N60478.AR.001424
NWS EARLE
5090.3a

SITE INVESTIGATION REPORT SUMMARY OF FINDINGS VOLUME 4 0F 4 NWS EARLE NJ
9/15/1994
ENVIRO-TECH, INC.

Item # 4

Box 1

Closure Report for:

C-2	MPL-1	554	5-53
C-8	MPL-2	555	
464	GB-1	566/1	
589	MA-2	567	

(6/20/94 Soil Samples)
UST 464

SITE INVESTIGATION REPORT
SUMMARY OF FINDINGS
for
UNITED STATES NAVAL WEAPONS STATION EARLE
Colts Neck, Monmouth County, New Jersey

September 15, 1994

VOLUME IV

Prepared for:

Tom Dunn
ROICC
NWS Earle
Colts Neck, New Jersey 07722-5025

Prepared by:

Enviro-Tech, Inc.
247 Main Street
Matawan, New Jersey

No. 9

June 20, 1994 Soil Samples
(UST 464)

464

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

ENVIRO-TECH, INC.
NJDEPE REDUCED PKG

PROJECT: EARLE AMMUNITION

LAB # AA24364-AA24369

NJDEPE Cert. #14622, CT Cert. #PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. #11408, NC Cert. #455

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

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VERITECH LABORATORY RESULTS

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SAMPLE KEY

ENVIRO-TECH NO.	VERITECH NO.
464-1	AA24364
464-2	AA24365
464-3	AA24366
464-4	AA24367
464-SP	AA24368
FIELD BLANK	AA24369

Enviro-Tech Inc.

Page ___ of ___

CHAIN-OF-CUSTODY RECORD

SAMPLER (Signature) [signature] Date Shipped _____ Carrier GDM

Phone 908-566-2277 Airbill No. _____ Cooler No. _____

SHIP TO:

ATTENTION: _____

SEND RESULTS TO:

Client Name _____

Company ENVIRO-TECH, INC.

Address 247 MAIN ST.
MATAWAN, NJ

Phone 908-566-2277

PROJECT NAME EARLE AMMO **PROJECT NO.** _____ **P.O. NO.** _____

Relinquished by: (Signature)	Received by: (Signature)	Date	Military Time
[signature]	Gerard D. Mezzo	6/21/94	1010 Hrs.
Relinquished by: (Signature)	Received by: (Signature)	Date	Military Time
Gerard D. Mezzo	A. Shah	6/21/94	1110
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Military Time
Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Military Time

ANALYSIS REQUEST

	Sample ID Number	Sample Description	Date/Time Sampled		Analysis Requested	Sample Condition Upon Receipt	
2	464-1	Soil	6/20/94	13:42	TPH*, VOTTO, XYLENE	Cool	AA24364
2	464-2			13:48			24365
2	464-3			13:53			24366
2	464-4			14:00			24367
2	464-SP			14:10			24368
3	FIELD BLANK	AQUEOUS		13:40			24369

Special Instructions/Comments:

* Please analyze samples for TPH first. If results show concentrations greater than 1,000 ppm, please call ETI office for authorization of additional parameters

24 HRS (LF) COOLER TEMP 4°C

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected Analytical T.A.T.'s: [X] Immediate Attention (200% surcharge) ____ RUSH (50-100% surcharge) ____ Standard

GDM-010

002

Sample Custodians Chain of Custody

veritech
Division of Hampton-Clarke, Inc.
environmental and analytical services

INTERNAL CHAIN OF CUSTODY RECORD

REMOVED FROM

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
Quasp Ign, TPH	24305 24315-32	3	6/20	4:00	[illegible]
Solids	24296-304	3	↓	↓	
TCLP	24305, 24315	3	6/20	4:47	Pete Johnson
Pesticides	24284, 24283	RC93	6/20	4:48	[illegible]
	24316 24311	24311 - Sample Hold	"	"	
TD-WT	23911-9295	3	6/20	5:00	Pete Johnson
↓	24047-48, 24154	↓	↓	↓	
TD-SI	23101-12, 21, 22	3	6/20	5:01	Pete Johnson
~~TD-WT~~					
TOX	24165, 24166, 23955	3	6/21	3:00	Mark V. [illegible]
RS CN	24041	3	6/21	8:30	[illegible]
GC/MS	24203 24221-24228	3	6/	12:04	[illegible]
	24305		6/21		
TD-VIC	23911-43, 24047	3	6/21	1:45	Pete Johnson
TCLP Ext.	24012, 24024, 24	3	6/21	12:40	Pete Johnson
BTEX 13N	24316 - 24326	3	6/21	2:15	[illegible]
Ign. RCN	24355	3	6/21	2:15	Dan Batello
BNA, PCB	24296-13 24300	3	6/21	3:00	[illegible]
	24316 24355				
Flashpt	24178-87	3	6/21	5:00	[illegible]
TPH % solids	464-1 → 4, 464-30	Sample Frig	6/21	[illegible]	Mark V. [illegible]
GC/MS	24316 24355	3	"	4:35	[illegible]

RETURNED TO

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
TOX	24105	3	6/20	4:35	[illegible]
↓	24164	↓	↓	↓	↓
↓	24192	↓	↓	↓	↓
Pesticides	24284 24283	3	6/20	4:52	[illegible]
"	24316 24311	DONE	"	"	
TD-WT	24047-48, 24154	3	6/20	5:45	Pete Johnson
↓	23911-43	↓	↓	↓	
TD-SI	23101-12, 21, 22	3	6/20	5:50	Pete Johnson
TCLP	24305, 24315	3	6/20	5:51	Pete Johnson
BN, BNA	24316 24326	3	6/20	2:20	[illegible]
BNA RD	24296-97, 24300	3	6/20	3:20	[illegible]
	24315 24395				
TOX	24165, 24168, 23955	3	6/21	4:00	Mark V. [illegible]
TPH % solids	464-1 → 4, 464-30	Sample Frig	6/21	4:00	Mark V. [illegible]
Flashpt	24178-87	3	6/21	4:15	[illegible]
Ign. RCN	24355	3	6/21	5:10	Dan Batello
TD-WG	23911-43, 24047	3	6/21	5:52	Pete Johnson
TCLP Ext	24012, 24024, 24	3	6/21	5:57	Pete Johnson

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:15

Sample I.D. AA24364
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: 464-1 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	90	PERCENT	06/21/94	MC
TPH-SOIL	35	mg/kg dry wt	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24364

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:16

Sample I.D. AA24365
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: 464-2 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	90	PERCENT	06/21/94	MC
TPH-SOIL	39	mg/kg dry wt	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24365

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:17

Sample I.D. AA24366
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: 464-3 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	90	PERCENT	06/21/94	MC
TPH-SOIL	90	mg/kg dry wt	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24366

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:17

Sample I.D. AA24367
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: 464-4 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	96	PERCENT	06/21/94	MC
TPH-SOIL	34	mg/kg dry wt	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24367

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:18

Sample I.D. AA24368
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: 464-SP SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	86	PERCENT	06/21/94	MC
TPH-SOIL	71	mg/kg dry wt	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24368

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:18

Sample I.D. AA24369
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 3

Date collected: 06/20/94
Date submitted: 06/21/94
Due date: 07/04/94
Specification checking: off
Descript: FIELD BLANK

MATRIX: WATER

Analysis	Result	Unit	Finished	Anl
TPH-WATER	Not detected	mg/L	06/21/94	MC
TPH EXTRACTION	Completed		06/21/94	MC

End of progress report on sample: AA24369

WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank:	X	
2.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)		X
3.	IR Spectra submitted for all standards, blanks, & samples		X
4.	Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted		
5.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
6.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

Additional Comments: _____

QA/QC Director: Deborah A. Keller Date: 6/27/94

METHOD REFERENCES

Volatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters) - Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters) - Federal Register, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion and the individual parameter methods listed above in the Total Metals (Soils) section.

ICP Metals (Waters) - Methods for the Determination of Metals in Environmental Samples, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

Cyanide (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9010.

Cyanide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 335.2.

Phenols (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9065.

Phenols (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

Hexavalent Chromium (Soils & Waters) - Test Methods for Evaluating Solid Waste, SW-846, Second and Third Editions, Methods 3060 and 7196A.

pH (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9040.

pH (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability - Test Methods for Evaluating Solid Waste, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1010.

Conductance (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.1.

Residue, Non-Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9252.

Sulfide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters) - Hach Chemical Company, Method 8000.

Oil & Grease (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils) - American Society for Testing & Materials (ASTM), D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF - Modified Contract Laboratory Program Statement of Work, November 1992.

VERITECH

47 CAREY AVE., BUTLER, NJ 07405

CT. NO: PH-0671
MADEP NO: NJ386
PADER NO: 68-463
NJDEPE NO: 14622
NYDOH NO: 11408

REPORT OF ANALYSIS

TO: ENVIRO-TECH, INC.
247 MAIN ST.
MATAWAN, NJ 07747-3222
(908) 566-2277

Date Collected: 06/20/94
Date Submitted: 06/21/94
Date Reported: 06/24/94
Project: EARLE

Sample I.D.		AA24364		AA24365	
Sample Description		464-1 SOIL		464-2 SOIL	
Analyte	**Units**	**MDL**	**Result**	**MDL**	**Result**
%SOLIDS	PERCENT	1.0	90	1.0	90
TPH-SOIL	mg/kg dry wt	22	35	22	39
TPH-WATER					

Sample I.D.		AA24366		AA24367	
Sample Description		464-3 SOIL		464-4 SOIL	
Analyte	**Units**	**MDL**	**Result**	**MDL**	**Result**
%SOLIDS	PERCENT	1.0	90	1.0	96
TPH-SOIL	mg/kg dry wt	22	90	21	34
TPH-WATER					

Sample I.D.		AA24368		AA24369	
Sample Description		464-SP SOIL		FIELD BLANK	
Analyte	**Units**	**MDL**	**Result**	**MDL**	**Result**
%SOLIDS	PERCENT	1.0	86		
TPH-SOIL	mg/kg dry wt	23	71		
TPH-WATER	mg/L			4.0	Not detected

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Stanley Gilewicz - Laboratory Director

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24364
Sample Matrix: Soil
% Solids: 90

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	464-1	35	1	22	6/21/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24365
Sample Matrix: Soil
% Solids: 90

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	464-2	39	1	22	6/21/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24366
Sample Matrix: Soil
% Solids: 90

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	464-3	90	1	22	6/21/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24367
Sample Matrix: Soil
% Solids: 96

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	464-4	34	1	21	6/21/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24368
Sample Matrix: Soil
% Solids: 86

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	464-SP	71	1	23	6/21/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24369
Sample Matrix: Water
% Solids:

Date Received: 6/21/94
Date Extracted: 6/21/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/L)	DILUTION FACTOR	MDL (mg/L)	DATE ANALYZED
TPH	FB	ND	1	4.0	6/21/94

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Soil

Lab Code: 14622 **Units:** mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	262s	ND

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Water

Lab Code: 14622 **Units:** mg/L

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	1.0	050w	ND

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.
AA24364 MS

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	779		35.4		736	101		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.
AA24364 MSD

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	632		35.4		736	81		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.
MBS

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): __mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.52		1.00	U	10.0	95		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

| MBS DUP |

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): __mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.55		1.00	U	10.0	95		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.
AA24364 DUP

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	35.4		40.7		13.8		
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.
MBS DUP

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	9.52		9.55		0		C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

TPH LINEAR REGRESSION DATE 10-Mar-94
TPH_3S ANALYST Dan B

STDS (MG)	ABS.
0	0.0000
2.5	0.0928
5	0.1933
10	0.3876
15	0.5814
20	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

Lot # W-94-TPH-1069

##

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5	0.1933	5.0246	-0.0246
10	0.3876	10.0918	-0.0918
15	0.5814	15.1459	-0.1459
20	0.7618	19.8506	0.1494

##

BATCH 262

SAMPLE	ABS.	MG
10mg6-21	0.413	10.7542
mbs	0.3938	10.2535
dup 24364	0.0217	0.5494
ms1 24364	0.4066	10.5873
ms2 24364	0.3301	8.5922
mb6-21	0.0062	0.1452
24364	0.0191	0.4816
24365	0.0208	0.5259
24366	0.0474	1.2197
24367	0.0193	0.4868
24368	0.0364	0.9328
24356		0.0000
24357		0.0000
24358		0.0000
24359		0.0000
24360		0.0000
24361		0.0000
24362		0.0000
24363		0.0000
24395	0.0120 ✓ 5.0	0.2965
24396	0.0142 ✓ cm	0.3538
24397	0.0229 ✓	0.5807
24398	0.0134 ✓	0.3330
mb6-22	0.0059	0.1374
10mg6-22	0.4073	10.6055

✓ data input
DB 6/23/94

ANALYSIS: TPH SOILS

BATCH 262

DATE: 23-Jun-94

ANALYST: DB

Q.C. DATA

	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.75	108%
MBS	666.7	683.56	103%
MS #1	735.84	779.05	101%
MS #2	735.84	632.25	81%
SAMPLE		35.44	RPD
SAMPLE DUP		40.7	13.82%

SAMPLE #	SOLIDS FACTOR	SAMPLE WEIGHT	MG CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg6-21	1.00	1000	10.7542	1.0	10.75	
mbs	1.00	15.0	10.2535	1.0	683.56	20.00
dup 24364	0.90	15.0	0.5494	1.0	40.70	22.22
ms1 24364	0.90	15.1	10.5873	1.0	779.05	22.22
ms2 24364	0.90	15.1	8.5922	1.0	632.25	22.22
mb6-21	1.00	15.0	0.1452	1.0	9.68	20.00
24364	0.90	15.1	0.4816	1.0	35.44	22.22
24365	0.90	15.1	0.5259	1.0	38.70	22.22
24366	0.90	15.0	1.2197	1.0	90.34	22.22
24367	0.96	15.0	0.4868	1.0	33.81	20.83
24368	0.86	15.3	0.9328	1.0	70.89	23.26
24356	0.87		0.0000	1.0	ERR	22.99
24357	0.88		0.0000	1.0	ERR	22.73
24358	0.87		0.0000	1.0	ERR	22.99
24359	0.90		0.0000	1.0	ERR	22.22
24360	0.88		0.0000	1.0	ERR	22.73
24361	0.91		0.0000	1.0	ERR	21.98
24362	0.95		0.0000	1.0	ERR	21.05
24363	0.93		0.0000	1.0	ERR	21.51
24395	0.76	15.2	0.2965	1.0	25.662	26.32
24396	0.82	15.1	0.3538	1.0	28.576	24.39
24397	0.89	15.2	0.5807	1.0	42.927	22.47
24398	0.83	15.0	0.3330	1.0	26.744	24.10
mb6-22	1.00	15.0	0.1374	1.0	9.158	20.00
10mg6-22	1.00	1000.0	10.6055	1.0	10.606	20.00

√ data input
DB 6/23/94

TPH LINEAR REGRESSION

DATE 08-june-94
ANALYST Dan B

STDS (MG)	ABS.
0.0	0.0000
2.5	0.0928
5.0	0.1933
10.0	0.3876
15.0	0.5814
20.0	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

lot # W-94 tph-1182

##

STDS (MG)	ABS.	PPM	DIFF
0.0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5.0	0.1933	5.0246	-0.0246
10.0	0.3876	10.0918	-0.0918
15.0	0.5814	15.1459	-0.1459
20.0	0.7618	19.8506	0.1494

##

BATCH 050w

SAMPLE	ABS.	MG
10mg 6-9	0.402	10.4673
MBS	0.3658	9.5232
MBSD	0.3668	9.5493
mb6-9	0.0073	0.1739
24048	0.0101	0.2469
24153	0.0064	0.1504
24193	0.3201	8.3314
24194	0.3898	10.1491
24195	0.0375	0.9615
mb6-15	0.0051	0.1165
10mg6-16	0.4047	10.5377
24277	0.0063 ✓	0.1478
24278	0.0049 ✓	0.1113
mb6-20	0.0060	0.1400
10mg6-20	0.4071	10.6003
24369	0.0053 ✓	0.1217
mb6-21	0.0054	0.1243
10mg6-21	0.4130	10.7542
24399	0.0058 ✓	0.1348
mb6-22	0.0057	0.1322
10mg6-22	0.4073	10.6055

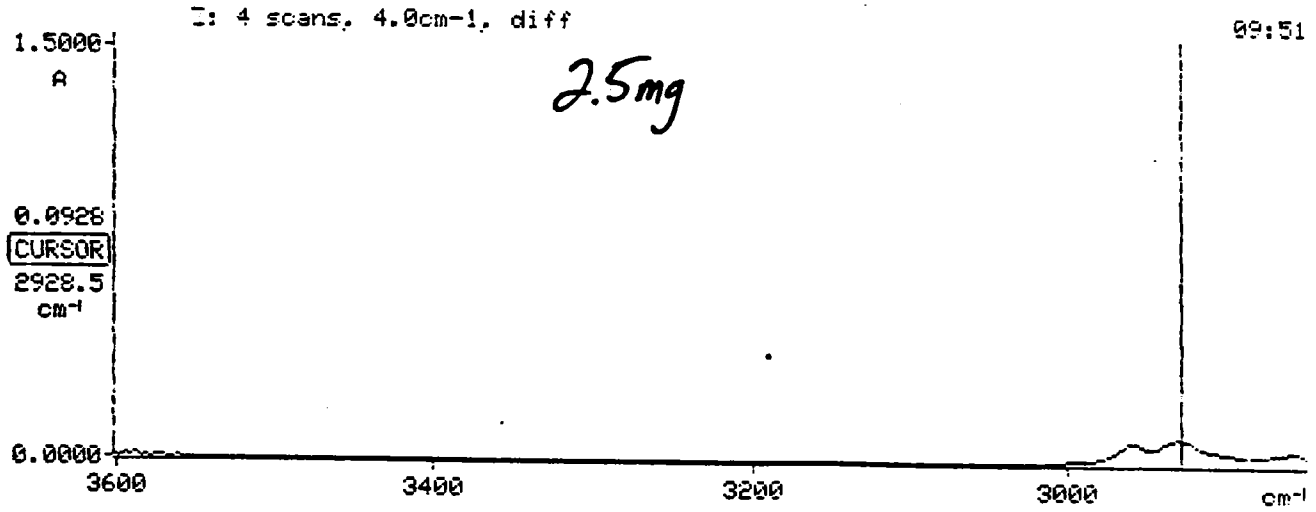
ANALYSIS: TPH WATERS G.C. DATA
batch 050
DATE: 23-Jun-94
ANALYST: DB

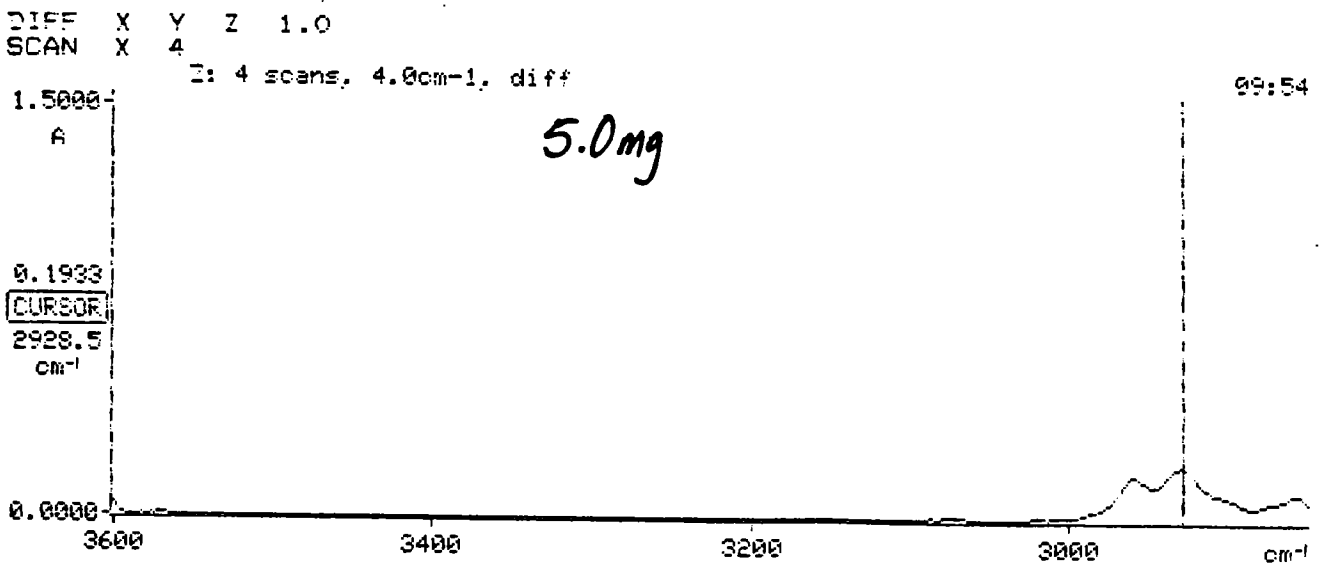
	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.467	105%
MBS	10	9.523	95%
MBS DUP	10	9.549	95%

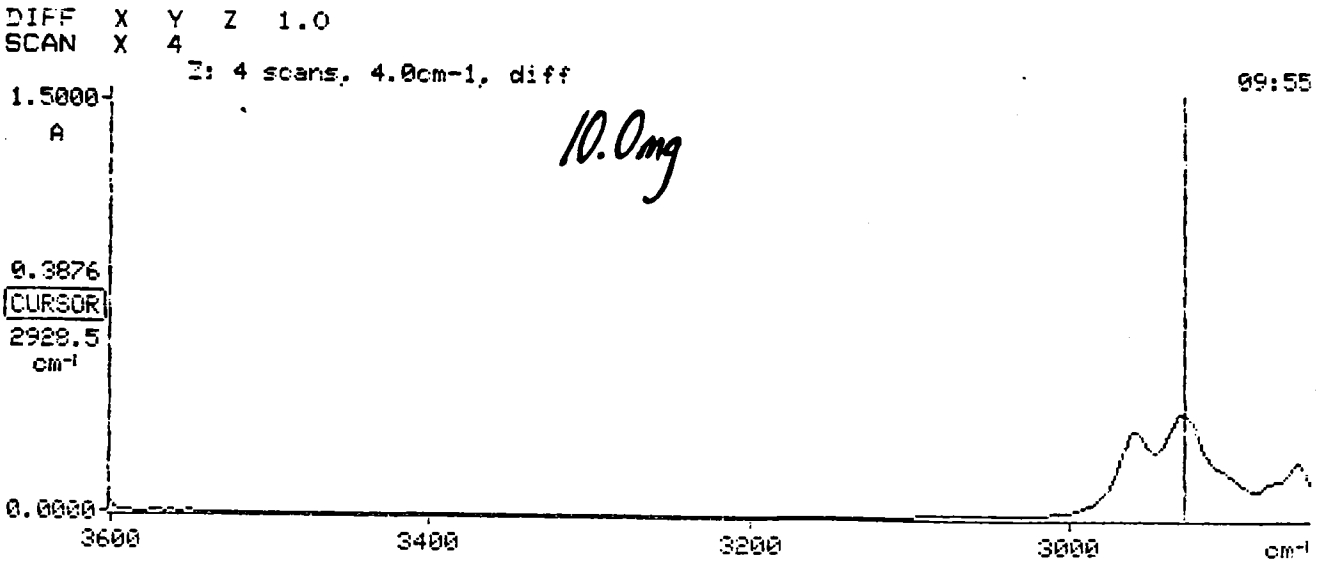
RPD = 0.00%

SAMPLE NO.	SAMPLE VOLUME	MG FROM CALC. CURV	DILUT. FACTOR	TPH (PPM)	MDL (PPM)
10mg 6-9	1000	10.4673	1.0	10.467	
MBS	1000	9.5232	1.0	9.523	
MBSD	1000	9.5493	1.0	9.549	
mb6-9	1000	0.1739	1.0	0.174	1.0
24048	955	0.2469	1.0	0.259	1.0
24153	455	0.1504	1.0	0.331	2.2
24193	100	8.3314	1.0	83.314	10.0
24194	100	10.1491	1.0	101.491	10.0
24195	100	0.9615	1.0	9.615	10.0
mb6-15	1000	0.1165	1.0	0.117	1.0
10mg6-16	1000	10.5377	1.0	10.538	1.0
24277	940	0.1478	1.0	0.157	1.1
24278	960	0.1113	1.0	0.116	1.0
mb6-20	1000	0.1400	1.0	0.140	1.0
10mg6-20	1000	10.6003	1.0	10.600	1.0
24369	250	0.1217	1.0	0.487	4.0
mb6-21	1000	0.1243	1.0	0.124	1.0
10mg6-21	1000	10.7542	1.0	10.754	1.0
24399	250	0.1348	1.0	0.539	4.0
mb6-22	1000	0.1322	1.0	0.132	1.0
10mg6-22	1000	10.6055	1.0	10.606	1.0

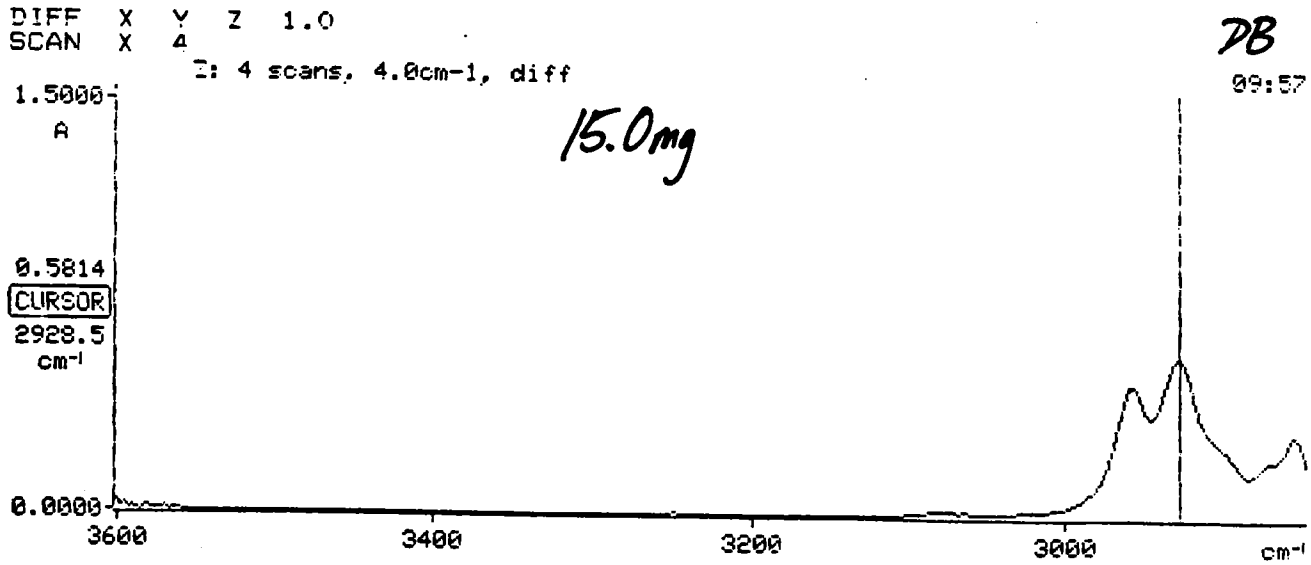
TPH curve
DB 6/7/94

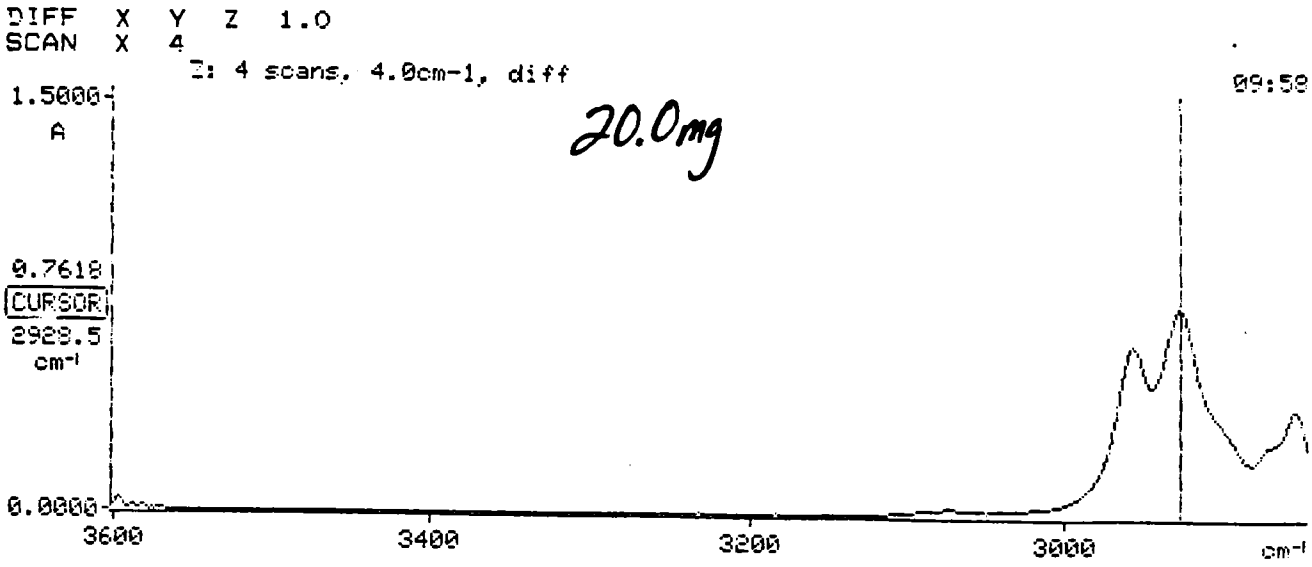


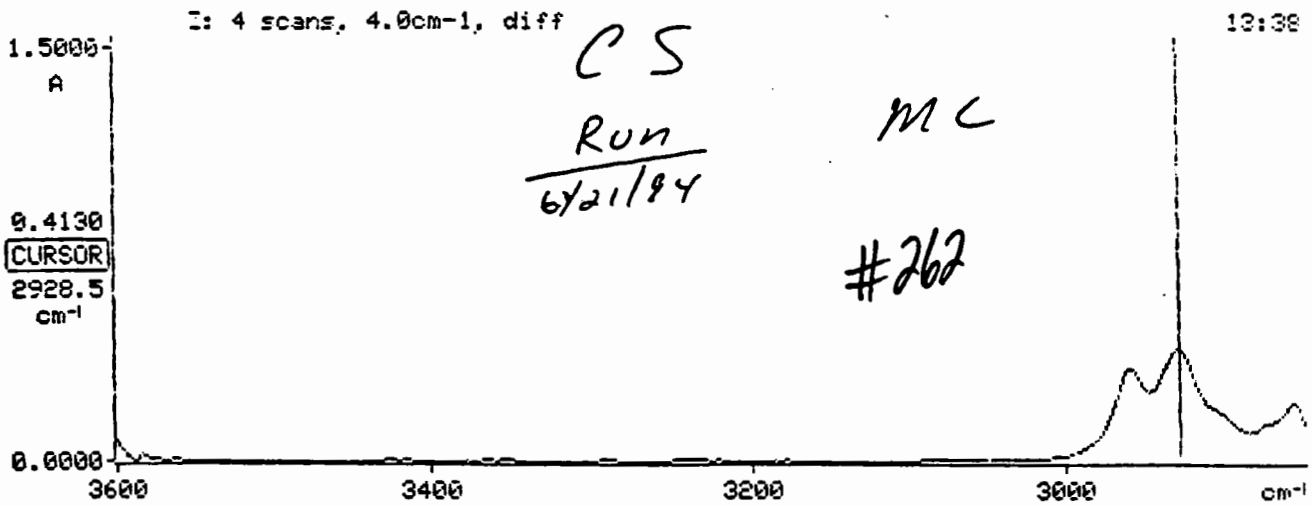




TPH curve
DB 6/7/94



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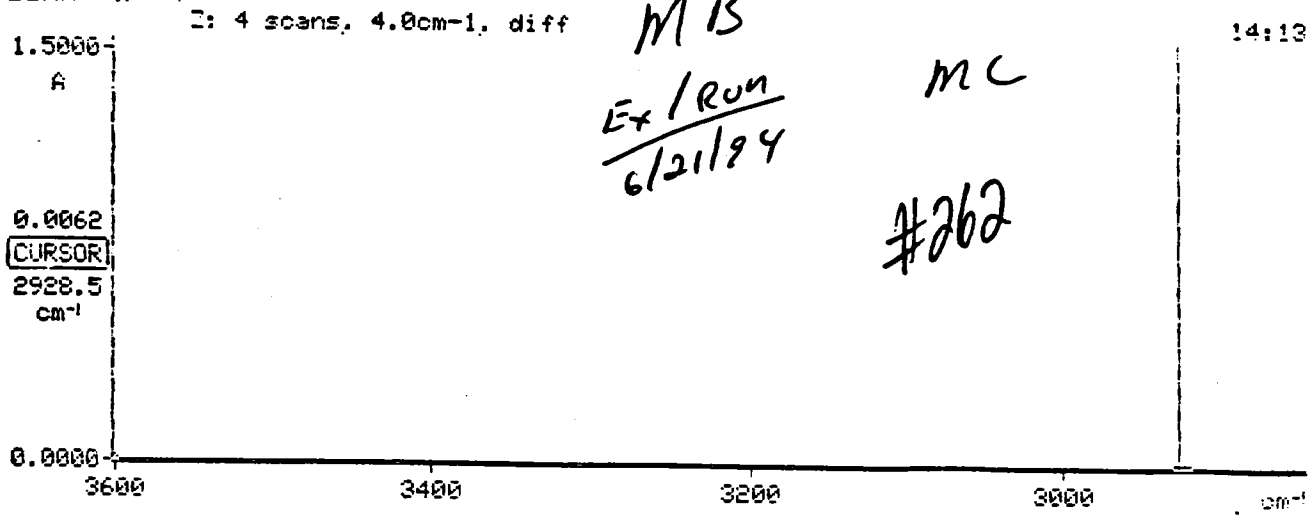
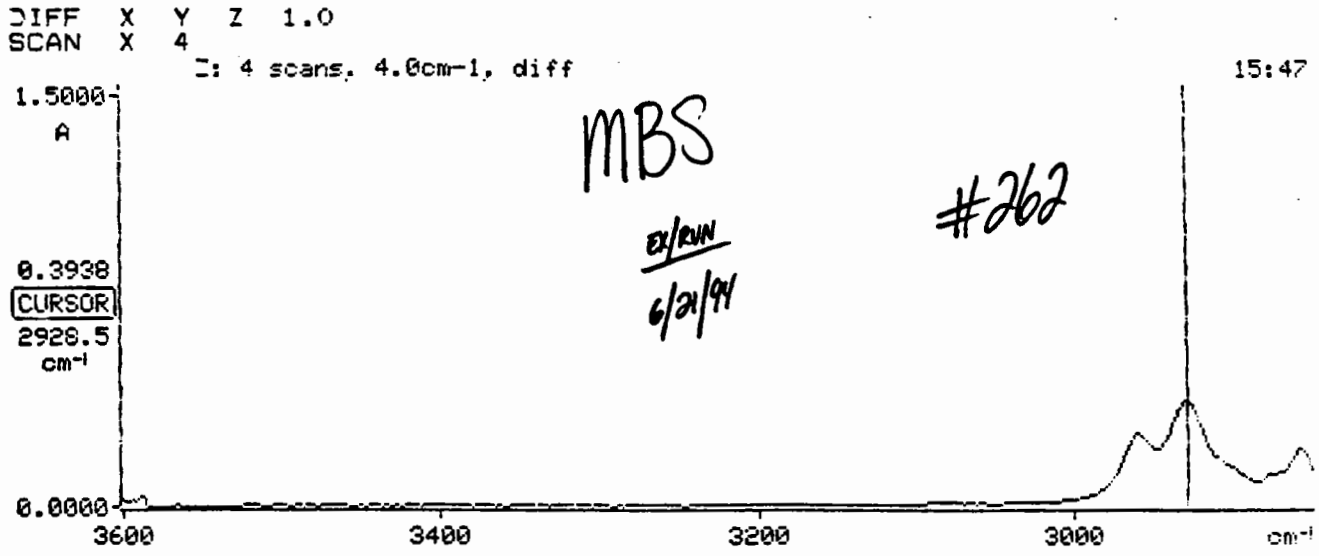
1.5000
A
0.4130
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
CS
Run
6/21/84
MC
#262

DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4



MB
Ex / Run
6/21/94

MC
#262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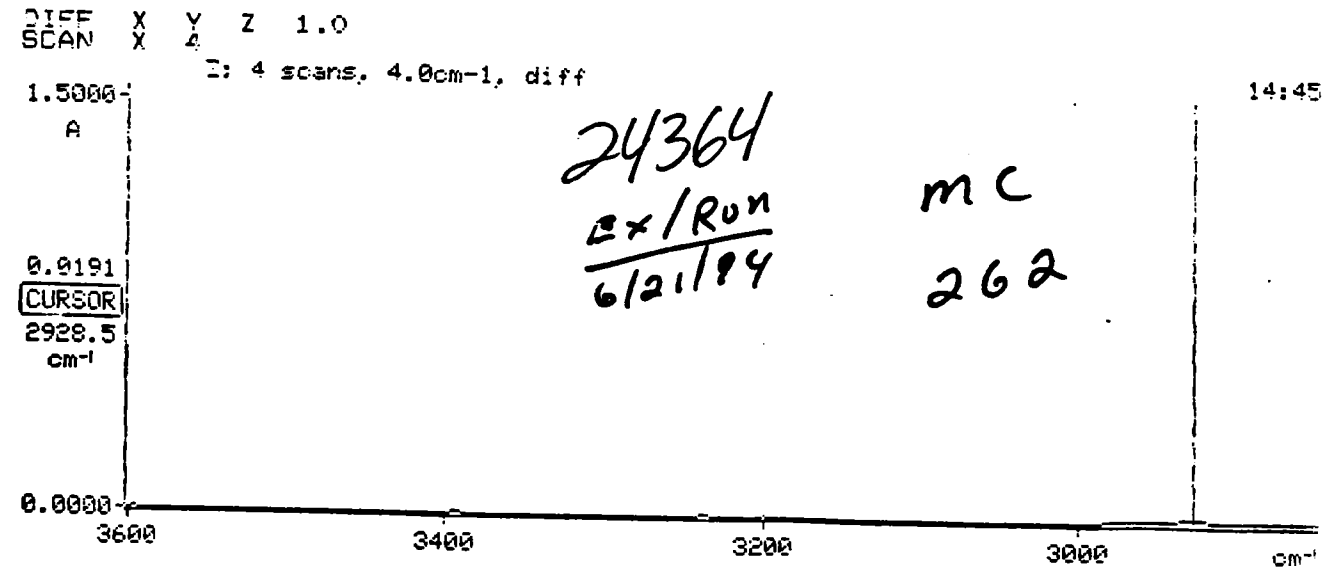
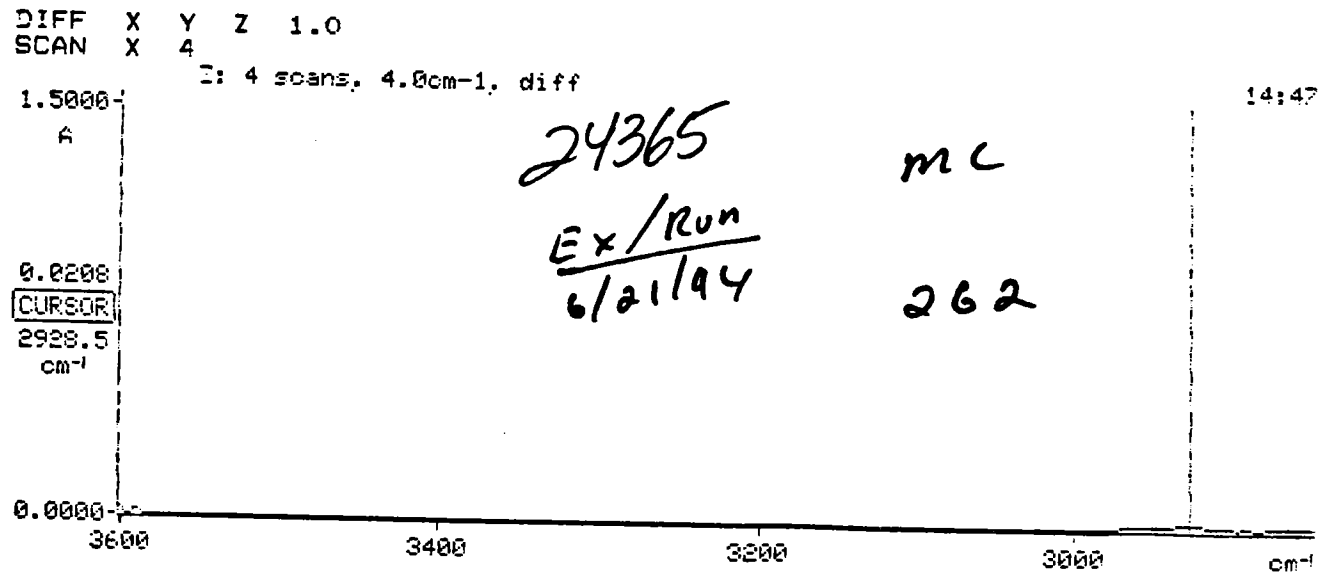
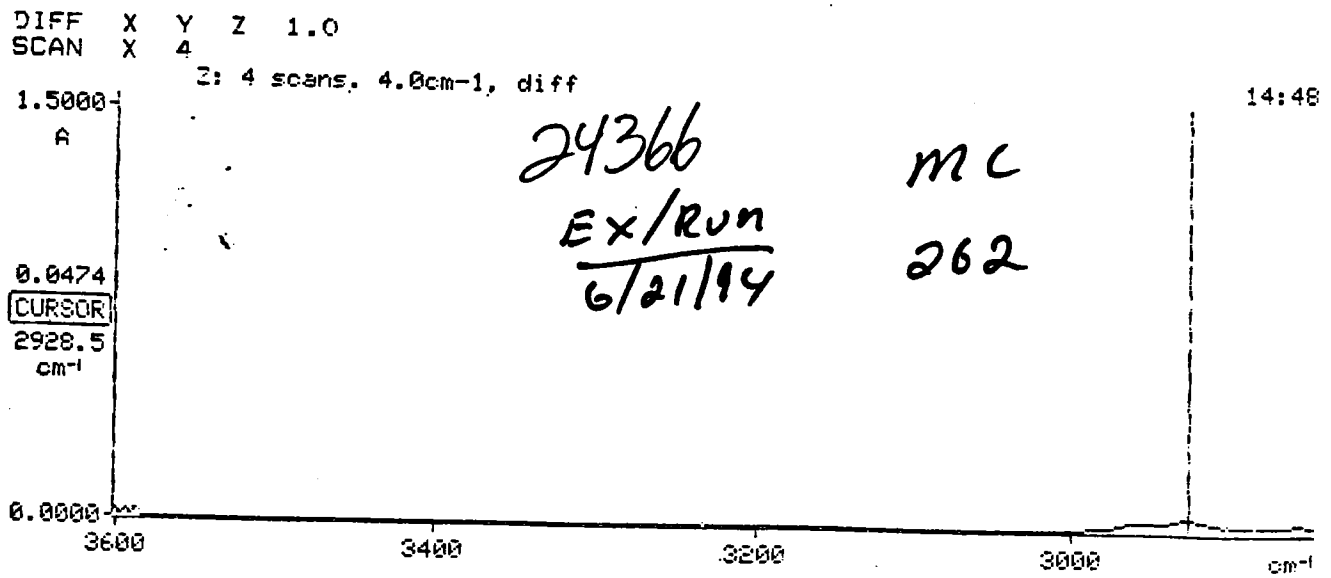
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:47
1.5000
A
0.3938
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS
#262
EX/RUN
6/21/94


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
1.5000
A
0.0191
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
14:45
24364
Ex/Run
6/21/94
MC
262


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
1.5000
A
0.0208
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
14:47
24365
Ex/Run
6/21/94
MC
262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SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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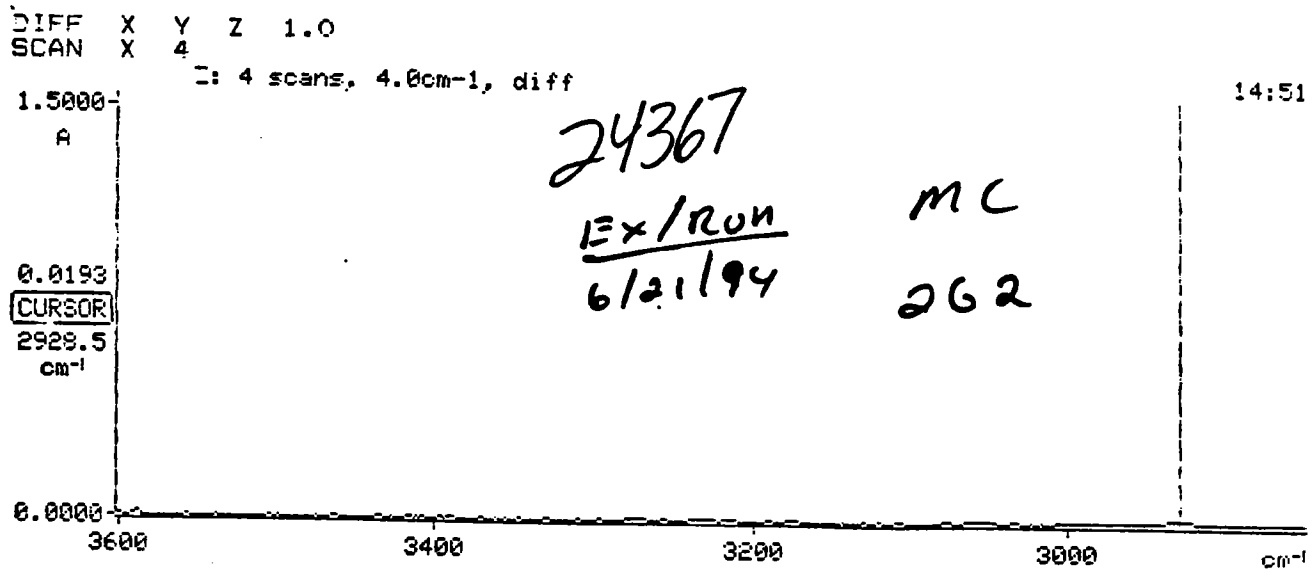
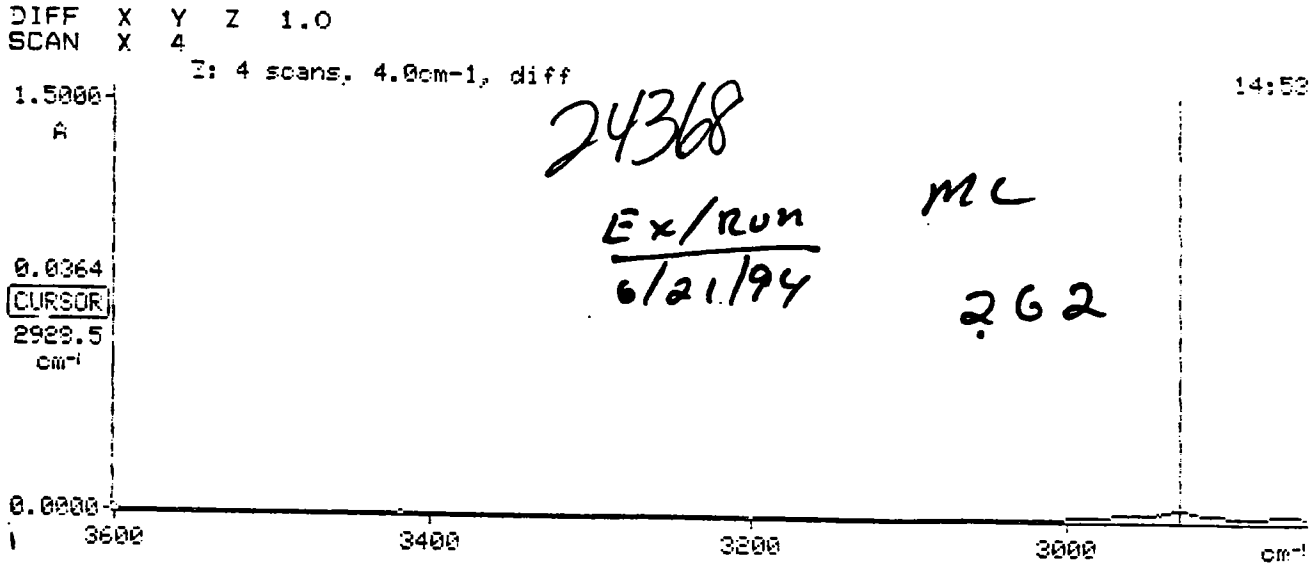
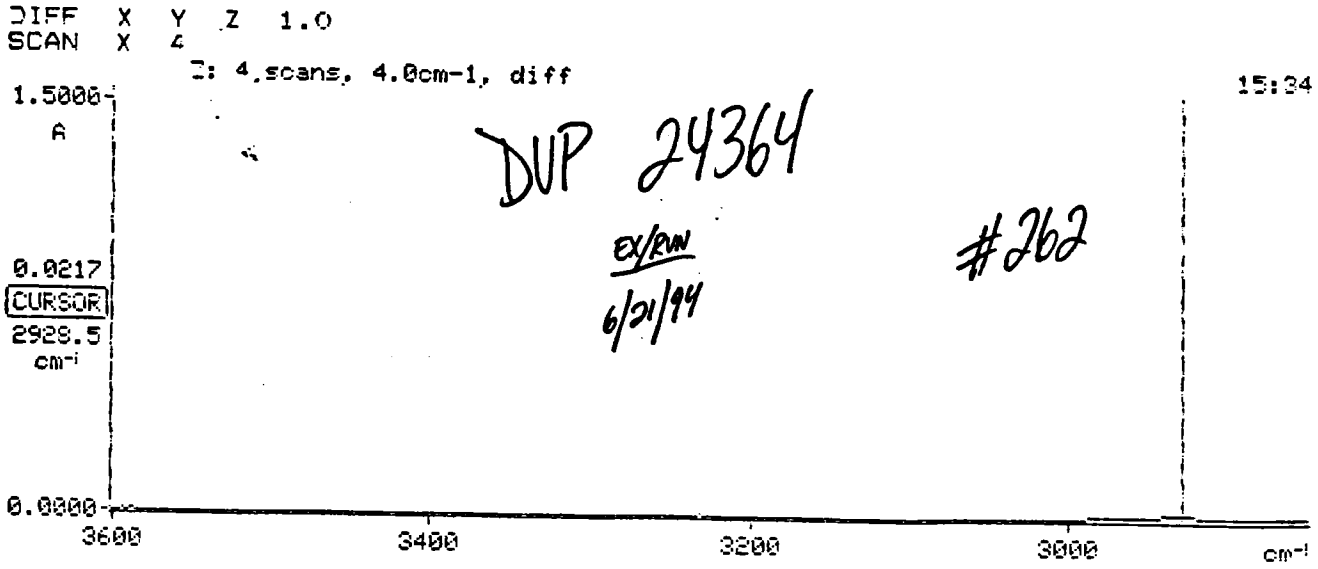
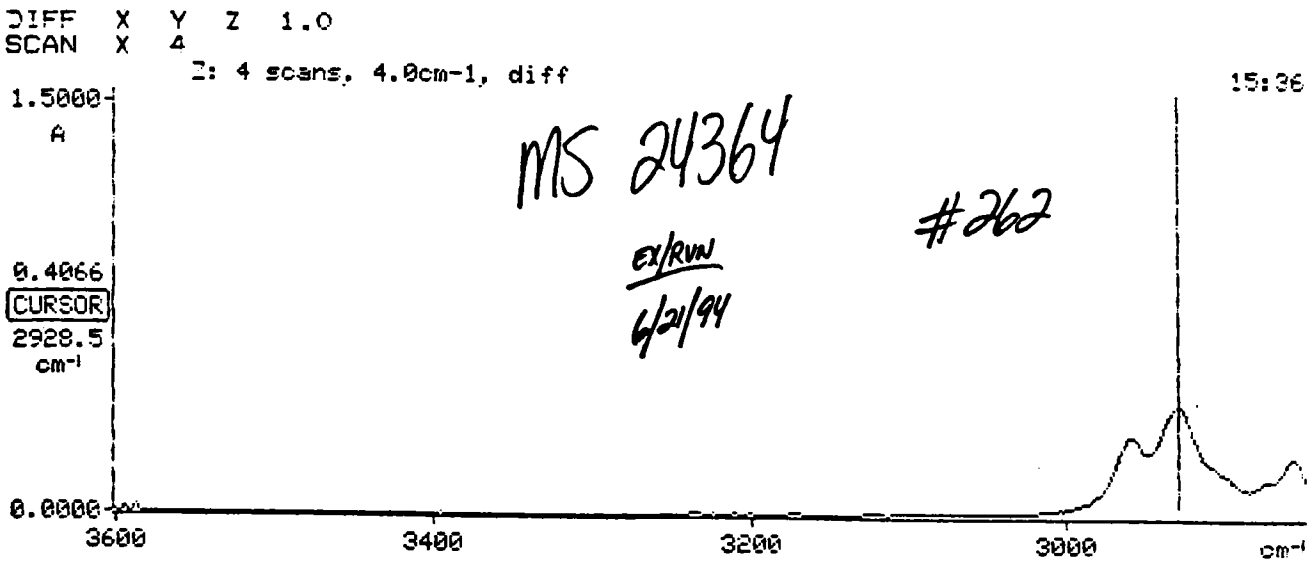
A
0.0474
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
14:48
24366
Ex/Run
6/21/94
MC
262


