

**FOCUSED GROUND-WATER
INVESTIGATION REPORT**

AT THE

**570 MAIN STREET
MANUFACTURING FACILITY
WESTBURY, NEW YORK
NYSDEC SITE CODE #130043A**

SEPTEMBER 1998

VOLUME III

PREPARED FOR:

IMC EASTERN CORP.

PREPARED BY:

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APPENDIX E

(Continued)

EcoTest Laboratories, Inc. Analytical Report for
Drill Cutting Characterization and Waste Manifest Forms

Standards Data

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8/21/98

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium	2000.0	1940.00	97.0	5000.0	5050.00	101.0	4840.00	96.8	A
Cadmium	500.0	505.00	101.0	250.0	253.00	101.2	250.00	100.0	A
Chromium	1500.0	1516.00	101.1	500.0	497.00	99.4	491.00	98.2	A
Lead	20.0	18.66	93.3	25.0	24.78	99.1	24.88	99.5	F
Mercury	2.0	2.19	109.5	1.0	1.09	109.0	1.08	108.0	CV

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium				5000.0	4890.00	97.8	4580.00	91.6	A
Cadmium				250.0	249.00	99.6	248.00	99.2	A
Chromium				500.0	501.00	100.2	506.00	101.2	A
Lead	20.0	19.49	97.4	25.0	25.91	103.6	25.27	101.1	F
Mercury				1.0	1.08	108.0	1.08	108.0	CV

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

PG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium									NR
Cadmium									NR
Chromium									NR
Lead				25.0	25.25	101.0			F
Mercury				1.0	1.01	101.0			CV

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium									NR
Cadmium									NR
Chromium									NR
Lead	20.0	20.43	102.2	25.0	24.60	98.4	24.70	98.8	F
Mercury									NR

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration				M
	True	Found	%R(1)	True	Found	%R(2)	Found	
Barium								NR
Cadmium								NR
Chromium								NR
Lead				25.0	24.91	99.6		F
Mercury								NR

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium									NR
Cadmium									NR
Chromium									NR
Lead	20.0	19.52	97.6	25.0	25.57	102.3	25.47	101.9	F
Mercury									NR

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Initial Calibration Source: LLI

Continuing Calibration Source: LLI

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(2)	Found	%R(2)	
Barium									NR
Cadmium									NR
Chromium									NR
Lead	20.0	20.04	100.2	25.0	27.10	108.4	27.44	109.8	F
Mercury									NR

1) Control Limits: All Metals 90-110

2) Control Limits: Mercury, Flame AA, Graphite Furnace AA 80-120; ICP 90-110

QUALITY ASSURANCE SUMMARY

CRDL STANDARD FOR AA AND ICP

Lab Name: LANCASTER LABORATORIES

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: IMC01

A CRDL Standard Source: LLI

ICP CRDL Standard Source: LLI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Barium	100.0	100.00	100.0					
Cadmium	10.0	10.00	100.0					
Chromium	30.0	31.00	103.3					
Lead	3.0	3.12	104.0					
Mercury	0.2	0.17	85.0					

QUALITY ASSURANCE SUMMARY

CRDL STANDARD FOR AA AND ICP

Lab Name: LANCASTER LABORATORIES

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: IMC01

AA CRDL Standard Source: LLI

ICP CRDL Standard Source: LLI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Barium								
Cadmium								
Chromium								
Lead	3.0	2.64	88.0					
Mercury								

QUALITY ASSURANCE SUMMARY

CRDL STANDARD FOR AA AND ICP

Lab Name: LANCASTER LABORATORIES

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: IMC01

A CRDL Standard Source: LLI

ICP CRDL Standard Source: LLI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Barium								
Cadmium								
Chromium								
Lead	3.0	3.14	104.7					
Mercury								

QUALITY ASSURANCE SUMMARY

CRDL STANDARD FOR AA AND ICP

Lab Name: LANCASTER LABORATORIES

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: IMC01

AA CRDL Standard Source: LLI

ICP CRDL Standard Source: LLI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Barium								
Cadmium								
Chromium								
Lead	3.0	3.00	100.0					
Mercury								

QUALITY ASSURANCE SUMMARY

CRDL STANDARD FOR AA AND ICP

Lab Name: LANCASTER LABORATORIES

Contract:

Lab Code:

Case No.:

SAS No.:

SDG No.: IMC01

AA CRDL Standard Source: LLI

ICP CRDL Standard Source: LLI

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
	True	Found	%R	True	Initial Found	%R	Final Found	%R
Barium								
Cadmium								
Chromium								
Lead	3.0	4.92	164.0					
Mercury								

QUALITY ASSURANCE SUMMARY

BLANKS

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L) C		Continuing Calibration Blank (ug/L)						Preparation Blank C		M
	1	C	2	C	3	C					
Barium	34.7	U	34.7	U	34.7	U	34.7	U	35.000	U	A
Cadmium	4.8	U	4.8	U	4.8	U	4.8	U	-4.000	B	A
Chromium	6.0	U	6.0	U	10.0	B	7.0	B	11.000	U	A
Lead	2.3	U	2.3	U	2.3	U			1.900	U	F
Mercury	0.042	U	0.042	U	0.042	U	0.042	U	-0.025	B	CV

QUALITY ASSURANCE SUMMARY

BLANKS

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Barium			34.7	U							A
Cadmium			-5.0	B							A
Chromium			13.0	B							A
Lead	2.3	U	2.3	U	2.3	U	2.3	U	1.900	U	F
Mercury			0.042	U	-0.046	B					C

QUALITY ASSURANCE SUMMARY

BLANKS

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		M
		C	1	C	2	C	3	C		C	
Barium											NR
Cadmium											NR
Chromium											NR
Lead	2.3	U	2.3	U	2.3	U	2.3	U			F
Mercury											NR

QUALITY ASSURANCE SUMMARY

BLANKS

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Barium		-		-		-		-		-	NR
Cadmium		-		-		-		-		-	NR
Chromium		-		-		-		-		-	NR
Lead	2.3	U	2.3	U	2.3	U		-		-	F
Mercury		-		-		-		-		-	NR
		-		-		-		-		-	

QUALITY ASSURANCE SUMMARY

BLANKS

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Preparation Blank Matrix (soil/water):

Preparation Blank Concentration Units (ug/L or mg/kg):

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L)						Prepa- ration Blank	C	M
			1	C	2	C	3	C			
Barium		-		-		-		-		-	NR
Cadmium		-		-		-		-		-	NR
Chromium		-		-		-		-		-	NR
Lead	2.3	U	2.3	U	-2.6	B		-		-	F
Mercury		-		-		-		-		-	NR
		-		-		-		-		-	

Quality Control Data

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MATRIX SPIKE/MATRIX SPIKE DUPLICATE

CLIENT SAMPLE NO.

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

PMW4MS

Matrix (Soil/Water): WATER

% Solids for sample: 0.0 Concentration Units (ug/l or mg/kg dry weight): UG/L Level (low/med): LOW

Analyte	M	Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	MS %R	Q	MSD %R	Q	Control Limits %R	RPD	Q	Ctl Lim RPD
Barium	A	60.0000	B	1670.0000	-	1690.0000	-	2000.00	2000.00	80.5	-	81.5	-	75-125	1.2	-	20
Cadmium	A	3.6000	U	53.0000	-	52.0000	-	50.00	50.00	106.0	-	104.0	-	75-125	1.9	-	20
Chromium	A	11.0000	B	205.0000	-	200.0000	-	200.00	200.00	97.0	-	94.5	-	75-125	2.5	-	20
Lead	CV	0.0270	B	1.0500	-	1.0100	-	1.00	1.00	102.3	-	98.3	-	80-120	3.9	-	20
Mercury																	

Note: An (N) in column "Q" indicates a spike recovery that is not within the control limits. An asterisk (*) in column "Q" indicates poor duplicate precision between the matrix spike and the matrix spike duplicate. The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

CLIENT SAMPLE NO.

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Matrix (Soil/Water): WATER

PMW5MS

% Solids for sample: 0.0 Concentration Units (ug/l or mg/kg dry weight): UG/L Level (low/med): LOW

Analyte	M	Sample Result	C	MS Sample Result	C	MSD Sample Result	C	MS Spike Added	MSD Spike Added	MS %R	Q	MSD %R	Q	Control Limits %R	RPD	Q	Ctl Lim RPD
Barium																	
Cadmium																	
Chromium																	
Lead	F	1.9000	U	17.9600		17.7800		20.00	20.00	89.8		88.9		75-125	1.0		20
Mercury																	

Note: An (N) in column "Q" indicates a spike recovery that is not within the control limits. An asterisk (*) in column "Q" indicates poor duplicate precision between the matrix spike and the matrix spike duplicate. The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY
POST DIGEST SPIKE SAMPLE RECOVERY

CLIENT SAMPLE NO.

Lab Name: LANCASTER LABORATORIES

PMW5MA

DG No.: IMC01

Matrix (soil/water): WATER

Level (low/med): LOW

Concentration Units: ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR) C	Sample Result (SR) C	Spike Added (SA)	%R	Q	M
Barium							NR
Cadmium							NR
Chromium							NR
Lead		17.76	1.90 U	20.0	88.8		F
Mercury							NR

Comments:

QUALITY ASSURANCE SUMMARY

DUPLICATES

CLIENT SAMPLE NO.

PMW4MD

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Matrix (soil/water): WATER

Level (low/med): LOW

% Solids for Sample: 0.0

% Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	M
Barium		60.0000 B	50.0000 B	18.2		A
Cadmium		3.6000 U	3.6000 U			A
Chromium		11.0000 B	11.0000 U	200.0		A
Lead						NR
Mercury		0.0270 B	0.0230 U	200.0		CV

NOTE: An asterisk(*) in column "Q" indicates poor duplicate precision (RPD > 20% OR $|(S) - (D)| > LOQ$ for values < 5x LOQ). The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY

CLIENT SAMPLE NO.

DUPLICATES

PMW5MD

ab Name: LANCASTER LABORATORIES

SDG No.: IMC01

atrix (soil/water): WATER

Level (low/med): LOW

% Solids for Sample: 0.0

% Solids for Duplicate: 0.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Barium								NR
Cadmium								NR
Chromium								NR
Lead		1.9000	U	1.9000	U			F
Mercury								NR

NOTE: An asterisk(*) in column "Q" indicates poor duplicate precision (RPD > 20% OR $|(S) - (D)| > LOQ$ for values < 5x LOQ). The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample page of the Quality Assurance Summary.

QUALITY ASSURANCE SUMMARY

LABORATORY CONTROL SAMPLE

Lab Name: LANCASTER LABORATORIES

OG No.: IMC01

Solid LCS Source:

Aqueous LCS Source: LLI

Analyte	Aqueous (ug/L)			Solid (mg/kg)				
	True	Found	%R(1)	True	Found	C	Limits	%R
Barium	2000.0	1630.00	81.5					
Cadmium	50.0	51.00	102.0					
Chromium	200.0	196.00	98.0					
Lead	20.0	20.25	101.2					
Mercury	1.0	1.12	112.0					

(1) Control Limits: 80-120

QUALITY ASSURANCE SUMMARY

LABORATORY CONTROL SAMPLE

Lab Name: LANCASTER LABORATORIES

OG No.: IMC01

Solid LCS Source:

Aqueous LCS Source: LLI

Analyte	Aqueous (ug/L)			Solid (mg/kg)					%R
	True	Found	%R(1)	True	Found	C	Limits		
Barium									
Cadmium									
Chromium									
Lead	20.0	18.29	91.4						
Mercury									

(1) Control Limits: 80-120

STANDARD ADDITION RESULTS

SDG No.: IMC01

Concentration Units: ug/L

[illegible]

Verification of Instrument Parameters

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER LABORATORIES
SDG No.: IMC01

CP ID Number:

Date: 07/15/98

Flame AA ID Number:

Furnace AA ID Number: 02803

Analyte	Wave-length (nm)	Back-ground	IDL (ug/L)	M
Barium				NR
Cadmium				NR
Chromium				NR
Lead	283.30	BD	2.3	F
Mercury				NR

Comments:

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER LABORATORIES
SDG No.: IMC01

CP ID Number:

Date: 07/15/98

Flame AA ID Number:

Furnace AA ID Number: 03812

Analyte	Wave-length (nm)	Back-ground	IDL (ug/L)	M
Barium				NR
Cadmium				NR
Chromium				NR
Lead	283.30	BZ	0.46	F
Mercury				NR

Comments:

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER LABORATORIES
SDG No.: IMC01

CP ID Number:

Date: 07/15/98

Flame AA ID Number: 03907

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	IDL (ug/L)	M
Barium	553.60		34.7	A
Cadmium	228.80	BD	4.8	A
Chromium	357.90		6.0	A
Lead				NR
Mercury				NR

Comments:

QUALITY ASSURANCE SUMMARY

INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: LANCASTER LABORATORIES
SDG No.: IMC01

CP ID Number:

Date: 04/15/98

Flame AA ID Number: 62016

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	IDL (ug/L)	M
Barium				NR
Cadmium				NR
Chromium				NR
Lead				NR
Mercury	254.00		0.042	CV

Comments:

QUALITY ASSURANCE SUMMARY

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Method: A

Matrix (soil/water): WATER

Date: 07/10/97

Analyte	Wave-length (nm)	Back-ground	LOQ (ug/L)	MDL (ug/L)
Barium	553.60		100	35.0
Cadmium	228.80	BD	10.0	3.6
Chromium	357.90		30.0	11.0
Lead				
Mercury				

** The LOQ must be adjusted for % Solids and Sample Weight for samples reporting in mg/Kg and ug.

Comments:

QUALITY ASSURANCE SUMMARY

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Method: F

Matrix (soil/water): WATER

Date: 07/17/98

Analyte	Wave-length (nm)	Back-ground	LOQ (ug/L)	MDL (ug/L)
Barium				
Cadmium				
Chromium				
Lead	283.30	BD	3.0	1.9
Mercury				

** The LOQ must be adjusted for % Solids and Sample Weight for samples reporting in mg/Kg and ug.

Comments:

QUALITY ASSURANCE SUMMARY

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: LANCASTER LABORATORIES

SDG No.: IMC01

Method: CV

Matrix (soil/water): WATER

Date: 07/10/97

Analyte	Wave-length (nm)	Back-ground	LOQ (ug/L)	MDL (ug/L)
Barium				
Cadmium				
Chromium				
Lead				
Mercury	254.00		0.20	0.023

** The LOQ must be adjusted for % Solids and Sample Weight for samples reporting in mg/Kg and ug.

Comments:

Preparation and Run Logs

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

Lab Name: LANCASTER LABORATORIES

LOG No.: IMC01

Method: A

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
LCSW	07/14/98		50
MW--1	07/14/98		50
MW--3	07/14/98		50
PBW	07/14/98		50
PM4UD	07/14/98		50
PMW4L	07/14/98		50
PMW4M	07/14/98		50
PMW4MD	07/14/98		50
PMW4MM	07/14/98		50
PMW4MS	07/14/98		50
PMW4U	07/14/98		50
PMW5L	07/14/98		50
PMW5M	07/14/98		50
PMW5U	07/14/98		50
PMW6L	07/14/98		50
PMW6M	07/14/98		50
PMW6U	07/14/98		50
PMW7L	07/14/98		50
PMW7M	07/14/98		50
PMW7U	07/14/98		50

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

Lab Name: LANCASTER LABORATORIES

LOG No.: IMC01

Method: F

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
LCSW	07/13/98		50
PBW	07/13/98		50
PM4UD	07/13/98		50
PMW4L	07/13/98		50
PMW4M	07/13/98		50
PMW4U	07/13/98		50
PMW5U	07/13/98		50

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

Lab Name: LANCASTER LABORATORIES__

DG No.: IMC01

Method: F_

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
LCSW	07/14/98		50
MW--1	07/14/98		50
MW--3	07/14/98		50
PBW	07/14/98		50
PMW5L	07/14/98		50
PMW5M	07/14/98		50
PMW5MD	07/14/98		50
PMW5MM	07/14/98		50
PMW5MS	07/14/98		50
PMW6L	07/14/98		50
PMW6M	07/14/98		50
PMW6U	07/14/98		50
PMW7L	07/14/98		50
PMW7M	07/14/98		50
PMW7U	07/14/98		50

QUALITY ASSURANCE SUMMARY

PREPARATION LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Method: CV

Client Sample No.	Preparation Date	Weight (gram)	Volume (ml)
LCSW	07/13/98		6
MW--1	07/13/98		6
MW--3	07/13/98		6
PBW	07/13/98		6
PM4UD	07/13/98		6
PMW4L	07/13/98		6
PMW4M	07/13/98		6
PMW4MD	07/13/98		6
PMW4MM	07/13/98		6
PMW4MS	07/13/98		6
PMW4U	07/13/98		6
PMW5L	07/13/98		6
PMW5M	07/13/98		6
PMW5U	07/13/98		6
PMW6L	07/13/98		6
PMW6M	07/13/98		6
PMW6U	07/13/98		6
PMW7L	07/13/98		6
PMW7M	07/13/98		6
PMW7U	07/13/98		6

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 03907

Method: A

Start Date: 07/15/98

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	0951		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S100	1.00	0952		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S500	1.00	0952		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S2500	1.00	0952		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S5000	1.00	0953		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S10000	1.00	0953		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICV	1.00	0953		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICB	1.00	0954		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CRA	1.00	0954			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	0954		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	0955		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PBW	1.00	0956		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LCSW	1.00	0957			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LCSW	1.00	0958		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4M	1.00	0959		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4MA	1.00	1000		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4ML	5.00	1000			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4MD	1.00	1001		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4MS	1.00	1001		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4MM	1.00	1002		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4U	1.00	1002		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	1003		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	1003		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PM4UD	1.00	1004		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW4L	1.00	1004		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW5U	1.00	1005		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW5M	1.00	1005		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW5L	1.00	1006		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW6U	1.00	1006		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW6M	1.00	1007		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW6L	1.00	1008		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW7U	1.00	1008		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES__

DG No.: IMC01__

Instrument ID Number: 03907__

Method: A__

Start Date: 07/15/98

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
PMW7M	1.00	1009		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	1009		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCB	1.00	1009		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW7L	1.00	1010		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW--1	1.00	1010		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW--3	1.00	1011		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	1011		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCB	1.00	1011		X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYSIS RUN LOG

DG No.: IMC01

Method: A

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	0850		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S10	1.00	0850		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S50	1.00	0851		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S250	1.00	0851		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S1000	1.00	0851		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S2500	1.00	0852		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICV	1.00	0852		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ICB	1.00	0853		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CRA	1.00	0853		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	0853		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCB	1.00	0854		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PBW	1.00	0854		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LCSW	1.00	0855		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4M	1.00	0855		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4MA	1.00	0856		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4ML	5.00	0856		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4MD	1.00	0857		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4MS	1.00	0857		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4MM	1.00	0858		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4U	1.00	0858		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PM4UD	1.00	0859		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	0859		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCB	1.00	0859		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW4L	1.00	0900		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW5U	1.00	0900		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW5M	1.00	0901		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW5L	1.00	0901		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW6U	1.00	0901		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW6M	1.00	0902		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW6L	1.00	0902		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW7U	1.00	0903		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMW7M	1.00	0903		-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYSIS RUN LOG

End Date: 07/15/98

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QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 03907

Method: A

Start Date: 07/15/98

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	1044				X																							
S50	1.00	1045				X																							
S250	1.00	1045				X																							
S500	1.00	1045				X																							
S1000	1.00	1046				X																							
S2500	1.00	1046				X																							
ICV	1.00	1046				X																							
ICB	1.00	1047				X																							
CRA	1.00	1047																											
CCV	1.00	1047				X																							
CCB	1.00	1048				X																							
PBW	1.00	1048				X																							
LCSW	1.00	1049				X																							
PMW4M	1.00	1049				X																							
PMW4MA	1.00	1050																											
PMW4ML	5.00	1050																											
PMW4MD	1.00	1051				X																							
PMW4MS	1.00	1051				X																							
PMW4MM	1.00	1051				X																							
PMW4U	1.00	1052				X																							
PM4UD	1.00	1052				X																							
CCV	1.00	1053				X																							
CCB	1.00	1053				X																							
PMW4L	1.00	1054				X																							
PMW5U	1.00	1054				X																							
PMW5M	1.00	1055				X																							
PMW5L	1.00	1055				X																							
PMW6U	1.00	1055				X																							
PMW6M	1.00	1056				X																							
PMW6L	1.00	1056				X																							
PMW7U	1.00	1057				X																							
PMW7M	1.00	1057				X																							

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 03907

Method: A

Start Date: 07/15/98

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
PMW7L	1.00	1057		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CCV	1.00	1058		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CCB	1.00	1058		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW--1	1.00	1058		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
MW--3	1.00	1059		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1059		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1100		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1101		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1102		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	10.00	1103		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	1.00	1104		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
ZZZZZZ	10.00	1105		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CCV	1.00	1106		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CCB	1.00	1106		-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 03812

Method: F

Start Date: 07/15/99

End Date: 07/15/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	1448		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S3.00	1.00	1453		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S9.00	1.00	1458		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S15.00	1.00	1503		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S30.00	1.00	1508		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S60.00	1.00	1512		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICV	1.00	1517		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICB	1.00	1521		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CRA	1.00	1526		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	1531		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	1535		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	10.00	1540		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	10.00	1544		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	10.00	1548		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PBW	1.00	1553		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
LCSW	1.00	1557		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1602		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1606		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1610		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1615		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	1619		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	1623		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	1628		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

ANALYSIS RUN LOG

End Date: 07/16/98

365

ANALYSIS RUN LOG

End Date: 07/16/98

[illegible]

ANALYSIS RUN LOG

End Date: 07/17/98

367

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 03812

Method: F

Start Date: 07/17/99

End Date: 07/17/98

EPA Sample No.	D/F	Time	% R	Analytes																							
				B A	C D	C R	P B	H G																			
ZZZZZZ	10.00	1209		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ZZZZZZ	10.00	1214		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCV	1.00	1219		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CCB	1.00	1223		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ANALYSIS RUN LOG

End Date: 07/20/98

[illegible]

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES__

DG No.: IMC01__

Instrument ID Number: 02803__

Method: F__

Start Date: 07/20/99

End Date: 07/20/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	0834		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S3.00	1.00	0839		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S9.00	1.00	0845		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S15.00	1.00	0850		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S30.00	1.00	0856		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
S60.00	1.00	0901		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICV	1.00	0906		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ICB	1.00	0911		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CRA	1.00	0916		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	0921		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	0927		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	1.00	0932		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	25.00	0937		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	0942		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	0947		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	0951		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	0956		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	1001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	25.00	1006		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ZZZZZZ	50.00	1011		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PMW7U	5.00	1016		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCV	1.00	1021		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
CCB	1.00	1026		-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

QUALITY ASSURANCE SUMMARY

ANALYSIS RUN LOG

Lab Name: LANCASTER LABORATORIES

DG No.: IMC01

Instrument ID Number: 62016

Method: CV

Start Date: 07/14/98

End Date: 07/14/98

EPA Sample No.	D/F	Time	% R	Analytes																									
				B A	C D	C R	P B	H G																					
S0	1.00	1120						X																					
S0.2	1.00	1122						X																					
S0.5	1.00	1123						X																					
S1.0	1.00	1124						X																					
S2.5	1.00	1126						X																					
S5.0	1.00	1128						X																					
ICV	1.00	1129						X																					
ICB	1.00	1131						X																					
CRA	1.00	1132																											
CCV	1.00	1133						X																					
CCB	1.00	1135						X																					
ZZZZZZ	1.00	1136																											
ZZZZZZ	1.00	1137																											
ZZZZZZ	1.00	1139																											
ZZZZZZ	1.00	1140																											
ZZZZZZ	1.00	1141																											
ZZZZZZ	1.00	1143																											
ZZZZZZ	1.00	1144																											
ZZZZZZ	1.00	1146																											
ZZZZZZ	1.00	1147																											
ZZZZZZ	1.00	1148																											
CCV	1.00	1149						X																					
CCB	1.00	1151						X																					
ZZZZZZ	1.00	1152																											
ZZZZZZ	1.00	1154																											
ZZZZZZ	1.00	1155																											
ZZZZZZ	1.00	1156																											
ZZZZZZ	1.00	1158																											
ZZZZZZ	1.00	1159																											
PBW	1.00	1200						X																					
LCSW	1.00	1202						X																					
PMW4U	10.00	1203						X																					

ANALYSIS RUN LOG

End Date: 07/14/98

[illegible]

Raw Data

Flame AA Data

LANCASTER LABORATORIES

FLAME AA REPORT

DATA REVIEWED BY:

PCJ 643

DATE:

7/15/98

DATA VERIFIED BY:

RDG-114

DATE:

7/15/98

____ Samples verified

RUN NAME: P819600A04

RUN DATE: 7/15/98

DATA FILE NAME: BA19600.FAA

RUN STARTTIME: 9:51:51

INSTRUMENT NO: 00507

RUN EXOTIME: 10:11:56

ANALYST: GAC

ELEMENT: BA

INTEGRATION TIME : 3.0

ABSORBANCE/EMISSIONS : ABSORBANCE

PC ON/OFF : OFF

PCV-ACETYLENE/ACETYLENE-AIR : Acetylene-W2

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819-0044
ELEMENT SA

LANCASTER LABORATORIES
INSTRUMENT ID: 003907

USE: 1 7/15/98 9:51:51

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5100	*		0.000	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			0.000	0.000	0.000	0.000	0.000	

USE: 2 7/15/98 9:52:11

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5100	*		0.100	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			0.000	0.000	0.000	0.000	0.000	

USE: 3 7/15/98 9:52:34

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5500	*		0.500	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			2.700	0.015	0.015	0.015	0.015	

USE: 4 7/15/98 9:52:54

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5500	*		2.500	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			1.200	0.175	0.175	0.175	0.175	

USE: 5 7/15/98 9:53:10

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5500	*		5.000	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			0.500	0.150	0.150	0.150	0.150	

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819503A04
ELEMENT: BA

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TUBE: 6 7/15/98 9:53:28

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
11 (00)	*	10.000	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		0.800	0.283	0.285	0.281	0.284	

TUBE: 7 7/15/98 9:53:55

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
12	*	1.940	1.000	1.000	1.000	1.000	1.000
		% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
		97.0	0.300	0.060	0.060	0.060	0.060

TUBE: 8 7/15/98 9:54:13

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
103	*	0.000	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		99.900	0.000	0.000	0.000	0.000	

TUBE: 9 7/15/98 9:54:34

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
094	*	0.100	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		10.500	0.003	0.003	0.003	0.004	

TUBE: 10 7/15/98 9:54:56

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
091	*	5.050	1.000	1.000	1.000	1.000	1.000
		% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
		101.0	1.500	0.152	0.152	0.154	0.149

DATA SHEET FOR FLAMEAA RUN

FILE NAME: 9819502474
 E-PRINT BA

LANCASTER LABORATORIES
 INSTRUMENT ID: 63907

TEST: 11 7/15/98 9:55:17

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
100	*		0.000	1.000	1.000	1.000	1.000	1.000

%RED	MEAN ABS	READING1	READING2	READING3
99.900	0.000	0.000	0.000	0.000

TEST: 12 7/15/98 9:56:25

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
RAW	*	9819502474	0.010	1.000	1.000	1.000	50.000	50.000

BR	RI	% RED	MEAN ABS	READING1	READING2	READING3
---	---	99.900	0.000	0.000	0.000	0.000

TEST: 13 7/15/98 9:57:15

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1004	*	9819502474	1.500	1.000	1.000	1.000	1.000	1.000

BR	RI	% RED	MEAN ABS	READING1	READING2	READING3
R	---	1.500	0.049	0.050	0.049	0.049

TEST: 14 7/15/98 9:58:44

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
104	*	9819502474	1.600	1.000	1.000	1.000	1.000	1.000

BR	RI	% RED	MEAN ABS	READING1	READING2	READING3
---	---	1.600	0.051	0.050	0.050	0.051

TEST: 15 7/15/98 9:59:23

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1010	*	9819502474	2.000	1.000	1.000	1.000	50.000	50.000

