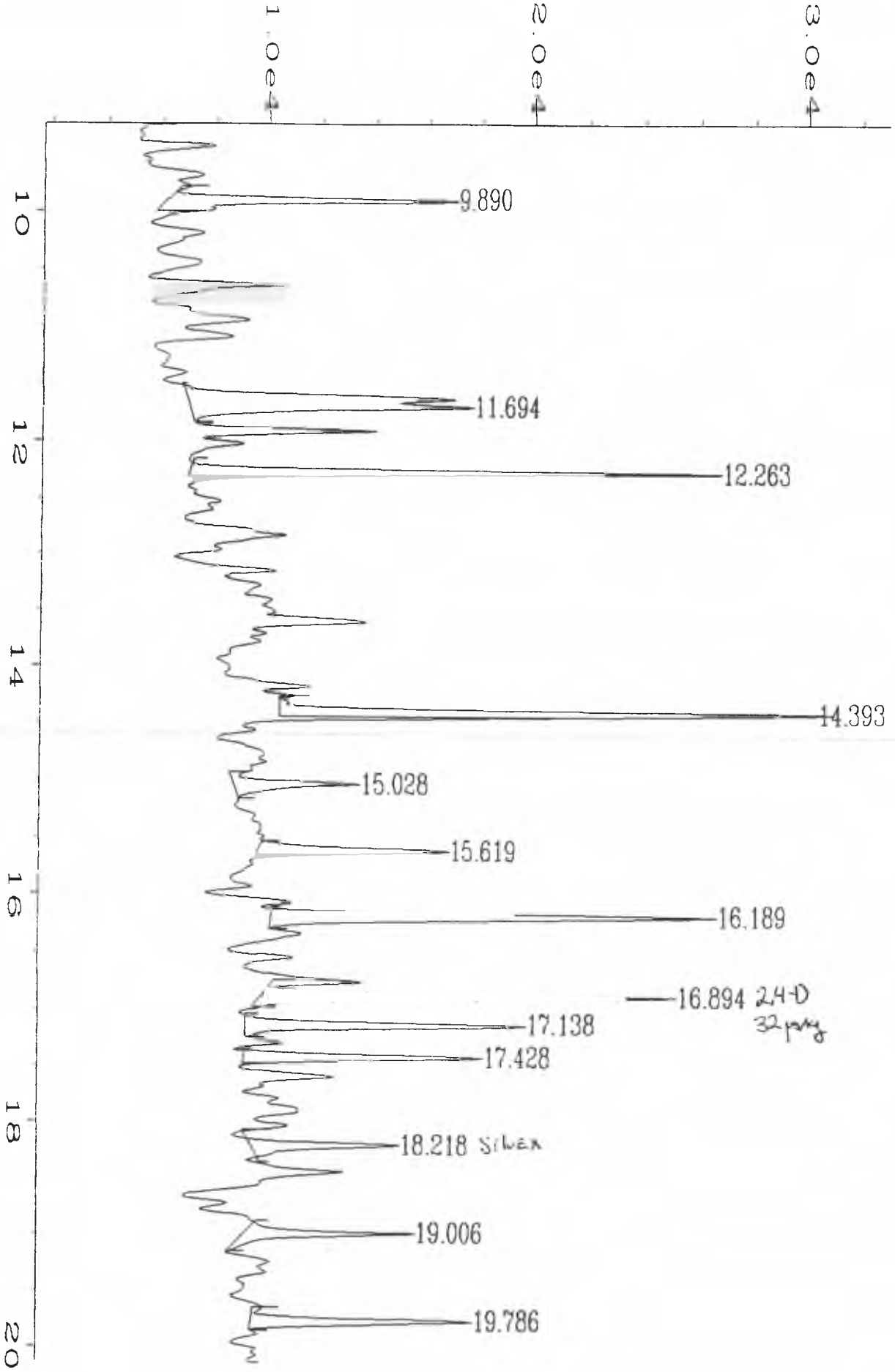
1.2e4
1.0e4
8000
6000
4000
2000
12
14
18
20
12.271
13.773
17.433
18.580
SUR

Matrix Spike Data
and
Raw Matrix Spike Data for
Samples 207-1501 thru 207-1514

Client Project ID:		Analyst:	S. Kouri
Method:	8150		
Sample Matrix:	Soil	Extracted:	3-Aug-92
Units:	ug/kg	Analyzed:	10-Aug-92
QC Sample #:	207-1507	Reported:	

QUALITY CONTROL DATA REPORT

Analyte	2.4-D	Silvex
Sample Conc.:	ND	ND
Spike Conc. Added:	40	4
Conc. Matrix Spike:	32	2.6
Matrix Spike % Recovery:	80%	65%
Conc. Matrix Spike Dup.:	29	2.3
Matrix Spike Duplicate % Recovery:	73%	58%
Relative Difference	10%	12%
Control Limits		
Upper	93	138
Lower	33	2
Max Rpd.	67	68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2.0e4
3.0e4
10
12
14
16
18
20
9.890
11.694
12.263
14.393
15.028
15.619
16.189
16.894 2,4-D
32 ppb
17.138
17.428
18.218 Silvex
19.006
19.786

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Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\062F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1507 MS 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 03:59 PM
Report Created on: 13 Aug 92 11:04 PM

Page Number : 1
Vial Number : 62
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\062F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	9.890	45381	10984	MM	0.069	8.2665
2	11.694	78921	10636	MM	0.124	14.3761
3	12.263	60030	20022	MM	0.050	10.9349
4	14.393	62955	20505	MM	0.051	11.4677
5	15.028	20038	4756	MM	0.070	3.6501
6	15.619	23012	7159	MM	0.054	4.1919
7	16.189	59327	16619	MM	0.059	10.8068
8	16.894	60552	15471	MM	0.065	11.0300
9	17.138	36871	10597	MM	0.058	6.7163
10	17.428	28079	8989	MM	0.052	5.1148
11	18.218	20574	5605	MM	0.061	3.7477
12	19.006	25286	6403	MM	0.066	4.6061
13	19.786	27948	8291	MM	0.056	5.0910

Total area = 548974

User Modified

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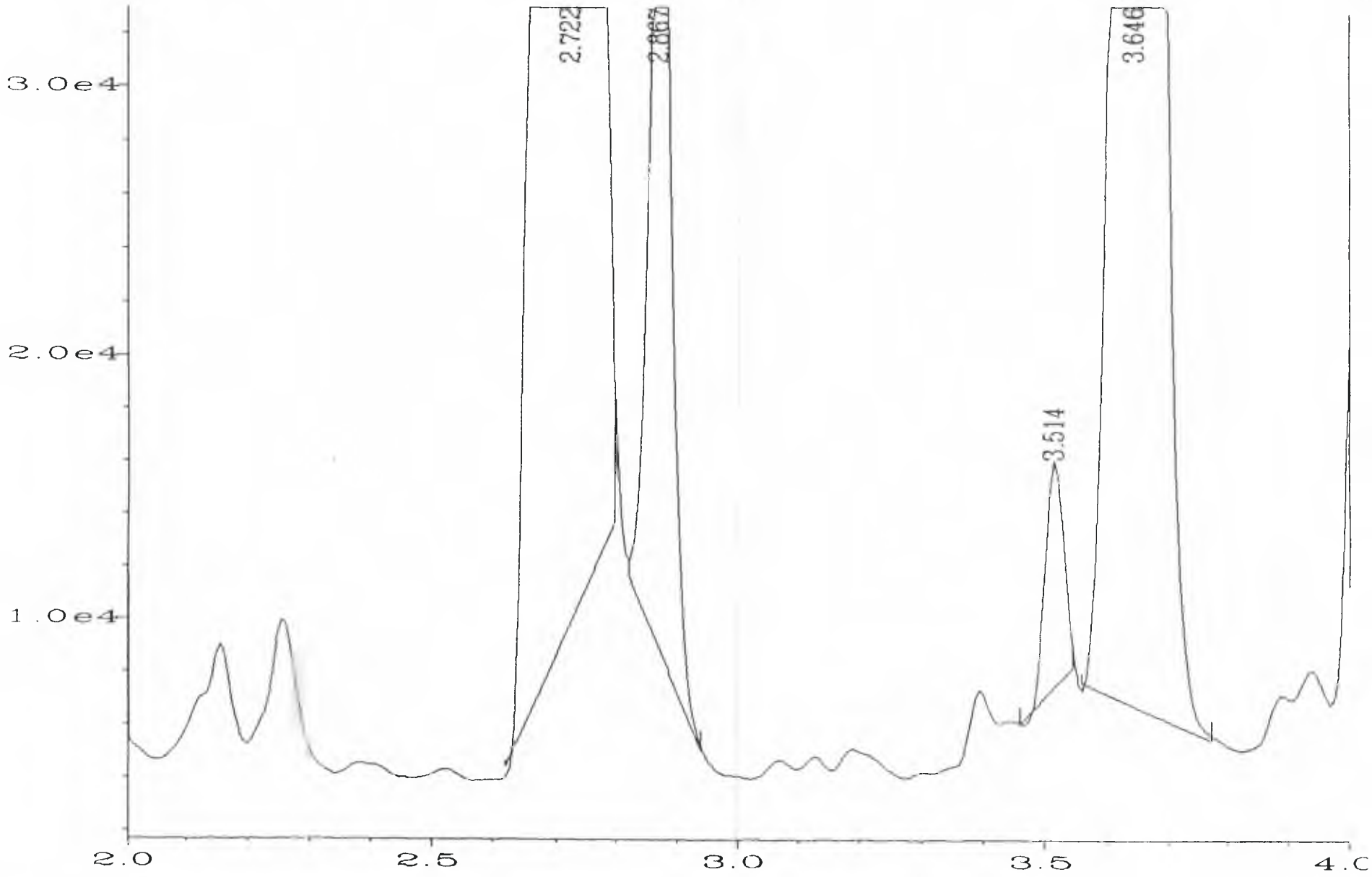
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1.0e4
2.722
2.867
3.514
3.646
2.0
2.5
3.0
3.5
4.0

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Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\062F1401.D

Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1507 MS 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 03:59 PM
Report Created on: 13 Aug 92 11:06 PM

Page Number : 1
Vial Number : 62
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

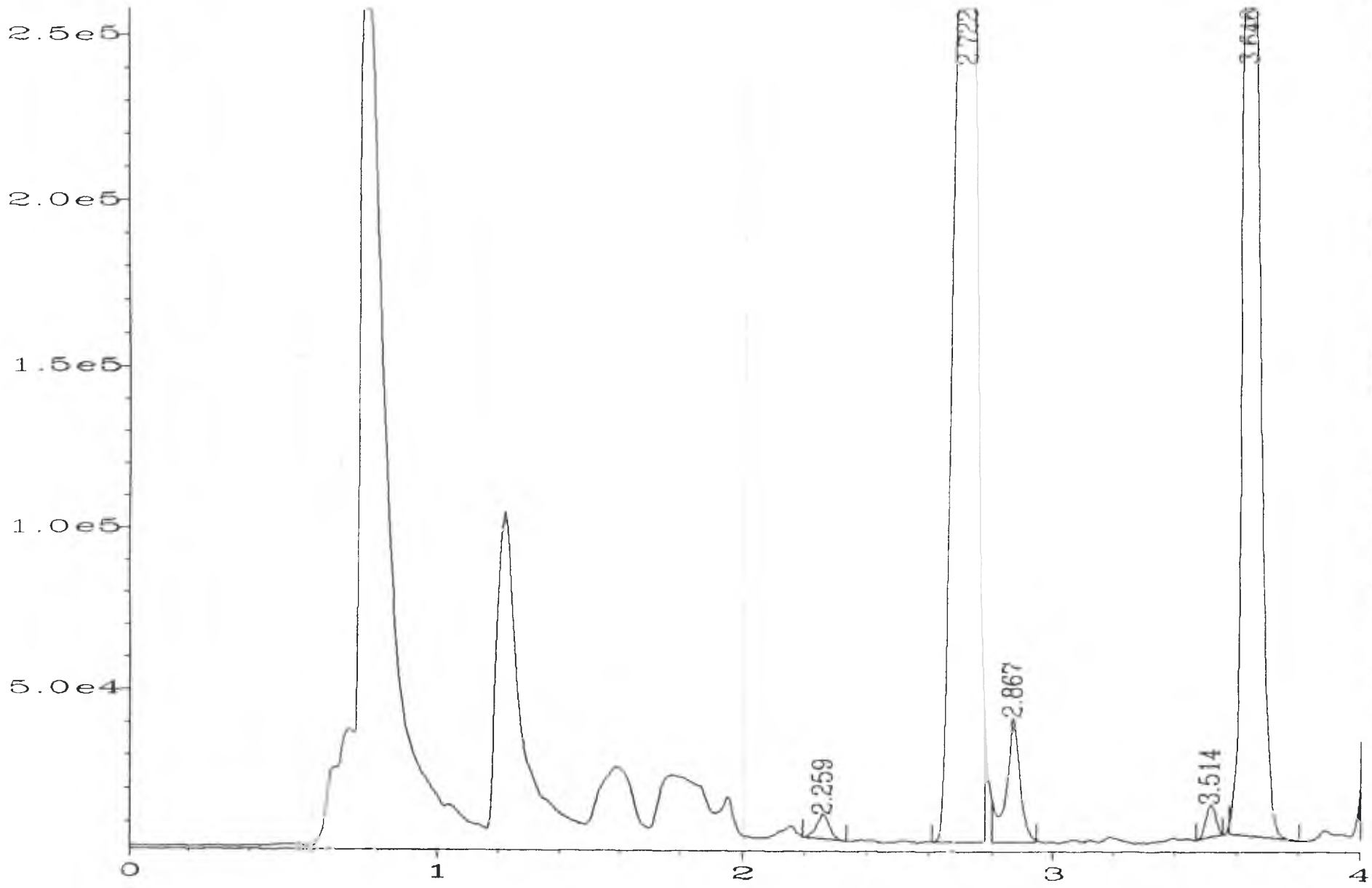
Sig. 1 in C:\HPCHEM\2\DATA\AUG07\062F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.722	3269212	1257416	MM	0.043	58.4127
2	2.867	84214	33816	MM	0.042	1.5047
3	3.514	17837	8727	MM	0.034	0.3187
4	3.646	1676510	612757	MM	0.046	29.9551
5	9.890	45381	10984	MM	0.069	0.8108
6	11.694	78921	10636	MM	0.124	1.4101
7	12.263	60030	20022	MM	0.050	1.0726
8	14.393	62955	20505	MM	0.051	1.1248
9	15.028	20038	4756	MM	0.070	0.3580
10	15.619	23012	7159	MM	0.054	0.4112
11	16.189	59327	16619	MM	0.059	1.0600
12	16.894	60552	15471	MM	0.065	1.0819
13	17.138	36871	10597	MM	0.058	0.6588
14	17.428	28079	8989	MM	0.052	0.5017
15	18.218	20574	5605	MM	0.061	0.3676
16	19.006	25286	6403	MM	0.066	0.4518
17	19.786	27948	8291	MM	0.056	0.4994

Total area = 5596747

User Modified

==========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1.5e5
1.0e5
5.0e4
0
1
2
3
4
2.259
2.722
2.867
3.514
3.640

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\063F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1507 MSD 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 04:45 PM
Report Created on: 13 Aug 92 11:09 PM

Page Number : 1
Vial Number : 63
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\063F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.259	22281	7474	MM	0.050	0.4166
2	2.722	3382940	1308053	MM	0.043	63.2555
3	2.867	119296	37654	MM	0.053	2.2306
4	3.514	21487	9898	MM	0.036	0.4018
5	3.646	1802054	647663	MM	0.046	33.6955

Total area = 5348059

User Modified

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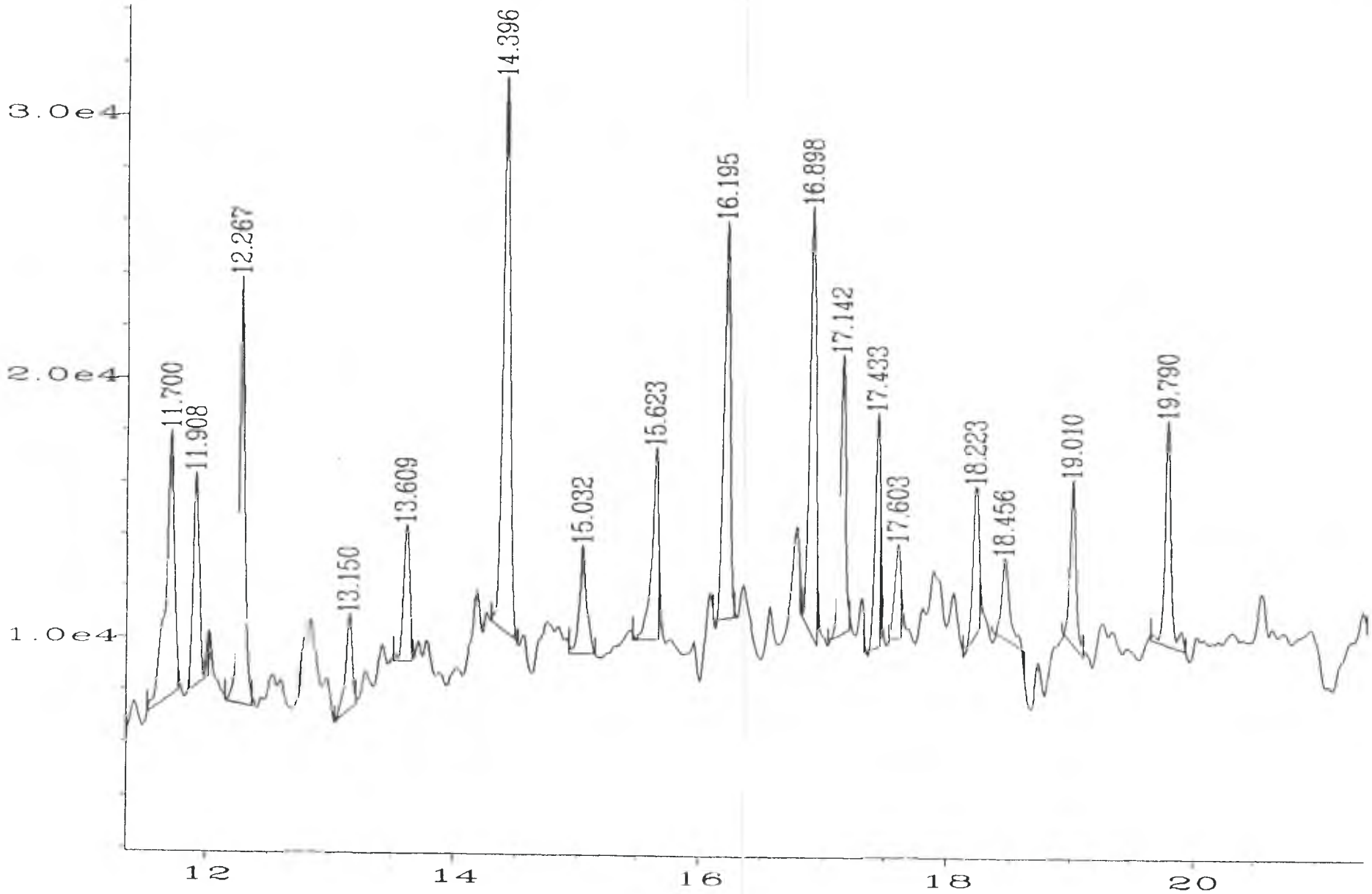
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14.396
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16.195
16.898
17.142
17.433
17.603
18.223
18.456
19.010
19.790
12
14
16
18
20

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\063F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1507 MSD 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 04:45 PM
Report Created on: 13 Aug 92 11:11 PM

Page Number : 1
Vial Number : 63
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\063F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.259	22281	7474	MM	0.050	0.3772
2	2.722	3382940	1308053	MM	0.043	57.2687
3	2.867	119296	37654	MM	0.053	2.0195
4	3.514	21487	9898	MM	0.036	0.3638
5	3.646	1802054	647663	MM	0.046	30.5064
6	11.700	50803	10284	MM	0.082	0.8600
7	11.908	29032	8277	MM	0.058	0.4915
8	12.267	55302	16480	MM	0.056	0.9362
9	13.150	13600	3755	MM	0.060	0.2302
10	13.609	19136	5258	MM	0.061	0.3240
11	14.396	79589	21379	MM	0.062	1.3473
12	15.032	17389	4192	MM	0.069	0.2944
13	15.623	27395	7441	MM	0.061	0.4638
14	16.195	50872	15257	MM	0.056	0.8612
15	16.898	55250	16589	MM	0.056	0.9353
16	17.142	36255	10815	MM	0.056	0.6138
17	17.433	25862	9046	MM	0.048	0.4378
18	17.603	11848	3652	MM	0.054	0.2006
19	18.223	18168	5760	MM	0.053	0.3076
20	18.456	14535	3137	MM	0.077	0.2461
21	19.010	21664	6339	MM	0.057	0.3667
22	19.790	32373	8763	MM	0.062	0.5480

Total area = 5907133

User Modified

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CALIBRATIONS

(INITIAL & CONTINUING)

Initial Calibration
and
Raw Calibration Data for
Samples 207-1501 thru 207-1514

Initial Calibration
RTX-35
Aug. 10, 1992
Conc. 1-5

		Lower	Stan.	Upper	Percent Rsd	Mean CF
Dalapon	1	3.073	3.085	3.097	13%	276304
Dicamba*	3	14.849	14.893	14.937	11%	693578
Mcpp*	4	14.994	15.041	15.088	15%	1229
Mcpa**	5	15.595	15.638	15.681	18%	2267
Dichloroprop	6	16.143	16.189	16.235	16%	286833
2,4-D	7	16.845	16.893	16.941	12%	327957
Silvex	8	18.165	18.216	18.267	5%	1240620
2,4,5-T	9	18.950	19.006	19.062	8%	1167063
Dinoseb	10	19.424	19.485	19.546	13%	679877
2,4-DB	11	19.717	19.783	19.849	8%	159461

Initial Calibration
RTX-35
Aug 10, 1992

Conc. #1

					TL On Colm.		
		Lower	Stan.	Upper	(ng)	Area	CF
Dalapon	1	3.065	3.085	3.105	0.373	139740	374638
Dicamba	3	14.873	14.893	14.913	0.015	8709	583713
Mcpp	4	15.021	15.041	15.061	14.900	21939	1472
Mcpa	5	15.618	15.638	15.658	14.900	39954	2681
Dichloroprop	6	16.169	16.189	16.209	0.149	52822	354035
2,4-D	7	16.873	16.893	16.913	0.149	54537	365529
Silvex	8	18.196	18.216	18.236	0.015	17722	1187802
2,4,5-T	9	18.986	19.006	19.026	0.015	16923	1134249
Dinoseb	10	19.465	19.485	19.505	0.075	57289	767640
2,4-DB	11	19.763	19.783	19.803	0.149	23976	160697

3.0e4
2.5e4
2.0e4
1.5e4
1.0e4
5000
3.028
12.275
13.567
14.945
15.027
15.620
16.193
16.899
17.433
18.221
19.011
19.491
19.790
5
10
15
20

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\068F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 201X
Run Time Bar Code:
Acquired on : 10 Aug 92 08:28 PM
Report Created on: 13 Aug 92 11:48 PM

Page Number : 1
Vial Number : 68
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\068F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.099	139740	54159	MM	0.043	30.3903
2	12.275	11465	2858	MM	0.067	2.4933
3	13.567	9660	2555	MM	0.063	2.1009
4	14.945	8709	3662	MM	0.040	1.8940
5	15.027	21939	5988	MM	0.061	4.7712
6	15.620	39954	9493	MM	0.070	8.6891
7	16.193	52822	13639	MM	0.065	11.4876
8	16.899	54537	14584	MM	0.062	11.8606
9	17.433	5081	1434	MM	0.059	1.1051
10	18.221	17722	5251	MM	0.056	3.8542
11	19.011	16923	5086	MM	0.055	3.6803
12	19.491	57289	16744	MM	0.057	12.4591
13	19.790	23976	6876	MM	0.058	5.2143

Total area = 459819

User Modified

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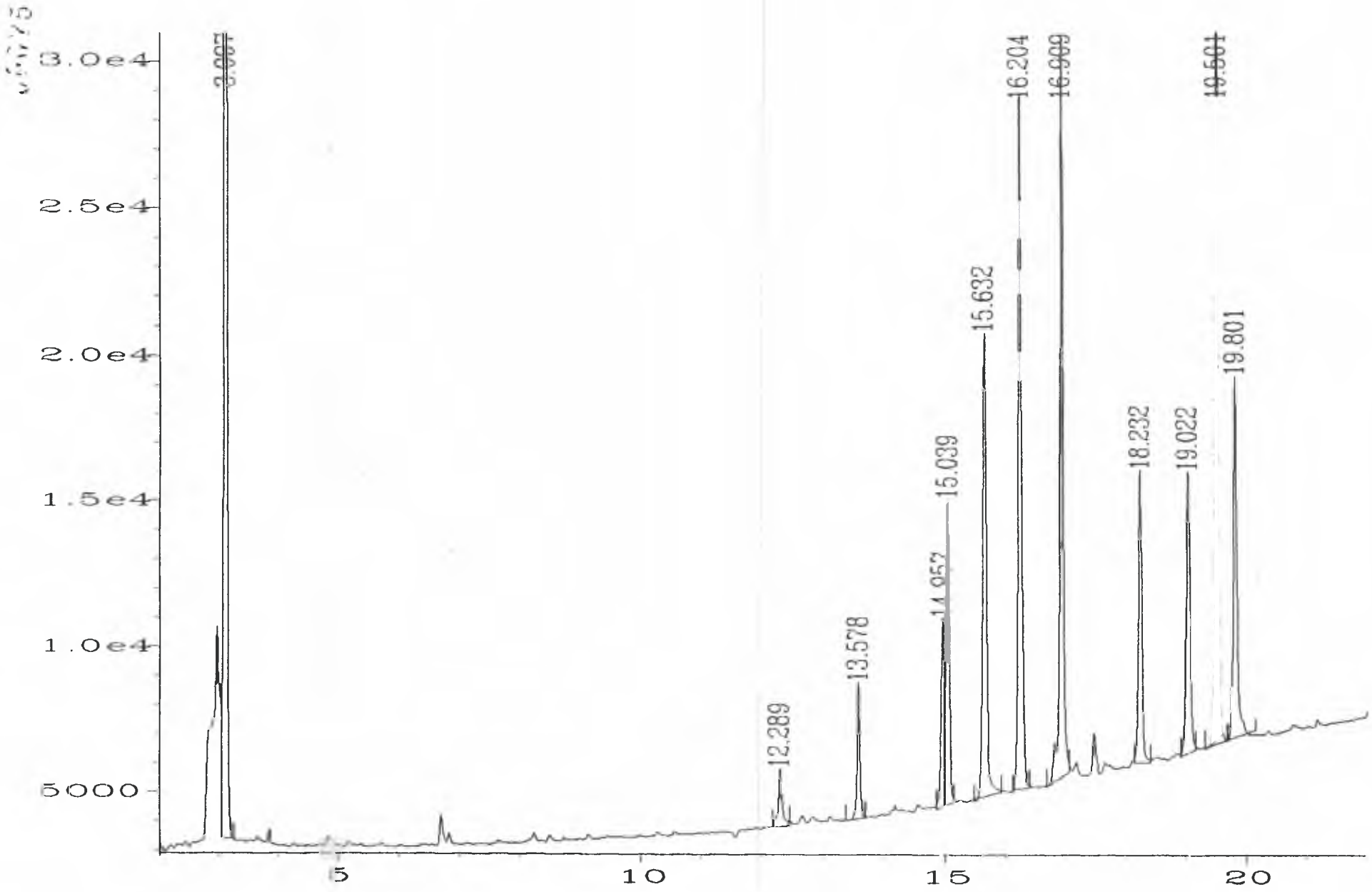
Conc. #2

					WL On Colm.		
		Lower	Stan.	Upper	(ng)	Area	CF
Dalapon	1	3.065	3.085	3.105	0.743	239513	322359
Dicamba	3	14.873	14.893	14.913	0.030	21778	733266
Mcpp	4	15.021	15.041	15.061	29.700	37644	1267
Mcpa	5	15.618	15.638	15.658	29.700	66539	2240
Dichloroprop	6	16.169	16.189	16.209	0.297	92611	311822
2,4-D	7	16.873	16.893	16.913	0.297	108978	366929
Silvex	8	18.196	18.216	18.236	0.030	37533	1263737
2,4,5-T	9	18.986	19.006	19.026	0.030	37480	1261953
Dinoseb	10	19.465	19.485	19.505	0.149	112028	754397
2,4-DB	11	19.763	19.783	19.803	0.297	50955	171566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2.0e4
1.5e4
1.0e4
5000
5
10
15
20
3.087
12.289
13.578
14.957
15.039
15.632
16.204
16.909
18.232
19.022
19.501
19.801

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\073F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 101X
Run Time Bar Code:
Acquired on : 11 Aug 92 00:13 AM
Report Created on: 13 Aug 92 11:51 PM

Page Number : 1
Vial Number : 73
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\073F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.097	239513	94885	MM	0.042	28.7776
2	12.289	9668	2020	MM	0.080	1.1616
3	13.578	17565	4722	MM	0.062	2.1104
4	14.957	21778	6529	MM	0.056	2.6166
5	15.039	37644	10474	MM	0.060	4.5229
6	15.632	66539	15935	MM	0.070	7.9947
7	16.204	92611	23900	MM	0.065	11.1272
8	16.909	108978	25526	MM	0.071	13.0937
9	18.232	37533	10049	MM	0.062	4.5096
10	19.022	37480	9694	MM	0.064	4.5032
11	19.501	112028	29889	MM	0.062	13.4602
12	19.801	50955	12430	MM	0.068	6.1222

Total area = 832292

User Modified

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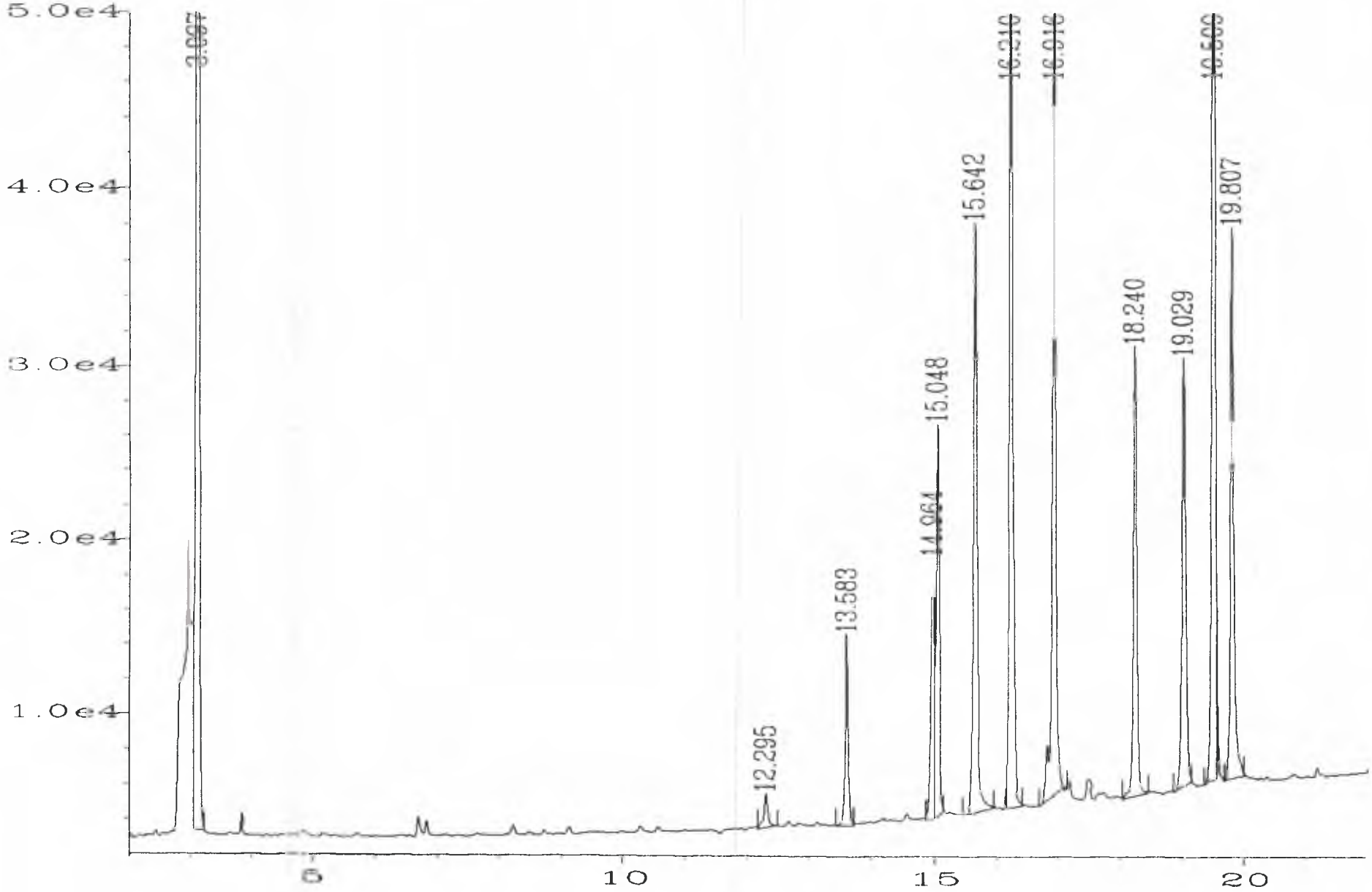
Conc #3

		Lower	Stan.	Upper	Wt. On Colm. (ng)	Area	CP
Dalapon	1	3.065	3.085	3.105	1.892	513034	271160
Dicamba	3	14.873	14.893	14.913	0.073	53546	731503
Mcpp	4	15.021	15.041	15.061	73.100	83069	1136
Mcpa	5	15.618	15.638	15.658	73.100	137360	1879
Dichloroprop	6	16.169	16.189	16.209	0.732	200203	273501
2,4-D	7	16.873	16.893	16.913	0.732	237389	324302
Silvex	8	18.196	18.216	18.236	0.073	94849	1295751
2,4,5-T	9	18.986	19.006	19.026	0.073	87591	1196598
Dinoseb	10	19.465	19.485	19.505	0.365	244442	669704
2,4-DB	11	19.763	19.783	19.803	0.732	119531	163294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2.0e4
1.0e4
3.997
12.295
13.583
14.964
15.048
15.642
16.210
16.916
18.240
19.029
19.500
19.807
5
10
15
20

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\077F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 41X
Run Time Bar Code:
Acquired on : 11 Aug 92 03:10 AM
Report Created on: 13 Aug 92 11:55 PM

Page Number : 1
Vial Number : 77
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\077F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.097	513034	201953	MM	0.042	28.1890
2	12.295	8858	1910	MM	0.077	0.4867
3	13.583	40107	10991	MM	0.061	2.2037
4	14.964	53546	15182	MM	0.059	2.9421
5	15.048	83069	22609	MM	0.061	4.5643
6	15.642	137360	33843	MM	0.068	7.5473
7	16.210	200203	52302	MM	0.064	11.0003
8	16.916	237389	58347	MM	0.068	13.0435
9	18.240	94849	25870	MM	0.061	5.2116
10	19.029	87591	24791	MM	0.059	4.8127
11	19.509	244442	70188	MM	0.058	13.4311
12	19.807	119531	31559	MM	0.063	6.5677

Total area = 1819979

User Modified

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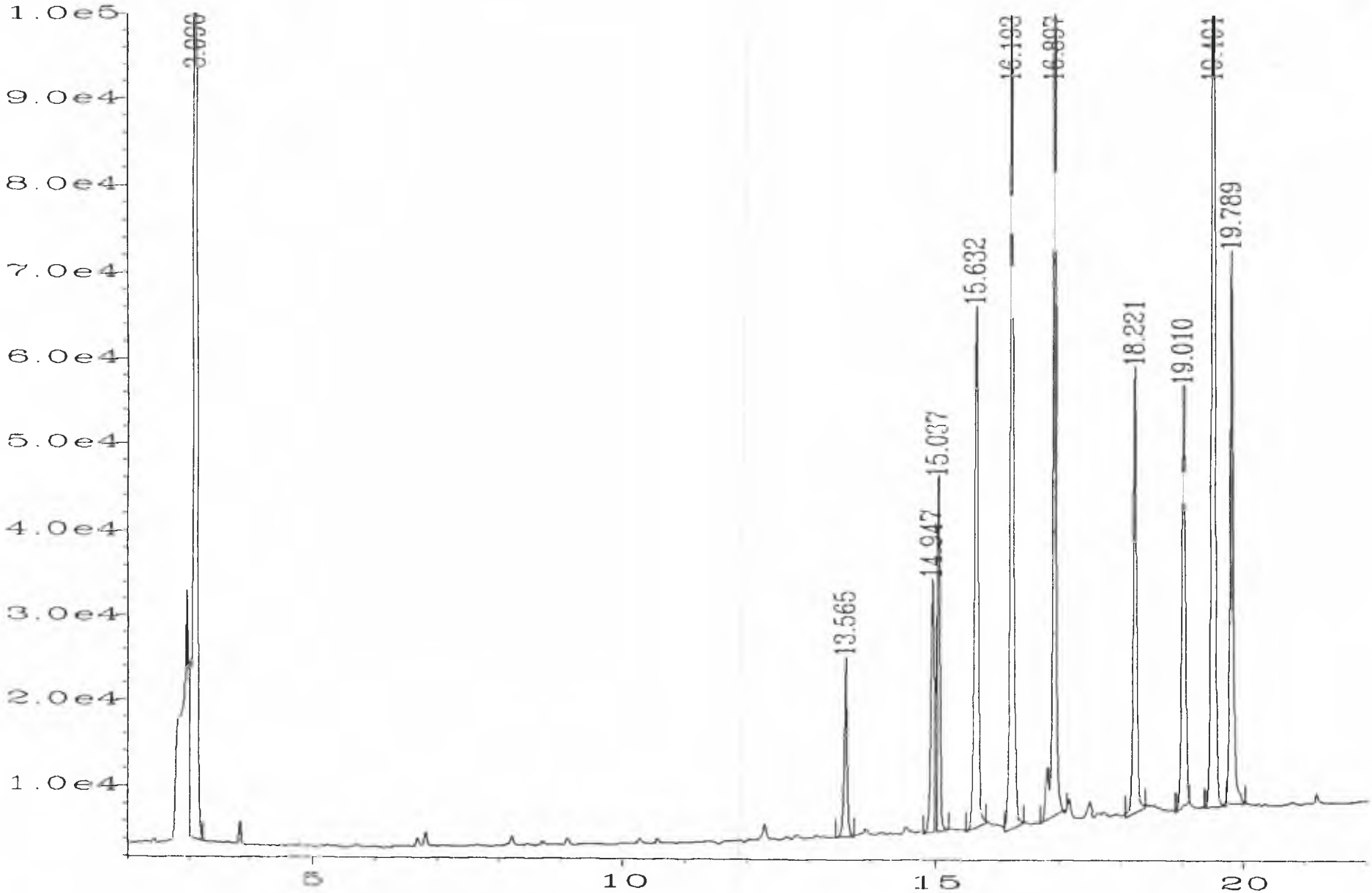
Conc. #4

		Lower	Stan.	Upper	Wt. On Colm. (ng)	Area	CF
Dalapon	1	3.065	3.085	3.105	3.570	986786	276411
Dicamba	3	14.873	14.893	14.913	0.142	103068	725831
Mcpp	4	15.021	15.041	15.061	143.000	105074	735
Mcpa	5	15.618	15.638	15.658	143.000	235064	1644
Dichloroprop	6	16.169	16.189	16.209	1.430	373571	261238
2,4-D	7	16.873	16.893	16.913	1.430	441567	308788
Silvex	8	18.196	18.216	18.236	0.143	185260	1295524
2,4,5-T	9	18.986	19.006	19.026	0.143	173475	1213112
Dinoseb	10	19.465	19.485	19.505	0.714	477297	668483
2,4-DB	11	19.763	19.783	19.803	1.430	235075	164388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5.0e4
4.0e4
3.0e4
2.0e4
1.0e4
3.000
13.565
14.947
15.037
15.632
16.192
16.897
18.221
19.010
19.101
19.789
5
10
15
20

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\086F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 21X
Run Time Bar Code:
Acquired on : 11 Aug 92 09:53 AM
Report Created on: 13 Aug 92 11:58 PM

Page Number : 1
Vial Number : 86
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\086F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.090	986786	378936	MM	0.043	29.1172
2	13.565	72782	20833	MM	0.058	2.1476
3	14.947	103068	29655	MM	0.058	3.0412
4	15.037	105074	41768	MM	0.042	3.1004
5	15.632	235064	61047	MM	0.064	6.9360
6	16.193	373571	99206	MM	0.063	11.0230
7	16.897	441567	114918	MM	0.064	13.0293
8	18.221	185260	52031	MM	0.059	5.4665
9	19.010	173475	49677	MM	0.058	5.1187
10	19.491	477297	132675	MM	0.060	14.0836
11	19.789	235075	64755	MM	0.061	6.9364

Total area = 3389019

User Modified

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Conc #5

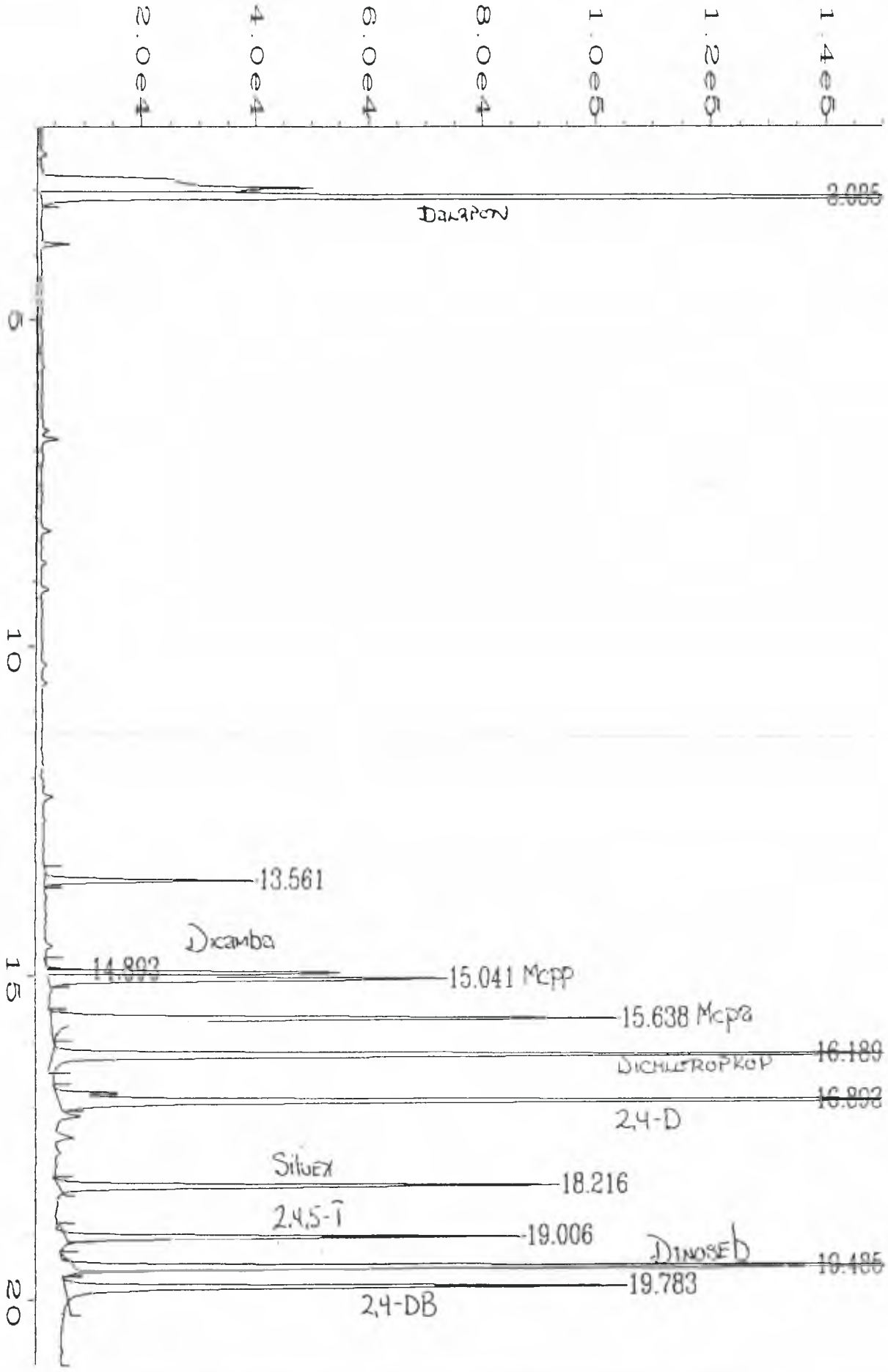
Compound	Upper Rt	Stan. Rt	Lower Rt	Wt. on Column (ng)	Area	Calib. Factor
Dalapon	3.105	3.085	3.065	6.82E+00	1604642	235354
Dicamba	14.913	14.893	14.873	2.72E-01	13504	49647
Mcpp	15.061	15.041	15.021	2.73E+02	283615	1039
Mcpa	15.658	15.638	15.618	2.73E+02	418877	1534
Dichloroprop	16.209	16.189	16.169	2.73E+00	637649	233571
2,4-D	16.913	16.893	16.873	2.73E+00	748663	274236
Silvex	18.236	18.216	18.196	2.72E-01	315597	1160283
2,4,5-T	19.026	19.006	18.986	2.72E-01	279997	1029401
Dinoseb	19.505	19.485	19.465	1.36E+00	733258	539160
2,4-DB	19.803	19.783	19.763	2.73E+00	374990	137359

Analyst: S. Kouri

Date: Aug. 10,1991

Column: Rtx-35

Method: 8150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6.0e4
8.0e4
1.0e5
1.2e5
1.4e5
8.085
Dalapon
5
10
13.561
Dicamba
14.893
15.041 Mcpp
15
15.638 Mcpa
16.189
Dichloroprop
16.893
2,4-D
Silvex
18.216
2,4,5-T
19.006
Dinoseb
19.485
19.783
2,4-DB
20

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG07\061F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 03:16 PM
Report Created on: 13 Aug 92 07:45 PM

Page Number : 1
Vial Number : 61
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG07\061F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	3.085	1604642	626243	MM	0.043	28.9722
2	13.561	127764	37266	MM	0.057	2.3068
3	14.893	13504	7542	MM	0.030	0.2438
4	15.041	283615	69976	MM	0.068	5.1207
5	15.638	418877	100879	MM	0.069	7.5629
6	16.189	637649	169114	MM	0.063	11.5129
7	16.893	748663	190057	MM	0.066	13.5173
8	18.216	315597	88722	MM	0.059	5.6982
9	19.006	279997	80854	MM	0.058	5.0554
10	19.485	733258	223296	MM	0.055	13.2392
11	19.783	374990	100011	MM	0.062	6.7705

Total area = 5538556

User Modified

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Initial calibration
RTX-35
Aug 10, 1992

00085

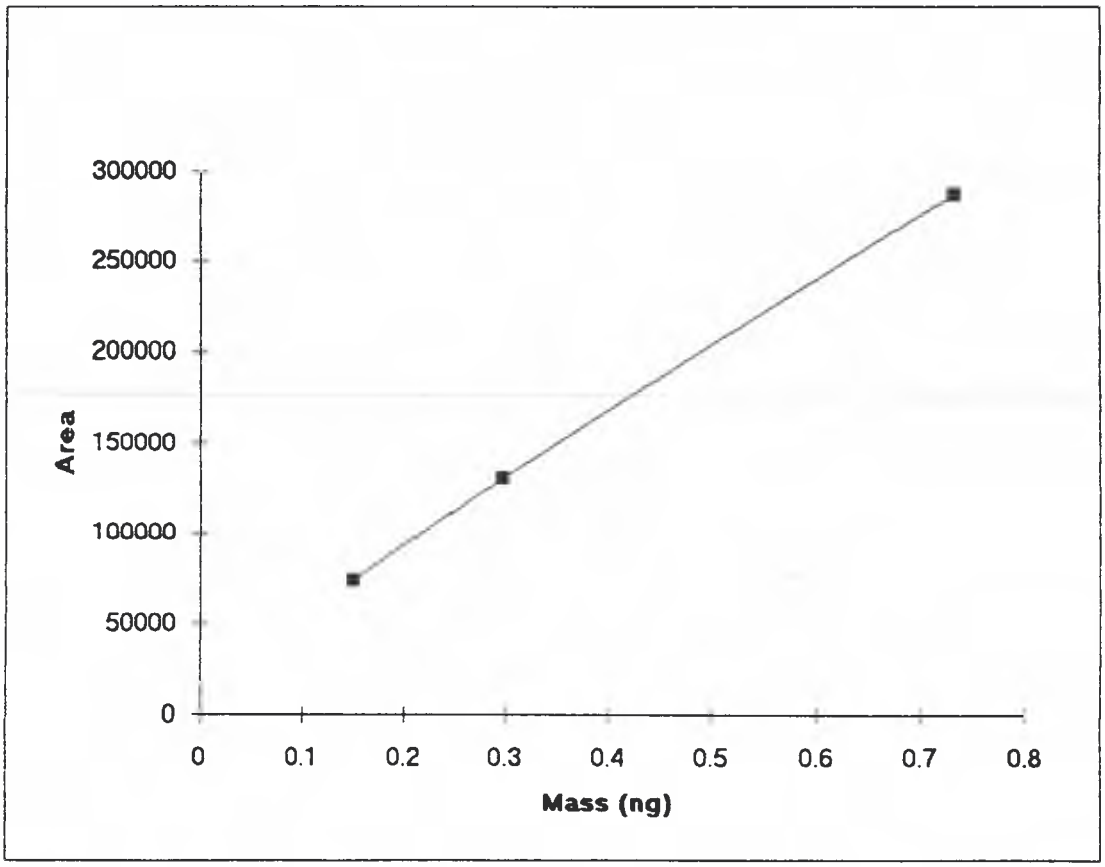
2,4-Diphenylacetic acid

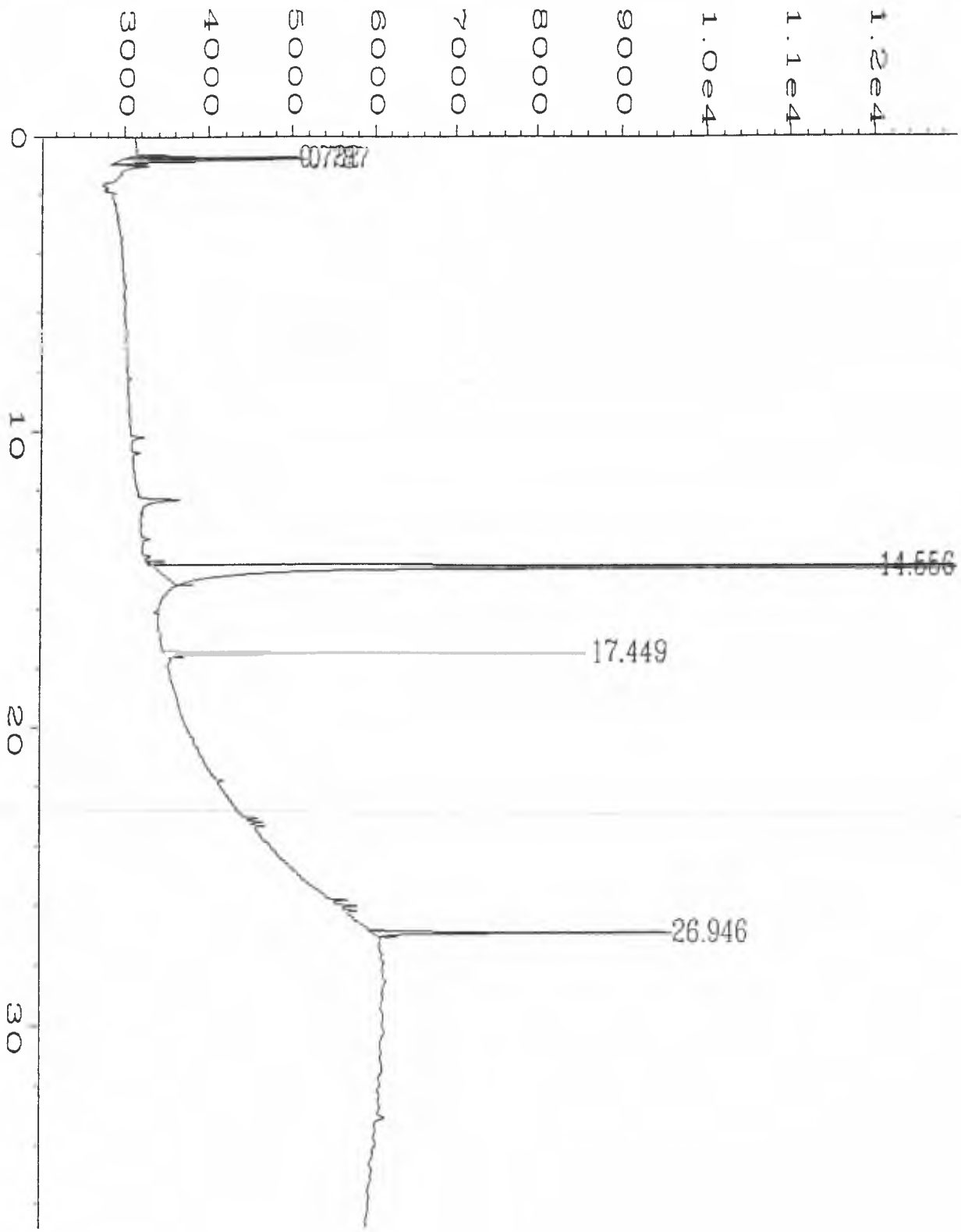
Wt. Mass (ng)	Ht. (Area)	Rf
0.149	73959	496369
0.297	131269	441983
0.732	287915	393327
1.430	436733	305408

Date: 8/10/92
Detector: ECD
Column: Rtx-35
Signal: 1

Percent RSD = 20%
Average Rf = 409272
Std. Dev= 51547.9

Cal Fact: 0.0000024





Data File Name	: C:\HPCHEM\2\DATA\Aug07\072F1401.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 72
Sample Name	: STD 5A 11X	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 14
Acquired on	: 10 Aug 92 11:27 PM	Instrument Method	: HERB1.MTH
Report Created on:	11 Aug 92 00:10 AM	Analysis Method	: HERB1.MTH

Area Percent Report

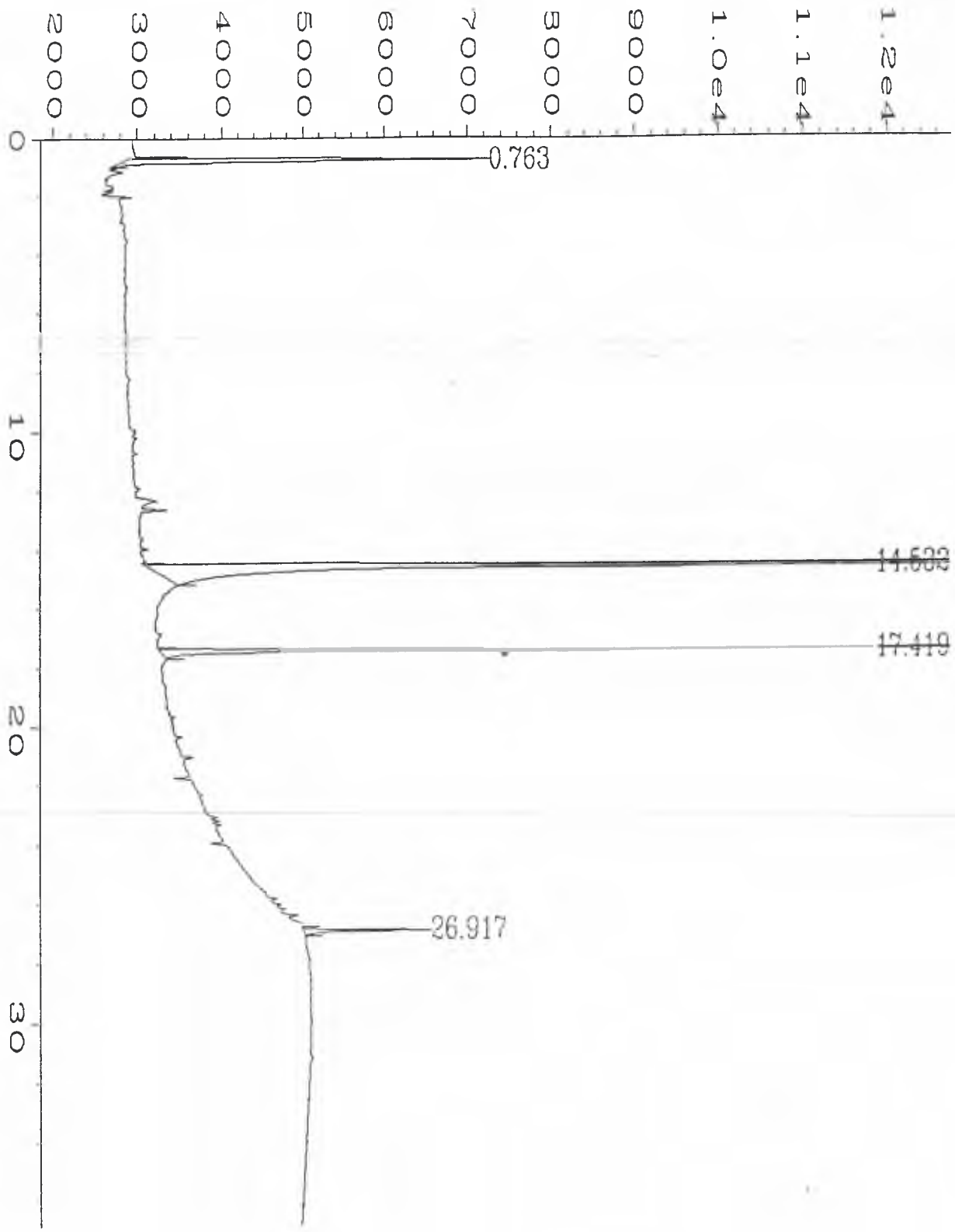
Data File Name : C:\HPCHEM\2\DATA\Aug07\072F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5A 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 11:27 PM
Report Created on: 11 Aug 92 00:11 AM

Page Number : 1
Vial Number : 72
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : HERB1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\Aug07\072F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	0.722	5888	2079	VV	0.040	1.7709
2	0.787	9573	2222	VV	0.059	2.8790
3	14.556	287915	78612	BB	0.055	86.5911
4	17.449	16953	5230	BB	0.049	5.0988
5	26.946	12170	3622	BB	0.051	3.6601

Total area = 332499



Data File Name	: C:\HPCHEM\2\DATA\Aug12\004F0101.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 4
Sample Name	: std 5a 11x	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 1
Acquired on	: 12 Aug 92 06:13 PM	Instrument Method	: HERB1.MTH
Report Created on:	12 Aug 92 06:56 PM	Analysis Method	: HERB1.MTH

Area Percent Report

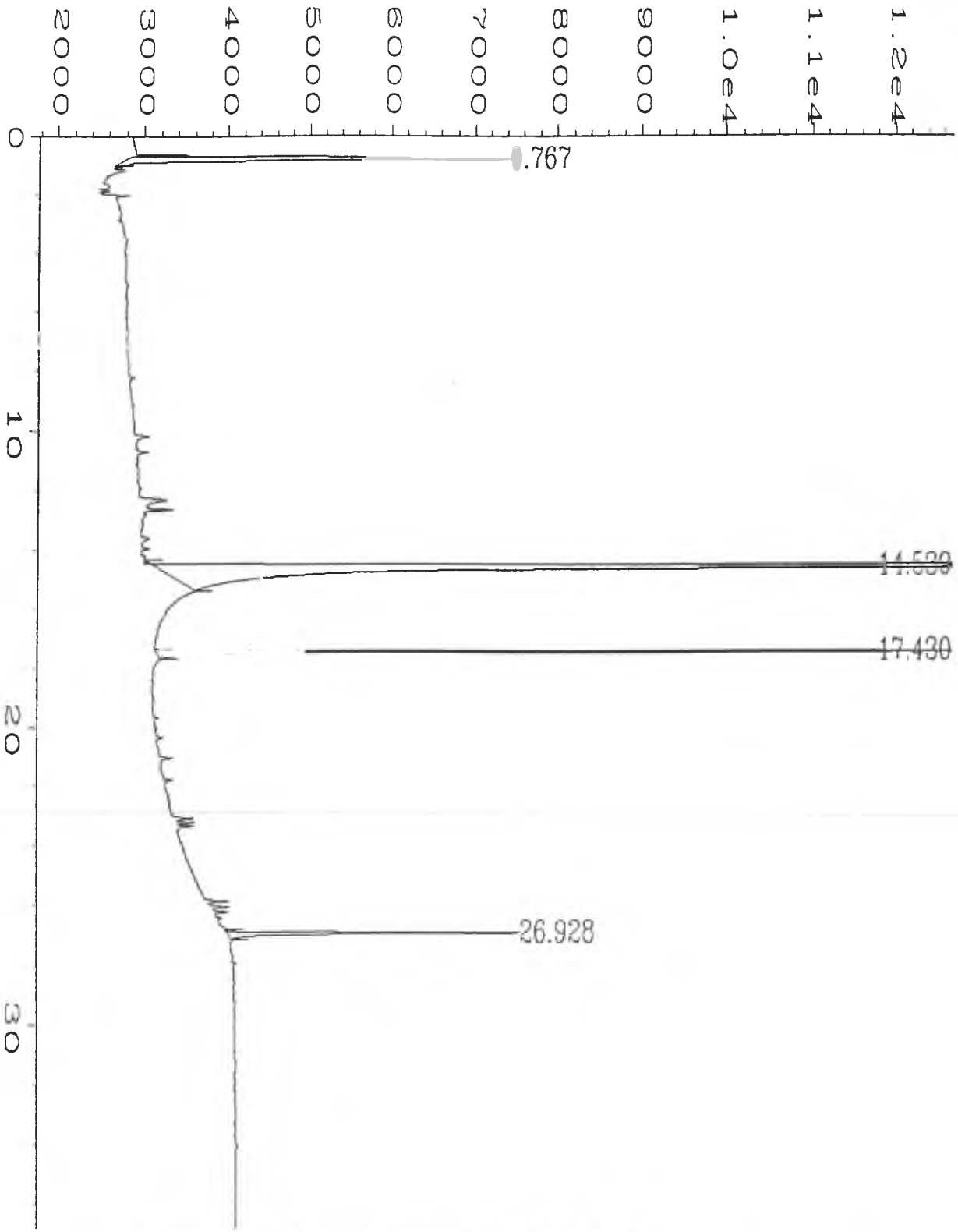
Data File Name : C:\HPCHEM\2\DATA\Aug12\004F0101.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : std 5a 11x
Run Time Bar Code:
Acquired on : 12 Aug 92 06:13 PM
Report Created on: 12 Aug 92 06:56 PM

Page Number : 1
Vial Number : 4
Injection Number : 1
Sequence Line : 1
Instrument Method: HERB1.MTH
Analysis Method : HERB1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\Aug12\004F0101.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	0.763	28377	4461	VV	0.083	8.6425
2	14.532	245680	53113	BB	0.067	74.8253
3	17.419	48299	12649	BB	0.057	14.7101
4	26.917	5982	1577	BB	0.057	1.8220

Total area = 328339



Data File Name	: C:\HPCHEM\2\DATA\Aug07\060F1401.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 60
Sample Name	: STD 5A 21X	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 14
Acquired on	: 10 Aug 92 02:28 PM	Instrument Method	: HERB1.MTH
Report Created on:	10 Aug 92 03:13 PM	Analysis Method	: HERB1.MTH

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\Aug07\060F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5A 21X
Run Time Bar Code:
Acquired on : 10 Aug 92 02:28 PM
Report Created on: 10 Aug 92 03:13 PM

Page Number : 1
Vial Number : 60
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : HERB1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\Aug07\060F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	0.767	30860	4633	VV	0.087	5.7936
2	14.539	436733	101821	BB	0.062	81.9917
3	17.430	51498	14087	BB	0.055	9.6683
4	26.928	13564	3565	BB	0.057	2.5464

Total area = 532655

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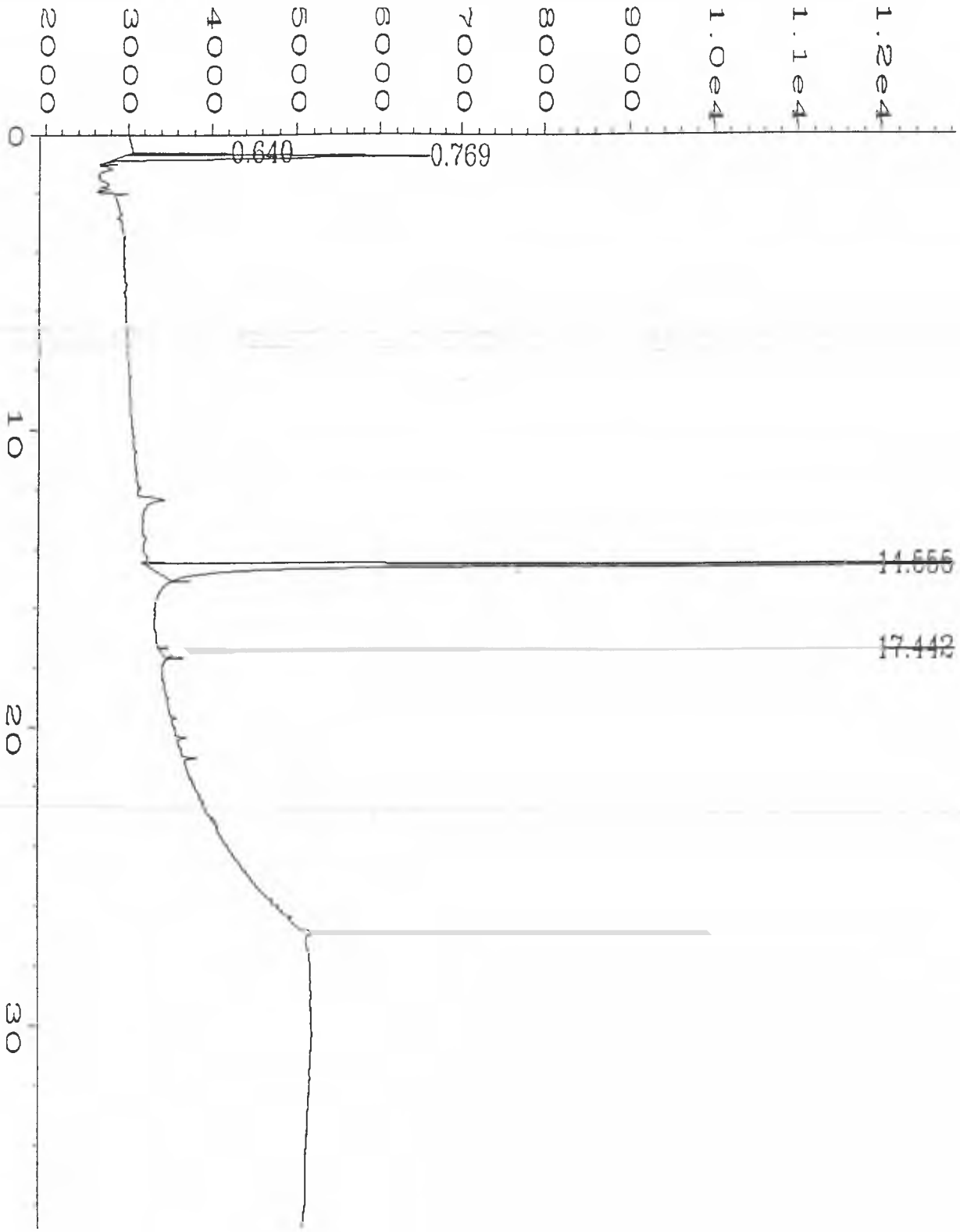


Data File Name : C:\HPCHEM\2\DATA\Aug07\091F1401.D

Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 91
Sample Name	: STD 5A 101X	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 14
Acquired on	: 11 Aug 92 01:35 PM	Instrument Method	: HERB1.MTH
Report Created on	: 11 Aug 92 02:19 PM	Analysis Method	: HERB1.MTH

Area Percent Report

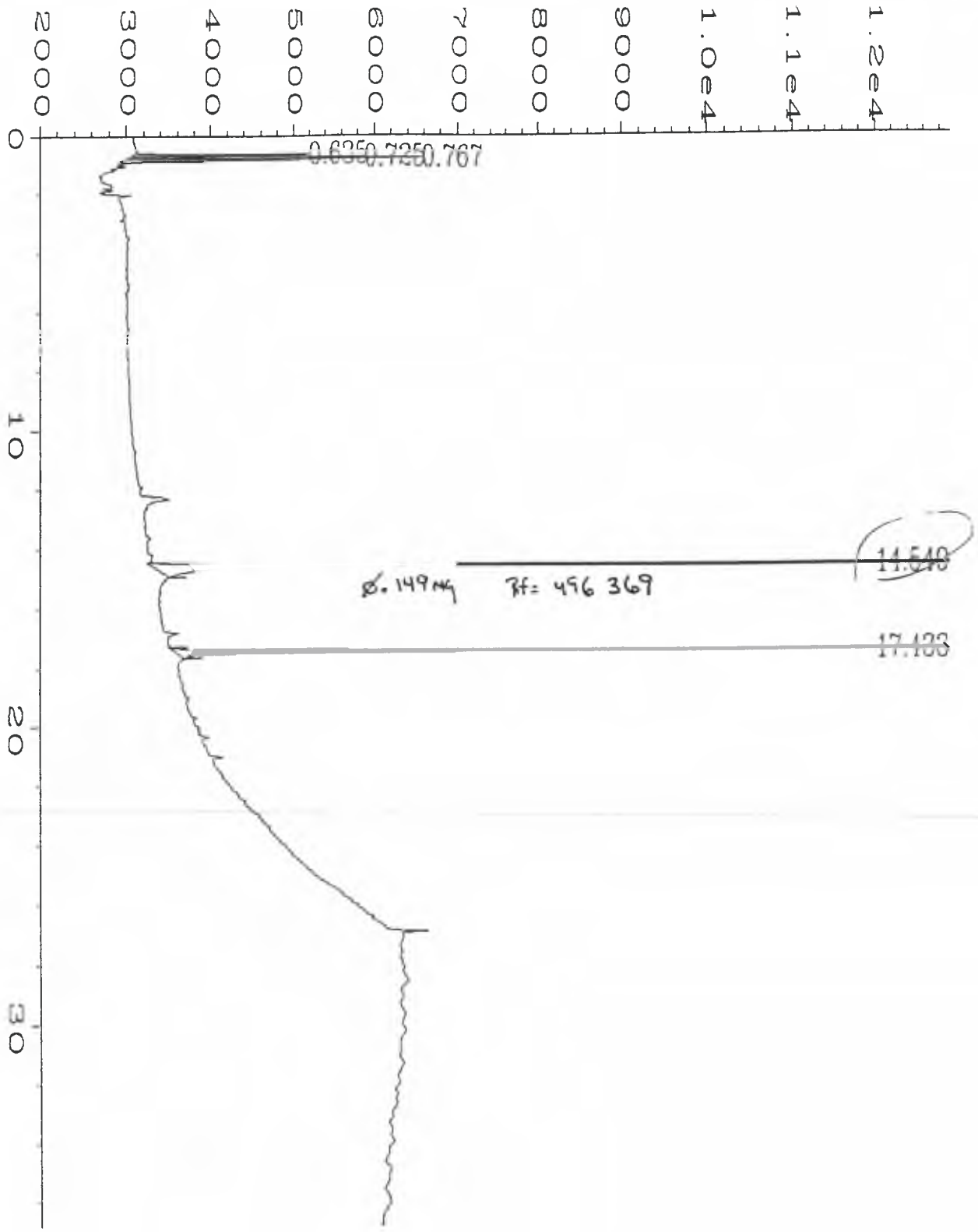
Data File Name : C:\HPCHEM\2\DATA\Aug07\091F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5A 101X
Run Time Bar Code:
Acquired on : 11 Aug 92 01:35 PM
Report Created on: 11 Aug 92 02:20 PM

Page Number : 1
Vial Number : 91
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : HERB1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\Aug07\091F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	0.640	3743	1202	BV	0.047	1.7397
2	0.769	25061	3736	VV	0.087	11.6475
3	14.555	131269	27262	BB	0.069	61.0105
4	17.442	55085	14562	BB	0.056	25.6023

Total area = 215158



Data File Name	: C:\HPCHEM\2\DATA\Aug07\085F1401.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 85
Sample Name	: STD 5A 201X	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 14
Acquired on	: 11 Aug 92 09:07 AM	Instrument Method	: HERB1.MTH
Report Created on:	11 Aug 92 09:51 AM	Analysis Method	: HERB1.MTH

Area Percent Report

Data File Name : C:\HPCHEM\2\DATA\Aug07\085F1401.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5A 201X
Run Time Bar Code:
Acquired on : 11 Aug 92 09:07 AM
Report Created on: 11 Aug 92 09:51 AM

Page Number : 1
Vial Number : 85
Injection Number : 1
Sequence Line : 14
Instrument Method: HERB1.MTH
Analysis Method : HERB1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\Aug07\085F1401.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	0.635	6171	2106	BV	0.044	3.2259
2	0.725	7685	2866	VV	0.045	4.0173
3	0.767	15673	3581	VV	0.060	8.1931
4	14.549	73959	16560	BB	0.065	38.6618
5	17.433	87809	24326	BB	0.054	45.9019

Total area = 191297

Confirmation Column

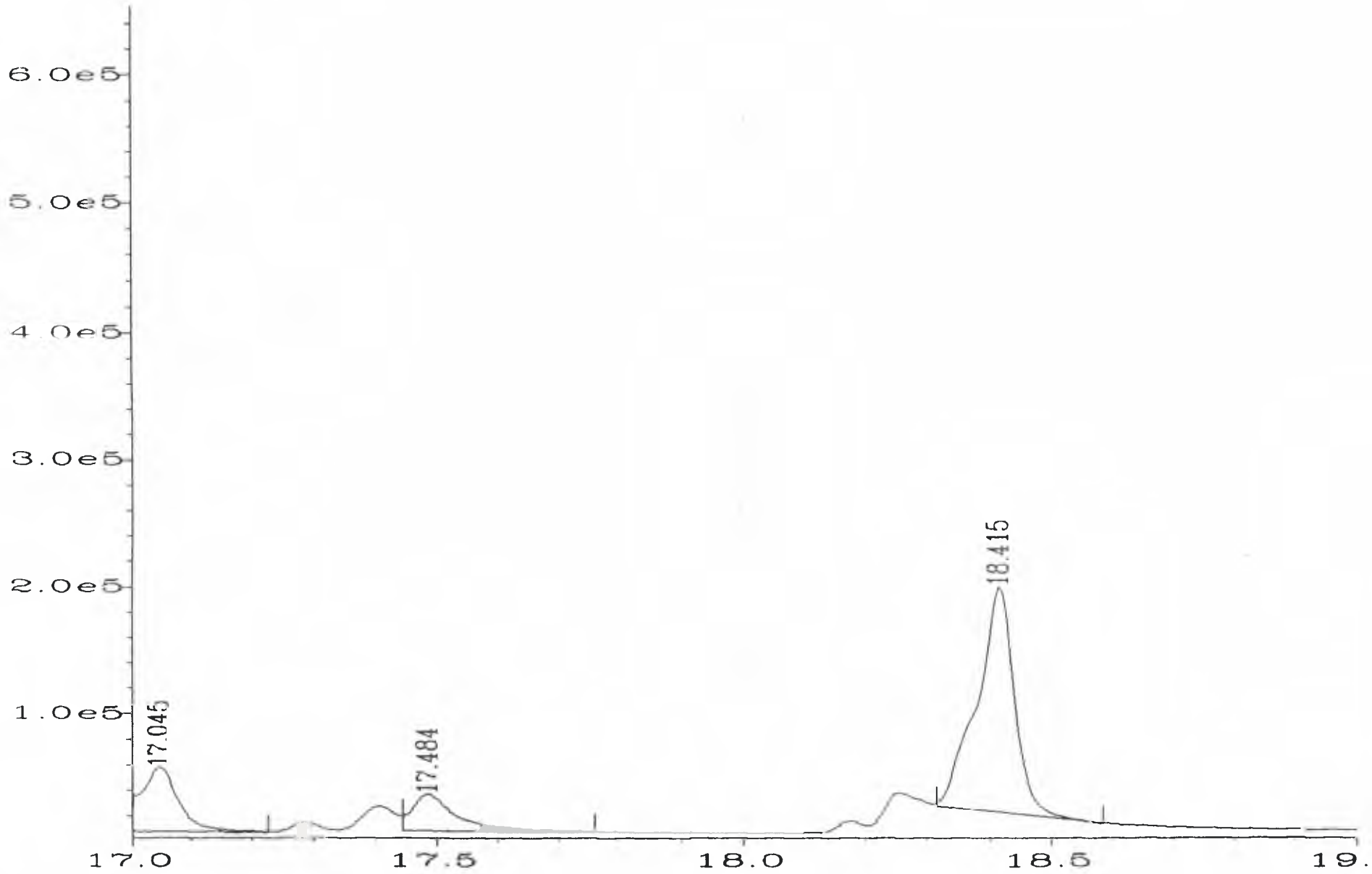
Compound	Upper Rt	Stan. Rt	Lower Rt	Wt. on Column (ng)	Area	Calib. Factor
Dalapon	2.847	2.827	2.807	6.82E+00	1578878	231575
Dicamba	12.383	12.363	12.343	2.72E-01	128646	472963
Mcpp	13.476	13.456	13.436	2.73E+02	212554	779
Mcpa	13.939	13.919	13.899	2.73E+02	322224	1180
Dichloroprop	14.221	14.201	14.181	2.73E+00	473667	173504
2,4-D	14.936	14.916	14.896	2.73E+00	652658	239069
Silvex	15.297	15.277	15.257	2.72E-01	563292	2070926
2,4,5-T	17.065	17.045	17.025	2.72E-01	281448	1034735
Dinoseb	18.435	18.415	18.395	1.36E+00	1176365	864974
2,4-DB	18.435	18.415	18.395	2.73E+00	Na	Na

Analyst: S. Kouri

Date: Aug. 10.1991

Column: Xti-5

Method: 8150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5.0e5
4.0e5
3.0e5
2.0e5
1.0e5
17.045
17.484
18.415
17.0
17.5
18.0
18.5
19.