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
14:51
1.5000
A
0.0193
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24367
Ex/Run
6/21/94
MC
262


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
14:53
1.5000
A
0.0364
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24368
Ex/Run
6/21/94
MC
262


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:34
1.5000
A
0.0217
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
DUP 24364
EX/RUN
6/21/94
#262


DIFF X Y Z 1.0
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I: 4 scans, 4.0cm-1, diff
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A
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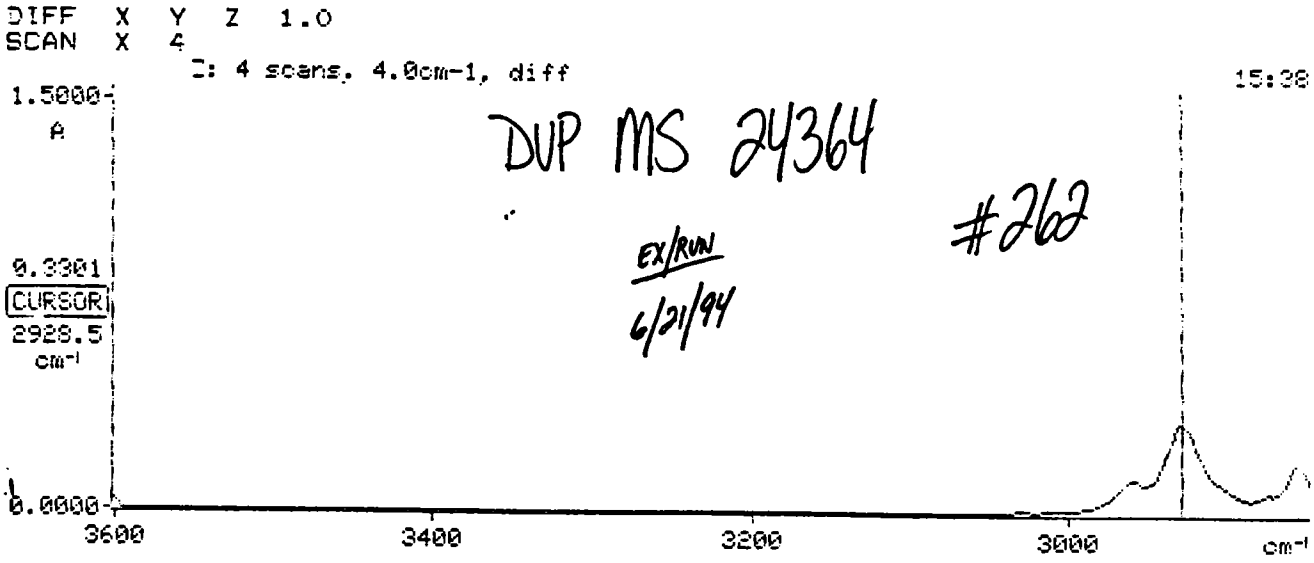
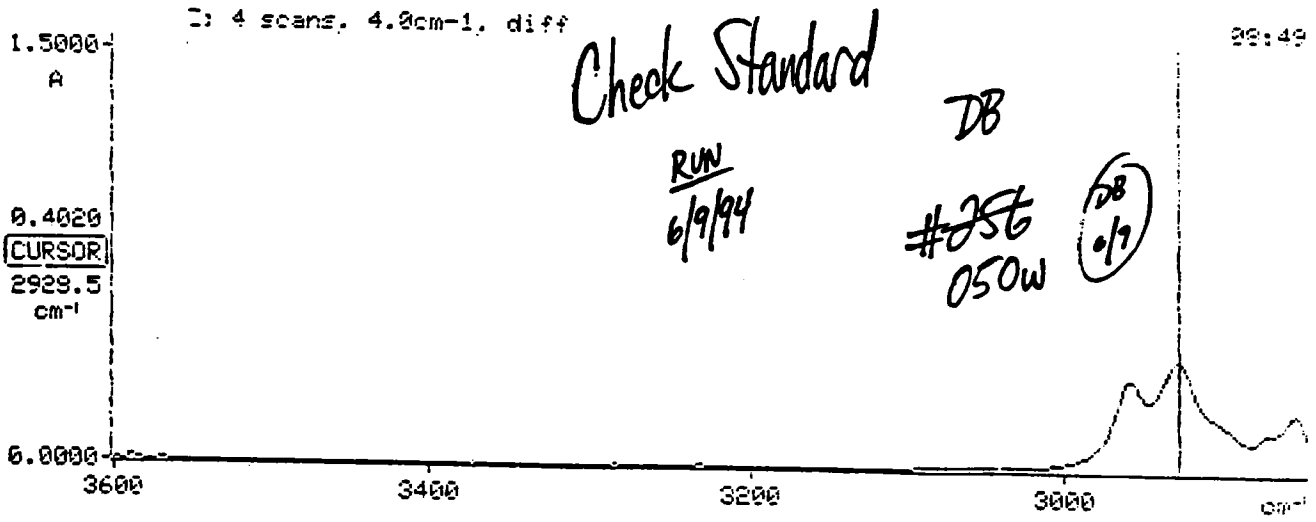
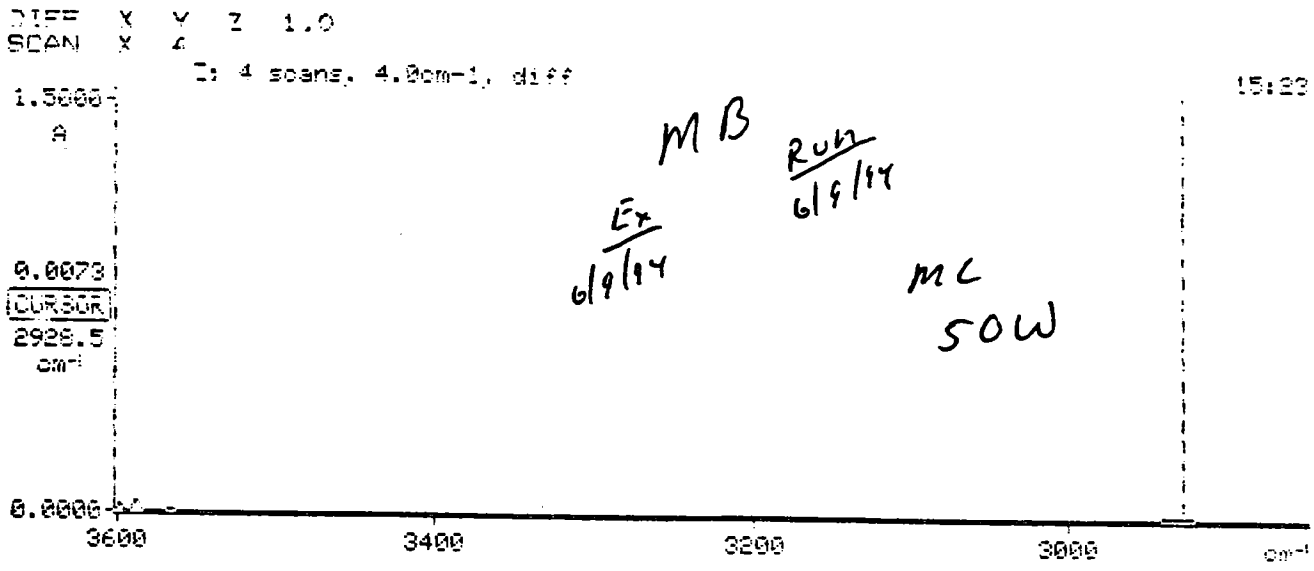
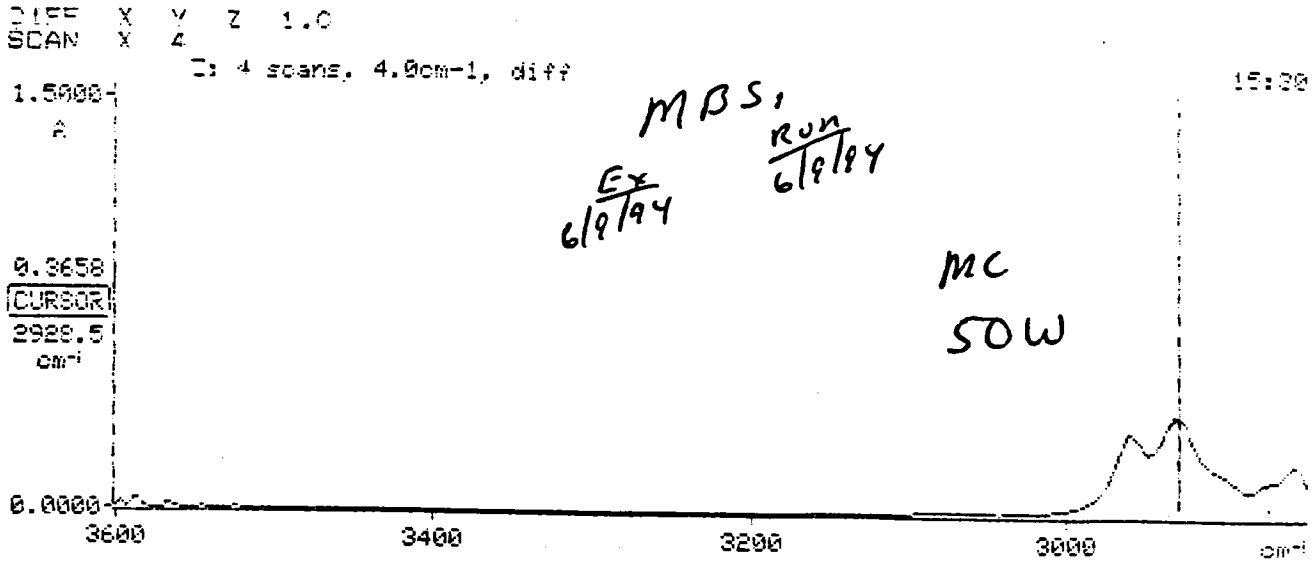
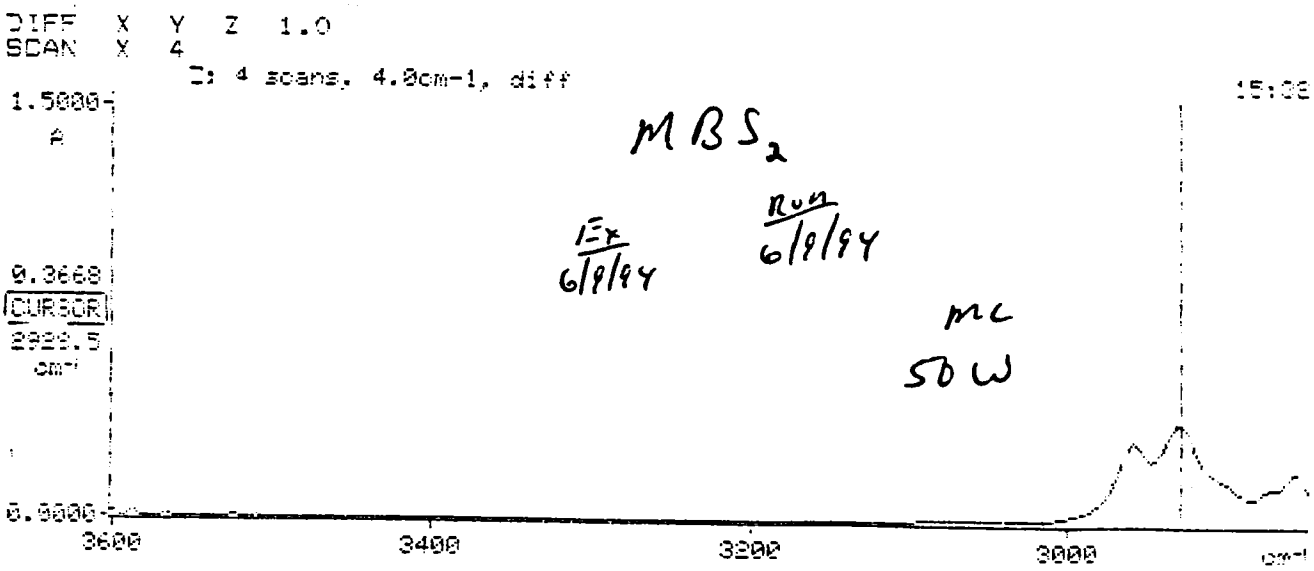
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MS 24364
#262
EX/RUN
6/21/94

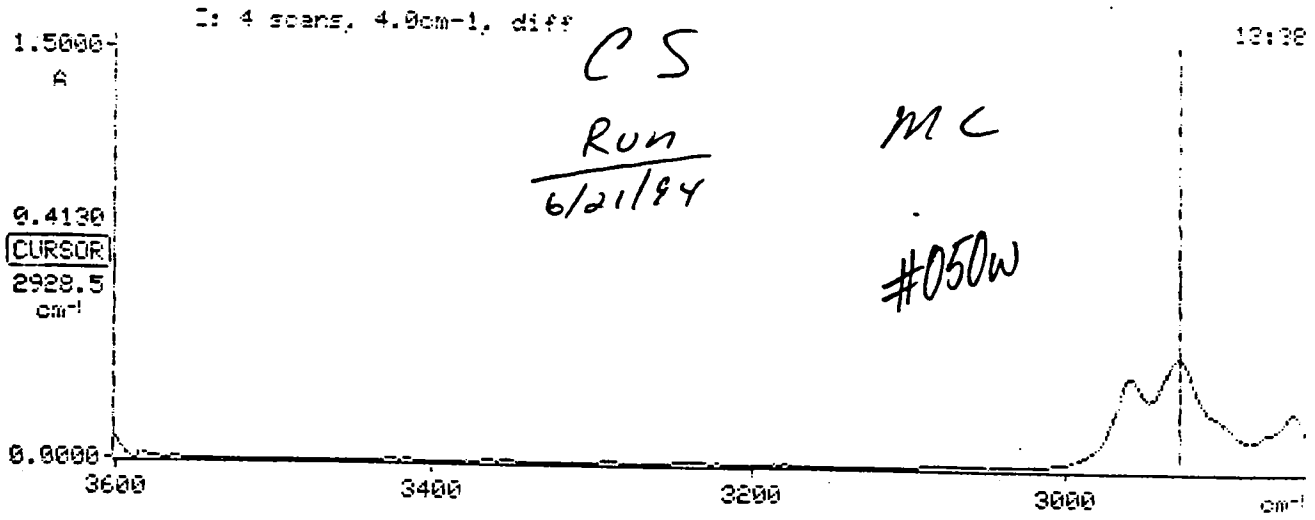

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:38
1.5000
A
0.3301
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
DUP MS 24364
#262
EX/RUN
6/21/94

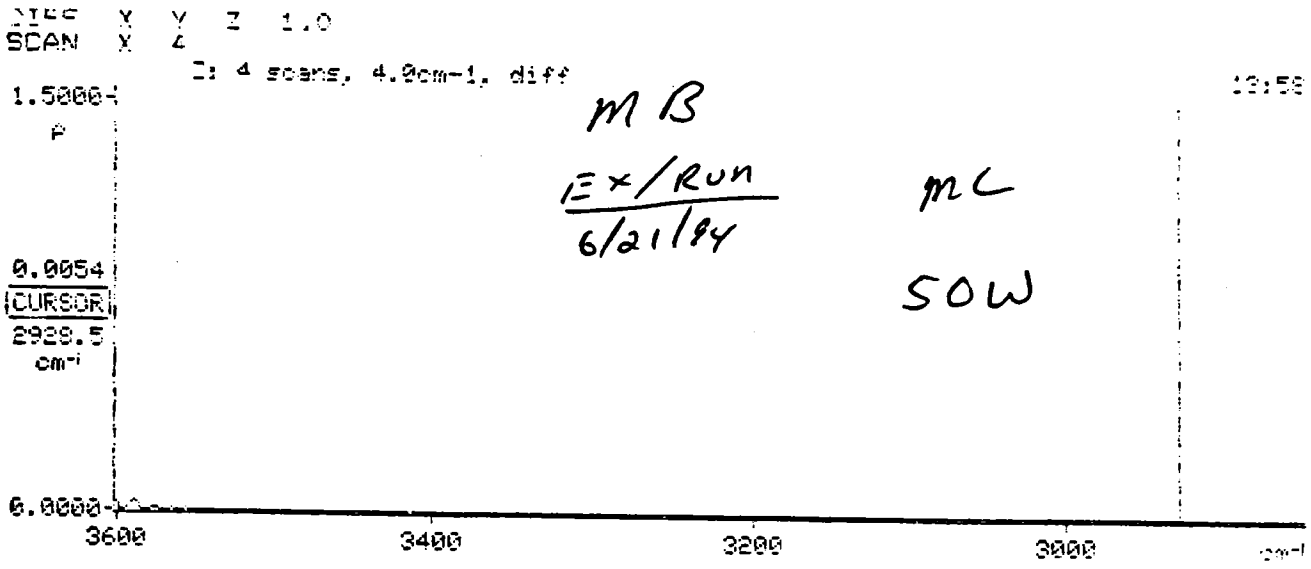

1: 4 scans, 4.0cm-1, diff
09:49
1.5000
A
0.4020
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
Check Standard
RUN
6/9/94
DB
#256
050W
DB
6/9

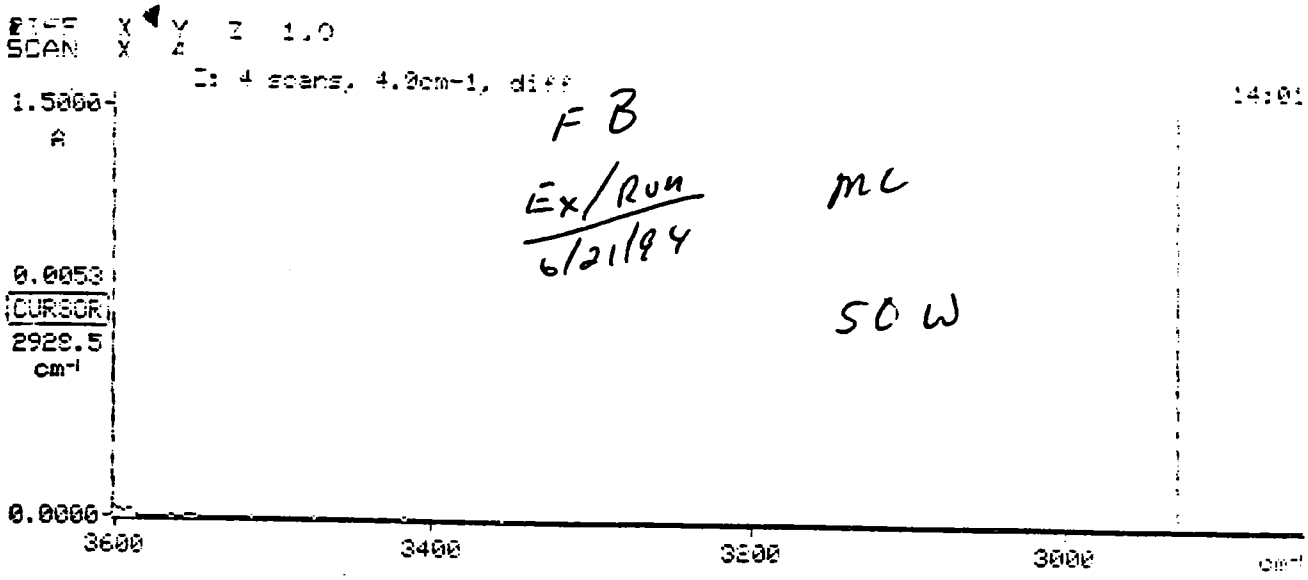

DIFF X Y Z 1.0
SCAN X Δ
I: 4 scans, 4.0cm-1, diff
15:33
1.5000
A
0.0073
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Run
6/9/94
Ex
6/9/94
MC
50W


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:00
1.5000
A
0.3658
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS1
Ex 6/9/94
Run 6/9/94
MC
50W


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:08
1.5000
A
0.3668
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS2
Ex 6/9/94
Run 6/9/94
MC
50W


I: 4 scans, 4.0cm-1, diff
CS
Run
6/21/84
MC
#050W
13:38
1.5000
A
0.4130
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1


SCAN
1.5000
0.0054
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
MB
Ex/Run
6/21/84
MC
SOW


DIFF X Y Z 1.0
SCAN X Z
I: 4 scans, 4.0cm-1, diff
14:01
1.5000
A
0.0053
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
FB
Ex/Run
6/21/94
mc
50 W

No. 10

June 21, 1994 Soil Samples
(UST 589)

589

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

ENVIRO-TECH, INC.
NJDEPE REDUCED PKG

PROJECT: EARL AMMUNITION

LAB # AA24395-AA24403

NJDEPE Cert. #14622, CT Cert. #PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. #11408, NC Cert. #455

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

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VERITECH LABORATORY RESULTS

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CHAIN OF CUSTODY	2
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SAMPLE KEY

ENVIRO-TECH NO.	VERITECH NO.
589-7	AA24395
589-2	AA24396
589-3	AA24397
589-4	AA24398
FIELD BLANK	AA24399
589-6	AA24400
589-5	AA24401
589 COMP	AA24402
589-8	AA24403

Enviro-Tech Inc.

CHAIN-OF-CUSTODY RECORD

SAMPLER: (Signature) [signature]
Phone (908) 566 2277
Date Shipped
Airbill No.
Carrier GDM
Cooler No. 28

SHIP TO:

ATTENTION:

SEND RESULTS TO:
Client Name Kenneth Braitling
Company ENVIRO Tech Inc.
Address 247 MAIN ST
MATAWAN NJ
Phone (908) 566 2277

PROJECT NAME EARL Ammo **PROJECT NO.** **P.O. NO.**

Relinquished by: (Signature)	Received by: (Signature)	Date	Military Time
[signature]	Gerard D. Mizzi	6/22/94	1135
Gerard D. Mizzi	A. Shmm	6/22/94	1310
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Military Time
Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Military Time

ANALYSIS REQUEST

	Sample ID Number	Sample Description	Date/Time Sampled	Analysis Requested	Sample Condition Upon Receipt	
2	589-1	Soil	6/21/94 15:45	TPHC * VO+10, Xylene	Cool	AA24395
2	589-2	Soil	14:00			24396
2	589-3	Soil	13:00			24397
2	589-4	Soil	13:30			24398
3	Field Blank	Aqueous				24399
2	589-6	Soil	14:45			24400
2	589-5	Soil	15:30			24401
2	589 Comp	Soil	15:00			24402
2	589-8	Soil	14:30			24403

Special Instructions/Comments: * Please analyze samples for TPHC. If results show concentration greater than 1,000 PPM please call E.T.I.

Cooler Temp 4.3°C

24 HRS TAT.

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected Analytical T.A.T.'s: X Immediate Attention (~~200% surcharge~~) ____ RUSH (50-100% surcharge) ____ Standard

GDM-010

Sample Custodians Chain of Custody

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

INTERNAL CHAIN OF CUSTODY RECORD

REMOVED FROM

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
BN	24268-70	3	6/20	4:50	Laura Richardson
BN	24184	3	6/20	5:15	Laura Richardson
Hg TCLP	24074, 75, 76, 77	Metals table	6/21	8:30	[illegible]
↓	24041, 23932	Back room	↓	↓	↓
	23937, 23946, 23952	↓			
	23953, 54, 24042, 23725				
	24305, 24315	metals table			
TD/SG	23823, 23, 25	Rfg 3	6/21	8:35	
	24056-57, 24061,	↓	↓	↓	
	063, 5, 66, 67				
	24190-192, 24047-45				
	24046	↓			
TPH Solids	24334 → 355	3	6/22	5:40	Martin V. Gyulai
Cr, Sol, Hg	24356 → 363	"	"	11:00	"
GC/MS	24333 ~ 24333	3	6/21	2:07	[illegible]
TCLP	24355, 24359-363	3	6/23	8:25	Laura Richardson
TPH	24334 → 354	3	6/23	5:00	Martin V. Gyulai
TD-SL	23820, 23826, 23829	3	6/23	11:20	[illegible]
SPH, Hg 24143	24143-2-43, 24144	3	6/23	10:20	Stuart Gurcell
PCB	24115, 24118-119	3	6/23	12:50	Laura Richardson
	24127				
TD-WL	24146	3	6/23	1:32	Pete Johnson

RETURNED TO

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
BN	24268-70	3	6/20	5:15	L Richardson
Hg TCLP	24074, 75, 76, 77	Metals table	6/21	11:10	[illegible]
↓	24041, 23932	Back room	↓	↓	
	23937, 23946, 23952	↓			
	23953, 54, 24042				
	23725, 24305, 24315	metals table			
BN	24184	3	6/20	5:15	Laura Richardson
TCLP	24355, 24359-363	3	6/23	10:10	Laura Richardson
PCB	24115, 24118-119	3	6/23	1:10	Laura Richardson
	24127				
TPH	24334 → 355	3	6/23	5:00	Martin V. Gyulai
Spn-pH-FP	24372, 24355, 24404	3	6/23	5:00	"
"	24373	"	"	"	"
TPH % solids	24372-73, 24404	"	"	"	"

* Samples for % solids + TPH-S were not signed out by the analyst

47 Carey Avenue • Butler, NJ 07405

Phone: (201) 492-8744 Fax: (201) 492-1815

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:19

Sample I.D. AA24395
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-7 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	76	PERCENT	06/22/94	MC
TPH-SOIL	26	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24395

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:20

Sample I.D. AA24396
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-2 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	82	PERCENT	06/22/94	MC
TPH-SOIL	29	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24396

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:20

Sample I.D. AA24397
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-3 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	89	PERCENT	06/22/94	MC
TPH-SOIL	43	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24397

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:21

Sample I.D. AA24398
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-4 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	83	PERCENT	06/22/94	MC
TPH-SOIL	27	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24398

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:22

Sample I.D. AA24399
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 3

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: FIELD BLANK

MATRIX: WATER

Analysis	Result	Unit	Finished	Anl
TPH-WATER	Not detected	mg/L	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24399

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:22

Sample I.D. AA24400
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-6 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	73	PERCENT	06/22/94	MC
TPH-SOIL	43	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24400

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:23

Sample I.D. AA24401
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-5 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	77	PERCENT	06/22/94	MC
TPH-SOIL	36	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24401

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:24

Sample I.D. AA24402
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-COMP SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	83	PERCENT	06/22/94	MC
TPH-SOIL	57	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24402

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-24-1994 Time: 15:56:24

Sample I.D. AA24403
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARL AMMO
CONTAIN: 2

Date collected: 06/21/94
Date submitted: 06/22/94
Due date: 07/05/94
Specification checking: off
Descript: 589-8 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	85	PERCENT	06/22/94	MC
TPH-SOIL	150	mg/kg dry wt	06/22/94	MC
TPH EXTRACTION	Completed		06/22/94	MC

End of progress report on sample: AA24403

WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank:	X	
2.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)		X
3.	IR Spectra submitted for all standards, blanks, & samples		X
4.	Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted		
5.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
6.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

Additional Comments: _____

QA/QC Director: Deborah A. Kellen Date: 6/27/94

METHOD REFERENCES

Volatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters) - Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters) - Federal Register, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion and the individual parameter methods listed above in the Total Metals (Soils) section.

ICP Metals (Waters) - Methods for the Determination of Metals in Environmental Samples, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

Cyanide (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9010.

Cyanide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 335.2.

Phenols (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9065.

Phenols (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

Hexavalent Chromium (Soils & Waters) - Test Methods for Evaluating Solid Waste, SW-846, Second and Third Editions, Methods 3060 and 7196A.

pH (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9040.

pH (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability - Test Methods for Evaluating Solid Waste, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1010.

Conductance (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.1.

Residue, Non-Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9252.

Sulfide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters) - Hach Chemical Company, Method 8000.

Oil & Grease (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils) - American Society for Testing & Materials (ASTM), D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF - Modified Contract Laboratory Program Statement of Work, November 1992.

VERITECH

47 CAREY AVE., BUTLER, NJ 07405

CT. NO: PH-0671
MADEP NO: NJ386
PADER NO: 68-463
NJDEPE NO: 14622
NYDOH NO: 11408

REPORT OF ANALYSIS

TO: ENVIRO-TECH, INC.
247 MAIN ST.
MATAWAN, NJ 07747-3222
(908) 566-2277

Date Collected: 06/21/94
Date Submitted: 06/22/94
Date Reported: 06/24/94
Project: EARL AMMO

Sample I.D.		AA24395		AA24396	
Sample Description		589-7 SOIL		589-2 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	76	1.0	82
TPH-SOIL	mg/kg dry wt	26	26	24	29
TPH-WATER					

Sample I.D.		AA24397		AA24398	
Sample Description		589-3 SOIL		589-4 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	89	1.0	83
TPH-SOIL	mg/kg dry wt	22	43	24	27
TPH-WATER					

Sample I.D.		AA24399		AA24400	
Sample Description		FIELD BLANK		589-6 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT			1.0	73
TPH-SOIL	mg/kg dry wt			27	43
TPH-WATER	mg/L	4.0	Not detected		

Sample I.D.		AA24401		AA24402	
Sample Description		589-5 SOIL		589-COMP SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	77	1.0	83
TPH-SOIL	mg/kg dry wt	26	36	24	57
TPH-WATER					

Sample I.D.	**AA24403**
Sample Description	**589-8 SOIL**

Analyte	**Units**	**MDL**	**Result**
%SOLIDS	PERCENT	1.0	85
TPH-SOIL	mg/kg dry wt	24	150
TPH-WATER			

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Stanley Gilewicz - Laboratory Director

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24395
Sample Matrix: Soil
% Solids: 76

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-1	ND	1	26	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24396
Sample Matrix: Soil
% Solids: 82

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-2	29	1	24	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24397
Sample Matrix: Soil
% Solids: 89

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-3	43	1	22	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24398
Sample Matrix: Soil
% Solids: 83

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-4	27	1	24	6/22/94

TPH LINEAR REGRESSION DATE 7-June-94
TPH_1S ANALYST Dan B

STDS (MG)	ABS.
0	0.0000
2.5	0.0928
5	0.1933
10	0.3876
15	0.5814
20	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

Lot # W-94-TPH-1182

****

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5	0.1933	5.0246	-0.0246
10	0.3876	10.0918	-0.0918
15	0.5814	15.1459	-0.1459
20	0.7618	19.8506	0.1494

****

BATCH 264

SAMPLE	ABS.	MG
10mg6-27	0.4068	10.5925
MBS	0.3627	9.4424
dup 24452	0.0093	0.2260
ms1 24452	0.3795	9.8805
ms2 24452	0.3565	9.2807
mb6-27	0.0088	0.2130
24452	0.01	0.2443
24453	0.0267	0.6798
24454	0.0134	0.3330
24455	0.0169	0.4242
24456	0.0142	0.3538
24457	0.2445	6.3598
24458	0.5629	14.6634
24461	0.0135 ✓	0.3356
24462	0.4055 ✓	10.5586
24463	0.0136 ✓	0.3382
24464	0.0096 ✓	0.2339

DB 6/28

J data input
S.C 6/27/94

analysis TPH SOILS

BATCH 264

DATE: 27-Jun-94

ANALYST: sg

Q.C. DATA

	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.59	106%
MBS	666.7	629.49	94%
MS #1	752.56	743.57	99%
MS #2	747.61	693.83	93%
SAMPLE		0.00	RPD
SAMPLE DUP		17.01	0.00%

SAMPLE #	SOLIDS FACTOR	SAMPLE WEIGHT	MG CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg6-27	1.00	1000	10.5925	1.0	10.59	
MBS	1.00	15.0	9.4424	1.0	629.49	20.00
dup 24452	0.88	15.1	0.2260	1.0	17.01	22.73
ms1 24452	0.88	15.1	9.8805	1.0	743.57	22.73
ms2 24452	0.88	15.2	9.2807	1.0	693.83	22.73
mb6-27	1.00	15.0	0.2130	1.0	14.20	20.00
24452	0.88	15.0	0.2443	1.0	18.51	22.73
24453	0.92	15.2	0.6798	1.0	48.61	21.74
24454	0.87	15.1	0.3330	1.0	25.35	22.99
24455	0.85	15.0	0.4242	1.0	33.27	23.53
24456	0.88	15.0	0.3538	1.0	26.81	22.73
24457	0.91	15.0	6.3598	1.0	465.92	21.98
24458	0.86	15.3	14.6634	2.0	2228.83	46.51
24461	0.89	15.2	0.3356	1.0	24.81	22.47
24462	0.92	15.2	10.5586	1.0	755.05	21.74
24463	0.91	15.5	0.3382	1.0	23.98	21.98
24464	0.90	15.2	0.2339	1.0	17.10	22.22

DB 6/28

J data input
SC 6/27/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24400
Sample Matrix: Soil
% Solids: 73

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-6	43	1	27	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24401
Sample Matrix: Soil
% Solids: 77

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-5	36	1	26	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24402
Sample Matrix: Soil
% Solids: 83

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-COMP	57	1	24	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24403
Sample Matrix: Soil
% Solids: 85

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	589-8	150	1	24	6/22/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24399
Sample Matrix: Water
% Solids:

Date Received: 6/22/94
Date Extracted: 6/22/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/L)	DILUTION FACTOR	MDL (mg/L)	DATE ANALYZED
TPH	FB	ND	1	4.0	6/22/94

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Soil

Lab Code: 14622 **Units:** mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	258s	ND

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Soil

Lab Code: 14622 **Units:** mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	262s	ND

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Water

Lab Code: 14622 **Units:** mg/L

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	1.0	050w	ND

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA24364 MSD

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	632		35.4		736	81		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA23883 MS

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 75

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	965		56.6		889	102		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.
AA23883 MSD

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 75

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	876		56.6		871	94		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.
MBS

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): __mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.52		1.00	U	10.0	95		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

MBS DUP

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.55		1.00	U	10.0	95		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

AA24364 DUP

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	35.4		40.7		13.8		
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.
AA24364 DUP

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 90

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	56.6		54.6		3.54		
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

MBS DUP

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	9.52		9.55		0		C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

TPH LINEAR REGRESSION DATE 10-Mar-94
TPH_3S ANALYST Dan B

STDS (MG)	ABS.
0	0.0000
2.5	0.0928
5	0.1933
10	0.3876
15	0.5814
20	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

Lot # W-94-TPH-1069

****

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5	0.1933	5.0246	-0.0246
10	0.3876	10.0918	-0.0918
15	0.5814	15.1459	-0.1459
20	0.7618	19.8506	0.1494

****

BATCH 262

SAMPLE	ABS.	MG
10mg6-21	0.413	10.7542
mbs	0.3938	10.2535
dup 24364	0.0217	0.5494
ms1 24364	0.4066	10.5873
ms2 24364	0.3301	8.5922
mb6-21	0.0062	0.1452
24364	0.0191	0.4816
24365	0.0208	0.5259
24366	0.0474	1.2197
24367	0.0193	0.4868
24368	0.0364	0.9328
24356		0.0000
24357		0.0000
24358		0.0000
24359		0.0000
24360		0.0000
24361		0.0000
24362		0.0000
24363		0.0000
24395	0.0120 ✓	0.2965
24396	0.0142 ✓	0.3538
24397	0.0229 ✓	0.5807
24398	0.0134 ✓	0.3330
mb6-22	0.0059	0.1374
10mg6-22	0.4073	10.6055

✓ data input
DB 6/23/94

ANALYSIS: TPH SOILS

BATCH 262

DATE: 23-Jun-94

ANALYST: DB

Q.C. DATA

	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.75	108%
MBS	666.7	683.56	103%
MS #1	735.84	779.05	101%
MS #2	735.84	632.25	81%
SAMPLE		35.44	RPD
SAMPLE DUP		40.7	13.82%

SAMPLE #	SOLIDS FACTOR	SAMPLE WEIGHT	MG CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg6-21	1.00	1000	10.7542	1.0	10.75	
mbs	1.00	15.0	10.2535	1.0	683.56	20.00
dup 24364	0.90	15.0	0.5494	1.0	40.70	22.22
ms1 24364	0.90	15.1	10.5873	1.0	779.05	22.22
ms2 24364	0.90	15.1	8.5922	1.0	632.25	22.22
mb6-21	1.00	15.0	0.1452	1.0	9.68	20.00
24364	0.90	15.1	0.4816	1.0	35.44	22.22
24365	0.90	15.1	0.5259	1.0	38.70	22.22
24366	0.90	15.0	1.2197	1.0	90.34	22.22
24367	0.96	15.0	0.4868	1.0	33.81	20.83
24368	0.86	15.3	0.9328	1.0	70.89	23.26
24356	0.87		0.0000	1.0	ERR	22.99
24357	0.88		0.0000	1.0	ERR	22.73
24358	0.87		0.0000	1.0	ERR	22.99
24359	0.90		0.0000	1.0	ERR	22.22
24360	0.88		0.0000	1.0	ERR	22.73
24361	0.91		0.0000	1.0	ERR	21.98
24362	0.95		0.0000	1.0	ERR	21.05
24363	0.93		0.0000	1.0	ERR	21.51
24395	0.76	15.2	0.2965	1.0	25.662	26.32
24396	0.82	15.1	0.3538	1.0	28.576	24.39
24397	0.89	15.2	0.5807	1.0	42.927	22.47
24398	0.83	15.0	0.3330	1.0	26.744	24.10
mb6-22	1.00	15.0	0.1374	1.0	9.158	20.00
10mg6-22	1.00	1000.0	10.6055	1.0	10.606	20.00

√ data input

DB 6/23/94

TPH LINEAR REGRESSION
TPH_1S

DATE 7-June-94
ANALYST Dan B

STDS (MG)	ABS.
0	0.0000
2.5	0.0928
5	0.1933
10	0.3876
15	0.5814
20	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

Lot # W-94-TPH-1182

****

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5	0.1933	5.0246	-0.0246
10	0.3876	10.0918	-0.0918
15	0.5814	15.1459	-0.1459
20	0.7618	19.8506	0.1494

****

BATCH 258

SAMPLE	ABS.	MG
10mg6-15	0.4051	10.5482
MBS	0.3852	10.0292
dup 23883	0.0245	0.6224
ms1 23883	0.4170	10.8585
ms2 23883	0.3861	10.0527
mb6-13	0.0068	0.1608
24188	0.705	18.3693
24189	0.2682	6.9779
24030	0.6102	15.8970
24031	0.1424	3.6972
24032	0.2089	5.4314
23882	0.0744	1.9238
23883	0.0252	0.6407
23884	0.3500	9.1112
23885	0.1658	4.3074
23886	0.6095	15.8787
23887	0.0472	1.2144
23888	0.2817	7.3300
23889	0.1582	4.1092
24221	0.3609	9.3955
24041	0.4309	11.2210
24211	0.5156 ✓ 4.✓ 6/23	13.4299
mb6-14	0.0061	0.1426
mb6-15	0.0056	0.1295
24400	0.0188 ✓	0.4738
24401	0.0166 ✓	0.4164
24402	0.0282 ✓	0.7189

✓ data import
DB 6/23/94

DB
6/23

24403	0.0764	1.9759
mb6-22	0.0059	0.1374
10mg6-22	0.4073	10.6055

√ data input
DB 6/23/94

analysis TPH SOILS

BATCH 258

DATE: 23-Jun-94

ANALYST: DB

Q.C. DATA

	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.55	106%
MBS	666.7	668.61	100%
MS #1	888.89	965.2	102%
MS #2	871.46	876.05	94%
SAMPLE		56.57	RPD
SAMPLE DUP		54.6	3.54%

SAMPLE #	SOLIDS FACTOR	SAMPLE WEIGHT	MG CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg6-15	1.00	1000	10.5482	1.0	10.55	
MBS	1.00	15.0	10.0292	1.0	668.61	20.00
dup 23883	0.75	15.2	0.6224	1.0	54.60	26.67
ms1 23883	0.75	15.0	10.8585	1.0	965.20	26.67
ms2 23883	0.75	15.3	10.0527	1.0	876.05	26.67
mb6-13	1.00	15.0	0.1608	1.0	10.72	20.00
24188	0.86	15.1	18.3693	5.0	7072.73	116.28
24189	0.78	15.2	6.9779	10.0	5885.56	256.41
24030	0.80	15.0	15.8970	2.0	2649.50	50.00
24031	0.79	15.2	3.6972	1.0	307.89	25.32
24032	0.87	15.1	5.4314	1.0	413.45	22.99
23882	0.74	15.4	1.9238	1.0	168.81	27.03
23883	0.75	15.1	0.6407	1.0	56.57	26.67
23884	0.70	15.1	9.1112	1.0	861.99	28.57
23885	0.76	15.3	4.3074	10.0	3704.35	263.16
23886	0.86	15.3	15.8787	2.0	2413.55	46.51
23887	0.85	15.4	1.2144	1.0	92.78	23.53
23888	0.79	15.5	7.3300	1.0	598.61	25.32
23889	0.88	15.0	4.1092	1.0	311.30	22.73
24221	0.93	15.0	9.3955	1.0	673.51	21.51
24041	0.85	15.0	11.2210	10.0	8800.78	235.29
24211	0.92	15.2	13.4299	2.0	1920.75	43.48
mb6-14	1.00	15.0	0.1426	1.0	9.51	20.00
mb6-15	1.00	15.0	0.1295	1.0	8.64	20.00
24400	0.73	15.2	0.4738	1.0	42.70	27.40
24401	0.77	15.2	0.4164	1.0	35.579	25.97
24402	0.83	15.1	0.7189	1.0	57.363	24.10
24403	0.85	15.0	1.9759	1.0	154.976	23.53
mb6-22	1.00	15.0	0.1374	1.0	9.158	20.00
10mg6-22	1.00	1000.0	10.6055	1.0	10.606	20.00

5.0 6/23

√ data input DB 6/23/94

TPH LINEAR REGRESSION

DATE 08-june-94
ANALYST Dan B

STDS (MG)	ABS.
0.0	0.0000
2.5	0.0928
5.0	0.1933
10.0	0.3876
15.0	0.5814
20.0	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

lot # W-94 tph-1182

##

STDS (MG)	ABS.	PPM	DIFF
0.0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5.0	0.1933	5.0246	-0.0246
10.0	0.3876	10.0918	-0.0918
15.0	0.5814	15.1459	-0.1459
20.0	0.7618	19.8506	0.1494

##

BATCH 050w

SAMPLE	ABS.	MG
10mg 6-9	0.402	10.4673
MBS	0.3658	9.5232
MBSD	0.3668	9.5493
mb6-9	0.0073	0.1739
24048	0.0101	0.2469
24153	0.0064	0.1504
24193	0.3201	8.3314
24194	0.3898	10.1491
24195	0.0375	0.9615
mb6-15	0.0051	0.1165
10mg6-16	0.4047	10.5377
24277	0.0063 ✓	0.1478
24278	0.0049 ✓	0.1113
mb6-20	0.0060	0.1400
10mg6-20	0.4071	10.6003
24369	0.0053 ✓	0.1217
mb6-21	0.0054	0.1243
10mg6-21	0.4130	10.7542
24399	0.0058 ✓	0.1348
mb6-22	0.0057	0.1322
10mg6-22	0.4073	10.6055

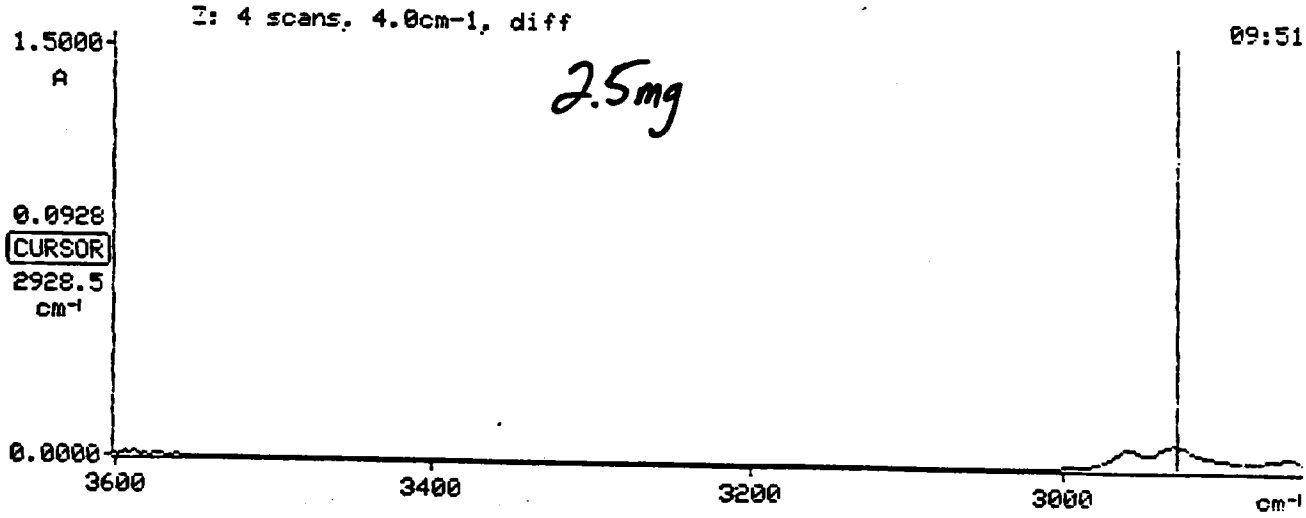
ANALYSIS: TPH WATERS
batch 050
DATE: 23-Jun-94
ANALYST: DB

Q.C. DATA

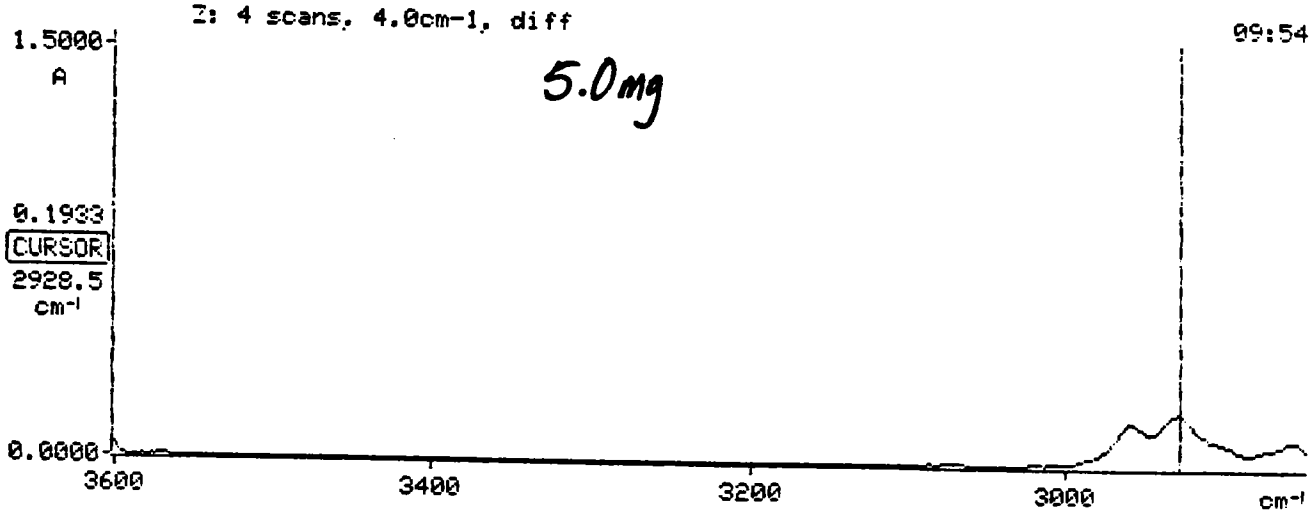
	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.467	105%
MBS	10	9.523	95%
MBS DUP	10	9.549	95%
		RPD =	0.00%

SAMPLE NO.	SAMPLE VOLUME	MG FROM CURV	CALC.	DILUT. FACTOR	TPH (PPM)	MDL (PPM)
10mg 6-9	1000	10.4673		1.0	10.467	
MBS	1000	9.5232		1.0	9.523	
MBSD	1000	9.5493		1.0	9.549	
mb6-9	1000	0.1739		1.0	0.174	1.0
24048	955	0.2469		1.0	0.259	1.0
24153	455	0.1504		1.0	0.331	2.2
24193	100	8.3314		1.0	83.314	10.0
24194	100	10.1491		1.0	101.491	10.0
24195	100	0.9615		1.0	9.615	10.0
mb6-15	1000	0.1165		1.0	0.117	1.0
10mg6-16	1000	10.5377		1.0	10.538	1.0
24277	940	0.1478		1.0	0.157	1.1
24278	960	0.1113		1.0	0.116	1.0
mb6-20	1000	0.1400		1.0	0.140	1.0
10mg6-20	1000	10.6003		1.0	10.600	1.0
24369	250	0.1217		1.0	0.487	4.0
mb6-21	1000	0.1243		1.0	0.124	1.0
10mg6-21	1000	10.7542		1.0 ✓	10.754	1.0
24399	250	0.1348		1.0 ✓	0.539	4.0
mb6-22	1000	0.1322		1.0 ✓	0.132	1.0
10mg6-22	1000	10.6055		1.0 ✓	10.606	1.0