BR	RI	% RED	MEAN ABS	READING1	READING2	READING3
---	---	12.000	0.002	0.002	0.002	0.002

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819603A04
ELEMENT BA

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TIME: 16 7/15/98 10:00:06

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
251810 F		981950820002	0.920	1.000	1.000	1.000	50.000	50.000
<i>PmW4m A</i>								
☒		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
				0.800	0.028	0.028	0.028	0.028

TIME: 17 7/15/98 10:00:31

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
251810 L		981950820002	0.010	10.000	2.000	5.000	50.000	50.000
<i>PmW4m C</i>								
☒		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
				72.600	0.000	0.001	0.000	0.000

TIME: 18 7/15/98 10:01:09

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
251810 D		981950820002	0.050	1.000	1.000	1.000	50.000	50.000
<i>PmW4m D</i>								
☒		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
				19.000	0.002	0.002	0.001	0.001

TIME: 19 7/15/98 10:01:38

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
251810 R		981950820002	1.670	1.000	1.000	1.000	50.000	50.000
<i>PmW4m S</i>								
☒		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
				1.700	0.052	0.052	0.051	0.052

TIME: 20 7/15/98 10:02:07

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
251810 M		981950820002	1.690	1.000	1.000	1.000	50.000	50.000
<i>PmW4m M</i>								
☒		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
				0.400	0.052	0.052	0.052	0.052

DATA SHEET FOR FLAMEAAS RUN

PIN NAME: 9819503404
ELEMENT BA

LANCASTER LABORATORIES
INSTRUMENT ID: 003907

TUBE: 21 7/15/98 10:02:50

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
9819503404	981950340402	0.170	1.000	1.000	1.000	50.000	50.000

pmw40

RR	RI	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	5.300	0.005	0.005	0.005	0.005

TUBE: 22 7/15/98 10:03:13

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
9819503404	981950340402	4.640	1.000	1.000	1.000	1.000	1.000

% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
96.8	0.200	0.146	0.146	0.146	0.146

TUBE: 23 7/15/98 10:03:31

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
9819503404	981950340402	0.000	1.000	1.000	1.000	1.000	1.000

% RSD	MEAN ABS	READING1	READING2	READING3
99.900	0.000	0.000	0.000	0.000

TUBE: 24 7/15/98 10:04:05

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
9819503404	981950340402	0.210	1.000	1.000	1.000	50.000	50.000

pmw40

RR	RI	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	9.100	0.007	0.007	0.007	0.007

TUBE: 25 7/15/98 10:04:42

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
9819503404	981950340402	1.000	1.000	1.000	1.000	50.000	50.000

pmw40

RR	RI	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	2.500	0.002	0.002	0.002	0.002

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819603AM4
ELEMENT BA

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TUBE: 26 7/15/98 10:05:12

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
21812	* 981950820002	0.100	1.000	1.000	1.000	50.000	50.000

pmw 5 m

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	8.100	0.003	0.003	0.003	0.003

TUBE: 27 7/15/98 10:05:41

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
21813	* 981950820002	0.030	1.000	1.000	1.000	50.000	50.000

pmw 5 m

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	35.500	0.001	0.001	0.001	0.001

TUBE: 28 7/15/98 10:06:20

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2961814	* 981950820002	0.050	1.000	1.000	1.000	50.000	50.000

pmw 5L

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	15.600	0.002	0.002	0.001	0.001

TUBE: 29 7/15/98 10:06:50

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761815	* 981950820002	0.080	1.000	1.000	1.000	50.000	50.000

pmw 6U

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	6.800	0.003	0.002	0.003	0.003

TUBE: 30 7/15/98 10:07:27

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
21814	* 981950820002	0.000	1.000	1.000	1.000	50.000	50.000

pmw 6 M

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	40.700	0.001	0.000	0.001	0.001

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9817601A4
EVENT BA

LANCASTER LABORATORIES
INSTRUMENT ID: 03707

TS: 31 7/15/98 10:05:04

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981817	* 98155/829002	0.024	1.000	1.000	1.000	50.000	50.000

PMW 70

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	24.800	0.001	0.001	0.001	0.001

DU 1244 8/12/98

TS: 32 7/15/98 10:05:07

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981818	* 98155/829002	0.250	1.000	1.000	1.000	50.000	50.000

PMW 70

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	2.200	0.003	0.003	0.003	0.003

TS: 33 7/15/98 10:09:10

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981819	* 98155/829002	0.050	1.000	1.000	1.000	50.000	50.000

PMW 70

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	18.400	0.002	0.002	0.002	0.001

TS: 34 7/15/98 10:09:30

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
DOVE	*	4.890	1.000	1.000	1.000	1.000	1.000

% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
97.8	2.100	0.147	0.144	0.150	0.142

TS: 35 7/15/98 10:09:47

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
DOVE	*	-0.010	1.000	1.000	1.000	1.000	1.000

% RSD	MEAN ABS	READING1	READING2	READING3
0.000	0.000	0.000	0.000	0.000

DATA SHEET FOR FLAMEAA RUN

UN NAME: 9819603A04
 ELEMENT BA

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

USE: 36 7/15/98 10:10:16

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981820	*	981950820002	0.020	1.000	1.000	1.000	50.000	50.000
<i>Pmw7L</i>								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	27.100	0.001	0.001	0.001	0.001

USE: 37 7/15/98 10:10:45

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981821	*	981950820002	0.030	1.000	1.000	1.000	50.000	50.000
<i>mw - - 1</i>								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	28.800	0.001	0.001	0.001	0.001

USE: 38 7/15/98 10:11:15

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981822	*	981950820002	0.010	1.000	1.000	1.000	50.000	50.000
<i>mw - - 3</i>								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	76.400	0.000	0.001	0.000	0.000

USE: 39 7/15/98 10:11:34

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
3CV4	*		4.580	1.000	1.000	1.000	1.000	1.000
		% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3	
		91.6	0.900	0.138	0.138	0.137	0.140	

USE: 40 7/15/98 10:11:56

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
314	*		-0.010	1.000	1.000	1.000	1.000	1.000
		% RSD	MEAN ABS	READING1	READING2	READING3		
		78.900	0.000	-0.001	0.000	0.000		

LANCASTER LABORATORIES

FLAME AA REPORT

DATA REVIEWED BY:

PCP643

DATE:

7/15/98

DATA VERIFIED BY:

RDG-114

DATE:

7/15/98

____ Samples Verified

RUN NAME: 9819602A04

RUN DATE: 7/15/98

DATA FILE NAME: LD19602.FAA

RUN STARTTIME: 8:50:14

INSTRUMENT NO: 00907

RUN ENDTIME: 9:12:29

ANALYST: 643

ELEMENT: CD

INTEGRATION TIME : 3.0

ABSORBANCE/EMISSIONS : ABSORBANCE

BD ON/OFF : ON

N2O-ACETYLENE/ACETYLENE-AIR : AIR-Acetylene

DATA SHEET FOR FLAMEA3 RUN

FILE NAME: 9919662A04
 EVENT CD

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

TUBE: 1 7/15/98 8:50:14

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
10	*	0.000	1.000	1.000	1.000	1.000	1.000
		<u>XRSD</u>	<u>MEAN ABS</u>	<u>READING1</u>	<u>READING2</u>	<u>READING3</u>	
		0.000	0.000	0.000	-0.001	0.000	

TUBE: 2 7/15/98 8:50:37

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
10	*	0.010	1.000	1.000	1.000	1.000	1.000
		<u>XRSD</u>	<u>MEAN ABS</u>	<u>READING1</u>	<u>READING2</u>	<u>READING3</u>	
		1.800	0.005	0.005	0.005	0.005	

TUBE: 3 7/15/98 8:51:04

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
10	*	0.050	1.000	1.000	1.000	1.000	1.000
		<u>XRSD</u>	<u>MEAN ABS</u>	<u>READING1</u>	<u>READING2</u>	<u>READING3</u>	
		1.500	0.030	0.030	0.030	0.030	

TUBE: 4 7/15/98 8:51:30

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
10	*	0.250	1.000	1.000	1.000	1.000	1.000
		<u>XRSD</u>	<u>MEAN ABS</u>	<u>READING1</u>	<u>READING2</u>	<u>READING3</u>	
		0.900	0.153	0.150	0.151	0.154	

TUBE: 5 7/15/98 8:51:52

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
10	*	1.000	1.000	1.000	1.000	1.000	1.000
		<u>XRSD</u>	<u>MEAN ABS</u>	<u>READING1</u>	<u>READING2</u>	<u>READING3</u>	
		0.500	0.500	0.505	0.503	0.503	

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819602A04
 IDENT CD

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

TIME: 6 7/15/98 8:52:15

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
500	*		2.500	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			0.600	0.873	0.873	0.868	0.879	

TIME: 7 7/15/98 8:52:46

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
100	*		0.505	1.000	1.000	1.000	1.000	1.000
			% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
			101.0	0.200	0.288	0.288	0.289	0.289

TIME: 8 7/15/98 8:53:05

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
100	*		-0.001	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			23.000	-0.001	0.000	-0.001	-0.001	

TIME: 9 7/15/98 8:53:26

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
100	*		0.010	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			9.500	0.005	0.004	0.005	0.005	

TIME: 10 7/15/98 8:53:47

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
100	*		0.253	1.000	1.000	1.000	1.000	1.000
			% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
			101.2	0.900	0.155	0.154	0.155	0.156

DATA SHEET FOR FLAMEA4 RUN

RUN NAME: 9819502404
 EVENT CD

LANCASTER LABORATORIES
 INSTRUMENT ID: 63907

LINE: 11 7/15/98 8:54:34

SAMPLE	IC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
CB1	*		-0.004	1.000	1.000	1.000	1.000	1.000

%RSD	MEAN ABS	READING1	READING2	READING3
31.800	-0.002	-0.001	-0.002	-0.002

LINE: 12 7/15/98 8:54:59

SAMPLE	IC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
PS4	*	981950824002	-0.004	1.000	1.000	1.000	50.000	50.000

RS	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	25.600	-0.001	-0.002	-0.002	-0.002

LINE: 13 7/15/98 8:55:28

SAMPLE	IC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
CB4	*	981950624002	0.001	1.000	1.000	1.000	1.000	1.000

RS	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	0.000	0.001	0.001	0.000	0.001

LINE: 14 7/15/98 8:55:53

SAMPLE	IC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
PS1514	*	981950804002	-0.004	1.000	1.000	1.000	50.000	50.000

RS	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	5.000	-0.002	-0.002	-0.002	-0.002

LINE: 15 7/15/98 8:56:21

SAMPLE	IC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	IF	FINVOL	SAMP WT
PS1514	*	981950804002	0.002	1.000	1.000	1.000	50.000	50.000

RS	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	0.000	0.000	0.000	0.000	0.000

DATA SHEET FOR FLAMEAA RUN

FILE NAME: 9919602A04
ELEMENT CD

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TIME: 16 7/15/98 8:56:56

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2541810 L		981950620002	-0.003	5.000	1.000	5.000	50.000	50.000
<i>Pmw4mL</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	19.000	-0.002	-0.001	-0.002	-0.001	

TIME: 17 7/15/98 8:57:22

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2541810 D		981950620002	-0.005	1.000	1.000	1.000	50.000	50.000
<i>Pmw4mD</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	5.500	-0.003	-0.003	-0.002	-0.003	

TIME: 18 7/15/98 8:57:44

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2541810 R		981950620002	0.053	1.000	1.000	1.000	50.000	50.000
<i>Pmw4mS</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	2.500	0.032	0.032	0.031	0.031	

TIME: 19 7/15/98 8:58:06

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2541810 M		981950620002	0.052	1.000	1.000	1.000	50.000	50.000
<i>Pmw4mM</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	0.500	0.031	0.031	0.031	0.031	

TIME: 20 7/15/98 8:58:30

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2541808 *		981950620002	-0.006	1.000	1.000	1.000	50.000	50.000
<i>Pmw4U</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	11.700	-0.003	-0.003	-0.003	-0.003	

DATA SHEET FOR FLOWEAK RUN

 RUN NAME: 981950044
 DOCUMENT ID

 LANCASTER LABORATORIES
 INSTRUMENT ID: 93907

TIME: 21 7/15/98 8:59:06

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
91300	981950044	-0.002	1.000	1.000	1.000	50.000	50.000

PMW 4 VD
3
8/1/98

ER	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	10.000	-0.004	-0.004	-0.004	-0.002

TIME: 22 7/15/98 8:59:29

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
102	*	0.150	1.000	1.000	1.000	1.000	1.000

% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
100.0	0.000	0.153	0.152	0.152	0.154

TIME: 23 7/15/98 8:59:48

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
102	*	-0.002	1.000	1.000	1.000	1.000	1.000

% RSD	MEAN ABS	READING1	READING2	READING3
45.000	-0.002	-0.001	-0.002	-0.002

TIME: 24 7/15/98 9:00:11

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981950044	981950044	-0.002	1.000	1.000	1.000	50.000	50.000

PMW 4L

ER	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	17.100	-0.002	-0.003	-0.002	-0.002

TIME: 25 7/15/98 9:00:32

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
91302	981950044	-0.002	1.000	1.000	1.000	50.000	50.000

PMW 5U

ER	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	12.900	-0.002	-0.003	-0.003	-0.003

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819602404
ELEMENT: CD

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TUBE: 26 7/15/98 9:01:02

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
261813 *	981950820002	-0.004	1.000	1.000	1.000	50.000	50.000
<i>PmwSm</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	16.600	-0.002	-0.002	-0.002	-0.002	

TUBE: 27 7/15/98 9:01:27

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
271814 *	981950820002	-0.003	1.000	1.000	1.000	50.000	50.000
<i>PmwSL</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	29.500	-0.002	-0.002	-0.001	-0.002	

TUBE: 28 7/15/98 9:01:52

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
281815 *	981950820002	-0.007	1.000	1.000	1.000	50.000	50.000
<i>PmwL</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	4.400	-0.003	-0.003	-0.003	-0.003	

TUBE: 29 7/15/98 9:02:21

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
291816 *	981950820002	-0.004	1.000	1.000	1.000	50.000	50.000
<i>PmwLm</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	17.100	-0.002	-0.002	-0.002	-0.002	

TUBE: 30 7/15/98 9:02:53

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
301817 *	981950820002	-0.004	1.000	1.000	1.000	50.000	50.000
<i>PmwL</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	18.700	-0.002	-0.002	-0.002	-0.002	

DATA SHEET FOR PLAMBA RD

INSTRUMENT: 981956120004
 ANALYST ID:

ANALYST OR LABORATORIES
 ANALYST ID: 03907

TUBE: 31 7/15/98 9:03:15

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981818	*	981956120002	-0.006	1.000	1.000	1.000	50.000	50.000

pmw70

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	14.800	-0.003	-0.003	-0.002	-0.003

TUBE: 32 7/15/98 9:03:45

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981819	*	981956120002	-0.005	1.000	1.000	1.000	50.000	50.000

pmw7m

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	27.100	-0.002	-0.002	-0.003	-0.002

TUBE: 33 7/15/98 9:04:10

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981820	*	981956120002	-0.004	1.000	1.000	1.000	50.000	50.000

pmw7c

RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	30.000	-0.002	-0.002	-0.001	-0.002

TUBE: 34 7/15/98 9:04:30

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981821	*	981956120002	0.149	1.000	1.000	1.000	1.000	1.000

RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
98.1	0.300	0.153	0.152	0.153	0.153

TUBE: 35 7/15/98 9:04:49

SAMPLE	QC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981822	*	981956120002	-0.004	1.000	1.000	1.000	1.000	1.000

% RSD	MEAN ABS	READING1	READING2	READING3
23.300	-0.002	-0.001	-0.002	-0.002

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819602A04
ELEMENT CD

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TUBE: 36 7/15/98 9:05:12

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
21521 *	981950820002	-0.005	1.000	1.000	1.000	50.000	50.000

	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
	—	—	11.400	-0.002	-0.003	-0.002	-0.002

TUBE: 37 7/15/98 9:05:38

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
21522 *	981950820002	-0.006	1.000	1.000	1.000	50.000	50.000

	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
	—	—	15.000	-0.003	-0.003	-0.003	-0.002

TUBE: 38 7/15/98 9:06:07

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
225	* 981951579001	-0.005	1.000	1.000	1.000	25.000	1.000

	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
	—	—	9.500	-0.003	-0.003	-0.003	-0.002

TUBE: 39 7/15/98 9:06:29

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
235	* 981951579001	0.050	1.000	1.000	1.000	1.000	1.000

	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
	—	—	0.900	0.030	0.030	0.030	0.030

TUBE: 40 7/15/98 9:06:53

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
245	* 981951579001	0.062	1.000	1.000	1.000	1.000	1.000

	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
	—	—	1.400	0.037	0.036	0.037	0.037

DATA SHEET FOR FLAMEAAR RUN

RUN NAME: 9819602P04
 L. ENG CD

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

TEST: 41 7/15/98 9:09:25

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5-9124 *		981951579001	0.098	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
ZZZZZ	RR	RD	0.600	0.059	0.059	0.059	0.059

TEST: 42 7/15/98 9:09:51

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5-9125 *		981951579001	0.147	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
ZZZZZ	RR	RD	0.600	0.089	0.088	0.089	0.089

TEST: 43 7/15/98 9:10:19

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5-9126 *		981951579001	0.237	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
ZZZZZ	RR	RD	0.500	0.145	0.144	0.146	0.144

TEST: 44 7/15/98 9:10:47

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5-9127 *		981951579001	0.371	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
ZZZZZ	RR	RD	0.400	0.230	0.230	0.231	0.230

TEST: 45 7/15/98 9:11:39

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
5-9128 *		981951579001	-0.005	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
ZZZZZ	RR	RD	15.200	-0.005	-0.005	-0.005	-0.005

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819600404
ELEMENT CD

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

Q E: 46 7/15/98 9:12:03

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
04	*	0.248	1.000	1.000	1.000	1.000	1.000

% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
99.2	0.700	0.152	0.151	0.153	0.153

Q E: 47 7/15/98 9:12:20

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
04	*	-0.005	1.000	1.000	1.000	1.000	1.000

%RSD	MEAN ABS	READING1	READING2	READING3
0.000	-0.002	-0.002	-0.002	-0.002

Reviewer's Signature PEJOL-643

Date 7/15/98

Verifier's Signature RD6114

Date 7/15/98

LANCASTER LABORATORIES

FLAME AA REPORT

DATA REVIEWED BY: JEJ 643

DATE: 7/15/98

DATA VERIFIED BY: RDG/114

DATE: 7/15/98

____ Samples Verified

RUN NAME: 9817004404

RUN DATE: 7/15/98

DATA FILE NAME: CR17804.FAA

RUN STARTTIME: 10:44:38

INSTRUMENT NO: 40907

RUN ENDTIME: 11:09:12

ANALYST: GAG

ELEMENT: CR

INTEGRATION TIME : 3.0

ABSORBANCE/EMISSIONS : ABSORBANCE

EC ON/OFF : OFF

ACETYLENE/ACETYLENE-AIR : Acetylene-N₂

DATA SHEET FOR FLAMEAA RUN

FILE NAME: 9919604444
 ELEMENT CR

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

USE: 1 7/15/98 10:44:38

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1	*	0.000	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		0.000	0.000	0.000	0.000	0.000	

USE: 2 7/15/98 10:45:00

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
250	*	0.050	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		5.600	0.005	0.006	0.006	0.006	

USE: 3 7/15/98 10:45:25

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
125	*	0.250	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		2.300	0.027	0.025	0.027	0.025	

USE: 4 7/15/98 10:45:46

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
3500	*	0.500	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		0.200	0.053	0.053	0.053	0.053	

USE: 5 7/15/98 10:46:01

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
11000	*	1.000	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		0.500	0.105	0.104	0.105	0.105	

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819604A04
ELEMENT OR

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TIME: 6 7/15/98 10:46:23

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
S 300	*	2.500	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		1.100	0.256	0.257	0.253	0.258	

TIME: 7 7/15/98 10:46:50

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
I 7	*	1.516	1.000	1.000	1.000	1.000	1.000
		% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
		101.4	0.800	0.158	0.159	0.159	0.157

TIME: 8 7/15/98 10:47:14

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
ICB	*	-0.001	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		99.900	0.000	0.000	0.000	0.000	

TIME: 9 7/15/98 10:47:36

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
CCA	*	0.031	1.000	1.000	1.000	1.000	1.000
		%RSD	MEAN ABS	READING1	READING2	READING3	
		16.600	0.004	0.004	0.003	0.004	

TIME: 10 7/15/98 10:47:56

SAMPLE	QC BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
CCA	*	0.497	1.000	1.000	1.000	1.000	1.000
		% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
		99.4	1.100	0.053	0.052	0.053	0.053

DATA SHEET FOR FLAMEAA RUN

TEST NAME: 9819604204
ELEMENT OR

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TEST: 11 7/15/98 10:48:15

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
131	*	0.002	1.000	1.000	1.000	1.000	1.000
		% RSD	MEAN ABS	READING1	READING2	READING3	
		61.700	0.000	0.000	0.000	0.000	

TEST: 12 7/15/98 10:48:57

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
132	*	0.004	1.000	1.000	1.000	50.000	50.000
		% RSD	MEAN ABS	READING1	READING2	READING3	
		89.400	0.000	0.000	0.001	0.001	

TEST: 13 7/15/98 10:49:25

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
133	*	0.190	1.000	1.000	1.000	1.000	1.000
		% RSD	MEAN ABS	READING1	READING2	READING3	
		2.200	0.022	0.021	0.022	0.021	

TEST: 14 7/15/98 10:49:52

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
134	*	0.001	1.000	1.000	1.000	50.000	50.000
		% RSD	MEAN ABS	READING1	READING2	READING3	
		39.700	0.001	0.001	0.001	0.002	

TEST: 15 7/15/98 10:50:29

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
135	*	0.765	1.000	1.000	1.000	50.000	50.000
		% RSD	MEAN ABS	READING1	READING2	READING3	
		1.000	0.001	0.001	0.001	0.002	

DATA SHEET FOR FLAMEAA RUN

IN NAME: 9819504204
 ELEMENT: DR

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

USE: 16 7/15/98 10:50:45

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981810 L		981950820002	0.011	10.000	2.000	5.000	50.000	50.000
<i>Pmw4ml</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	48.900	0.001	0.001	0.001	0.002	

USE: 17 7/15/98 10:51:08

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981810 D		981950820002	0.010	1.000	1.000	1.000	50.000	50.000
<i>Pmw4md</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	55.500	0.001	0.002	0.001	0.001	

USE: 18 7/15/98 10:51:29

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981810 R		981950820002	0.205	1.000	1.000	1.000	50.000	50.000
<i>Pmw4ms</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	1.400	0.023	0.023	0.023	0.022	

USE: 19 7/15/98 10:51:52

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981810 M		981950820002	0.200	1.000	1.000	1.000	50.000	50.000
<i>Pmw4mh</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	2.700	0.022	0.022	0.023	0.022	

USE: 20 7/15/98 10:52:19

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981808 *		981950820002	0.167	1.000	1.000	1.000	50.000	50.000
<i>Pmw4u</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	0.700	0.019	0.019	0.019	0.019	

DATA SHEET FOR FLAMEAA RUN

FILE NAME: 981960444
 ELEMENT OR

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

EE: 21 7/15/98 10:52:41

SAMPLE	GC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
51809	*	981950820002	0.233	1.000	1.000	1.000	50.000	50.000
<i>Pm4UD</i>								
	RR	FI	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	3.000	0.024	0.024	0.025	0.024	

EE: 22 7/15/98 10:53:10

SAMPLE	GC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
132	*		0.491	1.000	1.000	1.000	1.000	1.000
% RECOVERY			% RSD	MEAN ABS	READING1	READING2	READING3	
98.2			1.500	0.052	0.053	0.052	0.052	

EE: 23 7/15/98 10:53:27

SAMPLE	GC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
132	*		0.010	1.000	1.000	1.000	1.000	1.000
% RSD			MEAN ABS	READING1	READING2	READING3		
19.900			0.001	0.001	0.001	0.001	0.001	

EE: 24 7/15/98 10:54:27

SAMPLE	GC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981811	*	981950820002	0.012	1.000	1.000	1.000	50.000	50.000
<i>Pmw4L</i>								
	RR	FI	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	25.200	0.001	0.002	0.001	0.002	

EE: 25 7/15/98 10:54:48

SAMPLE	GC	BATCH#	CONC. (ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
981812	*	981950820002	0.049	1.000	1.000	1.000	50.000	50.000
<i>Pmw5U</i>								
	RR	FI	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	2.400	0.005	0.005	0.005	0.005	

DATA SHEET FOR FLAMEAAR RUN

RUN NAME: - 9819604A04
ELEMENT CR

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TIME: 26 7/15/98 10:55:10

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761813	* 981950820002	0.010	1.000	1.000	1.000	50.000	50.000
<i>Pnw 5m</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	56.400	0.001	0.001	0.001	0.002	

TIME: 27 7/15/98 10:55:34

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761814	* 981950820002	0.014	1.000	1.000	1.000	50.000	50.000
<i>Pnw 5L</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	25.800	0.002	0.002	0.002	0.001	

TIME: 28 7/15/98 10:55:58

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761815	* 981950820002	0.065	1.000	1.000	1.000	50.000	50.000
<i>Pnw 6U</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	13.300	0.009	0.009	0.007	0.007	

TIME: 29 7/15/98 10:56:20

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761816	* 981950820002	0.016	1.000	1.000	1.000	50.000	50.000
<i>Pnw 7m</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	23.400	0.002	0.002	0.002	0.001	

TIME: 30 7/15/98 10:56:42

SAMPLE	QC BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2761817	* 981950820002	0.026	1.000	1.000	1.000	50.000	50.000
<i>Pnw 7L</i>							
RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
—	—	12.700	0.003	0.003	0.003	0.003	

DATA SHEET FOR FLAMEAAS RUN

RUN NAME: 98195044A
ELEMENT OR

LANCASTER LABORATORIES
INSTRUMENT ID: 00907

TUBE: 31 7/15/98 10:57:03

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
981818	*	981950820002	0.155	1.000	1.000	1.000	50.000	50.000
<i>P.m.w.70</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	2.100	0.017	0.017	0.018	0.017	

TUBE: 32 7/15/98 10:57:25

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
981819	*	981950820002	0.016	1.000	1.000	1.000	50.000	50.000
<i>P.m.w.70</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	47.600	0.002	0.001	0.001	0.003	

TUBE: 33 7/15/98 10:57:45

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
981820	*	981950820002	0.014	1.000	1.000	1.000	50.000	50.000
<i>P.m.w.7L</i>								
	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3	
	—	—	12.700	0.002	0.001	0.002	0.002	

TUBE: 34 7/15/98 10:58:04

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
981821	*	981950820002	0.501	1.000	1.000	1.000	1.000	1.000
<i>P.m.w.7L</i>								
	% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3		
	100.2	1.700	0.052	0.052	0.054	0.054		

TUBE: 35 7/15/98 10:58:21

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIGVOL	DF	FINVOL	SAMP WT
981822	*	981950820002	0.007	1.000	1.000	1.000	1.000	1.000
<i>P.m.w.7L</i>								
	% RSD	MEAN ABS	READING1	READING2	READING3			
	25.900	1.000	0.000	0.001	0.002			

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819504404
 ELEMENT OR

LANCASTER LABORATORIES
 INSTRUMENT ID: 03907

TUBE: 36 7/15/98 10:58:41

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1521	*	981950620002	0.007	1.000	1.000	1.000	50.000	50.000
mw --- 1								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	18.500	0.001	0.001	0.001	0.001

TUBE: 37 7/15/98 10:59:04

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1522	*	981950620002	0.058	1.000	1.000	1.000	50.000	50.000
mw --- 3								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	4.600	0.007	0.007	0.006	0.007

TUBE: 38 7/15/98 10:59:56

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1523	*	981951579001	0.026	1.000	1.000	1.000	25.000	1.000
ZZZZZZ								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	35.300	0.003	0.002	0.003	0.004

TUBE: 39 7/15/98 11:00:27

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1524	*	981951579001	0.220	1.000	1.000	1.000	1.000	1.000
ZZZZZZ								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	2.500	0.024	0.024	0.025	0.024

TUBE: 40 7/15/98 11:01:47

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
1525	*	981951579001	0.227	1.000	1.000	1.000	1.000	1.000
ZZZZZZ								
		RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
		—	—	1.200	0.025	0.024	0.025	0.025

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819574004
ELEMENT OR

LANCASTER LABORATORIES
INSTRUMENT ID: 03967

TIME: 41 7/15/98 11:02:19

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
98195124	*	981951579001	2.490	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	—	2.000	0.255	0.255	0.250	0.260

TIME: 42 7/15/98 11:02:55

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
98195125	*	981951579001	50.000	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	—	0.500	0.350	0.350	0.352	0.349

TIME: 43 7/15/98 11:03:56

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
98195126	*	981951579001	0.338	10.000	1.000	10.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	—	1.700	0.050	0.050	0.056	0.057

TIME: 44 7/15/98 11:04:34

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
98195126	*	981951579001	50.000	1.000	1.000	1.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	—	1.400	0.500	0.503	0.505	0.492

TIME: 45 7/15/98 11:05:29

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
98195126	*	981951579001	0.500	10.000	1.000	10.000	25.000	1.000

ZZZZZ	RR	RD	% RSD	MEAN ABS	READING1	READING2	READING3
—	—	—	0.500	0.050	0.050	0.050	0.054

DATA SHEET FOR FLAMEAA RUN

RUN NAME: 9819604A04
ELEMENT CR

LANCASTER LABORATORIES
INSTRUMENT ID: 03907

TUBE: 46 7/15/98 11:06:06

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
CCV4	*		0.506	1.000	1.000	1.000	1.000	1.000
			% RECOVERY	% RSD	MEAN ABS	READING1	READING2	READING3
			101.2	2.700	0.054	0.053	0.056	0.053

TUBE: 47 7/15/98 11:06:23

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
C 34	*		0.013	1.000	1.000	1.000	1.000	1.000
			%RSD	MEAN ABS	READING1	READING2	READING3	
			22.200	0.001	0.001	0.002	0.001	

TUBE: 48 7/15/98 11:06:58

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2959127	*	981951579001	50.000	1.000	1.000	1.000	25.000	1.000
			% RSD	MEAN ABS	READING1	READING2	READING3	
			1.200	0.603	0.606	0.608	0.594	

TUBE: 49 7/15/98 11:07:58

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2959127	*	981951579001	0.612	10.000	1.000	10.000	25.000	1.000
			% RSD	MEAN ABS	READING1	READING2	READING3	
			1.200	0.065	0.064	0.065	0.066	

TUBE: 50 7/15/98 11:08:33

SAMPLE	QC	BATCH#	CONC.(ppm)	DILVOL	ALIQVOL	DF	FINVOL	SAMP WT
2959128	*	981951579001	0.021	1.000	1.000	1.000	25.000	1.000
			% RSD	MEAN ABS	READING1	READING2	READING3	
			28.400	0.002	0.003	0.002	0.002	

Furnace Data

LANCASTER LABORATORIES

GRAPHITE FURNACE ATOMIC ABSORPTION

DATA REVIEWED BY:

JMS028 7/15/98

DATA VERIFIED BY:

*RDG/ly
7/15/98*

DATA FILE NAME: PB19607

INSTRUMENT NO: 03812

RUN NAME: 9819603F03

BKG CORR: BZ

ANALYST: 31

ELEMENT: PB

407

Concentration is used to evaluate if sample results are within calibration range.