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\061R1301.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 05:30 PM
Report Created on: 13 Aug 92 09:12 PM

Page Number : 1
Vial Number : 61
Injection Number : 1
Sequence Line : 13
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

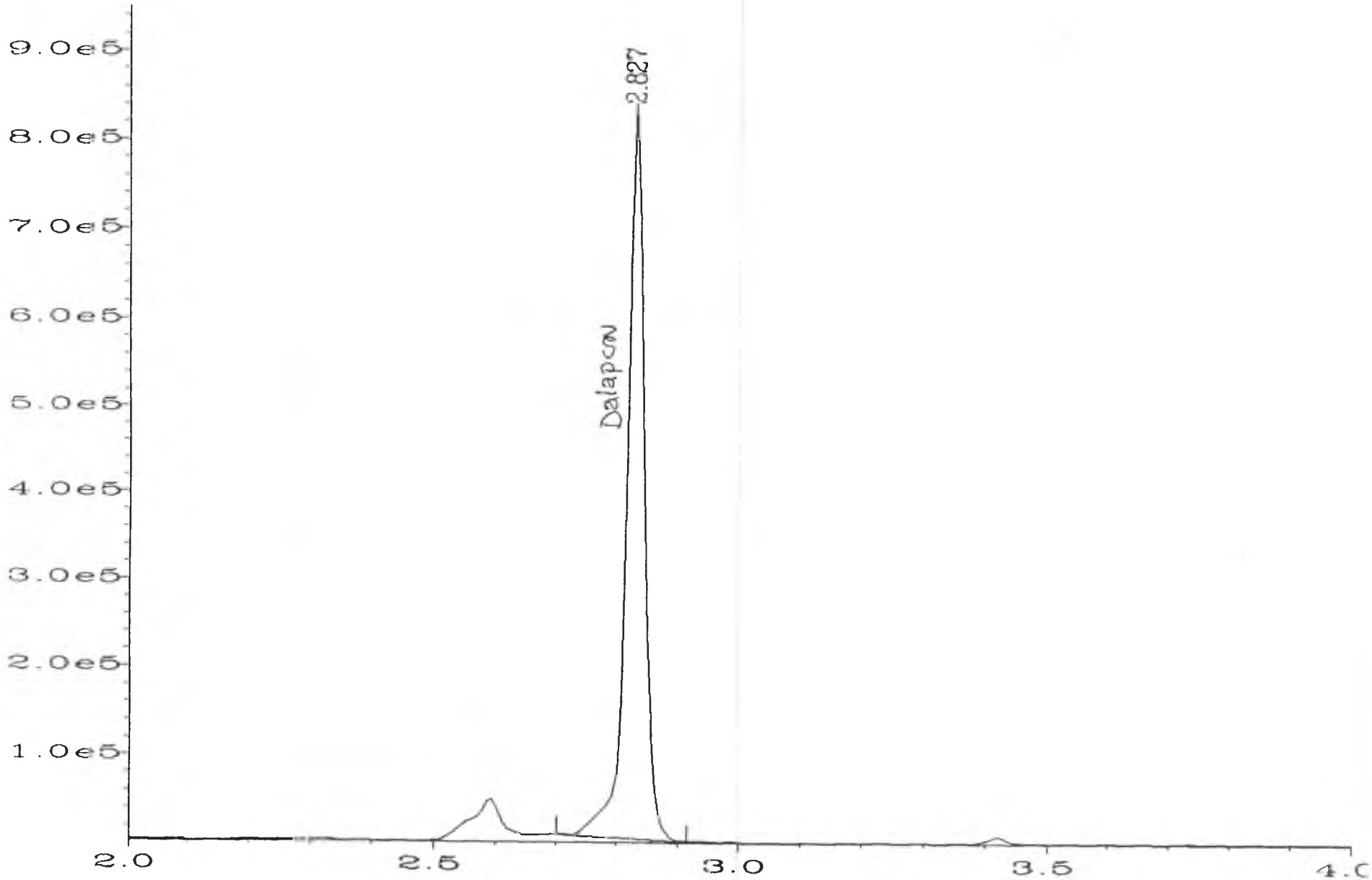
Sig. 2 in C:\HPCHEM\2\DATA\AUG07\061R1301.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.827	1578878	845114	MM	0.031	31.0109
2	12.363	128646	30441	MM	0.070	2.5267
3	13.456	212554	46465	MM	0.076	4.1748
4	13.919	322224	59144	MM	0.091	6.3288
5	14.201	473667	81890	MM	0.096	9.3033
6	14.916	652658	124396	MM	0.087	12.8189
7	15.277	563292	71456	MM	0.131	11.0637
8	17.045	281448	49911	MM	0.094	5.5279
9	17.484	145352	28607	MM	0.085	2.8549
10	18.415	732647	177595	MM	0.069	14.3900

Total area = 5091366

User Modified

==========


9.0e5
8.0e5
7.0e5
6.0e5
5.0e5
4.0e5
3.0e5
2.0e5
1.0e5
2.827
Dalapon
2.0
2.5
3.0
3.5

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\061R1301.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 05:30 PM
Report Created on: 13 Aug 92 09:06 PM

Page Number : 1
Vial Number : 61
Injection Number : 1
Sequence Line : 13
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 2 in C:\HPCHEM\2\DATA\AUG07\061R1301.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	2.827	1579979	845114	MM	0.031	28.5249
2	12.363	128646	30441	MM	0.070	2.3242
3	13.456	212554	46465	MM	0.076	3.8401
4	13.919	322224	59144	MM	0.091	5.8215
5	14.201	473667	81890	MM	0.096	8.5575
6	14.916	652658	124396	MM	0.087	11.7913
7	15.277	563292	71456	MM	0.131	10.1768
8	17.045	281448	49911	MM	0.094	5.0848
9	17.484	145352	28607	MM	0.085	2.6260
10	18.415	1176365	193021	MM	0.102	21.2529

Total area = 5535083

User Modified

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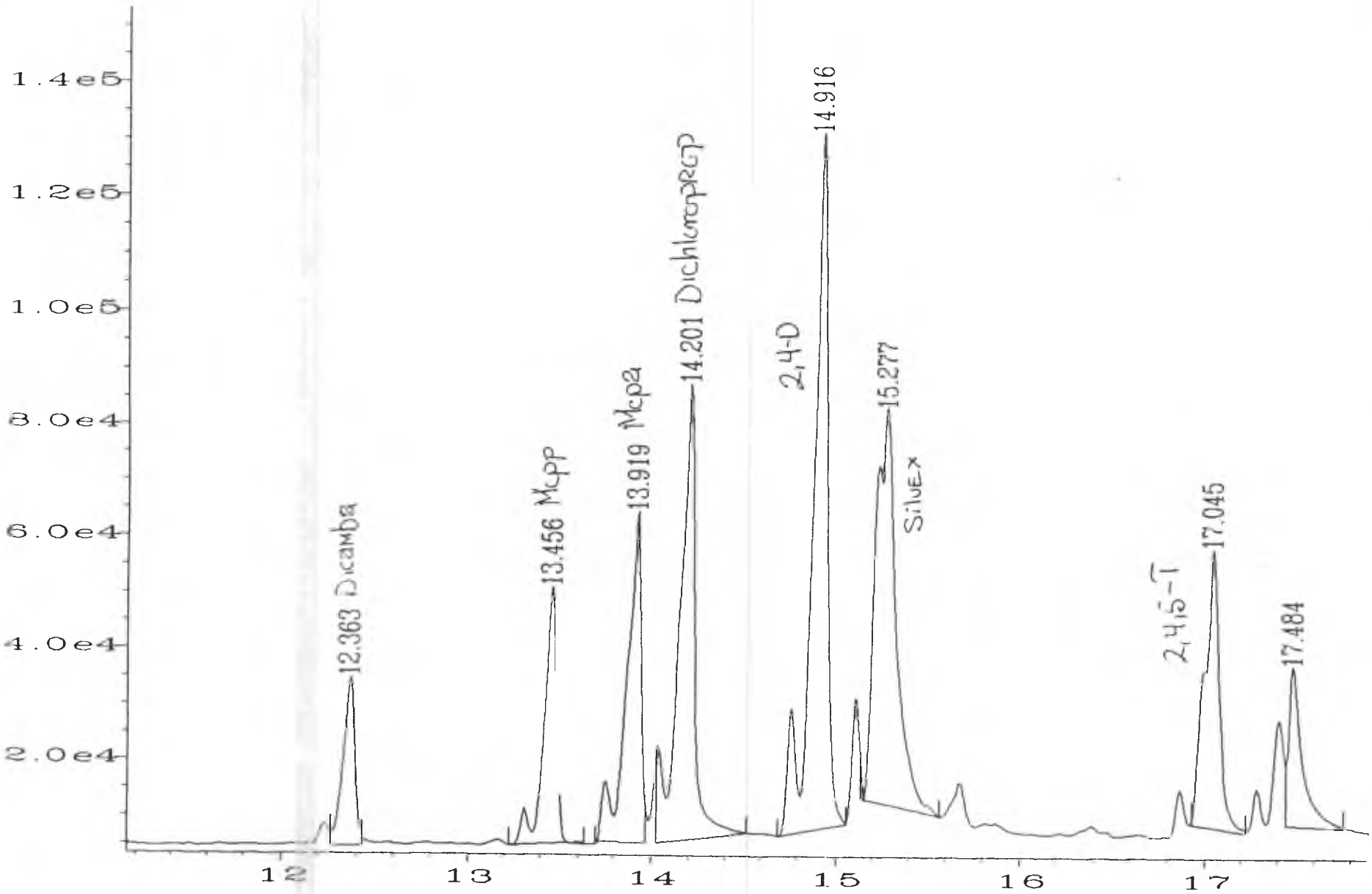
1.4e5
1.2e5
1.0e5
8.0e4
6.0e4
4.0e4
2.0e4
12.363 Dicamba
13.456 MCPP
13.919 MCPA
14.201 Dichlorprop
2,4-D
14.916
15.277
Silvex
2,4,5-T
17.045
17.484
12
13
14
15
16
17

==========

Area Percent Report

==========

Data File Name : C:\HPCHEM\2\DATA\AUG07\061R1301.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : STD 5Q 11X
Run Time Bar Code:
Acquired on : 10 Aug 92 05:30 PM
Report Created on: 13 Aug 92 09:05 PM

Page Number : 1
Vial Number : 61
Injection Number : 1
Sequence Line : 13
Instrument Method: HERB1.MTH
Analysis Method : DEFAULT.MTH

Sig. 2 in C:\HPCHEM\2\DATA\AUG07\061R1301.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	12.363	128646	30441	MM	0.070	3.2517
2	13.456	212554	46465	MM	0.076	5.3727
3	13.919	322224	59144	MM	0.091	8.1448
4	14.201	473667	81890	MM	0.096	11.9728
5	14.916	652658	124396	MM	0.087	16.4971
6	15.277	563292	71456	MM	0.131	14.2382
7	17.045	281448	49911	MM	0.094	7.1141
8	17.484	145352	28607	MM	0.085	3.6740
9	18.415	1176365	193021	MM	0.102	29.7347

Total area = 3956206

User Modified

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RAW DATA

Sample extraction log
and
Misc. Quantitation Information
for
Samples 207-1501 thru 207-1514

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
3	10	hexane					PEST1	1
4	12	hexane					MTH28120	1
4	13	hexane					MTH28120	1
5	23	std 8b 21x					MTH28120	1
5	24	STD 7KK 201X					MTH28120	1
5	25	STD 8O 11X					MTH28120	1
5	26	207-1380					MTH28120	1
5	27	207-1382					MTH28120	1
5	28	hexane					MTH28120	1
5	29	STD 7KK 101X					MTH28120	1
5	30	STD 8L 11X					MTH28120	1
5	31	std 8b 201x					MTH28120	1
5	32	207-1385					MTH28120	1
5	33	207-1372					MTH28120	1
5	34	hexane					MTH28120	1
5	35	STD 8P11X					MTH28120	1
5	36	STD 7KK 41X					MTH28120	1
5	37	STD 8M 11X					MTH28120	1
6	41	hexane					MTH28120	1
7	41	hexane					MTH28120	1
8	38	std 8b 11x					MTH28120	1
8	39	207-1373					MTH28120	1
9	41	hexane					MTH28120	1
10	43	STD 8Q 11X					MTH28120	1
10	44	std 8b 101x					MTH28120	1
10	45	blk 8/4/92 s					MTH28120	1
10	46	std 8b 41x					MTH28120	1
10	47	STD 8J 11X					MTH28120	1
10	48	207-1380 ms s					MTH28120	1
10	49	hexane					MTH28120	1
10	50	207-1380 msd s					MTH28120	1
10	51	hexane					MTH28120	1
10	52	STD 8N 11X					MTH28120	1
10	53	STD 7KK 11X					MTH28120	1
10	54	STD 8I 11X					MTH28120	1
10	55	std 8b 5x					MTH28120	1
10	56	STD 8K 11X					MTH28120	1
10	57	std 8b 2x					MTH28120	1
11	96	207-1372 231X					MTH28120	1
11	97	207-1382 231X					MTH28120	1
11	98	207-1385 231X					MTH28120	1
11	99	207-1373 121X					MTH28120	1
11	100	207-1376 121X					MTH28120	1
12	42	STD 7KK 21X					MTH28120	1
13	58	hexane					MTH28120	1
14	59	hexane					HERB1	1
14	60	STD 5A 21X					HERB1	1
14	61	STD 5Q 11X					HERB1	1
14	62	207-1507 MS 11X					HERB1	1
14	63	207-1507 MSD 11X					HERB1	1
14	64	HEXANE					HERB1	1
14	65	207-1501 11X					HERB1	1
14	66	207-1502 11X					HERB1	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
14	67	HEXANE					HERB1	1
14	68	STD 5Q 201X					HERB1	1
14	69	207-1507 11X					HERB1	1
14	70	207-1503 11X					HERB1	1
14	71	HEXANE					HERB1	1
14	72	STD 5A 11X					HERB1	1
14	73	STD 5Q 101X					HERB1	1
14	74	207-1509 101X					HERB1	1
14	75	207-1508 11X					HERB1	1
14	76	HEXANE					HERB1	1
14	77	STD 5Q 41X					HERB1	1
14	78	207-1510 11X					HERB1	1
14	79	207-1511 11X					HERB1	1
14	80	HEXANE					HERB1	1
14	81	STD 6DD 21X					HERB1	1
14	82	207-1513 11X					HERB1	1
14	83	207-1512 11X					HERB1	1
14	84	HEXANE					HERB1	1
14	85	STD 5A 201X					HERB1	1
14	86	STD 5Q 21X					HERB1	1
14	87	HEXANE					HERB1	1
14	88	207-1514 101X					HERB1	1
14	89	BLK S 8/3/92 11X					HERB1	1
14	90	HEXANE					HERB1	1
14	91	STD 5A 101X					HERB1	1
14	92	STD 5Q 5X					HERB1	1
REAR								
1	2	hexane					PEST1	1
1	3	STD 7NN					PEST1	1
1	4	STD 7OO					PEST1	1
1	5	207-1365 AC					PEST1	1
2	18	STD 7U 11X					PEST1	1
2	19	STD 7T 5X					PEST1	1
2	20	STD 7U 5X					PEST1	1
2	21	STD 7T 2X					PEST1	1
2	22	STD 7U 2X					PEST1	1
3	11	207-1382 accu11x					PEST1	1
3	12	hexane					PEST1	1
3	13	hexane					PEST1	1
4	13	hexane					MTH28120	1
5	23	std 8b 21x					MTH28120	1
5	24	STD 7KK 201X					MTH28120	1
5	25	STD 8O 11X					MTH28120	1
5	26	207-1380					MTH28120	1
5	27	207-1382					MTH28120	1
5	28	hexane					MTH28120	1
5	29	STD 7KK 101X					MTH28120	1
5	30	STD 8L 11X					MTH28120	1
5	31	std 8b 201x					MTH28120	1
5	32	207-1385					MTH28120	1
5	33	207-1372					MTH28120	1
5	34	hexane					MTH28120	1
5	35	STD 8P11X					MTH28120	1

Sample Log Table

Seq. Line	Vial Num.	Sample Name	Sample Amount	Multiplier	ISTD Amount	Cal. Line	Method Name	Inj/ Vial
13	82	207-1513 11X					HERB1	1
13	83	207-1512 11X					HERB1	1
13	84	HEXANE					HERB1	1
13	85	STD 5A 201X					HERB1	1
13	86	STD 5Q 21X					HERB1	1
13	87	HEXANE					HERB1	1
13	88	207-1514 101X					HERB1	1
13	89	BLK S 8/3/92 11X					HERB1	1

Notebook No. 1233

Continued From Page —

PROJECT 8/3/92

Client	Sample	Matrix	Dilution Diff	Extraction	Initial	Final	Spike	Spike	Due	Reported By	Comments
—	BLK	W	Ø	8015 / 3510	1000 ml	2 ml	7LL	10 ml	—	Amy L	
—	MS						6D	10 ml	—	Amy L	
—	MSD							10 ml	—	Amy L	
GEN	207-1577						7LL	10 ml	8/4	Amy L	
	-1578									Amy L	
	-1579									Amy L	
GEN	207-1585				500 ml					Amy L	(Rush) 24 hr
GEN	Sample Dup 1585				500 ml					Amy L	
HVL	207 1505	W		8080 / 3510	1L	1 mL	7EK	10 ml	8-10	7/3	
	207 1506										
	Blank		Ø								
	MS						6K				
	MSD										
GEN	2080050	S	Ø	HCLD	10g	20 ml	7LL	10 ml	8/4	—	wet soil
	2080051									—	wet soil
	BLANK									—	
HEW	BLK	S	Ø	8150	50g	2 ml	8A	200 ul	8/4		5 day rush
	MS						4S				
—	MSD						4S				
HEW	207 1507						8A				
	207 1507MS						4S				
	207 1507MSD						4S				
	2071501						8A				
	2071502										
	2071503										
	2071508										
	2071509										
	2071510										
	2071511										
	2071512										
	2071513										
	2071514										
SEA	2071616										
SEA	2071617										

Continued on Page

Read and Understood By T.S. Brown 8/11/92

+ Sanviron M

Method Information

Method 8150 Herbicide Program for columns RTX-35 and XTI-5
Entered by M.Bender on January 24,1992

Run Time Checklist

Pre-Run Program:	none
Name:	
Parameter:	
Data Acquisition:	On
Data Analysis:	On
Sig. 2 Mth:	none
Post-Run Program:	none
Name:	
Parameter:	

Injector Information

Injection Source:	Auto
Injection Location:	Dual
Front:	
Sample Washes:	2
Sample Pumps:	2
Sample Volume:	3 stops
Viscosity Delay:	0 sec.
Solvent A Washes:	2
Solvent B Washes:	2
On-Column:	No
Rear:	
Sample Washes:	2
Sample Pumps:	2
Sample Volume:	3 stops
Viscosity Delay:	0 sec.
Solvent A Washes:	2
Solvent B Washes:	2
On-Column:	No

Purge A/B:

	Init Value	On Time (Min.)	Off Time (Min.)
A (Valve 3)	On	0.75	0.00
B (Valve 4)	On	0.75	0.00

Temperature Information

Zone Temperatures:

	Set point
Inl. A	250 C.
Inl. B	250 C.
Det. A	350 C.
Det. B	350 C.
Aux.	Off

Oven Parameters:

Oven Equib. Time:	3.00 Min.
Oven Max:	450 C.
Oven	On
Cryo	Off
Ambient:	25 C.
Cryo Blast	Off

Method: C:\HPCHEM\2\METHODS\HERB1.MTH

Oven Program:

	Set Point
Initial Temp:	60 C.
Initial Time:	0.00 Min.

Level	Rate (C./Min.)	Final Temp. (C.)	Final Time. (Min.)
1	8.00	275	10.0
2(A)	0.00		
3(B)			

Next Run Time: 36.88 Min.

Signal Information

Save Data: Both

Signal 1

Source:	Det. A
Peak Width:	0.167 Min.
Data Rate:	2.500 Hz.
Data Storage:	All

Signal 2

Source:	Det. B
Peak Width:	0.167 Min.
Data Rate:	2.500 Hz.
Data Storage:	All

Valves/Relays Information

Initial Setpoints:

5890 Valves:

Valve 1:	Off
Valve 2:	Off
Valve 3 (Purge A):	On
Valve 4 (Purge B):	On

Detector Information

Detector	Type	State
A	ECD	On
B	ECD	On

Sequence Recalibration Table

Cal. Line	Cal. Level	Update Response Factor	Update Retention Times	Recalib Interval

Signal Plot Information

Signal	Attn. (2^)	Offset (%)	Time (Min.)
1	0	10	40
2	0	10	40

Integration Events

Events:	Value:	Time:
Initial Area Reject	1	INITIAL
Initial Peak Width	0.040	INITIAL
Shoulder Detection	OFF	INITIAL
Initial Threshold	3	INITIAL

Report Specification

Destination: Printer
Based on: Area
Calculations: Percent
Output: Chromatogram
Report
Report Header: On Chromatogram
On Each Report Page

Graphics Print Options

Layout: Full Size
Title: Vertical
Include:
Axes Units: On
Retention Times: On
Baselines: On
Retention Times Font: Default 16

Calibration Table

Pk#	RT	Lvl	ng/ul	Amt/Area	Ref Istd I#	Name
1	6.897	1	0.0	0.0	1	TCX
		3	0.2182	4.2384e-007		
2	9.643	1	0.2182	3.2077e-007	1	a-BHC
3	11.343	1	0.2182	3.6136e-007	1	g-BHC
4	13.117	1	0.2182	4.8231e-007	1	Hept
5	18.541	1	0.0	0.0	1	
6	18.893	1	0.0	0.0	1	
7	20.150	1	0.0	0.0	1	
8	20.306	1	0.0	0.0	1	
9	21.866	1	0.0	0.0	1	
10	22.727	1	0.0	0.0	1	
11	24.170	1	0.0	0.0	1	
12	24.640	1	0.0	0.0	1	
13	25.089	1	0.0	0.0	1	
14	26.085	1	0.0	0.0	1	
15	26.236	1	0.0	0.0	1	
16	26.726	1	0.0	0.0	1	
17	27.991	1	0.0	0.0	1	
18	28.154	1	0.0	0.0	1	
19	28.706	1	0.0	0.0	1	
20	34.666	1	0.0	0.0	1	

Calibration Settings

Title:

113

Reference window:	5.000 %
Non-reference window:	5.000 %
Units of amount:	ng/ul
Multiplier:	1.0
RF uncal peaks:	0.0
Sample Amount:	0.0

Sample ISTD Information

No Sample ISTD Amounts

Multilevel Information

Fit: Linear
Origin: Force

DATA PACKAGE
PERCENT SOLIDS DETERMINATION

CLIENT: HONG WEST & ASSOCIATES

CASE #: 207/1501-1514

Prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell, WA 98011

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Matrix:	Soil		
Lynnwood, WA 98036	Analysis for:	Total Solids	Received:	Jul 28, 1992
Attention: Doug Geller	First Sample #:	207-1501	Reported:	Aug 17, 1992

LABORATORY ANALYSIS FOR: Total Solids

Sample Number	Sample Description	Sample Result %
207-1501	DP-1	81
207-1502	DP-2	82
207-1503	DP-3	82
207-1504	DP-3A	84
207-1507	DF-6/MS/MSD	84
207-1508	DF-7	79
207-1509	DF-8	84
207-1510	DF-9	82
207-1511	DF-10	81
207-1512	DF-11	91
207-1513	DF-12	88

North Creek Analytical routinely provides analytical results for soils, sediments or sludges on a WET WEIGHT "as received" basis.
To attain dry weight equivalents for regulatory compliance, divide the soil result by the decimal fraction of percent solids.
The results in this report apply only to the samples analyzed, as indicated on the custody document.
This analytical report is to be reproduced only in its entirety.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		
19730 64th Avenue W.	Matrix:	Soil		
Lynnwood, WA 98036	Analysis for:	Total Solids	Received:	Jul 28, 1992
Attention: Doug Geller	First Sample #:	207-1514	Reported:	Aug 17, 1992

LABORATORY ANALYSIS FOR: Total Solids

Sample Number	Sample Description	Sample Result %
207-1514	DF-13	88

North Creek Analytical routinely provides analytical results for soils, sediments or sludges on a WET WEIGHT "as received" basis.
To attain dry weight equivalents for regulatory compliance, divide the soil result by the decimal fraction of percent solids.
The results in this report apply only to the samples analyzed, as indicated on the custody document.
This analytical report is to be reproduced only in its entirety.

NORTH CREEK ANALYTICAL inc

Scott Cocanour
Laboratory Director

TURNAROUND TIME 10

10 Aug

CLIENT: HONG

Client Project ID: VARL-90042
Matrix: Soil
Analysis for: Total Solids
First Sample #: 2071501

Received:
Reported: 07-28

LABORATORY ANALYSIS FOR: Total Solids

Sample Number	A WEIGHT OF PAN (g)	B WEIGHT OF WET Sx + PAN(g)	C WEIGHT OF DRIED Sx + PAN (g)	D SAMPLE RESULT
2071501	1.1	13.3	11.0	81
1502	1.1	16.2	13.5	82
1503	1.1	11.6	9.7	82
~~1504~~	1.1	15.1	12.8	84
~~1505~~	WATER	—	—	—
~~1506~~	WATER	—	—	—
1507	1.1	13.5	11.5	84
1508	1.1	17.1	13.7	79
1509	1.1	13.4	11.4	84
1510	1.1	13.5	11.3	82
1511	1.1	14.2	11.7	81

Calculation: $D = \frac{(C - A) \times 100}{(B - A)}$

TURNAROUND TIME _____

00005

CLIENT: _____

Client Project ID:
Matrix: Soil
Analysis for: Total Solids
First Sample #:

Received:
Reported:

LABORATORY ANALYSIS FOR: Total Solids

Sample Number	A WEIGHT OF PAN (g)	B WEIGHT OF WET Sx + PAN(g)	C WEIGHT OF DRIED Sx + PAN (g)	D SAMPI RESUI
207~~2~~1512	1.1	14.1	12.9	91
1513	1.1	10.8	9.6	88
1514	1.1	12.3	11.0	88

Calculation: $D = \frac{(C - A) \times 100}{(B - A)}$

DATA PACKAGE
ORGANOPHOS PESTICIDES - METHOD 8140

CLIENT: HONG WEST & ASSOCIATES

CASE #: 207/1501-1514

Prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell, WA 98011

NORTH CREEK ANALYTICAL

ORGANOPHOS PESTICIDES - METHOD 8140
CASE NARRATIVE

CLIENT: Hong West & Associates
CASE #: 207/1501-1514

Eleven soil samples were analyzed for Organophosphorous Pesticides by EPA Method 8140. All samples were extracted and analyzed within method hold times.

All QC results were within acceptable limits.

The initial calibration concentrations were 0.1, 0.2, 0.5, 1.0, 1.5, 2.0 and 3.0 ng.

The continuing calibration run on 8/3/92 had more than the allowed 20% compounds out of the +/- 30% range. There were no compounds detected in the sample analyses and the sample results were accepted without reanalysis.
A second continuing calibration was analyzed on 8/4/92 and was acceptable.
The concentration for the continuing calibration was 2.0 ng.

The MS & MSD were calculated from the continuing calibration.

The data package has been designed to provide sufficient information for stand-alone data validation under SW 846 Method 8140.

" I certify that this data package is in compliance with the Method stated above both technically and for completeness,for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Dennis D. Wells ,QA Director

00003

Pag 1 of 2

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HONG WEST & ASS.

ADDRESS:

PHONE: 774-0106 FAX:

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

PROJECT NAME: YARL

PROJECT NUMBER: 90042

SAMPLED BY: D. KOVANEN

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pest. 8080	8240	Cl. Herb 8150	8140	TCLP Extraction	Test Volatile Extraction			COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DP-1	2-27-92/1330	S	3	X	X	X	X	X	X	DK		8140 contained	207 1501
2 DP-2	1340	S	3	X	X	X	X	X	X	DK		in 4 oz.	1502
3 DP-3	1420	S	3	X	X	X	X	X	X	D		bottles.	1503
4 DP-3 A	1410	S	2					X	X		DK		~~1504~~
5 DP-4	1400	W	3	X	X	X	X	X	X	DK.			1505
6 DP-5	1430	W	3	X	X	X	X	X	X	DK.			1506
7 DF-6/MS/MSD	1540	S	3	X	X	X	X	X	X	DK			1507
8 DF-7	1538	S	3	X	X	X	X	X	X	DK			1508
9 DF-8	1535	S	3	X	X	X	X	X	X	DK		TOTAL # OF CONTAINERS	1509
10 DF-9	1530	S	3	X	X	X	X	X	X	DK		RECEIVED?	1510

RELINQUISHED BY: D. Kovanen DATE: 7-28-92 RECEIVED BY: PD Neely DATE: 07.28.92

FIRM: HWA TIME: 1510 FIRM: NCA TIME: 3:10

RELINQUISHED BY: DATE: RECEIVED BY: DATE:

FIRM: TIME: FIRM: TIME:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

G0004

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HWA

ADDRESS:

PHONE: 774-0106 FAX:

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

PROJECT NAME:

PROJECT NUMBER: 90042

SAMPLED BY: D.K.

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pet. 8080	8240	8150	8140	COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DF-10	7-27-92/1525	S	3	X	X	X	X		207511
2 DF-11	1520			X	X	X	X		1512
3 DF-12	1510			X	X	X	X		1513
4 DF-13	1500			X	X	X	X		1514
5									
6									
7									
8									
9								TOTAL # OF CONTAINERS	
10								RECEIVED?	

RELINQUISHED BY: D. Kovacs DATE: 7-28-92
FIRM: HWA TIME: 1510

RECEIVED BY: B. Nely DATE: 07-28-92
FIRM: NCA TIME: 1510

RELINQUISHED BY: DATE:
FIRM: TIME:

RECEIVED BY: DATE:
FIRM: TIME:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

PAGE 2 OF 2

SAMPLE RESULTS

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-1	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1501	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:110
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

For S.C.
8/18

Version: 860/V3.0 Printed: [illegible] 1992 at [illegible] Page [illegible]
Node: SAVAX1 GC Project: NOTE Date: [illegible]
Waters GC Report Using Multi-method [illegible] Line [illegible]

SAMPLE
ID. - DP-1

H2074755 3-Aug-1992 22:41:43
30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	1
Channel	1	Manual injection vial	11
Injection	1	Total injections	1
Run time	29.00 min	Sample rate	1.00 [illegible]
Injection volume	2 uL	Mode	Area [illegible]
Acquisition version	LAC/E/V3.0	Processing version	V3.1

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

Channel:
FPD

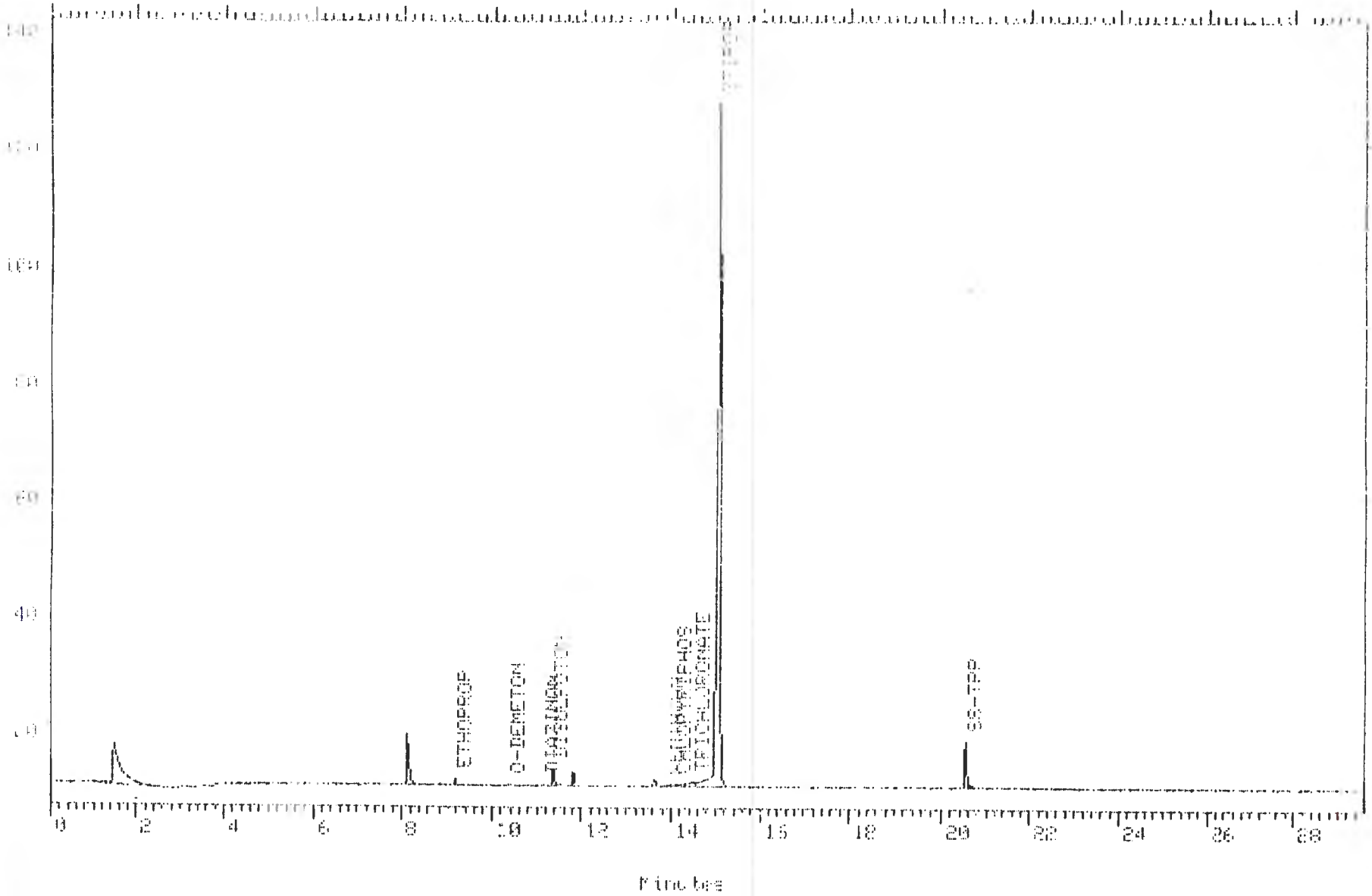
Method:
DB-5, 30M X 0.32mm X 0.25um
FPD
8140
72KPA

Sample:
External vial 11

NO

File ID	H2074755
Client ID	2071501
Vol. Inj.	2ul
Dil./Conc.	30g:5ml
Detector	FPD/DB-5
Port No.	GCMP 14

00008


ETHOPROP
O-DEMETON
DIAZINON
CHLORPYRIFOS
TRICHLORONATE
SS-TPP
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Minutes

Varian GC Report using data [illegible]
R2074755 3-Aug-1992 22:41:45

00009

Conditions:
Sample amount — Internal standard amt
Scale factor — Mode — Analysis
Keyboards of Remote Devices Unlocked

Integrate YES — Threshold [illegible] uV/sec — Peak Width [illegible] sec
Min Area [illegible] uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset 0.00 sec
Relative Peak Window 2% — Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	[illegible]	852	[illegible]	VV	-	
UNKNOWN	1.150	616	176	VV	-	
UNKNOWN	1.250	1164	216	VV	-	
UNKNOWN	1.333	1165	260	VV	-	
UNKNOWN	1.417	5762	321	VV	-	
UNKNOWN	1.467	83379	6769	VV	-	
UNKNOWN	3.200	524	95	VV	-	
UNKNOWN	4.883	516	118	BB	-	
DICHLOVOS	5.833	-	-	NF	-	
MEVINPHOS	7.217	-	-	NF	-	
UNKNOWN	8.150	21639	9408	VB	-	
S-DEMETON	8.900	-	-	NF		
ETHOPROP	9.167	2578	1193	BV	[illegible]	< DL
NALED	9.450	-	-	NF		
PHORATE	9.850	-	-	NF	-	
O-DEMETON	10.383	1016	340	BV	[illegible]	dnm
DIAZINON	11.150	1038	348	BV	[illegible]	< DL
DISULFOTON	11.350	10228	2834	VV	147.[illegible]	104 (5/50) = 17 < DL
UNKNOWN	11.817	6666	2440	BV	-	
PARATHION	12.550	-	-	NF	-	
RONNEL	12.967	-	-	NF	-	
UNKNOWN	13.633	5041	1382	VV	-	
UNKNOWN	13.817	897	163	VV	-	
FENTHION	13.900	1127	216	VV	[illegible]	dnm
~~CHLORPYRIFOS~~	14.017	2140	333	VV	[illegible]	< DL
UNKNOWN	14.133	1851	315	VV	-	
UNKNOWN	14.350	5037	527	VV	-	
TRICHLORONATE	14.500	6210	695	VV	111.[illegible]	dnm
STIROPHOS	15.067	535296	116945	VV	21502.[illegible]	dnm
TOKUTHION	16.217	-	-	NF	-	
MERPHOS	16.867	-	-	NF	-	
FENSULFOTHION	17.050	-	-	NF	-	
BOLSTAR	19.100	-	-	NF	-	
SS-TPP	20.550	27655	7805	BV	[illegible]	880
UNKNOWN	20.667	2279	606	VV	-	
AZINPHOS	23.000	-	-	NF	-	
COUMAPHOS	24.983	-	-	NF	-	

Total Area 734676 Total Amount 22802.896 Total Height [illegible]

*dnm = does not match - ie not in our RT window

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-2	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1502	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:93
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

2071507.HWA <11>

DP-Z

H2074756 3-Aug-1992 23:16:42

30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	4
Channel	1	Manual Injector Vial	12
Injection	1	Total Injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

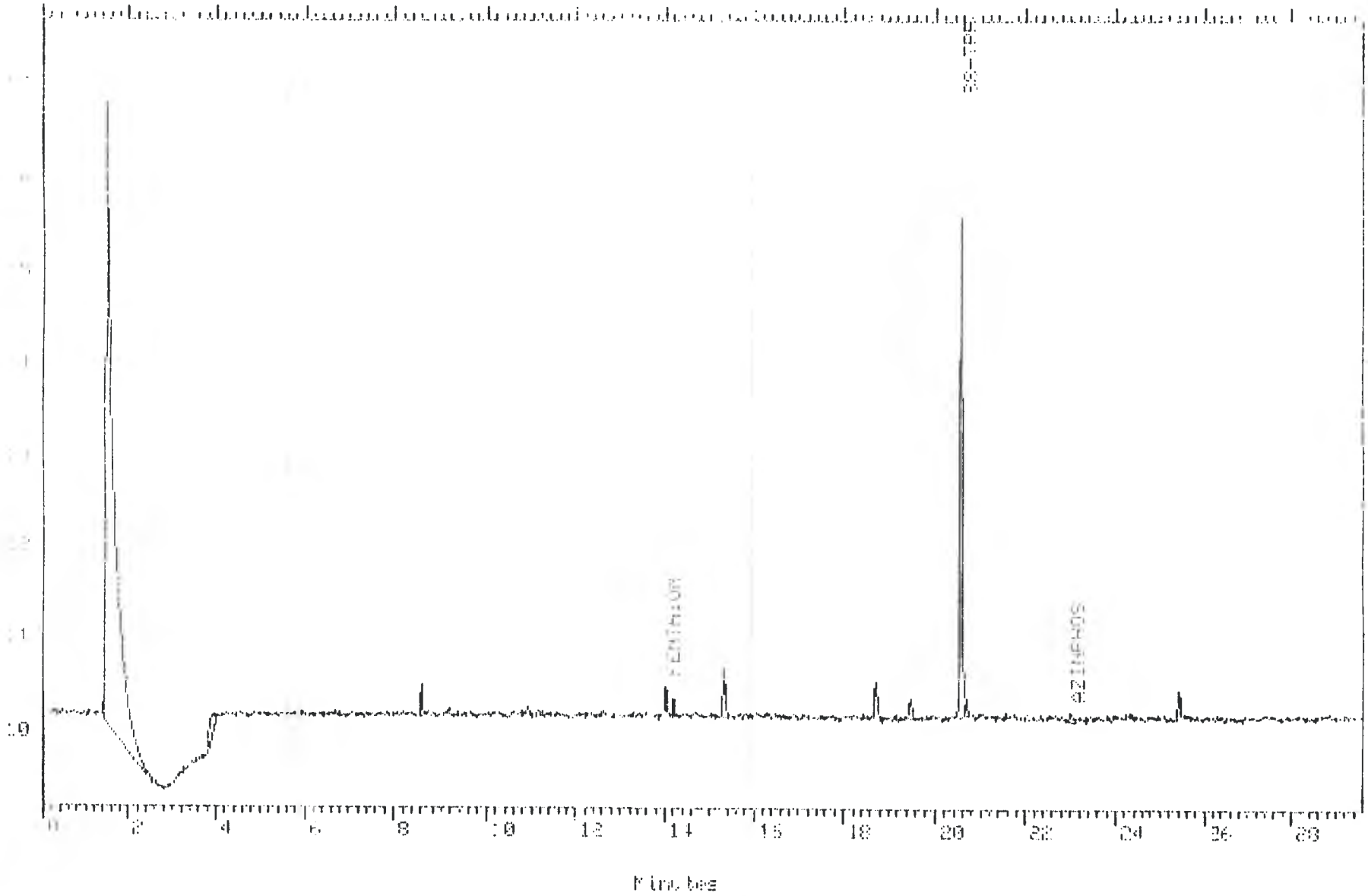
Sample:
External vial 12

ND

File ID	H2074756
Client ID	2071502
Vol. Inj.	2ul
Dil./Conc.	30g:5ml
Detector	FPD/DB-5
Port No.	GCHP 14

00012

Method: 8100



H2074756

Varian GC Report using Pesticides Method [illegible]

H2074756 3-Aug-1992 23:16:42

00013

Conditions:

Sample amount: Internal Standard amt

Scale factor: None Analysis

Keyboards of Remote Devices Unlocked

Integrate YES Threshold [illegible] uV-sec Peak Width [illegible] sec

Min Area 300 uV-sec Min Height [illegible] uV

Do Not Update Retention Time Retention Time Offset [illegible] sec

Relative Peak Window 3% Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	[illegible]	[illegible]	[illegible]	VV		
UNKNOWN	2.500	1214	[illegible]	BV		
DICHLOVOS	5.833	-	-	NF		
MEVINPHOS	7.217	-	-	NF	-	
UNKNOWN	8.617	773	257	BV	-	
S-DEMETON	8.900	-	-	NF	-	
ETHOPROP	9.133	-	-	NF	-	
NALED	9.450	-	-	NF	-	
PHORATE	9.850	-	-	NF	-	
O-DEMETON	10.217	-	-	NF	-	
DIAZINON	11.133	-	-	NF	-	
DISULFOTON	11.333	-	-	NF	-	
PARATHION	12.550	-	-	NF	-	
RONNEL	12.967	-	-	NF	-	
CHLORPYRIPHOS	13.983	-	-	NF	-	
FENTHION	14.017	1174	325	VV	[illegible]	CDL
UNKNOWN	14.200	598	190	VB	-	
TRICHLORONATE	14.433	-	-	NF	-	
STIROPHOS	15.100	-	-	NF	-	
UNKNOWN	15.333	1965	627	BV	-	
TOKUTHION	16.217	-	-	NF	-	
MERPHOS	16.867	-	-	NF	-	
FENSULFOTHION	17.050	-	-	NF	-	
UNKNOWN	18.717	1479	397	BV	-	
BOLSTAR	19.100	-	-	NF	-	
UNKNOWN	19.500	929	174	BV	-	
SS-TPP	20.567	23232	[illegible]	BV	[illegible]	740
UNKNOWN	20.667	651	207	VV	-	
AZINPHOS	23.017	561	92	VV	[illegible]	18 CDL
COUMAPHOS	24.983	-	-	NF	-	
UNKNOWN	25.433	872	303	BB	-	

Total Area [illegible]881 Total Amount [illegible] Total Height [illegible]

NORTH CREEK ANALYTICAL

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	DP-3	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1503	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:100
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Version: 860/V3.0 Printed: [illegible] Page [illegible]
Node: SAVAX1 GC Project: NOTE User: [illegible]
Waters GC Report Using Multi-method [illegible] Line 13

DP-3

H2074757 3-Aug-1992 23:51:38

30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	6
Channel	1	Manual Injector Vial	13
Injection	1	Total injections	1
Run time	19.60 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Analysis
Acquisition version	1AC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACC2 system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M x 0.32MM x 0.25UM
FPD
8140
72KPA

Sample:
External vial 13

ND

File ID H2074757
Client ID 2071503
Vol. Inj. 2ul
Dil./Conc. 30g:5ml
Detector FPD/DB-5
Port No. GCHP14

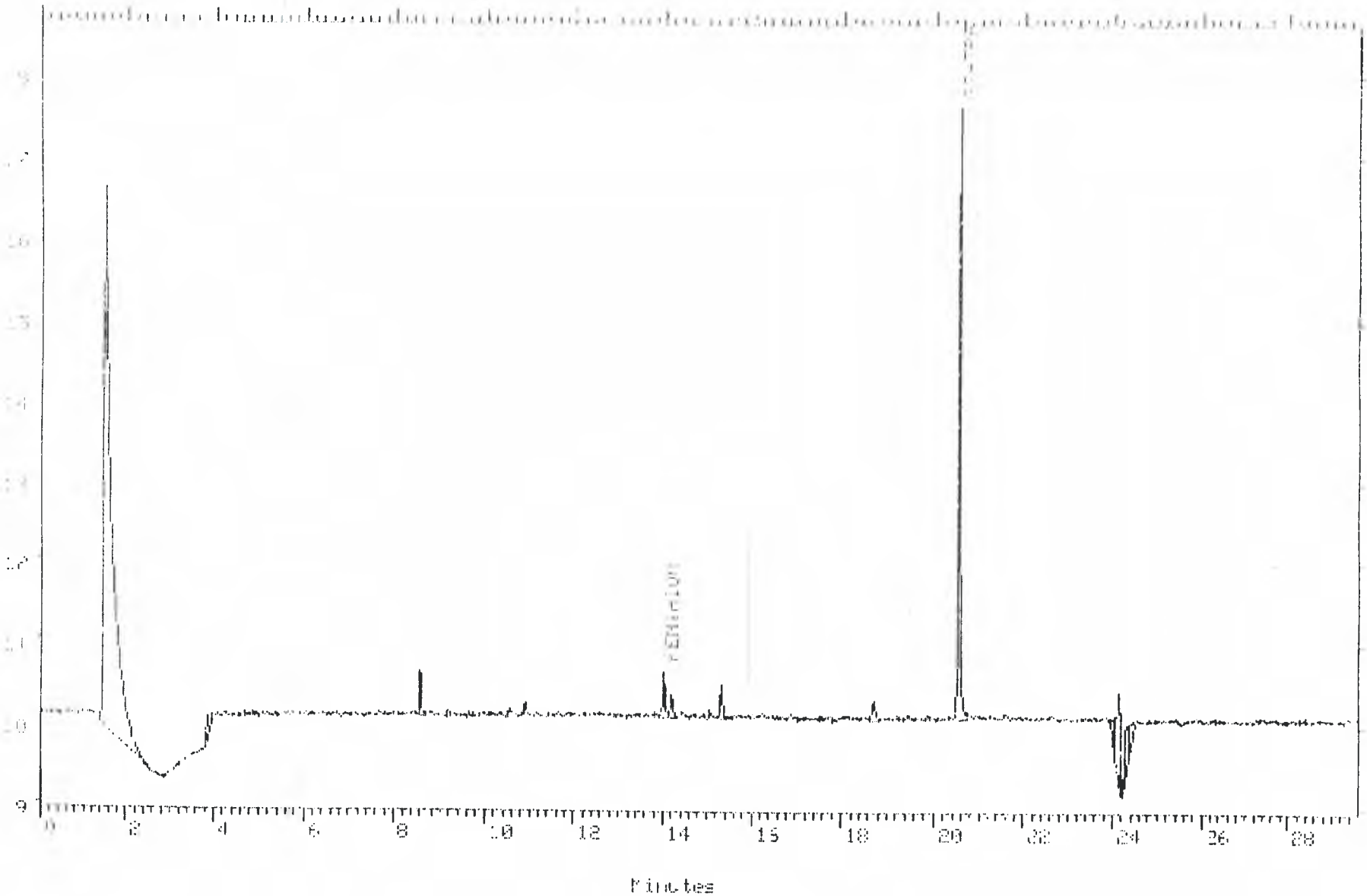
00016

Waters GC Report Data Analysis

H2074757

3-Aug-1992 23:51:20

First Slot:



Waters GC Report using multi method (Version [illegible])
H2074757 3-Aug-1992 23:51:38

00017

Conditions:

Sample amount		Internal Standard Wgt	
Scale factor		Mode	Analysis
Keyboards of Remote Devices Unlocked			
Integrate YES	Threshold	10.0 uV-sec	Peak Width [illegible]
	Min Area	300 uV-sec	Min Height 0 uV
Do Not Update Retention Time		Retention Time Offset	0.00 min
Relative Peak Window 2%		Absolute Peak Window	[illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	1.467	[illegible]	[illegible]	VB	-	
UNKNOWN	3.983	1722	[illegible]	BV		
DICHLOVOS	5.833	-	-	NF	-	
MEVINPHOS	7.217	-	-	NF	-	
UNKNOWN	8.600	1773	550	BB	-	
S-DEMETON	8.900	-	-	NF	-	
ETHOPROP	9.133	-	-	NF	-	
NALED	9.450	-	-	NF	-	
PHORATE	9.850	-	-	NF	-	
O-DEMETON	10.217	-	-	NF	-	
DIAZINON	11.133	-	-	NF	-	
DISULFOTON	11.333	-	-	NF	-	
PARATHION	12.550	-	-	NF	-	
RONNEL	12.967	-		NF		
CHLORPYRIPHOS	13.983	-	-	NF		
FENTHION	14.017	2103	554	VA	30.267	LDL
UNKNOWN	14.183	1264	316	VB	-	
TRICHLORONATE	14.433	-	-	NF	-	
STIROPHOS	15.100	-	-	NF	-	
UNKNOWN	15.333	1516	419	BB		
TOKUTHION	16.217	-	-	NF	-	
MERPHOS	16.867	-	-	NF	-	
FENSULFOTHION	17.050	-	-	NF		
UNKNOWN	18.717	1274	352	BB		
BOLSTAR	19.100	-	-	NF	-	
SS-TPP	20.550	26141	7546	VV	~~[illegible]~~ 830	
AZINPHOS	23.000	-	-	NF	-	
UNKNOWN	24.050	1383	230	BV	-	
UNKNOWN	24.150	4203	1111	VB	-	
UNKNOWN	24.300	4278	[illegible]	BV	-	
UNKNOWN	24.400	1510	251	VB	-	
COUMAPHOS	24.983	-	-	NF	-	

Total Area 129896 Total Amount [illegible] Total Height [illegible]

NORTH CREEK ANALYTICAL

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-6/MS/MSD	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1507	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:100
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director fax S.C. 8/18

Version: 860/V3.0 Printed: [illegible]
Node: SAVAR1 GC Project: [illegible]
Waters GC Report Using Multi-method [illegible]

DF-6
H2074758 4-Aug-1992 0:26:38
30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	2
Channel	1	Manual injection vial	14
Injection	1	Total injections	1
Run time	29.20 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Ana [illegible]
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 6 for [illegible]

Channel:
FPD

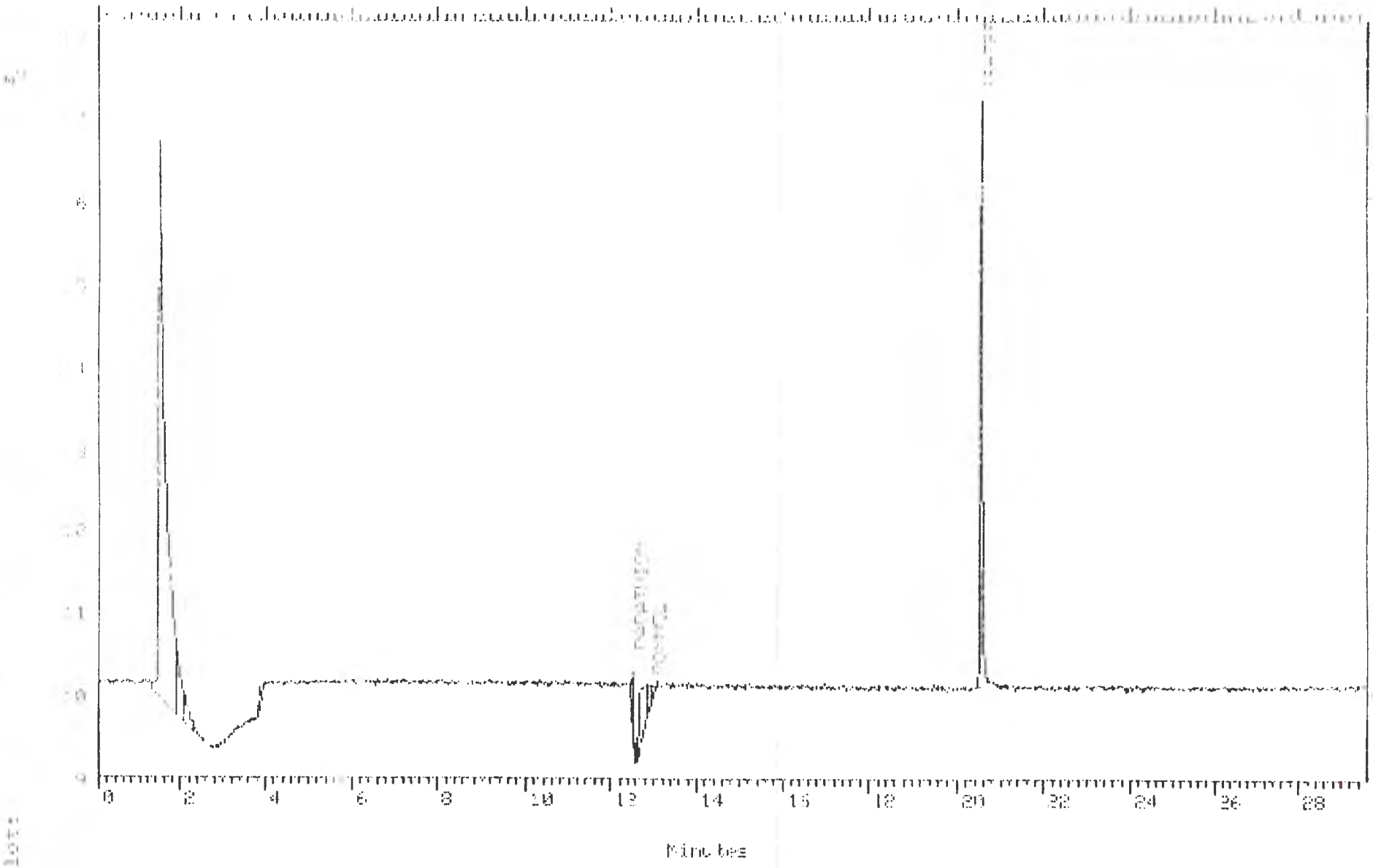
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72HPA

Sample:
External vial 14

ND

File ID	H2074758
Client ID	2071507
Vol. Inj.	2 ul
Dil./Conc.	30g:5ml
Detector	FPD/DB-5
Port No.	GCHP14

00020



H2074752

4-Aug-1992 0:00:38

Peters [illegible]
H2074758 4-Aug-1992 0:26:38

00021

Conditions:
Sample amount [illegible]
Scale factor Mode [illegible]
Keyboards of Remote Devices Unlocked

Integrate VES Threshold 10.0 uV-sec Peak Width 20 sec
Min Area 300 uV-sec Min Height 0 uV

Do Not Update Retention Time Retention Time Offset 0.00 sec
Relative Peak Window 2% Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.467	7[illegible]99	67[illegible]	VV	-
UNKNOWN	1.917	5202	772	[illegible]	-
UNKNOWN	2.083	2922	375	VV	-
UNKNOWN	3.883	1289	164	BB	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	6.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DISULFOTON	11.533	-	-	NF	-
PARATHION	12.[illegible]	1243	250	BB	[illegible].32 <DL
UNKNOWN	12.683	7819	[illegible]	BV	-
UNKNOWN	12.883	1144	241	[illegible]	-
RONNEL	12.950	555	10[illegible]	VB	[illegible] <DL
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.550	25055	7093	BF	[illegible] 790
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-

Total Area 122628 Total Amount 975.[illegible] Total Height [illegible]

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-7	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1508	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.20	N.D.
Bolstar	0.10	N.D.
Chlorpyrifos	0.10	N.D.
Coumaphos	0.20	N.D.
Demeton	0.10	N.D.
Diazinon	0.10	N.D.
Dichlorvos	0.10	N.D.
Disulfoton	0.10	N.D.
Ethoprop	0.10	N.D.
Fensulfothion	0.10	N.D.
Fenthion	0.10	N.D.
Merphos	0.10	N.D.
Mevinphos	0.10	N.D.
Naled	0.20	N.D.
Parathion methyl	0.10	N.D.
Phorate	0.10	N.D.
Ronnel	0.10	N.D.
Stirophos (Tetrachlorvinphos)	0.20	N.D.
Tokuthion (Prothiofos)	0.10	N.D.
Trichloronate	0.10	N.D.

Surrogate Recovery, %:84

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director For S.C.
8/18/92

Version: 860/V3.0 Printed: 04-Aug-1992 at 14:10:40 Page: 1
Node: SAVAX1 GC Project: NOTE Report: G_DEFAULT
Waters GC Report Using Multi-method 080392814 Line 1

DF-7

H2074759 4-Aug-1992 3:21:28

30g: 5ml
1:5 dil

Header:

Acquisition method	8140	Processing method	8140
Units		System number	0
Channel	1	Manual Injector Vial	19
Injection	1	Total Injections	1
Run time	39.60 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Analysis
Acquisition version	860/6/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 4 for NOTE

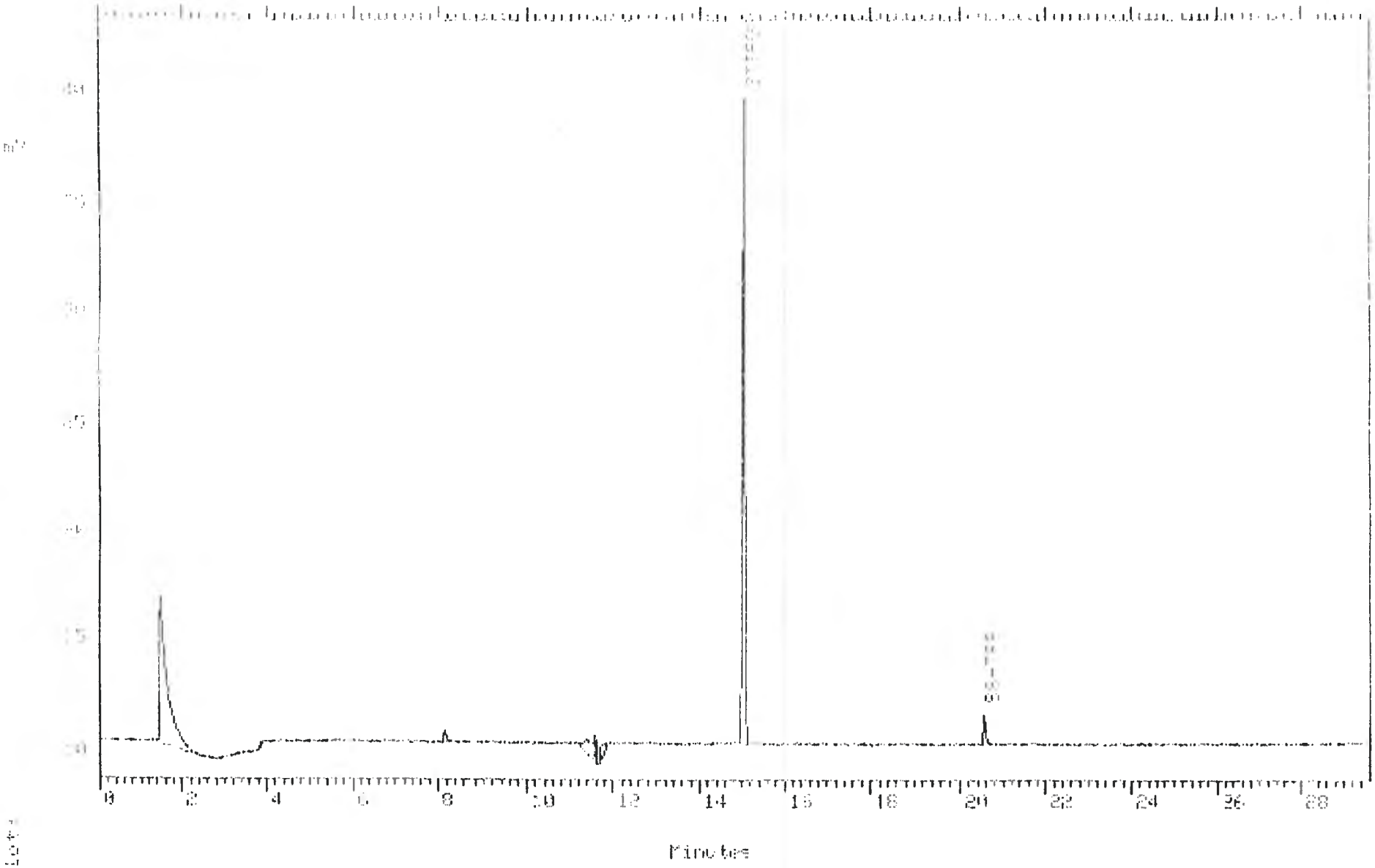
Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 19

File ID	H2074759
Client ID	2071508
Vol. Inj.	2 ul
Dil./Conc.	30g: 5ml
Detector	FPD/DB-5
Port No.	GCHP14

00024



4-Aug-1992 3:21:25

H2074759

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Varian 22 Report Gas Chromatograph

H2074754 4-Aug-1992 5:21:22

00025

Conditions:

Sample Amount — Internal Standard Amt

Scale Factor — None — Available

Keyboards or Remote Devices Unlocked

Integrate YES — Threshold [illegible] uV-sec — Peak Width [illegible] sec

Min Area 500 uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset 0.00 sec

Relative Peak Window 2% — Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.467	80911	6477	VV	-
UNKNOWN	2.850	650	129	BB	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
UNKNOWN	8.167	1992	490	BB	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DISULFOTON	11.233		-	NF	-
UNKNOWN	11.533	9217	755	VV	-
UNKNOWN	11.683	2999	1219	VB	-
UNKNOWN	11.733	3932	1142	BV	-
PARATHION	12.350	-	-	NF	-
RONNEL	12.967	-	-	NF	-
FENTHION	12.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.033	105510	29265	VV	~~[illegible]~~ dnm
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.567	5309	1336	BB	~~[illegible]~~ 840
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.483	-	-	NF	-

Total Area 210920 Total Amount 4453.50 Total Height [illegible]

dnm = does not match i.e. outside rt window

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-8	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1509	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:80
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Version: 860/V3.0 Printed: 20-Aug-1992 at 16:10:49 Page
Node: SAVAX1 GC Project: NOTE User: [illegible]
Waters GC Report Using Multi-method 08092814 Line 2

H2074760 4-Aug-1992 3:56:29

30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	6
Channel	1	Manual Injection Vial	20
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LPC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

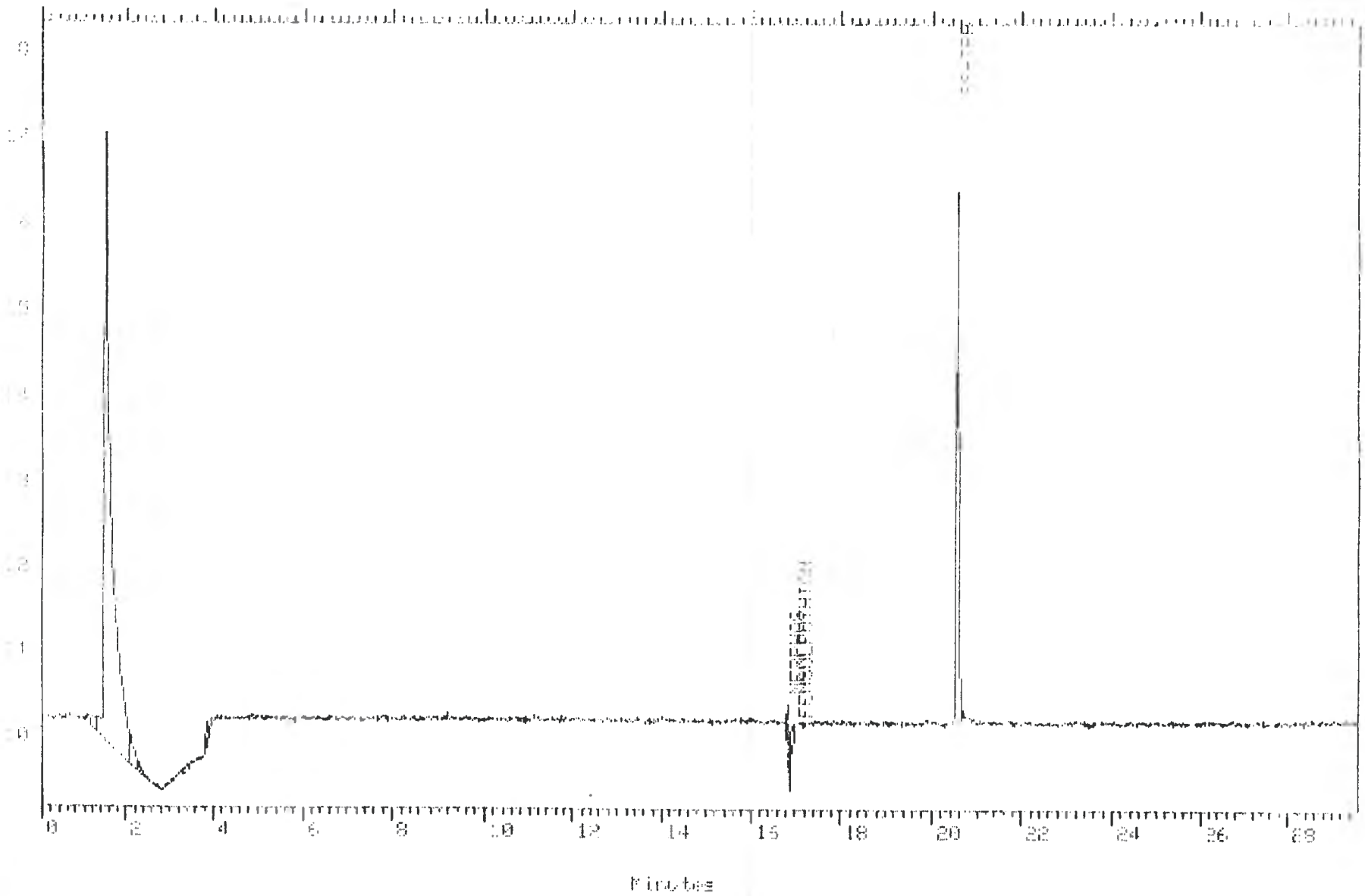
Channel:
FPD

Method:
OB-5, 30M X 0.32MM X 0.25um
FPD
8140
72KPA

Sample:
External vial 20

File ID	H2074760
Client ID	2071509
Vol. Inj.	2 ul
Dil./Conc.	30g : 5ml
Detector	FPD / OB-5
Port No.	GCHP14

00028



H2074760

Waters GC Report Using Multi-Person [illegible] Line [illegible]
H2074760 4-Aug-1992 3:56:25

Conditions:
Sample amount — Internal standard amt
Scale factor — Mode — Attenuation
Keyboards or Remote Devices Unlocked

Integrate YES — Threshold [illegible] uV-sec — Peak Width [illegible] sec
Min Area [illegible] uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset [illegible] sec
Relative Peak Window [illegible]% — Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	[illegible]	[illegible]	[illegible]	[illegible]	-
UNKNOWN	[illegible]	[illegible]	[illegible]	[illegible]	-
UNKNOWN	1.467	[illegible]	[illegible]	[illegible]	-
UNKNOWN	2.083	2492	[illegible]	[illegible]	-
UNKNOWN	2.283	556	[illegible]	[illegible]	-
UNKNOWN	3.400	502	[illegible]	[illegible]	-
UNKNOWN	3.867	1175	[illegible]	[illegible]	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DISULFOTON	11.333	-	-	NF	-
PARATHION	12.550	-	-	NF	-
RONNEL	12.967	-	-	NF	-
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.850	1649	[illegible]	BR	[illegible] 31 <DL
FENSULFOTHION	16.917	1447	[illegible]	[illegible]	[illegible] dnm
BOLSTAR	17.100	-	-	NF	-
SS-TPP	20.567	25192	[illegible]	[illegible]	[illegible] 800
AZINPHOS	20.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-

Total Area 118716 Total Amount [illegible] Total Height [illegible]

NORTH CREEK ANALYTICAL

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042		Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-9		Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140		Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1510		Analyzed:	Aug 3, 1992
				Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.20	N.D.
Bolstar	0.10	N.D.
Chlorpyrifos	0.10	N.D.
Coumaphos	0.20	N.D.
Demeton	0.10	N.D.
Diazinon	0.10	N.D.
Dichlorvos	0.10	N.D.
Disulfoton	0.10	N.D.
Ethoprop	0.10	N.D.
Fensulfothion	0.10	N.D.
Fenthion	0.10	N.D.
Merphos	0.10	N.D.
Mevinphos	0.10	N.D.
Naled	0.20	N.D.
Parathion methyl	0.10	N.D.
Phorate	0.10	N.D.
Ronnel	0.10	N.D.
Stirophos (Tetrachlorvinphos)	0.20	N.D.
Tokuthion (Prothiofos)	0.10	N.D.
Trichloronate	0.10	N.D.

