AR TARGET SHEET

The following document was too large to scan as one unit, therefore it has been broken down into sections.

DOCUMENT # B07MK9-TMA-369

EDMC # 0045426

SECTION 9 OF 10

CONTINUATION NOTICE

RECORD NO: 0045426

This record has been filmed in ~~two~~ three parts.
To view the beginning portion of this record, see the microfilm reel and frame number listed below.

CONTINUED FROM:

REEL NO: 96-13492 PART 2
FRAME NO: 5892

9613492.5893

0045426

37 of 42

E-93-22/2978-62

WESTINGHOUSE HANFORD COMPANY

241-T-106 DATA VALIDATION

DISTRIBUTION FORM

SDG: B07K04

Document Title Final QA Record Case #: 02-032

Fraction: SVOA

Document Number: _____ Date: 4/15/94

		DISTRIBUTION			
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J. Grover (ERL)		M. Schwarz (ERL)		Westinghouse EDMC	X
L. Hammerle (HCSEA)		A. Shen (HCSEA)			
K. Pool (WHC)					

Project Files (1=Administrative; 2=Correspondence; 3=Source Data; 4=Technical Data)

1.1	File Index		1.6.6.3	Plans Doc. Log		3.4	Original Chemical Data
1.2	Distribution Lists		1.6.6.4	Deliverables Doc. Log		3.5	Original Radiochemical Data
1.3	Project Procedures		1.7	Budget			
1.4	Project Modifications		1.7.1	Downloads		4.1	Task Plan
1.5	Staff		1.7.2	M-113s			
1.5.1	Staff Resumes		1.7.3	A-208s		4.2	Data Pkg. Completeness Verif. Checklist
1.5.2	Staff Training		1.7.4	Budget Status		4.3	Data Valididation Calcs./Annotated DP	X
1.5.3	Auth. Former Site Employee		1.7.5	Invoices		4.4	Prelim. QA Records
1.6	QA		1.8	Requisitions			
1.6.1	QA Manual		1.9	Meeting Minutes		4.5	Data Valid. & Qual. Summary Rpts.
1.6.2	QA Implementation		1.10	Record of Telecon		4.5.1	Internal Drafts/Comments/Resol.
1.6.3.1	QA Audits-Deliverables		1.11	Progress Reports		4.5.2	WHC Review Draft Comments/Resol.
1.6.3.2	QA Audits-Files		1.12	Subcontractor (HC)		4.5.3	Final Report
1.6.4.1	Audit Resps. - Deliverables					4.6	Weekly Status Reports
1.6.4.2	Audit Resps. - Files		2.1	Incoming Correspondence		4.7	Weekly Management Reports
1.6.5	QA Training		2.2	Outgoing Correspondence			
1.6.6.1	QA Manual Document Log		2.3	Internal Correspondence			
1.6.6.2	Procedure Document Log						
			3.1	Task Order			
			3.2	Sample Lists			
			3.3	Data Validation Procedures			

SEMI-VOLATILE ORGANIC DATA VALIDATION CHECKLIST - FORM A-2

PROJECT: 241-T-101	REVIEWER: KR/AS	DATE: 10/25/93
LABORATORY: TMA	CASE: 02-~~302~~	SDG: B07K04
SAMPLES/MATRIX:	032 KR	
B07K04 - water		
B07K05 - soil		
B07MLO - water		

1. DATA PACKAGE COMPLETENESS

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for submittal.

Data Package Item	Present?: Yes	No	N/A
Case Narrative	X		
Data Summary	X		
Chain-of-Custody	X		
QC Summary			
Surrogate report	X		
MS/MSD report	X		
Blank summary report	X		
GC/MS tuning report	X		
Internal standard summary report	X		
Sample Data			
Sample reports	X		
TIC reports for each sample	X		
RIC reports for all samples	X		
Raw and corrected spectra for all detected results	X		
Raw and corrected library search data for all reported TIC	X		
Quantitation and calculation data for all TIC	X		
Standards Data			
Initial calibration report	X		
RIC and quantitation reports for initial calibration	X		
Continuing calibration reports	X		
RIC and quantitation reports for cont. calibrations	X		
Internal standard summary report	X		
Raw QC Data			
Tuning report, spectra and mass lists	X		
Blank analysis reports	X		
TIC reports for all blanks	X		
RIC and quantitation reports for blanks	X		
Raw and corrected spectra for all detected results in blanks	X		
Raw and corrected library search data for all reported TIC	X		
Quantitation and calculation data for all TIC	X		
MS/MSD report forms	X		

Data Package Item	Present?:	Yes	No	N/A
RIC and quantitation reports for MS/MSD		X		
Additional Data				
Moisture/% solids data sheets				
Reduction formulae				
Instrument time logs				
Chemist notebook pages				
Sample preparation sheets				

2. HOLDING TIMES

Were all samples extracted within holding time?	Yes	No	N/A
Were all samples analyzed within holding time?	Yes	No	N/A

ACTION: If any holding times were exceeded, but not by greater than a factor of two, qualify associated samples as estimated (J for detects or UJ for nondetects), otherwise reject all nondetects (R) and qualify all associated detects as estimated (J).

3. INSTRUMENT CALIBRATION, TUNING AND PERFORMANCE CHECKS

3.1 GC/MS TUNING AND PERFORMANCE CHECKS

Is a DFTPP tune report present for each applicable 12h period?	Yes	No	N/A
Do all tunes on all instruments meet the tuning criteria?	Yes	No	N/A
Do all tunes on all instruments meet the expanded criteria?	Yes	No	N/A
Has the laboratory made any calculation or transciption errors?	Yes	No	N/A
Have the proper significant figures been reported?	Yes	No	N/A

ACTION: If the mass calibration is out of specification but within the expanded criteria, qualify associated data as estimated (J for detects and UJ for nondetects). If all tuning criteria are not met, qualify all associated data as unusable (R).

3.2 INITIAL CALIBRATION

Is an initial calibration report provided for all instruments?	Yes	No	N/A
Are all RSD values ≤30% (2/88 SOW)?	Yes	No	N/A
Are all RRF values ≥0.05 (2/88 SOW)?	Yes	No	N/A
Are all applicable RSD values ≤20.5% (3/90 SOW)?	Yes	No	N/A
Are all applicable RSD values ≤40% (3/90 SOW)?	Yes	No	N/A

Are all applicable RRF values within SOW limits (3/90 SOW)?	Yes	No	N/A
Are all erratic performance compound RRF values ≥0.01 (3/90 SOW)?	Yes	No	N/A

ACTION: With the exception of compounds that exhibit erratic performance and making allowances for up to four TCL compounds or surrogates, if any RRF value is out of specification qualify all detected results for the particular compound as estimated (J) and all nondetects as unusable (R). Making allowances for up to four TCL compounds or surrogates, if any RSD value is out of specification qualify all associated data as estimated (J for detects or UJ for nondetects).

3.3. CONTINUING CALIBRATION

Is a continuing calibration report present for all 12-h periods in which associated samples were analyzed?	Yes	No	N/A
Are all RRF values ≥0.05 (2/88 SOW)?	Yes	No	N/A
Are all %D values ≤25% (2/88 or 3/90 SOW)?	Yes	No	N/A
Are all %D values ≤40% (3/90 SOW)?	Yes	No	N/A
Are all RRF values within SOW limits (3/90 SOW)?	Yes	No	N/A
Are all erratic performance compound RRF values ≥0.01 (3/90 SOW)?	Yes	No	N/A

ACTION: With the exception of compounds that exhibit erratic performance and making allowances for up to four TCL compounds or surrogates, if any RRF value is out of specification qualify all associated detected results as estimated and all nondetects as unusable (R). Making allowances for up to four TCL compounds or surrogates, if any %D is out of specification, qualify all associated results as estimated (J for detects or UJ for nondetects).

4. BLANKS

4.1 LABORATORY BLANKS

Has the laboratory conducted a method blank analysis per matrix for every extraction batch?	Yes	No	N/A
Are compounds reported in the laboratory blanks?	Yes	No	N/A

ACTION: Qualify all sample results < 10 times the highest blank concentration for the common laboratory contaminants, as nondetects (U) or at the SQL if the result is < CRQL. Qualify all remaining sample results < 5 times the blank concentration in similar fashion.

4.2. FIELD BLANKS

Are compounds reported in the field blanks? Yes No N/A

ACTION: Qualify all detected sample results ≤ 5 times the amount in any valid field blank as nondetects (U) and note the results of the field blanks in the validation narrative.

5. ACCURACY

5.1 SURROGATE RECOVERY/SYSTEM MONITORING COMPOUND RECOVERY

Are any surrogate recoveries out of specification? Yes No N/A

Are any surrogate recoveries < 10%? Yes No N/A

Are any method blank surrogate recoveries out of specification? Yes No N/A

ACTION: Qualify all associated data as estimated (J for detects and UJ for nondetects) if at least two semivolatile surrogates are out of specification. If any surrogate is below 10% recovery qualify associated detected results as estimated (J) and associated nondetect results as unusable (R). If method blank surrogates are out of specification and associated sample surrogates are acceptable no qualification is required, however, the laboratory should be contacted for an explanation.

5.2 MATRIX SPIKE RECOVERY

Has an MS/MSD analysis been conducted per matrix in the sample group? Yes No N/A

Are MS/MSD recoveries within specification? Yes No N/A

Are there any calculation errors? Yes No N/A

ACTION: If an MS/MSD analysis has not been conducted contact the laboratory for an explanation. Review the MS/MSD recoveries in conjunction with other QC data such as surrogate recoveries and note the results in the validation narrative. If MS/MSD recoveries are out of specification and sample concentration is > 5 times the spike concentration, no qualification is required, otherwise qualify results as follows: Qualify positive results for the specific class of compound (aromatics and non-aromatics) as estimated (J) in all samples if associated surrogates are also out of specification. The qualification shall only be done on samples of similar matrix as the MS/MSD samples. If it is determined from the review that only the spiked samples are affected by low recoveries, qualify only the results for the spiked sample as described above. If it is determined from the review that out of specification MS/MSD recoveries are indicative of systematic problems in the laboratory such as sample preparation or sample-specific matrix interferences this must be noted in the validation narrative along with the potential affect on the sample results.

5.3 PERFORMANCE AUDIT SAMPLES

Are the results for the performance audit samples within the acceptance limits? Yes No N/A

ACTION: Note the results of the performance audit samples in the validation narrative.

6. PRECISION

6.1 MATRIX SPIKE/MATRIX SPIKE DUPLICATES

Are all RPD values within specification? Yes No N/A

Are there any calculation errors? Yes No N/A

ACTION: Review the MS/MSD results in conjunction with other QC data such as field duplicates and note the results in the validation narrative. If MS/MSD RPDs are out of specification and sample results are > 5xCRQL qualify positive results for the specific class of compound (aromatics and non-aromatics) as estimated (J). If it is determined from the review that out of specification MS/MSD results are indicative of systematic problems in the laboratory such as sample preparation or sample-specific matrix interferences this must be noted in the validation narrative along with the potential affect on the sample results.

6.2 FIELD DUPLICATE SAMPLES

Are field duplicate RPD values acceptable? Yes No N/A

ACTION: Note the results of the field duplicate samples in the validation narrative.

6.3 FIELD SPLIT SAMPLES

Are field split RPD values acceptable? Yes No N/A

ACTION: Note the results of the field split samples in the validation narrative.

7. SYSTEM PERFORMANCE

7.1 INTERNAL STANDARDS PERFORMANCE

Are any internal standard area counts outside the acceptance limits? Yes No N/A

Are retention times for any internal standard outside the ±30 second windows established by the most recent calibration check? Yes No N/A

ACTION: If the area counts are outside the acceptance limits qualify all associated results as estimated (J for detects and UJ for nondetects. If it is determined from the review that out of specification area counts and relative retention times are indicative of systematic problems within the laboratory the reviewer may consider rejection of all affected sample data (R).

8. COMPOUND IDENTIFICATION AND QUANTITATION

8.1 COMPOUND IDENTIFICATION

Are detected compounds within ±0.06 relative retention time units of the associated calibration standard?	Yes	No	N/A
Are all ions at a relative intensity of ≥10% in the standard spectra present in the sample spectra?	Yes	No	N/A
Do the relative intensities between the standard and sample spectra agree within 20%?	Yes	No	N/A
Have all ions > 10% in the sample spectra that are not present in the standard spectra been reviewed for possible background contamination?	Yes	No	N/A
Are molecular ions in the reference spectrum present in the sample spectrum?	Yes	No	N/A

ACTION: If compound identification is in error and retention time and mass spectral criteria are exceeded qualify all affected positive results as unusable (R). If cross-contamination between analyses is suspected, qualify affected data as unusable (R).

8.2 REPORTED RESULTS AND QUANTITATION LIMITS

Has the laboratory used the correct RRF values and internal standards for quantitation?	Yes	No	N/A
Are results and quantitation limits calculated properly?	Yes	No	N/A
Has the laboratory reported the sample quantitation limits within 5xCRQL values?	Yes	No	N/A

ACTION: If the quantitation limits are in error contact the laboratory for clarification and note in the validation narrative.

8.3 TENTATIVELY IDENTIFIED COMPOUNDS

Has the laboratory conducted a spectral library search on all candidate TIC peaks in accordance with the analytical SOW?	Yes	No	N/A
Has the laboratory properly identified and coded all TIC?	Yes	No	N/A

ACTION: If the laboratory has failed to search the minimum number of TIC peaks in the chromatogram contact the laboratory for submittal of the required data. Qualify as nondetects (U) all TIC compounds present in samples and blanks using the review criteria specified in the validation requirements. If TIC identification is in error sample results should be qualified as nondetects (U) or unusable (R). If TIC identifications are judged valid, qualify the results as presumptive and estimated (JN).

9. OVERALL ASSESSMENT AND SUMMARY

Has the laboratory conducted the analysis in accordance with the analytical SOW?	Yes	No	N/A
Were project specific data quality objectives met for this analysis?	Yes	No	N/A

ACTION: Summarize all the data qualifications and complete the data validation narrative as specified in Section 10.0 of the data validation requirements.

COMMENTS (attach additional sheets as necessary):

HOLDING TIME SUMMARY

SDG: B07K04	VALIDATOR: KRISTINE ROHA	DATE: 10/25/93	PAGE 1 OF 1
COMMENTS: Samples were extracted and analyzed within holding times			

FIELD SAMPLE ID	ANALYSIS TYPE	DATE SAMPLED	DATE PREPARED	DATE ANALYZED	PREP. HOLDING TIME, DAYS	ANALYSIS HOLDING TIME, DAYS	QUALIFIER
B07K04	SemiVOA	2/8/93	2/11	2/16	3	5	—
B07K05	↓	↓	2/12	2/22	4	10	—
B07MLO	↓	↓	2/11	2/16	3	5	—

AS 10/27/93

CALIBRATION DATA SUMMARY

SDG: B07K04	VALIDATOR: Kristine R	DATE: 10/25	PAGE 1 OF 1
COMMENTS:			
CALIB. TYPE:	INITIAL	CONTINUING	INSTRUMENT:

CALIB. DATE	COMPOUND	RF	RSD/%D/%R	SAMPLES AFFECTED	QUALIFIER
2/18/93	3,3'-dichlorobenzidine		23.1	—	—
2/18/93	2,4-dinitrophenol		25.5	—	—
				No qual required. Two TCL compounds allowed	
2/4/93	Benzo(g,h,i) Perylene		33.6	—	— AS 10/26/94

AS 10/27/93

BLANK AND SAMPLE DATA SUMMARY

SDG: B07K04 | VALIDATOR: Kristine Hollis | DATE: 10/25/93 | PAGE 1 OF 1

COMMENTS:

	SAMPLE ID	COMPOUND	RESULT	Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	QUALIFIER
W	SBIK0211C	Bis(2-ethylhexyl)phthalate	8	J		ug/L				
	↓	UH	3	J	5.60	ug/L			B07K04	U
S	SBIK0212S	Di-n-butylphthalate	110	J		ug/Kg			B07K05	U
		UH	780	J	5.27				B07K05	U
		U Ketone	99000	J	5.68					U
		UH	1100	J	6.68					U
		UH	160	J	7.22					U
								AS 10/27/93		

ACCURACY DATA SUMMARY

SDG: B07K04	VALIDATOR: KRISTINE ROHA	DATE: 10/25/93	PAGE 1 OF 1
COMMENTS: Surrogate & MS/MSD percent recoveries are within control			

SAMPLE ID	COMPOUND	% RECOVERY	SAMPLE(S) AFFECTED	QUALIFIER REQUIRED

AS 10/27/93

9613402.5905

PRECISION DATA SUMMARY

SDG: B07K04	VALIDATOR: KRISTINE REIA	DATE: 10/25/93	PAGE 1 OF 1

COMMENTS: The MS/MSD RPDs and Internal Standard area counts are within Control.

COMPOUND	SAMPLE ID:	SAMPLE ID:	RPD	SAMPLES AFFECTED	QUALIFIER

KR 10/27/93

CALCULATION SUMMARY

SDG: BC7KC4	REVIEWER: KRISTINE ROLLA	DATE: 10/25/93	PAGE 1 OF 1

COMMENTS: SEE ATTACHED SHEETS FOR CALIBRATION CHECKS.

NC Sample Calculations

MS/MSD Verification.

Phenol: MS 120.4/150 = 80 MSD 121.2/150 = 81

$$RPD = \frac{120.4-121.2}{(120.4+121.2)/2} \quad 100 = 0.6 = 1$$

1,2,4-Trichlorobenzene: MS 79.2/100 = 79 MSD 84.4/100 = 84

$$\frac{79.2-84.4}{(79.2+84.4)/2} \quad 100 = 4.3$$

MS 10/27/93

DATA QUALIFICATION SUMMARY

SDG: BC7KC4	VALIDATOR: Christine Bolla	DATE: 10/25/93	PAGE 1 OF 1
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
TIC rt 5.60	U	BC7M1C, BC7KC4	Blank Contam
~~BC7KC5~~	~~U~~		
Di-n-butylphthalate	U	BC7KC5	Blank Contam
TIC. rt. 5.27	U		
5.68	U		
6.68	U		
7.22	U		
ALL TICS NOT	JN	BC7KC5	Presumptive
Qualified U		BC7KC4	Evidence

10/27/93

TELEPHONE CONTACT SUMMARY

VALIDATOR:	DATE:	TIME:	PAGE____OF____
COMPANY:			
ADDRESS:			
PERSON CONTACTED:			
TELEPHONE:		FAX:	
PROJECT/CASE/SDG:			
REMARKS:			
No Phone Contact Made			

ACTION:

9613492.5910

04,05,10

Package ID: B071204-TMA-440

SEMI-VOLATILE ORGANIC DATA VERIFICATION CHECKLIST - FORM A-2

Review the data package for completeness and check off the items below. If any data review elements are missing, contact the laboratory for submittal.

Data Package Item	Present?: Yes	No	N/A
Quality Control (QC) Summary			
Surrogate Summary report	X		
MS/MSD Summary report	X		
Blank summary report	X		
GC/MS tuning report	X		
Sample Data			
Sample reports	X		
TIC reports for each sample	X		
RIC reports for all samples	X		
Raw and corrected spectra for all detected results	X		
Raw and corrected library search data for all reported TIC	X		
Quantitation and calculation data for all TIC	X		
Standards Data			
Initial calibration report	X		
RIC and quantitation reports for initial calibration	X		
Continuing calibration reports	X		
RIC and quantitation reports for cont. calibrations	X		
Internal standard summary report	X		
Raw QC Data			
Tuning, spectra and mass lists	X		
Blank Data			
Blank analysis reports	X		
TIC reports for all blanks	X		
RIC and quantitation reports for blanks	X		
Raw and corrected spectra for all detected results in blanks	X		
Raw and corrected library search data for all reported TIC	X		
Quantitation and calculation data for all TIC	X		
Matrix Spike/Matrix Spike Duplicate (MS/MSD) Data			
MS/MSD Analysis Reports	X		
RIC and quantitation reports for MS/MSD	X		
Additional Data			
Moisture/% solids data sheets	X		
Sample preparation sheets	X		

Comments: _____

9615492.5911

000022A
N3-02-03 160

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations 241-T-106

Borehole Number: 299-W10-196

Collection Date 2-8-93
Time 1300

Ice Chest No. JML 283

Field Logbook No. EFL-1053

Bill of Lading/Airbill No. 2536453034

Offsite Property No. WA3-0-090#3

Method of Shipment AIR (Emery)

Shipped to TMA-Norcal

Possible Sample Hazards/Remarks Keep samples chilled. All analysis per lab statement of work.

Sample Identification

B07K04

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) gross alpha, gross beta, GEA including Co-60, Ru-106,
1 x 2000 ml., plastic, water (HNO_3) } Ce-144, Cs-137,isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.S. Thompson Wendy S Thompson 2-9-93 1100	Al. Gobaleza Alonso Gobaleza	2-10-93 1140
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.5912

0000026

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector W. S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
B07K04	W	2-8-93	1300	✓ 3 x 40 ml., amber glass, water, CLP-VOA
				✓ 3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions
				SO_4, PO_4, NO_2-NO_3, pH.
				✓ 1 x 1000 ml., plastic, water (HNO_3), ICP/AA metals, Bi, Hg
				✓ 1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-
				CN
				✓ 1 x 250 ml., amber glass, water (H_2SO_4), TOC
				✓ 1 x 4000 ml., plastic, water (HNO_3)
				✓ 1 x 2000 ml., plastic, water (HNO_3)
				gross alpha, gross beta, GEA including Co-60,
				Ru-106, Ce-144, Cs-137, isotopic U, total U,
				Am-241, Np-237, Pu-238,-239,-240, Sr-90.
				✓ 1 x 1000 ml., plastic, water (HCL), Tc-99
				✓ 2 x 250 ml., amber glass, water, C-14

*Type of Sample

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

Field Information Samples support the 241-T-106 soil investigation. All analysis per lab statement of work.

Special Handling and/or Storage Keep samples chilled.

Possible Sample Hazards None indicated with field instruments.

9613492.5913

000002C

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator Wendy S. Thompson — PROJECT NUMBER: 92-336

Company Contact Wendy S. Thompson — Telephone (509) 376-2153

Project Designation/Sampling Locations 241-T-106 — Collection Date 2-8-93

Borehole Number: 299-W10-196 — Time: ① 0910 ② 0730

Ice Chest No. SML 284 — Field Logbook No. EFL-1053

Bill of Lading/Airbill No. 2536953034 — Offsite Property No. W93-0-090-58

Method of Shipment AIR (EMERY)

Shipped to TMA-Norcal

Possible Sample Hazards/Remarks Keep samples chilled. All analysis per lab statement of work. Samples are nonhazardous/nonradioactive with field instruments

Sample Identification

① B07K05

1x120 ml., amber glass, soil, CLP-VOA

1x250 ml., amber glass, soil, CLP-Semi-VOA

1x250 ml., amber glass, soil, Anions-SO_4, PO_4, NO_2-NO_3, CL, F, pH

1x250 ml., amber glass, soil, ICP/AA metals, Bi, CN, Hg

1x500 ml., amber glass, soil, gross alpha, gross beta, GEA, including Co_{60}, Ru_{106}, Ce_{144}, Cs_{137} isotopic U, total U, Am_{241}, Np_{237}, $Pu_{238/239/240}$, Sr_{90}, Tc_{99}, C_{14}

1x120ml., amber glass, soil, CLP-VOA

~~1x250 ml., amber glass, soil, CLP-Semi-VOA~~

1x250 ml., amber glass, soil, Anions-SO_4, PO_4, NO_2-NO_3, Cl, F, pH

1x250 ml., amber glass, soil, ICP/AA metals, Bi, CN, Hg

1x500 ml., amber glass, soil, gross alpha, gross beta, GEA, including Co_{60}, Ru_{106}, Ce_{144}, Cs_{13} isotopic U, total U, Am_{241}, Np_{237}, $Pu_{238/239/240}$, Sr_{90}, Tc_{99}, C_{14}

② B07K07; 3x40ml; amberglass; water; CLP-VOA

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Name)

Relinquished By	Date	Time	Received By	Date	Time
W.S. Thompson Wendy S Thompson	2-9-93	1100	Al Gobaleza Alfonso Gobaleza	2-10-93	1140

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.5914

000002D

(TMA [illegible] - soil)

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector Wendy S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

	Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
(1)	B07K05	S	2-8-93	0910	1x120ml., amber glass, soil, CLP-VOA
					1x250 ml., amber glass, soil, CLP-Semi-VOA
					1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
					1x250 ml., glass, soil, ICP/AA metals, Bi, CN, Hg
					1x500 ml., glass, soil, gross alpha, gross beta, GEA,
			2-8-93		including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241,
					Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14
(2)	B07K07	W	2-8-93	0730	3x40ml; amber glass; water CLP-VOA
					1x120ml., amber glass, soil, CLP-VOA
					1x250 ml., amber glass, soil, CLP-Semi-VOA
			2-8-93		1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
					1x250 ml., glass, soil, ICP/AA metals, Bi, CN, Hg
					1x500 ml., glass, soil, gross alpha, gross beta, GEA,
					including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241,
					Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14
					1x120 ml., amber glass, soil, CLP-VOA
			2-8-93		1x250 ml., amber glass, soil, CLP-Semi-VOA
					1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
					1x250ml., glass, soil, ICP/AA metals, Bi, CN, Hg
					1x500 ml., glass, soil, gross alpha, gross beta, GEA
					including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241,
					Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14

*Type of Sample: A = Air; DL = Drum Liquids; DS = Drum Solids; L = Liquid; O = Oil; S = Soil; SE = Sediment; SL = Sludge; SO = Solid; T = Tissue; W = Water; WI = Wipe; X = Other

Field Information: Samples support the 241-T-106 characterization (soil). All analysis per lab statement of work.

Special Handling and/or Storage: KEEP SAMPLES CHILLED.

Possible Sample Hazards: Samples are non hazardous with field instruments

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000002E

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator: Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact: Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations: 241-T-106

Borehole Number: 299-W10-196

Collection Date: 2-8-93

Time: 1000

Ice Chest No.: SML ~~2-83~~ 284 WH 2-9-93

Field Logbook No. EFL-1053

Bill of Lading/Airbill No.: 2536953034

Offsite Property No. W93-0-0190#3

Method of Shipment: AIR (Emery)

Shipped to: TMA-Norcal

Possible Sample Hazards/Remarks: Keep samples chilled. All analysis per lab statement of work. Sample is nonhazardous/non radioactive

Sample Identification

B07ML0

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) gross alpha, gross beta, GEA including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 2000 ml., plastic, water (HNO_3)

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.S. Thompson 2-9-93 Wendy S Thompson 1100	Gabaleza Monica Holaufa	2-10-93 1145
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.5916

CASE NO. 02-032

SEMIVOLATILES

9613492.5917

000207

2C
WATER SEMIVOLATILE SURROGATE RECOVERY

Name: TMA/ARLI Contract: WHC

Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
1	B07K04	85	88	88	90	86	96	95	81	0
2	B07ML0	90	91	92	93	90	101	97	80	0
3	B07K04MS	89	87	89	94	89	101	97	82	0
4	B07K04MSD	95	93	97	99	95	106	102	85	0
5	SBLK0211C	85	81	79	92	92	85	94	76	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(35-114)	
S2 (FBP)	= 2-Fluorobiphenyl	(43-116)	
S3 (TPH)	= Terphenyl-d14	(33-141)	
S4 (PHL)	= Phenol-d5	(10-110)	
S5 (2FP)	= 2-Fluorophenol	(21-110)	
S6 (TBP)	= 2,4,6-Tribromophenol	(10-123)	
S7 (2CP)	= 2-Chlorophenol-d4	(33-110)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(16-110)	(advisory)

KC 10/05/93

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Level:(low/med) LOW

	EPA SAMPLE NO.	S1 (NBZ) #	S2 (FBP) #	S3 (TPH) #	S4 (PHL) #	S5 (2FP) #	S6 (TBP) #	S7 (2CP) #	S8 (DCB) #	TOT OUT
01	B07K05	62	68	77	75	66	73	73	64	0
02	B07K05MS	79	77	98	84	77	90	84	75	0
03	B07K05MSD	72	71	93	78	75	85	79	72	0
04	SBLK0212S	67	67	85	77	71	67	76	68	0

		QC LIMITS	
S1 (NBZ)	= Nitrobenzene-d5	(23-120)	
S2 (FBP)	= 2-Fluorobiphenyl	(30-115)	
S3 (TPH)	= Terphenyl-d14	(18-137)	
S4 (PHL)	= Phenol-d5	(24-113)	
S5 (2FP)	= 2-Fluorophenol	(25-121)	
S6 (TBP)	= 2,4,6-Tribromophenol	(19-122)	
S7 (2CP)	= 2-Chlorophenol-d4	(20-130)	(advisory)
S8 (DCB)	= 1,2-Dichlorobenzene-d4	(20-130)	(advisory)

LC 10/20/93

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

3C

WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix Spike - EPA Sample No.: B07K04

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC LIMITS REC.
Phenol	150.0	0	120.4	80	12-110
2-Chlorophenol	150.0	0	134.8	90	27-123
1,4-Dichlorobenzene	100.0	0	76.60	77	36- 97
N-Nitroso-di-n-prop.(1)	100.0	0	87.20	87	41-116
1,2,4-Trichlorobenzene	100.0	0	79.20	79	39- 98
4-Chloro-3-methylphenol	150.0	0	137.0	91	23- 97
Acenaphthene	100.0	0	84.40	84	46-118
4-Nitrophenol	150.0	0	111.8	75	10- 80
2,4-Dinitrotoluene	100.0	0	77.40	77	24- 96
Pentachlorophenol	150.0	0	115.6	77	9-103
Pyrene	100.0	0	76.00	76	26-127

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	150.0	121.2	81	1	42	12-110
2-Chlorophenol	150.0	137.6	92	2	40	27-123
1,4-Dichlorobenzene	100.0	82.00	82	6	28	36- 97
N-Nitroso-di-n-prop.(1)	100.0	95.20	95	9	38	41-116
1,2,4-Trichlorobenzene	100.0	84.40	84	6	28	39- 98
4-Chloro-3-methylphenol	150.0	144.8	97	6	42	23- 97
Acenaphthene	100.0	91.20	91	8	31	46-118
4-Nitrophenol	150.0	118.4	79	5	50	10- 80
2,4-Dinitrotoluene	100.0	81.80	82	6	38	24- 96
Pentachlorophenol	150.0	125.0	83	8	50	9-103
Pyrene	100.0	82.00	82	8	31	26-127

(1) N-Nitroso-di-n-propylamine

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

KP 10/25/93

RPD: 0 out of 11 outside limits
Spike Recovery: 0 out of 22 outside limits

COMMENTS: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05

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000210

3D

SOIL SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

TMA/ARLI Contract: WHC

TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

ike - EPA Sample No.: B07K05 Level:(low/med) LOW

ND	SPIKE ADDED (ug/Kg)	SAMPLE CONCENTRATION (ug/Kg)	MS CONCENTRATION (ug/Kg)	MS % REC #	QC LIMITS REC.
	2600	0	1820	70	26- 90
ophenol	2600	0	1969	76	25-102
hlorobenzene	1740	0	1243	71	28-104
so-di-n-prop.(1)	1740	0	1309	75	41-126
richlorobenzene	1740	0	1254	72	38-107
o-3-methylphenol	2600	0	2091	80	26-103
thene	1740	0	1285	74	31-137
phenol	2600	0	2302	89	11-114
itrotoluene	1740	0	1306	75	28- 89
lorophenol	2600	0	2292	88	17-109
	1740	0	1275	73	35-142

ND	SPIKE ADDED (ug/Kg)	MSD CONCENTRATION (ug/Kg)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
	2600	1719	66	6	35	26- 90
ophenol	2600	1854	71	7	50	25-102
hlorobenzene	1740	1191	68	4	27	28-104
so-di-n-prop.(1)	1740	1205	69	8	38	41-126
richlorobenzene	1740	1167	67	7	23	38-107
o-3-methylphenol	2600	1997	77	4	33	26-103
thene	1740	1198	69	7	19	31-137
phenol	2600	2278	88	1	50	11-114
itrotoluene	1740	1271	73	3	47	28- 89
lorophenol	2600	2320	89	1	47	17-109
	1740	1222	70	4	36	35-142

troso-di-n-propylamine

to be used to flag recovery and RPD values with an asterisk outside of QC limits

KK 10/25/93

out of 11 outside limits
covery: 0 out of 22 outside limits

: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10

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000211

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK0211C

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 30216S02 Lab Sample ID: A302032-BLK

Instrument ID: SHERMA Date Extracted: 02/11/93

Matrix: (soil/water) WATER Date Analyzed: 02/16/93

Level:(low/med) LOW Time Analyzed: 1523

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	B07K04	A302032-01D	30216S03	02/16/93
02	B07ML0	A302032-02B	30216S06	02/16/93
03	B07K04MS	A302032-01E	30216S04	02/16/93
04	B07K04MSD	A302032-01F	30216S05	02/16/93

COMMENTS: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CAP/.25,30216S01,3DFT0216S1

4B
SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

SBLK0212S

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 30222S07 Lab Sample ID: A302032-BLK

Instrument ID: SHERMA Date Extracted: 02/12/93

Matrix: (soil/water) SOIL Date Analyzed: 02/22/93

Level:(low/med) LOW Time Analyzed: 1322

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	B07K05	A302032-03D	30222S08	02/22/93
02	B07K05MS	A302032-03E	30222S09	02/22/93
03	B07K05MSD	A302032-03F	30222S10	02/22/93

COMMENTS: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CAP/.25,30222S01,3DFT0222S1

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000213

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 3DFT0204S5 DFTPP Injection Date: 02/04/93

Instrument ID: SHERMA DFTPP Injection Time: 1054

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	45.2
68	Less than 2.0% of mass 69	0.1 (0.2)1
69	Mass 69 relative abundance	43.3
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	25.0 - 75.0% of mass 198	45.9
197	Less than 1.0% of mass 198	0.2
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.1
275	10.0 - 30.0% of mass 198	19.3
365	Greater than 0.75% of mass 198	1.64
441	Present, but less than mass 443	7.6
442	40.0 - 110.0% of mass 198	52.7
443	15.0 - 24.0% of mass 442	10.0 (19.0)2

1-Value is % mass 69 2-Value is % mass 442

KP 10/25/93

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD020	10PPM3SV0201	30204S02	02/04/93	1203
02	SSTD080	40PPM3SV0201	30204S04	02/04/93	1322
03	SSTD120	60PPM3SV0201	30204S05	02/04/93	1414
04	SSTD160	80PPM3SV0201	30204S06	02/04/93	1451
05	SSTD050	25PPM3SV0201	30204S07	02/04/93	1532

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 3DFT0216S1 DFTPP Injection Date: 02/16/93

Instrument ID: SHERMA DFTPP Injection Time: 1329

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	52.8
68	Less than 2.0% of mass 69	0.7 (1.5)1
69	Mass 69 relative abundance	48.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	49.3
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	20.4
365	Greater than 0.75% of mass 198	1.84
441	Present, but less than mass 443	7.7
442	40.0 - 110.0% of mass 198	59.4
443	15.0 - 24.0% of mass 442	9.9 (16.7)2

1-Value is % mass 69 2-Value is % mass 442

KR 10/25/93

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	25PPM3SV0201	30216S01	02/16/93	1408
02	SBLK0211C	A302032-BLK	30216S02	02/16/93	1523
03	B07K04	A302032-01D	30216S03	02/16/93	1600
04	B07K04MS	A302032-01E	30216S04	02/16/93	1641
05	B07K04MSD	A302032-01F	30216S05	02/16/93	1722
06	B07ML0	A302032-02B	30216S06	02/16/93	1803

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5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 3DFT0218S1 DFTPP Injection Date: 02/18/93

Instrument ID: SHERMA DFTPP Injection Time: 1021

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	47.3
68	Less than 2.0% of mass 69	0.3 (0.6)1
69	Mass 69 relative abundance	44.6
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	48.1
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 0.75% of mass 198	1.69
441	Present, but less than mass 443	8.5
442	40.0 - 110.0% of mass 198	64.2
443	15.0 - 24.0% of mass 442	11.4 (17.7)2

1-Value is % mass 69 2-Value is % mass 442

KK 10/25/93

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	25PPM3SV0201	30218S01	02/18/93	1041
02	SSTD020	10PPM3SV0201	30218S02	02/18/93	1116
03	SSTD080	40PPM3SV0201	30218S03	02/18/93	1155
04	SSTD120	60PPM3SV0201	30218S04	02/18/93	1234
05	SSTD160	80PPM3SV0201	30218S05	02/18/93	1313

9613492.5926

000216

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID: 3DFT0222S1 DFTPP Injection Date: 02/22/93

Instrument ID: SHERMA DFTPP Injection Time: 0909

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	45.5
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	43.3
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	45.6
197	Less than 1.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 30.0% of mass 198	21.1
365	Greater than 0.75% of mass 198	2.03
441	Present, but less than mass 443	8.3
442	40.0 - 110.0% of mass 198	65.8
443	15.0 - 24.0% of mass 442	11.3 (17.1)2

1-Value is % mass 69 2-Value is % mass 442

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD050	25PPM3SV0127	30222S01	02/22/93	928
02	SBLK0212S	A302032-BLK	30222S07	02/22/93	1322
03	B07K05	A302032-03D	30222S08	02/22/93	1401
04	B07K05MS	A302032-03E	30222S09	02/22/93	1440
05	B07K05MSD	A302032-03F	30222S10	02/22/93	1519

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID (Standard): 30216S01 Date Analyzed: 02/16/93

Instrument ID: SHERMA Time Analyzed: 1408

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	27848	8.40	96288	11.37	53544	15.79
	UPPER LIMIT	55696	8.90	192576	11.87	107088	16.29
	LOWER LIMIT	13924	7.90	48144	10.87	26772	15.29
	EPA SAMPLE NO.						
01	B07K04	27026	8.40	91622	11.37	47322	15.77
02	B07ML0	27360	8.40	90812	11.37	47754	15.79
03	B07K04MS	26160	8.42	89634	11.37	47806	15.80
04	B07K04MSD	26590	8.44	90144	11.40	49076	15.80
05	SBLK0211C	27998	8.40	92520	11.37	49102	15.80

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

KK 10/25/93

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

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

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID (Standard): 30216S01 Date Analyzed: 02/16/93

Instrument ID: SHERMA Time Analyzed: 1408

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	87450	19.52	49967	25.62	24511	28.87
	UPPER LIMIT	174900	20.02	99934	26.12	49022	29.37
	LOWER LIMIT	43725	19.02	24984	25.12	12256	28.37
	EPA SAMPLE NO.						
01	B07K04	72561	19.50	36651	25.61	26913	28.87
02	B07ML0	72775	19.54	37753	25.62	30073	28.89
03	B07K04MS	75460	19.54	39450	25.62	27162	28.89
04	B07K04MSD	75594	19.55	37902	25.64	26722	28.91
05	SBLK0211C	76848	19.54	36367	25.62	27792	28.89

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

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

9613492.5929

000219

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID (Standard): 30222S01 Date Analyzed: 02/22/93

Instrument ID: SHERMA Time Analyzed: 928

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	27360	8.40	98972	11.37	55832	15.80
	UPPER LIMIT	54720	8.90	197944	11.87	111664	16.30
	LOWER LIMIT	13680	7.90	49486	10.87	27916	15.30
	EPA SAMPLE NO.						
01	B07K05	33150	8.44	116965	11.39	63236	15.80
02	B07K05MS	29072	8.44	98126	11.37	54656	15.80
03	B07K05MSD	29720	8.47	101320	11.40	57058	15.80
04	SBLK0212S	29966	8.44	102786	11.39	56272	15.80

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

KK 10/25/93

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

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

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Lab File ID (Standard): 30222S01 Date Analyzed: 02/22/93

Instrument ID: SHERMA Time Analyzed: 928

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	92930	19.54	59157	25.62	27318	28.84
	UPPER LIMIT	185860	20.04	118314	26.12	54636	29.34
	LOWER LIMIT	46465	19.04	29578	25.12	13659	28.34
	EPA SAMPLE NO.						
01	B07K05	104826	19.55	66762	25.64	48179	28.87
02	B07K05MS	87752	19.54	56067	25.62	36728	28.86
03	B07K05MSD	89866	19.55	58034	25.64	39450	28.87
04	SBLK0212S	94376	19.55	58634	25.64	43269	28.87

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = + 100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = +0.50 minutes of internal standard RT.
RT LOWER LIMIT = -0.50 minutes of internal standard RT.

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

9613492.5931

000221
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07K04

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S03

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07K04

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S03

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9613492.5933

000223

EPA SAMPLE NO.

B07K04

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01D

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S03

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 2

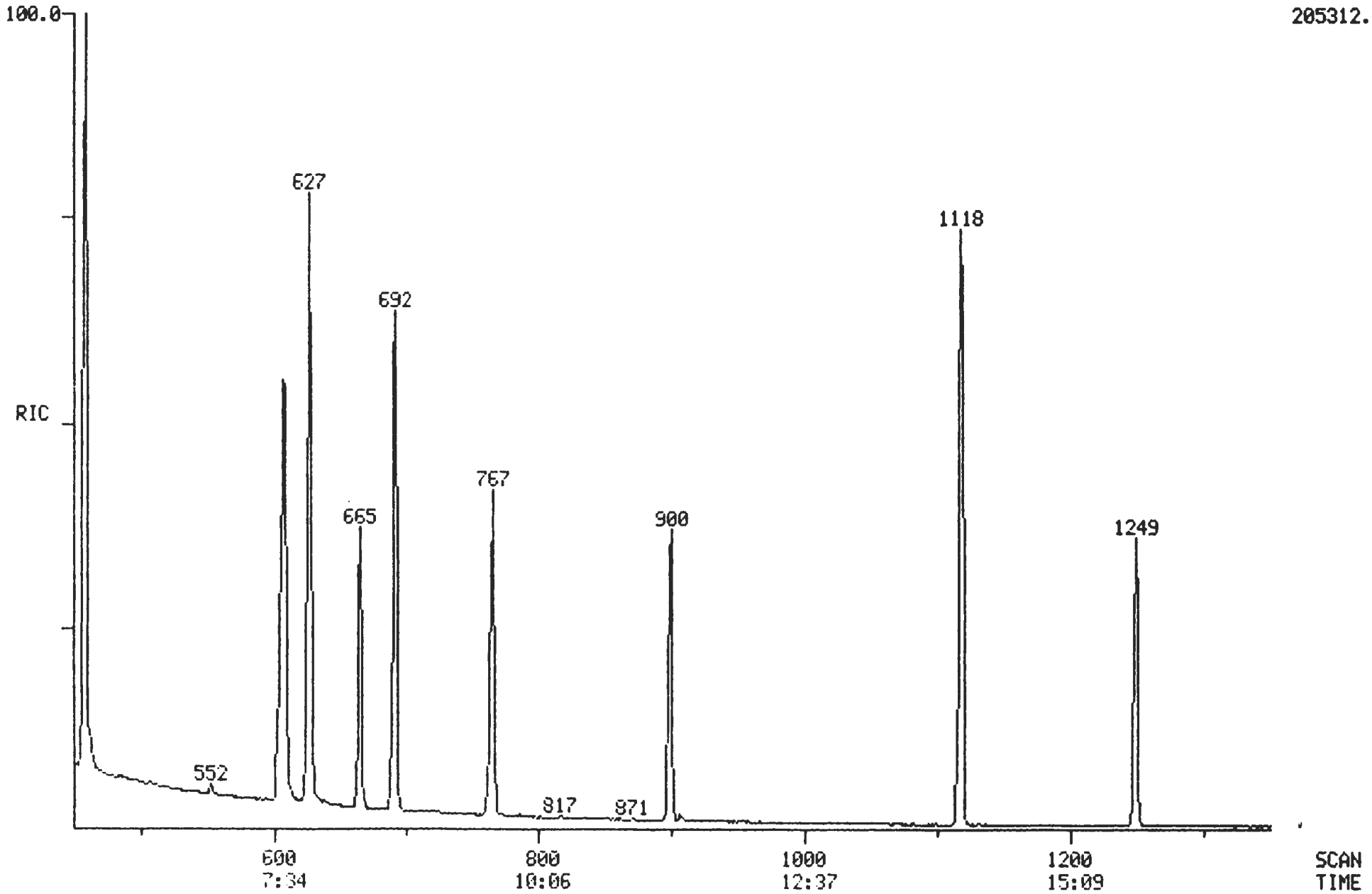
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.30	4	JN
2.	UNKNOWN HYDROCARBON	5.58	3	~~BJ~~ LI

KR 10/25/93

000224

RIC DATA: 30216S03 #1 SCANS 450 TO 1350
02/16/93 16:00:00 CALI: 30216S03 #3
SAMPLE: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

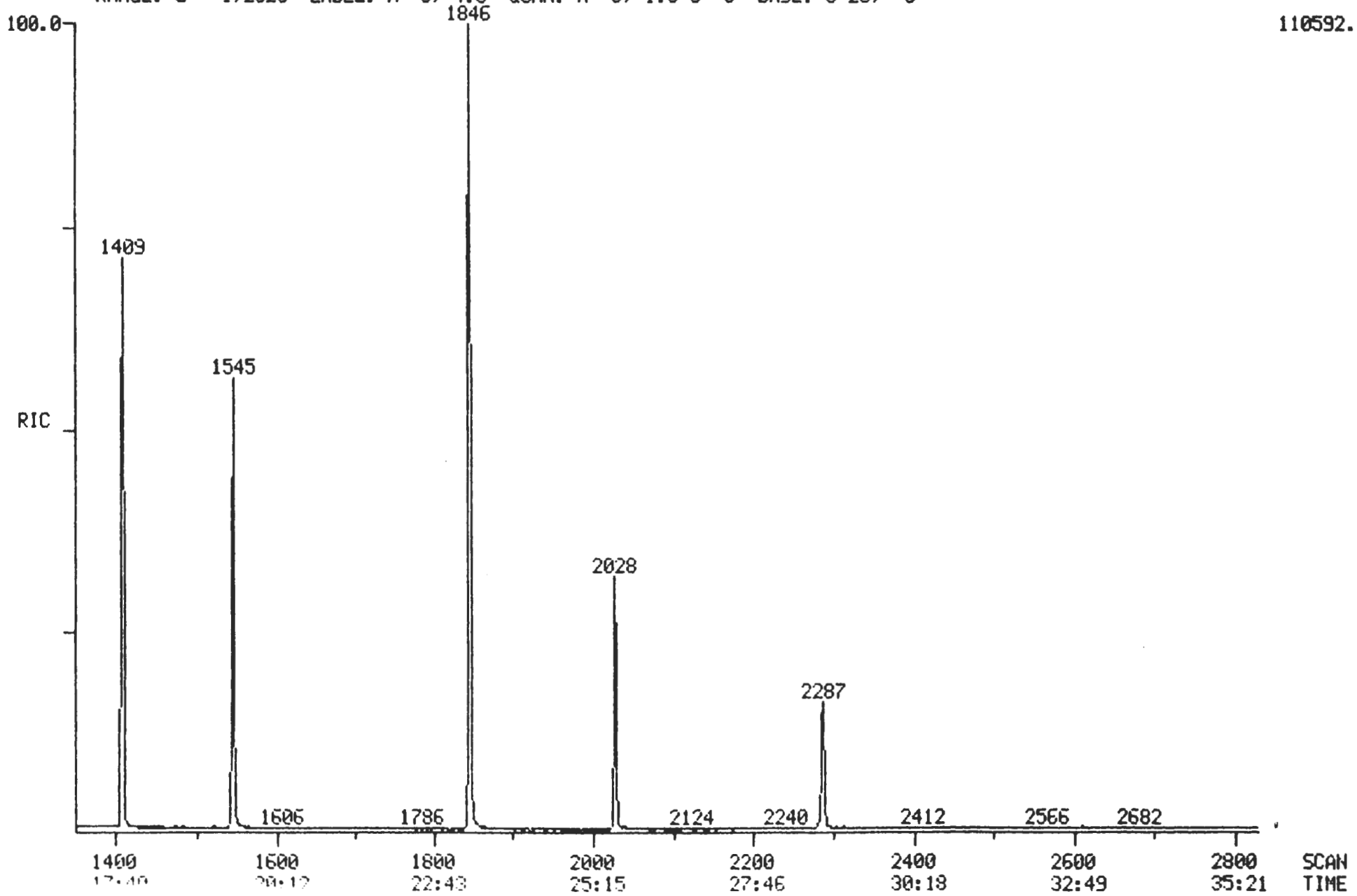


96130924.5934

000225

RIC
02/16/93 16:00:00
SAMPLE: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S03 #1 SCANS 1350 TO 2828
CALI: 30216S03 #3



96130492.5935

Quantitation Report File: 30216S03

Data: 30216S03.TI
02/16/93 16:00:00
Sample: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	665	8:24	1	1.000	A BB	27026.	20.000	NG/UL	3.53
2	136	900	11:22	2	1.000	A BB	91622.	20.000	NG/UL	3.53
3	164	1249	15:46	3	1.000	A BB	47322.	20.000	NG/UL	3.53
4	188	1545	19:30	4	1.000	A BB	72561.	20.000	NG/UL	3.53
5	240	2028	25:36	5	1.000	A BB	36651.	20.000	NG/UL	3.53
6	264	2287	28:52	6	1.000	A BB	26913.	20.000	NG/UL	3.53
7	112	459	5:48	1	0.690	A BB	124192.	64.694	NG/UL	11.43
8	99	607	7:40	1	0.913	A BB	130854.	67.195	NG/UL	11.87
9	330	1409	17:47	3	1.128	A BB	23782.	71.841	NG/UL	12.69
10	82	767	9:41	2	0.852	A BB	89962.	42.618	NG/UL	7.53
11	172	1118	14:07	3	0.895	A BV	137692.	44.164	NG/UL	7.80
12	244	1846	23:18	5	0.910	A BB	107950.	43.817	NG/UL	7.74
13	132	627	7:55	1	0.943	A BB	110842.	71.297	NG/UL	12.59
14	152	692	8:44	1	1.041	A BB	51196.	40.572	NG/UL	7.17

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	64.69	25.00	3.676	1.421	2.59
8	7:41	1.00	0.913	1.00	67.20	25.00	3.873	1.441	2.69
9	17:49	1.00	1.128	1.00	71.84	25.00	0.402	0.140	2.87
10	9:42	1.00	0.852	1.00	42.62	25.00	0.786	0.461	1.70
11	14:08	1.00	0.894	1.00	44.16	25.00	2.328	1.318	1.77

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	23:21	1.00	0.909	1.00	43.82	25.00	2.356	1.344	1.75
13	7:55	1.00	0.941	1.00	71.30	25.00	3.281	1.150	2.85
14	8:44	1.00	1.039	1.00	40.57	25.00	1.515	0.934	1.62

Quantitation Report File: 30216S03

Data: 30216S03.TI
02/16/93 16:00:00
Sample: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000229

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	665	8:24	1	1.000	A BB	27026.	20.000	NG/UL	3.52
2	136	900	11:22	2	1.000	A BB	91622.	20.000	NG/UL	3.52
3	164	1249	15:46	3	1.000	A BB	47322.	20.000	NG/UL	3.52
4	188	1545	19:30	4	1.000	A BB	72561.	20.000	NG/UL	3.52
5	240	2028	25:36	5	1.000	A BB	36651.	20.000	NG/UL	3.52
6	264	2287	28:52	6	1.000	A BB	26913.	20.000	NG/UL	3.52
7	112	459	5:48	1	0.690	A BB	124192.	64.694	NG/UL	11.39
8	99	607	7:40	1	0.913	A BB	130854.	67.195	NG/UL	11.83
9	330	1409	17:47	3	1.128	A BB	23782.	71.841	NG/UL	12.64
10	82	767	9:41	2	0.852	A BB	89962.	42.618	NG/UL	7.50
11	172	1118	14:07	3	0.895	A BV	137692.	44.164	NG/UL	7.77
12	244	1846	23:18	5	0.910	A BB	107950.	43.817	NG/UL	7.71
13	132	627	7:55	1	0.943	A BB	110842.	71.297	NG/UL	12.55
14	152	692	8:44	1	1.041	A BB	51196.	40.572	NG/UL	7.14
~~15~~	~~94~~	~~609~~	~~7:41~~	~~1~~	~~0.916~~	~~A BB~~	~~3446.~~	~~1.408~~	~~NG/UL~~	~~0.25~~
16	NOT FOUND									
17	NOT FOUND									
18	NOT FOUND									
19	NOT FOUND									
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

02/17/93

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	64.69	25.00	3.676	1.421	2.59
8	7:41	1.00	0.913	1.00	67.20	25.00	3.873	1.441	2.69
9	17:49	1.00	1.128	1.00	71.84	25.00	0.402	0.140	2.87
10	9:42	1.00	0.852	1.00	42.62	25.00	0.786	0.461	1.70
11	14:08	1.00	0.894	1.00	44.16	25.00	2.328	1.318	1.77
12	23:21	1.00	0.909	1.00	43.82	25.00	2.356	1.344	1.75
13	7:55	1.00	0.941	1.00	71.30	25.00	3.281	1.150	2.85
14	8:44	1.00	1.039	1.00	40.57	25.00	1.515	0.934	1.62
15	7:42	1.00	0.916	1.00	1.41	25.00	0.102	1.812	0.06
16	7:45		0.922						
17	7:57		0.946						
18	8:16		0.983						
19	8:27		1.005						
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.080						
24	9:24		1.119						
25	9:26		1.122						
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.972						
33	11:04		0.972						
34	11:15		0.989						
35	11:26		1.006						
36	11:36		1.020						
37	11:46		1.034						
38	12:51		1.130						
39	13:10		1.158						
40	13:34		0.859						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:42		0.930						
45	15:14		0.965						
46	15:26		0.977						
47	15:45		0.998						
48	15:53		1.006						
49	16:00		1.014						
50	16:14		1.028						

9613492.5941

000231

Quantitation Report File: 30216S03

Data: 30216S03.TI
02/16/93 16:00:00
Sample: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20		1.034						
52	15:22		0.973						
53	17:03		1.080						
54	16:22		1.036						
55	17:12		1.090						
56	17:15		1.093						
57	17:20		1.098						
58	17:25		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:35		0.951						
62	19:05		0.977						
63	19:36		1.003						
64	19:44		1.010						
65	20:09		1.031						
66	21:05		1.079						
67	22:25		1.147						
68	22:56		0.892						
69	24:30		0.954						
70	25:38		0.998						
71	25:40		0.999						
72	25:45		1.002						
73	25:52		1.007						
74	27:24		0.942						
75	28:07		0.967						
76	28:11		0.969						
77	28:57		0.995						
78	32:38		1.122						
79	32:51		1.129						
80	33:45		1.160						

INTERMEDIATE A9AR.QL FILE TO GET CAS NUMBERS

Quantitation Report File: A9AR

Data: 30216S03.TI
02/16/93 16:00:00
Sample: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	0-00-0	CI40 *IS2* NAPHTHALENE-D8
3	0-00-0	CI50 *IS3* ACENAPHTHENE-D10
4	0-00-0	CI60 *IS4* PHENANTHRENE-D10
5	0-00-0	CI70 *IS5* CHRYSENE-D12
6	0-00-0	CI75 *IS6* PERYLENE-D12
7	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-
8	557-40-4	1-PROPENE, 3,3'-OXYBIS-

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	TOT	665	8:24	1	1.000	A BB	124138.	20.000	NG/UL	13.66
2	TOT	900	11:22	2	1.000	A BB	149524.	20.000	NG/UL	13.66
3	TOT	1249	15:46	3	1.000	A BB	145608.	20.000	NG/UL	13.66
4	TOT	1545	19:30	4	1.000	A BB	132275.	20.000	NG/UL	13.66
5	TOT	2028	25:36	5	1.000	A BB	72213.	20.000	NG/UL	13.66
6	TOT	2287	28:52	6	1.000	A BB	55736.	20.000	NG/UL	13.66
7	TOT	420	5:18	2	0.467	A VB	23031.	15.403		10.52
8	TOT	442	5:35	2	0.491	A BB	16384.	10.957		7.49

9613492.5944

000234

QUANTITATION REPORT FOR TICS FILE: 30216S03

DATA: 30216S03
02/16/93 16:00:00
SAMPLE: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CONDS: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
SUBMITTED BY: 30216S01 ANALYST: JY#14S

NO	NAME
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	2-PENTANONE, 4-HYDROXY-4-METHYL-
8	1-PROPENE, 3,3'-OXYBIS-

NO	M/Z	SCAN		REF	AREA	AMOUNT
1		665	8:24	1	124138	20.
2		900	11:22	2	149524	20.
3		1249	15:46	3	145608	20.
4		1545	19:30	4	132275	20.
5		2028	25:36	5	72213	20.
6		2287	28:52	6	55736	20.
7		420	5:18	1	23031	4. - UH
8		442	5:35	1	16384	3. - UH(B)

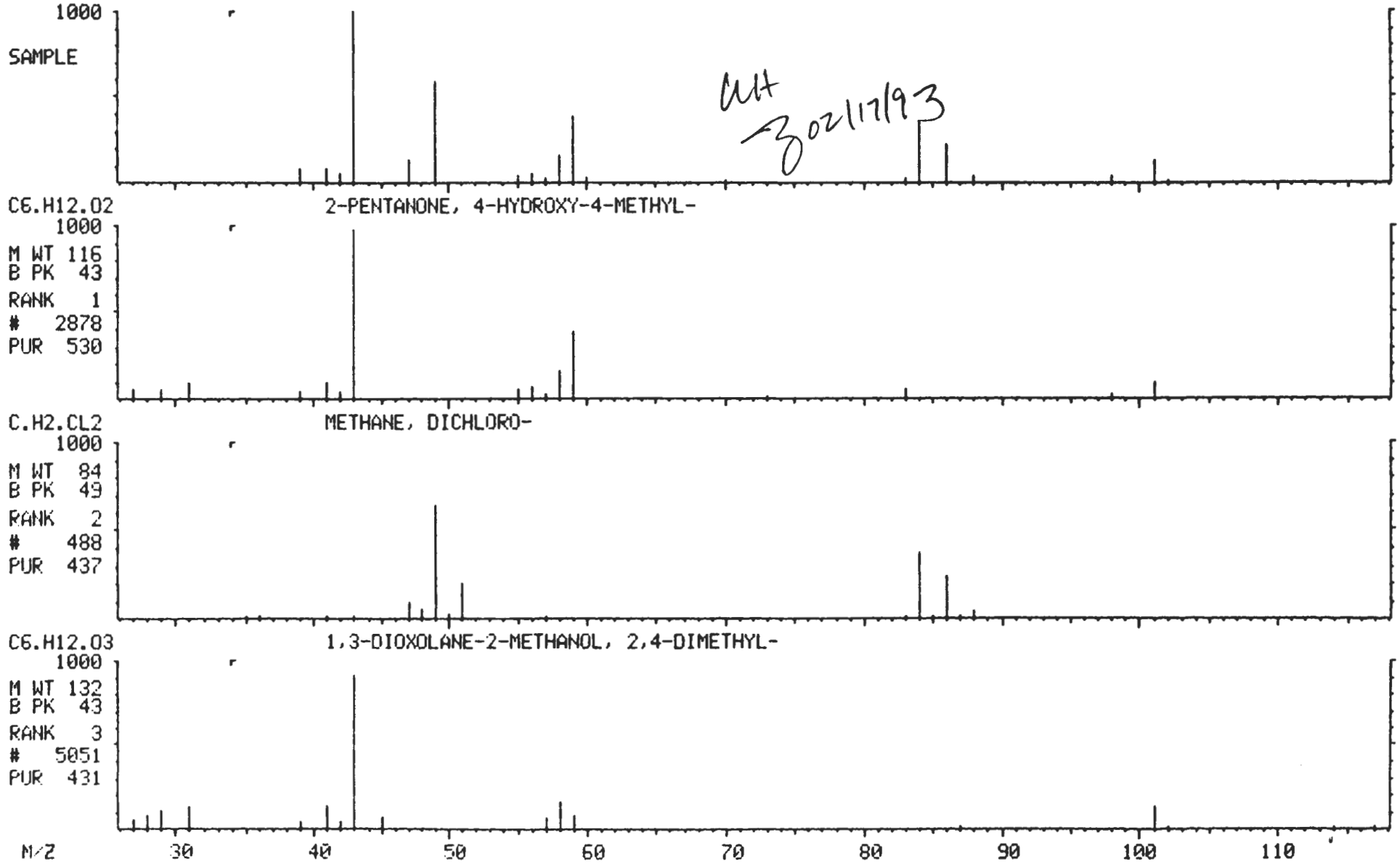
02/17/93

000235

MID LIBRARY SEARCH (LIBRARYNB)
02/16/93 16:00:00 + 5:18
SAMPLE: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
ENHANCED (S 15B 2N 0T)

DATA: 30216S03 # 420
CALI: 30216S03 # 3

BASE M/Z: 43
RIC: 11200.



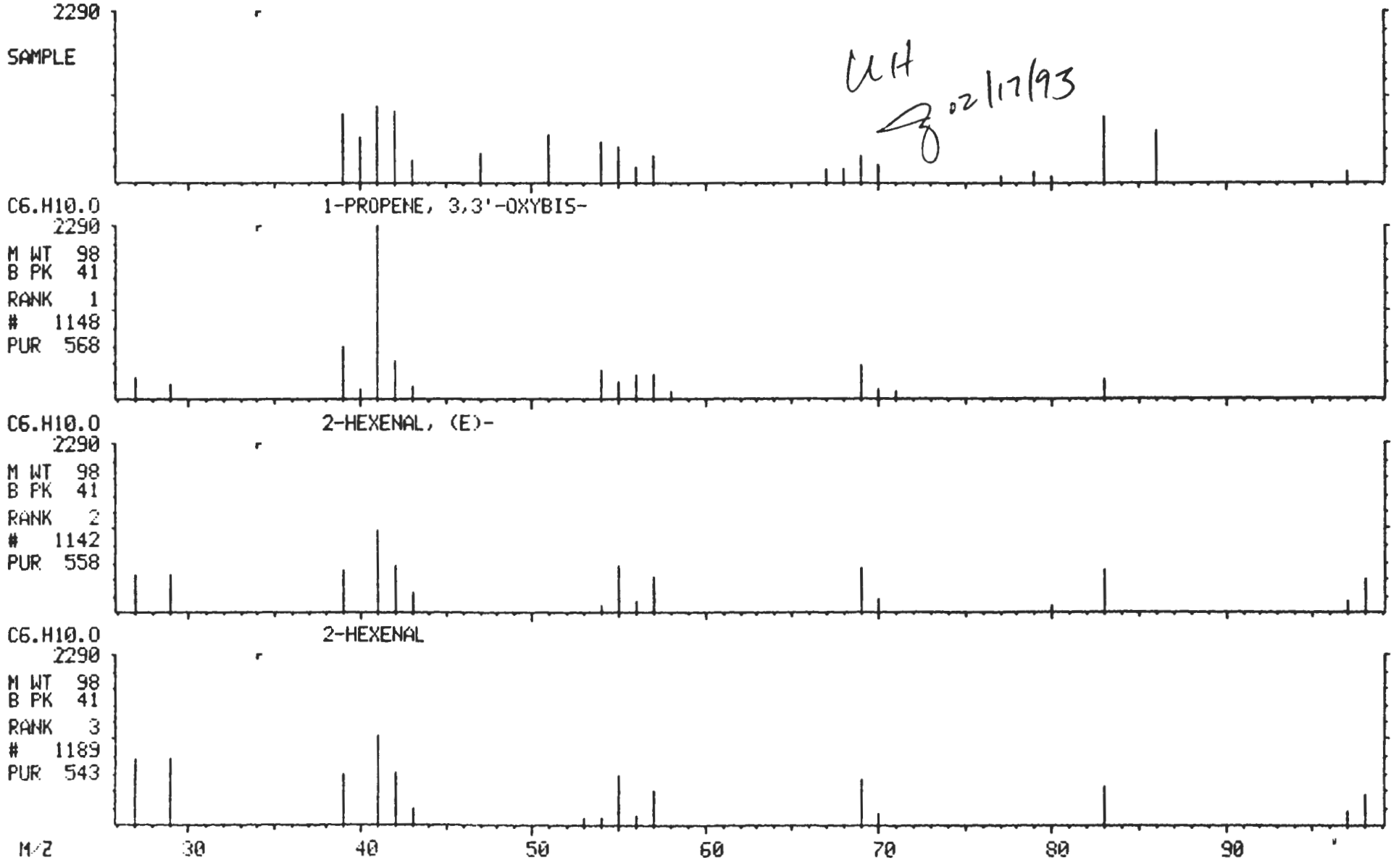
96K492.5045

000236

MID LIBRARY SEARCH (LIBRARYNB)
02/16/93 16:00:00 + 5:35
SAMPLE: CLP,02032,,B07K04,L,W,A302032-01D,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02,30216S04,30216S05
ENHANCED (S 15B 2N 0T)

DATA: 30216S03 # 442
CALI: 30216S03 # 3

BASE M/Z: 41
RIC: 7696.



9613092.5946

9613492.5947

000237

EPA SAMPLE NO.

B07K05

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 30222S08

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	340	U
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)Methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-Methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	820	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	820	U

9613492.5948

000238

EPA SAMPLE NO.

B07K05

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 30222S08

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-02-7	4-Nitrophenol	820	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-Butylphthalate	~~110~~ 340	~~BJ~~ U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)Anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-Octyl Phthalate	340	U
205-99-2	Benzo(b)Fluoranthene	340	U
207-08-9	Benzo(k)Fluoranthene	340	U
50-32-8	Benzo(a)Pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)Perylene	340	U

AS 10/28/93
KR 10/25/93

(1) - Cannot be separated from Diphenylamine

9613492.5949

000239

EPA SAMPLE NO.

B07K05

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03D

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 30222S08

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

Number TICs found: 8

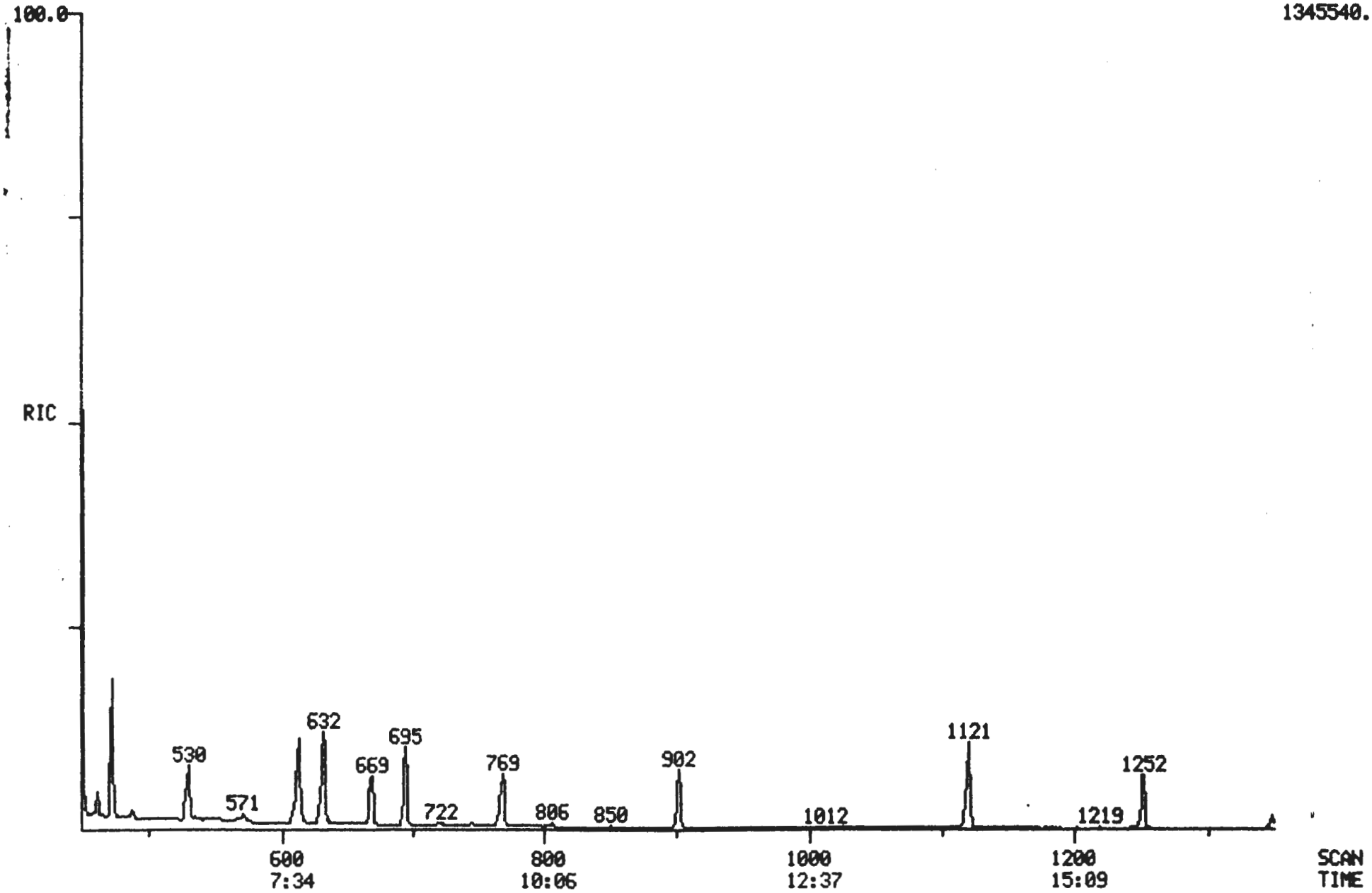
CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN ALKANE	5.18	550	J N
2.	UNKNOWN HYDROCARBON	5.27	930	~~BJ~~ U
3.	UNKNOWN KETONE	5.70	91000	~~BJ~~ U
4.	UNKNOWN HYDROCARBON	5.83	270	J N
5.	UNKNOWN HYDROCARBON	6.17	100	J N
6.	UNKNOWN HYDROCARBON	6.68	1100	~~BJ~~ U
7.	UNKNOWN HYDROCARBON	7.22	210	~~BJ~~ U
8.	UNKNOWN CARBOXYLIC ACID ESTE	20.12	69	J N

KR
10/25/93

000240

RIC DATA: 30222S08 #1 SCANS 450 TO 1350
02/22/93 14:01:00 CALI: 30222S08 #3
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



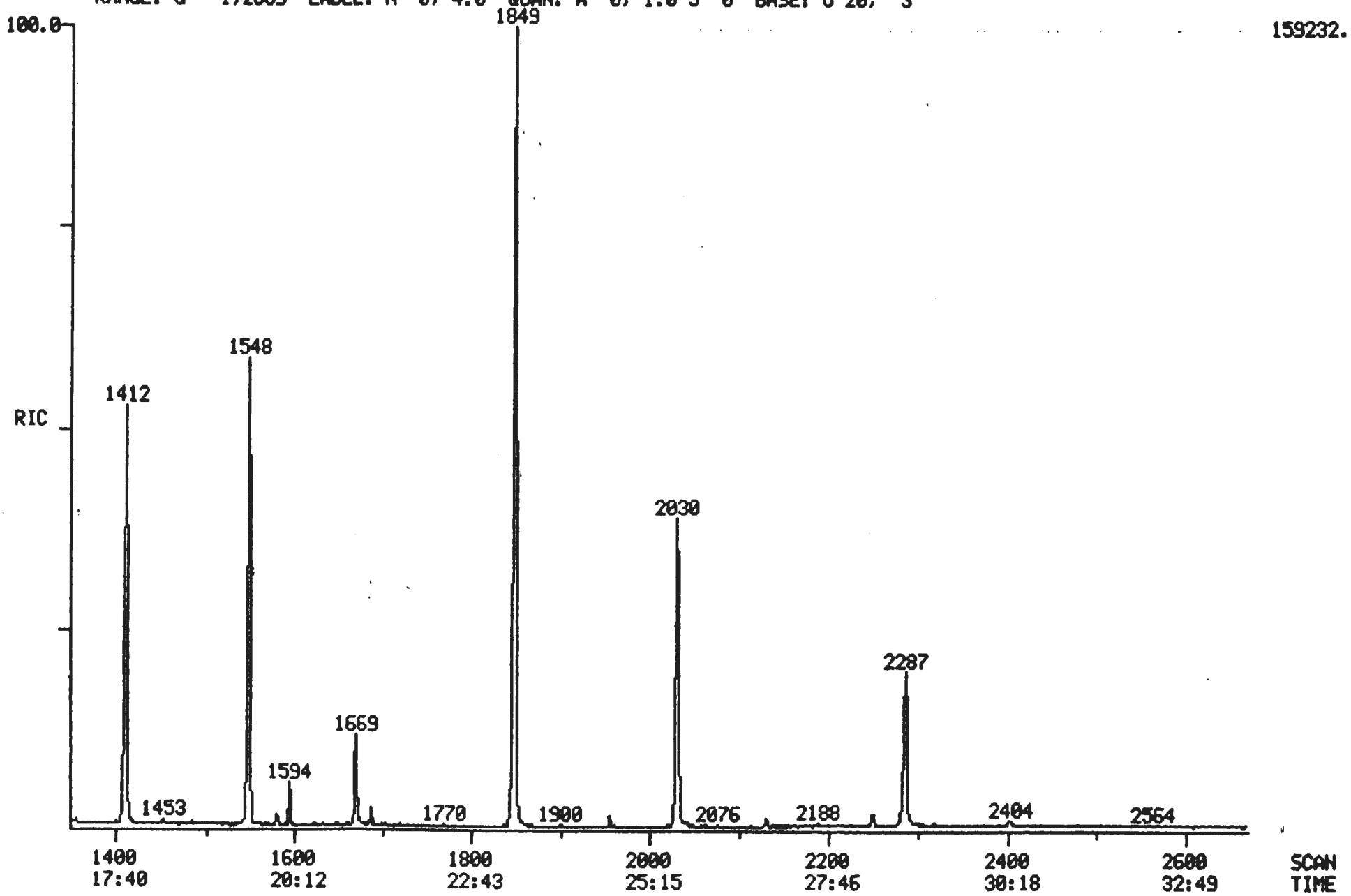
96 13492.5950

000241

RIC
02/22/93 14:01:00
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07,30222S09,30222S10
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S08 #1
CALI: 30222S08 #3

SCANS 1350 TO 2669



96A392.595

9613492.5952

000242

Quantitation Report File: 30222S08

Data: 30222S08.TI
02/22/93 14:01:00
Sample: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	CS50 *SU1* 2-FLUOROPHENOL
8	CS45 *SU2* PHENOL-D5
9	CS55 *SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20 *SU4* NITROBENZENE-D5
11	CS25 *SU5* 2-FLUOROBIPHENYL
12	CS30 *SU6* TERPHENYL-D14
13	CS70 2-CHLOROPHENOL-D4
14	CS75 1,2-DICHLOROBENZENE-D4
15	C650 DI-N-BUTYLPHTHALATE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	668	8:26	1	1.000	A BB	33150.	20.000 NG/UL	4.22
2	136	902	11:23	2	1.000	A BB	116965.	20.000 NG/UL	4.22
3	164	1251	15:48	3	1.000	A BB	63236.	20.000 NG/UL	4.22
4	188	1548	19:33	4	1.000	A BB	104826.	20.000 NG/UL	4.22
5	240	2030	25:38	5	1.000	A BB	66762.	20.000 NG/UL	4.22
6	264	2286	28:52	6	1.000	A BB	48179.	20.000 NG/UL	4.22
7	112	473	5:58	1	0.708	A BB	119787.	49.213 NG/UL	10.38
8	99	613	7:44	1	0.918	A BB	137105.	56.388 NG/UL	11.89
9	330	1411	17:49	3	1.128	A BB	24604.	54.945 NG/UL	11.58
10	82	769	9:42	2	0.853	A BB	89271.	31.196 NG/UL	6.58
11	172	1120	14:08	3	0.895	A BV	137164.	33.990 NG/UL	7.17
12	244	1849	23:21	5	0.911	A BB	164478.	38.632 NG/UL	8.14
13	132	632	7:59	1	0.946	A BB	104995.	54.724 NG/UL	11.54
14	152	695	8:46	1	1.040	A BB	49372.	31.897 NG/UL	6.72
15	149	1669	21:04	4	1.078	A BB	22006.	3.323 NG/UL	0.70

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	49.21	25.00	2.891	1.469	1.97
8	7:41	1.01	0.913	1.01	56.39	25.00	3.309	1.467	2.26
9	17:48	1.00	1.127	1.00	54.95	25.00	0.311	0.142	2.20

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
10	9:42	1.00	0.852	1.00	31.20	25.00	0.611	0.489	1.25
11	14:08	1.00	0.894	1.00	33.99	25.00	1.735	1.276	1.36
12	23:18	1.00	0.910	1.00	38.63	25.00	1.971	1.275	1.55
13	7:55	1.01	0.941	1.00	54.72	25.00	2.534	1.158	2.19
14	8:44	1.00	1.039	1.00	31.90	25.00	1.191	0.934	1.28
15	21:04	1.00	1.079	1.00	3.32	25.00	0.168	1.263	0.13

Quantitation Report File: 30222S08

Data: 30222S08.TI
02/22/93 14:01:00
Sample: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.5955

000245

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hgh%)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	33150.	20.000	NG/UL	4.20
2	136	902	11:23	2	1.000	A BB	116965.	20.000	NG/UL	4.20
3	164	1251	15:48	3	1.000	A BB	63236.	20.000	NG/UL	4.20
4	188	1548	19:33	4	1.000	A BB	104826.	20.000	NG/UL	4.20
5	240	2030	25:38	5	1.000	A BB	66762.	20.000	NG/UL	4.20
6	264	2286	28:52	6	1.000	A BB	48179.	20.000	NG/UL	4.20
7	112	473	5:58	1	0.708	A BB	119787.	49.213	NG/UL	10.33
8	99	613	7:44	1	0.918	A BB	137105.	56.388	NG/UL	11.83
9	330	1411	17:49	3	1.128	A BB	24604.	54.945	NG/UL	11.53
10	82	769	9:42	2	0.853	A BB	89271.	31.196	NG/UL	6.55
11	172	1120	14:08	3	0.895	A BV	137164.	33.990	NG/UL	7.13
12	244	1849	23:21	5	0.911	A BB	164478.	38.632	NG/UL	8.11
13	132	632	7:59	1	0.946	A BB	104995.	54.724	NG/UL	11.48
14	152	695	8:46	1	1.040	A BB	49372.	31.897	NG/UL	6.69
15	~~94~~	~~615~~	~~7:46~~	~~1~~	~~0.921~~	~~A BB~~	~~1274.~~	~~0.423~~	~~NG/UL~~	~~0.09~~
16	NOT FOUND									
17	~~128~~	~~634~~	~~8:00~~	~~1~~	~~0.949~~	~~A BB~~	~~524.~~	~~0.248~~	~~NG/UL~~	~~0.05~~
18	NOT FOUND									
19	NOT FOUND									
20	~~108~~	~~695~~	~~8:46~~	~~1~~	~~1.040~~	~~A BB~~	~~668.~~	~~0.526~~	~~NG/UL~~	~~0.11~~
21	NOT FOUND									
22	NOT FOUND									
23	~~45~~	~~722~~	~~9:07~~	~~1~~	~~1.081~~	~~A VV~~	~~976.~~	~~0.271~~	~~NG/UL~~	~~0.06~~
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	~~77~~	~~769~~	~~9:42~~	~~2~~	~~0.853~~	~~A BB~~	~~650.~~	~~0.230~~	~~NG/UL~~	~~0.05~~
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

FH 2/2/93

9613492.5956

000246

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	49.21	25.00	2.891	1.469	1.97
8	7:41	1.01	0.913	1.01	56.39	25.00	3.309	1.467	2.26
9	17:48	1.00	1.127	1.00	54.95	25.00	0.311	0.142	2.20
10	9:42	1.00	0.852	1.00	31.20	25.00	0.611	0.489	1.25
11	14:08	1.00	0.894	1.00	33.99	25.00	1.735	1.276	1.36
12	23:18	1.00	0.910	1.00	38.63	25.00	1.971	1.275	1.55
13	7:55	1.01	0.941	1.00	54.72	25.00	2.534	1.158	2.19
14	8:44	1.00	1.039	1.00	31.90	25.00	1.191	0.934	1.28
15	7:43	1.01	0.917	1.00	0.42	25.00	0.031	1.819	0.02
16	7:54		0.940						
17	7:57	1.01	0.946	1.00	0.25	25.00	0.013	1.275	0.01
18	8:16		0.983						
19	8:27		1.005						
20	8:46	1.00	1.044	1.00	0.53	25.00	0.016	0.766	0.02
21	8:46		1.044						
22	9:01		1.072						
23	9:05	1.00	1.081	1.00	0.27	25.00	0.024	2.173	0.01
24	9:24		1.119						
25	9:26		1.122						
26	9:32		1.134						
27	9:44	1.00	0.856	1.00	0.23	25.00	0.004	0.484	0.01
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.973						
33	11:04		0.972						
34	11:15		0.989						
35	11:26		1.004						
36	11:36		1.020						
37	11:45		1.033						
38	12:51		1.130						
39	13:09		1.156						
40	13:33		0.858						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:41		0.930						
45	15:14		0.965						
46	15:25		0.976						
47	15:45		0.998						
48	15:53		1.006						
49	16:00		1.014						
50	16:14		1.028						

9613492.5957

000247

Quantitation Report File: 30222S08

Data: 30222S08.TI
02/22/93 14:01:00
Sample: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	149	1669	21:04	4	1.078	A BB	22006.	3.323 NG/UL	0.70
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

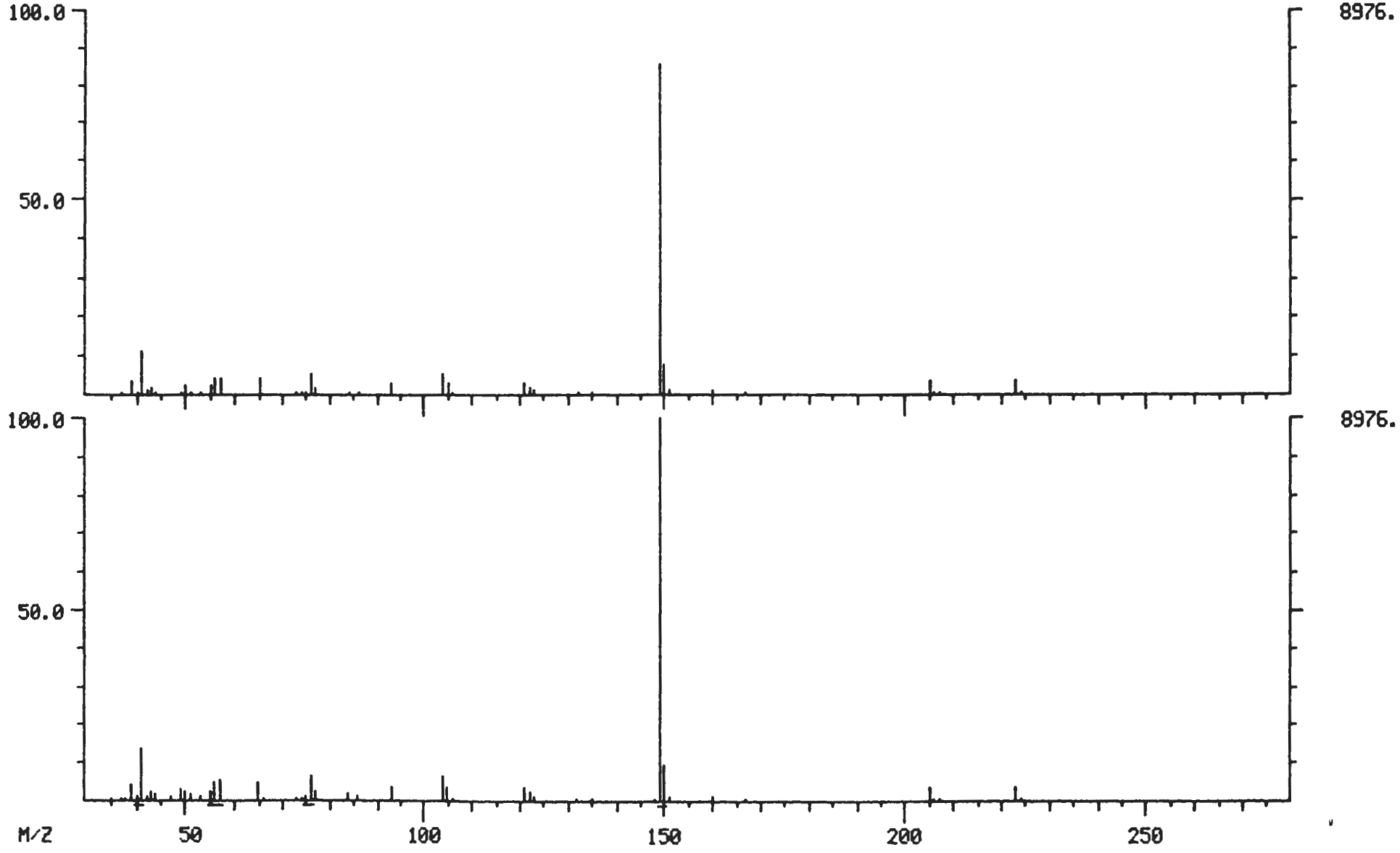
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19		1.034						
52	15:21		0.972						
53	17:03		1.080						
54	16:22		1.036						
55	17:12		1.089						
56	17:15		1.092						
57	17:20		1.098						
58	17:24		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:34		0.951						
62	19:05		0.977						
63	19:36		1.003						
64	19:43		1.010						
65	20:08		1.031						
66	21:04	1.00	1.079	1.00	3.32	25.00	0.168	1.263	0.13
67	22:24		1.147						
68	22:54		0.894						
69	24:27		0.955						
70	25:34		0.998						
71	25:35		0.999						
72	25:41		1.002						
73	25:44		1.005						
74	27:08		0.941						
75	27:55		0.968						
76	27:59		0.971						
77	28:42		0.995						
78	31:58		1.109						
79	32:03		1.112						
80	32:54		1.141						

000249

DUAL MASS SPECTRUM
02/22/93 14:01:00 + 21:04
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07,30222S09,30222S10
TEMP: 241 DEG. C
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 #1669
CALI: 30222S08 #3

BASE M/Z: 149/ 149
RIC: 15696./ 19296.



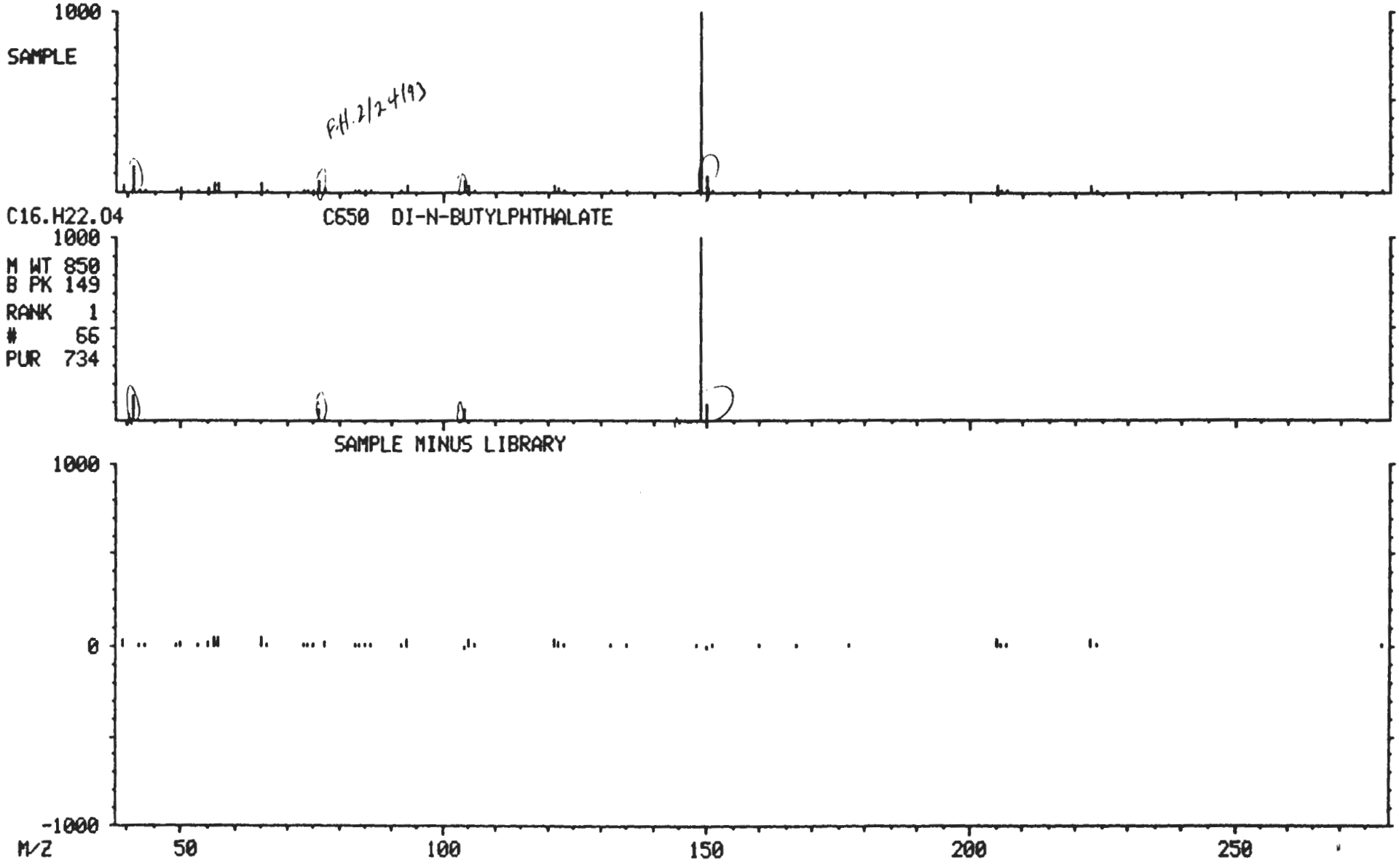
96130927 5950

000250

MID LIBRARY SEARCH (LIBRARYEP)
02/22/93 14:01:00 + 21:04
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 #1669
CALI: 30222S08 # 3

BASE M/Z: 149
RIC: 15408.



9613492.5960

INTERMEDIATE A9AR.QL FILE TO GET CAS NUMBERS

Quantitation Report File: A9AR

Data: 30222S08.TI
02/22/93 14:01:00
Sample: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	0-00-0	CI40 *IS2* NAPHTHALENE-D8
3	0-00-0	CI50 *IS3* ACENAPHTHENE-D10
4	0-00-0	CI60 *IS4* PHENANTHRENE-D10
5	0-00-0	CI70 *IS5* CHRYSENE-D12
6	0-00-0	CI75 *IS6* PERYLENE-D12
7	926-82-9	HEPTANE, 3,5-DIMETHYL-
8	108-11-2	2-PENTANOL, 4-METHYL-
9	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-
10	2216-33-3	OCTANE, 3-METHYL-
11	75-91-2	HYDROPEROXIDE, 1,1-DIMETHYLETHYL
12	4305-26-4	2-HEXANONE, 6-(ACETYLOXY)-
13	3240-09-3	5-HEXEN-2-ONE, 5-METHYL-
14	17851-53-5	1,2-BENZENEDICARBOXYLIC ACID, BUTYL 2-METHYLPROPYL EST

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	TOT	669	8:27	1	1.000	A BB	157492.	20.000 NG/UL	8.95
2	TOT	902	11:23	2	1.000	A BB	193523.	20.000 NG/UL	8.95
3	TOT	1251	15:48	3	1.000	A BB	194306.	20.000 NG/UL	8.95
4	TOT	1548	19:33	4	1.000	A BB	191542.	20.000 NG/UL	8.95
5	TOT	2030	25:38	5	1.000	A BB	129415.	20.000 NG/UL	8.95
6	TOT	2287	28:52	6	1.000	A BB	99480.	20.000 NG/UL	8.95
7	TOT	411	5:11	9	0.911	A VV	124480.	0.597	0.27
8	TOT	417	5:16	9	0.925	A VB	211136.	1.013	0.45
9	TOT	451	5:42	9	1.000	A BB	20834000.	100.000	44.73
10	TOT	462	5:50	9	1.024	A BB	61302.	0.294	0.13
11	TOT	488	6:10	9	1.082	A BB	20076.	0.096	0.04
12	TOT	530	6:41	9	1.175	A BV	257593.	1.236	0.55
13	TOT	571	7:13	9	1.266	A BB	50062.	0.240	0.11
14	TOT	1594	20:07	9	3.534	A BB	19050.	0.091	0.04

9613492.5962

QUANTITATION REPORT FOR TICS FILE: 30222S08

000252

DATA: 30222S08
02/22/93 14:01:00
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
SUBMITTED BY: ANALYST: FH#14S

NO	NAME
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	HEPTANE, 3,5-DIMETHYL-
8	2-PENTANOL, 4-METHYL-
9	2-PENTANONE, 4-HYDROXY-4-METHYL-
10	OCTANE, 3-METHYL-
11	HYDROPEROXIDE, 1,1-DIMETHYLETHYL
12	2-HEXANONE, 6-(ACETYLOXY)-
13	5-HEXEN-2-ONE, 5-METHYL-
14	1,2-BENZENEDICARBOXYLIC ACID, BUTYL 2-METHYLPROPYL ESTER

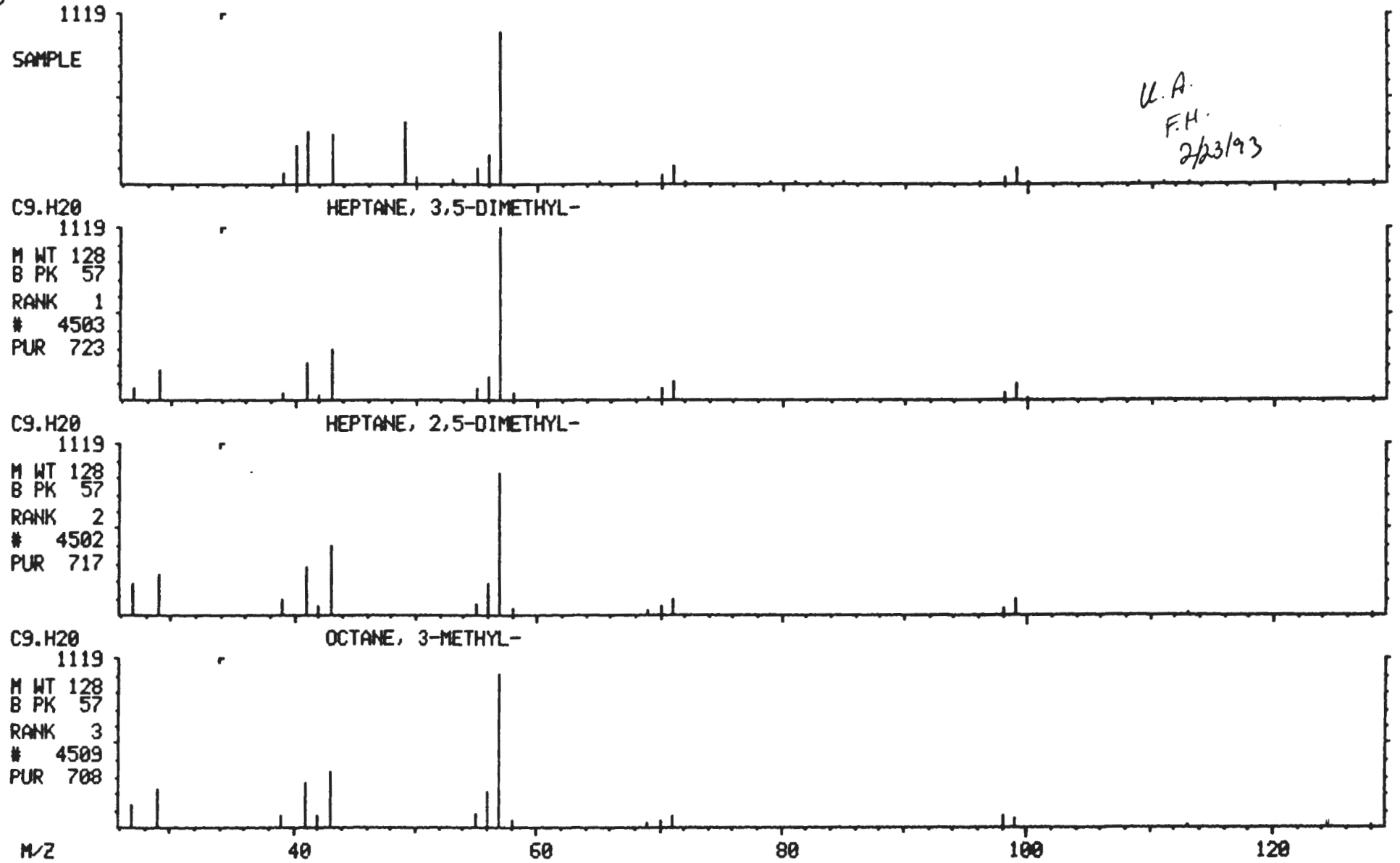
NO	M/Z	SCAN		REF	AREA	AMOUNT
1		669	8:27	1	157492	20.
2		902	11:23	2	193523	20. F.H. 2/23/93
3		1251	15:48	3	194306	20.
4		1548	19:33	4	191542	20.
5		2030	25:38	5	129415	20.
6		2287	28:52	6	99480	20.
7		411	5:11	1	124480	16. U.A.
8		417	5:16	1	211136	27. U.H.(B)
9		451	5:42	1	20834048	2646. UH.(B)
10		462	5:50	1	61302	8. U H.
11		488	6:10	1	20076	3. U.H.
12		530	6:41	1	257593	33. U.H.(B)
13		571	7:13	1	50062	6. UH (B)
14		1594	20: 7	4	19050	2. UCAE

000253

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 5:11
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222507,30222509,30222510
ENHANCED (S 15B 2N 0T)

DATA: 30222508 # 411
CALI: 30222508 # 3

BASE M/Z: 57
RIC: 18016.



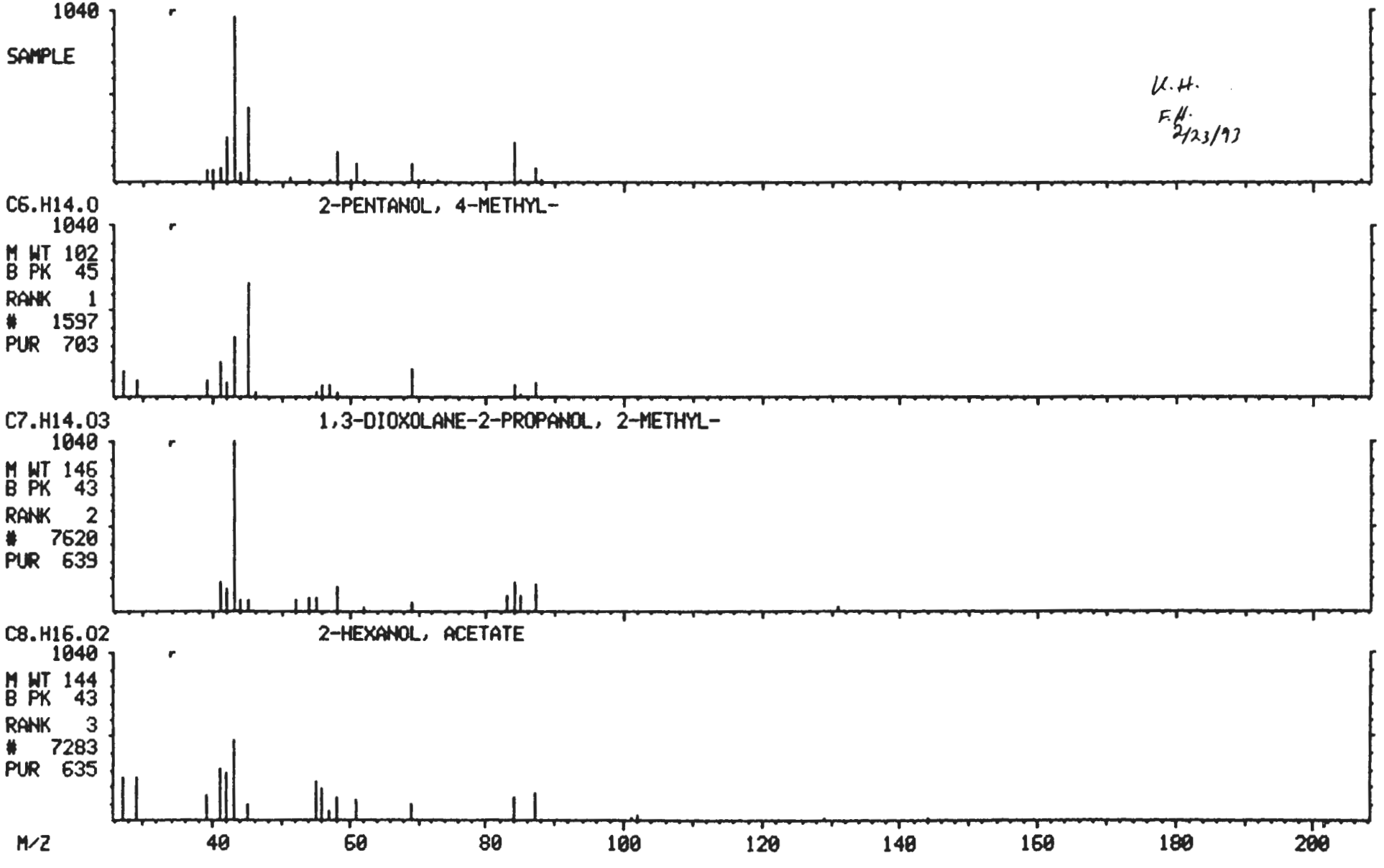
96132492.5963

000254

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 5:16
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 417
CALI: 30222S08 # 3

BASE M/Z: 43
RIC: 47488.



U.H.
F.H.
2/23/93

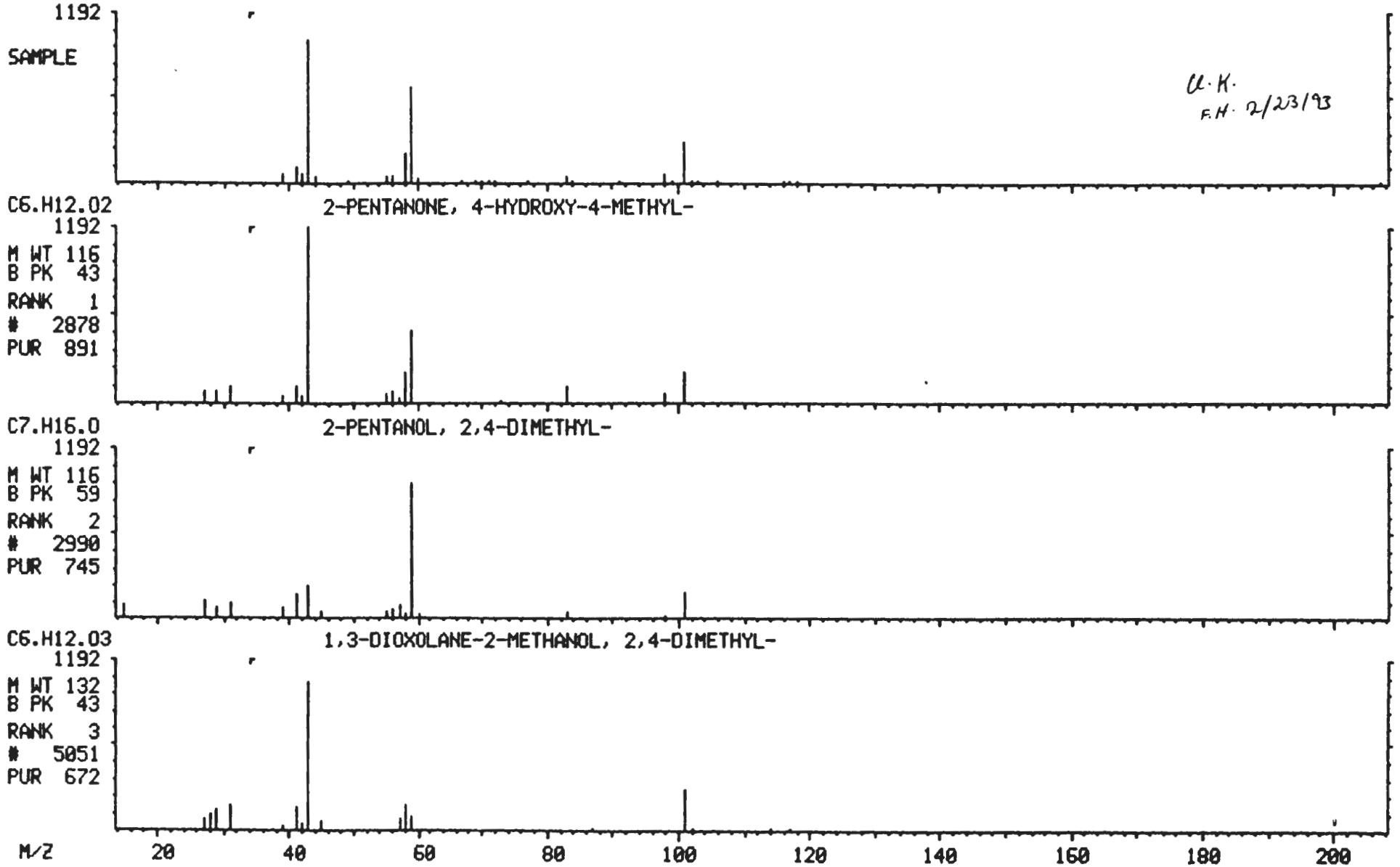
96130925.5941

000255

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 5:42
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 451
CALI: 30222S08 # 3

BASE M/Z: 43
RIC: 510976.



U.K.
F.H. 2/23/93

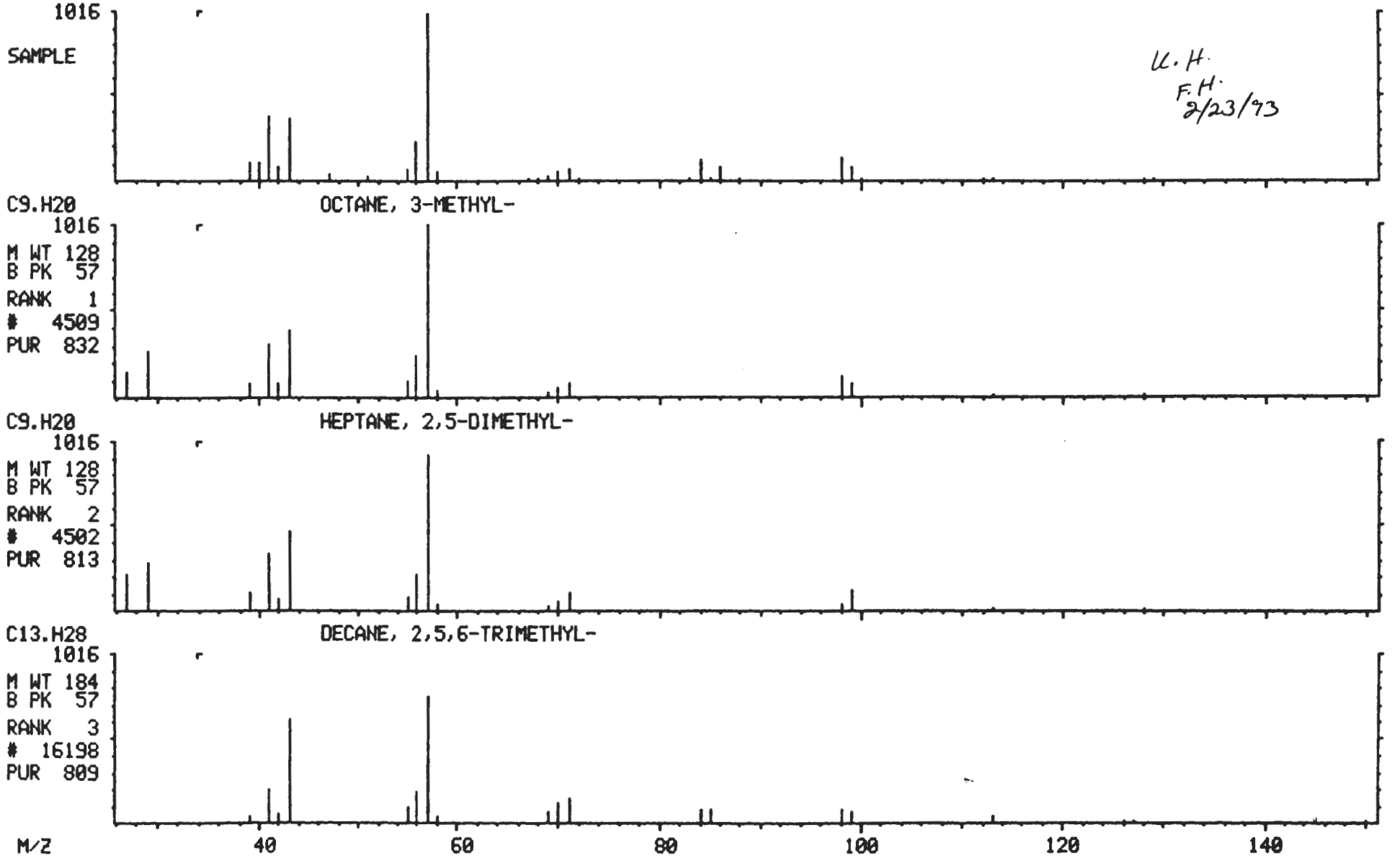
96130742 5965

000256

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 5:50
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 462
CALI: 30222S08 # 3

BASE M/Z: 57
RIC: 28384.



U.H.
F.H.
2/23/93

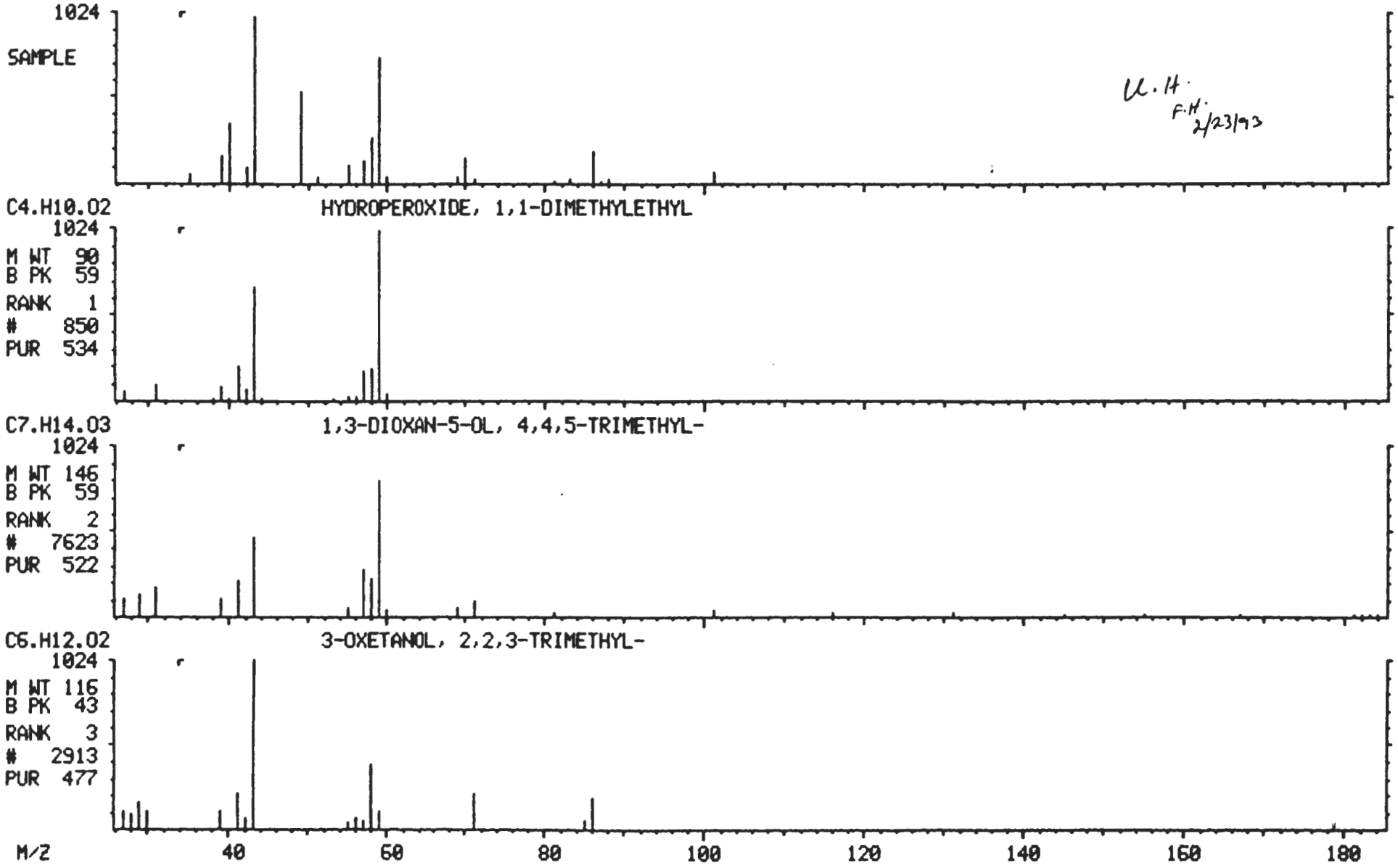
96130274.5966

000257

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 6:10
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 488
CALI: 30222S08 # 3

BASE M/Z: 43
RIC: 11264.



U.H.
F.H.
2/23/93

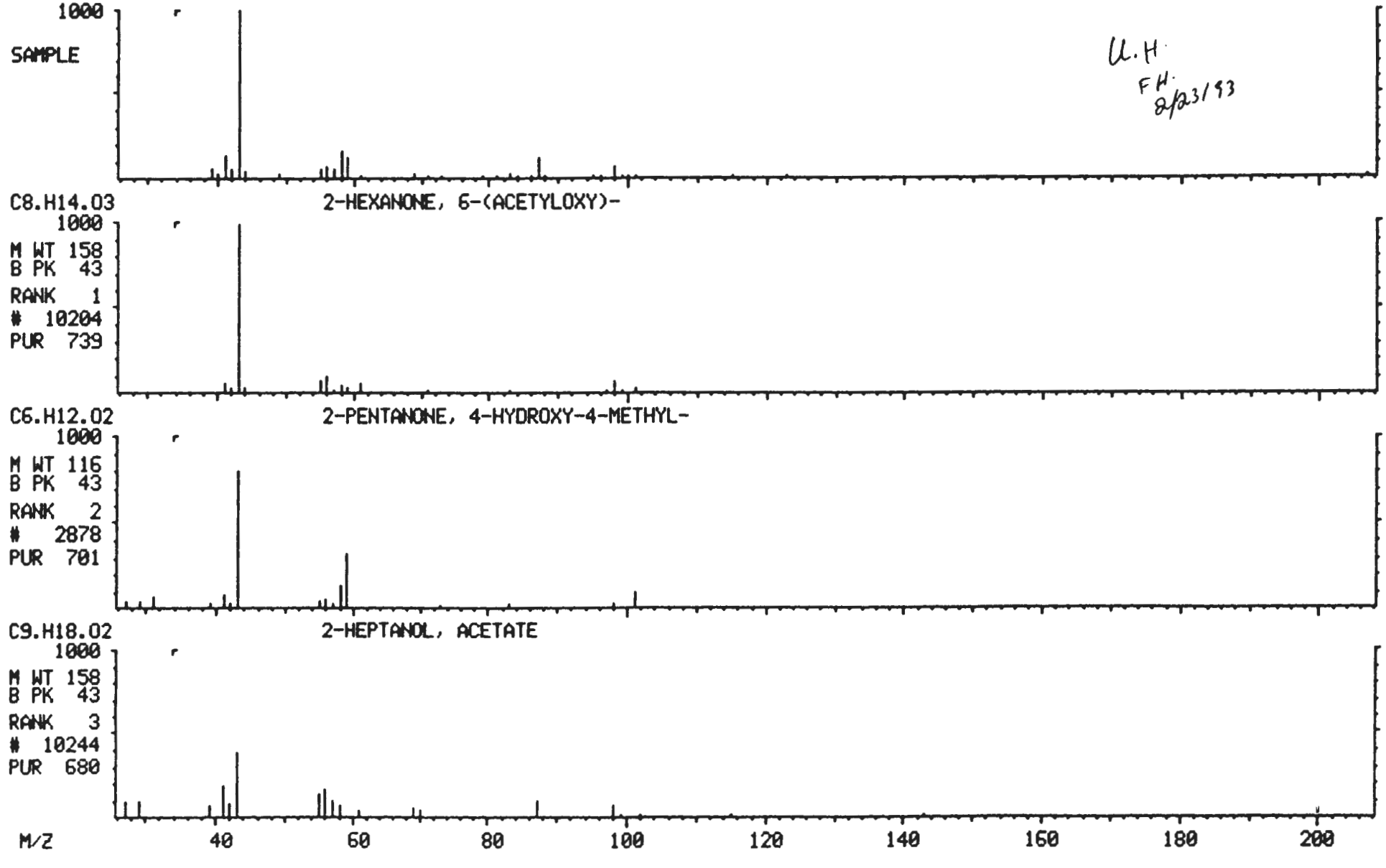
96134925965

000258

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 6:41
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 530
CALI: 30222S08 # 3

BASE M/Z: 43
RIC: 82304.



U.H.
F.H.
8/23/93

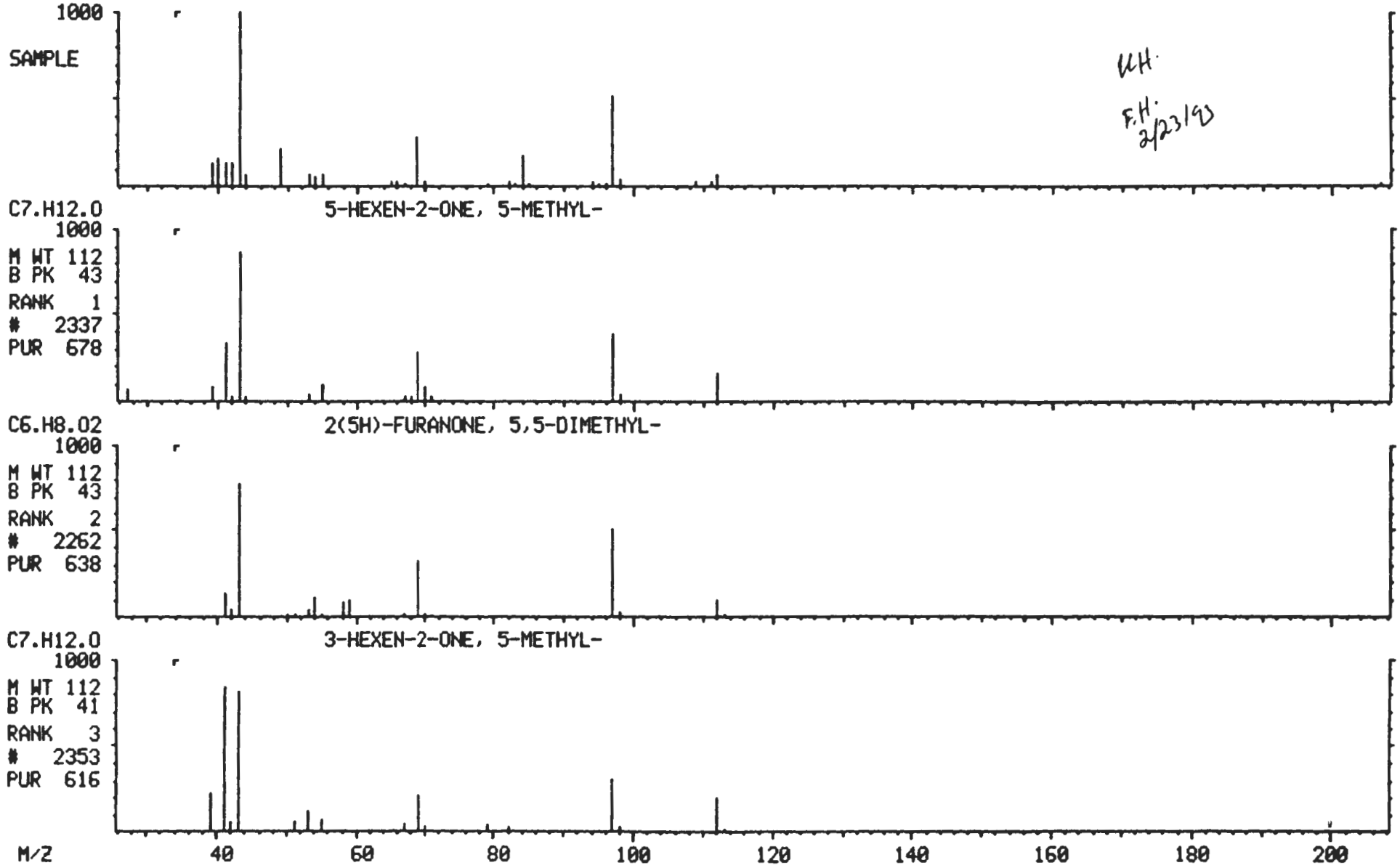
96134925968

000259

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 7:13
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 # 571
CALI: 30222S08 # 3

BASE M/Z: 43
RIC: 11888.



KH
F.H. 2/23/93

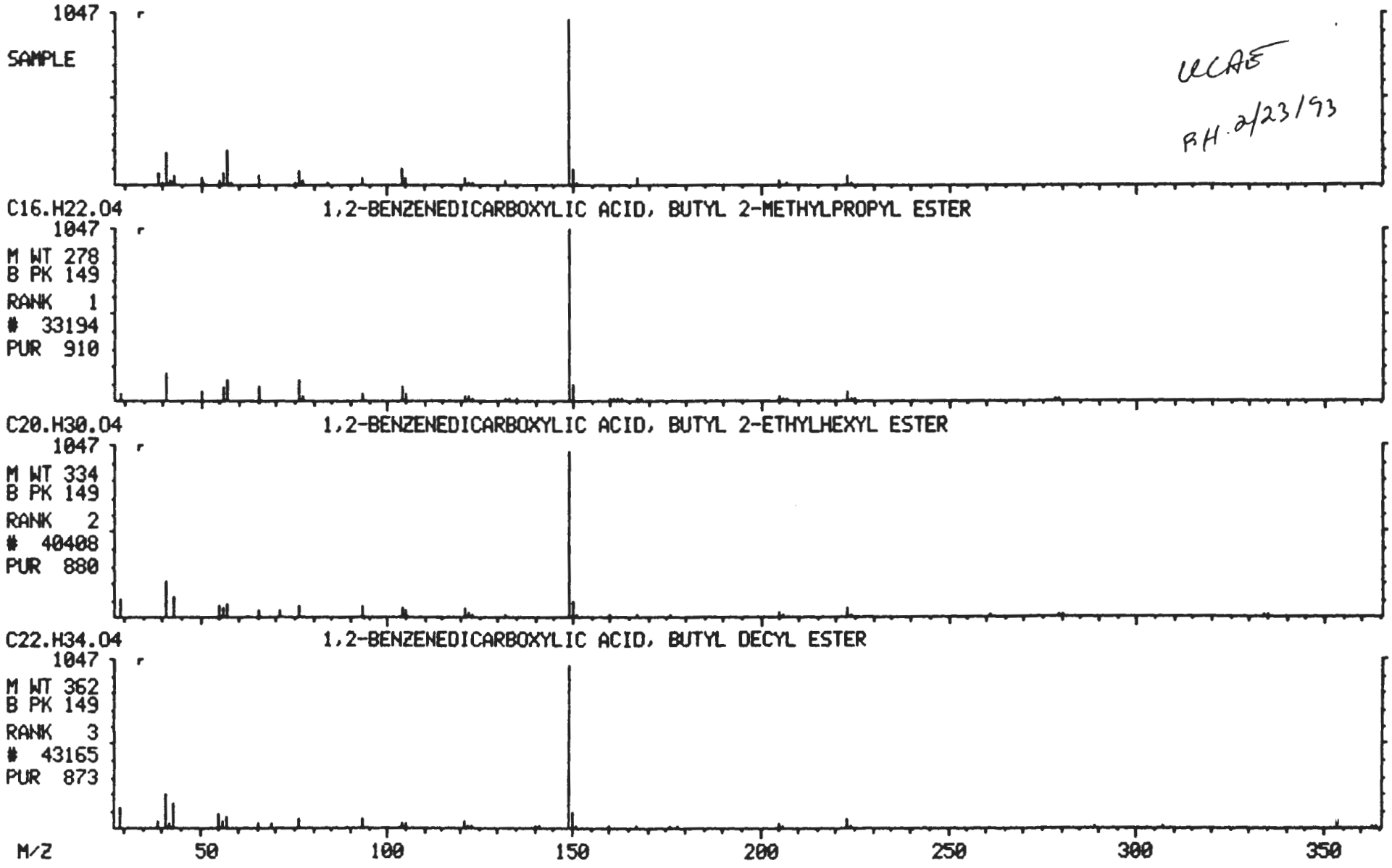
96135492.5969

000260

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 14:01:00 + 20:07
SAMPLE: CLP,02032,,B07K05,L,S,A302032-03D,BNA,EPA
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07,30222S09,30222S10
ENHANCED (S 15B 2N 0T)

DATA: 30222S08 #1594
CALI: 30222S08 # 3

BASE M/Z: 149
RIC: 7480.



UCAE
BH 2/23/93

0613092 5070

9615492.5971

000261

EPA SAMPLE NO.

B07ML0

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S06

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9613492.5972

000262

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07ML0

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S06

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

9613492.5973

000263

EPA SAMPLE NO.

B07ML0

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-02B

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S06

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.60	3	~~BJ~~ U

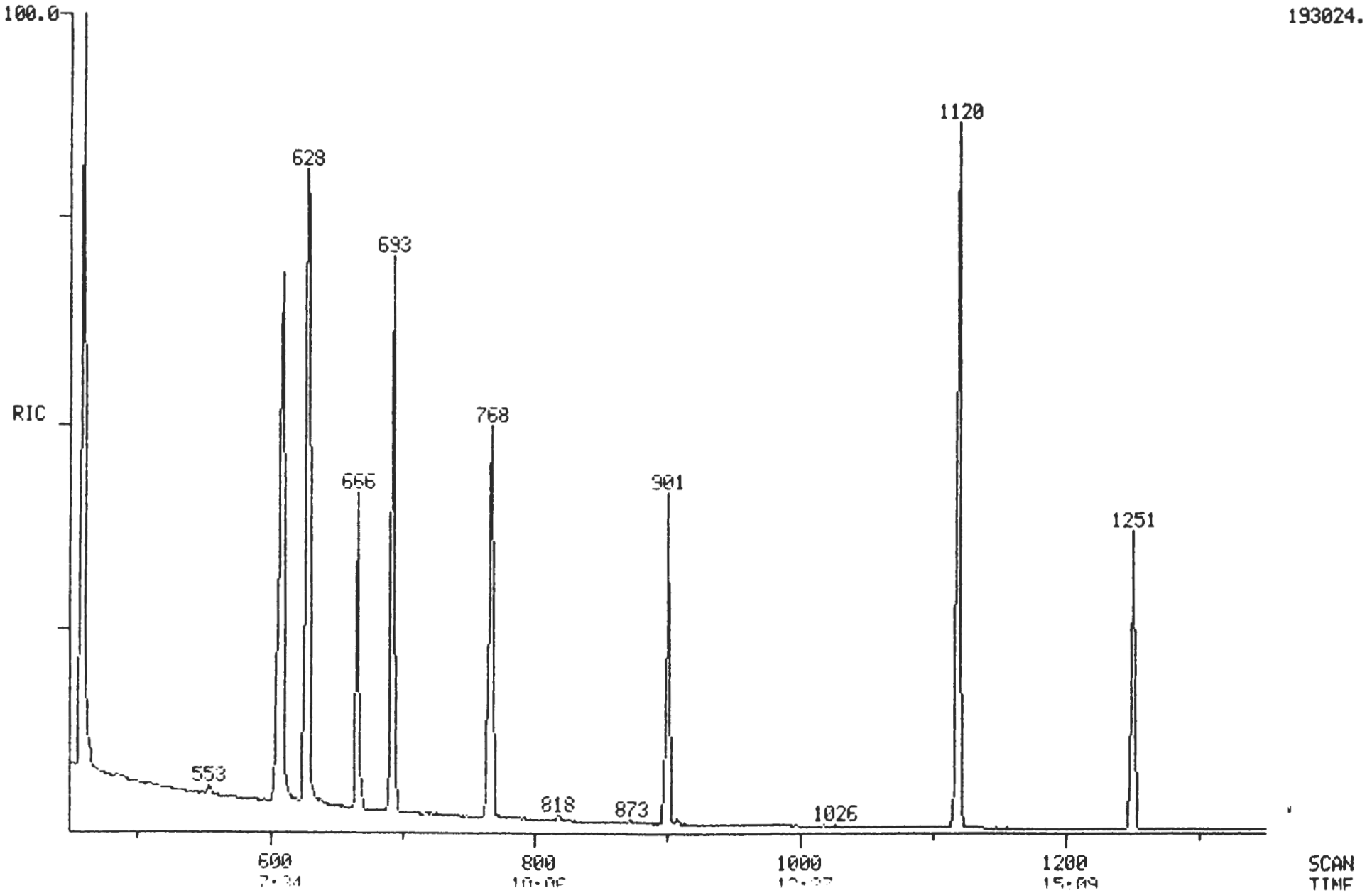
KR
10/25/93

000264

RIC
02/16/93 18:03:00
SAMPLE: CLP,02032,,B07ML0,L,W,A302032-02B,B,EPA
CONDS.: CAP/.25,30216S01,3DFT021651,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S06 #1
CALI: 30216S06 #3

SCANS 450 TO 1350



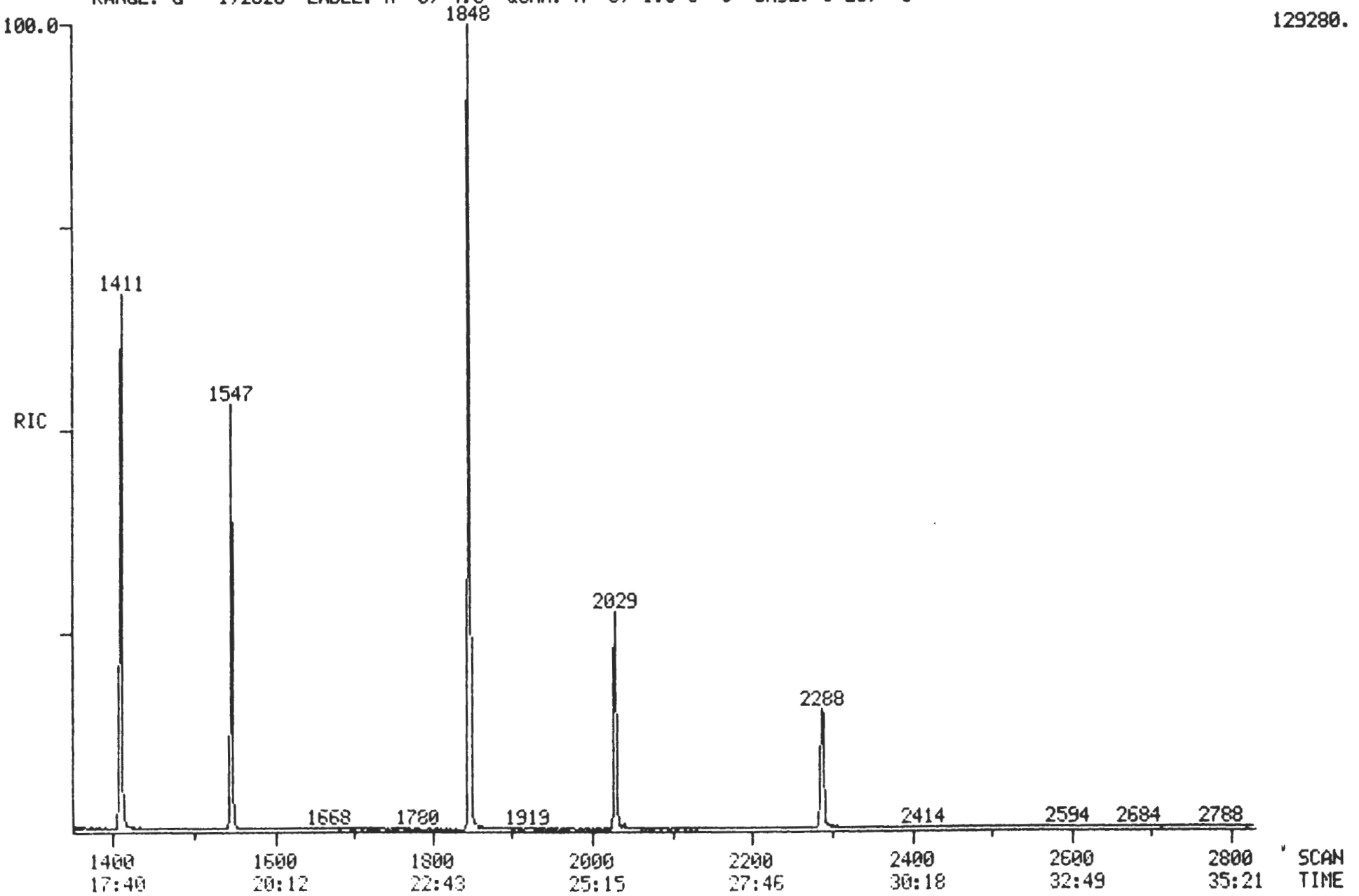
9617407 5074

000265

RIC
02/16/93 18:03:00
SAMPLE: CLP,02032,,B07ML0,L,W,A302032-02B,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S06 #1
CALI: 30216S06 #3

SCANS 1350 TO 2828



9613492.5075

Guantitation Report File: 30216S06

Data: 30216S06.TI
02/16/93 18:03:00
Sample: CLP,02032,,B07MLO,L,W,A302032-02B,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	CS50 *SU1* 2-FLUOROPHENOL
8	CS45 *SU2* PHENOL-D5
9	CS55 *SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20 *SU4* NITROBENZENE-D5
11	CS25 *SU5* 2-FLUOROBIPHENYL
12	CS30 *SU6* TERPHENYL-D14
13	CS70 2-CHLOROPHENOL-D4
14	CS75 1,2-DICHLOROBENZENE-D4

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	666	8:24	1	1.000	A BB	27360.	20.000	NG/UL	3.43
2	136	901	11:22	2	1.000	A BB	90812.	20.000	NG/UL	3.43
3	164	1250	15:47	3	1.000	A BB	47754.	20.000	NG/UL	3.43
4	188	1547	19:32	4	1.000	A BB	72775.	20.000	NG/UL	3.43
5	240	2029	25:37	5	1.000	A BB	37753.	20.000	NG/UL	3.43
6	264	2288	28:53	6	1.000	A BB	30073.	20.000	NG/UL	3.43
7	112	460	5:48	1	0.691	A BB	130812.	67.310	NG/UL	11.56
8	99	609	7:41	1	0.914	A BB	137472.	69.732	NG/UL	11.98
9	330	1411	17:49	3	1.129	A BB	25308.	75.760	NG/UL	13.01
10	82	768	9:42	2	0.852	A BB	94144.	44.997	NG/UL	7.73
11	172	1120	14:08	3	0.896	A BV	143190.	45.512	NG/UL	7.82
12	244	1848	23:20	5	0.911	A BB	116654.	45.968	NG/UL	7.89
13	132	628	7:56	1	0.943	A BB	114680.	72.866	NG/UL	12.51
14	152	693	8:45	1	1.041	A BB	51278.	40.141	NG/UL	6.89

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	67.31	25.00	3.825	1.421	2.69
8	7:41	1.00	0.913	1.00	69.73	25.00	4.020	1.441	2.79
9	17:49	1.00	1.128	1.00	75.76	25.00	0.424	0.140	3.03
10	9:42	1.00	0.852	1.00	45.00	25.00	0.829	0.461	1.80
11	14:08	1.00	0.894	1.00	45.51	25.00	2.399	1.318	1.82

9613492.5977

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
12	23:21	1.00	0.909	1.00	45.97	25.00	2.472	1.344	1.84
13	7:55	1.00	0.941	1.00	72.87	25.00	3.353	1.150	2.91
14	8:44	1.00	1.039	1.00	40.14	25.00	1.499	0.934	1.61

Quantitation Report File: 30216S06

Data: 30216S06.TI
02/16/93 18:03:00
Sample: CLP,02032,,B07ML0,L,W,A302032-02B,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.5979

000263

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	666	8:24	1	1.000	A BB	27360.	20.000 NG/UL	3.43
2	136	901	11:22	2	1.000	A BB	90812.	20.000 NG/UL	3.43
3	164	1250	15:47	3	1.000	A BB	47754.	20.000 NG/UL	3.43
4	188	1547	19:32	4	1.000	A BB	72775.	20.000 NG/UL	3.43
5	240	2029	25:37	5	1.000	A BB	37753.	20.000 NG/UL	3.43
6	264	2288	28:53	6	1.000	A BB	30073.	20.000 NG/UL	3.43
7	112	460	5:48	1	0.691	A BB	130812.	67.310 NG/UL	11.55
8	99	609	7:41	1	0.914	A BB	137472.	69.732 NG/UL	11.96
9	330	1411	17:49	3	1.129	A BB	25308.	75.760 NG/UL	12.99
10	82	768	9:42	2	0.852	A BB	94144.	44.997 NG/UL	7.72
11	172	1120	14:08	3	0.896	A BV	143190.	45.512 NG/UL	7.81
12	244	1848	23:20	5	0.911	A BB	116654.	45.968 NG/UL	7.88
13	132	628	7:56	1	0.943	A BB	114680.	72.866 NG/UL	12.50
14	152	693	8:45	1	1.041	A BB	51278.	40.141 NG/UL	6.89
15	NOT FOUND								
16	NOT FOUND								
~~17~~	~~128~~	~~630~~	~~7:57~~	~~1~~	~~0.946~~	~~A BB~~	~~596.~~	~~0.345 NG/UL~~	~~0.06~~
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

02/12/93

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29.05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	67.31	25.00	3.825	1.421	2.69
8	7:41	1.00	0.913	1.00	69.73	25.00	4.020	1.441	2.79
9	17:49	1.00	1.128	1.00	75.76	25.00	0.424	0.140	3.03
10	9:42	1.00	0.852	1.00	45.00	25.00	0.829	0.461	1.80
11	14:08	1.00	0.894	1.00	45.51	25.00	2.399	1.318	1.82
12	23:21	1.00	0.909	1.00	45.97	25.00	2.472	1.344	1.84
13	7:55	1.00	0.941	1.00	72.87	25.00	3.353	1.150	2.91
14	8:44	1.00	1.039	1.00	40.14	25.00	1.499	0.934	1.61
15	7:42		0.916						
16	7:45		0.922						
17	7:57	1.00	0.946	1.00	0.35	25.00	0.017	1.263	0.01
18	8:16		0.983						
19	8:27		1.005						
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.080						
24	9:24		1.119						
25	9:26		1.122						
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.972						
33	11:04		0.972						
34	11:15		0.989						
35	11:26		1.006						
36	11:36		1.020						
37	11:46		1.034						
38	12:51		1.130						
39	13:10		1.158						
40	13:34		0.859						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:42		0.930						
45	15:14		0.965						
46	15:26		0.977						
47	15:45		0.998						
48	15:53		1.006						
49	16:00		1.014						
50	16:14		1.028						

9613492.5981

Quantitation Report File: 30216S06

Data: 30216S06.TI
02/16/93 18:03:00
Sample: CLP,02032,,B07MLO,L,W,A302032-02B,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20		1.034						
52	15:22		0.973						
53	17:03		1.080						
54	16:22		1.036						
55	17:12		1.090						
56	17:15		1.093						
57	17:20		1.098						
58	17:25		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:35		0.951						
62	19:05		0.977						
63	19:36		1.003						
64	19:44		1.010						
65	20:09		1.031						
66	21:05		1.079						
67	22:25		1.147						
68	22:56		0.892						
69	24:30		0.954						
70	25:38		0.998						
71	25:40		0.999						
72	25:45		1.002						
73	25:52		1.007						
74	27:24		0.942						
75	28:07		0.967						
76	28:11		0.969						
77	28:57		0.995						
78	32:38		1.122						
79	32:51		1.129						
80	33:45		1.160						

INTERMEDIATE A9AR.QL FILE TO GET CAS NUMBERS

Quantitation Report File: A9AR

Data: 30216S06.TI
02/16/93 18:03:00
Sample: CLP,02032,,B07MLO,L,W,A302032-02B,B,EPA
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	0-00-0	CI40 *IS2* NAPHTHALENE-D8
3	0-00-0	CI50 *IS3* ACENAPHTHENE-D10
4	0-00-0	CI60 *IS4* PHENANTHRENE-D10
5	0-00-0	CI70 *IS5* CHRYSENE-D12
6	0-00-0	CI75 *IS6* PERYLENE-D12
7	505-57-7	2-HEXENAL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	TOT	666	8:24	1	1.000	A BB	126300.	20.000 NG/UL	15.13
2	TOT	901	11:22	2	1.000	A BB	148422.	20.000 NG/UL	15.13
3	TOT	1251	15:48	3	1.000	A BB	146320.	20.000 NG/UL	15.13
4	TOT	1547	19:32	4	1.000	A BB	131527.	20.000 NG/UL	15.13
5	TOT	2029	25:37	5	1.000	A BB	73990.	20.000 NG/UL	15.13
6	TOT	2288	28:53	6	1.000	A BB	60029.	20.000 NG/UL	15.13
7	TOT	444	5:36	2	0.493	A BB	18051.	12.162	9.20

9613492.5984

QUANTITATION REPORT FOR TICS FILE: 30216S06

000274

DATA: 30216S06
02/16/93 18:03:00
SAMPLE: CLP,02032,,B07ML0,L,W,A302032-02B,B,EPA
CONDS: CAP/.25,30216S01,3DFT0216S1,30216S02
SUBMITTED BY: 30216S01 ANALYST: JY#14S

NO	NAME
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	2-HEXENAL

NO	M/Z	SCAN		REF	AREA	AMOUNT
1		666	8:24	1	126300	20.
2		901	11:22	2	148422	20.
3		1251	15:48	3	146320	20.
4		1547	19:32	4	131527	20.
5		2029	25:37	5	73990	20.
6		2288	28:53	6	60029	20.
7		444	5:36	1	18051	3.-LH(B)

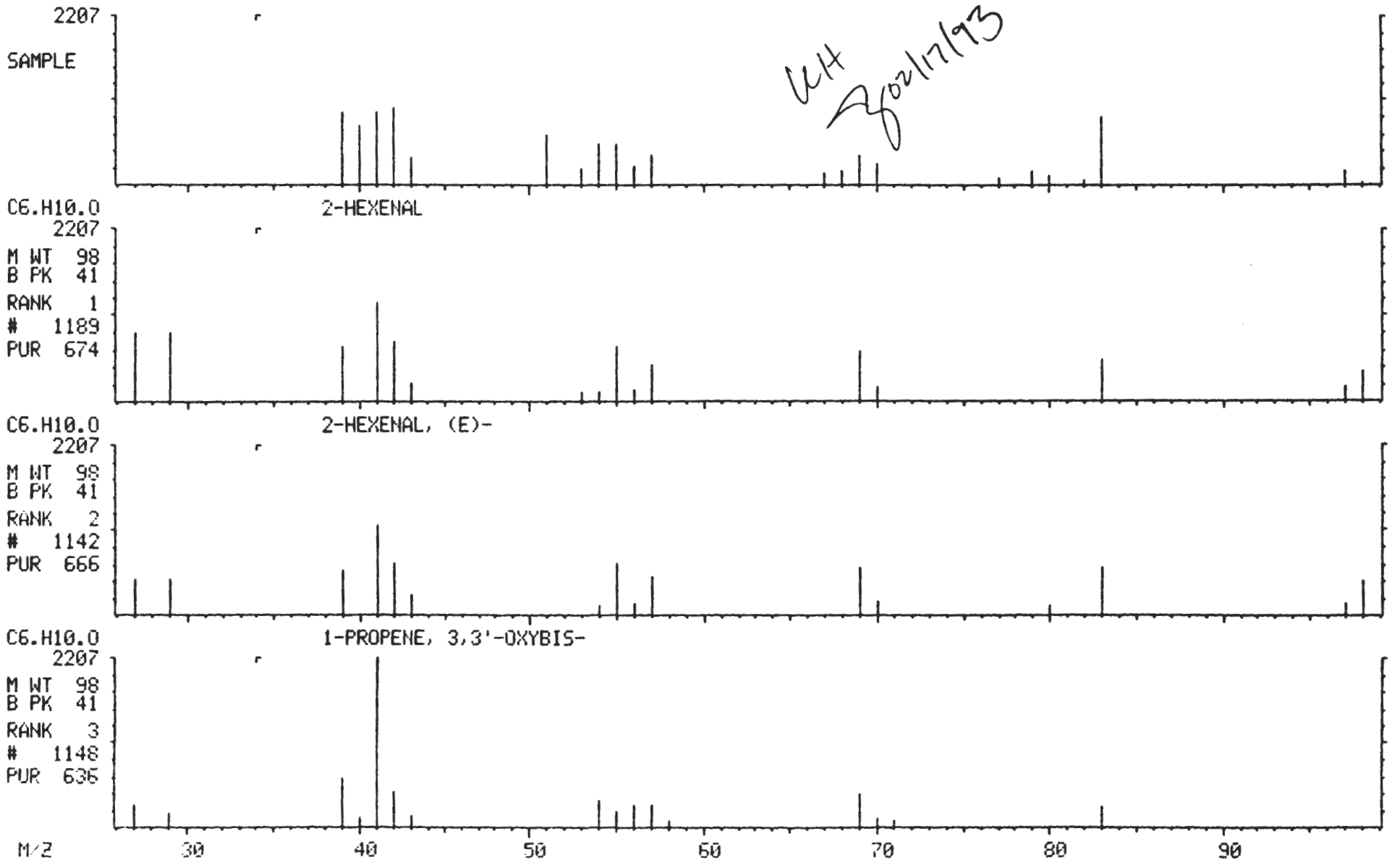
02/17/93

000275

MID LIBRARY SEARCH (LIBRARYNB)
02/16/93 18:03:00 + 5:36
SAMPLE: CLP,02032,,B07ML0,L,W,A302032-02B,B,EPA
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
ENHANCED (S 15B 2N 0T)

DATA: 30216S06 # 444
CALI: 30216S06 # 3

BASE M/Z: 42
RIC: 7416.