RUN NAME: 9819603F03

LANCASTER LABORATORIES

PAGE: 1

INSTRUMENT ID: 03812

ANALYST: 31

GFAA ELEMENT: PB

TUBE:	1	07/15/98 14:48				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S0	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
0.0000	0.0	-0.004	-0.004	-0.003

TUBE:	2	07/15/98 14:53				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S3.00	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
3.0000	10.4	0.044	0.047	0.040

TUBE:	3	07/15/98 14:58				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S9.00	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
9.0000	5.8	0.107	0.112	0.103

TUBE:	4	07/15/98 15:03				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S15.00	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
15.0000	4.4	0.176	0.181	0.170

TUBE:	5	07/15/98 15:08				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S30.00	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
30.0000	9.2	0.309	0.329	0.289

TUBE:	6	07/15/98 15:12				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
S60.00	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
60.0000	0.9	0.600	0.596	0.603

TUBE:	7	07/15/98 15:17				
SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER	
ICV	*****	0	0	1		

AVG(ppb)	ZRPD	AVG abs	BURN 1	BURN 2
18.6600	7.2	0.214	0.225	0.203

ZRECOVERY = 93.3

RUN NAME: 9819603F03
PAGE: 2
ANALYST: 31

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 8 07/15/98 15:21
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
ICB ***** 0 0 1

AVG(ppb) ZRPD AVG abs BURN 1 BURN 2
0.1300 73.0 0.002 0.001 0.003

TUBE: 9 07/15/98 15:26
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CRA ***** 0 0 1

AVG(ppb) ZRPD AVG abs BURN 1 BURN 2
3.1200 2.7 0.045 0.046 0.044

TUBE: 10 07/15/98 15:31
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCV 1 ***** 0 0 1

AVG(ppb) ZRPD AVG abs BURN 1 BURN 2
24.7800 3.7 0.269 0.262 0.276

ZRECOVERY = 99.1

TUBE: 11 07/15/98 15:35
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCB 1 ***** 0 0 1

AVG(ppb) ZRPD AVG abs BURN 1 BURN 2
0.1200 25.6 0.002 0.001 0.002

TUBE: 12 07/15/98 15:40
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961944 U***** 50 50 10 981945715001

V ZZZZZZ
AVG(ppb) ZRPD AVG abs BURN 1 BURN 2 RR RD
46.0300 0.2 0.466 0.466 0.467 PPS ---

TUBE: 13 07/15/98 15:44
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961944 D***** 50 50 10 981945715001

V ZZZZZZ
AVG(ppb) ZRPD AVG abs BURN 1 BURN 2 RR RD
44.7500 0.1 0.454 0.454 0.454 ---

TUBE: 14 07/15/98 15:48
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961944 R***** 50 50 10 981945715001

V ZZZZZZ
AVG(ppb) ZRPD AVG abs BURN 1 BURN 2 RR RD
48.5100 0.4 0.490 0.492 0.489 ---

RUN NAME: 9819603F03
PAGE: 3
ANALYST: 31

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 15 07/15/98 15:53
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
PBW ***** 50 50 1 981945704002

~~V~~ AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
0.0800 53.6 0.001 0.002 0.001 ---

TUBE: 16 07/15/98 15:57
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
LCSW ***** 1 1 1 981945704002

~~V~~ AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
20.2500 0.6 0.229 0.230 0.228 ---

TUBE: 17 07/15/98 16:02
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955782 U***** 50 50 1 981945704002

~~V~~ **ZZZZZZ** AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
39.1100 0.3 0.399 0.400 0.398 ^{1st} ~~not~~ ---

TUBE: 18 07/15/98 16:06
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955782 UP***** 50 50 1 981945704002

ZZZZZZ AVG(ppb) %RPD AVG abs BURN 1 BURN 2
53.3900 0.1 0.537 0.537 0.537

%RECOVERY = 71.4

TUBE: 19 07/15/98 16:10
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2956682 D***** 50 50 1 981945704002

~~V~~ **ZZZZZZ** AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
42.8100 0.6 0.435 0.437 0.433 ^{1st} ~~not~~ ---

TUBE: 20 07/15/98 16:15
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955783 R***** 50 50 1 981945704002

~~V~~ **ZZZZZZ** AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
55.6700 0.5 0.559 0.557 0.561 ---

TUBE: 21 07/15/98 16:19
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955784 M***** 50 50 1 981945704002

~~V~~ **ZZZZZZ** AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
57.6900 0.9 0.578 0.582 0.574 ^{1st} ~~not~~ ---

RUN NAME: 9819603F03
PAGE: 4
ANALYST: 31

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 22 07/15/98 16:23
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCV 2 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
24.8800 2.9 0.270 0.276 0.264

%RECOVERY = 99.5

TUBE: 23 07/15/98 16:28
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCB 2 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
-0.0800 5.4 -0.001 -0.001 -0.001

TUBE: 24 07/15/98 16:32
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955782 UL***** 50 50 5 981945704002

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
7.7000 0.7 0.096 0.096 0.095

TUBE: 25 07/15/98 16:37
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955785 ***** 50 50 1 981945704002

V AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
43.9300 0.1 0.446 0.446 0.446 100 mFA --

TUBE: 26 07/15/98 16:41
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955786 ***** 50 50 1 981945704002

V AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
1.1900 33.9 0.017 0.021 0.013 -- --

TUBE: 27 07/15/98 16:46
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2955787 ***** 50 50 1 981945704002

V AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
0.0200 86.0 0.000 0.000 0.000 -- --

TUBE: 28 07/15/98 16:50
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2956875 ***** 50 50 1 981945704002

V AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
-0.2700 13.1 -0.004 -0.004 -0.004 -- --

LANCASTER LABORATORIES
GRAPHITE FURNACE ATOMIC ABSORPTION

DATA REVIEWED BY: JMS068 7/16/98

DATA VERIFIED BY: RDG/ly
7/17/98

DATA FILE NAME: PB19709
RUN NAME: 9819701F01

INSTRUMENT NO: 02803
BKG CORR: BD

ANALYST: 68

ELEMENT: PB

RUN NAME: 9819701F01

PAGE: 1

ANALYST: 68

LANCASTER LABORATORIES

INSTRUMENT ID: 02803

GFAA ELEMENT: PB

TUBE: 1 07/16/98 15:53

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S0	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
0.0000	0.0	-0.005	-0.003	-0.007

TUBE: 2 07/16/98 15:59

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S3.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
3.0000	10.1	0.028	0.030	0.026

TUBE: 3 07/16/98 16:04

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S9.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
9.0000	1.3	0.089	0.088	0.090

TUBE: 4 07/16/98 16:10

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S15.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
15.0000	4.1	0.145	0.150	0.141

TUBE: 5 07/16/98 16:15

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S30.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
30.0000	0.3	0.276	0.277	0.276

TUBE: 6 07/16/98 16:21

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
S60.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
60.0000	3.7	0.486	0.499	0.474

TUBE: 7 07/16/98 16:26

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
ICV	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
19.4900	3.2	0.186	0.190	0.182

%RECOVERY = 97.4

RUN NAME: 9819701F01

PAGE: 2

ANALYST: 68

LANCASTER LABORATORIES

INSTRUMENT ID: 02803

GFAA ELEMENT: PB

<u>TUBE:</u>		<u>07/16/98 16:31</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
ICB		*****	0	0	1	
	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	
	-0.6100	47.6	-0.006	-0.004	-0.008	

<u>TUBE:</u>		<u>07/16/98 16:36</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
CRA		*****	0	0	1	
	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	
	2.6400	10.6	0.025	0.027	0.023	

<u>TUBE:</u>		<u>07/16/98 16:41</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
CCV 1		*****	0	0	1	
	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	
	25.9100	0.5	0.242	0.241	0.243	
	%RECOVERY = 103.6					

<u>TUBE:</u>		<u>07/16/98 16:46</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
CCB 1		*****	0	0	1	
	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	
	-0.6000	21.5	-0.006	-0.006	-0.005	

<u>TUBE:</u>		<u>07/16/98 16:51</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
PBW		*****	50	50	1	981955704001
V X	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	<u>RR</u> <u>RD</u>
	-0.6100	4.3	-0.006	-0.006	-0.006	— —

<u>TUBE:</u>		<u>07/16/98 16:56</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
LCSW		*****	1	1	1	981955704001
V X	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	<u>RR</u> <u>RD</u>
	18.2900	1.9	0.175	0.173	0.178	— —

<u>TUBE:</u>		<u>07/16/98 17:01</u>				
<u>SAMPLE</u>		<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
2961813		U*****	50	50	1	981955704001
V X	<u>AVG(ppb)</u>	<u>%RPD</u>	<u>AVG abs</u>	<u>BURN 1</u>	<u>BURN 2</u>	<u>RR</u> <u>RD</u>
	0.1100	52.2	0.001	0.001	0.001	— —

RUN NAME: 9819701F01
PAGE: 3
ANALYST: 68

LANCASTER LABORATORIES
INSTRUMENT ID: 02803
GFAA ELEMENT: PB

TUBE: 15 07/16/98 17:06
SAMPLE CLASS IVOL/WT
2961813 UP***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWSMA

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
17.7600 1.2 0.171 0.172 0.169

%RECOVERY = 88.8

TUBE: 16 07/16/98 17:11
SAMPLE CLASS IVOL/WT
2961813 D***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWSMD

V
X AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
0.4100 44.9 0.004 0.005 0.003 — —

TUBE: 17 07/16/98 17:16
SAMPLE CLASS IVOL/WT
2961813 R***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWSM

V
X AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
17.9600 0.2 0.172 0.172 0.173 — —

TUBE: 18 07/16/98 17:21
SAMPLE CLASS IVOL/WT
2961813 M***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWSmm

V
X AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
17.7800 0.3 0.171 0.170 0.171 — —

TUBE: 19 07/16/98 17:26
SAMPLE CLASS IVOL/WT
2961813 UL***** 50

FVOL DF BATCH NUMBER
50 5 981955704001

PmWSmL

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
0.0200 99.9 0.000 0.001 0.000

TUBE: 20 07/16/98 17:31
SAMPLE CLASS IVOL/WT
2961814 ***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWSL

V
X AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
3.2800 16.1 0.031 0.027 0.034 — —

TUBE: 21 07/16/98 17:35
SAMPLE CLASS IVOL/WT
2961815 ***** 50

FVOL DF BATCH NUMBER
50 1 981955704001

PmWLV

V
X AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
21.8400 0.2 0.207 0.206 0.207 — —

RUN NAME: 9819701F01
PAGE: 4
ANALYST: 68

LANCASTER LABORATORIES
INSTRUMENT ID: 02803
GFAA ELEMENT: PB

TUBE: 22 07/16/98 17:41

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCV 2	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
25.2700	0.8	0.236	0.235	0.238

%RECOVERY = 101.1

TUBE: 23 07/16/98 17:46

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCB 2	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
-0.8300	8.9	-0.008	-0.007	-0.008

TUBE: 24 07/16/98 17:51

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961816	*****	50	50	1	981955704001

P.m.w.b.m

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
12.2800	0.6	0.120	0.121	0.120	—	—

TUBE: 25 07/16/98 17:56

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961817	*****	50	50	1	981955704001

P.m.w.L

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
9.9500	1.4	0.098	0.097	0.099	—	—

TUBE: 26 07/16/98 18:00

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961818	*****	50	50	1	981955704001

P.m.w.L

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
0.0000	1.2	0.545	0.549	0.540	<i>25</i>	—

OVER CALIBRATION RANGE

TUBE: 27 07/16/98 18:05

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961819	*****	50	50	1	981955704001

P.m.w)n

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
0.3600	61.7	0.003	0.005	0.002	—	—

TUBE: 28 07/16/98 18:10

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961820	*****	50	50	1	981955704001

P.m.w)L

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
3.8300	2.9	0.036	0.037	0.035	—	—

RUN NAME: 9819701F01
PAGE: 5
ANALYST: 68

LANCASTER LABORATORIES
INSTRUMENT ID: 02803
GFAA ELEMENT: PB

TUBE: 29 07/16/98 18:15
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2961821 MW - -1 ***** 50 50 1 981955704001

~~V~~
X
AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
1.2400 1.2 0.012 0.012 0.012 — —

TUBE: 30 07/16/98 18:20
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2961822 MW - -3 ***** 50 50 1 981955704001

~~V~~
X
AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
3.3600 4.8 0.032 0.031 0.033 — —

TUBE: 31 07/16/98 18:25
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2962227 ***** 50 50 1 981955704001

~~V~~
X
ZZZZZZ
AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
2.3100 6.7 0.022 0.021 0.023 — —

TUBE: 32 07/16/98 18:30
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2962228 ***** 50 50 1 981955704001

~~V~~
X
ZZZZZZ
AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
1.5100 11.9 0.014 0.013 0.015 — —

TUBE: 33 07/16/98 18:36
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2962229 ***** 50 50 1 981955704001

~~V~~
X
ZZZZZZ
AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
5.9000 2.4 0.057 0.056 0.058 — —

TUBE: 34 07/16/98 18:41
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCV 3 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
25.2500 1.5 0.236 0.239 0.234

%RECOVERY = 101.0

TUBE: 35 07/16/98 18:46
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCB 3 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
-0.7200 14.9 -0.007 -0.006 -0.007

LANCASTER LABORATORIES
GRAPHITE FURNACE ATOMIC ABSORPTION

DATA REVIEWED BY:

MS031

DATA VERIFIED BY:

MS068 7/19/98

DATA FILE NAME: PR19802

INSTRUMENT NO: 03912

RUN NAME: PR19802F03

BKG CORR: BZ

ANALYST: JI

ELEMENT: PB

418

Concentration is used to evaluate if sample results are within calibration range.

RUN NAME: 9819802F03

LANCASTER LABORATORIES

PAGE: 1

INSTRUMENT ID: 03812

ANALYST: 31

GFAA ELEMENT: PB

TUBE:	07/17/98 09:41				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S0	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
0.0000	0.0	-0.007	-0.006	-0.007	

TUBE:	07/17/98 09:46				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S3.00	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
3.0000	0.0	0.032	0.033	0.032	

TUBE:	07/17/98 09:51				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S9.00	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
9.0000	2.0	0.091	0.092	0.090	

TUBE:	07/17/98 09:56				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S15.00	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
15.0000	2.3	0.150	0.148	0.153	

TUBE:	07/17/98 10:00				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S30.00	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
30.0000	5.0	0.286	0.275	0.296	

TUBE:	07/17/98 10:05				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S60.00	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
60.0000	1.0	0.502	0.505	0.498	

TUBE:	07/17/98 10:10				
SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
ICV	*****	0	0	1	
AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	
20.4300	0.9	0.202	0.203	0.201	

%RECOVERY = 102.2

RUN NAME: PS198329AC
 PAGE: 1
 ANALYST: Z

LANCASTER LABORATORIES
 INSTRUMENT ID: 40212
 GRAF ELEMENT: PB

TUBE: 8 07/17/98 10:14
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 ICE ***** 0 0 1
 AVG(ppb) XRPD AVG abs BURN 1 BURN 2
 0.1500 45.9 0.002 0.001 0.002

TUBE: 9 07/17/98 10:19
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CRA ***** 0 0 1
 AVG(ppb) XRPD AVG abs BURN 1 BURN 2
 3.1400 1.9 0.034 0.034 0.032

TUBE: 10 07/17/98 10:24
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CRA ***** 0 0 1
 V AVG(ppb) XRPD AVG abs BURN 1 BURN 2 Corrected RR RD
 23.4500 1.9 0.229 0.232 0.226 Conc (1 pt MSA) 0.000000
 WRECOVERY = 0.0

TUBE: 11 07/17/98 10:29
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CCV 1 ***** 0 0 1
 AVG(ppb) XRPD AVG abs BURN 1 BURN 2
 24.5000 1.2 0.240 0.238 0.242
 WRECOVERY = 95.4

TUBE: 12 07/17/98 10:33
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CCS 1 ***** 0 0 1
 AVG(ppb) XRPD AVG abs BURN 1 BURN 2
 -0.4800 12.1 -0.005 -0.005 -0.005

TUBE: 13 07/17/98 10:37
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 C95689C ***** 50 50 1 991943704001
 222222
 AVG(ppb) XRPD AVG abs BURN 1 BURN 2
 -0.3500 34.7 -0.004 -0.002 -0.005

RUN NAME: 9819802F03

PAGE: 3

ANALYST: 31

LANCASTER LABORATORIES

INSTRUMENT ID: 03612

GRAA ELEMENT: PB

TUBE: 14 07/17/98 10:42

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2956893	*****B*	50	50	1	981945704001

ZZZZZZ

Corrected RR RD

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	Conc (1 pt MSA)
11.7500	1.6	0.118	0.120	0.117	0.000000

%RECOVERY = 58.8

TUBE: 15 07/17/98 10:47

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2956682	D*****	50	50	2	981945704002

ZZZZZZ

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
19.3700	5.6	0.192	0.200	0.184

TUBE: 16 07/17/98 10:51

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2956682	D*****B*	50	50	2	981945704002

ZZZZZZ

Corrected RR RD

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	Conc (1 pt MSA)
41.3000	0.6	0.375	0.377	0.374	17.665299

%RECOVERY = 109.6

TUBE: 17 07/17/98 10:56

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2955783	R*****	50	50	2	981945704002

ZZZZZZ

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
27.2400	7.4	0.262	0.249	0.276

TUBE: 18 07/17/98 11:01

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2955783	R*****B*	50	50	2	981945704002

ZZZZZZ

Corrected RR RD

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	Conc (1 pt MSA)
47.9500	3.5	0.424	0.434	0.413	26.293436

%RECOVERY = 103.6

TUBE: 19 07/17/98 11:05

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2955784	R*****	50	50	2	981945704002

ZZZZZZ

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
25.7200	10.7	0.249	0.268	0.230

RUN NAME: 981945704002

LANCASTER LABORATORIES

PAGE: 4

INSTRUMENT ID: 60812

ANALYST: DL

CPMA ELEMENT: PF

TUBE: 20 07/17/98 11:16

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
2955784	*****	50	50	2	981945704002

Z Z Z Z Z Z

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2	Corrected Conc (1 pt MSA)	RR	RD
47.6200	97.2	0.417	0.420	0.414	14.15335		

%RECOVERY = 106.5

TUBE: 21 07/17/98 11:14

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
2955785	*****	50	50	2	981945704002

Z Z Z Z Z Z

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2
20.9900	0.3	0.207	0.207	0.207

TUBE: 22 07/17/98 11:19

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
2955785	*****	50	50	2	981945704002

Z Z Z Z Z Z

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2	Corrected Conc (1 pt MSA)	RR	RD
42.0000	0.0	0.381	0.381	0.381	19.952471		

%RECOVERY = 105.2

TUBE: 23 07/17/98 11:24

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
OCV 2	*****	0	0	1	

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2
24.7000	0.7	0.240	0.239	0.242

%RECOVERY = 98.2

TUBE: 24 07/17/98 11:25

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
OCV 2	*****	0	0	1	

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2
-0.2000	44.5	-0.003	-0.004	-0.002

TUBE: 25 07/17/98 11:33

SAMPLE	CLASS	IVOL/WT	EVOL	IF	BATCH NUMBER
2955785	*****	50	50	1	981945704002

Z Z Z Z Z Z

AVG(ppb)	%RFD	AVG abs	BURN 1	BURN 2
-0.2500	3.1	-0.003	-0.003	-0.002

RUN NAME: 98195703

PAGE: 5

ANALYST: 31

LANCASTER LABORATORIES

INSTRUMENT ID: 00812

GFAA ELEMENT: PB

TUBE: 26 07/17/98 11:38

SAMPLE CLASS IVOL/WT
2956875 *****B* 50

EVOL DF BATCH NUMBER
50 1 981945704002

Corrected RR RD

ZZZZZZ

AVG(ppb) %RPD AVG abs
19.5300 0.6 0.194

BURN 1 BURN 2
0.195 0.193

Conc (1 pt MSA) 0.000000

%RECOVERY = 98.0

TUBE: 27 07/17/98 11:42

SAMPLE CLASS IVOL/WT
2956868 ***** 50

EVOL DF BATCH NUMBER
50 5 981945704002

ZZZZZZ

AVG(ppb) %RPD AVG abs
17.4300 5.2 0.174

BURN 1 BURN 2
0.180 0.167

TUBE: 28 07/17/98 11:47

SAMPLE CLASS IVOL/WT
2959868 *****B* 50

EVOL DF BATCH NUMBER
50 5 981945704002

Corrected RR RD

ZZZZZZ

AVG(ppb) %RPD AVG abs
19.5000 1.1 0.362

BURN 1 BURN 2
0.359 0.365

Conc (1 pt MSA) 15.764706

%RECOVERY = 110.5

TUBE: 29 07/17/98 11:51

SAMPLE CLASS IVOL/WT
2951808 ***** 50

EVOL DF BATCH NUMBER
50 5 981945704002

PMW40 D

AVG(ppb) %RPD AVG abs
11.2300 0.5 0.113

BURN 1 BURN 2
0.114 0.113

TUBE: 30 07/17/98 11:56

SAMPLE CLASS IVOL/WT
2951808 ***** 50

EVOL DF BATCH NUMBER
50 5 981945704002

PMW40 I

AVG(ppb) %RPD AVG abs
12.4400 0.6 0.302

BURN 1 BURN 2
0.306 0.299

Corrected RR RD

Conc (1 pt MSA) 10.798345

%RECOVERY = 103.9

TUBE: 31 07/17/98 12:00

SAMPLE CLASS IVOL/WT
2951808 ***** 50

EVOL DF BATCH NUMBER
50 5 981945704002

PMW40 D

AVG(ppb) %RPD AVG abs
11.3400 0.3 0.113

BURN 1 BURN 2
0.113 0.114

RUN NAME: 9819802F03
PAGE: 6
ANALYST: 31

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 32 07/17/98 12:05

SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2961809 *****B* 50 50 5 981945704002

PM4001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 Corrected RR RD
31.5200 2.8 0.302 0.308 0.296 10.870406

%RECOVERY = 103.4

TUBE: 33 07/17/98 12:09

SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2962110 ***** 50 50 10 981945704002

222222

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
11.5100 1.5 0.116 0.115 0.117

TUBE: 34 07/17/98 12:14

SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2962110 *****B* 50 50 10 981945704002

222222

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 Corrected RR RD
33.6400 0.1 0.316 0.316 0.316 10.402169

%RECOVERY = 110.6

TUBE: 35 07/17/98 12:19

SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCV 3 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
24.9100 0.3 0.242 0.242 0.243

%RECOVERY = 99.6

TUBE: 36 07/17/98 12:23

SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCB 3 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
-0.4300 13.0 -0.005 -0.005 -0.004

DATA REVIEWED BY:

HS031

DATA VERIFIED BY:

HS028 7/19/98

424

LANCASTER LABORATORIES

GRAPHITE FURNACE ATOMIC ABSORPTION

DATA REVIEWED BY:

DTG 9

DATA VERIFIED BY:

*PG-114
7/20/88*

DATA FILE NAME: PE20103

RUN NAME: 9820101F03

INSTRUMENT NO: 03812

ENG CORR: BZ

ANALYST: 809

ELEMENT: PB

RUN NAME: 9326101F02

LANCASTER LABORATORIES

PAGE: 1

INSTRUMENT ID: 03812

ANALYST: BZF

GF44 ELEMENT: PB

TUBE: 1 07/20/98 09:41

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
50	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
0.0000	0.0	0.005	0.007	0.004

TUBE: 2 07/20/98 08:45

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
53.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
3.0000	0.2	0.040	0.040	0.040

TUBE: 3 07/20/98 08:50

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
59.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
9.0000	5.7	0.114	0.119	0.110

TUBE: 4 07/20/98 08:55

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
915.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
15.0000	1.5	0.182	0.184	0.187

TUBE: 5 07/20/98 09:00

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
300.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
30.0000	1.6	0.336	0.340	0.332

TUBE: 6 07/20/98 09:05

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
350.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
60.0000	0.1	0.571	0.570	0.571

TUBE: 7 07/20/98 09:09

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
107	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
19.5000	3.1	0.229	0.234	0.234

%RECOVERY = 97.5

RUN NAME: 9820101F03
PAGE: 2
ANALYST: 809

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 8 07/20/98 09:14

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
ICB	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
-0.1000	99.5	-0.001	0.000	-0.002

TUBE: 9 07/20/98 09:18

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
CRA	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
3.0000	3.3	0.040	0.039	0.041

TUBE: 10 07/20/98 09:23

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
CRA	*****	0	0	1	

ZZZZZZ

	AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	Corrected Conc (1 pt MSA)	RR	RD
V	20.6700	3.5	0.241	0.247	0.235	0.000000		

%RECOVERY = 0.0

TUBE: 11 07/20/98 09:28

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
CCV 1	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
25.5700	1.0	0.291	0.289	0.293

%RECOVERY = 102.3

TUBE: 12 07/20/98 09:32

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
CCB 1	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
-0.0500	99.9	-0.001	0.000	-0.002

TUBE: 13 07/20/98 09:37

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2961810	*****	50	50	1	981945704002

PMWYMD

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
1.9200	5.1	0.026	0.025	0.027