Surrogate Recovery, %:94

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

for S.C.
8/18

Version: 860/V3.0 Printed: [illegible]
Node: SAVAX1 GC Project: NOTE
Waters GC Report using multi-method [illegible]

DF-9
H2074761 4-Aug-1992 4:21:19
30g:5ml
1:5dil

Header:

Acquisition method	8140	Processing method	8140
Units		System number	6
Channel	1	Manual Injector Vial	21
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	[illegible] per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACZ system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M x 0.32mm x [illegible]
FPD
8140
72KPA

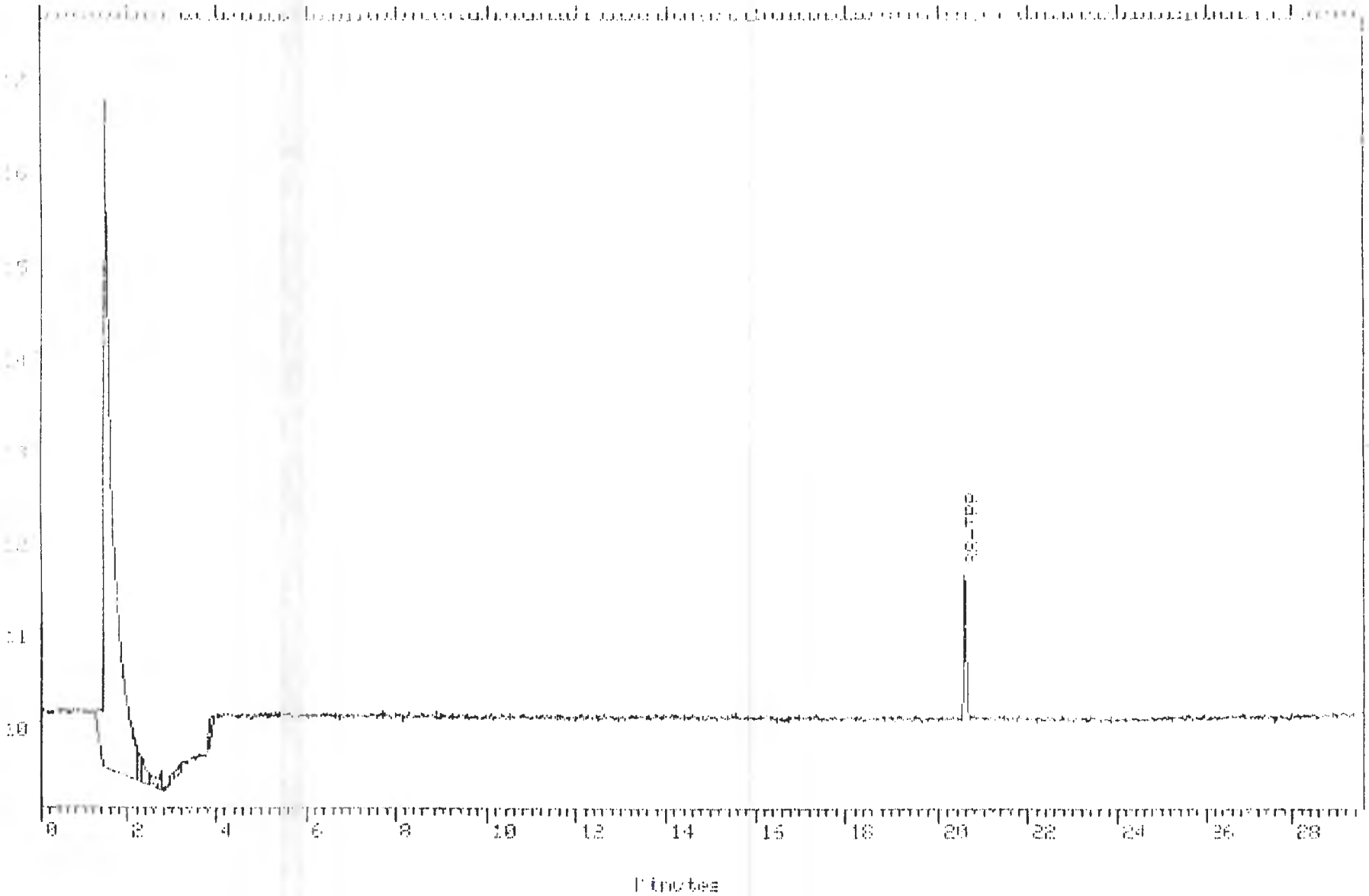
Sample:
External vial 21

File ID	H2074761
Client ID	2071510
Vol. Inj.	2ul
Dil./Conc.	30g:5ml
Detector	FPD/DB-5
Port No.	GCHP14

4-Aug-1992 4:31:15

H2074761

Fines Blank



H2074761 4-Aug-1992 4:31:1[illegible]

Conditions:
Sample Amount [illegible] Internal Standard Amt [illegible]
Scale Factor None Multiplier [illegible]
Keyboards or Remote Devices Unlocked

Integrate VBS Threshold [illegible] uV-sec Peak Width [illegible]
Min Area [illegible] uV-sec Min Height [illegible]

Do Not Update Retention Time Retention Time Offset [illegible] sec
Relative Peak Window 3% Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.417	2476	517	BV	-
UNKNOWN	1.467	[illegible]	[illegible]	BV	-
UNKNOWN	2.250	1029	301	VV	-
UNKNOWN	2.217	1690	251	VV	-
UNKNOWN	2.433	537	115	VV	-
UNKNOWN	2.750	592	193	VB	-
UNKNOWN	2.983	703	105	BV	-
UNKNOWN	3.167	708	88	VV	-
UNKNOWN	3.883	840	133	BB	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DISULFOTON	11.333	-	-	NF	-
PARATHION	12.550	-	-	NF	-
RONNEL	12.967	-	-	NF	-
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.583	5908	1558	VV	~~[illegible]~~ 940
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-

Total Area 111066 Total Amount [illegible] Total Height [illegible]

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-10	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1511	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %:91
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

for S.C.
8/18

Version: 860/V3.0 Printed: 2-Aug-1992 at [illegible]
Node: SAVAX1 GC Project: NOTE User: [illegible]
Waters GC Report Using multi-method 080292014 Line 01

DF-10

H2074762 4-Aug-1992 5:06:15

30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	6
Channel	1	Manual injection vial	22
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node PALAC2 system 6 for NOTE

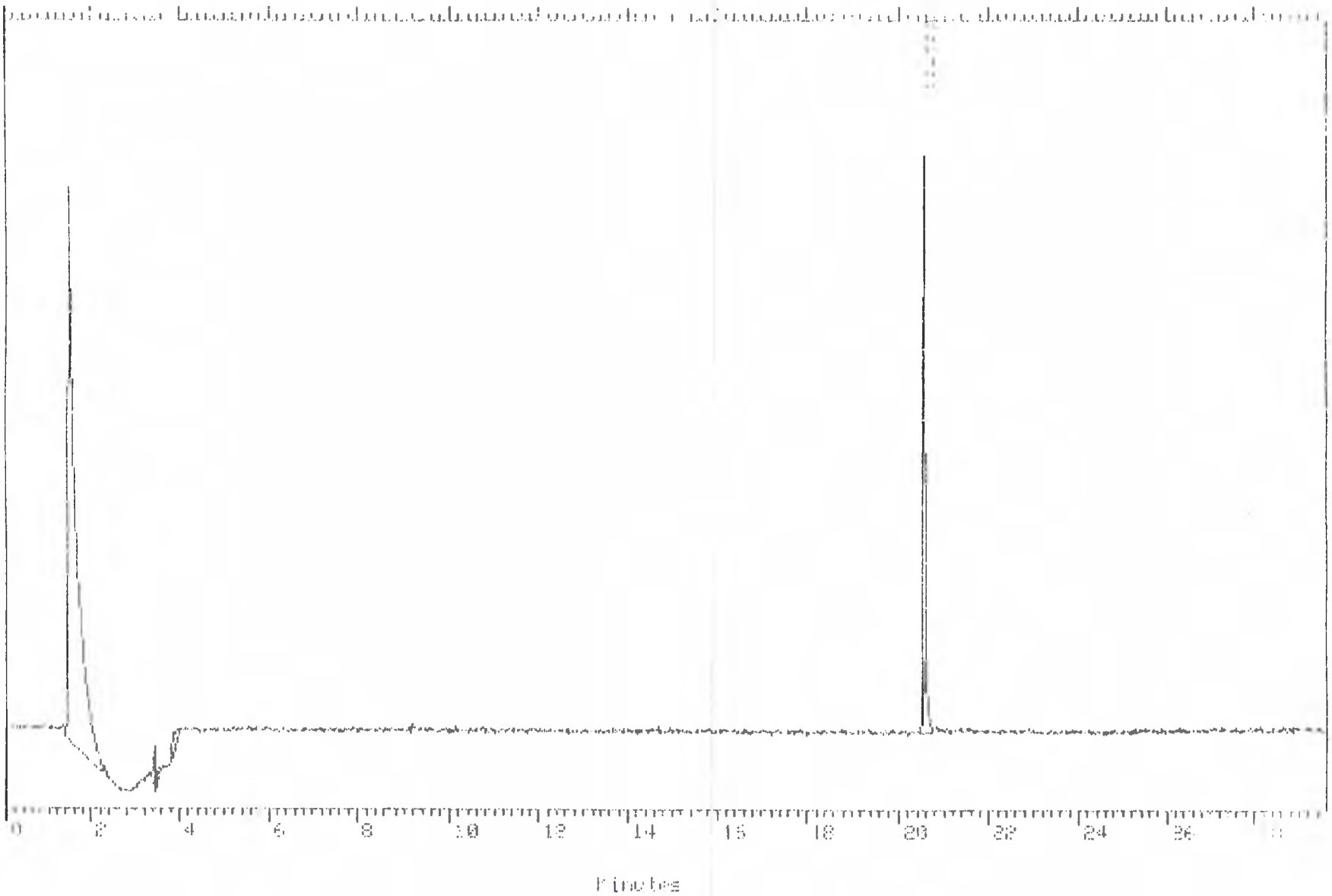
Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 22

File ID	H2074762
Client ID	2071511
Vol. Inj.	2 ul
Dil./Conc.	30g:5ml
Detector	FPD / DB-5
Port No.	GCHP14

00036



4-Aug-1992 5:06:15

H2074762

Waters GC Report using Gulf [illegible]

H2074762 4-Aug-1992 5:06:15

Conditions:

Sample Amount [illegible] Internal Standard Amt [illegible]

Scale Factor Mode [illegible]

Keyboards of Remote Devices Unlocked

Integrate YES Threshold [illegible] uV/sec Peak Width [illegible]

Min Area [illegible] uV-sec Min Height [illegible] uV

Do Not Update Retention Time Retention Time Offset [illegible] sec

Relative Peak Window 3% Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	[illegible]	[illegible]	[illegible]	VV	-
UNKNOWN	3.433	1075	506	BB	-
UNKNOWN	3.500	765	183	BB	-
UNKNOWN	3.983	1891	222	BV	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.700	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
DHORATE	9.850	-	-	NF	-
O-DEMETON	10.317	-	-	NF	-
DIAZINON	11.133		-	NF	-
DISULFOTON	11.333	-	-	NF	-
PARATHION	12.350		-	NF	-
RONNEL	12.941	-		NF	-
FENTHION	12.917	-	-	NF	-
CHLOPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433		-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.567	20795	7988	VV	~~[illegible]~~ 910
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-

Total Area 114863 Total Amount 1043.077 Total Height [illegible]

NORTH CREEK ANALYTICAL

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Phone (206) 481-9200 • FAX (206) 485-2992

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-11	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1512	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.20	N.D.
Bolstar	0.10	N.D.
Chlorpyrifos	0.10	N.D.
Coumaphos	0.20	N.D.
Demeton	0.10	N.D.
Diazinon	0.10	N.D.
Dichlorvos	0.10	N.D.
Disulfoton	0.10	N.D.
Ethoprop	0.10	N.D.
Fensulfothion	0.10	N.D.
Fenthion	0.10	N.D.
Merphos	0.10	N.D.
Mevinphos	0.10	N.D.
Naled	0.20	N.D.
Parathion methyl	0.10	N.D.
Phorate	0.10	N.D.
Ronnel	0.10	N.D.
Stirophos (Tetrachlorvinphos)	0.20	N.D.
Tokuthion (Prothiofos)	0.10	N.D.
Trichloronate	0.10	N.D.

Surrogate Recovery, %: 88

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

Version: 560/V3.0 Printed: [illegible] Page 1
Node: SAVAX1 GC Project: NOTE User [illegible]
Waters GC Report Using Multi-method 0800392814 Line 21

DF-11
H2074763 4-Aug-1992 5:41:12
30g:5ml
1:5 dil

Header:

Acquisition method	8140	Processing method	8140
Units		System number	1
Channel	1	Manual Injection Vial	22
Injection	1	Total Injections	
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACC system 4 for NOTE

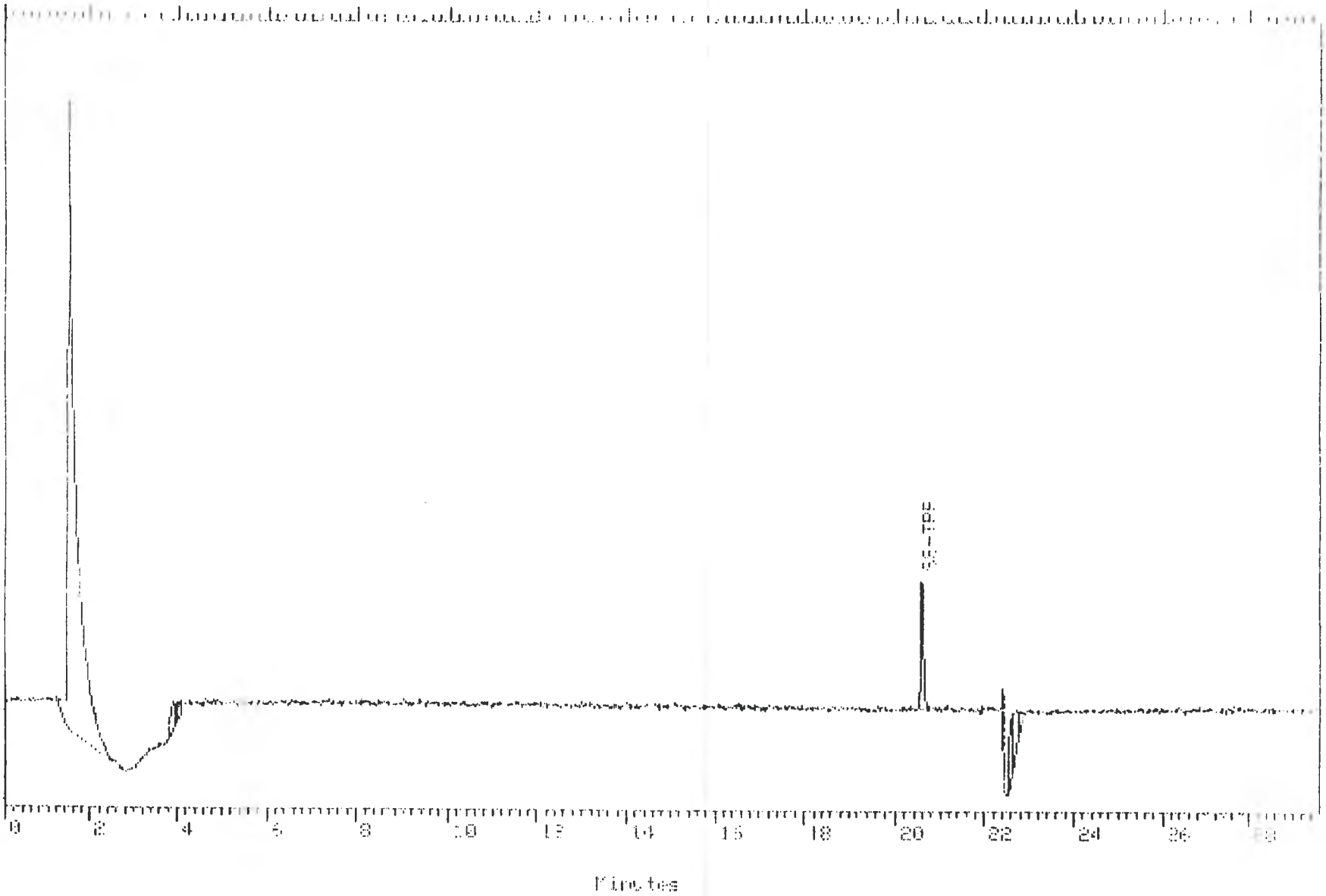
Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 22

File ID H2074763
Client ID 2071512
Vol. Inj. 2ul
Dil./Conc. 30g : 5ml
Detector FPD/DB-5
Port No. GCHP14

00040



4-Aug-1992 2:14:12

2074763

Direct Plot:

Pesticide GC Report (Peak Quant method [illegible])
H2074763 4-Aug-1992 5:41:1[illegible]

00041

Conditions:

Sample amount:		Internal standard mg/l	
Scale factor		Mode	Analysis
Keyboards of Remote Devices Unlocked			

Integrate YES	Threshold	10.0 uV/sec	Peak Width	2[illegible] sec
	Min Area	300 uV-sec	Min Height	0 uV

Do Not Update Retention Time		Retention Time Offset	0.00 sec
Relative Peak Window	3%	Absolute Peak Window	10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.417	1746	350	BB	-
UNKNOWN	1.467	98470	7048	BV	-
UNKNOWN	3.917	2419	320	BV	-
UNKNOWN	3.983	632	236	VV	
UNKNOWN	4.050	645	193	VV	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	
NALED	9.450	-	-	NF	-
PHORATE	9.850		-	NF	
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DISULFOTON	11.333	-	-	NF	
PARATHION	12.550	-	-	NF	
FONNEL	12.967	-	-	NF	
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPS	20.583	7542	1422	BB	[illegible] 880
UNKNOWN	22.433	[illegible]	687	BB	
UNKNOWN	22.583	3215	[illegible]	BV	
UNKNOWN	22.633	4605	604	VV	
UNKNOWN	22.800	810	229	VB	
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.983		-	NF	

Total Area 108904 Total Amount [illegible] Total Height [illegible]

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-12	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1513	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %: 63
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour for S.C.
Laboratory Director 8/19/92

Version: 860/V3.0 Printed: 20-Aug-1992 at [illegible] Page [illegible]
Node: SALVA/1 GC Project: NOTE User: [illegible]
Waters GC Report Using Multi-method [illegible]

DF-12
H2074764 4-Aug-1992 4:16:11
30g:5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	0
Channel	1	Manual injector vial	24
Injection	1	Total injections	1
Run time	19.60 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

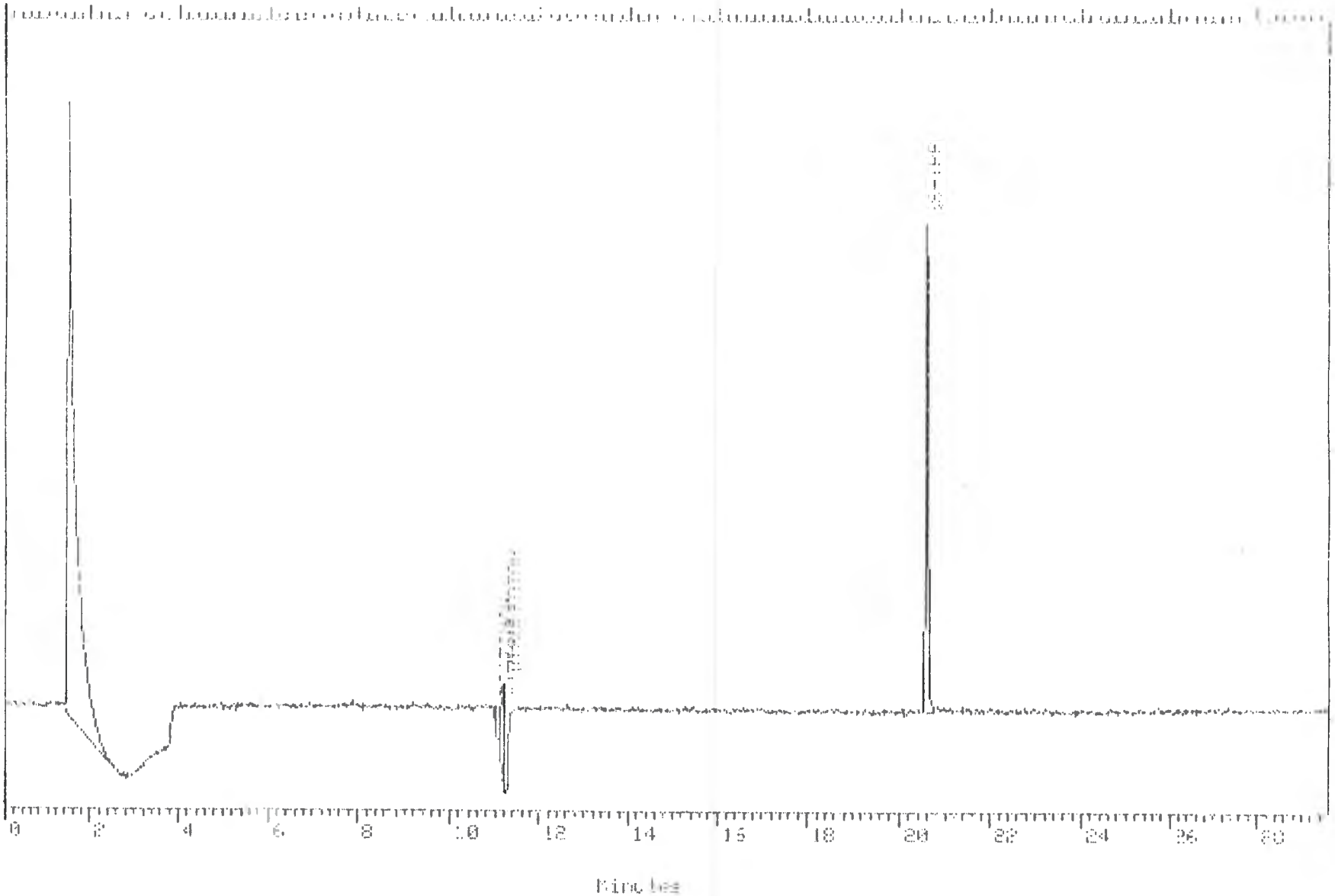
Node:
Acquired on node SALAC2 system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25um
FPD
8140
72KPA

Sample:
External vial 24

File ID	H2074764
Client ID	2071513
Vol. Inj.	2ul
Dil./Conc.	30g: 5ml
Detector	FPD/DB-5
Port No.	GCHP 14


0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
Minutes

Waters GC report using Multiple-Peak Integration
H2074764 4-Aug-1992 [illegible]

00045

Conditions:
Sample amount Internal standard amt
Scale factor Mode [illegible]
Keyboards of Remote Devices Unlocked

Integrate YES Threshold [illegible] Peak Width [illegible]
Min Area [illegible] Min Height [illegible]

Do Not Update Retention Time Retention Time Offset [illegible]
Relative Peak Window 2% Absolute Peak Window [illegible]

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	[illegible]	[illegible]	[illegible]	VB	-	
DICHLOVOS	3.233	-	-	NF	-	
MEVINPHOS	7.217	-	-	NF	-	
S-DEMETON	8.900	-		NF	-	
ETHOPROP	9.133	-	-	NF	-	
NALED	9.450	-	-	NF	-	
PHORATE	9.850	-	-	NF	-	
O-DEMETON	10.217	-	-	NF	-	
UNKNOWN	11.017	574	187	BV	-	
DIAZINON	11.083	1596	456	VV	[illegible]	dnm
DISULFOTON	11.183	3968	1078	VB	[illegible]	dnm
PARATHION	12.550	-	-	NF	-	
RONNEL	12.967	-	-	NF	-	
FENTHION	13.717	-	-	NF	-	
CHLORPYRIPHOS	13.983	-	-	NF	-	
TRICHLORONATE	14.433	-	-	NF	-	
STIROPHOS	15.100	-	-	NF	-	
TOKUTHION	16.217	-	-	NF	-	
MERPHOS	16.867	-	-	NF	-	
FENSULFOTHION	17.050		-	NF	-	
BOLSTAR	19.100	-	-	NF	-	
SS-TPP	20.583	19857	5430	VV	~~[illegible]~~	630
AZINPHOS	23.000		-	NF	-	
COUMAPHOS	24.983	-	-	NF	-	

Total Area 108415 Total Amount [illegible] Total Height [illegible]

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DF-13	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted:	Jul 31, 1992
Attention: D. Geller	Sample Number:	207-1514	Analyzed:	Aug 3, 1992
			Reported:	Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %: 87
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

2071507.HWA <20>

Version: 860/V3.0 Printed: [illegible]
Node: SAVA:1 GC Project: MOTE
Waters GC Report Using Multi-method [illegible]

DF-13

H2074765 4-Aug-1992 6:51:05

30g ; 5ml

Header:

Acquisition method	8140	Processing method	8140
Units		System number	[illegible]
Channel	[illegible]	Memory location (vial)	[illegible]
Injection	[illegible]	Total injection	[illegible]
Run time	[illegible].20 min	Sample rate	[illegible].00 per sec
Injection volume	[illegible] uL	Mode	Analysis
Acquisition version	LAC/E/V2.0	Processing version	V2.[illegible]

Description:

Node:
Acquired on node SALACS system & for MOTE

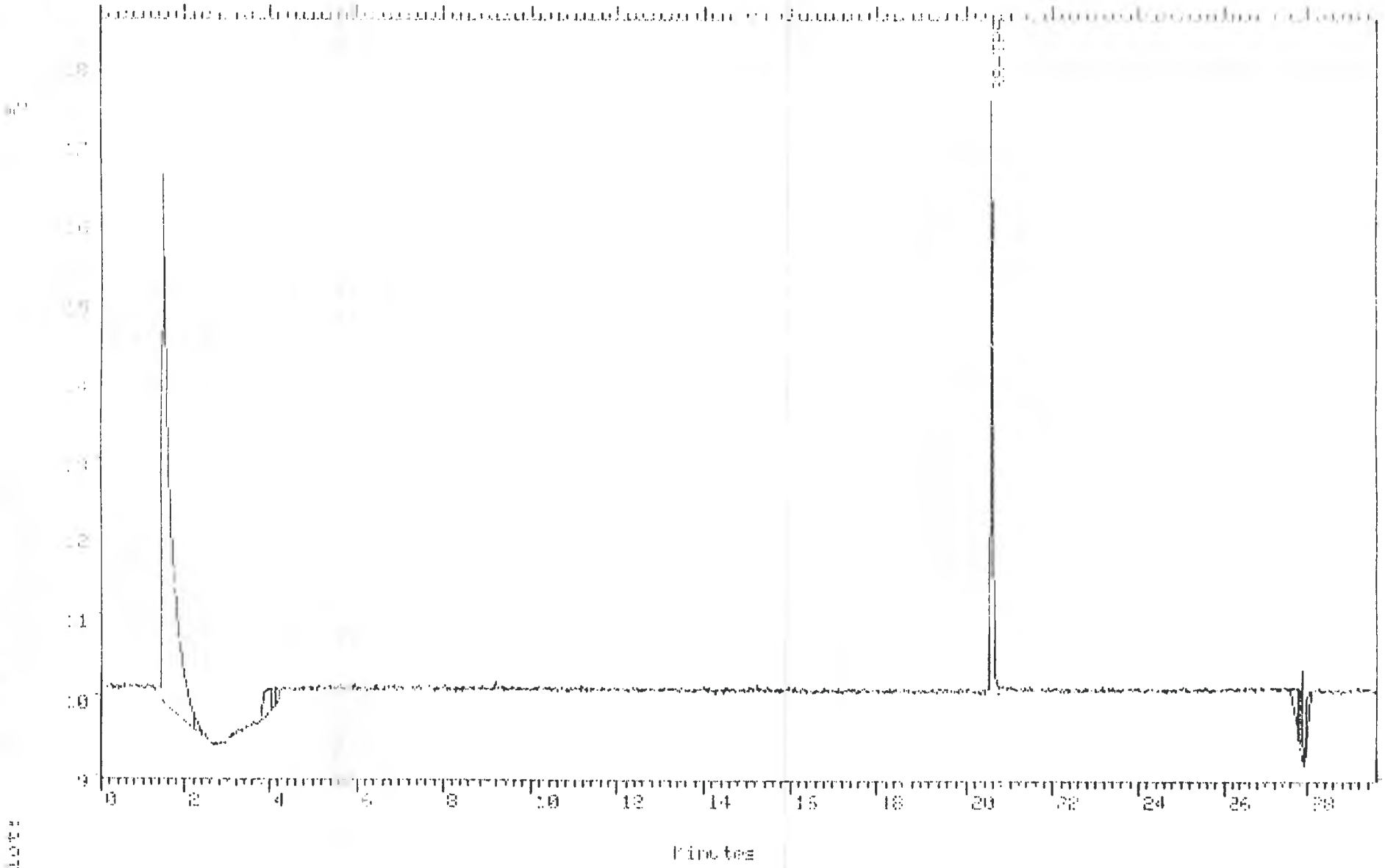
Channel:
FPD

Method:
DB-5, 20M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 05

File ID	H2074765
Client ID	2071514
Vol. Inj.	2ul
Dil./Conc.	30g : 5ml
Detector	FPD/DB-5
Port No.	GCHP14

00048



4-Aug-1992 6:51:05

H2074765

First Plot

Waters GC [illegible]

H2074765 4-Aug-1992 [illegible]:51:05

00049

Conditions:

Sample amount — Internal standard [illegible]

Scale factor — Mode — Analysis

Keyboards of Remote Devices Unlocked

Integrate YES — Thresholds 10.0 uV/sec — Peak Width [illegible] sec

Min Area 300 uV-sec — Min Height 0 uV

Do Not Update Retention Time — Retention Time Offset [illegible] sec

Relative Peak Window 2% — Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.467	82473	2452	BV	-
UNKNOWN	2.267	477	122	VB	-
UNKNOWN	3.917	3834	321	BV	-
UNKNOWN	4.050	1109	247	VV	-
UNKNOWN	4.150	1021	199	VV	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.217	-	-	NF	-
DIAZINON	11.133	-	-	NF	-
DIBULFOTON	11.333	-	-	NF	-
PARATHION	12.550	-	-	NF	-
RONNEL	12.967	-	-	NF	-
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.583	27333	7494	VV	[illegible] 870
AZINPHOS	22.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-
UNKNOWN	27.733	2459	468	BV	-
UNKNOWN	27.817	2996	488	VV	-
UNKNOWN	27.850	1379	1068	VB	-
UNKNOWN	27.967	3510	533	BB	-

Total Area 127992 Total Amount [illegible] Total Height [illegible]

QC RESULTS

METHOD BLANK

4G
ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
METHOD BLANK SUMMARY

Lab Name: SEQUOIA ANALYTICAL Contract: _____

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

Lab Sample ID: METHOD BLANK Lab File ID: HBLK073192

Matrix: soil/water SOIL Extraction: (SepF/Cont/Sonc) SONC

Sulfur Cleanup: (Y/N) N Date Extracted: 07/31/92

Date Analyzed (1) 08/03/92 Date Analyzed (2). _____

Time Analyzed (1): 21:31 Time Analyzed (2): _____

Instrument ID (1): GCHP14 Instrument ID (2): _____

GC Column ID (1) DB5 D: 0.32 (mm) GC Column ID (2): _____ ID: ____ (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PBS1A	BLANK SPIKE	HBLK073192	08/03/92	
02	PBSD1A	BLANK SPIKE DUP	HBLK0731MSD	08/03/92	
03	2071501	2074755	H2074755	08/03/92	
04	2071502	2074756	H2074756	08/03/92	
05	2071503	2074757	H2074757	08/03/92	
06	2071507	2074758	H2074758	08/04/92	
07	2071508	2074759	H2074759	08/04/92	
08	2071509	2074760	H2074760	08/04/92	
09	2071510	2074761	H2074761	08/04/92	
10	2071511	2074762	H2074762	08/04/92	
11	2071512	2074763	H2074763	08/04/92	
12	2071513	2074764	H2074764	08/04/92	
13	2071514	2074765	H2074765	08/04/92	
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

COMMENTS: _____

Page 1 of 1

NORTH CREEK ANALYTICAL

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00053

Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	
19730 64th Avenue W.	Sample Descript:	Method Blank	
Lynnwood, WA 98036	Analysis Method:	EPA 8140	Extracted: Jul 31, 1992
Attention: D. Geller	Sample Number:	BLK073192	Analyzed: Aug 3, 1992
			Reported: Aug 17, 1992

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Azinphos methyl	0.040	N.D.
Bolstar	0.020	N.D.
Chlorpyrifos	0.020	N.D.
Coumaphos	0.040	N.D.
Demeton	0.020	N.D.
Diazinon	0.020	N.D.
Dichlorvos	0.020	N.D.
Disulfoton	0.020	N.D.
Ethoprop	0.020	N.D.
Fensulfothion	0.020	N.D.
Fenthion	0.020	N.D.
Merphos	0.020	N.D.
Mevinphos	0.020	N.D.
Naled	0.040	N.D.
Parathion methyl	0.020	N.D.
Phorate	0.020	N.D.
Ronnel	0.020	N.D.
Stirophos (Tetrachlorvinphos)	0.040	N.D.
Tokuthion (Prothiofos)	0.020	N.D.
Trichloronate	0.020	N.D.

Surrogate Recovery, %: 110
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director

for S.C.
8/18

2071507.HWA <21>

Version: 860/V3.0 Printed: 3-Aug-1992 at [illegible]
Node: SRVAX1 GC Project: NOTE
Waters GC Report Using Multi-method (80092814 Line 4

HBLK07314 3-Aug-1992 21:31:49

method blank
30g:5ml

Header:

Acquisition method	8140	Processing method	[illegible]
Units		System number	[illegible]
Channel	[illegible]	Manual Injector Vial	[illegible]
Injection	[illegible]	Total Injections	[illegible]
Run time	20.00 min	Sample rate	[illegible]
Injection volume	[illegible] uL	Mode	[illegible]
Acquisition version	LAC/E/V3.0	Processing version	[illegible]

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

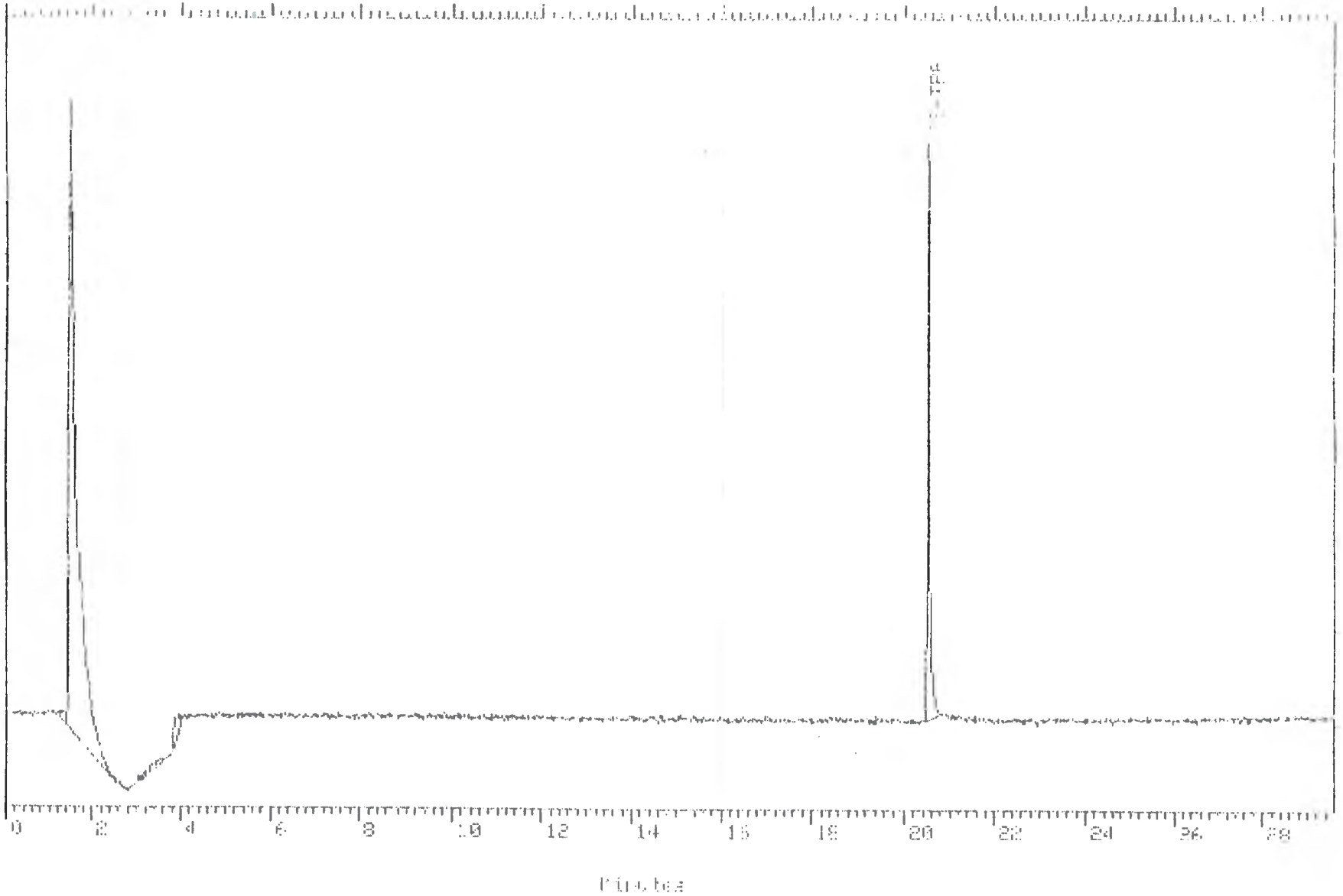
Channel:
FPD

Method:
DB-5, 20M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 9

ND

File ID	HBLK0731
Client ID	PBLK1A
Vol. Inj.	2 ul
Dil./Conc.	30g : 5ml
Detector	FPD/DB-5
Port No.	GCHP14


TPE
0
2
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16
18
20
22
24
26
28
Minutes

Hetero GC Report Using [illegible]

HBLK0731MS 3-Aug-1992 21:31:49

* 00056

Conditions:

Sample amount [illegible] Internal standard sol

Scale factor None [illegible]

Keyboards of Remote Devices Unlocked

Integrate YES Threshold 10.0 uV-sec Peak Width [illegible]

Min Area 500 uV-sec Min Height [illegible]

Do Not Update Retention Time Retention Time Offset 0.00 [illegible]

Relative Peak Window 2% Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.2[illegible]	544	[illegible]	VV	-
UNKNOWN	1.467	83938	[illegible]	VV	-
UNKNOWN	2.267	620	57	VV	-
UNKNOWN	2.467	507	47	VS	-
UNKNOWN	2.883	2066	240	BV	-
DICHLOVOS	5.833	-	-	NF	-
MEVINPHOS	7.217	-	-	NF	-
S-DEMETON	8.900	-	-	NF	-
ETHOPROP	9.133	-	-	NF	-
NALED	9.450	-	-	NF	-
PHORATE	9.850	-	-	NF	-
O-DEMETON	10.[illegible]	-	-	NF	-
DIAZINON	11.133		-	NF	-
DISULFOTON	11.333	-	-	NF	-
PARATHION	12.550	-	-	NF	-
RONNEL	12.967	-		NF	-
FENTHION	13.917	-	-	NF	-
CHLORPYRIPHOS	13.983	-	-	NF	-
TRICHLORONATE	14.433	-	-	NF	-
STIROPHOS	15.100	-	-	NF	-
TOKUTHION	16.217	-	-	NF	-
MERPHOS	16.867	-	-	NF	-
FENSULFOTHION	17.050	-	-	NF	-
BOLSTAR	19.100	-	-	NF	-
SS-TPP	20.533	23855	6153	VB	~~[illegible]~~ 820
AZINPHOS	23.000	-	-	NF	-
COUMAPHOS	24.983	-	-	NF	-

Total Area 112536 Total Amount [illegible] Total Height [illegible]

MATRIX SPIKE / MATRIX SPIKE DUP DATA

3FK
SOIL ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
BLANK SPIKE/BLANK SPIKE DUPLICATE RECOVERY

Lab Name: SEQUOIA ANALYTICAL Contract: _____

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

Matrix Spike - EPA Sample No PBS1A/PBSD1A Level: (low/med) LOW

COMPOUND	SPIKE ADDED (µg/Kg)	SAMPLE CONCEN. (µg/Kg)	MS CONCEN. (µg/Kg)	MS % REC #	QC LIMITS REC.
Ethroprop	1000	0	930	93	50-150
Ronnel	1000	0	940	94	50-150
Tokuthion	1000	0	990	99	50-150
Bolstar	1000	0	970	97	50-150

COMPOUND	SPIKE ADDED (µg/Kg)	MSD CONCEN. (µg/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Ethroprop	1000	990	99	6.2	40	50-150
Ronnel	1000	1000	100	6.2	40	50-150
Tokuthion	1000	1000	100	1.0	40	50-150
Bolstar	1000	1000	100	3.0	40	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 4 utside limits
Spike Recovery: 0 out of 8 utside limits

COMMENTS: _____

Version: 860/V3.0 Printed: 20-Aug-1992 at [illegible]
Node: SAVA-1 GC Project: NOTE
Waters GC Report Using Multi-method [illegible]

HBLK073192MS 3-Aug-1992 20:39:55
~~method~~ blank spike
30g:5ml

Header:

Acquisition method	[illegible]	Processing method	[illegible]
Units		System number	[illegible]
Channel	[illegible]	Manual Injector Vial	8
Injection	1	Total injections	1
Run time	29.[illegible] min	Sample rate	1.00 [illegible]
Injection volume	2 ul	Mode	Area%
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACO system 6 for NOTE

Channel:
FPD

Method:
DB-5, 20M X 0.32MM X 0.25u
FPD
8140
72KPA
Instr ID = GCHP14

Sample:
External vial 8

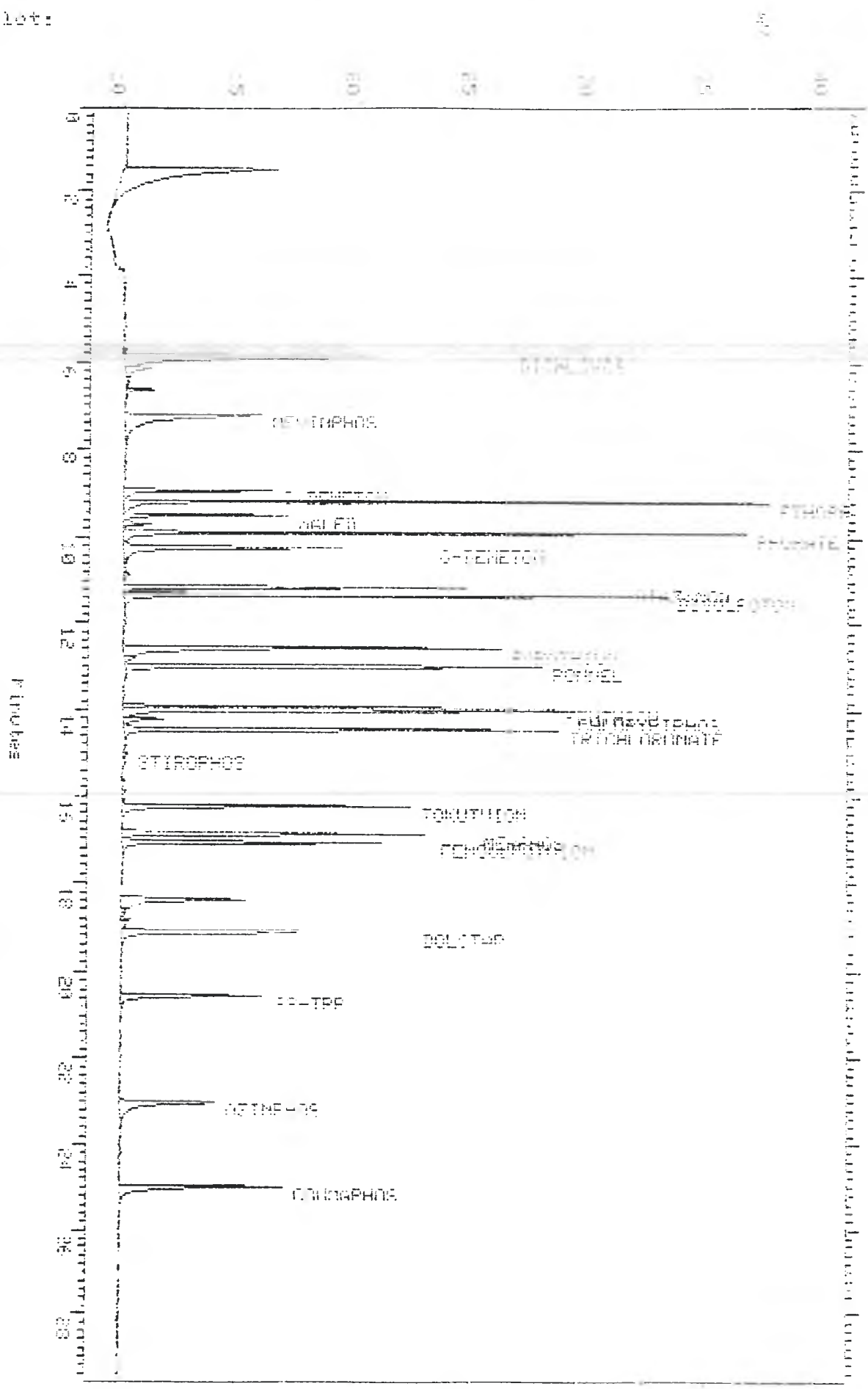
File ID	HBLK073192 MS
Client ID	PBS7A
Vol. Inj.	2ul
Dil./Conc.	30g : 5ml
Detector	FPD/DB-5
Port No.	GCHP14

Varian GC Report using Multiple Plots

HBLK073192 3-Aug-1992 20:59:55

00060

First Plot:



Waters GC Report - Using Multi. Method [illegible] Page 1

HBLK073192 3-Aug-1992 20:59:55

00061

Conditions:

Sample amount — Internal Standard [illegible]

Scale factor — Mode — Attn [illegible]

Keyboards of Remote Devices Unlocked

Integrate YES — Threshold [illegible] uV-sec — Peak Width [illegible] sec

Min Area [illegible] uV-sec — Min Height [illegible]

Do Not Update Retention Time — Retention Time Offset [illegible] sec

Relative Peak Window 3% — Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	1.467	82473	2513	VV		
UNKNOWN	3.833	510	80	BB	-	
UNKNOWN	5.717	737	170	BV	-	
DICHLOVOS	5.883	59783	[illegible]	VV	[illegible]	
UNKNOWN	6.150	7201	1432	VV	-	
UNKNOWN	6.650	2937	1175	BV	-	
MEVINPHOS	7.233	40330	5782	BV	1846.070	
S-DEMETON	8.917	15922	4209	VV	1171.299	
ETHOPROP	9.167	81053	27548	VV	1055.287	930
NALED	9.483	18897	6947	VV	1719.063	
UNKNOWN	9.700	3930	1182	VV	-	
PHORATE	9.883	72124	26568	VV	1079.022	
O-DEMETON	10.233	44452	[illegible]	VV	[illegible]	
UNKNOWN	10.583	641	[illegible]	VV	-	
UNKNOWN	10.750	817	[illegible]	VV	-	
UNKNOWN	10.833	1149	[illegible]	VB	-	
DIAZINON	11.150	53900	[illegible]	BV	[illegible]	
DISULFOTON	11.350	46232	23127	VV	955.974	
PARATHION	12.567	63980	[illegible]	BV	[illegible]	
UNKNOWN	12.783	2163	486	VV	-	
RONNEL	12.983	60286	17786	VB	1051.321	940
FENTHION	13.933	57285	18427	BV	959.750	
CHLORPYRIPHOS	14.017	65038	18963	VV	1184.470	
UNKNOWN	14.217	7045	1713	VV	-	
TRICHLORONATE	14.450	57694	18337	VV	[illegible]	
STIROPHOS	15.033	874	153	VV	[illegible]	
UNKNOWN	15.633	526	137	BB	-	
UNKNOWN	15.900	779	195	BV	-	
UNKNOWN	16.067	638	162	VV	-	
TOKUTHION	16.233	44537	12261	VV	1161.757	990
MERPHOS	16.883	50146	14935	BV	1095.810	
FENSULFOTHION	17.067	44429	13097	VV	[illegible]	
UNKNOWN	18.383	27340	[illegible]	BV	-	
UNKNOWN	18.583	1461	320	VV	-	
UNKNOWN	18.700	751	204	VV		
UNKNOWN	18.833	1484	386	VV	-	
UNKNOWN	18.967	1362	241	VV	-	
BOLSTAR	19.133	47941	12347	VB	1097.418	970
SS-TPP	20.567	25310	6068	VV	[illegible]	800
AZINPHOS	22.033	28483	4053	BV	[illegible]	
COUMAPHOS	25.000	27374	6901	BB	[illegible]	

Total Area 1172527 Total Amount 26146.[illegible] Total [illegible]

Version: 860/V3.0 Printed: 20-Aug-1992 at 16:09:17 Page 1
Node: SAVAX1 GC Project: NOTE User: D_[illegible]
Waters GC Report Using Multi-method n80392816 Line 1:

HBLK0731MSD 3-Aug-1992 22:06:45
Blank spike dup
30g:5ml

Header:

Acquisition method	8140	Processing method	[illegible]
Units		System number	[illegible]
Channel	1	Manual Injector Vial	10
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 10

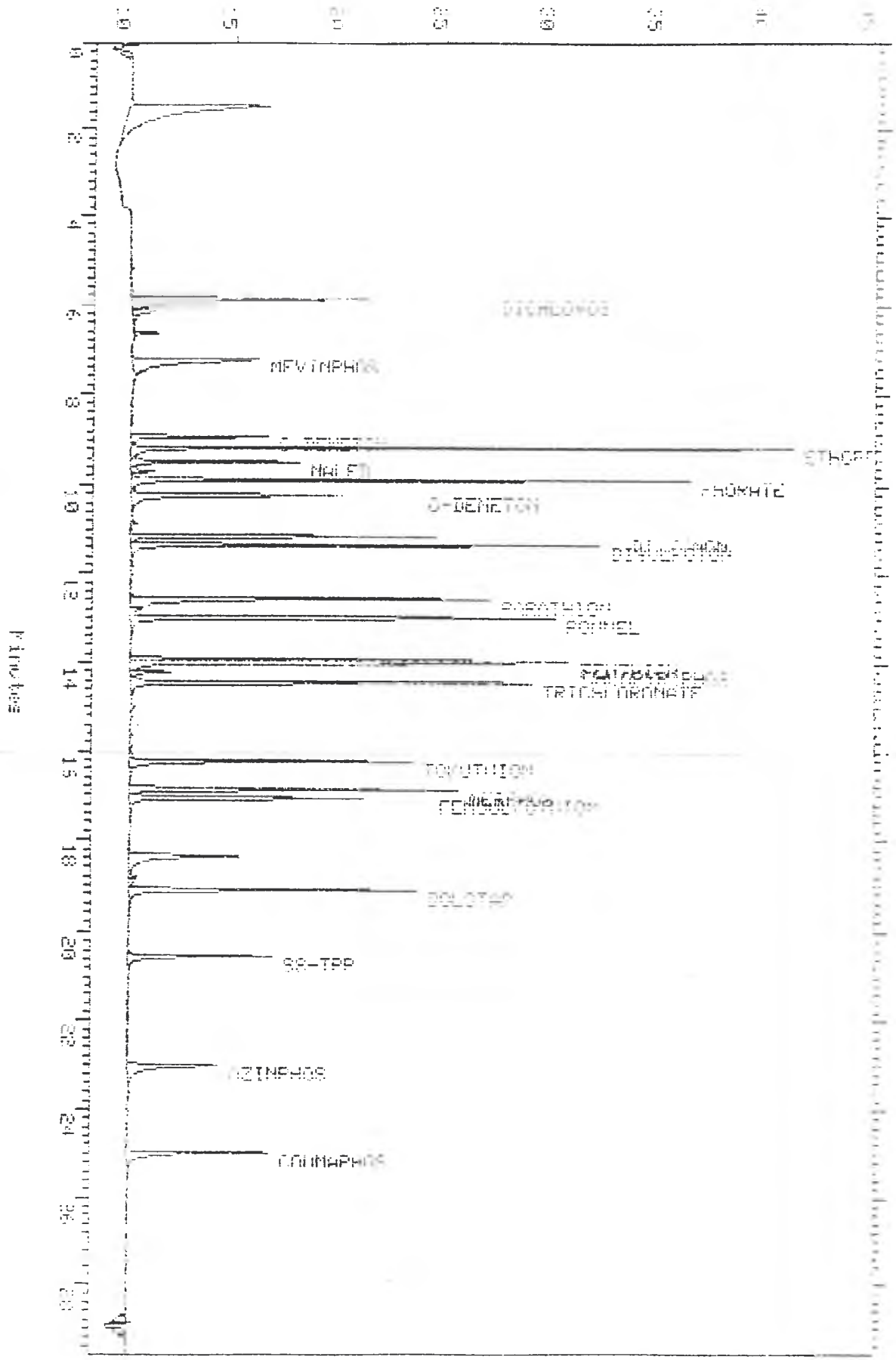
File ID	HBLK0731MSD
Client ID	PBSD1A
Vol. Inj.	2ul
Dil./Conc.	30g:5ml
Detector	FPD/DB-5
Port No.	GCHP14

Waters GC Report Using Multi-Standard

HBLK0731MSD 3-Aug-1992 22:06:45

00063

First Plot:



Waters GC report using Multiwindow [illegible]

HBLK0731MSD 3-Aug-1992 22:06:45 * 00064

Conditions:

Sample amount — Internal standard amt

Scale factor — Mode — Analysis

Keyboards of Remote Devices Unlocked

Integrate YES — Threshold 10.0 uV-sec — Peak Width [illegible] sec

Min Area 500 uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset 0.00 sec

Relative Peak Window 3% — Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount	
UNKNOWN	0.067	1087	[illegible]	BB		
UNKNOWN	0.217	5903	[illegible]	BB	-	
UNKNOWN	0.367	717	[illegible]	VB	-	
UNKNOWN	1.467	80967	[illegible]	VV	-	
UNKNOWN	5.183	337	[illegible]	BV	-	
DICHLOVOS	5.283	60594	14902	VV	[illegible]	
UNKNOWN	6.150	6642	1575	VV	-	
UNKNOWN	6.650	2838	1179	BB	-	
MEVINPHOS	7.233	38840	5990	BV	1786.[illegible]	
UNKNOWN	8.683	671	120	BB	-	
S-DEMETON	8.917	16385	6457	BV	[illegible]	
ETHOPROP	9.150	86478	21241	VV	1135.407	990
NALED	9.483	21454	7889	VV	[illegible]	
UNKNOWN	9.700	4215	1148	VV	-	
PHORATE	9.883	76049	26305	VV	[illegible]	
O-DEMETON	10.233	48619	12542	VV	[illegible]	
UNKNOWN	10.567	502	110	VB	-	
UNKNOWN	10.867	1265	316	BB	-	
DIAZINON	11.150	57345	22011	BV	[illegible]	
DISULFOTON	11.350	70737	22066	VV	[illegible]	
UNKNOWN	11.867	564	143	VB	-	
PARATHION	12.567	67392	16963	VV	1049.[illegible]	
UNKNOWN	12.783	3259	581	VV	-	
RONNEL	12.983	65202	19993	VV	[illegible]	1000
UNKNOWN	13.217	537	114	V[illegible]	-	
FENTHION	13.933	42253	10486	BV	[illegible]	
CHLORPYRIPHOS	14.000	66770	20803	VV	[illegible]	
UNKNOWN	14.217	7170	1923	VV	-	
TRICHLORONATE	14.450	62472	18286	VV	[illegible]	
UNKNOWN	14.667	637	129	VV	-	
STIROPHOS	15.100	-	-	NF	-	
UNKNOWN	15.633	727	150	BV	-	
UNKNOWN	15.883	7[illegible]	178	BV	-	
UNKNOWN	16.067	907	162	VV	-	
TOKUTHION	16.233	46344	13321	VV	[illegible]	1000
UNKNOWN	16.400	792	217	VV		
MERPHOS	16.867	53427	15499	BV	[illegible]	
FENSULFOTHION	17.067	47680	14112	VV	[illegible]	
UNKNOWN	18.383	30476	5327	VV	-	
UNKNOWN	18.683	708	165	VV	-	
UNKNOWN	18.833	1717	357	VV	-	
UNKNOWN	18.950	1199	222	VV		
BOLSTAR	19.117	50204	[illegible]	VV	[illegible]	1000
SS-TPP	20.550	27036	[illegible]	VV	[illegible]	
UNKNOWN	21.933	757	191	VV		860
AZINPHOS	22.033	28960	4278	VV	[illegible]	

Waters GC Report Using Multi-method [illegible]

HBLK0731MSD 3-Aug-1992 22:06:45

00065

Peak Name	Ret Time	Area	Height	[illegible]	[illegible]
COUMADHOS	25.000	30754	[illegible]	[illegible]	[illegible]
UNKNOWN	28.717	1120	304	[illegible]	-
UNKNOWN	28.833	2779	[illegible]	[illegible]	-
UNKNOWN	28.883	2528	[illegible]	[illegible]	-
UNKNOWN	29.033	4779	[illegible]	[illegible]	-
UNKNOWN	29.150	[illegible]	217	[illegible]	-

Total Area 1254780 Total Amount 27551.597 Total Height 350426

CALIBRATIONS

(INITIAL & CONTINUING)

INITIAL CALIBRATION DATA

6I-a
ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
INITIAL CALIBRATION

Lab Name: SEQUOIA ANALYTICAL Contract: _____

Lab Code: - Case No.: - SAS No.: _____ SDG No.: _____

Instrument ID: GCHP14 Calibration Date(s): 07/13/92 Time: 19:07

Matrix:soil/water WATER Level: (low/med) LOW

Max %D = 20%

LAB FILE ID: RRF0.1= HSTD071392 RRF0.2= HSTD071392A
RRF0.5= HSTD071392B RRF1.0= HSTD071392C RRF1.5= HSTD071392D

COMPOUND	RRF0.1	RRF0.2	RRF0.5	RRF1.0	RRF1.5
Azinphos methyl	-	11.0	10.2	11.7	14.6
Bolstar	29.3	29.4	-	28.7	29.9
Chloropyrifos	37.6	40.5	35.7	38.7	38.1
Coumaphos	12.7	15.1	11.6	14.9	16.8
Demeton	22.0	24.2	23.8	26.6	27.1
Diazinon	32.8	29.8	28.5	29.9	29.4
Dichlorvos	53.6	52.3	52.3	52.5	51.6
Disulfoton	48.1	48.4	49.4	51.4	50.1
Ethoprop	49.4	50.1	52.8	53.2	55.2
Fensulfothion	10.6	10.6	9.2	10.5	10.6
Fenthion	41.2	36.8	34.8	40.0	40.5
Merphos	31.7	33.1	27.8	32.3	31.9
Mevinphos	10.0	12.7	11.1	14.0	15.5
Naled	5.7	5.4	5.2	5.6	7.1
Parathion methyl	40.3	44.0	40.8	43.7	44.3
Phorate	47.3	47.4	48.2	49.0	48.8
Ronnel	37.3	39.3	35.9	36.8	38.0
Stirophos (Tetrachlorvinphos)	18.8	17.4	16.9	17.6	18.1
Tokuthion (Prothiofos)	21.0	21.4	17.7	22.2	23.4
Trichloronate	39.6	36.6	33.2	38.2	37.5
Triphenyl phosphate	19.7	-	13.2	16.2	17.2

ALL RF'S ARE x 10^3

6I-b
ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
INITIAL CALIBRATION

Lab Name: SEQUOIA ANALYTICAL Contract: _____

Lab Code: - Case No.: - SAS No.: _____ SDG No.: _____

Instrument ID: GCHP14 Calibration Date(s): 07/13/92 Time: 19:07

Matrix: soil/water WATER Level: (low/med) LOW

Max %D = 20 %

LAB FILE ID: RRF2.0 = HSTD071392E
RRF3.0 = HSTD071392F

COMPOUND	RRF2.0	RRF3.0	$\overline{RRF}$	% RSD
Azinphos methyl	17.4	16.0	13.5	20
Bolstar	31.2	29.3	29.6	2.6
Chloropyrifos	39.7	37.5	38.2	3.8
Coumaphos	17.0	15.8	14.8	13
Demeton	29.2	27.5	25.8	9.0
Diazinon	31.2	29.8	30.2	4.3
Dichlorvos	54.4	53.6	52.9	1.7
Disulfoton	53.1	51.2	50.2	3.3
Ethoprop	57.6	56.1	53.5	5.3
Fensulfothion	12.0	10.6	10.6	7.1
Fenthion	43.4	40.6	39.6	6.7
Merphos	34.0	31.7	31.8	5.7
Mevinphos	17.0	16.5	13.8	18
Naled	8.0	7.6	6.4	17
Parathion methyl	46.6	47.2	43.8	5.5
Phorate	51.0	48.6	48.6	2.4
Ronnel	40.1	39.0	38.0	3.6
Stirophos (Tetrachlorvinphos)	18.9	18.6	18.0	3.9
Tokuthion (Prothiofos)	24.9	23.3	22.0	9.7
Trichloronate	39.3	37.9	37.5	5.3
Triphenyl phosphate	18.0	16.4	16.8	12

ALL RF'S ARE x 10^3

Remedial Analytical - Chromatography Department
680 Chesapeake Redwood City California 94063

Version: 840/[illegible]0 Printed: 13-Jul-1992 at 19:40:[illegible] Page 1
Mode: [illegible] GC Project: NOTE User: [illegible]

Copied
QC'd Done

HSTD071392 13-Jul-1992 19:07:38

GCH071392.D → J
50ppb level 1

Header:

Acquisition method	8140	Processing method	8140
Units	DEF	System number	2
Channel	1	Manual Injector Vial	1
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node LAL-II system 2 for NOTE

Channel:
FPD

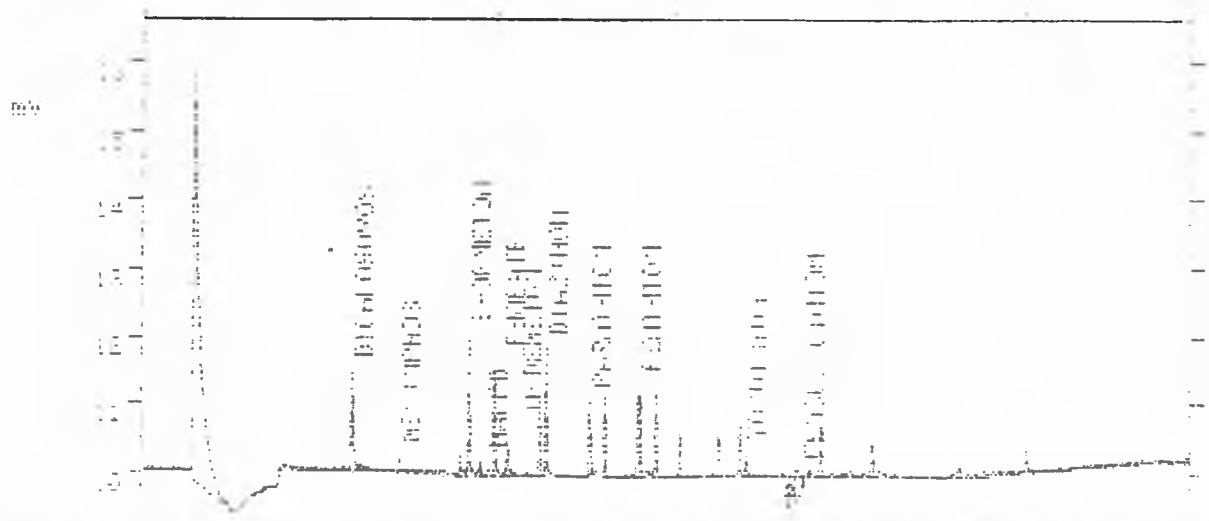
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 1

File ID	HSTD071392
Client ID	GCH071392D
Vol. Inj.	2ul
Dil./Conc.	-
Detector	FPD/DB-5
Port No.	GCHP14

First Plot:

HSTD071392 Man Inj vial 1 Inject 1 ch 1



Version: [illegible] Printed: [illegible]-Jul-1993 at [illegible] Page [illegible]
Node: [illegible] Project: NOTE User: [illegible]
HSTD071293 13-Jul-1993 19:07:38

Conditions:

Sample amount		Internal standard amt	
Scale factor		Mode	Calibration
Response	Replace	Keyboards or Remote Devices Inhibited	
Integrate YES	Threshold	10.0 uV-sec	Peak Width 20 sec
	Min Area	500 uV-sec	Min Height [illegible] uV
Do Not Update Retention Time		Retention Time Offset	[illegible] sec
Relative Peak Window 0%		Absolute Peak Window	[illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.483	7633	5927	VV	-
UNKNOWN	3.900	1164	187	BV	-
DICHLOROVOS	5.917	9361	1415	BV	CAL
UNKNOWN	6.167	620	111	VV	-
MEVINPHOS	7.267	999	231	BB	CAL
UNKNOWN	8.967	812	332	BV	-
S-DEMETON	9.217	4939	2006	BB	CAL
ETHOPROP	9.250	-	-	NF	-
NALED	9.533	571	167	VB	CAL
PHORATE	9.950	4739	1476	VB	CAL
O-DEMETON	10.300	2104	712	BV	CAL
UNKNOWN	11.217	2278	1124	BB	
DIAZINON	11.417	4812	1823	BB	CAL
DISULFOTON	11.583	-	-	NF	-
PARATHION	12.650	4034	1073	BB	CAL
UNKNOWN	13.067	2729	1137	BV	-
RONNEL	13.250	-	-	NF	-
UNKNOWN	14.033	4117	1203	BV	-
FENTHION	14.100	3745	1331	VB	CAL
CHLORPYRIFOS	14.283	-	-	NF	
UNKNOWN	14.533	2955	1200	VB	
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.317	1879	634	VV	
UNKNOWN	16.333	2102	606	BV	-
STIROPHOS	16.533	-	-	NF	
UNKNOWN	16.983	3166	908	BB	-
TOKUTHION	17.167	1063	312	BV	CAL
MERPHOS	17.367	-	-	NF	
UNKNOWN	18.300	1093	513	BB	
UNKNOWN	18.383	2534	551	BV	-
UNKNOWN	18.433	2040	532	VV	-
UNKNOWN	18.500	1897	509	VV	-
UNKNOWN	18.567	3716	449	VV	-
FENSULFOTHION	18.750	463	251	VV	CAL
UNKNOWN	19.233	2930	777	VV	-
BOLSTAR	19.433	-	-	NF	-
UNKNOWN	20.667	1966	454	BB	-
SS-TPP	20.883	-	-	NF	-
UNKNOWN	23.150	776	1[illegible]	VV	
AZINPHOS	23.250	-	-	NF	
UNKNOWN	25.067	1269	361	BV	-
COUMAPHOS	25.233	-	-	NF	-

Sequoia Analytical - Chromatography Laboratory
680 Chesapeake Redwood City California 94063

Version: 860/V3.0 Printed: 19-Jul-1992 at [illegible] Page 1
Node: SAVAX1 GC Project: MOTE Level: [illegible]

HSTD071392A 13-Jul-1992 19:40:20

GCH071392E
100ppb level 2

Header:

Acquisition method	8140	Processing method	8140
Units	ug/L	System number	2
Channel	1	Manual Injector [illegible]	2
Injection	1	Total injections	1
Run time	29.00 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:
Node:
Acquired on node SALAC2 system 6 for MOTE

Channel:
FPD 2

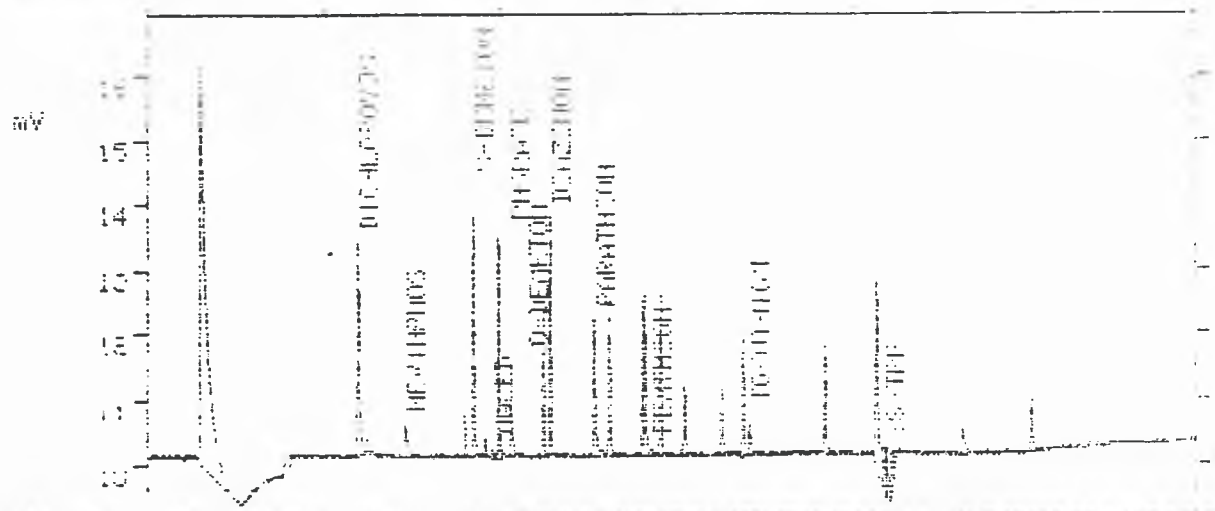
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 2

File ID	HSTD071392A
Client ID	GCH071392E
Vol. Inj.	2ul
DH/Conc	—
Column	FPD/DB-5
Port	GCHP14

First Plot:

HSTD071392A Man Inj Vial 2 Inject 1 Ch 1



Version: 860/V3.0 Printed: 13-Jul-1992 at 20:15:30 Page 1
Node: VSAVAX1 GC Project: NOTE User: [illegible]
HSTD0713924 13-Jul-1992 19:40:20

Conditions:

Sample amount		Internal standard amt	
Scale factor		Mode	Calibration
Responses	Replace	Keywords of Report Devices	Unknown
Integrate VBS	Threshold	10.0 uV-sec	Peak width	[illegible] sec
	Min Area	500 uV-sec	Min Height	[illegible] uV
Do Not Update Retention Time		Retention Time Offset	[illegible] sec
Relative Peak Window	2%	Absolute Peak Window	10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.483	74373	6083	VB	-
UNKNOWN	3.900	2089	328	BV	-
DICHLOROVOS	5.917	10459	3277	VV	CAL
MEVINPHOS	7.267	2534	484	VB	CAL
UNKNOWN	8.967	1460	675	BB	-
S-DEMETON	9.217	10019	4191	BB	CAL
ETHOPROP	9.350	-	-	NF	-
UNKNOWN	9.533	1091	314	BB	-
NALED	9.767	[illegible]	153	VV	CAL
PHORATE	9.933	[illegible]	[illegible]	VV	CAL
O-DEMETON	10.300	[illegible]	[illegible]	VV	CAL
UNKNOWN	11.217	[illegible]	[illegible]	BB	-
DIAZINON	11.417	[illegible]	3674	BB	CAL
DISULFOTON	11.583	-	-	NF	-
PARATHION	12.650	8800	2105	BV	CAL
UNKNOWN	13.067	7868	2434	VV	-
RONNEL	13.250	-	-	NF	-
UNKNOWN	14.017	7368	2380	BV	-
UNKNOWN	14.100	8104	2449	VV	-
FENTHION	14.283	624	117	VB	CAL
CHLORPYRIFOS	14.283	-	-	NF	-
UNKNOWN	14.533	7031	2429	BV	-
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.217	2488	1148	VB	-
UNKNOWN	16.333	4277	1163	VV	-
STIROPHOS	16.533	-	-	NF	-
UNKNOWN	16.967	6612	1976	VV	-
TOKUTHION	17.167	2120	594	VB	CAL
MERPHOS	17.367	-	-	NF	-
FENSULFOTHION	18.683	-	-	NF	-
UNKNOWN	19.217	5872	1650	BB	-
BOLSTAR	19.433	-	-	NF	-
UNKNOWN	20.650	15408	2987	VV	-
SS-TPP	20.883	2549	737	VV	CAL
UNKNOWN	20.933	2497	926	VB	-
UNKNOWN	21.067	2261	560	BV	-
UNKNOWN	21.150	971	[illegible]	VB	-
UNKNOWN	22.117	2197	386	BV	-
AZINPHOS	23.350	-	-	NF	-
UNKNOWN	25.050	3012	412	BV	
COUMAPHOS	25.233	-	-	NF	