96134927.5905

9613492.5986

000276

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration Date(s): 02/04/93 02/04/93

Calibration Times: 1203 1532

LAB FILE ID: RRF20 = 30204S02 RRF50 = 30204S07
RRF80 = 30204S04 RRF120= 30204S05 RRF160= 30204S06

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol	*	2.003	2.041	2.108	1.972	2.013	2.027	2.5*
bis(2-Chloroethyl)Ether	*	2.253	2.417	2.470	2.324	2.375	2.368	3.5*
2-Chlorophenol	*	1.374	1.386	1.412	1.316	1.369	1.371	2.6*
1,3-Dichlorobenzene	*	1.542	1.527	1.584	1.463	1.499	1.523	3.0*
1,4-Dichlorobenzene	*	1.568	1.565	1.637	1.513	1.553	1.567	2.9*
1,2-Dichlorobenzene	*	1.482	1.484	1.572	1.480	1.524	1.508	2.6*
2-Methylphenol	*	1.181	1.188	1.213	1.164	1.199	1.189	1.6*
2,2'-oxybis(1-Chloropropane		2.237	2.326	2.378	2.299	2.443	2.337	3.3
4-Methylphenol	*	1.226	1.274	1.280	1.215	1.254	1.250	2.3*
N-Nitroso-Di-n-Propylamine	*	1.142	1.210	1.228	1.186	1.290	1.211	4.5*
Hexachloroethane	*	0.599	0.619	0.634	0.611	0.637	0.620	2.6*
Nitrobenzene	*	0.421	0.452	0.447	0.435	0.454	0.442	3.1*
Isophorone	*	0.796	0.851	0.871	0.665	0.660	0.769	13.1*
2-Nitrophenol	*	0.176	0.182	0.190	0.192	0.196	0.187	4.3*
2,4-Dimethylphenol	*	0.310	0.315	0.326	0.310	0.317	0.316	2.1*
bis(2-Chloroethoxy)Methane	*	0.485	0.515	0.529	0.508	0.529	0.513	3.5*
2,4-Dichlorophenol	*	0.287	0.298	0.308	0.279	0.292	0.293	3.7*
1,2,4-Trichlorobenzene	*	0.321	0.323	0.341	0.315	0.326	0.325	3.0*
Naphthalene	*	1.048	1.031	1.072	1.015	1.059	1.045	2.2*
4-Chloroaniline		0.415	0.460	0.476	0.454	0.470	0.455	5.3
Hexachlorobutadiene		0.168	0.171	0.175	0.169	0.174	0.171	1.8
4-Chloro-3-Methylphenol	*	0.312	0.328	0.345	0.323	0.339	0.329	4.0*
2-Methylnaphthalene	*	0.729	0.716	0.772	0.717	0.735	0.734	3.1*
Hexachlorocyclopentadiene		0.261	0.261	0.278	0.262	0.281	0.269	3.7
2,4,6-Trichlorophenol	*	0.318	0.325	0.361	0.349	0.392	0.349	8.5*
2,4,5-Trichlorophenol	*	0.310	0.316	0.289	0.262	0.255	0.286	9.6*
2-Chloronaphthalene	*	1.153	1.161	1.204	1.105	1.154	1.155	3.0*
2-Nitroaniline		0.376	0.431	0.445	0.423	0.455	0.426	7.2
Dimethylphthalate		1.270	1.283	1.319	1.218	1.268	1.272	2.9
Acenaphthylene	*	1.779	1.788	1.874	1.733	1.816	1.798	2.9*
3-Nitroaniline		0.308	0.340	0.363	0.333	0.344	0.338	5.9
Acenaphthene	*	1.119	1.112	1.172	1.102	1.149	1.131	2.6*
2,4-Dinitrophenol		0.089	0.112	0.134	0.135	0.148	0.124	18.8
4-Nitrophenol		0.161	0.160	0.161	0.137	0.148	0.153	7.0
Dibenzofuran	*	1.552	1.549	1.623	1.505	1.564	1.559	2.7*
2,4-Dinitrotoluene	*	0.382	0.401	0.427	0.385	0.415	0.402	4.8*
2,6-Dinitrotoluene	*	0.304	0.285	0.321	0.303	0.320	0.307	4.8*

* Compounds with required minimum RRF and maximum %RSD values.
-All other compounds must meet a minimum RRF of 0.010.

KR 10/25

9613492.5987

000277

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration Date(s): 02/04/93 02/04/93

Calibration Times: 1203 1532

LAB FILE ID: RRF20 = 30204S02 RRF50 = 30204S07
RRF80 = 30204S04 RRF120= 30204S05 RRF160= 30204S06

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Diethylphthalate		1.595	1.449	1.488	1.391	1.407	1.466	5.6
4-Chlorophenyl-phenylether	*	0.589	0.580	0.610	0.586	0.621	0.597	2.9*
Fluorene	*	1.234	1.249	1.317	1.235	1.292	1.265	2.9*
4-Nitroaniline		0.318	0.330	0.351	0.300	0.324	0.325	5.7
4,6-Dinitro-2-methylphenol		0.086	0.097	0.109	0.110	0.112	0.103	10.8
N-Nitrosodiphenylamine (1)		0.224	0.227	0.237	0.233	0.240	0.232	2.9
4-Bromophenyl-phenylether	*	0.200	0.196	0.206	0.195	0.203	0.200	2.3*
Hexachlorobenzene	*	0.235	0.216	0.223	0.210	0.220	0.221	4.2*
Pentachlorophenol	*	0.111	0.111	0.120	0.111	0.116	0.114	3.6*
Phenanthrene	*	1.058	1.047	1.090	1.023	1.081	1.060	2.5*
Anthracene	*	1.070	1.060	1.101	1.026	1.034	1.058	2.8*
Carbazole		0.956	0.984	1.023	0.949	0.976	0.978	3.0
Di-n-Butylphthalate		1.265	1.363	1.424	1.289	1.368	1.342	4.8
Fluoranthene	*	1.021	0.997	1.042	0.911	0.930	0.980	5.8*
Pyrene	*	1.629	1.801	1.933	1.787	1.829	1.796	6.1*
Butylbenzylphthalate		0.582	0.767	0.805	0.750	0.770	0.735	11.9
3,3'-Dichlorobenzidine		0.305	0.345	0.372	0.374	0.386	0.356	9.1
Benzo(a)Anthracene	*	1.125	1.217	1.281	1.225	1.324	1.234	6.1*
bis(2-Ethylhexyl)Phthalate		0.785	0.915	0.991	0.954	0.996	0.928	9.3
Chrysene	*	1.029	0.966	0.963	0.872	0.838	0.934	8.3*
Di-n-Octyl Phthalate		1.653	2.275	2.239	2.221	2.295	2.137	12.7
Benzo(b)Fluoranthene	*	1.375	1.576	1.863	1.890	1.784	1.698	12.9*
Benzo(k)Fluoranthene	*	1.347	1.339	1.164	1.248	1.258	1.271	5.9*
Benzo(a)Pyrene	*	1.295	1.308	1.379	1.321	1.339	1.328	2.5*
Indeno(1,2,3-cd)Pyrene	*	1.116	1.126	1.096	1.055	1.012	1.081	4.4*
Dibenz(a,h)Anthracene	*	1.039	1.041	1.076	0.942	0.766	0.973	12.9*
Benzo(g,h,i)Perylene	*	0.970	0.892	0.902	0.764	0.583	0.822	18.6*
Nitrobenzene-d5	*	0.405	0.449	0.421	0.423	0.430	0.426	3.7*
2-Fluorobiphenyl	*	1.240	1.303	1.286	1.211	1.233	1.255	3.1*
Terphenyl-d14	*	1.174	1.322	1.318	1.232	1.251	1.259	4.9*
Phenol-d5	*	1.534	1.635	1.545	1.572	1.542	1.566	2.6*
2-Fluorophenol	*	1.388	1.477	1.374	1.418	1.375	1.406	3.1*
2,4,6-Tribromophenol		0.142	0.145	0.139	0.144	0.148	0.144	2.3
2-Chlorophenol-d4	*	1.210	1.265	1.195	1.213	1.206	1.218	2.2*
1,2-Dichlorobenzene-d4	*	0.910	0.932	0.947	0.905	0.909	0.921	2.0*

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

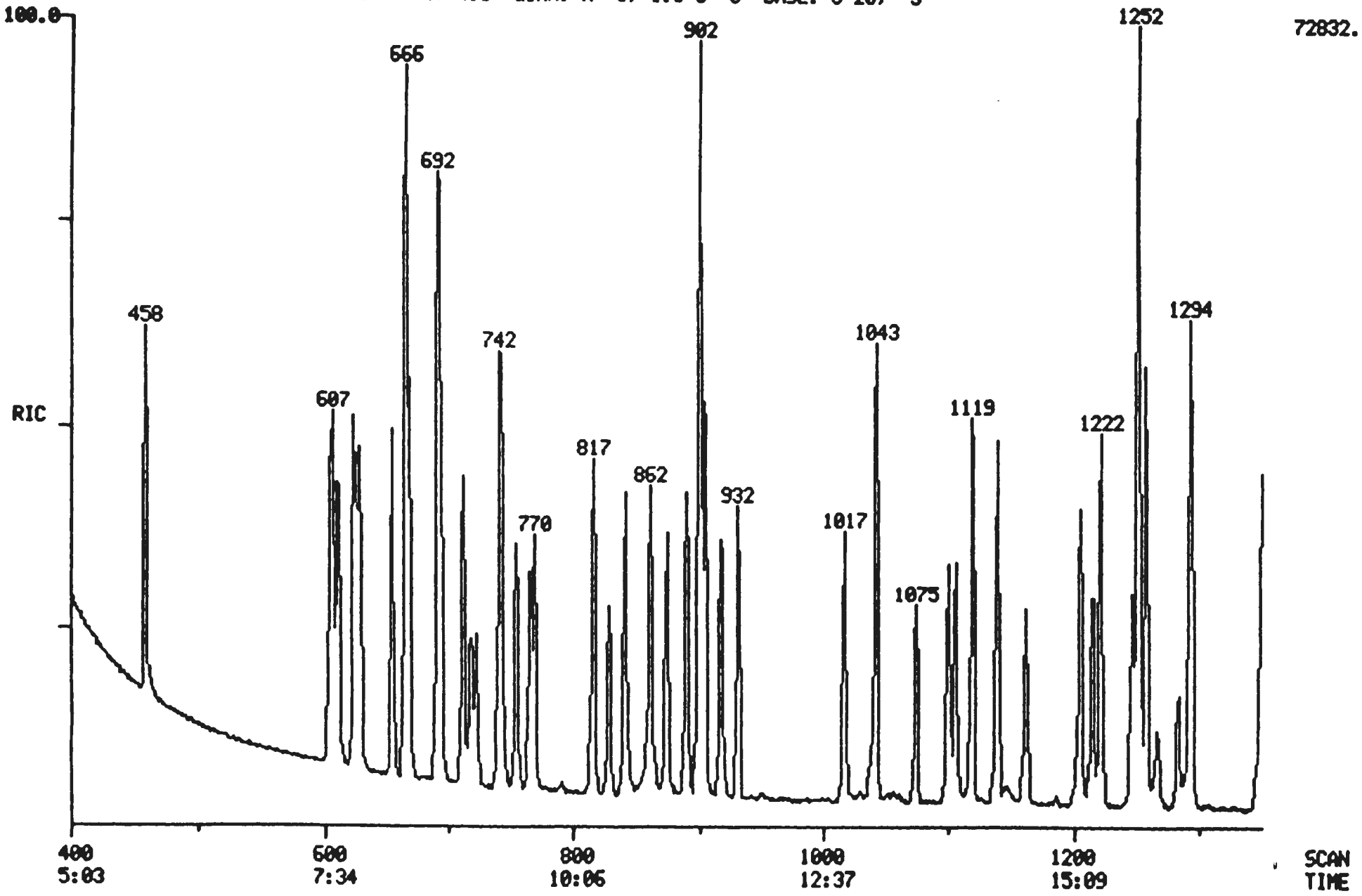
KR 10/25

000278

RIC
02/04/93 12:03:00
SAMPLE: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
CONDS.: CAP/.25,,30FT020453
RANGE: G 1,2020 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204502 #1
CALI: CALTAB #3

SCANS 400 TO 1350



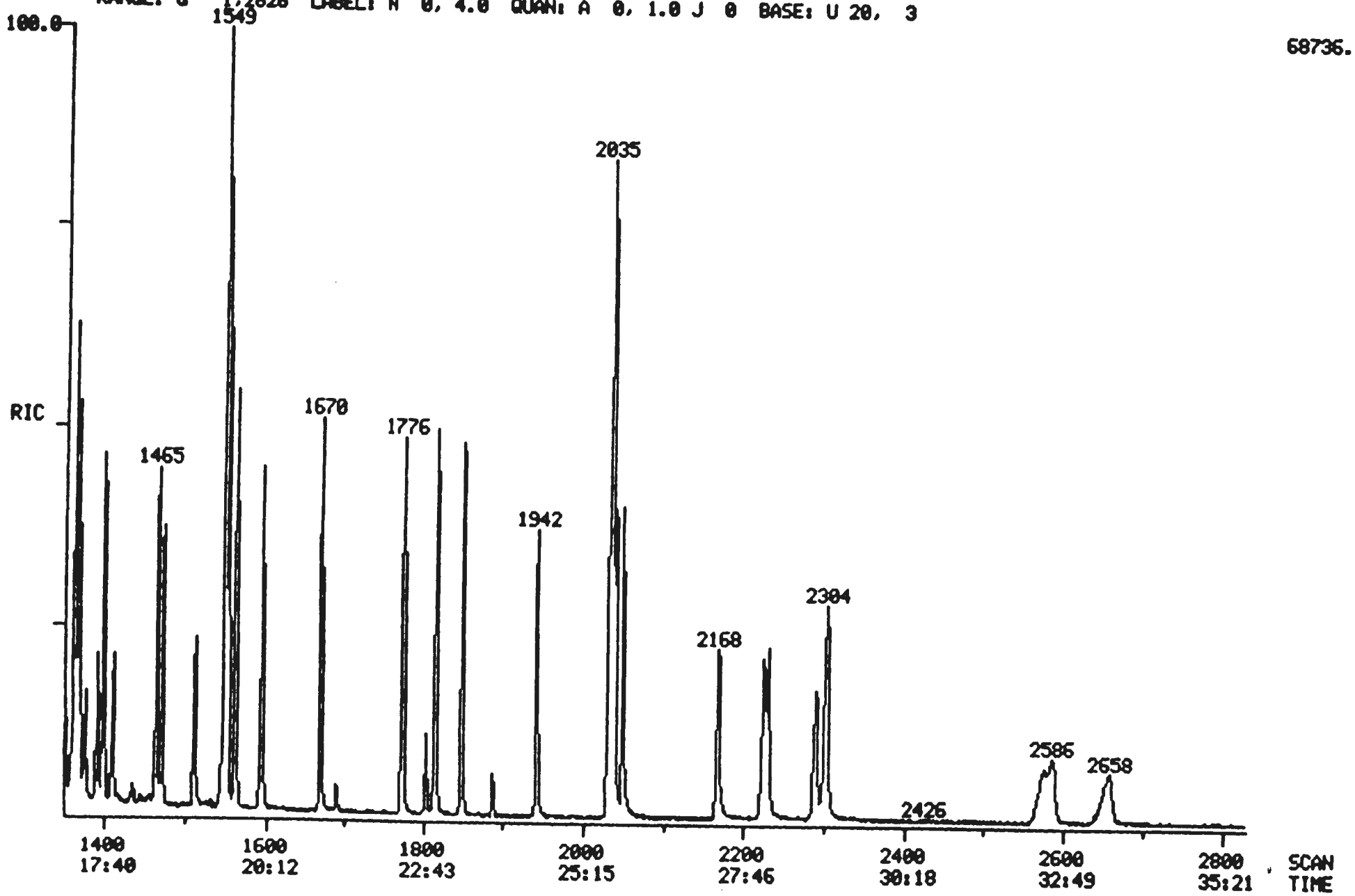
96 1 2 4 2 5 9 0 0

000279

RIC
02/04/93 12:03:00
SAMPLE: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
CONDS.: CAP/.25,,3DFT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S02 #1
CALI: CALTAB #3

SCANS 1350 TO 2828



96130492 0005 7940

Quantitation Report File: 30204S02

Data: 30204S02.TI
02/04/93 12:03:00
Sample: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	666	8:24	1	1.000	A BB	26410.	20.000 NG/UL	2.33
2	136	902	11:23	2	1.000	A BB	91522.	20.000 NG/UL	2.33
3	164	1252	15:48	3	1.000	A BB	50596.	20.000 NG/UL	2.33
4	188	1549	19:33	4	1.000	A BB	82238.	20.000 NG/UL	2.33
5	240	2035	25:41	5	1.000	A BB	53578.	20.000 NG/UL	2.33
6	264	2304	29:05	6	1.000	A BB	34464.	20.000 NG/UL	2.33
7	112	458	5:47	1	0.688	A BB	18334.	10.000 NG/UL	1.16
8	99	605	7:38	1	0.908	A BB	20256.	10.000 NG/UL	1.16
9	330	1411	17:49	3	1.127	A BB	3582.	10.000 NG/UL	1.16
10	82	766	9:40	2	0.849	A BB	18534.	10.000 NG/UL	1.16
11	172	1119	14:08	3	0.894	A BB	31374.	10.000 NG/UL	1.16
12	244	1849	23:21	5	0.909	A BV	31456.	10.000 NG/UL	1.16
13	132	626	7:54	1	0.940	A BB	15978.	10.000 NG/UL	1.16
14	152	692	8:44	1	1.039	A BB	12022.	10.000 NG/UL	1.16
15	94	607	7:40	1	0.911	A VV	26448.	10.000 NG/UL	1.16
16	93	611	7:43	1	0.917	A BV	29754.	10.000 NG/UL	1.16
17	128	629	7:56	1	0.944	A BV	18144.	10.000 NG/UL	1.16
18	146	655	8:16	1	0.983	A BB	20360.	10.000 NG/UL	1.16
19	146	669	8:27	1	1.005	A BB	20700.	10.000 NG/UL	1.16
20	108	692	8:44	1	1.039	A BB	12312.	10.000 NG/UL	1.16
21	146	695	8:46	1	1.044	A BB	19572.	10.000 NG/UL	1.16
22	108	713	9:00	1	1.071	A BV	15594.	10.000 NG/UL	1.16
23	45	719	9:05	1	1.080	A BB	29542.	10.000 NG/UL	1.16
24	108	742	9:22	1	1.114	A BV	16194.	10.000 NG/UL	1.16
25	70	744	9:24	1	1.117	A BV	15084.	10.000 NG/UL	1.16
26	117	755	9:32	1	1.134	A BB	7910.	10.000 NG/UL	1.16
27	77	770	9:43	2	0.854	A BB	19280.	10.000 NG/UL	1.16
28	82	817	10:19	2	0.906	A BB	36422.	10.000 NG/UL	1.16
29	139	829	10:28	2	0.919	A BB	8036.	10.000 NG/UL	1.16
30	122	842	10:38	2	0.933	A BV	14182.	10.000 NG/UL	1.16
31	93	862	10:53	2	0.956	A BB	22196.	10.000 NG/UL	1.16
32	122	865	10:55	2	0.959	A VV	6710.	10.000 NG/UL	1.16
33	162	875	11:03	2	0.970	A BB	13150.	10.000 NG/UL	1.16
34	180	891	11:15	2	0.988	A BB	14706.	10.000 NG/UL	1.16
35	128	905	11:26	2	1.003	A BV	47980.	10.000 NG/UL	1.16
36	127	918	11:35	2	1.018	A BB	19002.	10.000 NG/UL	1.16
37	225	932	11:46	2	1.033	A BB	7686.	10.000 NG/UL	1.16
38	107	1017	12:50	2	1.127	A BB	14262.	10.000 NG/UL	1.16
39	142	1043	13:10	2	1.156	A BB	33356.	10.000 NG/UL	1.16
40	237	1075	13:34	3	0.859	A BB	6594.	10.000 NG/UL	1.16
41	198	1100	13:53	3	0.879	A BV	8042.	10.000 NG/UL	1.16
42	198	1106	13:58	3	0.883	A VB	7852.	10.000 NG/UL	1.16
43	162	1139	14:23	3	0.910	A BB	29170.	10.000 NG/UL	1.16
44	65	1163	14:41	3	0.929	A BB	9518.	10.000 NG/UL	1.16
45	163	1206	15:14	3	0.963	A BB	32130.	10.000 NG/UL	1.16
46	152	1222	15:26	3	0.976	A BB	45014.	10.000 NG/UL	1.16
47	138	1247	15:45	3	0.996	A BB	7780.	10.000 NG/UL	1.16
48	153	1258	15:53	3	1.005	A BB	28308.	10.000 NG/UL	1.16
49	184	1267	16:00	3	1.012	A BB	2244.	10.000 NG/UL	1.16
50	109	1284	16:13	3	1.026	A BB	4070.	10.000 NG/UL	1.16

9613492.5992

000282

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	9:34	0.88	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	12:39	0.90	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	17:10	0.92	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	20:54	0.94	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	27:03	0.95	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	31:19	0.93	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	6:46	0.85	0.707	0.97	10.00	10.00	1.388	1.388	1.00
8	8:43	0.88	0.910	1.00	10.00	10.00	1.534	1.534	1.00
9	19:11	0.93	1.117	1.01	10.00	10.00	0.142	0.142	1.00
10	10:53	0.89	0.860	0.99	10.00	10.00	0.405	0.405	1.00
11	15:25	0.92	0.898	1.00	10.00	10.00	1.240	1.240	1.00
12	24:36	0.95	0.909	1.00	10.00	10.00	1.174	1.174	1.00
13	9:04	0.87	0.947	0.99	10.00	10.00	1.210	1.210	1.00
14	9:55	0.88	1.037	1.00	10.00	10.00	0.910	0.910	1.00
15	8:45	0.88	0.914	1.00	10.00	10.00	2.003	2.003	1.00
16	8:59	0.86	0.938	0.98	10.00	10.00	2.253	2.253	1.00
17	9:06	0.87	0.951	0.99	10.00	10.00	1.374	1.374	1.00
18	9:27	0.88	0.987	1.00	10.00	10.00	1.542	1.542	1.00
19	9:36	0.88	1.004	1.00	10.00	10.00	1.568	1.568	1.00
20	9:54	0.88	1.034	1.00	10.00	10.00	0.932	0.932	1.00
21	9:58	0.88	1.041	1.00	10.00	10.00	1.482	1.482	1.00
22	10:07	0.89	1.058	1.01	10.00	10.00	1.181	1.181	1.00
23	10:12	0.89	1.066	1.01	10.00	10.00	2.237	2.237	1.00
24	10:30	0.89	1.098	1.02	10.00	10.00	1.226	1.226	1.00
25	10:32	0.89	1.102	1.01	10.00	10.00	1.142	1.142	1.00
26	10:46	0.89	1.125	1.01	10.00	10.00	0.599	0.599	1.00
27	10:56	0.89	0.864	0.99	10.00	10.00	0.421	0.421	1.00
28	11:32	0.89	0.911	0.99	10.00	10.00	0.796	0.796	1.00
29	11:42	0.89	0.925	0.99	10.00	10.00	0.176	0.176	1.00
30	11:47	0.90	0.932	1.00	10.00	10.00	0.310	0.310	1.00
31	12:03	0.90	0.952	1.00	10.00	10.00	0.485	0.485	1.00
32	12:06	0.90	0.957	1.00	10.00	10.00	0.147	0.147	1.00
33	12:18	0.90	0.972	1.00	10.00	10.00	0.287	0.287	1.00
34	12:30	0.90	0.988	1.00	10.00	10.00	0.321	0.321	1.00
35	12:43	0.90	1.005	1.00	10.00	10.00	1.048	1.048	1.00
36	12:50	0.90	1.015	1.00	10.00	10.00	0.415	0.415	1.00
37	13:00	0.90	1.028	1.01	10.00	10.00	0.168	0.168	1.00
38	14:03	0.91	1.111	1.02	10.00	10.00	0.312	0.312	1.00
39	14:28	0.91	1.144	1.01	10.00	10.00	0.729	0.729	1.00
40	14:52	0.91	0.865	0.99	10.00	10.00	0.261	0.261	1.00
41	15:11	0.91	0.885	0.99	10.00	10.00	0.318	0.318	1.00
42	15:17	0.91	0.890	0.99	10.00	10.00	0.310	0.310	1.00
43	15:44	0.91	0.916	0.99	10.00	10.00	1.153	1.153	1.00
44	16:00	0.92	0.932	1.00	10.00	10.00	0.376	0.376	1.00
45	16:29	0.92	0.960	1.00	10.00	10.00	1.270	1.270	1.00
46	16:48	0.92	0.979	1.00	10.00	10.00	1.779	1.779	1.00
47	17:03	0.92	0.993	1.00	10.00	10.00	0.308	0.308	1.00
48	17:15	0.92	1.005	1.00	10.00	10.00	1.119	1.119	1.00
49	17:19	0.92	1.009	1.00	10.00	10.00	0.089	0.089	1.00
50	17:30	0.93	1.019	1.01	10.00	10.00	0.161	0.161	1.00

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Quantitation Report File: 30204S02

000283

Data: 30204S02.TI
02/04/93 12:03:00
Sample: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1293	16:19	3	1.033	A BB	39268.	10.000 NG/UL	1.16
52	165	1215	15:20	3	0.970	A BB	7688.	10.000 NG/UL	1.16
53	149	1350	17:03	3	1.078	A BV	40342.	10.000 NG/UL	1.16
54	165	1295	16:21	3	1.034	A BB	9658.	10.000 NG/UL	1.16
55	166	1363	17:12	3	1.089	A BB	31230.	10.000 NG/UL	1.16
56	204	1367	17:15	3	1.092	A BB	14910.	10.000 NG/UL	1.16
57	138	1370	17:18	3	1.094	A BB	8052.	10.000 NG/UL	1.16
58	198	1377	17:23	4	0.889	A BB	3542.	10.000 NG/UL	1.16
59	169	1392	17:34	4	0.899	A BB	9192.	10.000 NG/UL	1.16
60	248	1464	18:29	4	0.945	A BB	8240.	10.000 NG/UL	1.16
61	284	1471	18:34	4	0.950	A BB	9648.	10.000 NG/UL	1.16
62	266	1512	19:05	4	0.976	A BB	4564.	10.000 NG/UL	1.16
63	178	1553	19:36	4	1.003	A BV	43499.	10.000 NG/UL	1.16

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000284

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
64	178	1563	19:44	4	1.009	A VB	43977.	10.000	NG/UL	1.16
65	167	1595	20:08	4	1.030	A BV	39301.	10.000	NG/UL	1.16
66	149	1670	21:05	4	1.078	A BB	52024.	10.000	NG/UL	1.16
67	202	1776	22:25	4	1.147	A BB	41986.	10.000	NG/UL	1.16
68	202	1816	22:56	5	0.892	A BB	43648.	10.000	NG/UL	1.16
69	149	1942	24:31	5	0.954	A BB	15604.	10.000	NG/UL	1.16
70	252	2031	25:38	5	0.998	A BB	8170.	10.000	NG/UL	1.16
71	228	2033	25:40	5	0.999	A BV	30128.	10.000	NG/UL	1.16
72	228	2039	25:44	5	1.002	A VB	27572.	10.000	NG/UL	1.16
73	149	2049	25:52	5	1.007	A BB	21026.	10.000	NG/UL	1.16
74	149	2168	27:22	6	0.941	A BB	28489.	10.000	NG/UL	1.16
75	252	2225	28:05	6	0.966	A BV	23693.	10.000	NG/UL	1.16
76	252	2231	28:10	6	0.968	A VB	23218.	10.000	NG/UL	1.16
77	252	2290	28:55	6	0.994	A BB	22314.	10.000	NG/UL	1.16
78	276	2574	32:30	6	1.117	A BB	19237.	10.000	NG/UL	1.16
79	278	2587	32:40	6	1.123	A BB	17903.	10.000	NG/UL	1.16
80	276	2657	33:33	6	1.153	A BB	16713.	10.000	NG/UL	1.16

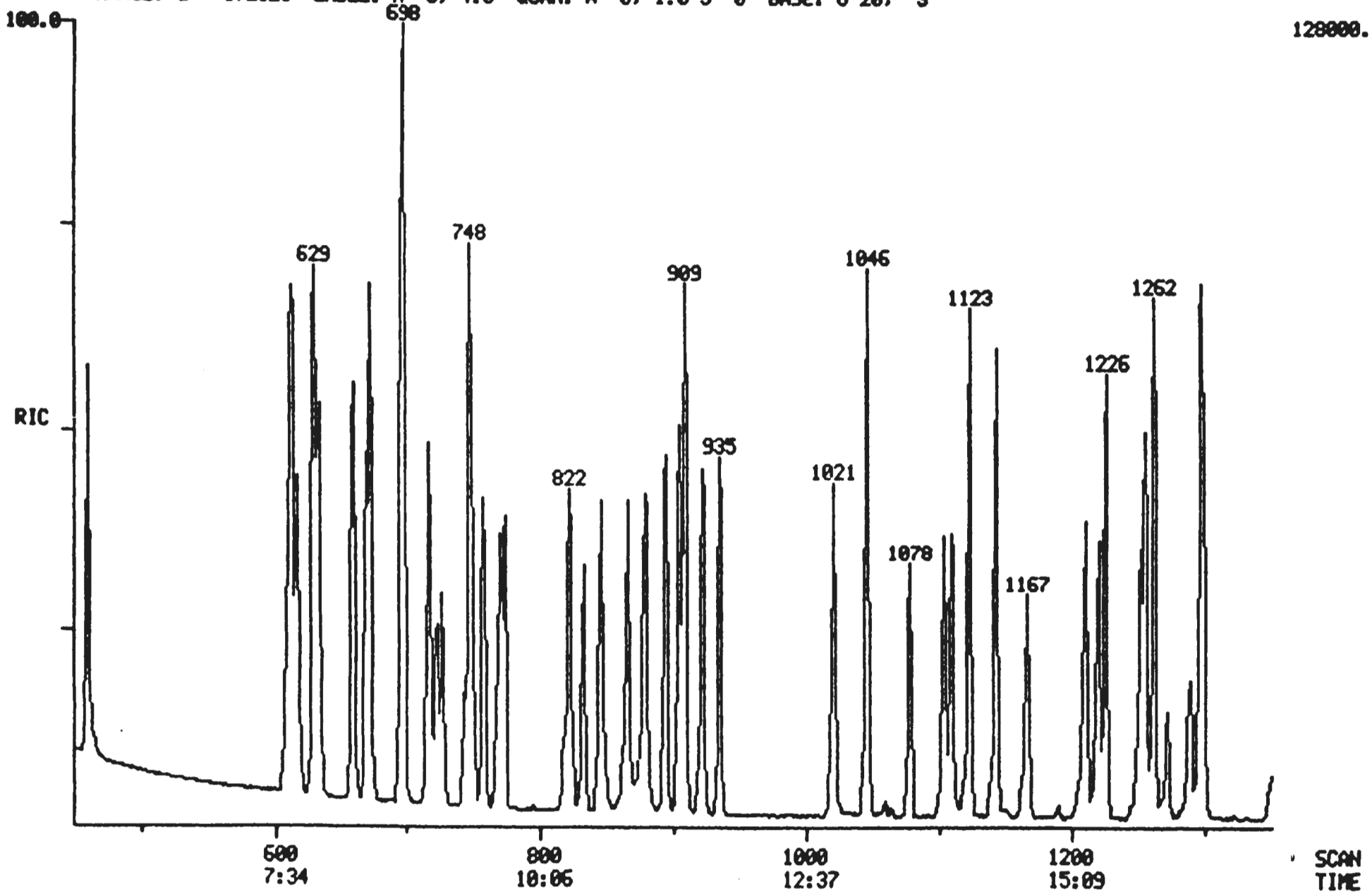
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	17:43	0.92	1.032	1.00	10.00	10.00	1.552	1.552	1.00
52	16:38	0.92	0.968	1.00	10.00	10.00	0.304	0.304	1.00
53	18:18	0.93	1.066	1.01	10.00	10.00	1.595	1.595	1.00
54	17:40	0.92	1.029	1.00	10.00	10.00	0.382	0.382	1.00
55	18:35	0.93	1.082	1.01	10.00	10.00	1.234	1.234	1.00
56	18:34	0.93	1.082	1.01	10.00	10.00	0.589	0.589	1.00
57	18:39	0.93	1.086	1.01	10.00	10.00	0.318	0.318	1.00
58	18:43	0.93	0.895	0.99	10.00	10.00	0.086	0.086	1.00
59	18:52	0.93	0.903	0.99	10.00	10.00	0.224	0.224	1.00
60	19:48	0.93	0.947	1.00	10.00	10.00	0.200	0.200	1.00
61	19:57	0.93	0.955	0.99	10.00	10.00	0.235	0.235	1.00
62	20:26	0.93	0.978	1.00	10.00	10.00	0.111	0.111	1.00
63	20:57	0.94	1.003	1.00	10.00	10.00	1.058	1.058	1.00
64	21:05	0.94	1.009	1.00	10.00	10.00	1.070	1.070	1.00
65	21:28	0.94	1.027	1.00	10.00	10.00	0.956	0.956	1.00
66	22:15	0.95	1.065	1.01	10.00	10.00	1.265	1.265	1.00
67	23:46	0.94	1.137	1.01	10.00	10.00	1.021	1.021	1.00
68	24:17	0.94	0.898	0.99	10.00	10.00	1.629	1.629	1.00
69	25:41	0.95	0.950	1.00	10.00	10.00	0.582	0.582	1.00
70	26:55	0.95	0.995	1.00	10.00	10.00	0.305	0.305	1.00
71	27:01	0.95	0.999	1.00	10.00	10.00	1.125	1.125	1.00
72	27:06	0.95	1.002	1.00	10.00	10.00	1.029	1.029	1.00
73	26:58	0.96	0.997	1.01	10.00	10.00	0.785	0.785	1.00
74	28:39	0.96	0.915	1.03	10.00	10.00	1.653	1.653	1.00
75	29:59	0.94	0.957	1.01	10.00	10.00	1.375	1.375	1.00
76	30:05	0.94	0.960	1.01	10.00	10.00	1.347	1.347	1.00
77	31:08	0.93	0.994	1.00	10.00	10.00	1.295	1.295	1.00
78	36:10	0.90	1.155	0.97	10.00	10.00	1.116	1.116	1.00
79	36:18	0.90	1.159	0.97	10.00	10.00	1.039	1.039	1.00
80	37:42	0.89	1.204	0.96	10.00	10.00	0.970	0.970	1.00

000285

RIC
02/04/93 15:32:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204507 #1
CALI: 30204507 #3

SCANS 450 TO 1350



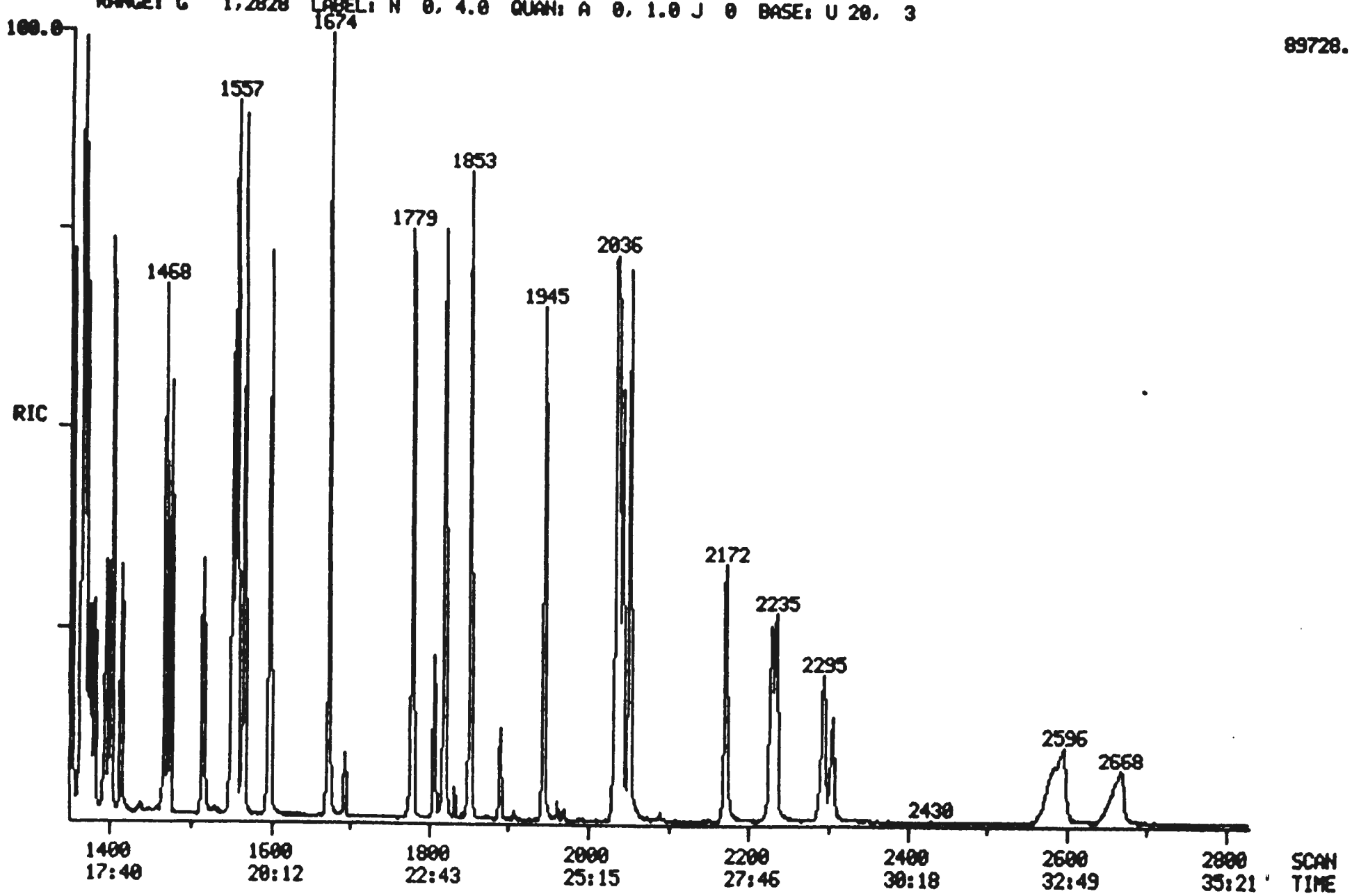
%RIC 2.0E+5

000286

RIC
02/04/93 15:32:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S07 #1
CALI: 30204S07 #3

SCANS 1350 TO 2828



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Quantitation Report File: 30204S07

Data: 30204S07.TI
02/04/93 15:32:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	669	8:27	1	1.000	A BB	23712.	20.000 NG/UL	1.02
2	136	905	11:26	2	1.000	A BB	81406.	20.000 NG/UL	1.02
3	164	1255	15:51	3	1.000	A BB	44286.	20.000 NG/UL	1.02
4	188	1552	19:36	4	1.000	A BB	72066.	20.000 NG/UL	1.02
5	240	2038	25:44	5	1.000	A BB	40683.	20.000 NG/UL	1.02
6	264	2306	29:07	6	1.000	A BB	20504.	20.000 NG/UL	1.02
7	112	460	5:48	1	0.688	A BB	43781.	25.000 NG/UL	1.27
8	99	610	7:42	1	0.912	A BB	48459.	25.000 NG/UL	1.27
9	330	1415	17:52	3	1.127	A BB	8010.	25.000 NG/UL	1.27
10	82	771	9:44	2	0.852	A BB	45658.	25.000 NG/UL	1.27
11	172	1123	14:11	3	0.895	A BB	72116.	25.000 NG/UL	1.27
12	244	1853	23:24	5	0.909	A BB	67245.	25.000 NG/UL	1.27
13	132	630	7:57	1	0.942	A BB	37488.	25.000 NG/UL	1.27
14	152	695	8:46	1	1.039	A BB	27628.	25.000 NG/UL	1.27
15	94	612	7:44	1	0.915	A BB	60483.	25.000 NG/UL	1.27
16	93	616	7:47	1	0.921	A BV	71654.	25.000 NG/UL	1.27
17	128	633	7:59	1	0.946	A BV	41086.	25.000 NG/UL	1.27
18	146	659	8:19	1	0.985	A BV	45263.	25.000 NG/UL	1.27
19	146	672	8:29	1	1.004	A VB	46374.	25.000 NG/UL	1.27
20	108	697	8:48	1	1.042	A BB	28708.	25.000 NG/UL	1.27
21	146	698	8:49	1	1.043	A BB	43972.	25.000 NG/UL	1.27
22	108	717	9:03	1	1.072	A BV	35212.	25.000 NG/UL	1.27
23	45	723	9:08	1	1.081	A BB	68952.	25.000 NG/UL	1.27
24	108	748	9:27	1	1.118	A BB	37768.	25.000 NG/UL	1.27
25	70	749	9:27	1	1.120	A BV	35852.	25.000 NG/UL	1.27
26	117	758	9:34	1	1.133	A BB	18360.	25.000 NG/UL	1.27
27	77	775	9:47	2	0.856	A BV	45995.	25.000 NG/UL	1.27
28	82	822	10:23	2	0.908	A BV	86577.	25.000 NG/UL	1.27
29	139	833	10:31	2	0.920	A BB	18482.	25.000 NG/UL	1.27
30	122	846	10:41	2	0.935	A BB	32004.	25.000 NG/UL	1.27
31	93	866	10:56	2	0.957	A BB	52430.	25.000 NG/UL	1.27
32	122	879	11:06	2	0.971	A BB	13947.	25.000 NG/UL	1.27
33	162	879	11:06	2	0.971	A BB	30290.	25.000 NG/UL	1.27
34	180	895	11:18	2	0.989	A BB	32866.	25.000 NG/UL	1.27
35	128	909	11:29	2	1.004	A BV	104886.	25.000 NG/UL	1.27
36	127	922	11:38	2	1.019	A BB	46828.	25.000 NG/UL	1.27
37	225	935	11:48	2	1.033	A BB	17356.	25.000 NG/UL	1.27
38	107	1021	12:53	2	1.128	A BB	33350.	25.000 NG/UL	1.27
39	142	1046	13:12	2	1.156	A BB	72813.	25.000 NG/UL	1.27
40	237	1078	13:37	3	0.859	A BB	14468.	25.000 NG/UL	1.27
41	198	1104	13:56	3	0.880	A BV	17990.	25.000 NG/UL	1.27
42	198	1109	14:00	3	0.884	A VB	17492.	25.000 NG/UL	1.27
43	162	1143	14:26	3	0.911	A BB	64282.	25.000 NG/UL	1.27
44	65	1167	14:44	3	0.930	A BB	23876.	25.000 NG/UL	1.27
45	163	1210	15:17	3	0.964	A BB	71043.	25.000 NG/UL	1.27
46	152	1226	15:29	3	0.977	A BB	99002.	25.000 NG/UL	1.27
47	138	1252	15:48	3	0.998	A BV	18814.	25.000 NG/UL	1.27
48	153	1262	15:56	3	1.006	A BB	61578.	25.000 NG/UL	1.27
49	184	1272	16:04	3	1.014	A BB	6186.	25.000 NG/UL	1.27
50	109	1289	16:16	3	1.027	A BV	8838.	25.000 NG/UL	1.27

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No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:27	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:44	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:06	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.00	0.688	1.00	25.00	25.00	1.477	1.477	1.00
8	7:43	1.00	0.913	1.00	25.00	25.00	1.635	1.635	1.00
9	17:52	1.00	1.127	1.00	25.00	25.00	0.145	0.145	1.00
10	9:44	1.00	0.852	1.00	25.00	25.00	0.449	0.449	1.00
11	14:11	1.00	0.895	1.00	25.00	25.00	1.303	1.303	1.00
12	23:24	1.00	0.909	1.00	25.00	25.00	1.322	1.322	1.00
13	7:57	1.00	0.942	1.00	25.00	25.00	1.265	1.265	1.00
14	8:46	1.00	1.039	1.00	25.00	25.00	0.932	0.932	1.00
15	7:45	1.00	0.918	1.00	25.00	25.00	2.041	2.041	1.00
16	7:47	1.00	0.922	1.00	25.00	25.00	2.417	2.417	1.00
17	7:59	1.00	0.946	1.00	25.00	25.00	1.386	1.386	1.00
18	8:18	1.00	0.984	1.00	25.00	25.00	1.527	1.527	1.00
19	8:29	1.00	1.004	1.00	25.00	25.00	1.565	1.565	1.00
20	8:49	1.00	1.043	1.00	25.00	25.00	0.969	0.969	1.00
21	8:49	1.00	1.043	1.00	25.00	25.00	1.484	1.484	1.00
22	9:04	1.00	1.073	1.00	25.00	25.00	1.188	1.188	1.00
23	9:08	1.00	1.081	1.00	25.00	25.00	2.326	2.326	1.00
24	9:27	1.00	1.120	1.00	25.00	25.00	1.274	1.274	1.00
25	9:30	0.99	1.126	0.99	25.00	25.00	1.210	1.210	1.00
26	9:34	1.00	1.133	1.00	25.00	25.00	0.619	0.619	1.00
27	9:47	1.00	0.856	1.00	25.00	25.00	0.452	0.452	1.00
28	10:24	1.00	0.910	1.00	25.00	25.00	0.851	0.851	1.00
29	10:31	1.00	0.920	1.00	25.00	25.00	0.182	0.182	1.00
30	10:42	1.00	0.936	1.00	25.00	25.00	0.315	0.315	1.00
31	10:57	1.00	0.958	1.00	25.00	25.00	0.515	0.515	1.00
32	11:10	0.99	0.978	0.99	25.00	25.00	0.137	0.137	1.00
33	11:07	1.00	0.972	1.00	25.00	25.00	0.298	0.298	1.00
34	11:18	1.00	0.989	1.00	25.00	25.00	0.323	0.323	1.00
35	11:29	1.00	1.004	1.00	25.00	25.00	1.031	1.031	1.00
36	11:39	1.00	1.020	1.00	25.00	25.00	0.460	0.460	1.00
37	11:48	1.00	1.033	1.00	25.00	25.00	0.171	0.171	1.00
38	12:53	1.00	1.128	1.00	25.00	25.00	0.328	0.328	1.00
39	13:12	1.00	1.156	1.00	25.00	25.00	0.716	0.716	1.00
40	13:36	1.00	0.858	1.00	25.00	25.00	0.261	0.261	1.00
41	13:56	1.00	0.880	1.00	25.00	25.00	0.325	0.325	1.00
42	14:01	1.00	0.884	1.00	25.00	25.00	0.316	0.316	1.00
43	14:26	1.00	0.911	1.00	25.00	25.00	1.161	1.161	1.00
44	14:45	1.00	0.931	1.00	25.00	25.00	0.431	0.431	1.00
45	15:17	1.00	0.965	1.00	25.00	25.00	1.283	1.283	1.00
46	15:29	1.00	0.977	1.00	25.00	25.00	1.788	1.788	1.00
47	15:49	1.00	0.998	1.00	25.00	25.00	0.340	0.340	1.00
48	15:57	1.00	1.006	1.00	25.00	25.00	1.112	1.112	1.00
49	16:04	1.00	1.014	1.00	25.00	25.00	0.112	0.112	1.00
50	16:17	1.00	1.028	1.00	25.00	25.00	0.160	0.160	1.00

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Quantitation Report File: 30204S07

Data: 30204S07.TI
02/04/93 15:32:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	XTot
51	168	1297	16:22	3	1.033	A BB	85728.	25.000 NG/UL	1.27
52	165	1220	15:24	3	0.972	A VB	15782.	25.000 NG/UL	1.27
53	149	1355	17:06	3	1.080	A BB	80237.	25.000 NG/UL	1.27
54	165	1299	16:24	3	1.035	A BB	22218.	25.000 NG/UL	1.27
55	166	1367	17:15	3	1.089	A BB	69118.	25.000 NG/UL	1.27
56	204	1371	17:18	3	1.092	A BB	32098.	25.000 NG/UL	1.27
57	138	1377	17:23	3	1.097	A BB	18252.	25.000 NG/UL	1.27
58	198	1382	17:27	4	0.890	A BB	8768.	25.000 NG/UL	1.27
59	169	1396	17:37	4	0.899	A BB	20484.	25.000 NG/UL	1.27
60	248	1468	18:32	4	0.946	A BV	17658.	25.000 NG/UL	1.27
61	284	1475	18:37	4	0.950	A BB	19466.	25.000 NG/UL	1.27
62	266	1515	19:08	4	0.976	A BB	9971.	25.000 NG/UL	1.27
63	178	1557	19:39	4	1.003	A BV	94344.	25.000 NG/UL	1.27

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1567	19:47	4	1.010	A VB	95490.	25.000 NG/UL	1.27
65	167	1600	20:12	4	1.031	A BB	88639.	25.000 NG/UL	1.27
66	149	1674	21:08	4	1.079	A BB	122758.	25.000 NG/UL	1.27
67	202	1779	22:28	4	1.146	A BB	89792.	25.000 NG/UL	1.27
68	202	1820	22:59	5	0.893	A BB	91606.	25.000 NG/UL	1.27
69	149	1945	24:33	5	0.954	A BB	39030.	25.000 NG/UL	1.27
70	252	2034	25:41	5	0.998	A BV	17526.	25.000 NG/UL	1.27
71	228	2036	25:42	5	0.999	A BV	61871.	25.000 NG/UL	1.27
72	228	2043	25:48	5	1.002	A VB	49116.	25.000 NG/UL	1.27
73	149	2052	25:54	5	1.007	A VB	46510.	25.000 NG/UL	1.27
74	149	2172	27:25	6	0.942	A BB	58304.	25.000 NG/UL	1.27
75	252	2229	28:08	6	0.967	A BV	40403.	25.000 NG/UL	1.27
76	252	2235	28:13	6	0.969	A VB	34328.	25.000 NG/UL	1.27
77	252	2295	28:58	6	0.995	A BB	33536.	25.000 NG/UL	1.27
78	276	2584	32:37	6	1.121	A BB	28864.	25.000 NG/UL	1.27
79	278	2596	32:46	6	1.126	A BB	26688.	25.000 NG/UL	1.27
80	276	2669	33:42	6	1.157	A BB	22862.	25.000 NG/UL	1.27

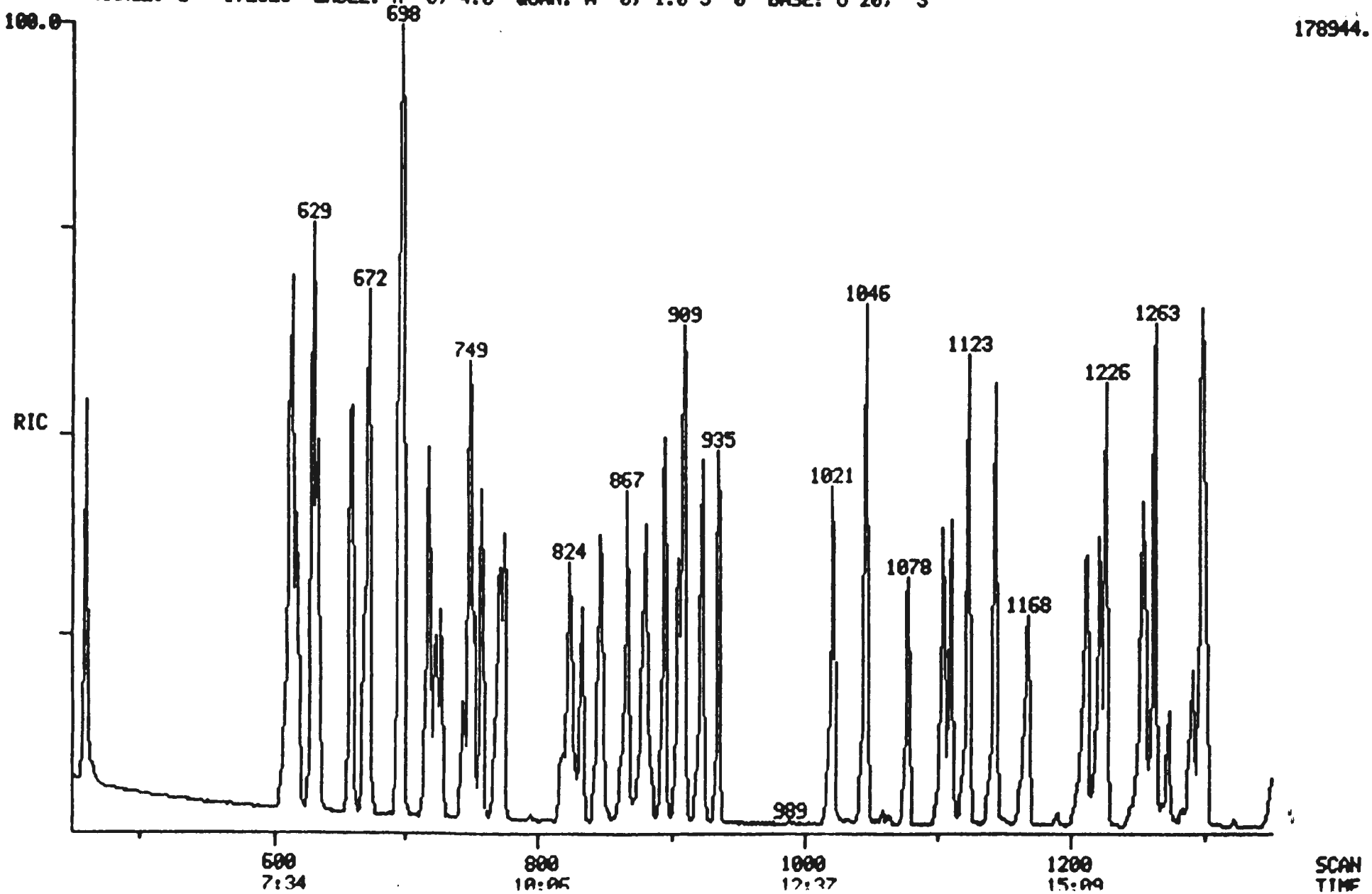
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	25.00	25.00	1.549	1.549	1.00
52	15:25	1.00	0.973	1.00	25.00	25.00	0.285	0.285	1.00
53	17:07	1.00	1.080	1.00	25.00	25.00	1.449	1.449	1.00
54	16:25	1.00	1.037	1.00	25.00	25.00	0.401	0.401	1.00
55	17:15	1.00	1.089	1.00	25.00	25.00	1.249	1.249	1.00
56	17:18	1.00	1.092	1.00	25.00	25.00	0.580	0.580	1.00
57	17:25	1.00	1.100	1.00	25.00	25.00	0.330	0.330	1.00
58	17:28	1.00	0.892	1.00	25.00	25.00	0.097	0.097	1.00
59	17:38	1.00	0.900	1.00	25.00	25.00	0.227	0.227	1.00
60	18:33	1.00	0.947	1.00	25.00	25.00	0.196	0.196	1.00
61	18:38	1.00	0.951	1.00	25.00	25.00	0.216	0.216	1.00
62	19:08	1.00	0.976	1.00	25.00	25.00	0.111	0.111	1.00
63	19:39	1.00	1.003	1.00	25.00	25.00	1.047	1.047	1.00
64	19:47	1.00	1.010	1.00	25.00	25.00	1.060	1.060	1.00
65	20:12	1.00	1.031	1.00	25.00	25.00	0.984	0.984	1.00
66	21:08	1.00	1.079	1.00	25.00	25.00	1.363	1.363	1.00
67	22:28	1.00	1.147	1.00	25.00	25.00	0.997	0.997	1.00
68	22:59	1.00	0.893	1.00	25.00	25.00	1.801	1.801	1.00
69	24:33	1.00	0.954	1.00	25.00	25.00	0.767	0.767	1.00
70	25:41	1.00	0.999	1.00	25.00	25.00	0.345	0.345	1.00
71	25:42	1.00	0.999	1.00	25.00	25.00	1.217	1.217	1.00
72	25:48	1.00	1.002	1.00	25.00	25.00	0.966	0.966	1.00
73	25:54	1.00	1.007	1.00	25.00	25.00	0.915	0.915	1.00
74	27:25	1.00	0.942	1.00	25.00	25.00	2.275	2.275	1.00
75	28:09	1.00	0.967	1.00	25.00	25.00	1.576	1.576	1.00
76	28:14	1.00	0.970	1.00	25.00	25.00	1.339	1.339	1.00
77	28:59	1.00	0.996	1.00	25.00	25.00	1.308	1.308	1.00
78	32:40	1.00	1.122	1.00	25.00	25.00	1.126	1.126	1.00
79	32:52	1.00	1.130	1.00	25.00	25.00	1.041	1.041	1.00
80	33:47	1.00	1.161	1.00	25.00	25.00	0.892	0.892	1.00

000292

RIC
02/04/93 13:22:00
SAMPLE: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2020 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S04 #1
CALI: 30204S04 #3

SCANS 450 TO 1350



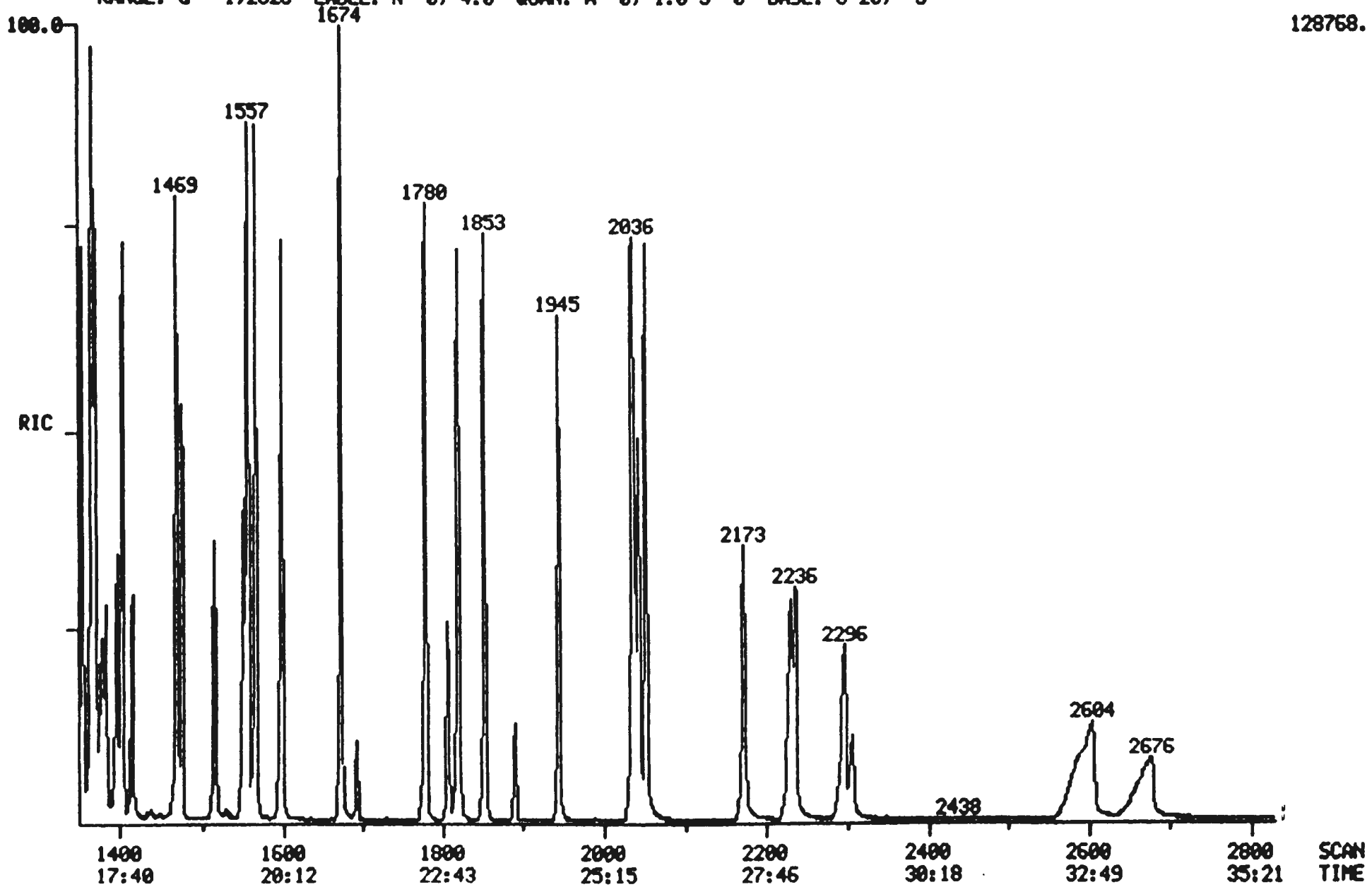
2409.2ME1 96

000293

RIC
02/04/93 13:22:00
SAMPLE: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
CONDS.: CAP/.25,,30FT0204S5
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S04 #1
CALI: 30204S04 #3

SCANS 1350 TO 2828



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Quantitation Report File: 30204S04

Data: 30204S04.TI
02/04/93 13:22:00
Sample: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000295

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	669	8:27	1	1.000	A BB	21150.	20.000 NG/UL	0.65
2	136	905	11:26	2	1.000	A BB	73348.	20.000 NG/UL	0.65
3	164	1255	15:51	3	1.000	A BB	40718.	20.000 NG/UL	0.65
4	188	1552	19:36	4	1.000	A BB	67340.	20.000 NG/UL	0.65
5	240	2038	25:44	5	1.000	A BB	36411.	20.000 NG/UL	0.65
6	264	2305	29:06	6	1.000	A BB	21658.	20.000 NG/UL	0.65
7	112	460	5:48	1	0.688	A BV	58110.	40.000 NG/UL	1.30
8	99	611	7:43	1	0.913	A BB	65350.	40.000 NG/UL	1.30
9	330	1415	17:52	3	1.127	A BB	11314.	40.000 NG/UL	1.30
10	82	771	9:44	2	0.852	A BB	61767.	40.000 NG/UL	1.30
11	172	1123	14:11	3	0.895	A BB	104732.	40.000 NG/UL	1.30
12	244	1853	23:24	5	0.909	A BB	95975.	40.000 NG/UL	1.30
13	132	630	7:57	1	0.942	A BB	50532.	40.000 NG/UL	1.30
14	152	695	8:46	1	1.039	A BB	40052.	40.000 NG/UL	1.30
15	94	614	7:45	1	0.918	A BV	89165.	40.000 NG/UL	1.30
16	93	617	7:47	1	0.922	A BV	104498.	40.000 NG/UL	1.30
17	128	633	7:59	1	0.946	A BB	59727.	40.000 NG/UL	1.30
18	146	658	8:18	1	0.984	A BV	66985.	40.000 NG/UL	1.30
19	146	672	8:29	1	1.004	A VB	69264.	40.000 NG/UL	1.30
20	108	698	8:49	1	1.043	A BB	42082.	40.000 NG/UL	1.30
21	146	698	8:49	1	1.043	A BB	66480.	40.000 NG/UL	1.30
22	108	718	9:04	1	1.073	A BV	51300.	40.000 NG/UL	1.30
23	45	723	9:08	1	1.081	A BB	100606.	40.000 NG/UL	1.30
24	108	749	9:27	1	1.120	A BB	54160.	40.000 NG/UL	1.30
25	70	753	9:30	1	1.126	A BV	51936.	40.000 NG/UL	1.30
26	117	758	9:34	1	1.133	A BB	26826.	40.000 NG/UL	1.30
27	77	775	9:47	2	0.856	A BB	65596.	40.000 NG/UL	1.30
28	82	824	10:24	2	0.910	A BB	127716.	40.000 NG/UL	1.30
29	139	833	10:31	2	0.920	A VB	27933.	40.000 NG/UL	1.30
30	122	847	10:42	2	0.936	A BB	47800.	40.000 NG/UL	1.30
31	93	867	10:57	2	0.958	A BB	77560.	40.000 NG/UL	1.30
32	122	885	11:10	2	0.978	A BB	21001.	40.000 NG/UL	1.30
33	162	880	11:07	2	0.972	A BB	45222.	40.000 NG/UL	1.30
34	180	895	11:18	2	0.989	A BB	50064.	40.000 NG/UL	1.30
35	128	909	11:29	2	1.004	A BV	157323.	40.000 NG/UL	1.30
36	127	923	11:39	2	1.020	A BB	69816.	40.000 NG/UL	1.30
37	225	935	11:48	2	1.033	A BB	25604.	40.000 NG/UL	1.30
38	107	1021	12:53	2	1.128	A BB	50614.	40.000 NG/UL	1.30
39	142	1046	13:12	2	1.156	A BB	113284.	40.000 NG/UL	1.30
40	237	1077	13:36	3	0.858	A BB	22674.	40.000 NG/UL	1.30
41	198	1104	13:56	3	0.880	A BV	29411.	40.000 NG/UL	1.30
42	198	1110	14:01	3	0.884	A VB	23545.	40.000 NG/UL	1.30
43	162	1143	14:26	3	0.911	A BB	98032.	40.000 NG/UL	1.30
44	65	1168	14:45	3	0.931	A BB	36220.	40.000 NG/UL	1.30
45	163	1211	15:17	3	0.965	A BB	107410.	40.000 NG/UL	1.30
46	152	1226	15:29	3	0.977	A BB	152598.	40.000 NG/UL	1.30
47	138	1253	15:49	3	0.998	A BV	29551.	40.000 NG/UL	1.30
48	153	1263	15:57	3	1.006	A BB	95442.	40.000 NG/UL	1.30
49	184	1273	16:04	3	1.014	A BB	10894.	40.000 NG/UL	1.30
50	109	1290	16:17	3	1.028	A BV	13120.	40.000 NG/UL	1.30

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)	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:23	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	40.00	40.00	1.374	1.374	1.00
8	7:38	1.01	0.908	1.01	40.00	40.00	1.545	1.545	1.00
9	17:49	1.00	1.127	1.00	40.00	40.00	0.139	0.139	1.00
0	9:40	1.01	0.849	1.00	40.00	40.00	0.421	0.421	1.00
1	14:08	1.00	0.894	1.00	40.00	40.00	1.286	1.286	1.00
2	23:21	1.00	0.909	1.00	40.00	40.00	1.318	1.318	1.00
3	7:54	1.01	0.940	1.00	40.00	40.00	1.195	1.195	1.00
4	8:44	1.00	1.039	1.00	40.00	40.00	0.947	0.947	1.00
5	7:40	1.01	0.911	1.01	40.00	40.00	2.108	2.108	1.00
6	7:43	1.01	0.917	1.01	40.00	40.00	2.470	2.470	1.00
7	7:56	1.01	0.944	1.00	40.00	40.00	1.412	1.412	1.00
8	8:16	1.00	0.983	1.00	40.00	40.00	1.584	1.584	1.00
9	8:27	1.00	1.005	1.00	40.00	40.00	1.637	1.637	1.00
0	8:44	1.01	1.039	1.00	40.00	40.00	0.995	0.995	1.00
1	8:46	1.00	1.044	1.00	40.00	40.00	1.572	1.572	1.00
2	9:00	1.01	1.071	1.00	40.00	40.00	1.213	1.213	1.00
3	9:05	1.01	1.080	1.00	40.00	40.00	2.378	2.378	1.00
4	9:22	1.01	1.114	1.00	40.00	40.00	1.280	1.280	1.00
5	9:24	1.01	1.117	1.01	40.00	40.00	1.228	1.228	1.00
6	9:32	1.00	1.134	1.00	40.00	40.00	0.634	0.634	1.00
7	9:43	1.01	0.854	1.00	40.00	40.00	0.447	0.447	1.00
8	10:19	1.01	0.906	1.01	40.00	40.00	0.871	0.871	1.00
9	10:28	1.00	0.919	1.00	40.00	40.00	0.190	0.190	1.00
0	10:38	1.01	0.933	1.00	40.00	40.00	0.326	0.326	1.00
1	10:53	1.01	0.956	1.00	40.00	40.00	0.529	0.529	1.00
2	10:55	1.02	0.959	1.02	40.00	40.00	0.143	0.143	1.00
3	11:03	1.01	0.970	1.00	40.00	40.00	0.308	0.308	1.00
4	11:15	1.00	0.988	1.00	40.00	40.00	0.341	0.341	1.00
5	11:26	1.00	1.003	1.00	40.00	40.00	1.072	1.072	1.00
6	11:35	1.01	1.018	1.00	40.00	40.00	0.476	0.476	1.00
7	11:46	1.00	1.033	1.00	40.00	40.00	0.175	0.175	1.00
8	12:50	1.00	1.127	1.00	40.00	40.00	0.345	0.345	1.00
9	13:10	1.00	1.156	1.00	40.00	40.00	0.772	0.772	1.00
0	13:34	1.00	0.859	1.00	40.00	40.00	0.278	0.278	1.00
1	13:53	1.00	0.879	1.00	40.00	40.00	0.361	0.361	1.00
2	13:58	1.00	0.883	1.00	40.00	40.00	0.289	0.289	1.00
3	14:23	1.00	0.910	1.00	40.00	40.00	1.204	1.204	1.00
4	14:41	1.00	0.929	1.00	40.00	40.00	0.445	0.445	1.00
5	15:14	1.00	0.963	1.00	40.00	40.00	1.319	1.319	1.00
6	15:26	1.00	0.976	1.00	40.00	40.00	1.874	1.874	1.00
7	15:45	1.00	0.996	1.00	40.00	40.00	0.363	0.363	1.00
8	15:53	1.00	1.005	1.00	40.00	40.00	1.172	1.172	1.00
9	16:00	1.00	1.012	1.00	40.00	40.00	0.134	0.134	1.00
0	16:13	1.00	1.026	1.00	40.00	40.00	0.161	0.161	1.00

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ntitation Report File: 30204S04

a: 30204S04.TI
04/93 13:22:00
ple: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
ds.: CAP/.25,,3DFT0204S5
mula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
mitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

UNT=AREA * REF AMNT/(REF AREA * RESP FACT)
p. fac. from Library Entry

Name	
C565	DIBENZOFURAN
C575	2,6-DINITROTOLUENE
C580	DIETHYLPHTHALATE
C570	2,4-DINITROTOLUENE
C590	FLUORENE
C585	4-CHLOROPHENYL-PHENYLETHER
C595	4-NITROANILINE
C610	4,6-DINITRO-2-METHYLPHENOL
C615	N-NITROSODIPHENYLAMINE
C625	4-BROMOPHENYL-PHENYLETHER
C630	HEXACHLOROBENZENE
C635	PENTACHLOROPHENOL
C640	PHENANTHRENE
C645	ANTHRACENE
C648	CARBAZOLE
C650	DI-N-BUTYLPHTHALATE
C655	FLUORANTHENE
C715	PYRENE
C720	BUTYLBENZYLPHTHALATE
C725	3,3'-DICHLOROBENZIDINE
C730	BENZO(A)ANTHRACENE
C740	CHRYSENE
C735	BIS(2-ETHYLHEXYL)PHTHALATE
C760	DI-N-OCTYL PHTHALATE
C765	BENZO(B)FLUROANTHENE
C770	BENZO(K)FLUORANTHENE
C775	BENZO(A)PYRENE
C780	INDENO(1,2,3-CD)PYRENE
C785	DIBENZO(A,H)ANTHRACENE
C790	BENZO(GHI)PERYLENE

m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
168	1298	16:23	3	1.034	A BB	132164.	40.000 NG/UL	1.30
165	1221	15:25	3	0.973	A BB	26121.	40.000 NG/UL	1.30
149	1356	17:07	3	1.080	A BB	121209.	40.000 NG/UL	1.30
165	1301	16:25	3	1.037	A BB	34768.	40.000 NG/UL	1.30
166	1367	17:15	3	1.089	A BB	107249.	40.000 NG/UL	1.30
204	1371	17:18	3	1.092	A BB	49635.	40.000 NG/UL	1.30
138	1380	17:25	3	1.100	A BB	28568.	40.000 NG/UL	1.30
198	1384	17:28	4	0.892	A BB	14702.	40.000 NG/UL	1.30
169	1397	17:38	4	0.900	A VB	31867.	40.000 NG/UL	1.30
248	1469	18:33	4	0.947	A BB	27772.	40.000 NG/UL	1.30
284	1476	18:38	4	0.951	A BB	30078.	40.000 NG/UL	1.30
266	1515	19:08	4	0.976	A BB	16143.	40.000 NG/UL	1.30
178	1557	19:39	4	1.003	A BV	146833.	40.000 NG/UL	1.30

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m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
178	1567	19:47	4	1.010	A VB	148304.	40.000	NG/UL	1.30
167	1600	20:12	4	1.031	A BB	137718.	40.000	NG/UL	1.30
149	1674	21:08	4	1.079	A BB	191825.	40.000	NG/UL	1.30
202	1780	22:28	4	1.147	A BB	140306.	40.000	NG/UL	1.30
202	1820	22:59	5	0.893	A BB	140748.	40.000	NG/UL	1.30
149	1945	24:33	5	0.954	A BB	58591.	40.000	NG/UL	1.30
252	2035	25:41	5	0.999	A BV	27095.	40.000	NG/UL	1.30
228	2036	25:42	5	0.999	A BV	93309.	40.000	NG/UL	1.30
228	2043	25:48	5	1.002	A VB	70128.	40.000	NG/UL	1.30
149	2052	25:54	5	1.007	A BB	72189.	40.000	NG/UL	1.30
149	2172	27:25	6	0.942	A BB	96988.	40.000	NG/UL	1.30
252	2230	28:09	6	0.967	A BV	80680.	40.000	NG/UL	1.30
252	2236	28:14	6	0.970	A VB	50420.	40.000	NG/UL	1.30
252	2296	28:59	6	0.996	A BB	59748.	40.000	NG/UL	1.30
276	2587	32:40	6	1.122	A BB	47495.	40.000	NG/UL	1.30
278	2604	32:52	6	1.130	A BB	46598.	40.000	NG/UL	1.30
276	2676	33:47	6	1.161	A BB	39054.	40.000	NG/UL	1.30

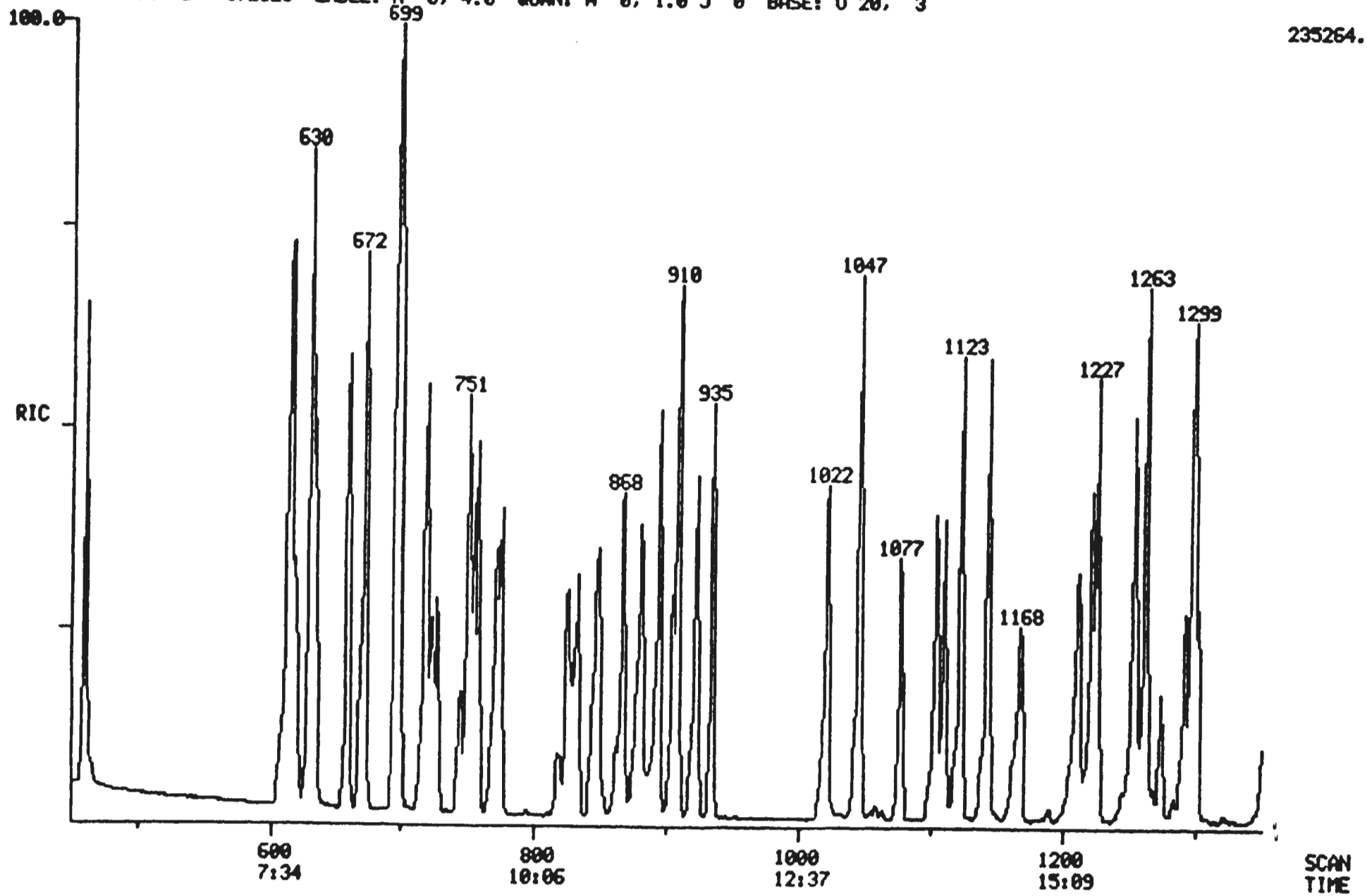
Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
16:19	1.00	1.033	1.00	40.00	40.00	1.623	1.623	1.00
15:20	1.00	0.970	1.00	40.00	40.00	0.321	0.321	1.00
17:03	1.00	1.078	1.00	40.00	40.00	1.488	1.488	1.00
16:21	1.00	1.034	1.00	40.00	40.00	0.427	0.427	1.00
17:12	1.00	1.089	1.00	40.00	40.00	1.317	1.317	1.00
17:15	1.00	1.092	1.00	40.00	40.00	0.610	0.610	1.00
17:18	1.01	1.094	1.00	40.00	40.00	0.351	0.351	1.00
17:23	1.01	0.889	1.00	40.00	40.00	0.109	0.109	1.00
17:34	1.00	0.899	1.00	40.00	40.00	0.237	0.237	1.00
18:29	1.00	0.945	1.00	40.00	40.00	0.206	0.206	1.00
18:34	1.00	0.950	1.00	40.00	40.00	0.223	0.223	1.00
19:05	1.00	0.976	1.00	40.00	40.00	0.120	0.120	1.00
19:36	1.00	1.003	1.00	40.00	40.00	1.090	1.090	1.00
19:44	1.00	1.009	1.00	40.00	40.00	1.101	1.101	1.00
20:08	1.00	1.030	1.00	40.00	40.00	1.023	1.023	1.00
21:05	1.00	1.078	1.00	40.00	40.00	1.424	1.424	1.00
22:25	1.00	1.147	1.00	40.00	40.00	1.042	1.042	1.00
22:56	1.00	0.892	1.00	40.00	40.00	1.933	1.933	1.00
24:31	1.00	0.954	1.00	40.00	40.00	0.805	0.805	1.00
25:38	1.00	0.998	1.00	40.00	40.00	0.372	0.372	1.00
25:40	1.00	0.999	1.00	40.00	40.00	1.281	1.281	1.00
25:44	1.00	1.002	1.00	40.00	40.00	0.963	0.963	1.00
25:52	1.00	1.007	1.00	40.00	40.00	0.991	0.991	1.00
27:22	1.00	0.941	1.00	40.00	40.00	2.239	2.239	1.00
28:05	1.00	0.966	1.00	40.00	40.00	1.863	1.863	1.00
28:10	1.00	0.968	1.00	40.00	40.00	1.164	1.164	1.00
28:55	1.00	0.994	1.00	40.00	40.00	1.379	1.379	1.00
32:30	1.01	1.117	1.00	40.00	40.00	1.096	1.096	1.00
32:40	1.01	1.123	1.01	40.00	40.00	1.076	1.076	1.00
33:33	1.01	1.153	1.01	40.00	40.00	0.902	0.902	1.00

000299

RIC
02/04/93 14:14:00
SAMPLE: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S05 #1
CALI: 30204S05 #3

SCANS 450 TO 1350



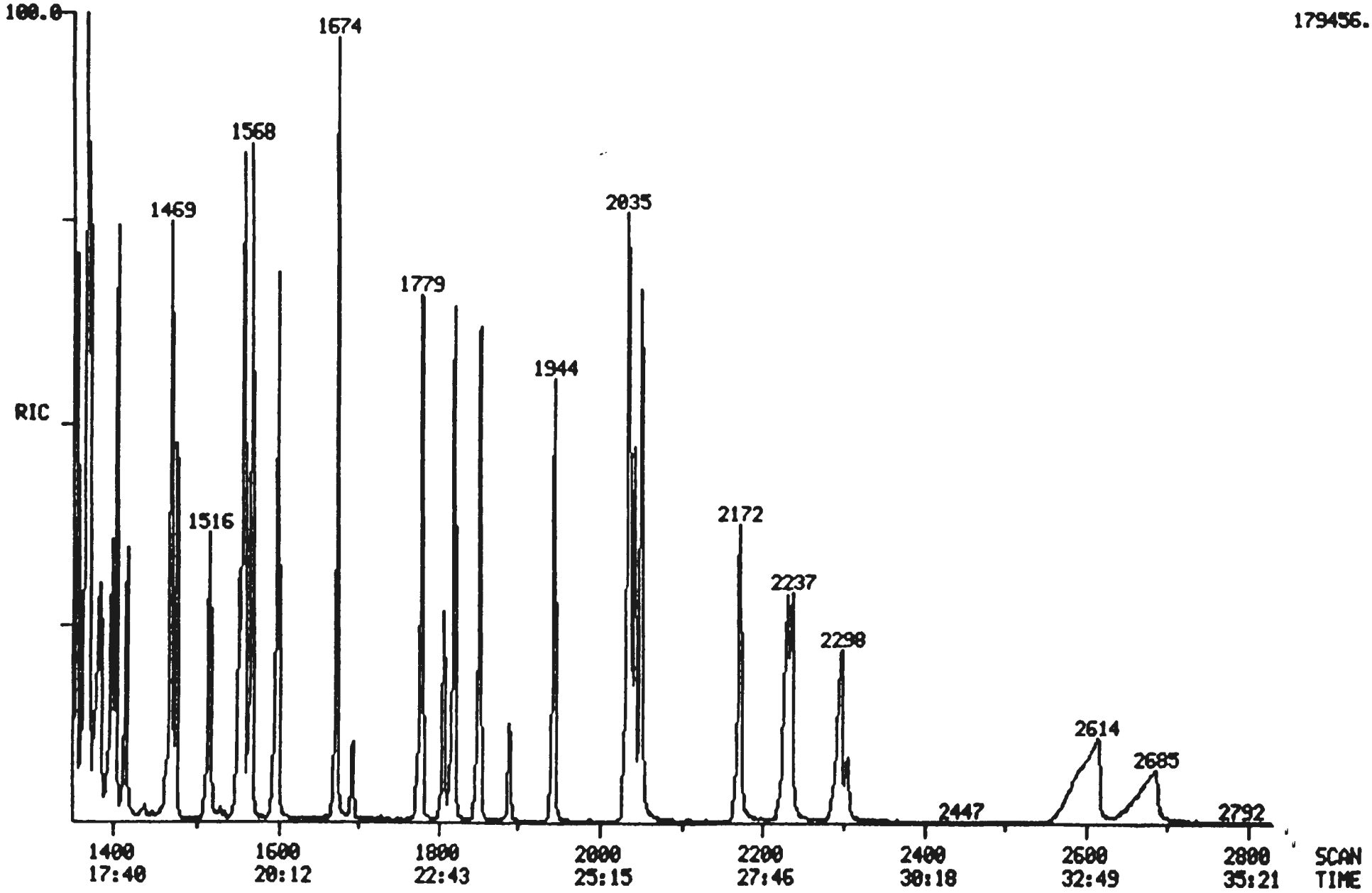
9413192.0009

000300

RIC
02/04/93 14:14:00
SAMPLE: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S05 #1
CALI: 30204S05 #3

SCANS 1350 TO 2828



0009 24HR 96

Quantitation Report File: 30204S05

Data: 30204S05.TI
02/04/93 14:14:00
Sample: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.6012

000302

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	669	8:27	1	1.000	A BB	22064.	20.000	NG/UL	0.44
2	136	905	11:26	2	1.000	A BB	76726.	20.000	NG/UL	0.44
3	164	1254	15:50	3	1.000	A BB	43016.	20.000	NG/UL	0.44
4	188	1551	19:35	4	1.000	A BB	69674.	20.000	NG/UL	0.44
5	240	2038	25:44	5	1.000	A BB	35188.	20.000	NG/UL	0.44
6	264	2305	29:06	6	1.000	A BB	22794.	20.000	NG/UL	0.44
7	112	461	5:49	1	0.689	A BB	93837.	60.000	NG/UL	1.32
8	99	613	7:44	1	0.916	A BB	104072.	60.000	NG/UL	1.32
9	330	1416	17:53	3	1.129	A BB	18646.	60.000	NG/UL	1.32
10	82	772	9:45	2	0.853	A BB	97369.	60.000	NG/UL	1.32
11	172	1123	14:11	3	0.896	A BB	156232.	60.000	NG/UL	1.32
12	244	1852	23:23	5	0.909	A BB	130025.	60.000	NG/UL	1.32
13	132	631	7:58	1	0.943	A BB	80314.	60.000	NG/UL	1.32
14	152	696	8:47	1	1.040	A BB	59914.	60.000	NG/UL	1.32
15	94	616	7:47	1	0.921	A BB	130562.	60.000	NG/UL	1.32
16	93	618	7:48	1	0.924	A BV	153830.	60.000	NG/UL	1.32
17	128	634	8:00	1	0.948	A BB	87133.	60.000	NG/UL	1.32
18	146	659	8:19	1	0.985	A BV	96858.	60.000	NG/UL	1.32
19	146	672	8:29	1	1.004	A VB	100146.	60.000	NG/UL	1.32
20	108	700	8:50	1	1.046	A BV	63927.	60.000	NG/UL	1.32
21	146	699	8:49	1	1.045	A BB	97936.	60.000	NG/UL	1.32
22	108	719	9:05	1	1.075	A BB	77015.	60.000	NG/UL	1.32
23	45	723	9:08	1	1.081	A BB	152198.	60.000	NG/UL	1.32
24	108	751	9:29	1	1.123	A BB	80440.	60.000	NG/UL	1.32
25	70	755	9:32	1	1.129	A BB	78476.	60.000	NG/UL	1.32
26	117	758	9:34	1	1.133	A BB	40472.	60.000	NG/UL	1.32
27	77	776	9:48	2	0.857	A BB	100063.	60.000	NG/UL	1.32
28	82	826	10:26	2	0.913	A VB	153003.	60.000	NG/UL	1.32
29	139	834	10:32	2	0.922	A VB	44231.	60.000	NG/UL	1.32
30	122	849	10:43	2	0.938	A BB	71369.	60.000	NG/UL	1.32
31	93	868	10:57	2	0.959	A BB	116940.	60.000	NG/UL	1.32
32	122	891	11:15	2	0.985	A VB	32519.	60.000	NG/UL	1.32
33	162	881	11:07	2	0.973	A BB	64284.	60.000	NG/UL	1.32
34	180	895	11:18	2	0.989	A BB	72606.	60.000	NG/UL	1.32
35	128	910	11:29	2	1.006	A BB	233584.	60.000	NG/UL	1.32
36	127	923	11:39	2	1.020	A BB	104441.	60.000	NG/UL	1.32
37	225	935	11:48	2	1.033	A BB	38884.	60.000	NG/UL	1.32
38	107	1022	12:54	2	1.129	A BB	74254.	60.000	NG/UL	1.32
39	142	1047	13:13	2	1.157	A BB	164983.	60.000	NG/UL	1.32
40	237	1077	13:36	3	0.859	A BB	33776.	60.000	NG/UL	1.32
41	198	1104	13:56	3	0.880	A BV	44978.	60.000	NG/UL	1.32
42	198	1110	14:01	3	0.885	A VB	33871.	60.000	NG/UL	1.32
43	162	1144	14:27	3	0.912	A BB	142580.	60.000	NG/UL	1.32
44	65	1168	14:45	3	0.931	A BB	54579.	60.000	NG/UL	1.32
45	163	1212	15:18	3	0.967	A BB	157232.	60.000	NG/UL	1.32
46	152	1227	15:29	3	0.978	A BB	223704.	60.000	NG/UL	1.32
47	138	1254	15:50	3	1.000	A BB	42965.	60.000	NG/UL	1.32
48	153	1263	15:57	3	1.007	A BB	142244.	60.000	NG/UL	1.32
49	184	1274	16:05	3	1.016	A BB	17483.	60.000	NG/UL	1.32
50	109	1292	16:19	3	1.030	A VV	17626.	60.000	NG/UL	1.32

9613492.6013

000303

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:23	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.01	0.688	1.00	60.00	60.00	1.418	1.418	1.00
8	7:38	1.01	0.908	1.01	60.00	60.00	1.572	1.572	1.00
9	17:49	1.00	1.127	1.00	60.00	60.00	0.144	0.144	1.00
10	9:40	1.01	0.849	1.00	60.00	60.00	0.423	0.423	1.00
11	14:08	1.00	0.894	1.00	60.00	60.00	1.211	1.211	1.00
12	23:21	1.00	0.909	1.00	60.00	60.00	1.232	1.232	1.00
13	7:54	1.01	0.940	1.00	60.00	60.00	1.213	1.213	1.00
14	8:44	1.01	1.039	1.00	60.00	60.00	0.905	0.905	1.00
15	7:40	1.01	0.911	1.01	60.00	60.00	1.972	1.972	1.00
16	7:43	1.01	0.917	1.01	60.00	60.00	2.324	2.324	1.00
17	7:56	1.01	0.944	1.00	60.00	60.00	1.316	1.316	1.00
18	8:16	1.01	0.983	1.00	60.00	60.00	1.463	1.463	1.00
19	8:27	1.00	1.005	1.00	60.00	60.00	1.513	1.513	1.00
20	8:44	1.01	1.039	1.01	60.00	60.00	0.966	0.966	1.00
21	8:46	1.01	1.044	1.00	60.00	60.00	1.480	1.480	1.00
22	9:00	1.01	1.071	1.00	60.00	60.00	1.164	1.164	1.00
23	9:05	1.01	1.080	1.00	60.00	60.00	2.299	2.299	1.00
24	9:22	1.01	1.114	1.01	60.00	60.00	1.215	1.215	1.00
25	9:24	1.01	1.117	1.01	60.00	60.00	1.186	1.186	1.00
26	9:32	1.00	1.134	1.00	60.00	60.00	0.611	0.611	1.00
27	9:43	1.01	0.854	1.00	60.00	60.00	0.435	0.435	1.00
28	10:19	1.01	0.906	1.01	60.00	60.00	0.665	0.665	1.00
29	10:28	1.01	0.919	1.00	60.00	60.00	0.192	0.192	1.00
30	10:38	1.01	0.933	1.00	60.00	60.00	0.310	0.310	1.00
31	10:53	1.01	0.956	1.00	60.00	60.00	0.508	0.508	1.00
32	10:55	1.03	0.959	1.03	60.00	60.00	0.141	0.141	1.00
33	11:03	1.01	0.970	1.00	60.00	60.00	0.279	0.279	1.00
34	11:15	1.00	0.988	1.00	60.00	60.00	0.315	0.315	1.00
35	11:26	1.01	1.003	1.00	60.00	60.00	1.015	1.015	1.00
36	11:35	1.01	1.018	1.00	60.00	60.00	0.454	0.454	1.00
37	11:46	1.00	1.033	1.00	60.00	60.00	0.169	0.169	1.00
38	12:50	1.00	1.127	1.00	60.00	60.00	0.323	0.323	1.00
39	13:10	1.00	1.156	1.00	60.00	60.00	0.717	0.717	1.00
40	13:34	1.00	0.859	1.00	60.00	60.00	0.262	0.262	1.00
41	13:53	1.00	0.879	1.00	60.00	60.00	0.349	0.349	1.00
42	13:58	1.00	0.883	1.00	60.00	60.00	0.262	0.262	1.00
43	14:23	1.00	0.910	1.00	60.00	60.00	1.105	1.105	1.00
44	14:41	1.00	0.929	1.00	60.00	60.00	0.423	0.423	1.00
45	15:14	1.00	0.963	1.00	60.00	60.00	1.218	1.218	1.00
46	15:26	1.00	0.976	1.00	60.00	60.00	1.733	1.733	1.00
47	15:45	1.01	0.996	1.00	60.00	60.00	0.333	0.333	1.00
48	15:53	1.00	1.005	1.00	60.00	60.00	1.102	1.102	1.00
49	16:00	1.01	1.012	1.00	60.00	60.00	0.135	0.135	1.00
50	16:13	1.01	1.026	1.00	60.00	60.00	0.137	0.137	1.00

9613492.6014

Quantitation Report File: 30204S05

000304

Data: 30204S05.TI
02/04/93 14:14:00
Sample: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1298	16:23	3	1.035	A BB	194228.	60.000 NG/UL	1.32
52	165	1222	15:26	3	0.974	A BB	39042.	60.000 NG/UL	1.32
53	149	1357	17:08	3	1.082	A BB	179514.	60.000 NG/UL	1.32
54	165	1302	16:26	3	1.038	A VB	49728.	60.000 NG/UL	1.32
55	166	1368	17:16	3	1.091	A BB	159424.	60.000 NG/UL	1.32
56	204	1371	17:18	3	1.093	A BB	75574.	60.000 NG/UL	1.32
57	138	1382	17:27	3	1.102	A BB	38703.	60.000 NG/UL	1.32
58	198	1385	17:29	4	0.893	A BB	22928.	60.000 NG/UL	1.32
59	169	1397	17:38	4	0.901	A BB	48601.	60.000 NG/UL	1.32
60	248	1469	18:33	4	0.947	A BB	40752.	60.000 NG/UL	1.32
61	284	1476	18:38	4	0.952	A BB	43826.	60.000 NG/UL	1.32
62	266	1515	19:08	4	0.977	A BB	23142.	60.000 NG/UL	1.32
63	178	1557	19:39	4	1.004	A BV	213873.	60.000 NG/UL	1.32

9613492.6015

000305

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1568	19:48	4	1.011	A VB	214558.	60.000 NG/UL	1.32
65	167	1600	20:12	4	1.032	A BB	198386.	60.000 NG/UL	1.32
66	149	1674	21:08	4	1.079	A BB	269411.	60.000 NG/UL	1.32
67	202	1779	22:28	4	1.147	A BB	190413.	60.000 NG/UL	1.32
68	202	1820	22:59	5	0.893	A BB	188608.	60.000 NG/UL	1.32
69	149	1944	24:33	5	0.954	A BB	79208.	60.000 NG/UL	1.32
70	252	2034	25:41	5	0.998	A BB	39506.	60.000 NG/UL	1.32
71	228	2036	25:42	5	0.999	A BV	129347.	60.000 NG/UL	1.32
72	228	2043	25:48	5	1.002	A VB	92071.	60.000 NG/UL	1.32
73	149	2051	25:54	5	1.006	A BB	100707.	60.000 NG/UL	1.32
74	149	2172	27:25	6	0.942	A BB	151853.	60.000 NG/UL	1.32
75	252	2231	28:10	6	0.968	A BV	129237.	60.000 NG/UL	1.32
76	252	2237	28:14	6	0.970	M XX	85355.	60.000 NG/UL	1.32
77	252	2297	29:00	6	0.997	A BB	90319.	60.000 NG/UL	1.32
78	276	2595	32:46	6	1.126	A BB	72130.	60.000 NG/UL	1.32
79	278	2615	33:01	6	1.134	A BB	64429.	60.000 NG/UL	1.32
80	276	2686	33:55	6	1.165	A BB	52258.	60.000 NG/UL	1.32

Gold 1/93

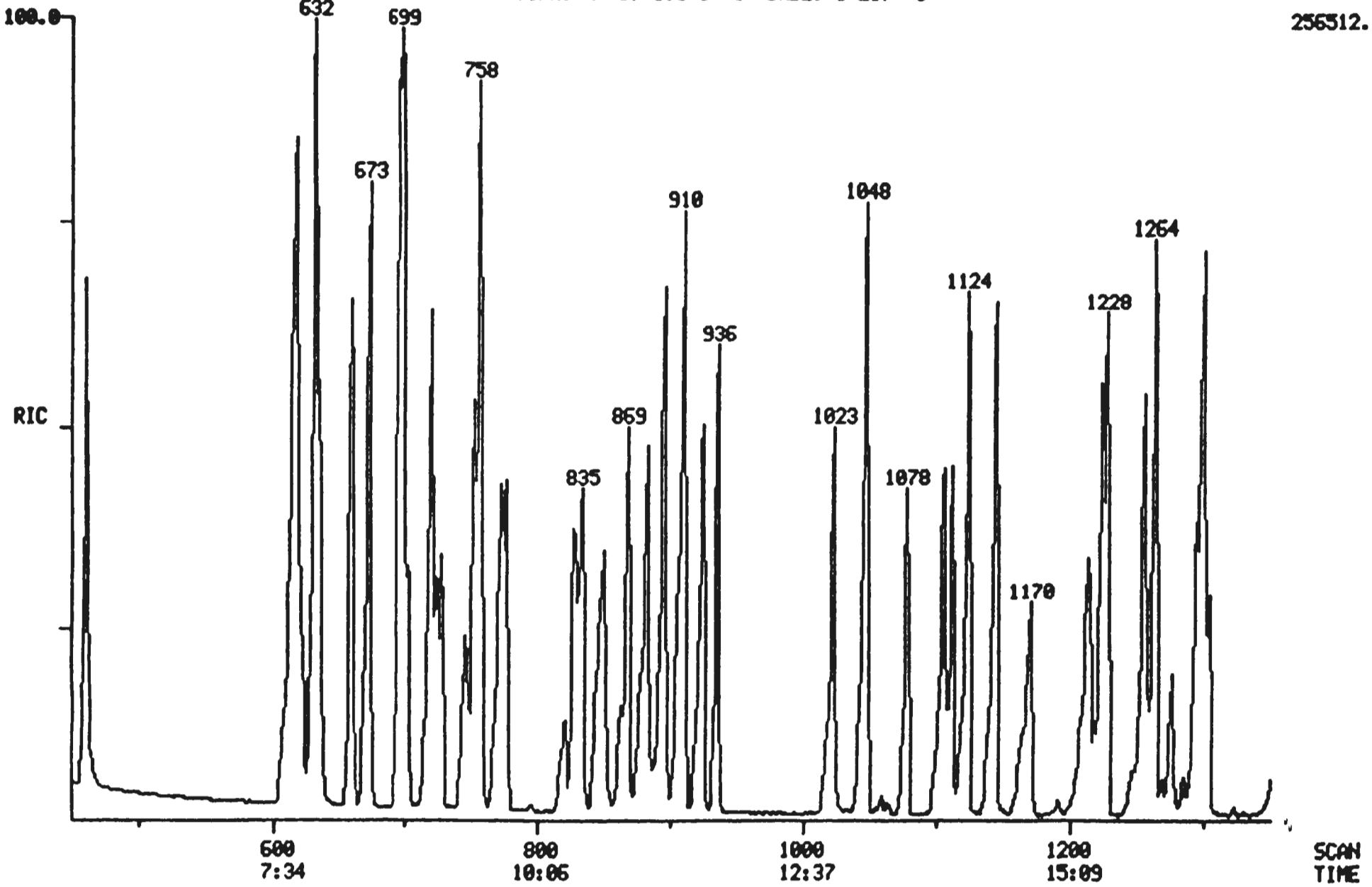
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19	1.00	1.033	1.00	60.00	60.00	1.505	1.505	1.00
52	15:20	1.01	0.970	1.00	60.00	60.00	0.303	0.303	1.00
53	17:03	1.01	1.078	1.00	60.00	60.00	1.391	1.391	1.00
54	16:21	1.01	1.034	1.00	60.00	60.00	0.385	0.385	1.00
55	17:12	1.00	1.089	1.00	60.00	60.00	1.235	1.235	1.00
56	17:15	1.00	1.092	1.00	60.00	60.00	0.586	0.586	1.00
57	17:18	1.01	1.094	1.01	60.00	60.00	0.300	0.300	1.00
58	17:23	1.01	0.889	1.00	60.00	60.00	0.110	0.110	1.00
59	17:34	1.00	0.899	1.00	60.00	60.00	0.233	0.233	1.00
60	18:29	1.00	0.945	1.00	60.00	60.00	0.195	0.195	1.00
61	18:34	1.00	0.950	1.00	60.00	60.00	0.210	0.210	1.00
62	19:05	1.00	0.976	1.00	60.00	60.00	0.111	0.111	1.00
63	19:36	1.00	1.003	1.00	60.00	60.00	1.023	1.023	1.00
64	19:44	1.00	1.009	1.00	60.00	60.00	1.026	1.026	1.00
65	20:08	1.00	1.030	1.00	60.00	60.00	0.949	0.949	1.00
66	21:05	1.00	1.078	1.00	60.00	60.00	1.289	1.289	1.00
67	22:25	1.00	1.147	1.00	60.00	60.00	0.911	0.911	1.00
68	22:56	1.00	0.892	1.00	60.00	60.00	1.787	1.787	1.00
69	24:31	1.00	0.954	1.00	60.00	60.00	0.750	0.750	1.00
70	25:38	1.00	0.998	1.00	60.00	60.00	0.374	0.374	1.00
71	25:40	1.00	0.999	1.00	60.00	60.00	1.225	1.225	1.00
72	25:44	1.00	1.002	1.00	60.00	60.00	0.872	0.872	1.00
73	25:52	1.00	1.007	1.00	60.00	60.00	0.954	0.954	1.00
74	27:22	1.00	0.941	1.00	60.00	60.00	2.221	2.221	1.00
75	28:05	1.00	0.966	1.00	60.00	60.00	1.890	1.890	1.00
76	28:10	1.00	0.968	1.00	60.00	60.00	1.248	1.248	1.00
77	28:55	1.00	0.994	1.00	60.00	60.00	1.321	1.321	1.00
78	32:30	1.01	1.117	1.01	60.00	60.00	1.055	1.055	1.00
79	32:40	1.01	1.123	1.01	60.00	60.00	0.942	0.942	1.00
80	33:33	1.01	1.153	1.01	60.00	60.00	0.764	0.764	1.00

000306

RIC
02/04/93 14:51:00
SAMPLE: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
CONDS.: CAP/.25,,30FT0204S5
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204S06 #1
CALI: 30204S06 #3

SCANS 450 TO 1350



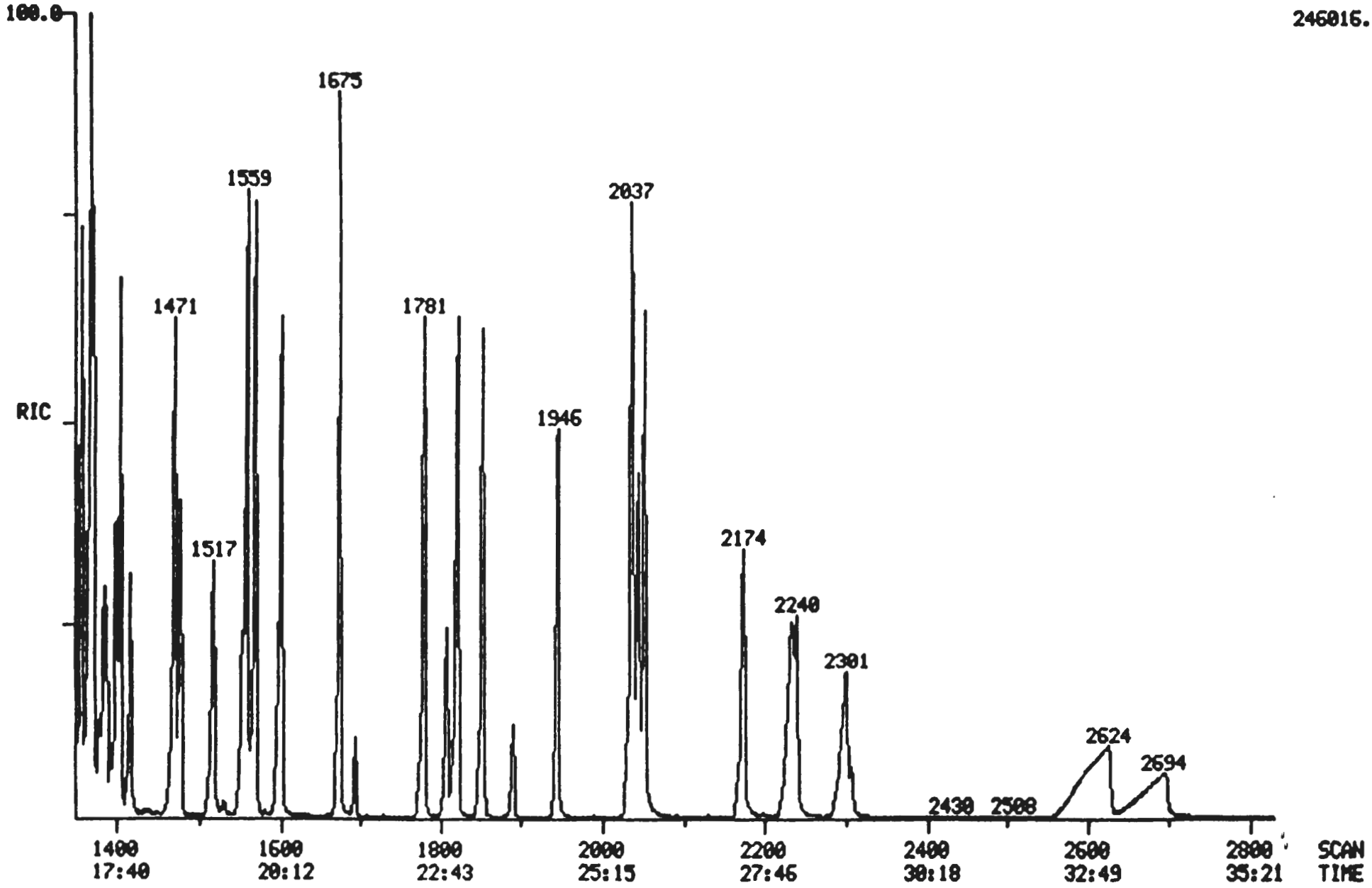
96130192.006

000307

RIC
02/04/93 14:51:00
SAMPLE: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
CONDS.: CAP/.25,,30FT020455
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30204506 01
CALI: 30204506 03

SCANS 1350 TO 2828



04/04/93 14:51:00

9613492.6018

Quantitation Report File: 30204S06

000308

Data: 30204S06.TI
02/04/93 14:51:00
Sample: CLP,,,SSTD160,,,80PPM3SV0201,8V,IC-160
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9615492.6019

000309

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	669	8:27	1	1.000	A BB	21878.	20.000 NG/UL	0.33
2	136	905	11:26	2	1.000	A BB	76758.	20.000 NG/UL	0.33
3	164	1255	15:51	3	1.000	A BB	42132.	20.000 NG/UL	0.33
4	188	1552	19:36	4	1.000	A BB	69031.	20.000 NG/UL	0.33
5	240	2039	25:44	5	1.000	A BB	34800.	20.000 NG/UL	0.33
6	264	2306	29:07	6	1.000	A BB	22823.	20.000 NG/UL	0.33
7	112	461	5:49	1	0.689	A BB	120314.	80.000 NG/UL	1.32
8	99	615	7:46	1	0.919	A BB	134949.	80.000 NG/UL	1.32
9	330	1417	17:53	3	1.129	A BB	24893.	80.000 NG/UL	1.32
10	82	774	9:46	2	0.855	A BB	132050.	80.000 NG/UL	1.32
11	172	1124	14:11	3	0.896	A BB	207771.	80.000 NG/UL	1.32
12	244	1854	23:24	5	0.909	A BB	174205.	80.000 NG/UL	1.32
13	132	632	7:59	1	0.945	A BB	105561.	80.000 NG/UL	1.32
14	152	696	8:47	1	1.040	A BB	79541.	80.000 NG/UL	1.32
15	94	618	7:48	1	0.924	A BV	176158.	80.000 NG/UL	1.32
16	93	618	7:48	1	0.924	A BV	207877.	80.000 NG/UL	1.32
17	128	635	8:01	1	0.949	A BB	119836.	80.000 NG/UL	1.32
18	146	659	8:19	1	0.985	A BV	131184.	80.000 NG/UL	1.32
19	146	673	8:30	1	1.006	A VB	135925.	80.000 NG/UL	1.32
20	108	703	8:53	1	1.051	A BV	85489.	80.000 NG/UL	1.32
21	146	699	8:49	1	1.045	A BB	133400.	80.000 NG/UL	1.32
22	108	720	9:05	1	1.076	A BB	104896.	80.000 NG/UL	1.32
23	45	724	9:08	1	1.082	A BB	213822.	80.000 NG/UL	1.32
24	108	753	9:30	1	1.126	A BB	109770.	80.000 NG/UL	1.32
25	70	757	9:33	1	1.132	A BB	112877.	80.000 NG/UL	1.32
26	117	758	9:34	1	1.133	A BB	55756.	80.000 NG/UL	1.32
27	77	778	9:49	2	0.860	A BB	139468.	80.000 NG/UL	1.32
28	82	828	10:27	2	0.915	A VB	202602.	80.000 NG/UL	1.32
29	139	835	10:32	2	0.923	A VB	60140.	80.000 NG/UL	1.32
30	122	850	10:44	2	0.939	A BB	97453.	80.000 NG/UL	1.32
31	93	869	10:58	2	0.960	A BB	162373.	80.000 NG/UL	1.32
32	122	896	11:19	2	0.990	A BB	38931.	80.000 NG/UL	1.32
33	162	883	11:09	2	0.976	A BB	89668.	80.000 NG/UL	1.32
34	180	896	11:19	2	0.990	A BB	99986.	80.000 NG/UL	1.32
35	128	910	11:29	2	1.006	A BB	325169.	80.000 NG/UL	1.32
36	127	925	11:41	2	1.022	A BB	144445.	80.000 NG/UL	1.32
37	225	936	11:49	2	1.034	A BB	53370.	80.000 NG/UL	1.32
38	107	1023	12:55	2	1.130	A BB	104050.	80.000 NG/UL	1.32
39	142	1048	13:14	2	1.158	A BB	225631.	80.000 NG/UL	1.32
40	237	1078	13:37	3	0.859	A BB	47294.	80.000 NG/UL	1.32
41	198	1105	13:57	3	0.880	A BV	66087.	80.000 NG/UL	1.32
42	198	1112	14:02	3	0.886	A VB	42997.	80.000 NG/UL	1.32
43	162	1145	14:27	3	0.912	A BB	194407.	80.000 NG/UL	1.32
44	65	1170	14:46	3	0.932	A BB	76720.	80.000 NG/UL	1.32
45	163	1214	15:20	3	0.967	A BB	213682.	80.000 NG/UL	1.32
46	152	1228	15:30	3	0.978	A BB	305996.	80.000 NG/UL	1.32
47	138	1256	15:51	3	1.001	A BB	57976.	80.000 NG/UL	1.32
48	153	1264	15:57	3	1.007	A BB	193578.	80.000 NG/UL	1.32
49	184	1276	16:07	3	1.017	A BB	24976.	80.000 NG/UL	1.32
50	109	1295	16:21	3	1.032	A VB	25017.	80.000 NG/UL	1.32

9613492.6020

000310

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:23	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.01	0.688	1.00	80.00	80.00	1.375	1.375	1.00
8	7:38	1.02	0.908	1.01	80.00	80.00	1.542	1.542	1.00
9	17:49	1.00	1.127	1.00	80.00	80.00	0.148	0.148	1.00
10	9:40	1.01	0.849	1.01	80.00	80.00	0.430	0.430	1.00
11	14:08	1.00	0.894	1.00	80.00	80.00	1.233	1.233	1.00
12	23:21	1.00	0.909	1.00	80.00	80.00	1.251	1.251	1.00
13	7:54	1.01	0.940	1.01	80.00	80.00	1.206	1.206	1.00
14	8:44	1.01	1.039	1.00	80.00	80.00	0.909	0.909	1.00
15	7:40	1.02	0.911	1.01	80.00	80.00	2.013	2.013	1.00
16	7:43	1.01	0.917	1.01	80.00	80.00	2.375	2.375	1.00
17	7:56	1.01	0.944	1.01	80.00	80.00	1.369	1.369	1.00
18	8:16	1.01	0.983	1.00	80.00	80.00	1.499	1.499	1.00
19	8:27	1.01	1.005	1.00	80.00	80.00	1.553	1.553	1.00
20	8:44	1.02	1.039	1.01	80.00	80.00	0.977	0.977	1.00
21	8:46	1.01	1.044	1.00	80.00	80.00	1.524	1.524	1.00
22	9:00	1.01	1.071	1.01	80.00	80.00	1.199	1.199	1.00
23	9:05	1.01	1.080	1.00	80.00	80.00	2.443	2.443	1.00
24	9:22	1.01	1.114	1.01	80.00	80.00	1.254	1.254	1.00
25	9:24	1.02	1.117	1.01	80.00	80.00	1.290	1.290	1.00
26	9:32	1.00	1.134	1.00	80.00	80.00	0.637	0.637	1.00
27	9:43	1.01	0.854	1.01	80.00	80.00	0.454	0.454	1.00
28	10:19	1.01	0.906	1.01	80.00	80.00	0.660	0.660	1.00
29	10:28	1.01	0.919	1.00	80.00	80.00	0.196	0.196	1.00
30	10:38	1.01	0.933	1.01	80.00	80.00	0.317	0.317	1.00
31	10:53	1.01	0.956	1.00	80.00	80.00	0.529	0.529	1.00
32	10:55	1.04	0.959	1.03	80.00	80.00	0.127	0.127	1.00
33	11:03	1.01	0.970	1.01	80.00	80.00	0.292	0.292	1.00
34	11:15	1.01	0.988	1.00	80.00	80.00	0.326	0.326	1.00
35	11:26	1.01	1.003	1.00	80.00	80.00	1.059	1.059	1.00
36	11:35	1.01	1.018	1.00	80.00	80.00	0.470	0.470	1.00
37	11:46	1.00	1.033	1.00	80.00	80.00	0.174	0.174	1.00
38	12:50	1.01	1.127	1.00	80.00	80.00	0.339	0.339	1.00
39	13:10	1.00	1.156	1.00	80.00	80.00	0.735	0.735	1.00
40	13:34	1.00	0.859	1.00	80.00	80.00	0.281	0.281	1.00
41	13:53	1.00	0.879	1.00	80.00	80.00	0.392	0.392	1.00
42	13:58	1.01	0.883	1.00	80.00	80.00	0.255	0.255	1.00
43	14:23	1.01	0.910	1.00	80.00	80.00	1.154	1.154	1.00
44	14:41	1.01	0.929	1.00	80.00	80.00	0.455	0.455	1.00
45	15:14	1.01	0.963	1.00	80.00	80.00	1.268	1.268	1.00
46	15:26	1.00	0.976	1.00	80.00	80.00	1.816	1.816	1.00
47	15:45	1.01	0.996	1.00	80.00	80.00	0.344	0.344	1.00
48	15:53	1.00	1.005	1.00	80.00	80.00	1.149	1.149	1.00
49	16:00	1.01	1.012	1.00	80.00	80.00	0.148	0.148	1.00
50	16:13	1.01	1.026	1.01	80.00	80.00	0.148	0.148	1.00

Quantitation Report File: 30204806

Data: 30204S06.TI
02/04/93 14:51:00
Sample: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
Conds.: CAP/.25,,3DFT0204S5
Formula: 3DFT0204S5 Instrument: SHERMA Weight: 0.000
Submitted by: 30204S03 Analyst: JY#13S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
51	168	1300	16:25	3	1.036	A BB	263502.	80.000	NG/UL	1.32
52	165	1224	15:27	3	0.975	A BB	53946.	80.000	NG/UL	1.32
53	149	1359	17:09	3	1.083	A BB	237082.	80.000	NG/UL	1.32
54	165	1305	16:29	3	1.040	A BB	69986.	80.000	NG/UL	1.32
55	166	1369	17:17	3	1.091	A BB	217767.	80.000	NG/UL	1.32
56	204	1373	17:20	3	1.094	A BB	104635.	80.000	NG/UL	1.32
57	138	1386	17:30	3	1.104	A BB	54524.	80.000	NG/UL	1.32
58	198	1388	17:31	4	0.894	A BB	30982.	80.000	NG/UL	1.32
59	169	1399	17:40	4	0.901	A BB	66278.	80.000	NG/UL	1.32
60	248	1470	18:33	4	0.947	A BB	55955.	80.000	NG/UL	1.32
61	284	1478	18:40	4	0.952	A BB	60718.	80.000	NG/UL	1.32
62	266	1517	19:09	4	0.977	A BB	32012.	80.000	NG/UL	1.32
63	178	1559	19:41	4	1.005	A BV	298478.	80.000	NG/UL	1.32

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000312

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
64	178	1569	19:48	4	1.011	A VB	285628.	80.000	NG/UL	1.32
65	167	1602	20:13	4	1.032	A BB	269509.	80.000	NG/UL	1.32
66	149	1675	21:09	4	1.079	A BB	377647.	80.000	NG/UL	1.32
67	202	1781	22:29	4	1.148	A BB	256796.	80.000	NG/UL	1.32
68	202	1822	23:00	5	0.894	A BB	254590.	80.000	NG/UL	1.32
69	149	1945	24:33	5	0.954	A BB	107255.	80.000	NG/UL	1.32
70	252	2036	25:42	5	0.999	A BB	53687.	80.000	NG/UL	1.32
71	228	2037	25:43	5	0.999	A BV	184301.	80.000	NG/UL	1.32
72	228	2045	25:49	5	1.003	A VB	116629.	80.000	NG/UL	1.32
73	149	2053	25:55	5	1.007	A BB	138687.	80.000	NG/UL	1.32
74	149	2174	27:27	6	0.943	A BB	209520.	80.000	NG/UL	1.32
75	252	2234	28:12	6	0.969	A BV	162840.	80.000	NG/UL	1.32
76	252	2240	28:17	6	0.971	M XX	114870.	80.000	NG/UL	1.32
77	252	2300	29:02	6	0.997	A BB	122216.	80.000	NG/UL	1.32
78	276	2602	32:51	6	1.128	M XX	92348.	80.000	NG/UL	1.32
79	278	2625	33:08	6	1.138	A BB	69972.	80.000	NG/UL	1.32
80	276	2695	34:01	6	1.169	A BB	53239.	80.000	NG/UL	1.32

g 02/09/93

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19	1.01	1.033	1.00	80.00	80.00	1.564	1.564	1.00
52	15:20	1.01	0.970	1.00	80.00	80.00	0.320	0.320	1.00
53	17:03	1.01	1.078	1.00	80.00	80.00	1.407	1.407	1.00
54	16:21	1.01	1.034	1.01	80.00	80.00	0.415	0.415	1.00
55	17:12	1.00	1.089	1.00	80.00	80.00	1.292	1.292	1.00
56	17:15	1.00	1.092	1.00	80.00	80.00	0.621	0.621	1.00
57	17:18	1.01	1.094	1.01	80.00	80.00	0.324	0.324	1.00
58	17:23	1.01	0.889	1.01	80.00	80.00	0.112	0.112	1.00
59	17:34	1.01	0.899	1.00	80.00	80.00	0.240	0.240	1.00
60	18:29	1.00	0.945	1.00	80.00	80.00	0.203	0.203	1.00
61	18:34	1.00	0.950	1.00	80.00	80.00	0.220	0.220	1.00
62	19:05	1.00	0.976	1.00	80.00	80.00	0.116	0.116	1.00
63	19:36	1.00	1.003	1.00	80.00	80.00	1.081	1.081	1.00
64	19:44	1.00	1.009	1.00	80.00	80.00	1.034	1.034	1.00
65	20:08	1.00	1.030	1.00	80.00	80.00	0.976	0.976	1.00
66	21:05	1.00	1.078	1.00	80.00	80.00	1.368	1.368	1.00
67	22:25	1.00	1.147	1.00	80.00	80.00	0.930	0.930	1.00
68	22:56	1.00	0.892	1.00	80.00	80.00	1.829	1.829	1.00
69	24:31	1.00	0.954	1.00	80.00	80.00	0.770	0.770	1.00
70	25:38	1.00	0.998	1.00	80.00	80.00	0.386	0.386	1.00
71	25:40	1.00	0.999	1.00	80.00	80.00	1.324	1.324	1.00
72	25:44	1.00	1.002	1.00	80.00	80.00	0.838	0.838	1.00
73	25:52	1.00	1.007	1.00	80.00	80.00	0.996	0.996	1.00
74	27:22	1.00	0.941	1.00	80.00	80.00	2.295	2.295	1.00
75	28:05	1.00	0.966	1.00	80.00	80.00	1.784	1.784	1.00
76	28:10	1.00	0.968	1.00	80.00	80.00	1.258	1.258	1.00
77	28:55	1.00	0.994	1.00	80.00	80.00	1.339	1.339	1.00
78	32:30	1.01	1.117	1.01	80.00	80.00	1.012	1.012	1.00
79	32:40	1.01	1.123	1.01	80.00	80.00	0.766	0.766	1.00
80	33:33	1.01	1.153	1.01	80.00	80.00	0.583	0.583	1.00

9613492.6023

000313

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration Date(s): 02/18/93 02/18/93

Calibration Times: 1041 1313

LAB FILE ID: RRF20 = 30218S02 RRF50 = 30218S01
RRF80 = 30218S03 RRF120= 30218S04 RRF160= 30218S05

COMPOUND		RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Phenol	*	1.872	1.869	2.002	1.887	1.938	1.914	3.0*
bis(2-Chloroethyl)Ether	*	1.651	1.643	1.696	1.516	1.522	1.606	5.1*
2-Chlorophenol	*	1.321	1.319	1.382	1.302	1.330	1.331	2.3*
1,3-Dichlorobenzene	*	1.555	1.538	1.573	1.450	1.473	1.518	3.5*
1,4-Dichlorobenzene	*	1.546	1.569	1.614	1.487	1.514	1.546	3.2*
1,2-Dichlorobenzene	*	1.491	1.518	1.571	1.450	1.478	1.502	3.1*
2-Methylphenol	*	1.067	1.087	1.158	1.086	1.135	1.107	3.4*
2,2'-oxybis(1-Chloropropane		2.108	2.147	2.343	2.224	2.376	2.240	5.3
4-Methylphenol	*	1.098	1.171	1.224	1.156	1.220	1.174	4.4*
N-Nitroso-Di-n-Propylamine	*	1.108	1.168	1.261	1.219	1.303	1.212	6.3*
Hexachloroethane	*	0.641	0.686	0.709	0.646	0.642	0.665	4.7*
Nitrobenzene	*	0.472	0.466	0.499	0.465	0.485	0.477	3.0*
Isophorone	*	0.787	0.804	0.882	0.832	0.855	0.832	4.6*
2-Nitrophenol	*	0.154	0.161	0.179	0.178	0.180	0.170	7.1*
2,4-Dimethylphenol	*	0.264	0.281	0.303	0.291	0.301	0.288	5.6*
bis(2-Chloroethoxy)Methane	*	0.472	0.487	0.530	0.499	0.524	0.502	4.9*
2,4-Dichlorophenol	*	0.261	0.280	0.301	0.276	0.282	0.280	5.1*
1,2,4-Trichlorobenzene	*	0.325	0.331	0.350	0.325	0.326	0.331	3.2*
Naphthalene	*	0.986	1.024	1.099	1.047	1.120	1.055	5.2*
4-Chloroaniline		0.370	0.411	0.462	0.444	0.459	0.429	9.0
Hexachlorobutadiene		0.192	0.192	0.196	0.186	0.183	0.190	2.7
4-Chloro-3-Methylphenol	*	0.260	0.284	0.320	0.303	0.326	0.299	9.1*
2-Methylnaphthalene	*	0.669	0.707	0.755	0.711	0.732	0.715	4.5*
Hexachlorocyclopentadiene		0.273	0.294	0.310	0.303	0.306	0.297	5.0
2,4,6-Trichlorophenol	*	0.274	0.305	0.361	0.357	0.414	0.342	15.9*
2,4,5-Trichlorophenol	*	0.289	0.295	0.291	0.273	0.235	0.277	8.9*
2-Chloronaphthalene	*	1.059	1.115	1.182	1.122	1.145	1.125	4.0*
2-Nitroaniline		0.320	0.365	0.421	0.416	0.438	0.392	12.4
Dimethylphthalate		1.086	1.161	1.289	1.230	1.261	1.205	6.8
Acenaphthylene	*	1.598	1.729	1.857	1.779	1.841	1.761	5.9*
3-Nitroaniline		0.234	0.276	0.327	0.303	0.320	0.292	13.0
Acenaphthene	*	1.031	1.110	1.190	1.133	1.172	1.127	5.5*
2,4-Dinitrophenol		0.070	0.107	0.128	0.128	0.148	0.116	25.5
4-Nitrophenol		0.141	0.166	0.178	0.156	0.163	0.161	8.5
Dibenzofuran	*	1.448	1.521	1.644	1.544	1.591	1.550	4.8*
2,4-Dinitrotoluene	*	0.332	0.358	0.407	0.385	0.403	0.377	8.4*
2,6-Dinitrotoluene	*	0.233	0.258	0.308	0.305	0.314	0.284	12.7*

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration Date(s): 02/18/93 02/18/93

Calibration Times: 1041 1313

LAB FILE ID: RRF20 = 30218S02 RRF50 = 30218S01
RRF80 = 30218S03 RRF120= 30218S04 RRF160= 30218S05

COMPOUND	RRF20	RRF50	RRF80	RRF120	RRF160	$\overline{RRF}$	% RSD
Diethylphthalate	1.175	1.280	1.448	1.332	1.418	1.331	8.2
4-Chlorophenyl-phenylether *	0.561	0.593	0.643	0.603	0.641	0.608	5.7*
Fluorene *	1.101	1.213	1.336	1.262	1.322	1.247	7.6*
4-Nitroaniline	0.221	0.253	0.308	0.258	0.273	0.263	12.0
4,6-Dinitro-2-methylphenol	0.076	0.091	0.107	0.107	0.108	0.098	14.4
N-Nitrosodiphenylamine (1)	0.187	0.192	0.220	0.224	0.237	0.212	10.2
4-Bromophenyl-phenylether *	0.191	0.198	0.217	0.203	0.213	0.204	5.2*
Hexachlorobenzene *	0.239	0.233	0.250	0.229	0.240	0.238	3.4*
Pentachlorophenol *	0.089	0.109	0.124	0.116	0.121	0.112	12.5*
Phenanthrene *	1.002	1.068	1.140	1.078	1.121	1.082	5.0*
Anthracene *	1.006	1.082	1.166	1.082	1.118	1.091	5.4*
Carbazole	0.837	0.929	1.046	0.966	1.034	0.962	8.8
Di-n-Butylphthalate	1.097	1.301	1.469	1.385	1.514	1.353	12.2
Fluoranthene *	0.940	1.075	1.170	1.055	1.071	1.062	7.7*
Pyrene *	1.621	1.805	1.991	1.816	2.075	1.862	9.5*
Butylbenzylphthalate	0.540	0.669	0.746	0.706	0.810	0.694	14.5
3,3'-Dichlorobenzidine	0.208	0.280	0.317	0.314	0.402	0.304	23.1
Benzo(a)Anthracene *	1.075	1.199	1.291	1.242	1.444	1.250	10.8*
bis(2-Ethylhexyl)Phthalate	0.741	0.915	0.974	0.951	1.128	0.942	14.7
Chrysene *	0.960	0.975	0.995	0.907	1.037	0.975	4.9*
Di-n-Octyl Phthalate	1.654	2.586	2.643	2.538	2.780	2.440	18.4
Benzo(b)Fluoranthene *	1.421	1.723	1.700	1.685	1.995	1.705	11.9*
Benzo(k)Fluoranthene *	1.304	1.453	1.506	1.395	1.305	1.393	6.4*
Benzo(a)Pyrene *	1.168	1.330	1.383	1.366	1.476	1.345	8.4*
Indeno(1,2,3-cd)Pyrene *	1.031	1.150	1.257	1.272	1.386	1.219	11.0*
Dibenz(a,h)Anthracene *	0.884	0.984	1.101	1.074	1.125	1.034	9.6*
Benzo(g,h,i)Perylene *	0.987	1.001	1.095	1.033	1.034	1.030	4.0*
Nitrobenzene-d5 *	0.451	0.467	0.480	0.459	0.466	0.465	2.3*
2-Fluorobiphenyl *	1.185	1.295	1.287	1.247	1.242	1.251	3.5*
Terphenyl-d14 *	1.164	1.322	1.332	1.268	1.434	1.304	7.6*
Phenol-d5 *	1.438	1.512	1.463	1.482	1.460	1.471	1.9*
2-Fluorophenol *	1.483	1.514	1.441	1.457	1.471	1.473	1.9*
2,4,6-Tribromophenol	0.131	0.141	0.143	0.147	0.154	0.143	5.9
2-Chlorophenol-d4 *	1.151	1.202	1.146	1.173	1.164	1.167	1.9*
1,2-Dichlorobenzene-d4 *	0.900	0.954	0.946	0.888	0.903	0.918	3.2*

(1) Cannot be separated from Diphenylamine

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.