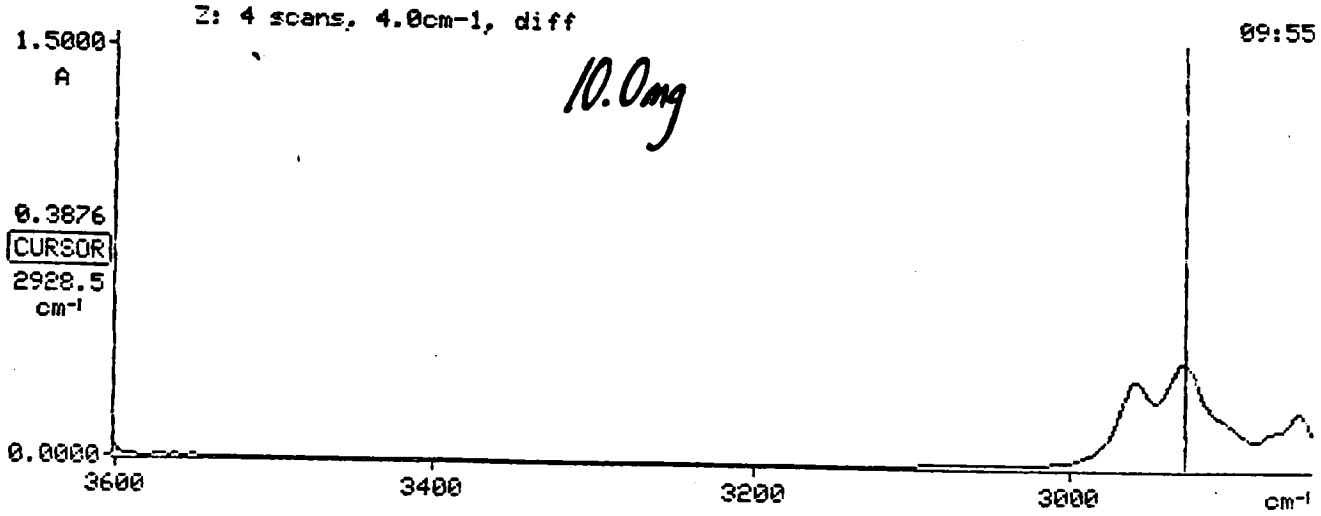
TPH curve
DB 6/7/94



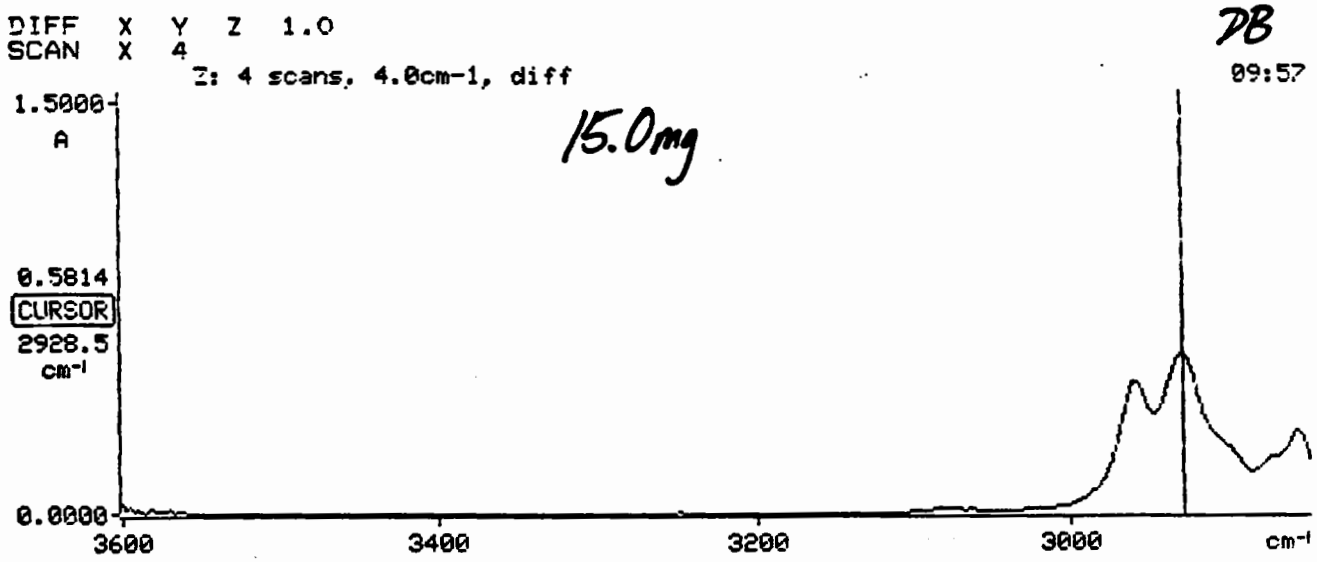
DIFF X Y Z 1.0
SCAN X 4

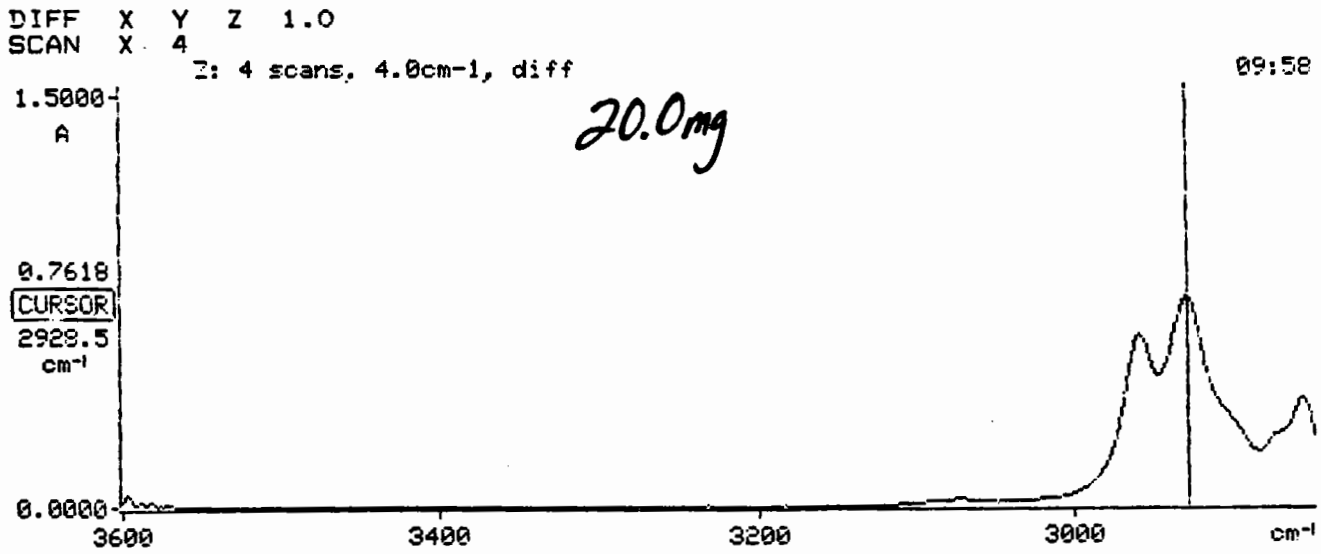


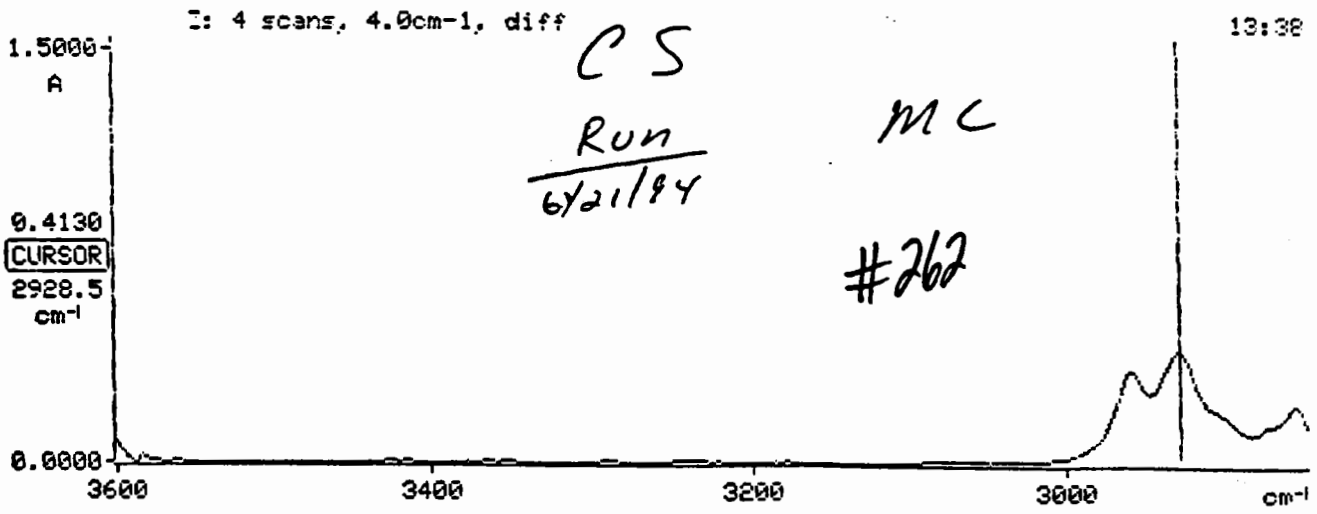
DIFF X Y Z 1.0
SCAN X 4

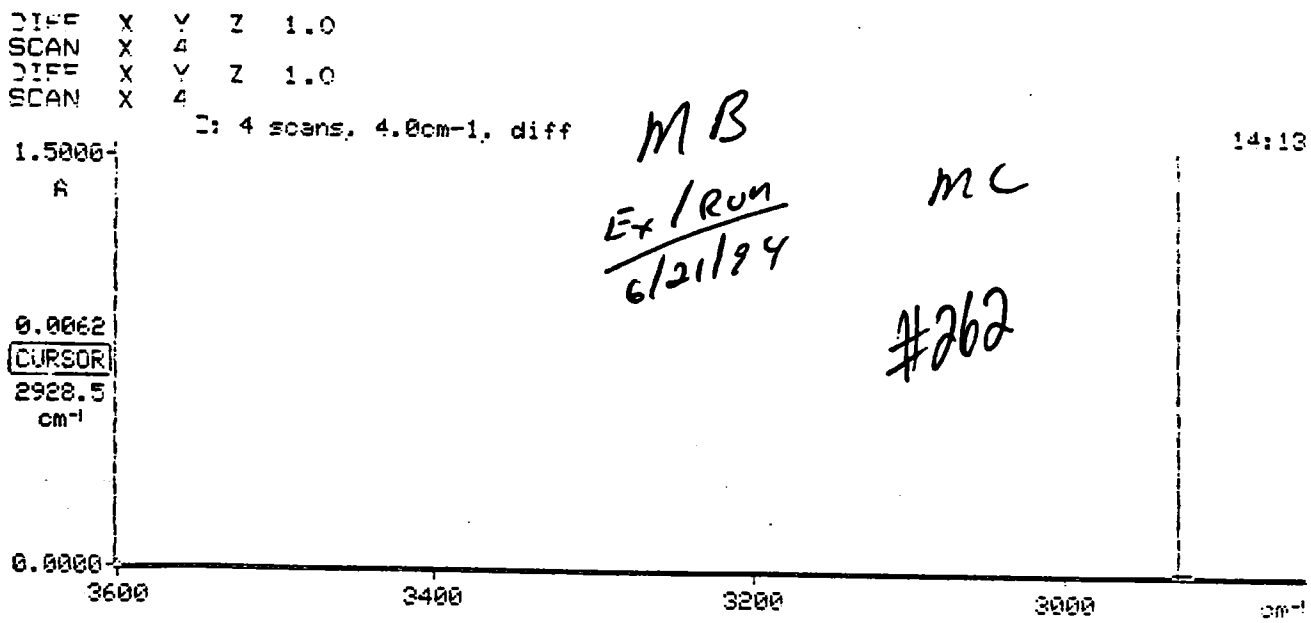


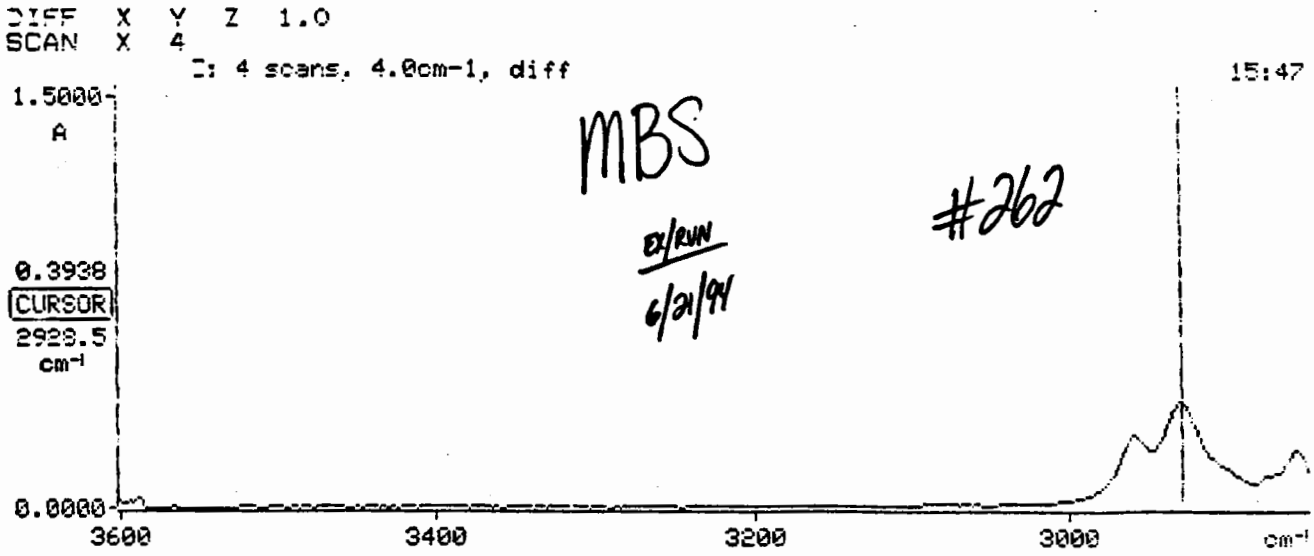
TPH curve
DB 6/7/94

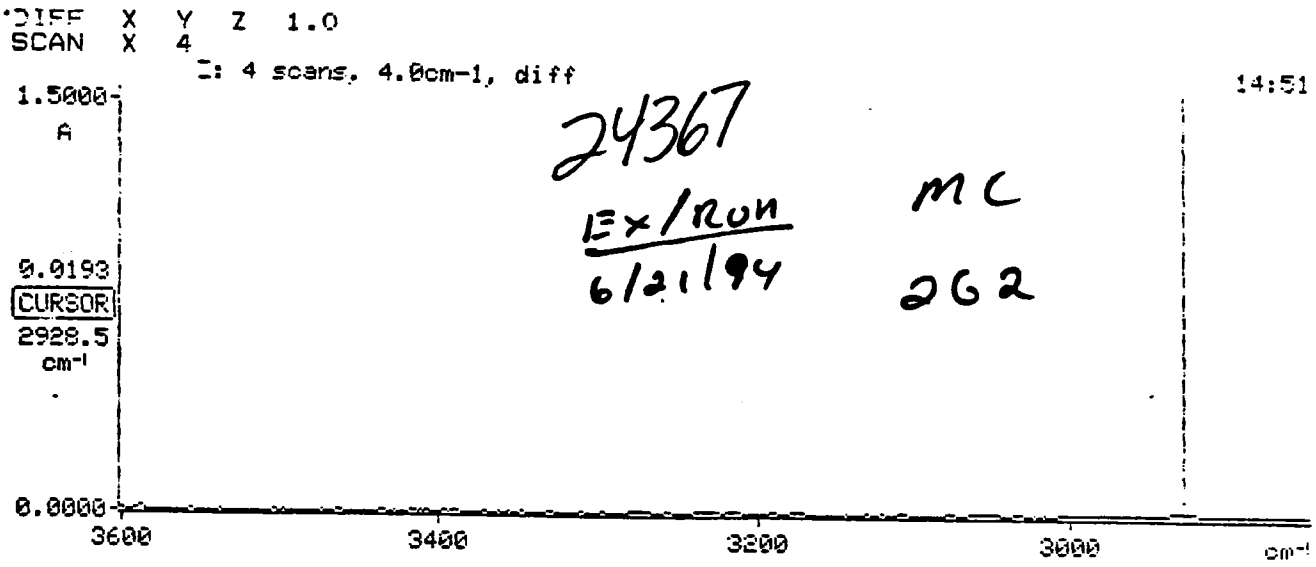


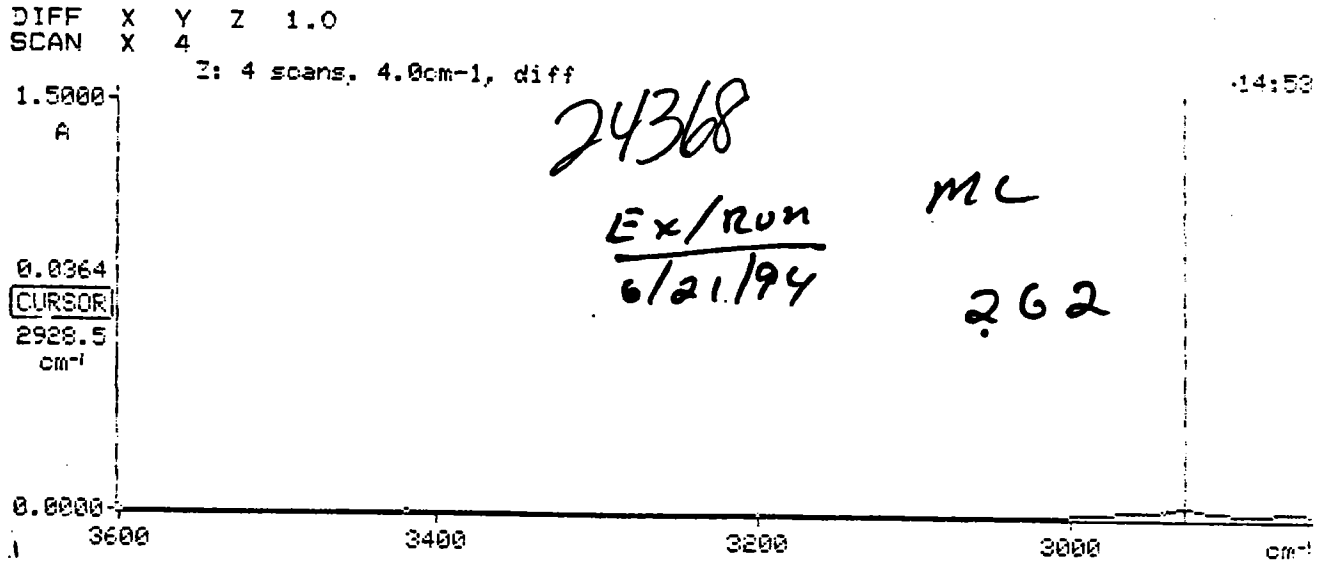


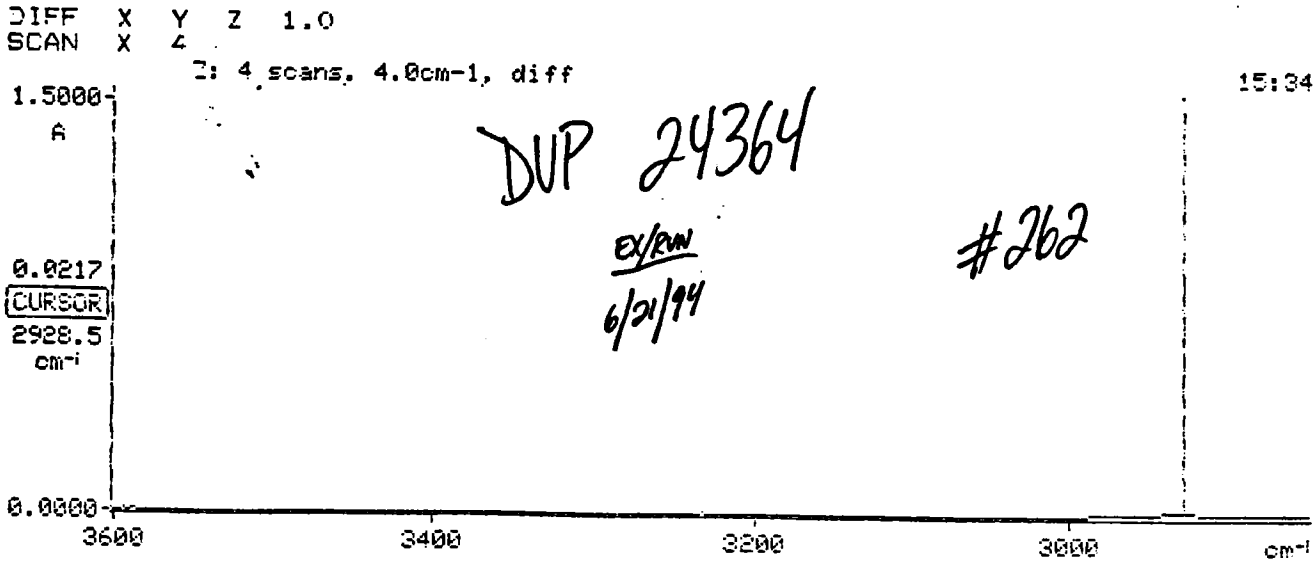

I: 4 scans, 4.0cm-1, diff
13:38
1.5000
A
0.4130
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
CS
Run
6/21/84
MC
#262

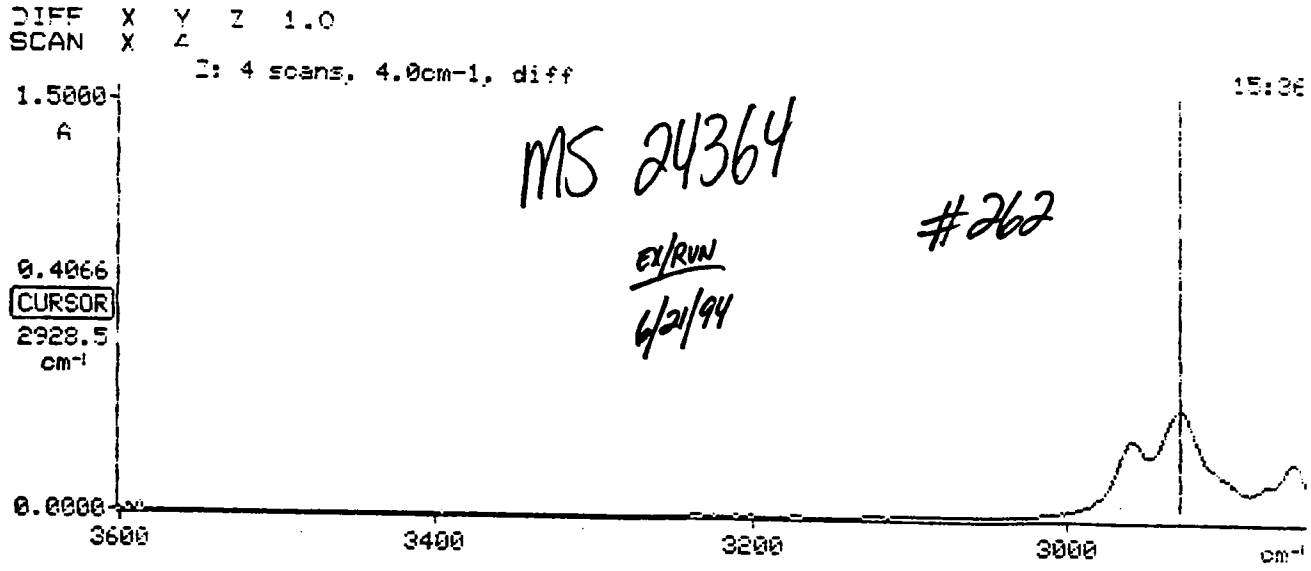

DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4
2: 4 scans, 4.0cm-1, diff
14:13
1.5000
A
0.0062
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex/Run
6/21/94
MC
#262

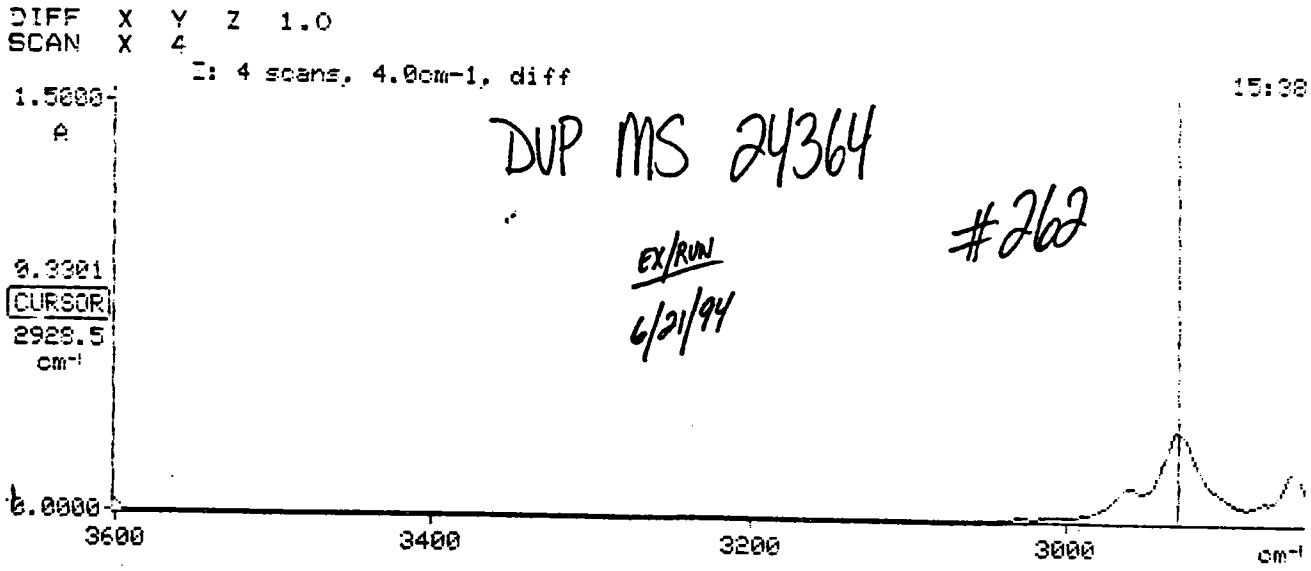

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:47
1.5000
A
0.3938
CURSOR
2923.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS
#262
EX/RUN
6/21/94

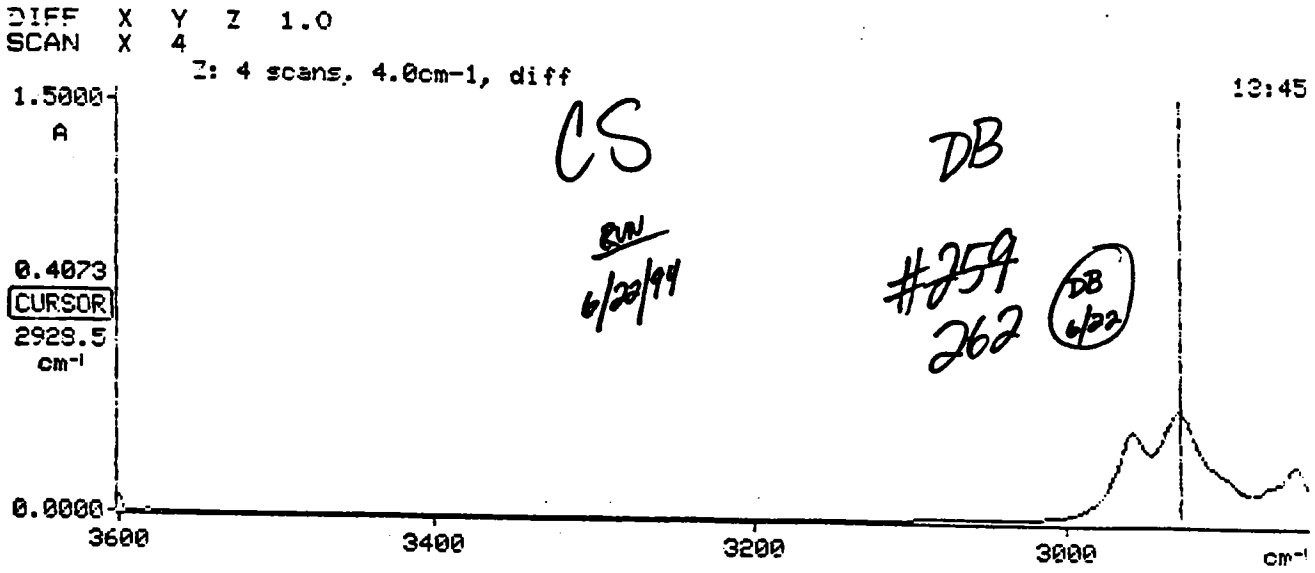

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:51
1.5000
A
0.0193
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24367
Ex/Run
6/21/94
MC
262

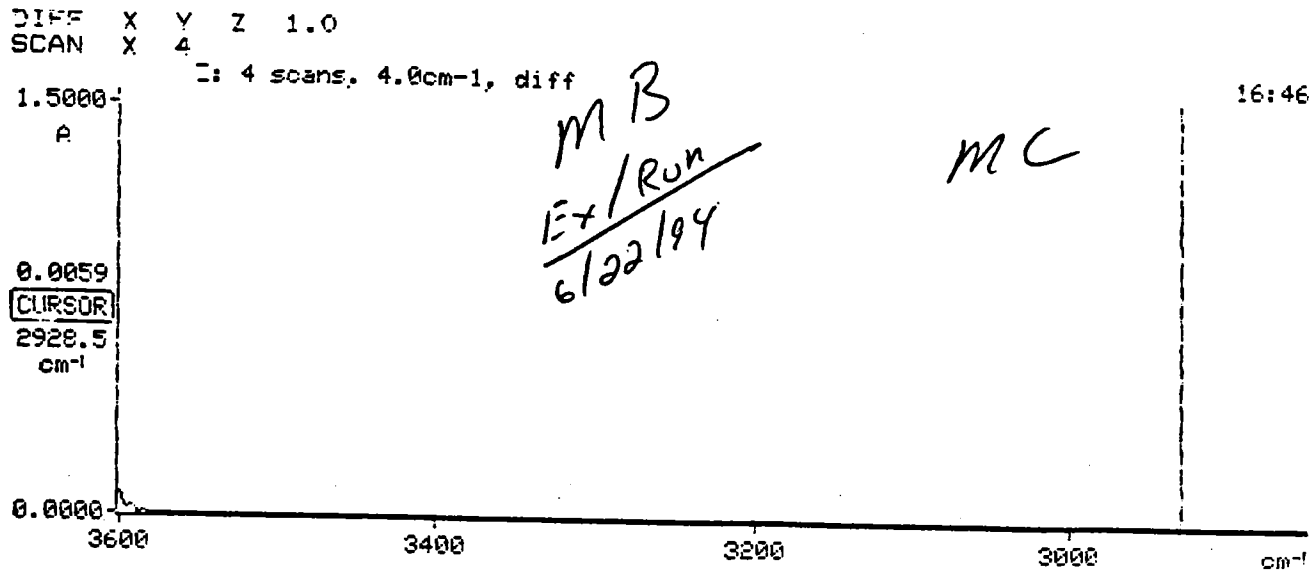

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:53
1.5000
A
0.0364
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24368
Ex/Run
6/21/94
MC
262

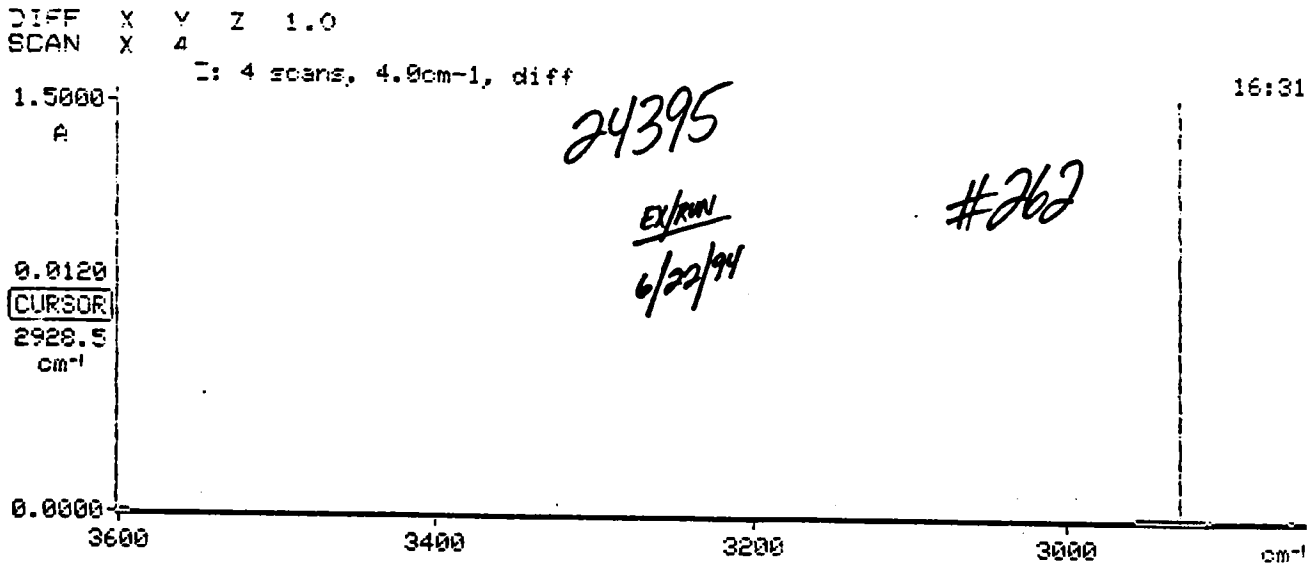

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
15:34
1.5000
A
0.0217
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
DUP 24364
EX/RUN
6/21/94
#262

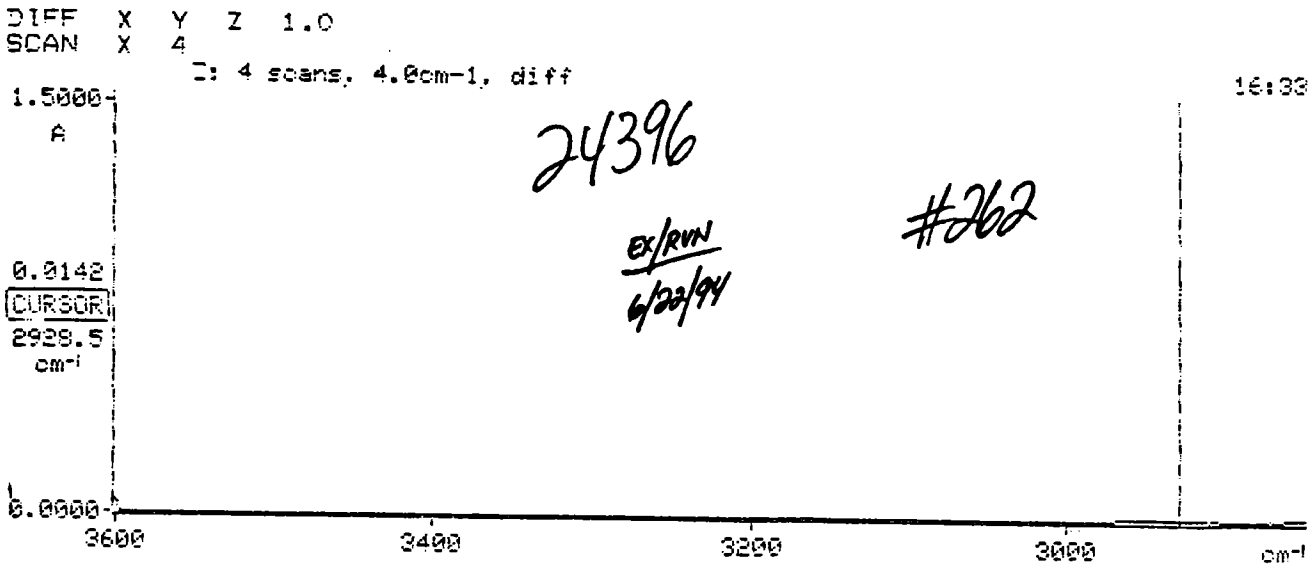

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:36
1.5000
A
0.4066
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MS 24364
#262
EX/RUN
6/21/94

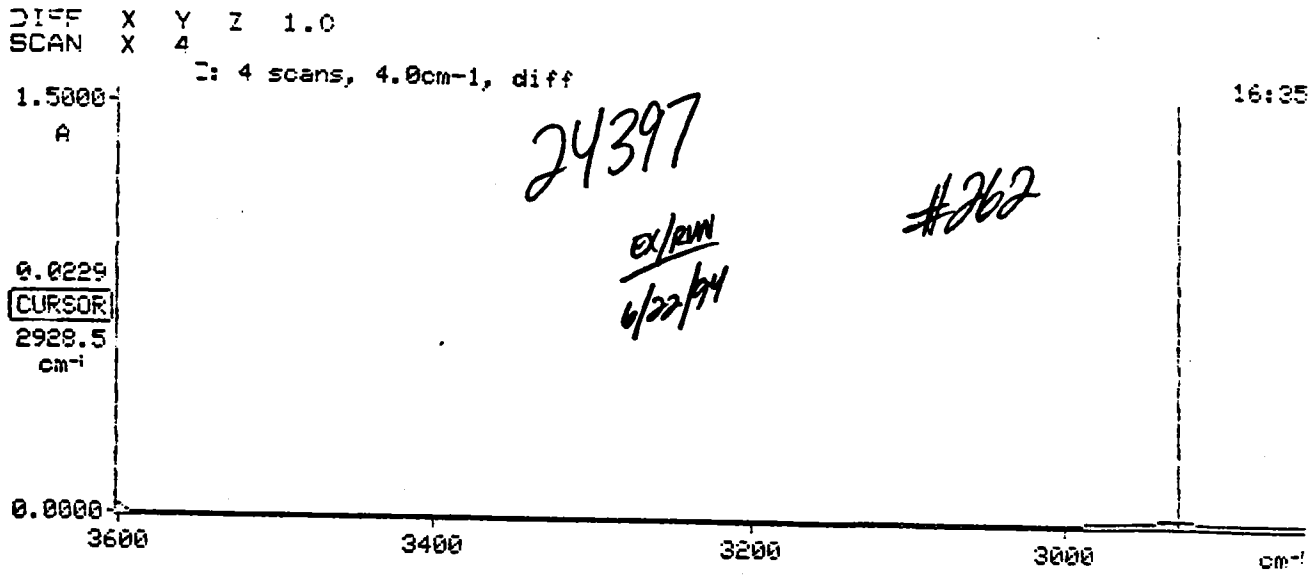

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:38
1.5000
A
0.3301
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
DUP MS 24364
#262
EX/RUN
6/21/94

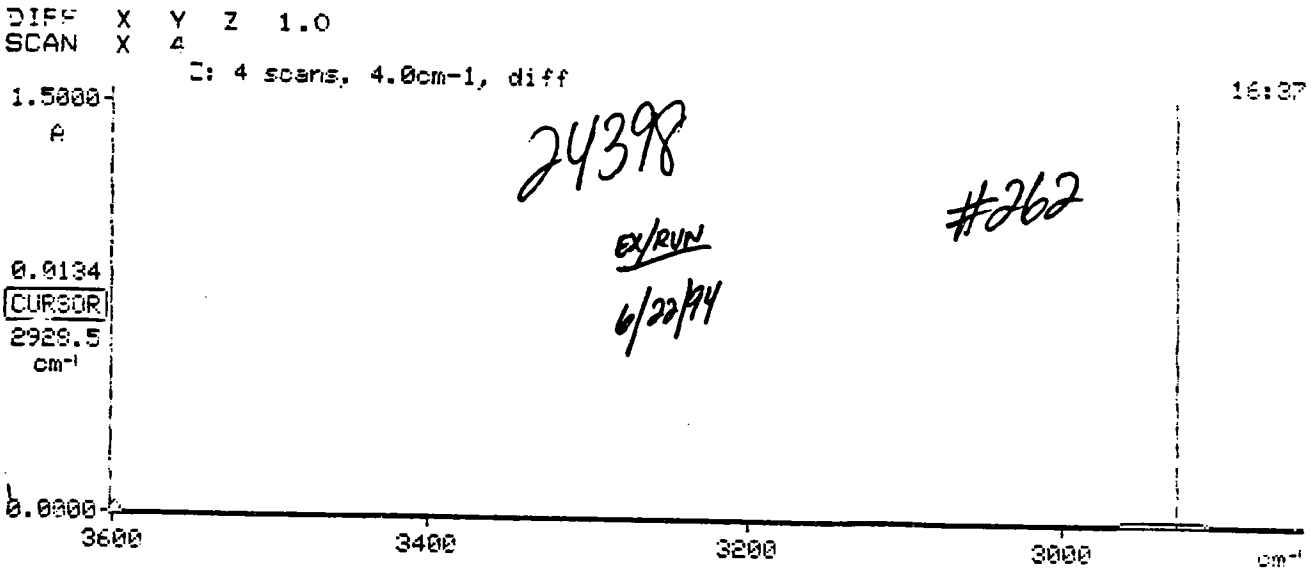

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
13:45
1.5000
A
0.4073
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
CS
RW
6/22/94
DB
#259
262
DB
6/22

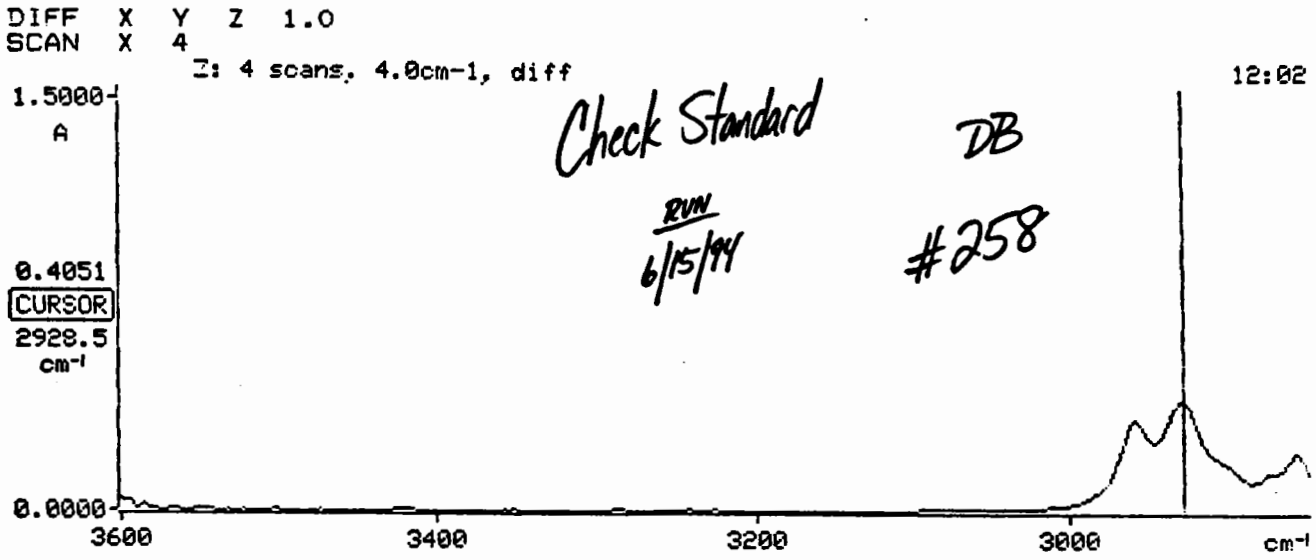

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:46
1.5000
A
0.0059
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex/Run
6/22/94
MC

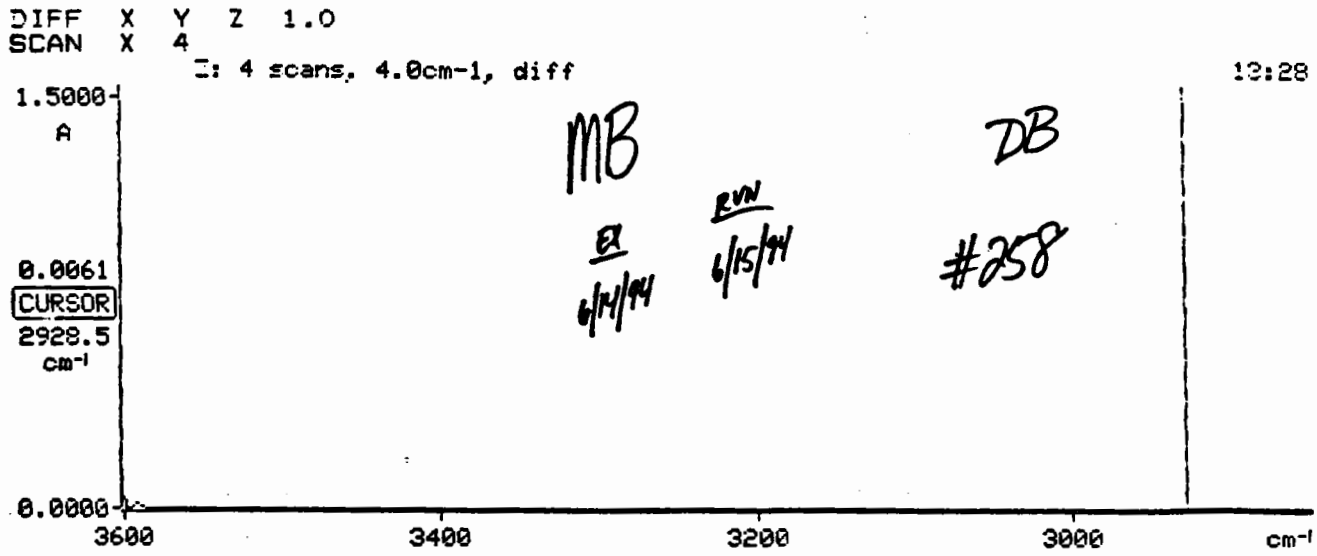

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:31
1.5000
A
24395
EX/RUN
6/22/94
#262
0.0120
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

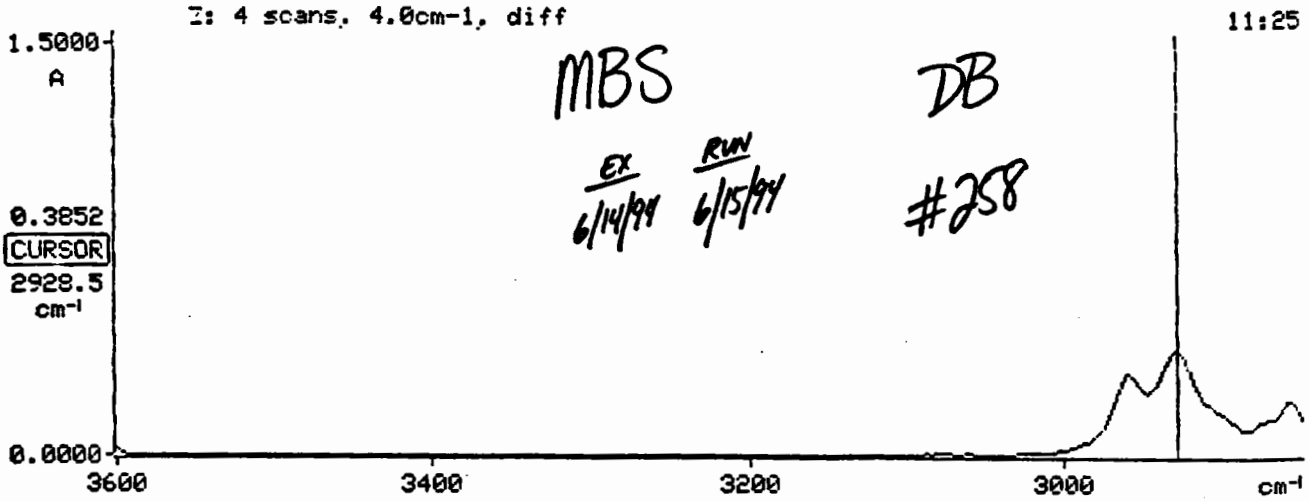

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:33
1.5000
A
24396
EX/RUN
6/22/94
#262
0.0142
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

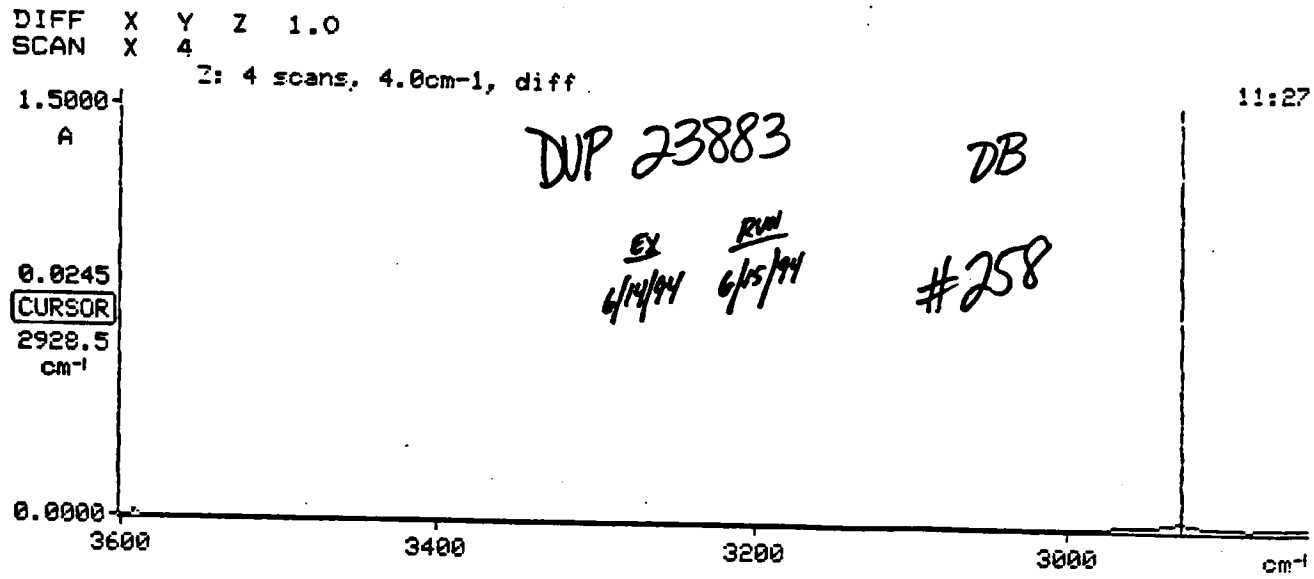

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:35
1.5000
A
24397
EX/RUN
6/22/94
#262
0.0229
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

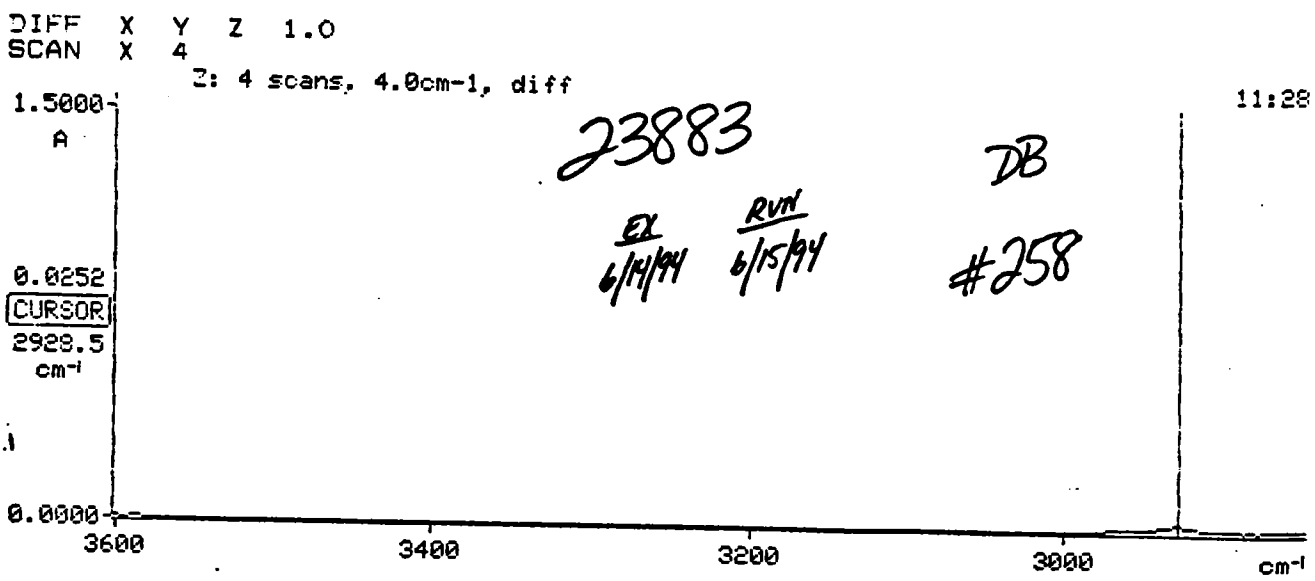

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:37
1.5000
A
24398
EX/RUN
6/22/94
#262
0.0134
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

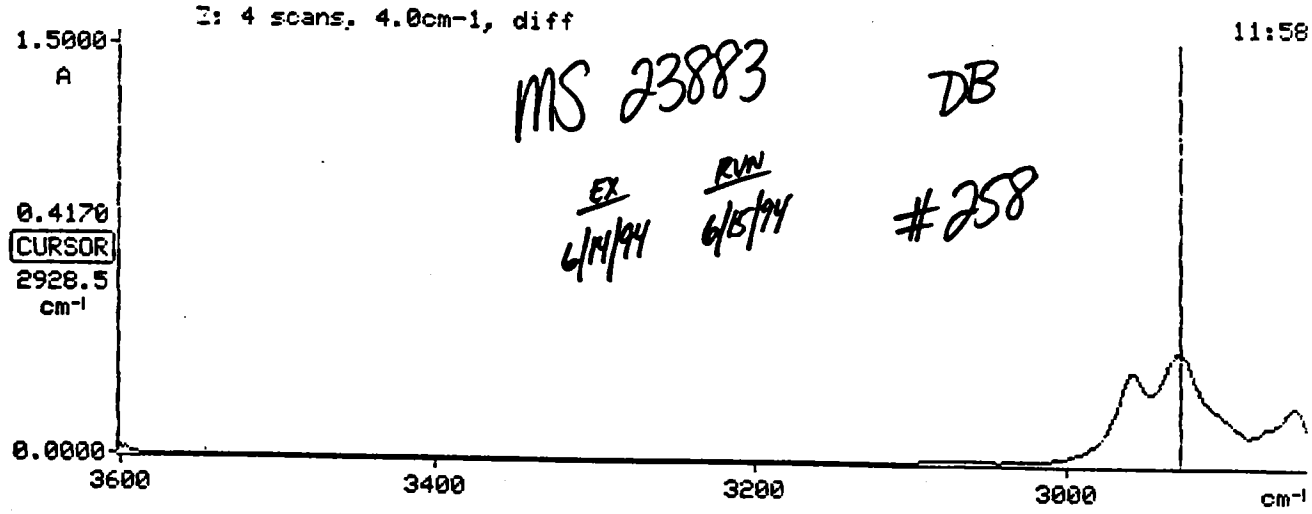

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
12:02
1.5000
A
0.4051
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
Check Standard
RUN
6/15/94
DB
#258