Total Area: [illegible] Total Amount: [illegible] Int: [illegible] sec [illegible]

Sequoia Analytical - Chromatography Department
680 Chesaweke Redwood City California 94063

Version: 860/V3.0 Printed: 13-Jul-1992 at 20:50:20 Page 1
Node: SAVAX1 GC Project: NOTE User: LAB

HSTD071392B 13-Jul-1992 20:15:20
GCH071392F
250ppb cal level 3

Header:

Acquisition method	8140	Processing method	8140
Units	PPB	System number	2
Channel	1	Manual Injector Vial	0
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACS system e for NOTE

Channel:
FPD

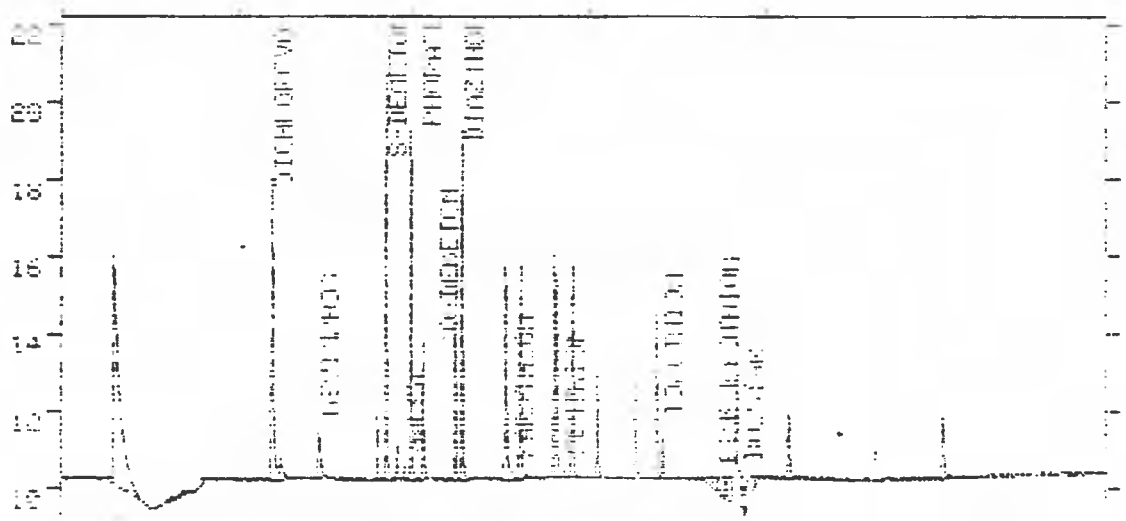
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Samples:
External vial 5

File ID	HSTD071392B
Client ID	GCH071392F
Vol. Inj.	2ul
[illegible]	-
D.	FPD/DB-5
Port [illegible]	GCHP14

First Plot:

HSTD071392B Man Inj Vial: 5 Injnt 1 Ch 1



Version: 860/V3.0 Printed: 15-Jul-1992 at 2:15:23 PM Page 1
Node: SAVAX1 GC Project: NOTE User: LJAAR
HSTD071392B 15-Jul-1992 20:15:23

Conditions:

Sample amount		Internal standard amt			
Scale factor		Mode		Calibration	
Responses	Replace	Keyboards of Remote Devices Unlocked			
Integrate YES	Threshold	10.0 uV/sec	Peak Width	20 sec	
	Min Area	500 uV-sec	Min Height	0 uV	
Do Not Update Retention Time		Retention Time Offset		0.00 sec	
Relative Peak Window	3%	Absolute Peak window		10 sec	

GC Results:

Peak Name	Ret Time	Area	Height	Inc	Amounts
UNKNOWN	1.483	72316	5939	VV	-
UNKNOWN	3.100	559	72	VV	
UNKNOWN	3.217	873	95	VV	-
UNKNOWN	3.917	3082	226	BV	-
UNKNOWN	5.717	555	170	BV	-
DICHLOROVOS	5.917	26166	7795	VV	CAL
UNKNOWN	6.167	2773	907	VV	-
UNKNOWN	6.483	556	181	BV	
MEVINPHOS	7.267	5526	1222	BB	CAL
UNKNOWN	8.967	4001	1707	VV	-
S-DEMETON	9.217	26397	10007	VV	CAL
ETHOPROP	9.350	-	-	NF	-
UNKNOWN	9.533	2580	890	VB	-
NALED	9.750	997	226	BB	CAL
PHORATE	9.933	24091	8976	BV	CAL
O-DEMETON	10.300	11886	3477	VV	CAL
UNKNOWN	11.217	14267	5749	BV	-
DIAZINON	11.417	24681	9034	VB	CAL
DISULFOTON	11.583	-	-	NF	-
UNKNOWN	12.633	20386	5448	BV	-
PARATHION	12.850	752	167	VV	CAL
UNKNOWN	13.067	17977	1693	VV	-
RONNEL	13.250	-	-	NF	-
UNKNOWN	14.017	17403	5722	VV	-
UNKNOWN	14.083	17872	5659	VV	-
FENTHION	14.333	811	202	VB	CAL
CHLORPYRIFOS	14.283	-	-	NF	-
UNKNOWN	14.533	16609	5555	BV	-
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.217	8460	1678	VV	-
UNKNOWN	16.333	8867	2565	BB	-
STIROPHOS	16.533	-	-	NF	-
UNKNOWN	16.967	13905	4264	VV	-
TOKUTHION	17.167	4583	1248	VV	CAL
MERPHOS	17.367	-	-	NF	-
UNKNOWN	18.417	507	108	BV	-
UNKNOWN	18.517	1833	145	VV	-
FENSULFOTHION	18.700	2517	353	VV	CAL
UNKNOWN	18.733	1908	405	VV	-
UNKNOWN	18.867	2889	302	VV	-
UNKNOWN	18.933	3665	691	VV	-
UNKNOWN	19.067	2115	649	VV	-
UNKNOWN	19.217	23625	[illegible]	VV	-

UNKNOWN	18.717	[illegible]	[illegible]	[illegible]
UNKNOWN	20.050	0993	.794	[illegible]

Version: 880/V3.0 Printed: 13-Jul 1992 at 20:50:[illegible] PAGE 3
Node: SAVAXI CC Project: NOTE Date: 1 [illegible]
HSTD071392B 13-Jul-1992 20:15:23

Peak Name	Ret Time	Area	Height	Int	Amount
SS-TPP	20.883	-	-	NF	
UNKNOWN	22.117	5117	852	BV	
AZINPHOS	23.250	-	-	NF	
UNKNOWN	23.050	5810	1716	BE	
COUMAPHOS	24.233	-	-	NF	

Total Area 416912 Total Amount 0.000 Total Height [illegible]

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Version: 860/V3.0 Printed: 13-Jul-1992 at 21:25:25 Page: 1
Node: SAVAX1 GC Project: NOTE User: [illegible]

HSTD071392C 13-Jul-1992 20:50:22
GCH071392G
500ppb level 4

Header:

Acquisition method	8140	Processing method	8140
Units	ppb	System number	6
Channel	1	Manual Injector Vial	4
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACI system 6 for NOTE

Channel:
ADD

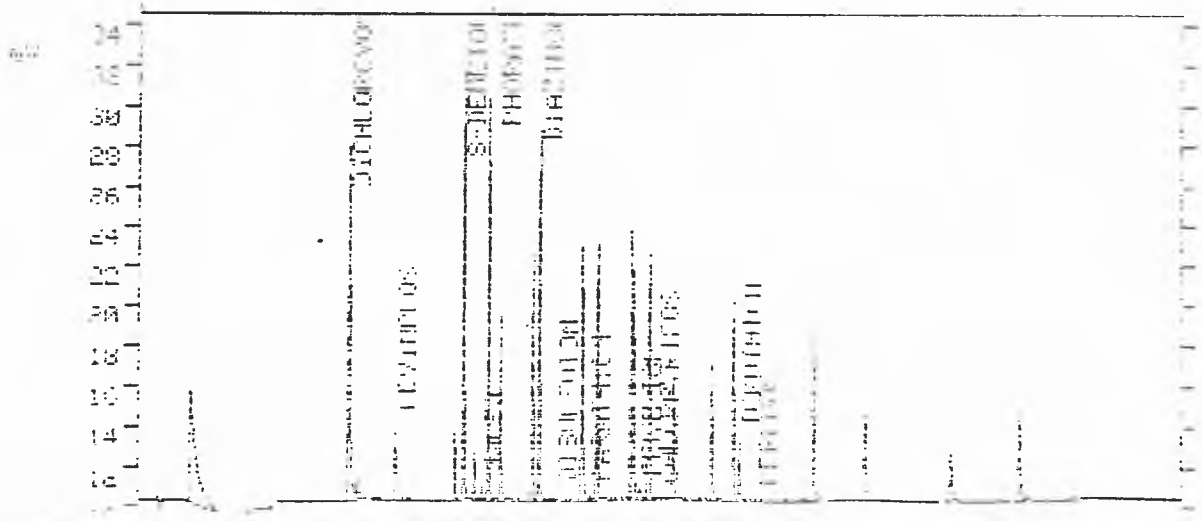
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 4

File ID	HSTD071392C
Client ID	GCH071392G
Vol. Inj.	2ul
Dil./Conc.	-
Data ID	FPD/DB-5
Port No.	GCHP14

First Plot:

HSTD071392C Man Inj Vial 4 Injection 1 Ch 1



Version: 860/V3.0 Printed: 1[illegible] [illegible] at [illegible] Page [illegible]
Node: \SAV4X1 GC Project: NOTE User: [illegible]
HSTD071392C 13-Jul-1992 20:50:22

Conditions:

Sample amount		Internal standard amt			
Scale factor		Mode		Calibration	
Responses	Replace	Keyboard of Remote Devices Unlocked			
Integrate YES	Threshold	10.0 uV/sec	Peak Width	20 sec	
	Min Area	500 uV-sec	Min Height	0 uV	
Do Not Update Retention Time		Retention Time Offset		0.00 sec	
Relative Peak Window	3%	Absolute Peak Window		10 sec	

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	0.583	1050	509	BB	-
UNKNOWN	0.667	2112	3[illegible]	BV	-
UNKNOWN	1.367	553	[illegible]	BV	-
UNKNOWN	1.483	70595	5797	VV	-
UNKNOWN	2.183	482	146	VV	-
UNKNOWN	5.717	749	210	BB	-
DICHLOROVOS	5.900	52477	17[illegible]	BV	CAL
UNKNOWN	6.167	3117	943	VB	-
UNKNOWN	6.6[illegible]	481	[illegible]	VV	-
UNKNOWN	6.783	3[illegible]	1[illegible]	VB	-
MEVINPHOS	7.250	13576	[illegible]	BV	CAL
UNKNOWN	8.967	7181	[illegible]	BB	-
S-DEMETON	9.217	53157	[illegible]	BV	CAL
ETHOPROP	9.250	-	-	NF	-
UNKNOWN	9.533	5555	[illegible]	BV	-
NALED	9.750	2081	660	VB	CAL
PHORATE	9.933	48957	19962	BV	CAL
UNKNOWN	10.283	26554	9101	VV	-
O-DEMETON	10.450	-	-	NF	-
UNKNOWN	11.217	29861	12254	VV	-
DIAZINON	11.417	51365	18[illegible]	VV	CAL
DISULFOTON	11.750	1470	200	VV	CAL
UNKNOWN	11.917	767	150	VV	-
UNKNOWN	12.633	43742	12677	BV	-
PARATHION	12.867	1019	267	VV	CAL
UNKNOWN	13.067	36856	12601	VB	-
RONNEL	13.250	-	-	NF	-
UNKNOWN	14.017	40044	13519	VV	-
UNKNOWN	14.083	38659	12809	VV	-
FENTHION	14.283	2541	556	VV	CAL
CHLORPYRIFOS	14.433	663	131	VV	CAL
UNKNOWN	14.533	38153	12310	VV	-
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.217	17595	5842	VB	-
UNKNOWN	15.983	807	1[illegible]	VV	-
UNKNOWN	16.317	22160	6653	BB	-
STIROPHOS	16.533	-	-	NF	-
UNKNOWN	16.967	12315	[illegible]	BV	-
TOKUTHION	17.167	10935	[illegible]	VV	CAL
MERPHOS	17.200	679	1[illegible]	VV	CAL
UNKNOWN	18.483	992	1[illegible]	BB	-
FENSULFOTHION	18.683	-	-	NF	-
UNKNOWN	18.[illegible]	1[illegible]	[illegible]	VV	

UNKNOWN [illegible]
SS-TPP 20.003

Version: 860/V3.0 Printed: 13-Jul-1992 at 21:25:25 Page 1
Node: VSAVA1 GC Project: NOTS User: [illegible]
HSTD071392C 13-Jul-1992 20:50:22

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	22.100	11741	2571	BB	-
AZINPHOS	23.270	-	-	NF	-
UNKNOWN	25.050	14925	4768	BV	
COUMAPHOS	25.233	-	-	NA	-

Total Area 702964 Total Amount [illegible].000 Total Height [illegible]

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Version: 860/V3.0 Printed: 13-Jul-1992 at [illegible] Page 1
Node: SAVAX1 GC Project: NOTE User: [illegible]

HSTD071392D 13-Jul-1992 21:25:22
GCH071392H
750 ppb level 5

Header:

Acquisition method	8140	Processing method	8140
Units	PPM	System number	6
Channel	1	Manual Injector Vial	5
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Calibration
Acquisition version	LPC/8/V3.0	Processing version	V3.0

Description:
Mode:
Acquired on node SAVAX1 system 6 for [illegible]

Channel:
FPD

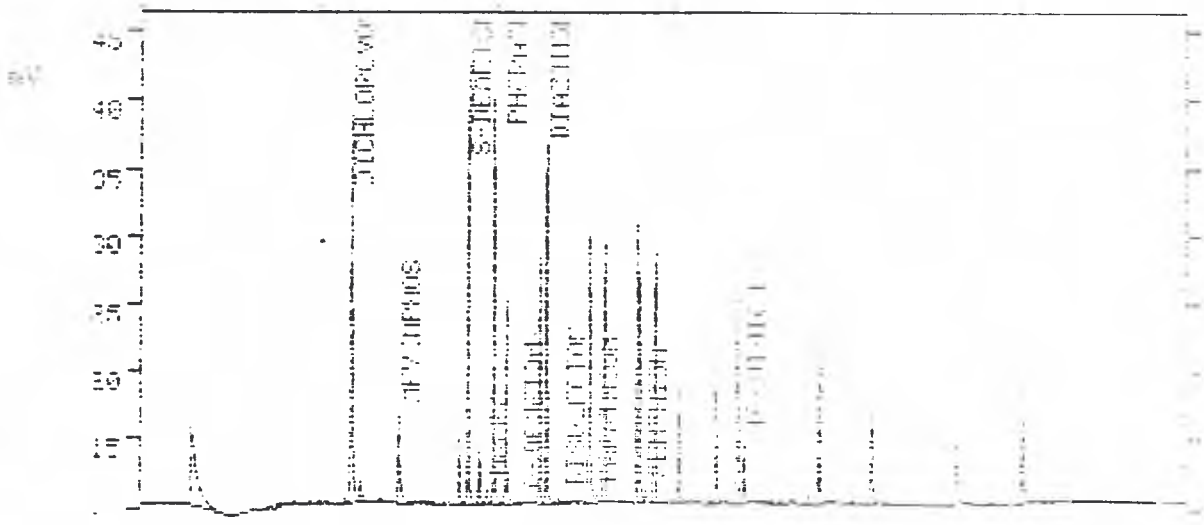
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 5

File ID	HSTD071392D
Client ID	GCH071392H
Vol. Inj.	2ul
Dil./Conc.	-
Detector	FPD/DB-5
Port No.	GCHP14

First Plot:

HSTD071392D Man Inj Vial 5 Inject 1 Ch 1



00081

Version: 860/V3.0 Printed: 13-Jul-1992 at 22:00:24 Page 1
Node: SAVAX1 GC Project: NOTE User: [illegible]
HSTD071392D 13-Jul-1992 21:25:22

Conditions:

Sample amount		Internal standard amt	
Scale factor		Mode	Calibration
Responses	Replace	Keyboards of Remote Devices	Unlocked
Integrate YES	Threshold	10.0 uV-sec	Peak Width	20 sec
	Min Area	500 uV-sec	Min Height	0 uV
Do Not Update Retention Time		Retention Time Offset	0.00 sec
Relative Peak Window	2%	Absolute Peak Window	10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.483	68914	5663	VV	-
UNKNOWN	3.867	2220	241	BV	-
UNKNOWN	4.000	1041	216	VV	-
UNKNOWN	5.717	1281	361	BB	-
DICHLOROVOS	5.900	77363	26485	BV	CAL
UNKNOWN	6.167	3517	1407	VV	-
UNKNOWN	6.217	1134	415	VB	-
UNKNOWN	6.683	1396	522	VV	-
UNKNOWN	6.783	411	213	VB	-
UNKNOWN	7.183	506	30	BV	-
MEVINPHOS	7.250	23316	6202	VV	CAL
UNKNOWN	8.967	11591	3098	BV	-
S-DEMETON	9.217	82815	32097	VV	CAL
ETHOPROP	9.250	-	-	NF	-
UNKNOWN	9.533	10676	3961	VV	-
NALED	9.750	3648	1115	VV	CAL
PHORATE	9.933	73206	29683	VV	CAL
UNKNOWN	10.283	40662	14613	VV	-
O-DEMETON	10.500	677	193	VV	CAL
UNKNOWN	10.567	898	218	VV	-
UNKNOWN	11.217	44142	18114	BV	
DIAZINON	11.417	75221	26979	VV	CAL
DISULFOTON	11.583	860	206	VV	CAL
UNKNOWN	11.750	2107	210	VV	-
UNKNOWN	11.917	822	186	VB	-
UNKNOWN	12.067	597	109	BV	-
UNKNOWN	12.333	734	206	VV	-
UNKNOWN	12.633	66450	19479	VV	-
PARATHION	12.850	2152	409	VV	CAL
UNKNOWN	13.067	56992	19193	VV	-
RONNEL	13.250	-	-	NF	-
UNKNOWN	14.017	60806	20272	VV	-
UNKNOWN	14.083	57117	18955	VV	-
FENTHION	14.283	2522	780	VV	CAL
CHLORPYRIFOS	14.283	-	-	NF	-
UNKNOWN	14.533	56244	18427	VV	-
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.100	741	230	BV	-
UNKNOWN	15.217	27101	8496	VV	-
UNKNOWN	15.967	699	245	VV	-
UNKNOWN	16.117	377	108	VB	-
UNKNOWN	16.217	35119	10481	BV	-
STIROPHOS	16.[illegible]		-	NF	-

MEVPHOS	17.347	-	-	BB	
UNKNOWN	18.465	1222	315	BB	

00082

Version: 660/V3.0 Printed: 13-Jul-1992 at 12:00:23 Page 3
Node: SAVAK1 DC Project: NOTE Use: [illegible]
HSTD071392D 13-Jul-1992 21:25:22

Peak Name	Ret Time	Area	Height	Int	Amount
PENSULFOTHION	18.682	-	-	NF	-
UNKNOWN	16.933	2368	668	VB	-
UNKNOWN	19.217	44916	17691	BV	-
BOLSTAR	19.433	-	-	NF	-
UNKNOWN	20.100	598	144	BV	-
UNKNOWN	20.650	25867	6694	BV	-
SS-TPP	20.883	-	-	NF	-
UNKNOWN	23.100	21844	4821	VV	-
AZINPHOS	23.350	-	-	NF	-
UNKNOWN	25.050	25231	7961	BB	
COUMAPHOS	25.233	-	-	NF	-

Total Area 1083203 Total Amount 0.000 Total Height 324593

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680 Chesapeake Redwood City California 94063

Version: 860/V3.0 Printed: 13-Jul-1992 at 22:30:07 Page 1
Node: SAVAX1 GC Project: NOTE Report: HSTD

HSTD071392E 13-Jul-1992 22:00:23
GCH071392I
1000 ppb level6

Header:

Acquisition method	8140	Processing method	8:20
Units	PPB	System number	2
Channel	1	Manual Injector Vial	6
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:
Node:
Acquired on node SSLAC2 system 6 for NOTE

Channel:
FPD

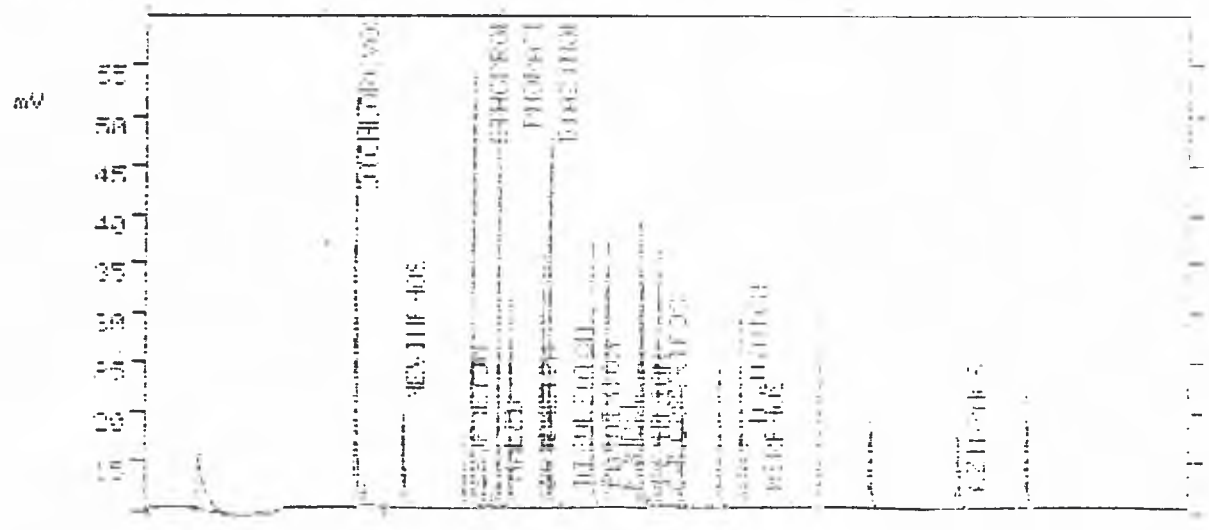
Methods:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Samples:
External vial 6

File ID	HSTD071392E
Client ID	GCH071392I
Vol. Inj.	2 ul
Dil./Conc.	-
Detector	FPD/DB-5
Port No.	GCHP14

First Plot:

HSTD071392E Man Inj Vial 6 Inject 1 Ch 1



Version: 820/V3.0 Printed: 13-Jul-1992 at 22:00:00 Page 1
Node: SAV4:1 GC Project: NOTE User: L_MAAR
HSTD071392E 13-Jul-1992 22:00:33

Conditions:

Sample amount — Internal standard amt
Scale factor — Mode — Calibration
Responses — Replace — Keyboards of Remote Devices Unlocked

Integrate YES — Threshold 10.0 uV/sec — Peak Width 20 sec
Min Area 500 uV-sec — Min Height 0 uV

Do Not Update Retention Time — Retention Time Offset 0.000 sec
Relative Peak Window 2% — Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	0.050	854	589	BP	-
UNKNOWN	0.200	3969	739	BV	-
UNKNOWN	0.267	2065	490	VV	-
UNKNOWN	0.350	586	227	VB	-
UNKNOWN	1.317	731	169	VV	-
UNKNOWN	1.417	1024	255	VV	-
UNKNOWN	1.483	71716	5855	VV	-
UNKNOWN	3.850	549	111	BB	-
UNKNOWN	4.750	541	204	BB	-
UNKNOWN	5.717	1318	507	BB	-
DICHLOROVOS	5.900	108796	42537	BV	CAL
UNKNOWN	6.167	4461	2070	VV	-
UNKNOWN	6.217	1637	545	VB	-
UNKNOWN	6.483	1169	382	BV	-
UNKNOWN	6.567	3469	1027	VB	-
UNKNOWN	6.683	4106	1249	BV	-
UNKNOWN	6.783	6652	996	VV	-
UNKNOWN	6.883	2416	455	VB	-
MEVINPHOS	7.250	34079	9092	VV	CAL
UNKNOWN	8.133	516	81	BV	-
UNKNOWN	8.967	15005	7175	BV	-
S-DEMETON	9.067	728	215	VV	CAL
ETHOPROP	9.217	115242	44200	VV	CAL
UNKNOWN	9.533	15929	5946	VV	-
NALED	9.750	5106	1493	VV	CAL
PHORATE	9.933	102042	41945	VV	CAL
UNKNOWN	10.283	58404	20934	VV	-
O-DEMETON	10.483	1065	214	VV	CAL
UNKNOWN	10.567	1906	304	VV	-
UNKNOWN	10.767	953	172	VV	-
UNKNOWN	10.917	945	143	VV	-
UNKNOWN	11.217	42417	25452	VV	-
DIAZINON	11.417	104264	37333	VV	CAL
DISULFOTON	11.733	2369	500	VV	CAL
UNKNOWN	11.933	1169	237	VV	-
UNKNOWN	12.067	564	136	VV	-
UNKNOWN	12.333	743	302	BB	-
UNKNOWN	12.433	93311	36671	BV	-
PARATHION	12.850	2265	565	VV	CAL
UNKNOWN	12.933	591	217	VV	-
UNKNOWN	13.067	80176	36671	VV	-
RONNEL	13.283	702	170	VV	CAL
UNKNOWN	13.367	174	175	VV	-

[illegible]	[illegible]	[illegible]	[illegible]		
CHLORPYRIFOS	14.417	750	[illegible]		CAL

00085

Version: 860/V3.0 Printed: 13-Jul-1992 at 22:36:00 Page 2
Node: SAVAX1 GC Project: NOTE User: [illegible]
HSTD0713925 13-Jul-1992 22:00:23

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	14.533	78641	25734	VB	-
TRICHLORONATE	14.733	-	-	NF	-
UNKNOWN	15.100	873	262	BV	-
UNKNOWN	15.217	37778	11758	VV	-
UNKNOWN	15.983	1253	335	BV	-
UNKNOWN	16.117	560	174	VV	-
UNKNOWN	16.317	49751	15183	VV	-
STIROPHOS	16.533	-		NF	-
UNKNOWN	16.967	67908	21240	BV	-
TOKUTHION	17.150	24076	4231	VV	CAL
MERPHOS	17.400	740	117	VV	CAL
UNKNOWN	17.617	547	97	VV	-
UNKNOWN	18.467	1879	466	BB	-
PENSULFOTHION	18.683	-	-	NF	-
UNKNOWN	18.917	3480	1022	BB	-
UNKNOWN	19.217	62357	18473	BB	-
BOLSTAR	19.433	-	-	NF	-
UNKNOWN	20.083	695	206	VB	-
UNKNOWN	20.650	36025	9537	VV	-
SS-TPP	20.883	-	-	NF	-
UNKNOWN	22.083	34822	7290	BV	-
AZINPHOS	23.300	1089	213	VV	CAL
UNKNOWN	24.250	773	141	VB	-
UNKNOWN	25.050	71903	11020	BB	-
COUMAPHOS	25.233	-	-	NF	-

Total Area 1531555 Total Amount 0.000 Total Height [illegible]

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680 Chesapeake Redwood City California 94063

Version: 860/V3.0 Printed: 15-Jul-1992 at [illegible] Page 1
Node: SAVAX1 GC Project: NOTE User: L. [illegible]

HSTD071392F 15-Jul-1992 22:35:25
GCH071392J
300 ppb level 7

Header:

Acquisition method	8140	Processing method	8140
Units	PPB	System number	4
Channel	1	Manual Injector Vial	7
Injection	1	Total injections	1
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 uL	Mode	Calibration
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:
Node:
Acquired on node SALACI system 4 for NOTE

Channel:
FPD

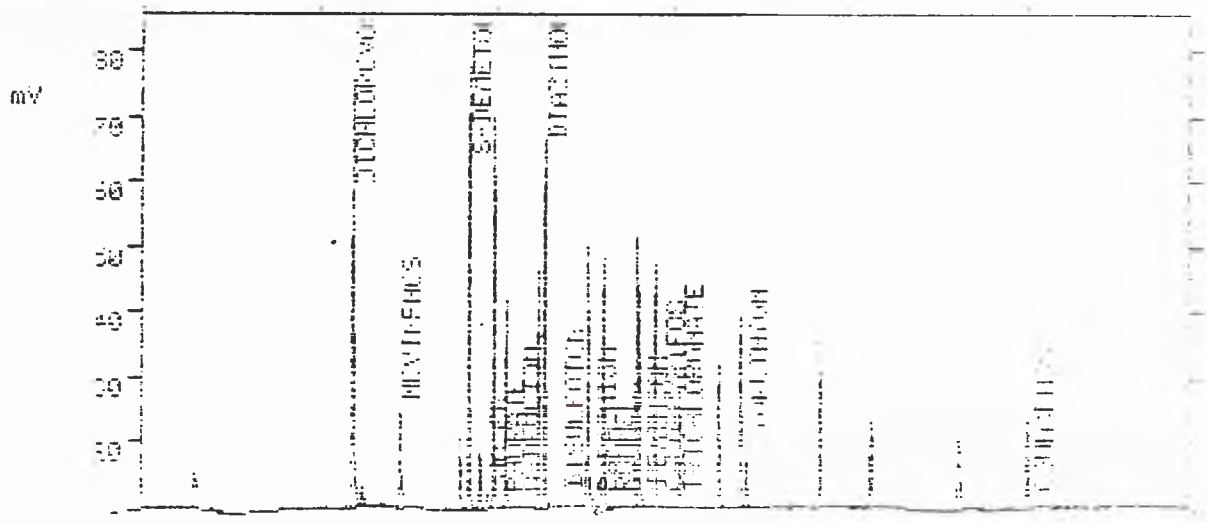
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 7

File ID	HSTD071392F
Client ID	GCH071392J
Vol. Inj.	2 ul
Dil./Conc.	-
Detector	FPD/DB-5
Port No.	GCHP14

First Plot:

HSTD071392F Man Inj Vial 7 Inject 1 Ch 1



Version: 840/V3.0 Printed: 13-Jul-1992 at 23:10:24 Page 1
Node: \SAV4X1 GC Project: NOTE User: [illegible]
HSTD071392F 13-Jul-1992 22:35:25

Conditions:
Sample amount Internal standard amt
Scale factor Mode Calibration
Responses Replace Keyboards of Remote Devices Unlocked

Integrate YES Threshold 10.0 uV/sec Peak Width 20 sec
Min Area 500 uV-sec Min Height 0 uV

Do Not Update Retention Time Retention Time Offset 0.00 sec
Relative Peak Window 3% Absolute Peak Window 10 sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	1.433	5654	115	BV	-
UNKNOWN	1.483	61208	5765	VB	-
UNKNOWN	4.750	1015	265	VV	-
UNKNOWN	5.033	865	221	VV	-
UNKNOWN	5.217	556	149	VV	-
UNKNOWN	5.717	2417	769	BB	-
DICHLOROVOS	5.900	160945	65384	BV	CAL
UNKNOWN	6.167	7578	2945	VV	-
UNKNOWN	6.217	2175	911	VV	-
UNKNOWN	6.233	325	178	VB	-
UNKNOWN	6.617	628	135	BV	-
UNKNOWN	6.683	3003	1137	VV	-
UNKNOWN	6.783	1007	483	VV	-
MEVINPHOS	7.233	49590	12940	BB	CAL
UNKNOWN	8.133	642	113	BV	-
UNKNOWN	8.967	23078	10468	BV	-
S-DEMETON	9.217	168428	67346	VV	CAL
ETHOPROP	9.350	-	-	NF	-
UNKNOWN	9.533	22890	8881	VV	-
NALED	9.750	6240	2104	VV	CAL
UNKNOWN	9.933	145946	59522	VV	-
PHORATE	10.083	819	293	VV	CAL
UNKNOWN	10.183	890	171	VV	-
UNKNOWN	10.283	82463	31044	VV	-
O-DEMETON	10.483	1199	312	VV	CAL
UNKNOWN	10.567	1020	279	VB	-
UNKNOWN	10.767	715	164	BV	-
UNKNOWN	10.917	723	170	BV	-
UNKNOWN	11.217	89349	36283	BV	-
DIAZINON	11.417	133575	54682	VV	CAL
DISULFOTON	11.733	3491	706	VV	CAL
UNKNOWN	11.933	1695	354	VV	-
UNKNOWN	12.083	560	157	VB	-
UNKNOWN	12.333	1043	348	VB	-
UNKNOWN	12.633	141600	40173	BB	-
PARATHION	12.867	4505	1205	BV	CAL
UNKNOWN	12.933	4830	1011	VV	-
UNKNOWN	13.067	117112	38535	VV	-
RONNEL	13.200	3597	769	VV	CAL
UNKNOWN	13.300	2044	431	VV	-
UNKNOWN	13.400	724	237	VB	-
UNKNOWN	14.017	121810	41057	VV	-
UNKNOWN	14.083	[illegible]	[illegible]	VV	-

UNKNOWN	14.833	113836	37342	VV	
TRICHLORONATE	14.783	1015	204	VV	CAL

00088

Version: 860/V3.0 Printed: 13-Jul-1992 at 22:10:54 Page 2
Node:\SAVAX1 GC Project: NOTE User: L HAAS
HSTD071392F 13-Jul-1992 22:35:25

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	14.950	1275	315	VV	-
UNKNOWN	15.100	1641	393	VV	-
UNKNOWN	15.217	35691	17571	VV	-
UNKNOWN	15.983	2064	552	BV	-
UNKNOWN	16.100	1245	211	VB	-
UNKNOWN	16.317	69790	21755	BV	-
STIROPHOS	16.533	-	-	NF	-
UNKNOWN	16.967	95202	29693	BV	-
TOKUTHION	17.150	31816	8930	VV	CAL
MERPHOS	17.367	-	-	NF	-
UNKNOWN	18.467	4182	893	BV	-
FENSULFOTHION	18.683	-	-	NF	-
UNKNOWN	18.917	3316	949	VB	-
UNKNOWN	19.217	87836	25547	BV	-
BOLSTAR	19.433	-	-	NF	-
UNKNOWN	20.083	1297	295	VV	-
UNKNOWN	20.650	49229	13309	VV	-
SS-TPP	20.883	-	-	NF	-
UNKNOWN	23.083	47980	10767	VV	-
AZINPHOS	23.350	-	-	NF	-
UNKNOWN	24.250	406	201	BB	-
UNKNOWN	25.050	47561	15064	VV	
COUMAPHOS	25.200	724	258	VV	CAL

Total: Area 2136269 Total Amount 0.000 Total Height 715904

CONTINUING CALIBRATION DATA

7I
ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
CONTINUING CALIBRATION CHECK

Lab Name: SEQUOIA ANALYTICAL Contract: _____

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

Instrument ID: GCHP14 Calibration Date(s): 08/03/92 Time: 18:27

Lab File ID: HSTD080392A Initial Calibration Date(s): 07/13/92

Matrix: soil/water WATER Level: (low/med) LOW

Max %D = 30% OF 80% OF COMPOUNDS

COMPOUND	RRF	RRF2.0	%D	RT	RT WINDOW FROM	RT WINDOW TO
Azinphos methyl	13.5	9.7	28	23.050	23.000	23.100
Bolstar	29.6	20.8	30	19.117	19.067	19.167
Chloropyrifos	38.2	29.7	22	14.000	13.950	14.050
Coumaphos	14.8	12.9	13	25.000	24.950	25.050
Demeton	25.8	17.8	31	10.233	10.183	10.283
Diazinon	30.2	20.3	33	11.150	11.100	11.200
Dichlorvos	52.9	28.6	46	5.900	5.850	5.950
Disulfoton	50.2	33.0	34	11.350	11.300	11.400
Ethoprop	53.5	37.2	30	9.167	9.117	9.217
Fensulfothion	10.6	9.4	11	17.067	17.017	17.117
Fenthion	39.6	24.7	38	13.933	13.883	13.983
Merphos	31.8	22.5	29	16.867	16.817	16.917
Mevinphos	13.8	9.6	30	7.300	7.250	7.350
Naled	6.4	8.3	30	9.483	9.433	9.533
Parathion methyl	43.8	27.4	37	12.567	12.517	12.617
Phorate	48.6	32.9	32	9.883	9.833	9.933
Ronnel	38.0	27.1	29	12.983	12.933	13.033
Stirophos (Tetrachlorvinphos)	18.0	12.0	33	15.117	15.067	15.167
Tokuthion (Prothiofos)	22.0	18.4	18	16.233	16.183	16.283
Trichloronate	37.5	27.0	28	14.450	14.400	14.500
Triphenyl phosphate	16.8	12.5	26.0	20.550	20.500	20.600

ALL CFS ARE x 10^3

Version: 860/V3.0 Printed: 20-Aug-1992 at 16:09:16 Page 1
Node: SAVA11 GC Project: NOTE User: [illegible]
Waters GC Report Using Multi-method 080392B14 Line 4

HSTD080392A 3-Aug-1992 18:27:03
GCH070992
8140 CCV 1000ppb

Header:

Acquisition method	8140	Processing method	8140
Units	PPB	System number	6
Channel	1	Manual Injector Vial	4
Injection	1	Total injections	1
Run time	29.40 min	Sample rate	1.00 [illegible]
Injection volume	2 ul	Mode	Multi-[illegible]
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALAC2 system 6 for NOTE

Channel:
FPD

Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 4

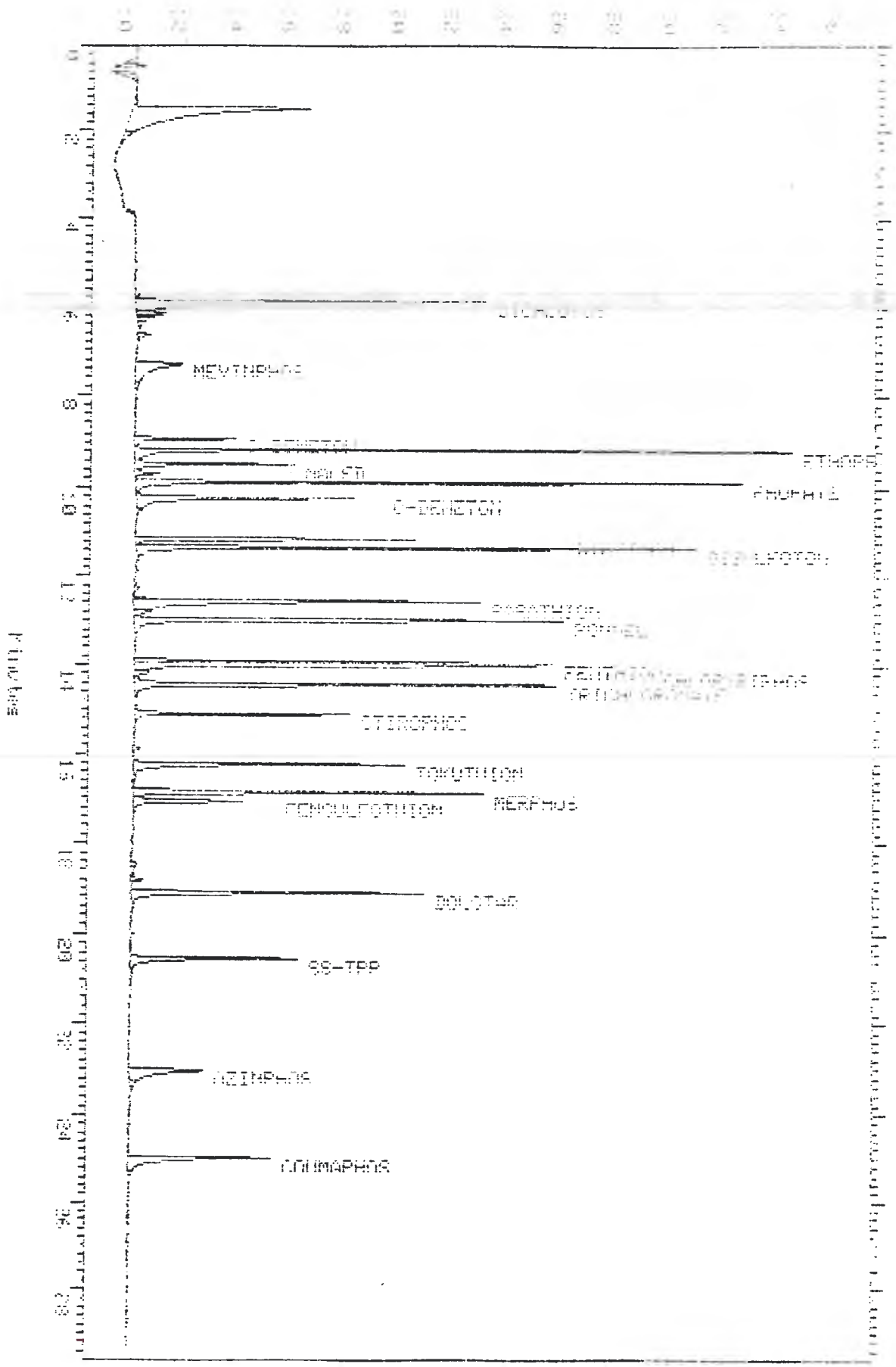
File ID	HSTD080392A
Client ID	GCH070992
Vol. Inj.	2ul
Dil./Conc.	–
Detector	FPD/DB5
Port No.	GCHP14

Waters GC Report [illegible]

HSTD080392A 3-Aug-1992 18:27:03

00092

First Plot:



Waters GC Tender [illegible]

HSTD080392A 3-Aug-1992 16:27:03

00093

Conditions:

Sample amount — Internal standard amt

Scale factor — Mode — A [illegible]

Keyboards of Remote Devices Unlocked

Integrate YES — Threshold 100.0 uV/sec — Peak Width [illegible] sec

Min Area 500 uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset 0.00 sec

Relative Peak Window 2% — Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	0.400	1724	[illegible]	[illegible]	
UNKNOWN	0.500	4731	[illegible]	[illegible]	
UNKNOWN	0.650	4459	597	[illegible]	
UNKNOWN	0.767	[illegible]	258	VB	
UNKNOWN	1.467	74318	6414	VV	
UNKNOWN	2.067	2095	306	VB	
UNKNOWN	3.883	1359	103	BB	
UNKNOWN	5.750	399	161	BB	
DICHLOVOS	5.900	57256	17899	BV	[illegible] 420
UNKNOWN	6.167	5127	1079	VV	
UNKNOWN	6.217	1649	377	VV	
UNKNOWN	6.267	1729	410	VV	
UNKNOWN	6.383	1055	194	VV	
UNKNOWN	6.450	1327	472	BV	
MEVINPHOS	7.300	19132	1725	VV	[illegible]
UNKNOWN	7.750	741	135	VV	
S-DEMETON	8.917	10228	3707	BV	1017 [illegible]
ETHOPROP	9.167	74473	24138	VV	970 [illegible]
NALED	9.483	16575	5783	VV	1519 [illegible]
UNKNOWN	9.700	3200	903	VB	
PHORATE	9.883	65786	23202	BV	984 [illegible] 80
O-DEMETON	10.233	35515	8963	VV	290 [illegible]
DIAZINON	11.150	40527	15784	BV	97[illegible]
DISULFOTON	11.350	[illegible]	20511	VB	[illegible]
UNKNOWN	12.267	540	1[illegible]	VB	
UNKNOWN	12.500	[illegible]	418	BV	
PARATHION	12.567	54844	10707	VV	65[illegible]
UNKNOWN	12.783	[illegible]	704	VV	
RONNEL	12.983	5[illegible]	15743	VV	9[illegible]
FENTHION	13.733	49499	15430	BV	828 [illegible]
CHLORPYRIPHOS	14.[illegible]	59440	19060	VV	1090 [illegible]
UNKNOWN	14.183	2835	656	VV	
UNKNOWN	14.317	857	208	VV	
TRICHLORONATE	14.450	54070	15470	VV	[illegible]
STIROPHOS	15.117	23979	7827	VB	9[illegible]
UNKNOWN	15.900	1064	265	VB	
TOKUTHION	16.233	36790	9883	BV	9[illegible]
UNKNOWN	16.517	678	119	VV	
MERPHOS	16.867	44925	12845	BV	98[illegible]
FENSULFOTHION	17.067	18813	3086	VV	1024 [illegible]
UNKNOWN	18.500	[illegible]	347	VV	
UNKNOWN	18.550	1540	175	VV	
UNKNOWN	18.833	1733	454	VV	
BOLSTAR	19.117	41611	10587	BV	[illegible]
SS-TPP	20.550	24927	1054	BV	[illegible]
AZINPHOS	23.050	19773	2685	BV	[illegible]

Waters QC Report Using Multi-method [illegible]

HSTD080392A 3-Aug-1992 18:27:03

0009d

Peak Name	Ret Time	Area	Amount	Int	Amount
UNKNOWN	23.200	1024	[illegible]	BV	
COUMAPHOS	25.000	258825	[illegible]	BV	[illegible]
UNKNOWN	25.300	636	169	VV	

Total Area 1018815 Total Amount [illegible] Total Height [illegible]

7I

ORGANOPHOSPHOROUS PESTICIDES (EPA 8140)
CONTINUING CALIBRATION CHECK

Lab Name: SEQUOIA ANALYTICAL Contract: _____

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

Instrument ID: GCHP14 Calibration Date(s): 08/04/92 Time: 02:46

Lab File ID: HSTD0803C Initial Calibration Date(s): 07/13/92

Matrix: soil/water WATER Level: (low/med) LOW

Max %D - 30% OF 80% OF COMPOUNDS

COMPOUND	RRF	RRF2.0	%D	RT	RT WINDOW FROM	RT WINDOW TO
Azinphos methyl	13.5	15.1	12	23.017	22.967	23.067
Bolstar	29.6	24.7	16	19.117	19.067	19.167
Chloropyrifos	38.7	34.8	8.9	14.017	13.967	14.067
Coumaphos	14.8	16.1	8.8	24.983	24.933	25.033
Demeton	25.8	22.7	12	10.233	10.183	10.283
Diazinon	30.2	26.0	14	11.150	11.100	11.200
Dichlorvos	52.9	36.4	31	5.883	5.833	5.933
Disulfoton	50.2	48.8	2.8	11.350	11.300	11.400
Ethoprop	53.5	43.5	19	9.167	9.117	9.217
Fensulfothion	10.6	11.2	5.7	17.067	17.017	17.117
Fenthion	39.6	30.5	23	13.933	13.883	13.983
Merphos	31.8	26.7	16	16.883	16.833	16.933
Mevinphos	13.8	11.2	19	7.233	17.183	17.283
Naled	6.4	7.3	14	9.483	9.433	9.533
Parathion methyl	43.8	36.5	17	12.567	12.517	12.617
Phorate	48.6	39.1	20	9.883	9.833	9.933
Ronnel	38.0	31.9	16	12.983	12.933	13.033
Stirophos (Tetrachlorvinphos)	18.0	13.5	25	15.133	15.083	15.183
Tokuthion (Prothiofos)	22.0	22.6	2.7	16.233	16.183	16.283
Trichloronate	37.5	31.8	15	14.450	14.400	14.500
Triphenyl phosphate	16.8	15.8	6.0	20.550	20.500	20.600

ALL CF'S ARE x 10^3

Version: 860/V3.0 Printed: 20-Aug-1992 Page 1
Node: SAVAX GC Project: NOTE User: D.PREPLOW
Waters GC Report Using Multi-method 080392014 Line 18

HSTD0803C 4-Aug-1992 2:46:09
GCLC070992
8140 CCV 1000ppb

Header:

Acquisition method	8140	Processing method	8140
Units		System number	1
Channel	1	Manual Injector Vial	18
Injection	1	Total injections	
Run time	29.60 min	Sample rate	1.00 per sec
Injection volume	2 ul	Mode	Analysis
Acquisition version	LAC/E/V3.0	Processing version	V3.0

Description:

Node:
Acquired on node SALACC system c for NOTE

Channel:
FPD

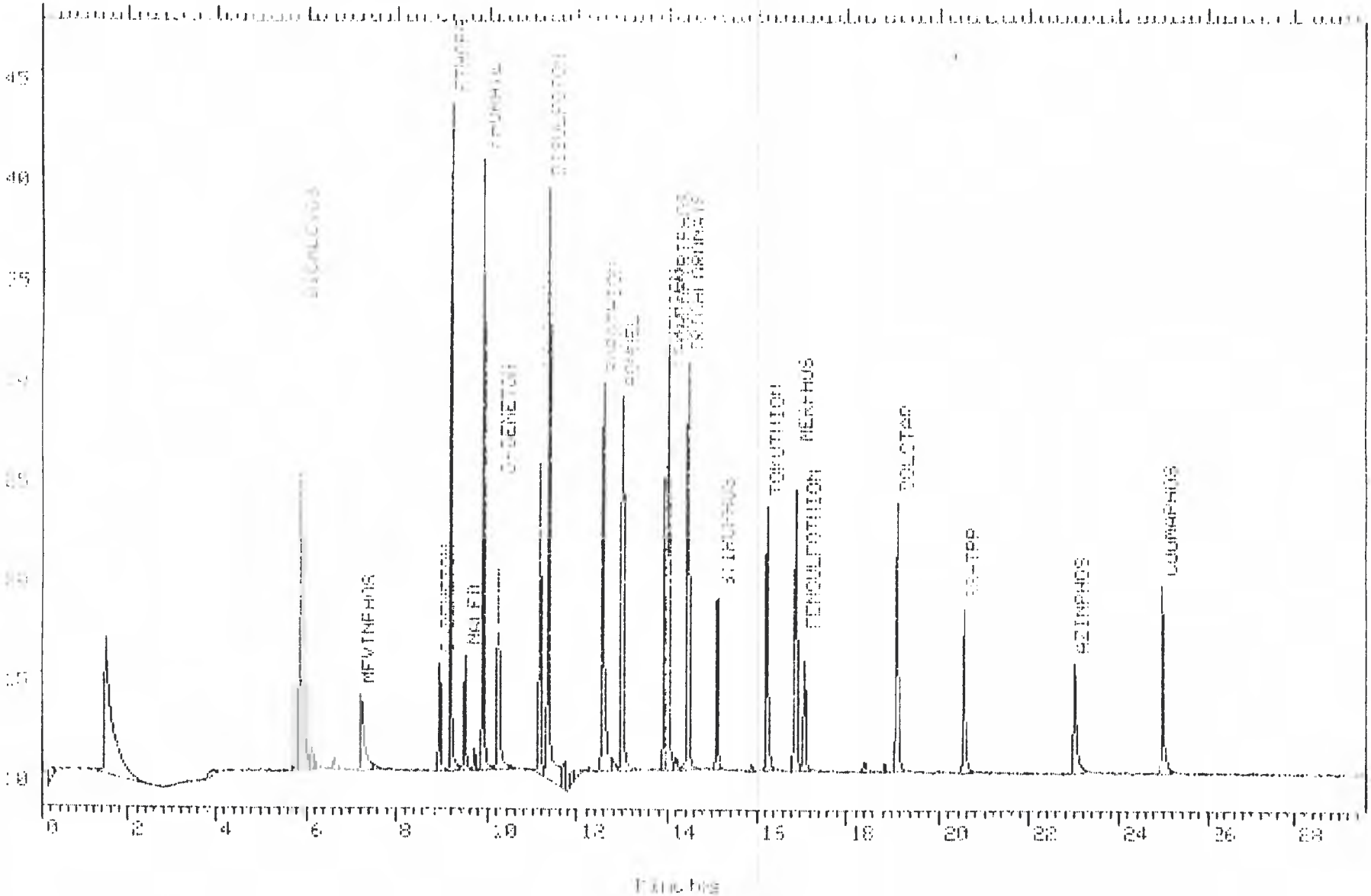
Method:
DB-5, 30M X 0.32MM X 0.25UM
FPD
8140
72KPA

Sample:
External vial 18

File ID	HSTD0803C
Client ID	GCLC070992
Vol. Inj.	2ul
Dil./Conc.	-
Detector	FPD/DB-5
Port No.	GCHP14

00097

Method: 8140



HSTD0803C 4-Aug-1992 2:46:28

Filter Plot

Waters GC Report Using Multi-method [illegible] Line [illegible]

HSTD0803C 4-Aug-1992 2:46:29

0009

Conditions:

Sample amount — Internal standard amt

Scale factor — Mode — Automatic

Keyboards or Remote Devices Unlocked

Integrate YES — Threshold 10.0 uV/sec — Peak Width [illegible] sec

Min Area 500 uV-sec — Min Height [illegible] uV

Do Not Update Retention Time — Retention Time Offset [illegible] sec

Relative Peak Window 2% — Absolute Peak Window [illegible] sec

GC Results:

Peak Name	Ret Time	Area	Height	Int	Amount
UNKNOWN	0.050	1001	834	BB	-
UNKNOWN	0.167	5377	621	BV	-
UNKNOWN	0.317	561	223	VB	-
UNKNOWN	1.317	595	157	VV	-
UNKNOWN	1.467	83205	6811	VV	
UNKNOWN	3.667	2672	279	BV	-
UNKNOWN	4.000	578	184	VV	-
UNKNOWN	5.717	858	197	VB	-
DICHLOVOS	5.883	72861	23107	BV	1182.981
UNKNOWN	6.150	4424	1363	VV	-
UNKNOWN	6.200	1790	674	VV	-
UNKNOWN	6.300	705	166	VB	-
UNKNOWN	6.650	1389	589	BV	-
UNKNOWN	6.767	793	149	VB	-
MEVINPHOS	7.233	22499	3837	BV	1134.746
UNKNOWN	7.500	1369	253	VB	-
S-DEMETON	8.917	12648	5363	VV	1253.039
ETHOPROP	9.167	87029	32048	VV	1132.739
NALED	9.483	14566	5742	VV	1347.635
UNKNOWN	9.700	3253	1077	VV	-
PHORATE	9.883	78262	30466	VV	1171.205
O-DEMETON	10.233	45474	14273	VV	1132.274
UNKNOWN	10.500	526	297	VV	-
DIAZINON	11.150	52000	[illegible]	VV	1254.878
DISULFOTON	11.250	97424	[illegible]	VV	[illegible]
UNKNOWN	11.733	6400	1291	VB	-
UNKNOWN	11.867	5160	832	BV	-
UNKNOWN	11.967	2696	503	VB	-
UNKNOWN	12.267	712	226	VB	-
PARATHION	12.567	72080	19446	VV	1135.097
UNKNOWN	12.783	3604	683	VV	-
RONNEL	12.983	63775	18682	VV	1112.102
UNKNOWN	13.250	731	14[illegible]	VV	-
FENTHION	13.933	61060	19701	BV	1022.908
CHLORPYRIPHOS	14.017	69680	20985	VV	1270.732
UNKNOWN	14.183	2942	677	VV	-
UNKNOWN	14.333	956	200	VV	-
TRICHLORONATE	14.450	63574	20073	VV	1153.705
STIROPHOS	15.133	27014	8613	VV	1089.791
UNKNOWN	15.900	1214	367	BB	-
TOKUTHION	16.233	45139	13344	VB	1177.203
MERPHOS	16.883	53466	15944	BV	1168.477
FENSULFOTHION	17.067	22347	6614	VV	1216.750
UNKNOWN	18.417	3616	527	BV	-
UNKNOWN	18.833	1938	456	VV	-
BOLSTAR	19.117	49316	13515	BV	1128.045

Waters GC [illegible] Multi method [illegible]

HSTD0803C 4-Aug-1992 2:46:29

00099

Peak Name	Ret Time	Area	Height	Int	[illegible]
UNKNOWN	20.000	615	41	BV	[illegible]
SS-TPP	20.550	21546	8178	VV	1140.[illegible]
AZINPHOS	22.017	30192	1462	BV	1357.[illegible]
UNKNOWN	23.283	600	148	VB	[illegible]
COUMAPHOS	24.983	33100	9409	BV	1369.340
UNKNOWN	25.167	587	214	VV	[illegible]

Total Area 1245879 Total Amount 26396.240 Total Height [illegible]

RAW DATA

EXTRACTION LOG SHEET

00101

	Lab#:	Client I.D. Code:	Ext. Method/ Analyst:	Anal. Method:	Samp. Vol. (g/ml):	Final Vol. (ml):	Due Date:	Conc. Date/ Analyst:	Ext. Loc:	Clear up(*)
equoia	BLK073192	BLANK	3550 DN FH	8140	30	5		7/31/DN	Box 3	
	BLK073192MS	SPIKE								
	MSD	DUP								
rth Creek	2074755	2071501					8/5			
	56	502								
	57	503								
	58	507								
	59	508								
	60	509								
	61	510						7/31/VH		
	62	511								
	63	512								
	64	513								
	65	514								

action Date: 7/31/92 Notebook Reference: — BC866

lvent Type: CH_2Cl_2 / Acetone (50/50) Solvent Volume: 180 ml Lot#: BC719

lvent Type: Hexane Sovlent Volume: 30 ml Lot#: BC384

ogate Spike: 8140 Surrogate SP073192DN / 10 µg/mL 500 µg

ix Spike: 8140 MS SP011492A / 10 ppm 500 µg

an-up: Date:

U V Calibration Date: Column Lot#:

ctive Action Attached: Yes ____ No X Narrative Log Attached: Yes ____ No X

ments:

Page 1 of 1

DATA PACKAGE
PESTICIDES/PCBs - METHOD 8080

CLIENT : HONG WEST & ASSOCIATES

CASE # : 207/1501-1514

prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell , WA 98011

NORTH CREEK ANALYTICAL

PESTICIDES/PCBs - METHOD 8080
CASE NARRATIVE

CLIENT: Hong West & Associates
CASE #: 207/1501-1514

Eleven soil and two water samples were analyzed for Pesticides and PCBs by EPA Method 8080. All samples were extracted and analyzed within method hold times.

The following samples had levels of pesticide detected above the ICAL range in the initial analysis:

CLIENT ID	LAB ID
DP-1	207/1501
DP-2	207/1502
DP-3	207/1503
DP-6	207/1508
DP-7	207/1509
DP-11	207/1512
DP-12	207/1513
DP-13	207/1514

These samples were diluted to bring them within the calibration range and reanalyzed. The results of both the original analyses and the reanalyses have been presented in the data package.

A small shoulder peak to DDE was observed in several of the samples on the Rtx-35 Primary column. This peak was within the retention time for Dieldrin. However, due to the large amount of DDE in the samples the Dieldrin peak could not be resolved on the Xti-5 Confirmation column. The sample extract with the highest unconfirmed concentration for Dieldrin (207/1503) was analyzed on our HP GCMS for confirmation. The Dieldrin was confirmed and the GCMS data has been included in the data package.

QC results for the soil samples were within acceptable limits.

QC results for the water samples were within acceptable limits with the exception of the recoveries for the Matrix Spike compounds which were uniformly low. Since the MSD results were acceptable it was assumed that poor extraction technique and not matrix effect was responsible for the low recoveries.

The water samples (DP-4 & DP-5) had low surrogate recoveries. However, there was not enough sample available to perform reextractions.

The data package has been designed to provide sufficient information for stand-alone data validation under SW 846 Method 8080.

" I certify that this data package is in compliance with the Method stated above both technically and for completeness,for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Dennis D. Wells QA Director

SAMPLE RESULTS

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-1	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8080	Extracted:	Aug 4, 1992
Attention: Doug Geller	Sample Number:	207-1501	Analyzed:	Aug 17, 1992
			Reported:	Aug 17, 1992

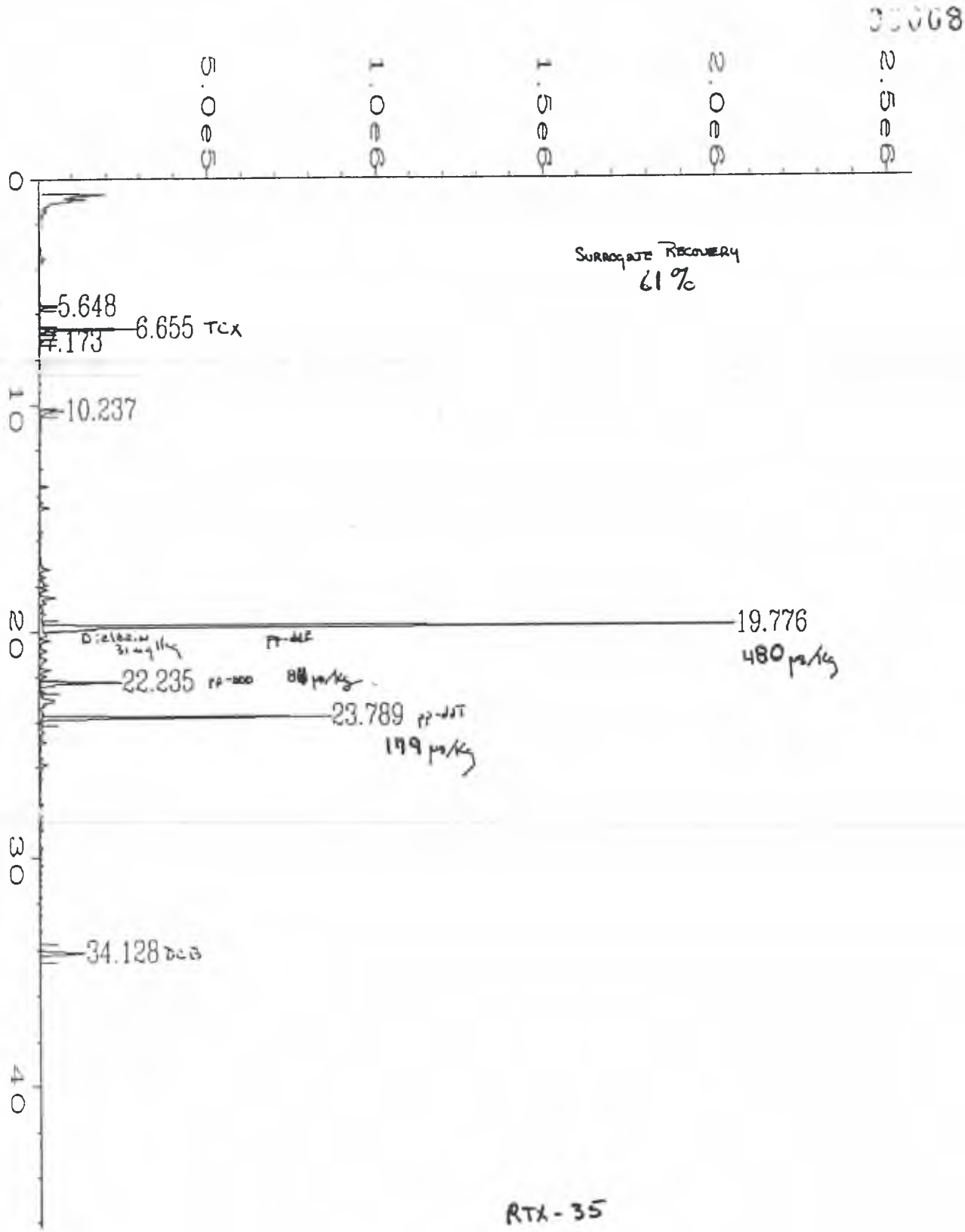
ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Aldrin	0.0050	N.D.
alpha-BHC	0.0050	N.D.
beta-BHC	0.0050	N.D.
delta-BHC	0.010	N.D.
gamma-BHC (Lindane)	0.0050	N.D.
Chlordane	0.050	N.D.
4,4'-DDD	0.010	0.084
4,4'-DDE	0.0050	0.48
4,4'-DDT	0.010	0.18
Dieldrin	0.013	0.031
Endosulfan I	0.010	N.D.
Endosulfan II	0.0050	N.D.
Endosulfan sulfate	0.050	N.D.
Endrin	0.010	N.D.
Endrin aldehyde	0.015	N.D.
Heptachlor	0.0050	N.D.
Heptachlor expoxide	0.0050	N.D.
Methoxychlor	0.15	N.D.
Toxaphene	0.20	N.D.
PCB-1016	0.050	N.D.
PCB-1221	0.050	N.D.
PCB-1232	0.050	N.D.
PCB-1242	0.050	N.D.
PCB-1248	0.050	N.D.
PCB-1254	0.050	N.D.
PCB-1260	0.050	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 61
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director



Data File Name	: C:\HPCHEM\2\DATA\AUG14\042F0501.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 42
Sample Name	: 207-1501	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 17 Aug 92 02:27 AM	Instrument Method	: PEST1.MTH
Report Created on	: 17 Aug 92 05:49 AM	Analysis Method	: PEST1.MTH

Area Percent Report

2309

Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 17 Aug 92 05:52 AM

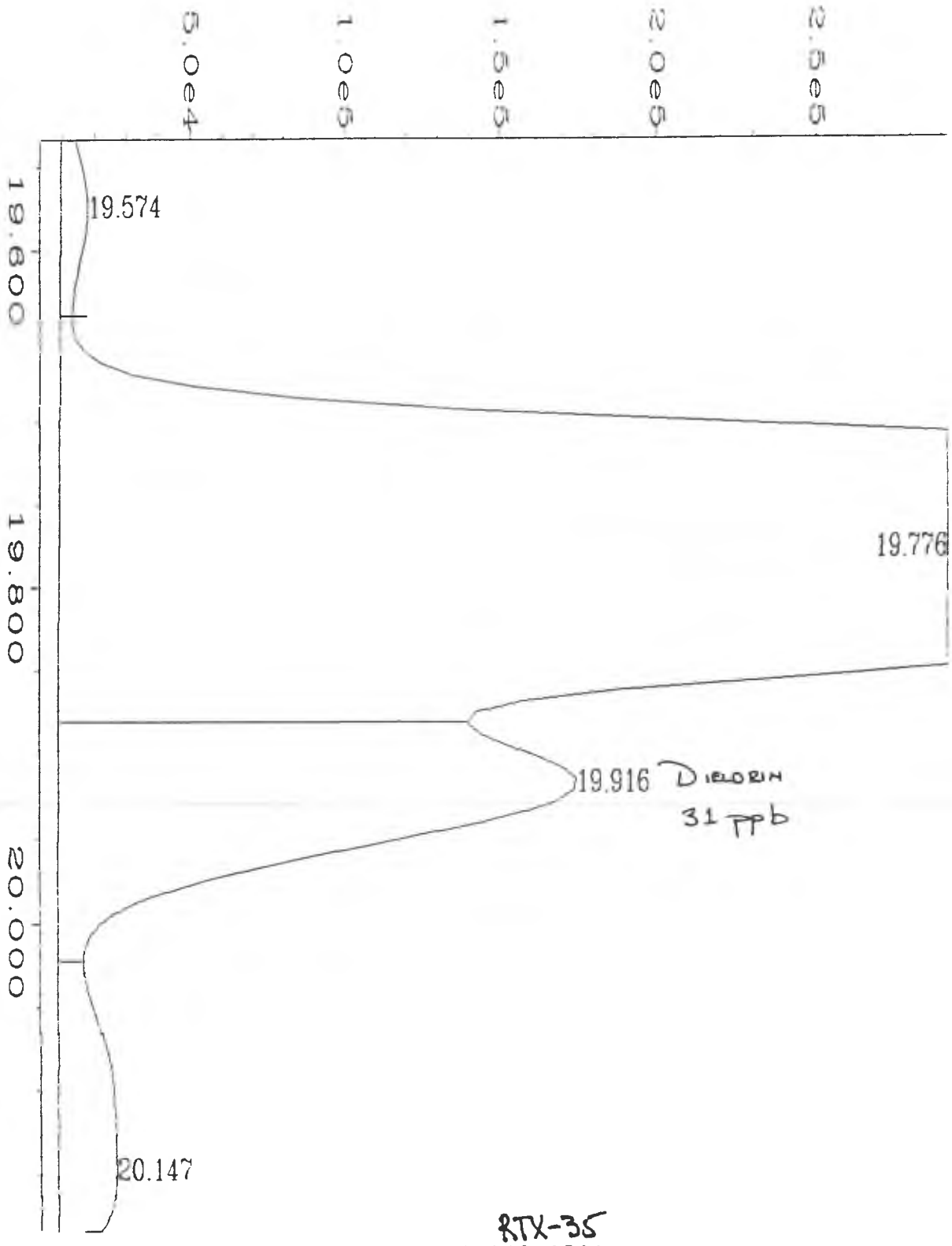
Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : PEST1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG14\042F0501.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	5.648	242188	52650	MM	0.077	1.1116
2	6.655	1289597 TCX	283134	MM	0.076	5.9191
3	7.173	55847	11269	MM	0.083	0.2563
4	10.237	453261	71511	MM	0.106	2.0804
5	13.575	136829	25792	MM	0.088	0.6280
6	14.522	169186	30185	MM	0.093	0.7765
7	17.235	149499	28078	MM	0.089	0.6862
8	17.573	67647	14423	MM	0.078	0.3105
9	18.128	117851	20848	MM	0.094	0.5409
10	18.486	235044	41584	MM	0.094	1.0788
11	18.727	87644	13632	MM	0.107	0.4023
12	19.200	67726	11048	MM	0.102	0.3109
13	19.776	1.18195E+007 DDE	2045202	MM	0.096	54.2502
14	22.235	1515111 DDD	238615	MM	0.106	6.9542
15	23.789	4432108 DDT	856776	MM	0.086	20.3429
16	34.128	947985	132265	MM	0.119	4.3511

Total area = 2.1787E+007

User Modified



RTX-35

Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 24 Aug 92 05:45 PM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : DEFAULT.MTH

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 24 Aug 92 05:46 PM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG14\042F0501.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	19.200	77620	11366	PV	0.097	0.6152
2	19.439	14584	2275	VV	0.092	0.1156
3	19.574	46350	8461	VV	0.084	0.3674
4	19.776	1.12055E+007	2052698	VV	0.086	88.8189
5	19.916	784162	165629	VV	0.073	6.2156
6	20.147	174196	18413	VV	0.152	1.3807
7	20.389	156767	30085	PV	0.082	1.2426
8	20.514	8602	2353	VV	0.061	0.0682
9	20.603	11501	2001	VV	0.093	0.0912
10	20.848	136832	18467	PV	0.124	1.0846

Total area = 1.26161E+007

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? 9706, 20, 1
ID # 29
? 9707, 20, 1
ID # 30
? 9559, 40, 2.06
ID # 31
? 9560, 40, 2.04
ID # 32
? 111, 1, 1
ID # 33
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N
        RT: CHART SPEED → 0.20 CM/MIN                                  0.47
        RT: CHART SPEED → 1.25 CM/MIN
          1.32

          1.98

          2.51

        RT: CHART SPEED → 0.75 CM/MIN
          3.51
          4.01

          4.82
          5.75
          5.63

           6.54
          7.04
           7.59

          8.63

          9.80


           11.64

        RT: STOP RUN


SAMPLE ID: .05 VOLUME(ML): 1  WEIGHT(GM): 1
【hp】 5880A  SAMPLER INJECTION @ 10:51  OCT 29, 1990
  SAMPLE # :  ID CODE   :
          1 1254 .1 UG/M
PCB DETERMINATION (AROCLOR)
ESTD

   RT    EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 1698.28
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.47    0.43       2268940.00    PV   0.10 *   1      1.000  HEXANE
  1.00                          RP: BL MODE →  1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF
 11.00   11.00         93595.70    ++   -----    2 3.637E-02  1260

MULTIPLIER = 1

RECALIB 0.05 UG/ML

  AMT OF AROCLOR 1260 (PPM) =   .05
【hp】 5880A  SAMPLER INJECTION @ 10:51  OCT 29, 1990
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 0.00                          BASELINE @ START RUN = 1650.27
 0.00                          THRESHOLD @ START RUN =  7
 0.00                          PEAK WIDTH @ START RUN = 0.16
 0.47    0.43       2172530.00    PV    0.09 *    1      1.000  HEXANE
 1.00                          RP: BL MODE → 1
 3.60                          RP: AREA SUM → ON
11.00                          RP: AREA SUM → OFF
11.00   11.00        865336.00    ++    -----     2      0.511  1260
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MULTIPLIER = 1

RECALIB 0.5 UG/ML

AMT OF AROCLOR 1260 (PPM) = .5
[hp] 5880A SAMPLER INJECTION @ 11:12 OCT 29, 1990
SAMPLE # : ID CODE :
2
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1650.27			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2176670.00	PH	0.09 *	367358.00	1624.73	50.788
1.03	10938.70	HH	-----	985.56	1624.73	0.255
2.00	6647.09	HH	-----	284.29	1624.73	0.155
2.53	8429.86	HH	-----	790.36	1624.73	0.197
3.53	46798.30	HH	0.186	3948.68	1624.73	1.092
4.03	72737.40	HH	0.235	4839.12	1624.73	1.697
4.85	81323.20	HH	*-----	3892.19	1624.73	1.897
5.37	74824.20	HH	-----	5335.34	1624.73	1.746
5.65	188480.00	HH	-----	9125.12	1624.73	4.398
6.56	258396.00	HH	-----	11581.70	1624.73	6.029
7.05	115534.00	HH	-----	5585.39	1624.73	2.696
7.61	298733.00	HH	-----	10829.90	1624.73	6.970
8.65	249675.00	HH	-----	6516.52	1624.73	5.826
9.81	284356.00	HH	-----*	5342.30	1624.73	6.635
11.65	412289.00	A HH	-----	9945.92	1624.73	9.620