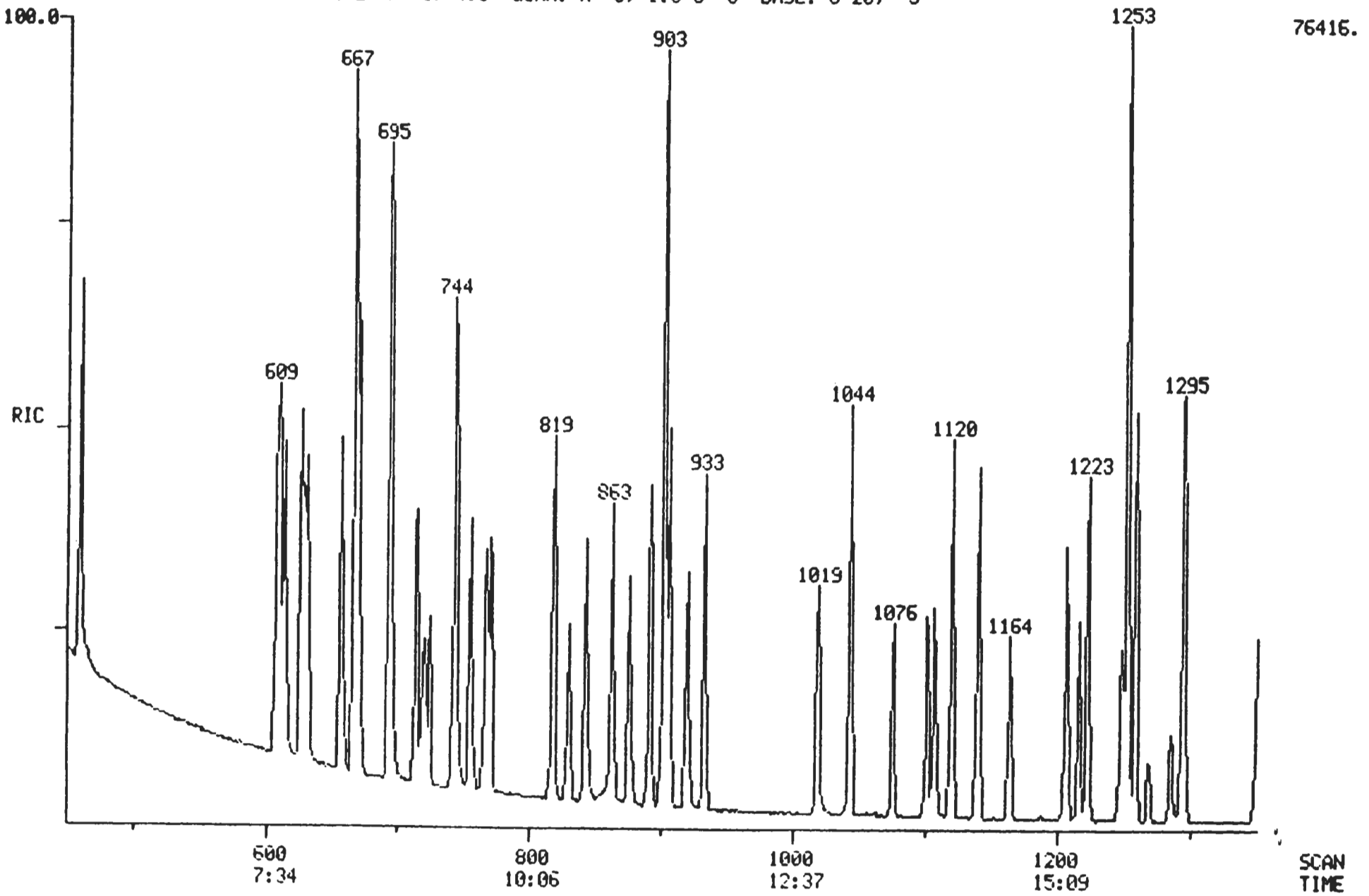
CR 10/25/93

000315

RIC
02/18/93 11:16:00
SAMPLE: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S02 #1
CALI: 30218S02 #3

SCANS 450 TO 1350



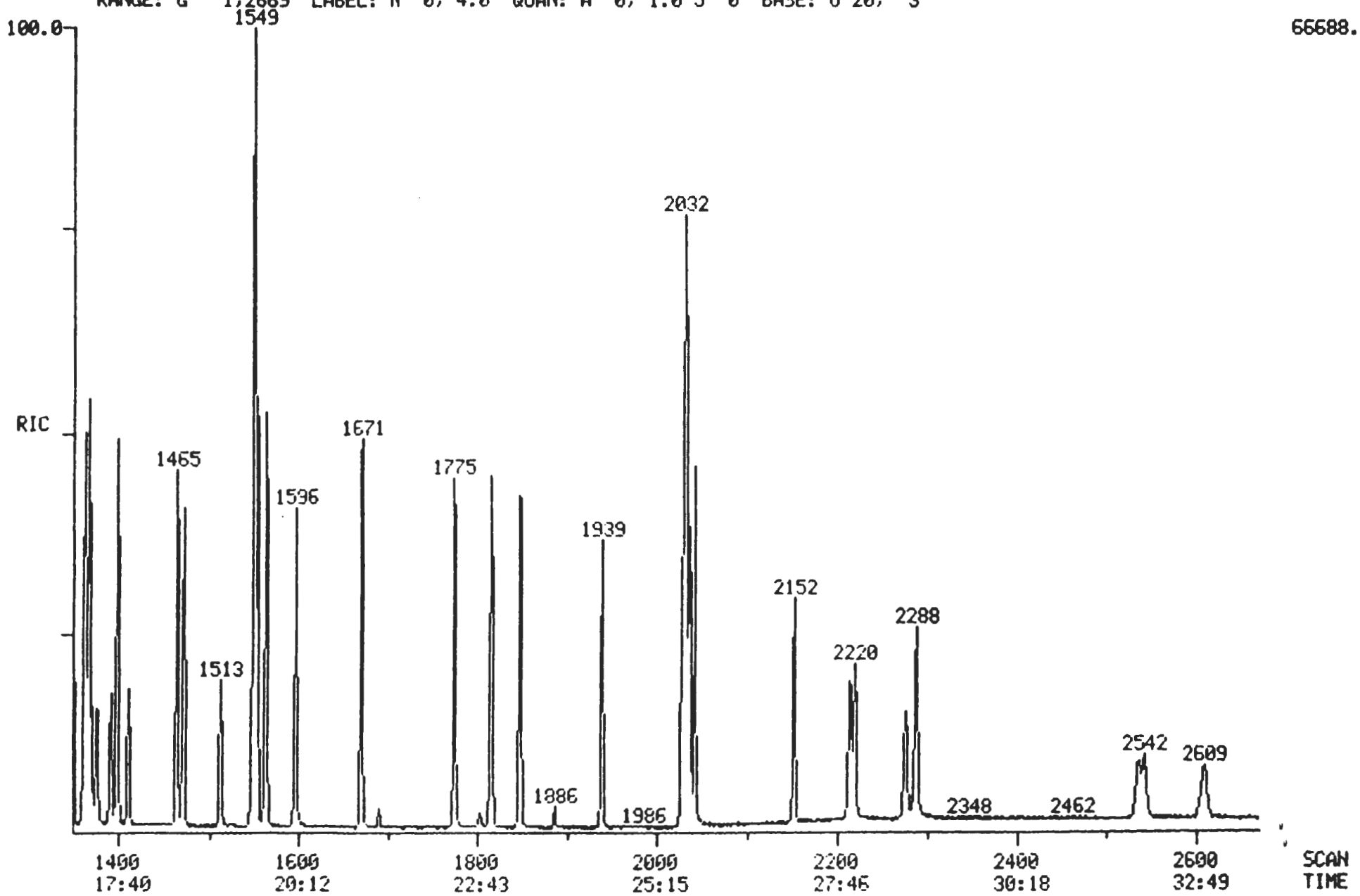
9613492.6025

000316

RIC
02/18/93 11:16:00
SAMPLE: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
CONDS.: CAP/.25,,30FT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S02 #1
CALI: 30218S02 #3

SCANS 1350 TO 2669



96130927.6026

Quantitation Report File: 30218S02

Data: 30218S02.TI
02/18/93 11:16:00
Sample: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	667	8:25	1	1.000	A BB	26548.	20.000 NG/UL	2.33
2	136	903	11:24	2	1.000	A BB	89122.	20.000 NG/UL	2.33
3	164	1253	15:49	3	1.000	A BB	49742.	20.000 NG/UL	2.33
4	188	1549	19:33	4	1.000	A BB	78402.	20.000 NG/UL	2.33
5	240	2032	25:39	5	1.000	A BB	47802.	20.000 NG/UL	2.33
6	264	2288	28:53	6	1.000	A BB	24948.	20.000 NG/UL	2.33
7	112	460	5:48	1	0.690	A BB	19690.	10.000 NG/UL	1.16
8	99	607	7:40	1	0.910	A BB	19086.	10.000 NG/UL	1.16
9	330	1411	17:49	3	1.126	A BB	3252.	10.000 NG/UL	1.16
10	82	768	9:42	2	0.850	A BB	20108.	10.000 NG/UL	1.16
11	172	1120	14:08	3	0.894	A BB	29466.	10.000 NG/UL	1.16
12	244	1848	23:20	5	0.909	A BB	27830.	10.000 NG/UL	1.16
13	132	628	7:56	1	0.942	A BB	15276.	10.000 NG/UL	1.16
14	152	693	8:45	1	1.039	A BB	11950.	10.000 NG/UL	1.16
15	94	609	7:41	1	0.913	A BB	24843.	10.000 NG/UL	1.16
16	93	626	7:54	1	0.939	A VB	21918.	10.000 NG/UL	1.16
17	128	631	7:58	1	0.946	A BB	17538.	10.000 NG/UL	1.16
18	146	656	8:17	1	0.984	A BB	20638.	10.000 NG/UL	1.16
19	146	670	8:28	1	1.004	A BB	20524.	10.000 NG/UL	1.16
20	108	695	8:46	1	1.042	A BB	10618.	10.000 NG/UL	1.16
21	146	696	8:47	1	1.043	A BB	19786.	10.000 NG/UL	1.16
22	108	715	9:02	1	1.072	A BV	14166.	10.000 NG/UL	1.16
23	45	720	9:05	1	1.079	A BB	27976.	10.000 NG/UL	1.16
24	108	744	9:24	1	1.115	A BB	14576.	10.000 NG/UL	1.16
25	70	745	9:24	1	1.117	A BB	14708.	10.000 NG/UL	1.16
26	117	756	9:33	1	1.133	A BB	8510.	10.000 NG/UL	1.16
27	77	771	9:44	2	0.854	A BB	21014.	10.000 NG/UL	1.16
28	82	819	10:20	2	0.907	A BB	35074.	10.000 NG/UL	1.16
29	139	830	10:29	2	0.919	A BB	6862.	10.000 NG/UL	1.16
30	122	843	10:39	2	0.934	A BB	11775.	10.000 NG/UL	1.16
31	93	863	10:54	2	0.956	A BB	21016.	10.000 NG/UL	1.16
32	122	865	10:55	2	0.958	A VB	4176.	10.000 NG/UL	1.16
33	162	876	11:04	2	0.970	A BB	11648.	10.000 NG/UL	1.16
34	180	892	11:16	2	0.988	A BB	14476.	10.000 NG/UL	1.16
35	128	906	11:26	2	1.003	A BB	43928.	10.000 NG/UL	1.16
36	127	920	11:37	2	1.019	A BV	16470.	10.000 NG/UL	1.16
37	225	933	11:47	2	1.033	A BB	8566.	10.000 NG/UL	1.16
38	107	1019	12:52	2	1.128	A BB	11580.	10.000 NG/UL	1.16
39	142	1044	13:11	2	1.156	A BB	29810.	10.000 NG/UL	1.16
40	237	1076	13:35	3	0.859	A BB	6780.	10.000 NG/UL	1.16
41	196	1101	13:54	3	0.879	A BV	6816.	10.000 NG/UL	1.16
42	196	1107	13:59	3	0.883	A VB	7194.	10.000 NG/UL	1.16
43	162	1140	14:24	3	0.910	A BB	26328.	10.000 NG/UL	1.16
44	65	1164	14:42	3	0.929	A BB	7954.	10.000 NG/UL	1.16
45	163	1207	15:14	3	0.963	A BB	27014.	10.000 NG/UL	1.16
46	152	1223	15:26	3	0.976	A BB	39756.	10.000 NG/UL	1.16
47	138	1248	15:45	3	0.996	A BB	5816.	10.000 NG/UL	1.16
48	153	1259	15:54	3	1.005	A BB	25648.	10.000 NG/UL	1.16
49	184	1268	16:00	3	1.012	A BB	1740.	10.000 NG/UL	1.16
50	109	1285	16:13	3	1.026	A BV	3496.	10.000 NG/UL	1.16

9613492.6029

000319

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28.55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	0.99	0.691	1.00	10.00	10.00	1.483	1.483	1.00
8	7:44	0.99	0.913	1.00	10.00	10.00	1.438	1.438	1.00
9	17:52	1.00	1.127	1.00	10.00	10.00	0.131	0.131	1.00
10	9:45	0.99	0.852	1.00	10.00	10.00	0.451	0.451	1.00
11	14:11	1.00	0.896	1.00	10.00	10.00	1.185	1.185	1.00
12	23:22	1.00	0.910	1.00	10.00	10.00	1.164	1.164	1.00
13	7:59	0.99	0.943	1.00	10.00	10.00	1.151	1.151	1.00
14	8:28	1.03	1.000	1.04	10.00	10.00	0.900	0.900	1.00
15	7:46	0.99	0.918	0.99	10.00	10.00	1.872	1.872	1.00
16	7:57	0.99	0.940	1.00	10.00	10.00	1.651	1.651	1.00
17	8:01	0.99	0.948	1.00	10.00	10.00	1.321	1.321	1.00
18	8:20	0.99	0.985	1.00	10.00	10.00	1.555	1.555	1.00
19	8:30	1.00	1.004	1.00	10.00	10.00	1.546	1.546	1.00
20	8:49	0.99	1.043	1.00	10.00	10.00	0.800	0.800	1.00
21	8:49	1.00	1.043	1.00	10.00	10.00	1.491	1.491	1.00
22	9:05	0.99	1.073	1.00	10.00	10.00	1.067	1.067	1.00
23	9:08	0.99	1.081	1.00	10.00	10.00	2.108	2.108	1.00
24	9:28	0.99	1.119	1.00	10.00	10.00	1.098	1.098	1.00
25	9:29	0.99	1.121	1.00	10.00	10.00	1.108	1.108	1.00
26	9:35	1.00	1.133	1.00	10.00	10.00	0.641	0.641	1.00
27	9:48	0.99	0.857	1.00	10.00	10.00	0.472	0.472	1.00
28	10:24	0.99	0.909	1.00	10.00	10.00	0.787	0.787	1.00
29	10:32	1.00	0.921	1.00	10.00	10.00	0.154	0.154	1.00
30	10:42	0.99	0.936	1.00	10.00	10.00	0.264	0.264	1.00
31	10:57	0.99	0.958	1.00	10.00	10.00	0.472	0.472	1.00
32	11:07	0.98	0.972	0.99	10.00	10.00	0.094	0.094	1.00
33	11:07	0.99	0.972	1.00	10.00	10.00	0.261	0.261	1.00
34	11:18	1.00	0.988	1.00	10.00	10.00	0.325	0.325	1.00
35	11:29	1.00	1.004	1.00	10.00	10.00	0.986	0.986	1.00
36	11:40	1.00	1.020	1.00	10.00	10.00	0.370	0.370	1.00
37	11:49	1.00	1.033	1.00	10.00	10.00	0.192	0.192	1.00
38	12:54	1.00	1.128	1.00	10.00	10.00	0.260	0.260	1.00
39	13:13	1.00	1.156	1.00	10.00	10.00	0.669	0.669	1.00
40	13:37	1.00	0.859	1.00	10.00	10.00	0.273	0.273	1.00
41	13:56	1.00	0.880	1.00	10.00	10.00	0.274	0.274	1.00
42	14:01	1.00	0.884	1.00	10.00	10.00	0.289	0.289	1.00
43	14:27	1.00	0.912	1.00	10.00	10.00	1.059	1.059	1.00
44	14:45	1.00	0.931	1.00	10.00	10.00	0.320	0.320	1.00
45	15:17	1.00	0.965	1.00	10.00	10.00	1.086	1.086	1.00
46	15:29	1.00	0.977	1.00	10.00	10.00	1.598	1.598	1.00
47	15:49	1.00	0.998	1.00	10.00	10.00	0.234	0.234	1.00
48	15:56	1.00	1.006	1.00	10.00	10.00	1.031	1.031	1.00
49	16:04	1.00	1.014	1.00	10.00	10.00	0.070	0.070	1.00
50	16:17	1.00	1.028	1.00	10.00	10.00	0.141	0.141	1.00

9613492.6030

000320

ntitation Report File: 30218S02

a: 30218S02.TI
18/93 11:16:00
ple: CLP,,,SSTD020,,,10PPM3SV0201,SV,IC-020
ds.: CAP/.25,,3DFT0218S1
nula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
nitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

JNT=AREA * REF AMNT/(REF AREA * RESP FACT)
). fac. from Library Entry

Name	
C565	DIBENZOFURAN
C575	2,6-DINITROTOLUENE
C580	DIETHYLPHTHALATE
C570	2,4-DINITROTOLUENE
C590	FLUORENE
C585	4-CHLOROPHENYL-PHENYLETHER
C595	4-NITROANILINE
C610	4,6-DINITRO-2-METHYLPHENOL
C615	N-NITROSODIPHENYLAMINE
C625	4-BROMOPHENYL-PHENYLETHER
C630	HEXACHLOROBENZENE
C635	PENTACHLOROPHENOL
C640	PHENANTHRENE
C645	ANTHRACENE
C648	CARBAZOLE
C650	DI-N-BUTYLPHTHALATE
C655	FLUORANTHENE
C715	PYRENE
C720	BUTYLBENZYLPHTHALATE
C725	3,3'-DICHLOROBENZIDINE
C730	BENZO(A)ANTHRACENE
C740	CHRYSENE
C735	BIS(2-ETHYLHEXYL)PHTHALATE
C760	DI-N-OCTYL PHTHALATE
C765	BENZO(B)FLUROANTHENE
C770	BENZO(K)FLUORANTHENE
C775	BENZO(A)PYRENE
C780	INDENO(1,2,3-CD)PYRENE
C785	DIBENZO(A,H)ANTHRACENE
C790	BENZO(GHI)PERYLENE

m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
168	1294	16:20	3	1.033	A BB	36014.	10.000 NG/UL	1.16
165	1216	15:21	3	0.970	A BB	5786.	10.000 NG/UL	1.16
149	1351	17:03	3	1.078	A BB	29216.	10.000 NG/UL	1.16
165	1296	16:22	3	1.034	A BB	8256.	10.000 NG/UL	1.16
166	1363	17:12	3	1.088	A BB	27388.	10.000 NG/UL	1.16
204	1368	17:16	3	1.092	A BB	13958.	10.000 NG/UL	1.16
138	1371	17:18	3	1.094	A BB	5490.	10.000 NG/UL	1.16
198	1377	17:23	4	0.889	A BB	2970.	10.000 NG/UL	1.16
169	1392	17:34	4	0.899	A BB	7344.	10.000 NG/UL	1.16
248	1465	18:30	4	0.946	A BB	7468.	10.000 NG/UL	1.16
284	1472	18:35	4	0.950	A BB	9370.	10.000 NG/UL	1.16
266	1512	19:05	4	0.976	A BB	3502.	10.000 NG/UL	1.16
178	1553	19:36	4	1.003	A BV	39276.	10.000 NG/UL	1.16

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1563	19:44	4	1.009	A VB	39443.	10.000 NG/UL	1.16
65	167	1596	20:09	4	1.030	A BB	32802.	10.000 NG/UL	1.16
66	149	1670	21:05	4	1.078	A BB	43016.	10.000 NG/UL	1.16
67	202	1775	22:25	4	1.146	A BV	36854.	10.000 NG/UL	1.16
68	202	1816	22:56	5	0.894	A BB	38738.	10.000 NG/UL	1.16
69	149	1939	24:29	5	0.954	A BB	12910.	10.000 NG/UL	1.16
70	252	2027	25:35	5	0.998	A BB	4966.	10.000 NG/UL	1.16
71	228	2030	25:38	5	0.999	A BV	25684.	10.000 NG/UL	1.16
72	228	2036	25:42	5	1.002	A VB	22939.	10.000 NG/UL	1.16
73	149	2042	25:47	5	1.005	A BB	17710.	10.000 NG/UL	1.16
74	149	2152	27:10	6	0.941	A BB	20636.	10.000 NG/UL	1.16
75	252	2214	27:57	6	0.968	A BV	17722.	10.000 NG/UL	1.16
76	252	2220	28:02	6	0.970	A VB	16261.	10.000 NG/UL	1.16
77	252	2276	28:44	6	0.995	A BV	14572.	10.000 NG/UL	1.16
78	276	2536	32:01	6	1.108	A BB	12863.	10.000 NG/UL	1.16
79	278	2542	32:06	6	1.111	A BB	11025.	10.000 NG/UL	1.16
80	276	2609	32:56	6	1.140	A BB	12314.	10.000 NG/UL	1.16

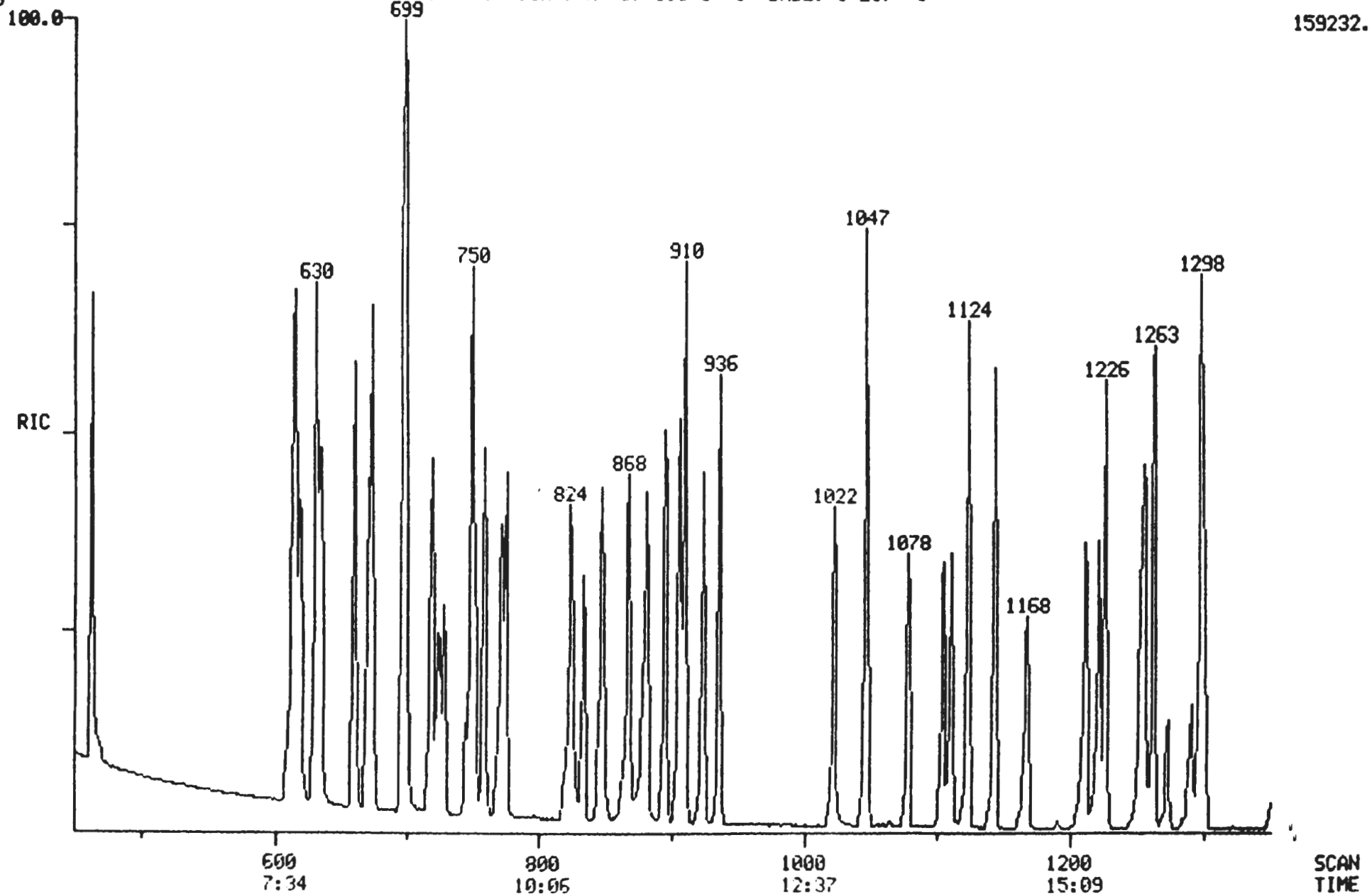
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	10.00	10.00	1.448	1.448	1.00
52	15:25	1.00	0.973	1.00	10.00	10.00	0.233	0.233	1.00
53	17:06	1.00	1.080	1.00	10.00	10.00	1.175	1.175	1.00
54	16:25	1.00	1.036	1.00	10.00	10.00	0.332	0.332	1.00
55	17:15	1.00	1.089	1.00	10.00	10.00	1.101	1.101	1.00
56	17:18	1.00	1.092	1.00	10.00	10.00	0.561	0.561	1.00
57	17:24	0.99	1.098	1.00	10.00	10.00	0.221	0.221	1.00
58	17:28	1.00	0.891	1.00	10.00	10.00	0.076	0.076	1.00
59	17:37	1.00	0.899	1.00	10.00	10.00	0.187	0.187	1.00
60	18:32	1.00	0.946	1.00	10.00	10.00	0.191	0.191	1.00
61	18:38	1.00	0.951	1.00	10.00	10.00	0.239	0.239	1.00
62	19:08	1.00	0.977	1.00	10.00	10.00	0.089	0.089	1.00
63	19:39	1.00	1.003	1.00	10.00	10.00	1.002	1.002	1.00
64	19:47	1.00	1.010	1.00	10.00	10.00	1.006	1.006	1.00
65	20:12	1.00	1.031	1.00	10.00	10.00	0.837	0.837	1.00
66	21:08	1.00	1.079	1.00	10.00	10.00	1.097	1.097	1.00
67	22:28	1.00	1.146	1.00	10.00	10.00	0.940	0.940	1.00
68	22:58	1.00	0.894	1.00	10.00	10.00	1.621	1.621	1.00
69	24:31	1.00	0.954	1.00	10.00	10.00	0.540	0.540	1.00
70	25:38	1.00	0.998	1.00	10.00	10.00	0.208	0.208	1.00
71	25:40	1.00	0.999	1.00	10.00	10.00	1.075	1.075	1.00
72	25:44	1.00	1.002	1.00	10.00	10.00	0.960	0.960	1.00
73	25:48	1.00	1.004	1.00	10.00	10.00	0.741	0.741	1.00
74	27:12	1.00	0.941	1.00	10.00	10.00	1.654	1.654	1.00
75	28:00	1.00	0.969	1.00	10.00	10.00	1.421	1.421	1.00
76	28:04	1.00	0.971	1.00	10.00	10.00	1.304	1.304	1.00
77	28:46	1.00	0.995	1.00	10.00	10.00	1.168	1.168	1.00
78	32:03	1.00	1.109	1.00	10.00	10.00	1.031	1.031	1.00
79	32:09	1.00	1.112	1.00	10.00	10.00	0.884	0.884	1.00
80	33:00	1.00	1.141	1.00	10.00	10.00	0.987	0.987	1.00

000322

RIC
02/18/93 10:41:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S01 #1
CALI: 30218S01 #3

SCANS 450 TO 1350



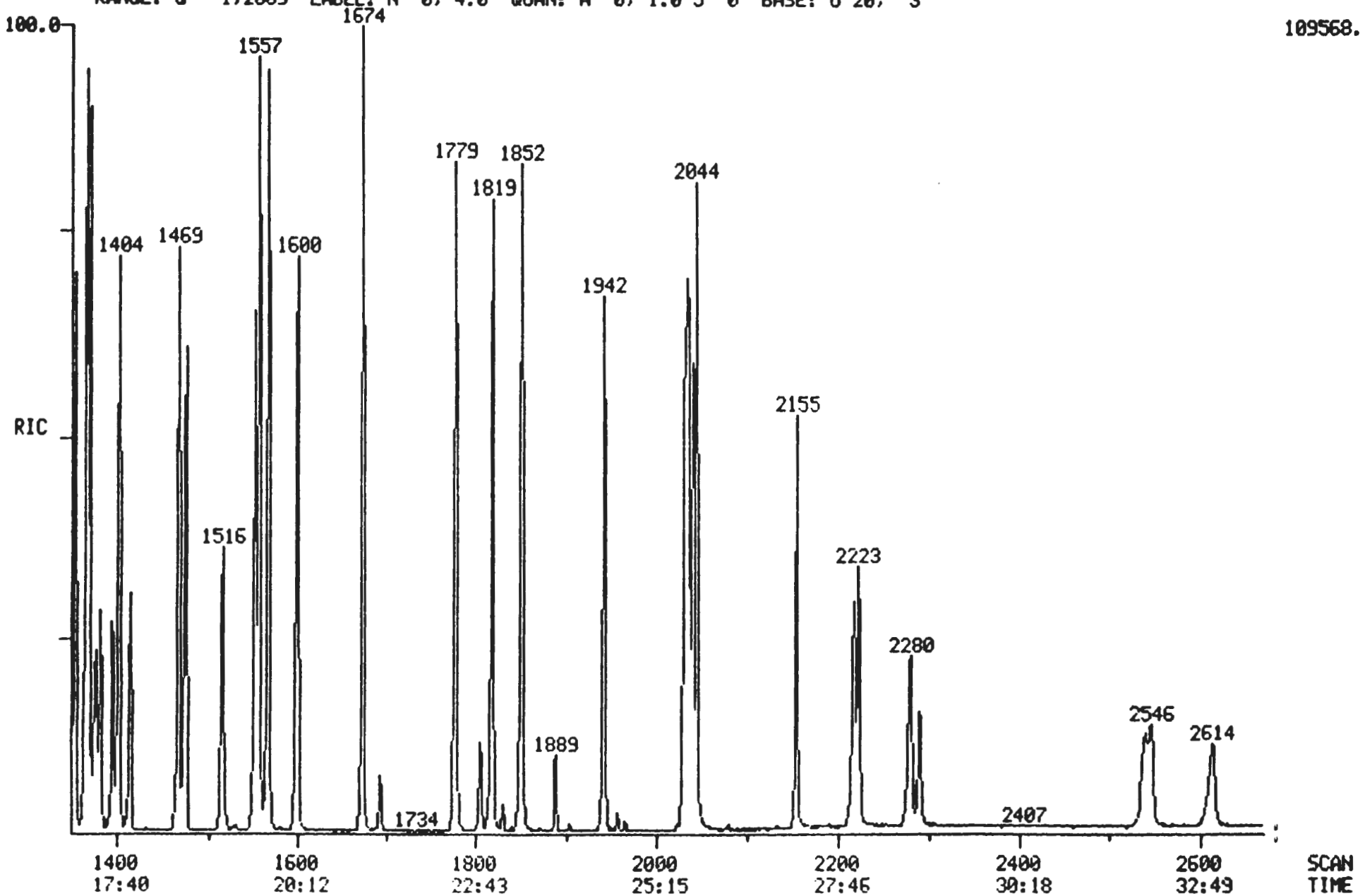
9613192.6032

000323

RIC
02/18/93 10:41:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S01 #1
CALI: 30218S01 #3

SCANS 1350 TO 2669



96173492.6035

Quantitation Report File: 30218S01

Data: 30218S01.TI
02/18/93 10:41:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.6045

000325

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	670	8:28	1	1.000	A BB	27778.	20.000 NG/UL	1.02
2	136	906	11:26	2	1.000	A BB	101664.	20.000 NG/UL	1.02
3	164	1255	15:51	3	1.000	A BB	54834.	20.000 NG/UL	1.02
4	188	1552	19:36	4	1.000	A BB	89842.	20.000 NG/UL	1.02
5	240	2035	25:41	5	1.000	A BB	55298.	20.000 NG/UL	1.02
6	264	2290	28:55	6	1.000	A BB	24405.	20.000 NG/UL	1.02
7	112	463	5:51	1	0.691	A BB	52560.	25.000 NG/UL	1.27
8	99	612	7:44	1	0.913	A BB	52500.	25.000 NG/UL	1.27
9	330	1415	17:52	3	1.127	A BB	9638.	25.000 NG/UL	1.27
10	82	772	9:45	2	0.852	A BB	59400.	25.000 NG/UL	1.27
11	172	1124	14:11	3	0.896	A BB	88740.	25.000 NG/UL	1.27
12	244	1851	23:22	5	0.910	A BB	91379.	25.000 NG/UL	1.27
13	132	632	7:59	1	0.943	A BB	41729.	25.000 NG/UL	1.27
14	152	697	8:48	1	1.040	A BB	33138.	25.000 NG/UL	1.27
15	94	615	7:46	1	0.918	A BB	64909.	25.000 NG/UL	1.27
16	93	630	7:57	1	0.940	A VB	57056.	25.000 NG/UL	1.27
17	128	635	8:01	1	0.948	A BB	45810.	25.000 NG/UL	1.27
18	146	660	8:20	1	0.985	A BB	53392.	25.000 NG/UL	1.27
19	146	673	8:30	1	1.004	A BB	54470.	25.000 NG/UL	1.27
20	108	699	8:49	1	1.043	A BB	28630.	25.000 NG/UL	1.27
21	146	699	8:49	1	1.043	A BB	52726.	25.000 NG/UL	1.27
22	108	719	9:05	1	1.073	A BV	37739.	25.000 NG/UL	1.27
23	45	724	9:08	1	1.081	A BB	74566.	25.000 NG/UL	1.27
24	108	750	9:28	1	1.119	A BB	40662.	25.000 NG/UL	1.27
25	70	751	9:29	1	1.121	A BB	40564.	25.000 NG/UL	1.27
26	117	759	9:35	1	1.133	A BB	23810.	25.000 NG/UL	1.27
27	77	776	9:48	2	0.857	A BB	59270.	25.000 NG/UL	1.27
28	82	824	10:24	2	0.909	A BV	102150.	25.000 NG/UL	1.27
29	139	834	10:32	2	0.921	A VB	20466.	25.000 NG/UL	1.27
30	122	848	10:42	2	0.936	A BB	35722.	25.000 NG/UL	1.27
31	93	868	10:57	2	0.958	A BB	61836.	25.000 NG/UL	1.27
32	122	881	11:07	2	0.972	A BB	15999.	25.000 NG/UL	1.27
33	162	881	11:07	2	0.972	A BB	35614.	25.000 NG/UL	1.27
34	180	895	11:18	2	0.988	A BB	42016.	25.000 NG/UL	1.27
35	128	910	11:29	2	1.004	A BB	130156.	25.000 NG/UL	1.27
36	127	924	11:40	2	1.020	A BB	52188.	25.000 NG/UL	1.27
37	225	936	11:49	2	1.033	A BB	24350.	25.000 NG/UL	1.27
38	107	1022	12:54	2	1.128	A BB	36122.	25.000 NG/UL	1.27
39	142	1047	13:13	2	1.156	A BB	89856.	25.000 NG/UL	1.27
40	237	1078	13:37	3	0.859	A BB	20176.	25.000 NG/UL	1.27
41	196	1104	13:56	3	0.880	A BV	20924.	25.000 NG/UL	1.27
42	196	1110	14:01	3	0.884	A VB	20192.	25.000 NG/UL	1.27
43	162	1144	14:27	3	0.912	A BB	76398.	25.000 NG/UL	1.27
44	65	1168	14:45	3	0.931	A BB	25042.	25.000 NG/UL	1.27
45	163	1211	15:17	3	0.965	A BB	79594.	25.000 NG/UL	1.27
46	152	1226	15:29	3	0.977	A BB	118516.	25.000 NG/UL	1.27
47	138	1253	15:49	3	0.998	A BB	18916.	25.000 NG/UL	1.27
48	153	1262	15:56	3	1.006	A BB	76066.	25.000 NG/UL	1.27
49	184	1272	16:04	3	1.014	A BB	7340.	25.000 NG/UL	1.27
50	109	1290	16:17	3	1.028	A BV	11358.	25.000 NG/UL	1.27

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	1.00	0.691	1.00	25.00	25.00	1.514	1.514	1.00
8	7:44	1.00	0.913	1.00	25.00	25.00	1.512	1.512	1.00
9	17:52	1.00	1.127	1.00	25.00	25.00	0.141	0.141	1.00
10	9:45	1.00	0.852	1.00	25.00	25.00	0.467	0.467	1.00
11	14:11	1.00	0.896	1.00	25.00	25.00	1.295	1.295	1.00
12	23:22	1.00	0.910	1.00	25.00	25.00	1.322	1.322	1.00
13	7:59	1.00	0.943	1.00	25.00	25.00	1.202	1.202	1.00
14	8:28	1.04	1.000	1.04	25.00	25.00	0.954	0.954	1.00
15	7:46	1.00	0.918	1.00	25.00	25.00	1.869	1.869	1.00
16	7:57	1.00	0.940	1.00	25.00	25.00	1.643	1.643	1.00
17	8:01	1.00	0.948	1.00	25.00	25.00	1.319	1.319	1.00
18	8:20	1.00	0.985	1.00	25.00	25.00	1.538	1.538	1.00
19	8:30	1.00	1.004	1.00	25.00	25.00	1.569	1.569	1.00
20	8:49	1.00	1.043	1.00	25.00	25.00	0.825	0.825	1.00
21	8:49	1.00	1.043	1.00	25.00	25.00	1.518	1.518	1.00
22	9:05	1.00	1.073	1.00	25.00	25.00	1.087	1.087	1.00
23	9:08	1.00	1.081	1.00	25.00	25.00	2.147	2.147	1.00
24	9:28	1.00	1.119	1.00	25.00	25.00	1.171	1.171	1.00
25	9:29	1.00	1.121	1.00	25.00	25.00	1.168	1.168	1.00
26	9:35	1.00	1.133	1.00	25.00	25.00	0.686	0.686	1.00
27	9:48	1.00	0.857	1.00	25.00	25.00	0.466	0.466	1.00
28	10:24	1.00	0.909	1.00	25.00	25.00	0.804	0.804	1.00
29	10:32	1.00	0.921	1.00	25.00	25.00	0.161	0.161	1.00
30	10:42	1.00	0.936	1.00	25.00	25.00	0.281	0.281	1.00
31	10:57	1.00	0.958	1.00	25.00	25.00	0.487	0.487	1.00
32	11:07	1.00	0.972	1.00	25.00	25.00	0.126	0.126	1.00
33	11:07	1.00	0.972	1.00	25.00	25.00	0.280	0.280	1.00
34	11:18	1.00	0.988	1.00	25.00	25.00	0.331	0.331	1.00
35	11:29	1.00	1.004	1.00	25.00	25.00	1.024	1.024	1.00
36	11:40	1.00	1.020	1.00	25.00	25.00	0.411	0.411	1.00
37	11:49	1.00	1.033	1.00	25.00	25.00	0.192	0.192	1.00
38	12:54	1.00	1.128	1.00	25.00	25.00	0.284	0.284	1.00
39	13:13	1.00	1.156	1.00	25.00	25.00	0.707	0.707	1.00
40	13:37	1.00	0.859	1.00	25.00	25.00	0.294	0.294	1.00
41	13:56	1.00	0.880	1.00	25.00	25.00	0.305	0.305	1.00
42	14:01	1.00	0.884	1.00	25.00	25.00	0.295	0.295	1.00
43	14:27	1.00	0.912	1.00	25.00	25.00	1.115	1.115	1.00
44	14:45	1.00	0.931	1.00	25.00	25.00	0.365	0.365	1.00
45	15:17	1.00	0.965	1.00	25.00	25.00	1.161	1.161	1.00
46	15:29	1.00	0.977	1.00	25.00	25.00	1.729	1.729	1.00
47	15:49	1.00	0.998	1.00	25.00	25.00	0.276	0.276	1.00
48	15:56	1.00	1.006	1.00	25.00	25.00	1.110	1.110	1.00
49	16:04	1.00	1.014	1.00	25.00	25.00	0.107	0.107	1.00
50	16:17	1.00	1.028	1.00	25.00	25.00	0.166	0.166	1.00

Quantitation Report File: 30218S01

Data: 30218S01.TI
02/18/93 10:41:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,IC-050
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1298	16:23	3	1.034	A BB	104232.	25.000 NG/UL	1.27
52	165	1221	15:25	3	0.973	A VB	17686.	25.000 NG/UL	1.27
53	149	1355	17:06	3	1.080	A BB	87738.	25.000 NG/UL	1.27
54	165	1300	16:25	3	1.036	A BB	24550.	25.000 NG/UL	1.27
55	166	1367	17:15	3	1.089	A BB	83134.	25.000 NG/UL	1.27
56	204	1371	17:18	3	1.092	A BB	40662.	25.000 NG/UL	1.27
57	138	1378	17:24	3	1.098	A BB	17348.	25.000 NG/UL	1.27
58	198	1383	17:28	4	0.891	A BB	10224.	25.000 NG/UL	1.27
59	169	1396	17:37	4	0.899	A BB	21518.	25.000 NG/UL	1.27
60	248	1468	18:32	4	0.946	A BB	22292.	25.000 NG/UL	1.27
61	284	1476	18:38	4	0.951	A BB	26200.	25.000 NG/UL	1.27
62	266	1516	19:08	4	0.977	A BB	12186.	25.000 NG/UL	1.27
63	178	1557	19:39	4	1.003	A BV	119935.	25.000 NG/UL	1.27

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1567	19:47	4	1.010	A VB	121512.	25.000 NG/UL	1.27
65	167	1600	20:12	4	1.031	A BB	104315.	25.000 NG/UL	1.27
66	149	1674	21:08	4	1.079	A VB	146052.	25.000 NG/UL	1.27
67	202	1779	22:28	4	1.146	A BB	120715.	25.000 NG/UL	1.27
68	202	1819	22:58	5	0.894	A BB	124792.	25.000 NG/UL	1.27
69	149	1942	24:31	5	0.954	A BB	46210.	25.000 NG/UL	1.27
70	252	2030	25:38	5	0.998	A BB	19382.	25.000 NG/UL	1.27
71	228	2033	25:40	5	0.999	A BV	82898.	25.000 NG/UL	1.27
72	228	2039	25:44	5	1.002	A VB	67421.	25.000 NG/UL	1.27
73	149	2044	25:48	5	1.004	A VB	63277.	25.000 NG/UL	1.27
74	149	2154	27:12	6	0.941	A BB	78896.	25.000 NG/UL	1.27
75	252	2218	28:00	6	0.969	A BV	52557.	25.000 NG/UL	1.27
76	252	2223	28:04	6	0.971	A VB	44320.	25.000 NG/UL	1.27
77	252	2279	28:46	6	0.995	A BB	40560.	25.000 NG/UL	1.27
78	276	2539	32:03	6	1.109	A BB	35081.	25.000 NG/UL	1.27
79	278	2546	32:09	6	1.112	A BB	30020.	25.000 NG/UL	1.27
80	276	2614	33:00	6	1.141	A BB	30552.	25.000 NG/UL	1.27

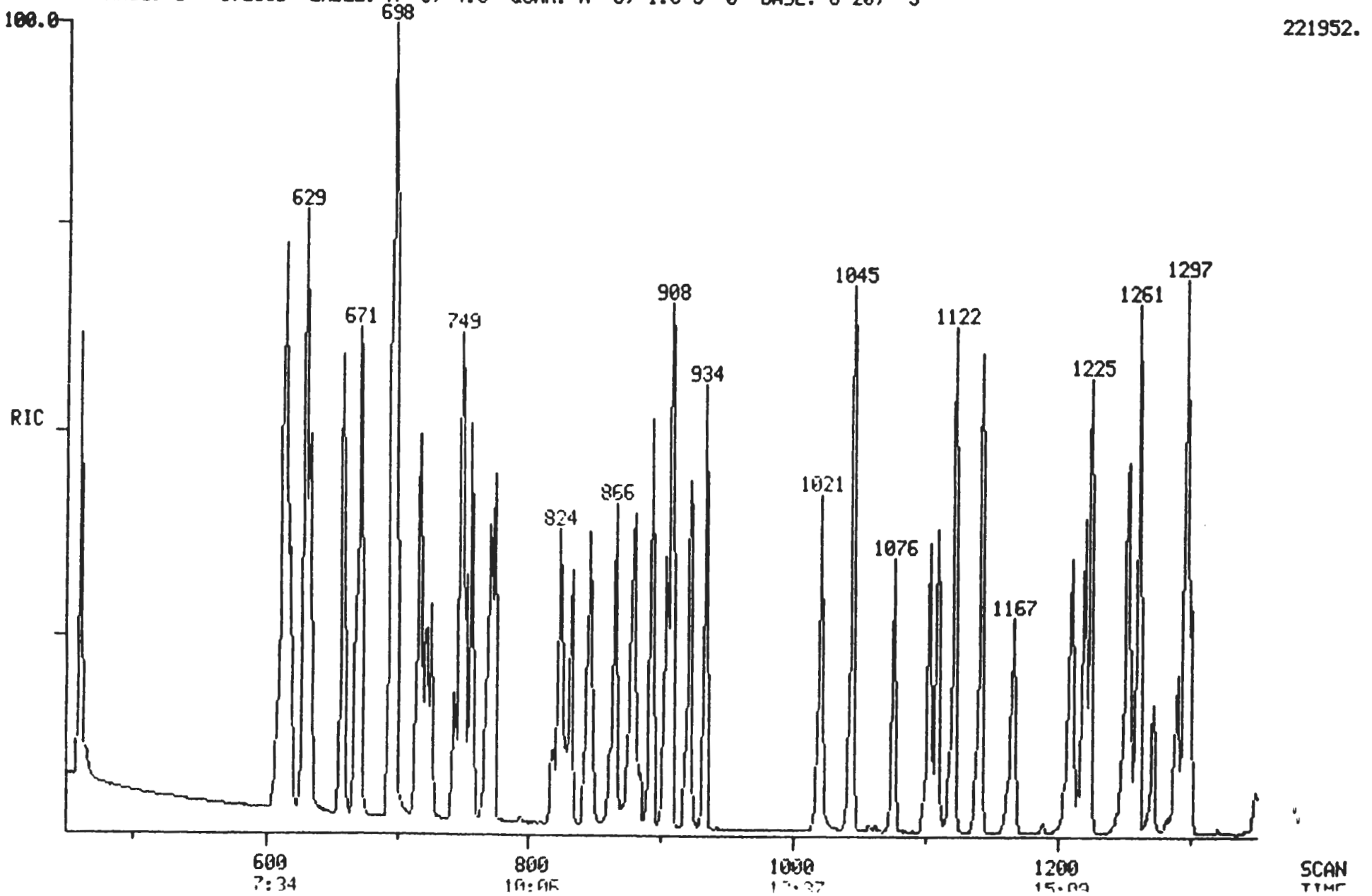
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	25.00	25.00	1.521	1.521	1.00
52	15:25	1.00	0.973	1.00	25.00	25.00	0.258	0.258	1.00
53	17:06	1.00	1.080	1.00	25.00	25.00	1.280	1.280	1.00
54	16:25	1.00	1.036	1.00	25.00	25.00	0.358	0.358	1.00
55	17:15	1.00	1.089	1.00	25.00	25.00	1.213	1.213	1.00
56	17:18	1.00	1.092	1.00	25.00	25.00	0.593	0.593	1.00
57	17:24	1.00	1.098	1.00	25.00	25.00	0.253	0.253	1.00
58	17:28	1.00	0.891	1.00	25.00	25.00	0.091	0.091	1.00
59	17:37	1.00	0.899	1.00	25.00	25.00	0.192	0.192	1.00
60	18:32	1.00	0.946	1.00	25.00	25.00	0.198	0.198	1.00
61	18:38	1.00	0.951	1.00	25.00	25.00	0.233	0.233	1.00
62	19:08	1.00	0.977	1.00	25.00	25.00	0.109	0.109	1.00
63	19:39	1.00	1.003	1.00	25.00	25.00	1.068	1.068	1.00
64	19:47	1.00	1.010	1.00	25.00	25.00	1.082	1.082	1.00
65	20:12	1.00	1.031	1.00	25.00	25.00	0.929	0.929	1.00
66	21:08	1.00	1.079	1.00	25.00	25.00	1.301	1.301	1.00
67	22:28	1.00	1.146	1.00	25.00	25.00	1.075	1.075	1.00
68	22:58	1.00	0.894	1.00	25.00	25.00	1.805	1.805	1.00
69	24:31	1.00	0.954	1.00	25.00	25.00	0.669	0.669	1.00
70	25:38	1.00	0.998	1.00	25.00	25.00	0.280	0.280	1.00
71	25:40	1.00	0.999	1.00	25.00	25.00	1.199	1.199	1.00
72	25:44	1.00	1.002	1.00	25.00	25.00	0.975	0.975	1.00
73	25:48	1.00	1.004	1.00	25.00	25.00	0.915	0.915	1.00
74	27:12	1.00	0.941	1.00	25.00	25.00	2.586	2.586	1.00
75	28:00	1.00	0.969	1.00	25.00	25.00	1.723	1.723	1.00
76	28:04	1.00	0.971	1.00	25.00	25.00	1.453	1.453	1.00
77	28:46	1.00	0.995	1.00	25.00	25.00	1.330	1.330	1.00
78	32:03	1.00	1.109	1.00	25.00	25.00	1.150	1.150	1.00
79	32:09	1.00	1.112	1.00	25.00	25.00	0.984	0.984	1.00
80	33:00	1.00	1.141	1.00	25.00	25.00	1.001	1.001	1.00

000329

RIC
02/18/93 11:55:00
SAMPLE: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S03 #1
CALI: 30218S03 #3

SCANS 450 TO 1350



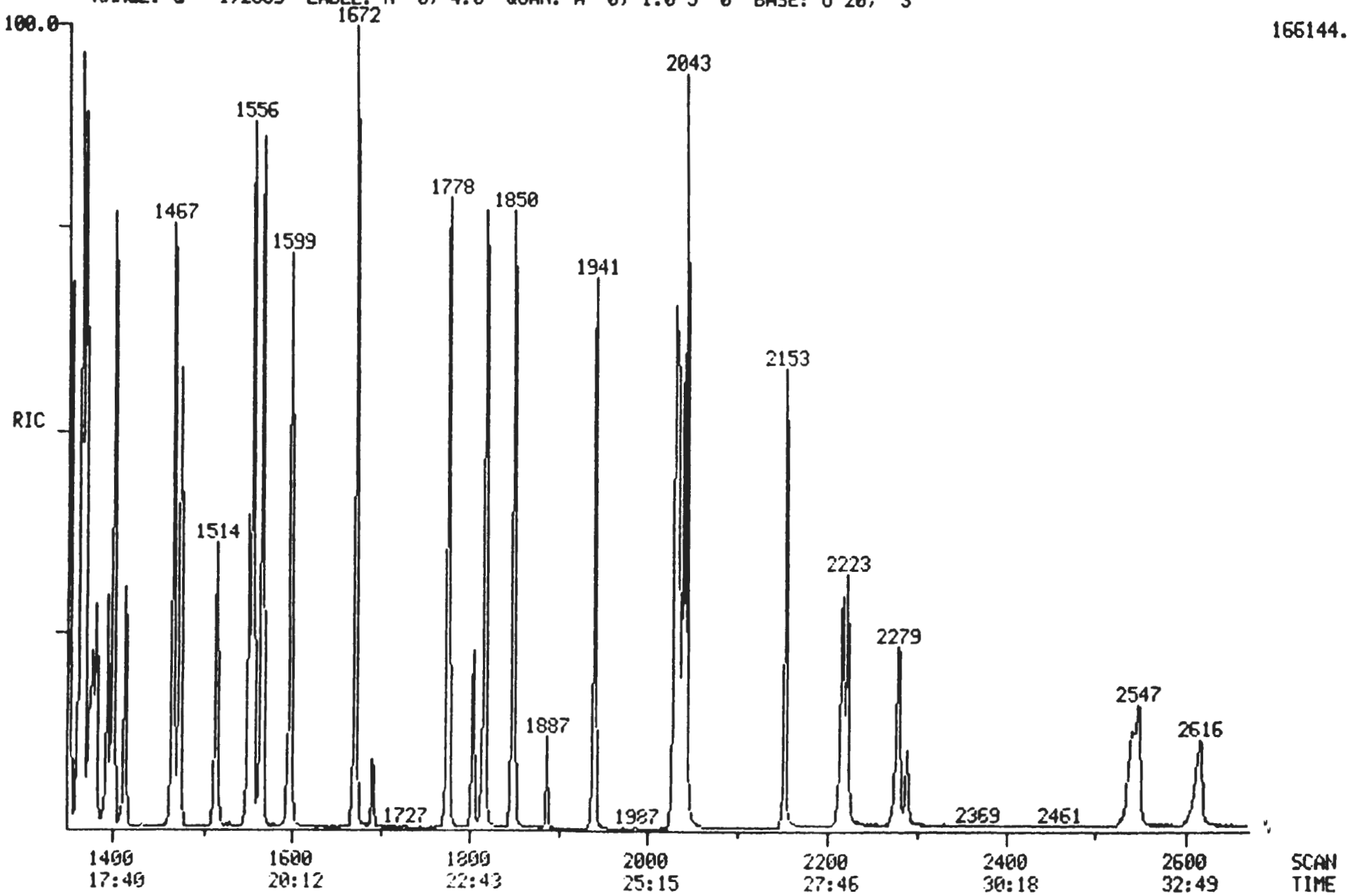
96134027.4030

000330

RIC
02/18/93 11:55:00
SAMPLE: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S03 #1
CALI: 30218S03 #3

SCANS 1350 TO 2669



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Quantitation Report File: 30218S03

Data: 30218S03.TI
02/18/93 11:55:00
Sample: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.6042

000332

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	668	8:26	1	1.000	A BB	25236.	20.000 NG/UL	0.65
2	136	904	11:25	2	1.000	A BB	91251.	20.000 NG/UL	0.65
3	164	1253	15:49	3	1.000	A BB	49704.	20.000 NG/UL	0.65
4	188	1550	19:34	4	1.000	A BB	81394.	20.000 NG/UL	0.65
5	240	2033	25:40	5	1.000	A BB	49547.	20.000 NG/UL	0.65
6	264	2289	28:54	6	1.000	A BB	23314.	20.000 NG/UL	0.65
7	112	461	5:49	1	0.690	A BB	72726.	40.000 NG/UL	1.30
8	99	612	7:44	1	0.916	A BB	73844.	40.000 NG/UL	1.30
9	330	1414	17:51	3	1.128	A BB	14170.	40.000 NG/UL	1.30
10	82	771	9:44	2	0.853	A BB	87546.	40.000 NG/UL	1.30
11	172	1122	14:10	3	0.895	A BB	127924.	40.000 NG/UL	1.30
12	244	1850	23:21	5	0.910	A VB	131962.	40.000 NG/UL	1.30
13	132	630	7:57	1	0.943	A BB	57831.	40.000 NG/UL	1.30
14	152	695	8:46	1	1.040	A BB	47758.	40.000 NG/UL	1.30
15	94	614	7:45	1	0.919	A BV	101037.	40.000 NG/UL	1.30
16	93	629	7:56	1	0.942	A BB	85617.	40.000 NG/UL	1.30
17	128	633	7:59	1	0.948	A BB	69745.	40.000 NG/UL	1.30
18	146	658	8:18	1	0.985	A BV	79393.	40.000 NG/UL	1.30
19	146	671	8:28	1	1.004	A VB	81442.	40.000 NG/UL	1.30
20	108	698	8:49	1	1.045	A BV	45379.	40.000 NG/UL	1.30
21	146	698	8:49	1	1.045	A BB	79268.	40.000 NG/UL	1.30
22	108	718	9:04	1	1.075	A BV	58462.	40.000 NG/UL	1.30
23	45	722	9:07	1	1.081	A BB	118264.	40.000 NG/UL	1.30
24	108	749	9:27	1	1.121	A BB	61803.	40.000 NG/UL	1.30
25	70	753	9:30	1	1.127	A BB	63628.	40.000 NG/UL	1.30
26	117	757	9:33	1	1.133	A BB	35762.	40.000 NG/UL	1.30
27	77	775	9:47	2	0.857	A BV	91152.	40.000 NG/UL	1.30
28	82	824	10:24	2	0.912	A BB	161040.	40.000 NG/UL	1.30
29	139	833	10:31	2	0.921	A VB	32650.	40.000 NG/UL	1.30
30	122	847	10:42	2	0.937	A BB	55255.	40.000 NG/UL	1.30
31	93	866	10:56	2	0.958	A BB	96672.	40.000 NG/UL	1.30
32	122	885	11:10	2	0.979	A BB	25106.	40.000 NG/UL	1.30
33	162	880	11:07	2	0.973	A BB	54990.	40.000 NG/UL	1.30
34	180	894	11:17	2	0.989	A BB	63816.	40.000 NG/UL	1.30
35	128	908	11:28	2	1.004	A BV	200488.	40.000 NG/UL	1.30
36	127	922	11:38	2	1.020	A BB	84320.	40.000 NG/UL	1.30
37	225	934	11:47	2	1.033	A BB	35840.	40.000 NG/UL	1.30
38	107	1021	12:53	2	1.129	A BB	58430.	40.000 NG/UL	1.30
39	142	1045	13:12	2	1.156	A BB	137838.	40.000 NG/UL	1.30
40	237	1076	13:35	3	0.859	A BB	30818.	40.000 NG/UL	1.30
41	196	1103	13:55	3	0.880	A BV	35848.	40.000 NG/UL	1.30
42	196	1109	14:00	3	0.885	A VB	28977.	40.000 NG/UL	1.30
43	162	1142	14:25	3	0.911	A BB	117538.	40.000 NG/UL	1.30
44	65	1167	14:44	3	0.931	A BB	41878.	40.000 NG/UL	1.30
45	163	1210	15:17	3	0.966	A BB	128110.	40.000 NG/UL	1.30
46	152	1225	15:28	3	0.978	A BB	184618.	40.000 NG/UL	1.30
47	138	1252	15:48	3	0.999	A BV	32550.	40.000 NG/UL	1.30
48	153	1261	15:55	3	1.006	A BB	118286.	40.000 NG/UL	1.30
49	184	1272	16:04	3	1.015	A BB	12688.	40.000 NG/UL	1.30
50	109	1290	16:17	3	1.030	A BV	17694.	40.000 NG/UL	1.30

9613492.6043

000333

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	1.00	0.691	1.00	40.00	40.00	1.441	1.441	1.00
8	7:44	1.00	0.913	1.00	40.00	40.00	1.463	1.463	1.00
9	17:52	1.00	1.127	1.00	40.00	40.00	0.143	0.143	1.00
10	9:45	1.00	0.852	1.00	40.00	40.00	0.480	0.480	1.00
11	14:11	1.00	0.896	1.00	40.00	40.00	1.287	1.287	1.00
12	23:22	1.00	0.910	1.00	40.00	40.00	1.332	1.332	1.00
13	7:59	1.00	0.943	1.00	40.00	40.00	1.146	1.146	1.00
14	8:28	1.04	1.000	1.04	40.00	40.00	0.946	0.946	1.00
15	7:46	1.00	0.918	1.00	40.00	40.00	2.002	2.002	1.00
16	7:57	1.00	0.940	1.00	40.00	40.00	1.696	1.696	1.00
17	8:01	1.00	0.948	1.00	40.00	40.00	1.382	1.382	1.00
18	8:20	1.00	0.985	1.00	40.00	40.00	1.573	1.573	1.00
19	8:30	1.00	1.004	1.00	40.00	40.00	1.614	1.614	1.00
20	8:49	1.00	1.043	1.00	40.00	40.00	0.899	0.899	1.00
21	8:49	1.00	1.043	1.00	40.00	40.00	1.571	1.571	1.00
22	9:05	1.00	1.073	1.00	40.00	40.00	1.158	1.158	1.00
23	9:08	1.00	1.081	1.00	40.00	40.00	2.343	2.343	1.00
24	9:28	1.00	1.119	1.00	40.00	40.00	1.224	1.224	1.00
25	9:29	1.00	1.121	1.01	40.00	40.00	1.261	1.261	1.00
26	9:35	1.00	1.133	1.00	40.00	40.00	0.709	0.709	1.00
27	9:48	1.00	0.857	1.00	40.00	40.00	0.499	0.499	1.00
28	10:24	1.00	0.909	1.00	40.00	40.00	0.882	0.882	1.00
29	10:32	1.00	0.921	1.00	40.00	40.00	0.179	0.179	1.00
30	10:42	1.00	0.936	1.00	40.00	40.00	0.303	0.303	1.00
31	10:57	1.00	0.958	1.00	40.00	40.00	0.530	0.530	1.00
32	11:07	1.00	0.972	1.01	40.00	40.00	0.138	0.138	1.00
33	11:07	1.00	0.972	1.00	40.00	40.00	0.301	0.301	1.00
34	11:18	1.00	0.988	1.00	40.00	40.00	0.350	0.350	1.00
35	11:29	1.00	1.004	1.00	40.00	40.00	1.099	1.099	1.00
36	11:40	1.00	1.020	1.00	40.00	40.00	0.462	0.462	1.00
37	11:49	1.00	1.033	1.00	40.00	40.00	0.196	0.196	1.00
38	12:54	1.00	1.128	1.00	40.00	40.00	0.320	0.320	1.00
39	13:13	1.00	1.156	1.00	40.00	40.00	0.755	0.755	1.00
40	13:37	1.00	0.859	1.00	40.00	40.00	0.310	0.310	1.00
41	13:56	1.00	0.880	1.00	40.00	40.00	0.361	0.361	1.00
42	14:01	1.00	0.884	1.00	40.00	40.00	0.291	0.291	1.00
43	14:27	1.00	0.912	1.00	40.00	40.00	1.182	1.182	1.00
44	14:45	1.00	0.931	1.00	40.00	40.00	0.421	0.421	1.00
45	15:17	1.00	0.965	1.00	40.00	40.00	1.289	1.289	1.00
46	15:29	1.00	0.977	1.00	40.00	40.00	1.857	1.857	1.00
47	15:49	1.00	0.998	1.00	40.00	40.00	0.327	0.327	1.00
48	15:56	1.00	1.006	1.00	40.00	40.00	1.190	1.190	1.00
49	16:04	1.00	1.014	1.00	40.00	40.00	0.128	0.128	1.00
50	16:17	1.00	1.028	1.00	40.00	40.00	0.178	0.178	1.00

9613492.6044

000334

Quantitation Report File: 30218S03

Data: 30218S03.TI
02/18/93 11:55:00
Sample: CLP,,,SSTD080,,,40PPM3SV0201,SV,IC-080
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1297	16:22	3	1.035	A BB	163446.	40.000 NG/UL	1.30
52	165	1220	15:24	3	0.974	A BB	30652.	40.000 NG/UL	1.30
53	149	1354	17:06	3	1.081	A BB	143902.	40.000 NG/UL	1.30
54	165	1300	16:25	3	1.038	A BB	40417.	40.000 NG/UL	1.30
55	166	1366	17:15	3	1.090	A BB	132848.	40.000 NG/UL	1.30
56	204	1370	17:18	3	1.093	A BB	63872.	40.000 NG/UL	1.30
57	138	1379	17:25	3	1.101	A BB	30658.	40.000 NG/UL	1.30
58	198	1383	17:28	4	0.892	A BB	17470.	40.000 NG/UL	1.30
59	169	1395	17:37	4	0.900	A VB	35850.	40.000 NG/UL	1.30
60	248	1467	18:31	4	0.946	A BB	35386.	40.000 NG/UL	1.30
61	284	1475	18:37	4	0.952	A BB	40633.	40.000 NG/UL	1.30
62	266	1514	19:07	4	0.977	A BB	20107.	40.000 NG/UL	1.30
63	178	1556	19:39	4	1.004	A BV	185584.	40.000 NG/UL	1.30

9613492.6045

000335

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
64	178	1566	19:46	4	1.010	A VB	189738.	40.000	NG/UL	1.30
65	167	1599	20:11	4	1.032	A BB	170327.	40.000	NG/UL	1.30
66	149	1672	21:06	4	1.079	A BB	239144.	40.000	NG/UL	1.30
67	202	1778	22:27	4	1.147	A BB	190518.	40.000	NG/UL	1.30
68	202	1818	22:57	5	0.894	A VB	197284.	40.000	NG/UL	1.30
69	149	1941	24:30	5	0.955	A BB	73918.	40.000	NG/UL	1.30
70	252	2029	25:37	5	0.998	A BB	31404.	40.000	NG/UL	1.30
71	228	2031	25:38	5	0.999	A BV	127949.	40.000	NG/UL	1.30
72	228	2039	25:44	5	1.003	A VB	98592.	40.000	NG/UL	1.30
73	149	2043	25:48	5	1.005	A VB	96501.	40.000	NG/UL	1.30
74	149	2153	27:11	6	0.941	A BB	123218.	40.000	NG/UL	1.30
75	252	2217	27:59	6	0.969	A BV	79279.	40.000	NG/UL	1.30
76	252	2223	28:04	6	0.971	A VB	70200.	40.000	NG/UL	1.30
77	252	2279	28:46	6	0.996	A BB	64473.	40.000	NG/UL	1.30
78	276	2540	32:04	6	1.110	A BB	58616.	40.000	NG/UL	1.30
79	278	2547	32:09	6	1.113	A BB	51361.	40.000	NG/UL	1.30
80	276	2616	33:02	6	1.143	A BB	51046.	40.000	NG/UL	1.30

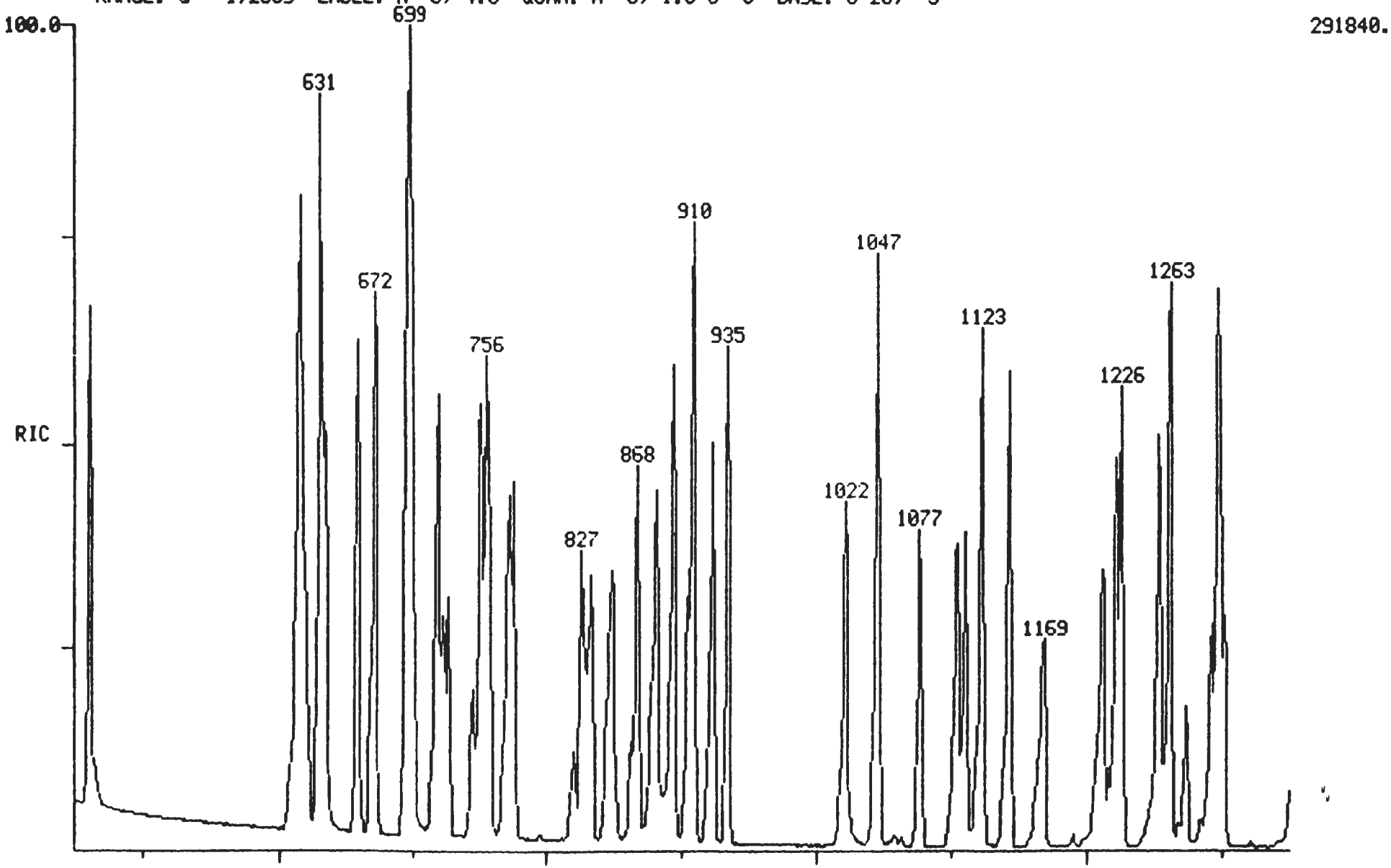
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	40.00	40.00	1.644	1.644	1.00
52	15:25	1.00	0.973	1.00	40.00	40.00	0.308	0.308	1.00
53	17:06	1.00	1.080	1.00	40.00	40.00	1.448	1.448	1.00
54	16:25	1.00	1.036	1.00	40.00	40.00	0.407	0.407	1.00
55	17:15	1.00	1.089	1.00	40.00	40.00	1.336	1.336	1.00
56	17:18	1.00	1.092	1.00	40.00	40.00	0.643	0.643	1.00
57	17:24	1.00	1.098	1.00	40.00	40.00	0.308	0.308	1.00
58	17:28	1.00	0.891	1.00	40.00	40.00	0.107	0.107	1.00
59	17:37	1.00	0.899	1.00	40.00	40.00	0.220	0.220	1.00
60	18:32	1.00	0.946	1.00	40.00	40.00	0.217	0.217	1.00
61	18:38	1.00	0.951	1.00	40.00	40.00	0.250	0.250	1.00
62	19:08	1.00	0.977	1.00	40.00	40.00	0.124	0.124	1.00
63	19:39	1.00	1.003	1.00	40.00	40.00	1.140	1.140	1.00
64	19:47	1.00	1.010	1.00	40.00	40.00	1.166	1.166	1.00
65	20:12	1.00	1.031	1.00	40.00	40.00	1.046	1.046	1.00
66	21:08	1.00	1.079	1.00	40.00	40.00	1.469	1.469	1.00
67	22:28	1.00	1.146	1.00	40.00	40.00	1.170	1.170	1.00
68	22:58	1.00	0.894	1.00	40.00	40.00	1.991	1.991	1.00
69	24:31	1.00	0.954	1.00	40.00	40.00	0.746	0.746	1.00
70	25:38	1.00	0.998	1.00	40.00	40.00	0.317	0.317	1.00
71	25:40	1.00	0.999	1.00	40.00	40.00	1.291	1.291	1.00
72	25:44	1.00	1.002	1.00	40.00	40.00	0.995	0.995	1.00
73	25:48	1.00	1.004	1.00	40.00	40.00	0.974	0.974	1.00
74	27:12	1.00	0.941	1.00	40.00	40.00	2.643	2.643	1.00
75	28:00	1.00	0.969	1.00	40.00	40.00	1.700	1.700	1.00
76	28:04	1.00	0.971	1.00	40.00	40.00	1.506	1.506	1.00
77	28:46	1.00	0.995	1.00	40.00	40.00	1.383	1.383	1.00
78	32:03	1.00	1.109	1.00	40.00	40.00	1.257	1.257	1.00
79	32:09	1.00	1.112	1.00	40.00	40.00	1.101	1.101	1.00
80	33:00	1.00	1.141	1.00	40.00	40.00	1.095	1.095	1.00

000336

RIC
02/18/93 12:34:00
SAMPLE: CLP,,,SSTD120,,,60PPM35V0201,SV,IC-120
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S04 #1
CALI: 30218S04 #3

SCANS 450 TO 1350



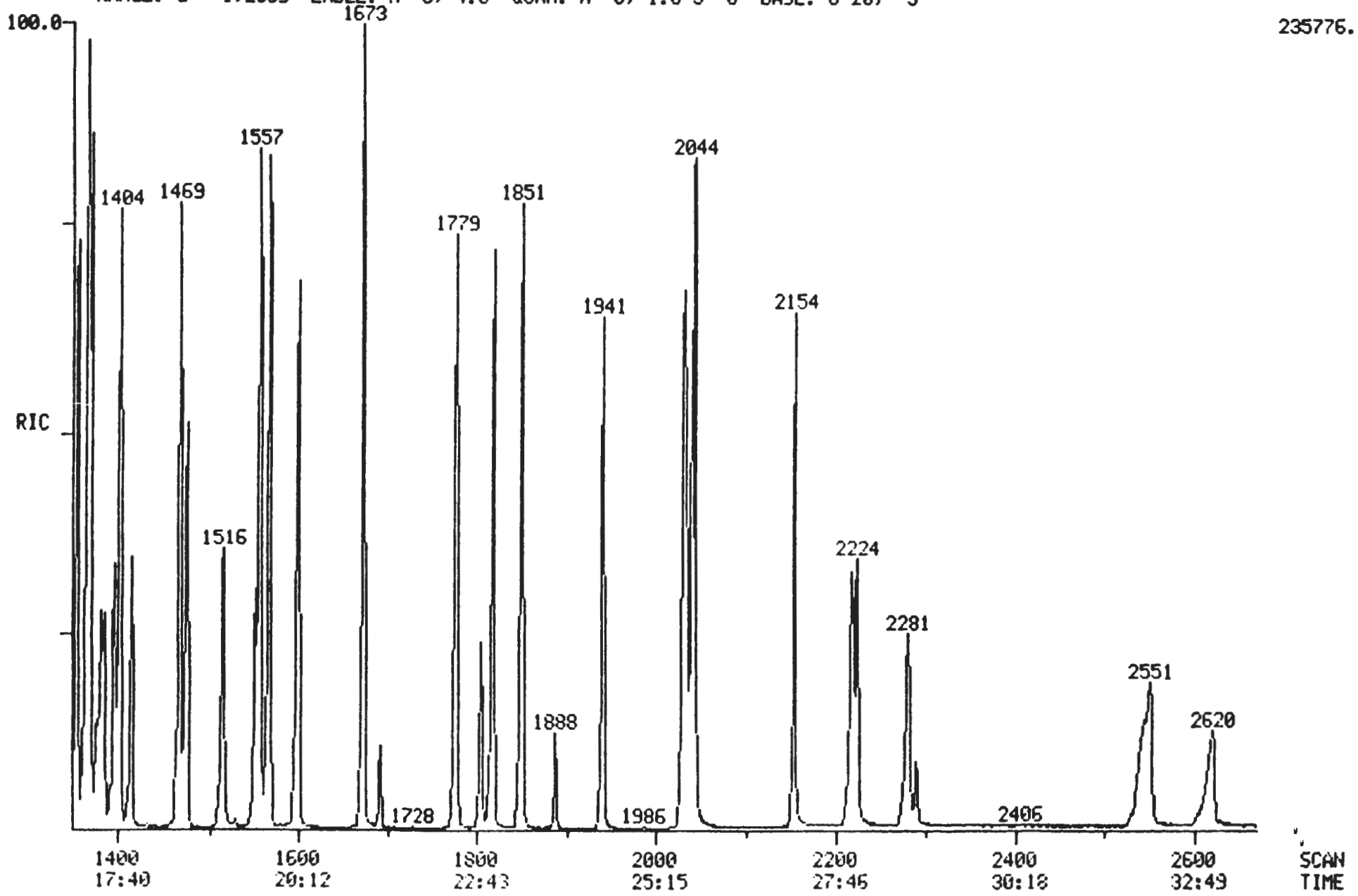
96134092.0046

000337

RIC
02/18/93 12:34:00
SAMPLE: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
CONDS.: CAP/.25,,3DFT021851
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218504 #1
CALI: 30218504 #3

SCANS 1350 TO 2669



96130192.0007

9613492.6048

Quantitation Report File: 30218S04

000338

Data: 30218S04.TI
02/18/93 12:34:00
Sample: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000339

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	669	8:27	1	1.000	A BB	27106.	20.000 NG/UL	0.44
2	136	905	11:26	2	1.000	A BB	99676.	20.000 NG/UL	0.44
3	164	1254	15:50	3	1.000	A BB	54277.	20.000 NG/UL	0.44
4	188	1551	19:35	4	1.000	A BB	86717.	20.000 NG/UL	0.44
5	240	2034	25:41	5	1.000	A BB	51222.	20.000 NG/UL	0.44
6	264	2290	28:55	6	1.000	A BB	26140.	20.000 NG/UL	0.44
7	112	462	5:50	1	0.691	A BB	118474.	60.000 NG/UL	1.32
8	99	614	7:45	1	0.918	A BB	120532.	60.000 NG/UL	1.32
9	330	1415	17:52	3	1.128	A BB	23864.	60.000 NG/UL	1.32
10	82	773	9:46	2	0.854	A BB	137288.	60.000 NG/UL	1.32
11	172	1123	14:11	3	0.896	A BB	203108.	60.000 NG/UL	1.32
12	244	1851	23:22	5	0.910	A BB	194850.	60.000 NG/UL	1.32
13	132	631	7:58	1	0.943	A BB	95377.	60.000 NG/UL	1.32
14	152	696	8:47	1	1.040	A BB	72188.	60.000 NG/UL	1.32
15	94	617	7:47	1	0.922	A BV	153432.	60.000 NG/UL	1.32
16	93	631	7:58	1	0.943	A BV	123286.	60.000 NG/UL	1.32
17	128	635	8:01	1	0.949	A BB	105868.	60.000 NG/UL	1.32
18	146	659	8:19	1	0.985	A BV	117892.	60.000 NG/UL	1.32
19	146	672	8:29	1	1.004	A VB	120897.	60.000 NG/UL	1.32
20	108	701	8:51	1	1.048	A BV	68525.	60.000 NG/UL	1.32
21	146	699	8:49	1	1.045	A BB	117915.	60.000 NG/UL	1.32
22	108	720	9:05	1	1.076	A BB	88303.	60.000 NG/UL	1.32
23	45	724	9:08	1	1.082	A BB	180890.	60.000 NG/UL	1.32
24	108	751	9:29	1	1.123	A BB	94012.	60.000 NG/UL	1.32
25	70	756	9:33	1	1.130	A BB	99130.	60.000 NG/UL	1.32
26	117	758	9:34	1	1.133	A BB	52512.	60.000 NG/UL	1.32
27	77	777	9:49	2	0.859	A BB	138993.	60.000 NG/UL	1.32
28	82	827	10:26	2	0.914	A BB	248861.	60.000 NG/UL	1.32
29	139	834	10:32	2	0.922	A VB	53126.	60.000 NG/UL	1.32
30	122	849	10:43	2	0.938	A BB	86944.	60.000 NG/UL	1.32
31	93	868	10:57	2	0.959	A BB	149306.	60.000 NG/UL	1.32
32	122	891	11:15	2	0.985	A BB	32274.	60.000 NG/UL	1.32
33	162	882	11:08	2	0.975	A BB	82605.	60.000 NG/UL	1.32
34	180	895	11:18	2	0.989	A BB	97202.	60.000 NG/UL	1.32
35	128	910	11:29	2	1.006	A BV	313082.	60.000 NG/UL	1.32
36	127	924	11:40	2	1.021	A BB	132641.	60.000 NG/UL	1.32
37	225	935	11:48	2	1.033	A BB	55598.	60.000 NG/UL	1.32
38	107	1022	12:54	2	1.129	A BB	90752.	60.000 NG/UL	1.32
39	142	1047	13:13	2	1.157	A BB	212667.	60.000 NG/UL	1.32
40	237	1077	13:36	3	0.859	A BB	49272.	60.000 NG/UL	1.32
41	196	1104	13:56	3	0.880	A BV	58076.	60.000 NG/UL	1.32
42	196	1111	14:02	3	0.886	A VB	44415.	60.000 NG/UL	1.32
43	162	1143	14:26	3	0.911	A BB	182724.	60.000 NG/UL	1.32
44	65	1169	14:45	3	0.932	A BB	67818.	60.000 NG/UL	1.32
45	163	1212	15:18	3	0.967	A BB	200355.	60.000 NG/UL	1.32
46	152	1226	15:29	3	0.978	A BB	289677.	60.000 NG/UL	1.32
47	138	1254	15:50	3	1.000	A BB	49313.	60.000 NG/UL	1.32
48	153	1263	15:57	3	1.007	A BB	184426.	60.000 NG/UL	1.32
49	184	1274	16:05	3	1.016	A BB	20876.	60.000 NG/UL	1.32
50	109	1293	16:19	3	1.031	A VB	25325.	60.000 NG/UL	1.32

9613492.6050

000340

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	1.00	0.691	1.00	60.00	60.00	1.457	1.457	1.00
8	7:44	1.00	0.913	1.00	60.00	60.00	1.482	1.482	1.00
9	17:52	1.00	1.127	1.00	60.00	60.00	0.147	0.147	1.00
10	9:45	1.00	0.852	1.00	60.00	60.00	0.459	0.459	1.00
11	14:11	1.00	0.896	1.00	60.00	60.00	1.247	1.247	1.00
12	23:22	1.00	0.910	1.00	60.00	60.00	1.268	1.268	1.00
13	7:59	1.00	0.943	1.00	60.00	60.00	1.173	1.173	1.00
14	8:28	1.04	1.000	1.04	60.00	60.00	0.888	0.888	1.00
15	7:46	1.00	0.918	1.00	60.00	60.00	1.887	1.887	1.00
16	7:57	1.00	0.940	1.00	60.00	60.00	1.516	1.516	1.00
17	8:01	1.00	0.948	1.00	60.00	60.00	1.302	1.302	1.00
18	8:20	1.00	0.985	1.00	60.00	60.00	1.450	1.450	1.00
19	8:30	1.00	1.004	1.00	60.00	60.00	1.487	1.487	1.00
20	8:49	1.00	1.043	1.00	60.00	60.00	0.843	0.843	1.00
21	8:49	1.00	1.043	1.00	60.00	60.00	1.450	1.450	1.00
22	9:05	1.00	1.073	1.00	60.00	60.00	1.086	1.086	1.00
23	9:08	1.00	1.081	1.00	60.00	60.00	2.224	2.224	1.00
24	9:28	1.00	1.119	1.00	60.00	60.00	1.156	1.156	1.00
25	9:29	1.01	1.121	1.01	60.00	60.00	1.219	1.219	1.00
26	9:35	1.00	1.133	1.00	60.00	60.00	0.646	0.646	1.00
27	9:48	1.00	0.857	1.00	60.00	60.00	0.465	0.465	1.00
28	10:24	1.00	0.909	1.00	60.00	60.00	0.832	0.832	1.00
29	10:32	1.00	0.921	1.00	60.00	60.00	0.178	0.178	1.00
30	10:42	1.00	0.936	1.00	60.00	60.00	0.291	0.291	1.00
31	10:57	1.00	0.958	1.00	60.00	60.00	0.499	0.499	1.00
32	11:07	1.01	0.972	1.01	60.00	60.00	0.108	0.108	1.00
33	11:07	1.00	0.972	1.00	60.00	60.00	0.276	0.276	1.00
34	11:18	1.00	0.988	1.00	60.00	60.00	0.325	0.325	1.00
35	11:29	1.00	1.004	1.00	60.00	60.00	1.047	1.047	1.00
36	11:40	1.00	1.020	1.00	60.00	60.00	0.444	0.444	1.00
37	11:49	1.00	1.033	1.00	60.00	60.00	0.186	0.186	1.00
38	12:54	1.00	1.128	1.00	60.00	60.00	0.303	0.303	1.00
39	13:13	1.00	1.156	1.00	60.00	60.00	0.711	0.711	1.00
40	13:37	1.00	0.859	1.00	60.00	60.00	0.303	0.303	1.00
41	13:56	1.00	0.880	1.00	60.00	60.00	0.357	0.357	1.00
42	14:01	1.00	0.884	1.00	60.00	60.00	0.273	0.273	1.00
43	14:27	1.00	0.912	1.00	60.00	60.00	1.122	1.122	1.00
44	14:45	1.00	0.931	1.00	60.00	60.00	0.416	0.416	1.00
45	15:17	1.00	0.965	1.00	60.00	60.00	1.230	1.230	1.00
46	15:29	1.00	0.977	1.00	60.00	60.00	1.779	1.779	1.00
47	15:49	1.00	0.998	1.00	60.00	60.00	0.303	0.303	1.00
48	15:56	1.00	1.006	1.00	60.00	60.00	1.133	1.133	1.00
49	16:04	1.00	1.014	1.00	60.00	60.00	0.128	0.128	1.00
50	16:17	1.00	1.028	1.00	60.00	60.00	0.156	0.156	1.00

Quantitation Report File: 30218S04

Data: 30218S04.TI
02/18/93 12:34:00
Sample: CLP,,,SSTD120,,,60PPM3SV0201,SV,IC-120
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1298	16:23	3	1.035	A BB	251489.	60.000 NG/UL	1.32
52	165	1222	15:26	3	0.974	A BB	49728.	60.000 NG/UL	1.32
53	149	1357	17:08	3	1.082	A VB	216932.	60.000 NG/UL	1.32
54	165	1302	16:26	3	1.038	A VB	62762.	60.000 NG/UL	1.32
55	166	1367	17:15	3	1.090	A BB	205529.	60.000 NG/UL	1.32
56	204	1371	17:18	3	1.093	A BB	98166.	60.000 NG/UL	1.32
57	138	1382	17:27	3	1.102	A BB	41988.	60.000 NG/UL	1.32
58	198	1385	17:29	4	0.893	A BB	27860.	60.000 NG/UL	1.32
59	169	1397	17:38	4	0.901	A BB	58214.	60.000 NG/UL	1.32
60	248	1469	18:33	4	0.947	A BB	52916.	60.000 NG/UL	1.32
61	284	1476	18:38	4	0.952	A BB	59646.	60.000 NG/UL	1.32
62	266	1516	19:08	4	0.977	A BB	30160.	60.000 NG/UL	1.32
63	178	1557	19:39	4	1.004	A BV	280525.	60.000 NG/UL	1.32

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1567	19:47	4	1.010	A VB	281392.	60.000 NG/UL	1.32
65	167	1600	20:12	4	1.032	A BB	251359.	60.000 NG/UL	1.32
66	149	1673	21:07	4	1.079	A BB	360297.	60.000 NG/UL	1.32
67	202	1779	22:28	4	1.147	A BB	274339.	60.000 NG/UL	1.32
68	202	1819	22:58	5	0.894	A VB	279108.	60.000 NG/UL	1.32
69	149	1941	24:30	5	0.954	A BB	108530.	60.000 NG/UL	1.32
70	252	2030	25:38	5	0.998	A BB	48282.	60.000 NG/UL	1.32
71	228	2032	25:39	5	0.999	A BV	190820.	60.000 NG/UL	1.32
72	228	2039	25:44	5	1.002	A VB	139299.	60.000 NG/UL	1.32
73	149	2043	25:48	5	1.004	A VB	146183.	60.000 NG/UL	1.32
74	149	2154	27:12	6	0.941	A VB	199062.	60.000 NG/UL	1.32
75	252	2218	28:00	6	0.969	A BV	132115.	60.000 NG/UL	1.32
76	252	2224	28:05	6	0.971	A VB	109395.	60.000 NG/UL	1.32
77	252	2281	28:48	6	0.996	A BB	107114.	60.000 NG/UL	1.32
78	276	2543	32:06	6	1.110	A BB	99753.	60.000 NG/UL	1.32
79	278	2551	32:12	6	1.114	A BB	84203.	60.000 NG/UL	1.32
80	276	2620	33:05	6	1.144	A BB	81011.	60.000 NG/UL	1.32

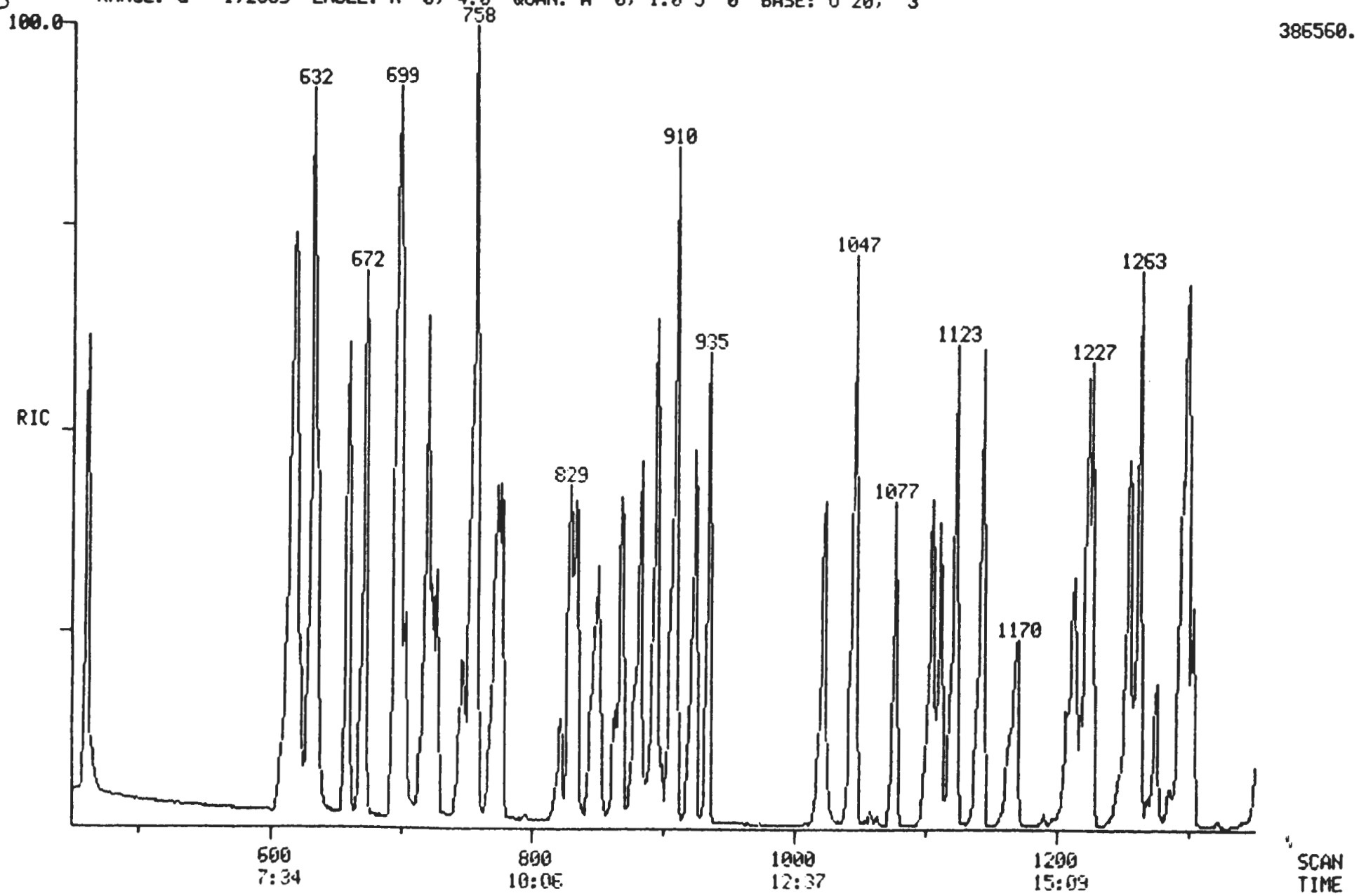
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	60.00	60.00	1.544	1.544	1.00
52	15:25	1.00	0.973	1.00	60.00	60.00	0.305	0.305	1.00
53	17:06	1.00	1.080	1.00	60.00	60.00	1.332	1.332	1.00
54	16:25	1.00	1.036	1.00	60.00	60.00	0.385	0.385	1.00
55	17:15	1.00	1.089	1.00	60.00	60.00	1.262	1.262	1.00
56	17:18	1.00	1.092	1.00	60.00	60.00	0.603	0.603	1.00
57	17:24	1.00	1.098	1.00	60.00	60.00	0.258	0.258	1.00
58	17:28	1.00	0.891	1.00	60.00	60.00	0.107	0.107	1.00
59	17:37	1.00	0.899	1.00	60.00	60.00	0.224	0.224	1.00
60	18:32	1.00	0.946	1.00	60.00	60.00	0.203	0.203	1.00
61	18:38	1.00	0.951	1.00	60.00	60.00	0.229	0.229	1.00
62	19:08	1.00	0.977	1.00	60.00	60.00	0.116	0.116	1.00
63	19:39	1.00	1.003	1.00	60.00	60.00	1.078	1.078	1.00
64	19:47	1.00	1.010	1.00	60.00	60.00	1.082	1.082	1.00
65	20:12	1.00	1.031	1.00	60.00	60.00	0.966	0.966	1.00
66	21:08	1.00	1.079	1.00	60.00	60.00	1.385	1.385	1.00
67	22:28	1.00	1.146	1.00	60.00	60.00	1.055	1.055	1.00
68	22:58	1.00	0.894	1.00	60.00	60.00	1.816	1.816	1.00
69	24:31	1.00	0.954	1.00	60.00	60.00	0.706	0.706	1.00
70	25:38	1.00	0.998	1.00	60.00	60.00	0.314	0.314	1.00
71	25:40	1.00	0.999	1.00	60.00	60.00	1.242	1.242	1.00
72	25:44	1.00	1.002	1.00	60.00	60.00	0.907	0.907	1.00
73	25:48	1.00	1.004	1.00	60.00	60.00	0.951	0.951	1.00
74	27:12	1.00	0.941	1.00	60.00	60.00	2.538	2.538	1.00
75	28:00	1.00	0.969	1.00	60.00	60.00	1.685	1.685	1.00
76	28:04	1.00	0.971	1.00	60.00	60.00	1.395	1.395	1.00
77	28:46	1.00	0.995	1.00	60.00	60.00	1.366	1.366	1.00
78	32:03	1.00	1.109	1.00	60.00	60.00	1.272	1.272	1.00
79	32:09	1.00	1.112	1.00	60.00	60.00	1.074	1.074	1.00
80	33:00	1.00	1.141	1.00	60.00	60.00	1.033	1.033	1.00

000343

RIC
02/18/93 13:13:00
SAMPLE: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S05 #1
CALI: 30218S05 #3

SCANS 450 TO 1350



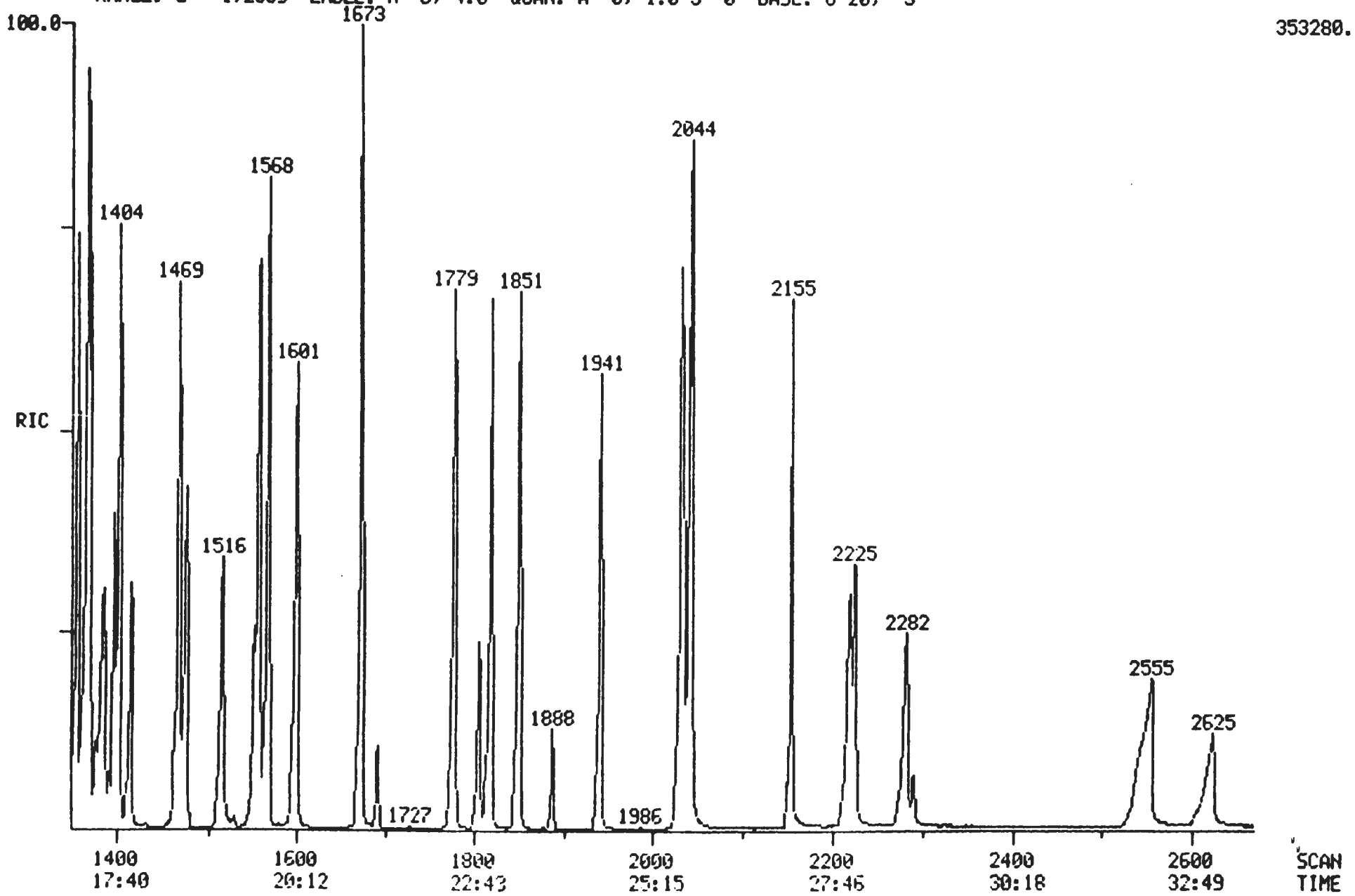
96B3492.0054

000344

RIC
02/18/93 13:13:00
SAMPLE: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
CONDS.: CAP/.25,,3DFT0218S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30218S05 #1
CALI: 30218S05 #3

SCANS 1350 TO 2669



4407 7614 96

9613492.6055

000345

Quantitation Report File: 30218S05

Data: 30218S05.TI
02/18/93 13:13:00
Sample: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000346

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	669	8:27	1	1.000	A BB	28594.	20.000 NG/UL	0.33
2	136	905	11:26	2	1.000	A BB	106258.	20.000 NG/UL	0.33
3	164	1254	15:50	3	1.000	A BB	58484.	20.000 NG/UL	0.33
4	188	1551	19:35	4	1.000	A BB	95218.	20.000 NG/UL	0.33
5	240	2035	25:41	5	1.000	A VB	49950.	20.000 NG/UL	0.33
6	264	2291	28:55	6	1.000	A BB	29904.	20.000 NG/UL	0.33
7	112	462	5:50	1	0.691	A BB	168302.	80.000 NG/UL	1.32
8	99	616	7:47	1	0.921	A BB	166960.	80.000 NG/UL	1.32
9	330	1416	17:53	3	1.129	A BB	35981.	80.000 NG/UL	1.32
10	82	773	9:46	2	0.854	A BB	197870.	80.000 NG/UL	1.32
11	172	1123	14:11	3	0.896	A BB	290491.	80.000 NG/UL	1.32
12	244	1851	23:22	5	0.910	A BB	286552.	80.000 NG/UL	1.32
13	132	632	7:59	1	0.945	A BB	133085.	80.000 NG/UL	1.32
14	152	696	8:47	1	1.040	A BB	103227.	80.000 NG/UL	1.32
15	94	618	7:48	1	0.924	A BV	221714.	80.000 NG/UL	1.32
16	93	632	7:59	1	0.945	A VB	174032.	80.000 NG/UL	1.32
17	128	635	8:01	1	0.949	A BB	152071.	80.000 NG/UL	1.32
18	146	659	8:19	1	0.985	A BB	168459.	80.000 NG/UL	1.32
19	146	672	8:29	1	1.004	A BB	173117.	80.000 NG/UL	1.32
20	108	703	8:53	1	1.051	A BV	95560.	80.000 NG/UL	1.32
21	146	699	8:49	1	1.045	A BB	169058.	80.000 NG/UL	1.32
22	108	720	9:05	1	1.076	A BB	129834.	80.000 NG/UL	1.32
23	45	724	9:08	1	1.082	A BB	271799.	80.000 NG/UL	1.32
24	108	753	9:30	1	1.126	A BB	139564.	80.000 NG/UL	1.32
25	70	758	9:34	1	1.133	A BB	149046.	80.000 NG/UL	1.32
26	117	758	9:34	1	1.133	A BB	73374.	80.000 NG/UL	1.32
27	77	777	9:49	2	0.859	A BB	206073.	80.000 NG/UL	1.32
28	82	829	10:28	2	0.916	A BB	363564.	80.000 NG/UL	1.32
29	139	834	10:32	2	0.922	A BB	76417.	80.000 NG/UL	1.32
30	122	851	10:45	2	0.940	A BB	127874.	80.000 NG/UL	1.32
31	93	868	10:57	2	0.959	A BB	222522.	80.000 NG/UL	1.32
32	122	895	11:18	2	0.989	A BB	46014.	80.000 NG/UL	1.32
33	162	883	11:09	2	0.976	A BB	119949.	80.000 NG/UL	1.32
34	180	895	11:18	2	0.989	A BB	138652.	80.000 NG/UL	1.32
35	128	910	11:29	2	1.006	A BB	475950.	80.000 NG/UL	1.32
36	127	924	11:40	2	1.021	A BB	194987.	80.000 NG/UL	1.32
37	225	935	11:48	2	1.033	A BB	77744.	80.000 NG/UL	1.32
38	107	1023	12:55	2	1.130	A BB	138684.	80.000 NG/UL	1.32
39	142	1047	13:13	2	1.157	A BB	311002.	80.000 NG/UL	1.32
40	237	1077	13:36	3	0.859	A BB	71472.	80.000 NG/UL	1.32
41	196	1105	13:57	3	0.881	A BV	96876.	80.000 NG/UL	1.32
42	196	1111	14:02	3	0.886	A VB	54890.	80.000 NG/UL	1.32
43	162	1144	14:27	3	0.912	A BB	267767.	80.000 NG/UL	1.32
44	65	1170	14:46	3	0.933	A BB	102546.	80.000 NG/UL	1.32
45	163	1213	15:19	3	0.967	A BB	295071.	80.000 NG/UL	1.32
46	152	1227	15:29	3	0.978	A BB	430726.	80.000 NG/UL	1.32
47	138	1255	15:51	3	1.001	A BB	74876.	80.000 NG/UL	1.32
48	153	1263	15:57	3	1.007	A BB	274282.	80.000 NG/UL	1.32
49	184	1276	16:07	3	1.018	A BB	34543.	80.000 NG/UL	1.32
50	109	1295	16:21	3	1.033	A VB	38048.	80.000 NG/UL	1.32

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	1.00	0.691	1.00	80.00	80.00	1.471	1.471	1.00
8	7:44	1.01	0.913	1.01	80.00	80.00	1.460	1.460	1.00
9	17:52	1.00	1.127	1.00	80.00	80.00	0.154	0.154	1.00
10	9:45	1.00	0.852	1.00	80.00	80.00	0.466	0.466	1.00
11	14:11	1.00	0.896	1.00	80.00	80.00	1.242	1.242	1.00
12	23:22	1.00	0.910	1.00	80.00	80.00	1.434	1.434	1.00
13	7:59	1.00	0.943	1.00	80.00	80.00	1.164	1.164	1.00
14	8:28	1.04	1.000	1.04	80.00	80.00	0.903	0.903	1.00
15	7:46	1.00	0.918	1.01	80.00	80.00	1.938	1.938	1.00
16	7:57	1.00	0.940	1.00	80.00	80.00	1.522	1.522	1.00
17	8:01	1.00	0.948	1.00	80.00	80.00	1.330	1.330	1.00
18	8:20	1.00	0.985	1.00	80.00	80.00	1.473	1.473	1.00
19	8:30	1.00	1.004	1.00	80.00	80.00	1.514	1.514	1.00
20	8:49	1.01	1.043	1.01	80.00	80.00	0.835	0.835	1.00
21	8:49	1.00	1.043	1.00	80.00	80.00	1.478	1.478	1.00
22	9:05	1.00	1.073	1.00	80.00	80.00	1.135	1.135	1.00
23	9:08	1.00	1.081	1.00	80.00	80.00	2.376	2.376	1.00
24	9:28	1.00	1.119	1.01	80.00	80.00	1.220	1.220	1.00
25	9:29	1.01	1.121	1.01	80.00	80.00	1.303	1.303	1.00
26	9:35	1.00	1.133	1.00	80.00	80.00	0.642	0.642	1.00
27	9:48	1.00	0.857	1.00	80.00	80.00	0.485	0.485	1.00
28	10:24	1.01	0.909	1.01	80.00	80.00	0.855	0.855	1.00
29	10:32	1.00	0.921	1.00	80.00	80.00	0.180	0.180	1.00
30	10:42	1.00	0.936	1.00	80.00	80.00	0.301	0.301	1.00
31	10:57	1.00	0.958	1.00	80.00	80.00	0.524	0.524	1.00
32	11:07	1.02	0.972	1.02	80.00	80.00	0.108	0.108	1.00
33	11:07	1.00	0.972	1.00	80.00	80.00	0.282	0.282	1.00
34	11:18	1.00	0.988	1.00	80.00	80.00	0.326	0.326	1.00
35	11:29	1.00	1.004	1.00	80.00	80.00	1.120	1.120	1.00
36	11:40	1.00	1.020	1.00	80.00	80.00	0.459	0.459	1.00
37	11:49	1.00	1.033	1.00	80.00	80.00	0.183	0.183	1.00
38	12:54	1.00	1.128	1.00	80.00	80.00	0.326	0.326	1.00
39	13:13	1.00	1.156	1.00	80.00	80.00	0.732	0.732	1.00
40	13:37	1.00	0.859	1.00	80.00	80.00	0.306	0.306	1.00
41	13:56	1.00	0.880	1.00	80.00	80.00	0.414	0.414	1.00
42	14:01	1.00	0.884	1.00	80.00	80.00	0.235	0.235	1.00
43	14:27	1.00	0.912	1.00	80.00	80.00	1.145	1.145	1.00
44	14:45	1.00	0.931	1.00	80.00	80.00	0.438	0.438	1.00
45	15:17	1.00	0.965	1.00	80.00	80.00	1.261	1.261	1.00
46	15:29	1.00	0.977	1.00	80.00	80.00	1.841	1.841	1.00
47	15:49	1.00	0.998	1.00	80.00	80.00	0.320	0.320	1.00
48	15:56	1.00	1.006	1.00	80.00	80.00	1.172	1.172	1.00
49	16:04	1.00	1.014	1.00	80.00	80.00	0.148	0.148	1.00
50	16:17	1.00	1.028	1.00	80.00	80.00	0.163	0.163	1.00

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000348

Quantitation Report File: 30218S05

Data: 30218S05.TI
02/18/93 13:13:00
Sample: CLP,,,SSTD160,,,80PPM3SV0201,SV,IC-160
Conds.: CAP/.25,,3DFT0218S1
Formula: 3DFT0218S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30218S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1299	16:24	3	1.036	A BB	372293.	80.000 NG/UL	1.32
52	165	1223	15:26	3	0.975	A BB	73405.	80.000 NG/UL	1.32
53	149	1358	17:09	3	1.083	A BB	331796.	80.000 NG/UL	1.32
54	165	1304	16:28	3	1.040	A VB	94171.	80.000 NG/UL	1.32
55	166	1368	17:16	3	1.091	A BB	309218.	80.000 NG/UL	1.32
56	204	1371	17:18	3	1.093	A BB	149838.	80.000 NG/UL	1.32
57	138	1385	17:29	3	1.104	A BB	63838.	80.000 NG/UL	1.32
58	198	1387	17:31	4	0.894	A BB	41256.	80.000 NG/UL	1.32
59	169	1398	17:39	4	0.901	A BB	90331.	80.000 NG/UL	1.32
60	248	1469	18:33	4	0.947	A BV	81238.	80.000 NG/UL	1.32
61	284	1477	18:39	4	0.952	A BB	91423.	80.000 NG/UL	1.32
62	266	1516	19:08	4	0.977	A BB	46145.	80.000 NG/UL	1.32
63	178	1557	19:39	4	1.004	A BV	427092.	80.000 NG/UL	1.32

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000349

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1568	19:48	4	1.011	A VB	425720.	80.000 NG/UL	1.32
65	167	1600	20:12	4	1.032	A BB	393944.	80.000 NG/UL	1.32
66	149	1673	21:07	4	1.079	A BB	576487.	80.000 NG/UL	1.32
67	202	1779	22:28	4	1.147	A BB	408033.	80.000 NG/UL	1.32
68	202	1820	22:59	5	0.894	A BB	414556.	80.000 NG/UL	1.32
69	149	1941	24:30	5	0.954	A BB	161829.	80.000 NG/UL	1.32
70	252	2031	25:38	5	0.998	A BB	80370.	80.000 NG/UL	1.32
71	228	2033	25:40	5	0.999	A BV	288480.	80.000 NG/UL	1.32
72	228	2040	25:45	5	1.002	A VB	207128.	80.000 NG/UL	1.32
73	149	2044	25:48	5	1.004	A VB	225308.	80.000 NG/UL	1.32
74	149	2155	27:12	6	0.941	A BB	332473.	80.000 NG/UL	1.32
75	252	2219	28:01	6	0.969	A BV	238675.	80.000 NG/UL	1.32
76	252	2225	28:05	6	0.971	A VB	156119.	80.000 NG/UL	1.32
77	252	2282	28:49	6	0.996	A BB	176570.	80.000 NG/UL	1.32
78	276	2546	32:09	6	1.111	A BB	165738.	80.000 NG/UL	1.32
79	278	2555	32:15	6	1.115	A BB	134622.	80.000 NG/UL	1.32
80	276	2625	33:08	6	1.146	A BB	123717.	80.000 NG/UL	1.32

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	80.00	80.00	1.591	1.591	1.00
52	15:25	1.00	0.973	1.00	80.00	80.00	0.314	0.314	1.00
53	17:06	1.00	1.080	1.00	80.00	80.00	1.418	1.418	1.00
54	16:25	1.00	1.036	1.00	80.00	80.00	0.403	0.403	1.00
55	17:15	1.00	1.089	1.00	80.00	80.00	1.322	1.322	1.00
56	17:18	1.00	1.092	1.00	80.00	80.00	0.641	0.641	1.00
57	17:24	1.01	1.098	1.01	80.00	80.00	0.273	0.273	1.00
58	17:28	1.00	0.891	1.00	80.00	80.00	0.108	0.108	1.00
59	17:37	1.00	0.899	1.00	80.00	80.00	0.237	0.237	1.00
60	18:32	1.00	0.946	1.00	80.00	80.00	0.213	0.213	1.00
61	18:38	1.00	0.951	1.00	80.00	80.00	0.240	0.240	1.00
62	19:08	1.00	0.977	1.00	80.00	80.00	0.121	0.121	1.00
63	19:39	1.00	1.003	1.00	80.00	80.00	1.121	1.121	1.00
64	19:47	1.00	1.010	1.00	80.00	80.00	1.118	1.118	1.00
65	20:12	1.00	1.031	1.00	80.00	80.00	1.034	1.034	1.00
66	21:08	1.00	1.079	1.00	80.00	80.00	1.514	1.514	1.00
67	22:28	1.00	1.146	1.00	80.00	80.00	1.071	1.071	1.00
68	22:58	1.00	0.894	1.00	80.00	80.00	2.075	2.075	1.00
69	24:31	1.00	0.954	1.00	80.00	80.00	0.810	0.810	1.00
70	25:38	1.00	0.998	1.00	80.00	80.00	0.402	0.402	1.00
71	25:40	1.00	0.999	1.00	80.00	80.00	1.444	1.444	1.00
72	25:44	1.00	1.002	1.00	80.00	80.00	1.037	1.037	1.00
73	25:48	1.00	1.004	1.00	80.00	80.00	1.128	1.128	1.00
74	27:12	1.00	0.941	1.00	80.00	80.00	2.780	2.780	1.00
75	28:00	1.00	0.969	1.00	80.00	80.00	1.995	1.995	1.00
76	28:04	1.00	0.971	1.00	80.00	80.00	1.305	1.305	1.00
77	28:46	1.00	0.995	1.00	80.00	80.00	1.476	1.476	1.00
78	32:03	1.00	1.109	1.00	80.00	80.00	1.386	1.386	1.00
79	32:09	1.00	1.112	1.00	80.00	80.00	1.125	1.125	1.00
80	33:00	1.00	1.141	1.00	80.00	80.00	1.034	1.034	1.00

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

000350

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration date: 02/16/93 Time: 1408

Lab File ID: 30216S01 Init. Calib. Date(s): 02/04/93 02/04/93

Init. Calib. Times: 1203 1532

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	2.027	1.812	0.800	10.6	25.0
bis(2-Chloroethyl)Ether	2.368	2.157	0.700	8.9	25.0
2-Chlorophenol	1.371	1.263	0.800	7.9	25.0
1,3-Dichlorobenzene	1.523	1.534	0.600	-0.7	25.0
1,4-Dichlorobenzene	1.567	1.537	0.500	1.9	25.0
1,2-Dichlorobenzene	1.508	1.477	0.400	2.1	25.0
2-Methylphenol	1.189	1.014	0.700	14.7	25.0
2,2'-oxybis(1-Chloropropane)	2.337	2.093	0.010	10.4	
4-Methylphenol	1.250	1.088	0.600	13.0	25.0
N-Nitroso-Di-n-Propylamine	1.211	1.137	0.500	6.1	25.0
Hexachloroethane	0.620	0.631	0.300	-1.8	25.0
Nitrobenzene	0.442	0.461	0.200	-4.3	25.0
Isophorone	0.769	0.793	0.400	-3.1	25.0
2-Nitrophenol	0.187	0.159	0.100	15.0	25.0
2,4-Dimethylphenol	0.316	0.273	0.200	13.6	25.0
bis(2-Chloroethoxy)Methane	0.513	0.485	0.300	5.5	25.0
2,4-Dichlorophenol	0.293	0.275	0.200	6.1	25.0
1,2,4-Trichlorobenzene	0.325	0.334	0.200	-2.8	25.0
Naphthalene	1.045	1.025	0.700	1.9	25.0
4-Chloroaniline	0.455	0.409	0.010	10.1	
Hexachlorobutadiene	0.171	0.191	0.010	-11.7	
4-Chloro-3-Methylphenol	0.329	0.281	0.200	14.6	25.0
2-Methylnaphthalene	0.734	0.725	0.400	1.2	25.0
Hexachlorocyclopentadiene	0.269	0.293	0.010	-8.9	
2,4,6-Trichlorophenol	0.349	0.280	0.200	19.8	25.0
2,4,5-Trichlorophenol	0.286	0.285	0.200	0.3	25.0
2-Chloronaphthalene	1.155	1.122	0.800	2.9	25.0
2-Nitroaniline	0.426	0.373	0.010	12.4	
Dimethylphthalate	1.272	1.173	0.010	7.8	
Acenaphthylene	1.798	1.746	1.300	2.9	25.0
3-Nitroaniline	0.338	0.285	0.010	15.7	
Acenaphthene	1.131	1.127	0.800	0.4	25.0
2,4-Dinitrophenol	0.124	0.111	0.010	10.5	
4-Nitrophenol	0.153	0.169	0.010	-10.5	
Dibenzofuran	1.559	1.563	0.800	-0.3	25.0
2,4-Dinitrotoluene	0.402	0.371	0.200	7.7	25.0
2,6-Dinitrotoluene	0.307	0.265	0.200	13.7	25.0

All other compounds must meet a minimum RRF of 0.010.

KK 10/25/93

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000351

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration date: 02/16/93 Time: 1408

Lab File ID: 30216S01 Init. Calib. Date(s): 02/04/93 02/04/93

Init. Calib. Times: 1203 1532

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.466	1.295	0.010	11.7	
4-Chlorophenyl-phenylether	0.597	0.603	0.400	-1.0	25.0
Fluorene	1.265	1.246	0.900	1.5	25.0
4-Nitroaniline	0.325	0.258	0.010	20.6	
4,6-Dinitro-2-methylphenol	0.103	0.095	0.010	7.8	
N-Nitrosodiphenylamine (1)	0.232	0.197	0.010	15.1	
4-Bromophenyl-phenylether	0.200	0.201	0.100	-0.5	25.0
Hexachlorobenzene	0.221	0.239	0.100	-8.1	25.0
Pentachlorophenol	0.114	0.109	0.050	4.4	25.0
Phenanthrene	1.060	1.065	0.700	-0.5	25.0
Anthracene	1.058	1.056	0.700	0.2	25.0
Carbazole	0.978	0.901	0.010	7.9	
Di-n-Butylphthalate	1.342	1.268	0.010	5.5	
Fluoranthene	0.980	1.023	0.600	-4.4	25.0
Pyrene	1.796	1.840	0.600	-2.4	25.0
Butylbenzylphthalate	0.735	0.685	0.010	6.8	
3,3'-Dichlorobenzidine	0.356	0.290	0.010	18.5	
Benzo(a)Anthracene	1.234	1.176	0.800	4.7	25.0
bis(2-Ethylhexyl)Phthalate	0.928	0.899	0.010	3.1	
Chrysene	0.934	0.977	0.700	-4.6	25.0
Di-n-Octyl Phthalate	2.137	2.200	0.010	-2.9	
Benzo(b)Fluoranthene	1.698	1.508	0.700	11.2	25.0
Benzo(k)Fluoranthene	1.271	1.374	0.700	-8.1	25.0
Benzo(a)Pyrene	1.328	1.283	0.700	3.4	25.0
Indeno(1,2,3-cd)Pyrene	1.081	1.222	0.500	-13.0	25.0
Dibenz(a,h)Anthracene	0.973	1.068	0.400	~~-9.8~~	25.0
Benzo(g,h,i)Perylene	0.822	1.098	0.500	-33.6	25.0
Nitrobenzene-d5	0.426	0.461	0.200	-8.2	25.0
2-Fluorobiphenyl	1.255	1.318	0.700	-5.0	25.0
Terphenyl-d14	1.259	1.344	0.500	-6.8	25.0
Phenol-d5	1.566	1.441	0.800	8.0	25.0
2-Fluorophenol	1.406	1.421	0.600	-1.1	25.0
2,4,6-Tribromophenol	0.144	0.140	0.010	2.8	
2-Chlorophenol-d4	1.218	1.150	0.800	5.6	25.0
1,2-Dichlorobenzene-d4	0.921	0.934	0.800	-1.4	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

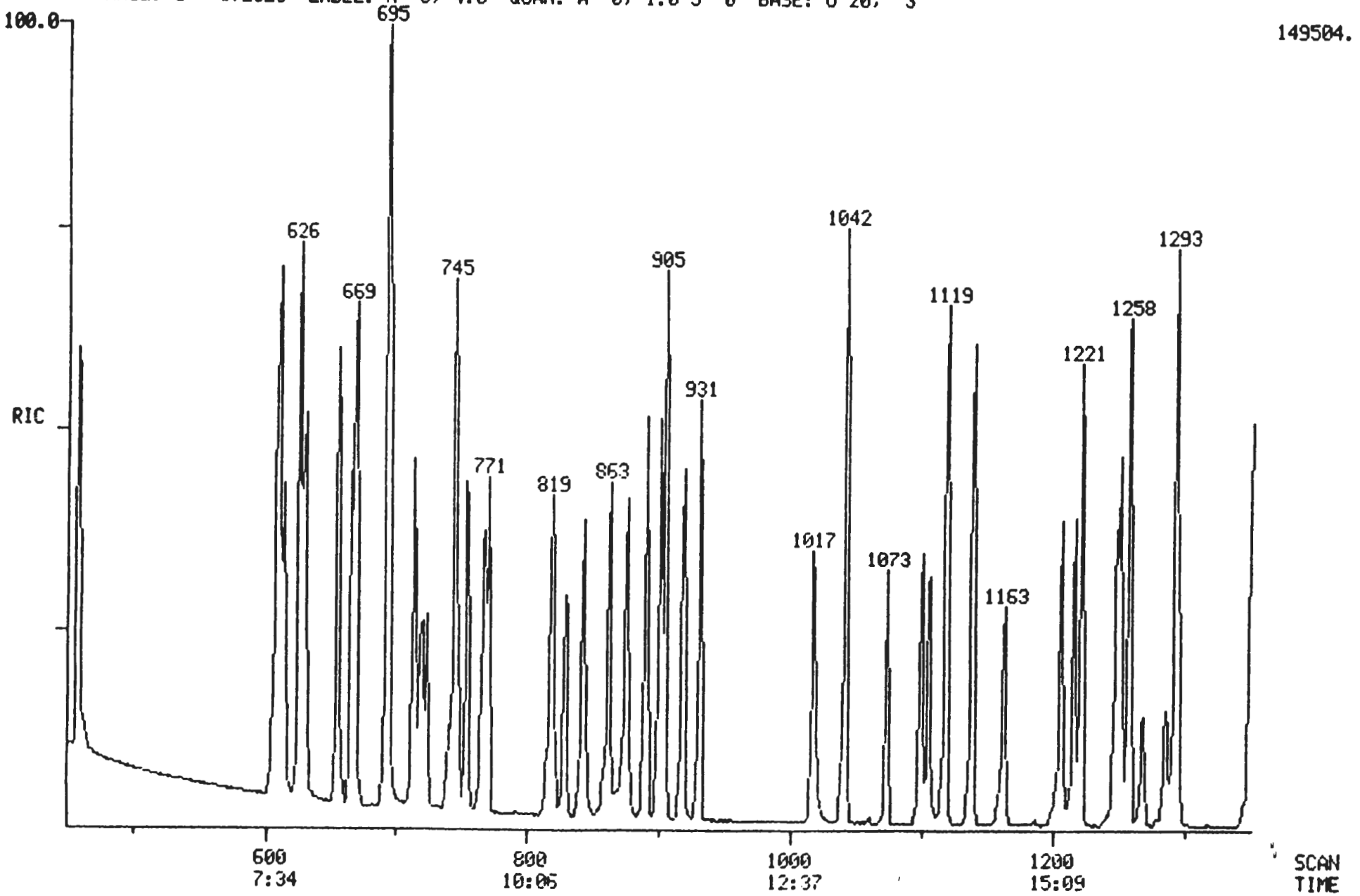
KK 10/25/93

000352

RIC
02/16/93 14:08:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,CC
CONDS.: CAP/.25,30204SAVG,3DFT0216S1
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S01 #1
CALI: 30216S01 #3

SCANS 450 TO 1350



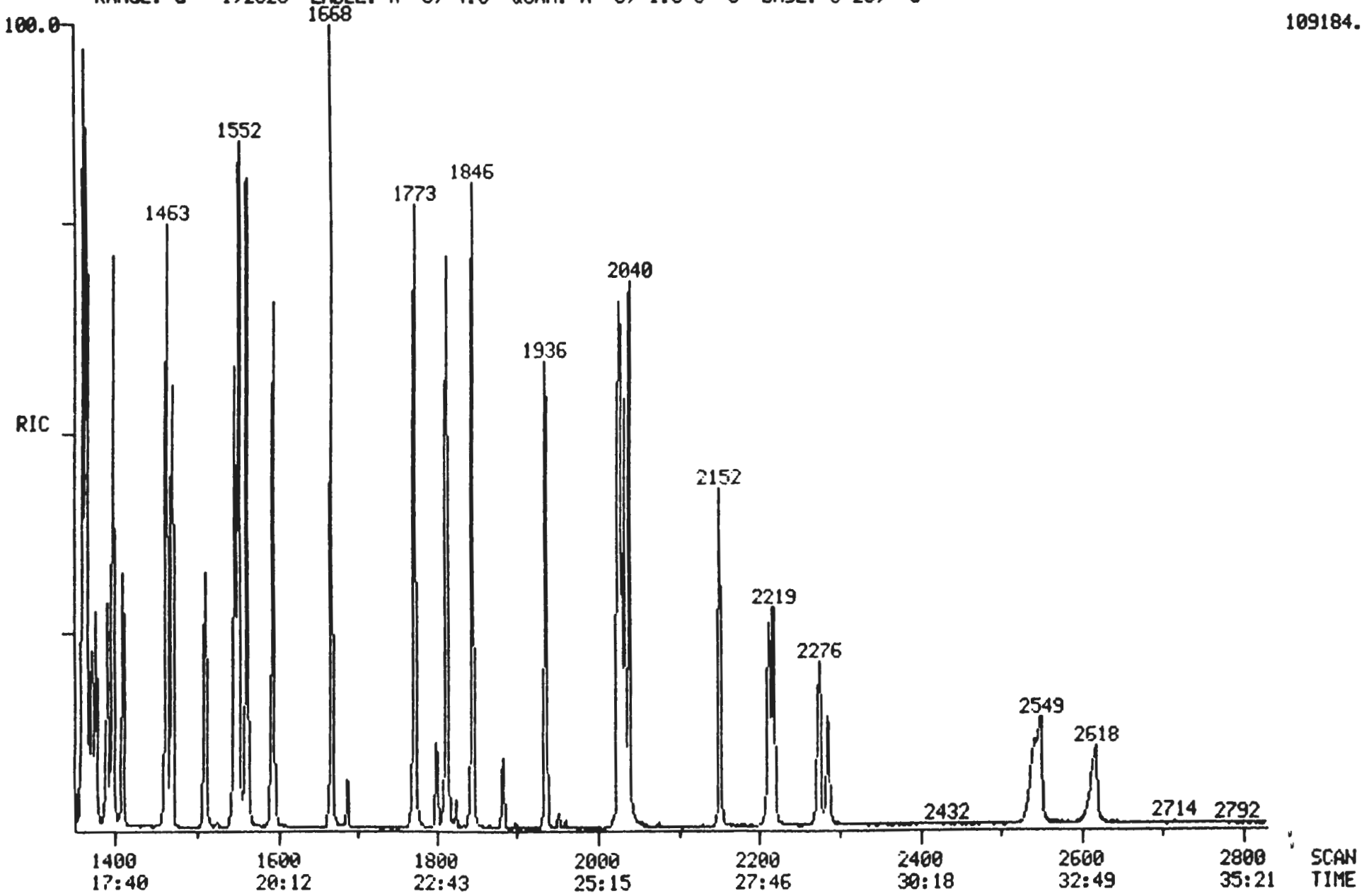
9613492.0062

000353

RIC
02/16/93 14:08:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0201,SV,CC
CONDS.: CAP/.25,30204SAVG,3DFT0216S1
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S01 #1
CALI: 30216S01 #3

SCANS 1350 TO 2828



9613492.6063

Quantitation Report File: 30216S01

Data: 30216S01.TI
02/16/93 14:08:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,CC
Conds.: CAP/.25,30204SAVG,3DFT0216S1
Formula: 3DFT0216S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.6065

000355

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	665	8:24	1	1.000	A BB	27848.	20.000 NG/UL	1.02
2	136	901	11:22	2	1.000	A BB	96288.	20.000 NG/UL	1.02
3	164	1250	15:47	3	1.000	A BB	53544.	20.000 NG/UL	1.02
4	188	1546	19:31	4	1.000	A BV	87450.	20.000 NG/UL	1.02
5	240	2029	25:37	5	1.000	A BB	49967.	20.000 NG/UL	1.02
6	264	2286	28:52	6	1.000	A BB	24511.	20.000 NG/UL	1.02
7	112	458	5:47	1	0.689	A BB	49452.	25.000 NG/UL	1.27
8	99	608	7:41	1	0.914	A BB	50165.	25.000 NG/UL	1.27
9	330	1410	17:48	3	1.128	A BB	9364.	25.000 NG/UL	1.27
10	82	767	9:41	2	0.851	A BB	55460.	25.000 NG/UL	1.27
11	172	1119	14:08	3	0.895	A BB	88192.	25.000 NG/UL	1.27
12	244	1846	23:18	5	0.910	A BB	83969.	25.000 NG/UL	1.27
13	132	627	7:55	1	0.943	A BB	40048.	25.000 NG/UL	1.27
14	152	692	8:44	1	1.041	A BB	32506.	25.000 NG/UL	1.27
15	94	610	7:42	1	0.917	A BV	63068.	25.000 NG/UL	1.27
16	93	614	7:45	1	0.923	A BV	75088.	25.000 NG/UL	1.27
17	128	630	7:57	1	0.947	A BV	43952.	25.000 NG/UL	1.27
18	146	655	8:16	1	0.985	A BB	53408.	25.000 NG/UL	1.27
19	146	669	8:27	1	1.006	A BB	53516.	25.000 NG/UL	1.27
20	108	694	8:46	1	1.044	A BB	24697.	25.000 NG/UL	1.27
21	146	695	8:46	1	1.045	A BB	51406.	25.000 NG/UL	1.27
22	108	714	9:01	1	1.074	A BB	35306.	25.000 NG/UL	1.27
23	45	720	9:05	1	1.083	A BB	72848.	25.000 NG/UL	1.27
24	108	745	9:24	1	1.120	A BB	37890.	25.000 NG/UL	1.27
25	70	746	9:25	1	1.122	A BB	39589.	25.000 NG/UL	1.27
26	117	754	9:31	1	1.134	A BB	21966.	25.000 NG/UL	1.27
27	77	771	9:44	2	0.856	A BB	55513.	25.000 NG/UL	1.27
28	82	819	10:20	2	0.909	A BV	95446.	25.000 NG/UL	1.27
29	139	829	10:28	2	0.920	A BB	19156.	25.000 NG/UL	1.27
30	122	843	10:39	2	0.936	A BB	32910.	25.000 NG/UL	1.27
31	93	863	10:54	2	0.958	A BB	58322.	25.000 NG/UL	1.27
32	122	876	11:04	2	0.972	A BB	14812.	25.000 NG/UL	1.27
33	162	876	11:04	2	0.972	A BB	33130.	25.000 NG/UL	1.27
34	180	891	11:15	2	0.989	A BB	40252.	25.000 NG/UL	1.27
35	128	905	11:26	2	1.004	A BV	123344.	25.000 NG/UL	1.27
36	127	919	11:36	2	1.020	A BB	49216.	25.000 NG/UL	1.27
37	225	931	11:45	2	1.033	A BB	23040.	25.000 NG/UL	1.27
38	107	1017	12:50	2	1.129	A BB	33818.	25.000 NG/UL	1.27
39	142	1042	13:09	2	1.156	A BB	87271.	25.000 NG/UL	1.27
40	237	1073	13:33	3	0.858	A BB	19608.	25.000 NG/UL	1.27
41	198	1100	13:53	3	0.880	A BV	18747.	25.000 NG/UL	1.27
42	198	1105	13:57	3	0.884	A VB	19066.	25.000 NG/UL	1.27
43	162	1139	14:23	3	0.911	A BB	75122.	25.000 NG/UL	1.27
44	65	1163	14:41	3	0.930	A BB	24934.	25.000 NG/UL	1.27
45	163	1206	15:14	3	0.965	A BB	78498.	25.000 NG/UL	1.27
46	152	1221	15:25	3	0.977	A BB	116886.	25.000 NG/UL	1.27
47	138	1247	15:45	3	0.998	A BB	19086.	25.000 NG/UL	1.27
48	153	1257	15:52	3	1.006	A BB	75400.	25.000 NG/UL	1.27
49	184	1267	16:00	3	1.014	A BB	7400.	25.000 NG/UL	1.27
50	109	1285	16:13	3	1.028	A BB	11290.	25.000 NG/UL	1.27

9613492.6066

000356

o	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	25.00	25.00	1.421	1.421	1.00
8	7:41	1.00	0.913	1.00	25.00	25.00	1.441	1.441	1.00
9	17:49	1.00	1.128	1.00	25.00	25.00	0.140	0.140	1.00
0	9:42	1.00	0.852	1.00	25.00	25.00	0.461	0.461	1.00
1	14:08	1.00	0.894	1.00	25.00	25.00	1.318	1.318	1.00
2	23:21	1.00	0.909	1.00	25.00	25.00	1.344	1.344	1.00
3	7:55	1.00	0.941	1.00	25.00	25.00	1.150	1.150	1.00
4	8:44	1.00	1.039	1.00	25.00	25.00	0.934	0.934	1.00
5	7:42	1.00	0.916	1.00	25.00	25.00	1.812	1.812	1.00
6	7:45	1.00	0.922	1.00	25.00	25.00	2.157	2.157	1.00
7	7:57	1.00	0.946	1.00	25.00	25.00	1.263	1.263	1.00
8	8:16	1.00	0.983	1.00	25.00	25.00	1.534	1.534	1.00
9	8:27	1.00	1.005	1.00	25.00	25.00	1.537	1.537	1.00
0	8:46	1.00	1.044	1.00	25.00	25.00	0.709	0.709	1.00
1	8:46	1.00	1.044	1.00	25.00	25.00	1.477	1.477	1.00
2	9:01	1.00	1.072	1.00	25.00	25.00	1.014	1.014	1.00
3	9:05	1.00	1.080	1.00	25.00	25.00	2.093	2.093	1.00
4	9:24	1.00	1.119	1.00	25.00	25.00	1.088	1.088	1.00
5	9:26	1.00	1.122	1.00	25.00	25.00	1.137	1.137	1.00
6	9:32	1.00	1.134	1.00	25.00	25.00	0.631	0.631	1.00
7	9:44	1.00	0.856	1.00	25.00	25.00	0.461	0.461	1.00
8	10:21	1.00	0.910	1.00	25.00	25.00	0.793	0.793	1.00
9	10:29	1.00	0.921	1.00	25.00	25.00	0.159	0.159	1.00
0	10:39	1.00	0.936	1.00	25.00	25.00	0.273	0.273	1.00
1	10:54	1.00	0.958	1.00	25.00	25.00	0.485	0.485	1.00
2	11:04	1.00	0.972	1.00	25.00	25.00	0.123	0.123	1.00
3	11:04	1.00	0.972	1.00	25.00	25.00	0.275	0.275	1.00
4	11:15	1.00	0.989	1.00	25.00	25.00	0.334	0.334	1.00
5	11:26	1.00	1.006	1.00	25.00	25.00	1.025	1.025	1.00
6	11:36	1.00	1.020	1.00	25.00	25.00	0.409	0.409	1.00
7	11:46	1.00	1.034	1.00	25.00	25.00	0.191	0.191	1.00
8	12:51	1.00	1.130	1.00	25.00	25.00	0.281	0.281	1.00
9	13:10	1.00	1.158	1.00	25.00	25.00	0.725	0.725	1.00
0	13:34	1.00	0.859	1.00	25.00	25.00	0.293	0.293	1.00
1	13:53	1.00	0.879	1.00	25.00	25.00	0.280	0.280	1.00
2	13:58	1.00	0.884	1.00	25.00	25.00	0.285	0.285	1.00
3	14:23	1.00	0.910	1.00	25.00	25.00	1.122	1.122	1.00
4	14:42	1.00	0.930	1.00	25.00	25.00	0.373	0.373	1.00
5	15:14	1.00	0.965	1.00	25.00	25.00	1.173	1.173	1.00
6	15:26	1.00	0.977	1.00	25.00	25.00	1.746	1.746	1.00
7	15:45	1.00	0.998	1.00	25.00	25.00	0.285	0.285	1.00
8	15:53	1.00	1.006	1.00	25.00	25.00	1.127	1.127	1.00
9	16:00	1.00	1.014	1.00	25.00	25.00	0.111	0.111	1.00
50	16:14	1.00	1.028	1.00	25.00	25.00	0.169	0.169	1.00

Quantitation Report File: 30216S01

Data: 30216S01.TI
02/16/93 14:08:00
Sample: CLP,,,SSTD050,,,25PPM3SV0201,SV,CC
Conds.: CAP/.25,30204SAVG,3DFT0216S1
Formula: 3DFT0216S1 Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1293	16:19	3	1.034	A BB	104620.	25.000 NG/UL	1.27
52	165	1216	15:21	3	0.973	A VB	17708.	25.000 NG/UL	1.27
53	149	1350	17:03	3	1.080	A BB	86649.	25.000 NG/UL	1.27
54	165	1295	16:21	3	1.036	A BB	24825.	25.000 NG/UL	1.27
55	166	1362	17:12	3	1.090	A BB	83364.	25.000 NG/UL	1.27
56	204	1366	17:15	3	1.093	A BB	40388.	25.000 NG/UL	1.27
57	138	1373	17:20	3	1.098	A BB	17273.	25.000 NG/UL	1.27
58	198	1377	17:23	4	0.891	A BB	10426.	25.000 NG/UL	1.27
59	169	1391	17:34	4	0.900	A BB	21536.	25.000 NG/UL	1.27
60	248	1463	18:28	4	0.946	A BB	21982.	25.000 NG/UL	1.27
61	284	1470	18:33	4	0.951	A BB	26166.	25.000 NG/UL	1.27
-62	266	1510	19:04	4	0.977	A BB	11870.	25.000 NG/UL	1.27
63	178	1552	19:36	4	1.004	A BV	116428.	25.000 NG/UL	1.27

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1561	19:42	4	1.010	A VB	115418.	25.000 NG/UL	1.27
65	167	1594	20:07	4	1.031	A BB	98499.	25.000 NG/UL	1.27
66	149	1668	21:03	4	1.079	A BB	138559.	25.000 NG/UL	1.27
67	202	1773	22:23	4	1.147	A BB	111858.	25.000 NG/UL	1.27
68	202	1813	22:53	5	0.894	A BB	114909.	25.000 NG/UL	1.27
69	149	1936	24:26	5	0.954	A BB	42804.	25.000 NG/UL	1.27
70	252	2025	25:34	5	0.998	A BB	18128.	25.000 NG/UL	1.27
71	228	2027	25:35	5	0.999	A BV	73478.	25.000 NG/UL	1.27
72	228	2034	25:41	5	1.002	A VB	61012.	25.000 NG/UL	1.27
73	149	2039	25:44	5	1.005	A VB	56168.	25.000 NG/UL	1.27
74	149	2152	27:10	6	0.941	A BB	67399.	25.000 NG/UL	1.27
75	252	2213	27:56	6	0.968	A BV	46217.	25.000 NG/UL	1.27
76	252	2218	28:00	6	0.970	A VB	42109.	25.000 NG/UL	1.27
77	252	2276	28:44	6	0.996	A BB	39302.	25.000 NG/UL	1.27
78	276	2541	32:05	6	1.112	A BB	37436.	25.000 NG/UL	1.27
79	278	2549	32:11	6	1.115	A BB	32725.	25.000 NG/UL	1.27
80	276	2617	33:02	6	1.145	A BB	33631.	25.000 NG/UL	1.27

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20	1.00	1.034	1.00	25.00	25.00	1.563	1.563	1.00
52	15:22	1.00	0.973	1.00	25.00	25.00	0.265	0.265	1.00
53	17:03	1.00	1.080	1.00	25.00	25.00	1.295	1.295	1.00
54	16:22	1.00	1.036	1.00	25.00	25.00	0.371	0.371	1.00
55	17:12	1.00	1.090	1.00	25.00	25.00	1.246	1.246	1.00
56	17:15	1.00	1.093	1.00	25.00	25.00	0.603	0.603	1.00
57	17:20	1.00	1.098	1.00	25.00	25.00	0.258	0.258	1.00
58	17:25	1.00	0.891	1.00	25.00	25.00	0.095	0.095	1.00
59	17:34	1.00	0.899	1.00	25.00	25.00	0.197	0.197	1.00
60	18:29	1.00	0.946	1.00	25.00	25.00	0.201	0.201	1.00
61	18:35	1.00	0.951	1.00	25.00	25.00	0.239	0.239	1.00
62	19:05	1.00	0.977	1.00	25.00	25.00	0.109	0.109	1.00
63	19:36	1.00	1.003	1.00	25.00	25.00	1.065	1.065	1.00
64	19:44	1.00	1.010	1.00	25.00	25.00	1.056	1.056	1.00
65	20:09	1.00	1.031	1.00	25.00	25.00	0.901	0.901	1.00
66	21:05	1.00	1.079	1.00	25.00	25.00	1.268	1.268	1.00
67	22:25	1.00	1.147	1.00	25.00	25.00	1.023	1.023	1.00
68	22:56	1.00	0.892	1.00	25.00	25.00	1.840	1.840	1.00
69	24:30	1.00	0.954	1.00	25.00	25.00	0.685	0.685	1.00
70	25:38	1.00	0.998	1.00	25.00	25.00	0.290	0.290	1.00
71	25:40	1.00	0.999	1.00	25.00	25.00	1.176	1.176	1.00
72	25:45	1.00	1.002	1.00	25.00	25.00	0.977	0.977	1.00
73	25:52	1.00	1.007	1.00	25.00	25.00	0.899	0.899	1.00
74	27:24	0.99	0.942	1.00	25.00	25.00	2.200	2.200	1.00
75	28:07	0.99	0.967	1.00	25.00	25.00	1.508	1.508	1.00
76	28:11	0.99	0.969	1.00	25.00	25.00	1.374	1.374	1.00
77	28:57	0.99	0.995	1.00	25.00	25.00	1.283	1.283	1.00
78	32:38	0.98	1.122	0.99	25.00	25.00	1.222	1.222	1.00
79	32:51	0.98	1.129	0.99	25.00	25.00	1.068	1.068	1.00
80	33:45	0.98	1.160	0.99	25.00	25.00	1.098	1.098	1.00

9613492.6069

000359

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration date: 02/22/93 Time: 928

Lab File ID: 30222S01 Init. Calib. Date(s): 02/18/93 02/18/93

Init. Calib. Times: 1041 1313

COMPOUND	RRF	RRF50	MIN RRF	%D	MAX %D
Phenol	1.914	1.819	0.800	5.0	25.0
bis(2-Chloroethyl)Ether	1.606	1.636	0.700	-1.9	25.0
2-Chlorophenol	1.331	1.275	0.800	4.2	25.0
1,3-Dichlorobenzene	1.518	1.510	0.600	0.5	25.0
1,4-Dichlorobenzene	1.546	1.544	0.500	0.1	25.0
1,2-Dichlorobenzene	1.502	1.476	0.400	1.7	25.0
2-Methylphenol	1.107	1.047	0.700	5.4	25.0
2,2'-oxybis(1-Chloropropane)	2.240	2.173	0.010	3.0	
4-Methylphenol	1.174	1.133	0.600	3.5	25.0
N-Nitroso-Di-n-Propylamine	1.212	1.180	0.500	2.6	25.0
Hexachloroethane	0.665	0.675	0.300	-1.5	25.0
Nitrobenzene	0.477	0.484	0.200	-1.5	25.0
Isophorone	0.832	0.819	0.400	1.6	25.0
2-Nitrophenol	0.170	0.158	0.100	7.1	25.0
2,4-Dimethylphenol	0.288	0.276	0.200	4.2	25.0
bis(2-Chloroethoxy)Methane	0.502	0.491	0.300	2.2	25.0
2,4-Dichlorophenol	0.280	0.276	0.200	1.4	25.0
1,2,4-Trichlorobenzene	0.331	0.334	0.200	-0.9	25.0
Naphthalene	1.055	1.024	0.700	2.9	25.0
4-Chloroaniline	0.429	0.416	0.010	3.0	
Hexachlorobutadiene	0.190	0.195	0.010	-2.6	
4-Chloro-3-Methylphenol	0.299	0.288	0.200	3.7	25.0
2-Methylnaphthalene	0.715	0.712	0.400	0.4	25.0
Hexachlorocyclopentadiene	0.297	0.291	0.010	2.0	
2,4,6-Trichlorophenol	0.342	0.296	0.200	13.4	25.0
2,4,5-Trichlorophenol	0.277	0.296	0.200	-6.9	25.0
2-Chloronaphthalene	1.125	1.110	0.800	1.3	25.0
2-Nitroaniline	0.392	0.381	0.010	2.8	
Dimethylphthalate	1.205	1.172	0.010	2.7	
Acenaphthylene	1.761	1.700	1.300	3.5	25.0
3-Nitroaniline	0.292	0.279	0.010	4.5	
Acenaphthene	1.127	1.095	0.800	2.8	25.0
2,4-Dinitrophenol	0.116	0.113	0.010	2.6	
4-Nitrophenol	0.161	0.158	0.010	1.9	
Dibenzofuran	1.550	1.518	0.800	2.1	25.0
2,4-Dinitrotoluene	0.377	0.369	0.200	2.1	25.0
2,6-Dinitrotoluene	0.284	0.287	0.200	-1.1	25.0

(1) Cannot be separated from Diphenylamine
All other compounds must meet a minimum RRF of 0.010.