RUN NAME: 9820101F03
PAGE: 3
ANALYST: 9/9

LANCASTER LABORATORIES
INSTRUMENT ID: 03812
GFAA ELEMENT: PB

TUBE: 14 07/20/98 09:42

SAMPLE CLASS IVOL/WT
2961810 ***** 50

pmw4m1

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
19.9100 1.1 0.222

BURN 1 BURN 2 Conc (1 pt MSA)
0.220 0.224 2.273535

%RECOVERY = 84.4

TUBE: 15 07/20/98 09:46

SAMPLE CLASS IVOL/WT
2961811 ***** 50

pmw4L0

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
20.3300 1.2 0.238

BURN 1 BURN 2
0.240 0.236

TUBE: 16 07/20/98 09:51

SAMPLE CLASS IVOL/WT
2961811 ***** 50

pmw4L1

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
37.5400 4.2 0.404

BURN 1 BURN 2 Conc (1 pt MSA)
0.416 0.392 23.625799

%RECOVERY = 86.0

TUBE: 17 07/20/98 09:55

SAMPLE CLASS IVOL/WT
2961812 ***** 50

pmw5v0

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
20.7800 0.5 0.242

BURN 1 BURN 2
0.243 0.242

TUBE: 18 07/20/98 10:00

SAMPLE CLASS IVOL/WT
2961812 ***** 50

pmw5v1

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
38.1300 2.0 0.409

BURN 1 BURN 2 Conc (1 pt MSA)
0.403 0.415 23.953890

%RECOVERY = 86.8

TUBE: 19 07/20/98 10:05

SAMPLE CLASS IVOL/WT
2962109 ***** 50

zzzzzz

FVOL DF BATCH NUMBER
50 1 981945704002

AVG(ppb) %RPD AVG abs
9.0900 0.7 0.115

BURN 1 BURN 2
0.116 0.115

RUN NAME: 9820101F03
PAGE: 4
ANALYST: B09

LANCASTER LABORATORIES
INSTRUMENT ID: 00812
GFAA ELEMENT: PB

TUBE: 20 07/20/98 10:09

SAMPLE CLASS IVOL/WT
2962109 ***** 50

FVOL DF BATCH NUMBER
50 1 981945704002

222222

AVG(ppb) %RPD AVG abs
29.2100 0.3 0.328

BURN 1 BURN 2
0.329 0.327

Corrected RR RD
Conc (1 pt MSA) 9.021361

%RECOVERY = 100.6

TUBE: 21 07/20/98 10:14

SAMPLE CLASS IVOL/WT
CCV 2 ***** 0

FVOL DF BATCH NUMBER
0 1

AVG(ppb) %RPD AVG abs
25.4700 0.9 0.290

BURN 1 BURN 2
0.292 0.289

%RECOVERY = 101.9

TUBE: 22 07/20/98 10:19

SAMPLE CLASS IVOL/WT
CCB 2 ***** 0

FVOL DF BATCH NUMBER
0 1

AVG(ppb) %RPD AVG abs
-0.1700 9.1 -0.002

BURN 1 BURN 2
-0.002 -0.002

DATA REVIEWED BY:

EAT809

DATA VERIFIED BY:

RD6114
7/20/98

LANCASTER LABORATORIES

GRAPHITE FURNACE ATOMIC ABSORPTION

DATA REVIEWED BY: *EDT809*

DATA VERIFIED BY: *RDG-114*
7/20/98

DATA FILE NAME: 9828101
RUN NAME: 981010501

INSTRUMENT NO: 60200
END CORR: 00

ANALYST: 609

ELEMENT: AS

430

RUN NAME: 9820102F01

LANCASTER LABORATORIES

PAGE: 1

INSTRUMENT ID: 02803

ANALYST: 809

GFAA ELEMENT: PB

TUBE: 1 07/20/98 08:34

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S0	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
0.0000	0.0	0.002	0.005	-0.001

TUBE: 2 07/20/98 08:39

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S3.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
3.0000	8.1	0.019	0.020	0.018

TUBE: 3 07/20/98 08:45

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S9.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
9.0000	3.7	0.070	0.072	0.068

TUBE: 4 07/20/98 08:50

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S15.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
15.0000	5.7	0.121	0.116	0.126

TUBE: 5 07/20/98 08:56

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S30.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
30.0000	3.1	0.240	0.245	0.235

TUBE: 6 07/20/98 09:01

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
S60.00	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
60.0000	0.4	0.443	0.444	0.442

TUBE: 7 07/20/98 09:06

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
ICV	*****	0	0	1	

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
29.0400	0.8	0.161	0.160	0.162

%RECOVERY = 100.2

RUN NAME: 9824123F01

PAGE: 2

ANALYST: BAF

LANCASTER LABORATORIES

INSTRUMENT ID: 00902

GFAA ELEMENT: FE

TUBE: 8 07/20/98 09:11

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
IC5	*****	0	0	1	

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2
-1.3100	11.9	-0.012	-0.011	-0.012

TUBE: 9 07/20/98 09:15

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
DRA	*****	0	0	1	

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2
4.9200	22.7	0.003	0.028	0.007

TUBE: 10 07/20/98 09:21

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCV 1	*****	0	0	1	

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2
27.1000	1.8	0.217	0.214	0.220

%RECOVERY = 108.4

TUBE: 11 07/20/98 09:27

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCB 1	*****	0	0	1	

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2
-2.0500	15.4	-0.013	-0.012	-0.015

TUBE: 12 07/20/98 09:32

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
REG	*****	1.00	100	1	981975710001

222222

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2	RR	RD
-1.4000	3.0	-0.009	-0.009	-0.010	—	—

TUBE: 13 07/20/98 09:37

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
LOSS	*****	1.00	100	25	981975710001

222222

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2	RR	RD
33.4100	0.9	0.260	0.264	0.268	—	—

TUBE: 14 07/20/98 09:42

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2859991	*****	1.00	100	50	981975710001

222222

AVG(ppb)	XRPD	AVG abs	BURN 1	BURN 2	RR	RD
28.5500	2.0	0.232	0.235	0.238	—	—

1st MSA

432

RUN NAME: 9820102F01

PAGE: 13

ANALYST: 809

LANCASTER LABORATORIES

INSTRUMENT ID: 02803

GFAA ELEMENT: PB

TUBE: 15 07/20/98 09:47

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2959991	UP*****	1.00	100	50	981975710001

Z Z Z Z Z Z

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
52.1800	0.3	0.396	0.395	0.397

%RECOVERY = 116.2

TUBE: 16 07/20/98 09:51

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2959991	D*****	1.00	100	50	981975710001

Z Z Z Z Z Z

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
29.0000	0.8	0.232	0.231	0.233		

TUBE: 17 07/20/98 09:56

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2959991	R*****	1.03	100	50	981975710001

Z Z Z Z Z Z

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
35.2700	0.2	0.280	0.279	0.280		

TUBE: 18 07/20/98 10:01

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2959991	M*****	1.02	100	50	981975710001

Z Z Z Z Z Z

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
27.5300	0.9	0.221	0.222	0.219		

TUBE: 19 07/20/98 10:06

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2959991	UL*****	1.00	100	25	981975710001

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2
5.2200	7.9	0.036	0.034	0.038

TUBE: 20 07/20/98 10:11

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2960914	*****	1.01	100	50	981975710001

Z Z Z Z Z Z

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
26.5600	0.7	0.213	0.214	0.212		

TUBE: 21 07/20/98 10:16

SAMPLE	CLASS	IVOL/WT	FVOL	DF	BATCH NUMBER
2961918	*****	50	50	5	981955704001

Pmw70

AVG(ppb)	%RPD	AVG abs	BURN 1	BURN 2	RR	RD
18.0000	0.4	0.145	0.145	0.145		

RUN NAME: 9820102F01
PAGE: 4
ANALYST: 809

LANCASTER LABORATORIES
INSTRUMENT ID: 02803
GFAA ELEMENT: PB

TUBE: 22 07/20/98 10:21
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCV 2 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
27.4400 0.9 0.220 0.221 0.219

%RECOVERY = 109.8

TUBE: 23 07/20/98 10:26
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
CCB 2 ***** 0 0 1

AVG(ppb) %RPD AVG abs BURN 1 BURN 2
-2.6400 0.7 -0.017 -0.017 -0.017

TUBE: 24 07/20/98 10:31
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2963595 ***** 50 50 1 981965704001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
-2.3100 17.5 -0.015 -0.017 -0.013 — —

TUBE: 25 07/20/98 10:36
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2963596 ***** 50 50 1 981965704001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
-2.0500 5.8 -0.013 -0.014 -0.013 — —

TUBE: 26 07/20/98 10:41
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2963597 ***** 50 50 1 981965704001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
1.3700 8.7 0.009 0.008 0.009 — —

TUBE: 27 07/20/98 10:46
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2963598 ***** 50 50 1 981965704001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
-2.1400 5.0 -0.014 -0.014 -0.013 — —

TUBE: 28 07/20/98 10:51
SAMPLE CLASS IVOL/WT FVOL DF BATCH NUMBER
2963599 ***** 50 50 1 981965704001

AVG(ppb) %RPD AVG abs BURN 1 BURN 2 RR RD
2.0900 31.5 0.013 0.016 0.010 — —

Mercury Data

LANCASTER LABORATORIES

MERCURY ANALYZER

DATA REVIEWED BY: *NSM 823* *7/14/98*

DATA VERIFIED BY: *RDG 114*
7/14/98

DATA FILE NAME: 9819403.PRN
RUN NAME: 9819501M05

INSTRUMENT NO: 62016

ANALYST: 823

ELEMENT: HG

RUN NAME: 9819501M05

PAGE: 1

ANALYST: 823

LANCASTER LABORATORIES

INSTRUMENT ID: 62016

CV ELEMENT: HG

TUBE: 1 07/14/98 11:20

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
SO	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
0.0000	7313.0

TUBE: 2 07/14/98 11:22

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
SO.2	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
0.2000	33730.0

TUBE: 3 07/14/98 11:23

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
SO.5	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
0.5000	74722.0

TUBE: 4 07/14/98 11:24

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
S1.0	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
1.0000	150150.0

TUBE: 5 07/14/98 11:26

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
S2.5	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
2.5000	372127.0

TUBE: 6 07/14/98 11:28

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
S5.0	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
5.0000	719701.0

Correlation Coefficient = 0.99989

TUBE: 7 07/14/98 11:29

<u>SAMPLE</u>	<u>CLASS</u>	<u>IVOL/WT</u>	<u>FVOL</u>	<u>DF</u>	<u>BATCH NUMBER</u>
ICV	*****	0	0	1	

<u>AVG(ppb)</u>	<u>Intensity</u>
2.1900	321083.0

%RECOVERY = 109.5

437

RUN NAME: 9819501M05

PAGE: 2

ANALYST: 823

LANCASTER LABORATORIES

INSTRUMENT ID: 62016

CV ELEMENT: HG

TUBE: 8

07/14/98 11:31

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

ICB

0

0

1

AVG(ppb)

Intensity

0.0130

8455.0

TUBE: 9

07/14/98 11:32

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

CRA

0

0

1

AVG(ppb)

Intensity

0.1730

31297.0

TUBE: 10

07/14/98 11:33

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

CCV 1

0

0

1

AVG(ppb)

Intensity

1.0900

163470.0

XRECOVERY = 109.0

TUBE: 11

07/14/98 11:35

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

CCB 1

0

0

1

AVG(ppb)

Intensity

-0.0090

5218.0

TUBE: 12

07/14/98 11:36

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

PBW

6

6

1

981945714001

ZZZZZZ

AVG(ppb)

Intensity

-0.0100

5096.0

RR

RD

TUBE: 13

07/14/98 11:37

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

LCSW

1

1

1

981945714001

ZZZZZZ

AVG(ppb)

Intensity

1.1500

172033.0

RR

RD

TUBE: 14

07/14/98 11:39

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

2941763

U*****

6

6

1

981945714001

ZZZZZZ

AVG(ppb)

Intensity

5.0600

731377.0

RR

RD

2

438

TUBE: 15 07/14/98 11:40

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
2941763	D*****	6	6	1	981945714001

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
5.1400	743086.0	2	

TUBE: 16 07/14/98 11:41

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
2947264	U*****	6	6	1	981945714001

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
3.2700	475367.0		

TUBE: 17 07/14/98 11:43

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
2947264	R*****	6	6	1	981945714001

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
4.2400	614519.0		

TUBE: 18 07/14/98 11:44

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
FBW	*****	6	6	1	981945714002

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
-0.0350	1498.0		

TUBE: 19 07/14/98 11:46

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
LC5W	*****	1	1	1	981945714002

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
1.0600	158573.0		

TUBE: 20 07/14/98 11:47

SAMPLE	CLASS	IVOL/WT	EVOL	DE	BATCH NUMBER
LC5DW	*****	1	1	1	981945714002

ZZZZZZ

AVG(ppb)	Intensity	RR	RD
1.0800	161955.0		

RUN NAME: 9819501M05

PAGE: 4

ANALYST: 823

LANCASTER LABORATORIES

INSTRUMENT ID: 62016

CV ELEMENT: HG

TUBE: 21 07/14/98 11:48
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 2961701 ***** 6 6 1 981945714002

ZZZZZZ

AVG(ppb)
 -0.0030

Intensity
 6178.0

RR RD

TUBE: 22 07/14/98 11:49
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CCV 2 ***** 0 0 1

AVG(ppb)
 1.0800

Intensity
 161015.0

%RECOVERY = 108.0

TUBE: 23 07/14/98 11:51
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 CCB 2 ***** 0 0 1

AVG(ppb)
 -0.0120

Intensity
 4839.0

TUBE: 24 07/14/98 11:52
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 2961910 ***** 6 6 1 981945714002

ZZZZZZ

AVG(ppb)
 -0.0080

Intensity
 5354.0

RR RD

TUBE: 25 07/14/98 11:54
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 2961944 U***** 6 6 1 981945714002

ZZZZZZ

AVG(ppb)
 -0.0110

Intensity
 4956.0

RR RD

TUBE: 26 07/14/98 11:55
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 2961944 D***** 6 6 1 981945714002

ZZZZZZ

AVG(ppb)
 0.0090

Intensity
 7860.0

RR RD

TUBE: 27 07/14/98 11:56
 SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
 2961944 R***** 6 6 1 981945714002

ZZZZZZ

AVG(ppb)
 1.0700

Intensity
 159384.0

RR RD

440

TUBE: 28

07/14/98 11:58

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

2961945

6

6

1

981945714002

X
AVG(ppb)

Intensity

RR

RD

-0.0020

6244.0

TUBE: 29

07/14/98 11:59

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

2962066

6

6

1

981945714002

X
AVG(ppb)

Intensity

RR

RD

0.0300

10841.0

TUBE: 30

07/14/98 12:00

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

PBW

6

6

1

981945713001

X
AVG(ppb)

Intensity

RR

RD

-0.0250

2971.0

TUBE: 31

07/14/98 12:02

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

LCSW

1

1

1

981945713001

X
AVG(ppb)

Intensity

RR

RD

1.1200

166620.0

TUBE: 32

07/14/98 12:03

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

2961808

6

6

10

981945713001

X
AVG(ppb)

Intensity

RR

RD

0.0280

10603.0

TUBE: 33

07/14/98 12:05

SAMPLE

CLASS

IVOL/WT

EVOL

DF

BATCH NUMBER

2961809

6

6

10

981945713001

X
AVG(ppb)

Intensity

RR

RD

0.0330

11269.0

RUN NAME: 9819501M05

PAGE: 6

ANALYST: 823

LANCASTER LABORATORIES

INSTRUMENT ID: 62016

CV ELEMENT: HG

TUBE: 34 07/14/98 12:06
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCV 3 ***** 0 0 1

AVG(ppb) Intensity
1.0800 161727.0

%RECOVERY = 108.0

TUBE: 35 07/14/98 12:08
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCV 3 ***** 0 0 1

AVG(ppb) Intensity
-0.0370 1258.0

TUBE: 36 07/14/98 12:09
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961810 U***** 6 6 1 981945713001

Pmw4m

AVG(ppb) Intensity RR RD
0.0270 10457.0

TUBE: 37 07/14/98 12:10
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961810 D***** 6 6 1 981945713001

Pmw4mD

AVG(ppb) Intensity RR RD
0.0030 6993.0

TUBE: 38 07/14/98 12:11
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961810 R***** 6 6 1 981945713001

Pmw4mS

AVG(ppb) Intensity RR RD
1.0500 156901.0

TUBE: 39 07/14/98 12:13
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961810 M***** 6 6 1 981945713001

Pmw4mM

AVG(ppb) Intensity RR RD
1.0100 151321.0

TUBE: 40 07/14/98 12:14
SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961811 ***** 6 6 1 981945713001

Pmw4L

AVG(ppb) Intensity RR RD
0.1410 26762.0

442

RUN NAME: 9819501705
PAGE: 7
ANALYST: 823

LANCASTER LABORATORIES
INSTRUMENT ID: 62016
CV ELEMENT: HG

TUBE: 41 07/14/98 12:15

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961812 ***** 6 6 10 981945713001
pmw 5v

AVG(ppb) Intensity RR RD
0.0100 7932.0

TUBE: 42 07/14/98 12:17

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961813 ***** 6 6 1 981945713001
pmw 5m

AVG(ppb) Intensity RR RD
0.0230 9801.0

TUBE: 43 07/14/98 12:18

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961814 ***** 6 6 1 981945713001
pmw 5L

AVG(ppb) Intensity RR RD
0.0330 11272.0

TUBE: 44 07/14/98 12:20

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961815 ***** 6 6 10 981945713001
pmw 6v

AVG(ppb) Intensity RR RD
-0.0120 4884.0

TUBE: 45 07/14/98 12:21

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
2961816 ***** 6 6 1 981945713001
pmw 6m

AVG(ppb) Intensity RR RD
0.0160 5874.0

TUBE: 46 07/14/98 12:23

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCV 4 ***** 0 0 1

AVG(ppb) Intensity RR RD
1.0900 161432.0

%RECOVERY = 108.0

TUBE: 47 07/14/98 12:24

SAMPLE CLASS IVOL/WT EVOL DF BATCH NUMBER
CCV 4 ***** 0 0 1

AVG(ppb) Intensity RR RD
-0.0350 1409.0

443

RUN NAME: 9819501M05

PAGE: 8

ANALYST: 823

LANCASTER LABORATORIES

INSTRUMENT ID: 62016

CV ELEMENT: HG

TUBE: 48 07/14/98 12:25

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961817	*****	6	6	1	981945713001

pnw1L

AVG(ppb)	Intensity	RR	RD
0.0140	8603.0	---	---

TUBE: 49 07/14/98 12:27

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961818	*****	6	6	10	981945713001

pnw7V

AVG(ppb)	Intensity	RR	RD
-0.0010	6352.0	---	---

TUBE: 50 07/14/98 12:28

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961819	*****	6	6	1	981945713001

pnw7M

AVG(ppb)	Intensity	RR	RD
0.0320	11113.0	---	---

TUBE: 51 07/14/98 12:30

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961820	*****	6	6	1	981945713001

pnw1L

AVG(ppb)	Intensity	RR	RD
-0.0060	5726.0	---	---

TUBE: 52 07/14/98 12:31

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961821	*****	6	6	1	981945713001

mw-1

AVG(ppb)	Intensity	RR	RD
-0.0010	6359.0	---	---

TUBE: 53 07/14/98 12:32

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961822	*****	6	6	1	981945713001

mw-3

AVG(ppb)	Intensity	RR	RD
0.0640	15727.0	---	---

TUBE: 54 07/14/98 12:34

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
PCW	*****	6	6	1	981945713002

Z Z Z Z Z Z

AVG(ppb)	Intensity	RR	RD
-0.0160	4276.0	---	---

TUBE: 55 07/14/98 12:35

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
LCSW	*****	1	1	1	981945713002

Z Z Z Z Z Z

AVG(ppb)	Intensity	RR	RD
1.1200	167692.0	---	---

TUBE: 56 07/14/98 12:37

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
LCSW	*****	1	1	1	981945713002

Z Z Z Z Z Z

AVG(ppb)	Intensity	RR	RD
1.1500	171120.0	---	---

TUBE: 57 07/14/98 12:38

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961334	*****	6	6	1	981945713002

Z Z Z Z Z Z

AVG(ppb)	Intensity	RR	RD
0.1550	28691.0	---	---

TUBE: 58 07/14/98 12:39

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCV 5	*****	0	0	1	

AVG(ppb)	Intensity
1.0100	151527.0

%RECOVERY = 101.0

TUBE: 59 07/14/98 12:41

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
CCB 5	*****	0	0	1	

AVG(ppb)	Intensity
-0.0460	-107.0

TUBE: 60 07/14/98 12:42

SAMPLE	CLASS	IVOL/WT	EVOL	DF	BATCH NUMBER
2961335	*****	6	6	10	981945713002

AVG(ppb)	Intensity	RR	RD
0.0410	12473.0	---	---

Extraction/Distillation/Digestion Logs

Batch #

9	8	1	9	4
5	7	0	4	
0	0	2		

5	7	0	4
---	---	---	---

0	0	2
---	---	---

Sample #	T	Initial Vol (mL)	Final Vol (mL)	SDG #
2955782 u	1	50	50	BBB22
5785				
5786				
5787				
6875				
6876				
6877				
6878				
6879				
7029				
7030				
9868				
2961719				
1808				
1809				
1810				
1811				
1812				
2109				
2110				
2956682				
5783				
5784				
Blank				

Blank and LCS(s) final volumes are the same.

		Spike Information		
Sample #	Solin ID	8		0.25 ppm Ag
2955783	Lot #	182		
↓ 5784	Vol Added (mL)	0.5		
LCS	Vol Added (mL)	↓		
LCSD				

28

1481 Rev. 01/14/97

Digest Date: 7/13/98

Digested By (Init/Emp #): MDK519

1481a Rev. 01/14/97

48

Batch #

98195 5704 001

Sample #	T	Initial Vol (mL)	Final Vol (mL)	SDG #
2961813 U	1	50	50	
1814				
1815				
1816				
1817				
1818				
1819				
1820				
1821				
1822				
2227				
2228				
2229				
2230				
2487				
2488				
2489				
2490				
2491				
2492				
2961813				
1813				
1813				
BLANK				

Dup (D)
Spike (R)
MSD (M)
Blank

Blank and LCS(s) final volumes are the same.

Spike Information			
Sample #	Soln ID	Lot #	0.25 ppm Ag
2961813 (R)	8	182	
2961813 (M)		0.5 mL	
LCS	Vol Added (mL)		
LCS D	Vol Added (mL)		

QC

89

1481 Rev. 01/14/97

7846

Dig

e

COG

Stamp

22

Reagents

HNO₃

30% H₂O₂

Lot #

Vol Added (mL)

Lot #

Vol Added (mL)

Notes

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
Dup
Spike
MSD
Blank

Digest Date: 7-14-98

Digested By (Init/Emp #): AMS862

1481a Rev. 01/14/97

89

Batch # 98194 5713 001

Sample #	T	Initial Vol (mL)	Final Vol (mL)	DF	SDG #
1	2961808	6	6	105	
2	1809				
3	1810W				
4	1811				
5	1812				
6	1813				
7	1814				
8	1815				
9	1816				
10	1817				
11	1818				
12	1819				
13	1820				
14	1821				
15	1822				
16					
17					
18					
19					
20					
Dup (D)	2961810 D	6	6		
Spike (R)	1810 R				
MSD (M)	1810 M				
Blank	BLANK				

Blank and LCS(s) final volumes are the same.

Spike Information			
LCS	Soln ID	1 ppm Hg	
	Lot #	194	
LCS D	Vol Added (mL)	0.148 → 100	
Sample #	Soln ID	0.1 ppm Hg	
2961810 (R)	Lot #	194	
2961810 (M)	Vol Added (mL)	0.148 → 10	

1502 Rev. 01/14/97

100

Digest Type Hg-SWB46 COC (Y/N) N Start Time 2125

Notes	
1	Leeman lab. Digestion
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
Dup	Leeman lab. Digestion
Spike	
MSD	
Blank	

Reagent	Lot #	Vol Added (mL)*	Vol Added (mL)**
H ₂ SO ₄	2876LVMA	0.4	
HNO ₃	442025	0.2	
5% KMnO ₄	177	1.2	
5% K ₂ S ₂ O ₈	155	0.64	
NaCl/NH ₂ OH•HCl	161	0.70	

*Automated digester volumes added to each field and QC sample.
**Manual digestion volumes added to each field and QC sample.

Digest Date 7/13/98

Digested by (Init/Emp#) NSM823

1502a Rev. 01/14/97

Reviewed by
Kelly A. Mylon 03
8/08/98
109

APPENDIX F

Microbe Inotech Laboratory, Inc. Analytical Report

Report Of Analyses

Prepared by:

Microbe Inotech Laboratories



the MiL, Inc.

Summary Report of Analysis

[5440]

Lance Turley
Hull & Associates
4700 Duke Dr. Suite 172
Mason, OH 45040

August 14, 1998

Description and Chain of Custody Record Information:

Fri, July 31, 1998 - 10:00 AM: Received by courier, 4 samples for Aerobic Biofeasibility study with nutrient chemistry, and 4 samples for Anaerobic Biofeasibility study.

MiL, Inc. REPORT & Invoice No.: MILB-5440

Purchase Order No.: Contract

Project No.: NMB007

Project Name: 570 Main Westbury, NY

Processing:

[Standard Bacterial Plate Count 9215- standard spread plate method] Within 20 minutes of reception an aliquot from each sample is checked for weight or volume and serially diluted. The dilutions are aseptically transferred in a laminar flow biological cabinet and plated onto previously prepared and dried TSA medium in Petri plates. Observations for colony forming units (CFU) are made after 24 and 48 hours of incubation at 28°C. Anaerobic sample dilutions are place in and anerobic chamber and incubated at 28°C. Colony forming units are counted and isolated after 48hours of incubation.

Total Heterotrophic Plate Count Results:

DATA:Direct Count: Colony Forming Units (CFU/ ml) on TSA			
Aerobic Samples			
Sample	24 Hours	48 Hours	Types
MW4U	$<1.00 \times 10^1$	$<1.00 \times 10^1$	0
MW5U	$<1.00 \times 10^1$	$<1.00 \times 10^1$	0
MW6U	$<1.00 \times 10^1$	$<1.00 \times 10^1$	0
MW7U	$<1.00 \times 10^1$	$<1.00 \times 10^1$	0
Anaerobic Samples			
Sample	24 Hours	48 Hours	Types
MW4U	NA	7.90×10^4	3
MW5U	NA	7.05×10^4	6
MW6U	NA	4.62×10^3	5
MW7U	NA	3.20×10^4	7
Total morphological different types among all samples: 11			

Approximate Percentages of Strain Types in Each Sample:

Sample→ Strain ↓	Aerobic Strains				Anaerobic Strains			
	MW4U	MW5U	MW6U	MW7U	MW4U	MW5U	MW6U	MW7U
5440-1								10
5440-2					40	15	50	10
5440-3					40	20	30	35
5440-4							10	10
5440-5					20			20
5440-6							5	10
5440-7						25		5
5440-8							5	
5440-9						5		
5440-10						30		
5440-11						5		

GC-FAME Processing:

Following isolation, the strains are individually streaked onto TSA. The strains are incubated for 24 hours and then processed by standard GC-FAME Method 1. The processed strains are examined against both the Aerobe (TSBA [rev. 3.90]) and Clinical Aerobe (CLIN [rev.3.90]) GC-FAME databases. The client is strongly urged to examine the data sheets accompanying the chromatogram of the strain for alternate possible identities not summarized here. Should a question be raised on the basis of sample history, ecology and source, this additional information may be enlightening.

GC-FAME Results:

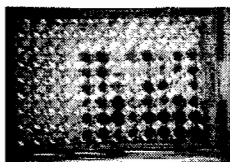
Strain	Primary ID by GC-FAME	Sim. Coef.	Dist. Coef.
5440-1	<i>Kluyvera ascorbata</i>	.683	3.101
5440-2	Insufficient growth to ID	--	--
5440-3	<i>Pseudomonas putida</i> biotype A	.789	2.595
5440-4	<i>Pseudomonas putida</i> biotype A	.310	5.774
5440-5	<i>Variovorax paradoxus</i> GC subgroup A	.350	5.144
5440-6	<i>Comamonas acidovorans</i>	.012	10.610
5440-7	<i>Pseudomonas putida</i> biotype A	.326	5.642
5440-8	<i>Bacillus mycoides</i>	.141	7.469
5440-9	<i>Pseudomonas fluorescens</i>	.711	3.116
5440-10	No match/closest species <i>Legionella longbeachae</i>	--	13.843
5440-11	<i>Chryseobacterium indologenes</i>	.799	2.383

Disclaimer: The MiL, Inc. is not a human clinical diagnostic laboratory and makes no warranty to the fitness of this data for such purposes.