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
13:28
1.5000
A
0.0061
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
EX
6/14/94
RUN
6/15/94
DB
#258

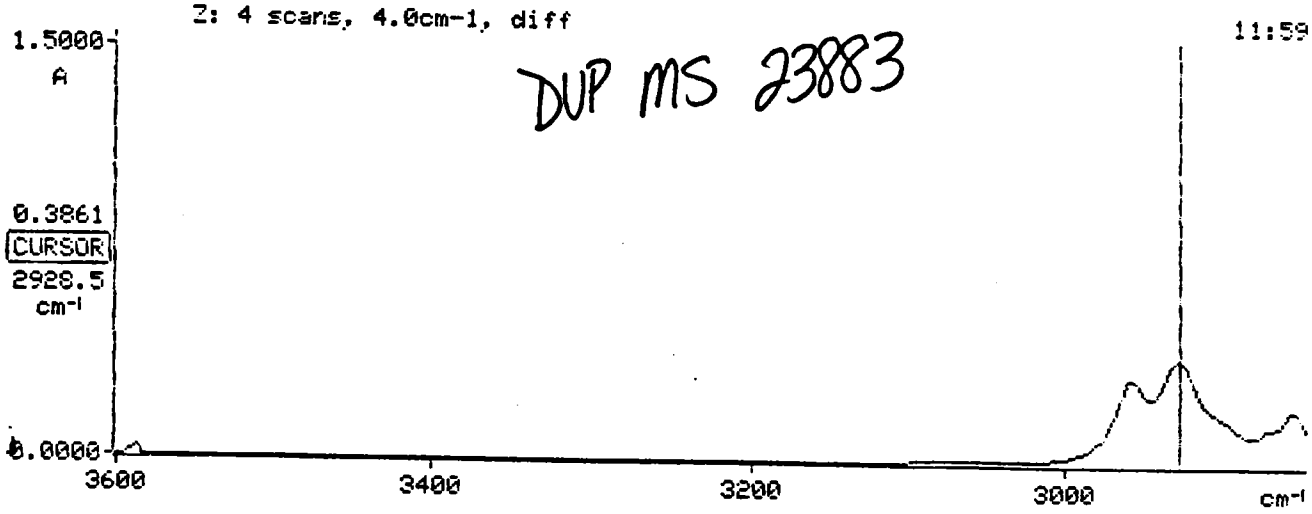

I: 4 scans, 4.0cm-1, diff
11:25
1.5000
A
0.3852
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS
DB
EX
6/14/94
RUN
6/15/94
#258

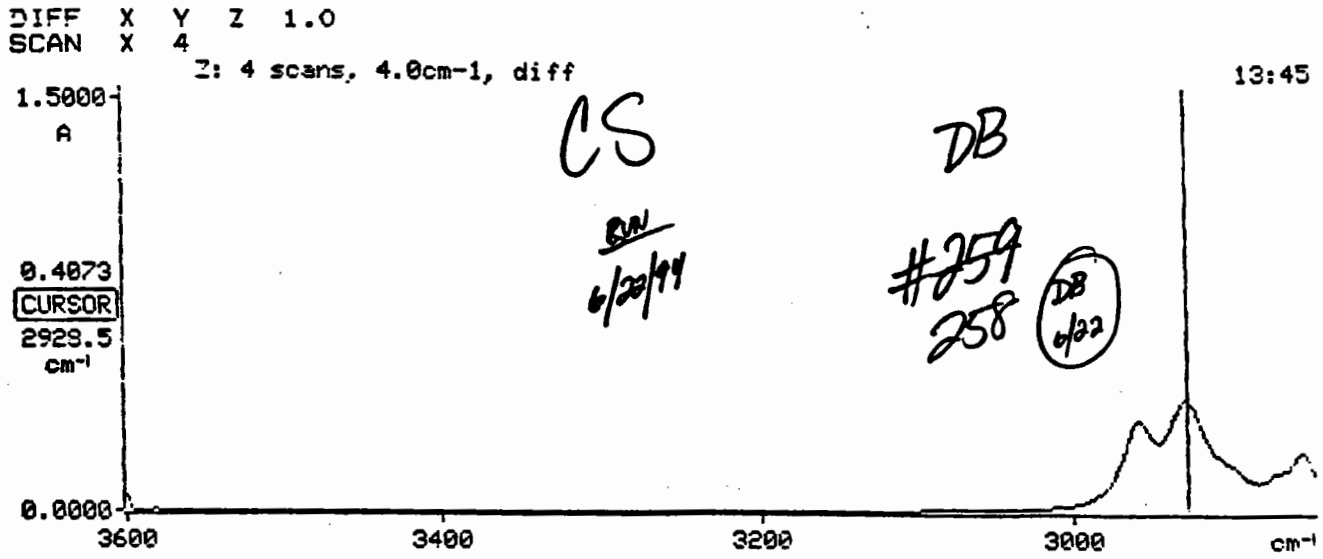

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
11:27
1.5000
A
0.0245
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
DUP 23883
DB
EX
6/14/94
RUN
6/15/94
#258

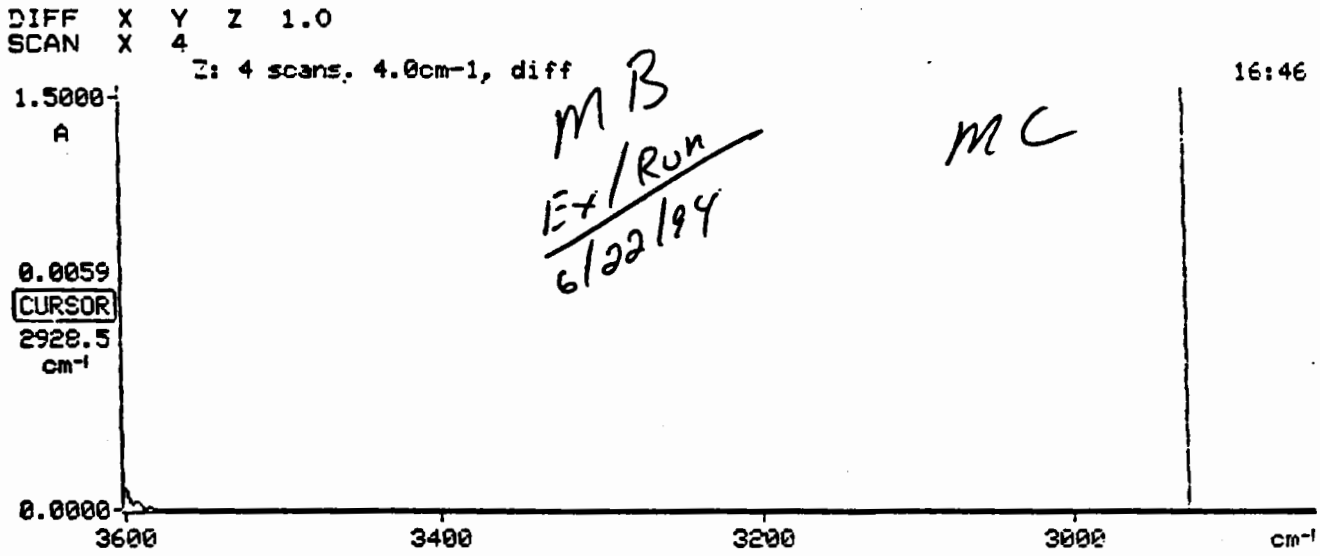

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
11:28
1.5000
A
0.0252
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
23883
DB
EX
6/14/94
RUN
6/15/94
#258

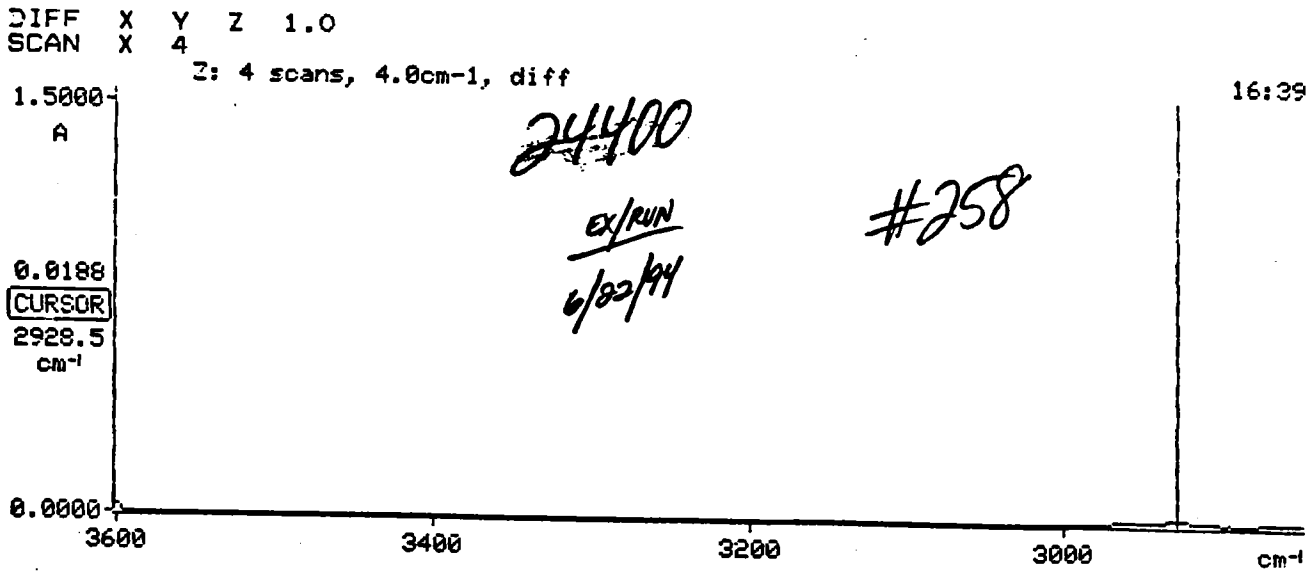


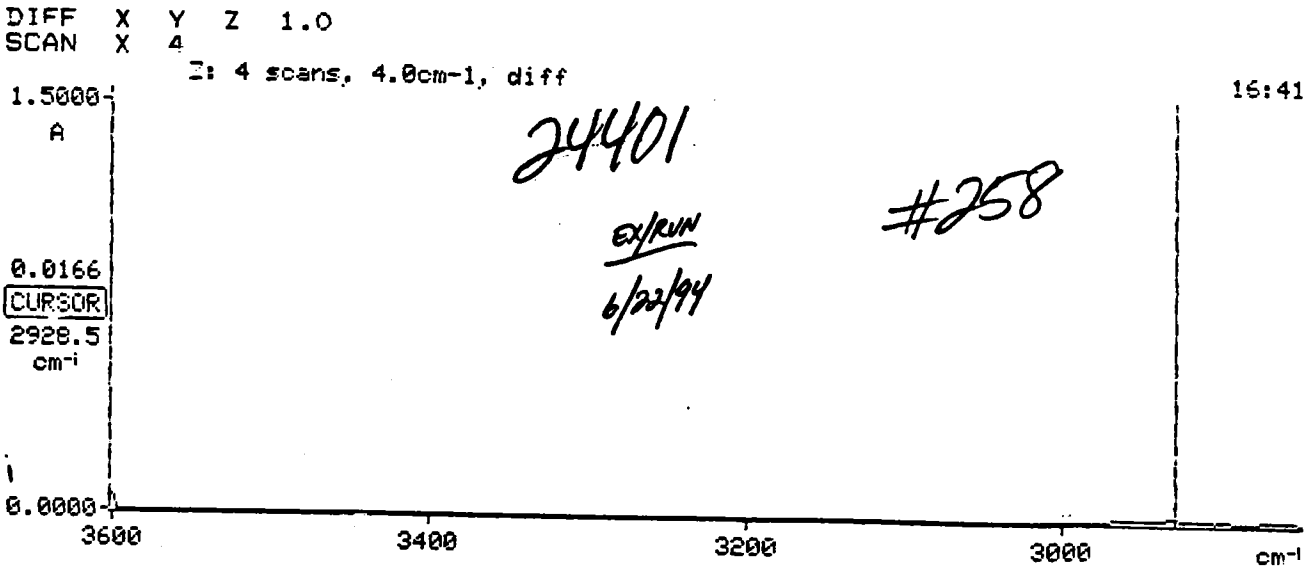
DIFF X Y Z 1.0
SCAN X 4

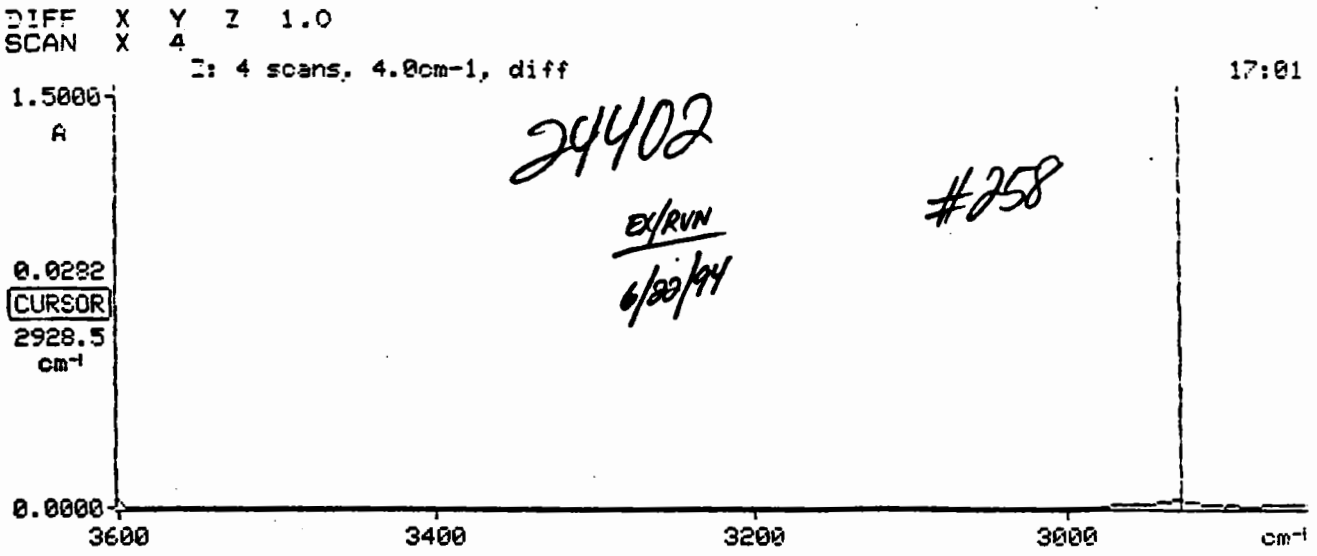


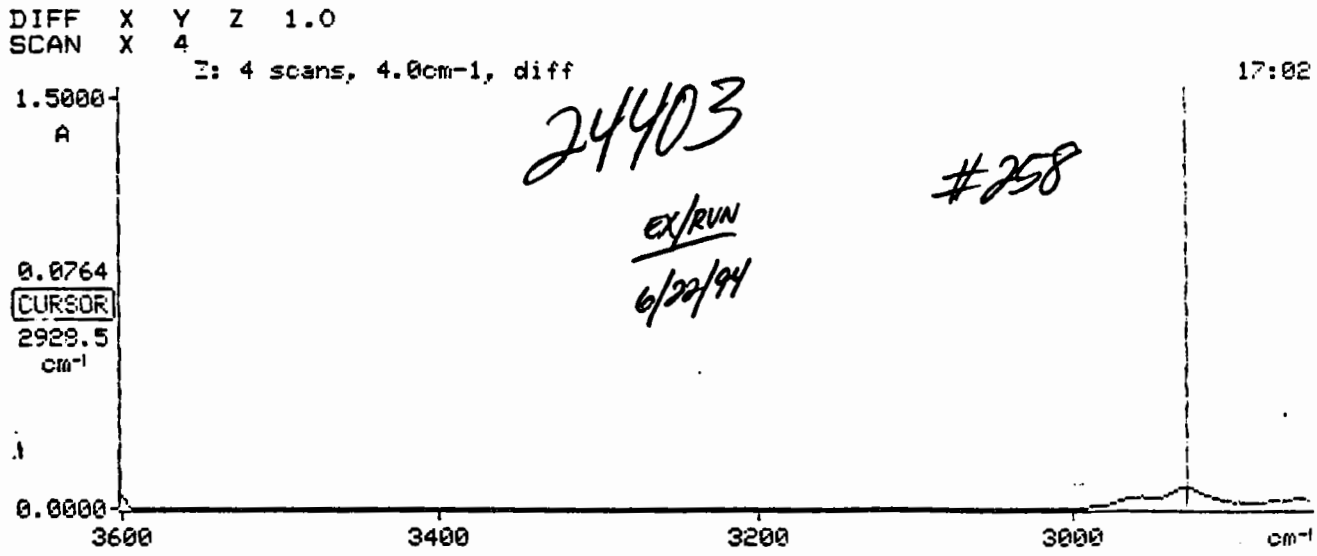

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
13:45
1.5000
A
0.4073
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
CS
BVN
6/22/94
DB
#259
258
DB
6/22

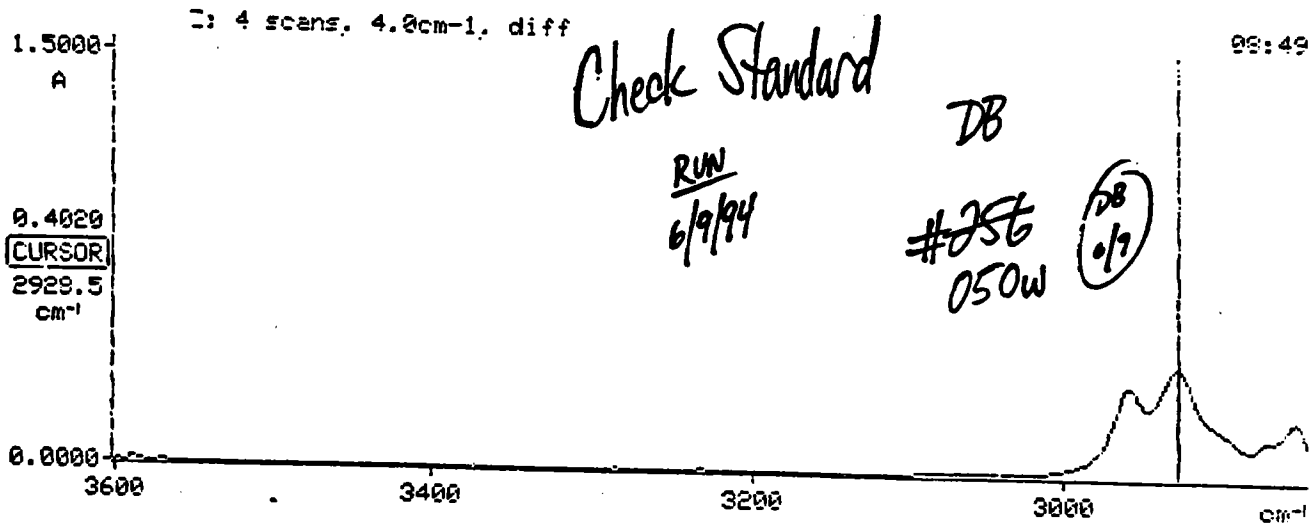

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
16:46
1.5000
A
0.0059
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex/Run
6/22/94
MC

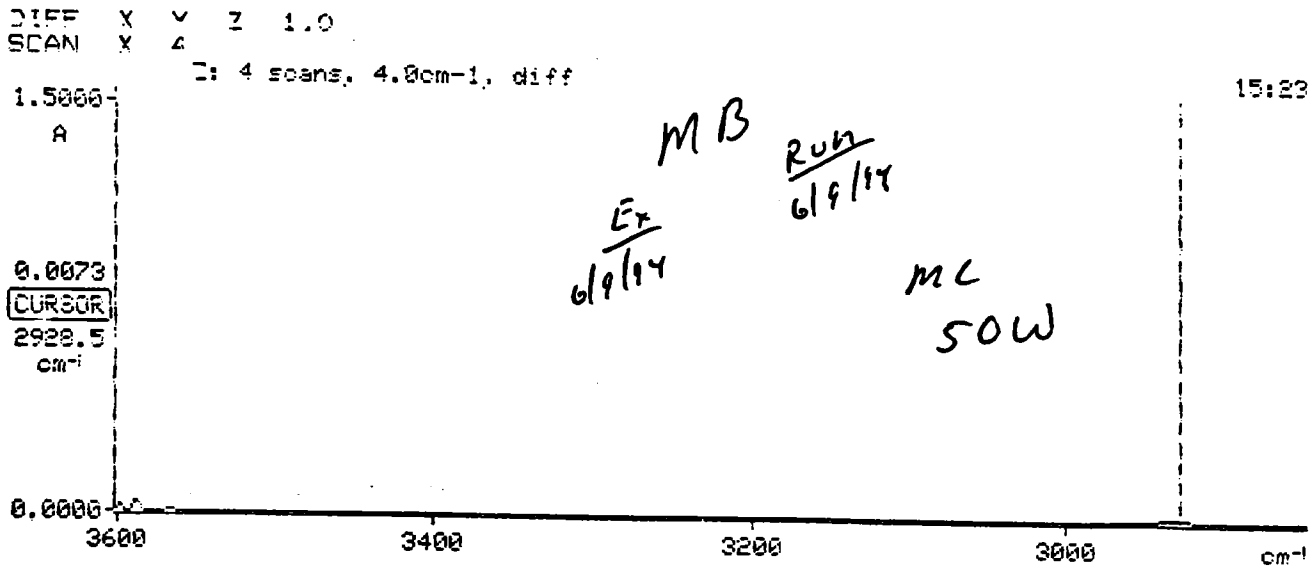

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
16:39
1.5000
A
0.0188
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24400
EX/RUN
6/22/94
#258


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
16:41
1.5000
A
0.0166
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24401
EX/RUN
6/22/94
#258

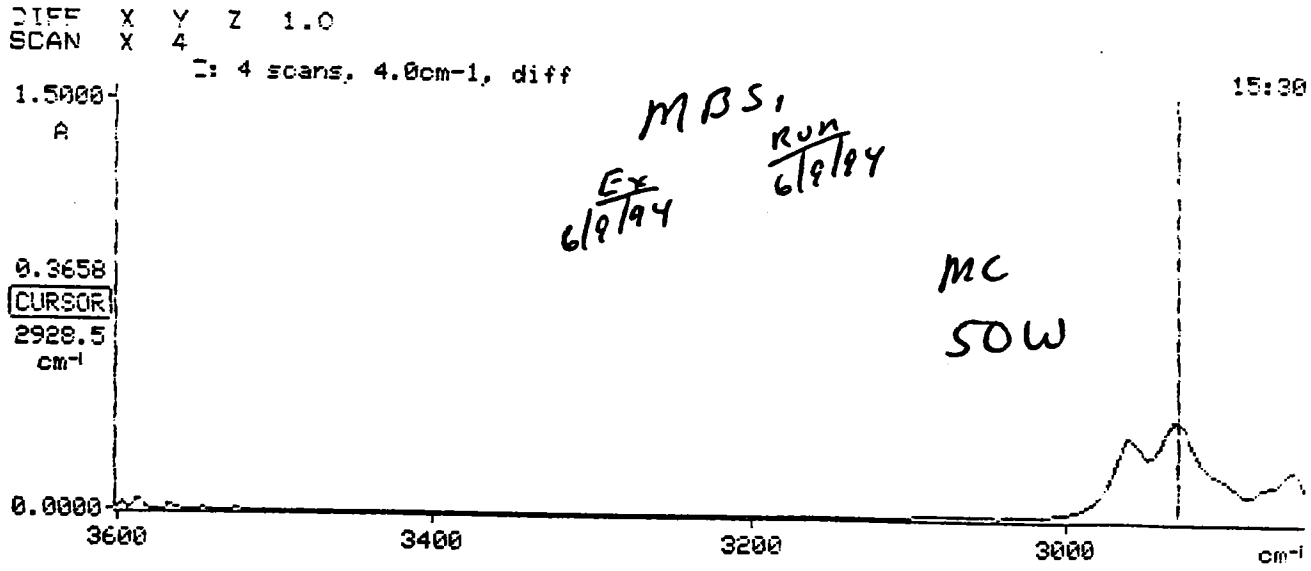

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
17:01
1.5000
A
0.0282
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24402
EX/RUN
6/22/94
#258

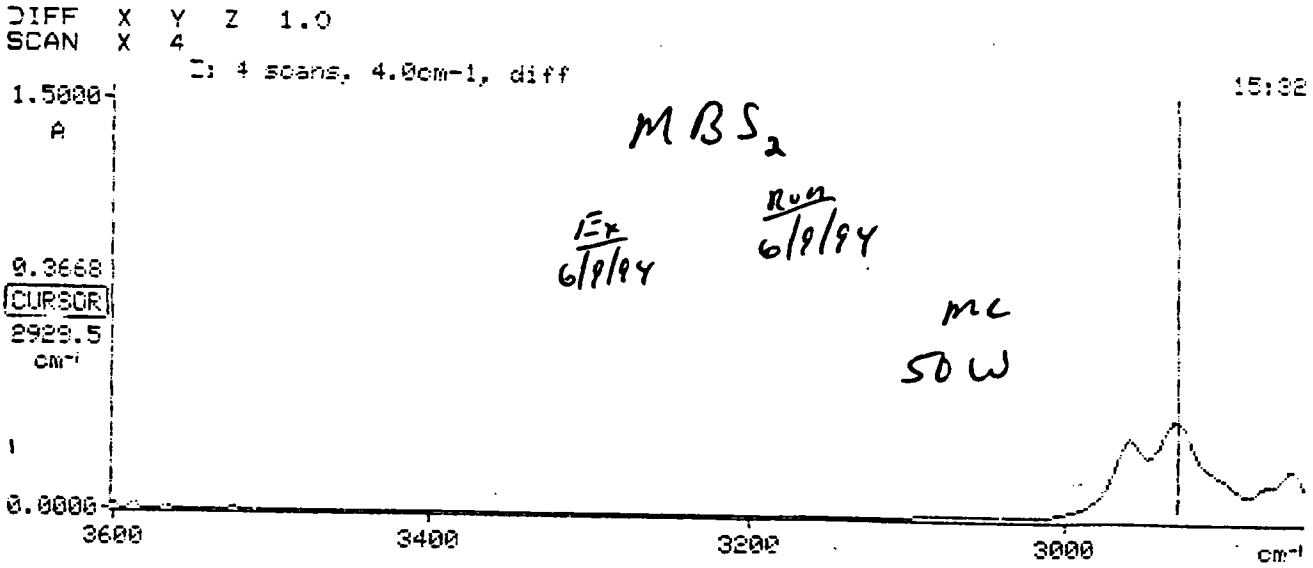

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
17:02
1.5000
A
0.0764
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24403
EX/RUN
6/22/94
#258

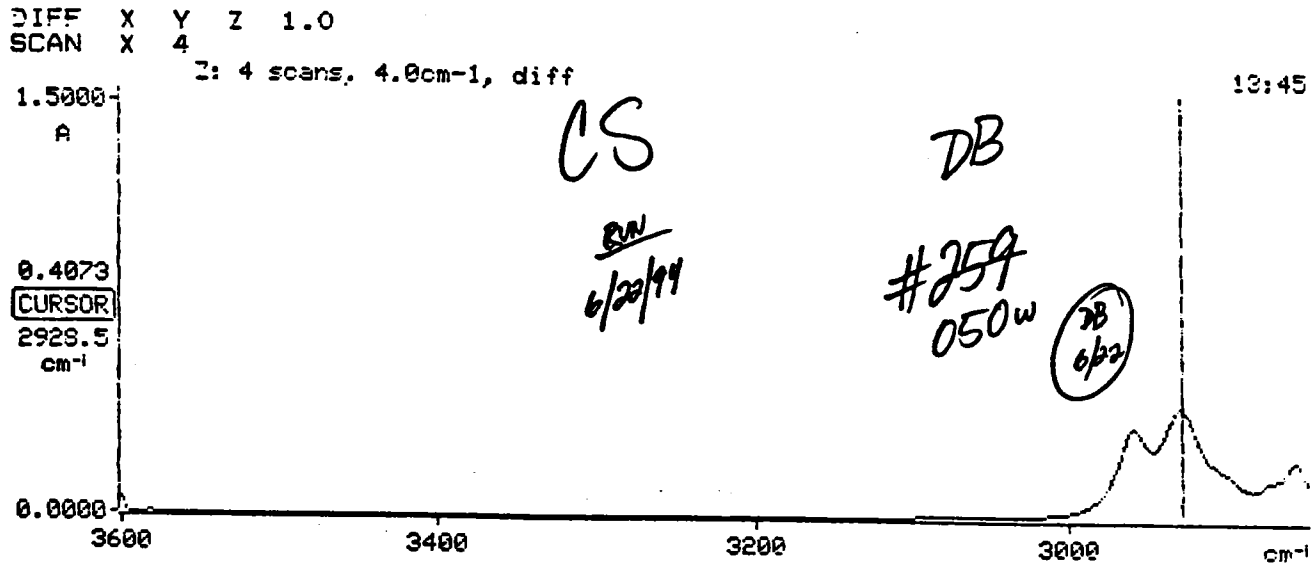

1: 4 scans, 4.0cm-1, diff
Check Standard
RUN
6/9/94
DB
#256
050W
DB
09:49
1.5000
A
0.4020
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

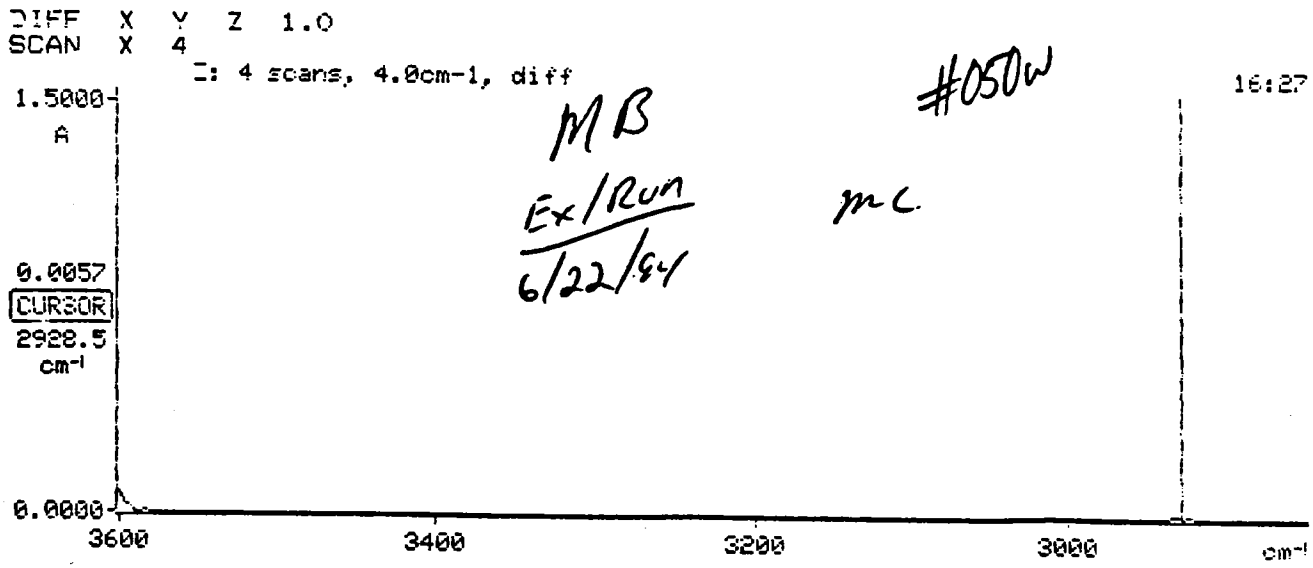

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:23
1.5000
A
0.0073
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Run
6/9/14
Ex
6/9/14
MC
50W

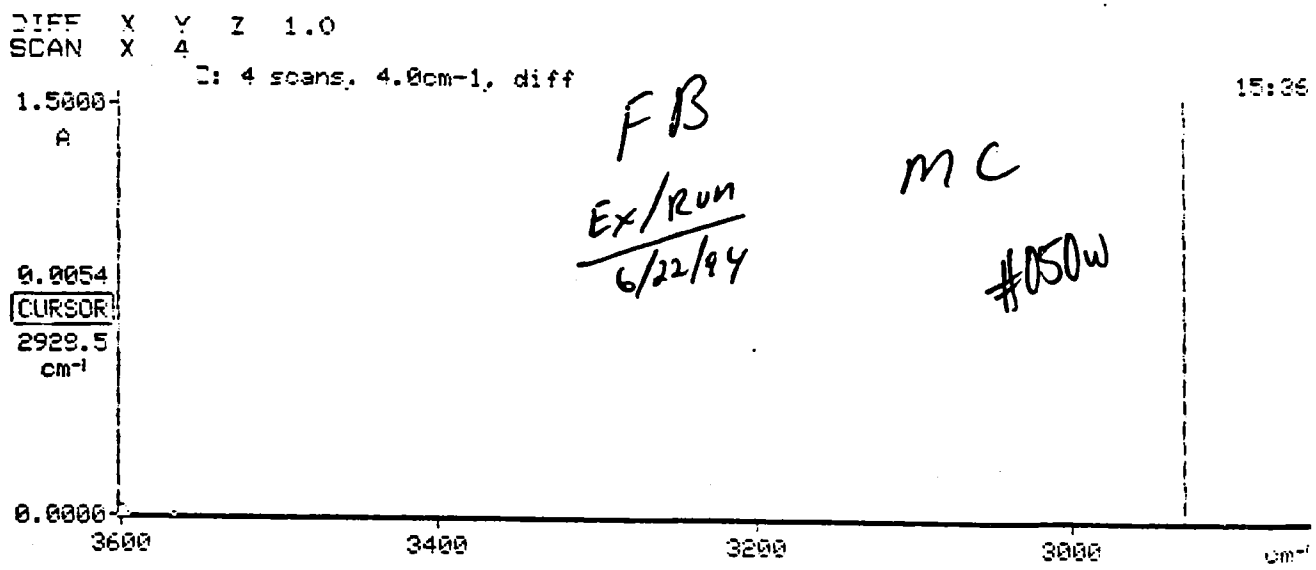
068


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
1.5000
A
0.3658
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
15:30
MBS1
Ex 6/9/94
Run 6/9/94
MC
SOW


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
1.5000
A
0.3668
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
15:32
MBS2
Ex 6/9/94
Run 6/9/94
MC
SOW


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
13:45
1.5000
A
0.4073
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
CS
RW
6/22/94
DB
#259
050w
DB
6/22


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
16:27
1.5000
A
0.0057
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex/Run
6/22/84
#050W
mc


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
15:36
1.5000
A
0.0054
CURSOR
2929.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
FB
Ex/Run
6/22/94
MC
#050W

No. 11

June 27, 1994 Soil Samples
(UST GB-1)

GB-1

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

ENVIRO-TECH, INC.
NJDEPE REDUCED PKG

PROJECT: EARLE AMMUNITION

LAB # AA24461-AA24465

NJDEPE Cert. #14622, CT Cert. #PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. #11408, NC Cert. #455

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

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VERITECH LABORATORY RESULTS

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SAMPLE KEY

ENVIRO-TECH NO.	VERITECH NO.
GB1-1	AA24461
GB1-2	AA24462
GB1-3	AA24463
GB1-4	AA24464
FIELD BLANK	AA24465

Enviro-Tech Inc.

Page ___ of ___

CHAIN-OF-CUSTODY RECORD

SAMPLER: (Signature) [signature]

Phone 908-566-2277

Date Shipped _____

Airbill No. _____

Carrier GDM

Cooler No. _____

SHIP TO:

VERITECH

ATTENTION: _____

SEND RESULTS TO:

Client Name _____

Company ENVIRO-TECH, INC.

Address 247 MAIN ST.
MATAWAN, NJ

Phone 908-566-2277

PROJECT NAME EARLE AMMUNITION **PROJECT NO.** _____ **P.O. NO.** _____

Relinquished by: (Signature)	Received by: (Signature)	Date	Military Time
[signature]	Edward D. Mizo	6/27/94	1115
Edward D. Mizo	A. Shami	6/27/94	1245
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Military Time

Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Military Time

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time Sampled		Analysis Requested	Sample Condition Upon Receipt
GB1-1	Soil	6/27/94	10:00	TPH*, VOHO, xylene	Cool AA2446
GB1-2			10:15		2446
GB1-3			10:30		2446
GB1-4			10:45		2446
FIELD BLANK	AQUEOUS		09:50		2446

Special Instructions/Comments:

* PLEASE ANALYZE SAMPLES FOR TPH FIRST. IF RESULTS ARE GREATER THAN 1,000 ppm, PLEASE CALL ETI OFFICE FOR AUTHORIZATION OF ADDITIONAL ANALYSES.

* 24 HR. TAT.

Cooler temp 2°C

LS

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected Analytical T.A.T.'s: *24 HR. TAT _____ Immediate Attention (200% surcharge) _____ RUSH (50-100% surcharge) _____ Standard

02

GDM-010

Sample Custodians Chain of Custody

veritech
Division of Hampton-Clarke, Inc.
environmental and analytical services

INTERNAL CHAIN OF CUSTODY RECORD

REMOVED FROM

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
TPH	23472 → 475	3	6/25	10:00	Martin Gyatt
TPH Sol. dr	23382-77, 24441, 42	"	"	"	"
RCN RS	24404, 24441-442	"	"	"	"
TPH, soils	24413-46, 24452-58	3	6/27	9:45	Steve Gerrit
PCB BNA	24455, 23335, 24464	3	6/27	10:20	Tracy Crane
"	24441-42	"	"	"	"
TCLP	24441-42, 24458	organics	6/27	11:00	Laura Richardson
	24376-77	sample			
TCLP	24359-63				
	24355, 24389				
	24414				
TD-SI	24151, 24359-63	3	6/27	3:37	Pete Johnson
↓	24005-11, 24378-81	↓	↓	↓	↓
TPH, soils	24414, 24461-64	Sample Frig	6/27	11:00	Steve Gerrit
GC/MS	24440, 24458	3	"	4:55	[illegible]
TD-WI-W6	24382, 24387, 24405	3	6/28	9:56	Pete Johnson
↓	23390-91	↓	↓	↓	↓
BN	24438-39	3	6/28	10:00	Tracy Crane
TPH, soils	24470-71, 24475-49	3	6/28	10:00	Steve Gerrit
GC/MS	24444, 24409	WET VAL	6/28	12:47	[illegible]
TOx	24404	?	6/28	11:00	[illegible]
TSS, Flash pt	24424, 427, 24377, 373	?	6/28	11:10	Martin Gyatt
Flash pt	24425, 427	"	"	"	"

RETURNED TO

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
PCB BNA	24464, 23335	3	6/27	11:00	Tracy Crane
PCB	24339	3	6/27	11:15	Tracy Crane
TCLP	24441-442	WET VAL	6/27	2:30	Laura Richardson
	24458, 24376-77	Sample			
TCLP	24355, 24389	3	6/27	4:15	Laura Richardson
	24413				
TPH, soils	24413-46, 24452-58	3	6/27	4:20	Steve Gerrit
↓	24461-64	↓	↓	↓	Steve Gerrit
TD-SI	24151, 24359-63	3	6/27	5:50	Pete Johnson
↓	24005-11, 24378-81	↓	↓	↓	↓
BN	24438-39	DONE	6/28	10:30	Tracy Crane
TOx	24404	Done	6/28	11:00	Martin Gyatt
TSS, Flash pt	24424, 427, 24377, 373	?	"	3:45	Martin Gyatt
" "	24425, 22427	"	"	"	"
TPH, soils	[illegible]	3	6/28	3:50	Steve Gerrit
RCN RS	24458	3	6/28	4:20	Martin Gyatt
TCLP Ext	24355, 24389, 24404	3	6/27	5:00	Pete Johnson
↓	24359-63	↓	↓	↓	↓

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-28-1994 Time: 16:46:23

Sample I.D. AA24461
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE AMMO
CONTAIN: 1

Date collected: 06/27/94
Date submitted: 06/27/94
Due date: 07/11/94
Specification checking: off
Descript: GB1-1 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	89	PERCENT	06/27/94	SG
TPH-SOIL	25	mg/kg dry wt	06/27/94	SG
TPH EXTRACTION	Completed		06/27/94	SG

End of progress report on sample: AA24461

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-28-1994 Time: 16:46:24

Sample I.D. AA24462
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE AMMO
CONTAIN: 1

Date collected: 06/27/94
Date submitted: 06/27/94
Due date: 07/11/94
Specification checking: off
Descript: GB1-2 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	92	PERCENT	06/27/94	SG
TPH-SOIL	760	mg/kg dry wt	06/27/94	SG
TPH EXTRACTION	Completed		06/27/94	SG

End of progress report on sample: AA24462

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-28-1994 Time: 16:46:25

Sample I.D. AA24463
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE AMMO
CONTAIN: 1

Date collected: 06/27/94
Date submitted: 06/27/94
Due date: 07/11/94
Specification checking: off
Descript: GB1-3 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	91	PERCENT	06/27/94	SG
TPH-SOIL	24	mg/kg dry wt	06/27/94	SG
TPH EXTRACTION	Completed		06/27/94	SG

End of progress report on sample: AA24463

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-28-1994 Time: 16:46:25

Sample I.D. AA24464
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE AMMO
CONTAIN: 1

Date collected: 06/27/94
Date submitted: 06/27/94
Due date: 07/11/94
Specification checking: off
Descript: GB1-4 SOIL

MATRIX: SOIL

Analysis	Result	Unit	Finished	Anl
%SOLIDS	90	PERCENT	06/27/94	SG
TPH-SOIL	Not detected	mg/kg dry wt	06/27/94	SG
TPH EXTRACTION	Completed		06/27/94	SG

End of progress report on sample: AA24464

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 06-28-1994 Time: 16:46:26

Sample I.D. AA24465
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE AMMO
CONTAIN: 3

Date collected: 06/27/94
Date submitted: 06/27/94
Due date: 07/11/94
Specification checking: off
Descript: FIELD BLANK

MATRIX: WATER

Analysis	Result	Unit	Finished	Anl
TPH-WATER	Not detected	mg/L	06/27/94	SG
TPH EXTRACTION	Completed		06/27/94	SG

End of progress report on sample: AA24465

WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank:	X	
2.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)		X
3.	IR Spectra submitted for all standards, blanks, & samples		X
4.	Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted		
5.	Extraction Holding Time Met		X
	If not met, list number of days exceeded for each sample:		
6.	Analysis Holding Time Met		X
	If not met, list number of days exceeded for each sample:		

Additional Comments: _____

QA/QC Director: Deborah A. Keller Date: 6/30/94

METHOD REFERENCES

Volatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters) - Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters) - Federal Register, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion and the individual parameter methods listed above in the Total Metals (Soils) section.

ICP Metals (Waters) - Methods for the Determination of Metals in Environmental Samples, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

Cyanide (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9010.

Cyanide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 335.2.

Phenols (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9065.

Phenols (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

Hexavalent Chromium (Soils & Waters) - Test Methods for Evaluating Solid Waste, SW-846, Second and Third Editions, Methods 3060 and 7196A.

pH (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9040.

pH (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability - Test Methods for Evaluating Solid Waste, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1010.

Conductance (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.1.

Residue, Non-Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9252.

Sulfide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters) - Hach Chemical Company, Method 8000.

Oil & Grease (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils) - American Society for Testing & Materials (ASTM), D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF - Modified Contract Laboratory Program Statement of Work, November 1992.

VERITECH

47 CAREY AVE., BUTLER, NJ 07405

CT. NO: PH-0671
MADEP NO: NJ386
PADER NO: 68-463
NJDEPE NO: 14622
NYDOH NO: 11408

REPORT OF ANALYSIS

TO: ENVIRO-TECH, INC.
247 MAIN ST.
MATAWAN, NJ 07747-3222
(908) 566-2277

Date Collected: 06/27/94
Date Submitted: 06/27/94
Date Reported: 06/28/94
Project: EARLE AMMO

Sample I.D.		AA24461		AA24462	
Sample Description		GB1-1 SOIL		GB1-2 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	89	1.0	92
TPH-SOIL	mg/kg dry wt	22	25	22	760
TPH-WATER					

Sample I.D.		AA24463		AA24464	
Sample Description		GB1-3 SOIL		GB1-4 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	91	1.0	90
TPH-SOIL	mg/kg dry wt	22	24	22	Not detected
TPH-WATER					

Sample I.D.		AA24465	
Sample Description		FIELD BLANK	
Analyte	Units	MDL	Result
%SOLIDS			
TPH-SOIL			
TPH-WATER	mg/L	4.3	Not detected

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Stanley Gilewicz - Laboratory Director

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24461
Sample Matrix: Soil
% Solids: 89

Date Received: 6/27/94
Date Extracted: 6/27/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	GB1-1	25	1	22	6/27/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24462
Sample Matrix: Soil
% Solids: 92

Date Received: 6/27/94
Date Extracted: 6/27/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	GB1-2	760	1	22	6/27/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24463
Sample Matrix: Soil
% Solids: 91

Date Received: 6/27/94
Date Extracted: 6/27/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	GB1-3	24	1	22	6/27/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24464
Sample Matrix: Soil
% Solids: 90

Date Received: 6/27/94
Date Extracted: 6/27/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	GB1-4	ND	1	22	6/27/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA24465
Sample Matrix: Water
% Solids:

Date Received: 6/27/94
Date Extracted: 6/27/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/L)	DILUTION FACTOR	MDL (mg/L)	DATE ANALYZED
TPH	FB	ND	1	4.3	6/27/94

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Soil

Lab Code: 14622 **Units:** mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	264s	ND

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Water

Lab Code: 14622 **Units:** mg/L

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	1.0	051w	ND

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA24452 MS

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 88

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	744		23	U	753	99		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA24452 MSD

Lab Name: Veritech **Sample Matrix:** SOIL

Lab Code: 14622

% Solids for Sample: 88

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	694		23	U	748	93		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

MBS

Lab Name: Veritech **Sample Matrix:** WATER

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.35		1.00	U	10.0	94		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

MBS DUP

Lab Name: Veritech **Sample Matrix:** WATER

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	9.29		1.00	U	10.0	93		
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

AA24452 DUP

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 88

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	23	U	23	U	0		C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.
MBS DUP

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	9.35		9.29		0		C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

TPH LINEAR REGRESSION

DATE 08-june-94
ANALYST Dan B

STDS (MG)	ABS.
0.0	0.0000
2.5	0.0928
5.0	0.1933
10.0	0.3876
15.0	0.5814
20.0	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

lot # W-94 tph-1182

****

STDS (MG)	ABS.	PPM	DIFF
0.0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5.0	0.1933	5.0246	-0.0246
10.0	0.3876	10.0918	-0.0918
15.0	0.5814	15.1459	-0.1459
20.0	0.7618	19.8506	0.1494

****

BATCH 051w

SAMPLE	ABS.	MG
10mg6-27	0.4068	10.5925
MBS	0.3592	9.3511
MBSD	0.3570	9.2937
mb6-25	0.0034	0.0722
24372	0.0073	0.1739
24373	0.0071	0.1687
24374	0.0061	0.1426
24375	0.0026	0.0513
24447	0.0142	0.3538
24465	0.0071	0.1687
mb6-27	0.0063	0.1478

DB 6/28

√ data input
G.G 6/29/94

ANALYSIS: TPH WATERS
batch 051w
DATE: 27-Jun-94
ANALYST: sg

G.C. DATA

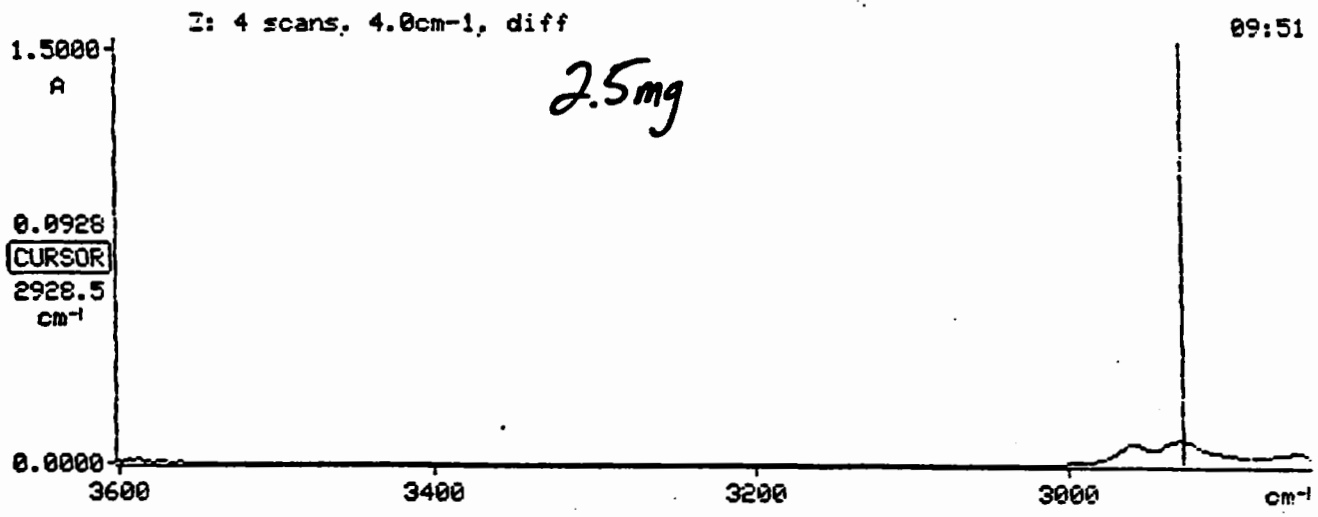
	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.592	106%
MBS	10	9.351	94%
MBS DUP	10	9.294	93%
		RPD =	0.00%

SAMPLE NO.	SAMPLE VOLUME	MG FROM CALC. CURV	DILUT. FACTOR	TPH (PPM)	MDL (PPM)
10mg6-27	1000	10.5925	1.0	10.592	
MBS	1000	9.3511	1.0	9.351	
MBSD	1000	9.2937	1.0	9.294	
mb6-25	1000	0.0722	1.0	0.072	1.0
24372	975	0.1739	1.0	0.178	1.0
24373	930	0.1687	1.0	0.181	1.1
24374	935	0.1426	1.0	0.152	1.1
24375	975	0.0513	1.0	0.053	1.0
24447	270	0.3538	1.0	1.310	3.7
24465	230	0.1687	1.0	0.733	4.3
mb6-27	1000	0.1478	1.0	0.148	1.0