KK 10/25/93

9613492.6070

000360

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Instrument ID: SHERMA Calibration date: 02/22/93 Time: 928

Lab File ID: 30222S01 Init. Calib. Date(s): 02/18/93 02/18/93

Init. Calib. Times: 1041 1313

COMPOUND	$\overline{RRF}$	RRF50	MIN RRF	%D	MAX %D
Diethylphthalate	1.331	1.297	0.010	2.6	
4-Chlorophenyl-phenylether	0.608	0.604	0.400	0.7	25.0
Fluorene	1.247	1.210	0.900	3.0	25.0
4-Nitroaniline	0.263	0.262	0.010	0.4	
4,6-Dinitro-2-methylphenol	0.098	0.097	0.010	1.0	
N-Nitrosodiphenylamine (1)	0.212	0.195	0.010	8.0	
4-Bromophenyl-phenylether	0.204	0.202	0.100	1.0	25.0
Hexachlorobenzene	0.238	0.232	0.100	2.5	25.0
Pentachlorophenol	0.112	0.107	0.050	4.5	25.0
Phenanthrene	1.082	1.045	0.700	3.4	25.0
Anthracene	1.091	1.041	0.700	4.6	25.0
Carbazole	0.962	0.903	0.010	6.1	
Di-n-Butylphthalate	1.353	1.263	0.010	6.7	
Fluoranthene	1.062	1.084	0.600	-2.1	25.0
Pyrene	1.862	1.756	0.600	5.7	25.0
Butylbenzylphthalate	0.694	0.681	0.010	1.9	
3,3'-Dichlorobenzidine	0.304	0.285	0.010	6.2	
Benzo(a)Anthracene	1.250	1.234	0.800	1.3	25.0
bis(2-Ethylhexyl)Phthalate	0.942	0.919	0.010	2.4	
Chrysene	0.975	0.971	0.700	0.4	25.0
Di-n-Octyl Phthalate	2.440	2.491	0.010	-2.1	
Benzo(b)Fluoranthene	1.705	1.659	0.700	2.7	25.0
Benzo(k)Fluoranthene	1.393	1.390	0.700	0.2	25.0
Benzo(a)Pyrene	1.345	1.304	0.700	3.0	25.0
Indeno(1,2,3-cd)Pyrene	1.219	1.221	0.500	-0.2	25.0
Dibenz(a,h)Anthracene	1.034	1.042	0.400	-0.8	25.0
Benzo(g,h,i)Perylene	1.030	1.062	0.500	-3.1	25.0
Nitrobenzene-d5	0.465	0.489	0.200	-5.2	25.0
2-Fluorobiphenyl	1.251	1.276	0.700	-2.0	25.0
Terphenyl-d14	1.304	1.275	0.500	2.2	25.0
Phenol-d5	1.471	1.467	0.800	0.3	25.0
2-Fluorophenol	1.473	1.469	0.600	0.3	25.0
2,4,6-Tribromophenol	0.143	0.142	0.010	0.7	
2-Chlorophenol-d4	1.167	1.158	0.800	0.8	25.0
1,2-Dichlorobenzene-d4	0.918	0.934	0.800	-1.7	25.0

(1) Cannot be separated from Diphenylamine

All other compounds must meet a minimum RRF of 0.010.

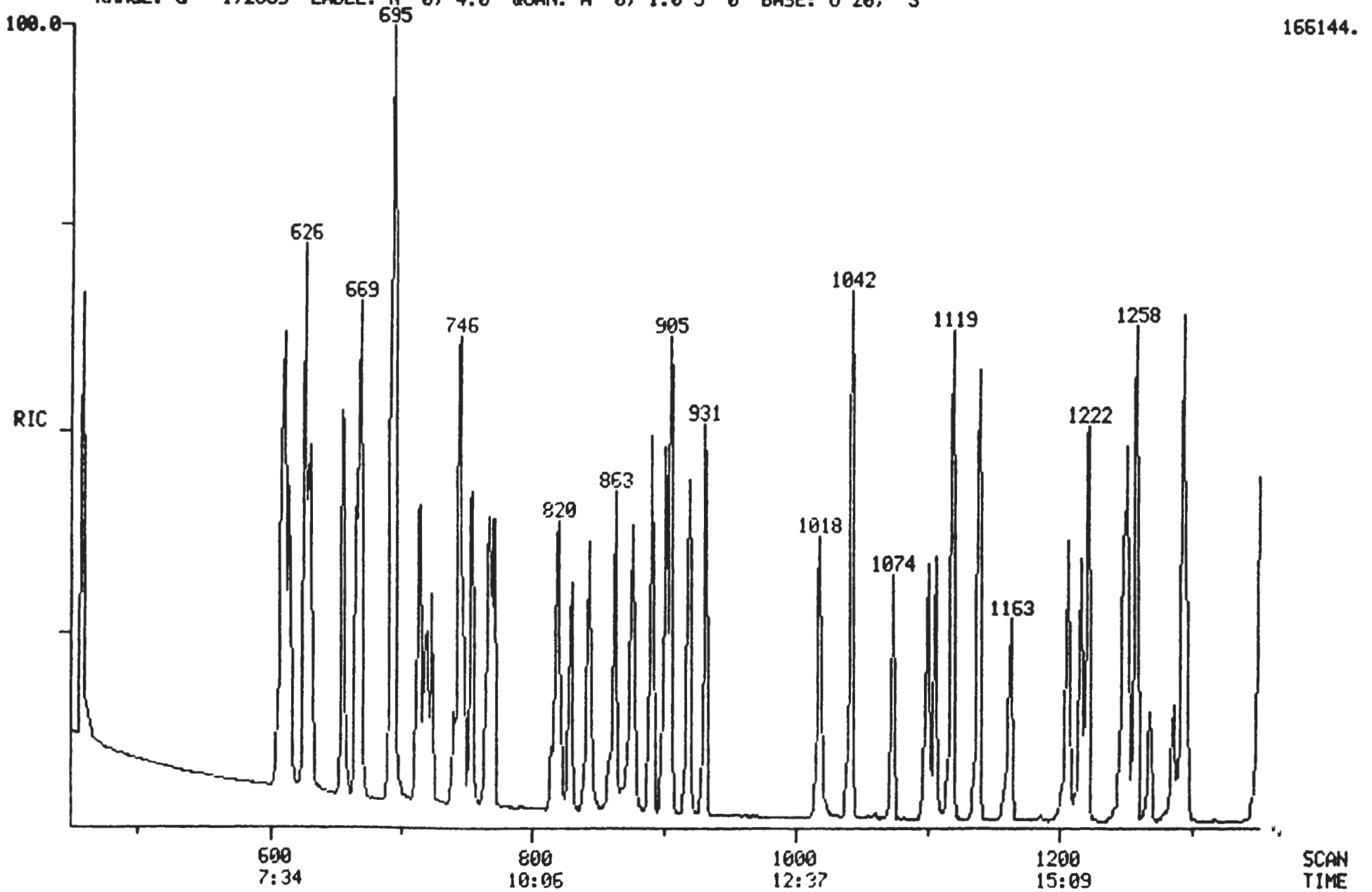
KR 12/23/92

000361

RIC
02/22/93 9:28:00
SAMPLE: CLP,,,SSTD050,,,25PPM3SV0127,SV,CC-050
CONDS.: CAP/.25,302185AVG,3DFT0222S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S01 #1
CALI: 30222S01 #3

SCANS 450 TO 1350



96130924071

000362

RIC
02/22/93 9:28:00
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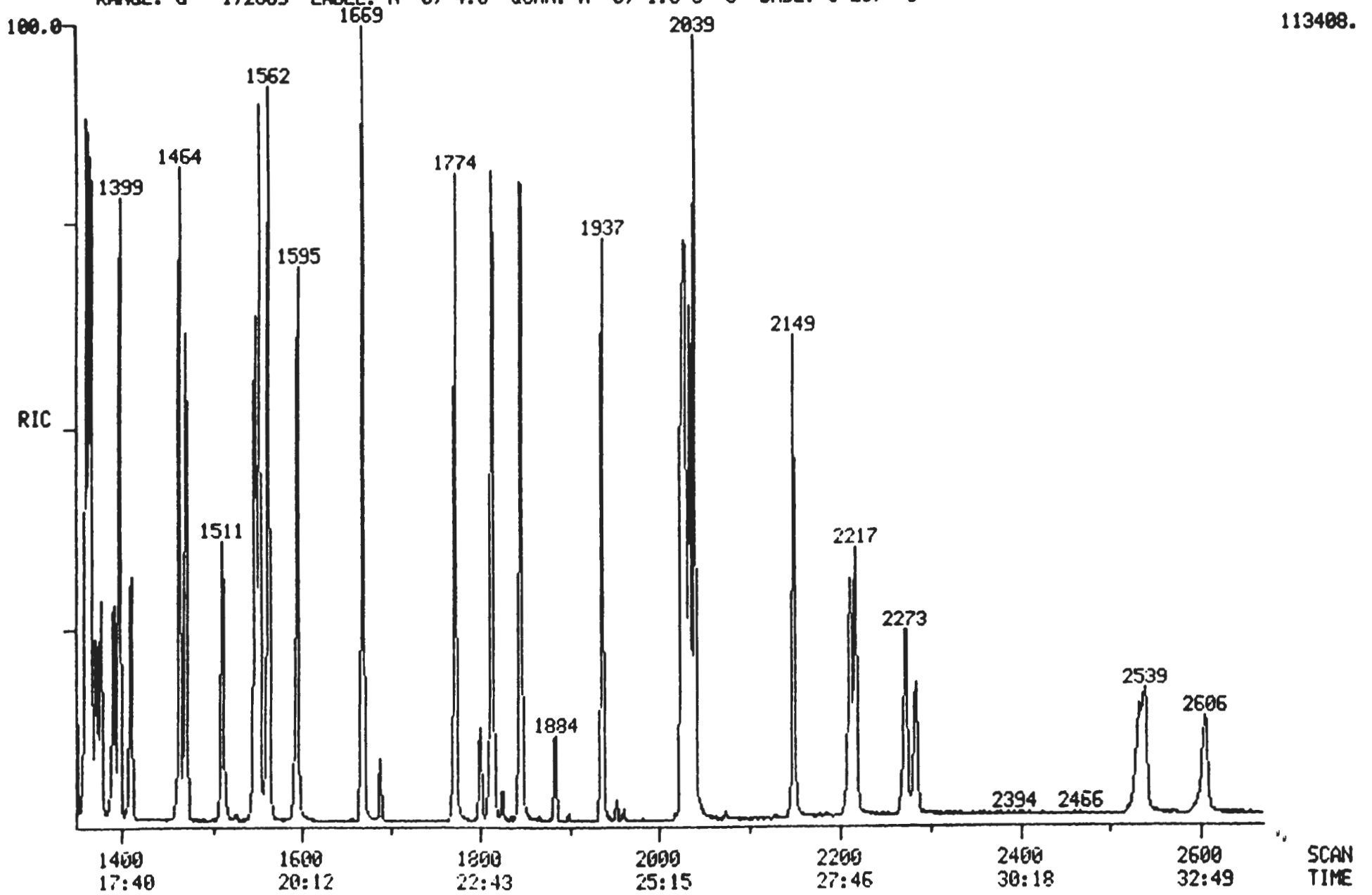
CONDS.: CAP/.25,30218SAVG,30FT0222S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222501 #1
CALI: 30222501 #3

SCANS 1350 TO 2669



96130027.6072

Quantitation Report File: 30222S01

Data: 30222S01.TI
02/22/93 9:28:00
Sample: CLP,,,SSTD050,,,25PPM3SV0127,SV,CC-050
Conds.: CAP/.25,30218SAVG,3DFT0222S1
Formula: 30222S01 Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

No	Name	
48	C550	ACENAPHTHENE
49	C555	2,4-DINITROPHENOL
50	C560	4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	666	8:24	1	1.000	A BB	27360.	20.000 NG/UL	1.02
2	136	901	11:22	2	1.000	A BB	98972.	20.000 NG/UL	1.02
3	164	1251	15:48	3	1.000	A BB	55832.	20.000 NG/UL	1.02
4	188	1547	19:32	4	1.000	A BB	92930.	20.000 NG/UL	1.02
5	240	2029	25:37	5	1.000	A BB	59157.	20.000 NG/UL	1.02
6	264	2284	28:50	6	1.000	A BB	27318.	20.000 NG/UL	1.02
7	112	459	5:48	1	0.689	A BB	50223.	25.000 NG/UL	1.27
8	99	608	7:41	1	0.913	A BB	50170.	25.000 NG/UL	1.27
9	330	1410	17:48	3	1.127	A BB	9884.	25.000 NG/UL	1.27
10	82	768	9:42	2	0.852	A BB	60534.	25.000 NG/UL	1.27
11	172	1119	14:08	3	0.894	A BB	89072.	25.000 NG/UL	1.27
12	244	1846	23:18	5	0.910	A BB	94313.	25.000 NG/UL	1.27
13	132	627	7:55	1	0.941	A BB	39588.	25.000 NG/UL	1.27
14	152	692	8:44	1	1.039	A BB	31938.	25.000 NG/UL	1.27
15	94	611	7:43	1	0.917	A BB	62202.	25.000 NG/UL	1.27
16	93	626	7:54	1	0.940	A VB	55949.	25.000 NG/UL	1.27
17	128	630	7:57	1	0.946	A BB	43604.	25.000 NG/UL	1.27
18	146	655	8:16	1	0.983	A BB	51635.	25.000 NG/UL	1.27
19	146	669	8:27	1	1.005	A VB	52790.	25.000 NG/UL	1.27
20	108	695	8:46	1	1.044	A BB	26209.	25.000 NG/UL	1.27
21	146	695	8:46	1	1.044	A BB	50470.	25.000 NG/UL	1.27
22	108	714	9:01	1	1.072	A BV	35794.	25.000 NG/UL	1.27
23	45	720	9:05	1	1.081	A BB	74314.	25.000 NG/UL	1.27
24	108	745	9:24	1	1.119	A BB	38734.	25.000 NG/UL	1.27
25	70	747	9:26	1	1.122	A BV	40355.	25.000 NG/UL	1.27
26	117	755	9:32	1	1.134	A BB	23078.	25.000 NG/UL	1.27
27	77	771	9:44	2	0.856	A BB	59860.	25.000 NG/UL	1.27
28	82	820	10:21	2	0.910	A BV	101276.	25.000 NG/UL	1.27
29	139	830	10:29	2	0.921	A VB	19598.	25.000 NG/UL	1.27
30	122	843	10:39	2	0.936	A BB	34164.	25.000 NG/UL	1.27
31	93	863	10:54	2	0.958	A BB	60746.	25.000 NG/UL	1.27
32	122	877	11:04	2	0.973	A BB	12358.	25.000 NG/UL	1.27
33	162	876	11:04	2	0.972	A BB	34190.	25.000 NG/UL	1.27
34	180	891	11:15	2	0.989	A BB	41380.	25.000 NG/UL	1.27
35	128	905	11:26	2	1.004	A BV	126656.	25.000 NG/UL	1.27
36	127	919	11:36	2	1.020	A BB	51500.	25.000 NG/UL	1.27
37	225	931	11:45	2	1.033	A BB	24178.	25.000 NG/UL	1.27
38	107	1018	12:51	2	1.130	A BB	35618.	25.000 NG/UL	1.27
39	142	1042	13:09	2	1.156	A BB	88070.	25.000 NG/UL	1.27
40	237	1073	13:33	3	0.858	A BB	20338.	25.000 NG/UL	1.27
41	196	1100	13:53	3	0.879	A BV	20641.	25.000 NG/UL	1.27
42	196	1106	13:58	3	0.884	A VB	20676.	25.000 NG/UL	1.27
43	162	1139	14:23	3	0.910	A BB	77452.	25.000 NG/UL	1.27
44	65	1163	14:41	3	0.930	A BB	26596.	25.000 NG/UL	1.27
45	163	1207	15:14	3	0.965	A BB	81782.	25.000 NG/UL	1.27
46	152	1221	15:25	3	0.976	A BB	118614.	25.000 NG/UL	1.27
47	138	1248	15:45	3	0.998	A BB	19492.	25.000 NG/UL	1.27
48	153	1258	15:53	3	1.006	A BB	76430.	25.000 NG/UL	1.27
49	184	1268	16:00	3	1.014	A BB	7860.	25.000 NG/UL	1.27
50	109	1286	16:14	3	1.028	A BV	11021.	25.000 NG/UL	1.27

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:28	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:26	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:51	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:36	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:55	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:51	0.99	0.691	1.00	25.00	25.00	1.469	1.469	1.00
8	7:44	0.99	0.913	1.00	25.00	25.00	1.467	1.467	1.00
9	17:52	1.00	1.127	1.00	25.00	25.00	0.142	0.142	1.00
10	9:45	0.99	0.852	1.00	25.00	25.00	0.489	0.489	1.00
11	14:11	1.00	0.896	1.00	25.00	25.00	1.276	1.276	1.00
12	23:22	1.00	0.910	1.00	25.00	25.00	1.275	1.275	1.00
13	7:59	0.99	0.943	1.00	25.00	25.00	1.158	1.158	1.00
14	8:28	1.03	1.000	1.04	25.00	25.00	0.934	0.934	1.00
15	7:46	0.99	0.918	1.00	25.00	25.00	1.819	1.819	1.00
16	7:57	0.99	0.940	1.00	25.00	25.00	1.636	1.636	1.00
17	8:01	0.99	0.948	1.00	25.00	25.00	1.275	1.275	1.00
18	8:20	0.99	0.985	1.00	25.00	25.00	1.510	1.510	1.00
19	8:30	0.99	1.004	1.00	25.00	25.00	1.544	1.544	1.00
20	8:49	0.99	1.043	1.00	25.00	25.00	0.766	0.766	1.00
21	8:49	0.99	1.043	1.00	25.00	25.00	1.476	1.476	1.00
22	9:05	0.99	1.073	1.00	25.00	25.00	1.047	1.047	1.00
23	9:08	0.99	1.081	1.00	25.00	25.00	2.173	2.173	1.00
24	9:28	0.99	1.119	1.00	25.00	25.00	1.133	1.133	1.00
25	9:29	0.99	1.121	1.00	25.00	25.00	1.180	1.180	1.00
26	9:35	0.99	1.133	1.00	25.00	25.00	0.675	0.675	1.00
27	9:48	0.99	0.857	1.00	25.00	25.00	0.484	0.484	1.00
28	10:24	1.00	0.909	1.00	25.00	25.00	0.819	0.819	1.00
29	10:32	1.00	0.921	1.00	25.00	25.00	0.158	0.158	1.00
30	10:42	0.99	0.936	1.00	25.00	25.00	0.276	0.276	1.00
31	10:57	0.99	0.958	1.00	25.00	25.00	0.491	0.491	1.00
32	11:07	1.00	0.972	1.00	25.00	25.00	0.100	0.100	1.00
33	11:07	0.99	0.972	1.00	25.00	25.00	0.276	0.276	1.00
34	11:18	1.00	0.988	1.00	25.00	25.00	0.334	0.334	1.00
35	11:29	0.99	1.004	1.00	25.00	25.00	1.024	1.024	1.00
36	11:40	0.99	1.020	1.00	25.00	25.00	0.416	0.416	1.00
37	11:49	0.99	1.033	1.00	25.00	25.00	0.195	0.195	1.00
38	12:54	1.00	1.128	1.00	25.00	25.00	0.288	0.288	1.00
39	13:13	1.00	1.156	1.00	25.00	25.00	0.712	0.712	1.00
40	13:37	1.00	0.859	1.00	25.00	25.00	0.291	0.291	1.00
41	13:56	1.00	0.880	1.00	25.00	25.00	0.296	0.296	1.00
42	14:01	1.00	0.884	1.00	25.00	25.00	0.296	0.296	1.00
43	14:27	1.00	0.912	1.00	25.00	25.00	1.110	1.110	1.00
44	14:45	1.00	0.931	1.00	25.00	25.00	0.381	0.381	1.00
45	15:17	1.00	0.965	1.00	25.00	25.00	1.172	1.172	1.00
46	15:29	1.00	0.977	1.00	25.00	25.00	1.700	1.700	1.00
47	15:49	1.00	0.998	1.00	25.00	25.00	0.279	0.279	1.00
48	15:56	1.00	1.006	1.00	25.00	25.00	1.095	1.095	1.00
49	16:04	1.00	1.014	1.00	25.00	25.00	0.113	0.113	1.00
50	16:17	1.00	1.028	1.00	25.00	25.00	0.158	0.158	1.00

9613492.6076

000360

Quantitation Report File: 30222S01

Data: 30222S01.TI
02/22/93 9:28:00
Sample: CLP,,,SSTD050,,,25PPM3SV0127,SV,CC-050
Conds.: CAP/.25,30218SAVG,3DFT0222S1
Formula: 30222S01 Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

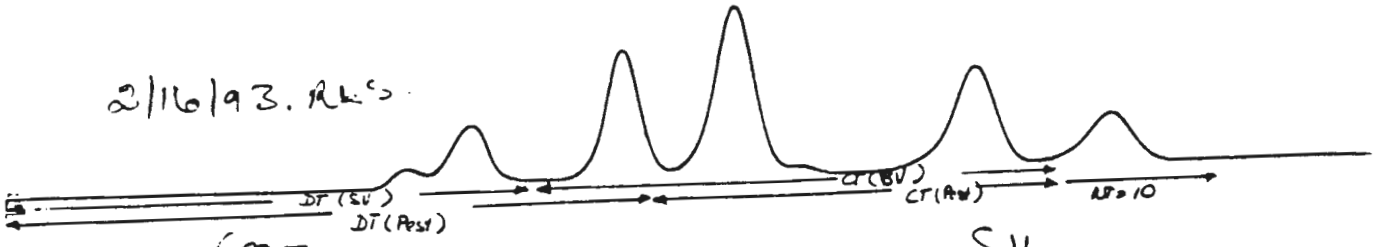
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	168	1293	16:19	3	1.034	A BB	105976.	25.000 NG/UL	1.27
52	165	1216	15:21	3	0.972	A BB	20032.	25.000 NG/UL	1.27
53	149	1351	17:03	3	1.080	A BB	90496.	25.000 NG/UL	1.27
54	165	1296	16:22	3	1.036	A BB	25758.	25.000 NG/UL	1.27
55	166	1362	17:12	3	1.089	A BB	84460.	25.000 NG/UL	1.27
56	204	1366	17:15	3	1.092	A BB	42156.	25.000 NG/UL	1.27
57	138	1373	17:20	3	1.098	A BB	18300.	25.000 NG/UL	1.27
58	198	1378	17:24	4	0.891	A BB	11324.	25.000 NG/UL	1.27
59	169	1391	17:34	4	0.899	A BB	22610.	25.000 NG/UL	1.27
60	248	1464	18:29	4	0.946	A BV	23426.	25.000 NG/UL	1.27
61	284	1471	18:34	4	0.951	A BB	26980.	25.000 NG/UL	1.27
62	266	1511	19:05	4	0.977	A BB	12402.	25.000 NG/UL	1.27
63	178	1552	19:36	4	1.003	A BV	121445.	25.000 NG/UL	1.27

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	178	1562	19:43	4	1.010	A VB	120872.	25.000 NG/UL	1.27
65	167	1595	20:08	4	1.031	A BB	104912.	25.000 NG/UL	1.27
66	149	1669	21:04	4	1.079	A VB	146748.	25.000 NG/UL	1.27
67	202	1774	22:24	4	1.147	A BB	125867.	25.000 NG/UL	1.27
68	202	1814	22:54	5	0.894	A BB	129823.	25.000 NG/UL	1.27
69	149	1937	24:27	5	0.955	A BB	50364.	25.000 NG/UL	1.27
70	252	2025	25:34	5	0.998	A BB	21078.	25.000 NG/UL	1.27
71	228	2027	25:35	5	0.999	A BV	91250.	25.000 NG/UL	1.27
72	228	2034	25:41	5	1.002	A VB	71810.	25.000 NG/UL	1.27
73	149	2039	25:44	5	1.005	A VB	67952.	25.000 NG/UL	1.27
74	149	2149	27:08	6	0.941	A BB	85077.	25.000 NG/UL	1.27
75	252	2211	27:55	6	0.968	A BV	56662.	25.000 NG/UL	1.27
76	252	2217	27:59	6	0.971	A VB	47456.	25.000 NG/UL	1.27
77	252	2273	28:42	6	0.995	A BV	44536.	25.000 NG/UL	1.27
78	276	2532	31:58	6	1.109	A BB	41692.	25.000 NG/UL	1.27
79	278	2539	32:03	6	1.112	A BB	35573.	25.000 NG/UL	1.27
80	276	2606	32:54	6	1.141	A BB	36281.	25.000 NG/UL	1.27

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:23	1.00	1.034	1.00	25.00	25.00	1.518	1.518	1.00
52	15:25	1.00	0.973	1.00	25.00	25.00	0.287	0.287	1.00
53	17:06	1.00	1.080	1.00	25.00	25.00	1.297	1.297	1.00
54	16:25	1.00	1.036	1.00	25.00	25.00	0.369	0.369	1.00
55	17:15	1.00	1.089	1.00	25.00	25.00	1.210	1.210	1.00
56	17:18	1.00	1.092	1.00	25.00	25.00	0.604	0.604	1.00
57	17:24	1.00	1.098	1.00	25.00	25.00	0.262	0.262	1.00
58	17:28	1.00	0.891	1.00	25.00	25.00	0.097	0.097	1.00
59	17:37	1.00	0.899	1.00	25.00	25.00	0.195	0.195	1.00
60	18:32	1.00	0.946	1.00	25.00	25.00	0.202	0.202	1.00
61	18:38	1.00	0.951	1.00	25.00	25.00	0.232	0.232	1.00
62	19:08	1.00	0.977	1.00	25.00	25.00	0.107	0.107	1.00
63	19:39	1.00	1.003	1.00	25.00	25.00	1.045	1.045	1.00
64	19:47	1.00	1.010	1.00	25.00	25.00	1.041	1.041	1.00
65	20:12	1.00	1.031	1.00	25.00	25.00	0.903	0.903	1.00
66	21:08	1.00	1.079	1.00	25.00	25.00	1.263	1.263	1.00
67	22:28	1.00	1.146	1.00	25.00	25.00	1.084	1.084	1.00
68	22:58	1.00	0.894	1.00	25.00	25.00	1.756	1.756	1.00
69	24:31	1.00	0.954	1.00	25.00	25.00	0.681	0.681	1.00
70	25:38	1.00	0.998	1.00	25.00	25.00	0.285	0.285	1.00
71	25:40	1.00	0.999	1.00	25.00	25.00	1.234	1.234	1.00
72	25:44	1.00	1.002	1.00	25.00	25.00	0.971	0.971	1.00
73	25:48	1.00	1.004	1.00	25.00	25.00	0.919	0.919	1.00
74	27:12	1.00	0.941	1.00	25.00	25.00	2.491	2.491	1.00
75	28:00	1.00	0.969	1.00	25.00	25.00	1.659	1.659	1.00
76	28:04	1.00	0.971	1.00	25.00	25.00	1.390	1.390	1.00
77	28:46	1.00	0.995	1.00	25.00	25.00	1.304	1.304	1.00
78	32:03	1.00	1.109	1.00	25.00	25.00	1.221	1.221	1.00
79	32:09	1.00	1.112	1.00	25.00	25.00	1.042	1.042	1.00
80	33:00	1.00	1.141	1.00	25.00	25.00	1.062	1.062	1.00

Book #894 page# 8.A

2/16/93. RLS



PCST

Dump Time 28.75 mins

Collect Time 18.25 mins.

wash Time 10 mins.

SV.

Dump Time 23 mins

Collect Time. 24 mins

wash Time 16 mins.

GPC Instrument: AS2000/UV-~~Dect~~ Detector Sectra

GPC Calibration check.

GPC 0216S1 (Matrix Spk1)
GPC 0216S2 (Matrix Spk2)
GPC 0216P (LCS)
GPC 0216B (PEST Blank)
} ay 2/22/93

GPC 0216B (GNA BLANK) SY 02/19/93

Book # 894 page # 8.

GPC. Instrument : AS 2000.
Initial Calibration : 2-16-93
date Analyzed : 2-17-93
Start Time : 3:30 pm.
End Time 2-18-93.

Semivolatics:

Dump Time : 23 mins
Collect Time : 24 mins
Wash Time : 16 mins.

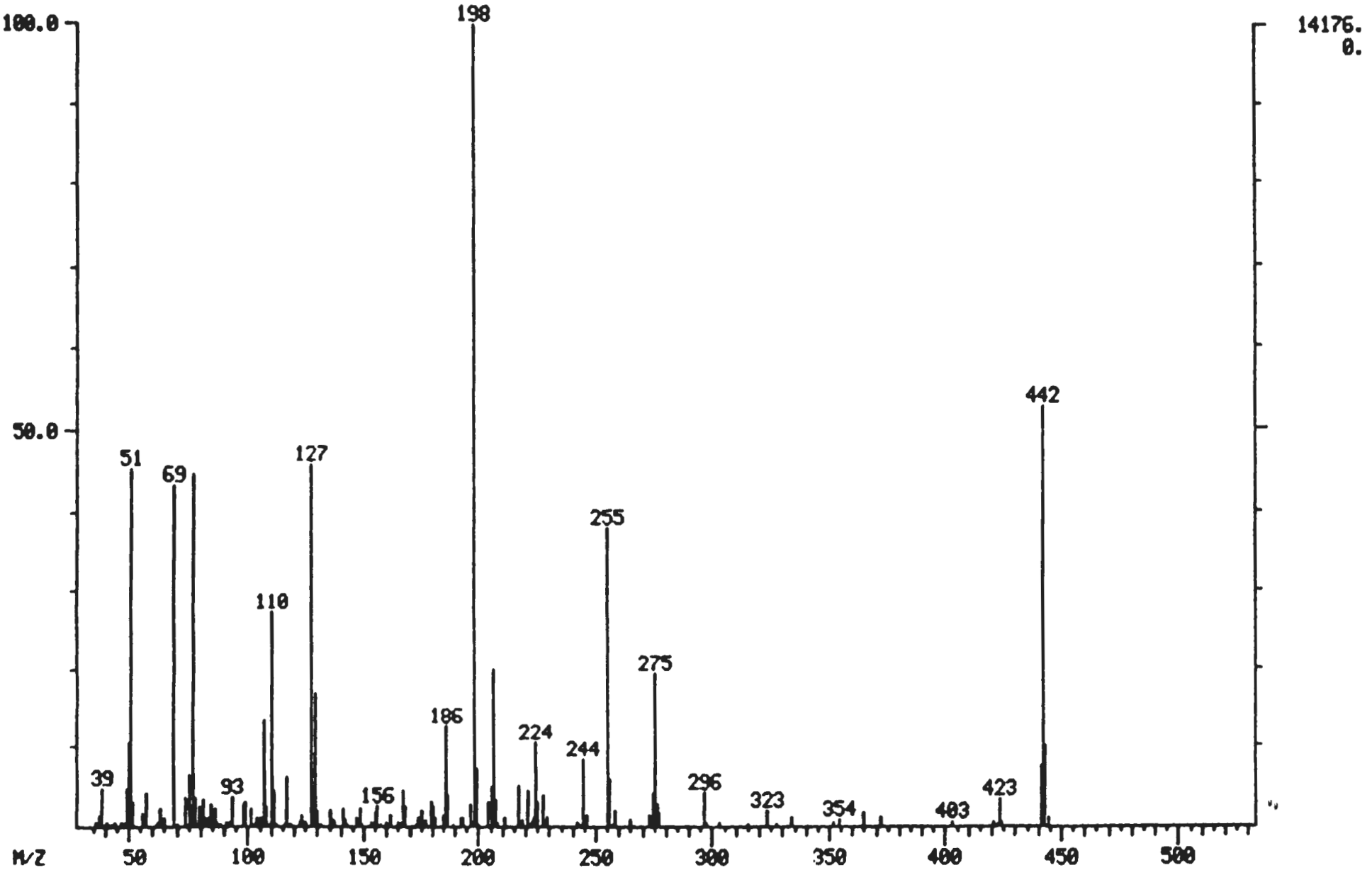
POS#	LabID	Comments	Analysis.
2	cleanup blank.		BNAS
3	A3-02-032-Blk	SBLK0212S	"
4	" 03D		"
5	" 03E	MS	"
6	" 03F	MSD	"
7	A3-02-030-Blk	SBLK0211S2	"
8	" 01D		"
9	" 01E	MS	"
10	" 01F	MSD	"
11	" 02B		"
12	A3-02-027-Blk	SBLK0211S1	"
13	" 03B		"
14	" 05B		"
15	" 06B		"
16	" 04B		"
17	" 01D		"
18	" 01E	MS	"
19.	" 01F	MSD	"

000370

MASS SPECTRUM
02/04/93 10:54:00 + 8:15
SAMPLE: 50NG/2UL DFTPP 020493 JY
CONDS.: SHERMA
TEMP: 247 DEG. C
#652 TO #654 SUMMED - #641

DATA: 3DFT0204S5 #653
CALI: 3DFT0204S5 #3

BASE M/Z: 198
RIC: 107008.



Mass List Data: 3DFT0204S5 # 653 Base m/z: 198
02/04/93 10:54:00 + 8:15 Cali: 3DFT0204S5 # 3 RIC: 107008.
Sample: 50NG/2UL DFTPP 020493 JY
Conds.: SHERMA
#652 to #654 summed - #641

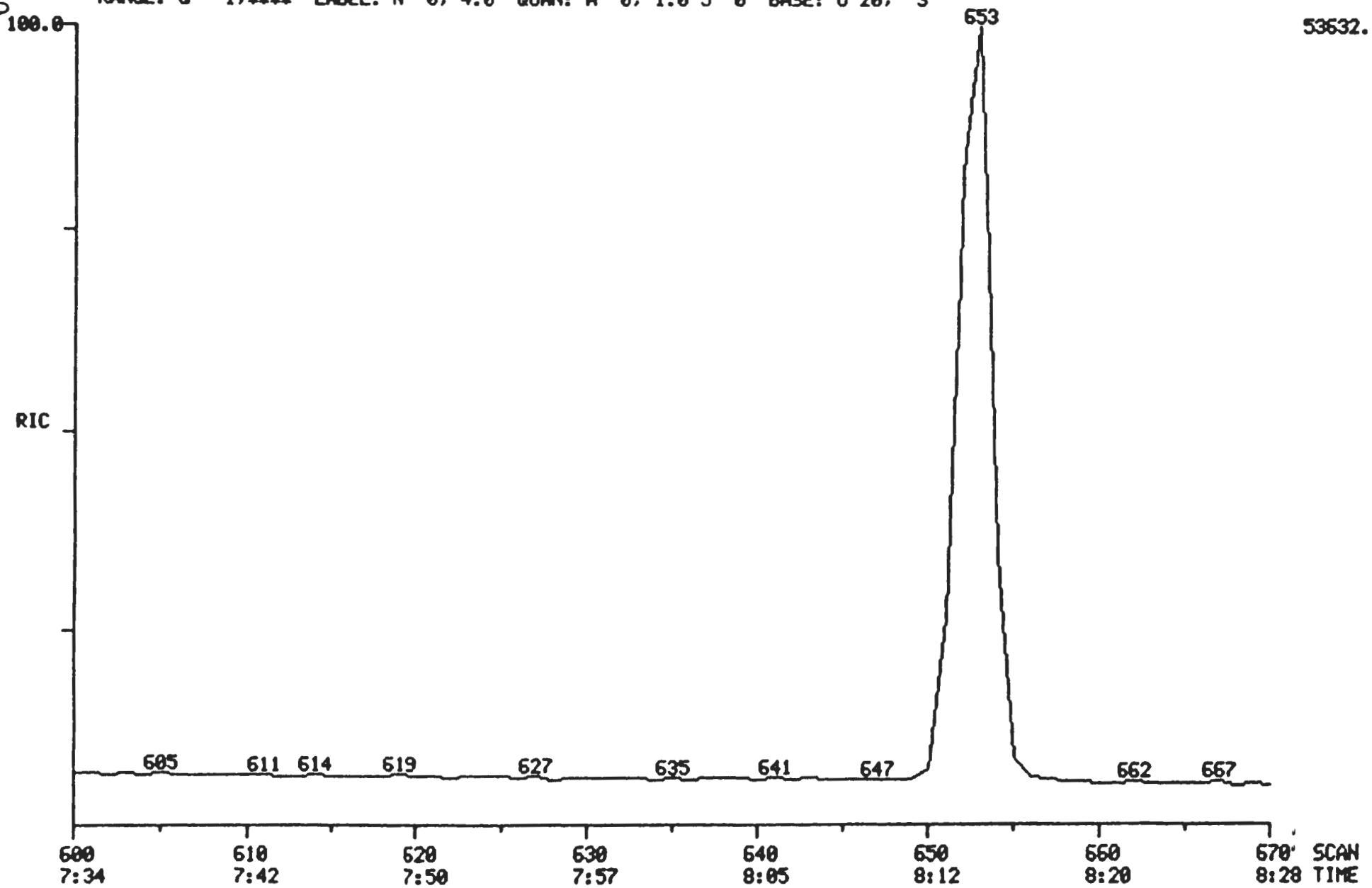
35 0.00 0. Minima Min Inten: 23.
444 Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.	Mass	% RA	Inten.
36	0.49	70.	112	0.25	36.	205	5.01	710.
37	0.21	30.	116	0.37	52.	206	20.01	2836.
38	1.27	180.	117	6.01	852.	207	3.33	472.
39	4.70	666.	118	0.25	36.	208	0.66	94.
40	0.20	28.	122	0.63	90.	211	1.11	158.
41	0.61	86.	123	1.48	210.	217	5.04	714.
43	0.17	24.	124	0.48	68.	218	0.76	108.
44	0.55	78.	125	0.56	80.	221	4.35	616.
47	0.54	76.	127	45.94	6512.	222	0.51	72.
48	0.58	82.	128	3.92	556.	223	1.24	176.
49	4.70	666.	129	16.90	2396.	224	10.38	1472.
50	10.47	1484.	130	1.90	270.	225	3.05	432.
51	45.20	6408.	131	0.27	38.	227	3.75	532.
52	2.95	418.	135	1.96	278.	228	0.47	66.
56	1.62	230.	136	0.69	98.	229	1.02	144.
57	4.22	598.	137	0.76	108.	242	0.51	72.
61	0.25	36.	141	2.14	304.	243	0.25	36.
62	0.42	60.	142	0.79	112.	244	8.21	1164.
63	2.10	298.	143	0.40	56.	245	1.14	162.
65	1.11	158.	147	1.14	162.	246	1.41	200.
69	43.28	6136.	148	2.23	316.	255	38.09	5400.
70	0.17	24.	149	0.24	34.	256	5.93	840.
74	3.57	506.	153	0.61	86.	257	0.23	32.
75	6.43	912.	154	0.17	24.	258	1.96	278.
76	2.62	372.	155	1.65	234.	265	0.76	108.
77	44.64	6328.	156	2.43	344.	273	1.28	182.
78	3.68	522.	160	0.44	62.	274	4.08	578.
79	2.47	350.	161	1.33	188.	275	19.33	2740.
80	2.24	318.	165	0.55	78.	276	2.88	408.
81	3.43	486.	166	0.68	96.	277	1.54	218.
82	1.20	170.	167	4.30	610.	296	4.11	582.
83	1.13	160.	168	2.61	370.	297	0.63	90.
84	2.78	394.	173	0.35	50.	303	0.45	64.
85	0.75	106.	174	1.03	146.	315	0.25	36.
86	2.20	312.	175	1.95	276.	323	1.88	266.
87	0.54	76.	177	0.69	98.	334	1.19	168.
88	0.20	28.	179	3.03	430.	352	0.47	66.
91	0.44	62.	180	2.41	342.	354	0.79	112.
92	0.51	72.	181	1.19	168.	365	1.64	232.
93	3.58	508.	185	1.47	208.	372	1.13	160.
98	2.79	396.	186	12.67	1796.	403	0.44	62.
99	3.01	426.	187	3.78	536.	421	0.42	60.
101	2.07	294.	189	0.25	36.	422	0.21	30.
103	0.25	36.	192	1.14	162.	423	3.36	476.
104	1.06	150.	193	1.21	172.	424	0.59	84.
105	1.10	156.	196	2.65	376.	441	7.58	1074.
107	13.49	1912.	198	100.00	14176.	442	52.71	7472.
108	2.58	366.	199	7.12	1010.	443	10.02	1420.
110	27.48	3896.	200	0.40	56.	444	1.13	160.
111	4.35	616.	204	3.06	434.			

0000372

RIC
02/04/93 10:54:00
SAMPLE: 50NG/2UL DFTPP 020493 JY
CONDS.: SHERMA
RANGE: G 1,**** LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 3DFT020455 #652 SCANS 600 TO 670
CALI: 3DFT020455 #3



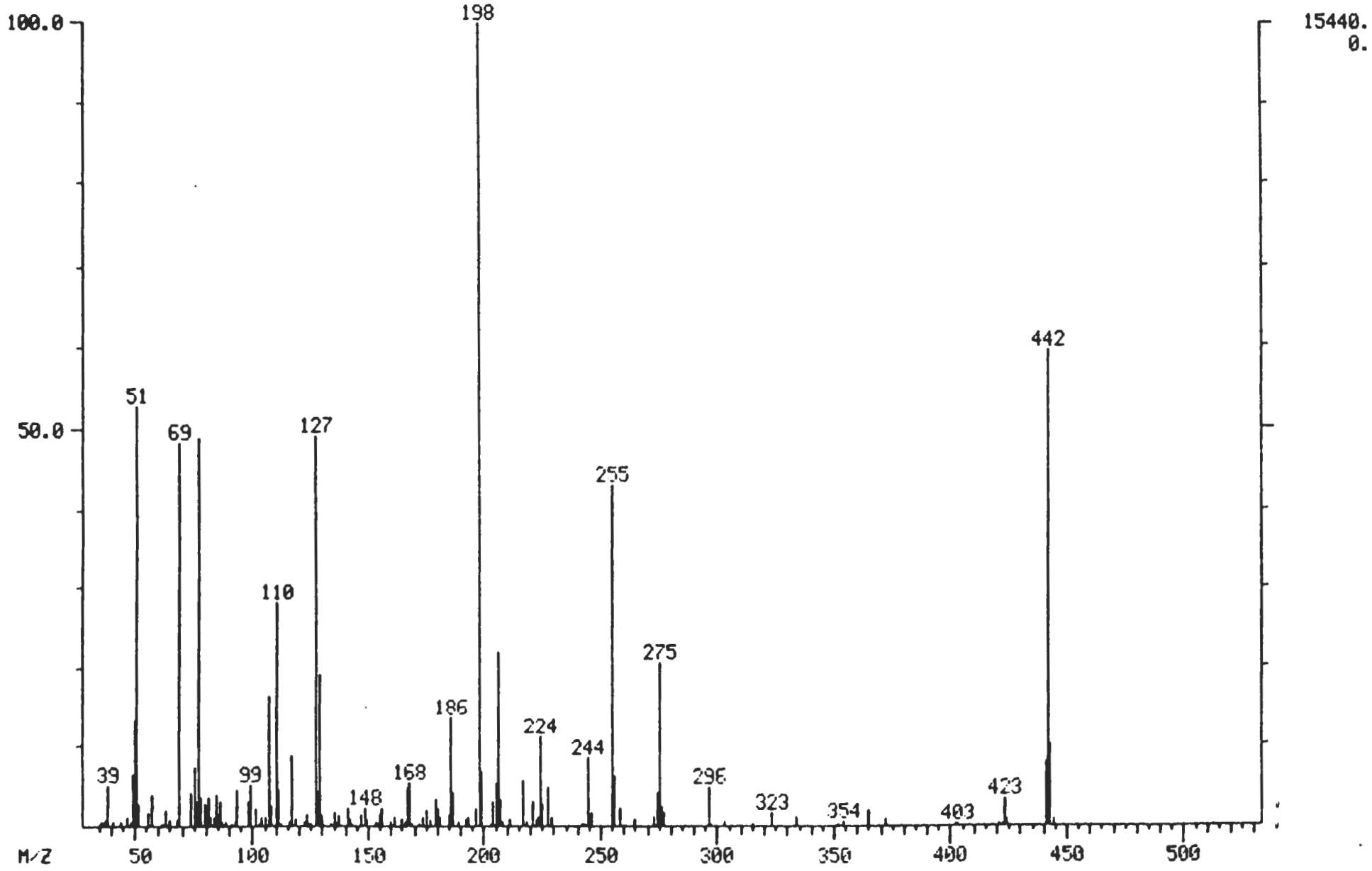
9613492.6082

000373

MASS SPECTRUM
02/16/93 13:29:00 + 8:12
SAMPLE: 50NG/2UL DFTPP 02/04/93 JY
CONDS.: SHERMA
TEMP: 246 DEG. C
#648 TO #650 SUMMED - #640

DATA: 3DFT0316S1 #649
CALI: CALTAB #3

BASE M/Z: 198
RIC: 124544.



96 3492 0003

9613492.6084

000374

Mass List Data: 3DFTO216S1 # 649 Base m/z: 198
02/16/93 13:29:00 + 8:12 Cali: CALTAB # 3 RIC: 124544.
Sample: 50NG/2UL DFTPP 02/04/93 JY
Conds.: SHERMA
#648 to #650 summed - #640

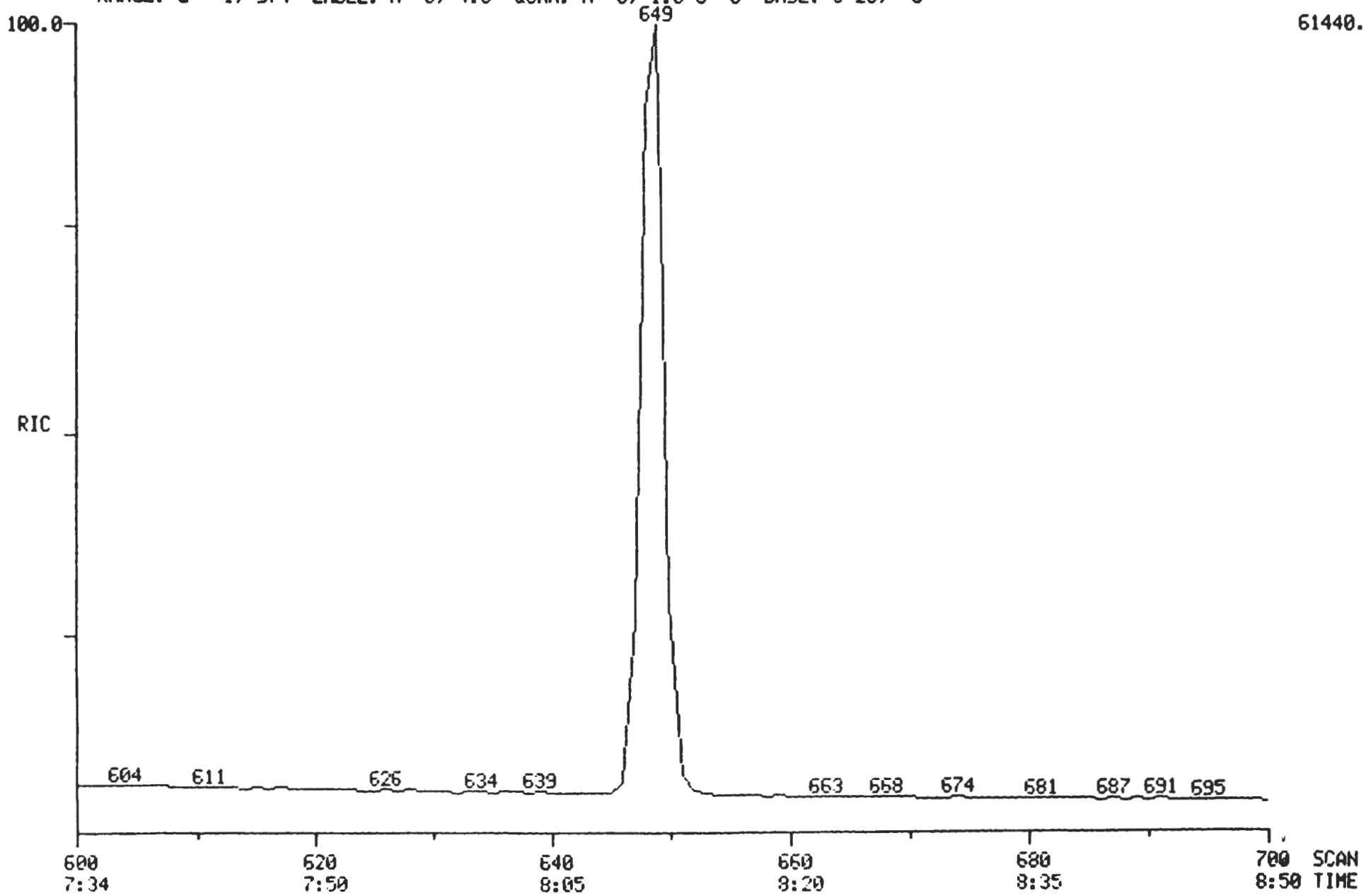
35 0.00 0. Minima Min Inten: 19.
444 Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.	Mass	% RA	Inten.
35	0.23	36.	116	0.49	76.	205	5.16	796.
36	0.44	68.	117	8.55	1320.	206	21.76	3360.
37	0.26	40.	118	0.75	116.	207	3.25	502.
38	0.87	134.	122	0.60	92.	208	0.67	104.
39	5.03	776.	123	1.35	208.	211	0.75	116.
41	0.57	88.	124	0.36	56.	217	5.43	838.
44	0.60	92.	125	0.38	58.	218	0.63	98.
47	1.11	172.	127	49.27	7608.	221	3.12	482.
48	0.56	86.	128	4.16	642.	222	0.84	130.
49	6.22	960.	129	18.94	2924.	223	1.14	176.
50	13.13	2028.	130	1.52	234.	224	11.14	1720.
51	52.75	8144.	134	0.16	24.	225	2.89	446.
52	2.72	420.	135	1.77	274.	227	4.56	704.
56	1.58	244.	136	0.28	44.	229	1.00	154.
57	3.95	610.	137	1.31	202.	242	0.27	42.
61	0.40	62.	141	2.25	348.	243	0.26	40.
62	0.32	50.	142	0.80	124.	244	8.30	1282.
63	1.96	302.	143	0.23	36.	245	1.22	188.
65	0.87	134.	147	1.32	204.	246	1.54	238.
68	0.74	114.	148	2.32	358.	255	43.06	6648.
69	48.34	7464.	149	0.87	134.	256	6.17	952.
74	4.21	650.	153	0.57	88.	258	2.11	326.
75	7.22	1114.	154	0.39	60.	265	0.83	128.
76	2.97	458.	155	1.30	200.	273	1.22	188.
77	49.02	7568.	156	2.32	358.	274	4.03	622.
78	3.65	564.	160	0.60	92.	275	20.44	3156.
79	2.82	436.	161	1.19	184.	276	2.56	396.
80	2.60	402.	165	0.70	108.	277	1.65	254.
81	3.73	576.	166	0.58	90.	296	4.56	704.
82	1.00	154.	167	4.72	728.	297	0.27	42.
83	1.05	162.	168	5.32	822.	303	0.49	76.
84	3.83	592.	169	0.14	22.	315	0.19	30.
85	1.35	208.	172	0.14	22.	323	1.77	274.
86	3.11	480.	174	1.02	158.	334	1.14	176.
87	0.54	84.	175	1.84	284.	352	0.23	36.
88	0.53	82.	177	0.84	130.	354	0.56	86.
91	0.28	44.	179	3.28	506.	365	1.84	284.
92	0.60	92.	180	2.28	352.	372	0.87	134.
93	4.31	666.	181	1.09	168.	402	0.17	26.
98	3.10	478.	185	1.49	230.	403	0.32	50.
99	4.86	750.	186	13.65	2108.	421	0.17	26.
101	2.07	320.	187	4.12	636.	422	0.23	36.
103	0.21	32.	189	0.56	86.	423	3.38	522.
104	0.97	150.	192	0.93	144.	424	0.70	108.
105	1.11	172.	193	1.22	188.	441	7.67	1184.
107	16.19	2500.	196	2.20	340.	442	59.38	9168.
108	2.51	388.	198	100.00	15440.	443	9.92	1532.
110	28.08	4336.	199	6.76	1044.	444	0.93	144.
111	4.34	670.	203	0.18	28.			
112	0.16	24.	204	3.15	486.			

000375

RIC
02/16/93 13:29:00
SAMPLE: 50NG/2UL DFTPP 02/04/93 JY
CONDS.: SHERMA
RANGE: G 1, 974 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 3DFT021651 #648 SCANS 600 TO 700
CALI: CALTAB #3



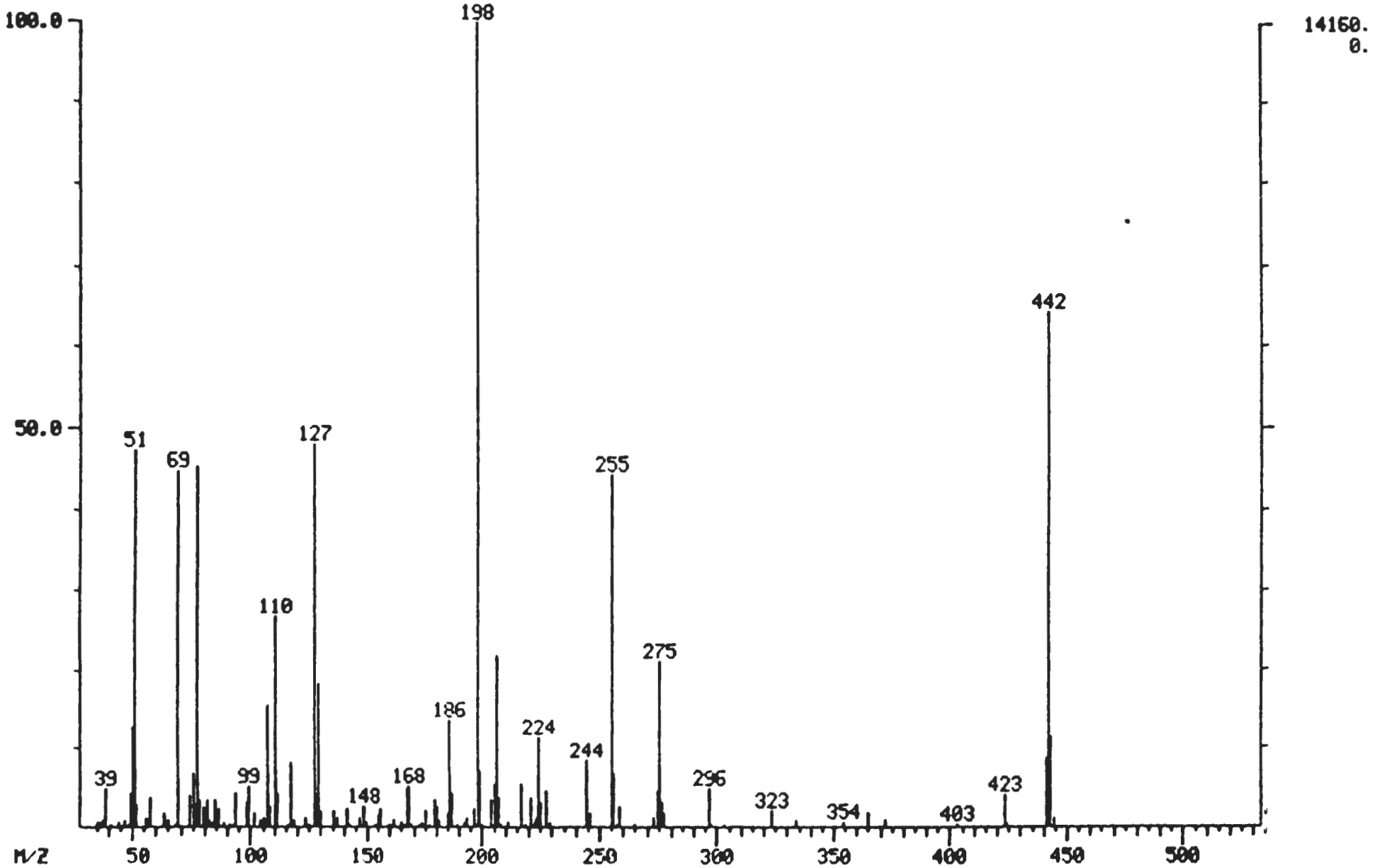
96 3402 6085

000376

MASS SPECTRUM
02/18/93 10:21:00 + 8:14
SAMPLE: 50NG/2UL DFTPP 02/04/93 JY
CONDS.: SHERMA
TEMP: 247 DEG. C
#651 TO #653 SUMMED - #640

DATA: 3DFT021851 #652
CALI: 3DFT021851 #3

BASE M/Z: 198
RIC: 110720.



96 13492.6006

9613492.6087

000377

Mass List Data: 3DFT0218S1 # 652 Base m/z: 198
02/18/93 10:21:00 + 8:14 Cali: 3DFT0218S1 # 3 RIC: 110720.
Sample: 50NG/2UL DFTPP 02/04/93 JY
Conds.: SHERMA
#651 to #653 summed - #640

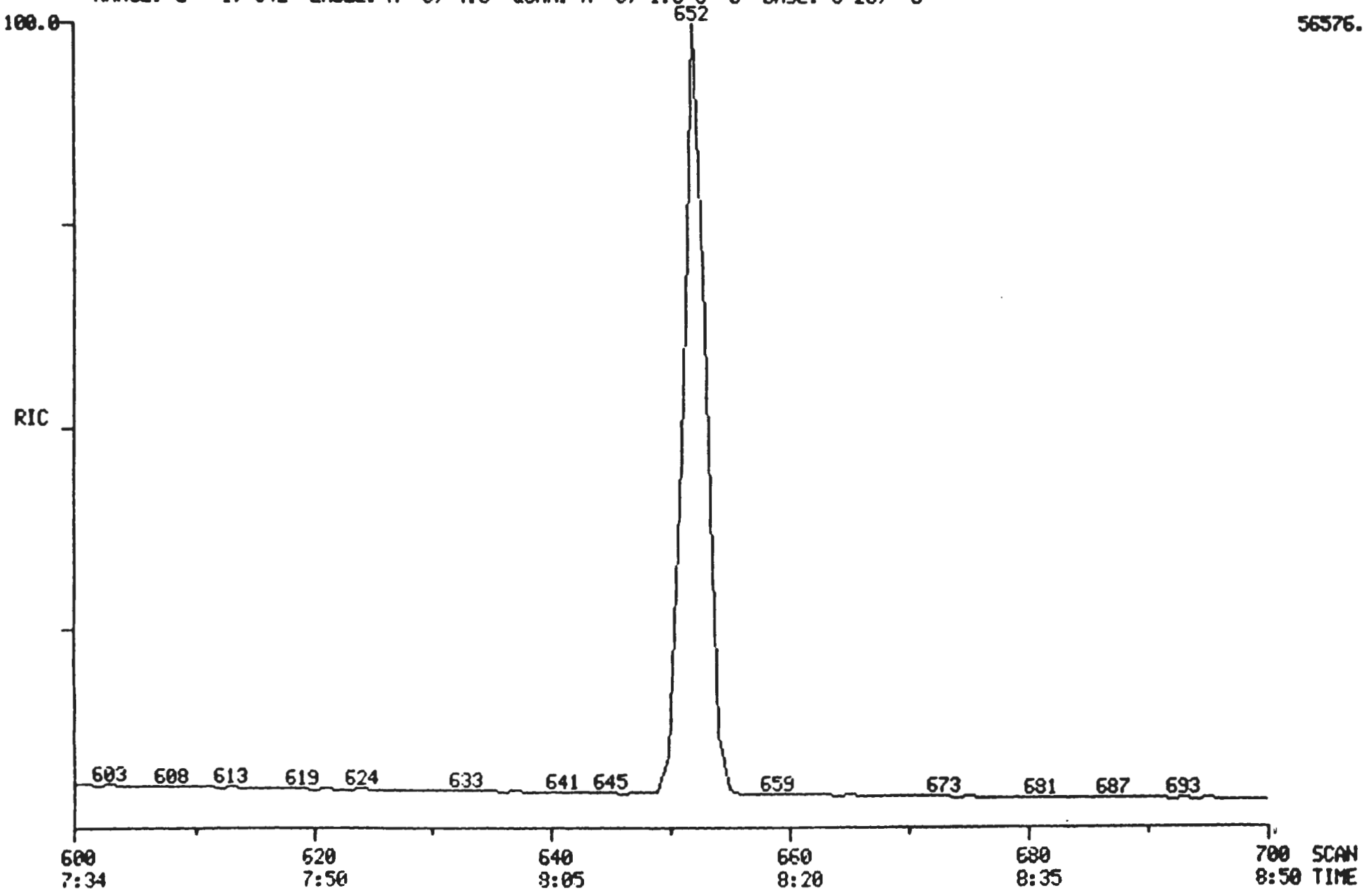
35 0.00 0. Minima Min Inten: 0.
444 Maxima # 0

Mass	% RA	Inten.	Mass	% RA	Inten.	Mass	% RA	Inten.
35	0.56	80.	125	0.17	24.	223	1.03	146.
36	0.56	80.	127	48.14	6816.	224	11.31	1602.
37	0.42	60.	128	3.79	536.	225	3.08	436.
38	0.93	132.	129	18.36	2600.	227	4.44	628.
39	4.77	676.	130	1.86	264.	228	0.24	34.
41	0.14	20.	135	1.84	260.	229	0.49	70.
44	0.49	70.	137	1.13	160.	243	0.13	18.
47	0.71	100.	141	2.10	298.	244	8.32	1178.
48	0.18	26.	142	0.37	52.	245	0.81	114.
49	4.12	584.	143	0.13	18.	246	1.72	244.
50	12.81	1814.	147	1.16	164.	255	44.07	6240.
51	47.29	6696.	148	2.44	346.	256	6.51	922.
52	2.84	402.	149	0.61	86.	257	0.17	24.
56	1.14	162.	153	0.24	34.	258	2.39	338.
57	3.59	508.	155	1.36	192.	265	0.35	50.
63	1.74	246.	156	2.15	304.	273	1.09	154.
65	0.88	124.	160	0.25	36.	274	4.38	620.
68	0.27	38.	161	0.93	132.	275	21.07	2984.
69	44.63	6320.	165	0.52	74.	276	2.95	418.
74	3.90	552.	166	0.16	22.	277	1.69	240.
75	6.72	952.	167	4.58	648.	296	4.66	660.
76	2.64	374.	168	5.03	712.	297	0.21	30.
77	45.31	6416.	169	0.17	24.	303	0.17	24.
78	3.42	484.	173	0.25	36.	323	2.02	286.
79	2.47	350.	174	0.51	72.	334	0.96	136.
80	2.25	318.	175	2.02	286.	352	0.13	18.
81	3.35	474.	177	0.41	58.	354	0.47	66.
82	0.96	136.	179	3.32	470.	365	1.69	240.
83	0.62	88.	180	2.61	370.	372	0.95	134.
84	3.31	468.	181	0.85	120.	403	0.27	38.
85	0.86	122.	185	1.64	232.	421	0.11	16.
86	2.27	322.	186	13.47	1908.	422	0.11	16.
88	0.64	90.	187	4.22	598.	423	3.83	542.
91	0.28	40.	189	0.25	36.	424	0.64	90.
92	0.25	36.	192	0.45	64.	441	8.53	1208.
93	4.19	594.	193	1.10	156.	442	64.18	9088.
98	2.92	414.	196	2.27	322.	443	11.38	1612.
99	4.84	686.	198	100.00	14160.	444	1.06	150.
101	1.74	246.	199	6.98	988.			
104	0.72	102.	200	0.17	24.			
105	0.99	140.	204	3.18	450.			
107	15.51	2196.	205	5.13	726.			
108	2.50	354.	206	21.92	3104.			
110	26.69	3780.	207	3.66	518.			
111	4.25	602.	208	0.21	30.			
116	0.21	30.	211	0.51	72.			
117	8.06	1142.	217	5.27	746.			
118	0.71	100.	218	0.31	44.			
123	1.10	156.	221	3.64	516.			
124	0.17	24.	222	0.48	68.			

000378

RIC
02/18/93 10:21:00
SAMPLE: 50NG/2UL DFTPP 02/04/93 JY
CONDS.: SHERMA
RANGE: G 1, 842 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 3DFT0218S1 #651 SCANS 600 TO 700
CALI: 3DFT0218S1 #3



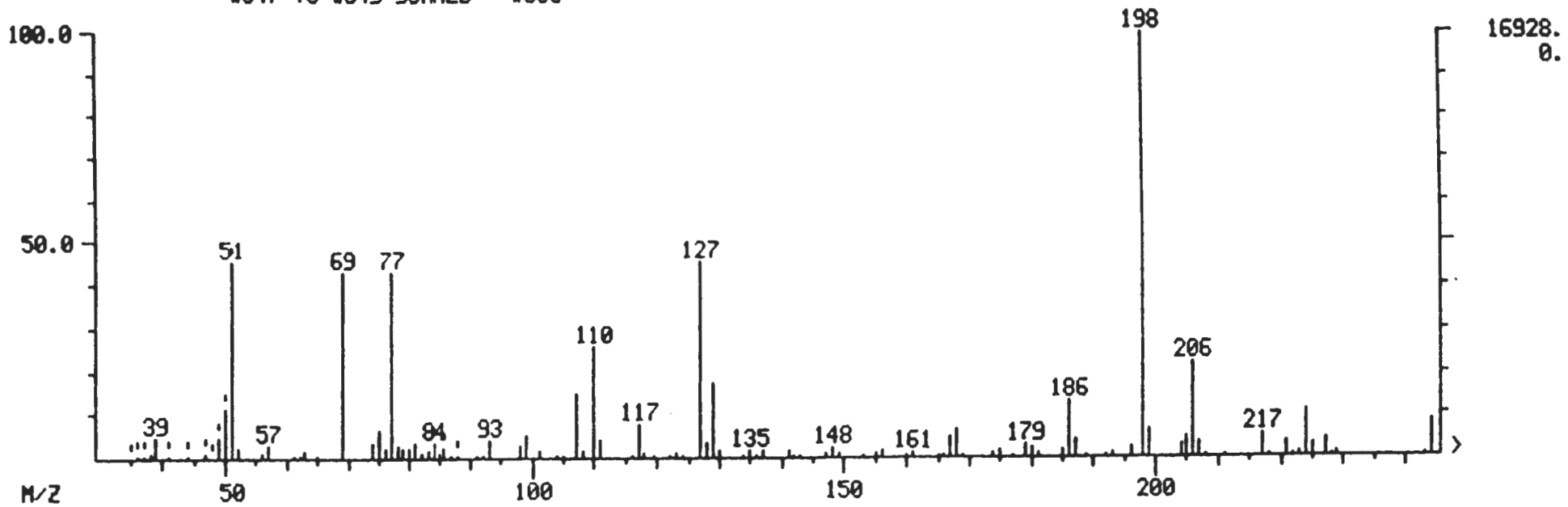
%13492.6000

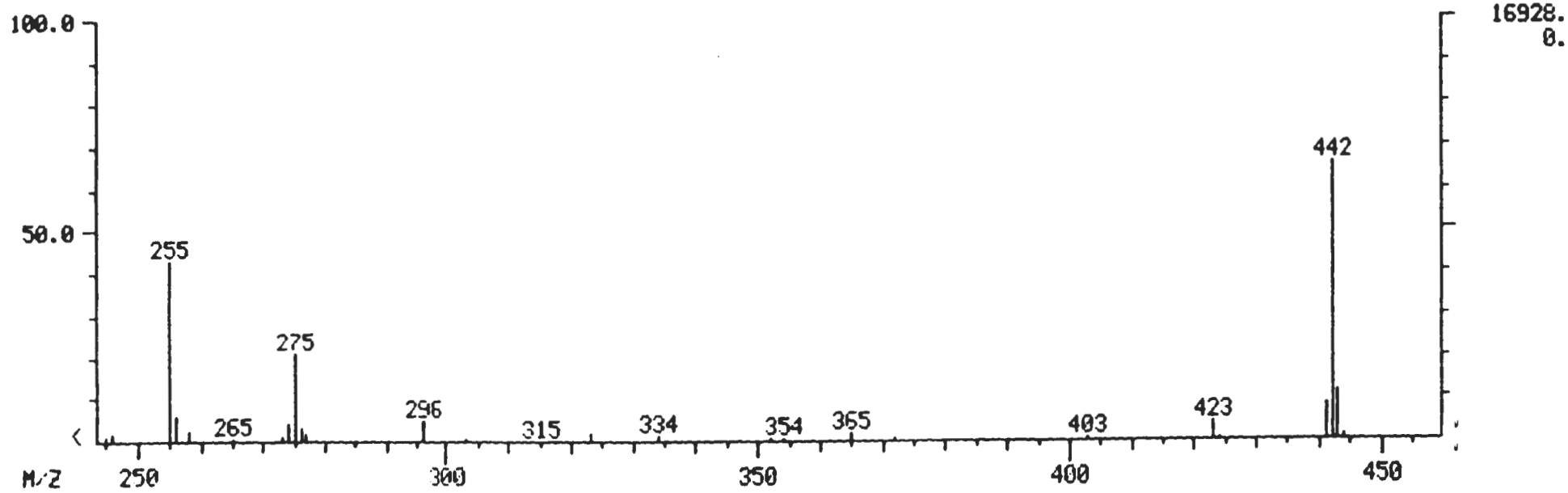
000379

MASS SPECTRUM
02/22/93 9:09:00 + 8:11
SAMPLE: 50 NG DFTPP/2UL 2/4/93
CONDS.:
TEMP: 246 DEG. C
#647 TO #649 SUMMED - #635

DATA: 3DFT022251 #648
CALI: CALTAB #3

BASE M/Z: 198
RIC: 132352.





0009.2HC196

9613492.6090

000380

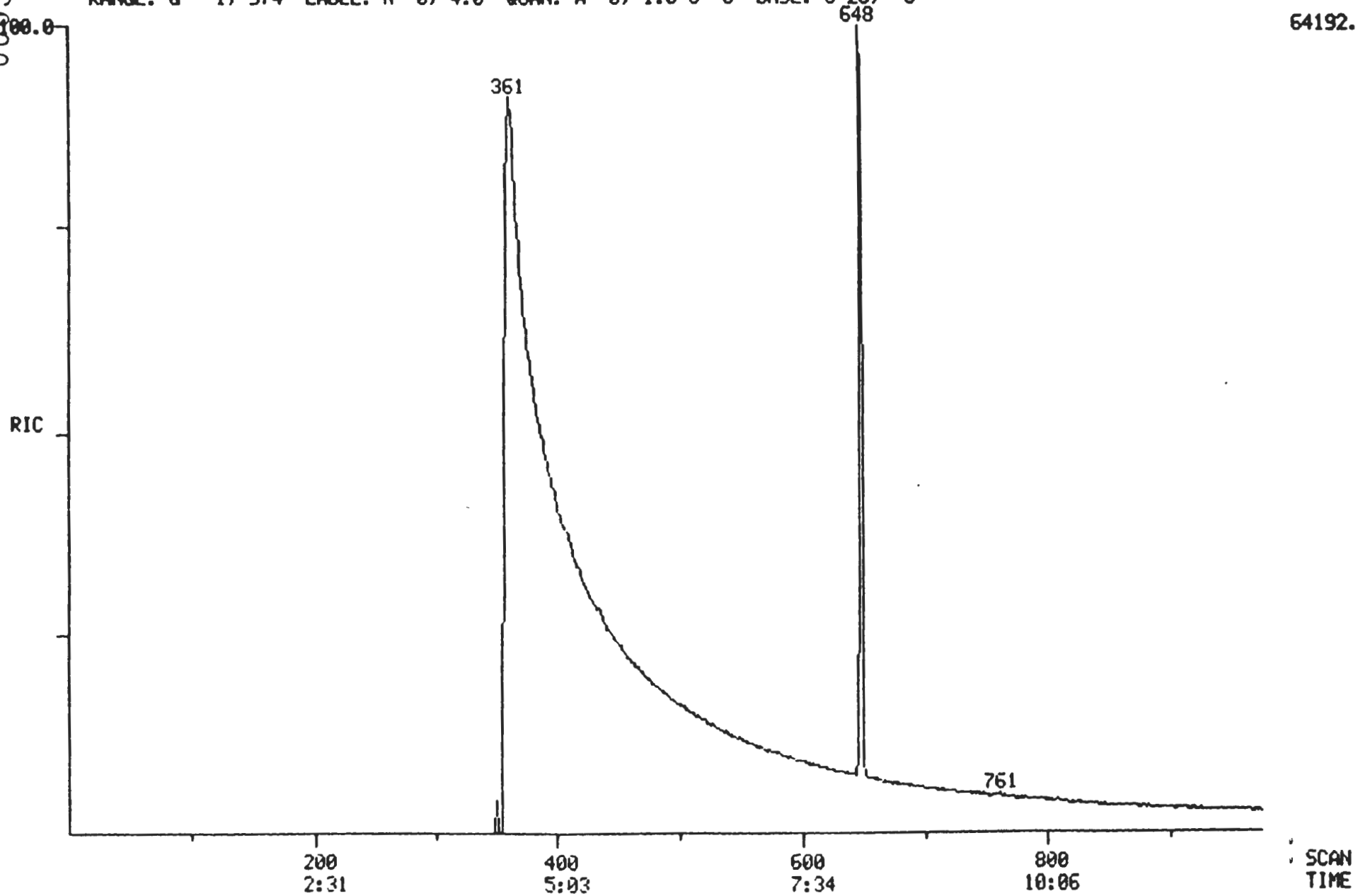
Mass List Data: 3DFT0222S1 # 648 Base m/z: 198
02/22/93 9:09:00 + 8:11 Cali: CALTAB # 3 RIC: 132352.
Sample: 50 NG DFTPP/2UL 2/4/93
Conds.:
#647 to #649 summed - #635

35 0.00 0. Minima Min Inten: 129.
444 Maxima # 0

Mass		% RA	Inten.	Mass	% RA	Inten.
38?		1.00	170.	161	1.10	186.
39?		4.50	762.	167	4.57	774.
47?	S	0.92	156.	168	6.42	1086.
49?	S	4.62	782.	174	0.92	156.
50?	S	11.16	1890.	175	1.70	288.
51?	S	45.46	7696.	179	3.04	514.
52?		2.50	424.	180	2.55	432.
56?		1.42	240.	181	1.05	178.
57?		3.28	556.	185	1.61	272.
63?		1.61	272.	186	13.40	2268.
65?		0.86	146.	187	4.15	702.
69		43.29	7328.	192	0.89	150.
74		3.75	634.	193	0.93	158.
75		6.53	1106.	196	2.26	382.
76		2.36	400.	198	100.00	16928.
77		43.29	7328.	199	6.62	1120.
78		2.98	504.	204	3.05	516.
79		2.52	426.	205	4.96	840.
80		2.11	358.	206	21.95	3716.
81		3.32	562.	207	3.63	614.
82		1.11	188.	211	0.90	152.
83		1.78	302.	217	5.25	888.
84	S	3.33	564.	221	3.39	574.
85		1.23	208.	222	0.77	130.
86	S	2.63	446.	223	1.06	180.
93		4.16	704.	224	11.02	1866.
98		2.99	506.	225	2.92	494.
99		5.28	894.	227	4.40	744.
101		1.72	292.	229	0.93	158.
104		0.90	152.	244	8.29	1404.
105		0.84	142.	245	0.97	164.
107		14.77	2500.	246	1.58	268.
108		2.04	346.	255	43.24	7320.
110		25.99	4400.	256	6.20	1050.
111		3.95	668.	258	2.19	370.
117		7.80	1320.	273	1.15	194.
118		0.95	160.	274	4.36	738.
123		1.22	206.	275	21.08	3568.
127		45.60	7720.	276	2.97	502.
128		3.66	620.	277	1.80	304.
129		17.39	2944.	296	4.63	784.
130		1.56	264.	323	2.09	354.
135		1.61	272.	334	1.38	234.
137		1.52	258.	365	2.03	344.
141		1.78	302.	423	3.90	660.
147		1.10	186.	424	0.90	152.
148		2.41	408.	441	8.33	1410.
149		1.00	170.	442	65.78	11136.
155		1.34	226.	443	11.26	1906.
156		2.00	338.	444	1.13	192.

RIC
02/22/93 9:09:00
SAMPLE: 50 NG DFTPP/2UL 2/4/93
CONDS.:
RANGE: G 1, 974 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 3DFT0222S1 #647 SCANS 1 TO 974
CALI: CALTAB #3



000381
96130492 4091

9613492.6092

000382

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK0211C

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-BLK

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S02

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U
51-28-5	2,4-Dinitrophenol	25	U

9613492.6093

000383

EPA SAMPLE NO.

SBLK0211C

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-BLK

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S02

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	8	J
218-01-9	Chrysene	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

KK 2/25/93

9613492.6094

000384
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLK0211C

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-BLK

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 30216S02

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

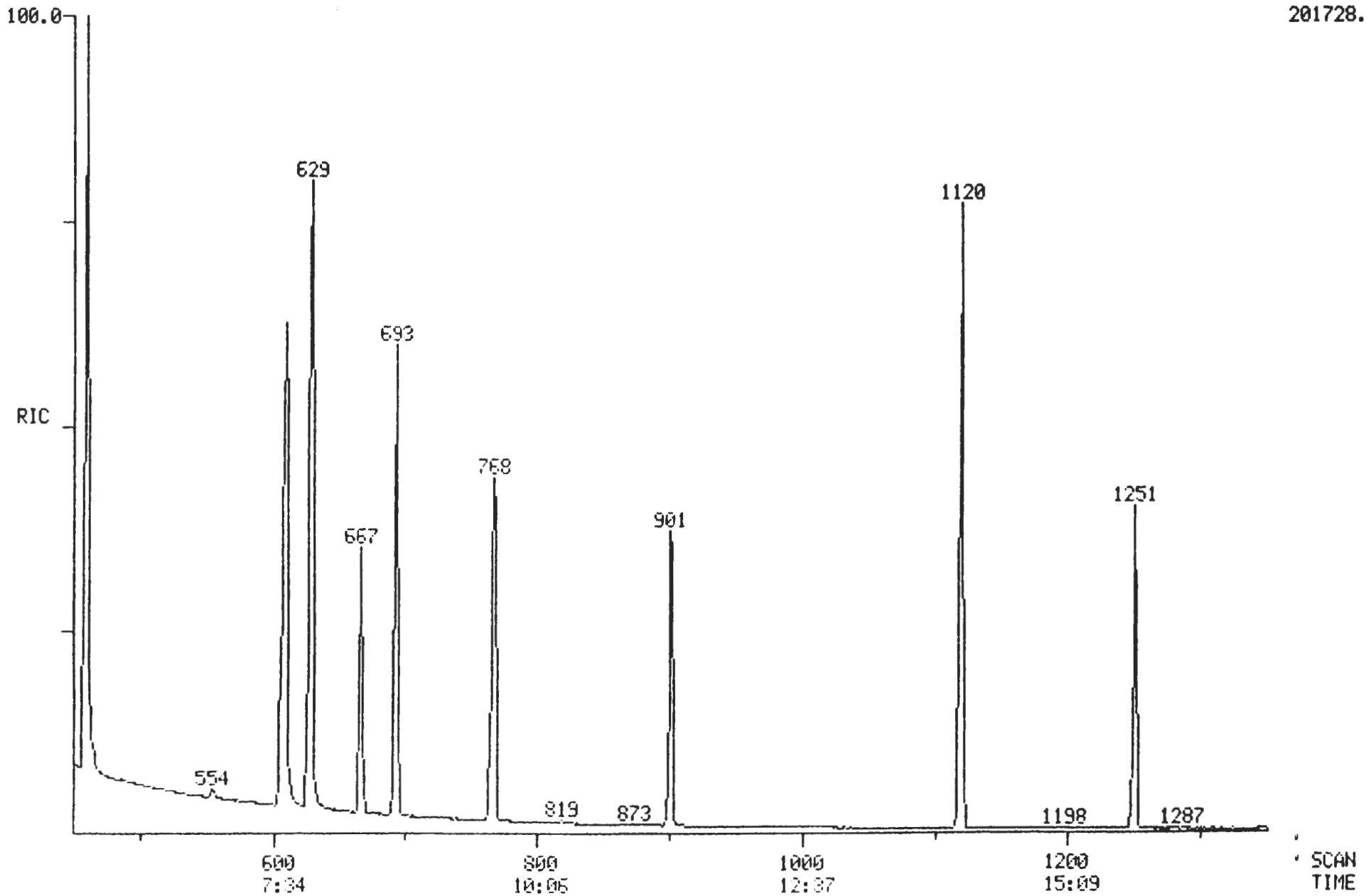
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.60	3	J

000385

RIC
02/16/93 15:23:00
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS.: CAP/.25,30216S01,3DFT021651
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S02 #1
CALI: 30216S02 #3

SCANS 450 TO 1350



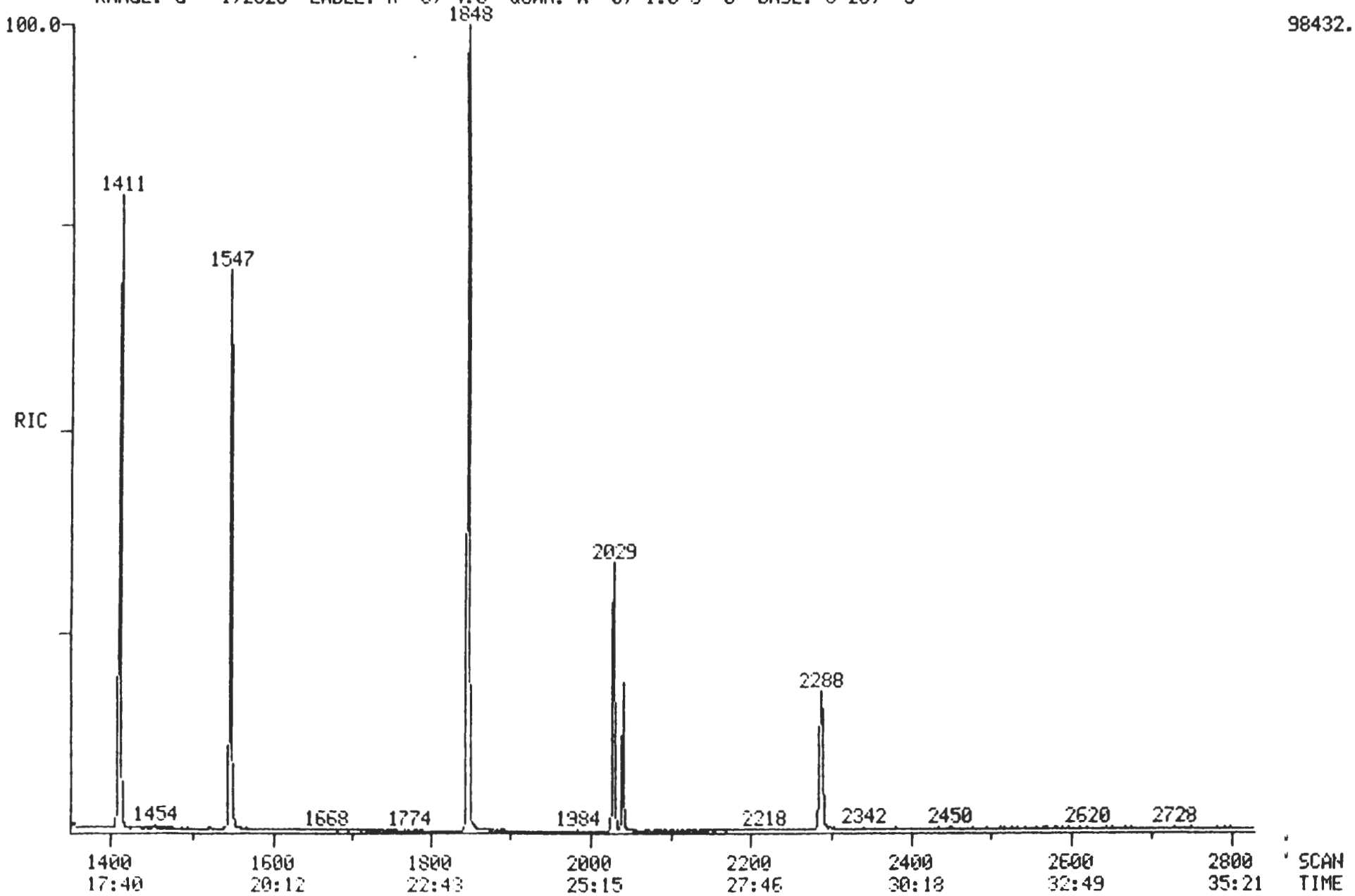
96139 92.6095

000386

RIC
02/16/93 15:23:00
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS.: CAP/.25,30216501,3DFT021651
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216502 #1
CALI: 30216502 #3

SCANS 1350 TO 2828



96/3492.6096

9613492.6097

000387

Quantitation Report File: 30216S02

Data: 30216S02.TI
02/16/93 15:23:00
Sample: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
Conds.: CAP/.25,30216S01,3DFT0216S1
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	CS50 *SU1* 2-FLUOROPHENOL
8	CS45 *SU2* PHENOL-D5
9	CS55 *SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20 *SU4* NITROBENZENE-D5
11	CS25 *SU5* 2-FLUOROBIPHENYL
12	CS30 *SU6* TERPHENYL-D14
13	CS70 2-CHLOROPHENOL-D4
14	CS75 1,2-DICHLOROBENZENE-D4
15	C735 BIS(2-ETHYLHEXYL)PHTHALATE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	666	8:24	1	1.000	A BB	27998.	20.000	NG/UL	3.57
2	136	901	11:22	2	1.000	A BB	92520.	20.000	NG/UL	3.57
3	164	1251	15:48	3	1.000	A BB	49102.	20.000	NG/UL	3.57
4	188	1547	19:32	4	1.000	A BB	76848.	20.000	NG/UL	3.57
5	240	2029	25:37	5	1.000	A BB	36367.	20.000	NG/UL	3.57
6	264	2288	28:53	6	1.000	A BV	27792.	20.000	NG/UL	3.57
7	112	460	5:48	1	0.691	A BB	137269.	69.023	NG/UL	12.33
8	99	609	7:41	1	0.914	A BB	138536.	68.670	NG/UL	12.27
9	330	1411	17:49	3	1.128	A BB	21762.	63.356	NG/UL	11.32
10	82	768	9:42	2	0.852	A BB	90778.	42.587	NG/UL	7.61
11	172	1120	14:08	3	0.895	A BB	130924.	40.471	NG/UL	7.23
12	244	1847	23:19	5	0.910	A BB	96032.	39.283	NG/UL	7.02
13	132	629	7:56	1	0.944	A BB	114096.	70.843	NG/UL	12.66
14	152	693	8:45	1	1.041	A BB	49384.	37.777	NG/UL	6.75
15	149	2040	25:45	5	1.005	A BB	12430.	7.601	NG/UL	1.36

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	69.02	25.00	3.922	1.421	2.76
8	7:41	1.00	0.913	1.00	68.67	25.00	3.958	1.441	2.75
9	17:49	1.00	1.128	1.00	63.36	25.00	0.355	0.140	2.53

9613492.6098

000388

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R. Fac	R. Fac(L)	Ratio
10	9:42	1.00	0.852	1.00	42.59	25.00	0.785	0.461	1.70
11	14:08	1.00	0.894	1.00	40.47	25.00	2.133	1.318	1.62
12	23:21	1.00	0.909	1.00	39.28	25.00	2.112	1.344	1.57
13	7:55	1.00	0.941	1.00	70.84	25.00	3.260	1.150	2.83
14	8:44	1.00	1.039	1.00	37.78	25.00	1.411	0.934	1.51
15	25:52	1.00	1.007	1.00	7.60	25.00	0.273	0.899	0.30

Quantitation Report File: 30216S02

Data: 30216S02.TI
02/16/93 15:23:00
Sample: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
Conds.: CAP/.25,30216S01,3DFT0216S1
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000390

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	666	8:24	1	1.000	A BB	27998.✓	20.000 NG/UL	3.57
2	136	901	11:22	2	1.000	A BB	92520.✓	20.000 NG/UL	3.57
3	164	1251	15:48	3	1.000	A BB	49102.✓	20.000 NG/UL	3.57
4	188	1547	19:32	4	1.000	A BB	76848.✓	20.000 NG/UL	3.57
5	240	2029	25:37	5	1.000	A BB	36367.✓	20.000 NG/UL	3.57
6	264	2288	28:53	6	1.000	A BV	27792.✓	20.000 NG/UL	3.57
7	112	460	5:48	1	0.691	A BB	137269.	69.023 NG/UL✓	12.31
8	99	609	7:41	1	0.914	A BB	138536.	68.670 NG/UL✓	12.25
9	330	1411	17:49	3	1.128	A BB	21762.	63.356 NG/UL✓	11.30
10	82	768	9:42	2	0.852	A BB	90778.	42.587 NG/UL ✓	7.60
11	172	1120	14:08	3	0.895	A BB	130924.	40.471 NG/UL ✓	7.22
12	244	1847	23:19	5	0.910	A BB	96032.	39.283 NG/UL✓	7.01
13	132	629	7:56	1	0.944	A BB	114096.	70.843 NG/UL✓	12.64
14	152	693	8:45	1	1.041	A BB	49384.	37.777 NG/UL ✓	6.74
~~15~~	~~94~~	~~611~~	~~7:43~~	~~1~~	~~0.917~~	~~A BB~~	~~1346.~~	~~0.531 NG/UL~~	~~0.09~~
16	NOT FOUND								
17	NOT FOUND								
18	NOT FOUND								
19	NOT FOUND								
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	NOT FOUND								
24	NOT FOUND								
25	NOT FOUND								
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	NOT FOUND								
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	NOT FOUND								
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	NOT FOUND								
49	NOT FOUND								
50	NOT FOUND								

02/17/93

9613492.6101

000391

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	69.02	25.00	3.922	1.421	2.76
8	7:41	1.00	0.913	1.00	68.67	25.00	3.958	1.441	2.75
9	17:49	1.00	1.128	1.00	63.36	25.00	0.355	0.140	2.53
10	9:42	1.00	0.852	1.00	42.59	25.00	0.785	0.461	1.70
11	14:08	1.00	0.894	1.00	40.47	25.00	2.133	1.318	1.62
12	23:21	1.00	0.909	1.00	39.28	25.00	2.112	1.344	1.57
13	7:55	1.00	0.941	1.00	70.84	25.00	3.260	1.150	2.83
14	8:44	1.00	1.039	1.00	37.78	25.00	1.411	0.934	1.51
15	7:42	1.00	0.916	1.00	0.53	25.00	0.038	1.812	0.02
16	7:45		0.922						
17	7:57		0.946						
18	8:16		0.983						
19	8:27		1.005						
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.080						
24	9:24		1.119						
25	9:26		1.122						
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.972						
33	11:04		0.972						
34	11:15		0.989						
35	11:26		1.006						
36	11:36		1.020						
37	11:46		1.034						
38	12:51		1.130						
39	13:10		1.158						
40	13:34		0.859						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:42		0.930						
45	15:14		0.965						
46	15:26		0.977						
47	15:45		0.998						
48	15:53		1.006						
49	16:00		1.014						
50	16:14		1.028						

Quantitation Report File: 30216S02

Data: 30216S02.TI
02/16/93 15:23:00
Sample: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
Conds.: CAP/.25,30216S01,3DFT0216S1
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								

9613492.6103

000393

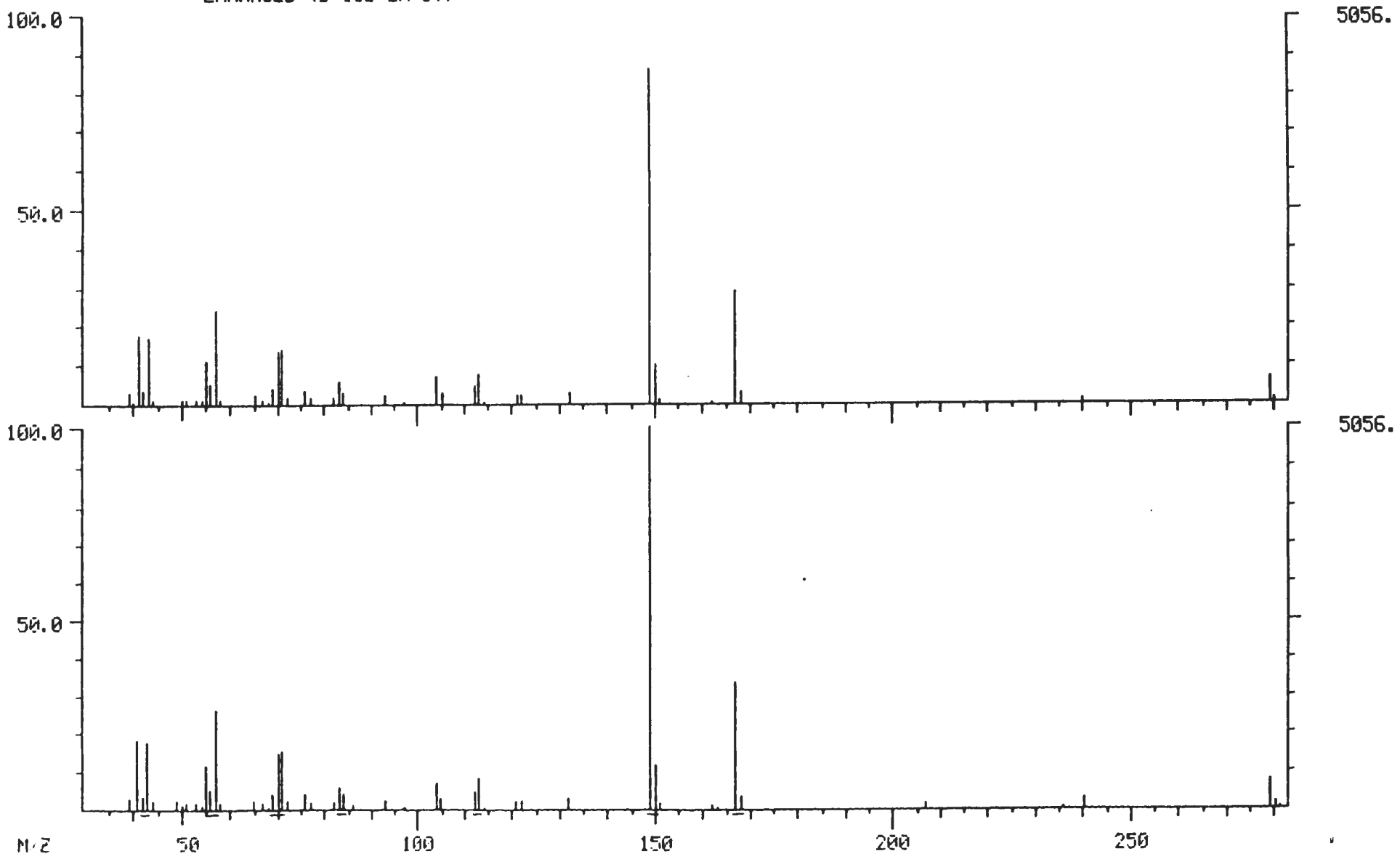
No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
64	NOT FOUND									
65	NOT FOUND									
66	NOT FOUND									
67	NOT FOUND									
68	NOT FOUND									
69	NOT FOUND									
70	NOT FOUND									
71	NOT FOUND									
72	NOT FOUND									
73	149	2040	25:45	5	1.005	A BB	12430.	7.601	NG/UL	1.36
74	NOT FOUND									
75	NOT FOUND									
76	NOT FOUND									
77	NOT FOUND									
78	NOT FOUND									
79	NOT FOUND									
80	NOT FOUND									

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20		1.034						
52	15:22		0.973						
53	17:03		1.080						
54	16:22		1.036						
55	17:12		1.090						
56	17:15		1.093						
57	17:20		1.098						
58	17:25		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:35		0.951						
62	19:05		0.977						
63	19:36		1.003						
64	19:44		1.010						
65	20:09		1.031						
66	21:05		1.079						
67	22:25		1.147						
68	22:56		0.892						
69	24:30		0.954						
70	25:38		0.998						
71	25:40		0.999						
72	25:45		1.002						
73	25:52	1.00	1.007	1.00	7.60	25.00	0.273	0.899	0.30
74	27:24		0.942						
75	28:07		0.967						
76	28:11		0.969						
77	28:57		0.995						
78	32:38		1.122						
79	32:51		1.129						
80	33:45		1.160						

000394

DUAL MASS SPECTRUM
02/16/93 15:23:00 + 25:45
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS.: CAP/.25,30216S01,3DFT0216S1
TEMP: 298 DEG. C
ENHANCED (S 15B 2N 0T)

DATA: 30216S02 #2040 BASE M/Z: 149/ 149
CALI: 30216S02 #3 RIC: 16128./ 18368.



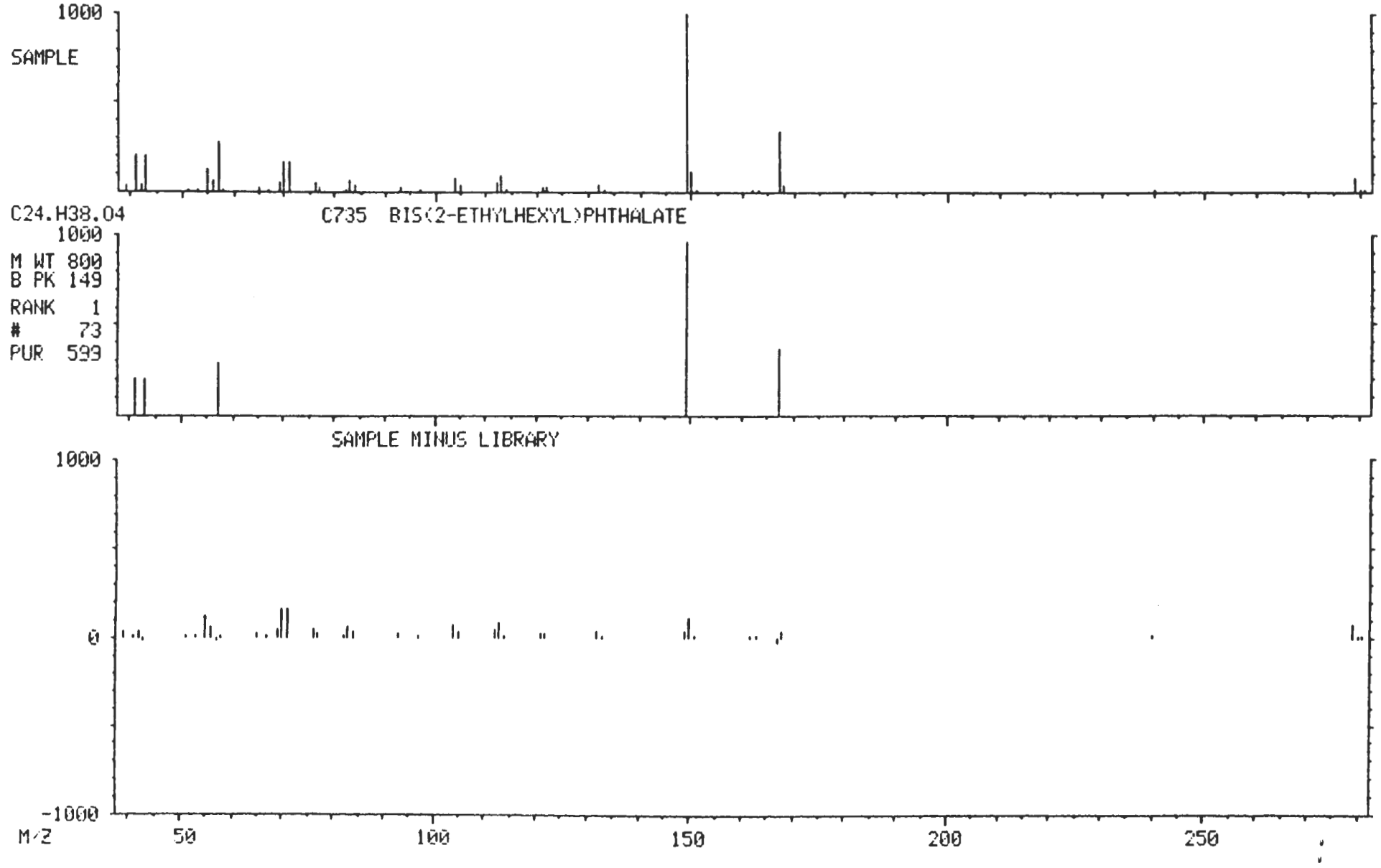
9613492.6104

000395

MID LIBRARY SEARCH (LIBRARYEP)
02/16/93 15:23:00 + 25:45
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS.: CAP/.25,30216S01,3DFT0216S1
ENHANCED (S 15B 2N 0T)

DATA: 30216S02 #2040
CALI: 30216S02 # 3

BASE M/Z: 149
RIC: 15776.



96130926.MS

9613492.6106

INTERMEDIATE A9AR.QL FILE TO GET CAS NUMBERS

000396

Quantitation Report File: A9AR

Data: 30216S02.TI
02/16/93 15:23:00
Sample: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
Conds.: CAP/.25,30216S01,3DFT0216S1
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	0-00-0	CI40 *IS2* NAPHTHALENE-D8
3	0-00-0	CI50 *IS3* ACENAPHTHENE-D10
4	0-00-0	CI60 *IS4* PHENANTHRENE-D10
5	0-00-0	CI70 *IS5* CHRYSENE-D12
6	0-00-0	CI75 *IS6* PERYLENE-D12
7	505-57-7	2-HEXENAL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	TOT	667	8:25	1	1.000	A BB	128090.	20.000 NG/UL	14.86
2	TOT	901	11:22	2	1.000	A BB	150348.	20.000 NG/UL	14.86
3	TOT	1251	15:48	3	1.000	A BB	150750.	20.000 NG/UL	14.86
4	TOT	1547	19:32	4	1.000	A BB	138843.	20.000 NG/UL	14.86
5	TOT	2029	25:37	5	1.000	A BB	68770.	20.000 NG/UL	14.86
6	TOT	2288	28:53	6	1.000	A BB	54380.	20.000 NG/UL	14.86
7	TOT	444	5:36	3	0.355	A BB	22048.	14.626	10.86

9613492.6107

QUANTITATION REPORT FOR TICS FILE: 30216S02

000397

DATA: 30216S02
02/16/93 15:23:00
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS: CAP/.25,30216S01,3DFT0216S1
SUBMITTED BY: 30216S01 ANALYST: JY#14S

NO	NAME
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	2-HEXENAL

NO	M/Z	SCAN		REF	AREA	AMOUNT
1		667	8:25	1	128090	20.
2		901	11:22	2	150348	20.
3		1251	15:48	3	150750	20.
4		1547	19:32	4	138843	20.
5		2029	25:37	5	68770	20.
6		2288	28:53	6	54380	20.
7		444	5:36	1	22048	3.-u/+

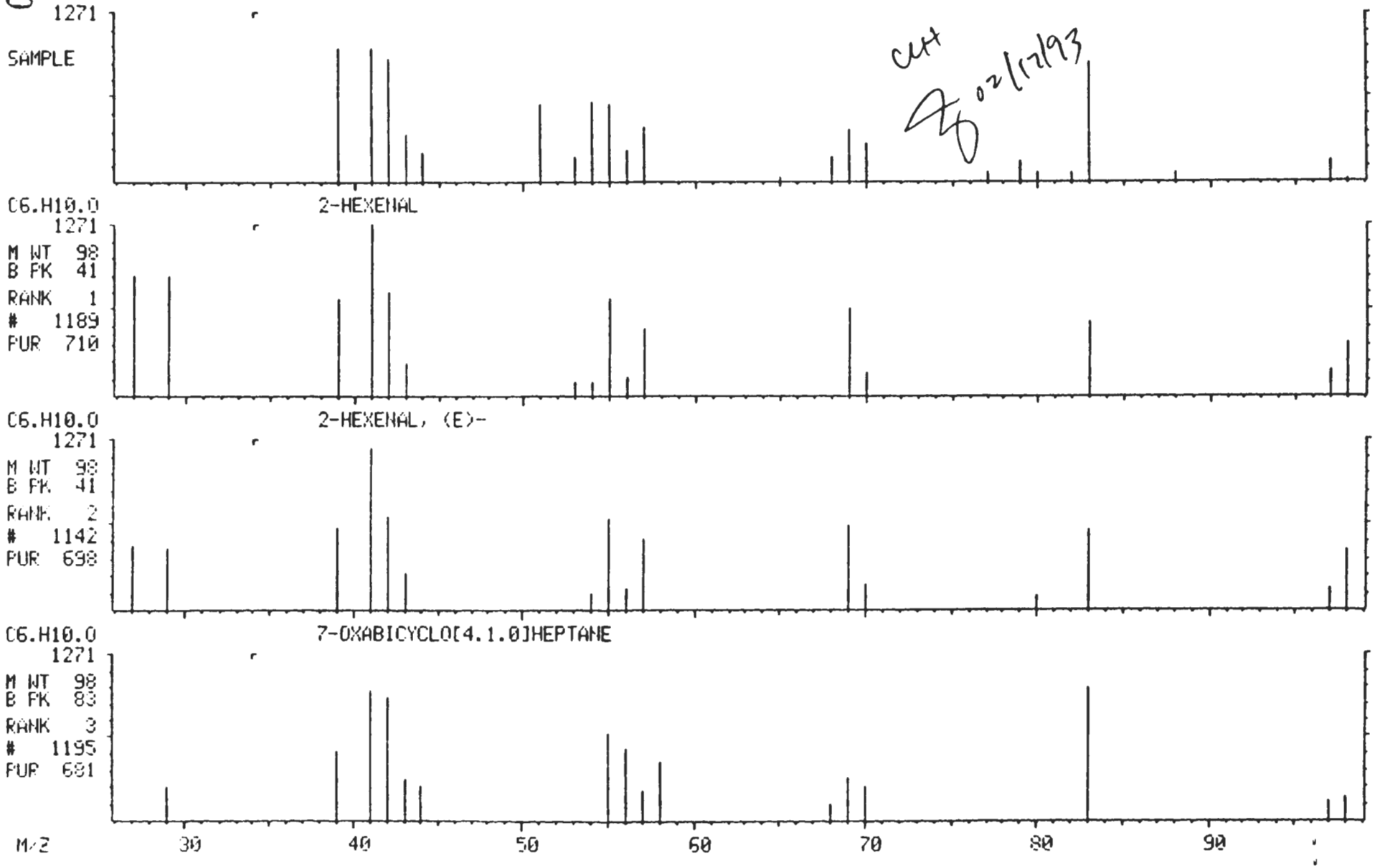
02/17/93

000398

MID LIBRARY SEARCH (LIBRARYNB)
02/16/93 15:23:00 + 5:36
SAMPLE: CLP,02032,,SBLK0211C,L,W,A302032-BLK,B,BLANK
CONDS.: CAP/.25,30216S01,3DFT0216S1
ENHANCED (S 15B 2N 0T)

DATA: 30216S02 # 444
CALI: 30216S02 # 3

BASE M/Z: 41
RIC: 7704.



96 3492.6108

9613492.6109

000399

EPA SAMPLE NO.

SBLK0212S

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-BLK

Sample wt/vol: 30.6 (g/mL) G Lab File ID: 30222S07

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	320	U
111-44-4	bis(2-Chloroethyl)Ether	320	U
95-57-8	2-Chlorophenol	320	U
541-73-1	1,3-Dichlorobenzene	320	U
106-46-7	1,4-Dichlorobenzene	320	U
95-50-1	1,2-Dichlorobenzene	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-oxybis(1-Chloropropane)	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-Di-n-Propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	bis(2-Chloroethoxy)Methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
120-82-1	1,2,4-Trichlorobenzene	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
59-50-7	4-Chloro-3-Methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	780	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	780	U
131-11-3	Dimethylphthalate	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	780	U
83-32-9	Acenaphthene	320	U
51-28-5	2,4-Dinitrophenol	780	U

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000400

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SBLK0212S

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-BLK

Sample wt/vol: 30.6 (g/mL) G Lab File ID: 30222S07

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-02-7	4-Nitrophenol	780	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
606-20-2	2,6-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
86-73-7	Fluorene	320	U
100-01-6	4-Nitroaniline	780	U
534-52-1	4,6-Dinitro-2-methylphenol	780	U
86-30-6	N-Nitrosodiphenylamine (1)	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
87-86-5	Pentachlorophenol	780	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
86-74-8	Carbazole	320	U
84-74-2	Di-n-Butylphthalate	110	J
206-44-0	Fluoranthene	320	U
129-00-0	Pyrene	320	U
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)Anthracene	320	U
117-81-7	bis(2-Ethylhexyl)Phthalate	320	U
218-01-9	Chrysene	320	U
117-84-0	Di-n-Octyl Phthalate	320	U
205-99-2	Benzo(b)Fluoranthene	320	U
207-08-9	Benzo(k)Fluoranthene	320	U
50-32-8	Benzo(a)Pyrene	320	U
193-39-5	Indeno(1,2,3-cd)Pyrene	320	U
53-70-3	Dibenz(a,h)Anthracene	320	U
191-24-2	Benzo(g,h,i)Perylene	320	U

(1) - Cannot be separated from Diphenylamine

KK 10/25/

9613492.6111

000401
EPA SAMPLE NO.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

SBLK0212S

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-BLK

Sample wt/vol: 30.6 (g/mL) G Lab File ID: 30222S07

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: _____

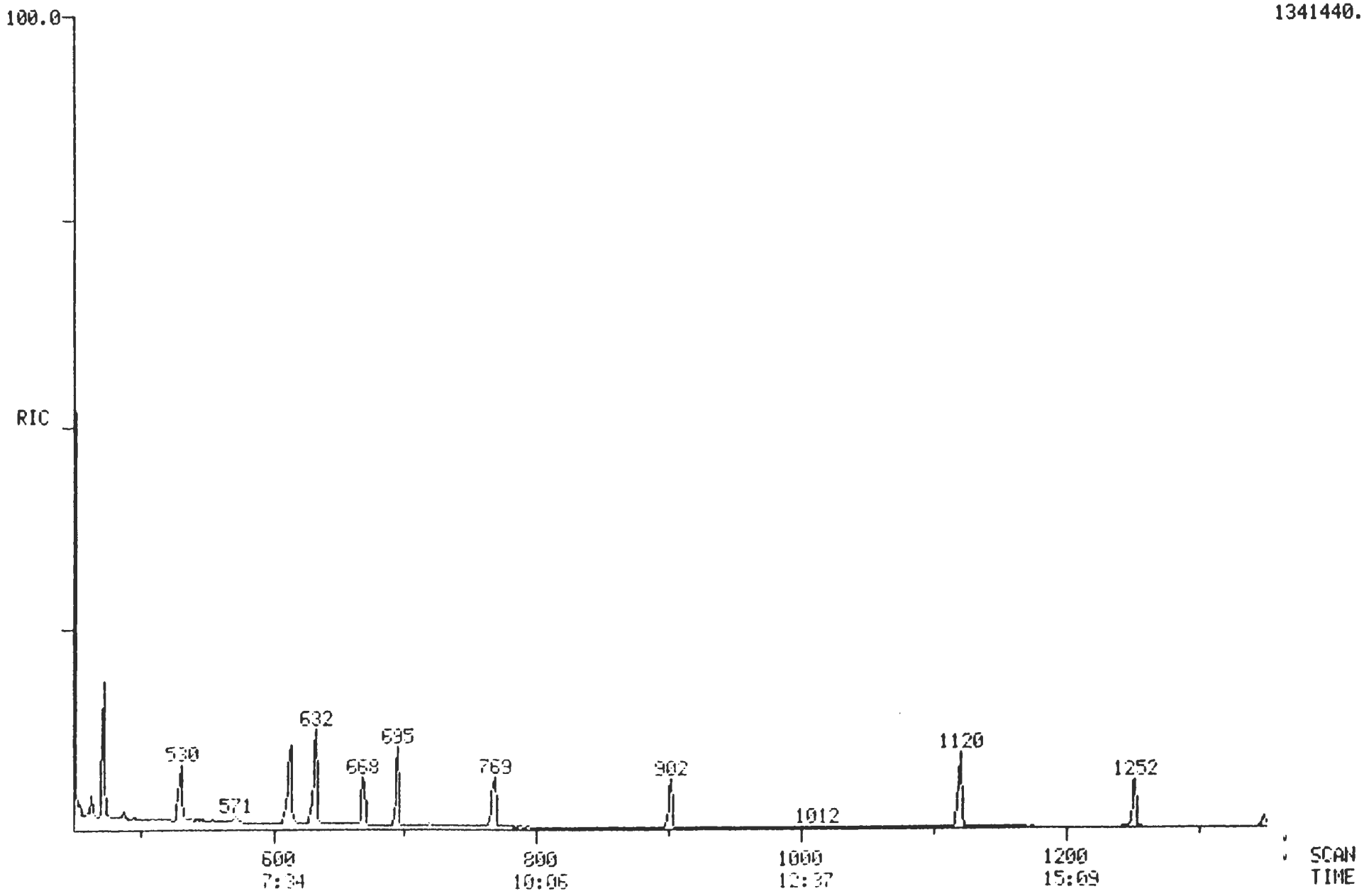
Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	5.27	780	J
2.	UNKNOWN KETONE	5.68	99000	J
3.	UNKNOWN HYDROCARBON	6.68	1100	J
4.	UNKNOWN HYDROCARBON	7.22	160	J

000402

RIC DATA: 30222S07 #1 SCANS 450 TO 1350
02/22/93 13:22:00 CALI: 30222S07 #3
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3



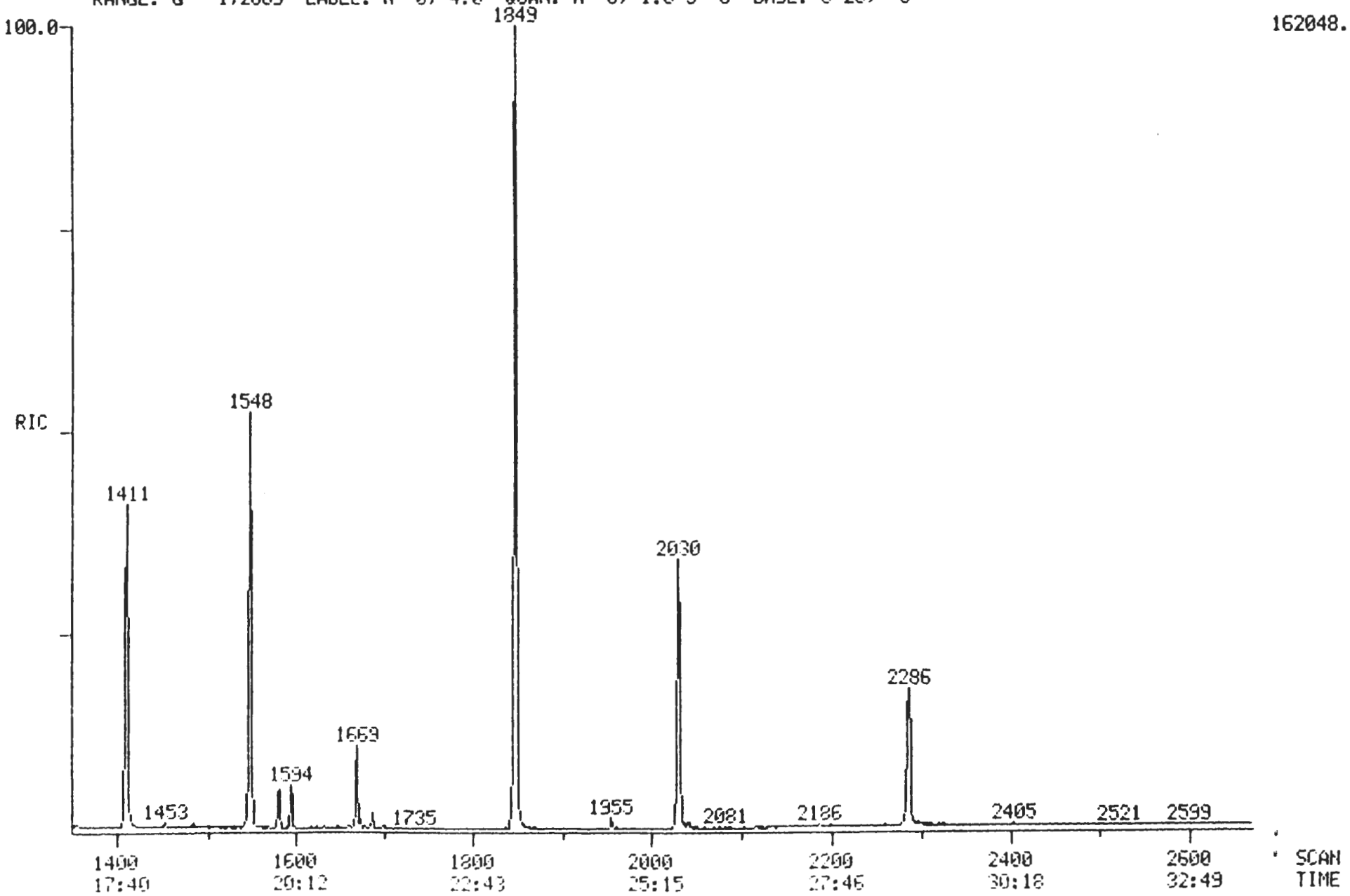
96130492.612

000403

RIC
02/22/93 13:22:00
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT022251
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S07 #1
CALI: 30222S07 #3

SCANS 1350 TO 2669



96173492.613

9613492.6114

000404

Guantitation Report File: 30222S07

Data: 30222S07.TI
02/22/93 13:22:00
Sample: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
Conds.: CAP/.25,30222S01,3DFT0222S1
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C650	DI-N-BUTYLPHTHALATE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	29966.	20.000	NG/UL	4.13
2	136	902	11:23	2	1.000	A BB	102786.	20.000	NG/UL	4.13
3	164	1251	15:48	3	1.000	A BB	56272.	20.000	NG/UL	4.13
4	188	1548	19:33	4	1.000	A BB	94376.	20.000	NG/UL	4.13
5	240	2030	25:38	5	1.000	A BB	58634.	20.000	NG/UL	4.13
6	264	2286	28:52	6	1.000	A BB	43269.	20.000	NG/UL	4.13
7	112	473	5:58	1	0.708	A BB	117698.	53.493	NG/UL	11.03
8	99	613	7:44	1	0.918	A BB	126118.	57.380	NG/UL	11.84
9	330	1411	17:49	3	1.128	A BB	20058.	50.337	NG/UL	10.38
10	82	769	9:42	2	0.853	A BB	83631.	33.257	NG/UL	6.86
11	172	1120	14:08	3	0.895	A BV	120155.	33.460	NG/UL	6.90
12	244	1849	23:21	5	0.911	A BB	158866.	42.487	NG/UL	8.76
13	132	632	7:59	1	0.946	A BB	98663.	56.888	NG/UL	11.73
14	152	695	8:46	1	1.040	A BB	47614.	34.029	NG/UL	7.02
15	149	1669	21:04	4	1.078	A BB	20756.	3.482	NG/UL	0.72

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	53.49	25.00	3.142	1.469	2.14
8	7:41	1.01	0.913	1.01	57.38	25.00	3.367	1.467	2.30
9	17:48	1.00	1.127	1.00	50.34	25.00	0.285	0.142	2.01

9613492.6115

000405

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
10	9:42	1.00	0.852	1.00	33.26	25.00	0.651	0.489	1.33
11	14:08	1.00	0.894	1.00	33.46	25.00	1.708	1.276	1.34
12	23:18	1.00	0.910	1.00	42.49	25.00	2.168	1.275	1.70
13	7:55	1.01	0.941	1.00	56.89	25.00	2.634	1.158	2.28
14	8:44	1.00	1.039	1.00	34.03	25.00	1.271	0.934	1.36
15	21:04	1.00	1.079	1.00	3.48	25.00	0.176	1.263	0.14

Quantitation Report File: 30222S07

Data: 30222S07.TI
02/22/93 13:22:00
Sample: CLP,02032,,SBLK0212S.L,S,A302032-BLK,BNA,BLANK
Conds.: CAP/ 25,30222S01,3DFT0222S1
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000407

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	29966.	20.000	NG/UL	4.11
2	136	902	11:23	2	1.000	A BB	102786.	20.000	NG/UL	4.11
3	164	1251	15:48	3	1.000	A BB	56272.	20.000	NG/UL	4.11
4	188	1548	19:33	4	1.000	A BB	94376.	20.000	NG/UL	4.11
5	240	2030	25:38	5	1.000	A BB	58634.	20.000	NG/UL	4.11
6	264	2286	28:52	6	1.000	A BB	43269.	20.000	NG/UL	4.11
7	112	473	5:58	1	0.708	A BB	117698.	53.493	NG/UL	10.98
8	99	613	7:44	1	0.918	A BB	126118.	57.380	NG/UL	11.78
9	330	1411	17:49	3	1.128	A BB	20058.	50.337	NG/UL	10.33
10	82	769	9:42	2	0.853	A BB	83631.	33.257	NG/UL	6.83
11	172	1120	14:08	3	0.895	A BV	120155.	33.460	NG/UL	6.87
12	244	1849	23:21	5	0.911	A BB	158866.	42.487	NG/UL	8.72
13	132	632	7:59	1	0.946	A BB	98663.	56.888	NG/UL	11.68
14	152	695	8:46	1	1.040	A BB	47614.	34.029	NG/UL	6.99
15	~~94~~	~~614~~	~~7:45~~	~~1~~	~~0.919~~	~~A BB~~	~~1084.~~	~~0.398~~	~~NG/UL~~	~~0.08~~
16	NOT FOUND									
17	~~128~~	~~634~~	~~8:00~~	~~1~~	~~0.949~~	~~A BB~~	~~518.~~	~~0.271~~	~~NG/UL~~	~~0.06~~
18	NOT FOUND									
19	NOT FOUND									
20	~~108~~	~~695~~	~~8:46~~	~~1~~	~~1.040~~	~~A BB~~	~~592.~~	~~0.516~~	~~NG/UL~~	~~0.11~~
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	NOT FOUND									
26	NOT FOUND									
27	~~77~~	~~769~~	~~9:42~~	~~2~~	~~0.853~~	~~A BB~~	~~572.~~	~~0.230~~	~~NG/UL~~	~~0.05~~
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	NOT FOUND									
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	NOT FOUND									
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	NOT FOUND									
49	NOT FOUND									
50	NOT FOUND									

F.H. 2/22/93

9613492.6118

000408

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	53.49	25.00	3.142	1.469	2.14
8	7.41	1.01	0.913	1.01	57.38	25.00	3.367	1.467	2.30
9	17:48	1.00	1.127	1.00	50.34	25.00	0.285	0.142	2.01
10	9:42	1.00	0.852	1.00	33.26	25.00	0.651	0.489	1.33
11	14:08	1.00	0.894	1.00	33.46	25.00	1.708	1.276	1.34
12	23:18	1.00	0.910	1.00	42.49	25.00	2.168	1.275	1.70
13	7:55	1.01	0.941	1.00	56.89	25.00	2.634	1.158	2.28
14	8:44	1.00	1.039	1.00	34.03	25.00	1.271	0.934	1.36
15	7:43	1.00	0.917	1.00	0.40	25.00	0.029	1.819	0.02
16	7:54		0.940						
17	7:57	1.01	0.946	1.00	0.27	25.00	0.014	1.275	0.01
18	8:16		0.983						
19	8:27		1.005						
20	8:46	1.00	1.044	1.00	0.52	25.00	0.016	0.766	0.02
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.081						
24	9:24		1.119						
25	9:26		1.122						
26	9:32		1.134						
27	9:44	1.00	0.856	1.00	0.23	25.00	0.004	0.484	0.01
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.973						
33	11:04		0.972						
34	11:15		0.989						
35	11:26		1.004						
36	11:36		1.020						
37	11:45		1.033						
38	12:51		1.130						
39	13:09		1.156						
40	13:33		0.858						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:41		0.930						
45	15:14		0.965						
46	15:25		0.976						
47	15:45		0.998						
48	15:53		1.006						
49	16:00		1.014						
50	16:14		1.028						

Quantitation Report File: 30222S07

Data: 30222S07.TI
02/22/93 13:22:00
Sample: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
Conds.: CAP/.25,30222S01,3DFT0222S1
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
51	C565 DIBENZOFURAN
52	C575 2,6-DINITROTOLUENE
53	C580 DIETHYLPHTHALATE
54	C570 2,4-DINITROTOLUENE
55	C590 FLUORENE
56	C585 4-CHLOROPHENYL-PHENYLETHER
57	C595 4-NITROANILINE
58	C610 4,6-DINITRO-2-METHYLPHENOL
59	C615 N-NITROSODIPHENYLAMINE
60	C625 4-BROMOPHENYL-PHENYLETHER
61	C630 HEXACHLOROBENZENE
62	C635 PENTACHLOROPHENOL
63	C640 PHENANTHRENE
64	C645 ANTHRACENE
65	C648 CARBAZOLE
66	C650 DI-N-BUTYLPHTHALATE
67	C655 FLUORANTHENE
68	C715 PYRENE
69	C720 BUTYLBENZYLPHTHALATE
70	C725 3,3'-DICHLOROBENZIDINE
71	C730 BENZO(A)ANTHRACENE
72	C740 CHRYSENE
73	C735 BIS(2-ETHYLHEXYL)PHTHALATE
74	C760 DI-N-OCTYL PHTHALATE
75	C765 BENZO(B)FLUROANTHENE
76	C770 BENZO(K)FLUORANTHENE
77	C775 BENZO(A)PYRENE
78	C780 INDENO(1,2,3-CD)PYRENE
79	C785 DIBENZO(A,H)ANTHRACENE
80	C790 BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	NOT FOUND								
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	NOT FOUND								
63	NOT FOUND								

9613492.6120

000410

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	149	1669	21:04	4	1.078	A BB	20756.	3.482 NG/UL	0.71
67	NOT FOUND								
68	NOT FOUND								
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	~~149~~	~~2040~~	~~25:45~~	~~5~~	~~1.005~~	~~A BB~~	~~762.~~	~~0.283 NG/UL~~	~~0.06~~
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

F.H. 2/22/93

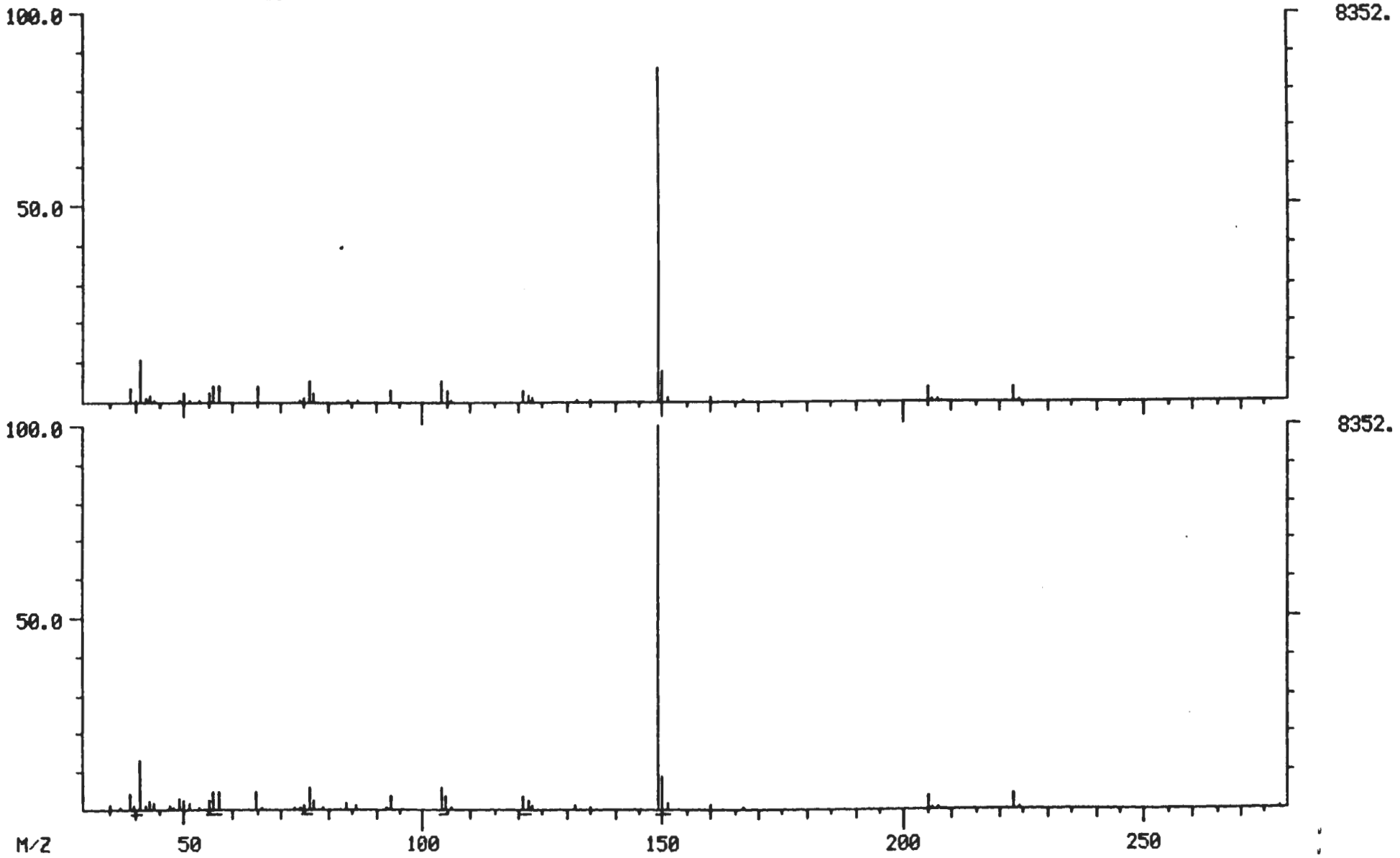
No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19		1.034						
52	15:21		0.972						
53	17:03		1.080						
54	16:22		1.036						
55	17:12		1.089						
56	17:15		1.092						
57	17:20		1.098						
58	17:24		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:34		0.951						
62	19:05		0.977						
63	19:36		1.003						
64	19:43		1.010						
65	20:08		1.031						
66	21:04	1.00	1.079	1.00	3.48	25.00	0.176	1.263	0.14
67	22:24		1.147						
68	22:54		0.894						
69	24:27		0.955						
70	25:34		0.998						
71	25:35		0.999						
72	25:41		1.002						
73	25:44	1.00	1.005	1.00	0.28	25.00	0.010	0.919	0.01
74	27:08		0.941						
75	27:55		0.968						
76	27:59		0.971						
77	28:42		0.995						
78	31:58		1.109						
79	32:03		1.112						
80	32:54		1.141						

0004111

DUAL MASS SPECTRUM
02/22/93 13:22:00 + 21:04
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
TEMP: 242 DEG. C
ENHANCED (S 15B 2N 0T)

DATA: 30222S07 #1669
CALI: 30222S07 #3

BASE M/Z: 149/ 149
RIC: 14464./ 17920.



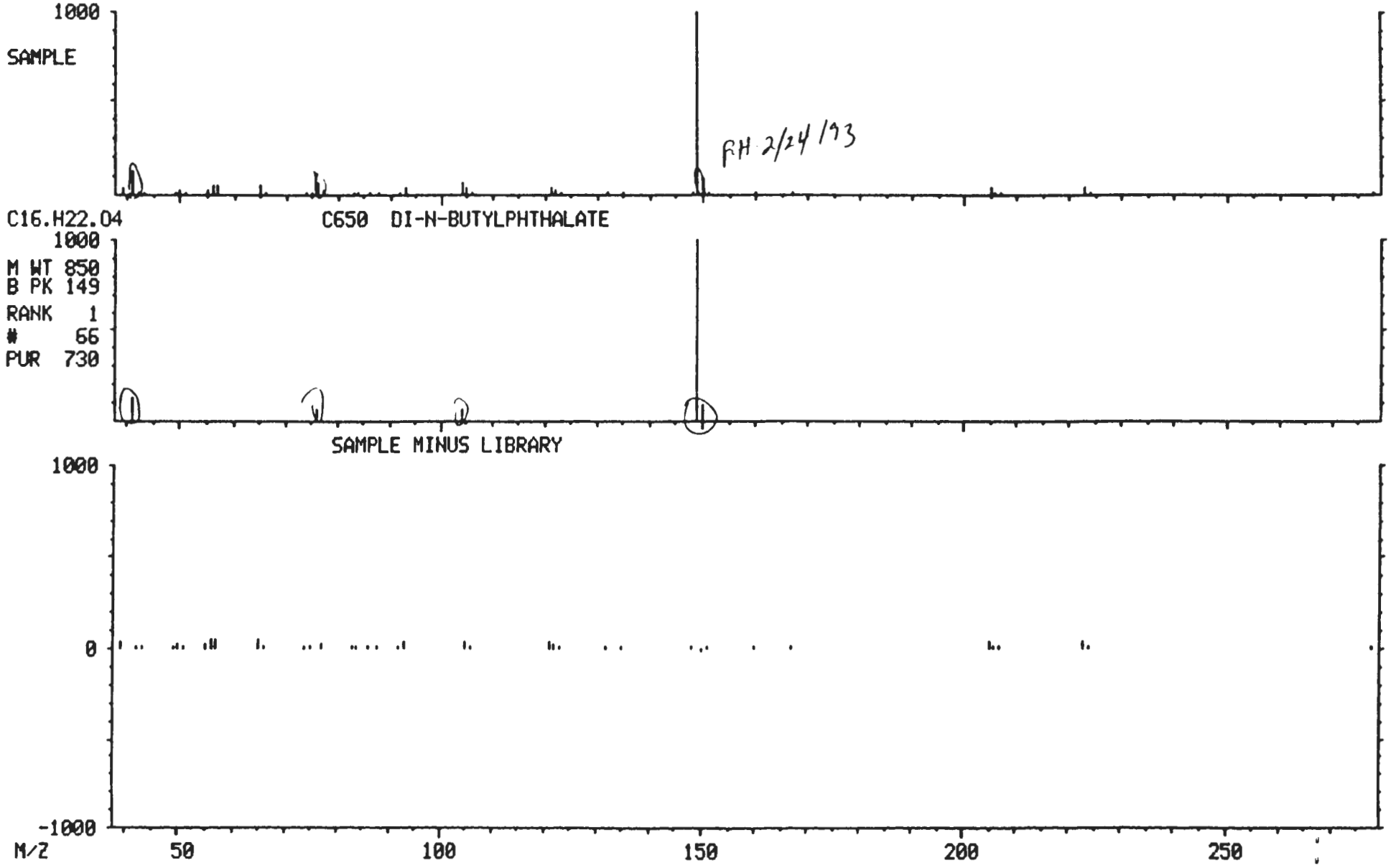
9613492.6121

000412

MID LIBRARY SEARCH (LIBRARYEP)
02/22/93 13:22:00 + 21:04
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
ENHANCED (S 15B 2N 0T)

DATA: 30222S07 #1669
CALI: 30222S07 # 3

BASE M/Z: 149
RIC: 14240.