Similarity and Distance Coefficient

In order to create the database that we use to identify your organisms, thousands of species of bacteria had to be tested. In fact, each species itself had to be tested hundreds of times to determine a set of characteristics unique to it. The species characteristics that are in our database are an "average" of the characteristics of hundreds of tested bacteria of the same species. The Similarity and Distance Coefficient of your organism refers to the similarity and distance to the hypothetical 'mean' organism in the database. The database organism has a similarity coefficient of one and a distance of zero. So the closer your strain is to one and zero the more closely it matches the mean organism in the database. A good match is one with a similarity coefficient greater than .5 and a distance coefficient of less than 7.

Endpoint Assay Processing



Representative Microplate

The bacterial strains to be tested are grown overnight (18 hours) on trypticase soy broth agar at 28°C, and then suspended in sterile saline to a turbidity of 40%-50%T. The strains are then placed into 96-well microtiter plate wells that contain an undisclosed growth medium of mineral salts, vitamins and buffer without a major carbon source. The wells also contained a tetrazolium dye, redox indicator system. Bacterial growth (metabolic respiration, or oxidation of carbon sources) is monitored by tetrazolium reduction as measured at 590 nm in a microplate reader. **Chlorinated Solvent Mix** (5 µl) was added to selected wells based on client supplied contaminate data, to serve as the major carbon source. Trypticase soy broth served as a positive growth control and water served as a negative growth control. Total volume of each well is 150µl.

Total growth is measured after 24 hours incubation at 28 °C. The data is processed and given with background blank values subtracted. Bar-chart interpretation of the data is provided on the following pages. The design template of the experiment is located in the raw data section of this report. The template shows the arrangement and position of strains in the matrix.

Endpoint Assay Results:

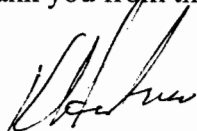
Contaminant ⇒ Strain ↓	Chlorinated Solvent Mix
5440-1	Good
5440-2	Minimal
5440-3	Good
5440-4	Good
5440-5	Fair
5440-6	Inhibited
5440-7	Inhibited
5440-8	Inhibited
5440-9	Minimal
5440-10	Excellent
5440-11	Inhibited

Chemistry Results: (mg/L except as noted)

Sample → Analyte ↓	MW4U	MW5U	MW6U	MW7U	Method Number
Ammonia	0.33	0.30	<0.10	<0.10	4500-NH3 F
Nitrate	7.64	22.0	4.00	1.84	4500-NO3 E
Nitrite	0.01	0.02	<0.01	<0.01	4500-NO2 B
pH	6.78	6.59	7.52	6.97	4500- H+B
o Phosphorous	<0.010	<0.010	<0.010	<0.010	4500- P E
Total Organic Carbon	2.40	2.90	2.30	1.60	5310-C
Sulfate	68.0	60.0	33.0	18.0	4500-SO4-2E
Total Iron	<0.04	<0.04	<0.04	<0.04	3500-Fe B
Alkalinity	74.0	66.0	42.0	46.0	2320B
Chloride	31.0	36.0	18.0	7.0	4500-Cl C
Methane	<0.02	<0.02	<0.02	<0.02	ASTM D1945
Ethane	<0.03	<0.03	<0.03	<0.03	ASTM D1945
Ethylene	<0.03	<0.03	<0.03	<0.03	ASTM D1945

All tests performed at lab IEPA#100226 IDPH#17584

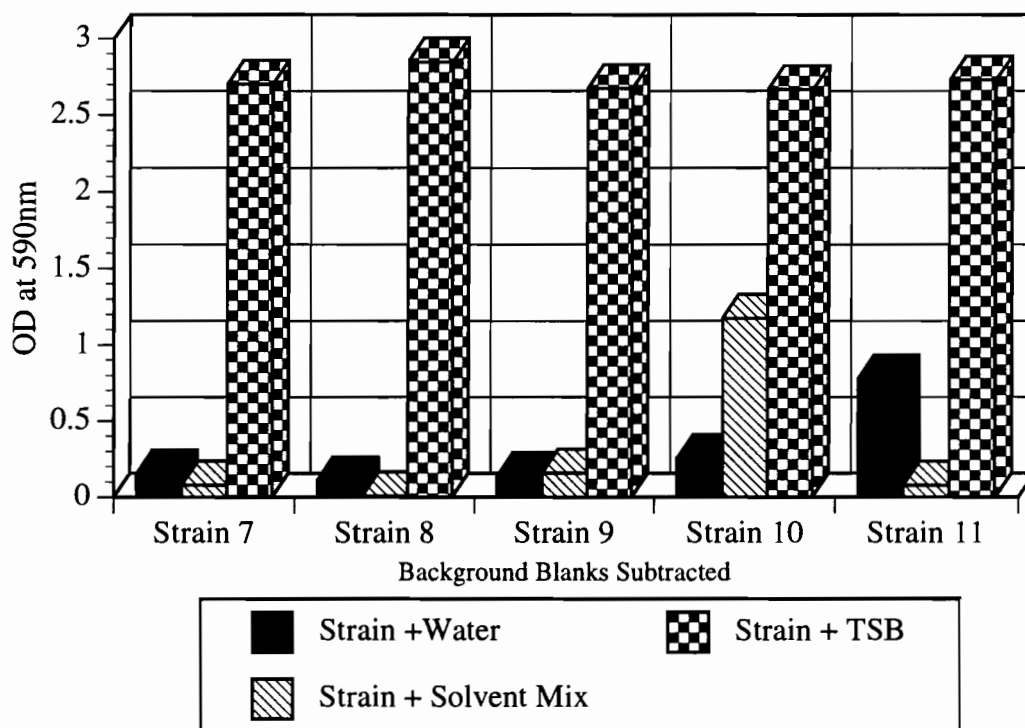
Thank you from the staff on project:



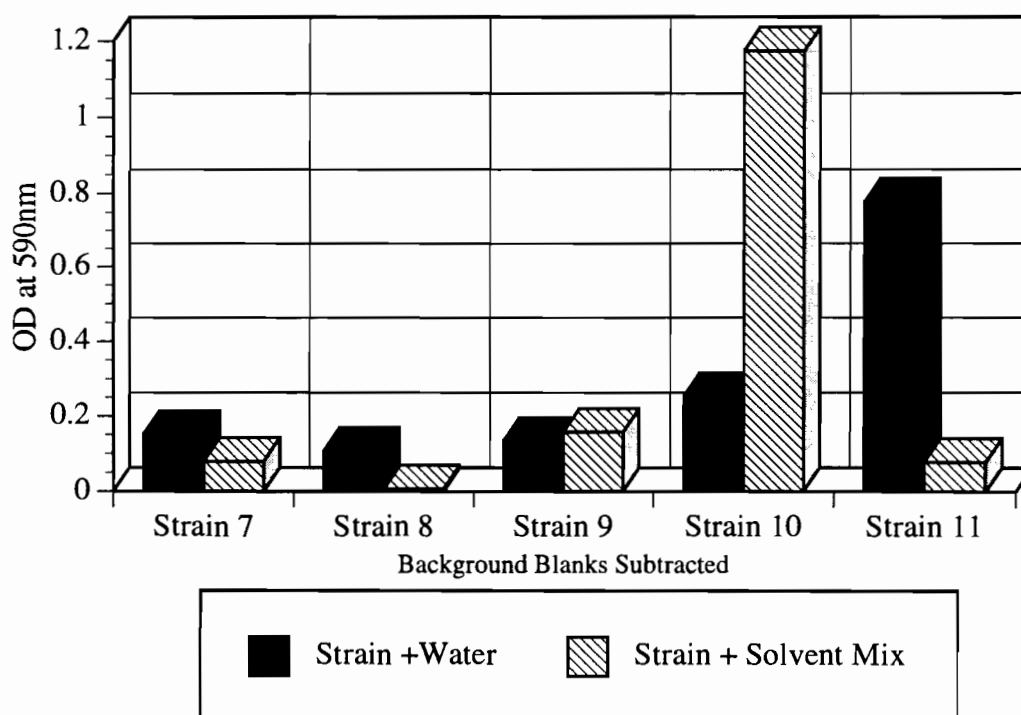
Kirk M. Hartwein - Laboratory Manager

Bruce C. Hemming Ph.D., Operations Director

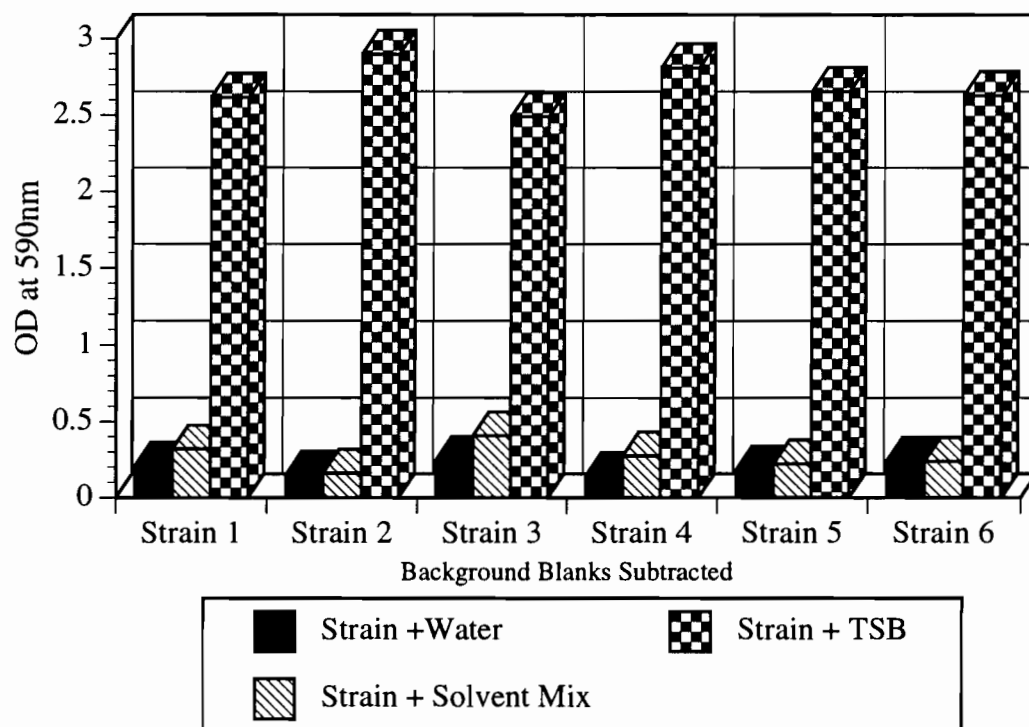
24 Hour Endpoint Assay On 5 Strains With Hydrocarbon Solvent Mix



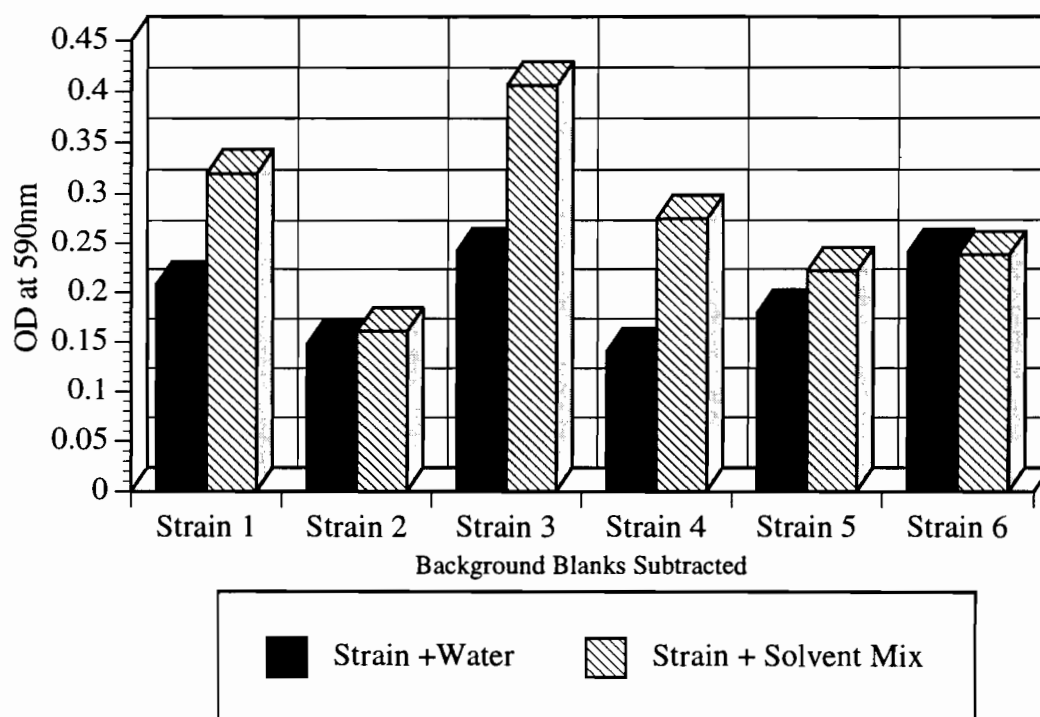
Same data as above without positive growth control



24 Hour Endpoint Assay On 6 Strains With Chlorinated Solvent Mix



Same data as above without positive growth control





the Mil, Inc.

Sample Receipt Confirmation Form

This notice is to confirm receipt of samples at Microbe Inotech Laboratories, Inc.,
at 12133 Bridgeton Square Dr., St. Louis, MO 63044

Client Information:

Contact: Lance Turley

Firm: Hull + Assoc.

Fax No: (513) 459-9869

Project Name: 570 Main Westbury NY

Project No.: NY 8007

Mil Information:

Receiving Staff Member: Rod Kowalewski

Assigned Mil Project No. MILB- 5439

5440 (KH)

Sample Information:

Total number of sample containers 16 representing Total number of samples: 16

Arrived on: Fri 07-31-98 10:10 RCVD
Day of Week Month/Day/Year at Time of Day

List of Samples Received	Condition Upon Receipt	Analysis Requested	Collection Date
PMW 70 Methane	Good	Aerobic + Anaerobic	7/30/98 11:58
PMW 70 Ethane		BioFeasibility	"
PMW 70 Ethene		w/ Chemistry	"
PMW 70 1 Liter			"
PMW 60 Methane			7/30/98 11:10
PMW 60 Ethane			"
PMW 60 Ethene			"
PMW 60 1 Liter			"
PMW 50 Methane			7/30/98 10:18
PMW 50 Ethane			"
PMW 50 Ethene			"
PMW 50 1 Liter			"
PMW 40 Methane			7/30/98 9:10
PMW 40 Ethane			"
Comments or Further Requested Information:			"
PMW 40 Ethene			"
PMW 40 1 Liter			

Thank You Rodney Kowalewski
Signature of Sender

MICROBE INOTECH LABORATORIES, INC. - 12133 BRIDGETON SQUARE DRIVE - SAINT LOUIS, MISSOURI 63044

314-344-3030 FAX: 314-344-3031

Mil Form #0010-2
Rev. 4/98 KMH

GC-FAME

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BOTTLE: 1 ID#: 1FRI 07-AUG-98 15:07:49

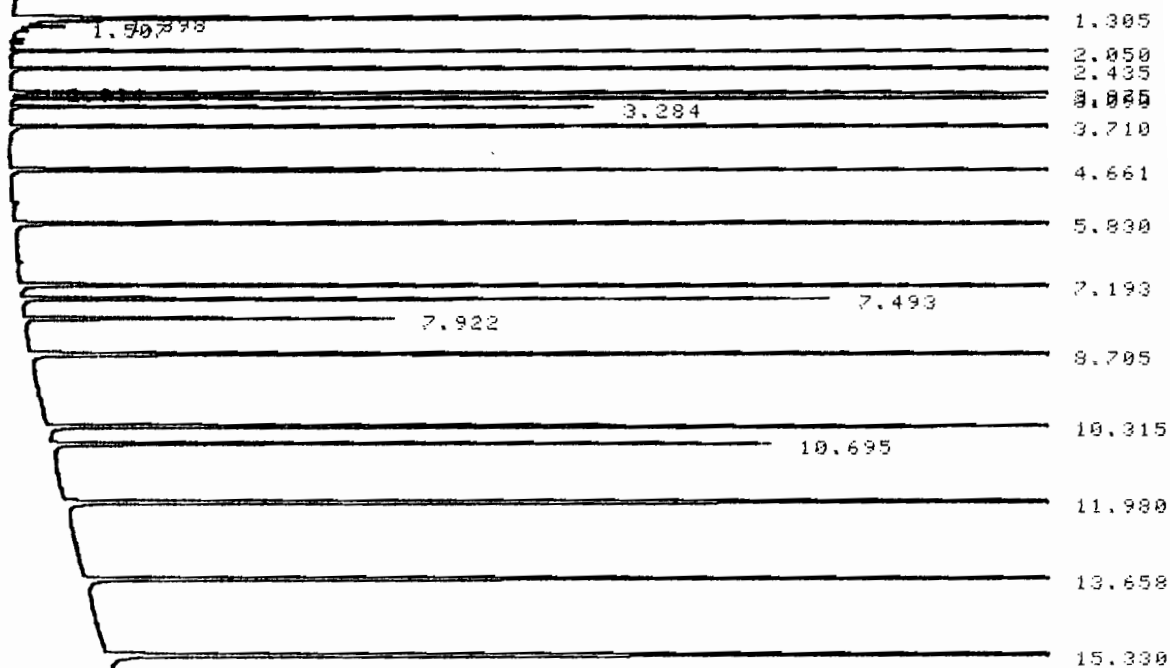
FILE DATA1:F98807396

CALIBRATION AEROBE

RUN # 9 AUG 7, 1998 05:45:48

START

IF



IF

STOP

RUN # 9 AUG 7, 1998 05:45:48

START-No Plot

END OF SIGNAL

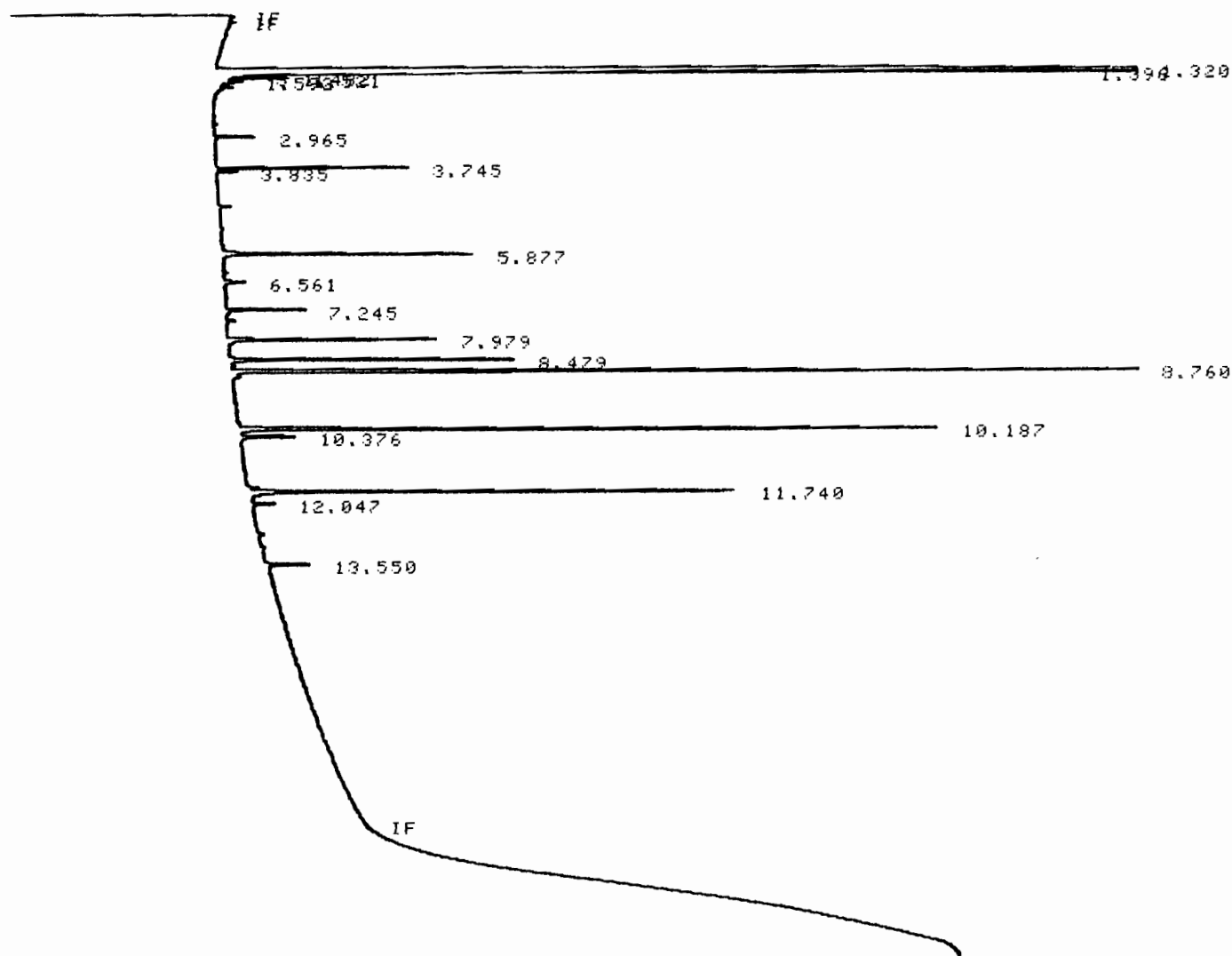
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FILE DATA1:F98806335

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START

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STOP

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RUN #      2      AUG  6, 1998  01:07:40
START-No plot
END OF SIGNAL