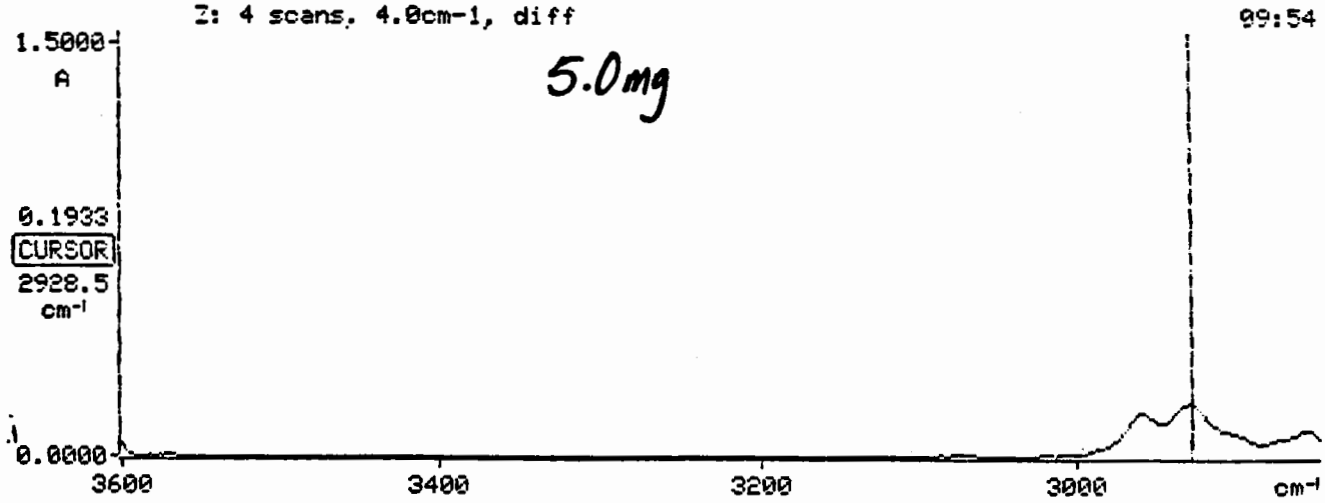
DB 6/28

✓ data input
S.C. 6/27/94

TPH curve
DB 6/7/94



DIFF X Y Z 1.0
SCAN X 4



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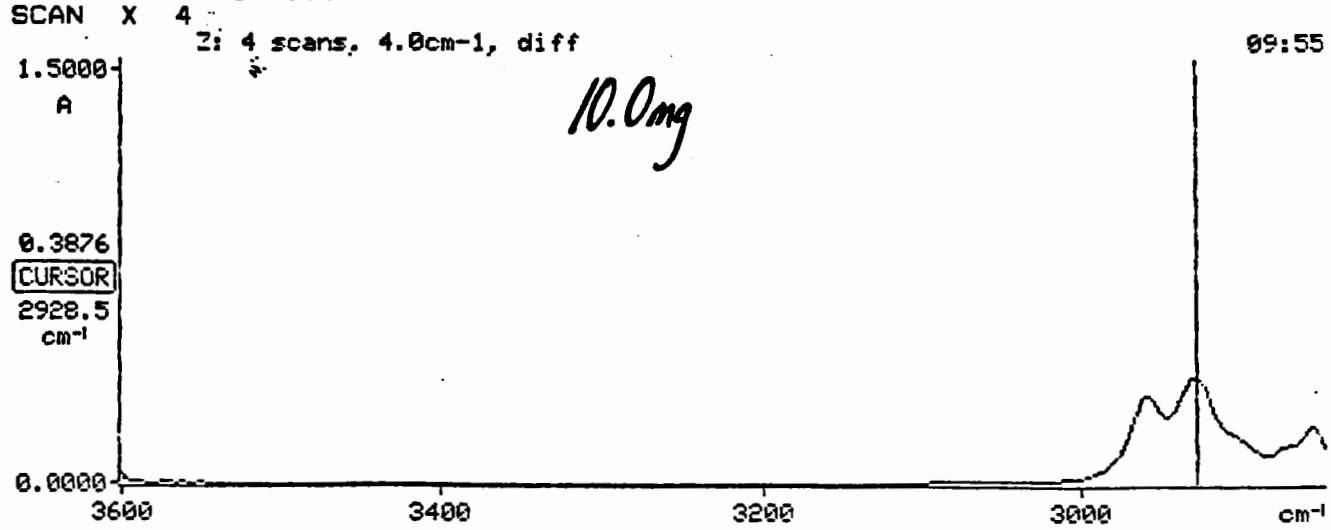
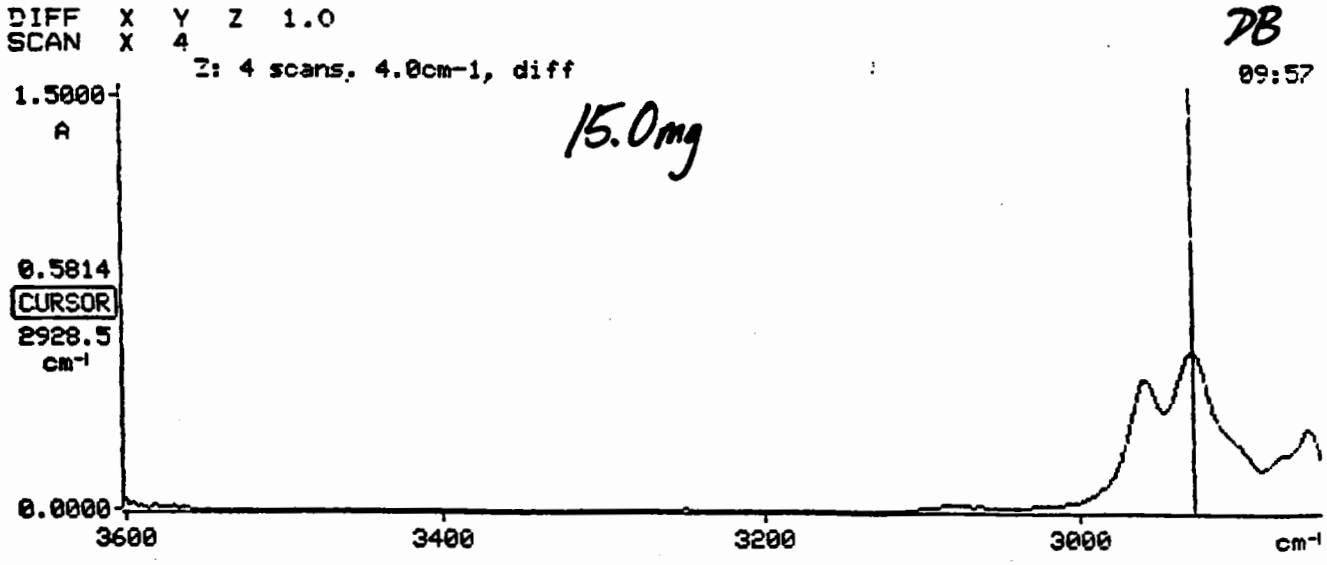
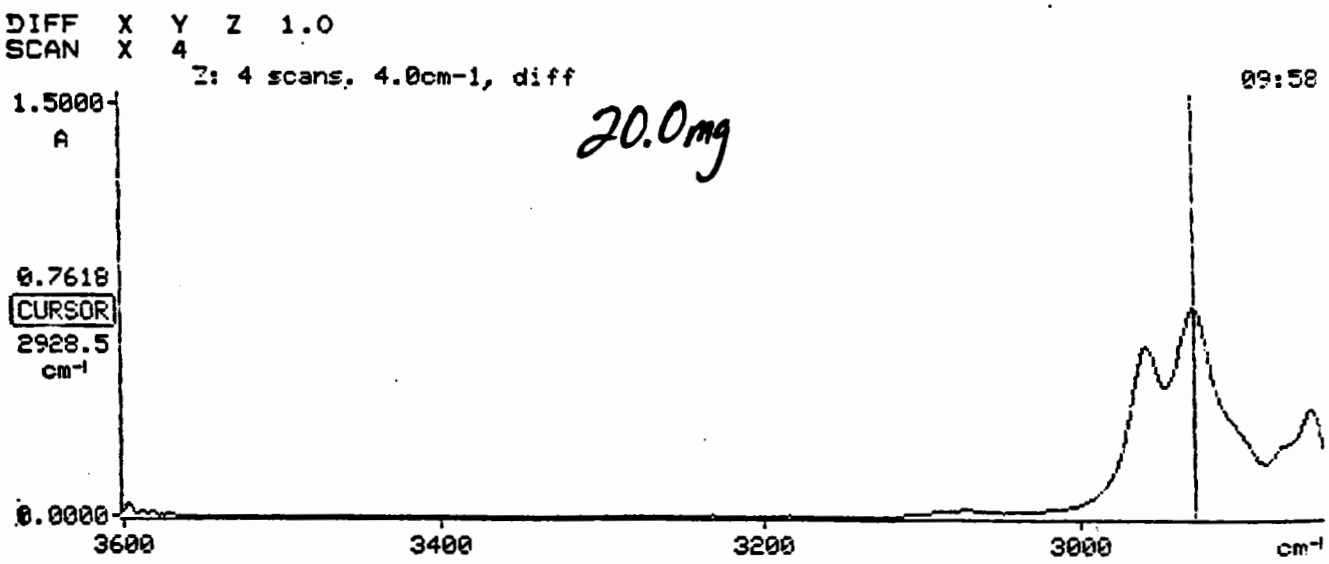
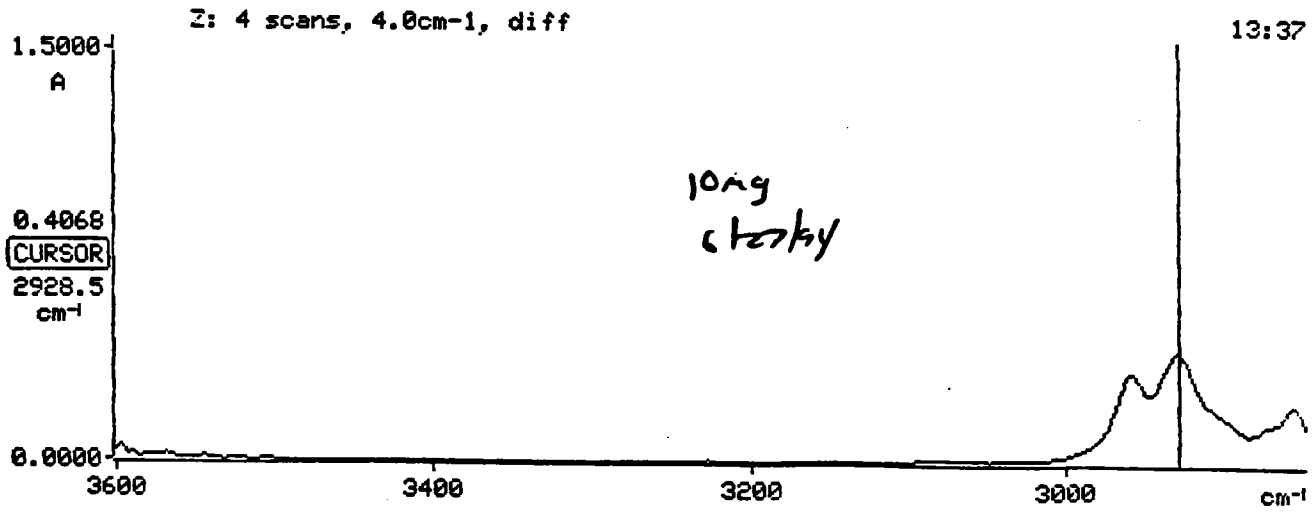
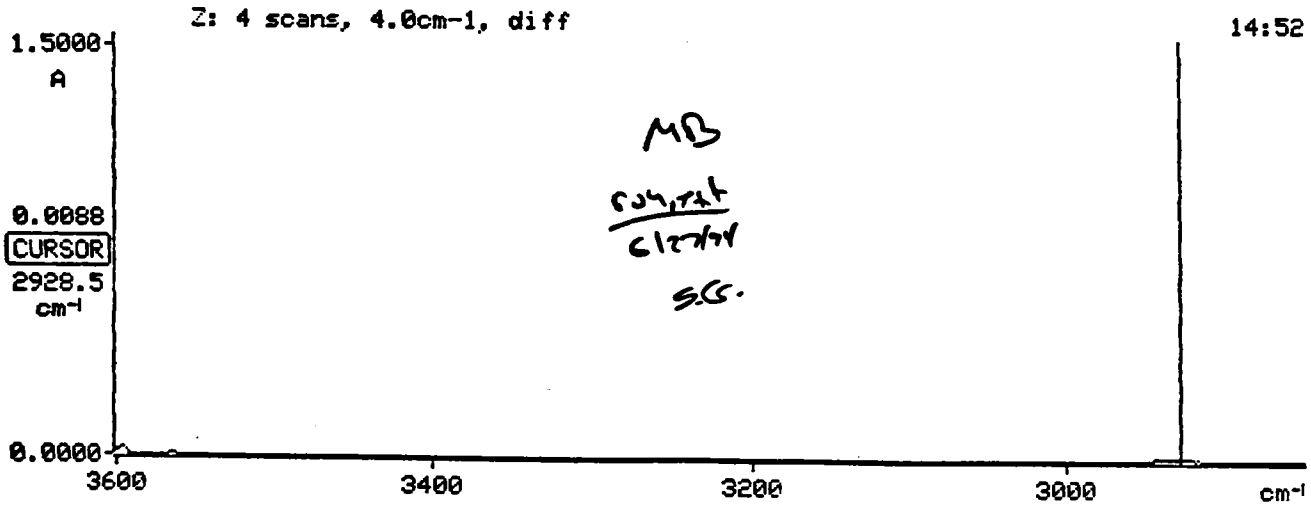


TPH curve
DB 6/7/94






Z: 4 scans, 4.0cm-1, diff
13:37
1.5000
A
0.4068
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
10mg
cloroky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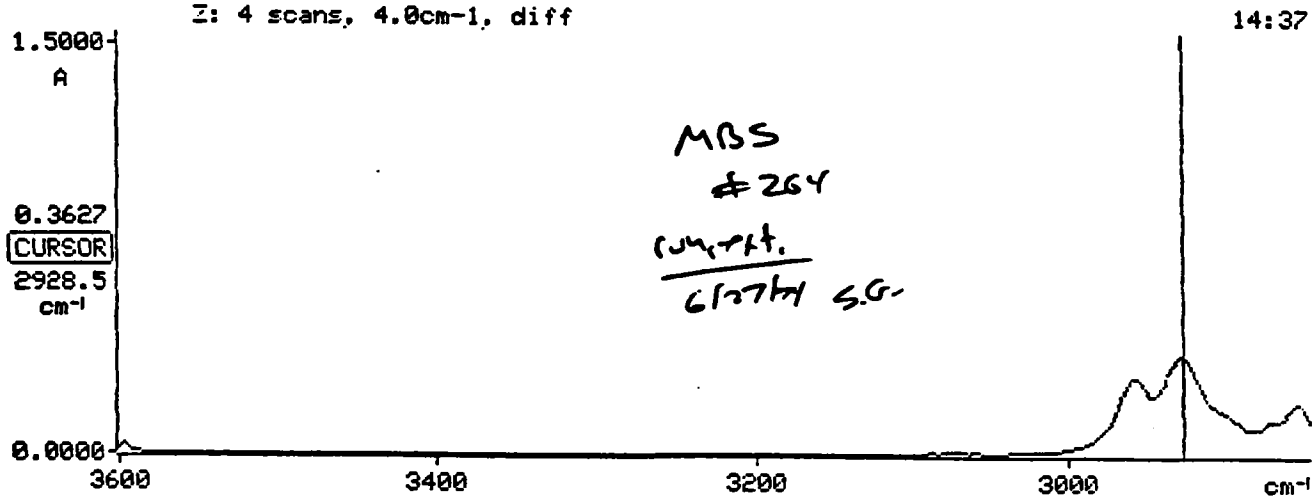
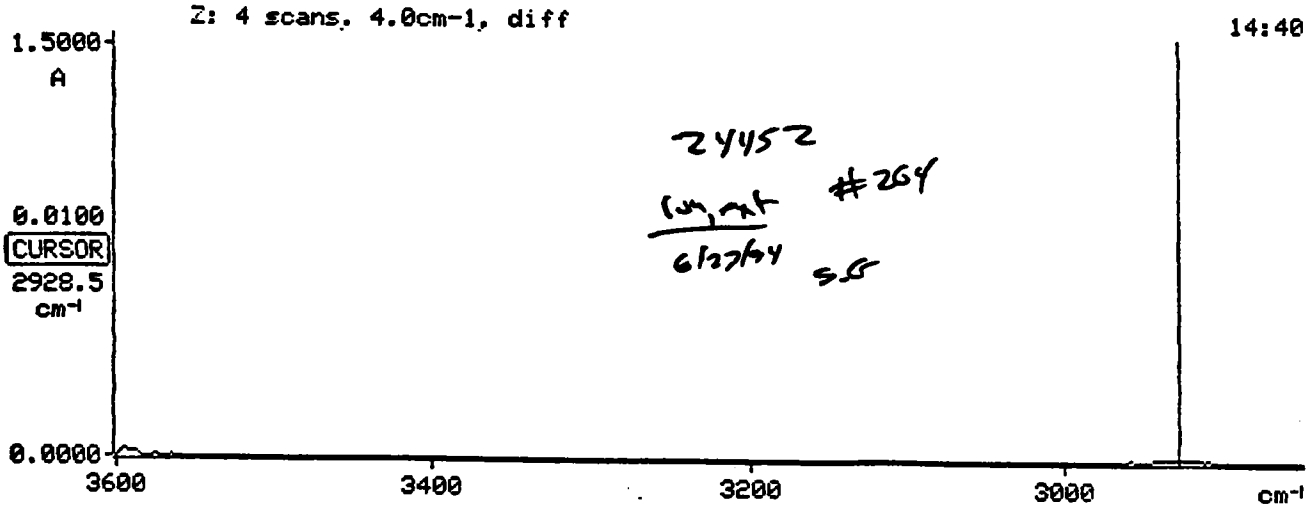
14:52
1.5000
A
0.0088
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
S.G.

DIFF X Y Z 1.0
SCAN X 4

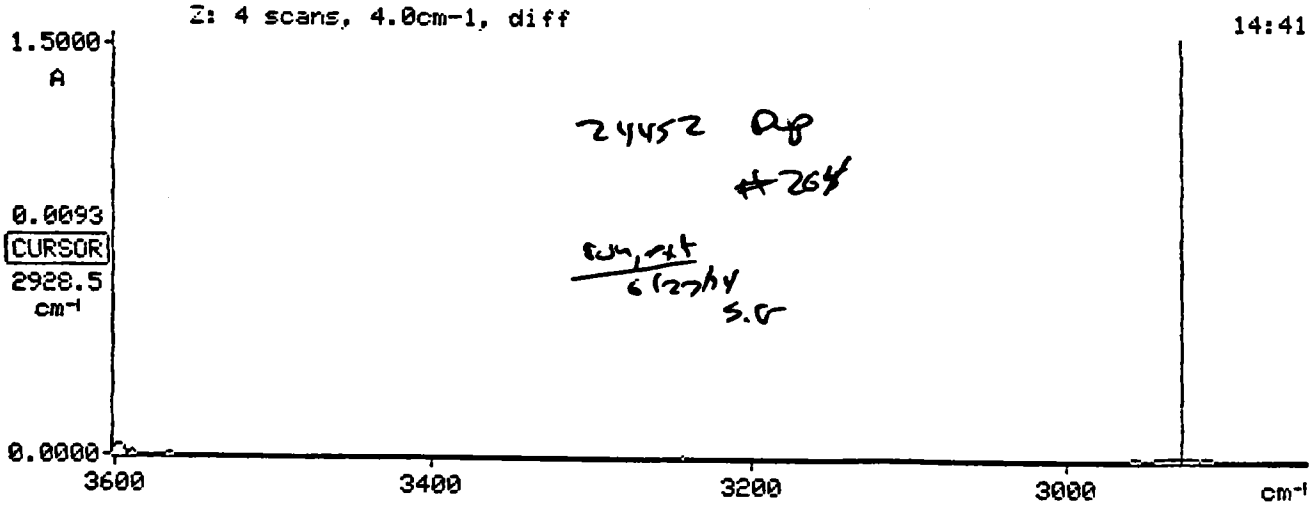


DIFF X Y Z 1.0
SCAN X 4

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff

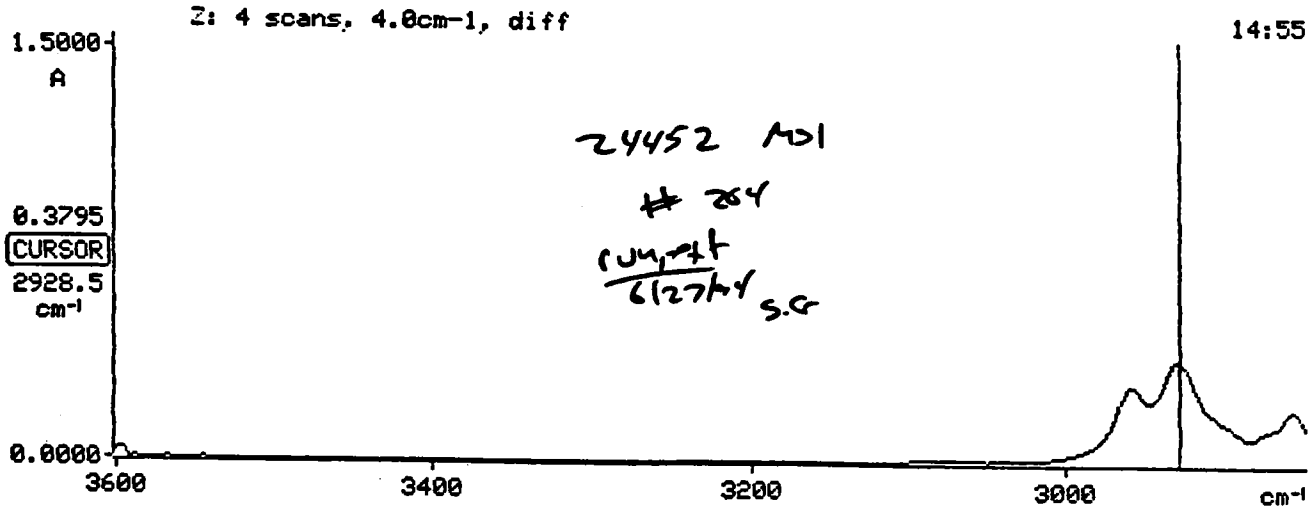


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff



DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4

DIFF X Y Z 1.0
SCAN X 4



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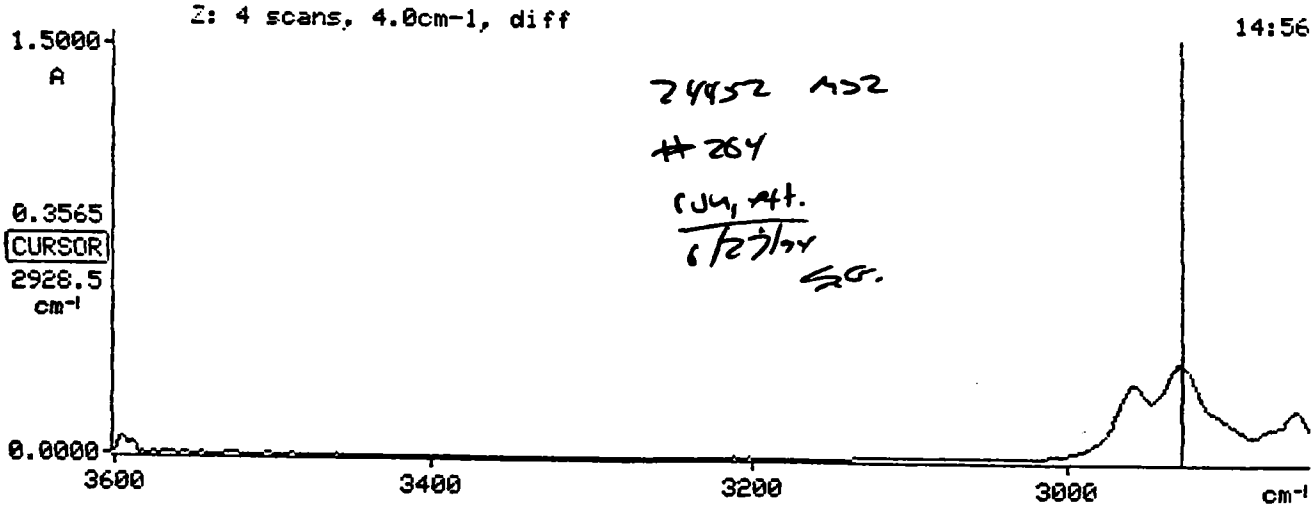

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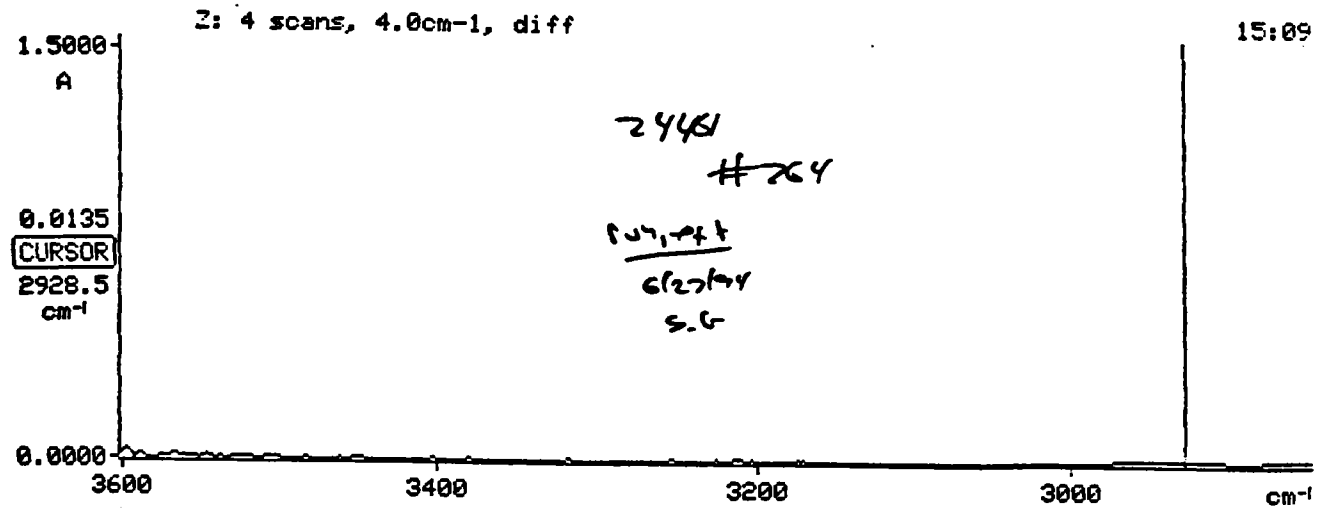

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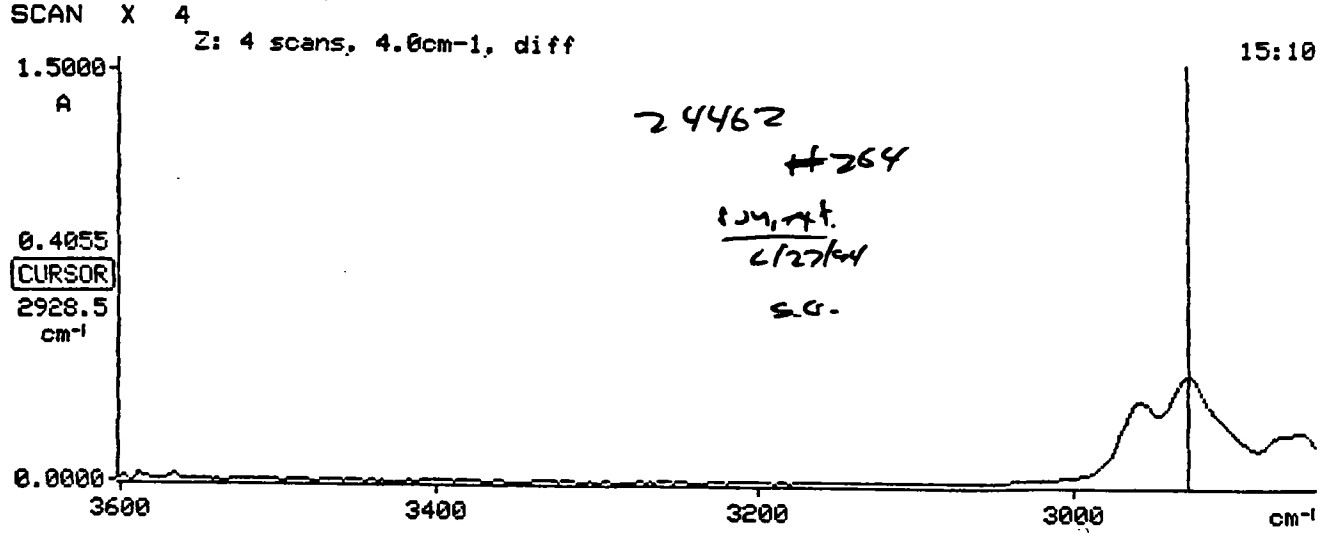
SCAN X 4



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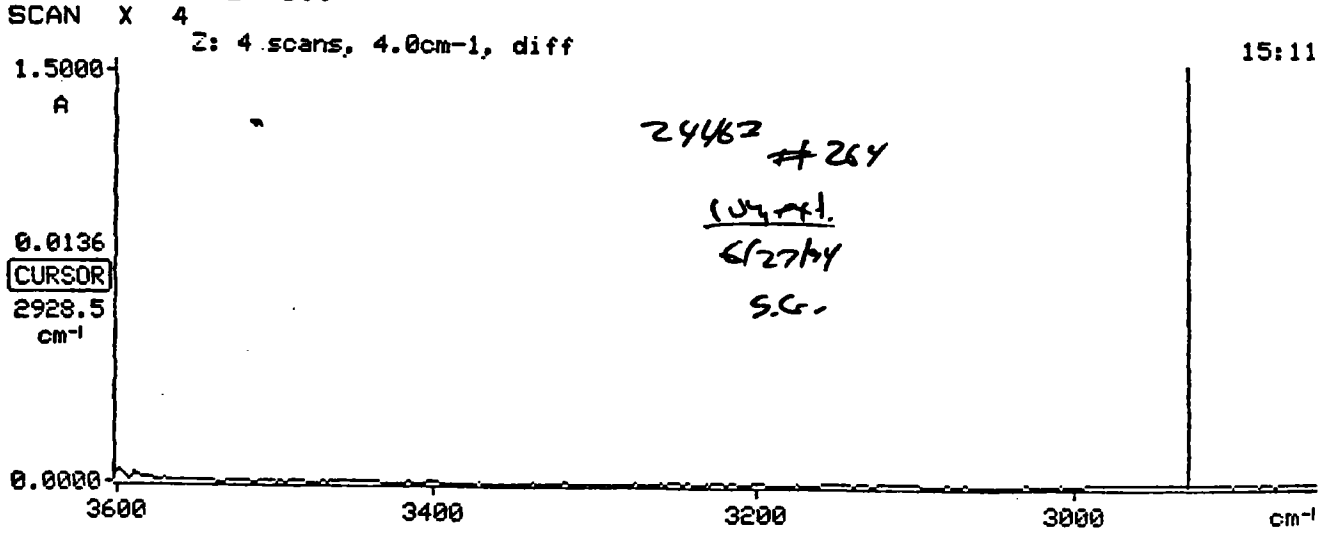
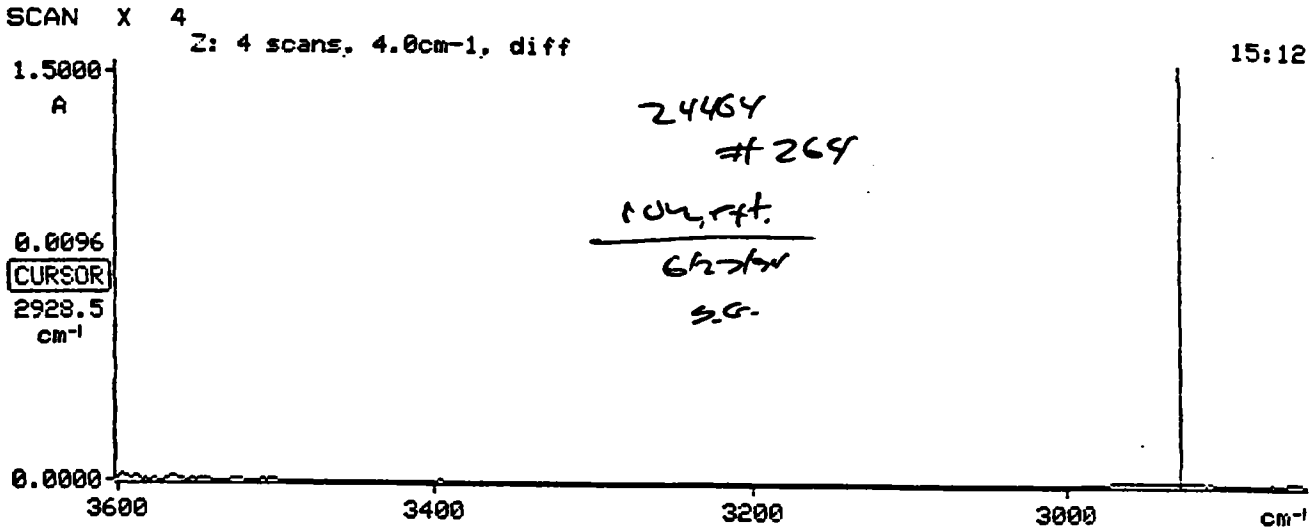
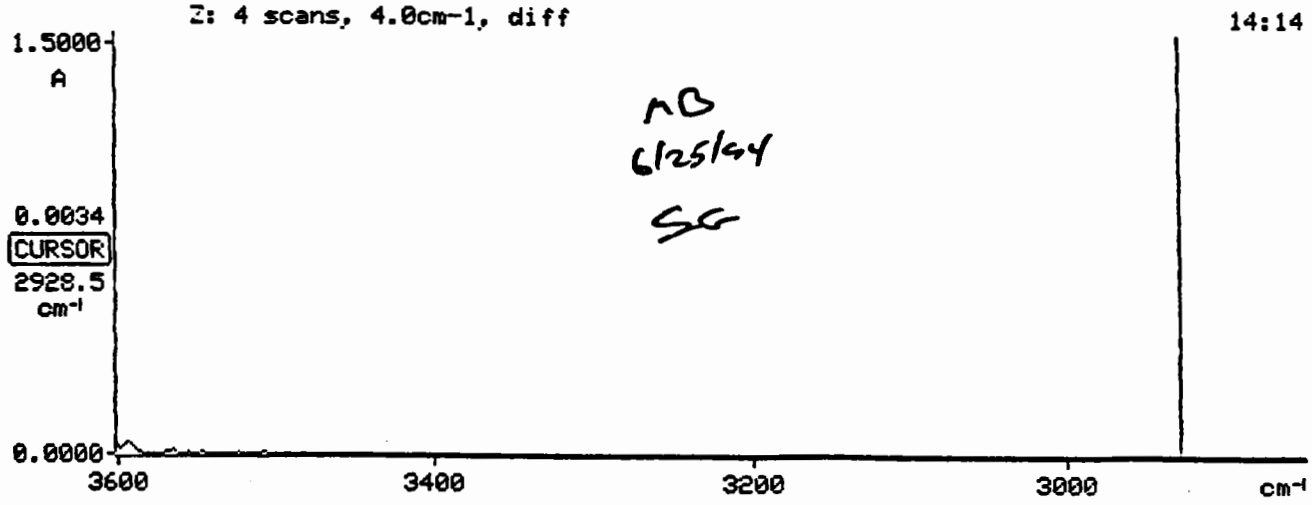
SCAN X 4



DIFF X Y Z 1.0


SCAN X 4
Z: 4 scans, 4.0cm-1, diff
15:12
1.5000
A
0.0096
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
24464
#264
10mg/ft.
6/2/80
S.G.

DIFF X Y Z 1.0
SCAN X 4



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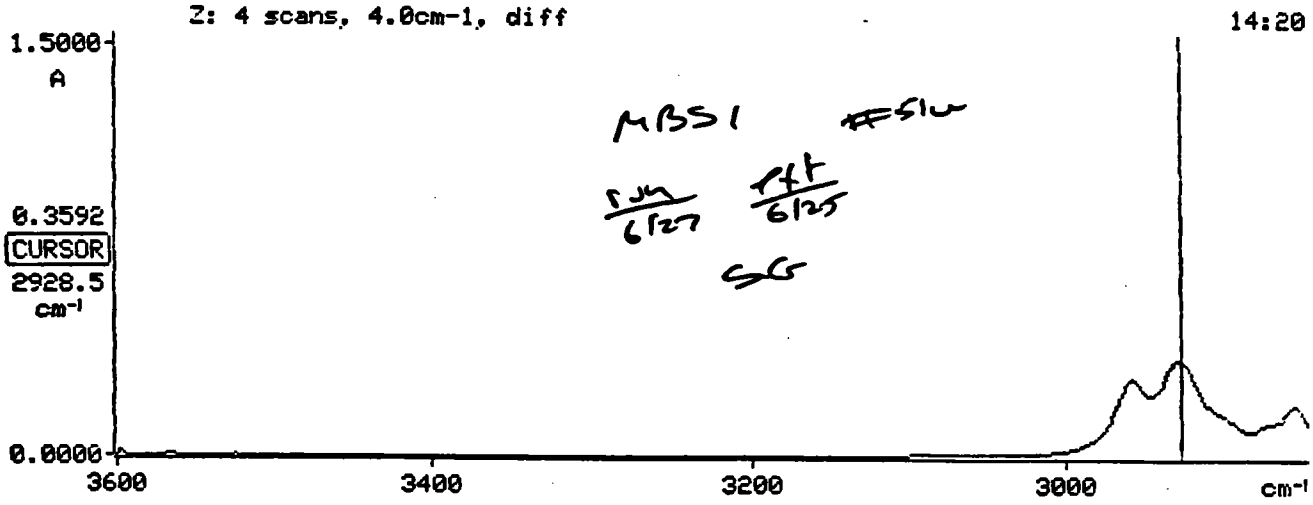
SCAN X 4



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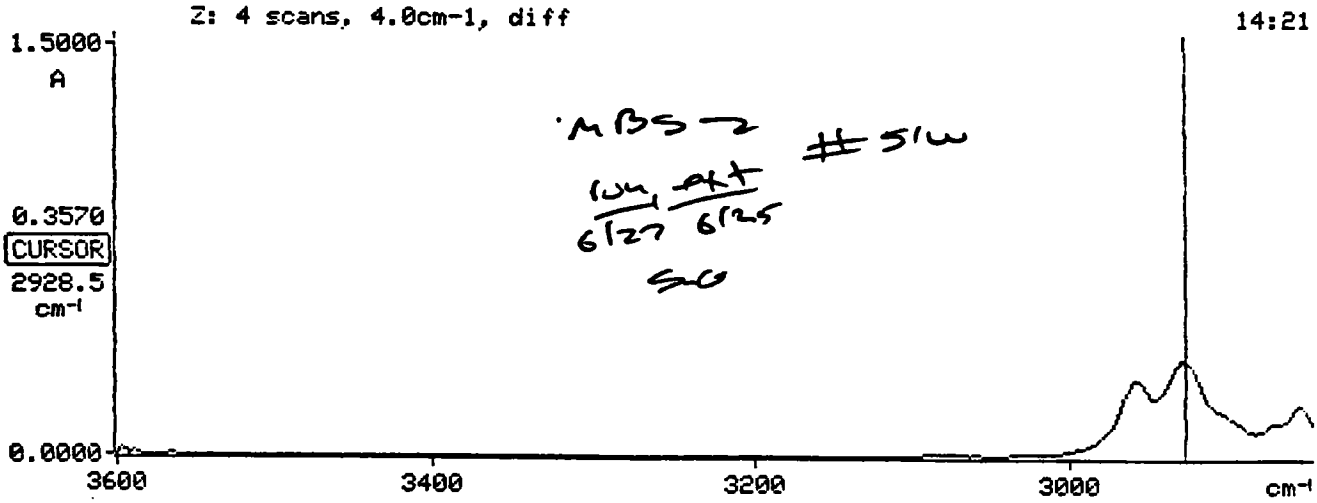
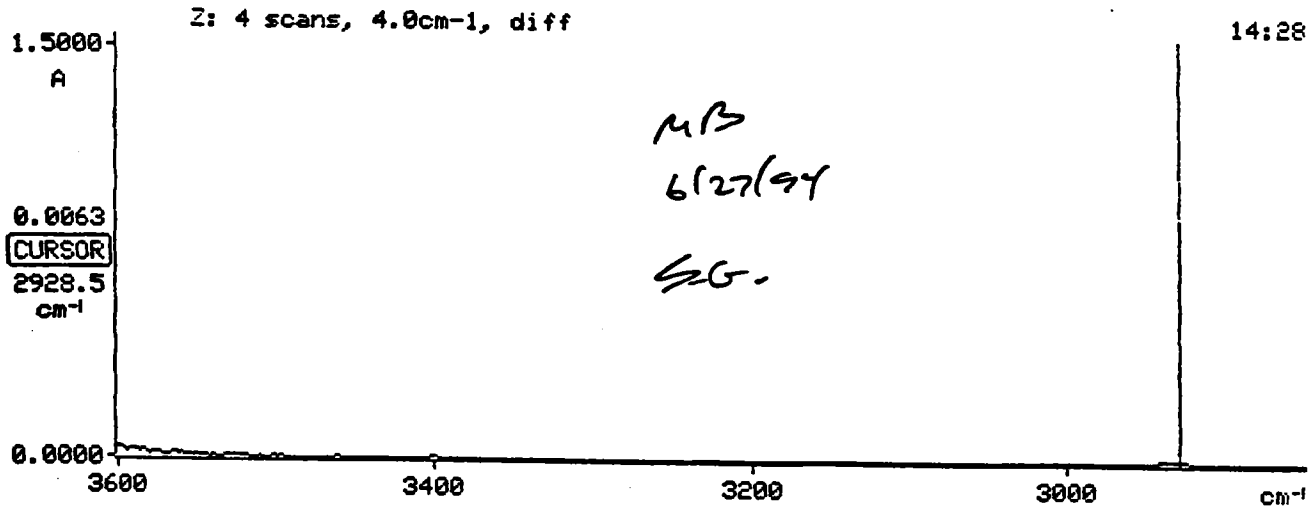
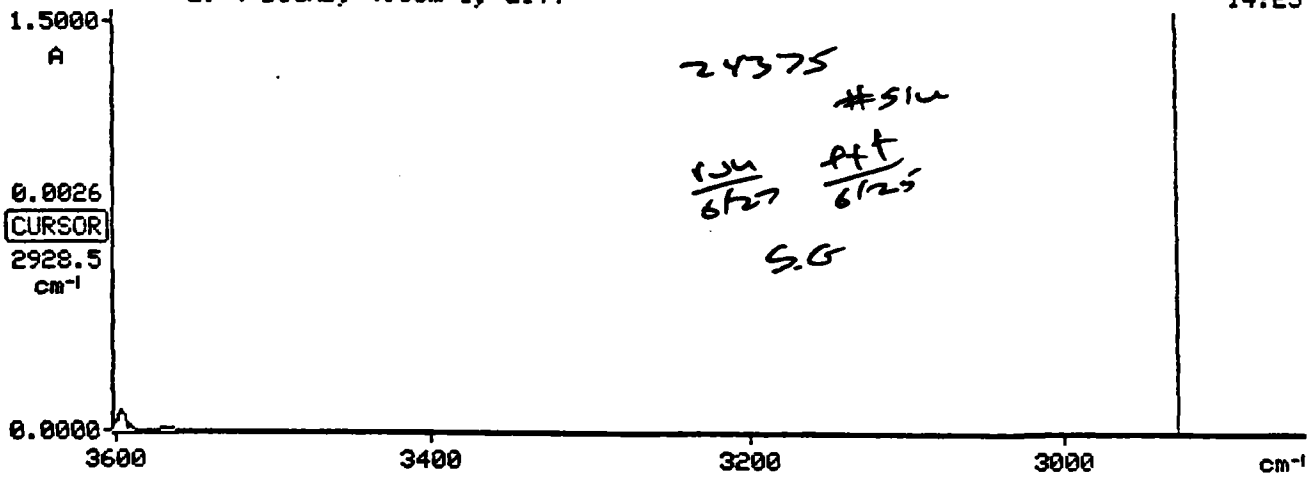
SCAN X 4



DIFF X Y Z 1.0
SCAN X 4


Z: 4 scans, 4.0cm-1, diff
14:28
1.5000
A
0.0063
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
6/27/94
SG.

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff 14:25



DIFF X Y Z 1.0
SCAN X 4
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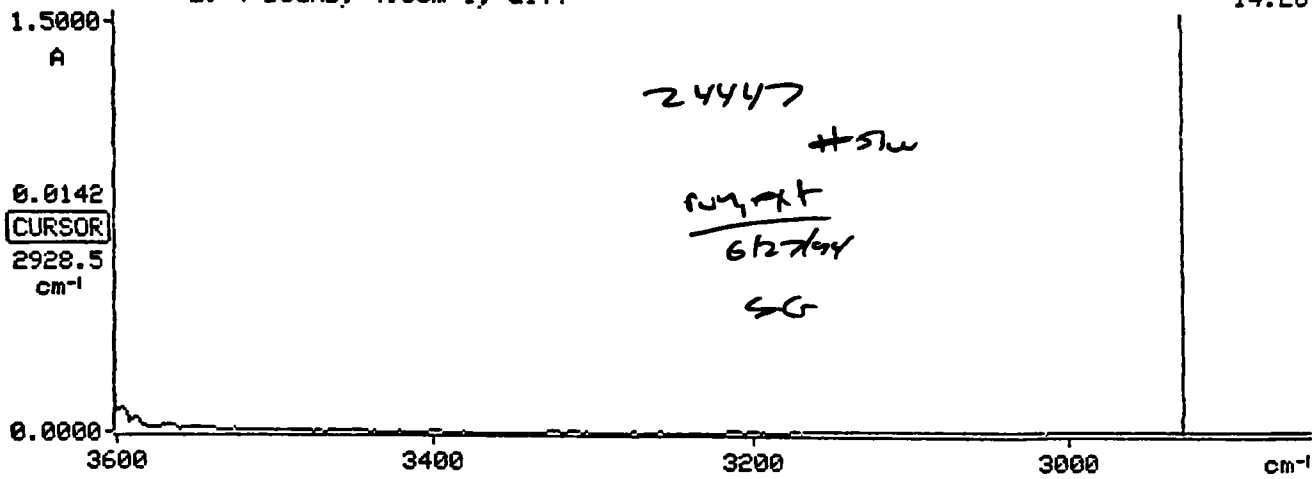
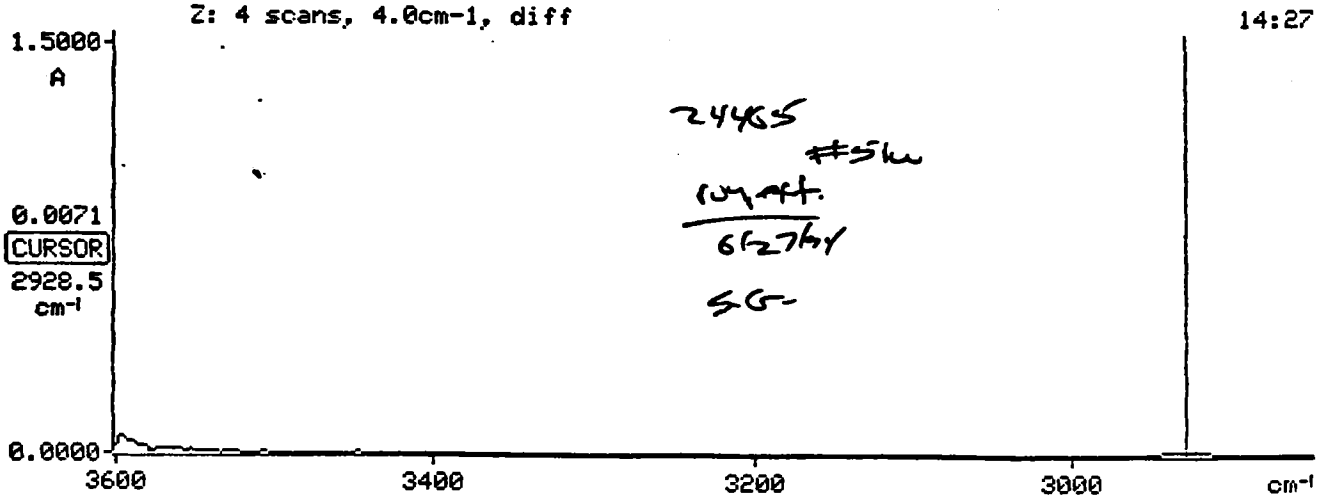


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff 14:27



DIFF X Y Z 1.0
SCAN X 4

No. 12

July 27, 1994 Soil Samples
(UST MA-2)

MA-2

veritech

Division of Hampton-Clarke, Inc.

environmental and analytical services

ENVIRO-TECH, INC.

NJDEPE REDUCED PKG

PROJECT: EARLE AMMUNITION

LAB # AA25185-AA25195

NJDEPE Cert. #14622, CT Cert. #PH0671
PADER Cert. #68-463, MA Cert. #NJ386
NYDOH Cert. #11408, NC Cert. #455

47 Carey Avenue • Butler, NJ 07405
Phone: (201) 492-8744 Fax: (201) 492-1815

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SAMPLE KEY

ENVIRO-TECH NO.	VERITECH NO.
MA2-1	AA25185
MA2-2	AA25186
MA2-3	AA25187
MA2-4	AA25188
MA2-5	AA25189
MA2-6	AA25190
MA2-7	AA25191
MA2-8	AA25192
MA2-SPA	AA25193
MA2-SPB	AA25194
FIELD BLANK	AA25195

Enviro-Tech Inc.

Page ___ of ___

CHAIN-OF-CUSTODY RECORD

SAMPLER: (Signature) [signature]
Phone 908-566-2277
Date Shipped
Airbill No.
Carrier
Cooler No.

SHIP TO:
VERITECH
ATTENTION:

SEND RESULTS TO:
Client Name
Company ENVIRO-TECH, INC.
Address 247 MAIN ST.
MATAWAN, NJ
Phone 908-566-2277

PROJECT NAME EARLE AMMUNITION **PROJECT NO.** **P.O. NO.**

Relinquished by: (Signature)	Received by: (Signature)	Date	Military Time
[signature]	[signature]	7/28/94	0945
[signature]	[signature]	7/28/94	1105
Relinquished by: (Signature)	Received at lab by: (Signature)	Date	Military Time
Relinquished from lab by: (Signature)	Received by: (Signature)	Date	Military Time

ANALYSIS REQUEST

	Sample ID Number	Sample Description	Date/Time Sampled	Analysis Requested	Sample Condition Upon Receipt	
2	MA2-1	Soil	7/27/94 13:20	TPH*, VOTIO, XYLENE	cool	AA25185
	MA2-2		13:25			25186
	MA2-3		13:30			25187
	MA2-4		13:35			25188
	MA2-5		13:40			25189
	MA2-6		13:45			25190
	MA2-7		13:50			25191
	MA2-8		13:55			25192
	MA2-SPA		14:15			25193
	MA2-SPB		14:20			25194
3	FIELD BLANK	AQUEOUS	13:15			25195

Special Instructions/Comments:

* Please analyze for TPH first. If the results show concentrations of TPH > 1,000 ppm, please call ET, office for authorization of additional parameters.