9613492.0422

9613492.6123

INTERMEDIATE A9AR.QL FILE TO GET CAS NUMBERS

000413

Quantitation Report File: A9AR

Data: 30222S07.TI
02/22/93 13:22:00
Sample: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
Conds.: CAP/.25,30222S01,3DFT0222S1
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	CAS #	Name
1	0-00-0	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	0-00-0	CI40 *IS2* NAPHTHALENE-D8
3	0-00-0	CI50 *IS3* ACENAPHTHENE-D10
4	0-00-0	CI60 *IS4* PHENANTHRENE-D10
5	0-00-0	CI70 *IS5* CHRYSENE-D12
6	0-00-0	CI75 *IS6* PERYLENE-D12
7	108-11-2	2-PENTANOL, 4-METHYL-
8	123-42-2	2-PENTANONE, 4-HYDROXY-4-METHYL-
9	4305-26-4	2-HEXANONE, 6-(ACETYLOXY)-
10	3240-09-3	5-HEXEN-2-ONE, 5-METHYL-
11	607-99-8	BENZENE, 1,3,5-TRIBROMO-2-METHOXY-

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	TOT	668	8:26	1	1.000	A BB	142366.	20.000	NG/UL	9.00
2	TOT	902	11:23	2	1.000	A BB	171058.	20.000	NG/UL	9.00
3	TOT	1252	15:48	3	1.000	A BB	172678.	20.000	NG/UL	9.00
4	TOT	1548	19:33	4	1.000	A BB	170790.	20.000	NG/UL	9.00
5	TOT	2030	25:38	5	1.000	A BB	114677.	20.000	NG/UL	9.00
6	TOT	2286	28:52	6	1.000	A BB	86951.	20.000	NG/UL	9.00
7	TOT	417	5:16	8	0.927	A VB	168704.	0.779		0.35
8	TOT	450	5:41	8	1.000	A BB	21657300.	100.000		45.02
9	TOT	530	6:41	8	1.178	A BV	243962.	1.126		0.51
10	TOT	571	7:13	8	1.269	A BB	33792.	0.156		0.07
11	TOT	1580	19:57	8	3.511	A BB	10456.	0.048		0.02

9613492.6124

000414

QUANTITATION REPORT FOR TICS FILE: 30222S07

DATA: 30222S07
02/22/93 13:22:00
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS: CAP/.25,30222S01,3DFT0222S1
SUBMITTED BY: ANALYST: FH#14S

NO	NAME
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	2-PENTANOL, 4-METHYL-
8	2-PENTANONE, 4-HYDROXY-4-METHYL-
9	2-HEXANONE, 6-(ACETYLOXY)-
10	5-HEXEN-2-ONE, 5-METHYL-
11	BENZENE, 1,3,5-TRIBROMO-2-METHOXY-

NO	M/Z	SCAN		REF	AREA	AMOUNT
1		668	8:26	1	142366	20.
2		902	11:23	2	171058	20.
3		1252	15:48	3	172678	20.
4		1548	19:33	4	170790	20.
5		2030	25:38	5	114677	20.
6		2286	28:52	6	86951	20.
7		417	5:16	1	168704	24. K.H.
8		450	5:41	1	21657344	3042. K.H.
9		530	6:41	1	243962	34. K.H.
10		571	7:13	1	33792	5. KH.
11		1580	19:57	4	10456	~~1.~~

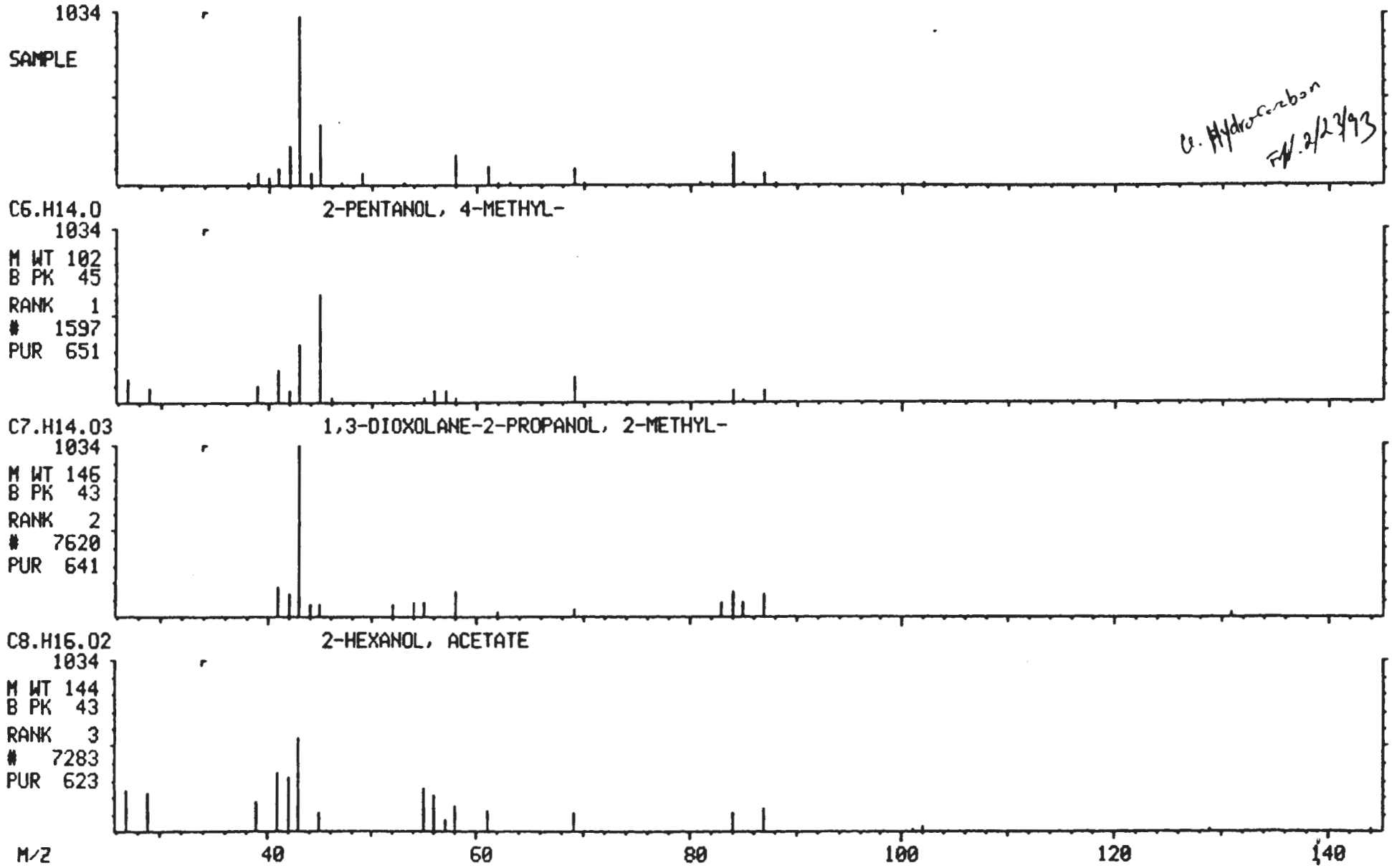
F.H. 2/23/93

000415

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 13:22:00 + 5:16
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
ENHANCED (S 15B 2N 0T)

DATA: 30222S07 # 417
CALI: 30222S07 # 3

BASE M/Z: 43
RIC: 57984.



a. Hydrocarbon
FN. 2/23/93

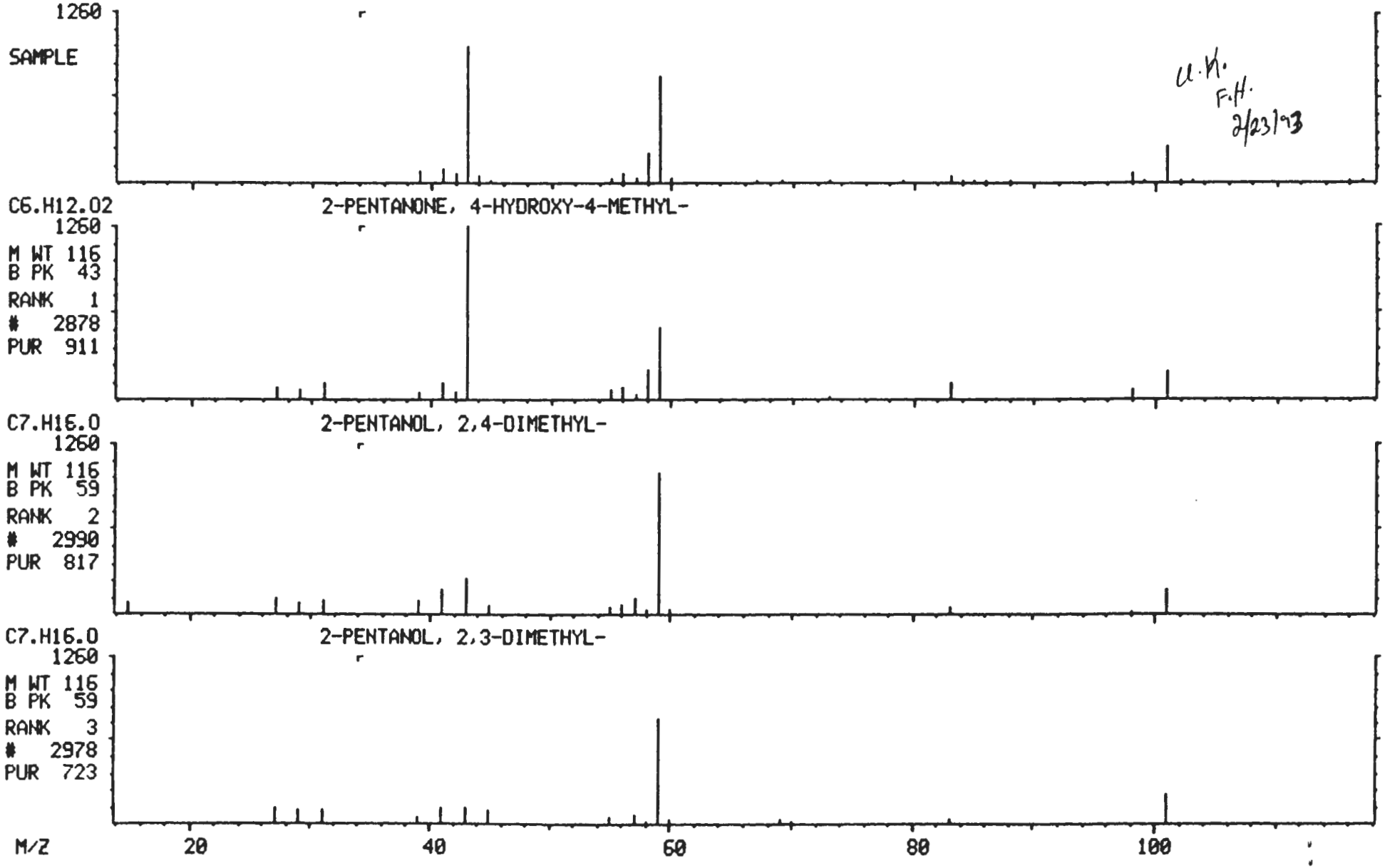
96 3092.6125

000416

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 13:22:00 + 5:41
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222501,3DFT022251
ENHANCED (S 15B 2N 0T)

DATA: 30222507 # 450
CALI: 30222507 # 3

BASE M/Z: 43
RIC: 926720.



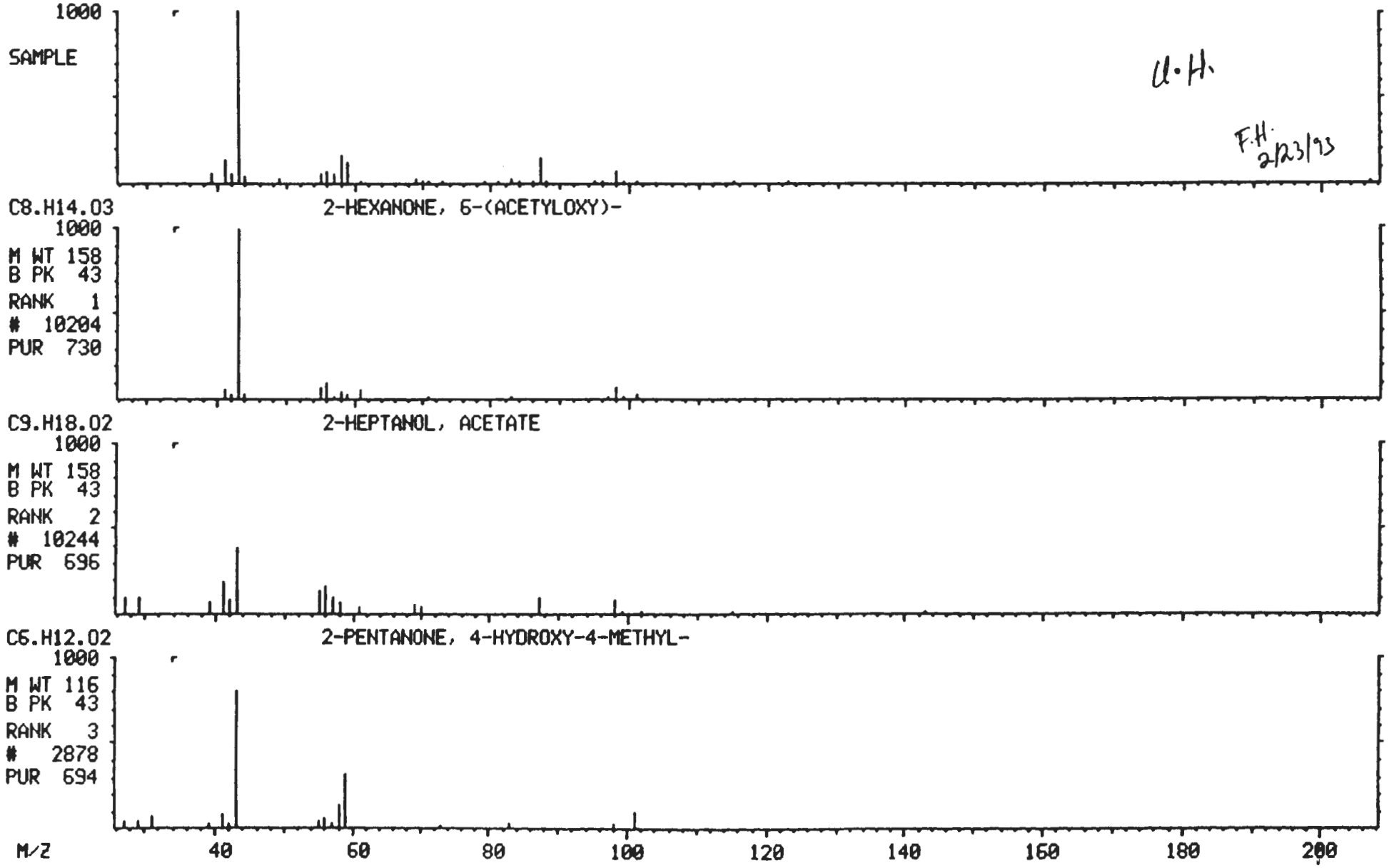
9613492.6126

0004117

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 13:22:00 + 6:41
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
ENHANCED (S 15B 2N 0T)

DATA: 30222S07 # 530
CALI: 30222S07 # 3

BASE M/Z: 43
RIC: 78720.



U.H.

F.H. 2/23/93

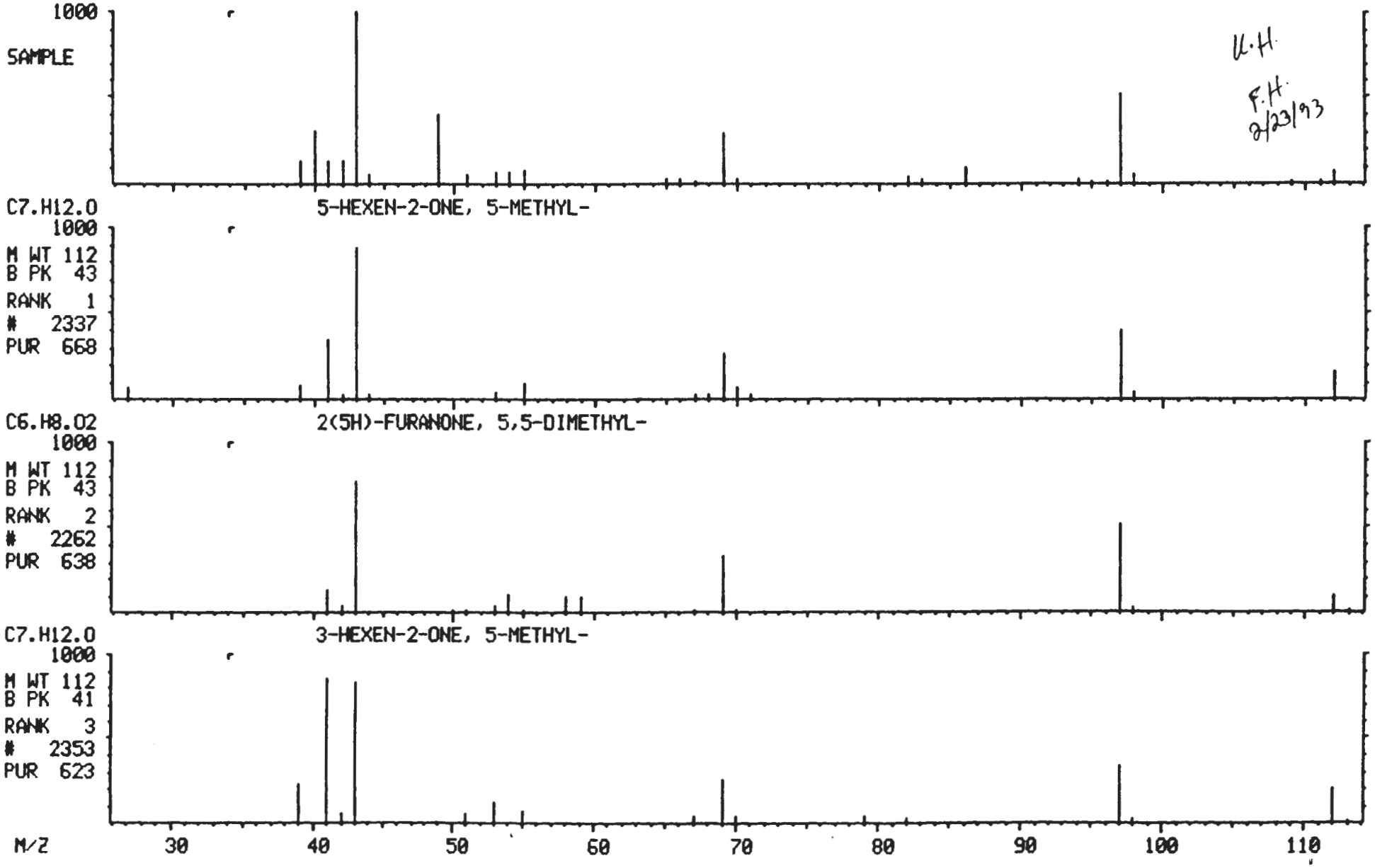
9613492.6127

000418

MID LIBRARY SEARCH (LIBRARYNB)
02/22/93 13:22:00 + 7:13
SAMPLE: CLP,02032,,SBLK0212S,L,S,A302032-BLK,BNA,BLANK
CONDS.: CAP/.25,30222S01,3DFT0222S1
ENHANCED (S 15B 2N 0T)

DATA: 30222S07 # 571
CALI: 30222S07 # 3

BASE M/Z: 43
RIC: 8320.



K.H.
F.H.
2/23/93

96B3192.6128

9613492.6129

000419

EPA SAMPLE NO.

B07K04MS

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01E

Sample wt/vol: 500 (g/mL) ML Lab File ID: 30216S04

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	120	
111-44-4	bis(2-Chloroethyl)Ether	20	U
95-57-8	2-Chlorophenol	130	
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	77	
95-50-1	1,2-Dichlorobenzene	20	U
95-48-7	2-Methylphenol	20	U
108-60-1	2,2'-oxybis(1-Chloropropane)	20	U
106-44-5	4-Methylphenol	20	U
621-64-7	N-Nitroso-Di-n-Propylamine	87	
67-72-1	Hexachloroethane	20	U
98-95-3	Nitrobenzene	20	U
78-59-1	Isophorone	20	U
88-75-5	2-Nitrophenol	20	U
105-67-9	2,4-Dimethylphenol	20	U
111-91-1	bis(2-Chloroethoxy)Methane	20	U
120-83-2	2,4-Dichlorophenol	20	U
120-82-1	1,2,4-Trichlorobenzene	79	
91-20-3	Naphthalene	20	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	20	U
59-50-7	4-Chloro-3-Methylphenol	140	
91-57-6	2-Methylnaphthalene	20	U
77-47-4	Hexachlorocyclopentadiene	20	U
88-06-2	2,4,6-Trichlorophenol	20	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	20	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	20	U
208-96-8	Acenaphthylene	20	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	84	
51-28-5	2,4-Dinitrophenol	50	U

9613492.4130

000420

EPA SAMPLE NO.

B07K04MS

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01E

Sample wt/vol: 500 (g/mL) ML Lab File ID: 30216S04

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: _____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

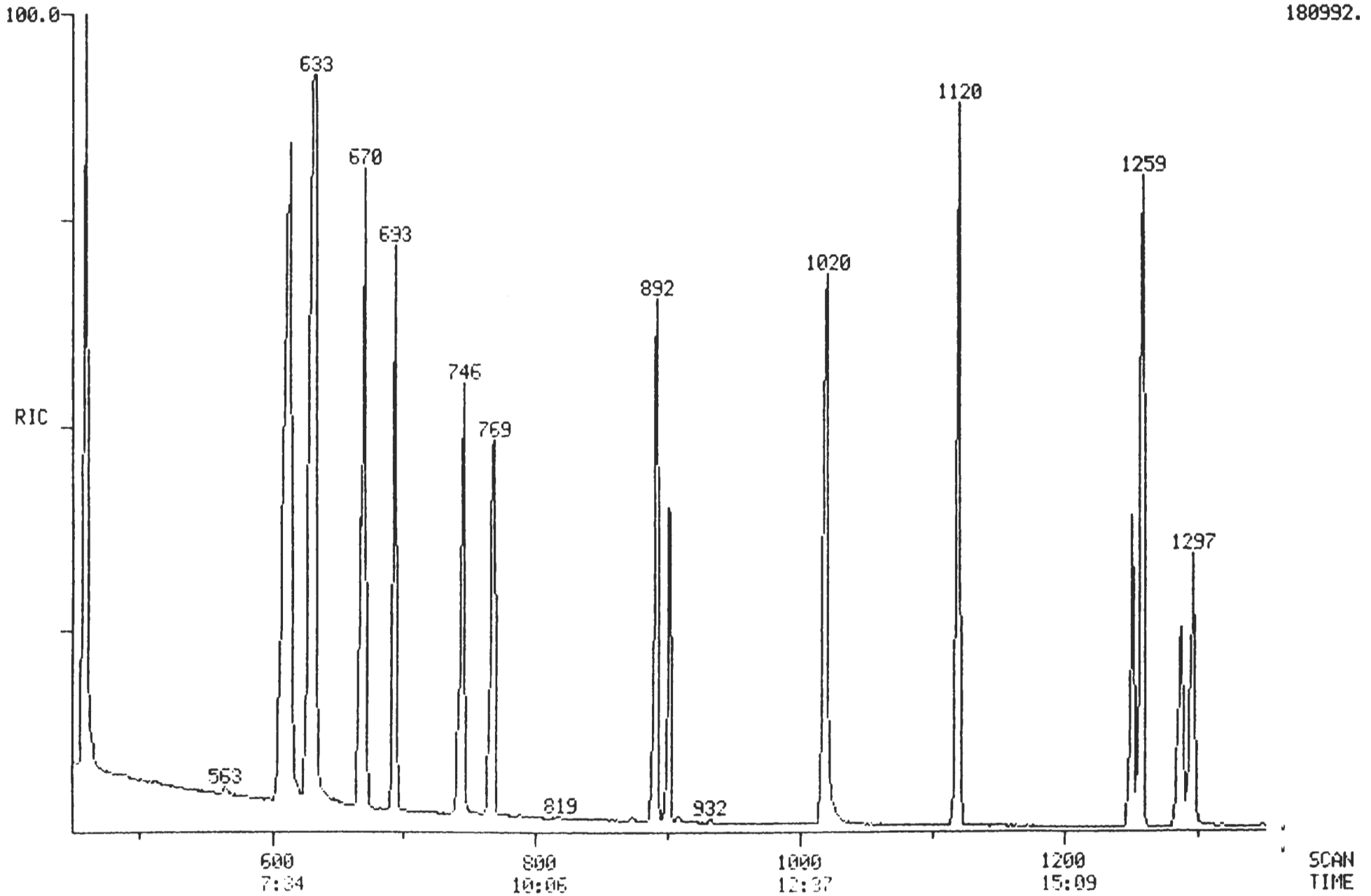
GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	110	
132-64-9	Dibenzofuran	20	U
121-14-2	2,4-Dinitrotoluene	77	
606-20-2	2,6-Dinitrotoluene	20	U
84-66-2	Diethylphthalate	20	U
7005-72-3	4-Chlorophenyl-phenylether	20	U
86-73-7	Fluorene	20	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	20	U
101-55-3	4-Bromophenyl-phenylether	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	120	
85-01-8	Phenanthrene	20	U
120-12-7	Anthracene	20	U
86-74-8	Carbazole	20	U
84-74-2	Di-n-Butylphthalate	20	U
206-44-0	Fluoranthene	20	U
129-00-0	Pyrene	76	
85-68-7	Butylbenzylphthalate	20	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	20	U
117-81-7	bis(2-Ethylhexyl)Phthalate	20	U
218-01-9	Chrysene	20	U
117-84-0	Di-n-Octyl Phthalate	20	U
205-99-2	Benzo(b)Fluoranthene	20	U
207-08-9	Benzo(k)Fluoranthene	20	U
50-32-8	Benzo(a)Pyrene	20	U
193-39-5	Indeno(1,2,3-cd)Pyrene	20	U
53-70-3	Dibenz(a,h)Anthracene	20	U
191-24-2	Benzo(g,h,i)Perylene	20	U

(1) - Cannot be separated from Diphenylamine

000421

RIC DATA: 30216S04 #1 SCANS 450 TO 1350
02/16/93 16:41:00 CALI: 30216S04 #3
SAMPLE: CLP,02032,,B07K04MS,L,W,A302032-01E,B,MS
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

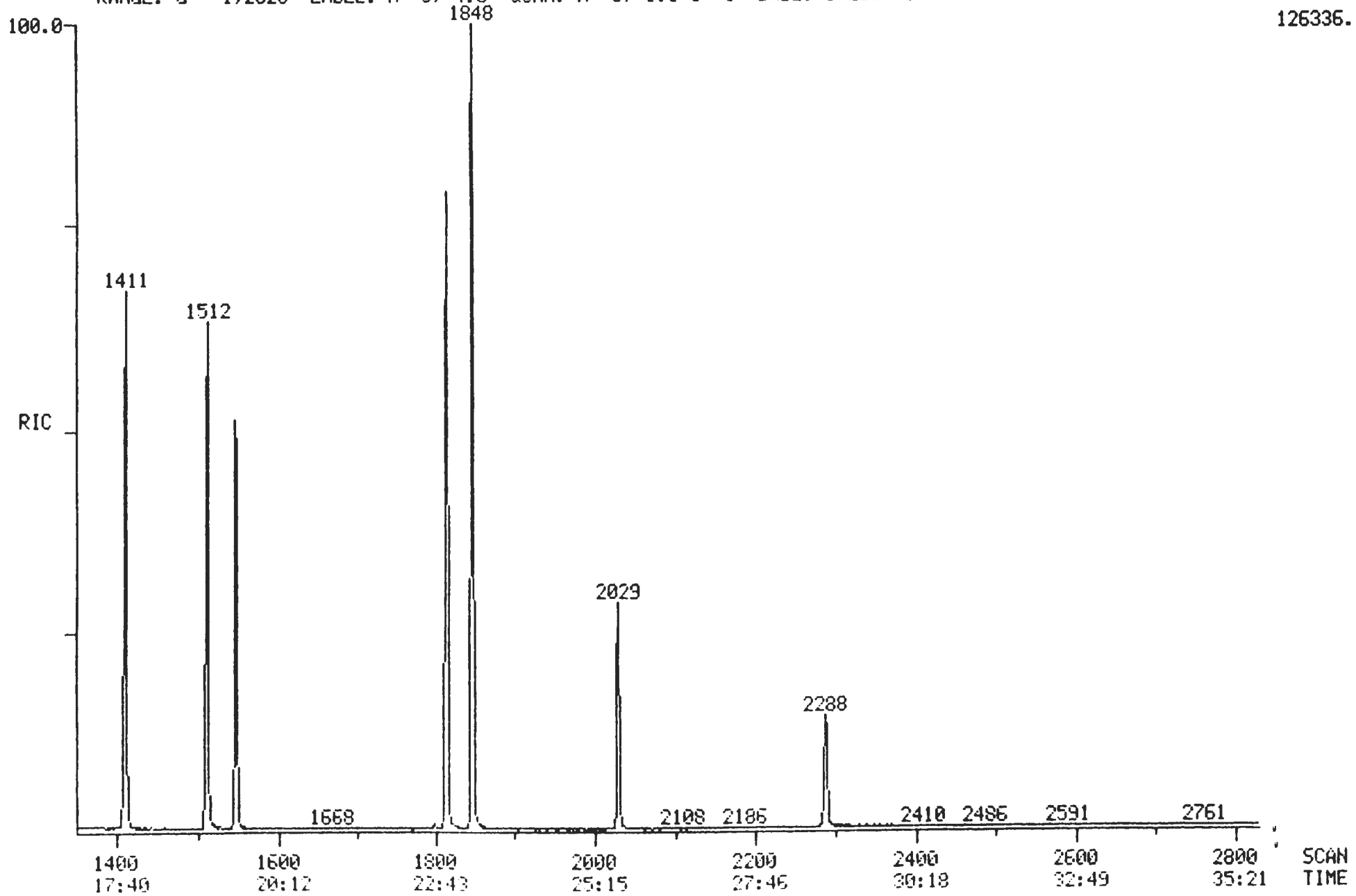


0004422

RIC
02/16/93 16:41:00
SAMPLE: CLP,02032,,B07K04MS,L,W,A302032-01E,B,MS
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S04 #1
CALI: 30216S04 #3

SCANS 1350 TO 2828



96K492.6132

Quantitation Report File: 30216S04

Data: 30216S04.TI
02/16/93 16:41:00
Sample: CLP,02032,,B07K04MS,L,W,A302032-01E,B,MS
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C330	2-CHLOROPHENOL
17	C340	1,4-DICHLOROBENZENE
18	C370	N-NITROSO-DI-N-PROPYLAMINE
19	C445	1,2,4-TRICHLOROBENZENE
20	C465	4-CHLORO-3-METHYLPHENOL
21	C550	ACENAPHTHENE
22	C560	4-NITROPHENOL
23	C570	2,4-DINITROTOLUENE
24	C635	PENTACHLOROPHENOL
25	C715	PYRENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	667	8:25	1	1.000	A BB	26160.	20.000 NG/UL	1.77
2	136	901	11:22	2	1.000	A BB	89634.	20.000 NG/UL	1.77
3	164	1251	15:48	3	1.000	A BB	47806.	20.000 NG/UL	1.77
4	188	1547	19:32	4	1.000	A BB	75460.	20.000 NG/UL	1.77
5	240	2029	25:37	5	1.000	A BB	39450.	20.000 NG/UL	1.77
6	264	2288	28:53	6	1.000	A BB	27162.	20.000 NG/UL	1.77
7	112	460	5:48	1	0.690	A BB	123443.	66.432 NG/UL	5.89
8	99	611	7:43	1	0.916	A BB	132996.	70.556 NG/UL	6.25
9	330	1411	17:49	3	1.128	A BB	25274.	75.575 NG/UL	6.70
10	82	769	9:42	2	0.853	A BB	91969.	44.535 NG/UL	3.95
11	172	1120	14:08	3	0.895	A BV	137648.	43.703 NG/UL	3.87
12	244	1848	23:20	5	0.911	A BB	117639.	44.362 NG/UL	3.93
13	132	629	7:56	1	0.943	A BB	109334.	72.656 NG/UL	6.44
14	152	693	8:45	1	1.039	A BB	50056.	40.982 NG/UL	3.63
15	94	614	7:45	1	0.921	A BB	142576.	60.163 NG/UL	5.33
16	128	633	7:59	1	0.949	A BB	111349.	67.423 NG/UL	5.97
17	146	670	8:28	1	1.004	A BB	76930.	38.257 NG/UL	3.39
18	70	746	9:25	1	1.118	A BV	64816.	43.571 NG/UL	3.86

9613492.6134

000424

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
19	180	892	11:16	2	0.990	A BB	59310.	39.571	NG/UL	3.51
20	107	1020	12:53	2	1.132	A BB	86218.	68.468	NG/UL	6.07
21	153	1259	15:54	3	1.006	A BB	113530.	42.161	NG/UL	3.73
22	109	1288	16:16	3	1.030	A BB	22542.	55.907	NG/UL	4.95
23	165	1297	16:22	3	1.037	A BB	34316.	38.706	NG/UL	3.43
24	266	1512	19:05	4	0.977	A BB	23684.	57.808	NG/UL	5.12
25	202	1815	22:55	5	0.895	A BB	137880.	37.995	NG/UL	3.37

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	66.43	25.00	3.775	1.421	2.66
8	7:41	1.00	0.913	1.00	70.56	25.00	4.067	1.441	2.82
9	17:49	1.00	1.128	1.00	75.58	25.00	0.423	0.140	3.02
10	9:42	1.00	0.852	1.00	44.54	25.00	0.821	0.461	1.78
11	14:08	1.00	0.894	1.00	43.70	25.00	2.303	1.318	1.75
12	23:21	1.00	0.909	1.00	44.36	25.00	2.386	1.344	1.77
13	7:55	1.00	0.941	1.00	72.66	25.00	3.344	1.150	2.91
14	8:44	1.00	1.039	1.00	40.98	25.00	1.531	0.934	1.64
15	7:42	1.01	0.916	1.01	60.16	25.00	4.360	1.812	2.41
16	7:57	1.00	0.946	1.00	67.42	25.00	3.405	1.263	2.70
17	8:27	1.00	1.005	1.00	38.26	25.00	2.353	1.537	1.53
18	9:26	1.00	1.122	1.00	43.57	25.00	1.982	1.137	1.74
19	11:15	1.00	0.989	1.00	39.57	25.00	0.529	0.334	1.58
20	12:51	1.00	1.130	1.00	68.47	25.00	0.770	0.281	2.74
21	15:53	1.00	1.006	1.00	42.16	25.00	1.900	1.127	1.69
22	16:14	1.00	1.028	1.00	55.91	25.00	0.377	0.169	2.24
23	16:22	1.00	1.036	1.00	38.71	25.00	0.574	0.371	1.55
24	19:05	1.00	0.977	1.00	57.81	25.00	0.251	0.109	2.31
25	22:56	1.00	0.892	1.00	37.99	25.00	2.796	1.840	1.52

9613492.6135

000425

Quantitation Report File: 30216S04

Data: 30216S04.TI
02/16/93 16:41:00
Sample: CLP,02032,,B07K04MS,L,W,A302032-01E,B,MS
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000426

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	667	8:25	1	1.000	A BB	26160.	20.000	NG/UL	1.77
2	136	901	11:22	2	1.000	A BB	89634.	20.000	NG/UL	1.77
3	164	1251	15:48	3	1.000	A BB	47806.	20.000	NG/UL	1.77
4	188	1547	19:32	4	1.000	A BB	75460.	20.000	NG/UL	1.77
5	240	2029	25:37	5	1.000	A BB	39450.	20.000	NG/UL	1.77
6	264	2288	28:53	6	1.000	A BB	27162.	20.000	NG/UL	1.77
7	112	460	5:48	1	0.690	A BB	123443.	66.432	NG/UL	5.88
8	99	611	7:43	1	0.916	A BB	132996.	70.556	NG/UL	6.25
9	330	1411	17:49	3	1.128	A BB	25274.	75.575	NG/UL	6.69
10	82	769	9:42	2	0.853	A BB	91969.	44.535	NG/UL	3.94
11	172	1120	14:08	3	0.895	A BV	137648.	43.703	NG/UL	3.87
12	244	1848	23:20	5	0.911	A BB	117639.	44.362	NG/UL	3.93
13	132	629	7:56	1	0.943	A BB	109334.	72.656	NG/UL	6.43
14	152	693	8:45	1	1.039	A BB	50056.	40.982	NG/UL	3.63
15	94	614	7:45	1	0.921	A BB	142576.	60.163	NG/UL	5.33
16	NOT FOUND									
17	128	633	7:59	1	0.949	A BB	111349.	67.423	NG/UL	5.97
18	NOT FOUND									
19	146	670	8:28	1	1.004	A BB	76930.	38.257	NG/UL	3.39
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	70	746	9:25	1	1.118	A BV	64816.	43.571	NG/UL	3.86
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	180	892	11:16	2	0.990	A BB	59310.	39.571	NG/UL	3.50
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	107	1020	12:53	2	1.132	A BB	86218.	68.468	NG/UL	6.06
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	153	1259	15:54	3	1.006	A BB	113530.	42.161	NG/UL	3.73
49	NOT FOUND									
50	109	1288	16:16	3	1.030	A BB	22542.	55.907	NG/UL	4.95

02/17/93

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000427

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.00	0.688	1.00	66.43	25.00	3.775	1.421	2.66
8	7:41	1.00	0.913	1.00	70.56	25.00	4.067	1.441	2.82
9	17:49	1.00	1.128	1.00	75.58	25.00	0.423	0.140	3.02
10	9:42	1.00	0.852	1.00	44.54	25.00	0.821	0.461	1.78
11	14:08	1.00	0.894	1.00	43.70	25.00	2.303	1.318	1.75
12	23:21	1.00	0.909	1.00	44.36	25.00	2.386	1.344	1.77
13	7:55	1.00	0.941	1.00	72.66	25.00	3.344	1.150	2.91
14	8:44	1.00	1.039	1.00	40.98	25.00	1.531	0.934	1.64
15	7:42	1.01	0.916	1.01	60.16	25.00	4.360	1.812	2.41
16	7:45		0.922						
17	7:57	1.00	0.946	1.00	67.42	25.00	3.405	1.263	2.70
18	8:16		0.983						
19	8:27	1.00	1.005	1.00	38.26	25.00	2.353	1.537	1.53
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.080						
24	9:24		1.119						
25	9:26	1.00	1.122	1.00	43.57	25.00	1.982	1.137	1.74
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.972						
33	11:04		0.972						
34	11:15	1.00	0.989	1.00	39.57	25.00	0.529	0.334	1.58
35	11:26		1.006						
36	11:36		1.020						
37	11:46		1.034						
38	12:51	1.00	1.130	1.00	68.47	25.00	0.770	0.281	2.74
39	13:10		1.158						
40	13:34		0.859						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:42		0.930						
45	15:14		0.965						
46	15:26		0.977						
47	15:45		0.998						
48	15:53	1.00	1.006	1.00	42.16	25.00	1.900	1.127	1.69
49	16:00		1.014						
50	16:14	1.00	1.028	1.00	55.91	25.00	0.377	0.169	2.24

Quantitation Report File: 30216S04

Data: 30216S04.TI
02/16/93 16:41:00
Sample: CLP,02032,,B07K04MS,L,W,A302032-01E,B,MS
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	165	1297	16:22	3	1.037	A BB	34316.	38.706 NG/UL	3.43
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	266	1512	19:05	4	0.977	A BB	23684.	57.808 NG/UL	5.12
63	NOT FOUND								

9613492.6139

000429

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	202	1815	22:55	5	0.895	A BB	137880.	37.995 NG/UL	3.36
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20		1.034						
52	15:22		0.973						
53	17:03		1.080						
54	16:22	1.00	1.036	1.00	38.71	25.00	0.574	0.371	1.55
55	17:12		1.090						
56	17:15		1.093						
57	17:20		1.098						
58	17:25		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:35		0.951						
62	19:05	1.00	0.977	1.00	57.81	25.00	0.251	0.109	2.31
63	19:36		1.003						
64	19:44		1.010						
65	20:09		1.031						
66	21:05		1.079						
67	22:25		1.147						
68	22:56	1.00	0.892	1.00	37.99	25.00	2.796	1.840	1.52
69	24:30		0.954						
70	25:38		0.998						
71	25:40		0.999						
72	25:45		1.002						
73	25:52		1.007						
74	27:24		0.942						
75	28:07		0.967						
76	28:11		0.969						
77	28:57		0.995						
78	32:38		1.122						
79	32:51		1.129						
80	33:45		1.160						

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07K05MS

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03E

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 30222S09

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1800	
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	2000	
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	1200	
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	1300	
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)Methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	1200	
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-Methylphenol	2100	
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	1300	
51-28-5	2,4-Dinitrophenol	830	U

9613492.6141

000431

EPA SAMPLE NO.

B07K05MS

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03E

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 30222S09

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-02-7	4-Nitrophenol	2300	
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	1300	
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	2300	
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-Butylphthalate	150	BJ
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)Anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-Octyl Phthalate	340	U
205-99-2	Benzo(b)Fluoranthene	340	U
207-08-9	Benzo(k)Fluoranthene	340	U
50-32-8	Benzo(a)Pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)Perylene	340	U

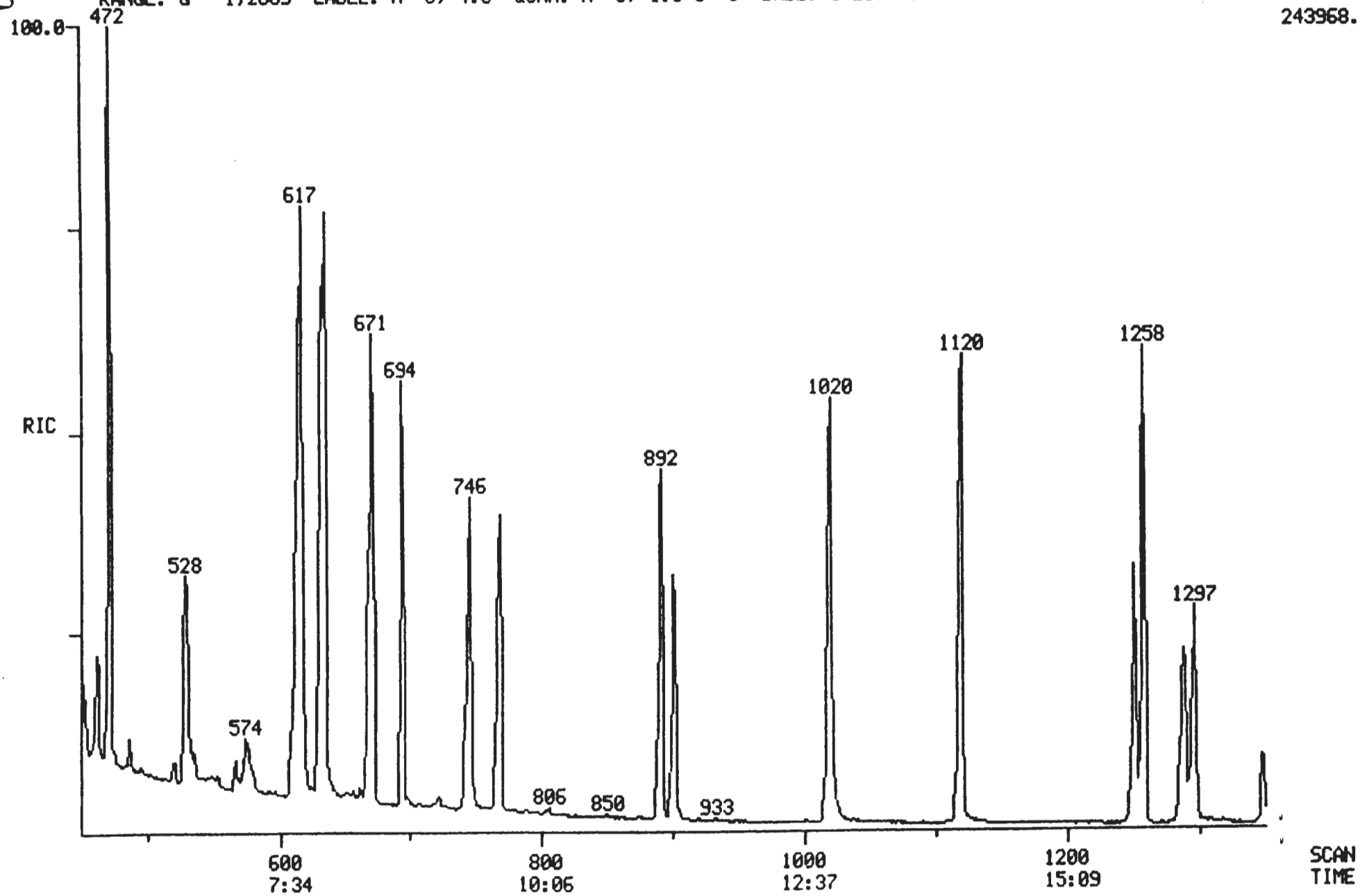
(1) - Cannot be separated from Diphenylamine

000432

RIC
02/22/93 14:40:00
SAMPLE: CLP,02032,,B07K05MS,L,S,A302032-03E,BNA,MS
CONDS.: CAP/.25,30222501,3DFT022251,30222507
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222509 #1
CALI: 30222509 #3

SCANS 450 TO 1350



243968.

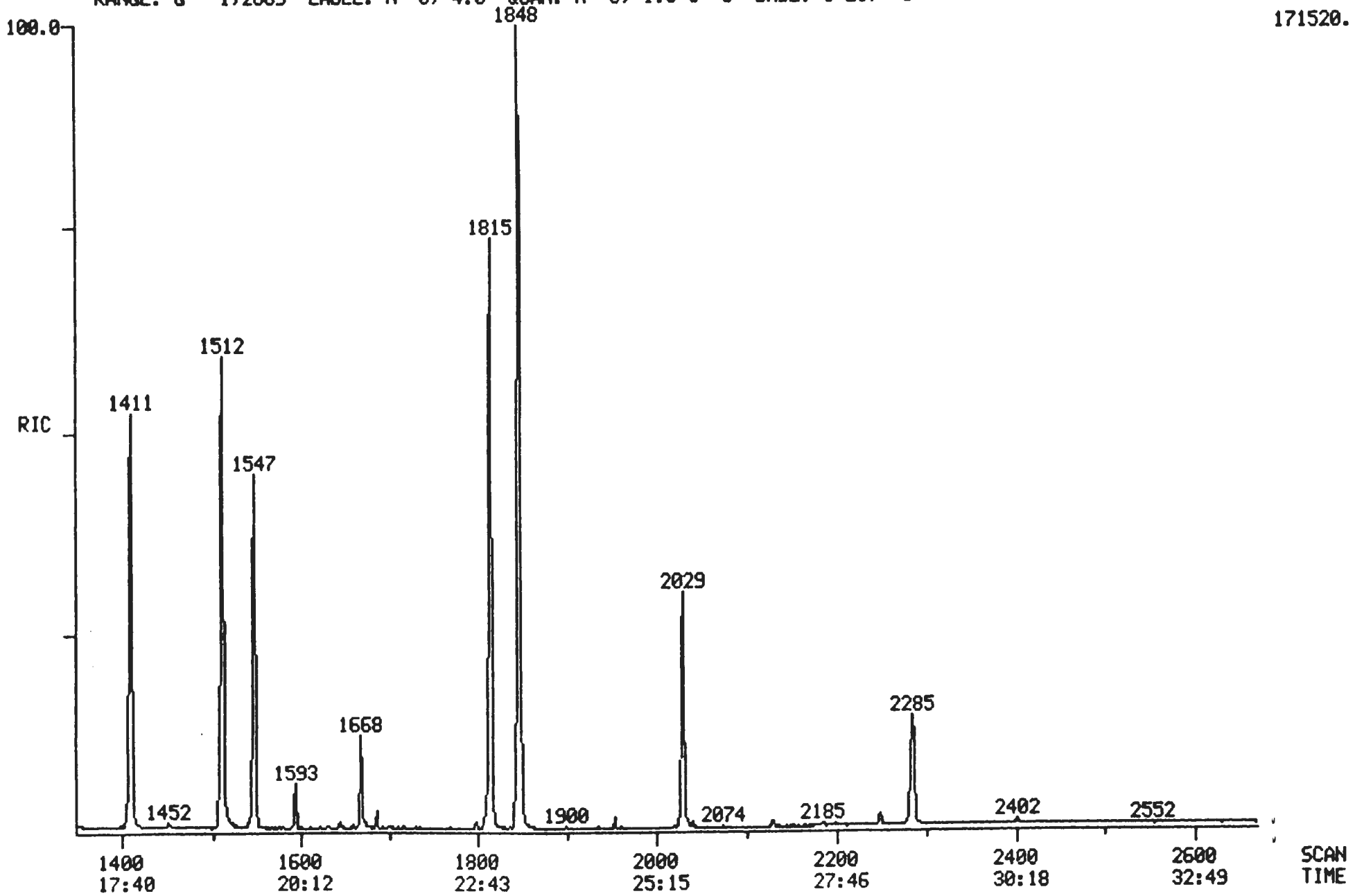
96/3192.6942

000433

RIC
02/22/93 14:40:00
SAMPLE: CLP,02032,,B07K05MS,L,S,A302032-03E,BNA,MS
CONDS.: CAP/.25,30222S01,3DFT022251,30222S07
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S09 #1
CALI: 30222S09 #3

SCANS 1350 TO 2669



SHA-2GHZ 96

9613492.6144

000434

Quantitation Report File: 30222S09

Data: 30222S09.TI
02/22/93 14:40:00
Sample: CLP,02032,,B07K05MS,L,S,A302032-03E,BNA,MS
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C330	2-CHLOROPHENOL
17	C340	1,4-DICHLOROBENZENE
18	C370	N-NITROSO-DI-N-PROPYLAMINE
19	C445	1,2,4-TRICHLOROBENZENE
20	C465	4-CHLORO-3-METHYLPHENOL
21	C550	ACENAPHTHENE
22	C560	4-NITROPHENOL
23	C570	2,4-DINITROTOLUENE
24	C635	PENTACHLOROPHENOL
25	C650	DI-N-BUTYLPHTHALATE
26	C715	PYRENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	29072.	20.000	NG/UL	1.88
2	136	901	11:22	2	1.000	A BB	98126.	20.000	NG/UL	1.88
3	164	1251	15:48	3	1.000	A BB	54656.	20.000	NG/UL	1.88
4	188	1547	19:32	4	1.000	A BB	87752.	20.000	NG/UL	1.88
5	240	2029	25:37	5	1.000	A BB	56067.	20.000	NG/UL	1.88
6	264	2285	28:51	6	1.000	A BB	36728.	20.000	NG/UL	1.88
7	112	472	5:58	1	0.707	A BB	124075.	58.125	NG/UL	5.47
8	99	614	7:45	1	0.919	A BB	133635.	62.670	NG/UL	5.90
9	330	1410	17:48	3	1.127	A BB	26220.	67.746	NG/UL	6.37
10	82	769	9:42	2	0.853	A BB	94431.	39.335	NG/UL	3.70
11	172	1120	14:08	3	0.895	A BV	134716.	38.625	NG/UL	3.63
12	244	1848	23:20	5	0.911	A BB	175770.	49.160	NG/UL	4.63
13	132	632	7:59	1	0.946	A BB	105773.	62.862	NG/UL	5.91
14	152	694	8:46	1	1.039	A BB	51114.	37.654	NG/UL	3.54
15	94	617	7:47	1	0.924	A BV	138414.	52.355	NG/UL	4.93
16	128	635	8:01	1	0.951	A BB	105104.	56.712	NG/UL	5.34
17	146	671	8:28	1	1.004	A BB	80354.	35.813	NG/UL	3.37

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000435

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
18	70	746	9:25	1	1.117	A BB	64606.	37.666 NG/UL	3.54
19	180	892	11:16	2	0.990	A BB	59254.	36.107 NG/UL	3.40
20	107	1020	12:53	2	1.132	A BB	85008.	60.181 NG/UL	5.66
21	153	1258	15:53	3	1.006	A BB	110601.	36.956 NG/UL	3.48
22	109	1288	16:16	3	1.030	A BB	28616.	66.309 NG/UL	6.24
23	165	1297	16:22	3	1.037	A BB	37912.	37.587 NG/UL	3.54
24	266	1512	19:05	4	0.977	A BB	30910.	65.985 NG/UL	6.21
25	149	1668	21:03	4	1.078	A BB	24330.	4.389 NG/UL	0.41
26	202	1815	22:55	5	0.895	A BB	180465.	36.667 NG/UL	3.45

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	58.13	25.00	3.414	1.469	2.33
8	7:41	1.01	0.913	1.01	62.67	25.00	3.677	1.467	2.51
9	17:48	1.00	1.127	1.00	67.75	25.00	0.384	0.142	2.71
10	9:42	1.00	0.852	1.00	39.34	25.00	0.770	0.489	1.57
11	14:08	1.00	0.894	1.00	38.62	25.00	1.972	1.276	1.54
12	23:18	1.00	0.910	1.00	49.16	25.00	2.508	1.275	1.97
13	7:55	1.01	0.941	1.00	62.86	25.00	2.911	1.158	2.51
14	8:44	1.00	1.039	1.00	37.65	25.00	1.407	0.934	1.51
15	7:43	1.01	0.917	1.01	52.36	25.00	3.809	1.819	2.09
16	7:57	1.01	0.946	1.00	56.71	25.00	2.892	1.275	2.27
17	8:27	1.00	1.005	1.00	35.81	25.00	2.211	1.544	1.43
18	9:26	1.00	1.122	1.00	37.67	25.00	1.778	1.180	1.51
19	11:15	1.00	0.989	1.00	36.11	25.00	0.483	0.334	1.44
20	12:51	1.00	1.130	1.00	60.18	25.00	0.693	0.288	2.41
21	15:53	1.00	1.006	1.00	36.96	25.00	1.619	1.095	1.48
22	16:14	1.00	1.028	1.00	66.31	25.00	0.419	0.158	2.65
23	16:22	1.00	1.036	1.00	37.59	25.00	0.555	0.369	1.50
24	19:05	1.00	0.977	1.00	65.98	25.00	0.282	0.107	2.64
25	21:04	1.00	1.079	1.00	4.39	25.00	0.222	1.263	0.18
26	22:54	1.00	0.894	1.00	36.67	25.00	2.575	1.756	1.47

Quantitation Report File: 30222S09

Data: 30222S09.TI
02/22/93 14:40:00
Sample: CLP,02032,,B07K05MS,L,S,A302032-03E,BNA,MS
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000437

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hgh*)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	29072.	20.000	NG/UL	1.88
2	136	901	11:22	2	1.000	A BB	98126.	20.000	NG/UL	1.88
3	164	1251	15:48	3	1.000	A BB	54656.	20.000	NG/UL	1.88
4	188	1547	19:32	4	1.000	A BB	87752.	20.000	NG/UL	1.88
5	240	2029	25:37	5	1.000	A BB	56067.	20.000	NG/UL	1.88
6	264	2285	28:51	6	1.000	A BB	36728	20.000	NG/UL	1.88
7	112	472	5:58	1	0.707	A BB	124075.	58.125	NG/UL	5.46
8	99	614	7:45	1	0.919	A BB	133635.	62.670	NG/UL	5.89
9	330	1410	17:48	3	1.127	A BB	26220.	67.746	NG/UL	6.36
10	82	769	9:42	2	0.853	A BB	94431.	39.335	NG/UL	3.69
11	172	1120	14:08	3	0.895	A BV	134716.	38.625	NG/UL	3.63
12	244	1848	23:20	5	0.911	A BB	175770.	49.160	NG/UL	4.62
13	132	632	7:59	1	0.946	A BB	105773.	62.862	NG/UL	5.90
14	152	694	8:46	1	1.039	A BB	51114.	37.654	NG/UL	3.54
15	94	617	7:47	1	0.924	A BV	138414.	52.355	NG/UL	4.92
16	NOT FOUND									
17	128	635	8:01	1	0.951	A BB	105104.	56.712	NG/UL	5.33
18	NOT FOUND									
19	146	671	8:28	1	1.004	A BB	80354.	35.813	NG/UL	3.36
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	~~45~~	~~722~~	~~9:07~~	~~1~~	~~1.081~~	~~A BB~~	~~891.~~	~~0.282~~	~~NG/UL~~	~~0.03~~
24	NOT FOUND									
25	70	746	9:25	1	1.117	A BB	64606.	37.666	NG/UL	3.54
26	NOT FOUND									
27	~~77~~	~~769~~	~~9:42~~	~~2~~	~~0.853~~	~~A BB~~	~~630.~~	~~0.265~~	~~NG/UL~~	~~0.02~~
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	180	892	11:16	2	0.990	A BB	59254.	36.107	NG/UL	3.39
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	107	1020	12:53	2	1.132	A BB	85008.	60.181	NG/UL	5.65
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	153	1258	15:53	3	1.006	A BB	110601.	36.956	NG/UL	3.47
49	NOT FOUND									
50	109	1288	16:16	3	1.030	A BB	28616.	66.309	NG/UL	6.23

F.H. 2/22/97

F.H. 1/22/97

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	58.13	25.00	3.414	1.469	2.33
8	7:41	1.01	0.913	1.01	62.67	25.00	3.677	1.467	2.51
9	17:48	1.00	1.127	1.00	67.75	25.00	0.384	0.142	2.71
10	9:42	1.00	0.852	1.00	39.34	25.00	0.770	0.489	1.57
11	14:08	1.00	0.894	1.00	38.62	25.00	1.972	1.276	1.54
12	23:18	1.00	0.910	1.00	49.16	25.00	2.508	1.275	1.97
13	7:55	1.01	0.941	1.00	62.86	25.00	2.911	1.158	2.51
14	8:44	1.00	1.039	1.00	37.65	25.00	1.407	0.934	1.51
15	7:43	1.01	0.917	1.01	52.36	25.00	3.809	1.819	2.09
16	7:54		0.940						
17	7:57	1.01	0.946	1.00	56.71	25.00	2.892	1.275	2.27
18	8:16		0.983						
19	8:27	1.00	1.005	1.00	35.81	25.00	2.211	1.544	1.43
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05	1.00	1.081	1.00	0.28	25.00	0.025	2.173	0.01
24	9:24		1.119						
25	9:26	1.00	1.122	1.00	37.67	25.00	1.778	1.180	1.51
26	9:32		1.134						
27	9:44	1.00	0.856	1.00	0.27	25.00	0.005	0.484	0.01
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.973						
33	11:04		0.972						
34	11:15	1.00	0.989	1.00	36.11	25.00	0.483	0.334	1.44
35	11:26		1.004						
36	11:36		1.020						
37	11:45		1.033						
38	12:51	1.00	1.130	1.00	60.18	25.00	0.693	0.288	2.41
39	13:09		1.156						
40	13:33		0.858						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:41		0.930						
45	15:14		0.965						
46	15:25		0.976						
47	15:45		0.998						
48	15:53	1.00	1.006	1.00	36.96	25.00	1.619	1.095	1.48
49	16:00		1.014						
50	16:14	1.00	1.028	1.00	66.31	25.00	0.419	0.158	2.65

9613492.6149

000439

Quantitation Report File: 30222S09

Data: 30222S09.TI
02/22/93 14:40:00
Sample: CLP,02032,,B07K05MS,L,S,A302032-03E,BNA,MS
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	~~149~~	~~1349~~	~~17:02~~	~~3~~	~~1.078~~	~~A BB~~	~~514.~~	~~0.145 NG/UL~~	~~0.01~~
54	165	1297	16:22	3	1.037	A BB	37912.	37.587 NG/UL	3.53
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	266	1512	19:05	4	0.977	A BB	30910.	65.985 NG/UL	6.20
63	NOT FOUND								

F.H. 2/22/93

9613492.6150

000440

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	149	1668	21:03	4	1.078	A BB	24330.	4.389 NG/UL	0.41
67	NOT FOUND								
68	202	1815	22:55	5	0.895	A BB	180465.	36.667 NG/UL	3.44 ✓
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	~~149~~	~~2039~~	~~25:44~~	~~5~~	~~1.005~~	~~A BB~~	~~608.~~	~~0.236 NG/UL~~	~~0.02~~
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

F.H 2/22/93

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19		1.034						
52	15:21		0.972						
53	17:03	1.00	1.080	1.00	0.15	25.00	0.008	1.297	0.01
54	16:22	1.00	1.036	1.00	37.59	25.00	0.555	0.369	1.50
55	17:12		1.089						
56	17:15		1.092						
57	17:20		1.098						
58	17:24		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:34		0.951						
62	19:05	1.00	0.977	1.00	65.98	25.00	0.282	0.107	2.64
63	19:36		1.003						
64	19:43		1.010						
65	20:08		1.031						
66	21:04	1.00	1.079	1.00	4.39	25.00	0.222	1.263	0.18
67	22:24		1.147						
68	22:54	1.00	0.894	1.00	36.67	25.00	2.575	1.756	1.47
69	24:27		0.955						
70	25:34		0.998						
71	25:35		0.999						
72	25:41		1.002						
73	25:44	1.00	1.005	1.00	0.24	25.00	0.009	0.919	0.01
74	27:08		0.941						
75	27:55		0.968						
76	27:59		0.971						
77	28:42		0.995						
78	31:58		1.109						
79	32:03		1.112						
80	32:54		1.141						

9613492.6151

000441
EPA SAMPLE NO.

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07K04MSD

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01F

Sample wt/vol: 500 (g/mL) ML Lab File ID: 30216S05

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	120	
111-44-4	bis(2-Chloroethyl)Ether	20	U
95-57-8	2-Chlorophenol	140	
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	82	
95-50-1	1,2-Dichlorobenzene	20	U
95-48-7	2-Methylphenol	20	U
108-60-1	2,2'-oxybis(1-Chloropropane)	20	U
106-44-5	4-Methylphenol	20	U
621-64-7	N-Nitroso-Di-n-Propylamine	95	
67-72-1	Hexachloroethane	20	U
98-95-3	Nitrobenzene	20	U
78-59-1	Isophorone	20	U
88-75-5	2-Nitrophenol	20	U
105-67-9	2,4-Dimethylphenol	20	U
111-91-1	bis(2-Chloroethoxy)Methane	20	U
120-83-2	2,4-Dichlorophenol	20	U
120-82-1	1,2,4-Trichlorobenzene	84	
91-20-3	Naphthalene	20	U
106-47-8	4-Chloroaniline	20	U
87-68-3	Hexachlorobutadiene	20	U
59-50-7	4-Chloro-3-Methylphenol	140	
91-57-6	2-Methylnaphthalene	20	U
77-47-4	Hexachlorocyclopentadiene	20	U
88-06-2	2,4,6-Trichlorophenol	20	U
95-95-4	2,4,5-Trichlorophenol	50	U
91-58-7	2-Chloronaphthalene	20	U
88-74-4	2-Nitroaniline	50	U
131-11-3	Dimethylphthalate	20	U
208-96-8	Acenaphthylene	20	U
99-09-2	3-Nitroaniline	50	U
83-32-9	Acenaphthene	91	
51-28-5	2,4-Dinitrophenol	50	U

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000442
EPA SAMPLE NO.

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

B07K04MSD

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Lab Sample ID: A302032-01F

Sample wt/vol: 500 (g/mL) ML Lab File ID: 30216S05

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: ____ decanted: (Y/N) ___ Date Extracted: 02/11/93

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 02/16/93

Injection Volume: 2.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ____

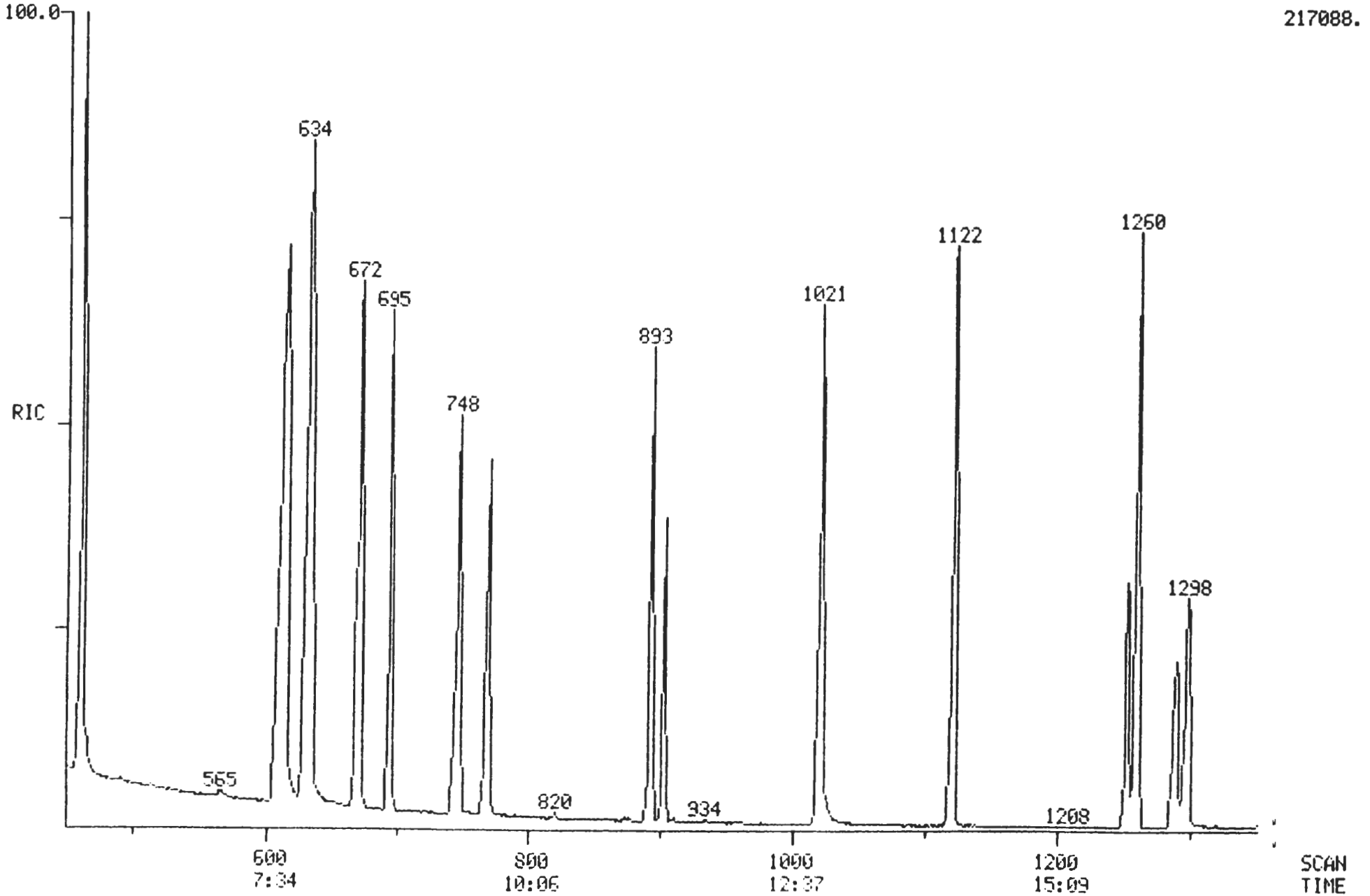
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-02-7	4-Nitrophenol	120	
132-64-9	Dibenzofuran	20	U
121-14-2	2,4-Dinitrotoluene	82	
606-20-2	2,6-Dinitrotoluene	20	U
84-66-2	Diethylphthalate	20	U
7005-72-3	4-Chlorophenyl-phenylether	20	U
86-73-7	Fluorene	20	U
100-01-6	4-Nitroaniline	50	U
534-52-1	4,6-Dinitro-2-methylphenol	50	U
86-30-6	N-Nitrosodiphenylamine (1)	20	U
101-55-3	4-Bromophenyl-phenylether	20	U
118-74-1	Hexachlorobenzene	20	U
87-86-5	Pentachlorophenol	120	
85-01-8	Phenanthrene	20	U
120-12-7	Anthracene	20	U
86-74-8	Carbazole	20	U
84-74-2	Di-n-Butylphthalate	20	U
206-44-0	Fluoranthene	20	U
129-00-0	Pyrene	82	
85-68-7	Butylbenzylphthalate	20	U
91-94-1	3,3'-Dichlorobenzidine	20	U
56-55-3	Benzo(a)Anthracene	20	U
117-81-7	bis(2-Ethylhexyl)Phthalate	20	U
218-01-9	Chrysene	20	U
117-84-0	Di-n-Octyl Phthalate	20	U
205-99-2	Benzo(b)Fluoranthene	20	U
207-08-9	Benzo(k)Fluoranthene	20	U
50-32-8	Benzo(a)Pyrene	20	U
193-39-5	Indeno(1,2,3-cd)Pyrene	20	U
53-70-3	Dibenz(a,h)Anthracene	20	U
191-24-2	Benzo(g,h,i)Perylene	20	U

(1) - Cannot be separated from Diphenylamine

000443

RIC
02/16/93 17:22:00
SAMPLE: CLP,02032,,B07K04MSD,L,W,A302032-01F,B,MSD
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S05 #1
CALI: 30216S05 #3
SCANS 450 TO 1350



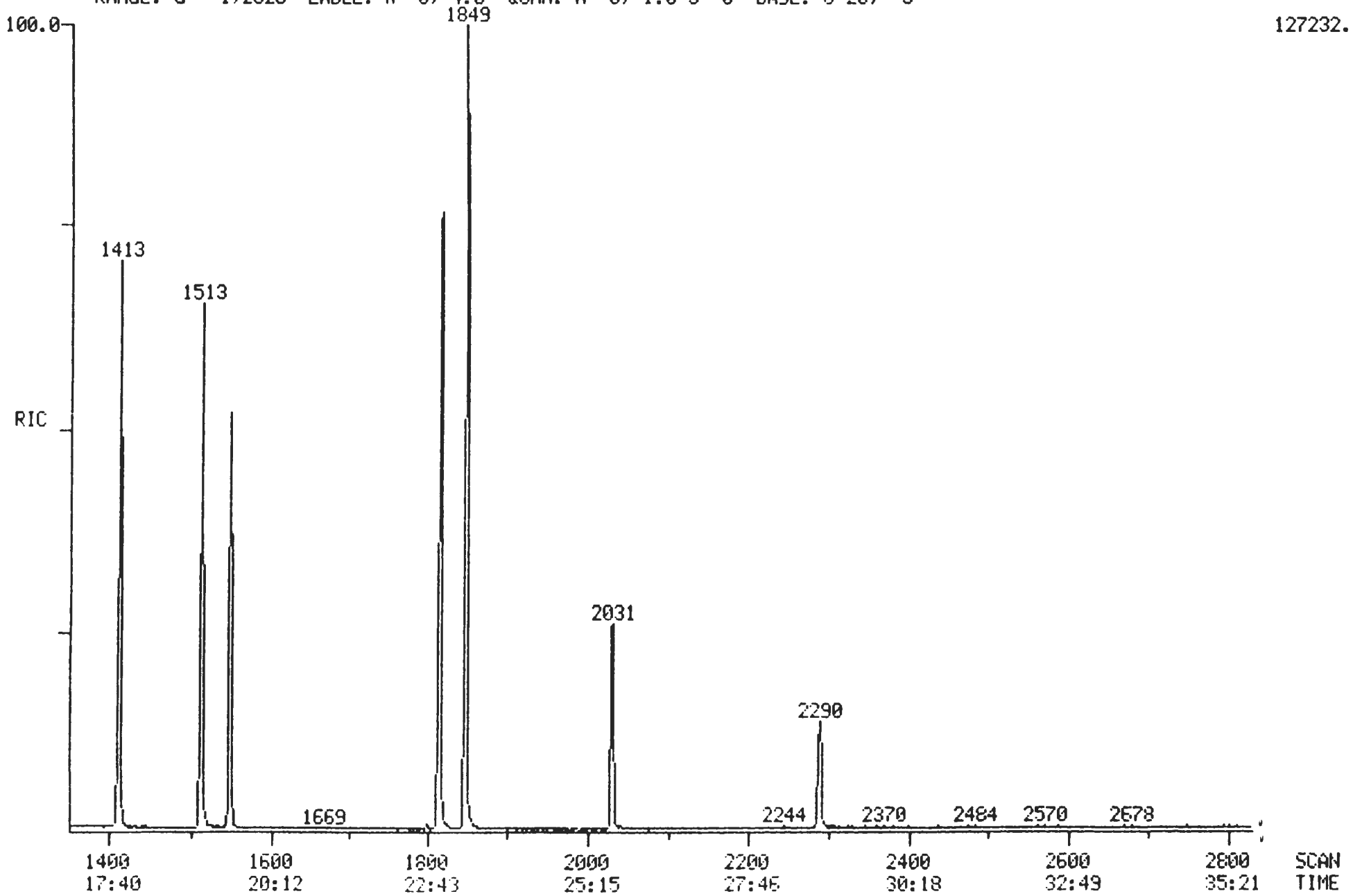
96130926153

000444

RIC
02/16/93 17:22:00
SAMPLE: CLP,02032,,B07K04MSD,L,W,A302032-01F,B,MSD
CONDS.: CAP/.25,30216S01,3DFT0216S1,30216S02
RANGE: G 1,2828 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30216S05 #1
CALI: 30216S05 #3

SCANS 1350 TO 2828



96 3492 4154

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000445

Quantitation Report File: 30216S05

Data: 30216S05.TI
02/16/93 17:22:00
Sample: CLP,02032,,B07K04MSD,L,W,A302032-01F,B,MSD
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name
1	CI30 *IS1* 1,4-DICHLOROBENZENE-D4
2	CI40 *IS2* NAPHTHALENE-D8
3	CI50 *IS3* ACENAPHTHENE-D10
4	CI60 *IS4* PHENANTHRENE-D10
5	CI70 *IS5* CHRYSENE-D12
6	CI75 *IS6* PERYLENE-D12
7	CS50 *SU1* 2-FLUOROPHENOL
8	CS45 *SU2* PHENOL-D5
9	CS55 *SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20 *SU4* NITROBENZENE-D5
11	CS25 *SU5* 2-FLUOROBIPHENYL
12	CS30 *SU6* TERPHENYL-D14
13	CS70 2-CHLOROPHENOL-D4
14	CS75 1,2-DICHLOROBENZENE-D4
15	C315 PHENOL
16	C330 2-CHLOROPHENOL
17	C340 1,4-DICHLOROBENZENE
18	C370 N-NITROSO-DI-N-PROPYLAMINE
19	C445 1,2,4-TRICHLOROBENZENE
20	C465 4-CHLORO-3-METHYLPHENOL
21	C550 ACENAPHTHENE
22	C560 4-NITROPHENOL
23	C570 2,4-DINITROTOLUENE
24	C635 PENTACHLOROPHENOL
25	C715 PYRENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	668	8:26	1	1.000	A BB	26590.	20.000 NG/UL	1.68
2	136	903	11:24	2	1.000	A BB	90144.	20.000 NG/UL	1.68
3	164	1252	15:48	3	1.000	A BB	49076.	20.000 NG/UL	1.68
4	188	1549	19:33	4	1.000	A BB	75594.	20.000 NG/UL	1.68
5	240	2030	25:38	5	1.000	A BB	37902.	20.000 NG/UL	1.68
6	264	2289	28:54	6	1.000	A BB	26722.	20.000 NG/UL	1.68
7	112	462	5:50	1	0.692	A BB	133964.	70.929 NG/UL	5.97
8	99	612	7:44	1	0.916	A BB	142144.	74.190 NG/UL	6.25
9	330	1412	17:50	3	1.128	A BB	27199.	79.229 NG/UL	6.67
10	82	770	9:43	2	0.853	A BB	99158.	47.744 NG/UL	4.02
11	172	1121	14:09	3	0.895	A BV	149930.	46.370 NG/UL	3.90
12	244	1849	23:21	5	0.911	A BB	123080.	48.309 NG/UL	4.07
13	132	631	7:58	1	0.945	A BB	117075.	76.542 NG/UL	6.44
14	152	695	8:46	1	1.040	A BB	52976.	42.671 NG/UL	3.59
15	94	615	7:46	1	0.921	A BB	145850.	60.550 NG/UL	5.10
16	128	634	8:00	1	0.949	A BB	115521.	68.817 NG/UL	5.79
17	146	672	8:29	1	1.006	A BB	83736.	40.968 NG/UL	3.45
18	70	748	9:27	1	1.120	A BB	72035.	47.641 NG/UL	4.01

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000446

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
19	180	893	11:16	2	0.989	A BB	63658.	42.232	NG/UL	3.56
20	107	1021	12:53	2	1.131	A BB	91657.	72.375	NG/UL	6.09
21	153	1260	15:54	3	1.006	A BB	125986.	45.576	NG/UL	3.84
22	109	1289	16:16	3	1.030	A BB	24522.	59.244	NG/UL	4.99
23	165	1298	16:23	3	1.037	A BB	37204.	40.877	NG/UL	3.44
24	266	1513	19:06	4	0.977	A BB	25638.	62.466	NG/UL	5.26
25	202	1816	22:56	5	0.895	A BB	142860.	40.975	NG/UL	3.45

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.01	0.688	1.01	70.93	25.00	4.031	1.421	2.84
8	7:41	1.01	0.913	1.00	74.19	25.00	4.277	1.441	2.97
9	17:49	1.00	1.128	1.00	79.23	25.00	0.443	0.140	3.17
10	9:42	1.00	0.852	1.00	47.74	25.00	0.880	0.461	1.91
11	14:08	1.00	0.894	1.00	46.37	25.00	2.444	1.318	1.85
12	23:21	1.00	0.909	1.00	48.31	25.00	2.598	1.344	1.93
13	7:55	1.01	0.941	1.00	76.54	25.00	3.522	1.150	3.06
14	8:44	1.00	1.039	1.00	42.67	25.00	1.594	0.934	1.71
15	7:42	1.01	0.916	1.01	60.55	25.00	4.388	1.812	2.42
16	7:57	1.01	0.946	1.00	68.82	25.00	3.476	1.263	2.75
17	8:27	1.00	1.005	1.00	40.97	25.00	2.519	1.537	1.64
18	9:26	1.00	1.122	1.00	47.64	25.00	2.167	1.137	1.91
19	11:15	1.00	0.989	1.00	42.23	25.00	0.565	0.334	1.69
20	12:51	1.00	1.130	1.00	72.38	25.00	0.813	0.281	2.90
21	15:53	1.00	1.006	1.00	45.58	25.00	2.054	1.127	1.82
22	16:14	1.00	1.028	1.00	59.24	25.00	0.400	0.169	2.37
23	16:22	1.00	1.036	1.00	40.88	25.00	0.606	0.371	1.64
24	19:05	1.00	0.977	1.00	62.47	25.00	0.271	0.109	2.50
25	22:56	1.00	0.892	1.00	40.97	25.00	3.015	1.840	1.64

Quantitation Report File: 30216S05

Data: 30216S05.TI
02/16/93 17:22:00
Sample: CLP,02032,,B07K04MSD,L,W,A302032-01F,B,MSD
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

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000448

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
1	152	668	8:26	1	1.000	A BB	26590.	20.000	NG/UL	1.68
2	136	903	11:24	2	1.000	A BB	90144.	20.000	NG/UL	1.68
3	164	1252	15:48	3	1.000	A BB	49076.	20.000	NG/UL	1.68
4	188	1549	19:33	4	1.000	A BB	75594.	20.000	NG/UL	1.68
5	240	2030	25:38	5	1.000	A BB	37902.	20.000	NG/UL	1.68
6	264	2289	28:54	6	1.000	A BB	26722.	20.000	NG/UL	1.68
7	112	462	5:50	1	0.692	A BB	133964.	70.929	NG/UL	5.97
8	99	612	7:44	1	0.916	A BB	142144.	74.190	NG/UL	6.24
9	330	1412	17:50	3	1.128	A BB	27199.	79.229	NG/UL	6.67
10	82	770	9:43	2	0.853	A BB	99158.	47.744	NG/UL	4.02
11	172	1121	14:09	3	0.895	A BV	149930.	46.370	NG/UL	3.90
12	244	1849	23:21	5	0.911	A BB	123080.	48.309	NG/UL	4.07
13	132	631	7:58	1	0.945	A BB	117075.	76.542	NG/UL	6.44
14	152	695	8:46	1	1.040	A BB	52976.	42.671	NG/UL	3.59
15	94	615	7:46	1	0.921	A BB	145850.	60.550	NG/UL	5.10
16	NOT FOUND									
17	128	634	8:00	1	0.949	A BB	115521.	68.817	NG/UL	5.79
18	NOT FOUND									
19	146	672	8:29	1	1.006	A BB	83736.	40.968	NG/UL	3.45
20	NOT FOUND									
21	NOT FOUND									
22	NOT FOUND									
23	NOT FOUND									
24	NOT FOUND									
25	70	748	9:27	1	1.120	A BB	72035.	47.641	NG/UL	4.01
26	NOT FOUND									
27	NOT FOUND									
28	NOT FOUND									
29	NOT FOUND									
30	NOT FOUND									
31	NOT FOUND									
32	NOT FOUND									
33	NOT FOUND									
34	180	893	11:16	2	0.989	A BB	63658.	42.232	NG/UL	3.55
35	NOT FOUND									
36	NOT FOUND									
37	NOT FOUND									
38	107	1021	12:53	2	1.131	A BB	91657.	72.375	NG/UL	6.09
39	NOT FOUND									
40	NOT FOUND									
41	NOT FOUND									
42	NOT FOUND									
43	NOT FOUND									
44	NOT FOUND									
45	NOT FOUND									
46	NOT FOUND									
47	NOT FOUND									
48	153	1260	15:54	3	1.006	A BB	125986.	45.576	NG/UL	3.84
49	NOT FOUND									
50	109	1289	16:16	3	1.030	A BB	24522.	59.244	NG/UL	4.99

02/17/93

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000449

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:33	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:41	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	29:05	0.99	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:47	1.01	0.688	1.01	70.93	25.00	4.031	1.421	2.84
8	7:41	1.01	0.913	1.00	74.19	25.00	4.277	1.441	2.97
9	17:49	1.00	1.128	1.00	79.23	25.00	0.443	0.140	3.17
10	9:42	1.00	0.852	1.00	47.74	25.00	0.880	0.461	1.91
11	14:08	1.00	0.894	1.00	46.37	25.00	2.444	1.318	1.85
12	23:21	1.00	0.909	1.00	48.31	25.00	2.598	1.344	1.93
13	7:55	1.01	0.941	1.00	76.54	25.00	3.522	1.150	3.06
14	8:44	1.00	1.039	1.00	42.67	25.00	1.594	0.934	1.71
15	7:42	1.01	0.916	1.01	60.55	25.00	4.388	1.812	2.42
16	7:45		0.922						
17	7:57	1.01	0.946	1.00	68.82	25.00	3.476	1.263	2.75
18	8:16		0.983						
19	8:27	1.00	1.005	1.00	40.97	25.00	2.519	1.537	1.64
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05		1.080						
24	9:24		1.119						
25	9:26	1.00	1.122	1.00	47.64	25.00	2.167	1.137	1.91
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.972						
33	11:04		0.972						
34	11:15	1.00	0.989	1.00	42.23	25.00	0.565	0.334	1.69
35	11:26		1.006						
36	11:36		1.020						
37	11:46		1.034						
38	12:51	1.00	1.130	1.00	72.38	25.00	0.813	0.281	2.90
39	13:10		1.158						
40	13:34		0.859						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:42		0.930						
45	15:14		0.965						
46	15:26		0.977						
47	15:45		0.998						
48	15:53	1.00	1.006	1.00	45.58	25.00	2.054	1.127	1.82
49	16:00		1.014						
50	16:14	1.00	1.028	1.00	59.24	25.00	0.400	0.169	2.37

9613492.6160

000450

Quantitation Report File: 30216S05

Data: 30216S05.TI
02/16/93 17:22:00
Sample: CLP,02032,,B07K04MSD,L,W,A302032-01F,B,MSD
Conds.: CAP/.25,30216S01,3DFT0216S1,30216S02
Formula: 1L:1ML Instrument: SHERMA Weight: 0.000
Submitted by: 30216S01 Analyst: JY#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	NOT FOUND								
54	165	1298	16:23	3	1.037	A BB	37204.	40.877 NG/UL	3.44
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	266	1513	19:06	4	0.977	A BB	25638.	62.466 NG/UL	5.26
63	NOT FOUND								

9613492.6161

000451

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
64	NOT FOUND								
65	NOT FOUND								
66	NOT FOUND								
67	NOT FOUND								
68	202	1816	22:56	5	0.895	A BB	142860.	40.975 NG/UL	3.45
69	NOT FOUND								
70	NOT FOUND								
71	NOT FOUND								
72	NOT FOUND								
73	NOT FOUND								
74	NOT FOUND								
75	NOT FOUND								
76	NOT FOUND								
77	NOT FOUND								
78	NOT FOUND								
79	NOT FOUND								
80	NOT FOUND								

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:20		1.034						
52	15:22		0.973						
53	17:03		1.080						
54	16:22	1.00	1.036	1.00	40.88	25.00	0.606	0.371	1.64
55	17:12		1.090						
56	17:15		1.093						
57	17:20		1.098						
58	17:25		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:35		0.951						
62	19:05	1.00	0.977	1.00	62.47	25.00	0.271	0.109	2.50
63	19:36		1.003						
64	19:44		1.010						
65	20:09		1.031						
66	21:05		1.079						
67	22:25		1.147						
68	22:56	1.00	0.892	1.00	40.97	25.00	3.015	1.840	1.64
69	24:30		0.954						
70	25:38		0.998						
71	25:40		0.999						
72	25:45		1.002						
73	25:52		1.007						
74	27:24		0.942						
75	28:07		0.967						
76	28:11		0.969						
77	28:57		0.995						
78	32:38		1.122						
79	32:51		1.129						
80	33:45		1.160						

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B07K05MSD

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03F

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 30222S10

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1700	
111-44-4	bis(2-Chloroethyl)Ether	340	U
95-57-8	2-Chlorophenol	1800	
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	1200	
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-oxybis(1-Chloropropane)	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-Di-n-Propylamine	1200	
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	bis(2-Chloroethoxy)Methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	1200	
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-Methylphenol	2000	
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	830	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	1200	
51-28-5	2,4-Dinitrophenol	830	U

9613492.6163

000453

EPA SAMPLE NO.

B07K05MSD

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: TMA/ARLI Contract: WHC

Lab Code: TMALA Case No.: 02032 SAS No.: NA SDG No.: NA

Matrix: (soil/water) SOIL Lab Sample ID: A302032-03F

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 30222S10

Level: (low/med) LOW Date Received: 02/10/93

% Moisture: 4 decanted: (Y/N) N Date Extracted: 02/12/93

Concentrated Extract Volume: 500.0 (uL) Date Analyzed: 02/22/93

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 9.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-02-7	4-Nitrophenol	2300	
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	1300	
606-20-2	2,6-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
86-73-7	Fluorene	340	U
100-01-6	4-Nitroaniline	830	U
534-52-1	4,6-Dinitro-2-methylphenol	830	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	2300	
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
86-74-8	Carbazole	340	U
84-74-2	Di-n-Butylphthalate	150	BJ
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	340	U
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)Anthracene	340	U
117-81-7	bis(2-Ethylhexyl)Phthalate	340	U
218-01-9	Chrysene	340	U
117-84-0	Di-n-Octyl Phthalate	340	U
205-99-2	Benzo(b)Fluoranthene	340	U
207-08-9	Benzo(k)Fluoranthene	340	U
50-32-8	Benzo(a)Pyrene	340	U
193-39-5	Indeno(1,2,3-cd)Pyrene	340	U
53-70-3	Dibenz(a,h)Anthracene	340	U
191-24-2	Benzo(g,h,i)Perylene	340	U

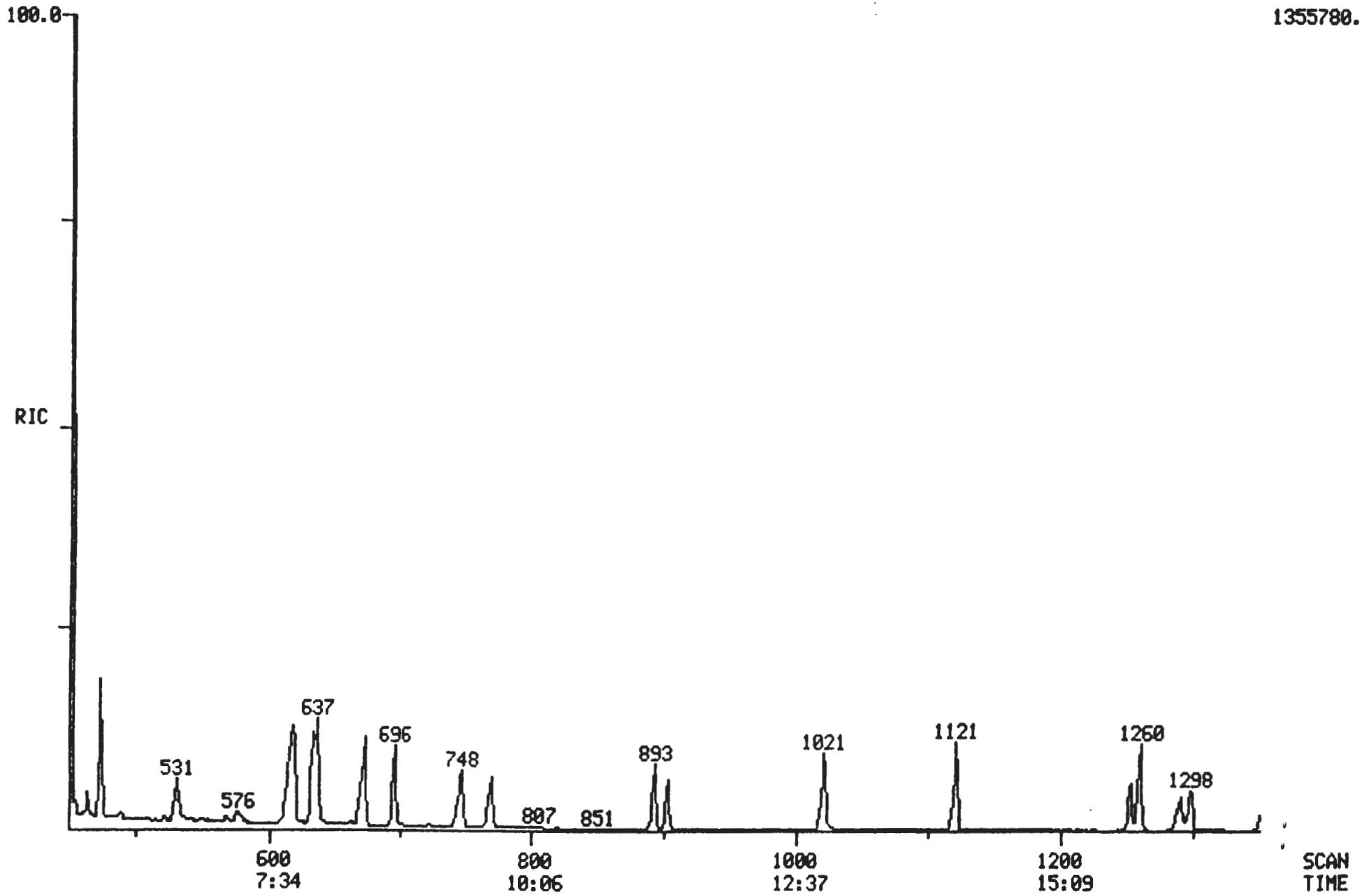
(1) - Cannot be separated from Diphenylamine

000454

RIC
02/22/93 15:19:00
SAMPLE: CLP,02032,,B07K05MSD,L,S,A302032-03F,BNA,MSD
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S10 #1
CALI: 30222S10 #3

SCANS 450 TO 1350



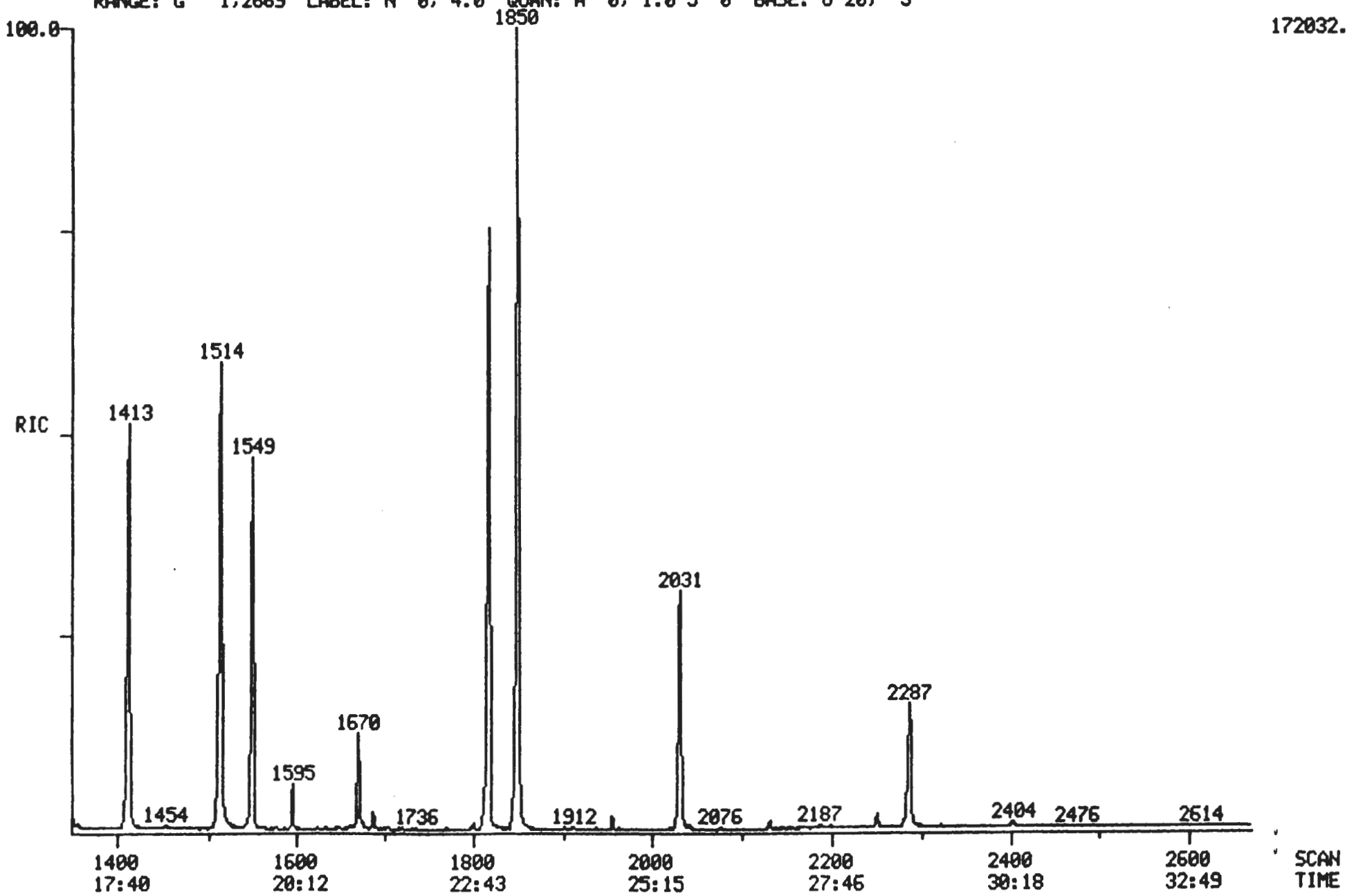
96B3492.6164

000453

RIC
02/22/93 15:19:00
SAMPLE: CLP,02032,,B07K05MSD,L,S,A302032-03F,BNA,MSD
CONDS.: CAP/.25,30222S01,3DFT0222S1,30222S07
RANGE: G 1,2669 LABEL: N 0, 4.0 QUAN: A 0, 1.0 J 0 BASE: U 20, 3

DATA: 30222S10 #1
CALI: 30222S10 #3

SCANS 1350 TO 2669



96130927.6165

9613492.6166

000456

Quantitation Report File: 30222S10

Data: 30222S10.TI
02/22/93 15:19:00
Sample: CLP,02032,,B07K05MSD,L,S,A302032-03F,BNA,MSD
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C330	2-CHLOROPHENOL
17	C340	1,4-DICHLOROBENZENE
18	C370	N-NITROSO-DI-N-PROPYLAMINE
19	C445	1,2,4-TRICHLOROBENZENE
20	C465	4-CHLORO-3-METHYLPHENOL
21	C550	ACENAPHTHENE
22	C560	4-NITROPHENOL
23	C570	2,4-DINITROTOLUENE
24	C635	PENTACHLOROPHENOL
25	C650	DI-N-BUTYLPHTHALATE
26	C715	PYRENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	670	8:28	1	1.000	A BB	29720.	20.000 NG/UL	1.97
2	136	903	11:24	2	1.000	A BB	101320.	20.000 NG/UL	1.97
3	164	1252	15:48	3	1.000	A BB	57058.	20.000 NG/UL	1.97
4	188	1549	19:33	4	1.000	A BB	89866.	20.000 NG/UL	1.97
5	240	2031	25:38	5	1.000	A BB	58034.	20.000 NG/UL	1.97
6	264	2287	28:52	6	1.000	A BB	39450.	20.000 NG/UL	1.97
7	112	474	5:59	1	0.707	A BB	122352.	56.068 NG/UL	5.51
8	99	616	7:47	1	0.919	A BB	127777.	58.616 NG/UL	5.76
9	330	1412	17:50	3	1.128	A BB	25716.	63.647 NG/UL	6.25
10	82	770	9:43	2	0.853	A BB	89832.	36.240 NG/UL	3.56
11	172	1121	14:09	3	0.895	A BB	128802.	35.374 NG/UL	3.48
12	244	1850	23:21	5	0.911	A BB	171995.	46.474 NG/UL	4.57
13	132	634	8:00	1	0.946	A BB	101762.	59.160 NG/UL	5.81
14	152	696	8:47	1	1.039	A BB	49906.	35.963 NG/UL	3.53
15	94	618	7:48	1	0.922	A BV	133704.	49.471 NG/UL	4.86
16	128	637	8:03	1	0.951	A BB	101185.	53.407 NG/UL	5.25
17	146	673	8:30	1	1.004	A BB	78726.	34.322 NG/UL	3.37

9613492.6167

000457

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
18	70	748	9:27	1	1.116	A BB	60851.	34.703	NG/UL	3.41
19	180	893	11:16	2	0.989	A BB	56978.	33.626	NG/UL	3.30
20	107	1021	12:53	2	1.131	A BB	83844.	57.486	NG/UL	5.65
21	153	1260	15:54	3	1.006	A BB	107814.	34.508	NG/UL	3.39
22	109	1290	16:17	3	1.030	A BB	29542.	65.573	NG/UL	6.44
23	165	1298	16:23	3	1.037	A BB	38572.	36.632	NG/UL	3.60
24	266	1514	19:07	4	0.977	A BB	32055.	66.819	NG/UL	6.57
25	149	1670	21:05	4	1.078	A BB	25308.	4.458	NG/UL	0.44
26	202	1817	22:56	5	0.895	A BB	179171.	35.170	NG/UL	3.46

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.01	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	56.07	25.00	3.293	1.469	2.24
8	7:41	1.01	0.913	1.01	58.62	25.00	3.440	1.467	2.34
9	17:48	1.00	1.127	1.00	63.65	25.00	0.361	0.142	2.55
10	9:42	1.00	0.852	1.00	36.24	25.00	0.709	0.489	1.45
11	14:08	1.00	0.894	1.00	35.37	25.00	1.806	1.276	1.41
12	23:18	1.00	0.910	1.00	46.47	25.00	2.371	1.275	1.86
13	7:55	1.01	0.941	1.01	59.16	25.00	2.739	1.158	2.37
14	8:44	1.01	1.039	1.00	35.96	25.00	1.343	0.934	1.44
15	7:43	1.01	0.917	1.01	49.47	25.00	3.599	1.819	1.98
16	7:57	1.01	0.946	1.01	53.41	25.00	2.724	1.275	2.14
17	8:27	1.01	1.005	1.00	34.32	25.00	2.119	1.544	1.37
18	9:26	1.00	1.122	1.00	34.70	25.00	1.638	1.180	1.39
19	11:15	1.00	0.989	1.00	33.63	25.00	0.450	0.334	1.35
20	12:51	1.00	1.130	1.00	57.49	25.00	0.662	0.288	2.30
21	15:53	1.00	1.006	1.00	34.51	25.00	1.512	1.095	1.38
22	16:14	1.00	1.028	1.00	65.57	25.00	0.414	0.158	2.62
23	16:22	1.00	1.036	1.00	36.63	25.00	0.541	0.369	1.47
24	19:05	1.00	0.977	1.00	66.82	25.00	0.285	0.107	2.67
25	21:04	1.00	1.079	1.00	4.46	25.00	0.225	1.263	0.18
26	22:54	1.00	0.894	1.00	35.17	25.00	2.470	1.756	1.41

9613492.6168

Quantitation Report File: 30222S10 000458

Data: 30222S10.TI
02/22/93 15:19:00
Sample: CLP,02032,,B07K05MSD,L,S,A302032-03F,BNA,MSD
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
1	CI30	*IS1* 1,4-DICHLOROBENZENE-D4
2	CI40	*IS2* NAPHTHALENE-D8
3	CI50	*IS3* ACENAPHTHENE-D10
4	CI60	*IS4* PHENANTHRENE-D10
5	CI70	*IS5* CHRYSENE-D12
6	CI75	*IS6* PERYLENE-D12
7	CS50	*SU1* 2-FLUOROPHENOL
8	CS45	*SU2* PHENOL-D5
9	CS55	*SU3* 2,4,6,-TRIBROMOPHENOL
10	CS20	*SU4* NITROBENZENE-D5
11	CS25	*SU5* 2-FLUOROBIPHENYL
12	CS30	*SU6* TERPHENYL-D14
13	CS70	2-CHLOROPHENOL-D4
14	CS75	1,2-DICHLOROBENZENE-D4
15	C315	PHENOL
16	C325	BIS(2-CHLOROETHYL)ETHER
17	C330	2-CHLOROPHENOL
18	C335	1,3-DICHLOROBENZENE
19	C340	1,4-DICHLOROBENZENE
20	C345	BENZYL ALCOHOL
21	C350	1,2-DICHLOROBENZENE
22	C355	2-METHYLPHENOL
23	C360	BIS(2-CHLOROISOPROPYL)ETHER
24	C365	4-METHYLPHENOL
25	C370	N-NITROSO-DI-N-PROPYLAMINE
26	C375	HEXACHLOROETHANE
27	C410	NITROBENZENE
28	C415	ISOPHORONE
29	C420	2-NITROPHENOL
30	C425	2,4-DIMETHYLPHENOL
31	C435	BIS(2-CHLOROETHOXY)METHANE
32	C430	BENZOIC ACID
33	C440	2,4-DICHLOROPHENOL
34	C445	1,2,4-TRICHLOROBENZENE
35	C450	NAPHTHALENE
36	C455	4-CHLOROANILINE
37	C460	HEXACHLOROBUTADIENE
38	C465	4-CHLORO-3-METHYLPHENOL
39	C470	2-METHYLNAPHTHALENE
40	C510	HEXACHLOROCYCLOPENTADIENE
41	C515	2,4,6-TRICHLOROPHENOL
42	C520	2,4,5-TRICHLOROPHENOL
43	C525	2-CHLORONAPHTHALENE
44	C530	2-NITROANILINE
45	C535	DIMETHYL PHTHALATE
46	C540	ACENAPHTHYLENE
47	C545	3-NITROANILINE

9613492.6169

000459

No	Name
48	C550 ACENAPHTHENE
49	C555 2,4-DINITROPHENOL
50	C560 4-NITROPHENOL

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
1	152	670	8:28	1	1.000	A BB	29720.	20.000 NG/UL	1.96
2	136	903	11:24	2	1.000	A BB	101320.	20.000 NG/UL	1.96
3	164	1252	15:48	3	1.000	A BB	57058.	20.000 NG/UL	1.96
4	188	1549	19:33	4	1.000	A BB	89866.	20.000 NG/UL	1.96
5	240	2031	25:38	5	1.000	A BB	58034.	20.000 NG/UL	1.96
6	264	2287	28:52	6	1.000	A BB	39450.	20.000 NG/UL	1.96
7	112	474	5:59	1	0.707	A BB	122352.	56.068 NG/UL	5.50
8	99	616	7:47	1	0.919	A BB	127777.	58.616 NG/UL	5.75
9	330	1412	17:50	3	1.128	A BB	25716.	63.647 NG/UL	6.25
10	82	770	9:43	2	0.853	A BB	89832.	36.240 NG/UL	3.56
11	172	1121	14:09	3	0.895	A BB	128802.	35.374 NG/UL	3.47
12	244	1850	23:21	5	0.911	A BB	171995.	46.474 NG/UL	4.56
13	132	634	8:00	1	0.946	A BB	101762.	59.160 NG/UL	5.81
14	152	696	8:47	1	1.039	A BB	49906.	35.963 NG/UL	3.53
15	94	618	7:48	1	0.922	A BV	133704.	49.471 NG/UL	4.85
16	NOT FOUND								
17	128	637	8:03	1	0.951	A BB	101185.	53.407 NG/UL	5.24
18	NOT FOUND								
19	146	673	8:30	1	1.004	A BB	78726.	34.322 NG/UL	3.37
20	NOT FOUND								
21	NOT FOUND								
22	NOT FOUND								
23	~~45~~	~~724~~	~~9:08~~	~~1~~	~~1.081~~	~~A BB~~	~~611.~~	~~0.189 NG/UL~~	~~0.02~~
24	NOT FOUND								
25	70	748	9:27	1	1.116	A BB	60851.	34.703 NG/UL	3.41
26	NOT FOUND								
27	NOT FOUND								
28	NOT FOUND								
29	NOT FOUND								
30	NOT FOUND								
31	NOT FOUND								
32	NOT FOUND								
33	NOT FOUND								
34	180	893	11:16	2	0.989	A BB	56978.	33.626 NG/UL	3.30
35	NOT FOUND								
36	NOT FOUND								
37	NOT FOUND								
38	107	1021	12:53	2	1.131	A BB	83844.	57.486 NG/UL	5.64
39	NOT FOUND								
40	NOT FOUND								
41	NOT FOUND								
42	NOT FOUND								
43	NOT FOUND								
44	NOT FOUND								
45	NOT FOUND								
46	NOT FOUND								
47	NOT FOUND								
48	153	1260	15:54	3	1.006	A BB	107814.	34.508 NG/UL	3.39
49	NOT FOUND								
50	109	1290	16:17	3	1.030	A BB	29542.	65.573 NG/UL	6.43

FH 8/23/

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000460

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
1	8:24	1.01	1.000	1.00	20.00	20.00	1.000	1.000	1.00
2	11:22	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
3	15:48	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
4	19:32	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
5	25:37	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
6	28:50	1.00	1.000	1.00	20.00	20.00	1.000	1.000	1.00
7	5:48	1.03	0.689	1.03	56.07	25.00	3.293	1.469	2.24
8	7:41	1.01	0.913	1.01	58.62	25.00	3.440	1.467	2.34
9	17:48	1.00	1.127	1.00	63.65	25.00	0.361	0.142	2.55
10	9:42	1.00	0.852	1.00	36.24	25.00	0.709	0.489	1.45
11	14:08	1.00	0.894	1.00	35.37	25.00	1.806	1.276	1.41
12	23:18	1.00	0.910	1.00	46.47	25.00	2.371	1.275	1.86
13	7:55	1.01	0.941	1.01	59.16	25.00	2.739	1.158	2.37
14	8:44	1.01	1.039	1.00	35.96	25.00	1.343	0.934	1.44
15	7:43	1.01	0.917	1.01	49.47	25.00	3.599	1.819	1.98
16	7:54		0.940						
17	7:57	1.01	0.946	1.01	53.41	25.00	2.724	1.275	2.14
18	8:16		0.983						
19	8:27	1.01	1.005	1.00	34.32	25.00	2.119	1.544	1.37
20	8:46		1.044						
21	8:46		1.044						
22	9:01		1.072						
23	9:05	1.01	1.081	1.00	0.19	25.00	0.016	2.173	0.01
24	9:24		1.119						
25	9:26	1.00	1.122	1.00	34.70	25.00	1.638	1.180	1.39
26	9:32		1.134						
27	9:44		0.856						
28	10:21		0.910						
29	10:29		0.921						
30	10:39		0.936						
31	10:54		0.958						
32	11:04		0.973						
33	11:04		0.972						
34	11:15	1.00	0.989	1.00	33.63	25.00	0.450	0.334	1.35
35	11:26		1.004						
36	11:36		1.020						
37	11:45		1.033						
38	12:51	1.00	1.130	1.00	57.49	25.00	0.662	0.288	2.30
39	13:09		1.156						
40	13:33		0.858						
41	13:53		0.879						
42	13:58		0.884						
43	14:23		0.910						
44	14:41		0.930						
45	15:14		0.965						
46	15:25		0.976						
47	15:45		0.998						
48	15:53	1.00	1.006	1.00	34.51	25.00	1.512	1.095	1.38
49	16:00		1.014						
50	16:14	1.00	1.028	1.00	65.57	25.00	0.414	0.158	2.62

9613492.6171

000461

Quantitation Report File: 30222S10

Data: 30222S10.TI
02/22/93 15:19:00
Sample: CLP,02032,,B07K05MSD,L,S,A302032-03F,BNA,MSD
Conds.: CAP/.25,30222S01,3DFT0222S1,30222S07
Formula: 30G:0.5ML Instrument: SHERMA Weight: 0.000
Submitted by: Analyst: FH#14S Acct. No.: CALTAB

AMOUNT=AREA * REF AMNT/(REF AREA * RESP FACT)
Resp. fac. from Library Entry

No	Name	
51	C565	DIBENZOFURAN
52	C575	2,6-DINITROTOLUENE
53	C580	DIETHYLPHTHALATE
54	C570	2,4-DINITROTOLUENE
55	C590	FLUORENE
56	C585	4-CHLOROPHENYL-PHENYLETHER
57	C595	4-NITROANILINE
58	C610	4,6-DINITRO-2-METHYLPHENOL
59	C615	N-NITROSODIPHENYLAMINE
60	C625	4-BROMOPHENYL-PHENYLETHER
61	C630	HEXACHLOROBENZENE
62	C635	PENTACHLOROPHENOL
63	C640	PHENANTHRENE
64	C645	ANTHRACENE
65	C648	CARBAZOLE
66	C650	DI-N-BUTYLPHTHALATE
67	C655	FLUORANTHENE
68	C715	PYRENE
69	C720	BUTYLBENZYLPHTHALATE
70	C725	3,3'-DICHLOROBENZIDINE
71	C730	BENZO(A)ANTHRACENE
72	C740	CHRYSENE
73	C735	BIS(2-ETHYLHEXYL)PHTHALATE
74	C760	DI-N-OCTYL PHTHALATE
75	C765	BENZO(B)FLUROANTHENE
76	C770	BENZO(K)FLUORANTHENE
77	C775	BENZO(A)PYRENE
78	C780	INDENO(1,2,3-CD)PYRENE
79	C785	DIBENZO(A,H)ANTHRACENE
80	C790	BENZO(GHI)PERYLENE

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount	%Tot
51	NOT FOUND								
52	NOT FOUND								
53	~~149~~	~~1351~~	~~17:03~~	~~3~~	~~1.079~~	~~A BB~~	~~716.~~	~~0.194 NG/UL~~	~~0.02~~
54	165	1298	16:23	3	1.037	A BB	38572.	36.632 NG/UL	3.59 ✓
55	NOT FOUND								
56	NOT FOUND								
57	NOT FOUND								
58	NOT FOUND								
59	NOT FOUND								
60	NOT FOUND								
61	NOT FOUND								
62	266	1514	19:07	4	0.977	A BB	32055.	66.819 NG/UL	6.56 ✓
63	NOT FOUND								

F.H.
02/22/93

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000462

No	m/z	Scan	Time	Ref	RRT	Meth	Area(Hght)	Amount		%Tot
64	NOT FOUND									
65	NOT FOUND									
66	149	1670	21:05	4	1.078	A BB	25308.	4.458	NG/UL	0.44
67	NOT FOUND									
68	202	1817	22:56	5	0.895	A BB	179171.	35.170	NG/UL	3.45
69	NOT FOUND									
70	NOT FOUND									
71	NOT FOUND									
72	NOT FOUND									
73	~~149~~	~~2041~~	~~25:46~~	~~5~~	~~1.005~~	~~A BB~~	~~624.~~	~~0.234~~	~~NG/UL~~	~~0.02~~
74	NOT FOUND									
75	NOT FOUND									
76	NOT FOUND									
77	NOT FOUND									
78	NOT FOUND									
79	NOT FOUND									
80	NOT FOUND									

jjn 02/25/13

No	Ret(L)	Ratio	RRT(L)	Ratio	Amnt	Amnt(L)	R.Fac	R.Fac(L)	Ratio
51	16:19		1.034						
52	15:21		0.972						
53	17:03	1.00	1.080	1.00	0.19	25.00	0.010	1.297	0.01
54	16:22	1.00	1.036	1.00	36.63	25.00	0.541	0.369	1.47
55	17:12		1.089						
56	17:15		1.092						
57	17:20		1.098						
58	17:24		0.891						
59	17:34		0.899						
60	18:29		0.946						
61	18:34		0.951						
62	19:05	1.00	0.977	1.00	66.82	25.00	0.285	0.107	2.67
63	19:36		1.003						
64	19:43		1.010						
65	20:08		1.031						
66	21:04	1.00	1.079	1.00	4.46	25.00	0.225	1.263	0.18
67	22:24		1.147						
68	22:54	1.00	0.894	1.00	35.17	25.00	2.470	1.756	1.41
69	24:27		0.955						
70	25:34		0.998						
71	25:35		0.999						
72	25:41		1.002						
73	25:44	1.00	1.005	1.00	0.23	25.00	0.009	0.919	0.01
74	27:08		0.941						
75	27:55		0.968						
76	27:59		0.971						
77	28:42		0.995						
78	31:58		1.109						
79	32:03		1.112						
80	32:54		1.141						

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ADDITIONAL RAW DATA

9613492.6174

THERMO ANALYTICAL, INC.
TMA/ARLI

000464

WORK ORDER # A3-02-032 BOOK # 90

CLIENT: WHC PAGE # 37

METHODS USED pH (150.1 & 9045 soil)

DATA & CALCULATIONS:

Sample		pH calibration	temp 23°C ~~829~~ Bk. 89/2
016	LIQ.	5.84, 5.61, 5.76	→ 5.7
02C	LIQ.	5.88, 5.81	→ 5.8
02D	DUP LIQ.	5.82, 5.87	→ 5.8
036	SOIL	10.00	→ 10.0
03I	DUP SOIL	9.90	→ 9.9
03I	DUP SOIL	9.84	→ 9.8

2/16/93

COMMENTS:

DATE	2	16	93	Total Hrs.
Signed				
Approved				

9613492.6175 THERMO ANALYTICAL, INC. 000465
TMA/ARLI

WORK ORDER # A3-02032 BOOK # 90

CLIENT: WHC PAGE # 44

METHODS USED

Moisture dried at 105°C 1-2 hrs

DATA & CALCULATIONS:

Sample I.D.	wt. of empty Beaker (g)	wt. of beaker + sample (unheated) (g)	wt. of beaker + sample (heated) (g)	% moi
036	1.0336	5.7128	5.5090	4.4%

(Balance BK 669/95)

$$\left(\frac{5.7128-5.5090}{5.7128-1.0336}\right)\times 100 = 4.4\%$$ ✓

OK WK 3/12/93

COMMENTS:

DATE	3	9	93	Total Hrs.
Signed	DR			
Approved				

000466

TMA/ARLI
Thermo Analytical Inc.

Semi VOA Extraction

Book No. 896
Page No. 36

Work Order # / Client: A3-02-032/WHC
Matrix / Method: Liquid EPA 3520.

Holding time expires: 2-15-93
Date extracted: 2-11-93
Date completed: 2-12-93

Sample Number	Sample Vol./Wt.	BN Surr./ ID / Acid Surr./ ID	BN Spikes/ID / Acid Spikes/ID	BN pH (>10) / Acid pH (<2)	BN Vf / Acid Vf	Vol Extracted, mL	GPC Y/N	Tot Vf, mL	Comments (pH for water, extract characteristics, reagents lot #, etc.)
		0.5ml/0.15.4A				1ml	N		Methylene Chloride
SBLK0211C	1000ml DI H2O	0.5ml/0.15.3.A		pH<2					lot: 11 P.D 3.30
									Sodium Sulfate
01D	1000ml								lot # 81-24 K.J TG.
			0.5ml/0.12.3.F						
01E MS	500ml		0.5ml/0.12.4 F						
01FMSD	500ml								
									Start Time. 3:35 PM.
02B	1000ml								
									J.S. Gupta LT#LA33928 (3)

Surr. & Spikes added by: RKS.
Observed by: [illegible]

Reviewed by: F.H. 2/16/93

9412 2412 96

000467

TMA/ARLI
Thermo Analytical Inc.

Semi VOA Extraction

Book No. 396
Page No. 37

Work Order # / Client: A3-02-032/WMC.
Matrix / Method: Soil/SD wic EPA 3550.

Holding time expires: 2-20-9
Date extracted: 2-12-9
Date completed: 2-19-9

Sample Number	Sample Vol./Wt.	BN Surr./ ID / Acid Surr./ ID	BN Spikes/ID / Acid Spikes/ID	BN pH (>10) / Acid pH (<2)	BN Vf / Acid Vf	Vol Extracted, mL	GPC Y/N	Tot Vf, mL	Comments (pH for water, extract characteristics, reagents lot #, etc.)
		0.5ml/0.15.4.A				0ml	Y	0.5ml	Methylene Chloride
SBLK02125	30.65 g	0.5ml/0.15.3.A							lot # F.D 330
									Sodium Sulfate
03D	30.32								lot # 80-24 F.J T.G.
			0.5ml/0.12.3.F						Acetone lot # BD 67916
03EMS	30.13		0.5ml/0.12.4.F						
03FMSD	30.14								Supelco lot # CA33728
									(3)

Surr. & Spikes added by: R.S.
Observed by: [illegible]

Reviewed by: F.H 2/22/92

96 3102 677

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38 of 42

E-93-22/2978-62

WESTINGHOUSE HANFORD COMPANY
241-T-106 DATA VALIDATION
DISTRIBUTION FORM

SDG: 1307L04

Document Title Final QA Record Case #: 02-032

Fraction: Wet Chem

Document Number: _____ Date: 4/15/94

		DISTRIBUTION			
M. Baker (HCRL)		D. Mantooth (ERL)		D. Wiley (ERL)	
P. Bartley (ERL)		T. McDonald (HCRL)		N. Wold (ERL)	
Y. Chun (HCSEA)		R. Potter (HCRL)		ERL Project File/J. Pawlowski	
B. Downs (HCSEA)		K. Rolla (HCSEA)		Project File/D. Simpson (HCRL)	
M. Gerboth (HCRL)		C. Sater (ERL)		Duplicate Project File/T. Trevino (HCSEA)	
J. Grover (ERL)		M. Schwarz (ERL)		Westinghouse EDMC	X
L. Hammerle (HCSEA)		A. Shen (HCSEA)			
K. Pool (WHC)					

Project Files (1=Administrative; 2=Correspondence; 3=Source Data; 4=Technical Data)

1.1	File Index		1.6.6.3	Plans Doc. Log		3.4	Original Chemical Data
1.2	Distribution Lists		1.6.6.4	Deliverables Doc. Log		3.5	Original Radiochemical Data
1.3	Project Procedures		1.7	Budget			
1.4	Project Modifications		1.7.1	Downloads		4.1	Task Plan
1.5	Staff		1.7.2	M-113s			
1.5.1	Staff Resumes		1.7.3	A-208s		4.2	Data Pkg. Completeness Verif. Checklist
1.5.2	Staff Training		1.7.4	Budget Status		4.3	Data Valididation Calcs./Annotated DP X
1.5.3	Auth. Former Site Employee		1.7.5	Invoices		4.4	Prelim. QA Records
1.6	QA		1.8	Requisitions			
1.6.1	QA Manual		1.9	Meeting Minutes		4.5	Data Valid. & Qual. Summary Rpts.
1.6.2	QA Implementation		1.10	Record of Telecon		4.5.1	Internal Drafts/Comments/Resol.
1.6.3.1	QA Audits-Deliverables		1.11	Progress Reports		4.5.2	WHC Review Draft Comments/Resol.
1.6.3.2	QA Audits-Files		1.12	Subcontractor (HC)		4.5.3	Final Report
1.6.4.1	Audit Resps. - Deliverables					4.6	Weekly Status Reports
1.6.4.2	Audit Resps. - Files		2.1	Incoming Correspondence		4.7	Weekly Management Reports
1.6.5	QA Training		2.2	Outgoing Correspondence			
1.6.6.1	QA Manual Document Log		2.3	Internal Correspondence			
1.6.6.2	Procedure Document Log						
			3.1	Task Order			
			3.2	Sample Lists			
			3.3	Data Validation Procedures			

9613492.6179

AS 10/18/93 V✓ COC ✓

WET CHEMISTRY DATA VALIDATION CHECKLIST - FORM A-7

PROJECT: 241-T-106	REVIEWER: AS	DATE: 10/18/93
LABORATORY: TMA	CASE: 02-~~303~~ 032	SDG: B07K04
SAMPLES/MATRIX:		
B07K04 - water		
B07K05 - ~~water~~ soil		
B07MLO - ~~soil~~ water		

1. DATA PACKAGE COMPLETENESS

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for submittal of the omitted data.

Data Package Item	Present?:	Yes	No	N/A
Case Narrative	See Attached verification sheet	—	—	—
Cover Page		—	—	—
Traffic Reports/Chain-of-Custody		—	—	—
Sample Analysis Data Report Forms		—	—	—
Standards Data		—	—	—
QC Summary				
Blanks Summary Report Forms		—	—	—
Spike Sample Recovery Report Forms		—	—	—
Duplicate Sample Analysis Report Forms		—	—	—
Laboratory Control Sample Report Forms		—	—	—
Raw Data				
Ion Chromatograph Chromatograms		—	—	—
TOC and TOX Instrument Printouts		—	—	—
Laboratory Bench Sheets		—	—	—
Additional Data				
Laboratory Sample Preparation Logs		—	—	—
Instrument Run Logs		—	—	—
Internal Laboratory Chain-of-Custory		—	—	—
Percent Solids Analysis Records		—	—	—
Reduction Formulae		—	—	—
Chemist Notebook Pages		—	—	—

2. HOLDING TIMES

Were all samples analyzed within holding times? Yes **No** N/A

Action: If any holding times were exceeded qualify all affected results as estimated (J for detects and UJ for nondetects).

3. INITIAL CALIBRATIONS

Were all instruments calibrated daily, each set-up time and were the proper number of standards used?	Yes	No	N/A
Are the correlation coefficients ≥0.995?	Yes	No	N/A
Was a balance check conducted prior to the TDS analysis?	Yes	No	N/A
Was the titrant normality checked?	Yes	No	N/A

ACTION: Qualify all data as unusable (R) if reported from an analysis in which the above criteria were not met.

4. INITIAL AND CONTINUING CALIBRATION VERIFICATION

Have ICV and CCV been analyzed at the proper frequency?	Yes	No	N/A
Are ICV and CCV percent recoveries within control?	Yes	No	N/A
Are there calculation errors?	Yes	No	N/A

ACTION: Qualify all affected data in accordance with the validation requirements.

5. LABORATORY BLANKS

Are target analytes present in the laboratory blanks?	Yes	No	N/A

ACTION: Qualify all associated sample results for any analyte <5 times the amount in any laboratory blank as nondetected (U) and list the affected samples and analytes below.

6. FIELD BLANKS

Are target analytes present in the field blanks?	Yes	No	N/A

ACTION: Qualify all sample results for any analyte <5 times the amount in any valid field blank as nondetected (U).

7. MATRIX SPIKE SAMPLE ANALYSIS

Are spike recoveries within the acceptance limits?	Yes	No	N/A

ACTION: If the sample concentration exceeds the spike concentration by a factor of 4 or more, and spike recoveries are outside the acceptance limits, no qualification is necessary. If spike recovery is outside the control limits and the sample results are >CRQL, qualify the data as estimated (J). If the spike recovery is <30% and the sample results are less then the IDL qualify the data as unusable (R).

8. LABORATORY CONTROL SAMPLE

Are percent recoveries within the acceptance limits? Yes No N/A

Are there calculation errors? Yes No N/A

ACTION: Qualify the affected results according to the following requirements:

AQUEOUS LCS - Qualify as estimated (J), all sample results > IDL, for which the LCS %R falls within the range 50-79% or > 120%. Qualify as estimated (UJ), all sample results < IDL, for which the LCS falls within the range of 50-79%. Qualify as unusable (R) all sample results, for which the LCS %R < 50%.

SOLID LCS - Qualify as estimated (J), all sample results > IDL for which the LCS %R is outside the established control limits. Qualify as estimated (UJ), all sample results < IDL for which the LCS %R are lower than the established control limits.

9. PERFORMANCE AUDIT ANALYSES

Are the performance audit sample results within the acceptance limits? Yes No N/A

ACTION: Note the results of the performance audit samples in the validation narrative.

10. DUPLICATE SAMPLE ANALYSIS

Are RPD values within the acceptance limits? Yes No N/A

Action: Qualify the results for all associated samples of the same matrix as estimated (J) if the RPD falls outside the acceptance limits.

11. FIELD DUPLICATE SAMPLES

Do RPD values exceed the acceptance limits? Yes No N/A

ACTION: Note the results of the field duplicate samples in the validation narrative.

12. FIELD SPLIT SAMPLES

Do RPD values exceed the acceptance limits? Yes No N/A

ACTION: Note the results of the field split samples in the validation narrative.

13. ANALYTE QUANTITATION AND DETECTION LIMITS

Have results been reported and calculated correctly? Yes No N/A

Are instrument detection limits below the CRDL? Yes No N/A

Action: If analyte quantitation is in error, contact the laboratory for explanation. If errors or deficiencies can not be resolved with the laboratory, qualify associated data as unusable (R).

14. OVERALL ASSESSMENT AND SUMMARY

Has the laboratory conducted the analysis in accordance with the analytical SOW? Yes No N/A

Were project specific data quality objectives met for this analysis? Yes No N/A

ACTION: Summarize all the data qualifications and complete the data validation narrative as specified in Section 10.0 of the data validation requirements.

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COMMENTS (attach additional sheets as necessary):

9613492.6185

APPENDIX B

DATA SUMMARY FORMS

9613492.6186

04,05,L0

Package ID: B07R04-TUA-440

GENERAL CHEMISTRY DATA VERIFICATION CHECKLIST - FORM A-7

Review the data package for completeness and check off the items below. If any data review elements are missing, contact the laboratory for submittal of the omitted data.

Data Package Item	Present?	Yes	No	N/A
☒ Anions by Ion Chromatography (Method 300.0)				
Sample Results		X		
Initial Calibration Data		X		
Continuing Calibration Verification		X		
Calibration Standard Concentrations		X		
Blank Analysis Data or Summary Report Forms		X		
Duplicate Sample Analysis Report Forms		X		
Spike Sample Recovery Data		X		
Laboratory Control Sample Data		X		
Raw Data		X		
Analytical Sequence		X		
Ion Chromatograms		X		
Quantitation Report		X		
Additional Data				
Moisture/% Solids data sheets		X		
Sample preparation sheets(Soils, Other only)				X
☐ Colorimetric (Note: Identify by Name, Analyte and EPA Method)_____				
Sample Results				
Initial Calibration Data				
Continuing Calibration Verification				
Calibration Standard Concentrations				
Blank Analysis Data or Summary Report Forms				
Duplicate Sample Analysis Report Forms				
Spike Sample Recovery Data				
Laboratory Control Sample Data				
Raw Data				
Analytical Sequence				
Laboratory Bench Sheets				
Chart Recorder Printouts				
Additional Data				
Moisture/% Solids data sheets				
Sample preparation sheets				

9613492.6187

04,05,10

Package ID: B07R04-TMA-440

☐ **Gravimetric (Note: Identify by Name, Analyte and EPA Method)**_____

Sample Results			
Balance Check			
Blank Analysis Data or Summary Report Forms			
Duplicate Sample Analysis Report Forms			
Laboratory Control Sample Report Forms			
Raw Data			
Additional Data			
Moisture/% Solids data sheets			
Sample preparation sheets			

☒ **Ion Selective Electrode (Note: Identify by Name, Analyte and EPA Method)**

pH - 150.1 / 9045

Sample Results	X		
Initial Calibration Data	X		
Continuing Calibration Verification	X		
Blank Analysis Data or Summary Report Forms			X
Duplicate Sample Analysis Report Forms	X		
Spike Sample Recovery Data			X
Laboratory Control Sample Data			X
Raw Data	X		
mV Check		X	
Additional Data			
Moisture/% Solids data sheets			X
Sample preparation sheets			X

☐ **Titrimetric (Note: Identify by Name, Analyte and EPA Method)**_____

Sample Results			
Initial Calibration Data (Auto)			
Continuing Calibration Verification (Auto)			
Titrant Normality Checks			
Blank Analysis Data or Summary Report Forms			
Duplicate Sample Analysis Report Forms			
Laboratory Control Sample Data			
Raw Data			
Additional Data			
Moisture/% Solids data sheets			
Sample preparation sheets			

DATA QUALIFICATION SUMMARY

SDG: B07K04	VALIDATOR: AS	DATE: 10/18/93	PAGE____OF____
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
pH	J	B07K04	Exceeded holding time
		B07K05	↓
		B07M20	
Note that samples were submitted in			
glass jars	not plastic	~~Note~~ F?	
~~Fluoride~~	~~J(+)/UJ(-)~~	~~B07K04~~	~~Samples were~~
		~~B07K05~~	~~in glass jars~~
		~~B07M20~~	~~not plastic jars~~
			~~A.S. 11/12/93~~
PO_4 ~~All anions~~	J(+)/UJ(-)	" "	Exceeded
NO_2/NO_3 ~~as below~~			holding time
$+SO_4$			A.S. 11/12/93

CALIBRATION DATA SUMMARY

SDG: B07K04	VALIDATOR: AS	DATE: 11/18/93	PAGE ____ OF ____
COMMENTS:			
CALIB. TYPE:	INITIAL	CONTINUING	INSTRUMENT:

CALIB. DATE	COMPOUND	RF	RSD/%D/%R	SAMPLES AFFECTED	QUALIFIER
2/16/93	Cl	R= .9966 ✓		—	—
	F	.9991 ✓		—	—
	PO_4	.9953 ✓		—	—
	SO_4	.9970 ✓		—	—
	$N\text{-}NO_2$	.9991 ✓		—	—
	$N\text{-}NO_3$	.9962 ✓		—	—
2/23/93	Cl =	.9980 ✓		—	—
	F =	.9986 ✓		—	—
	PO_4 =	.9967 ✓		—	—
	SO_4 =	.9993 ✓		—	—
	$N\text{-}NO_2$ =	.9999 ✓		—	—
	$N\text{-}NO_3$ =	.9985 ✓		—	—
		2/22/93	2/25/93		
2/22/93 Cal	F =	95%	99%	—	—
	Cl =	97%	97%	—	—
	$N\text{-}NO_2$ =	97%	96%	—	—
	$N\text{-}NO_3$ =	97%	97%	—	—
	$P\text{-}PO_4$ =	97%	93%	—	—
	SO_4 =	98%	97%	—	—

96 3192.6190

BLANK AND SAMPLE DATA SUMMARY

SDG: B07K04	VALIDATOR: AS	DATE: 10/18/93	PAGE____OF____
COMMENTS:			

SAMPLE ID	COMPOUND	RESULT	Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	QUALIFIER
All Blanks = Non-detect								—	—

ACCURACY DATA SUMMARY

SDG: B07K04	VALIDATOR: AS	DATE: 10/18/93	PAGE____OF____	
COMMENTS:				
SAMPLE ID	COMPOUND	% RECOVERY	SAMPLE(S) AFFECTED	QUALIFIER REQUIRED
2/22/93 DS-038	F =	101	—	—
	Cl =	105	—	—
	N-NO_3 =	100	—	—
	P-PO_4 =	103	—	—
	SO_4 =	99	—	—
2/25/93 DS-05-07	F	97%	—	—
	Cl	100%	—	—
	N-NO_3	97%	—	—
	P-PO_4	92%	—	—
	SO_4	100%	—	—
2/22/93 ~~HS~~ 201HMS	F =	10.483/10.0 = ~~100~~ 104%	—	—
	Cl =	9.828/10.0 = 98%	—	—
	P-PO_4 =	9.671/10.0 = 97%	—	—
	SO_4 =	29.246/30.00 = 97%	—	—
	F =	111%	—	—
	Cl =	114%	—	—
	N-NO_2 =	93%	—	—
	N-NO_3 =	115%	—	—
	P-PO_4 =	85%	—	—
	SO_4 =	115%	—	—

9613492.0001

PRECISION DATA SUMMARY

SDG: B07/K04	VALIDATOR: AS	DATE: 10/18/93	PAGE____OF____
COMMENTS:			

COMPOUND	SAMPLE ID: -02C	SAMPLE ID: -02C Dup	RPD	SAMPLES AFFECTED	QUALIFIER
All anions	ND	ND	—	—	—
pH	5.8	5.8	0	—	—
	-03C	-03C Dup		—	—
F	1.632	2.08	27%	—	—
Cl	3.785	3.956	—	—	—
N-NO_3	6.615	6.609	—	—	
SO_4	25.027	24.976	—	—	
pH	10.0	9.9	0	—	—

9613492.6193

Calculations

HARTCROWSER

Page ____ of ____

Job No. 2078-62

Project WHC

Date 10/18/93

Calculations for 241-T-106

Made by AS

Accuracy

2/22/93 LCS

F = 19.79/19.6 = 101 %
Cl = 30.527/29.1 = 105 %
N-NO_3 = ~~29.382~~ 100/100 = 100 %
P-PO_4 = 156.2/151 = 103 %
SO_4 = 148.804/151 = 99 %

2/25/93 LCS

18.962/19.6 = 97 %
29.106/29.1 = 100 %
96.7/100 = 97 %
140.4/151 = 92 %
151/157 = 100 %

-201 HMS
2/22/93

F = 104 %
Cl = 98 %
P-PO_4 = 97 %
SO_4 = 97 %

0203803 MS

F = 11.1/10 = 111 %
Cl = 14/10 = 114 %
N-NO_2 = 9.3/10 = 93 %
N-NO_3 = 46/40 = 115 %
P-PO_4 = 17/20 = 85 %
SO_4 = 46/40 = 115 %

Recycled Paper

CALCULATION SUMMARY

SDG: 1307K04	REVIEWER: AS	DATE: 10/18/93	PAGE ____ OF ____

COMMENTS:

Cl	Area	F		PO4	
0	0	0	0	0	0
1.25	321235 ✓	.625	232604 ✓	2.5	538174 ✓
2.5	617832 ✓ r=.9966 ✓	1.25	445920 ✓	5.0	1163208 ✓
5.0	1364762 ✓	2.5	1048666 ✓	10.0	2473972 ✓
10.0	2939995 ✓	5.0	2128767 ✓	20.0	5550740 ✓
20.0	6967853 ✓	10.0	4637769 ✓	40.0	13550607 ✓
		r=.9991 ✓		r=.9953 ✓	

SO4		NO3		
0	0	0	0	0
5.0	854261 ✓	1.0	556555 ✓	612613 ✓
10.0	1870264 ✓	2.0	1087911 ✓	1311576 ✓
20.0	3991926 ✓	4.0	2370186 ✓	2715049 ✓
40.0	8456329 ✓	8.0	4830756 ✓	5895194 ✓
80.0	19889332 ✓	16.0	10502917 ✓	14099730 ✓
r=.7970 ✓		r=.9991 ✓		r=.9962 ✓

Cl		F r=.9986 ✓		PO4	
0	360701 ✓	0	0	0	0
.437	713393 ✓	0.25	294747 ✓	.937	458036 ✓
.875	1559974 ✓	0.5	639734 ✓	1.875	1089337 ✓
1.75	3056137 ✓	1.0	1406327 ✓	3.750	2412507 ✓
3.5	6996407 ✓	2.0	2674210 ✓	7.5	5233553 ✓
7.0		4.0	5993059 ✓	15.0	12416571 ✓

r=.9980 ✓ r=.9967 ✓

SO4		NO2/NO3		
0	0	0	0	0
1.25	732873 ✓	0.313	548165 ✓	608540 ✓
2.5	1498665 ✓	.625	1108142 ✓	1252440 ✓
5.0	3047170 ✓	1.250	2451855 ✓	2607489 ✓
10.0	6102304 ✓	2.500	4774092 ✓	5310412 ✓
20.0	13162480 ✓	5.000	10557018 ✓	11892573 ✓
r=.9993 ✓		r=.9989 ✓		r=.9985 ✓

-02C = All non Detect

-03C

F = 1124964/89816

Cl = 1749971/462343

NO2/NO3 = 7645042/155713

SO4 = 8079400/322827

al 2/22/93
1.8/1.25
2.423/2.5
$_2$ = 1.949/2.0
$_{O_3}$ = 1.927/2.0
$_4$ = 4.859/5.0
$_i$ = 9.815/10.0

✓ AS

TELEPHONE CONTACT SUMMARY

VALIDATOR:	DATE:	TIME:	PAGE_____OF____
COMPANY:			
ADDRESS:			
PERSON CONTACTED:			
TELEPHONE:		FAX:	
PROJECT/CASE/SDG:			
REMARKS:			
ACTION:			

HOLDING TIME SUMMARY

SDG: B07K04	VALIDATOR: AS	DATE: 10/18/93	PAGE ____ OF ____
COMMENTS:			

FIELD SAMPLE ID	ANALYSIS TYPE	DATE SAMPLED	DATE PREPARED	DATE ANALYZED	PREP. HOLDING TIME, DAYS	ANALYSIS HOLDING TIME, DAYS	QUALIFIER
B07K04	Anions	2/8/93		2/22/93		14	~~F~~ J/UJ AS 1/26/94
B07K05	↓	2/8/93	2/24/93	2/25/93	16	~~17~~ (1)	~~F~~ J
B07MLO	↓	2/8/93	—	2/22/93		14	~~F~~ J/UJ
B07K04	pH	↓		2/16/93		8	J
B07K05	↓	↓		↓		↓	↓
B07MLO	↓	↓		↓		↓	↓
B07K04	PO_4	2/8/93		2/22/93		14	J
B07K05	↓	↓		↓		↓	↓
B07MLO	↓	↓		↓		↓	↓
							AS 11/12/93

✱ F submitted in glass jar not plastic. Note narrative

Qualify for PO_4, ~~NO_2/NO_3~~ only. All others DL

9613492.6197

000010

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07WL0 FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	<0.2	mg/L	0.2	~~UJ~~
Fluoride	300.0	<0.1	mg/L	0.1	~~UJ~~
Phosphate	300.0	<0.4	mg/L	0.4	UJ
pH	150.1	5.8	pH	0.1	J
Sulfate	300.0	<1	mg/L	1	~~UJ~~

AS 11/12/93

AS 10/18/93

FORM I

AS 1/26/94

9613492.6198

000009

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07K04 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	5.7	pH	0.1
Sulfate	300.0	<1	mg/L	1

AS 11/12/93

AS 10/15/93

AS 1/26/94

FORM I

9613492.6199

000011

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07K05 FRACTION 03G TEST CODE WCCLPS NAME Anions in Solids - WH232

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - SOLIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT	
Chloride	300.0	3.8	mg/Kg	0.4	
Fluoride	300.0	1.6	mg/Kg	0.2	
Phosphate	300.0	<0.8	mg/Kg	0.8	AS 11/12/93
pH	9045	10.0	pH	0.1	
Sulfate	300.0	25	mg/Kg	2.0	
Nitrate Nitrogen	300.0	6.6	mg/Kg	0.4	AS 10/18/93
Nitrite Nitrogen	300.0	<0.2	mg/Kg	0.2	

AS 1/26/94

FORM I

B07K04

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-00044
Record of Disposition No.

DATE: 2/17/93	LABORATORY: TMA
PROJECT TITLE/NO.: 241-T-106/92-336	NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

B07ML0,B07K04

DESCRIPTION OF EVENT:

TOC aliquots for these sample were sent to TMA instead of Weston.

DISPOSITION OF SAMPLES:

TMA to ship TOC aliquots for these sample to Weston.

APPROVAL SIGNATURES:

R. C. Smith/ R C Smith — 2/17/93
OSM Project Coordinator (Print/Sign Name) — Date

J. Freeman-Pollard/ J R Freeman-Pollard — 3/1/93
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-00042
Record of Disposition No.

DATE: 2/22/93	LABORATORY: TMA
PROJECT TITLE/NO.: 241-T-106/92-336	NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

All samples for this project.

DESCRIPTION OF EVENT:

Analyses for Flouride and Chloride were not asked for on the SAR despite request on SAF.

DISPOSITION OF SAMPLES:

Include Flouride and Chloride in anions analysis.