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#

=====

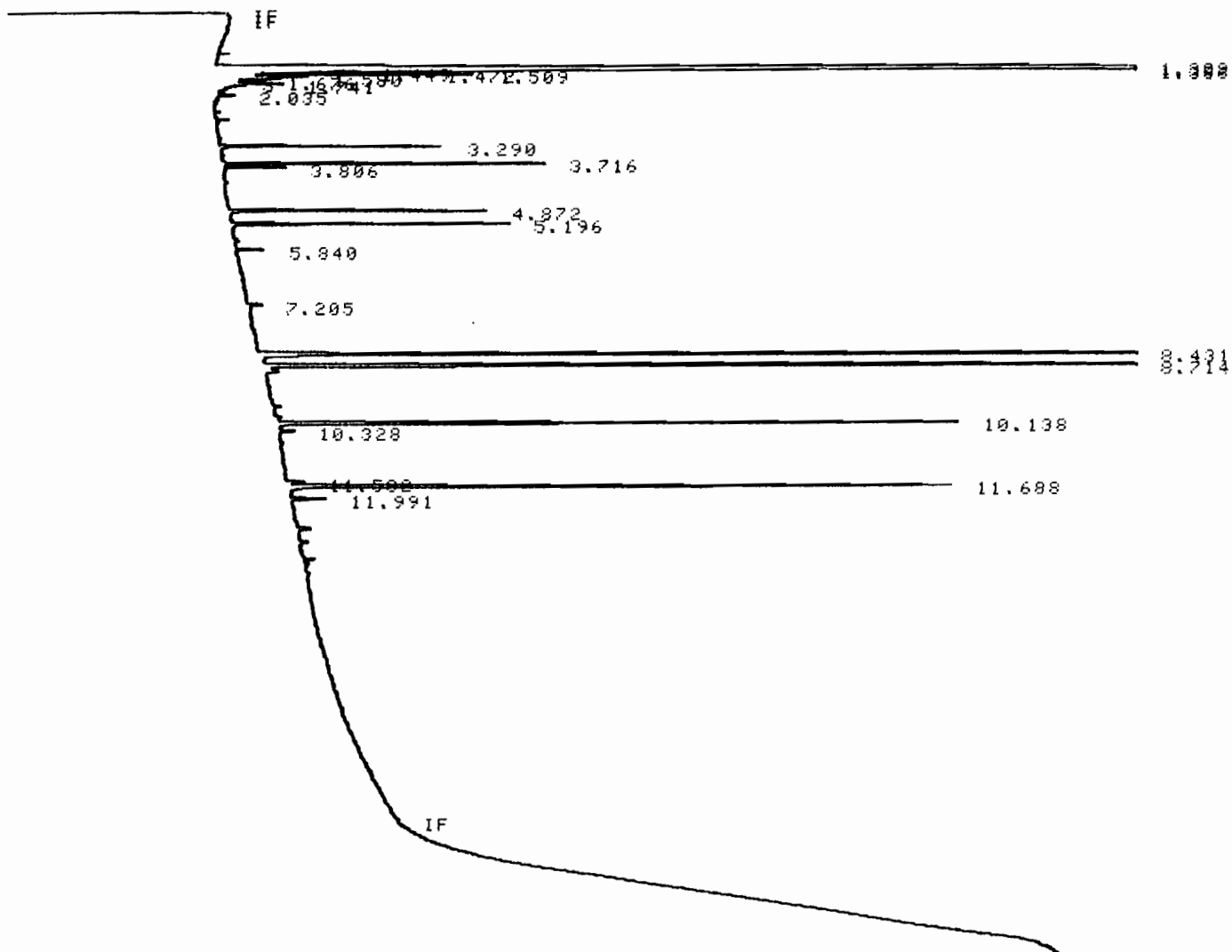
BOTTLE: 2 ID#: 3FRI 07-AUG-98 12:01:33

FILE DATA1:F98807396

5440-3 HULL

RUN # 3 AUG 7, 1998 02:40:20

START



STOP

RUN # 3 AUG 7, 1998 02:40:20

START-No Plot

END OF SIGNAL

#

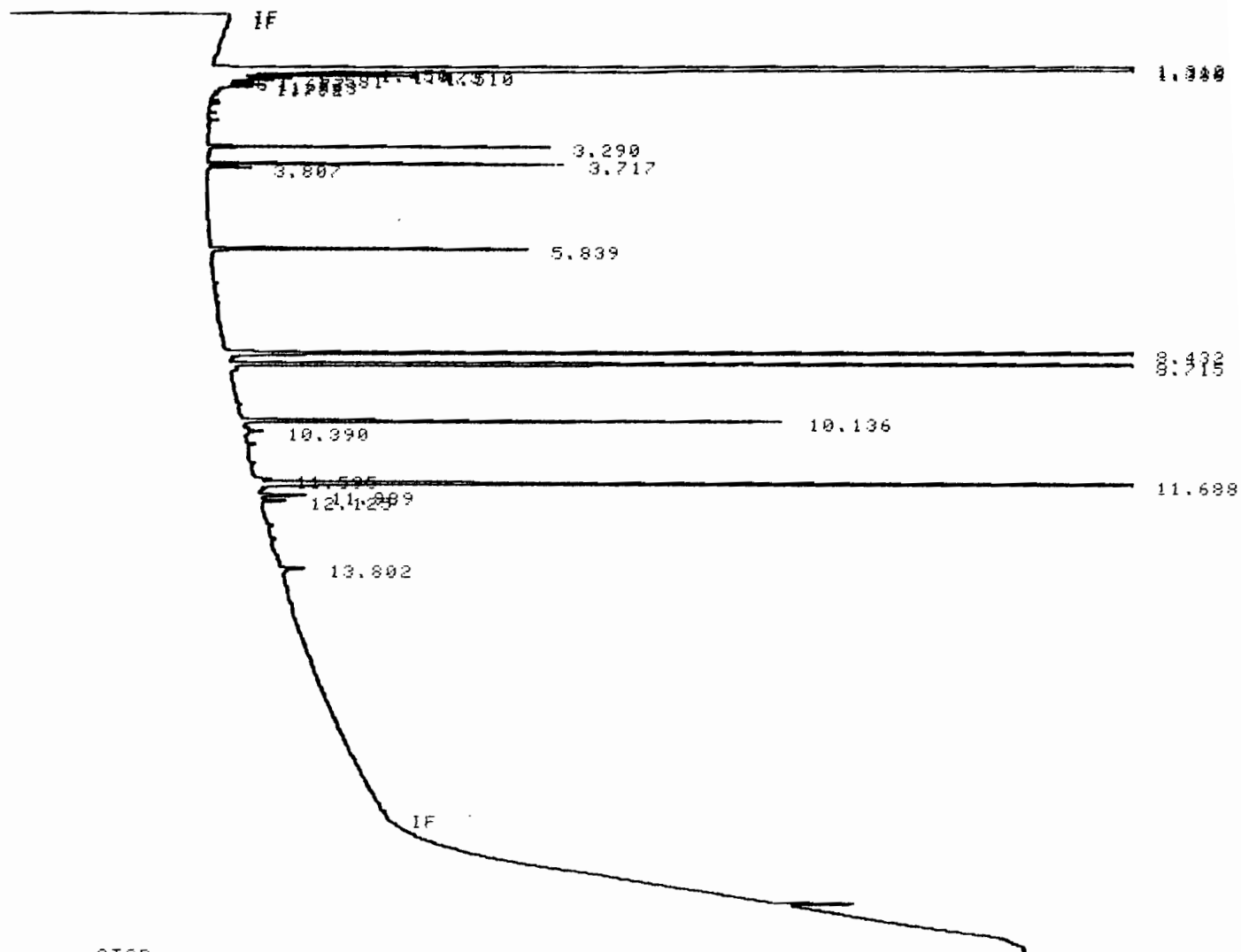
BOTTLE: 3 ID#: 4FRI 07-AUG-98 12:32:57

FILE DATA1:F98807396

5440-4 HULL

RUN # 4 AUG 7, 1998 03:10:53

START



STOP

RUN # 4 AUG 7, 1998 03:10:53

START-No plot

END OF SIGNAL

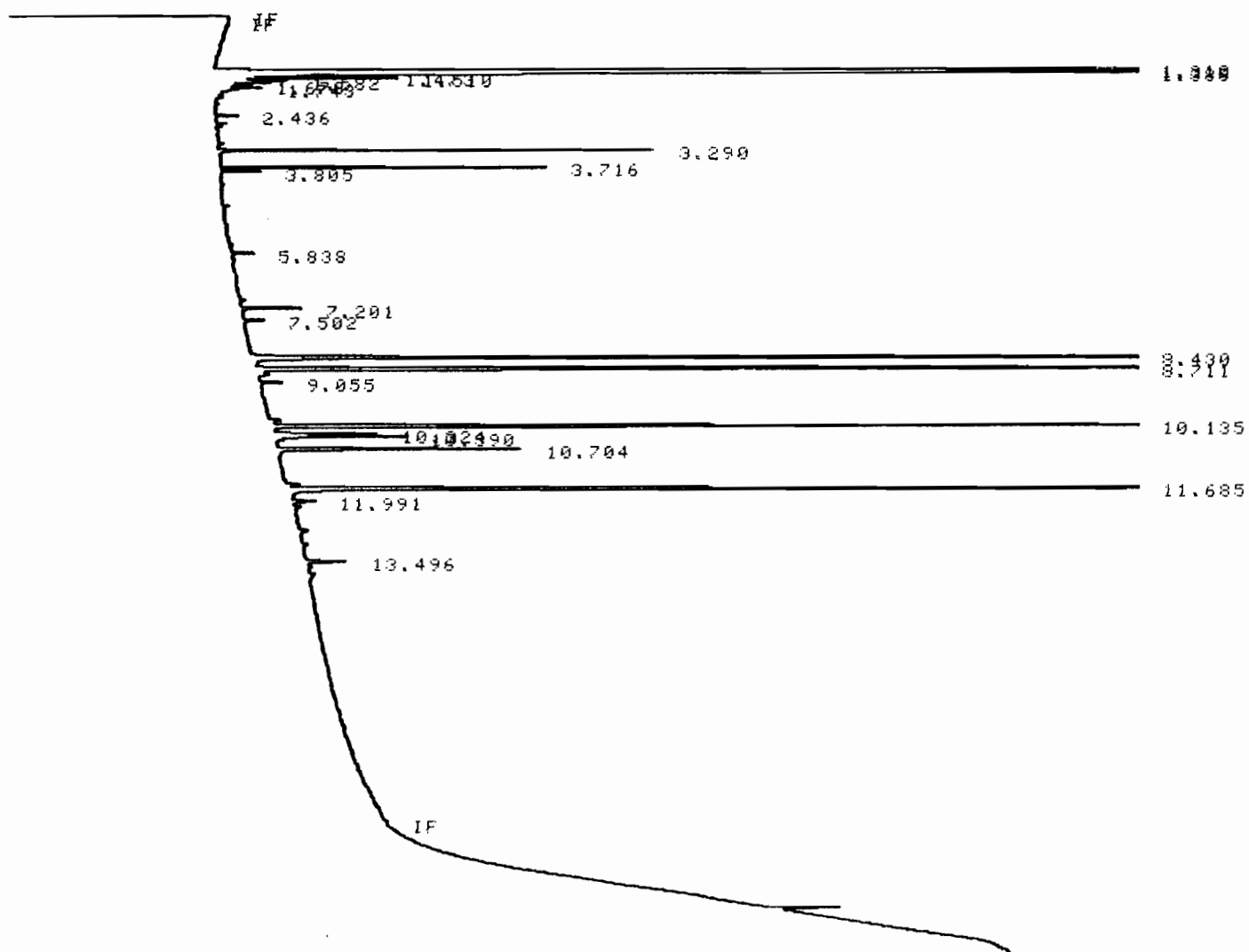
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FILE DATA1:F98807396