NOTE: UNUSED PORTIONS OF NON-AQUEOUS SAMPLES WILL BE RETURNED TO CLIENT

Expected Analytical T.A.T.'s: X Immediate ___ Attention (200% surcharge) ___ RUSH (50-100% surcharge) ___ Standard

02

Sample Custodians Chain of Custody

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Division of Hampton-Clarke, Inc.

environmental and analytical services

CONDITION UPON RECEIPT

Date 7/28/94 Filed By A. S

Proj. Name ENVIRO Lab Sample No(s) AA d5185 - d5195

CONDITION [Check Applicable Items]

____ (1) Not enough sample sent for analysis

____ (2) Sample(s) received broken or leaking

✓ (3) Illegible sample number(s) or label(s) missing from bottle(s)

✓ (4) Numbers on sample(s) do not correspond to information on chain-of-custody

____ (5) No chain-of-custody record submitted

____ (6) Custody seals missing or broken

____ (7) Holding time(s) exceeded upon receipt (List parameters_____)

____ (8) Samples received without proper refrigeration when deemed necessary

____ (9) Samples received without proper preservation

✓ (10) Other (Specify) TEMP (1) 18C° (2) 19C° (3) 20C°

~~Trip~~ 83101

1/1/. 500 ml

2 T.B. Not used

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INTERNAL CHAIN OF CUSTODY RECORD

REMOVED FROM

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE	
TPH	25195	3	7/28	3:15	Dan Battelle	X
BNA	25183, 62, 67	sample Frig	7/28	3:10	Tracy Crane	
BN	25097	3	"	"	"	
% solids TPH	25195 - 199	Sample Frig	7/28	12:00	Mark V. Cipolla	X
~~24-95~~ TPH	~~DPH 24/95~~	"	"	"	"	X
BN	25090 98 68 69	3	7/28	9:50	Tracy Crane	
RCW/S	25180	3	7/29	8:45	NPENA	
TD-WI-WG	25018, 97, 25151, 61	3	7/29	11:05	Nate Johnson	
Solids	25248-25256	3	7/29	1:05	NPENA	
TPH	25248-25253	3	7/29	1:05	NPENA	
T.S. Solids	25161, 25241, 25244	3	7/29	2:35	NPENA	
TPH	25255, 56, 57	3	7/29	3:30	NPENA	
GC/MS	25180	WPC lab		4:07	[illegible]	
"	15151 - 15159	3		4:11	[illegible]	
TPH	25258	3	7/29	4:15	NPENA	
TCLP	25257, 25272-74	3	8/1	8:45	Laura Richardson	
Solids	25257-25258	3	8/1	8:45	NPENA	
TPH/Solids	25263, 64, 65, 72, 73, 74	3	8/1	8:45	NPENA	
TD-WG	25246, 66, 67	3	8/1	9:50	Nate Johnson	
GCMS	25143	3	8/1	9:55	[illegible]	
PCB	25257, 25274-73-72	3	8/1	11:20	Laura Richardson	
TPH	25242, 243, 245, 246	3	8/1	8:00	Mark V. Cipolla	
OTG	25242, 243, 245, 246	3	8/1	11:20	Mark V. Cipolla	

RETURNED TO

PARAMETER	SAMPLE NO.	COLDBOX NO.	DATE	TIME	SIGNATURE
TPH	25195	sample depleted	7/28	3:40	Dan Battelle
BNA	25183, 62, 67	sample Frig	"	4:00	Tracy Crane
BN	25097	DONE	"	"	"
% solids TPH	25195 - 199	Sample Frig	7/28	4:50	Mark V. Cipolla
TPH	24:95	Done	"	"	"
BN	25090 98 68 69	3	7/28	6:05	Tracy Crane
Solids	25248-25256	3	7/28	4:30	NPENA
TPH	25248-25253	done	7/28	4:30	NPENA
TPH	25257-25258	done	7/28	4:30	NPENA
TSS	25161, 241, 242	3	7/28	5:55	Mark V. Cipolla
TD-WI-WG	25018, 97, 25151, 61	3	7/29	5:45	Nate Johnson
TCLP	25257, 25272-74	3	8/1	9:55	Laura Richardson
TPH	25242, 243, 245, 246	Done	8/1	12:30	Mark V. Cipolla
PCB	25242, 243, 245, 246	"	"	12:30	Mark V. Cipolla
PCB	25251, 74, 73, 72	3	8/1	12:05	Tracy Crane
Solids	25257-25258	3	8/1	15:00	NPENA
TPH/Solids	25263, 64, 65, 72, 73, 74	done	8/1	15:00	NPENA
Root/PCB	25540	3	8/9	11:15	Laura Richardson

04

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VERITECH INTERNAL CHAIN OF CUSTODY RECORD
REFRIGERATOR NO 2

PARAMETER & FROM/TO REFRIG	SAMPLE NUMBER	DATE OUT	TIME OUT	DATE IN *	TIME IN *	SIGNATURE
GCMS	25015 ~ 25027, 25019, 25024	7/28/94	6:16	7/28/94	6:19	
"	24999, 25148, 25050	"	6:33	"	6:49	
"	25084	"	7:01			
"	24914 ~ 24917	7/29/94	3:23			
"	25029 ~ 25035	"	3:27	7/29/94	3:50	
"	25048, 25050	"	5:49	"	6:00	
"	25150 ~ 25159	"	6:07	"	6:23	
"	25161, 25147, 24981 ~ 24987	"	6:44			
TCLP	25180	8/1/94	8:50	8/1/94	9:05	Laura Richards
GCMS	25180, 25193	"	1:17	"	1:35	
"	24914 ~ 24917	"	2:44			
"	25030, 25030	"	3:08	8/1/94	3:12	
"	25156 ~ 25160	"	4:21	"	4:24	
"	25115	"	4:50	"	4:58	
"	25155, 25150	"	5:23	"	5:49	
"	24987 ~ 24989	"	6:41			
"	25117	"	7:19			
"	AM25115, 163-68	8/04/94	15:40	8/04/94	16:40	
"	AM25161, 184, 147, 266 → 271, 324	"	16:45	8/04/94	17:30	
"	AM25342 → 48, 184, 147	"	17:45	"	18:00	
"	25257, 25289 - 313			8/04/94	18:05	
"	AM25297, ~~5285~~ 5330-56, 5367-76	8/05/94	16:00			
"	AM25196 → 203	8/08/94	15:45			
"	AM25204 → 211	8/08/94	19:00			
"	AM25211 → 21	8/09/94	11:30			
"	AM25223 → 31, 202, 205, 208	8/09/94	20:47			
"	AM25232 - 240, 205, 208, 222	8/10/94	6:30			
"	AM25207, 19, 34, 01, 04, 10, 06, 60-62	8/10/94	13:30			
"	AM25315, 314, 242, 255, 257, 58, 53	8/11/94	14:00	8/11/94	14:30	
"	AM25306 → 13	8/11/94	14:30	8/11/94	15:00	
"	AM25312, 272, 273, 274, 310, 30, 257	8/12/94	14:30	8/12/94	14:30	
"	AM25518 → 330, 332, 334, 336, 337, 338	8/12/94	14:45			
"	AM25539, 93, 94, 96, 97, 95, 96	8/12/94	16:00			
"	AM25255, 274	8/12/94	18:00	8/12/94	18:10	
"	AM25355, 30, 54, 56, 67, 70-72, 74, 76	8/12/94	22:00			
"	AM25353, 5360, 363, 331, 363, 337-42	8/15/94	17:00			
"	AM25339, 360, 455, 452, 485-98	8/15/94	18:00			
"	AM25497 - 516, 542 → 546	8/16/94	11/15/94 19:00			
"	AM25402, 415, 87, 89, 419 → 22, 277, 315	8/16/94	14:00			
"	AM25326, 465, 472, 523, 464	8/16/94	16:00			
"	AM25416, 84, 89-95, 65, 19	8/17/94	14:00			

COMMENTS: * Aqueous samples are not logged back into the refrigerator

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:37

Sample I.D. AA25185
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-1 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	96	PERCENT	07/28/94	MC
TPH-SOIL	31	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25185

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:38

Sample I.D. AA25186
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-2 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	92	PERCENT	07/28/94	MC
TPH-SOIL	130	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25186

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:38

Sample I.D. AA25187
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-3 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	92	PERCENT	07/28/94	MC
TPH-SOIL	130	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25187

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:39

Sample I.D. AA25188
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-4 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	91	PERCENT	07/28/94	MC
TPH-SOIL	390	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25188

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:40

Sample I.D. AA25189
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-5 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	95	PERCENT	07/28/94	MC
TPH-SOIL	34	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25189

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:40

Sample I.D. AA25190
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-6 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	92	PERCENT	07/28/94	MC
TPH-SOIL	30	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25190

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:41

Sample I.D. AA25191
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-7 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	96	PERCENT	07/28/94	MC
TPH-SOIL	36	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25191

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:42

Sample I.D. AA25192
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-8 SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	95	PERCENT	07/28/94	MC
TPH-SOIL	870	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25192

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:43

Sample I.D. AA25193
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-SPA SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	95	PERCENT	07/28/94	MC
TPH-SOIL	1300	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP
VOLATILES + 10	Completed	ATTACHED	08/01/94	YS

End of progress report on sample: AA25193

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:44

Sample I.D. AA25194
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 2

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: MA2-SPB SOIL

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
%SOLIDS	96	PERCENT	07/28/94	MC
TPH-SOIL	5300	mg/kg dry wt	07/28/94	MC
TPH EXTRACTION	Completed		07/28/94	NP

End of progress report on sample: AA25194

SAMPLE PROGRESS REPORT

Veritech (Hampton Clarke)
Date: 08-19-1994 Time: 09:48:44

Sample I.D. AA25195
Status: Complete and inactive
Priority: 24 HR TA
Deliverables: REDUCED
Client ID: ENVIRO
Project Account Code: EARLE
CONTAIN: 3

Date collected: 07/27/94
Date submitted: 07/28/94
Due date: 08/10/94
Specification checking: off
Descript: FIELD BLANK

COL.DATE: 7/27/94

Analysis	Result	Unit	Finished	Anl
TPH-WATER	Not detected	mg/L	07/28/94	DB
TPH EXTRACTION	Completed		07/28/94	DB

End of progress report on sample: AA25195

GC/MS ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

CLIENT: ENVIRO PROJECT: EARLE
ANALYSIS: VOLATILE

	NO	YES
1. GC/MS Tune Specifications		
a. BFB passed	___	_X_
b. DFTPP passed	___	___
2. GC/MS Tuning Frequency - performed every 12 hours	___	_X_
3. GC/MS Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 12 hours before sample analysis.	___	_X_
4. GC/MS Calibration Requirements		
a. Calibration Check Compounds	___	_X_
b. System Performance Check Compounds	___	_X_
5. Blank Contamination - List compounds for each fraction		
a. VOA Fraction See Form 1.		
b. B/N Fraction		
c. Acid Fraction		
6. Surrogate Recoveries Meet Criteria (If not met; list those compounds and their recoveries which fall outside the acceptable range)	___	_X_
a. VOA Fraction		
b. B/N Fraction		
c. Acid Fraction		
7. Extraction Holding Time Met	___	___
Comments:		
8. Analysis Holding Time Met	___	_X_
Comments:		

Additional Comments: _____

Organics Director _____ Date: 08/12/94___

WET CHEMISTRY ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY FORMAT

		No	Yes
1.	Blank Contamination - If yes, list the sample and the corresponding concentrations in each blank:	_X_	___
2.	Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria (If not met, list the sample and corresponding recovery which falls outside the acceptable range)	___	_X_
3.	IR Spectra submitted for all standards, blanks, & samples	___	_X_
4.	Chromatograms submitted for all standards, blanks, & samples if GC fingerprinting was conducted	___	___
5.	Extraction Holding Time Met	___	_X_
	If not met, list number of days exceeded for each sample:		
6.	Analysis Holding Time Met	___	_X_
	If not met, list number of days exceeded for each sample:		

Additional Comments: _____

QA/QC Director: Deborah A. Keller Date: 8/2/94

METHOD REFERENCES

Volatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 8240.

Volatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 624.

TCLP Volatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8240.

Volatile Organics (Drinking Waters) - Methods for the Determination of Organic Compounds in Drinking Water, EPA/600/4-88/039, Revision 3, 1989, Method 524.2.

Semivolatile Organics (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8270.

Semivolatile Organics (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 625.

TCLP Semivolatile Organics - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8270.

Pesticides (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

Pesticides (Waters) - Federal Register, 40 CFR Part 136, October 26, 1984, Method 608.

TCLP Pesticides - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311, 3510 and 8080.

TCLP Herbicides (Waters) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 1311 and 8150.

PCB's (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3550 and 8080.

PCB's (Waters) - Federal Register, 40 CFR, Part 136, October 26, 1984, Method 608.

PCB's (Oils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Methods 3580 and 8080.

Total Metals (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition. Methods 3020 or 3050 are used for digestion. All ICP metals are analyzed using Method 6010. Antimony, arsenic, cadmium, molybdenum, selenium and thallium are analyzed by Methods 7041, 7060, 7131, 7481, 7740 and 7841 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

TCLP Metals - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1311 followed by Method 3020 for digestion and the individual parameter methods listed above in the Total Metals (Soils) section.

ICP Metals (Waters) - Methods for the Determination of Metals in Environmental Samples, EPA/600/4-91/010, June 1991, Revision 3.3, Method 200.7.

GFAA Metals & Mercury (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983. Antimony, arsenic, cadmium, lead, molybdenum, selenium, thallium and tin are analyzed using Methods 204.2, 206.2, 213.2, 239.2, 246.2, 270.2, 279.2 and 282.2 respectively. Mercury is analyzed using the Inorganic Statement of Work, Contract Laboratory Program, Revision 2.1.

Cyanide (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9010.

Cyanide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 335.2.

Phenols (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9065.

Phenols (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 420.1.

TPH (Soils & Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 418.1 for waters and modified 418.1 for soils using a soxhlet extraction with freon prior to analysis.

Hexavalent Chromium (Soils & Waters) - Test Methods for Evaluating Solid Waste, SW-846, Second and Third Editions, Methods 3060 and 7196A.

pH (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9040.

pH (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 150.1.

Reactive Cyanide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Reactive Sulfide - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Chapter Seven, Section 7.3, Reactivity.

Ignitability - Test Methods for Evaluating Solid Waste, SW-848, Third Edition, Chapter Seven, Section 7.1, Ignitability.

Flashpoint - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 1010.

Conductance (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 120.1.

Residue, Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.1.

Residue, Non-Filterable (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.2.

Residue, Total (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 160.3.

Chloride (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 325.3.

Chloride (Soils) - Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Method 9252.

Sulfide (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 376.1.

Chemical Oxygen Demand (Waters) - Hach Chemical Company, Method 8000.

Oil & Grease (Waters) - Methods for the Chemical Analysis of Water and Wastes, EPA-600/4-79-020, March 1983, Method 413.1.

TOX (Waters & Soils) - American Society for Testing & Materials (ASTM), D2361-91, June 1991.

2,3,7,8 - TCDD/TCDF - Modified Contract Laboratory Program Statement of Work, November 1992.

VERITECH

47 CAREY AVE., BUTLER, NJ 07405

CT. NO: PH-0671
MADEP NO: NJ386
PADER NO: 68-463
NJDEPE NO: 14622
NYDOH NO: 11408

REPORT OF ANALYSIS

TO: ENVIRO-TECH, INC.
247 MAIN ST.
MATAWAN, NJ 07747-3222
(908) 566-2277

Date Collected: 07/27/94
Date Submitted: 07/28/94
Date Reported: 08/19/94
Project: EARLE

Sample I.D.		AA25185		AA25186	
Sample Description		MA2-1 SOIL		MA2-2 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	96	1.0	92
TPH-SOIL	mg/kg dry wt	21	31	22	130
TPH-WATER					
VOLATILES + 10					

Sample I.D.		AA25187		AA25188	
Sample Description		MA2-3 SOIL		MA2-4 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	92	1.0	91
TPH-SOIL	mg/kg dry wt	22	130	22	390
TPH-WATER					
VOLATILES + 10					

Sample I.D.		AA25189		AA25190	
Sample Description		MA2-5 SOIL		MA2-6 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	95	1.0	92
TPH-SOIL	mg/kg dry wt	21	34	22	30
TPH-WATER					
VOLATILES + 10					

Sample I.D.		AA25191		AA25192	
Sample Description		MA2-7 SOIL		MA2-8 SOIL	
Analyte	Units	MDL	Result	MDL	Result
%SOLIDS	PERCENT	1.0	96	1.0	95
TPH-SOIL	mg/kg dry wt	21	36	21	870
TPH-WATER					

Sample I.D.		AA25193		AA25194	
Sample Description		MA2-SPA SOIL		MA2-SPB SOIL	
Analyte	**Units**	**MDL**	**Result**	**MDL**	**Result**
%SOLIDS	PERCENT	1.0	95	1.0	96
TPH-SOIL	mg/kg dry wt	21	1300	210	5300
TPH-WATER					
VOLATILES + 10	ATTACHED		Completed		

Sample I.D.		AA25195	
Sample Description		FIELD BLANK	
Analyte	**Units**	**MDL**	**Result**
%SOLIDS			
TPH-SOIL			
TPH-WATER	mg/L	3.7	Not detected
VOLATILES + 10			

This report is a true report of results obtained from our tests of this material. In lieu of a formal contract document, the total aggregate liability of Veritech to all parties shall not exceed Veritech's total fee for analytical services rendered.

Stanley Gilewicz - Laboratory Director

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID :
Date Rcvd/Extd:
Sample Matrix : Soil
Percent Solid : 100
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : DAILY BL
Lab File ID : >E1463
Date Analyzed : 08/01/94
Dilution Factor: 1
Sample Wt/Vol : 5.0g

CONCENTRATION UNITS: UG/KG(PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	10	U	124481	Dibromochloromethane	5	U
74839	Bromomethane	10	U	79005	1,1,2-Trichloroethane	3	U
75014	Vinyl Chloride	5	U	71432	Benzene	1	U
75003	Chloroethane	10	U	10061026	Trans-1,3-Dichloropropene	5	U
75092	Methylene Chloride	2	U	110758	2-Chloroethylvinylether	10	U
67641	Acetone	20	11J	75252	Bromoform	4	U
75150	Carbon Disulfide	5	U	108101	4-Methyl-2-Pentanone	25	U
75694	Trichlorofluoromethane	5	U	591786	2-Hexanone	20	U
75354	1,1-Dichloroethene	2	U	127184	Tetrachloroethene	1	U
75343	1,1-Dichloroethane	5	U	79345	1,1,2,2-Tetrachloroethane	2	U
156605	Trans-1,2-Dichloroethene	5	U	108883	Toluene	5	U
67663	Chloroform	5	U	108907	Chlorobenzene	4	U
107062	1,2-Dichloroethane	2	U	100414	Ethylbenzene	5	U
78933	2-Butanone	25	U	100425	Styrene	5	U
71556	1,1,1-Trichloroethane	5	U	108383	m&p-Xylenes	5	U
56235	Carbon Tetrachloride	2	U	95476	o-Xylene	5	U
108054	Vinyl Acetate	10	U	541731	1,3-Dichlorobenzene	5	U
75274	Bromodichloromethane	1	U	95501	1,2-Dichlorobenzene	5	U
78875	1,2-Dichloropropane	1	U	106467	1,4-Dichlorobenzene	5	U
10061015	cis-1,3-Dichloropropene	5	U	1634044	Methyl-t-butyl ether	5	U
79016	Trichloroethene	1	U	108203	Di-isopropyl-ether	5	U
				75650	t-Butyl Alcohol	100	U

TARGET COMPOUND SUMMARY: 0

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.
DAILY BLK(S

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL

Lab Sample ID: DAILY BLK(S

Sample wt/vol: 5.0(g/ml) g

Lab File ID: >E1463

Level: (low/med) LOW

Date Received:

% Solid: 100

Date Analyzed: 08/01/94

Column: CAP

Dilution Factor: 1

Number of TICs found: 0

CONCENTRATION UNITS: ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Tentative Compound Summary: 0

FORM I VOA-TIC 1/87 Rev

QUANT REPORT

Operator ID: LIN
Output File: ^E1463::D2
Data File: >E1463::D2
Name: DAILY BLK(S)
Misc: A,FOR SOIL

Quant Rev: 7
Quant Time: 940801 13:30
Injected at: 940801 13:05
Dilution Factor: 1.00000
Instrument ID: MSD_1

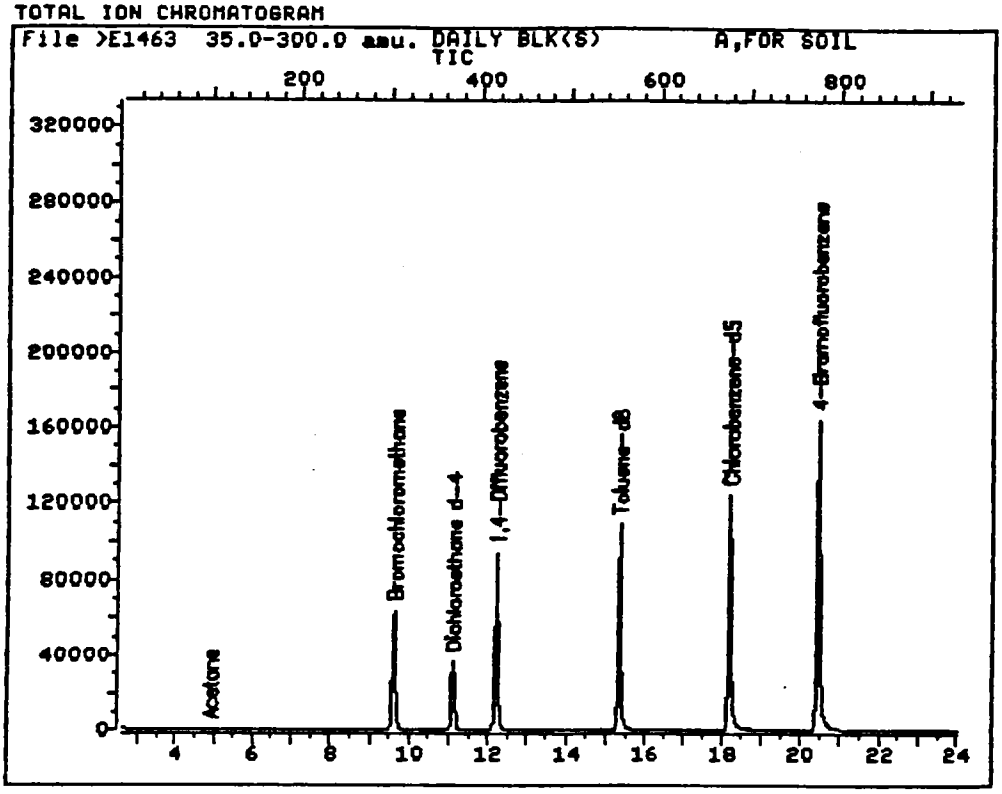
ID File: IDSV01::A3
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 940716 02:40
Last Qcal Time: 940801 12:35

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.62	306	51831	50.00	ug/L	94
10)	Acetone	4.92	101	1990	11.14	ug/L	87
19)	1,2-Dichloroethane-d4	11.09	370	15485	49.11	ug/L	93
28)	*1,4-Difluorobenzene	12.20	418	208597	50.00	ug/L	96
39)	*Chlorobenzene-d5	18.19	679	194187	50.00	ug/L	96
46)	Toluene d-8	15.34	555	188400	48.30	ug/L	94
53)	Bromofluorobenzene	20.44	777	177147	51.40	ug/L	99

* Compound is ISTD

MRD 8/12/94

TOTAL ION CHROMATOGRAM



Data File: >E1463::D2 Quant Output File: ^E1463::D2
Name: DAILY BLK(S) Instrument ID: MSD_1
Misc: A,FOR SOIL

Id File: IDSVO1::A3
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 940716 02:40 Last Qcal Time: 940801 12:35

Operator ID: LIN
Quant Time : 940801 13:30
Injected at: 940801 13:05

HAMPTON-CLARKE/VERITECH
VOLATILE ORGANICS ANALYSIS DATA SHEET

Client ID : MA2-SPA
Date Rcvd/Extd: 07/27/94-NA
Sample Matrix : Soil
Percent Solid : 95
Column : J&W DB-624 75M .53mm ID column

Lab Sample No. : AA25193
Lab File ID : >E1464
Date Analyzed : 08/01/94
Dilution Factor: 1
Sample Wt/Vol : 5.0g

CONCENTRATION UNITS: UG/KG(PPB)

CAS No.	COMPOUND	PQL	CONC	CAS NO.	COMPOUND	PQL	CONC
74873	Chloromethane	11	U	124481	Dibromochloromethane	5	U
74839	Bromomethane	11	U	79005	1,1,2-Trichloroethane	3	U
75014	Vinyl Chloride	5	U	71432	Benzene	1	U
75003	Chloroethane	11	U	10061026	Trans-1,3-Dichloropropene	5	U
75092	Methylene Chloride	2	3	110758	2-Chloroethylvinylether	11	U
67641	Acetone	21	15JB	75252	Bromoform	4	U
75150	Carbon Disulfide	5	U	108101	4-Methyl-2-Pentanone	26	U
75694	Trichlorofluoromethane	5	U	591786	2-Hexanone	21	U
75354	1,1-Dichloroethene	2	U	127184	Tetrachloroethene	1	U
75343	1,1-Dichloroethane	5	U	79345	1,1,2,2-Tetrachloroethane	2	U
156605	Trans-1,2-Dichloroethene	5	U	108883	Toluene	5	U
67663	Chloroform	5	U	108907	Chlorobenzene	4	U
107062	1,2-Dichloroethane	2	U	100414	Ethylbenzene	5	U
78933	2-Butanone	26	U	100425	Styrene	5	U
71556	1,1,1-Trichloroethane	5	U	108383	m&p-Xylenes	5	U
56235	Carbon Tetrachloride	2	U	95476	o-Xylene	5	U
108054	Vinyl Acetate	11	U	541731	1,3-Dichlorobenzene	5	U
75274	Bromodichloromethane	1	U	95501	1,2-Dichlorobenzene	5	U
78875	1,2-Dichloropropane	1	U	106467	1,4-Dichlorobenzene	5	U
10061015	cis-1,3-Dichloropropene	5	U	1634044	Methyl-t-butyl ether	5	U
79016	Trichloroethene	1	U	108203	Di-isopropyl-ether	5	U
				75650	t-Butyl Alcohol	110	U

TARGET COMPOUND SUMMARY: 3

DATA REPORTING QUALIFIERS

U - Indicates the compound was analyzed for but not detected.
J - Indicates an estimated value used when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the GC/MS instrument for that specific analyte.

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

LAB SAMPLE NO.
AA25193

Lab Name: VERITECH, NJDEPE CERT.# 14622 Contract:-------

Lab Code: GC/MS Case No.: ----- SAS No.: ----- SDG No.: -----

Matrix: SOIL Lab Sample ID: AA25193

Sample wt/vol: 5.0(g/ml) g Lab File ID: >E1464

Level: (low/med) LOW Date Received:

% Solid: 95 Date Analyzed: 08/01/94

Column: CAP Dilution Factor: 1

Number of TICs found: 9

CONCENTRATION UNITS: ug/Kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		Unknown	21.35	18	
2		Unknown	21.69	5	
3	2847725	Decane, 4-methyl-	21.90	23	
4		Unknown	22.31	15	
5		Unknown	22.50	8	
6		Unknown	22.80	22	
7		Unknown	23.32	43	
8	1120214	Undecane	23.58	60	
9	535773	Benzene, 1-methyl-3-(1-methy	23.88	22	

Tentative Compound Summary: 217

FORM I VOA-TIC 1/87 Rev

QUANT REPORT

Operator ID: LIN
Output File: ^E1464::D2
Data File: >E1464::D2
Name: AA25193
Misc: S,5g

Quant Rev: 7
Quant Time: 940801 14:07
Injected at: 940801 13:38
Dilution Factor: 1.00000
Instrument ID: MSD_1

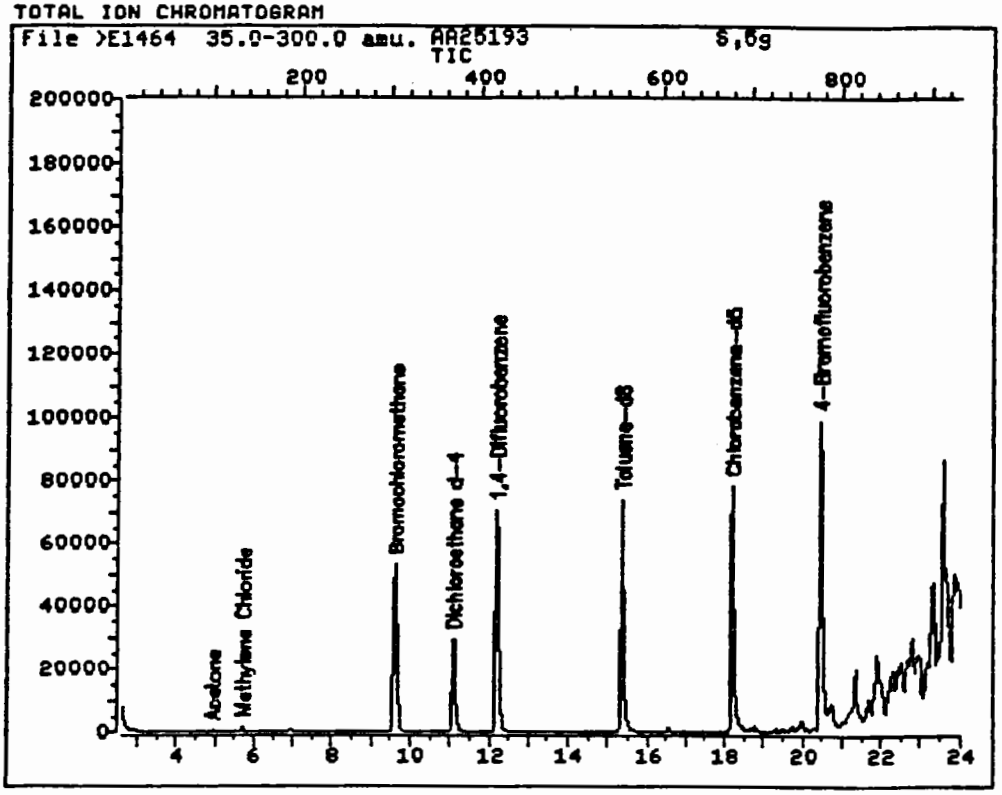
ID File: IDSV01::A3
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 940716 02:40
Last Qcal Time: 940801 12:35

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*Bromochloromethane	9.63	306	42350	50.00	ug/L	99
9)	Methylene Chloride	5.72	136	1574	2.83	ug/L	94
10)	Acetone	4.94	102	2031	13.92	ug/L	87
19)	1,2-Dichloroethane-d4	11.10	370	12553	48.72	ug/L	92
28)	*1,4-Difluorobenzene	12.20	418	157718	50.00	ug/L	97
39)	*Chlorobenzene-d5	18.20	679	129342	50.00	ug/L	96
46)	Toluene d-8	15.35	555	132599	51.04	ug/L	95
53)	Bromofluorobenzene	20.45	777	113241	49.33	ug/L	97

* Compound is ISTD

mes 8/12/94

TOTAL ION CHROMATOGRAM



Data File: >E1464::D2 Quant Output File: ^E1464::D2
Name: AA25193 Instrument ID: MSD_1
Misc: S,5g

Id File: IDSV01::A3
Title: J&W DB-624 75M .53mm ID column
Last Calibration: 940716 02:40 Last Qcal Time: 940801 12:35

Operator ID: LIN
Quant Time : 940801 14:07
Injected at: 940801 13:38

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25185
Sample Matrix: Soil
% Solids: 96

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-1	31	1	21	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25186
Sample Matrix: Soil
% Solids: 92

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-2	130	1	22	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25187
Sample Matrix: Soil
% Solids: 92

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-3	130	1	22	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25188
Sample Matrix: Soil
% Solids: 91

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-4	390	1	22	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25189
Sample Matrix: Soil
% Solids: 95

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-5	34	1	21	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25190
Sample Matrix: Soil
% Solids: 92

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-6	30	1	22	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25191
Sample Matrix: Soil
% Solids: 96

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-7	36	1	21	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25192
Sample Matrix: Soil
% Solids: 95

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-8	870	1	21	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25193
Sample Matrix: Soil
% Solids: 95

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-SPA	1300	1	21	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25194
Sample Matrix: Soil
% Solids: 96

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/kg)	DILUTION FACTOR	MDL (mg/kg)	DATE ANALYZED
TPH	MA2-SPB	5300	10	210	7/28/94

INORGANIC ANALYTICAL RESULTS SUMMARY

Lab ID No.: AA25195
Sample Matrix: Water
% Solids:

Date Received: 7/28/94
Date Extracted: 7/28/94

PARAMETER	FIELD SAMPLE NO.	SAMPLE CONCEN. (mg/L)	DILUTION FACTOR	MDL (mg/L)	DATE ANALYZED
TPH	FB	ND	1	3.7	7/28/94

2A
VOLATILE SURROGATE RECOVERIES

Lab Name: Veritech NJDEPE CERT.# 14622

Lab Code: 020406 Case No.:---- SAS No.:---- SDG No.:----

Date Analyzed: 08/01/94

LAB SAMP NO.	($)	S1 (DCE)#	S2 (TOL)#	S3 (BFB)#	FILE	TOT OUT
DAILY CAL(	S	94	104	106	^E1462	0
DAILY BLK(	S	98	97	103	^E1463	0
AA25193	S	97	102	99	^E1464	0
AA25180	S	96	100	107	^E1465	0
DAILY BLK(	W	85	102	102	^E1466	0
AA25030	W	88	102	106	^E1467	0
AA25032	W	88	101	108	^E1468	0
AA25156	S	0*	0*	0*	^E1469	3
AA25115	W	86	100	102	^E1470	0
AA25156	S	98	98	98	^E1471	0
AA25157	S	99	100	99	^E1472	0
AA25158	S	96	100	99	^E1473	0
AA25159	S	96	100	97	^E1474	0
AA25160	S	100	102	101	^E1475	0
AA25155MS	S	102	103	98	^E1476	0
AA25155MSD	S	96	102	98	^E1477	0
AA25050MS	W	90	104	101	^E1478	0
AA25050MSD	W	92	104	103	^E1479	0
SMB-SPK	S	96	100	100	^E1480	0
WMB-SPK	W	99	102	92	^E1481	0

QC Limits For:	Soil	Water	Sur Conc(ug/L) Water	Soil
S1 (DCE) = 1,2-Dichloroethane-d4	70-121	76-114	50	50
S2 (TOL) = Toluene d-8	81-117	88-110	50	50
S3 (BFB) = Bromofluorobenzene	74-121	86-115	50	50

$ Column indicating Soil or Water matrix
# Column to be used to flag recovery values
* Values outside of CLP QC limits

FORM 3

SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Matrix Spike - Lab sample No.: AA25155

Non spiked file: ^E1454 Spiked file: ^E1476 Spike dup file: ^E1477

Compound	Spike Added (ug/Kg)	Sample Conc (ug/Kg)	MS Conc (ug/Kg)	MSD Conc (ug/Kg)	MS % Rec#	MSD % Rec#	% Rpd#	QC Limits Rpd	QC Limits Rec
1,1-Dichloroethene	50	0	51	49	102	98	4	22	59-172
Trichloroethene	50	0	52	51	104	102	2	24	62-137
Benzene	50	0	52	52	104	104	0	21	66-142
Toluene	50	0	54	51	108	102	6	21	59-139
Chlorobenzene	50	0	53	52	106	104	2	21	60-133

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

RPD: 0 out of 5 outside limits
Spike Recovery: 0 of 10 outside of limits

Comments:

4A
VOLATILE METHOD BLANK SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622.

Lab file ID: >E1463 Lab Sample ID: DAILY BLK(S

Date Analyzed: 08/01/94 Time Analyzed: 13:05

Matrix: Water

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

LAB FILE NO.	LAB SAMPLE ID	TIME ANALYZED
>E1464	AA25193	13:38
>E1465	AA25180	14:13
>E1469	AA25156	16:31
>E1471	AA25156	17:41
>E1472	AA25157	18:16
>E1473	AA25158	18:52
>E1474	AA25159	19:27
>E1475	AA25160	20:02
>E1476	AA25155MS	20:38
>E1477	AA25155MSD	21:13
>E1480	SMB-SPK	22:57

Comments:

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:VERITECH Contract: -----

Lab File ID: >E1188 BFB Injection date: 7/15/94

Instrument ID: MSD_2 BFB Injection time: 20:15

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	24.6
75	30-60% of mass 95	47.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	8.0
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	70.4
175	5.0 - 9.0% of mass 174	5.3(7.5)1
176	Greater than 95.0%, but less than 101.0% of mass 174	69.7(99.0)1
177	5.0 - 9.0% of mass 176	4.9(7.1)2

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

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

	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	10 PPB STD	>E1189	7/15/94	21:10
2	----------	20 PPB STD	>E1190	7/15/94	21:40
3	----------	50 PPB STD	>E1191	7/15/94	22:11
4	----------	100PPB STD	>E1192	7/15/94	22:41
5	----------	200PPB STD	>E1193	7/15/94	23:11
6	----------	BLANK	>E1194	7/15/94	23:41
7	----------	10 PPB STD	>E1195	7/16/94	0:11
8	----------	20 PPB STD	>E1196	7/16/94	0:41
9	----------	50 PPB STD	>E1197	7/16/94	1:11
10	----------	100PPB STD	>E1198	7/16/94	1:41
11	----------	200PPB STD	>E1199	7/16/94	2:11
12	----------	BLANK	>E1200	7/16/94	2:40
13	----------	DAILY BLANK	>E1201	7/16/94	3:10
14	----------	AA24535	>E1202	7/16/94	3:40
15	----------	AA24536	>E1203	7/16/94	4:09
16					
17					
18					
19					
20					
21					
22					

Page 1 of 1

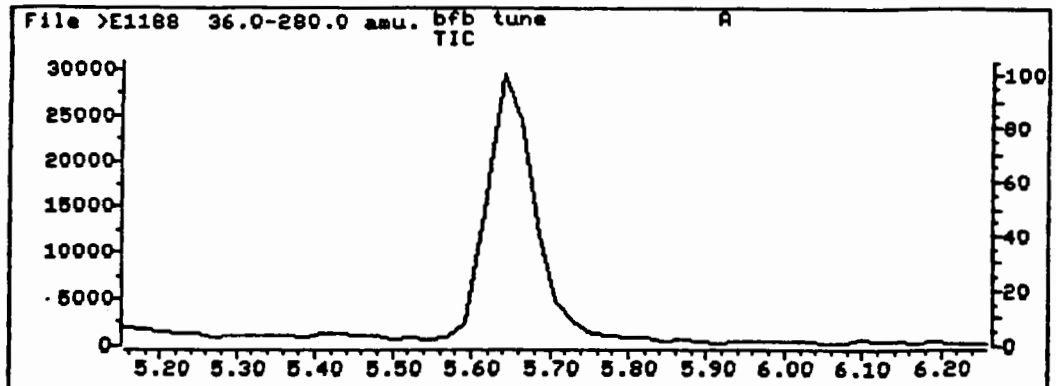
FORM V VOA

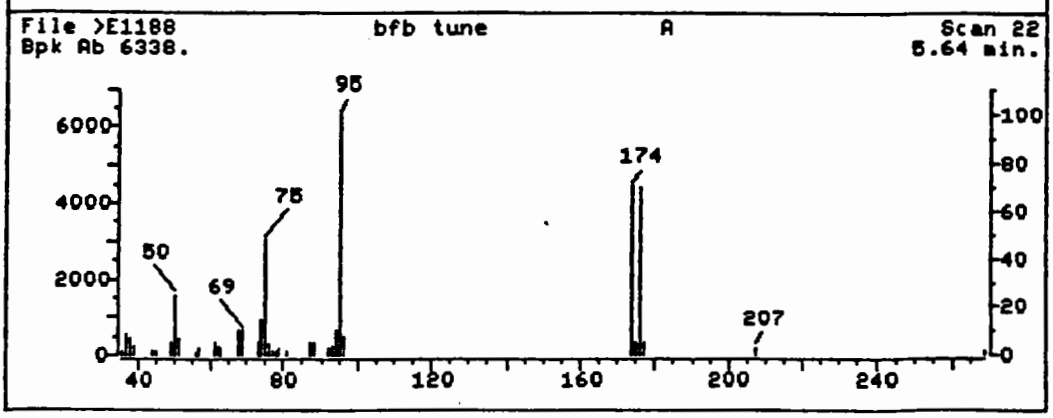
GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	24.60	24.60	Ok
75	30-60% of mass 95	47.81	47.81	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	8.05	8.05	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	70.35	70.35	Ok
175	5-9% of mass 174	5.30	7.54	Ok
176	95-101% of mass 174	69.66	99.01	Ok
177	5-9% of mass 176	4.92	7.07	Ok

Injection Date: 07/15/94
Injection Time: 20:15
Data File: >E1188
Scan: 22





MED 8/12/94

>E1188 bfb tune A
22

File: >E1188 Scan #: 22 Retn. time: 5.64

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	112.00	51.00	432.00	73.00	309.00	80.85	111.00	96.05	510.00
37.00	559.00	56.00	92.00	74.00	924.00	86.95	323.00	173.90	4459.00
38.00	445.00	57.00	167.00	75.00	3030.00	87.95	323.00	174.85	336.00
39.00	205.00	61.00	326.00	76.05	257.00	91.95	150.00	175.85	4415.00
43.90	130.00	62.00	221.00	76.95	108.00	92.95	240.00	176.95	312.00
45.00	107.00	63.00	186.00	77.95	100.00	94.05	630.00	207.05	178.00
49.00	355.00	68.00	626.00	78.85	157.00	95.05	6338.00	269.00	116.00
50.00	1559.00	69.00	637.00						

5A

VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE (BFB)

Lab Name:VERITECH Contract: -----

Lab File ID: >E1460 BFB Injection date: 8/01/94

Instrument ID: MSD_1 BFB Injection time: 11:35

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15-40% of mass 95	24.4
75	30-60% of mass 95	46.4
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of mass 95	7.9
173	Less than 2.0% of mass 174	0.0(0.0)1
174	Greater than 50.0% of mass 95	68.7
175	5.0 - 9.0% of mass 174	5.3(7.8)1
176	Greater than 95.0%, but less than 101.0% of mass 174	68.0(99.0)1
177	5.0 - 9.0% of mass 176	4.7(6.9)2

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

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

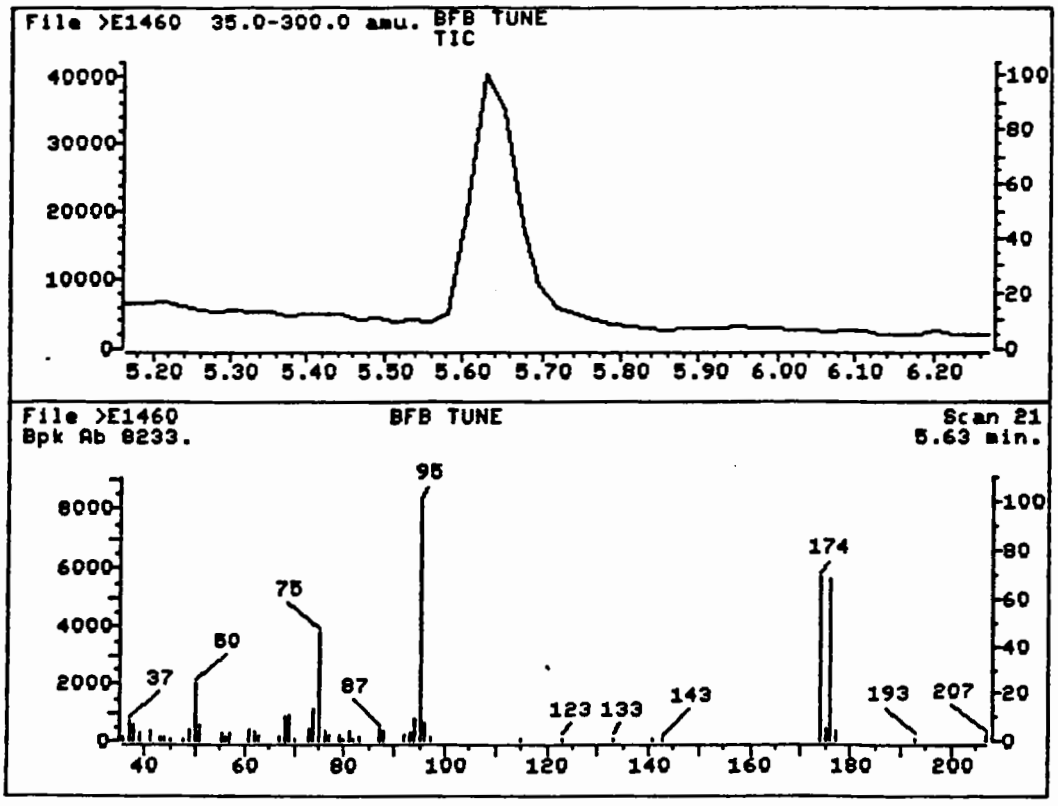
	EPA SAMPLE NO	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	----------	DAILY CAL(A)	>E1461	8/01/94	12:05
2	----------	DAILY CAL(S)	>E1462	8/01/94	12:35
3	----------	DAILY BLK(S)	>E1463	8/01/94	13:05
4	----------	AA25193	>E1464	8/01/94	13:38
5	----------	AA25180	>E1465	8/01/94	14:13
6	----------	DAILY BLK(ME	>E1466	8/01/94	14:48
7	----------	AA25030	>E1467	8/01/94	15:20
8	----------	AA25032	>E1468	8/01/94	15:56
9	----------	AA25156	>E1469	8/01/94	16:31
10	----------	AA25115	>E1470	8/01/94	17:06
11	----------	AA25156	>E1471	8/01/94	17:41
12	----------	AA25157	>E1472	8/01/94	18:16
13	----------	AA25158	>E1473	8/01/94	18:52
14	----------	AA25159	>E1474	8/01/94	19:27
15	----------	AA25160	>E1475	8/01/94	20:02
16	----------	AA25155MS	>E1476	8/01/94	20:38
17	----------	AA25155MSD	>E1477	8/01/94	21:13
18	----------	AA25050MS	>E1478	8/01/94	21:48
19	----------	AA25050MSD	>E1479	8/01/94	22:22
20	----------	SMB-SPK	>E1480	8/01/94	22:57
21	----------	WMB-SPK	>E1481	8/01/94	23:32
22					

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	24.41	24.41	Ok
75	30-60% of mass 95	46.37	46.37	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.91	7.91	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	68.69	68.69	Ok
175	5-9% of mass 174	5.33	7.76	Ok
176	95-101% of mass 174	68.03	99.05	Ok
177	5-9% of mass 176	4.66	6.86	Ok

Injection Date: 08/01/94
Injection Time: 11:35
Data File: >E1460
Scan: 21



MED 8/12/94

>E1460 BFB TUNE
21

File: >E1460 Scan #: 21 Retn. time: 5.63

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.00	130.00	51.00	605.00	70.00	84.00	83.05	133.00	123.15	94.00
37.00	691.00	55.10	294.00	73.00	417.00	86.95	416.00	133.00	92.00
38.00	563.00	56.00	170.00	74.00	1152.00	87.95	379.00	140.90	77.00
39.00	305.00	57.00	301.00	75.00	3818.00	91.95	234.00	142.90	80.00
41.00	383.00	61.00	413.00	76.05	356.00	93.05	311.00	173.90	5655.00
43.10	165.00	62.00	348.00	76.95	214.00	94.05	766.00	174.95	439.00
44.00	128.00	63.00	245.00	78.95	243.00	95.05	8233.00	175.85	5601.00
45.00	113.00	67.10	170.00	79.95	98.00	96.05	651.00	176.95	384.00
47.80	61.00	68.00	829.00	80.95	375.00	97.05	144.00	192.95	110.00
49.00	405.00	69.00	890.00	82.05	121.00	114.95	58.00	207.05	217.00
50.00	2010.00								

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR SOIL

Instrument ID: MSD_2
Calibration Date: 07/16/94

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

Laboratory ID:	>E1195	>E1196	>E1197	>E1198	>E1199					
	RF	RF	RF	RF	RF					
Compound	10.0	20.0	50.0	100.0	200.0	$RT	$RF	$RSD	*/**	Optional Cal Curve
Chloromethane	1.167	1.107	.9212	.9687	.9423	2.960	1.021	10.66	**	
Bromomethane	.2777	.2855	.3000	.2839	.2523	3.474	.2799	6.230		
Vinyl Chloride	1.261	1.124	1.064	1.083	1.051	3.093	1.117	7.658	*	
Chloroethane	.1304	.0652	.1765	.1500	.1276	3.465	.1299	31.66		
Trichlorofluoromethane	1.192	1.057	.9750	1.052	.8981	3.897	1.035	10.56		
t-Butyl Alcohol	.0755	.0701	.0552	.0712	.0786	6.241	.0701	12.83		(50.0,100.,250.,500.,1000)
Methyl-t-butyl ether	1.601	1.532	1.444	1.654	1.562	6.402	1.559	5.044		
Methylene Chloride	.8116	.7707	.6919	.7178	.6679	5.717	.7320	8.008		
Acrolein	--	--	--	--	.0076	4.661	.0076	--		
Acrylonitrile	.0795	.1206	.1158	.1458	.1387	6.310	.1201	21.54		
Acetone	.2209	.1701	.1246	.1479	.1446	4.973	.1616	22.81		
Carbon Disulfide	1.857	1.955	1.891	1.946	1.863	5.156	1.902	2.414		
1,1-Dichloroethene	.6105	.6280	.5962	.6029	.5608	4.775	.5997	4.126	*	
Di-isopropyl-ether	4.431	4.478	4.212	4.501	4.316	7.670	4.388	2.768		
1,1-Dichloroethane	2.183	2.263	2.119	2.210	2.104	7.344	2.176	3.013	**	
Trans-1,2-Dichloroethene	.6602	.6949	.6643	.6768	.6287	6.291	.6650	3.663		
Chloroform	2.930	3.001	2.854	3.015	2.819	9.922	2.924	2.972	*	
1,2-Dichloroethane-d4	.2861	.2881	.2856	.2889	.2976	11.14	.2893	1.676		(50.0,50.0,50.0,50.0,50.0)
1,2-Dichloroethane	1.807	1.899	1.776	1.913	1.785	11.32	1.836	3.547		
2-Butanone	.6896	.6260	.4787	.5662	.6241	9.182	.5969	13.26		
1,1,1-Trichloroethane	2.489	2.533	2.346	2.440	2.270	10.31	2.416	4.431		
Carbon Tetrachloride	2.428	2.628	2.520	2.648	2.481	10.73	2.541	3.732		
Vinyl Acetate	3.635	3.642	3.621	3.679	4.151	7.615	3.745	6.079		
Bromodichloromethane	2.796	3.090	3.016	3.323	3.146	13.90	3.074	6.255		
1,2-Dichloropropane	.3845	.3936	.3802	.4164	.3961	13.26	.3942	3.558	*	
Trans-1,3-Dichloropropene	.3467	.4170	.4218	.4949	.4812	16.01	.4323	13.67		
Trichloroethene	.4757	.4996	.4680	.5016	.4645	12.77	.4819	3.649		
Dibromochloromethane	.5083	.5795	.5657	.6446	.6055	17.10	.5807	8.682		
1,1,2-Trichloroethane	.3462	.3752	.3476	.3753	.3770	16.34	.3643	4.353		
Benzene	.8334	.8492	.7924	.8424	.8055	11.24	.8246	2.970		
cis-1,3-Dichloropropene	.5296	.5836	.5770	.6455	.6284	14.85	.5928	7.717		
2-Chloroethylvinylether	.1484	.1840	.1825	.2181	.2333	14.62	.1933	17.23		
Bromoform	.5919	.6654	.6425	.7431	.7295	19.84	.6745	9.279	**	
2-Hexanone	.4305	.4025	.3357	.4246	.4971	15.23	.4181	13.88		
4-Methyl-2-Pentanone	.1529	.1127	.2166	.3005	.3605	17.00	.2286	44.75		
Tetrachloroethene	.5539	.5743	.5411	.5686	.5203	16.59	.5517	3.952		
1,1,2,2-Tetrachloroethane	.7993	.7644	.6850	.7716	.7939	20.77	.7629	6.018	**	
Toluene	.5992	.6198	.5912	.6274	.6073	15.51	.6090	2.422	*	
Toluene d-8	.9893	.9838	1.008	1.006	1.038	15.37	1.005	2.117		(50.0,50.0,50.0,50.0,50.0)
Chlorobenzene	.9444	.9644	.9255	.9749	.9441	18.27	.9507	2.032	**	

* - Indicates CCC Compound ** - Indicates SPCC Compound Units in ug/L
$RT - Avg Retention Times $RF - Avg Response Factor $RSD- Relative Standard Deviation

Initial Calibration Data

Lab: Veritech
Cal Type: CAL FOR SOIL

Instrument ID: MSD_2
Calibration Date: 07/16/94

Minimum Avg RF for SPCC is: .300

Maximum %RSD for CCC is: 30

Laboratory ID:	>E1195	>E1196	>E1197	>E1198	>E1199					
Compound	RF 10.0	RF 20.0	RF 50.0	RF 100.0	RF 200.0	$RT	$RF	$RSD	*/**	Optional Cal Curve
Ethylbenzene	1.274	1.332	1.303	1.396	1.386	18.51	1.338	3.912	*	
Styrene	.8466	.9294	.8878	.9486	.8627	19.52	.8950	4.838		
m&p-Xylenes	.5008	.5019	.4818	.4990	.4403	18.73	.4848	5.399		(20.0,40.0,100.,200.,400.)
o-Xylene	1.406	1.362	1.281	1.329	1.184	19.48	1.312	6.482		
Bromofluorobenzene	.8696	.8998	.9163	.9248	.9708	20.47	.9163	4.044		(50.0,50.0,50.0,50.0,50.0)
1,3-Dichlorobenzene	.9259	1.005	.9822	1.017	.9765	22.53	.9818	3.581		
1,4-Dichlorobenzene	1.281	1.210	1.114	1.137	1.054	22.69	1.159	7.587		
1,2-Dichlorobenzene	1.090	1.043	.9654	1.004	.9461	23.38	1.010	5.770		

* - Indicates CCC Compound ** - Indicates SPCC Compound Units in ug/L
$RT - Avg Retention Times $RF - Avg Response Factor $RSD- Relative Standard Deviation

FORM6 (Page 2 of 2)

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR SOIL
File name: ^E1462

Instrument ID : MSD_1
Calibration Date: 08/01/94
Injection Time : 1235

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	%RF	RF	RT	%DIF	*/**	
Chloromethane	1.021	1.191	2.953	16.64	**	
Bromomethane	.2799	.2344	3.459	16.26		
Vinyl Chloride	1.117	1.198	3.068	7.27	*	
Chloroethane	.1299	.0937	3.528	27.91		
Trichlorofluoromethane	1.035	.7919	3.849	23.47		
t-Butyl Alcohol	.0701	.0872	6.239	24.37		(Conc=250)
Methyl-t-butyl ether	1.559	1.373	6.354	11.90		
Methylene Chloride	.7320	.6564	5.664	10.32		
Acrolein	--	--	--	--		
Acrylonitrile	.1201	.1460	6.262	21.59		
Acetone	.1616	.1723	4.952	6.60		
Carbon Disulfide	1.902	1.663	5.113	12.60		
1,1-Dichloroethene	.5997	.5243	4.722	12.58	*	
Di-isopropyl-ether	4.388	4.137	7.618	5.70		
1,1-Dichloroethane	2.176	1.981	7.273	8.92	**	
Trans-1,2-Dichloroethene	.6650	.6078	6.239	8.60		
Chloroform	2.924	2.577	9.870	11.85	*	
1,2-Dichloroethane-d4	.2893	.3042	11.09	5.16		
1,2-Dichloroethane	1.836	1.626	11.27	11.45		
2-Butanone	.5969	.7079	9.134	18.60		
1,1,1-Trichloroethane	2.416	2.042	10.26	15.46		
Carbon Tetrachloride	2.541	2.200	10.67	13.44		
Vinyl Acetate	3.745	4.512	7.549	20.46		
Bromodichloromethane	3.074	2.869	13.87	6.66		
1,2-Dichloropropane	.3942	.3814	13.23	3.24	*	
Trans-1,3-Dichloropropene	.4323	.4375	15.98	1.20		
Trichloroethene	.4819	.4356	12.74	9.62		
Dibromochloromethane	.5807	.5609	17.06	3.42		
1,1,2-Trichloroethane	.3643	.3788	16.31	3.98		
Benzene	.8246	.7684	11.20	6.82		
cis-1,3-Dichloropropene	.5928	.5887	14.81	.70		
2-Chloroethylvinylether	.1933	.2239	14.58	15.85		
Bromoform	.6745	.6810	19.82	.97	**	
2-Hexanone	.4181	.4635	15.20	10.87		
4-Methyl-2-Pentanone	.2286	.3114	16.88	36.21		
Tetrachloroethene	.5517	.4804	16.56	12.92		
1,1,2,2-Tetrachloroethane	.7629	.8127	20.74	6.54	**	
Toluene	.6090	.5736	15.48	5.80	*	
Toluene d-8	1.005	1.004	15.34	.09		
Chlorobenzene	.9507	.8689	18.24	8.60	**	

* - Indicates CCC compound
** - Indicates SPCC compound
RT - Cont Cal Retention Times
RF - Response Factor from daily cal @ 50.00 ug/L
%DIFF- %Difference from average RF
%RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

Continuing Calibration Data

Lab : Veritech
Cal Type : CAL FOR SOIL
File name: ^E1462

Instrument ID : MSD_1
Calibration Date: 08/01/94
Injection Time : 1235

Minimum RF for SPCC is: .300 Maximum % Diff for CCC is: 25

Compound	%RF	RF	RT	%DIF	*/**	
Ethylbenzene	1.338	1.250	18.47	6.59	*	
Styrene	.8950	.8839	19.48	1.25		
m&p-Xylenes	.4848	.4698	18.70	3.09		(Conc=100)
o-Xylene	1.312	1.206	19.46	8.07		
Bromofluorobenzene	.9163	.8874	20.44	3.15		
1,3-Dichlorobenzene	.9818	.8970	22.49	8.63		
1,4-Dichlorobenzene	1.159	1.036	22.68	10.60		
1,2-Dichlorobenzene	1.010	.9299	23.36	7.90		

* - Indicates CCC compound
** - Indicates SPCC compound
RT - Cont Cal Retention Times
RF - Response Factor from daily cal @ 50.00 ug/L
%DIFF- %Difference from average RF
%RF - Avg Response Factor from initial cal
@ - Indicates compound failed specified criteria

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8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E1197 Lab Sample ID: 50 PPB STD

Date Analyzed: 07/16/94 Time Analyzed: 01:11

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	45057	9.65	183600	12.22	166300	18.22
UPPER LIMIT	90114		367200		332600	
LOWER LIMIT	22529		91800		83150	
LAB SAMPLE #						
10 PPB STD	33405	9.64	130261	12.22	116937	18.22
20 PPB STD	40791	9.65	166031	12.22	153048	18.22
100PPB STD	39470	9.65	157009	12.22	145549	18.22
200PPB STD	47353	9.65	190807	12.22	172678	18.20

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal from previous daily cal.