APPROVAL SIGNATURES:

R.C. Smith/ R Clayton Smith — 2/22/93
OSM Project Coordinator (Print/Sign Name) — Date

J. Freeman-Pollard/ J. Freeman-Pollard — 3/1/93
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

9613492.6202

TMA

RECORD COPY

APR 1993
RECEIVED
OSM DMO

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

ORGANICS & GENERAL CHEMISTRY
Case No. 02-032
(TMA/ARLI Work Order # A3-02-032)

METALS
Case No. N3-02-059
(TMA/Skinner & Sherman W.O. # S3-02-131 & S3-02-132)

March 31, 1993

TMA Master Work Order N3-02-059

9613492.6203

000001

WESTINGHOUSE HANFORD COMPANY

Results of Analyses For:

GENERAL CHEMISTRY
CASE NO. 02-032
(TMA/ARLI Work Order # A3-02-032)

ORGANICS
CASE NO. 02-032
(TMA/ARLI Work Order # A3-02-032)

General Chemistry and Organics results are presented for the following WHC LIQUID and SOIL sample(s):

B07K04	B07K05
B07K07	B07ML0

Norcal Work Order # N3-02-059

Thermo Analytical Inc.
160 Taylor Street
Monrovia, CA 91016
(818) 357-3247

Date Submitted:

MAR 2 6 1993

9613492.6204

000002

1 TMA/Norcal CHAIN OF CUSTODY ORD # N3-02-059

RCVD: 02/10/93 DUE: 03/12/93 02/10/93 15:50:47 KEEP: 06/10/93 DISP: S

DASH	SAMPLE IDENTIFICATION		STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY			
01A-W	B07K04		ARLI	WH018	WH020	WH043	WH121
02A-S	B07K05		ARLI	WH014	WH016	WH217	WH232
02C-S	B07K05	MS	ARLI	WH014	WH016	WH232	
02D-S	B07K05	MSD	ARLI	WH014	WH016		
02E-S	B07K05	DUP	ARLI	WH217	WH232		
03A-W	B07ML0		ARLI	WH018	WH020	WH043	WH121
03C-W	B07ML0	MS	ARLI	WH018	WH020	WH043	
03D-W	B07ML0	MSD	ARLI	WH018	WH020		
03E-W	B07ML0	DUP	ARLI	WH043	WH121		
04A-W	B07K07		~~GAS~~ ARLI	WH018			
04B-W	B07K07	MS	ARLI	WH018			
04C-W	B07K07	MSD	ARLI	WH018			

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
tyamamoto	2-10-93	ARLI	2-10-93	Judy Pabel	2/11/93

9613492.6205

000032A
N3-02-039/60

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations 241-T-106

Borehole Number: 299-W10-196

Collection Date 2-8-93
Time 1300

Ice Chest No. SML 283

Field Logbook No. EFL-1053

Bill of Lading/Airbill No. 2536453034

Offsite Property No. WA3-0-090#3

Method of Shipment AIR (Emery)

Shipped to TMA-Norcal

Possible Sample Hazards/Remarks Keep samples chilled. All analysis per lab statement of work.

Sample Identification

B07K04

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) } gross alpha, gross beta, GEA including Co-60, Ru-106,
1 x 2000 ml., plastic, water (HNO_3) } Ce-144, Cs-137,isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.S. Thompson Wendy S Thompson 2-9-93 1100	Al. Gobaleza Alfonso Gobaleza	2-10-93 1140
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.6206

000002B

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector W. S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
B07K04	W	2-8-93	1300	✓ 3 x 40 ml., amber glass, water, CLP-VOA
				✓ 3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions
				SO_4, PO_4, NO_2-NO_3, pH.
				✓ 1 x 1000 ml., plastic, water (HNO_3), ICP/AA metals, Bi, Ho
				✓ 1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-
				CN
				✓ 1 x 250 ml., amber glass, water (H_2SO_4), TOC
				✓ 1 x 4000 ml., plastic, water (HNO_3)
				✓ 1 x 2000 ml., plastic, water (HNO_3)
				gross alpha, gross beta, GEA including Co-60,
				Ru-106, Ce-144, Cs-137, isotopic U, total U,
				Am-241, Np-237, Pu-238,-239,-240, Sr-90.
				✓ 1 x 1000 ml., plastic, water (HCL), Tc-99
				✓ 2 x 250 ml., amber glass, water, C-14

2-8-93

*Type of Sample: A = Air; DL = Drum Liquids; DS = Drum Solids; L = Liquid; O = Oil; S = Soil; SE = Sediment; SL = Sludge; SO = Solid; T = Tissue; W = Water; WI = Wipe; X = Other

Field Information: Samples support the 241-T-106 soil investigation. All analysis per lab statement of work.

Special Handling and/or Storage: Keep samples chilled.

Possible Sample Hazards: None indicated with field instruments.

9613492.6207

000002C

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator Wendy S. Thompson — PROJECT NUMBER: 92-336

Company Contact Wendy S. Thompson — Telephone (509) 376-2153

Project Designation/Sampling Locations 241-T-106 — Collection Date 2-8-93

Borehole Number: 299-W10-196 — Time: ① 0910 ② 0730

Ice Chest No. SMC 284 — Field Logbook No. EFL-1053

Bill of Lading/Airbill No. 2536953034 — Offsite Property No. ~~W93-0-090~~ 58

Method of Shipment AIR (EMERY)

Shipped to TMA-Norcal

Possible Sample Hazards/Remarks Keep samples chilled. All analysis per lab statement of work. Samples are nonhazardous/nonradioactive with field instruments

Sample Identification

① B07K05

1x120 ml., amber glass, soil, CLP-VOA

1x250 ml., amber glass, soil, CLP-Semi-VOA

1x250 ml., amber glass, soil, Anions-SO_4, PO_4, NO_2-NO_3, CL, F, pH

1x250 ml., amber glass, soil, ICP/AA metals, Bi, CN, Hg

1x500 ml., amber glass, soil, gross alpha, gross beta, GEA, including Co_{60}, Ru_{106}, Ce_{144}, Cs_{137} isotopic U, total U, Am_{241}, Np_{237}, $Pu_{238/239/240}$, Sr_{90}, Tc_{99}, C_{14}

1x120ml., amber glass, soil, CLP-VOA

~~1x250 ml., amber glass, soil, CLP-Semi-VOA~~

1x250 ml., amber glass, ~~soil, Anions-SO_4~~, PO_4, NO_2-NO_3, Cl, F, pH

1x250 ml., amber glass, soil, ICP/AA metals, Bi, CN, Hg

~~1x500 ml., amber glass, soil, gross alpha, gross beta, GEA, including Co_{60}, Ru_{106}, Ce_{144}, Cs_{137}~~ isotopic U, total U, Am_{241}, Np_{237}, $Pu_{238/239/240}$, Sr_{90}, Tc_{99}, C_{14}

② B07K07; 3x40ml; amberglass; water; CLP-VOA

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Name)

Relinquished By	Date	Time	Received By	Date	Time
W.S. Thompson Wendy S Thompson	2-9-93	1100	Al Gobaleza Alfonso Gobaleza	2-10-93	1140

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.6208

000002D

(TMA - soil)

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector Wendy S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
(1) B07K05	S	2-8-93	0910	1x120ml., amber glass, soil, CLP-VOA
				1x250 ml., amber glass, soil, CLP-Semi-VOA
				1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
				1x250 ml., glass, soil, ICP/AA metals, Bi, CN, Hg
				1x500 ml., glass, soil, gross alpha, gross beta, GEA,
				including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241,
				Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14
(2) B07K07	W	2-8-93	0730	3x40ml; amberglass; water CLP-VOA
				1x120ml., amber glass, soil, CLP-VOA
				1x250 ml., amber glass, soil, CLP-Semi-VOA
				1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
				1x250 ml., glass, soil, ICP/AA metals, Bi, CN, Hg
				1x500 ml., glass, soil, gross alpha, gross beta, GEA,
				including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241
				Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14
				1x120 ml., amber glass, soil, CLP-VOA
				1x250 ml., amber glass, soil, CLP-Semi-VOA
				1x250 ml., amber glass, soil, IC Anions, SO_4, PO_4, NO_2-NO_3, pH
				1x250ml., glass, soil, ICP/AA metals, Bi, CN, Hg
				1x500 ml., glass, soil, gross alpha, gross beta, GEA
				including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, Am-241,
				Np-237, Pu-238,-239,-240, Sr-90, Tc-99, total U, C-14

*Type of Sample: A = Air; DL = Drum Liquids; DS = Drum Solids; L = Liquid; O = Oil; S = Soil; SE = Sediment; SL = Sludge; SO = Solid; T = Tissue; W = Water; WI = Wipe; X = Other

Field Information: Samples support the 241-T-106 characterization (soil). All analysis per lab statement of work.

Special Handling and/or Storage: KEEP SAMPLES CHILLED.

Possible Sample Hazards: Samples are non hazardous with field instruments

9613492.6209

000002E

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator: Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact: Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations: 241-T-106

Borehole Number: 299-W10-196

Collection Date: 2-8-93

Time: 1000

Ice Chest No.: SML ~~283~~ 284 WSF 2-9-93

Field Logbook No. EFL-1053

Bill of Lading/Airbill No.: 2536953034

Offsite Property No. W93-0-0190 #3

Method of Shipment: AIR (Emery)

Shipped to: TMA-Norcal

Possible Sample Hazards/Remarks: Keep samples chilled. All analysis per lab statement of work. Sample is nonhazardous/non radioactive

Sample Identification

B07MLO

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) gross alpha, gross beta, GEA including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 2000 ml., plastic, water (HNO_3)

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)

Relinquished by:	Received by:	Date/Time:
W.S. Thompson 2-9-93 Wendy S Thompson 1100	Gabaleza Monica Gabaleza	2-10-93 1145
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.6210

000002F

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector Wendy S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
B07ML0	W	2-8-93	1000 ✓	3 x 40 ml., amber glass, water, CLP-VOA
			✓	3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions
				SO_4, PO_4, NO_2-NO_3, pH.
			✓	1 x 1000 ml., plastic, water (HNO_3), ICP/AA metals, Bi,Hg
			✓	1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-
				CN
			✓	1 x 250 ml., amber glass, water (H_2SO_4), TOC
			✓	1 x 4000 ml., plastic, water (HNO_3)
			✓	1 x 2000 ml., plastic, water (HNO_3)
				gross alpha, gross beta, GEA including Co-60,
				Ru-106, Ce-144, Cs-137, isotopic U, total U,
				Am-241, Np-237, Pu-238,-239,-240, Sr-90.
			✓	1 x 1000 ml., plastic, water (HCL), Tc-99
			✓	2 x 250 ml., amber glass, water, C-14

2-8-93

*Type of Sample: A = Air; DL = Drum Liquids; DS = Drum Solids; L = Liquid; O = Oil; S = Soil; SE = Sediment; SL = Sludge; SO = Solid; T = Tissue; W = Water; WI = Wipe; X = Other

Field Information: Samples support the 241-T-106 soil investigation. All analysis per lab statement of work.

Special Handling and/or Storage: Keep samples chilled.

Possible Sample Hazards: None indicated with field instruments

9613492.6211

000002G

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-00043
Record of Disposition No.

DATE: 2/22/93

LABORATORY: TMA

RECEIVED MAR 1 1993

PROJECT TITLE/NO.: 241-T-106/92-336

NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

B07MK9, B07K04, B07ML0

DESCRIPTION OF EVENT:

Water samples to be analyzed for nitrite-nitrate were not preserved as required.

DISPOSITION OF SAMPLES:

Per telecon with J. Freeman-Pollard, project engineer, cancel nitrite-nitrate analysis for these samples.

APPROVAL SIGNATURES:

R. C. Smith/ R Clyde Smith — 2/22/93
OSM Project Coordinator (Print/Sign Name) — Date

J. Freeman-Pollard/ J Freeman-Pollard — 2/22/93
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

9613492.6212

000002

OFFICE OF SAMPLE MANAGEMENT

RECORD OF DISPOSITION

ROD-93-00042
Record of Disposition No.

DATE: 2/22/93	LABORATORY: TMA
PROJECT TITLE/NO.: 241-T-106/92-336	NCR NO.: N/A

SAMPLE IDENTIFICATION NUMBERS:

All samples for this project.

DESCRIPTION OF EVENT:

Analyses for Flouride and Chloride were not asked for on the SAR despite request on SAF.

DISPOSITION OF SAMPLES:

Include Flouride and Chloride in anions analysis.

APPROVAL SIGNATURES:

R.C. Smith/ R Clayton Smith — 2/22/93
OSM Project Coordinator (Print/Sign Name) — Date

J. Freeman-Pollard/ J Freeman-Pollard — 2/22/93
Technical Representative (Print/Sign Name) — Date

N/A
Quality Assurance (Print/Sign Name) — Date

9613492.6213

LAB NAME : TMA/ARLI

PAGE : 1 OF 1

RECEIVED BY (PRINT NAME): Trudy Galuh

LOG-IN-DATE : 2/11/93

RECEIVED BY (SIGNATURE): Trudy Galuh

CASE NUMBER:
SAMPLE DELIVERY GROUP NO.:
SAS NUMBER:

REMARKS: SML-284

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos:
3. Chain of Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Airbill/Sticker Present/Absent*
6. Airbill No.: 6395891913
7. Sample Tags Present/Absent*
8. Sample Tags Numbers Listed/Not Listed on Chain of Custody
9. Sample Condition: Intact/Broken*/Leaking
10. Does information on custody records, traffic reports, and sample tags agree Yes/No*
11. Date Recieved at Lab: 2/11/93
12. Temp of ice chest 2 °F
13. Time Recieved: 0915

SAMPLE TRANSFER

Fraction:
Area #:
By:
On:

000003

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC
	B07K04	A3-02-032-01	
	B07MU0	A3-02-032-02	
	B07K07	A3-02-032-04	
	B07K05	A3-02-032-03	

* Contact SMO and attach record of resolution

Reviewed By:
Date:
Logbook No.:
Logbook Page No.:

FORM DC-1

9613492.6214
HS-02-C-32

TMA/ARLI
The rmo Analytical Inc.

000004

RADIATION DOSE RATE SURVEY FORM

Date 2/11/93 COMPANY NORCAL (WHC) OTHER ORD # 6375891713

Surveyor's Name MARK S. McCoy

Model No. HP-210 / ESP-1 Model No. AC-3-7 / ESP-1

Serial Nos. 710289 / 02619 Serial Nos. 407726 / 02628

Calibration Date 12/02/93 Calibration Date OUT OF SERVICE FOR

Instrument Calibration Factor 0.280 Instrument Calibration Factor RECALIBRATION

Sample	Location	HP-210 CPM	HP-210 Factor	HP-210 DPM	AC-3-7 CPM	AC-3-7 Factor	AC-3-7 DPM	Spillage or Breakage?	Activity, dCi/mL or R/h
Background		30.0							
Consistency		7,440	0.2872						
Smear SML 284		77.0						NONE	
Reported (WHC)		4 samples each			< 50 pCi/gram			—	—

Comments

All OK ✓ Approved MSM

Not OK Date 2/11/93

000000

96134922215

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE

AIRBILL PACKAGE TRACKING NUMBER 6395891913

23579 6395891913

RECIPIENT'S COPY

1 [redacted] Date 7.10.93

From (Your Name) Please Print: SAMPLE CONTROL

Your Phone Number (Very Important): 310-235-2633

Company: T M A/MUNICIPAL

Department/Floor No.:

Street Address: 2030 WRIGHT AVE

City: ICHMOND State: CA ZIP Required: 9 4 8 0 4

2 To (Recipient's Name) Please Print: SAMPLE CONTROL ( )

Recipient's Phone Number (Very Important):

Company: TMA / ARLI

Department/Floor No.:

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes.): 160 TAYLOR STREET

City: MONAVVIA State: CA ZIP Required: 91016

YOUR INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice.): 2340 640C

H IF HOLD FOR PICK-UP, Print FEDEX Address Here
Street Address:
City: State: ZIP Required:

3 PAYMENT 1 [X] Bill Sender 2 [ ] Bill Recipient's FedEx Acct. No 3 [ ] Bill 3rd Party FedEx Acct. No 4 [ ] Bill Credit Card 5 [ ] Cash/Check

4 SERVICES (Check only one box)

Priority Overnight (Delivery by next business morning)
11 [X] OTHER PACKAGING
16 [ ] FEDEX LETTER*
12 [ ] FEDEX PAK*
13 [ ] FEDEX BOX
14 [ ] FEDEX TUBE

Standard Overnight (Delivery by next business afternoon No Saturday delivery†)
51 [ ] OTHER PACKAGING
56 [ ] FEDEX LETTER*
52 [ ] FEDEX PAK*
53 [ ] FEDEX BOX
54 [ ] FEDEX TUBE

Economy Two-Day (Delivery by second business day †)
30 [ ] ECONOMY**
* Economy Letter rate not available. Minimum charge One pound economy rate

Government Overnight (Restricted to authorized shipments)
46 [ ] GOV'T LETTER
41 [ ] GOV'T PACKAGE

Freight Service (for packages over 150 lbs.)
70 [ ] OVERNIGHT FREIGHT** (If preferred reservation requested)
80 [ ] TWO-DAY FREIGHT**
† Delivery commitment may be later in some areas
*Declared Value Limit $500
**Call for delivery schedule

5 DELIVERY AND SPECIAL HANDLING (Check services required)
1 [ ] HOLD FOR PICK-UP (Fill in Box H)
2 [X] DELIVER WEEKDAY
3 DELIVER SATURDAY (Extra charge) [ ] (Not available to all locations)
4 [ ] DANGEROUS GOODS (Extra charge)
5 [ ]
6 [ ] DRY ICE Dangerous Goods Shipper's Declaration not required
Dry Ice: lb UN 1845 x kg 904 =
7 [ ] OTHER SPECIAL SERVICE
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
[ ]
12 [ ] HOLIDAY DELIVERY (If offered) (Extra charge)

6 PACKAGES | WEIGHT in Pounds Only | YOUR DECLARED VALUE (Also right)
Total | Total 1 | 5 5 | Total

DIM SHIPMENT (Chargeable Weight)
[ ] lbs
L x W x H

Received At
1 [X] Regular Stop 3 [ ] Drop Box
2 [ ] On-Call Stop 4 [ ] B S C
5 [ ] Station

7 Release Signature

Emp. No | Date
[ ] Cash Received
[ ] Return Shipment
[ ] Third Party [ ] Chg. To Del [ ] Chg. To Hold
Street Address
City State Zip
Received By: X
Date/Time Received FedEx Employee Number

Federal Express Use
Base Charges
Declared Value Charge
Other 1
Other 2
Total Charges

REVISION DATE 11/92
PART #137204 FXEM 12/92
FORMAT #155
155
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GENERAL CHEMISTRY RESULTS

CASE NO. 02-032

Water and Soil Sample #:

B07K04 B07K05 B07K07

B07MLO

CASE NARRATIVE

holding time for the pH analysis was eeded. Careful review of the QC analysis icates the data is reliable.

of the above samples were received in glass tainers. According to SW 846 guidelines the oride analysis should be run on sample stored plastic containers.

ple B07K05 (A3-02-032-03) yielded a 27.0% RPD the Fluoride analysis. TMA attempted to ogenize the sample. Duplicate recoveries icated that the soil sample could not be perly homogenized.

other problems were encountered during sample lysis. All QC results were acceptable.

Ernesto Vázquez 3-26-93

Ernesto Vazquez

9613492.6217

000007

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 03/23/93 17:08:45

REPORT TO
Westinghouse Hanford Company
2355 Stevens Dr.
Richland,WA,99352
MO-346/200 West/T6-08
ATTEN Jeanette Duncan

PREPARED BY
Thermo Analytical, Inc.
160 Taylor Street
Monrovia, CA 91016
ATTEN Ms. Carole Harris
PHONE 818-357-3247

CERTIFIED BY

CONTACT EVV CIH

CLIENT WHC SAMPLES 5
COMPANY Westinghouse Hanford Company
FACILITY

This report is for the sole and exclusive use of the client to whom it is addressed and represents only those samples herein described. Samples not destroyed in testing are retained a maximum of 30 days unless otherwise requested.

WORK ID 241-T-106
TAKEN By Westinghouse Staff
TRANS By Federal Express
TYPE Liquid/Soil
P.O. # N3-02-059-SU-AR
INVOICE under separate cover

SAMPLE IDENTIFICATION

01	B07K04
01	B07K04 MS
01	B07K04 MSD
01	B07K04
01	B07K04 MS
01	B07K04 MSD
01	B07K04
01	B07K04 MS
02	B07ML0
02	B07ML0 Duplicate
03	B07K05
03	B07K05 MS
03	B07K05 MSD
03	B07K05
03	B07K05 MS
03	B07K05 MSD
03	B07K05
03	B07K05 MS
03	B07K05 Duplicate
04	B07K07
05	Wet Chemistry Blank
05	Laboratory Control Sample
05	Wet Chemistry Blank Soil

TEST CODES and NAMES used on this workorder

BNCLPS	CLP Semivol. Sol. - WH016
BNCLPW	CLP Semivol. Water - WH020
IC_AN	Anions Extraction Solids
VOCLPL	CLP Volatile Org.Liq.
VOCLPS	CLP Vol. Org.Soils - WH014
WCCLPL	Anions & Wet Chem. - WH043
WCCLPS	Anions in Solids - WH232
WCL_L	Chloride - WH120
WCL_S	Chloride in Solids - WH216
WCQCD	Quality Control Summary
WCQCS	Quality Control Summary
WF_L	Fluoride in Water
WF_S	Fluoride in Solids
WMOIST	Moisture
WNO2_L	Nitrite (Liquids)
WNO2_S	Nitrite (Soilds)
WNO3_L	Nitrate (water)
WNO3_S	Nitrate (solids)
WPH_L	pH of Liquid - WH121
WPH_S	pH of Solids - WH217
WPO4_L	Phosphate in Liquids
WPO4_S	Phosphate in Solids
WSO4_L	Sulfate (in Waters)
WSO4_S	Sulfate (in Solids)

9613492.6218

SAMPLE RESULTS

9613492.6219

000009

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID B07K04 FRACTION 01G TEST CODE WCCLPL NAME Anions & Wet Chem. - WH043

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	5.7	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

9613492.6220

000010

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07MLO FRACTION 02C TEST CODE WCCLPL NAME Anions & Wet Chem. - WM043

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
pH	150.1	5.8	pH	0.1
Sulfate	300.0	<1	mg/L	1

FORM I

9613492.6221

000011

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07K05 FRACTION 03G TEST CODE WCCLPS NAME Anions in Solids - WH232

Date & Time Collected 02/08/93 Category

ANIONS AND WET CHEMISTRY - SOLIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	3.8	mg/Kg	0.4
Fluoride	300.0	1.6	mg/Kg	0.2
Phosphate	300.0	<0.8	mg/Kg	0.8
pH	9045	10.0	pH	0.1
Sulfate	300.0	25	mg/Kg	2.0
Nitrate Nitrogen	300.0	6.6	mg/Kg	0.4
Nitrite Nitrogen	300.0	<0.2	mg/Kg	0.2

FORM I

9613492.6222

000012

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID Wet Chemistry Blank FRACTION 05A TEST CODE WCCLPL NAME Anions & Wet Chem. - WN043

Date & Time Collected not specified Category

ANIONS AND WET CHEMISTRY - LIQUIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.2	mg/L	0.2
Fluoride	300.0	<0.1	mg/L	0.1
Phosphate	300.0	<0.4	mg/L	0.4
Sulfate	300.0	<1	mg/L	1

FORM I

9613492.6223

000013

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID Wet Chemistry Blank Soil FRACTION 05C TEST CODE WCCLPS NAME Anions in Solids - WM232

Date & Time Collected not specified Category

ANIONS AND WET CHEMISTRY - SOLIDS

ANALYSIS	METHOD	RESULT	UNITS	LIMIT
Chloride	300.0	<0.4	mg/Kg	0.4
Fluoride	300.0	<0.2	mg/Kg	0.2
Phosphate	300.0	<0.8	mg/Kg	0.8
Sulfate	300.0	<2	mg/Kg	2.0
Nitrate Nitrogen	300.0	<0.4	mg/Kg	0.4
Nitrite Nitrogen	300.0	<0.2	mg/Kg	0.2

FORM I

9613492.6224

QC RESULTS

9613492.6225

000015

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07K04 MS FRACTION 01W TEST CODE WCQCS NAME Quality Control Summary

Date & Time Collected 02/08/93 Category

SPIKE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	SPIKE RESULT	AMOUNT ADDED	% R
Chloride	B07K04	<0.2	9.8	10.00	98.0
Fluoride	B07K04	<0.1	10.5	10.00	105.0
Phosphate	B07K04	<0.4	9.7	10.00	97.0
Sulfate	B07K04	<1	29	30.00	96.7

FORM V

9613492.6226

000010

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID B07K05 MS FRACTION 03W TEST CODE VCQCS NAME Quality Control Summary

Date & Time Collected 02/08/93 Category

SPIKE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	SPIKE RESULT	AMOUNT ADDED	% R
Chloride	B07K05	3.8	14.0	10.00	102.0
Fluoride	B07K05	1.6	11.1	10.00	95.0
Phosphate	B07K05	<0.8	17.1	20.00	85.5
Sulfate	B07K05	25	47	20.00	110.0
Nitrate Nitrogen	B07K05	6.6	46.8	40.00	100.5
Nitrite Nitrogen	B07K05	<0.2	9.3	10.00	93.0

FORM V

9613492.6227

000017

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93

Results by Sample

SAMPLE ID B07ML0 Duplicate FRACTION 02D TEST CODE WCQCD NAME Quality Control Summary

Date & Time Collected 02/08/93 Category

DUPLICATE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	DUPL. RESULT	RPD
Chloride	B07ML0	<0.2	<0.2	
Fluoride	B07ML0	<0.1	<0.1	
Phosphate	B07ML0	<0.4	<0.4	
pH	B07ML0	5.8	5.8	0.0
Sulfate	B07ML0	<1	<1	

FORM VI

9613492.6228

000018

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID B07K05 Duplicate FRACTION 03I TEST CODE WCQCD NAME Quality Control Summary

Date & Time Collected 02/08/93 Category

DUPLICATE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	DUPL. RESULT	RPD
Chloride	B07K05	3.8	4.0	5.1
Fluoride	B07K05	1.6	2.1	27.0
Phosphate	B07K05	<0.8	<0.8	
pH	B07K05	10	9.9	1.0
Sulfate	B07K05	25	25	0.0
Nitrate Nitrogen	B07K05	6.6	6.6	0.0
Nitrite Nitrogen	B07K05	<0.2	<0.2	

FORM VI

9613492.6229

000019

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID Laboratory Control Sample FRACTION OSN TEST CODE WCQCS NAME Quality Control Summary

Date & Time Collected not specified Category

SPIKE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	SPIKE RESULT	AMOUNT ADDED	% R
Chloride	LCS-2/22/93	N/A	30.5	29.10	104.8
Fluoride	LCS-2/22/93	N/A	19.8	19.60	101.0
Phosphate	LCS-2/22/93	N/A	156.2	151.00	103.4
Sulfate	LCS-2/22/93	N/A	149	151.00	98.7

FORM V

9613492.6230

000020

TMA Inc. REPORT Work Order # A3-02-032

Received: 02/10/93 Results by Sample

SAMPLE ID Laboratory Control Sample FRACTION 05D TEST CODE WCQCS NAME Quality Control Summary

Date & Time Collected not specified Category

SPIKE QC SUMMARY

ANALYSIS	SAMPLE ID	SAMPLE RESULT	SPIKE RESULT	AMOUNT ADDED	% R
Chloride	LCS-2/25/93	N/A	29.1	29.10	100.0
Fluoride	LCS-2/25/93	N/A	19.0	19.60	96.9
Phosphate	LCS-2/25/93	N/A	140.4	151.00	93.0
Sulfate	LCS-2/25/93	N/A	152.0	151.00	100.7
Nitrate Nitrogen	LCS-2/25/93	N/A	96.7	100.00	96.7

FORM V

9613492.6231

000021

STANDARDS DATA

9613492.6232

000022

ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
CHLORIDE
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	Cl CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-219803		0.67	-0.67
2	1.25	321235	216665	1.36	1.58	-0.33
3	2.5	617832	653132	1.26	2.43	0.07
4	5.0	1364762	1526067	1.30	4.55	0.45
5	10.0	2939995	3271938	1.29	9.03	0.97
6	20.0	6967853	6763678	1.33	20.49	-0.49

Avg Rt = 1.3025 Sd = 0.576
Avg Rf = 283893

Area = a x (mg/L) + b

Regression Output:

Constant	-2E+05
Std Err of Y Est	244124
R Squared	0.9931
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	349174.0
Std Err of Coef.	14523.19

mg/L = a x (AREA) + b

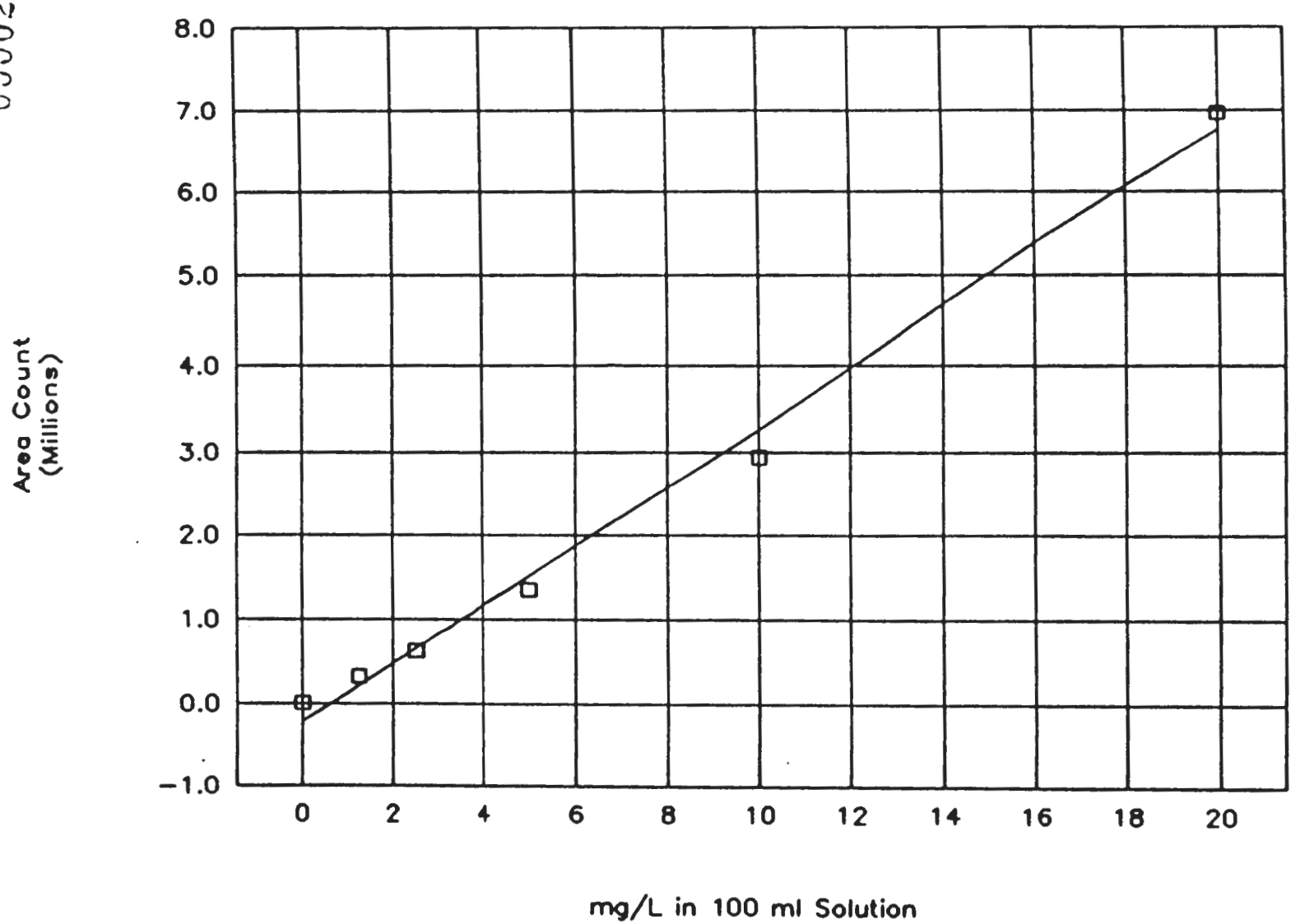
Regression Output:

Constant	b = 0.6695 mg/L
Std Err of Y Est	0.6967
R Squared	0.9931 0.9966 = R
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.000002 = a
Std Err of Coef.	0.000000

AS
10/18/93

ION CHROMATOGRAPH CALIBRATION

Chloride, 02/16/93



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AS 10/24/92

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
FLUORIDE
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	F CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-89216		0.20	-0.20
2	0.625	232604	202043	0.97	0.70	-0.07
3	1.25	445920	493302	0.89	1.15	0.10
4	2.5	1048666	1075819	0.92	2.44	0.06
5	5.0	2128767	2240854	0.91	4.76	0.24
6	10.0	4637769	4451144	0.92	10.13	-0.13

Avg Rt = 0.9225 Sd = 0.150
Avg Rf = 407579

Area = a x (mg/L) + b

Regression Output:

Constant	-89216
Std Err of Y Est	85011.
R Squared	0.9981
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	466014
Std Err of Coef.	10115

mg/L = a x (AREA) + b

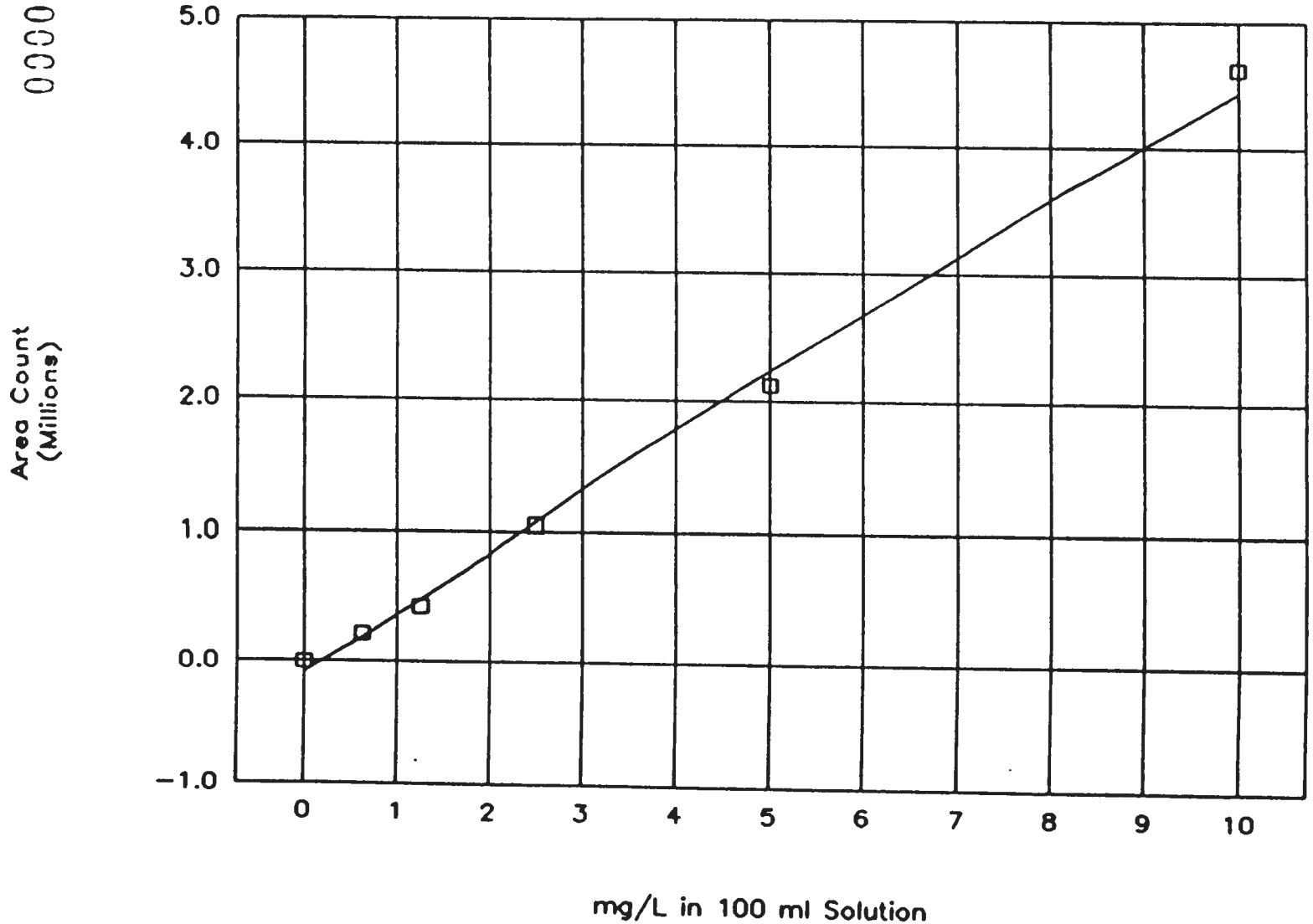
Regression Output:

Constant	b = 0.1971 mg/L
Std Err of Y Est	0.1822
R Squared	0.9981 0.9991 = R
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.000002 = a
Std Err of Coef.	0.000000

HS
10/28/93

ION CHROMATOGRAPH CALIBRATION

Fluoride, 02/16/93



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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
PHOSPHATE PHOSPHORUS
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	P(PO4) * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-512354		1.6	-1.61
2	2.5	538174	337672	3.04	3.2	-0.68
3	5.0	1163208	1187699	2.94	5.0	0.00
4	10.0	2473972	2887752	2.92	8.8	1.18
5	20.0	5550740	6287859	2.87	17.8	2.21
6	40.0	13550607	13088072	3.01	41.1	-1.09

Avg Rt = 2.9425 Sd = 1.350
Avg Rf = 262322

Area = a x (mg/L) + b

Regression Output:

Constant	-5E+05
Std Err of Y Est	554933
R Squared	0.9906
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 340010.6
Std Err of Coef. 16506.75

mg/L = a x (AREA) + b

Regression Output:

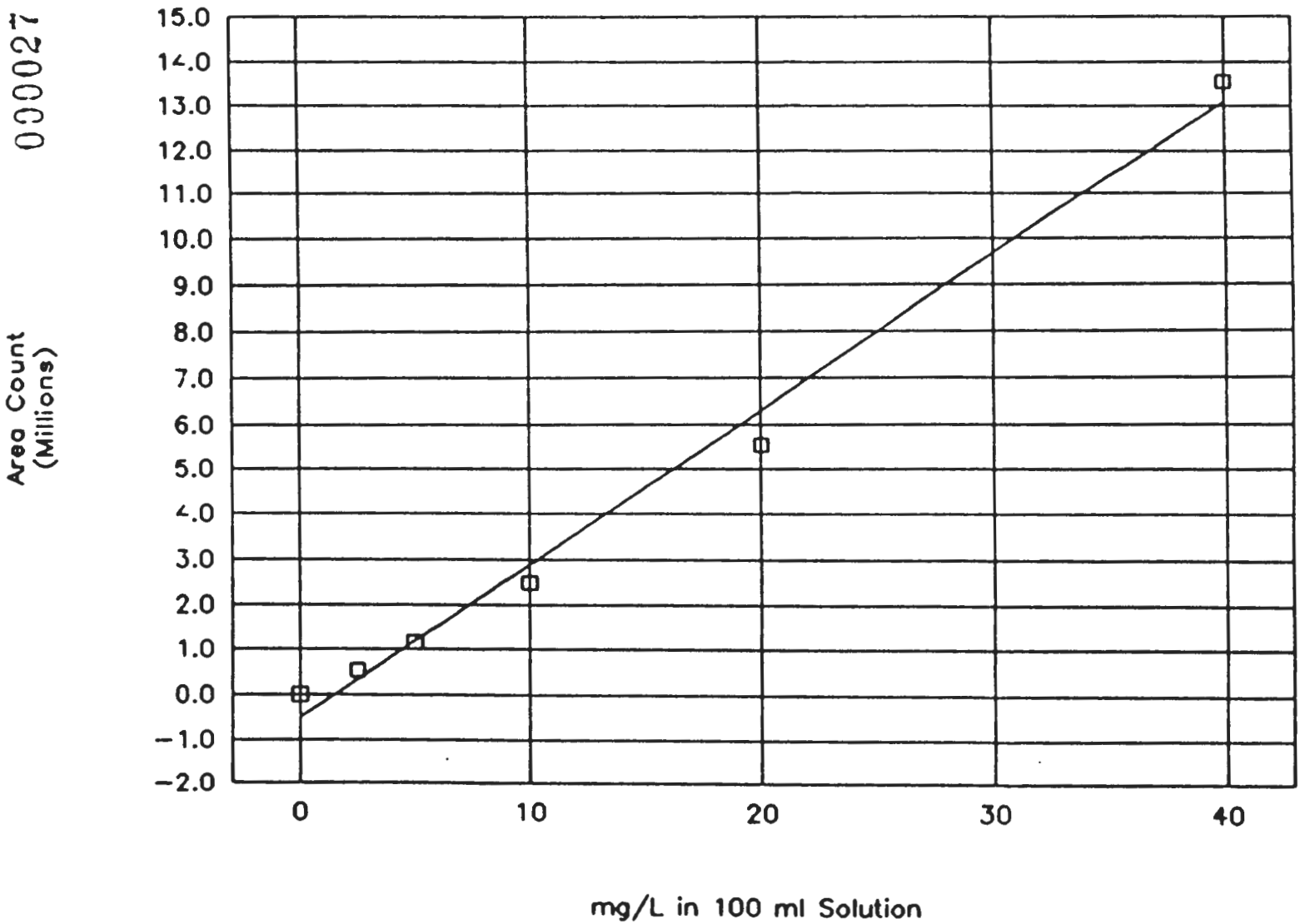
Constant	b = 1.6134 mg/L
Std Err of Y Est	1.6244
R Squared	0.9906 0.9953 = R
No. of Observations	6
Degrees of Freedom	4

AS
10/18/93

X Coefficient(s) 0.000002 = a
Std Err of Coef. 0.000000

ION CHROMATOGRAPH CALIBRATION

Phosphate, 02/16/93



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10/13/93

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
SULFATE
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	SO4 CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-593120		2.5	-2.52
2	5.0	854261	652713	4.04	5.9	-0.93
3	10.0	1870264	1898546	3.98	10.0	0.02
4	20.0	3991926	4390213	3.94	18.4	1.55
5	40.0	8456329	9373546	3.84	36.3	3.74
6	80.0	19889332	19340213	4.05	81.9	-1.87

Avg Rt = 3.95 Sd = 2.14
Avg Rf = 203499

Area = a x (mg/L) + b

Regression Output:

Constant	-6E+05
Std Err of Y Est	650896
R Squared	0.9939
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 249166.6
Std Err of Coef. 9680.609

mg/L = a x (AREA) + b

Regression Output:

Constant	b = 2.5211 mg/L
Std Err of Y Est	2.6044
R Squared	0.9939 0.9970 = R
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000003 = a
Std Err of Coef. 0.000000

HS
10/18/93

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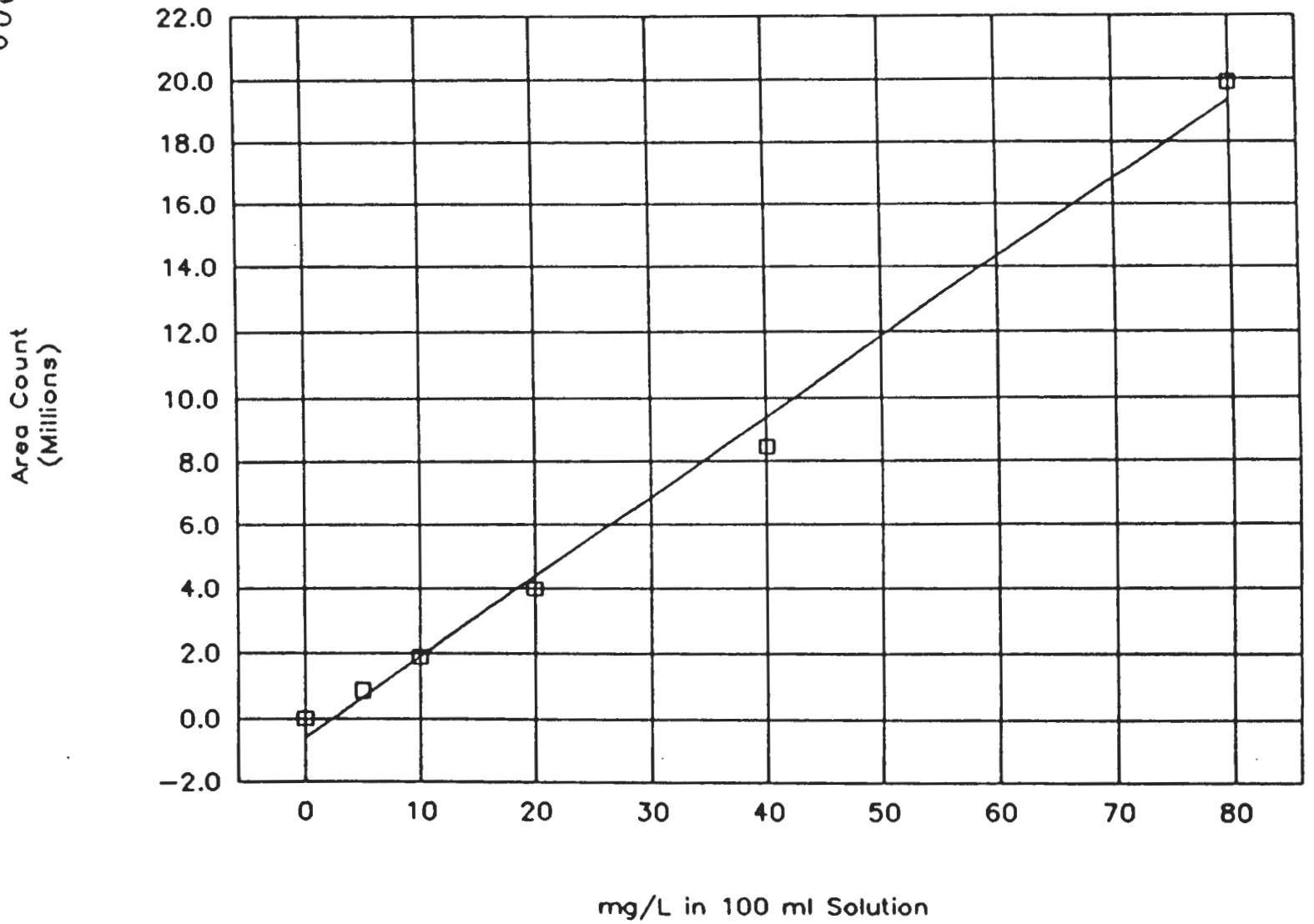
ION CHROMATOGRAPH CALIBRATION

Sulfate, 02/16/93



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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
NITRITE NITROGEN
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	N(NO2) CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-173566		0.27	-0.27
2	1	556555	484164	1.58	1.12	-0.12
3	2.0	1087911	1141894	1.47	1.92	0.08
4	4.0	2370106	2457355	1.51	3.87	0.13
5	8.0	4830756	5088277	1.49	7.60	0.40
6	16.0	10502917	10350121	1.56	16.21	-0.21

Avg Rt = 1.5125 Sd = 0.227
Avg Rf = 590662

Area = a x (mg/L) + b

Regression Output:

Constant	-2E+05
Std Err of Y Est	184089
R Squared	0.9982
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 657730.4
Std Err of Coef. 13689.59

mg/L = a x (AREA) + b

Regression Output:

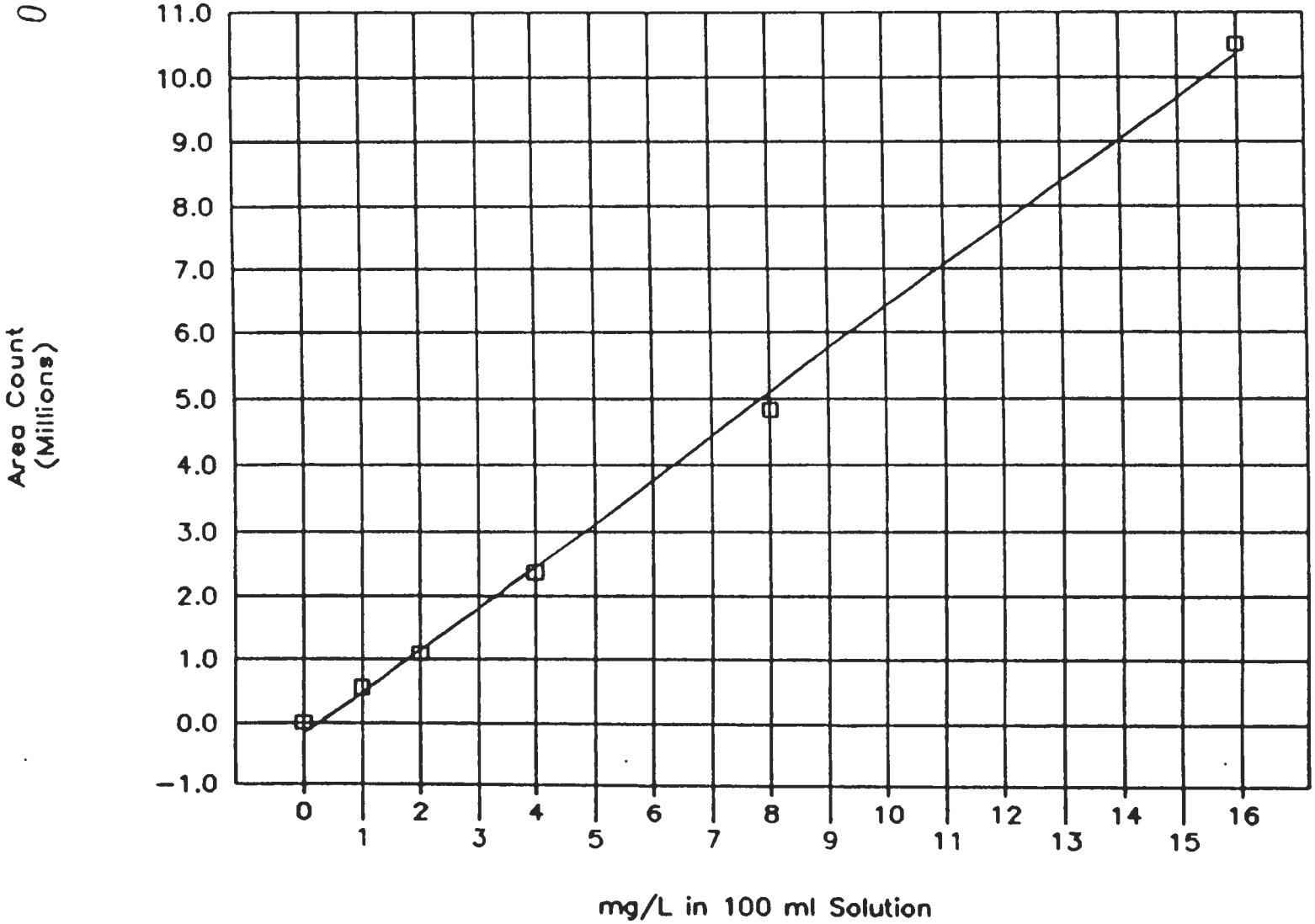
Constant	b = 0.2723 mg/L
Std Err of Y Est	0.2796
R Squared	0.9982 0.9991 = R
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000001 = a
Std Err of Coef. 0.000000

AS
10/18/93

ION CHROMATOGRAPH CALIBRATION

Nitrite, 02/16/93



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10/18/93

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
02/16/93
NITRATE NITROGEN
CONCENTRATION IN 100 MLS INJECTION SOLN *
100 uMHOs, full scale

	N(NO3) CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-453640		0.5	-0.55
2	1	612613	428811	2.52	1.2	-0.24
3	2.0	1311576	1311263	2.39	2.0	-0.02
4	4.0	2715049	3076167	2.38	3.6	0.40
5	8.0	5895194	6605974	2.32	7.2	0.82
6	16.0	14099730	12609278	2.4	16.4	-0.41

Avg Rt = 2.4025 Sd = 0.481
Avg Rf = 713059

Area = a x (mg/L) + b

Regression Output:

Constant	-5E+05
Std Err of Y Est	515670
R Squared	0.9925
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 882451.7
Std Err of Coef. 38347.17

mg/L = a x (AREA) + b

Regression Output:

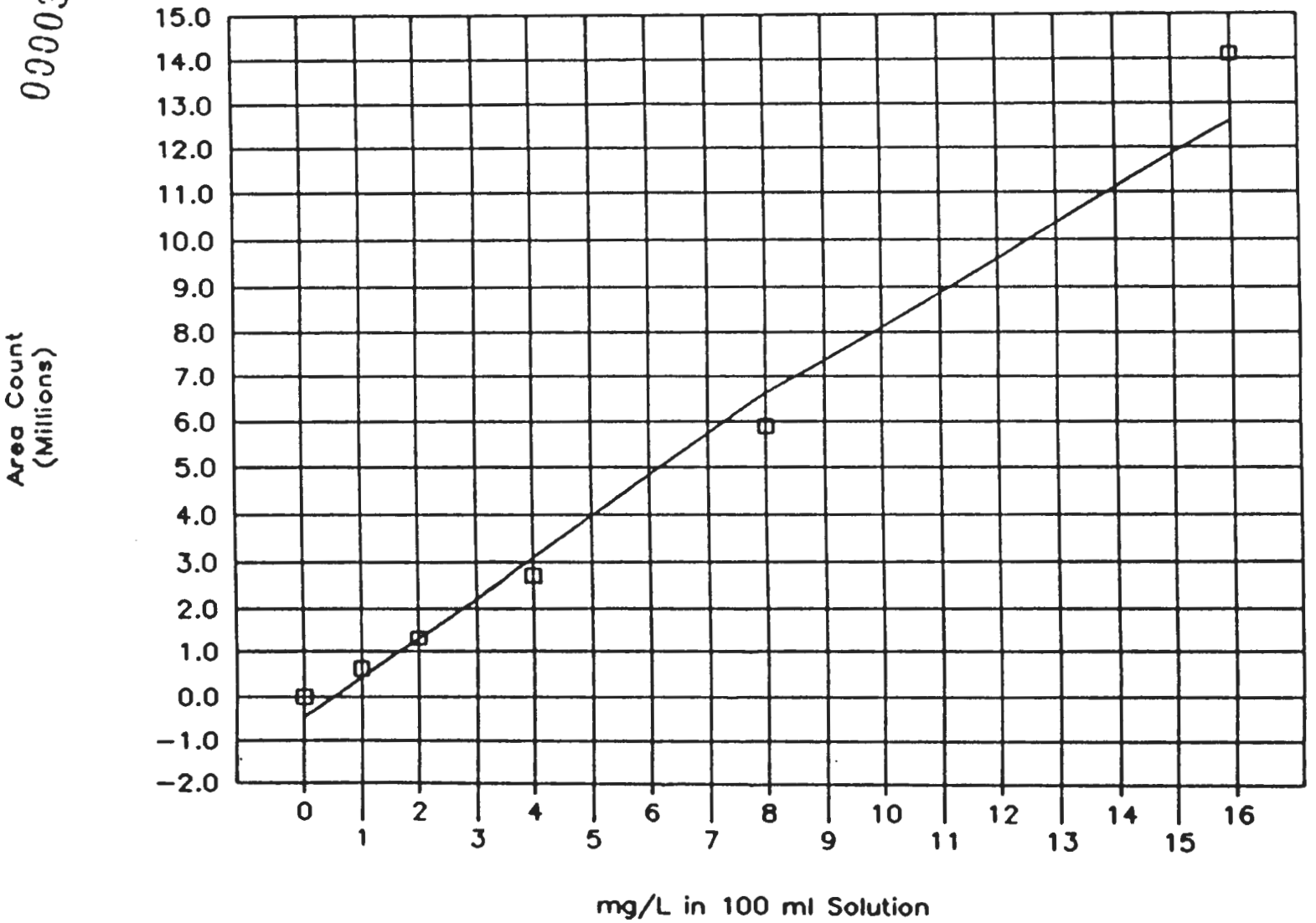
Constant	b = 0.5489 mg/L
Std Err of Y Est	0.5821
R Squared	0.9925 0.9962 = R
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000001 =a
Std Err of Coef. 0.000000

HS
10/18/93

ION CHROMATOGRAPH CALIBRATION

Nitrate, 02/16/93



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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
CHLORIDE
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	Cl CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-138891		0.15	-0.15
2	0.437	360701	296754	1.31	0.51	-0.07
3	0.875	713393	733396	1.30	0.86	0.01
4	1.75	1559974	1605684	1.32	1.71	0.04
5	3.5	3056137	3350259	1.32	3.20	0.30
6	7	6996407	6839410	1.39	7.14	-0.14

Avg Rt = 1.3125 Sd = 0.151
Avg Rf = 880958

Area = a x (mg/L) + b

Regression Output:

Constant	-1E+05
Std Err of Y Est	185084
R Squared	0.9960
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	996900.2
Std Err of Coef.	31458.79

mg/L = a x (AREA) + b

Regression Output:

Constant	b = 0.1477 mg/L
Std Err of Y Est	0.1852
R Squared	0.9960 0.9980 = R
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.000000 = a
Std Err of Coef.	0.000000

AS
10/18/93

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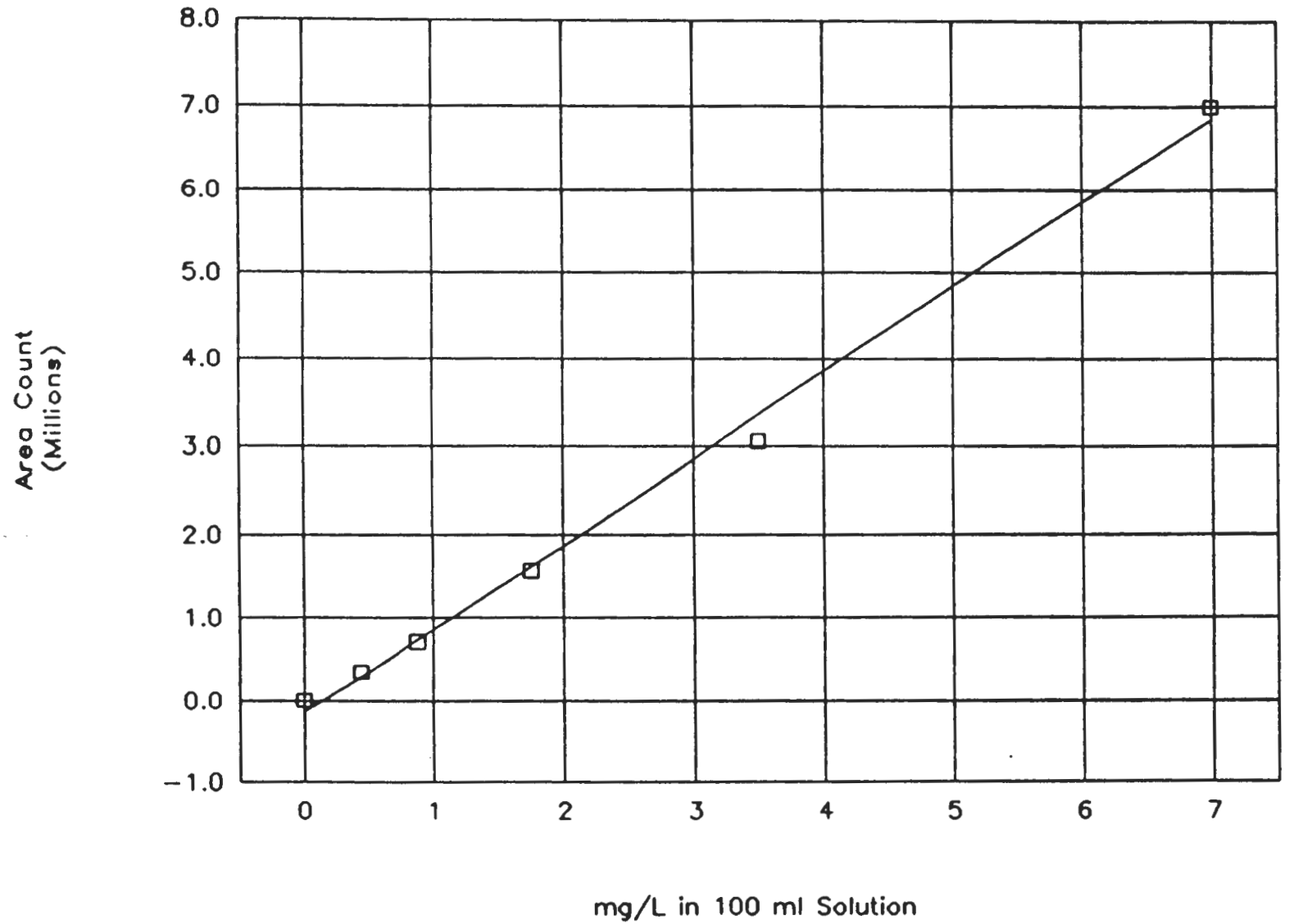
ION CHROMATOGRAPH CALIBRATION

Chloride, 2/23/93



AS
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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
FLUORIDE
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	F CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-96951		0.07	-0.07
2	0.25	294747	276913	0.92	0.26	-0.01
3	0.5	639734	650777	0.91	0.49	0.01
4	1.0	1406327	1398505	0.93	1.01	-0.01
5	2.0	2674210	2893961	0.93	1.85	0.15
6	4.0	5993059	5884873	0.97	4.06	-0.06

Avg Rt = 0.9225 Sd = 0.072
Avg Rf = 1E+06

Area = a x (mg/L) + b

Regression Output:

Constant	-96951
Std Err of Y Est	132188
R Squared	0.9972
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 1495456
Std Err of Coef. 39320

mg/L = a x (AREA) + b

Regression Output:

Constant	b = 0.0682 mg/L
Std Err of Y Est	0.0882
R Squared	0.9972 0.9986 = R
No. of Observations	6
Degrees of Freedom	4

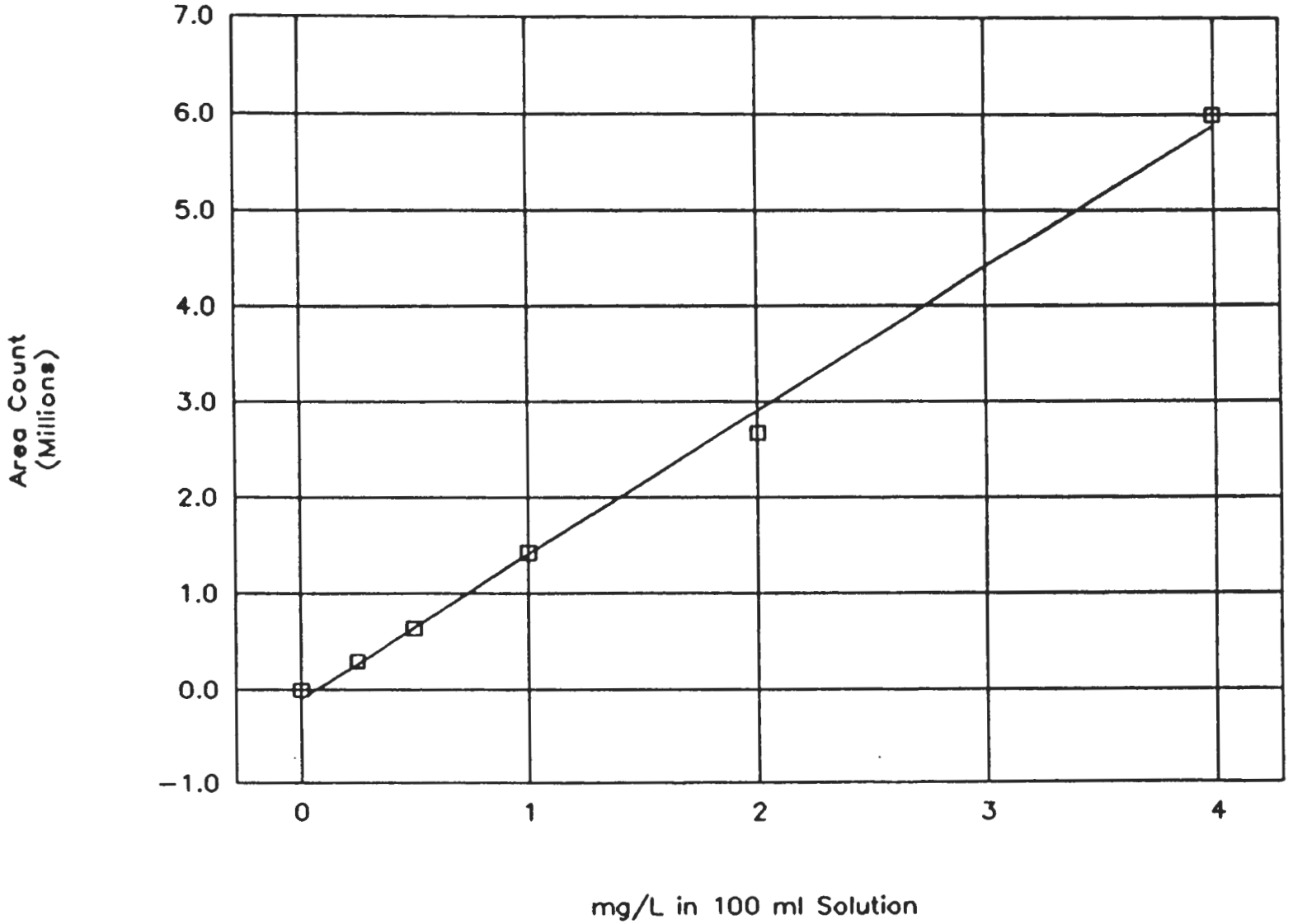
X Coefficient(s) 0.000000 = a
Std Err of Coef. 0.000000

✓ AS 10/18/93

000037

ION CHROMATOGRAPH CALIBRATION

Fluoride, 2/23/93



AS 10/12/93

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
PHOSPHATE PHOSPHORUS
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	P(PO4) * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-431601		0.5	-0.55
2	0.937	458036	348629	3.03	1.1	-0.16
3	1.875	1089337	1129691	3.01	1.8	0.03
4	3.750	2412507	2690983	3.08	3.4	0.32
5	7.500	5233553	5813567	3.02	6.8	0.71
6	15.000	12416571	12058735	3.14	15.4	-0.36

Avg Rt = 3.035 Sd = 0.426
Avg Rf = 647745

Area = a x (mg/L) + b

Regression Output:

Constant	-4E+05
Std Err of Y Est	430665
R Squared	0.9933
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 832689.0
Std Err of Coef. 34160.46

mg/L = a x (AREA) + b

Regression Output:

Constant	b = 0.5472 mg/L
Std Err of Y Est	0.5154
R Squared	0.9933 0.9967 = R
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000001 = a
Std Err of Coef. 0.000000

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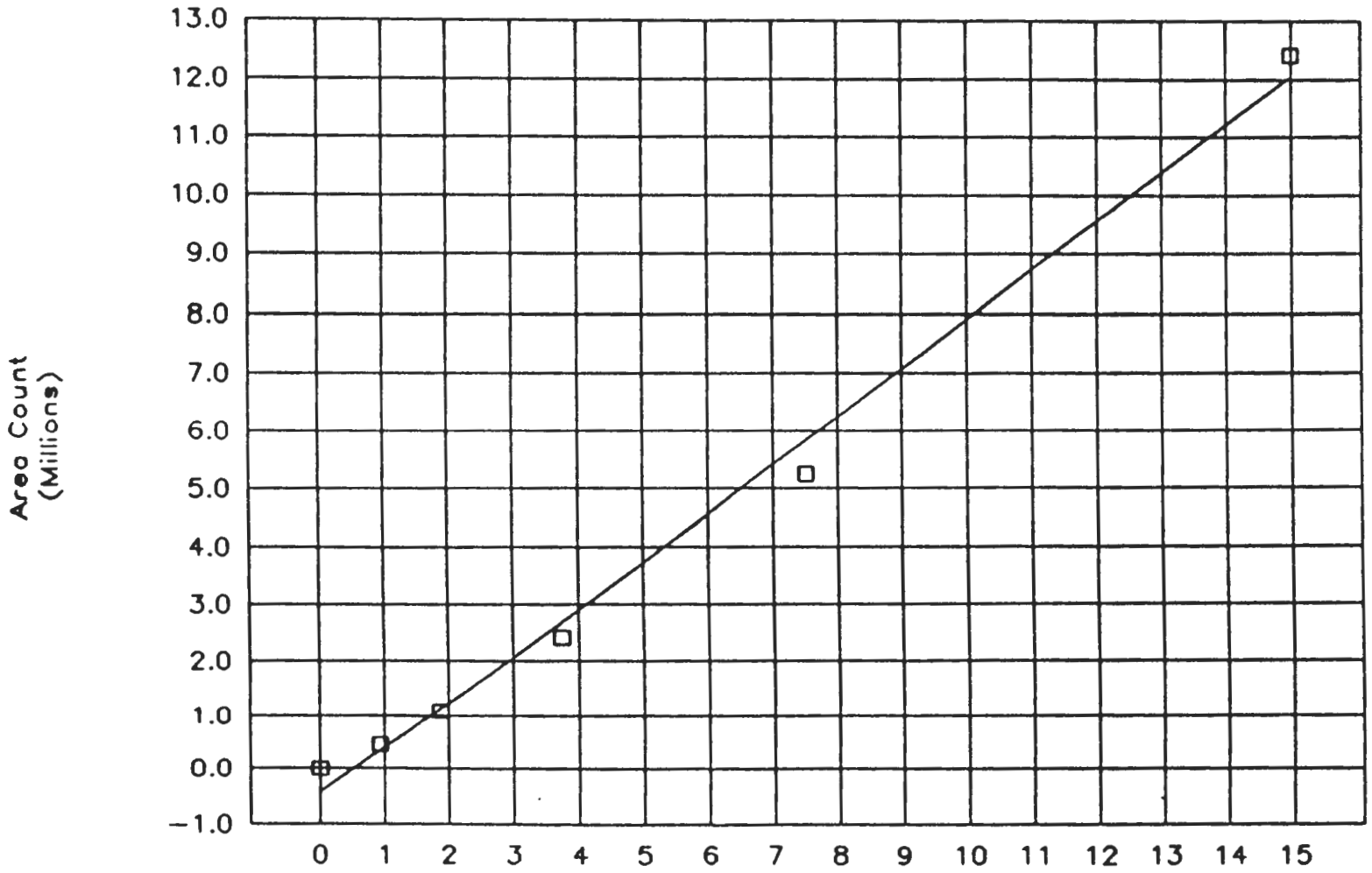
MS
10/18/93

ION CHROMATOGRAPH CALIBRATION

Phosphate P, 2/23/93



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AS
10/18/93

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
SULFATE
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	SO4 CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-152817		0.2	-0.24
2	1.25	733873	668519	4.07	1.4	-0.11
3	2.5	1498665	1489854	4.06	2.5	-0.02
4	5.0	3047170	3132524	4.13	4.9	0.13
5	10.0	6102304	6417865	4.04	9.5	0.48
6	20.0	13162480	12988547	4.19	20.2	-0.25

Avg Rt = 4.075 Sd = 0.25
Avg Rf = 612870

Area = a x (mg/L) + b

Regression Output:

Constant	-2E+05
Std Err of Y Est	202989
R Squared	0.9986
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 657068.1
Std Err of Coef. 12076.02

mg/L = a x (AREA) + b

Regression Output:

Constant	b = 0.2409 mg/L
Std Err of Y Est	0.3087
R Squared	0.9986 0.9993 = R
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000001 = a
Std Err of Coef. 0.000000

A.S.
10/18/93

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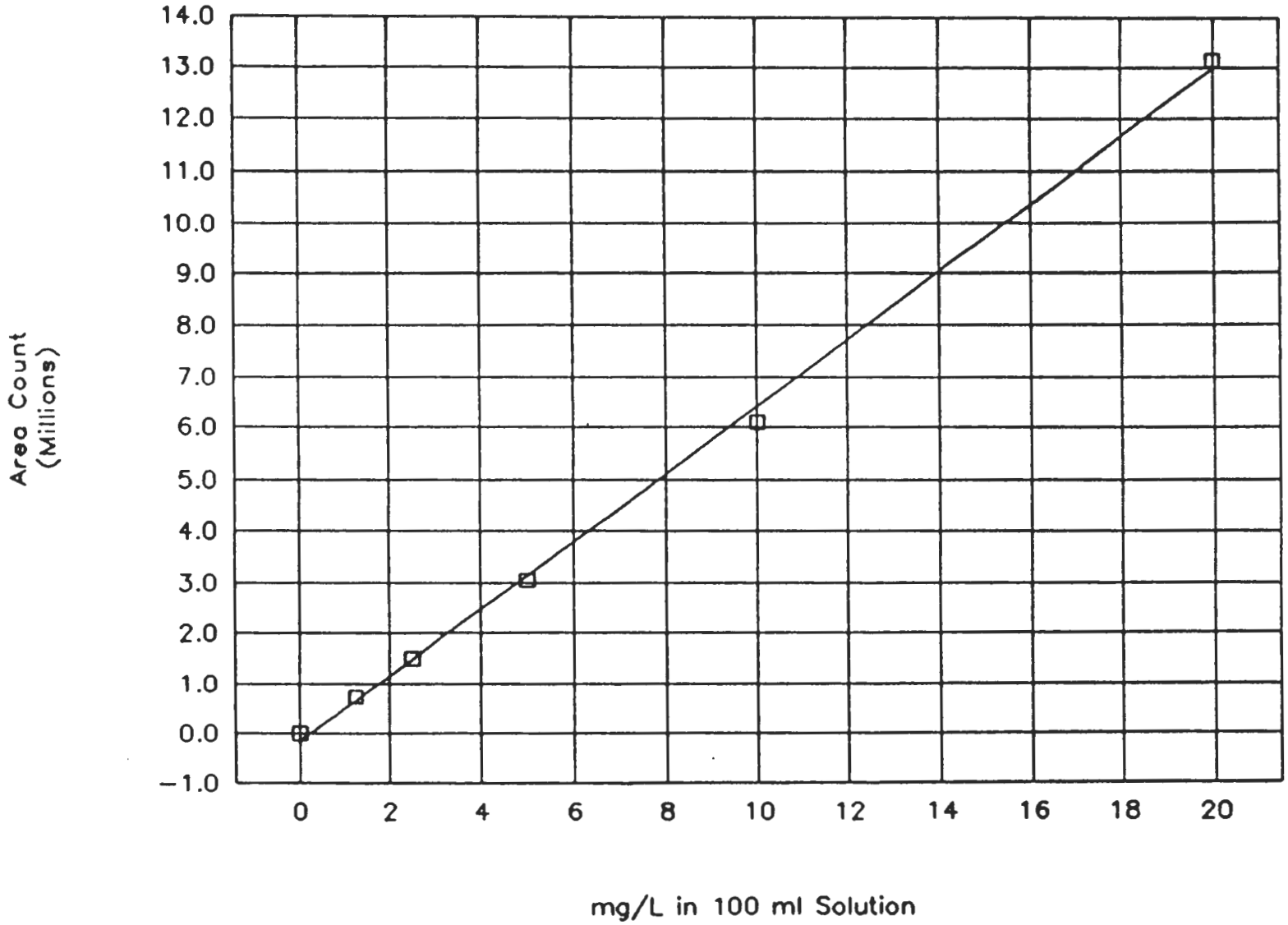
ION CHROMATOGRAPH CALIBRATION

Sulfate, 2/23/93



SM 6/8/97

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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
NITRITE NITROGEN
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	N(NO2) CONC, * mg/L	AREA	CALC AREA	RT	mg/L	mg/L DIFF
1	0	0	-167301		0.08	-0.08
2	0.313	548165	493174	1.52	0.34	-0.03
3	0.625	1108142	1151539	1.52	0.61	0.02
4	1.250	2451855	2470379	1.54	1.24	0.01
5	2.500	4774092	5108060	1.54	2.34	0.16
6	5.000	10557018	10383421	1.62	5.07	-0.07

Avg Rt = 1.53 Sd = 0.081
Avg Rf = 2E+06

Area = a x (mg/L) + b

Regression Output:

Constant	-2E+05
Std Err of Y Est	209111
R Squared	0.9977
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	2110144.
Std Err of Coef.	49762.80

mg/L = a x (AREA) + b

Regression Output:

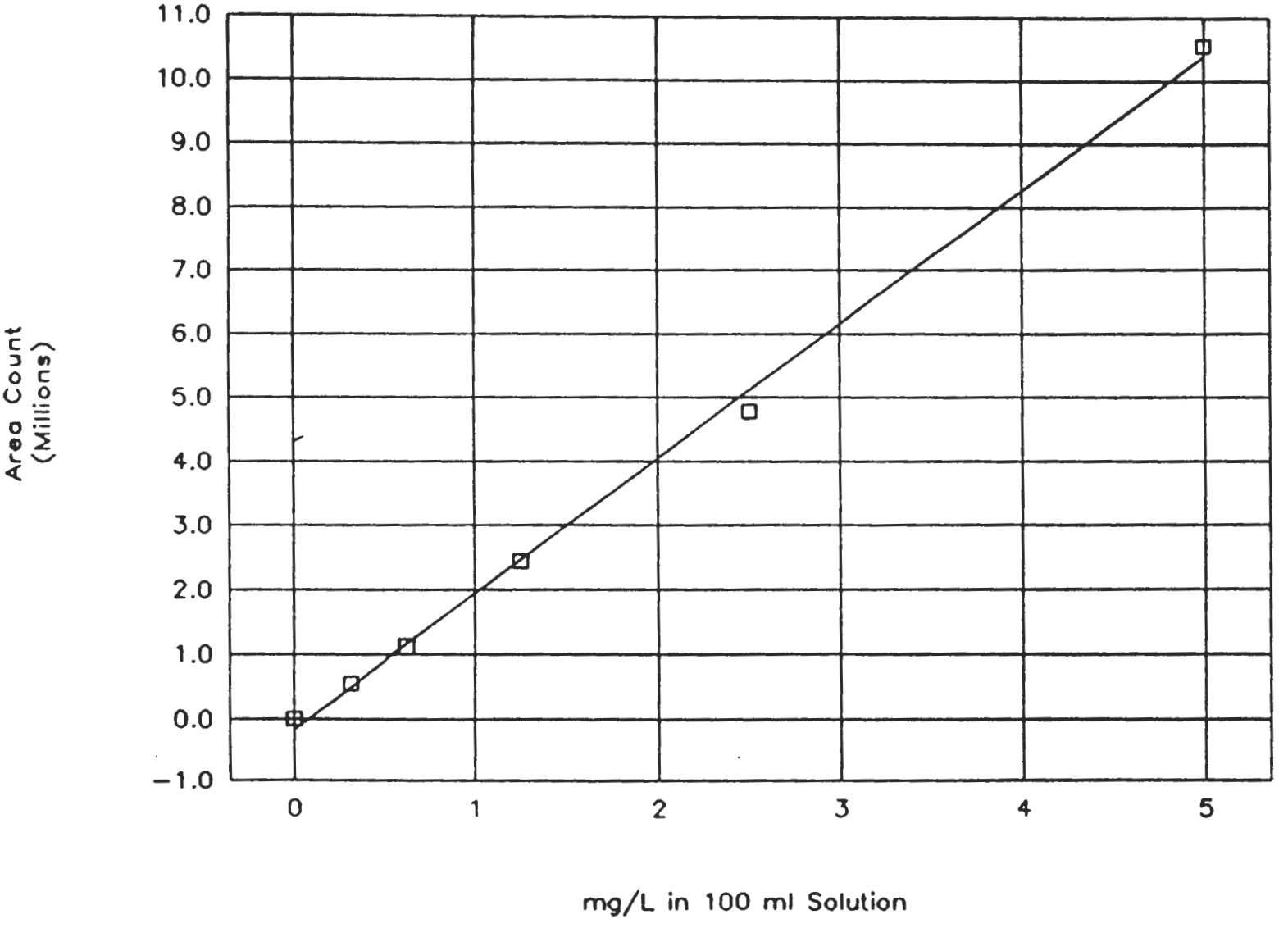
Constant	b = 0.0826 mg/L
Std Err of Y Est	0.0989
R Squared	0.9977 0.9989 = R
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.000000 = a
Std Err of Coef.	0.000000

AS
10/18/93

000043

ION CHROMATOGRAPH CALIBRATION

Nitrite Nitrogen, 2/23/92



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ION CHROMATOGRAPHIC 5 POINT CALIBRATION
2/23/93
NITRATE NITROGEN
CONCENTRATION IN 100 MLS INJECTION SOLN *
30 uMHOs, full scale

	N(NO3) CONC, * mg/L	AREA	CALC AREA	RT	mg/L
1	0	0	-226682		0.1
2	0.313	608540	517421	2.5	0.4
3	0.625	1252440	1259147	2.47	0.6
4	1.250	2607489	2744977	2.52	1.2
5	2.500	5310412	5716636	2.47	2.3
6	5.000	11892573	11659955	2.55	5.1

Avg Rt = 2.49 Sd =
Avg Rf = 2E+06

Area = a x (mg/L) + b

Regression Output:

Constant	-2E+05
Std Err of Y Est	272839
R Squared	0.9970
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 2377327.
Std Err of Coef. 64928.20

mg/L = a x (AREA) + b

Regression Output:

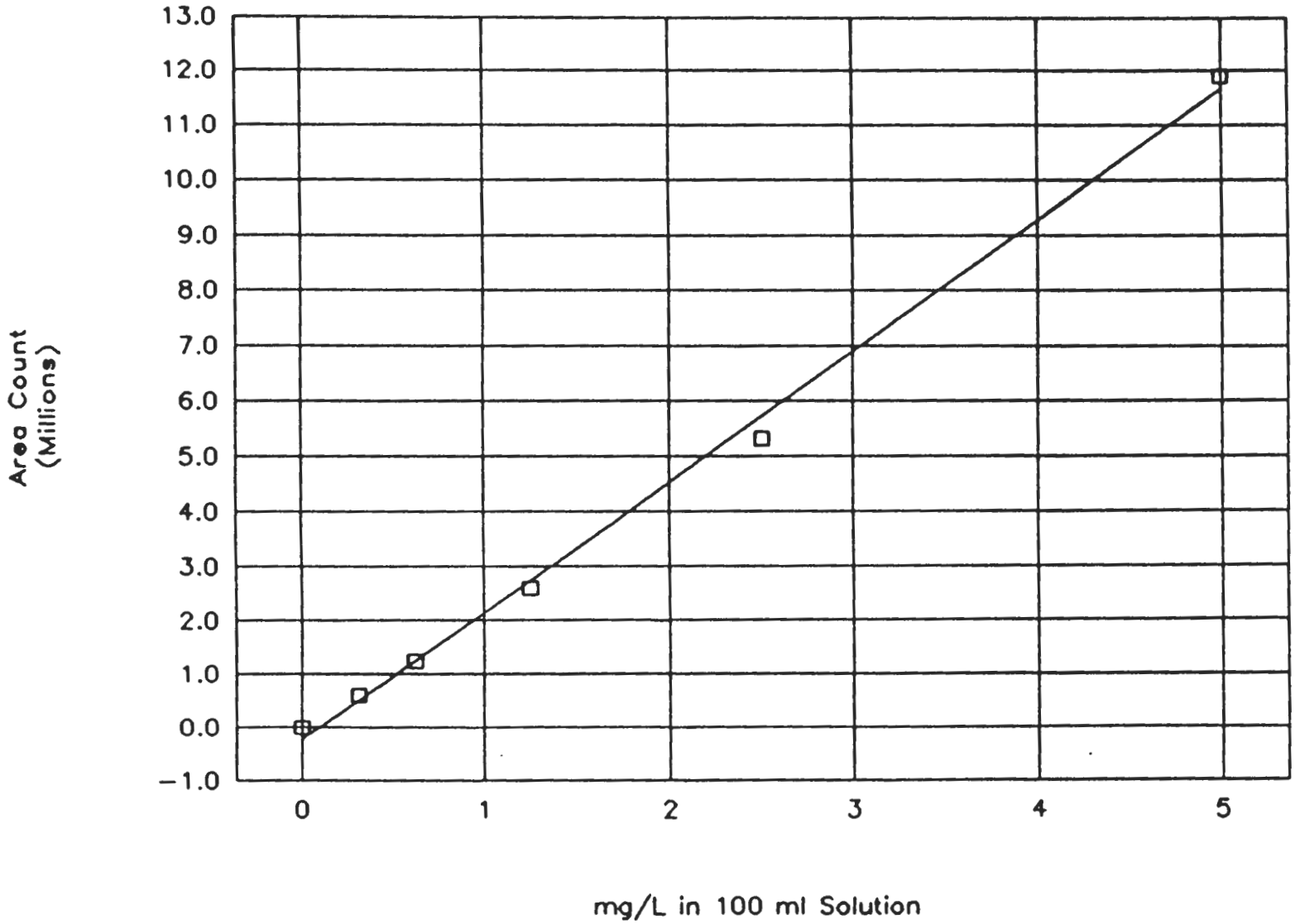
Constant	b = 0.0998 mg/L
Std Err of Y Est	0.1145
R Squared	0.9970 0.9985
No. of Observations	6
Degrees of Freedom	4

X Coefficient(s) 0.000000 =a
Std Err of Coef. 0.000000

AS
10/18/93

ION CHROMATOGRAPH CALIBRATION

Nitrate Nitrogen, 2/23/93



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```
SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L
SAM IDX    NAME            SAM AMT      SCALE FACTOR
SI= 1      SN=" BLK        SA= 1        XF= 1
SI= 2      SN=" STD1-8     SA= 1        XF= 1
SI= 3      SN=" STD2-8     SA= 1        XF= 1
SI= 4      SN=" STD3-8     SA= 1        XF= 1
SI= 5      SN=" STD4-8     SA= 1        XF= 1
SI= 6      SN=" STD5-8     SA= 1        XF= 1
SI=
END OF DIALOG

CHANNEL A      INJECT   02/16/93 11:48:24
               PM 1
II 0
```

BLK/Eluent Blank (WC-93-2-16-Eluent-07)
by BK 898/49

```
                                  02/16/93 11:48:24     CH= "A"  PS=  1.
FILE  1.     METHOD  5.     RUN  25     INDEX   1     CALIB
ANALYST: GM

NAME                MG/L       RT       AREA BC     RF

TOTALS              0.

CHANNEL A      INJECT   02/16/93 11:56:56
               PM 1
II 0
.97
36
1.58
2.52
3.04
4.04
```

Std 1-8
(WC-93-2-4-Std 1-8)
by BK 898/32

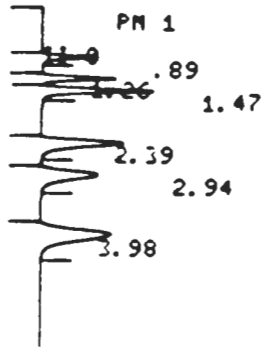
```
                                  02/16/93 11:56:56     CH= "A"  PS=  1.
FILE  1.     METHOD  5.     RUN  26     INDEX   2     CALIB
ANALYST: GM

NAME                MG/L       RT       AREA BC     RF

F                   0.625      0.97     232604 01
CL                  1.25       1.36     321235 02
NNO2                1.         1.58     556555 03
NNO3                1.         2.52     612613 01
PPO4                2.5        3.04     538174 01
SO4                 5.         4.04     854261 01

TOTALS             11.375               3115442
```

MS
10/18/93

9613492.6257

000047

CHANNEL A INJECT 02/16/93 12:04:52



STD 2-8

(WC-93-2-4-Std 2-8)

logBK 398/33

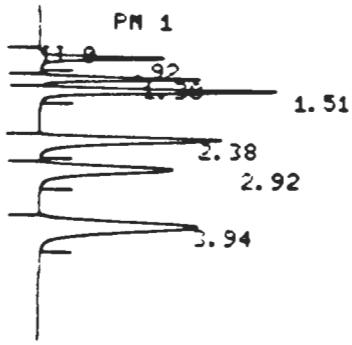
02/16/93 12:04:52 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 27 INDEX 3 CALIB

ANALYST: GM

NAME	MG/L	RT	AREA	BC	RF
F	1.25	0.89	445920	01	
CL	2.5	1.26	617832	02	
NNO2	2.	1.47	1087911	03	
NNO3	2.	2.39	1311576	01	
PPO4	5.	2.94	1163208	01	
SO4	10.	3.98	1370264	01	
TOTALS	22.75		6496711		

CHANNEL A INJECT 02/16/93 12:11:52



STD 3-8

(WC-93-2-4-Std 3-8)

logBK 398/34

02/16/93 12:11:52 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 28 INDEX 4 CALIB

ANALYST: GM

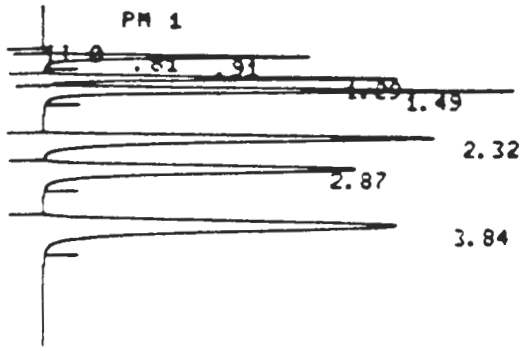
NAME	MG/L	RT	AREA	BC	RF
F	2.5	0.92	1048666	01	
CL	5.	1.3	1364762	02	
NNO2	4.	1.51	2370106	03	
NNO3	4.	2.38	2715049	01	
PPO4	10.	2.92	2473972	01	
SO4	20.	3.94	3991926	01	
TOTALS	45.5		13964481		

HS
10/19/93

9613492.6258

CHANNEL A INJECT 02/16/93 12:19:23

000048



Std 4-8
(WC-93-2-4-Std 4-8)
Log Bk 895/35

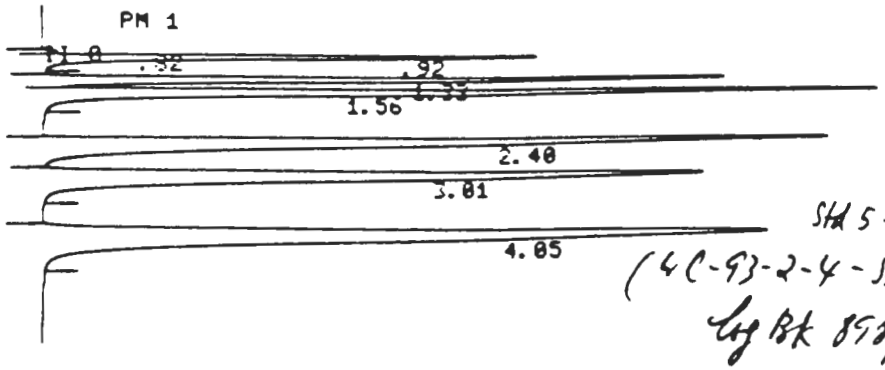
02/16/93 12:19:23 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 29 INDEX 5 CALIB

ANALYST: GM

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.81	46737	02	
F	5.	0.91	2128767	03	
CL	10.	1.29	2939995	02	
NNO2	8.	1.49	4830756	03	
NNO3	8.	2.32	5895194	02	
PPO4	20.	2.87	5550740	03	
SO4	40.	3.84	8456329	01	
TOTALS	91.		29848518		

CHANNEL A INJECT 02/16/93 12:26:37



Std 5-8
(WC-93-2-4-Std 5-8)
Log Bk 895/36

02/16/93 12:26:37 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 30 INDEX 6 CALIB

ANALYST: GM

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.82	87051	02	
F	10.	0.92	4637769	03	
CL	20.	1.33	6967853	02	
NNO2	16.	1.56	10502917	03	
NNO3	16.	2.4	14099730	02	
PPO4	40.	3.01	13550607	03	
SO4	80.	4.05	19889332	01	
TOTALS	182.		69735259		

HS 10/18/93

COEFFICIENTS OF LEAST SQUARES FIT TO A LINEAR EQUATION

FILE ENTRY	KA	KB	KC
1	0.0000↑+01	0.4660↑+06	-.892↑+05
2	0.0000↑+01	0.3492↑+06	-.220↑+06
3	0.0000↑+01	0.6577↑+06	-.174↑+06
4	0.0000↑+01	0.8825↑+06	-.454↑+06
5	0.0000↑+01	0.3400↑+06	-.512↑+06
6	0.0000↑+01	0.2492↑+06	-.593↑+06

9613492.6259

000049

SAMPLE TABLE...
ANALYST:AN=" RL
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" BLK	SA= 1	XF= 1
SI= 2	SN=" STD1S-7	SA= 1	XF= 1
SI= 3	SN=" STD2S-7	SA= 1	XF= 1
SI= 4	SN=" STD3S-7	SA= 1	XF= 1
SI= 5	SN=" STD4S-7	SA= 1	XF= 1
SI= 6	SN=" STD5S-7	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/23/93 08:41:33

PM 1

II 0

BLK WC-93-2-23-Effluent-11
logBK 905/16

02/23/93 08:41:33 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 19 INDEX 1 CALIB

ANALYST: RL

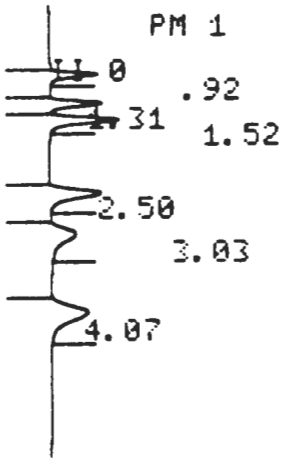
NAME	MG/L	RT	AREA BC	RF
TOTALS	0.			

9613492.6260

000050

CHANNEL A INJECT 02/23/93 08:55:21

PM 1



Std 1 S-7

(WC-93-2-2-Std 1-S7 logBk 898/28)

079

02/23/93 08:55:21 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 20 INDEX 2 CALIB

ANALYST: RL

NAME	MG/L	RT	AREA	BC	RF
F	0.25	0.92	294747	01	
CL	0.437	1.31	360701	02	
NNO2	0.313	1.52	548165	03	
NNO3	0.313	2.5	608540	01	
PPO4	0.937	3.03	458036	01	
SO4	1.25	4.07	733873	01	
TOTALS	3.5		3004062		

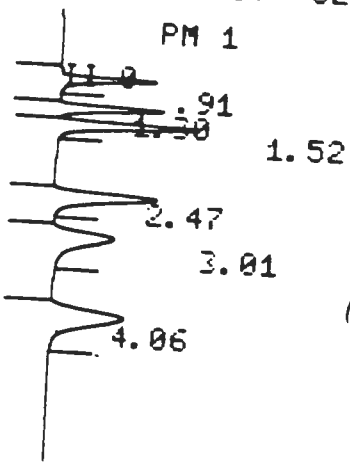
KS
1/18/93

9613492.6261

000051

CHANNEL A INJECT 02/23/93 09:05:12

PM 1



Std2-5-7
(WC-93-2-2-Std2.S7 by BK 98/28)

02/23/93 09:05:12 CH= "A" PS=

FILE 2. METHOD 5. RUN 21 INDEX 3 CALIB

ANALYST: RL

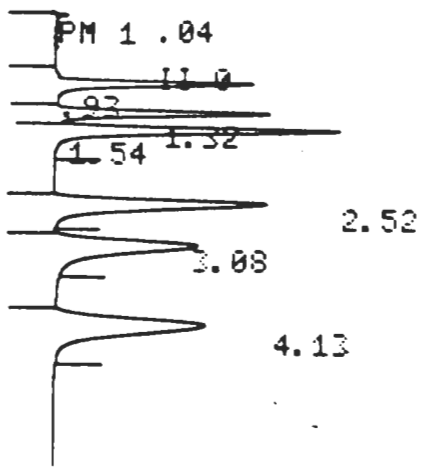
NAME	MG/L	RT	AREA	BC	RF
F	0.5	0.91	639734	01	
CL	0.875	1.3	713393	02	
NNO2	0.625	1.52	1108142	03	
NNO3	0.625	2.47	1252440	01	
PPO4	1.875	3.01	1089337	01	
SO4	2.5	4.06	1498665	01	
TOTALS	7.		6301711		

HS
10/12/93

9613492.6262

000052

CHANNEL A INJECT 02/23/93 09:13:47



Std 3-S7
(WC-93-2-2-Std 3 S7, log DK 8/98/29)

02/23/93 09:13:47 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 22 INDEX 4 CALIB

ANALYST: RL

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.04	23716	01	
F	1.	0.93	1406327	02	
CL	1.75	1.32	1559974	02	
NNO2	1.25	1.54	2451855	03	
NNO3	1.25	2.52	2607489	01	
PPO4	3.75	3.08	2412507	01	
SO4	5.	4.13	3047170	01	
TOTALS	14.		13509038		

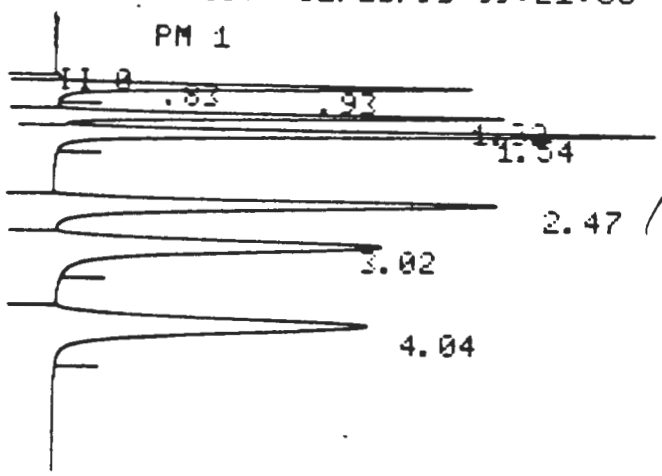
AS
10/18/93

9613492.6263

000053

CHANNEL A INJECT 02/23/93 09:21:05

PM 1



Std 4-5-7

(WC-93-2-2-Std 4 S7, Lg BK 993/30)

02/23/93 09:21:05 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 23 INDEX 5 CALIB

ANALYST: RL

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.83	22055	02	
F	2.	0.93	2674210	03	
CL	3.5	1.32	3056137	02	
NNO2	2.5	1.54	4774092	03	
NNO3	2.5	2.47	5310412	02	
PPO4	7.5	3.02	5233553	03	
SO4	10.	4.04	6102304	01	
TOTALS	28.		27172763		

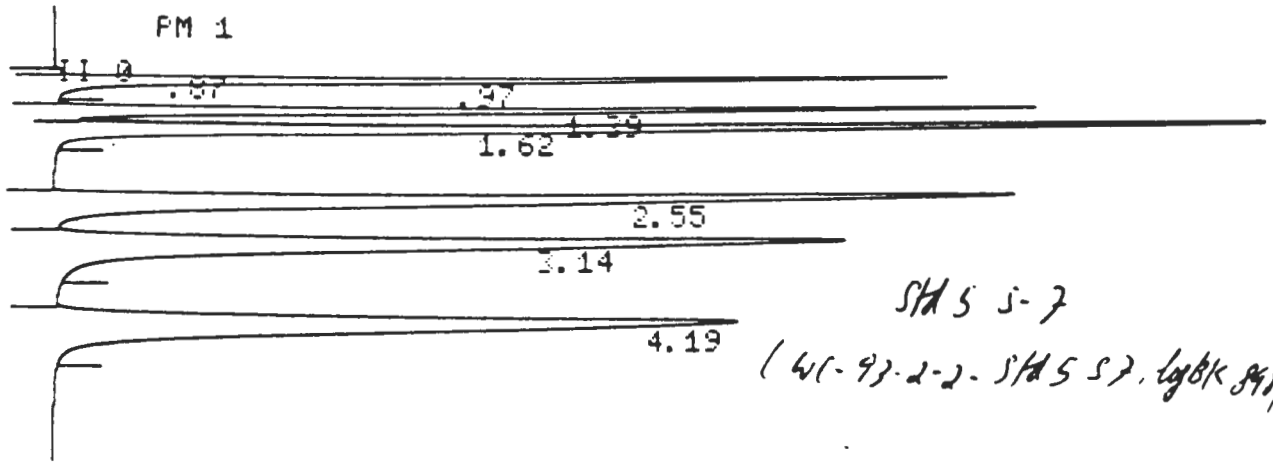
HS
10/18/93

081

9613492.6264

000054

CHANNEL A INJECT 02/23/93 09:28:36



Std S 5-7
(W(-93-2-2. Std S 5-7, logbk 8/31,

02/23/93 09:28:36 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 24 INDEX 6 CALIB

ANALYST: RL

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.87	35263	02	
F	4.	0.97	5993059	03	
CL	7.	1.39	6996407	02	
NNO2	5.	1.62	10557018	03	
NNO3	5.	2.55	11892573	02	
PPO4	15.	3.14	12416571	03	
SO4	20.	4.19	13162480	01	
TOTALS	56.		61053371		

AS 10/12/93

COEFFICIENTS OF LEAST SQUARES FIT TO A LINEAR EQUATION

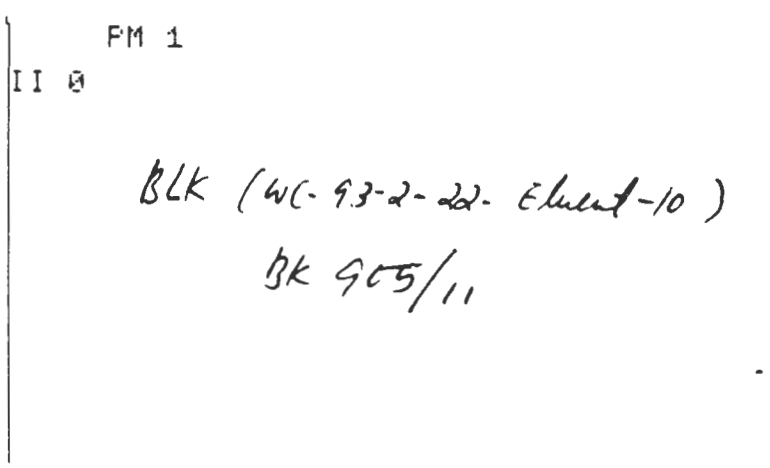
FILE ENTRY	KA	KB	KC
1	0.0000↑+01	0.1495↑+07	-.970↑+05
2	0.0000↑+01	0.9969↑+06	-.139↑+06
3	0.0000↑+01	0.2110↑+07	-.167↑+06
4	0.0000↑+01	0.2377↑+07	-.226↑+06
5	0.0000↑+01	0.8327↑+06	-.432↑+06
6	0.0000↑+01	0.6571↑+06	-.153↑+06

9613492.6265

med. level I cal

000055

```
SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L
SAM IDX   NAME            SAM AMT      SCALE FACTOR
SI= 1     SN=" BLK        SA= 1        XF= 1
SI=
END OF DIALOG

CHANNEL A      INJECT  02/22/93 09:01:26
```




```
                                  02/22/93 09:01:26     CH= "A"  PS=  1.

FILE  1.      METHOD  5.      RUN 183      INDEX   1

ANALYST: GM

SAMPLE   1      BLK  01BMS

   SA        IS        XF
    1.        0.        1.