TOTAL AREA = 4285840.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
0.49
1.42
1.73
1.87
2.13
2.53
2.81
RT: CHART SPEED → 0.75 CM/MIN
3.54
4.04
4.86
5.39
5.67
6.58
7.07
7.64
8.70

11.71

~~RT: STOP RUN~~

SAMPLE ID: 5 VOLUME(ML): 1 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 11:32 OCT 29, 1990
SAMPLE # : ID CODE :
3
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1817.05				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	3219960.00	BB	0.137*	1	1.017	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	7497040.00	++	-----	2	5.221	1260

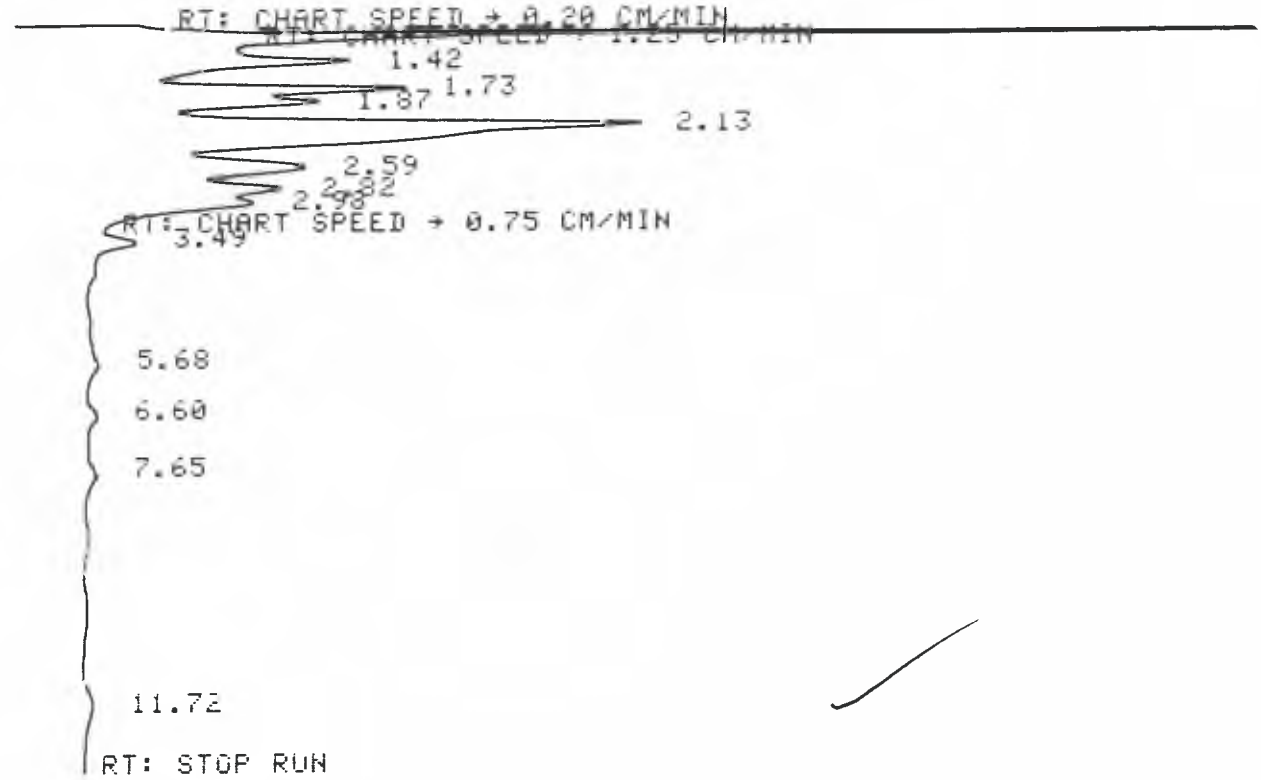
MULTIPLIER = 1

RECALIB 5.0 UG/ML

AMT OF AROCLOR 1260 (PPM) = 5
【hp】 5880A SAMPLER INJECTION @ 11:32 OCT 29, 1990
SAMPLE # : ID CODE :
3
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1817.05			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	3243970.00	BV	0.138*	367166.00	1814.46	14.995
1.04	12756.80	VV	-----*	1367.54	1811.57	0.059
1.42	7755.30	VV	-----	760.84	1809.50	0.036
1.73	4995.73	VV	-----	695.63	1807.89	0.023
1.87	2987.63	VV	-----	432.81	1807.16	0.014
2.13	16201.20	VV	-----*	1171.19	1805.75	0.075
2.53	50251.00	VV	0.150	5229.77	1803.63	0.232
2.81	12906.10	VP	-----*	889.39	1802.18	0.060
3.54	373166.00	PH	0.184	31804.00	1799.93	1.725
4.04	588854.00	HH	0.236	38992.00	1799.93	2.722
4.86	699971.00	HH	*-----	32588.80	1799.93	3.236
5.39	612607.00	HH	-----	44118.00	1799.93	2.832
5.67	1577450.00	HH	-----	74954.70	1799.93	7.292
6.58	2256340.00	HH	-----	104132.00	1799.93	10.430
7.07	1031130.00	HH	-----	48743.80	1799.93	4.766
7.64	2665150.00	HH	-----	96694.30	1799.93	12.320
8.70	2202170.00	HH	-----	56532.30	1799.93	10.179
9.86	2543010.00	HH	-----*	46145.90	1799.93	11.755
11.71	3731730.00 A	HH	-----	88967.60	1799.93	17.250

TOTAL AREA = 21633400.00
MULTIPLIER = 1



SAMPLE ID: 1016 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:53 OCT 29, 1990
SAMPLE # : ID CODE :
4
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2441.04				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2475380.00	BB	0.106*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	9237.40	++	-----	2	4.935E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.93473E-03
[hp] 5880A SAMPLER INJECTION @ 11:53 OCT 29, 1990
SAMPLE # : ID CODE :
4
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2441.04			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2537010.00	BV	0.108*	366576.00	2366.33	90.143
1.42	32992.60	VV	-----	3042.51	2219.22	1.172
1.73	27057.80	VV	-----	3832.48	2171.75	0.961

2.59	32594.30	VV	-----	2632.57	2030.39	1.156
2.82	22943.30	VV	-----	2375.43	2001.68	0.815
2.98	20744.90	VV	-----	2009.64	1977.87	0.737
3.49	6351.13	VP	0.202	493.04	1898.09	0.226
5.68	4159.32	PP	-----	150.03	1727.14	0.148
6.60	2943.90	PV	0.308	149.56	1703.86	0.105
7.65	3729.51	VP	-----	145.66	1688.04	0.133
11.72	4925.24 A	PP	-----	124.60	1649.57	0.175

TOTAL AREA = 2814440.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.48
RT: CHART SPEED → 1.25 CM/MIN
1.43
1.73
2.13
2.54
RT: CHART SPEED → 0.75 CM/MIN
3.48

RT: STOP RUN

SAMPLE ID: 1221 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 12:13 OCT 29, 1990
SAMPLE # : ID CODE :
5
PCB DETERMINATION (AROCLOR)
ESTD

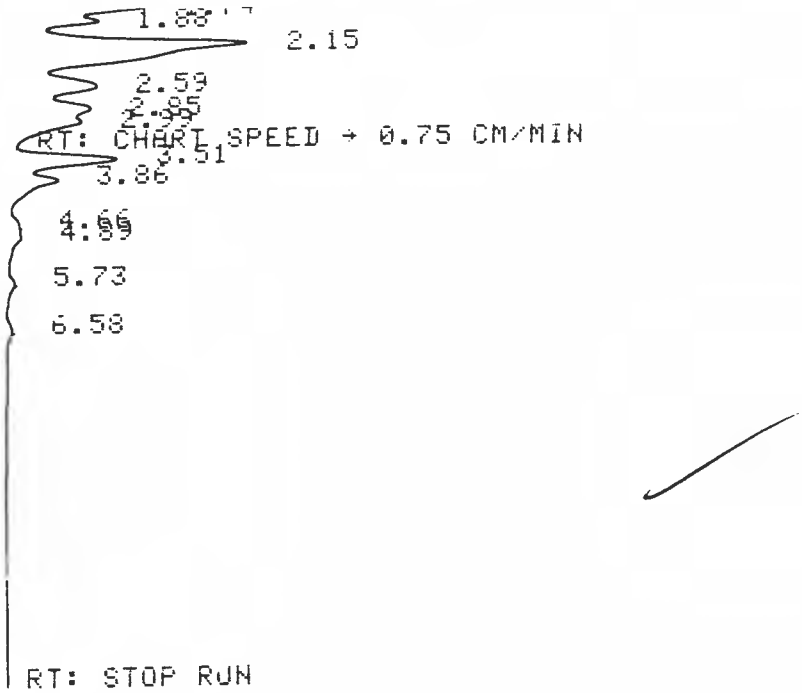
RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 1655.43					
0.00		THRESHOLD @ START RUN = 7					
0.00		PEAK WIDTH @ START RUN = 0.16					
0.48	0.43	2783350.00	PV	0.12	1	1.000	HEXANE
1.00		RP: BL MODE → 1					
3.60		RP: AREA SUM → ON					
11.00		RP: AREA SUM → OFF					

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

070



SAMPLE ID: 1232 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 12:34 OCT 29, 1990
SAMPLE # : ID CODE :
6
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1657.73				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2200500.00	PV	0.09	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	9104.48	++	-----	2	4.864E-03	1260

MULTIPLIER = 1

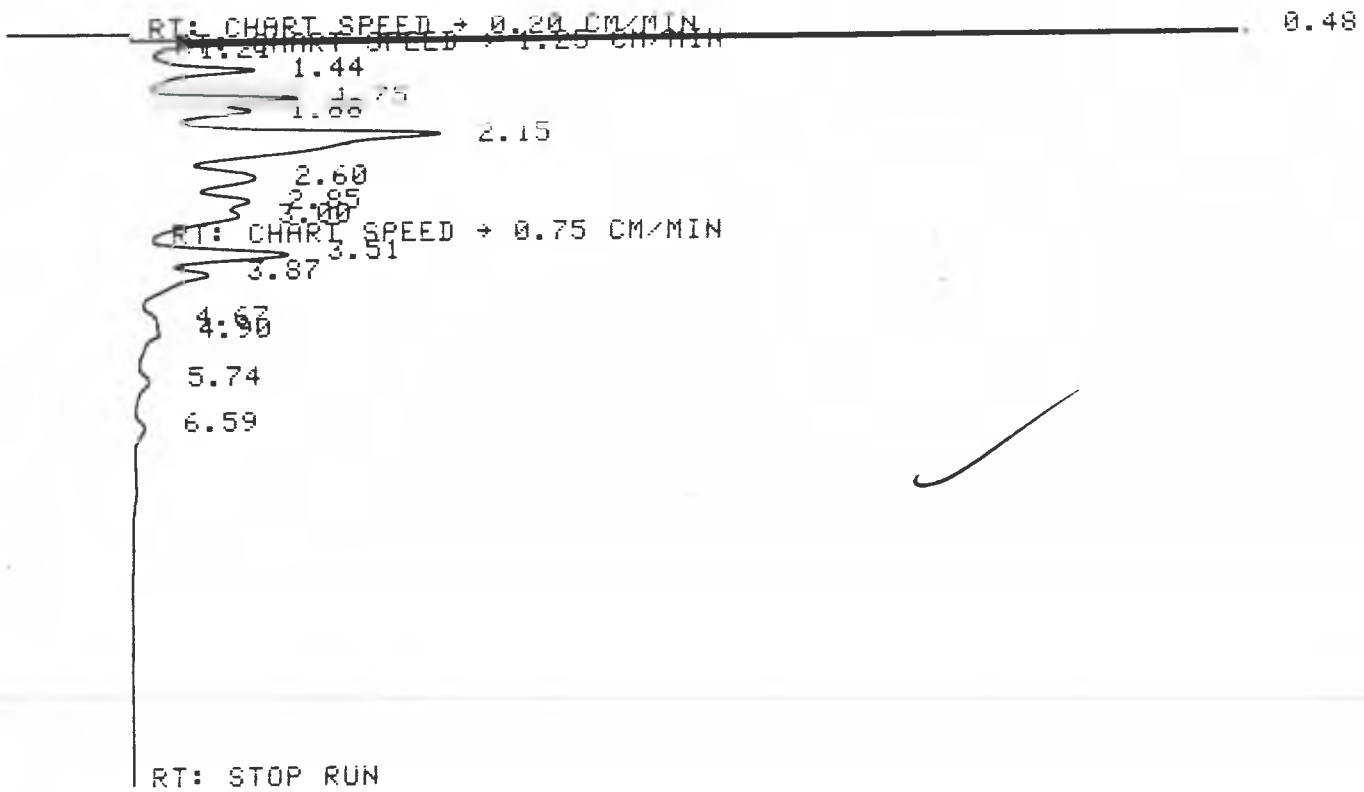
AMT OF AROCLOR 1260 (PPM) = 4.86373E-03
[hp] 5880A SAMPLER INJECTION @ 12:34 OCT 29, 1990
SAMPLE # : ID CODE :
6
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1657.73			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2204310.00	PH	0.09	367359.00	1613.96	91.232
0.97	7987.37	HH	-----	833.01	1613.96	0.331
1.12	2460.15	HH	-----	504.91	1613.96	0.102
1.21	3014.35	HH	-----	551.07	1613.96	0.125
1.44	26245.10	HH	-----	2948.99	1613.96	1.086
1.74	14241.10	HH	-----	1941.92	1613.96	0.589
[illegible]	[illegible]	[illegible]	-----	[illegible]	1613.96	0.792

2.85	11977.90	HH	-----	1209.69	1613.96	0.496
2.99	12977.40	HH	-----	1085.89	1613.96	0.537
3.51	23670.40	HH	-----	1538.27	1613.96	0.980
3.86	15347.00	HH	-----	753.88	1613.96	0.635
4.66	4128.57	HH	-----	231.45	1613.96	0.171
4.89	6144.79	HH	-----	253.95	1613.96	0.254
5.73	4352.39	HH	-----	158.38	1613.96	0.180
6.58	3057.32	HH	-----	119.17	1613.96	0.127

TOTAL AREA = 2416170.00
MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: 1242 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 12:54 OCT 29, 1990
SAMPLE # : ID CODE :
7
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1657.17				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2533660.00	BB	0.11 *	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	14352.20	++	-----	2	7.667E-03	1260

MULTIPLIER = 1

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GC-WAI 74703/ 92 0625

072

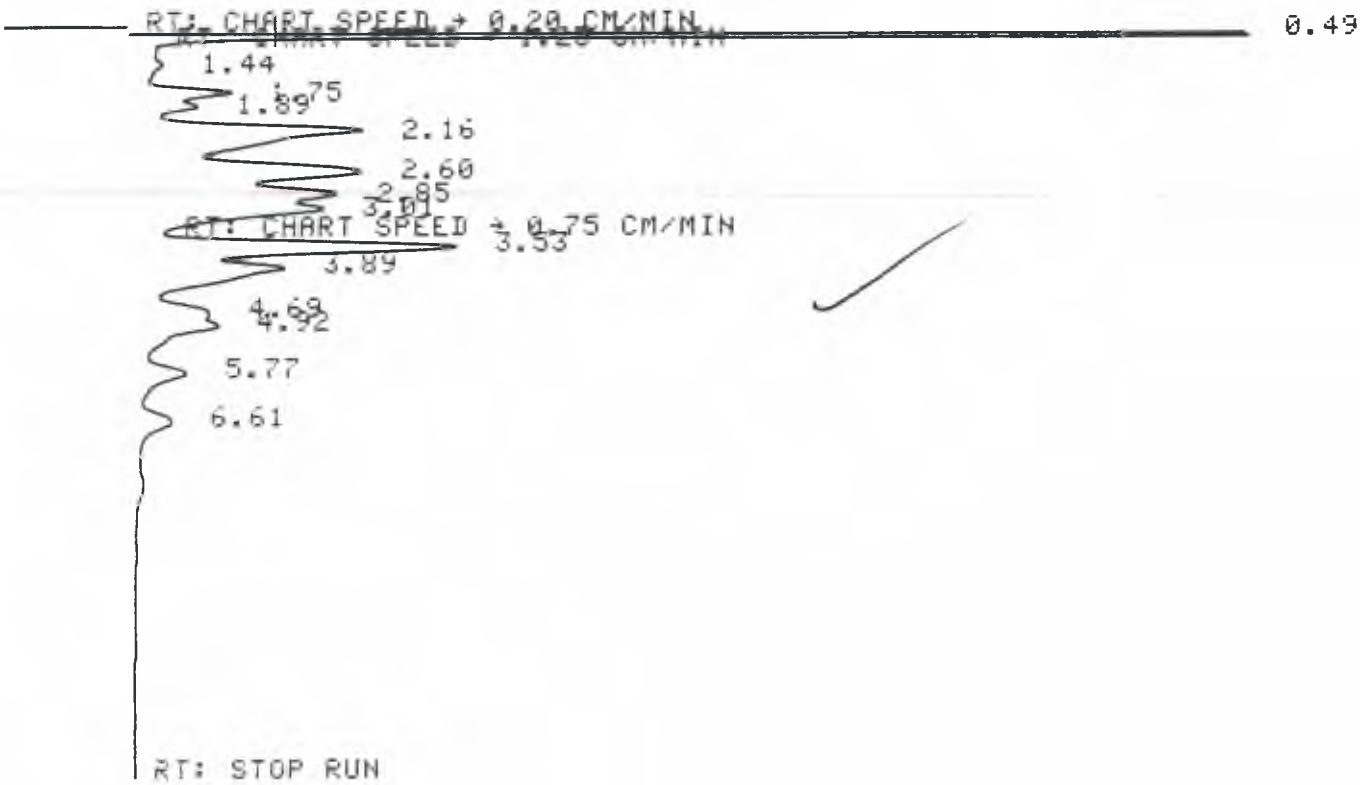
SAMPLE # : ID CODE :
7

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1657.17			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2542430.00	BH	0.11 *	367347.00	1616.87	91.255
1.21	2684.95	HH	-----	418.39	1616.87	0.096
1.44	15632.50	HH	-----	1657.36	1616.87	0.561
1.75	16292.20	HH	-----	2234.54	1616.87	0.585
1.88	11996.00	HH	-----	1634.32	1616.87	0.431
2.15	63175.50	HH	-----*	4168.94	1616.87	2.268
2.60	21836.30	HH	-----	1685.83	1616.87	0.784
2.85	15929.20	HH	-----	1601.12	1616.87	0.572
3.00	17588.80	HH	-----	1465.32	1616.87	0.631
3.51	32697.20	HH	-----	2100.35	1616.87	1.174
3.87	21409.00	HH	-----	1037.00	1616.87	0.768
4.67	6347.42	HH	-----	348.07	1616.87	0.228
4.90	8277.30	HH	-----	377.57	1616.87	0.297
5.74	5850.04	HH	-----	234.83	1616.87	0.210
6.59	3910.60	HH	-----	169.57	1616.87	0.140

TOTAL AREA = 2786060.00
MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: 1248 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 13:15 OCT 29, 1990
SAMPLE # : ID CODE :
8

PCB DETERMINATION (AROCLOR)
ESTD

```
 0.00                          BASELINE @ START RUN = 1624.93
 0.00                          THRESHOLD @ START RUN =  7
 0.00                          PEAK WIDTH @ START RUN = 0.16
 0.49    0.43       2945580.00    BB    0.13 *    1      1.000  HEXANE
 1.00                          RP: BL MODE →  1
 3.60                          RP: AREA SUM → ON
11.00                          RP: AREA SUM → OFF
11.00   11.00         40986.20    ++    -----     2 2.190E-02  1260

MULTIPLIER = 1


  AMT OF AROCLOR 1260 (PPM) =    2.18953E-02
【hp】 5880A  SAMPLER INJECTION @ 13:15  OCT 29, 1990
  SAMPLE # :   ID CODE    :
          8
AREA %

   RT              AREA  TYPE   WIDTH        HEIGHT      BASELINE     AREA %

  0.00                          BASELINE @ START RUN = 1624.93
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.49      2955280.00   BV    0.13 *    367360.00       1587.83     89.520
  1.44         6304.54   VV    -----*       436.50       1606.55      0.191
  1.75        10307.70   VV    -----       1353.65       1612.62      0.312
  1.89         6936.23   VV    -----        910.40       1615.49      0.210
  2.16        44842.30   VV    -----*      3116.51       1620.80      1.358
  2.60        39685.10   VV    -----       3090.09       1629.65      1.202
  2.85        26950.30   VV    -----       2756.19       1634.48      0.816
  3.01        31326.70   VV    -----       2563.94       1637.70      0.949
  3.53        67044.20   VV    -----       4334.55       1647.90      2.031
  3.89        47368.10   VV    -----*      2007.50       1655.12      1.435
  4.69        16920.00   VV    -----        998.05       1670.94      0.513
  4.92        23559.50   VV    -----       1112.64       1675.42      0.714
  5.77        14961.60   VV    -----        661.69       1692.25      0.453
  6.61         9763.98   VB    0.333        458.99       1708.94      0.296

TOTAL AREA = 3301250.00
MULTIPLIER = 1

OVEN TEMP NOT READY
```

RT: CHART SPEED → 0.20 CM/MIN 0.49

1.72
2.56
2.82
2.99
RT: CHART SPEED → 0.75 CM/MIN
3.54
4.06
4.66
4.90
5.73
6.60
7.11
7.68
8.83

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK GC-WAI 7470/ 0635

11.76

RT: STOP RUN

SAMPLE ID: 1254 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 13:35 OCT 29, 1990
SAMPLE # : ID CODE :
9
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1642.35				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	3075320.00	PB	0.13 *	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	218987.00	++	-----	2	0.123	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .123115
[hp] 5880A SAMPLER INJECTION @ 13:35 OCT 29, 1990
SAMPLE # : ID CODE :
9
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1642.35			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	3084860.00	PH	0.13 *	367383.00	1598.21	83.979
1.72	2987.08	HH	-----	261.90	1598.21	0.081
2.02	3310.69	HH	-----	324.52	1598.21	0.090
2.13	5131.98	HH	-----	338.83	1598.21	0.140
2.56	23577.00	HH	-----	2184.33	1598.21	0.642
2.82	12258.70	HH	-----	1209.50	1598.21	0.334
2.99	7811.10	HH	-----	684.57	1598.21	0.213
3.54	55150.30	HH	-----	3580.67	1598.21	1.501
4.06	69418.30	HH	-----	3474.81	1598.21	1.890
4.66	40296.20	HH	-----	2602.00	1598.21	1.097
4.90	65583.50	HH	-----	3527.23	1598.21	1.785
5.73	82850.00	HH	-----	3199.08	1598.21	2.255
6.60	65452.80	HH	-----	2769.10	1598.21	1.782
7.11	11774.10	HH	-----	688.78	1598.21	0.321
7.68	72567.80	HH	-----	2298.15	1598.21	1.976
8.83	26145.40	HH	-----	671.30	1598.21	0.712
10.38	26032.70	HH	-----	422.96	1598.21	0.709
11.76	18145.10	A HH	-----	331.92	1598.21	0.494

TOTAL AREA = 3673350.00
MULTIPLIER = 1

OVEN TEMP NOT READY

2.56

RT: CHART SPEED → 0.75 CM/MIN

hexane

RT: STOP RUN

SAMPLE ID: 111 VOLUME(ML): 1 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 13:56 OCT 29, 1990
SAMPLE # : ID CODE :
10
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 1666.94					
0.00		THRESHOLD @ START RUN = 7					
0.00		PEAK WIDTH @ START RUN = 0.16					
0.44	0.43	218797.00	BV	0.05	1	0.101	HEXANE
1.00		RP: BL MODE → 1					
3.60		RP: AREA SUM → ON					
11.00		RP: AREA SUM → OFF					

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.49
~~RT: CHART SPEED → 1.25 CM/MIN~~

2.03
2.38
2.55

RT: CHART SPEED → 0.75 CM/MIN
3.37

blank wipe

4.17
4.38

6.51

7.55

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK GC-WAI 74703/ 92 0623

```
RUN TIME ERROR: ONE ISTABLE MINUTE SETPOINT
  12.19
RT: STOP RUN


SAMPLE ID: 11  VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A  SAMPLER INJECTION @ 14:16  OCT 29, 1990
  SAMPLE # :  ID CODE   :
        11
PCB DETERMINATION (AROCLOR)
ESTD

   RT    EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 1619.29
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.49    0.43      3310150.00    BV   0.14 *   1     1.028  HEXANE
  1.00                          RP: BL MODE → 1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF
 11.00   11.00        31735.30    ++   -----    2 1.695E-02  1260

MULTIPLIER = 1


  AMT OF AROCLOR 1260 (PPM) =   .339068
[hp] 5880A  SAMPLER INJECTION @ 14:16  OCT 29, 1990
  SAMPLE # :  ID CODE   :
        11
AREA %

   RT              AREA  TYPE   WIDTH        HEIGHT     BASELINE    AREA %

  0.00                          BASELINE @ START RUN = 1619.29
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.49      3311870.00   BV    0.14 *    367362.00      1580.69    96.337
  1.05        10907.30   VV    -----        558.14      1579.06     0.317
  2.03         3977.80   VV    -----        324.92      1576.24     0.116
  2.38         3595.76   VV    -----        346.69      1575.21     0.105
  2.55         3778.15   VV    -----        313.67      1574.72     0.110
  3.37        16379.30   VV    0.210       1220.22      1572.33     0.476
  4.13         3068.28   VV    -----        147.68      1570.13     0.089
  4.38         2983.03   VP    -----        174.36      1569.43     0.087
  6.51          797.14   BP    -----         42.71      1589.78     0.023
  7.55         9094.73   PB   *------*      240.53      1578.16     0.265
 10.13        42742.70   BH    -----*       400.40      1251.07     1.243
 12.19        28613.70   HH    -----        358.69      1251.07     0.832

TOTAL AREA = 3437810.00
MULTIPLIER = 1

OVEN TEMP NOT READY

LIST RUN TIME
LIST RUN TBL
RUN TABLE:
    0.10  CHART SPEED 0.2
    1.25  CHART SPEED 1.25
```

PCB's

CS1 (10/24)

```
AVAILABLE MEMORY (BYTES): 14880

LIST REPORT TBL
REPORT TABLE :
    1.00  BL MODE 1
    3.60  AREA SUM ON
   11.00  AREA SUM OFF

AVAILABLE MEMORY (BYTES): 14880

        RT: CHART SPEED → 0.20 CM/MIN                                  0.45
        RT: CHART SPEED → 1.25 CM/MIN

        RT: CHART SPEED → 0.75 CM/MIN

        RT: STOP RUN
```

blank soil

```
SAMPLE ID: 12  VOLUME(ML): 40 WEIGHT(GM): 2
【hp】 5880A  SAMPLER INJECTION @ 14:37  OCT 29, 1990
  SAMPLE # :  ID CODE   :
         12
PCB DETERMINATION (AROCLOR)
ESTD

   RT     EXP RT            AREA    TYPE  WIDTH  CAL     AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 1634.48
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.45    0.43       1453320.00    PB   0.06 *   1      0.669  HEXANE
  1.00                          RP: BL MODE → 1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF

MULTIPLIER = 1

OVEN TEMP NOT READY

_ PRGM 5
LIST PRGM 340
340  START AUTO SEQ I,I
```

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK GC-WAI 74703/ 92 0625

1.44
1.74
1.88
2.15
2.56

RT: CHART SPEED → 0.75 CM/MIN

3.57
THRESHOLD → 74.07
4.90
5.43
5.72
6.64
7.14
7.71
8.76
9.95
11.82

RT: STOP RUN

Spike wipe

0.05mL (200µg/wipe)

= 10µg/wipe

$\frac{11.5}{10.} = 115\%$

SAMPLE ID: 13 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 14:57 OCT 29, 1990
SAMPLE # : ID CODE :
13
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1636.73				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2098920.00	PV	0.09	1	0.966	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	977145.00	++	-----	2	0.576	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 11.5174
[hp] 5880A SAMPLER INJECTION @ 14:57 OCT 29, 1990
SAMPLE # : ID CODE :
13
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1636.73			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2099960.00	PH	0.09	367376.00	1590.09	46.393
0.89	5401.90	HH	-----	808.80	1590.09	0.119
1.05	5034.54	HH	-----	341.51	1590.09	0.111
1.44	2937.87	HH	-----	217.84	1590.09	0.065
1.74	2031.97	HH	-----	233.26	1590.09	0.045
1.88	1238.22	HH	-----	197.80	1590.09	0.027

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK GC WAI 74703/ 9270 5

3.57	48055.20	HH	0.189	3982.60	1590.09	1.062
4.07	72722.10	HH	0.236	4822.02	1590.09	1.607
4.90	77442.90	HH	*-----	3789.34	1590.09	1.711
5.43	89674.20	HH	-----	6182.71	1590.09	1.981
5.72	208420.00	HH	-----	10044.10	1590.09	4.605
6.64	292673.00	HH	-----	12853.80	1590.09	6.466
7.14	136734.00	HH	-----	6463.50	1590.09	3.021
7.71	321659.00	HH	-----	11661.20	1590.09	7.106
8.76	303384.00	HH	-----	7654.12	1590.09	6.703
9.95	344966.00	HH	-----*	6510.59	1590.09	7.621
11.82	497001.00 A	HH	-----	11822.30	1590.09	10.980

TOTAL AREA = 4526420.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN

0.49

2.15
2.37
2.57

RT: CHART SPEED → 0.75 CM/MIN

3.58
4.09
4.89
5.45
5.74
6.66
7.17
7.72
8.78
9.97
11.83

RT: STOP RUN

Spike soil

$0.100\,mL\left(\frac{200\,\mu g}{mL}\right) = 10\,\mu g$

2.0 g

SAMPLE ID: 14 VOLUME(ML): 40 WEIGHT(GM): 2.06
[hp] 5880A SAMPLER INJECTION @ 15:18 OCT 29, 1990
SAMPLE # : ID CODE :
14
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1730.18				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	2976760.00	BB	0.127*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	980067.00	++	-----	2	0.578	1260

MULTIPLIER = 1

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK

080

AMT OF AROCLOR 1260 (PPM) = 11.2204

$\frac{11.2}{10.0} = 112\%$

[hp] 5880A SAMPLER INJECTION @ 15:18 OCT 29, 1990

SAMPLE # : ID CODE :

14

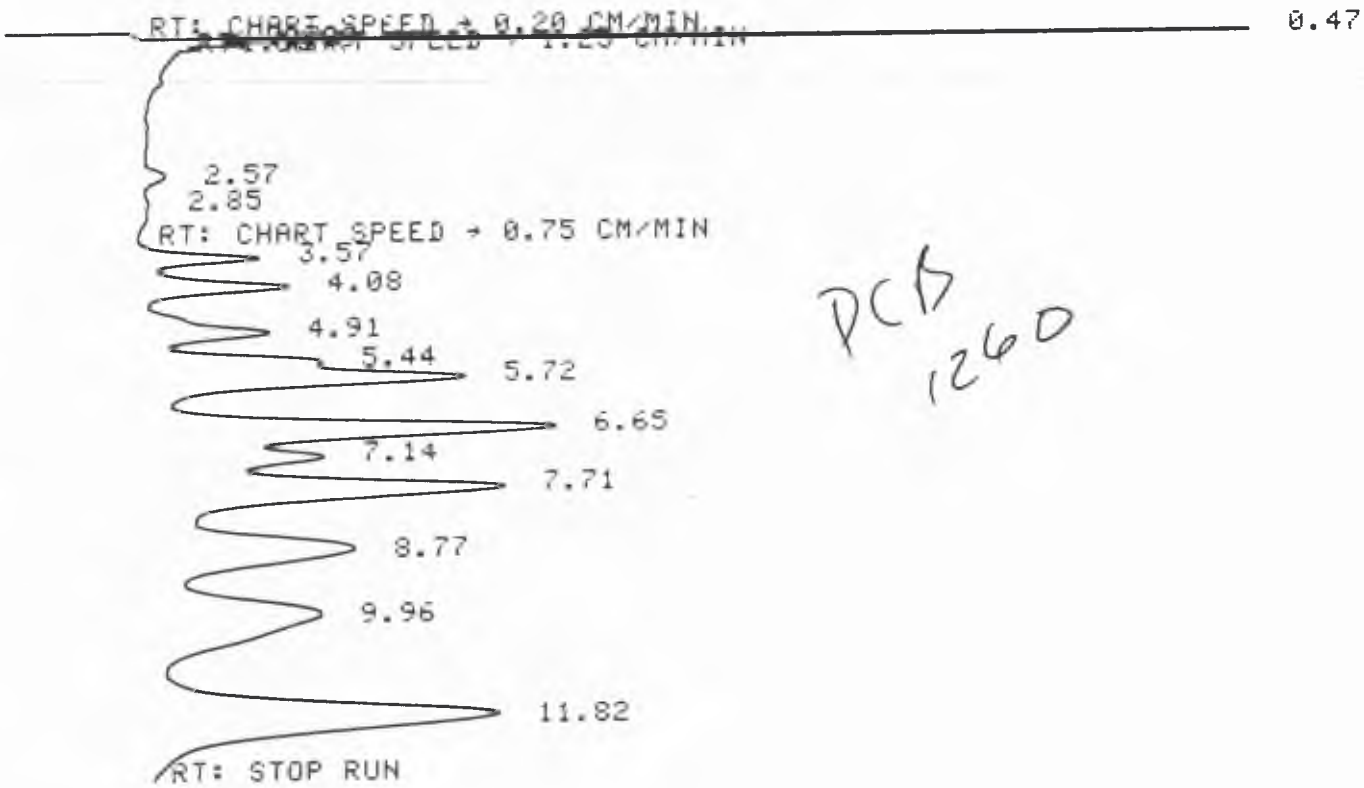
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1730.18			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	2993410.00	BV	0.128*	367148.00	1796.33	56.701
1.12	11700.40	VB	-----*	640.07	1881.02	0.222
2.15	3008.96	PV	-----	260.29	1808.29	0.057
2.37	3659.52	VV	-----	430.54	1772.14	0.069
2.57	7182.30	VP	-----	727.18	1740.44	0.136
3.58	56355.30	PH	*-----	3976.99	1693.09	1.067
4.09	75936.80	HH	-----*	4684.09	1693.09	1.438
4.89	55281.30	HH	*-----	2937.52	1693.09	1.047
5.45	87324.40	HH	-----	6188.81	1693.09	1.654
5.74	203942.00	HH	-----	9989.57	1693.09	3.863
6.66	276739.00	HH	-----	12457.10	1693.09	5.242
7.17	127251.00	HH	-----	6123.02	1693.09	2.410
7.72	327634.00	HH	-----	11919.50	1693.09	6.206
8.78	272002.00	HH	-----	7422.29	1693.09	5.152
9.97	321993.00	HH	-----*	6327.48	1693.09	6.099
11.83	455835.00	A HH	-----	11282.30	1693.09	8.634

TOTAL AREA = 5279250.00

MULTIPLIER = 1

OVEN TEMP NOT READY



PCB 1260

SAMPLE ID: 9694 VOLUME(ML): 20 WEIGHT(GM): 1

[hp] 5880A SAMPLER INJECTION @ 15:38 OCT 29, 1990

SAMPLE # : ID CODE :

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1709.44				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1656900.00	PV	0.071	1	0.763	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	409002.00	++	-----	2	0.234	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.67825

[hp] 5880A SAMPLER INJECTION @ 15:38 OCT 29, 1990

SAMPLE # : ID CODE :

15

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1709.44			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1660040.00	PH	0.071	367224.00	1709.04	62.211
0.78	6692.13	HH	-----	1254.28	1709.04	0.251
0.89	10642.70	HH	-----	1497.68	1709.04	0.399
1.12	19497.90	HH	-----	924.34	1709.04	0.731
2.57	4729.07	HH	-----	406.52	1709.04	0.177
2.85	1893.43	HH	-----	188.13	1709.04	0.071
3.57	22284.00	HH	0.211	1655.01	1709.04	0.835
4.08	33752.70	HH	0.259	2043.17	1709.04	1.265
4.91	38320.30	HH	*-----	1770.39	1709.04	1.436
5.44	35322.50	HH	-----	2489.70	1709.04	1.324
5.72	92189.20	HH	-----	4387.28	1709.04	3.455
6.65	126447.00	HH	-----	5609.20	1709.04	4.739
7.14	51223.60	HH	-----	2461.86	1709.04	1.920
7.71	135321.00	HH	-----	4898.08	1709.04	5.071
8.77	110477.00	HH	-----	2869.71	1709.04	4.140
9.96	126660.00	HH	-----*	2416.34	1709.04	4.747
11.82	192923.00	A HH	-----	4767.51	1709.04	7.230

TOTAL AREA = 2668410.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

~~RT: CHART SPEED → 1.25 CM/MIN~~

1.45

1.75

1.90

2.17

2.62

2.87

3.42

~~RT: CHART SPEED~~ → 0.75 CM/MIN 3.55

3.91

4.93

5.46

5.75

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK GC GC WAI 74703/ 9230-0625

7.14

8.80

9.98

PCB 1260

11.86

~~RT:~~ STOP RUN

SAMPLE ID: 9696 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 15:59 OCT 29, 1990
SAMPLE # : ID CODE :
16
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1673.83				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1821450.00	BV	0.078	1	0.838	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	1401780.00	++	-----	2	0.864	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 17.2802
[hp] 5880A SAMPLER INJECTION @ 15:59 OCT 29, 1990
SAMPLE # : ID CODE :
16
AREA %

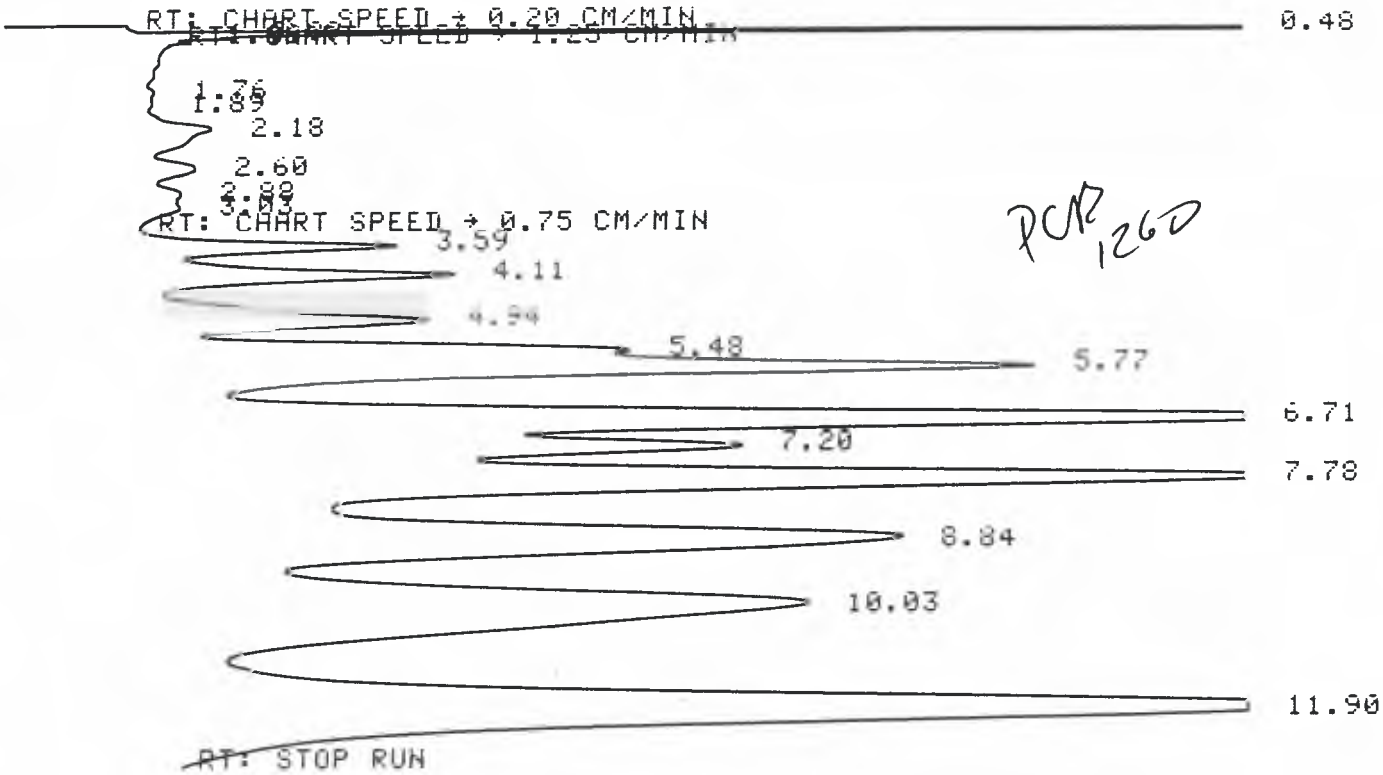
RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1673.83			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1821450.00	BV	0.078	367080.00	1850.68	31.659
1.03	286.48	BV	-----	63.06	2125.03	0.005
1.13	869.97	VP	-----	120.18	2088.98	0.015
1.45	584.30	PH	-----	119.55	2003.14	0.010
1.57	503.03	HH	-----	102.10	2003.14	0.009
1.75	9467.94	HH	-----	1455.72	2003.14	0.165
1.90	10160.40	HH	-----	1417.44	2003.14	0.177
2.17	110338.00	HH	-----*	6738.45	2003.14	1.918
2.62	80926.60	HH	-----	6421.44	2003.14	1.407
2.87	72711.00	HH	-----	7584.71	2003.14	1.264
3.02	95530.10	HH	-----	7735.02	2003.14	1.660
3.55	248434.00	HH	-----	16323.50	2003.14	4.318
3.91	222371.00	HH	-----*	8970.20	2003.14	3.865
4.93	185205.00	HH	*-----	6957.90	2003.14	3.219
5.46	97391.90	HH	-----	6516.59	2003.14	1.693
5.75	267651.00	HH	-----	12616.10	2003.14	4.652
6.68	383322.00	HH	-----	17171.20	2003.14	6.663
7.17	163822.00	HH	-----	7840.65	2003.14	2.847

GC 8 WAI 74703/ 9270

9.98	450335.00	HH	-----*	8755.87	2003.14	7.827
11.86	731099.00 A	HH	-----	18198.00	2003.14	12.707

TOTAL AREA = 5753350.00
MULTIPLIER = 1

OVEN TEMP NOT READY



PCB 1260

SAMPLE ID: 9697 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 16:19 OCT 29, 1990
SAMPLE # : ID CODE :
17
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1768.79				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2288910.00	PV	0.098*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	1305770.00	++	-----	2	0.799	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 15.9773
[hp] 5880A SAMPLER INJECTION @ 16:19 OCT 29, 1990
SAMPLE # : ID CODE :
17
AREA %

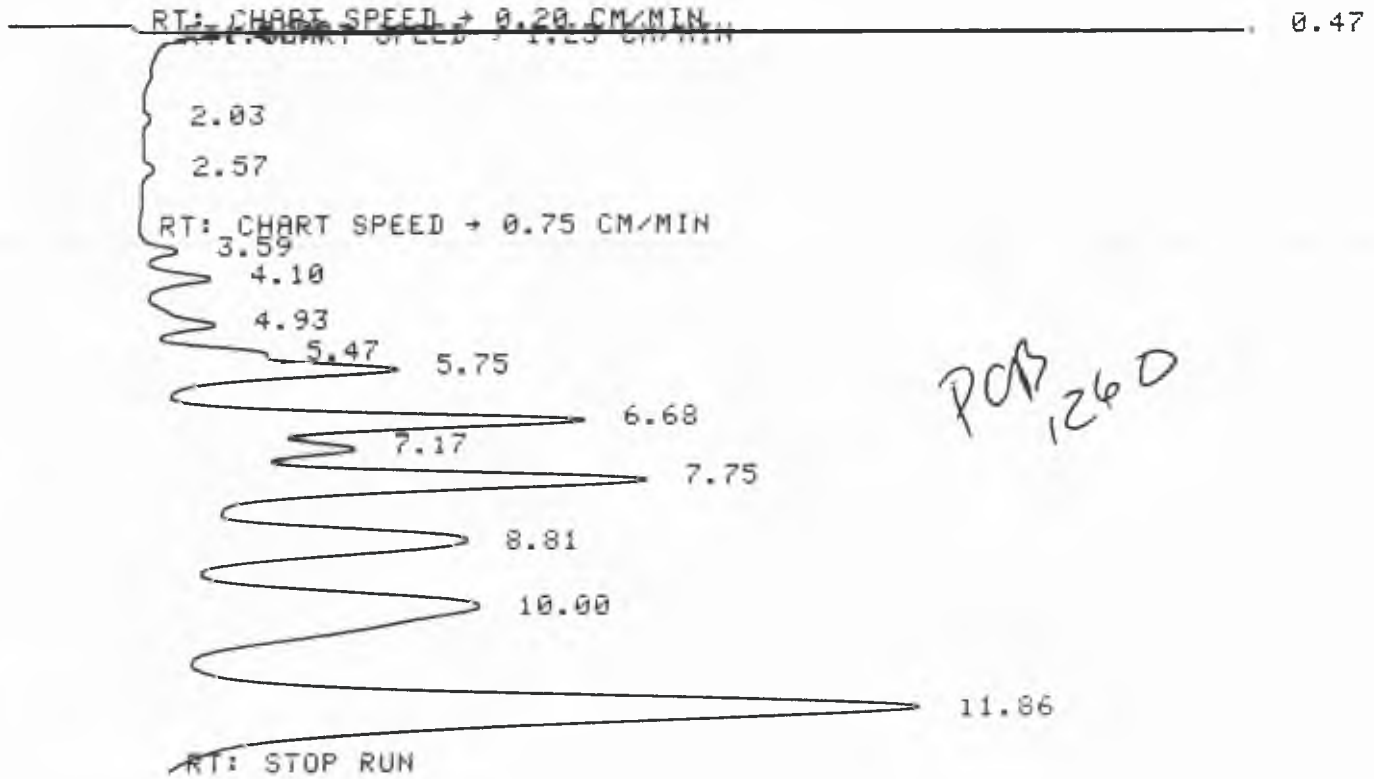
RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK
OPTIC WAI 74703/ 93/0421

0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	2294320.00	HH	0.098*	367175.00	1768.79	41.943
0.89	9039.35	HH	-----	1365.00	1768.79	0.165
1.06	15110.60	HH	-----	806.07	1768.79	0.276
1.76	2709.15	HH	-----	350.97	1768.79	0.050
1.89	2364.51	HH	-----	325.52	1768.79	0.043
2.18	20143.30	HH	-----*	1125.29	1768.79	0.368
2.60	11296.60	HH	-----	909.07	1768.79	0.207
2.88	6963.67	HH	-----	715.73	1768.79	0.127
3.03	8171.75	HH	-----	700.84	1768.79	0.149
3.59	51449.70	HH	0.224	3593.78	1768.79	0.941
4.11	76716.50	HH	-----	4380.03	1768.79	1.402
4.94	87089.40	HH	*-----	4026.91	1768.79	1.592
5.48	94933.00	HH	-----	6736.03	1768.79	1.735
5.77	255956.00	HH	-----	12122.70	1768.79	4.679
6.71	381295.00	HH	-----	16855.30	1768.79	6.971
7.20	173407.00	HH	-----	8189.76	1768.79	3.178
7.78	434840.00	HH	-----	15632.50	1768.79	7.949
8.84	400975.00	HH	-----	10362.80	1768.79	7.330
10.03	474979.00	HH	-----*	9084.69	1768.79	8.683
11.90	668330.00 A	HH	-----	16210.30	1768.79	12.218

TOTAL AREA = 5470090.00
MULTIPLIER = 1

OVEN TEMP NOT READY



PCB 1260

SAMPLE ID: 9698 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 16:40 OCT 29, 1990
SAMPLE # : ID CODE :
18
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME

085

```
 0.00                          THRESHOLD @ START RUN =  7
 0.00                          PEAK WIDTH @ START RUN = 0.16
 0.47    0.43       1687460.00    PV    0.072    1      0.777  HEXANE
 1.00                          RP: BL MODE → 1
 3.60                          RP: AREA SUM → ON
11.00                          RP: AREA SUM → OFF
11.00   11.00        541970.00    ++    -----    2      0.311  1260

MULTIPLIER = 1


  AMT OF AROCLOR 1260 (PPM) =   6.22892
[hp] 5880A  SAMPLER INJECTION @ 16:40  OCT 29, 1990
  SAMPLE # :  ID CODE   :
        18
AREA %
```

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1711.80			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1689290.00	PH	0.072	367211.00	1708.53	54.461
0.78	5527.99	HH	-----	989.29	1708.53	0.178
0.89	7781.76	HH	-----	1112.24	1708.53	0.251
1.13	12531.10	HH	-----	643.64	1708.53	0.404
2.03	2353.75	HH	-----	221.65	1708.53	0.076
2.57	3281.40	HH	-----	257.88	1708.53	0.106
3.59	9159.59	HH	-----	564.29	1708.53	0.295
4.10	18029.50	HH	-----	990.02	1708.53	0.581
4.93	24216.20	HH	*-----	1058.33	1708.53	0.781
5.47	22181.00	HH	-----	1747.89	1708.53	0.715
5.75	77119.80	HH	-----	3490.64	1708.53	2.486
6.68	137759.00	HH	-----	6009.66	1708.53	4.441
7.17	60468.90	HH	-----	2884.96	1708.53	1.949
7.75	191297.00	HH	-----	6808.74	1708.53	6.167
8.81	165607.00	HH	-----	4406.04	1708.53	5.339
10.00	242523.00	HH	-----*	4565.56	1708.53	7.819
11.86	432689.00	A HH	-----	10444.90	1708.53	13.950

```
TOTAL AREA = 3101820.00
MULTIPLIER = 1

OVEN TEMP NOT READY
```

RT: CHART SPEED → 0.20 CM/MIN 0.50

~~RT: CHART SPEED → 1.25 CM/MIN~~

2.02
2.36
2.55

RT: CHART SPEED → 0.75 CM/MIN

3.56
4.07
4.88
5.43
5.71
6.64
7.13
7.70
8.75

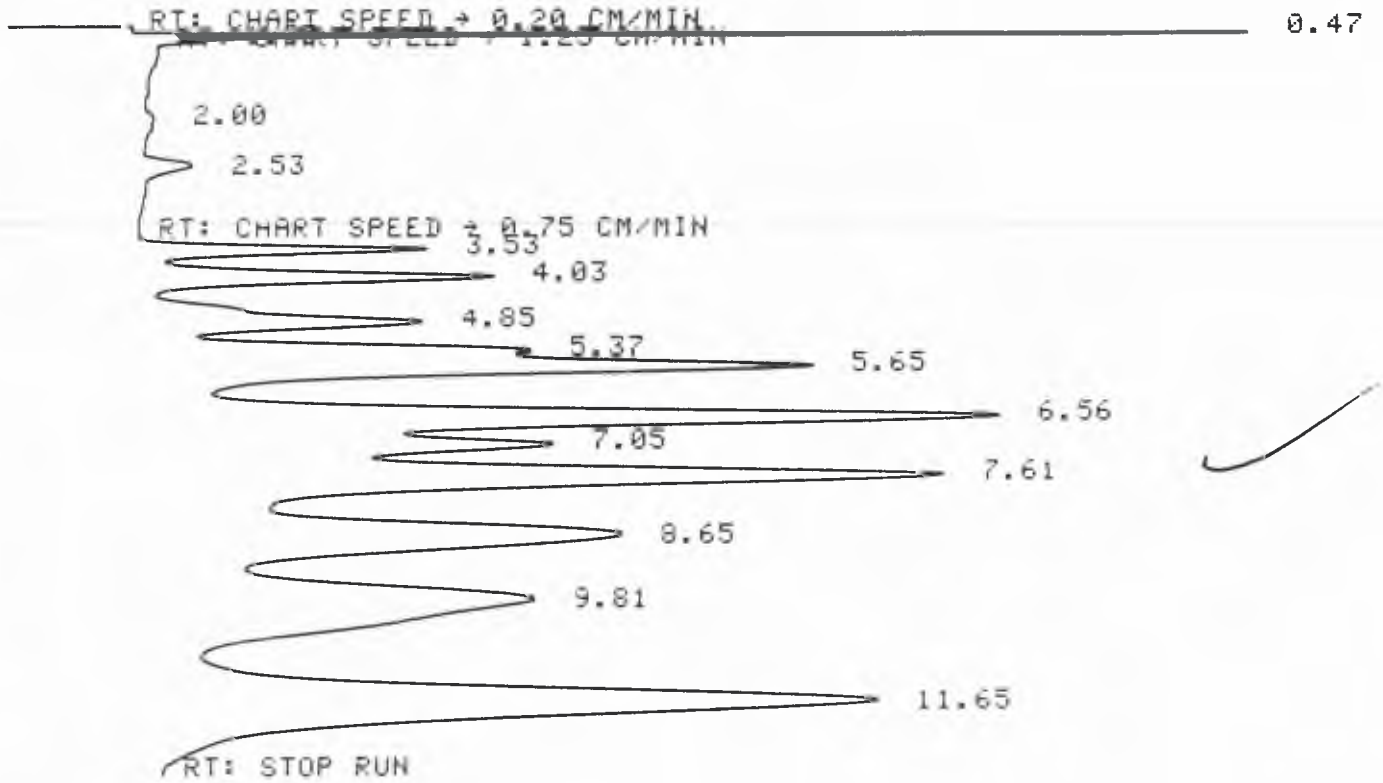
PCB 1260

AREA %

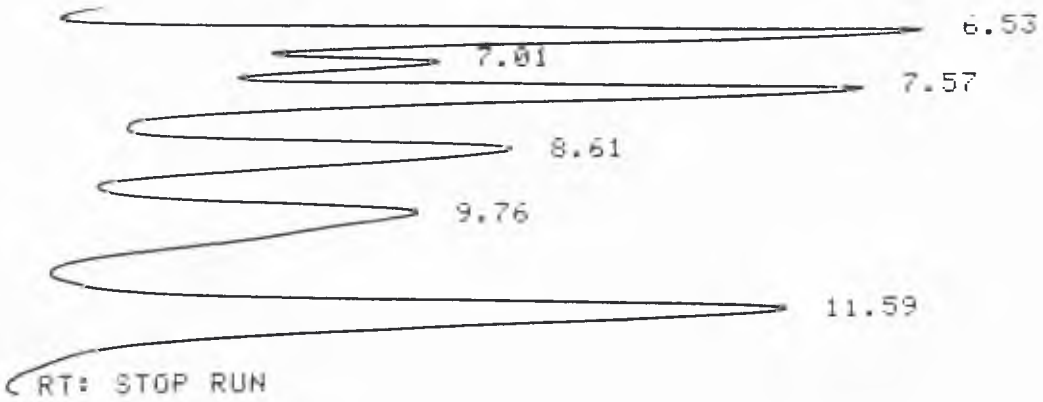
RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1698.28			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2275460.00	PV	0.10 *	367355.00	1663.76	90.111
1.03	15190.40	VV	-----	1334.66	1663.18	0.602
1.32	12706.80	VV	-----	550.84	1662.87	0.503
1.98	6088.34	VV	-----	350.92	1662.18	0.241
2.51	8482.04	VV	-----	375.44	1661.63	0.336
3.51	7206.16	VV	-----	512.29	1660.59	0.285
4.01	9374.19	VV	0.250	587.50	1660.06	0.371
4.82	8524.72	VV	-----	412.78	1659.22	0.338
5.35	7636.57	VV	-----	569.91	1658.67	0.302
5.63	20486.00	VV	-----	1024.08	1658.37	0.811
6.54	27715.00	VV	-----	1279.31	1657.42	1.098
7.04	11165.60	VV	-----	540.02	1656.91	0.442
7.59	30811.40	VV	-----	1126.04	1656.34	1.220
8.63	23005.30	VV	-----	642.05	1655.25	0.911
9.80	24865.30	VV	-----*	509.83	1654.03	0.985
11.64	36447.50	A VP	-----	938.51	1652.11	1.443

TOTAL AREA = 2525160.00
MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: .5 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:12 OCT 29, 1990
SAMPLE # : ID CODE :
2
PCB DETERMINATION (AROCLOR)
ESTD



SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 21:43 OCT 29, 1990
SAMPLE # : ID CODE :
33
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1583.93				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2186960.00	PV	0.093	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	944088.00	++	-----	2	0.553	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .553438
[hp] 5880A SAMPLER INJECTION @ 21:43 OCT 29, 1990
SAMPLE # : ID CODE :
33
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1583.93			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2188490.00	PH	0.093	367495.00	1544.69	48.400
0.87	6720.18	HH	-----	1036.42	1544.69	0.149
1.03	10765.40	HH	-----	958.07	1544.69	0.238
2.00	1738.64	HH	-----	218.34	1544.69	0.038
2.10	2233.49	HH	-----	224.68	1544.69	0.049
2.52	8477.07	HH	-----	831.78	1544.69	0.187
3.51	50231.30	HH	0.183	4299.90	1544.69	1.111
4.01	79323.90	HH	0.234	5304.80	1544.69	1.754
4.82	90177.80	HH	*-----	4309.72	1544.69	1.994
5.34	83060.20	HH	-----	5926.59	1544.69	1.837
5.62	207414.00	HH	-----	10085.40	1544.69	4.587
6.53	283723.00	HH	-----	12774.40	1544.69	6.275
7.01	129023.00	HH	-----	6245.31	1544.69	2.853
7.57	331836.00	HH	-----	11969.30	1544.69	7.339
8.61	275488.00	HH	-----	7226.61	1544.69	6.093
[illegible]	[illegible]	HH	-----+	[illegible]	[illegible]	[illegible]

11.00	11.00	1150930.00	++	-----	2	0.694	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 13.8759

[hp] 5880A SAMPLER INJECTION @ 20:21 OCT 29, 1990

SAMPLE # : ID CODE :

29

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2104.63			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.46	1623960.00	BV	*0.069	366991.00	2003.03	36.064
0.81	10449.30	VV	-----	1026.37	1927.32	0.232
1.04	5227.56	VP	-----	544.86	1875.33	0.116
2.01	770.17	PV	0.093	129.12	1725.67	0.017
2.55	2870.14	VV	-----	256.85	1676.97	0.064
3.55	21996.40	PH	0.181	1900.81	1616.79	0.488
4.06	43195.10	HH	0.227	2979.10	1616.79	0.959
4.87	53724.20	HH	*-----	2807.62	1616.79	1.193
5.40	78691.50	HH	-----	5634.36	1616.79	1.748
5.69	200507.00	HH	-----	9838.28	1616.79	4.453
6.61	315222.00	HH	-----	14177.60	1616.79	7.000
7.10	156143.00	HH	-----	7471.43	1616.79	3.468
7.67	371824.00	HH	-----	13816.20	1616.79	8.257
8.71	389682.00	HH	-----	9986.50	1616.79	8.654
9.88	485079.00	HH	-----*	9570.76	1616.79	10.772
11.74	743661.00 A	HH	-----	17857.40	1616.79	16.515

TOTAL AREA = 4503000.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 1.25 CM/MIN

0.45

2.01

2.54

RT: CHART SPEED → 0.75 CM/MIN

ND

RT: STOP RUN

100

```
SAMPLE ID: 9559                    VOLUME(ML): 40 WEIGHT(GM): 2.06
[hp] 5880A  SAMPLER INJECTION @ 20:42  OCT 29, 1990
  SAMPLE # :  ID CODE    :
          30
PCB DETERMINATION (AROCLOR)
ESTD

   RT     EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 2001.19
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.45    0.43       1525210.00    BV   0.065    1     0.702  HEXANE
  1.00                          RP: BL MODE →  1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF

MULTIPLIER = 1

OVEN TEMP NOT READY

        RT: CHART SPEED → 0.20 CM/MIN                                  0.45
        RT: CHART SPEED → 1.25 CM/MIN

         2.00
         2.34
         2.53

        RT: CHART SPEED → 0.75 CM/MIN

                                                  ND

        RT: STOP RUN
```

```
SAMPLE ID: 9560                    VOLUME(ML): 40 WEIGHT(GM): 2.04
[hp] 5880A  SAMPLER INJECTION @ 21:02  OCT 29, 1990
  SAMPLE # :  ID CODE    :
          31
PCB DETERMINATION (AROCLOR)
ESTD

   RT     EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 1593.29
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.45    0.43       1510980.00    PV   0.064    1     0.695  HEXANE
  1.00                          RP: BL MODE →  1
```

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.43

RT: CHART SPEED → 1.25 CM/MIN

2.00

2.52

RT: CHART SPEED → 0.75 CM/MIN

hexane

RT: STOP RUN

SAMPLE ID: 111 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 21:23 OCT 29, 1990
SAMPLE # : ID CODE :
32
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 1588.89					
0.00		THRESHOLD @ START RUN = 7					
0.00		PEAK WIDTH @ START RUN = 0.16					
0.43	0.43	224257.00	PV	0.05	1	0.103	HEXANE
1.00		RP: BL MODE → 1					
3.60		RP: AREA SUM → ON					
11.00		RP: AREA SUM → OFF					

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

RT: CHART SPEED → 1.25 CM/MIN

2.00

2.10

2.52

RT: CHART SPEED → 0.75 CM/MIN

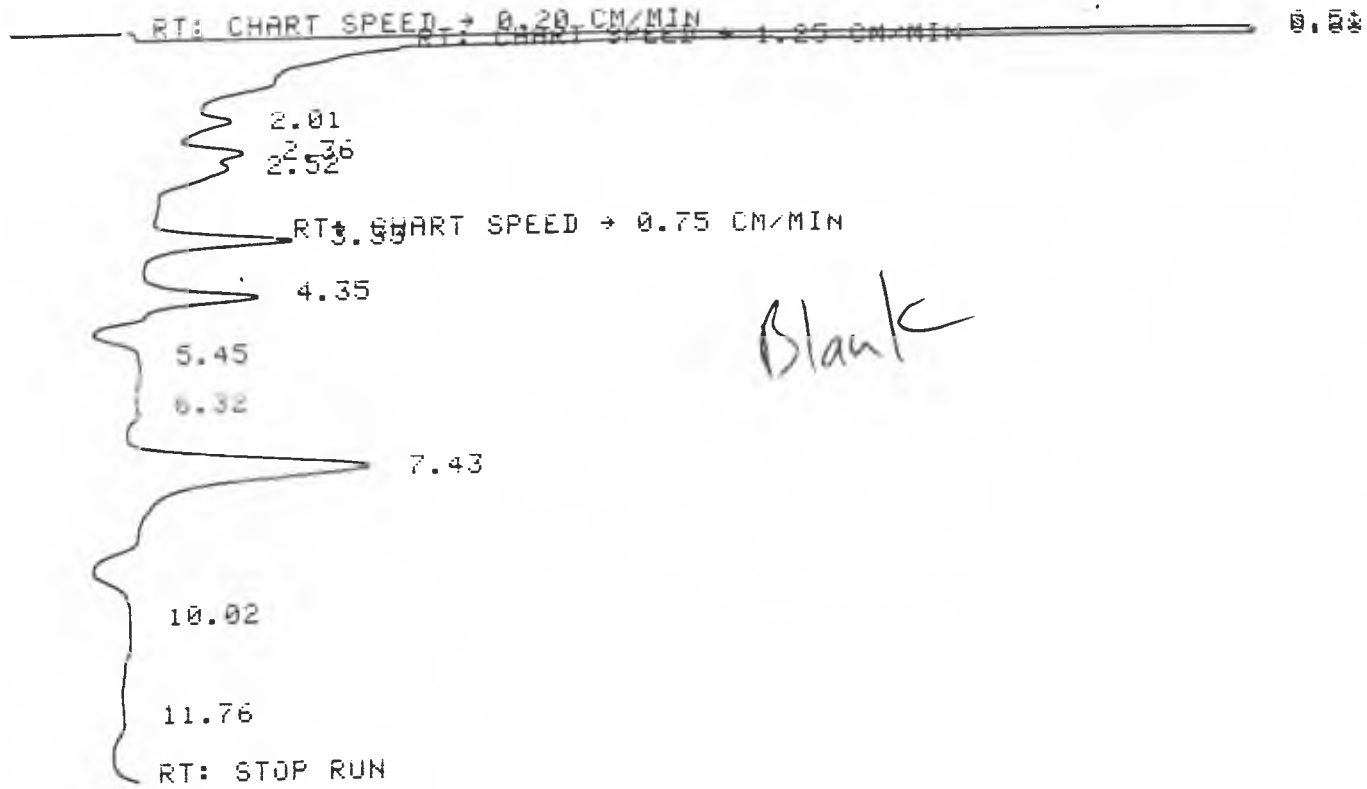
3.51

4.01

110% OK

TOTAL AREA = 4521630.00
MULTIPLIER = 1

OVEN TEMP NOT READY



Blank

SAMPLE ID: 34 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 22:04 OCT 29, 1990
SAMPLE # : ID CODE :
34
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1899.72				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	5027350.00	PV	0.214	1	1.561	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	189840.00	++	-----	2	0.106	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .10612
[hp] 5880A SAMPLER INJECTION @ 22:04 OCT 29, 1990
SAMPLE # : ID CODE :
34
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1899.72			

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK GC-WAI 74703 9700-0625

0.51	5033490.00	VV	0.215	357217.00	[illegible]	[illegible]
0.88	292167.00	VV	-----*	18824.10	1793.77	5.151
2.01	24775.40	VV	-----	1552.29	1657.91	0.437
2.36	19459.70	VV	-----	1751.10	1615.20	0.343
2.52	36689.60	VV	-----	1580.73	1595.46	0.647
3.33	46365.10	VV	-----	2509.82	1497.94	0.817
4.35	61977.50	VP	-----	2178.76	1375.29	1.093
5.45	10456.90	PV	-----	375.13	1547.18	0.184
6.32	2154.87	BV	-----	83.65	1812.40	0.038
7.43	131617.00	VP	-----*	3415.75	1596.33	2.320
10.02	9648.54	PB	-----	159.44	1611.22	0.170
11.76	3260.64	BP	-----	83.68	1596.32	0.057

TOTAL AREA = 5672060.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
0.50
2.01
2.56
3.00
RT: CHART SPEED → 0.75 CM/MIN
3.56
4.06
4.87
5.42
5.71
6.64
7.13
7.69
8.74
9.92
11.77
RT: STOP RUN

spk blank

[Exp] = 200ug/ml 0.01ml X 30/

~~30%~~ ~~0.26 ug/g~~ 0.066 ug/

115%

SAMPLE ID: 35 VOLUME(ML): 4 /WEIGHT(GM): 30 /
[hp] 5880A SAMPLER INJECTION @ 22:24 OCT 29, 1990
SAMPLE # : ID CODE :
35
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2029.10				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.50	0.43	5282740.00	PV	0.225	1	1.641	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	976632.00	++	-----	2	0.576	1260

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK
GC [illegible]-WAI 74703/ 9270 [illegible]

11.79

RT: STOP RUN

SAMPLE ID: 9699 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 17:00 OCT 29, 1990
SAMPLE # : ID CODE :
19
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1721.80				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.50	0.43	3768410.00	PV	0.161*	1	1.170	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	1467810.00	++	-----	2	0.909	1260

MULTIPLIER = 1

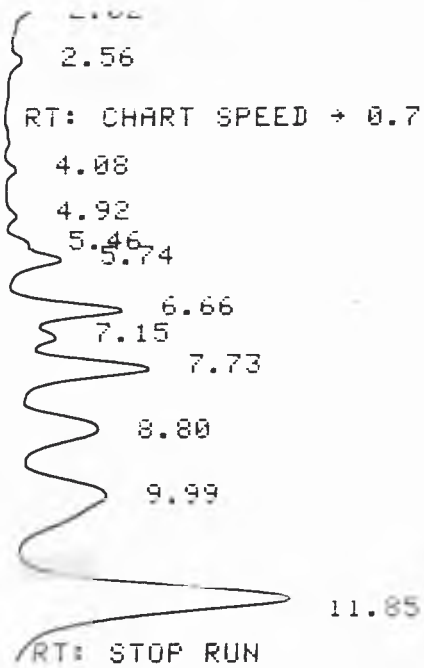
AMT OF AROCLOR 1260 (PPM) = 18.1762
[hp] 5880A SAMPLER INJECTION @ 17:00 OCT 29, 1990
SAMPLE # : ID CODE :
19
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1721.80			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.50	3771000.00	PV	0.161*	367233.00	1708.64	50.641
1.04	10870.50	VV	-----*	589.47	1695.97	0.146
2.02	1765.10	VV	-----	181.12	1673.05	0.024
2.36	1856.01	VV	-----	204.60	1664.99	0.025
2.55	3107.18	VV	-----	288.23	1660.56	0.042
3.56	19592.90	PH	*-----	1363.97	1646.15	0.263
4.07	41340.00	HH	0.245	2645.01	1646.15	0.555
4.88	51201.80	HH	*-----	2602.79	1646.15	0.688
5.43	74353.40	HH	-----	5498.88	1646.15	0.998
5.71	214671.00	HH	-----	10441.60	1646.15	2.883
6.64	387038.00	HH	-----	17566.20	1646.15	5.198
7.13	182455.00	HH	-----	8815.71	1646.15	2.450
7.70	504074.00	HH	-----	18616.10	1646.15	6.769
8.75	487706.00	HH	-----	12743.90	1646.15	6.549
9.93	629553.00	HH	-----*	12028.30	1646.15	8.454
11.79	1065980.00	A HH	-----	25976.40	1646.15	14.315

TOTAL AREA = 7446560.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED = 0.20 CM/MIN 0.47



PCB 1260

SAMPLE ID: 9700 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 17:20 OCT 29, 1990
SAMPLE # : ID CODE :
20
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1848.64				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1707470.00	BV	0.073	1	0.786	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	151966.00	++	-----	2	8.404E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.68071
[hp] 5880A SAMPLER INJECTION @ 17:20 OCT 29, 1990
SAMPLE # : ID CODE :
20
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1848.64			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1711720.00	BV	0.073	367089.00	1827.08	79.304
0.78	16562.60	VV	-----*	1279.87	1812.38	0.767
1.13	20709.00	VV	-----	965.59	1796.64	0.959
2.02	2881.76	VV	-----	254.41	1755.10	0.134
2.56	2293.42	VP	-----	195.85	1730.15	0.106
4.08	2371.97	PH	0.219	169.96	1683.15	0.110
4.92	3300.12	HH	-----	174.08	1683.15	0.153

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6.66	34837.10	HH	-----	1389.39	1683.15	1.617
7.15	14253.70	HH	-----	702.45	1683.15	0.660
7.73	53193.30	HH	-----	1952.17	1683.15	2.464
8.80	48599.90	HH	-----	1269.69	1683.15	2.252
9.99	73622.30	HH	-----*	1375.53	1683.15	3.411
11.85	153887.00	A HH	-----	3816.39	1683.15	7.130

TOTAL AREA = 2158430.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.44

RT: CHART SPEED → 1.25 CM/MIN

2.03

2.57

RT: CHART SPEED → 0.75 CM/MIN

STOP AUTO SEQ

STOP PRGM
STOP PROGRAM AT LINE 340

START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?222↵
22, 47
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 22
? 222, 1, 1
ID # 23
? 9701, 20, 1
ID # 24
? 9702, 20, 1
ID # 25
? 9703, 20, 1
ID # 26
? 9704, 20, 1
ID # 27
? 9705, 20, 1
ID # 28
? 9706, 20, 1
ID # 29
? 9707, 20, 1
ID # 30
? 9559, 40, 1↵
9559, 40, 2.06
ID # 31
? 9560, 40, 2.04

```
ID # 33
? 222, 1, 1
ID # 34
? 34, 1, 1
ID # 35
? 35, 4, 30
ID # 36
? 9540, 4, 30
ID # 37
? 9541, 4, 30
ID # 38
? 9542, 4, 30
ID # 39
? 94
9543, 4, 30
ID # 40
? 9544, 4, 30
ID # 41
? 9545, 4, 30
ID # 42
? 9546, 4, 30
ID # 43
? 9547, 4, 30
ID # 44
? 9551, 4, 30
ID # 45
? 9553, 4, 30
ID # 46
? 111, 1, 1
ID # 47
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N
RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
```

0.48

2:05
2:18
2.58

RT: CHART SPEED → 0.75 CM/MIN

3.61
4.11
4.95
5.49
5.78
6.71
7.21
7.78
8.85
10.03
11.91

RT: STOP RUN

1138 ok

```
SAMPLE ID: 222 VOLUME(ML): 1  WEIGHT(GM): 1
[hp] 5880A  SAMPLER INJECTION @ 17:57  OCT 29, 1990
  SAMPLE # :  ID CODE   :
```

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1605.95				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2215630.00	PV	0.094	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	963716.00	++	-----	2	0.567	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .566756

【hp】 5890A SAMPLER INJECTION @ 17:57 OCT 29, 1990

SAMPLE # : ID CODE :