Column used to flag internal standard are values with an asterisk

8A
VOLATILE INTERNAL STANDARD AREA SUMMARY

Lab Name: VERITECH, NJDEPE CERT.# 14622

Lab file ID: >E1438 Lab Sample ID: DAILY CAL(S

Date Analyzed: ~~07/29/94~~ 05/01/94 Time Analyzed: 13:52

SA

	IS1(BCM) AREA #	RT	IS2(DFB) AREA #	RT	IS3(CBZ) AREA #	RT
12 HOUR STD	29347	9.65	124010	12.24	119744	18.22
UPPER LIMIT	58694		248020		239488	
LOWER LIMIT	14673		62005		59872	
LAB SAMPLE #						
DAILY CAL(	43791	9.59	177350	12.19	166464	18.19
DAILY BLK(	51831	9.62	208597	12.20	194187	18.19
AA25193	42350	9.63	157718	12.20	129342	18.20
AA25180	39129	9.63	144686	12.20	122623	18.20
AA25156	0*	0.00	0*	0.00	0*	0.00
AA25156	39863	9.62	158712	12.19	145077	18.19
AA25157	44321	9.62	176471	12.20	150545	18.19
AA25158	37311	9.63	159014	12.20	140725	18.20
AA25159	40360	9.62	157447	12.21	137913	18.19
AA25160	45289	9.63	178777	12.20	158667	18.20
AA25155MS	46053	9.60	183199	12.20	163306	18.18
AA25155MSD	47802	9.59	188234	12.19	174317	18.19
SMB-SPK	42697	9.61	170615	12.19	159034	18.19

IS1 (BCM) = Bromochlormethane @ 50ppb
IS2 (DFB) = 1,4-Difluorobenzene @ 50ppb
IS3 (CBZ) = Chlorobenzene-d5 @ 50ppb

UPPER LIMIT = + 100% of internal standard area of daily cal from previous daily cal.
LOWER LIMIT = -50% of internal standard area of daily cal.

1/3/94

METHOD DETECTION LIMTS FOR MSD#1

All the followin analytes were injected at 10 ppb with the exeception of TBA and M&P-Xylene which were injected at 20 and 50 ppb respectively.

FILE ==========>	^C9008	^C9009	^C9010	^C9011	^C9012	^C9013	^C9014	AVG	STDDEV	MDL
Chloromethane	7.47	8.22	7.27	6.88	6.16	6.27	5.74	6.86	.86	2.71
Bromomethane	7.50	7.93	7.04	7.27	7.33	7.75	7.71	7.51	.31	.98
Vinyl Chloride	8.60	8.82	7.99	7.86	7.21	7.01	6.76	7.75	.79	2.49
Chloroethane	4.93	4.81	3.97	4.61	4.75	4.06	5.95	4.73	.66	2.06
Trichlorofluorometh	9.98	10.36	9.88	9.63	8.89	10.33	10.81	9.99	.62	1.94
t-Butyl Alcohol	73.64	63.64	75.70	62.38	67.24	70.21	74.03	69.56	5.29	16.62
Methyl-t-butyl ethe	11.32	10.70	10.88	11.27	11.20	11.31	11.38	11.15	.26	.81
Methylene Chloride	11.30	11.76	11.94	12.58	11.31	11.60	11.42	11.70	.46	1.43
Acetone	10.25	13.83	14.34	16.42	10.25	14.85	14.83	13.54	2.38	7.48
Carbon Disulfide	9.68	9.50	9.80	9.75	9.42	9.35	9.31	9.54	.20	.63
Di-isopropyl-ether	9.47	8.78	9.06	9.09	8.70	8.58	8.46	8.88	.35	1.10
1,1-Dichloroethene	10.18	10.06	9.95	10.77	10.38	10.72	10.41	10.35	.32	1.00
1,1-Dichloroethane	10.24	9.84	9.97	10.40	10.01	10.05	10.03	10.08	.19	.58
Trans-1,2-Dichloroe	10.03	9.65	9.70	9.76	9.31	9.53	9.54	9.65	.22	.70
Chloroform	10.45	10.25	10.86	11.02	10.90	10.98	10.99	10.78	.30	.96
1,2-Dichloroethane	11.06	10.75	11.86	12.26	12.14	12.55	12.54	11.88	.71	2.24
2-Butanone	11.17	11.03	12.21	12.28	11.74	10.39	12.41	11.60	.76	2.40
1,1,1-Trichloroetha	10.68	10.48	11.09	11.44	11.19	11.37	11.48	11.10	.39	1.22
Carbon Tetrachlorid	10.39	10.26	10.67	11.08	10.84	11.03	11.04	10.76	.33	1.04
Vinyl Acetate	8.72	7.83	7.29	6.88	6.09	6.40	5.14	6.91	1.18	3.70
Bromodichloromethan	9.54	9.48	9.91	9.91	10.21	9.82	10.15	9.86	.28	.87
1,2-Dichloropropane	9.22	8.91	9.54	9.40	8.93	9.26	9.30	9.22	.23	.73
cis-1,3-Dichloropro	9.09	8.62	9.20	9.11	9.14	9.08	8.88	9.02	.20	.64
Trichloroethene	9.74	9.28	9.71	9.97	9.79	9.64	9.70	9.69	.21	.66
Dibromochloromethan	9.11	8.68	9.53	9.57	9.55	9.38	9.38	9.31	.32	1.00
1,1,2-Trichloroetha	9.81	9.54	9.49	9.75	9.73	9.61	9.46	9.51	.25	.78
Benzene	9.99	9.69	9.83	10.08	9.66	9.81	9.67	9.82	.16	.51
Trans-1,3-Dichlorop	8.60	7.83	8.56	8.60	8.97	8.50	8.56	8.52	.34	1.06
2-Chloroethylvinyle	5.63	6.05	6.71	7.08	6.48	6.62	6.39	6.42	.47	1.48
Bromoform	8.83	8.30	9.25	9.24	9.42	9.05	8.76	8.98	.38	1.19
2-Hexanone	6.24	4.40	7.81	5.13	7.54	7.24	5.38	6.25	1.32	4.16
4-Methyl-2-Pentanon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tetrachloroethene	9.81	9.68	9.55	9.87	10.00	9.68	10.04	9.81	.18	.56
1,1,2,2-Tetrachloro	9.86	9.65	9.81	9.77	10.54	10.26	9.30	9.89	.40	1.27
Toluene	10.16	9.49	9.37	9.12	9.75	9.56	9.76	9.60	.33	1.05
Chlorobenzene	9.94	9.33	9.56	9.84	9.97	9.61	9.77	9.72	.23	.73
Ethylbenzene	9.64	9.24	9.53	9.58	9.65	9.68	9.74	9.58	.16	.51
Styrene	8.83	8.70	8.93	8.79	8.71	8.78	8.66	8.77	.09	.29
m&p-Xylenes	19.66	19.40	19.28	19.28	19.74	19.36	19.75	19.50	.21	.67
o-Xylene	10.53	10.06	10.29	10.57	10.77	10.76	10.83	10.54	.28	.89
1,3-Dichlorobenzene	9.73	8.84	9.39	9.13	9.57	9.61	9.56	9.41	.32	.99
1,4-Dichlorobenzene	10.52	10.07	10.27	10.28	10.67	10.10	10.50	10.34	.23	.71
1,2-Dichlorobenzene	10.38	9.71	10.17	10.18	10.49	10.31	10.14	10.19	.24	.76

The following analyte was injected at 50 ppb.

FILE ==========>	^c9018	^c9019	^c9020	^c9021	^c9022	^c9023	^c9024	AVG	STDDEV	MDL
4-Methyl-2-Pentanon	61.85	64.11	61.15	59.98	60.27	61.37	65.21	61.99	1.96	6.15

"c" unit converted to "E" unit after data file >C4999

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Soil

Lab Code: 14622 **Units:** mg/kg

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	20	274s	ND

INORGANIC METHOD BLANK SUMMARY

Lab Name: Veritech **Blank Matrix:** Water

Lab Code: 14622 **Units:** mg/L

Analyte	Practical Quant Limit	Batch Number	Method Blank Result
TPH	1.0	053w	ND

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA25170 MS

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 85

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	757		23.5	U	779	94		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

AA25170 MSD

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 85

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	777		23.5	U	779	96		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

MBS

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	10.2		1.00	U	10.0	102		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC SPIKE SAMPLE RECOVERY

SAMPLE NO.

MBS DUP

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Added (SA)	%R	Q	M
TPHC	75-125	10.6		1.00	U	10.0	106		C
Total CN	75-125								
Phenols	75-125								
Reac CN	75-125								
Reac HS	75-125								
Hex Cr	75-125								

Comments:

FORM V (PART 1) - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

AA25170 DUP

Lab Name: Veritech **Sample Matrix:** Soil

Lab Code: 14622

% Solids for Sample: 85

Concentration Units (mg/L or mg/kg dry weight): mg/kg

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	23.5	U	23.5	U			C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

INORGANIC DUPLICATE SUMMARY

SAMPLE NO.

MBS

Lab Name: Veritech **Sample Matrix:** Water

Lab Code: 14622

% Solids for Sample:

Concentration Units (mg/L or mg/kg dry weight): mg/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
TPH	+/-20%	10.2		10.6		3.85		C
Total CN	+/-20%							
Phenols	+/-20%							
Reac CN	+/-20%							
Reac HS	+/-20%							
Hex Cr	+/-20%							

FORM VI - IN ILM02.0

SOLIDS_3 DATE: 01-Aug-94 ANALYST:NP

Batch 435

RPD 0.00%

SAMPLES	TARE WEIGHT	TARE + WET SAMP	TARE + DRY SAMP	WET WEIGHT	DRY WEIGHT	SOLIDS FACTOR
dup 25093	1.0	3.7	3.5	2.7	2.5	0.93
25093	1.0	4.0	3.8	3.0	2.8	0.93
25094	1.0	3.7	3.5	2.7	2.5	0.93
25095	1.0	4.0	3.5	3.0	2.5	0.83
25096	1.0	3.8	3.6	2.8	2.6	0.93
25181	1.0	3.5	3.3	2.5	2.3	0.92
25182	1.0	4.0	3.6	3.0	2.6	0.87
24977	1.0	3.8	3.7	2.8	2.7	0.96
25185	1.0	3.7	3.6	2.7	2.6	0.96
25186	1.0	3.6	3.4	2.6	2.4	0.92
25187	1.0	3.4	3.2	2.4	2.2	0.92
25188	1.0	3.3	3.1	2.3	2.1	0.91
25189	1.0	3.2	3.1	2.2	2.1	0.95
25190	1.0	3.6	3.4	2.6	2.4	0.92
25191	1.0	3.8	3.7	2.8	2.7	0.96
25192	1.0	3.2	3.1	2.2	2.1	0.95
25193	1.0	3.1	3.0	2.1	2.0	0.95
25194	1.0	3.4	3.3	2.4	2.3	0.96
25248	1.0	3.3	2.9	2.3	1.9	0.83
25249	1.0	4.0	3.5	3.0	2.5	0.83
25250	1.0	3.7	3.2	2.7	2.2	0.81

mc 8/1

√ data input

DB 8/1/94

TPH LINEAR REGRESSION
TPH_1S

DATE 7-June-94
ANALYST Dan B

STDS (MG)	ABS.
0	0.0000
2.5	0.0928
5	0.1933
10	0.3876
15	0.5814
20	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

Lot # W-94-TPH-1182

****

STDS (MG)	ABS.	PPM	DIFF
0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5	0.1933	5.0246	-0.0246
10	0.3876	10.0918	-0.0918
15	0.5814	15.1459	-0.1459
20	0.7618	19.8506	0.1494

****

BATCH 274

SAMPLE	ABS.	MG
10mg7-28	0.4181	10.8872
mbs	0.4364	11.3644
dup 25170	0.0083	0.2000
ms1 25170	0.3732	9.7162
ms2 25170	0.3805	9.9066
mb7-27	0.0089	0.2156
25170	0.0126	0.3121
25171	0.0179	0.4503
27172	0.0123	0.3043
25173	0.0146	0.3643
25174	0.0343	0.8780
25175	0.0139	0.3460
25180	0.0545	1.4048
25185	0.0179	0.4503
25186	0.0703	1.8169
25187	0.0722	1.8664
25188	0.2053	5.3375
25189	0.0194	0.4894
25190	0.0166	0.4164
25191	0.0207	0.5233
25192	0.4794	12.4858
25193	0.7085	18.4606
25194	0.2959	7.7003
10mg7-29	0.4178	10.8794
mb7-28	0.0113	0.2782
10mg8-1	0.3975	10.3500
mb8-1	0.0094	0.2286
25254	0.0216	0.5468

DB 8/8

√ data input
MC 8/1/94

25255	0.4762	12.4024
25256	0.0184	0.4634

DB 8/3

✓ data input
mc 8/1/84

analysis TPH SOILS
BATCH 274
DATE: 01-Aug-94
ANALYST: DB

Q.C. DATA

	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.89	109%
MBS	666.7	757.63	114%
MS #1	779.12	757.01	94%
MS #2	784.31	776.99	96%
SAMPLE		23.39	RPD
SAMPLE DUP		15.58	0.00%

SAMPLE #	SOLIDS FACTOR	SAMPLE WEIGHT	MG CALC. FROM CURVE	DILUT. FACTOR	TPH (PPM)	MDL DRY WT.
10mg7-28	1.00	1000	10.8872	1.0	10.89	
mbs	1.00	15.0	11.3644	1.0	757.63	20.00
dup 25170	0.85	15.1	0.2000	1.0	15.58	23.53
ms1 25170	0.85	15.1	9.7162	1.0	757.01	23.53
ms2 25170	0.85	15.0	9.9066	1.0	776.99	23.53
mb7-27	1.00	15.0	0.2156	1.0	14.37	20.00
25170	0.85	15.7	0.3121	1.0	23.39	23.53
25171	0.90	15.1	0.4503	1.0	33.14	22.22
27172	0.89	15.0	0.3043	1.0	22.79	22.47
25173	0.91	15.0	0.3643	1.0	26.69	21.98
25174	0.90	15.0	0.8780	1.0	65.04	22.22
25175	0.89	15.0	0.3460	1.0	25.92	22.47
25180	0.90	15.0	1.4048	1.0	104.06	22.22
25185	0.96	15.0	0.4503	1.0	31.27	20.83
25186	0.92	15.0	1.8169	1.0	131.66	21.74
25187	0.92	15.1	1.8664	1.0	134.35	21.74
25188	0.91	15.1	5.3375	1.0	388.44	21.98
25189	0.95	15.1	0.4894	1.0	34.12	21.05
25190	0.92	15.0	0.4164	1.0	30.18	21.74
25191	0.96	15.0	0.5233	1.0	36.34	20.83
25192	0.95	15.1	12.4858	1.0	870.40	21.05
25193	0.95	15.0	18.4606	1.0	1295.48	21.05
25194	0.96	15.0	7.7003	10.0	5347.44	208.33
10mg7-29	1.00	15.0	10.8794	1.0	725.29	20.00
mb7-28	1.00	15.0	0.2782	1.0	18.55	20.00
10mg8-1	1.00	1000.0	10.3500	1.0	10.350	20.00
mb8-1	1.00	15.0	0.2286	1.0	15.243	20.00
25254	0.78	15.0	0.5468	1.0	46.736	25.64
25255	0.76	15.0	12.4024	1.0	1087.928	26.32
25256	0.74	15.1	0.4634	1.0	41.467	27.03

DB 8/2

✓ data input
mc 8/1/94

TPH LINEAR REGRESSION

DATE 08-june-94
ANALYST Dan B

STDS (MG)	ABS.
0.0	0.0000
2.5	0.0928
5.0	0.1933
10.0	0.3876
15.0	0.5814
20.0	0.7618

Regression Output:

Constant	0.000632
Std Err of Y Est	0.004781
R Squared	0.999790
No. of Observations	6
Degrees of Freedom	4
X Coefficient(s)	0.038344
Std Err of Coef.	0.000277

lot # W-94 tph-1182

##

STDS (MG)	ABS.	PPM	DIFF
0.0	0.0000	-0.0165	0.0165
2.5	0.0928	2.4036	0.0964
5.0	0.1933	5.0246	-0.0246
10.0	0.3876	10.0918	-0.0918
15.0	0.5814	15.1459	-0.1459
20.0	0.7618	19.8506	0.1494

##

BATCH 053w

SAMPLE	ABS.	MG
10mg7-15	0.4092	10.6551
MBS	0.3904	10.1648
MBSD	0.4074	10.6081
mb7-14	0.0078	0.1869
24776	0.0513	1.3214
24778	0.7320	19.0734
24781	0.5158	13.4351
24783	0.1675	4.3518
24786	0.0793	2.0516
24788	0.0367	0.9406
24846	0.0046	0.1035
24838	0.0055	0.1269
24836	0.0049	0.1113
24837	0.0049	0.1113
24929	0.0049	0.1113
mb7-18	0.0042	0.0930
mb7-19	0.0028	0.0565
10mg7-20	0.4028	10.4882
20mg7-15	0.7998	20.8416
25084	0.3066 ✓	7.9794
25161	0.1106 ✓	2.8679
25195	0.0041 ✓	0.0904
10mg7-28	0.4181 ✓	10.8872
mb7-28	0.0045	0.1009

DB 7/29

✓ Data Input mc 7/28/94

ANALYSIS: TPH WATERS
batch 053w
DATE: 29-Jul-94
ANALYST: MC

Q.C. DATA

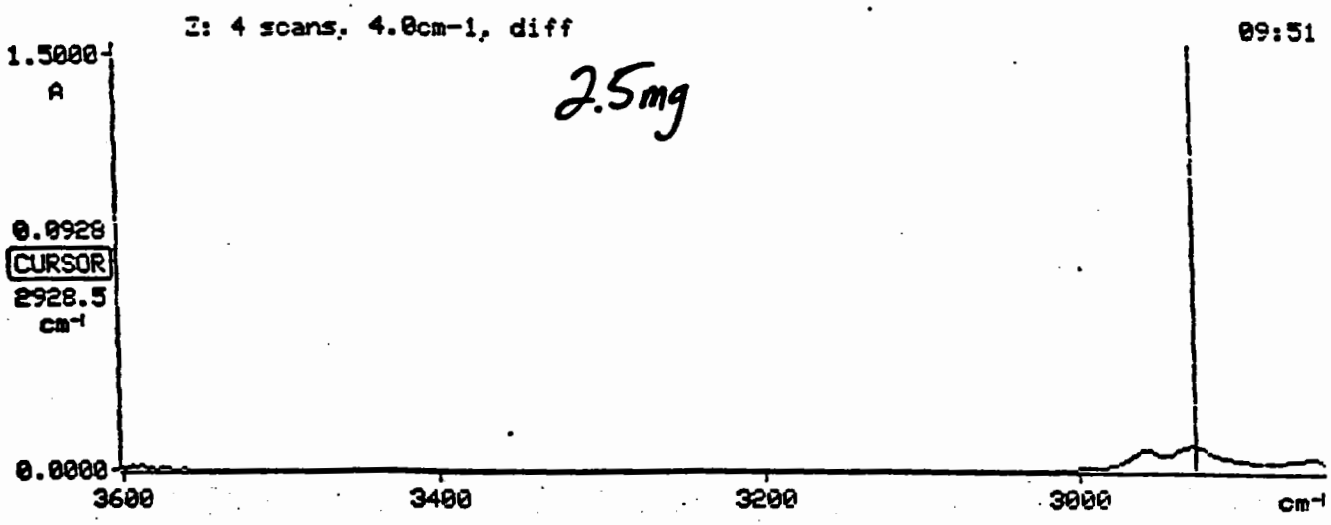
	THEORETICAL VALUE PPM	RESULT PPM	% REC.
CK STD	10	10.655	107%
MBS	10	10.165	102%
MBS DUP	10	10.608	106%
		RPD =	0.00%

SAMPLE NO.	SAMPLE VOLUME	MG CALC. FROM CURV	DILUT. FACTOR	TPH (PPM)	MDL (PPM)
10mg7-15	1000	10.6551	1.0	10.655	
MBS	1000	10.1648	1.0	10.165	
MBSD	1000	10.6081	1.0	10.608	
mb7-14	1000	0.1869	1.0	0.187	1.0
24776	940	1.3214	1.0	1.406	1.1
24778	975	19.0734	2.0	39.125	2.1
24781	925	13.4351	1.0	14.524	1.1
24783	980	4.3518	1.0	4.441	1.0
24786	985	2.0516	1.0	2.083	1.0
24788	980	0.9406	1.0	0.960	1.0
24846	970	0.1035	1.0	0.107	1.0
24838	955	0.1269	1.0	0.133	1.0
24836	1000	0.1113	1.0	0.111	1.0
24837	975	0.1113	1.0	0.114	1.0
24929	500	0.1113	1.0	0.223	2.0
mb7-18	1000	0.0930	1.0	0.093	1.0
mb7-19	1000	0.0565	1.0	0.057	1.0
10mg7-20	1000	10.4882	1.0	10.488	1.0
20mg7-15	1000	20.8416	1.0	20.842	1.0
25084	710	7.9794	10.0	112.385	14.1
25161	900	2.8679	1.0	3.187	1.1
25195	270	0.0904	1.0	0.335	3.7
10mg7-28	1000	10.8872	1.0	10.887	1.0
mb7-28	1000	0.1009	1.0	0.101	1.0

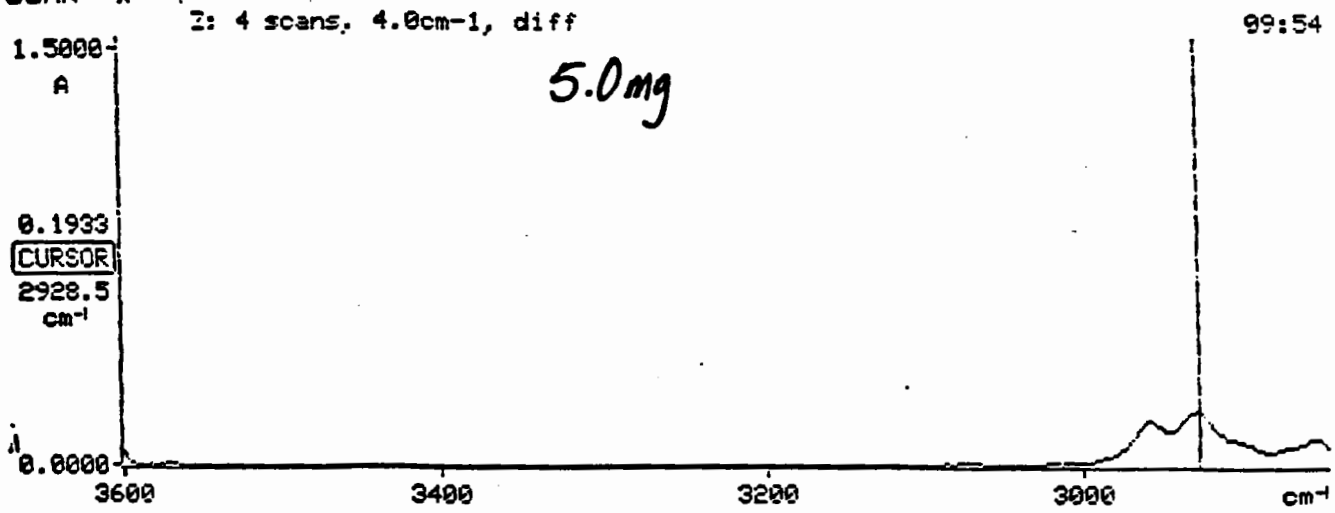
DB 7/29

J Data Imp
MC 7/29/94

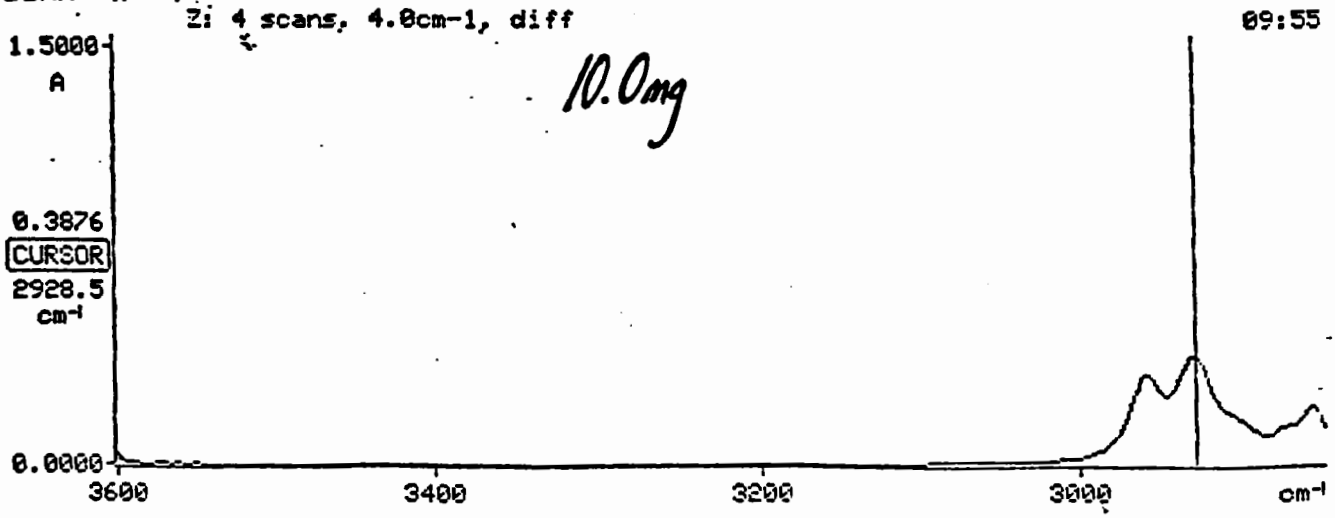
TPH curve
DB 6/7/94



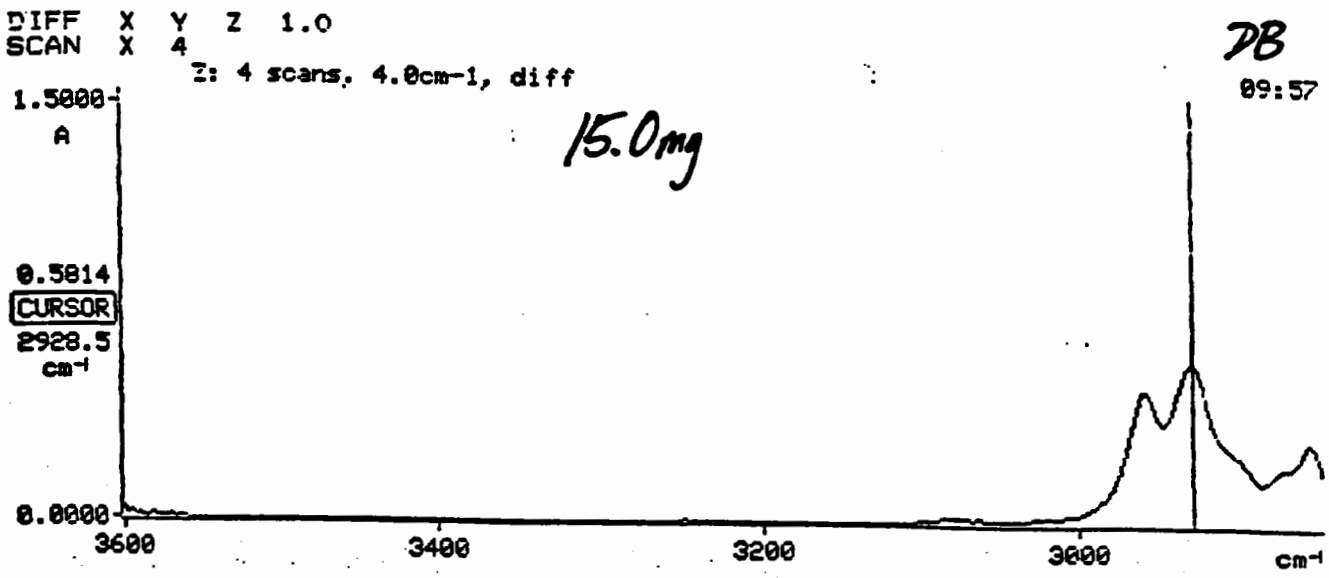
DIFF X Y Z 1.0
SCAN X 4

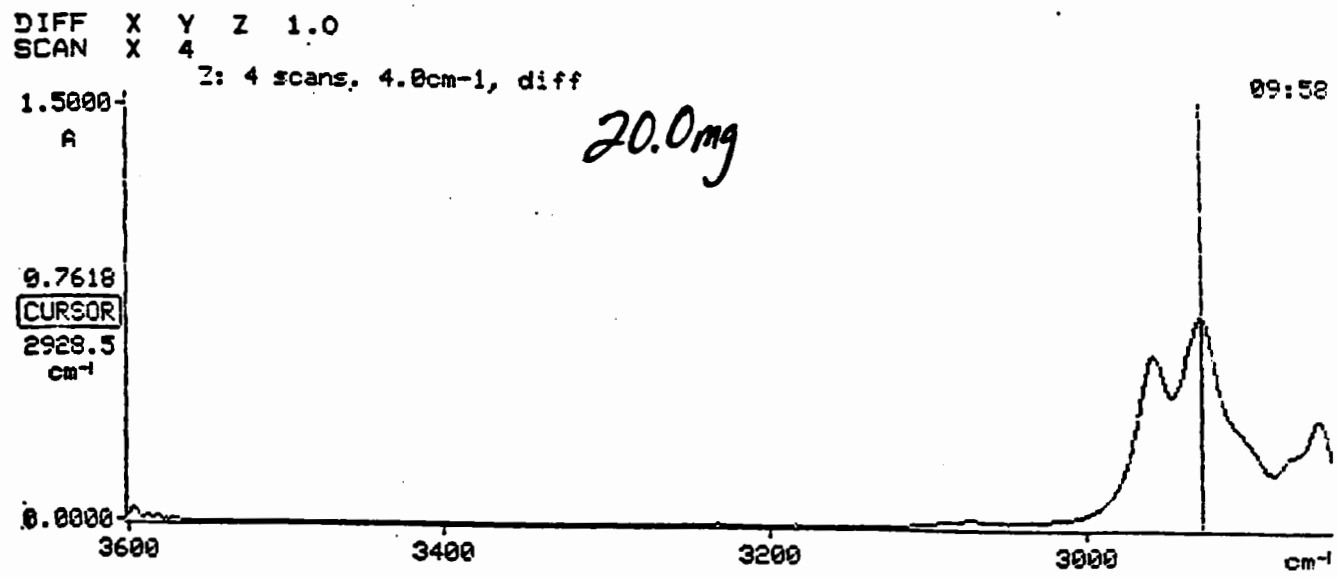


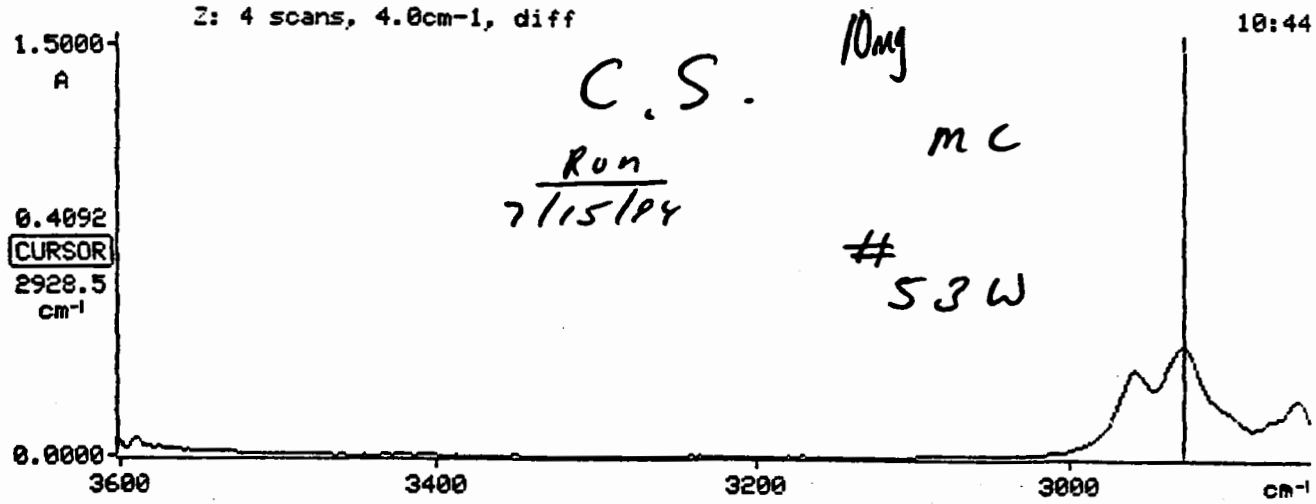
DIFF X Y Z 1.0
SCAN X 4

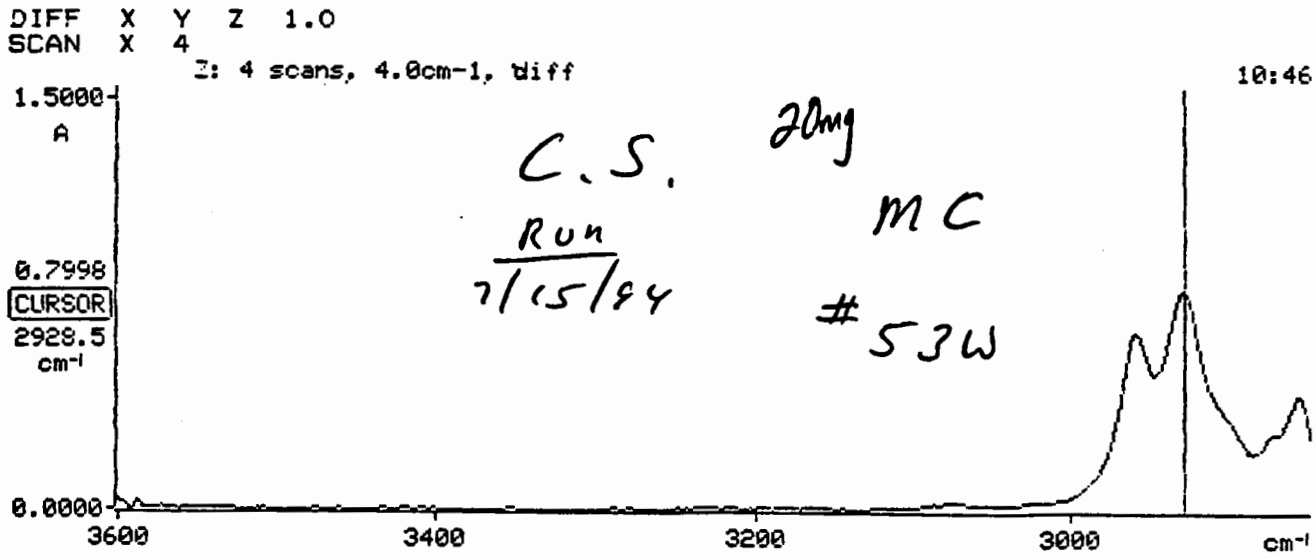


TPH curve
DB 6/7/94






Z: 4 scans, 4.0cm-1, diff
10:44
1.5000
A
0.4092
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
C.S.
10mg
MC
Run
7/15/84
#53W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SCAN X 4
Z: 4 scans, 4.0cm-1, diff
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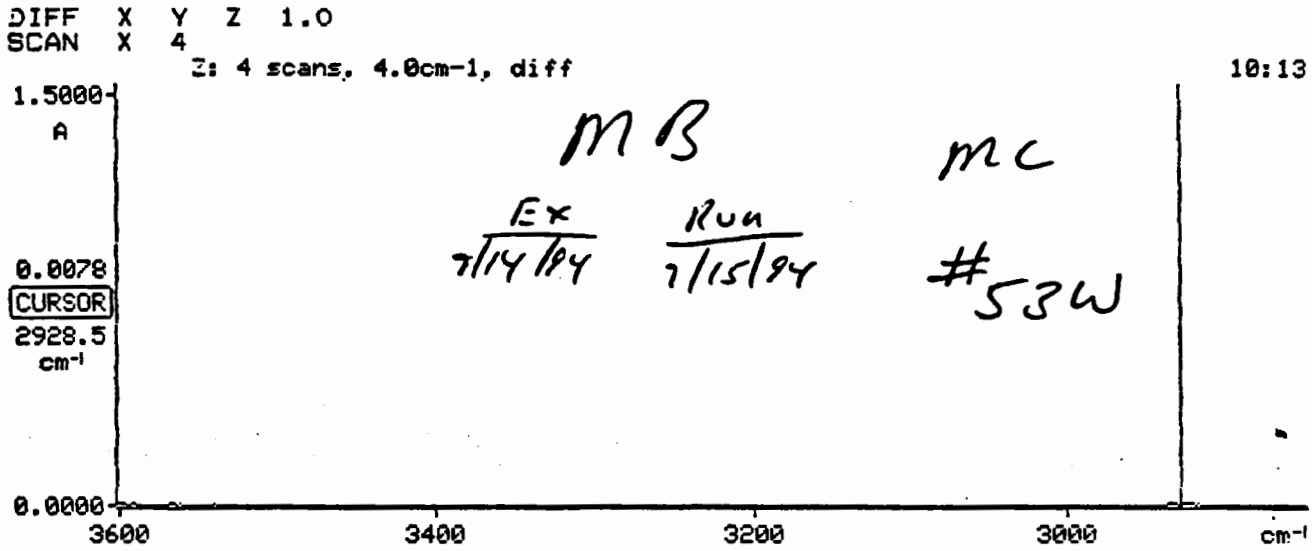
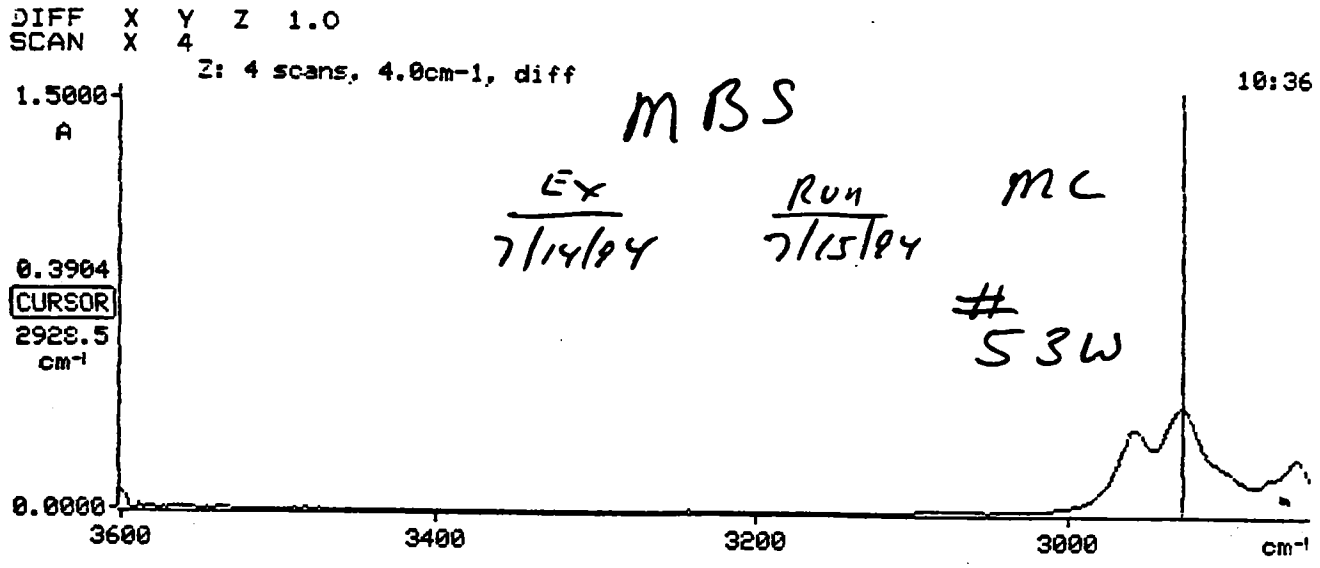
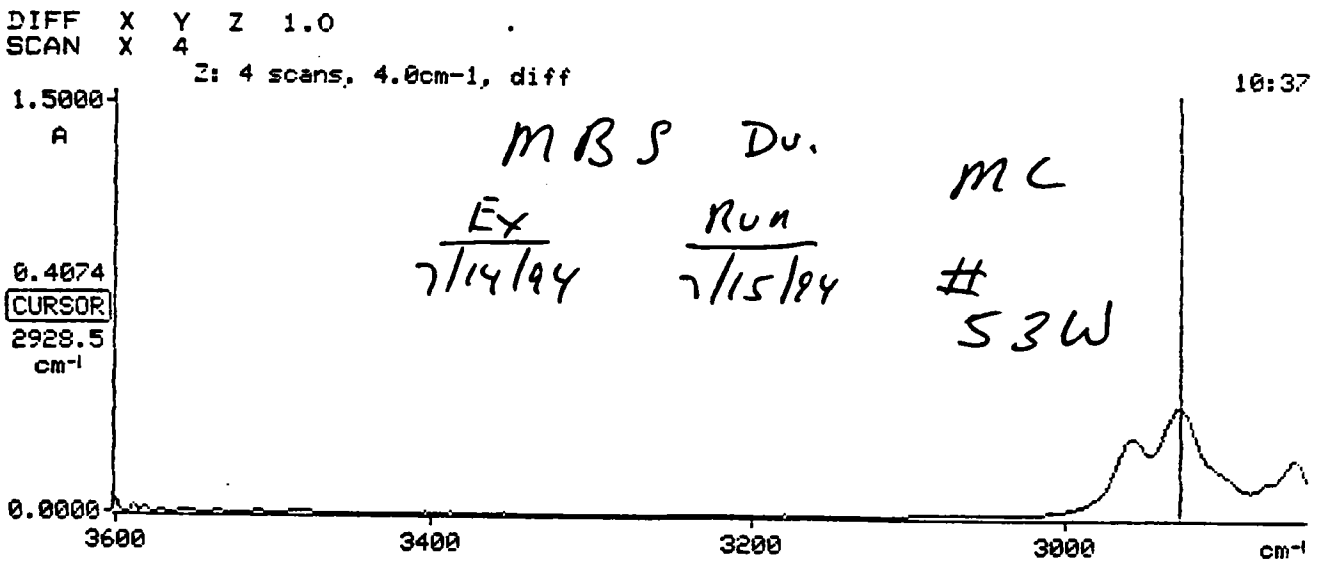
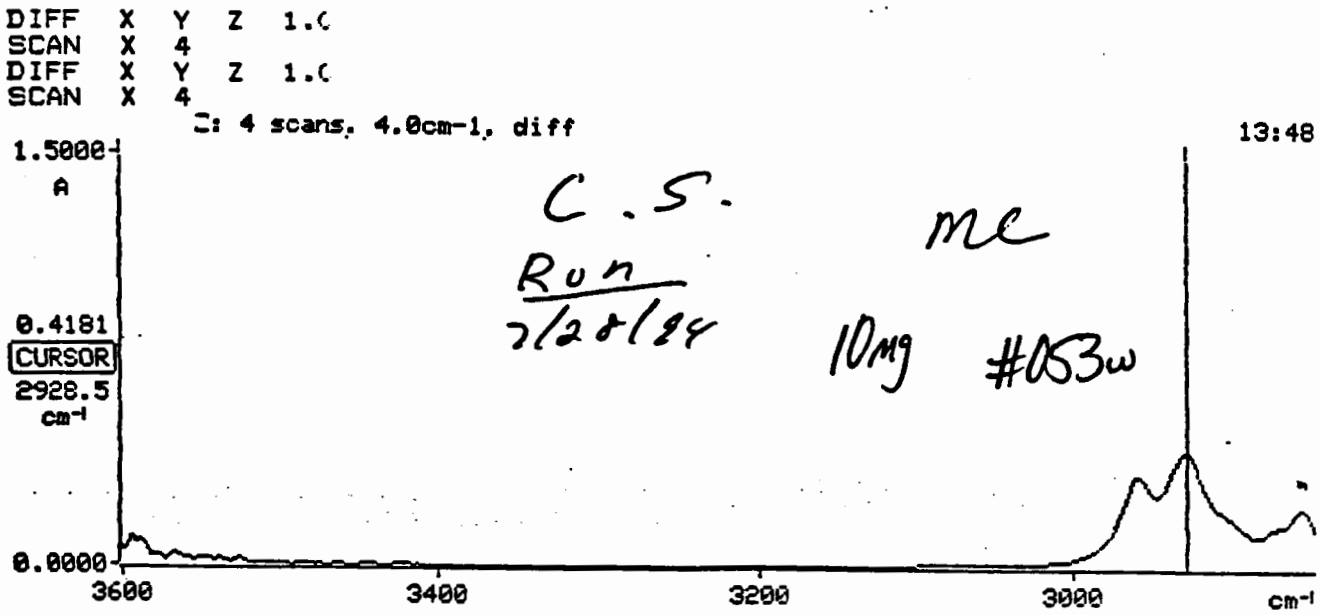
1.5000
A
0.7998
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
C.S.
20mg
MC
Run
7/15/84
#53W


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
10:13
1.5000
A
0.0078
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex
7/14/94
Run
7/15/94
MC
#53W


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
10:36
1.5000
A
0.3904
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS
Ex
7/14/84
Run
7/15/84
MC
#
53W