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START

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STOP

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START-No plot
END OF SIGNAL
```

#

=====

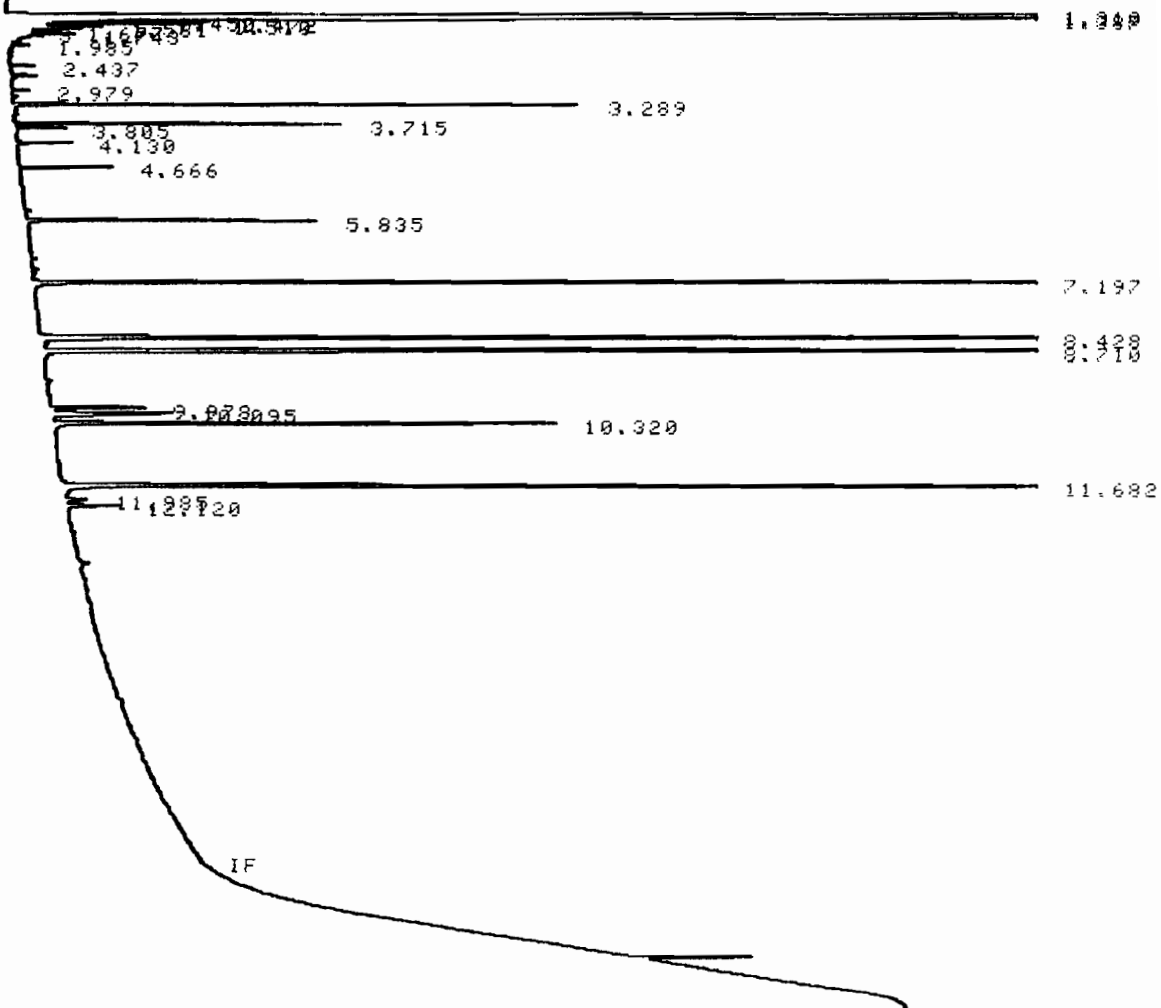
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FILE DATA1:F98807396

5440-6 HULL

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START

IF



STOP

RUN # 6 AUG 7, 1998 04:12:32
START-No plot
END OF SIGNAL

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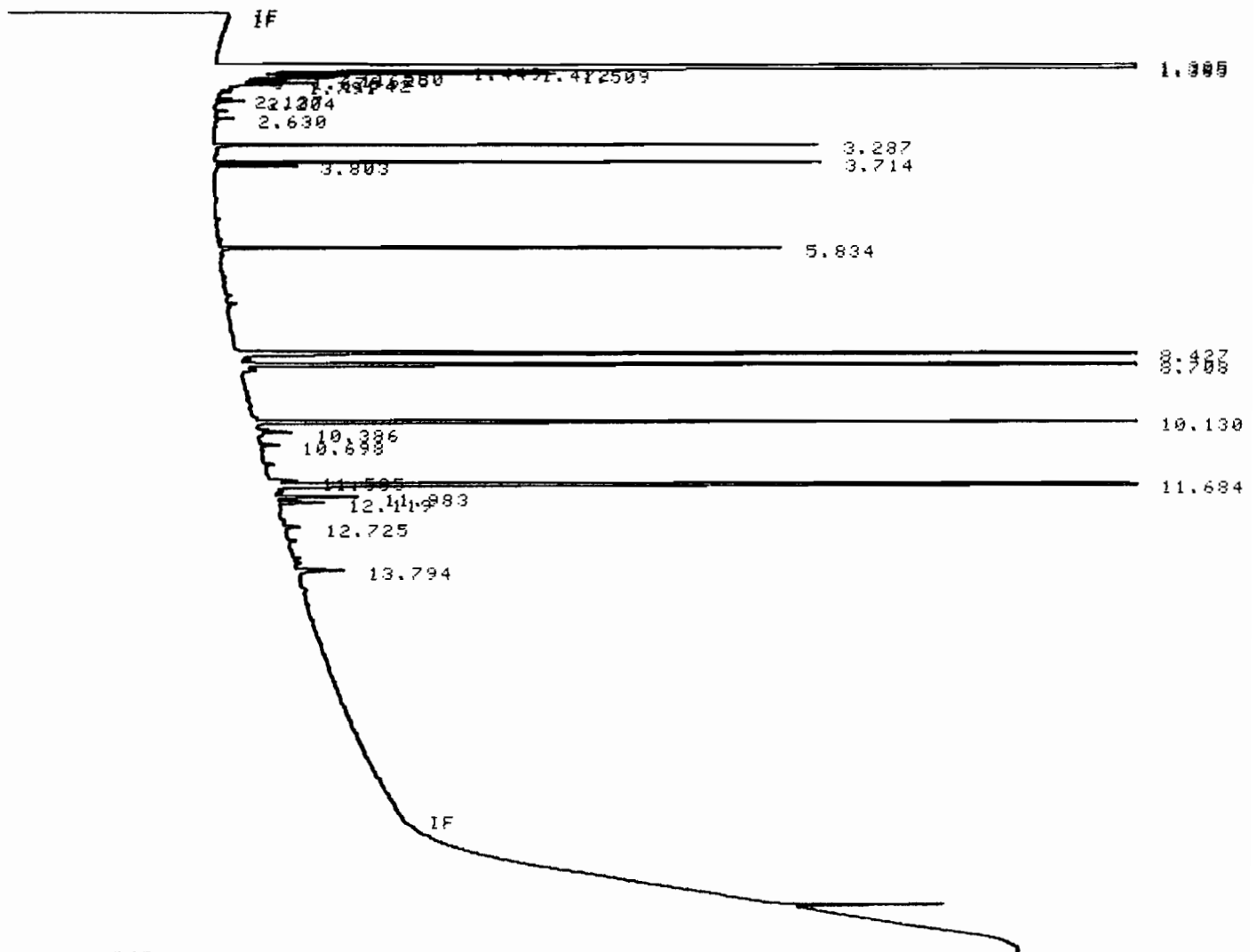
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FILE DATA1:F98807396

5440-7 HULL

RUN # 7 AUG 7, 1998 04:43:42

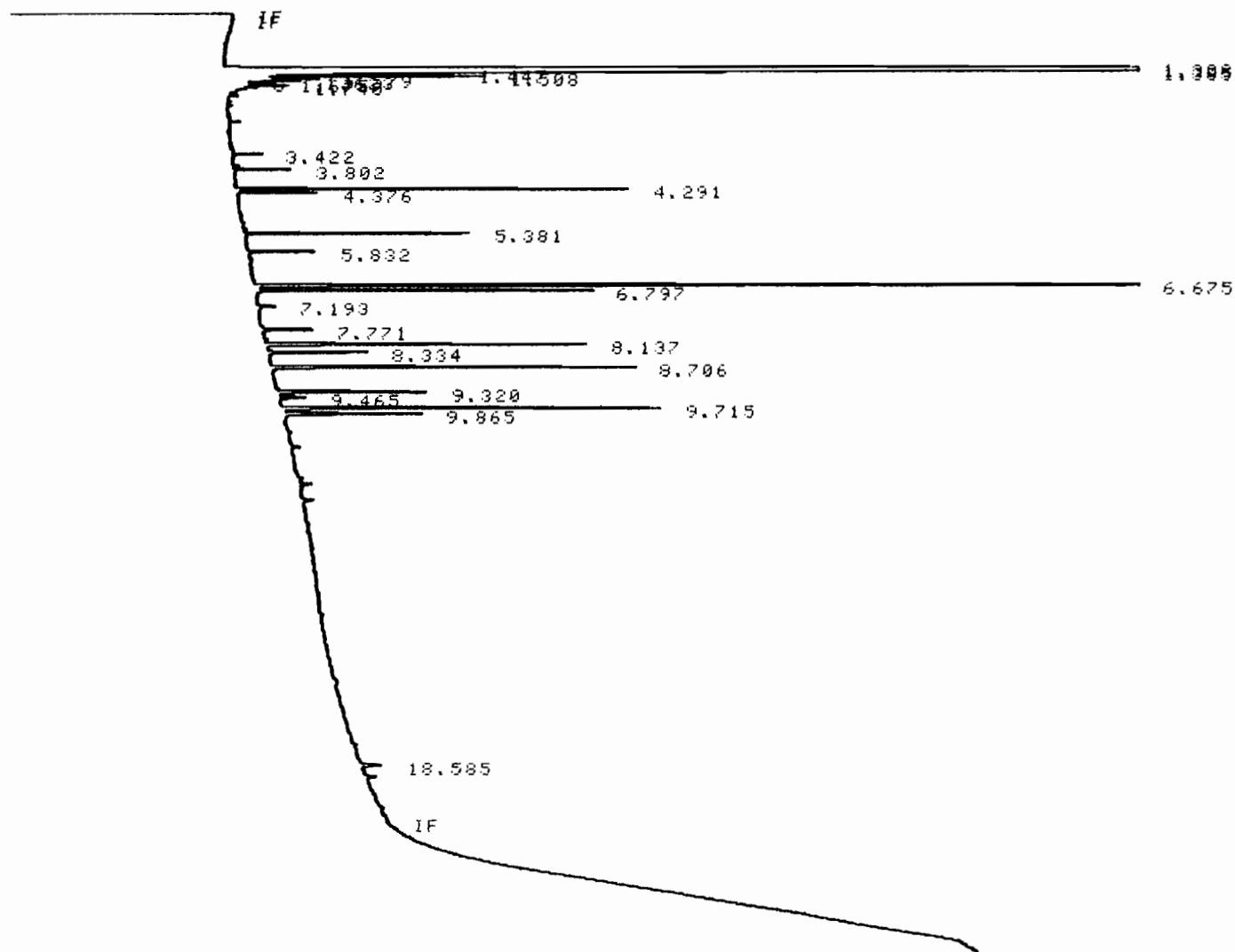
START



5440-8 HULL

RUN # 8 AUG 7, 1998 05:14:50

START



STOP

RUN # 8 AUG 7, 1998 05:14:50

START-No plot

END OF SIGNAL

#

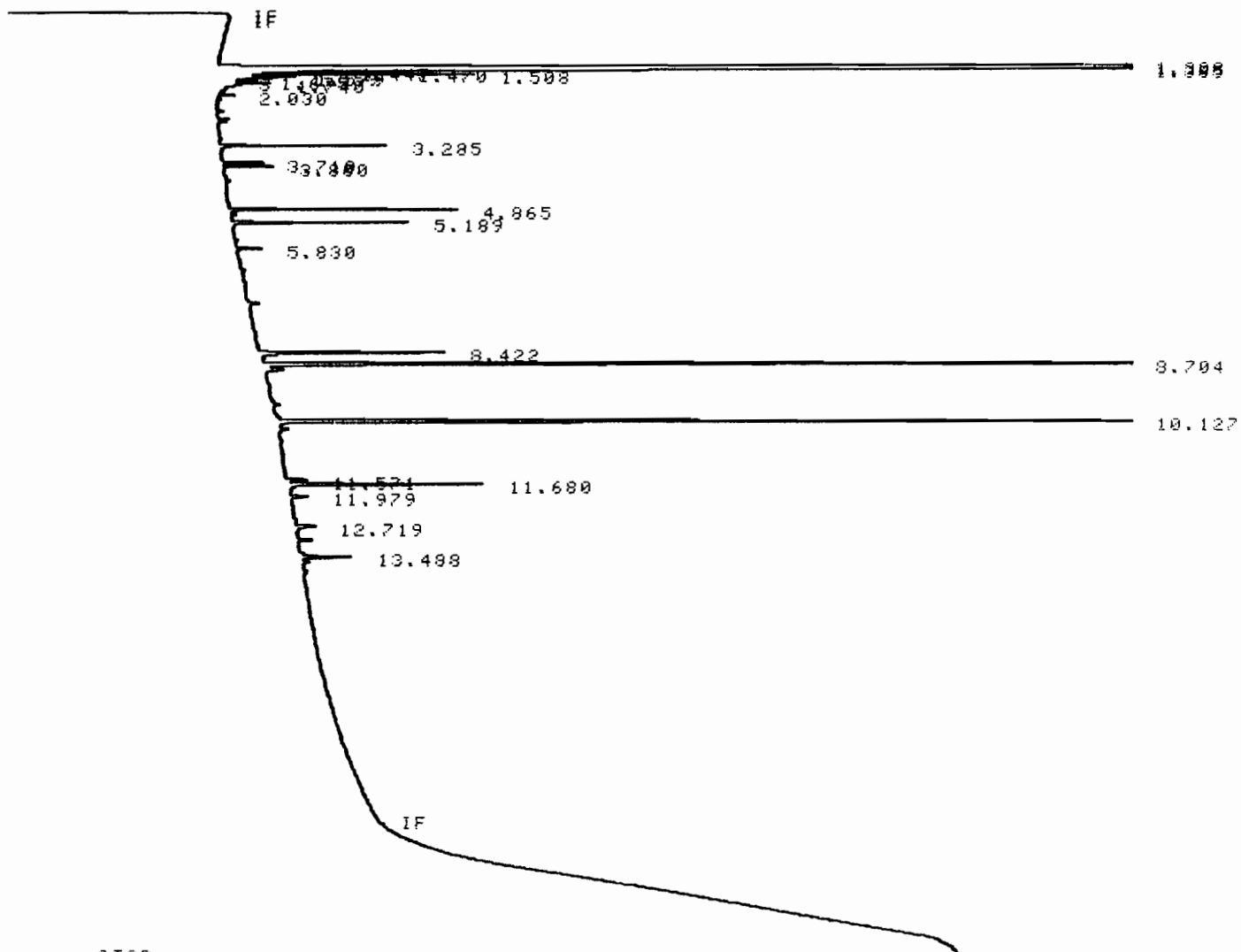
BOTTLE: 8 ID#: 9FRI 07-AUG-98 15:37:29

FILE DATA1:F98807396

5440-9 HULL

RUN # 10 AUG 7, 1998 06:16:02

START



STOP

RUN # 10 AUG 7, 1998 06:16:02

START-No plot

END OF SIGNAL

#

=====

BOTTLE: 9 ID#: 10SAT 08-AUG-98 09:21:39

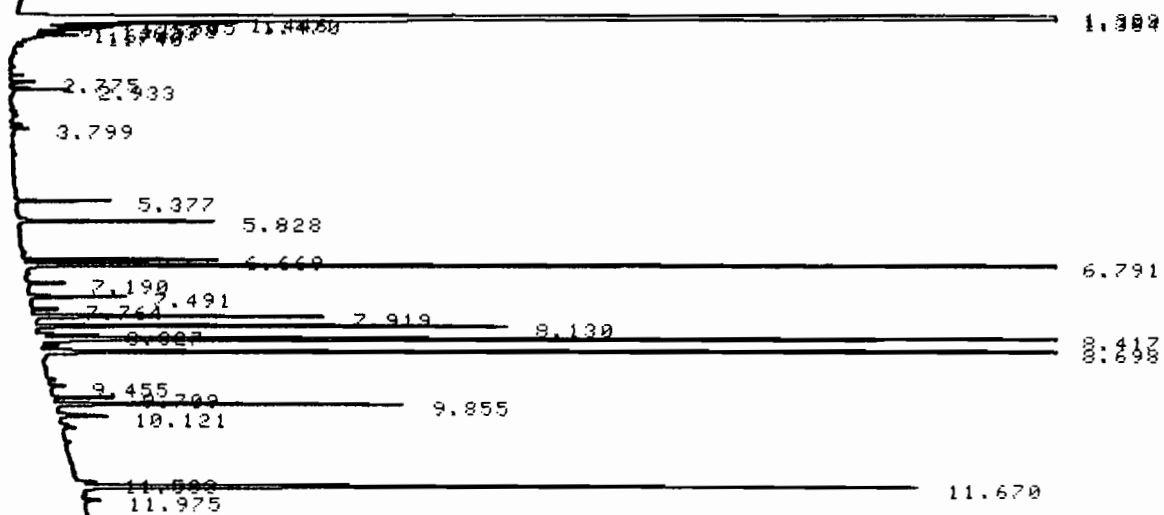
FILE DATA1:F98808301

5440-10 HULL

RUN # 15 AUG 9, 1998 00:00:16

START

IF



IF

STOP

RUN # 15 AUG 9, 1998 00:00:16

START-No Plot

END OF SIGNAL

#

BOTTLE: 10 ID#: 11FRI 07-AUG-98 16:08:43

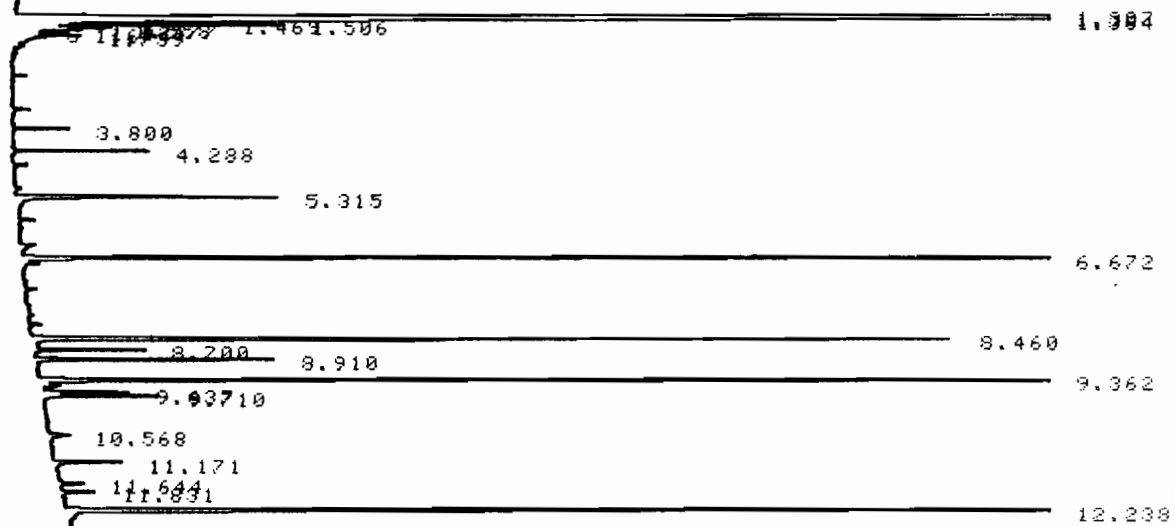
FILE DATA1:F98807396

5440-11 HULL

RUN # 11 AUG 7, 1998 06:46:40

START

IF



IF

STOP

RUN # 11 AUG 7, 1998 06:46:40

START-No plot

END OF SIGNAL

#

=====

ID: 3 5440 Hull-1 Date of run: 6-AUG-98 01:07:40
 Bottle: 2 SAMPLE [AEROSE]

RT	Area	Ar/Ht	Respon	ECL	Name	%	Comment 1	Comment 2
1.331	313867776	0.025	...	7.074	SOLVENT PEAK	...	< min rt	
1.492	368	0.015	...	7.488	...	...	< min rt	
1.530	888	0.020	...	7.586	...	...	< min rt	
2.976	1248	0.034	0.903	10.928	Sum In Feature 3	0.80	ECL deviates -0.000	unknown 10.928
3.755	4736	0.029	0.933	12.000	12:0	3.13	ECL deviates -0.000	Reference -0.009
3.845	624	0.033	0.935	12.096	11:0 ISO 30H	0.41	ECL deviates 0.006	
5.988	8560	0.039	0.985	14.001	14:0	5.97	ECL deviates 0.001	Reference -0.010
6.571	1096	0.056	0.998	14.501	unknown 14.503	0.78	ECL deviates -0.002	
7.255	2952	0.040	1.012	15.001	15:0	2.12	ECL deviates 0.001	Reference -0.011
7.989	8032	0.042	1.025	15.485	Sum In Feature 3	5.83	ECL deviates 0.003	16:1 ISO I/14:0 30H
9.488	10944	0.043	1.035	15.813	Sum In Feature 4	8.02	ECL deviates -0.004	16:1 w7c/15 iso 20H
8.770	42624	0.041	1.040	15.999	16:0	31.40	ECL deviates -0.001	Reference -0.013
10.197	28009	0.044	1.067	16.883	17:0 CYCLO	21.17	ECL deviates -0.005	
10.386	2440	0.048	1.071	17.000	17:0	1.85	ECL deviates -0.000	
11.750	20528	0.046	1.098	17.818	Sum In Feature 7	15.97	ECL deviates -0.004	18:1 w7c/w9t/w12t
12.055	1088	0.049	1.105	18.000	18:0	0.85	ECL deviates 0.000	Reference -0.012
13.560	2112	0.051	1.139	18.895	19:0 CYCLO w8c	1.70	ECL deviates -0.005	
*****	9280	...	...	...	SUMMED FEATURE 3	6.63	12:0 ALDE ?	unknown 10.928
*****	...	...	...	...	...	...	16:1 ISO I/14:0 30H	14:0 30H/16:1 ISO I
*****	10944	...	...	...	SUMMED FEATURE 4	8.02	16:1 w7c/15 iso 20H	15:0 ISO 20H/16:1 w7c
*****	20528	...	...	...	SUMMED FEATURE 7	15.97	18:1 w7c/w9t/w12t	18:1 w9c/w12t/w7c
*****	...	...	...	...	...	...	18:1 w12t/w9t/w7c	

Solvent Ar	Total Area	Named Area	% Named	Total Amt	Nbr Ref	ECL Deviation	Ref ECL Shift
313867776	134992	134992	100.00	141183	5	0.003	0.011

TSBA [Rev 3.90]	Kluyvera	0.683
	K. ascorbata	0.683
	Klebsiella	0.470
	K. pneumoniae	0.470
	K. p. ozaenae	0.470
	K. p. pneumoniae*	0.395
	K. trevisanii	0.405
	Serratia	0.416
	S. marcescens	0.416
	S. n. GF subgroup B	0.416
	S. proteamaculans	0.238 (Serratia liquefaciens)
CLIN [Rev 3.90]	Escherichia	0.644 (high DNA homology with Shigella)
	E. coli subgroup A	0.644 (high DNA homology with Shigella)
	Klebsiella	0.585
	K. pneumoniae	0.585
	K. p. rhinoscleromatis	0.585
	K. oxytoca GC subgroup A	0.512
	Enterobacter	0.527
	E. taylorae	0.527
	E. cloacae	0.434
	E. c. GC subgroup B**	0.434
	E. c. GC subgroup A*	0.232
	E. asburiae	0.349

5440 Hu21-1

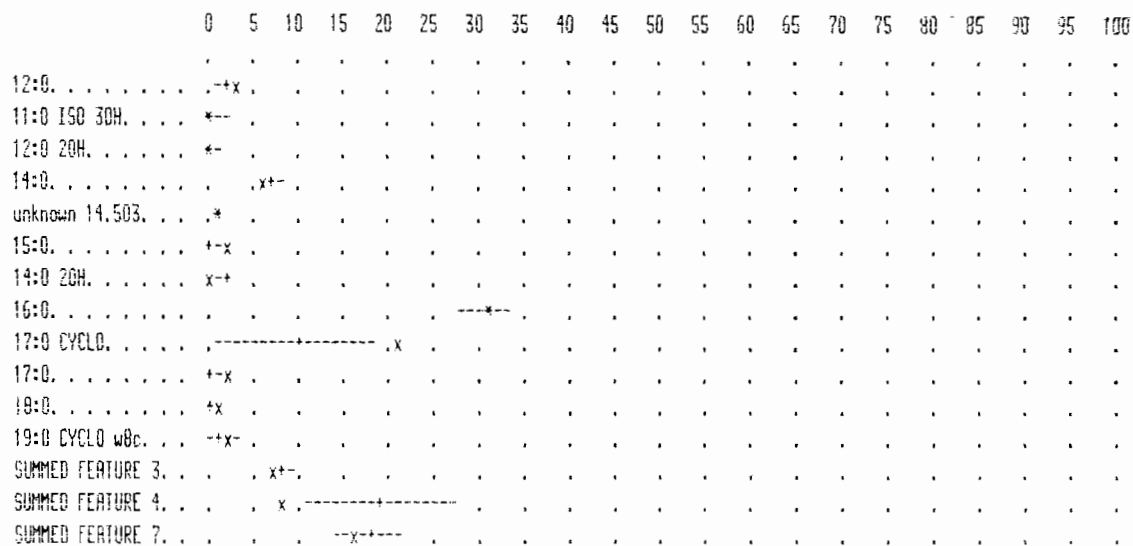
[LAEROBE] 6-AUG-98 01:07:40

DATA1:F98806335

07-AUG-98 09:25:36

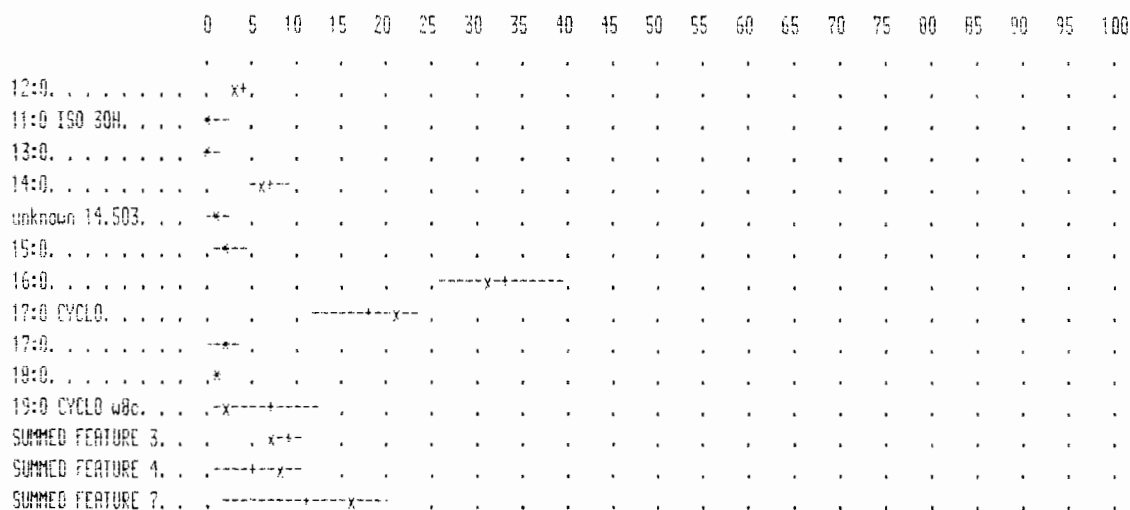
Comparison with TSBA [Rev 3.90]: *Serratia-marcescens*-GC subgroup D

Distance: 9.703



Comparison with CLIN [Rev 3.90]: Escherichia-coli subgroup A (high DNA homology with Shigella)

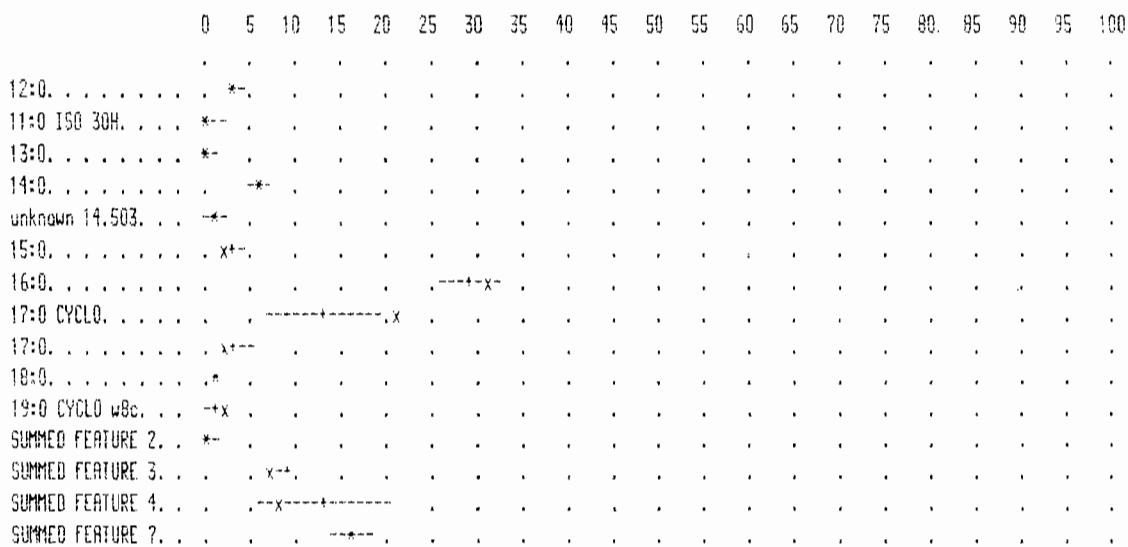
Distance: 3.538



[AEROBE] 6-AUG-98 01:07:40

Distance: 3.907

Distance: 4.270



LAEROBE] 6-AUG-98 01:07:40

Distance: 3.101

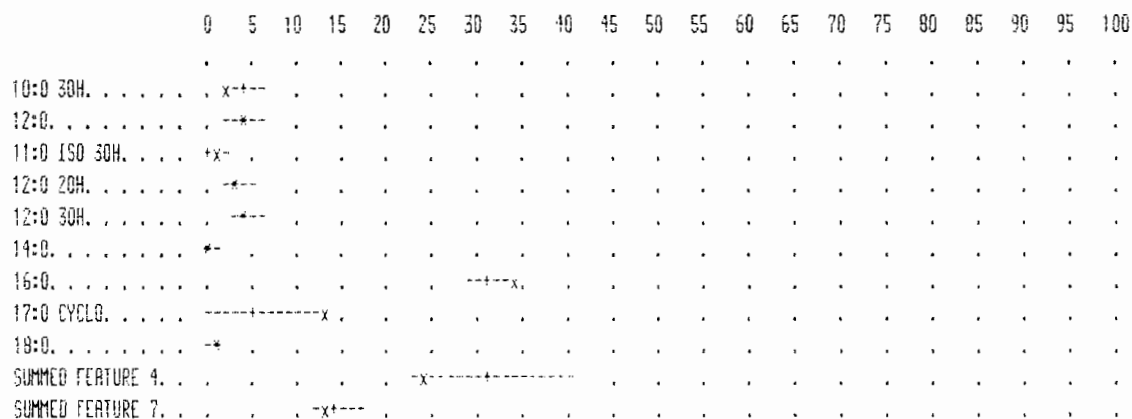
[illegible]

Distance: 4.365

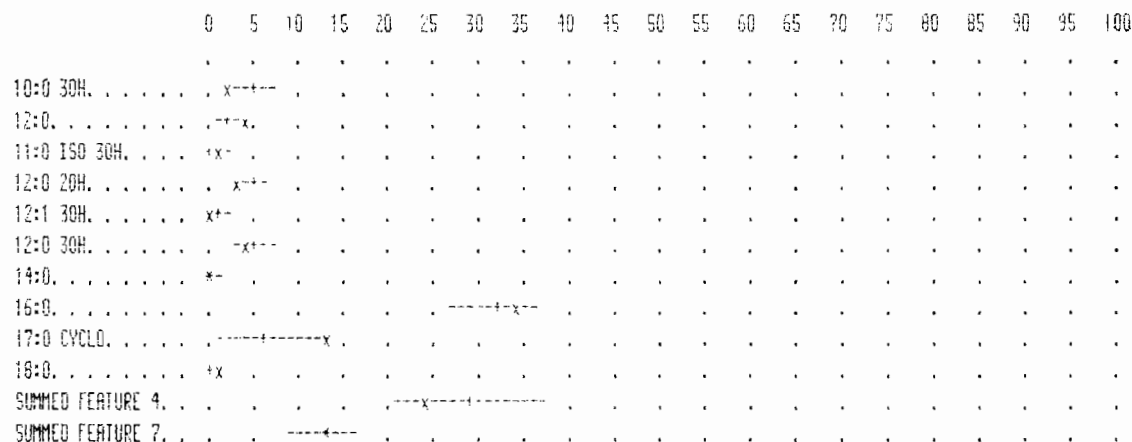
[illegible]

TSBA [Rev 3.90]	<i>Pseudomonas</i>	0.762	
	<i>P. putida</i>	0.762	
	<i>P. p.</i> biotype B	0.762	
	<i>P. p.</i> biotype A	0.436	
	<i>P. chlororaphis</i>	0.549	(<i>Pseudomonas aureofaciens</i>)
CLIN [Rev 3.90]	<i>Pseudomonas</i>	0.789	
	<i>P. putida</i>	0.789	
	<i>P. p.</i> biotype A*	0.789	
	<i>P. p.</i> biotype B	0.493	
	<i>P. fluorescens</i>	0.693	

Distance: 2.619



Distance: 3.888



Comparison with CLIN [Rev 3.90]: *Pseudomonas-putida*-biotype A*

Distance: 2.595

[illegible]

Comparison with CLIN [Rev 3.90]: *Pseudomonas-fluorescens*

Distance: 3.226

[illegible]

4	5440-4 Hull	[AEROBE]	7-AUG-98	03:10:53	Area: 246360 % Named: 100
	ISBA [Rev 3.90] Salmonella				0.196
	<i>S. choleraesuis</i>				0.196
	<i>S. c. arizonae</i>				0.196
	<i>S. c. choleraesuis</i>				0.115
	Pantoea				0.175 (Entb. agglomerans, Erwinia herbicola)
	<i>P. agglomerans</i> *				0.175 (Entb. agglomerans, Erwinia herbicola)
	Comamonas				0.171 (Pseudomonas acidovorans)
	<i>C. acidovorans</i>				0.171 (Pseudomonas acidovorans)
	CLIN [Rev 3.90] Pseudomonas				0.310
	<i>P. putida</i>				0.310
	<i>P. p. biotype A</i> *				0.310
	<i>P. stutzeri</i>				0.187

Comparison with ISBA [Rev 3.90]: *Salmonella-choleraesuis-arizonae* Distance: 6.411

[illegible]

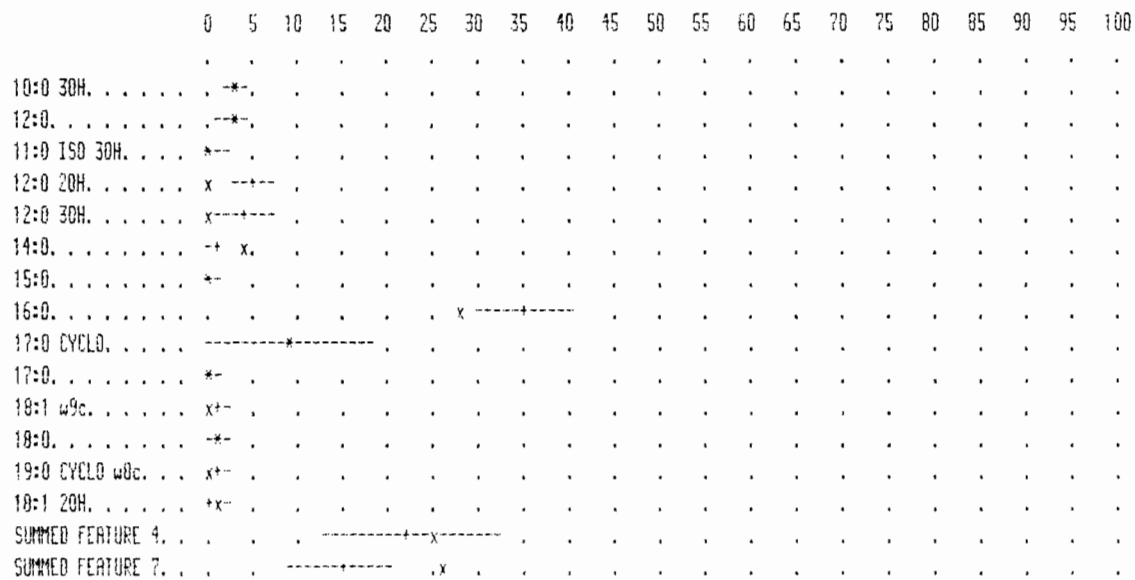
Comparison with TSOA [Rev 3.90]: Pantoea-agglomerans*(Entb. agglomerans, Erwinia herbicola/ Distance: 6.635

[illegible]

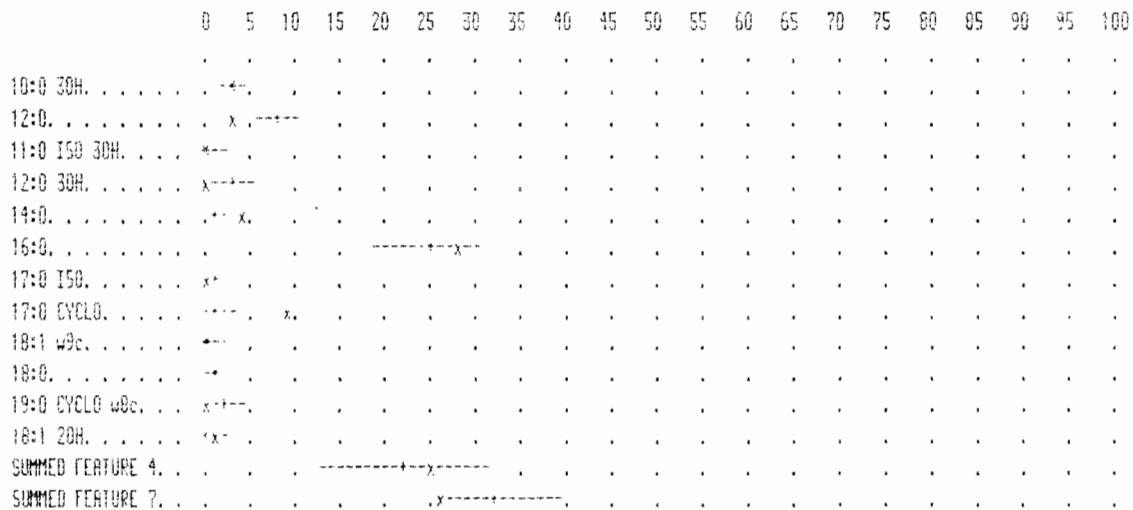
07-AUG-98 11:01:31

[AEROBE] 7-AUG-98 03:10:53

Distance: 5.774



Distance: 6.908



TSBA [Rev 3.90]	Variovorax	0.350	(Alcaligenes paradoxus)
	<i>V. paradoxus</i>	0.350	(Alcaligenes paradoxus)
	<i>V. p.</i> GC subgroup A	0.350	(Alcaligenes paradoxus)
	<i>V. p.</i> GC subgroup B	0.178	(Alcaligenes paradoxus)
	Comamonas	0.271	(Pseudomonas acidovorans)
	<i>C. acidovorans</i>	0.271	(Pseudomonas acidovorans)
	Pseudomonas	0.194	
	<i>P. putida</i>	0.194	
	<i>P. p.</i> biotype B	0.194	
	<i>P. p.</i> biotype A	0.113	
CLIN [Rev 3.90]	Pseudomonas	0.317	
	<i>P. putida</i>	0.317	
	<i>P. p.</i> biotype A*	0.317	
	Comamonas	0.256	(Pseudomonas testosteroni)
	<i>C. testosteroni</i>	0.256	(Pseudomonas testosteroni)

Comparison with TSBA [Rev 3.90]: *Variovorax-paradoxus*-EC subgroup A(*Alcaligenes paradoxus*) Distance: 5.144

[illegible]

Contingue: 5 5440-5 Hull

[AEROBEE] 7-AUG-98 03:41:29

Distance: 5.741

[illegible]

Distance: 5,715

[illegible]

Continue: 5

[AEROBE] 7-AUG-98 03:41:29

07-AUG-98 11:01:31

Distance: 6.222

[illegible]

Comparison with ISBA [Rev 3.90]: *Comamonas acidovorans* (*Pseudomonas acidovorans*) Distance: 10.610

[illegible]

Comparison with ISBA [Rev 3.90]: *Enterobacter-intermedius**

Distance: 11.166

[illegible]

Continue: 6

[AEROBES] 7-AUG-98 04:12:32

07-AUG-98 11:01:31

Comparison with CLIN [Rev 3.90]: *Vibrio-parahaemolyticus*

Distance: 9.470

[illegible]

Continue: 6

[AEROBIC] 7-AUG-98 04:12:32

07-AUG-98 11:01:31

Distance: 9.474

[illegible]

TSBA [Rev 3.90]	Salmonella	0.222	
	<i>S. choleraesuis</i>	0.222	
	<i>S. c. arizonae</i>	0.222	
	<i>S. c. choleraesuis</i>	0.134	
	Pantoea	0.188	(Entb. agglomerans, Erwinia herbicola)
	<i>P. agglomerans</i> *	0.188	(Entb. agglomerans, Erwinia herbicola)
	Comamonas	0.184	(Pseudomonas acidovorans)
	<i>C. acidovorans</i>	0.184	(Pseudomonas acidovorans)
CLIN [Rev 3.90]	Pseudomonas	0.326	
	<i>P. putida</i>	0.326	
	<i>P. p. biotype A</i> *	0.326	

[illegible][illegible]

Comparison with CLIN [Rev 3.90]: *Pseudomonas-putida*-biotype A*

[illegible]

Comparison with CLIN [Rev 3,90]: *Pseudomonas-stutzeri*

Distance: 7.322

[illegible]

07-AUG-98 11:01:31

** ECL SHIFT OR DEVIATION EXCEEDS 1.3000000000000000e-002. SYSTEM WILL RECALIBRATE **

8. cereus	0.085
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<i>B. mycoides</i>	0.141
--------------------	-------

Distance: 7.868

[illegible]

Comparison with ISBA [Rev 3.90]: *Brevibacterium-acetylicum*-GC subgroup B(not the type strain)

[illegible]

Comparison with CLIN [Rev 3.90]: *Bacillus-mycoides*

Distance: 7.469

[illegible]

TSBA [Rev 3.90]	Yersinia	0.032
	Y. pseudotuberculosis	0.032
CLIM [Rev 3.90]	Pseudomonas	0.711
	P. fluorescens	0.711
	P. putida	0.397
	P. p. biotype A*	0.397
	P. p. biotype B	0.394

[illegible][illegible]

Continue: 9

5440-9 HULL

[AEROBE] 7-AUG-98 06:16:02

distance: 3,116

Comparison with CLIN [Rev 3.90]: *Pseudomonas-fluorescens*

[illegible]

Comparison with CLIN (Rev 3.90): *Pseudomonas-putida*-biotype A*

Distance: 5.123

[illegible]

[ACROBE] 9-AUG-98 00:00:16 Area: 275168 % Named: 100

Distance: 16.631

[illegible]

Continue: 10

[AEROBE] 9-AUG-98 00:00:16

08-AUG-98 08:21:42

Comparison with CLIN [Rev 3.90]: *Legionella-free*

Distance: 14,704

[illegible]

TSBA [Rev 3.90]	Chryseobacterium	0.799	(Flavobacterium)
	<i>C. indologenes</i> *	0.799	(Flavobacterium)
	<i>C. balustinum</i> *	0.548	(Flavobacterium)
CLIN [Rev 3.90]	Chryseobacterium	0.629	(Flavobacterium)
	<i>C. gleum</i>	0.629	(Flavobacterium)
	<i>C. g.</i> GC subgroup A	0.629	(Flavobacterium)
	<i>C. g.</i> GC subgroup B	0.566	(Flavobacterium)
	<i>C. indologenes</i> *	0.327	(Flavobacterium)

[illegible][illegible]

Continue: 11

LAEROBE3 7-AUG-98 06:46:40

07-AUG-98 11:01:31

Distance: 3.631

[illegible]

Distance: 4.025

[illegible]

24hr Endpoint Assay Results

MOLECULAR DEVICES CORP.
Template Display

DATA FILE: DATA 8/6 13_58_02
DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
PROTOCOL:
DESCRIPTION: strains 1-6

PAGE: 1

PRINTED: 8/17/98

	1	2	3	4	5	6	7	8	9	10	11	12
A	□ BL	□ BL	□ BL	□ BL	! CNT07	! CNT07	! CNT07	! CNT07	! CNT08	! CNT08	! CNT08	! CNT08
B	! CNT01	! CNT01	! CNT01	! CNT01	? UNK01	? UNK01	? UNK01	? UNK01	! CNT09	! CNT09	! CNT09	! CNT09
C	! CNT02	! CNT02	! CNT02	! CNT02	? UNK02	? UNK02	? UNK02	? UNK02	! CNT10	! CNT10	! CNT10	! CNT10
D	! CNT03	! CNT03	! CNT03	! CNT03	? UNK03	? UNK03	? UNK03	? UNK03	! CNT11	! CNT11	! CNT11	! CNT11
E	! CNT04	! CNT04	! CNT04	! CNT04	? UNK04	? UNK04	? UNK04	? UNK04	! CNT12	! CNT12	! CNT12	! CNT12
F	! CNT05	! CNT05	! CNT05	! CNT05	? UNK05	? UNK05	? UNK05	? UNK05	! CNT13	! CNT13	! CNT13	! CNT13
G	! CNT06	! CNT06	! CNT06	! CNT06	? UNK06	? UNK06	? UNK06	? UNK06	! CNT14	! CNT14	! CNT14	! CNT14
H	! CNT06	! CNT06	! CNT06	! CNT06	? UNK06	? UNK06	? UNK06	? UNK06	! CNT14	! CNT14	! CNT14	! CNT14

Group Type	Name	Std. Value/Dil. Factor	Wells
Blank Control	BL		A1,A2,A3,A4
	CNT01	1.000	B1,B2,B3,B4
	CNT02	1.000	C1,C2,C3,C4
	CNT03	1.000	D1,D2,D3,D4
	CNT04	1.000	E1,E2,E3,E4
	CNT05	1.000	F1,F2,F3,F4
	CNT06	1.000	G1,G2,G3,G4,H1,H2,H3,H4
	CNT07	1.000	A5,A6,A7,A8
	CNT08	1.000	A9,A10,A11,A12
	CNT09	1.000	B9,B10,B11,B12
	CNT10	1.000	C9,C10,C11,C12
	CNT11	1.000	D9,D10,D11,D12
	CNT12	1.000	E9,E10,E11,E12
	CNT13	1.000	F9,F10,F11,F12
	CNT14	1.000	G9,G10,G11,G12,H9,H10,H11,H12
Unknown	UNK01	1.000	B5,B6,B7,B8
	UNK02	1.000	C5,C6,C7,C8
	UNK03	1.000	D5,D6,D7,D8
	UNK04	1.000	E5,E6,E7,E8
	UNK05	1.000	F5,F6,F7,F8
	UNK06	1.000	G5,G6,G7,G8,H5,H6,H7,H8

MOLECULAR DEVICES CORP.
Raw Data (Plate)

DATA FILE: DATA 8/6 13_58_02
DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
PROTOCOL:
DESCRIPTION: strains 1-6
MODE: Endpoint
WAVELENGTH: 590

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

Optical Density

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.116	0.106	0.095	0.134	0.156	0.126	0.154	0.198	2.285	2.258	2.612	0.122
B	0.330	0.329	0.335	0.289	0.538	0.403	0.451	0.539	2.647	2.728	2.748	2.801
C	0.217	0.251	0.297	0.275	0.326	0.322	0.317	0.314	2.787	3.144	3.039	3.078
D	0.361	0.379	0.316	0.364	0.522	0.594	0.542	0.601	2.714	2.541	2.550	2.608
E	0.285	0.241	0.240	0.244	0.395	0.412	0.420	0.509	2.972	3.031	2.813	2.881
F	0.289	0.316	0.291	0.271	0.362	0.414	0.386	0.362	2.900	2.867	2.584	2.729
G	0.341	0.361	0.372	0.469	0.324	0.428	0.362	0.375	2.954	2.863	2.697	2.395
H	0.292	0.286	0.342	0.359	0.425	0.446	0.401	0.416	2.966	2.857	2.517	2.692

MOLECULAR DEVICES CORP.
Raw Data (Plate)

DATA FILE: DATA 8/6 13_58_02
DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
PROTOCOL:
DESCRIPTION: strains 1-6
MODE: Endpoint
WAVELENGTH: 590

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

OD with Plate Blank Subtracted

	1	2	3	4	5	6	7	8	9	10	11	12
A	0#003-0#007-0#018	0#021	0.043	0.013	0.041	0.085	2.172	2.145	2.499	0.009		
B	0.217	0.216	0.222	0.176	0.425	0.290	0.338	0.426	2.534	2.615	2.635	2.688
C	0.104	0.138	0.184	0.162	0.213	0.209	0.204	0.201	2.674	3.031	2.926	2.965
D	0.248	0.266	0.203	0.251	0.409	0.481	0.429	0.488	2.601	2.428	2.437	2.495
E	0.172	0.128	0.127	0.131	0.282	0.299	0.307	0.396	2.859	2.918	2.700	2.768
F	0.176	0.203	0.178	0.158	0.249	0.301	0.273	0.249	2.787	2.754	2.471	2.616
G	0.228	0.248	0.259	0.356	0.211	0.315	0.249	0.262	2.841	2.750	2.584	2.282
H	0.179	0.173	0.229	0.246	0.312	0.333	0.288	0.303	2.853	2.744	2.404	2.579

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 13_58_02
 DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
 PROTOCOL:
 DESCRIPTION: strains 1-6
 MODE: Endpoint
 WAVELENGTH: 590

PAGE: 1

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

PLATE BLANK	Mean OD	Std Dev	CV	Well	OD
BL	0.113	0.017	14.69	A1	0.116
				A2	0.106
				A3	0.095
				A4	0.134

CONTROLS	Mean OD	Std Dev	CV	Well	OD
CNT01	0.208	0.021	10.25	B1	0.217
				B2	0.216
				B3	0.222
				B4	0.176
CNT02	0.147	0.034	23.28	C1	0.104
				C2	0.138
				C3	0.184
				C4	0.162
CNT03	0.242	0.027	11.21	D1	0.248
				D2	0.266
				D3	0.203
				D4	0.251
CNT04	0.140	0.022	15.55	E1	0.172
				E2	0.128
				E3	0.127
				E4	0.131
CNT05	0.179	0.019	10.34	F1	0.176
				F2	0.203
				F3	0.178
				F4	0.158
CNT06	0.240	0.057	23.57	G1	0.228
				G2	0.248
				G3	0.259
				G4	0.356
				H1	0.179
				H2	0.173
				H3	0.229
				H4	0.246
CNT07	0.046	0.030	64.88	A5	0.043
				A6	0.013
				A7	0.041
				A8	0.085
CNT08	1.707	1.143	66.97	A9	2.172
				A10	2.145
				A11	2.499
				A12	0.009

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 13_58_02
 DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
 PROTOCOL:
 DESCRIPTION: strains 1-6
 MODE: Endpoint
 WAVELENGTH: 590

PAGE: 2

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

CONTROLS	Mean OD	Std Dev	CV	Well	OD
CNT09	2.618	0.064	2.441	B9	2.534
				B10	2.615
				B11	2.635
				B12	2.688
CNT10	2.899	0.156	5.385	C9	2.674
				C10	3.031
				C11	2.926
				C12	2.965
CNT11	2.491	0.080	3.195	D9	2.601
				D10	2.428
				D11	2.437
				D12	2.495
CNT12	2.811	0.096	3.431	E9	2.859
				E10	2.918
				E11	2.700
				E12	2.768
CNT13	2.657	0.144	5.436	F9	2.787
				F10	2.754
				F11	2.471
				F12	2.616
CNT14	2.630	0.207	7.853	G9	2.841
				G10	2.750
				G11	2.584
				G12	2.282
				H9	2.853
				H10	2.744
				H11	2.404
				H12	2.579

UNKNOWNNS	Mean OD	Std Dev	CV	Well	OD
UNK01	0.370	0.067	18.19	B5	0.425
				B6	0.290
				B7	0.338
				B8	0.426
UNK02	0.207	0.005	2.568	C5	0.213
				C6	0.209
				C7	0.204
				C8	0.201