22

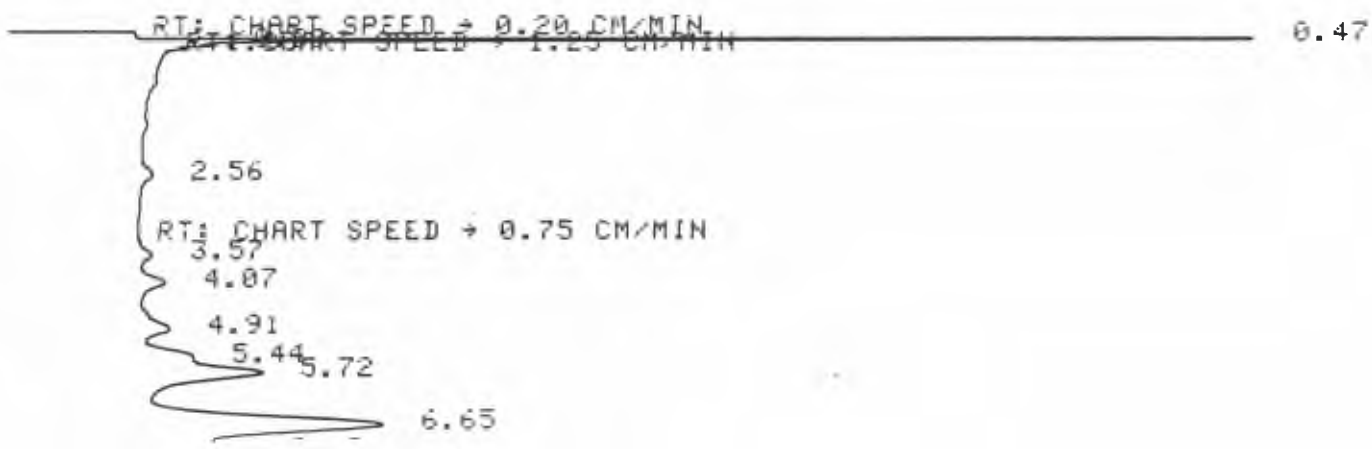
AREA %

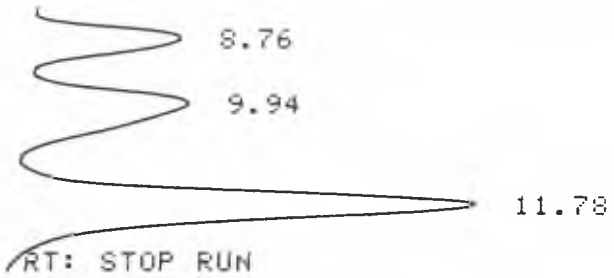
RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1605.95			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2217220.00	PH	0.094	367399.00	1562.28	49.036
0.89	6922.19	HH	-----	1039.10	1562.28	0.153
1.06	10585.50	HH	-----	925.91	1562.28	0.234
2.05	1724.82	HH	-----	212.85	1562.28	0.038
2.16	3445.65	HH	-----	224.21	1562.28	0.076
2.58	8960.15	HH	-----	835.02	1562.28	0.198
3.61	50331.00	HH	0.192	4113.51	1562.28	1.113
4.11	79405.50	HH	0.245	5078.25	1562.28	1.756
4.95	89709.20	HH	*-----	4096.10	1562.28	1.984
5.49	81231.80	HH	-----	5690.70	1562.28	1.797
5.78	208520.00	HH	-----	9615.66	1562.28	4.612
6.71	283673.00	HH	-----	12168.30	1562.28	6.274
7.21	127054.00	HH	-----	5948.04	1562.28	2.810
7.78	327925.00	HH	-----	11339.00	1562.28	7.252
8.85	273952.00	HH	-----	6897.95	1562.28	6.059
10.03	312395.00	HH	-----*	5678.01	1562.28	6.909
11.91	438567.00 A	HH	-----	10290.30	1562.28	9.699

TOTAL AREA = 4521620.00

MULTIPLIER = 1

OVEN TEMP NOT READY





PCB 1260

SAMPLE ID: 9701 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 18:18 OCT 29, 1990
SAMPLE # : ID CODE :
23
PCB DETERMINATION (AROCLOR)
ESTD

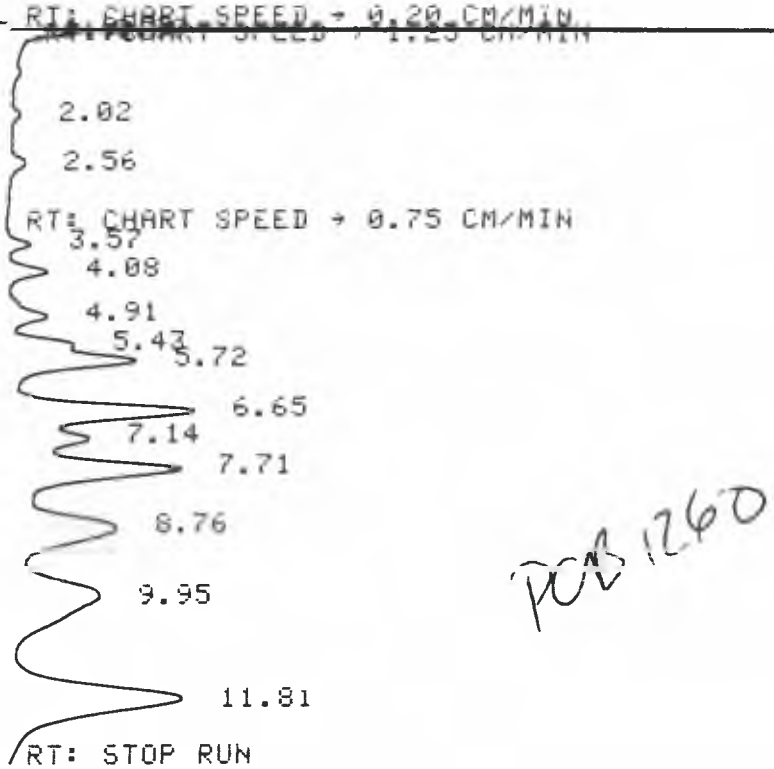
RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1661.19				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1665610.00	PV	0.071	1	0.767	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	298236.00	++	-----	2	0.169	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 3.38651
[hp] 5880A SAMPLER INJECTION @ 18:18 OCT 29, 1990
SAMPLE # : ID CODE :
23
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1661.19			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1667750.00	PV	0.071	367329.00	1653.97	67.991
0.89	7865.67	VV	-----	1069.51	1660.62	0.321
1.13	13116.60	VV	*-----	672.88	1664.37	0.535
2.56	2089.08	VB	-----	194.19	1686.98	0.085
3.57	2962.60	BH	0.235	197.32	1667.97	0.121
4.07	6316.80	HH	0.260	380.00	1667.97	0.258
4.91	9272.74	HH	*-----	446.36	1667.97	0.378
5.44	10037.60	HH	-----	773.26	1667.97	0.409
5.72	35284.40	HH	-----	1705.48	1667.97	1.438
6.65	72948.50	HH	-----	3325.11	1667.97	2.974
7.13	31098.70	HH	-----	1524.51	1667.97	1.268
7.70	105377.00	HH	-----	3906.71	1667.97	4.296
8.76	94681.70	HH	-----	2499.60	1667.97	3.860
9.94	135787.00	HH	-----*	2600.39	1667.97	5.536
11.78	258291.00 A	HH	-----	6483.47	1667.97	10.530

TOTAL AREA = 2452880.00
MULTIPLIER = 1



PCB 1260

SAMPLE ID: 9702 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 18:38 OCT 29, 1990
SAMPLE # : ID CODE :
24
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1683.60				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1630790.00	BV	0.070	1	0.751	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	190933.00	++	-----	2	0.107	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 2.13514
[hp] 5880A SAMPLER INJECTION @ 18:38 OCT 29, 1990
SAMPLE # : ID CODE :
24
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1683.60			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1631820.00	BV	0.070	367329.00	1671.51	78.028
0.78	3849.58	VV	-----	739.34	1668.84	0.184
0.89	5922.29	VV	-----	912.47	1667.96	0.283
1.05	8458.33	VV	-----	482.68	1666.62	0.404

11.00 RT: AREA SUM → OFF

11.00	11.00	1150930.00	++	-----	2	0.694	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 13.8759

[hp] 5880A SAMPLER INJECTION @ 20:21 OCT 29, 1990

SAMPLE # : ID CODE :

29

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2104.63			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.46	1623960.00	BV	*0.069	366991.00	2003.03	36.064
0.81	10448.30	VV	-----	1026.37	1927.32	0.232
1.04	5227.56	VP	-----	544.86	1875.33	0.116
2.01	770.17	PV	0.093	129.12	1725.67	0.017
2.55	2870.14	VV	-----	256.85	1676.97	0.064
3.55	21996.40	PH	0.181	1900.81	1616.79	0.488
4.06	43195.10	HH	0.227	2979.10	1616.79	0.959
4.87	53724.20	HH	*-----	2807.62	1616.79	1.193
5.40	78691.50	HH	-----	5634.36	1616.79	1.748
5.69	200507.00	HH	-----	9838.28	1616.79	4.453
6.61	315222.00	HH	-----	14177.60	1616.79	7.000
7.10	156143.00	HH	-----	7471.43	1616.79	3.468
7.67	371824.00	HH	-----	13816.20	1616.79	8.257
8.71	389682.00	HH	-----	9986.50	1616.79	8.654
9.88	485079.00	HH	-----*	9570.76	1616.79	10.772
11.74	743661.00	A HH	-----	17857.40	1616.79	16.515

TOTAL AREA = 4503000.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.45

~~RT: CHART SPEED → 1.25 CM/MIN~~

2.01

2.54

RT: CHART SPEED → 0.75 CM/MIN

ND

RT: STOP RUN

100

SAMPLE ID: 9559 VOLUME(ML): 40 WEIGHT(GM): 2.06
[hp] 5880A SAMPLER INJECTION @ 20:42 OCT 29, 1990
SAMPLE # : ID CODE :
30
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2001.19				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.45	0.43	1525210.00	BV	0.065	1	0.702	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.45
RT: CHART SPEED → 1.25 CM/MIN

2.00
2.34
2.53

RT: CHART SPEED → 0.75 CM/MIN

ND

RT: STOP RUN

SAMPLE ID: 9560 VOLUME(ML): 40 WEIGHT(GM): 2.04
[hp] 5880A SAMPLER INJECTION @ 21:02 OCT 29, 1990
SAMPLE # : ID CODE :
31
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1593.29				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.45	0.43	1510980.00	PV	0.064	1	0.695	HEXANE
1.00			RP: BL MODE → 1				

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.43

2.00

2.52

RT: CHART SPEED → 0.75 CM/MIN

hexane

RT: STOP RUN

SAMPLE ID: 111 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 21:23 OCT 29, 1990
SAMPLE # : ID CODE :
32
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1588.89				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.43	0.43	224257.00	PV	0.05	1	0.103	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

2.00

2.52

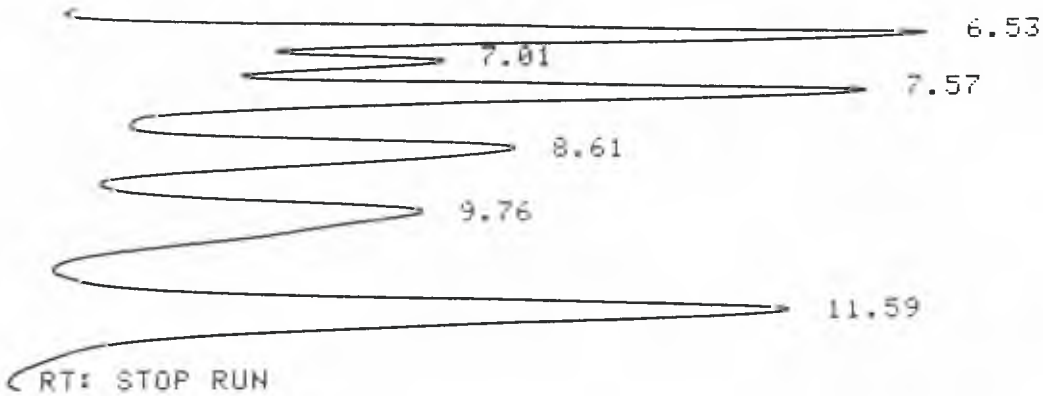
RT: CHART SPEED → 0.75 CM/MIN

3.51

4.01

110% OK

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK 14203/ 92-0631



SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 21:43 OCT 29, 1990
SAMPLE # : ID CODE :
33
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1583.93				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2186960.00	PV	0.093	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	944088.00	++	-----	2	0.553	1260

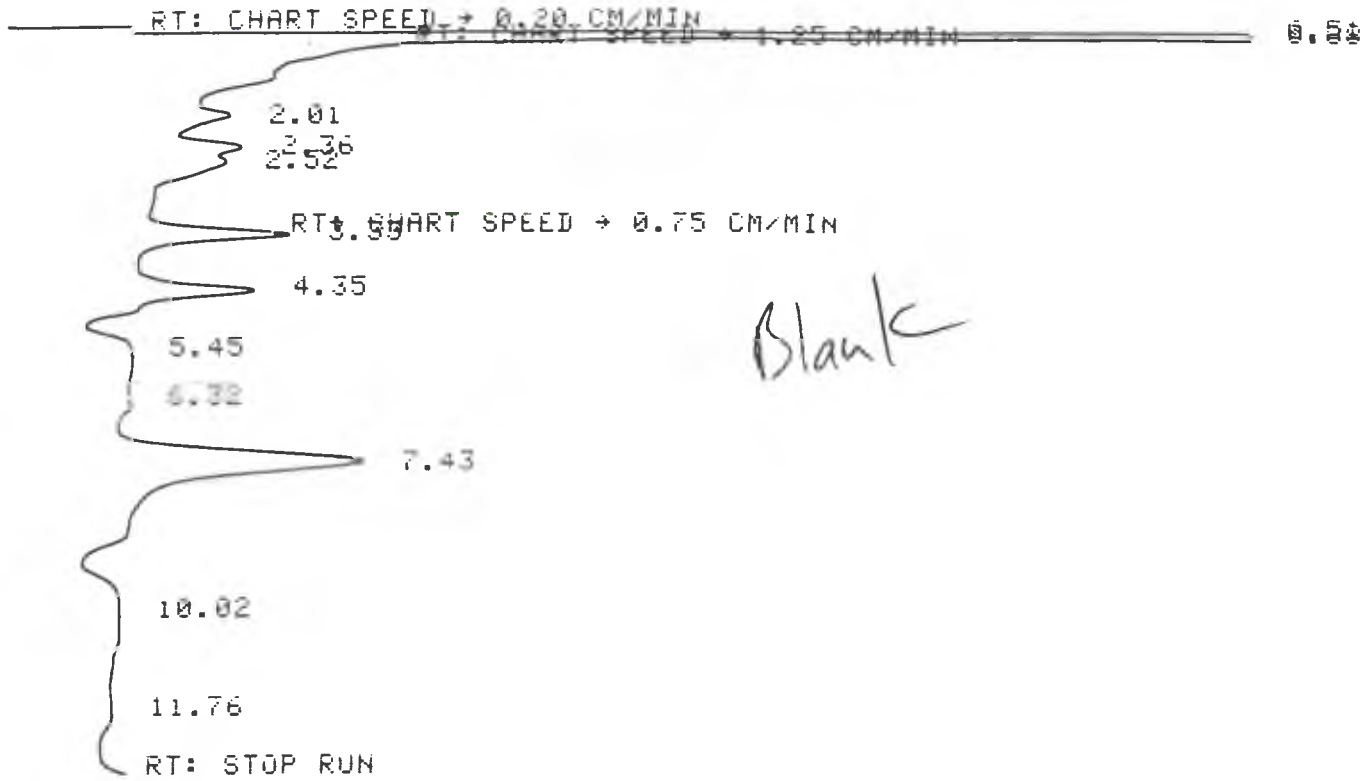
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .553438
[hp] 5880A SAMPLER INJECTION @ 21:43 OCT 29, 1990
SAMPLE # : ID CODE :
33
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1583.93			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2188490.00	PH	0.093	367495.00	1544.69	48.400
0.87	6720.18	HH	-----	1036.42	1544.69	0.149
1.03	10765.40	HH	-----	958.07	1544.69	0.238
2.00	1738.64	HH	-----	218.34	1544.69	0.038
2.10	2233.49	HH	-----	224.68	1544.69	0.049
2.52	8477.07	HH	-----	831.78	1544.69	0.187
3.51	50231.30	HH	0.183	4299.90	1544.69	1.111
4.01	79323.90	HH	0.234	5304.80	1544.69	1.754
4.82	90177.80	HH	*-----	4309.72	1544.69	1.994
5.34	83060.20	HH	-----	5926.59	1544.69	1.837
5.62	207414.00	HH	-----	10085.40	1544.69	4.587
6.53	283723.00	HH	-----	12774.40	1544.69	6.275
7.01	129023.00	HH	-----	6245.31	1544.69	2.853
7.57	331836.00	HH	-----	11969.30	1544.69	7.339
8.61	275488.00	HH	-----	7226.61	1544.69	6.093
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TOTAL AREA = 4521630.00
MULTIPLIER = 1

OVEN TEMP NOT READY



Blank

SAMPLE ID: 34 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 22:04 OCT 29, 1990
SAMPLE # : ID CODE :
34
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1899.72				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	5027350.00	PV	0.214	1	1.561	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	189840.00	++	-----	2	0.106	1260

MULTIPLIER = 1

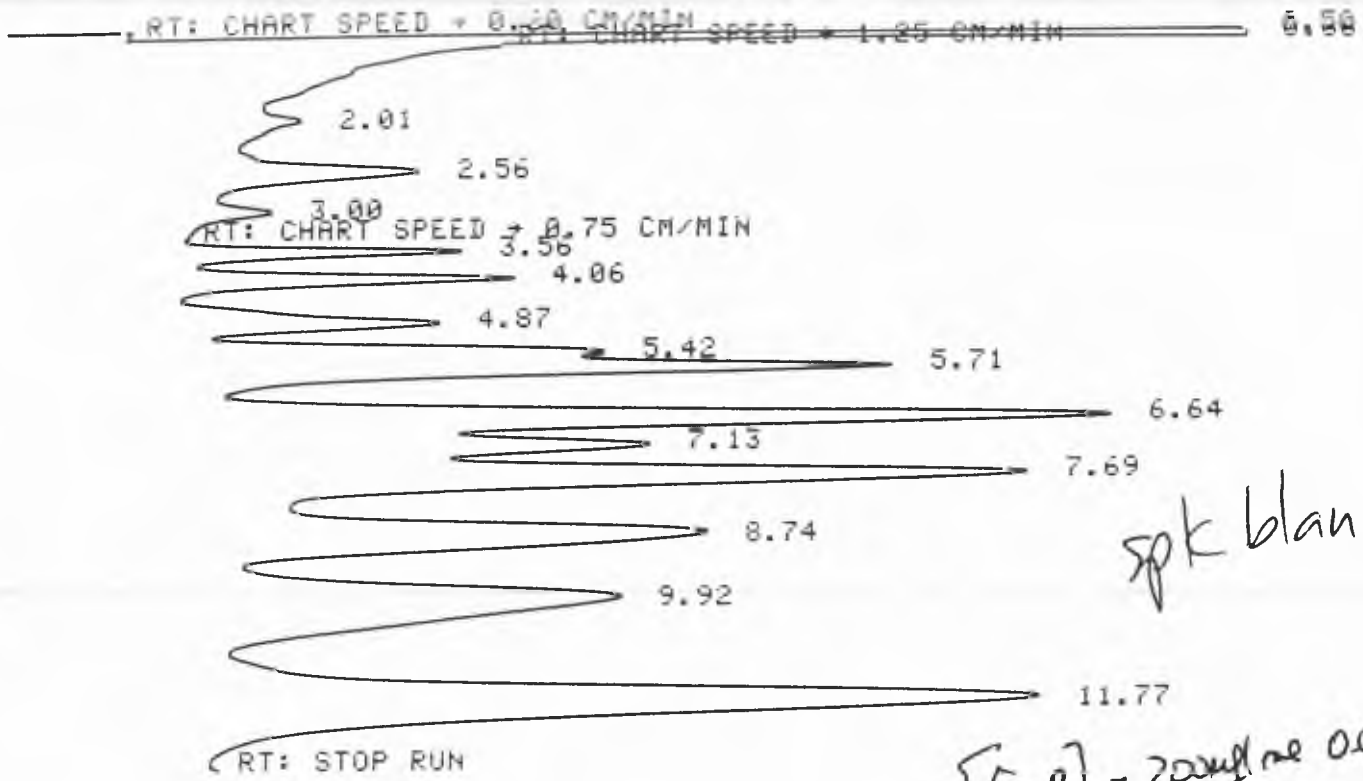
AMT OF AROCLOR 1260 (PPM) = .10612
[hp] 5880A SAMPLER INJECTION @ 22:04 OCT 29, 1990
SAMPLE # : ID CODE :
34
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1899.72			

0.51	5033490.00	VV	0.215	367217.00	[illegible]	[illegible]
0.88	292167.00	VV	-----*	18824.10	1793.77	5.151
2.01	24775.40	VV	-----	1552.29	1657.91	0.437
2.36	19459.70	VV	-----	1751.10	1615.20	0.343
2.52	36689.60	VV	-----	1580.73	1595.46	0.647
3.33	46365.10	VV	-----	2509.82	1497.94	0.817
4.35	61977.50	VP	-----	2178.76	1375.29	1.093
5.45	10456.90	PV	-----	375.13	1547.18	0.184
6.32	2154.87	BV	-----	83.65	1812.40	0.038
7.43	131617.00	VP	-----*	3415.75	1596.33	2.320
10.02	9648.54	PB	-----	159.44	1611.22	0.170
11.76	3260.64	BP	-----	83.68	1596.32	0.057

TOTAL AREA = 5672060.00
MULTIPLIER = 1

OVEN TEMP NOT READY



spk blank

[Exp] = 20ug/ml 0.01ml X 1/30g

~~0.26 ug/g~~
0.066 ug/g

~~30%~~

115%

SAMPLE ID: 35 VOLUME(ML): 4 /WEIGHT(GM): 30 /
[hp] 5880A SAMPLER INJECTION @ 22:24 OCT 29, 1990
SAMPLE # : ID CODE :
35
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2029.10				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.50	0.43	5282740.00	PV	0.225	1	1.641	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	976632.00	++	-----	2	0.576	1260

GC WAI 74703/ 9/70-09

05

AMT OF AROCLOR 1260 (PPM) = 7.67361E-02

0.066

[hp] 5880A SAMPLER INJECTION @ 22:24 OCT 29, 1990

SAMPLE # : ID CODE :

35

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2029.10			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.50	5291200.00	PH	0.226	367112.00	1946.44	63.572
0.88	363122.00	HH	-----*	21342.60	1946.44	4.363
2.01	49069.30	HH	-----	2313.77	1946.44	0.590
2.56	73664.50	HH	-----	3888.90	1946.44	0.885
3.00	34133.70	HH	-----	1913.51	1946.44	0.410
3.56	63126.40	HH	-----	4450.06	1946.44	0.758
4.06	87496.50	HH	-----	5180.49	1946.44	1.051
4.87	94838.40	HH	*-----	4169.09	1946.44	1.139
5.42	94458.50	HH	-----	6390.47	1946.44	1.135
5.71	217228.00	HH	-----	10247.80	1946.44	2.610
6.64	301810.00	HH	-----	13170.40	1946.44	3.626
7.13	150191.00	HH	-----	6955.97	1946.44	1.805
7.69	339389.00	HH	-----	12044.00	1946.44	4.078
8.74	292310.00	HH	-----	7727.52	1946.44	3.512
9.92	341624.00	HH	-----*	6561.00	1946.44	4.105
11.77	529439.00	A HH	-----	12139.50	1946.44	6.361

TOTAL AREA = 8323110.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 1.25 CM/MIN

RT: CHART SPEED → 0.75 CM/MIN

RT: STOP RUN

0.50
0.88
1.25
1.56
1.81
2.07
2.42
2.78
3.34
3.66
4.12
4.75
5.35
5.97
6.78
7.36
8.94
9.60
10.30
10.99
11.57

needs dilution

SAMPLE ID: 9540 VOLUME(ML): 4 WEIGHT(GM): 30

[hp] 5880A SAMPLER INJECTION @ 22:45 OCT 29, 1990

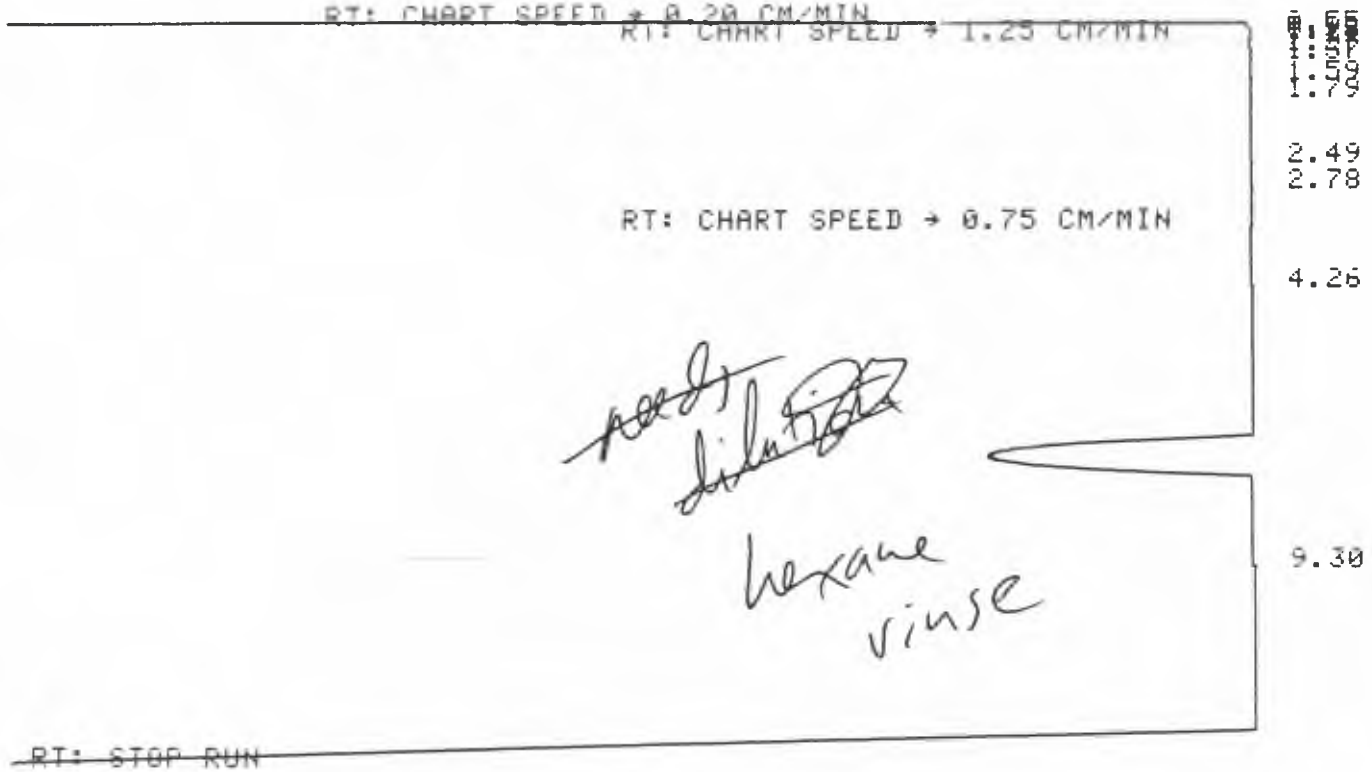
106

PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 3202.35				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.50	0.43	5203490.00	PV	0.22 *	1	1.616	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	12351300.00	++	-----	2	8.237	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY



AMT OF AROCLOR 1260 (PPM) = 1.09833
[hp] 5880A SAMPLER INJECTION @ 23:07 OCT 29, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 76239.50			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.55	1626170.00	BV	*-----	86778.40	76236.50	3.367
0.92	1754670.00	VV	*-----	92854.20	76234.50	3.633
1.15	1177090.00	VV	-----	97200.80	76233.20	2.437
1.27	748253.00	VV	-----	99937.20	76232.60	1.549
1.37	1072940.00	VV	-----	101836.00	76232.00	2.221
1.59	1047620.00	VV	-----	101107.00	76230.80	2.169
1.79	1791170.00	VV	-----	121076.00	76229.80	3.708

4.26	15237100.00	VV	*------*	165369.00	76216.20	31.946
9.30	12470500.00	A VP	*------*	67174.70	76188.70	25.818

TOTAL AREA = 48301100.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN

0.51
1:08
1:28
1:57
1:85
2.11
2.71
3.49
4.18
4.86
5.61
6.02
6.83
7.39
9.05
10.54

RT: CHART SPEED → 0.75 CM/MIN

need dilution

RT: STOP RUN

SAMPLE ID: 9541 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 23:29 OCT 29, 1990
SAMPLE # : ID CODE :
37
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2671.04				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	5071020.00	PP	0.221*	1	1.575	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	20671600.00	++	-----	2	13.787	1260

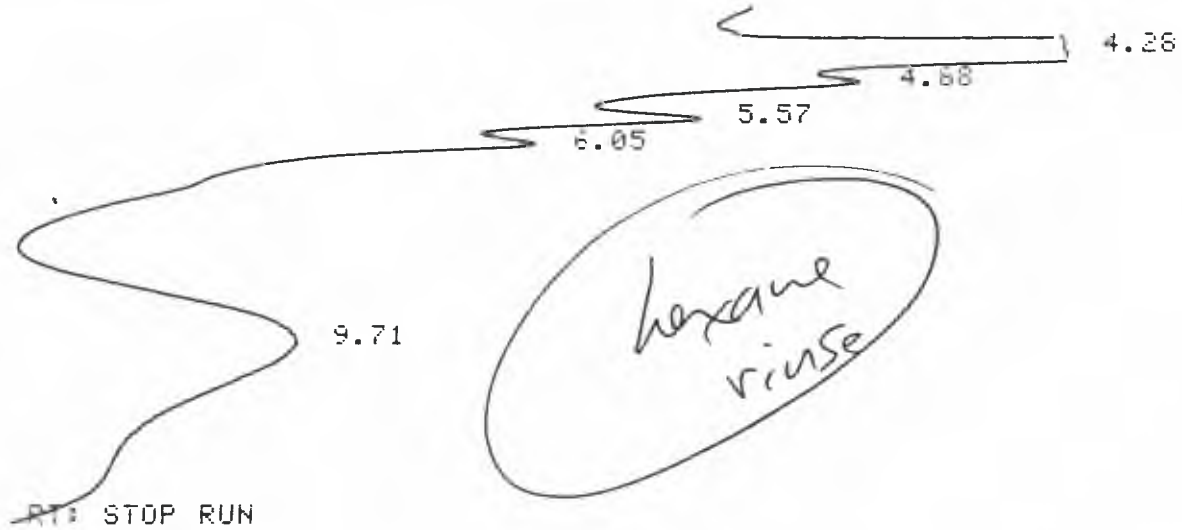
MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.0591M/MIN

0.54
1:28
1.59
1.73
2.12

GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK. GC-WAI 74703/ 92 0625

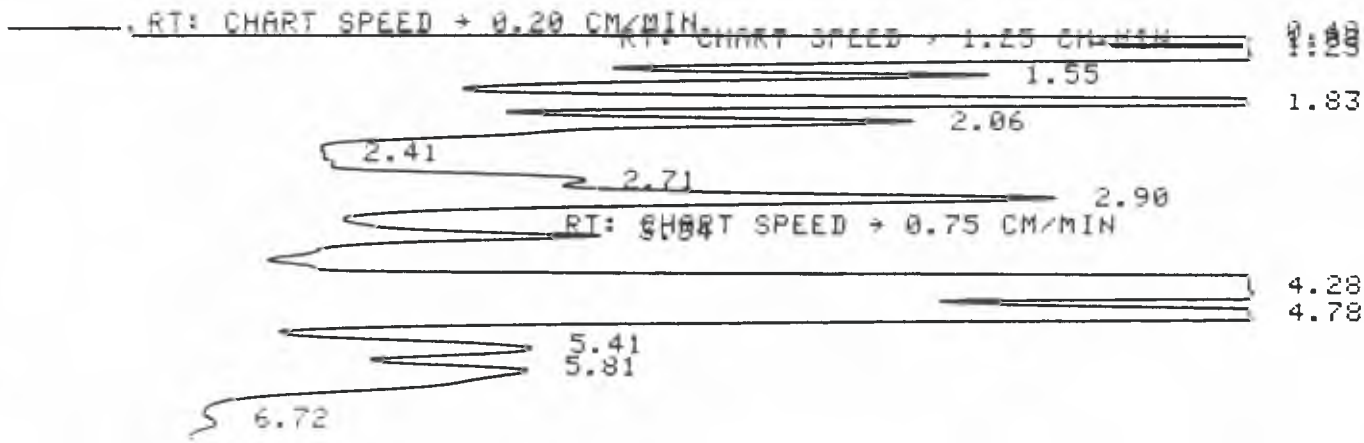


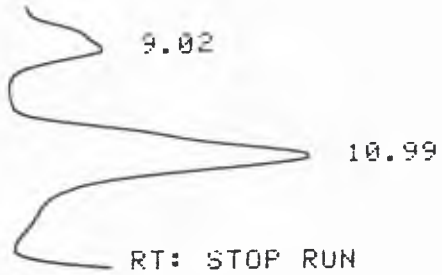
AMT OF AROCLOR 1260 (PPM) = 1.8382
[hp] 5880A SAMPLER INJECTION @ 23:52 OCT 29, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 11737.90			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.54	283812.00	BV	*-----	20950.30	11808.40	4.731
0.91	168166.00	VV	*-----	11178.60	11856.00	2.803
1.06	151997.00	VV	-----	16655.90	11876.70	2.534
1.28	601754.00	VV	-----	71363.00	11904.40	10.031
1.59	135814.00	VV	-----	15155.40	11945.00	2.264
1.73	239651.00	VV	-----*	14777.40	11963.80	3.995
2.12	618630.00	VV	-----*	35050.70	12013.90	10.312
2.74	436531.00	VV	-----	34796.50	12095.00	7.277
2.95	488727.00	VV	-----	24264.40	12122.40	8.147
4.28	1352900.00	VV	*-----	66427.90	12296.40	22.552
4.88	358989.00	VV	-----	11698.30	12374.70	5.984
5.57	265419.00	VV	-----	9470.53	12463.60	4.424
6.05	325152.00	VB	-----	7180.47	12526.40	5.420
9.71	571359.00	A BH	*-----*	3737.20	12761.00	9.524

TOTAL AREA = 5998900.00
MULTIPLIER = 1

OVEN TEMP NOT READY





no pcb pattern

SAMPLE ID: 9542 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 00:14 OCT 30, 1990
SAMPLE # : ID CODE :
38
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1982.06				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	5254490.00	PV	0.23 *	1	1.632	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	4327220.00	++	-----	2	2.849	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .379879
[hp] 5880A SAMPLER INJECTION @ 00:14 OCT 30, 1990
SAMPLE # : ID CODE :
38
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1982.06			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	5450670.00	PH	0.23 *	367047.00	1952.89	43.261
1.08	151430.00	HH	-----	17370.70	1952.89	1.202
1.25	984033.00	HH	0.105	146932.00	1952.89	7.810
1.55	107709.00	HH	-----	11479.90	1952.89	0.855
1.83	171840.00	HH	-----	20653.70	1952.89	1.364
2.06	134651.00	HH	-----*	10484.10	1952.89	1.069
2.41	13650.70	HH	-----	2591.02	1952.89	0.108
2.71	78618.70	HH	*-----	6090.58	1952.89	0.624
2.90	156644.00	HH	-----	12381.50	1952.89	1.243
3.34	132719.00	HH	-----	6274.66	1952.89	1.053
4.28	4003810.00	HH	*0.171	366980.00	1952.89	31.778
4.78	385486.00	HH	-----	18504.30	1952.89	3.060
5.41	115666.00	HH	-----	5364.28	1952.89	0.918
5.81	172300.00	HH	-----*	5306.13	1952.89	1.368
6.72	27365.00	HH	-----	1143.28	1952.89	0.217
7.35	145707.00	HH	0.373	6116.23	1952.89	1.156
9.02	93977.80	HH	*-----	1638.56	1952.89	0.746
10.99	273121.00	HH	*-----*	4413.21	1952.89	2.168

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 1.25 CM/MIN

0.50
1.00
1.27
1.58
1.86
2.10
2.95
RT: CHART SPEED → 0.75 CM/MIN
3.39
4.27
4.79
5.42
6.14
7.50

needs cleaning
dilution
reinject

11.78

RT: STOP RUN

SAMPLE ID: 9543 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 00:34 OCT 30, 1990
SAMPLE # : ID CODE :
39
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 16137.80				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.52	0.43	4603480.00	PV	0.204	1	1.430	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	6574290.00	++	-----	2	4.374	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .583182
[hp] 5880A SAMPLER INJECTION @ 00:34 OCT 30, 1990
SAMPLE # : ID CODE :
39
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 16137.80			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.02	6578.87	BP	-----	349.56	15831.70	0.048

1.06	109423.00	VV	-----	14681.20	15736.50	0.791
1.27	882082.00	VV	-----	129034.00	16445.50	6.380
1.58	44331.30	VV	-----	4955.28	17471.70	0.321
1.86	28538.30	VP	-----	4158.28	18396.90	0.206
2.10	67289.20	PV	-----	8535.13	19250.40	0.487
2.95	182427.00	BV	0.182	15693.60	20537.20	1.319
3.39	113559.00	VV	-----*	3835.60	19836.50	0.821
4.27	6435890.00	VV	0.288	350428.00	18455.30	46.548
4.79	505458.00	VV	-----	24988.30	17633.40	3.656
5.42	96969.60	VV	-----	5201.70	16628.30	0.701
6.14	206575.00	VV	*-----	5350.24	15492.20	1.494
7.50	297291.00	VB	-----	16619.60	13351.00	2.150
11.78	21522.20 A	VP	-----	497.11	8118.62	0.156

TOTAL AREA = 13826200.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
0.58
1.31
1.58
1.87
2.11
2.58
2.97
RT: CHART SPEED → 0.75 CM/MIN
3.42
4.33
4.80
5.61
6.18
7.53
10.80
11.81
RT: STOP RUN

no pcb pattern det 10x

SAMPLE ID: 9544 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 00:55 OCT 30, 1990
SAMPLE # : ID CODE :
40
PCB DETERMINATION (AROCLOR)
ESTD

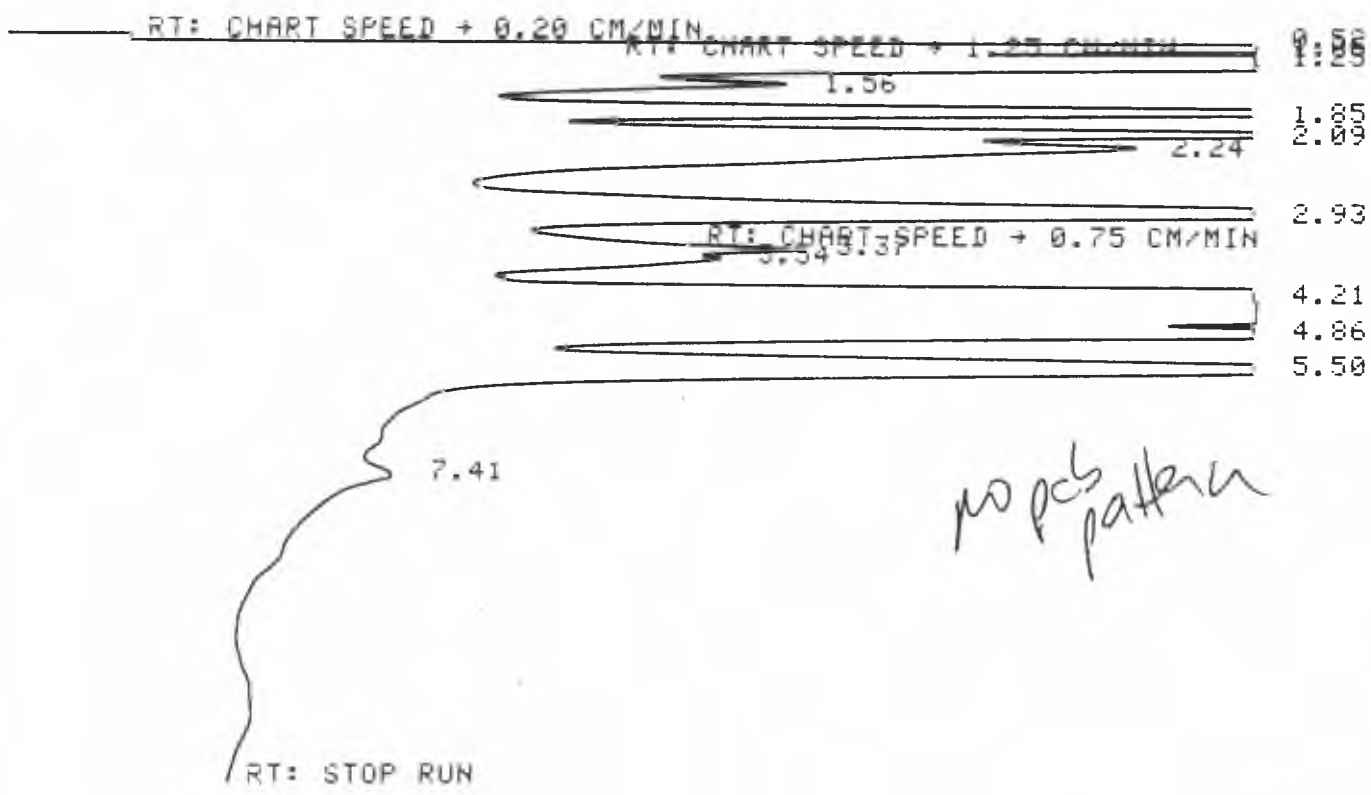
RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 3264.83					
0.00		THRESHOLD @ START RUN = 7					
0.00		PEAK WIDTH @ START RUN = 0.16					
0.52	0.43	5539910.00	PV	0.239	1	1.720	HEXANE
1.00		RP: BL MODE → 1					
3.60		RP: AREA SUM → ON					
11.00		RP: AREA SUM → OFF					

AMT OF AROCLOR 1260 (PPM) = .659788
[hp] 5880A SAMPLER INJECTION @ 00:55 OCT 30, 1990
SAMPLE # : ID CODE :
40
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 3264.83			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.52	5672370.00	PH	0.243	365942.00	3053.39	27.369
0.90	193554.00	HH	-----	28804.30	3053.39	0.934
1.06	146533.00	HH	-----	18251.50	3053.39	0.707
1.31	2961660.00	HH	0.127	365026.00	3053.39	14.290
1.58	143801.00	HH	-----	14685.70	3053.39	0.694
1.87	349973.00	HH	-----	41057.30	3053.39	1.689
2.11	277862.00	HH	-----*	16852.00	3053.39	1.341
2.58	34806.40	HH	-----	5317.60	3053.39	0.168
2.97	425625.00	HH	*-----	26312.40	3053.39	2.054
3.42	494819.00	HH	-----	30973.90	3053.39	2.387
4.33	5889890.00	HH	*0.252	365802.00	3053.39	28.418
4.80	1122710.00	HH	-----	56601.90	3053.39	5.417
5.61	1133250.00	HH	-----	49860.10	3053.39	5.468
6.18	521577.00	HH	-----	18204.20	3053.39	2.517
7.53	1240350.00	HH	0.40	48340.60	3053.39	5.985
10.80	34468.60	HH	-----	615.45	3053.39	0.166
11.81	82414.40	A HH	-----	1823.35	3053.39	0.398

TOTAL AREA = 20725700.00
MULTIPLIER = 1

OVEN TEMP NOT READY



no pcb pattern

[hp] 5880A SAMPLER INJECTION @ 01:18 OCT 30, 1990

SAMPLE # : ID CODE :

41

PCB DETERMINATION (AROCLOR)

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2300.51				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.52	0.43	5023060.00	PV	0.216	1	1.560	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	8224650.00	++	-----	2	5.485	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 0.25 CM/MIN

1.28

1.59

1.88

2.12

2.98

RT: CHART SPEED → 0.75 CM/MIN

4.32

4.92

5.58

hexane rinse

RT: STOP RUN

AMT OF AROCLOR 1260 (PPM) = .731369

[hp] 5880A SAMPLER INJECTION @ 01:38 OCT 30, 1990

SAMPLE # : ID CODE :

99

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1976.59			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.55	92598.80	BV	0.125*	11605.00	1977.23	17.038
0.91	8970.98	VV	-----	1379.17	1969.88	1.651
1.07	5897.66	VV	-----	797.04	1966.63	1.085
1.28	67402.50	VV	0.104	10110.70	1962.36	12.402

2.12	[illegible]	[illegible]				
2.98	8379.13	VV	-----	598.77	1927.81	1.542
4.32	326755.00	VV	0.209	24490.10	1900.43	60.121
4.92	5283.05	VV	-----	291.06	1888.26	0.972
5.58	5917.67	VB	-----	201.02	1874.84	1.089

TOTAL AREA = 543499.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.50
1.56
1.77
2.10
2.57
2.88
RT: CHART SPEED → 0.75 CM/MIN
3.62
4.04
4.31
4.71
needs dilution
6.13
7.35
8.47
9.47
10.95
11.75
RT: STOP RUN 12.82

SAMPLE ID: 9546 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 02:00 OCT 30, 1990
SAMPLE # : ID CODE :
42
PCB DETERMINATION (AROCLOR)
ESTD

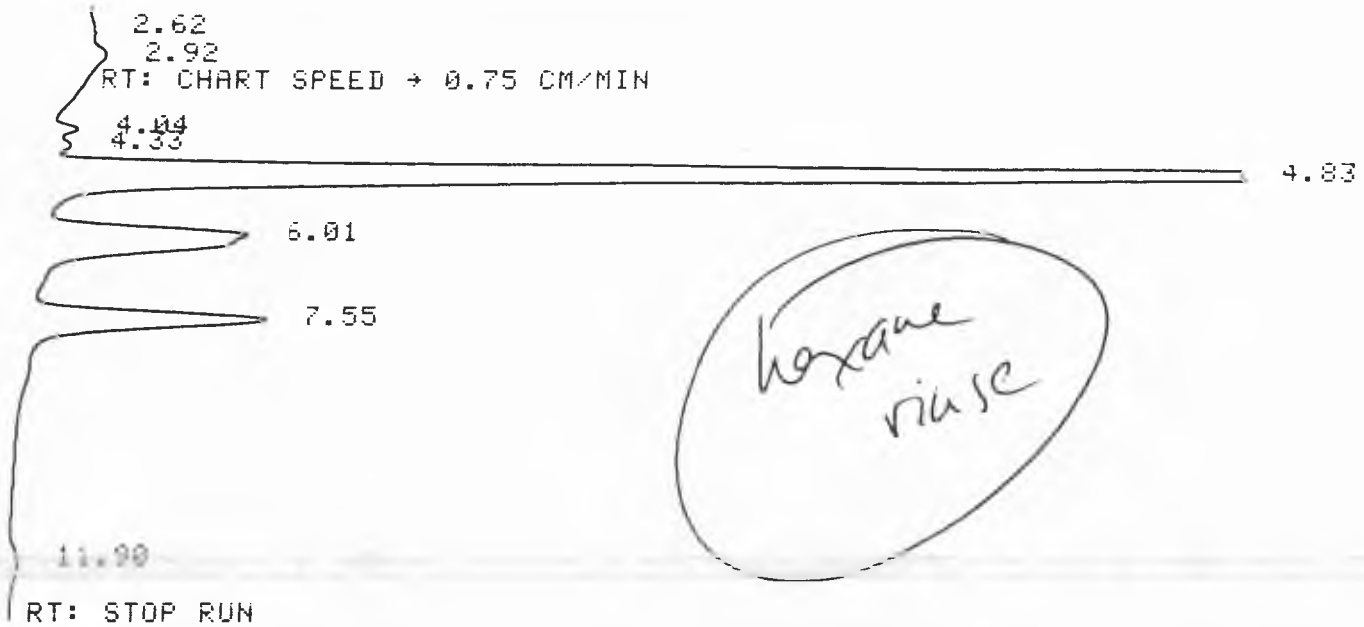
RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
			BASELINE @ START RUN = 1724.18				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.00							
0.50	0.43	5306290.00	BV	0.227	1	1.648	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	37299700.00	++	-----	2	24.876	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.55
RT: CHART SPEED → 1.25 CM/MIN

ARMC CONTROLS CORPORATION BUFFALO NEW YORK GC CHW AI 74703/ 9270 0

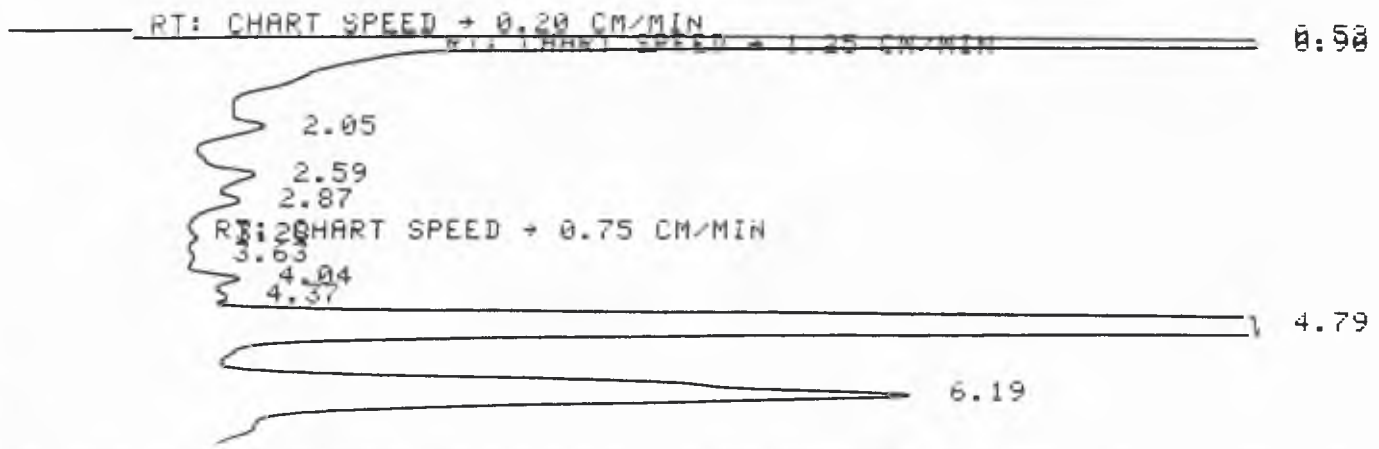


AMT OF AROCLOR 1260 (PPM) = 3.31684
[hp] 5880A SAMPLER INJECTION @ 02:22 OCT 30, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 3626.99			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.55	104297.00	BV	*-----	14118.60	3369.59	14.740
0.91	15800.50	VV	-----	1193.87	3290.43	2.233
2.10	1516.80	VV	-----	132.23	3031.35	0.214
2.62	4172.87	VV	-----	227.38	2919.59	0.590
2.92	14737.70	VP	-----	460.56	2853.59	2.083
4.04	3310.97	PV	-----	309.04	2634.81	0.468
4.33	3474.70	VV	-----	245.55	2611.55	0.491
4.83	406597.00	VV	0.280	22696.20	2570.22	57.464
6.01	85492.40	VP	-----*	2734.65	2474.93	12.083
7.55	63937.10	PB	0.322	3113.12	2352.08	9.036
11.90	4230.73	BB	0.587	112.90	2063.15	0.598

TOTAL AREA = 707568.00
MULTIPLIER = 1

OVEN TEMP NOT READY



no pcb pattern

11.74

~~RT: STOP RUN~~

SAMPLE ID: 9547 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 02:44 OCT 30, 1990
SAMPLE # : ID CODE :
43
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1731.38				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.52	0.43	4953450.00	BV	/SYM	1	1.538	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	1669600.00	++	-----	2	1.046	1260

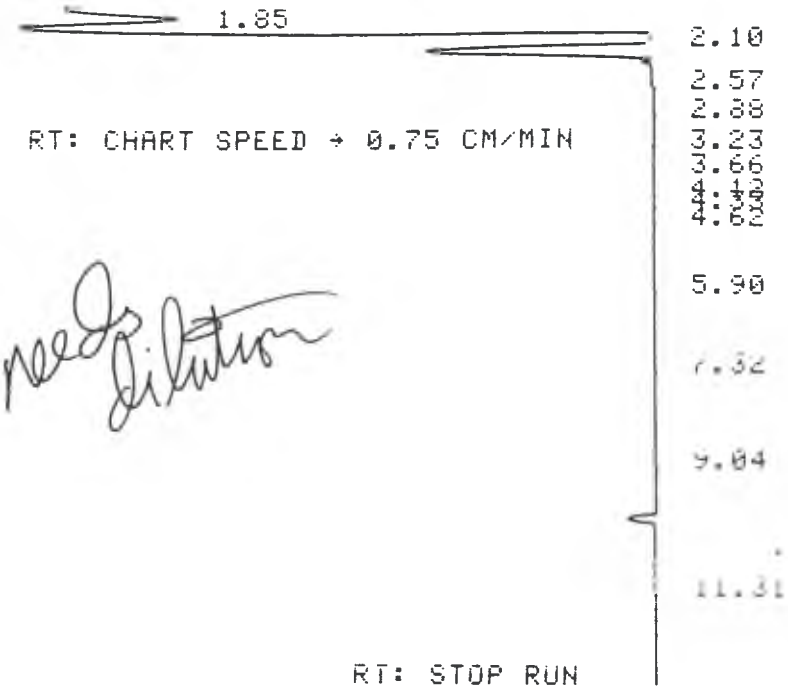
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .139432
[hp] 5880A SAMPLER INJECTION @ 02:44 OCT 30, 1990
SAMPLE # : ID CODE :
43
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1731.38			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.52	4960560.00	BH	/SYM	367318.00	1684.15	52.751
0.90	294482.00	HH	-----*	19820.50	1684.15	3.132
2.05	40099.10	HH	-----	1756.22	1684.15	0.426
2.59	33851.90	HH	-----	1646.85	1684.15	0.360
2.87	25181.80	HH	-----	1459.09	1684.15	0.268
3.28	15971.90	HH	-----	875.62	1684.15	0.170
3.63	17023.70	HH	-----	851.71	1684.15	0.181
4.04	25542.20	HH	-----	1449.33	1684.15	0.272
4.37	21457.20	HH	-----	1295.26	1684.15	0.228
4.79	801929.00	HH	0.281*	44653.60	1684.15	8.528
6.19	372764.00	HH	*-----*	10417.90	1684.15	3.964
7.51	747022.00	HH	0.354	33079.40	1684.15	7.944
11.74	2047860.00	A HH	*-----	44667.40	1684.15	21.777

TOTAL AREA = 9403750.00
MULTIPLIER = 1

OVEN TEMP NOT READY

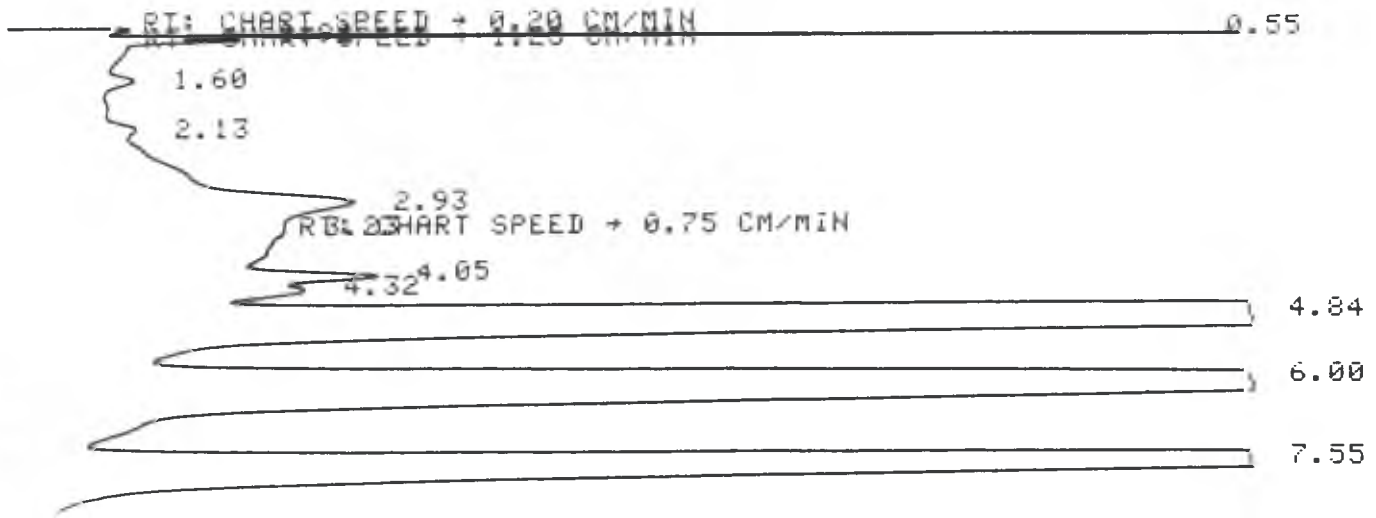


SAMPLE ID: 9551 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 03:05 OCT 30, 1990
SAMPLE # : ID CODE :
44
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2290.95				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	4848220.00	PV	/SYM	1	1.506	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	46191900.00	++	-----	2	30.807	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY



(hexane rinse)

11.88

~~RT: STOP RUN~~

AMT OF AROCLOR 1260 (PPM) = 4.10756
[hp] 5880A SAMPLER INJECTION @ 03:27 OCT 30, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 5324.15			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.55	112032.00	BV	*-----	14468.40	4962.65	2.510
0.92	19519.20	VV	-----*	1838.16	4907.57	0.437
1.60	4703.08	VV	-----	526.16	4805.17	0.105
2.13	6614.15	VV	-----	621.17	4726.88	0.148
2.93	109071.00	VV	*-----	3651.32	4606.39	2.444
3.23	103899.00	VV	-----*	2757.49	4562.44	2.328
4.05	71807.50	VV	-----	4109.05	4439.39	1.609
4.32	52666.50	VV	-----	3187.96	4399.72	1.180
4.84	1252490.00	VV	0.320	61354.80	4321.27	28.060
6.00	704508.00	VV	-----*	22389.40	4148.60	15.784
7.55	598319.00	VB	0.37	25449.20	3917.57	13.405
11.88	1427930.00	A PH	*-----	31079.80	3526.16	31.991

TOTAL AREA = 4463560.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

~~RT: CHART SPEED → 1.25 CM/MIN~~

0.57
1.08
1.32
1.59
1.87
2.11
2.47
2.78

RT: CHART SPEED → 0.75 CM/MIN

3.42
4.22

(needs dilution)

5.53
6.06
6.91
7.53
8.47
9.13
10.56
11.75

RT: 25.00 STOP RUN

[hp] 5880A SAMPLER INJECTION @ 03:49 OCT 30, 1990
SAMPLE # : ID CODE :
45
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 2337.27					
0.00		THRESHOLD @ START RUN = 7					
0.00		PEAK WIDTH @ START RUN = 0.16					
0.53	0.43	4948280.00	BV	0.213*	1	1.537	HEXANE
1.00		RP: BL MODE → 1					
3.60		RP: AREA SUM → ON					
11.00		RP: AREA SUM → OFF					
11.00	11.00	32009800.00	++	-----	2	21.348	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
0.56
1.29
1.61
1.87
2.13
RT: CHART SPEED → 0.75 CM/MIN
4.30
4.91
10.27
RT: STOP RUN

IMPROPER PEAK# PARAMETER
ABORT PROGRAM AT LINE 640

```
LIST PRGM 640
640  IF AMT(C)<=D THEN 660

LIST PRGM 660
660  PRINT

LIST PRGM 670, 800
670  PRINT "  AMT OF AROCLOR 1260 (PPM) =  ";A(I)
671  DELETE REPORT TBL
672  AREA%
673  LIST REPORT
```


GRAPHIC CONTROLS CORPORATION BUFFALO, NEW YORK GC-C WAI 74703/ 927 0625

```
V START PRGM
  ↑ ERROR: "ENTER" KEY EXPECTED

STOP AUTO SEQ

STOP PRGM

START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?91, 94
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 91
? 111, 1, 1
ID # 92
? 222, 1, 1
ID # 93
? 93, 20, 1
ID # 94
? 94, 20, 1
ANY MISTAKES OR REPEATS (Y OR N)?N
RT: CHART SPEED → 0.20 CM/MIN                                  0.44
RT: CHART SPEED → 1.25 CM/MIN
  1.27
  1.58
                1.86
  2.07

  2.76
  2.91
RT: CHART SPEED → 0.75 CM/MIN
  3.38
                4.26
  4.76

  5.90

  7.42

  11.64
RT: STOP RUN
```

hexane

SAMPLE ID: 111 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 08:58 OCT 30, 1990

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1686.54				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.44	0.43	217408.00	BV	0.051	1	0.100	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	56407.20	++	-----	2	3.013E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 3.01334E-02

[illegible] 5880A SAMPLER INJECTION @ 06:06 OCT 30, 1990

SAMPLE # : ID CODE :
91

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1686.54			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.44	217894.00	BV	0.051	66531.60	1658.05	59.436
0.64	13180.70	VV	-----*	1051.91	1658.44	3.595
1.27	4961.73	VV	-----	580.70	1659.62	1.353
1.58	2365.96	VV	-----	204.70	1660.21	0.645
1.86	17501.60	VV	-----	2270.21	1660.73	4.774
2.07	3349.64	VV	-----	335.79	1661.14	0.914
2.76	3761.42	VV	-----	304.17	1662.43	1.026
2.91	2827.67	VV	-----	255.43	1662.72	0.771
3.38	3640.85	VV	-----	186.88	1663.60	0.993
4.26	52722.50	VV	0.219	3762.64	1665.26	14.382
4.76	12536.30	VV	-----	524.11	1666.21	3.420
5.90	10585.10	VV	-----	311.88	1668.35	2.887
7.42	7224.07	VB	0.52	217.26	1671.21	1.971
11.64	14048.10	A BH	-----	299.24	1674.28	3.832

TOTAL AREA = 366599.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.48
RT: CHART SPEED → 1.25 CM/MIN
1.85
2.02
2.55
2.83
RT: CHART SPEED → 0.75 CM/MIN
3.56
4.06
4.88
5.41
5.69
6.61
7.10
7.66

98% OK

GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK

9.89

11.73

RT: STOP RUN

SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 09:19 OCT 30, 1990
SAMPLE # : ID CODE :
92
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1697.10				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2226340.00	PV	0.095*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	851780.00	++	-----	2	0.492	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .492095
[hp] 5880A SAMPLER INJECTION @ 09:19 OCT 30, 1990
SAMPLE # : ID CODE :
92
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1697.10			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2227870.00	PH	0.095*	367305.00	1656.29	49.626
0.88	6434.49	HH	-----	984.48	1656.29	0.143
1.05	10601.80	HH	-----	888.50	1656.29	0.236
1.85	5403.12	HH	-----	515.34	1656.29	0.120
2.02	6136.05	HH	-----*	394.70	1656.29	0.137
2.55	11291.30	HH	-----	936.10	1656.29	0.252
2.83	7431.82	HH	-----	331.10	1656.29	0.166
3.56	54821.50	HH	0.211	4071.12	1656.29	1.221
4.06	83240.30	HH	0.261	4990.18	1656.29	1.854
4.88	91583.20	HH	*-----	4063.21	1656.29	2.040
5.41	77946.60	HH	-----	5517.06	1656.29	1.736
5.69	202972.00	HH	-----	9290.59	1656.29	4.521
6.61	270498.00	HH	-----	11644.60	1656.29	6.025
7.10	122526.00	HH	-----	5771.46	1656.29	2.729
7.66	317321.00	HH	-----	10861.40	1656.29	7.068
8.72	261567.00	HH	-----	6611.49	1656.29	5.826
9.89	299420.00	HH	-----*	5440.72	1656.29	6.670
11.73	432273.00 A	HH	-----	9917.49	1656.29	9.629

TOTAL AREA = 4489340.00
MULTIPLIER = 1

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 1.25 CM/MIN

0.47

1.83

2.54

RT: CHART SPEED → 0.75 CM/MIN

Blank wipe

11.63

RT: STOP RUN

SAMPLE ID: 93 VOLUME(ML): 20 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 09:39 OCT 30, 1990
SAMPLE # : ID CODE :
93
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1742.77				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1657390.00	BB	0.071*	1	0.763	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.63	11.00	3093.31	A BB	-----	2	1.652E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 3.30497E-02
【hp】 5880A SAMPLER INJECTION @ 09:39 OCT 30, 1990
SAMPLE # : ID CODE :
93
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1742.77			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1668140.00	BV	0.071*	367217.00	1736.52	99.063
1.11	8446.72	VV	-----*	394.34	1726.48	0.502
1.83	1663.65	VV	-----	201.60	1715.19	0.099

Pesticides and PCBs

EPA Method 8080

HWA
HONG WEST
& ASSOCIATES, INC.

Geotechnical Engineering
Hydrogeology
Geoenvironmental Services
Testing & Inspection

August 28, 1992

Gerritt Rosenthal
Emcon Northwest, Inc.
15055 SW Sequoia Parkway
Portland, Oregon 97224

Subject: Data Validation for Yakima Agricultural Research Laboratory
Soil Samples in support of RCRA Clean Closure

Dear Gerrit:

Attached find data packages for YARL, as follows:

October, 1990 data (first septic tank/washdown pad overexcavation):

LAB: Biospherics, Inc. Beltsville, MD Contact: Dan Carey (301) 369-3900

Soils data for the septic tank pit (TP 100 series) were used for verification of closure to action levels for the septic tank excavation; therefore, data validation of these results are required. Focus is on pesticides, as these have the detections. Validation for metals, volatile organics, etc. should be simple, as there were no (or very few) detections.

June, 1991 data (second washdown pad overexcavation)

LAB: Biospherics, Inc. Beltsville, MD Contact: Dan Carey (301) 369-3900

Soils data for the washdown pad (A, B,C and D) were used for verification of closure to action levels for the washdown pad; therefore, data validation of these results are required. Pesticide-specific analyses only.

July, 1992 data (removal of sink drainpipe)

LAB: North Creek Analytical, Bothell, WA. Contact: Dennis Wells (206) 481-9200

An old sink drainpipe, formerly connected to the septic tank/washdown pad disposal system was removed and soils beneath the pipe were sampled (DP-1, DP-2 and DP-3). EPA requests data validation of sampling results (8080, 8140, 8150 and 8240).

This data package is more well organized and geared more towards a CLP style data validation effort, because the lab anticipated such an effort would be required. The October, 1990 and June 1991 data packages do not have the analytical results; please

19730-64th Ave. W.
Lynnwood, WA 98036-5904
Tel. 206-774-0106
Fax. 206-775-7506

refer to Volume II of the November, 1991 Closure Report for these results. In addition, no case narrative is provided; again, refer to the results in Volume II for a review of each case provided by Biospherics. The goal of data validation is to use the CLP program as a guide. EPA Region X has been provided with the other half of the laboratory data (June, 1990) and conducted their own CLP type of data validation. If there are any questions concerning EPA's validation effort and what they expect from our efforts, please contact Bruce Woods at EPA. You may reach him by first contacting Ms. Lynda Priddy at (206) 553-2372.

As much of this work relates most closely to our work under Task 16, Closure Certification, please bill this work to HWA task 16. If you have any questions, please contact me. I will be on vacation from September 4th through September 18, 1992.

Sincerely,

HONG WEST & ASSOCIATES, INC.

Douglas Geller
Senior hydrogeologist

Pag 1 of 2

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HONG WEST & ASS.

ADDRESS:

PHONE: 774-0106 FAX:

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

PROJECT NAME: YARL

PROJECT NUMBER: 90042

SAMPLED BY: D. KOVANEN

SAME DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
4 DAY RUSH	(+40%)
5 DAY STANDARD	(LIST PRICE) X

ANALYSIS REQUESTED

	SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Pest. 8080	8240	Cl. Herb. 8150	8140	TCLP Extraction	TCLP Volatile Extraction			COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1	DP-1	7-27-92/1330	S	3	X	X	X	X	X	X		DK	8140 contained	2071501
2	DP-2	1340	S	3	X	X	X	X	X	X		DK	in 4 oz.	1502
3	DP-3	1420	S	3	X	X	X	X	X	X		D	bottles.	1503
4	DP-3 A	1410	S	2					X	X		DK		~~1504~~
5	DP-4	1400	W	3	X	X	X	X	X	X		DK.		1505
6	DP-5	1430	W	3	X	X	X	X	X	X		DK.		1506
7	DF-6 /MS/MSD	1540	S	3	X	X	X	X	X	X		DK		1507
8	DF-7	1535	S	3	X	X	X	X	X	X		DK		1508
9	DF-8	1535	S	3	X	X	X	X	X	X		DK	TOTAL # OF CONTAINERS	1509
10	DF-9	1530	S	3	X	X	X	X	X	X		DK	RECEIVED?	1510

RELINQUISHED BY: D. Kovanen DATE: 7-29-92 TIME: 1510 RECEIVED BY: P. D. Neely DATE: 07-28-92 TIME: 3:10

FIRM: HWA FIRM: NCA

RELINQUISHED BY: DATE: TIME: RECEIVED BY: DATE: TIME:

FIRM: FIRM:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION?: GOOD VIOLATED COOL (4° C): YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES; DESCRIBE ON BACK

PAGE 1 OF 2

NORTH CREEK ANALYTICAL

18939 120th Avenue N.E., Suite 101 • Bothell, WA 98011-2569
Phone (206) 481-9200 • FAX (206) 485-2992

CHAIN OF CUSTODY REPORT

CLIENT: HWA

ADDRESS:

PHONE: 774-0106 FAX:

REPORT TO: D. Geller

BILLING TO:

P.O. NUMBER: 90042

NCA QUOTE #:

PROJECT NAME:

PROJECT NUMBER: 90042

SAMPLED BY: D.K.

ONE DAY (2-8 HR.) RUSH	(+150%)
NEXT DAY RUSH	(+100%)
2 DAY RUSH	(+80%)
3 DAY RUSH	(+60%)
5 DAY RUSH	(+40%)
10 DAY STANDARD	(LIST PRICE) X

SAMPLE IDENTIFICATION: NUMBER OR DESCRIPTION		MATRIX (W,S,O)	# OF CONT.	Ref. 8260	8240	8150	8140						COMMENTS & PRESERVATIVES USED	LABORATORY NUMBER
1 DF-10	[redacted]	S	5	X	X	X	X							2071511
2 DF-11	1510			X	X	X	X							1512
3 DF-12	1510			X	X	X	X							1513
4 DF-13	1510			X	X	X	X							1514
5														
6														
7														
8														
9													TOTAL # OF CONTAINERS	
10													RECEIVED?	