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
10:37
1.5000
A
0.4074
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS Du.
Ex
7/14/84
Run
7/15/84
MC
#
53W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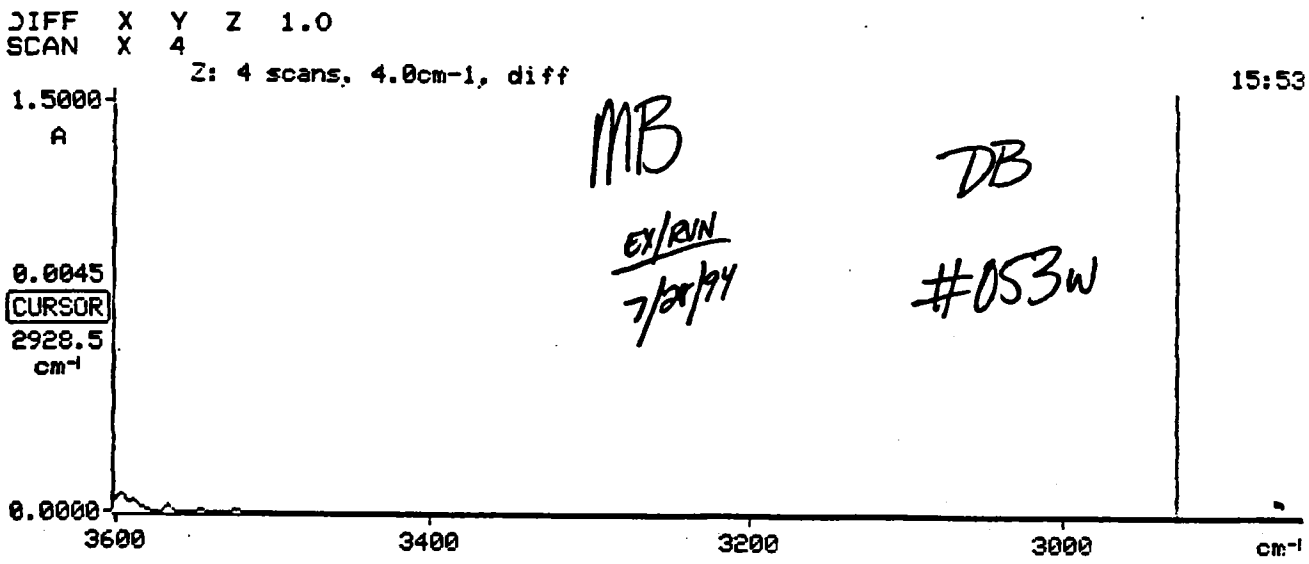
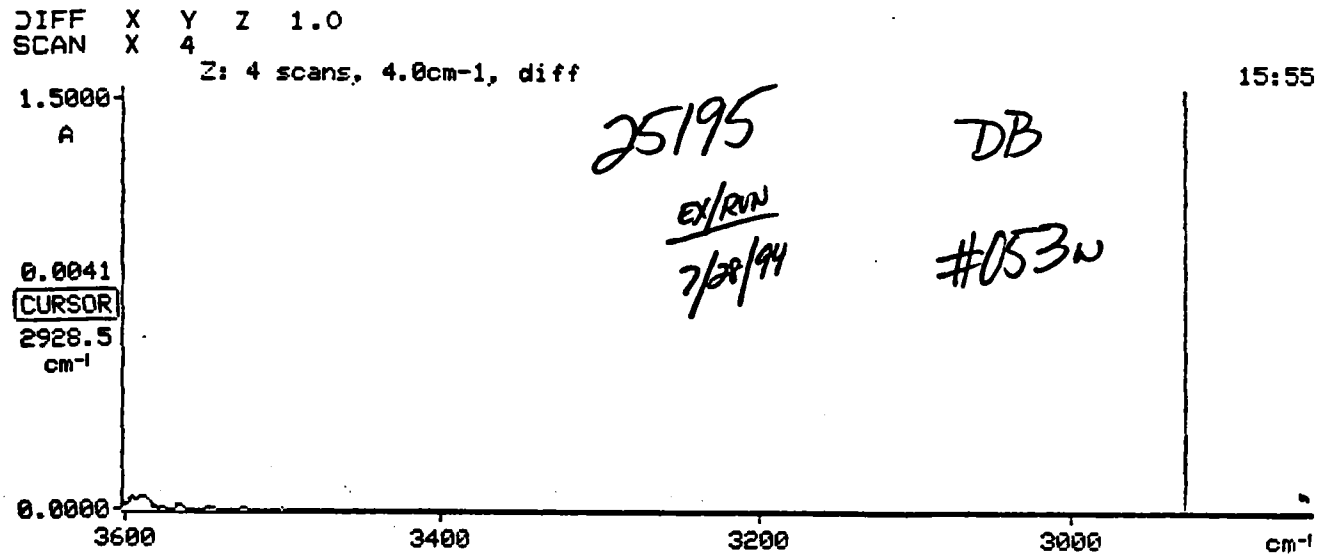
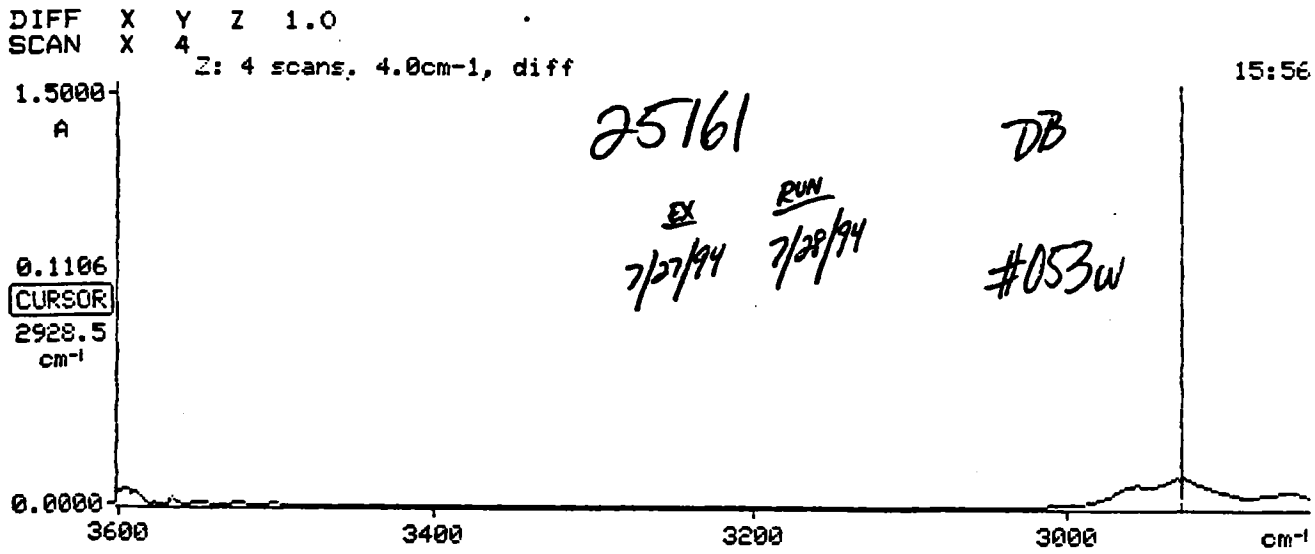
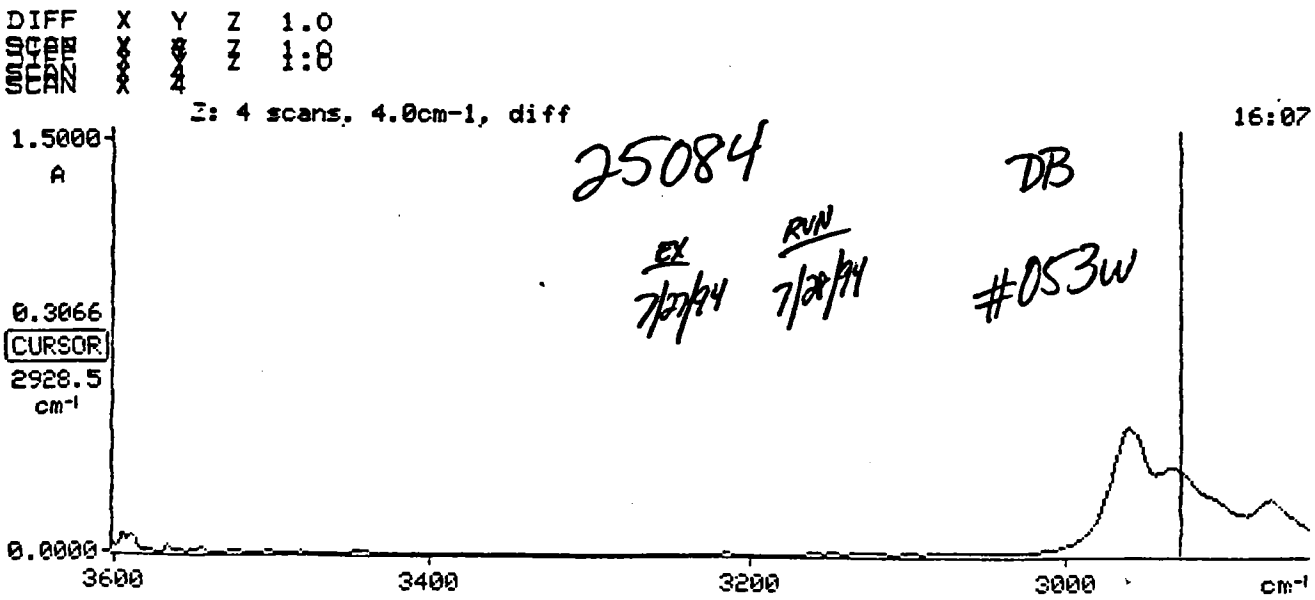
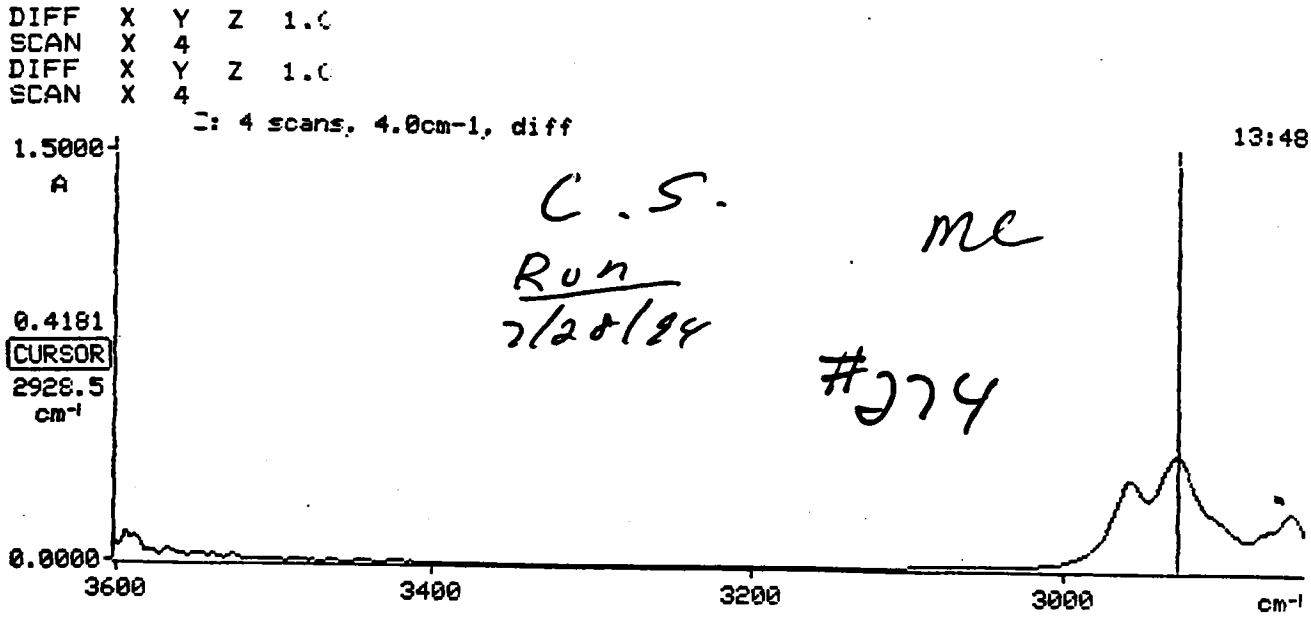
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4
: 4 scans, 4.0cm-1, diff
13:48
1.5000
A
0.4181
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
C.S.
Run
7/28/84
mc
10mg
#053w

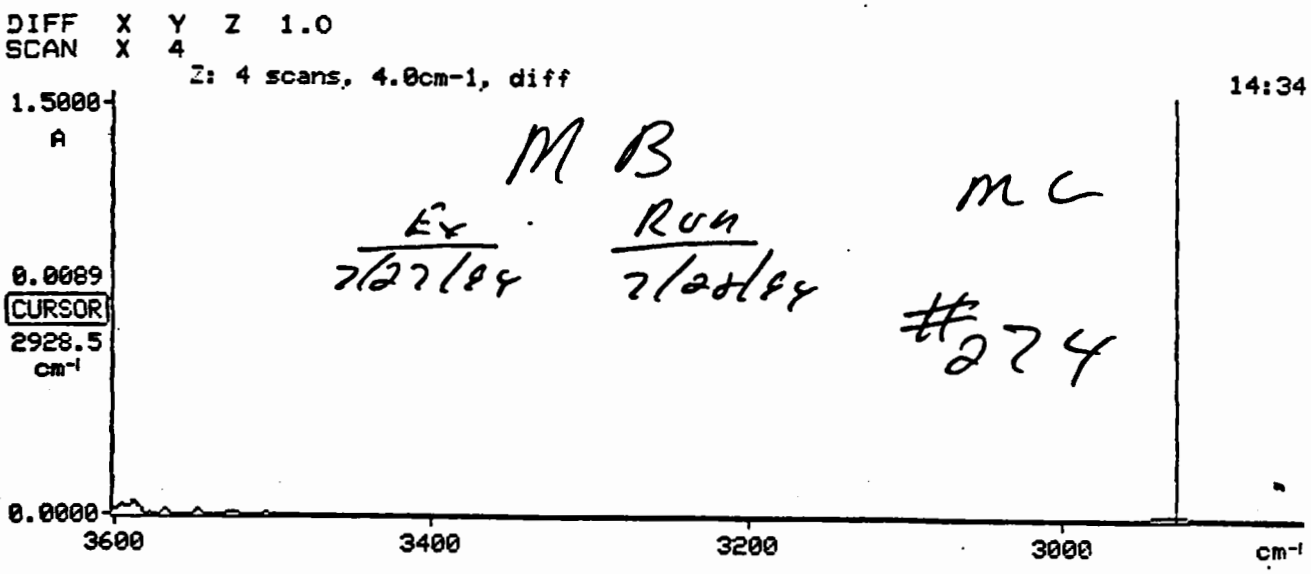

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
15:53
1.5000
A
0.0045
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
EX/RUN
7/28/94
DB
#053W

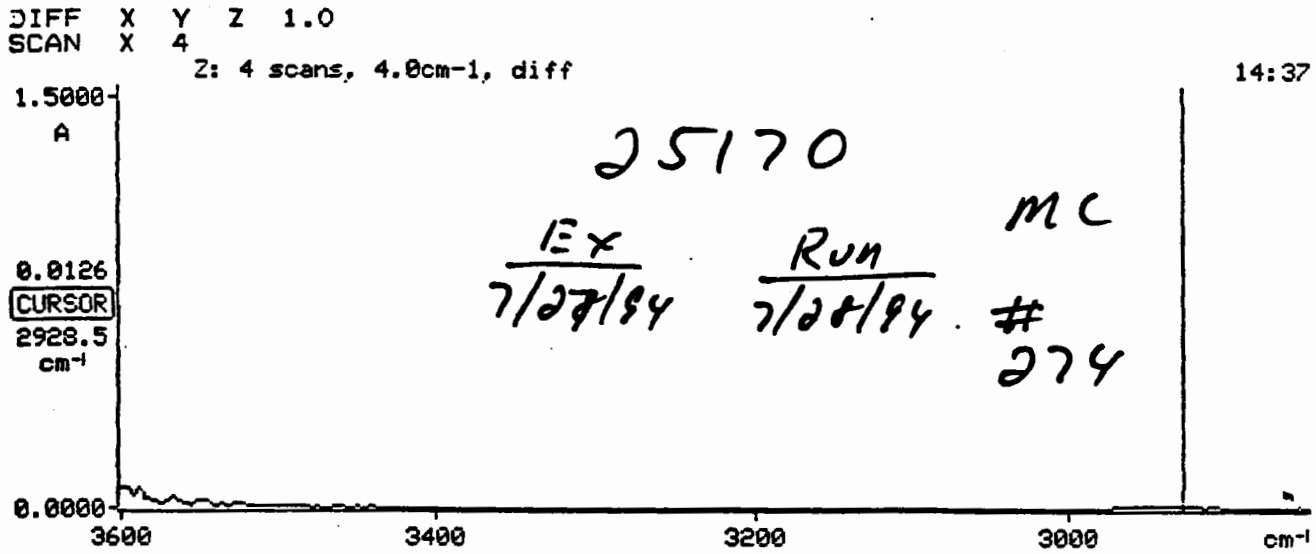

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
15:55
1.5000
A
25195
DB
EX/RUN
7/28/94
#053w
0.0041
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

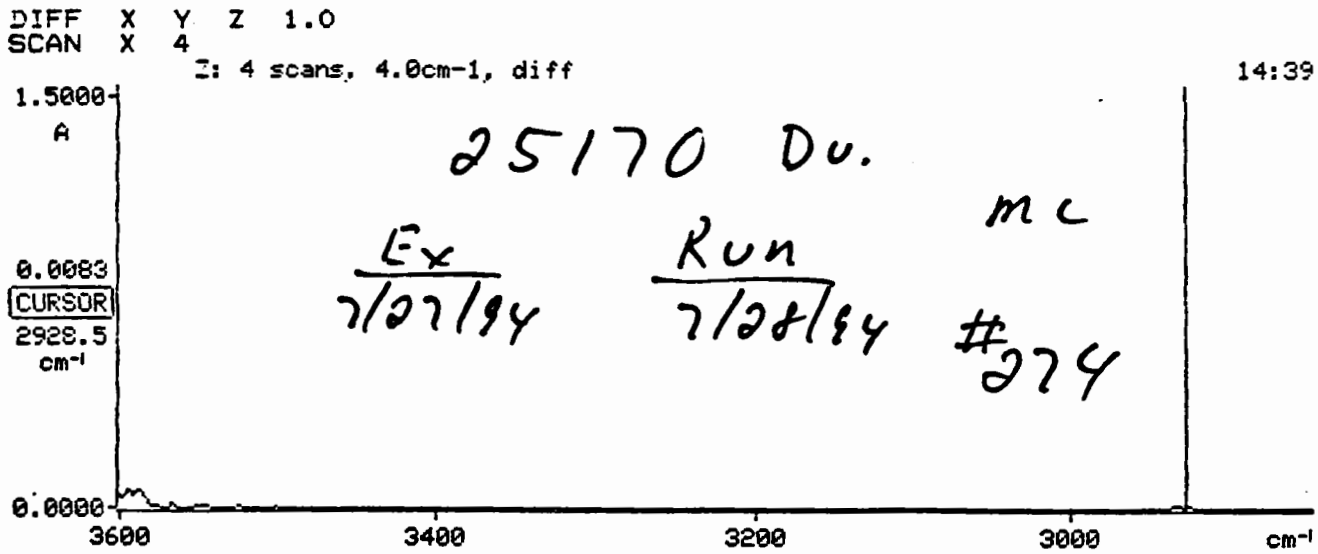

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
15:56
1.5000
A
25161
DB
EX
RUN
7/27/94
7/28/94
#053w
0.1106
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
16:07
1.5000
A
25084
DB
EX
RUN
7/27/94
7/28/94
#053w
0.3066
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1

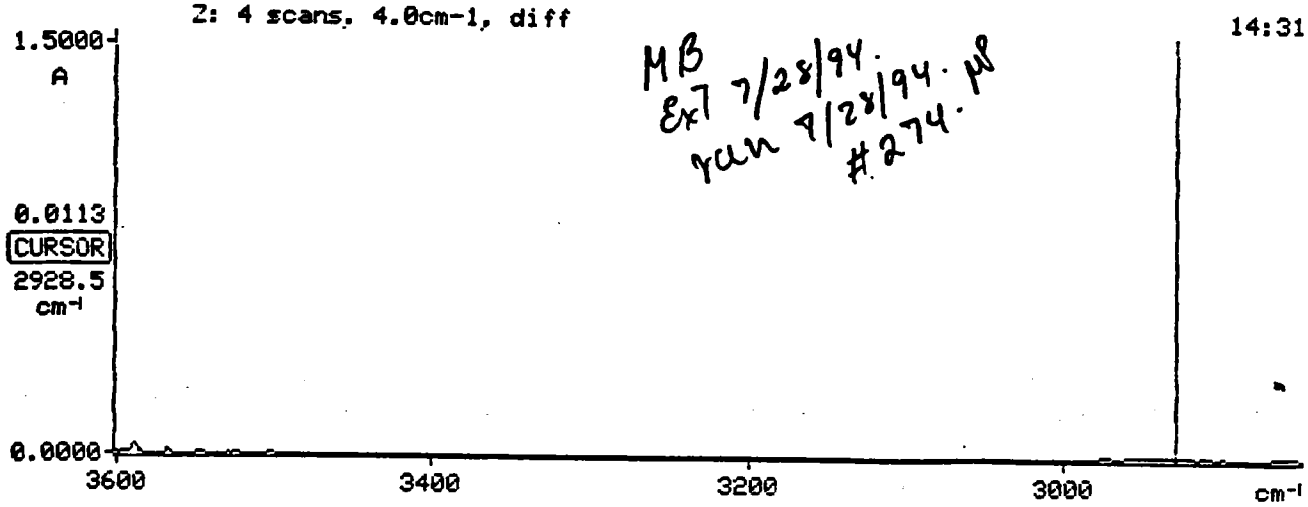

DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4
: 4 scans, 4.0cm-1, diff
13:48
1.5000
A
0.4181
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
C.S.
Run
2/28/94
me
#274

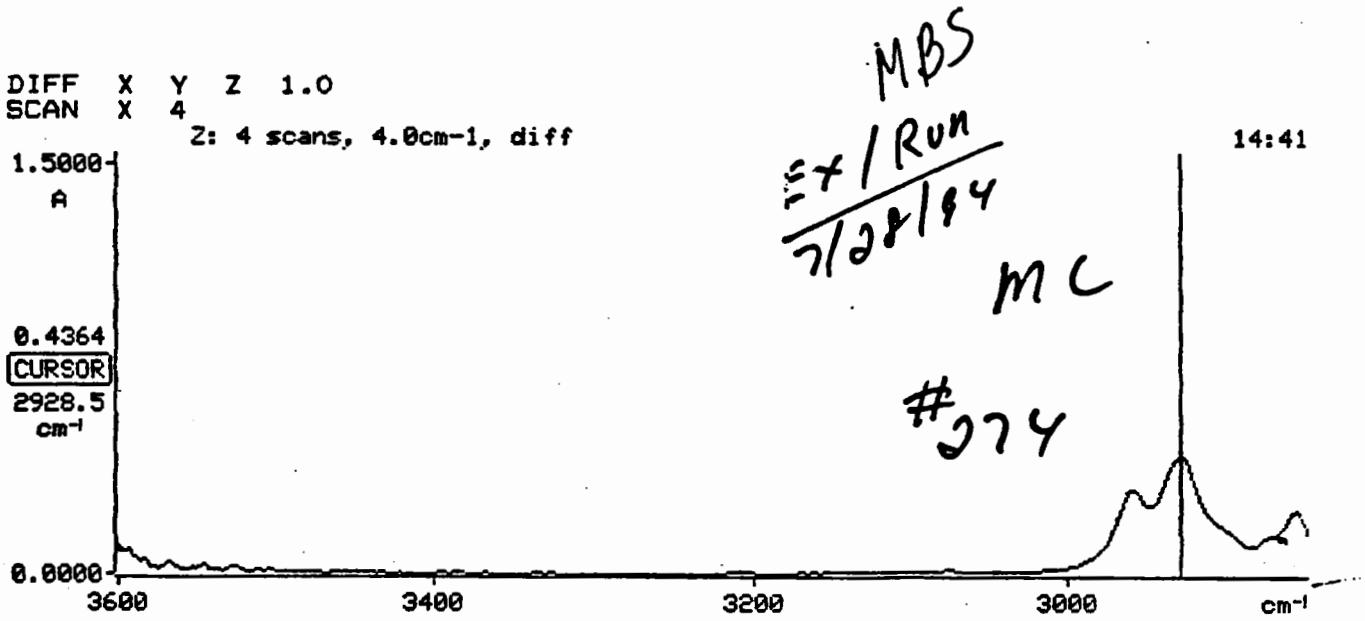

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:34
1.5000
A
0.0089
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MB
Ex
7/27/84
Run
7/28/84
MC
#274

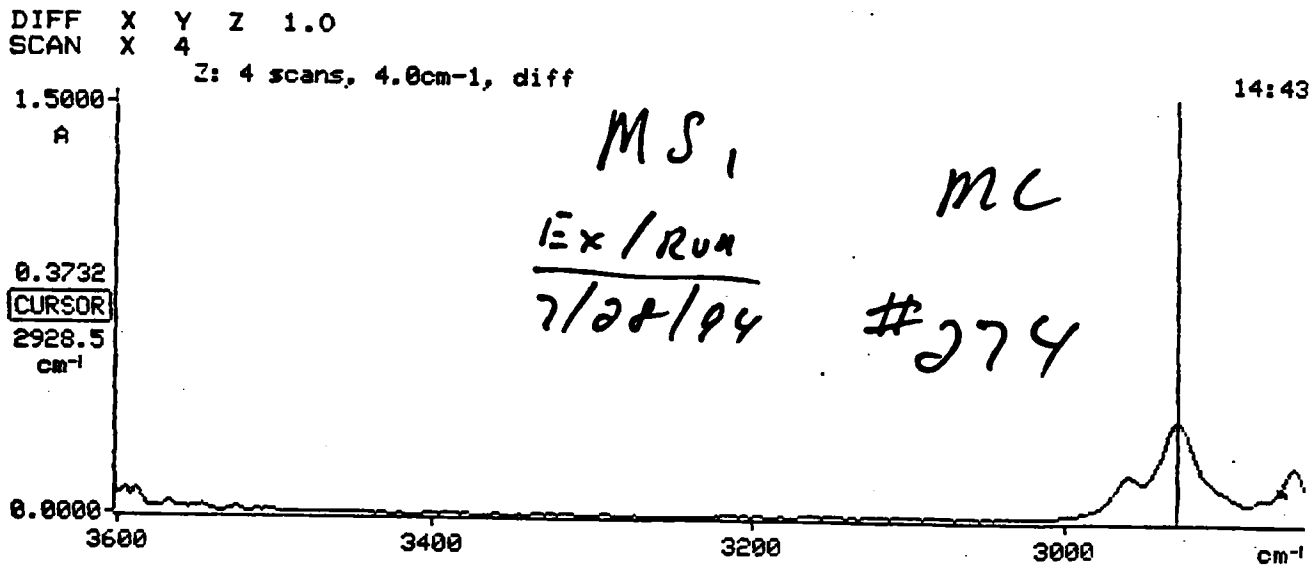

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:37
1.5000
A
0.0126
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25170
Ex
7/27/94
Run
7/28/94
MC
#
274

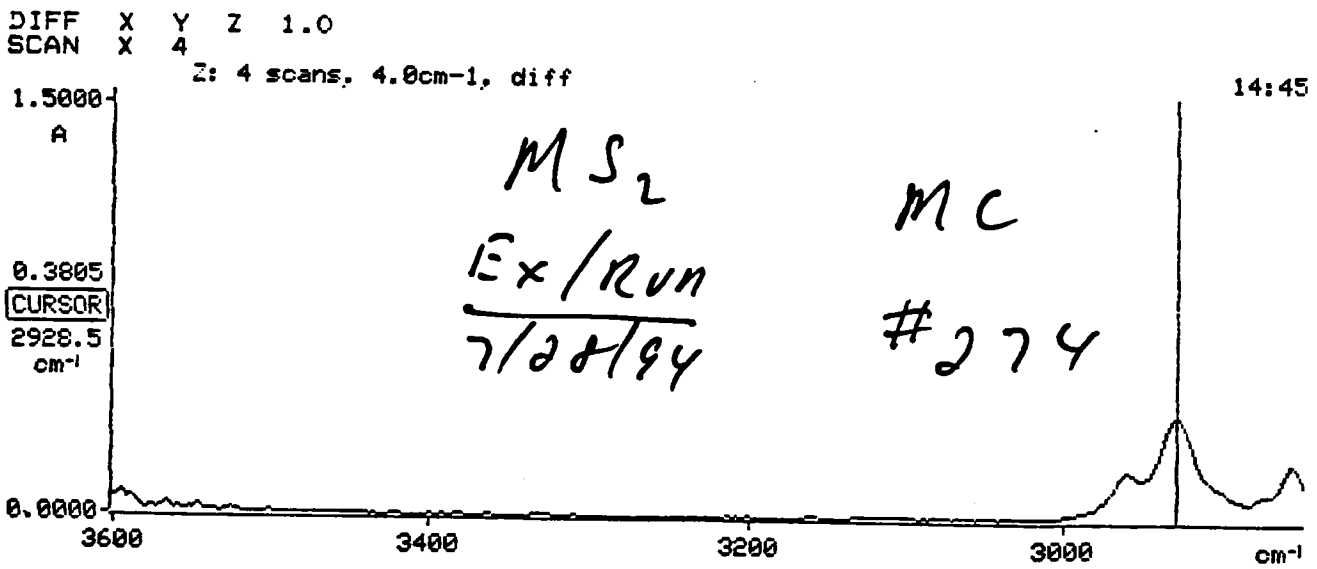

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:39
1.5000
A
0.0083
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25170 Du.
Ex
7/27/94
Run
7/28/94
MC
#274

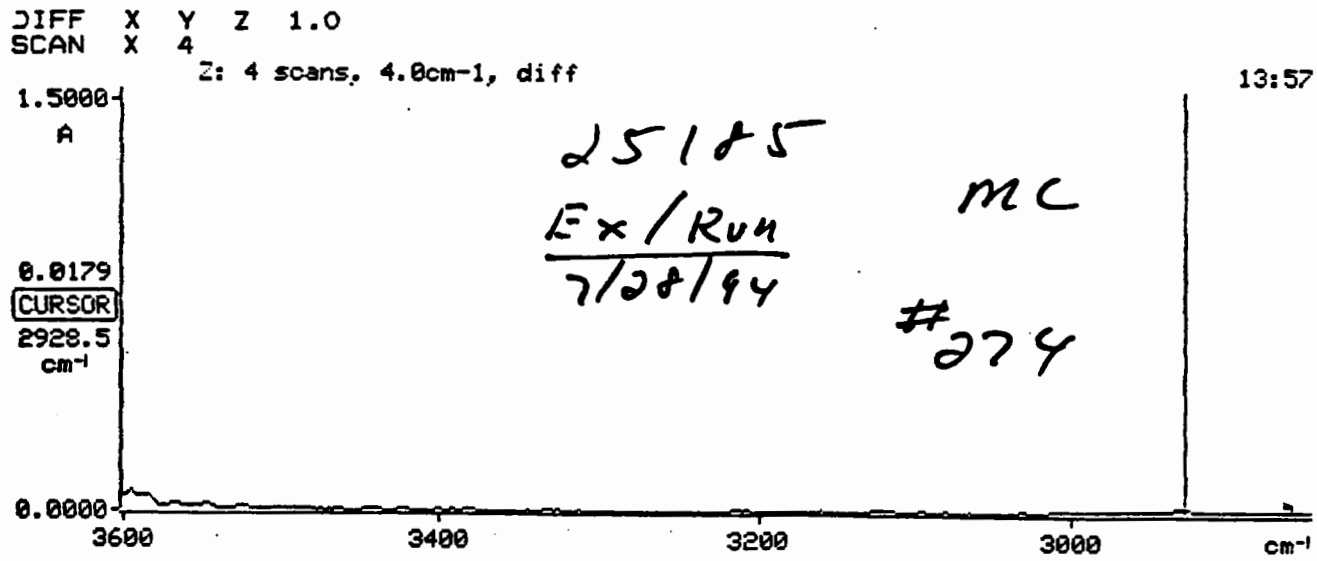
DIFF X Y Z 1.0
SCAN X 4
DIFF X Y Z 1.0
SCAN X 4

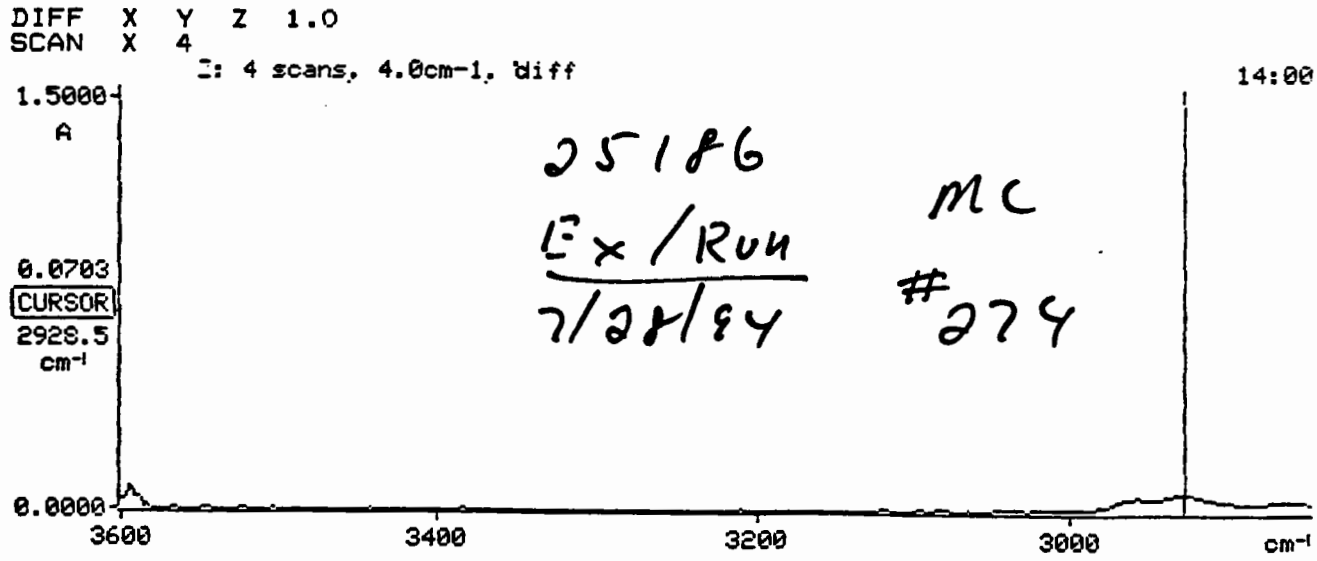


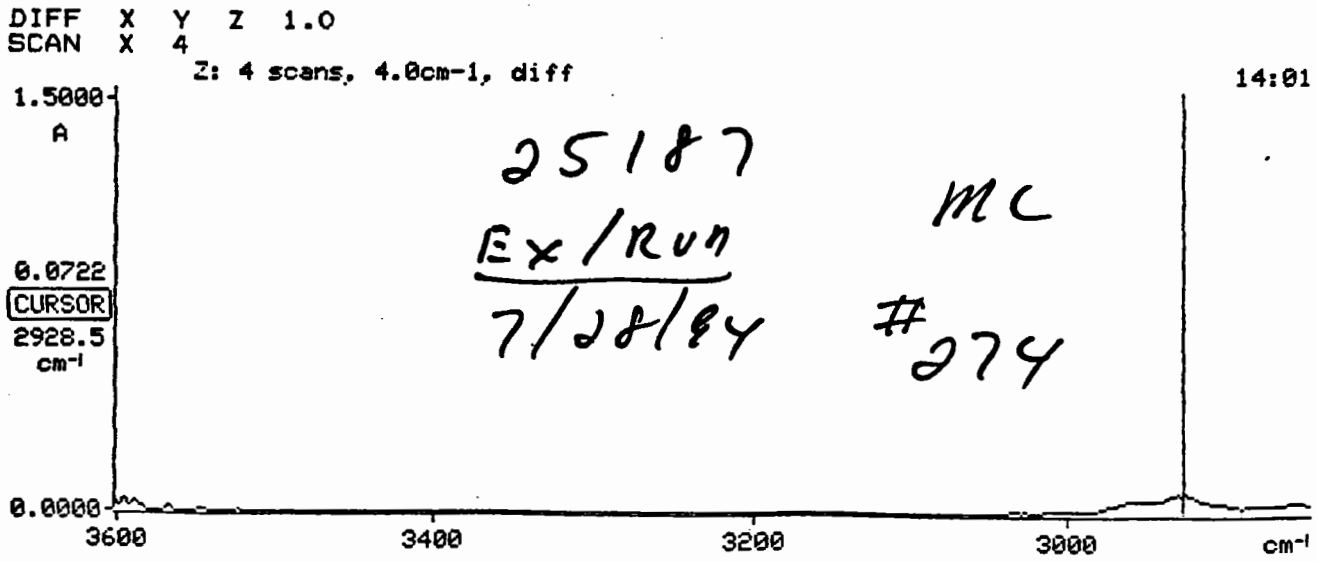

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:41
1.5000
A
0.4364
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MBS
Ex / Run
7/28/84
MC
#274

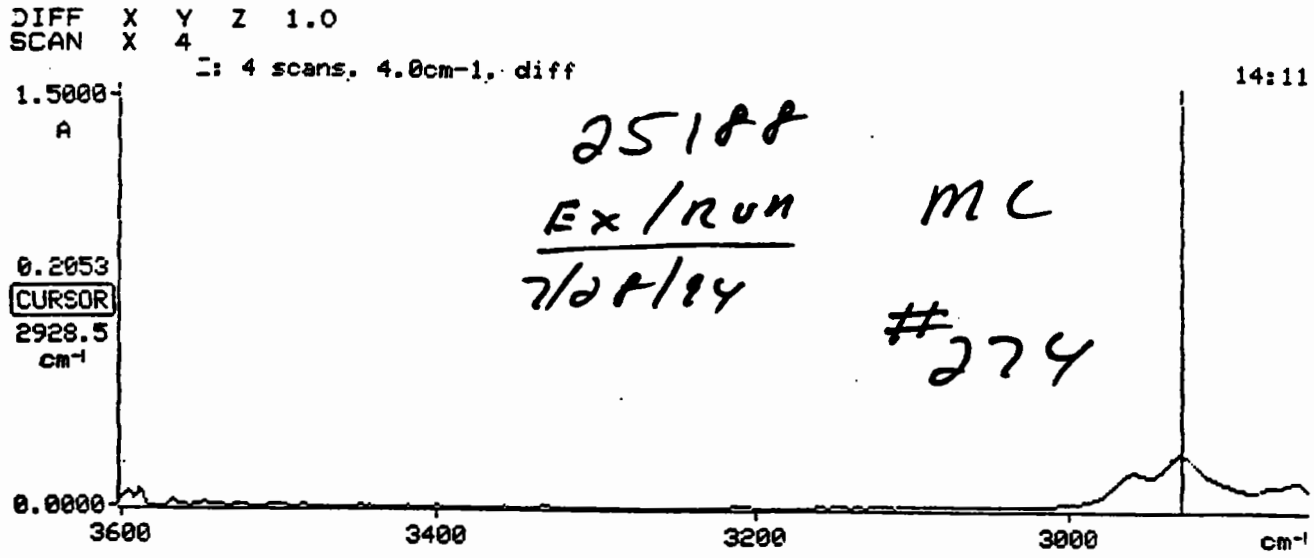

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:43
1.5000
A
0.3732
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MS1
Ex/Run
7/28/94
MC
#274

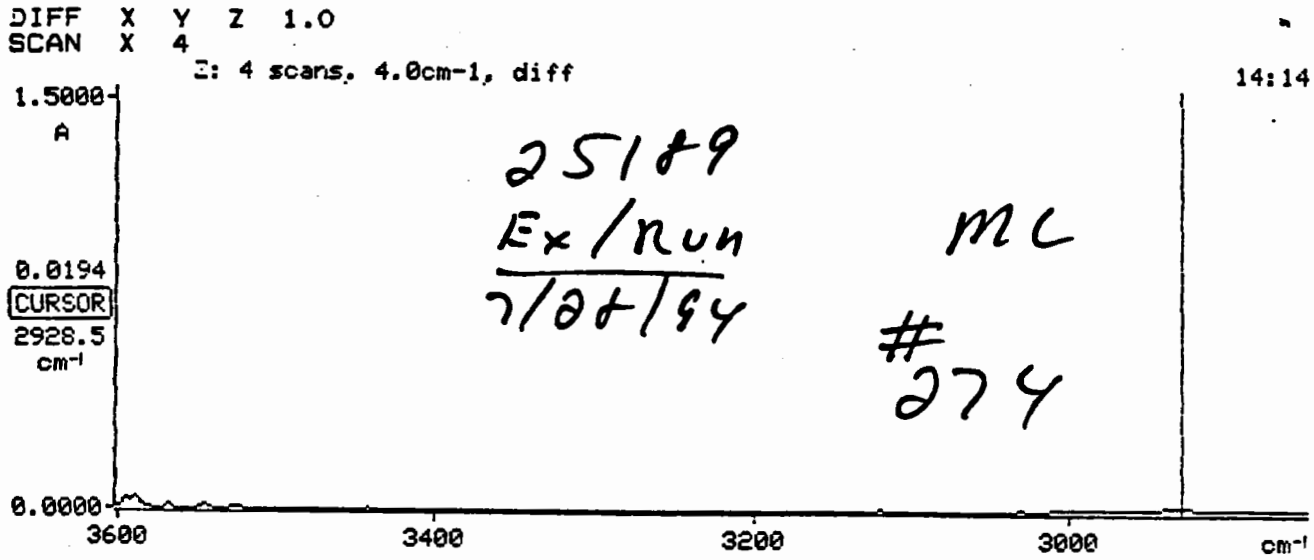

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:45
1.5000
A
0.3805
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
MS2
Ex/Run
7/28/94
MC
#274

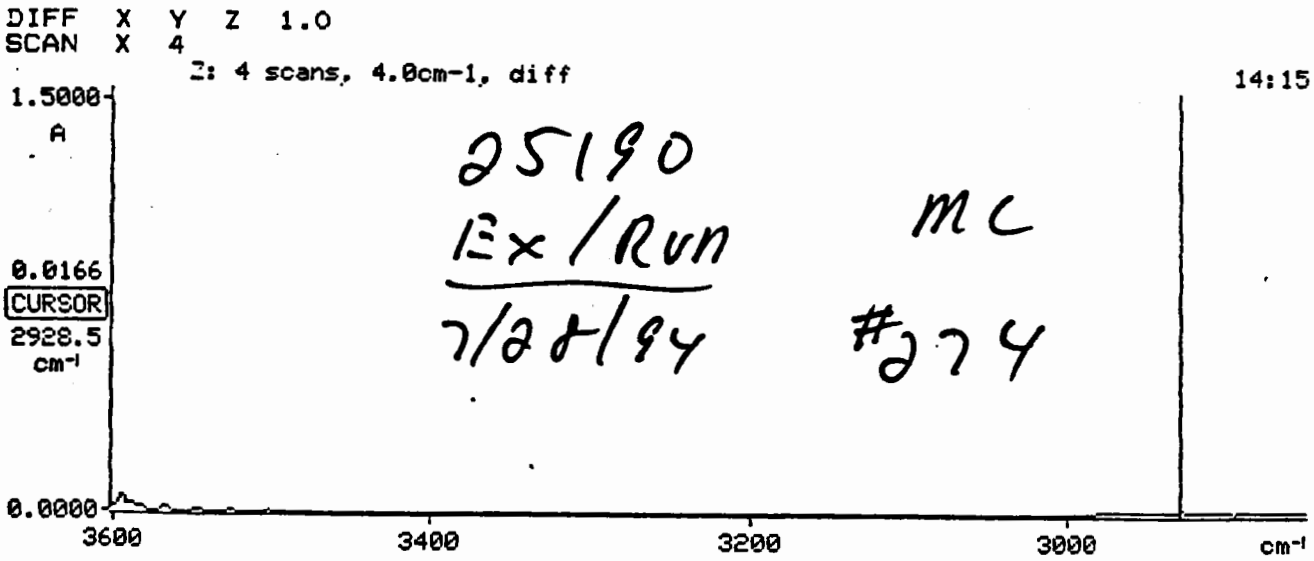

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
13:57
1.5000
A
0.0179
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25185
Ex/Run
7/28/94
MC
#274

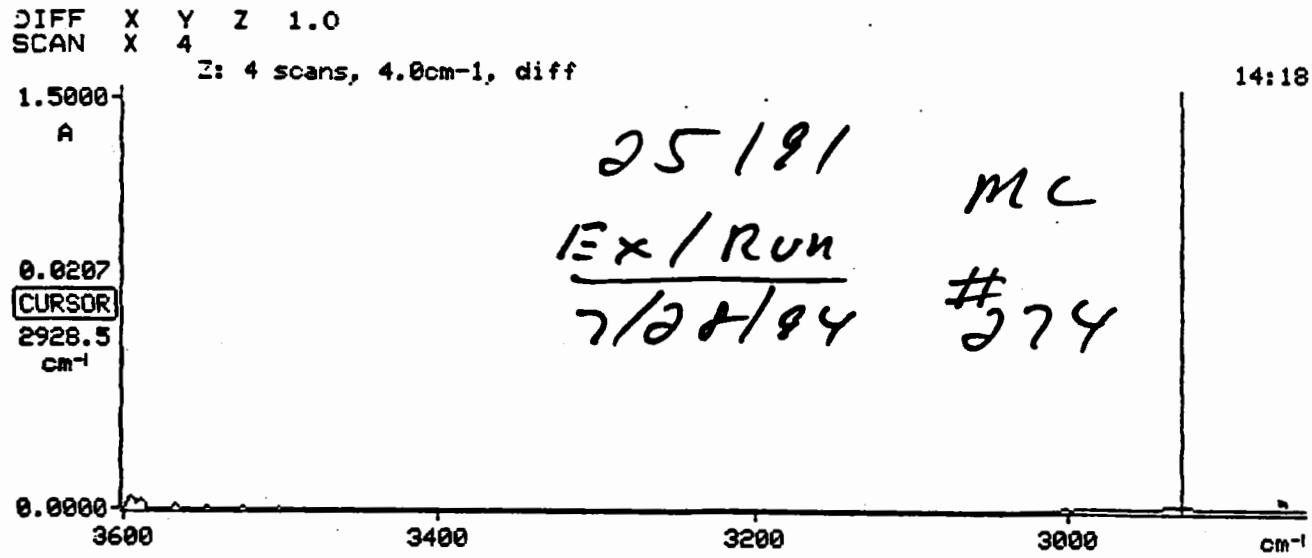

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:00
1.5000
A
0.0703
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25186
Ex/Run
7/28/94
MC
#274

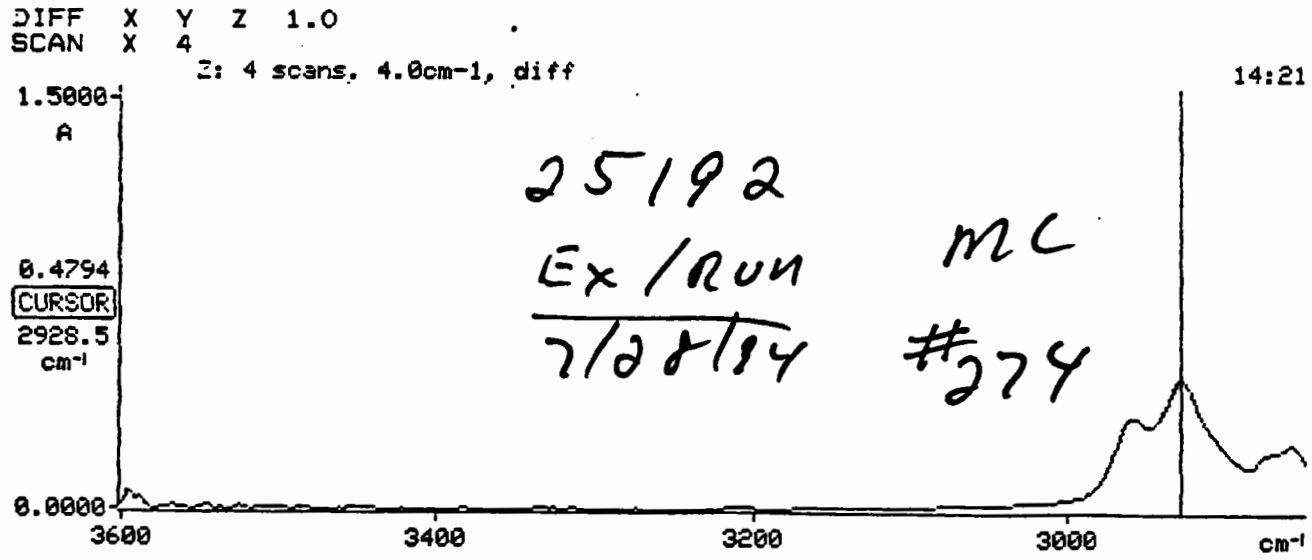

DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:01
1.5000
A
0.0722
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25187
Ex/Run
7/28/94
MC
#274

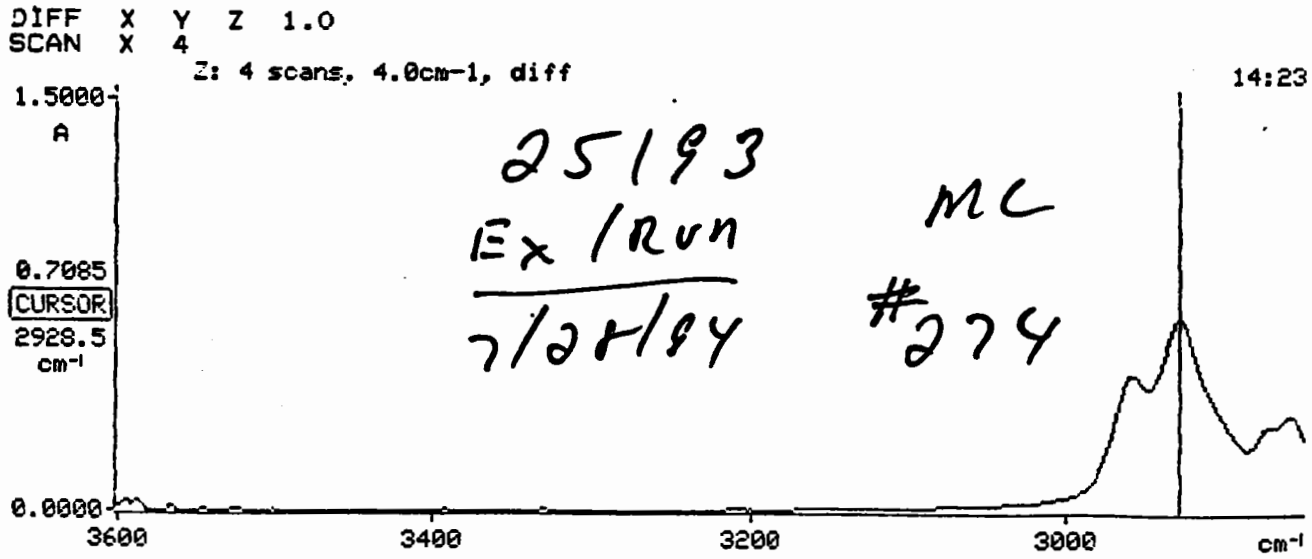

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
14:11
1.5000
A
0.2053
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25188
Ex/Run
7/28/94
MC
#274

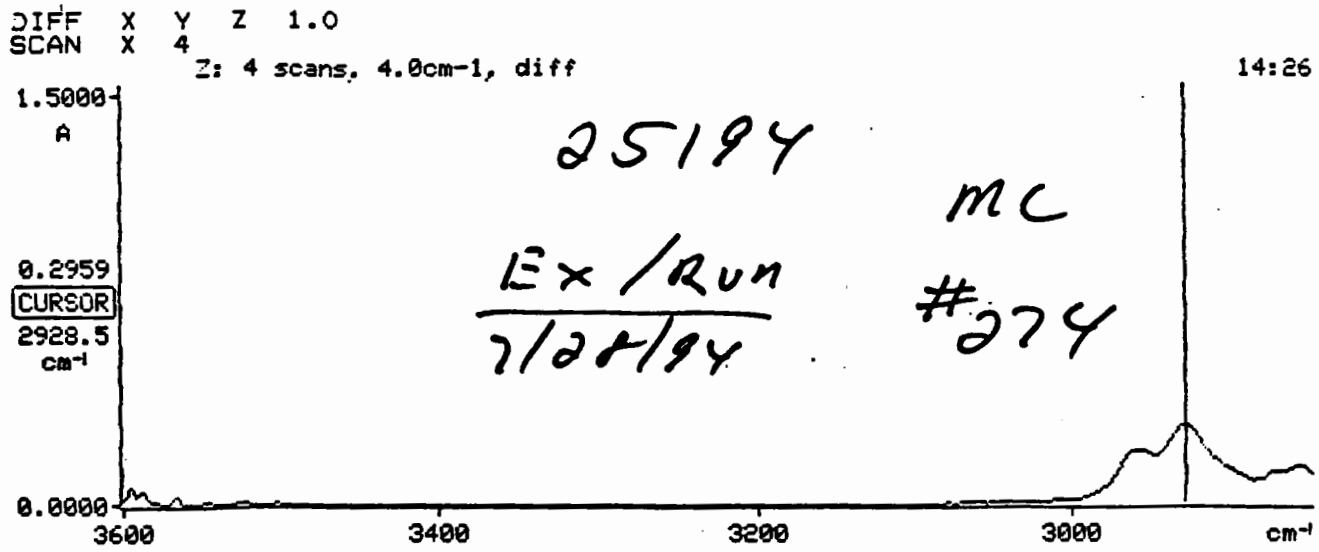

DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
14:14
1.5000
A
0.0194
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25189
Ex/Run
7/28/94
MC
#274


DIFF X Y Z 1.0
SCAN X 4
I: 4 scans, 4.0cm-1, diff
14:15
1.5000
A
0.0166
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25190
Ex/Run
7/28/94
MC
#274


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:18
1.5000
A
0.0207
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25191
Ex/Run
7/28/84
MC
#274


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:21
1.5000
A
0.4794
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25192
Ex/Run
7/28/84
MC
#274


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:23
1.5000
A
0.7085
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25193
Ex/Run
7/28/84
MC
#274


DIFF X Y Z 1.0
SCAN X 4
Z: 4 scans, 4.0cm-1, diff
14:26
1.5000
A
0.2959
CURSOR
2928.5
cm-1
0.0000
3600
3400
3200
3000
cm-1
25194
Ex/Run
7/28/94
MC
#274