NAME                MG/L        RT       AREA BC      RF

TOTALS              0.
```

9613492.6266

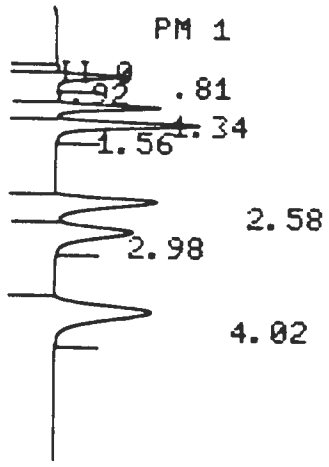
000056

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" STD2-8	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/22/93 09:08:30



02/22/93 09:08:30 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 184 INDEX 1

ANALYST: GM

SAMPLE 1 STD2-8

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.81	16978	02	
F	1.184	0.92	462586	03	390697.635
CL	2.423	1.34	626165	02	258425.506
NNO2	1.949	1.56	1108683	03	568847.101
NNO3	1.927	2.58	1246870	02	647052.413
PPO4	4.859	2.98	1139655	03	234545.174
SO4	9.815	4.02	1852326	01	188723.994
TOTALS	22.157		6453263		

Check Std 2-8
(WC-93-2-4-Std 2-8 Std.)
F = 1.25 mg/l
Cl = 2.50 mg/l
N-NO_2 = 2.0 mg/l
N-NO_3 = 2.0 mg/l
P-PO_4 = 5.0 mg/l
SO_4 = 10.0 mg/l

KS 10/14/93

9613492.6267

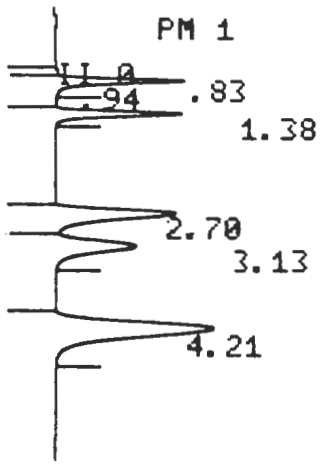
000057

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" DS-03	SA= 10	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/22/93 09:19:26



052

02/22/93 09:19:26 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 185 INDEX 1

ANALYST: GM

*N-NO_3 → NO_3 = 22.582 × $\frac{62}{14}$ mg/l = 100.0 mg/l

SAMPLE 1 DS-038

*P-PO_4 → PO_4 = 50.99 × $\frac{95}{31}$ mg/l = 156.2 mg/l

SA	IS	XF
10.	0.	100.

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.83	16576	02	
F	19.79	0.94	833024	03	42093.178
CL	30.527	1.38	846137	01	27717.66
NNO3	22.582	2.7	1539071	02	68154.769
PPO4	50.99	3.13	1221366	03	23953.05
SO4	148.804	4.21	3114576	01	20930.728
TOTALS	272.693		7570750		

Check Dilute-Std 08
(4C-93-2-2-5(-DS-03)
BK 98/21

F = 19.6 mg/l
Cl = 29.1 mg/l
NO_3 = 100 mg/l
PO_4 = 151 mg/l
SO_4 = 151 mg/l

✓ AS 10/18/93

9613492.6268

low level I cal

000058

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" BLK	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 08:46:31

PM 1
II 0

Blk(IC Eluent) (WC-93-2-23-Eluent-11)
Log Bk 9-J/16

02/25/93 08:46:31 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 97 INDEX 1

ANALYST: GM

SAMPLE 1 BLK 01GDP

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA BC	RF
TOTALS	0.			

AS
10/13/93

9613492.6269

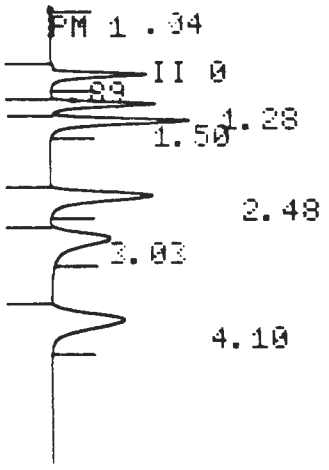
000059

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" STD2S-7	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 09:23:59



02/25/93 09:23:59 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 99 INDEX 1

ANALYST: GM

SAMPLE 1 STD2S-7

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.04	8877	01	
F	0.494	0.89	642130	01	1299858.299
CL	0.85	1.28	707769	02	832669.412
NNO2	0.6	1.5	1099746	03	1832910.
NNO3	0.609	2.48	1220766	01	2004541.873
PPO4	1.743	3.03	1019975	01	585183.592
SO4	2.435	4.1	1447325	01	594383.984
TOTALS	6.731		6146588		

Check Std 2 S7
CVC-93-2-2-Std2-S7,
DK 8/8/28
F = 0.5 mg/l
Cl = 0.875 mg/l
n-NO2 = 0.625 mg/l
n-NO3 = 0.625 mg/l
PO4 = 1.875 mg/l
SO4 = 2.5 mg/l
AS
10/18/93

9613492.6270

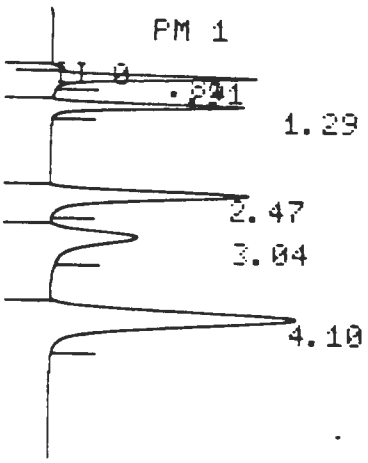
000060

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" DS-05	SA= 5	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 09:38:32



02/25/93 09:38:32 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 100 INDEX 1

ANALYST: GM

$N\text{-}NO_3 \rightarrow NO_3 = \frac{62}{14} \times 21.846\ mg/l = 96.7\ mg/l$

SAMPLE 1 DS-05-7

$P\text{-}PO_4 \rightarrow PO_4 = \frac{95}{31} \times 45.826\ mg/l = 140.4\ mg/l$

SA	IS	XF
5.	0.	100.

Check Dwnek-DI
(WC-93-2-24-2(-DS-05)
BK 95/18

NAME	MG/L	RT	AREA	BC	RF
1	0.	0.81	65791	02	
F	18.962	0.91	1320905	03	69660.637
CL	29.106	1.29	1311794	01	45069.539
NNO3	21.846	2.47	2370238	01	108497.574
PPO4	45.826	3.04	1476271	01	32214.703
SO4	151.688	4.1	4830638	01	31845.881
TOTALS	267.428		11375637		

F = 19.6 mg/l
Cl = 29.1 mg/l
NO_3 = 100 mg/l
PO_4 = 151 mg/l
SO_4 = 151 mg/l

AS 10/12/93

Date	LO	Sample ID	Aliquot	Basis	Remark	Init.
					SL 870033	
2/16/93	BLK	BLK	1:1	l		[illegible]
↓	Std 1-8	Std 1-8	1:1	l		[illegible]
Calibr	" 2-8	-2-8	1:1	l		[illegible]
	" 3-8	-3-8	1:1	l		[illegible]
m-level	" 4-8	-4-8	1:1	l		[illegible]
	" 5-8	-5-8	1:1	l		[illegible]
	BLK	BLK	1:1	l		[illegible]
	Std 2-8	Std 2-8	1:1	l		[illegible]
	BS-03	BS-03	10:100	l		[illegible]
	A-02-002	01A	50:200	l		"
		02A	50:200	l		"
	A-02-003	01C	1:100	s→l		"
	~~"~~	~~01C~~	~~1:50~~	~~l~~	~~RL 2/16/93~~	"
	"	01E	1:1	s→l		"
	A-02-003	01C	1:50	s→l		"
	"	01E	1:1	s→l		"
	"	01C	1:1	s→l		"
	"	01EDup	1:1	s→l		"
	"	01DMS	1:1	s→l		"
	"	01C	25:100	s→l		"
	"	01C	12.5:100	s→l		

9613492.6272

Date	WO	Sample ID	dilution factor	Matrix	Remarks	Fnl	Bat
	RC870040				000062		2/24
B 2/22/93	BLK	BLK	1:1	l		GM	
	BLK	BLK	1:1	l		"	
	STD2-8	STD2-8	1:1	l		"	
	DS-03	DS-03	10:100	l		"	↓
	02-032	02C	1:1	l		"	2/27
	02-032	02DDup	1:1	l		"	
	02-032	01G	1:1	l		"	
	02-032	01G	1:1	l		"	Cal for
	02-032	01G	1:1	l		"	
	02-032	01G	1:1	l		"	
	02-032	01HMS	1:1	l	F=10mg/L Cl=10mg/L PO_4=10mg/L SO_4=30mg/L	"	
2/22/93	BLK	BLK	1:1	l		GM	
	STD 1S-7	STD1S-7	1:1	l		"	
Calib.	STD 2S-7	STD2S-7	1:1	l		"	
	STD3-S-7	STD3S-7	1:1	l		"	
	STD4-S-7	STD4-S-7	1:1	l		"	
	STD5-S-7	STD5-S-7	1:1	l		"	
	STD2S-7	STD2S-7	1:1	l		"	
	DS-04-7	DS-04-7	5:100	l		"	
	DS-04-7	DS-04-7	5:100	l		"	
	DS-04-7	DS-04-7	5:100	l		"	
	02-018	01B	50.06:100	S		"	

9615492.6275

000063

Date	WO	Sample ID	Dilution factor	matrix	Remarks !!! 870041	Inst
2/27/95	02-018	01B	50.06:100	S		
	02-018	01B	50.06:100	S	TEST	"
	02-018	01B	50.06:100	S	1 drop of H_2SO_4(sa)	"
	02-018	01B	50.06:100	S	4 drops $NH_4^+Cl^-$	"
	02-018	02C	50.05:100	S		"
2/27/95	BLK	BLK	1:1	l		[illegible]
	STD1S-7	STD1S-7	1:1	l		"
	STD2S-7	STD2S-7	1:1	l		"
	STD3S-7	STD3S-7	1:1	l		"
	STD4S-7	STD4S-7	1:1	l		"
	STD5S-7	STD5S-7	1:1	l		"
	STD.2S-7	STD2S-7	1:1	l		"
	DS-04	DS-04	5:100	l		"
	02-018	01B	50.06:100	S		"
	02-018	01B	50.06:100	S	TEST Fl - 1 drop	"
	02-018	01B	50.06:100	S		"
	02-018	01B	50.06:100	S	Test Fl - 3 drops	"
	02-018	02C	50.05:100	S		"
	02-018	02C	50.05:100	S		"
	02-018	02C	50.05:100	S		"
	02-018	02DMS	50.07:100	S	F=10 mg/kg Cl 10 mg/kg SO_4 60 mg/kg	"
	02-018	03B	50.09:100	S	F=10 mg/kg Cl=10 mg/kg SO_4=60 mg/kg	"
	02-018	03B	50.09:100	S		"
	02-018	03B	50.09:100	S	TEST 1 drop F	"

Calib. low (*)

9613492.6274

Date	WO 870042	Sample ID	Dilution Factor	Matrix	Remarks 000064	Init
2/24/93	02-018	04C	50.02:100	S		
	02-018	04C	50.02:100	S		"
	02-018	04C	50.02:100	S		
	02-018	04C dup	50.02:100	S		"
	02-009	01D	50.05:100	S		"
	02-009	01D	50.05:100	S		"
	02-009	01D	50.05:100	S		"
	02-009	01G	50.03:100	S		"
	02-009	01G	50.03:100	S		"
	02-009	01G	50.03:100	S		"
	02-009	01EMS	50.00:100	S	1 ~~F-Zinc~~ mg/kg Se ~~[illegible]~~ mg/kg DL 4/15/93	"
	02-011	01G	50.14:100	S		"
	02-011	01G	50.14:100	S		"
	02-011	01HMS	50.12:100	S	F-Zinc mg/kg Se ~~[illegible]~~ mg/kg DL 4/15/93	"
	02-011	01HMS	50.12:100	S	F-Zinc mg/kg Se ~~[illegible]~~ mg/kg DL 4/15/93	"
	02-011	02E	50.10:100	S		"
	02-011	03A	50.15:100	S		"
2/24/93	BLK	BLK	1:1	l		
	BLK	BLK	1:1	l		"
	STD2-5-7	STD2-5-7	1:1	l		"
	DS-04	DS-04	5:100	l		"
	DS-04	DS-04	5:100	l		"
	STD2-5-7	STD2-5-7	1:1	l		"

9613492.6275

Date	WO	Sample ID	Dilution factor	Matrix	Remarks	Lab	Date
	870044						
2/24/93	A_3-02-027	04C	50.01:100	S	000065	GM	2/25/93
	02-027	04C	50.01:100	S		"	
	02-027	05C	50.06:100	S		"	
	02-027	06C	50.00:100	S		"	
	02-039	01G	50.08:100	S		"	
	02-039	01HMS	50.13:100	S	F=10mg/Kg SO4=20mg/Kg OL 3/04/93	"	
	02-039	02E	50.12:100	S		"	
	02-032	03G	50.06:100	S		"	
	02-009	01GDup	50.03:100	S		"	
	02-009	01GDup	50.03:100	S		"	
2/25/93	BLK	BLK	1:1	l		GM	
	BLK	BLK	1:1	l		"	
	BLK	BLK	1:1	l		"	
	BLK	BLK	1:1	l		"	
	STD 25-7	STD 25-7	1:1	l		"	
	DS-05	DS05	5:100	l		"	
	A_3-02-030	01G	50.15:100	S		"	
	02-030	01HMS	50.13:100	S	F=10mg/Kg SO4=20mg/Kg OL 2/25/93	"	
	02-030	02E	50.08:100	S		"	2/26/93
	02-030	02FDup	50.11:100	S		"	
	02-020	01A	1:1	l	SCREEN RUN	"	
	02-041	01G	50.10:100	S		"	
	02-041	01G	25.05:100	S		"	

9613492.6276

099066

870045

Analyst	Date	WO	Sample ID	Dilution factor	Matrix	Remarks	Analyst
GM	2/25/93	B3 02-041	01HMS	25.03:100	S	F=20mg/kg; Cl=20mg/kg; NO2=2mg/kg; PO4=40mg/kg 40 mg/kg; SO4=8mg/kg 10 mg/kg; NO3=8mg/kg 80 mg/kg RL 3/4/93	GM
"		02-041	01HMS	12.575:100	S		"
"		02-041	01HMS	6.255:100	S		"
"		02-041	02C	50.07:100	S		"
"		02-041	02C	25.035:100	S		"
"		02-041	02C	12.515:100	S		"
"		02-041	02DDup	50.03:100	S		"
"		02-041	02DDup	25.015:100	S		"
"		02-041	02DDup	25.015:100	S		"
"		B3 02-032	03G-	50.06:100	S		"
GM		02-032	03IDp	50.07:100	S		"
"		02-032	03HMS	50.07:100	S	Spike level F = 10 mg/kg; Cl = 10 mg/kg; N-NO2 = 10 mg/kg; P-PO4 = 20 mg/kg; SO4 = 20 mg/kg	"
"							
"							
"							
"		02-032	03HMS	25.04:100	S	Spike level N-NO3 = 20 mg/kg	
"		"	03HMS	12.52:100	S	" " = 40 mg/kg	
"	2/26/93	BLK	BLK	1:1	l		GM
"		BLK	BLK	1:1	l		"
"		BLK	BLK	1:1	l		"
"		BLK	BLK	1:1	l		"
"		BLK	BLK	1:1	l		"
		BLK	BLK	1:1	l		"
		BLK	BLK	1:1	l		"

9613492.6277

A-92-12-18-JC-c

Certificate of Analysis

Five Anion Standard

000067

Product Number 037157
Lot Number 921124

The Five Anion Standard was developed to aid the analysis of anions by Ion Chromatography (IC). The standard was prepared by the dissolution of high purity salts in high purity deionized water (18 Megohm-cm specific resistance and tested by IC for ionic contaminants). The bottle label lists the nominal concentration values of the ionic components for informational purposes only. All individual ion concentration values were determined by Ion Chromatography. The system was standardized using the National Bureau of Standards Standard Reference Material SRM 3183 (Fluoride Standard Solution), SRM 3182 (Chloride Standard Solution), SRM 3185 (Nitrate Standard Solution), SRM 3186 (Phosphate Standard Solution), SRM 3181 (Sulfate Standard Solution) and other standards. The actual concentration values determined for each of the component icns are listed in Table 1.

Table 1

Five Anion Standard

Components	Concentration (mg/L)
Fluoride	19.6 ± 0.4
Chloride	29.1 ± 1.0
Nitrate	100 ± 0*
Phosphate	151 ± 1
Sulfate	151 ± 1

The concentration values were based on proven reliable methods of analysis. The estimated uncertainties are two standard deviations of the concentration values. The concentration values are warranted to be stable for three months from the date of shipment.

The preparation and analyses of the Five Anion Standard were performed with extreme care by Charles Catanese of the DIONEX Corporation Consumables Manufacturing Department.

DIONEX Corporation, Sunnyvale, California 94088-3603.

* The uncertainty of the nitrate determination was less than 1.

9613492.6278

000068

THERMO ANALYTICAL, INC.
TMA/ARLI

ORK ORDER # IC Eluent buffer Soln. dIC Eluent BK Soln BOOK # 898

IENT: WC-93-2-16 Eluent-07 PAGE # 49

ETHODS USED EPA 300.0

ATA & CALCULATIONS: IC-buffer Soln and IC Eluent BK Soln

40ml [IC Eluent Stock Soln. WC-93-2-2-Eluent stock-03 2/2/93 log bk 898/16]

dilute → 4L DI H_2O

OMMENTS:

DATE	2/16/93		Total Hrs.
Signed	jm		
Approved	RL 2/16/93		

9613492.6279

THERMO ANALYTICAL, INC.
TMA/ARLI

000069

WORK ORDER # IC-Std working Solution BOOK # 898

CLIENT: WC-93-2-4-Std 1-8 PAGE # 32

METHODS USED

DATA & CALCULATIONS:

Amount of WC-93-2-4-Std2-, to be diluted to 1 lt with D2H2O.

WC-93-2-4-Std2-8 500 ml
(log Bk 898/33)

WC-93-2-2 Ethent-Std4-03 500 ml
(log Bk 898/16)

DL 2/4/93

DL 2/4/93.

COMMENTS:

DATE	2/4/93	Total Hrs.
Signed	DL	
Approved	RSF 2/18/93	

9613492.6280

THERMO ANALYTICAL, INC.
TMA/ARLI

000070

WORK ORDER # IC- Std working solution. BOOK # 991

CLIENT: W(-93-2-4-Std2-8 PAGE # 33

METHODS USED

DATA & CALCULATIONS:

Amount of W(-93-2-4-Std3-8 to be diluted to 1 lb with D2H2O.

W(-93-2-4-Std3-8 500 ml.
(log Bk 998/34)

5 ml 2/6/93

W(-93-2-2-Elect Std(-03 10 ml
(log Bk 998/16)

dil to 1 lb with D2H2O.

COMMENTS:

DATE	2/5/93	2/4/93	Total Hrs.
Signed			
Approved		RSF 2/4/93	2/18/93

9613492.6201

THERMO ANALYTICAL, INC.
TMA/ARLI

000071

WORK ORDER # IC-Std working solution BOOK # 898

CLIENT: hC-93-2-4-Std3-8 PAGE # 34

METHODS USED

DATA & CALCULATIONS:

Amount of hC-93-2-4-Std4-8 to be diluted to 1 Lt with D2H2O.

hC-93-2-4-Std4-8 (Lg bk 898/35) 500 ml.

hC-93-2-2-Eluent-Std6-0) (Lg bk 898/16) ~~10.0 ml~~ 5 ml PL 2/4/93 dil. to 1 Lt with D2H2O.

PL 2/4/93

COMMENTS:

DATE	2/4/93	Total Hrs.
Signed	PL	
Approved	RSF 2/18/93	

9613492.6282

THERMO ANALYTICAL, INC. 000072
TMA/ARLI

WORK ORDER # IC - Std working Solution BOOK # 898
CLIENT: WC-93-2-4-Std 4-8 PAGE # 35
METHODS USED

DATA & CALCULATIONS:

Amount of WC-93-2-4-Std5-8 to be diluted to 1 lt with D_2H_2O.

WC-93-2-4-Std5-8 (by DK 898/36) 500 ml

5 ml of 2/4/93

WC-93-2-2-Eluent-Std-03 (by DK 898/16) 5.0 ml

Dil to 1 lt with D_2H_2O

RC 2/4/93

COMMENTS:

DATE	2/4/93	Total Hrs.
Signed	RC	
Approved	RSF 2/18/93	

9613492.6283

THERMO ANALYTICAL, INC. 00007.
TMA/ARLI

WORK ORDER # 2C - Std working Solution BOOK # 898
CLIENT: W(-93-2-4-Std 5-8 PAGE # 36
METHODS USED

DATA & CALCULATIONS:

Amount of Stock Std Solution
To be diluted to 1L with $DI H_2O$

W(-93-2-2-F-04 (lg Bk 898/18) 10.0 ml = 10.0 ug F^-

W(-93-2-2-Cl-04 (lg Bk 898/18) 20.0 ml = 20.0 ug Cl

W(-93-2-2-N-NO_2-04 (lg Bk 898/19) 16.0 ml = 16.0 ug N-NO_2

W(-93-2-2-N-NO_3-04 (lg Bk 898/19) 16.0 ml = 16.0 ug N-NO_3

W(-93-2-2-P-PO_4-04 (lg Bk 898/20) 40.0 ml = 40.0 ug P-PO_4

W(-93-2-2-SO_4-04 (lg Bk 898/20) 80.0 ml = 80.0 ug SO_4

W(-93-2-2-Blank-Stock-03 (lg Bk 898/16) 10.0 ml

RL 2/4/93

COMMENTS:

DATE	2/4/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6284

THERMO ANALYTICAL, INC.
TMA/ARLI

000074

ORK ORDER # IC Eluent buffer Soln + IC Eluent BLK Soln BOOK # 905

JENT: WC93-2-23-Eluent-11 PAGE # 16

ETHODS USED EPA 300.0

ATA & CALCULATIONS:

IC Eluent buffer Soln and IC Eluent BLK Soln.

40 ml [IC Eluent Stock Soln. WC 93-2-18-Eluent Stock-04
2/15/93 [illegible] log bk 905/7]

→ 4L DI H_2O

RL 2/24/93

OMMENTS:

DATE	2/25/93	Total Hrs.
Signed	[illegible]	
Approved	RL 2/24/93	

9613492.6285

THERMO ANALYTICAL, INC. 000075
TMA/ARLI

WORK ORDER # IC Eluent buffer Soln. + IC Eluent BLK Soln BOOK # 905
CLIENT: WC-93-2-22 Eluent-10 PAGE # 11
METHODS USED EPA 300.0

DATA & CALCULATIONS:
IC Eluent buffer Soln and IC Eluent BLK Soln

40ml [IC Eluent Stock Soln. WC 93-2-18-Eluent Stock-04
2/18/93 in logbk 905/7]

→ 4L DI H_2O

RL 2/22/93

COMMENTS:

DATE	2/22/93	Total Hrs.
Signed	bm	
Approved	RL 2/22/93	

9613492.6286

000076

THERMO ANALYTICAL, INC.
TMA/ARLI

WORK ORDER # IC - Std working solution BOOK # 898

CLIENT: WC-93-2-2-Std 2-5 PAGE # 28

METHODS USED WC-93-2-2-Std 1-5-7

DATA & CALCULATIONS:

Amount of Std ~~[illegible]~~ to be diluted to 1 L with D_2H_2O
DL 2/2/93

WC-93-2-2-Std 2-5

Amount of WC-93-2-2-Std 3-5 to be diluted to 1 L with D_2H_2O.

WC-93-2-2-Std 3-5 (by DC 898/29) 50 ml
WC-93-2-2-Eluent-Stock 03 (by DC 858/16) 5 ml / dil to 1 L with D_2H_2O

WC-93-2-2-Std 1-5-7

Amount of WC-93-2-2-Std 2-5-7 to be diluted to 1 L with D_2H_2O

WC-93-2-2-Std 2-5-7 (by DC 898/28) 50 ml
WC-93-2-2-Eluent-Stock 03 (by DC 858/16) 5 ml / dil to 1 L with D_2H_2O

COMMENTS:

DATE	2/2/93	Total Hrs.
Signed	DL	
Approved	RSF 2/18/93	

9613492.6287

THERMO ANALYTICAL, INC. 000077
TMA/ARLI

WORK ORDER # IC-Std working solution BOOK # 898
CLIENT: WC-93-2-2-Std3-S7 PAGE # 29
METHODS USED

DATA & CALCULATIONS:

Amount of WC-93-2-2-Std4-S7 to be diluted to 1 L with D2H2O.

WC-93-2-2-Std4-S7 (lyBC898/2) 50 ml

WC-93-2-2-Std4-03 (lyBC898/16) 5 ml

DL 2/2/93

COMMENTS:

DATE	2/8/93	Total Hrs.
Signed	DL	
Approved	2/18/93 RSF	

9613492.6288

000078

THERMO ANALYTICAL, INC.
TMA/ARLI

WORK ORDER # 2C-Std working Solution BOOK # 199

CLIENT: W(-93-2-2-Std 4-5) PAGE # 70

METHODS USED

DATA & CALCULATIONS:

Amount of ~~Std~~ W(-93-2-2-Std5-5) 2/5/93
to be diluted to 1 lb with D2H2O

W(-93-2-2-Std5-5) (Log Bk 199/24) 500 ml

W(-93-2-2-Eluent-Std-03) (Log Bk 199/16) 5 ml

DIS
1 lb with
D2H2O

RL 2/2/93

COMMENTS:

DATE	2/2/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6289

THERMO ANALYTICAL, INC.
TMA/ARLI

000079

WORK ORDER # 2C- Std working Solution BOOK # 892

CLIENT: WC-93-2-2-Std 5-5) PAGE # 31

METHODS USED

DATA & CALCULATIONS:

A count of stock Std Solution to be diluted to 1 lb with DI H2O.

WC-93-2-2-F-04 (log bk 892/18) 4.0 ml = 4.0 ng

WC-93-2-2-Cl-04 (log bk 892/18) 7.0 ml = 7.0 ng.

WC-93-2-2-N-NO_2-04 (log bk 892/19) 5.0 ml = 5.0 ng

WC-93-2-2-N-NO_3-04 (log bk 892/19) 5.0 ml = 5.0 ng

WC-93-2-2-P-PO_4-04 (log bk 892/20) 15.0 ml = 15.0 ng

WC-93-2-2-SO_4-04 (log bk 892/20) 20.0 ml = 20.0 ng

WC-93-2-2-Eluent Std-03 (log bk 892/16) 10 ml

PL 2/2/93.

COMMENTS:

DATE	2/2/93	Total Hrs.
Signed	PL	
Approved	RSF 2/18/93	

9613492.6290

THERMO ANALYTICAL, INC. 000080
TMA/ARLI

WORK ORDER # IC Eluent Stock Solution BOOK # 998
CLIENT: WC-93-2-2-Eluent Stock-03 PAGE # 16
METHODS USED
EPA Sw. 0

DATA & CALCULATIONS:

IC Eluent Stock Solution (WC-93-2-2-Eluent Stock-03)

Dissolve 25.2025g $NaHCO_3$ & 25.4400g Na_2CO_3 in D_2H_2O & dilute to 1 lt.

Na_2CO_3 A-92-3-9-Na_2CO_3-07
Mallinckrodt lot 7508KHG

$NaHCO_3$ A-92-12-21-$NaHCO_3$-02
Mallinckrodt lot 7412KJNN

IC Eluent Solution (WC-93-2-2-Eluent-04) Dilute 40 ml stock solution (WC-93-2-2-Eluent Stock-03) 4 pt 1:40/16 to 1 lt with D_2H_2O.

COMMENTS:

DATE	2/12/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6291

THERMO ANALYTICAL, INC. 000081
TMA/ARLI

WORK ORDER # Cl⁻ Stock Std Solution (1000 mg/l) / F⁻ Stock Std Solution (1000 mg/l) BOOK # 99

CLIENT: PAGE # 18

METHODS USED

EPA 300.0

DATA & CALCULATIONS:

Cl⁻ Stock Std Solution (WC-93-2-2-Cl-04)

Dissolve 1.6485 g NaCl (dried at 105°C 30 min) (A-92-1-2-Cl-07) Mallinckrodt Lot 7181KHS in reagent H2O & dilute to 1 liter.

F⁻ Stock Std Solution (WC-93-2-2-F-04)

Dissolve 2.2100 g NaF (dried at 105°C 30 min) in (A-92-4-2-F-07, Mallinckrodt, Lot 7636 EJAC) reagent H2O & dilute to 1 liter.

COMMENTS:

DATE	2/2/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6292

THERMO ANALYTICAL, INC. 000082
TMA/ARLI

WORK ORDER # N-NO2 Stock Std Solution & N-NO3 Stock Std Soln BOOK # 99
CLIENT: (1000 µg/L) (1000 µg/L). PAGE # 19
METHODS USED
EPA 300.0

DATA & CALCULATIONS:

N-NO2 Stock Std Solution (WC-93-2-2-N-NO2-04)
Dissolve 6.0679 g NaNO2 at (105) 4.9253 g NaNO2 (dried 105°C, 2 hr)
A-92-7-6-N-NO2-Q.
Mallinckrodt Lot 7808 KEEN-Q.
in reagent water & dilute to 1 L.

N-NO3 Stock Std Solution (WC-93-2-2-N-NO3-04)
Dissolve 6.0679 g NaNO3 (dried at 105°C, 30 min) in
reagent H2O & dilute to 1 L.
NaNO3. A-92-7-7-N-NO3-Q.
Mallinckrodt; Lot 7808 KEEN-Q.

COMMENTS:

DATE	2/12/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6293

THERMO ANALYTICAL, INC. 000083
TMA/ARLI

WORK ORDER # P-PO4 Stock Std Solution & SO4 Stock Std Solution BOOK # 898
CLIENT: (1000 ppm/l) (1000 ppm/l) PAGE # 20
METHODS USED
EPA 300.0

DATA & CALCULATIONS:

P-PO4 Stock Std Solution (WC-93-2-2-P-PO4-04)
Dissolve 4.3935g KH2PO4 (dried 105°C, 30 min) in
reagent H2O & dilute to 1 liter with DI H2O.
KH2PO4: A-92-8-13-P-PO4-02
Mallinckrodt lot 7402KHLV.

SO4 Stock Std Solution (WC-93-2-2-SO4-04)
Dissolve 1.8141g K2SO4 (dried 105°C, 30 min)
in reagent H2O & dil. to 1 liter.
K2SO4 A-92-8-5-SO4-01
Mallinckrodt lot 7140KHHK

COMMENTS:

DATE	2/12/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6294

THERMO ANALYTICAL, INC.
TMA/ARLI

000084

WORK ORDER # Dionex - Std working Solution BOOK # 89
CLIENT: 1) WC-93-2-2-IC-DS-03 PAGE # 24
METHODS USED
2) WC-93-2-2-IC-DS-04.

DATA & CALCULATIONS:

1) WC-93-2-2-IC-DS-03

1 ml of Dionex - Std Stock Solution (A-92-12-18-IC-04
Dionex Lot 921124
Certificate of Analyse Doc Nr. 039085

F = 19.6 mg/l
Cl = 29.1 mg/l.
NO_3 = 100.0 mg/l
PO_4 = 157.0 mg/l
SO_4 = 151.0 mg/l

into a 100 ml volumetric flask + 1 ml Eluent Stock
WC-93-2-2-Eluent Stock-03
by DC 898/16

& dilute to the mark with $DI H_2O$.

2) WC-93-2-2-IC-DS-04.

5 ml of A-92-12-18-IC-04 Dionex Stock Solution into
a 100 ml volumetric flask + 1 ml WC-93-2-2-Eluent Stock-03
(by DC 898/16)

& dilute to the mark with $DI H_2O$.

COMMENTS:

DATE	2/2/93	Total Hrs.
Signed	RL	
Approved	RSF 2/18/93	

9613492.6295

THERMO ANALYTICAL, INC.
TMA/ARLI

033085

ORK ORDER # Dionex - Std working Soln. BOOK # 905

IENT: WC 93-2-24-IC-DS-05 PAGE # 18

ETHODS USED

EIA 300.0

ATA & CALCULATIONS:

5 ml of Dionex 5 anion std A-92-12-18-IC-04

to 100 ml DI H_2O

A-92-12-17-IC-04 (Dionex 5 Anion Standard)
Dionex Corp. Lot 921124
Lot Certificate of Analysis

F = 8.620.6 µg/l
Cl = 29.137.0 µg/l
NO_3 = 100 ± 0 µg/l
NO_2 = 151 ± 1 µg/l
SO_4 = 151 ± 1 µg/l

RL 2/24/93

COMMENTS:

DATE	2/24/93	Total Hrs.
Signed		
Approved	RL 2/24/93	

9613492.6296

Balance Calibration

		1g	50g	100g
2/18/93	WC-1011	1.0000 g	50.0000 g	99.9997 g
	WC-0115	1.00 g	50.03 g	100.00 g
2/19/93	WC-1011	0.9999 g	49.9997 g	99.9997 g
	WC-0115	0.96 g	49.97 g	99.99 g
	WC-1414	1.0	50.0	100.0
	AA-0042/A	1.004	50.004	100.002
	GCE			
	GCW-110	0.9999	50.0004	100.0007
	OX-0002	1.000	50.000	100.000
2/22/93	WC-1011	1.0000	50.0000	99.9995
	WC-0115	0.99	49.99	100.02
	WC-1414	1.0	50.0	100.0
	AA-0042/A	1.002	50.005	100.006
	GCE-			
	GCW-110	1.0002	49.9998	99.9992
	OX-0002	1.001	50.001	100.001
2/23/93	WC-1011	1.0001 g	49.9996 g	99.9997 g
	WC-0115	0.97 g	49.93 g	99.95
	WC-1414	1.0	50.0	100.0
	GCE-0042/B	1.0	50.0	99.9
	AA-0042/A	1.000	50.005	100.008
	GCW-110	1.0001	50.0001	100.0007
	OX-0002	1.001	50.001	100.003
2/24/93	WC-1011	0.9995	49.9995	99.9991
	WC-0115	1.00	49.95	99.97
	WC-1414	1.0	50.0	100.0
	GCE-0042/B	1.0	50.0	99.9
	AA-0042/A	1.000	50.001	100.003
	GCW-110	1.0002	50.0003	100.0009
	OX-0002	1.003	50.004	100.005
2/25/93	WC-1011	0.9994	49.9994	99.9990
	WC-0115	0.99	49.95	99.96
	WC-1414	1.0	50.0	100.0
	AA-0042/A	1.000	50.002	100.003
	OX-0002	1.001	50.001	100.003
	GCW-110	1.0001	49.9997	99.9990
	GCE-0042/B	1.0	50.0	100.0

9613492.6297

Balance Calibration

000087 95

Date	Dept. /bal	1g	50g 00665	100g
3/5/93	WC-1011	1.0000 g	50.0000 g	99.9998 g
	WC-0115	0.99	49.95	99.97
	WC-1414	0.99	49.5	100.0
	AA-0042/A	1.002	50.005	100.009
	GCE-0042/B	1.0	50.0	100.0
	GCW-110	1.0003	49.9993	99.9981
	OX-0002	1.001	50.001	100.004
3/8/93	WC-1011	1.0000 g	50.0004 g	100.0000 g
	WC-0115	0.98 g	49.97 g	99.97 g
	WC-1414	1.0 g	50.0 g	100.0 g
	AA-0042/A	1.002 g	50.005 g	100.008 g
	GCE-0042/B	1.0 g	50.0 g	100.0 g
	OX-0002	1.000 g	50.001 g	100.004 g
	GCW-110	0.9999 g	49.9984 g	99.9955 g
3/9/93	WC-1011	1.0000 g	50.0001 g	99.9999 g
	WC-0115	0.99 g	49.96 g	99.97 g
	WC-1414	1.0 g	50.0 g	100.0 g
	GCE-0042/B	1.0 g	50.0 g	100.0 g
	OX-0002	0.999 g	50.002 g	100.005 g
	GCW-110	1.0002	49.9985 g	99.9964 g
	AA-0042/A	1.001 g	50.006 g	100.019 g
3/10/93	WC-1011	1.0000 g	50.0002 g	99.9998 g
	WC-0115	0.96 g	49.93 g	99.94 g
	WC-1414	1.0	50.0	100.0
	GCE-0042/B	1.0	50.0	100.0
	AA-0042/A	1.003	50.011	100.006
	GCW-110	1.0004	50.0002	100.0007
	OX-0002	1.003	50.004	100.007
3/11/93	WC-1011	0.9999 g	50.0000 g	99.9995 g
	WC-0115	0.99 g	50.00 g	100.00 g
	WC-1414	1.0	50.0	100.0
	GCE-1042/B	1.0	50.0	100.0
	AA-0042/A	1.002	50.003	100.005
	GCW-110	1.0001	49.9994	99.9975
	OX-0002	1.000	50.000	100.003

9613492.6298

829024

Date	pH meter	Buffer Soln	Calib.	T°C	Initials	2/2:
2/8/93	SA 720	pH = 4.00	4.00 → 4.00	20°C	[illegible]	
		pH = 10.05	10.03 → 10.05	20°C	[illegible]	
	check	pH = 7.02	→ 7.03	20°C	[illegible]	2/2
2/9/93	orion 720	pH = 4.00	4.02 → 4.00	19°C	DR	
		pH = 10.06	10.04 → 10.06	19°C	DR	
		check pH = 7.02	→ 7.02	19°C	DR	2/2
2/10/93	orion 720	pH = 4.00	4.00 → 4.00	22°C	DR	
		pH = 10.03	10.08 → 10.03	22°C	DR	
		check pH = 7.01	→ 7.01	22°C	DR	2/2
2/16/93	orion	pH = 4.00	3.99 → 4.00	22°C	[illegible]	
[illegible]	SA 720.	pH = 10.03	10.03 → 10.03	22°C	[illegible]	
		check = 7.0	7.01 → 7.01	22°C	[illegible]	2,
	was calibrated 2/17/93 but cycle at time.					
2/18/93	orion 720	pH = 4.00	4.02 → 4.00	20.5	DR	
		pH = 10.05	9.99 → 10.05	20.5	DR	
		check pH = 7.02	→ 7.02	20.5	DR	3,
2/19/93	orion SA720	pH = 4.00	4.61 → 4.00	21°C	DR	
		pH = 10.04	9.91 → 10.04	21°C	DR	
		check pH = 7.02	→ 7.02	21°C	DR	

9613492.6299

RAW DATA

9613492.6300

056

000090

SAMPLE TABLE...
ANALYST:GM
GM
INJECTIONS/SAMPLE:RA=

SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203201G	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/22/93 10:12:24

PM 1

II 0

02/22/93 10:12:24 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 191 INDEX 1

ANALYST: GM

SAMPLE 1 0203201G

AS 10/18/93

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA BC	RF
TOTALS	0.			

9613492.6301

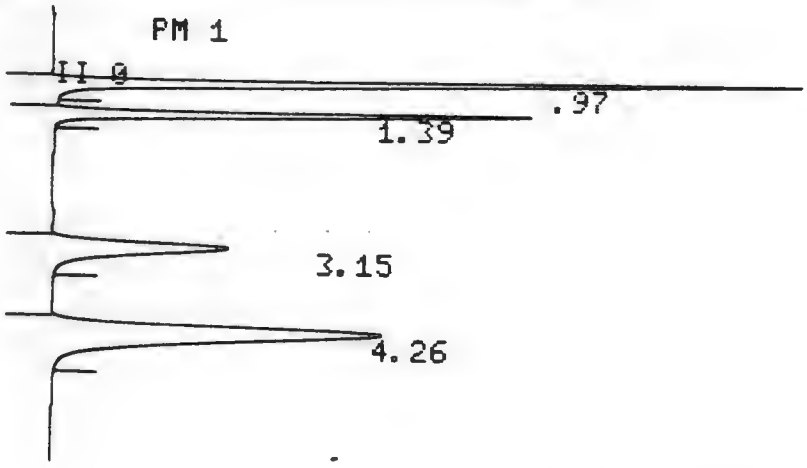
000091

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203201HMS	SA= 1	XF= 1
SI=			

END OF DIALOG

CHANNEL A INJECT 02/22/93 10:20:28



057

02/22/93 10:20:28 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 192 INDEX 1

ANALYST: GM

SAMPLE 1 0203201HMS

AS 10/18/93

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA	BC	RF
F	10.483	0.97	4796212	01	457522.847
CL	9.828	1.39	3211666	01	326787.342
PPO4	9.671	3.15	2775865	01	287029.78
SO4	29.246	4.26	6694073	01	228888.498
TOTALS	59.228		17477816		

Spike level
F = 10 mg/l.
(WC-93-2-2-F-04 BK 893/18)
Cl = 10 mg/l
(WC-93-2-2-Cl-04 BK 893/18)
P-PO4 = 10 mg/l
(WC-93-2-2-P-PO4-04 BK 893/20)
SO4 = 30 mg/l
(WC-93-2-2-SO4-04 BK 893/20)

9613492.6302

000092

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203202C	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/22/93 09:30:58

PM 1

LI 0

02/22/93 09:30:58 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 186 INDEX 1

ANALYST: GM

SAMPLE 1 0203202C

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA BC	RF
TOTALS	0.			

9613492.6503

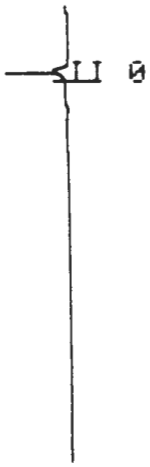
000093

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/L

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203202DDP	SA= 1	XF= 1

SI=
END OF DIALOG

CHANNEL A INJECT 02/22/93 09:38:29



02/22/93 09:38:29 CH= "A" PS= 1.

FILE 1. METHOD 5. RUN 187 INDEX 1

ANALYST: GM

SAMPLE 1 0203202DDP

SA	IS	XF
1.	0.	1.

NAME	MG/L	RT	AREA BC	RF
TOTALS	0.			

9613492.6304

000094

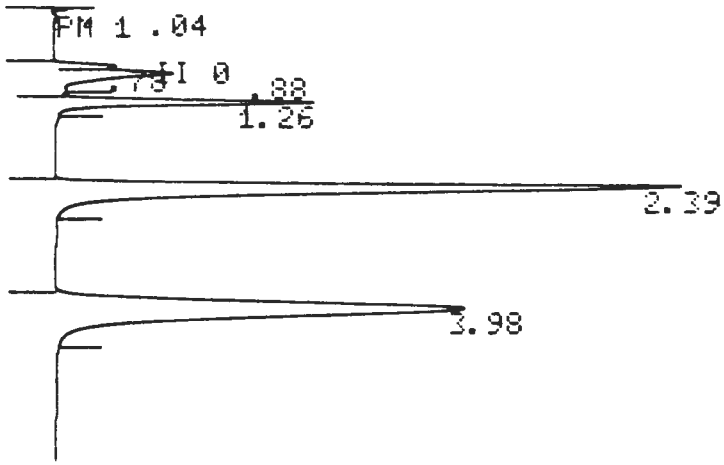
156

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/9+KG

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203203G	SA= 50.06	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 16:18:10



02/25/93 16:18:10 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 118 INDEX 1

ANALYST: GM

SAMPLE 1 0203203G

SA	IS	XF
50.06	0.	100.

NAME	MG/KG	RT	AREA	BC	RF
1	0.	0.04	25919	01	
2	0.	0.78	345213	02	
F	1.632	0.88	1124964	03	689316.177
CL	3.785	1.26	1749971	01	462343.726
NNO3	6.615	2.39	7645042	01	1155713.077
SO4	25.027	3.98	8079400	01	322827.347
TOTALS	37.059		18970509		

AS 10/18/93

9613492.6305

000095

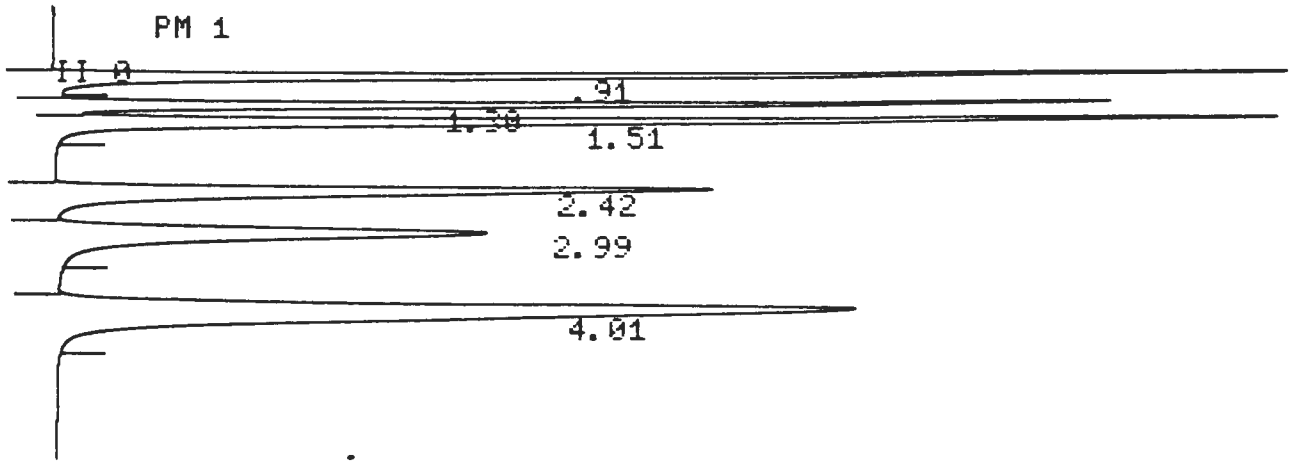
158

SAMPLE TABLE...
ANALYST:AN=" RL/GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/KG

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203203HMS	SA= 50.08	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 17:17:17



02/25/93 17:17:17 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 120 INDEX 1

ANALYST: RL/GM

SAMPLE 1 0203203HMS

SA	IS	XF
50.08	0.	100.

NAME	MG/KG	RT	AREA	BC	RF
F	11.108	0.91	8222468	01	740229.384
CL	14.014	1.3	6857160	02	489307.835
NNO2	9.347	1.51	9710453	03	1038884.456
~~NNO3~~	~~6.611~~	~~2.42~~	~~7644195~~	~~02~~	~~1156284.224~~
PPO4	17.124	2.99	6709142	03	391797.594
SO4	46.604	4.01	15182858	01	325784.439
TOTALS	104.808		54326276		

AS 10/18/92 spike level
F = 10 mg/kg (WC-93-2-2-F-04 BK 898/13)
Cl = 10 mg/kg (WC-93-2-2-Cl-04 BK 898/13
N-NO2 = 10 mg/kg (WC-93-2-2-NO2-04 BK 898/14
P-PO4 = 20 mg/kg (WC-93-2-2-PO4-04 BK 898/
SO4 = 20 mg/kg (WC-93-2-2-SO4-04 BK 898/

9613492.6306

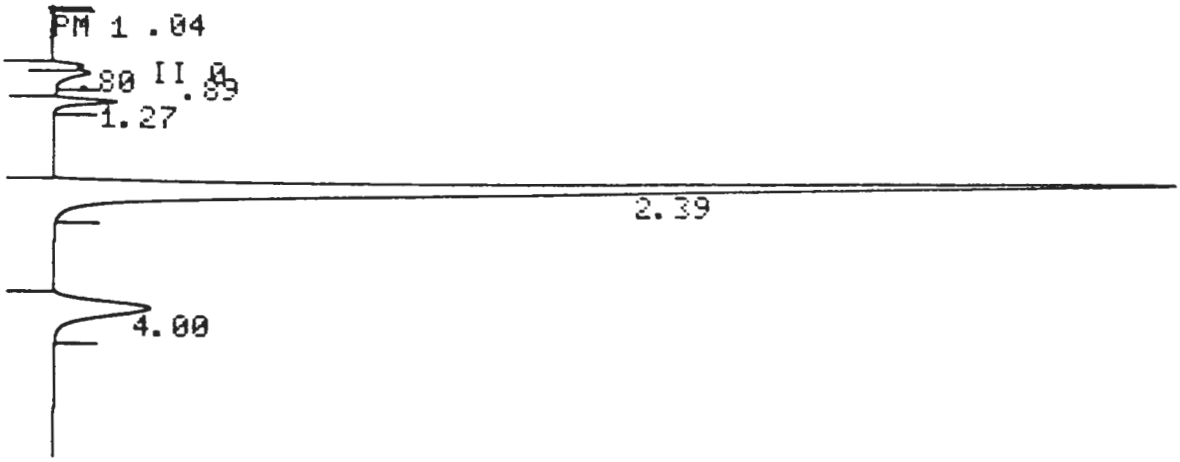
SAMPLE TABLE...
ANALYST:AN=" RL/GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/KG

000096

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203203HMS	SA= 12.52	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 17:50:31



02/25/93 17:50:31 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 122 INDEX 1

ANALYST: RL/GM

SAMPLE 1 0203203HMS

SA	IS	XF
12.52	0.	100.

NAME	MG/KG	RT	AREA	BC	RF
1	0.	0.04	14554	01	
2	0.	0.8	201903	02	
~~F~~	~~2.334~~	~~0.89~~	~~340107~~	~~03~~	~~145718.509~~
~~CL~~	~~4.777~~	~~1.27~~	~~457130~~	~~01~~	~~95693.35~~
NNO3	46.844	2.39	13715882	01	292799.12
~~SO4~~	~~25.467~~	~~4.~~	~~1942239~~	~~01~~	~~76264.931~~
TOTALS	79.422		16671815		

Spike level

N-NO3 = 40 mg/kg

(4/1-93 d-2-N-NO3-04 BK 898/19)

3-23-93

9613492.6307

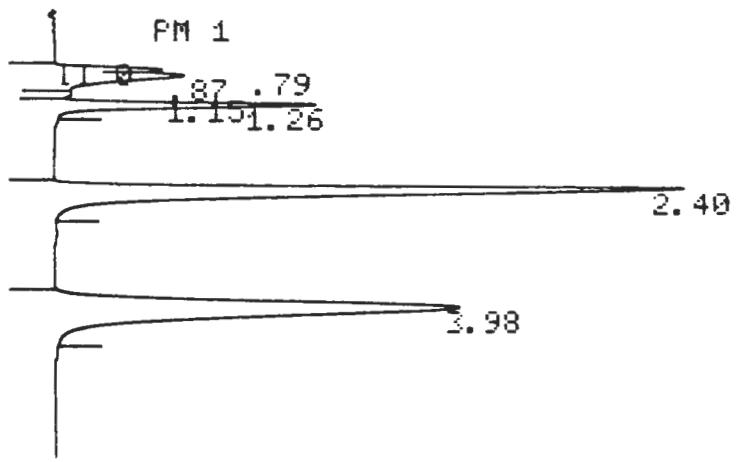
000097

SAMPLE TABLE...
ANALYST:AN=" GM
INJECTIONS/SAMPLE:RA=
SAMPLES BETWEEN CALIB:CI=
CONC UNITS:CU=" MG/KG

SAM IDX	NAME	SAM AMT	SCALE FACTOR
SI= 1	SN=" 0203203IDP	SA= 50.09	XF= 100

SI=
END OF DIALOG

CHANNEL A INJECT 02/25/93 16:28:59



02/25/93 16:28:59 CH= "A" PS= 1.

FILE 2. METHOD 5. RUN 119 INDEX 1

ANALYST: GM

SAMPLE 1 0203203IDP

SA	IS	XF
50.09	0.	100.

NAME	MG/KG	RT	AREA	BC	RF
1	0.	0.79	618843	02	
F	2.08	0.87	1461369	02	702581.25
3	0.	1.15	128154	02	
CL	3.956	1.26	1836105	03	464131.699
NNO3	6.609	2.4	7644344	01	1156656.681
SO4	24.976	3.98	8067122	01	322994.955
TOTALS	37.621		19755937		

157

9613492.6308

THERMO ANALYTICAL, INC.
TMA/ARLI

000098

WORK ORDER # A3-02-032 BOOK # 892

CLIENT: WHC PAGE # 46

METHODS USED ~~EPA 300.0~~ RL 2/25/93.

DATA & CALCULATIONS: Extr of soil sample using tetracing box + filter.

Sample ID	wt. of Sample	Final Vol.
03G	50.06g	100 ml
03HMS	50.08g	100 ml
03IDup	50.09g	100 ml

Balance calibr log Bk: 669/93

COMMENTS:

DATE	2/24/93	Total Hrs.
Signed	CM	
Approved	RL 2/25/93	

9613492.6309

THERMO ANALYTICAL, INC.
TMA/ARLI

000099

WORK ORDER # A3-02032 BOOK # 908

CLIENT: WHC PAGE # 44

METHODS USED

Moisture dried at 105°C 1-2 hrs

DATA & CALCULATIONS:

Sample I.D.	wt. of empty Beaker (g)	wt. of beaker + sample (unheated) (g)	wt. of beaker + sample (heated) (g)	% moi
036	1.0336	5.7128	5.5090	4.4%

(Balance BK 669/95)

$$\left(\frac{5.7128-5.5090}{5.7128-1.0336}\right) \times 100 = 4.4\%$$

COMMENTS:

DATE	3	9	93	Tot. Hr:
Signed	DR			
Approved	RL 3/10'93			

9613492.6310

000100

THERMO ANALYTICAL, INC.
TMA/ARLI

WORK ORDER # A3-02-032 BOOK # 902

CLIENT: WHC PAGE # 37

METHODS USED pH (150.1 & 9045 soil)

DATA & CALCULATIONS:

Sample		pH calibration ~~629~~	temp 23°C Bk. 89/24
016	LIQ.	5.84, 5.61, 5.76	→ 5.7
02C	LIQ.	5.88, 5.81	→ 5.8
02D	DUP LIQ.	5.82, 5.87	→ 5.8
036	SOIL	10.00	→ 10.0
03I	DUP SOIL	9.90	→ 9.9
03I	DUP SOIL	9.84	→ 9.8

2/16/93

COMMENTS:

DATE	2	16	93	Total Hrs.
Signed				
Approved				

9613492.6371

0045426

39 of 42

E-93-22/2978-62

WESTINGHOUSE HANFORD COMPANY
241-T-106 DATA VALIDATION
DISTRIBUTION FORM

SDG: B07K04

Document Title Final QA Record Case #: N3-02-054

Fraction: METALS

Document Number: _____ Date: 4/15/94

DISTRIBUTION					
M. Baker (HCRL)		D. Mantooth (ERL)		D. Wiley (ERL)	
P. Bartley (ERL)		T. McDonald (HCRL)		N. Wold (ERL)	
Y. Chun (HCSEA)		R. Potter (HCRL)		ERL Project File/J. Pawlowski	
B. Downs (HCSEA)		K. Rolla (HCSEA)		Project File/D. Simpson (HCRL)	
M. Gerboth (HCRL)		C. Sater (ERL)		Duplicate Project File/T. Trevino (HCSEA)	
J. Grover (ERL)		M. Schwarz (ERL)		Westinghouse EDMC	X
L. Hammerle (HCSEA)		A. Shen (HCSEA)			
K. Pool (WHC)					

Project Files (1=Administrative; 2=Correspondence; 3=Source Data; 4=Technical Data)

1.1	File Index		1.6.6.3	Plans Doc. Log		3.4	Original Chemical Data
1.2	Distribution Lists		1.6.6.4	Deliverables Doc. Log		3.5	Original Radiochemical Data
1.3	Project Procedures		1.7	Budget			
1.4	Project Modifications		1.7.1	Downloads		4.1	Task Plan
1.5	Staff		1.7.2	M-113s			
1.5.1	Staff Resumes		1.7.3	A-208s		4.2	Data Pkg. Completeness Verif. Checklist
1.5.2	Staff Training		1.7.4	Budget Status		4.3	Data Valididation Calcs./Annotated DP X
1.5.3	Auth. Former Site Employee		1.7.5	Invoices		4.4	Prelim. QA Records
1.6	QA		1.8	Requisitions			
1.6.1	QA Manual		1.9	Meeting Minutes		4.5	Data Valid. & Qual. Summary Rpts.
1.6.2	QA Implementation		1.10	Record of Telecon		4.5.1	Internal Drafts/Comments/Resol.
1.6.3.1	QA Audits-Deliverables		1.11	Progress Reports		4.5.2	WHC Review Draft Comments/Resol.
1.6.3.2	QA Audits-Files		1.12	Subcontractor (HC)		4.5.3	Final Report
1.6.4.1	Audit Resps. - Deliverables					4.6	Weekly Status Reports
1.6.4.2	Audit Resps. - Files		2.1	Incoming Correspondence		4.7	Weekly Management Reports
1.6.5	QA Training		2.2	Outgoing Correspondence			
1.6.6.1	QA Manual Document Log		2.3	Internal Correspondence			
1.6.6.2	Procedure Document Log						
			3.1	Task Order			
			3.2	Sample Lists			
			3.3	Data Validation Procedures			

9613492.6312

V ✓ COC ✓

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST - FORM A-6

PROJECT: 241-T-106	REVIEWER:	DATE:
LABORATORY: TMA	CASE: N3-02-059	SDG: B07K04
SAMPLES/MATRIX:		
B07K04 / Water		
~~B07K05~~ KR		
B07ML0 / Water		

1. COMPLETENESS AND CONTRACT COMPLIANCE

Review the data package for completeness and check off the items below. If any data review elements are missing contact the laboratory for submittal of the omitted data.

Data Package Item	Present?: Yes	No	N/A
Case Narrative	X		
Cover Page	X		
Traffic Reports			X
Sample Data			
Inorganic Analysis Data Sheets	X		
Standards Data			
Initial and Continuing Calibration Verification	X		
CRDL Standard for AA and ICP	X		
QC Summary			
Blanks	X		
ICP Interference Check Summary	X		
Spike Sample Recovery	X		
Post-Digestion Spike Sample Recovery	X		X
Duplicate	X		
Laboratory Control Sample	X		
Standard Addition Results	X		
ICP Serial Dilutions	X		
Instrument Detection Limits	X		
ICP Interelement Correction Factors	X		
ICP Linear Ranges	X		
Preparation Log	X		
Analysis Run Log	X		
Raw Data			
ICP Raw Data	X		
Furnace AA Raw Data	X		
Mercury Raw Data	X		
Cyanide Raw Data	X		
Additional Data			
Internal laboratory chain-of-custody			X
Laboratory Sample Preparation Records	X		

Data Package Item	Present?: Yes	No	N/A
Percent Solids Analysis Records	—	—	—
Reduction Formulae	—	—	—
Instrument Run Logs	—	—	—
Chemist Notebook Pages	—	—	—

2. HOLDING TIMES

Have all samples been analyzed within holding times? Yes No N/A

ACTION: If any holding times have been exceeded qualify all affected results as estimated (J for detects and UJ for nondetects).

3. INITIAL CALIBRATIONS

Were all instruments calibrated daily, each set-up time and were the proper number of standards used? Yes No N/A

Are the correlation coefficients ≥0.995? Yes No N/A

Was a midrange cyanide standard distilled? Yes No N/A

ACTION: Qualify all data as unusable if reported from an analysis in which an instrument was not calibrated or was calibrated with less than the minimum number of standards. Qualify associated sample results > IDL as estimated (J) and results < IDL as estimated (UJ), if the correlation coefficient is <0.995 or the laboratory did not distill the midrange cyanide standard.

4. INITIAL AND CONTINUING CALIBRATION VERIFICATION

Are ICV and CCV percent recoveries within control? Yes No N/A

Are there calculation errors? Yes No N/A

ACTION: Qualify all affected data in accordance with Section 8.3 of the validation requirements. If calculation errors are noted, contact the laboratory for clarification.

5. ICP INTERFERENCE CHECK SAMPLE

Has an ICS sample been analyzed at the proper frequency? Yes No N/A

Are the AB solution %R values within control? Yes No N/A

Are there calculation errors? Yes No N/A

ACTION: Qualify all affected data in accordance with Section 8.3 of the validation requirements. If calculation errors are noted, contact the laboratory for clarification.

6. LABORATORY BLANKS

Are target analytes present in the laboratory blanks? Yes No N/A

ACTION: Qualify all associated sample results for any analyte <5 times the amount in any laboratory blank as nondetected (U). If analyte concentrations in the blank are >CRDL or below the negative CRDL, verify the laboratory has redigested and reanalyzed associated samples with analyte concentrations <10 times the blank concentration. If the laboratory has not redigested and reanalyzed the samples, note in the validation narrative.

7. FIELD BLANKS

Are target analytes present in the field blanks? Yes No N/A

ACTION: Qualify all sample results for any analyte <5 times the amount in any valid field blank as nondetected (U).

8. MATRIX SPIKE SAMPLE ANALYSIS

Are spike recoveries within the control limits? Yes No N/A

ACTION: Qualify the affected sample data according to the following requirements:

If spike recovery is >125% and sample results are <IDL no qualification is required. If spike recovery is >125% or <75% qualify all positive results as estimated (J). If spike recovery is 30% to 74% qualify all nondetects as estimated (UJ). If spike recovery is <30%, reject all nondetects (R). If the field blank has been used for spike analysis, note in the validation narrative.

9. LABORATORY CONTROL SAMPLE

Are percent recoveries within the acceptance limits? Yes No N/A

Are there calculation errors? Yes No N/A

ACTION: Qualify the sample data according to the following requirements:

AQUEOUS LCS - Qualify as estimated (J), all sample results >IDL, for which the LCS %R falls within the range 50-79% or >120%. Qualify as estimated (UJ), all sample results <IDL, for which the LCS falls within the range of 50-79%. Qualify as unusable (R) all sample results, for which the LCS %R <50%.

SOLID LCS - Qualify as estimated (J), all sample results >IDL for which the LCS result is outside the established control limits. Qualify as estimated (UJ), all sample results <IDL for which the LCS %R are lower than the established control limits.

10. PERFORMANCE AUDIT ANALYSES

Are the performance audit sample results within the acceptance limits? Yes No N/A

ACTION: Note the results of the performance audit sample analyses in the data validation narrative.

11. DUPLICATE SAMPLE ANALYSIS

Are RPD values acceptable? Yes No N/A

ACTION: Qualify the results for all associated samples of the same matrix as estimated (J) if the RPD results fall outside the appropriate control limits. If field blanks were used for laboratory duplicates, note in the validation narrative.

12. ICP SERIAL DILUTION

Are the serial dilution results acceptable? Yes No N/A

Is there evidence of negative interference? Yes No N/A

ACTION: Qualify the associated data as estimated (J) for those analytes in which the %D is outside the control limits. If evidence of negative interference is found, use professional judgment to qualify the data.

13. FIELD DUPLICATE SAMPLES

Do the RPD values exceed the control limits? Yes No N/A

ACTION: Note the results of the field duplicate samples in the validation narrative.

14. FIELD SPLIT SAMPLES

Do the RPD values exceed the control limits? Yes No N/A

ACTION: Note the results of the field split samples in the validation narrative.

1516. FURNACE ATOMIC ABSORPTION QUALITY CONTROL

Do all applicable analyses have duplicate injections? Yes No N/A

Are applicable duplicate injection RSD values within control? Yes No N/A

If no, were samples rerun once as required? ~~Yes~~ No N/A

Does the RSD for the rerun fall within the control limits? Yes No N/A

Were analytical spike recoveries within the control limits? Yes No N/A

If no, were MSA analyses performed when required?	Yes	No	N/A
Are MSA correlation coefficients $\geq$0.995?	Yes	No	N/A
If no, was a second MSA analysis performed?	Yes	No	N/A

ACTION: If duplicate injections are outside the acceptance limits and the sample has not been reanalyzed or the reanalysis is outside the acceptance limits, qualify the associated data as estimated (J for detects and UJ for nondetects). If the analytical spike recovery is <40% qualify detects as estimated (J). If the analytical spike recovery is $\geq$10% but <40%, qualify all nondetects as estimated (UJ) and if the analytical spike recovery is <10%, reject all nondetects (R). If the sample absorbance is <50% of the analytical spike absorbance and the analytical spike recovery is <85% or >115%, qualify all results as estimated (J for detects and UJ for nondetects). If method of standard additions (MSA) was required but was not performed, the MSA samples were spiked incorrectly, or the MSA correllation coefficient was <0.995, qualify the associated detected results as estimated (J).

17. ANALYTE QUANTITATION AND DETECTION LIMITS

Have results been reported and calculated correctly?	Yes	No	N/A
Are results within the calibrated range of the instruments and within the linear range of the ICP?	Yes	No	N/A
Are all detection limits below the CRQL?	Yes	No	N/A

Action: If analyte quantitation is in error, contact the laboratory for explanation. If errors or deficiencies can not be resolved with the laboratory, qualify associated data as unusable (R).

18. OVERALL ASSESSMENT AND SUMMARY

Has the laboratory conducted the analysis in accordance with the analytical SOW?	Yes	No	N/A
Were project specific data quality objectives met for this analysis?	Yes	No	N/A

ACTION: Summarize all the data qualifications and complete the data validation narrative as specified in Section 10.0 of the data validation requirements.

COMMENTS (attach additional sheets as necessary):

The lab reported the lead result for B07ML0 as detected @ 1.63, but the Raw Data shows this result is for the lab duplicate. The result for B07ML0 sample is non-detected. None of the run-logs were changed to reflect this raw-data change. The ~~raw~~ data was qualified as not-detected due to Blank Contamination anyway, but this anomaly should be reviewed by the lab.

HOLDING TIME SUMMARY

Case N3-02-059

SDG: B07K04 | VALIDATOR: Kristine Rolla | DATE: 10/15 | PAGE 1 OF 1

COMMENTS: All analyses were performed within recommended holding time.

FIELD SAMPLE ID	ANALYSIS TYPE	DATE SAMPLED	DATE PREPARED	DATE ANALYZED	PREP. HOLDING TIME, DAYS	ANALYSIS HOLDING TIME, DAYS	QUALIFIER
B07K04	ICP	2/8/93	2/18	2/22	10	4	—
B07MLO	ICP	2/8/93	2/18	2/22	10	4	—
B07K04	GFAA	2/8/93	2/18	2/18	10	0	—
B07MLO	GFAA	2/8/93	2/18	2/18	10	0	—
B07K04	CV	2/8	2/19	2/19	11	0	—
B07MLO	CV	2/8	2/19	2/19	11	0	—
B07K04	AA	2/8	2/18	2/24	10	6	—
B07MLO	AA	2/8	2/18	2/24	10	6	—
						1	
B07K04	CA	2/8	2/16	2/17	8	1	—
B07MLO	CA	2/8	2/16	2/17	8	1	—

CALIBRATION DATA SUMMARY

SDG: B07K04	VALIDATOR: Kristine) Bolka	DATE: 10/15	PAGE 1 OF 1

COMMENTS: ICV, CCV %R IN CONTROL. CORRELATION COEFICIENTS FOR Bi, Se, Pb, TL <0.995, Qualified.

CALIB. TYPE:	INITIAL	CONTINUING	INSTRUMENT:			
CALIB. DATE	COMPOUND		RF	RSD/%D/%R	SAMPLES AFFECTED	QUALIFIER
2/24	Bismuth	r= 0.979			B07K04, B07MLO	UJ
2/18	Selenium	r= 0.993			↓	UJ
2/18	Lead	r= 0.994			↓	J
2/18	Thallium	r= 0.990			↓	UJ

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BLANK AND SAMPLE DATA SUMMARY

SDG: B07K04	VALIDATOR: Kristine Rolla	DATE: 10/15/93	PAGE 1 OF 2

COMMENTS: All detected analytes were qualified as U not detected due to blank contamination except for Chromium.

SAMPLE ID	COMPOUND	RESULT	Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	QUALIFIER
CCB1	Aluminum	38.3	B		ug/L				~~U~~
CCB3	Al	31.6	B						
ICB	Barium	1.8	B					B07K04	U
CCB1	Ba	1.4	B					~~B07~~	
CCB2	Ba	1.6	B						
CCB3	Ba	1.2	B						
CCB1	Cadmium	1.8	B						~~U~~
CCB2	Cd	2.2	B						
CCB3	Cd	2.2	B						
CCB1	Calcium	60.9	B					B07MLD	~~U~~ UJ
PB	Ca	-57.69	B					B07K04	UJ
ICB	Copper	5.7	B					B07K04	U
CCB1	Cu	8.3	B					B07MLD	U
CCB2	Cu	4.9	B						
CCB3	Cu	4.5	B						
PB	Cu	5.290	B						
CCB1	Iron	17.1	B					B07K04	U
CCB3	Fe	14.2	B					B07MLD	U

BLANK AND SAMPLE DATA SUMMARY - FORM B-3

SDG: B07K04	REVIEWER: Kristine Rolla	DATE: 10/15/93	PAGE 2 OF 2

COMMENTS:

SAMPLE ID	COMPOUND	RESULT	Q	RT	UNITS	5X RESULT	10X RESULT	SAMPLES AFFECTED	QUALIFIER
PB	Fe	17.180	B		ug/L				
PB	Lead	1.586	B					B07K04 B07MLO	U
ICB	Magnesium	32.6	B					B07K04	U
CCB1	Mg	27.0	B					B07MLO	U
CCB2	Mg	24.6	B						
CCB3	Manganese	1.1	B					B07K04	U
PB	Sodium	50.81	B					B07K04 B07MLO	U
CCB1	Zinc	5.2	B					B07K04	U

ACCURACY DATA SUMMARY

SDG: B07K04	VALIDATOR: Kristine Rola	DATE: 10/15		PAGE 1 OF 1
COMMENTS:				
SAMPLE ID	COMPOUND	% RECOVERY	SAMPLE(S) AFFECTED	QUALIFIER REQUIRED
The ICS sample	recoveries were within control limits. A slight false			
positive was seen in Mg. No qualifiers were assigned based on ICS sample.				
All matrix spike	recoveries were within control limits.			
	GFAA QC			
B07MLO	Selenium	69.5 %	B07K04, B07MLO	UJ
		C.V. >20%		
	Pb:			
B07MLO	> on the Run log the sample appears to be #46,			
	But the raw data sheets were changed so the			
	sample was switche with #52. The Lab			
	reported the value associated with the Lab Dup.			
B07K04 Se:	Post Digestion Spike %R <85% (66.8%) - no rerun results available			
B07MLO Se:	Post Digestion Spike %R <85% (69.5%); Duplicate injection criteria not met.			

PRECISION DATA SUMMARY

SDG: B07K04	VALIDATOR: Kristine Rolla	DATE: 10/15	PAGE 1 OF 1

COMMENTS:

COMPOUND	SAMPLE ID:	SAMPLE ID:	RPD	SAMPLES AFFECTED	QUALIFIER
No duplicate Samples could be evaluated due to low					
Concentrations in the sample.					
LCS %R were within Control limits					
ICP Serial dilutions could not be evaluated since					
Concentrations were <50 x IDL.					

CALCULATION SUMMARY

SDG: B07K04	REVIEWER: K. Rolla	DATE: 10/15	PAGE 1 OF 1

COMMENTS:

See Attached Sheets

9613492.6625

Calculations

HARTCROWSER

Correlation Coefficients

Page 1 of 1

Job No. 2978-62

Project Westinghouse Hanford

Date 10/15/93

Calculations for 241-T-106 Data Validation

Made by KRolla

Bi 2/24

0	~~0.014~~ 0.10
2	0.014
5	4.67
10	12.19

r = 0.979

As 2/18

0	0
10	.1035
50	.2045
100	.398

r = 0.999

Se 2/18

0	0
5	.0205
50	.1665
100	.2690

r = 0.993

Pb 2/18

0	0
3	0.043
50	0.5090
100	0.8350

r = .994

Tl 2/18

0	0
10	0.0585
50	0.2425
100	0.3820

r = 0.990

Hg 2/19

0	0
.2	5
.5	12
1.0	20
2.0	38
5.0	107

r = 0.999

CN 2/17

0	.046626
10	7.735
40	42.36
100	98.82
200	202.1
400	399.0

r = 0.999

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Calculations

HARTCROWSER

Initial and Continuing Calibration

Page 1 of

Job No. 2978-62

Project Westinghouse/Hanford

Date 10/15/93

Calculations for 241-T-106

Made by Kristine Rolla

	ICV	CCV1	CCV2	CCV3
Al	1966.7/20 = 98.3			
Sb		2469.5/25 = 98.78	53.18/.5	
As			~~2497.4/25~~ 106.3	
Ba				2393.7/25 95.7
Be	47.37/.5 = 94.7			
Cd		2432.6/25 = 97.3		
Ca			24625/250 = 98.5	~~2242.3~~ ~~98.9~~
Cr				~~2396.7~~/25 = 95.9
Co	478.97/5 = 95.8			
Cu		2443.4/25 = 97.7		
Fe			9863.9/100 = 98.6	
Pb				9777.2/100 = 97.8
Mg	49260/500 = 98.5			
Mn		2419.6/25 = 96.8		
Hg			2.1/.02 = 105	
Ni				2389.6/25 = 95.6
K	48878/500 = 97.8			
Se		49.02/5 = 98.0		
Ag			488.51/5 = 97.7	
Na				24255/250 = 97.0
Tl	106.64/1 = 105.9 ~~= 106.6~~			
V	1.007	2343.5/25 = 97.2		
Zi			2465.8/25 = 98.6	
CN				202.55/2 101.3
Bi	5010/50 = 100.2			

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Calculations

ICP Interference Check Sample

HARTCROWSER

Page 1 of

Job No. 2978-62

Project Westinghouse Hanford

Date 10/15/93

Calculations for 241-T-106 Data Validation

Made by KRolla

	Initial		Final	
Al	494700/5000	= 98.9	492330/5000	98.5
Ba	447.4/5	= 89.5	440.2/5	88.0
Be	460.7/5	= 92.1	454.7/5	90.9
Cd	891.0/10	= 89.1	878.3/10	87.8
Ca	467040/5000	= 93.4	464310/5000	92.9
Cr	466.9/5	= 93.4	465.1/5	93.0
Co	438.5/5	= 87.7	439.2/5	93.8
Cu	466.7/5	= 93.3	463.7/5	92.7
Fe	181150/2000	= 90.6	179600/2000	89.8
Mg	508770/5000	= 101.8	503990/5000	100.8
Mn	457.7/5	= 91.5	~~465~~ 456.8/5	91.3
Ni	870/10	= 87	865.8/10	86.6
~~K~~	?			
Ag	966.8/10	= 96.7	971.6/10	97.2
~~Na~~				?
V	466.7/5	= 93.3	460.8/5	92.2
Zn	969.9/10	= 97.0	982.5/10	98.3

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Calculations

HARTCROWSER

Spike Sample Recovery & LCS

Page 1 of

Job No. 2978-62

Project Westinghouse/Hanford

Date 10/15/93

Calculations for 241-T-106 Data Validation

Made by KRolla

	SPIKE V.R		LCS V.R	
Al	1981.1/20	99.1	1930.9/2000	96.5
Sb	497.87/5	99.6	568.5/6	94.8
As	37.663/.4	94.2	48.16/.5	96.3
Ba	1871.5/20	93.6	1805.4/20	90.27
Be	51.3/.5	102.6	46.63/.5	93.26
Cd	51.82/.5	103.6	47.84/.5	95.7
Ca	⊖		46597/500	93.2
Cr	(196.79/2 − 3.35)/200 =	96.7	96.81/1	96.8
Co	491.05/5	98.2	462.63/5	92.5
Cu	(243.78−4.53)/2.5	95.7	238.47/2.5	95.4
Fe	(1032.8−12.04)/10 =	102.1	963.38/10	96.3
Pb	(19.8−1.627)/.2 =	90.7	27.02/.25	108.1
Mg	485.64/5	97.1	47277/5000	94.6
Mn			13855/1.5	92.4
~~Hg~~	0.82/.01	82		
Ni	490.47/5	98.1	369.39/4	92.3
~~Se~~ K	⊖		47124/5000	94.2
~~Ag~~ Se	8.666/.1	86.7	47.55/.5	95.1
Ag	46.75/.5	93.5	90.4/1	90.4
Na	⊖		47265/500	94.53
Tl	48.3135/.5	96.6	50.12/.5	100.24
V	487.74/5	97.5	473.92/5	94.8
Zn	492.92/5	98.6	194.85/2	97.4
CN	512.0984/5	102.4		
Bi	5140/50	102.8	2560/25	102.4

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Calculations

HARTCROWSER

Sample Results

Page 1 of 1

Job No. 2978-62

Project Westinghouse Hanford

Date 10/15/93

Calculations for 241-T-106

Made by KRolla

	B07K04			B07KA1L0		
Ba	$\frac{(.00177)(\ )}{1000}$	= 1.77	✓	ND		
Cr	ND			(.00336)( )	= 3.36	✓
Cu	(.00567)( )	= 5.67	✓	(.00453)( )	= 4.53	✓
Fe	(.01874)( )	= 18.74	✓	(.01205)( )	= 12.05	✓
Pb	(2.26)	= 2.26	✓	ND		✓
Mg	(.03181)( )	= 31.81	✓	(.02703)( )	= 27.03	✓
Mn	(.00159)( )	= 1.59	✓	ND		✓
Na	(.06776)( )	= 67.76	✓	(.05566)( )	= 55.66	✓
Zi	(.00524)( )	= 5.24	✓	ND ~~ND~~		

No Calculations Needed for water samples.

Recycled Paper

DATA QUALIFICATION SUMMARY

SDG: B07K04	VALIDATOR: Kristine Rolla	DATE: 10/15/93	PAGE 1 OF 1
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Bismuth	UJ	B07K04, B07MLO	r < 0.995
Selenium	UJ	↓	↓
Lead	UJ	↓	↓
Thallium	UJ	↓	↓
Barium	U	B07K04	Blank Contam.
Calcium	UJ	B07K04, B07MLO	Neg. Blank Cont. in P.B.
Copper	U	B07K04, B07MLO	Blank Contam.
Iron	U	B07K04, B07MLO	Blank Contam.
Lead	U	B07K04, B07MLO	Blank Contam.
Magnesium	U	B07K04, B07MLO	Blank Contam.
Manganese	U	B07K04	Blank Cont.
Sodium	U	B07K04, B07MLO	Blank Contam.
Zinc	U	B07K04	Blank Cont.
Se	UJ	B07K04, B07MLO	Furnace QC not acceptable

TELEPHONE CONTACT SUMMARY

VALIDATOR:	DATE:	TIME:	PAGE_____OF____
COMPANY:			
ADDRESS:			
PERSON CONTACTED:			
TELEPHONE:		FAX:	
PROJECT/CASE/SDG:			
REMARKS:			

No phone Contact Made.

ACTION:

9613492.6332

04,LO

Package ID: B07R04-TMA-440

INORGANIC ANALYSIS DATA VERIFICATION CHECKLIST - FORM A-6

Review the data package for completeness and check off the items below. If any data review elements are missing, contact the laboratory for submittal of the omitted data.

Data Package Item	Present?: Yes	No	N/A
Cover Page (CLP only)	X		
Sample Data			
Inorganic Analysis Data Sheets	X		
Standards Data			
Initial and Continuing Calibration Verification	X		
CRDL Standard for AA and ICP (Detection Limit Verification)	X		
QC Summary			
Blanks	X		
ICP Interference Check Summary	X		
Spike Sample Recovery	X		
Post-Digestion Spike Sample Recovery			X
Duplicates	X		
Laboratory Control Sample	X		
Standard Addition Results	X		
ICP Serial Dilutions	X		
Instrument Detection Limits	X		
ICP Interelement Correction Factors	X		
ICP Linear Ranges	X		
Preparation Log	X		
Instrument Run Log	X		
Raw Data			
ICP Raw Data	X		
Furnace AA Raw Data	X		
Flame AA Raw Data	X		
Mercury Raw Data	X		
Cyanide Raw Data	X		
Additional Data			
Moisture/% Solids data sheets			X
Sample preparation sheets	X		

Comments:

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000022A

N3-02-039 160

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations 241-T-106

Borehole Number: 299-W10-196

Collection Date 2-8-93

Time 1300

Ice Chest No. SML 283

Field Logbook No. EFL-1053

Bill of Lading/Airbill No. 2536953034

Offsite Property No. WA3-0-090 #3

Method of Shipment AIR (Emery)

Shipped to TMA-Norcal

Possible Sample Hazards/Remarks Keep samples chilled. All analysis per lab statement of work.

Sample Identification

B07K04

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) } gross alpha, gross beta, GEA including Co-60, Ru-106,
1 x 2000 ml., plastic, water (HNO_3) } Ce-144, Cs-137,isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: W.S. Thompson Wendy S Thompson 2-9-93 1100	Received by: Al. Gobaleza Alfonso Gobaleza	Date/Time: 2-10-93 1140
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

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0000026

Westinghouse Hanford Company

SAMPLE ANALYSIS REQUEST

Collector W. S. Thompson Date 2-8-93

Company Contact Wendy S. Thompson Telephone (509) 376-2153

Sample Number	*	Date Collected	Time Collected	Number and Type of Sample Containers/Analysis Requested
B07K04	W	2-8-93	1300	✓ 3 x 40 ml., amber glass, water, CLP-VOA
				✓ 3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions
				SO_4, PO_4, NO_2-NO_3, pH.
				✓ 1 x 1000 ml., plastic, water (HNO_3), ICP/AA metals, Bi, Ho
				✓ 1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-
				CN
				✓ 1 x 250 ml., amber glass, water (H_2SO_4), TOC
				✓ 1 x 4000 ml., plastic, water (HNO_3)
				✓ 1 x 2000 ml., plastic, water (HNO_3)
				gross alpha, gross beta, GEA including Co-60,
				Ru-106, Ce-144, Cs-137, isotopic U, total U,
				Am-241, Np-237, Pu-238,-239,-240, Sr-90.
				✓ 1 x 1000 ml., plastic, water (HCL), Tc-99
				✓ 2 x 250 ml., amber glass, water, C-14

Rec'd 2-8-93

*Type of Sample: A = Air; DL = Drum Liquids; DS = Drum Solids; L = Liquid; O = Oil; S = Soil; SE = Sediment; SL = Sludge; SO = Solid; T = Tissue; W = Water; WI = Wipe; X = Other

Field Information: Samples support the 241-T-106 soil investigation. All analysis per lab statement of work.

Special Handling and/or Storage: Keep samples chilled.

Possible Sample Hazards: None indicated with field instruments.

9613492.6335

000002E

Westinghouse Hanford Company	CHAIN OF CUSTODY

Custody Form Initiator: Wendy S. Thompson

PROJECT NUMBER 92-336

Company Contact: Wendy S. Thompson

Telephone (509) 376-2153

Project Designation/Sampling Locations: 241-T-106

Borehole Number: 299-W10-196

Collection Date: 2-8-93

Time: 1000

Ice Chest No.: SML ~~283~~ 284 WS 2-9-93

Field Logbook No. EFL-1053

Bill of Lading/Airbill No.: 2536953034

Offsite Property No. W93-0-0190#3

Method of Shipment: AIR (Emery)

Shipped to: TMA-Norcal

Possible Sample Hazards/Remarks: Keep samples chilled. All analysis per lab statement of work. Sample is nonhazardous/non radioactive

Sample Identification

B07ML0

3 x 40 ml., amber glass, water, CLP-VOA

3 x 1000 ml., amber glass, water, CLP- Semi-VOA, IC Anions, SO_4, PO_4, NO_2-NO_3, pH, Cl, F

1 x 1000 ml.,plastic, water (HNO_3), ICP/AA metals, Bi, Hg

1 x 1000 ml., plastic, water (NaOH, ascorbic acid), CLP-CN

1 x 250 ml., amber glass, water (H_2SO_4), TOC

1 x 4000 ml., plastic, water ((HNO_3)) gross alpha, gross beta, GEA including Co-60, Ru-106, Ce-144, Cs-137, isotopic U, total U, Am-241, Np-237, Pu-238,-239,-240, Sr-90.

1 x 2000 ml., plastic, water (HNO_3)

1 x 1000 ml., plastic, water (HCL), Tc-99

2 x 250 ml., amber glass, water, C-14

☐ Field Transfer of Custody

CHAIN OF POSSESSION (Sign and Print Names)		
Relinquished by: W.S. Thompson 2-9-93 Wendy S Thompson 1100	Received by: Gabaleza Monica Molina	Date/Time: 2-10-93 1145
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:
Relinquished by:	Received by:	Date/Time:

Final Sample Disposition

Disposal Method:	Disposed by:	Date/Time:

Comments:

9613492.6336

TMA
Thermo Analytical Inc.

Skinner & Sherman Labs., Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200
FAX (617) 890-3883

RECORD COPY

APR 1993
RECEIVED
OSM DMO

March 3, 1993

TMA/NORCAL
2030 Wright Avenue
Richmond, CA 94804
Attention: Dan Stuermer

Quality Control Narrative

Scope
Two (2) water samples were submitted to TMA/Skinner & Sherman Laboratories, Inc. on February 11, 1993 from TMA/Norcal. The samples were analyzed for the USEPA CLP metals, cyanide and bismuth as indicated on the chain of custody. The analysis was performed under TMA/Skinner and Sherman work order S302131.

Methodology
The samples were prepared, analyzed and reported in accordance with the USEPA Contract Laboratory Program Statement of Work ILM02. Bismuth was analyzed by flame atomic absorption spectroscopy.

Discussion
All quality control requirements were met for the samples with no exceptions.

Please feel free to call if there are any questions concerning the data package.

Respectfully submitted,

TMA/SKINNER & SHERMAN LABORATORIES, INC.

David N. Peterson
Assistant Laboratory Manager

9613492.6357

WESTINGHOUSE/HANFORD

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059 SAS No.: SDG No.: B07K04

SOW No.: ILM02.1

SAMPLE NUMBER:	Lab Sample ID.
B07K04	02131-01S
B07ML0	02131-02S
B07ML0D	02131-02S2
B07ML0S	02131-02DS

Were ICP interelement corrections applied? Yes/No YES
Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in comoliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Steven R Provencal Name: Steven R. Provencal

Date: 3/3/93 Title: Lead Chemist

9613492.6338

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07K04

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Matrix (soil/water): WATER Lab Sample ID: 02131-01S

Level (low/med): LOW Date Received: 02/11/93

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	27.0	U		P	
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	2.6	U		F	
7440-39-3	Barium	1.8	~~B~~	U	P	B
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U		P	
7440-70-2	Calcium	17.2	U	J	P	NegB
7440-47-3	Chromium	2.7	U		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	5.7	~~B~~	U	P	B
7439-89-6	Iron	18.7	~~B~~	U	P	B
7439-92-1	Lead	2.3	~~B~~	UJ	F	B
7439-95-4	Magnesium	31.8	~~B~~	U	P	B
7439-96-5	Manganese	1.6	~~B~~	U	P	B
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	116	U		P	
7782-49-2	Selenium	3.1	U	~~U~~ J	F	
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	67.8	~~B~~	U	P	B
7440-28-0	Thallium	2.6	U	J	F	
7440-62-2	Vanadium	2.5	U		P	
7440-66-6	Zinc	5.2	~~B~~	U	P	B
	Cyanide	10.0	U		CA	
7440-69-9	Bismuth	500	U	J	A	

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

KAC
10/26/93

Comments:

002

FORM I - IN ILM02.1

9613492.6339

WESTINGHOUSE/HANFORD
1

SAMPLE NUMBER:

INORGANIC ANALYSIS DATA SHEET

B07ML0

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Matrix (soil/water): WATER Lab Sample ID: 02131-02S

Level (low/med): LOW Date Received: 02/11/93

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	27.0	U		P	
7440-36-0	Antimony	18.4	U		P	
7440-38-2	Arsenic	2.6	U		F	
7440-39-3	Barium	1.0	U		P	
7440-41-7	Beryllium	0.50	U		P	
7440-43-9	Cadmium	1.6	U	~~J~~	P	~~Neg B~~
7440-70-2	Calcium	17.2	U	J	P	Neg B
7440-47-3	Chromium	3.4	B		P	
7440-48-4	Cobalt	2.5	U		P	
7440-50-8	Copper	4.5	~~B~~	U	P	B
7439-89-6	Iron	12.0	~~B~~	U	P	B
7439-92-1	Lead	1.6	~~B~~	U J	F	B
7439-95-4	Magnesium	27.0	~~B~~	U	P	B
7439-96-5	Manganese	1.0	U		P	
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	3.0	U		P	
7440-09-7	Potassium	116	U		P	
7782-49-2	Selenium	3.1	U	~~MW~~ J	F	
7440-22-4	Silver	3.9	U		P	
7440-23-5	Sodium	55.6	~~B~~	U	P	B
7440-28-0	Thallium	2.6	U	J	F	
7440-62-2	Vanadium	2.5	U		P	
7440-66-6	Zinc	4.7	U		P	
	Cyanide	10.0	U		CA	
7440-69-9	Bismuth	500	U	J	A	

LEAD WAS NOT DETECTED.
Transcription ERROR occurred.

KAC
10/26/93

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

003

FORM I - IN ILM02.1

WESTINGHOUSE/HANFORD

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Initial Calibration Source: EPA-LV

Continuing Calibration Source: SKINER

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum	2000.0	1966.70	98.3	25000.0	24209.00	96.8	24352.00	97.4	P
Antimony	600.0	584.32	97.4	2500.0	2469.50	98.8	2497.40	99.9	P
Arsenic	50.4	52.93	105.0	50.0	52.05	104.1	53.18	106.4	F
Barium	2000.0	1863.80	93.2	2500.0	2421.40	96.9	2404.20	96.2	P
Beryllium	50.0	47.37	94.7	500.0	496.19	99.2	496.65	99.3	P
Cadmium	50.0	49.64	99.3	2500.0	2432.60	97.3	2429.00	97.2	P
Calcium	50000.0	48538.00	97.1	25000.0	24385.00	97.5	24625.00	98.5	P
Chromium	100.0	98.81	98.8	2500.0	2407.40	96.3	2423.20	96.9	P
Cobalt	500.0	478.97	95.8	2500.0	2406.60	96.3	2442.40	97.7	P
Copper	250.0	233.95	93.6	2500.0	2443.40	97.7	2437.40	97.5	P
Iron	1000.0	983.32	98.3	10000.0	9851.60	98.5	9863.90	98.6	P
Lead	98.4	103.78	105.5	50.0	49.13	98.3	48.84	97.7	F
Magnesium	50000.0	49260.00	98.5	25000.0	24441.00	97.8	24515.00	98.1	P
Manganese	150.0	143.81	95.9	2500.0	2419.60	96.8	2437.30	97.5	P
Mercury	5.0	5.89	117.8	2.0	2.05	102.5	2.10	105.0	CV
Nickel	400.0	379.48	94.9	2500.0	2397.40	95.9	2414.80	96.6	P
Potassium	50000.0	48878.00	97.8	25000.0	24421.00	97.7	24444.00	97.8	P
Selenium	50.3	52.57	104.5	50.0	49.02	98.0	49.38	98.8	F
Silver	100.0	96.70	96.7	500.0	484.24	96.8	488.51	97.7	P
Sodium	50000.0	48818.00	97.6	25000.0	24400.00	97.6	24292.00	97.2	P
Thallium	100.7	106.64	105.9	50.0	50.25	100.5	49.34	98.7	F
Vanadium	500.0	489.95	98.0	2500.0	2430.50	97.2	2435.20	97.4	P
Zinc	200.0	197.97	99.0	2500.0	2431.10	97.2	2465.80	98.6	P
Cyanide	94.0	94.13	100.1	200.0	206.13	103.1	202.36	101.2	CA
Bismuth	5000.0	5010.00	100.2	5000.0	5390.00	107.8	5270.00	105.4	A

KR 10/15

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

9613492.6341

WESTINGHOUSE/HANFORD

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Initial Calibration Source: EPA-LV

Continuing Calibration Source: SKINER

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum				25000.0	24128.00	96.5			P
Antimony				2500.0	2447.80	97.9			P
Arsenic				50.0	51.80	103.6	48.91	97.8	F
Barium				2500.0	2393.70	95.7			P
Beryllium				500.0	490.62	98.1			P
Cadmium				2500.0	2428.70	97.1			P
Calcium				25000.0	24289.00	97.2			P
Chromium				2500.0	2396.70	95.9			P
Cobalt				2500.0	2413.70	96.5			P
Copper				2500.0	2430.20	97.2			P
Iron				10000.0	9777.20	97.8			P
Lead				50.0	48.89	97.8	49.13	98.3	F
Magnesium				25000.0	24315.00	97.3			P
Manganese				2500.0	2419.10	96.8			P
Mercury									NR
Nickel				2500.0	2389.60	95.6			P
Potassium				25000.0	24123.00	96.5			P
Selenium				50.0	47.37	94.7	46.29	92.6	F
Silver				500.0	484.59	96.9			P
Sodium				25000.0	24255.00	97.0			P
Thallium				50.0	48.69	97.4	49.86	99.7	F
Vanadium				2500.0	2409.20	96.4			P
Zinc				2500.0	2440.30	97.6			P
Cyanide				200.0	202.55	101.3	200.13	100.1	CA
Bismuth				5000.0	4990.00	99.8	5010.00	100.2	A

KR 10/15

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

005

9615492.6342

WESTINGHOUSE/HANFORD

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Initial Calibration Source: EPA-LV

Continuing Calibration Source: SKINER

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	M
Aluminum									NR
Antimony									NR
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead				50.0	47.83	95.7	46.77	93.5	F
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium				50.0	46.01	92.0	47.40	94.8	F
Vanadium									NR
Zinc									NR
Cyanide				200.0	202.81	101.4			CA
Bismuth				5000.0	5190.00	103.8	4930.00	98.6	A

KR 10/15

(1) Control limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

9613492.6343

WESTINGHOUSE/HANFORD

2B
CRDL STANDARD FOR AA AND ICP

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

AA CRDL Standard Source: SKINER

ICP CRDL Standard Source: SKINER

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Aluminum								
Antimony				120.0	118.91	99.1	131.72	109.8
Arsenic	10.0	9.15	91.5					
Barium								
Beryllium				10.0	9.79	97.9	9.79	97.9
Cadmium				10.0	11.53	115.3	10.99	109.9
Calcium								
Chromium				20.0	19.08	95.4	19.75	98.8
Cobalt				100.0	99.49	99.5	98.42	98.4
Copper				50.0	47.20	94.4	47.58	95.2
Iron								
Lead	3.0	3.48	116.0					
Magnesium								
Manganese				30.0	29.30	97.7	29.14	97.1
Mercury								
Nickel				80.0	78.75	98.4	78.19	97.7
Potassium								
Selenium	5.0	6.68	133.6					
Silver				20.0	20.12	100.6	20.07	100.4
Sodium								
Thallium	10.0	9.47	94.7					
Vanadium				100.0	98.50	98.5	96.87	96.9
Zinc				40.0	41.29	103.2	42.34	105.8
Bismuth	2000.0	2080.00	104.0					

UK

KR 10/15

9613492.6344

WESTINGHOUSE/HANFORD

3
BLANKS

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum	27.0	U	38.3	B	27.0	U	31.6	B	27.000	U	P
Antimony	18.4	U	18.4	U	18.4	U	18.4	U	18.400	U	P
Arsenic	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	F
Barium	1.8	B	1.4	B	1.6	B	1.2	B	1.000	U	P
Beryllium	0.5	U	0.5	U	0.5	U	0.5	U	0.500	U	P
Cadmium	1.6	U	1.8	B	2.2	B	2.2	B	1.600	U	P
Calcium	17.2	U	60.9	B	17.2	U	17.2	U	-57.690	B	P
Chromium	2.7	U	2.7	U	2.7	U	2.7	U	2.700	U	P
Cobalt	2.5	U	2.5	U	2.5	U	2.5	U	2.500	U	P
Copper	5.7	B	8.3	B	4.9	B	4.5	B	5.290	B	P
Iron	6.5	U	17.1	B	6.5	U	14.2	B	17.180	B	P
Lead	1.2	U	1.2	U	1.2	U	1.2	U	1.586	B	F
Magnesium	32.6	B	27.0	B	24.6	B	24.6	U	24.600	U	P
Manganese	1.0	U	1.0	U	1.0	U	1.1	B	1.000	U	P
Mercury	0.1	U	0.1	U	0.1	U			0.100	U	CV
Nickel	3.0	U	3.0	U	3.0	U	3.0	U	3.000	U	P
Potassium	116.0	U	116.0	U	116.0	U	116.0	U	116.000	U	P
Selenium	3.1	U	3.1	U	3.1	U	3.1	U	3.100	U	F
Silver	3.9	U	3.9	U	3.9	U	3.9	U	3.900	U	P
Sodium	42.1	U	42.1	U	42.1	U	42.1	U	50.810	B	P
Thallium	2.6	U	2.6	U	2.6	U	2.6	U	2.600	U	F
Vanadium	2.5	U	2.5	U	2.5	U	2.5	U	2.500	U	P
Zinc	4.7	U	5.2	B	4.7	U	4.7	U	4.700	U	P
Cyanide	10.0	U	10.0	U	10.0	U	10.0	U	10.000	U	CA
Bismuth	500.0	U	500.0	U	500.0	U	500.0	U	500.000	U	A

KR 10/15

WESTINGHOUSE/HANFORD

3
BLANKS

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Prepa-ration Blank	C	M
Aluminum											NR
Antimony											NR
Arsenic			2.6	U							F
Barium											NR
Beryllium											NR
Cadmium											NR
Calcium											NR
Chromium											NR
Cobalt											NR
Copper											NR
Iron											NR
Lead			1.2	U	1.2	U	1.2	U			F
Magnesium											NR
Manganese											NR
Mercury											NR
Nickel											NR
Potassium											NR
Selenium			3.1	U							F
Silver											NR
Sodium											NR
Thallium			2.6	U	2.6	U	2.6	U			F
Vanadium											NR
Zinc											NR
Cyanide			10.0	U	10.0	U					CA
Bismuth			500.0	U	500.0	U	500.0	U			A

KR 10/15

9613492.6346

WESTINGHOUSE/HANFORD

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 ICS Source: SPEX INT-A1

Concentration Units: ug/L

Analyte	True Sol. A	True Sol. AB	Initial Found Sol. A	Initial Found Sol. AB	%R	Final Found Sol. A	Final Found Sol. AB	%R
Aluminum	500000	500000	498510	494700.0	98.9	494390	492330.0	98.5
Antimony	0	0	16	-5.1		-15	11.8	
Arsenic								
Barium	0	500	-11	447.4	89.5	-11	440.2	88.0
Beryllium	0	500	0	460.7	92.1	0	454.7	90.9
Cadmium	0	1000	2	891.0	89.1	3	878.3	87.8
Calcium	500000	500000	472130	467040.0	93.4	465200	464310.0	92.9
Chromium	0	500	19	466.9	93.4	18	465.1	93.0
Cobalt	0	500	-1	438.5	87.7	0	439.2	87.8
Copper	0	500	5	466.7	93.3	3	463.7	92.7
Iron	200000	200000	182430	181150.0	90.6	179710	179600.0	89.8
Lead								
Magnesium	500000	500000	512300	508770.0	101.8	504590	503990.0	100.8
Manganese	0	500	11	457.7	91.5	11	456.8	91.4
Mercury								
Nickel	0	1000	-1	870.0	87.0	-2	865.8	86.6
Potassium	0	0	67	203.7		70	187.0	
Selenium								
Silver	0	1000	-5	966.8	96.7	-6	971.6	97.2
Sodium	0	0	256	241.2		240	230.7	
Thallium								
Vanadium	0	500	4	466.7	93.3	2	460.8	92.2
Zinc	0	1000	35	969.9	97.0	35	982.5	98.2
Bismuth								

KR 10/15

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WESTINGHOUSE/HANFORD

5A

SPIKE SAMPLE RECOVERY

SAMPLE NUMBER:

B07ML0S

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Matrix: WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum	75-125	1981.1000		27.0000	U	2000.00	99.1		P
Antimony	75-125	497.8700		18.4000	U	500.00	99.6		P
Arsenic	75-125	37.6630		2.6000	U	40.00	94.2		F
Barium	75-125	1871.5000		1.0000	U	2000.00	93.6		P
Beryllium	75-125	51.3000		0.5000	U	50.00	102.6		P
Cadmium	75-125	51.8200		1.6000	U	50.00	103.6		P
Calcium									NR
Chromium	75-125	196.7900		3.3500	B	200.00	96.7		P
Cobalt	75-125	491.0500		2.5000	U	500.00	98.2		P
Copper	75-125	243.7800		4.5300	B	250.00	95.7		P
Iron	75-125	1032.8000		12.0400	B	1000.00	102.1		P
Lead	75-125	19.8000		1.6270	B	20.00	90.9		F
Magnesium									NR
Manganese	75-125	485.6400		1.0000	U	500.00	97.1		P
Mercury	75-125	0.8200		0.1000	U	1.00	82.0		CV
Nickel	75-125	490.4700		3.0000	U	500.00	98.1		P
Potassium									NR
Selenium	75-125	8.6660		3.1000	U	10.00	86.7		F
Silver	75-125	46.7500		3.9000	U	50.00	93.5		P
Sodium									NR
Thallium	75-125	48.3135		2.6000	U	50.00	96.6		F
Vanadium	75-125	487.7400		2.5000	U	500.00	97.5		P
Zinc	75-125	492.9200		4.7000	U	500.00	98.6		P
Cyanide	75-125	512.0984		10.0000	U	500.00	102.4		CA
Bismuth	75-125	5140.0000		500.0000	U	5000.00	102.8		A

Comments:

KR 10/15

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WESTINGHOUSE/HANFORD

6
DUPLICATES

SAMPLE NUMBER:

B07ML0D

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		27.0000	U	27.0000	U			P
Antimony		18.4000	U	18.4000	U			P
Arsenic		2.6000	U	2.6000	U			F
Barium		1.0000	U	1.0000	U			P
Beryllium		0.5000	U	0.5000	U			P
Cadmium		1.6000	U	1.6000	U			P
Calcium		17.2000	U	17.2000	U			P
Chromium		3.3500	B	2.7000	U	200.0		P
Cobalt		2.5000	U	2.5000	U			P
Copper		4.5300	B	2.9000	U	200.0		P
Iron		12.0400	B	63.5900	B	136.3		P
Lead		1.6270	B	1.2000	U	200.0		F
Magnesium		27.0300	B	24.6000	U	200.0		P
Manganese		1.0000	U	1.0000	U			P
Mercury		0.1000	U	0.1000	U			CV
Nickel		3.0000	U	3.0000	U			P
Potassium		116.0000	U	116.0000	U			P
Selenium		3.1000	U	3.1000	U			F
Silver		3.9000	U	3.9000	U			P
Sodium		55.6500	B	42.1000	U	200.0		P
Thallium		2.6000	U	2.6000	U			F
Vanadium		2.5000	U	2.5000	U			P
Zinc		4.7000	U	6.3000	B	200.0		P
Cyanide		10.0000	U	10.0000	U			CA
Bismuth		500.0000	U	500.0000	U			A

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7

LABORATORY CONTROL SAMPLE

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Solid LCS Source:

Aqueous LCS Source: SPEX ICV-1

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Aluminum	2000.0	1930.90	96.5						
Antimony	600.0	568.50	94.8						
Arsenic	50.0	48.16	96.3						
Barium	2000.0	1805.40	90.3						
Beryllium	50.0	46.63	93.3						
Cadmium	50.0	47.84	95.7						
Calcium	50000.0	46597.00	93.2						
Chromium	100.0	96.81	96.8						
Cobalt	500.0	462.63	92.5						
Copper	250.0	238.47	95.4						
Iron	1000.0	963.38	96.3						
Lead	25.0	27.02	108.1						
Magnesium	50000.0	47277.00	94.6						
Manganese	150.0	138.55	92.4						
Mercury									
Nickel	400.0	369.39	92.3						
Potassium	50000.0	47124.00	94.2						
Selenium	50.0	47.55	95.1						
Silver	100.0	90.40	90.4						
Sodium	50000.0	47265.00	94.5						
Thallium	50.0	50.12	100.2						
Vanadium	500.0	473.92	94.8						
Zinc	200.0	194.85	97.4						
Cyanide									
Bismuth	2500.0	2560.00	102.4						

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8

STANDARD ADDITION RESULTS

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Concentration Units: ug/L

EPA Sample No.	An	0 ADD ABS	1 ADD CON	1 ADD ABS	2 ADD CON	2 ADD ABS	3 ADD CON	3 ADD ABS	Final Conc.	r	Q

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9

ICP SERIAL DILUTIONS

SAMPLE NUMBER: B07ML0L

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	27.00	U	135.00	U			P
Antimony	18.40	U	92.00	U			P
Arsenic							NR
Barium	1.00	U	5.85	B			P
Beryllium	0.50	U	2.50	U			P
Cadmium	1.60	U	8.00	U			P
Calcium	17.20	U	521.55	B			P
Chromium	3.35	B	13.50	U	100.0		P
Cobalt	2.50	U	12.50	U			P
Copper	4.53	B	14.50	U	100.0		P
Iron	12.04	B	32.50	U	100.0		P
Lead							NR
Magnesium	27.03	B	123.00	U	100.0		P
Manganese	1.00	U	5.00	U			P
Mercury							NR
Nickel	3.00	U	15.00	U			P
Potassium	116.00	U	580.00	U			P
Selenium							NR
Silver	3.90	U	19.50	U			P
Sodium	55.65	B	210.50	U	100.0		P
Thallium							NR
Vanadium	2.50	U	12.50	U			P
Zinc	4.70	U	24.50	B			P
Bismuth							NR

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015

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10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: Date: 01/15/93

Flame AA ID Number:

Furnace AA ID Number: F2

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead	283.30	BS	3	1.2	F
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium	276.80	BS	10	2.6	F
Vanadium			50		NR
Zinc			20		NR
Bismuth			500		NR

Comments:
F2: THERMO JARRELL-ASH VIDEO 22E (#2511)

WESTINGHOUSE/HANFORD

10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: Date: 01/15/93

Flame AA ID Number:

Furnace AA ID Number: F5

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic	197.20	BS	10	2.6	F
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium	196.00	BS	5	3.1	F
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Bismuth			500		NR

Comments:
F5: THERMO JARRELL-ASH VIDEO 21E (#2936)

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10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: Date: 01/15/93

Flame AA ID Number: F7

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury			0.2		NR
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Bismuth	223.00	BS	500	500.0	A

Comments:
F7: PERKIN-ELMER 3030B

018

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10
INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: Date: 01/15/93

Flame AA ID Number: M1

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum			200		NR
Antimony			60		NR
Arsenic			10		NR
Barium			200		NR
Beryllium			5		NR
Cadmium			5		NR
Calcium			5000		NR
Chromium			10		NR
Cobalt			50		NR
Copper			25		NR
Iron			100		NR
Lead			3		NR
Magnesium			5000		NR
Manganese			15		NR
Mercury	253.70		0.2	0.1	CV
Nickel			40		NR
Potassium			5000		NR
Selenium			5		NR
Silver			10		NR
Sodium			5000		NR
Thallium			10		NR
Vanadium			50		NR
Zinc			20		NR
Bismuth			500		NR

Comments:
M1: TECHNICON MERCURY ANALYZER (#SS4199A-D)

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10

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 Date: 01/15/93

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRDL (ug/L)	IDL (ug/L)	M
Aluminum	308.20		200	27.0	P
Antimony	206.80		60	18.4	P
Arsenic			10		NR
Barium	493.40		200	1.0	P
Beryllium	313.00		5	0.5	P
Cadmium	226.50		5	1.6	P
Calcium	317.90		5000	17.2	P
Chromium	267.70		10	2.7	P
Cobalt	228.60		50	2.5	P
Copper	324.70		25	2.9	P
Iron	259.90		100	6.5	P
Lead			3		NR
Magnesium	279.00		5000	24.6	P
Manganese	257.60		15	1.0	P
Mercury			0.2		NR
Nickel	231.60		40	3.0	P
Potassium	766.40		5000	116.0	P
Selenium			5		NR
Silver	328.00		10	3.9	P
Sodium	588.90		5000	42.1	P
Thallium			10		NR
Vanadium	292.40		50	2.5	P
Zinc	213.80		20	4.7	P
Bismuth			500		NR

Comments:
P2: THERMO JARRELL-ASH ICAP61 (#22982)

020

WESTINGHOUSE/HANFORD

13
PREPARATION LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Method: A

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
B07K04	02/18/93		100
B07ML0	02/18/93		100
B07ML0D	02/18/93		100
B07ML0S	02/18/93		100
LCSW	02/18/93		100
PBW	02/18/93		100

WESTINGHOUSE/HANFORD

13
PREPARATION LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Method: CA

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
B07K04	02/16/93		50
B07ML0	02/16/93		50
B07ML0D	02/16/93		50
B07ML0S	02/16/93		50
PBW	02/16/93		50

WESTINGHOUSE/HANFORD

13
PREPARATION LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Method: CV

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
B07K04	02/19/93		100
B07ML0	02/19/93		100
B07ML0D	02/19/93		100
B07ML0S	02/19/93		100
PBW	02/19/93		100

WESTINGHOUSE/HANFORD

13

PREPARATION LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Method: F

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
B07K04	02/18/93		100
B07ML0	02/18/93		100
B07ML0D	02/18/93		100
B07ML0S	02/18/93		100
LCSW	02/18/93		100
PBW	02/18/93		100

WESTINGHOUSE/HANFORD

13
PREPARATION LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Method: P

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
B07K04	02/18/93		100
B07ML0	02/18/93		100
B07ML0D	02/18/93		100
B07ML0S	02/18/93		100
LCSW	02/18/93		100
PBW	02/18/93		100

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11A
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 Date: 07/01/92

Analyte	Wave-length (nm)	Al	Ca	Fe	Mg	Cr
Aluminum	308.20	0.0000000	0.0000000	0.0000000	0.0000000	-0.0006600
Antimony	206.80	0.0000000	0.0000000	0.0002200	0.0000000	0.0130700
Arsenic						
Barium	493.40	0.0000300	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0002000	0.0000000	0.0000000
Calcium	317.90	0.0000000	0.0000000	-0.0001800	0.0000700	0.0000000
Chromium	267.70	0.0000000	0.0000000	-0.0000300	0.0000000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0002500
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000600
Iron	259.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead						
Magnesium	279.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.60	0.0000200	0.0000000	-0.0000100	0.0000000	0.0000000
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.00	0.0000000	0.0000000	-0.0003100	0.0000000	0.0000000
Sodium	588.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	0.0000000	-0.0000300	0.0000000	-0.0037800
Zinc	213.80	0.0000000	0.0000000	0.0001200	0.0000000	0.0000000
Bismuth						

Comments:
P2: THERMO JARRELL-ASH ICAP61 (#22982)

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11B
ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 Date: 07/01/92

Analyte	Wave-length (nm)	Cu	Mn	Mo	Ni	Sn
Aluminum	308.20	0.0000000	0.0009700	0.0006000	0.0000000	0.0000000
Antimony	206.80	0.0000000	0.0000000	0.0000000	-0.0017900	0.0000000
Arsenic						
Barium	493.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	313.00	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.50	0.0000000	0.0000000	0.0000000	-0.0002300	0.0000000
Calcium	317.90	0.0000000	0.0003000	0.0000000	0.0000000	0.0000000
Chromium	267.70	0.0000000	0.0002500	0.0000700	0.0000000	0.0000000
Cobalt	228.60	0.0000000	0.0000000	0.0000000	-0.0001800	0.0000000
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Iron	259.90	0.0000000	-0.0030600	0.0002000	0.0000000	-0.0000500
Lead						
Magnesium	279.00	0.0000000	-0.0038500	0.0002000	0.0000000	0.0000000
Manganese	257.60	-0.0000400	0.0000000	0.0000000	0.0000000	0.0000000
Mercury						
Nickel	231.60	0.0000000	0.0000000	-0.0002300	0.0000000	0.0000000
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium						
Silver	328.00	0.0000000	0.0001000	0.0000000	0.0000000	0.0000000
Sodium	588.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium						
Vanadium	292.40	0.0000000	-0.0001100	0.0000000	0.0000000	0.0000000
Zinc	213.80	0.0018900	0.0001100	0.0000000	0.0039800	0.0000000
Bismuth						

Comments:
P2: THERMO JARRELL-ASH ICAP61 (#22982)

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11B

ICP INTERELEMENT CORRECTION FACTORS (ANNUALLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 Date: 07/01/92

Analyte	Wave-length (nm)	Sr	Ti	V	Zn	
Aluminum	308.20	0.0000000	0.0000000	-0.0323900	0.0000000	
Antimony	206.80	0.0000000	0.0015000	-0.0094100	-0.0007400	
Arsenic						
Barium	493.40	0.0000000	0.0000000	0.0000000	0.0000000	
Beryllium	313.00	0.0000000	0.0000000	-0.0014700	0.0000000	
Cadmium	226.50	0.0000000	0.0000000	0.0000000	0.0000000	
Calcium	317.90	0.0000300	0.0000000	0.0000000	0.0000000	
Chromium	267.70	0.0000000	0.0000000	0.0005100	0.0000000	
Cobalt	228.60	0.0000000	0.0014400	0.0000000	0.0000000	
Copper	324.70	0.0000000	0.0000000	0.0000000	0.0000000	
Iron	259.90	0.0000050	0.0000000	0.0000000	0.0000000	
Lead						
Magnesium	279.00	0.0000000	-0.0038300	0.0000000	0.0000000	
Manganese	257.60	0.0000000	0.0000000	0.0000000	0.0000000	
Mercury						
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	
Potassium	766.40	0.0000000	0.0000000	0.0000000	0.0000000	
Selenium						
Silver	328.00	0.0000000	-0.0001400	0.0000000	0.0000000	
Sodium	588.90	0.0000000	0.0000000	0.0000000	0.0000000	
Thallium						
Vanadium	292.40	0.0000000	0.0003400	0.0000000	0.0000000	
Zinc	213.80	0.0000000	0.0000000	0.0000000	0.0000000	
Bismuth						

Comments:
P2: THERMO JARRELL-ASH ICAP61 (#22982)

9613492.6365

WESTINGHOUSE/HANFORD

12

ICP LINEAR RANGES (QUARTERLY)

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

ICP ID Number: P2 Date: 01/15/93

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Aluminum	5.00	1000000.0	P
Antimony	5.00	25000.0	P
Arsenic			NR
Barium	5.00	100000.0	P
Beryllium	5.00	25000.0	P
Cadmium	5.00	25000.0	P
Calcium	5.00	900000.0	P
Chromium	5.00	200000.0	P
Cobalt	5.00	100000.0	P
Copper	5.00	250000.0	P
Iron	5.00	600000.0	P
Lead			NR
Magnesium	5.00	1000000.0	P
Manganese	5.00	100000.0	P
Mercury			NR
Nickel	5.00	250000.0	P
Potassium	5.00	1000000.0	P
Selenium			NR
Silver	5.00	40000.0	P
Sodium	5.00	1000000.0	P
Thallium			NR
Vanadium	5.00	50000.0	P
Zinc	5.00	150000.0	P
Bismuth			NR

Comments:

P2: THERMO JARRELL-ASH ICAP61 (#22982)

9613492.6566

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: C1 Method: CA

Start date: 02/17/93 End date: 02/17/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1831																									X	
S10	1.00	1832																									X	
S40	1.00	1833																									X	
S100	1.00	1834																									X	
S200	1.00	1834																									X	
S400	1.00	1835																									X	
S400	1.00	1836																									X	
S40	1.00	1837																									X	
S40	1.00	1837																									X	
ICV	1.00	1838																									X	
ICB	1.00	1839																									X	
CCV	1.00	1840																									X	
CCB	1.00	1840																									X	
ZZZZZZ	1.00	1841																										
ZZZZZZ	1.00	1842																										
ZZZZZZ	1.00	1843																										
ZZZZZZ	1.00	1843																										
ZZZZZZ	1.00	1844																										
ZZZZZZ	1.00	1845																										
ZZZZZZ	1.00	1846																										
ZZZZZZ	1.00	1846																										
ZZZZZZ	1.00	1847																										
CCV	1.00	1848																									X	
CCB	1.00	1849																									X	
ZZZZZZ	1.00	1849																										
ZZZZZZ	1.00	1850																										
ZZZZZZ	1.00	1851																										
ZZZZZZ	1.00	1852																										
ZZZZZZ	1.00	1852																										
ZZZZZZ	1.00	1853																										
ZZZZZZ	1.00	1854																										
CCV	1.00	1855																									X	

9613492.6367

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: C1 Method: CA

Start date: 02/17/93 End date: 02/17/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
CCB	1.00	1855																									X	
ZZZZZZ	1.00	1856																										
ZZZZZZ	1.00	1857																										
ZZZZZZ	1.00	1858																										
ZZZZZZ	1.00	1858																										
ZZZZZZ	1.00	1859																										
ZZZZZZ	1.00	1900																										
CCV	1.00	1901																									X	
CCB	1.00	1901																									X	
PBW	1.00	1902																									X	
B07K04	1.00	1903																									X	
B07ML0	1.00	1904																									X	
B07ML0D	1.00	1904																									X	
B07ML0S	2.00	1905																									X	
B07ML0A	1.00	1906																										
CCV	1.00	1907																									X	
CCB	1.00	1907																									X	

9613492.6368

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: M1 Method: CV

Start date: 02/19/93 End date: 02/19/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				ALS	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1500																X									
S0.2	1.00	1503																X									
S0.5	1.00	1506																X									
S1.0	1.00	1509																X									
S2.0	1.00	1512																X									
S5.0	1.00	1515																X									
ICV	2.00	1521																X									
ICB	1.00	1524																X									
CCV	1.00	1527																X									
CCB	1.00	1530																X									
ZZZZZZ	1.00	1533																									
ZZZZZZ	1.00	1536																									
PBW	1.00	1539																X									
B07K04	1.00	1542																X									
B07ML0	1.00	1545																X									
B07ML0D	1.00	1548																X									
B07ML0S	1.00	1551																X									
CCV	1.00	1554																X									
CCB	1.00	1557																X									

9613492.6369

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1351				X																						
S10	1.00	1356				X																						
S50	1.00	1401				X																						
S100	1.00	1406				X																						
ICV	1.00	1412				X																						
ICB	1.00	1417				X																						
CRA	1.00	1422				X																						
CCV	1.00	1427				X																						
CCB	1.00	1433				X																						
ZZZZZZ	1.00	1438																										
ZZZZZZ	1.00	1443																										
ZZZZZZ	1.00	1448																										
ZZZZZZ	1.00	1453																										
ZZZZZZ	1.00	1458																										
CCV	1.00	1503				X																						
CCB	1.00	1508				X																						
PBW	1.00	1532				X																						
PBWA	1.00	1537	94.2			X																						
LCSW	1.00	1542				X																						
LCSWA	1.00	1547	104.1			X																						
B07K04	1.00	1552				X																						
B07K04A	1.00	1557	88.1			X																						
B07ML0	1.00	1602				X																						
B07ML0A	1.00	1607	94.8			X																						
B07ML0S	1.00	1613				X																						
ZZZZZZ	1.00	1618																										
CCV	1.00	1623				X																						
CCB	1.00	1628				X																						
B07ML0D	1.00	1633				X																						
B07ML0DA	1.00	1638	87.5			X																						
ZZZZZZ	1.00	1649																										
ZZZZZZ	1.00	1654																										

FORM XIV - IN ILM02.1

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WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				ALB	SB	ABS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
ZZZZZZ	1.00	1710																									
ZZZZZZ	1.00	1715																									
ZZZZZZ	1.00	1720																									
ZZZZZZ	1.00	1725																									
CCV	1.00	1730				X																					
CCB	1.00	1735				X																					

036

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WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																					
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	VZ	CN	BI
S0	1.00	1351																			X						
S5	1.00	1356																			X						
S50	1.00	1401																			X						
S100	1.00	1406																			X						
ICV	1.00	1412																			X						
ICB	1.00	1417																			X						
CRA	1.00	1422																			X						
CCV	1.00	1427																			X						
CCB	1.00	1433																			X						
ZZZZZZ	1.00	1438																									
ZZZZZZ	1.00	1443																									
ZZZZZZ	1.00	1448																									
ZZZZZZ	1.00	1453																									
ZZZZZZ	1.00	1458																									
CCV	1.00	1503																			X						
CCB	1.00	1508																			X						
PBW	1.00	1532																									
PBWA	1.00	1537	89.4																								
LCSW	1.00	1542																			X						
LCSWA	1.00	1547	99.0																		X						
B07K04	1.00	1552																			X						
B07K04A	1.00	1557	66.8																		X						
B07ML0	1.00	1602																									
B07ML0A	1.00	1607	93.4																								
B07ML0S	1.00	1613																									
ZZZZZZ	1.00	1618																									
CCV	1.00	1623																			X						
CCB	1.00	1628																			X						
B07ML0D	1.00	1633																			X						
B07ML0DA	1.00	1638	72.1																		X						
B07ML0	1.00	1649																			X						
B07ML0A	1.00	1654	69.5																		X						

QC criteria not met

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~~Highlights~~ ~~The~~

KR. 10/15

037

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WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				ALS	SBS	ABA	BBE	CDA	CAR	CRO	CUE	FEB	PBG	MGN	MNG	HGI	NIK	SEG	AGA	NAL	TLV	ZNN	CNB	BIS		
PBW	1.00	1710																X								
PBWA	1.00	1715	98.7															X								
B07ML0S	1.00	1720																X								
ZZZZZZ	1.00	1725																								
CCV	1.00	1730																X								
CCB	1.00	1735																X								

038

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WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: P2 Method: P

Start date: 02/22/93 End date: 02/22/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				ALS	BS	ABA	BEA	CDA	CAR	CRO	CUE	FEB	PBG	MGN	MGI	NIK	SEG	AGA	NAL	TV	ZN	CN	BI
S0	1.00	0909		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
S	1.00	0911		X					X			X	X			X		X					
S	1.00	0914			X	X	X	X	X	X	X			X	X					X	X		
S	1.00	0916															X						
ICV	1.00	0919		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICB	1.00	0922		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICSA	1.00	0925		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICSAB	1.00	0928		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CRI	1.00	0931			X		X	X		X	X	X			X	X		X		X	X		
CCV	1.00	0933		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB	1.00	0936		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
PBW	1.00	0939		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ	1.00	0944																					
B07K04	1.00	0947		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B07ML0	1.00	0950		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B07ML0D	1.00	0953		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
B07ML0S	1.00	0956		X	X	X	X	X	X	X	X	X		X	X		X			X	X		
B07ML0L	5.00	0958		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
LCSW	1.00	1028		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ	1.00	1032																					
CCV	1.00	1035		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB	1.00	1038		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICSA	1.00	1040		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICSAB	1.00	1043		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CRI	1.00	1046			X		X	X		X	X	X			X	X		X		X	X		
CCV	1.00	1049		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB	1.00	1051		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

9613492.6374

C L P M E T A L S 3.03a

HANFORD NOR

Run id: P2 9305301
THERMO JARRELL-ASH ICAP61 (#22982)
Analytical method: P
Element: Multi-Element Al, Sb, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe
Mg, Mn, Ni, K, Na, V, Zn, Ag

Acquired: 02/22/93 by JON
Crunched: 02/26/93 by JON
Time: 1128
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	CICV1	ICV	P			ICV	02/22/93	09:19
2	STDB	ICB	P			ICB	02/22/93	09:22
3	INTAA	ICSA0	P			ICSA	02/22/93	09:25
4	INTABB	ICSAB0	P			ICSAB	02/22/93	09:28
5	2XCRDL29301	CRI0	P		01/15/93	CRI	02/22/93	09:31
6	HALFSTD	CCV	P			CCV	02/22/93	09:33
7	STDB	CCB	P			CCB	02/22/93	09:36
8	PB	PBW	P	1408	02/18/93	PBW	02/22/93	09:39
9	X	X	P			ZZZZZZ	02/22/93	09:44
10	S302131-01	S	P	1408	02/18/93	B07K04	02/22/93	09:47
11	S302131-02	S	P	1408	02/18/93	B07ML0	02/22/93	09:50
12	S302131-02	S2	P	1408	02/18/93	B07ML0D	02/22/93	09:53
13	S302131-02	DS	P	1408	02/18/93	B07ML0S	02/22/93	09:56
14	S302131-02	ISD	P	1408		B07ML0L	02/22/93	09:58
15	CLCSPW	LCSW	P	1408	02/18/93	LCSW	02/22/93	10:28
16	X	X	P	1408		ZZZZZZ	02/22/93	10:32
17	HALFSTD	CCV	P			CCV	02/22/93	10:35
18	STDB	CCB	P			CCB	02/22/93	10:38
19	INTAA	ICSA1	P			ICSA	02/22/93	10:40
20	INTABB	ICSAB1	P			ICSAB	02/22/93	10:43
21	2XCRDL29301	CRI1	P		01/15/93	CRI	02/22/93	10:46
22	HALFSTD	CCV	P			CCV	02/22/93	10:49
23	STDB	CCB	P			CCB	02/22/93	10:51
24	STDB	WS0	P			S0	02/22/93	09:09
25	STD3	WS1	P			S	02/22/93	09:11
26	STD1	WS2	P			S	02/22/93	09:14
27	STD2	WS3	P			S	02/22/93	09:16

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Standardization Rpt. Mon 02-22-93 09:12:11 AM page 1

Method: CLP01AP2 Standard: STD8

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Avge	.00913	-.00060	-.00253	.00000	.00040	-.00020	.03840
SDev	.00303	.00131	.00208	.00020	.00000	.00053	.00044
%RSD	33.234	218.58	82.171	.00000	.00000	264.58	1.1386
#1	.00640	-.00080	-.00020	.00020	.00040	.00020	.03793
#2	.01240	.00080	-.00420	.00000	.00040	.00000	.03879
#3	.00860	-.00180	-.00320	-.00020	.00040	-.00080	.03850

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Avge	.00000	-.00013	.00060	.00480	-.00020	.00200	.00113
SDev	.00040	.00023	.00040	.00087	.00180	.00111	.00023
%RSD	.00000	173.21	66.667	18.162	900.00	55.678	20.327
#1	.00040	.00000	.00060	.00580	.00160	.00180	.00100
#2	.00000	.00000	.00100	.00420	-.00020	.00320	.00140
#3	-.00040	-.00040	.00020	.00440	-.00200	.00100	.00100

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Avge	.00027	-.00093	.03500	.06327	.00007	.00027
SDev	.00064	.00170	.00436	.00099	.00023	.00012
%RSD	241.09	182.25	12.454	1.5594	346.41	43.301
#1	.00000	-.00100	.03200	.06260	.00020	.00020
#2	.00100	.00080	.04000	.06440	.00020	.00040
#3	-.00020	-.00260	.03300	.06280	-.00020	.00020

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Standardization Rpt. Mon 02-22-93 09:14:32 AM page 1

Method: CLP01AP2 Standard: STD3

Elem	Al3082	Ca3179	Fe2599	Mg2790	K_7664	Na5889
Avge	9.0748	22.077	11.180	4.1946	.99713	4.1955
SDev	.0169	.057	.036	.0142	.00205	.0030
%RSD	.18624	.25630	.31776	.33920	.20586	.07235
#1	9.0718	22.061	11.172	4.1906	.99940	4.1950
#2	9.0596	22.029	11.149	4.1828	.99540	4.1928
#3	9.0930	22.139	11.219	4.2104	.99660	4.1988

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Standardization Rpt. Mon 02-22-93 09:17:08 AM page 1

Method: CLP01AP2 Standard: STD1

Elem	Sb2068	As1936	Ba4934	Be3130	Cd2265	Cr2677	Co2286
Avge	1.1681	1.1487	1.6961	.74633	1.8509	.99253	.93807
SDev	.0042	.0109	.0066	.00155	.0081	.00308	.00230
%RSD	.36293	.94553	.39007	.20815	.43710	.30977	.24526
#1	1.1636	1.1362	1.6886	.74460	1.8418	.98900	.93580
#2	1.1688	1.1546	1.7010	.74760	1.8538	.99460	.93800
#3	1.1720	1.1554	1.6988	.74680	1.8572	.99400	.94040

Elem	Cu3247	Pb2203	Mn2576	Ni2316	V_2924	Zn2138
Avge	.88347	.84693	2.0938	1.1896	1.0194	.95133
SDev	.00248	.00237	.0075	.0033	.0023	.00237
%RSD	.28124	.27974	.35600	.27982	.22283	.24904
#1	.88060	.84420	2.0852	1.1858	1.0168	.94860
#2	.88480	.84840	2.0978	1.1920	1.0210	.95280
#3	.88500	.84820	2.0984	1.1910	1.0204	.95260

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Standardization Rpt. Mon 02-22-93 09:19:38 AM page 1

Method: CLP01AP2 Standard: STD2

Elem	Ag3280
Avge	2.5678
SDev	.0123
%RSD	.47893
#1	2.5638
#2	2.5816
#3	2.5580

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Analysis Report QC Standard Mon 02-22-93 09:22:32 AM page 1

Method: CLP01AP2 Sample Name: CICV1:ICV Operator: JST
Run Time: 02/22/93 09:19:48
Comment: ICV#1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9667	.58433	.10158	1.8638	.04737	.04965	48.538
SDev	.0137	.00572	.01646	.0077	.00054	.00108	.368
%RSD	.69784	.97856	16.200	.41162	1.1381	2.1758	.75805
#1	1.9552	.57803	.09211	1.8559	.04737	.04857	48.252
#2	1.9819	.58918	0.12058	1.8713	.04791	.05073	48.953
#3	1.9631	.58577	.09204	1.8642	.04684	.04965	48.410
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	.60000	.10000	2.0000	.05000	.05000	50.000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09882	.47897	.23395	.98332	.04931	49.260	.14382
SDev	.00253	.00308	.00285	.00806	.01534	.343	.00146
%RSD	2.5646	.64245	1.2190	.82006	31.107	.69632	1.0150
#1	.09848	.47720	.23352	.97545	.04932	48.946	.14254
#2	.10150	.48253	.23697	.99156	0.06465	49.626	.14541
#3	.09647	.47720	.23131	.98297	0.03397	49.206	.14350
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.10000	.50000	.25000	1.0000	.05000	50.000	.15000
Range	10.000	10.000	10.000	10.000	10.000	10.000	10.000

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.37948	48.878	.09670	48.818	.48995	.19797
SDev	.00463	.113	.00396	.183	.00345	.00437
%RSD	1.2203	.23040	4.0949	.37574	.70455	2.2079
#1	.37640	48.781	.09841	48.621	.48668	.20149
#2	.38481	49.001	.09952	48.984	.49356	.19934
#3	.37724	48.851	.09217	48.849	.48962	.19308
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	.40000	50.000	.10000	50.000	.50000	.20000
Range	10.000	10.000	10.000	10.000	10.000	10.000

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Analysis Report Mon 02-22-93 09:25:22 AM page 1

Method: CLP01AP2 Sample Name: STDB;ICB Operator: JST
Run Time: 02/22/93 09:22:38
Comment: ICB#1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01402	.01111	.00427	.00177	.00027	.00072	-.01459
SDev	.00880	.00475	.00638	.00000	.00027	.00031	.00777
%RSD	62.790	42.737	149.50	.01500	99.820	43.268	53.225
#1	.01476	.01026	.00658	.00177	.00054	.00054	-.00766
#2	.00487	.00685	-.00295	.00177	.00027	.00054	-.01313
#3	.02242	.01623	.00918	.00177	-.00000	.00108	-.02299
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01460	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01460	-.20000	-.00500	-.00500	-5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00201	.00107	.00566	-.00036	.01140	.03260	.00032
SDev	.00000	.00061	.00000	.00124	.00583	.01790	.00028
%RSD	.03706	57.731	.00526	347.47	51.111	54.918	86.616
#1	.00201	.00071	.00566	.00036	.01534	.04294	.00064
#2	.00201	.00071	.00566	.00036	.01416	.04293	.00016
#3	.00202	.00178	.00566	-.00179	.00471	.01193	.00016
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.05000	.02500	.10000	.01620	5.0000	.01500
Low	-.01000	-.05000	-.02500	-.10000	-.01620	-5.0000	-.01500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00112	.03340	-.00003	.03146	.00132	.00349
SDev	.00128	.03221	.00206	.01647	.00150	.00243
%RSD	114.56	96.437	7792.1	52.360	113.90	69.613
#1	.00224	.05678	-.00166	.05001	.00164	.00489
#2	.00140	-.00334	.00229	.01855	.00262	.00068
#3	-.00028	.04676	-.00071	.02581	-.00032	.00490
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.04000	5.0000	.01000	5.0000	.05000	.02000
Low	-.04000	-5.0000	-.01000	-5.0000	-.05000	-.02000

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Analysis Report Mon 02-22-93 09:28:10 AM page 1

Method: CLP01AP2 Sample Name: INTAA:ICSA Operator: JST
Run Time: 02/22/93 09:25:28
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	498.51	.01586	-.06552	-.01102	.00009	.00237	472.13
SDev	.82	.00747	.04609	.00032	.00015	.00163	.67
%RSD	.16491	47.106	70.345	2.8733	161.81	68.695	.14233
#1	498.74	.00761	-.09563	-.01084	.00027	.00095	471.64
#2	499.20	.01781	-.01246	-.01085	.00001	.00414	472.90
#3	497.60	.02216	-.08848	-.01139	.00000	.00202	471.85
Errors	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	LC Pass
High	600.00						600.00
Low	400.00						400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01890	-.00143	.00490	182.43	.06285	511.40	.01129
SDev	.00154	.00213	.00366	.17	.00827	.89	.00022
%RSD	8.1631	149.51	74.817	.09194	13.160	.17419	1.4045
#1	.01856	-.00143	.00633	182.32	.06309	511.[illegible]	.01160
#2	.02059	.00071	.00359	182.69	.07100	512.31	.01112
#3	.01756	-.00356	.00022	182.35	.05446	511.[illegible]	.01115
Errors	NOCHECK	NOCHECK	NOCHECK	LC Pass	NOCHECK	LC Pass	NOCHECK
High				240.00		400.00	
Low				160.00		400.00	

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn[illegible]
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00112	.06680	-.00428	.25571	.00358	.03[illegible]
SDev	.00420	.06257	.00430	.01921	.00151	.00269
%RSD	375.00	93.675	88.022	7.5116	42.081	7.7548
#1	-.00112	.01670	-.00328	.24845	.00227	.03440
#2	.00308	.13693	-.00161	.27749	.00523	.03222
#3	-.00533	.04676	-.00974	.24119	.00325	.03757
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High						
Low						

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Analysis Report Mon 02-22-93 09:31:00 AM page 1

Method: CLP01AP2 Sample Name: TNTARB:TCSAB Operator: JST
Run Time: 02/22/93 09:28:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	494.70	-.00506	-.05709	.44739	.46069	.89103	467.04
SDev	1.26	.01963	.01466	.00114	.00148	.00192	1.89
%RSD	.25494	387.59	25.685	.25560	.32113	.21577	.40413
#1	493.27	-.00672	-.04981	.44625	.45971	.88893	465.81
#2	495.65	.01534	-.04749	.44854	.46239	.89149	469.21
#3	495.19	-.02381	-.07397	.44737	.45997	.89269	466.09
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00			.60000	.60000	1.2000	600.00
Low	400.00			.40000	.40000	.80000	400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46686	.43847	.46675	181.15	.94719	508.77	.45769
SDev	.00291	.00222	.00052	.55	.02935	1.64	.00152
%RSD	.62413	.50602	.11222	.30129	3.09889	.32173	.33263
#1	.46853	.43669	.46704	180.78	.94904	507.49	.45660
#2	.46856	.44096	.46614	181.78	.97558	510.61	.45943
#3	.46350	.43776	.46706	180.90	.91696	508.20	.45704
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60000	.60000	.60000	240.00	1.2000	600.00	.60000
Low	.40000	.40000	.40000	160.00	.80000	400.00	.40000

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.86996	.20373	.96676	.24119	.46670	.96988
SDev	.00222	.06519	.00147	.02334	.00249	.00792
%RSD	.25571	31.999	.15187	9.6759	.53379	.81627
#1	.87080	.26718	.96782	.25813	.46702	.96083
#2	.87164	.13693	.96739	.25087	.46901	.97326
#3	.86743	.20707	.96509	.21457	.46406	.97554
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	LC Pass
High	1.2000		1.2000		.60000	1.2000
Low	.80000		.80000		.40000	.80000

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Analysis Report Mon 02-22-93 09:33:46 AM page 1

Method: CLP01AP2 Sample Name: 2XCRDL29301:CRT Operator: JST
Run Time: 02/22/93 09:31:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16385	.11891	.03876	-.00000	.00980	.01153	.05782
SDev	.03943	.01242	.00670	.00059	.00001	.00083	.04661
%RSD	24.063	10.448	17.296	11971.	.06139	7.1698	80.609
#1	.20771	.10695	.03159	.00058	.00980	.01081	.10932
#2	.15250	.13175	.04487	-.00000	.00980	.01244	.04560
#3	.13135	.11804	.03981	-.00059	.00979	.01136	.01854

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01909	.09949	.04721	.05819	.04081	.13289	.02931
SDev	.00174	.00163	.00066	.02299	.01119	.07756	.00096
%RSD	9.1336	1.6365	1.3937	39.505	27.422	58.366	3.2592
#1	.02009	.10091	.04759	.08385	.05179	.21717	.03026
#2	.02009	.09985	.04759	.05127	.04121	.11699	.02931
#3	.01707	.09771	.04645	.03946	.02942	.06451	.02835

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07876	.08349	.02012	.05243	.09851	.04129
SDev	.00222	.08099	.00246	.02309	.00409	.00106
%RSD	2.8246	96.995	12.198	44.028	4.1534	2.5583
#1	.08044	.15697	.02292	.05485	.10178	.04023
#2	.07960	.09685	.01912	.07421	.09982	.04234
#3	.07623	-.00334	.01833	.02823	.09392	.04131

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Analysis Report Mon 02-22-93 09:36:34 AM page 1

Method: CLP01AP2 Sample Name: HALFSTD:CCV Operator: JST
Run Time: 02/22/93 09:33:52
Comment: CCV#1
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.209	2.4695	2.4178	2.4214	.49620	2.4326	24.385
SDev	.027	.0169	.0123	.0041	.00138	.0117	.093
%RSD	.11127	.68484	.50936	.17099	.27879	.47895	.38073
#1	24.235	2.4809	2.4065	2.4254	.49503	2.4193	24.293
#2	24.181	2.4501	2.4310	2.4171	.49584	2.4377	24.385
#3	24.210	2.4775	2.4160	2.4218	.49773	2.4409	24.478
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	2.7500	2.7500	2.7500	.55000	2.7500	27.500
Low	22.500	2.2500	2.2500	2.2500	.45000	2.2500	22.500

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4074	2.4066	2.4434	9.8516	2.4065	24.441	2.4196
SDev	.0052	.0101	.0057	.0296	.0222	.094	.0099
%RSD	.21731	.42096	.23186	.30060	.92131	.38325	.40971
#1	2.4014	2.3966	2.4434	9.8187	2.3809	24.333	2.4107
#2	2.4105	2.4062	2.4378	9.8602	2.4187	24.495	2.4178
#3	2.4105	2.4169	2.4491	9.8760	2.4199	24.495	2.4303
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	2.7500	2.7500	11.000	2.7500	27.500	2.7500
Low	2.2500	2.2500	2.2500	9.0000	2.2500	22.500	2.2500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3974	24.421	.48425	24.400	2.4305	2.4311
SDev	.0090	.035	.00104	.042	.0055	.0103
%RSD	.37500	.14409	.21430	.17207	.22557	.42455
#1	2.3876	24.384	.48316	24.410	2.4246	2.4280
#2	2.3994	24.424	.48436	24.354	2.4315	2.4227
#3	2.4053	24.454	.48523	24.436	2.4354	2.4426
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	27.500	.55000	27.500	2.7500	2.7500
Low	2.2500	22.500	.45000	22.500	2.2500	2.2500

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Analysis Report Mon 02-22-93 09:39:22 AM page 1

Method: CLP01AP2 Sample Name: STDB:CCB Operator: IST
Run Time: 02/22/93 09:36:40
Comment: CCB#1
Mode: CONC Corr Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03829	.00285	-.00220	.00137	.00036	.00180	.06087
SDev	.01590	.01231	.01080	.00034	.00031	.00082	.00678
%RSD	41.519	431.99	490.20	24.752	86.717	45.880	11.142
#1	.04458	.00770	-.00137	.00177	.00054	.00108	.06560
#2	.05009	.01199	.00816	.00118	.00054	.00270	.06391
#3	.02021	-.01115	-.01340	.00118	-.00000	.00162	.05310
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01460	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01460	-.20000	-.00500	-.00500	-5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00134	.00071	.00831	.01706	.00351	.02703	.00064
SDev	.00058	.00213	.00173	.00399	.00614	.01588	.00048
%RSD	43.283	300.23	20.830	23.398	174.76	58.751	75.009
#1	.00201	.00071	.01020	.02005	.00705	.04532	.00111
#2	.00101	.00284	.00793	.01861	-.00358	.01908	.00064
#3	.00101	-.00142	.00680	.01253	.00707	.01670	.00016
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.05000	.02500	.10000	.01620	5.0000	.01500
Low	-.01000	-.05000	-.02500	-.10000	-.01620	-5.0000	-.01500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00056	-.06012	-.00139	.02339	.00164	.00524
SDev	.00295	.04628	.00235	.01210	.00170	.00159
%RSD	526.78	76.980	168.97	51.724	103.64	30.357
#1	.00224	-.03340	.00001	.02339	.00262	.00698
#2	-.00028	-.03340	-.00007	.03549	.00262	.00489
#3	-.00364	-.11355	-.00410	.01129	-.00032	.00385
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.04000	5.0000	.01000	5.0000	.05000	.02000
Low	-.04000	-5.0000	-.01000	-5.0000	-.05000	-.02000

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Analysis Report Mon 02-22-93 09:42:11 AM page 1

Method: CLP01AP2 Sample Name: PB:PBW Operator: JST
Run Time: 02/22/93 09:39:28
Comment:
Mode: CONC Corr Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02649	-.00374	-.00359	.00059	-.00009	.00144	-.05769
SDev	.00719	.01167	.00654	.00059	.00015	.00031	.00299
%RSD	27.151	312.20	182.00	100.15	172.30	21.650	5.0689
#1	.02680	.00680	-.00647	-.00000	-.00000	.00162	-.06047
#2	.01914	-.01628	-.00820	.00118	.00000	.00162	-.05461
#3	.03351	-.00173	.00389	.00059	-.00027	.00108	-.05805
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01460	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01460	-.20000	-.00500	-.00500	-5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00235	.00178	.00529	.01718	.00864	.02067	.00043
SDev	.00058	.00107	.00285	.00164	.01183	.01102	.00028
%RSD	24.715	60.009	53.888	9.5416	136.92	53.292	57.720
#1	.00202	.00284	.00227	.01575	-.00474	.01431	.00064
#2	.00202	.00071	.00567	.01897	H.01769	.01431	.00016
#3	.00302	.00178	.00793	.01682	.01296	.03339	.00064
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.05000	.02500	.10000	.01620	5.0000	.01500
Low	-.01000	-.05000	-.02500	-.10000	-.01620	-5.0000	-.01500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00028	.06680	-.00123	.05082	.00034	.00244
SDev	.00252	.05302	.00102	.01700	.00150	.00059
%RSD	900.00	79.373	82.675	33.447	445.88	24.301
#1	-.00280	.10687	-.00236	.05243	-.00130	.00176
#2	-.00028	.00668	-.00039	.03307	.00066	.00279
#3	.00224	.08683	-.00094	.06695	.00165	.00278
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.04000	5.0000	.01000	5.0000	.05000	.02000
Low	-.04000	-5.0000	-.01000	-5.0000	-.05000	-.02000

9613492.6387

Analysis Report Mon 02-22-93 09:50:29 AM page 1

Method: CLP01AP2 Sample Name: S302131-01;S Operator: JST
Run Time: 02/22/93 09:47:47
Comment: B07K04
Mode: CONC Conc. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02096	.01482	.00136	.00177	-.00009	.00018	-.04253
SDev	.00988	.01473	.01132	.00000	.00015	.00136	.00253
%RSD	47.129	99.374	834.58	.01676	172.29	765.25	5.9486
#1	.01580	-.00172	.00138	.00177	-.00000	.00162	-.03962
#2	.01473	.01969	.01267	.00177	-.00027	-.00108	-.04417
#3	.03235	.02651	-.00998	.00177	-.00000	-.00000	-.04380

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00067	.00107	.00567	.01874	.01297	.03181	.00159
SDev	.00058	.00061	.00113	.00177	.00473	.00600	.00000
%RSD	86.628	57.725	19.984	9.4234	36.458	18.871	.01554
#1	.00101	.00071	.00567	.02077	.01297	.03101	.00159