RELINQUISHED BY: D. Kramer DATE: 7-28-92 TIME: 1510
FIRM: HWA

RECEIVED BY: B. Nely DATE: 07-28-92 TIME: 1510
FIRM: NCA

RELINQUISHED BY: DATE: TIME:
FIRM:

RECEIVED BY: DATE: TIME:
FIRM:

SAMPLE RECEIPT INFORMATION: CONTAINER CONDITION: GOOD VIOLATED COOL (4° C)? YES NO

CUSTODY SEALS? GOOD VIOLATED NOT USED HAZARDOUS SAMPLES?: NO YES: DESCRIBE ON BACK

TOTAL AREA = 1683920.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47
RT: CHART SPEED → 1.25 CM/MIN
1.43
1.84
2.14
2.55

RT: CHART SPEED → 0.75 CM/MIN
3.56
4.06
4.88
5.42
5.78
6.62
7.12
7.68
8.73
9.92
11.78
RT: STOP RUN

Spike wipe

$(0.02mL)\left(\frac{200\mu g}{mL}\right) = 4\mu g/wipe$

$\frac{3.85}{4.0} = 96\%$

SAMPLE ID: 94 VOLUME(ML): 20 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 10:00 OCT 30, 1990
SAMPLE # : ID CODE :
94
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1642.35				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1730780.00	BB	0.08 *	1	0.820	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	338304.00	++	-----	2	0.193	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 3.85377
【hp】 5880A SAMPLER INJECTION @ 10:00 OCT 30, 1990
SAMPLE # : ID CODE :
94
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1642.35			

0.47	1784030.00	BH	0.08 *	367362.00	1605.01	67.261
1.11	2138.56	HH	-----	162.90	1605.01	0.081
1.43	1547.07	HH	-----	113.78	1605.01	0.058
1.84	2017.48	HH	-----	150.87	1605.01	0.076
2.14	3020.83	HH	-----	154.10	1605.01	0.114
2.55	3170.19	HH	-----	270.20	1605.01	0.120
3.56	17797.60	HH	0.189	1472.31	1605.01	0.671
4.06	27818.40	HH	0.246	1772.66	1605.01	1.049
4.88	28171.90	HH	*-----	1366.56	1605.01	1.062
5.42	31689.00	HH	-----	2241.81	1605.01	1.195
5.70	79018.60	HH	-----	3677.90	1605.01	2.979
6.62	107114.00	HH	-----	4593.90	1605.01	4.038
7.12	47845.50	HH	-----	2246.92	1605.01	1.804
7.68	117284.00	HH	-----	4056.64	1605.01	4.422
8.73	105002.00	HH	-----	2662.14	1605.01	3.959
9.92	121257.00	HH	-----*	2262.32	1605.01	4.572
11.78	173494.00 A	HH	-----	3967.91	1605.01	6.541

TOTAL AREA = 2652410.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
91	111	3.01334E-02	N	.05
92	222	.492095	N	.05
93	93	3.30497E-02	N	1
94	94	3.85377	N	1

DO YOU WANT TO STOP THE PRGM? (Y OR N)N
WHAT IS THE FIRST AND LAST SAMPLE?95, 99
ID # 95
? 95, 10, .1
ID # 96
? 96, 10, .1
ID # 97
? 29031, 20, 1
ID # 98
? 29032, 20, 1
ID # 99
? 29033, 20, 1
ANY MISTAKES OR REPEATS (Y OR N)?N

RT: CHART SPEED → 0.20 CM/MIN 0.48
~~RT: CHART SPEED → 1.25 CM/MIN~~
1.37
1.81
2.31

RT: CHART SPEED → 0.75 CM/MIN

4.29

Blank oil

7.49

9.06

10.37

11.51

RT: STOP RUN

SAMPLE ID: 95 VOLUME(ML): 10 WEIGHT(GM): .1
[hp] 5880A SAMPLER INJECTION @ 10:58 OCT 30, 1990
SAMPLE # : ID CODE :
95
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1616.48				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2253200.00	BV	0.096	1	1.000	HEXANE

```
 11.00                          RP: AREA SUM → OFF
 11.00    11.00         15147.20    ++    -----     2 8.092E-03  1260

MULTIPLIER = 1


  AMT OF AROCLOR 1260 (PPM) =    .809184
【hp】 5880A  SAMPLER INJECTION @ 10:58  OCT 30, 1990
  SAMPLE # :  ID CODE    :
         95
AREA %

   RT              AREA  TYPE   WIDTH        HEIGHT      BASELINE     AREA %

  0.00                        BASELINE @ START RUN = 1616.48
  0.00                        THRESHOLD @ START RUN =  7
  0.00                        PEAK WIDTH @ START RUN = 0.16
  0.48      2258930.00   BV    0.096      367467.00      1590.97     93.123
  0.86        45251.40   VV    -----*       3667.58      1599.40      1.865
  1.37        19365.50   VV    -----        1134.69      1610.62      0.798
  1.81         7414.00   VV    -----         632.29      1620.35      0.306
  2.31         8861.88   VV    -----         607.07      1631.49      0.365
  4.29         6702.92   VV    -----         303.71      1675.28      0.276
  7.49         4073.17   BP    0.609         104.75      1731.69      0.168
  9.06          612.03   BV    -----          33.57      1802.21      0.025
 10.37        20625.90   VV    -----         417.38      1786.54      0.850
 11.51        53914.30 A VP    -----         910.66      1772.94      2.223

TOTAL AREA = 2425750.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN                                          0.48
RT: CHART SPEED → 1.25 CM/MIN
  1.38
 1.81
 2.02
  2.33
  2.60
 2.89
RT: CHART SPEED → 0.75 CM/MIN
   3.63
    4.15
  4.99
     5.55  5.82
        6.78
    7.28
       7.86
        8.96
        10.21
        12.05
RT: STOP RUN
```

Spike oil

$$\frac{0.01\,mL\left(\frac{200\,\mu g}{mL}\right)}{0.1\,g} = 20\,\mu g/g$$

130

```
SAMPLE ID: 96  VOLUME(ML): 10 WEIGHT(GM): .1
【hp】 5880A  SAMPLER INJECTION @ 11:18  OCT 30, 1990
  SAMPLE # :  ID CODE    :
```

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1278.14				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2275320.00	BV	0.097	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	305863.00	++	-----	2	0.174	1260

MULTIPLIER =.1

$\frac{17}{20} = 85\%$

AMT OF AROCLOR 1260 (PPM) = 17.3772

[AP] 5880H SAMPLER INJECTION @ 11:18 OCT 30, 1990

SAMPLE # : ID CODE :

96

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1278.14			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2282190.00	BH	0.097	367798.00	1241.68	62.106
0.87	40423.50	HH	-----*	2760.39	1241.68	1.100
1.38	25766.30	HH	-----*	1474.90	1241.68	0.701
1.81	15226.60	HH	-----	1056.49	1241.68	0.414
2.02	8071.65	HH	-----	951.48	1241.68	0.220
2.33	23616.10	HH	*-----	1156.03	1241.68	0.643
2.60	20316.90	HH	-----	1144.86	1241.68	0.553
2.89	31971.10	HH	-----	955.91	1241.68	0.870
3.63	38728.30	HH	-----	1992.51	1241.68	1.054
4.15	53052.30	HH	-----	2210.76	1241.68	1.444
4.99	56421.30	HH	*-----	1868.29	1241.68	1.535
5.55	40785.60	HH	-----	2585.53	1241.68	1.110
5.82	102049.00	HH	-----	3800.92	1241.68	2.777
6.78	123567.00	HH	-----	4505.31	1241.68	3.363
7.28	60969.70	HH	-----	2610.96	1241.68	1.659
7.86	136225.00	HH	-----	4067.93	1241.68	3.707
8.96	144830.00	HH	-----	2986.45	1241.68	3.941
10.21	192072.00	HH	-----	3002.13	1241.68	5.227
12.05	278368.00 A	HH	*-----	4518.38	1241.68	7.575

TOTAL AREA = 3674650.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

RT: CHART SPEED → 1.25 CM/MIN

1.25

1.65

2.05

2.60

3.08

RT: CHART SPEED → 0.75 CM/MIN

4.09

6.74
7.77
8.84
10.10
11.97
RT: STOP RUN

PCB 1260
<DL

SAMPLE ID: 29031 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:39 OCT 30, 1990
SAMPLE # : ID CODE :
97
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1379.82				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1593530.00	BB	0.07 *	1	0.733	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	56611.70	++	-----	2	3.024E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .604853
[hp] 5880A SAMPLER INJECTION @ 11:39 OCT 30, 1990
SAMPLE # : ID CODE :
97
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1379.82			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1598980.00	BH	0.07 *	367671.00	1345.75	69.657
1.25	2622.57	HH	-----	278.29	1345.75	0.114
1.65	7062.93	HH	-----	332.71	1345.75	0.308
2.05	10939.70	HH	*-----	402.90	1345.75	0.477
2.60	14577.60	HH	*-----	563.55	1345.75	0.635
3.08	16717.80	HH	*-----	638.84	1345.75	0.728
4.09	77083.60	HH	*-----*	1264.31	1345.75	3.358
5.57	91379.10	HH	*-----	1684.58	1345.75	3.981
5.79	70671.00	HH	-----*	1740.27	1345.75	3.079
6.74	60653.00	HH	-----	1727.56	1345.75	2.642
7.77	144140.00	HH	*-----*	1905.75	1345.75	6.279
8.84	62840.00	HH	-----	1216.76	1345.75	2.738
10.10	81199.30	HH	-----	916.11	1345.75	3.537
11.97	56633.20	A HH	-----	966.99	1345.75	2.467

TOTAL AREA = 2295500.00

RT: CHART SPEED → 0.20 CM/MIN 0.47
RT: CHART SPEED → 1.25 CM/MIN

RT: CHART SPEED → 0.75 CM/MIN

ND

RT: STOP RUN

SAMPLE ID: 29032 VOLUME(ML): 20 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:59 OCT 30, 1990
SAMPLE # : ID CODE :
98
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1237.36				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1526160.00	BB	0.065	1	0.702	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47
RT: CHART SPEED → 1.25 CM/MIN
1.48
1.65
1.95
2.23
2.47

RT: CHART SPEED → 0.75 CM/MIN
3.38
3.64

ND

RT: STOP RUN

SAMPLE ID: 29033 VOLUME(ML): 20 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 12:20 OCT 30, 1990
SAMPLE # : ID CODE :
99
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1128.89				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1516300.00	BV	0.065*	1	0.698	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	992.07	++	-----	2	5.300E-04	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.05995E-02
【hp】 5880A SAMPLER INJECTION @ 12:20 OCT 30, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00		BASELINE @ START RUN = 1128.89				
0.00		THRESHOLD @ START RUN = 7				
0.00		PEAK WIDTH @ START RUN = 0.16				
0.47	1518690.00	BH	0.065*	367846.00	1099.97	94.508
0.83	15579.10	HH	-----	2126.81	1099.97	0.969
1.06	13888.30	HH	-----*	843.43	1099.97	0.864
1.48	5377.61	HH	-----	581.85	1099.97	0.335
1.65	11160.50	HH	-----	711.85	1099.97	0.695
1.95	10548.70	HH	-----	565.01	1099.97	0.656
2.23	5026.17	HH	-----	516.68	1099.97	0.313
2.47	7073.18	HH	-----	562.30	1099.97	0.440
3.33	8236.76	HH	-----	492.83	1099.97	0.513
3.64	11368.80	HH	-----	488.40	1099.97	0.707

TOTAL AREA = 1606950.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
---	---	---	---	---

```
UNDEFINED VALUE
ABORT PROGRAM AT LINE 870

START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?1, 2
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 1
? 111, 1, 1
ID # 2
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N
```

RT: CHART SPEED → 0.20 CM/MIN 0.44

RT: CHART SPEED → 1.25 CM/MIN

2.06

RT: CHART SPEED → 0.75 CM/MIN

7.65

RT: STOP RUN

```
SAMPLE ID: 111 VOLUME(ML): 1  WEIGHT(GM): 1
【hp】 5880A  SAMPLER INJECTION @ 12:46  OCT 30, 1990
  SAMPLE # :  ID CODE   :
          1 1254 .1 UG/M
PCB DETERMINATION (AROCLOR)
ESTD
```

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1127.34				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.44	0.43	193530.00	BB	0.056	1	8.908E-02	HEXANE
1.00			RP: BL MODE → 1				

11.00 11.00 3010.76 ++ ----- 2 1.608E-03 1260

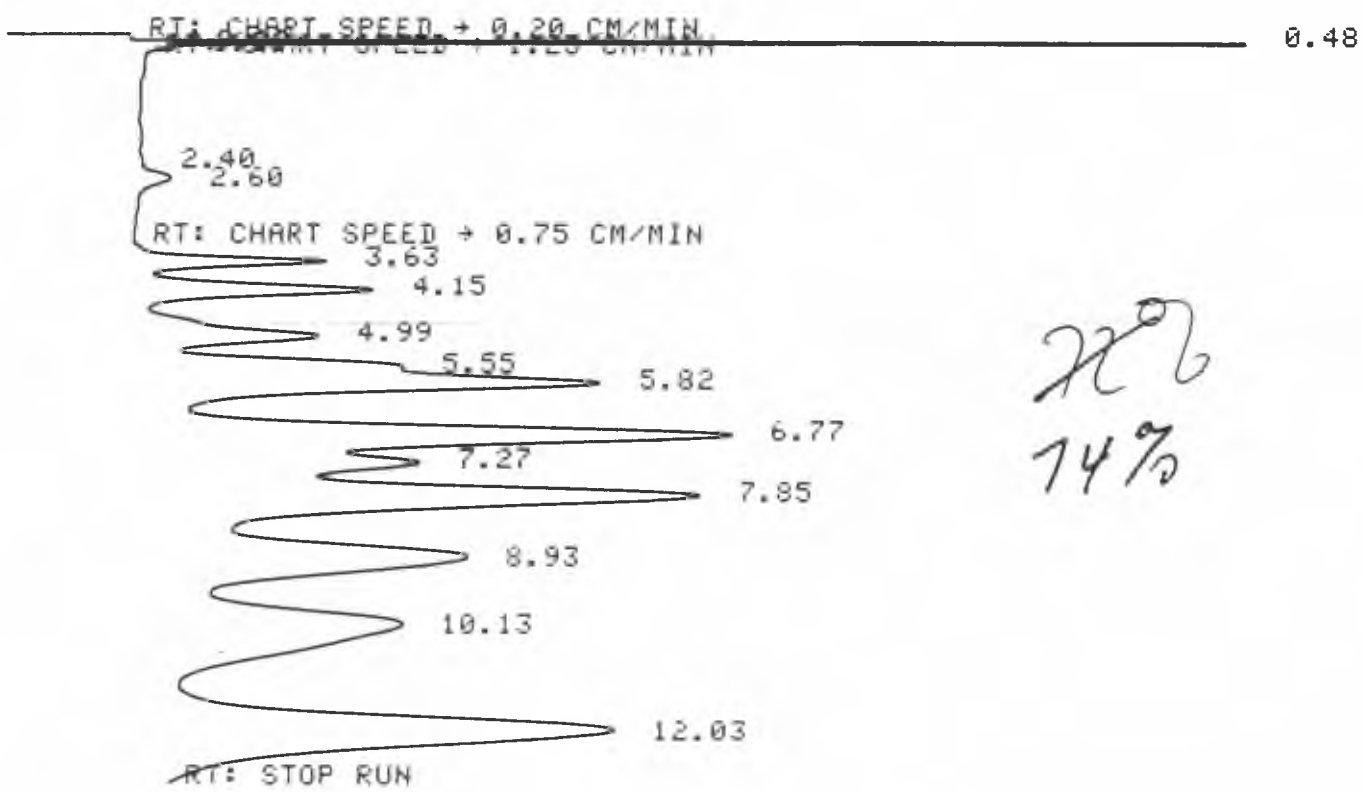
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.60838E-03
[hp] 5880A SAMPLER INJECTION @ 12:46 OCT 30, 1990
SAMPLE # : ID CODE :
1 1254 .1 UG/M
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1127.34			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.44	193530.00	BB	0.056	54124.80	1214.09	97.855
0.98	394.33	BP		187.97	1313.20	0.199
2.06	836.91	PP	0.133	98.42	1152.18	0.423
7.65	3010.76	PB	0.542	86.98	1104.91	1.522

TOTAL AREA = 197772.00
MULTIPLIER = 1

OVEN TEMP NOT READY



NO
74%

SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 13:07 OCT 30, 1990
SAMPLE # : ID CODE :
2
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 1118.39					

```
  0.48    0.43       2111320.00    BV    0.090     1      0.972  HEXANE
  1.00                          RP: BL MODE → 1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF
 11.00   11.00        638962.00    ++    -----     ?      0.368  1260

MULTIPLIER = 1


  AMT OF AROCLOR 1260 (PPM) =    .368002
【hp】 5880A  SAMPLER INJECTION @ 13:07  OCT 30, 1990
  SAMPLE # :  ID CODE    :
         2
AREA %
```

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1110.39			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2111320.00	BV	0.090	367862.00	1110.57	58.200
0.89	3368.38	VV	-----	549.73	1177.93	0.093
1.06	3942.18	VB	-----	467.96	1205.33	0.109
2.40	606.70	VV	-----	85.14	1195.31	0.017
2.60	4584.26	VV	-----	465.94	1181.39	0.126
3.63	33235.20	PH	0.200	2604.95	1136.82	0.916
4.15	51912.40	HH	0.250	3245.21	1136.82	1.431
4.99	55655.00	HH	*-----	2524.98	1136.82	1.534
5.55	49206.60	HH	-----	3648.07	1136.82	1.356
5.82	143638.00	HH	-----	6285.72	1136.82	3.959
6.77	194069.00	HH	-----	8031.81	1136.82	5.350
7.27	82798.30	HH	-----	3823.21	1136.82	2.282
7.85	230851.00	HH	-----	7604.81	1136.82	6.364
8.93	181259.00	HH	-----	4485.86	1136.82	4.997
10.13	202092.00	HH	-----*	3619.01	1136.82	5.571
12.03	279157.00 A	HH	-----	6460.63	1136.82	7.695

```
TOTAL AREA = 3627690.00
MULTIPLIER = 1
```

Dilutions

GC #: 3 Test/Matrix: Soil PCB's Date: 10-20-90

Column #: 80 Initials: CN

Chromatograms enclosed in File #: ESDCS45(1x26)

1.	CCC		26.
2.	9019339 x10		27.
3.	340 x10 + clean		28.
4.	341 x10 + "		29.
5.	339 x10 + clean, need x10 more		30.
6.	541 +	x10	31.
7.	542		32.
8.	545		33.
9.	546		34.
10.	551	x100	35.
11.	553	x100	36.
12.	Hex		37.
13.	CCC		38.
14.	9019548 (Hexflush H_2O)		39.
15.	9549		40.
16.	9554		41.
17.	9555		42.
18.	spike blank III		43.
19.	blank		44.
20.			45.
21.			46.
22.			47.
23.			48.
24.			49.
25.			50.

day 203

day 184 injected

321FORMAT 1

```
START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?  1, 4
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 1
? 222, 1, 1
ID # 2
? 19339, 10, .25%
19339, 10, .25
ID # 3
? 19340, 10, .25
ID # 4
? 19341, 10, .25
ANY MISTAKES OR REPEATS (Y OR N)?N
RT: CHART SPEED → 0.20 CM/MIN                                    0.49
RT: CHART SPEED → 1.25 CM/MIN

2.07
2.60
RT: CHART SPEED → 0.75 CM/MIN
3.64
4.15
5.00
5.53
5.83
6.77
7.27
7.85
8.92
10.12
12.02
RT: STOP RUN
```

90%

```
SAMPLE ID: 222 VOLUME(ML): 1  WEIGHT(GM): 1
[hp] 5880A  SAMPLER INJECTION @ 15:19  OCT 30, 1990
  SAMPLE # :  ID CODE   :
          1 1254 .1 UG/M
PCB DETERMINATION (AROCLOR)
ESTD

   RT    EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME
```

0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	2290750.00	BB	0.098*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	785614.00	++	-----	2	0.454	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .453514

[hp] 5880A SAMPLER INJECTION @ 15:19 OCT 30, 1990

SAMPLE # : ID CODE :

1 ~~1254 .1 UG/M~~ 1260 CCC

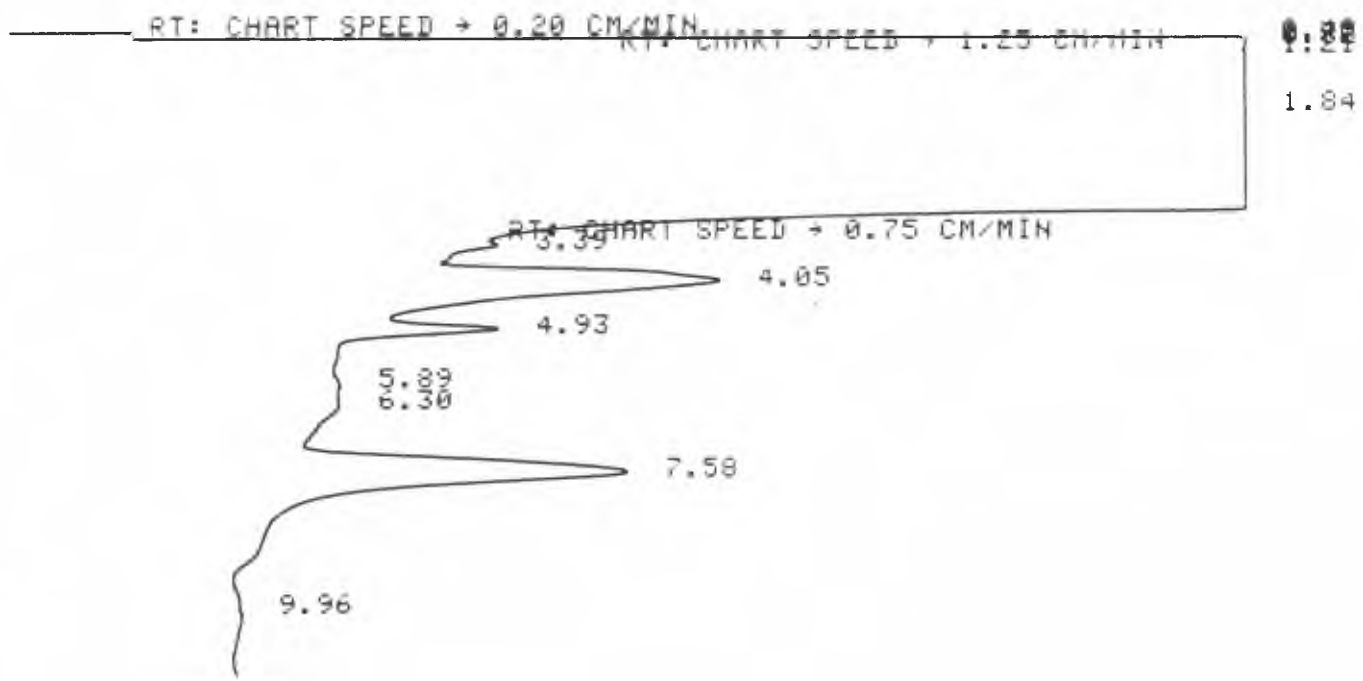
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1340.91			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	2290750.00	BB	0.098*	367436.00	1571.80	56.670
1.06	1280.17	BP	-----	342.91	1805.41	0.032
2.07	1502.56	PV	-----	115.14	1479.92	0.037
2.60	5767.19	VV	0.146	617.56	1441.41	0.143
3.64	38470.90	PH	0.183	3291.10	1390.62	0.952
4.15	61701.90	HH	0.236	4091.66	1390.62	1.526
5.00	67629.20	HH	*-----	3210.56	1390.62	1.673
5.53	64281.70	HH	-----	4467.68	1390.62	1.590
5.83	161734.00	HH	-----	7720.13	1390.62	4.001
6.77	222963.00	HH	-----	9816.13	1390.62	5.516
7.27	97625.10	HH	-----	4615.99	1390.62	2.415
7.85	255572.00	HH	-----	9077.60	1390.62	6.322
8.92	209044.00	HH	-----	5387.07	1390.62	5.171
10.12	233956.00	HH	-----*	4383.19	1390.62	5.788
12.02	329999.00	A HH	-----	8173.02	1390.62	8.164

TOTAL AREA = 4042280.00

MULTIPLIER = 1

OVEN TEMP NOT READY



140

/RT: STOP RUN

SAMPLE ID: 19339 VOLUME(ML): 10 WEIGHT(GM): .25

[hp] 5880A SAMPLER INJECTION @ 15:40 OCT 30, 1990

SAMPLE # : ID CODE :

2

PCB DETERMINATION (AROCLOR)

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1410.63				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	2501410.00	BV	0.100	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	293436.00	++	-----	2	0.167	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 6.66105

[hp] 5880A SAMPLER INJECTION @ 15:40 OCT 30, 1990

SAMPLE # : ID CODE :

2

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1410.63			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	2554280.00	BH	0.109	367540.00	1379.40	8.914
0.70	247407.00	HH	-----	27855.10	1379.40	0.863
0.82	305840.00	HH	-----*	27036.40	1379.40	1.067
1.21	318655.00	HH	*-----	21375.40	1379.40	1.112
1.84	23914600.00	HH	-----*	367456.00	1379.40	83.459
3.39	104477.00	HH	-----	4868.72	1379.40	0.365
4.05	338690.00	HH	*-----	7905.31	1379.40	1.182
4.93	119922.00	HH	-----	4880.33	1379.40	0.419
5.89	72895.60	HH	-----	2750.60	1379.40	0.254
6.30	143566.00	HH	-----	2747.29	1379.40	0.501
7.58	413852.00	HH	-----	6629.69	1379.40	1.444
9.96	120166.00	HH	-----	1420.98	1379.40	0.419

TOTAL AREA = 28654300.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.51

1.58

1.63

2.07

2.46

RT: CHART SPEED → 0.75 CM/MIN

3.43

5.44

7.60

σ

10.07

11.83

RT: STOP RUN

ND

Cleanout

SAMPLE ID: 19340 VOLUME(ML): 10 WEIGHT(GM): .25

[hp] 5880A SAMPLER INJECTION @ 16:00 OCT 30, 1990

SAMPLE # : ID CODE :

3

PCB DETERMINATION (AROCLOR)

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2582.25				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	3263340.00	BV	0.140	1	1.013	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	33935.70	++	-----	2	1.813E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .725155

[hp] 5880A SAMPLER INJECTION @ 16:00 OCT 30, 1990

SAMPLE # : ID CODE :

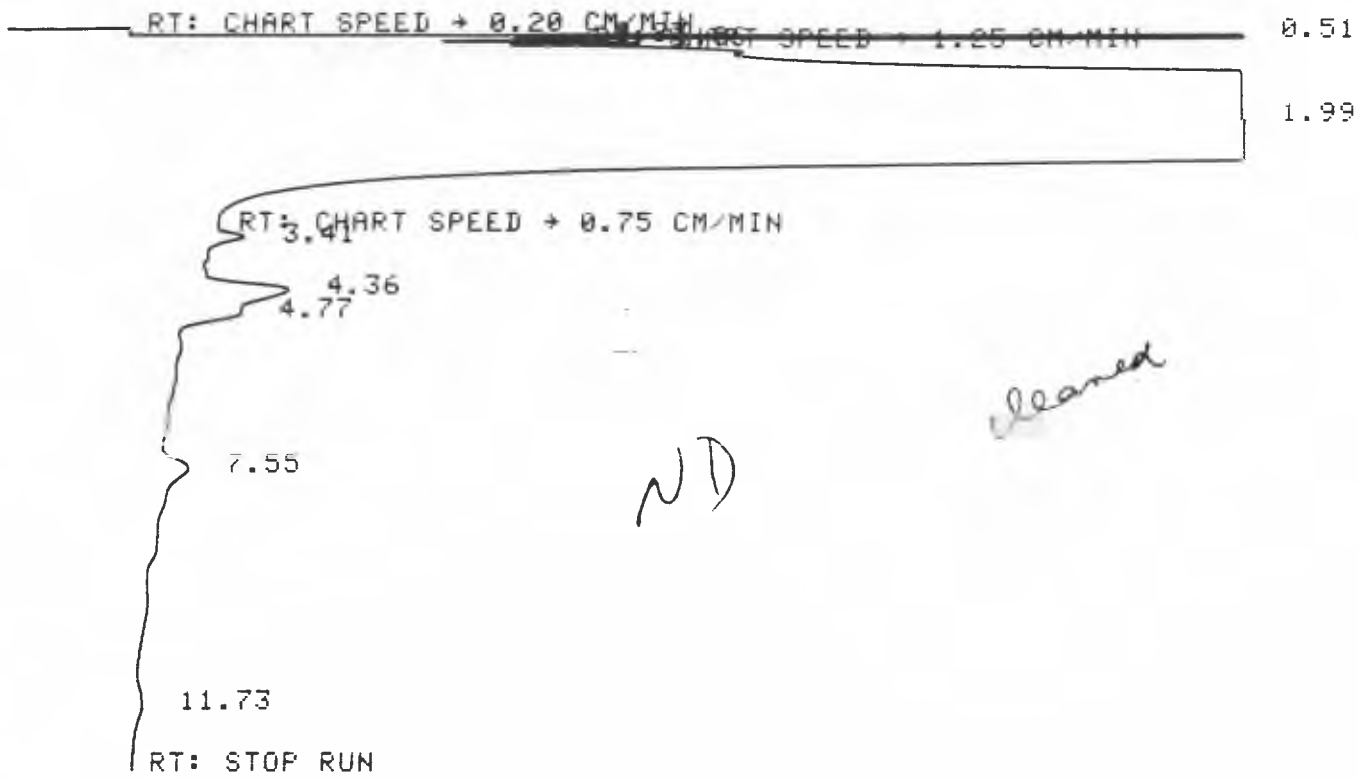
3

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2582.25			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.51	3279050.00	BV	0.140	366518.00	2409.90	89.186
0.99	38081.60	VV	-----	2780.77	2385.62	1.036
1.29	11840.00	VV	-----	1709.21	2370.27	0.322
1.38	16837.50	VV	-----	1710.61	2365.56	0.458
1.63	33537.60	VV	-----*	1770.03	2352.87	0.912
2.07	65418.70	VV	-----*	6169.70	2330.86	1.779
2.46	50578.60	VV	-----	1767.48	2310.97	1.376
3.43	29720.00	VV	-----	1164.60	2262.22	0.808
4.36	51833.40	VV	-----*	1495.45	2215.48	1.410
4.80	22447.10	VV	-----	1081.84	2193.03	0.611
5.44	20514.10	VV	-----	593.09	2160.92	0.558
7.60	35375.40	VV	-----	630.87	2051.62	0.962
10.07	10480.50	PV	-----	141.01	1954.13	0.285
11.83	10908.50	A VP	-----	225.21	1946.77	0.297

MULTIPLIER = 1

OVEN TEMP NOT READY



cleaned

ND

SAMPLE ID: 19341 VOLUME(ML): 10 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 16:21 OCT 30, 1990
SAMPLE # : ID CODE :
4
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1689.47				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	3184210.00	BV	0.136	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	29641.60	++	-----	2	1.583E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .633397
[hp] 5880A SAMPLER INJECTION @ 16:21 OCT 30, 1990
SAMPLE # : ID CODE :
4
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1689.47			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			

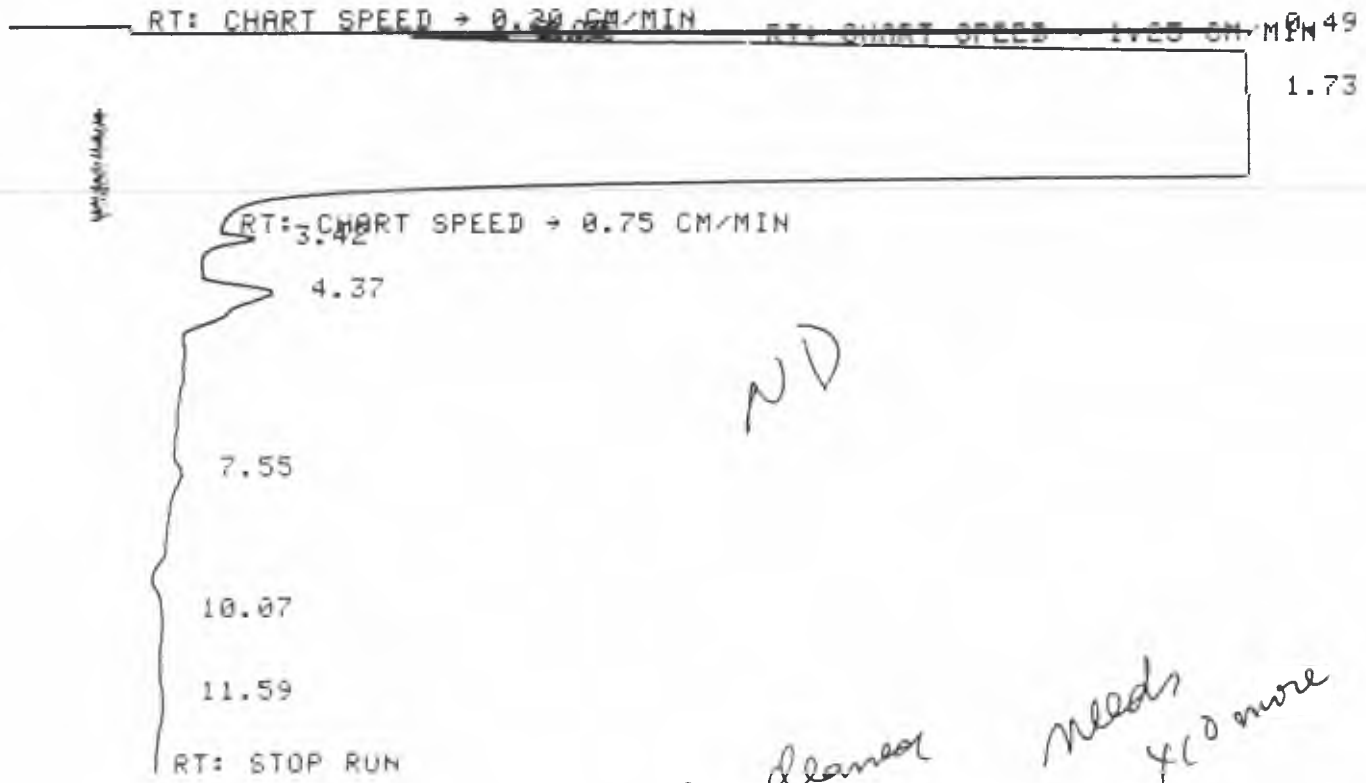
1.06	99841.80	VV	*-----	6816.91	1668.73	1.458
1.99	3354460.00	VV	*0.573	91686.70	1708.96	48.999
3.41	33524.70	VV	-----	1419.28	1770.35	0.490
4.36	56045.00	VV	-----	1985.27	1811.50	0.819
4.77	25548.00	VV	-----	1324.00	1829.24	0.373
7.55	18896.80	VB	-----	497.30	1949.44	0.276
11.73	4074.45	A PP	-----	106.16	1709.64	0.060

TOTAL AREA = 6846030.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
1	222	.453514	N	.05
2	19339	6.66105	N	2
3	19340	.725155	N	2
4	19341	.633397	N	2

DO YOU WANT TO STOP THE PRGM? (Y OR N)N
WHAT IS THE FIRST AND LAST SAMPLE?5, 13
ID # 5
? 9019339, 10, .25
ID # 6
? 9019541, 4, 30
ID # 7
? 9019543, 4, 30
ID # 8
? 9019545, 4, 30
ID # 9
? 9019546, 4, 30
ID # 10
? 9019551, 4, 30
ID # 11
? 9019553, 4, 30
ID # 12
? 111, 1, 1
ID # 13
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N



ND

9019339 X10 cleaned needs X10 more

SAMPLE ID: 9.01934E+06 VOLUME(ML): 10 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 16:45 OCT 30, 1990
SAMPLE # : ID CODE :
5
PCB DETERMINATION (AROCLOR)
ESTD.

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1575.72				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	2521080.00	BV	0.107	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	48759.60	++	-----	2	2.605E-02	1260

MULTIPLIER = 1

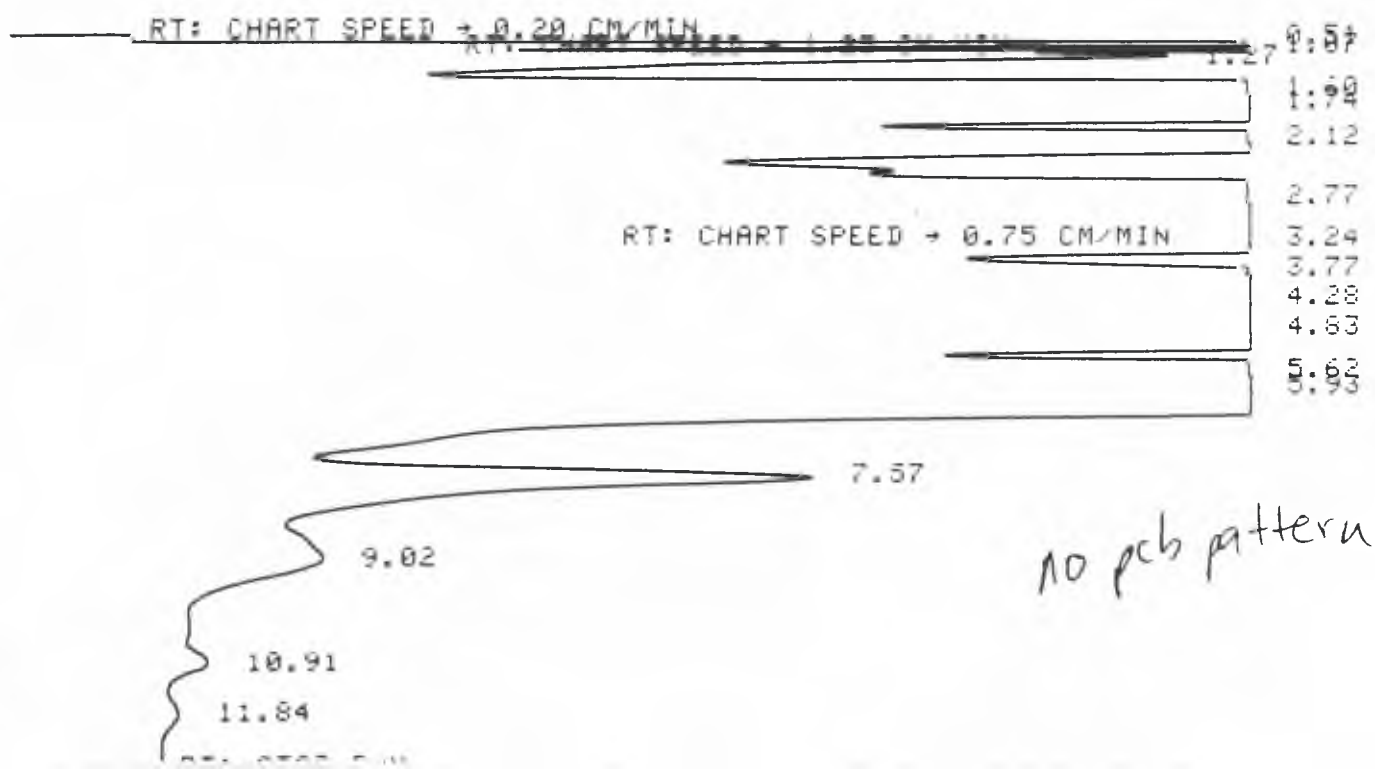
AMT OF AROCLOR 1260 (PPM) = 1.04192
[hp] 5880A SAMPLER INJECTION @ 16:45 OCT 30, 1990
SAMPLE # : ID CODE :
5

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1575.72			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	2523170.00	BV	0.108	367384.00	1528.31	10.601
0.83	31451.10	VV	-----	4893.27	1539.54	0.132
0.95	31658.10	VV	-----	5025.58	1543.29	0.133
1.73	21050700.00	VV	*-----*	367281.00	1569.39	88.442
3.42	40304.70	VV	-----	1593.03	1625.02	0.169
4.37	78287.80	VV	-----*	1805.57	1656.58	0.329
7.55	36258.10	VP	-----	473.98	1761.98	0.152
10.07	5952.87	PV	-----*	112.50	1864.42	0.025
11.59	3978.77	A BP	-----	77.83	1910.93	0.017

TOTAL AREA = 23801800.00
MULTIPLIER = 1

OVEN TEMP NOT READY



no pcb pattern

9019541

clear

SAMPLE ID: 9.01954E+06 VOLUME(ML): 4 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 17:05 OCT 30, 1990
SAMPLE # : ID CODE :
6

PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1799.50				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	3293340.00	BP	0.141*	1	1.023	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	7613230.00	++	-----	2	5.077	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***

AMT OF AROCLOR 1260 (PPM) = .676998
[hp] 5880A SAMPLER INJECTION @ 17:05 OCT 30, 1990
SAMPLE # : ID CODE :
6

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1799.50			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.51	3390030.00	BH	0.145*	367136.00	1746.47	12.949
1.07	770550.00	HH	0.086	140768.00	1746.47	2.943
1.27	123054.00	HH	-----	13871.70	1746.47	0.470
1.60	509931.00	HH	-----	81738.20	1746.47	1.948
1.74	865958.00	HH	-----*	80358.10	1746.47	3.308
2.12	403984.00	HH	-----*	27445.60	1746.47	1.543
2.77	6334530.00	HH	*0.270	367018.00	1746.47	24.197
3.24	442151.00	HH	-----	23701.20	1746.47	1.689
3.77	240455.00	HH	-----	15683.40	1746.47	0.918
4.28	7844660.00	HH	*-----*	366935.00	1746.47	29.965
4.83	1874230.00	HH	-----	76539.40	1746.47	7.159
5.62	1224830.00	HH	-----	67911.90	1746.47	4.679
5.93	1559390.00	HH	-----*	52771.80	1746.47	5.957
7.57	347322.00	HH	-----	9163.22	1746.47	1.327
9.02	173514.00	HH	*-----	2535.91	1746.47	0.663
10.91	42008.30	HH	-----	1010.01	1746.47	0.160
11.84	32835.40	HH	-----	617.34	1746.47	0.125

TOTAL AREA = 26179400.00
MULTIPLIER = 1

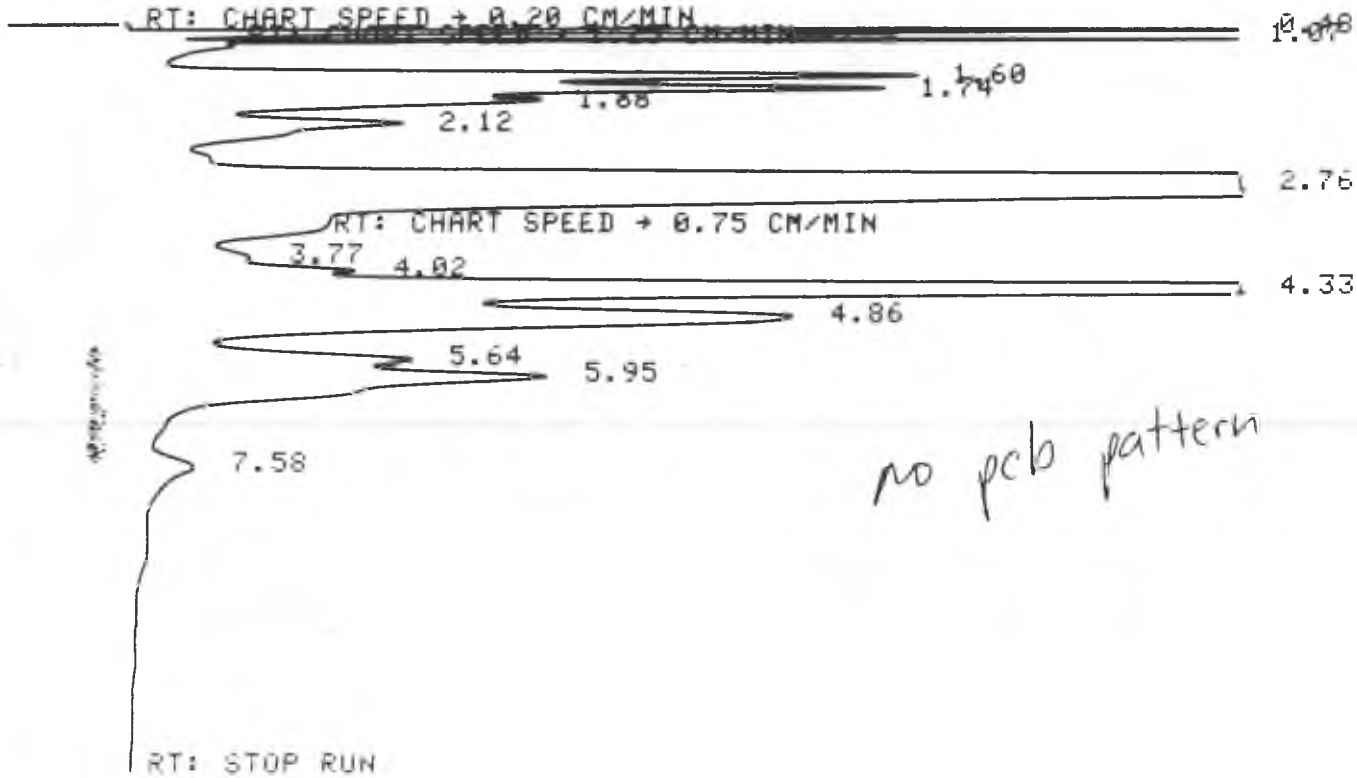
OVEN TEMP NOT READY

STOP PRGM
STOP PROGRAM AT LINE 340

STOP AUTO SEQ

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?6, 13
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 6
? 19541, 40, 30
ID # 7
? 19543, 40, 30
ID # 8
? 19545, 40, 30
ID # 9
? 19546, 40, 30
ID # 10
? 19551, 400, 30
ID # 11
? 19553, 400, 30
ID # 12
? 111, 1, 1
ID # 13
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N



no pcb pattern

SAMPLE ID: 19541 VOLUME(ML): 40 ✓ WEIGHT(GM): 30 ✓
[hp] 5880A SAMPLER INJECTION @ 17:38 OCT 30, 1990
SAMPLE # : ID CODE :
6
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1578.42				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2023930.00	BP	0.09 *	1	0.932	HEXANE
[illegible]			PP: BL MODE > 1				

148

11.00 RP: AREA SUM → OFF

11.00 11.00 450066.00 ++ ----- 2 0.258 1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .34381

[hp] 5880A SAMPLER INJECTION @ 17:38 OCT 30, 1990

SAMPLE # : ID CODE :

6

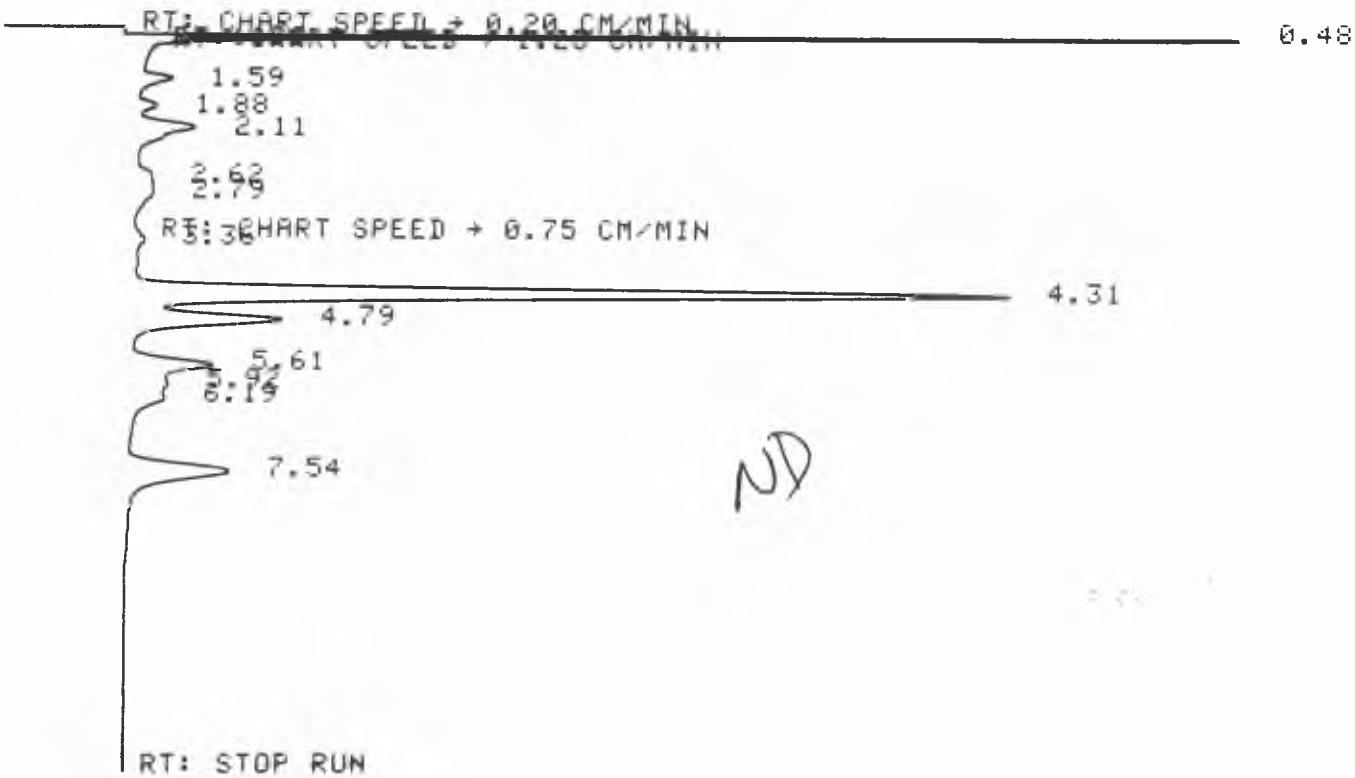
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1578.42			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2032950.00	BV	0.09 *	367301.00	1917.40	52.104
1.07	81068.70	VV	0.088	14475.70	1890.42	2.078
1.60	60157.20	BV	-----	10027.30	2116.23	1.542
1.74	65604.20	VV	-----	9539.91	2164.84	1.681
1.88	34147.60	VV	-----	4851.70	2209.58	0.875
2.12	30647.00	VP	-----*	2919.83	2291.80	0.785
2.76	802570.00	PB	*0.169*	74231.20	2552.25	20.570
3.77	5293.74	BV	-----	522.37	2668.53	0.136
4.02	20872.80	VV	-----	1985.99	2611.09	0.535
4.33	378335.00	VV	0.218	27115.30	2539.38	9.697
4.86	194793.00	VV	-----	8075.66	2416.68	4.992
5.64	46896.40	VV	-----	3110.16	2236.27	1.202
5.95	132067.00	VP	-----*	5007.43	2163.78	3.385
7.58	16338.10	PP	0.435	588.17	1856.56	0.419

TOTAL AREA = 3901740.00

MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: 19543 VOLUME(ML): 40 WEIGHT(GM): 30

[hp] 5880A SAMPLER INJECTION @ 17:59 OCT 30, 1990

SAMPLE # : ID CODE :

7

PCB DETERMINATION (AROCLOR)

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1598.24				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2026150.00	BV	0.09 *	1	0.933	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	194035.00	++	-----	2	0.109	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .144754

[hp] 5880A SAMPLER INJECTION @ 17:59 OCT 30, 1990

SAMPLE # : ID CODE :

7

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1598.24			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2029030.00	BV	0.09 *	367340.00	1553.28	87.011
1.06	13294.80	VV	-----*	920.60	1557.40	0.570
1.59	6403.51	VV	-----	653.29	1561.21	0.275
1.88	3910.16	VV	-----	438.00	1563.27	0.168
2.11	12178.30	VV	-----*	974.83	1564.94	0.522
2.62	4683.38	VV	-----	391.80	1568.60	0.201
2.79	7109.81	VV	-----	394.35	1569.77	0.305
3.36	5423.07	VV	-----	256.63	1573.90	0.233
4.31	148372.00	VV	0.196	11856.00	1580.63	6.363
4.79	32180.30	VV	-----	2102.55	1584.09	1.380
5.61	20031.30	VV	-----	1176.97	1589.91	0.859
5.92	8318.00	VV	-----	576.36	1592.19	0.357
6.19	11774.90	VV	-----	532.29	1594.11	0.505
7.54	29206.30	VB	0.328	1394.53	1603.72	1.252

TOTAL AREA = 2331910.00

MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN

RT: CHART SPEED → 1.25 CM/MIN

0.48

1.58

1.87

2.10

2.61

2.81

RT: CHART SPEED → 0.75 CM/MIN

ND

4.29

4.73

5.58

7.58

RT: STOP RUN

SAMPLE ID: 19545 VOLUME(ML): 40 WEIGHT(GM): 30
[hp] 5880A SAMPLER INJECTION @ 18:19 OCT 30, 1990
SAMPLE # : ID CODE :
9

PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1533.99				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	1922130.00	BV	0.08 *	1	0.885	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	315213.00	++	-----	2	0.179	1260

MULTIPLIER = 1

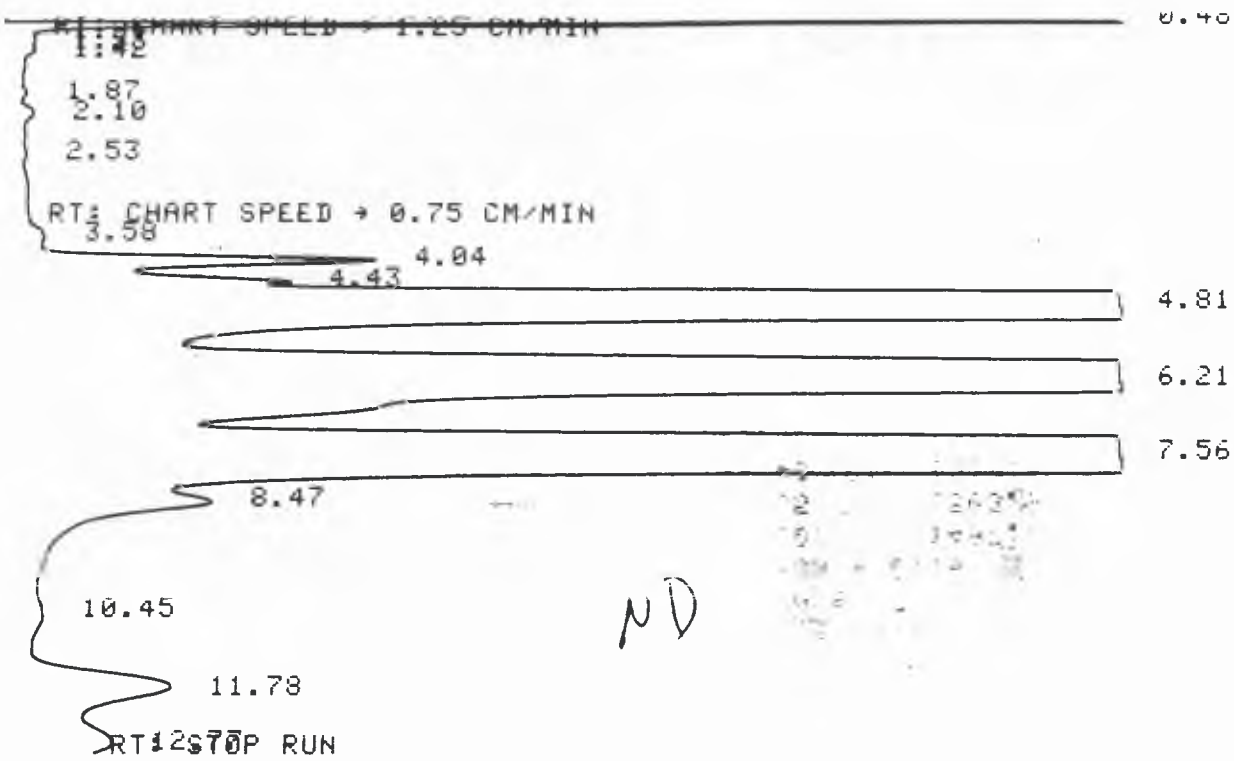
AMT OF AROCLOR 1260 (PPM) = .238966
[hp] 5880A SAMPLER INJECTION @ 18:19 OCT 30, 1990
SAMPLE # : ID CODE :
8

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1533.99			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	1924580.00	BV	0.08 *	367390.00	1497.87	83.336
1.05	9200.14	VV	-----*	655.55	1503.97	0.398
1.58	4983.93	VV	-----	399.45	1509.57	0.216
1.87	2991.54	VV	-----	343.91	1512.57	0.130
2.10	14158.00	VV	-----*	1257.06	1515.05	0.613
2.61	9556.87	VV	-----	910.41	1520.47	0.414
2.81	4574.08	VV	-----	350.44	1522.53	0.198
3.28	4311.66	VV	-----	232.18	1527.57	0.187
4.29	285526.00	VV	0.196	22803.50	1538.22	12.363
4.73	5844.85	VV	-----	363.59	1542.93	0.253
5.58	41515.70	VB	0.28	2287.22	1551.94	1.798
7.58	2189.48	BB	0.482	71.05	1539.96	0.095

TOTAL AREA = 2309430.00
MULTIPLIER = 1

OVEN TEMP NOT READY



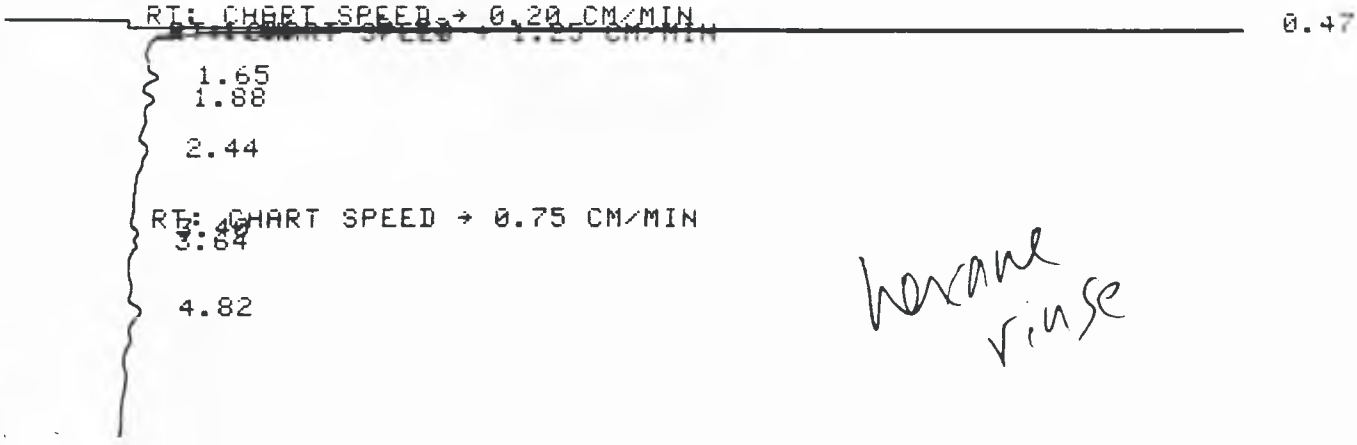
ND

SAMPLE ID: 19546 VOLUME(ML): 40 WEIGHT(GM): 30
【hp】 5880A SAMPLER INJECTION @ 18:40 OCT 30, 1990
SAMPLE # : ID CODE :
9
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1538.19				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2087850.00	BB	0.09 *	1	0.961	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	13435800.00	++	-----	2	8.961	1260

MULTIPLIER = 1

*** SAMPLE IS ABOVE CALIBRATION RANGE ***
OVEN TEMP NOT READY



hexane rinse

RT: STOP RUN

AMT OF AROCLOR 1260 (PPM) = 11.9477
[hp] 5880A SAMPLER INJECTION @ 19:03 OCT 30, 1990
SAMPLE # : ID CODE :
99
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1516.57			
0.00			THRESHOLD @ START RUN = 7.			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1665190.00	BV	0.071*	367394.00	1477.20	95.445
0.82	18908.80	VV	-----	2817.64	1470.34	1.084
1.06	9946.31	VV	-----	773.49	1465.81	0.570
1.65	4786.58	VV	-----	437.08	1454.53	0.274
1.88	4267.42	VV	-----	376.89	1450.01	0.245
2.44	8157.85	VV	-----	310.97	1439.36	0.468
3.40	2849.31	VV	-----	203.08	1420.76	0.163
3.64	2867.82	VV	-----	174.86	1416.18	0.164
4.82	5251.76	VV	-----	254.07	1393.48	0.301
7.62	22441.90	BB	0.419	838.20	1345.39	1.286

TOTAL AREA = 1744660.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.45
RT: CHART SPEED → 1.25 CM/MIN
1.59
1.87
2.07
2.59
RT: CHART SPEED → 0.75 CM/MIN
3.63
4.04
4.41
4.80
6.21
7.54
ND
11.79
RT: STOP RUN

30
[hp] 5880A SAMPLER INJECTION @ 19:24 OCT 30, 1990
SAMPLE # : ID CODE :
10
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1356.65				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.45	0.43	1155610.00	BB	0.05 *	1	0.532	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	2590000.00	++	-----	2	1.671	1260

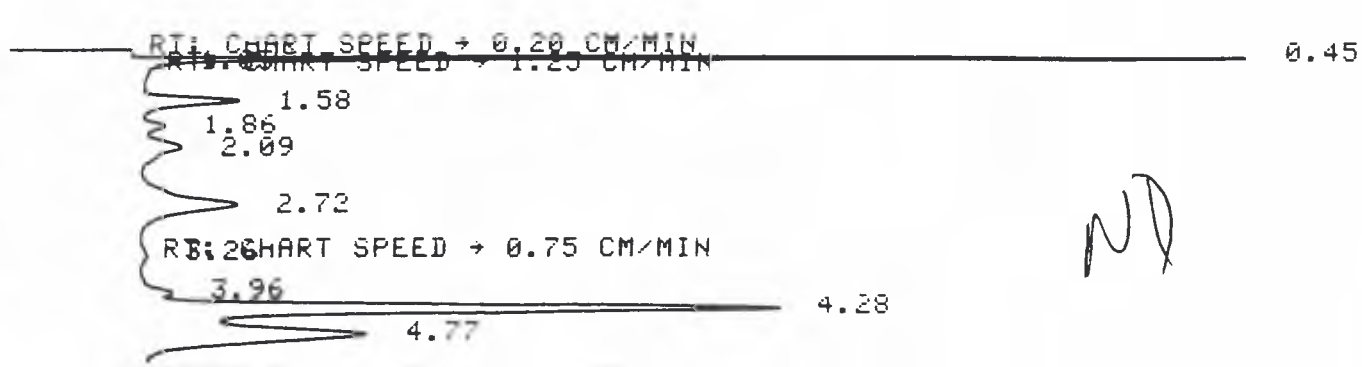
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 22.2793
[hp] 5880A SAMPLER INJECTION @ 19:24 OCT 30, 1990
SAMPLE # : ID CODE :
10
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1356.65			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.45	1160600.00	BH	0.05 *	367496.00	1317.99	25.778
1.14	5871.46	HH	-----	276.93	1317.99	0.130
1.59	2950.53	HH	-----	270.00	1317.99	0.066
1.87	3386.05	HH	-----	427.67	1317.99	0.075
2.07	6678.51	HH	-----	543.35	1317.99	0.148
2.59	9456.65	HH	-----	422.59	1317.99	0.210
3.24	5010.68	HH	-----	309.17	1317.99	0.111
3.63	9354.06	HH	-----	417.35	1317.99	0.208
4.04	32958.20	HH	-----	2076.05	1317.99	0.732
4.41	16112.60	HH	-----	1162.46	1317.99	0.358
4.80	861172.00	HH	0.252	53428.50	1317.99	19.127
6.21	611272.00	HH	*------*	18920.00	1317.99	13.577
7.54	1347930.00	HH	0.355	59464.30	1317.99	29.939
11.79	429559.00	A HH	-----	9463.62	1317.99	9.541

TOTAL AREA = 4502310.00
MULTIPLIER = 1

OVEN TEMP NOT READY



ND

7.48

RT: STOP RUN

SAMPLE ID: 19553 VOLUME(ML): 400 WEIGHT(GM):
30
[hp] 5880A SAMPLER INJECTION @ 19:45 OCT 30, 1990
SAMPLE # : ID CODE :
11
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1439.65				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.45	0.43	1083990.00	BV	0.05 *	1	0.499	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	162749.00	++	-----	2	9.032E-02	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.20431
[hp] 5880A SAMPLER INJECTION @ 19:45 OCT 30, 1990
SAMPLE # : ID CODE :
11
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1439.65			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.45	1085570.00	BV	0.05 *	367401.00	1400.77	77.461
1.05	6731.27	VV	-----*	411.85	1405.97	0.480
1.58	10582.90	VV	0.114	1455.00	1410.53	0.755
1.86	3443.68	VV	-----	449.31	1412.92	0.246
2.09	8649.98	VV	-----*	680.50	1414.91	0.617
2.72	20440.50	VV	*-----	1424.86	1420.39	1.459
3.26	3503.26	VV	-----	182.01	1425.04	0.250
3.96	7787.94	VV	-----	526.95	1431.13	0.556
4.28	112023.00	VV	0.202	8695.99	1433.89	7.993
4.77	59222.60	VV	-----	3118.61	1438.09	4.226
5.57	12856.70	VV	-----	859.68	1445.07	0.917
5.88	38927.80	VV	-----*	1441.78	1447.75	2.778
7.48	31699.60	VB	0.329	1509.64	1461.58	2.262

TOTAL AREA = 1401440.00

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.44

RT: CHART SPEED → 1.25 CM/MIN

1.85

2.07

2.57

RT: CHART SPEED → 0.75 CM/MIN

7.58

RT: STOP RUN

SAMPLE ID: 111 VOLUME(ML): 1 WEIGHT(GM): 1
【hp】 5880A SAMPLER INJECTION @ 20:05 OCT 30, 1990
SAMPLE # : ID CODE :
12
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1451.60				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.44	0.43	241967.00	BV	0.05	1	0.111	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	3576.42	++	-----	2	1.911E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.91057E-03
【hp】 5880A SAMPLER INJECTION @ 20:05 OCT 30, 1990
SAMPLE # : ID CODE :
12
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1451.60			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.44	243548.00	BV	0.05	71842.50	1405.86	92.340
78	3089.05	VV	-----	537.29	1403.40	1.171

2.07	2768.42	VV	-----	218.23	1394.10	1.050
2.57	2619.83	VV	-----	146.21	1390.49	0.993
7.58	3889.62	BH	0.715	85.20	1359.06	1.475

TOTAL AREA = 263750.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.48
RT: CHART SPEED → 1.25 CM/MIN
1.44
1.85
2.04
2.57
RT: CHART SPEED → 0.75 CM/MIN
3.59
4.89
4.93
5.46
5.75
6.67
7.17
7.74
8.80
9.98
11.85
RT: STOP RUN

94%

SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 20:26 OCT 30, 1990
SAMPLE # : ID CODE :
13
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1434.72				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2222260.00	BV	0.09 *	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	817659.00	++	-----	2	0.472	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .4722
[hp] 5880A SAMPLER INJECTION @ 20:26 OCT 30, 1990
SAMPLE # : ID CODE :
13
AREA %

0.00				BASELINE @ START RUN = 1434.72			
0.00				THRESHOLD @ START RUN = 7			
0.00				PEAK WIDTH @ START RUN = 0.16			
0.48	2224990.00		BH	0.09 *	367495.00	1395.39	53.344
1.05	10058.70		HH	-----	789.36	1395.39	0.241
1.44	2555.33		HH	-----	243.44	1395.39	0.061
1.85	4206.49		HH	-----	276.62	1395.39	0.101
2.04	7478.50		HH	-----	430.86	1395.39	0.179
2.57	9038.71		HH	-----	854.32	1395.39	0.217
3.59	43040.70		HH	0.183	3683.30	1395.39	1.032
4.09	67723.80		HH	0.234	4523.79	1395.39	1.624
4.93	75645.40		HH	*-----	3610.32	1395.39	1.814
5.46	70932.60		HH	-----	4961.75	1395.39	1.701
5.75	175047.00		HH	-----	8528.52	1395.39	4.197
6.67	241417.00		HH	-----	10831.10	1395.39	5.788
7.17	107423.00		HH	-----	5154.21	1395.39	2.575
7.74	276369.00		HH	-----	10088.50	1395.39	6.626
8.88	238488.00		HH	-----	5983.05	1395.39	5.526
9.98	258908.00		HH	-----*	4889.92	1395.39	6.207
11.85	365721.00	A	HH	-----	9019.56	1395.39	8.768

TOTAL AREA = 4171050.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

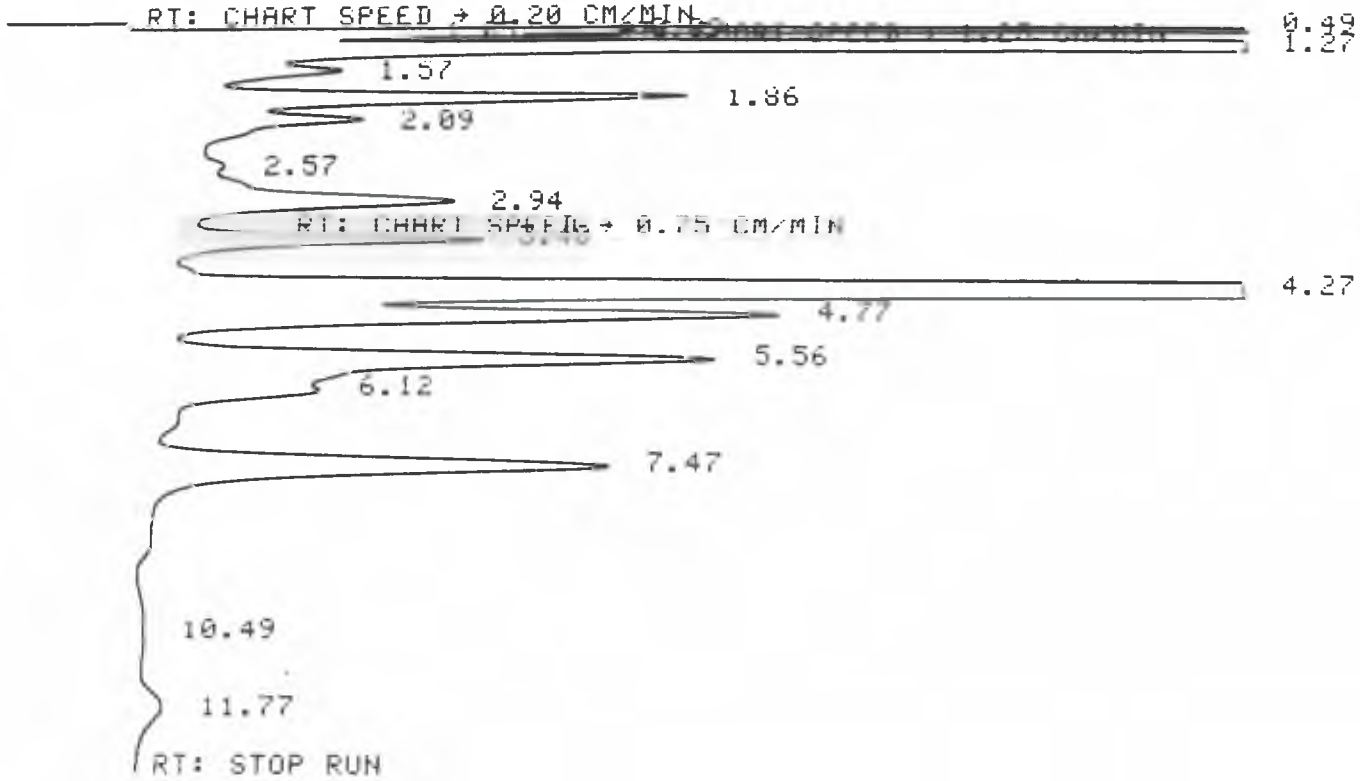
SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
6	19541	.34381	N	6.66667E-02
7	19543	.144754	N	6.66667E-02
8	19545	.238966	N	6.66667E-02
9	19546	11.9477	N	6.66667E-02
10	19551	22.2793	N	.666667
11	19553	1.20431	N	.666667
12	111	1.91057E-03	N	.05
13	222	.4722	N	.05

DO YOU WANT TO STOP THE PRGM? (Y OR N)

ES DC94S(10/26)

ESDCS45/C4 26

START PRGM
WHAT IS THE FIRST AND LAST SAMPLE?40,40
ID # 40
? 9544,20,1
ANY MISTAKES OR REPEATS (Y OR N)?N



SAMPLE ID: 9544 VOLUME(ML): ~~20~~ 40 WEIGHT(GM): ~~1~~ 30
[hp] 5880A SAMPLER INJECTION @ 11:32 OCT 31, 1990
SAMPLE # : ID CODE :
40
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1497.40				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	2822890.00	PV	0.120	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	906606.00	++	-----	2	0.528	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 10.5601
[hp] 5880A SAMPLER INJECTION @ 11:32 OCT 31, 1990
SAMPLE # : ID CODE :
40

0.00			BASELINE @ START RUN = 1497.40			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	2848520.00	PH	0.121	367553.00	1467.73	58.023
0.89	44022.30	HH	-----	6477.63	1467.73	0.897
1.05	28795.70	HH	-----	3688.53	1467.73	0.587
1.27	421403.00	HH	0.111	59630.80	1467.73	8.584
1.57	28160.60	HH	-----	2813.52	1467.73	0.574
1.86	61397.80	HH	-----	7499.45	1467.73	1.251
2.09	43009.60	HH	-----	3106.44	1467.73	0.876
2.57	17652.50	HH	-----	1282.54	1467.73	0.360
2.94	69019.90	HH	*-----	4339.66	1467.73	1.406
3.40	75004.50	HH	-----	4705.35	1467.73	1.528
4.27	670742.00	HH	*0.218	48265.20	1467.73	13.663
4.77	159185.00	HH	-----	8723.72	1467.73	3.243
5.56	179596.00	HH	-----*	7889.92	1467.73	3.658
6.12	51232.20	HH	-----	2531.67	1467.73	1.044
7.47	162459.00	HH	0.393	6475.51	1467.73	3.309
10.49	20632.60	HH	-----	228.63	1467.73	0.420
11.77	28455.50 A	HH	-----	482.26	1467.73	0.580