UNK03	0.452	0.039	8.583	D5	0.409
				D6	0.481
				D7	0.429
				D8	0.488

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 13_58_02
DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
PROTOCOL:
DESCRIPTION: strains 1-6
MODE: Endpoint
WAVELENGTH: 590

PAGE: 3

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

UNKNOWN	Mean OD	Std Dev	CV	Well	OD
UNK04	0.321	0.051	15.90	E5	0.282
				E6	0.299
				E7	0.307
				E8	0.396
UNK05	0.268	0.025	9.222	F5	0.249
				F6	0.301
				F7	0.273
				F8	0.249
UNK06	0.284	0.041	14.29	G5	0.211
				G6	0.315
				G7	0.249
				G8	0.262
				H5	0.312
				H6	0.333
				H7	0.288
				H8	0.303

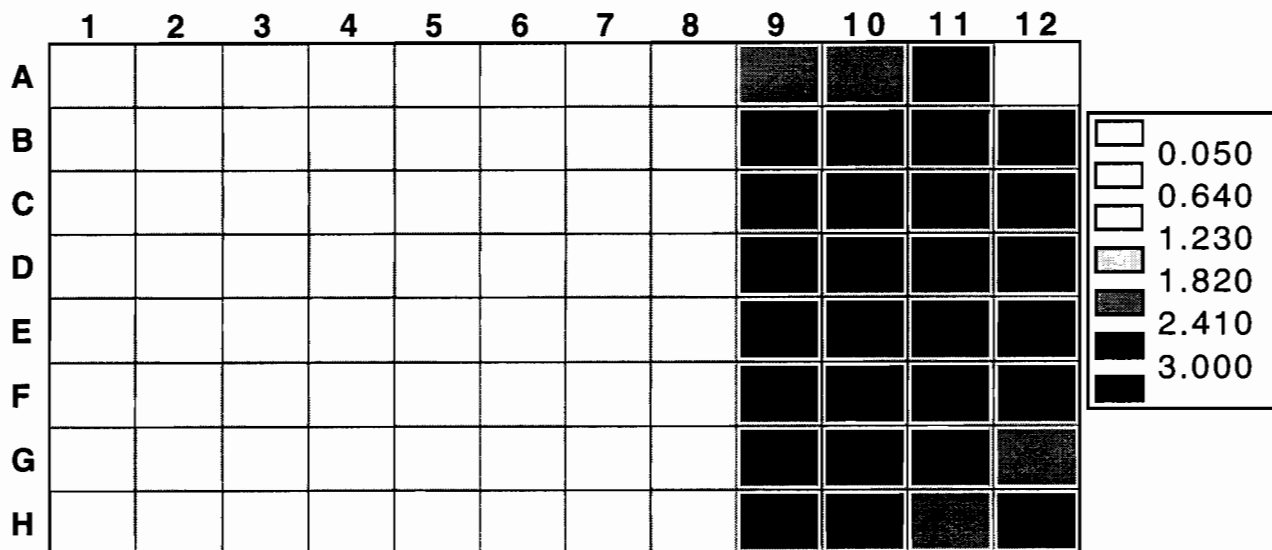
MOLECULAR DEVICES CORP.
Gray Scale (Plate)

DATA FILE: DATA 8/6 13_58_02
DESCRIPTION: 5440 Hull 6 strains with Hydrocarbon solution
PROTOCOL:
DESCRIPTION: strains 1-6
MODE: Endpoint
WAVELENGTH: 590

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON



High Limit = 3.000

Low Limit = 0.050

MOLECULAR DEVICES CORP.
Template Display

DATA FILE: DATA 8/6 14_15_36
DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
PROTOCOL:
DESCRIPTION: strains 7-11

PAGE: 1

PRINTED: 8/17/98

	1	2	3	4	5	6	7	8	9	10	11	12
A	□ BL	□ BL	□ BL	□ BL	! CNT06	! CNT06	! CNT06	! CNT06	! CNT07	! CNT07	! CNT07	! CNT07
B	! CNT01	! CNT01	! CNT01	! CNT01	? UNK7	? UNK7	? UNK7	? UNK7	! CNT08	! CNT08	! CNT08	! CNT08
C	! CNT02	! CNT02	! CNT02	! CNT02	? UNK08	? UNK08	? UNK08	? UNK08	! CNT09	! CNT09	! CNT09	! CNT09
D	! CNT03	! CNT03	! CNT03	! CNT03	? UNK09	? UNK09	? UNK09	? UNK09	! CNT10	! CNT10	! CNT10	! CNT10
E	! CNT04	! CNT04	! CNT04	! CNT04	? UNK10	? UNK10	? UNK10	? UNK10	! CNT11	! CNT11	! CNT11	! CNT11
F	! CNT04	! CNT04	! CNT04	! CNT04	? UNK10	? UNK10	? UNK10	? UNK10	! CNT11	! CNT11	! CNT11	! CNT11
G	! CNT05	! CNT05	! CNT05	! CNT05	? UNK11	? UNK11	? UNK11	? UNK11	! CNT12	! CNT12	! CNT12	! CNT12
H	! CNT05	! CNT05	! CNT05	! CNT05	? UNK11	? UNK11	? UNK11	? UNK11	! CNT12	! CNT12	! CNT12	! CNT12

Group Type	Name	Std. Value/Dil. Factor	Wells
Blank Control	BL		A1,A2,A3,A4
	CNT01	1.000	B1,B2,B3,B4
	CNT02	1.000	C1,C2,C3,C4
	CNT03	1.000	D1,D2,D3,D4
	CNT04	1.000	E1,E2,E3,E4,F1,F2,F3,F4
	CNT05	1.000	G1,G2,G3,G4,H1,H2,H3,H4
	CNT06	1.000	A5,A6,A7,A8
	CNT07	1.000	A9,A10,A11,A12
	CNT08	1.000	B9,B10,B11,B12
	CNT09	1.000	C9,C10,C11,C12
	CNT10	1.000	D9,D10,D11,D12
	CNT11	1.000	E9,E10,E11,E12,F9,F10,F11,F12
	CNT12	1.000	G9,G10,G11,G12,H9,H10,H11,H12
Unknown	UNK08	1.000	C5,C6,C7,C8
	UNK09	1.000	D5,D6,D7,D8
	UNK10	1.000	E5,E6,E7,E8,F5,F6,F7,F8
	UNK11	1.000	G5,G6,G7,G8,H5,H6,H7,H8
	UNK7	1.000	B5,B6,B7,B8

MOLECULAR DEVICES CORP.
Raw Data (Plate)

DATA FILE: DATA 8/6 14_15_36
DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
PROTOCOL: PRINTED: 8/17/98
DESCRIPTION: strains 7-11
MODE: Endpoint AUTOMIX: OFF
WAVELENGTH: 590 CALIBRATION: ON

Optical Density

	1	2	3	4	5	6	7	8	9	10	11	12
A	0.112	0.100	0.102	0.112	0.214	0.168	0.181	0.183	2.530	2.734	2.680	2.691
B	0.250	0.257	0.280	0.245	0.251	0.266	0.281	0.256	2.841	2.742	2.825	2.822
C	0.216	0.201	0.263	0.171	0.266	0.263	0.255	0.279	2.975	2.925	2.957	2.952
D	0.228	0.248	0.241	0.241	0.229	0.194	0.136	0.213	2.467	2.879	2.860	2.919
E	0.391	0.330	0.354	0.363	0.323	0.331	0.348	0.361	2.716	2.645	2.862	2.812
F	0.375	0.341	0.381	0.345	0.394	0.314	0.311	0.363	2.667	2.792	2.772	2.921
G	0.904	0.976	1.090	1.061	1.507	1.505	1.288	1.530	2.848	2.918	2.911	2.361
H	0.592	0.803	0.742	0.893	1.376	1.368	1.152	1.160	2.813	2.943	2.934	2.953

MOLECULAR DEVICES CORP.
Raw Data (Plate)

DATA FILE: DATA 8/6 14_15_36
DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
PROTOCOL:
DESCRIPTION: strains 7-11
MODE: Endpoint AUTOMIX: OFF
WAVELENGTH: 590

PRINTED: 8/17/98

CALIBRATION: ON

OD with Plate Blank Subtracted

	1	2	3	4	5	6	7	8	9	10	11	12
A	0#005-0#006-0#004	0#005	0.108	0.061	0.074	0.077	2.423	2.628	2.574	2.585		
B	0.144	0.151	0.174	0.138	0.144	0.159	0.175	0.149	2.734	2.636	2.718	2.715
C	0.110	0.095	0.157	0.065	0.159	0.157	0.149	0.172	2.869	2.818	2.850	2.846
D	0.122	0.142	0.134	0.134	0.123	0.087	0.030	0.107	2.360	2.773	2.754	2.812
E	0.285	0.224	0.248	0.256	0.216	0.224	0.241	0.255	2.609	2.538	2.755	2.705
F	0.269	0.235	0.274	0.239	0.287	0.207	0.205	0.256	2.560	2.685	2.665	2.815
G	0.798	0.869	0.983	0.954	1.400	1.398	1.181	1.424	2.742	2.811	2.805	2.255
H	0.485	0.697	0.636	0.787	1.269	1.262	1.045	1.054	2.706	2.837	2.828	2.847

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 14_15_36
 DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
 PROTOCOL:
 DESCRIPTION: strains 7-11
 MODE: Endpoint
 WAVELENGTH: 590

PAGE: 1

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

PLATE BLANK	Mean OD	Std Dev	CV	Well	OD
BL	0.107	0.006	6.012	A1	0.112
				A2	0.100
				A3	0.102
				A4	0.112
CONTROLS	Mean OD	Std Dev	CV	Well	OD
CNT01	0.151	0.015	10.21	B1	0.144
				B2	0.151
				B3	0.174
				B4	0.138
CNT02	0.106	0.038	36.11	C1	0.110
				C2	0.095
				C3	0.157
				C4	0.065
CNT03	0.133	0.008	6.276	D1	0.122
				D2	0.142
				D3	0.134
				D4	0.134
CNT04	0.253	0.021	8.379	E1	0.285
				E2	0.224
				E3	0.248
				E4	0.256
				F1	0.269
				F2	0.235
				F3	0.274
				F4	0.239
CNT05	0.776	0.167	21.49	G1	0.798
				G2	0.869
				G3	0.983
				G4	0.954
				H1	0.485
				H2	0.697
				H3	0.636
				H4	0.787
CNT06	0.080	0.020	24.38	A5	0.108
				A6	0.061
				A7	0.074
				A8	0.077
CNT07	2.552	0.089	3.485	A9	2.423
				A10	2.628
				A11	2.574
				A12	2.585
CNT08	2.701	0.044	1.646	B9	2.734

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 14_15_36
 DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
 PROTOCOL:
 DESCRIPTION: strains 7-11
 MODE: Endpoint
 WAVELENGTH: 590

PAGE: 2

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

CONTROLS	Mean OD	Std Dev	CV	Well	OD
CNT08	2.701	0.044	1.646	B10	2.636
				B11	2.718
				B12	2.715
CNT09	2.846	0.021	0.727	C9	2.869
				C10	2.818
				C11	2.850
				C12	2.846
CNT10	2.675	0.211	7.886	D9	2.360
				D10	2.773
				D11	2.754
				D12	2.812
CNT11	2.667	0.095	3.545	E9	2.609
				E10	2.538
				E11	2.755
				E12	2.705
				F9	2.560
				F10	2.685
				F11	2.665
				F12	2.815
CNT12	2.729	0.198	7.243	G9	2.742
				G10	2.811
				G11	2.805
				G12	2.255
				H9	2.706
				H10	2.837
				H11	2.828
				H12	2.847

UNKNOWN	Mean OD	Std Dev	CV	Well	OD
UNK08	0.159	0.010	6.266	C5	0.159
				C6	0.157
				C7	0.149
				C8	0.172
UNK09	0.087	0.041	46.94	D5	0.123
				D6	0.087
				D7	0.030
				D8	0.107
UNK10	0.237	0.029	12.12	E5	0.216
				E6	0.224
				E7	0.241
				E8	0.255
				F5	0.287
				F6	0.207
				F7	0.205

MOLECULAR DEVICES CORP.

Raw Data (Report)
(Plate Blank Subtracted)

DATA FILE: DATA 8/6 14_15_36
DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
PROTOCOL:
DESCRIPTION: strains 7-11
MODE: Endpoint
WAVELENGTH: 590

PAGE: 3

PRINTED: 8/17/98

AUTOMIX: OFF

CALIBRATION: ON

UNKNOWN	Mean OD	Std Dev	CV	Well	OD
UNK10	0.237	0.029	12.12	F8	0.256
UNK11	1.254	0.151	12.07	G5	1.400
				G6	1.398
				G7	1.181
				G8	1.424
				H5	1.269
				H6	1.262
				H7	1.045
				H8	1.054
UNK7	0.157	0.013	8.426	B5	0.144
				B6	0.159
				B7	0.175
				B8	0.149

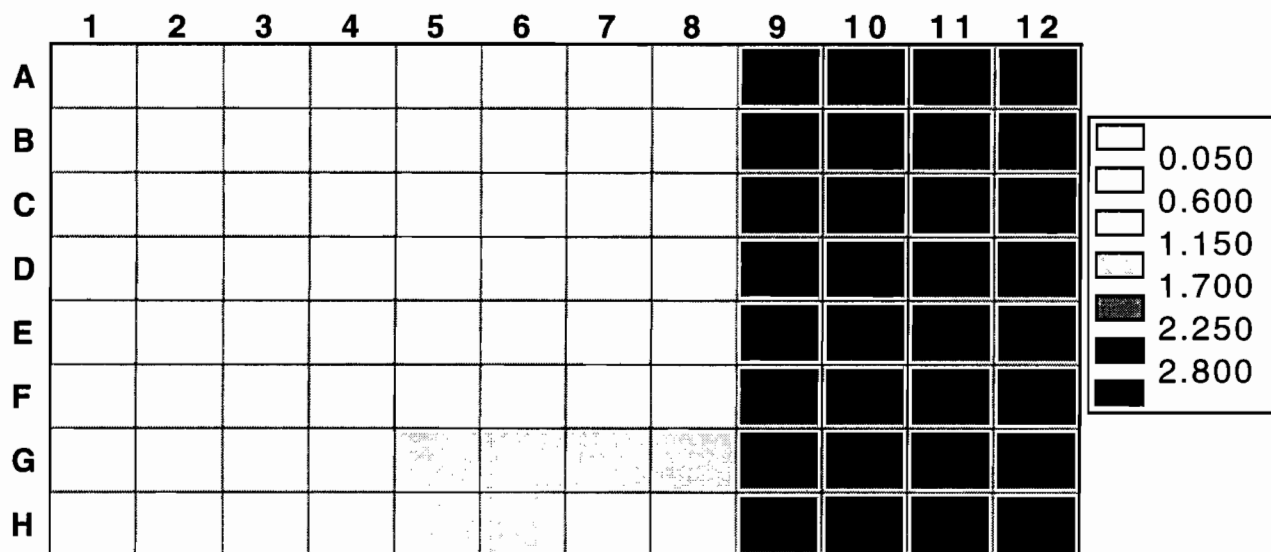
MOLECULAR DEVICES CORP.
Gray Scale (Plate)

DATA FILE: DATA 8/6 14_15_36
DESCRIPTION: 5440 Hull 5 strains with Hydrocarbon Mixture
PROTOCOL:
DESCRIPTION: strains 7-11
MODE: Endpoint
WAVELENGTH: 590

AUTOMIX: OFF

PRINTED: 8/17/98

CALIBRATION: ON



High Limit = 2.800

Low Limit = 0.050

Warranty And Limits Of Liability

In accepting analytical work, we warrant the accuracy of test results under the conditions employed in the laboratory. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. We disclaim any other warranties, expressed or implied, including a Warranty of Fitness for Particular Purpose and Warranty of Merchantability. We accept no legal responsibility for the purposes for which the client uses the test results.

APPENDIX G

EcoTest Laboratories, Inc. Analytical Report for
Drill Cutting Characterization and Waste Manifest Forms

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.982967.00

07/30/98

Land Tech Remedial
31 Dubon Court
Farmingdale, NY 11735
ATTN: Catherine Pohlot

SOURCE OF SAMPLE: Land Tech No. 11531
COLLECTED BY: Client DATE COL'D:07/27/98 RECEIVED:07/27/98

SAMPLE: Soil sample, soil pile, 1440

ANALYTICAL PARAMETERS

Aroclor 1016	ug/Kg	<40
Aroclor 1221	ug/Kg	<40
Aroclor 1232	ug/Kg	<40
Aroclor 1242	ug/Kg	<40
Aroclor 1248	ug/Kg	<40
Aroclor 1254	ug/Kg	<40
Aroclor 1260	ug/Kg	<40

ANALYTICAL PARAMETERS

cc:

REMARKS:

DIRECTOR

rn=

17290

NYSDOH ID# 10320



377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.982967.00

07/30/98

Land Tech Remedial
31 Dubon Court
Farmingdale, NY 11735
ATTN: Catherine Pohlott

SOURCE OF SAMPLE: Land Tech No. 11531
COLLECTED BY: Client DATE COL'D:07/27/98 RECEIVED:07/27/98

SAMPLE: Soil sample, soil pile, 1440

ANALYTICAL PARAMETERS

Arsenic as As	mg/Kg	1.7
Barium as Ba	mg/Kg	2.2
Cadmium as Cd	mg/Kg	<0.05
Chromium as Cr	mg/Kg	5.5
Lead as Pb	mg/Kg	1.3
Mercury as Hg	mg/Kg	<0.005
Selenium as Se	mg/Kg	<0.4
Silver as Ag	mg/Kg	<0.05

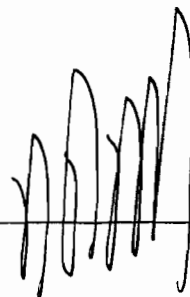
% Solids		98
Reactive cyanide	mg/Kg	<2
Sulfide as S	mg/Kg	<2
Flash Point deg C	mg/Kg	>100
pH (lab) units		7.2
Petrol. Hydrocarbons	mg/Kg	250

ANALYTICAL PARAMETERS

cc:

REMARKS:

DIRECTOR



ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.982967.00

07/30/98

Land Tech Remedial
31 Dubon Court
Farmingdale, NY 11735
ATTN: Catherine Pohlot

SOURCE OF SAMPLE: Land Tech No. 11531
COLLECTED BY: Client DATE COL'D:07/27/98 RECEIVED:07/27/98

SAMPLE: Soil sample, soil pile, 1440

ANALYTICAL PARAMETERS

Carbon Tetrachloride	ug/L*	<1
Chlorobenzene	ug/L*	<1
Chloroform	ug/L*	<1
1,4 Dichlorobenzene	ug/L*	<2
1,2 Dichloroethane	ug/L*	<1
1,1 Dichloroethene	ug/L*	<1
Methyl Ethyl Ketone	ug/L*	<20
Tetrachloroethene	ug/L*	<1
Trichloroethylene	ug/L*	<1
Vinyl Chloride	ug/L*	<1
Benzene	ug/L*	<1

ANALYTICAL PARAMETERS

cc:

REMARKS: * Analysis performed on TCLP Leachate according to
USEPA Method 1311.

DIRECTOR

rn= 17292

NYSDOH ID# 10320

CHAIN OF CUSTODY RECORD

TYPE & NUMBER OF CONTAINERS

TYPE & NUMBER	TOTAL NUMBER OF CONTAINERS
TPH 418.1	
TOTAL KCEA METALS	
PCB, KCEA TESTS	
KCEA CHARACTERISTICS	
PCB, KCEA TESTS	
TPH VOLATILES	

61

SAMPLE IDENTIFICATION

SAMPLE IDENTIFICATION

MATRIX (Soil, Water, etc.)	COLLECTED	
	DATE	TIME

SOIL PILE

Soil	710	7-27-98	1415
------	-----	---------	------

1440

REMARKS-TESTS REQUIRED,
SPECIAL TURNAROUND. SPECIAL Q.C. etc

246-7A

Relinquished by: (Signature) <i>[Signature]</i>	DATE/TIME 7/27 1530	SEAL INTACT ? YES NO NA	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: (Signature)
Representing: LTR			Representing: <i>[Signature]</i>	Representing:			Representing:
Relinquished by: (Signature)	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: (Signature)	Relinquished by: (Signature)	DATE/TIME	SEAL INTACT ? YES NO NA	Received by: (Signature)
Representing:			Representing:	Representing:			Representing:



NON-HAZARDOUS WASTE MANIFEST

Waste Management
of Long Island

Please print or type

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. <i>Exempt</i>		Manifest Document No. LT-98-08	2. Page 1 of 1
3. Generator's Name and Mailing Address I.M.C. Eastern Corp. 570 Main St, Westbury N.Y. 11590					
4. Generator's Phone 516-694-4040				1A- 392 392	
5. Transporter 1 Company Name A.B. Oil Corp		6. US EPA ID Number NYR00003582		A. State Transporter's ID PR 2958	
7. Transporter 2 Company Name		8. US EPA ID NUMBER		B. Transporter Phone 516-567-6545	
9. Designated Facility Name and Site Address A.B. Oil, Corporation 1599 Ocean Avenue Bohemia N.Y. 11716		10. US EPA ID Number NY D987023371		C. State Transporter's ID	
				D. Transporter 2 Phone	
				E. State Facility's ID	
				F. Facility's Phone 516-567-6545	
11. WASTE DESCRIPTION			12. Containers		
			No.	Type	Quantity
a. Non-Hazardous Waste Liquid N.O.S. (Purge Water)			18	D M	900
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above Well Development Water Spill or Release #- N/A.			H. Handling Codes for Wastes Listed Above a.) R 501		
15. Special Handling Instructions and Additional Information E.R. Phone # 800-211-4938					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name Chris M. Rawnsley		Signature <i>[Signature]</i>		Date Month Day Year 8 10 98	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name James Vanderweyde		Signature <i>[Signature]</i>		Date Month Day Year 8 19 98	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Date Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator, Certification of receipt of the waste material covered by this manifest, except as noted in item 19 Printed/Typed Name		Signature <i>[Signature]</i>		Date Month Day Year 8 19 98	

09/17/98 09:37 FAX 201358 0617

CAPITOL ENV

003

AUG 14 '98 09:49AM

P.2/2

R3 TECHNOLOGIES, INC.
7 STEEL ROAD EAST
MORRISVILLE, PA 19067-0847
(215) 428-1700

33792

DATE: 08/13/98
TIME IN: 11:28
TIME OUT: 11:28
SCALE: 1

CARRIER: TSD TOP SOIL DEPOT INC.

OWNER: CAP CAPITOL ENVIRONMENTAL SERVICES, INC.

TRUCK: 08

TRAILER:

DUCT: A2 #2 OIL

JOB: CAP9806010A2

WGT IN GROSS: 34220 LBS

TARE: 23500 LBS

NET: 10720 LBS

5.36 TONS

0.00 PER TON

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

UNT: \$ 0.00

LIC: 57873

condition for transportation according to appropriate state and federal regulations.
I certify that the foregoing is true and correct to the best of my knowledge.

Date: 8/13/98

Signature: *[Signature]*

2 Hauler of Waste (must be filled in by hauler) EPA ID. No.:

COMPANY NAME: TSD

(Bickler)

ADDRESS: Wayne

Pick-up Date: 8/13/98

Truck No.: 08

Vehicle Lic. No.:

PZ 4342

The above described waste was picked up and hauled by me to the disposal facility named below and was accepted. I certify under penalty of perjury that the foregoing is true and correct.

(Signature of authorized agent and title)

3. Processing Facility:

R3 Technologies, Inc.
7 Steel Road East
Morrisville, PA 19067-0847
Permit #301254

Waste subject to this manifest was delivered by the above
hauler to this disposal facility and accepted on this date:

(Signature of authorized agent and title)

PROCESSING FACILITY

09/29/98 TUE 10:31 FAX 5166944075

LAND TECH REMEDIAL

004

09/17/98 09:37 FAX 201358 0617

CAPITOL ENV

004

AUG 14 '98 09:49AM

P.1/2

R3 TECHNOLOGIES, INC.
7 STEEL ROAD EAST
MORRISVILLE, PA 19067-0847
(215) 428-1700

33791

DATE: 08/13/98
TIME IN: 11:26
TIME OUT: 11:26
SCALE: 1

CARRIER: TSD TOP SOIL DEPOT INC.

ESTIMER: CAP CAPITOL ENVIRONMENTAL SERVICES, INC.

TRUCK: 4617

TRAILER:

RC UCT: A2 #2 OIL

JOB: CAP9808010A2

WGT IN GROSS: 54240 LBS

TARE: 27380 LBS P

NET: 26860 LBS = 13.43 TONS @ 0.00 PER TON

DRIVER SIGNATURE

WEIGHMASTER SIGNATURE

JNT: \$ 0.00

LIC: 57873

I certify that the foregoing is true and correct to the best of my knowledge.

Date: 8/13/98 Signature: [Signature]

(Sign and Title)

Hauler of Waste (must be filled in by hauler) EPA I.D. No.: [Blank]

(if applicable)

COMPANY NAME: TSD

ADDRESS: [Signature]

Pick-up Date: 8/13/98

Truck No.: 4617

Vehicle Lic. No.: P22053

The above described waste was picked up and hauled by me to the disposal facility named below and was accepted. I certify under penalty of perjury that the foregoing is true and correct.

(Signature of authorized agent and title)

Processing Facility: R3 Technologies, Inc.
7 Steel Road East
Morrisville, PA 19067-0847
Permit #301254

Waste subject to this manifest was delivered by the above hauler to this disposal facility and accepted on this date:

(Signature of authorized agent and title)

8/13/98