#2	-.00000	.00071	.00680	.01790	.01770	.03817	.00159
#3	.00101	.00178	.00453	.01754	.00824	.02624	.00159

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00084	-.01670	.00140	.06776	.00000	.00524
SDev	.00049	.02086	.00128	.00978	.00056	.00243
%RSD	57.735	124.90	91.723	14.434	17217.	46.302
#1	.00140	-.03340	.00253	.05727	-.00032	.00804
#2	.00056	.00668	.00166	.07663	.00065	.00384
#3	.00056	-.02338	.00000	.06937	-.00032	.00384

9613492.6388

Analysis Report Mon 02-22-93 09:53:16 AM page 1

Method: CLP01AP2 Sample Name: S302131-02:S Operator: JST
Run Time: 02/22/93 09:50:34
Comment: B07MLO
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01618	.01022	-.00876	.00079	-.00009	.00036	-.06191
SDev	.01649	.00748	.00656	.00034	.00015	.00174	.00049
%RSD	101.88	73.173	74.876	43.373	172.33	484.74	.78617
#1	.01142	.01880	-.01251	.00059	-.00027	-.00162	-.06247
#2	.03452	.00677	-.01258	.00059	-.00000	.00108	-.06165
#3	.00260	.00509	-.00119	.00118	.00000	.00162	-.06161

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00336	.00106	.00453	.01205	.01376	.02703	-.00016
SDev	.00116	.00061	.00113	.00207	.00532	.01377	.00028
%RSD	34.646	57.753	24.994	17.153	38.627	50.942	172.99
#1	.00202	.00071	.00340	.00966	.00825	.04293	-.00032
#2	.00403	.00177	.00453	.01324	.01886	.01908	.00016
#3	.00403	.00071	.00567	.01324	.01416	.01908	-.00032

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00112	.04676	.00161	.05566	.00001	.00175
SDev	.00168	.09558	.00131	.02030	.00113	.00001
%RSD	150.00	204.42	81.258	36.463	8669.6	.46182
#1	-.00112	-.00334	.00285	.04517	.00066	.00175
#2	-.00280	.15697	.00024	.07905	-.00129	.00175
#3	.00056	-.01336	.00174	.04275	.00067	.00174

9613492.6509

Analysis Report Mon 02-22-93 09:56:01 AM page 1

Method: CLP01AP2 Sample Name: S302131-02:S2 Operator: JST
Run Time: 02/22/93 09:53:21
Comment: B07MLOD
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01652	.00340	-.00268	-.00020	-.00009	.00017	-.07109
SDev	.01728	.00893	.01295	.00090	.00015	.00205	.00438
%RSD	104.57	262.65	482.73	456.91	170.92	1198.2	6.1621
#1	.03235	-.00259	.00999	-.00000	-.00027	.00161	-.06745
#2	.01914	.01366	-.00213	.00059	.00000	.00107	-.06987
#3	-.00191	-.00087	-.01591	-.00118	-.00000	-.00217	-.07596

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00034	.00107	.00077	.06359	.00077	.00080	.00032
SDev	.00210	.00123	.00131	.00219	.00680	.01314	.00028
%RSD	620.29	115.52	169.83	3.4400	883.45	1649.8	86.447
#1	.00101	.00178	.00228	.06550	.00469	.00954	.00064
#2	.00202	.00178	.00002	.06407	.00470	.00716	.00016
#3	-.00201	-.00036	.00001	.06121	-.00709	-.01431	.00016

Elem	Ni2316	K_7664	Ag3281	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00196	.06346	-.00106	.03307	-.00065	.00630
SDev	.00303	.10429	.00175	.01055	.00151	.00220
%RSD	154.52	164.34	165.10	31.894	231.48	34.884
#1	-.00112	.14695	-.00156	.04033	-.00032	.00700
#2	.00056	.09685	.00089	.03791	.00066	.00384
#3	-.00533	-.05344	-.00251	.02097	-.00229	.00807

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Analysis Report Mon 02-22-93 09:58:50 AM page 1

Method: CLP01AP2 Sample Name: S302131-02:DS Operator: JST
Run Time: 02/22/93 09:56:06
Comment: B07MI DS
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9811	.49787	2.0082	1.8715	.05130	.05183	-.04952
SDev	.0113	.01063	.0082	.0059	.00041	.00093	.00103
%RSD	.56850	2.1345	.40887	.31558	.80081	1.8039	2.0786
#1	1.9782	.50357	2.0018	1.8718	.05166	.05237	-.04833
#2	1.9936	.50443	2.0053	1.8654	.05085	.05237	-.05015
#3	1.9716	.48561	2.0175	1.8772	.05140	.05075	-.05008

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19680	.49105	.24378	1.0328	.49276	.00028	.48564
SDev	.00210	.00185	.00196	.0017	.01147	.00275	.00096
%RSD	1.0651	.37596	.80495	.16405	2.3284	984.92	.19685
#1	.19613	.49212	.24492	1.0334	.49551	-.00290	.48565
#2	.19512	.48892	.24152	1.0309	.48015	.00187	.48469
#3	.19915	.49212	.24492	1.0341	.50260	.00187	.48660

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49047	.07682	.04675	.08470	.48775	.49992
SDev	.00388	.01735	.00142	.01091	.00205	.00528
%RSD	.79179	22.592	3.0458	12.884	.42035	1.0701
#1	.48823	.09685	.04715	.08389	.48709	.49923
#2	.48823	.06680	.04517	.09599	.48611	.48803
#3	.49496	.06680	.04794	.07421	.49005	.49851

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Analysis Report Mon 02-22-93 10:01:36 AM page 1

Method: CLP01AP2 Sample Name: S302131-02:ISD/5 Operator: JST
Run Time: 02/22/93 09:58:55
Comment: 807MLOL
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00369	-.00114	-.00292	.00118	-.00018	-.00054	.10431
SDev	.02104	.00737	.01054	.00059	.00015	.00108	.00261
%RSD	570.36	644.52	361.37	50.005	86.373	199.90	2.5016
#1	-.02060	.00684	-.00802	.00118	-.00000	-.00162	.10149
#2	.01586	-.00768	-.00993	.00177	-.00027	-.00054	.10663
#3	.01580	-.00259	.00920	.00059	-.00027	.00054	.10483

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00067	-.00036	.00227	.00310	.00826	.00557	.00000
SDev	.00116	.00185	.00113	.00041	.01622	.00364	.00028
%RSD	173.26	519.46	49.986	13.337	196.32	65.480	573500.
#1	.00000	-.00249	.00113	.00286	-.00589	.00238	-.00032
#2	-.00000	.00071	.00340	.00358	.00471	.00954	.00016
#3	.00202	.00071	.00227	.00286	.02596	.00477	.00016

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00028	-.04676	.00105	.02259	.00033	.00490
SDev	.00128	.08521	.00207	.02424	.00113	.00278
%RSD	458.26	182.25	196.03	107.32	342.99	56.630
#1	-.00112	-.14361	.00079	.00403	-.00033	.00281
#2	.00140	-.01336	-.00087	.01371	.00164	.00805
#3	.00056	.01670	.00324	.05001	-.00032	.00385

9613492.6392

Analysis Report Mon 02-22-93 10:31:38 AM page 1

Method: CLP01AP2 Sample Name: CLCSPW:LCSW Operator: JST
Run Time: 02/22/93 10:28:55
Comment: LCS
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9309	.56850	.09003	1.8054	.04663	.04785	46.597
SDev	.0182	.02184	.01692	.0090	.00015	.00032	.135
%RSD	.94187	3.8420	18.796	.49886	.33197	1.7248	.28923
#1	1.9493	.58473	.10879	1.7976	.04654	.04857	46.442
#2	1.9129	.54367	.07591	1.8152	.04681	.04695	46.666
#3	1.9306	.57711	.08539	1.8035	.04655	.04803	46.684
Errors	LC Pass	LC Pass	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	.66000		2.2000	.05500	.05500	55.000
Low	1.6000	.54000		1.6000	.04500	.04500	45.000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09681	.46263	.23848	.96338	H.06232	47.277	.13856
SDev	.00210	.00123	.00285	.00177	.01161	.175	.00028
%RSD	2.1668	.26617	1.1955	.18333	18.634	.36992	.19936
#1	.09748	.46121	.23810	.96219	H.07530	47.076	.13824
#2	.09849	.46334	.24150	.96541	.05289	47.394	.13872
#3	.09446	.46334	.23583	.96255	H.05878	47.363	.13872
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass
High	.11000	.55000	.27500	1.1000	.05500	55.000	.16500
Low	.09000	.45000	.22500	.90000	.04500	45.000	.13500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.36939	47.124	.09041	47.265	.47392	.19485
SDev	.00340	.135	.00208	.200	.00097	.00606
%RSD	.91991	.28710	2.2978	.42376	.20581	3.1096
#1	.36631	46.988	.09004	47.075	.47294	.18786
#2	.36883	47.258	L.08854	47.474	.47393	.19835
#3	.37304	47.128	.09264	47.247	.47489	.19835
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.44000	55.000	.11000	55.000	.55000	.22000
Low	.36000	45.000	.09000	45.000	.45000	.18000

~~06~~
3/3/93 SRP
061

9613492.6393

Analysis Report Mon 02-22-93 10:37:54 AM page 1

Method: CLP01AP2 Sample Name: HALFSTD;CCV Operator: JST
Run Time: 02/22/93 10:35:10
Comment: CCV#2
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.352	2.4974	2.4592	2.4042	.49665	2.4290	24.625
SDev	.184	.0103	.0344	.0184	.00398	.0142	.211
%RSD	.75400	.41251	1.3992	.76472	.80166	.58438	.85828
#1	24.198	2.4963	2.4440	2.3871	.49449	2.4231	24.525
#2	24.304	2.4877	2.4349	2.4018	.49422	2.4188	24.482
#3	24.555	2.5082	2.4986	2.4236	.50125	2.4452	24.867
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	2.7500	2.7500	2.7500	.55000	2.7500	27.500
Low	22.500	2.2500	2.2500	2.2500	.45000	2.2500	22.500

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4232	2.4424	2.4374	9.8639	2.4591	24.515	2.4373
SDev	.0203	.0262	.0172	.0801	.0225	.209	.0221
%RSD	.83959	1.0725	.70608	.81203	.91611	.85055	.90740
#1	2.4115	2.4318	2.4219	9.8076	2.4659	24.409	2.4231
#2	2.4115	2.4233	2.4344	9.8284	2.4340	24.381	2.4260
#3	2.4467	2.4723	2.4559	9.9556	2.4775	24.755	2.4628
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	2.7500	2.7500	11.000	2.7500	27.500	2.7500
Low	2.2500	2.2500	2.2500	9.0000	2.2500	22.500	2.2500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4148	24.444	.48850	24.292	2.4352	2.4658
SDev	.0225	.151	.00453	.184	.0216	.0236
%RSD	.93191	.61893	.92833	.75878	.88811	.95857
#1	2.4086	24.424	.48979	24.129	2.4237	2.4501
#2	2.3960	24.304	.48348	24.255	2.4217	2.4543
#3	2.4397	24.604	.49228	24.492	2.4601	2.4929
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	27.500	.55000	27.500	2.7500	2.7500
Low	2.2500	22.500	.45000	22.500	2.2500	2.2500

3/3/93 SRP
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Analysis Report Mon 02-22-93 10:40:41 AM page 1

Method: CLP01AP2 Sample Name: STDB:CCB Operator: JST
Run Time: 02/22/93 10:38:00
Comment: CCB#2
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01806	.00198	-.00762	.00157	.00018	.00216	-.01177
SDev	.01356	.00907	.00915	.00034	.00016	.00054	.00389
%RSD	75.089	457.76	120.14	21.642	86.136	25.009	33.065
#1	.00814	.00340	L-.01598	.00118	.00027	.00162	-.00787
#2	.01252	-.00772	-.00904	.00177	.00000	.00270	-.01565
#3	.03351	.01026	.00216	.00177	.00027	.00216	-.01177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01460	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01460	-.20000	-.00500	-.00500	-5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00235	.00071	.00491	.00346	.00038	.02465	.00096
SDev	.00058	.00000	.00131	.00115	.00954	.00838	.00028
%RSD	24.745	.02867	26.640	33.250	2501.5	33.984	28.898
#1	.00302	.00071	.00566	.00430	-.01063	.03340	.00112
#2	.00201	.00071	.00340	.00394	.00589	.02386	.00111
#3	.00201	.00071	.00566	.00215	.00588	.01670	.00064
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.05000	.02500	.10000	.01620	5.0000	.01500
Low	-.01000	-.05000	-.02500	-.10000	-.01620	-5.0000	-.01500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00084	.06012	-.00010	.01936	.00132	.00419
SDev	.00049	.03061	.00147	.01611	.00057	.00121
%RSD	57.735	50.918	1403.4	83.229	43.084	28.949
#1	.00056	.02672	.00142	.00161	.00165	.00489
#2	.00140	.08683	-.00150	.03307	.00066	.00279
#3	.00056	.06680	-.00024	.02339	.00164	.00489
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.04000	5.0000	.01000	5.0000	.05000	.02000
Low	-.04000	-5.0000	-.01000	-5.0000	-.05000	-.02000

Analysis Report Mon 02-22-93 10:43:28 AM page 1

Method: CLP01AP2 Sample Name: INTAA;ICSA Operator: JST
Run Time: 02/22/93 10:40:47
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	494.39	-.01549	-.07196	-.01070	.00018	.00257	465.20
SDev	1.27	.01185	.01559	.00056	.00015	.00163	2.76
%RSD	.25777	76.488	21.670	5.1933	85.094	63.239	.59248
#1	493.71	-.00541	-.08937	-.01068	.00000	.00084	462.96
#2	493.60	-.02854	-.06722	-.01127	.00027	.00406	464.36
#3	495.86	-.01252	-.05928	-.01016	.00027	.00282	468.28
Errors	I C Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	I C Pass
High	600.00						600.00
Low	400.00						400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01849	-.00000	.00273	179.71	.05541	504.59	.01086
SDev	.00102	.00268	.00082	.70	.02426	2.39	.00026
%RSD	5.5385	53921	30.089	.39125	43.790	.47357	2.3699
#1	.01847	-.00249	.00224	179.24	.03744	502.99	.01071
#2	.01747	-.00036	.00227	179.37	.04578	503.44	.01072
#3	.01952	.00284	.00368	180.52	.08301	507.33	.01116
Errors	NOCHECK	NOCHECK	NOCHECK	I C Pass	NOCHECK	I C Pass	NOCHECK
High				240.00		600.00	
Low				160.00		400.00	

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00196	.07014	-.00554	.24038	.00219	.03490
SDev	.00222	.09731	.00334	.03459	.00198	.00376
%RSD	113.39	138.75	60.359	14.390	90.468	10.759
#1	-.00112	-.01336	-.00627	.20247	.00218	.03078
#2	-.00448	.04676	-.00845	.24845	.00022	.03813
#3	-.00028	.17701	-.00189	.27023	.00418	.03579
Errors	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High						
Low						

9613492.6396

Analysis Report Mon 02-22-93 10:46:17 AM page 1

Method: CLP01AP2 Sample Name: TNTABB:ICSAB Operator: JSI
Run Time: 02/22/93 10:43:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	492.33	.01179	-.07747	.44019	.45469	.87829	464.31
SDev	2.80	.01639	.05392	.00316	.00432	.00833	4.26
%RSD	.56838	139.02	69.605	.71861	.94999	.94820	.91844
#1	494.98	.00615	-.01751	.44325	.45783	.88193	467.38
#2	489.40	-.00104	-.12198	.43693	.44977	.86876	459.44
#3	492.61	.03025	-.09292	.44037	.45648	.88417	466.10
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	600.00			.60000	.60000	1.2000	600.00
Low	400.00			.40000	.40000	.80000	400.00

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.46514	.43918	.46373	179.60	.96201	503.99	.45677
SDev	.00619	.00246	.00600	1.27	.02450	4.02	.00303
%RSD	1.3307	.56054	1.2945	.70747	2.5463	.79760	.66365
#1	.47054	.44202	.46926	180.63	.98088	507.26	.45895
#2	.45839	.43776	.45735	178.18	.93430	499.50	.45331
#3	.46650	.43776	.46458	179.99	.97082	505.20	.45804
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60000	.60000	.60000	240.00	1.2000	600.00	.60000
Low	.40000	.40000	.40000	160.00	.80000	400.00	.40000

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.86575	.18703	.97157	.23070	.46076	.98246
SDev	.01256	.03006	.00597	.02784	.00702	.00986
%RSD	1.4503	16.071	.61435	12.067	1.5239	1.0034
#1	.87500	.18703	.97796	.23151	.46703	.98397
#2	.85146	.15697	.96614	.20247	.45317	.97194
#3	.87080	.21709	.97060	.25813	.46209	.99148
Errors	LC Pass	NOCHECK	LC Pass	NOCHECK	LC Pass	LC Pass
High	1.2000		1.2000		.60000	1.2000
Low	.80000		.80000		.40000	.80000

9613492.6397

Analysis Report Mon 02-22-93 10:49:03 AM page 1

Method: CLP01AP2 Sample Name: 2XCRDL29301;CRT Operator: JST
Run Time: 02/22/93 10:46:23
Comment:
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16748	.13172	.02833	.00019	.00979	.01099	.16139
SDev	.07118	.00451	.01107	.00034	.00000	.00136	.05418
%RSD	42.503	3.4265	39.064	176.64	.00014	12.341	33.570
#1	.24947	.13683	.04102	.00058	.00979	.01243	.22397
#2	.12152	.13004	.02331	-.00000	.00979	.00973	.13842
#3	.13145	.12829	.02066	-.00000	.00979	.01082	.12948

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01976	.09842	.04759	.06452	.03490	.16230	.02915
SDev	.00233	.00123	.00114	.02834	.00490	.06238	.00028
%RSD	11.776	1.2504	2.3913	43.934	14.031	38.435	.94424
#1	.02110	.09985	.04873	.09673	.03642	.23386	.02931
#2	.01707	.09771	.04645	.05342	.02943	.13368	.02883
#3	.02110	.09771	.04758	.04340	.03887	.11937	.02931

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07820	.00334	.02007	.03307	.09688	.04234
SDev	.00243	.10036	.00199	.01511	.00001	.00104
%RSD	3.1040	3005.0	9.9212	45.695	.00944	2.4486
#1	.07960	.11689	.02237	.03791	.09688	.04338
#2	.07539	-.07348	.01896	.01613	.09686	.04131
#3	.07960	-.03340	.01888	.04517	.09688	.04234

9613492.6398

Analysis Report Mon 02-22-93 10:51:51 AM page 1

Method: CLP01AP2 Sample Name: HALFSTD:CCV Operator: JST
Run Time: 02/22/93 10:49:09
Comment: CCV#3
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.128	2.4478	2.4213	2.3937	.49063	2.4287	24.289
SDev	.057	.0262	.0136	.0077	.00032	.0091	.081
%RSD	.23608	1.0701	.56108	.32139	.06431	.37305	.33195
#1	24.088	2.4185	2.4343	2.3912	.49044	2.4182	24.199
#2	24.102	2.4560	2.4072	2.3877	.49045	2.4334	24.316
#3	24.193	2.4689	2.4225	2.4024	.49099	2.4344	24.353
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	27.500	2.7500	2.7500	2.7500	.55000	2.7500	27.500
Low	22.500	2.2500	2.2500	2.2500	.45000	2.2500	22.500

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3967	2.4137	2.4302	9.7772	2.4164	24.315	2.4191
SDev	.0084	.0083	.0116	.0165	.0215	.091	.0073
%RSD	.34986	.34486	.47615	.16851	.89031	.37292	.30365
#1	2.3873	2.4041	2.4253	9.7582	2.3917	24.211	2.4107
#2	2.3994	2.4179	2.4219	9.7858	2.4271	24.352	2.4276
#3	2.4034	2.4190	2.4434	9.7876	2.4305	24.381	2.4241
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	2.7500	2.7500	11.000	2.7500	27.500	2.7500
Low	2.2500	2.2500	2.2500	9.0000	2.2500	22.500	2.2500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3896	24.123	.48460	24.255	2.4092	2.4403
SDev	.0068	.131	.00201	.085	.0056	.0078
%RSD	.28441	.54471	.41506	.35152	.23291	.32158
#1	2.3817	24.003	.48228	24.204	2.4030	2.4323
#2	2.3935	24.103	.48584	24.209	2.4109	2.4407
#3	2.3935	24.264	.48568	24.354	2.4138	2.4480
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.7500	27.500	.55000	27.500	2.7500	2.7500
Low	2.2500	22.500	.45000	22.500	2.2500	2.2500

9613492.6399

Analysis Report Mon 02-22-93 10:54:39 AM page 1

Method: CLP01AP2 Sample Name: STDB;CCB Operator: JST
Run Time: 02/22/93 10:51:57
Comment: CCB#3
Mode: CONC Corr. Factor: 1

Elem	Al3082	Sb2068	As1936	Ba4934	Be3130	Cd2265	Ca3179
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03164	.00113	.00565	.00118	.00018	.00216	-.00938
SDev	.01404	.01037	.00685	.00059	.00031	.00143	.00265
%RSD	44.364	920.68	121.24	50.040	171.58	66.199	28.241
#1	.02352	-.00687	-.00213	.00177	.00054	.00270	-.00816
#2	.04785	.01284	.01079	.00118	.00000	.00324	-.00757
#3	.02355	-.00259	.00829	.00059	.00000	.00054	-.01242
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20000	.06000	.01460	.20000	.00500	.00500	5.0000
Low	-.20000	-.06000	-.01460	-.20000	-.00500	-.00500	-5.0000

Elem	Cr2677	Co2286	Cu3247	Fe2599	Pb2203	Mg2790	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00168	.00142	.00453	.01420	-.00238	.02386	.00111
SDev	.00058	.00163	.00227	.00325	.00624	.01863	.00000
%RSD	34.673	114.61	49.975	22.870	261.59	78.083	.03393
#1	.00202	.00178	.00680	.01790	-.00210	.03578	.00111
#2	.00101	.00284	.00227	.01289	.00469	.03340	.00111
#3	.00201	-.00036	.00453	.01182	-.00474	.00239	.00111
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.01000	.05000	.02500	.10000	.01620	5.0000	.01500
Low	-.01000	-.05000	-.02500	-.10000	-.01620	-5.0000	-.01500

Elem	Ni2316	K_7664	Ag3280	Na5889	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00084	.05344	-.00118	.02904	.00066	.00349
SDev	.00097	.07652	.00052	.01956	.00098	.00160
%RSD	115.47	143.21	43.925	67.358	148.14	45.859
#1	.00140	-.01336	-.00063	.01129	-.00032	.00488
#2	.00140	.13693	-.00165	.05001	.00164	.00384
#3	-.00028	.03674	-.00126	.02581	.00066	.00174
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.04000	5.0000	.01000	5.0000	.05000	.02000
Low	-.04000	-5.0000	-.01000	-5.0000	-.05000	-.02000

9613492.6400

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F7 Method: A

Start date: 02/24/93 End date: 02/24/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				ALB	SB	ASA	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1115																										X
S2000	1.00	1115																										X
S5000	1.00	1115																										X
S10000	1.00	1116																										X
ICV	1.00	1116																										X
ICB	1.00	1116																										X
CRA	1.00	1117																										X
CCV	1.00	1117																										X
CCB	1.00	1117																										X
ZZZZZZ	1.00	1118																										
ZZZZZZ	1.00	1118																										
ZZZZZZ	1.00	1118																										
ZZZZZZ	1.00	1119																										
ZZZZZZ	1.00	1119																										
CCV	1.00	1119																										X
CCB	1.00	1120																										X
ZZZZZZ	1.00	1120																										
ZZZZZZ	1.00	1120																										
ZZZZZZ	1.00	1121																										
ZZZZZZ	1.00	1121																										
ZZZZZZ	1.00	1121																										
CCV	1.00	1122																										X
CCB	1.00	1122																										X
ZZZZZZ	1.00	1122																										
ZZZZZZ	1.00	1123																										
ZZZZZZ	1.00	1123																										
ZZZZZZ	1.00	1123																										
ZZZZZZ	1.00	1124																										
CCV	1.00	1124																										X
CCB	1.00	1124																										X
ZZZZZZ	1.00	1125																										
ZZZZZZ	1.00	1125																										

9613492.6401

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F7 Method: A

Start date: 02/24/93 End date: 02/24/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				ALB	SBS	ABA	BEE	CDA	CAR	CRO	CUE	FEB	PBG	MGN	MGI	HEG	NIA	KAL	SEN	AGN	NCN	TIB	VIA	ZIN	CIN	BIA
ZZZZZZ	1.00	1125																								
ZZZZZZ	1.00	1126																								
ZZZZZZ	1.00	1126																								
CCV	1.00	1126																								X
CCB	1.00	1127																								X
PBW	1.00	1127																								X
LCSW	1.00	1127																								X
B07K04	1.00	1128																								X
B07ML0	1.00	1128																								X
B07ML0D	1.00	1128																								X
B07ML0S	1.00	1129																								X
CCV	1.00	1129																								X
CCB	1.00	1129																								X

9613492.6402

C L P M E T A L S 3.03a

S302131--BISMUTH

Run id: F7 9305505
PERKIN-ELMER 3030B
Analytical method: A
Element: Bi

Acquired: 02/24/93 by SRP
Crunched: 03/02/93 by SRP
Time: 1249
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	A			S0	02/24/93	11:15
2	2000 PPB	WS1	A			S2000	02/24/93	11:15
3	5000 PPB	WS2	A			S5000	02/24/93	11:15
4	10000 PPB	WS3	A			S10000	02/24/93	11:16
5	ICVBI	ICV	A			ICV	02/24/93	11:16
6	CAL BLK	ICB	A			ICB	02/24/93	11:16
7	CRA	CRA0	A			CRA	02/24/93	11:17
8	5000 PPB	CCV	A			CCV	02/24/93	11:17
9	CAL BLK	CCB	A			CCB	02/24/93	11:17
10	X	X	A			ZZZZZZ	02/24/93	11:18
11	X	X	A			ZZZZZZ	02/24/93	11:18
12	X	X	A			ZZZZZZ	02/24/93	11:18
13	X	X	A			ZZZZZZ	02/24/93	11:19
14	X	X	A			ZZZZZZ	02/24/93	11:19
15	5000 PPB	CCV	A			CCV	02/24/93	11:19
16	CAL BLK	CCB	A			CCB	02/24/93	11:20
17	X	X	A			ZZZZZZ	02/24/93	11:20
18	X	X	A			ZZZZZZ	02/24/93	11:20
19	X	X	A			ZZZZZZ	02/24/93	11:21
20	X	X	A			ZZZZZZ	02/24/93	11:21
21	X	X	A			ZZZZZZ	02/24/93	11:21
22	5000 PPB	CCV	A			CCV	02/24/93	11:22
23	CAL BLK	CCB	A			CCB	02/24/93	11:22
24	X	X	A			ZZZZZZ	02/24/93	11:22
25	X	X	A			ZZZZZZ	02/24/93	11:23
26	X	X	A			ZZZZZZ	02/24/93	11:23
27	X	X	A			ZZZZZZ	02/24/93	11:23
28	X	X	A			ZZZZZZ	02/24/93	11:24
29	5000 PPB	CCV	A			CCV	02/24/93	11:24
30	CAL BLK	CCB	A			CCB	02/24/93	11:24
31	X	X	A			ZZZZZZ	02/24/93	11:25
32	X	X	A			ZZZZZZ	02/24/93	11:25
33	X	X	A			ZZZZZZ	02/24/93	11:25
34	X	X	A			ZZZZZZ	02/24/93	11:26
35	X	X	A			ZZZZZZ	02/24/93	11:26
36	5000 PPB	CCV	A			CCV	02/24/93	11:26
37	CAL BLK	CCB	A			CCB	02/24/93	11:27
38	PB	PBW	A	1408	02/18/93	PBW	02/24/93	11:27
39	CLCSPW	LCSW	A	1408	02/18/93	LCSW	02/24/93	11:27
40	S302131-01	S	A	1408	02/18/93	B07K04	02/24/93	11:28
41	S302131-02	S	A	1408	02/18/93	B07ML0	02/24/93	11:28
42	S302131-02	S2	A	1408	02/18/93	B07ML0D	02/24/93	11:28
43	S302131-02	DS	A	1408	02/18/93	B07ML0S	02/24/93	11:29

9613492.6403

S302131--BISMUTH

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
44	5000 PPB	CCV	A			CCV	02/24/93	11:29
45	CAL BLK	CCB	A			CCB	02/24/93	11:29

9613492.6404

FLAME ATOMIC ABSORPTION RUN BENCH SHEET
Skinner and Sherman Laboratories, Inc.

AA Sequence #: 298 Instrument ID: F7 Page 1 of 2
Date: 2/24/93 Operator: SRP Reviewed by:

Instrument Method: 29
Background: BS BD
Time Calibrated: 11:15
ACQ
Run ID: 9305501, 02, 03, 04, 05, 06, 07, 08
Element: Bi
STD1: 0 ppm STD2: 2 ppm
STD3: 5 ppm STD4: 10 ppm

Standard Source:
1. Calibration: HPBi-1 1000 ppm
2. ICV: 5 ppm
3. CCV: 5 ppm
Wavelength (nm): 223
Slitwidth (nm): .2
Integration Time (sec):

S302131

	SAMPLE ID	DILUTION	COMMENTS
1	ICV		
2	ICB		
3	CRA		
4	CCV		
5	CCB		
6	PBW		
7	LCSW		
8	S302077-01		
9	01D		
10	01S		
11	CCV		
12	CCB		
13	PBW		
14	LCSW		
15	S302079-01		
16	01D		
17	01S		
18	CCV		
19	CCB		
20	PBW		
21	LCSW		
22	S302092-01		
23	01D		
24	01S		
25	CCV		
26	CCB		
27	PBW		
28	LCSW		
29	S302093-01		
30	01D		
31	01S		
32	CCV		
33	CCB		
34	S302131 PBW		
35	LCSW		
36	01		
37	02		
38	02D		

9613492.6405

FLAME ATOMIC ABSORPTION RUN BENCH SHEET
Skinner and Sherman Laboratories, Inc.

39	02S		
40	CCV		
41	CCB		
42	PBW		
43	LCSW	End of	
44	S302135-01		
45	01D		
46	01S	run	
47	CCV		
48	CCB		
49	PBW		
50	LCSW		
51	S302137-01		
52	01D		
53	01S		
54	CCV		
55	CCB		
56	PBW		
57	LCSW		
58	S302145-01		
59	01D		
60	01S		
61	CCV		
62	CCB		
63			
64			
65			
66			
67			
68			
69			
70			
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87			
88			
89			

9613492.6406

B I

	AA	AA-BG	BG
ABSORBANCE	0.002	0.002	0.000

0.24

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	0.000

0.12

	AA	AA-BG	BG
ABSORBANCE	0.000	0.000	0.000

-0.05 9/15

MEAN= 0.10 STD.DEV.= 0.15 COEF.VAR.= 99.99 %

****

0.00 ppm AUTOZERO

****

B I

	AA	AA-BG	BG
ABSORBANCE	0.015	0.014	0.000

0.014

	AA	AA-BG	BG
ABSORBANCE	0.014	0.013	0.000

0.013

	AA	AA-BG	BG
ABSORBANCE	0.016	0.016	0.000

0.016

MEAN= 0.014 STD.DEV.= 0.001 COEF.VAR.= 9.55 %

****

2.00 ppm STANDARD 1

****

B I

	AA	AA-BG	BG
ABSORBANCE	0.034	0.033	0.001

4.63

	AA	AA-BG	BG
ABSORBANCE	0.035	0.034	0.000

074

4.77

	AA	AA-BG	BG
ABSORBANCE	0.035	0.033	0.002

9613492.6407

(CONTINUED)

4.61

MEAN= 4.67 STD.DEV.= 0.09 COEF.VAR.= 1.86 %

5.00 ppm STANDARD 2

BI

	AA	AA-BG	BG
ABSORBANCE	0.071	0.071	0.000

12.23

	AA	AA-BG	BG
ABSORBANCE	0.072	0.070	0.002

12.05

	AA	AA-BG	BG
ABSORBANCE	0.072	0.071	0.001

12.29 11:16

MEAN= 12.19 STD.DEV.= 0.15 COEF.VAR.= 1.20 %

10.02 ppm STANDARD 3

BI 0001

	AA	AA-BG	BG
ABSORBANCE	0.036	0.036	0.000

5.24

	AA	AA-BG	BG
ABSORBANCE	0.036	0.034	0.002

4.93

	AA	AA-BG	BG
ABSORBANCE	0.034	0.033	0.001

4.85 ICV BI #1

MEAN= 5.01 STD.DEV.= 0.20 COEF.VAR.= 3.92 %

BI 0002

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.002	0.001

-0.33

075

	AA	AA-BG	BG
ABSORBANCE	0.001	0.001	0.000

9613492.6408

0002 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.000	-0.002	0.001

-0.23 ICB #1

MEAN= -0.15 STD.DEV.= 0.24 COEF.VAR.= 99.99 %

****

BI 0003

	AA	AA-BG	BG
ABSORBANCE	0.015	0.015	0.000

2.23

	AA	AA-BG	BG
ABSORBANCE	0.014	0.014	0.000

2.06

	AA	AA-BG	BG
ABSORBANCE	0.014	0.013	0.000

1.95 CRA 11:17

MEAN= 2.08 STD.DEV.= 0.14 COEF.VAR.= 6.80 %

****

BI 0004

	AA	AA-BG	BG
ABSORBANCE	0.037	0.037	0.000

5.36

	AA	AA-BG	BG
ABSORBANCE	0.034	0.034	0.000

5.00

	AA	AA-BG	BG
ABSORBANCE	0.040	0.040	0.000

5.80 CCV #1

MEAN= 5.39 STD.DEV.= 0.39 COEF.VAR.= 7.20 %

****

BI 0005

	AA	AA-BG	BG
ABSORBANCE	0.000	0.000	0.000

0.06

076

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.002	0.001

9613492.6409

0005 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.001	0.001	0.000

0.14 CCB #1

MEAN= -0.02 STD.DEV.= 0.21 COEF.VAR.= 99.99 %

****

BI 0006

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.001	-0.001

-0.10

	AA	AA-BG	BG
ABSORBANCE	0.001	0.000	0.001

-0.05

	AA	AA-BG	BG
ABSORBANCE	0.000	0.000	0.000

S302077 PBW

-0.07 ~~S302077-01~~ 2/24/93 SRP 11:18

MEAN= -0.08 STD.DEV.= 0.02 COEF.VAR.= 30.89 %

****

BI 0007

	AA	AA-BG	BG
ABSORBANCE	0.018	0.017	0.000

2.57

	AA	AA-BG	BG
ABSORBANCE	0.016	0.016	0.000

2.41

	AA	AA-BG	BG
ABSORBANCE	0.018	0.017	0.001

CLCSPW

2.52 ~~CCID~~ 2/24/93 SRP

MEAN= 2.50 STD.DEV.= 0.08 COEF.VAR.= 3.39 %

****

BI 0008

	AA	AA-BG	BG
ABSORBANCE	0.002	0.001	0.001

077

0.17

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

9613492.6410

0008 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.04 S302077-01 B082W8

MEAN= 0.11 STD.DEV.= 0.07 COEF.VAR.= 64.78 %

****

EI 0009

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.03

	AA	AA-BG	BG
ABSORBANCE	-0.003	-0.002	0.000

-0.31

	AA	AA-BG	BG
ABSORBANCE	0.000	0.002	-0.002

0.29 -010 B082W8D 11:19

MEAN= 0.00 STD.DEV.= 0.30 COEF.VAR.= 99.99 %

****

EI 0010

	AA	AA-BG	BG
ABSORBANCE	0.037	0.036	0.001

5.25

	AA	AA-BG	BG
ABSORBANCE	0.037	0.036	0.001

5.19

	AA	AA-BG	BG
ABSORBANCE	0.038	0.038	0.000

5.49 -015 B082W8S

MEAN= 5.31 STD.DEV.= 0.15 COEF.VAR.= 2.90 %

****

EI 0011

	AA	AA-BG	BG
ABSORBANCE	0.035	0.037	-0.002

078

5.34

	AA	AA-BG	BG
ABSORBANCE	0.036	0.035	0.000

9613492.6411

0011 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.037	0.037	0.001

5.32 CCV #2

MEAN= 5.27 STD.DEV.= 0.09 COEF.VAR.= 1.77 %

****

BI 0012

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

0.10

	AA	AA-BG	BG
ABSORBANCE	0.001	0.002	-0.001

0.36

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.07 CCB #2 11:20

MEAN= 0.18 STD.DEV.= 0.16 COEF.VAR.= 88.70 %

****

BI 0013

	AA	AA-BG	BG
ABSORBANCE	0.002	0.002	0.000

0.32

	AA	AA-BG	BG
ABSORBANCE	0.001	0.003	-0.002

0.42

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

0.18 S302079 PBW

MEAN= 0.31 STD.DEV.= 0.12 COEF.VAR.= 40.21 %

****

BI 0014

	AA	AA-BG	BG
ABSORBANCE	0.018	0.019	-0.001

079

2.77

	AA	AA-BG	BG
ABSORBANCE	0.018	0.018	0.000

9613492.6412

0014 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.018	0.019	-0.001

2/24/93 SRP

2.74 ~~5302079-01~~ CLCSPW

MEAN= 2.74 STD.DEV.= 0.03 COEF.VAR.= 1.14 %

****

BI 0015

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.06

	AA	AA-BG	BG
ABSORBANCE	0.000	0.002	-0.002

0.24

	AA	AA-BG	BG
ABSORBANCE	0.000	-0.001	0.000

5302079-01 B092X0

-0.08 ~~01D~~ 11:21

MEAN= 0.08 STD.DEV.= 0.16 COEF.VAR.= 99.99 %

****

BI 0016

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.001	0.000

-0.17

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.00

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	0.000

0.11 01D B092X0D

MEAN= -0.02 STD.DEV.= 0.14 COEF.VAR.= 99.99 %

****

BI 0017

	AA	AA-BG	BG
ABSORBANCE	0.037	0.037	0.000

030

5.44

	AA	AA-BG	BG
ABSORBANCE	0.036	0.037	0.000

9613492.6413

0017 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.036	0.036	0.000

5.20 BIS B082X05

MEAN= 5.32 STD.DEV.= 0.12 COEF.VAR.= 2.19 %

****

BI 0018

	AA	AA-BG	BG
ABSORBANCE	0.035	0.035	0.000

5.08

	AA	AA-BG	BG
ABSORBANCE	0.033	0.033	0.000

4.85

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	-0.001

5.05 CCV # 3 11:22

MEAN= 4.99 STD.DEV.= 0.12 COEF.VAR.= 2.43 %

****

BI 0019

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.001	-0.001

0.09

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

-0.05

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.000	-0.002

0.07 CCB#3

MEAN= 0.04 STD.DEV.= 0.08 COEF.VAR.= 99.99 %

****

BI 0020

	AA	AA-BG	BG
ABSORBANCE	0.000	-0.002	0.002

081

-0.24

	AA	AA-BG	BG
ABSORBANCE	0.001	0.002	-0.001

9613492.6414

0020 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

0.21 5302092 PBW

MEAN= 0.10 STD.DEV.= 0.30 COEF.VAR.= 99.99 %

****

BI 0021

	AA	AA-BG	BG
ABSORBANCE	0.016	0.018	-0.001

2.59

	AA	AA-BG	BG
ABSORBANCE	0.020	0.020	0.000

2.99

	AA	AA-BG	BG
ABSORBANCE	0.018	0.020	-0.001

2.92 CLCSPW 11:23

MEAN= 2.83 STD.DEV.= 0.21 COEF.VAR.= 7.37 %

****

BI 0022

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.002

0.21

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	0.000

0.08

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

0.14 5302092-01 B082X2

MEAN= 0.14 STD.DEV.= 0.06 COEF.VAR.= 44.93 %

****

BI 0023

	AA	AA-BG	BG
ABSORBANCE	0.000	0.000	0.000

-0.01 082

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

9613492.6415

0023 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.000	0.000	0.000

-0.05 -01D B082X2D

MEAN= 0.01 STD.DEV.= 0.07 COEF.VAR.= 99.99 %

****

BI 0024

	AA	AA-BG	BG
ABSORBANCE	0.034	0.037	-0.003

5.41

	AA	AA-BG	BG
ABSORBANCE	0.036	0.036	0.000

5.23

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	-0.002

5.15 -01S B082X2S 11:24

MEAN= 5.26 STD.DEV.= 0.13 COEF.VAR.= 2.47 %

****

BI 0025

	AA	AA-BG	BG
ABSORBANCE	0.035	0.035	-0.001

5.12

	AA	AA-BG	BG
ABSORBANCE	0.035	0.035	0.000

5.03

	AA	AA-BG	BG
ABSORBANCE	0.034	0.034	0.000

4.89 CCV #4

MEAN= 5.01 STD.DEV.= 0.11 COEF.VAR.= 2.27 %

****

BI 0026

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.002	-0.003

083

0.23

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.000	-0.002

9613492.6416

0026 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	-0.003	0.000	-0.003

-0.03 CCB#4

MEAN= 0.06 STD.DEV.= 0.15 COEF.VAR.= 99.99 %

****

BI 0027

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

0.16

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.002	-0.001

-0.24

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.001	0.000

-0.17 S902093 PBW 11:25

MEAN= -0.08 STD.DEV.= 0.21 COEF.VAR.= 99.99 %

****

BI 0028

	AA	AA-BG	BG
ABSORBANCE	0.016	0.016	0.000

2.42

	AA	AA-BG	BG
ABSORBANCE	0.016	0.019	-0.002

2.75

	AA	AA-BG	BG
ABSORBANCE	0.017	0.019	-0.002

2.83 CLCSPW

MEAN= 2.67 STD.DEV.= 0.21 COEF.VAR.= 8.03 %

****

BI 0029

	AA	AA-BG	BG
ABSORBANCE	0.000	0.001	-0.001

084

0.15

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

9613492.6417

0029 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.001	-0.003

0.20 S302093 -01 B082X4

MEAN= 0.12 STD.DEV.= 0.10 COEF.VAR.= 77.03 %

****

BI 0030

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.001	-0.002

0.09

	AA	AA-BG	BG
ABSORBANCE	-0.003	0.000	-0.003

-0.03

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.001	-0.002

0.13 -01D B082X4D 11:26

MEAN= 0.06 STD.DEV.= 0.08 COEF.VAR.= 99.99 %

****

BI 0031

	AA	AA-BG	BG
ABSORBANCE	0.036	0.036	0.000

5.31

	AA	AA-BG	BG
ABSORBANCE	0.033	0.035	-0.002

5.10

	AA	AA-BG	BG
ABSORBANCE	0.035	0.035	0.000

5.08 -01S B082X4S

MEAN= 5.16 STD.DEV.= 0.12 COEF.VAR.= 2.34 %

****

BI 0032

	AA	AA-BG	BG
ABSORBANCE	0.035	0.037	-0.002

085

5.35

	AA	AA-BG	BG
ABSORBANCE	0.033	0.035	-0.002

9613492.6418

0032 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	-0.001

5.12 CCV#5

MEAN= 5.19 STD.DEV.= 0.13 COEF.VAR.= 2.59 %

****

BI 0033

	AA	AA-BG	BG
ABSORBANCE	-0.003	-0.002	-0.001

-0.27

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.002	-0.003

0.32

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.001	-0.001

-0.10 CCB#5 11:27

MEAN= -0.02 STD.DEV.= 0.30 COEF.VAR.= 99.99 %

****

BI 0034

	AA	AA-BG	BG
ABSORBANCE	0.000	0.004	-0.004

0.54

	AA	AA-BG	BG
ABSORBANCE	-0.001	-0.001	-0.001

-0.11

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.000	-0.001

0.02 S302131 PBW

MEAN= 0.15 STD.DEV.= 0.35 COEF.VAR.= 99.99 %

****

BI 0035

	AA	AA-BG	BG
ABSORBANCE	0.015	0.016	-0.001

086

2.41

	AA	AA-BG	BG
ABSORBANCE	0.017	0.017	0.000

9613492.6419

0035 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	0.018	0.019	-0.001

2.76 CLCSPW

MEAN= 2.56 STD.DEV.= 0.18 COEF.VAR.= 6.94 %

****

BI 0036

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.001	-0.001

-0.10

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.001	-0.001

-0.09

	AA	AA-BG	BG
ABSORBANCE	-0.003	-0.002	-0.001

-0.24 S302131-01 B07K04 11:28

MEAN= -0.14 STD.DEV.= 0.08 COEF.VAR.= 58.59 %

****

BI 0037

	AA	AA-BG	BG
ABSORBANCE	-0.004	-0.002	-0.002

-0.26

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.000	-0.002

0.07

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.000	-0.002

0.01 -02 B07ML0 -

MEAN= -0.06 STD.DEV.= 0.17 COEF.VAR.= 99.99 %

****

BI 0038

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.002	0.000

087

-0.25

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.001	-0.002

9613492.6420

0038 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.001	-0.001

-0.12 -020 BOTMLOD

MEAN= -0.10 STD.DEV.= 0.17 COEF.VAR.= 99.99 %

****

BI 0039

	AA	AA-BG	BG
ABSORBANCE	0.035	0.036	-0.002

5.30

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	-0.001

5.07

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	0.000

5.04 -025 BOTMLOS 11:29

MEAN= 5.14 STD.DEV.= 0.14 COEF.VAR.= 2.66 %

****

BI 0040

	AA	AA-BG	BG
ABSORBANCE	0.034	0.035	-0.002

5.16

	AA	AA-BG	BG
ABSORBANCE	0.032	0.033	-0.001

4.77

	AA	AA-BG	BG
ABSORBANCE	0.033	0.033	0.000

4.87 CCV #6

MEAN= 4.93 STD.DEV.= 0.20 COEF.VAR.= 4.03 %

****

BI 0041

	AA	AA-BG	BG
ABSORBANCE	-0.002	-0.002	0.000

088

-0.29

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.001	-0.003

9613492.6421

0041 (CONTINUED)

	AA	AA-BG	BG
ABSORBANCE	-0.004	-0.004	0.000

-0.64 CCB #6

MEAN= -0.25 STD.DEV.= 0.42 COEF.VAR.= 99.99 %

****

BI 0042

	AA	AA-BG	BG
ABSORBANCE	-0.002	0.001	-0.003

0.11

	AA	AA-BG	BG
ABSORBANCE	-0.003	-0.001	-0.002

end of run
3/2/93 SRP

-0.15

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.001	-0.003

0.18 S302135 PBW 11:30

MEAN= 0.05 STD.DEV.= 0.17 COEF.VAR.= 99.99 %

****

BI 0043

	AA	AA-BG	BG
ABSORBANCE	0.015	0.015	0.000

2.23

	AA	AA-BG	BG
ABSORBANCE	0.017	0.018	-0.001

2.66

	AA	AA-BG	BG
ABSORBANCE	0.017	0.019	-0.002

2.74 CLCSPW

MEAN= 2.54 STD.DEV.= 0.27 COEF.VAR.= 10.71 %

****

BI 0044

	AA	AA-BG	BG
ABSORBANCE	-0.003	0.000	-0.003

089

0.03

	AA	AA-BG	BG
ABSORBANCE	-0.001	0.002	-0.003

9613492.6422

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																					
				ALB	SBS	ASA	BAE	BED	CDA	CAR	COU	CUE	FEB	PBG	MGN	MNG	HGI	NIK	SEG	AGA	NAL	TLV	VZN	ZNC	CNB	BIS
S0	1.00	1351				X																				
S10	1.00	1356				X																				
S50	1.00	1401				X																				
S100	1.00	1406				X																				
ICV	1.00	1412				X																				
ICB	1.00	1417				X																				
CRA	1.00	1422				X																				
CCV	1.00	1427				X																				
CCB	1.00	1433				X																				
ZZZZZZ	1.00	1438																								
ZZZZZZ	1.00	1443																								
ZZZZZZ	1.00	1448																								
ZZZZZZ	1.00	1453																								
ZZZZZZ	1.00	1458																								
CCV	1.00	1503				X																				
CCB	1.00	1508				X																				
PBW	1.00	1532				X																				
PBWA	1.00	1537	94.2			X																				
LCSW	1.00	1542				X																				
LCSWA	1.00	1547	104.1			X																				
B07K04	1.00	1552				X																				
B07K04A	1.00	1557	88.1			X																				
B07ML0	1.00	1602				X																				
B07ML0A	1.00	1607	94.8			X																				
B07ML0S	1.00	1613				X																				
ZZZZZZ	1.00	1618																								
CCV	1.00	1623				X																				
CCB	1.00	1628				X																				
B07ML0D	1.00	1633				X																				
B07ML0DA	1.00	1638	87.5			X																				
ZZZZZZ	1.00	1649																								
ZZZZZZ	1.00	1654																								

FORM XIV - IN 1LM02.1

9613492.6423

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				ALB	SB	ASA	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
ZZZZZZ	1.00	1710																									
ZZZZZZ	1.00	1715																									
ZZZZZZ	1.00	1720																									
ZZZZZZ	1.00	1725																									
CCV	1.00	1730				X																					
CCB	1.00	1735				X																					

9613492.6424

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059 SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																					
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	VZ	NN	CN	BI
S0	1.00	1351																			X							
S5	1.00	1356																			X							
S50	1.00	1401																			X							
S100	1.00	1406																			X							
ICV	1.00	1412																			X							
ICB	1.00	1417																			X							
CRA	1.00	1422																			X							
CCV	1.00	1427																			X							
CCB	1.00	1433																			X							
ZZZZZZ	1.00	1438																										
ZZZZZZ	1.00	1443																										
ZZZZZZ	1.00	1448																										
ZZZZZZ	1.00	1453																										
ZZZZZZ	1.00	1458																										
CCV	1.00	1503																			X							
CCB	1.00	1508																			X							
PBW	1.00	1532																										
PBWA	1.00	1537	89.4																									
LCSW	1.00	1542																			X							
LCSWA	1.00	1547	99.0																		X							
B07K04	1.00	1552																			X							
B07K04A	1.00	1557	66.8																		X							
B07ML0	1.00	1602																										
B07ML0A	1.00	1607	93.4																									
B07ML0S	1.00	1613																										
ZZZZZZ	1.00	1618																										
CCV	1.00	1623																			X							
CCB	1.00	1628																			X							
B07ML0D	1.00	1633																			X							
B07ML0DA	1.00	1638	72.1																		X							
B07ML0	1.00	1649																			X							
B07ML0A	1.00	1654	69.5																		X							

QC criteria not met

?

~~Hold Results~~

~~FRC~~

KR. 10/15

037

9613492.6425

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F5 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
PBW	1.00	1710																			X							
PBWA	1.00	1715	98.7																		X							
B07ML0S	1.00	1720																			X							
ZZZZZZ	1.00	1725																										
CCV	1.00	1730																			X							
CCB	1.00	1735																			X							

038

9613492.6426

C L P M E T A L S 3.03a

S302131-ARSENIC

Run id: F5 9304902
THERMO JARRELL-ASH VIDEO 21E (#2936)
Analytical method: F
Element: Multi-Element

Acquired: 02/18/93 by KDJ
Crunched: 02/26/93 by KDJ
Time: 1647
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	F			S0	02/18/93	13:51
2	10 PPB	WS1	F			S10	02/18/93	13:56
3	50 PPB	WS2	F			S50	02/18/93	14:01
4	100 PPB	WS3	F			S100	02/18/93	14:06
5	ICV-2	ICV	F			ICV	02/18/93	14:12
6	CAL BLK	ICB	F			ICB	02/18/93	14:17
7	CRA	CRA0	F			CRA	02/18/93	14:22
8	50 PPB	CCV	F			CCV	02/18/93	14:27
9	CAL BLK	CCB	F			CCB	02/18/93	14:33
10	X	X	F			ZZZZZZ	02/18/93	14:38
11	X	X	F			ZZZZZZ	02/18/93	14:43
12	X	X	F			ZZZZZZ	02/18/93	14:48
13	X	X	F			ZZZZZZ	02/18/93	14:53
14	X	X	F			ZZZZZZ	02/18/93	14:58
15	50 PPB	CCV	F			CCV	02/18/93	15:03
16	CAL BLK	CCB	F			CCB	02/18/93	15:08
17	PB	PBW	F	1408	02/18/93	PBW	02/18/93	15:32
18	PB	ASPBW	F	1408		PBWA	02/18/93	15:37
19	CLCSFW	LCSW	F	1408	02/18/93	LCSW	02/18/93	15:42
20	CLCSFW	ASLCSW	F	1408		LCSWA	02/18/93	15:47
21	S302131-01	S	F	1408	02/18/93	B07K04	02/18/93	15:52
22	S302131-01	AS	F	1408		B07K04A	02/18/93	15:57
23	S302131-02	S	F	1408	02/18/93	B07ML0	02/18/93	16:02
24	S302131-02	AS	F	1408		B07ML0A	02/18/93	16:07
25	S302131-02	DS	F	1408	02/18/93	B07ML0S	02/18/93	16:13
26	X	X	F			ZZZZZZ	02/18/93	16:18
27	50 PPB	CCV	F			CCV	02/18/93	16:23
28	CAL BLK	CCB	F			CCB	02/18/93	16:28
29	S302131-02	S2	F	1408	02/18/93	B07ML0D	02/18/93	16:33
30	S302131-02	ASS2	F	1408		B07ML0DA	02/18/93	16:38
31	X	X	F	1408		ZZZZZZ	02/18/93	16:49
32	X	X	F	1408		ZZZZZZ	02/18/93	16:54
33	X	X	F			ZZZZZZ	02/18/93	17:10
34	X	X	F			ZZZZZZ	02/18/93	17:15
35	X	X	F	1408		ZZZZZZ	02/18/93	17:20
36	X	X	F			ZZZZZZ	02/18/93	17:25
37	50 PPB	CCV	F			CCV	02/18/93	17:30
38	CAL BLK	CCB	F			CCB	02/18/93	17:35

9613492.6927

C L P M E T A L S 3.03a

S302131-SELENIUM

Run id: F5 9304952
THERMO JARRELL-ASH VIDEO 21E (#2936)
Analytical method: F
Element: Multi-Element

Acquired: 02/18/93 by KDJ
Crunched: 02/26/93 by KDJ
Time: 1649
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	F			S0	02/18/93	13:51
2	5 PPB	WS1	F			S5	02/18/93	13:56
3	50 PPB	WS2	F			S50	02/18/93	14:01
4	100 PPB	WS3	F			S100	02/18/93	14:06
5	ICV-2	ICV	F			ICV	02/18/93	14:12
6	CAL BLK	ICB	F			ICB	02/18/93	14:17
7	CRA	CRA0	F			CRA	02/18/93	14:22
8	50 PPB	CCV	F			CCV	02/18/93	14:27
9	CAL BLK	CCB	F			CCB	02/18/93	14:33
10	X	X	F			ZZZZZZ	02/18/93	14:38
11	X	X	F			ZZZZZZ	02/18/93	14:43
12	X	X	F			ZZZZZZ	02/18/93	14:48
13	X	X	F			ZZZZZZ	02/18/93	14:53
14	X	X	F			ZZZZZZ	02/18/93	14:58
15	50 PPB	CCV	F			CCV	02/18/93	15:03
16	CAL BLK	CCB	F			CCB	02/18/93	15:08
17	PB	PBW	F	1408	02/18/93	PBW	02/18/93	15:32
18	PB	ASPBW	F	1408		PBWA	02/18/93	15:37
19	CLCSFW	LCSW	F	1408	02/18/93	LCSW	02/18/93	15:42
20	CLCSFW	ASLCSW	F	1408		LCSWA	02/18/93	15:47
21	S302131-01	S	F	1408	02/18/93	B07K04	02/18/93	15:52
22	S302131-01	AS	F	1408		B07K04A	02/18/93	15:57
23	S302131-02	S	F	1408	02/18/93	B07ML0	02/18/93	16:02
24	S302131-02	AS	F	1408		B07ML0A	02/18/93	16:07
25	S302131-02	DS	F	1408	02/18/93	B07ML0S	02/18/93	16:13
26	X	X	F			ZZZZZZ	02/18/93	16:18
27	50 PPB	CCV	F			CCV	02/18/93	16:23
28	CAL BLK	CCB	F			CCB	02/18/93	16:28
29	S302131-02	S2	F	1408	02/18/93	B07ML0D	02/18/93	16:33
30	S302131-02	ASS2	F	1408		B07ML0DA	02/18/93	16:38
31	S302131-02	S	F	1408	02/18/93	B07ML0 rerun	02/18/93	16:49
32	S302131-02	AS	F	1408		B07ML0A	02/18/93	16:54
33	PB	PBW	F	1408	02/18/93	PBW	02/18/93	17:10
34	PB	ASPBW	F	1408		PBWA	02/18/93	17:15
35	S302131-02	DS	F	1408	02/18/93	B07ML0S rerun	02/18/93	17:20
36	X	X	F			ZZZZZZ	02/18/93	17:25
37	50 PPB	CCV	F			CCV	02/18/93	17:30
38	CAL BLK	CCB	F			CCB	02/18/93	17:35

9613492.6428

TMA/SKINNER & SHERMAN LABORATORIES, INC.
GRAPHITE FURNACE AA RUN BENCH SHEET

AA Sequence # 2413 GFAA ID: F1 F2 F3 F4 (F5) F6 Method: 150

Date: 2/18/93 Reviewed By: 2/26/93 Standards Prepared: 800 2/18/93

Operator: [illegible]

Disk # 4

Acq

SAMIN ✓ S302431

Standards Source
1. Calibration: 10 ppm
2. ICV: [✓] ICV-2 [] ICV-4(1:1)
3. CCV: 50 ppb

Channel A:			Channel B:		
RUN ID:	9304902		RUN ID:	9304S2	
Element:	[✓] AS	[] PB	Element:	[✓] SE	[] TL
Background:	BS	BS	Background:	BS	BS
Wavelength (nm):	197.2	283.3	Wavelength (nm):	196.0	276.8
Slitwidth (nm):	2.0	1.0	Slitwidth (nm):	2.0	1.0
Integ Time (sec):	3.0	3.0	Integ Time (sec):	3.0	3.0

Comments		Sample ID	Dilution	Comments
STD1	1	0 PPB		
STD2	2	[✓] 10,5 [] 3,10		
STD3	3	50 PPB		
STD4	4	100 PPB		
	5	ICV		
	6	ICB		
	7	CRA		
	8	CCV		
	9	CCB		
	10	X		
	11	X		
	12	X		
	13	X		
	14	X		
	15	CW		
	16	CCB		
	17	PBW		RSD
	18	PBWA		
	19	CLCSW		
	20	CLCSWA		
	21	01		
	22	01A		
	23	02		RSD
	24	02A		
	25	02S		RSD
	26	X		
	27	CW ✓		
	28	CCB		
	29	02D		
	30	02DA		
	31	02		
	32	02A		
	33	DPBW		
	34	DPBWA		
	35	02S		
	36	X		
	37	CCV		
	38	CCB		
	39			

Se only

092

9613492.6429

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 1

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
1	STD1(0)	XWS0	S0	1.00x	02/18/93	13:51

	As		Se	
Burns (Abs)	[0]A	[0]A	[0]A	[0]A
Mean	0.0000		0.0000	
CV %	---		---	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
2	STD2(10,5)	WS1	S	1.00x	02/18/93	13:56

	As		Se	
Burns (Abs)	0.039 A	0.031 A	0.019A	0.022A
Mean	0.0350		0.0205	
CV %	16.16		0.00	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
3	STD3(50)	WS2	S	1.00x	02/18/93	14:01

	As		Se	
Burns (Abs)	0.208 A	0.201 A	0.164A	0.169A
Mean	0.2045		0.1665	
CV %	2.42		2.12	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
4	STD4(100)	WS3	S	1.00x	02/18/93	14:06

	As		Se	
Burns (Abs)	0.407 A	0.389 A	0.267A	0.271A
Mean	0.3980		0.2690	
CV %	3.20		0.00	

As r = 0.9998 Se r = 0.9929 OOC

- Calibration coefficients -

	As	Se
Order:	2	2
Coef[0]:	0	0
Coef[1]:	0.004109282	0.003977522
Coef[2]:	-1.245069e-006	-1.287942e-005
Correl. coef.:	0.9997	1.0000

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
5	ICV-2	ICV	ICV	1.00x	02/18/93	14:12

	As		Se	
Burns (Conc)	54.435	51.418	51.998	53.142
Mean	52.9265		52.5700	
CV %	4.03		1.54	
Sample value	52.93		52.57	

ARGOS MODEL SA4 Version 1.29

9613492.6430

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 2

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
6	CAL BLK	ICB	ICB	1.00x	02/18/93	14:17

	As		Se	
Burns (Conc)	-0.730	-1.703	0.756	0.252
Mean	-1.2165		0.5040	
CV %	56.56		70.71	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
7	CRA	CRA	CRA	1.00x	02/18/93	14:22

	As		Se	
Burns (Conc)	8.295	10.008	6.419	6.944
Mean	9.1515		6.6815	
CV %	13.24		5.56	
Sample value	9.15		6.68	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
8	50 PPB	CCV	CCV	1.00x	02/18/93	14:27

	As		Se	
Burns (Conc)	53.429	50.665	50.493	47.546
Mean	52.0470		49.0195	
CV %	3.76		4.25	
Sample value	52.05		49.02	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
9	CAL BLK	CCB	CCB	1.00x	02/18/93	14:33

	As		Se	
Burns (Conc)	0.487	-0.973	0.504	-2.741
Mean	-0.2430		-1.1185	
CV %	424.85		205.15	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
10	X	X	ZZZZZZ	1.00x	02/18/93	14:38

	As		Se	
Burns (Conc)	55.946	56.198	49.378	48.642
Mean	56.0720		49.0100	
CV %	0.32		1.06	
Sample value	56.07		49.01	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
11	X	X	ZZZZZZ	1.00x	02/18/93	14:43

	As		Se	
Burns (Conc)	80.314	76.226	60.708	58.254
Mean	78.2700		59.4810	
CV %	3.69		2.92	
Sample value	78.27		59.48	

ARGOS MODEL SA4 Version 1.29

9613492.0431

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 3

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
12	X	X	ZZZZZZ	1.00x	02/18/93	14:48

	As		Se	
Burns (Conc)	55.694	56.198	51.243	49.009
Mean	55.9460		50.1260	
CV %	0.64		3.15	
Sample value	55.95		50.13	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
13	X	X	ZZZZZZ	1.00x	02/18/93	14:53

	As		Se	
Burns (Conc)	80.569	76.481	61.123	57.450
Mean	78.5250		59.2865	
CV %	3.68		4.38	
Sample value	78.53		59.29	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
14	X	X	ZZZZZZ	1.00x	02/18/93	14:58

	As		Se	
Burns (Conc)	0.730	1.217	0.756	2.535
Mean	0.9735		1.6455	
CV %	35.37		76.45	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
15	50 PPB	CCV 2	CCV	1.00x	02/18/93	15:03

	As		Se	
Burns (Conc)	53.680	52.675	48.275	50.493
Mean	53.1775		49.3840	
CV %	1.34		3.18	
Sample value	53.18		49.38	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
16	CAL BLK	CCB 2	CCB	1.00x	02/18/93	15:08

	As		Se	
Burns (Conc)	-0.243	0.000	1.770	1.009
Mean	-0.1215		1.3895	
CV %	141.42		38.73	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
17	PB	PBW	PBW	1.00x	02/18/93	15:32

	As		Se	
Burns (Conc)	0.243	0.974	-2.494	-0.251
Mean	0.6085		-1.3725	
CV %	84.95		115.56	
Sample value	2.60U		3.10U	

ARGOS MODEL SA4 Version 1.29

9613492.6432

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 4

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
18	PB	ASPBW	PBWA	1.00x	02/18/93	15:37

	As		Se	
Burns (Conc)	19.584	18.107	10.677	7.208
Mean	18.8455		8.9425	
CV %	5.54		27.43 ***	
Sample value	18.85		8.94	
Spike added	20.00		10.00	
Spike recovery, %	94.23		89.42	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
19	CLCSFW	LCSW	LCSW	1.00x	02/18/93	15:42

	As		Se	
Burns (Conc)	49.159	47.154	48.642	46.462
Mean	48.1565		47.5520	
CV %	2.94		3.24	
Sample value	48.16		47.55	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
20	CLCSFW	ASLCSW	LCSWA	1.00x	02/18/93	15:47

	As		Se	
Burns (Conc)	71.132	66.814	58.254	56.653
Mean	68.9730		57.4535	
CV %	4.43		1.97	
Sample value	68.97		57.45	
Spike added	20.00		10.00	
Spike recovery, %	104.08		99.01	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
21	S302131-01	S	B07K04	1.00x	02/18/93	15:52

	As		Se	
Burns (Conc)	1.217	0.243	0.504	0.000
Mean	0.7300		0.2520	
CV %	94.35		141.42	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
22	-01	AS	B07K04A	1.00x	02/18/93	15:57

	As		Se	
Burns (Conc)	18.107	17.123	6.157	7.208
Mean	17.6150		6.6825	
CV %	3.95		11.12	
Sample value	17.61		6.68	
Spike added	20.00		10.00	
Spike recovery, %	88.07		66.82 ***	

ARGOS MODEL SA4 Version 1.29

9613492.6433

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 5

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
23	-02	S	B07MLO	1.00x	02/18/93	16:02

	As		Se	
Burns (Conc)	-0.487	-0.973	-0.752	-0.502
Mean	-0.7300		-0.6270	
CV %	47.08		28.19	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
24	-02	AS	B07MLOA	1.00x	02/18/93	16:07

	As		Se	
Burns (Conc)	19.338	18.600	11.218	7.472
Mean	18.9690		9.3450	
CV %	2.75		28.34 ***	ok
Sample value	18.97		9.35	
Spike added	20.00		10.00	
Spike recovery, %	94.85		93.45	ok

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
25	-02	DS	B07MLOS	1.00x	02/18/93	16:13

	As		Se	
Burns (Conc)	38.908	36.418	8.532	5.113
Mean	37.6630		6.8225	
CV %	4.67		35.44 ***	need rerun
Sample value	37.66		6.82	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
26	X	X	ZZZZZZ	1.00x	02/18/93	16:18

	As		Se	
Burns (Conc)	21.063	11.723	9.601	4.853
Mean	16.3930		7.2270	
CV %	40.29 ***		46.46 ***	
Sample value	16.39		7.23	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
27	50 PPB	CCV 3	CCV	1.00x	02/18/93	16:23

	As		Se	
Burns (Conc)	51.921	51.669	46.462	48.275
Mean	51.7950		47.3685	
CV %	0.34		2.71	
Sample value	51.79		47.37	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
28	CAL BLK	CCB 3	CCB	1.00x	02/18/93	16:28

	As		Se	
Burns (Conc)	-0.730	0.243	-1.002	-1.002
Mean	-0.2435		-1.0020	
CV %	282.55		0.00	
Sample value	2.60U		3.10U	

9613492.6434

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 6

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
29	-02	S2	B07MLOD	1.00x	02/18/93	16:33

	As		Se	
Burns (Conc)	-0.730	-0.973	-0.502	-1.750
Mean	-0.8515		-1.1260	
CV %	20.18		78.37	
Sample value	2.60U		3.10U	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
30	-02	ASS2	B07MLODA	1.00x	02/18/93	16:38

	As		Se	
Burns (Conc)	18.107	16.878	7.736	6.681
Mean	17.4925		7.2085	
CV %	4.97		10.35	
Sample value	17.49		7.21	
Spike added	20.00		10.00	
Spike recovery, %	87.46		72.09 ***	

need rerun

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
31	-02	S	B07MLO	1.00x	02/18/93	16:49

	As		Se	
Burns (Conc)	0.974	-1.216	-0.752	-1.750
Mean	-0.1210		-1.2510	
CV %	1279.80		56.41	
Sample value	2.60U		3.10U	

Se only

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
32	-02	AS	B07MLOA	1.00x	02/18/93	16:54

	As		Se	
Burns (Conc)	17.861	14.666	8.266	5.634
Mean	16.2635		6.9500	
CV %	13.89		26.78 ***	
Sample value	16.26		6.95	
Spike added	20.00		10.00	
Spike recovery, %	81.32 ***		69.50 ***	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
33	PB	PBW	PBW	1.00x	02/18/93	17:10

	As		Se	
Burns (Conc)	0.730	-1.216	0.252	-0.752
Mean	-0.2430		-0.2500	
CV %	566.27		283.97	
Sample value	2.60U		3.10U	

ARGOS MODEL SA4 Version 1.29

9613492.6435

Jarrell-Ash Video 22
Run: F5 9304902 Analyst: DNP Page 7

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
34	PB	ASPBW	PBWA	1.00x	02/18/93	17:15

	As		Se	
Burns (Conc)	20.077	20.323	9.869	9.869
Mean	20.2000		9.8690	
CV %	0.86		0.00	
Sample value	20.20		9.87	
Spike added	20.00		10.00	
Spike recovery, %	101.00		98.69	

Se only 2/18/93 SG

35	-02	DS	B07MLOS	1.00x	02/18/93	17:20

	As		Se	
Burns (Conc)	35.423	36.667	8.266	9.066
Mean	36.0450		8.6660	
CV %	2.44		6.53	
Sample value	36.04		8.67	

36	X	X	ZZZZZZ	1.00x	02/18/93	17:25

	As		Se	
Burns (Conc)	0.243	1.461	-0.752	0.756
Mean	0.8520		0.0020	
CV %	101.09		>9999.99	
Sample value	2.60U		3.10U	

37	50 PPB	CCV 4	CCV	1.00x	02/18/93	17:30

	As		Se	
Burns (Conc)	49.159	48.658	47.546	43.033
Mean	48.9085		46.2895	
CV %	0.72		3.84	
Sample value	48.91		46.29	

38	CAL BLK	CCB 4	CCB	1.00x	02/18/93	17:35

	As		Se	
Burns (Conc)	-1.460	0.000	-1.252	0.504
Mean	-0.7300		-0.3740	
CV %	141.42		332.00	
Sample value	2.60U		3.10U	

9613492.6436

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F2 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1701													X													
S3	1.00	1705													X													
S50	1.00	1710													X													
S100	1.00	1714													X													
ICV	2.00	1720													X													
ICB	1.00	1724													X													
CRA	1.00	1728													X													
CCV	1.00	1733													X													
CCB	1.00	1737													X													
ZZZZZZ	1.00	1742																										
ZZZZZZ	1.00	1746																										
ZZZZZZ	1.00	1750																										
ZZZZZZ	1.00	1755																										
ZZZZZZ	1.00	1759																										
ZZZZZZ	1.00	1803																										
ZZZZZZ	1.00	1808																										
ZZZZZZ	1.00	1812																										
ZZZZZZ	1.00	1816																										
ZZZZZZ	1.00	1821																										
CCV	1.00	1825													X													
CCB	1.00	1829													X													
ZZZZZZ	1.00	1835																										
ZZZZZZ	1.00	1839																										
ZZZZZZ	1.00	1843																										
ZZZZZZ	1.00	1848																										
ZZZZZZ	1.00	1852																										
ZZZZZZ	1.00	1856																										
ZZZZZZ	1.00	1901																										
ZZZZZZ	1.00	1905																										
ZZZZZZ	1.00	1910																										
ZZZZZZ	1.00	1914																										
CCV	1.00	1918													X													

039

9613492.6437

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F2 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
CCB	1.00	1923													X													
ZZZZZZ	1.00	1935																										
ZZZZZZ	1.00	1939																										
ZZZZZZ	1.00	1944																										
ZZZZZZ	1.00	1948																										
CCV	1.00	1952													X													
CCB	1.00	1957													X													
PBW	1.00	2010													X													
PBWA	1.00	2014	89.7												X													
LCSW	1.00	2018													X													
LCSWA	1.00	2023	95.8												X													
B07K04	1.00	2027													X													
B07K04A	1.00	2031	112.0												X													
B07ML0	1.00	2036													X													
B07ML0A	1.00	2040	102.1												X													
B07ML0S	1.00	2044													X													
ZZZZZZ	1.00	2049																										
CCV	1.00	2053													X													
CCB	1.00	2057													X													
B07ML0D	1.00	2102													X													
B07ML0DA	1.00	2106	104.0												X													
CCV	1.00	2111													X													
CCB	1.00	2115													X													

9613492.6438

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F2 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				ALB	SBS	ASA	BAE	BCD	CAR	CCO	CUE	FEB	PBG	MGN	HGI	NIK	SEG	AGA	NAL	TLV	VZN	ZCN	CNB	BIS		
S0	1.00	1701																		X						
S10	1.00	1705																		X						
S50	1.00	1710																		X						
S100	1.00	1714																		X						
ICV	2.00	1720																		X						
ICB	1.00	1724																		X						
CRA	1.00	1728																		X						
CCV	1.00	1733																		X						
CCB	1.00	1737																		X						
ZZZZZZ	1.00	1742																								
ZZZZZZ	1.00	1746																								
ZZZZZZ	1.00	1750																								
ZZZZZZ	1.00	1755																								
ZZZZZZ	1.00	1759																								
ZZZZZZ	1.00	1803																								
ZZZZZZ	1.00	1808																								
ZZZZZZ	1.00	1812																								
ZZZZZZ	1.00	1816																								
ZZZZZZ	1.00	1821																								
CCV	1.00	1825																		X						
CCB	1.00	1829																		X						
ZZZZZZ	1.00	1835																								
ZZZZZZ	1.00	1839																								
ZZZZZZ	1.00	1843																								
ZZZZZZ	1.00	1848																								
ZZZZZZ	1.00	1852																								
ZZZZZZ	1.00	1856																								
ZZZZZZ	1.00	1901																								
ZZZZZZ	1.00	1905																								
ZZZZZZ	1.00	1910																								
ZZZZZZ	1.00	1914																								
CCV	1.00	1918																		X						

9613492.6439

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: F2 Method: F

Start date: 02/18/93 End date: 02/18/93

EPA Sample No.	D/F	Time	% R	Analytes																						
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
CCB	1.00	1923																						X				
ZZZZZZ	1.00	1935																										
ZZZZZZ	1.00	1939																										
ZZZZZZ	1.00	1944																										
ZZZZZZ	1.00	1948																										
CCV	1.00	1952																						X				
CCB	1.00	1957																						X				
PBW	1.00	2010																						X				
PBWA	1.00	2014	92.4																					X				
LCSW	1.00	2018																						X				
LCSWA	1.00	2023	82.1																					X				
B07K04	1.00	2027																						X				
B07K04A	1.00	2031	106.2																					X				
B07ML0	1.00	2036																						X				
B07ML0A	1.00	2040	99.3																					X				
B07ML0S	1.00	2044																						X				
ZZZZZZ	1.00	2049																										
CCV	1.00	2053																						X				
CCB	1.00	2057																						X				
B07ML0D	1.00	2102																						X				
B07ML0DA	1.00	2106	96.3																					X				
CCV	1.00	2111																						X				
CCB	1.00	2115																						X				

042

9613492.6440

C L P M E T A L S 3.03a

S302131-LEAD

Run id: F2 9304902
THERMO JARRELL-ASH VIDEO 22E (#2511)
Analytical method: F
Element: Multi-Element

Acquired: 02/18/93 by MAS
Crunched: 02/26/93 by KDJ
Time: 1749
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	F			S0	02/18/93	17:01
2	3 PPB	WS1	F			S3	02/18/93	17:05
3	50 PPB	WS2	F			S50	02/18/93	17:10
4	100 PPB	WS3	F			S100	02/18/93	17:14
5	ICV-4	ICV	F			ICV	02/18/93	17:20
6	CAL BLK	ICB	F			ICB	02/18/93	17:24
7	CRA	CRA0	F			CRA	02/18/93	17:28
8	50 PPB	CCV	F			CCV	02/18/93	17:33
9	CAL BLK	CCB	F			CCB	02/18/93	17:37
10	X	X	F			ZZZZZZ	02/18/93	17:42
11	X	X	F			ZZZZZZ	02/18/93	17:46
12	X	X	F			ZZZZZZ	02/18/93	17:50
13	X	X	F			ZZZZZZ	02/18/93	17:55
14	X	X	F			ZZZZZZ	02/18/93	17:59
15	X	X	F			ZZZZZZ	02/18/93	18:03
16	X	X	F			ZZZZZZ	02/18/93	18:08
17	X	X	F			ZZZZZZ	02/18/93	18:12
18	X	X	F			ZZZZZZ	02/18/93	18:16
19	X	X	F			ZZZZZZ	02/18/93	18:21
20	50 PPB	CCV	F			CCV	02/18/93	18:25
21	CAL BLK	CCB	F			CCB	02/18/93	18:29
22	X	X	F			ZZZZZZ	02/18/93	18:35
23	X	X	F			ZZZZZZ	02/18/93	18:39
24	X	X	F			ZZZZZZ	02/18/93	18:43
25	X	X	F			ZZZZZZ	02/18/93	18:48
26	X	X	F			ZZZZZZ	02/18/93	18:52
27	X	X	F			ZZZZZZ	02/18/93	18:56
28	X	X	F			ZZZZZZ	02/18/93	19:01
29	X	X	F			ZZZZZZ	02/18/93	19:05
30	X	X	F			ZZZZZZ	02/18/93	19:10
31	X	X	F			ZZZZZZ	02/18/93	19:14
32	50 PPB	CCV	F			CCV	02/18/93	19:18
33	CAL BLK	CCB	F			CCB	02/18/93	19:23
34	X	X	F			ZZZZZZ	02/18/93	19:35
35	X	X	F			ZZZZZZ	02/18/93	19:39
36	X	X	F			ZZZZZZ	02/18/93	19:44
37	X	X	F			ZZZZZZ	02/18/93	19:48
38	50 PPB	CCV	F			CCV	02/18/93	19:52
39	CAL BLK	CCB	F			CCB	02/18/93	19:57
40	PB	PBW	F	1408	02/18/93	PBW	02/18/93	20:10
41	PB	ASPBW	F	1408		PBWA	02/18/93	20:14
42	CLCSFW	LCSW	F	1408	02/18/93	LCSW	02/18/93	20:18
43	CLCSFW	ASLCSW	F	1408		LCSWA	02/18/93	20:23

9613492.6441

S302131-LEAD

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
44	S302131-01	S	F	1408	02/18/93	B07K04	02/18/93	20:27
45	S302131-01	AS	F	1408		B07K04A	02/18/93	20:31
46	S302131-02	S	F	1408	02/18/93	B07ML0	02/18/93	20:36
47	S302131-02	AS	F	1408		B07ML0A	02/18/93	20:40
48	S302131-02	DS	F	1408	02/18/93	B07ML0S	02/18/93	20:44
49	X	X	F			ZZZZZZ	02/18/93	20:49
50	50 PPB	CCV	F			CCV	02/18/93	20:53
51	CAL BLK	CCB	F			CCB	02/18/93	20:57
52	S302131-02	S2	F	1408	02/18/93	B07ML0D	02/18/93	21:02
53	S302131-02	ASS2	F	1408		B07ML0DA	02/18/93	21:06
54	50 PPB	CCV	F			CCV	02/18/93	21:11
55	CAL BLK	CCB	F			CCB	02/18/93	21:15

9613492.6442

C L P M E T A L S 3.03a

S302131-THALLIUM

Run id: F2 9304952
THERMO JARRELL-ASH VIDEO 22E (#2511)
Analytical method: F
Element: Multi-Element

Acquired: 02/18/93 by KDJ
Crunched: 02/26/93 by KDJ
Time: 1751
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	F			S0	02/18/93	17:01
2	10 PPB	WS1	F			S10	02/18/93	17:05
3	50 PPB	WS2	F			S50	02/18/93	17:10
4	100 PPB	WS3	F			S100	02/18/93	17:14
5	ICV-4	ICV	F			ICV	02/18/93	17:20
6	CAL BLK	ICB	F			ICB	02/18/93	17:24
7	CRA	CRA0	F			CRA	02/18/93	17:28
8	50 PPB	CCV	F			CCV	02/18/93	17:33
9	CAL BLK	CCB	F			CCB	02/18/93	17:37
10	X	X	F			ZZZZZZ	02/18/93	17:42
11	X	X	F			ZZZZZZ	02/18/93	17:46
12	X	X	F			ZZZZZZ	02/18/93	17:50
13	X	X	F			ZZZZZZ	02/18/93	17:55
14	X	X	F			ZZZZZZ	02/18/93	17:59
15	X	X	F			ZZZZZZ	02/18/93	18:03
16	X	X	F			ZZZZZZ	02/18/93	18:08
17	X	X	F			ZZZZZZ	02/18/93	18:12
18	X	X	F			ZZZZZZ	02/18/93	18:16
19	X	X	F			ZZZZZZ	02/18/93	18:21
20	50 PPB	CCV	F			CCV	02/18/93	18:25
21	CAL BLK	CCB	F			CCB	02/18/93	18:29
22	X	X	F			ZZZZZZ	02/18/93	18:35
23	X	X	F			ZZZZZZ	02/18/93	18:39
24	X	X	F			ZZZZZZ	02/18/93	18:43
25	X	X	F			ZZZZZZ	02/18/93	18:48
26	X	X	F			ZZZZZZ	02/18/93	18:52
27	X	X	F			ZZZZZZ	02/18/93	18:56
28	X	X	F			ZZZZZZ	02/18/93	19:01
29	X	X	F			ZZZZZZ	02/18/93	19:05
30	X	X	F			ZZZZZZ	02/18/93	19:10
31	X	X	F			ZZZZZZ	02/18/93	19:14
32	50 PPB	CCV	F			CCV	02/18/93	19:18
33	CAL BLK	CCB	F			CCB	02/18/93	19:23
34	X	X	F			ZZZZZZ	02/18/93	19:35
35	X	X	F			ZZZZZZ	02/18/93	19:39
36	X	X	F			ZZZZZZ	02/18/93	19:44
37	X	X	F			ZZZZZZ	02/18/93	19:48
38	50 PPB	CCV	F			CCV	02/18/93	19:52
39	CAL BLK	CCB	F			CCB	02/18/93	19:57
40	PB	PBW	F	1408	02/18/93	PBW	02/18/93	20:10
41	PB	ASPBW	F	1408		PBWA	02/18/93	20:14
42	CLCSFW	LCSW	F	1408	02/18/93	LCSW	02/18/93	20:18
43	CLCSFW	ASLCSW	F	1408		LCSWA	02/18/93	20:23

9613492.6443

S302131-THALLIUM

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
44	S302131-01	S	F	1408	02/18/93	B07K04	02/18/93	20:27
45	S302131-01	AS	F	1408		B07K04A	02/18/93	20:31
46	S302131-02	S	F	1408	02/18/93	B07ML0	02/18/93	20:36
47	S302131-02	AS	F	1408		B07ML0A	02/18/93	20:40
48	S302131-02	DS	F	1408	02/18/93	B07ML0S	02/18/93	20:44
49	X	X	F			ZZZZZZ	02/18/93	20:49
50	50 PPB	CCV	F			CCV	02/18/93	20:53
51	CAL BLK	CCB	F			CCB	02/18/93	20:57
52	S302131-02	S2	F	1408	02/18/93	B07ML0D	02/18/93	21:02
53	S302131-02	ASS2	F	1408		B07ML0DA	02/18/93	21:06
54	50 PPB	CCV	F			CCV	02/18/93	21:11
55	CAL BLK	CCB	F			CCB	02/18/93	21:15

9613492.6444

TMA/SKINNER & SHERMAN LABORATORIES, INC.
GRAPHITE FURNACE AA RUN BENCH SHEET

AA Sequence # 2292 GFAA ID: F1 (F2) F3 F4 F5 F6 Method: 160

Date: 2/18/93 Reviewed By: 10/2/26/93 Standards Prepared: 800 2/18/93

Operator: 509

Disk # 80 S302131

Acq ~~S302141~~

SAMIN ✓

Standards Source
1. Calibration: 10 ppm
2. ICV: [ ] ICV-2 [✓] ICV-4(1:1)
3. CCV: 50 ppb

Channel A:			Channel B:		
RUN ID:	930490 02	2/18/93	RUN ID:	930495 52	
Element:	[ ] AS	[✓] PB	Element:	[ ] SE	[✓] TL
Background:	BS	BS	Background:	BS	BS
Wavelength (nm):	197.2	283.3	Wavelength (nm):	196.0	276.8
Slitwidth (nm):	2.0	1.0	Slitwidth (nm):	2.0	1.0
Integ Time (sec):	3.0	3.0	Integ Time (sec):	3.0	3.0

Comments			Sample ID	Dilution	Comments
	STD1	1	0 PPB		
	STD2	2	[ ] 10,5 [✓] 3,10		
	STD3	3	50 PPB		
	STD4	4	100 PPB		
		5	ICV		
		6	ICB		
		7	CRA		
		8	CCV		
		9	CCB		
rerun		10	~~PBW~~		rerun
		11	~~PBW A~~		
		12	LCSW		
		13	LCSW A		
		14	01		
		15	01A		
		16	02		
		17	02A		
		18	~~02B~~		
		19	X		
		20	CCV		
		21	CCB		
		22	02D		
		23	02DA		
		24	03		
		25	03A		
		26	04		
		27	04A		
		28	05		
		29	05A		
		30	X		
		31	X		
		32	CCV		
		33	CCB		
		34	X		
		35	X		
		36	PBW		
		37	~~PBW A~~		
		38	CCV		
		39	CCB		

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A Neal

9613492.6445

TMA/SKINNER & SHERMAN LABORATORIES, INC.
GRAPHITE FURNACE AA RUN BENCH SHEET

AA Sequence # 229R
Page 2 of 2

40	PBW		
41	PBWA		
42	CLCSW		
43	CLCSWA		
44	S302131-01		
45	-01A		
46	-02		
47	-02A		
48	023		
49	X		
50	CCW		
51	CCB		
52	02D		
53	02DA		
54	CCV		
55	CCB		
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9613492.6446

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 1

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
1	STD1(0)	XWS0	S0	1.00x	02/18/93	17:01

	<-Pb->		<-Tl->	
Burns (Abs)	[0]A	[0]A	[0]A	[0]A
Mean	0.0000		0.0000	
CV %	---		---	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
2	STD2(3,10)	WS1	S	1.00x	02/18/93	17:05

	<-Pb->		<-Tl->	
Burns (Abs)	0.045 A	0.041 A	0.058A	0.059A
Mean	0.0430		0.0585	
CV %	0.00		0.00	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
3	STD3(50)	WS2	S	1.00x	02/18/93	17:10

	<-Pb->		<-Tl->	
Burns (Abs)	0.502 A	0.516 A	0.242A	0.243A
Mean	0.5090		0.2425	
CV %	1.94		0.00	

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
4	STD4(100)	WS3	S	1.00x	02/18/93	17:14

	<-Pb->		<-Tl->	
Burns (Abs)	0.828 A	0.842 A	0.375A	0.389A
Mean	0.8350		0.3820	
CV %	1.19		2.59	

Pb r=0.994 r=0.9903

- Calibration coefficients -

	<-Pb->	<-Tl->
Order:	2	2
Coef[0]:	0	0
Coef[1]:	0.01204554	0.005903549
Coef[2]:	-3.697565e-005	-2.084788e-005
Correl. coef.:	0.9999	1.0000

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
5	ICV-4	ICV	ICV	2.00x	02/18/93	17:20

	<-Pb->		<-Tl->	
Burns (Conc)	51.588	52.197	53.183	53.454
Mean	51.8925		53.3185	
CV %	0.83		0.36	
Sample value	103.78		106.64	

ARGOS MODEL SA4 Version 1.29

9613492.6447

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 2

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
6	CAL BLK	ICB	ICB	1.00x	02/18/93	17:24

	<-Pb->		<-Tl->	
Burns (Conc)	0.416	-0.083	1.020	0.337
Mean	0.1665		0.6795	
CV %	211.92		70.87	
Sample value	1.20U		2.60U	

7	CRA	CRA	CRA	1.00x	02/18/93	17:28

	<-Pb->		<-Tl->	
Burns (Conc)	3.440	3.525	8.379	10.557
Mean	3.4825		9.4680	
CV %	1.73		16.27	
Sample value	3.48		9.47	

8	50 PPB	CCV	CCV	1.00x	02/18/93	17:33

	<-Pb->		<-Tl->	
Burns (Conc)	47.883	50.379	49.463	51.038
Mean	49.1310		50.2505	
CV %	3.59		2.22	
Sample value	49.13		50.25	

9	CAL BLK	CCB	CCB	1.00x	02/18/93	17:37

	<-Pb->		<-Tl->	
Burns (Conc)	0.499	-0.332	0.169	-0.844
Mean	0.0835		-0.3375	
CV %	703.72		212.24	
Sample value	1.20U		2.60U	

10	X	X	ZZZZZZ	1.00x	02/18/93	17:42

	<-Pb->		<-Tl->	
Burns (Conc)	1.250	0.666	0.169	-1.013
Mean	0.9580		-0.4220	
CV %	43.11		198.06	
Sample value	1.20U		2.60U	

11	X	X	ZZZZZZ	1.00x	02/18/93	17:46

	<-Pb->		<-Tl->	
Burns (Conc)	31.218	25.292	29.284	24.475
Mean	28.2550		26.8795	
CV %	14.83		12.65	
Sample value	28.25		26.88	

ARGOS MODEL SA4 Version 1.29

9613492.6448

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 3

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
12	X	X	ZZZZZZ	1.00x	02/18/93	17:50

	<-Pb->		<-Tl->	
Burns (Conc)	49.900	49.303	53.454	49.985
Mean	49.6015		51.7195	
CV %	0.85		4.74	
Sample value	49.60		51.72	

13	X	X	ZZZZZZ	1.00x	02/18/93	17:55

	<-Pb->		<-Tl->	
Burns (Conc)	72.358	74.169	72.352	77.013
Mean	73.2635		74.6825	
CV %	1.75		4.41	
Sample value	73.26		74.68	

14	X	X	ZZZZZZ	1.00x	02/18/93	17:59

	<-Pb->		<-Tl->	
Burns (Conc)	2.005	1.334	0.509	0.509
Mean	1.6695		0.5090	
CV %	28.42		0.00	
Sample value	1.67		2.60U	

15	X	X	ZZZZZZ	1.00x	02/18/93	18:03

	<-Pb->		<-Tl->	
Burns (Conc)	25.193	22.953	23.050	21.442
Mean	24.0730		22.2460	
CV %	6.58		5.11	
Sample value	24.07		22.25	

16	X	X	ZZZZZZ	1.00x	02/18/93	18:08

	<-Pb->		<-Tl->	
Burns (Conc)	1.334	1.334	0.509	-0.844
Mean	1.3340		-0.1675	
CV %	0.00		571.17	
Sample value	1.33		2.60U	

17	X	X	ZZZZZZ	1.00x	02/18/93	18:12

	<-Pb->		<-Tl->	
Burns (Conc)	25.095	22.760	24.066	22.043
Mean	23.9275		23.0545	
CV %	6.90		6.20	
Sample value	23.93		23.05	

ARGOS MODEL SA4 Version 1.29

9613492.6449

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 4

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
18	X	X	ZZZZZZ	1.00x	02/18/93	18:16

	<-Pb->		<-Tl->	
Burns (Conc)	21.798	21.511	49.723	51.038
Mean	21.6545		50.3805	
CV %	0.94		1.85	
Sample value	21.65		50.38	

19	X	X	ZZZZZZ	1.00x	02/18/93	18:21

	<-Pb->		<-Tl->	
Burns (Conc)	0.499	-0.166	0.000	-0.676
Mean	0.1665		-0.3380	
CV %	282.42		141.42	
Sample value	1.20U		2.60U	

20	50 PPB	CCV 2	CCV	1.00x	02/18/93	18:25

	<-Pb->		<-Tl->	
Burns (Conc)	47.531	50.139	48.427	50.247
Mean	48.8350		49.3370	
CV %	3.78		2.61	
Sample value	48.83		49.34	

21	CAL BLK	CCB 2	CCB	1.00x	02/18/93	18:29

	<-Pb->		<-Tl->	
Burns (Conc)	0.083	0.000	0.509	0.169
Mean	0.0415		0.3390	
CV %	141.42		70.92	
Sample value	1.20U		2.60U	

22	X	X	ZZZZZZ	1.00x	02/18/93	18:35

	<-Pb->		<-Tl->	
Burns (Conc)	2.089	2.341	-0.338	0.000
Mean	2.2150		-0.1690	
CV %	8.04		141.42	
Sample value	2.21		2.60U	

23	X	X	ZZZZZZ	1.00x	02/18/93	18:39

	<-Pb->		<-Tl->	
Burns (Conc)	29.483	28.172	27.799	27.169
Mean	28.8275		27.4835	
CV %	3.22		1.62	
Sample value	28.83		27.48	

ARGOS MODEL SA4 Version 1.29

9613492.6450

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 5

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
24	X	X	ZZZZZZ	1.00x	02/18/93	18:43

	<-Pb->		<-Tl->	
Burns (Conc)	2.005	1.417	-0.169	0.509
Mean	1.7110		0.1700	
CV %	24.30		282.01	
Sample value	1.71		2.60U	

25	X	X	ZZZZZZ	1.00x	02/18/93	18:48

	<-Pb->		<-Tl->	
Burns (Conc)	26.675	24.605	25.297	23.252
Mean	25.6400		24.2745	
CV %	5.71		5.96	
Sample value	25.64		24.27	

26	X	X	ZZZZZZ	1.00x	02/18/93	18:52

	<-Pb->		<-Tl->	
Burns (Conc)	49.065	53.179	47.149	53.454
Mean	51.1220		50.3015	
CV %	5.69		8.86	
Sample value	51.12		50.30	

27	X	X	ZZZZZZ	1.00x	02/18/93	18:56

	<-Pb->		<-Tl->	
Burns (Conc)	74.934	71.466	73.400	70.980
Mean	73.2000		72.1900	
CV %	3.35		2.37	
Sample value	73.20		72.19	

28	X	X	ZZZZZZ	1.00x	02/18/93	19:01

	<-Pb->		<-Tl->	
Burns (Conc)	2.763	1.921	-0.338	-1.013
Mean	2.3420		-0.6755	
CV %	25.42		70.66	
Sample value	2.34		2.60U	

29	X	X	ZZZZZZ	1.00x	02/18/93	19:05

	<-Pb->		<-Tl->	
Burns (Conc)	26.675	25.587	24.066	25.091
Mean	26.1310		24.5785	
CV %	2.94		2.95	
Sample value	26.13		24.58	

ARGOS MODEL SA4 Version 1.29

9613492.6451

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 6

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
30	X	X	ZZZZZZ	1.00x	02/18/93	19:10

	<-Pb->		<-Tl->	
Burns (Conc)	1.166	0.999	0.509	-0.507
Mean	1.0825		0.0010	
CV %	10.91		>9999.99	
Sample value	1.20U		2.60U	

31	X	X	ZZZZZZ	1.00x	02/18/93	19:14

	<-Pb->		<-Tl->	
Burns (Conc)	16.992	17.270	16.360	16.168
Mean	17.1310		16.2640	
CV %	1.15		0.84	
Sample value	17.13		16.26	

32	50 PPB	CCV	3 CCV	1.00x	02/18/93	19:18

	<-Pb->		<-Tl->	
Burns (Conc)	48.709	49.065	48.170	49.203
Mean	48.8870		48.6865	
CV %	0.51		1.50	
Sample value	48.89		48.69	

33	CAL BLK	CCB	3 CCB	1.00x	02/18/93	19:23

	<-Pb->		<-Tl->	
Burns (Conc)	0.499	0.083	0.000	-0.844
Mean	0.2910		-0.4220	
CV %	101.08		141.42	
Sample value	1.20U		2.60U	

34	X	X	ZZZZZZ	1.00x	02/18/93	19:35

	<-Pb->		<-Tl->	
Burns (Conc)	49.780	53.426	44.890	50.510
Mean	51.6030		47.7000	
CV %	5.00		8.33	
Sample value	51.60		47.70	

35	X	X	ZZZZZZ	1.00x	02/18/93	19:39

	<-Pb->		<-Tl->	
Burns (Conc)	53.921	64.623	54.000	62.338
Mean	59.2720		58.1690	
CV %	12.77		10.14	
Sample value	59.27		58.17	

ARGOS MODEL SA4 Version 1.29

9613492.6452

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 7

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
36	X	X	ZZZZZZ	1.00x	02/18/93	19:44

	<-Pb->		<-Tl->	
Burns (Conc)	1.334	-0.083	0.509	-0.844
Mean	0.6255		-0.1675	
CV %	160.19		571.17	
Sample value	1.20U		2.60U	

37	X	X	ZZZZZZ	1.00x	02/18/93	19:48

	<-Pb->		<-Tl->	
Burns (Conc)	19.328	19.894	17.707	19.462
Mean	19.6110		18.5845	
CV %	2.04		6.68	
Sample value	19.61		18.58	

38	50 PPB	CCV	4 CCV	1.00x	02/18/93	19:52

	<-Pb->		<-Tl->	
Burns (Conc)	48.473	49.780	48.685	51.038
Mean	49.1265		49.8615	
CV %	1.88		3.34	
Sample value	49.13		49.86	

39	CAL BLK	CCB	4 CCB	1.00x	02/18/93	19:57

	<-Pb->		<-Tl->	
Burns (Conc)	0.582	0.000	0.679	-0.844
Mean	0.2910		-0.0825	
CV %	141.42		1305.36	
Sample value	1.20U		2.60U	

40	PB	PBW	PBW	1.00x	02/18/93	20:10

	<-Pb->		<-Tl->	
Burns (Conc)	2.173	0.999	-0.338	-0.676
Mean	1.5860		-0.5070	
CV %	52.34		47.14	
Sample value	1.59		2.60U	

41	PB	ASPBW	PBWA	1.00x	02/18/93	20:14

	<-Pb->		<-Tl->	
Burns (Conc)	19.705	19.328	19.070	17.901
Mean	19.5165		18.4855	
CV %	1.37		4.47	
Sample value	19.52		18.49	
Spike added	20.00		20.00	
Spike recovery, %	89.65		92.43	

ARGOS MODEL SA4 Version 1.29

9613492.6453

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 8

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
42	CLCSFW	LCSW	LCSW	1.00x	02/18/93	20:18

	<-Pb->		<-Tl->	
Burns (Conc)	26.973	27.072	49.723	50.510
Mean	27.0225		50.1165	
CV %	0.26		1.11	
Sample value	27.02		50.12	

43	CLCSFW	ASLCSW	LCSWA	1.00x	02/18/93	20:23

	<-Pb->		<-Tl->	
Burns (Conc)	46.133	46.249	66.375	66.695
Mean	46.1910		66.5350	
CV %	0.18		0.34	
Sample value	46.19		66.54	
Spike added	20.00		20.00	
Spike recovery, %	95.85		82.09 ***	

44	S302131-01	S	B07K04	1.00x	02/18/93	20:27

	<-Pb->		<-Tl->	
Burns (Conc)	2.679	1.837	1.704	0.679
Mean	2.2580		1.1915	
CV %	26.37		60.83	
Sample value	2.26		2.60U	

45	-01	AS	B07K04A	1.00x	02/18/93	20:31

	<-Pb->		<-Tl->	
Burns (Conc)	25.095	24.215	20.646	21.842
Mean	24.6550		21.2440	
CV %	2.52		3.98	
Sample value	24.66		21.24	
Spike added	20.00		20.00	
Spike recovery, %	111.99		106.22	

46	-02	S2	B07MLOD	1.00x	02/18/93	20:36

SGJ 2/26/93

	<-Pb->		<-Tl->	
Burns (Conc)	1.753	1.501	0.849	-0.507
Mean	1.6270		0.1710	
CV %	10.95		560.72	
Sample value	1.63		2.60U	

ARGOS MODEL SA4 Version 1.29

This result was reposted as B07MLO But was changed. (NOT changed on the run log however)

~~B07MLL~~

9613492.6454

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 9

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
47	-02	AS52	B07MLO~~A~~ DA	1.00x	02/18/93	20:40

	<-Pb->		<-Tl->	
Burns (Conc)	22.086	21.990	19.659	20.053
Mean	22.0380		19.8560	
CV %	0.31		1.40	
Sample value	22.04		19.86	
Spike added	20.00		20.00	
Spike recovery, %	102.06		99.28	

48	-02	DS	B07MLOS	1.00x	02/18/93	20:44

	<-Pb->		<-Tl->	
Burns (Conc)	19.422	20.178	46.642	49.985
Mean	19.8000		48.3135	
CV %	2.70		4.84	
Sample value	19.80		48.31	

49	X	X	ZZZZZZ	1.00x	02/18/93	20:49

	<-Pb->		<-Tl->	
Burns (Conc)	0.083	-0.083	1.362	0.509
Mean	-0.0000		0.9355	
CV %	>9999.99		64.47	
Sample value	1.20U		2.60U	

50	50 PPB	CCV	5 CCV	1.00x	02/18/93	20:53

	<-Pb->		<-Tl->	
Burns (Conc)	46.481	49.184	45.887	46.138
Mean	47.8325		46.0125	
CV %	4.00		0.39	
Sample value	47.83		46.01	

51	CAL BLK	CCB	5 CCB	1.00x	02/18/93	20:57

	<-Pb->		<-Tl->	
Burns (Conc)	0.582	-0.249	0.509	0.679
Mean	0.1665		0.5940	
CV %	352.92		20.24	
Sample value	1.20U		2.60U	

52	-02	S	B07MLO	1.00x	02/18/93	21:02

	<-Pb->		<-Tl->	
Burns (Conc)	0.916	0.916	-0.338	-0.169
Mean	0.9160		-0.2535	
CV %	0.00		47.14	
Sample value	1.20U		2.60U	

ARGOS MODEL SA4 Version 1.29

9613492.6455

Jarrell-Ash Video 22
Run: F2 9304902 Analyst: LL Page 10

Concentrations/Absorbances

POS	SAMPLE ID	CODE	CLIENT ID	DILUTION	DATE	TIME
53	-02	AS	B07ML0A	1.00x	02/18/93	21:06

	<-Pb->		<-Tl->	
Burns (Conc)	20.653	20.938	19.659	18.875
Mean	20.7955		19.2670	
CV %	0.97		2.88	
Sample value	20.80		19.27	
Spike added	20.00		20.00	
Spike recovery, %	103.97		96.33	

54	50 PPB	CCV	CCV	1.00x	02/18/93	21:11

	<-Pb->		<-Tl->	
Burns (Conc)	46.946	46.597	46.895	47.914
Mean	46.7715		47.4045	
CV %	0.53		1.52	
Sample value	46.77		47.40	

55	CAL BLK	CCB	CCB	1.00x	02/18/93	21:15

	<-Pb->		<-Tl->	
Burns (Conc)	0.332	0.083	0.339	-0.169
Mean	0.2075		0.0850	
CV %	84.85		422.60	
Sample value	1.20U		2.60U	

9613492.6456

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: C1 Method: CA

Start date: 02/17/93 End date: 02/17/93

EPA Sample No.	D/F	Time	% R	Analytes																					
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1831																									X	
S10	1.00	1832																									X	
S40	1.00	1833																									X	
S100	1.00	1834																									X	
S200	1.00	1834																									X	
S400	1.00	1835																									X	
S400	1.00	1836																									X	
S40	1.00	1837																									X	
S40	1.00	1837																									X	
ICV	1.00	1838																									X	
ICB	1.00	1839																									X	
CCV	1.00	1840																									X	
CCB	1.00	1840																									X	
ZZZZZZ	1.00	1841																										
ZZZZZZ	1.00	1842																										
ZZZZZZ	1.00	1843																										
ZZZZZZ	1.00	1843																										
ZZZZZZ	1.00	1844																										
ZZZZZZ	1.00	1845																										
ZZZZZZ	1.00	1846																										
ZZZZZZ	1.00	1846																										
ZZZZZZ	1.00	1847																										
CCV	1.00	1848																									X	
CCB	1.00	1849																									X	
ZZZZZZ	1.00	1849																										
ZZZZZZ	1.00	1850																										
ZZZZZZ	1.00	1851																										
ZZZZZZ	1.00	1852																										
ZZZZZZ	1.00	1852																										
ZZZZZZ	1.00	1853																										
ZZZZZZ	1.00	1854																										
CCV	1.00	1855																									X	

9613492.6457

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: C1 Method: CA

Start date: 02/17/93 End date: 02/17/93

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
CCB	1.00	1855																									X	
ZZZZZZ	1.00	1856																										
ZZZZZZ	1.00	1857																										
ZZZZZZ	1.00	1858																										
ZZZZZZ	1.00	1858																										
ZZZZZZ	1.00	1859																										
ZZZZZZ	1.00	1900																										
CCV	1.00	1901																									X	
CCB	1.00	1901																									X	
PBW	1.00	1902																									X	
B07K04	1.00	1903																									X	
B07ML0	1.00	1904																									X	
B07ML0D	1.00	1904																									X	
B07ML0S	2.00	1905																									X	
B07ML0A	1.00	1906																										
CCV	1.00	1907																									X	
CCB	1.00	1907																									X	

9613492.6458

C L P M E T A L S 3.03a

S302131--CYANIDE

Run id: C1 9304804
TRAACS 800 AUTOANALYZER (#TC0451)
Analytical method: CA
Element: CN

Acquired: 02/17/93 by SRP
Crunched: 03/02/93 by SRP
Time: 1534
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
2	0 PPB	WS1	CA			S0	02/17/93	18:31:45
3	10 PPB	WS2	CA			S10	02/17/93	18:32:30
4	40 PPB	WS3	CA			S40	02/17/93	18:33:15
5	100 PPB	WS4	CA			S100	02/17/93	18:34:00
6	200 PPB	WS5	CA			S200	02/17/93	18:34:45
7	400 PPB	WS6	CA			S400	02/17/93	18:35:30
8	400 PPB	WS7	CA			S400	02/17/93	18:36:15
9	40 PPB	WS8	CA			S40	02/17/93	18:37:00
10	40 PPB	WS9	CA			S40	02/17/93	18:37:45
11	ICV-6	ICV	CA			ICV	02/17/93	18:38:30
12	CAL BLK	ICB	CA			ICB	02/17/93	18:39:15
13	200 PPB	CCV	CA			CCV	02/17/93	18:40:00
14	CAL BLK	CCB	CA			CCB	02/17/93	18:40:45
15	DIST STD	X	CA			ZZZZZZ	02/17/93	18:41:30
16	X	X	CA			ZZZZZZ	02/17/93	18:42:15
17	X	X	CA			ZZZZZZ	02/17/93	18:43:00
18	X	X	CA			ZZZZZZ	02/17/93	18:43:45
19	X	X	CA			ZZZZZZ	02/17/93	18:44:30
20	X	X	CA			ZZZZZZ	02/17/93	18:45:15
21	X	X	CA			ZZZZZZ	02/17/93	18:46:00
22	X	X	CA			ZZZZZZ	02/17/93	18:46:45
23	X	X	CA			ZZZZZZ	02/17/93	18:47:30
24	200 PPB	CCV	CA			CCV	02/17/93	18:48:15
25	CAL BLK	CCB	CA			CCB	02/17/93	18:49:00
26	X	X	CA			ZZZZZZ	02/17/93	18:49:45
27	X	X	CA			ZZZZZZ	02/17/93	18:50:30
28	X	X	CA			ZZZZZZ	02/17/93	18:51:15
29	X	X	CA			ZZZZZZ	02/17/93	18:52:00
30	X	X	CA			ZZZZZZ	02/17/93	18:52:45
31	X	X	CA			ZZZZZZ	02/17/93	18:53:30
32	X	X	CA			ZZZZZZ	02/17/93	18:54:15
33	200 PPB	CCV	CA			CCV	02/17/93	18:55:00
34	CAL BLK	CCB	CA			CCB	02/17/93	18:55:45
35	X	X	CA			ZZZZZZ	02/17/93	18:56:30
36	X	X	CA			ZZZZZZ	02/17/93	18:57:15
37	X	X	CA			ZZZZZZ	02/17/93	18:58:00
38	X	X	CA			ZZZZZZ	02/17/93	18:58:45
39	X	X	CA			ZZZZZZ	02/17/93	18:59:30
40	X	X	CA			ZZZZZZ	02/17/93	19:00:15
41	200 PPB	CCV	CA			CCV	02/17/93	19:01:00
42	CAL BLK	CCB	CA			CCB	02/17/93	19:01:45
43	PB	PBW	CA	1408	02/16/93	PBW	02/17/93	19:02:30
44	S302131-01	S	CA	1408	02/16/93	B07K04	02/17/93	19:03:15

9613492.6459

S302131--CYANIDE

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
45	S302131-02	S	CA	1408	02/16/93	B07ML0	02/17/93	19:04:00
46	S302131-02	S2	CA	1408	02/16/93	B07ML0D	02/17/93	19:04:45
47	S302131-02	DS	CA	1408	02/16/93	B07ML0S	02/17/93	19:05:30
48	S302131-02	PS	CA	1408		B07ML0A	02/17/93	19:06:15
49	200 PPB	CCV	CA			CCV	02/17/93	19:07:00
50	CAL BLK	CCB	CA			CCB	02/17/93	19:07:45

9613492.6460

SKINNER & SHERMAN LAB
TRAACS 800 SYSTEM BENCH SHEET
CYANIDE ANALYSIS

DATE: 2-17-93
ANALYST: DUFFY

METHOD: 335.3
SEMI-AUTOMATED MIDI DISTILLATION

FRM VER 2.4b 03/30/92

RUN ID'S		WORKORDER	
93048	- 01	5302097	
	- 02	5302133	✓
	- 03	5302132	✓
	- 04	5302131	✓ 1408
	- 05	5302135	✓
	- 06	5302121	
	- 07	5302039	

STANDARDS:	NAME	SOURCE	PREPARED
ICV	ICV-6	0789	
CCV & DIST STD	200 PPB	5PPM	
ICB/CCB	CAL BLK		

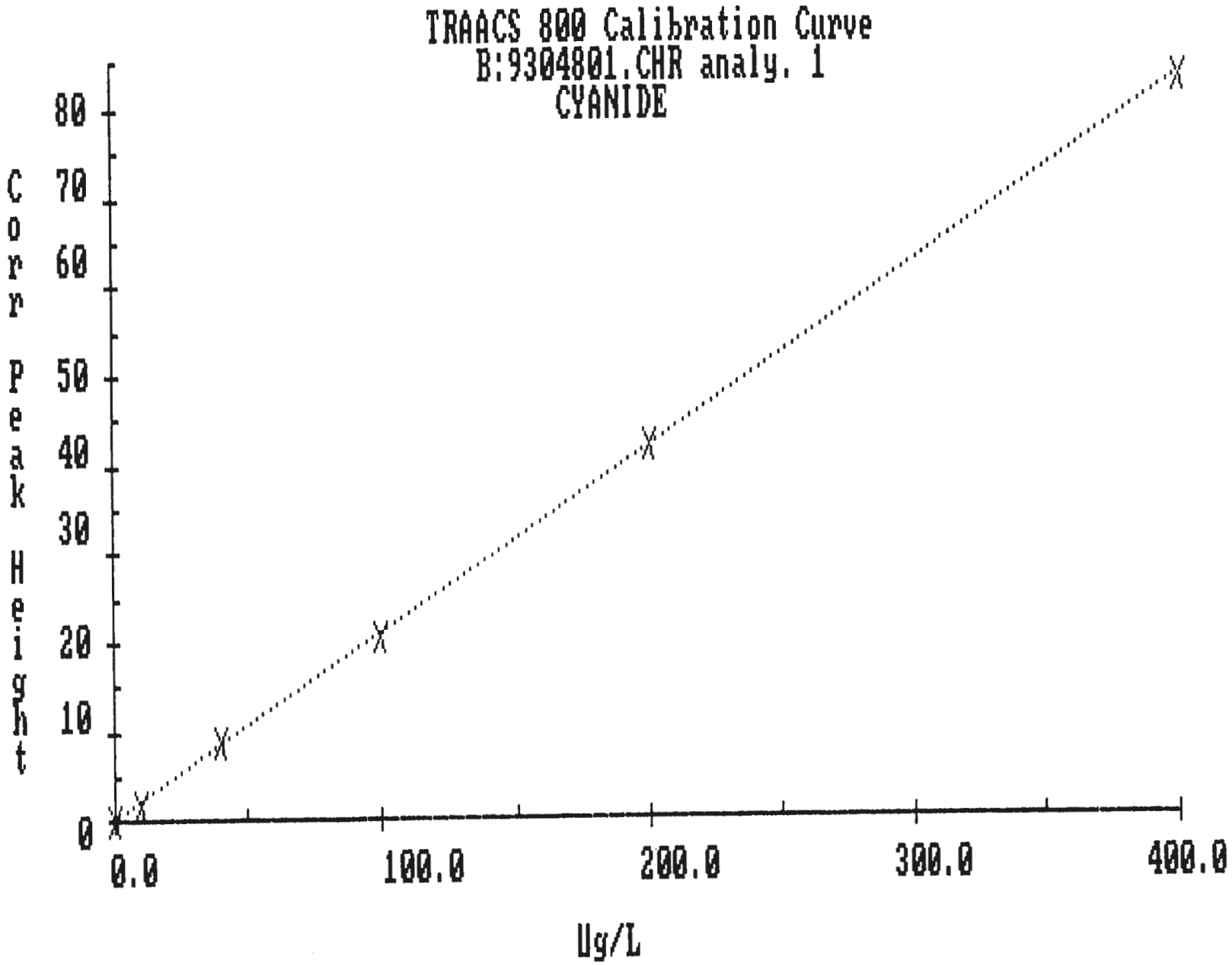
POS	LAB ID	SAMPLE ID	COMMENTS
01	PRIMER	400 PPB	ABS: 0.25
02	STD0	0 PPB	
03	STD1	10 PPB	
04	STD2	40 PPB	
05	STD3	100 PPB	
06	STD4	200 PPB	
07	STD5	400 PPB	
08	HIGH STD	400 PPB	
09	LOW STD1	40 PPB	
10	LOW STD2	40 PPB	
11	ICV	ICV-6	
12	ICB	CAL BLK	
13	CCV	200 PPB	
14	CAL BLK	CAL BLK	
15	200 PPB	DIST STD	
16	PBS		
17	LCSS		
18	JD 2-17-93 ~~5302~~	5302097 01	
19		01D	
20		01S	SPIKE is 1:1 DILUTION
21		01PS	
22		02	
23		03	
24	CCV 2		
25	CCB 2		
26	PBS		
27	CLCSS		
28		5302133 01	
29		02	
30		02D	
31		02S	SPIKE is 1:1 DILUTION
32		02PS	
33	CCV 3		
34	CCB 3		
35	PBS		

9613492.6461

SKINNER & SHERMAN LAB
TRAACS BENCH SHEET CYANIDE
DATE: 2-17-93

RUN ID: 9304801

POS	LAB ID	SAMPLE ID	COMMENTS
36	CLCSS		
37		5302132 01	
38		01D	
39		01S	SPIKE IS 2:1 DILUTION
40		01PS	
41	CCV 4		
42	CCB 4		
43	PBW		
44		5302131 01	
45		02	
46		02D	
47		02S	SPIKE IS 2:2 DILUTION
48		02PS	
49	CCV 5		
50	CCB 5		
51	PBW		
52		5302135 01	
53		01D	
54		01S	SPIKE IS 2:1 DILUTION
55		01PS	
56		5302124 02	
57	CCV 6		
58	CCB 6		
59	~~5302039 01~~	PBW	
60	01D	5302039 01	REACTIVITIES
61	02	01D	
62	03	02	
63	JD 2-17-93 04	03	
64	05	04	
65	~~CCV~~	05	
66	~~CCB~~	CCV 7	
67		CCB 7	
68	H		
69	L		
70	L		
71	G		
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			

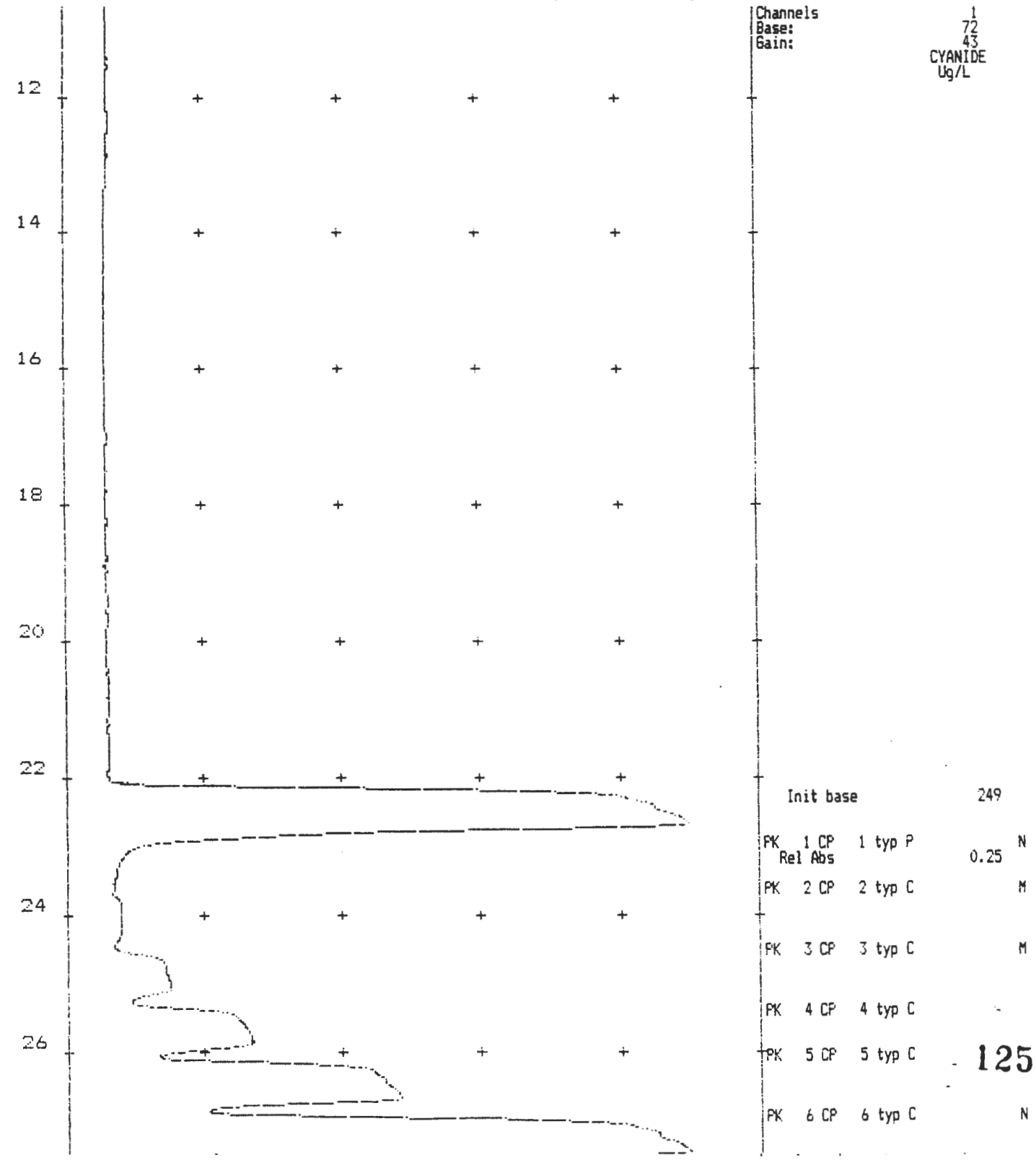

TRAACS 800 Calibration Curve
B:9304801.CHR analy. 1
CYANIDE
Corr Peak Height
80
70
60
50
40
30
20
10
0
0.0
100.0
200.0
300.0
400.0
Ug/L

9613492.6463

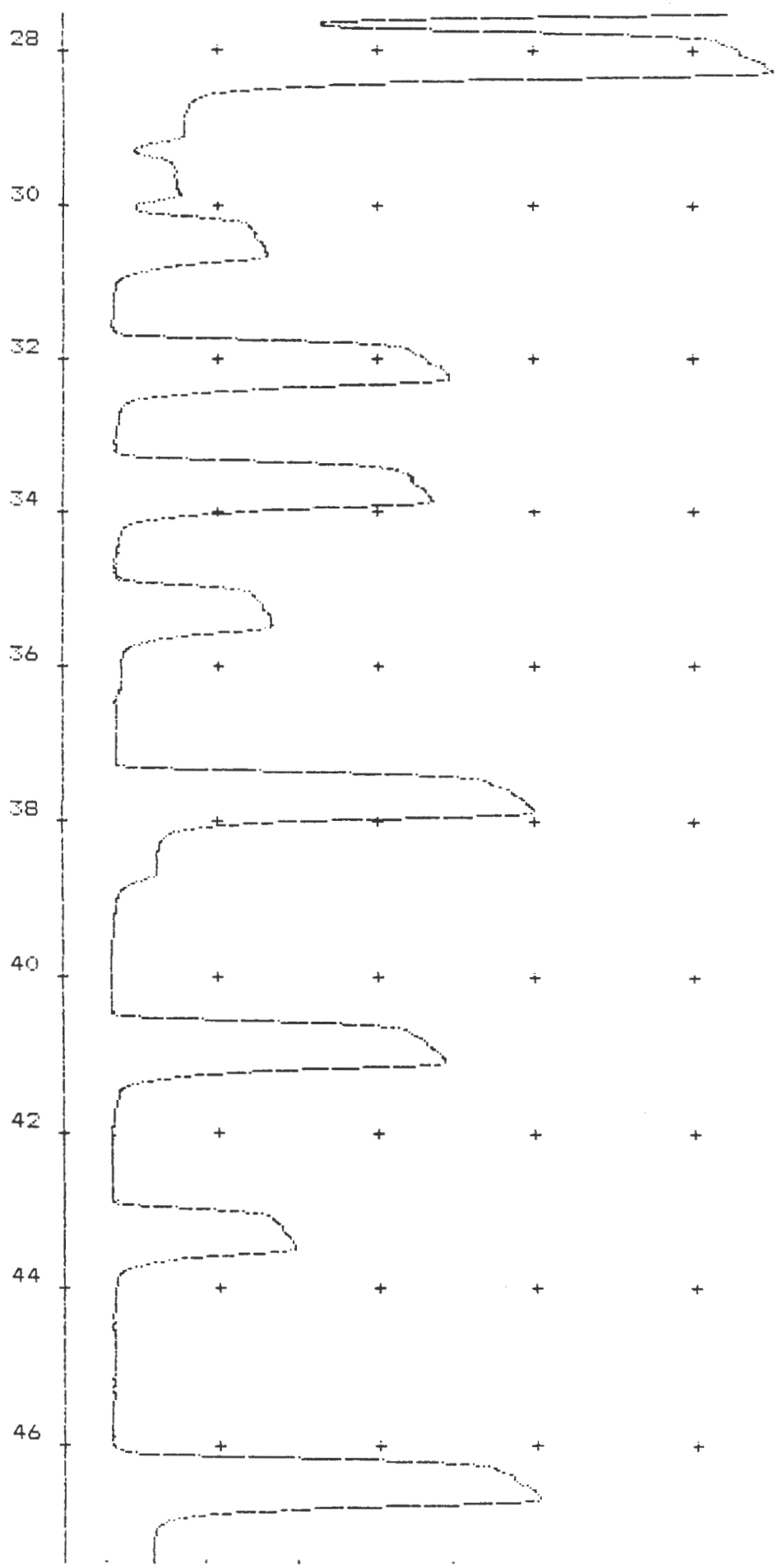
Time: 18:31; Date: 02-17-93
Operator: DUFFY

Comment: CYANIDE AT SEVENTY FIVE SAMPLES PER HOUR

There are 15804416 (bytes) free on disk.
File B:9304801.CHR will take approximately 11568 (bytes).

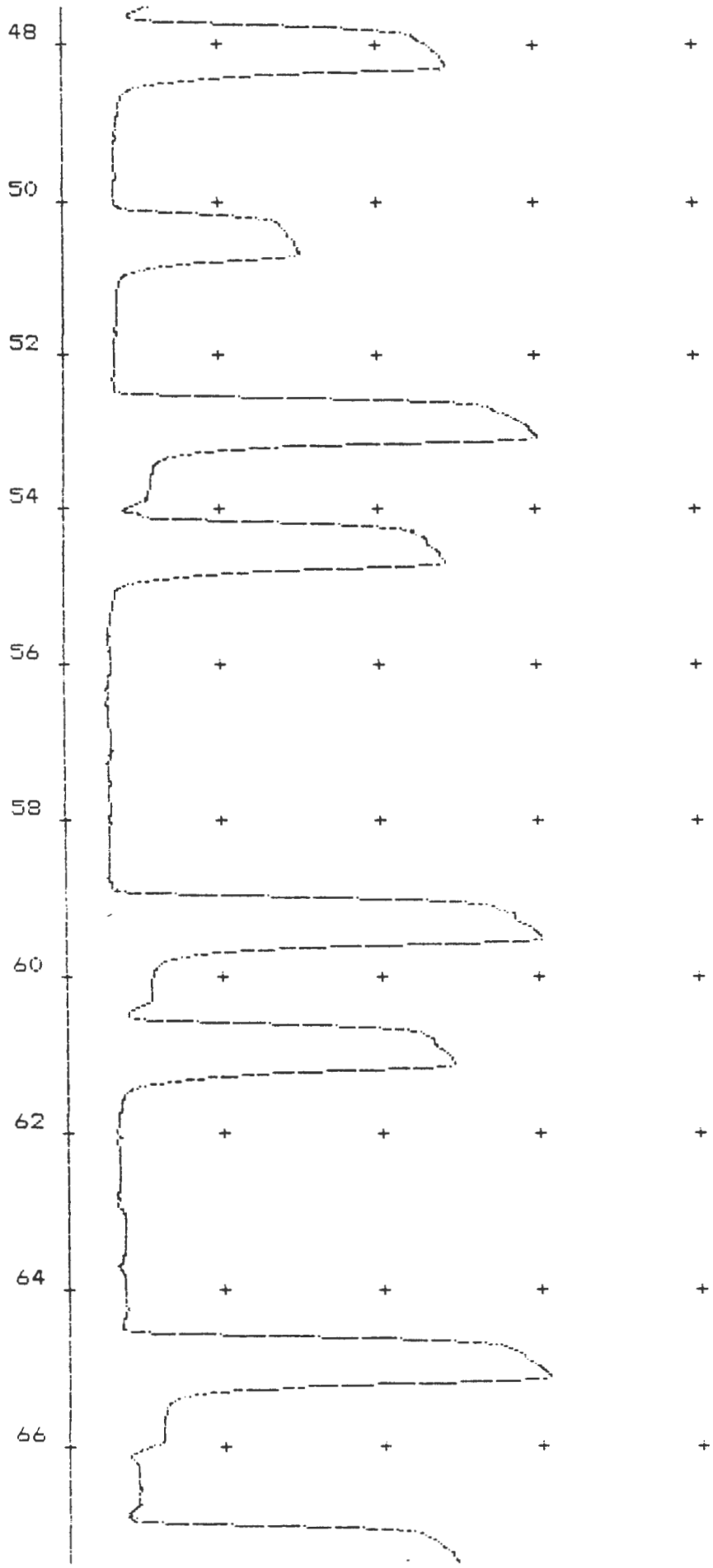


9613492.6464



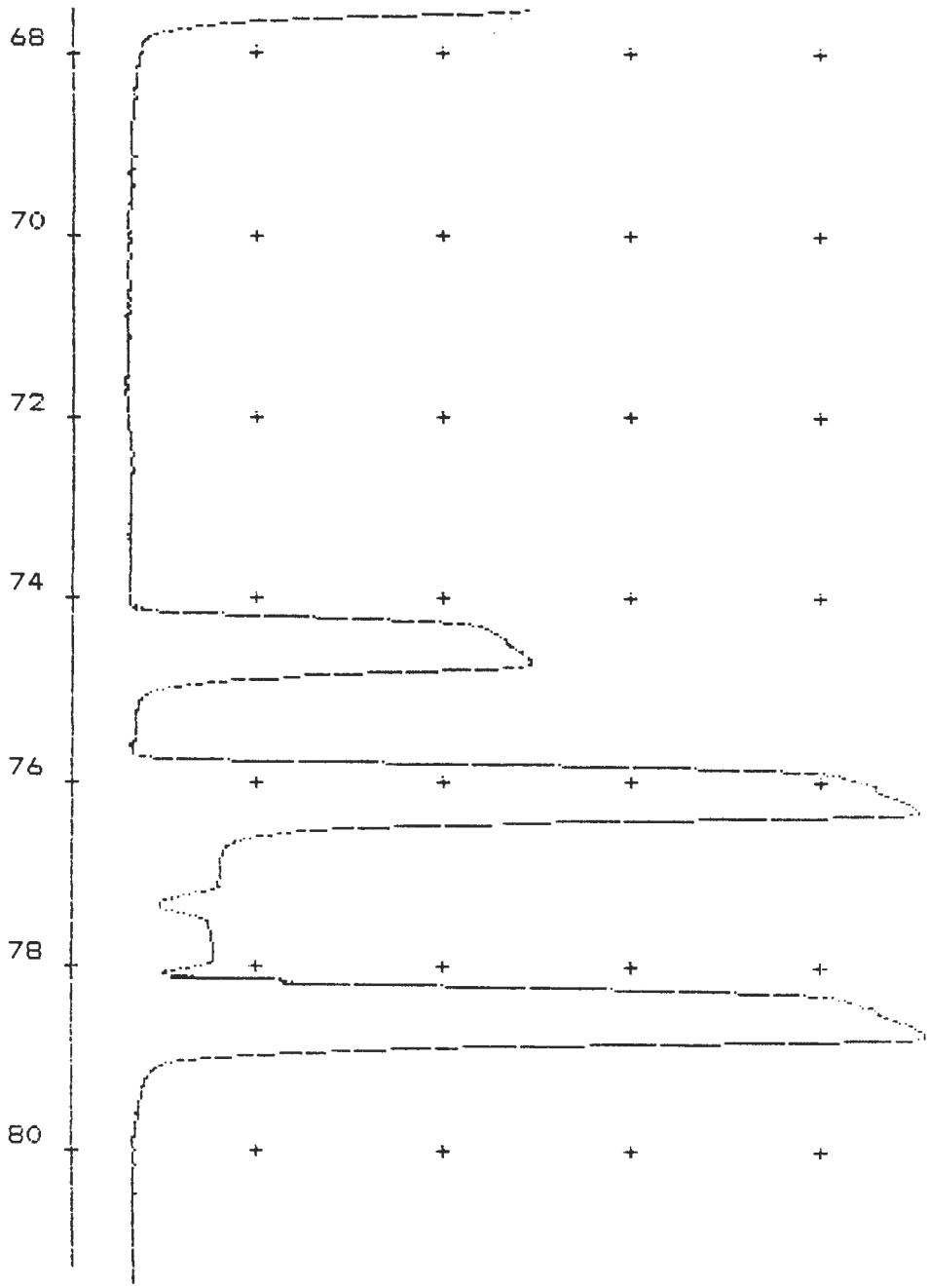
PK	7 CP	7 typ C		399.3 N
PK	8 CP	8 typ H		401.4 N
PK	9 CP	9 typ L		44.02
PK	10 CP	10 typ L		41.09
PK	11 CP	11 typ S		93.98
PK	12 CP	12 typ S		0.1662 M
PK	13 CP	13 typ S		205.7 N
PK	14 CP	14 typ S		1.808 M
PK	15 CP	15 typ S		195.1 N
PK	16 CP	16 typ S		1.573 M
PK	17 CP	17 typ S		96.56
PK	18 CP	18 typ S		5.209 M
PK	19 CP	19 typ S		2.981 M
PK	20 CP	20 typ S		256.9 N
PK	21 CP	21 typ S		27.14
PK	22 CP	22 typ S		0.4008 M
PK	23 CP	23 typ S		-0.5373 M
PK	24 CP	24 typ S		202.9 N
PK	25 CP	25 typ S		0.1662 M
PK	26 CP	26 typ S		-0.7719 M
PK	27 CP	27 typ S		109.9
PK	28 CP	28 typ S		0.5180 M
PK	29 CP	29 typ S		1.222 M
PK	30 CP	30 typ S		-0.4201 M
PK	31 CP	31 typ S		258.8 N

9613492.6465



PK	32 CP	32 typ S		23.85
PK	33 CP	33 typ S		204.1 N
PK	34 CP	34 typ S		2.394 M
PK	35 CP	35 typ S		0.8698 M
PK	36 CP	36 typ S		113.9
PK	37 CP	37 typ S		1.691 M
PK	38 CP	38 typ S		0.6353 M
PK	39 CP	39 typ S		258.1 N
PK	40 CP	40 typ S		20.57 M
PK	41 CP	41 typ S		202.3 N
PK	42 CP	42 typ S		-1.944 M
PK	43 CP	43 typ S		-4.055 M
PK	44 CP	44 typ S		-1.944 M
PK	45 CP	45 typ S		-2.883 M
PK	46 CP	46 typ S		-3.703 M
PK	47 CP	47 typ S		259.1 N
PK	48 CP	48 typ S		20.69 M
PK	49 CP	49 typ S		205.7 N
PK	50 CP	50 typ S		0.9871 M
PK	51 CP	51 typ S		0.5180 M
PK	52 CP	52 typ S		4.036 M
PK	53 CP	53 typ S		5.091 M
PK	54 CP	54 typ S		261.5 N
PK	55 CP	55 typ S		27.25
PK	56 CP	56 typ S		12.13 M

9613492.6166



PK	57 CP	57 typ S		205.1 N
PK	58 CP	58 typ S		2.629 M
PK	59 CP	59 typ S		-0.7719 M
PK	60 CP	60 typ S		-1.593 M
PK	61 CP	61 typ S		-1.593 M
PK	62 CP	62 typ S		-2.765 M
PK	63 CP	63 typ S		-1.006 M
PK	64 CP	64 typ S		-0.3028 M
PK	65 CP	65 typ S		-0.1855 M
PK	66 CP	66 typ S		206.9 N
PK	67 CP	67 typ S		2.042 M
PK	68 CP	68 typ H		404.1 N
PK	69 CP	69 typ L		45.43
PK	70 CP	70 typ L		42.73
PK	71 CP	71 typ G		407.2 N
Last base				269

Time: 18:31; Date: 02-17-93
Operator: DUFFY

Comment: CYANIDE AT SEVENTY FIVE SAMPLES PER HOUR

Channels	1
Base:	72
Gain:	43

CYANIDE
Ug/L

Base drift correction made
Carryover correction made
Gain drift correction made
Init base 249

9613492.6467

	PK	1	CP	1	typ	P	401.7	N	
	Rel	Abs					0.25		
	PK	2	CP	2	typ	C	0.4626	M	
	PK	3	CP	3	typ	C	7.735	M	
	PK	4	CP	4	typ	C	42.36		
	PK	5	CP	5	typ	C	98.82		
	PK	6	CP	6	typ	C	202.1	N	
	PK	7	CP	7	typ	C	399.0	N	
	PK	8	CP	8	typ	H	399.4	N	
	PK	9	CP	9	typ	L	41.33		
	PK	10	CP	10	typ	L	41.22		
8:38:30	PK	11	CP	11	typ	S	94.13		ICV
8:39:15	PK	12	CP	12	typ	S	-0.2197	M	ICB
8:40:00	PK	13	CP	13	typ	S	206.1	N	CCV 1
8:40:45	PK	14	CP	14	typ	S	0.4650	M	CCB 1
	PK	15	CP	15	typ	S	195.3	N	DIST STD
	PK	16	CP	16	typ	S	0.2525	M	PBS
	PK	17	CP	17	typ	S	96.68		LCSS
	PK	18	CP	18	typ	S	4.608	M	MABH 20
	PK	19	CP	19	typ	S	3.080	M	200
	PK	20	CP	20	typ	S	256.5	N	20 S 2x = 513
	PK	21	CP	21	typ	S	25.12		20 PS
	PK	22	CP	22	typ	S	0.2335	M	21
	PK	23	CP	23	typ	S	-0.5206	M	22
18:48:15	PK	24	CP	24	typ	S	202.4	N	CCV 2
18:49:00	PK	25	CP	25	typ	S	-1.497	M	CCB 2
	PK	26	CP	26	typ	S	-0.8465	M	PBS
	PK	27	CP	27	typ	S	109.4		CVCSF
	PK	28	CP	28	typ	S	-0.4986	M	BOSON 1
	PK	29	CP	29	typ	S	1.042	M	0
	PK	30	CP	30	typ	S	-0.6294	M	20
	PK	31	CP	31	typ	S	257.4	N	0 S 2x = 514.8
	PK	32	CP	32	typ	S	21.41		0 PS
18:55:00	PK	33	CP	33	typ	S	202.5	N	CCV 3
18:55:45	PK	34	CP	34	typ	S	0.4306	M	CCB 3
	PK	35	CP	35	typ	S	0.4877	M	PBS
	PK	36	CP	36	typ	S	112.8		CLCSS
	PK	37	CP	37	typ	S	0.3538	M	BOTK 05
	PK	38	CP	38	typ	S	0.1658	M	D
	PK	39	CP	39	typ	S	255.9	N	S 2x = 511.8
	PK	40	CP	40	typ	S	17.86	M	PS
19:01:00	PK	41	CP	41	typ	S	200.1	N	CCV 4
19:01:45	PK	42	CP	42	typ	S	-4.113	M	CCB 4
	PK	43	CP	43	typ	S	-4.616	M	PBW
	PK	44	CP	44	typ	S	-2.536	M	BOTK04
	PK	45	CP	45	typ	S	-3.513	M	MLO
	PK	46	CP	46	typ	S	-4.350	M	MLO D
	PK	47	CP	47	typ	S	256.0	N	MLO S 2x = 512
	PK	48	CP	48	typ	S	17.68	M	MLO PS
19:07:00	PK	49	CP	49	typ	S	202.8	N	CCV 5
19:07:45	PK	50	CP	50	typ	S	-1.478	M	CCB 5
	PK	51	CP	51	typ	S	-0.3517	M	PBW
	PK	52	CP	52	typ	S	3.102	M	BOS2X6
	PK	53	CP	53	typ	S	4.087	M	D
	PK	54	CP	54	typ	S	257.7	N	S 2x = 515.4
	PK	55	CP	55	typ	S	23.90		PS
	PK	56	CP	56	typ	S	10.76	M	101 GRAB
19:13:00	PK	57	CP	57	typ	S	201.6	N	CCV 6
19:13:45	PK	58	CP	58	typ	S	-0.09760	M	CCB6
	PK	59	CP	59	typ	S	-1.887	M	PBW

	PK	60	CP	60	typ	S	-2.702	M CU SLUDGE TANK 1 ↓ D
	PK	61	CP	61	typ	S	-2.726	M
	PK	62	CP	62	typ	S	-3.913	M CU SLUDGE TANK 2
	PK	63	CP	63	typ	S	-2.199	M DEMISTER
	PK	64	CP	64	typ	S	-1.549	M CU TANK 1 LINER
	PK	65	CP	65	typ	S	-1.470	M VENT AFTER DEMISTER
5:15:45	PK	66	CP	66	typ	S	202.6	N CCU7
5:26:30	PK	67	CP	67	typ	S	-0.9691	M CC87
	PK	68	CP	68	typ	H	396.8	N H
	PK	69	CP	69	typ	L	40.15	L
	PK	70	CP	70	typ	L	40.28	L
	PK	71	CP	71	typ	G	399.0	N G
	Last base						269	

Sample statistics

Anal	level	cups	avg	std dev	cv
1	all	57	59.69	94.2	158%

Anal 1: linear fit
Carryover factor: 0.80%.

Chart saved to file B:9304801.CHR.

text file B:9304801.TXT has been saved to disk.

9613492.6469

WESTINGHOUSE/HANFORD

14

ANALYSIS RUN LOG

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-D0-0108

Lab Code: SKINER Case No.: N3-02-059SAS No.: SDG No.: B07K04

Instrument ID Number: M1 Method: CV

Start date: 02/19/93 End date: 02/19/93

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN	BI
S0	1.00	1500																X										
S0.2	1.00	1503																X										
S0.5	1.00	1506																X										
S1.0	1.00	1509																X										
S2.0	1.00	1512																X										
S5.0	1.00	1515																X										
ICV	2.00	1521																X										
ICB	1.00	1524																X										
CCV	1.00	1527																X										
CCB	1.00	1530																X										
ZZZZZZ	1.00	1533																										
ZZZZZZ	1.00	1536																										
PBW	1.00	1539																X										
B07K04	1.00	1542																X										
B07ML0	1.00	1545																X										
B07ML0D	1.00	1548																X										
B07ML0S	1.00	1551																X										
CCV	1.00	1554																X										
CCB	1.00	1557																X										

034

9613492.6470

C L P M E T A L S 3.03a

S302131--MERCURY

Run id: M1 9305006
TECHNICON MERCURY ANALYZER (#SS4199A-D)
Analytical method: CV
Element: Hg

Acquired: 02/19/93 by MAS
Crunched: 03/02/93 by SRP
Time: 1248
Processing protocol: 3/90

Pos	Sample	Code	Preparation Meth	Batch	Date	Client ID	Date	Time
1	0 PPB	WS0	CV			S0	02/19/93	15:00
2	0.2 PPB	WS1	CV			S0.2	02/19/93	15:03
3	0.5 PPB	WS2	CV			S0.5	02/19/93	15:06
4	1.0 PPB	WS3	CV			S1.0	02/19/93	15:09
5	2.0 PPB	WS4	CV			S2.0	02/19/93	15:12
6	5.0 PPB	WS5	CV			S5.0	02/19/93	15:15
7	ICV-5	ICV	CV			ICV	02/19/93	15:21
8	CAL BLK	ICB	CV			ICB	02/19/93	15:24
9	2 PPB	CCV	CV			CCV	02/19/93	15:27
10	CAL BLK	CCB	CV			CCB	02/19/93	15:30
11	X	X	CV			ZZZZZZ	02/19/93	15:33
12	X	X	CV			ZZZZZZ	02/19/93	15:36
13	PB	PBW	CV	1408	02/19/93	PBW	02/19/93	15:39
14	S302131-01	S	CV	1408	02/19/93	B07K04	02/19/93	15:42
15	S302131-02	S	CV	1408	02/19/93	B07ML0	02/19/93	15:45
16	S302131-02	S2	CV	1408	02/19/93	B07ML0D	02/19/93	15:48
17	S302131-02	DS	CV	1408	02/19/93	B07ML0S	02/19/93	15:51
18	2 PPB	CCV	CV			CCV	02/19/93	15:54
19	CAL BLK	CCB	CV			CCB	02/19/93	15:57

9613492.6471

Copy MBHP03/
Original is filed in CSF 19461

TMA/Skinner & Sherman Labs
MERCURY BENCH SHEET

SEQ NO: 532
RUN IDS: 930500 5 06 07
Reviewed SRP 3/2/93
Pg 1 of 1

ANALYST MS
INSTR: M1(water)
METHOD: HG
WAVELENGTH 253.7 mm

CALIBRATION TIME 15:00

RUN DATE 2/19/93
STANDARDS PREPPED DATE: 2/19/93
STANDARD SOURCE CALIB: 10ppm Hg 290930
ICV: ICV-5-24 CCV: 2 ppb

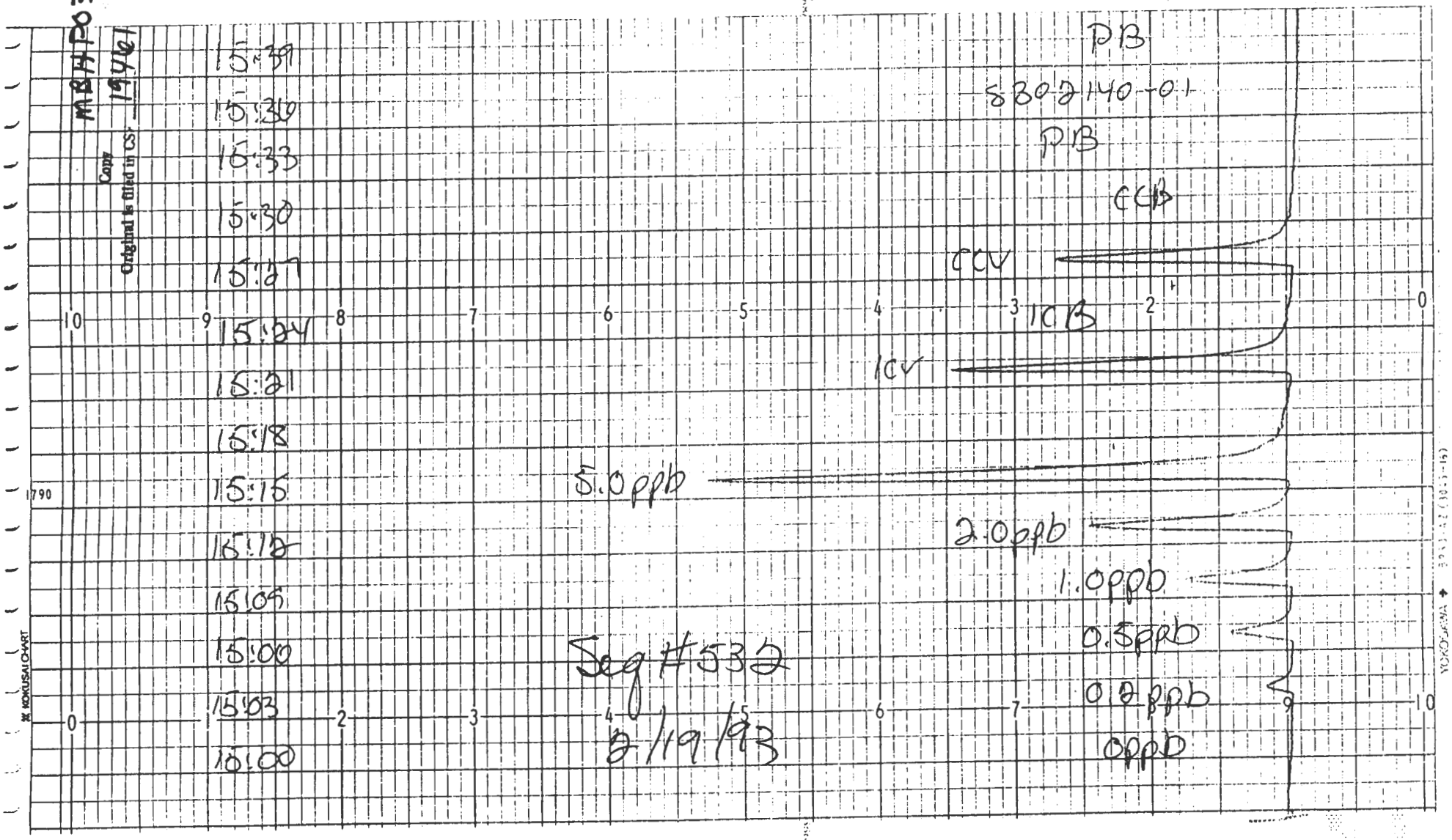
		PK HT(mm)
01	BLANK	0
02	0.2 PPB	5
03	0.5 PPB	12
04	1.0 PPB	20
05	2.0 PPB	38
06	5.0 PPB	107

r=0.9985 ✓

	SAMPLE ID	CLIENT ID	PK HT(mm)	CONC(ppb)	COMMENT
07	ICV-5	ICV	62	2.95	
08	CAL BLK	ICB	0	0.02	
09	2 PPB	CCV	43	2.05	
10	CAL BLK	CCB	0	0.02	
11	PB				
12	S302140-02MBHP06				
13	PB				
14	S302131-01	B07K04			
15	02	M60			
16	02D	M60D			
17	025	M60S	17	0.82	
18	CCV		44	2.10	
19	CCB		0	0.02	
20	PB				
21	S302141-01	MDEJ55			
22	02	63			
23	02D	63D			
24	025	63S	9	0.44	
25	03	83	0	0.02	
26	04	84	64	3.04	
27	05	85	0	0.02	
28	CCVPB		49	2.33	
29	CCB S302137-01	B082X8	0	0.02	
30	CCV	MS 2/19/93	17	0.82	
31	CCB		50	2.37	
32	01D	B082X8D	0	0.02	
33	01S	X8S			
34					
35					
36					
37					
38					
39					

025 CCV
CCB

Revised 07/92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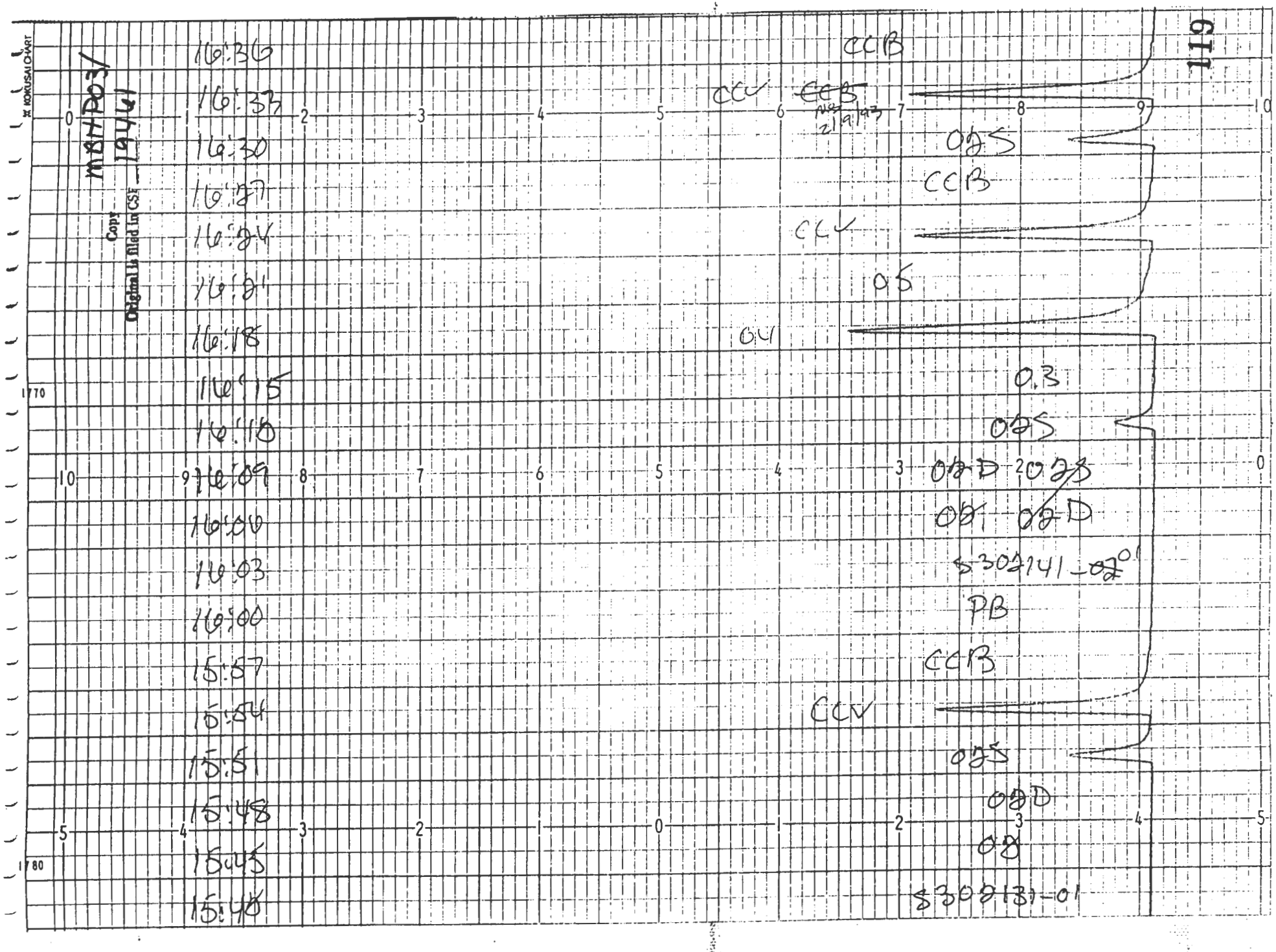
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S302141-01
PB
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CCV
OZS
OZD
OZ
S302131-01

9613492.6474

SAMPLE PREPARATION REPORT: AQUEOUS

Prep batch: 1408
Printed by SRP

Date: 02/25/93
Approved: SRP

pH AS RECEIVED

Sample ID	Lab code	pH	pH(CN)
S302131-01	S	2.0	12.0
S302131-02	S	2.0	12.0
S302131-02	S2	2.0	12.0

Prep code A (Flame AA)

Client ID	Sample ID	Lab Code	Initial vol, ml	Final vol.ml	Date Prep.	Ana-lyst	Overall Dilution
	CLCSPW	LCSW	100	100	02/18/93 0800	SRP	1.00
	PB	PBW	100	100	02/18/93 0800	SRP	1.00
B07K04	S302131-01	S	100	100	02/18/93 0800	SRP	1.00
B07ML0S	S302131-02	DS	100	100	02/18/93 0800	SRP	1.00
B07ML0	S302131-02	S	100	100	02/18/93 0800	SRP	1.00
B07ML0D	S302131-02	S2	100	100	02/18/93 0800	SRP	1.00

Prep code CA (Midi cyanide)

Client ID	Sample ID	Lab Code	Initial vol, ml	Final vol.ml	Date Prep.	Ana-lyst	Overall Dilution
	PB	PBW	50	50	02/16/93 0800	SRP	1.00
B07K04	S302131-01	S	50	50	02/16/93 0800	SRP	1.00
B07ML0S	S302131-02	DS	50	50	02/16/93 0800	SRP	1.00
B07ML0	S302131-02	S	50	50	02/16/93 0800	SRP	1.00
B07ML0D	S302131-02	S2	50	50	02/16/93 0800	SRP	1.00

Prep code CV (Mercury)

Client ID	Sample ID	Lab Code	Initial vol, ml	Final vol.ml	Date Prep.	Ana-lyst	Overall Dilution
	PB	PBW	100	100	02/19/93 0800	SRP	1.00
B07K04	S302131-01	S	100	100	02/19/93 0800	SRP	1.00
B07ML0S	S302131-02	DS	100	100	02/19/93 0800	SRP	1.00
B07ML0	S302131-02	S	100	100	02/19/93 0800	SRP	1.00
B07ML0D	S302131-02	S2	100	100	02/19/93 0800	SRP	1.00

9613492.6475

SAMPLE PREPARATION REPORT: AQUEOUS

Prep batch: 1408
Printed by SRP

Date: 02/25/93
Approved: SRP

Prep code F (Furnace)

Client ID	Sample ID	Lab Code	Initial vol, ml	Final vol,ml	Date Prep.	Ana-lyst	Overall Dilution
	CLCSFW	LCSW	100	100	02/18/93 0800	SRP	1.00
	PB	PBW	100	100	02/18/93 0800	SRP	1.00
B07K04	S302131-01	S	100	100	02/18/93 0800	SRP	1.00
B07ML05	S302131-02	DS	100	100	02/18/93 0800	SRP	1.00
B07ML0	S302131-02	S	100	100	02/18/93 0800	SRP	1.00
B07ML0D	S302131-02	S2	100	100	02/18/93 0800	SRP	1.00

Prep code P (ICP)

Client ID	Sample ID	Lab Code	Initial vol, ml	Final vol,ml	Date Prep.	Ana-lyst	Overall Dilution
	CLCSPW	LCSW	100	100	02/18/93 0800	SRP	1.00
	PB	PBW	100	100	02/18/93 0800	SRP	1.00
B07K04	S302131-01	S	100	100	02/18/93 0800	SRP	1.00
B07ML05	S302131-02	DS	100	100	02/18/93 0800	SRP	1.00
B07ML0	S302131-02	S	100	100	02/18/93 0800	SRP	1.00
B07ML0D	S302131-02	S2	100	100	02/18/93 0800	SRP	1.00

DATE 2/18/93 ANALYST HE FOR GFAA/ICP WATERS PREP LOG

DATE _____ ANALYST _____ FOR MERCURY PREP BATCH # 408 REVIEWED BY KJ 2/18/93

Thermo Analytical/ SKINNER & SHERMAN

LCS SOURCE		Digest 1 (GFAA)		Digest 2 (ICP)			Digest 3 (Hg)	Description Color Clarity
Client ID	Lab ID	Initial Vol(ml)	Final Vol(ml)	Initial Vol(ml)	Final Vol(ml)	pH	Initial Vol(ml)	
B07K04	S302131-01	100	100	100	100	2.0		Colorless, clear
B07MLO	02							
D	02:S2							
S	02:D1							
	C-LCSW							
	MB							

Page 1

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TMA/SKINNER & SHERMAN LABORATORIES
MERCURY PREPARATION LOG

DATE 2/19/93

PREPARED BY NS

S302131

WORK ORDER

SKINNER & SHERMAN ID	CLIENT ID	INITIAL VOL (ML)	INITIAL WT (GM)	FINAL VOL (ML)	COMMENTS
PB				100	
LCSHG	LCSS	XXXX			
S302131-01	B07K04	100		100	
02	M60				
02D	M60D				
03S	M60S				

REVIEWED BY: [illegible] 2/20/93

PAGE: 072

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9613492.6478

S302131

Radio

CYANIDE MIDI-DISTILLATION LOG

Case No. Commercial DATE RECEIVED 2-11-93 Analyst(s) RB
SDG No. Hanford Nuc DATE DISTILLED 2-16-93 Approval [illegible]

WATER SAMPLE	CLIENT ID (EPA)	VOLUME USED	pH
PREP BLANK	PBW	50 ml	--
S302131-01	B07K04	50ml	12
02	B07M60	↓	↓
02D	↓	↓	↓
02S	↓	↓	↓

SOIL/SOLID SAMPLE ID	CLIENT ID (EPA)	WET WT
PREP BLANK	PBS	1.00 g
LCSS	LCSS	1.00 g

NOTE: FINAL DISTILLATE VOLUME IS 50 ml

DISTILLED STANDARD IS 10 UG OR 200 UG/L

ICV-6: EMSL-LV: VOLUME USED 0.5 ml: TRUE VALUE = 94 UG/L

S2 = DUPLICATE SAMPLE DS = MATRIX SPIKE 25 UG CN

INTERFERENCE CHECKS

* SAMPLE EXHIBITS CHLORINE ODOR
DOES POTASSIUM IODIDE-STARCH PAPER TEST BLUE? No
IF YES, ADD ASCORBIC ACID CRYSTALLS AND DISTILL.

** DISTILLATE IS CLOUDY
IS LEAD ACETATE PAPER DISCOLORED (INDICATES SULFIDE)? No
IF YES, TREAT WITH CADMIUM CARBONATE AND ANALYZE.

COMMENTS:

TMA/Skinner & Sherman Labs

9613492.6479

(1)

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: STANDARD B

DATE PREPARED: 1/27/93
PREPARED BY: JST

FINAL VOLUME: 1000 ml

MATRIX: 1 %HNO3
5 %HCl
___ Other

MLS ADDED: 10 HNO3
50 HCl
___ Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
reprepped 2/1/93 JST					
reprepped 2/10/93 JST					

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

9613492.6480

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

(2)

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: STANDARD 1

DATE PREPARED: 2/7/93
PREPARED BY: [illegible]

FINAL VOLUME: 1000 ml

MATRIX: 1 %HNO3
5 %HCl
___ Other

MLS ADDED: 10 HNO3
50 HCl
___ Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
Sb	MVSb-3		1000 ppm	5 ml	5 ppm
As	HPAS-3		1000 ppm	5 ml	5 ppm
Ba	HPBa-1		1000 ppm	5 ml	5 ppm
Be	HPBe-1		1000 ppm	1 ml	1 ppm
Cd	HPCd-1		1000 ppm	5 ml	5 ppm
Cr	HPCr-1		1000 ppm	5 ml	5 ppm
Co	HPCo-1		1000 ppm	5 ml	5 ppm
Cu	HPCu-1		1000 ppm	5 ml	5 ppm
Pb	HPPb-1		1000 ppm	5 ml	5 ppm
Mn	MVMn-3		1000 ppm	5 ml	5 ppm
Ni	MVNi-3		1000 ppm	5 ml	5 ppm
Se	HPSe-1		1000 ppm	5 ml	5 ppm
Tl	HPTl-1		1000 ppm	5 ml	5 ppm
V	HPV-1		1000 ppm	5 ml	5 ppm
Zn	HPZn-1		1000 ppm	5 ml	5 ppm
Ti	HPTi-1		1000 ppm	5 ml	5 ppm

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SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

9613492.6481

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

(3)

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: STANDARD 2

DATE PREPARED: 2/1/93
PREPARED BY: JST

FINAL VOLUME: 1000 ml

MATRIX: 2 %HNO3
___%HCl
___Other

MLS ADDED: 20 HNO3
___HCl
___Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
Ag			1000 ppm	1 ml	1.0 ppm

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

9613492.6482

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

(4)

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: STANDARD 3

DATE PREPARED: 2/7/93
PREPARED BY: [illegible]

FINAL VOLUME: 1000 ml

MATRIX: 1 %HNO3
5 %HCl
___Other

MLS ADDED: 10 HNO3
50 HCl
___Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
AL	HPAL-1		10,000ppm	5 ml	50 ppm
Ca	HPCa-1		10,000ppm	5 ml	50 ppm
Fe	HPFe-1		10,000 ppm	2 ml	20 ppm
Mg	HPMg-1		10,000ppm	5 ml	50 ppm
K	HPK-1		10000ppm	5.0 ml	50 ppm
Na	HPNa-1		10000ppm	5.0 ml	50 ppm

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

9613492.6483

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: CICV-1

DATE PREPARED: 2/11/93
PREPARED BY: SRP

FINAL VOLUME: 500 ml

MATRIX: 2 %HNO3
___%HCl
___Other

MLS ADDED: 10 HNO3
___HCl
___Other

ELEMENT	SOURCE LOT#	STOCK CONC	VOLUME	FINAL CONC
	CICVI-01		5.0 mls	

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

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SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: Commercial Interferent Checks

DATE PREPARED: 2/11/93
PREPARED BY: SRP

FINAL VOLUME: 500 ml

MATRIX: 2 %HNO3
___%HCl
___Other

MLS ADDED: 10 HNO3
___HCl
___Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
a) INTA1	INT-A1			50 ml	
b) INTAB1	INT-A1			50 ml	
	INT-B1			5 ml	

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

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7A

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: 2X CONTRACT REQUIRED DETECTION LIMIT SOLUTION P2

DATE PREPARED: 2/9/93
PREPARED BY: JST

FINAL VOLUME: 1000 ml

MATRIX: 1 %HNO3
5 %HCl
___ Other

MLS ADDED: 10 HNO3
50 HCl
___ Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
Sb	MVSb-3		1000 PPM	120 ul	120 PPb
As	HPAs-2		1000 PPM	30 ul	30 PPb
Be	HPBe-1		1000 PPM	10 ul	10 PPb
Cd	HPCd-1		1000 PPM	10 ul	10 ppb
Cr	HPCr-1		1000 PPM	20 ul	20 ppb
Co	HPCo-1		1000 PPM	100 ul	100 ppb
Cu	HPCu-1		1000 PPM	50 ul	50 ppb
Pb	HPPb-1		1000 PPM	30 ul	30 PPb
Mn	MVMn-3		1000 PPM	30 ul	30 ppb
Ni	MVNi-3		1000 PPM	80 ul	80 ppb
Se	HPSe-1		1000 PPM	100 ul	100 ppb
V	HPV-1		1000 PPM	100 ul	100 ppb
Tl	HPTl-1		1000 PPM	500 ul	500 ppb
Ag	HPAg-1		1000 PPM	20 ul	20 ppb
Zn	HPZn-1		1000 PPM	40 ul	40 ppb
Ti	HPTi-1		1000 PPM	100 ul	100 ppb
Sr	MVSr-3		1000 PPM	400 ul	400 ppb
Mo	MVMo-3		1000 PPM	400 ul	400 ppb
Sn	MVSn-2		1000 PPM	400 ul	400 ppb
Li	MVLi-3		1000 PPM	200 ul	200 ppb

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

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(BOOK# - PAGE#)

9613492.6486

7B

SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: 2X CONTRACT REQUIRED DETECTION LIMIT SOLUTION P1

DATE PREPARED: 2/9/93
PREPARED BY: JST

FINAL VOLUME: 1000 ml

MATRIX: 1 %HNO3
5 %HCl
___ Other

MLS ADDED: 10 HNO3
50 HCl
___ Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
Sb			1000 ppm	120 ul	120 ppb
As			1000 ppm	40 ul	40 ppb
Be			1000 ppm	10 ul	10 ppb
Cd			1000 ppm	10 ul	10 ppb
Cr			1000 ppm	20 ul	20 ppb
Co			1000 ppm	100 ul	100 ppb
Cu			1000 ppm	50 ul	50 ppb
Pb			1000 ppm	30 ul	30 ppb
Mn			1000 ppm	30 ul	30 ppb
Ni			1000 ppm	80 ul	80 ppb
Se			1000 ppm	100 ul	100 ppb
V			1000 ppm	100 ul	100 ppb
Tl			1000 ppm	500 ul	500 ppb
Ag			1000 ppm	20 ul	20 ppb
Zn			1000 ppm	40 ul	40 ppb
Ti			1000 ppm	100 ul	100 ppb
Sr			1000 ppm	400 ul	400 ppb
Mo			1000 ppm	400 ul	400 ppb
Sn			1000 ppm	400 ul	400 ppb
Li			1000 ppm	200 ul	200 ppb

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

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(BOOK# - PAGE#)

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SKINNER AND SHERMAN LABORATORIES, INC
SUBSIDIARY OF THERMO ANALYTICAL, INC.

(8)

STANDARD PREPARATION LOG
++++++++++++++++++++++++

STANDARD IDENTITY: Continuing Calibration Verification Solution (HalfSTD)

DATE PREPARED: 2/11/93
PREPARED BY: JST

FINAL VOLUME: 500 ml

MATRIX: 1 %HNO3
5 %HCl
___Other

MLS ADDED: ___HNO3
___HCl
___Other

ELEMENT	SOURCE	LOT#	STOCK CONC	VOLUME	FINAL CONC
STD1	In House			250 ml	500 ml
STD3	In House			250 ml	
Ag			1000 ppm	250 ul	

SOURCES: S=Spex F=Fisher B=Baker R=Ricca O=Other (identify)

TMA/SKINNER & SHERMAN LABORATORIES, INC.
STANDARDS TRACKING LOG BOOK -- SECTION 2
STANDARD PREPARATION LOG

STANDARD IDENTITY Hg Working Standard

DATE PREPARED: PREPARED BY:

FINAL VOLUME: 100 ml

MATRIX: 2 %HNO3 ___ %HCL ___ Other

MLS ADDED: 2 HNO3 ___ HCl ___ Other

ELEMENT	SOURCE/LOT#	STOCK CONC	VOLUME ADDED	FINAL CONC
2/9/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/10/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/11/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/16/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/17/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/18/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—
2/19/93	Hg Lot #290930	10 ppm	1 ml	100 ppb
	Cr	5%	25 ml	—

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SOURCE: QC=USEPA ICV=USEPA MV=METALS VENTURES S=SPEX OTHER=IDENTIFY

ver 1.1 04/17/91

TMA/SKINNER & SHERMAN LABORATORIES, INC.
STANDARDS TRACKING LOG BOOK

STANDARDIZATIONS AND PREPARATION OF CYANIDE SOLUTIONS

Standization with 0.0192 N AgNO3 (1.0 mL = 1.0 mg CN)

SOURCE: ~~MALLINKRODT~~ KCN DATE RECEIVED: 5-1-90 DATE OPENED: 5-1-90 LOT#: C689KD56

Date 1-29-93 By JD

	Volume of Stock Solution Titrated	Volume AgNO3 Required	
	10 ml ≈ 1000 ppm STOCK	8.20	18.20
Calculation	$\frac{8.20}{10} = 0.8200$ $\frac{10}{.82} = 12.195$	0.00	10.000
		8.20	8.20

Volume of stock solution required for 10 mg CN is 12.195 mL.

Calibration Standards: Add 10 mL of 1.25 N NAOH solution to each of the required number of 50 mL volumetric flasks. Add quantities of the 5 ug/mL CN standard solution as listed below and dilute to volume.

Standard Solution in mLs	Micrograms CN	ug/L CN
0	0.0 (blank)	0
0.1	2.5	10
0.2	5.0	20
0.4	10.0	40
1.0	25.0	100
2.0	50.0	200
4.0	100.0	400

Preparation of Dilute Standards

Standard ID	Date	By		Concentration mg/L CN	Preparation Information
INT STD	1-29-93	JD		50 ppm	12.195 ml CN5 STOCK in 200 ml
WORKING STD	↓	↓		5 ppm	20.00 ~~10.00 ml~~ 50 ppm in 200 ml
CAL STDS			FOR	5301123, 5301125,	JD 1-29-93 5301112
CAL STDS	2-1-93	JD	FOR	5301102, 5301120	
CAL STDS	2-2-93	JD	FOR	5301127, 5301154, 5301156	
CAL STDS	2-3-93	JD	FOR	5301135, 5301118, 5301176, 5301157	
CAL STDS	2-8-93	JD	FOR	5302001, 5302023 5302027 5301150 5301181 5302025	
CAL STDS	2-9-93	JD	FOR	5302047 5302032 5301182	
CAL STDS	2-10-93	JD	FOR	5302047 5302032 5301182	
↓	↓	↓	↓	5302028 5302026 5302015 5302017 5302052	
CAL STDS	2-11-93	JD	FOR	5302077 5302080 5302035 5302056 5302059	
CAL STDS	2-16-93	JD	FOR	5302089, 5302095 5302090 5302092	
CAL STDS	2-17-93	JD	FOR	5302097 5302133 5302132 5302131 5302135 5302121 5302039	

DOCUMENT #_____ ver 2.1 01/13/92

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Sampled 2/8/93

TMA/Skinner & Sherman Labs SAMPLE LOG-IN

WORKORDER S302131 CLIENT HANFORD NOR No. SAMPLES:

PROTCL CLP TURNARND 33 Day 2

COOLER TEMP: 5 oC, or NA (Soil) (Water) (Specify Other)

CUSTODIAN B. Powell SDG/BATCH N/A

CUSTODY SEAL: PRESENT/ABSENT/INTACT/NOT CLIENT CASE N302059

SHIPER & # Fed Ex PO/CONTRACT# ↓

TAGS: PRESENT/ABSENT/NA/SEE COC CONTACT D. SANCHEZ

CHAIN OF CUSTODY: PRESENT/ABSENT/NA, # N/A COMMENTS: none

SAMPLE CONTAINERS-INTACT/BROKEN COMMENTS

CLIENT COMMENT? YES/NO

SAMPLE LABELS AGREE WITH CHAIN OF CUSTODY INFO? YES/NO (COMMENT)

CLIENT PAPERWORK AGREES WITH SAMPLES & COC? YES/NO (COMMENT)

SHIPMENT DATES 2-11-93

LIST ANY DATE WITH PAPERWORK/SHIPMENT PROBLEMS & SPECIFY THE PROBLEM:

	CLIENT ID	MATRIX	RECEIVED	PH*	TEST(S) & QC	HOLD TIME UP
1	B07K04	Water	2-11-93	1.92/12.53	Tm/CN + Bismuth	
2	B07M00	↓	↓	1.89/12.49 D.S	↓	
3						
4						
5						
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27						

3/3/93 SK

Samples are from site known to have Rad-Contamination: YES ✓ NO

Samples have detectable amounts of Radioactive Material: YES NO ✓

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SUBCONTRACT: YES/NO, TO: DATE:

REVIEWED

Compete 2/16/93

* EPA/CLP required Rev 1.6 PAGE: 69 3P

9613492.6491

PAGE 1 TMA/Norcal CHAIN OF CUSTODY ORD # N3-02-059

RCVD: 02/10/93 DUE: 03/12/93 02/10/93 15:50:49 KEEP: 06/10/93 DISP: S

DASH	SAMPLE IDENTIFICATION	STORED	TESTS for FRACTIONS with work in DEPT: SU and CATEGORY				
01B-W	B07K04	S&S	WH007	WH008	WH010	WH011	WH075A
02B-S	B07K05	S&S	WH001	WH002	WH004	WH005	WH171A
02F-S	B07K05 MS	S&S	WH001	WH002	WH004	WH005	WH171A
02G-S	B07K05 DUP	S&S	WH001	WH002	WH004	WH005	WH171A
02H-S	L C S	S&S	WH001	WH002	WH004	WH005	WH171A
03B-W	B07ML0	S&S	WH007	WH008	WH010	WH011	WH075A
03F-W	B07ML0 MS	S&S	WH007	WH008	WH010	WH011	WH075A
03G-W	B07ML0 DUP	S&S	WH007	WH008	WH010	WH011	WH075A
03H-W	L C S	S&S	WH007	WH008	WH010	WH075A	

RELEASED BY	DATE	TRANSFERRED TO	DATE	RECEIVED BY	DATE
Yamamoto	2-10-93	Stimmer	2-10-93	[illegible]	2/11/93