TOTAL AREA = 4909280.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

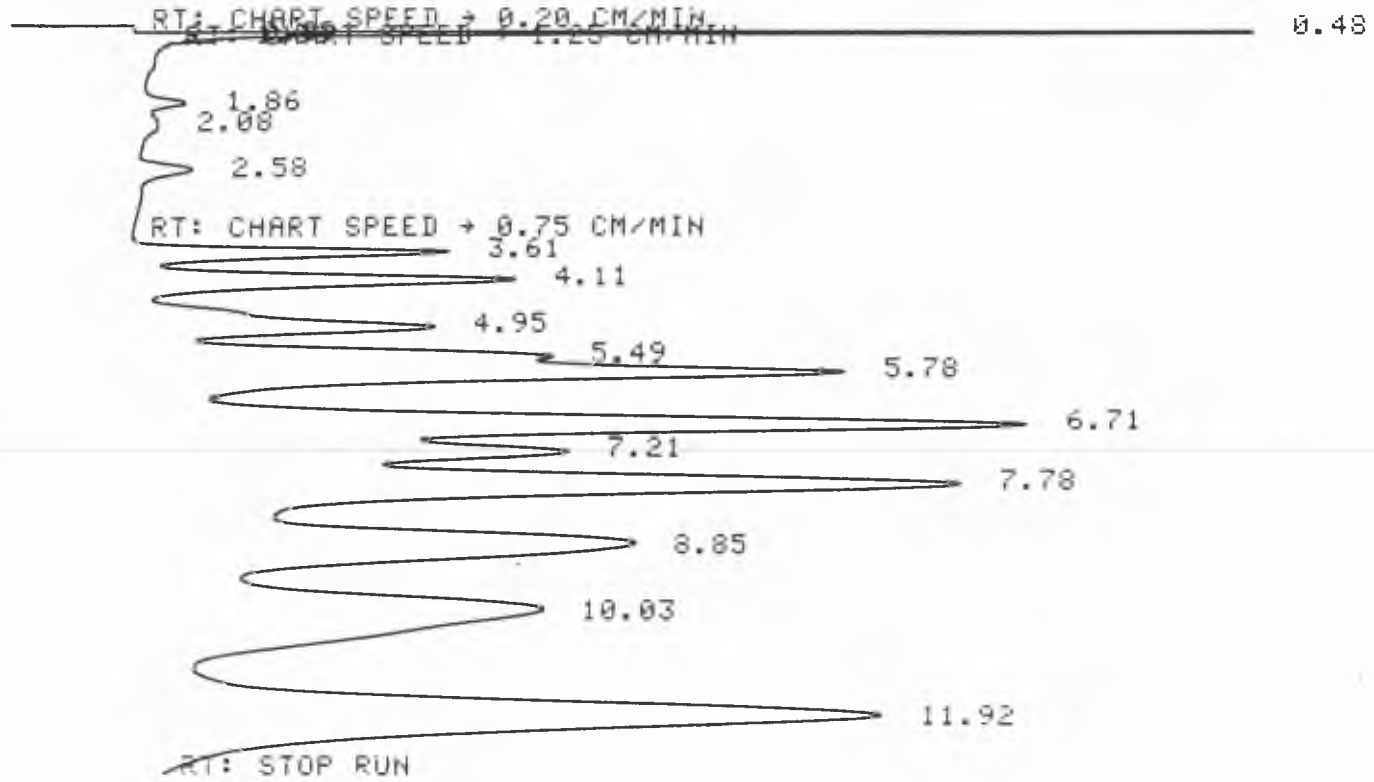
SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
---	---	---	---	---

UNDEFINED VALUE
ABORT PROGRAM AT LINE 870

START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?1, 2
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 1
? 222, 1, 1
ID # 2
? 19339, 100, .25
ANY MISTAKES OR REPEATS (Y OR N)?N



SAMPLE ID: 222 VOLUME(ML): 1 WEIGHT(GM): 1
【hP】 5880A SAMPLER INJECTION @ 12:06 OCT 31, 1990
SAMPLE # : ID CODE :
1 1254 .1 UG/M
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1712.96				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2300260.00	BV	0.098	1	1.000	HEXANE
1.00			RP: BL MODE → 1				

11.00 11.00 962659.00 ++ ----- 2 0.566 1260 = 110 ppb

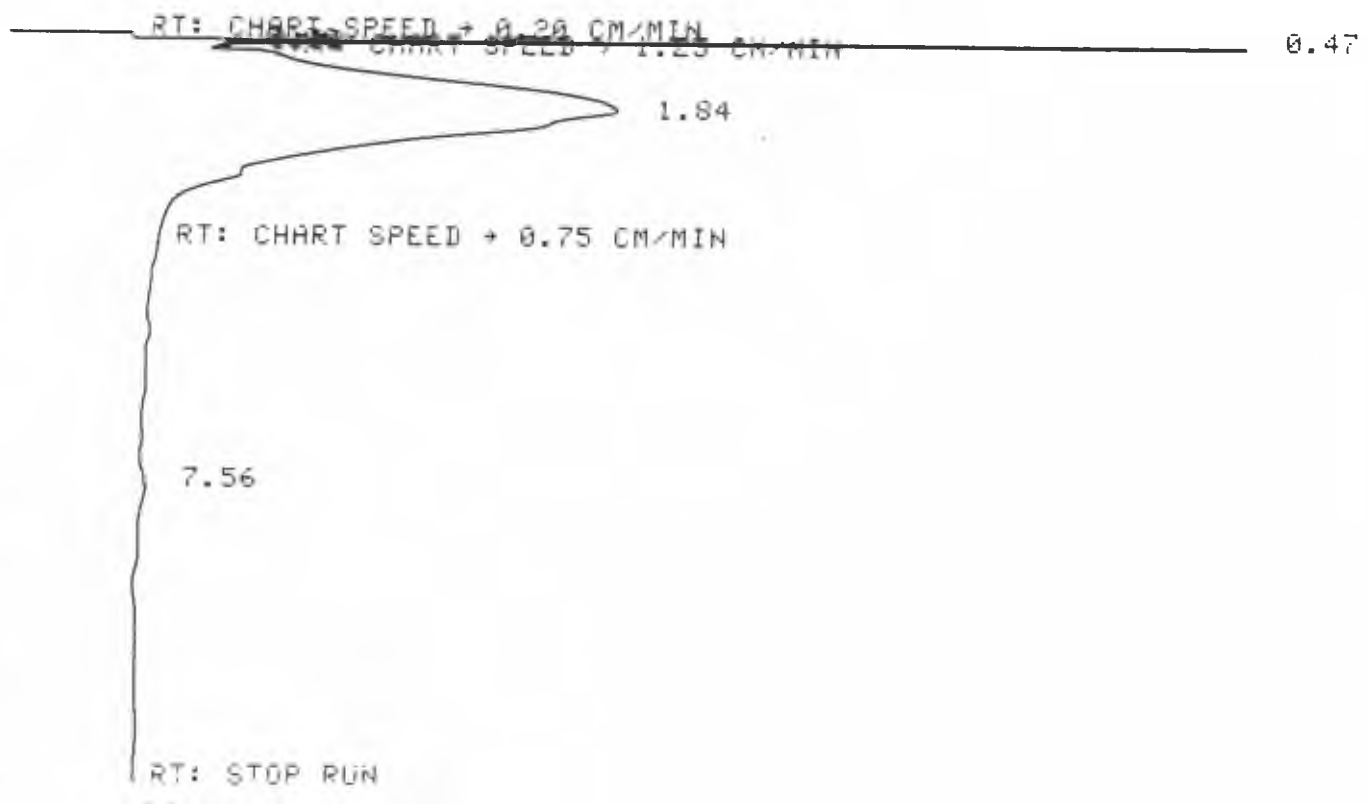
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .566039
[hp] 5880A SAMPLER INJECTION @ 12:06 OCT 31, 1990
SAMPLE # : ID CODE :
1 1254 .1 UG/M
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1712.96			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2302280.00	BV	0.098	367293.00	1677.80	50.896
0.89	7730.34	VV	-----	1181.84	1676.00	0.171
1.06	13705.60	VV	-----	1086.85	1675.28	0.303
1.86	6414.05	VV	-----	705.67	1671.76	0.142
2.08	5936.26	VV	-----	340.99	1670.80	0.131
2.58	8093.39	VV	0.158	803.53	1668.62	0.179
3.61	49222.50	PH	0.183	4205.27	1665.53	1.088
4.11	78298.30	HH	0.240	5109.09	1665.53	1.731
4.95	85100.30	HH	*-----	4030.43	1665.53	1.881
5.49	79581.90	HH	-----	5612.47	1665.53	1.759
5.78	202813.00	HH	-----	9555.13	1665.53	4.484
6.71	273664.00	HH	-----	11958.30	1665.53	6.050
7.21	122786.00	HH	-----	5782.71	1665.53	2.714
7.78	319033.00	HH	-----	11085.70	1665.53	7.053
8.85	259930.00	HH	-----	6687.89	1665.53	5.746
10.03	293230.00	HH	-----*	5469.58	1665.53	6.482
11.92	415701.00 A	HH	-----	10029.90	1665.53	9.190

TOTAL AREA = 4523520.00
MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: 19339 VOLUME(ML): 100 WEIGHT(GM): .25

[hp] 5880A SAMPLER INJECTION @ 12:26 OCT 31, 1990

SAMPLE # : ID CODE :

2

PCB DETERMINATION (AROCLOR)

ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1509.25				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	1788450.00	PV	0.076	1	0.823	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	3586.64	++	-----	2	1.916E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .76641

[hp] 5880A SAMPLER INJECTION @ 12:26 OCT 31, 1990

SAMPLE # : ID CODE :

2

AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1509.25			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	1795470.00	PV	0.077	367447.00	1501.50	83.741
0.80	7203.70	VV	-----	1178.39	1536.96	0.336
0.92	9429.20	VV	-----	1236.66	1549.64	0.440
1.84	328378.00	VB	*-----*	6339.04	1647.03	15.316
7.56	3586.64	PP	-----	88.90	1565.17	0.167

TOTAL AREA = 2144060.00

MULTIPLIER = 1

SUMMARY OF PCB RESULTS

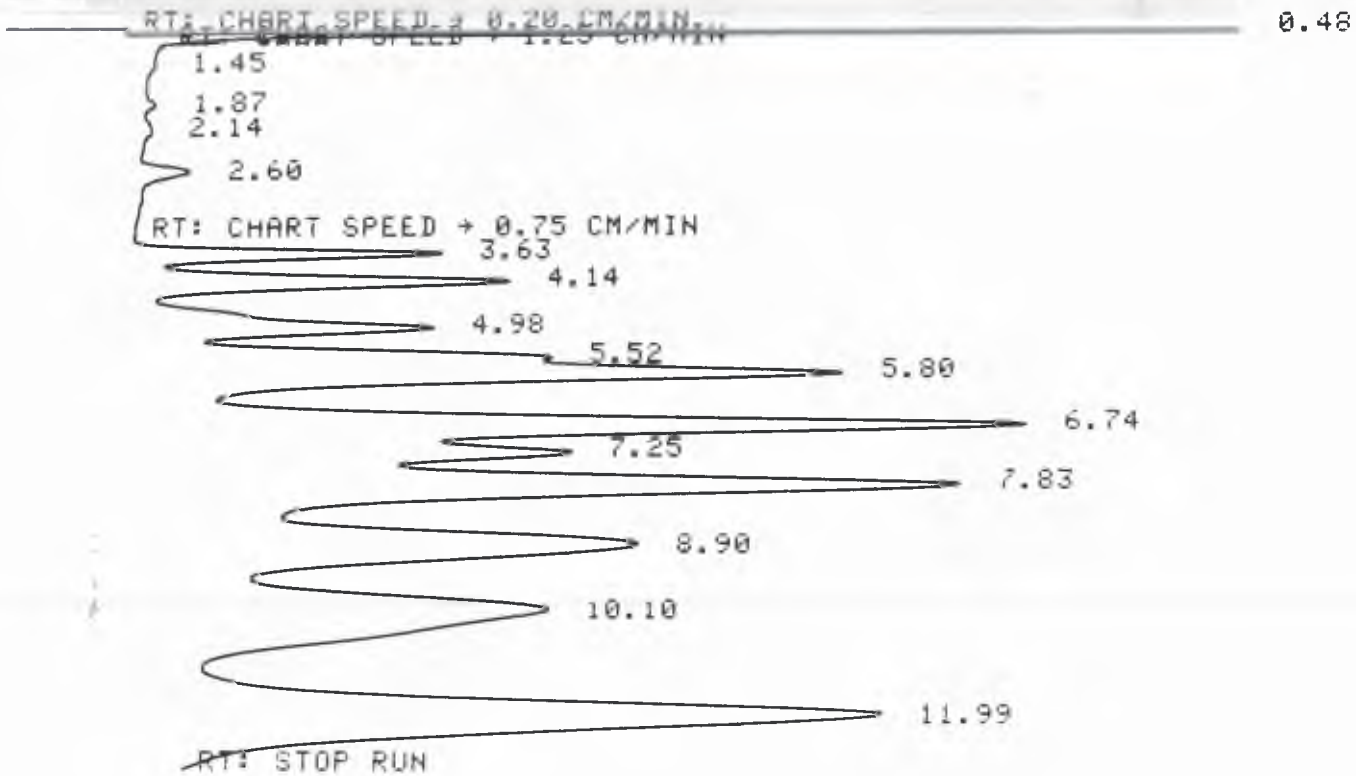
SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
1	222	.566039	N	.05
2	19339	.76641	N	20

DO YOU WANT TO STOP THE PRGM? (Y OR N)

?

[redacted] [redacted]

```
  START PRGM
WHAT IS THE FIRST AND LAST SAMPLE?13,17
ID # 13
? 222,1,1
ID # 14
? 9548,1,.25
ID # 15
? 9549,1,.25
ID # 16
? 9554,1,.25
ID # 17
? 9555,1,.25
ANY MISTAKES OR REPEATS (Y OR N)?N
```



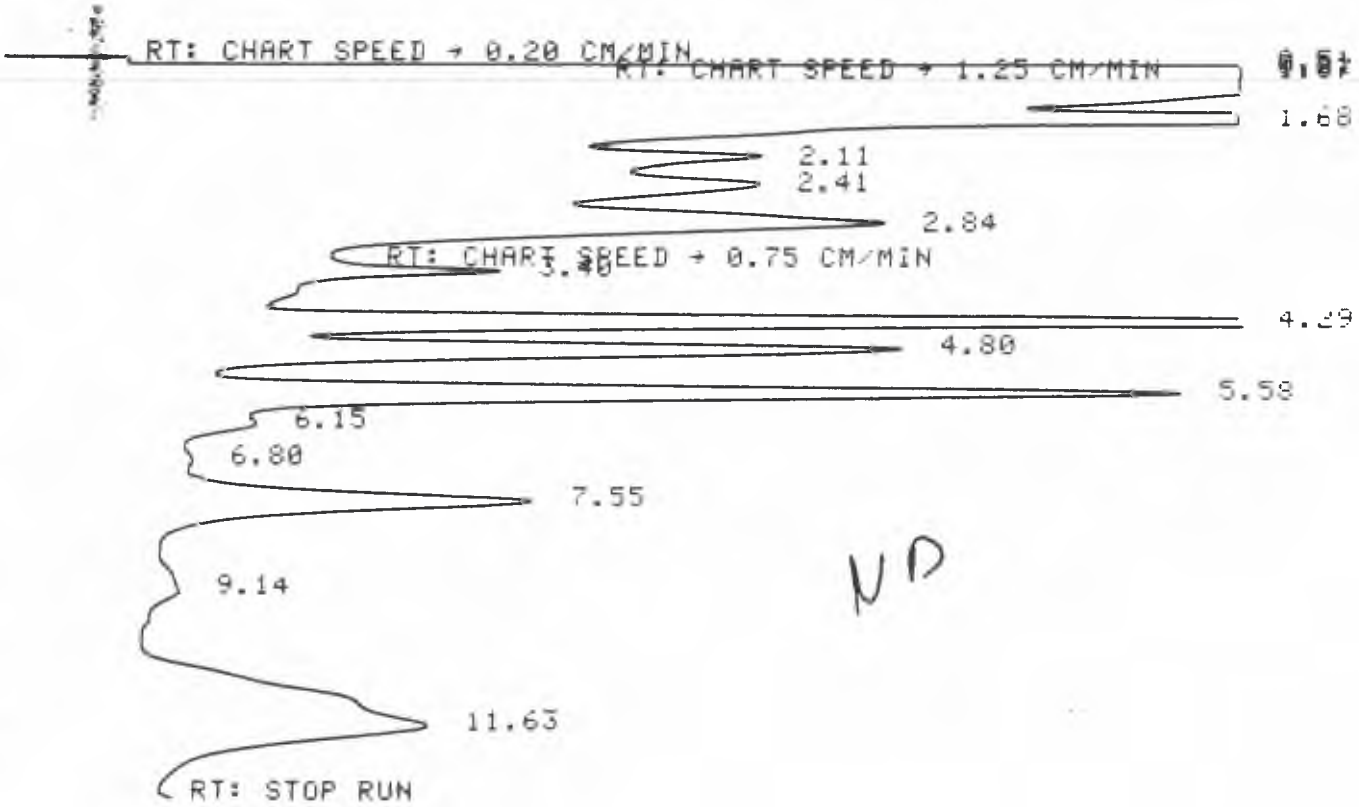

```
SAMPLE ID: 222 VOLUME(ML): 1  WEIGHT(GM): 1
[hp] 5880A  SAMPLER INJECTION @ 16:07  OCT 31, 1990
  SAMPLE # :  ID CODE   :
        13
PCB DETERMINATION (AROCLOR)
ESTD

   RT    EXP RT            AREA   TYPE  WIDTH  CAL    AMOUNT  NAME

  0.00                          BASELINE @ START RUN = 1505.13
  0.00                          THRESHOLD @ START RUN =  7
  0.00                          PEAK WIDTH @ START RUN = 0.16
  0.48    0.43       2305350.00    PV   0.10 *   1     1.000  HEXANE
  1.00                          RP: BL MODE →  1
  3.60                          RP: AREA SUM → ON
 11.00                          RP: AREA SUM → OFF
 11.00   11.00        965025.00    ++   -----    2     0.568  1260

MULTIPLIER = 1
```

AMT OF AROCLOR 1260 (PPM) = .567644
[hp] 5880A SAMPLER INJECTION @ 16:07 OCT 31, 1990
SAMPLE # : ID CODE :
13
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1505.13			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2309730.00	PH	0.10 *	367513.00	1471.50	49.360
1.06	15784.70	HH	-----*	1248.82	1471.50	0.337
1.45	5251.77	HH	-----	387.48	1471.50	0.112
1.87	5656.69	HH	-----	402.40	1471.50	0.121
2.14	7538.53	HH	-----	359.42	1471.50	0.161
2.60	10175.20	HH	-----	874.47	1471.50	0.217
3.63	53422.80	HH	0.157	4239.08	1471.50	1.142
4.14	83624.60	HH	0.253	5174.14	1471.50	1.787
4.98	92832.30	HH	*-----	4140.26	1471.50	1.984
5.52	81825.30	HH	-----	5764.85	1471.50	1.749
5.80	216162.00	HH	-----	9667.78	1471.50	4.620
6.74	289397.00	HH	-----	12113.90	1471.50	6.185
7.25	130232.00	HH	-----	5995.13	1471.50	2.783
7.83	338310.00	HH	-----	11232.60	1471.50	7.230
8.90	279487.00	HH	-----	6902.12	1471.50	5.973
10.10	318537.00	HH	-----*	5685.07	1471.50	6.807
11.99	441363.00	A HH	-----	10165.30	1471.50	9.432

TOTAL AREA = 4679320.00
MULTIPLIER = 1

OVEN TEMP NOT READY



ND

SAMPLE ID: 9548 VOLUME(ML): 1 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 16:28 OCT 31, 1990

PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1523.43				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.51	0.43	3772280.00	PV	-----*	1	1.172	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	707097.00	++	-----	2	0.408	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.63092
[hp] 5880A SAMPLER INJECTION @ 16:28 OCT 31, 1990
SAMPLE # : ID CODE :
14
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1523.43			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.51	3825780.00	PH	-----*	367450.00	1500.40	47.278
0.81	158364.00	HH	-----	34652.30	1500.40	1.957
1.07	1820840.00	HH	*-----*	194711.00	1500.40	22.501
1.68	355993.00	HH	-----	31202.50	1500.40	4.399
2.11	118976.00	HH	-----	8522.09	1500.40	1.470
2.41	157275.00	HH	-----	8503.72	1500.40	1.944
2.84	219698.00	HH	-----	10197.80	1500.40	2.715
3.40	102964.00	HH	-----	4995.51	1500.40	1.272
4.29	306978.00	HH	0.222	21652.70	1500.40	3.794
4.80	209668.00	HH	-----	10430.00	1500.40	2.591
5.58	263535.00	HH	0.291	14160.20	1500.40	3.257
6.15	40526.90	HH	-----	1713.60	1500.40	0.501
6.80	21924.50	HH	-----	849.12	1500.40	0.271
7.55	162545.00	HH	0.466	5457.09	1500.40	2.009
9.14	37796.40	HH	*-----	665.59	1500.40	0.467
11.63	289271.00	HH	*-----	4060.48	1500.40	3.575

TOTAL AREA = 8092140.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN
RT: CHART SPEED → 1.25 CM/MIN
0.48
1.36
1.63
2.09
2.37
2.79
ND
RT: CHART SPEED → 0.75 CM/MIN
3.39
3.98
4.28
4.77
5.54
6.18

7.55

9.80

11.59

RT: STOP RUN

SAMPLE ID: 9549 VOLUME(ML): 1 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 16:49 OCT 31, 1990
SAMPLE # : ID CODE :
15
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 7992.92				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2299910.00	PV	0.100*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	655235.00	++	-----	2	0.377	1260

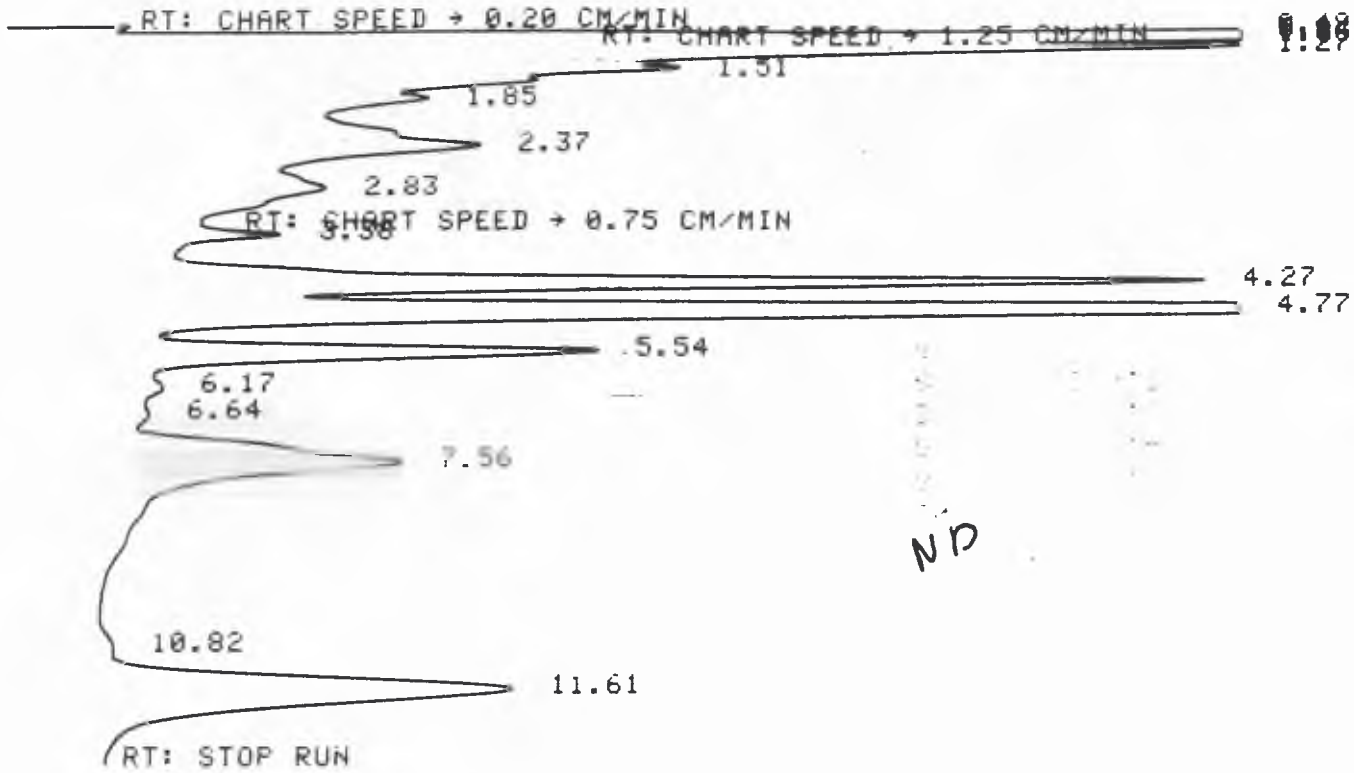
MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 1.50996
[hp] 5880A SAMPLER INJECTION @ 16:49 OCT 31, 1990
SAMPLE # : ID CODE :
15
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 7992.92			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2372430.00	PV	0.102*	362584.00	6303.73	45.449
0.90	113204.00	VV	-----	14657.50	6261.46	2.169
1.04	48536.80	VV	-----	7703.53	6246.51	0.930
1.36	208786.00	VV	*-----	13309.00	6214.71	4.000
1.63	107461.00	VV	-----	5237.30	6187.39	2.059
2.09	56023.30	VV	-----	3605.25	6141.03	1.073
2.37	78551.50	VV	-----	4265.87	6112.32	1.505
2.79	178273.00	VV	-----	9649.70	6069.63	3.415
3.39	159851.00	VV	*-----*	5331.24	6009.12	3.062
3.98	86784.20	VV	-----	4498.62	5949.24	1.663
4.28	170140.00	VV	-----	7512.01	5918.51	3.259
4.77	413354.00	VV	-----	18478.70	5868.72	7.919
5.54	157366.00	VV	-----	5814.74	5791.03	3.015
6.18	257522.00	VV	-----	4976.51	5725.75	4.933
7.55	654822.00	VV	-----	15040.70	5587.51	12.545
9.80	106507.00	VV	-----	1202.67	5359.53	2.040
11.59	50372.20	A VP	-----	1110.92	5178.01	0.965

TOTAL AREA [illegible]

OVEN TEMP NOT READY



ND

SAMPLE ID: 9554 VOLUME(ML): 1 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 17:09 OCT 31, 1990
SAMPLE # : ID CODE :
16
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2274.39				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	3095000.00	PV	0.134	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	728607.00	++	-----	2	0.420	1260

MULTIPLIER = 1

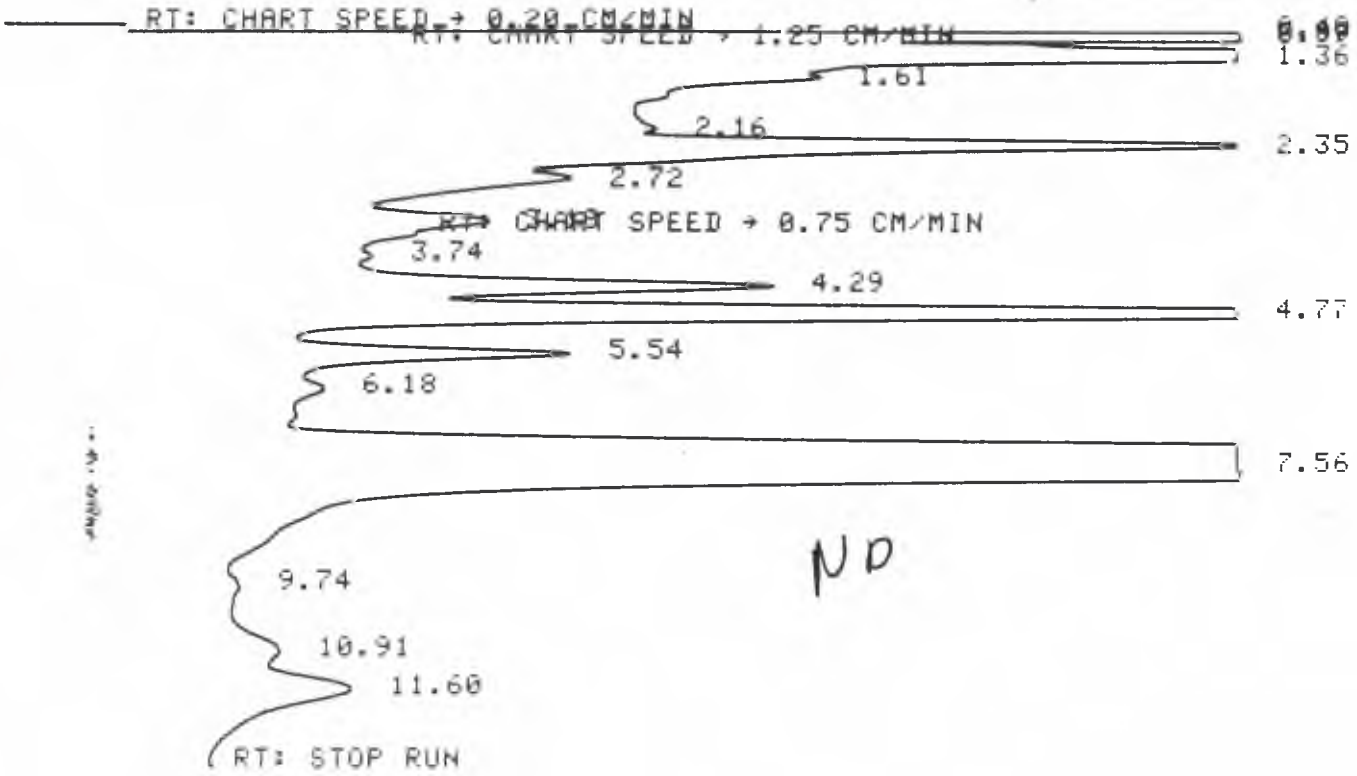
AMT OF AROCLOR 1260 (PPM) = 1.68109
[hp] 5880A SAMPLER INJECTION @ 17:09 OCT 31, 1990
SAMPLE # : ID CODE :
16
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2274.39			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	3224470.00	PV	0.138	366799.00	2128.90	58.062

1.27	176361.00	VV	-----	16045.00	2106.51	3.176
1.51	111677.00	VV	-----	7543.66	2099.61	2.011
1.85	49264.30	VV	-----	4134.18	2089.92	0.887
2.37	126291.00	VV	*-----	4861.65	2074.96	2.274
2.83	73549.80	VV	*-----	2803.84	2061.50	1.324
3.38	43711.80	VV	-----	2233.09	2045.74	0.787
4.27	253894.00	VV	*-----	14698.60	2020.01	4.572
4.77	384669.00	VV	0.261	23096.20	2005.80	6.927
5.54	118894.00	VV	0.282	6607.37	1983.47	2.141
6.17	18866.50	VV	-----	757.94	1965.30	0.340
6.64	13880.20	VV	-----	578.26	1951.76	0.250
7.56	181346.00	VB	*-----	3978.41	1925.47	3.265
10.82	4650.46	BH	-----	198.69	1848.63	0.084
11.61	203251.00 A	HH	-----	5563.04	1848.63	3.660

TOTAL AREA = 5553480.00
MULTIPLIER = 1

OVEN TEMP NOT READY



SAMPLE ID: 9555 VOLUME(ML): 1 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 17:30 OCT 31, 1990
SAMPLE # : ID CODE :
17
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1698.28				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2851230.00	PV	0.122*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.09034
[hp] 5880A SAMPLER INJECTION @ 17:30 OCT 31, 1990
SAMPLE # : ID CODE :
17
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1698.28			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2917900.00	PV	0.125*	366734.00	2214.76	53.405
0.89	75340.90	VV	-----	16658.80	3955.39	1.379
0.97	162436.00	VV	-----*	16433.70	4229.75	2.973
1.36	271393.00	VV	*-----	24519.30	5842.77	4.967
1.61	42600.70	VV	-----	4120.70	6871.84	0.780
2.16	6969.84	BV	-----	868.85	7877.35	0.128
2.35	107713.00	VV	-----*	10024.70	7227.63	1.971
2.72	18437.80	VP	-----	1662.81	5971.26	0.337
3.18	25286.90	PV	-----*	1668.50	4853.89	0.463
3.74	4615.87	VV	-----	345.32	4605.11	0.084
4.29	108217.00	VV	-----	6028.80	4362.06	1.981
4.77	292506.00	VP	0.239	19126.30	4148.81	5.354
5.54	61357.90	PV	0.255	3769.03	3873.77	1.123
6.18	13486.10	VV	-----	593.38	3737.11	0.247
7.56	1257210.00	VP	*-----*	36534.60	3437.83	23.010
9.74	2573.06	PB	-----	135.13	3059.71	0.047
10.91	22516.60	BV	-----	728.31	3021.92	0.412
11.60	73122.50	VP	-----	1764.20	2945.61	1.338

TOTAL AREA = 5463680.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

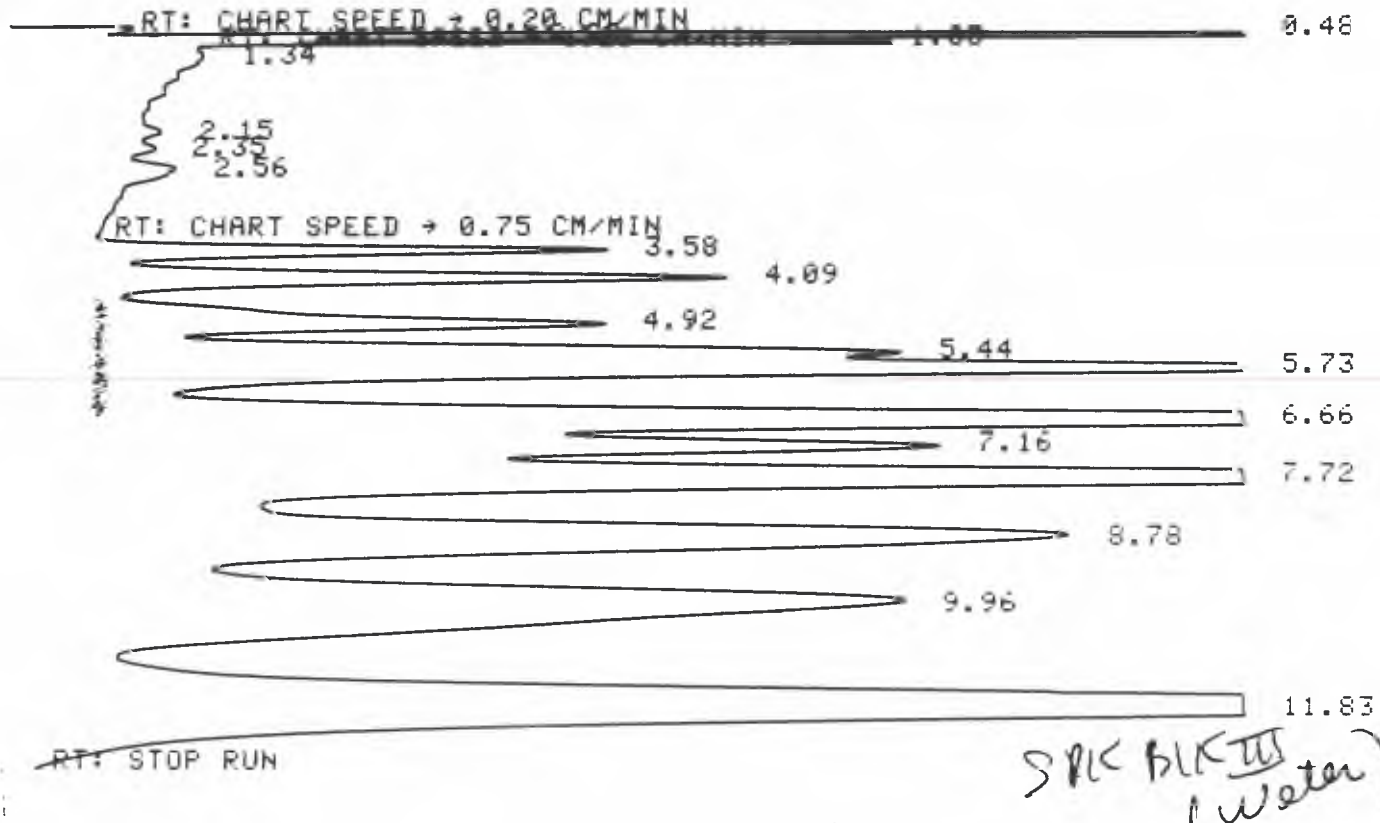
SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
---	---	---	---	---

UNDEFINED VALUE
ABORT PROGRAM AT LINE 870

START PRGM

PCB REPORT PROGRAM
MAKE SURE YOU HAVE ENOUGH PAPER

WHAT IS THE FIRST AND LAST SAMPLE?18,19
INPUT SAMPLE ID (NUMERIC),SAMPLE VOL (ML),SAMPLE WT(GM)
INPUT STDS AS 0.05, 0.5, 5.0
ID # 18
? 1800,1,.25
ID # 19
? 1900,1,.25
ANY MISTAKES OR REPEATS (Y OR N)?N
OVEN TEMP NOT READY



SPK BLK III (Water)

SAMPLE ID: 1800 ✓ VOLUME(ML): 1 ✓ WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 17:51 OCT 31, 1990
SAMPLE # : ID CODE :
18

200ng/ml × 0.010 ml / 0.25 g = 8 ng/g

PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME

60%

0.00 BASELINE @ START RUN = 4387.54
0.00 THRESHOLD @ START RUN = 7
0.00 PEAK WIDTH @ START RUN = 0.16

3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	1881760.00	++	-----	2	1.190	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.75882

[hp] 5880A SAMPLER INJECTION @ 17:51 OCT 31, 1990

SAMPLE # : ID CODE :

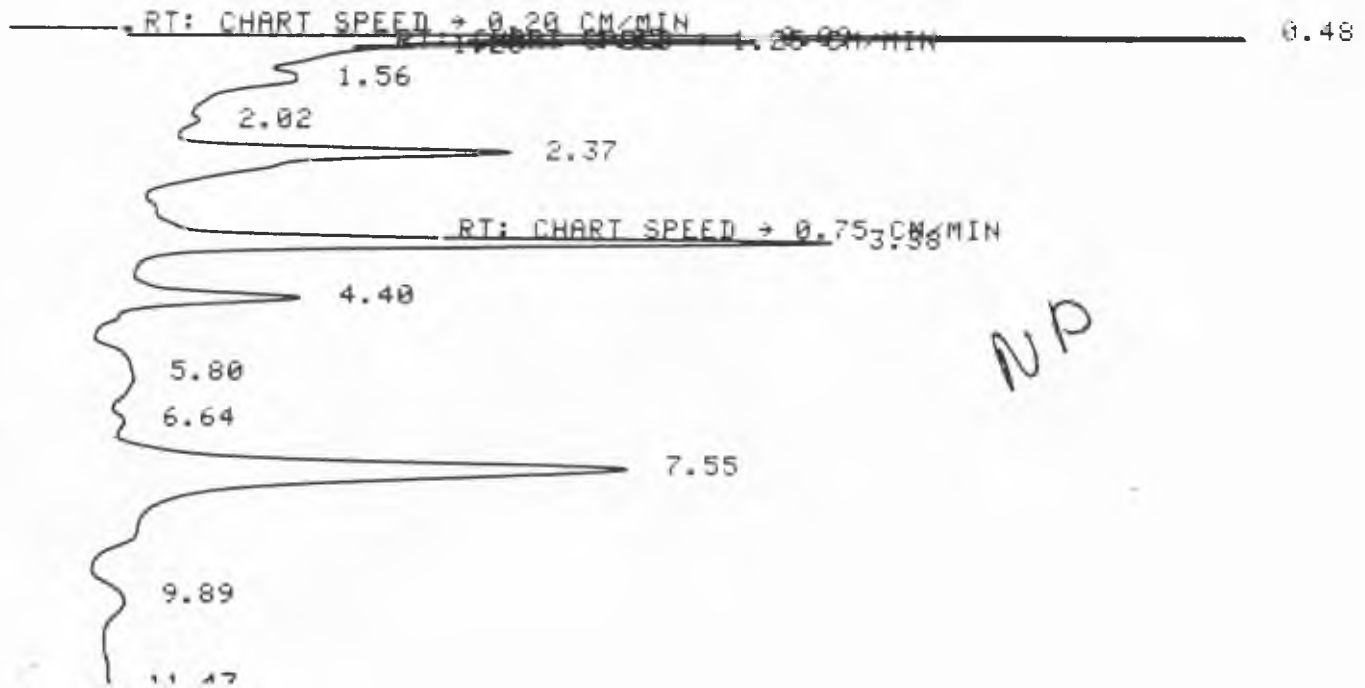
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 4387.54			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2569470.00	PV	0.110	364800.00	4116.55	38.150
0.89	33655.70	VV	-----	5337.71	4083.83	0.500
1.05	72416.10	VV	-----	10293.70	4071.10	1.075
1.34	17332.80	VV	-----	1285.62	4048.28	0.257
2.15	10242.80	VV	-----	773.02	3983.65	0.152
2.35	6638.49	VV	-----	713.74	3968.54	0.099
2.56	19020.10	VP	-----*	1010.95	3951.28	0.282
3.58	76564.20	PV	0.174	6901.24	3879.07	1.137
4.09	121926.00	VV	0.224	8539.78	3855.42	1.810
4.92	138098.00	VV	*-----	6935.46	3816.69	2.050
5.44	157037.00	VV	-----	10959.60	3792.01	2.332
5.73	354570.00	VV	-----	18297.10	3778.46	5.264
6.66	509546.00	VV	-----	23849.70	3735.13	7.565
7.16	236161.00	VV	-----	11551.20	3712.00	3.506
7.72	554787.00	VV	-----	21877.90	3685.53	8.237
8.78	482205.00	VV	-----	13339.20	3636.30	7.159
9.96	532861.00	VV	-----*	11223.20	3581.10	7.912
11.83	842675.00	A VP	-----	22943.00	3493.78	12.511

TOTAL AREA = 6735210.00

MULTIPLIER = 1

OVEN TEMP NOT READY



RT: STOP RUN

SAMPLE ID: 1900 VOLUME(ML): 1 WEIGHT(GM): .25
[hp] 5880A SAMPLER INJECTION @ 18:11 OCT 31, 1990
SAMPLE # : ID CODE :
19
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2575.16				
0.00			THRESHOLD @ START RUN = [illegible]				
0.00			PEAK WIDTH @ START RUN = [illegible]				
0.48	0.43	2323660.00	PV	0.099*	1	[illegible]	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	290022.00	++	-----	2	0.165	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = .658144
[hp] 5880A SAMPLER INJECTION @ 18:11 OCT 31, 1990
SAMPLE # : ID CODE :
19
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2575.16			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2346270.00	PV	0.100*	366445.00	2475.12	74.136
0.89	67335.50	VV	-----	8360.15	2437.78	2.128
1.05	41441.60	VV	-----	5844.66	2423.39	1.309
1.20	57021.70	VV	-----*	3896.20	2409.65	1.802
1.56	48010.90	VV	-----	2403.77	2377.94	1.517
2.02	15453.20	VV	-----	1153.20	2335.77	0.488
2.37	79627.30	VV	-----*	5327.50	2303.91	2.516
3.38	139549.00	VV	*0.223	9795.31	2212.98	4.409
4.40	51489.50	VP	0.297	2711.74	2120.88	1.627
5.80	29664.90	PV	*-----*	539.61	2048.58	0.937
6.64	10688.10	VV	-----	437.42	2035.90	0.338
7.55	241186.00	VP	0.520*	7261.51	2022.10	7.621
9.89	20141.60	PH	-----	457.52	1995.57	0.636
11.43	16957.00	HH	*-----	254.35	1995.57	0.536

TOTAL AREA = 3164830.00
MULTIPLIER = 1

SUMMARY OF PCB RESULTS

SAMPLE#	SAMPLE ID	1260	DILUTION REQ.	DET. LIMIT
18	1800	4.75882	N	.2
19	1900	.658144	N	.2

DO YOU WANT TO STOP THE PRGM? (Y OR N)Y
PR: STOP PROGRAM AT LINE 950

PAGE

EMCON
Northwest, Inc.
P.O. Box 231269, 15055 S.W. Sequoia Pkwy, Suite 140, Portland, OR 97224-7712 • Office (503) 624-7200 • FAX (503) 620-7658

TRANSMITTAL

Date 6 Oct 92

Project YA721

To: Doug Geller - Hanford West

We are enclosing:

Copies	Description
1	DATA PACKAGE
1	DATA VALIDATION REPORT & MEMO
1	COVER LETTER

For your X Use
Approval
Information

Sent by First Class Mail
Federal Express
Other

Comments:

cc:

GC #: 3 Test/Matrix: PCB Date: 10/29/90

Column #: 80 Initials: TC

ESD CS45 (10/26)

Chromatograms enclosed in File #:

1.	0.05 1260 PCB ?	26.	90 19704, 20, 1
2.	0.5 1260	27.	9705, 20, 1
3.	5.0 1260	28.	9706, 20, 1
4.	PCB 1016	29.	9707, 20, 1
5.	1221	30.	9019559, 40, 2.06
6.	1232	31.	9019560, 40, 2.04
7.	1242	32.	Hex
8.	1248	33.	CCC
9.	1254	34.	Blank
10.	Hex	35.	Spike Blank *
11.	Blank wipe	36.	9019540, 4, 30 dil 10x
12.	Blank Soil	37.	9541, 4, 30 dil 10x
13.	Spike Wipe	38.	9542, 4, 30
14.	Spike Soil	39.	9543, 4, 30 dil 10x
15.	90 19695, 20, 1	40.	9544, 4, 30
16.	9696, 20, 1	41.	9545, 4, 30 dil 10x
17.	9697, 20, 1	42.	9546, 4, 30 dil 10x
18.	9698, 20, 1	43.	9547, 4, 30
19.	9699, 20, 1	44.	9551, 4, 30 dil 100x
20.	9700, 20, 1	45.	9553, 4, 30 dil 100x
21.	Hex	46.	Hex
22.	CCC	47.	CCC
23.	90 19701, 20, 1	48.	
24.	9702, 20, 1	49.	
25.	9703, 20, 1	50.	

321FORMAT 1

Chromatograms enclosed in File #:

51.	76.
52.	77.
53.	78.
54.	79.
55.	80.
56.	81.
57.	82.
58.	83.
59.	84.
60.	85.
61.	86.
62.	87.
63.	88.
64.	89.
65.	90.
66.	91. Hexane
67.	92. CCC
68.	93. Blank Wipe
69.	94. Spike Wipe
70.	95. Blank Oil
71.	96. Spike Oil
72.	97. 90102903-1 wipe
73.	98. 90102903-2 wipe
74.	99. 90102903-3 oil
75.	100.

1 He.

2 CCC

321FORMAT 2

DATA PACKAGE
PESTICIDES/PCBs - METHOD 8080

CLIENT : HONG WEST & ASSOCIATES

CASE # : 207/1501-1514

prepared by:

NORTH CREEK ANALYTICAL
18939 120th Ave. N.E. Suite 101
Bothell , WA 98011

NORTH CREEK ANALYTICAL

PESTICIDES/PCBs - METHOD 8080
CASE NARRATIVE

CLIENT: Hong West & Associates
CASE #: 207/1501-1514

Eleven soil and two water samples were analyzed for Pesticides and PCBs by EPA Method 8080. All samples were extracted and analyzed within method hold times.

The following samples had levels of pesticide detected above the ICAL range in the initial analysis:

CLIENT ID	LAB ID
DP-1	207/1501
DP-2	207/1502
DP-3	207/1503
DP-6	207/1508
DP-7	207/1509
DP-11	207/1512
DP-12	207/1513
DP-13	207/1514

These samples were diluted to bring them within the calibration range and reanalyzed. The results of both the original analyses and the reanalyses have been presented in the data package.

A small shoulder peak to DDE was observed in several of the samples on the Rtx-35 Primary column. This peak was within the retention time for Dieldrin. However, due to the large amount of DDE in the samples the Dieldrin peak could not be resolved on the Xti-5 Confirmation column. The sample extract with the highest unconfirmed concentration for Dieldrin (207/1503) was analyzed on our HP GCMS for confirmation. The Dieldrin was confirmed and the GCMS data has been included in the data package.

QC results for the soil samples were within acceptable limits.

QC results for the water samples were within acceptable limits with the exception of the recoveries for the Matrix Spike compounds which were uniformly low. Since the MSD results were acceptable it was assumed that poor extraction technique and not matrix effect was responsible for the low recoveries.

The water samples (DP-4 & DP-5) had low surrogate recoveries. However, there was not enough sample available to perform reextractions.

The data package has been designed to provide sufficient information for stand-alone data validation under SW 846 Method 8080.

" I certify that this data package is in compliance with the Method stated above both technically and for completeness,for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature."

Dennis D. Wells QA Director

SAMPLE RESULTS

NORTH CREEK ANALYTICAL

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Hong West & Associates, Inc.	Client Project ID:	Yarl, #90042	Sampled:	Jul 27, 1992
19730 64th Avenue W.	Sample Descript:	Soil, DP-1	Received:	Jul 28, 1992
Lynnwood, WA 98036	Analysis Method:	EPA 8080	Extracted:	Aug 4, 1992
Attention: Doug Geller	Sample Number:	207-1501	Analyzed:	Aug 17, 1992
			Reported:	Aug 17, 1992

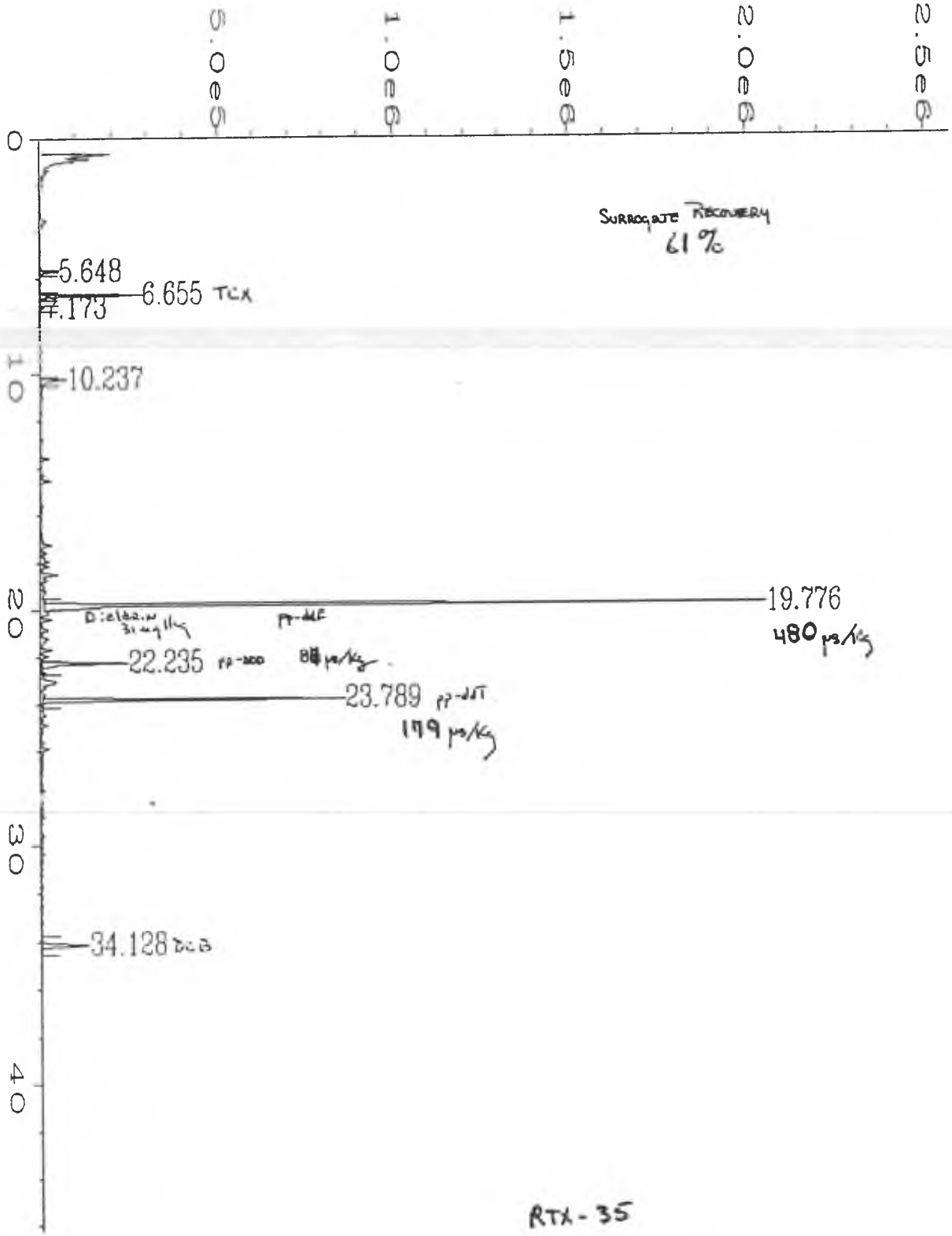
ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit mg/kg (ppm)	Sample Results mg/kg (ppm)
Aldrin	0.0050	N.D.
alpha-BHC	0.0050	N.D.
beta-BHC	0.0050	N.D.
delta-BHC	0.010	N.D.
gamma-BHC (Lindane)	0.0050	N.D.
Chlordane	0.050	N.D.
4,4'-DDD	0.010	0.084
4,4'-DDE	0.0050	0.40
4,4'-DDT	0.010	0.18
Dieldrin	0.013	0.031
Endosulfan I	0.010	N.D.
Endosulfan II	0.0050	N.D.
Endosulfan sulfate	0.050	N.D.
Endrin	0.010	N.D.
Endrin aldehyde	0.015	N.D.
Heptachlor	0.0050	N.D.
Heptachlor expoxide	0.0050	N.D.
Methoxychlor	0.15	N.D.
Toxaphene	0.20	N.D.
PCB-1016	0.050	N.D.
PCB-1221	0.050	N.D.
PCB-1232	0.050	N.D.
PCB-1242	0.050	N.D.
PCB-1248	0.050	N.D.
PCB-1254	0.050	N.D.
PCB-1260	0.050	N.D.

Tetrachloro-m-xylene Surrogate Recovery, %: 61
Analytes reported as N.D. were not present above the stated limit of detection.

NORTH CREEK ANALYTICAL inc

Scot Cocanour
Laboratory Director



RTX-35

Data File Name	: C:\HPCHEM\2\DATA\AUG14\042F0501.D		
Operator	: MARCIA BENDER	Page Number	: 1
Instrument	: NIALL	Vial Number	: 42
Sample Name	: 207-1501	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 5
Acquired on	: 17 Aug 92 02:27 AM	Instrument Method	: PEST1.MTH
Report Created on	: 17 Aug 92 05:49 AM	Analysis Method	: PEST1.MTH

Area Percent Report

Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 17 Aug 92 05:52 AM

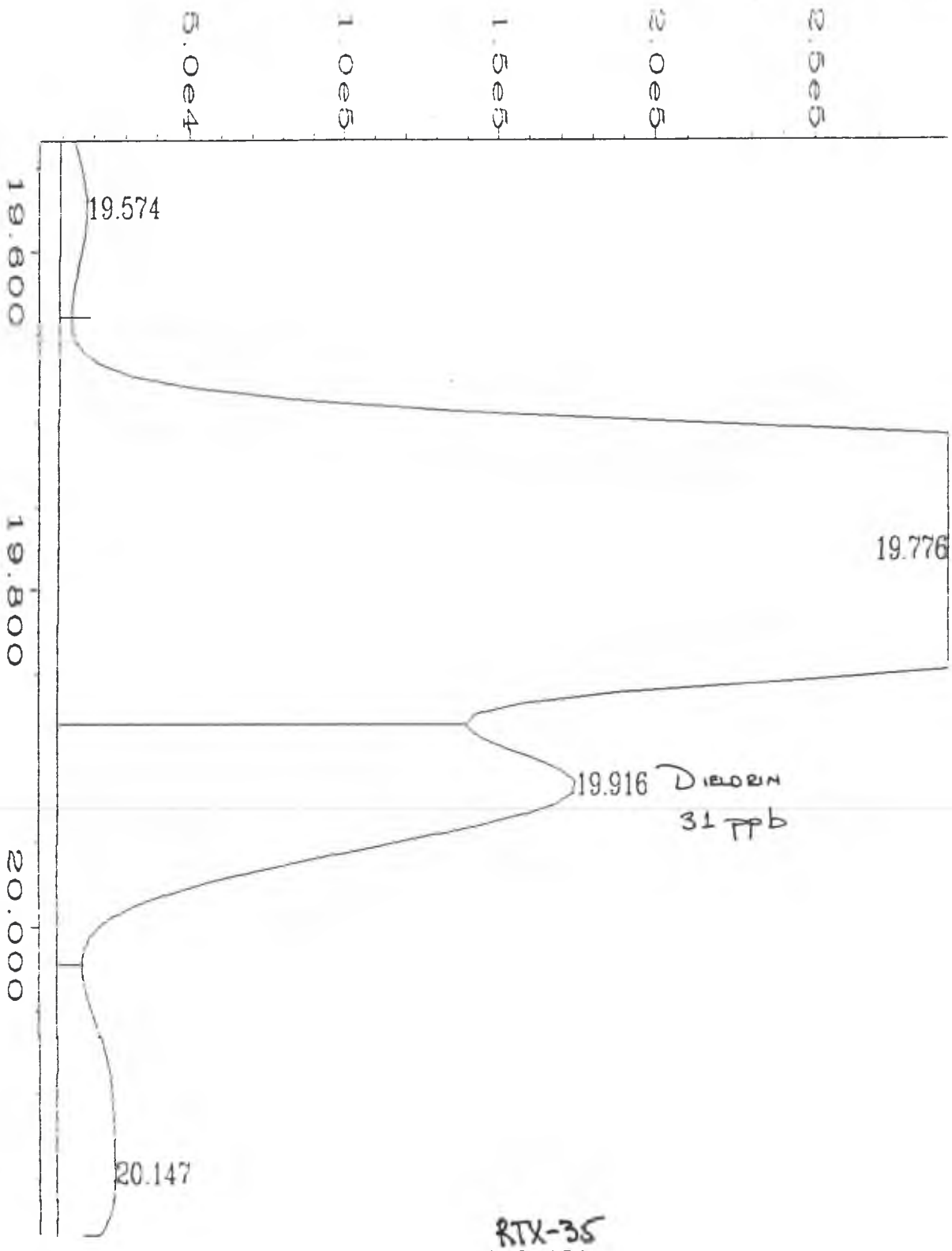
Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : PEST1.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG14\042F0501.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	5.648	242188	52650	MM	0.077	1.1116
2	6.665	1289597 TCX	283134	MM	0.076	5.9191
3	7.173	55847	11269	MM	0.083	0.2563
4	10.237	453261	71511	MM	0.106	2.0804
5	13.575	136829	25792	MM	0.088	0.6280
6	14.522	169186	30185	MM	0.093	0.7765
7	17.235	149499	28078	MM	0.089	0.6862
8	17.573	67647	14423	MM	0.078	0.3105
9	18.128	117851	20848	MM	0.094	0.5409
10	18.486	235044	41584	MM	0.094	1.0788
11	18.727	87644	13632	MM	0.107	0.4023
12	19.200	67726	11048	MM	0.102	0.3109
13	19.776	1.18195E+007 DDE	2045202	MM	0.096	54.2502
14	22.235	1515111 DDD	238615	MM	0.106	6.9542
15	23.789	4432108 DDT	856776	MM	0.086	20.3429
16	34.128	947985	132265	MM	0.119	4.3511

Total area = 2.1787E+007

User Modified



RTX-35

Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 24 Aug 92 05:45 PM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : DEFAULT.MTH

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Area Percent Report

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Data File Name : C:\HPCHEM\2\DATA\AUG14\042F0501.D
Operator : MARCIA BENDER
Instrument : NIALL
Sample Name : 207-1501
Run Time Bar Code:
Acquired on : 17 Aug 92 02:27 AM
Report Created on: 24 Aug 92 05:46 PM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 5
Instrument Method: PEST1.MTH
Analysis Method : DEFAULT.MTH

Sig. 1 in C:\HPCHEM\2\DATA\AUG14\042F0501.D

Pk#	Ret Time	Area	Height	Type	Width	Area %
1	19.200	77620	11366	PV	0.097	0.6152
2	19.439	14584	2275	VV	0.092	0.1156
3	19.574	46350	8461	VV	0.084	0.3674
4	19.776	1.12055E+007	2052698	VV	0.086	88.8189
5	19.916	784162	165629	VV	0.073	6.2156
6	20.147	174196	18413	VV	0.152	1.3807
7	20.389	156767	30085	PV	0.082	1.2426
8	20.514	8602	2353	VV	0.061	0.0682
9	20.603	11501	2001	VV	0.093	0.0912
10	20.848	136832	18467	PV	0.124	1.0846

Total area = 1.26161E+007

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? 9706, 20, 1
ID # 29
? 9707, 20, 1
ID # 30
? 9559, 40, 2.06
ID # 31
? 9560, 40, 2.04
ID # 32
? 111, 1, 1
ID # 33
? 222, 1, 1
ANY MISTAKES OR REPEATS (Y OR N)?N

RT: CHART SPEED → 0.20 CM/MIN 0.47

RT: CHART SPEED → 1.25 CM/MIN
1.32

1.98

2.51

RT: CHART SPEED → 0.75 CM/MIN
3.51
4.01

4.82
5.35
5.63

6.54
7.04
7.59

8.63

9.80

11.64

RT: STOP RUN

SAMPLE ID: .05 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 10:51 OCT 29, 1990
SAMPLE # : ID CODE :
1 1254 .1 UG/M
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1698.28				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2268940.00	PV	0.10 *	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	93595.70	++	-----	2	3.637E-02	1260

MULTIPLIER = 1

RECALIB 0.05 UG/ML

AMT OF AROCLOR 1260 (PPM) = .05
[hp] 5880A SAMPLER INJECTION @ 10:51 OCT 29, 1990

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 0.00                          BASELINE @ START RUN = 1650.27
 0.00                          THRESHOLD @ START RUN =  7
 0.00                          PEAK WIDTH @ START RUN = 0.16
 0.47    0.43       2172530.00    PV    0.09 *    1      1.000  HEXANE
 1.00                          RP: BL MODE → 1
 3.60                          RP: AREA SUM → ON
11.00                          RP: AREA SUM → OFF
11.00   11.00        865336.00    ++    -----     2      0.511  1260
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MULTIPLIER = 1

RECALIB 0.5 UG/ML

AMT OF AROCLOR 1260 (PPM) = .5
【hp】 5880A SAMPLER INJECTION @ 11:12 OCT 29, 1990
SAMPLE # : ID CODE :
2
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1650.27			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2176670.00	PH	0.09 *	367358.00	1624.73	50.788
1.03	10938.70	HH	-----	985.56	1624.73	0.255
2.00	6647.09	HH	-----	284.29	1624.73	0.155
2.53	8429.86	HH	-----	790.36	1624.73	0.197
3.53	46798.30	HH	0.186	3948.68	1624.73	1.092
4.03	72737.40	HH	0.235	4839.12	1624.73	1.697
4.85	81323.20	HH	*-----	3892.19	1624.73	1.897
5.37	74824.20	HH	-----	5335.34	1624.73	1.746
5.65	188480.00	HH	-----	9125.12	1624.73	4.398
6.56	258396.00	HH	-----	11581.70	1624.73	6.029
7.05	115534.00	HH	-----	5585.39	1624.73	2.696
7.61	298733.00	HH	-----	10829.90	1624.73	6.970
8.65	249675.00	HH	-----	6516.52	1624.73	5.826
9.81	284356.00	HH	-----*	5342.30	1624.73	6.635
11.65	412289.00	A HH	-----	9945.92	1624.73	9.620

TOTAL AREA = 4285840.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.49
1.42
1.73
1.87
2.13
2.53
2.81
RT: CHART SPEED → 0.75 CM/MIN 3.54
4.04
4.86
5.39
5.67
6.58
7.07
7.64
8.70

11.71

~~RT: STOP RUN~~

SAMPLE ID: 5 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:32 OCT 29, 1990
SAMPLE # : ID CODE :
3
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1817.05				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.49	0.43	3219960.00	BB	0.137*	1	1.017	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	7497040.00	++	-----	2	5.221	1260

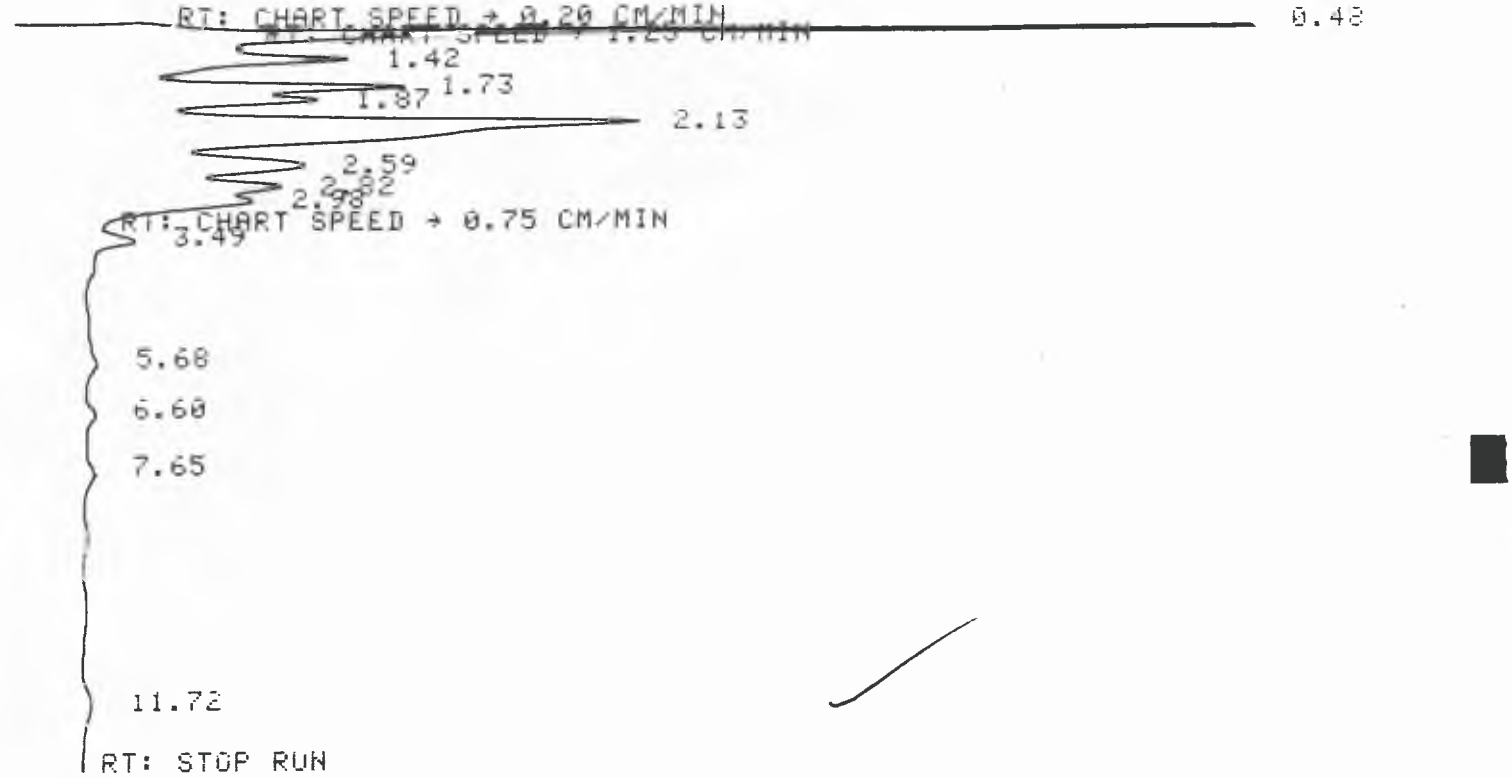
MULTIPLIER = 1

RECALIB 5.0 UG/ML

AMT OF AROCLOR 1260 (PPM) = 5
[hp] 5880A SAMPLER INJECTION @ 11:32 OCT 29, 1990
SAMPLE # : ID CODE :
3
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1817.05			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.49	3243970.00	BV	0.138*	367166.00	1814.46	14.995
1.04	12756.80	VV	-----*	1367.54	1811.57	0.059
1.42	7755.30	VV	-----	760.84	1809.50	0.036
1.73	4995.73	VV	-----	695.63	1807.89	0.023
1.87	2987.63	VV	-----	432.81	1807.16	0.014
2.13	16201.20	VV	-----*	1171.19	1805.75	0.075
2.53	50251.00	VV	0.150	5229.77	1803.63	0.232
2.81	12906.10	VP	-----*	889.39	1802.18	0.060
3.54	373166.00	PH	0.184	31804.00	1799.93	1.725
4.04	588854.00	HH	0.236	38992.00	1799.93	2.722
4.86	699971.00	HH	*-----	32588.80	1799.93	3.236
5.39	612607.00	HH	-----	44118.00	1799.93	2.832
5.67	1577450.00	HH	-----	74954.70	1799.93	7.292
6.58	2256340.00	HH	-----	104132.00	1799.93	10.430
7.07	1031130.00	HH	-----	48743.80	1799.93	4.766
7.64	2665150.00	HH	-----	96694.30	1799.93	12.320
8.70	2202170.00	HH	-----	56532.30	1799.93	10.179
9.86	2543010.00	HH	-----*	46145.90	1799.93	11.755
11.71	3731730.00 A	HH	-----	88967.60	1799.93	17.250

TOTAL AREA = 21633400.00
MULTIPLIER = 1



SAMPLE ID: 1016 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 11:53 OCT 29, 1990
SAMPLE # : ID CODE :
4
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 2441.04				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2475380.00	BB	0.106*	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	9237.40	++	-----	2	4.935E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.93473E-03
[hp] 5880A SAMPLER INJECTION @ 11:53 OCT 29, 1990
SAMPLE # : ID CODE :
4
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 2441.04			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.48	2537010.00	BV	0.108*	366576.00	2366.33	90.143
1.42	32992.60	VV	-----	3042.51	2219.22	1.172
1.73	27057.80	VV	-----	3832.48	2171.75	0.961

2.59	32594.30	VV	-----	2632.57	2036.59	1.156
2.82	22943.30	VV	-----	2375.43	3001.68	0.815
2.98	20744.90	VV	-----	2009.64	1977.87	0.737
3.49	6351.13	VP	0.202	493.04	1898.09	0.226
5.68	4159.32	PP	-----	150.03	1727.14	0.148
6.60	2943.90	PV	0.308	149.56	1703.86	0.105
7.65	3729.51	VP	-----	145.66	1688.04	0.133
11.72	4925.24	A PP	-----	124.60	1649.57	0.175

TOTAL AREA = 2814440.00
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.48
RT: CHART SPEED → 1.25 CM/MIN
1.43
1.73
2.13
2.54
RT: CHART SPEED → 0.75 CM/MIN
3.48

RT: STOP RUN

SAMPLE ID: 1221 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 12:13 OCT 29, 1990
SAMPLE # : ID CODE :
5
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1655.43				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.48	0.43	2783350.00	PV	0.12	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				

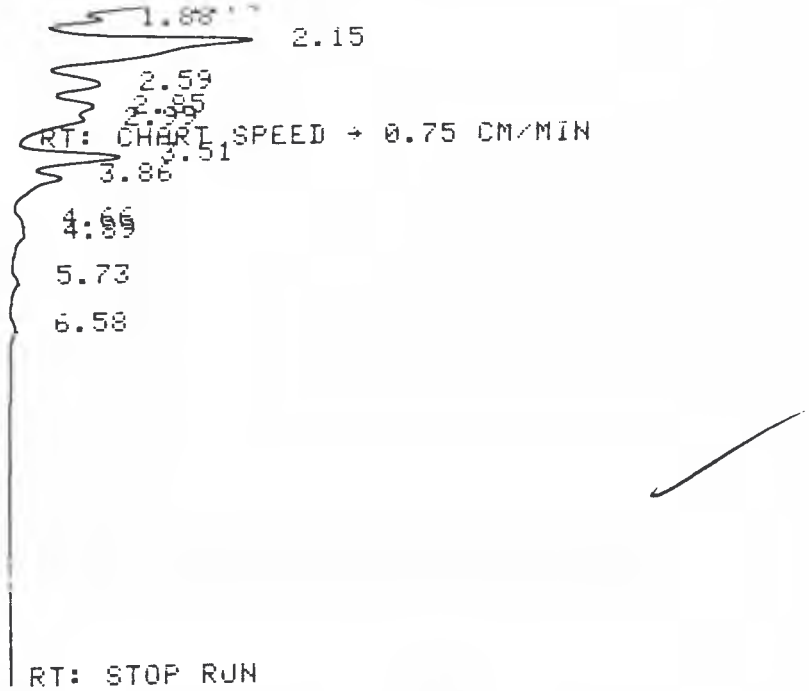
MULTIPLIER = 1

OVEN TEMP NOT READY

RT: CHART SPEED → 0.20 CM/MIN 0.47

GC-WAI 74703/ 927 0625

070



SAMPLE ID: 1232 VOLUME(ML): 1 WEIGHT(GM): 1
[hp] 5880A SAMPLER INJECTION @ 12:34 OCT 29, 1990
SAMPLE # : ID CODE :
6
PCB DETERMINATION (AROCLOR)
ESTD

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00			BASELINE @ START RUN = 1657.73				
0.00			THRESHOLD @ START RUN = 7				
0.00			PEAK WIDTH @ START RUN = 0.16				
0.47	0.43	2200500.00	PV	0.09	1	1.000	HEXANE
1.00			RP: BL MODE → 1				
3.60			RP: AREA SUM → ON				
11.00			RP: AREA SUM → OFF				
11.00	11.00	9104.48	++	-----	2	4.864E-03	1260

MULTIPLIER = 1

AMT OF AROCLOR 1260 (PPM) = 4.86373E-03
[hp] 5880A SAMPLER INJECTION @ 12:34 OCT 29, 1990
SAMPLE # : ID CODE :
6
AREA %

RT	AREA	TYPE	WIDTH	HEIGHT	BASELINE	AREA %
0.00			BASELINE @ START RUN = 1657.73			
0.00			THRESHOLD @ START RUN = 7			
0.00			PEAK WIDTH @ START RUN = 0.16			
0.47	2204310.00	PH	0.09	367359.00	1613.96	91.232
0.97	7987.37	HH	-----	833.01	1613.96	0.331
1.12	2460.15	HH	-----	504.91	1613.96	0.102
1.21	3014.35	HH	-----	551.07	1613.96	0.125
1.44	26245.10	HH	-----	2948.99	1613.96	1.086
1.74	14241.10	HH	-----	1941.92	1613.96	0.589
[illegible]	[illegible]	HH	-----	[illegible]	1613.96	0.792